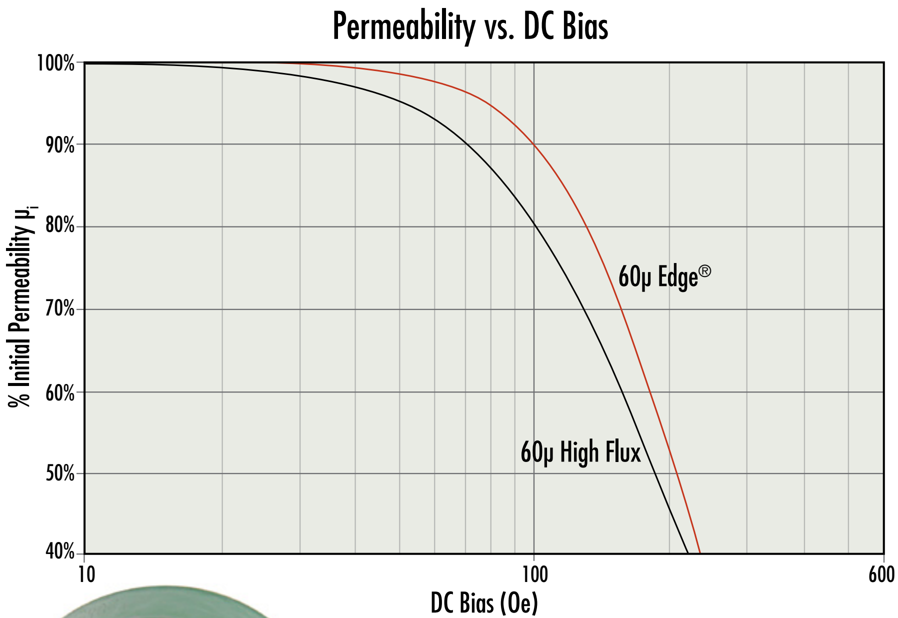
Edge® Powder Cores

Designed for cutting edge performance, Edge® cores offer the highest efficiency and best DC bias performance of all alloy powder cores. When compared with High Flux, Edge displays approximately 40% lower losses and 30% improvement in DC bias. Edge is the choice material for telecom servers or high density rack mount power supplies.

Available in 14, 19, 26, 40, 60, 75, 90 and 125 permeabilities.

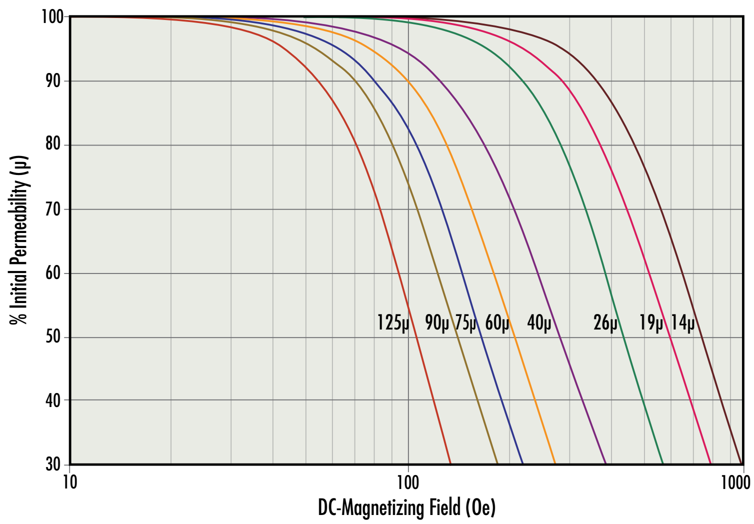


Material	Alloy Composition	DC Bias	Core Loss	Relative Cost	Saturation Flux Density (Tesla)	Curie Temperature	60μ Maximum Usable Frequency
Edge	**FeNi**	**Highest**	**Very Low**	**High**	**1.5**	**500°C**	**20 MHz**
High Flux	FeNi	High	Moderate	High	1.5	500°C	3 MHz
XFlux®	FeSi	High	High	Low	1.6	700°C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

Permeability vs. DC Bias

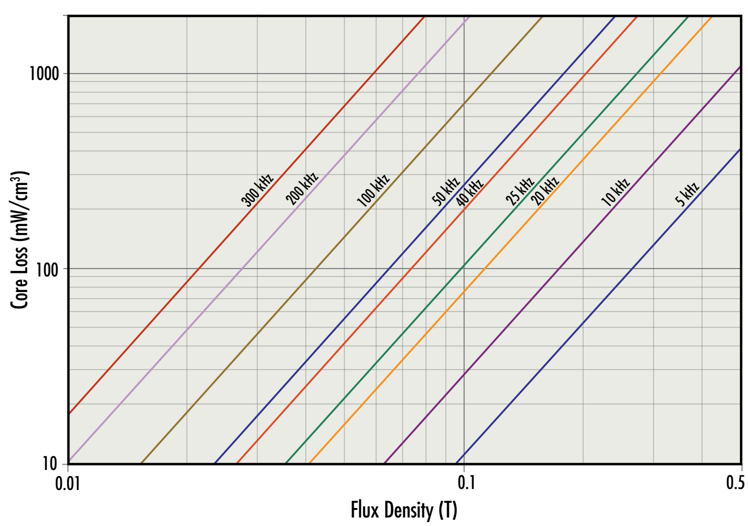
	a	b	c
14µ	0.01	1.17E-11	3.106
19µ	0.01	6.39E-11	2.950
26µ	0.01	3.65E-11	3.192
40µ	0.01	2.59E-09	2.683
60µ	0.01	9.20E-10	3.044
75µ	0.01	1.58E-09	3.067
90µ	0.01	1.85E-09	3.138
125µ	0.01	1.23E-09	3.419

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



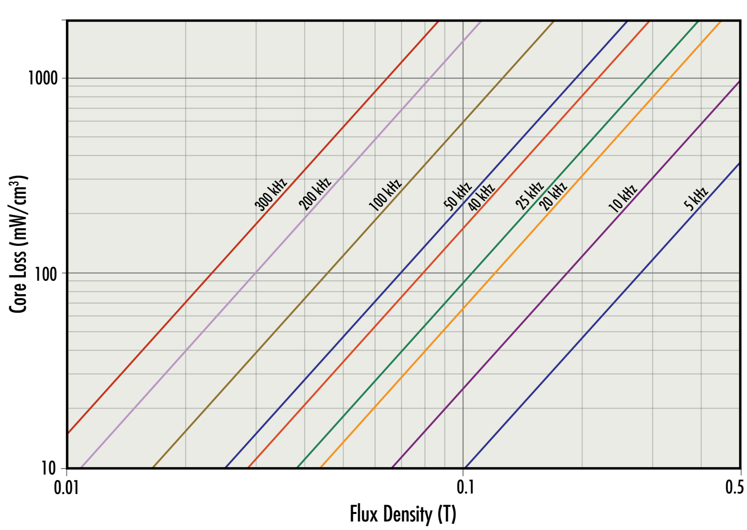
14µ Core Loss Density

$P = a(B^b)(f^c)$ (B in Tesla, f in kHz)			
	a	b	c
14µ	212.96	2.263	1.390



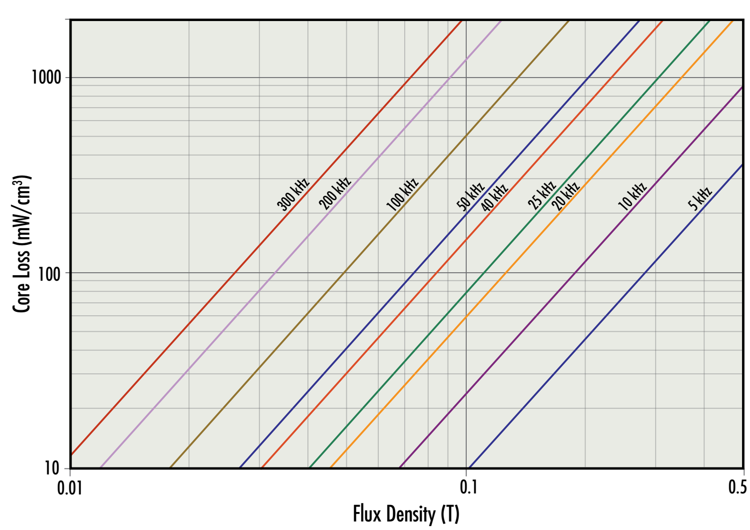
19µ Core Loss Density

$P = a(B^b)(f^c)$ (B in Tesla, f in kHz)			
	a	b	c
19µ	200.53	2.263	1.369



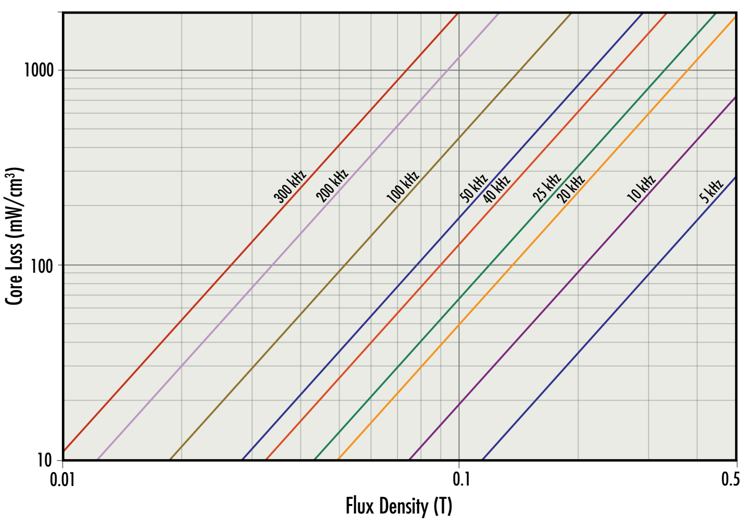
26µ Core Loss Density

$P = a(B^b)(f^c)$ (B in Tesla, f in kHz)			
	a	b	c
26µ	207.90	2.263	1.322



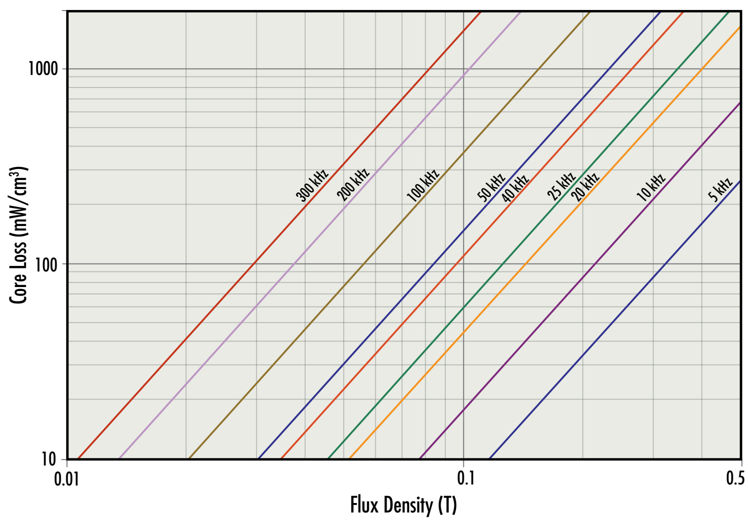
40µ Core Loss Density

$P = a(B^b)(f^c)$ (B in Tesla, f in kHz)			
	a	b	c
40µ	150.40	2.263	1.369



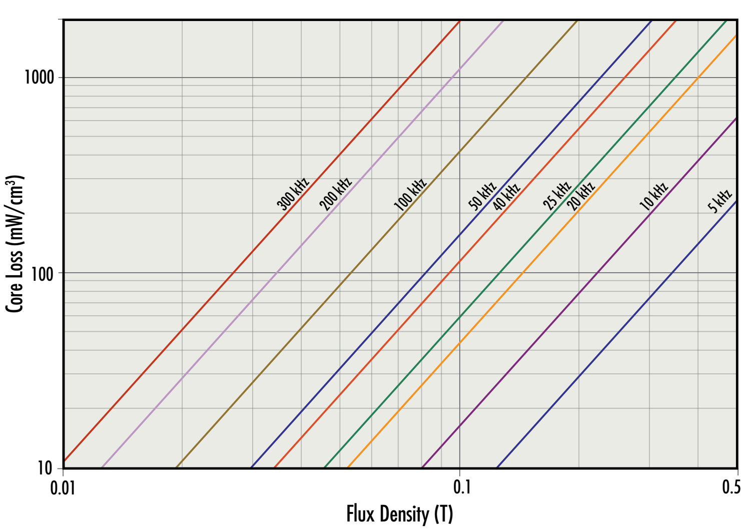
60µ Core Loss Density

$P = a(B^b)(f^c)$ (B in Tesla, f in kHz)			
	a	b	c
60µ	156.18	2.263	1.321



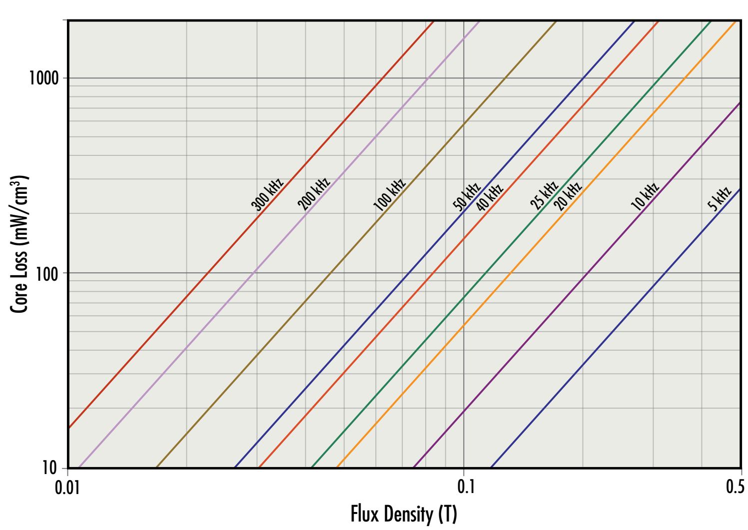
75µ Core Loss Density

$P = a(B^b)(f^c)$ (B in Tesla, f in kHz)			
	a	b	c
75µ	121.47	2.263	1.403



90µ & 125µ Core Loss Density

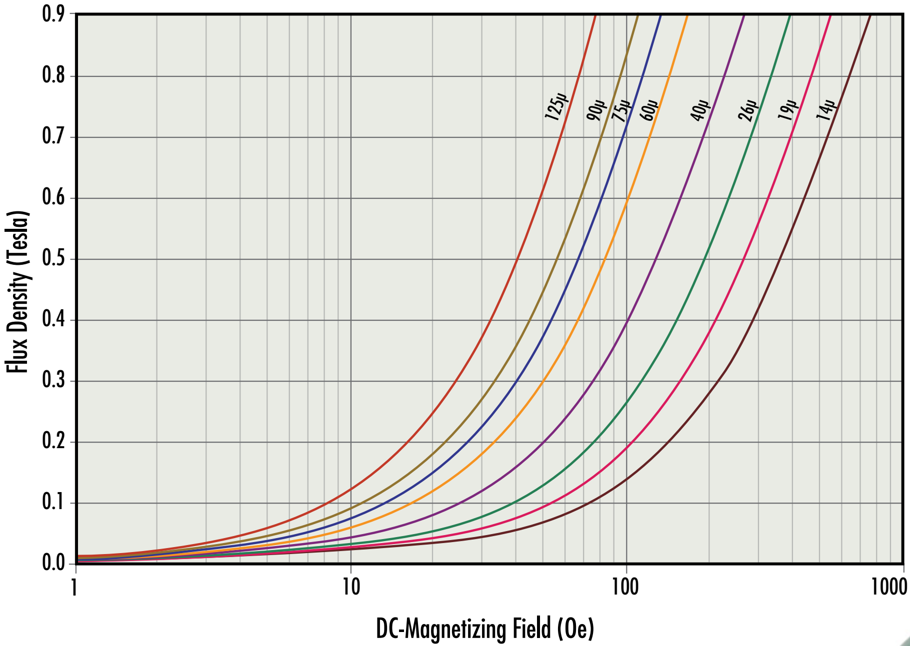
$P = a(B^b)(f^c)$ (B in Tesla, f in kHz)			
	a	b	c
90µ & 125µ	121.57	2.263	1.471



DC Magnetization

$$B = \left[\frac{a + bH + cH^2}{1 + dH + eH^2}\right]^x$$ Units: B in Tesla, H in Oe

	a	b	c	d	e	f
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



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