POWDER CORES

MAGNETICS®

Kool Mµ® Kool Mµ® MAX Kool Mµ® H*f* Kool Mµ® Ultra

XFlux® XFlux® Ultra High Flux Edge® MPP

2024 MAGNETICS POWDER CORES CATALOG

We offer the confidence of over ***seventy years of expertise*** in the research, design, manufacture and support of high quality magnetic materials and components.

A major manufacturer of the highest performance materials in the industry including: Kool Mμ®, Kool Mμ® MAX, Kool Mμ® Hƒ, Kool Mμ® Ultra, XFlux®, XFlux® Ultra, High Flux, Edge®, MPP, power ferrites, high permeability ferrites, nanocrystalline cores, amorphous cores and strip wound cores. Magnetics' products set the standard for providing consistent and reliable electrical properties for a comprehensive range of core materials and geometries. Magnetics is the best choice for a variety of applications ranging from simple chokes and transformers used in telecommunications equipment to sophisticated devices for aerospace electronics.

Magnetics backs its products with unsurpassed technical expertise and customer service. Magnetics' Sales Engineers offer the experience necessary to assist the designer from the initial design phase through prototype approval. Knowledgeable Sales Managers provide dedicated account management. Skilled Customer Service Representatives are easily accessible to provide exceptional sales support. This support, combined with a global presence via a worldwide distribution network, makes Magnetics a superior supplier to the international electronics industry.

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Introduction

Kool Mµ®
Kool Mµ powder cores are distributed air gap cores made from a ferrous alloy powder for low losses at elevated frequencies. The near zero magnetostriction alloy makes Kool Mµ ideal for eliminating audible frequency noise in fillter inductors. In high frequency applications, Kool Mµ exhibits significantly less core losses than powdered iron, resulting in lower temperature rise. The 10,500 gauss saturation level of Kool Mµ provides a higher energy storage capability than can be obtained with gapped ferrite E-cores, resulting in smaller core size. Very large cores and structures are available to support very high current applications.

Kool Mµ® MAX
Kool Mµ MAX powder cores are made of an iron, silicon, and aluminum alloy and are characterized by improved DC bias performance over Kool Mµ and low core loss. Like Magnetics other powder core materials, Kool Mµ MAX operates with no aging effect at elevated temperatures, providing an advantage when compared with iron powder cores.

Kool Mµ® Hƒ
Kool Mµ Hƒ powder cores are made from distributed gap alloy powder optimized for frequencies 200-500 kHz. Exhibiting approximately 35% lower losses when compared to Kool Mµ, Kool Mµ Hƒ is a cost-effective solution for maximizing efficiency in medium and high current power inductors.

Kool Mµ® Ultra
Magnetics' **lowest loss powder core material**, Kool Mµ Ultra has DC bias superior to Kool Mµ and comparable to Kool Mµ Hƒ, with core losses almost 30% below Kool Mµ Hƒ.

XFlux®
Magnetics’ XFlux cores are made from 6.5% silicon iron powder. XFlux offers lower losses than powdered iron cores and superior DC bias performance. The soft saturation of XFlux material offers an advantage over ferrite cores. XFlux cores are ideal for low and medium frequency chokes when inductance at peak load is critical.

High DC Bias XFlux®
High DC Bias XFlux cores cores offer the same high saturation found in standard silicon-iron XFlux while providing up to 20% improvement in DC Bias.

XFlux® Ultra
XFlux Ultra cores cores offer the same high saturation found in standard silicon-iron XFlux while providing a 20% improvement in core loss.

High Flux
High Flux powder cores are distributed air gap toroidal cores made from a 50% nickel, 50% iron alloy powder for high biasing capability. High Flux cores exhibit superior performance in applications involving high power, high DC bias, or high AC excitation amplitude. The High Flux alloy has saturation flux density that is twice that of MPP alloy and three times or more than that of ferrite. As a result, High Flux cores can support significantly more DC bias current or AC flux density.

Edge®
Designed for cutting edge performance, Edge cores offer superior DC Bias. When compared with High Flux, Edge displays approximately 40% lower losses and 30% improvement in DC bias.

High DC Bias Edge®
Magnetics' **highest DC bias material,** High DC Bias Edge cores provide up to 20% improvement in DC bias compared to standard nickel-iron Edge powder cores.

MPP
Molypermalloy powder cores (MPP) are distributed air gap toroidal cores made from 81% nickel, 17% iron, and 2% molybdenum alloy powder which have extremely low core losses, highest Q, and best temperature stability compared with other materials. MPP cores possess many outstanding magnetic characteristics, such as high resistivity, low hysteresis and eddy current losses, excellent inductance stability after high DC magnetization or under high DC bias conditions and minimal inductance shift under high AC excitation.

Magnetics powder cores are true high temperature materials with no thermal aging.

Magnetics is committed to meeting global environmental standards and initiatives. Magnetics’ REACH and RoHS compliance statements and reports are available on our website: www.mag-inc.com/company/certifications

Applications and Materials

Magnetics powder cores are most commonly used in power inductor applications, specifically in switch-mode power supply (SMPS) filter inductors, also known as DC inductors or chokes. Other power applications include differential inductors, boost inductors, buck inductors and flyback transformers.

While all eleven materials are used in these applications, each has its own advantages. For the lowest loss inductor, Kool Mµ Ultra, Kool Mµ H*ƒ*, Edge and MPP materials should be used since they have the lowest core loss. For the smallest package size in a DC bias dominated design, Edge and High Flux should be used since they have the highest flux capacity. XFlux and XFlux Ultra can be a lower cost alternative to High Flux in situations where the higher core losses and more limited permeability availability of XFlux is acceptable. Both Kool Mµ and Kool Mµ MAX are economical choices that offer superior DC bias under current loading.

Magnetics' powder cores are used in a variety of other applications, including: High Q filters, high reliability inductors and filters, high temperature inductors and filters, high current CTs, telecom filters, and load coils.

Magnetics' powder cores are available in a variety of shapes including toroids, E cores, U cores, EQ cores, LP cores, EER cores, cylinders, blocks, and round blocks, which can be used to create customizable structures. *For more information on cylinders or custom shapes, please contact Magnetics.*

		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® H*ƒ*	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
Alloy Composition		FeSiAl	FeSiAl	FeSiAl	FeSiAl	FeSi	FeSi	FeNi	FeNi	FeNiMo
Available Permeabilities		14-125	14-90	26-60	26-60	19-125	26, 60	14-125	14-160	14-550
Core Loss - 60µ (mW/cc)	50 kHz, 1000 G	215	200	120	100*	575	450	150	250	165
	100 kHz, 1000 G	550	550	325	160*	1,280	1,035	375	625	450
Perm vs. DC Bias - 60µ (Oe)	80% of μ_i	45	65	60	60	100	110	130*	100	60
	50% of μ_i	95	130	115	120	170	180	205*	185	105
60µ Temperature Stability - Typical % shift from -60 to 200°C		6%	3%	5%	5%	4%	2.5%	2%	4.5%	2.5%
Curie Temperature		500°C	500°C	500°C	500°C	700°C	700°C	500°C	500°C	460°C
Saturation Flux Density (Tesla)		1.0	1.0	1.0	1.0	1.6	1.6	1.5	1.5	0.8
Frequency Response - 60µ flat to…		5 MHz	13 MHz	16 MHz	3 MHz	4 MHz	2.5 MHz	15 MHz	1 MHz	2 MHz
Relative Cost		1x*	2x	2x	3x	1.2x	1.5x	5x	4x-6x	7x-9x

*indicates best choice

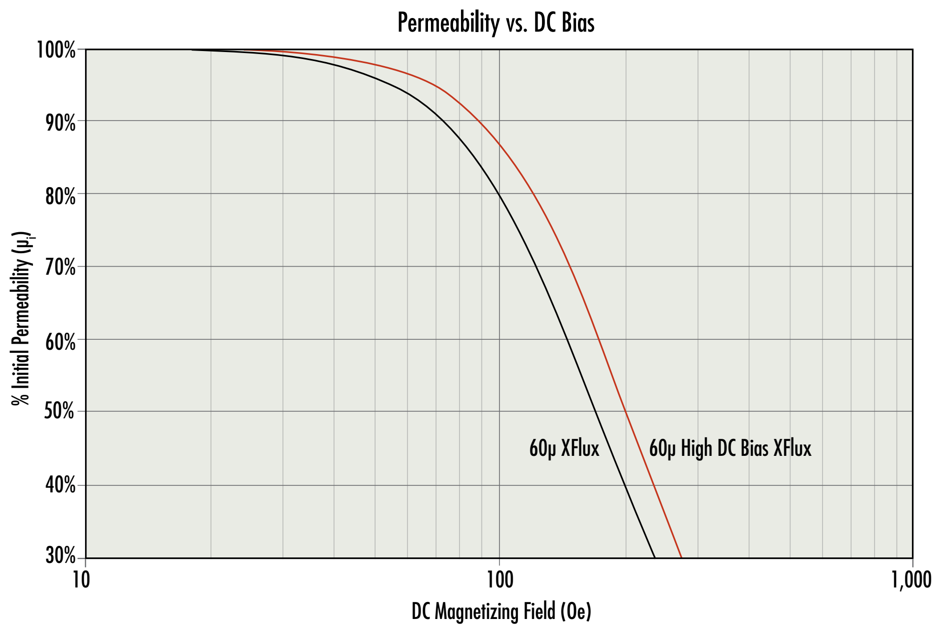
A lower cost family of alternative products to Magnetics' eleven premium powder core materials are powdered irons. Manufacturers of powdered iron use a different production process. For comparison with the above table, powdered irons have permeabilities from 10-100; highest core loss; good perm vs. DC bias; fair temperature stability; lower temperature ratings; soft saturation; 0% nickel content; lowest relative cost.

Magnetics' Kool Mµ family of products and powdered iron cores have comparable DC bias performance. The advantages of Kool Mµ compared with powdered iron include (1) lower core losses; (2) no thermal aging, since Kool Mµ is manufactured without the use of organic binders; (3) near zero magnetostriction, which means that Kool Mµ can be useful for addressing audible noise problems; and (4) better stability of permeability vs. AC flux density.

High DC Bias XFlux®

High DC Bias XFlux® cores offer the same high saturation found in standard silicon-iron XFlux while providing up to 20% improvement in DC bias.

High DC Bias XFlux allows for smaller core size for use in space-conscious inductor designs. Use of copper wire is minimized by maintaining inductance using less turns, resulting in lower copper losses and savings in overall component costs.



HOW TO ORDER

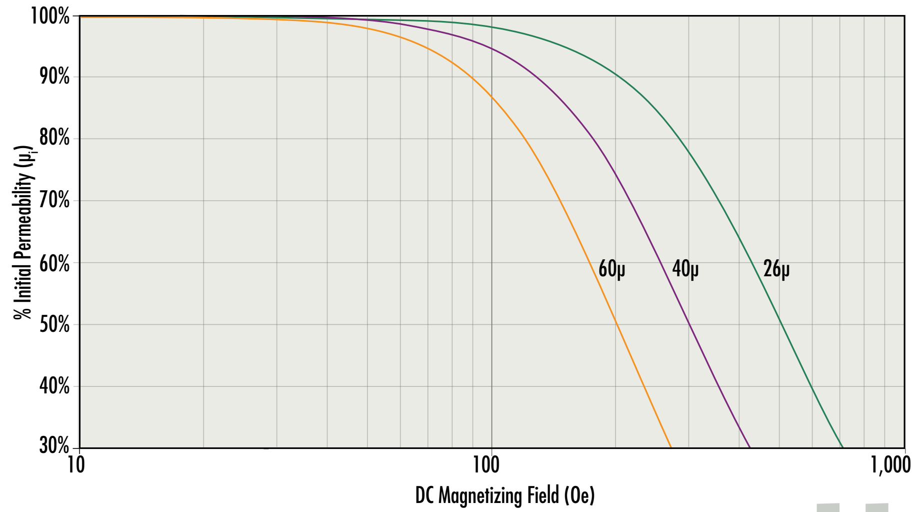
00 78 050 A7 S01

- S01 → High DC Bias variant XFlux
- A7 → Core finish code (A7 = 2,000 VAC)
- 050 → Catalog Number (size)
- 78 → Material Code (78 = XFlux)
- 00 → Grading (00 = not graded)

Material	Perm vs. DC Bias (Oe)		Core Loss (mW/cm³)
	80%	**50%**	$W_{1000\ G,\ 50\ kHz}$
26µ High DCB XFlux	285	505	725
26µ XFlux	270	450	600
60µ High DCB XFlux	120	200	625
60µ XFlux	100	170	575

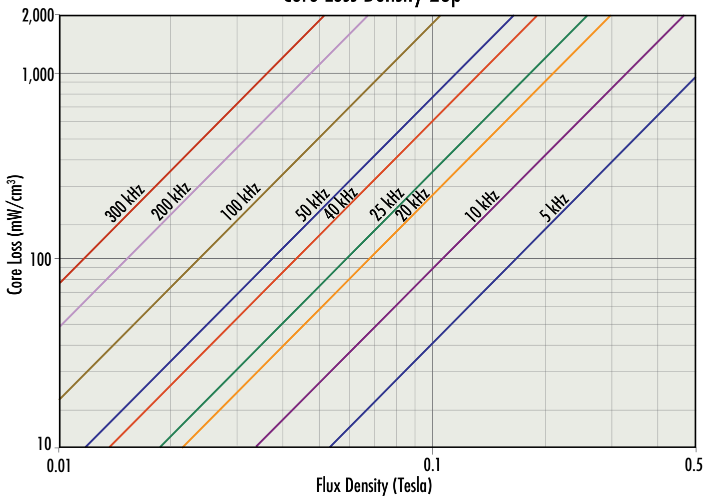
$$\%\ \text{Initial Permeability} = \frac{1}{a + bH^c}$$

Perm	a	b	c
26	0.01	2.81E-09	2.423
40	0.01	4.25E-09	2.572
60	0.01	5.69E-09	2.714

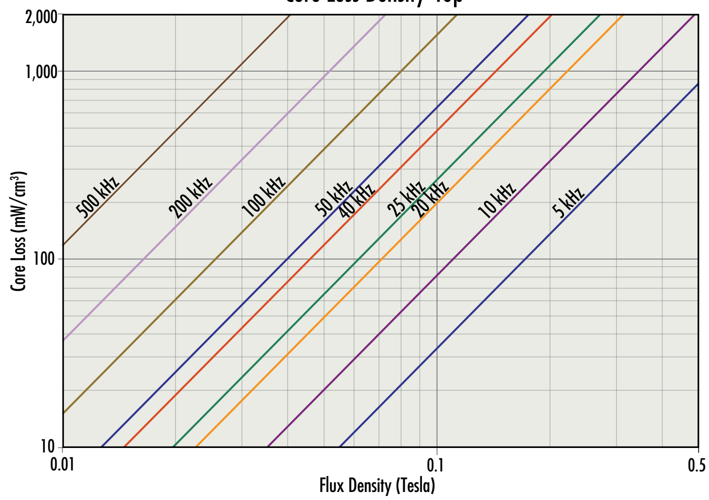


High DC Bias XFlux®

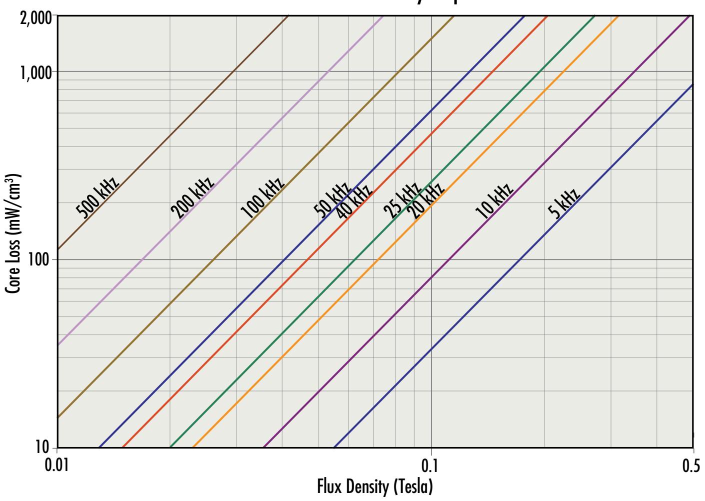
Core Loss Density 26μ



Core Loss Density 40μ



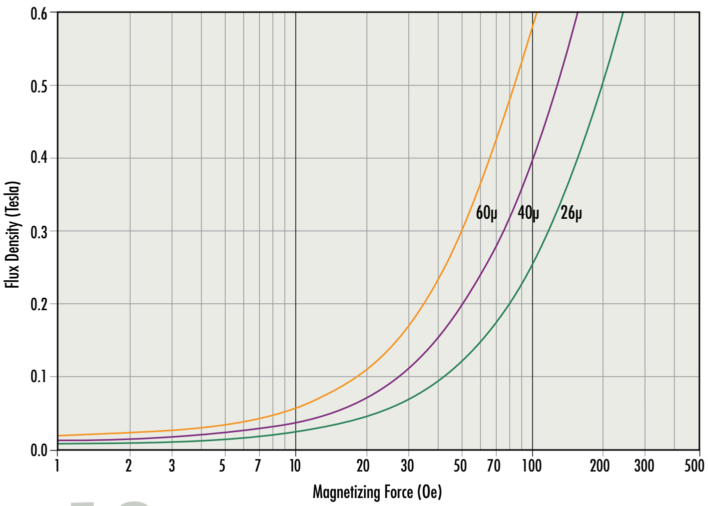
Core Loss Density 60μ



Core Loss Density $P = a(B^b)(f^c)$

Perm	a	b	c
26μ	443.53	2.015	1.312
40μ	442.15	2.015	1.283
60μ	447.34	2.015	1.272

DC Magnetization



$$B = \left[\frac{a + bH + cH^2}{1 + dH + eH^2} \right]^x$$

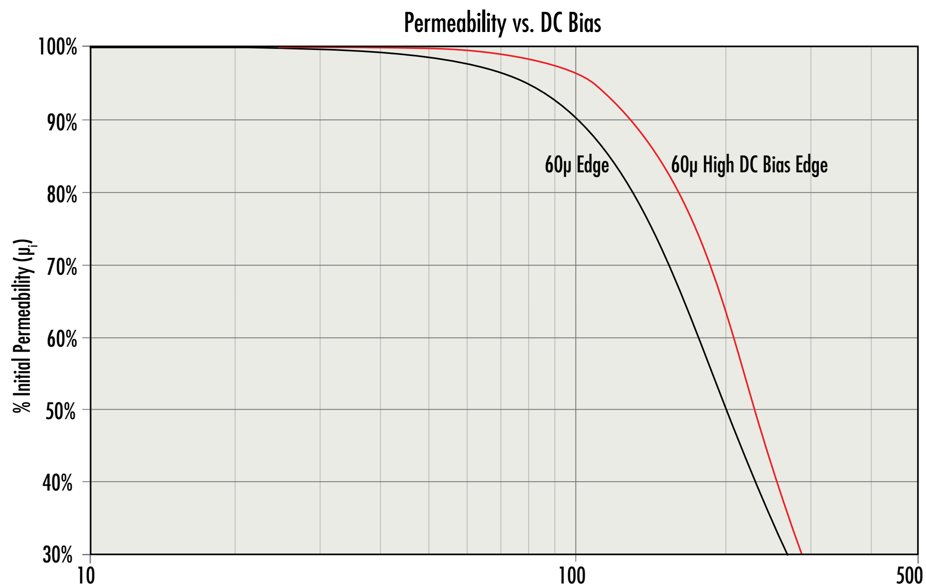
where B = Tesla (T), H = Oersteds (Oe)

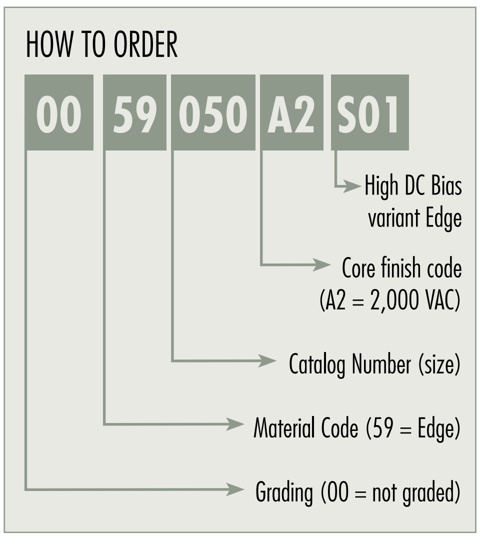
Perm	a	b	c	d	e	x
26μ	6.175E-02	1.035E-02	1.920E-04	4.322E-02	1.167E-04	1.778
40μ	6.362E-02	1.000E-02	2.079E-04	3.212E-02	1.276E-04	1.648
60μ	6.481E-02	1.000E-02	2.277E-04	2.431E-02	1.361E-04	1.496

High DC Bias Edge®

Designed for cutting edge performance, High DC Bias Edge cores offer the highest efficiency and best DC bias performance of all alloy powder cores.

High DC Bias Edge cores provide up to 20% improvement in DC bias compared to standard nickel-iron Edge powder cores.

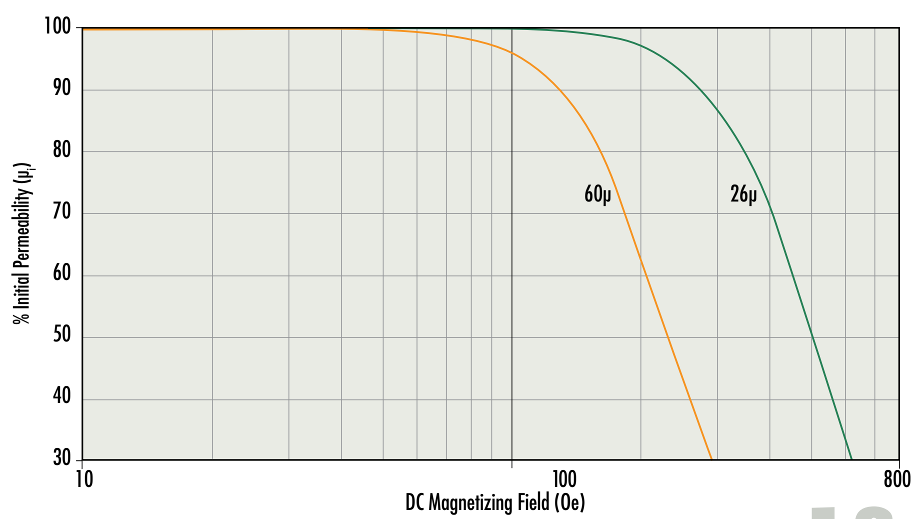




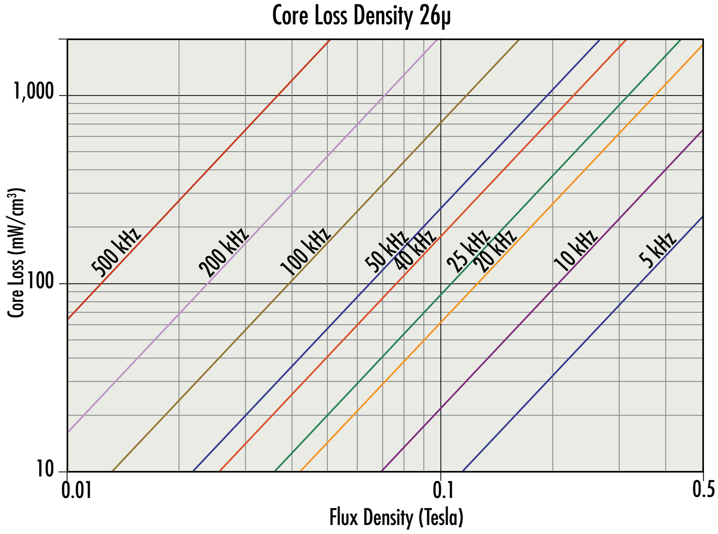
Material	Perm vs. DC Bias (Oe)		Core Loss (mW/cm³)
	80%	**50%**	$W_{1000\ G,\ 50\ kHz}$
26μ High DCB Edge	350	500	275
26μ Edge	285	440	200
60μ High DCB Edge	160	230	200
60μ Edge	130	205	150

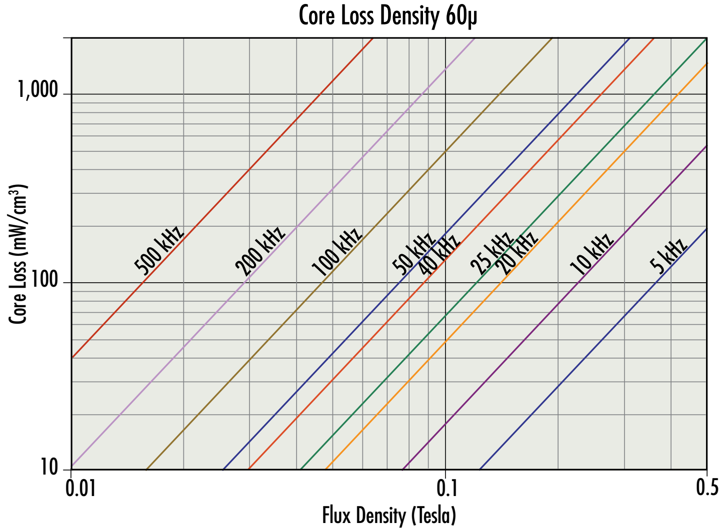
$$\%\ \text{Initial Permeability} = \frac{1}{a + bH^c}$$

Perm	a	b	c
26	0.01	3.23E-13	3.887
60	0.01	9.51E-12	3.820



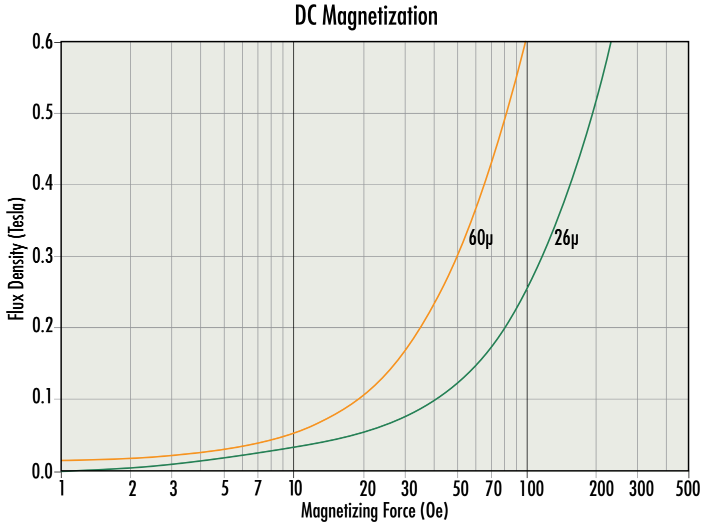
High DC Bias Edge®





Core Loss Density $P = a(B^b)(f^c)$

Perm	a	b	c
26μ	83.23	2.106	1.520
60μ	82.64	2.106	1.444



$$B = \left[\frac{a + bH + cH^2}{1 + dH + eH^2} \right]^x$$ where B = Tesla (T), H = Oersteds (Oe)

Perm	a	b	c	d	e	x
26μ	9.900E-02	4.600E-01	6.100E-03	8.940E-01	5.070E-03	4.970
60μ	4.907E-02	1.000E-02	2.703E-04	2.943E-02	1.342E-04	1.457

Material Properties

	PERMEABILITY vs. T, B, & f - TYPICAL			
	Permeability (μ)	μ vs. T dynamic range (-50° C TO +100° C) MATERIALS RATED TO 200° C	μ vs. B dynamic range 0 to 400 mT	μ vs. f flat to...
Kool Mμ®	14μ	0.6%	+0.6%	20 MHz
	26μ	1.2%	+1.1%	13 MHz
	40μ	1.9%	+1.7%	9 MHz
	60μ	2.9%	+2.5%	5 MHz
	75μ	3.7%	+3.1%	4 MHz
	90μ	4.4%	+3.8%	3 MHz
	125μ	6.2%	+5.2%	2 MHz
Kool Mμ® MAX	14μ	0.3%	+0.9%	27 MHz
	19μ	0.4%	+1.3%	25 MHz
	26μ	0.6%	+1.7%	22 MHz
	40μ	0.9%	+2.7%	18 MHz
	60μ	1.3%	+4.0%	13 MHz
	75μ	1.5%	+5.5%	8 MHz
Kool Mμ® H*f*	26μ	0.8%	+0.8%	23 MHz
	40μ	2.0%	+1.25%	31 MHz
	60μ	2.5%	+1.8%	16 MHz
Kool Mμ® Ultra	26μ	0.14%	+5.0%	3 MHz
	40μ	0.08%	-2.0%	3.5 MHz
	60μ	0.4%	+3.0%	3 MHz
XFlux®	19μ	0.5%	+7.1%	6 MHz
	26μ	1.1%	+10.2%	5 MHz
	40μ	2.0%	+13.2%	4 MHz
	60μ	3.0%	+16.3%	4 MHz
	75μ	3.7%	+20.3%	2 MHz
	90μ	4.5%	+24.4%	2 MHz
	125μ	6.2%	+28.5%	1 MHz
XFlux® Ultra	26μ	1.3%	+1.0%	3 MHz
	60μ	0.7%	+6.0%	2.5 MHz
Edge®	26μ	0.9%	+0.8%	22 MHz
	60μ	1.2%	+1.9%	15 MHz
	75μ	1.5%	+0.2%	10 MHz
	90μ	1.6%	+0.3%	5 MHz
	125μ	2.0%	+0.5%	2 MHz
High Flux	14μ	1.5%	+5.0%	3 MHz
	26μ	2.0%	+9.0%	1.5 MHz
	60μ	2.6%	+13.5%	1 MHz
	125μ	3.6%	+19.0%	700 kHz
	147μ	4.8%	+22.0%	500 kHz
	160μ	5.5%	+25.0%	400 kHz
MPP	14μ	0.7%	+0.4%	4 MHz
	26μ	0.9%	+0.4%	3 MHz
	60μ	1.0%	+0.8%	2 MHz
	125μ	1.3%	+1.4%	300 kHz
	147μ, 160μ, 173μ	1.5%	+1.9%	200 kHz
	200μ	1.6%	+2.8%	100 kHz
	300μ	1.6%	+4.5%	90 kHz
	550μ	8.7%	+21.0%	20 kHz

Material Properties

	Curie Temperature	Density (60µ)	Coefficient of Thermal Expansion
Kool Mµ	500°C	5.8 grams/cm^3	10.8 x 10^{-6}/°C
Kool Mµ MAX	500°C	6.5 grams/cm^3	10.8 x 10^{-6}/°C
Kool Mµ H*f*	500°C	6.0 grams/cm^3	10.8 x 10^{-6}/°C
Kool Mµ Ultra	500°C	6.0 grams/cm^3	10.8 x 10^{-6}/°C
XFlux	700°C	6.9 grams/cm^3	11.6 x 10^{-6}/°C
XFlux Ultra	700°C	7.1 grams/cm^3	11.6 x 10^{-6}/°C
Edge	500°C	7.8 grams/cm^3	5.8 x 10^{-6}/°C
High Flux	500°C	7.6 grams/cm^3	5.8 x 10^{-6}/°C
MPP	460°C	7.8 grams/cm^3	12.9 x 10^{-6}/°C

Core Weights

See individual data sheets for nominal core weights. Material densities listed above are for 60µ. The approximate densities of other permeabilities are related to 60µ density by the factors shown:

Permeability	14µ	19µ	26µ	40µ	60µ	75µ	90µ	125µ	147µ 160µ 173µ	200µ 300µ	550µ
	85%	89%	91%	96%	100%	102%	103%	105%	106%	107%	108%

Unit Conversions

To obtain number of	Multiply number of	By
A·T/cm	oersteds	0.795
oersteds	A·T/cm	1.26
tesla	gauss	0.0001
gauss	tesla	10,000
gauss	mT(milli Tesla)	10
cm^2	in^2	6.452
cm^2	circular mils	5.07 x 10^{-6}

Core Identification

All Magnetics powder cores have unique part numbers that provide important information about the characteristics of the cores. Depending on size, cores may be stamped using laser etching or ink. A description of each type of part number is provided below.

TOROIDS

C0 55 206 A2

Core Finish Code	Voltage Breakdown (wire to wire)	Material Availability	OD Size Availability
A2	2,000 V_{AC} min*	High Flux, Edge, MPP	All
A7	2,000 V_{AC} min*	Kool Mµ, Kool Mµ MAX, Kool Mµ H*f*, Kool Mµ Ultra, XFlux, XFlux Ultra	All
AY	600 V_{AC} min	All	3.56 - 16.6 mm**
A9	8,000 V_{AC} min	All	>4.65 mm

- Catalog Number (designates size and permeability)
- Material Code . . . 55 = MPP, 58 = High Flux, 59 = Edge, 70 = Kool Mµ Ultra, 74 = XFlux Ultra, 76 = Kool Mµ H*f*, 77 = Kool Mµ, 78 = XFlux, 79 = Kool Mµ MAX
- Grading Code . . . C0 = Graded into 2% inductance bands – OD <4.65 mm, 5% bands; 00 = Not graded

*A2 and A7 voltage breakdown min varies by size:
- 1000 V_{AC} with OD ≤4.65mm
- 1250 V_{AC} with 4.65mm < OD < 17.27mm
- 2000 V_{AC} with 17.27mm ≤ OD < 26.92mm
- 3000 V_{AC} with OD ≥26.92mm

**AY finish not available for 550µ MPP

Custom height toroids available based on pressed height or coated height
· Pressed height example: **P**185 suffix for pressing to nominal bare core height of 18.5 mm
· Coated height example: **HT**330 suffix for max coated height of 33.0 mm

Powder Core Toroid Marking Summary						
Size (OD mm)	6-digit Shop Order Number	2-digit Material Code	3-digit Catalog Number	2-digit Core Finish Code	Inductance Code	Marking Example
6.35 - 6.86	✔		✔		✔	123456 020 +6
7.87 - 12.7	✔		✔	✔	✔	123456 050A2 +6
> 12.7	✔	✔	✔	✔	✔	123456 55120A2 +6

- Inductance Code is only marked on MPP and High Flux toroids with C0 grading code
- Cores with OD < 6.35 mm are not marked
- Shop order number identifies the product batch, ensuring traceability of every core through the entire manufacturing process, back to raw materials

SHAPES and THINZ

00K5528E060

- Permeability Code: Permeability, e.g. 060 for 60µ
- Shape Code . . . . B = Block, E = E Core, I = I Core/Plate, LB = Large Block ("A" dim. >99 mm), LE = Large E Core, R = Round Block, T = Toroid (THINZ), U = U Core
- Size Code . . . . . First two digits equal approximate length or OD in mm / Last two digits equal approximate height or ID in mm (not listed for Large E and Large Block cores)
- Material Code . . . G = Edge, H = High Flux, K = Kool Mµ, F = Kool Mµ H*f*, Y = Kool Mµ MAX, A = Kool Mµ MAX High Performance, M = MPP, X = XFlux
- Grading Code . . . 00 = Not graded
  - Full part number and shop order number are marked on all shapes

EQ, LP and EER SHAPES

EQ X 2619 E060 L101

- Height Code . . . . . . Approximate leg length per piece, e.g. 101 for 10.1 mm
- Permeability Code . . Permeability, e.g. 060 for 60µ
- Size Code . . . . First two digits equal approximate length or OD in mm / Last two digits equal approximate width in mm
- Material Code . . . . . G = Edge, H = High Flux, K = Kool Mµ, Y = Kool Mµ MAX, X = XFlux
- Shape Code . . . . . . ER = EER Shape, EQ = EQ Shape, LP = LP Shape

Inductance and Grading

Measured vs. Calculated Inductance

A_L (Inductance factor) is given for each core in this catalog. Inductance for blocks is tested in standard picture frame arrangements. Units for A_L are nH/T^2. A_L is related to nominal calculated inductance (L_N, in µH) by the number of turns, N.

$$L_N = A_L N^2 10^{-3}$$

Magnetics' inductance standards are measured in a Kelsall Permeameter Cup. Actual wound inductance measured outside a Kelsall Cup is greater than the nominal calculated value due to leakage flux and flux developed by the current in the winding. The difference depends on many variables; core size, permeability, core coating thickness, wire size and number of turns, in addition to the way in which the windings are put on the core. The difference is negligible for permeabilities above 125 and turns greater than 500. However, the lower the permeability and/or number of turns, the more pronounced this deviation becomes.

Example : C055930A2 (26.9 mm, 125µ, p. 166)

Number of Turns	Calculated Inductance	Measured Inductance
1,000	157 mH	+0.0%
500	39.3 mH	+0.5%
300	14.1 mH	+1%
100	1.57 mH	+3%
50	393 µH	+5%
25	98.1 µH	+9%

The following formula can be used to approximate the leakage flux to add to the expected inductance. This formula was developed from historical data of cores tested at Magnetics. Be aware that this will only give an approximation based on evenly spaced windings. You may expect as much as a ±50% deviation from this result.

$$L_{LK} = \frac{0.292 N^{1.065} A_e}{l_e}$$ where:

L_{LK} = leakage inductance adder (µH)
N = number of turns
A_e = core cross section (mm^2)
l_e - core magnetic path length (mm)

Example: C055930A2 with 25 turns (p. 166)

Catalog Data	Calculated Inductance
$A_L = 157$ nH/T^2 $A_e = 65.4$mm^2 $l_e = 63.5$mm	$L_N = (157)(25)^2 10^{-3}$ $= 98.1$µH
Leakage Adder	**Estimated Measured Inductance**
$L_{LK} = \frac{0.292(25)^{1.065}(65.4)}{63.5}$ $= 9.3$µH	$L = L_N + L_{LK}$ $= 98.1 + 9.3$ $= 107$µH

Core Inductance Tolerance and Grading

Magnetics powder cores are precision manufactured to an inductance tolerance of ± 8%*, using standard Kelsall Permeameter Cup measurements with a precision series inductance bridge.

MPP and High Flux cores with C0- prefix and outside diameters >4.65 mm are graded into 2% inductance bands. Core grading can reduce winding costs by minimizing turns adjustments when building high turns inductors to very tight inductance specifications. MPP cores with C0- prefix and outside diameters 4.65 mm and smaller are graded into 5% bands.

Graded Magnetics MPP cores and High Flux cores are also available with tolerances tighter than the standard ± 8%.

*Kool Mµ cores with OD < 12.7 mm have wider tolerances.

GRADE Stamped on Core OD	INDUCTANCE % Deviation from Nominal		TURNS % Deviation from Nominal	
	From	To	From	To
+8	+8	+7	-4.0	-3.5
+6	+7	+5	-3.5	-2.5
+4	+5	+3	-2.5	-1.5
+2	+3	+1	-1.5	-0.5
+0	+1	-1	-0.5	+0.5
-2	-1	-3	+0.5	+1.5
-4	-3	-5	+1.5	+2.5
-6	-5	-7	+2.5	+3.5
-8	-7	-8	+3.5	+4.0

Core Coating

Magnetics toroidal powder cores are coated with a special epoxy finish that provides a tough, wax tight, moisture and chemical resistant barrier having excellent dielectric properties. Toroids up to 16.5 mm OD can also be coated with Parylene-C (core finish code AY).

Material	Color	Core Finish Codes
Kool Mµ®	Black	A7, A9
Kool Mµ® MAX	Black	A7, A9
Kool Mµ® H*ƒ*	Black	A7, A9
Kool Mµ® Ultra	Black	A7, A9
XFlux®	Brown	A7, A9
XFlux® Ultra	Brown	A7, A9
High DC Bias XFlux®	Brown	A7, A9
High Flux	Khaki	A2, A9
Edge®	Green	A2, A9
High DC Bias Edge®	Green	A2, A9
MPP	Gray	A2, A9

The finish is tested for voltage breakdown by inserting a core between two weighted wire mesh pads. Force is adjusted to produce a uniform pressure of 10 psi, simulating winding pressure. The test condition for each core in the random sample set, to guarantee minimum breakdown voltage in each production batch, is 60 Hz rms voltage at 1.25 the guaranteed limit. A2 and A7 samples (26.9 mm and larger) are tested to 3750 V min wire-to-wire. AY samples are tested to 750 V min wire-to-wire.

Higher minimum breakdown coatings can be applied upon request for cores larger than 4.65 mm.

Parylene coating (AY) minimizes the constriction of the inside diameter, although the surface texture is not as smooth as epoxy. All finished dimensions in this catalog are for epoxy coating (A2 or A7). For AY coating, the maximum OD and HT are reduced by 0.18 mm (0.007”), and the minimum ID is increased by 0.18 mm (0.007”).

The maximum steady-state operating temperature for epoxy coating is 200°C. The maximum steady-state operating temperature for parylene coating is 130°C, but it can be used as high as 200°C for short periods, such as during board soldering. High temperature operation of Magnetics powder cores does not affect magnetic properties.

Magnetics powder core materials can be operated continuously at 200°C with no aging or damage.

MPP Temperature Stabilization

Magnetics' core finish code is used to designate the stabilization, although the coating itself has no influence on the temperature stabilization performance of the core. A2, A7, AY and A9 are standard and W4 and M4 are controlled stabilization.

Inductance of standard MPP cores exhibits a small, positive temperature coefficient. This is due to the permeability vs. temperature characteristic of the magnetic alloy, and to the thermal expansion response of the distributed air gap formed by the insulating material surrounding metal powder grains.

The inductance of controlled stabilization MPP cores (codes W4 and M4) exhibits nearly flat temperature coefficient within defined temperature ranges. This is accomplished with adjustments in the alloy chemistry, unique to Magnetics.

There is no impact on any electrical or physical properties apart from the flattened inductance curve. W4 and M4 cores are higher in cost than standard stabilization cores.

The typical applications for stabilized cores are tuned filters, where very consistent inductance over temperature is required. The flat inductance performance of controlled stabilization cores is apparent only at low drive levels, less than 10 mT. Consequently, there is no performance benefit to using stabilized cores at higher drive levels, for example in power chokes.

Contact Magnetics for availability of sizes and permeabilities of W4 and M4 powder cores.

Part Number Suffix	Stabilization Type	Guaranteed Inductance Range	Stabilized Temperature Range
W4	Controlled	0.50% maximum	-55°C to +85°C
M4	Controlled	0.50% maximum	-65°C to +125°C

M4 cores meet the W4 limits and may be substituted in place of W4.
Stability limit example: When the 2mT, 10kHz inductance of a W4 stabilized core is measured at all temperature stops between -55°C and +85°C, the difference between the highest value and the lowest value cannot exceed 0.50% of the inductance at 25°C.

Inductor Core Selection Procedure

Only two parameters of the design application must be known to select a core for a current-limited inductor: inductance required with DC bias and the DC current. Use the following procedure to determine the core size and number of turns.

1. Compute the product of LI^2 where:
   L = inductance required with DC bias (mH)
   I = DC current (A)

2. Locate the LI^2 value on the Core Selector Chart (pgs. 29 - 42). Follow this coordinate to the intersection with the first core size that lies above the diagonal permeability line. This is the smallest core size that can be used.

3. The permeability line is sectioned into standard available core permeabilities. Selecting the core listed on the graph will tend to be the best tradeoff between A_L and DC bias.

4. Inductance, core size, and permeability are now known. Calculate the number of turns by using the following procedure:

   (a) The inductance factor (A_L in nH/T^2) for the core is obtained from the core data sheet. Determine the minimum A_L by using the worst case negative tolerance (generally -8%). With this information, calculate the number of turns needed to obtain the required inductance from:

$$N = \sqrt{\frac{L10^3}{A_L}}$$

   Where L is required inductance (μH)

(b) Calculate the bias in Oersteds from:

$$H = \frac{4\pi NI}{l_e}$$

   (c) From the Permeability vs. DC Bias curves (pgs. 44 - 58), determine the rolloff percentage of initial permeability for the previously calculated bias level. Curve fit equations shown in the catalog can simplify this step. They are also available to use on Magnetics' website: https://www.mag-inc.com/design/design-tools/Curve-Fit-Equation-Tool

   (d) Multiply the required inductance by the percentage rolloff to find the inductance with bias current applied.

   (e) Increase the number of turns by dividing the initial number of turns (from step 4(a)) by the percentage rolloff. This will yield an inductance close to the required value after steps 4 (b), (c) and (d) are repeated.

   (f) Iterate steps 4 (b), (c) and (d) if needed to adjust turns up or down until the biased inductance is satisfactorily close to the target.

5. Choose a suitable wire size using the Wire Table (p. 28). Duty cycles below 100% allow smaller wire sizes and lower winding factors, but do not allow smaller core sizes.

6. Design Checks

   (a) **Winding Factor**. See p.22 for notes on checking the coil design.

   (b) **Copper Losses**. See p.22 for notes on calculating conductor resistance and losses.

   (c) **Core Losses**. See pgs. 23-27 for notes on calculating AC core losses. If AC losses result in too much heating or low efficiency, then the inductor may be loss-limited rather than current-limited. Design alternatives for this case include using a larger core or a lower permeability core to reduce the AC flux density; or using a lower loss material such as MPP or Kool Mμ MAX in place of Kool Mμ, or High Flux in place of XFlux.

   (d) **Temperature Rise**. Dissipation of the heat generated by conductor and core losses is influenced by many factors. This means there is no simple way to predict temperature rise (△T) precisely. But the following equation is known to give a useful approximation for a component in still air. Surface areas for cores wound to 40% fill are given with the core data in this catalog.

$$\triangle T(^\circ C) = \left(\frac{\text{Total Losses (mW)}}{\text{Component Surface Area (cm}^2\text{)}}\right)^{0.833}$$

Core Selection Example

Determine core size and number of turns to meet the following requirement:

(a) Minimum inductance with DC bias of 0.6 mH (600 µH)
(b) DC current of 5.0 A

1. $LI^2 = (0.6)(5.0)^2 = 15.0$ mH·A^2

2. Using the Kool Mµ Toroids LI^2 chart found on p. 29, locate 15 mH·A^2 on the bottom axis. Following this coordinate vertically results in the selection of 0077083A7 (77083) as an appropriate core for the above requirements.

3. From the 0077083A7 core data p. 170, the inductance factor (A_L) of this core is 81 nH/T^2 ± 8%. The minimum A_L of this core is 74.5 nH/T^2.

4. From $L = A_L \cdot N^2$, 90 turns are needed to obtain 600 µH at no load. To calculate the number of turns required at full load, determine the DC bias level:

   $H = 4\pi\, N \cdot I / l_e$ where l_e is the path length in mm. The DC bias is 57.5 Oe, yielding 72% of initial permeability from the 60µ Kool Mµ DC bias curve on p. 44.The adjusted turns are 90/0.72 =125 Turns.

5. Re-calculate the DC bias level with 125 turns. The permeability versus DC bias curve shows 58% of initial permeability at 79.8 Oe.

6. Multiply the minimum A_L 74.5 nH/T^2 by 0.58 to yield effective A_L = 43.2 nH/T^2. The inductance of this core with 125 turns and with 79.8 Oe will be 675 µH minimum. The inductance requirement has been met.

7. The wire table indicates that 17 AWG is needed to carry 5.0 A with a current density of 500 A/cm^2. 125 turns of 17 AWG (wire area = 1.177 mm^2) equals a total wire area of 147.1 mm^2. The window area of a 0077083A7 is 427 mm^2. Calculating window fill, 147.1 mm^2/427 mm^2 corresponds to an approximate 35% winding factor. A 0077083A7 with 125 turns of 17 AWG is a manufacturable design.

Toroid Winding

Winding Factor

Winding factor, also called fill factor, is the ratio of total conductor cross section (usually copper cross section) to the area of the core window.

$$\text{Toroid winding factor} = \frac{N A_W}{W_A}$$

where: N = Number of turns
A_W = Area of wire
W_A = Window Area of the core $\left(\frac{\pi}{4} ID^2\right)$

Toroid Core Winding factors can vary from 20-60%, a typical value in many applications being 35-40%.

In practice, several approaches to toroid winding are used:

- Single layer: The number of turns is limited by the inside circumference of the core divided by the wire diameter. Advantages are lower winding capacitance, more repeatable parasitics, good cooling, and low cost. Disadvantages are reduced power handling and higher flux leakage.
- Low fill: For manufacturing ease and reduced capacitance, winding factor between single layer and 30% may be used.
- Full winding: Factors between 30% and 45% are normally a reasonable trade off between fully utilizing the space available for a given core size, while avoiding excessive manufacturing cost.
- High fill: Winding factors up to about 65% are achievable, but generally only with special expensive measures, such as completing each coil by hand after the residual hole becomes too small to fit the winding shuttle.

Estimating Wound Core Dimensions

For each core size, wound coil dimensions are given for 40% winding factor, since this is a typical, practical value. Worst case package dimensions for coils wound completely full are also shown. These are max expected OD and max expected HT.

To estimate dimensions for other winding factors, use:

$$OD_{X\%} = \sqrt{\frac{X\%}{40\%}\left(OD^2_{40\%} - OD^2_{core}\right) + OD^2_{core}}$$

$$HT_{X\%} = ID_{core} + HT_{core} - \sqrt{\frac{100\% - X\%}{60\%}}\left(ID_{core} + HT_{core} - HT_{40\%}\right)$$

Where: X% is the new winding factor;
$OD_{40\%}$ and $HT_{40\%}$ are the coil dimensions shown on the core data page;
OD_{core} and HT_{core} are the maximum core dimensions after finish.

MLT and DCR

MLT (Mean Length of Turn) is given for a range of winding factors for each core size. To estimate DCR, first calculate the winding factor for the core, wire gauge, and number of turns selected. On the wire table look up resistance per unit of length for the gauge selected. On the data page for the core selected, consult the Winding Turn Length chart. Unless the winding factor is exactly one of the values listed, interpolate to find the MLT. Then,

$$DCR = (MLT)(N)\ (\Omega/\text{Length}).$$

For single layer winding, MLT is the 0% fill value on each core data page. Even easier, DCRs for single layer windings for a range of wire gauges are given in the winding tables on pgs. 148 - 190.

Wire Loss

DC copper loss is calculated directly as I^2R. Naturally, for aluminum conductors, a suitable wire table must be used. Also, the increase of wire resistance with temperature should be considered.

AC copper loss can be significant for large ripple and for high frequency. Unfortunately, calculation of AC copper loss is not a straight-forward matter. Estimates are typically used.

Powder Core Loss Calculation

Core loss is generated by the changing magnetic flux field within a material, since no magnetic materials exhibit perfectly efficient magnetic response. Core loss density (PL) is a function of half of the AC flux swing (½△B=B_{pk}) and frequency (*f*). It can be approximated from core loss charts or the curve fit loss equation:

$$PL = aB_{pk}^{b} f^{c}$$

where a, b, c are constants determined from curve fitting, and B_{pk} is defined as half of the AC flux swing:

$$B_{pk} = \frac{\Delta B}{2} = \frac{B_{AC\,max} - B_{AC\,min}}{2}$$

Units typically used are (mW/cm^3) for PL; Tesla (T) for B_{pk}; and (kHz) for *f*.
The task of core loss calculation is to determine B_{pk} from known design parameters. Once B_{pk} and *f* are known, PL is easily found from the catalog graph or equation.

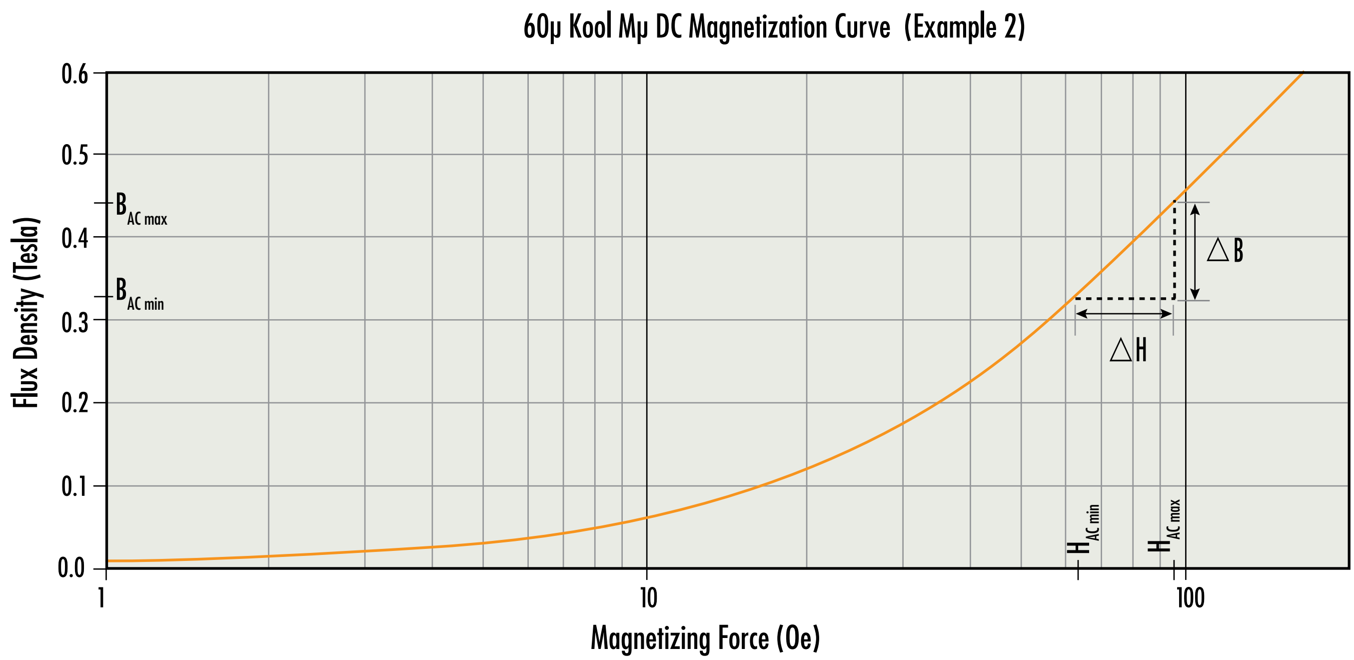
Method 1 – Determine B_{pk} from DC Magnetization Curve. B_{pk}= f(H)

Flux density (B) is a non-linear function of magnetizing field (H), which in turn is a function of winding number of turns (N), current (I), and magnetic path length (l_e). The value of B_{pk} can typically be determined by first calculating *H* at each AC extreme:

$$H_{AC\,max} = 4\pi\left[\frac{N}{l_e}\left(I_{DC} + \frac{\Delta I}{2}\right)\right]$$

$$H_{AC\,min} = 4\pi\left[\frac{N}{l_e}\left(I_{DC} - \frac{\Delta I}{2}\right)\right]$$

Units: Oersted; Amp; mm
From $H_{AC\,max}$, $H_{AC\,min}$, and the BH curve or equation (pgs. 106 -126) $B_{AC\,max}$, $B_{AC\,min}$ and therefore B_{pk} can be determined.



Example 1 - AC current is 10% of DC current:

Approximate the core loss of an inductor with 20 turns wound on Kool Mμ p/n 0077894A7 (p. 166) (60μ, l_e=63.5 mm, A_e=65.4 mm^2, A_L=75 nH/T^2). Inductor current is 20 Amps DC with ripple of 2 Amps peak-peak at 100 kHz.

1.) Calculate *H* and determine *B* from BH curve (p. 106) or curve fit equation (p. 122):

$$H_{AC\,max} = 4\pi \frac{20}{63.5}\left(20 + \frac{2}{2}\right) = 83.1 \text{ Oe} \longrightarrow B_{AC\,max} \cong 0.404T \longrightarrow B_{pk} = \frac{\Delta B}{2} = \frac{0.404 - 0.377}{2} = 0.014T$$

$$H_{AC\,min} = 4\pi \frac{20}{63.5}\left(20 - \frac{2}{2}\right) = 75.2 \text{ Oe} \longrightarrow B_{AC\,min} \cong 0.377T$$

2.) Determine core loss density from chart (p. 63) or calculate from loss equation (p. 104): $PL = (44.3)(0.014^{1.988})(100^{1.541}) \cong 11.0 \frac{mW}{cm^3}$

3.) Calculate core loss: $P_{fe} = (PL)(l_e)(A_e) = (11.0)(63.5)(65.4)\left(\frac{1cm^3}{1000mm^3}\right) \cong 46mW$

Powder Core Loss Calculation

Example 2 - AC current is 40% of DC current:

Approximate the core loss for the same 20-turn inductor, with same inductor current of 20 Amps DC but ripple of 8 Amps peak-peak at 100kHz.

1.) Calculate *H* and determine *B* from BH curve fit equation:

$$H_{AC\,max} = 4\pi \frac{20}{63.5}\left(20 + \frac{8}{2}\right) = 95.0\text{ Oe} \longrightarrow B_{AC\,max} \cong 0.441\text{T}$$

$$H_{AC\,min} = 4\pi \frac{20}{63.5}\left(20 - \frac{8}{2}\right) = 63.3\text{ Oe} \longrightarrow B_{AC\,min} \cong 0.331\text{T}$$

$$\longrightarrow B_{pk} = \frac{\Delta B}{2} = \frac{0.441 - 0.331}{2} = 0.055\text{T}$$

2.) Determine core loss density from chart or calculate from loss equation: $PL = (44.3)\,(0.055^{1.988})\,(100^{1.541}) \cong 168\ \frac{mW}{cm^3}$

3.) Calculate core loss: $P_{fe} = (PL)\,(l_e)\,(A_e) = (168)\,(63.5)(65.4)\,(0.001) \cong 698\text{ mW}$

Note: Core losses result only from AC excitation. DC bias applied to any core does not cause any core losses, regardless of the magnitude of the bias.

Example 3 – pure AC, no DC:

Approximate the core loss for the same 20-turn inductor, now with 0 Amps DC and 8 Amps peak-peak at 100kHz.

1.) Calculate H and determine B from BH curve fit equation:

$$H_{AC\,max} = 4\pi \frac{20}{63.5}\left(+\frac{8}{2}\right) = 15.8\text{ Oe} \longrightarrow B_{AC\,max} \cong 0.092\text{T}$$

$$H_{AC\,min} = 4\pi \frac{20}{63.5}\left(-\frac{8}{2}\right) = -15.8\text{ Oe} \longrightarrow B_{AC\,min} \cong -0.092\text{T}$$

$$\longrightarrow B_{pk} = \frac{\Delta B}{2} \sim 0.092\text{T}$$

Note: Curve fit equations are not valid for negative values of B. Evaluate for the absolute value of B, then reverse the sign of the resulting H value.

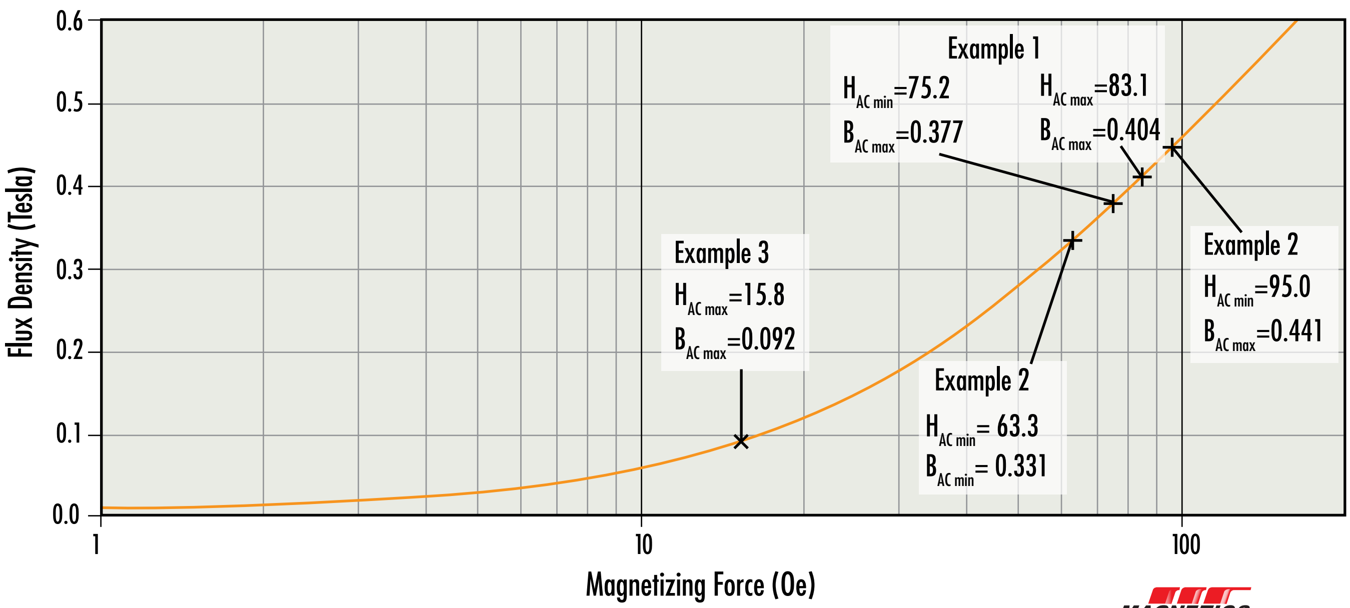
2.) Determine core loss density from chart or calculate from loss equation.

$$PL = (44.3)\,(0.092^{1.988})\,(100^{1.541}) \cong 466\ \frac{mW}{cm^3}$$

3.) Calculate core loss: $P_{fe} = (PL)\,(l_e)\,(A_e) = (466)\,(6.35)\,(0.654) \cong 1.94\text{W}$

Plotted below are the operating ranges for each of the three examples.
Note the significant influence of DC bias on core loss, comparing Example 3 with Example 2. Lower permeability results in less B_{pk}, even though the current ripple is the same. This effect can be achieved with DC bias, or by selecting a lower permeability material.

60μ Kool Mμ DC Magnetization Curve



Powder Core Loss Calculation

Method 2 – For small △H, approximate B_{pk} from effective perm with DC bias. $B_{pk} = f(\mu_e, \triangle H)$

The instantaneous slope of the BH curve is defined as the absolute permeability, which is the product of permeability of free space ($\mu_0=4\pi \times 10^{-7}$) and the material permeability (μ), which varies along the BH curve. For small AC, this slope can be modeled as a constant throughout AC excitation, with μ approximated as the effective perm at DC bias (μ_e):

$$\frac{dB}{dH} = \mu_0\mu_e \longrightarrow \frac{\triangle B}{\triangle H} = \mu_0\mu_e \longrightarrow \triangle B = \mu_0\mu_e\triangle H \quad B_{pk} = \frac{\triangle B}{2} = (0.5)\,\mu_0\mu_e\,\triangle H$$

The effective perm with DC bias is shown in this catalog as % of initial perm, $(\%\mu_i)(\mu_i)$. This can be obtained from the DC bias curve or curve fit equation, (pgs. 34 - 41).

$$B_{pk} = (0.5)\,(\mu_0)\,(\%\mu_i)\,(\mu_i)\left(\frac{1000}{4\pi}\right)(\triangle H) \quad \text{where} \quad \triangle H = 4\pi\frac{N\triangle I}{l_e}$$

△H is multiplied by $\frac{1000}{4\pi}$ because H units here are Oersteds and B units are Tesla.

Reworking Example 1 (20 Amps DC, 2 Amps pk-pk)

$$H_{DC} = \left[4\pi\frac{20}{63.5}(20)\right] = 79.2 \text{ Oe} \longrightarrow \text{from curve fit equation, } \%\mu_i = 0.58$$

$$\mu_i = 60$$

$$\triangle H = 4\pi\frac{N\triangle I}{l_e} = 4\pi\,\frac{20\,(2)}{63.5} = 7.9 \text{ Oe}$$

$$B_{pk} = 0.5\,(4\pi \times 10^{-7})\,(0.058)\,(60)\left(\frac{1000}{4\pi}\right)(7.9) \cong 0.014\text{T} \quad \text{(this compares to 0.014T using Method 1)}$$

Reworking Example 2 (20 Amps DC, 8 Amps pk-pk)

From example 1,

$$H_{DC} = 79.2 \text{ Oe};\ \%\mu_i = 0.58;\ \mu_i = 60$$

$$\triangle H = 4\pi\frac{N\triangle I}{l_e} = 4\pi\,\frac{20\,(8)}{63.5} = 31.7 \text{ Oe}$$

$$B_{pk} = 0.5\,(4\pi \times 10^{-7})\,(0.058)\,(60)\left(\frac{1000}{4\pi}\right)(31.7) = 0.055\text{T} \quad \text{(this compares to 0.055T using Method 1)}$$

Reworking Example 3 (0 Amps DC, 8 Amps pk-pk)

From example 2,

$$\triangle H = 31.7 \text{ Oe}$$

$$H_{DC} = 0 \quad \%\mu_i = 1.0$$

$$B_{pk} = 0.5\,(4\pi \times 10^{-7})\,(1)\,(60)\left(\frac{1000}{4\pi}\right)(31.7) = 0.095\text{T} \quad \text{(this compares to 0.092T using Method 1)}$$

Powder Core Loss Calculation

Method 3 – For small $\triangle H$, determine B_{pk} from biased inductance. $B_{pk}=f(L,I)$

B can be rewritten in terms of inductance by considering Faraday's equation and its effect on inductor current:

$$V_L = NA\frac{dB}{dt} = L\frac{dI}{dt} \longrightarrow dB = \frac{L}{NA}dI$$

L varies non-linearly with I. For small AC, L can be assumed constant throughout AC excitation and is approximated by the biased inductance (L_{DC}).

$$\triangle B = \frac{L_{DC}\triangle I}{NA} \longrightarrow B_{pk} = \frac{L_{DC}\triangle I}{2NA_e}$$

Another way of looking at this is by rewriting the relationship between B and L as:

$$\longrightarrow \frac{dB}{dH} = \frac{L}{NA}\frac{dI}{dH}$$

Substituting (dH/dI) with (N/l_e) and A with A_e:

$$\longrightarrow \frac{dB}{dH} = \frac{Ll_e}{N^2A_e}$$

L varies non-linearly with H. For small AC, the slope of the BH curve is assumed constant throughout AC excitation, and L is approximated by the biased inductance (L_{DC}).

$$\frac{\triangle B}{\triangle H} = \frac{L_{DC}\,l_e}{N^2A_e} \longrightarrow \triangle B = \frac{L_{DC}\,l_e}{N^2A_e}\triangle H = \frac{L_{DC}\triangle I}{NA_e} \longrightarrow \triangle B_{pk} = \frac{L_{DC}\triangle I}{2NA_e}$$

Powder Core Loss Calculation

Reworking Example 1:

$$L_{nl}\text{ (no load)} = (A_L)(N^2) = (75nH/T^2)(20^2) = 30\mu H$$

$$L_{DC}\text{ (20A)} = (\%\mu_i)(L_{nl}) = (0.58)(30) = 17.4\mu H$$

$$B_{pk} = \frac{(17.4)(10^{-6})(2)}{2(20)(65.4)(10^{-6})} = 0.013T$$ (this compares to 0.014T per Method 1; 0.014T per Method 2).

Reworking Example 2:

From example 1: $L_{DC} = 17.4\mu H$

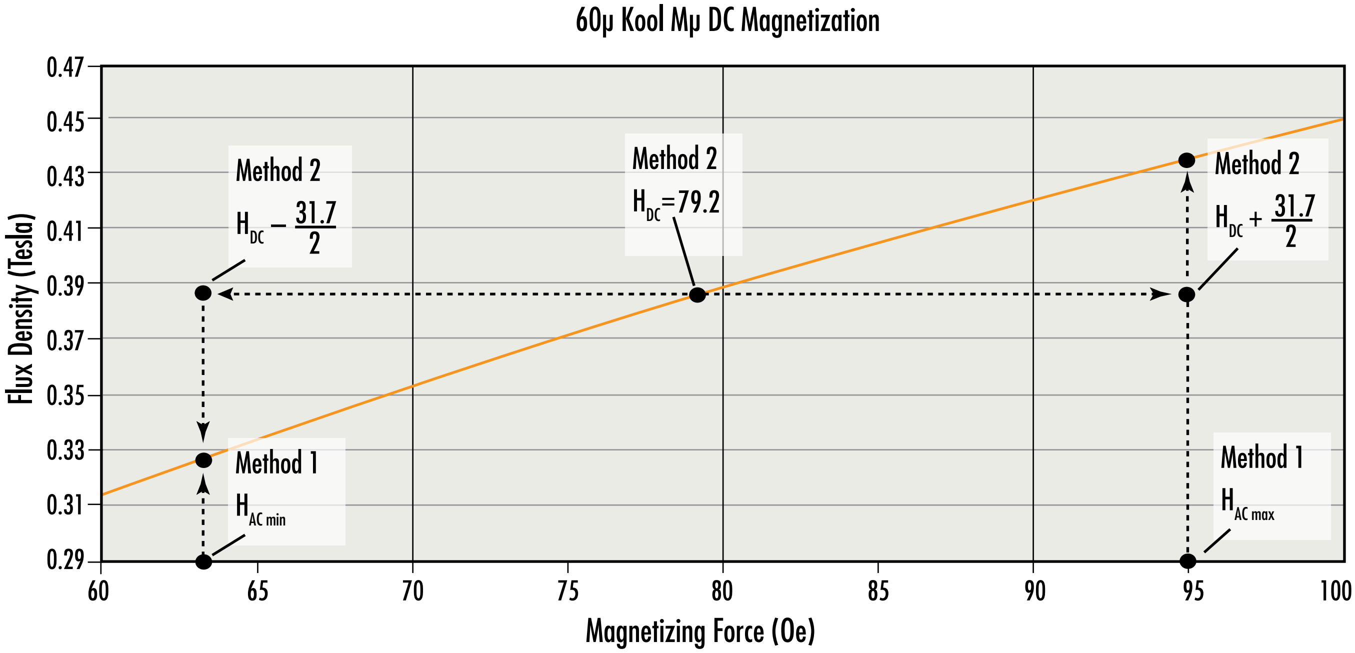
$$B_{pk} = \frac{(17.4)(10^{-6})(8)}{2(20)(65.4)(10^{-6})} = 0.053T$$ (this compares to 0.055T per Method 1; 0.055T per Method 2).

Reworking Example 3:

$$L_{DC} = L_{nl} + 30\mu H$$

$$B_{pk} = \frac{(30)(10^{-6})(8)}{2(20)(65.4)(10^{-6})} = 0.092T$$ (this compares to 0.092T per Method 1; 0.095T per Method 2).

After B_{pk} is found using Method 1, Method 2, or Method 3, then it is simple to use to use the core loss curve or curve fit equation to find the core loss density (PL) for the known drive frequency. The plot below illustrates the difference between Method 1 and Method 2.



Core Selector Charts

The core selector charts are a quick guide to finding the optimum permeability and smallest core size for DC bias applications.

These charts are based on a permeability reduction (and therefore inductance) of not more than 50% with DC bias; typical winding factors of 40% for toroids, 60% for E cores and U cores, and 75% for EQ cores (helical coil assumed); and an AC current that is small relative to the DC current. These charts are based on the nominal core inductance and a current density 400-1000 A/cm^2:

Kool Mµ	400 A/cm^2
Kool Mµ MAX	600 A/cm^2
Kool Mµ H*f*	400 A/cm^2
Kool Mµ Ultra	400 A/cm^2
XFlux	600 A/cm^2
XFlux Ultra	600 A/cm^2
High Flux	600 A/cm^2
Edge	600 A/cm^2
MPP	400 A/cm^2
Kool Mµ E/U Cores	400 A/cm^2
Kool Mµ MAX E/U Cores	400 A/cm^2
Kool Mµ MAX High Performance E/U Cores	400 A/cm^2
Kool Mµ H*f* E/U Cores	400 A/cm^2
Kool Mµ EQ/LP Cores	800 A/cm^2
Kool Mµ MAX EQ/LP Cores	800 A/cm^2
XFlux EQ/LP Cores	1000 A/cm^2
High Flux EQ/LP Cores	1000 A/cm^2

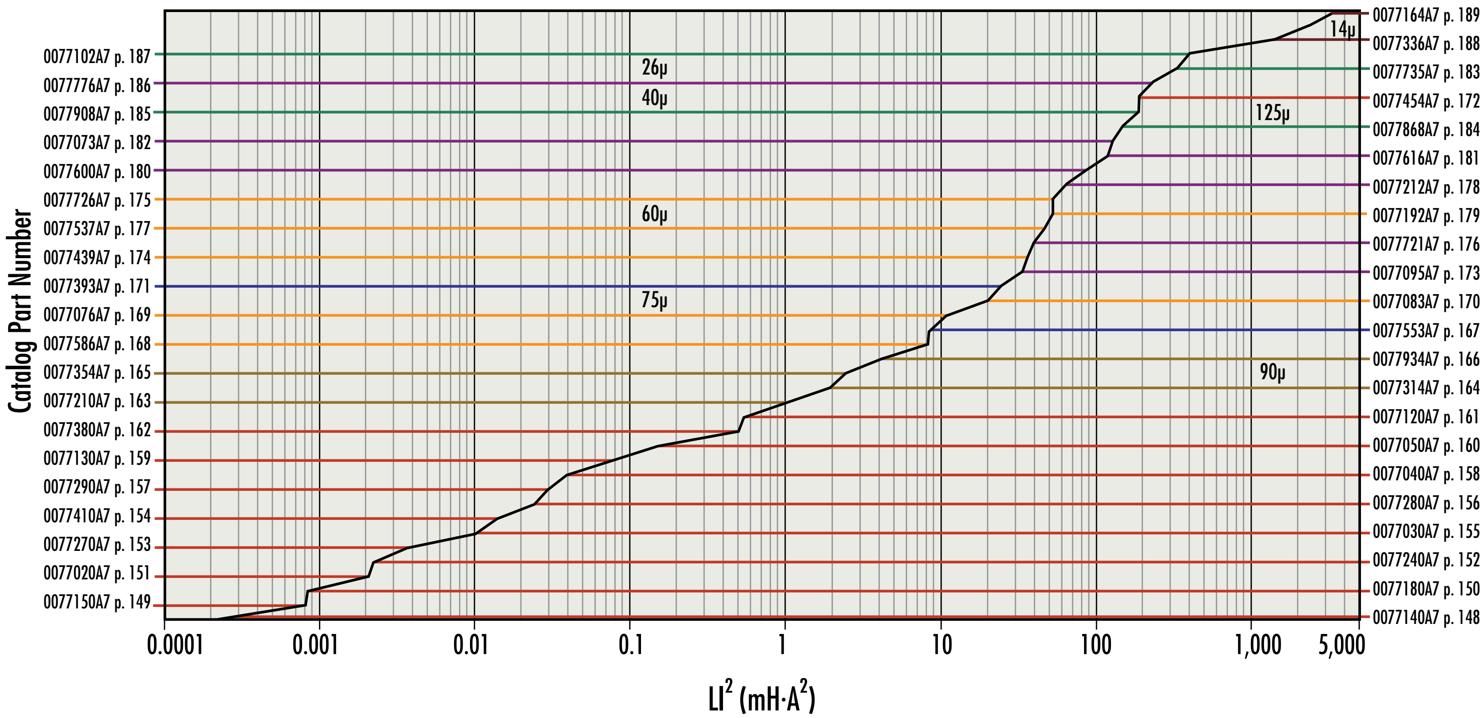
If a core is being selected for use with a large AC current relative to any DC current, such as a flyback inductor or buck/boost inductor, frequently a larger core will be needed to limit the core losses due to AC flux. In other words, the design becomes loss-limited rather than bias-limited.

For additional power handling capability, stacking of cores will yield a proportional increase in power handling. For example, double stacking of the C055908A2 core will result in doubled power handling capability to about 400 mH·A^2.

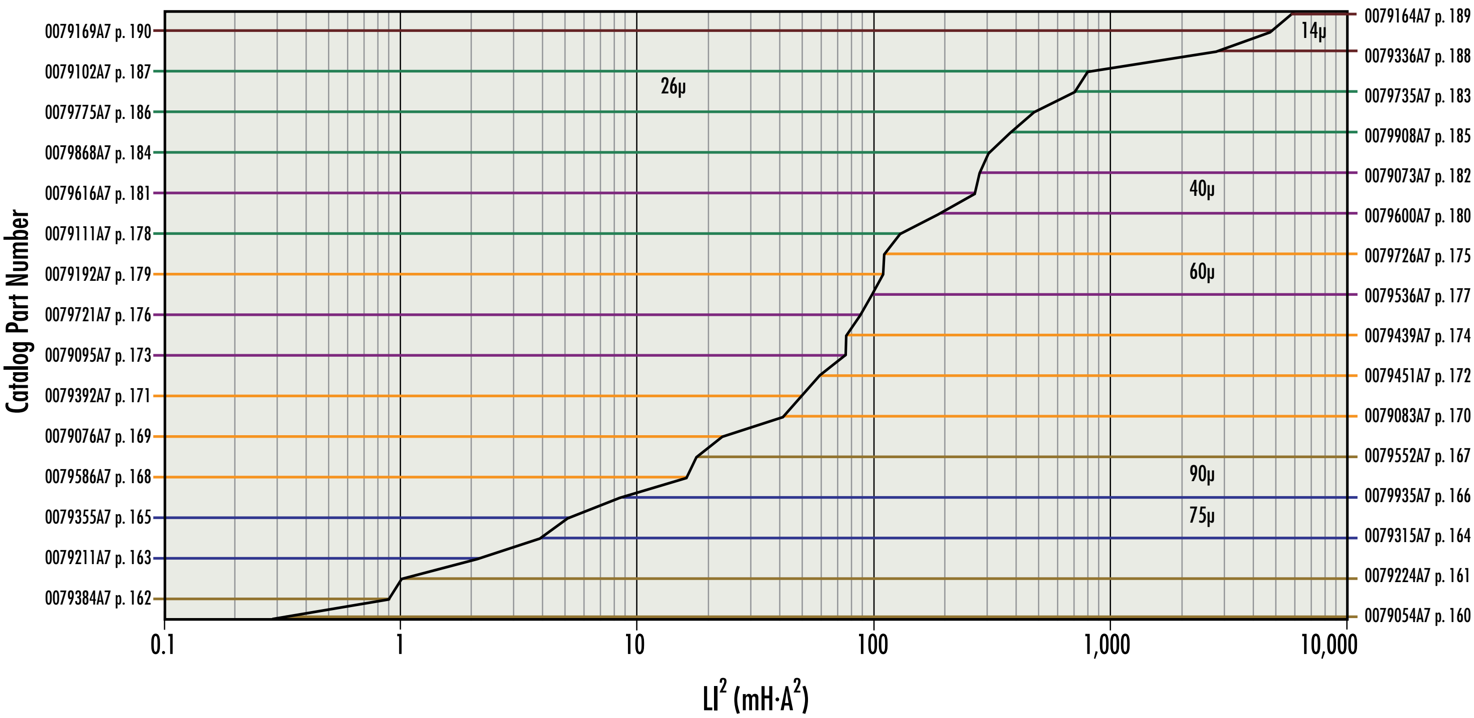
Cores with increased heights are easily ordered. Contact Magnetics for more information.

Core Selector Charts

Kool Mµ® Toroids

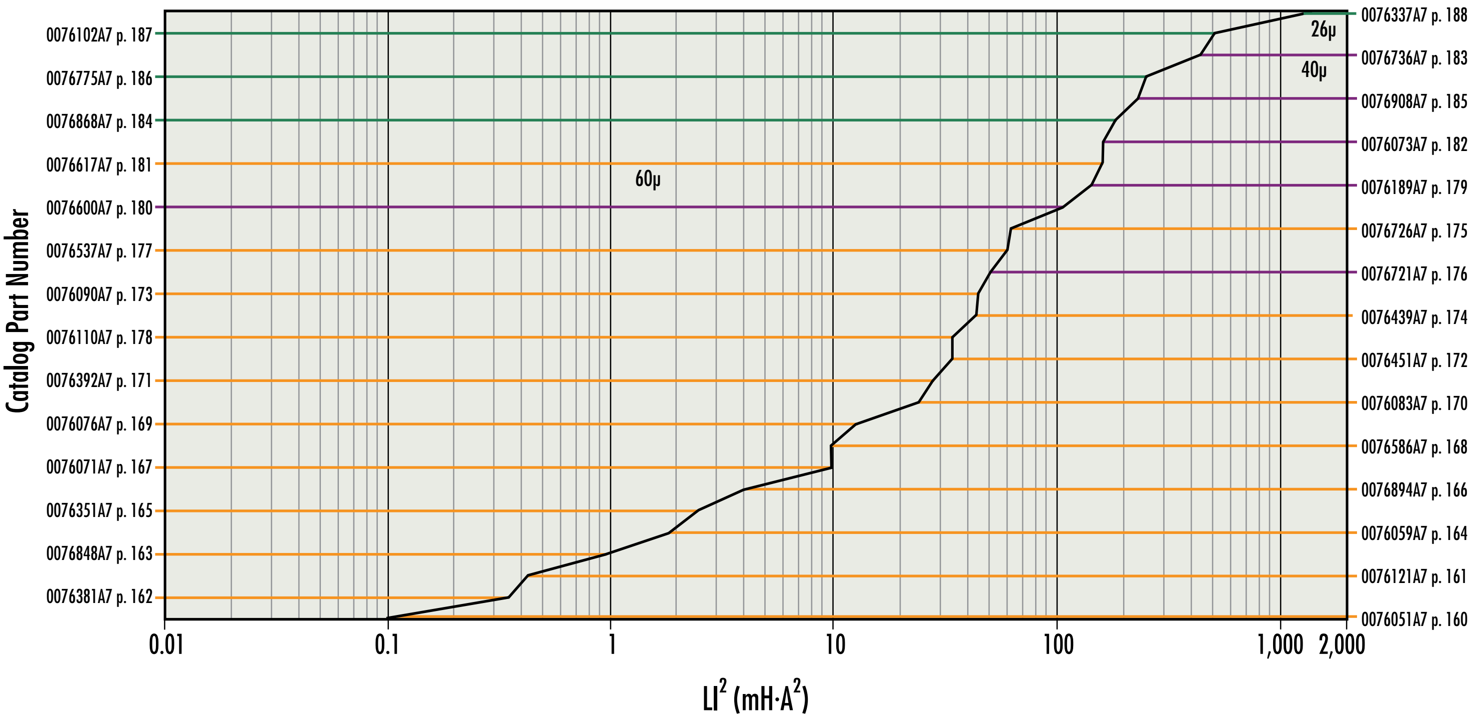


Kool Mµ® MAX Toroids

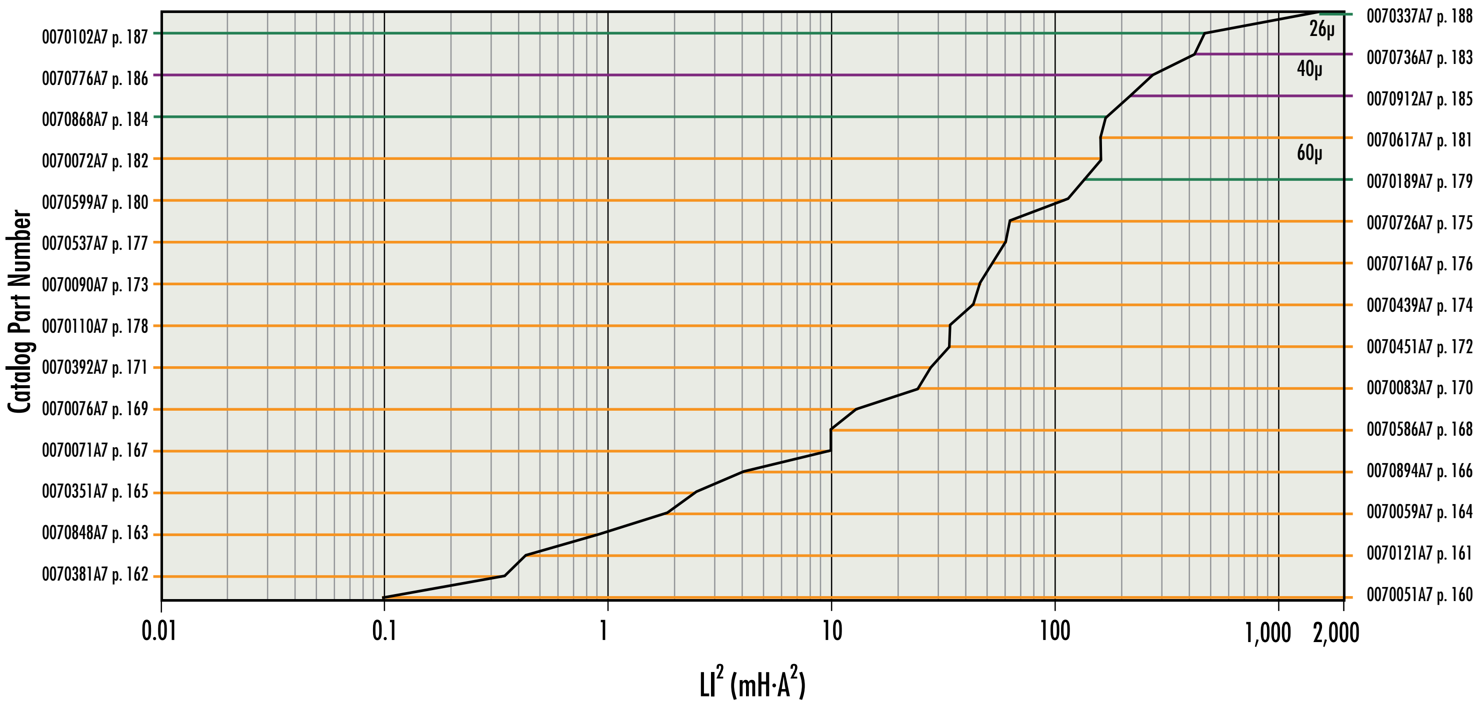


Core Selector Charts

Kool Mμ® H*f* Toroids

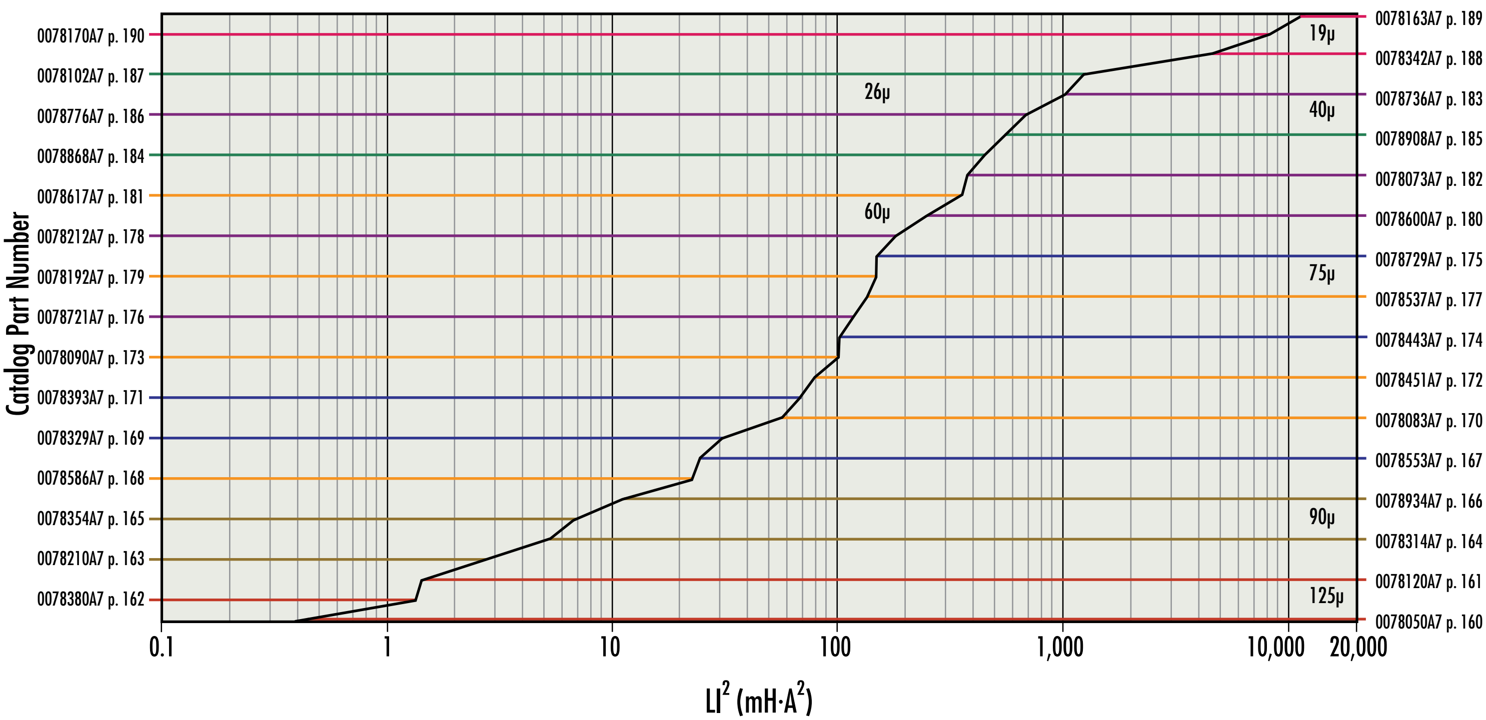


Kool Mμ® Ultra Toroids

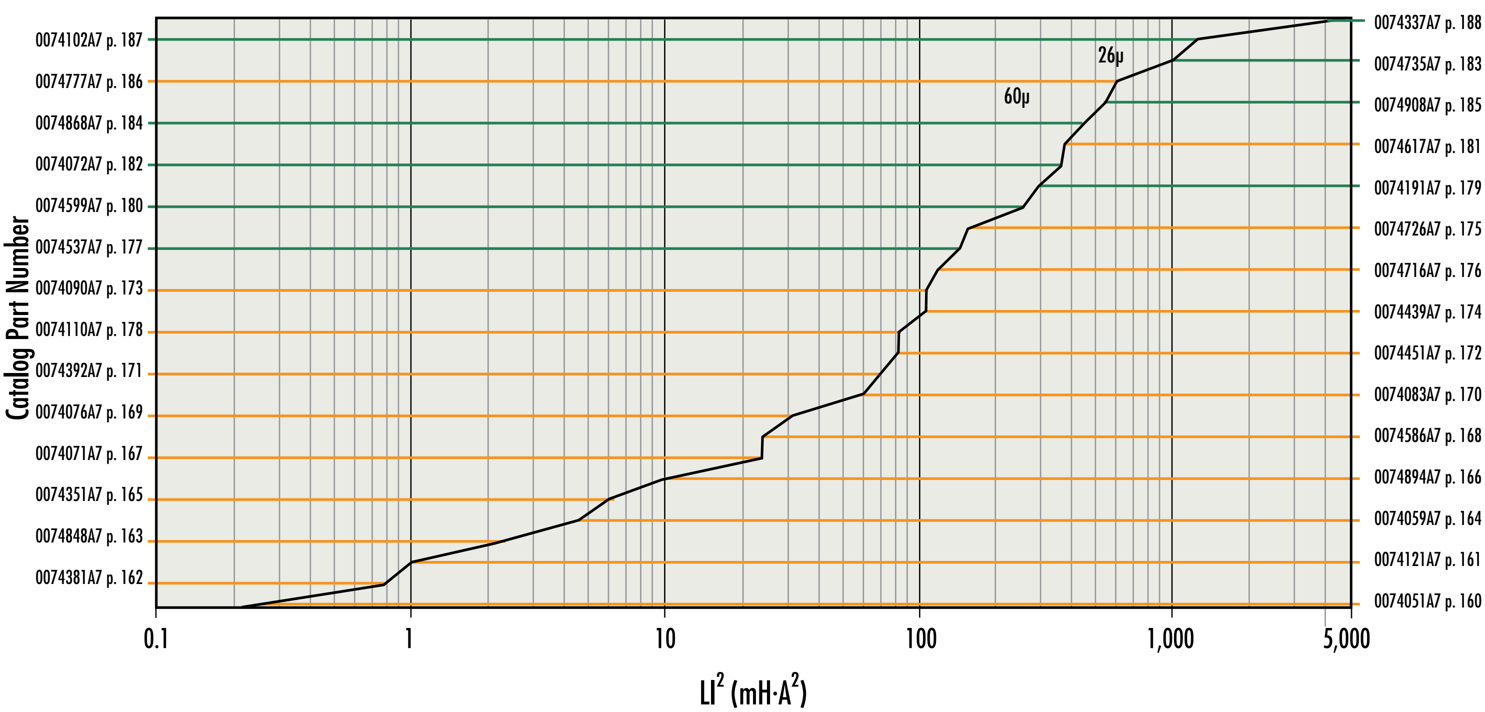


Core Selector Charts

XFlux® Toroids

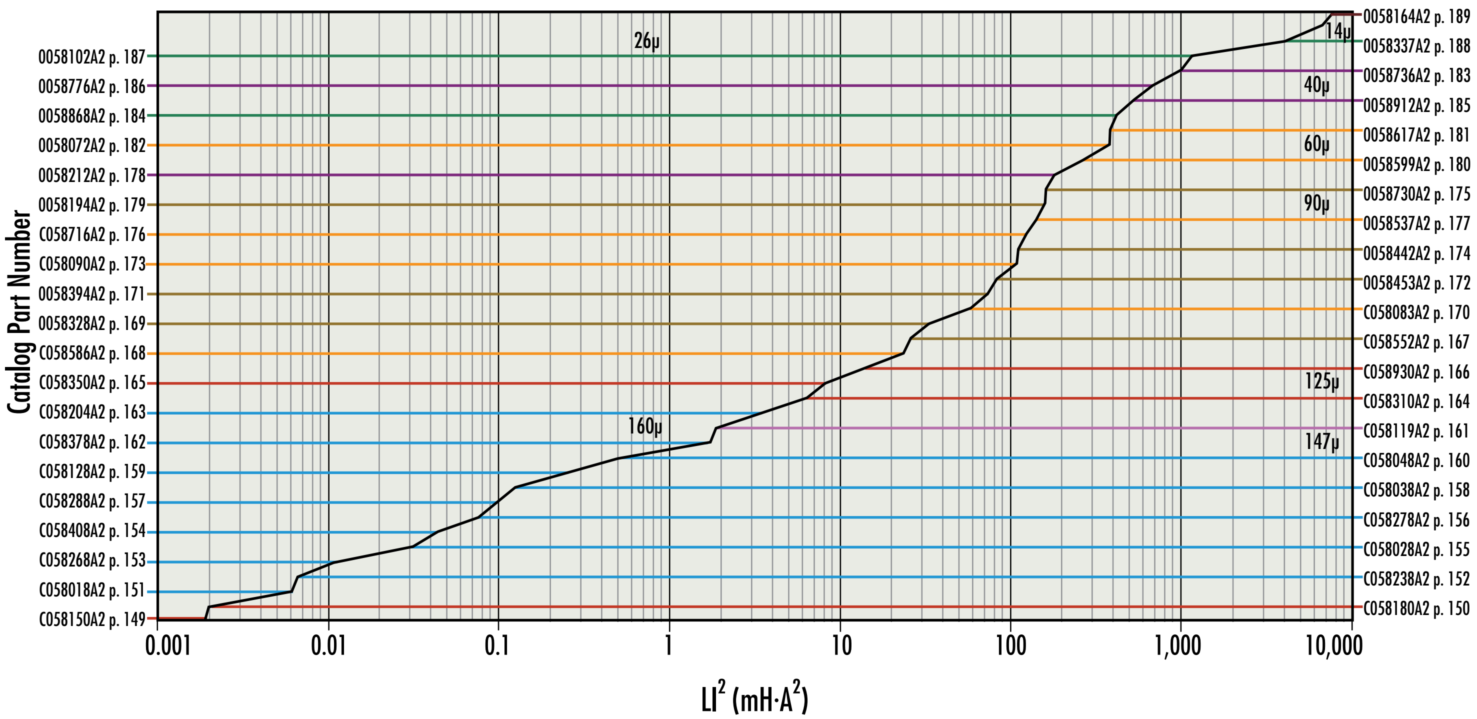


XFlux® Ultra Toroids

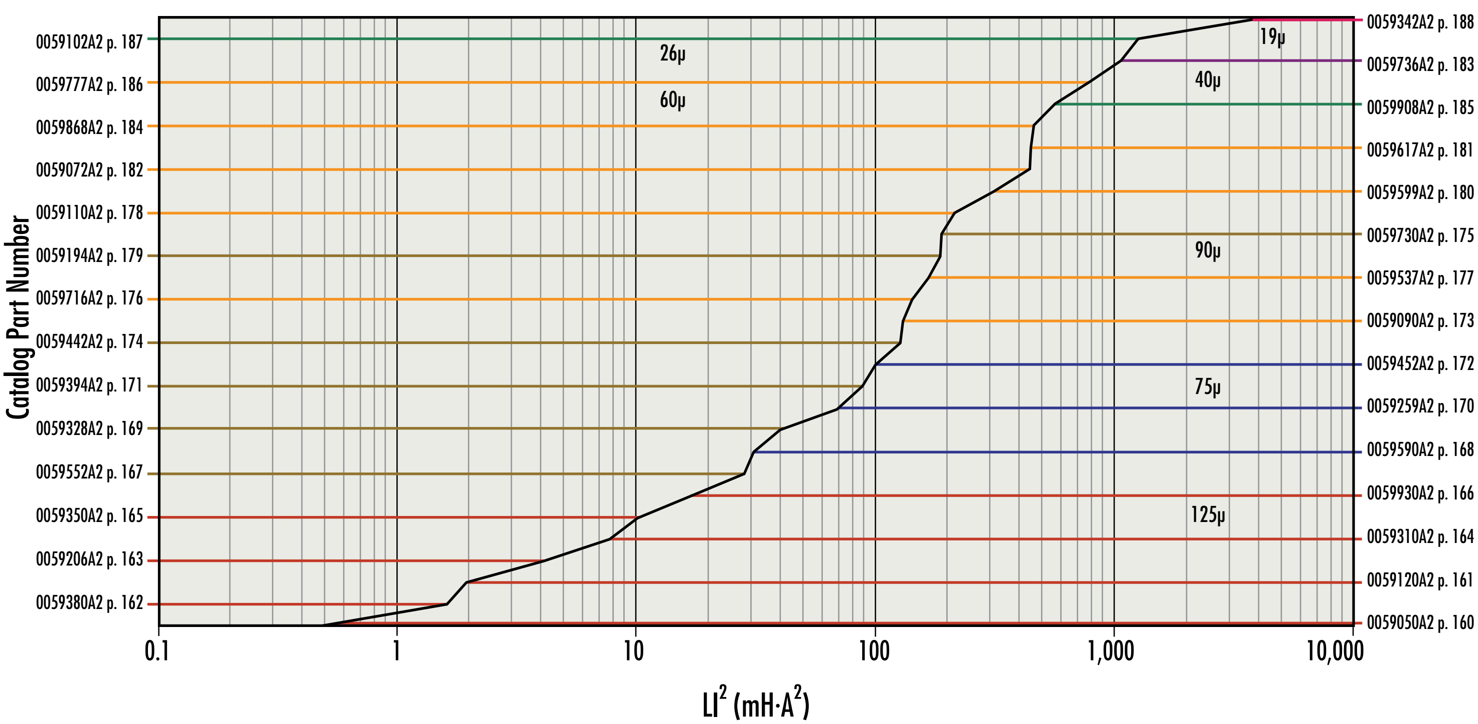


Core Selector Charts

High Flux Toroids

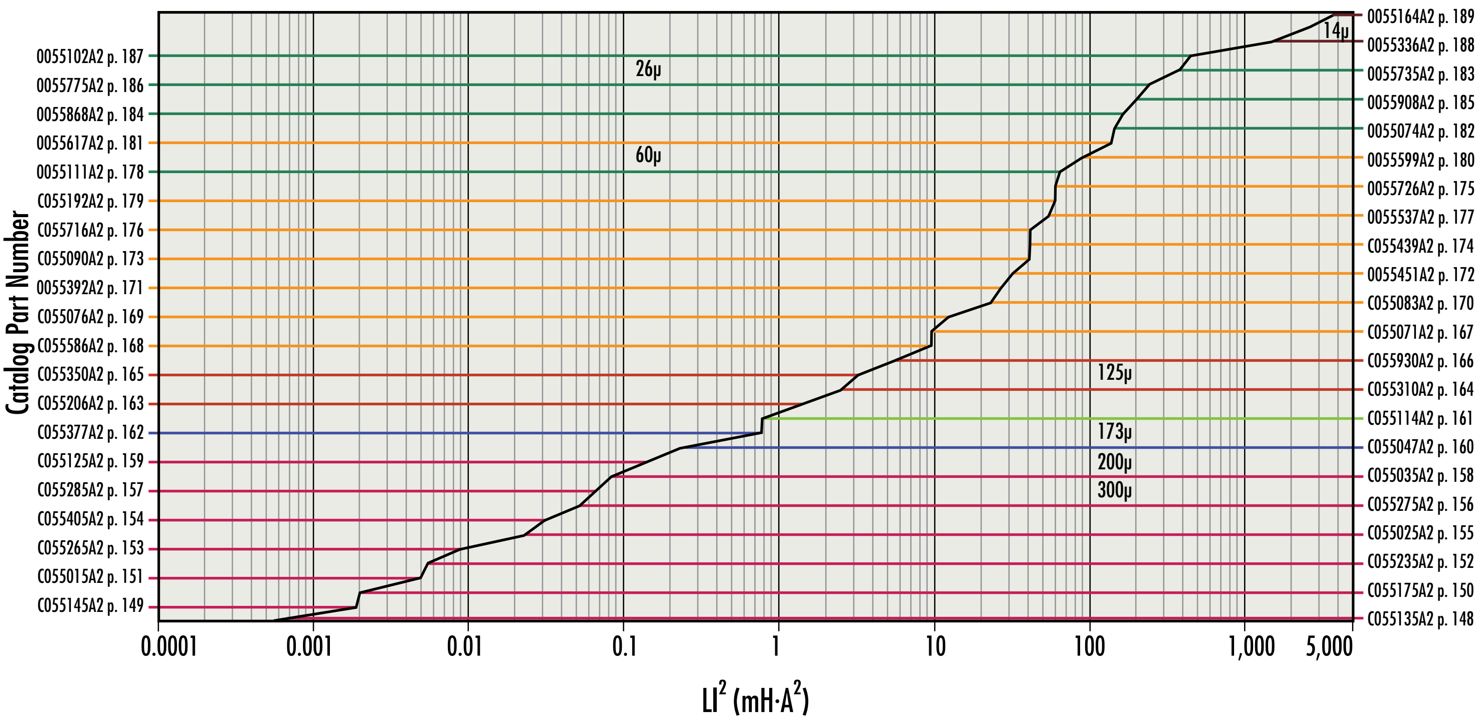


Edge® Toroids

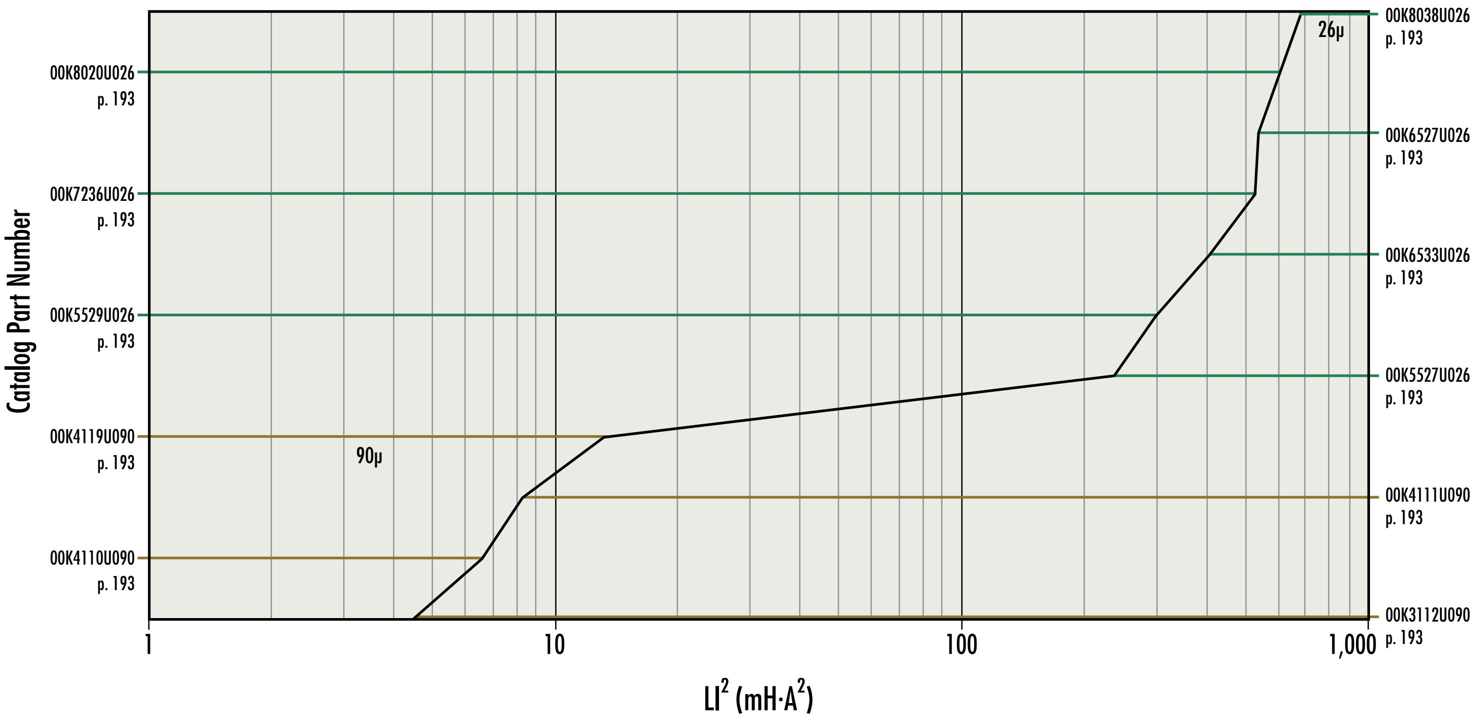


Core Selector Charts

MPP Toroids



Kool Mµ® U Cores



Core Selector Charts

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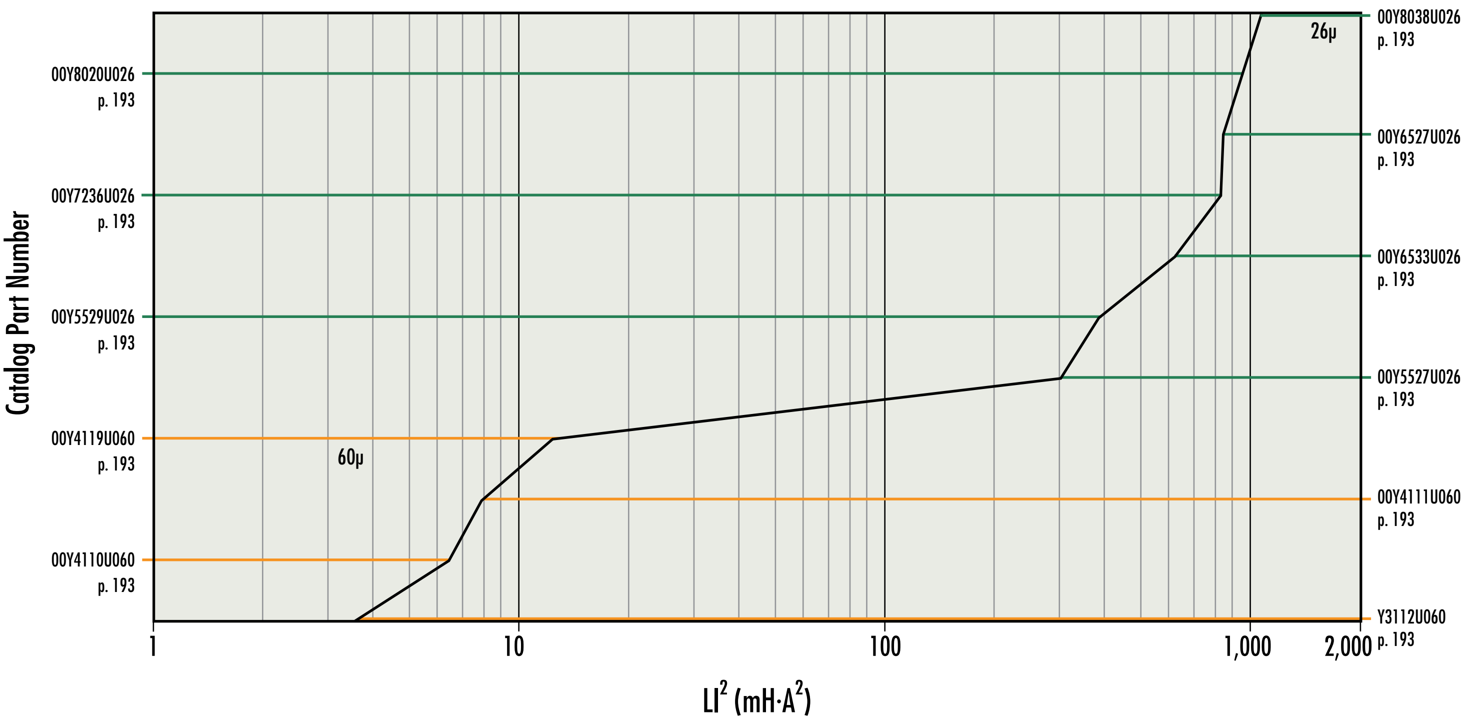
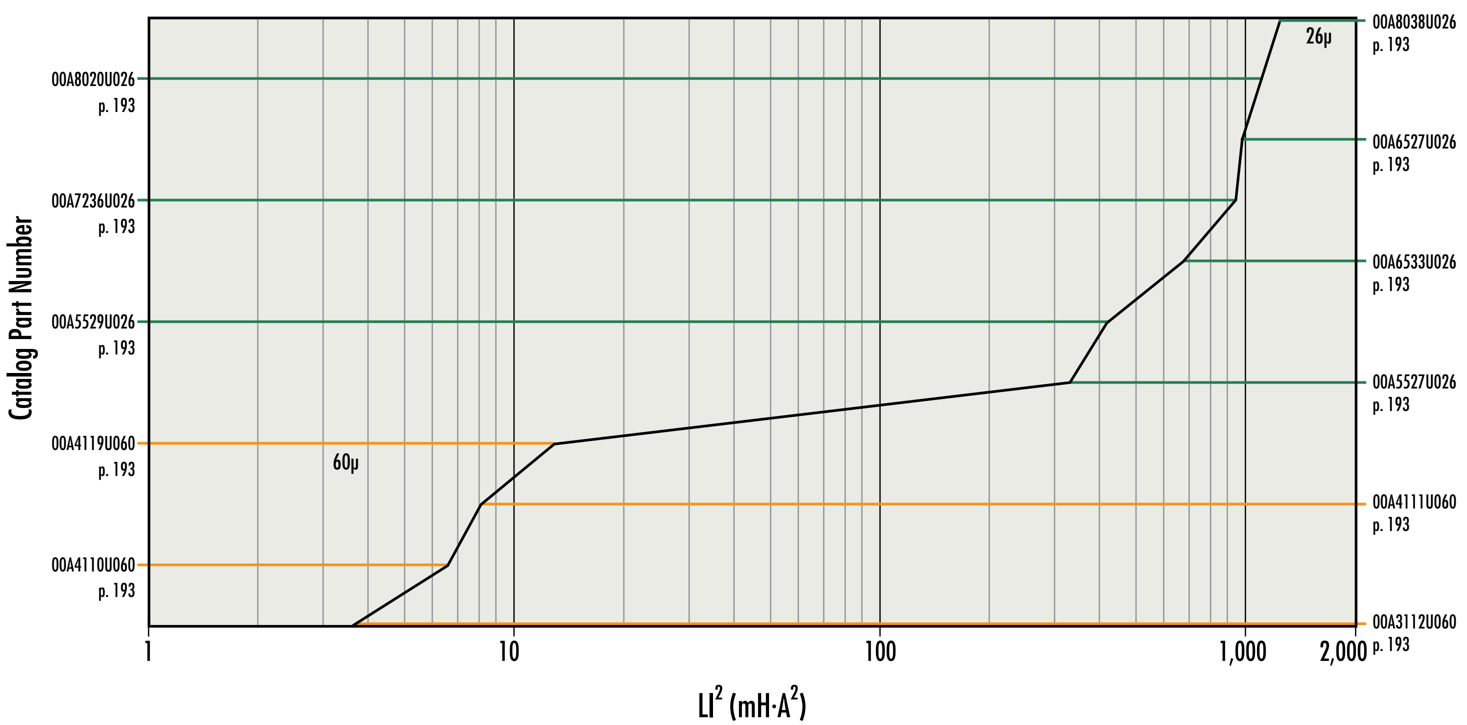
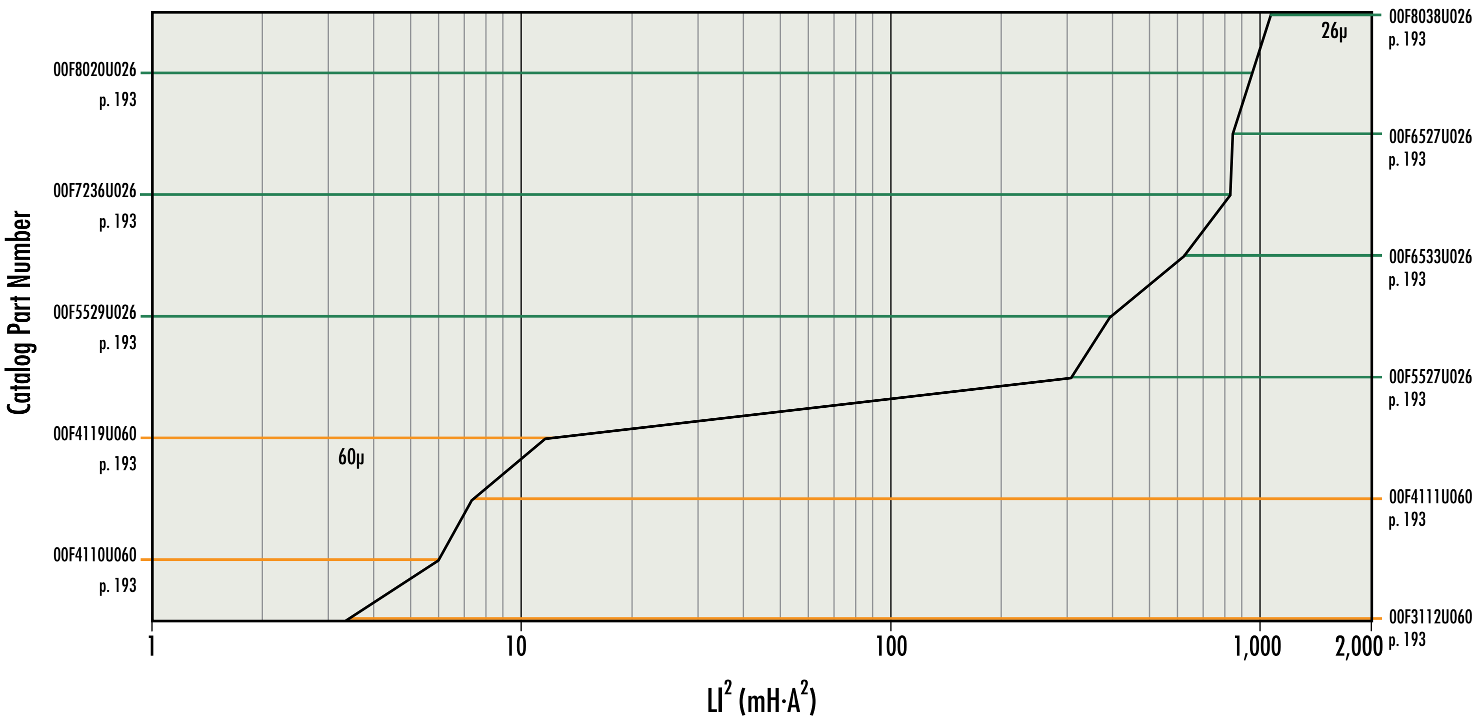


Kool Mμ® MAX High Performance U Cores

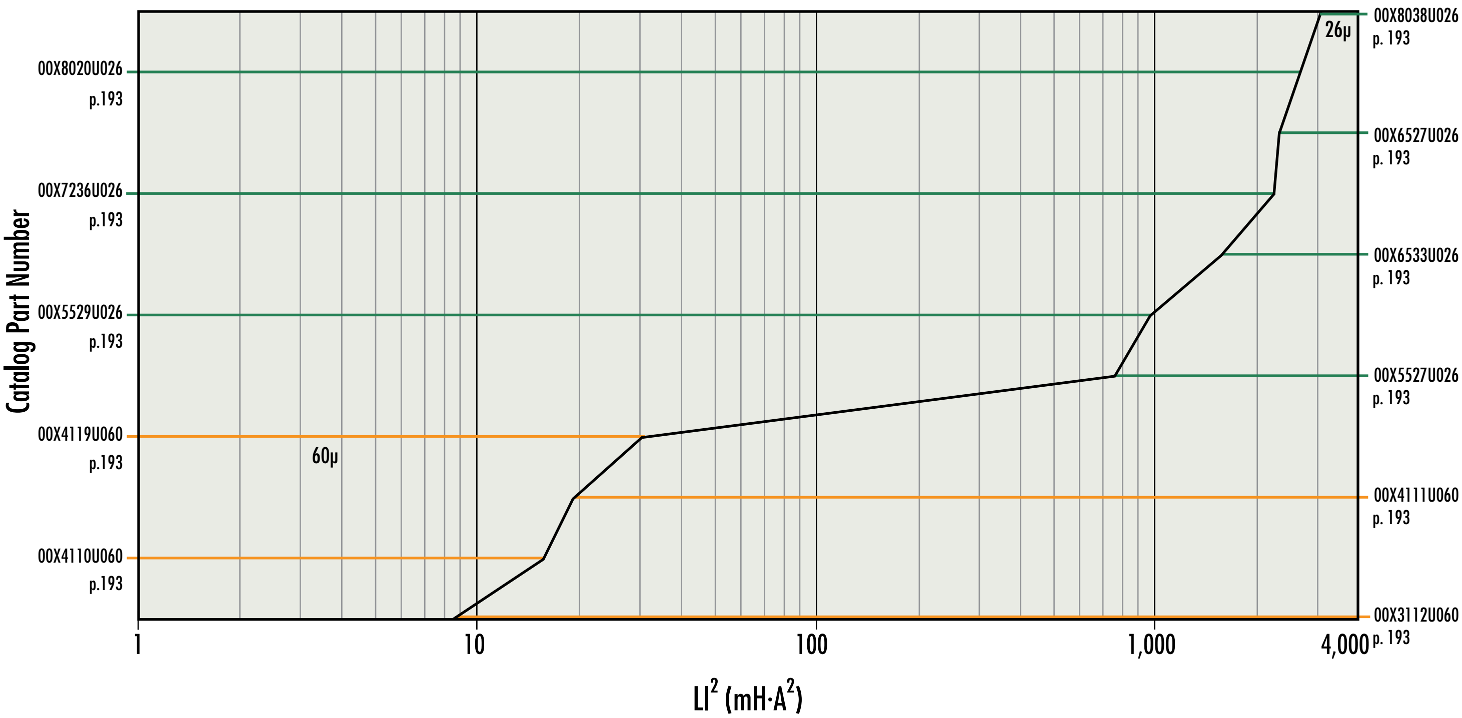


Core Selector Charts

Kool Mμ® Hƒ U Cores

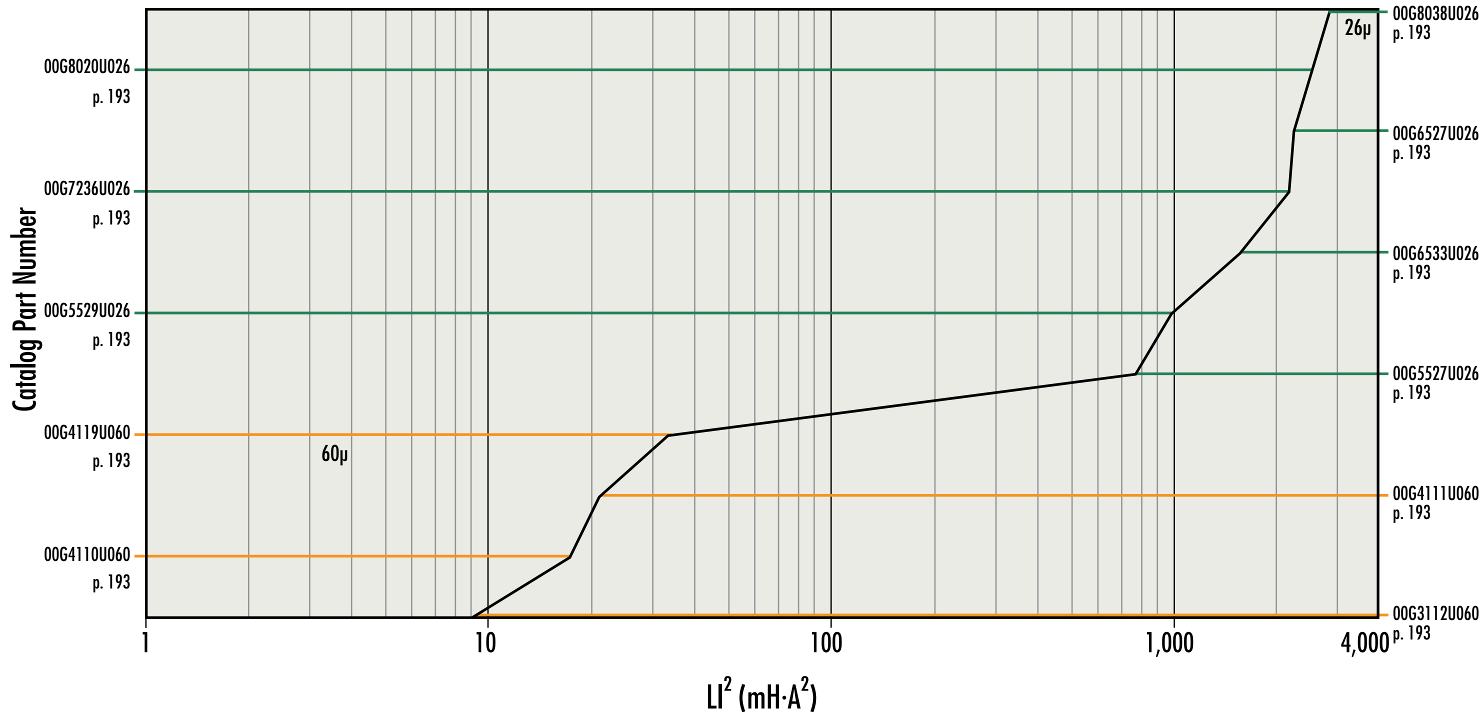


XFlux® U Cores

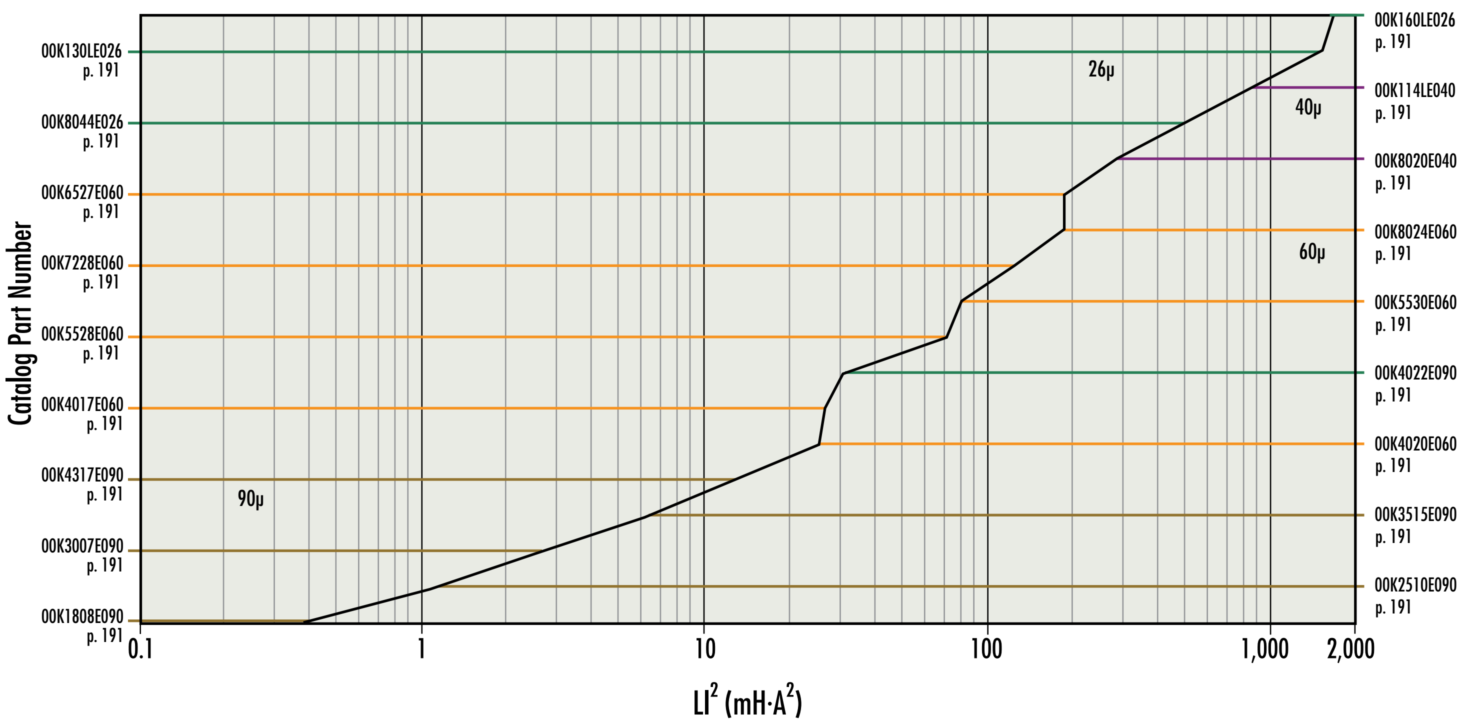


Core Selector Charts

Edge® U Cores

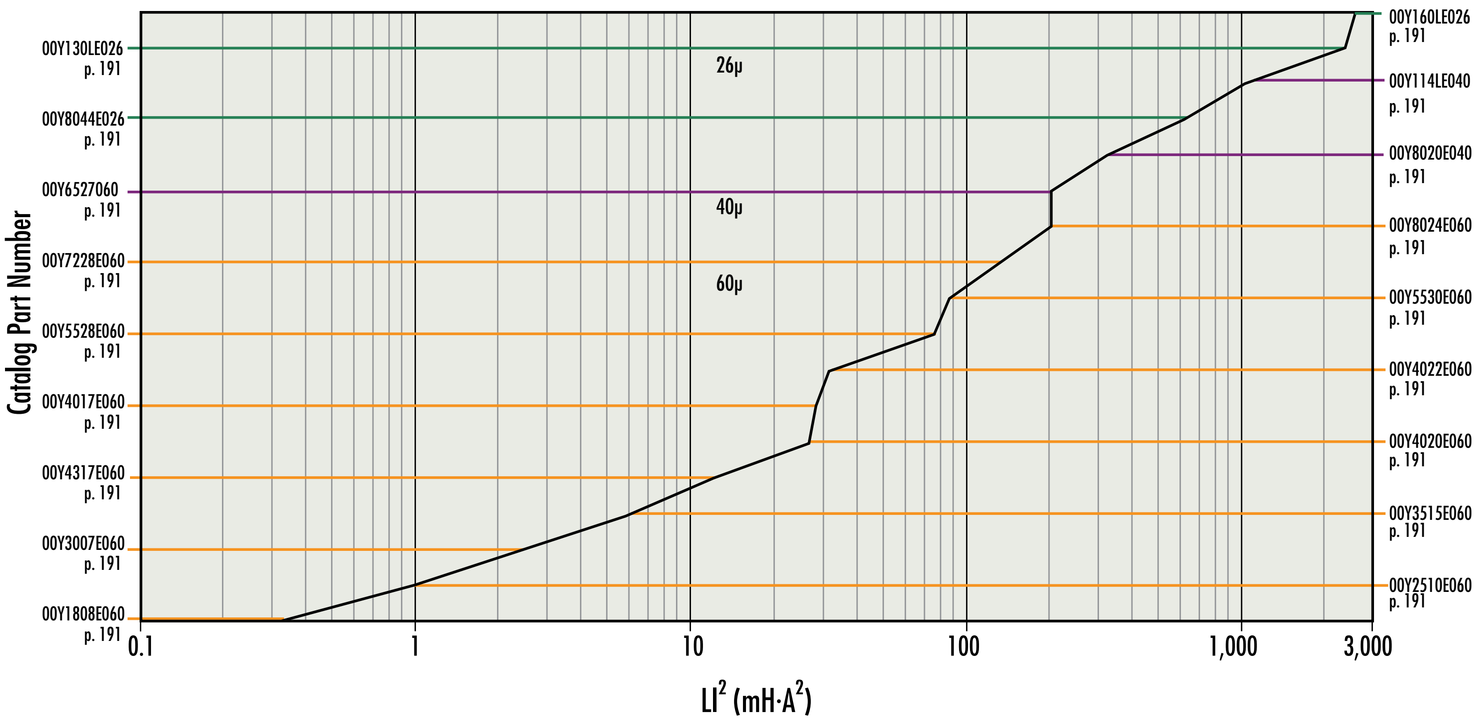


Kool Mµ® E Cores

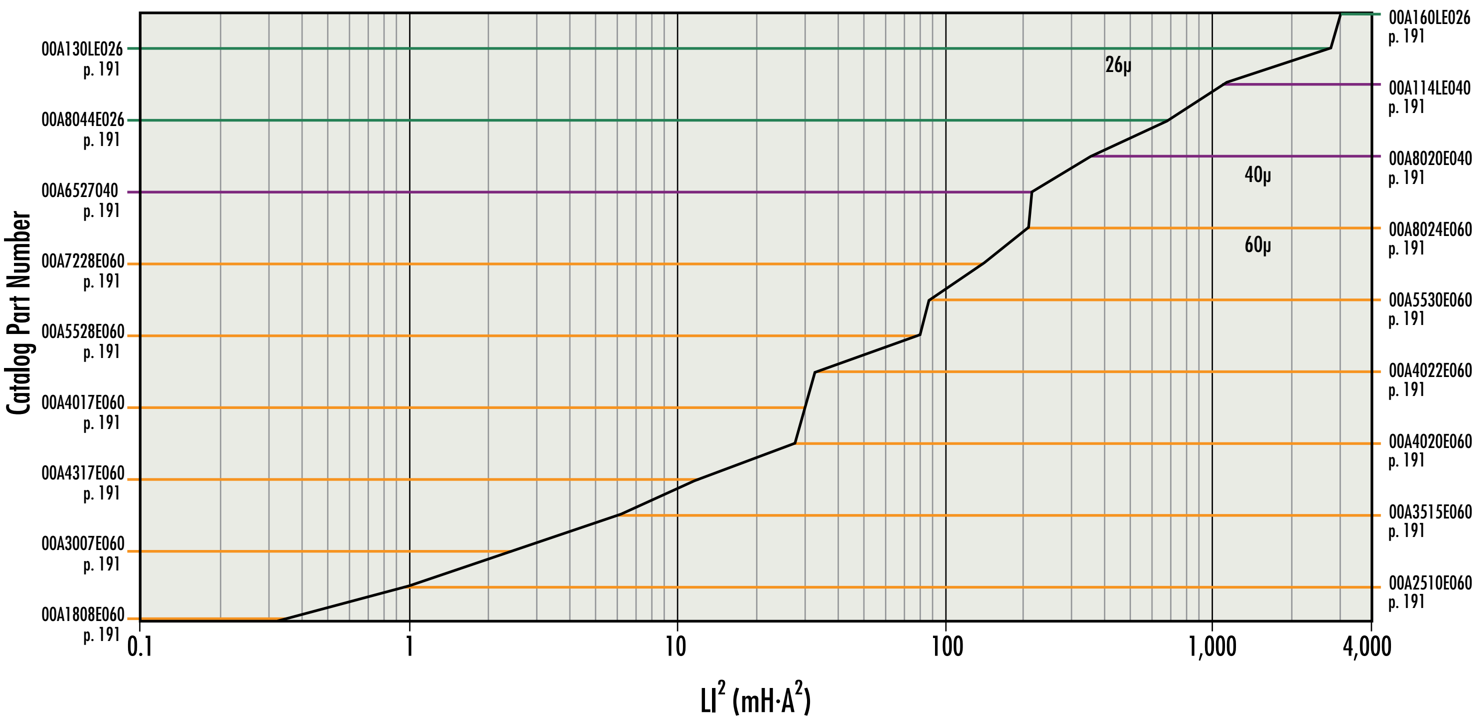


Core Selector Charts

Kool Mµ® MAX E Cores

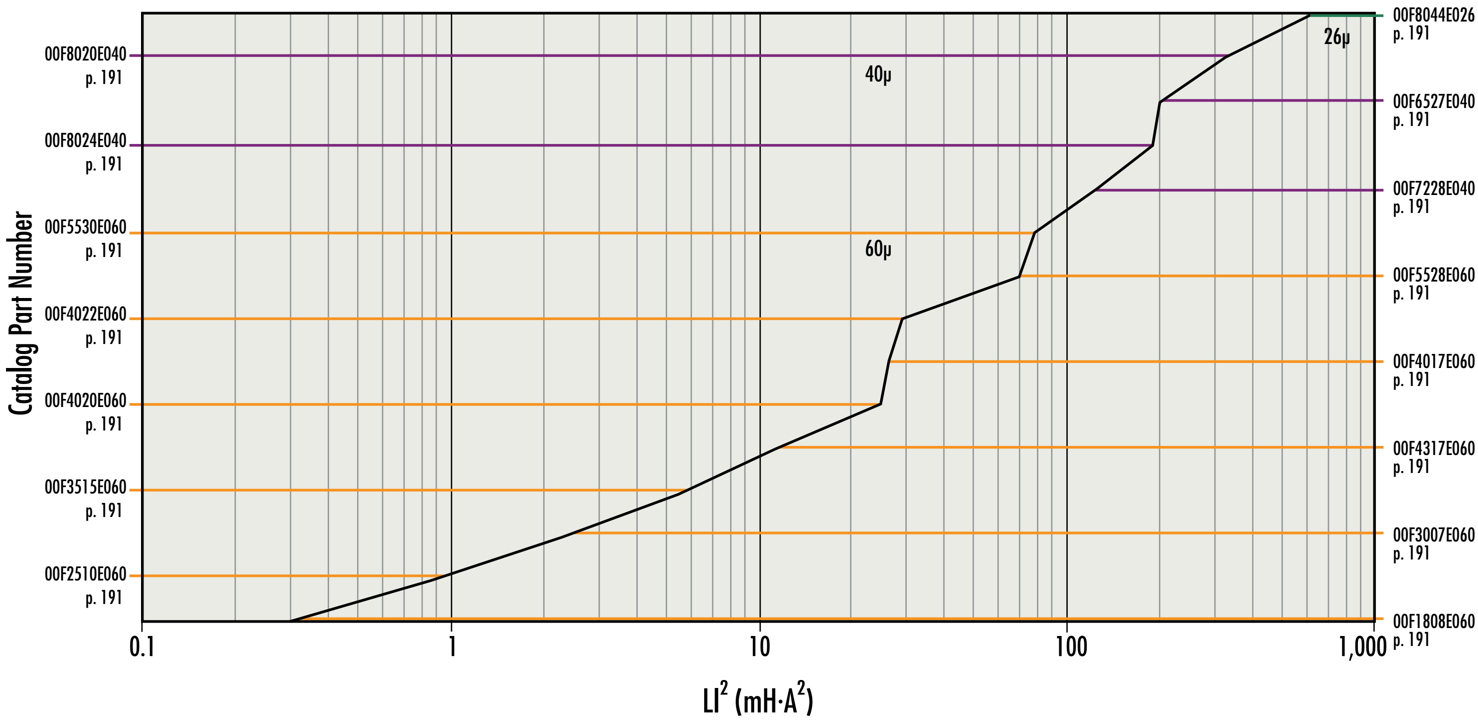


Kool Mµ® MAX High Performance E Cores

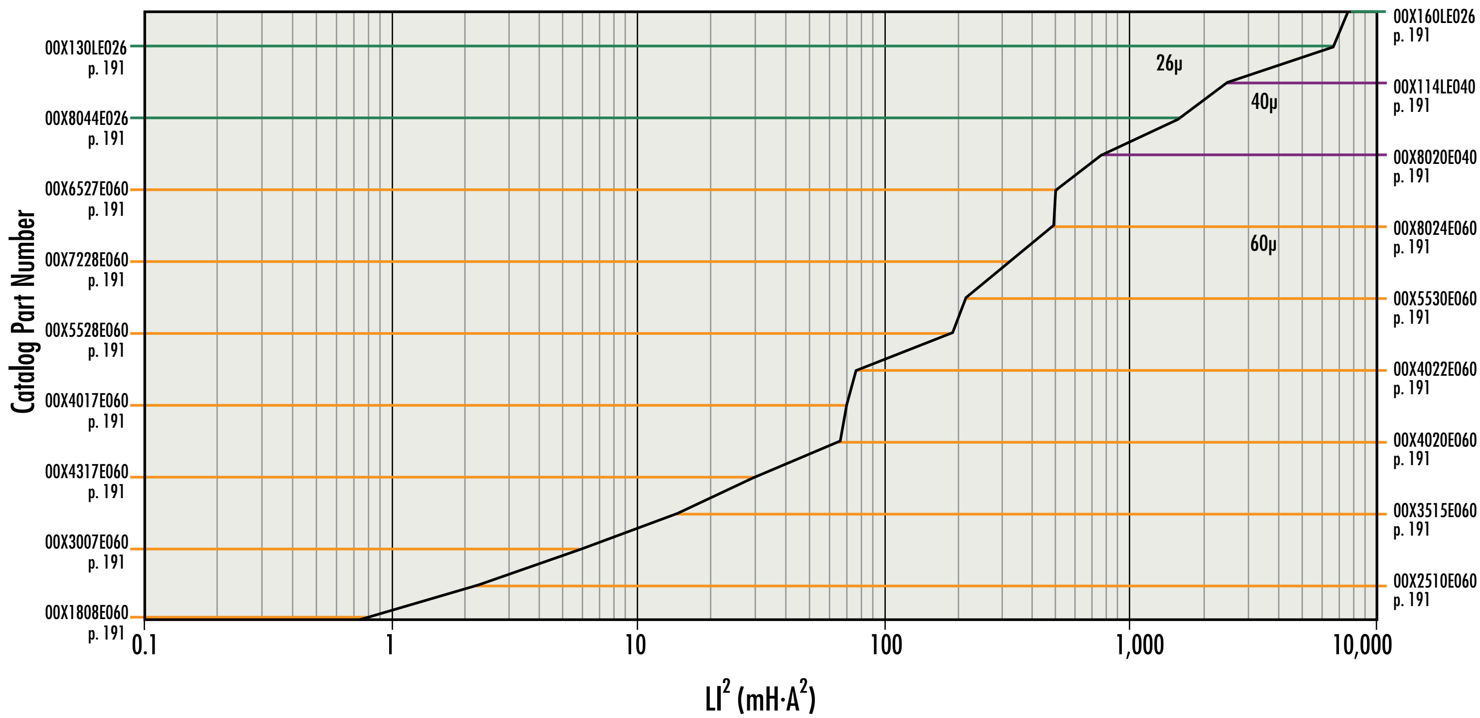


Core Selector Charts

Kool Mµ® H*f* E Cores

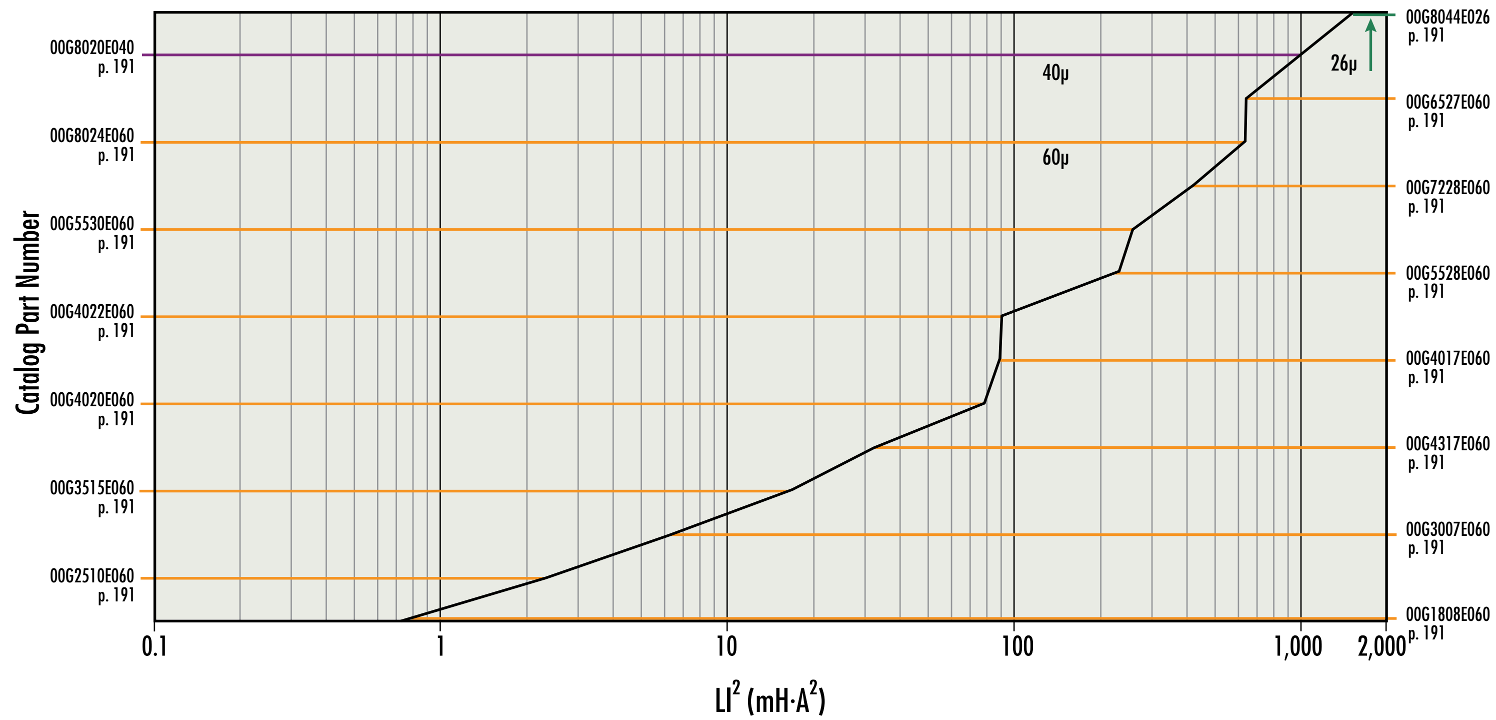


XFlux® E Cores

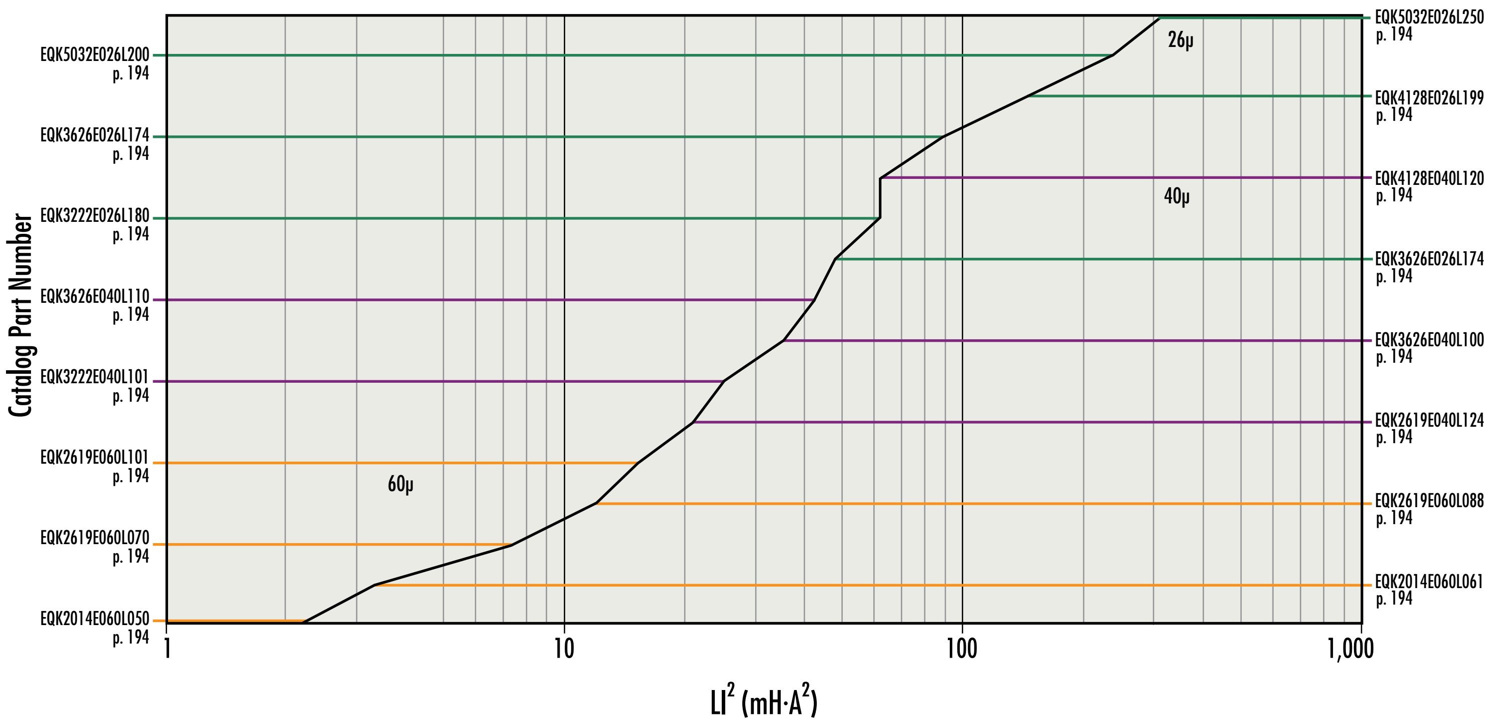


Core Selector Charts

Edge® E Cores

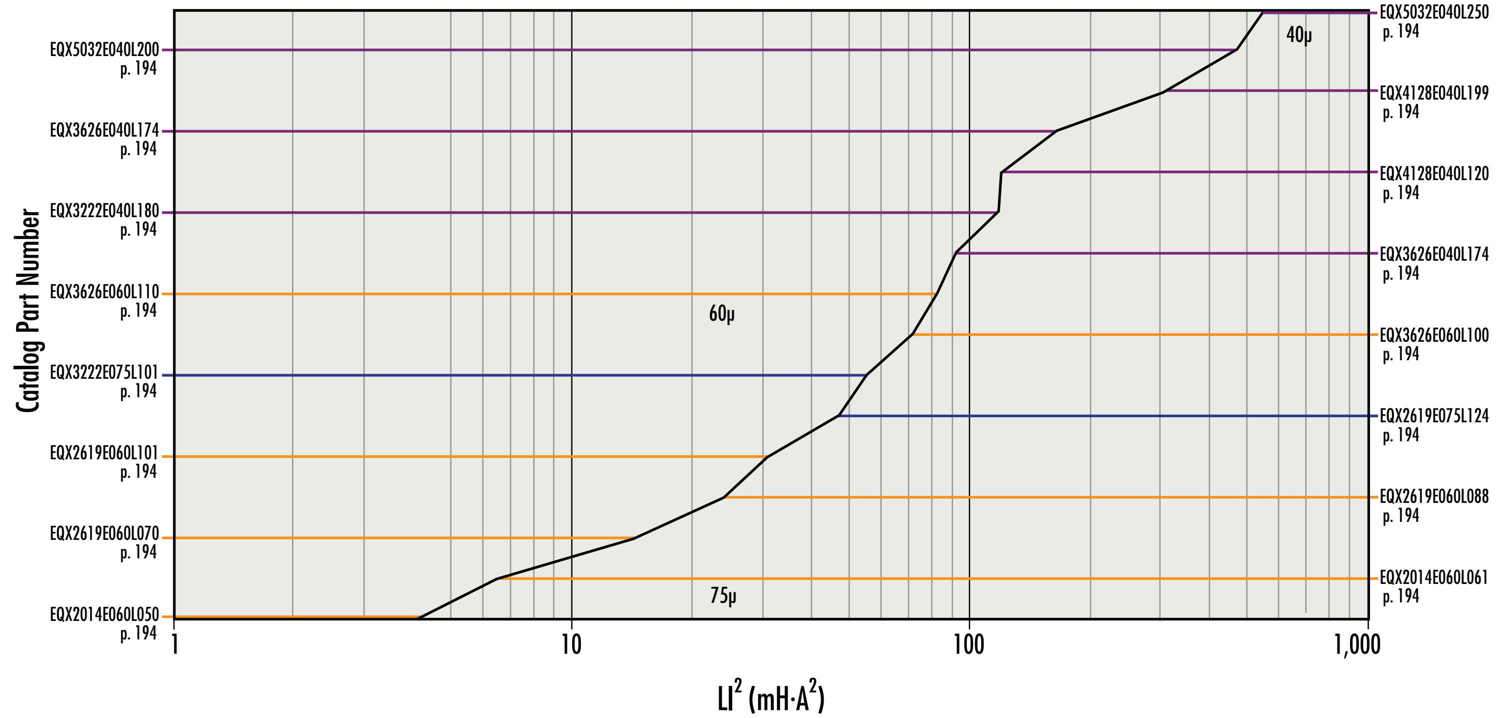


Kool Mµ® EQ Cores

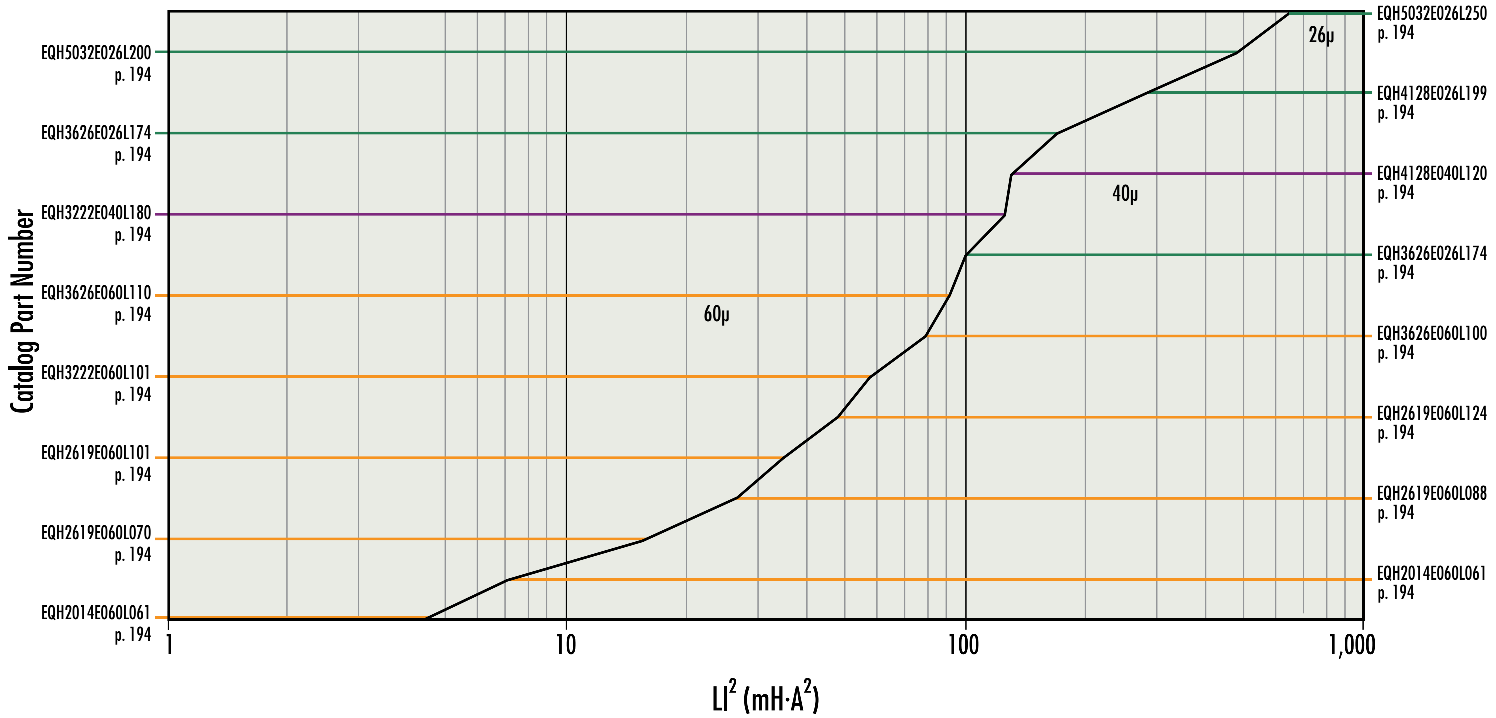


Core Selector Charts

XFlux® EQ Cores

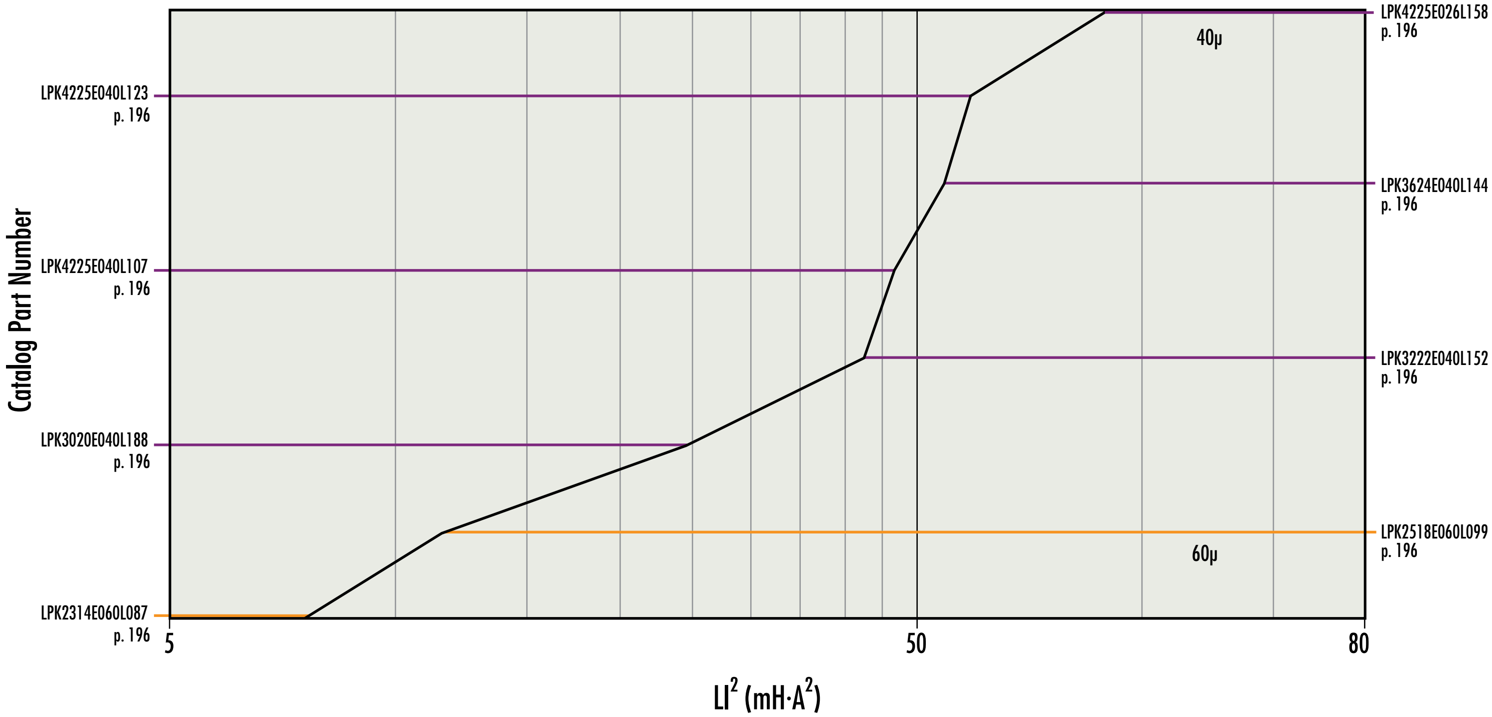


High Flux EQ Cores



Core Selector Charts

Kool Mµ® LP Cores



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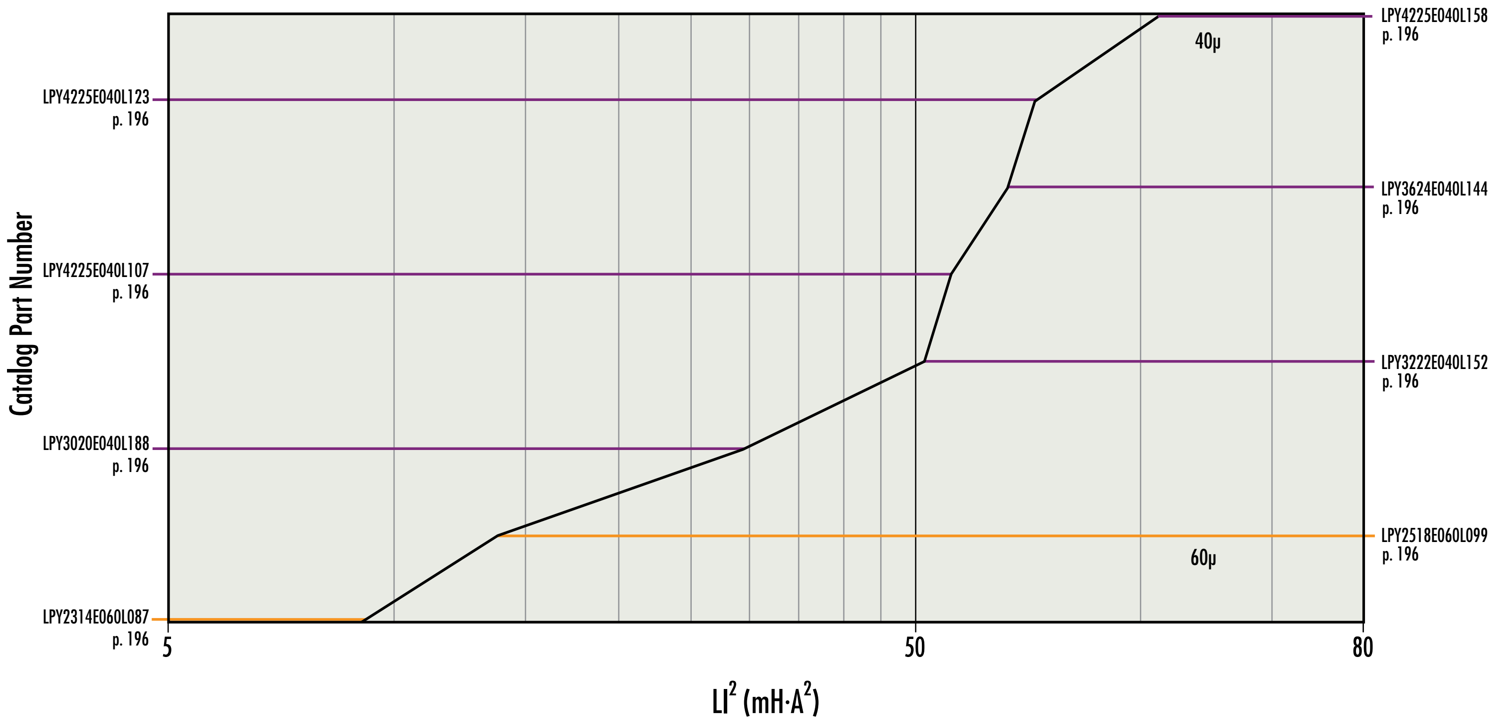
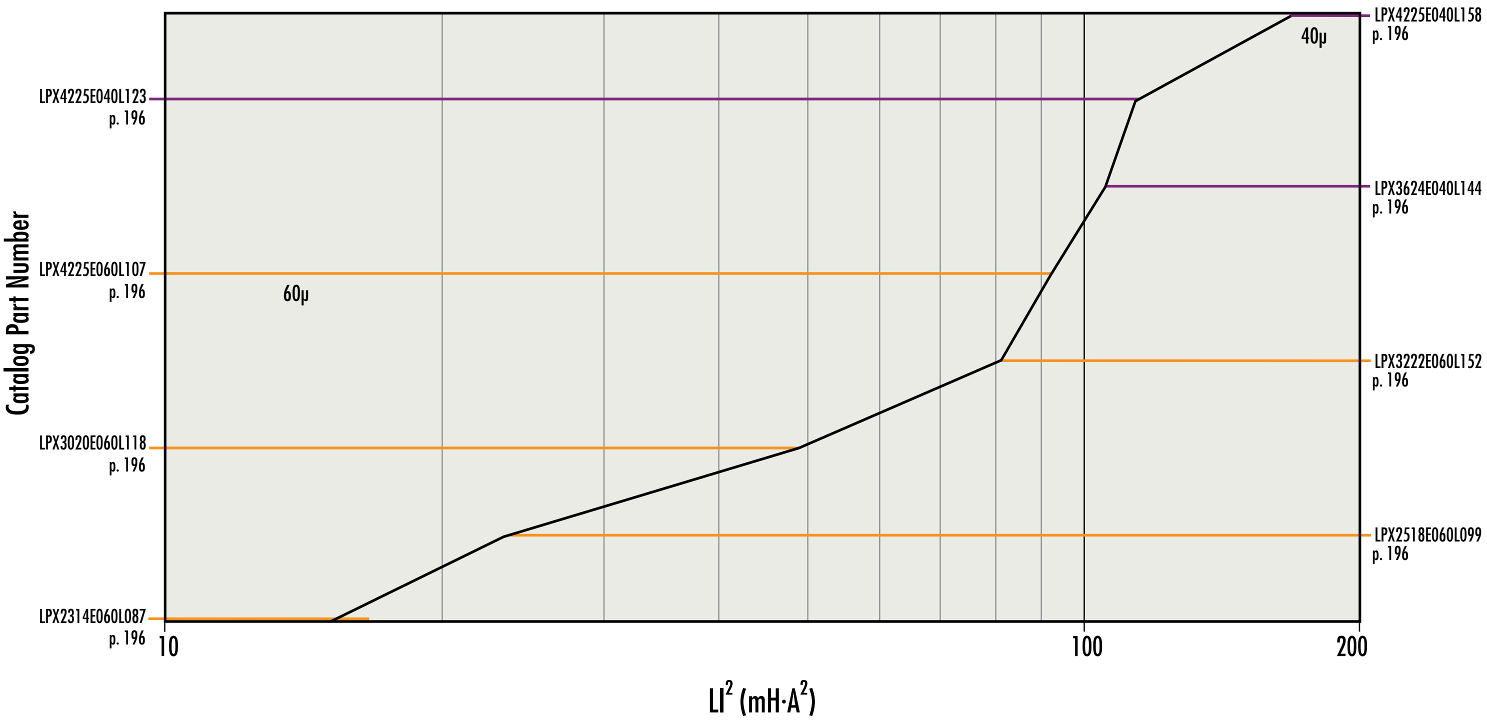
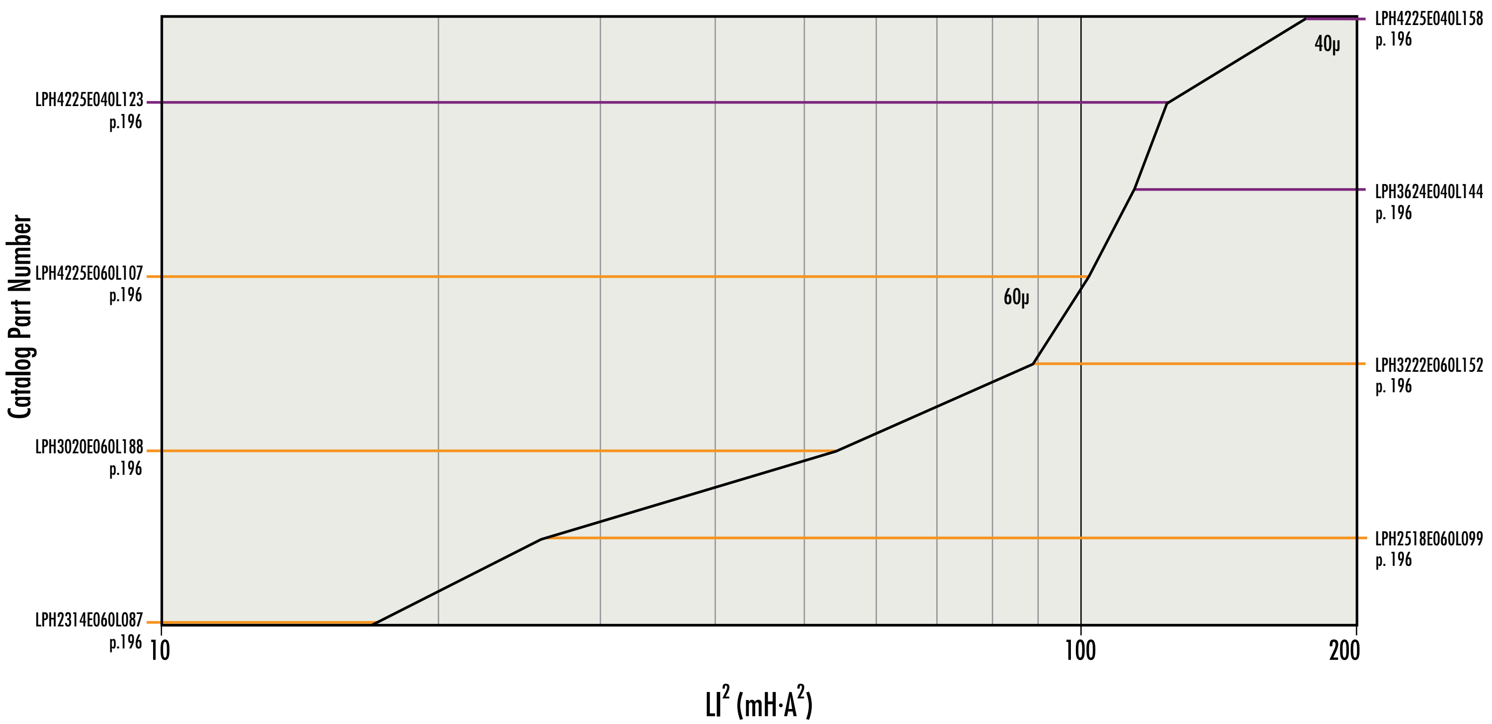


Core Selector Charts

XFlux® LP Cores



High Flux® LP Cores

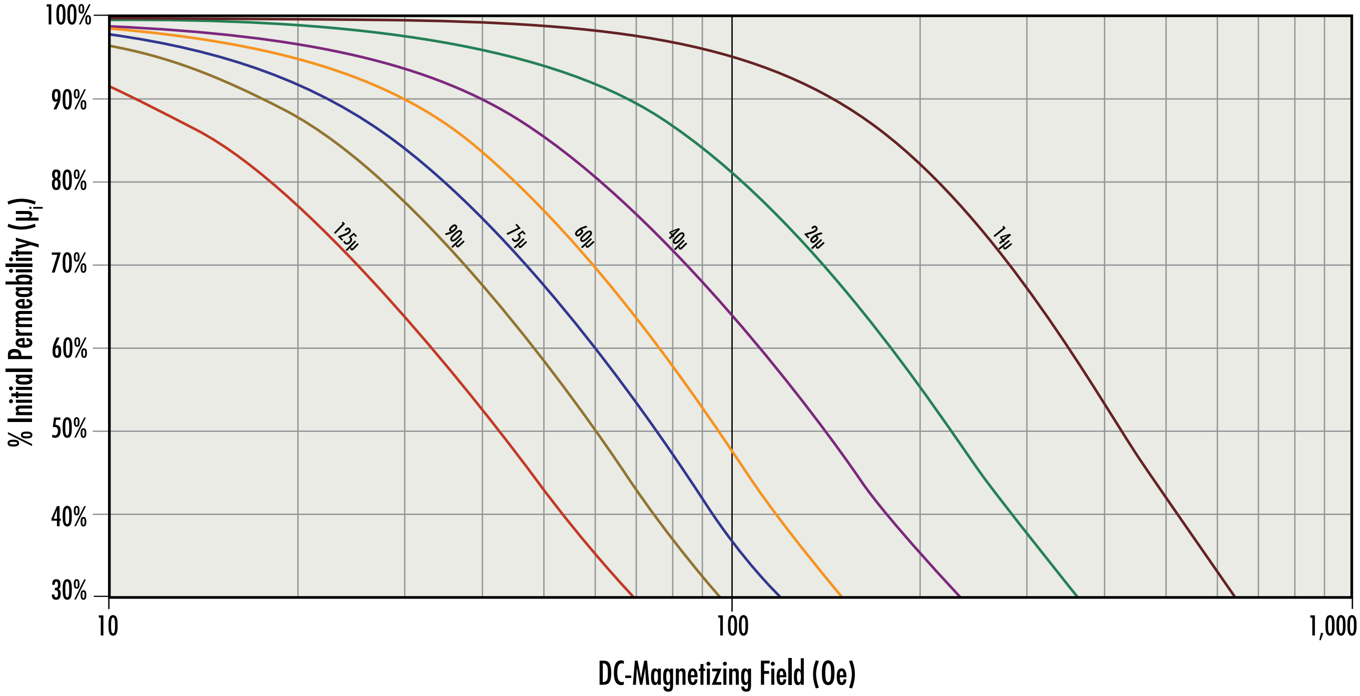


Wire Table

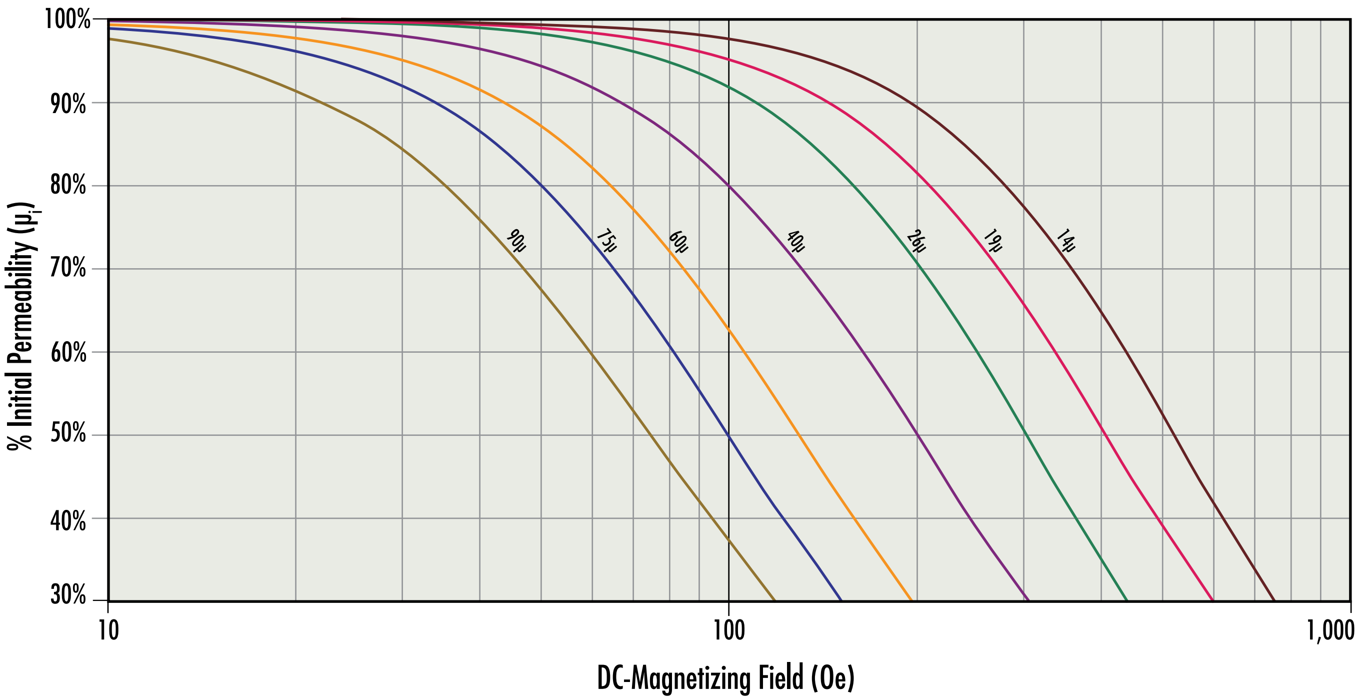
AWG Wire Size	Resistance Ω/meter	Wire O.D. (cm) Heavy Build	Wire Area cm^2	Current Capacity, Amps (listed by columns of Amps/cm^2)				
				200	400	500	600	800
6	.00130	.421	0.1392	26.6	53.2	66.5	79.8	106
7	.00163	.376	0.1110	21.1	42.2	52.8	63.3	84.4
8	.00206	.336	0.0887	16.7	33.5	41.8	50.2	66.9
9	.00260	.299	0.0702	13.3	26.5	33.2	39.8	53.1
10	.00328	.267	0.0560	10.5	21.0	26.3	31.6	42.1
11	.00414	.238	0.0445	8.34	16.7	20.8	25.0	33.3
12	.00521	.213	0.0356	6.62	13.2	16.5	19.8	26.5
13	.00656	.1902	0.0284	5.25	10.5	13.1	15.8	21.0
14	.00828	.1715	0.0231	4.16	8.33	10.4	12.5	16.7
15	.01044	.1529	0.01840	3.30	6.61	8.26	9.91	13.2
16	.01319	.1369	0.01472	2.62	5.23	6.54	7.85	10.5
17	.01658	.1224	0.01177	2.08	4.16	5.20	6.24	8.32
18	.02095	.1095	0.00942	1.65	3.29	4.11	4.94	6.58
19	.02640	.0980	0.00754	1.31	2.61	3.27	3.92	5.22
20	.03323	.0879	0.00607	1.04	2.08	2.59	3.11	4.15
21	.04190	.0785	0.00484	0.823	1.65	2.06	2.47	3.29
22	.05315	.0701	0.00386	0.649	1.30	1.62	1.95	2.59
23	.06663	.0632	0.00314	0.518	1.04	1.29	1.55	2.07
24	.08422	.0566	0.00252	0.409	0.819	1.0236	1.23	1.64
25	.10620	.0505	0.00200	0.325	0.649	0.812	0.974	1.30
26	.13458	.0452	0.00160	0.256	0.512	0.641	0.769	1.02
27	.16873	.0409	0.00131	0.204	0.409	0.511	0.613	0.817
28	0.214	.0366	0.00105	0.161	0.322	0.402	0.483	0.644
29	0.266	.0330	0.000855	0.129	0.259	0.324	0.388	0.518
30	0.340	.0295	0.000683	0.101	0.203	0.253	0.304	0.405
31	0.429	.0267	0.000560	0.0803	0.161	0.201	0.241	0.321
32	0.532	.0241	0.000456	0.0649	0.130	0.162	0.195	0.259
33	0.675	.0216	0.000366	0.0511	0.102	0.128	0.153	0.204
34	0.857	.01905	0.000285	0.0402	0.0804	0.101	0.121	0.161
35	1.085	.01702	0.000228	0.0318	0.0636	0.0795	0.0953	0.127
36	1.361	.01524	0.000182	0.0253	0.0507	0.0633	0.0760	0.101
37	1.680	.01397	0.000153	0.0205	0.0410	0.0513	0.0616	0.0821
38	2.13	.01245	0.000122	0.0162	0.0324	0.0405	0.0486	0.0649
39	2.78	.01092	0.000094	0.0124	0.0248	0.0310	0.0372	0.0497
40	3.54	.00965	0.000073	0.00974	0.0195	0.0243	0.0292	0.0390
41	4.34	.00864	0.000059	0.00795	0.0159	0.0199	0.0238	0.0318
42	5.44	.00762	0.000046	0.00633	0.0127	0.0158	0.0190	0.0253
43	7.03	.00686	0.000037	0.00490	0.00981	0.0123	0.0147	0.0196
44	8.51	.00635	0.000032	0.00405	0.00811	0.0101	0.0122	0.0162
45	10.98	.00546	0.000023	0.00314	0.00628	0.00785	0.00942	0.0126
46	13.80	.00498	0.000019	0.00250	0.00500	0.00624	0.00749	0.00999
47	17.36	.00452	0.000016	0.00199	0.00397	0.00497	0.00596	0.00795
48	22.10	.00394	0.000012	0.00156	0.00312	0.00390	0.00467	0.00623
49	27.60	.00353	0.000010	0.00125	0.00250	0.00312	0.00375	0.00499

Permeability versus DC Bias Curves

Kool Mμ® Toroids

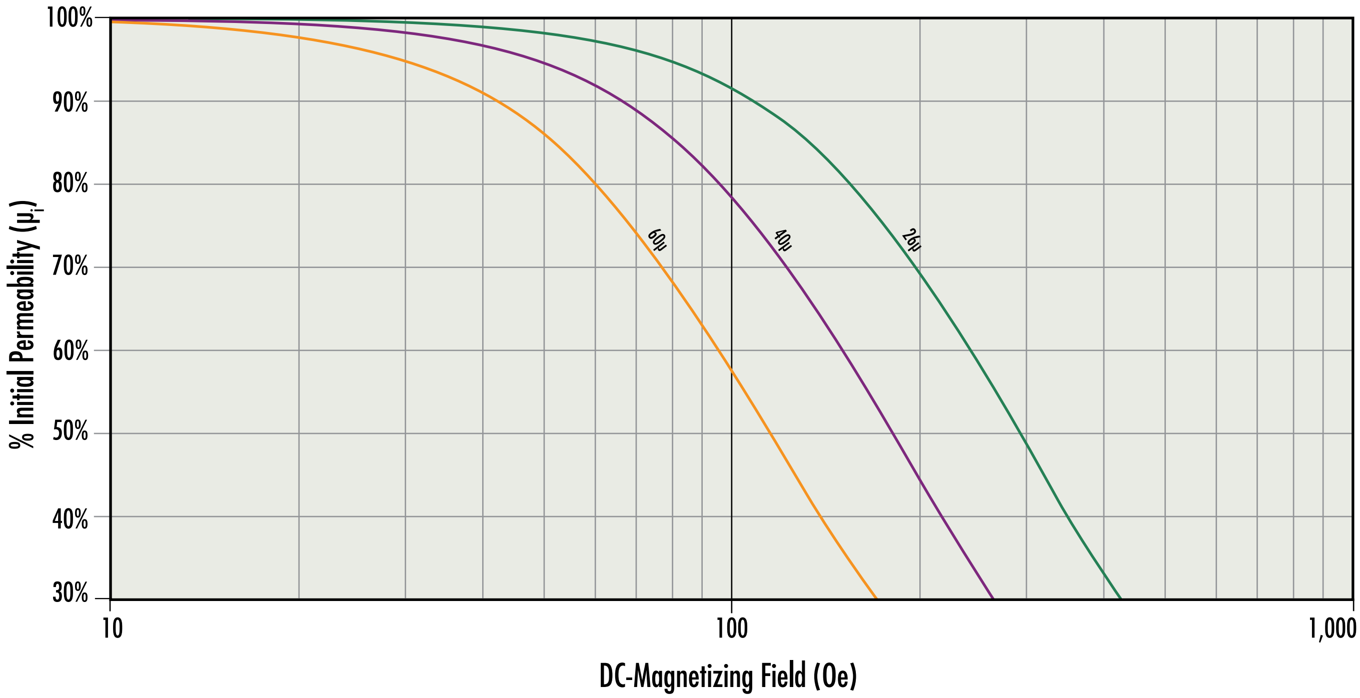


Kool Mμ® MAX Toroids

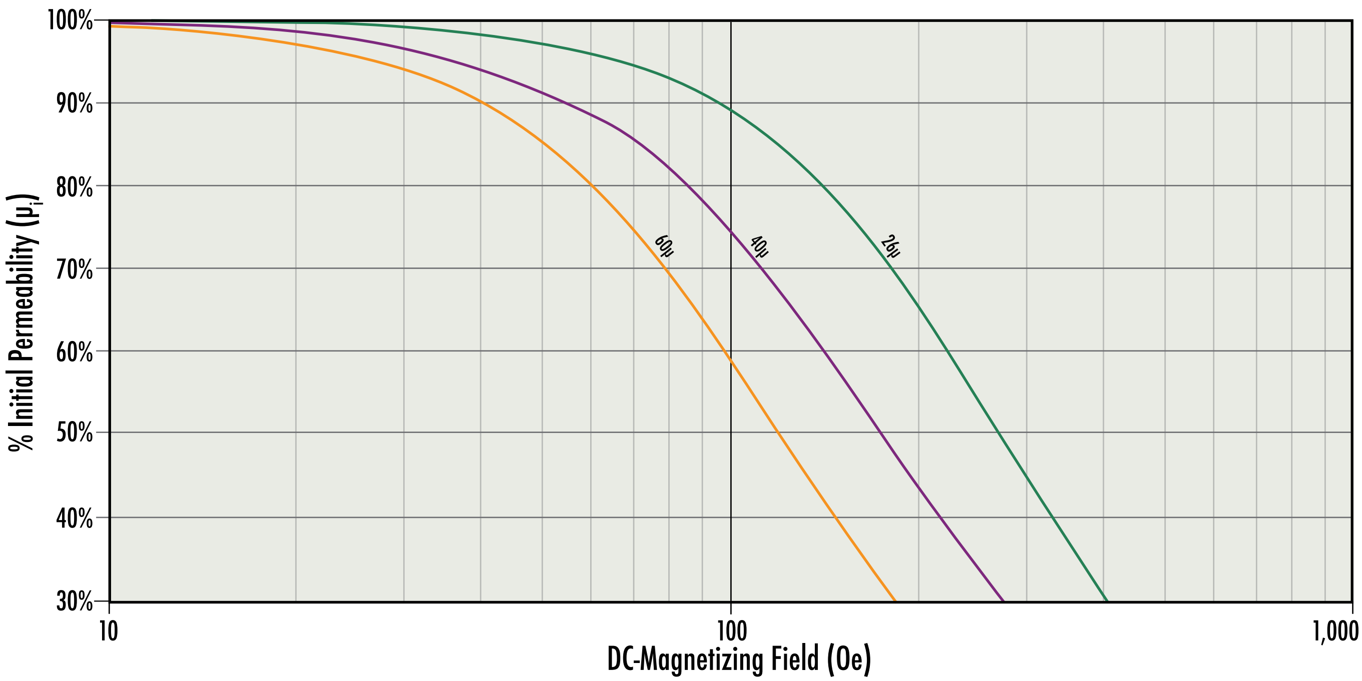


Permeability versus DC Bias Curves

Kool Mµ® H*f* Toroids

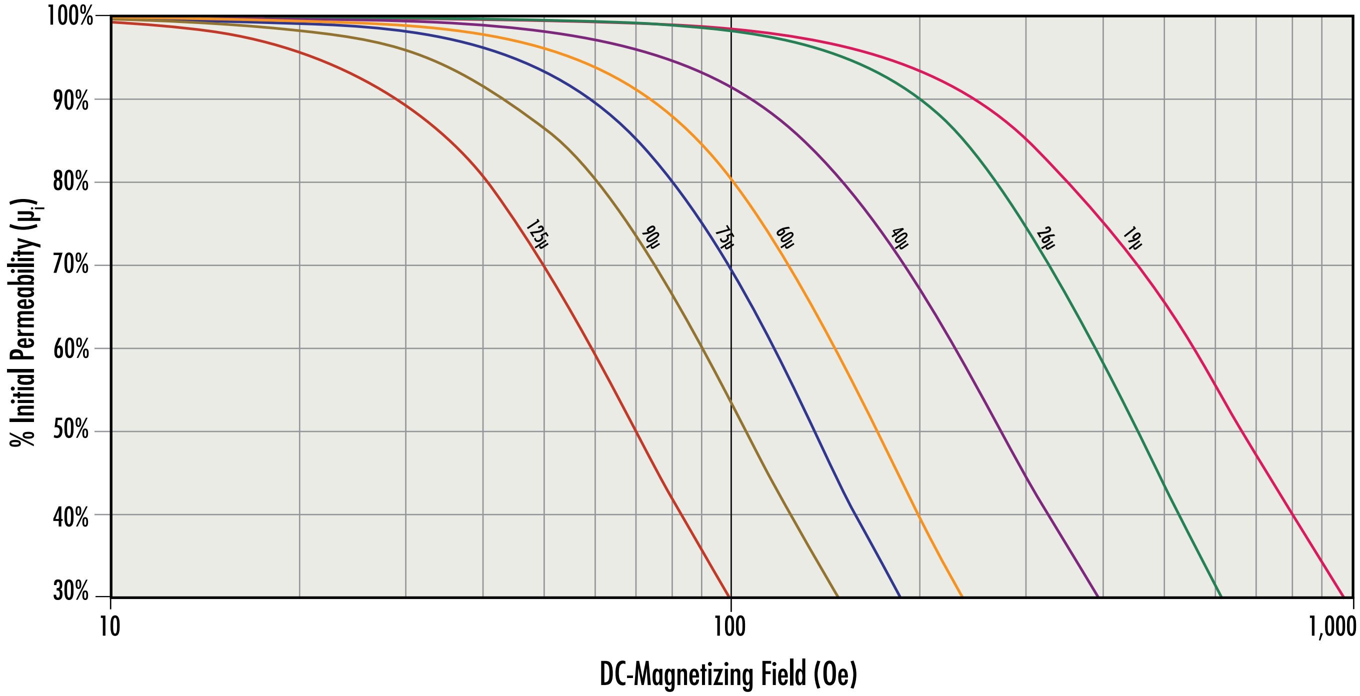


Kool Mµ® Ultra Toroids

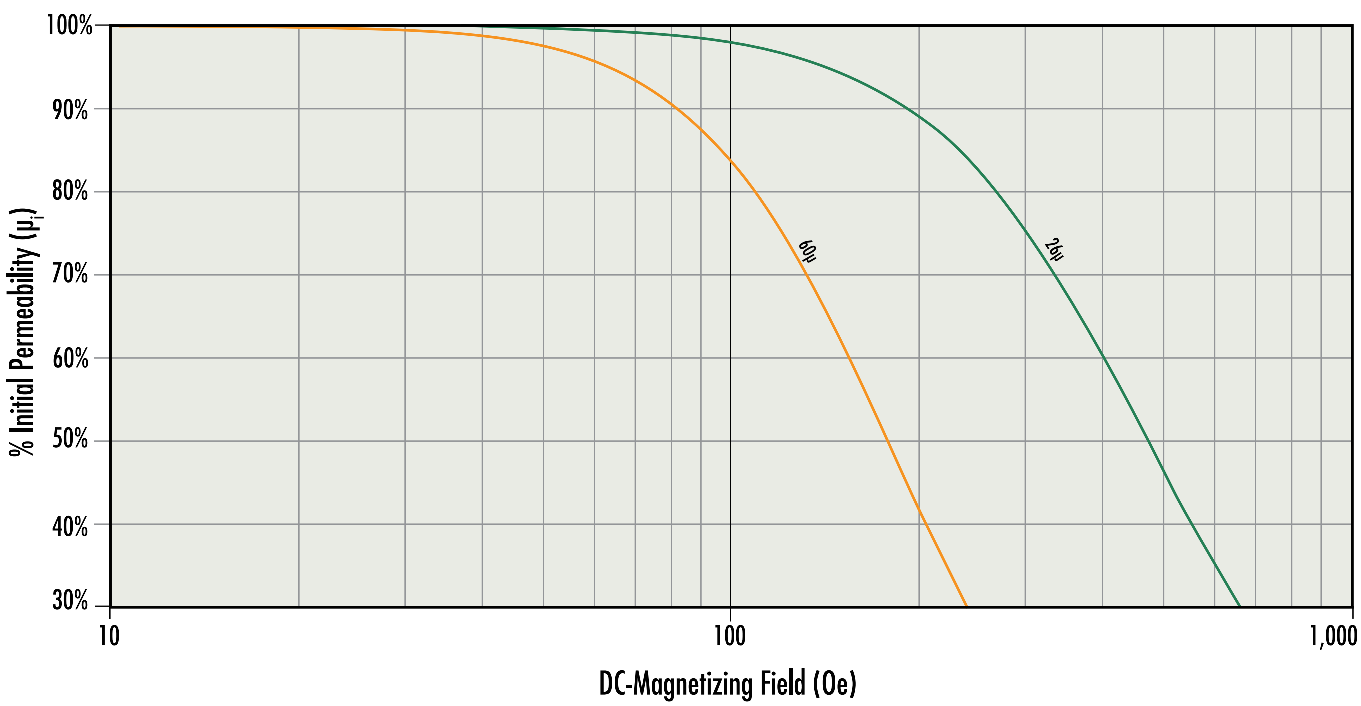


Permeability versus DC Bias Curves

XFlux® Toroids

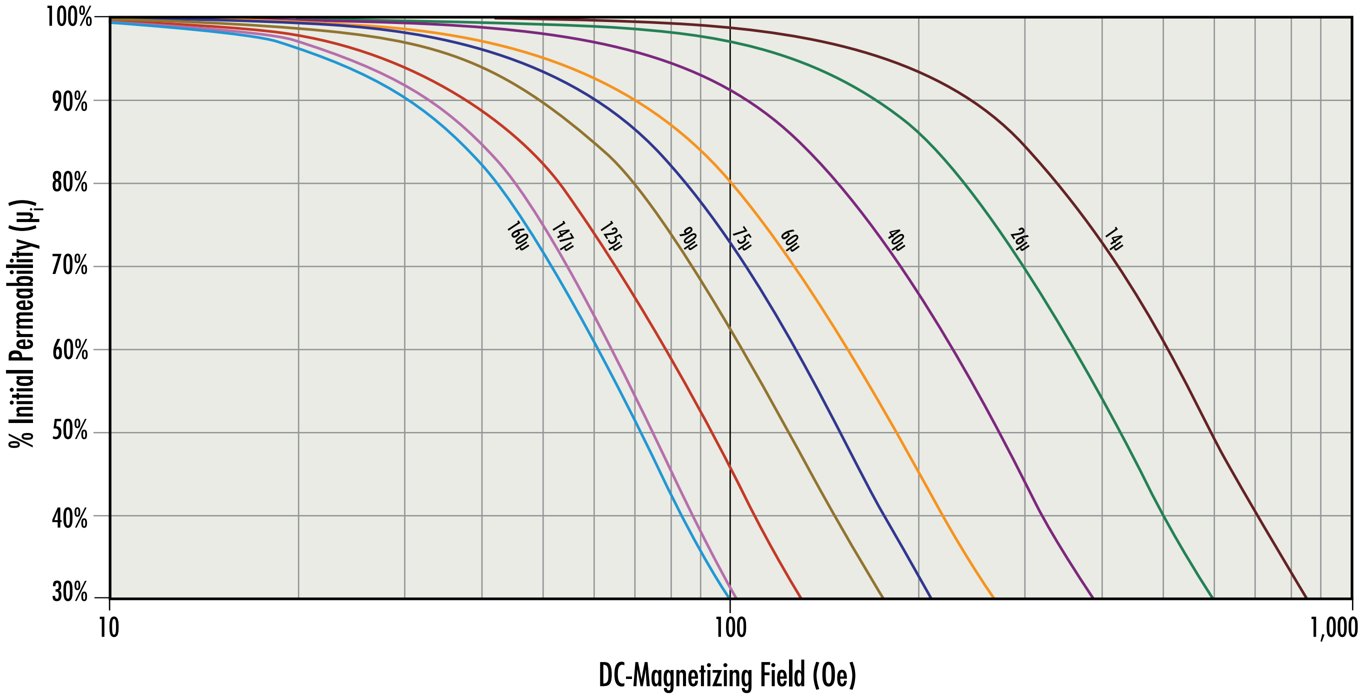


XFlux® Ultra Toroids

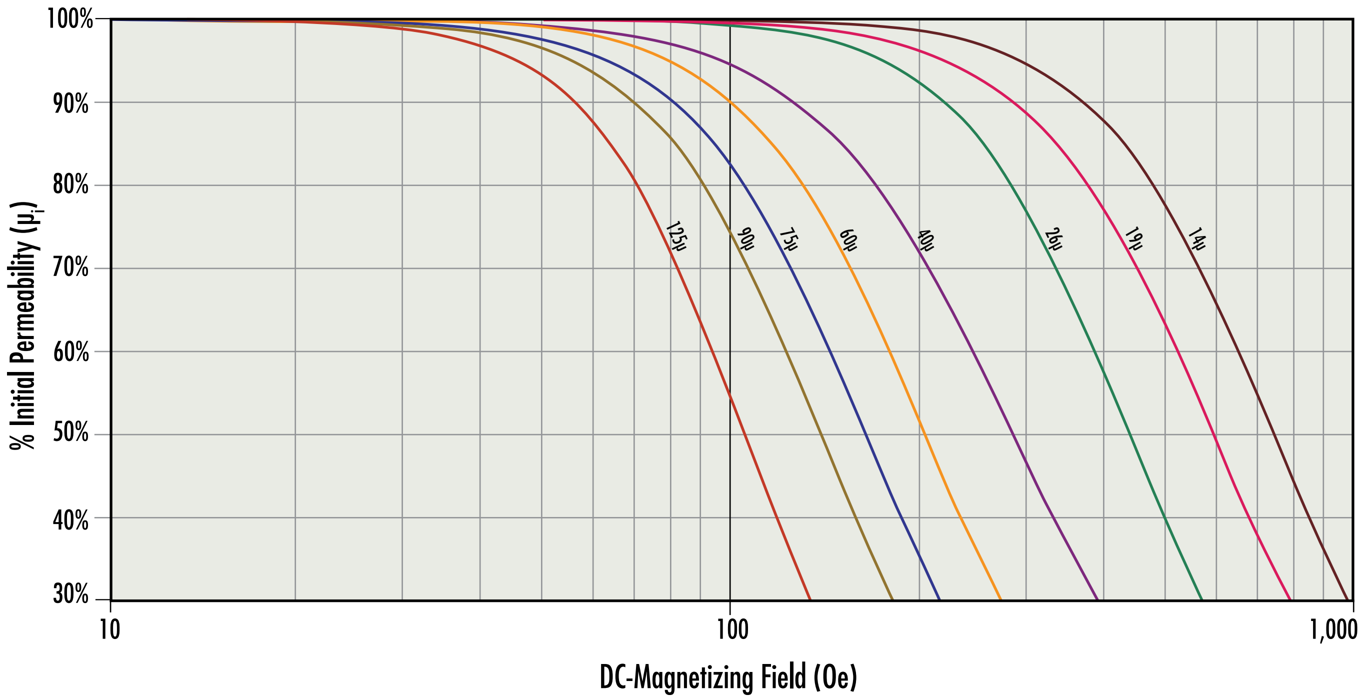


Permeability versus DC Bias Curves

High Flux Toroids

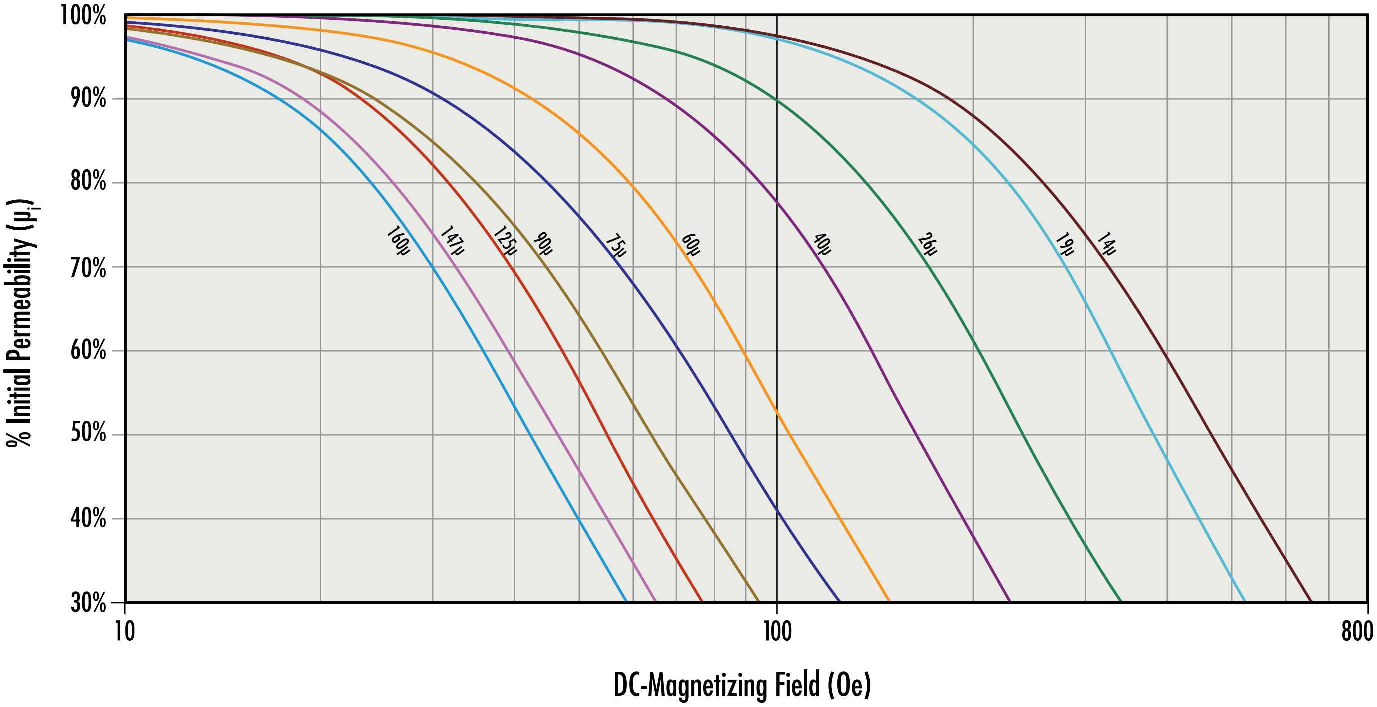


Edge® Toroids

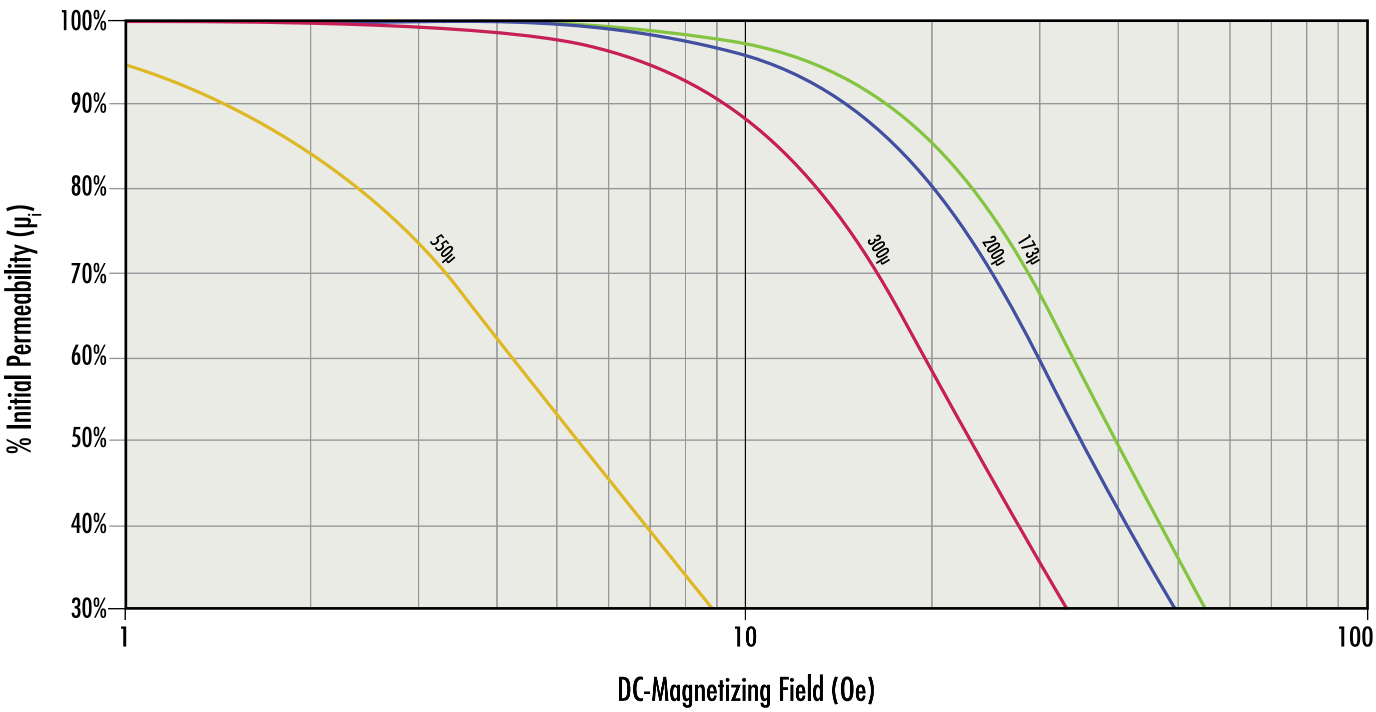


Permeability versus DC Bias Curves

MPP Toroids 14µ - 160µ

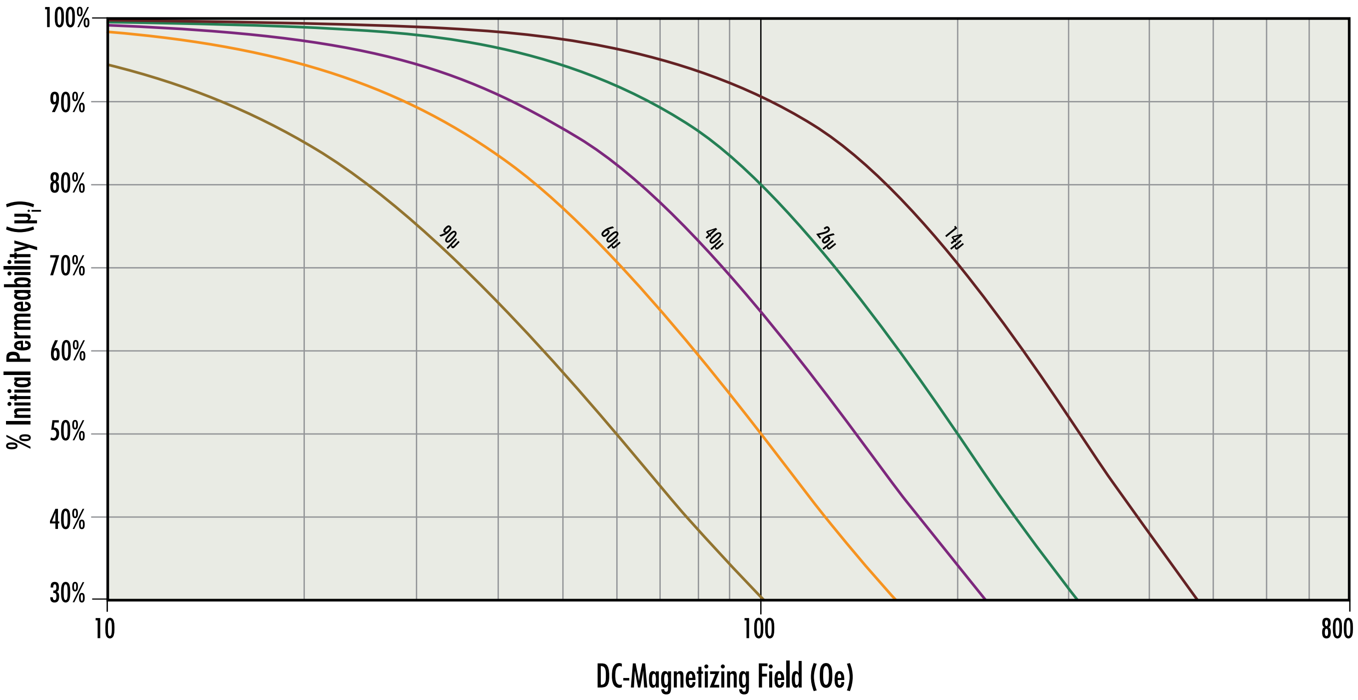


MPP Toroids 173µ - 550µ

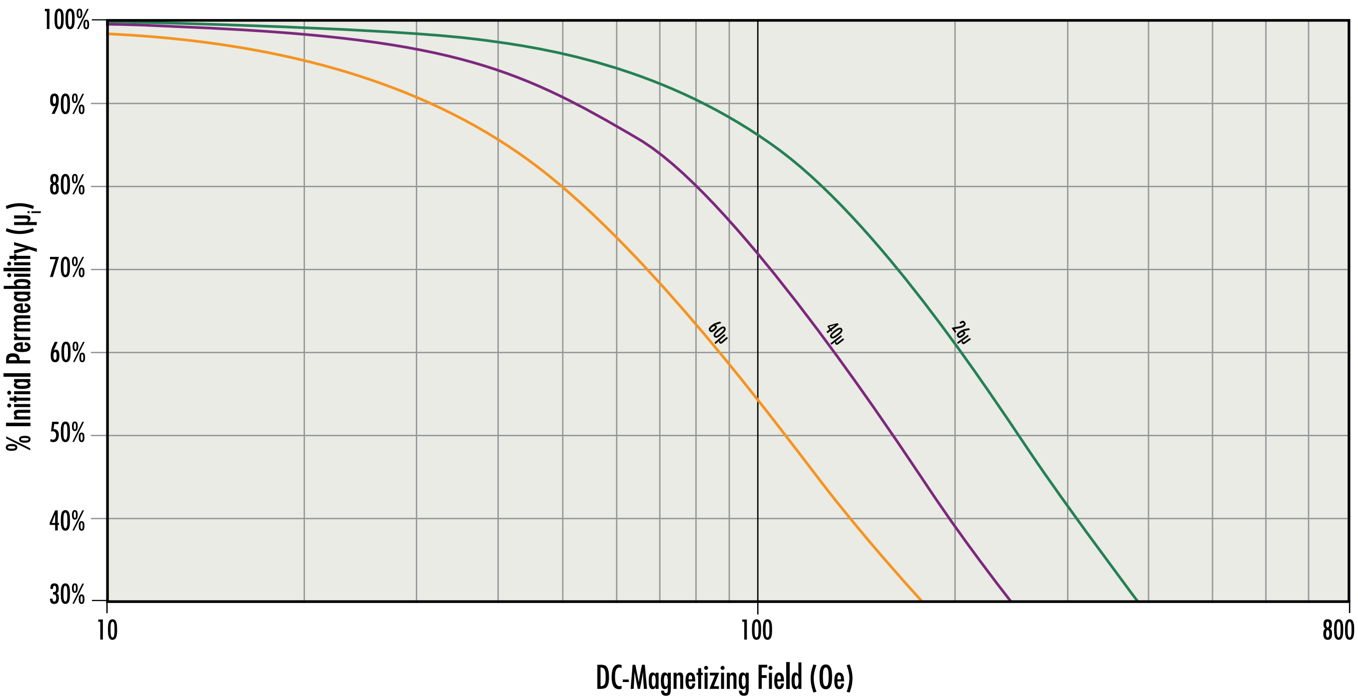


Permeability versus DC Bias Curves

Kool Mμ® E Cores, U Cores & EER Cores

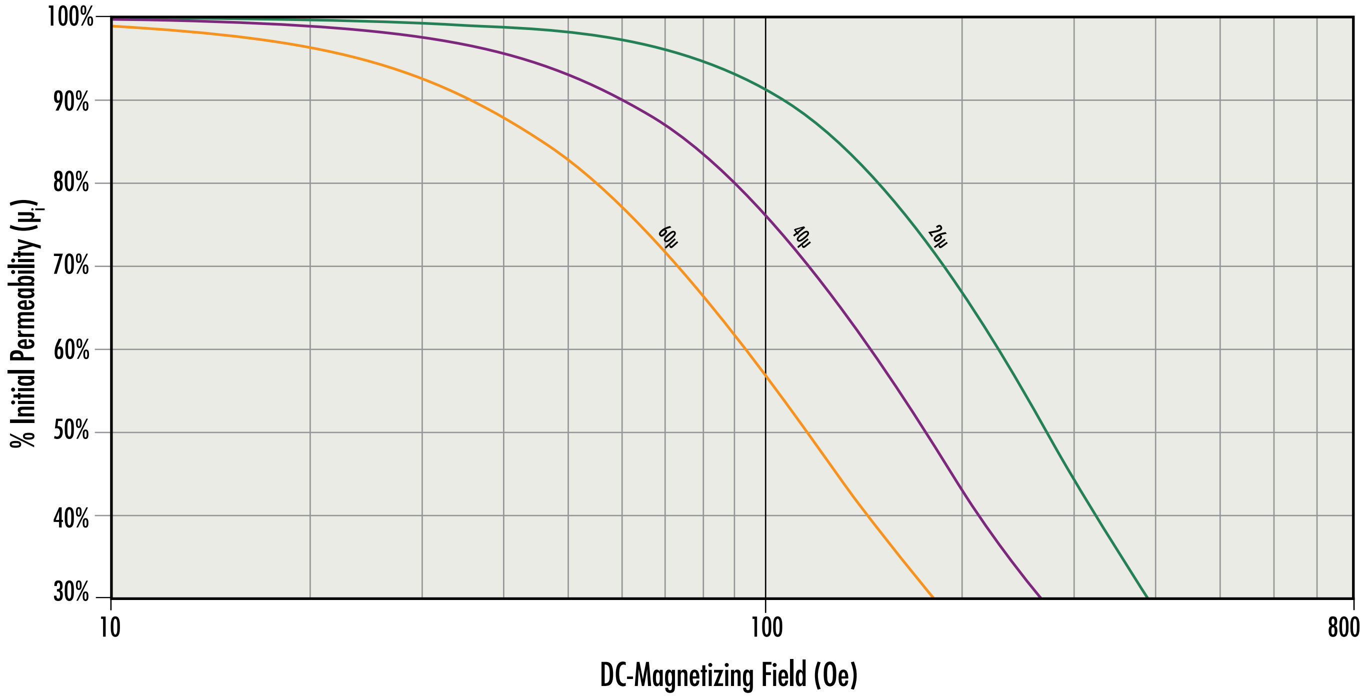


Kool Mμ® MAX E Cores, U Cores & EER Cores

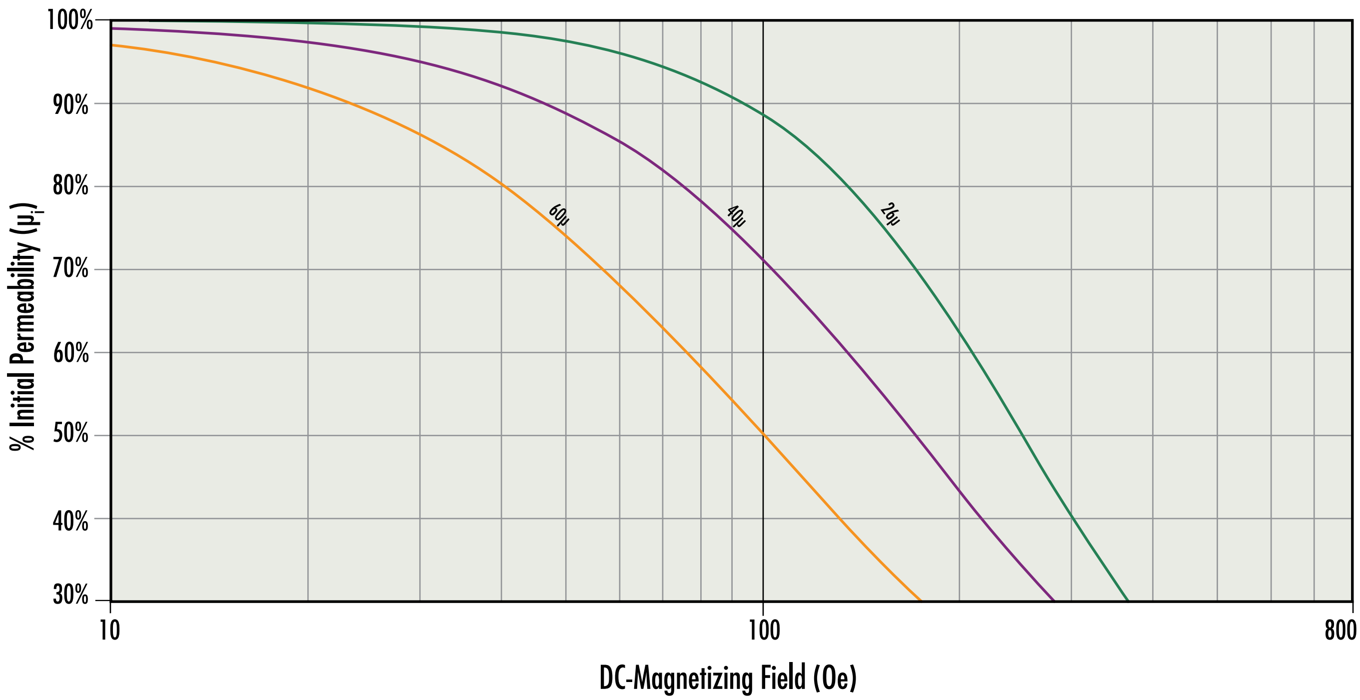


Permeability versus DC Bias Curves

Kool Mμ® MAX High Performance E Cores, U Cores & EER Cores

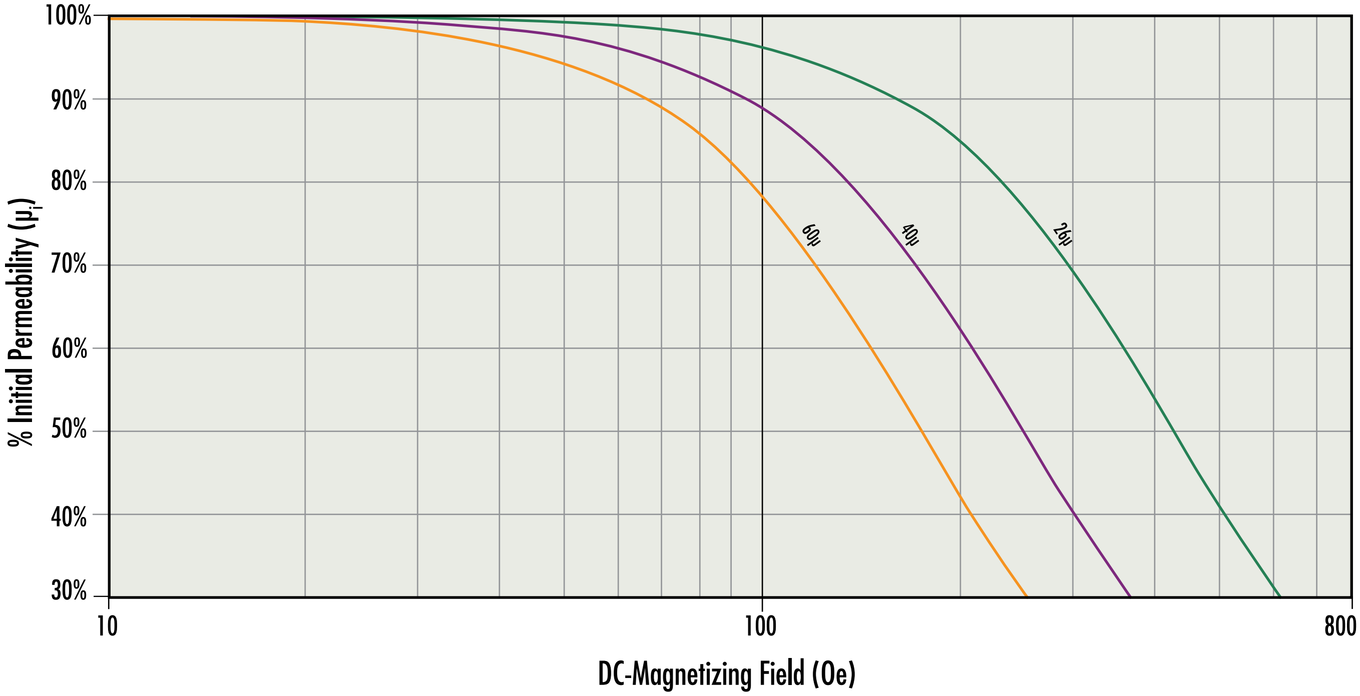


Kool Mμ® Hƒ E Cores, U Cores & EER Cores

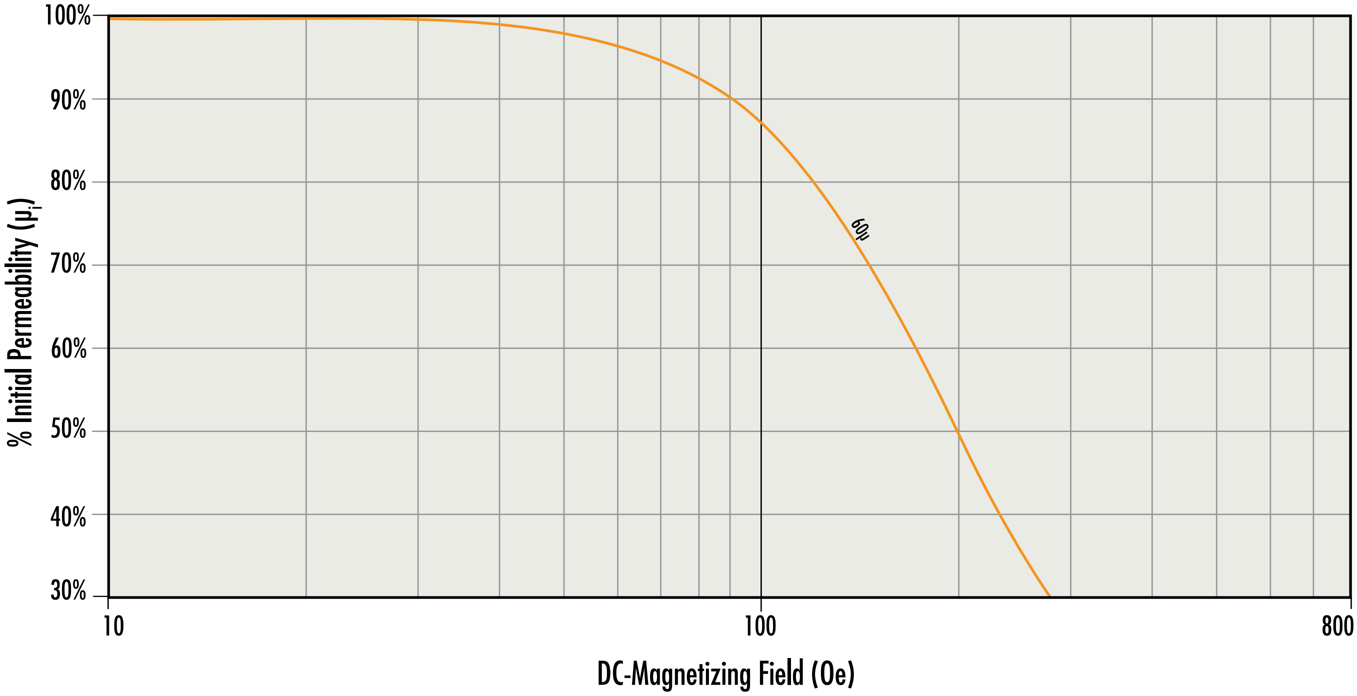


Permeability versus DC Bias Curves

XFlux® E Cores, U Cores & EER Cores

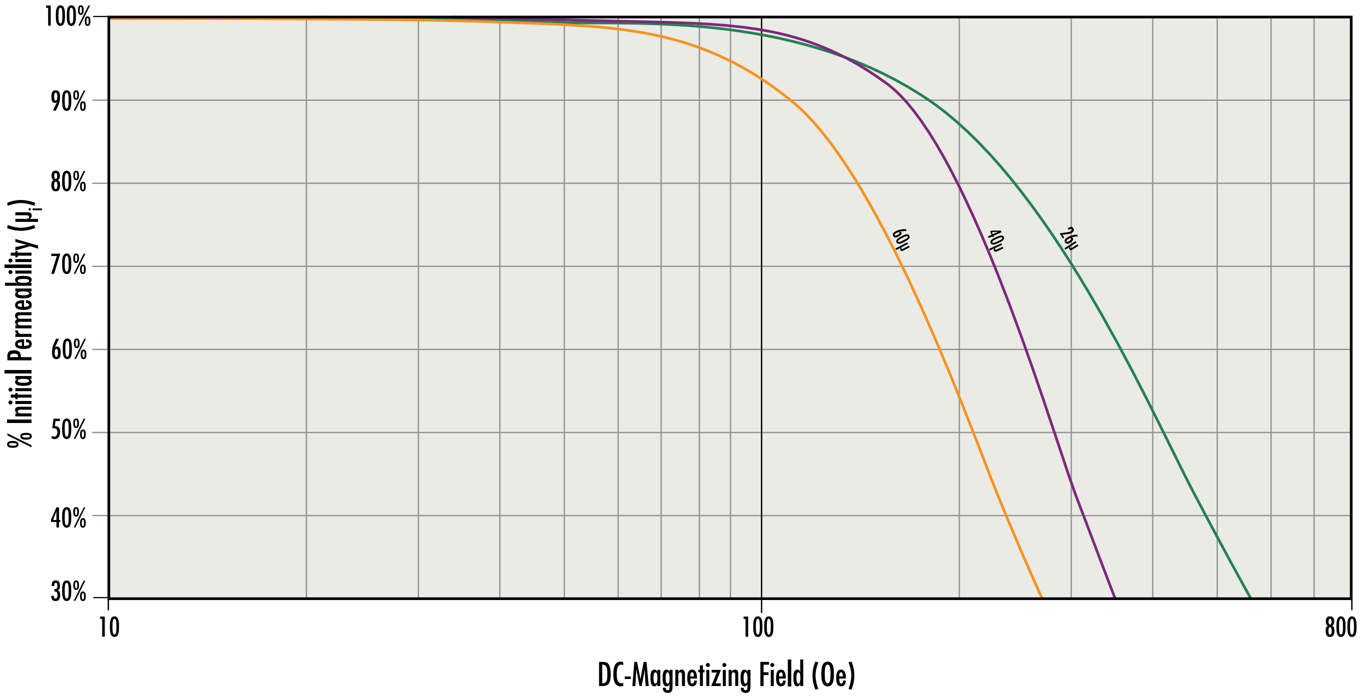


High Flux E Cores, U Cores & EER Cores

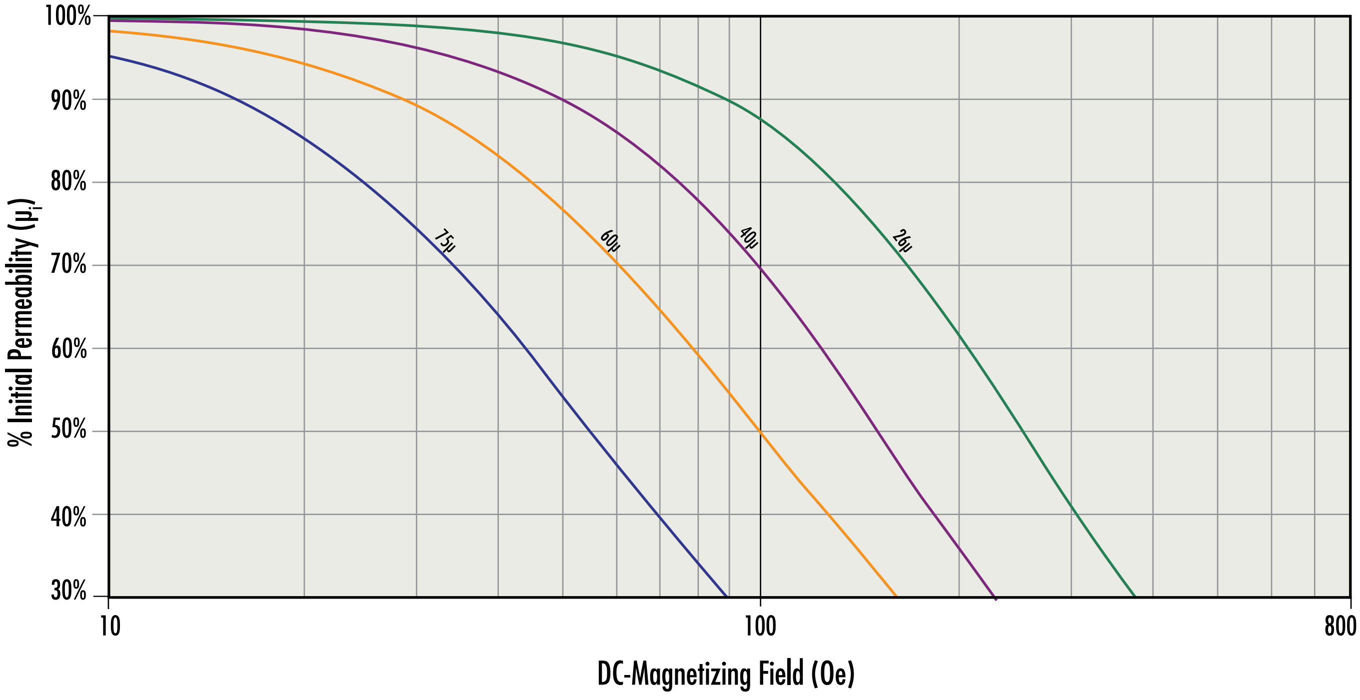


Permeability versus DC Bias Curves

Edge® E Cores, U Cores & EER Cores

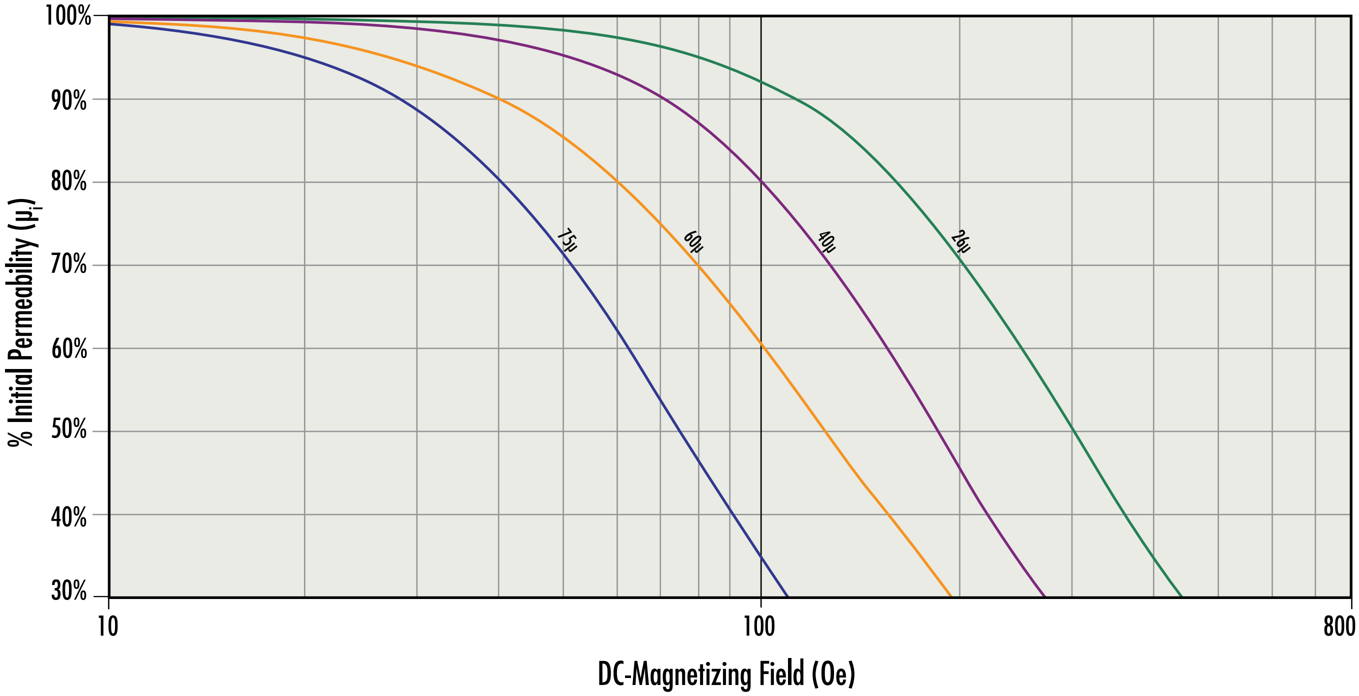


Kool Mμ® EQ & LP Cores

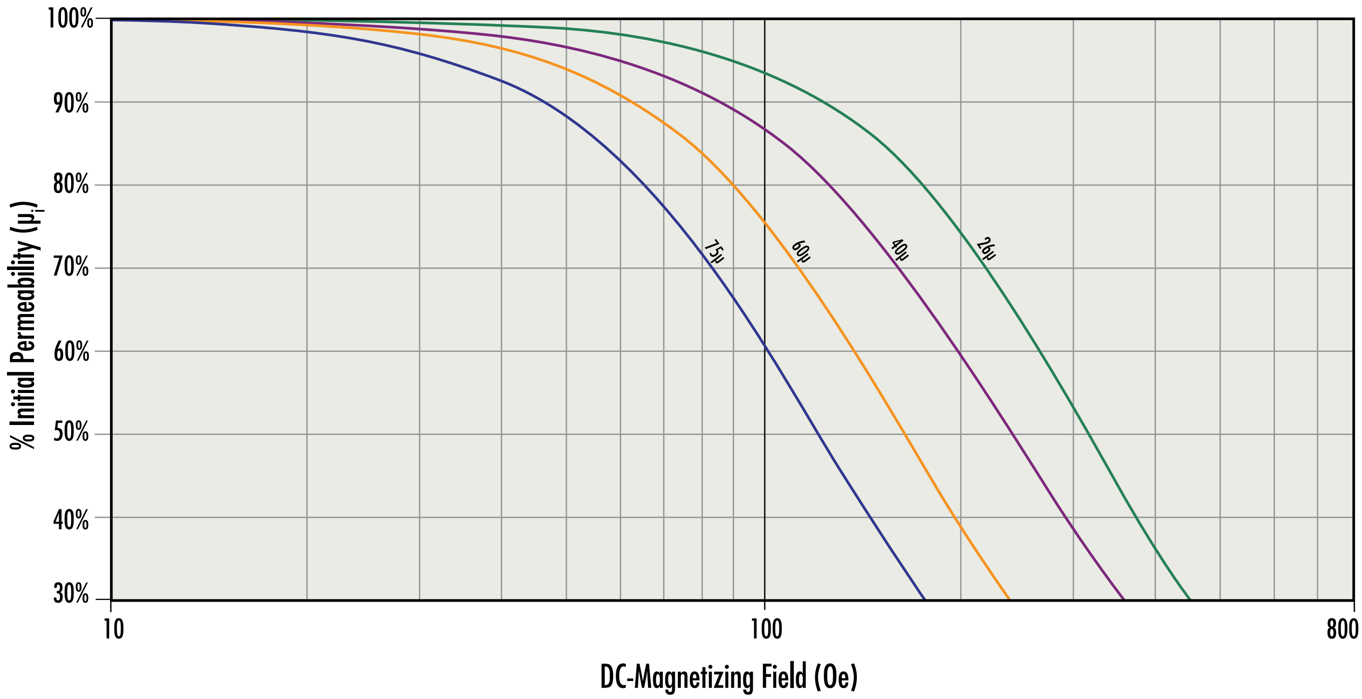


Permeability versus DC Bias Curves

Kool Mµ® MAX EQ & LP Cores

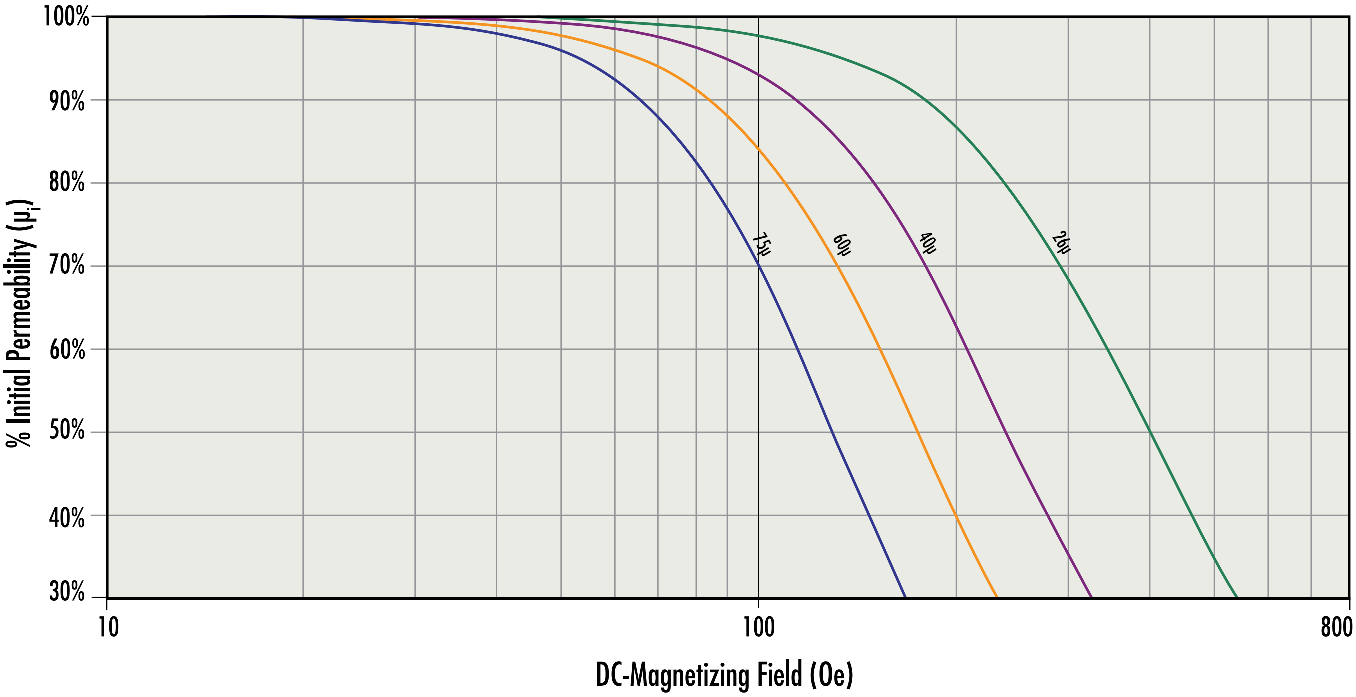


XFlux® EQ & LP Cores

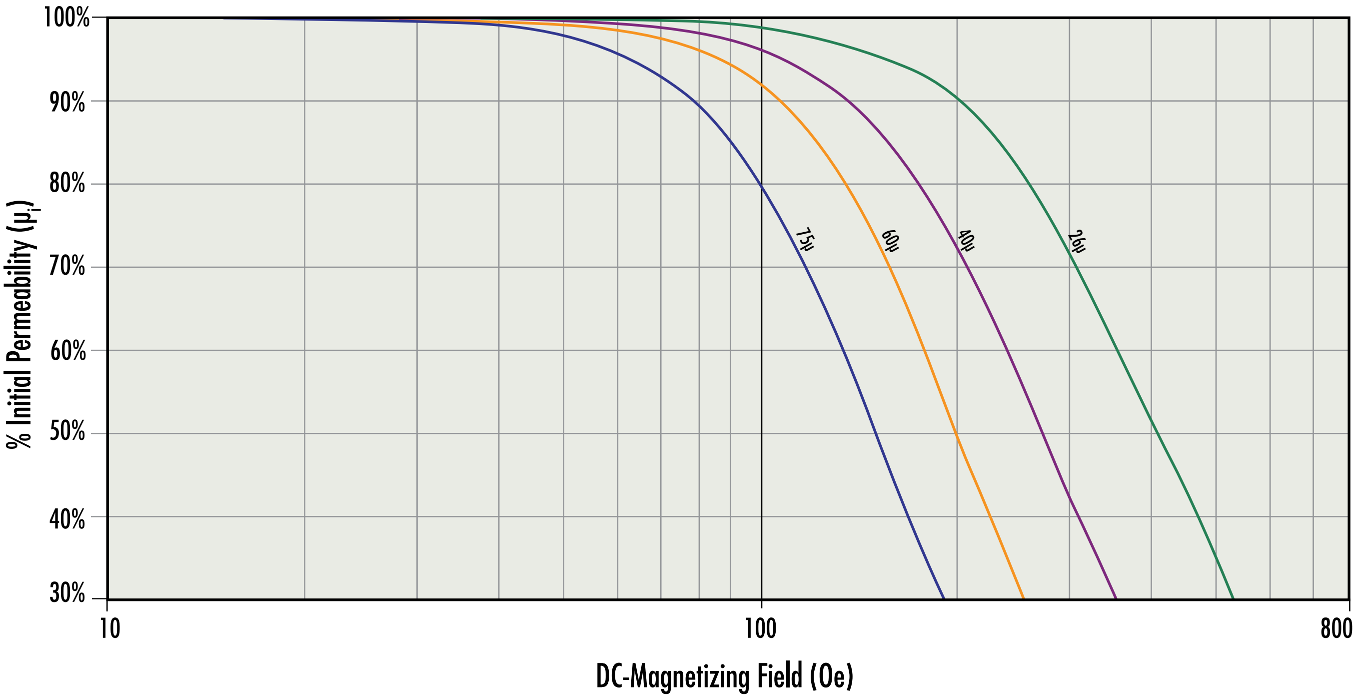


Permeability versus DC Bias Curves

High Flux EQ & LP Cores

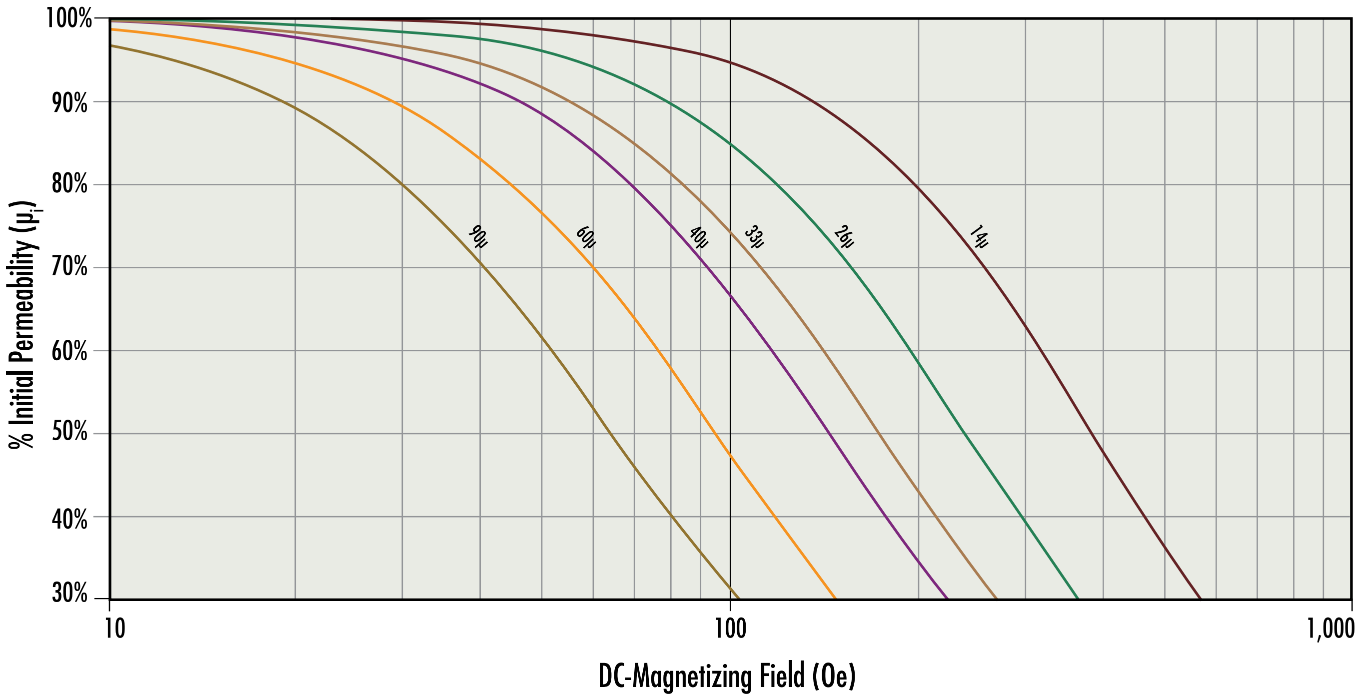


Edge® EQ & LP Cores

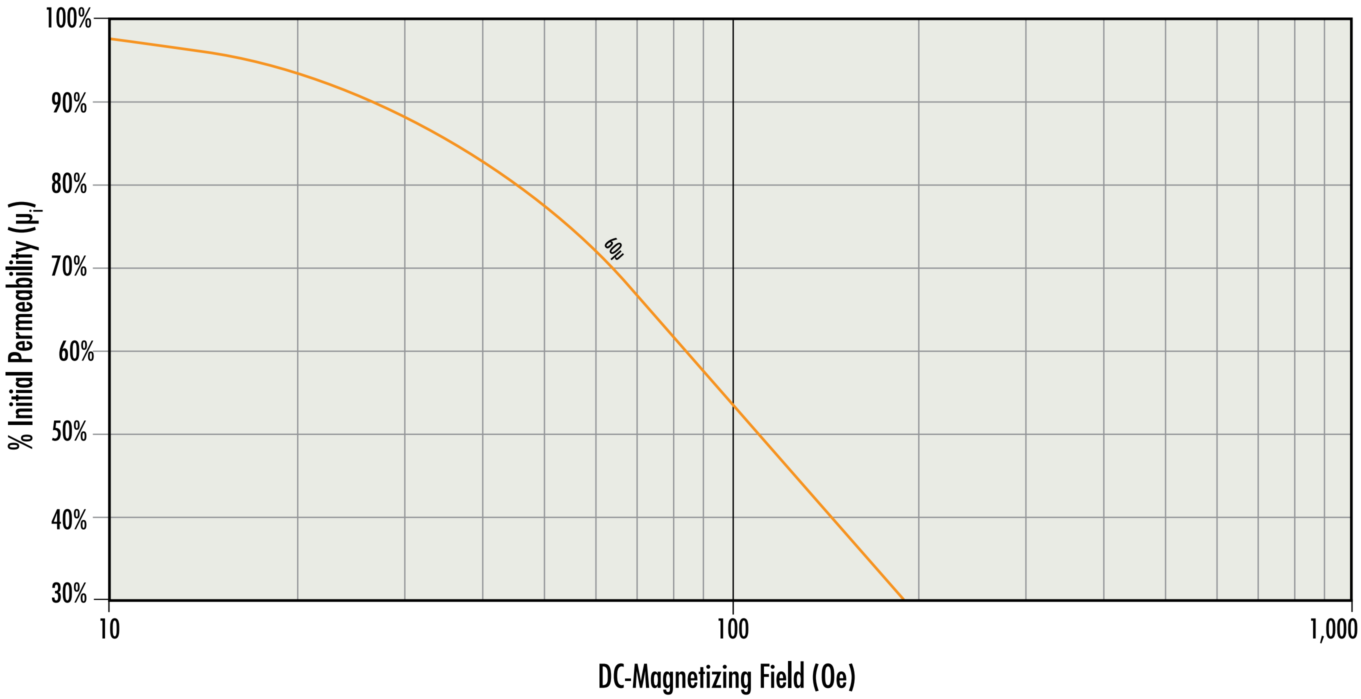


Permeability versus DC Bias Curves

Kool Mμ® Blocks, Round Blocks & Cylinders

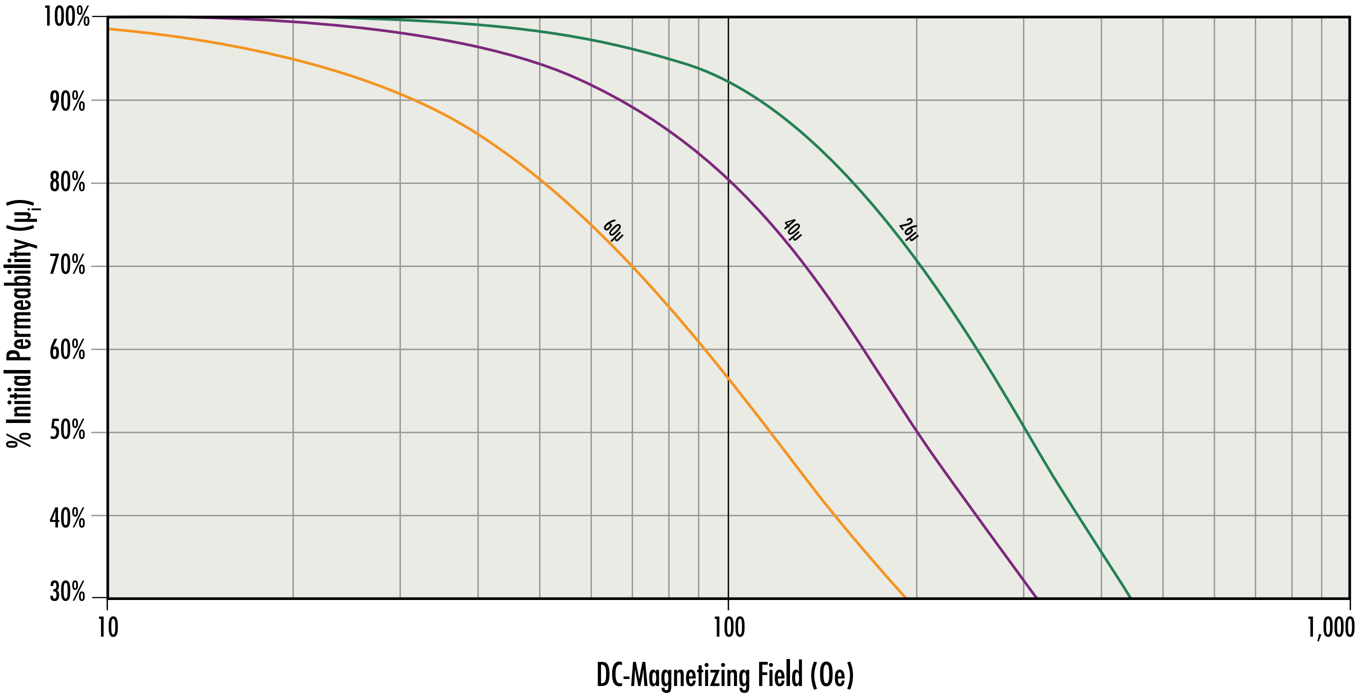


Kool Mμ® MAX Blocks, Round Blocks & Cylinders

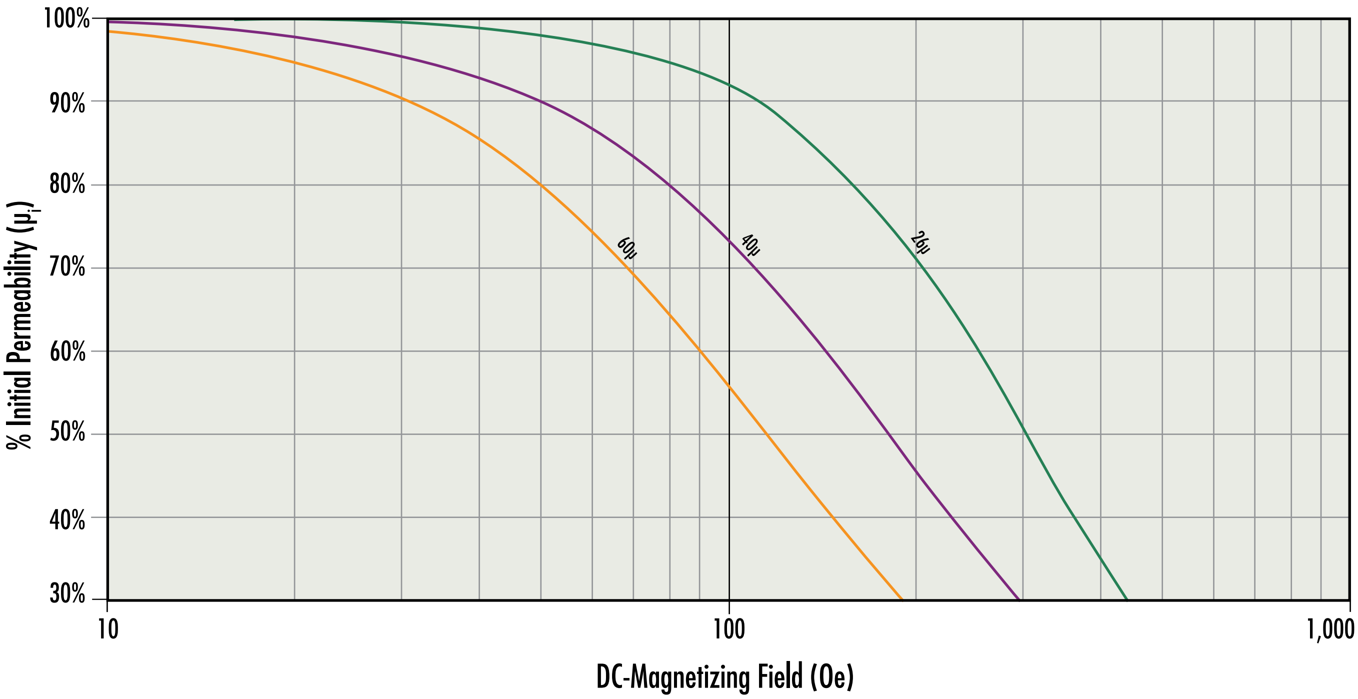


Permeability versus DC Bias Curves

Kool Mµ® MAX High Performance Blocks, Round Blocks & Cylinders

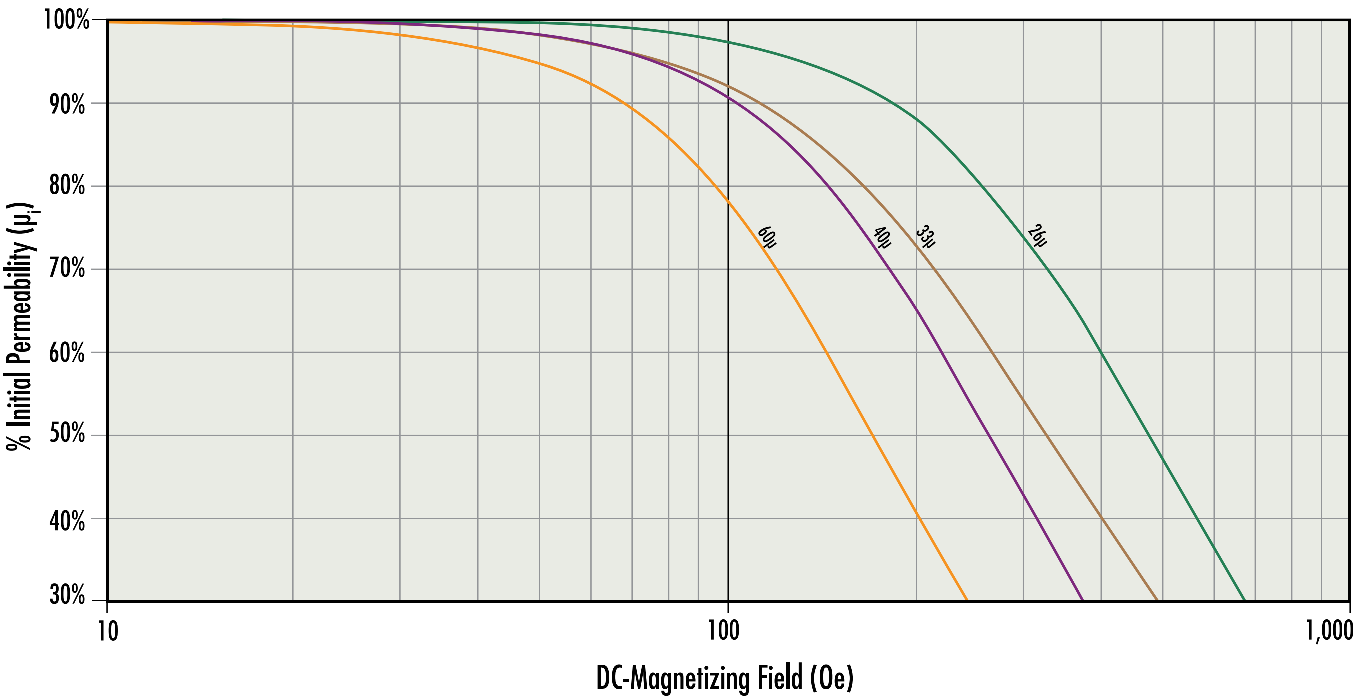


Kool Mµ® Hƒ Blocks, Round Blocks & Cylinders

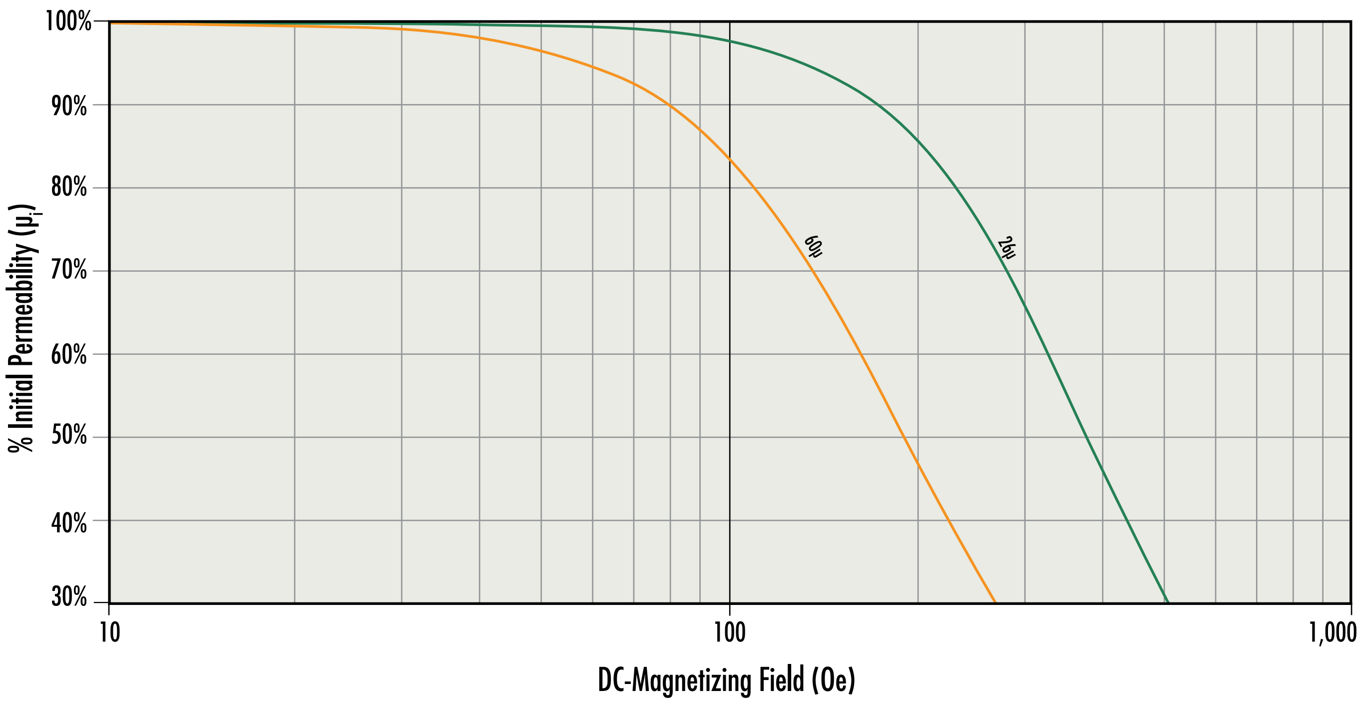


Permeability versus DC Bias Curves

XFlux® Blocks, Round Blocks & Cylinders

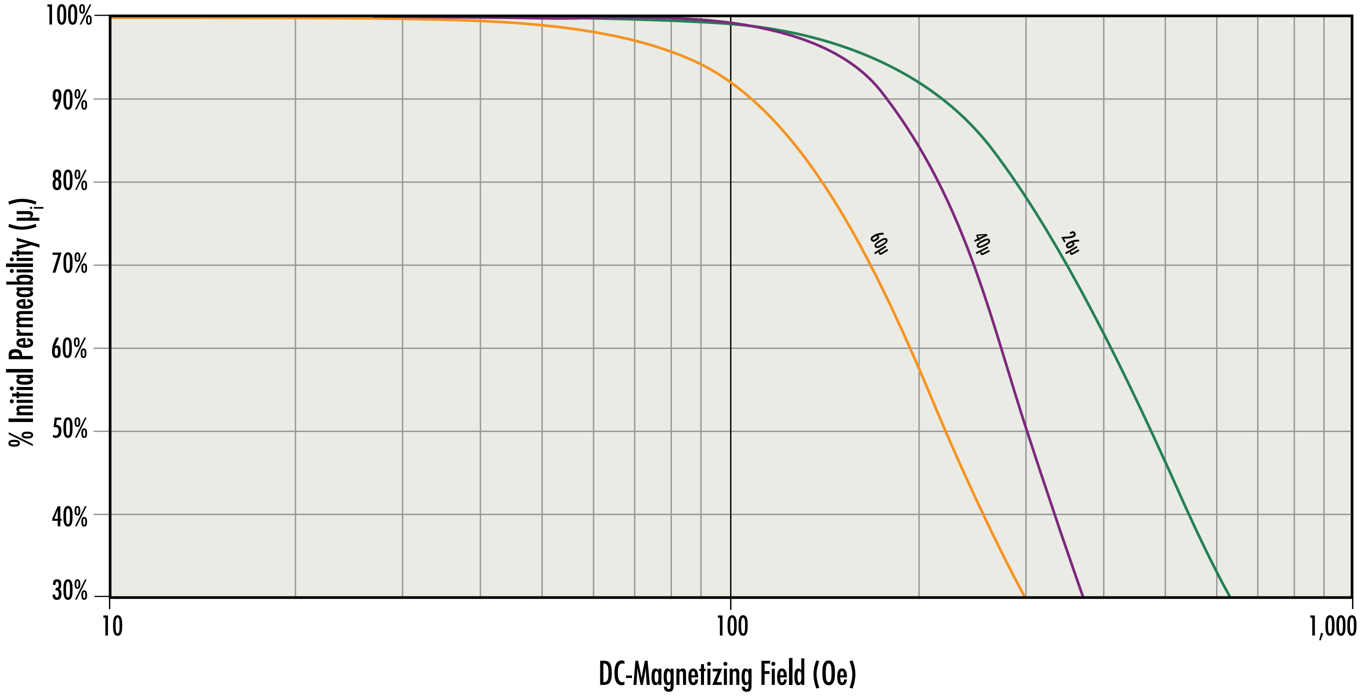


High Flux Blocks, Round Blocks & Cylinders

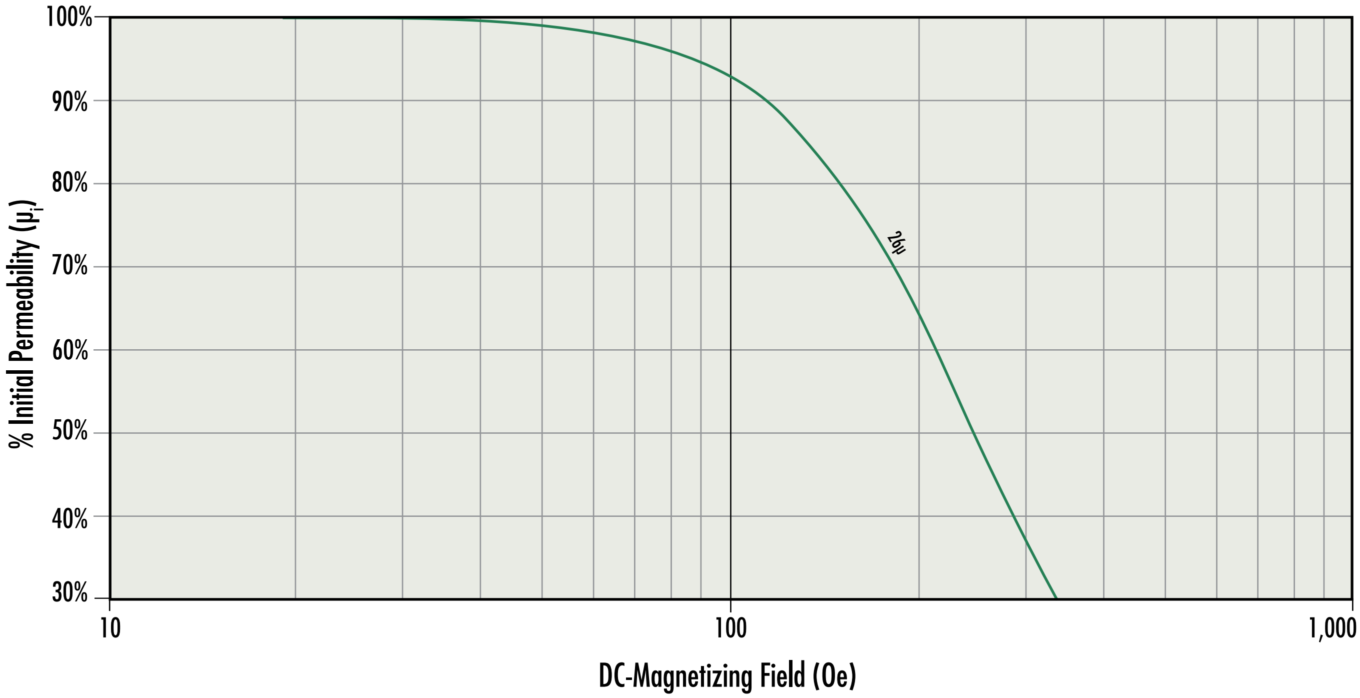


Permeability versus DC Bias Curves

Edge® Blocks, Round Blocks & Cylinders



MPP Blocks, Round Blocks & Cylinders



Permeability versus DC Bias Curves

Fit Formula

$$\%\ \text{initial permeability} = \frac{1}{(a + bH^c)}$$ where H is Oersteds (Oe)

Perm	a	b	c
Kool Mµ® Toroids			
14µ	0.01	4.498E-08	2.034
26µ	0.01	5.266E-07	1.819
40µ	0.01	2.177E-06	1.704
60µ	0.01	2.142E-06	1.855
75µ	0.01	3.885E-06	1.819
90µ	0.01	5.830E-06	1.819
125µ	0.01	2.209E-05	1.636
Kool Mµ® MAX Toroids			
14µ	0.01	8.274E-09	2.239
19µ	0.01	3.136E-08	2.111
26µ	0.01	3.444E-08	2.205
40µ	0.01	2.500E-07	2.000
60µ	0.01	5.917E-07	2.000
75µ	0.01	1.000E-06	2.000
90µ	0.01	3.885E-06	1.819
Kool Mµ® H*f* Toroids			
26µ	0.01	3.556E-08	2.213
40µ	0.01	1.282E-07	2.169
60µ	0.01	4.064E-07	2.131
Kool Mµ® Ultra Toroids			
26µ	0.01	7.380E-08	2.110
40µ	0.01	4.940E-07	1.920
60µ	0.01	6.944E-07	2.000
XFlux® Toroids			
19µ	0.01	4.976E-09	2.236
26µ	0.01	6.304E-10	2.714
40µ	0.01	1.843E-08	2.358
60µ	0.01	1.489E-08	2.613
75µ	0.01	2.269E-08	2.649
90µ	0.01	9.841E-08	2.477
125µ	0.01	2.687E-07	2.477
XFlux® Ultra Toroids			
26µ	0.01	2.699E-09	2.454
60µ	0.01	4.483E-09	2.815

Perm	a	b	c
High Flux Toroids			
14µ	0.01	1.657E-09	2.441
26µ	0.01	4.205E-09	2.426
40µ	0.01	1.843E-08	2.358
60µ	0.01	6.413E-08	2.291
75µ	0.01	4.884E-08	2.441
90µ	0.01	9.693E-08	2.391
125µ	0.01	1.403E-07	2.465
147µ	0.01	8.155E-08	2.714
160µ	0.01	1.671E-07	2.572
Edge® Toroids			
14µ	0.01	1.173E-11	3.106
19µ	0.01	6.393E-11	2.950
26µ	0.01	3.646E-11	3.192
40µ	0.01	2.592E-09	2.683
60µ	0.01	9.202E-10	3.044
75µ	0.01	1.580E-09	3.067
90µ	0.01	1.846E-09	3.138
125µ	0.01	1.229E-09	3.419
MPP Toroids			
14µ	0.01	4.357E-09	2.385
19µ	0.01	1.499E-09	2.645
26µ	0.01	1.090E-08	2.505
40µ	0.01	2.702E-08	2.511
60µ	0.01	1.165E-07	2.436
75µ	0.01	6.228E-07	2.180
90µ	0.01	8.712E-07	2.239
125µ	0.01	4.061E-07	2.518
147µ	0.01	9.118E-07	2.430
160µ	0.01	9.525E-07	2.477
173µ	0.01	8.078E-07	2.563
200µ	0.01	1.496E-06	2.477
300µ	0.01	4.913E-06	2.430
550µ	0.01	5.597E-04	1.710
Kool Mµ® E Cores, U Cores & EER Cores			
14µ	0.01	1.041E-07	2.000
26µ	0.01	2.500E-07	2.000
40µ	0.01	1.325E-06	1.807
60µ	0.01	3.371E-06	1.736
90µ	0.01	1.529E-05	1.583

Note: Fit valid only for range shown on graph.

Permeability versus DC Bias Curves

Fit Formula

$$\%\ \text{initial permeability} = \frac{1}{(a + bH^c)}$$ where H is Oersteds (Oe)

Perm	a	b	c
Kool Mμ® MAX E Cores, U Cores & EER Cores			
26µ	0.01	1.600E-07	2.000
40µ	0.01	3.906E-07	2.000
60µ	0.01	2.575E-06	1.758
Kool Mμ® MAX High Performance E Cores, U Cores & EER Cores			
26µ	0.01	1.843E-08	2.358
40µ	0.01	2.108E-07	2.085
60µ	0.01	1.340E-06	1.879
Kool Mμ® H*f* E Cores, U Cores & EER Cores			
26µ	0.01	4.028E-08	2.250
40µ	0.01	1.665E-06	1.694
60µ	0.01	9.421E-06	1.513
XFlux® E Cores, U Cores & EER Cores			
26µ	0.01	1.163E-08	2.258
40µ	0.01	4.028E-08	2.250
60µ	0.01	8.129E-08	2.269
High Flux E Cores, U Cores & EER Cores			
60µ	0.01	5.694E-09	2.714
Edge® E Cores, U Cores & EER Cores			
26µ	0.01	9.235E-10	2.692
40µ	0.01	8.270E-13	4.120
60µ	0.01	1.149E-10	3.419
Kool Mμ® EQ & LP Cores			
26µ	0.01	8.250E-08	2.120
40µ	0.01	4.444E-07	2.000
60µ	0.01	3.371E-06	1.736
75µ	0.01	8.710E-06	1.758
Kool Mμ® MAX EQ & LP Cores			
26µ	0.01	3.444E-08	2.205
40µ	0.01	7.781E-08	2.253
60µ	0.01	1.095E-06	1.889
75µ	0.01	7.326E-07	2.205

Perm	a	b	c
XFlux® EQ & LP Cores			
26µ	0.01	1.282E-08	2.358
40µ	0.01	8.743E-08	2.125
60µ	0.01	8.480E-08	2.287
75µ	0.01	1.990E-07	2.261
High Flux EQ & LP Cores			
26µ	0.01	8.679E-10	2.714
40µ	0.01	9.538E-10	2.950
60µ	0.01	2.009E-09	2.986
75µ	0.01	1.267E-09	3.263
Edge® EQ & LP Cores			
26µ	0.01	6.985E-11	3.128
40µ	0.01	1.687E-10	3.197
60µ	0.01	7.657E-11	3.527
75µ	0.01	3.630E-10	3.419
Kool Mμ® Blocks, Round Blocks & Cylinders			
14µ	0.01	3.367E-08	2.117
26µ	0.01	1.736E-07	2.000
33µ	0.01	4.943E-07	1.920
40µ	0.01	7.684E-07	1.904
60µ	0.01	2.142E-06	1.855
90µ	0.01	5.617E-06	1.793
Kool Mμ® MAX Blocks, Round Blocks & Cylinders			
60µ	0.01	6.821E-06	1.551
Kool Mμ® MAX High Performance Blocks, Round Blocks & Cylinders			
26µ	0.01	3.444E-08	2.205
40µ	0.01	2.500E-07	2.000
60µ	0.01	3.717E-06	1.664
Kool Mμ® H*f* Blocks, Round Blocks & Cylinders			
26µ	0.01	3.444E-08	2.205
40µ	0.01	1.395E-06	1.710
60µ	0.01	3.717E-06	1.664

Note: Fit valid only for range shown on graph.

Permeability versus DC Bias Curves

Fit Formula

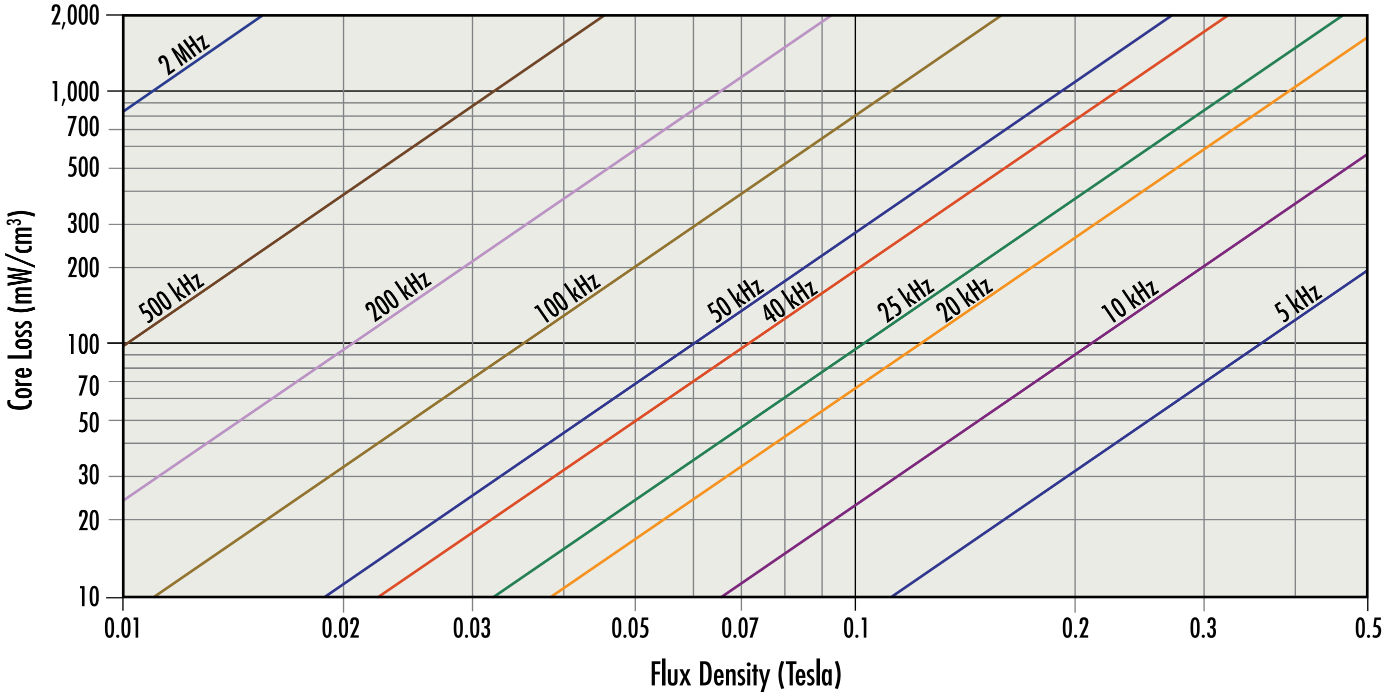
$$\%\ \text{initial permeability} = \frac{1}{(a + bH^c)}$$ where H is Oersteds (Oe)

Perm	a	b	c
XFlux® Blocks, Round Blocks & Cylinders			
26µ	0.01	5.537E-09	2.342
33µ	0.01	7.296E-08	2.045
40µ	0.01	1.849E-08	2.374
60µ	0.01	4.858E-08	2.382
High Flux Blocks, Round Blocks & Cylinders			
26µ	0.01	5.017E-10	2.836
60µ	0.01	1.660E-08	2.536
Edge® Blocks, Round Blocks & Cylinders			
26µ	0.01	2.129E-10	2.871
40µ	0.01	4.922E-13	4.161
60µ	0.01	6.539E-10	3.067
MPP Blocks, Round Blocks & Cylinders			
26µ	0.01	1.775E-09	2.826

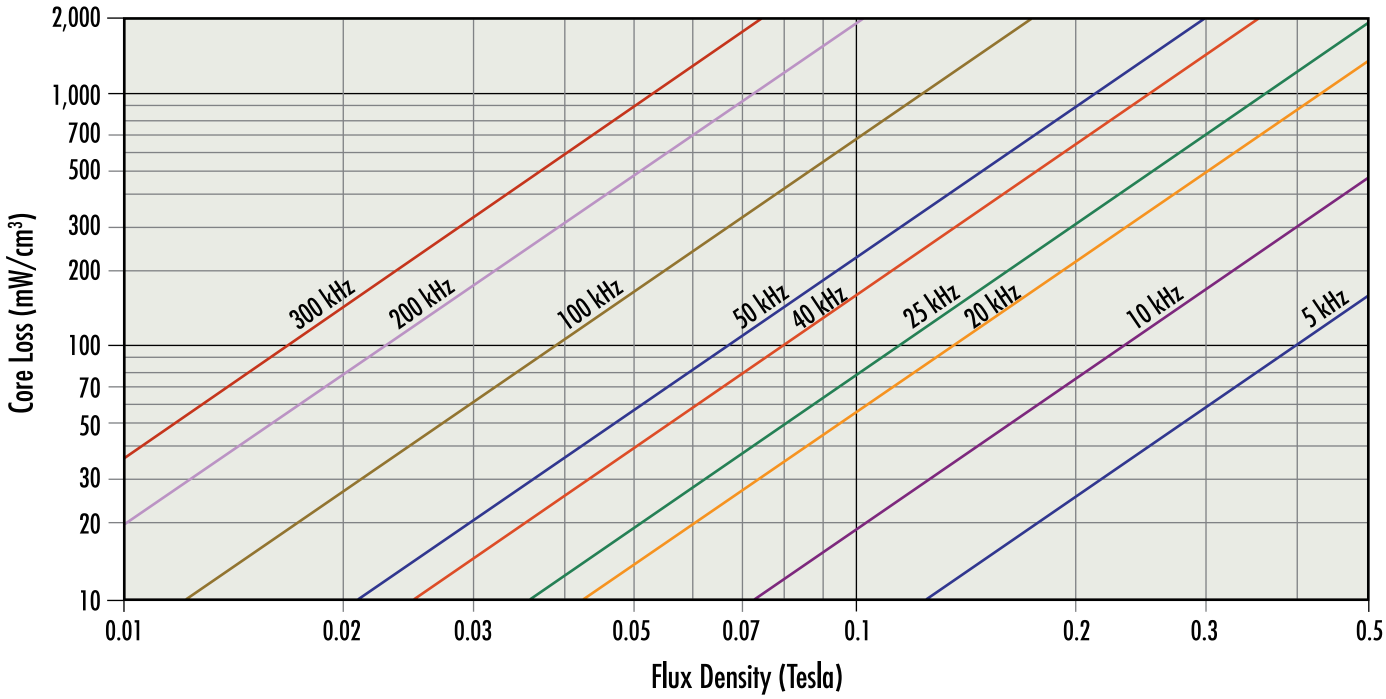
Note: Fit valid only for range shown on graph.

Core Loss Density Curves

Kool Mμ® Toroids 14μ

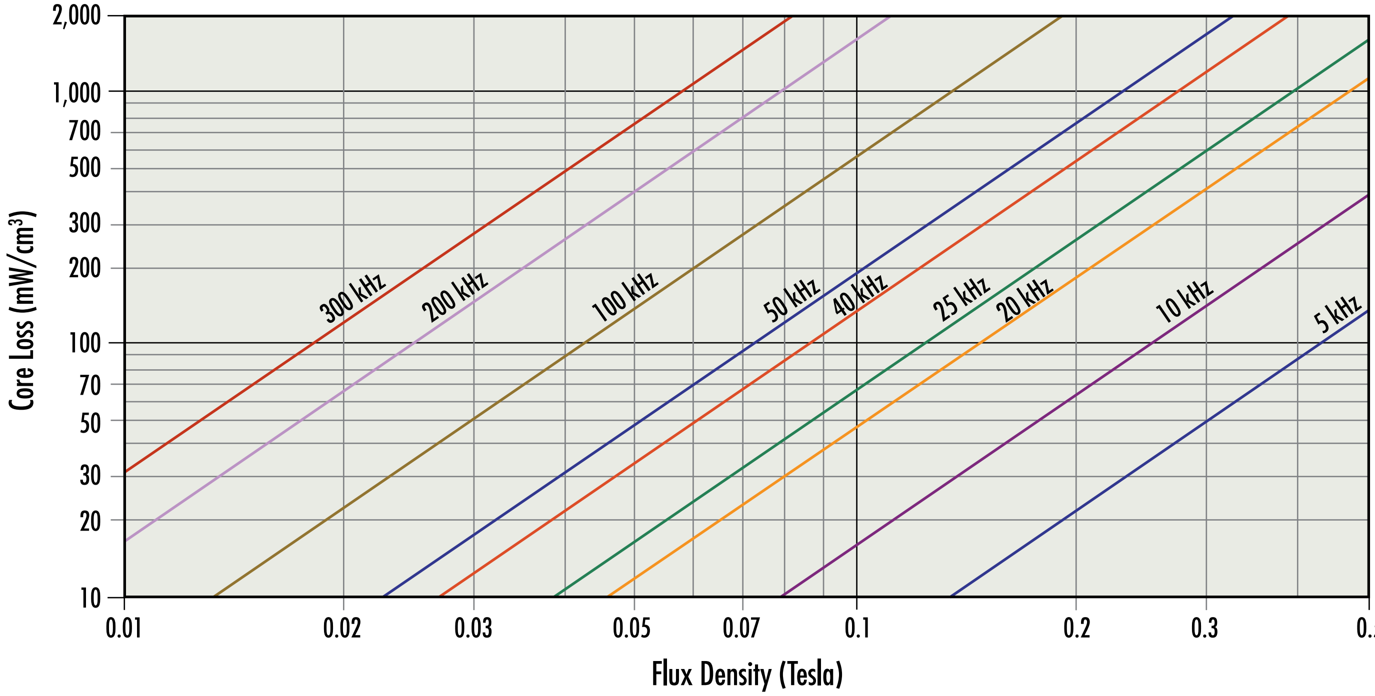


Kool Mμ® Toroids 26μ, 40μ

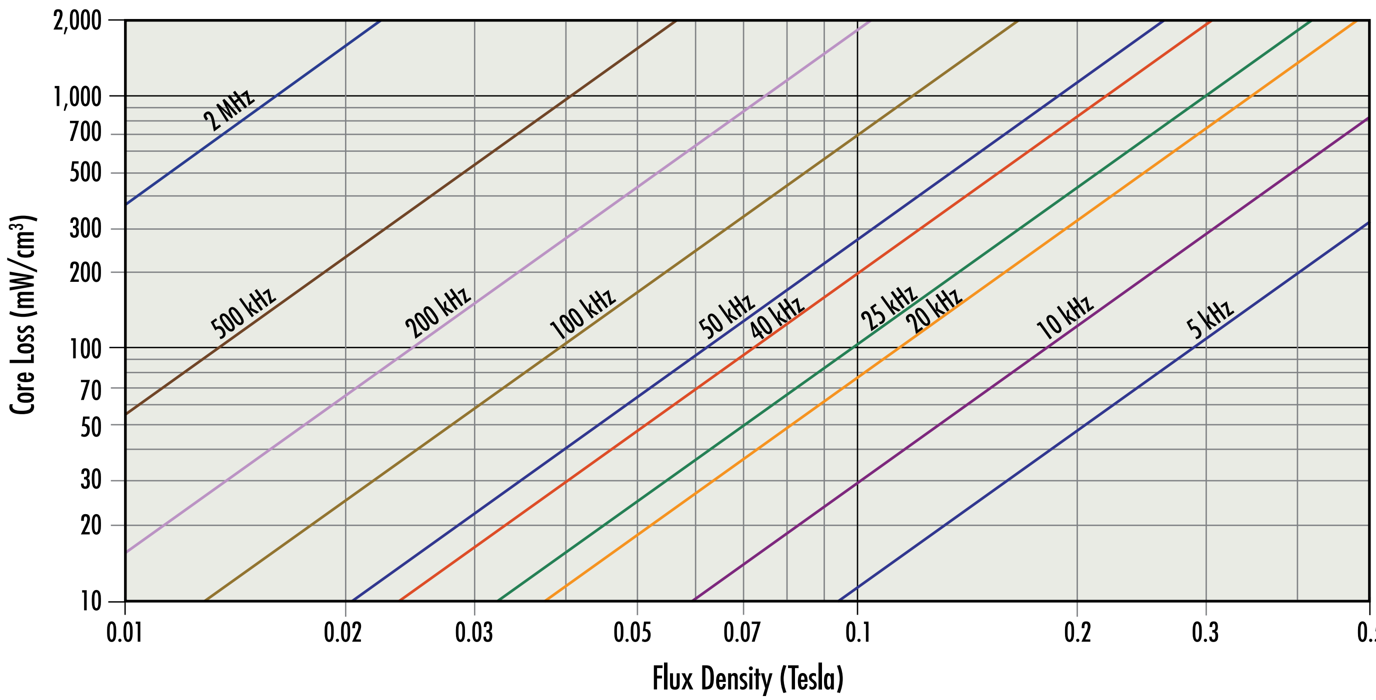


Core Loss Density Curves

Kool Mµ® Toroids 60µ, 75µ, 90µ, 125µ

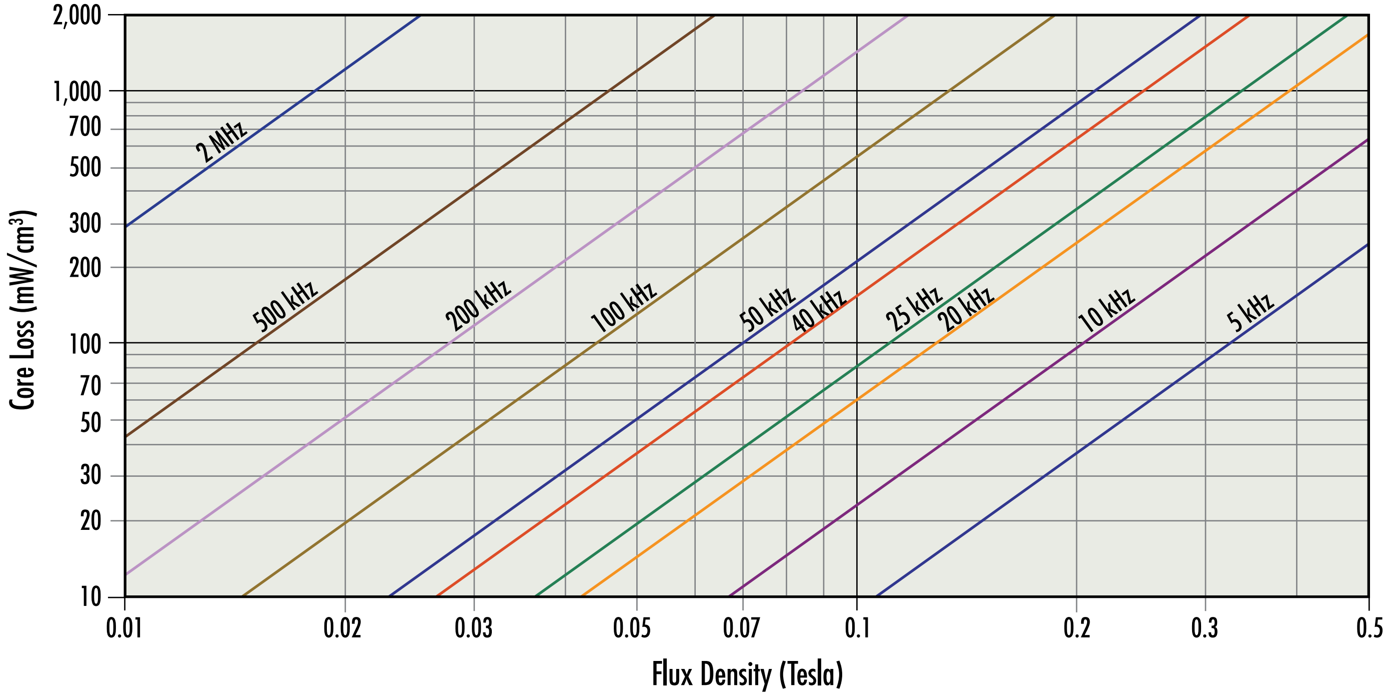


Kool Mµ® MAX Toroids 14µ, 19µ

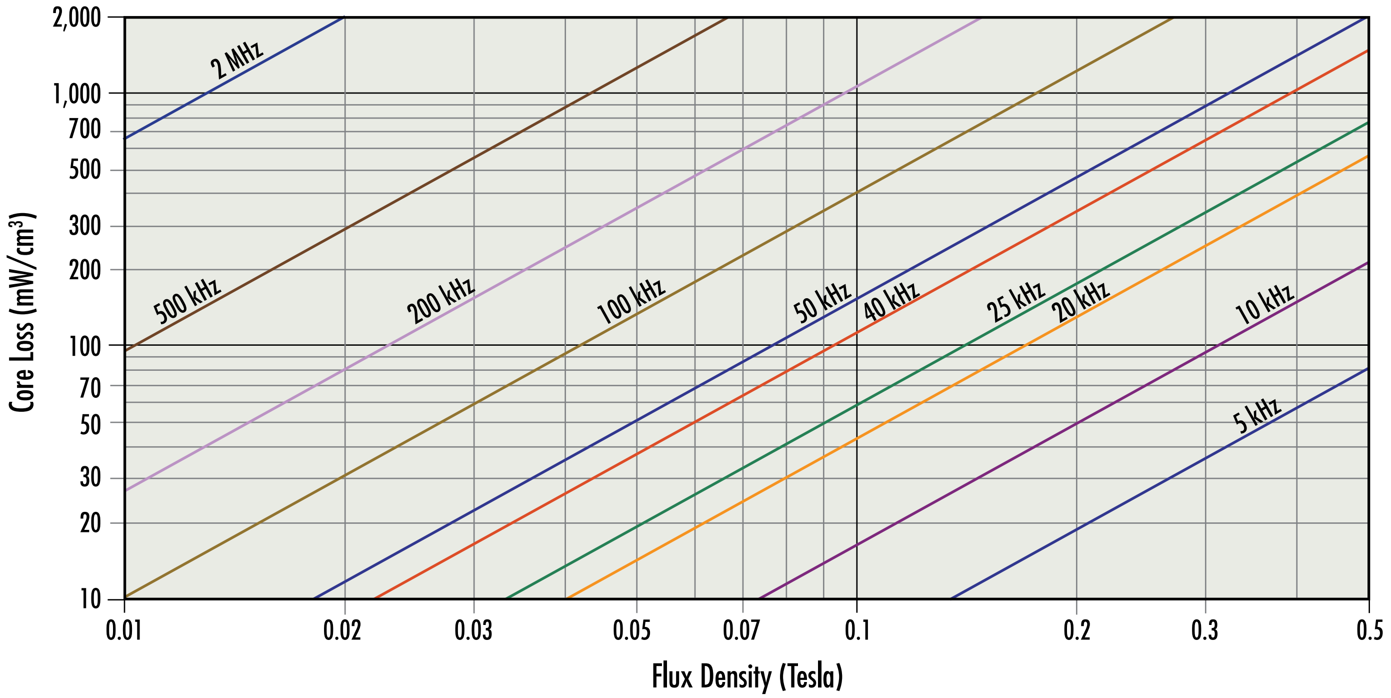


Core Loss Density Curves

Kool Mμ® MAX Toroids 26μ, 40μ, 60μ, 75μ, 90μ

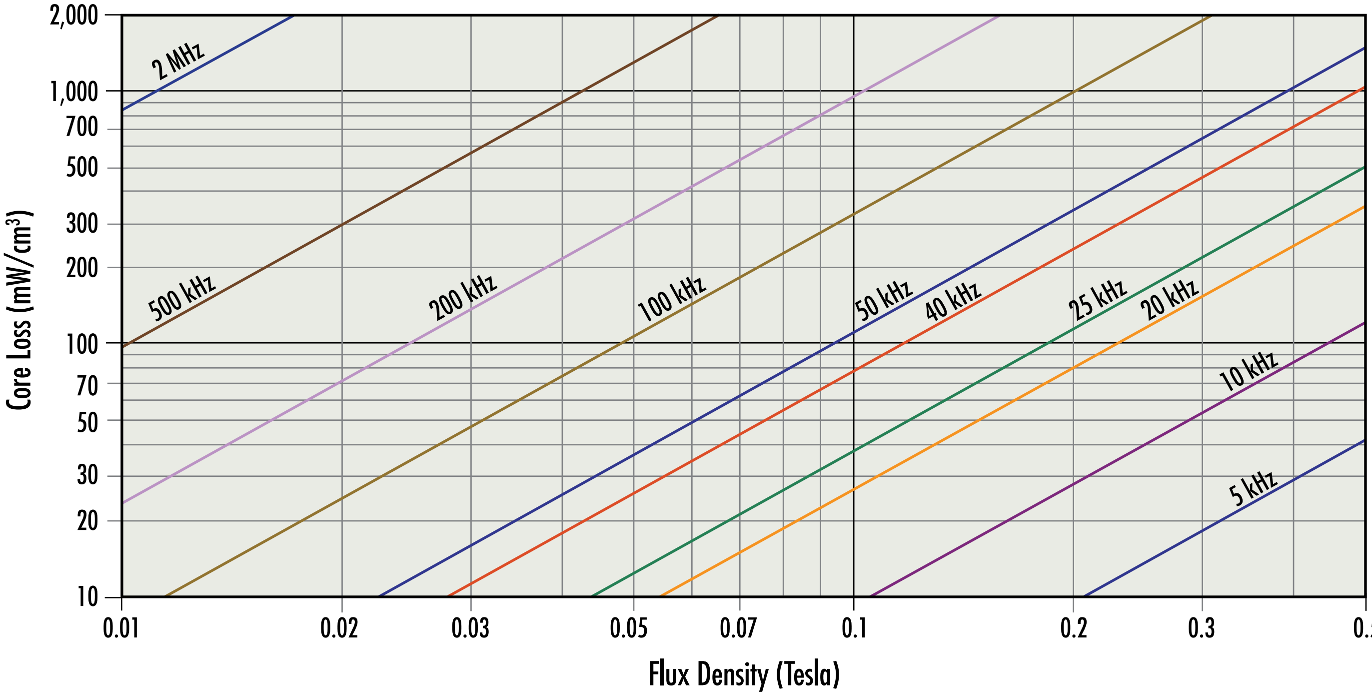


Kool Mμ® Hƒ Toroids 26μ

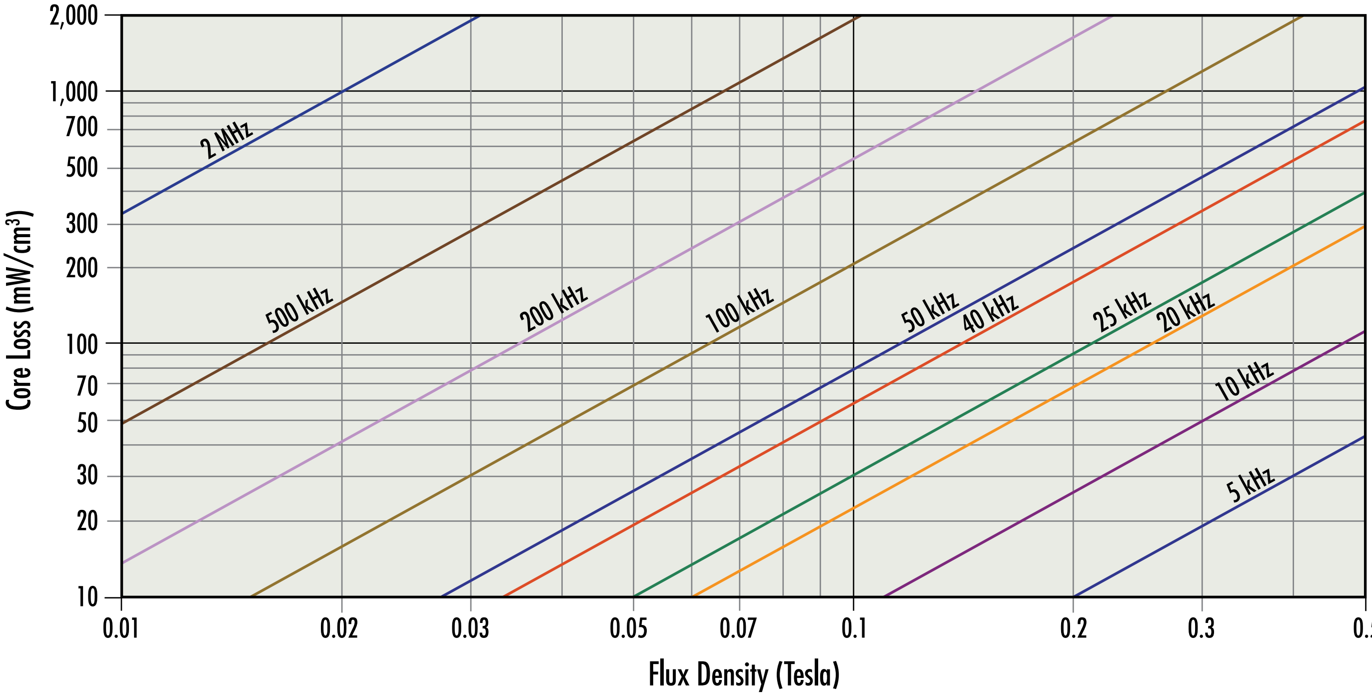


Core Loss Density Curves

Kool Mµ® H*ƒ* Toroids 40µ, 60µ

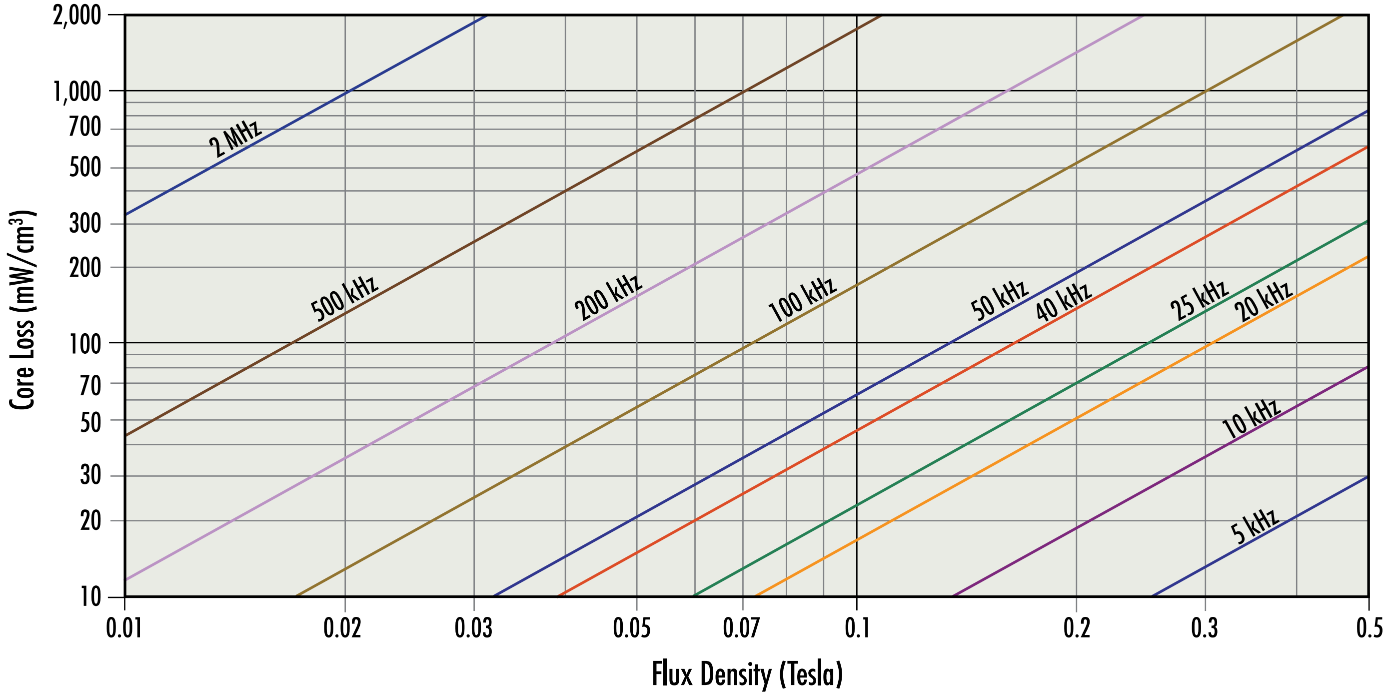


Kool Mµ® Ultra Toroids 26µ, 40µ

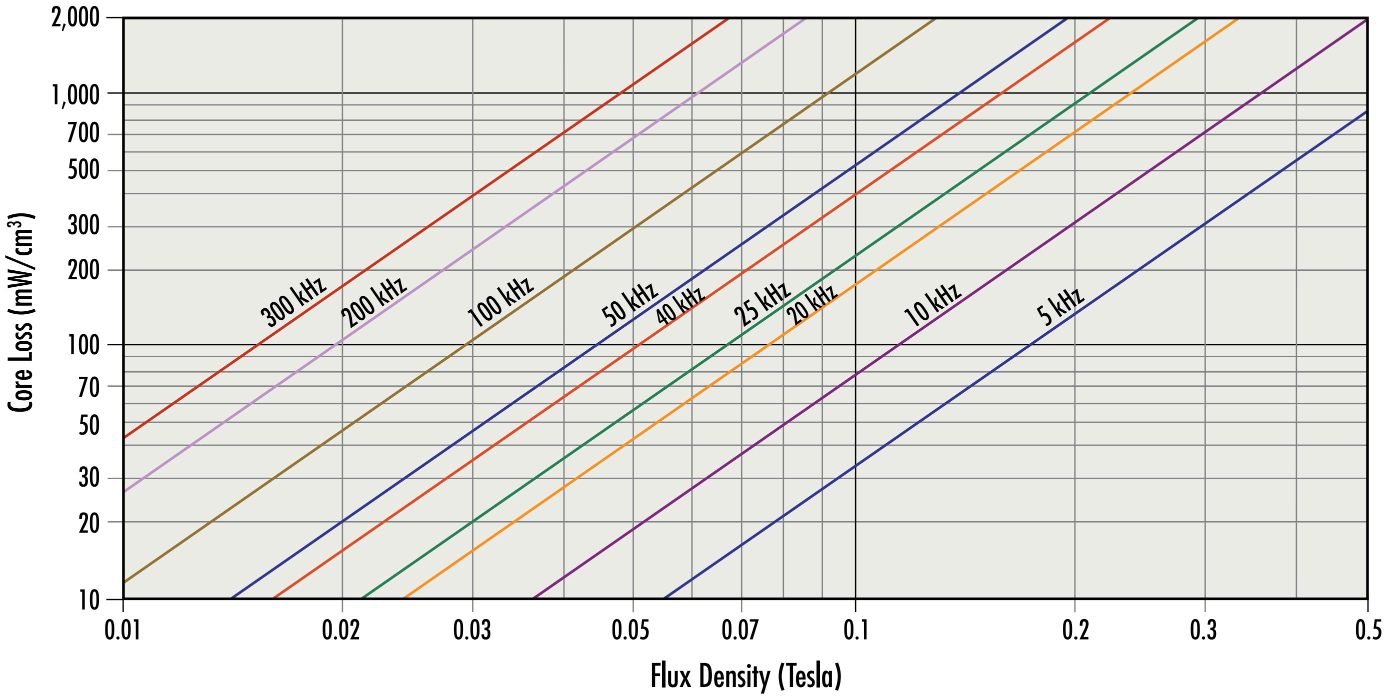


Core Loss Density Curves

Kool Mμ® Ultra Toroids 60μ

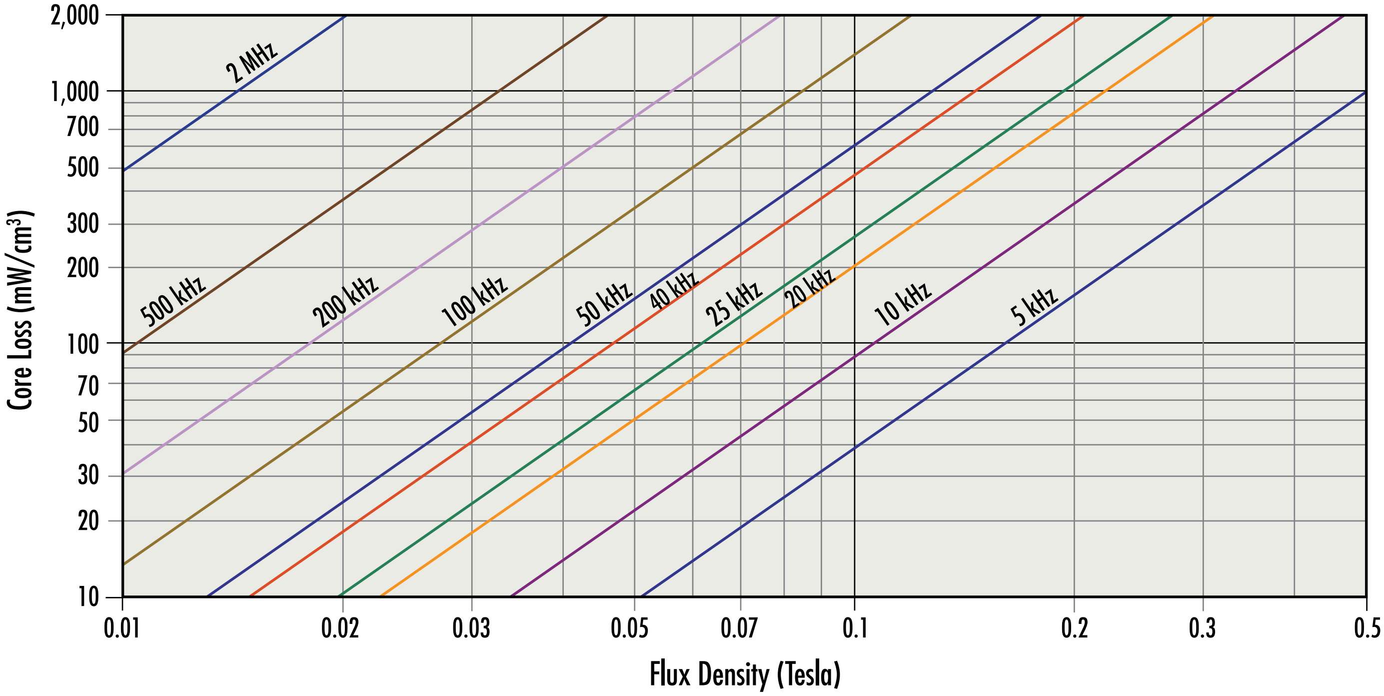


XFlux® Toroids 19μ

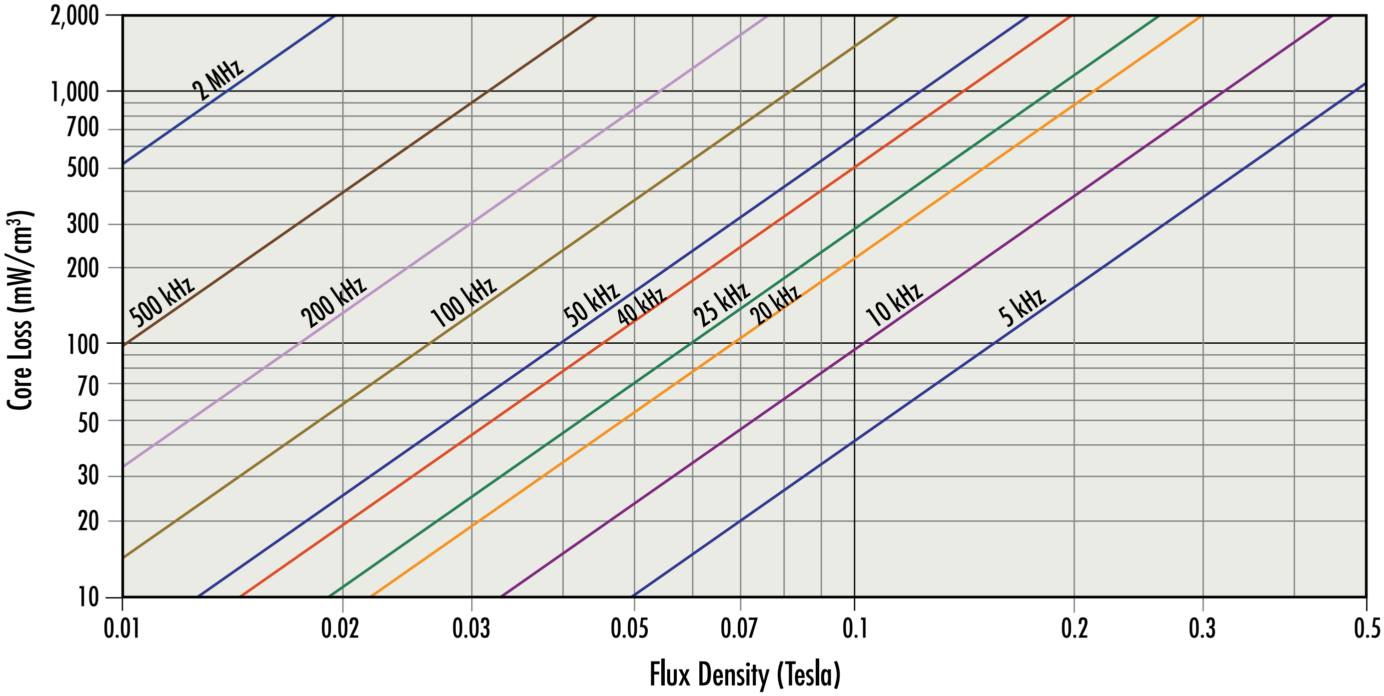


Core Loss Density Curves

XFlux® Toroids 26µ

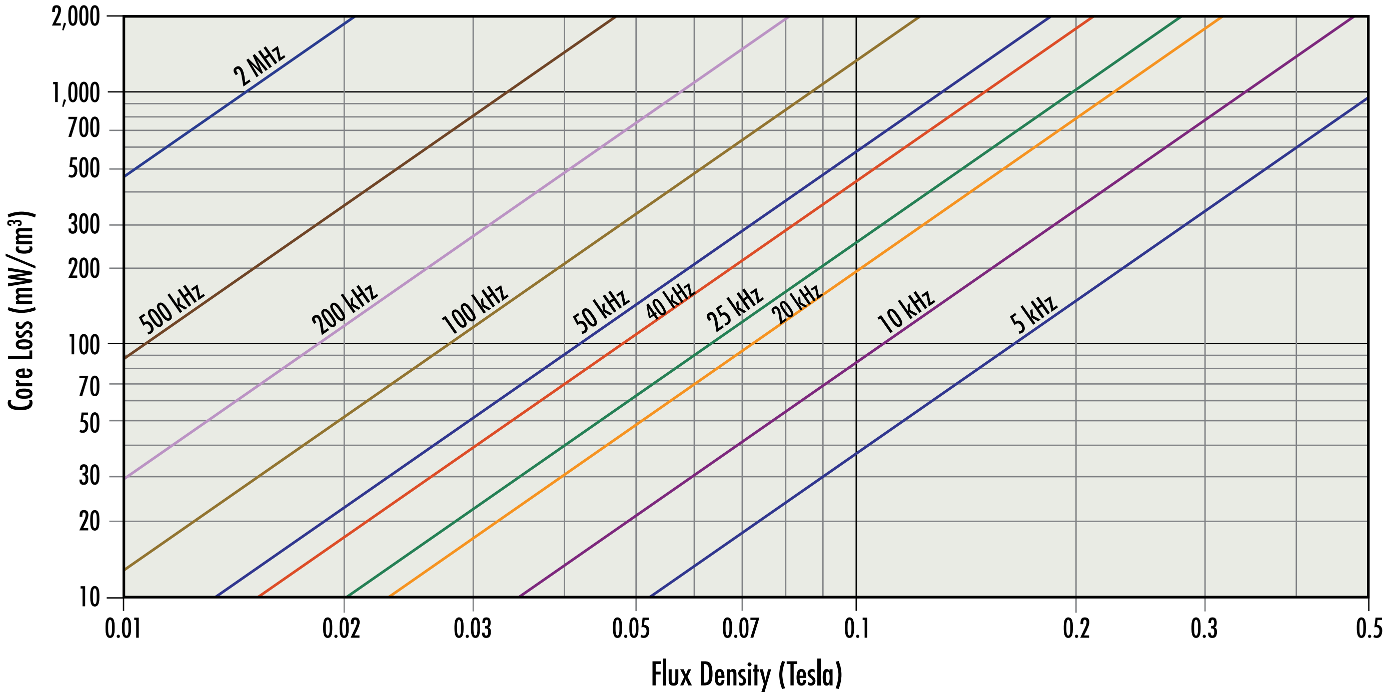


XFlux® Toroids 40µ

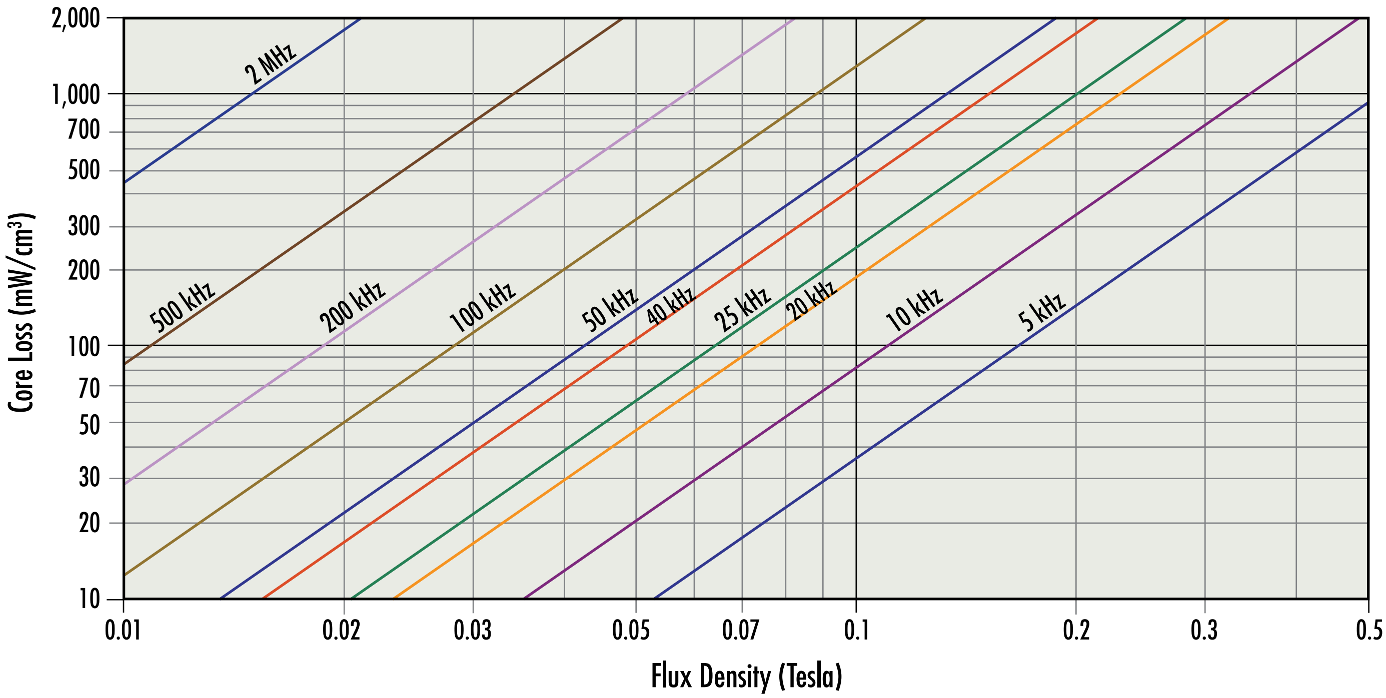


Core Loss Density Curves

XFlux® Toroids 60µ

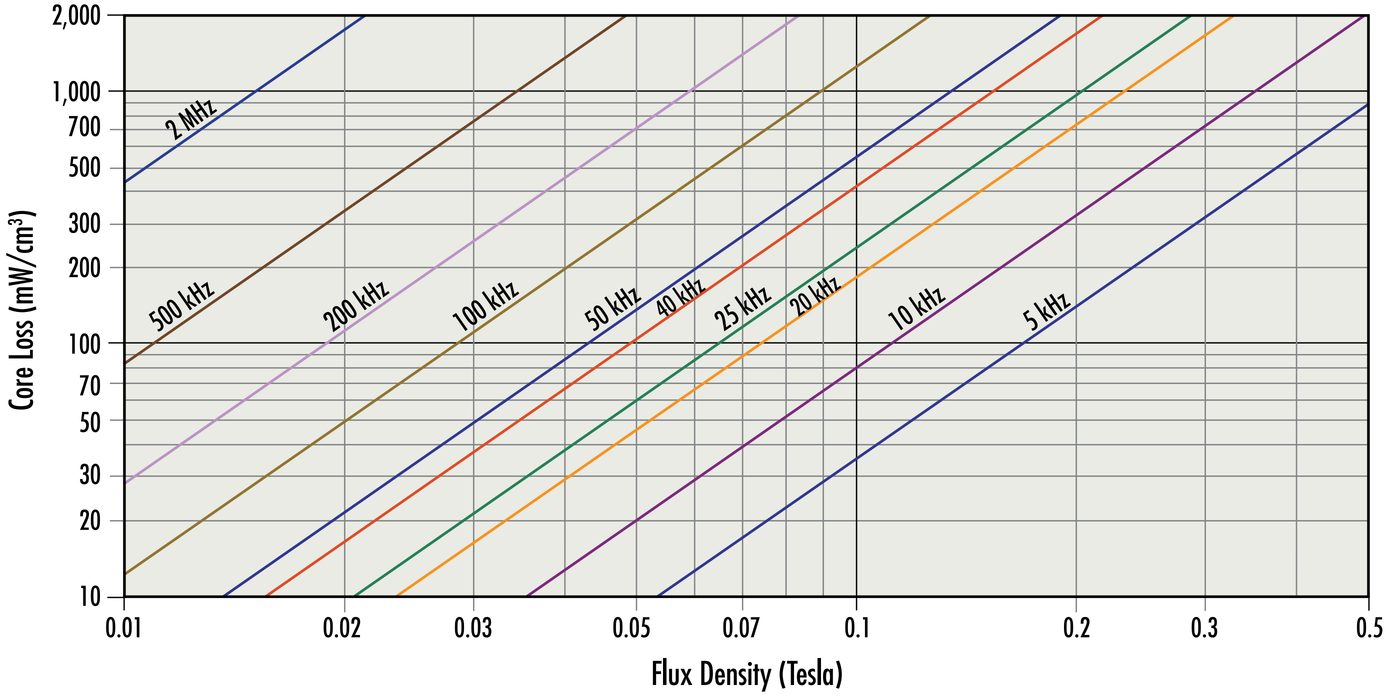


XFlux® Toroids 75µ, 90µ

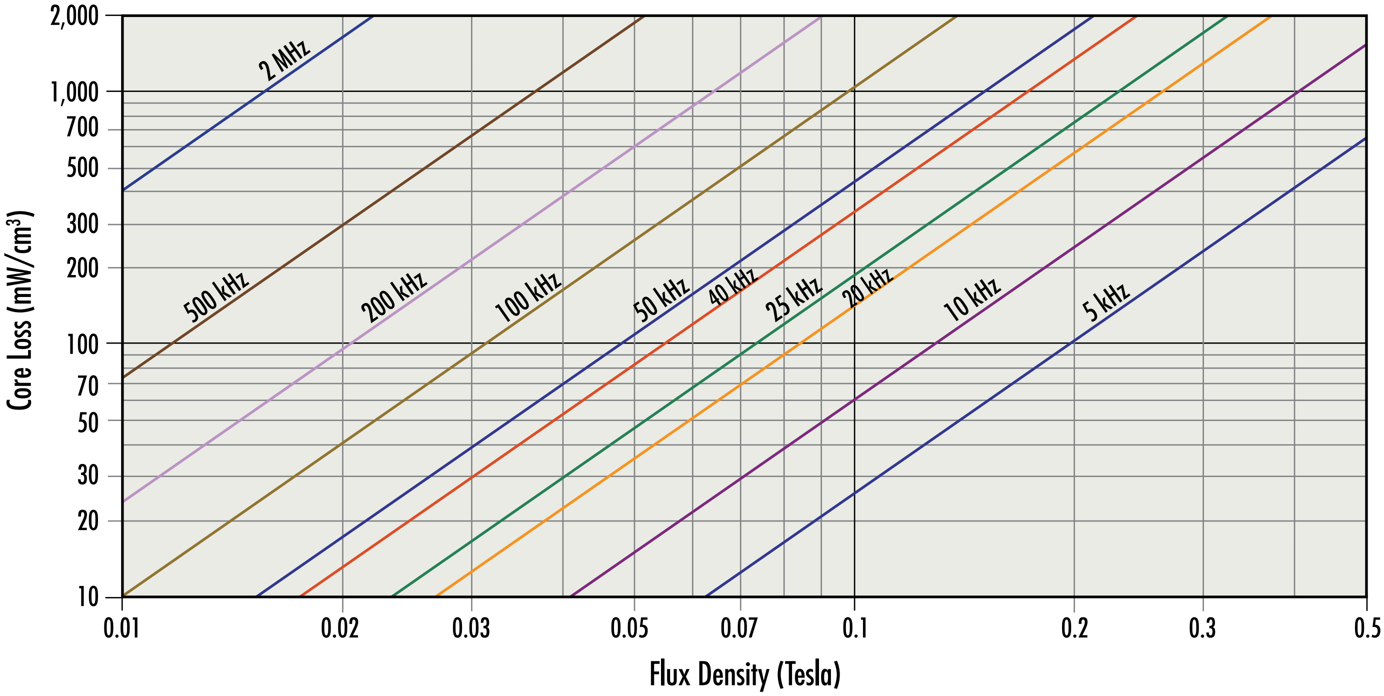


Core Loss Density Curves

XFlux® Toroids 125µ

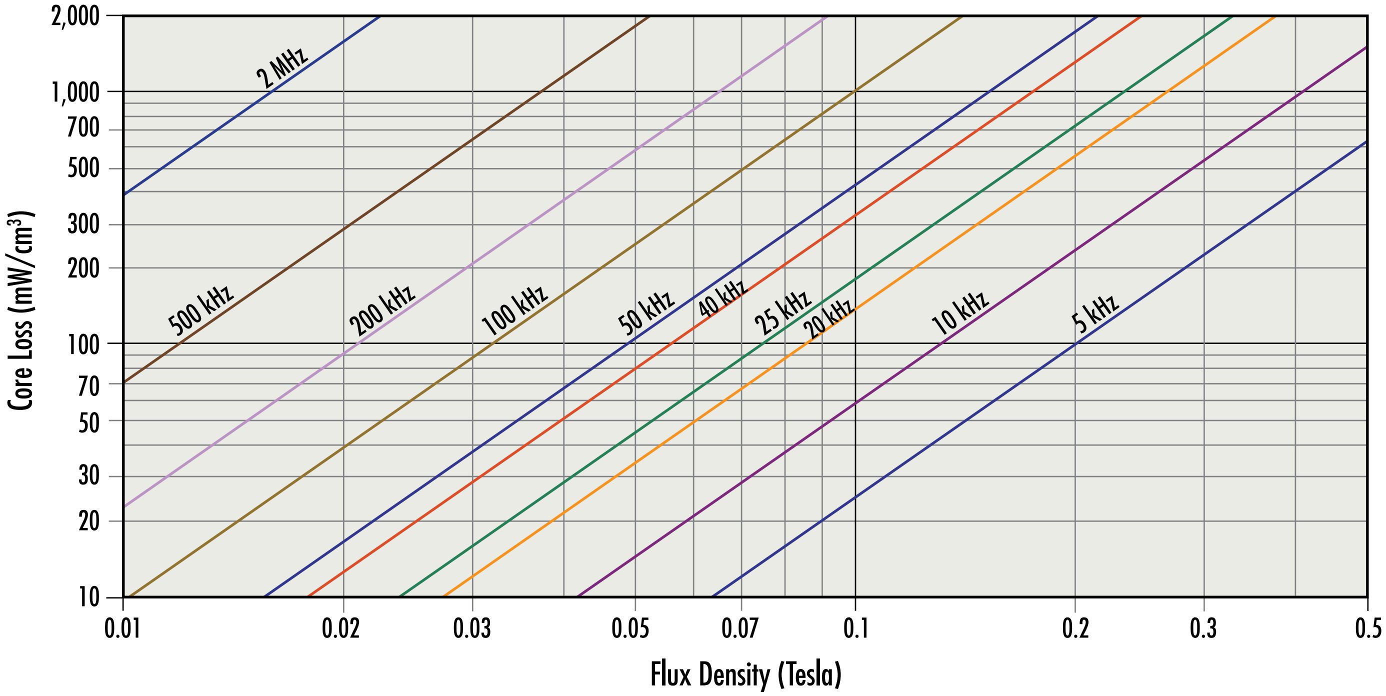


XFlux® Ultra Toroids 26µ

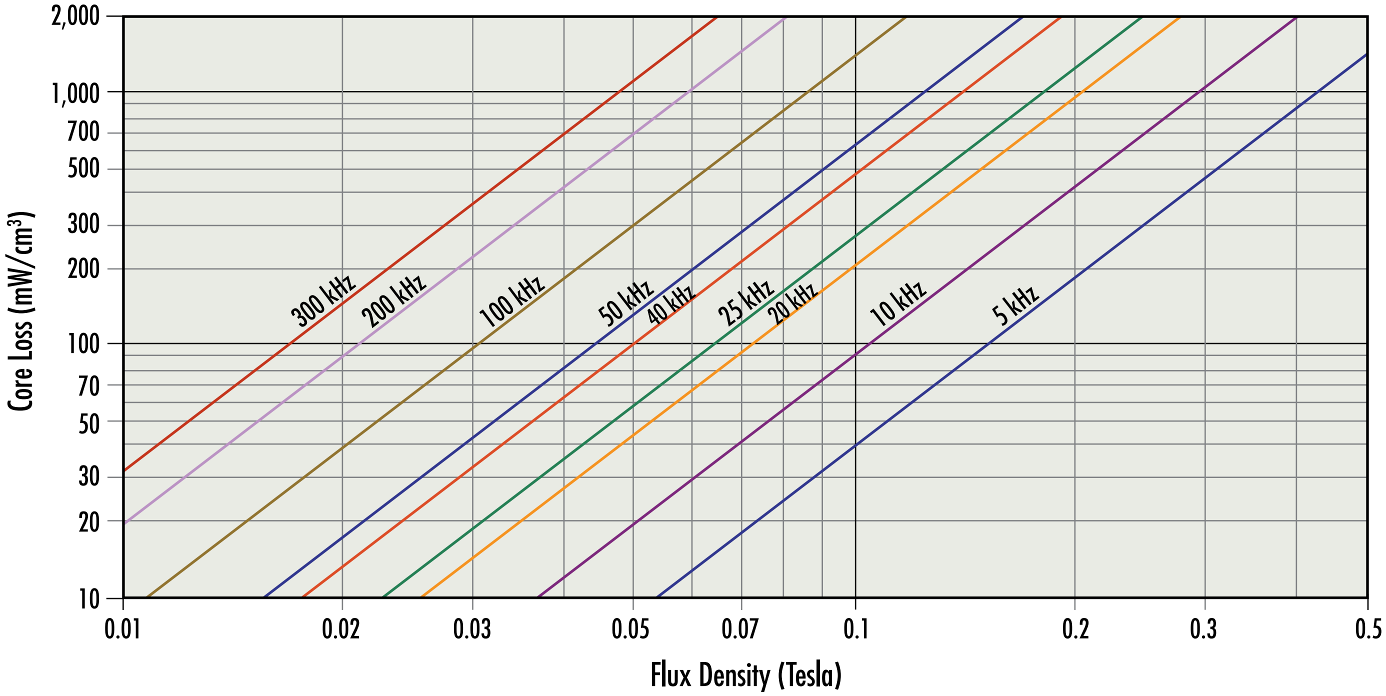


Core Loss Density Curves

XFlux® Ultra Toroids 60μ

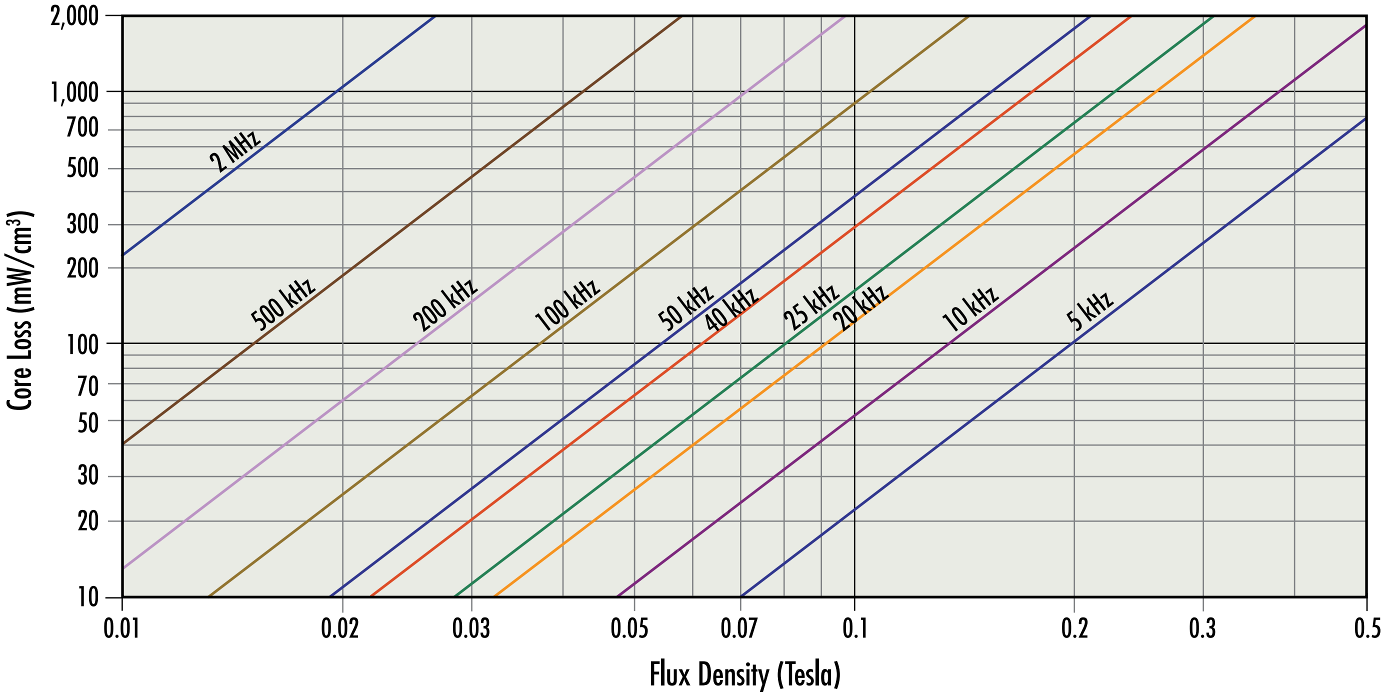


High Flux Toroids 14μ

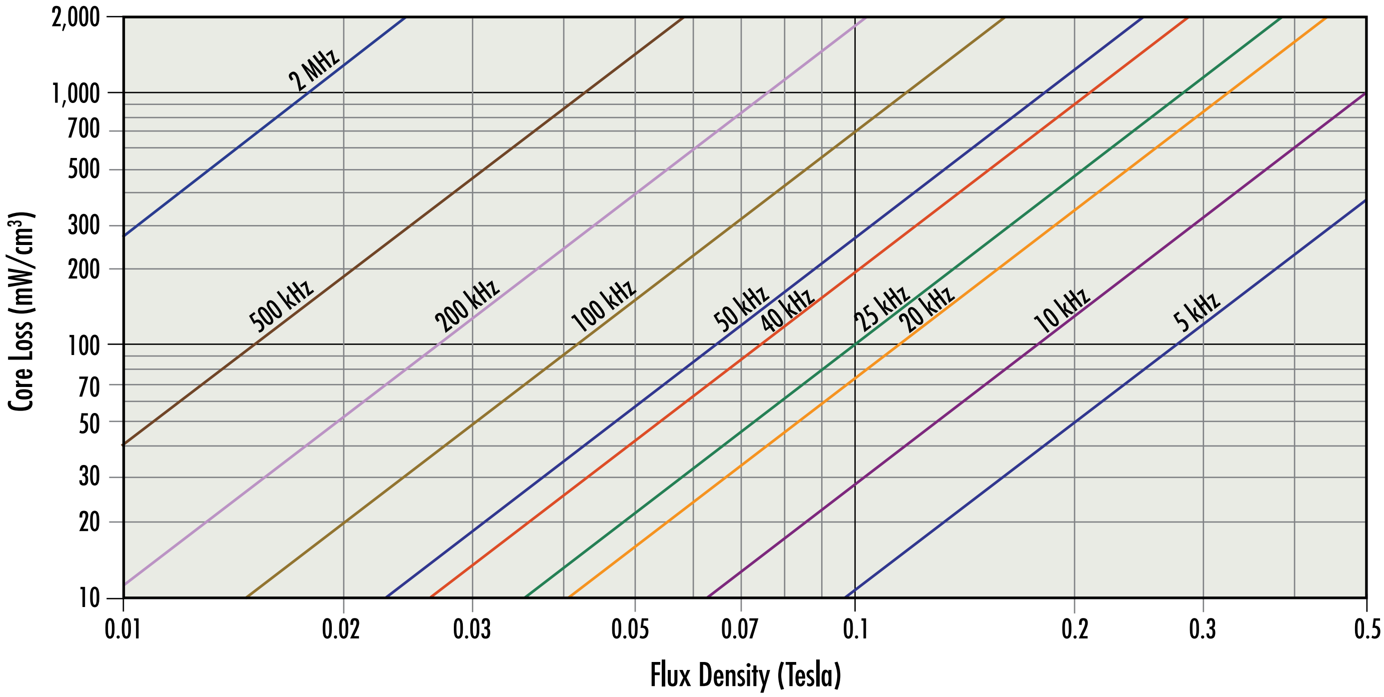


Core Loss Density Curves

High Flux Toroids 26µ

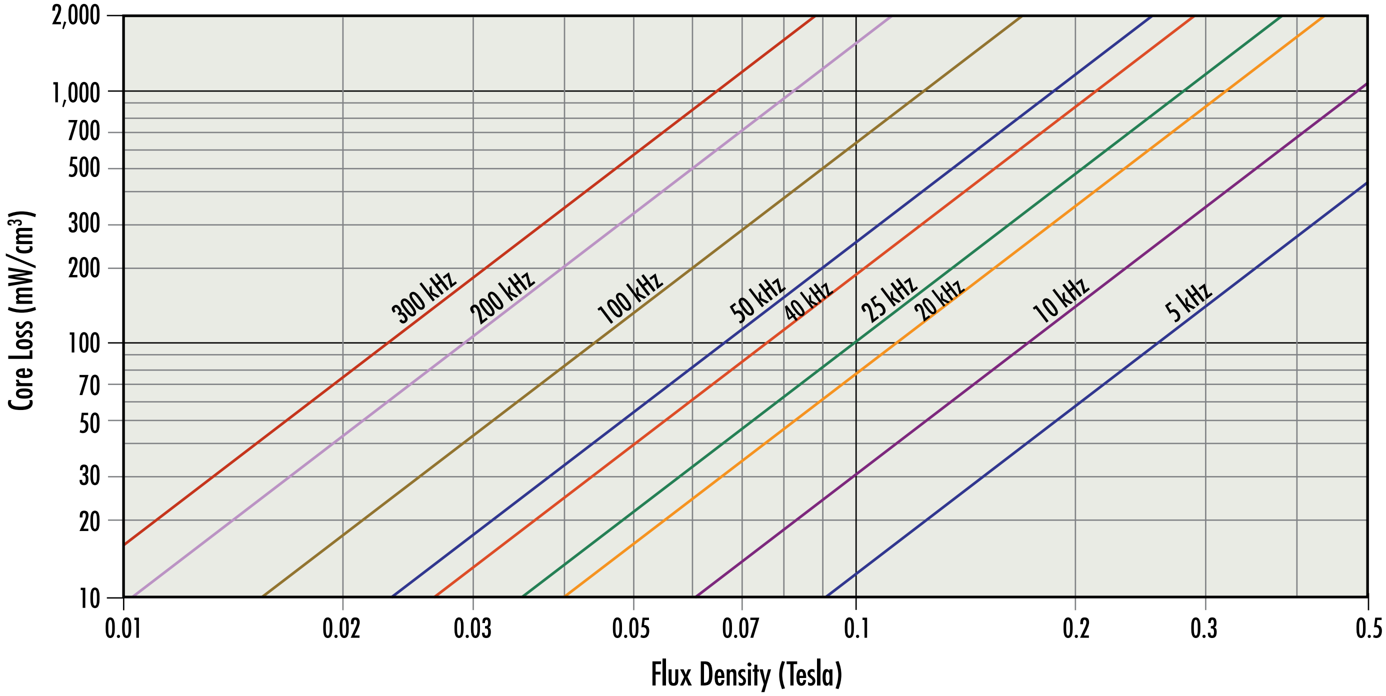


High Flux Toroids 40µ

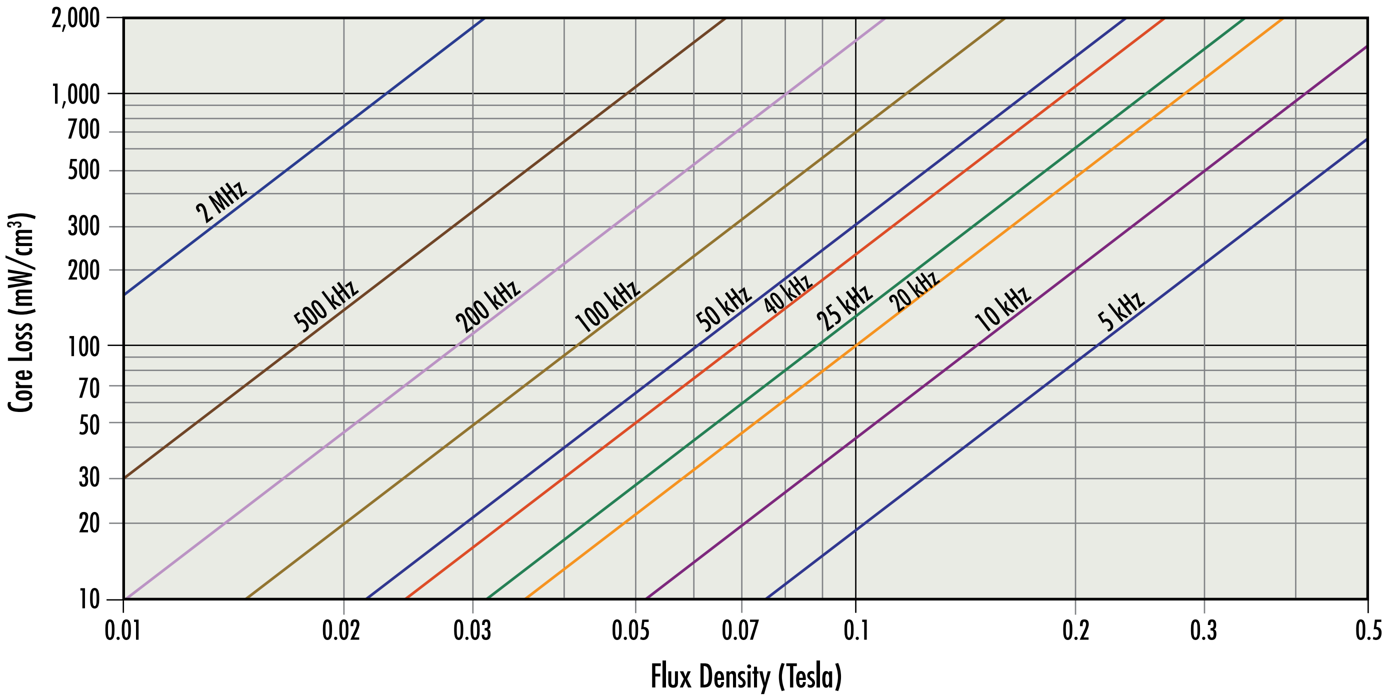


Core Loss Density Curves

High Flux Toroids 60µ

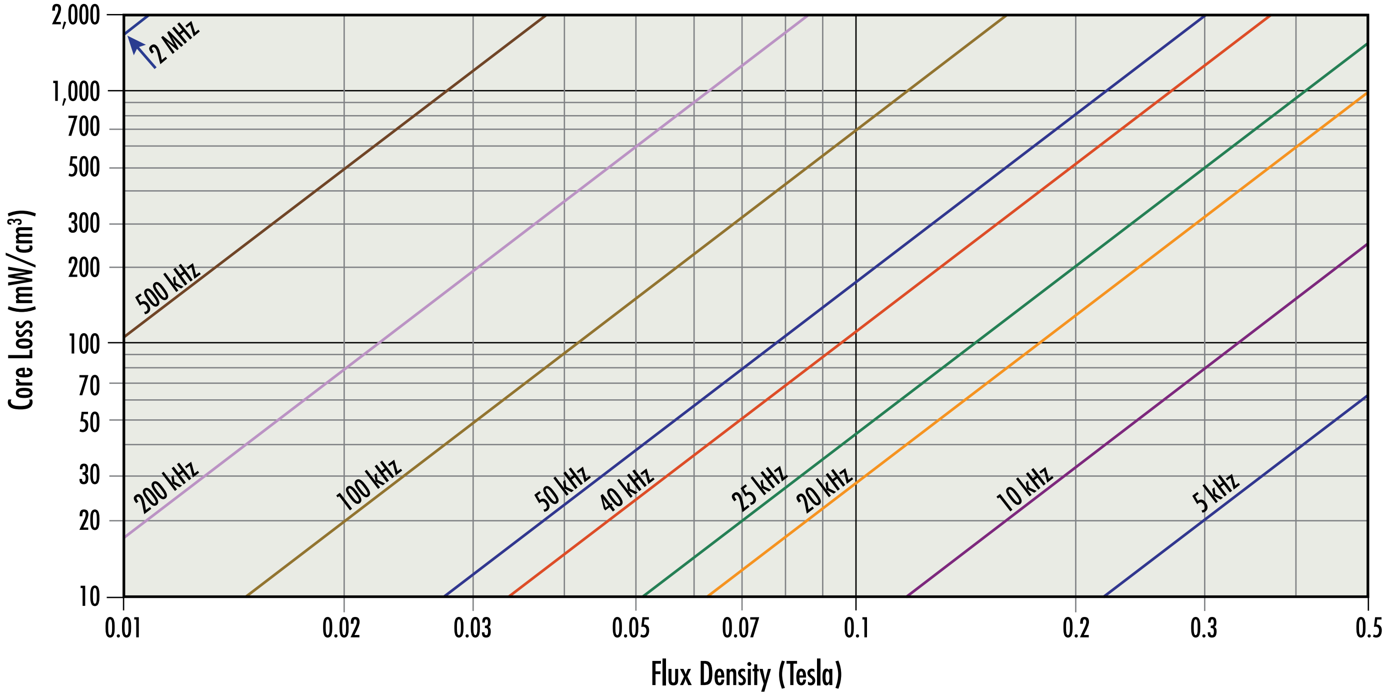


High Flux Toroids 75µ

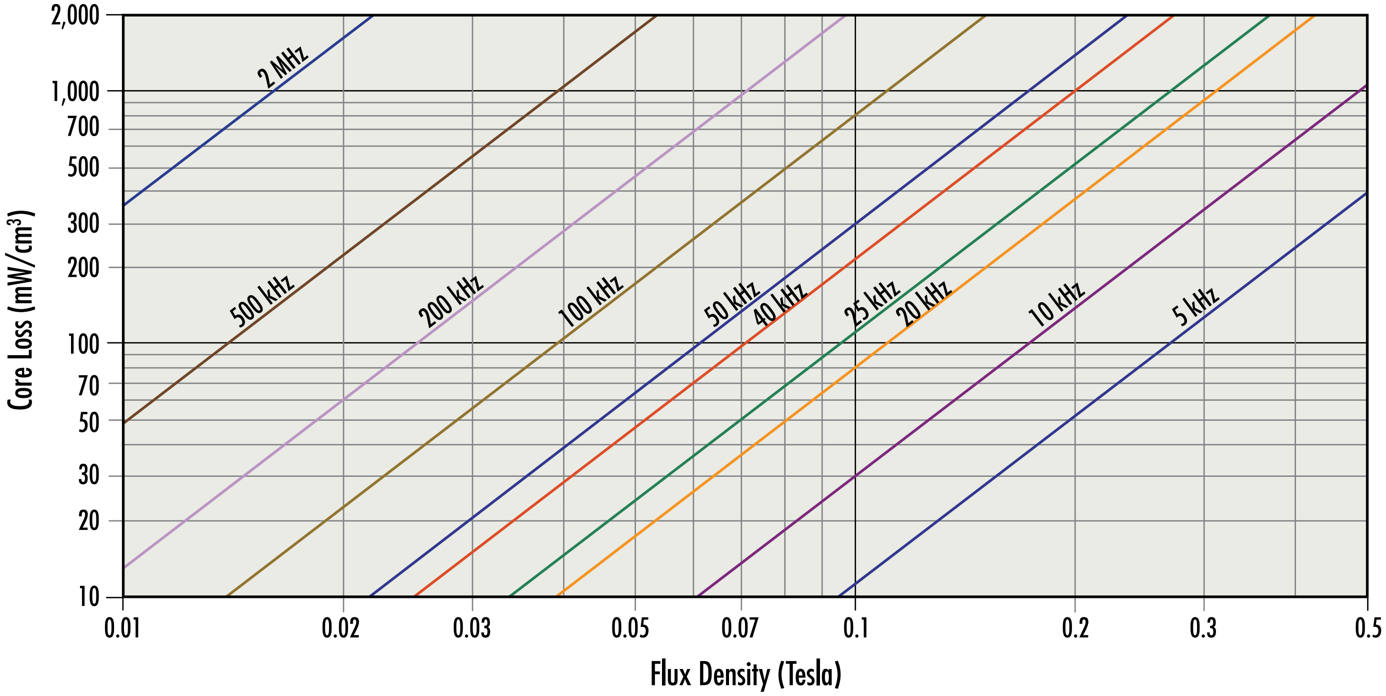


Core Loss Density Curves

High Flux Toroids 90µ

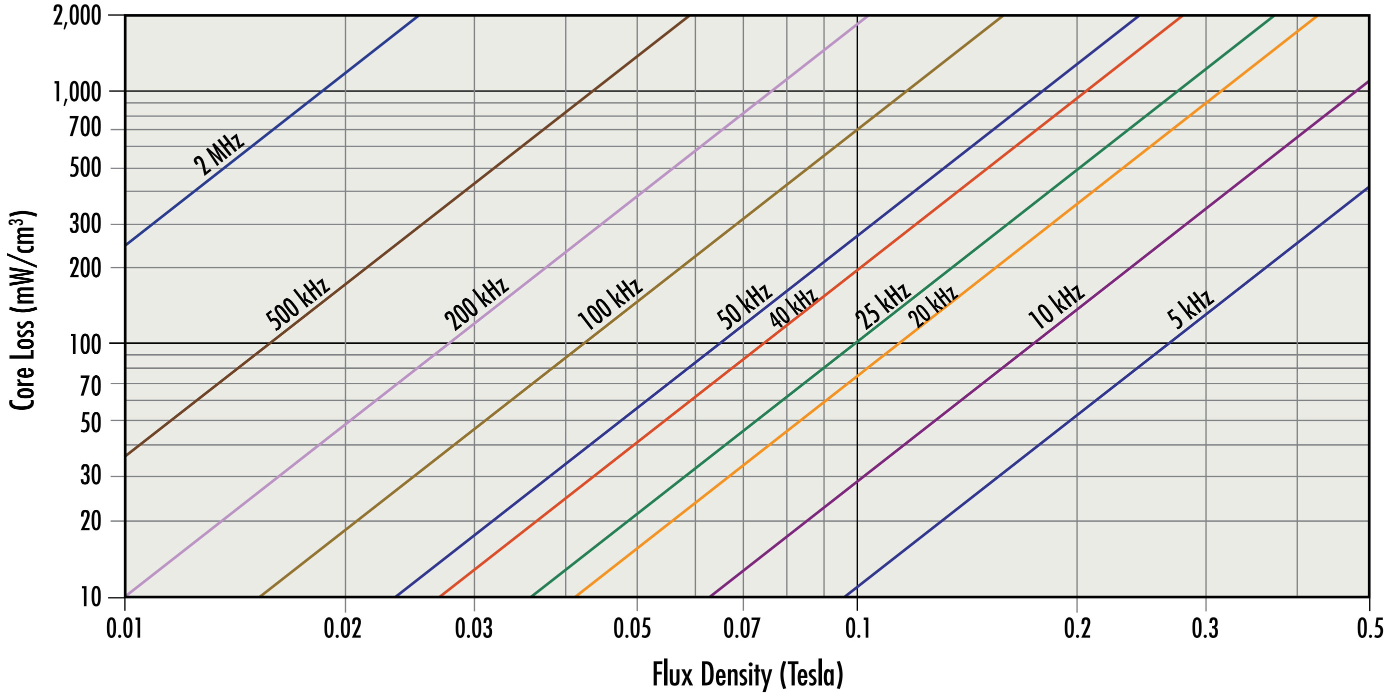


High Flux Toroids 125µ, 147µ, 160µ

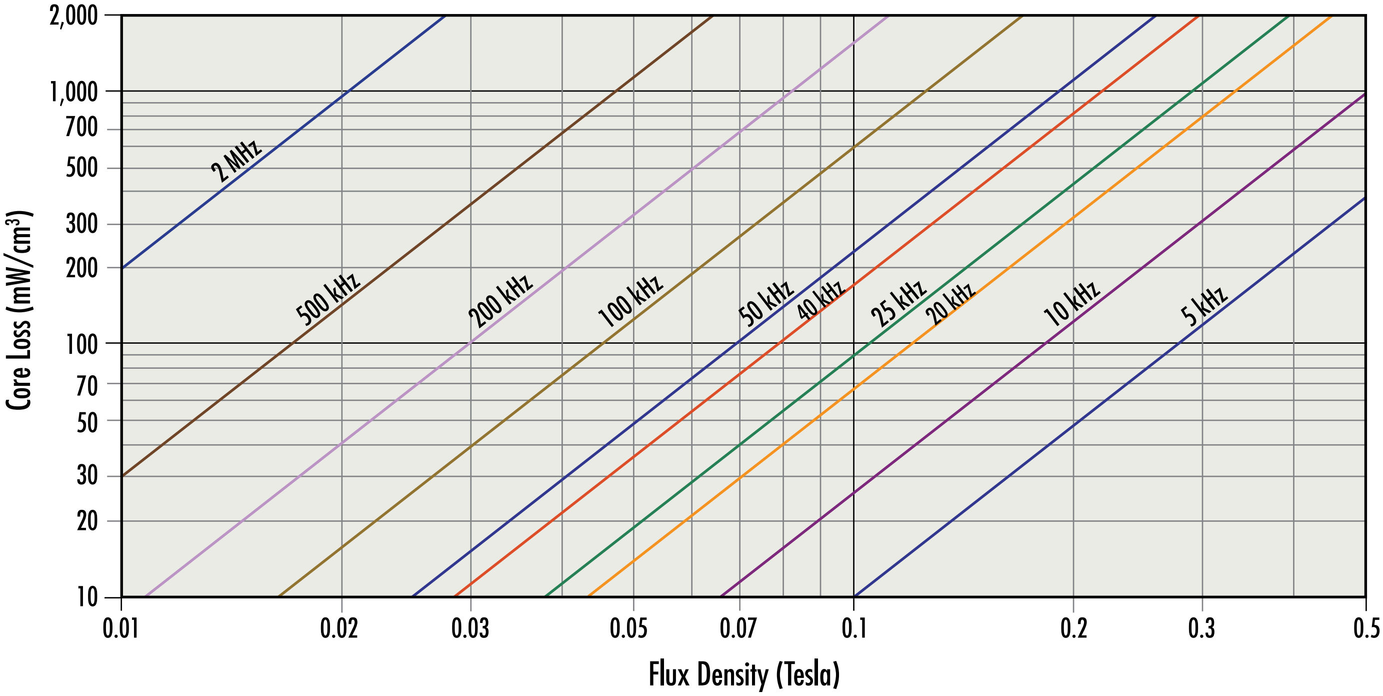


Core Loss Density Curves

Edge® Toroids 14µ

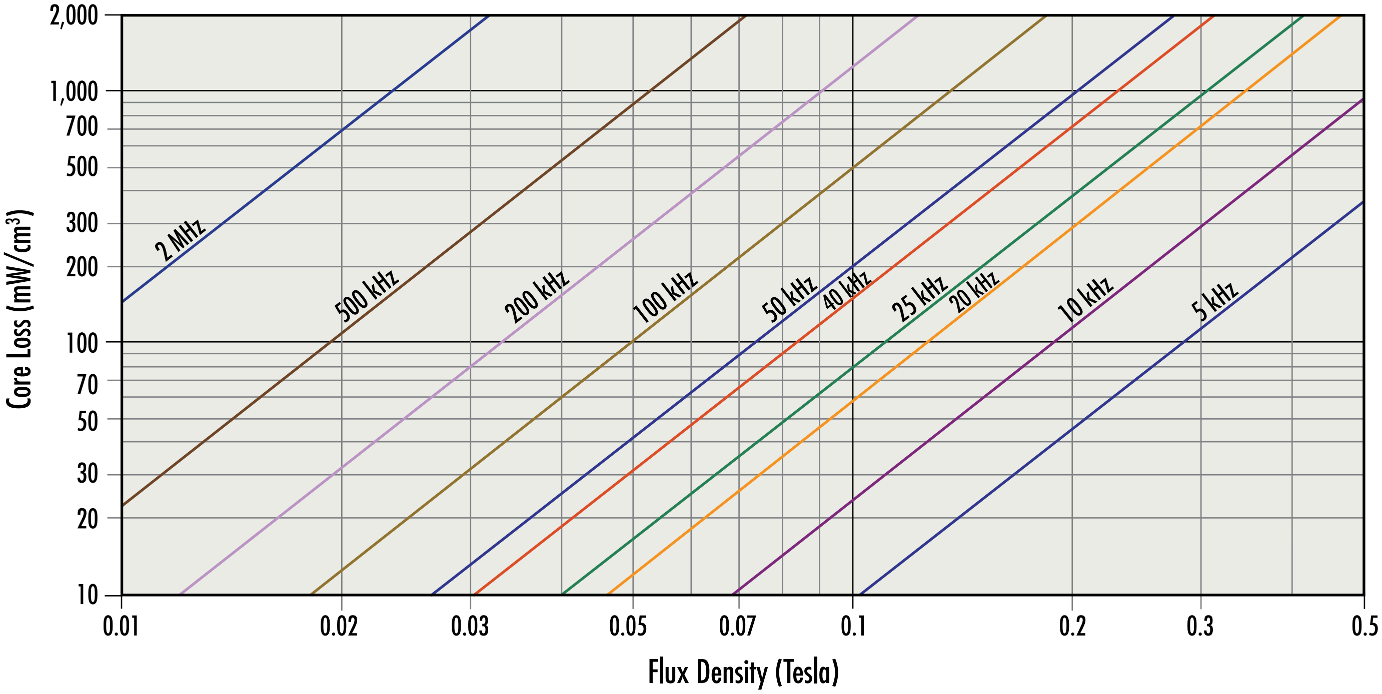


Edge® Toroids 19µ

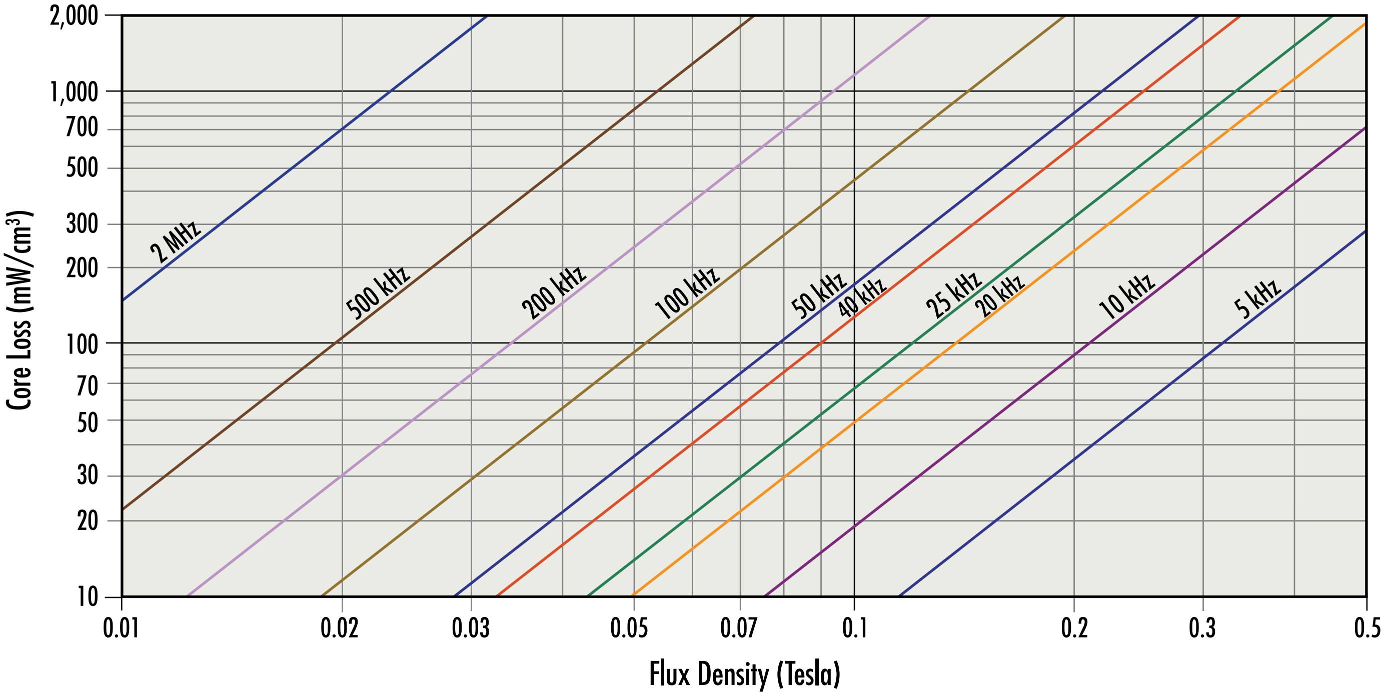


Core Loss Density Curves

Edge® Toroids 26µ

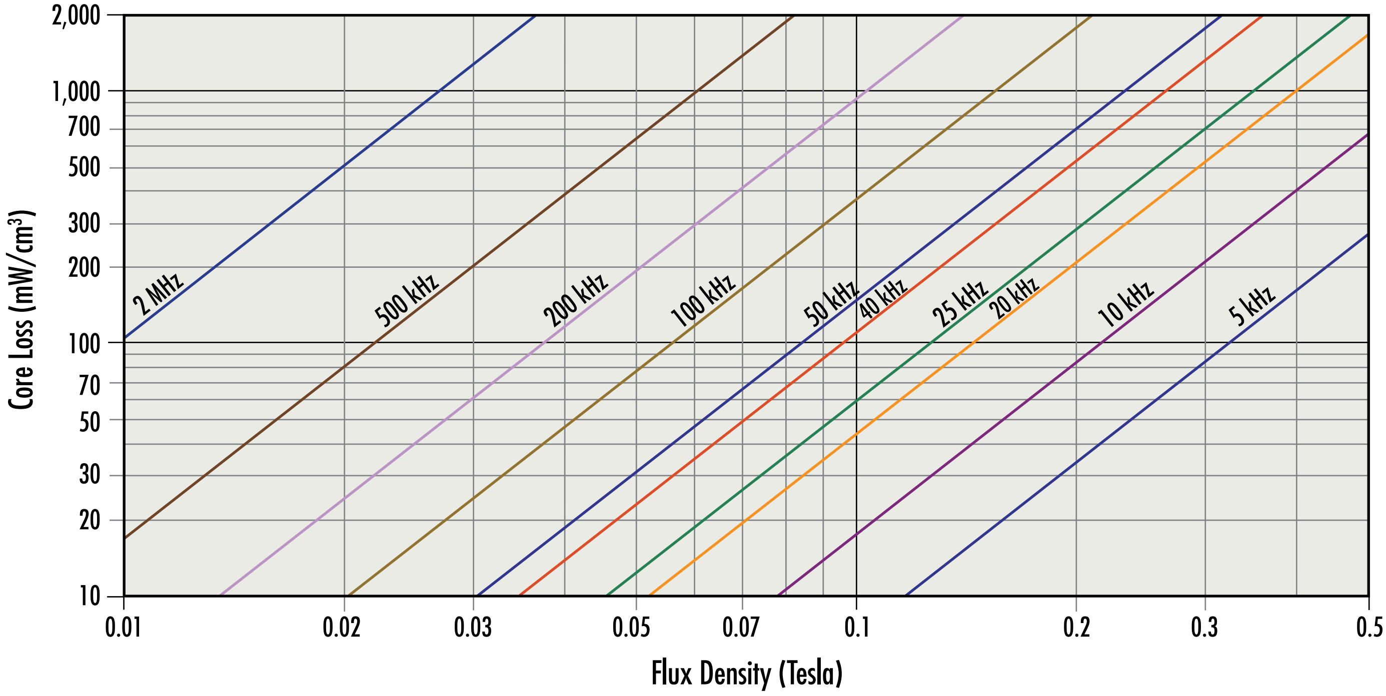


Edge® Toroids 40µ

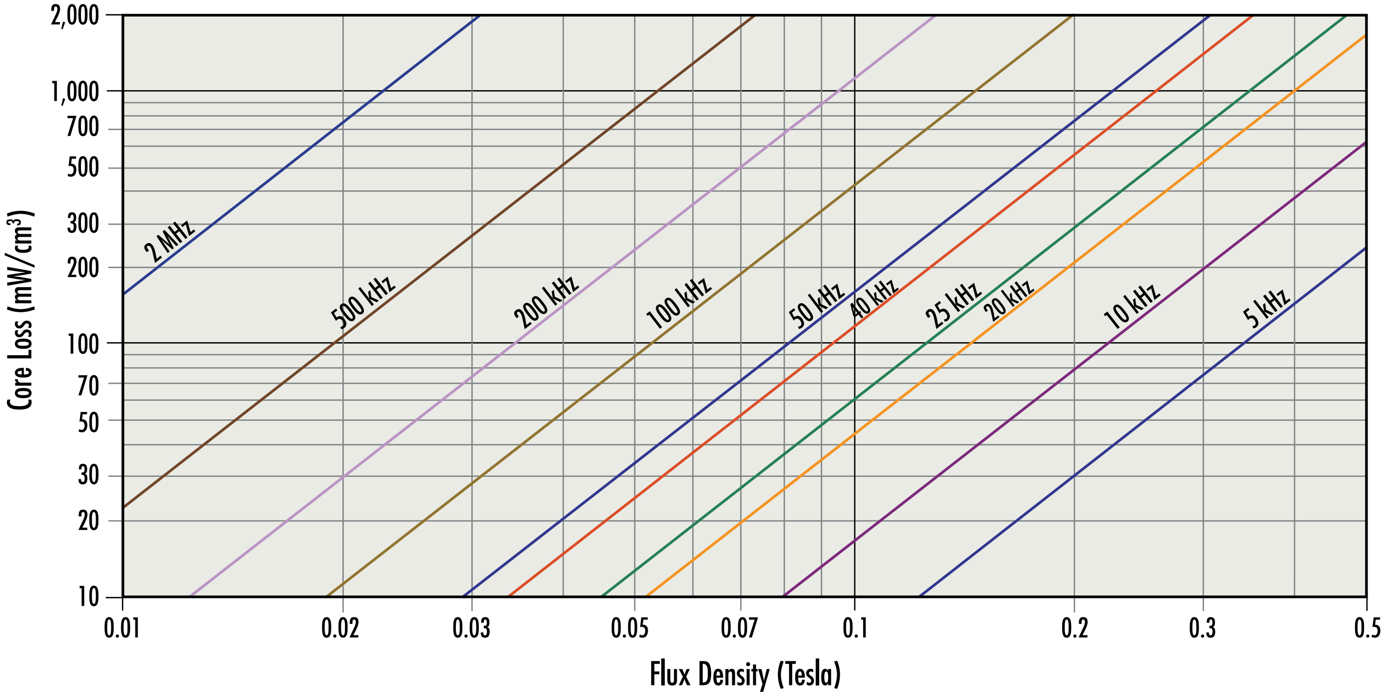


Core Loss Density Curves

Edge® Toroids 60µ

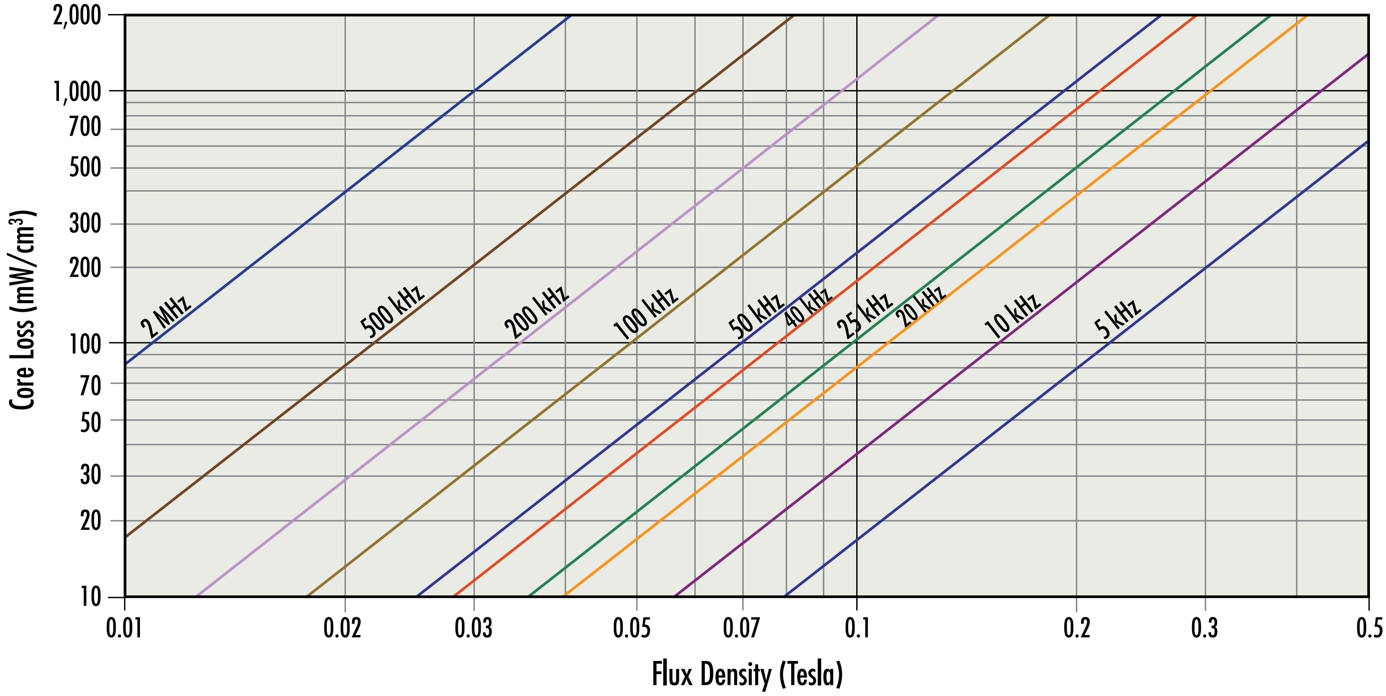


Edge® Toroids 75µ

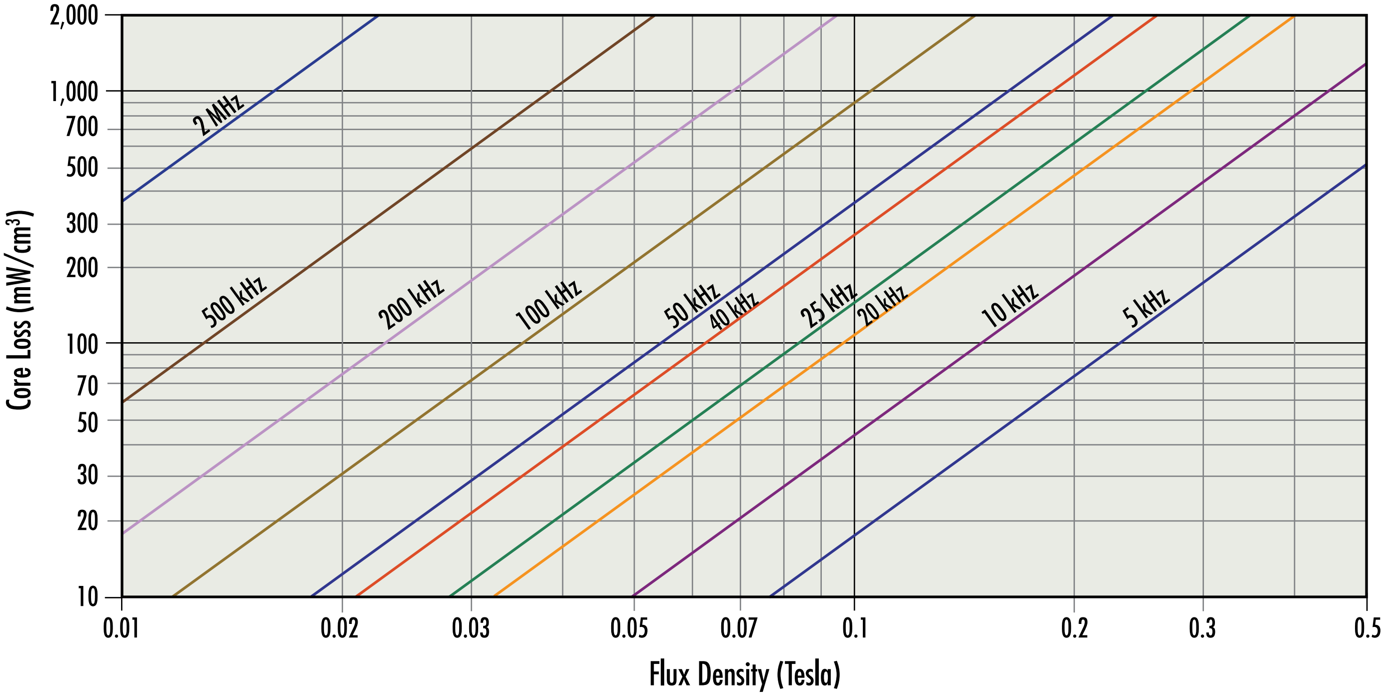


Core Loss Density Curves

Edge® Toroids 90μ, 125μ

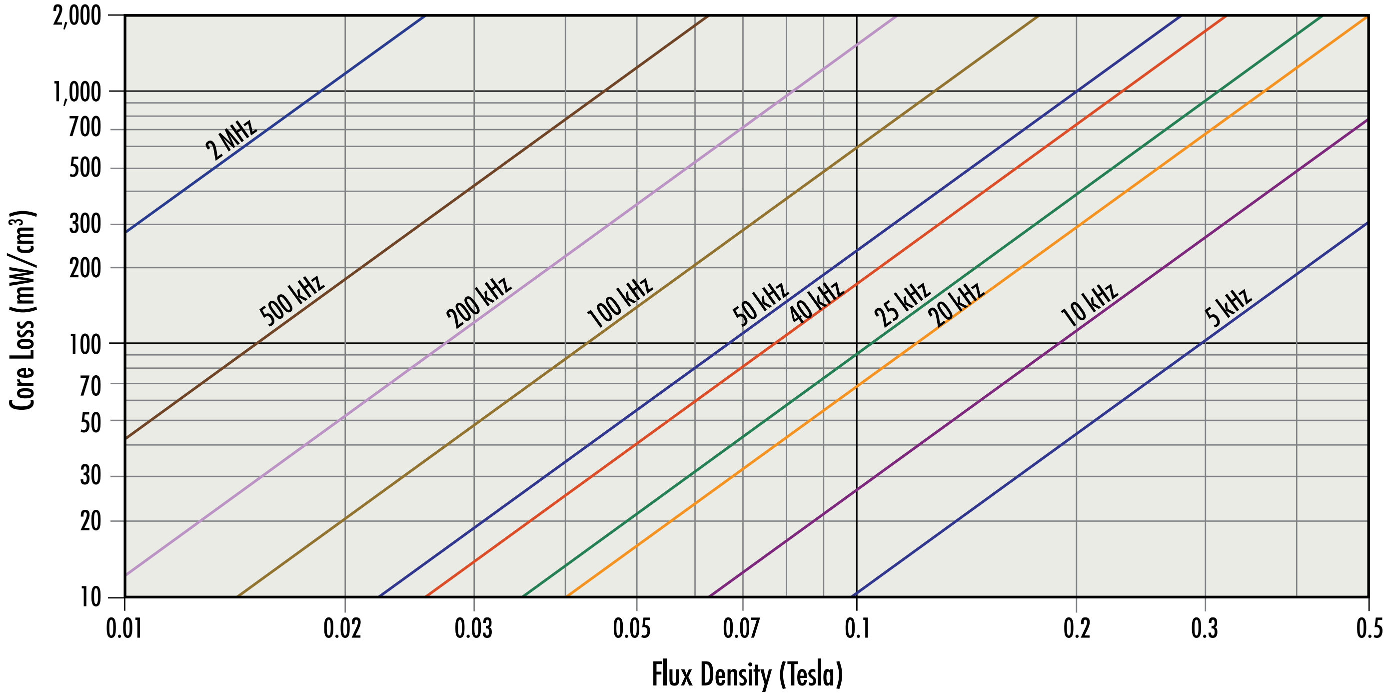


MPP Toroids 14μ, 19μ

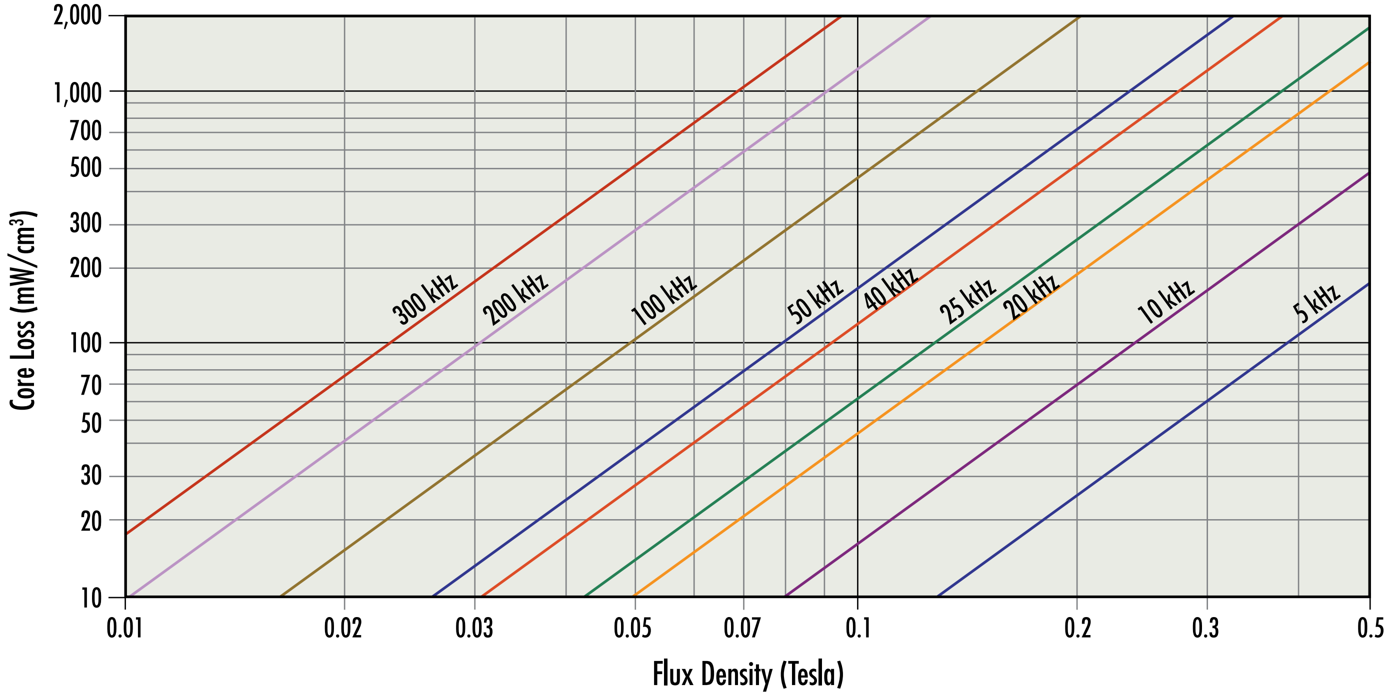


Core Loss Density Curves

MPP Toroids 26µ, 40µ

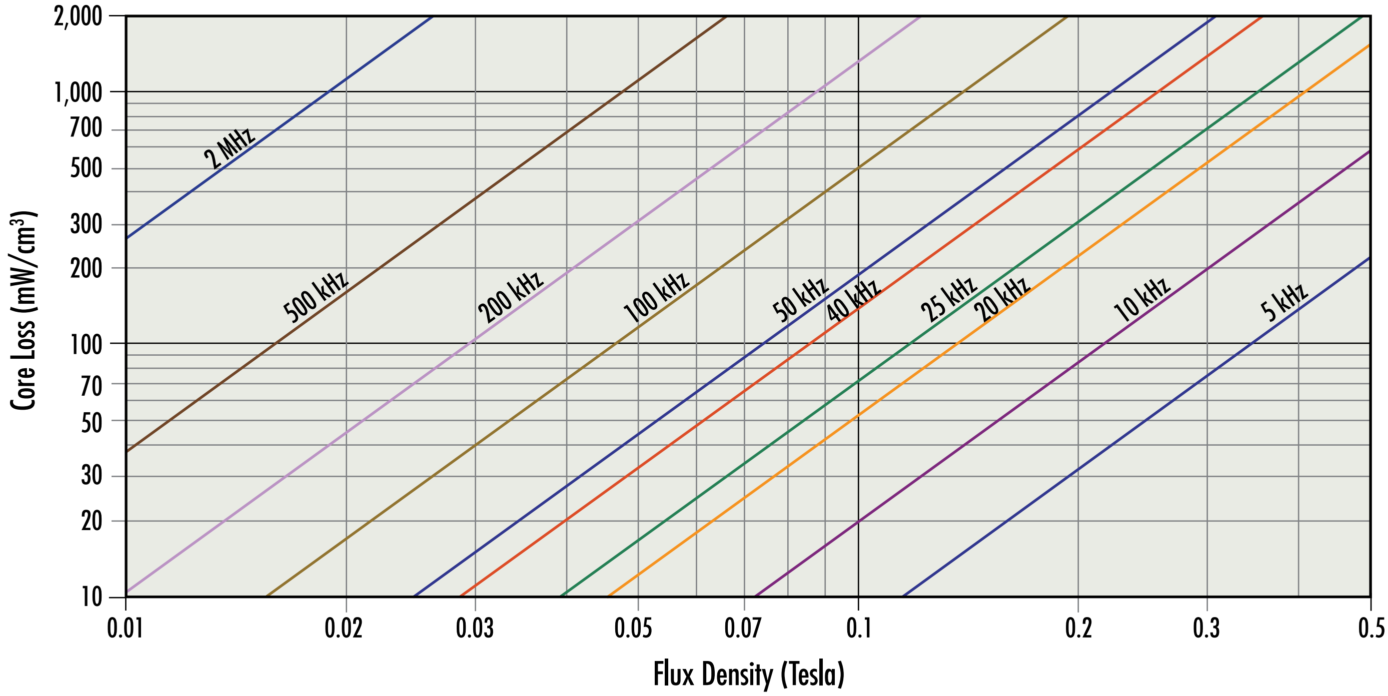


MPP Toroids 60µ

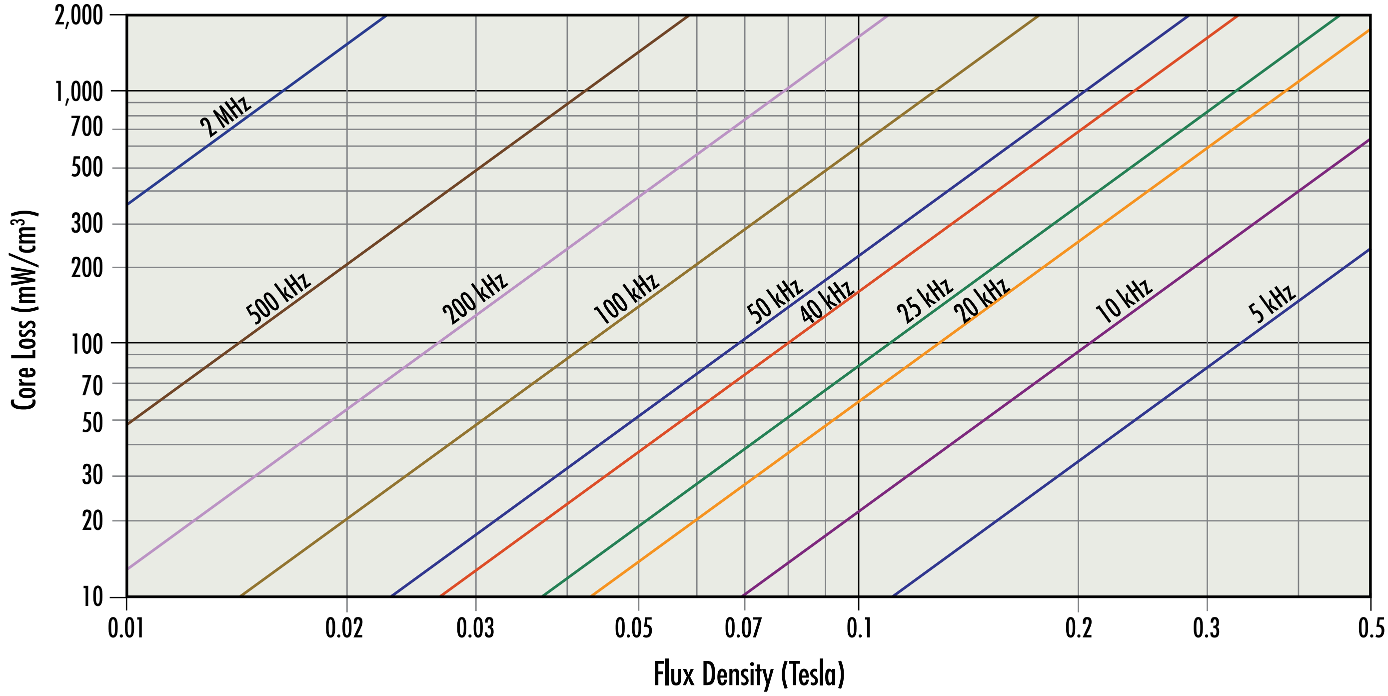


Core Loss Density Curves

MPP Toroids 75µ

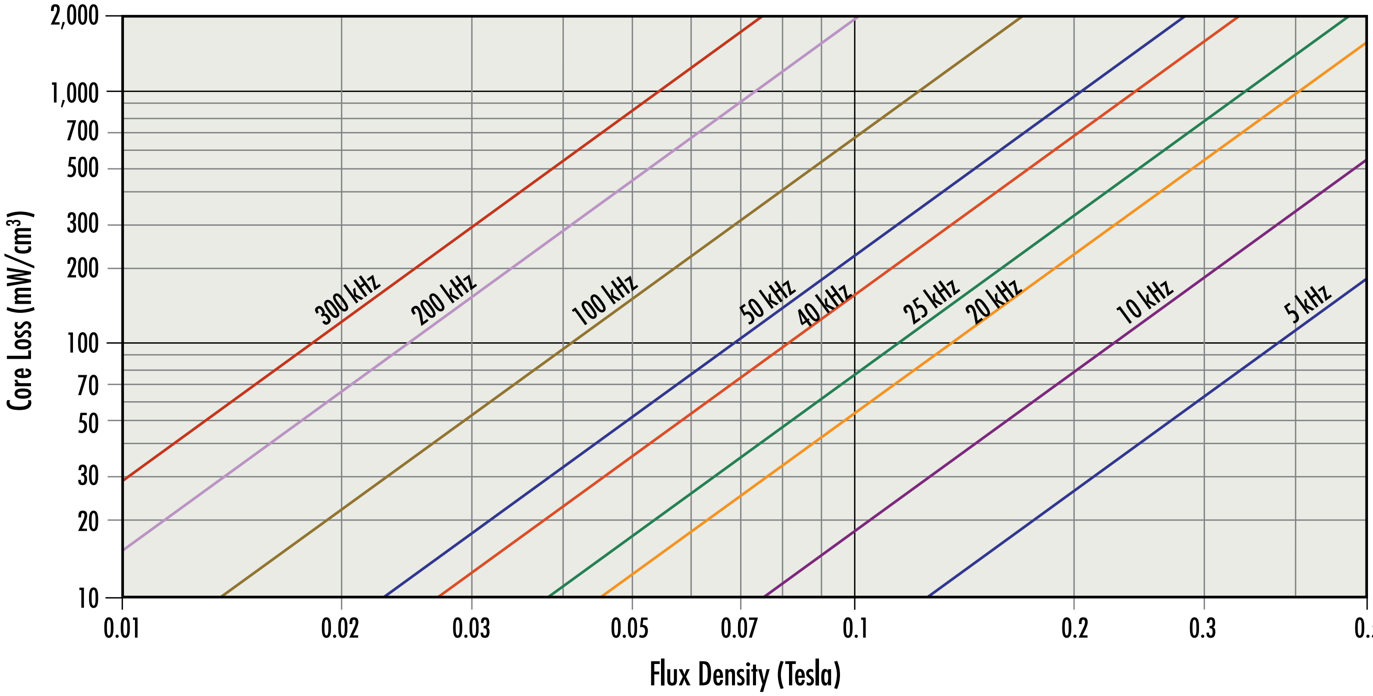


MPP Toroids 90µ

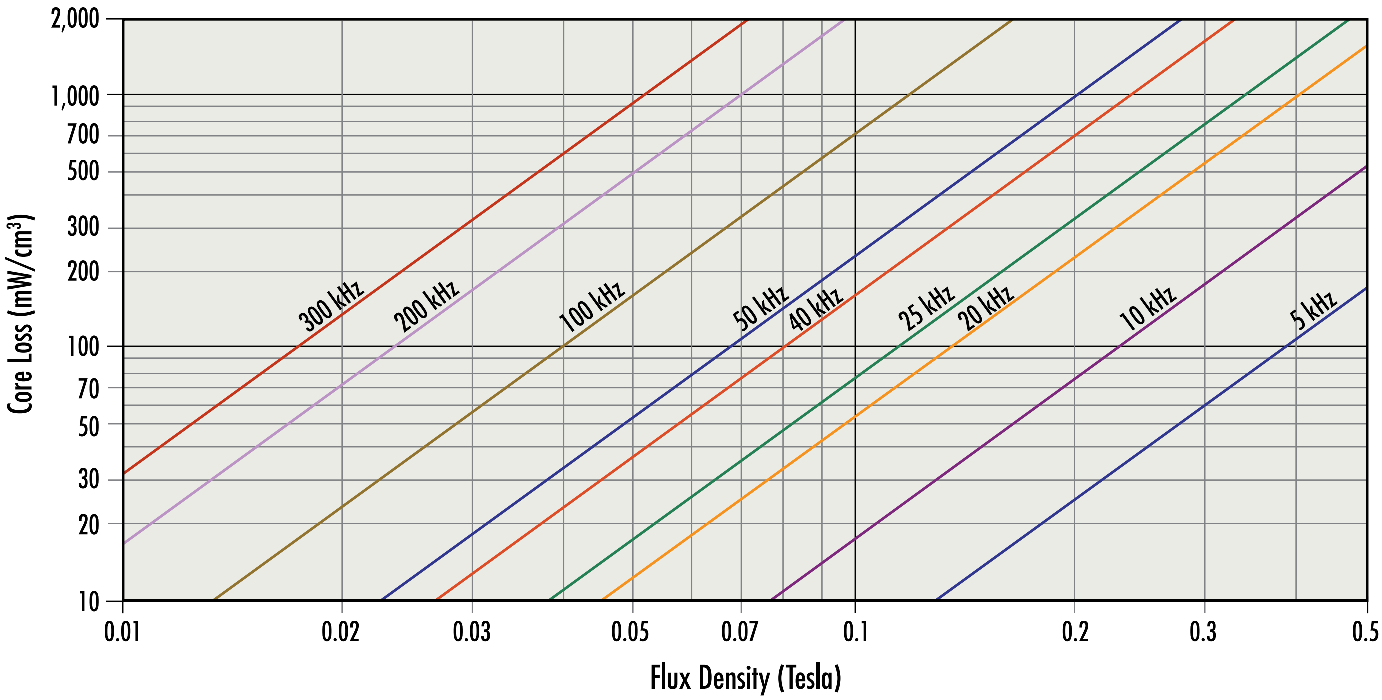


Core Loss Density Curves

MPP Toroids 125µ

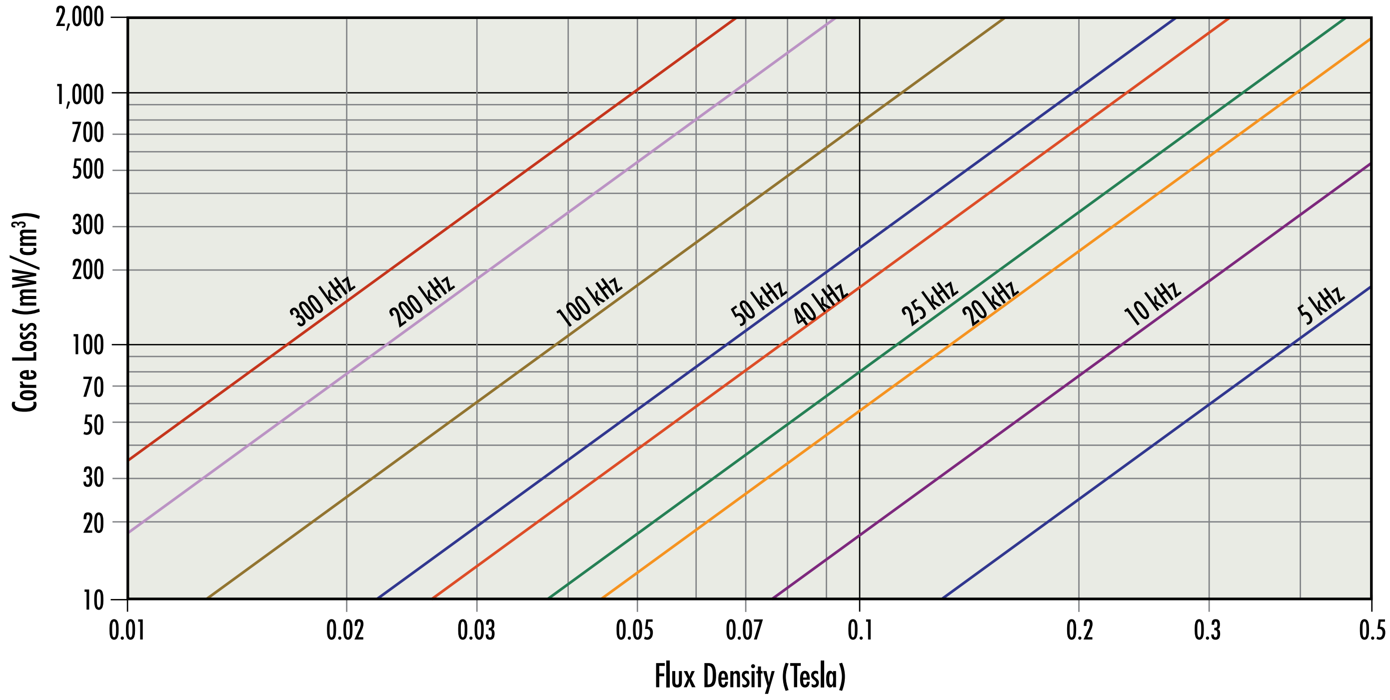


MPP Toroids 147µ, 160µ, 173µ

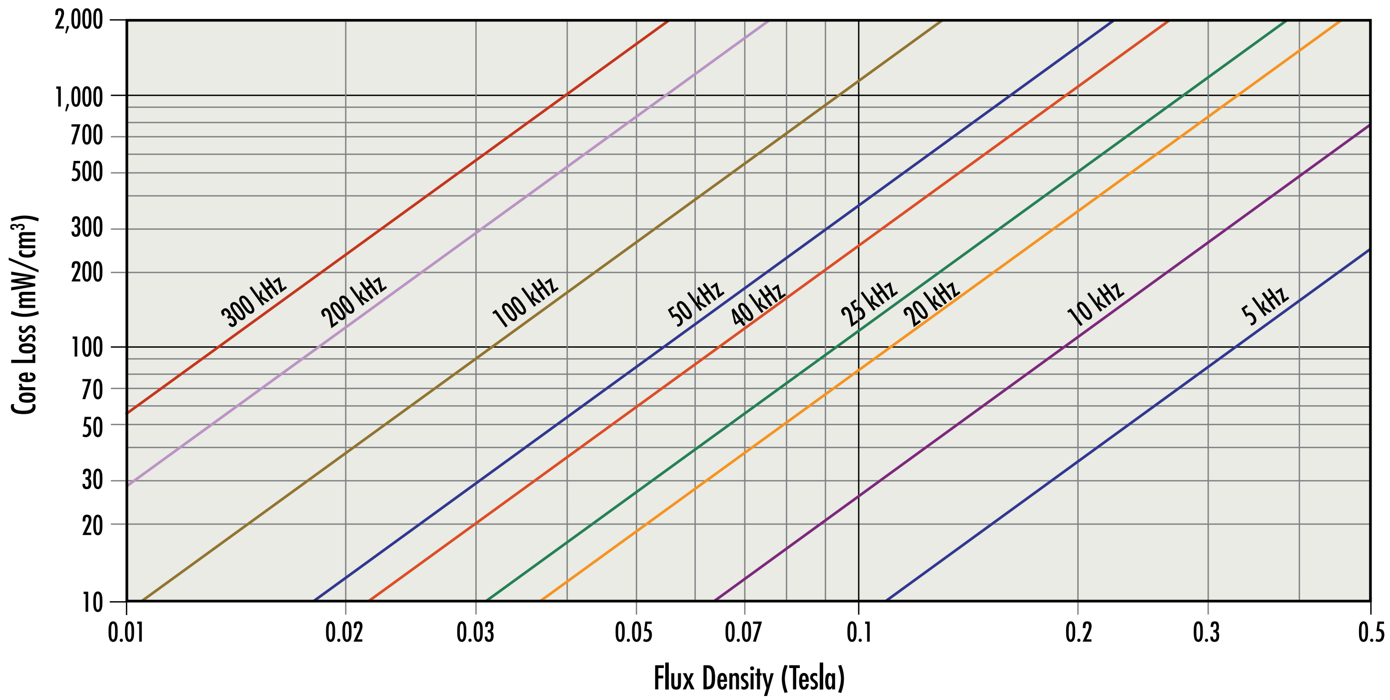


Core Loss Density Curves

MPP Toroids 200µ, 300µ

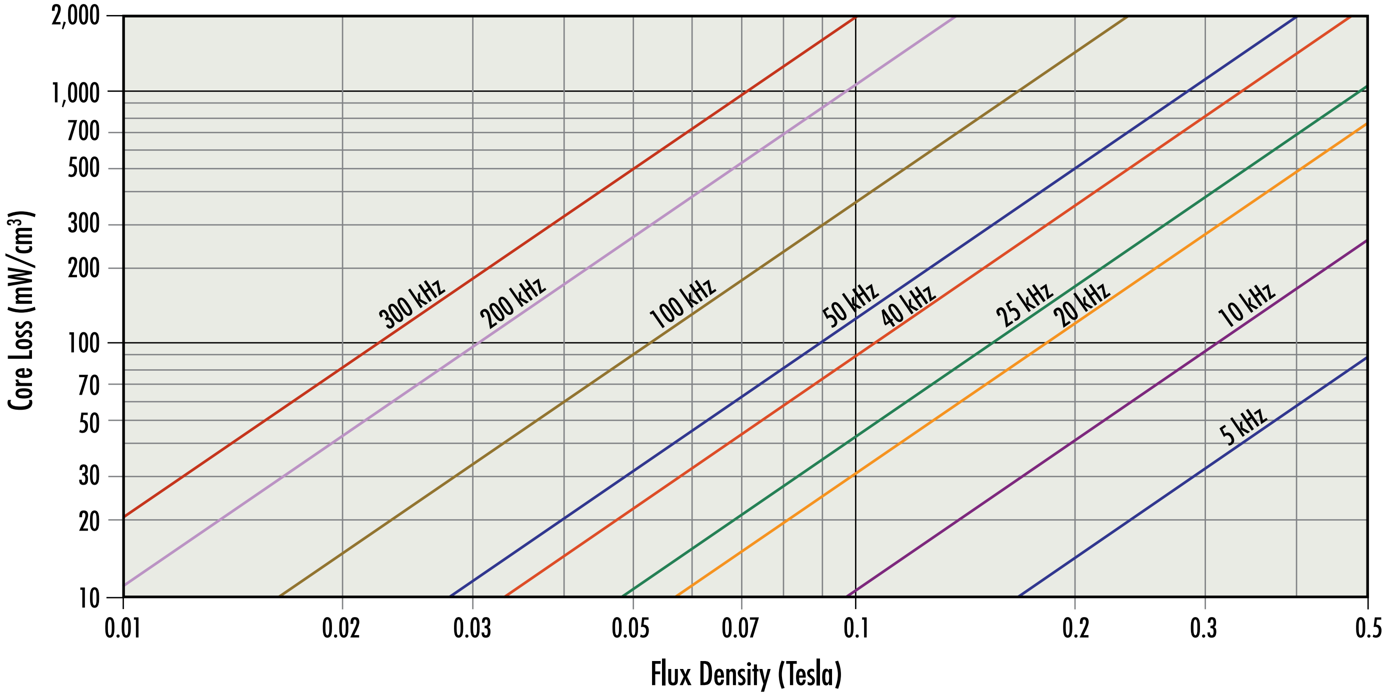


MPP Toroids 550µ

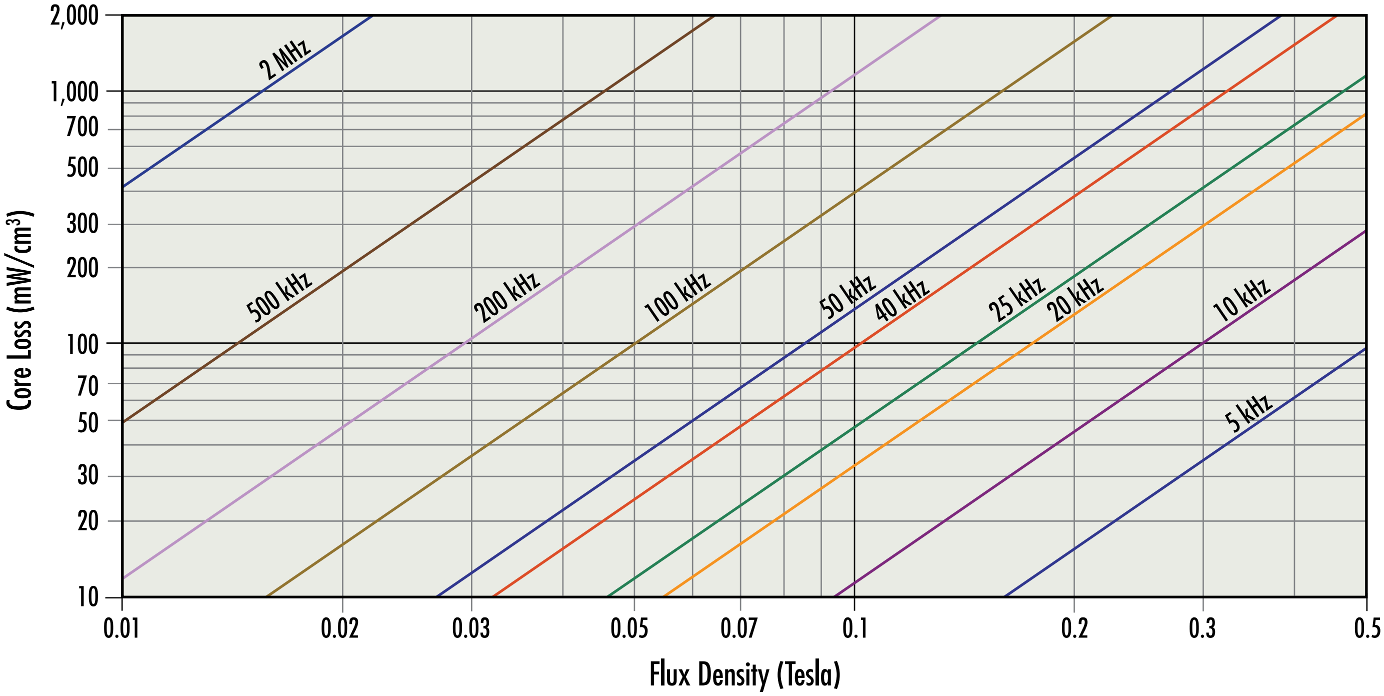


Core Loss Density Curves

Kool Mμ® E Cores, U Cores & EER Cores 14μ

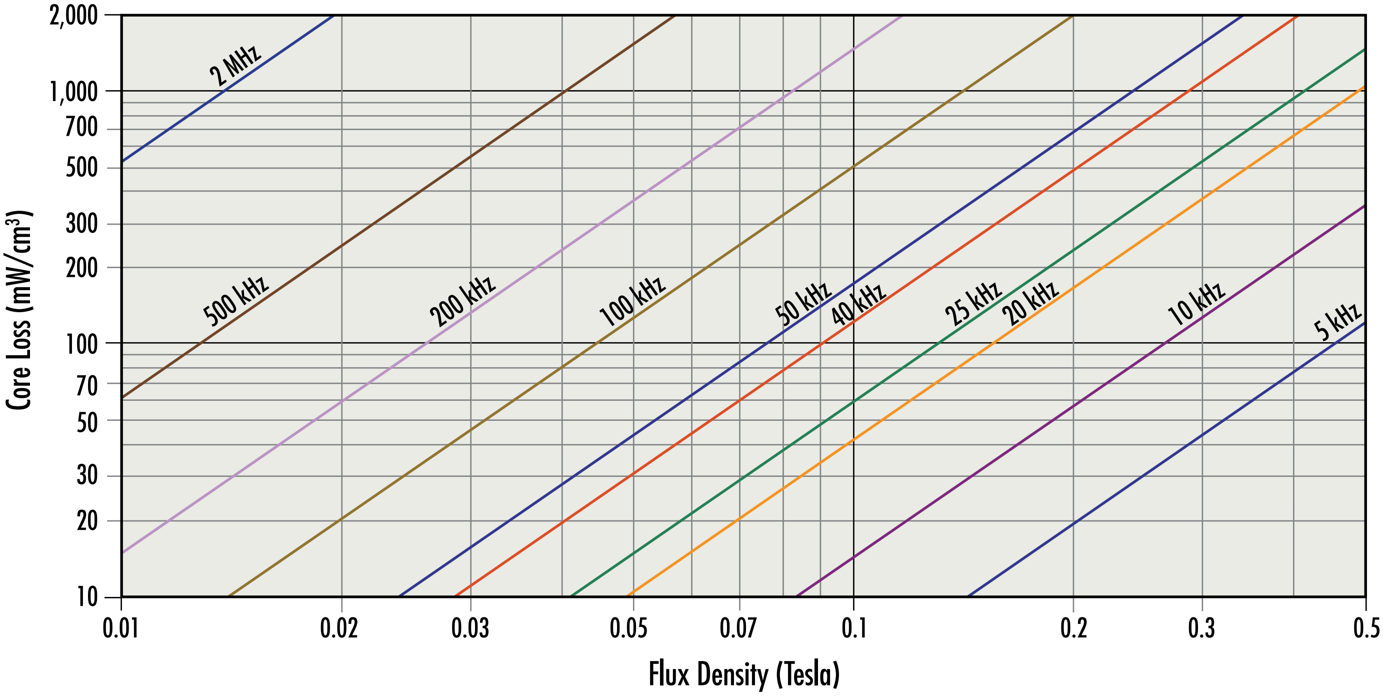


Kool Mμ® E Cores, U Cores & EER Cores 26μ, 40μ

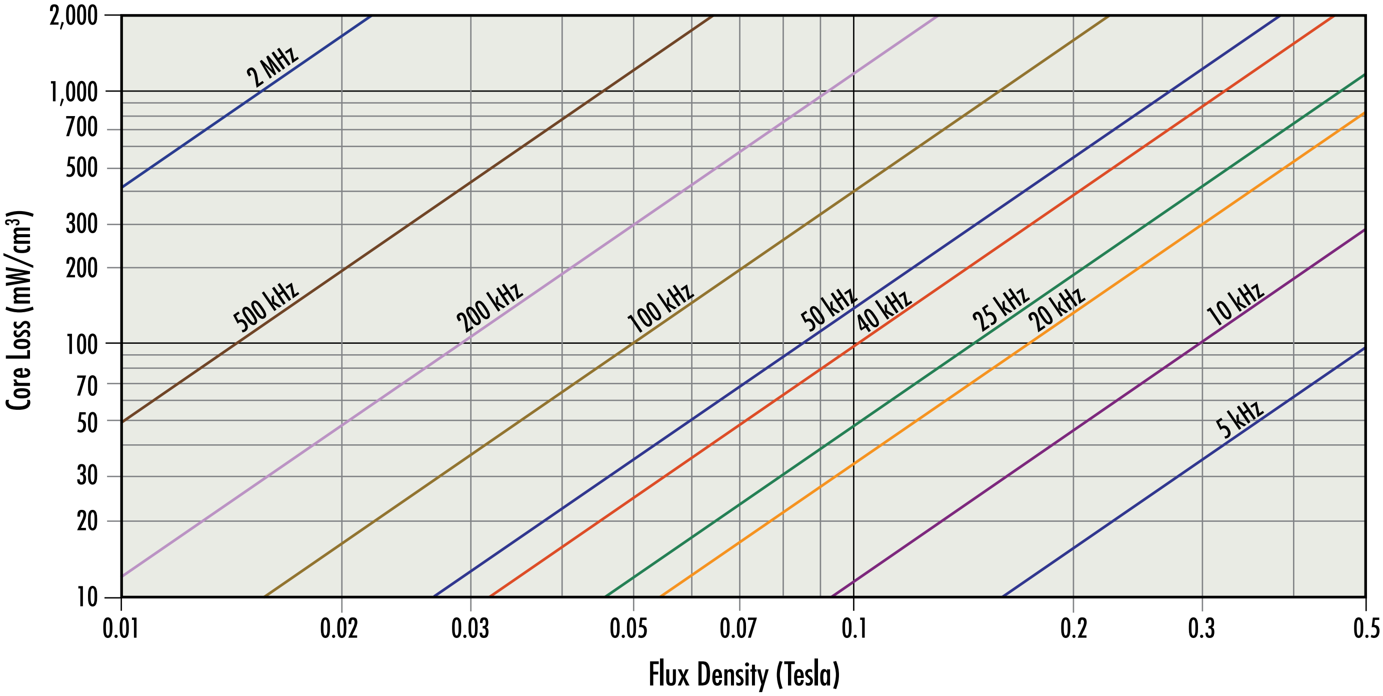


Core Loss Density Curves

Kool Mμ® E Cores, U Cores & EER Cores 60μ, 90μ

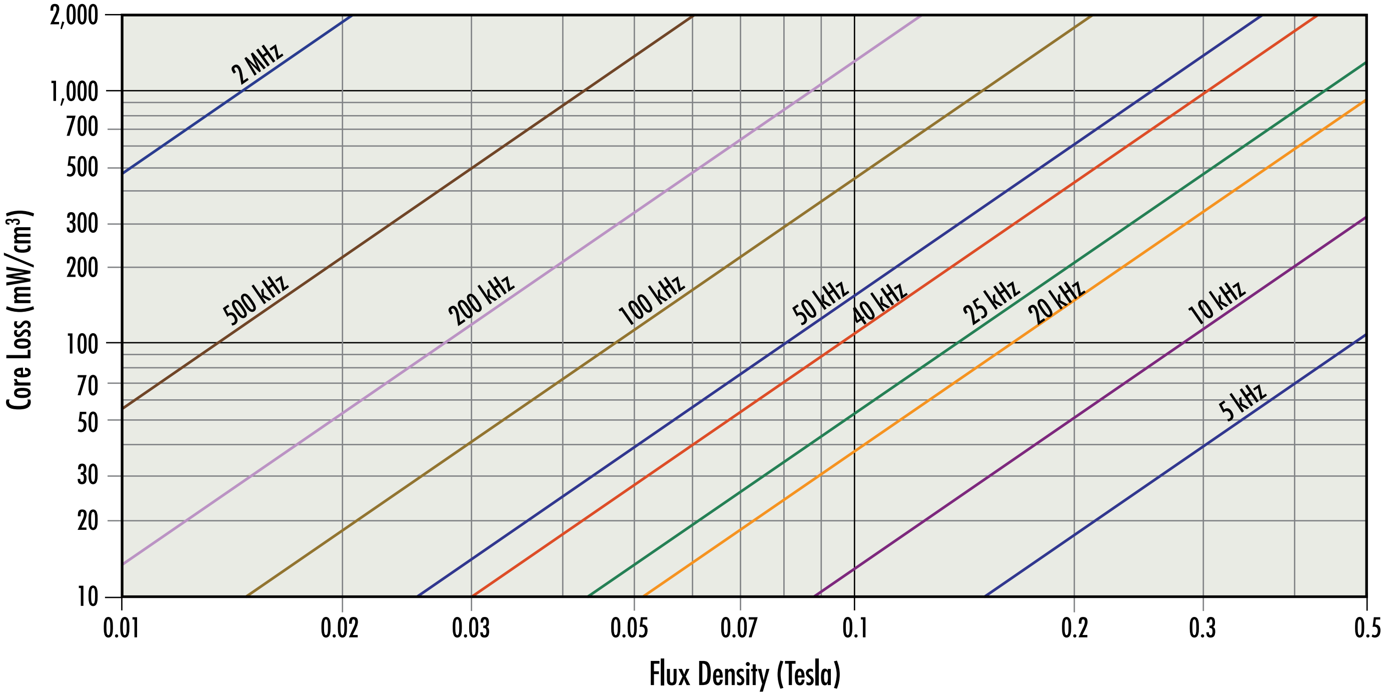


Kool Mμ® MAX E Cores, U Cores & EER Cores 26μ, 40μ

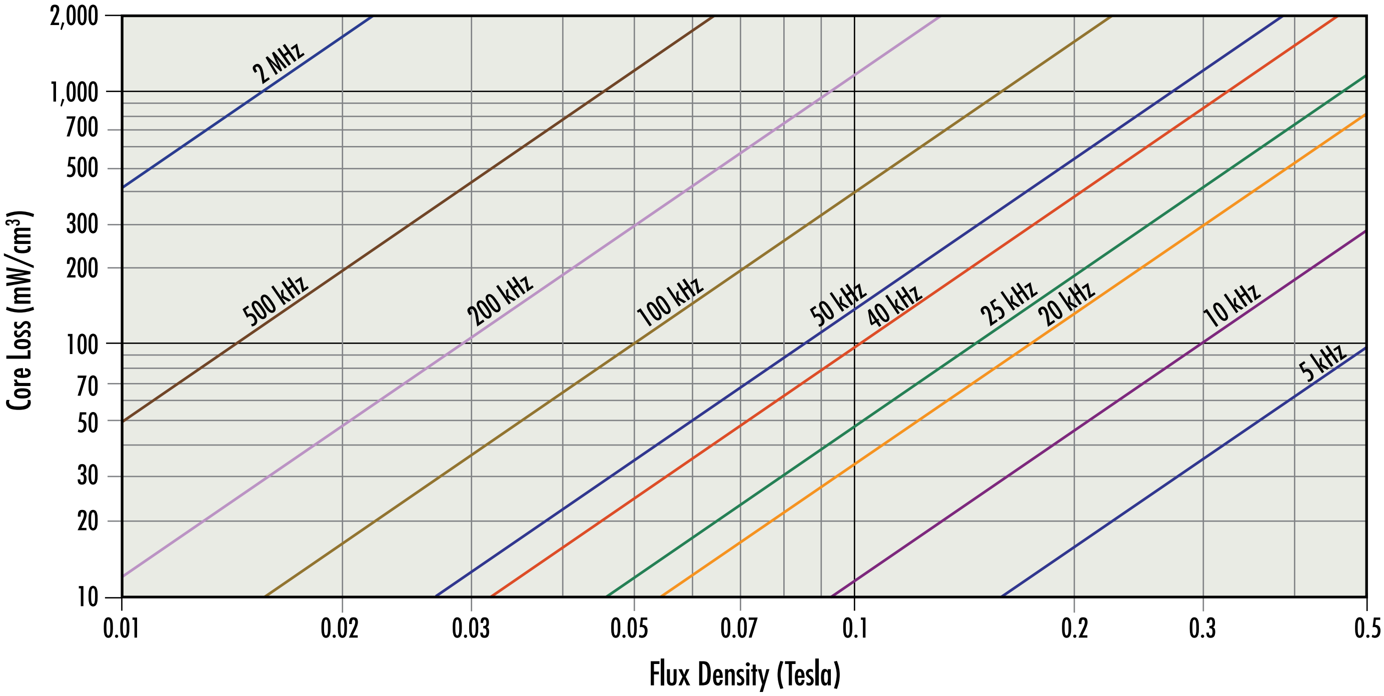


Core Loss Density Curves

Kool Mμ® MAX E Cores, U Cores & EER Cores 60μ

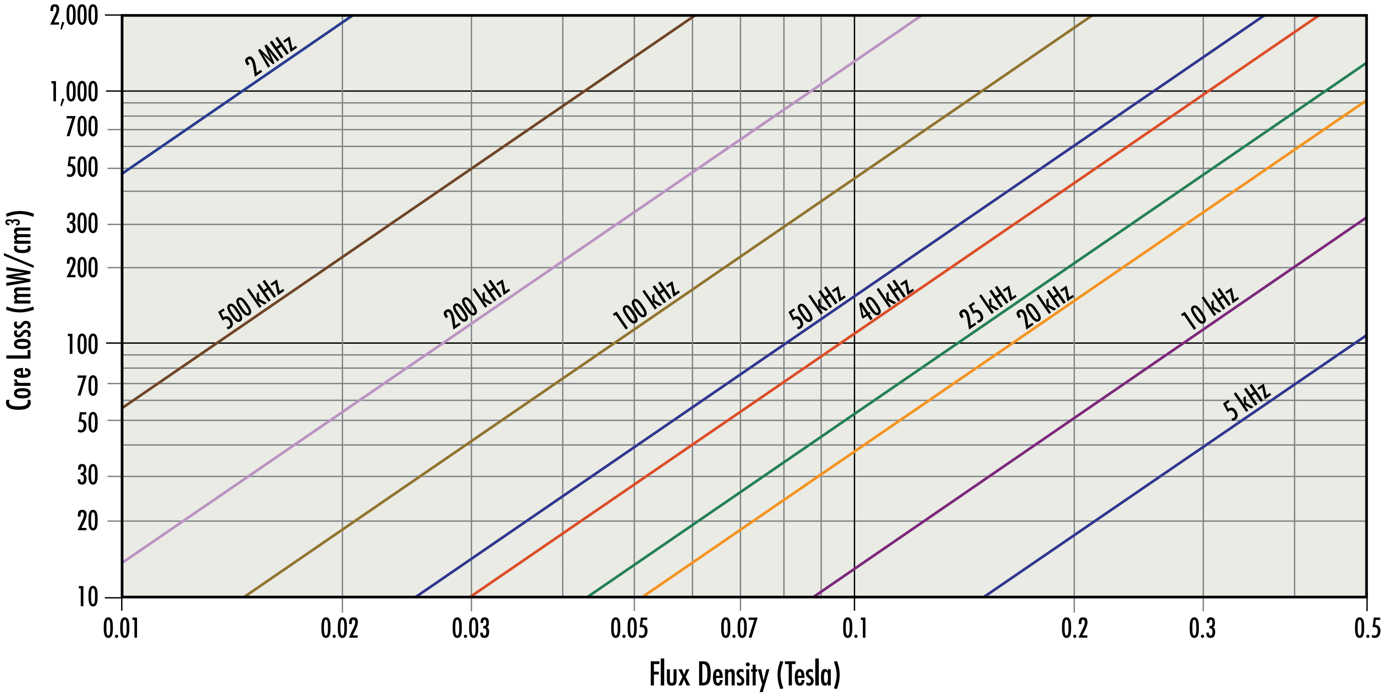


Kool Mμ® MAX High Performance E Cores, U Cores & EER Cores 26μ, 40μ

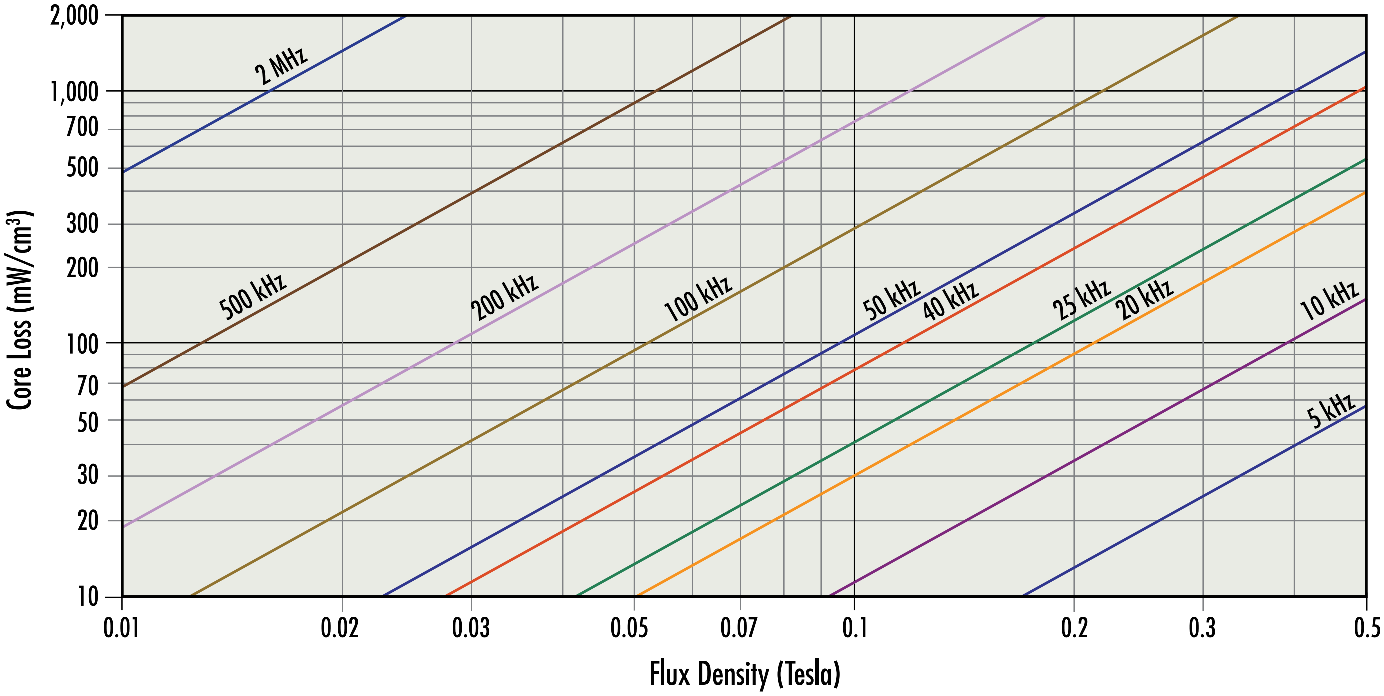


Core Loss Density Curves

Kool Mμ® MAX High Performance E Cores, U Cores & EER Cores 60μ

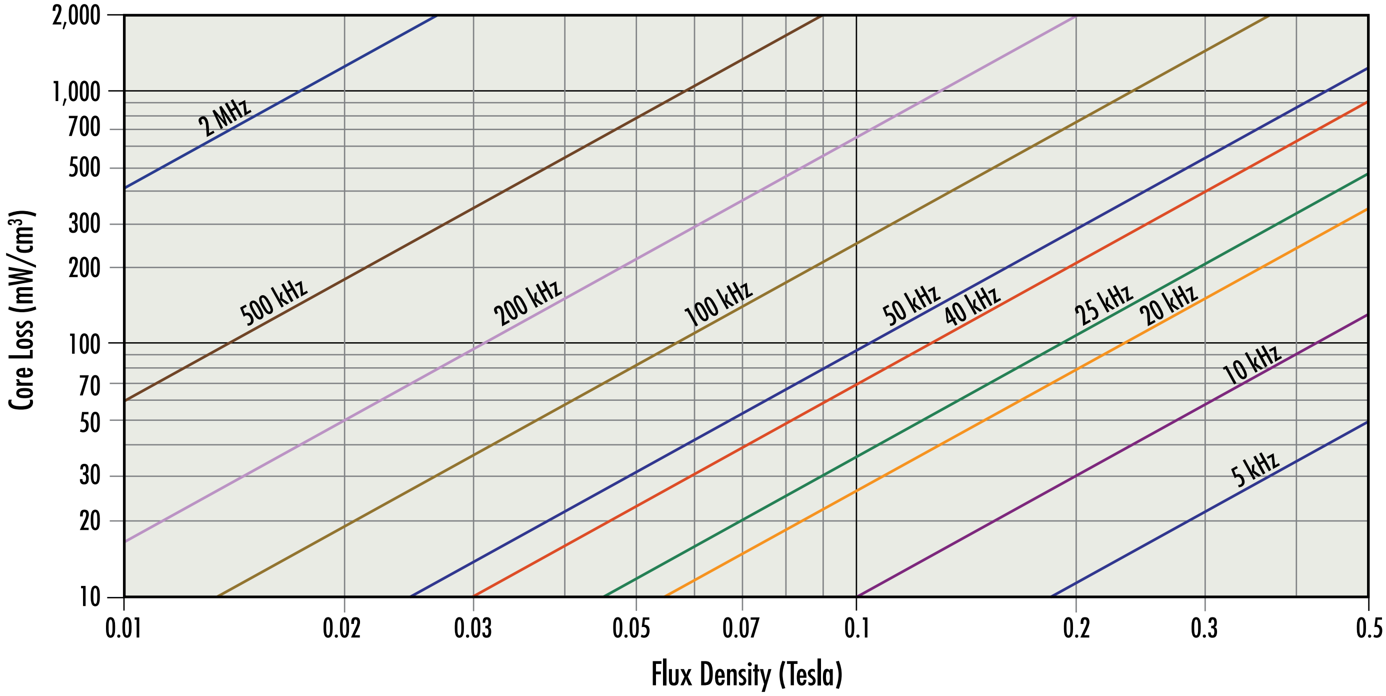


Kool Mμ® H*ƒ* E Cores, U Cores & EER Cores 26μ

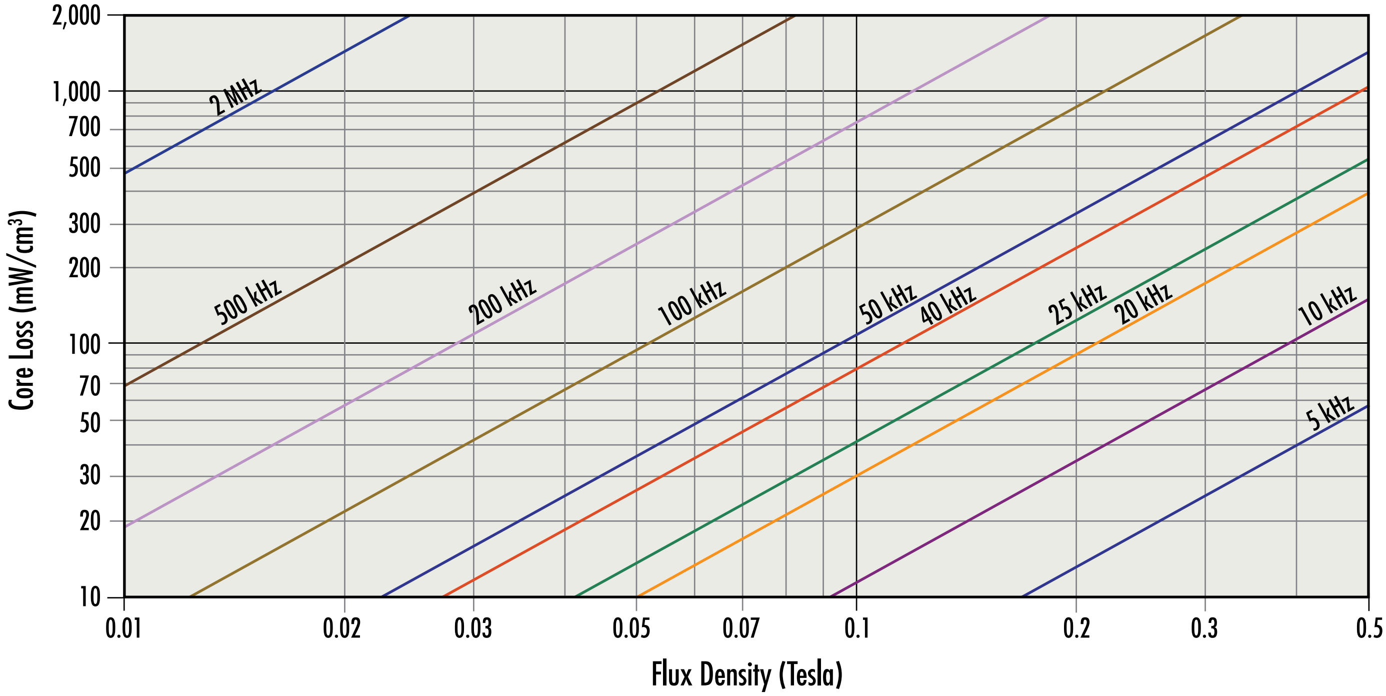


Core Loss Density Curves

Kool Mμ® H*f* E Cores, U Cores & EER Cores 40μ

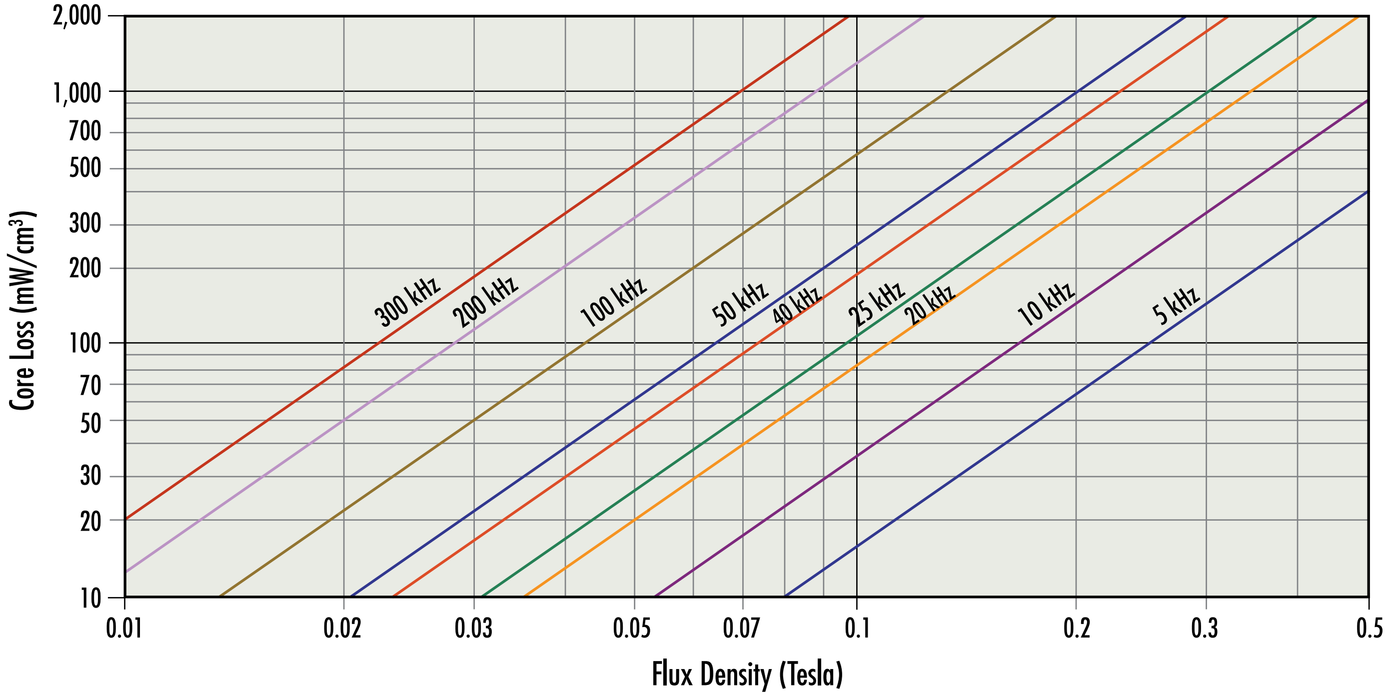


Kool Mμ® H*f* E Cores, U Cores & EER Cores 60μ

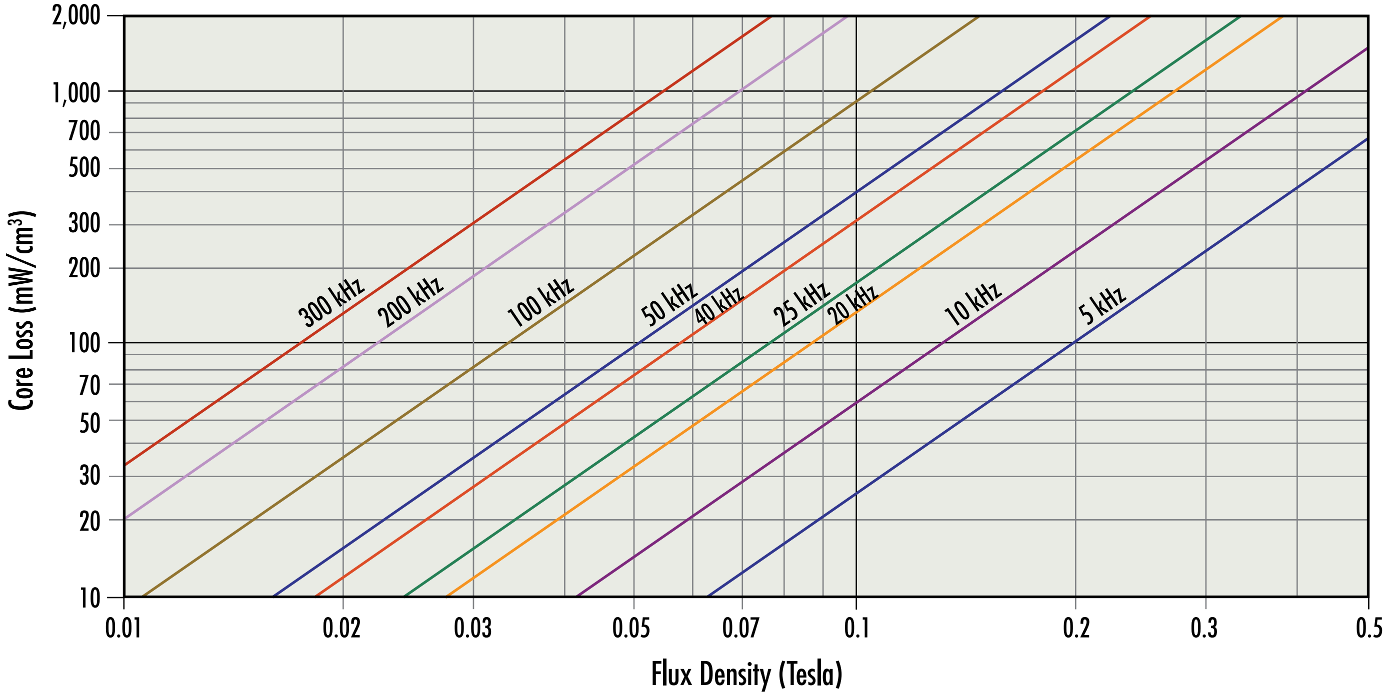


Core Loss Density Curves

XFlux® E Cores, U Cores & EER Cores 26µ

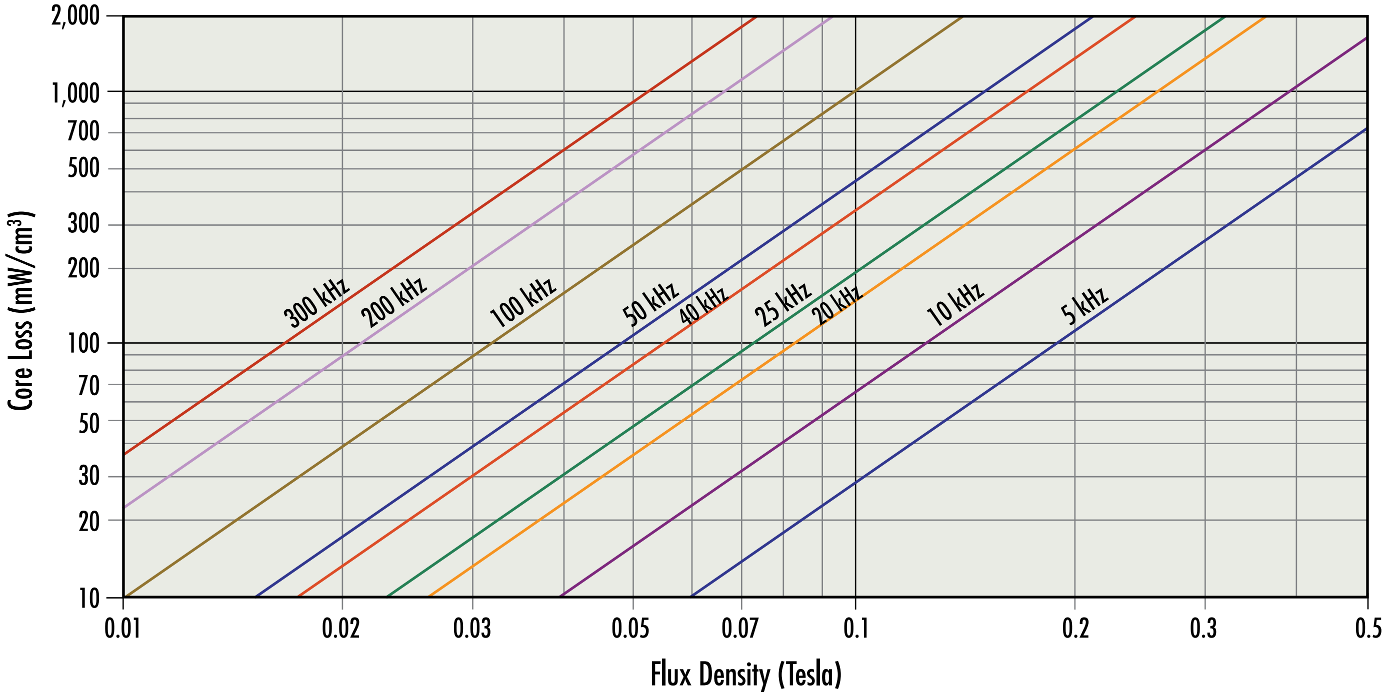


XFlux® E Cores, U Cores & EER Cores 40µ

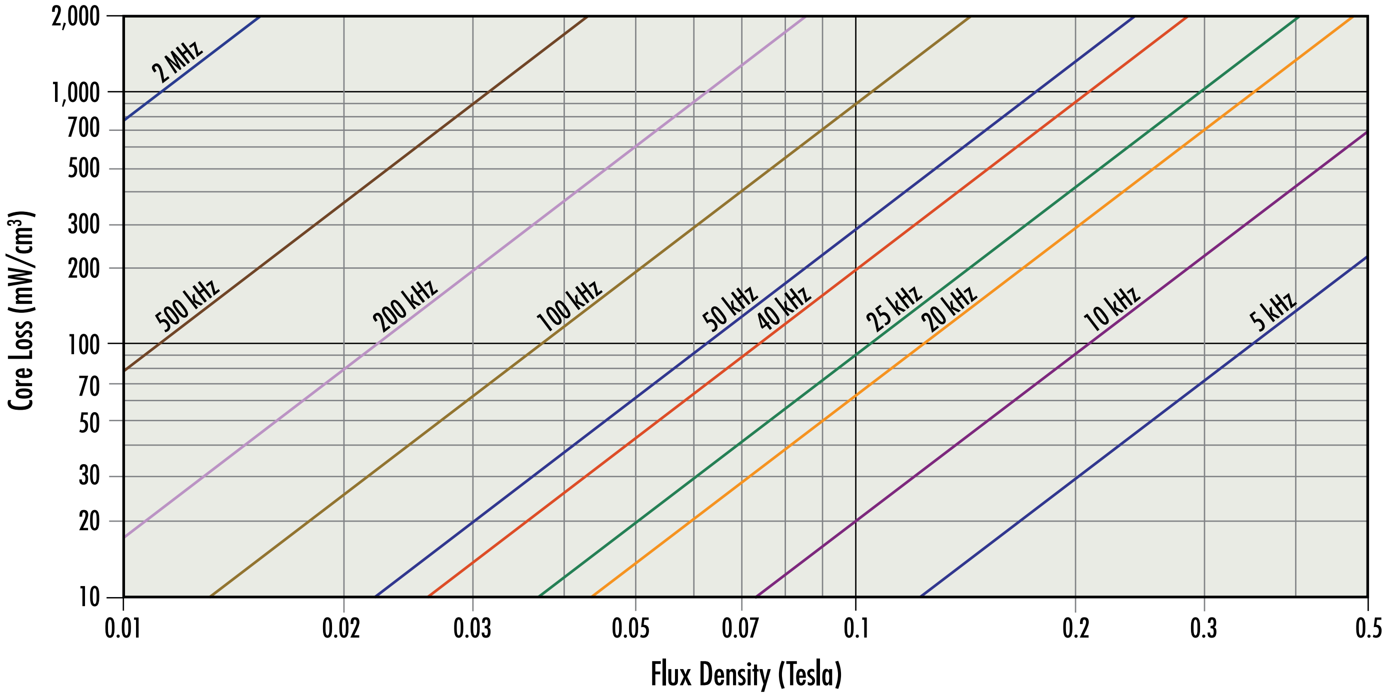


Core Loss Density Curves

XFlux® E Cores, U Cores & EER Cores 60μ

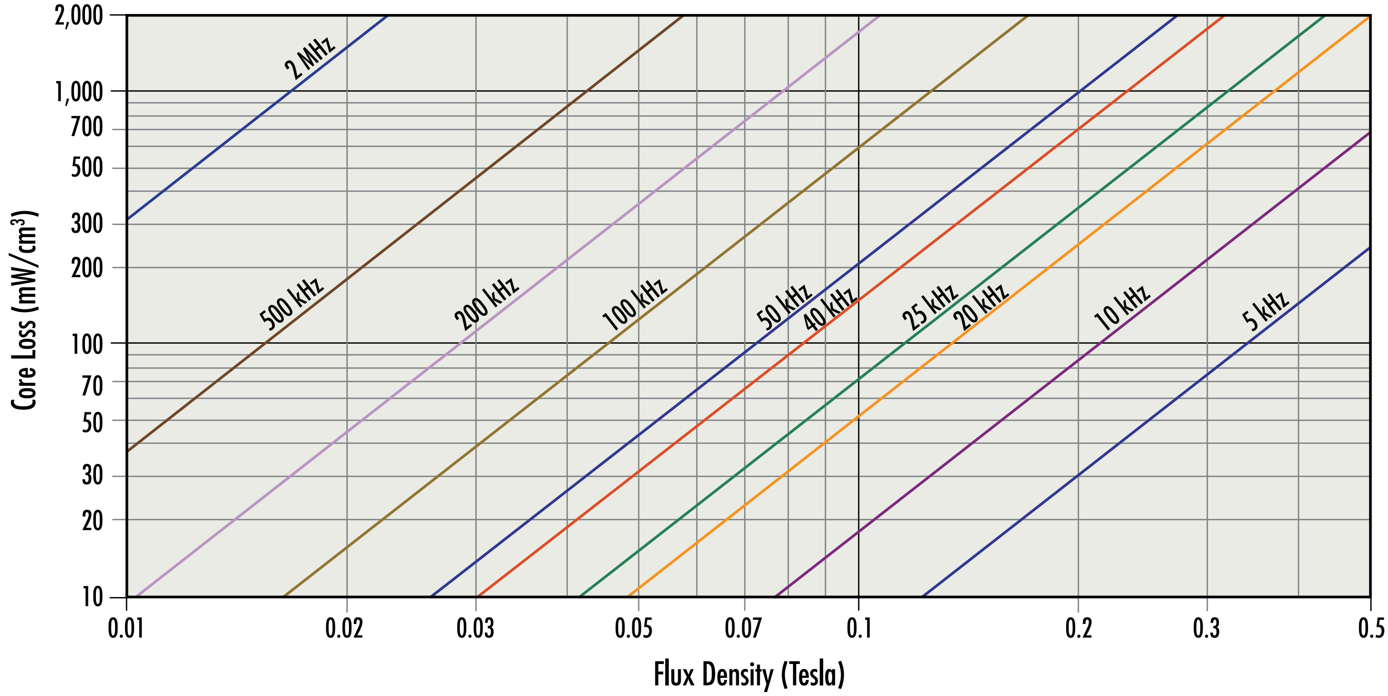


High Flux E Cores, U Cores & EER Cores 60μ

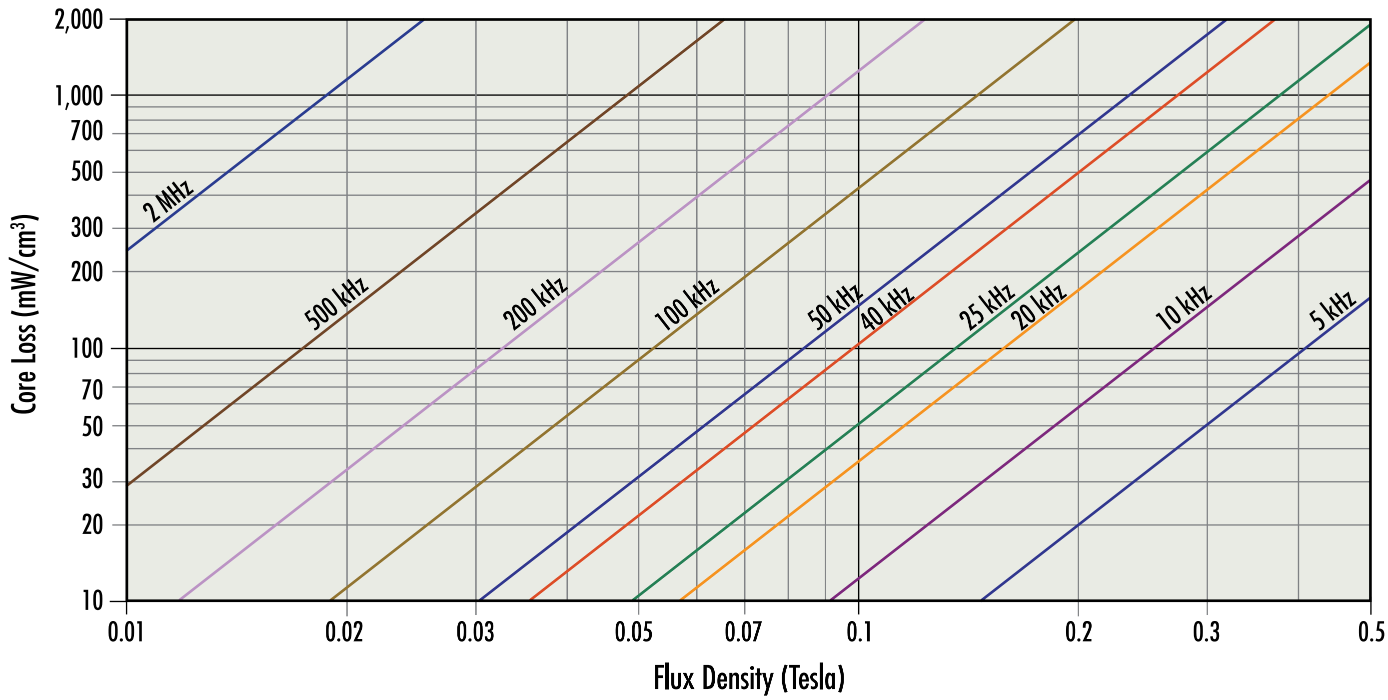


Core Loss Density Curves

Edge® E Cores, U Cores & EER Cores 26µ

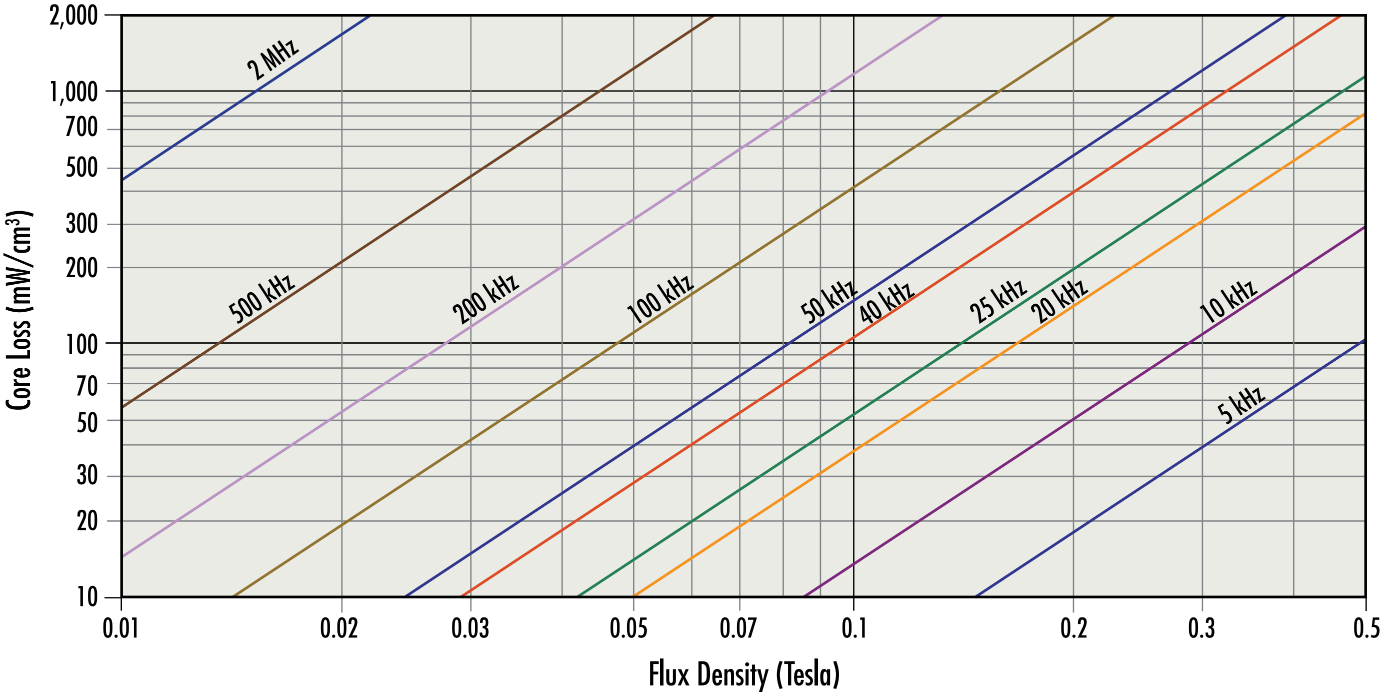


Edge® E Cores, U Cores & EER Cores 40µ, 60µ

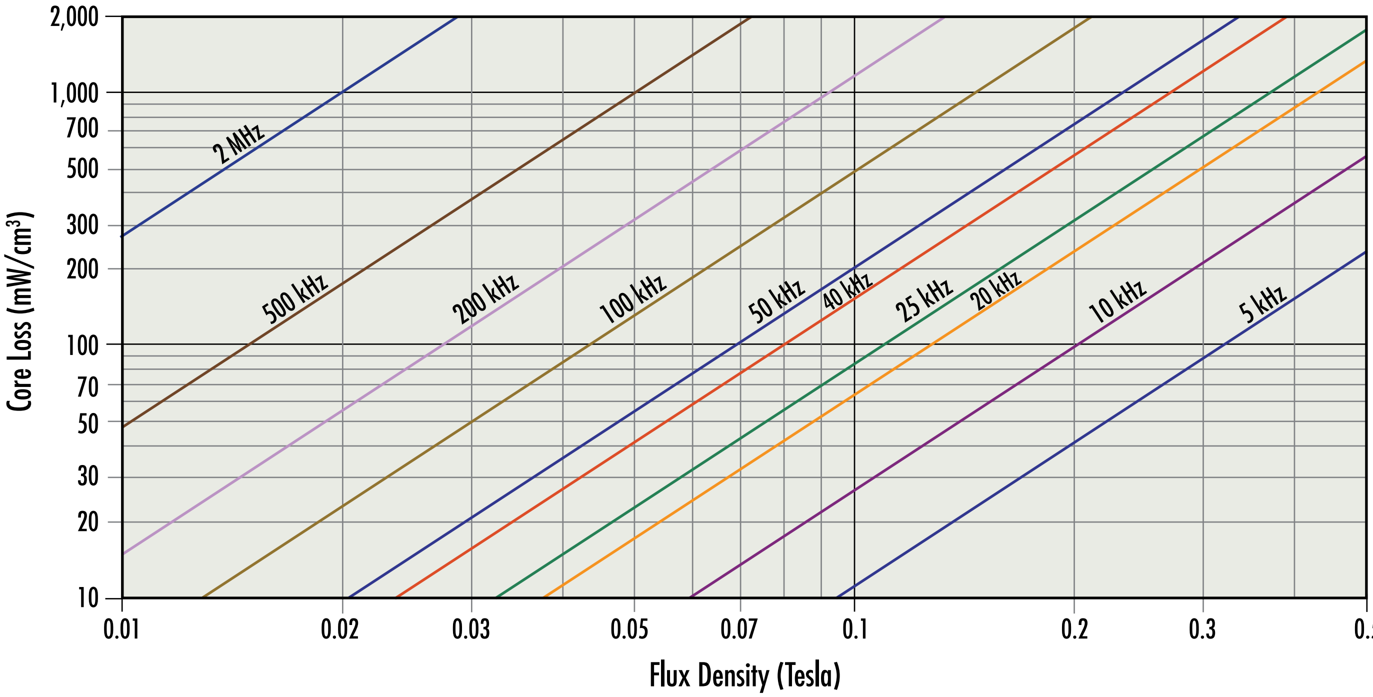


Core Loss Density Curves

Kool Mμ® EQ & LP Cores 26μ, 40μ

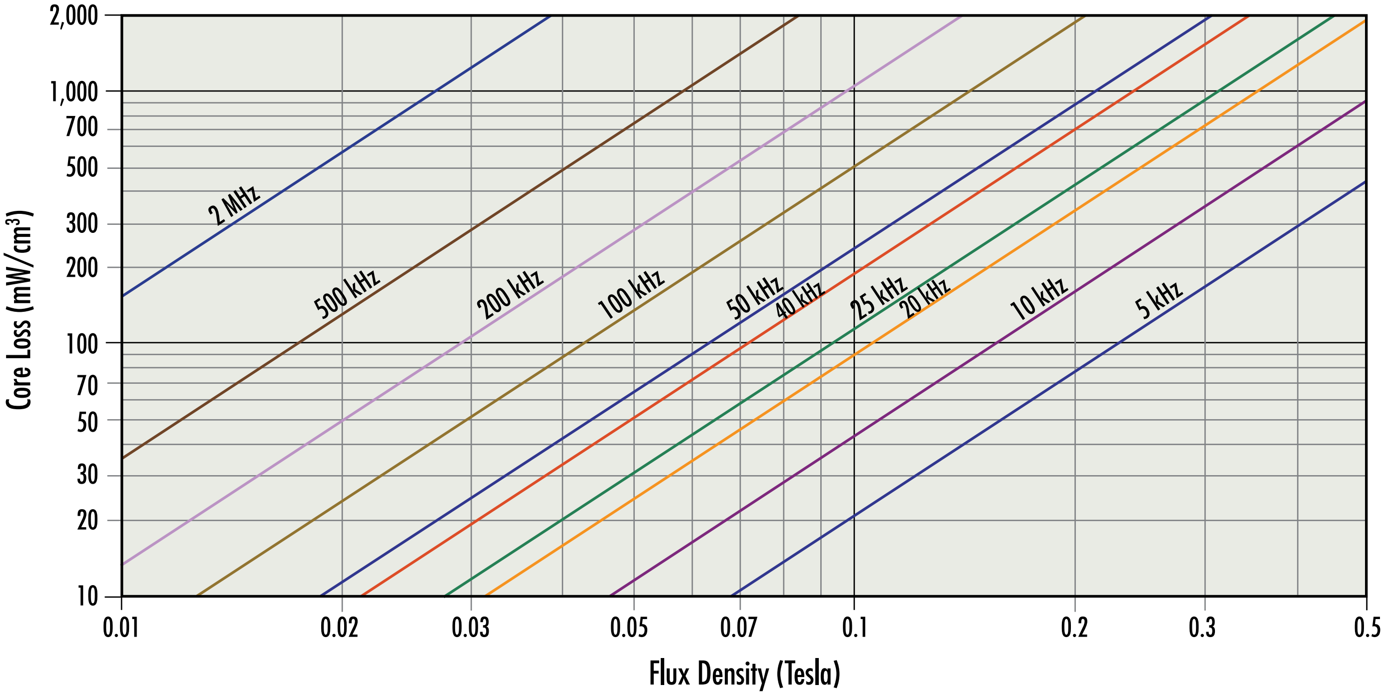


Kool Mμ® EQ & LP Cores 60μ

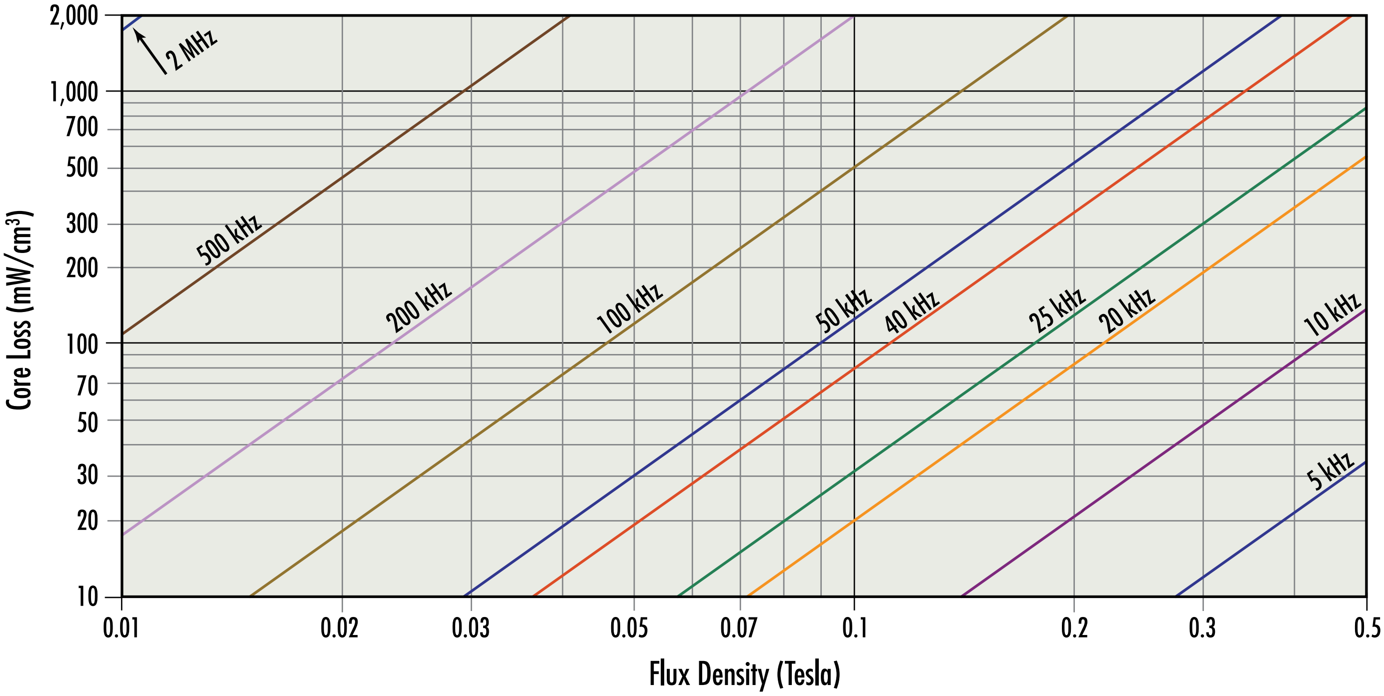


Core Loss Density Curves

Kool Mμ® EQ & LP Cores 75μ

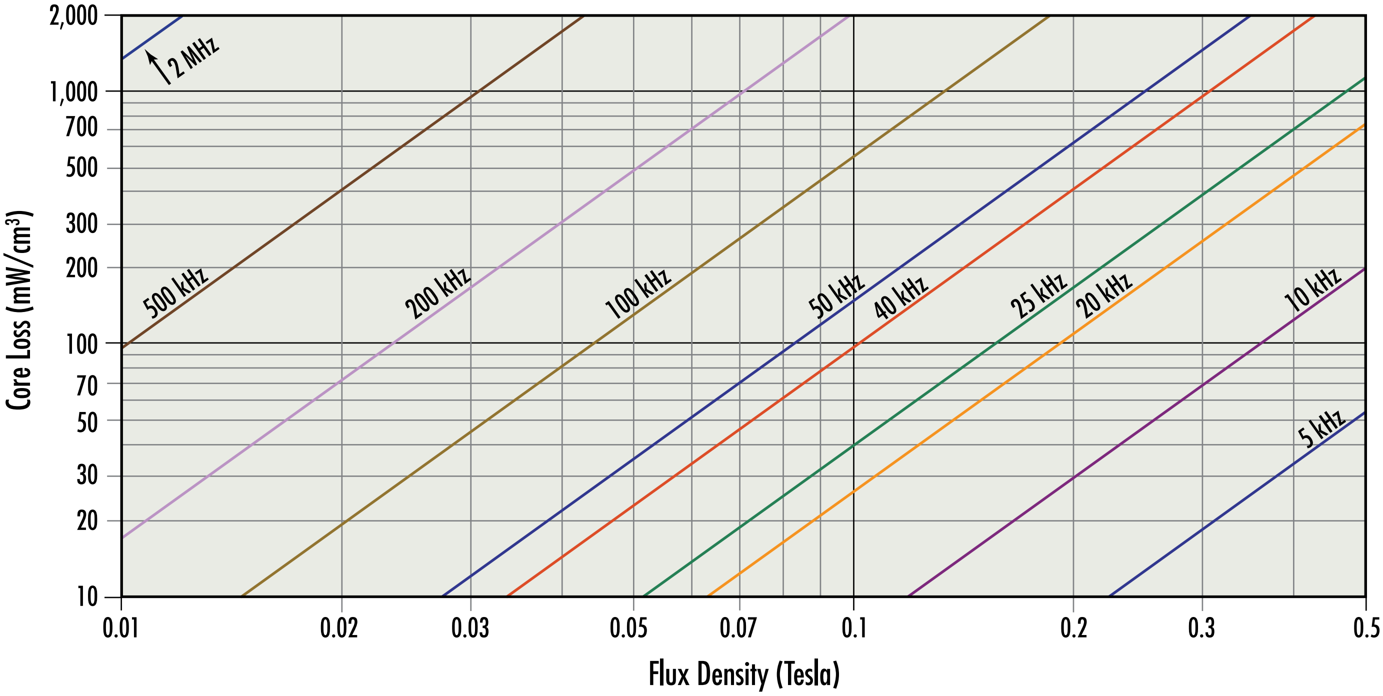


Kool Mμ® MAX EQ & LP Cores 26μ

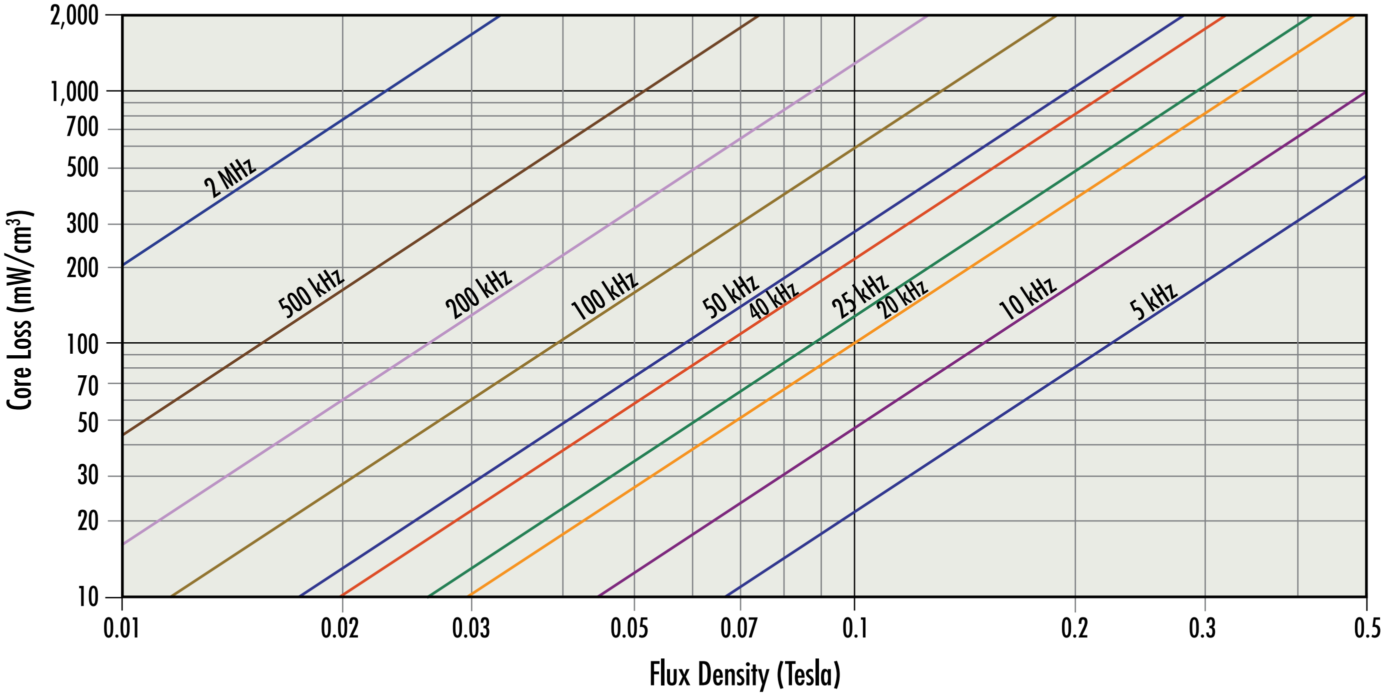


Core Loss Density Curves

Kool Mµ® MAX EQ & LP Cores 40µ, 60µ

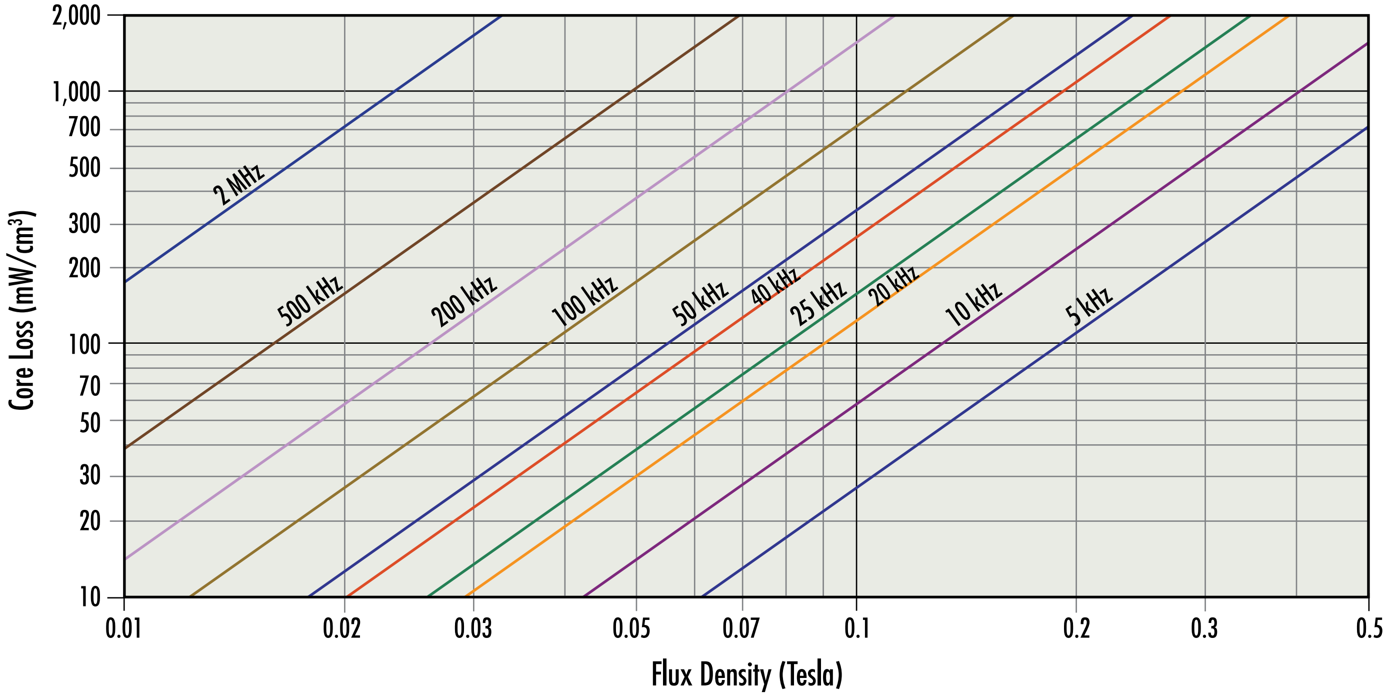


Kool Mµ® MAX EQ & LP Cores 75µ

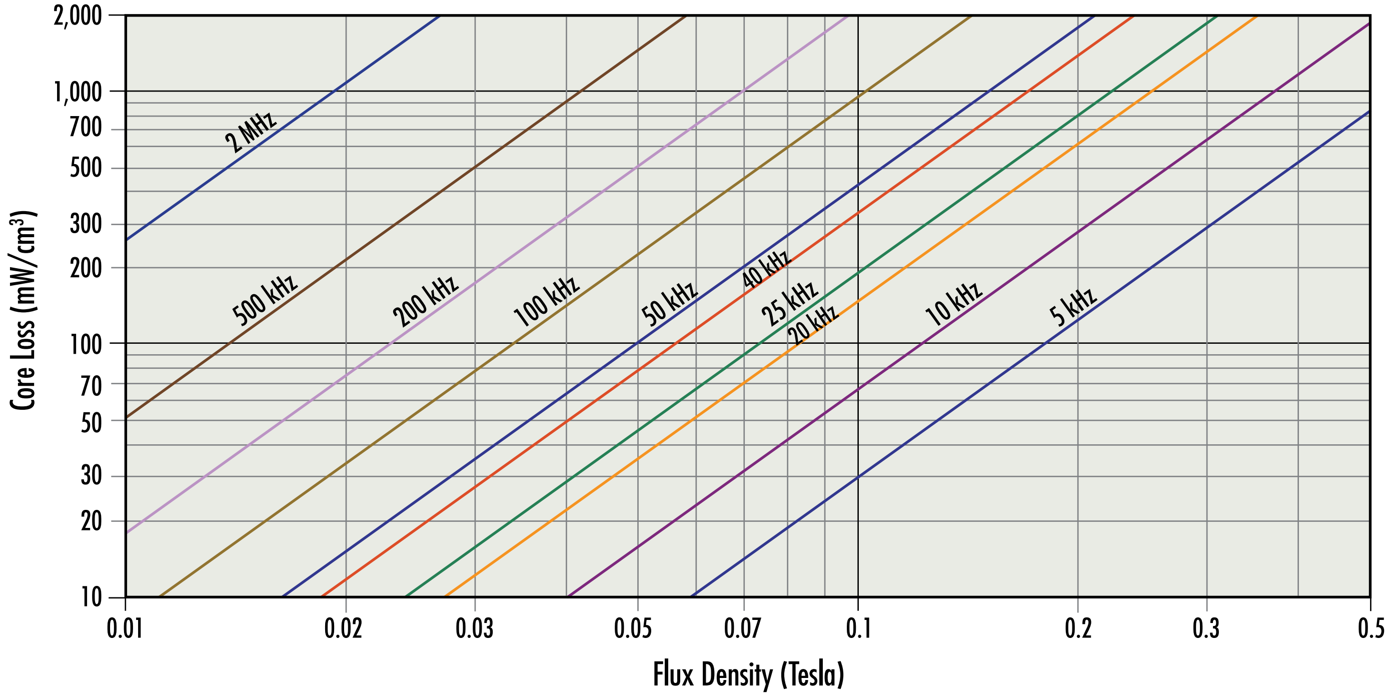


Core Loss Density Curves

XFlux® EQ & LP Cores 26µ

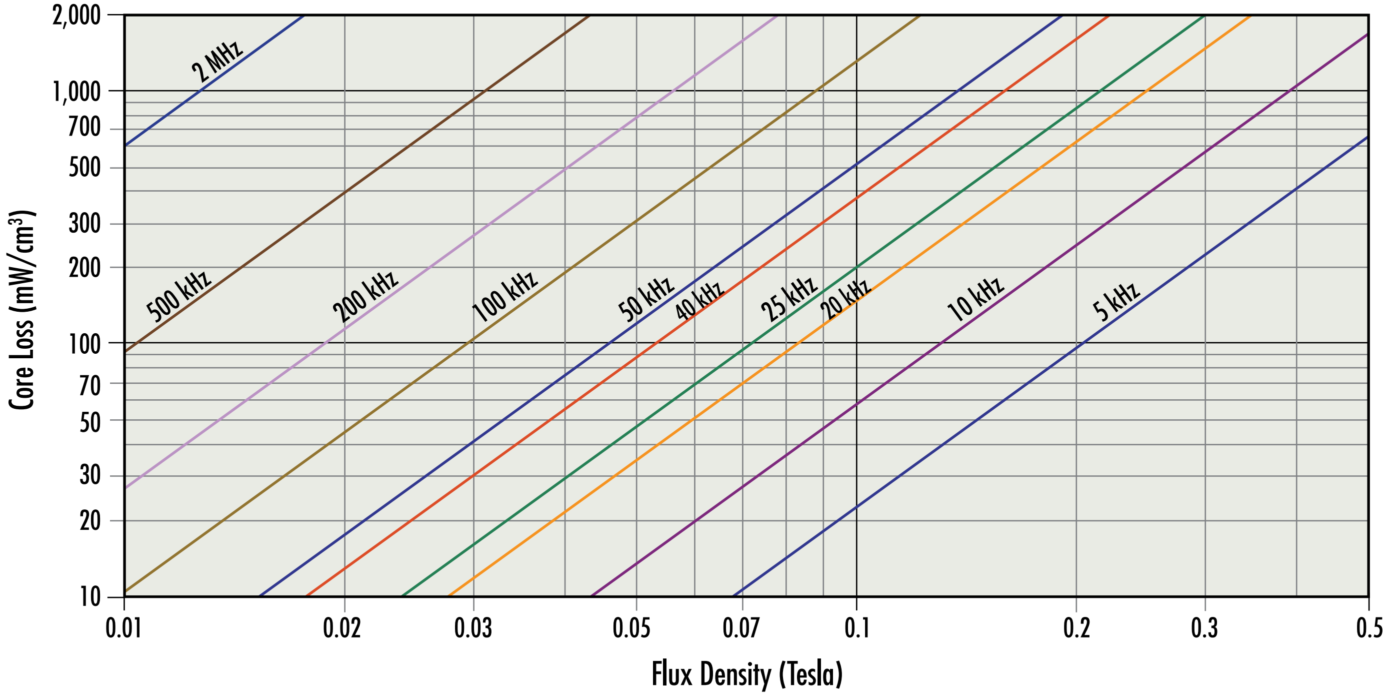


XFlux® EQ & LP Cores 40µ, 60µ

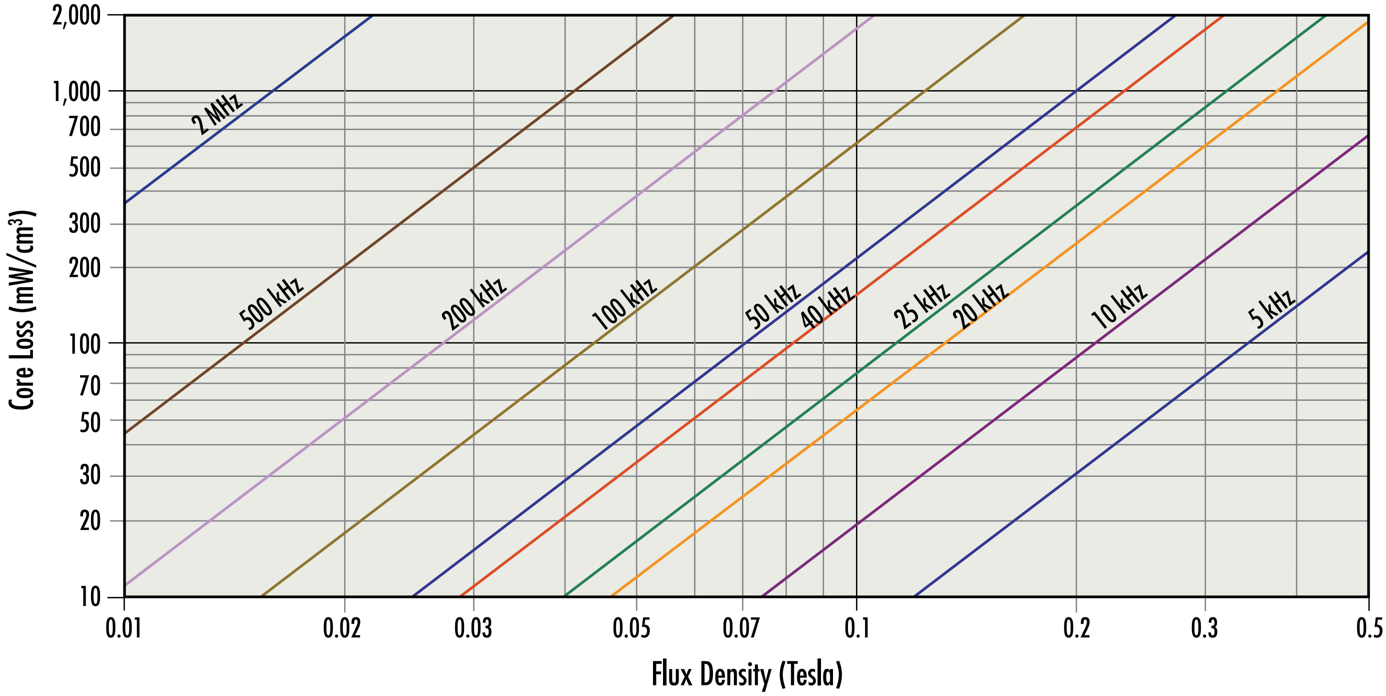


Core Loss Density Curves

XFlux® EQ & LP Cores 75μ

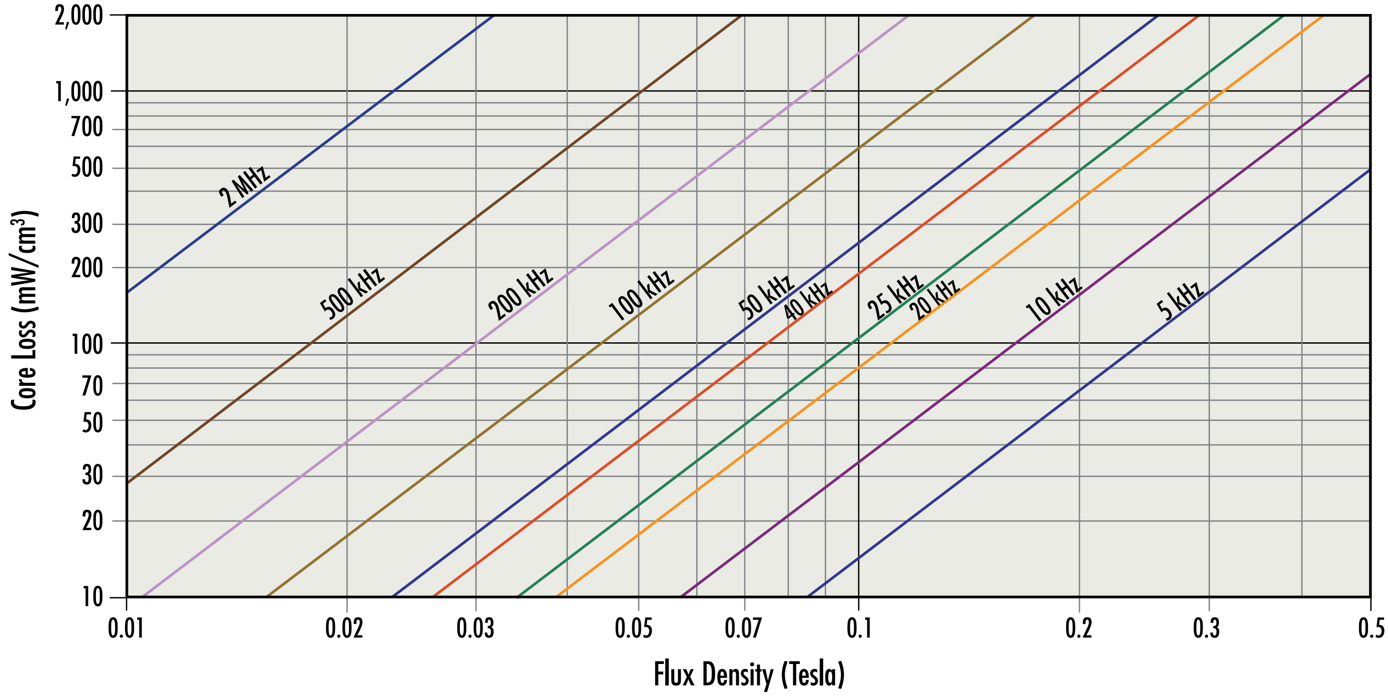


High Flux EQ & LP Cores 26μ, 40μ, 60μ

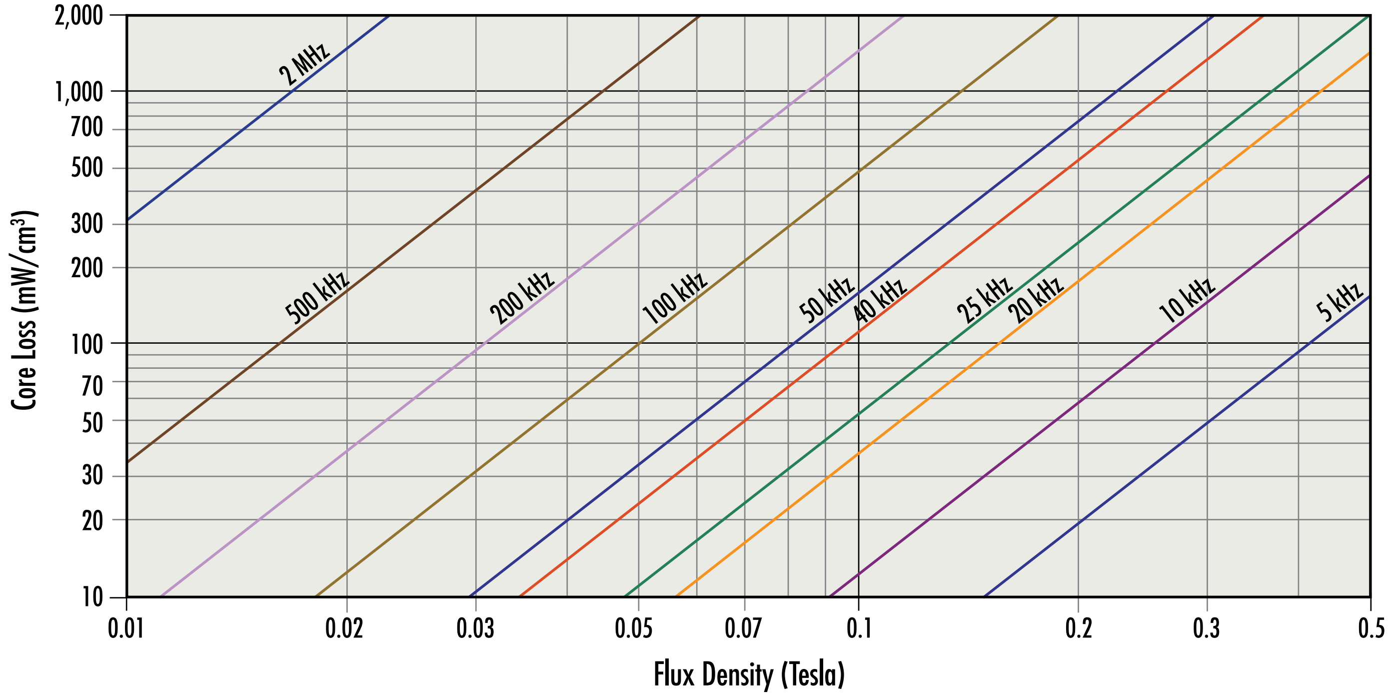


Core Loss Density Curves

High Flux EQ & LP Cores 75µ

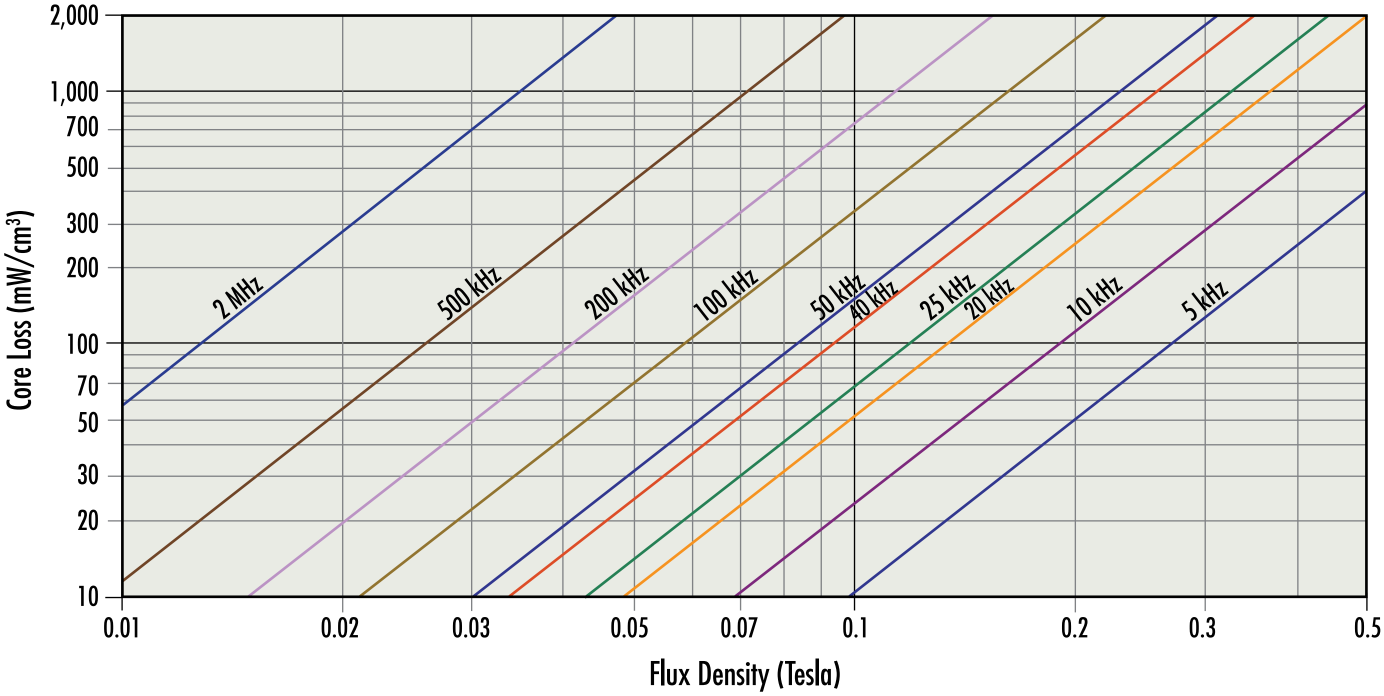


Edge® EQ & LP Cores 26µ, 40µ, 60µ

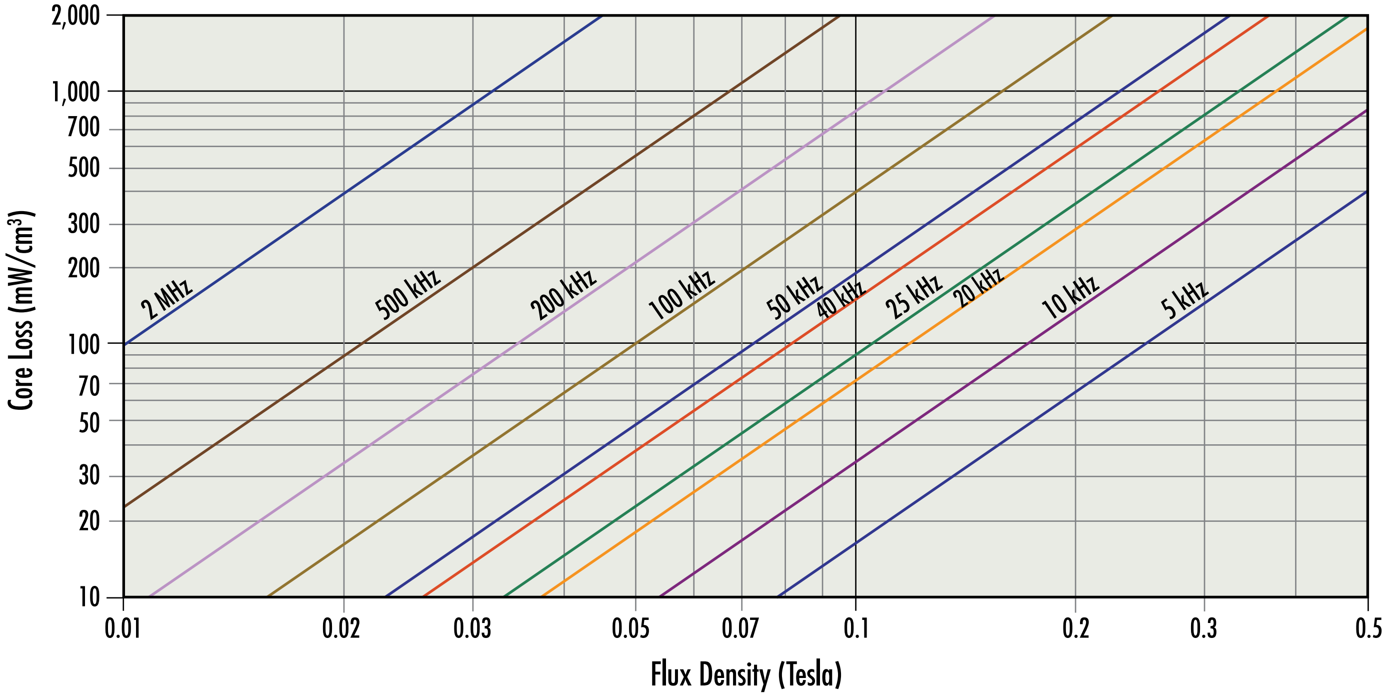


Core Loss Density Curves

Edge® EQ & LP Cores 75µ

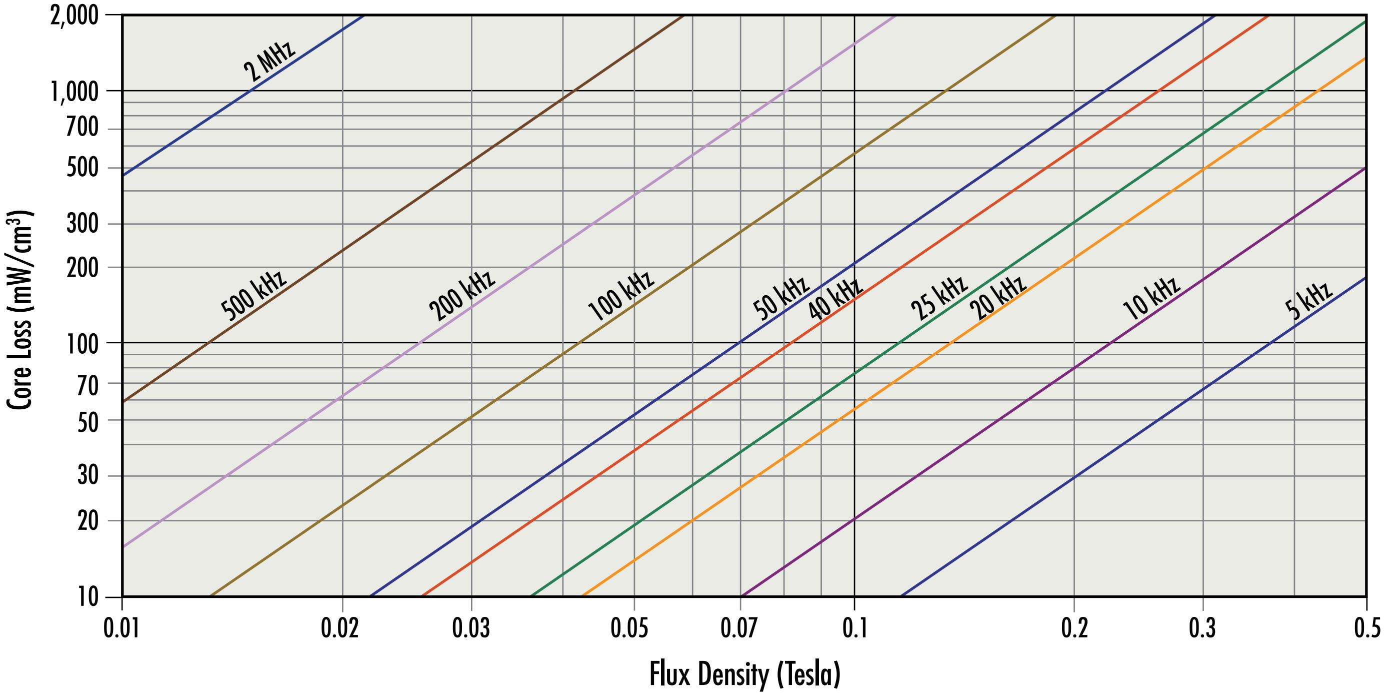


Kool Mµ® Blocks, Round Blocks & Cylinders 14µ

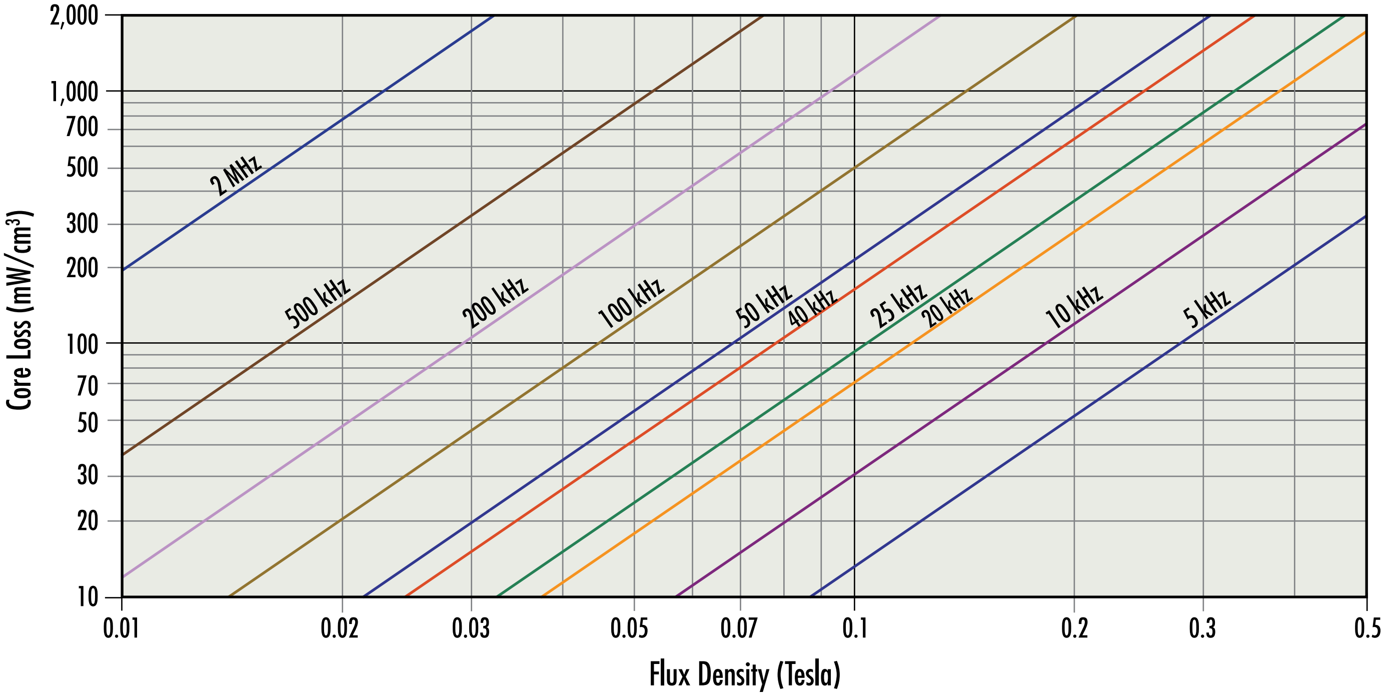


Core Loss Density Curves

Kool Mµ® Blocks, Round Blocks & Cylinders 26µ, 33µ, 40µ, 60µ, 90µ

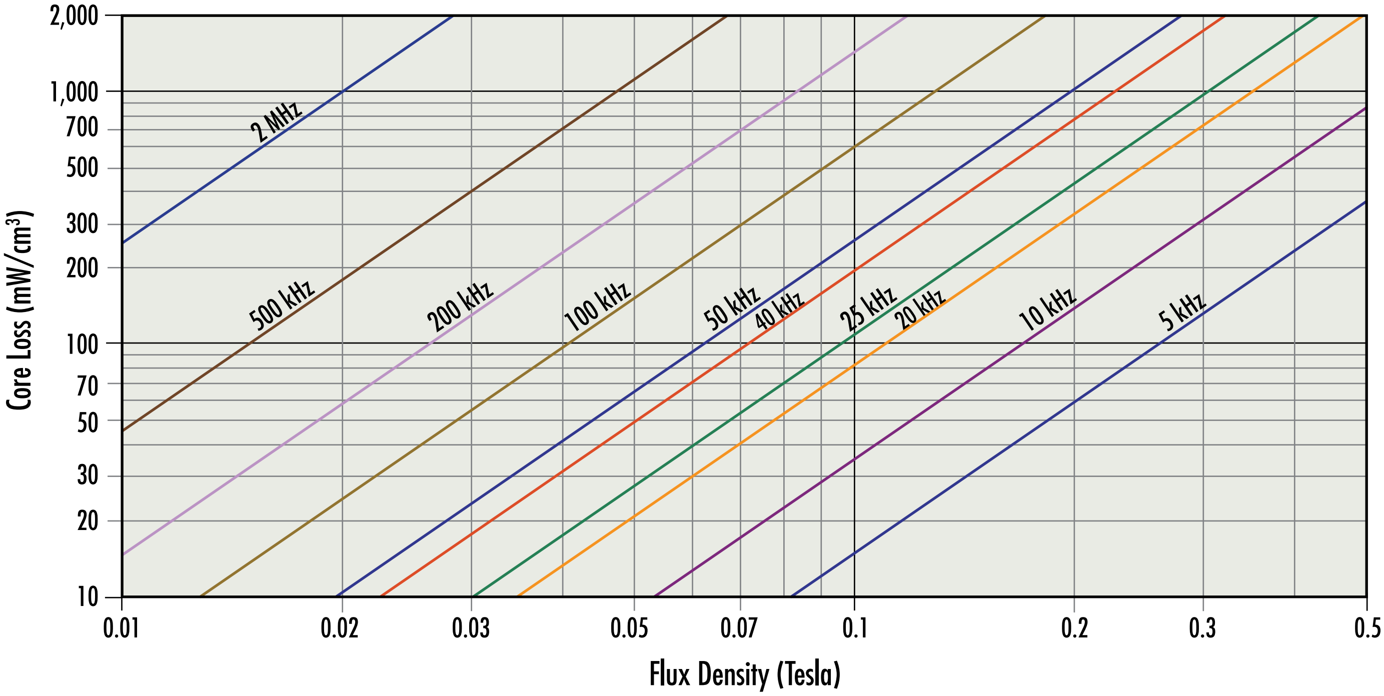


Kool Mµ® MAX Blocks, Round Blocks & Cylinders 60µ

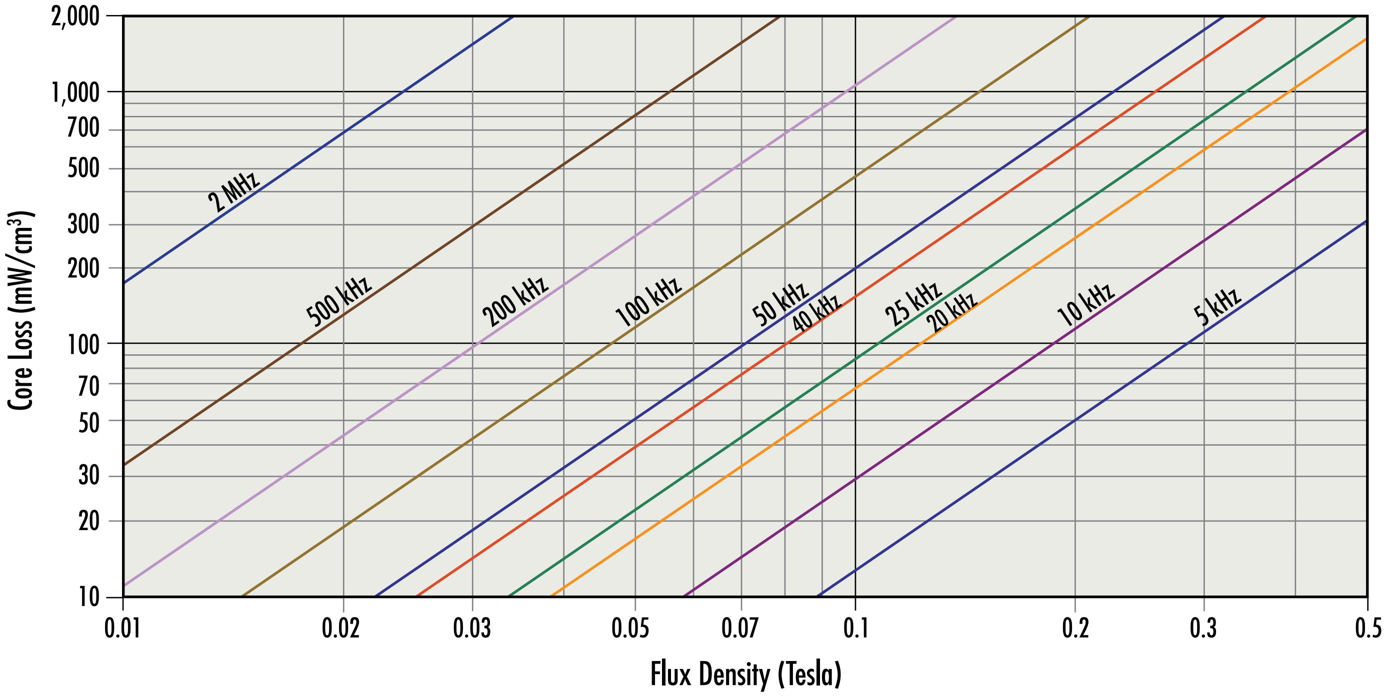


Core Loss Density Curves

Kool Mµ® MAX High Performance Blocks, Round Blocks & Cylinders 26µ

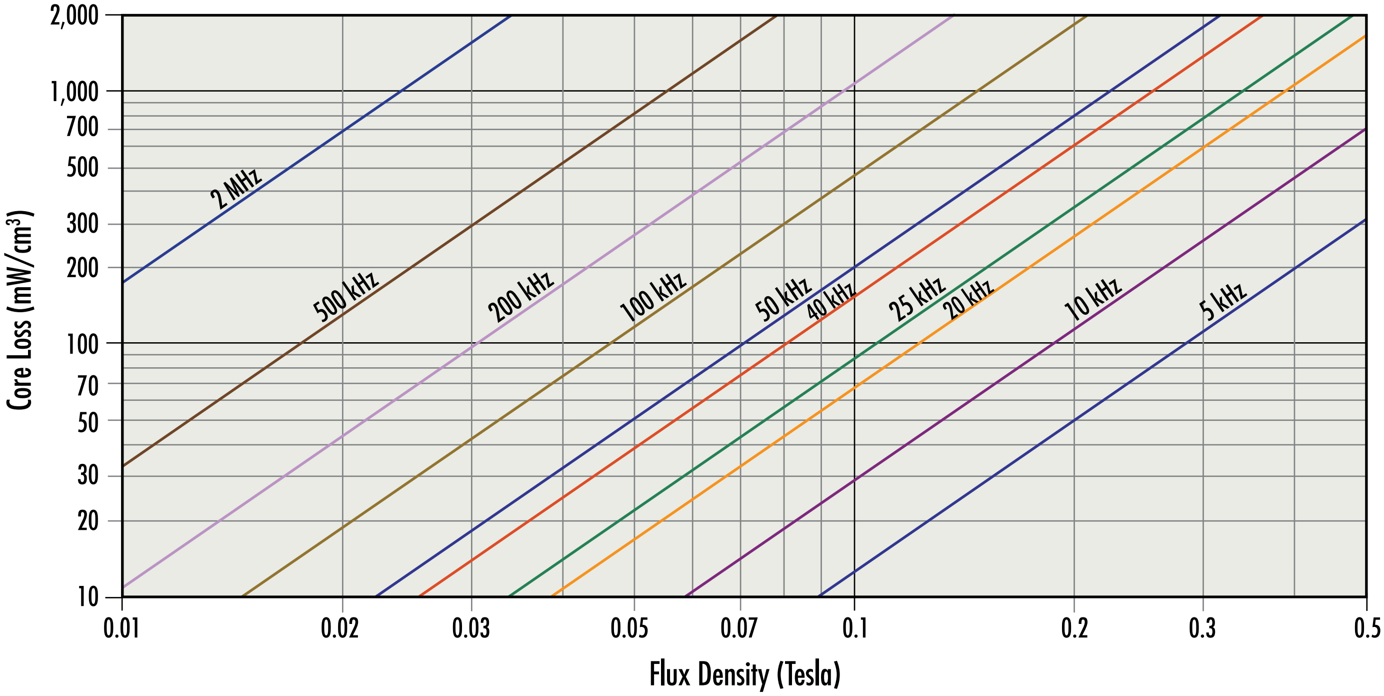


Kool Mµ® MAX High Performance Blocks, Round Blocks & Cylinders 40µ

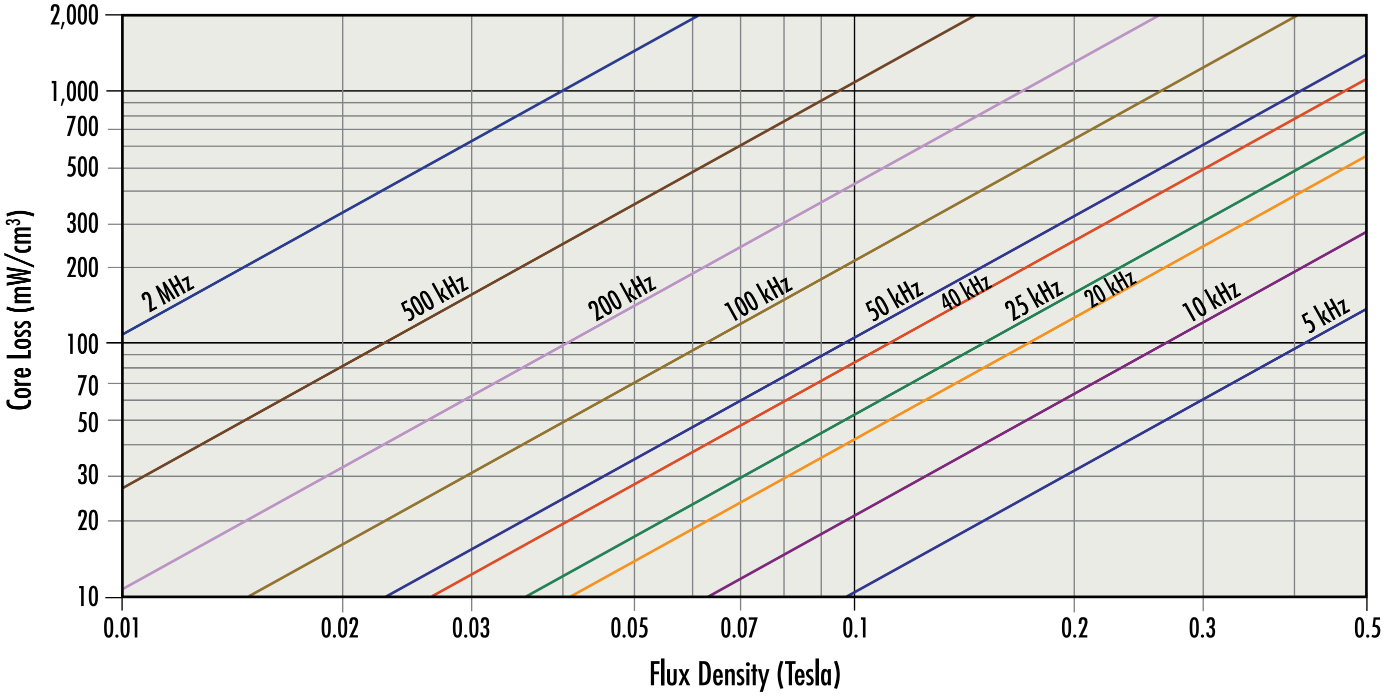


Core Loss Density Curves

Kool Mµ® MAX High Performance Blocks, Round Blocks & Cylinders 60µ

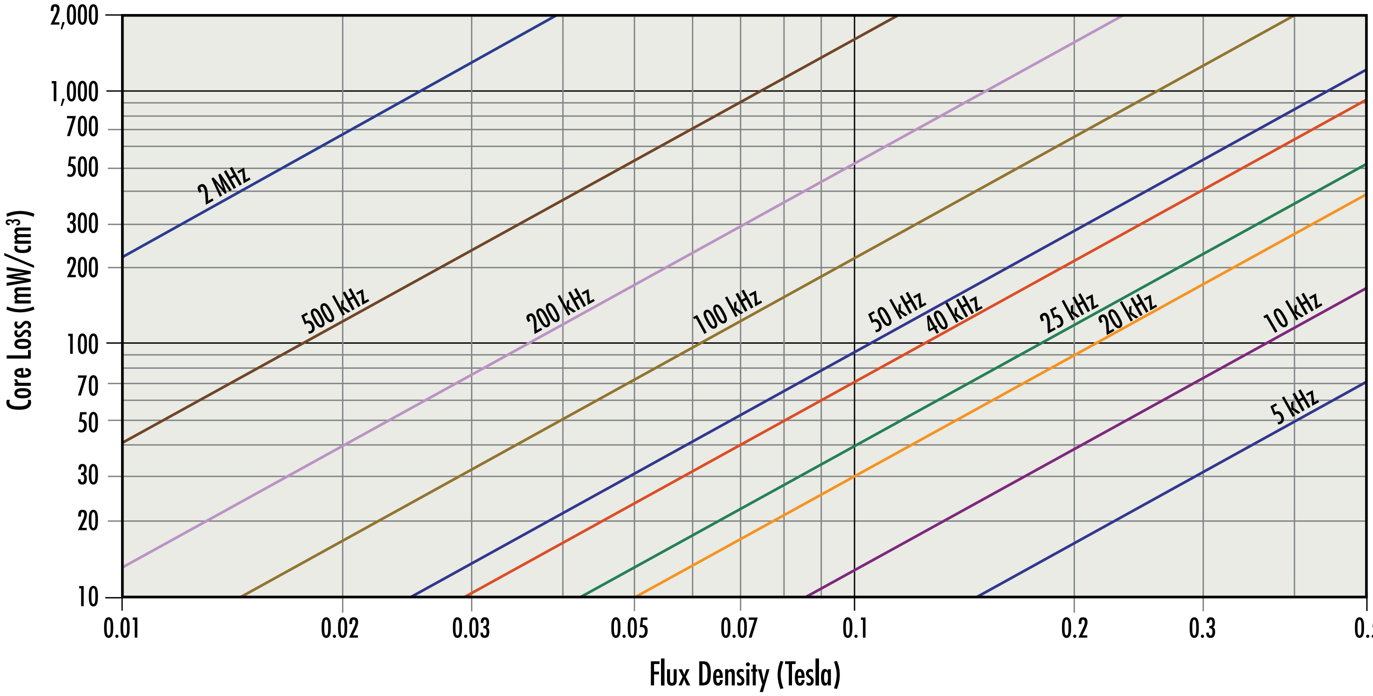


Kool Mµ® H*f* Blocks, Round Blocks & Cylinders 26µ

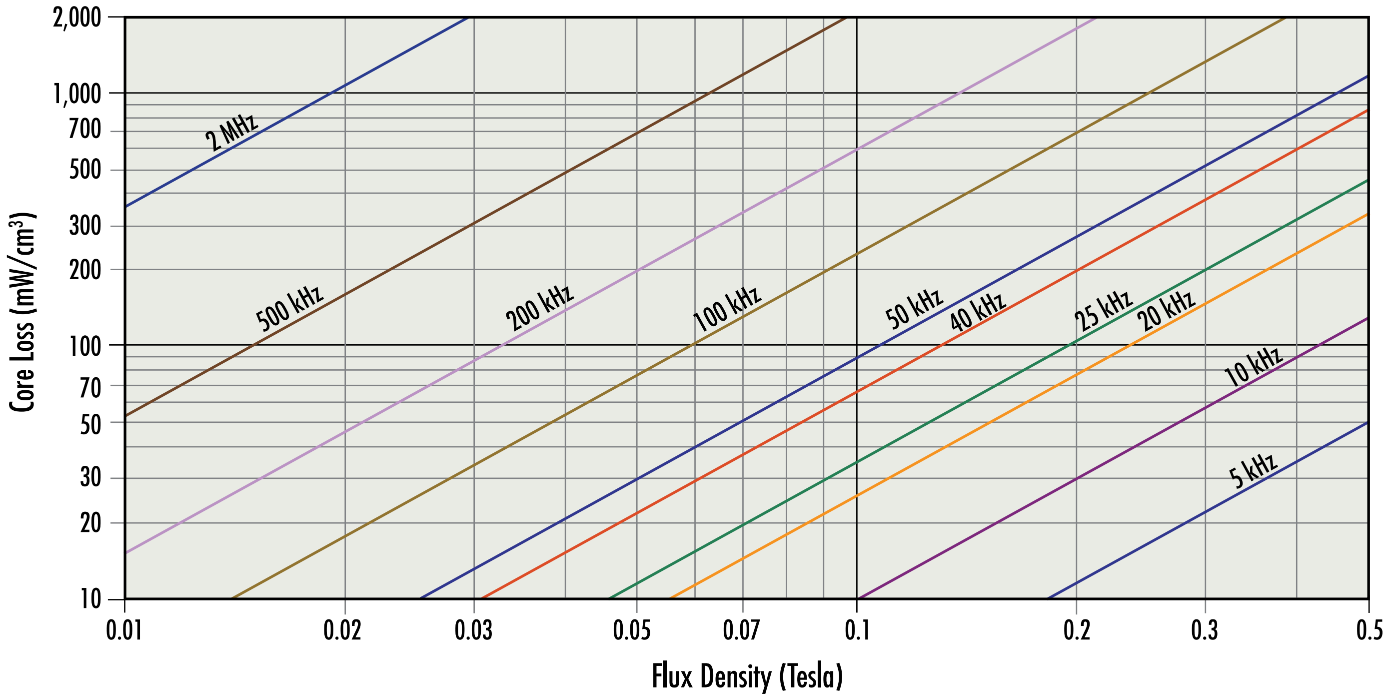


Core Loss Density Curves

Kool Mμ® Hƒ Blocks, Round Blocks & Cylinders 40μ

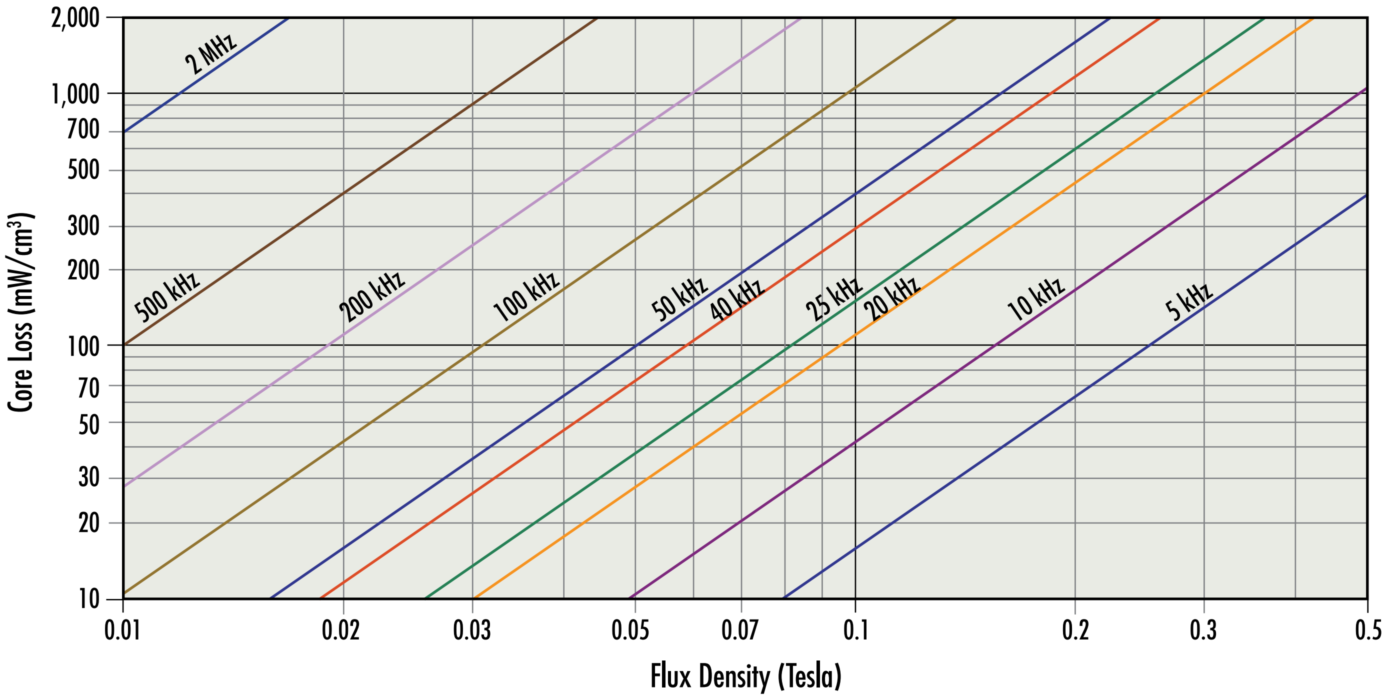


Kool Mμ® Hƒ Blocks, Round Blocks & Cylinders 60μ

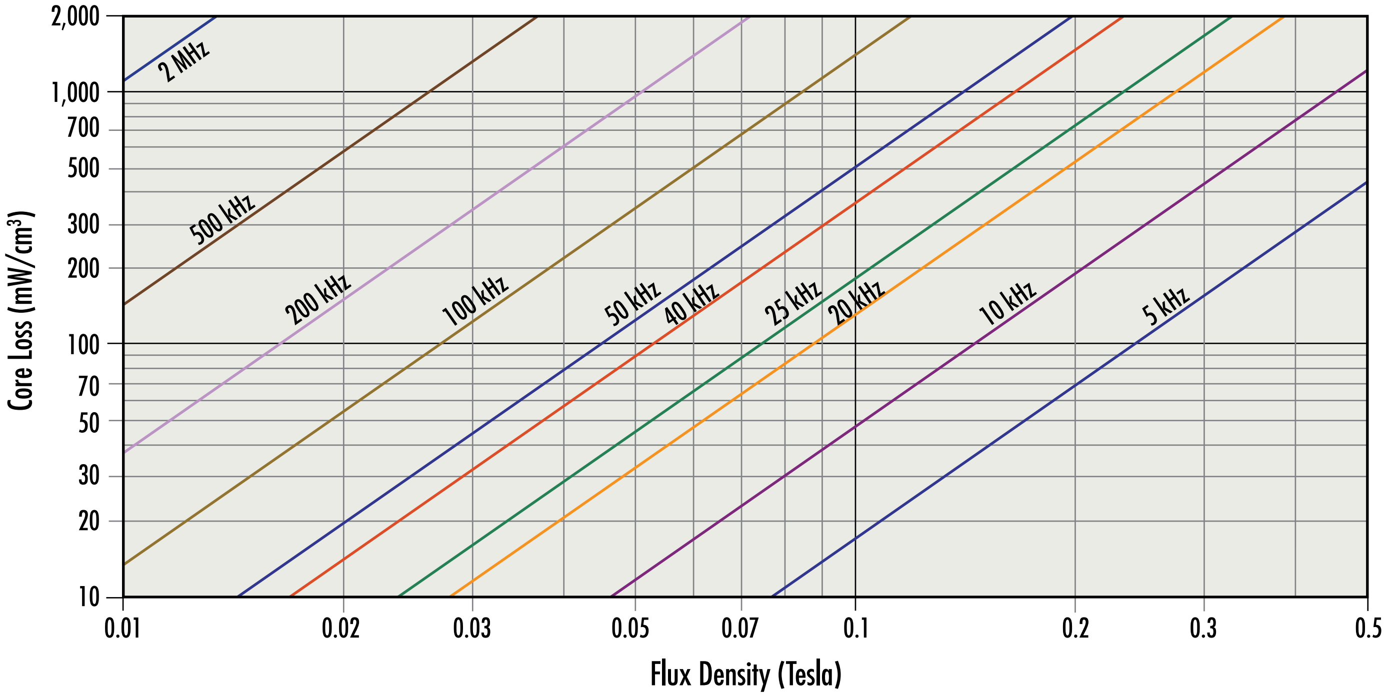


Core Loss Density Curves

XFlux® Blocks, Round Blocks & Cylinders 26µ

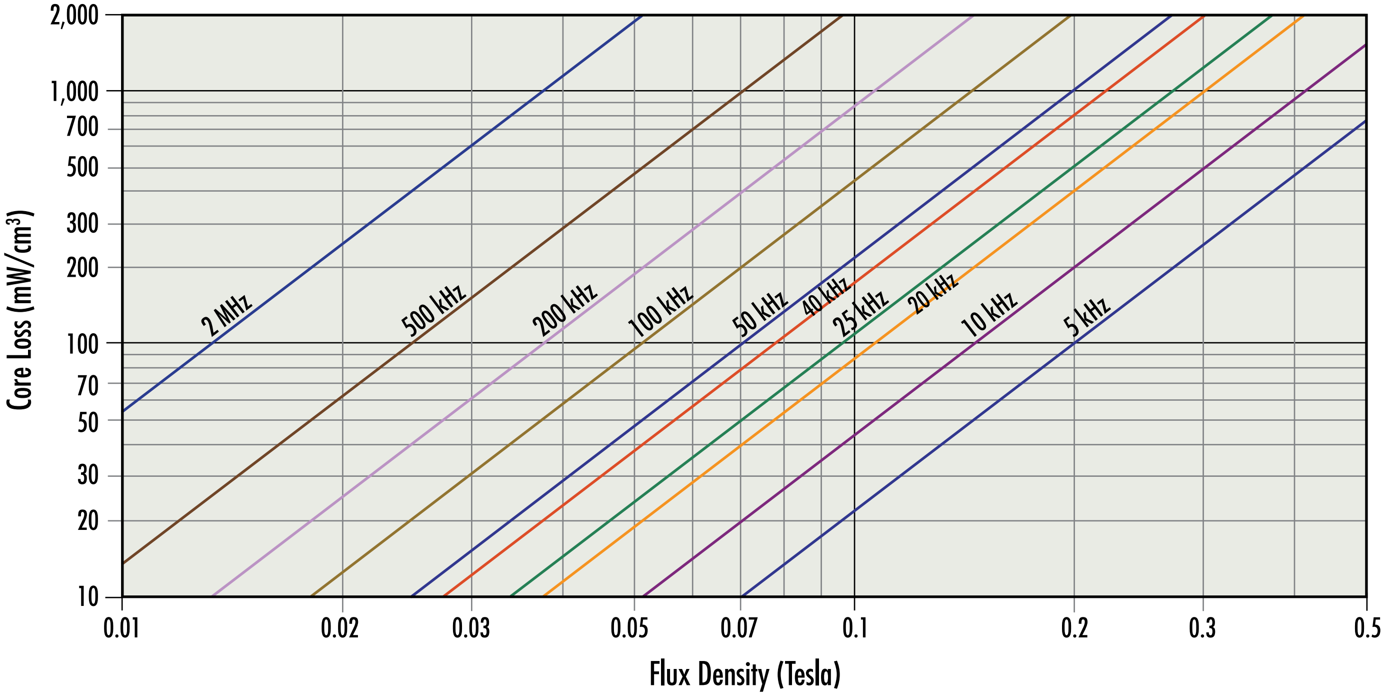


XFlux® Blocks, Round Blocks & Cylinders 33µ, 40µ, 60µ

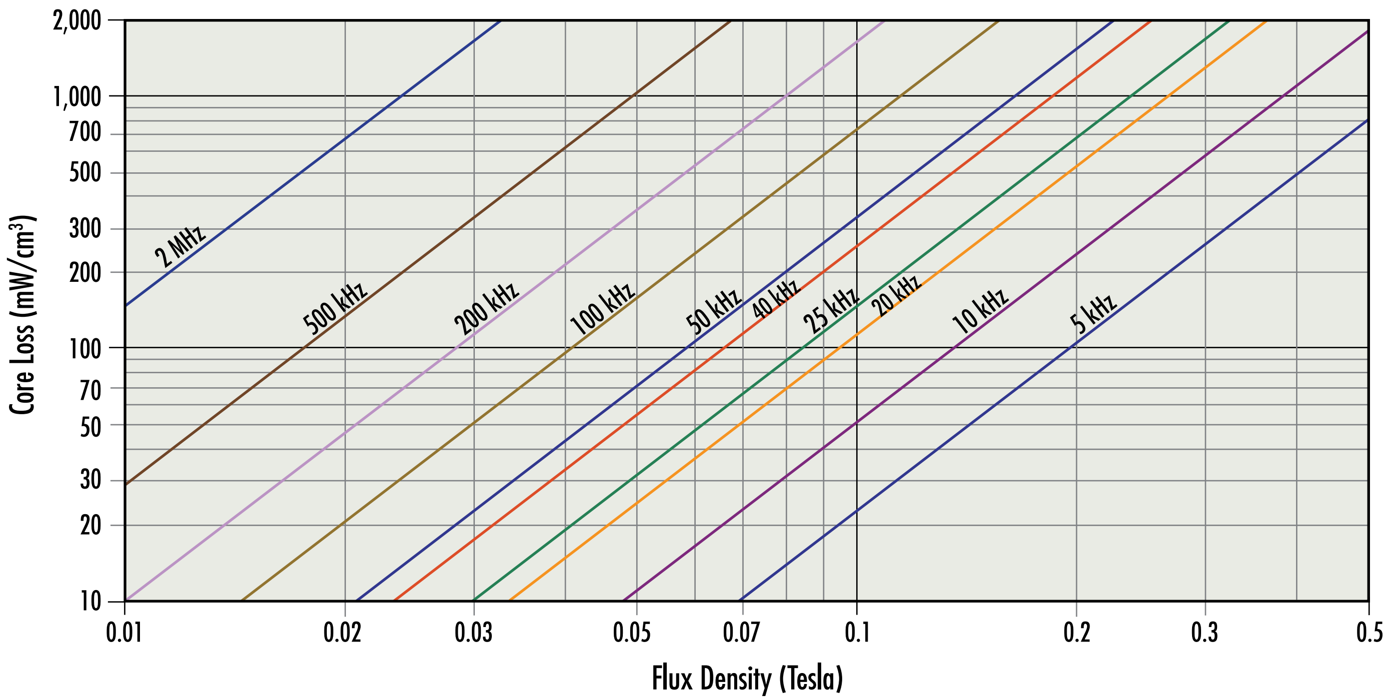


Core Loss Density Curves

High Flux Blocks, Round Blocks & Cylinders 26µ

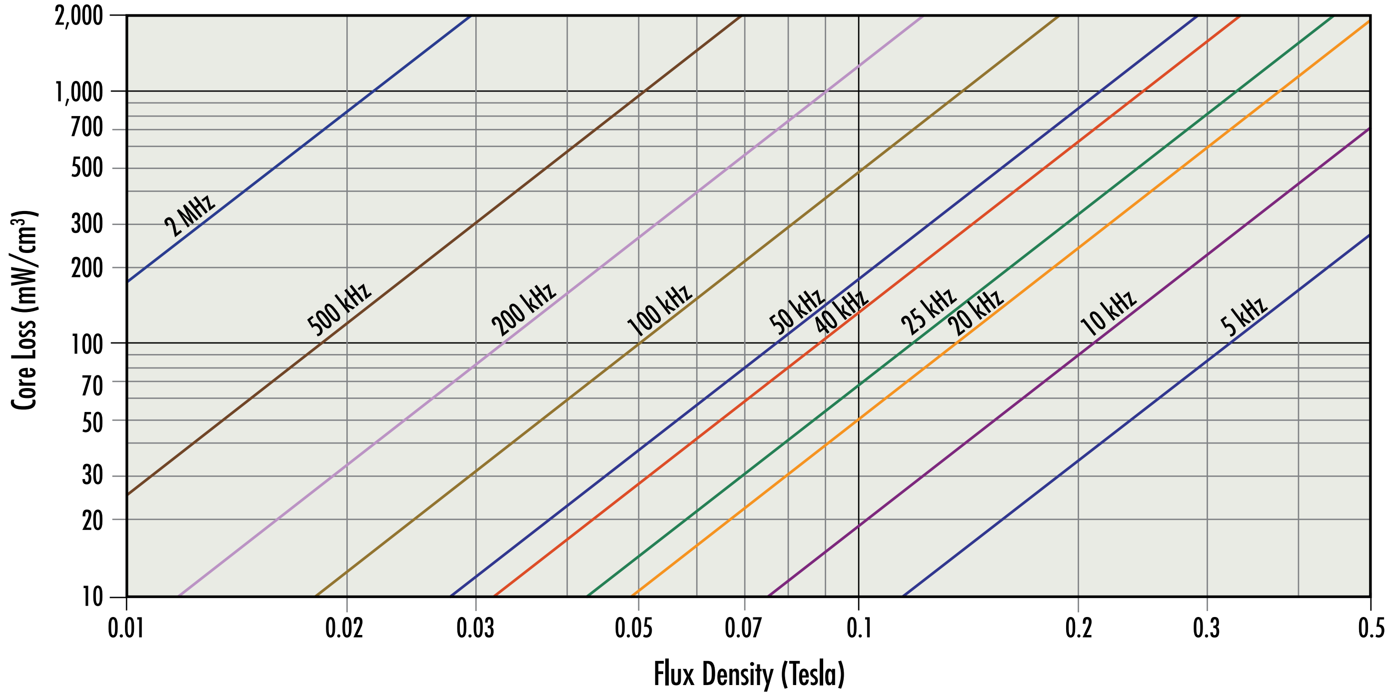


High Flux Blocks, Round Blocks & Cylinders 60µ

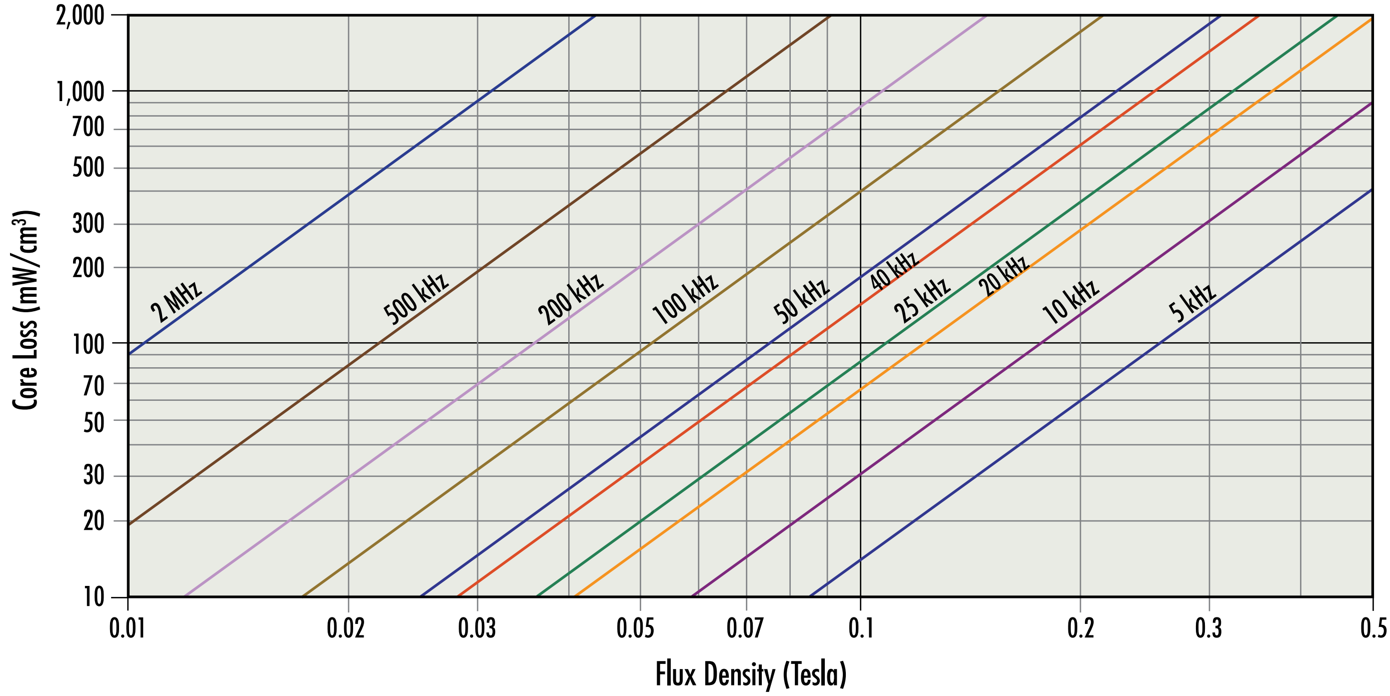


Core Loss Density Curves

Edge® Blocks, Round Blocks & Cylinders 26µ, 40µ, 60µ



MPP Blocks, Round Blocks & Cylinders 26µ



Core Loss Density Curves

Fit Formula

$P = aB^bf^c$ where B = Tesla (T), f = kilohertz (kHz)

Perm	a	b	c
Kool Mµ® Toroids			
14µ	64.43	1.988	1.541
26µ, 40µ	52.36	1.988	1.541
60µ, 75µ, 90µ, 125µ	44.30	1.988	1.541
Kool Mµ® MAX Toroids			
14µ, 19µ	144.49	2.072	1.379
26µ, 40µ, 60µ, 75µ, 90µ	113.53	2.072	1.379
Kool Mµ® H*f* Toroids			
26µ	26.41	1.602	1.394
40µ, 60µ	49.54	1.602	1.209
Kool Mµ® Ultra Toroids			
26µ, 40µ	13.99	1.602	1.385
60µ	8.88	1.602	1.443
XFlux® Toroids			
19µ	509.27	2.015	1.194
26µ	581.54	2.015	1.194
40µ	630.00	2.015	1.194
60µ	557.31	2.015	1.194
75µ, 90µ	542.77	2.015	1.194
125µ	533.08	2.015	1.194
XFlux® Ultra Toroids			
26µ	363.07	2.015	1.236
60µ	348.97	2.015	1.236
High Flux Toroids			
14µ	968.56	2.218	1.189
26µ	492.31	2.218	1.240
40µ	185.02	2.218	1.398
60µ	246.54	2.218	1.311
75µ	440.08	2.218	1.210
90µ	440.08	2.218	1.210
125µ, 147µ, 160µ	184.44	2.218	1.428
Edge® Toroids			
14µ	212.96	2.263	1.390
19µ	200.53	2.263	1.369
26µ	207.90	2.263	1.322
40µ	150.40	2.263	1.369
60µ	156.18	2.263	1.321
75µ	121.47	2.263	1.403
90µ, 125µ	481.77	2.263	1.139

Perm	a	b	c
MPP Toroids			
14µ, 19µ	266.22	2.103	1.316
26µ, 40µ	146.94	2.103	1.357
60µ	72.15	2.103	1.449
75µ	99.48	2.103	1.402
90µ	99.64	2.103	1.441
125µ	62.22	2.103	1.561
147µ, 160µ, 173µ	56.51	2.103	1.598
200µ, 300µ	53.71	2.103	1.624
550µ	74.76	2.103	1.645
Kool Mµ® E Cores, U Cores & EER Cores			
14µ	29.30	1.988	1.541
26µ, 40µ	32.22	1.988	1.541
60µ, 90µ	40.27	1.988	1.541
Kool Mµ® MAX E Cores, U Cores & EER Cores			
26µ, 40µ	32.22	1.988	1.541
60µ	36.25	1.988	1.541
Kool Mµ® MAX High Performance E Cores, U Cores & EER Cores			
26µ, 40µ	32.22	1.988	1.541
60µ	36.24	1.988	1.541
Kool Mµ® H*f* E Cores, U Cores & EER Cores			
26µ	18.01	1.602	1.401
40µ	15.69	1.602	1.401
60µ	18.01	1.602	1.401
XFlux® E Cores, U Cores & EER Cores			
26µ	290.77	2.015	1.194
40µ	387.69	2.015	1.194
60µ	436.16	2.015	1.194
High Flux E Cores, U Cores & EER Cores			
60µ	73.92	2.218	1.652
Edge® E Cores, U Cores & EER Cores			
26µ	100.70	2.263	1.519
40µ, 60µ	63.63	2.263	1.547
Kool Mµ® EQ & LP Cores			
26µ, 40µ	35.75	1.912	1.490
60µ	114.54	1.893	1.260
75µ	298.96	1.893	1.058

Core Loss Density Curves

Fit Formula

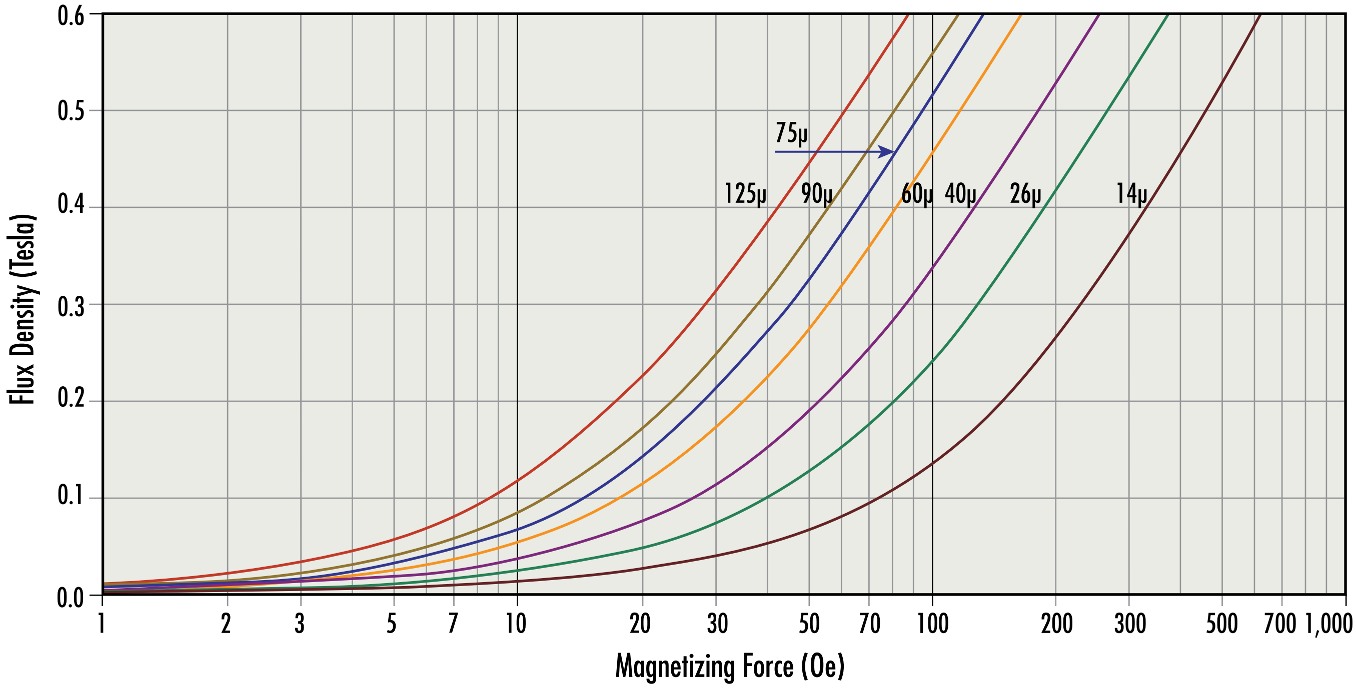
$P = aB^b f^c$ where B = Tesla (T), f = kilohertz (kHz)

Perm	a	b	c
Kool Mμ® MAX EQ & LP Cores			
26μ	5.73	2.059	2.000
40μ, 60μ	10.83	2.081	1.893
75μ	304.35	2.081	1.188
XFlux® EQ & LP Cores			
26μ	515.72	2.049	1.100
40μ, 60μ	546.68	2.080	1.160
75μ	311.03	2.080	1.346
High Flux EQ & LP Cores			
26μ, 40μ, 60μ	95.15	2.204	1.510
75μ	307.94	2.204	1.247
Edge® EQ & LP Cores			
26μ, 40μ, 60μ	57.90	2.263	1.590
75μ	304.57	2.263	1.151
Kool Mμ® Blocks, Round Blocks & Cylinders			
14μ	286.68	1.988	1.065
26μ, 33μ, 40μ, 60μ, 90μ	72.13	1.988	1.440
Kool Mμ® MAX Blocks, Round Blocks & Cylinders			
60μ	180.89	1.988	1.215
Kool Mμ® MAX High Performance Blocks, Round Blocks & Cylinders			
26μ	200.00	1.988	1.234
40μ	180.59	1.988	1.200
60μ	176.51	1.988	1.202
Kool Mμ® H*f* Blocks, Round Blocks & Cylinders			
26μ	81.90	1.602	1.007
40μ	29.17	1.602	1.239
60μ	16.60	1.602	1.373
XFlux® Blocks, Round Blocks & Cylinders			
26μ	167.38	2.015	1.410
33μ, 40μ, 60μ	167.40	2.015	1.470

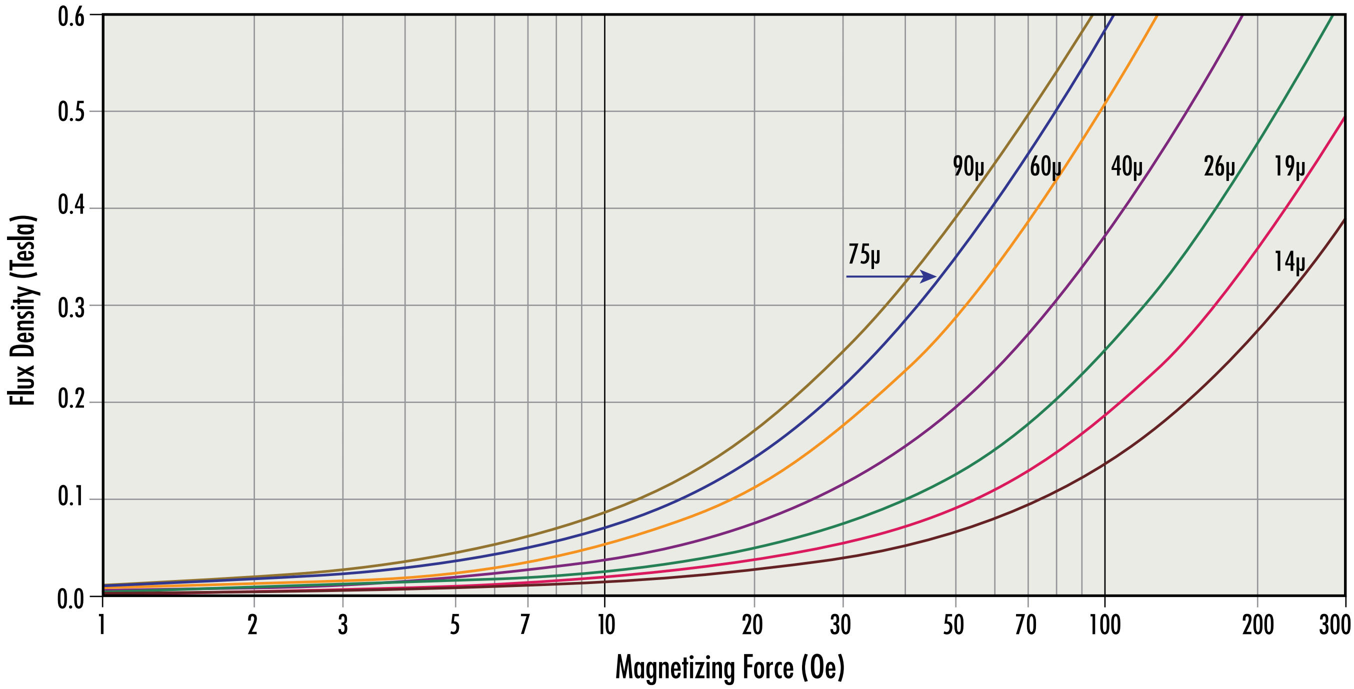
Perm	a	b	c
High Flux Blocks, Round Blocks & Cylinders			
26μ	725.25	2.218	1.000
60μ	579.78	2.218	1.160
Edge® Blocks, Round Blocks & Cylinders			
26μ, 40μ, 60μ	137.53	2.263	1.402
MPP Blocks, Round Blocks & Cylinders			
26μ	289.70	2.103	1.122

DC Magnetization Curves

Kool Mµ® Toroids

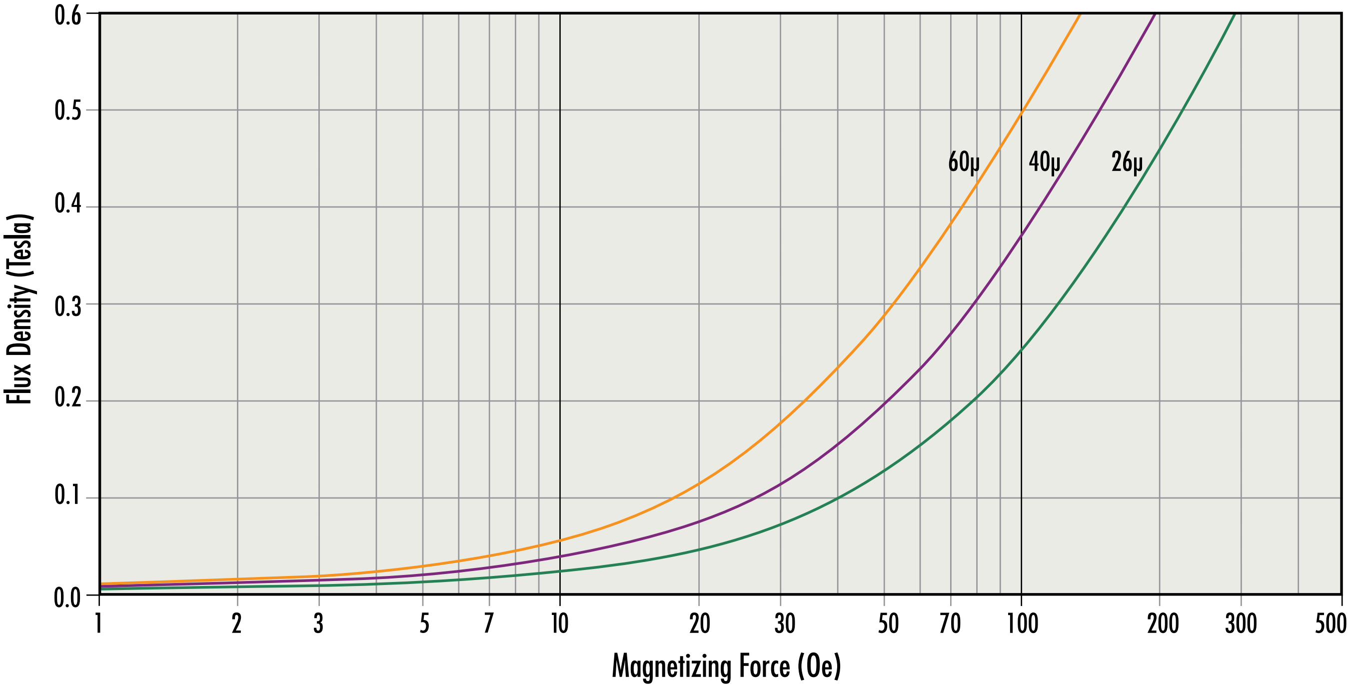


Kool Mµ® MAX Toroids

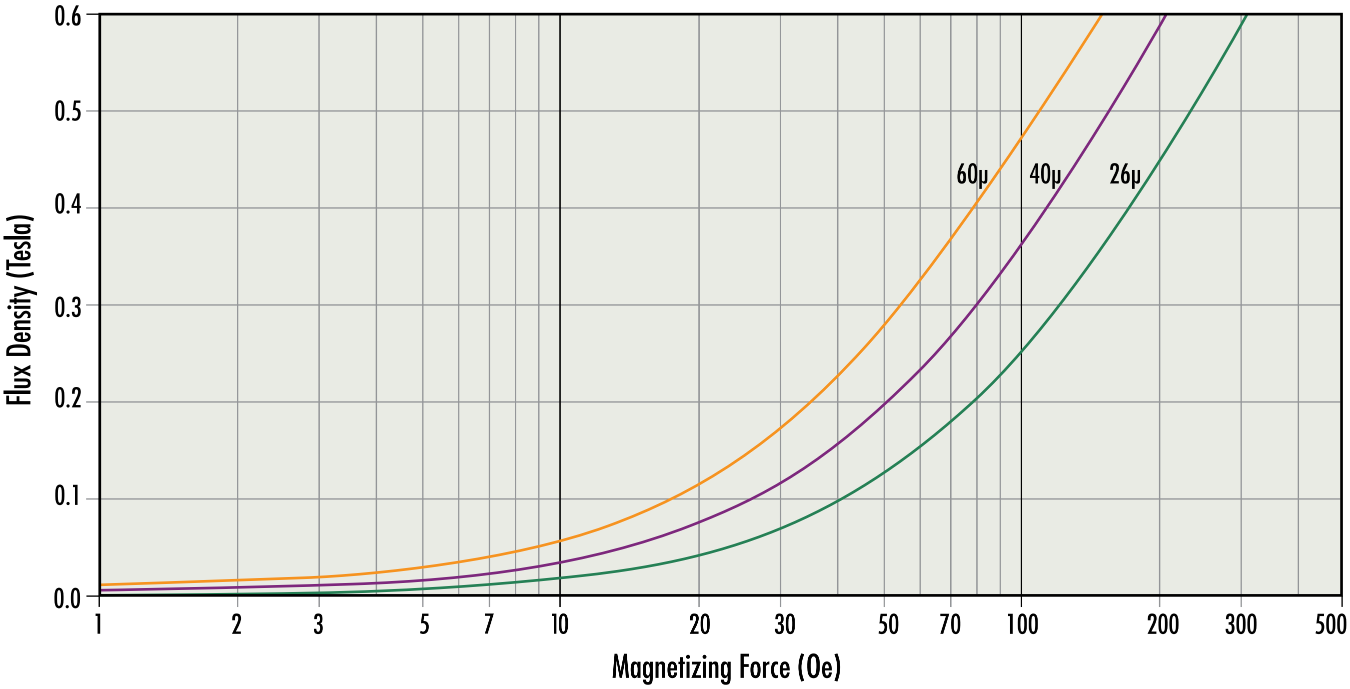


DC Magnetization Curves

Kool Mµ® H*ƒ* Toroids

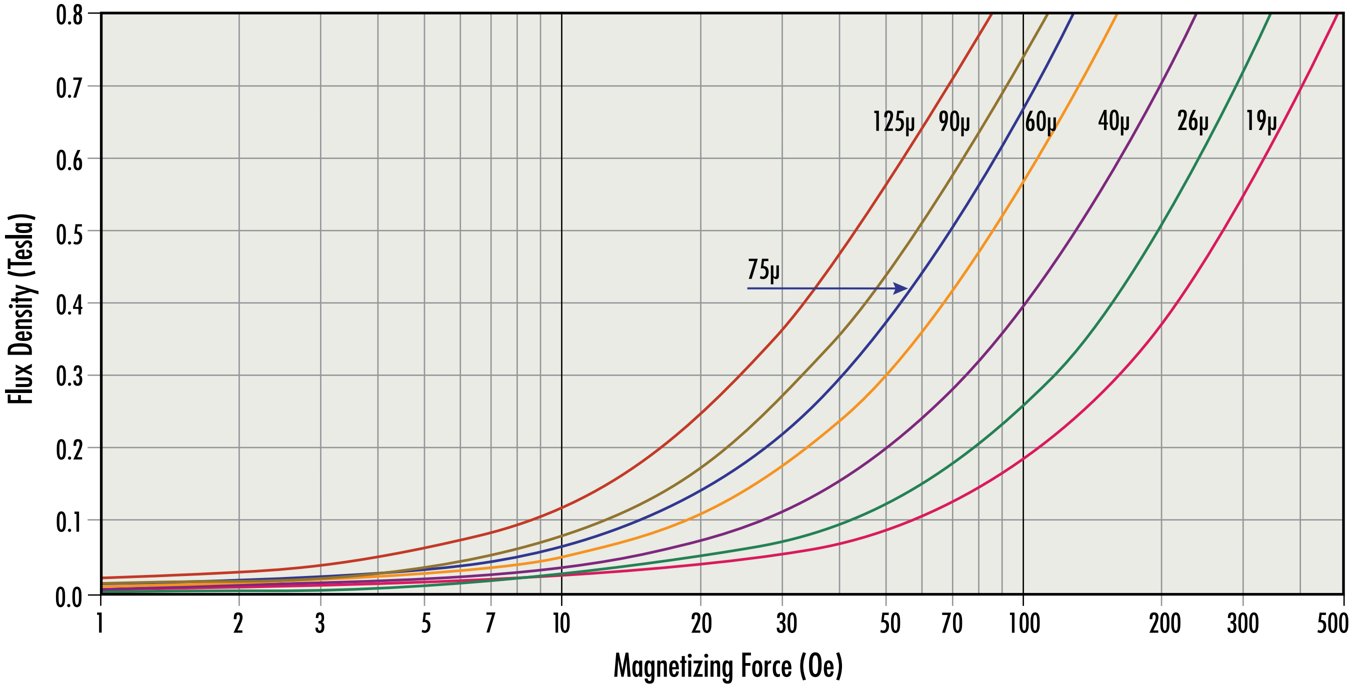


Kool Mµ® Ultra Toroids

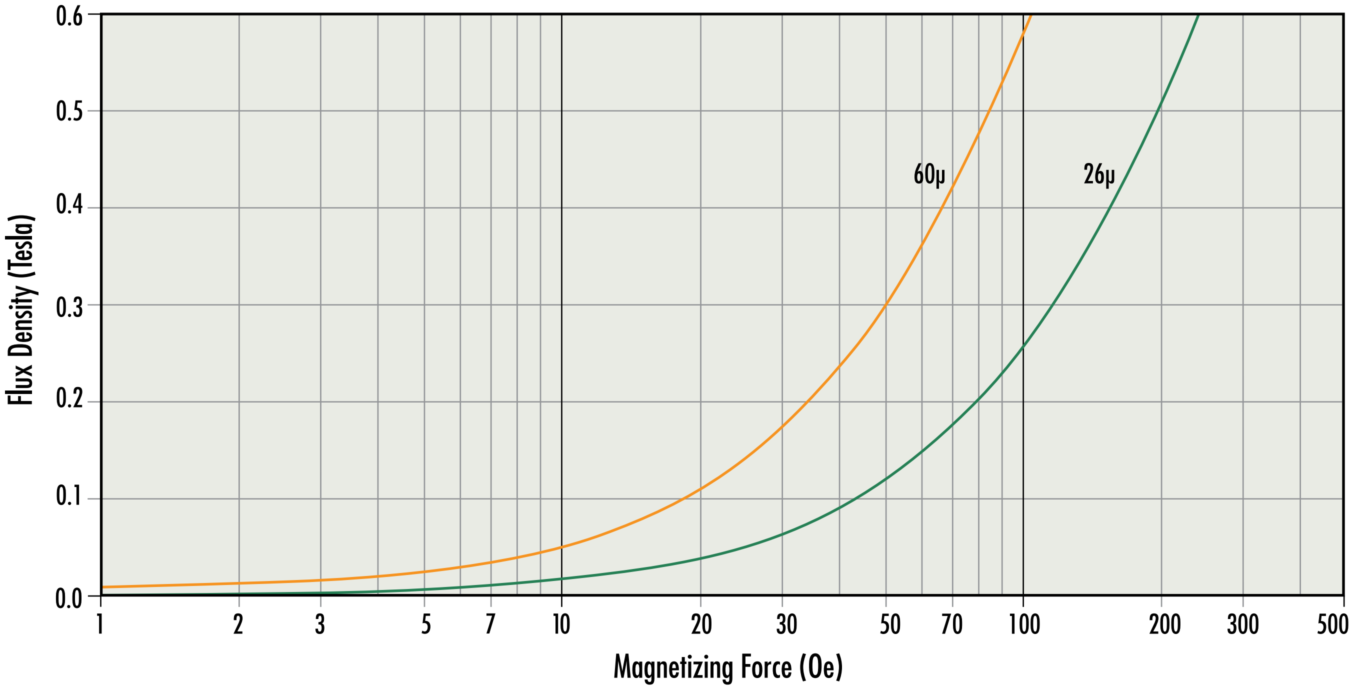


DC Magnetization Curves

XFlux® Toroids

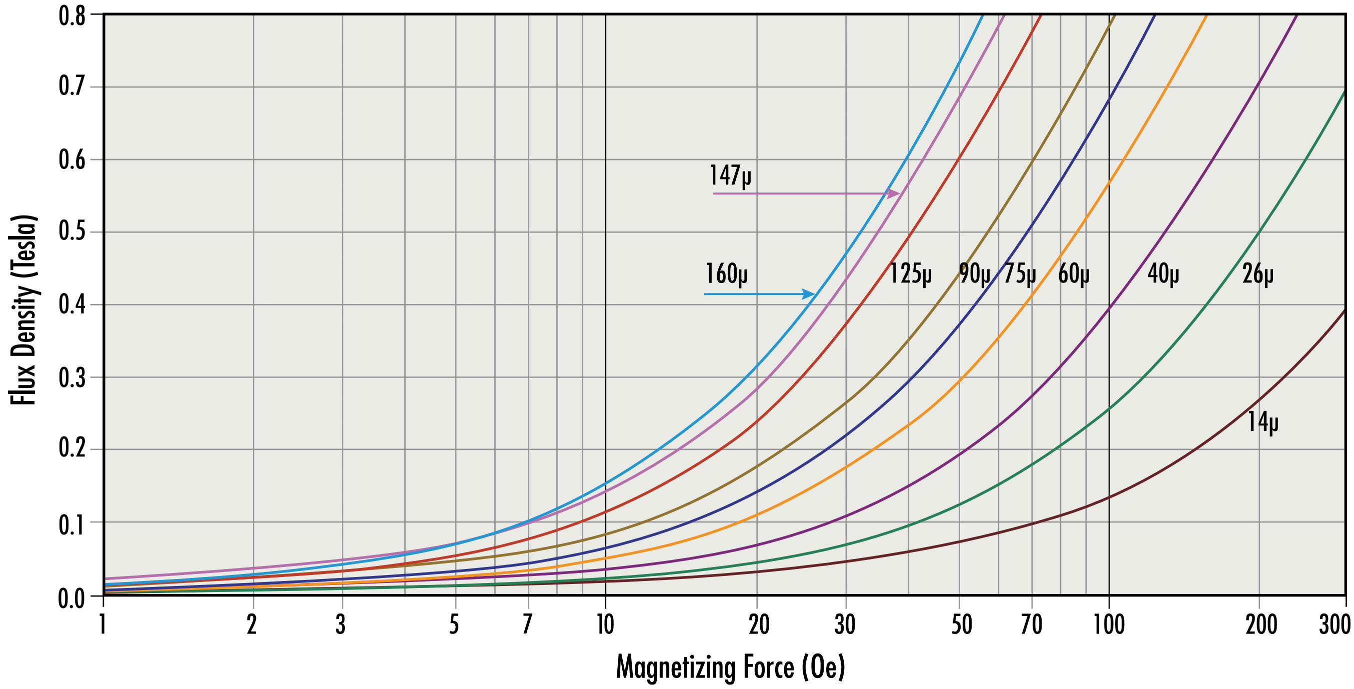


XFlux® Ultra Toroids

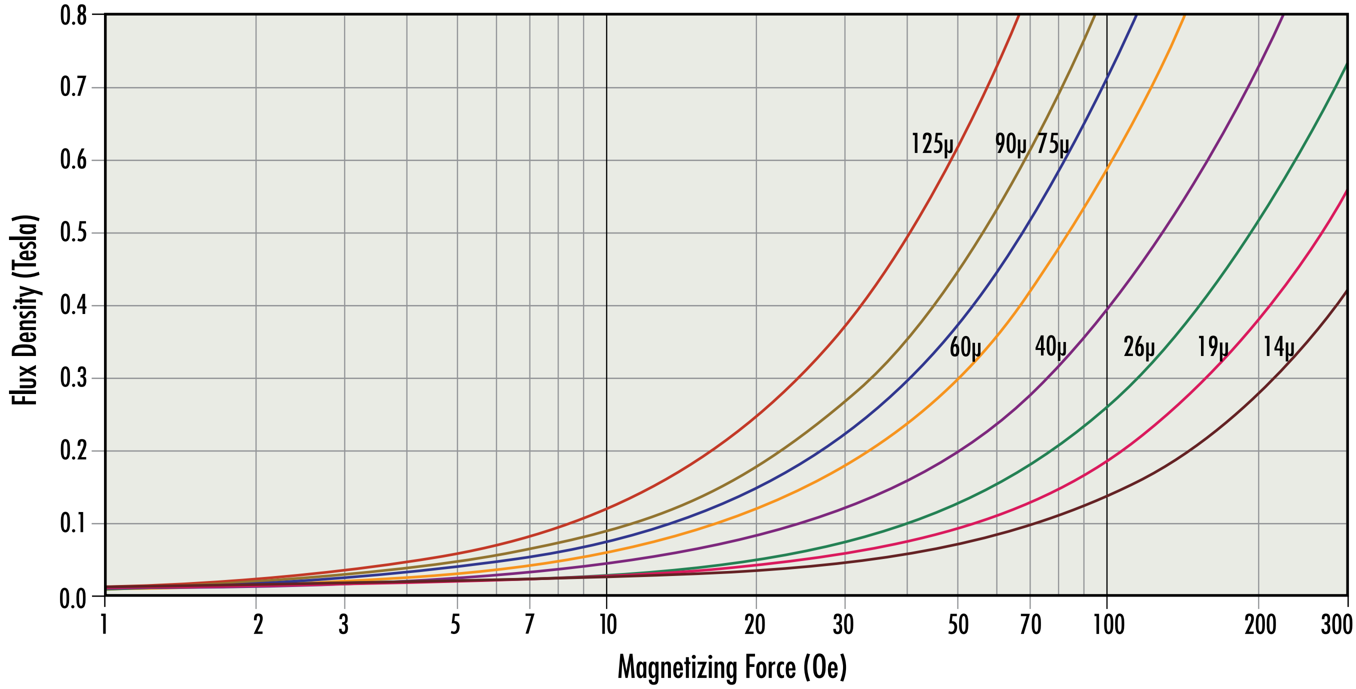


DC Magnetization Curves

High Flux Toroids

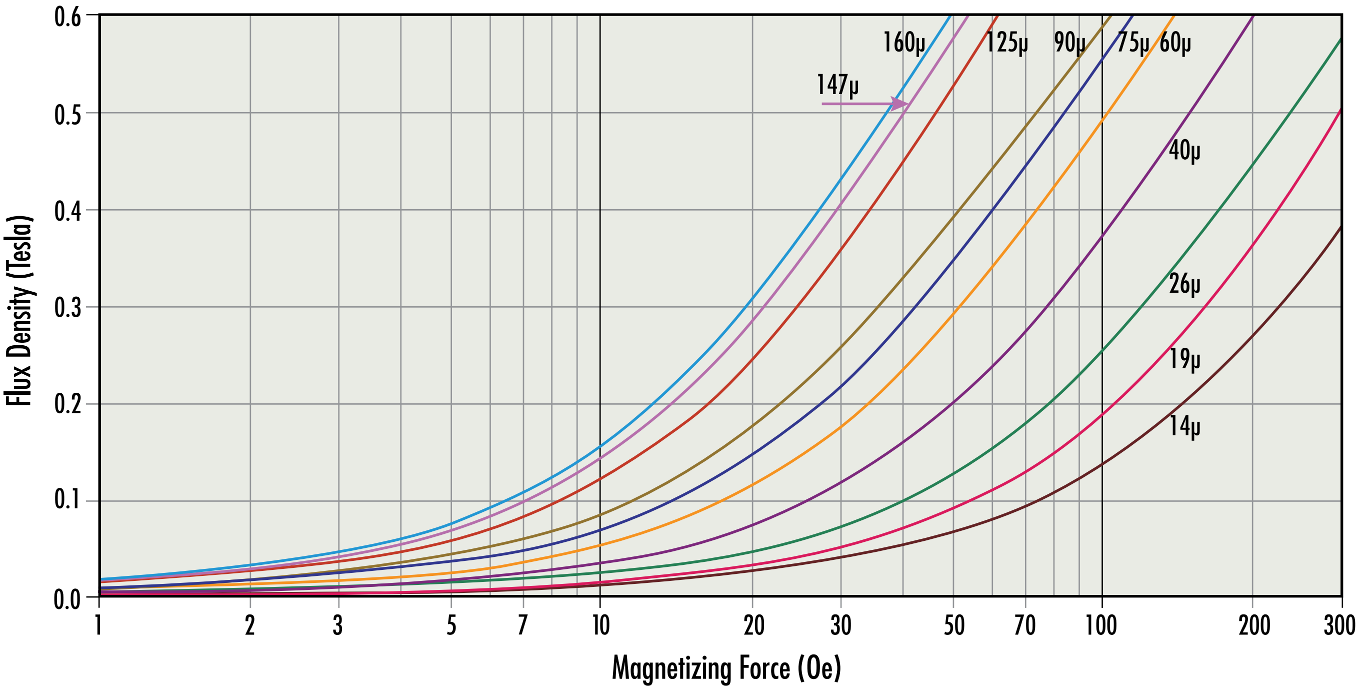


Edge® Toroids

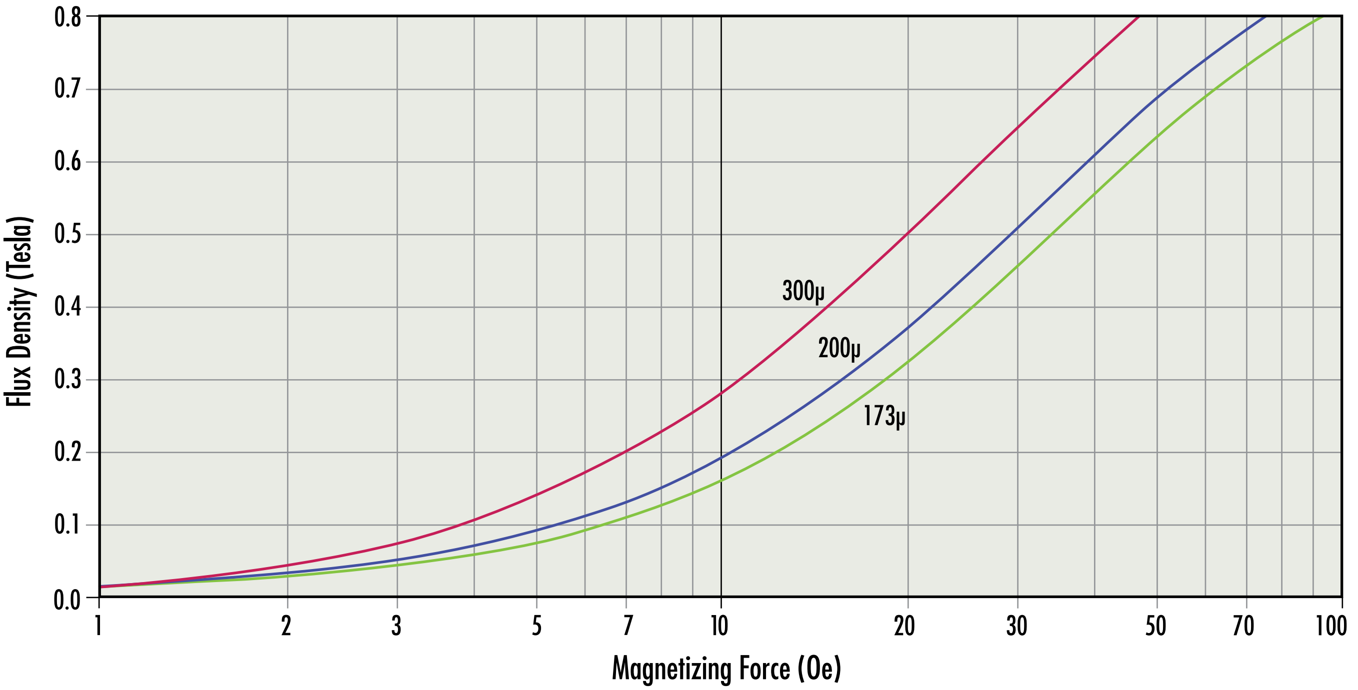


DC Magnetization Curves

MPP Toroids 14µ - 160µ

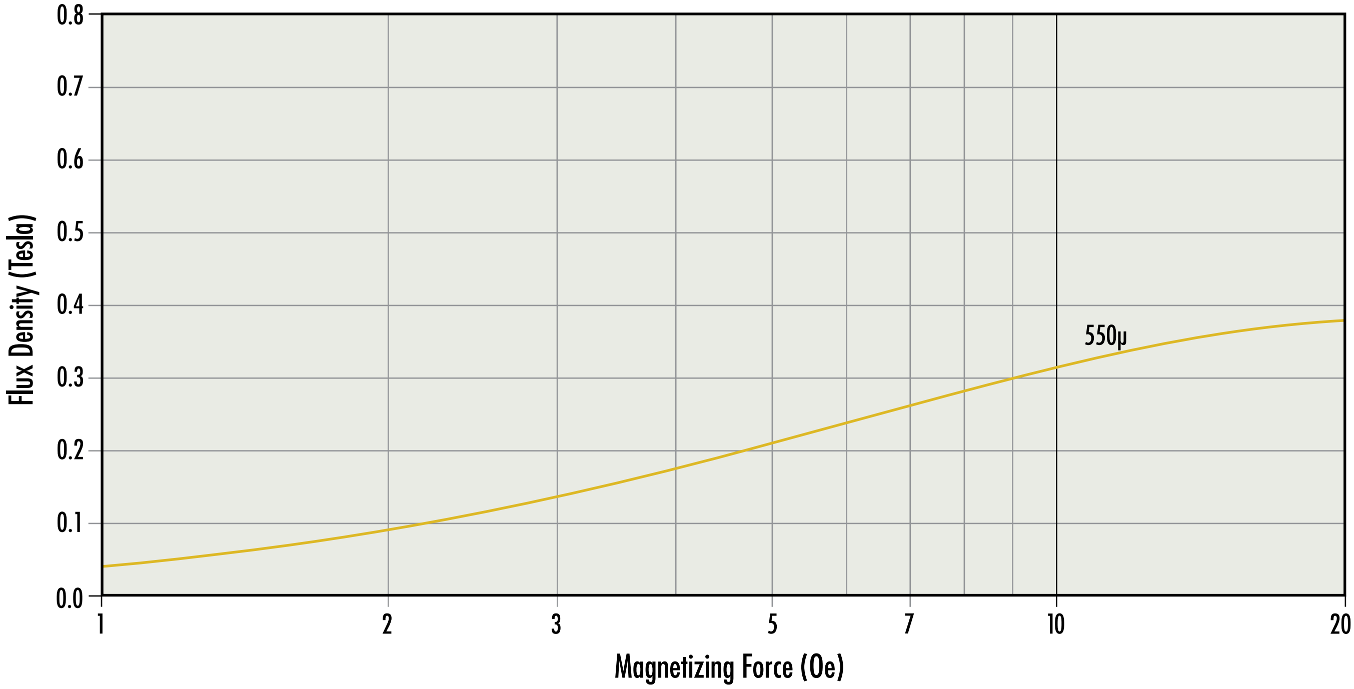


MPP Toroids 173µ - 300µ

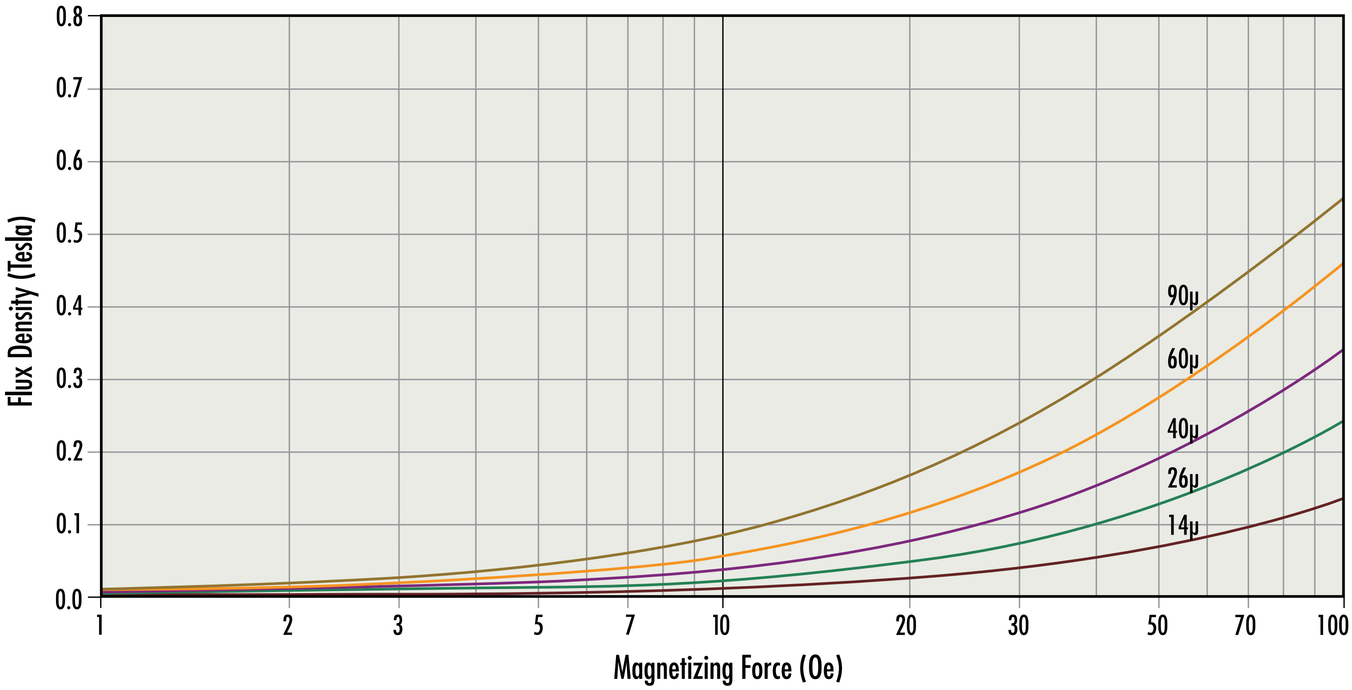


DC Magnetization Curves

MPP Toroids 550µ

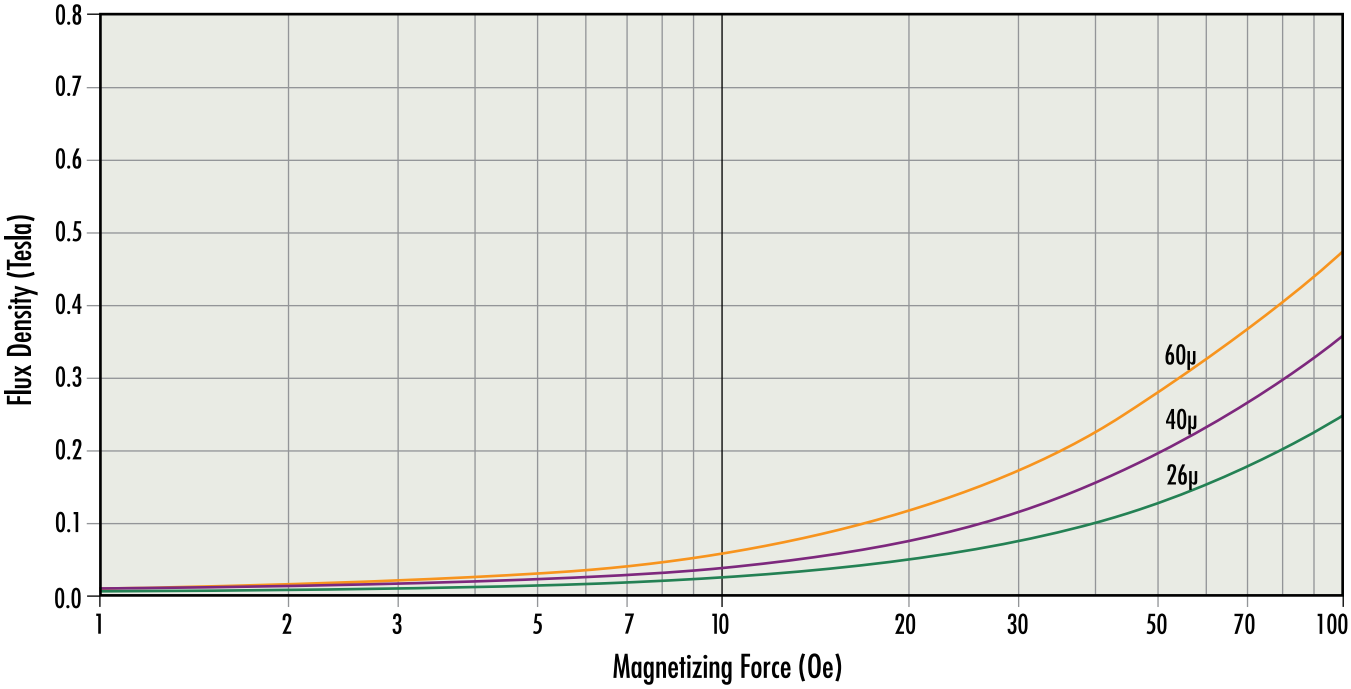


Kool Mµ® E Cores, U Cores & EER Cores

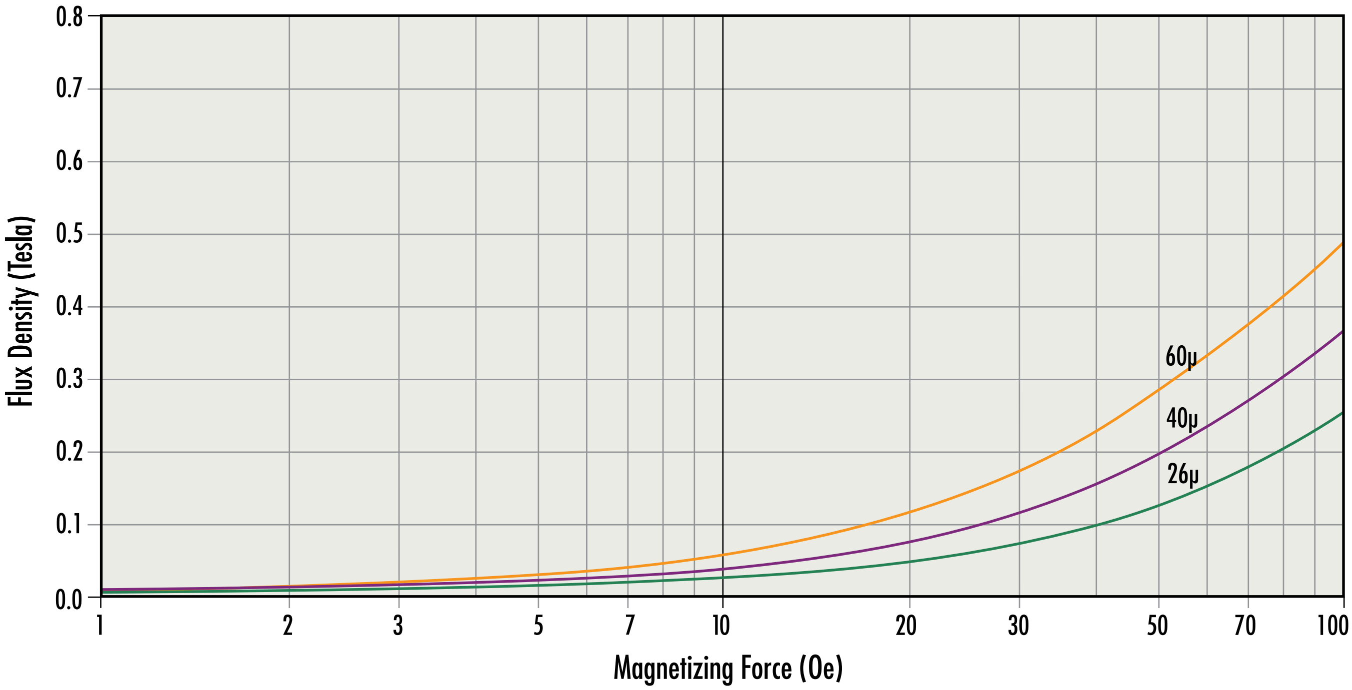


DC Magnetization Curves

Kool Mμ® MAX E Cores, U Cores & EER Cores

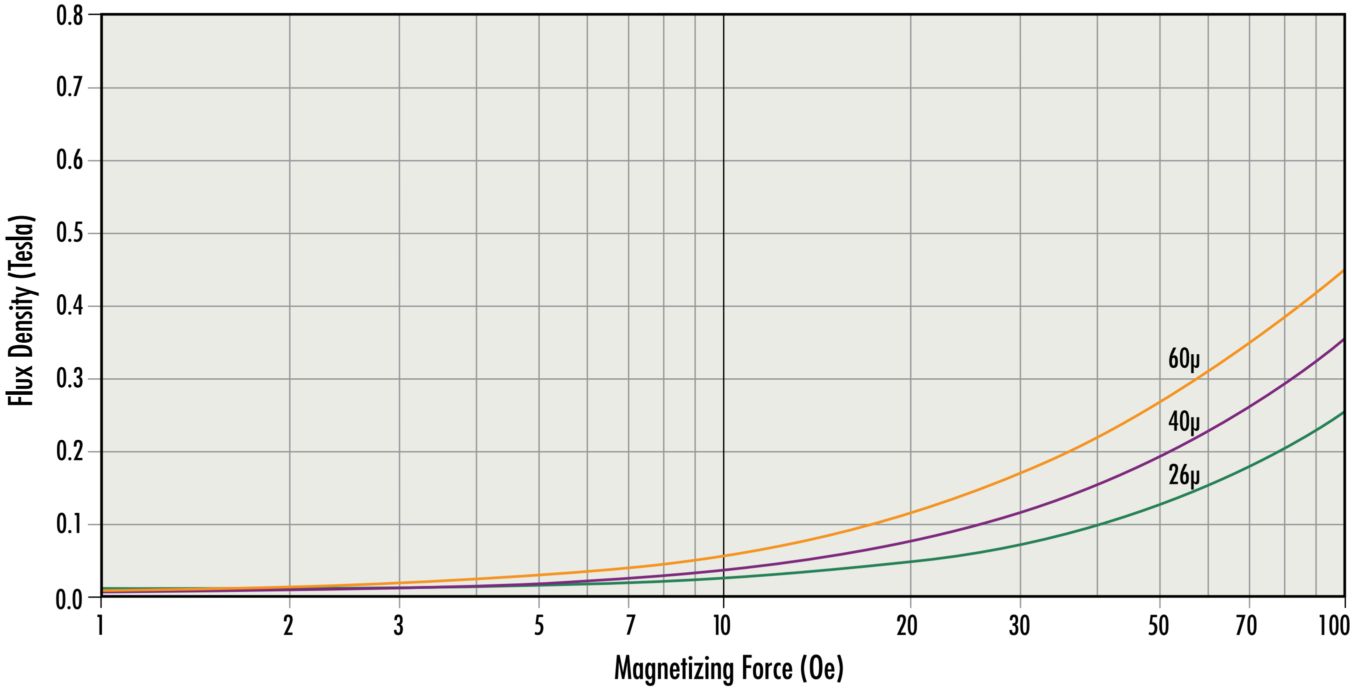


Kool Mμ® MAX High Performance E Cores, U Cores & EER Cores

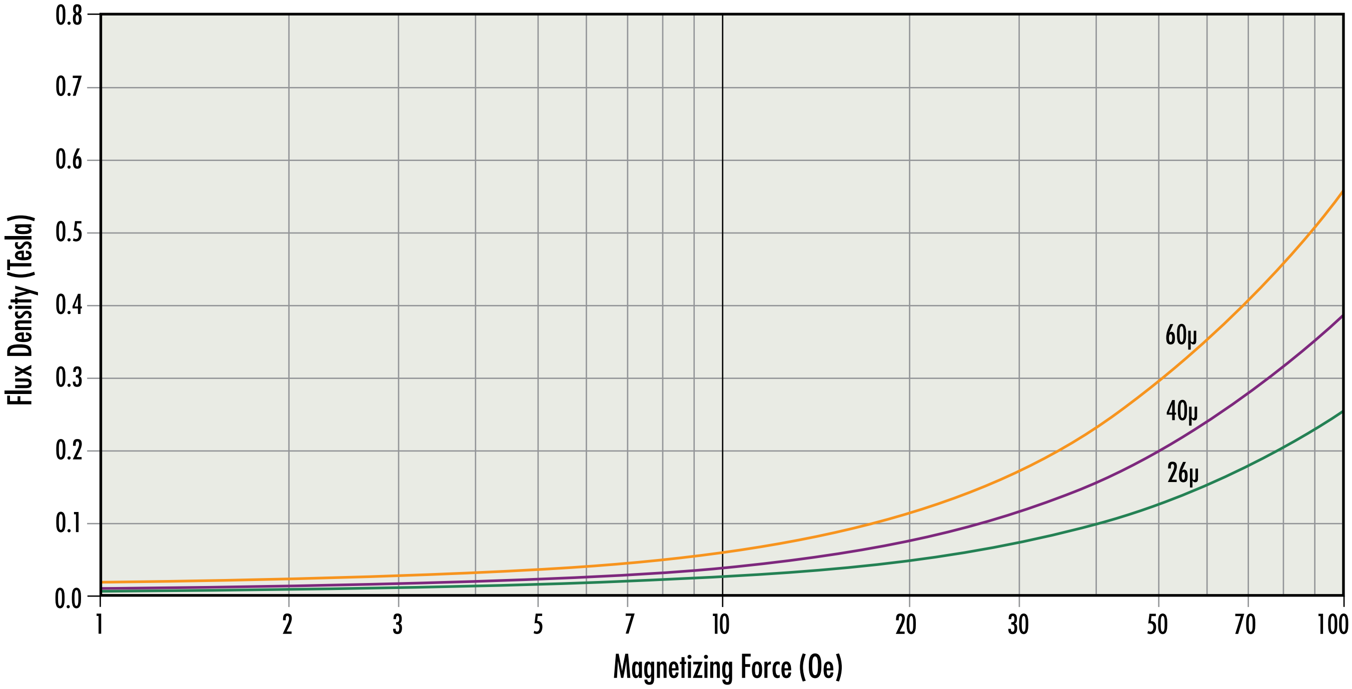


DC Magnetization Curves

Kool Mμ® H*f* E Cores, U Cores & EER Cores

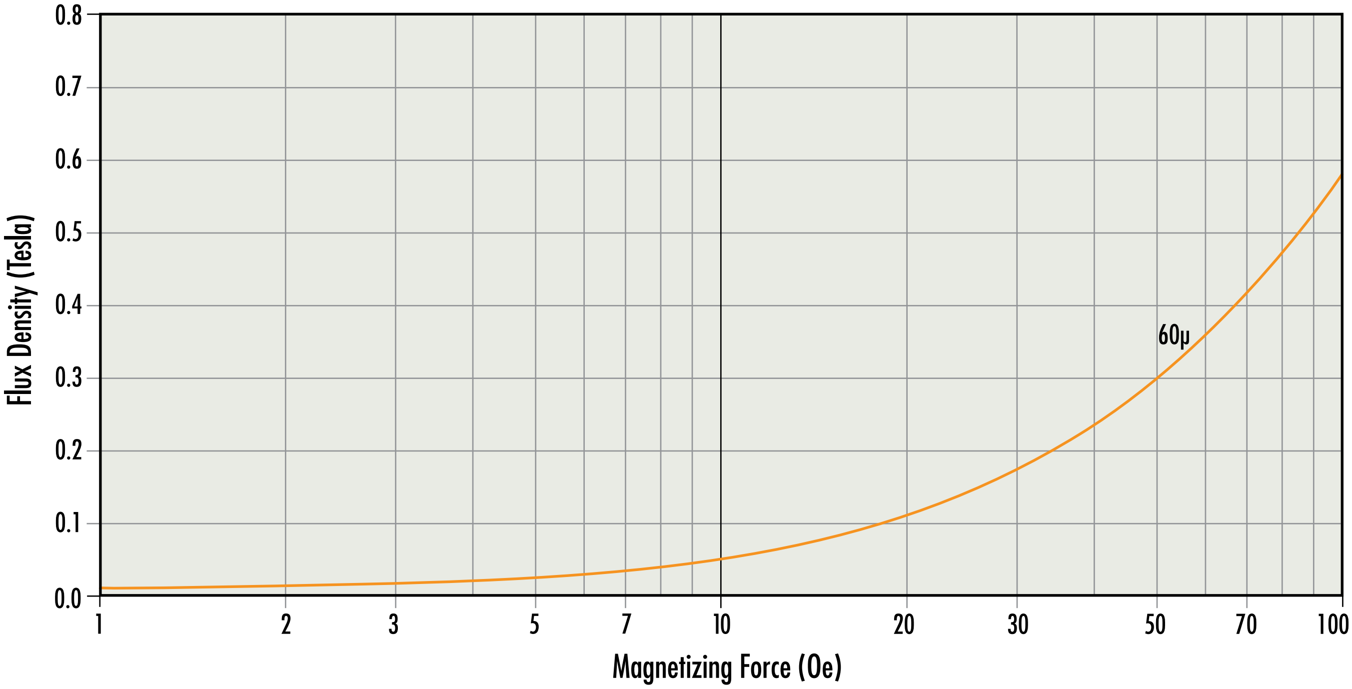


XFlux® E Cores, U Cores & EER Cores

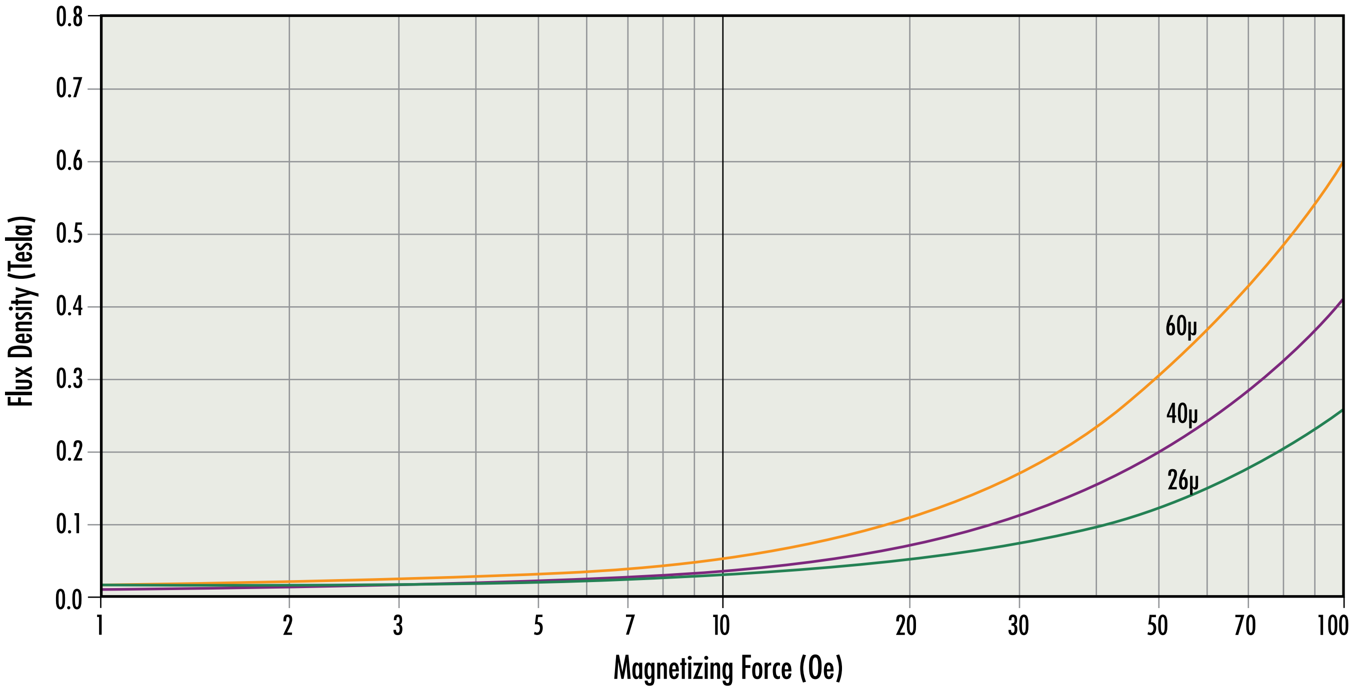


DC Magnetization Curves

High Flux E Cores, U Cores & EER Cores

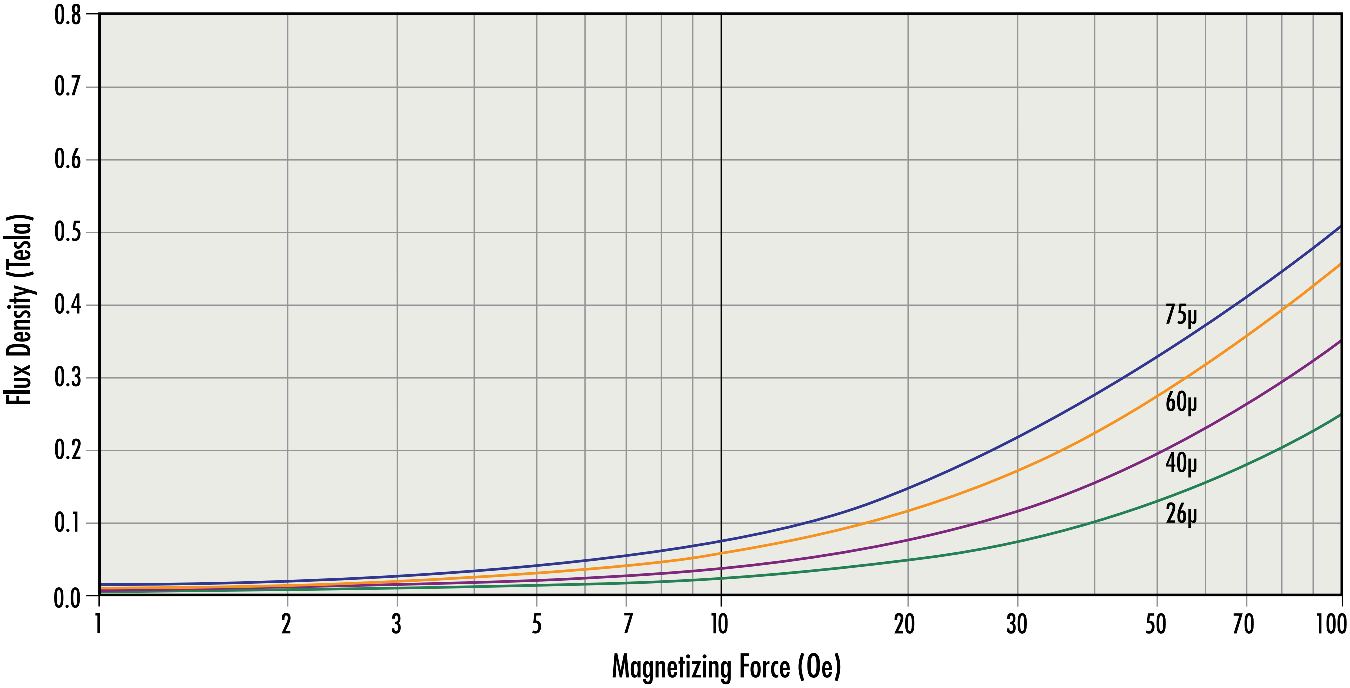


Edge® E Cores, U Cores & EER Cores

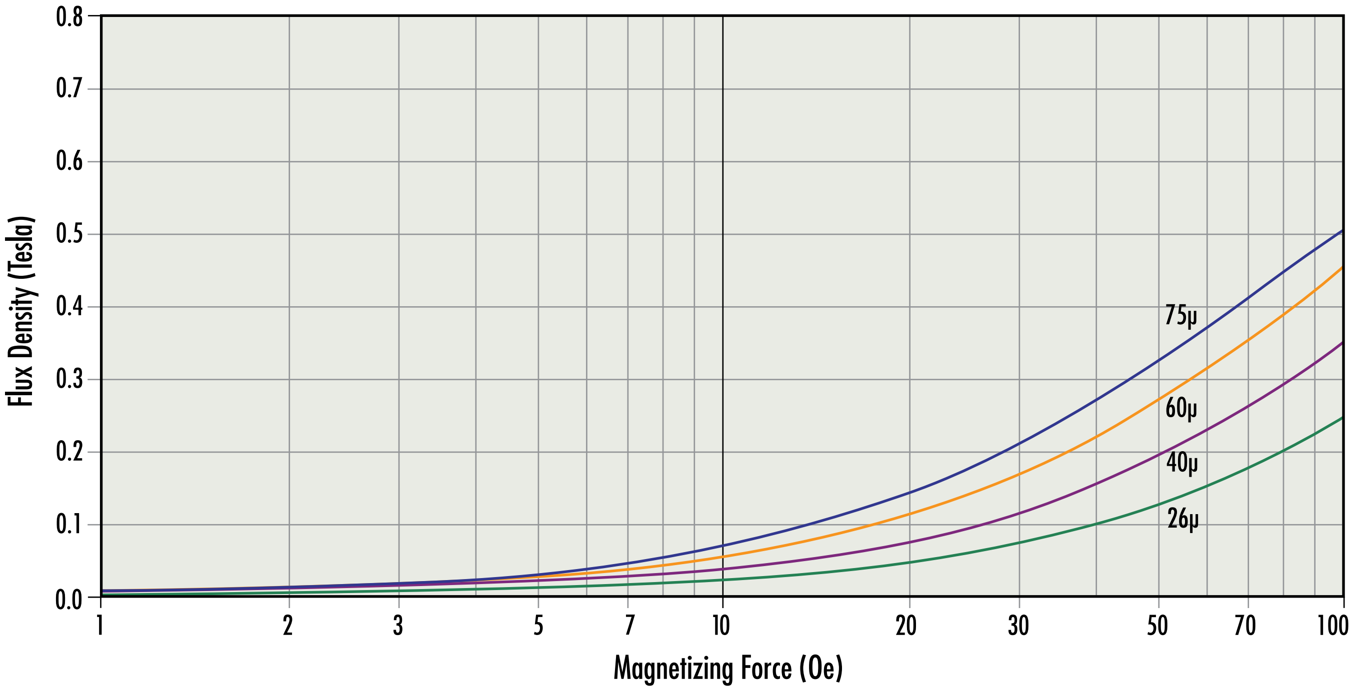


DC Magnetization Curves

Kool Mμ® EQ & LP Cores

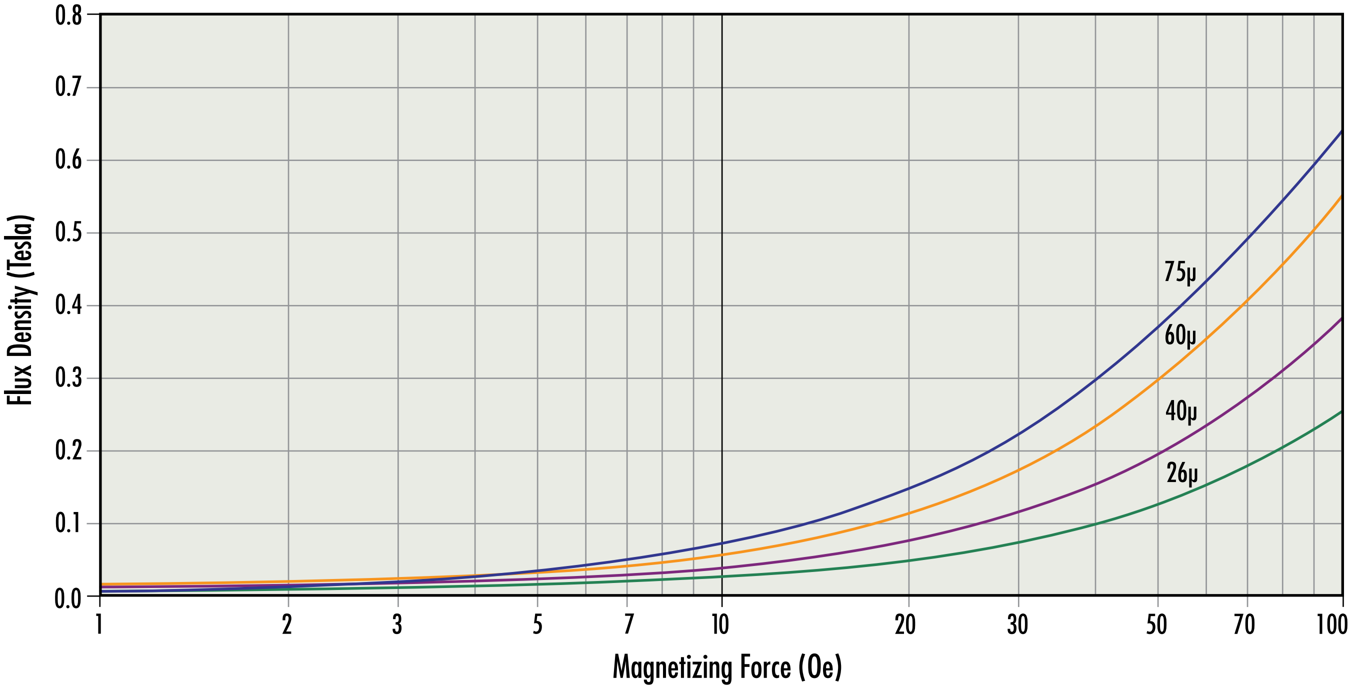


Kool Mμ® MAX EQ & LP Cores

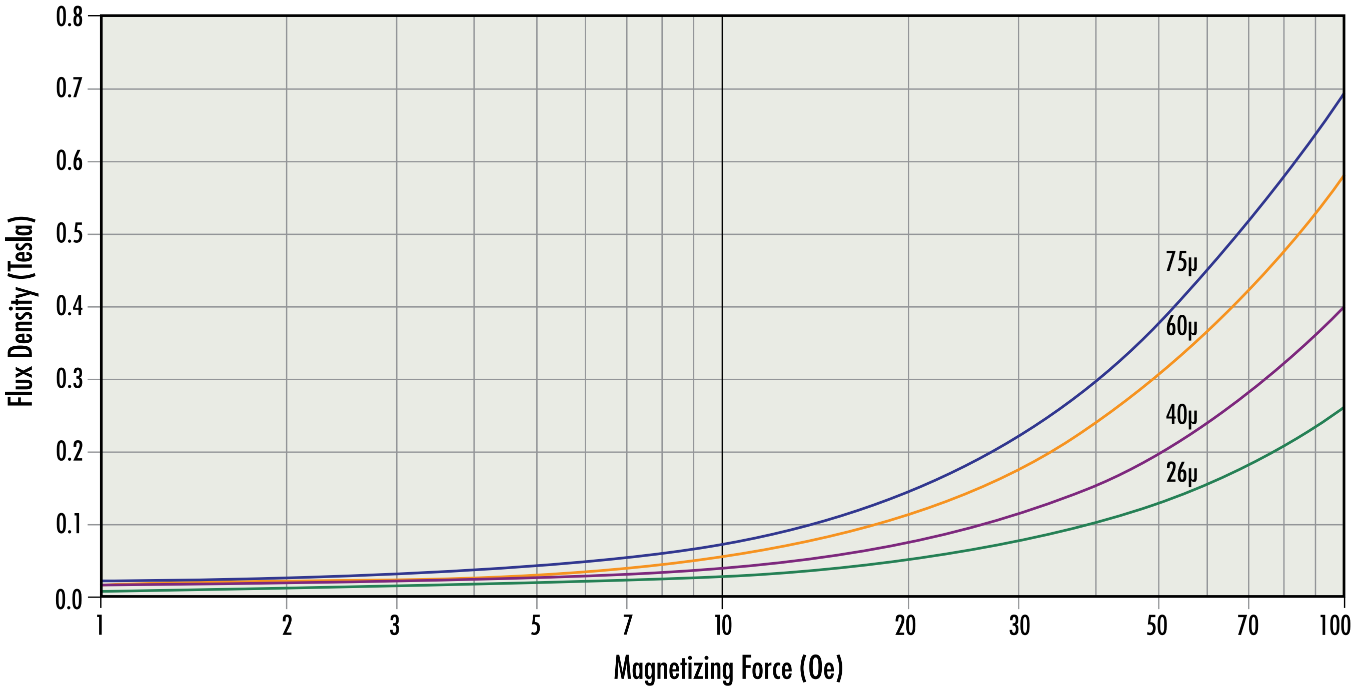


DC Magnetization Curves

XFlux® EQ & LP Cores

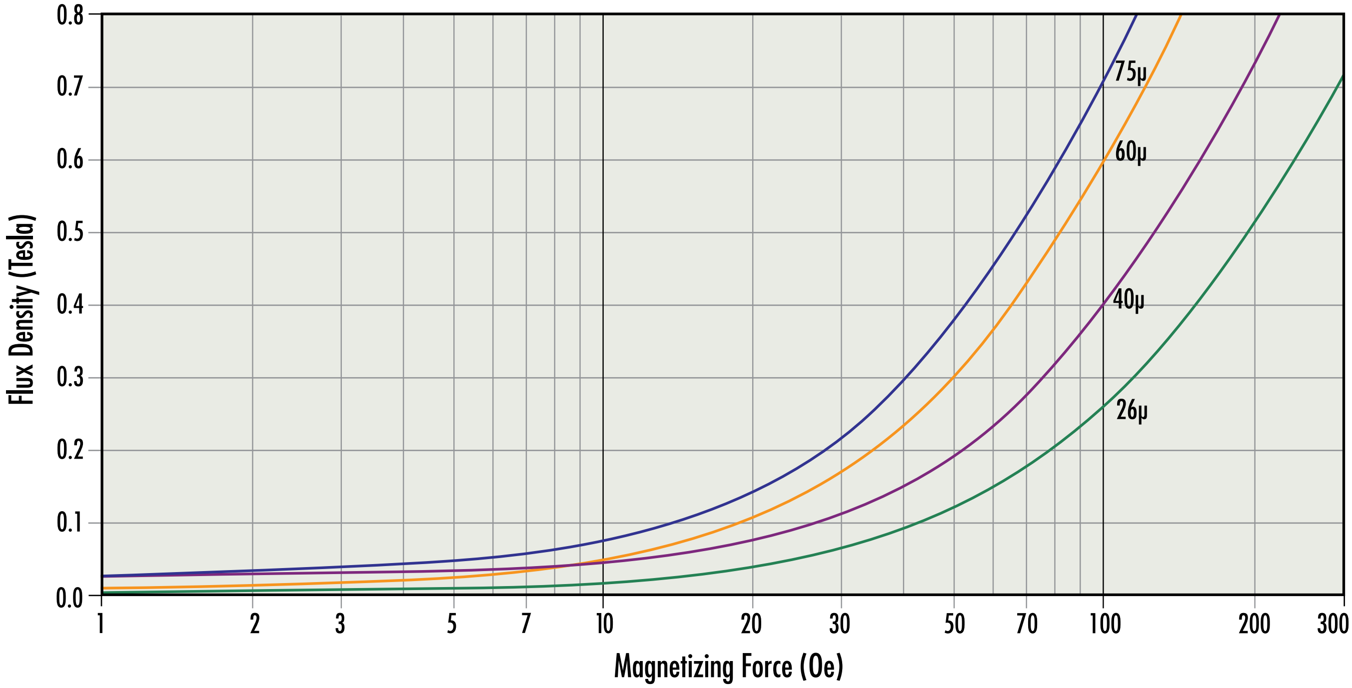


High Flux EQ & LP Cores

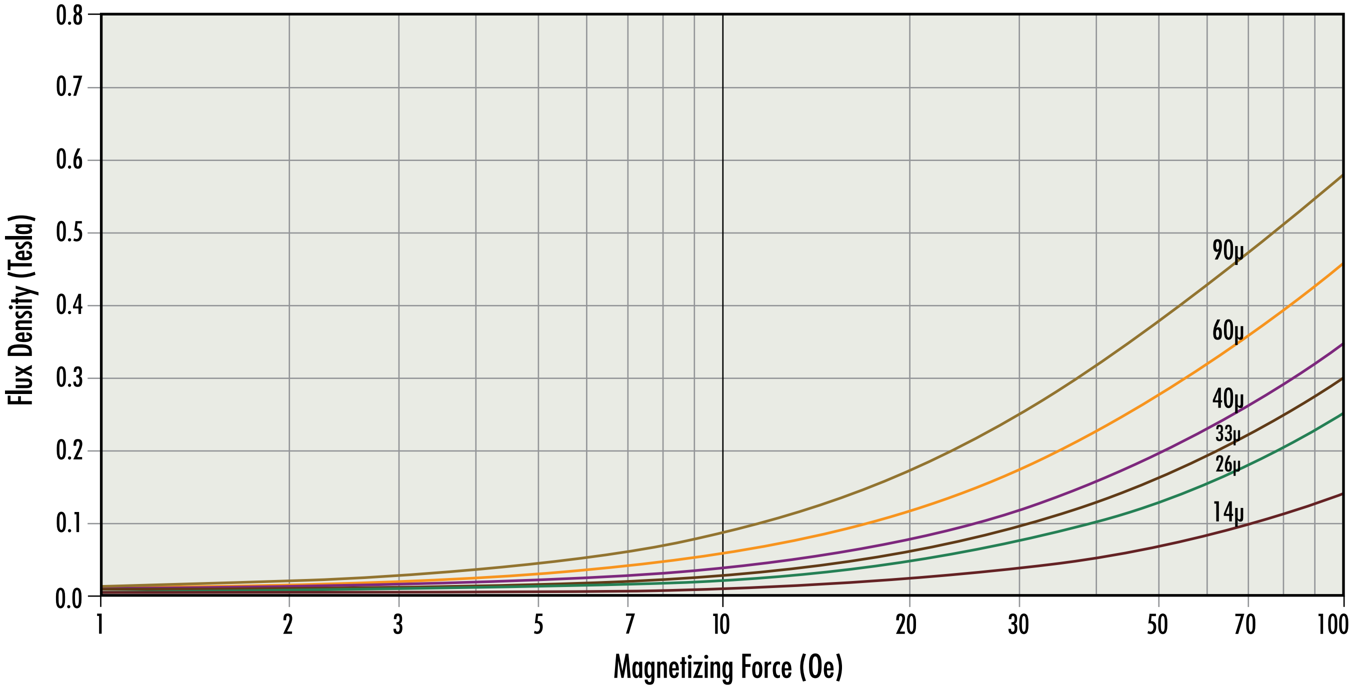


DC Magnetization Curves

Edge® EQ & LP Cores

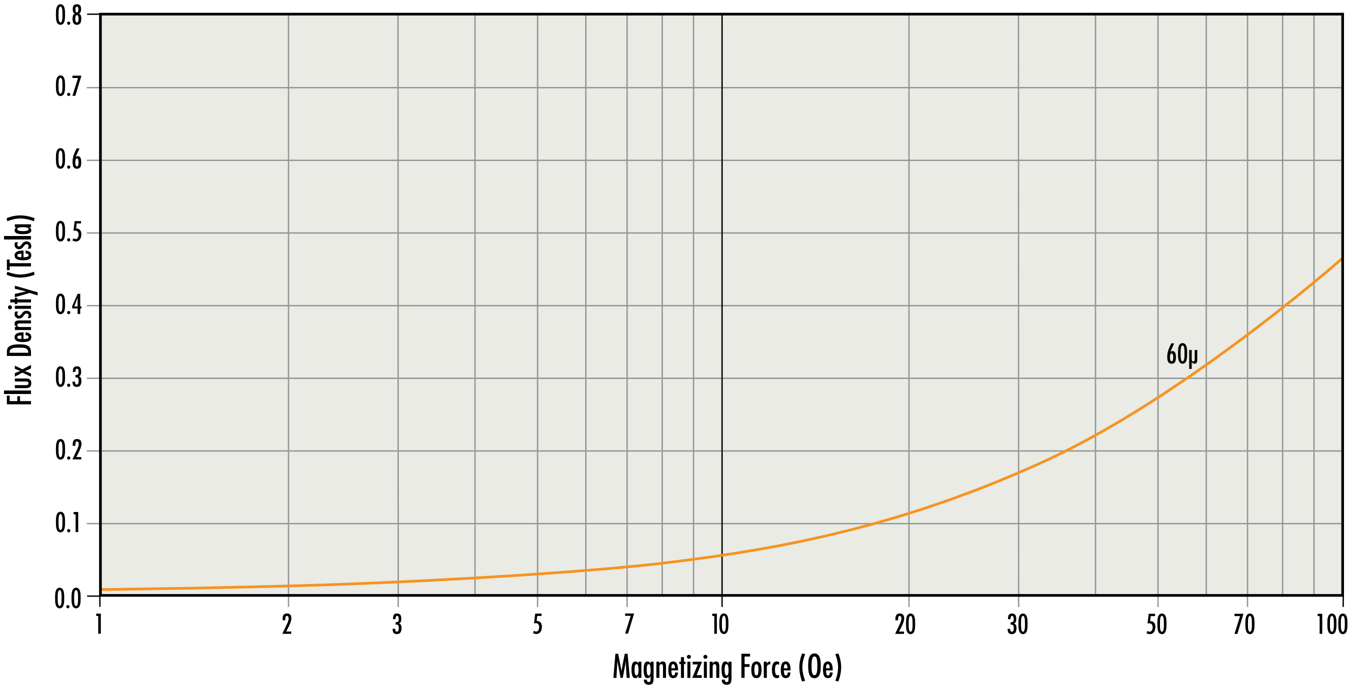


Kool Mµ® Blocks, Round Blocks & Cylinders

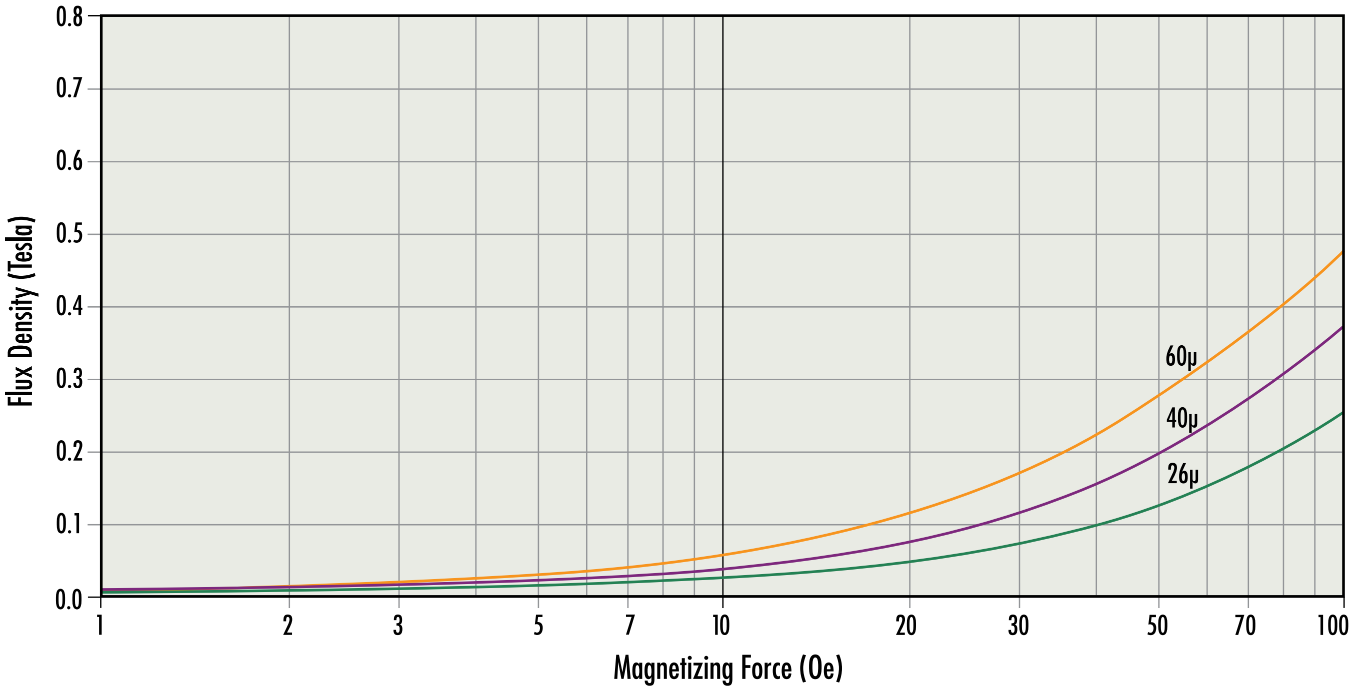


DC Magnetization Curves

Kool Mμ® MAX Blocks, Round Blocks & Cylinders

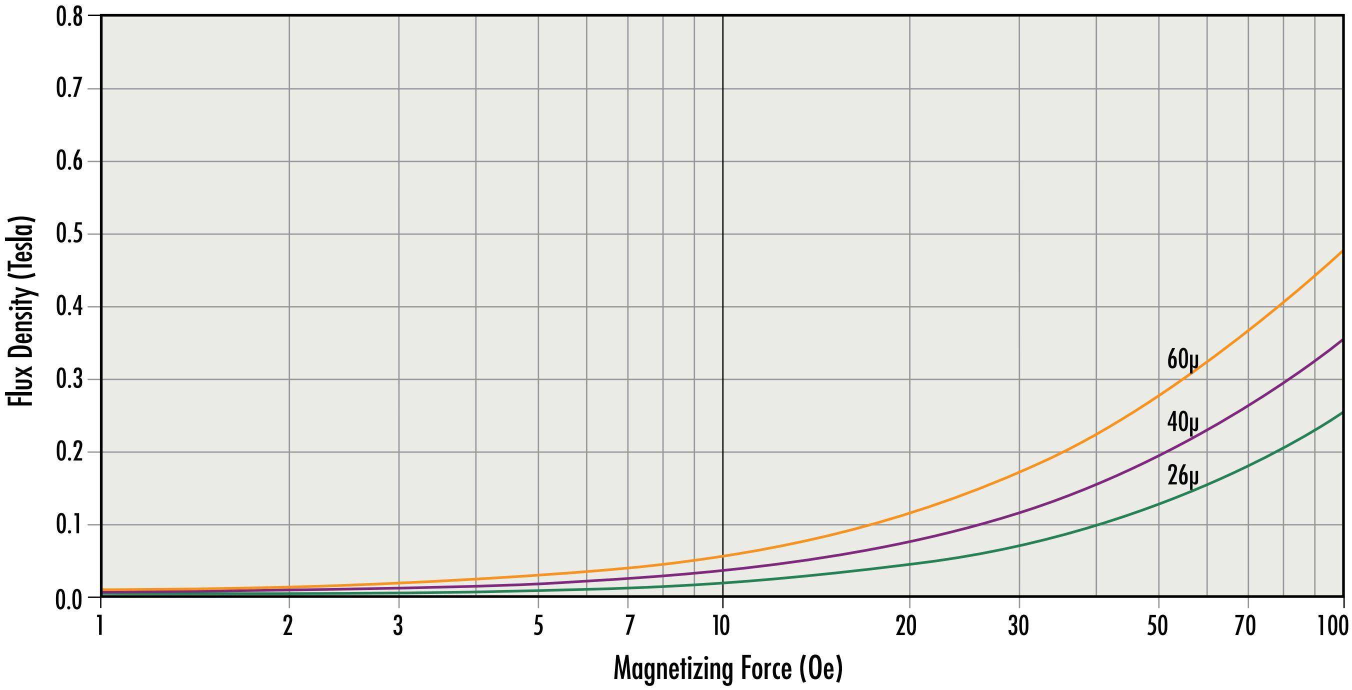


Kool Mμ® MAX High Performance Blocks, Round Blocks & Cylinders

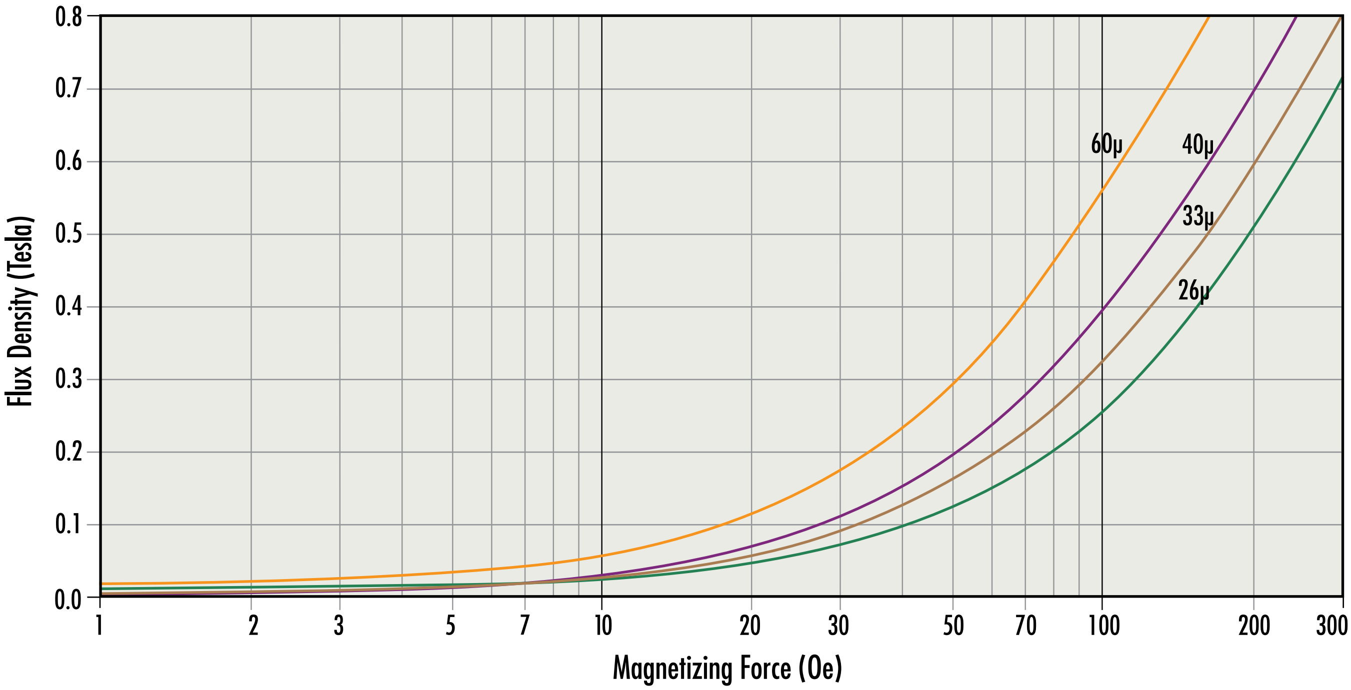


DC Magnetization Curves

Kool Mµ® H*ƒ* Blocks, Round Blocks & Cylinders

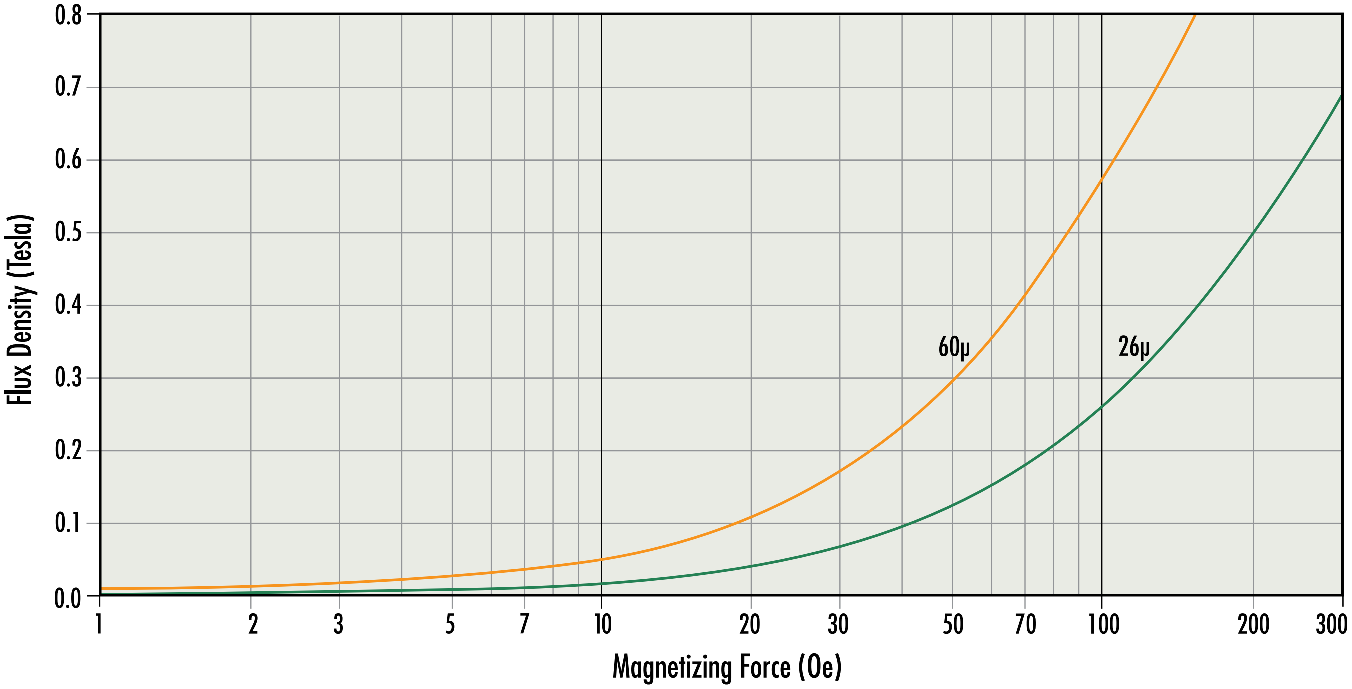


XFlux® Blocks, Round Blocks & Cylinders

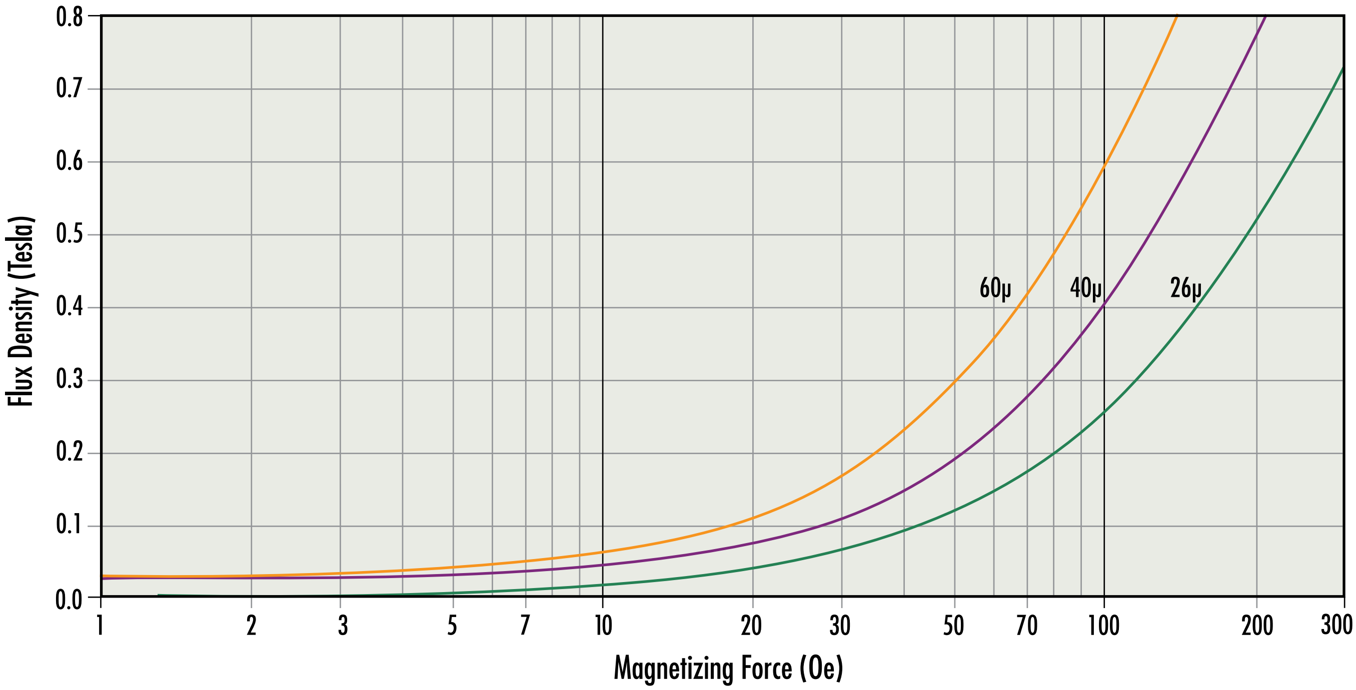


DC Magnetization Curves

High Flux Blocks, Round Blocks & Cylinders

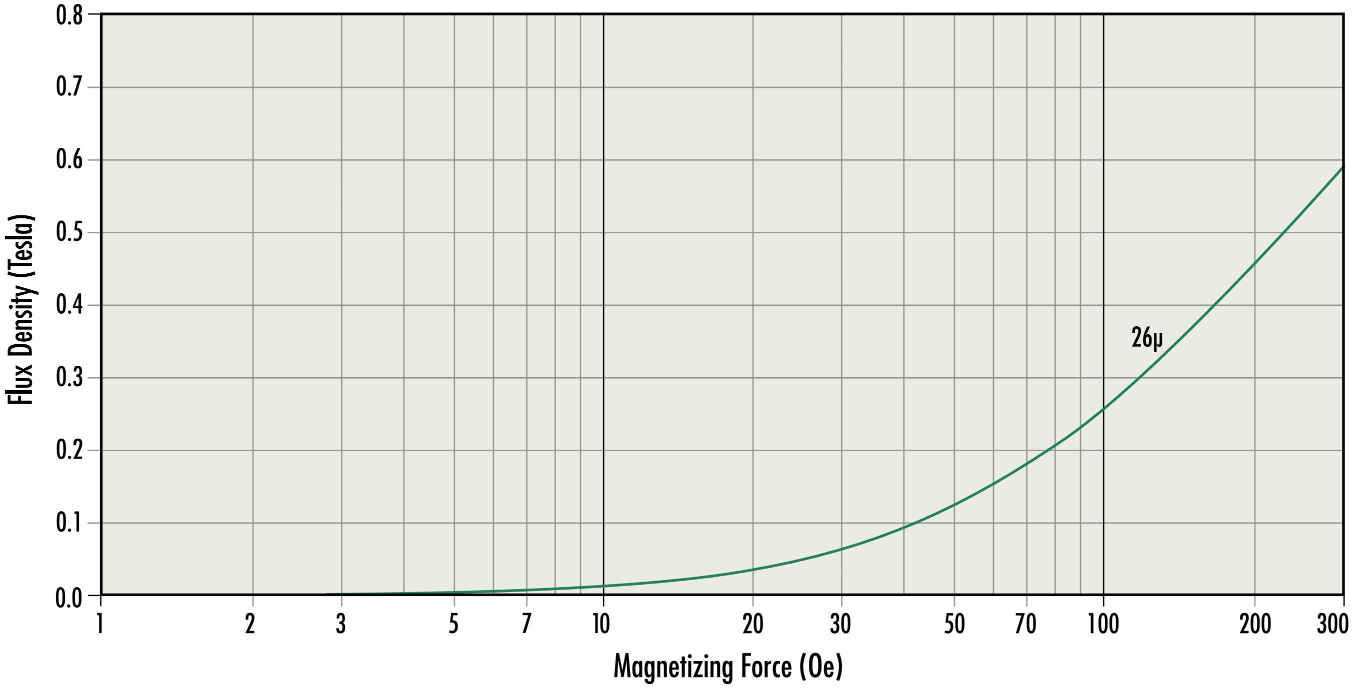


Edge® Blocks, Round Blocks & Cylinders



DC Magnetization Curves

MPP Blocks, Round Blocks & Cylinders



DC Magnetization Curves

Fit Formula

$$B = \left[\frac{a + bH + cH^2}{1 + dH + eH^2} \right]^x$$ where B = Tesla (T), H = Oersteds (Oe)

Perm	a	b	c	d	e	x
Kool Mµ® Toroids						
14µ	3.918E-02	1.856E-02	4.812E-04	1.390E-01	4.478E-04	1.875
26µ	3.763E-02	1.712E-02	5.155E-04	9.190E-02	4.909E-04	1.812
40µ	3.789E-02	1.632E-02	5.355E-04	7.365E-02	5.110E-04	1.665
60µ	3.601E-02	1.721E-02	5.401E-04	5.624E-02	5.156E-04	1.577
75µ	3.111E-02	2.286E-02	5.343E-04	5.568E-02	4.982E-04	1.614
90µ	2.965E-02	2.538E-02	5.142E-04	5.305E-02	4.867E-04	1.578
125µ	2.730E-02	2.946E-02	5.038E-04	5.274E-02	4.639E-04	1.471
Kool Mµ® MAX Toroids						
14µ	3.945E-02	1.922E-02	4.882E-04	1.430E-01	4.217E-04	1.895
19µ	3.915E-02	1.866E-02	5.237E-04	1.225E-01	4.368E-04	1.859
26µ	6.405E-02	1.572E-02	5.541E-04	9.685E-02	4.568E-04	1.813
40µ	4.927E-02	1.443E-02	5.832E-04	7.862E-02	4.579E-04	1.626
60µ	3.589E-02	1.862E-02	6.201E-04	6.341E-02	4.897E-04	1.630
75µ	3.910E-02	1.532E-02	6.442E-04	5.467E-02	5.139E-04	1.437
90µ	2.126E-02	1.390E-02	2.144E-04	2.365E-02	1.843E-04	1.259
Kool Mµ® H*f* Toroids						
26µ	6.666E-02	1.606E-02	4.749E-04	8.148E-02	4.021E-04	1.905
40µ	6.976E-02	1.484E-02	5.132E-04	6.291E-02	4.399E-04	1.773
60µ	4.190E-02	1.210E-02	6.069E-04	5.722E-02	5.174E-04	1.437
Kool Mµ® Ultra Toroids						
26µ	2.167E-02	1.082E-02	1.351E-04	3.187E-02	1.136E-04	1.770
40µ	2.664E-02	1.000E-02	1.505E-04	2.735E-02	1.239E-04	1.504
60µ	3.785E-02	1.424E-02	6.078E-04	6.109E-02	5.442E-04	1.471
XFlux® Toroids						
19µ	3.986E-02	2.164E-02	5.311E-04	1.504E-01	3.344E-04	1.783
26µ	4.042E-02	2.042E-02	5.962E-04	1.164E-01	3.934E-04	1.872
40µ	5.119E-02	1.602E-02	6.640E-04	9.034E-02	4.405E-04	1.679
60µ	3.880E-02	1.648E-02	6.982E-04	6.611E-02	4.705E-04	1.623
75µ	4.142E-02	1.414E-02	7.119E-04	5.584E-02	4.648E-04	1.461
90µ	3.621E-02	1.987E-02	6.675E-04	4.921E-02	4.657E-04	1.542
125µ	3.814E-02	1.729E-02	6.277E-04	3.363E-02	4.649E-04	1.307
XFlux® Ultra Toroids						
26µ	2.180E-02	1.088E-02	1.584E-04	3.677E-02	1.000E-04	1.821
60µ	2.335E-02	1.000E-02	1.774E-04	2.102E-02	1.072E-04	1.374

DC Magnetization Curves

Fit Formula

$$B = \left[\frac{a + bH + cH^2}{1 + dH + eH^2} \right]^x$$ where B = Tesla (T), H = Oersteds (Oe)

Perm	a	b	c	d	e	x
High Flux Toroids						
14µ	3.981E-02	2.174E-02	4.745E-04	1.733E-01	3.407E-04	1.749
26µ	3.969E-02	1.964E-02	5.931E-04	1.163E-01	4.025E-04	1.828
40µ	4.884E-02	1.000E-02	2.491E-04	3.772E-02	1.607E-04	1.581
60µ	3.828E-02	1.800E-02	7.012E-04	7.063E-02	4.502E-04	1.630
75µ	3.820E-02	1.775E-02	7.012E-04	5.929E-02	4.352E-04	1.554
90µ	2.303E-02	1.000E-02	2.272E-04	1.803E-02	1.283E-04	1.156
125µ	3.790E-02	2.126E-02	7.080E-04	4.139E-02	4.223E-04	1.433
147µ	3.237E-02	1.736E-02	3.192E-04	1.586E-02	2.147E-04	1.217
160µ	1.171E-02	2.166E-02	2.712E-08	7.129E-03	2.718E-05	1.206
Edge® Toroids						
14µ	1.099E-01	2.442E-02	3.465E-04	1.154E-01	2.451E-04	2.180
19µ	1.285E-01	1.690E-02	2.450E-04	6.471E-02	1.690E-04	2.199
26µ	5.394E-02	1.162E-02	4.921E-04	1.108E-01	2.725E-04	1.533
40µ	1.000E-03	2.076E-03	2.454E-05	2.589E-03	1.299E-05	0.833
60µ	1.000E-03	4.989E-03	2.155E-05	1.000E-03	1.582E-05	0.949
75µ	1.000E-03	6.274E-03	3.108E-05	1.000E-03	2.374E-05	0.950
90µ	1.000E-03	7.519E-03	4.266E-05	1.000E-03	3.254E-05	0.949
125µ	1.000E-03	1.245E-02	3.626E-05	1.011E-03	3.857E-05	1.021
MPP Toroids						
14µ	3.918E-02	1.824E-02	4.911E-04	1.331E-01	4.502E-04	1.938
19µ	2.974E-02	1.232E-02	4.350E-04	9.999E-02	3.655E-04	1.729
26µ	5.340E-02	1.144E-02	5.419E-04	8.772E-02	5.000E-04	1.699
40µ	2.725E-02	1.068E-02	5.126E-04	6.462E-02	4.470E-04	1.513
60µ	3.933E-02	1.371E-02	5.727E-04	5.100E-02	5.216E-04	1.528
75µ	2.534E-02	1.166E-02	5.528E-04	4.557E-02	4.991E-04	1.295
90µ	1.892E-02	1.363E-02	4.776E-04	3.614E-02	4.746E-04	1.261
125µ	3.423E-02	2.092E-02	5.477E-04	3.371E-02	4.941E-04	1.364
147µ	2.888E-02	2.651E-02	5.290E-04	3.462E-02	5.025E-04	1.396
160µ	2.843E-02	2.738E-02	5.121E-04	3.243E-02	5.052E-04	1.365
173µ	2.933E-02	2.707E-02	4.917E-04	2.795E-02	5.130E-04	1.325
200µ	2.257E-02	3.252E-02	5.097E-04	3.170E-02	5.225E-04	1.316
300µ	2.880E-03	5.179E-02	5.787E-04	4.904E-02	5.100E-04	1.254
550µ	1.681E-03	7.555E-02	1.118E-10	9.743E-02	1.754E-03	1.100
Kool Mµ® E Cores, U Cores & EER Cores						
14µ	4.618E-02	1.617E-02	4.197E-04	1.012E-01	4.718E-04	2.008
26µ	2.526E-02	8.341E-03	4.021E-04	7.653E-02	4.101E-04	1.475
40µ	4.676E-02	1.636E-02	5.664E-04	7.309E-02	5.493E-04	1.706
60µ	4.286E-02	1.787E-02	6.044E-04	6.335E-02	5.529E-04	1.586
90µ	3.157E-02	2.186E-02	6.059E-04	5.720E-02	5.696E-04	1.476

DC Magnetization Curves

Fit Formula

$$B = \left[\frac{a + bH + cH^2}{1 + dH + eH^2} \right]^x$$ where B = Tesla (T), H = Oersteds (Oe)

Perm	a	b	c	d	e	x
Kool Mµ® MAX E Cores, U Cores & EER Cores						
26µ	2.744E-02	9.252E-03	4.056E-04	8.043E-02	3.568E-04	1.504
40µ	5.065E-02	1.473E-02	5.797E-04	7.274E-02	5.247E-04	1.673
60µ	4.299E-02	1.781E-02	6.154E-04	6.433E-02	5.320E-04	1.587
Kool Mµ® MAX High Performance E Cores, U Cores & EER Cores						
26µ	7.845E-02	1.638E-02	4.508E-04	7.246E-02	3.994E-04	2.017
40µ	5.286E-02	1.423E-02	5.887E-04	7.398E-02	5.058E-04	1.662
60µ	2.921E-02	1.271E-02	5.805E-04	6.092E-02	4.813E-04	1.393
Kool Mµ® H*f* E Cores, U Cores & EER Cores						
26µ	6.399E-02	1.000E-02	5.288E-04	9.030E-02	4.769E-04	1.626
40µ	2.918E-02	1.439E-02	5.396E-04	7.954E-02	4.542E-04	1.546
60µ	2.629E-02	1.636E-02	5.534E-04	6.624E-02	4.840E-04	1.460
XFlux® E Cores, U Cores & EER Cores						
26µ	7.819E-02	2.378E-02	5.099E-04	9.677E-02	3.679E-04	2.121
40µ	1.318E-01	2.607E-02	7.203E-04	8.601E-02	5.547E-04	2.245
60µ	8.348E-02	1.437E-02	4.492E-04	4.456E-02	3.064E-04	1.670
High Flux E Cores, U Cores & EER Cores						
60µ	2.877E-02	1.001E-02	2.726E-04	3.018E-02	1.518E-04	1.387
Edge® E Cores, U Cores & EER Cores						
26µ	8.565E-02	7.192E-03	1.677E-04	3.379E-02	1.131E-04	1.701
40µ	4.875E-02	1.000E-02	1.835E-04	2.952E-02	1.062E-04	1.619
60µ	5.156E-02	1.004E-02	2.823E-04	2.987E-02	1.527E-04	1.458
Kool Mµ® EQ & LP Cores						
26µ	3.910E-02	1.469E-02	5.558E-04	9.429E-02	5.063E-04	1.759
40µ	4.570E-02	1.315E-02	5.518E-04	6.907E-02	5.200E-04	1.614
60µ	3.511E-02	1.651E-02	6.165E-04	6.543E-02	5.599E-04	1.511
75µ	1.082E-03	1.074E-01	1.171E-02	5.800E-01	1.180E-02	2.069
Kool Mµ® MAX EQ & LP Cores						
26µ	4.208E-02	1.056E-02	2.018E-04	4.144E-02	1.629E-04	1.755
40µ	4.356E-02	1.000E-02	2.157E-04	3.214E-02	1.768E-04	1.566
60µ	4.168E-02	1.225E-02	2.289E-04	2.893E-02	1.822E-04	1.460
75µ	3.040E-02	1.403E-02	1.076E-04	1.777E-02	1.196E-04	1.393

DC Magnetization Curves

Fit Formula

$$B = \left[\frac{a + bH + cH^2}{1 + dH + eH^2} \right]^x$$ where B = Tesla (T), H = Oersteds (Oe)

Perm	a	b	c	d	e	x
XFlux® EQ & LP Cores						
26µ	1.156E-01	1.994E-02	4.793E-04	7.722E-02	4.017E-04	2.219
40µ	1.217E-01	1.672E-02	3.032E-04	4.289E-02	2.315E-04	2.103
60µ	5.197E-02	1.119E-02	6.435E-04	6.316E-02	4.209E-04	1.428
75µ	2.413E-02	1.000E-02	1.469E-04	1.526E-02	1.064E-04	1.234
High Flux EQ & LP Cores						
26µ	3.850E-02	1.704E-02	5.445E-04	1.175E-01	3.423E-04	1.665
40µ	1.005E-01	1.354E-02	5.978E-04	7.141E-02	4.303E-04	1.787
60µ	5.326E-02	9.957E-03	7.338E-04	6.889E-02	4.473E-04	1.418
75µ	3.836E-02	1.000E-02	1.444E-04	1.296E-02	1.015E-04	1.308
Edge® EQ & LP Cores						
26µ	2.178E-02	1.014E-02	3.978E-04	7.546E-02	2.646E-04	1.680
40µ	9.277E-02	6.804E-03	1.519E-04	2.061E-02	1.000E-04	1.596
60µ	2.183E-02	1.000E-02	4.668E-04	4.768E-02	2.480E-04	1.389
75µ	6.936E-02	1.000E-02	1.524E-04	1.285E-02	1.000E-04	1.425
Kool Mµ® Blocks, Round Blocks & Cylinders						
14µ	2.366E-02	1.000E-02	1.154E-04	3.725E-02	1.141E-04	1.991
26µ	2.348E-02	1.000E-02	1.235E-04	2.982E-02	1.103E-04	1.712
33µ	2.469E-02	1.000E-02	1.242E-04	2.695E-02	1.152E-04	1.588
40µ	2.518E-02	1.000E-02	1.247E-04	2.457E-02	1.156E-04	1.493
60µ	2.524E-02	1.131E-02	1.647E-04	2.412E-02	1.589E-04	1.357
90µ	1.884E-02	1.482E-02	1.380E-04	2.083E-02	1.354E-04	1.275
Kool Mµ® MAX Blocks, Round Blocks & Cylinders						
60µ	1.837E-02	1.210E-02	1.397E-04	2.529E-02	1.091E-04	1.358
Kool Mµ® MAX High Performance Blocks, Round Blocks & Cylinders						
26µ	5.720E-02	7.190E-03	1.583E-04	3.243E-02	1.270E-04	1.610
40µ	5.132E-02	9.086E-03	1.674E-04	2.709E-02	1.301E-04	1.535
60µ	1.986E-02	1.132E-02	3.776E-04	4.674E-02	3.001E-04	1.309
Kool Mµ® Hƒ Blocks, Round Blocks & Cylinders						
26µ	1.917E-02	1.223E-02	3.348E-04	6.594E-02	2.682E-04	1.690
40µ	2.008E-02	1.118E-02	3.550E-04	5.742E-02	2.820E-04	1.446
60µ	1.986E-02	1.132E-02	3.776E-04	4.674E-02	3.001E-04	1.309

DC Magnetization Curves

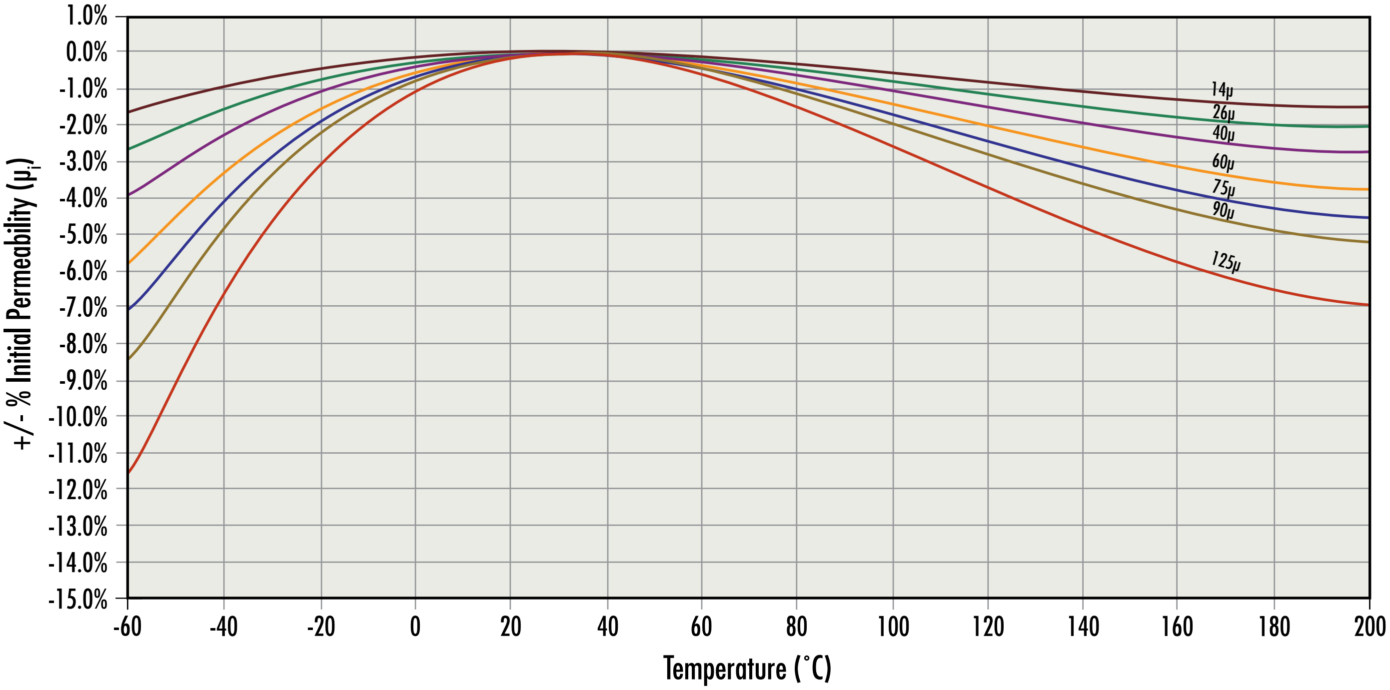
Fit Formula

$$B = \left[\frac{a + bH + cH^2}{1 + dH + eH^2} \right]^x$$ where B = Tesla (T), H = Oersteds (Oe)

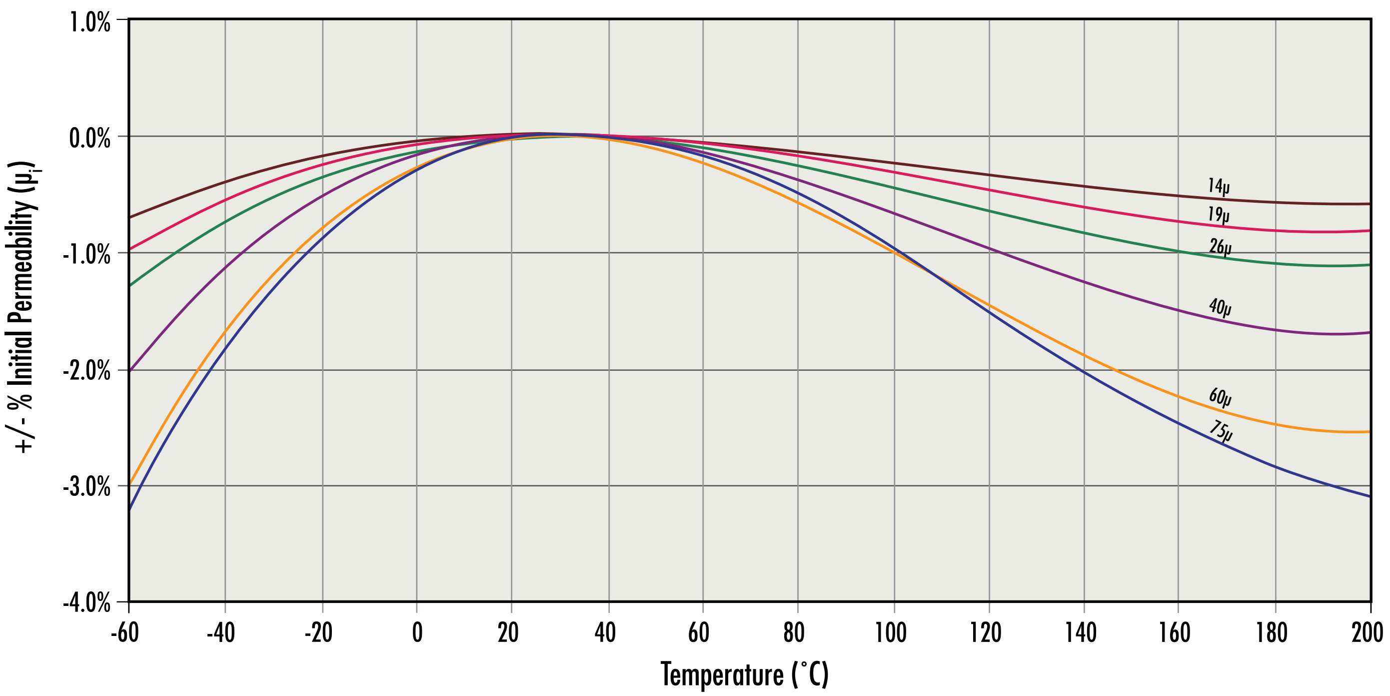
Perm	a	b	c	d	e	x
XFlux® Blocks, Round Blocks & Cylinders						
26µ	5.899E-02	8.234E-03	1.706E-04	3.856E-02	1.042E-04	1.652
33µ	1.889E-02	1.026E-02	1.564E-04	3.252E-02	1.001E-04	1.609
40µ	2.086E-02	1.000E-02	1.654E-04	2.832E-02	1.061E-04	1.540
60µ	5.739E-02	9.995E-03	2.054E-04	2.272E-02	1.368E-04	1.452
High Flux Blocks, Round Blocks & Cylinders						
26µ	2.809E-02	1.000E-02	2.061E-04	4.237E-02	1.444E-04	1.738
60µ	2.876E-02	1.000E-02	2.448E-04	2.775E-02	1.421E-04	1.379
Edge® Blocks, Round Blocks & Cylinders						
26µ	2.721E-02	1.085E-02	2.085E-04	4.544E-02	1.296E-04	1.775
40µ	8.360E-02	5.890E-03	1.776E-04	2.468E-02	1.000E-04	1.501
60µ	8.064E-02	7.744E-03	2.735E-04	2.674E-02	1.483E-04	1.429
MPP Blocks, Round Blocks & Cylinders						
26µ	2.042E-02	1.052E-02	1.086E-04	2.349E-02	1.000E-04	1.924

Permeability versus Temperature Curves

Kool Mμ®

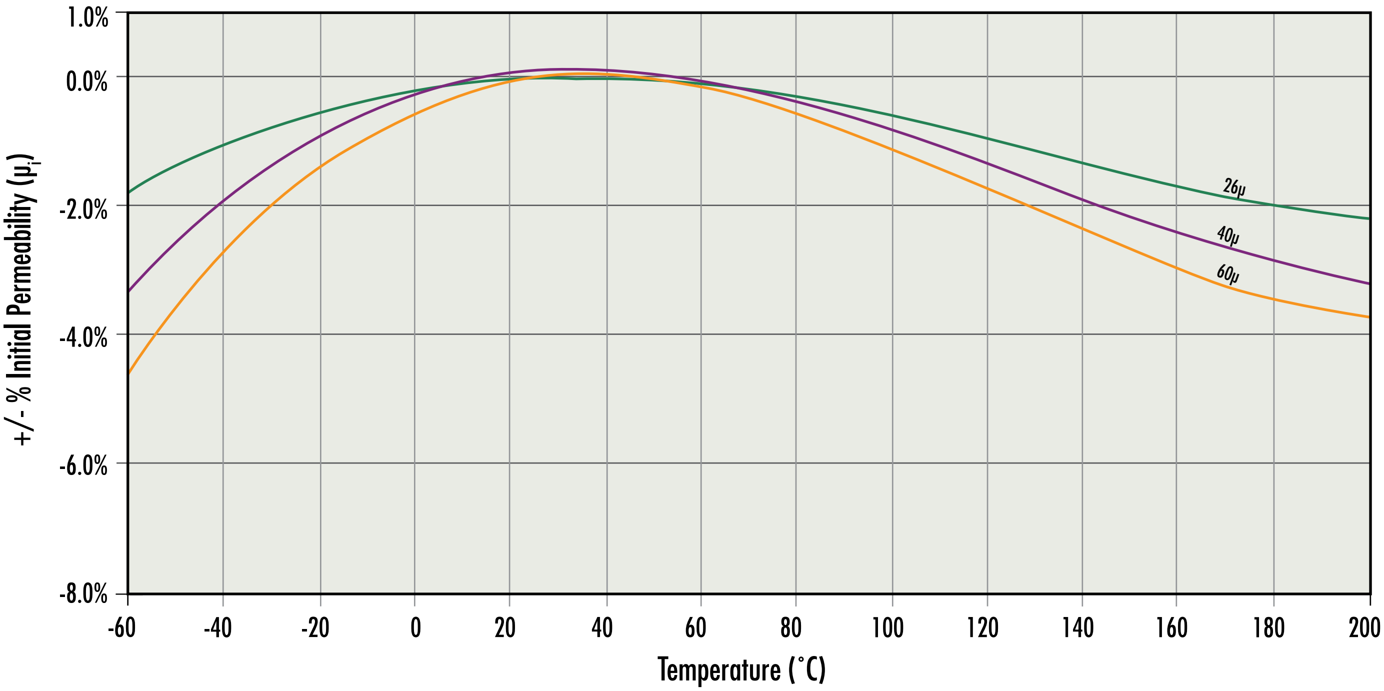


Kool Mμ® MAX

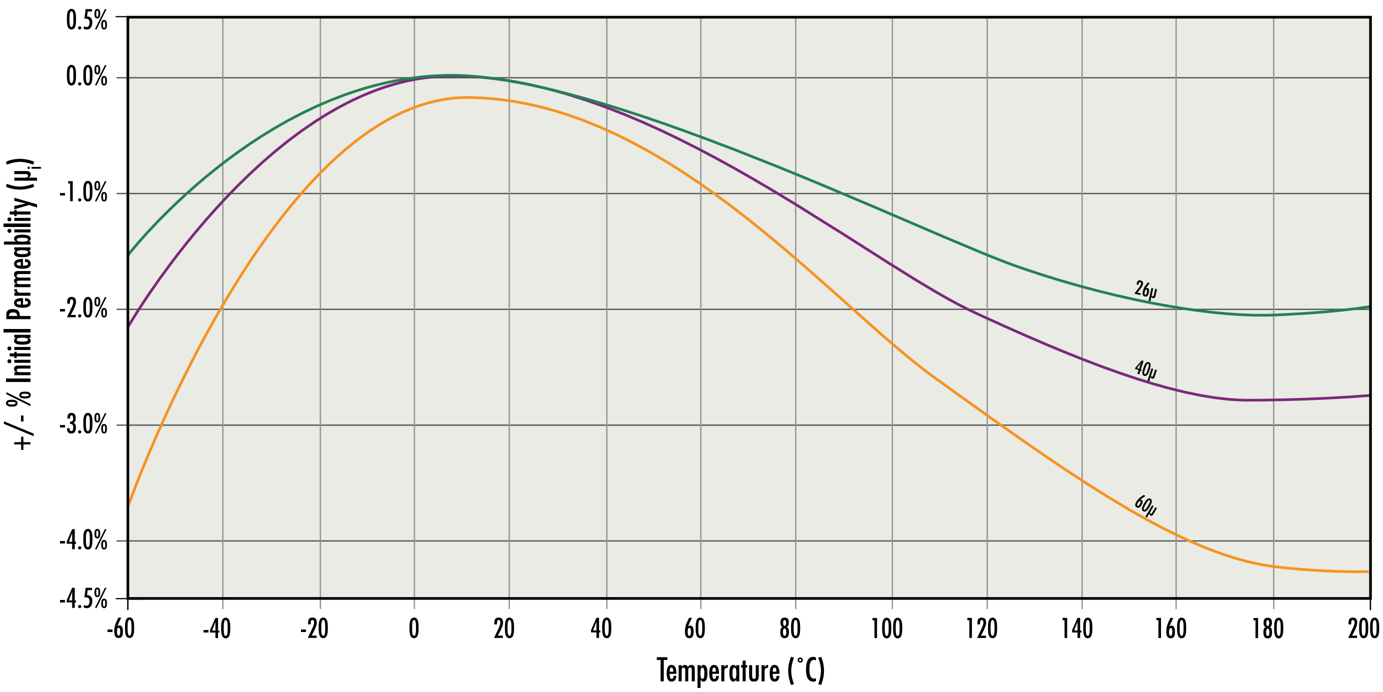


Permeability versus Temperature Curves

Kool Mµ® H*f*

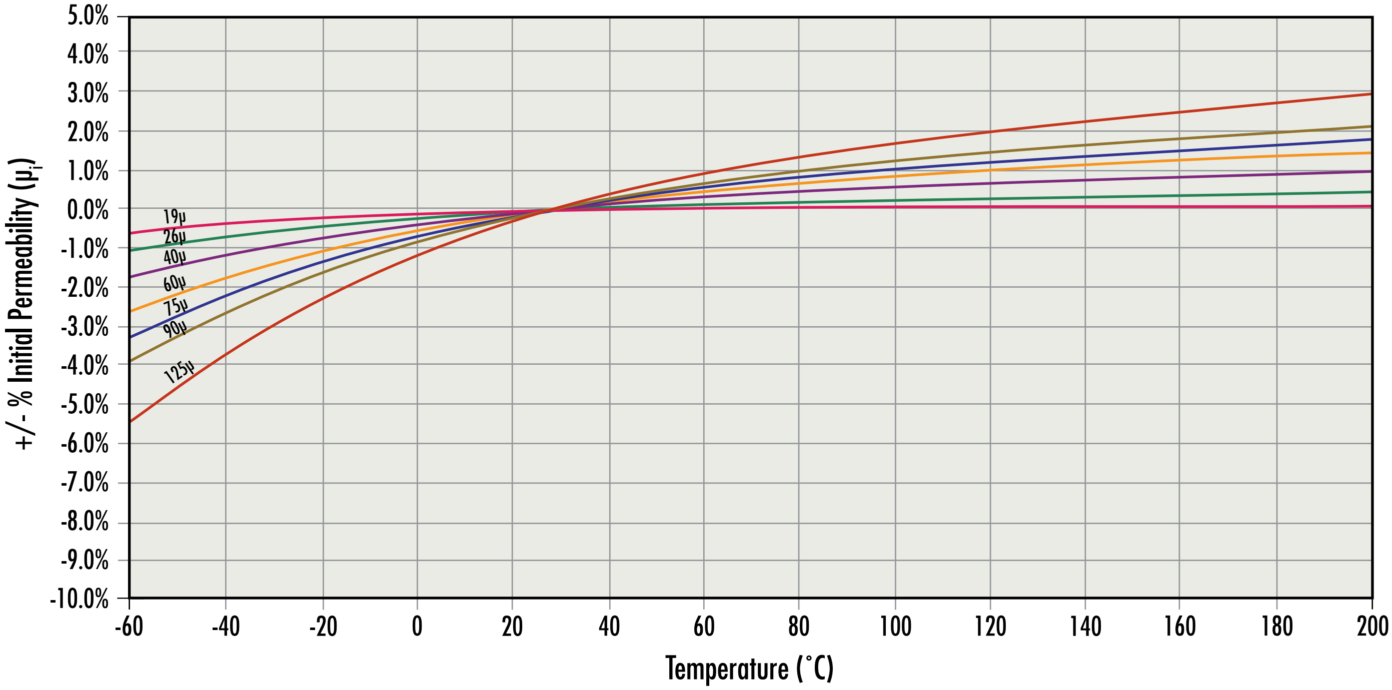


Kool Mµ® Ultra

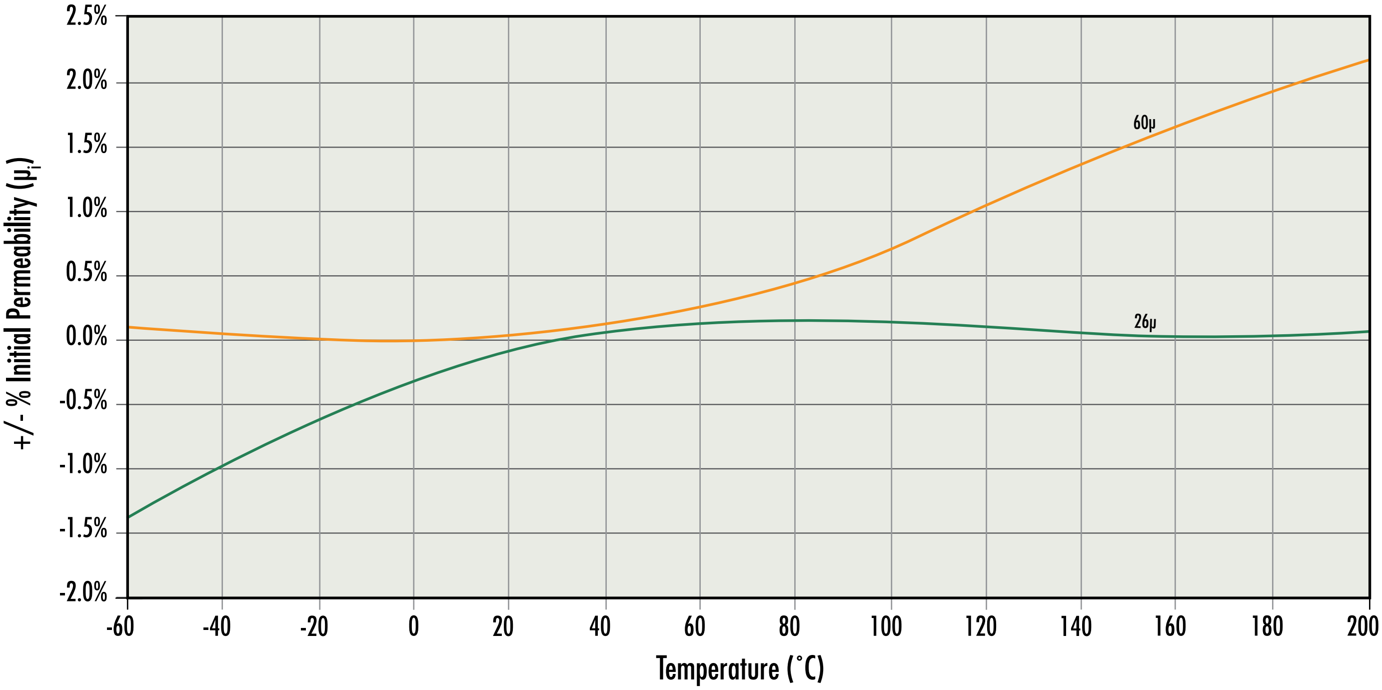


Permeability versus Temperature Curves

XFlux®

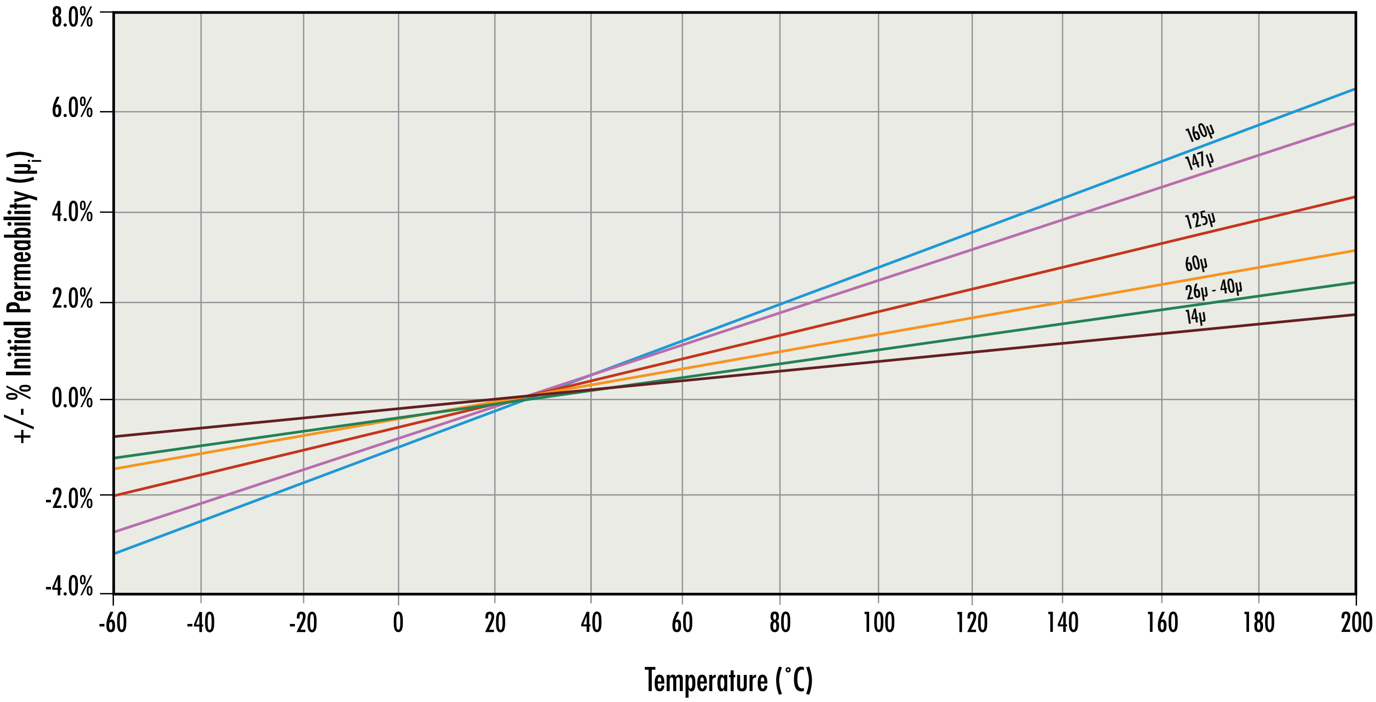


XFlux® Ultra

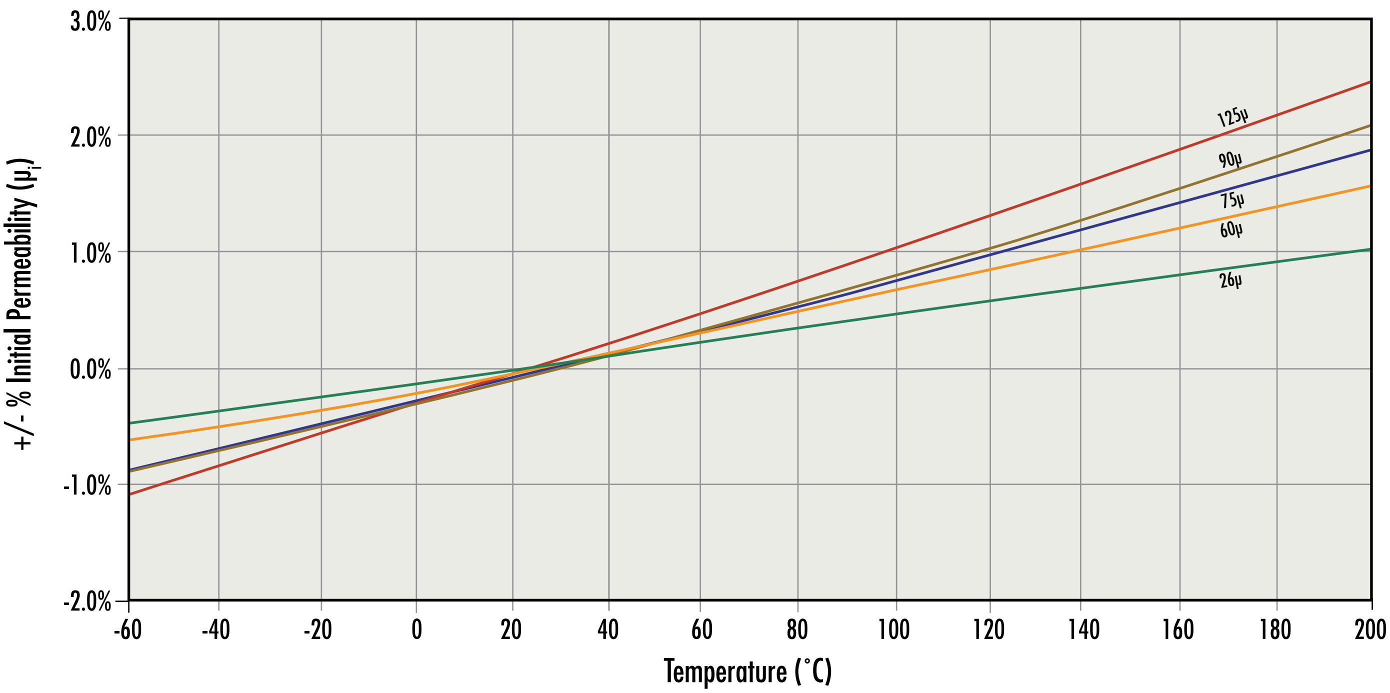


Permeability versus Temperature Curves

High Flux

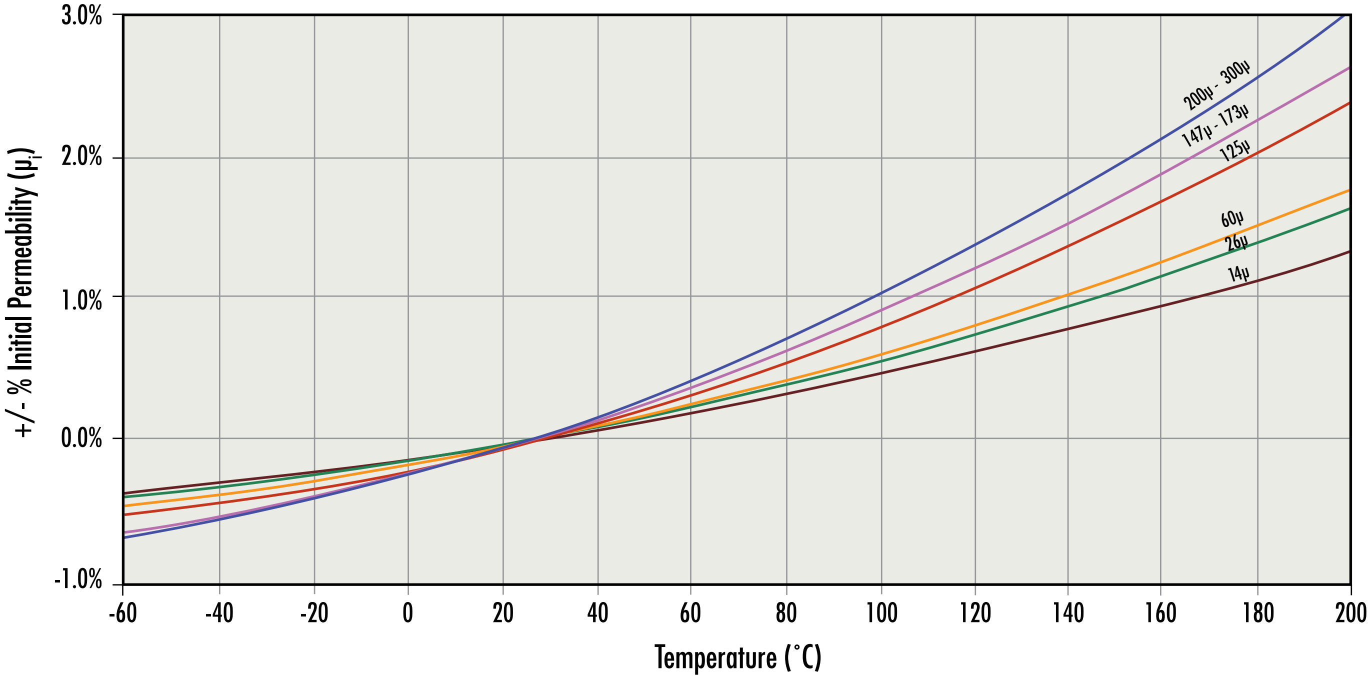


Edge®

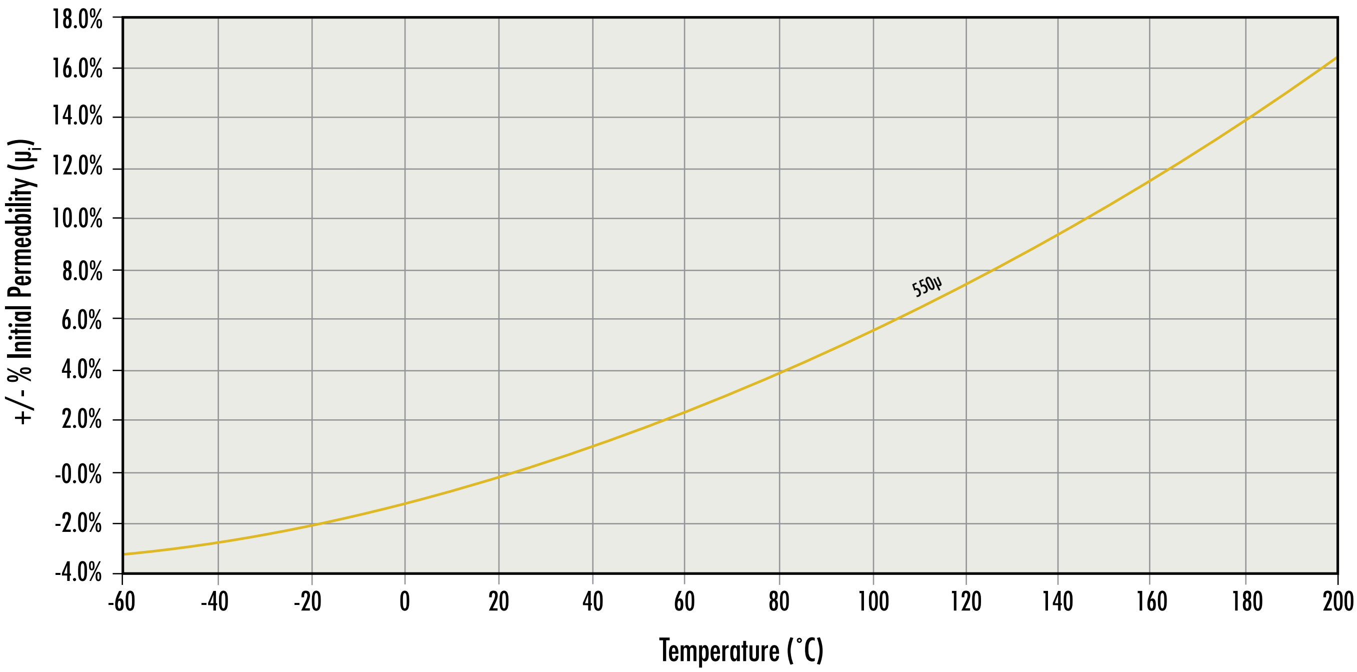


Permeability versus Temperature Curves

MPP 14µ-300µ



MPP 550µ



Permeability versus Temperature Curves

Fit Formula

Change compared with $\mu_{25℃} = \dfrac{\mu_T - \mu_{25℃}}{\mu_{25℃}} = a + bT + cT^2 + dT^3 + eT^4$

Perm	a	b	c	d	e
Kool Mμ®					
14μ	-1.892E-03	9.866E-05	-1.966E-06	5.728E-09	-8.706E-14
26μ	-2.857E-03	1.641E-04	-3.233E-06	1.147E-08	-8.391E-12
40μ	-3.982E-03	2.404E-04	-4.711E-06	1.816E-08	-1.808E-11
60μ	-5.590E-03	3.495E-04	-6.822E-06	2.772E-08	-3.192E-11
75μ	-6.796E-03	4.313E-04	-8.406E-06	3.490E-08	-4.230E-11
90μ	-8.002E-03	5.130E-04	-9.989E-06	4.207E-08	-5.268E-11
125μ	-1.082E-02	7.039E-04	-1.368E-05	5.880E-08	-7.690E-11
Kool Mμ® MAX					
14μ	-5.884E-04	4.384E-05	-8.804E-07	2.735E-09	-4.762E-13
19μ	-7.985E-04	5.950E-05	-1.195E-06	3.711E-09	-6.463E-13
26μ	-1.093E-03	8.142E-05	-1.635E-06	5.079E-09	-8.844E-13
40μ	-1.681E-03	1.253E-04	-2.515E-06	7.813E-09	-1.361E-12
60μ	-2.522E-03	1.879E-04	-3.773E-06	1.172E-08	-2.041E-12
75μ	-2.900E-03	2.100E-04	-3.850E-06	1.070E-08	-9.000E-13
Kool Mμ® H*f*					
26μ	-2.268E-03	1.373E-04	-2.055E-06	1.755E-09	1.316E-11
40μ	-2.800E-03	2.350E-04	-4.000E-06	1.125E-08	-4.000E-12
60μ	-5.441E-03	3.217E-04	-5.135E-06	1.320E-08	2.276E-12
Kool Mμ® Ultra					
26μ	-3.733E-04	4.004E-05	-2.691E-06	1.238E-08	-1.168E-11
40μ	1.489E-04	6.337E-05	3.890E-06	1.846E-08	2.000E-11
60μ	-3.733E-04	4.004E-05	-2.691E-06	1.238E-08	-1.168E-11
XFlux®					
19μ	-8.147E-04	4.387E-05	-5.911E-07	3.367E-09	-6.573E-12
26μ	-2.000E-03	8.887E-05	-6.792E-07	2.949E-09	-4.823E-12
40μ	-3.723E-03	1.578E-04	-9.501E-07	3.325E-09	-4.372E-12
60μ	-5.585E-03	2.367E-04	-1.425E-06	4.988E-09	-6.558E-12
75μ	-6.981E-03	2.959E-04	-1.781E-06	6.234E-09	-8.198E-12
90μ	-8.377E-03	3.551E-04	-2.138E-06	7.481E-09	-9.837E-12
125μ	-1.163E-02	4.931E-04	-2.969E-06	1.039E-08	-1.366E-11
XFlux® Ultra					
26μ	-3.000E-03	1.000E-04	-9.000E-07	4.000E-10	8.000E-12
60μ	-6.000E-05	4.000E-06	6.000E-07	3.000E-09	-2.000E-11

Permeability versus Temperature Curves

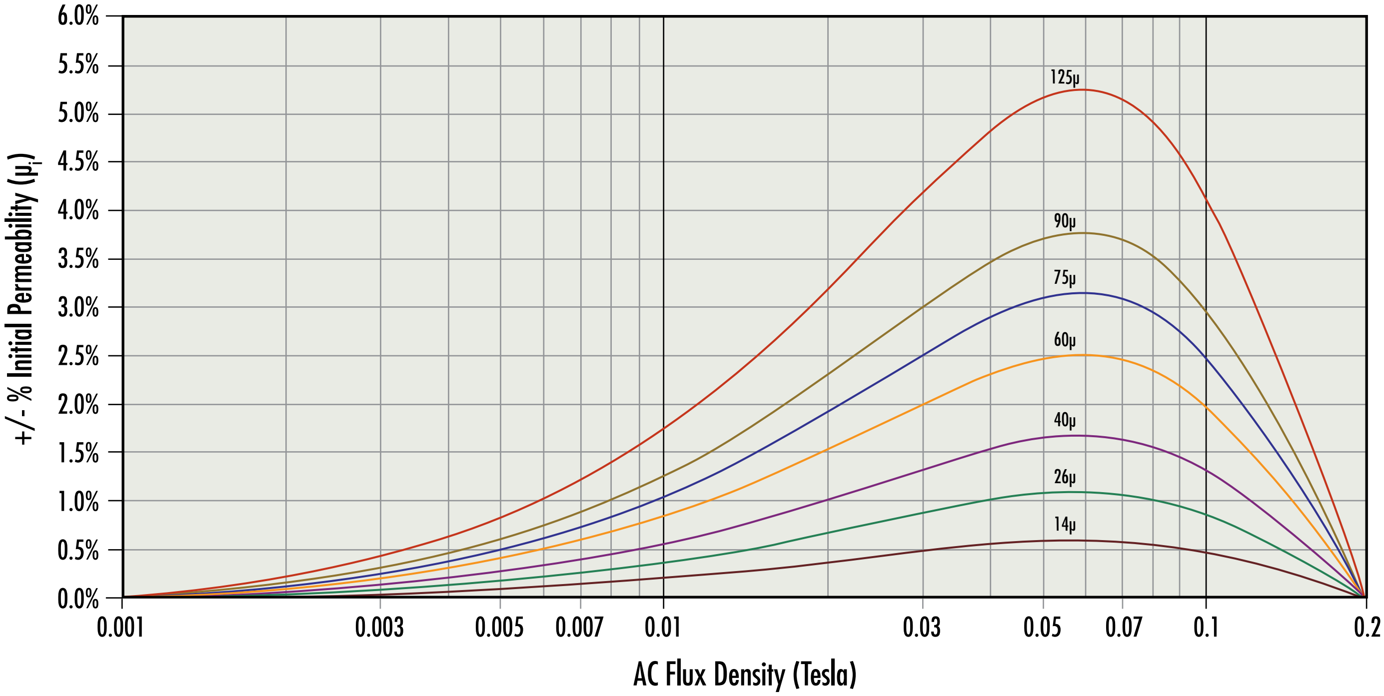
Fit Formula

Change compared with $\mu_{25℃} = \dfrac{\mu_T - \mu_{25℃}}{\mu_{25℃}} = a + bT + cT^2 + dT^3 + eT^4$

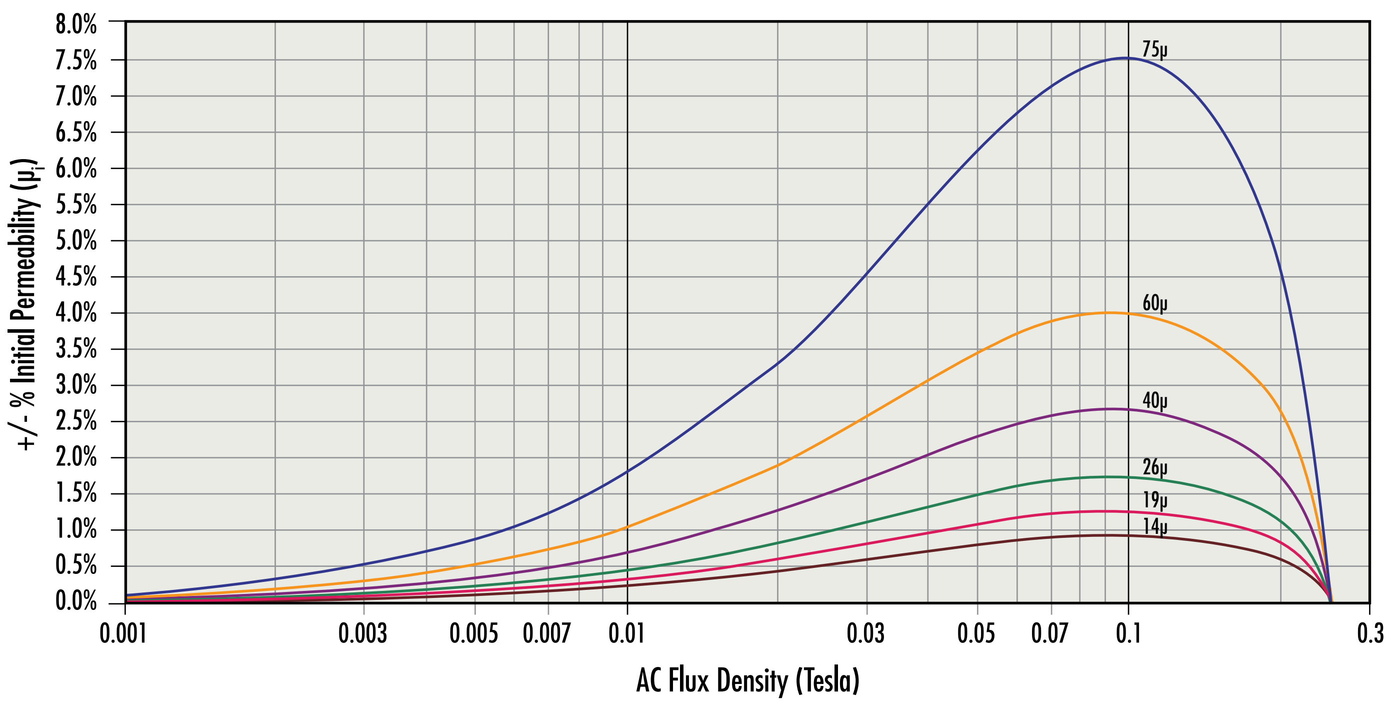
Perm	a	b	c	d	e
High Flux					
14µ	-2.500E-03	9.670E-05	5.560E-08	0.00E+00	0.00E+00
26µ	-3.300E-03	1.290E-04	3.800E-08	0.00E+00	0.00E+00
60µ	-4.400E-03	1.740E-04	4.090E-08	0.00E+00	0.00E+00
125µ	-6.000E-03	2.400E-04	3.220E-08	0.00E+00	0.00E+00
147µ	-7.900E-03	3.140E-04	7.310E-08	0.00E+00	0.00E+00
160µ	-9.200E-03	3.670E-04	1.750E-08	0.00E+00	0.00E+00
Edge®					
26µ	-1.532E-03	6.054E-05	7.220E-08	-6.624E-10	1.250E-12
60µ	-2.134E-03	8.192E-05	1.643E-07	-1.242E-09	2.938E-12
75µ	-3.000E-03	1.000E-04	5.000E-08	-4.000E-11	-9.000E-16
90µ	-3.200E-03	1.000E-04	1.000E-07	-2.000E-21	1.000E-23
125µ	-3.200E-03	1.300E-04	5.000E-08	-4.000E-11	-9.000E-16
MPP					
14µ	-1.300E-03	4.750E-05	1.300E-07	0.00E+00	0.00E+00
26µ	-1.431E-03	5.265E-05	1.837E-07	0.00E+00	0.00E+00
60µ	-1.604E-03	5.945E-05	1.875E-07	0.00E+00	0.00E+00
125µ	-1.939E-03	7.013E-05	2.967E-07	0.00E+00	0.00E+00
147µ	-2.308E-03	8.497E-05	2.943E-07	0.00E+00	0.00E+00
160µ	-2.308E-03	8.497E-05	2.943E-07	0.00E+00	0.00E+00
173µ	-2.308E-03	8.497E-05	2.943E-07	0.00E+00	0.00E+00
200µ	-2.528E-03	9.211E-05	3.601E-07	0.00E+00	0.00E+00
300µ	-2.528E-03	9.211E-05	3.601E-07	0.00E+00	0.00E+00
550µ	-1.309E-02	4.716E-04	2.086E-06	0.00E+00	0.00E+00

Permeability versus AC Flux Curves

Kool Mμ®

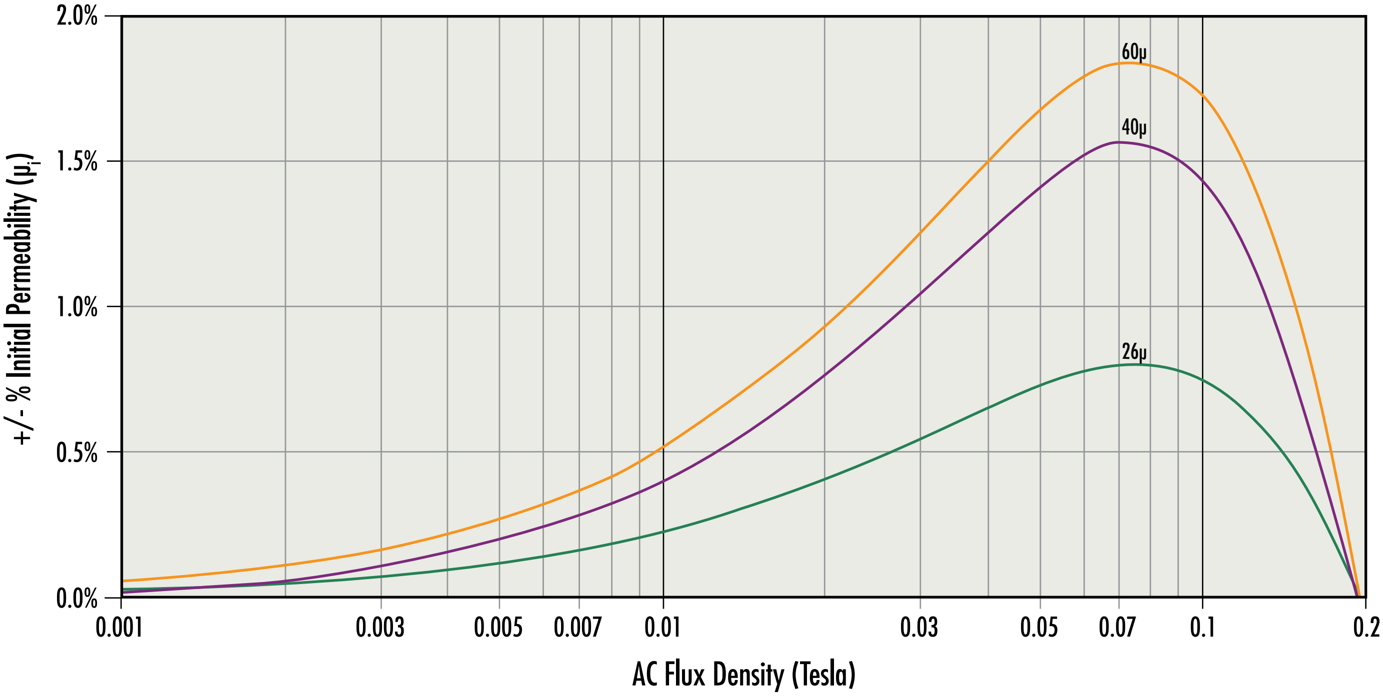


Kool Mμ® MAX

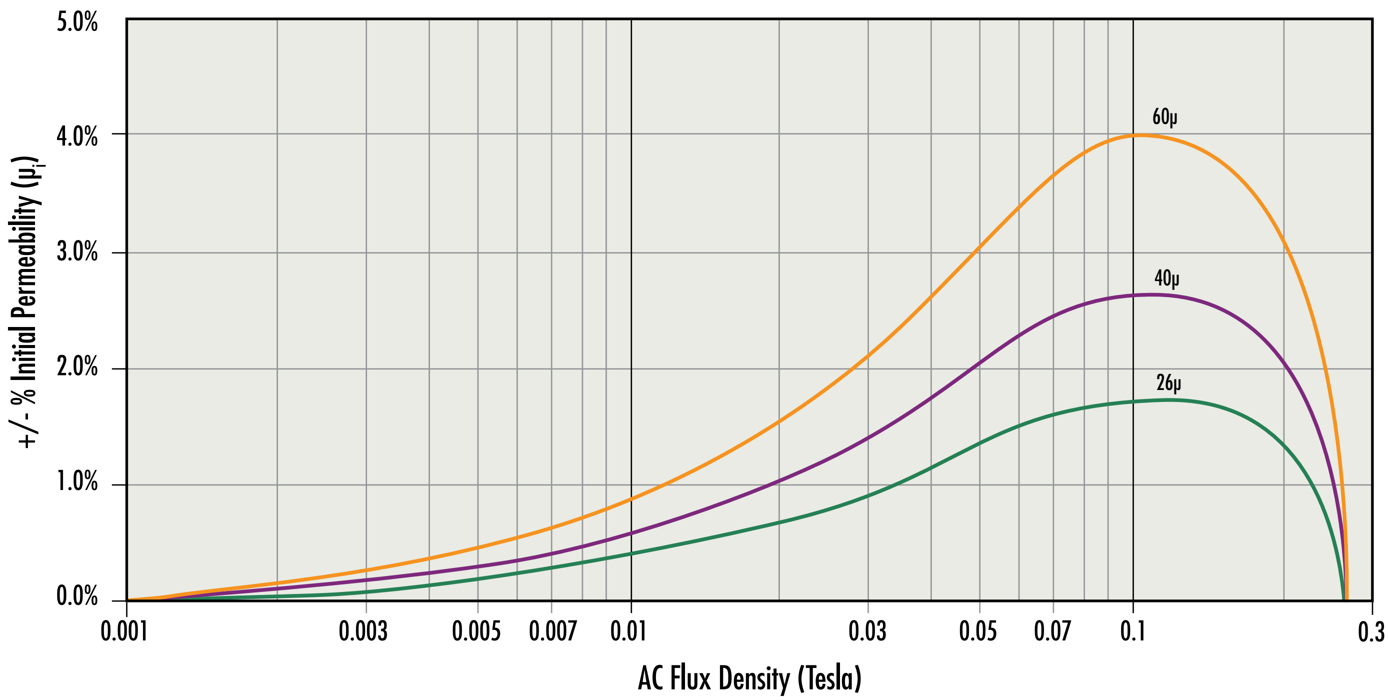


Permeability versus AC Flux Curves

Kool Mμ® Hƒ

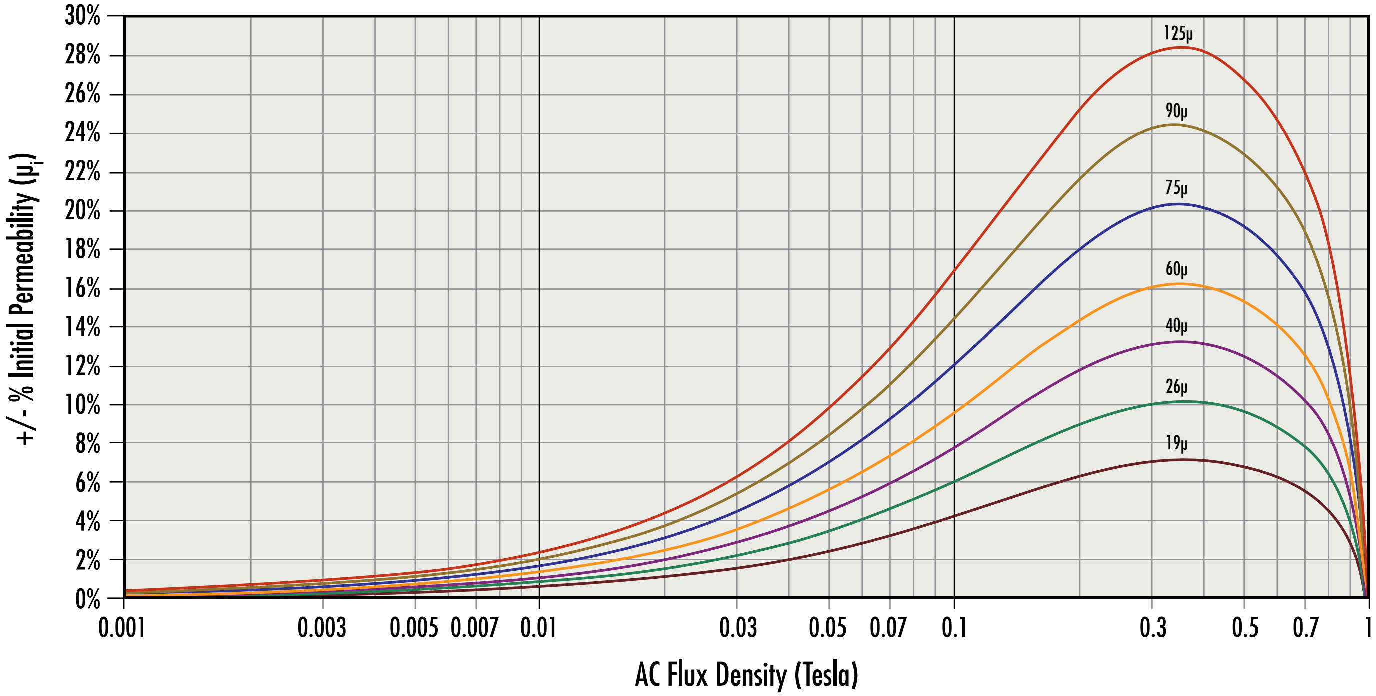


Kool Mμ® Ultra

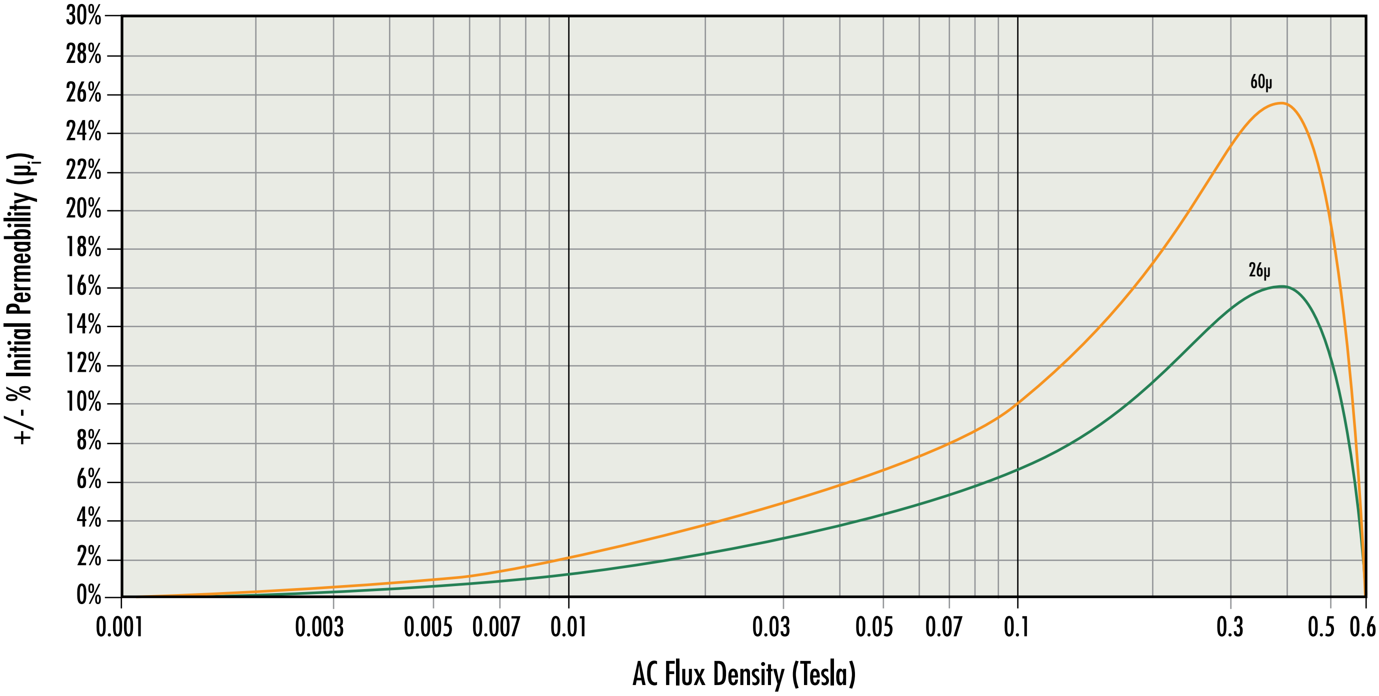


Permeability versus AC Flux Curves

XFlux®

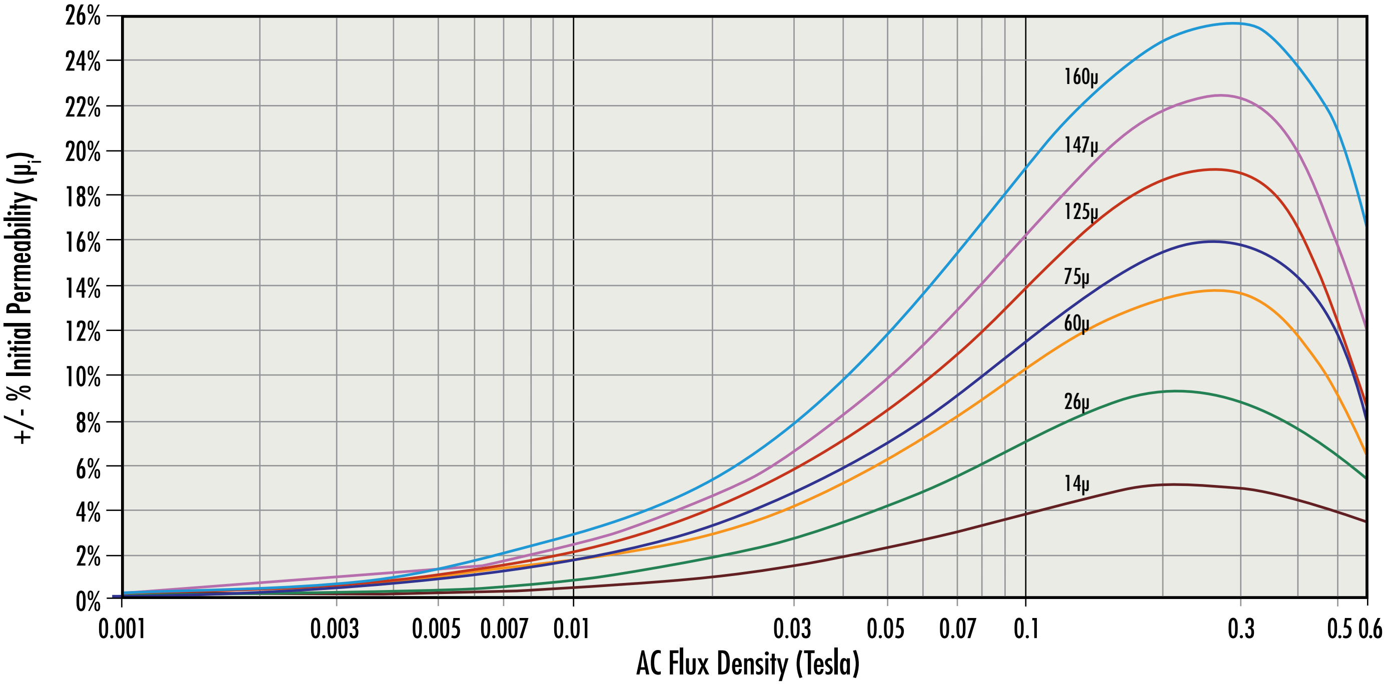


XFlux® Ultra

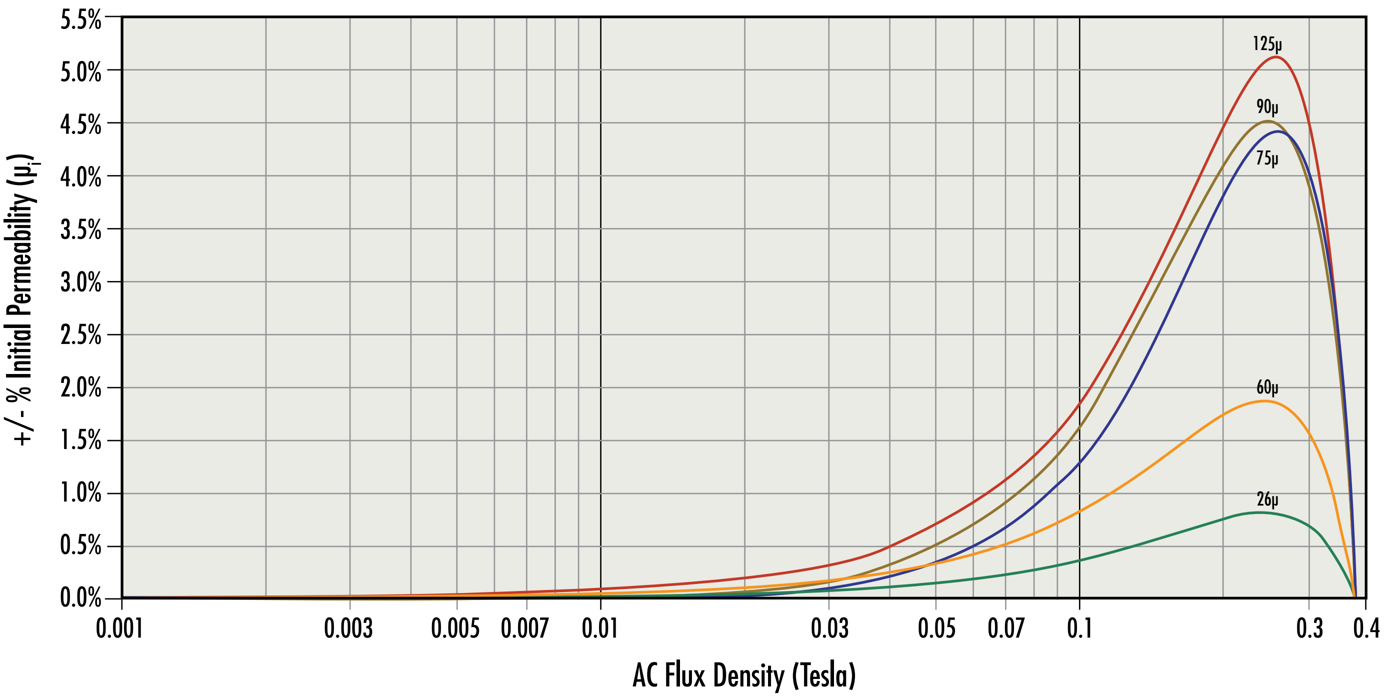


Permeability versus AC Flux Curves

High Flux

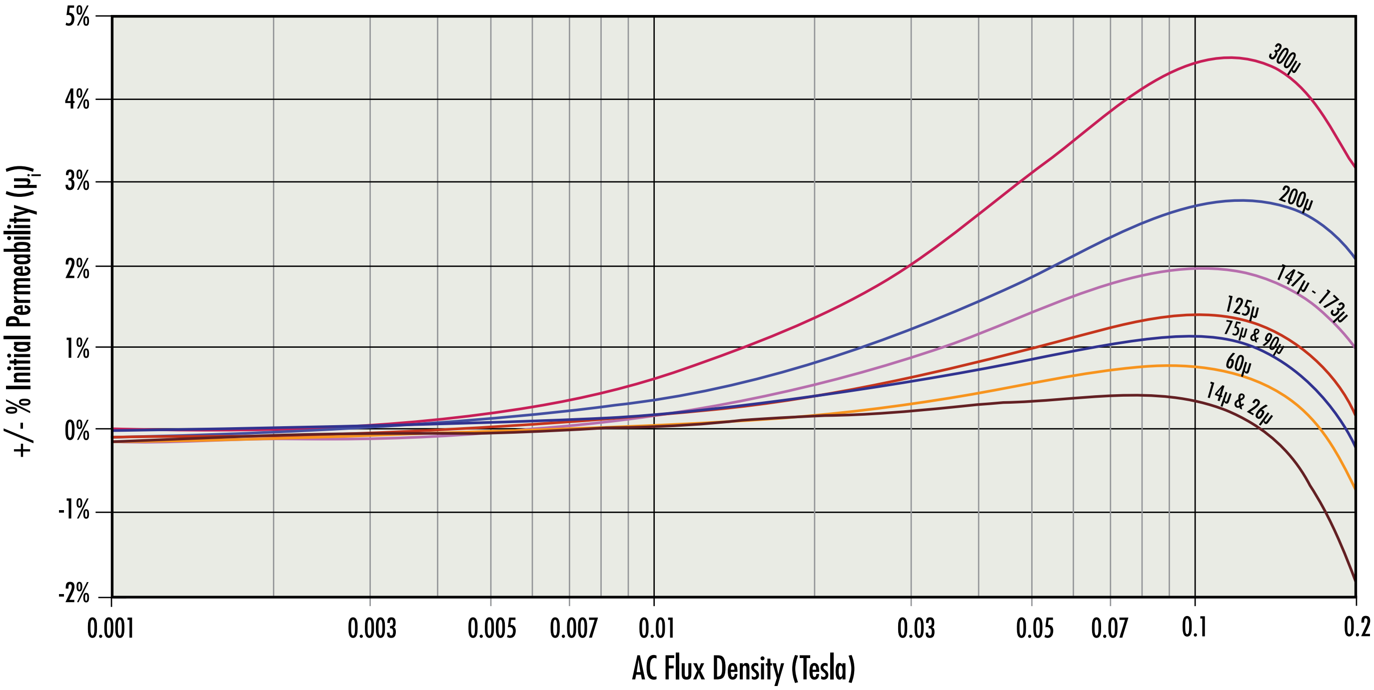


Edge®

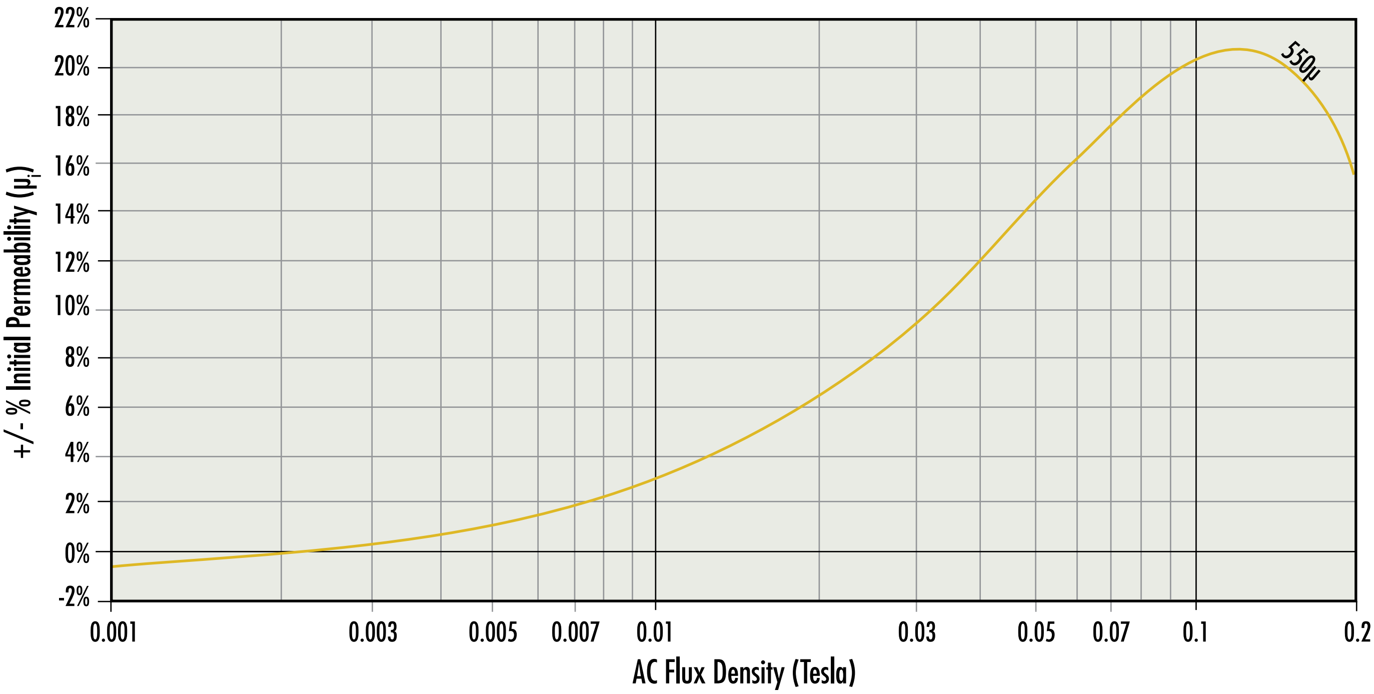


Permeability versus AC Flux Curves

MPP 14µ-300µ



MPP 550µ



Permeability versus AC Flux Curves

Fit Formula

$\pm \%\mu_i = (a + bB + cB^2 + dB^3 + eB^4)$ where B is Tesla

Perm	a	b	c	d	e
Kool Mµ®					
14µ	-2.478E-04	2.512E-01	-3.347E+00	1.599E+01	-2.766E+01
26µ	-4.602E-04	4.664E-01	-6.215E+00	2.969E+01	-5.136E+01
40µ	-7.081E-04	7.176E-01	-9.562E+00	4.568E+01	-7.902E+01
60µ	-1.062E-03	1.076E+00	-1.434E+01	6.852E+01	-1.185E+02
75µ	-1.328E-03	1.345E+00	-1.793E+01	8.565E+01	-1.482E+02
90µ	-1.593E-03	1.615E+00	-2.151E+01	1.028E+02	-1.778E+02
125µ	-2.213E-03	2.242E+00	-2.988E+01	1.427E+02	-2.469E+02
Kool Mµ® MAX					
14µ	-9.942E-05	2.814E-01	-2.949E+00	1.308E+01	-2.288E+01
19µ	-1.349E-04	3.819E-01	-4.003E+00	1.775E+01	-3.105E+01
26µ	-1.846E-04	5.226E-01	-5.477E+00	2.429E+01	-4.249E+01
40µ	-2.841E-04	8.040E-01	-8.427E+00	3.737E+01	-6.537E+01
60µ	-4.261E-04	1.206E+00	-1.264E+01	5.606E+01	-9.806E+01
75µ	-1.000E-03	2.075E+00	-1.976E+01	7.962E+01	-1.340E+02
Kool Mµ® Hƒ					
26µ	0.000E+00	2.464E-01	-2.368E+00	7.404E+00	-8.877E+00
40µ	-4.000E-04	4.786E-01	-4.206E+00	8.988E+00	0.000E+00
60µ	0.000E+00	5.686E-01	-5.465E+00	1.709E+01	-2.049E+01
Kool Mµ® Ultra					
26u	-1.000E-02	4.668E-01	-3.510E+00	9.254E+00	-9.788E+00
40u	-1.600E-03	7.115E-01	-5.350E+00	1.411E+01	-1.492E+01
60u	-2.400E-03	1.078E+00	-8.106E+00	2.137E+01	-2.261E+01
XFlux®					
19µ	4.533E-04	5.521E-01	-1.516E+00	1.750E+00	-7.866E-01
26µ	6.475E-04	7.888E-01	-2.166E+00	2.499E+00	-1.124E+00
40µ	8.418E-04	1.025E+00	-2.816E+00	3.249E+00	-1.461E+00
60µ	1.036E-03	1.262E+00	-3.466E+00	3.999E+00	-1.798E+00
75µ	1.295E-03	1.578E+00	-4.333E+00	4.999E+00	-2.248E+00
90µ	1.554E-03	1.893E+00	-5.199E+00	5.999E+00	-2.697E+00
125µ	1.813E-03	2.209E+00	-6.066E+00	6.998E+00	-3.147E+00
XFlux® Ultra					
26µ	3.700E-03	7.525E-01	-1.544E+00	3.768E+00	-5.490E+00
60µ	6.600E-03	1.086E+00	-1.674E+00	4.066E+00	-7.191E+00

Permeability versus AC Flux Curves

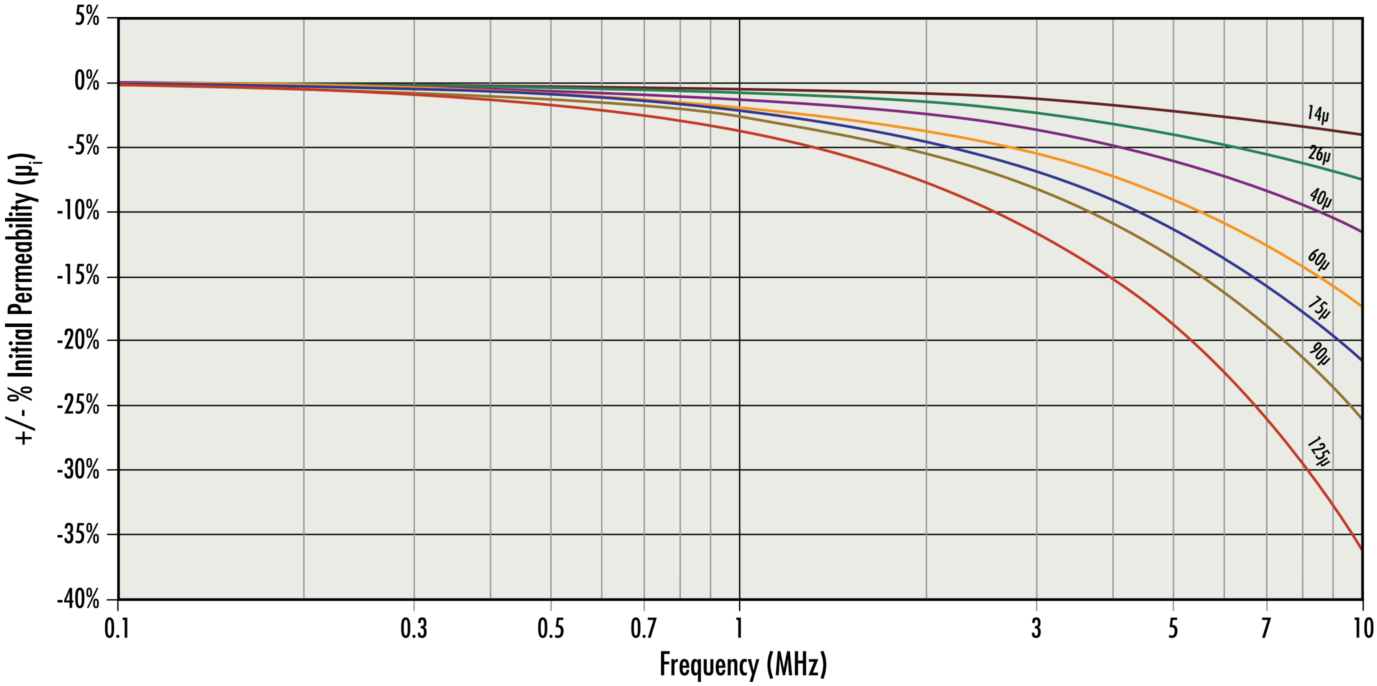
Fit Formula

$\pm \%\mu_i = (a + bB + cB^2 + dB^3 + eB^4)$ where B is Tesla

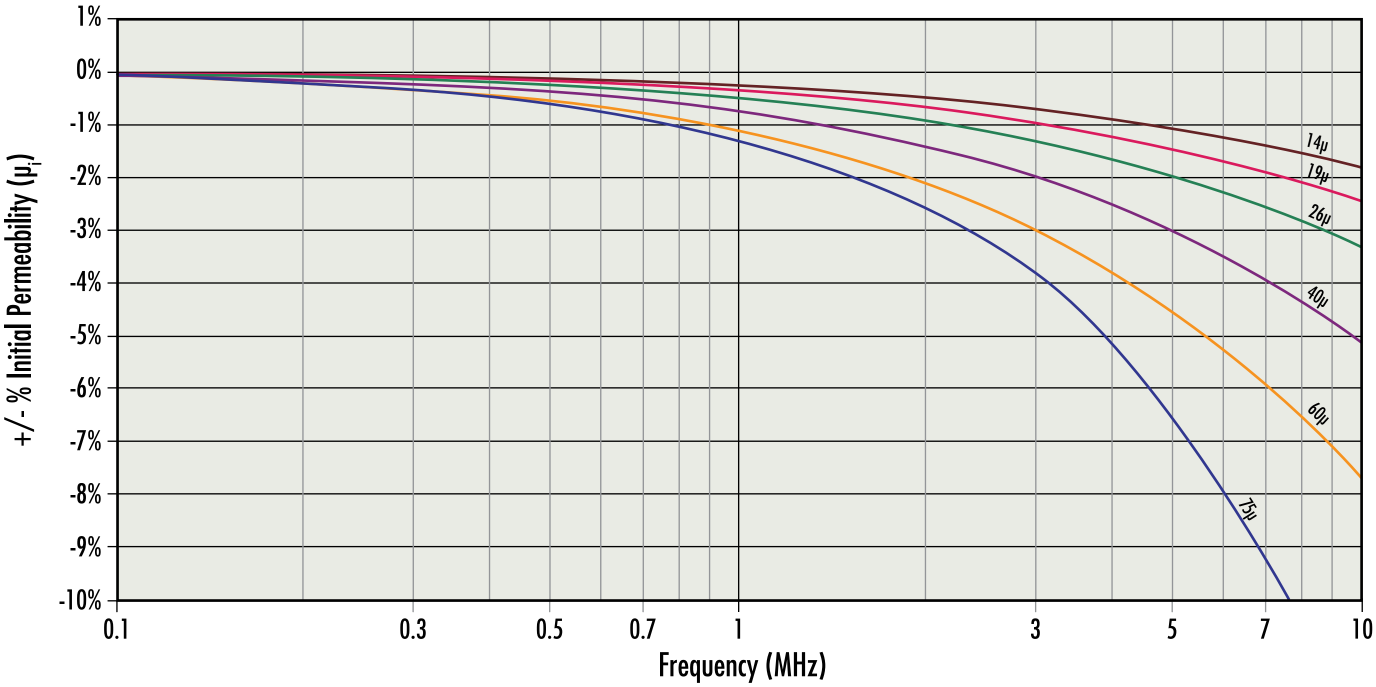
Perm	a	b	c	d	e
High Flux					
14μ	-1.000E-03	5.458E-01	-1.930E+00	2.598E+00	-1.228E+00
26μ	-2.000E-03	1.020E+00	-3.696E+00	5.099E+00	-2.529E+00
60μ	0.000E+00	1.476E+00	-5.695E+00	9.395E+00	-6.182E+00
75μ	0.000E+00	1.659E+00	-6.134E+00	9.693E+00	-6.248E+00
125μ	0.000E+00	1.934E+00	-6.792E+00	1.014E+01	-6.347E+00
147μ	0.000E+00	2.350E+00	-8.895E+00	1.465E+01	-9.716E+00
160μ	-2.000E-03	2.910E+00	-1.224E+01	2.263E+01	-1.590E+01
Edge®					
26μ	0.000E+00	1.647E-02	2.767E-01	-8.511E-01	9.325E-08
60μ	0.000E+00	3.801E-02	6.385E-01	-1.964E+00	2.152E-07
75μ	0.000E+00	-1.820E-02	1.871E+00	-3.567E+00	-3.238E+00
90μ	0.000E+00	-8.500E-03	2.476E+00	-7.682E+00	3.221E+00
125μ	0.000E+00	6.410E-02	1.560E+00	-2.949E+00	-4.220E+00
MPP					
14μ	-5.000E-04	1.186E-01	-5.096E-01	-2.727E+00	0.000E+00
26μ	-5.000E-04	1.186E-01	-5.096E-01	-2.727E+00	0.000E+00
60μ	-1.000E-03	1.708E-01	-6.675E-01	-1.792E+00	0.000E+00
75μ	-2.000E-04	2.336E-01	-1.115E+00	-4.825E-01	0.000E+00
90μ	-2.000E-04	2.336E-01	-1.115E+00	-4.825E-01	0.000E+00
125μ	-1.000E-03	2.960E-01	-1.561E+00	8.254E-01	0.000E+00
147μ	-2.000E-03	4.393E-01	-2.591E+00	3.446E+00	0.000E+00
160μ	-2.000E-03	4.393E-01	-2.591E+00	3.446E+00	0.000E+00
173μ	-2.000E-03	4.393E-01	-2.591E+00	3.446E+00	0.000E+00
200μ	-1.000E-03	5.145E-01	-2.688E+00	3.308E+00	0.000E+00
300μ	-2.000E-03	9.038E-01	-5.112E+00	7.055E+00	0.000E+00
550μ	-9.000E-03	4.042E+00	-2.240E+01	3.123E+01	0.000E+00

Permeability versus Frequency Curves

Kool Mμ®

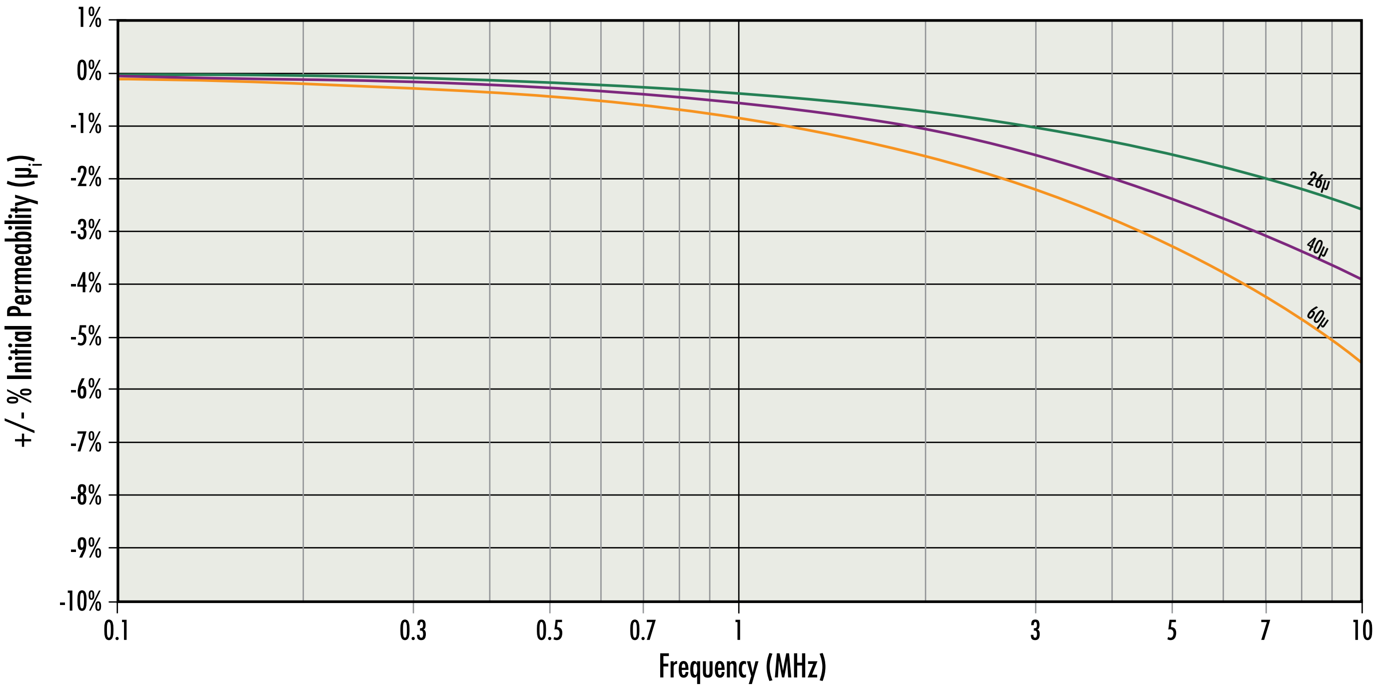


Kool Mμ® MAX

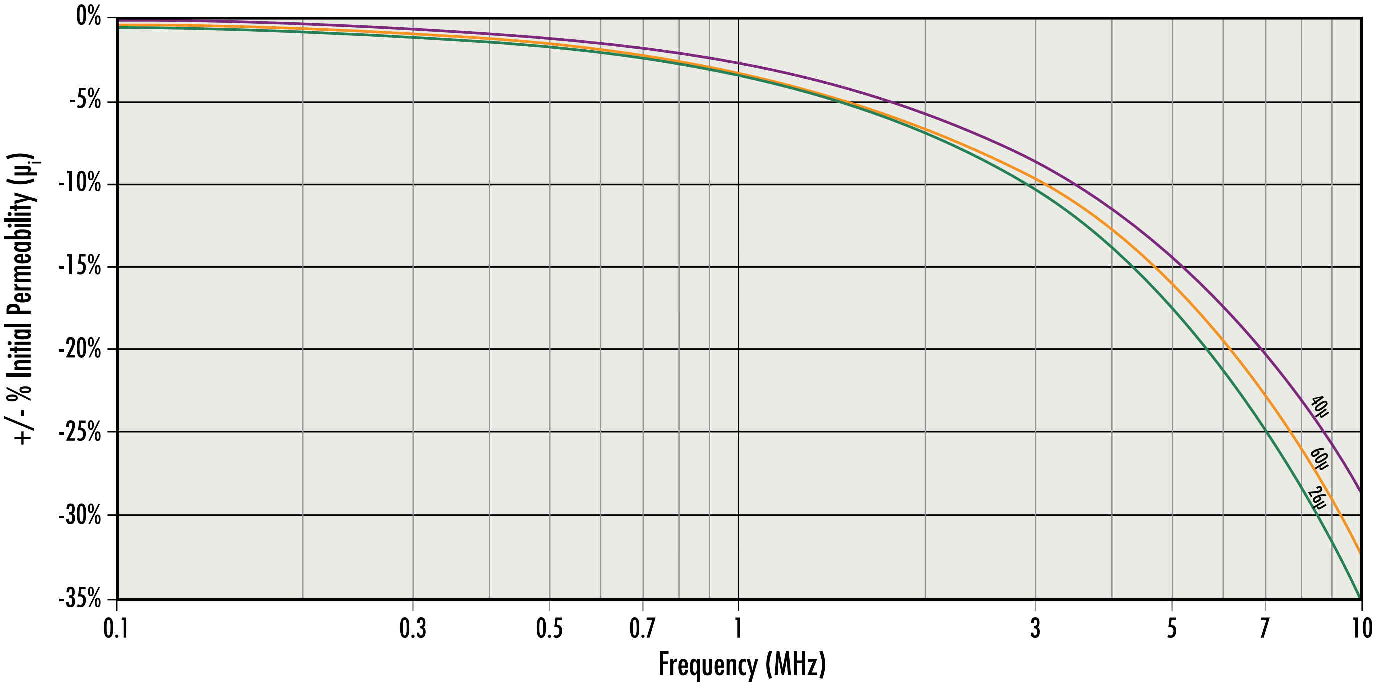


Permeability versus Frequency Curves

Kool Mµ® H*f*

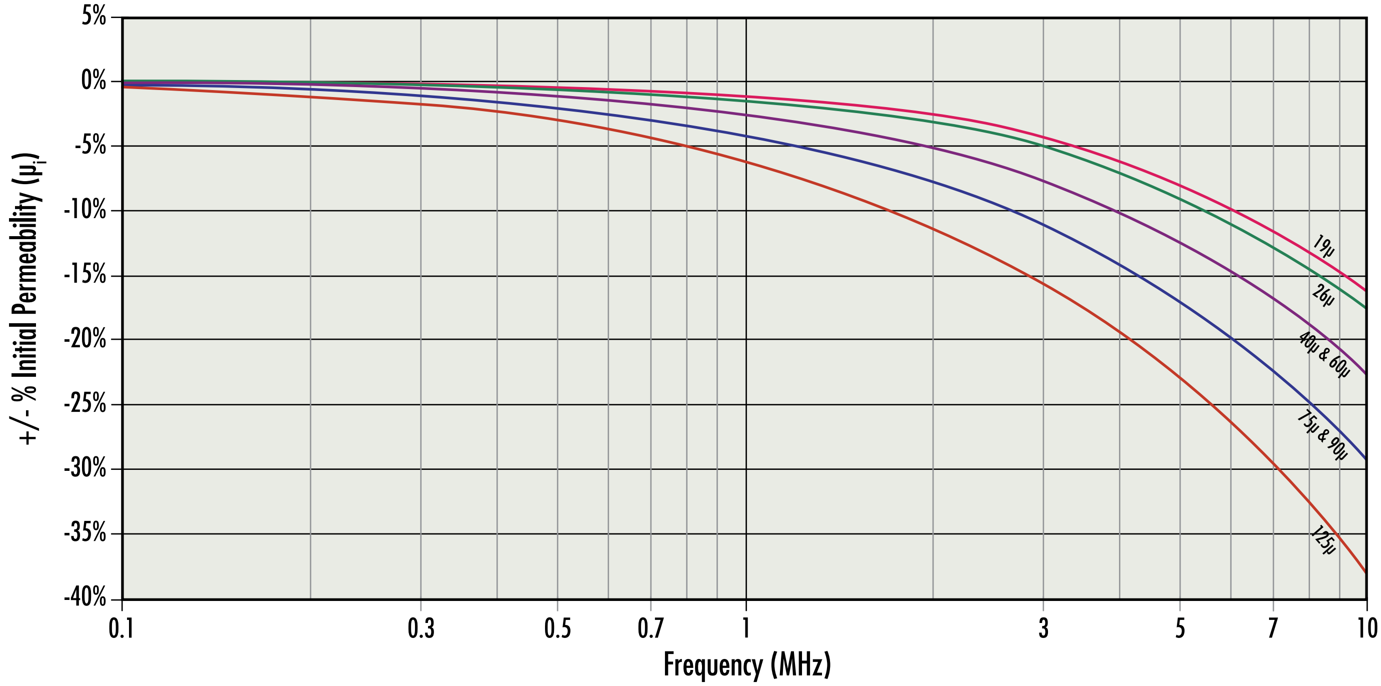


Kool Mµ® Ultra

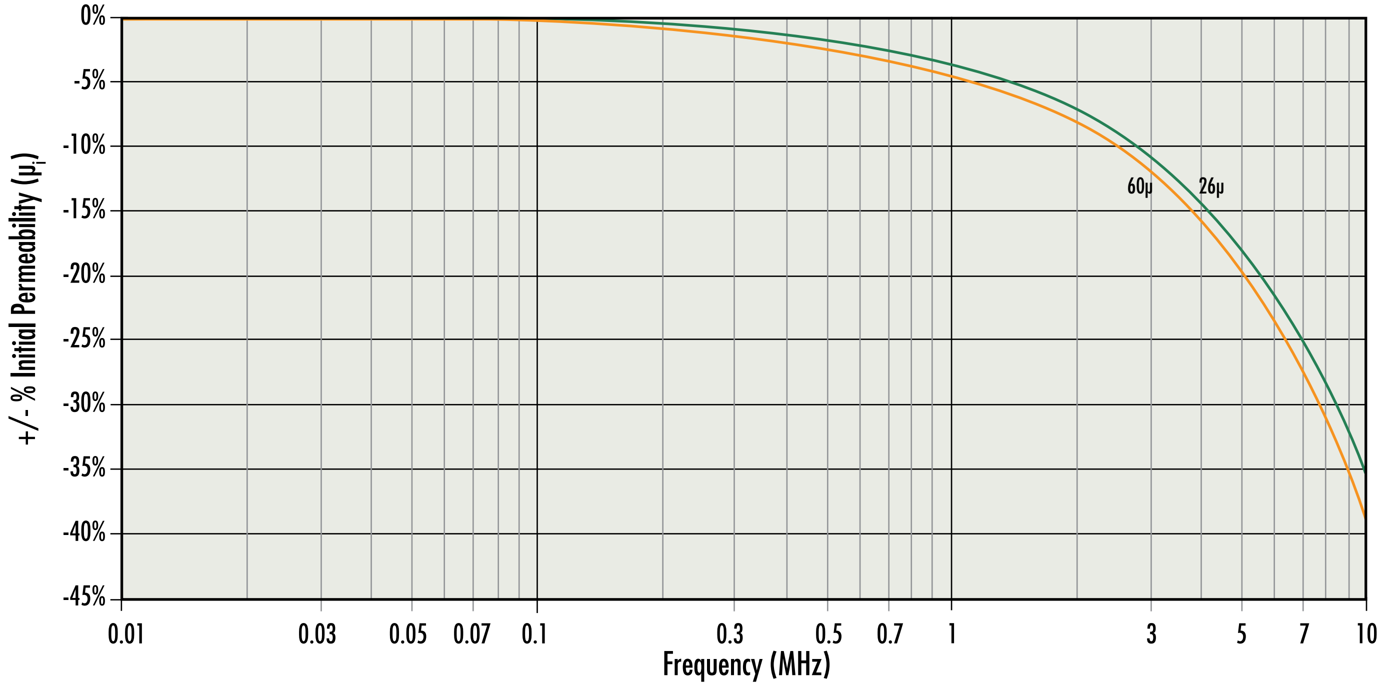


Permeability versus Frequency Curves

XFlux®

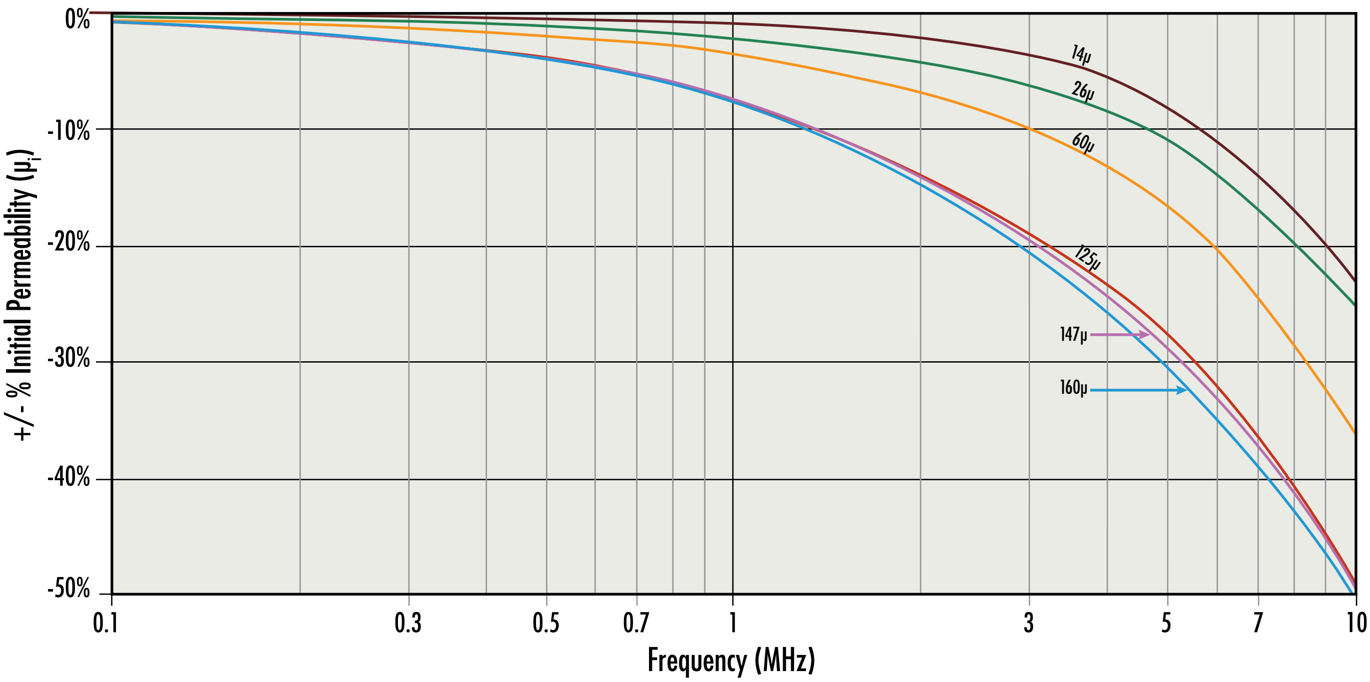


XFlux® Ultra

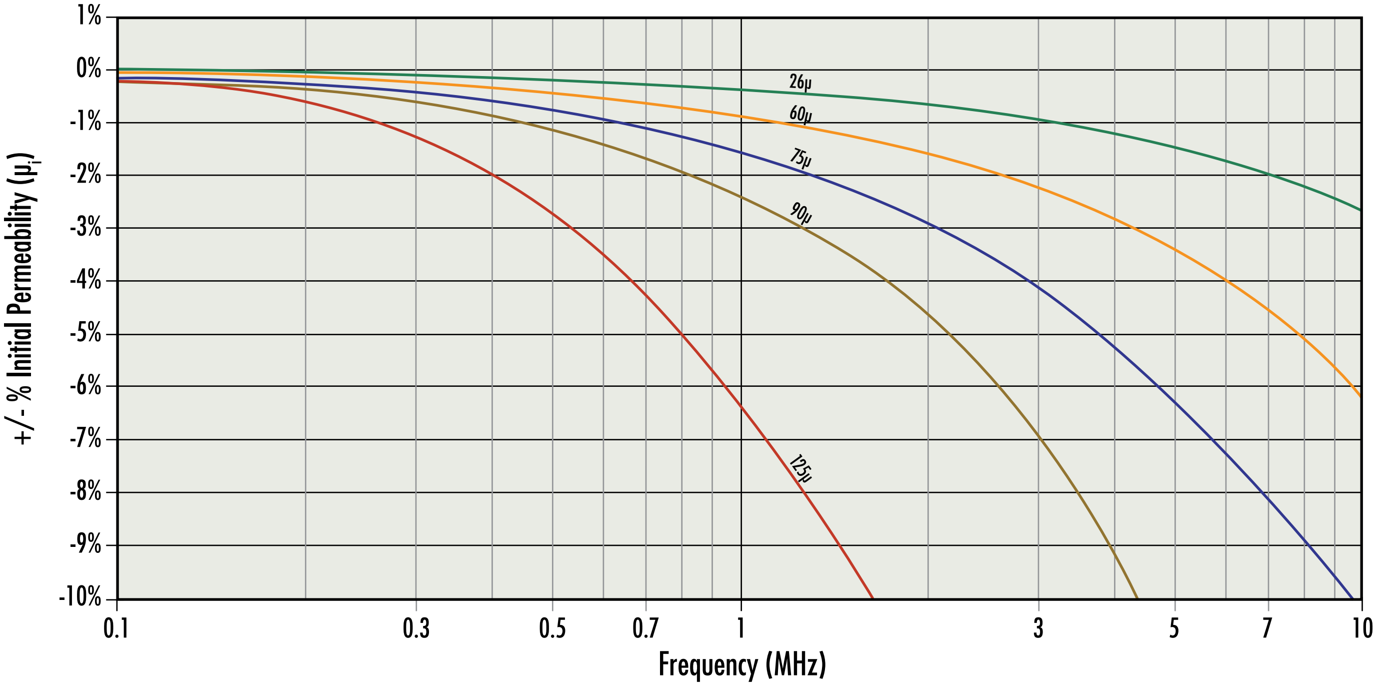


Permeability versus Frequency Curves

High Flux

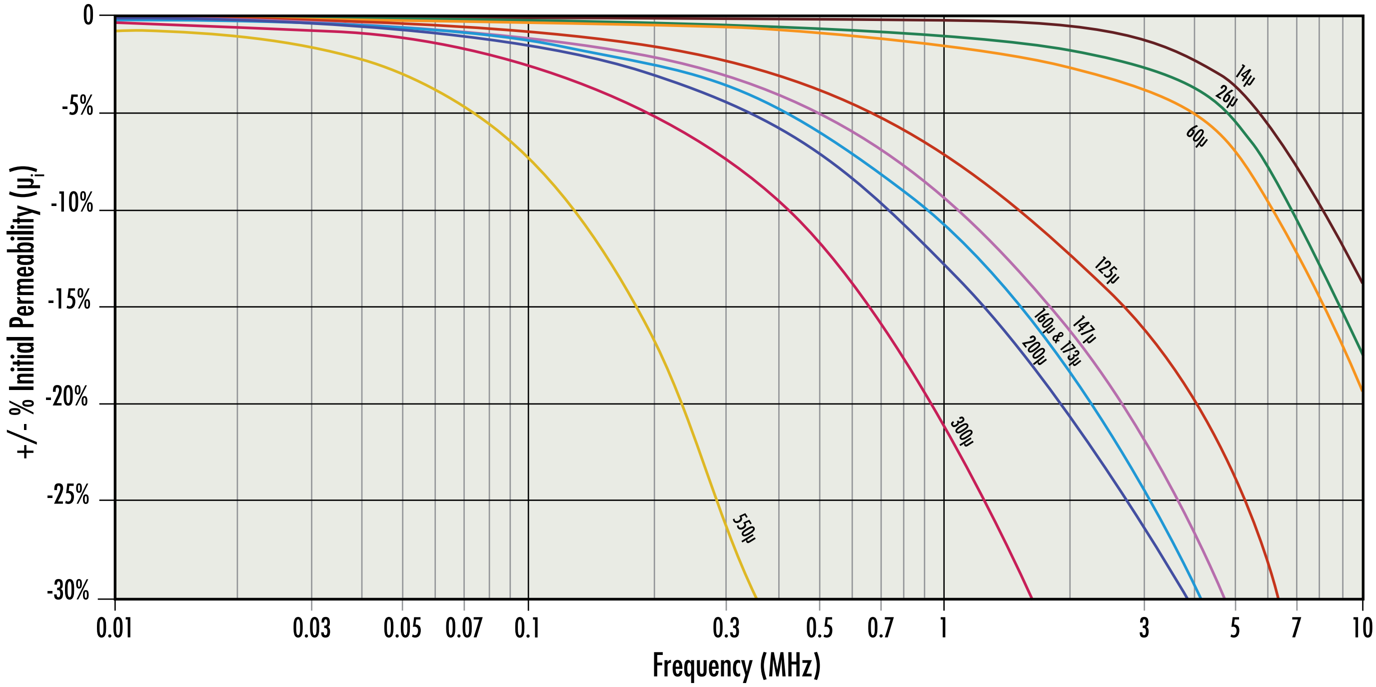


Edge®



Permeability versus Frequency Curves

MPP



Permeability versus Frequency Curves

Fit Formula

$\pm \%\mu_i = a + bf + cf^2 + df^3 + ef^4$ where f = megahertz (MHz)

Perm	a	b	c	d	e
Kool Mµ®					
14µ	1.911E-04	-4.298E-03	-5.002E-05	1.373E-05	-6.261E-07
26µ	3.550E-04	-7.982E-03	-9.290E-05	2.551E-05	-1.163E-06
40µ	5.461E-04	-1.228E-02	-1.429E-04	3.924E-05	-1.789E-06
60µ	8.191E-04	-1.842E-02	-2.144E-04	5.886E-05	-2.683E-06
75µ	1.024E-03	-2.303E-02	-2.680E-04	7.358E-05	-3.354E-06
90µ	1.229E-03	-2.763E-02	-3.216E-04	8.829E-05	-4.025E-06
125µ	1.707E-03	-3.838E-02	-4.466E-04	1.226E-04	-5.590E-06
Kool Mµ® MAX®					
14µ	8.465E-05	-1.904E-03	-2.216E-05	6.083E-06	-2.773E-07
19µ	1.149E-04	-2.583E-03	-3.007E-05	8.255E-06	-3.763E-07
26µ	1.572E-04	-3.535E-03	-4.115E-05	1.130E-05	-5.149E-07
40µ	2.418E-04	-5.439E-03	-6.330E-05	1.738E-05	-7.922E-07
60µ	3.628E-04	-8.158E-03	-9.496E-05	2.607E-05	-1.188E-06
75µ	1.300E-03	-1.330E-02	3.000E-06	-3.000E-10	7.000E-15
Kool Mµ® H*f*					
26µ	0.00E+00	-4.371E-03	3.095E-04	-1.344E-05	0.000E+00
40µ	0.00E+00	-6.000E-03	2.750E-04	-6.000E-06	0.000E+00
60µ	0.00E+00	-9.179E-03	6.500E-04	-2.822E-05	0.000E+00
Kool Mµ® Ultra					
26µ	1.000E-13	-3.520E-02	6.000E-06	-4.000E-10	8.000E-15
40µ	1.000E-13	-2.870E-02	5.000E-06	-3.000E-10	7.000E-15
60µ	1.000E-13	-3.250E-02	5.000E-06	-3.000E-10	8.000E-15
XFlux®					
19µ	4.454E-04	-7.911E-03	-3.405E-03	4.290E-04	-1.724E-05
26µ	6.652E-04	-1.222E-02	-2.602E-03	3.447E-04	-1.399E-05
40-60µ	1.419E-03	-2.699E-02	1.514E-04	5.563E-05	-2.844E-06
75-90µ	2.440E-03	-4.699E-02	3.880E-03	-3.358E-04	1.225E-05
125µ	3.775E-03	-7.315E-02	8.755E-03	-8.477E-04	3.199E-05
XFlux® Ultra					
26µ	-2.000E-15	-3.600E-02	5.000E-06	-3.000E-10	6.000E-15
60µ	-3.000E-15	-3.940E-02	6.000E-06	-4.000E-10	1.000E-14

Permeability versus Frequency Curves

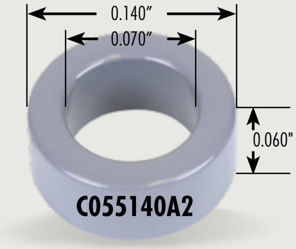
Fit Formula

$\pm \%\mu_i = a + bf + cf^2 + df^3 + ef^4$ where f = megahertz (MHz)

Perm	a	b	c	d	e
High Flux					
14µ	0.00E+00	-1.070E-02	5.960E-04	-4.920E-04	3.070E-05
26µ	0.00E+00	-2.560E-02	3.430E-03	-7.340E-04	3.990E-05
60µ	0.00E+00	-3.870E-02	3.050E-03	-5.490E-04	2.690E-05
125µ	0.00E+00	-8.600E-02	1.140E-02	-1.370E-03	6.050E-05
147µ	0.00E+00	-8.170E-02	7.330E-03	-6.400E-04	2.390E-05
160µ	0.00E+00	-8.590E-02	7.220E-03	-5.530E-04	1.880E-05
Edge®					
26µ	0.00E+00	-4.484E-03	3.175E-04	-1.379E-05	0.000E+00
60µ	0.00E+00	-1.035E-02	7.327E-04	-3.182E-05	0.000E+00
75µ	0.00E+00	-1.500E-02	4.850E-04	5.000E-08	-3.000E-12
90µ	0.00E+00	-2.300E-02	2.000E-06	-2.000E-10	4.000E-15
125µ	4.700E-03	7.310E-02	8.100E-03	-6.000E-04	2.000E-05
MPP					
14µ	0.00E+00	-2.320E-03	7.630E-04	-5.070E-04	3.170E-05
26µ	0.00E+00	-1.560E-02	5.190E-03	-1.160E-03	6.230E-05
60µ	0.00E+00	-1.820E-02	4.320E-03	-9.780E-04	5.360E-05
125µ	0.00E+00	-8.430E-02	1.590E-02	-2.270E-03	1.080E-04
147µ	0.00E+00	-1.110E-01	2.040E-02	-2.810E-03	1.300E-04
160-173µ	0.00E+00	-1.290E-01	2.390E-02	-3.080E-03	1.410E-04
200µ	0.00E+00	-1.610E-01	3.820E-02	-5.170E-03	2.160E-04
300µ	0.00E+00	-2.590E-01	5.570E-02	-6.530E-03	2.780E-04
550µ	0.00E+00	-4.590E-01	-3.300E+00	8.140E+00	-5.730E+00

3.56 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	3.56 mm/0.140 in	1.78 mm/0.070 in	1.52 mm/0.060 in
After Finish (limits)	4.19 mm/0.165 in	1.27 mm/0.050 in	2.16 mm/0.085 in



Perm (µ)	A_L ± 8% (nH/T²)*	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® Hƒ	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
60	13	0077141A7	-	-	-	-	-	-	C058141A2	0055141A2
75	16	0077445A7	-	-	-	-	-	-	0058445A2	0055445A2
90	19	0077444A7	-	-	-	-	-	-	0058444A2	0055444A2
125	26	0077140A7	-	-	-	-	-	-	C058140A2	C055140A2
147	31	-	-	-	-	-	-	-	-	C055139A2
160	33	-	-	-	-	-	-	-	-	C055138A2
173	36	-	-	-	-	-	-	-	-	C055134A2
200	42	-	-	-	-	-	-	-	-	C055137A2
300	62	-	-	-	-	-	-	-	-	C055135A2

*Kool Mµ A_L ± 15%

Package Quantity	1,500

Physical and Magnetic Parameters	
Window Area	1.27 mm²
Cross Section (A_e)	1.30 mm²
Path Length (L_e)	8.06 mm
Effective Volume (V_e)	10.5 mm³
Area Product	1.65 mm⁴

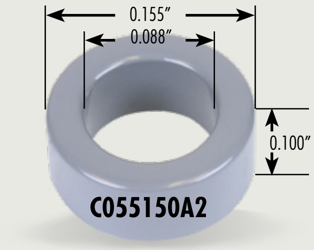
Wound Coil Dimensions		
40% Winding Factor	OD	4.30 mm
	HT	2.56 mm
Completely Full Window	Max OD	4.95 mm
	Max HT	2.74 mm

Surface Area	
Unwound Core	60 mm²
40% Winding Factor	70 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	7.24
20%	7.56
25%	7.65
30%	7.70
35%	7.81
40%	7.89
45%	7.98
50%	8.08
60%	8.27
70%	8.48

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
30	10	0.0286
31	11	0.0392
32	13	0.0567
33	15	0.0821
34	17	0.119
35	20	0.172
36	23	0.246
37	25	0.328
38	28	0.461
39	33	0.704
40	38	1.03
41	43	1.42
42	49	2.01
43	55	2.91
44	59	3.76
45	69	5.65
46	76	7.80
47	85	11.0
48	98	16.0
49	109	22.2

3.94 mm OD



Core Dimensions	OD	ID	HT
Before Finish (nominal)	3.94 mm/0.155 in	2.24 mm/0.088 in	2.54 mm/0.100 in
After Finish (limits)	4.57 mm/0.180 in	1.73 mm/0.068 in	3.18 mm/0.125 in

Perm (µ)	A_L ± 8% (nH/T^2)*	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® H*f*	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
60	17	0077151A7	-	-	-	-	-	-	C058151A2	0055151A2
75	21	0077155A7	-	-	-	-	-	-	0058155A2	0055155A2
90	25	0077154A7	-	-	-	-	-	-	0058154A2	0055154A2
125	35	0077150A7	-	-	-	-	-	-	C058150A2	C055150A2
147	41	-	-	-	-	-	-	-	-	C055149A2
160	45	-	-	-	-	-	-	-	-	C055148A2
173	48	-	-	-	-	-	-	-	-	C055144A2
200	56	-	-	-	-	-	-	-	-	C055147A2
300	84	-	-	-	-	-	-	-	-	C055145A2

*Kool Mµ A_L ± 15%

Package Quantity	750

Physical and Magnetic Parameters	
Window Area	2.32 mm^2
Cross Section (A_e)	2.11 mm^2
Path Length (L_e)	9.42 mm
Effective Volume (V_e)	19.9 mm^3
Area Product	4.90 mm^4

Wound Coil Dimensions		
40% Winding Factor	OD	4.85 mm
	HT	3.73 mm
Completely Full Window	Max OD	5.77 mm
	Max HT	4.75 mm

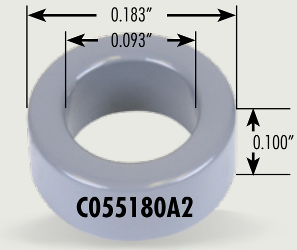
Surface Area	
Unwound Core	90 mm^2
40% Winding Factor	110 mm^2

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	9.20
20%	9.64
25%	9.76
30%	9.84
35%	9.98
40%	10.1
45%	10.2
50%	10.3
60%	10.6
70%	10.9

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
28	11	0.0251
29	13	0.0364
30	15	0.0529
31	17	0.0749
32	19	0.103
33	22	0.149
34	25	0.218
35	28	0.300
36	32	0.427
37	35	0.574
38	40	0.826
39	46	1.23
40	53	1.80
41	59	2.44
42	68	3.52
43	76	5.06
44	82	6.60
45	96	9.93
46	105	13.6
47	117	19.1

4.65 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	4.65 mm/0.183 in	2.36 mm/0.093 in	2.54 mm/0.100 in
After Finish (limits)	5.28 mm/0.208 in	1.85 mm/0.073 in	3.18 mm/0.125 in



Perm (μ)	A_L ± 8% (nH/T²)*	Part Number								
		Kool Mμ®	Kool Mμ® MAX	Kool Mμ® Hƒ	Kool Mμ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
60	20	0077181A7	-	-	-	-	-	-	0058181A2	0055181A2
75	25	0077185A7	-	-	-	-	-	-	0058185A2	0055185A2
90	30	0077184A7	-	-	-	-	-	-	0058184A2	0055184A2
125	42	0077180A7	-	-	-	-	-	-	C058180A2	C055180A2
147	49	-	-	-	-	-	-	-	-	C055179A2
160	53	-	-	-	-	-	-	-	-	C055178A2
173	57	-	-	-	-	-	-	-	-	C055174A2
200	67	-	-	-	-	-	-	-	-	C055177A2
300	99	-	-	-	-	-	-	-	-	C055175A2

*Kool Mμ A_L ± 15%

Package Quantity	500

Physical and Magnetic Parameters	
Window Area	2.69 mm²
Cross Section (A_e)	2.85 mm²
Path Length (L_e)	10.6 mm
Effective Volume (V_e)	30.3 mm³
Area Product	7.66 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	5.56 mm
	HT	3.73 mm
Completely Full Window	Max OD	6.65 mm
	Max HT	4.94 mm

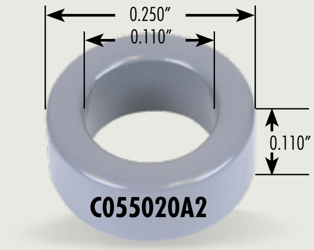
Surface Area	
Unwound Core	110 mm²
40% Winding Factor	130 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	9.79
20%	10.3
25%	10.4
30%	10.5
35%	10.6
40%	10.7
45%	10.9
50%	11.0
60%	11.3
70%	11.6

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
27	11	0.0212
28	12	0.0289
29	14	0.0414
30	16	0.0597
31	18	0.0838
32	20	0.114
33	23	0.165
34	27	0.249
35	31	0.352
36	34	0.481
37	38	0.661
38	43	0.942
39	50	1.42
40	57	2.05
41	64	2.82
42	73	4.01
43	81	5.73
44	88	7.52
45	103	11.3
46	113	15.6

6.35 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	6.35 mm/0.250 in	2.79 mm/0.110 in	2.79 mm/0.110 in
After Finish (limits)	6.99 mm/0.275 in	2.29 mm/0.090 in	3.43 mm/0.135 in



Perm (μ)	A_L ± 8% (nH/T²)*	Part Number								
		Kool Mμ®	Kool Mμ® MAX	Kool Mμ® Hƒ	Kool Mμ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	6	0077023A7	-	-	-	-	-	-	0058023A2	0055023A2
19	8	0077823A7	-	-	-	-	-	-	-	0055823A2
26	10	0077022A7	-	-	-	-	-	-	0058022A2	0055022A2
40	18	0077826A7	-	-	-	-	-	-	0058826A2	0055826A2
60	24	0077021A7	-	-	-	-	-	-	C058021A2	C055021A2
75	30	0077825A7	-	-	-	-	-	-	0058825A2	0055825A2
90	36	0077824A7	-	-	-	-	-	-	0058824A2	0055824A2
125	50	0077020A7	-	-	-	-	-	-	C058020A2	C055020A2
147	59	-	-	-	-	-	-	-	C058019A2	C055019A2
160	64	-	-	-	-	-	-	-	C058018A2	C055018A2
173	69	-	-	-	-	-	-	-	-	C055014A2
200	80	-	-	-	-	-	-	-	-	C055017A2
300	120	-	-	-	-	-	-	-	-	C055015A2
550	220	-	-	-	-	-	-	-	-	C055016A2

*Kool Mμ A_L ± 12%

Package Quantity	10,000

Physical and Magnetic Parameters	
Window Area	4.08 mm²
Cross Section (A_e)	4.70 mm²
Path Length (L_e)	13.6 mm
Effective Volume (V_e)	64.0 mm³
Area Product	19.2 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	7.34 mm
	HT	4.12 mm
Completely Full Window	Max OD	8.81 mm
	Max HT	5.38 mm

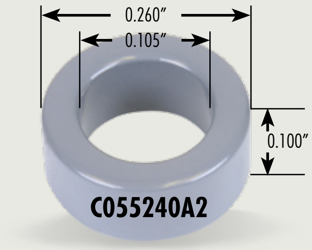
Surface Area	
Unwound Core	170 mm²
40% Winding Factor	200 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	11.6
20%	12.2
25%	12.3
30%	12.4
35%	12.6
40%	12.8
45%	12.9
50%	13.1
60%	13.4
70%	13.9

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
26	12	0.0216
27	14	0.0312
28	16	0.0446
29	18	0.0617
30	21	0.0910
31	23	0.125
32	26	0.173
33	30	0.252
34	34	0.367
35	39	0.518
36	44	0.729
37	48	0.977
38	54	1.39
39	62	2.07
40	71	3.00
41	80	4.13
42	91	5.87
43	101	8.40
44	110	11.1
45	128	16.6

6.60 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	6.60 mm/0.260 in	2.67 mm/0.105 in	2.54 mm/0.100 in
After Finish (limits)	7.24 mm/0.285 in	2.16 mm/0.085 in	3.18 mm/0.125 in



Perm (µ)	A_L ± 8% (nH/T²)*	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® Hƒ	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	6	0077243A7	-	-	-	-	-	-	0058243A2	0055243A2
19	8	0077247A7	-	-	-	-	-	-	-	0055247A2
26	11	0077242A7	-	-	-	-	-	-	0058242A2	0055242A2
40	17	0077246A7	-	-	-	-	-	-	0058246A2	0055246A2
60	26	0077241A7	-	-	-	-	-	-	C058241A2	C055241A2
75	32	0077245A7	-	-	-	-	-	-	0058245A2	0055245A2
90	39	0077244A7	-	-	-	-	-	-	0058244A2	0055244A2
125	54	0077240A7	-	-	-	-	-	-	C058240A2	C055240A2
147	64	-	-	-	-	-	-	-	C058239A2	C055239A2
160	69	-	-	-	-	-	-	-	C058238A2	C055238A2
173	75	-	-	-	-	-	-	-	-	C055234A2
200	86	-	-	-	-	-	-	-	-	C055237A2
300	130	-	-	-	-	-	-	-	-	C055235A2
550	242	-	-	-	-	-	-	-	-	C055236A2

*Kool Mµ A_L ± 12%

Package Quantity	10,000

Physical and Magnetic Parameters	
Window Area	3.63 mm²
Cross Section (A_e)	4.76 mm²
Path Length (L_e)	13.6 mm
Effective Volume (V_e)	64.9 mm³
Area Product	17.3 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	7.41 mm
	HT	3.87 mm
Completely Full Window	Max OD	9.12 mm
	Max HT	5.13 mm

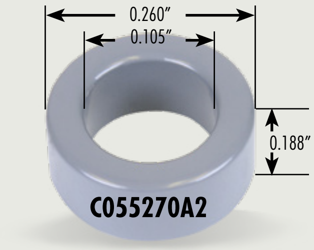
Surface Area	
Unwound Core	170 mm²
40% Winding Factor	190 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	11.4
20%	12.0
25%	12.2
30%	12.3
35%	12.4
40%	12.6
45%	12.7
50%	12.9
60%	13.2
70%	13.6

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
26	11	0.0196
27	13	0.0287
28	15	0.0414
29	17	0.0577
30	19	0.0815
31	22	0.118
32	25	0.165
33	28	0.233
34	32	0.342
35	36	0.473
36	41	0.672
37	45	0.907
38	51	1.30
39	58	1.92
40	67	2.80
41	75	3.84
42	85	5.43
43	95	7.82
44	103	10.3
45	121	15.5

6.60 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	6.60 mm/0.260 in	2.67 mm/0.105 in	4.78 mm/0.188 in
After Finish (limits)	7.24 mm/0.285 in	2.16 mm/0.085 in	5.41 mm/0.213 in



Perm (µ)	A_L ± 8% (nH/T²)*	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® Hf	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	12	0077273A7	-	-	-	-	-	-	0058273A2	0055273A2
19	16	0077877A7	-	-	-	-	-	-	-	0055877A2
26	21	0077272A7	-	-	-	-	-	-	0058272A2	0055272A2
40	33	0077876A7	-	-	-	-	-	-	0058876A2	0055876A2
60	50	0077271A7	-	-	-	-	-	-	C058271A2	C055271A2
75	62	0077875A7	-	-	-	-	-	-	0058875A2	0055875A2
90	74	0077874A7	-	-	-	-	-	-	0058874A2	0055874A2
125	103	0077270A7	-	-	-	-	-	-	C058270A2	C055270A2
147	122	-	-	-	-	-	-	-	C058269A2	C055269A2
160	132	-	-	-	-	-	-	-	C058268A2	C055268A2
173	144	-	-	-	-	-	-	-	-	C055264A2
200	165	-	-	-	-	-	-	-	-	C055267A2
300	247	-	-	-	-	-	-	-	-	C055265A2
550	466	-	-	-	-	-	-	-	-	C055266A2

*Kool Mµ A_L ± 12%

Package Quantity	10,000

Physical and Magnetic Parameters	
Window Area	3.63 mm²
Cross Section (A_e)	9.20 mm²
Path Length (L_e)	13.6 mm
Effective Volume (V_e)	125 mm³
Area Product	33.4 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	7.41 mm
	HT	6.11 mm
Completely Full Window	Max OD	9.17 mm
	Max HT	7.42 mm

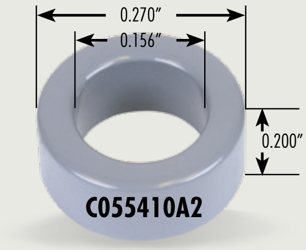
Surface Area	
Unwound Core	230 mm²
40% Winding Factor	260 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	15.9
20%	16.4
25%	16.6
30%	16.7
35%	16.9
40%	17.0
45%	17.2
50%	17.3
60%	17.7
70%	18.0

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
26	11	0.0266
27	13	0.0390
28	15	0.0566
29	17	0.0790
30	19	0.112
31	22	0.163
32	25	0.228
33	28	0.322
34	32	0.474
35	36	0.658
36	41	0.936
37	45	1.26
38	51	1.81
39	58	2.68
40	67	3.92
41	75	5.37
42	85	7.61
43	95	11.0
44	103	14.4
45	121	21.8

6.86 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	6.86 mm/0.270 in	3.96 mm/0.156 in	5.08 mm/0.200 in
After Finish (limits)	7.49 mm/0.295 in	3.45 mm/0.136 in	5.72 mm/0.225 in



Perm (µ)	A_L ± 8% (nH/T^2)*	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® H*f*	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	8	0077413A7	-	-	-	-	-	-	0058413A2	0055413A2
19	11	0077417A7	-	-	-	-	-	-	-	0055417A2
26	14	0077412A7	-	-	-	-	-	-	0058412A2	0055412A2
40	22	0077403A7	-	-	-	-	-	-	0058403A2	0055403A2
60	33	0077411A7	-	-	-	-	-	-	C058411A2	0055411A2
75	42	0077415A7	-	-	-	-	-	-	0058415A2	0055415A2
90	50	0077414A7	-	-	-	-	-	-	0058414A2	0055414A2
125	70	0077410A7	-	-	-	-	-	-	C058410A2	C055410A2
147	81	-	-	-	-	-	-	-	0058409A2	C055409A2
160	89	-	-	-	-	-	-	-	C058408A2	C055408A2
173	95	-	-	-	-	-	-	-	-	C055404A2
200	112	-	-	-	-	-	-	-	-	C055407A2
300	166	-	-	-	-	-	-	-	-	C055405A2

*Kool Mµ A_L ± 12%

Package Quantity	10,000

Physical and Magnetic Parameters	
Window Area	9.35 mm^2
Cross Section (A_e)	7.25 mm^2
Path Length (L_e)	16.5 mm
Effective Volume (V_e)	120 mm^3
Area Product	67.8 mm^4

Wound Coil Dimensions		
40% Winding Factor	OD	8.06 mm
	HT	6.84 mm
Completely Full Window	Max OD	9.60 mm
	Max HT	10.0 mm

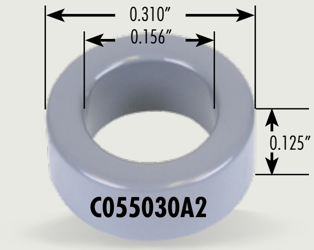
Surface Area	
Unwound Core	260 mm^2
40% Winding Factor	330 mm^2

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	15.5
20%	16.4
25%	16.6
30%	16.8
35%	17.0
40%	17.3
45%	17.5
50%	17.8
60%	18.3
70%	18.9

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
22	12	0.0116
23	14	0.0168
24	16	0.0239
25	18	0.0334
26	20	0.0465
27	23	0.0663
28	26	0.0942
29	29	0.129
30	33	0.187
31	37	0.262
32	41	0.358
33	47	0.518
34	53	0.752
35	60	1.05
36	67	1.47
37	74	1.99
38	83	2.82
39	96	4.24
40	109	6.11
41	122	8.37

7.87 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	7.87 mm/0.310 in	3.96 mm/0.156 in	3.18 mm/0.125 in
After Finish (limits)	8.51 mm/0.335 in	3.45 mm/0.136 in	3.81 mm/0.150 in



Perm (µ)	A_L ± 8% (nH/T^2)*	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® Hƒ	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	6	0077033A7	-	-	-	-	-	-	0058033A2	0055033A2
19	8	0077832A7	-	-	-	-	-	-	-	0055832A2
26	11	0077032A7	-	-	-	-	-	-	0058032A2	0055032A2
40	17	0077833A7	-	-	-	-	-	-	0058833A2	0055833A2
60	25	0077031A7	-	-	-	-	-	-	C058031A2	C055031A2
75	31	0077835A7	-	-	-	-	-	-	0058835A2	0055835A2
90	37	0077834A7	-	-	-	-	-	-	0058834A2	0055834A2
125	52	0077030A7	-	-	-	-	-	-	C058030A2	C055030A2
147	62	-	-	-	-	-	-	-	C058029A2	C055029A2
160	66	-	-	-	-	-	-	-	C058028A2	C055028A2
173	73	-	-	-	-	-	-	-	-	C055024A2
200	83	-	-	-	-	-	-	-	-	C055027A2
300	124	-	-	-	-	-	-	-	-	C055025A2
550	229	-	-	-		-		-	-	C055026A2

*Kool Mµ A_L ± 12%

Package Quantity	10,000

Physical and Magnetic Parameters	
Window Area	9.35 mm^2
Cross Section (A_e)	5.99 mm^2
Path Length (L_e)	17.9 mm
Effective Volume (V_e)	107 mm^3
Area Product	56.0 mm^4

Wound Coil Dimensions		
40% Winding Factor	OD	9.07 mm
	HT	4.93 mm
Completely Full Window	Max OD	11.0 mm
	Max HT	6.73 mm

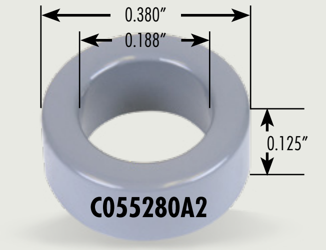
Surface Area	
Unwound Core	240 mm^2
40% Winding Factor	310 mm^2

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	12.7
20%	13.6
25%	13.8
30%	14.0
35%	14.3
40%	14.5
45%	14.7
50%	15.0
60%	15.5
70%	16.1

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
22	12	0.00988
23	14	0.0142
24	16	0.0201
25	18	0.0281
26	20	0.0390
27	23	0.0556
28	26	0.0787
29	29	0.108
30	33	0.156
31	37	0.218
32	41	0.298
33	47	0.430
34	53	0.623
35	60	0.870
36	67	1.21
37	74	1.65
38	83	2.33
39	96	3.50
40	109	5.04
41	122	6.90

9.65 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	9.65 mm/0.380 in	4.78 mm/0.188 in	3.18 mm/0.125 in
After Finish (limits)	10.29 mm/0.405 in	4.27 mm/0.168 in	3.81 mm/0.150 in



Perm (µ)	A_L ± 8% (nH/T^2)*	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® *Hf*	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	6	0077283A7	-	-	-	-	-	-	0058283A2	0055283A2
19	8	0077887A7	-	-	-	-	-	-	-	0055887A2
26	11	0077282A7	-	-	-	-	-	-	0058282A2	0055282A2
40	17	0077886A7	-	-	-	-	-	-	0058886A2	0055886A2
60	25	0077281A7	-	-	-	-	-	-	C058281A2	C055281A2
75	32	0077885A7	-	-	-	-	-	-	0058885A2	0055885A2
90	38	0077884A7	-	-	-	-	-	-	0058884A2	0055884A2
125	53	0077280A7	-	-	-	-	-	-	C058280A2	C055280A2
147	63	-	-	-	-	-	-	-	C058279A2	C055279A2
160	68	-	-	-	-	-	-	-	C058278A2	C055278A2
173	74	-	-	-	-	-	-	-	-	C055274A2
200	84	-	-	-	-	-	-	-	-	C055277A2
300	128	-	-	-	-	-	-	-	-	C055275A2
550	232	-	-	-	-	-	-	-	-	C055276A2

*Kool Mµ A_L ± 12%

Package Quantity	8,000

Physical and Magnetic Parameters	
Window Area	14.3 mm^2
Cross Section (A_e)	7.52 mm^2
Path Length (L_e)	21.8 mm
Effective Volume (V_e)	164 mm^3
Area Product	107 mm^4

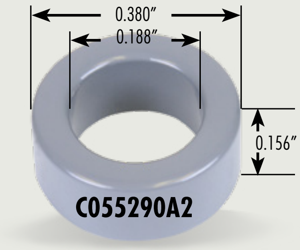
Wound Coil Dimensions		
40% Winding Factor	OD	11.0 mm
	HT	5.17 mm
Completely Full Window	Max OD	13.4 mm
	Max HT	7.44 mm

Surface Area	
Unwound Core	310 mm^2
40% Winding Factor	410 mm^2

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	13.6
20%	14.7
25%	15.0
30%	15.3
35%	15.6
40%	15.9
45%	16.2
50%	16.5
60%	17.2
70%	17.9

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
20	12	0.00684
21	13	0.00914
22	15	0.0131
23	18	0.0194
24	20	0.0268
25	23	0.0383
26	26	0.0541
27	29	0.0747
28	33	0.107
29	37	0.147
30	42	0.212
31	47	0.297
32	52	0.404
33	58	0.568
34	67	0.844
35	75	1.17
36	84	1.63
37	92	2.19
38	104	3.13
39	119	4.66

9.65 mm OD



Core Dimensions	OD	ID	HT
Before Finish (nominal)	9.65 mm/0.380 in	4.78 mm/0.188 in	3.96 mm/0.156 in
After Finish (limits)	10.29 mm/0.405 in	4.27 mm/0.168 in	4.60 mm/0.181 in

Perm (μ)	A_L ± 8% (nH/T^2)*	Part Number								
		Kool Mμ®	Kool Mμ® MAX	Kool Mμ® Hƒ	Kool Mμ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	7	0077293A7	-	-	-	-	-	-	0058293A2	0055293A2
19	10	0077297A7	-	-	-		-	-	-	0055297A2
26	14	0077292A7	-	-	-	-	-	-	0058292A2	0055292A2
40	22	0077296A7	-	-	-	-	-	-	0058296A2	0055296A2
60	32	0077291A7	-	-	-	-	-	-	C058291A2	C055291A2
75	40	0077295A7	-	-	-	-	-	-	0058295A2	0055295A2
90	48	0077294A7	-	-	-	-	-	-	0058294A2	0055294A2
125	66	0077290A7	-	-	-	-	-	-	C058290A2	C055290A2
147	78	-	-	-	-	-	-	-	C058289A2	C055289A2
160	84	-	-	-	-	-	-	-	C058288A2	C055288A2
173	92	-	-	-	-	-	-	-	-	C055284A2
200	105	-	-	-	-	-	-	-	-	C055287A2
300	159	-	-	-	-	-	-	-	-	C055285A2
550	290	-	-	-	-	-	-	-	-	C055286A2

*Kool Mμ A_L ± 12%

Package Quantity	8,000

Physical and Magnetic Parameters	
Window Area	14.3 mm^2
Cross Section (A_e)	9.45 mm^2
Path Length (L_e)	21.8 mm
Effective Volume (V_e)	206 mm^3
Area Product	135 mm^4

Wound Coil Dimensions		
40% Winding Factor	OD	11.0 mm
	HT	5.96 mm
Completely Full Window	Max OD	13.4 mm
	Max HT	8.20 mm

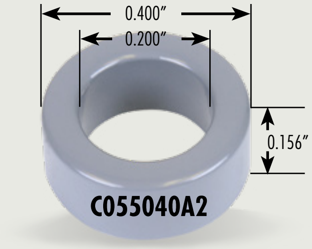
Surface Area	
Unwound Core	350 mm^2
40% Winding Factor	450 mm^2

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	15.2
20%	16.4
25%	16.6
30%	16.9
35%	17.2
40%	17.4
45%	17.8
50%	18.1
60%	18.7
70%	19.5

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
20	12	0.00747
21	13	0.0100
22	15	0.0144
23	18	0.0213
24	20	0.0295
25	23	0.0421
26	26	0.0596
27	29	0.0825
28	33	0.118
29	37	0.163
30	42	0.234
31	47	0.328
32	52	0.448
33	58	0.630
34	67	0.937
35	75	1.29
36	84	1.81
37	92	2.44
38	104	3.48
39	119	5.18

10.2 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	10.16 mm/0.400 in	5.08 mm/0.200 in	3.96 mm/0.156 in
After Finish (limits)	10.80 mm/0.425 in	4.57 mm/0.180 in	4.60 mm/0.181 in



Perm (μ)	A_L ± 8% (nH/T^2)*	Part Number								
		Kool Mμ®	Kool Mμ® MAX	Kool Mμ® Hƒ	Kool Mμ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	7	0077043A7	-	-	-	-	-	-	0058043A2	0055043A2
19	10	0077843A7	-	-	-	-	-	-	-	0055843A2
26	14	0077042A7	-	-	-	-	-	-	0058042A2	0055042A2
40	21	0077846A7	-	-	-	-	-	-	0058846A2	0055846A2
60	32	0077041A7	-	-	-	-	-	-	C058041A2	C055041A2
75	40	0077845A7	-	-	-	-	-	-	0058845A2	0055845A2
90	48	0077844A7	-	-	-	-	-	-	0058844A2	0055844A2
125	66	0077040A7	-	-	-	-	-	-	C058040A2	C055040A2
147	78	-	-	-	-	-	-	-	C058039A2	C055039A2
160	84	-	-	-	-	-	-	-	C058038A2	C055038A2
173	92	-	-	-	-	-	-	-	-	C055034A2
200	105	-	-	-	-	-	-	-	-	C055037A2
300	159	-	-	-	-	-	-	-	-	C055035A2
550	290	-	-	-	-	-	-	-	-	C055036A2

*Kool Mμ A_L ± 12%

Package Quantity	8,000

Physical and Magnetic Parameters	
Window Area	16.4 mm^2
Cross Section (A_e)	9.57 mm^2
Path Length (L_e)	23.0 mm
Effective Volume (V_e)	220 mm^3
Area Product	156 mm^4

Wound Coil Dimensions		
40% Winding Factor	OD	11.5 mm
	HT	5.96 mm
Completely Full Window	Max OD	14.1 mm
	Max HT	8.46 mm

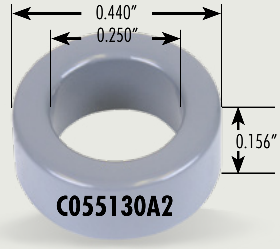
Surface Area	
Unwound Core	370 mm^2
40% Winding Factor	480 mm^2

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	15.4
20%	16.6
25%	16.9
30%	17.1
35%	17.5
40%	17.8
45%	18.1
50%	18.4
60%	19.2
70%	20.0

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
20	13	0.00818
21	15	0.0117
22	17	0.0165
23	19	0.0227
24	22	0.0328
25	25	0.0463
26	28	0.0650
27	31	0.0893
28	36	0.130
29	40	0.178
30	45	0.254
31	50	0.354
32	56	0.488
33	63	0.693
34	72	1.02
35	81	1.42
36	91	1.99
37	99	2.66
38	112	3.80
39	128	5.65

11.2 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	11.18 mm/0.440 in	6.35 mm/0.250 in	3.96 mm/0.156 in
After Finish (limits)	11.81 mm/0.465 in	5.84 mm/0.230 in	4.60 mm/0.181 in



Perm (μ)	A_L ± 8% (nH/T²)*	Part Number								
		Kool Mμ®	Kool Mμ® MAX	Kool Mμ® Hƒ	Kool Mμ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	6	0077133A7	-	-	-	-	-	-	0058133A2	0055133A2
19	8	0077230A7	-	-	-	-	-	-	-	0055230A2
26	11	0077132A7	-	-	-	-	-	-	0058132A2	0055132A2
40	17	0077402A7	-	-	-	-	-	-	0058402A2	0055402A2
60	26	0077131A7	-	-	-	-	-	-	C058131A2	C055131A2
75	32	0077335A7	-	-	-	-	-	-	0058335A2	0055335A2
90	38	0077334A7	-	-	-	-	-	-	0058334A2	0055334A2
125	53	0077130A7	-	-	-	-	-	-	C058130A2	C055130A2
147	63	-	-	-	-	-	-	-	C058129A2	C055129A2
160	68	-	-	-	-	-	-	-	C058128A2	C055128A2
173	74	-	-	-	-	-	-	-	-	C055124A2
200	85	-	-	-	-	-	-	-	-	C055127A2
300	127	-	-	-	-	-	-	-	-	C055125A2

*Kool Mμ A_L ± 12%

Package Quantity	6,000

Physical and Magnetic Parameters	
Window Area	26.8 mm²
Cross Section (Ae)	9.06 mm²
Path Length (Le)	26.9 mm
Effective Volume (Ve)	244 mm³
Area Product	243 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	12.9 mm
	HT	6.53 mm
Completely Full Window	Max OD	15.7 mm
	Max HT	8.97 mm

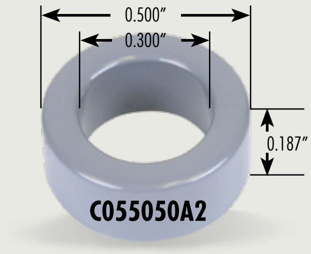
Surface Area	
Unwound Core	420 mm²
40% Winding Factor	600 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	15.2
20%	16.7
25%	17.0
30%	17.4
35%	17.8
40%	18.1
45%	18.6
50%	19.0
60%	19.9
70%	20.9

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
16	10	0.00272
17	11	0.00366
18	13	0.00532
19	15	0.00756
20	17	0.0106
21	20	0.0153
22	23	0.0220
23	25	0.0295
24	29	0.0426
25	33	0.0602
26	37	0.0845
27	41	0.116
28	46	0.164
29	52	0.228
30	59	0.328
31	65	0.453
32	72	0.618
33	81	0.877
34	93	1.30
35	104	1.79

12.7 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	12.70 mm/0.500 in	7.62 mm/0.300 in	4.75 mm/0.187 in
After Finish (limits)	13.46 mm/0.530 in	6.99 mm/0.275 in	5.51 mm/0.217 in



Perm (µ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® Hƒ	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	6.4	0077053A7	0079053A7	-	-	-	-	0059053A2	0058053A2	0055053A2
19	9	0077057A7	0079057A7	-	-	0078057A7	-	0059057A2	-	0055057A2
26	12	0077052A7	0079052A7	0076052A7	0070052A7	0078052A7	0074052A7	0059052A2	0058052A2	0055052A2
40	18	0077056A7	0079056A7	0076056A7	0070056A7	0078056A7		0059056A2	0058056A2	0055056A2
60	27	0077051A7	0079051A7	0076051A7	0070051A7	0078051A7	0074051A7	0059051A2	C058051A2	C055051A2
75	34	0077055A7	0079055A7	-	-	0078055A7	-	0059055A2	0058055A2	0055055A2
90	40	0077054A7	0079054A7	-	-	0078054A7	-	0059054A2	C058054A2	0055054A2
125	56	0077050A7	-	-	-	0078050A7	-	0059050A2	C058050A2	C055050A2
147	67	-	-	-	-	-	-	-	0058049A2	C055049A2
160	72	-	-	-	-	-	-	-	C058048A2	C055048A2
173	79	-	-	-	-	-	-	-	-	C055044A2
200	90	-	-	-	-	-	-	-	-	C055047A2
300	134	-	-	-	-	-	-	-	-	C055045A2
550	255	-	-	-	-	-	-	-	-	C055046A2

Package Quantity	5,000

Physical and Magnetic Parameters	
Window Area	38.3 mm²
Cross Section (A_e)	10.9 mm²
Path Length (L_e)	31.2 mm
Effective Volume (V_e)	340 mm³
Area Product	417 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	14.6 mm
	HT	7.66 mm
Completely Full Window	Max OD	18.2 mm
	Max HT	11.5 mm

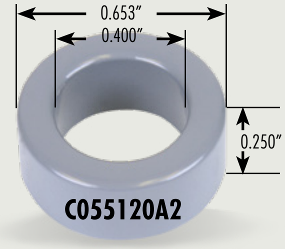
Surface Area	
Unwound Core	560 mm²
40% Winding Factor	800 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	17.5
20%	19.3
25%	19.8
30%	20.1
35%	20.7
40%	21.1
45%	21.7
50%	22.1
60%	23.2
70%	24.5

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
16	12	0.00364
17	14	0.00520
18	16	0.00733
19	19	0.0107
20	21	0.0147
21	24	0.0207
22	28	0.0302
23	31	0.0413
24	35	0.0582
25	40	0.0829
26	45	0.117
27	50	0.161
28	56	0.227
29	63	0.315
30	71	0.451
31	79	0.629
32	87	0.854
33	98	1.21
34	112	1.79
35	125	2.46

16.6 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	16.59 mm/0.653 in	10.16 mm/0.400 in	6.35 mm/0.250 in
After Finish (limits)	17.27 mm/0.680 in	9.53 mm/0.375 in	7.11 mm/0.280 in



Perm (µ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® H*f*	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	8	0077123A7	0079123A7	-		-		0059123A2	0058123A2	0055123A2
19	11	0077226A7	0079226A7	-		0078226A7		0059226A2	-	0055226A2
26	15	0077122A7	0079122A7	0076122A7	0070122A7	0078122A7	0074122A7	0059122A2	0058122A2	0055122A2
40	24	0077113A7	0079113A7	0076113A7	0070113A7	0078113A7		0059113A2	0058133A2	0055113A2
60	35	0077121A7	0079121A7	0076121A7	0070121A7	0078121A7	0074121A7	0059121A2	C058121A2	C055121A2
75	43	0077225A7	0079225A7	-		0078225A7		0059225A2	0058225A2	0055225A2
90	52	0077224A7	0079224A7	-		0078224A7		0059224A2	0058224A2	0055224A2
125	72	0077120A7	-	-		0078120A7		0059120A2	C058120A2	C055120A2
147	88	-	-	-		-		-	C058119A2	C055119A2
160	92	-	-	-		-		-	C058118A2	C055118A2
173	104	-	-	-		-		-	-	C055114A2
200	115	-	-	-		-		-	-	C055117A2
300	173	-	-	-		-		-	-	C055115A2
550	317	-	-	-		-		-	-	C055116A2

Package Quantity	2,000

Physical and Magnetic Parameters	
Window Area	71.2 mm²
Cross Section (A_e)	19.2 mm²
Path Length (L_e)	41.2 mm
Effective Volume (V_e)	791 mm³
Area Product	1,370 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	18.8 mm
	HT	10.1 mm
Completely Full Window	Max OD	23.7 mm
	Max HT	15.2 mm

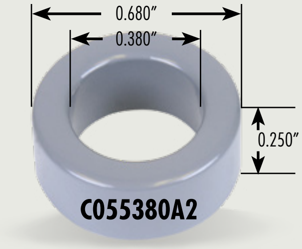
Surface Area	
Unwound Core	920 mm²
40% Winding Factor	1,300 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	22.0
20%	24.4
25%	25.0
30%	25.6
35%	26.2
40%	26.8
45%	27.6
50%	28.3
60%	29.7
70%	31.4

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
13	12	0.00234
14	14	0.00336
15	16	0.00471
16	18	0.00654
17	21	0.00940
18	24	0.0133
19	27	0.0185
20	30	0.0255
21	34	0.0359
22	39	0.0516
23	44	0.0722
24	49	0.101
25	56	0.143
26	63	0.203
27	70	0.280
28	78	0.393
29	87	0.542
30	98	0.775
31	108	1.07
32	121	1.48

17.3 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	17.27 mm/0.680 in	9.65 mm/0.380 in	6.35 mm/0.250 in
After Finish (limits)	18.03 mm/0.710 in	9.02 mm/0.355 in	7.11 mm/0.280 in



Perm (μ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mμ®	Kool Mμ® MAX	Kool Mμ® Hƒ	Kool Mμ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	10	0077383A7	0079383A7	-	-	-	-	0059383A2	0058383A2	0055383A2
19	14	0077387A7	0079387A7	-	-	0078387A7	-	0059387A2	-	0055387A2
26	19	0077382A7	0079382A7	0076382A7	0070382A7	0078382A7	0074382A7	0059382A2	0058382A2	0055382A2
40	28	0077386A7	0079386A7	0076386A7	0070386A7	0078386A7	-	0059386A2	0058386A2	0055386A2
60	43	0077381A7	0079381A7	0076381A7	0070381A7	0078381A7	0074381A7	0059381A2	C058381A2	C055381A2
75	53	0077385A7	0079385A7	-	-	0078385A7	-	0059385A2	0058385A2	0055385A2
90	64	0077384A7	0079384A7	-	-	0078384A7	-	0059384A2	C058384A2	0055384A2
125	89	0077380A7	-	-	-	0078380A7	-	0059380A2	C058380A2	C055380A2
147	105	-	-	-	-	-	-	-	C058379A2	C055379A2
160	114	-	-	-	-	-	-	-	C058378A2	C055378A2
173	123	-	-	-	-	-	-	-	-	C055374A2
200	142	-	-	-	-	-	-	-	-	C055377A2
300	214	-	-	-	-	-	-	-	-	C055375A2

Package Quantity	2,000

Physical and Magnetic Parameters	
Window Area	63.8 mm²
Cross Section (A_e)	23.2 mm²
Path Length (L_e)	41.4 mm
Effective Volume (V_e)	960 mm³
Area Product	1,480 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	19.6 mm
	HT	10.1 mm
Completely Full Window	Max OD	24.9 mm
	Max HT	16.3 mm

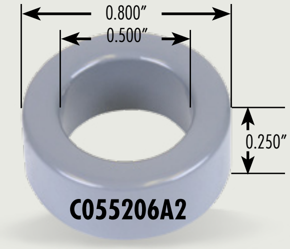
Surface Area	
Unwound Core	990 mm²
40% Winding Factor	1,400 mm²

Winding Turn Length*	
Winding Factor	Length/Turn (mm)
0%	23.2
20%	25.6
25%	26.2
30%	26.6
35%	27.4
40%	28.0
45%	28.6
50%	29.3
60%	30.8
70%	32.4

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
13	11	0.00223
14	13	0.00324
15	15	0.00460
16	17	0.00644
17	20	0.00933
18	22	0.0127
19	25	0.0179
20	29	0.0258
21	32	0.0354
22	37	0.0512
23	41	0.0704
24	46	0.099
25	52	0.139
26	59	0.199
27	66	0.277
28	74	0.391
29	82	0.535
30	92	0.764
31	102	1.06
32	114	1.47

20.3 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	20.32 mm/0.800 in	12.70 mm/0.500 in	6.35 mm/0.250 in
After Finish (limits)	21.08 mm/0.830 in	12.07 mm/0.475 in	7.11 mm/0.280 in



Perm (µ)	A_L ± 8% (nH/T^2)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® Hƒ	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	7.8	0077209A7	0079209A7	-	-	-	-	0059209A2	0058209A2	0055209A2
19	10	0077849A7	0079849A7	-	-	0078849A7	-	0059849A2	-	0055849A2
26	14	0077208A7	0079208A7	0076208A7	0070208A7	0078208A7	0074208A7	0059208A2	0058208A2	0055208A2
40	21	0077847A7	0079847A7	0076847A7	0070847A7	0078847A7	-	0059847A2	0058847A2	0055847A2
60	32	0077848A7	0079848A7	0076848A7	0070848A7	0078848A7	0074848A7	0059848A2	C058848A2	C055848A2
75	41	0077211A7	0079211A7	-	-	0078211A7	-	0059211A2	0058211A2	0055211A2
90	49	0077210A7	0079210A7	-	-	0078210A7	-	0059210A2	C058210A2	0055210A2
125	68	0077206A7	-	-	-	0078206A7	-	0059206A2	C058206A2	C055206A2
147	81	-	-	-	-	-	-	-	C058205A2	C055205A2
160	87	-	-	-	-	-	-	-	C058204A2	C055204A2
173	96	-	-	-	-	-	-	-	-	C055200A2
200	109	-	-	-	-	-	-	-	-	C055203A2
300	163	-	-	-	-	-	-	-	-	C055201A2
550	320	-	-	-	-	-	-	-	-	C055202A2

Package Quantity	1,600

Physical and Magnetic Parameters	
Window Area	114 mm^2
Cross Section (A_e)	22.1 mm^2
Path Length (L_e)	50.9 mm
Effective Volume (V_e)	1,120 mm^3
Area Product	2,520 mm^4

Wound Coil Dimensions		
40% Winding Factor	OD	22.9 mm
	HT	10.7 mm
Completely Full Window	Max OD	29.2 mm
	Max HT	17.4 mm

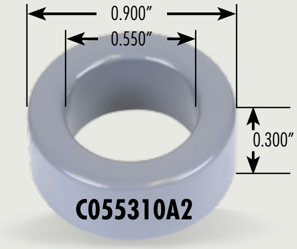
Surface Area	
Unwound Core	1,200 mm²
40% Winding Factor	1,900 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	23.2
20%	26.3
25%	27.0
30%	27.8
35%	28.6
40%	29.3
45%	30.3
50%	31.2
60%	32.9
70%	35.1

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
11	12	0.00163
12	14	0.00232
13	16	0.00324
14	18	0.00449
15	21	0.00644
16	24	0.00909
17	27	0.0126
18	31	0.0179
19	35	0.0251
20	39	0.0347
21	45	0.0498
22	50	0.0692
23	56	0.0962
24	63	0.135
25	71	0.191
26	80	0.270
27	89	0.374
28	100	0.529
29	111	0.725
30	125	1.04

22.9 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	22.86 mm/0.900 in	13.97 mm/0.550 in	7.62 mm/0.300 in
After Finish (limits)	23.62 mm/0.930 in	13.34 mm/0.525 in	8.38 mm/0.330 in



Perm (µ)	A_L ± 8% (nH/T^2)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® Hƒ	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	9.9	0077313A7	0079313A7	-	-	-	-	0059313A2	0058313A2	0055313A2
19	14	0077303A7	0079303A7	-	-	0078303A7	-	0059303A2	-	0055303A2
26	19	0077312A7	0079312A7	0076312A7	0070312A7	0078312A7	0074312A7	0059312A2	0058312A2	0055312A2
40	29	0077316A7	0079316A7	0076316A7	0070316A7	0078316A7	-	0059316A2	0058316A2	0055316A2
60	43	0077059A7	0079059A7	0076059A7	0070059A7	0078059A7	0074059A7	0059059A2	C058059A2	C055059A2
75	54	0077315A7	0079315A7	-		0078315A7	-	0059315A2	0058315A2	0055315A2
90	65	0077314A7	0079314A7	-	-	0078314A7	-	0059314A2	0058314A2	0055314A2
125	90	0077310A7	-	-	-	0078310A7	-	0059310A2	C058310A2	C055310A2
147	106	-	-	-	-	-	-	-	C058309A2	C055309A2
160	115	-	-	-	-	-	-	-	C058308A2	C055308A2
173	124	-	-	-	-	-	-	-	-	C055304A2
200	144	-	-	-	-	-	-	-	-	C055307A2
300	216	-	-	-	-	-	-	-	-	C055305A2
550	396	-	-	-	-	-	-	-	-	C055306A2

Package Quantity	1,000

Physical and Magnetic Parameters	
Window Area	139 mm^2
Cross Section (A_e)	31.7 mm^2
Path Length (L_e)	56.7 mm
Effective Volume (V_e)	1,800 mm^3
Area Product	4,430 mm^4

Wound Coil Dimensions		
40% Winding Factor	OD	25.7 mm
	HT	12.4 mm
Completely Full Window	Max OD	32.6 mm
	Max HT	19.8 mm

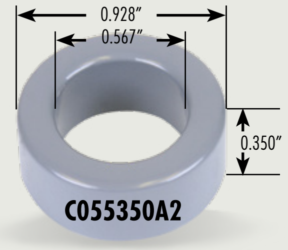
Surface Area	
Unwound Core	1,600 mm^2
40% Winding Factor	2,400 mm^2

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	27.0
20%	30.5
25%	31.3
30%	32.0
35%	33.1
40%	33.9
45%	34.9
50%	35.9
60%	38.0
70%	40.4

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
10	12	0.00148
11	14	0.00212
12	16	0.00296
13	18	0.00409
14	21	0.00589
15	24	0.00830
16	27	0.0116
17	31	0.0164
18	35	0.0230
19	39	0.0319
20	44	0.0446
21	50	0.0632
22	56	0.0888
23	63	0.124
24	70	0.173
25	79	0.244
26	89	0.345
27	99	0.479
28	111	0.677
29	123	0.927

23.6 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	23.57 mm/0.928 in	14.40 mm/0.567 in	8.89 mm/0.350 in
After Finish (limits)	24.33 mm/0.958 in	13.77 mm/0.542 in	9.65 mm/0.380 in



Perm (µ)	A_L ± 8% (nH/T^2)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® Hf	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	12	0077353A7	0079353A7	-	-	-	-	0059353A2	0058353A2	0055353A2
19	16	0077357A7	0079357A7	-	-	0078357A7	-	0059357A2	-	0055357A2
26	22	0077352A7	0079352A7	0076352A7	0070352A7	0078352A7	0074352A7	0059352A2	0058352A2	0055352A2
40	34	0077356A7	0079356A7	0076356A7	0070356A7	0078356A7	-	0059356A2	0058356A2	0055356A2
60	51	0077351A7	0079351A7	0076351A7	0070351A7	0078351A7	0074351A7	0059351A2	C058351A2	C055351A2
75	62	0077355A7	0079355A7	-	-	0078355A7	-	0059355A2	0058355A2	0055355A2
90	76	0077354A7	0079354A7	-	-	0078354A7	-	0059354A2	0058354A2	0055354A2
125	105	0077350A7	-	-	-	0078350A7	-	0059350A2	C058350A2	C055350A2
147	124	-	-	-	-	-	-	-	C058349A2	C055349A2
160	135	-	-	-	-	-	-	-	C058348A2	C055348A2
173	146	-	-	-	-	-	-	-	-	C055344A2
200	169	-	-	-	-	-	-	-	-	C055347A2
300	253	-	-	-	-	-	-	-	-	C055345A2

Package Quantity	720

Physical and Magnetic Parameters	
Window Area	149 mm^2
Cross Section (A_e)	38.8 mm^2
Path Length (L_e)	58.8 mm
Effective Volume (V_e)	2,280 mm^3
Area Product	5,770 mm^4

Wound Coil Dimensions		
40% Winding Factor	OD	26.7 mm
	HT	14.2 mm
Completely Full Window	Max OD	33.5 mm
	Max HT	21.4 mm

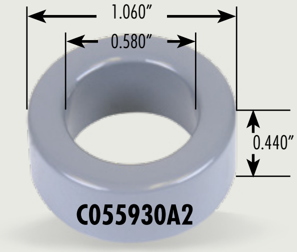
Surface Area	
Unwound Core	1,800 mm^2
40% Winding Factor	2,700 mm^2

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	29.8
20%	33.4
25%	34.2
30%	35.0
35%	36.1
40%	36.9
45%	38.0
50%	38.9
60%	41.1
70%	43.6

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
9	11	0.00120
10	13	0.00173
11	15	0.00244
12	17	0.00340
13	19	0.00467
14	22	0.00668
15	25	0.00938
16	28	0.0130
17	32	0.0184
18	36	0.0258
19	41	0.0365
20	46	0.0510
21	51	0.0705
22	58	0.101
23	65	0.140
24	73	0.197
25	82	0.277
26	92	0.392
27	102	0.542
28	115	0.770

26.9 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	26.92 mm/1.060 in	14.73 mm/0.580 in	11.18 mm/0.440 in
After Finish (limits)	27.69 mm/1.090 in	14.10 mm/0.555 in	11.94 mm/0.470 in



Perm (µ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® Hƒ	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	18	0077933A7	0079933A7	-	-	-	-	0059933A2	0058933A2	0055933A2
19	23	0077937A7	0079937A7	-	-	0078937A7	-	0059937A2	-	0055937A2
26	32	0077932A7	0079932A7	0076932A7	0070932A7	0078932A7	0074932A7	0059932A2	0058932A2	0055932A2
40	50	0077936A7	0079936A7	0076936A7	0070936A7	0078936A7	-	0059936A2	0058936A2	0055936A2
60	75	0077894A7	0079894A7	0076894A7	0070894A7	0078894A7	0074894A7	0059894A2	C058894A2	C055894A2
75	94	0077935A7	0079935A7	-	-	0078935A7	-	0059935A2	0058935A2	0055935A2
90	113	0077934A7	0079934A7	-	-	0078934A7	-	0059934A2	C058934A2	C055934A2
125	157	0077930A7	-	-	-	0078930A7	-	0059930A2	C058930A2	C055930A2
147	185	-	-	-	-	-	-	-	C058929A2	C055929A2
160	201	-	-	-	-	-	-	-	C058928A2	C055928A2
173	217	-	-	-	-	-	-	-	-	C055924A2
200	251	-	-	-	-	-	-	-	-	C055927A2
300	377	-	-	-	-	-	-	-	-	C055925A2
550	740	-	-	-	-	-	-	-	-	C055926A2

Package Quantity	400

Physical and Magnetic Parameters	
Window Area	156 mm²
Cross Section (A_e)	65.4 mm²
Path Length (L_e)	63.5 mm
Effective Volume (V_e)	4,150 mm³
Area Product	10,200 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	30.0 mm
	HT	16.5 mm
Completely Full Window	Max OD	37.3 mm
	Max HT	24.0 mm

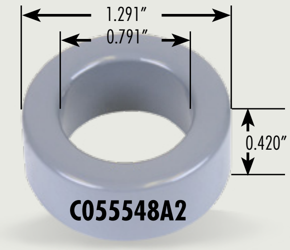
Surface Area	
Unwound Core	2,400 mm²
40% Winding Factor	3,500 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	37.5
20%	41.1
25%	41.9
30%	42.8
35%	43.8
40%	44.6
45%	45.7
50%	46.6
60%	48.8
70%	51.3

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
9	11	0.00141
10	13	0.00205
11	15	0.00292
12	17	0.00407
13	20	0.00592
14	22	0.00808
15	25	0.0114
16	29	0.0164
17	33	0.0232
18	37	0.0324
19	42	0.0459
20	47	0.0640
21	53	0.0902
22	60	0.128
23	66	0.176
24	75	0.251
25	84	0.352
26	94	0.497
27	105	0.693
28	117	0.975

32.8 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	32.79 mm/1.291 in	20.09 mm/0.791 in	10.67 mm/0.420 in
After Finish (limits)	33.66 mm/1.325 in	19.46 mm/0.766 in	11.43 mm/0.450 in



Perm (μ)	$A_L \pm 8\%$ (nH/T^2)	Part Number								
		Kool Mμ®	Kool Mμ® MAX	Kool Mμ® H*f*	Kool Mμ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	14	0077551A7	0079551A7	-	-	-	-	0059551A2	0058551A2	0055551A2
19	20	0077554A7	0079554A7	-	-	0078554A7	-	0059554A2	-	0055554A2
26	28	0077550A7	0079550A7	0076550A7	0070550A7	0078550A7	0074550A7	0059550A2	0058550A2	0055550A2
40	41	0077555A7	0079555A7	0076555A7	0070555A7	0078555A7	-	0059555A2	0058555A2	0055555A2
60	61	0077071A7	0079071A7	0076071A7	0070071A7	0078071A7	0074071A7	0059071A2	C058071A2	C055071A2
75	76	0077553A7	0079553A7	-	-	0078553A7	-	0059553A2	0058553A2	0055553A2
90	91	0077552A7	0079552A7	-	-	0078552A7	-	0059552A2	C058552A2	0055552A2
125	127	0077548A7	-	-	-	0078548A7	-	0059548A2	C058548A2	C055548A2
147	150	-	-	-	-	-	-	-	C058547A2	C055547A2
160	163	-	-	-	-	-	-	-	C058546A2	C055546A2
173	176	-	-	-	-	-	-	-	-	C055542A2
200	203	-	-	-	-	-	-	-	-	C055545A2
300	305	-	-	-	-	-	-	-	-	C055543A2
550	559	-	-	-	-	-	-	-	-	C055544A2

Package Quantity	250

Physical and Magnetic Parameters	
Window Area	297 mm^2
Cross Section (A_e)	65.6 mm^2
Path Length (L_e)	81.4 mm
Effective Volume (V_e)	5,340 mm^3
Area Product	19,500 mm^4

Wound Coil Dimensions		
40% Winding Factor	OD	36.8 mm
	HT	17.8 mm
Completely Full Window	Max OD	46.7 mm
	Max HT	28.0 mm

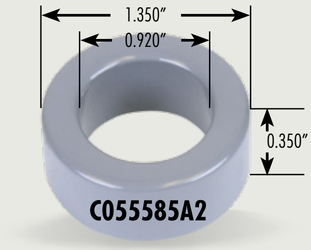
Surface Area	
Unwound Core	3,100 mm^2
40% Winding Factor	4,900 mm^2

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	37.1
20%	42.1
25%	43.2
30%	44.4
35%	45.9
40%	46.9
45%	48.5
50%	50.0
60%	52.8
70%	56.3

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	14	0.00147
9	17	0.00218
10	19	0.00299
11	22	0.00427
12	25	0.00598
13	28	0.00826
14	32	0.0117
15	36	0.0163
16	41	0.0232
17	46	0.0322
18	52	0.0455
19	58	0.0632
20	65	0.0883
21	74	0.126
22	83	0.177
23	92	0.245
24	103	0.344
25	116	0.485
26	131	0.691
27	145	0.954

34.3 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	34.29 mm/1.350 in	23.37 mm/0.920 in	8.89 mm/0.350 in
After Finish (limits)	35.18 mm/1.385 in	22.56 mm/0.888 in	9.78 mm/0.385 in



Perm (µ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® Hƒ	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	9	0077588A7	0079588A7	-	-	-	-	0059588A2	0058588A2	0055588A2
19	12	0077592A7	0079592A7	-	-	0078592A7	-	0059592A2	-	0055592A2
26	16	0077587A7	0079587A7	0076587A7	0070587A7	0078587A7	0074587A7	0059587A2	0058587A2	0055587A2
40	25	0077591A7	0079591A7	0076591A7	0070591A7	0078591A7	-	0059591A2	0058591A2	0055591A2
60	38	0077586A7	0079586A7	0076586A7	0070586A7	0078586A7	0074586A7	0059586A2	C058586A2	C055586A2
75	47	0077590A7	0079590A7	-	-	0078590A7	-	0059590A2	0058590A2	0055590A2
90	57	0077589A7	0079589A7	-	-	0078589A7	-	0059589A2	0058589A2	0055589A2
125	79	0077585A7	-	-	-	0078585A7	-	0059585A2	C058585A2	C055585A2
147	93	-	-	-	-	-	-	-	C058584A2	C055584A2
160	101	-	-	-	-	-	-	-	C058583A2	C055583A2
173	109	-	-	-	-	-	-	-	-	C055579A2
200	126	-	-	-	-	-	-	-	-	C055582A2
300	190	-	-	-	-	-	-	-	-	C055580A2
550	348	-	-	-	-	-	-	-	-	C055581A2

Package Quantity	300

Physical and Magnetic Parameters	
Window Area	399 mm²
Cross Section (A_e)	46.4 mm²
Path Length (L_e)	89.5 mm
Effective Volume (V_e)	4,150 mm³
Area Product	18,500 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	40.5 mm
	HT	16.8 mm
Completely Full Window	Max OD	50.1 mm
	Max HT	29.0 mm

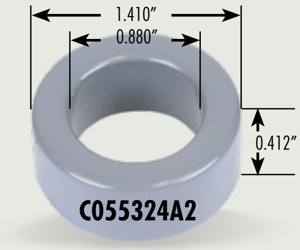
Surface Area	
Unwound Core	2,900 mm²
40% Winding Factor	5,500 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	32.2
20%	38.1
25%	39.6
30%	40.6
35%	42.5
40%	44.0
45%	45.6
50%	47.3
60%	50.8
70%	54.9

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	17	0.00160
9	20	0.00229
10	23	0.00323
11	26	0.00449
12	30	0.00636
13	34	0.00887
14	38	0.0123
15	43	0.0172
16	48	0.0238
17	54	0.0332
18	61	0.0467
19	69	0.0657
20	77	0.0913
21	87	0.1287
22	98	0.1821
23	109	0.2519
24	122	0.354
25	137	0.497
26	153	0.699
27	170	0.969

35.8 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	35.81 mm/1.410 in	22.35 mm/0.880 in	10.46 mm/0.412 in
After Finish (limits)	36.70 mm/1.445 in	21.54 mm/0.848 in	11.35 mm/0.447 in



Perm (μ)	A_L ± 8% (nH/T^2)	Part Number								
		Kool Mμ®	Kool Mμ® MAX	Kool Mμ® Hƒ	Kool Mμ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	13	0077327A7	0079327A7	-	-	-	-	0059327A2	0058327A2	0055327A2
19	18	0077317A7	0079317A7	-	-	0078317A7	-	0059317A2	-	0055317A2
26	24	0077326A7	0079326A7	0076326A7	0070326A7	0078326A7	0074326A7	0059326A2	0058326A2	0055326A2
40	37	0077330A7	0079330A7	0076330A7	0070330A7	0078330A7	-	0059330A2	0058330A2	0058330A2
60	56	0077076A7	0079076A7	0076076A7	0070076A7	0078076A7	0074076A7	0059076A2	C058076A2	C055076A2
75	70	0077329A7	0079329A7	-	-	0078329A7	-	0059329A2	0058329A2	0055329A2
90	84	0077328A7	0079328A7	-	-	0078328A7	-	0059328A2	0058328A2	0055328A2
125	117	0077324A7	-	-	-	0078324A7	-	0059324A2	C058324A2	C055324A2
147	138	-	-	-	-	-	-	-	C058323A2	C055323A2
160	150	-	-	-	-	-	-	-	C058322A2	C055322A2
173	162	-	-	-	-	-	-	-	-	C055318A2
200	187	-	-	-	-	-	-	-	-	C055321A2
300	281	-	-	-	-	-	-	-	-	C055319A2
550	515	-	-	-	-	-	-	-	-	C055320A2

Package Quantity	220

Physical and Magnetic Parameters	
Window Area	364 mm^2
Cross Section (A_e)	67.8 mm^2
Path Length (L_e)	89.8 mm
Effective Volume (V_e)	6,090 mm^3
Area Product	24,700 mm^4

Wound Coil Dimensions		
40% Winding Factor	OD	40.2 mm
	HT	18.4 mm
Completely Full Window	Max OD	51.1 mm
	Max HT	29.6 mm

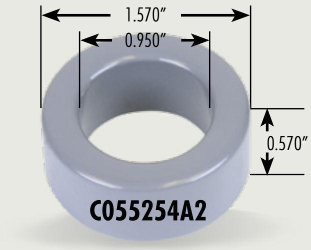
Surface Area	
Unwound Core	3,400 mm^2
40% Winding Factor	5,700 mm^2

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	37.9
20%	43.5
25%	44.8
30%	46.0
35%	47.6
40%	48.9
45%	50.6
50%	52.0
60%	55.5
70%	59.3

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	16	0.00169
9	19	0.00246
10	22	0.00351
11	25	0.00491
12	28	0.00677
13	32	0.00955
14	36	0.0133
15	41	0.0188
16	46	0.0263
17	52	0.0369
18	58	0.0514
19	65	0.0718
20	73	0.1
21	82	0.141
22	93	0.201
23	103	0.277
24	116	0.392
25	130	0.551
26	146	0.78
27	162	1.08

39.9 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	39.88 mm/1.570 in	24.13 mm/0.950 in	14.48 mm/0.570 in
After Finish (limits)	40.77 mm/1.605 in	23.32 mm/0.918 in	15.37 mm/0.605 in



Perm (μ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mμ®	Kool Mμ® MAX	Kool Mμ® *Hf*	Kool Mμ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	19	0077257A7	0079257A7	-	-	-	-	0059257A2	0058257A2	0055257A2
19	26	0077262A7	0079262A7	-	-	0078262A7	-	0059262A2	-	0055262A2
26	35	0077256A7	0079256A7	0076256A7	0070256A7	0078256A7	0074256A7	0059256A2	0058256A2	0055256A2
40	54	0077260A7	0079260A7	0076260A7	0070260A7	0078260A7	-	0059260A2	0058260A2	0055260A2
60	81	0077083A7	0079083A7	0076083A7	0070083A7	0078083A7	0074083A7	0059083A2	C058083A2	C055083A2
75	101	0077259A7	0079259A7	-	-	0078259A7	-	0059259A2	0058259A2	0055259A2
90	121	0077258A7	0079258A7	-	-	0078258A7	-	0059258A2	0058258A2	0055258A2
125	168	0077254A7	-	-	-	0078254A7	-	0059254A2	C058254A2	C055254A2
147	198	-	-	-	-	-	-	-	C058253A2	C055253A2
160	215	-	-	-	-	-	-	-	C058252A2	C055252A2
173	233	-	-	-	-	-	-	-	-	C055248A2
200	269	-	-	-	-	-	-	-	-	C055251A2
300	403	-	-	-	-	-	-	-	-	C055249A2
550	740	-	-	-	-	-		-	-	C055250A2

Package Quantity	180

Physical and Magnetic Parameters	
Window Area	427 mm²
Cross Section (A_e)	107 mm²
Path Length (L_e)	98.4 mm
Effective Volume (V_e)	10,600 mm³
Area Product	45,800 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	44.3 mm
	HT	22.4 mm
Completely Full Window	Max OD	56.4 mm
	Max HT	35.2 mm

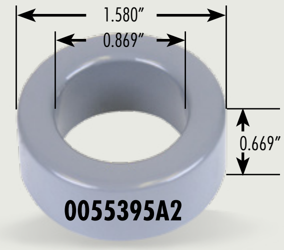
Surface Area	
Unwound Core	4,800 mm²
40% Winding Factor	7,300 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	48.2
20%	54.3
25%	55.8
30%	57.0
35%	58.8
40%	60.2
45%	62.1
50%	63.7
60%	67.3
70%	71.5

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	18	0.00229
9	21	0.00329
10	24	0.00464
11	27	0.00646
12	31	0.00917
13	35	0.0128
14	39	0.0178
15	44	0.0250
16	50	0.0354
17	56	0.0493
18	63	0.0695
19	71	0.0978
20	80	0.138
21	90	0.194
22	101	0.274
23	112	0.379
24	126	0.536
25	141	0.753
26	158	1.06
27	175	1.47

40.1 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	40.13 mm/1.580 in	22.08 mm/0.869 in	17.00 mm/0.669 in
After Finish (limits)	40.94 mm/1.612 in	21.27 mm/0.837 in	17.89 mm/0.704 in



Perm (μ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mμ®	Kool Mμ® MAX	Kool Mμ® Hƒ	Kool Mμ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	28	0077388A7	0079388A7	-	-	-	-	0059388A2	0058388A2	0055388A2
19	39	0077389A7	0079389A7	-	-	0078389A7	-	0059389A2	-	0055389A2
26	53	0077390A7	0079390A7	0076390A7	0070390A7	0078390A7	0074390A7	0059390A2	0058390A2	0055390A2
40	81	0077391A7	0079391A7	0076391A7	0070391A7	0078391A7	-	0059391A2	0058391A2	0055391A2
60	122	0077392A7	0079392A7	0076392A7	0070392A7	0078392A7	0074392A7	0059392A2	0058392A2	0055392A2
75	153	0077393A7	-	-	-	0078393A7	-	0059393A2	0058393A2	0055393A2
90	183	0077394A7	-	-	-	0078394A7	-	0059394A2	0058394A2	0055394A2
125	254	0077395A7	-	-	-	0078395A7	-	-	0058395A2	0055395A2
147	299	-	-	-	-	-	-	-	-	0055396A2
160	325	-	-	-	-	-	-	-	-	0055397A2
173	351	-	-	-	-	-	-	-	-	0055398A2
200	406	-	-	-	-	-	-	-	-	0055399A2
300	609	-	-		-		-		-	0055400A2

Package Quantity	160

Physical and Magnetic Parameters	
Window Area	355 mm²
Cross Section (A_e)	153 mm²
Path Length (L_e)	94 mm
Effective Volume (V_e)	14,600 mm³
Area Product	54,315 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	45.3 mm
	HT	24.5mm
Completely Full Window	Max OD	47.5 mm
	Max HT	33.3 mm

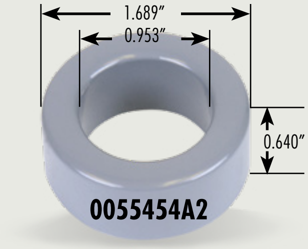
Surface Area	
Unwound Core	5,400 mm²
40% Winding Factor	7,500 mm²

Winding Turn Length*	
Winding Factor	Length/Turn (mm)
0%	55.5
20%	60.2
25%	62.5
30%	64.0
35%	65.1
40%	66.6
45%	68.3
50%	69.7
60%	73.1
70%	76.8

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	16	0.00227
9	19	0.00333
10	21	0.00456
11	24	0.00646
12	28	0.00933
13	31	0.0128
14	35	0.0181
15	40	0.0257
16	45	0.0362
17	51	0.0510
18	57	0.0714
19	65	0.102
20	72	0.141
21	81	0.199
22	92	0.285
23	102	0.394
24	114	0.554
25	129	0.787
26	144	1.11
27	160	1.54

42.9 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	42.90 mm/1.689 in	24.21 mm/0.953 in	16.26 mm/0.640 in
After Finish (limits)	43.84 mm/1.726 in	23.39 mm/0.921 in	17.27 mm/0.680 in



Perm (µ)	A_L ± 8% (nH/T^2)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® H*f*	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	25	0077446A7	0079446A7	-	-	-	-	0059446A2	0058446A2	0055446A2
19	35	0077447A7	0079447A7	-	-	0078447A7	-	0059447A2	-	0055447A2
26	47	0077448A7	0079448A7	0076448A7	0070448A7	0078448A7	0074448A7	0059448A2	0058448A2	0055448A2
40	72	0077450A7	0079450A7	0076450A7	0070450A7	0078450A7	-	0059450A2	0058450A2	0055450A2
60	108	0077451A7	0079451A7	0076451A7	0070451A7	0078451A7	0074451A7	0059451A2	0058451A2	0055451A2
75	135	0077452A7	-	-		0078452A7		0059452A2	0058452A2	0055452A2
90	161	0077453A7	-	-		0078453A7		0059453A2	0058453A2	0055453A2
125	224	0077454A7	-	-		0078454A7		-	0058454A2	0055454A2
147	264	-	-	-		-		-	0058455A2	0055455A2
160	287	-	-	-		-		-	0058456A2	0055456A2
173	310	-	-	-		-		-	-	0055457A2
200	359	-	-	-		-		-	-	0055458A2
300	538	-	-	-		-		-	-	0055459A2

Package Quantity	120

Physical and Magnetic Parameters	
Window Area	430 mm^2
Cross Section (A_e)	147.5 mm^2
Path Length (L_e)	102 mm
Effective Volume (V_e)	15,100 mm^3
Area Product	63,400 mm^4

Wound Coil Dimensions		
40% Winding Factor	OD	47.6 mm
	HT	24.6 mm
Completely Full Window	Max OD	59.4 mm
	Max HT	36.7 mm

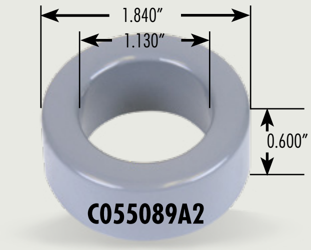
Surface Area	
Unwound Core	5,800 mm^2
40% Winding Factor	8,400 mm^2

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	55.0
20%	61.1
25%	62.5
30%	63.8
35%	65.6
40%	67.1
45%	68.9
50%	70.8
60%	74.2
70%	78.5

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	18	0.0025
9	21	0.0037
10	24	0.0052
11	27	0.0072
12	31	0.0103
13	35	0.0144
14	39	0.0200
15	44	0.0281
16	50	0.0399
17	56	0.0556
18	63	0.0784
19	71	0.110
20	80	0.156
21	90	0.219
22	101	0.310
23	113	0.433
24	126	0.608
25	142	0.860
26	159	1.22
27	176	1.68

46.7 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	46.74 mm/1.840 in	28.70 mm/1.130 in	15.24 mm/0.600 in
After Finish (limits)	47.63 mm/1.875 in	27.89 mm/1.098 in	16.13 mm/0.635 in



Perm (μ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mμ®	Kool Mμ® MAX	Kool Mμ® Hf	Kool Mμ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	20	0077092A7	0079092A7	-	-	-	-	0059092A2	0058092A2	0055092A2
19	27	0077079A7	0079079A7	-	-	0078079A7	-	0059079A2	-	0055079A2
26	37	0077091A7	0079091A7	0076091A7	0070091A7	0078091A7	0074091A7	0059091A2	0058091A2	0055091A2
40	57	0077095A7	0079095A7	0076095A7	0070095A7	0078095A7	-	0059095A2	0058095A2	0055095A2
60	86	0077090A7	0079090A7	0076090A7	0070090A7	0078090A7	0074090A7	0059090A2	C058090A2	C055090A2
75	107	0077094A7	-	-		0078094A7	-	0059094A2	0058094A2	0055094A2
90	128	0077093A7	-	-		0078093A7	-	0059093A2	C058093A2	0055093A2
125	178	0077089A7	-	-		0078089A7	-	-	C058089A2	C055089A2
147	210	-	-	-		-	-	-	0058088A2	C055088A2
160	228	-	-	-		-	-	-	-	C055087A2
173	246	-	-	-		-	-	-	-	C055082A2
200	285	-	-	-		-	-	-	-	C055086A2
300	427	-	-	-		-	-	-	-	C055084A2

Package Quantity	120

Physical and Magnetic Parameters	
Window Area	610 mm²
Cross Section (A_e)	134 mm²
Path Length (L_e)	116 mm
Effective Volume (V_e)	15,600 mm³
Area Product	81,800 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	52.0 mm
	HT	24.9 mm
Completely Full Window	Max OD	66.3 mm
	Max HT	39.8 mm

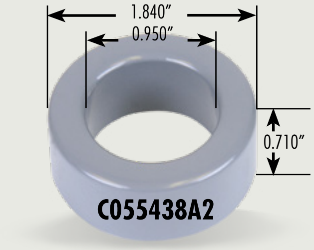
Surface Area	
Unwound Core	6,100 mm²
40% Winding Factor	9,800 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	52.0
20%	59.1
25%	61.0
30%	62.2
35%	64.5
40%	66.4
45%	68.2
50%	70.4
60%	74.7
70%	79.5

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	22	0.00296
9	26	0.00432
10	29	0.00596
11	33	0.00840
12	38	0.0120
13	42	0.0164
14	47	0.0229
15	54	0.0327
16	60	0.0455
17	68	0.0641
18	76	0.0897
19	86	0.127
20	96	0.177
21	108	0.249
22	121	0.352
23	135	0.490
24	151	0.690
25	170	0.975
26	190	1.37
27	211	1.91

46.7 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	46.74 mm/1.840 in	24.13 mm/0.950 in	18.03 mm/0.710 in
After Finish (limits)	47.63 mm/1.875 in	23.32 mm/0.918 in	18.92 mm/0.745 in



Perm (μ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mμ®	Kool Mμ® MAX	Kool Mμ® H*f*	Kool Mμ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	32	0077441A7	0079441A7	-	-	-	-	0059441A2	0058441A2	0055441A2
19	43	0077430A7	0079430A7	-	-	0078430A7	-	0059430A2	-	0055430A2
26	59	0077440A7	0079440A7	0076440A7	0070440A7	0078440A7	0074440A7	0059440A2	0058440A2	0055440A2
40	90	0077431A7	0079431A7	0076431A7	0070431A7	0078431A7	-	0059431A2	0058431A2	0055431A2
60	135	0077439A7	0079439A7	0076439A7	0070439A7	0078439A7	0074439A7	0059439A2	C058439A2	C055439A2
75	169	0077443A7	-	-	-	0078443A7	-	0059443A2	0058443A2	0055443A2
90	202	0077442A7	-	-	-	0078442A7	-	0059442A2	0058442A2	0055442A2
125	281	0077438A7	-	-	-	0078438A7	-	-	C058438A2	C055438A2
147	330	-	-	-	-	-	-	-	C058437A2	C055437A2
160	360	-	-	-	-	-	-	-	-	C055436A2
173	390	-	-	-	-	-	-	-	-	C055432A2
200	450	-	-	-	-	-	-	-	-	C055435A2
300	674	-	-	-	-	-	-	-	-	C055433A2

Package Quantity*	105
*High Flux, Edge, MPP	90

Physical and Magnetic Parameters	
Window Area	427 mm²
Cross Section (A_e)	199 mm²
Path Length (L_e)	107 mm
Effective Volume (V_e)	21,300 mm³
Area Product	85,900 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	51.2 mm
	HT	26.0 mm
Completely Full Window	Max OD	63.8 mm
	Max HT	38.7 mm

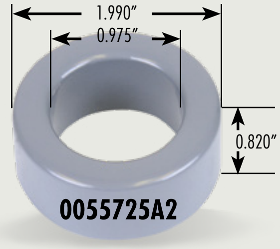
Surface Area	
Unwound Core	6,900 mm²
40% Winding Factor	9,600 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	62.1
20%	68.2
25%	69.7
30%	70.9
35%	72.7
40%	74.1
45%	76.0
50%	77.6
60%	81.2
70%	85.4

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	18	0.00280
9	21	0.00405
10	24	0.00573
11	27	0.00801
12	31	0.0114
13	35	0.0160
14	39	0.0223
15	44	0.0314
16	50	0.0446
17	56	0.0622
18	63	0.0878
19	71	0.124
20	80	0.175
21	90	0.246
22	101	0.349
23	112	0.483
24	126	0.683
25	141	0.961
26	158	1.36
27	175	1.88

50.6 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	50.55 mm/1.990 in	24.77 mm/0.975 in	20.83 mm/0.820 in
After Finish (limits)	51.51 mm/2.028 in	24.00 mm/0.945 in	21.59 mm/0.850 in



Perm (µ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® H*f*	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	41	0077728A7	0079728A7	-	-	-	-	0059728A2	0058728A2	0055728A2
19	56	0077750A7	0079750A7	-	-	0078750A7	-	0059750A2	-	0055750A2
26	76	0077727A7	0079727A7	0076727A7	0070727A7	0078727A7	0074727A7	0059727A2	0058727A2	0055727A2
40	117	0077733A7	0079733A7	0076733A7	0070733A7	0078733A7	-	0059733A2	0058733A2	0055733A2
60	175	0077726A7	0079726A7	0076726A7	0070726A7	0078726A7	0074726A7	0059726A2	0058726A2	0055726A2
75	219	0077729A7	-	-	-	0078729A7	-	0059729A2	0058729A2	0055729A2
90	263	0077730A7	-	-	-	0078730A7	-	0059730A2	0058730A2	0055730A2
125	366	0077725A7	-	-	-	0078725A7	-	-	0058725A2	0055725A2
147	426	-	-	-	-	-	-	-	0058724A2	0055724A2
173	504	-	-	-	-	-	-	-	-	0055722A2
200	582	-	-	-	-	-	-	-	-	0055731A2
300	873	-	-	-	-	-	-	-	-	0055732A2

Package Quantity	70

Physical and Magnetic Parameters	
Window Area	452 mm²
Cross Section (A_e)	262 mm²
Path Length (L_e)	113.5 mm
Effective Volume (V_e)	29,700 mm³
Area Product	118,000 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	55.0 mm
	HT	29.0 mm
Completely Full Window	Max OD	68.0 mm
	Max HT	41.0 mm

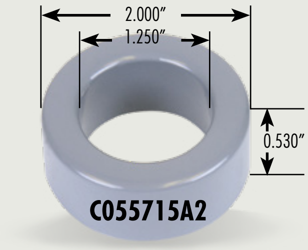
Surface Area	
Unwound Core	8,300 mm²
40% Winding Factor	11,500 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	70.7
20%	76.9
25%	78.3
30%	79.7
35%	81.5
40%	82.8
45%	84.8
50%	86.6
60%	90.1
70%	94.4

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	19	0.0033
9	22	0.0047
10	25	0.0067
11	28	0.0093
12	32	0.0132
13	36	0.0185
14	40	0.026
15	46	0.037
16	51	0.051
17	58	0.073
18	65	0.102
19	73	0.144
20	82	0.202
21	92	0.28
22	104	0.41
23	116	0.57
24	130	0.80
25	146	1.13
26	163	1.59
27	181	2.21

50.8 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	50.80 mm/2.000 in	31.75 mm/1.250 in	13.46 mm/0.530 in
After Finish (limits)	51.69 mm/2.035 in	30.94 mm/1.218 in	14.35 mm/0.565 in



Perm (µ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® *Hf*	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	17	0077718A7	0079718A7	-	-	-	-	0059718A2	0058718A2	0055718A2
19	23	0077708A7	0079708A7	-	-	0078708A7	-	0059708A2	-	0055708A2
26	32	0077717A7	0079717A7	0076717A7	0070717A7	0078717A7	0074717A7	0059717A2	0058717A2	0055717A2
40	49	0077721A7	0079721A7	0076721A7	0070721A7	0078721A7	-	0059721A2	0058721A2	0055721A2
60	73	0077716A7	0079716A7	0076716A7	0070716A7	0078716A7	0074716A7	0059716A2	C058716A2	C055716A2
75	91	0077720A7	-	-	-	0078720A7	-	0059720A2	0058720A2	0055720A2
90	109	0077719A7	-	-	-	0078719A7	-	0059719A2	0058719A2	0055719A2
125	152	0077715A7	-	-	-	0078715A7	-	-	C058715A2	C055715A2
147	179	-	-	-	-	-	-	-	C058714A2	C055714A2
160	195	-	-	-	-	-	-	-	-	C055713A2
173	210	-	-	-	-	-	-	-	-	C055709A2
200	243	-	-	-	-	-	-	-	-	C055712A2
300	365	-	-	-	-	-	-	-	-	C055710A2

Package Quantity	90

Physical and Magnetic Parameters	
Window Area	751 mm²
Cross Section (A_e)	125 mm²
Path Length (L_e)	127 mm
Effective Volume (V_e)	15,900 mm³
Area Product	94,000 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	56.6 mm
	HT	24.2 mm
Completely Full Window	Max OD	72.4 mm
	Max HT	40.6 mm

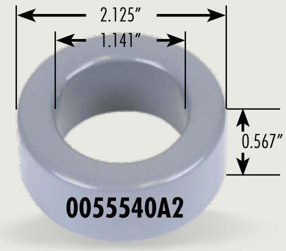
Surface Area	
Unwound Core	6,400 mm²
40% Winding Factor	11,000 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	49.5
20%	57.4
25%	59.6
30%	61.0
35%	63.5
40%	65.5
45%	67.7
50%	70.1
60%	74.9
70%	80.3

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	25	0.00324
9	29	0.00463
10	33	0.00651
11	37	0.00904
12	42	0.0127
13	47	0.0176
14	53	0.0247
15	60	0.0348
16	67	0.0486
17	76	0.0685
18	85	0.0959
19	95	0.134
20	107	0.189
21	120	0.265
22	135	0.375
23	150	0.520
24	168	0.732
25	189	1.03
26	211	1.46
27	234	2.02

54.0 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	54.00 mm/2.125 in	29.00 mm/1.141in	14.40 mm/0.567 in
After Finish (limits)	54.90 mm/2.161 in	28.10 mm/1.106 in	15.30 mm/0.602 in



Perm (µ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® H*f*	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	24	0077533A7	0079533A7	-	-	-	-	0059533A2	0058533A2	0055533A2
19	33	0077534A7	0079534A7	-	-	0078534A7	-	0059534A2	-	0055534A2
26	45	0077535A7	0079535A7	0076535A7	0070535A7	0078535A7	0074535A7	0059535A2	0058535A2	0055535A2
40	69	0077536A7	0079536A7	0076536A7	0070536A7	0078536A7	-	0059536A2	0058536A2	0055536A2
60	104	0077537A7	0079537A7	0076537A7	0070537A7	0078537A7	0074537A7	0059537A2	0058537A2	0055537A2
75	130	0077538A7	-	-	-	0078538A7	-	0059538A2	0058538A2	0055538A2
90	156	0077539A7	-	-	-	0078539A7	-	0059539A2	0058539A2	0055539A2
125	217	0077540A7	-	-	-	0078540A7	-	0059540A2	0058540A2	0055540A2
147	255	-	-	-	-	-	-	-	-	0055531A2
160	278	-	-	-	-	-	-	-	-	0055532A2

Package Quantity	90

Physical and Magnetic Parameters	
Window Area	620 mm²
Cross Section (A_e)	174 mm²
Path Length (L_e)	126 mm
Effective Volume (V_e)	22,000 mm³
Area Product	107,880 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	60.9 mm
	HT	24.3 mm
Completely Full Window	Max OD	63.9 mm
	Max HT	36.3 mm

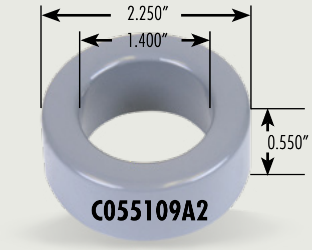
Surface Area	
Unwound Core	7,500 mm²
40% Winding Factor	11,000 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	54.7
20%	64.7
25%	66.5
30%	67.9
35%	70.2
40%	72.0
45%	74.0
50%	76.1
60%	80.5
70%	85.5

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	23	0.00337
9	26	0.00470
10	29	0.00649
11	33	0.00917
12	38	0.0131
13	43	0.0184
14	48	0.0256
15	54	0.0359
16	61	0.0508
17	68	0.0705
18	77	0.100
19	86	0.140
20	97	0.197
21	109	0.277
22	122	0.392
23	136	0.545
24	152	0.766
25	171	1.08
26	192	1.54
27	212	2.12

57.2 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	57.15 mm/2.250 in	35.56 mm/1.400 in	13.97 mm/0.550 in
After Finish (limits)	58.04 mm/2.285 in	34.75 mm/1.368 in	14.86 mm/0.585 in



Perm (µ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® *Hf*	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	18	0077112A7	0079112A7	-	-	-	-	0059112A2	0058112A2	0055112A2
19	24	0077215A7	0079215A7	-	-	0078215A7	-	0059215A2	-	0055215A2
26	33	0077111A7	0079111A7	0076111A7	0070111A7	0078111A7	0074111A7	0059111A2	0058111A2	0055111A2
40	50	0077212A7	0079212A7	0076212A7	0070212A7	0078212A7	-	0059212A2	0058212A2	0055212A2
60	75	0077110A7	0079110A7	0076110A7	0070110A7	0078110A7	0074110A7	0059110A2	C058110A2	C055110A2
75	94	0077214A7	-	-	-	0078214A7	-	0059214A2	0058214A2	0055214A2
90	112	0077213A7	-	-	-	0078213A7	-	0059213A2	C058213A2	0055213A2
125	156	0077109A7	-	-	-	0078109A7	-	-	C058109A2	C055109A2
147	185	-	-	-	-	-	-	-	-	C055108A2
160	200	-	-	-	-	-	-	-	-	C055107A2
173	218	-	-	-	-	-	-	-	-	C055103A2
200	250	-	-	-	-	-	-	-	-	C055106A2
300	374	-	-	-	-	-	-	-	-	C055104A2

Package Quantity	90

Physical and Magnetic Parameters	
Window Area	948 mm²
Cross Section (A_e)	144 mm²
Path Length (L_e)	143 mm
Effective Volume (V_e)	20,700 mm³
Area Product	137,000 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	63.5 mm
	HT	25.9 mm
Completely Full Window	Max OD	81.3 mm
	Max HT	44.4 mm

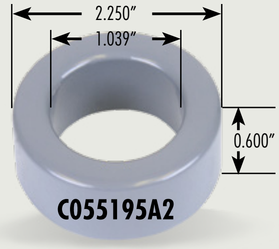
Surface Area	
Unwound Core	7,700 mm²
40% Winding Factor	13,000 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	53.0
20%	61.9
25%	64.3
30%	65.8
35%	68.7
40%	71.0
45%	73.2
50%	76.0
60%	81.3
70%	87.1

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	29	0.00397
9	33	0.00558
10	37	0.00773
11	42	0.0109
12	48	0.0154
13	54	0.0215
14	60	0.0297
15	68	0.0420
16	76	0.0586
17	85	0.0816
18	96	0.115
19	108	0.162
20	120	0.225
21	135	0.318
22	152	0.451
23	169	0.625
24	189	0.880
25	212	1.24
26	238	1.76
27	263	2.43

57.2 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	57.15 mm/2.250 in	26.39 mm/1.039 in	15.24 mm/0.600 in
After Finish (limits)	58.04 mm/2.285 in	25.58 mm/1.007 in	16.13 mm/0.635 in



Perm (µ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® Hƒ	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	32	0077190A7	0079190A7	-	-	-	-	0059190A2	0058190A2	0055190A2
19	44	0077188A7	0079188A7	-	-	0078188A7	-	0059188A2	-	0055188A2
26	60	0077191A7	0079191A7	0076191A7	0070191A7	0078191A7	0074191A7	0059191A2	0058191A2	0055191A2
40	92	0077189A7	0079189A7	0076189A7	0070189A7	0078189A7	-	0059189A2	0058189A2	0055189A2
60	138	0077192A7	0079192A7	0076192A7	0070192A7	0078192A7	0074192A7	0059192A2	C058192A2	C055192A2
75	172	0077193A7	-	-	-	0078193A7	-	0059193A2	0058193A2	0055193A2
90	207	0077194A7	-	-	-	0078194A7	-	0059194A2	0058194A2	0055194A2
125	287	0077195A7	-	-	-	0078195A7	-	-	C058195A2	C055195A2
147	306	-	-	-	-	-	-	-	-	C055196A2
160	333	-	-	-	-	-	-	-	-	C055197A2
173	360	-	-	-	-	-	-	-	-	C055198A2
200	417	-	-	-	-	-	-	-	-	C055199A2
300	626	-	-	-	-	-	-	-	-	0055186A2

Package Quantity	80

Physical and Magnetic Parameters	
Window Area	514 mm²
Cross Section (A_e)	229 mm²
Path Length (L_e)	125 mm
Effective Volume (V_e)	28,600 mm³
Area Product	118,000 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	62.0 mm
	HT	24.0 mm
Completely Full Window	Max OD	75.7 mm
	Max HT	34.0 mm

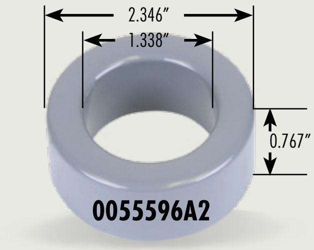
Surface Area	
Unwound Core	8,500 mm²
40% Winding Factor	12,000 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	64.6
20%	71.2
25%	72.9
30%	74.1
35%	76.3
40%	77.8
45%	79.8
50%	81.6
60%	85.6
70%	90.1

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	20	0.00322
9	23	0.00458
10	26	0.00642
11	30	0.00921
12	34	0.0130
13	39	0.0185
14	43	0.0254
15	49	0.0362
16	55	0.0508
17	62	0.0714
18	70	0.101
19	78	0.141
20	88	0.199
21	99	0.281
22	111	0.398
23	124	0.555
24	138	0.777
25	156	1.10
26	174	1.56
27	193	2.16

59.6 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	59.60 mm/2.346 in	34.00 mm/1.338in	19.50 mm/0.767 in
After Finish (limits)	60.60 mm/2.385 in	33.00 mm/1.299 in	20.50 mm/0.807 in



Perm (µ)	$A_L \pm 8\%$ (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® H*f*	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	29	0077603A7	0079603A7	-	-	-	-	0059603A2	0058603A2	0055603A2
19	39	0077602A7	0079602A7	-	-	0078602A7	-	0059602A2	-	0055602A2
26	54	0077601A7	0079601A7	0076601A7	0070601A7	0078601A7	0074601A7	0059601A2	0058601A2	0055601A2
40	83	0077600A7	0079600A7	0076600A7	0070600A7	0078600A7	-	0059600A2	0058600A2	0055600A2
60	125	0077599A7	0079599A7	0076599A7	0070599A7	0078599A7	0074599A7	0059599A2	0058599A2	0055599A2
75	156	0077598A7	-	-	-	0078598A7	-	0059598A2	0058598A2	0055598A2
90	187	0077597A7	-	-	-	0078597A7	-	0059597A2	0058597A2	0055597A2
125	259	0077596A7	-	-	-	-	-	-	0058596A2	0055596A2
147	305	-	-	-	-	-	-	-	-	0055595A2

Package Quantity	63

Physical and Magnetic Parameters	
Window Area	855 mm²
Cross Section (A_e)	237 mm²
Path Length (L_e)	143 mm
Effective Volume (V_e)	33,900 mm³
Area Product	202,635 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	67.4 mm
	HT	30.7 mm
Completely Full Window	Max OD	70.8 mm
	Max HT	44.3 mm

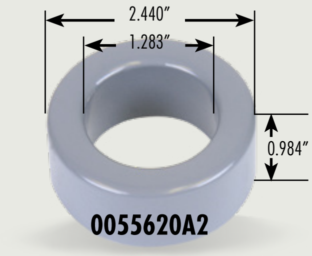
Surface Area	
Unwound Core	10,000 mm²
40% Winding Factor	15,000 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	68.6
20%	77.2
25%	78.7
30%	81.4
35%	83.3
40%	85.7
45%	87.9
50%	90.5
60%	95.7
70%	102

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
6	21	0.00233
7	24	0.00327
8	27	0.00456
9	31	0.00649
10	35	0.00910
11	40	0.0129
12	45	0.0181
13	51	0.0255
14	57	0.0356
15	64	0.0499
16	72	0.0703
17	81	0.0987
18	91	0.139
19	102	0.195
20	114	0.273
21	128	0.385
22	144	0.546
23	160	0.758
24	180	1.07
25	202	1.51

62.0 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	61.98 mm/2.440 in	32.59 mm/1.283 in	24.99 mm/0.984 in
After Finish (limits)	63.09 mm/2.484 in	31.70 mm/1.248 in	25.91 mm/1.020 in



Perm (μ)	A_L ± 8% (nH/T^2)	Part Number								
		Kool Mμ®	Kool Mμ® MAX	Kool Mμ® Hƒ	Kool Mμ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	44	0077614A7	0079614A7	-	-	-	-	0059614A2	0058614A2	0055614A2
19	60	0077612A7	0079612A7	-	-	0078612A7	-	0059612A2	-	0055612A2
26	82	0077615A7	0079615A7	0076615A7	0070615A7	0078615A7	0074615A7	0059615A2	0058615A2	0055615A2
40	126	0077616A7	0079616A7	0076616A7	0070616A7	0078616A7	-	0059616A2	0058616A2	0055616A2
60	189	0077617A7	0079617A7	0076617A7	0070617A7	0078617A7	0074617A7	0059617A2	0058617A2	0055617A2
75	237	0077618A7	-	-	-	0078618A7	-	0059618A2	0058618A2	0055618A2
90	284	0077619A7	-	-	-	0078619A7	-	0059619A2	0058619A2	0055619A2
125	394	0077620A7	-	-	-	-	-	-	0058620A2	0055620A2
147	465	-	-	-	-	-	-	-	-	0055624A2

Package Quantity	27

Physical and Magnetic Parameters	
Window Area	789 mm^2
Cross Section (A_e)	360 mm^2
Path Length (L_e)	144 mm
Effective Volume (V_e)	51,800 mm^3
Area Product	284,000 mm^4

Wound Coil Dimensions		
40% Winding Factor	OD	75.3 mm
	HT	39.7 mm
Completely Full Window	Max OD	81.4 mm
	Max HT	47.4 mm

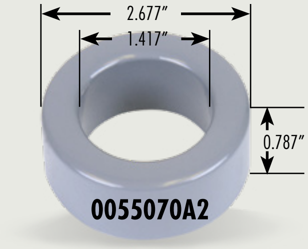
Surface Area	
Unwound Core	12,000 mm^2
40% Winding Factor	21,000 mm^2

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	83.0
20%	91.3
25%	93.4
30%	94.9
35%	97.5
40%	99.5
45%	102
50%	104
60%	109
70%	115

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
6	20	0.00260
7	23	0.00368
8	26	0.00517
9	30	0.00741
10	34	0.0104
11	38	0.0146
12	43	0.0205
13	49	0.0291
14	54	0.0402
15	61	0.0568
16	69	0.0805
17	78	0.114
18	87	0.159
19	98	0.225
20	110	0.316
21	123	0.444
22	138	0.629
23	154	0.878
24	172	1.24
25	194	1.75

68.0 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	68.00 mm/2.677 in	35.99 mm/1.417 in	19.99 mm/0.787 in
After Finish (limits)	69.42 mm/2.733 in	34.67 mm/1.365 in	21.41 mm/0.843 in



Perm (µ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® Hƒ	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	35	0077075A7	0079075A7	-	-	-	-	0059075A2	0058075A2	0055075A2
19	48	0077067A7	0079067A7	-	-	0078067A7	-	0059067A2	-	0055067A2
26	65	0077074A7	0079074A7	0076074A7	0070074A7	0078074A7	0074074A7	0059074A2	0058074A2	0055074A2
40	100	0077073A7	0079073A7	0076073A7	0070073A7	0078073A7	-	0059073A2	0058073A2	0055073A2
60	143	0077072A7	0079072A7	0076072A7	0070072A7	0078072A7	0074072A7	0059072A2	0058072A2	0055072A2
75	187	0077069A7	-	-	-	0078069A7	-	0059069A2	0058069A2	0055069A2
90	225	0077068A7	-	-	-	0078068A7	-	0059068A2	0058068A2	0055068A2
125	312	0077070A7	-	-	-	-	-	-	0058070A2	0055070A2
147	367	-	-	-	-	-	-	-	-	0055066A2

Package Quantity	35

Physical and Magnetic Parameters	
Window Area	945 mm²
Cross Section (A_e)	314 mm²
Path Length (L_e)	158 mm
Effective Volume (V_e)	49,700 mm³
Area Product	297,000 mm⁴

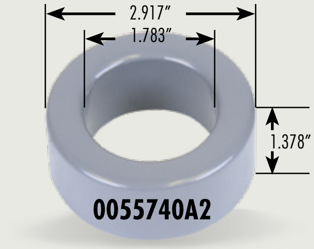
Wound Coil Dimensions		
40% Winding Factor	OD	74.7 mm
	HT	32.4 mm
Completely Full Window	Max OD	92.7 mm
	Max HT	50.6 mm

Surface Area	
Unwound Core	12,700 mm²
40% Winding Factor	19,000 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	77.6
20%	86.6
25%	88.6
30%	90.7
35%	93.2
40%	95.1
45%	98.0
50%	101
60%	106
70%	112

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
6	22	0.0027
7	25	0.0038
8	29	0.0054
9	33	0.0077
10	37	0.0107
11	42	0.0151
12	48	0.022
13	54	0.030
14	60	0.042
15	68	0.059
16	76	0.083
17	85	0.116
18	96	0.165
19	108	0.23
20	120	0.32
21	135	0.46
22	152	0.65
23	169	0.90
24	189	1.27
25	212	1.79

74.1 mm OD



Core Dimensions	OD	ID	HT
Before Finish (nominal)	74.09 mm/2.917 in	45.29 mm/1.783 in	35.00 mm/1.378 in
After Finish (limits)	75.21 mm/2.961 in	44.40 mm/1.748 in	35.92 mm/1.414 in

Perm (µ)	A_L ± 8% (nH/T^2)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® H*f*	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	48	0077734A7	0079734A7	-	-	-	-	0059734A2	0058734A2	0055734A2
19	64	0077744A7	0079744A7	-	-	0078744A7	-	0059744A2	-	0055744A2
26	88	0077735A7	0079735A7	0076735A7	0070735A7	0078735A7	0074735A7	0059735A2	0058735A2	0055735A2
40	136	0077736A7	0079736A7	0076736A7	0070736A7	0078736A7	-	0059736A2	0058736A2	0055736A2
60	204	0077737A7	0079737A7	0076737A7	0070737A7	0078737A7	0074737A7	0059737A2	0058737A2	0055737A2
75	255	0077738A7	-	-	-	0078738A7	-	0059738A2	0058738A2	0055738A2
90	306	0077739A7	-	-	-	0078739A7	-	0059739A2	0058739A2	0055739A2
125	425	0077740A7	-	-	-	-	-	-	0058740A2	0055740A2
147	501	-	-	-	-	-	-	-	-	0055745A2

Package Quantity	24

Physical and Magnetic Parameters	
Window Area	1,550 mm^2
Cross Section (A_e)	497 mm^2
Path Length (L_e)	184 mm
Effective Volume (V_e)	91,400 mm^3
Area Product	769,000 mm^4

Wound Coil Dimensions		
40% Winding Factor	OD	91.0 mm
	HT	55.2 mm
Completely Full Window	Max OD	102 mm
	Max HT	65.7 mm

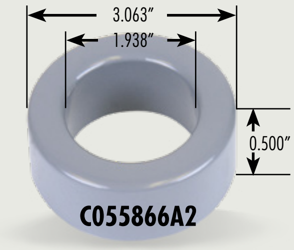
Surface Area	
Unwound Core	19,000 mm^2
40% Winding Factor	33,000 mm^2

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	102
20%	114
25%	117
30%	119
35%	122
40%	125
45%	129
50%	132
60%	139
70%	147

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
6	29	0.00450
7	33	0.00632
8	38	0.00907
9	43	0.0128
10	49	0.0182
11	55	0.0255
12	62	0.0358
13	70	0.0505
14	78	0.0706
15	88	0.0997
16	98	0.139
17	110	0.196
18	124	0.277
19	139	0.390
20	155	0.546
21	174	0.769
22	195	1.09
23	217	1.52
24	243	2.14
25	273	3.03

77.8 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	77.80 mm/3.063 in	49.23 mm/1.938 in	12.70 mm/0.500 in
After Finish (limits)	78.94 mm/3.108 in	48.21 mm/1.898 in	13.84 mm/0.545 in



Perm (µ)	$A_L \pm 8\%$ (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® Hƒ	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	16	0077869A7	0079869A7	-	-	-	-	0059869A2	0058869A2	0055869A2
19	22	0077873A7	0079873A7	-	-	0078873A7	-	0059873A2	-	0055873A2
26	30	0077868A7	0079868A7	0076868A7	0070868A7	0078868A7	0074868A7	0059868A2	0058868A2	0055868A2
40	45	0077872A7	0079872A7	-	0070872A7	0078872A7	-	0059872A2	0058872A2	0055872A2
60	68	0077867A7	0079867A7	-	0070867A7	0078867A7	0074867A7	0059867A2	C058867A2	C055867A2
75	85	0077871A7	-	-	-	0078871A7	-	0058871A2	0058871A2	0055871A2
90	102	0077870A7	-	-	-	0078870A7	-	0059870A2	0058870A2	0055870A2
125	142	0077866A7	-	-	-	-	-	-	C058866A2	C055866A2
147	166	-	-	-	-	-	-	-	-	0055865A2
200	225	-	-	-	-	-	-	-	-	C055863A2

Package Quantity	45

Physical and Magnetic Parameters	
Window Area	1,820 mm²
Cross Section (A_e)	176 mm²
Path Length (L_e)	196 mm
Effective Volume (V_e)	34,500 mm³
Area Product	321,000 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	86.6 mm
	HT	29.1 mm
Completely Full Window	Max OD	112 mm
	Max HT	54.3 mm

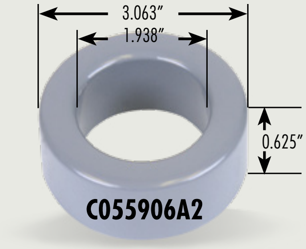
Surface Area	
Unwound Core	11,000 mm²
40% Winding Factor	23,000 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	58.4
20%	70.9
25%	74.1
30%	76.3
35%	80.4
40%	83.5
45%	86.7
50%	90.4
60%	98.1
70%	107

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	41	0.00607
9	47	0.00860
10	53	0.0120
11	60	0.0169
12	67	0.0234
13	76	0.0329
14	85	0.0459
15	95	0.0640
16	107	0.0901
17	120	0.126
18	135	0.178
19	151	0.248
20	169	0.348
21	189	0.487
22	212	0.689
23	236	0.958
24	264	1.35
25	296	1.90
26	331	2.68
27	367	3.72

77.8 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	77.80 mm/3.063 in	49.23 mm/1.938 in	15.88 mm/0.625 in
After Finish (limits)	78.94 mm/3.108 in	48.21 mm/1.898 in	17.02 mm/0.670 in



Perm (μ)	A_L ± 8% (nH/T^2)	Part Number								
		Kool Mμ®	Kool Mμ® MAX	Kool Mμ® H*f*	Kool Mμ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	20	0077909A7	0079909A7	-	-	-	-	0059909A2	0058909A2	0055909A2
19	27	0077913A7	0079913A7	-	-	0078913A7	-	0059913A2	-	0055913A2
26	37	0077908A7	0079908A7	0076908A7	0070908A7	0078908A7	0074908A7	0059908A2	0058908A2	0055908A2
40	57	0077912A7	0079912A7	-	0070912A7	0078912A7	-	0059912A2	0058912A2	0055912A2
60	85	0077907A7	0079907A7	-	0070907A7	0078907A7	0074907A7	0059907A2	C058907A2	C055907A2
75	106	0077911A7	-	-	-	0078911A7	-	0059911A2	0058911A2	0055911A2
90	128	0077910A7	-	-	-	0078910A7	-	0059910A2	0058910A2	0055910A2
125	177	0077906A7	-	-	-	-	-	-	C058906A2	C055906A2
147	208	-	-	-	-		-	-	-	0055905A2

Package Quantity	40

Physical and Magnetic Parameters	
Window Area	1,820 mm^2
Cross Section (A_e)	221 mm^2
Path Length (L_e)	196 mm
Effective Volume (V_e)	43,400 mm^3
Area Product	403,000 mm^4

Wound Coil Dimensions		
40% Winding Factor	OD	86.6 mm
	HT	32.3 mm
Completely Full Window	Max OD	113 mm
	Max HT	57.7 mm

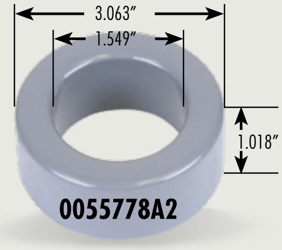
Surface Area	
Unwound Core	13,000 mm^2
40% Winding Factor	24,000 mm^2

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	64.8
20%	77.3
25%	80.1
30%	83.1
35%	86.5
40%	89.2
45%	93.2
50%	97.0
60%	104
70%	113

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	41	0.00660
9	47	0.00937
10	53	0.0131
11	60	0.0184
12	67	0.0256
13	76	0.0361
14	85	0.0504
15	95	0.0703
16	107	0.0991
17	120	0.139
18	135	0.195
19	151	0.274
20	169	0.383
21	189	0.538
22	212	0.761
23	236	1.06
24	264	1.49
25	296	2.10
26	331	2.96
27	367	4.11

77.8 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	77.80 mm/3.063 in	39.34 mm/1.549 in	25.86 mm/1.018 in
After Finish (limits)	78.94 mm/3.108 in	38.33 mm/1.509 in	26.85 mm/1.057 in



Perm (µ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® *Hf*	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	47	0077774A7	0079774A7	-	-	-	-	0059774A2	0058774A2	0055774A2
19	64	0077772A7	0079772A7	-	-	0078772A7	-	0059772A2	-	0055772A2
26	88	0077775A7	0079775A7	0076775A7	0070775A7	0078775A7	0074775A7	0059775A2	0058775A2	0055775A2
40	135	0077776A7	0079776A7	-	0070776A7	0078776A7	-	0059776A2	0058776A2	0055776A2
60	205	0077777A7	0079777A7	-	0070777A7	0078777A7	0074777A7	0059777A2	0058777A2	0055777A2
75	256	0077773A7	-	-	-	0078773A7	-	0059773A2	0058773A2	0055773A2
90	306	0077771A7	-	-	-	0078771A7	-	0059771A2	0058771A2	0055771A2
125	425	0077778A7	-	-	-	-	-	-	0058778A2	0055778A2
147	500	-	-	-	-	-	-	-	-	0055779A2

Package Quantity*	25
*0055779A2	20

Physical and Magnetic Parameters	
Window Area	1,150 mm²
Cross Section (A_e)	492 mm²
Path Length (L_e)	177.2 mm
Effective Volume (V_e)	81,500 mm³
Area Product	550,000 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	84.6 mm
	HT	38.9 mm
Completely Full Window	Max OD	105 mm
	Max HT	58.9 mm

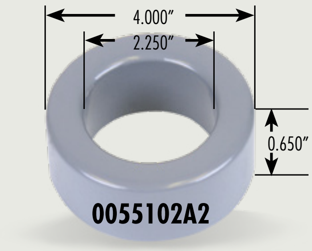
Surface Area	
Unwound Core	17,000 mm²
40% Winding Factor	25,000 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	94.3
20%	104
25%	107
30%	109
35%	112
40%	114
45%	117
50%	120
60%	126
70%	132

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
8	32	0.0071
9	37	0.0102
10	41	0.0141
11	47	0.0202
12	53	0.0284
13	60	0.0401
14	67	0.056
15	75	0.079
16	84	0.111
17	95	0.156
18	106	0.219
19	119	0.309
20	133	0.432
21	150	0.61
22	168	0.87
23	187	1.21
24	209	1.70
25	235	2.40
26	263	3.40
27	291	4.71

101.6 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	101.60 mm/4.000 in	57.15 mm/2.250 in	16.51 mm/0.650 in
After Finish (limits)	103.00 mm/4.055 in	55.75 mm/2.195 in	17.91 mm/0.705 in



Perm (µ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® Hƒ	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	26	0077101A7	0079101A7	-	-	-	-	0059101A2	0058101A2	0055101A2
19	35	0077097A7	0079097A7	-	-	0078097A7	-	0059097A2	-	0055097A2
26	48	0077102A7	0079102A7	0076102A7	0070102A7	0078102A7	0074102A7	0059102A2	0058102A2	0055102A2
40	74	0077100A7	0079100A7	-	-	0078100A7	-	0059100A2	0058100A2	0055100A2
60	111	0077099A7	0079099A7	-	-	0078099A7	0074099A7	0059099A2	0058099A2	0055099A2
75	138	0077159A7	-	-	-	0078159A7	-	-	-	0055159A2
90	167	0077096A7	-	-	-	0078096A7	-	-	-	0055096A2
125	232	0077098A7	-	-	-	-	-	-	-	0055098A2
147	273	-	-	-	-	-	-	-	-	0055160A2

Package Quantity	25

Physical and Magnetic Parameters	
Window Area	2,470 mm²
Cross Section (A_e)	358 mm²
Path Length (L_e)	243 mm
Effective Volume (V_e)	86,900 mm³
Area Product	885,000 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	112 mm
	HT	34.9 mm
Completely Full Window	Max OD	136 mm
	Max HT	55.1 mm

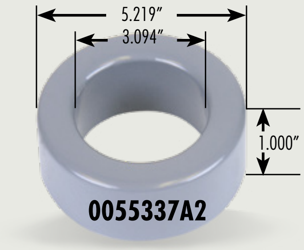
Surface Area	
Unwound Core	20,000 mm²
40% Winding Factor	36,000 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	83.1
20%	97.6
25%	101
30%	104
35%	108
40%	111
45%	116
50%	120
60%	128
70%	138

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
6	38	0.00489
7	43	0.00682
8	49	0.00965
9	55	0.0135
10	62	0.0189
11	70	0.0266
12	79	0.0373
13	89	0.0524
14	99	0.0730
15	112	0.103
16	125	0.145
17	140	0.202
18	157	0.285
19	176	0.400
20	197	0.561
21	221	0.790
22	248	1.12
23	275	1.55
24	308	2.19
25	345	3.09

132.6 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	132.56 mm/5.219 in	78.59 mm/3.094 in	25.40 mm/1.000 in
After Finish (limits)	133.96 mm/5.274 in	77.19 mm/3.039 in	26.80 mm/1.055 in



Perm (µ)	A_L ± 8% (nH/T^2)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® H*f*	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	37	0077336A7	0079336A7	-	-	-	-	0059336A2	0058336A2	0055336A2
19	50	0077342A7	0079342A7	-	-	0078342A7	-	0059342A2	-	0055342A2
26	68	0077337A7	0079337A7	0076337A7	0070337A7	0078337A7	0074337A7	0059337A2	0058337A2	0055337A2
40	105	0077338A7	-	-	-	0078338A7	-	-	0058338A2	0055338A2
60	158	0077339A7	-	-	-	0078339A7	0074339A7	-	0058339A2	0055339A2

Package Quantity	16

Physical and Magnetic Parameters	
Window Area	4,710 mm^2
Cross Section (A_e)	678 mm^2
Path Length (L_e)	324 mm
Effective Volume (V_e)	220,000 mm^3
Area Product	3,190,000 mm^4

Wound Coil Dimensions		
40% Winding Factor	OD	146 mm
	HT	50.7 mm
Completely Full Window	Max OD	179 mm
	Max HT	78.8 mm

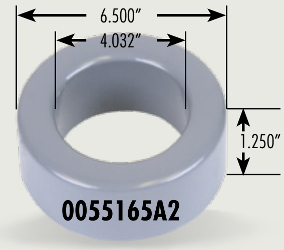
Surface Area	
Unwound Core	36,000 mm^2
40% Winding Factor	65,000 mm^2

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	110
20%	130
25%	135
30%	139
35%	145
40%	150
45%	156
50%	162
60%	173
70%	187

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
6	54	0.00890
7	61	0.0124
8	69	0.0175
9	78	0.0247
10	87	0.0344
11	99	0.0489
12	111	0.0685
13	124	0.0956
14	138	0.133
15	155	0.188
16	174	0.265
17	195	0.371
18	218	0.522
19	244	0.733
20	273	1.03
21	306	1.45
22	343	2.05
23	381	2.85
24	426	4.02
25	478	5.68

165.1 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	165.10 mm/6.500 in	102.41 mm/4.032 in	31.75 mm/1.250 in
After Finish (limits)	166.50 mm/6.555 in	101.02 mm/3.977 in	33.15 mm/1.305 in



Perm (µ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® Hƒ	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	42	0077164A7	0079164A7	-	-	-	-	-	0058164A2	0055164A2
19	57	0077163A7	-	-	-	0078163A7	-	-	-	0055163A2
26	78	0077165A7	-	-	-	0078165A7	-	-	0058165A2	0055165A2

Package Quantity*	6
*High Flux, MPP	4

Physical and Magnetic Parameters	
Window Area	8,030 mm²
Cross Section (A_e)	987 mm²
Path Length (L_e)	412 mm
Effective Volume (V_e)	407,000 mm³
Area Product	7,920,000 mm⁴

Wound Coil Dimensions		
40% Winding Factor	OD	182 mm
	HT	63.2 mm
Completely Full Window	Max OD	228 mm
	Max HT	103 mm

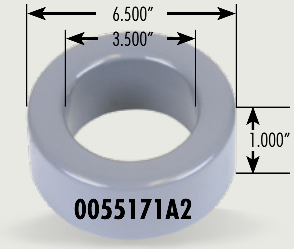
Surface Area	
Unwound Core	55,000 mm²
40% Winding Factor	102,000 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	132
20%	158
25%	164
30%	170
35%	178
40%	184
45%	192
50%	199
60%	215
70%	233

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
6	72	0.0139
7	81	0.0193
8	91	0.0272
9	103	0.0384
10	115	0.0536
11	130	0.0759
12	145	0.106
13	163	0.149
14	182	0.209
15	204	0.293
16	228	0.412
17	256	0.579
18	286	0.814
19	320	1.14
20	358	1.61
21	401	2.26
22	449	3.21
23	499	4.46
24	558	6.29
25	625	8.86

165.1 mm OD

Core Dimensions	OD	ID	HT
Before Finish (nominal)	165.10 mm/6.500 in	88.90 mm/3.500 in	25.40 mm/1.000 in
After Finish (limits)	167.21 mm/6.583 in	86.89 mm/3.421 in	27.31 mm/1.075 in



Perm (µ)	A_L ± 8% (nH/T²)	Part Number								
		Kool Mµ®	Kool Mµ® MAX	Kool Mµ® H*f*	Kool Mµ® Ultra	XFlux®	XFlux® Ultra	Edge®	High Flux	MPP
14	42	-	0079169A7	-	-	-	-	-	-	-
19	58	-	-	-		0078170A7	-	-	-	-
26	80	-	-	-		0078171A7	-	-	-	-

Package Quantity	8

Physical and Magnetic Parameters	
Window Area	5,930 mm²
Cross Section (A_e)	948 mm²
Path Length (L_e)	386.5 mm
Effective Volume (V_e)	366,400 mm³
Area Product	5,620,000 mm⁴

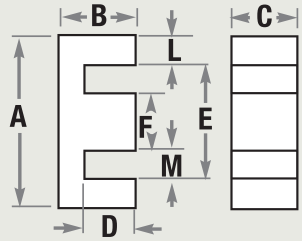
Wound Coil Dimensions		
40% Winding Factor	OD	181 mm
	HT	56.3 mm
Completely Full Window	Max OD	225 mm
	Max HT	103 mm

Surface Area	
Unwound Core	54,000 mm²
40% Winding Factor	96,000 mm²

Winding Turn Length	
Winding Factor	Length/Turn (mm)
0%	135
20%	158
25%	163
30%	168
35%	175
40%	179
45%	187
50%	193
60%	206
70%	222

AWG Wire Size	Single Layer Turns	Single Layer R_{DC} (Ohms, Ω)
6	61	0.0120
7	69	0.0169
8	78	0.0238
9	88	0.0336
10	99	0.0473
11	111	0.0664
12	125	0.0934
13	140	0.131
14	156	0.183
15	175	0.258
16	196	0.363
17	219	0.508
18	246	0.718
19	275	1.01
20	307	1.41
21	344	1.99
22	386	2.83
23	428	3.92
24	479	5.53
25	537	7.81

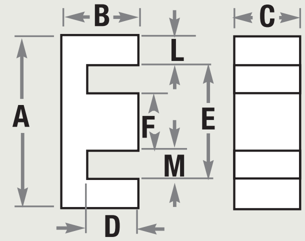
E Core Data



PART NO		A	B	C	D(min)	E(min)	F	L(nom)	M(min)
00_1808E*** (EI-187)	mm in	19.30±0.30 0.760±0.012	8.10±0.18 0.319±0.007	4.78±0.15 0.188±0.006	5.54 0.218	13.92 0.548	4.78±0.13 0.188±0.005	2.39 0.094	4.65 0.183
00_2510E*** (E-2425)	mm in	25.40±0.38 1.000±0.015	9.53±0.18 0.375±0.007	6.35±0.10 0.250±0.004	6.22 0.245	18.80 0.740	6.35±0.13 0.250±0.005	3.18 0.125	6.25 0.246
00_3007E*** (DIN 30/7)	mm in	30.10±0.46 1.185±0.018	15.01±0.23 0.591±0.009	7.06±0.15 0.278±0.006	9.55 0.376	19.86 0.782	6.96±0.20 0.274±0.008	5.11 0.201	6.32 0.249
00_3515E*** (EI-375)	mm in	34.54±0.51 1.360±0.020	14.15±0.23 0.557±0.009	9.35±0.18 0.368±0.007	9.60 0.378	25.27 0.995	9.32±0.20 0.367±0.008	4.45 0.175	7.87 0.310
00_4017E*** (EE 42/11)	mm in	42.85±0.64 1.687±0.025	21.08±0.30 0.830±0.012	10.77±0.25 0.424±0.010	14.91 0.587	30.35 1.195	11.89±0.25 0.468±0.010	5.94 0.234	9.27 0.365
00_4020E*** (DIN 42/15)	mm in	42.85±0.64 1.687±0.025	21.08±0.33 0.830±0.013	15.44±0.25 0.608±0.010	14.91 0.587	30.35 1.195	11.89±0.25 0.468±0.010	5.94 0.234	9.27 0.365
00_4022E*** (DIN 42/20)	mm in	42.85±0.64 1.687±0.025	21.08±0.33 0.830±0.013	20.02±0.25 0.788±0.010	14.91 0.587	30.35 1.195	11.89±0.25 0.468±0.010	5.94 0.234	9.27 0.365
00_4317E*** (EI-21)	mm in	40.87±0.61 1.609±0.024	16.51±0.28 0.650±0.011	12.52±0.18 0.493±0.007	10.39 0.409	28.32 1.115	12.52±0.20 0.493±0.008	6.05 0.238	7.87 0.310
00_5528E*** (DIN 55/21)	mm in	54.86±0.81 2.160±0.032	27.56±0.41 1.085±0.016	20.62±0.38 0.812±0.015	18.52 0.729	37.49 1.476	16.76±0.38 0.660±0.015	8.38 0.330	10.29 0.405
00_5530E*** (DIN 55/25)	mm in	54.86±0.81 2.160±0.032	27.56±0.41 1.085±0.016	24.61±0.38 0.969±0.015	18.52 0.729	37.49 1.476	16.76±0.38 0.660±0.015	8.38 0.330	10.29 0.405
00_6527E*** (Metric E65)	mm in	65.15±1.27 2.565±0.050	32.51±0.38 1.280±0.015	27.00±0.41 1.063±0.016	22.20 0.874	44.20 1.740	19.66±0.36 0.774±0.014	10.01 0.394	12.09 0.476
00_7228E*** (F11)	mm in	72.39±1.09 2.850±0.043	27.94±0.51 1.100±0.020	19.05±0.38 0.750±0.015	17.75 0.699	52.63 2.072	19.05±0.38 0.750±0.015	9.53 0.375	16.89 0.665
00_8020E*** (Metric E80)	mm in	80.01±1.19 3.150±0.047	38.10±0.64 1.500±0.025	19.81±0.38 0.780±0.015	28.02 1.103	59.28 2.334	19.81±0.38 0.780±0.015	9.91 0.390	19.81 0.780
00_8024E***	mm in	80.01±1.19 3.150±0.047	24.13±0.64 0.950±0.025	29.72±0.38 1.170±0.015	14.02 0.552	59.28 2.334	19.81±0.38 0.780±0.015	9.91 0.390	19.81 0.780
00_8044E***	mm in	80.01±1.19 3.150±0.047	44.58±0.64 1.755±0.025	19.81±0.38 0.780±0.015	34.37 1.353	59.28 2.334	19.81±0.38 0.780±0.015	9.91 0.390	19.81 0.780
00_114LE***	mm in	114.30±0.76 4.500±0.030	46.18±0.38 1.818±0.015	34.93±0.38 1.375±0.015	28.60 1.126	79.50 3.130	35.10±0.38 1.382±0.015	17.17 0.676	22.20 0.874
00_130LE***	mm in	130.30±3.81 5.130±0.150	32.51±0.30 1.280±0.012	53.85±1.27 2.120±0.050	22.20 0.874	108.46 4.270	20.02±0.76 0.788±0.030	10.01 0.394	44.22 1.741
00_160LE***	mm in	160.02±2.54 6.300±0.100	38.10±0.64 1.500±0.025	39.62±1.27 1.560±0.050	28.14 1.108	138.18 5.440	19.81±0.76 0.780±0.030	9.91 0.390	59.28 2.334

For material code see p. 17.
*Add permeability code*** to part number, e.g. for 26µ Kool Mµ the complete part number is 00K4022E026.*

E Core Data



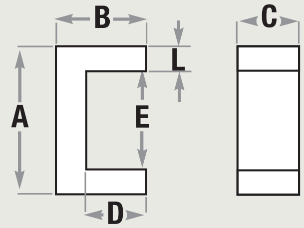
PART NO	A_L nH/T^2 ± 8%					Path Length l_e (mm)	Cross Section A_e (mm^2)	Volume V_e (mm^3)	Package Quantity
	14µ	26µ	40µ	60µ	90µ				
00_1808E***	-	26	35	48	69	40.1	22.8	914	2,880
00_2510E***	-	39	52	70	100	48.5	38.5	1,870	1,728
00_3007E***	-	33	46	71	92	65.6	60.1	3,940	720
00_3515E***	-	56	75	102	146	69.4	84.0	5,830	720
00_4017E***	-	56	76	105	151	98.4	128	12,600	264
00_4020E***	-	80	108	150	217	98.4	183	18,000	240
00_4022E***	-	104	140	194	281	98.4	237	23,300	180
00_4317E***	-	88	119	163	234	77.5	152	11,800	270
00_5528E***	-	116	157	219	322	123	350	43,100	112
00_5530E***	-	138	187	261	382	123	417	51,300	96
00_6527E***	103	162	230	300	-	147	540	79,400	54 or 56
00_7228E***	-	130	173	235	-	137	368	50,400	84
00_8020E***	75	103	145	190	-	185	389	72,000	72
00_8024E***	-	200	275	370	-	131.4	600	78,840	45
00_8044E***	66	91	113	170	-	208	389	80,900	63
00_114LE***	161	235	335	445	-	215	1220	262,000	18
00_130LE***	-	254	-	-	-	219	1080	237,000	16
00_160LE***	-	180	-	-	-	273	778	212,000	16

Blocks

PART NO		A	B	C	Volume V_e (mm^3)	Package Quantity
00_4741B***	mm in	47.50±0.61 1.870±0.024	41.00±0.51 1.614±0.020	27.51±0.41 1.083±0.016	53,600	48
00_5030B***	mm in	50.50±0.50 1.988±0.020	30.30±0.30 1.193±0.012	15.00±0.20 0.591±0.008	23,000	64
00_5528B***	mm in	54.86±0.64 2.160±0.025	27.56±0.41 1.085±0.016	20.62±0.38 0.812±0.015	31,200	64
00_6030B***	mm in	60.00±0.50 2.362±0.020	30.00±0.30 1.181±0.012	15.00±0.20 0.591±0.008	27,000	80
00_6131B***	mm in	60.50±0.50 2.382±0.020	30.30±0.30 1.193±0.012	20.00±0.20 0.787±0.01	36,700	64
00_7020B***	mm in	70.50±0.50 2.776±0.020	20.30±0.30 0.799±0.012	20.00±0.20 0.787±0.008	28,600	96
00_7030B***	mm in	70.50±0.50 2.776±0.020	30.30±0.30 1.193±0.012	20.00±0.20 0.787±0.008	42,800	64
00_8030B***	mm in	80.50±0.50 3.169±0.020	30.30±0.30 1.193±0.020	20.00±0.21 0.787±0.008	48,800	48
00_9030B***	mm in	90.50±0.50 3.562±0.020	30.30±0.30 1.192±0.012	20.00±0.20 0.790±0.008	54,843	40
00_9541B***	mm in	95.00±0.61 3.740±0.024	41.00±0.51 1.614±0.020	27.51±0.41 1.083±0.016	107,200	30

*For material code see p. 17. Add permeability code*** to part number, e.g. for 26µ Kool Mµ the complete part number is 00K6030B026.*
Note: Inductance is tested in standard picture frame arrangements.
High Flux, Edge and MPP shapes may have different package quantities due to increased weight. Refer to individual data sheets.

U Core Data

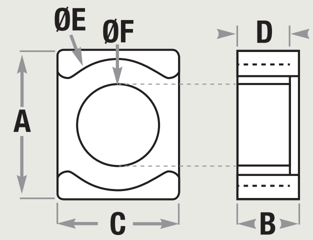


PART NO		A	B	C	D(min)	E(min)	L(nom)
00_3112U***	mm	31.24±0.51	11.18±0.25	12.07±0.38	2.54	14.22	8.26
	in	1.230±0.020	0.440±0.010	0.475±0.015	0.100	0.560	0.325
00_4110U***	mm	40.64±0.51	11.18±0.51	9.53±0.38	2.54	23.62	8.38
	in	1.600±0.020	0.440±0.020	0.375±0.015	0.100	0.930	0.330
00_4111U***	mm	40.64±0.51	11.18±0.25	12.07±0.38	2.54	23.62	8.38
	in	1.600±0.020	0.440±0.010	0.475±0.015	0.100	0.930	0.330
00_4119U***	mm	40.64±0.51	11.18±0.25	19.05±0.38	2.54	23.62	8.38
	in	1.600±0.020	0.440±0.010	0.750±0.015	0.100	0.930	0.330
00_5527U***	mm	54.86±0.64	27.56±0.51	16.33±0.38	16.76	33.78	10.54
	in	2.160±0.025	1.085±0.020	0.643±0.015	0.660	1.330	0.415
00_5529U***	mm	54.86±0.64	27.56±0.51	23.16±0.38	16.51	33.02	10.54
	in	2.160±0.025	1.085±0.020	0.912±0.015	0.650	1.300	0.415
00_6527U***	mm	65.15±0.89	32.51±0.30	27.00±0.38	22.20	44.22	10.01
	in	2.565±0.035	1.280±0.012	1.063±0.015	0.874	1.741	0.394
00_6533U***	mm	65.15±0.89	32.51±0.30	20.02±0.38	19.61	39.24	12.52
	in	2.565±0.035	1.280±0.012	0.788±0.015	0.772	1.545	0.493
00_7236U***	mm	72.39±0.89	35.56±0.64	20.85±0.38	21.36	43.69	13.89
	in	2.850±0.035	1.400±0.025	0.821±0.015	0.841	1.720	0.547
00_8020U***	mm	80.01±0.89	38.10±0.64	19.81±0.38	28.14	59.28	9.91
	in	3.150±0.035	1.500±0.025	0.780±0.015	1.108	2.334	0.390
00_8038U***	mm	80.01±0.89	38.10±0.64	23.04±0.38	22.43	49.28	15.37
	in	3.150±0.035	1.500±0.025	0.907±0.015	0.883	1.940	0.605

PART NO	A_L nH/T^2 ± 8%				Path Length l_e (mm)	Cross Section A_e (mm^2)	Volume V_e (mm^3)	Package Quantity
	26µ	40µ	60µ	90µ				
00_3112U***	61	92	111	179	65.6	101	6,630	672
00_4110U***	42	56	78	109	85.2	80	6,820	480
00_4111U***	52	72	95	138	85.2	101	8,600	480
00_4119U***	79	110	151	218	85.2	159	13,600	240
00_5527U***	67	94	120	-	168	172	28,900	128
00_5529U***	85	121	160	-	168	244	41,000	96
00_6527U***	89	111	165	-	219	270	59,100	54 or 56
00_6533U***	82	109	143	-	199	250	49,800	54
00_7236U***	87	114	149	-	219	290	63,500	60
00_8020U***	64	77	95	-	273	195	53,200	63
00_8038U***	97	124	179	-	237	354	83,900	63

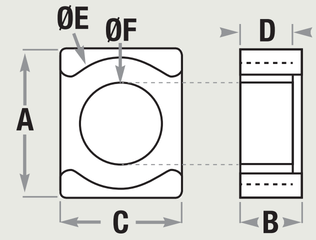
For material code see p. 17.
*Add permeability code*** to part number, e.g., for 26µ Kool Mµ, the complete part number is 00K6527U026.*
High Flux, Edge and MPP shapes may have different package quantities due to increased weight. Refer to individual data sheets.

EQ Core Data



PART NO		A	B	C	D	E	F
EQ_2014E***L050	mm in	20.00 0.787	5.00 0.197	14.00 0.551	2.60 0.102	18.00 0.708	8.80 0.346
EQ_2014E***L061	mm in	20.00 0.787	6.10 0.240	14.00 0.551	3.70 0.146	18.00 0.708	8.80 0.346
EQ_2619E***L070	mm in	26.50 1.043	7.00 0.275	19.00 0.748	3.70 0.146	22.60 0.890	12.00 0.472
EQ_2619E***L088	mm in	26.50 1.043	8.79 0.346	19.00 0.748	5.49 0.216	22.60 0.890	12.00 0.472
EQ_2619E***L101	mm in	26.50 1.043	10.10 0.398	19.00 0.748	6.80 0.268	22.60 0.890	12.00 0.472
EQ_2619E***L124	mm in	26.50 1.043	12.40 0.488	19.00 0.748	9.10 0.358	22.60 0.890	12.00 0.472
EQ_3222E***L101	mm in	32.00 1.260	10.10 0.398	22.00 0.866	6.40 0.252	27.60 1.087	13.50 0.531
EQ_3222E***L152	mm in	32.00 1.260	15.20 0.598	22.00 0.866	11.50 0.453	27.60 1.087	13.50 0.531
EQ_3222E***L180	mm in	32.00 1.260	18.00 0.708	22.00 0.866	14.30 0.563	27.60 1.087	13.50 0.531
EQ_3626E***L100	mm in	36.00 1.417	10.00 0.394	26.00 1.023	6.00 0.236	32.00 1.259	14.40 0.567
EQ_3626E***L110	mm in	36.00 1.417	11.00 0.433	26.00 1.023	7.00 0.275	32.00 1.259	14.40 0.567
EQ_3626E***L122	mm in	36.00 1.417	12.20 0.480	26.00 1.024	8.20 0.323	32.00 1.259	14.40 0.567
EQ_3626E***L174	mm in	36.00 1.417	17.40 0.685	26.00 1.024	13.40 0.528	32.00 1.260	14.40 0.567
EQ_4128E***L120	mm in	41.50 1.633	12.00 0.472	28.00 1.102	7.50 0.295	36.50 1.436	14.90 0.586
EQ_4128E***L199	mm in	41.50 1.634	19.90 0.783	28.00 1.102	15.40 0.606	36.50 1.437	14.90 0.587
EQ_5032E***L200	mm in	50.00 1.968	20.00 0.787	32.00 1.259	14.50 0.571	44.00 1.732	20.00 0.787
EQ_5032E***L250	mm in	50.00 1.969	25.00 0.984	32.00 1.260	19.50 0.768	44.00 1.732	20.00 0.787

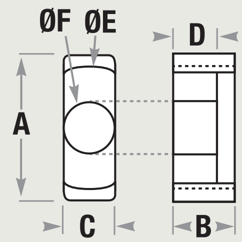
EQ Core Data



PART NO	A_L nH/T^2 ± 8%				Path Length l_e (mm)	Cross Section A_e (mm^2)	Volume V_e (mm^3)	Package Quantity
	26µ	40µ	60µ	75µ				
EQ_2014E***L050	81	120	167	203	29.3	60.8	1,780	1,596
EQ_2014E***L061	67	98	138	168	35.8	60.8	2,180	1,596
EQ_2619E***L070	111	164	228	278	42.3	119.8	5,070	588
EQ_2619E***L088	95	140	195	237	49.5	119.8	5,834	588
EQ_2619E***L101	86	127	177	206	54.7	119.8	6,550	462
EQ_2619E***L124	74	108	151	184	63.9	119.8	7,650	420
EQ_3222E***L101	100	148	207	250	59.5	152.3	9,100	360
EQ_3222E***L152	75	110	156	187	79.9	152.3	12,168	300
EQ_3222E***L180	66	97	136	164	91.1	152.3	13,900	270
EQ_3626E***L100	109	160	224	272	65.1	180.8	11,800	270
EQ_3626E***L110	102	151	197	256	69.1	180.8	12,500	270
EQ_3626E***L122	95	141	197	239	73.9	180.8	13,360	270
EQ_3626E***L174	75	110	154	187	94.7	180.8	17,122	240
EQ_4128E***L120	94	138	193	234	83.6	199.7	16,700	200
EQ_4128E***L199	68	100	140	170	115.2	199.7	23,000	140
EQ_5032E***L200	109	160	223	271	113.0	314.1	35,600	96
EQ_5032E***L250	92	136	190	231	133.4	314.1	41,900	80

*For material code see p. 17. Add permeability code*** to part number, e.g. for 26µ Kool Mµ the complete part number is EQK2014E026L050.*

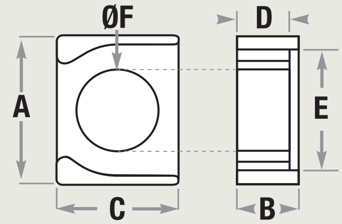
EER Core Data



PART NO		A	B	C	D	E	F
ER_2507E***L110	mm in	25.50 1.004	11.00 0.433	7.50 0.295	7.90 0.311	19.80 0.780	7.50 0.295
ER_4013E***L224	mm in	40.00 1.575	22.40 0.882	13.30 0.524	15.40 0.606	29.00 1.142	13.30 0.524

PART NO	A_L nH/T^2 ± 8%			Path Length l_e (mm)	Cross Section A_e (mm^2)	Volume V_e (mm^3)	Package Quantity
	26µ	40µ	60µ				
ER_2507E***L110	34	47	65	57.8	45.0	2,600	560
ER_4013E***L224	59	81	111	111.3	149.1	16,600	180

LP Core Data



PART NO		A	B	C	D	E	F
LP_2314E***L087	mm in	23.39 0.921	8.71 0.343	14.00 0.551	6.20 0.244	19.41 0.764	9.19 0.362
LP_2518E***L099	mm in	25.00 0.984	9.90 0.390	18.00 0.709	6.90 0.272	21.00 0.827	11.00 0.433
LP_3020E***L118	mm in	30.00 1.181	11.80 0.464	20.00 0.787	8.50 0.335	25.60 1.007	12.00 0.474
LP_3222E***L152	mm in	32.00 1.259	15.20 0.598	22.00 0.866	11.50 0.453	27.00 1.063	13.50 0.531
LP_3624E***L144	mm in	36.20 1.425	14.40 0.567	24.00 0.945	10.40 0.409	30.40 1.196	15.00 0.590
LP_4225E***L107	mm in	42.00 1.654	10.70 0.421	25.00 0.984	6.30 0.248	35.20 1.386	16.20 0.638
LP_4225E***L123	mm in	42.00 1.654	12.30 0.484	25.00 0.984	7.90 0.311	35.20 1.386	16.20 0.638
LP_4225E***L158	mm in	42.00 1.654	15.80 0.622	25.00 0.984	11.40 0.449	35.20 1.386	16.20 0.638

PART NO	A_L nH/T^2 ± 8%				Path Length l_e (mm)	Cross Section A_e (mm^2)	Volume V_e (mm^3)	Package Quantity
	26µ	40µ	60µ	75µ				
LP_2314E***L087	54	79	110	134	49.1	67.0	3,290	630
LP_2518E***L099	68	100	139	169	55.7	96.0	5,350	588
LP_3020E***L118	65	96	134	163	68.5	114.0	7,800	300
LP_3222E***L152	69	101	141	171	82.1	143.0	11,740	300
LP_3624E***L144	86	127	177	215	80.6	177.0	14,270	240
LP_4225E***L107	116	171	239	290	69.7	206.0	14,360	220
LP_4225E***L123	106	156	218	265	76.1	206.0	15,680	180
LP_4225E***L158	90	132	182	224	90.1	206.0	18,560	180

*For material code see p. 17. Add permeability code*** to part number, e.g. for 26µ Kool Mµ the complete part number is LPK2314E026L087.*

E Core Hardware

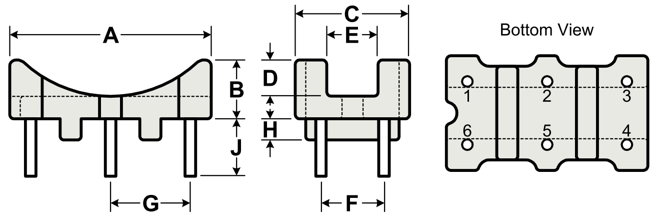
Magnetics has bobbins available for use with powder cores. Refer to Magnetics Ferrite Cores catalog for a complete listing of available bobbins. The cores are standard industry sizes that will fit standard bobbins available from many sources. Core pieces can be assembled by bonding the mating surfaces or taping around the perimeter of the core set. Caution is advised if metal clamps are considered, since eddy current heating can occur in conductive material that is very close to the surface of low permeability powder core material.

Core Number	Bobbin Number	Number of Pins	Winding Area (mm^2)	Length Per Turn (mm)
1808E (EI-187)	PCB1808B1	8	31.6	40.5
	00B180801	-	34.2	39.4
2510E (E-2425)	PCB2510V1	10	40.6	54.2
	PCB2510V2	10	20.3	54.2
	00B251001	-	51	45.4
3515E (EI-375)	PCB3515M1	12	94.8	73.4
	PCB3515M2	12	47.4	73.4
	00B351501	-	113	72
4020E (DIN 42/15)	PCB4020N1	12	194	91.4
	00B402021	-	207	97.5
4022E (DIN 42/20)	PCB4022N1	12	194	102.1
4317E (EI-21)	PCB4317M1	12	101	85.6
	00B4317B1	-	122	86
5528E (DIN55/25)	PCB5528WC	14	302	107.3
	00B5528B1	-	302	107.3
5530E	PCB5530FA	14	289	133.8
6527E (Metric E65)	00B652701	-	440	168
	00B6527B1	-	490	166
	00B6527C1		430	203
7228E (F11)	00B722801	-	408	149
8020E (Metric E80)	00B8020B1	-	896	163
	00B8020C2	-	203	203
114LE	00B114LB1	-	945	230

Toroid Hardware

TVB22066A

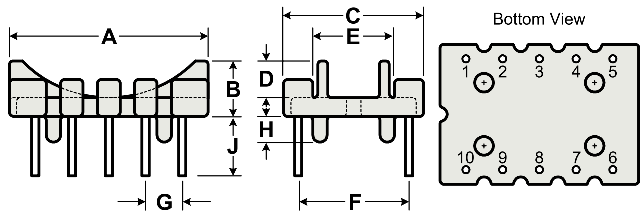
For use with toroids from 12.7 mm through 22.2 mm



Material	6 Pins	A Nom.	B Nom.	C Nom.	D Nom.	E Ref.	F Typ.	G Typ.	H Ref.	J Ref.
Phenolic rated UL94V0	CP wire 0.99 mm	19.0 mm	5.44 mm	10.8 mm	3.51 mm	4.80 mm	6.00 mm	7.49 mm	2.01 mm	5.49 mm

TVB2908TA

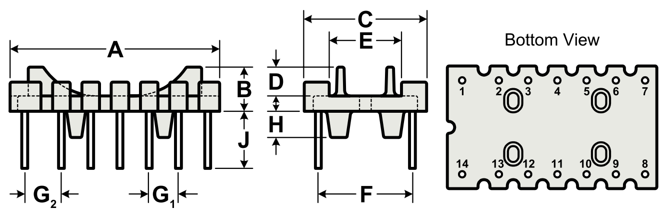
For use with toroids from 20.5 mm through 31.8 mm



Material	10 Pins	A Nom.	B Nom.	C Nom.	D Nom.	E Ref.	F Typ.	G Typ.	H Ref.	J Ref.
Phenolic rated UL94V0	CP wire 0.99 mm	27.0 mm	7.49 mm	19.0 mm	5.00 mm	11.0 mm	15.0 mm	5.00 mm	3.51 mm	8.13 mm

TVB3610FA

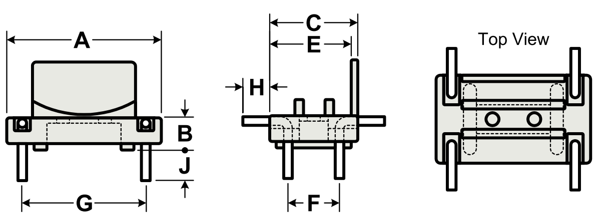
For use with toroids from 28.6 mm through 38.1 mm



Material	14 Pins	A Nom.	B Nom.	C Nom.	D Nom.	E Ref.	F Typ.	G_1 Typ.	G_2 Typ.	H Ref.	J Ref.
Phenolic rated UL94V0	CP wire 0.99 mm	35.8 mm	7.59 mm	20.8 mm	5.00 mm	12.3 mm	16.0 mm	5.00 mm	6.30 mm	4.5 mm	9.75 mm

TVH22064A

For use with toroids from 12.7 mm through 25.4 mm

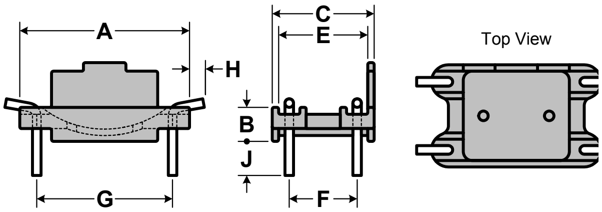


Material	4 Pins	A Nom.	B Nom.	C Nom.	E Ref.	F Typ.	G Typ.	H Ref.	J Ref.
Nylon 6/6 rated UL94V0	CP wire 1.02 mm	19.1 mm	3.94 mm	10.8 mm	9.78 mm	6.35 mm	15.2 mm	3.30 mm	3.81 mm

Toroid Hardware

TVH25074A

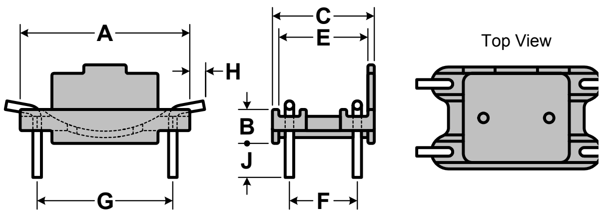
For use with toroids from 20.5 mm (0.810") through 30.5 mm



Material	4 Pins	A Nom.	B Nom.	C Nom.	E Ref.	F Typ.	G Typ.	H Ref.	J Ref.
Nylon 6/6 rated UL94V0	CP wire 1.21 mm	25.4 mm	5.08 mm	15.2 mm	13.0 mm	10.2 mm	20.3 mm	2.29 mm	5.08 mm

TVH38134A

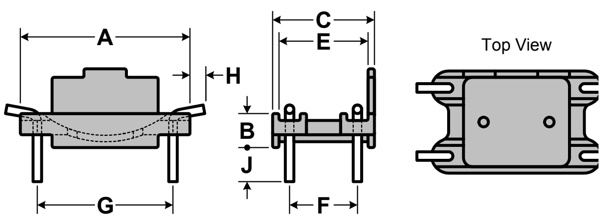
For use with toroids from 25.4 mm (1.000") through 40.6 mm



Material	4 Pins	A Nom.	B Nom.	C Nom.	E Ref.	F Typ.	G Typ.	H Ref.	J Ref.
Nylon 6/6 rated UL94V0	CP wire 1.27 mm	27.9 mm	5.08 mm	20.3 mm	18.0 mm	15.2 mm	22.9 mm	2.29 mm	5.08 mm

TVH49164A

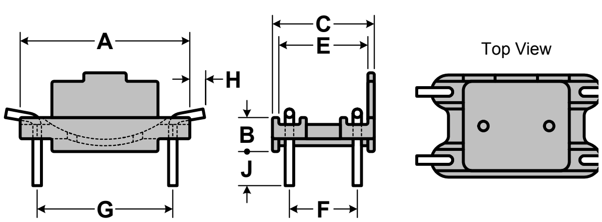
For use with toroids from 38.1 mm through 63.5 mm



Material	4 Pins	A Nom.	B Nom.	C Nom.	E Ref.	F Typ.	G Typ.	H Ref.	J Ref.
Nylon 6/6 rated UL94V0	CP wire 1.27 mm	35.6 mm	5.08 mm	22.9 mm	20.6 mm	17.8 mm	30.5 mm	2.29 mm	5.08 mm

TVH61134A

For use with toroids from 44.4 mm through 71.1 mm



Material	4 Pins	A Nom.	B Nom.	C Nom.	E Ref.	F Typ.	G Typ.	H Ref.	J Ref.
Nylon 6/6 rated UL94V0	CP wire 1.27 mm	43.2 mm	5.08 mm	27.9 mm	25.7 mm	22.9 mm	38.1 mm	2.29 mm	5.08 mm

Other Products from Magnetics

Ferrites
Ferrite cores are manufactured for a wide variety of applications. Magnetics produces the leading MnZn ferrite materials for power transformers, power inductors, wideband transformers, common mode chokes, and many other applications. In addition to offering the leading materials, other advantages of ferrites from Magnetics include the full range of standard planar E, ER, and I cores; the widest range of toroid sizes in power and high permeability materials; standard gapping to precise inductance or mechanical dimension; a wide range of available coil formers and assembly hardware; and superior toroid coatings available in several options.

Applications include chokes, transformers, current sensors, EMI filters, power supplies, and more.

Power Materials
Five low loss materials are engineered for optimum frequency and temperature performance in power applications. Magnetics' R, P, F, L, and T materials provide superior saturation, high temperature performance, low losses and product consistency.

Shapes: E cores, Planar E cores, ER cores, ETD, EC, U cores, I cores, PQ, Planar PQ, RM, Toroids, Pot cores, RS (round-slab), DS (double slab), EP, Special Shapes.

High Permeability Materials
Three high permeability materials (5,000µ J material, 10,000µ W material, and 15,000µ M material) are engineered for optimum frequency and impedance performance in signal, choke and filter applications. These Magnetics materials provide superior loss factor, frequency response, temperature performance, and product consistency.

Shapes: Toroids, E cores, U cores, RM, Pot cores, RS (round-slab), DS (double slab), EP, Special Shapes.

Amorphous Cores
Amorphous cut cores are made from metallic glass materials without a crystalline structure. The amorphous atomic structure results in much higher resistivity than what is exhibited by crystalline alloys; therefore, amorphous cut cores offer excellent frequency response and efficiency. Amorphous cut cores are a choice solution for high frequency, low loss applications.

Tape Wound Cores
Strip wound cores are made from high permeability magnetic strip alloys of nickel-iron (80% or 50% nickel), and silicon-iron. The alloys are known as Orthonol®, Permalloy 80, 48 Alloy and Magnesil®. Tape Wound Cores are produced as small as 0.438" OD in hundreds of sizes. For a wide range of frequency applications, materials are produced in thicknesses from 1/2 mil (0.013 mm) through 4 mils (0.102 mm). Cases are robust nylon and aluminum boxes, rated for 200°C continuous operation and 2,000 minimum voltage breakdown. Tape wound cores are useful for both power and signal circuits in harsh environmental conditions where robust component operation is essential to achieve high reliability.

Bobbin Cores
Bobbin cores are miniature tape cores made from ultra-thin (0.000125" to 0.001" thick) strip material wound on nonmagnetic stainless steel bobbins. Bobbin cores are generally manufactured from Permalloy 80 and Orthonol®. Covered with protective caps and then epoxy coated, bobbin cores can be made as small as 0.05" ID and with strip widths down to 0.032". Bobbin cores can switch from positive to negative saturation in a few microseconds or less, making them ideal for analog logic elements, magnetometers, and pulse transformers.

Bobbin cores are useful in harsh environmental conditions where robust and reliable operation is essential.

Nanocrystalline Cores
Nanocrystalline cores exhibit high permeability, low power loss, and high saturation. When compared to ferrite cores, nanocrystalline cores provide a wider operational temperature range and significantly higher impedance at high frequencies. The material's low AC losses result in excellent efficiency, and the option of durable cases - available in polyester (<130°C) and rynite polyester (<155°C) - makes cores suitable for winding with thick wire. Applications include common mode chokes, current transformers, and magnetic amplifiers (magamps).

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