



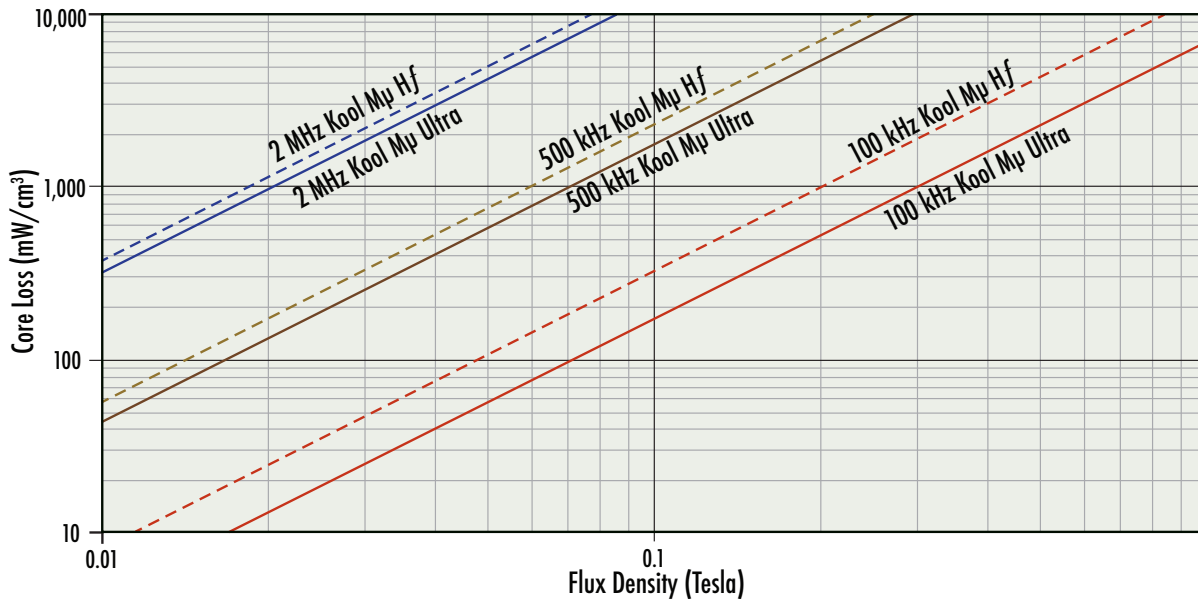
Kool M μ [®] Ultra Powder Cores



Magnetics' ultra low loss power core material, Kool M μ [®] Ultra is an optimal solution for telecom and datacom applications. Kool M μ Ultra is the best of both worlds, with losses approaching ferrite levels while maintaining powder core advantages of soft saturation, stable high temperature performance, and no gap fringing losses. Kool M μ Ultra has DC bias superior to Kool M μ and comparable to Kool M μ Hf, with core losses almost 30% below Kool M μ Hf.

Currently available in 26 μ , 40 μ , and 60 μ toroids.

60 μ Core Loss Density

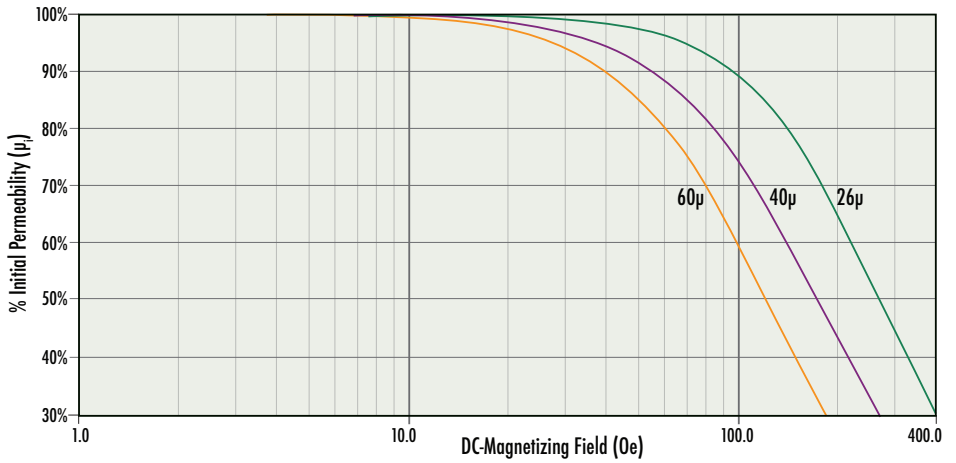


60 μ	Perm vs. DC Bias (Oer)		Core Loss (mW/cm ³)
	80%	50%	W 100 mT, 50 kHz
Kool Mμ[®] Ultra	60	120	100
Kool M μ [®] Hf	60	115	140
Kool M μ [®]	45	95	190

Permeability vs. DC Bias

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

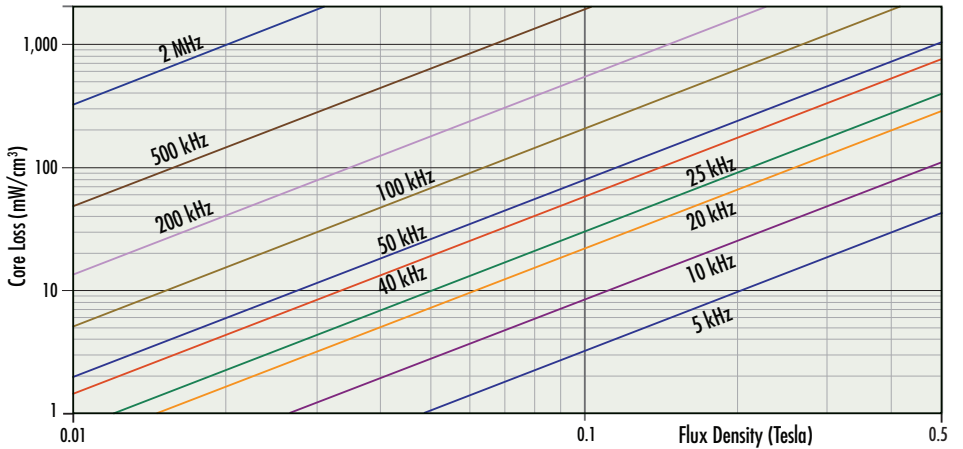
	a	b	c
26μ	0.01	7.38E-08	2.111
40μ	0.01	4.94E-07	1.920
60μ	0.01	6.94E-07	2.000



Core Loss Density 26μ & 40μ

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

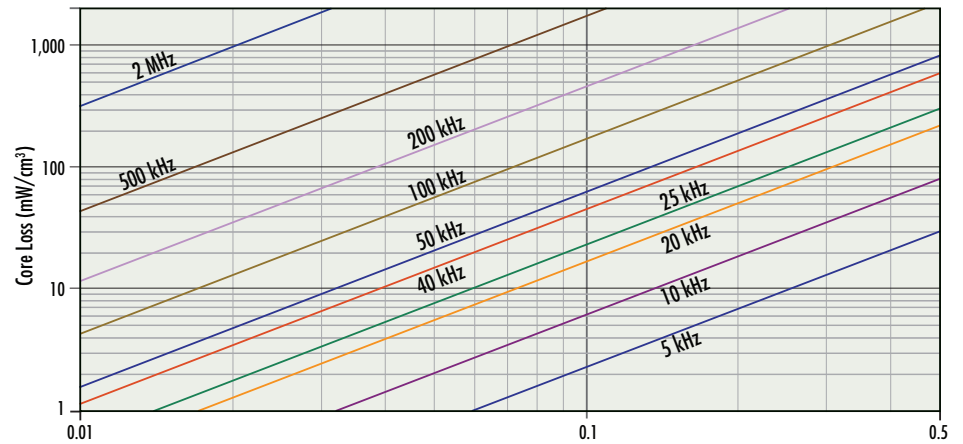
	a	b	c
26 & 40μ	13.99	1.602	1.385



Core Loss Density 60μ

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

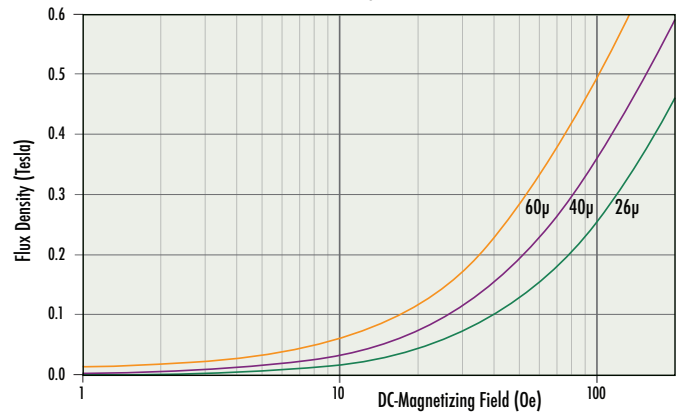
	a	b	c
60μ	8.88	1.602	1.443



DC Magnetization

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

Perm	a	b	c	d	e	x
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	1.508E-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



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