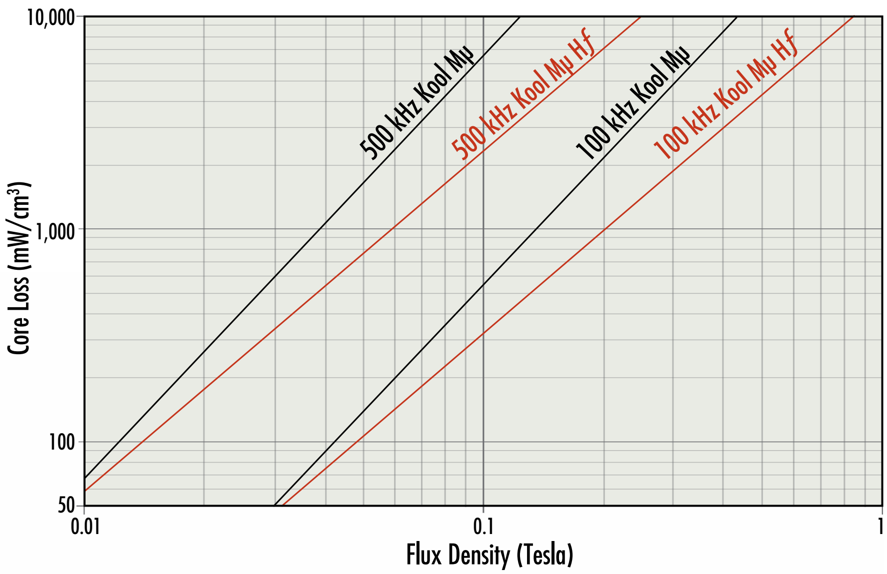
Kool Mµ® H*f* Powder Cores

Kool Mµ® H*f* powder cores are made from distributed gap FeSiAl alloy powder optimized for frequencies 200-500 kHz. Exhibiting up to 35% lower losses when compared to Kool Mµ®, Kool Mµ H*f* is a cost-effective solution for minimizing power losses in high frequency power supplies using GaN or SiC and high efficiency power supplies.

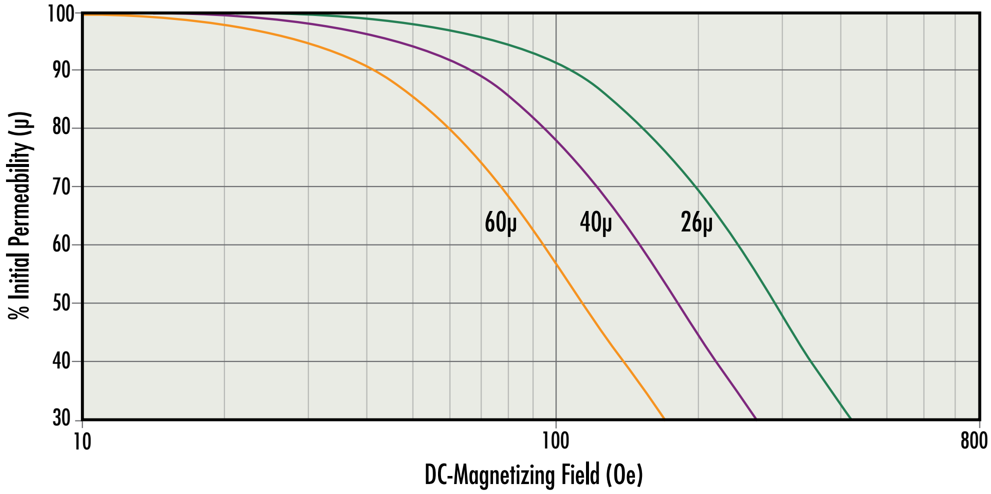
Currently available in 26, 40 and 60 permeabilities.

60µ Core Loss Density



Material	Alloy Composition	DC Bias	Core Loss	Relative Cost	Saturation Flux Density (Tesla)	Curie Temperature	60µ Maximum Usable Frequency
Kool Mµ® H*f*	**FeSiAl**	**Moderate**	**Lowest**	**Medium**	**1.0**	**500°C**	**30 MHz**
Edge®	FeNi	Highest	Very Low	High	1.5	500°C	20 MHz
MPP	FeNiMo	Moderate	Very Low	Highest	0.8	460°C	6 MHz
Kool Mµ® MAX	FeSiAl	Moderate	Low	Medium	1.0	500°C	15 MHz
Kool Mµ®	FeSiAl	Moderate	Low	Lowest	1.0	500°C	5 MHz
High Flux	FeNi	High	Moderate	High	1.5	500°C	3 MHz
XFLUX®	FeSi	High	High	Low	1.6	700°C	1.5 MHz

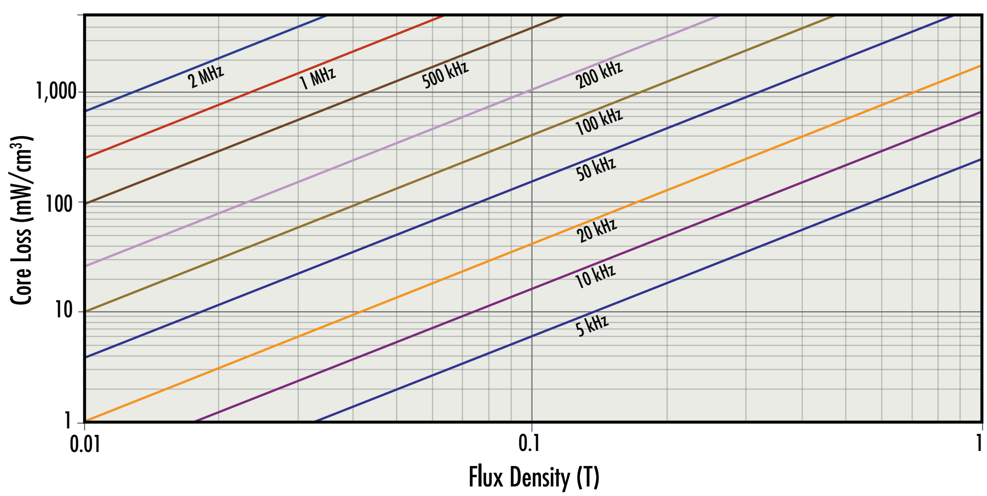
Permeability vs. DC Bias Toroids



$$\frac{\mu}{\mu_i} \times 100 = \frac{1}{(a + bH^c)}$$

	a	b	c
26μ	0.01	3.56E-08	2.213
40μ	0.01	1.28E-07	2.169
60μ	0.01	4.06E-07	2.131

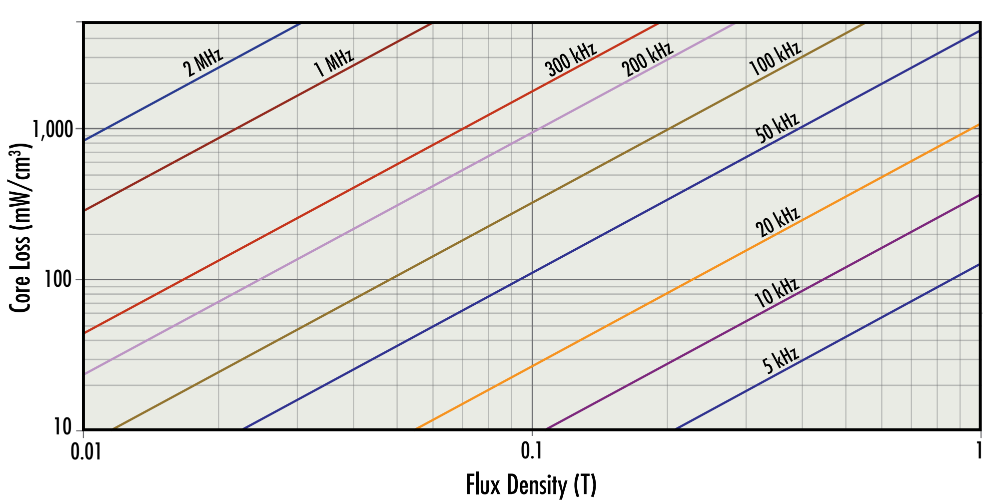
Core Loss Density 26μ Toroids



$$P = a(B^b)(f^c)$$

	a	b	c
26μ	26.41	1.602	1.394

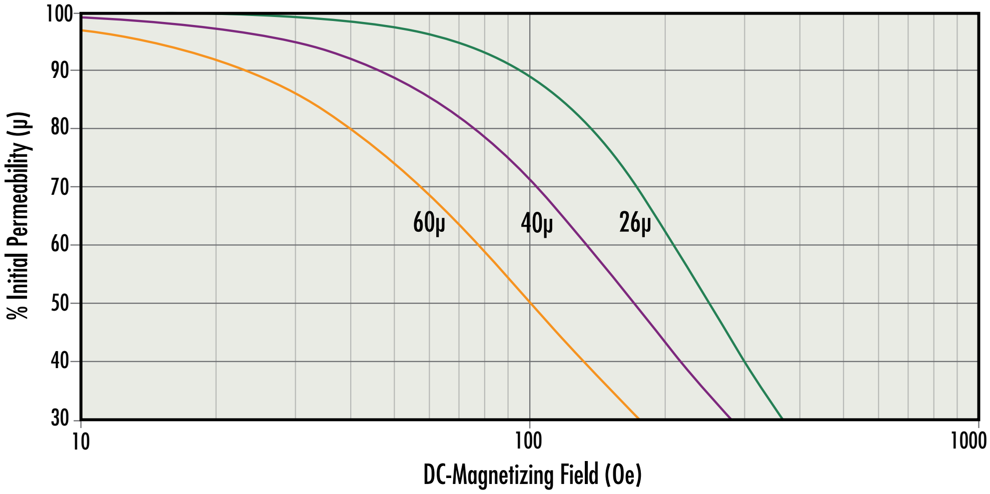
Core Loss Density 40μ, 60μ Toroids



$$P = a(B^b)(f^c)$$

	a	b	c
40μ, 60μ <500 kHz	10.45	1.602	1.547
40μ, 60μ >500 kHz	58.95	1.602	1.187

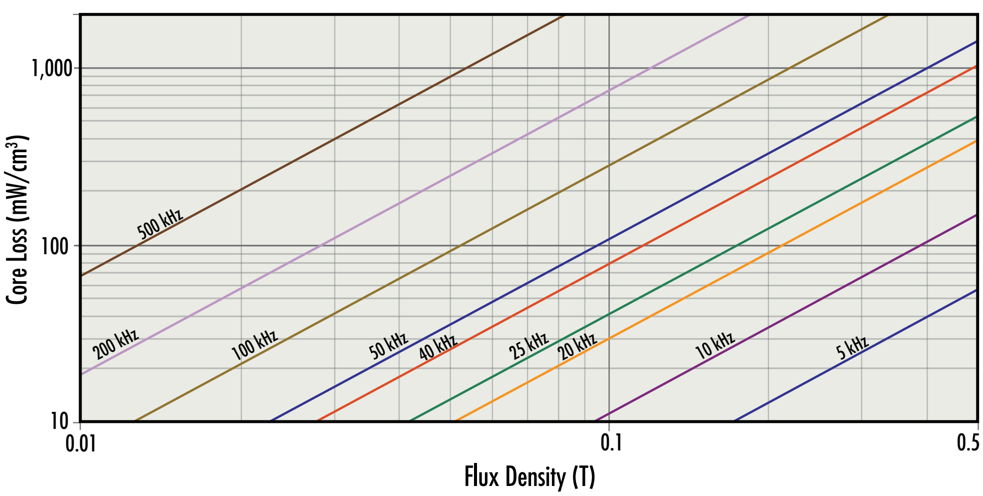
Permeability vs. DC Bias Shapes



$$\frac{\mu}{\mu_i} \times 100 = \frac{1}{(a + bH^c)}$$

	a	b	c
26μ	0.01	4.028E-08	2.250
40μ	0.01	1.665E-06	1.694
60μ	0.01	9.421E-06	1.513

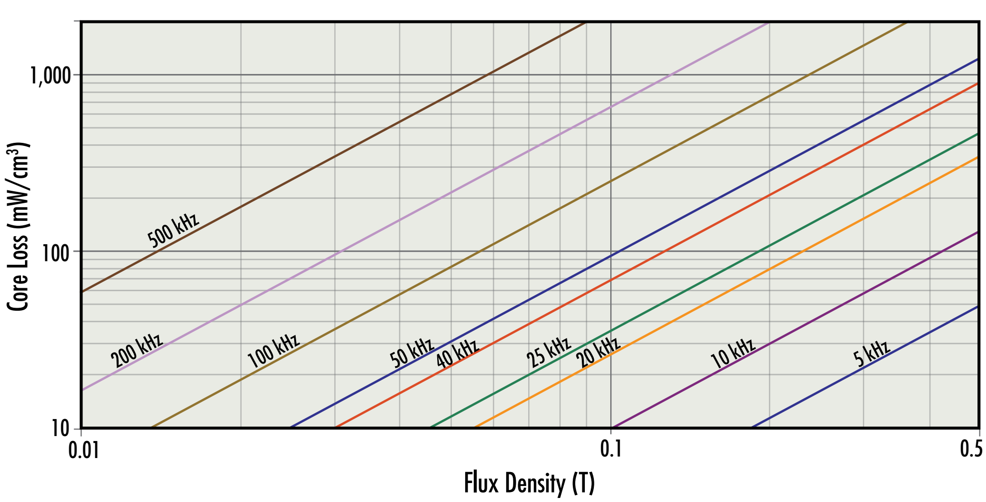
Core Loss Density 26μ Shapes



$$P = a(B^b)(f^c)$$

	a	b	c
26μ	18.01	1.602	1.401

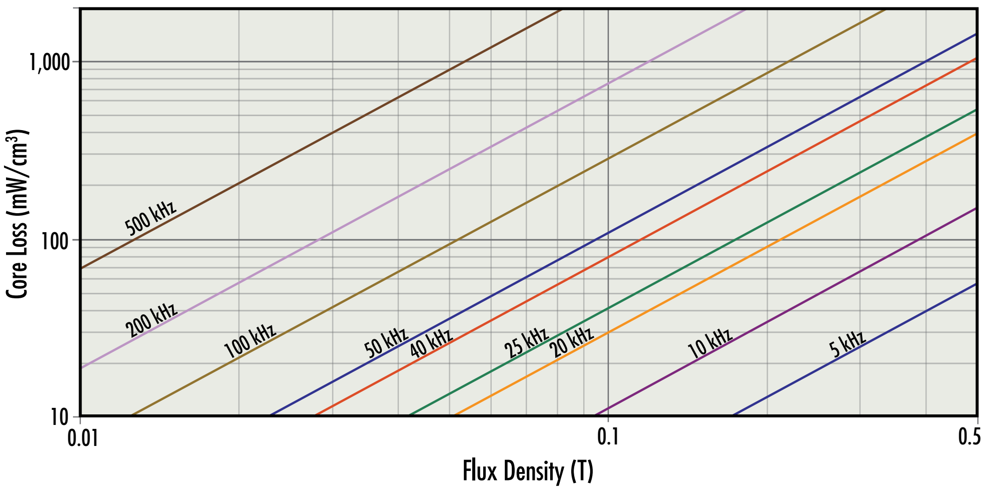
Core Loss Density 40μ Shapes



$$P = a(B^b)(f^c)$$

	a	b	c
40μ	15.69	1.602	1.401

Core Loss Density 60µ Shapes



$P = a(B^b)(f^c)$			
	a	b	c
60µ	18.01	1.602	1.401

MAGNETICS®

HEADQUARTERS
110 Delta Drive
Pittsburgh, PA 15238
(p) **1.412.696.1333**
1.800.245.3984
magnetics@spang.com
www.mag-inc.com

MAGNETICS INTERNATIONAL
13/F 1-3 Chatham Road South
Tsim Sha Tsui, Kowloon, Hong Kong
(p) **+852.2731.9700**
+86.139.1147.1417
asiasales@spang.com
www.mag-inc.com