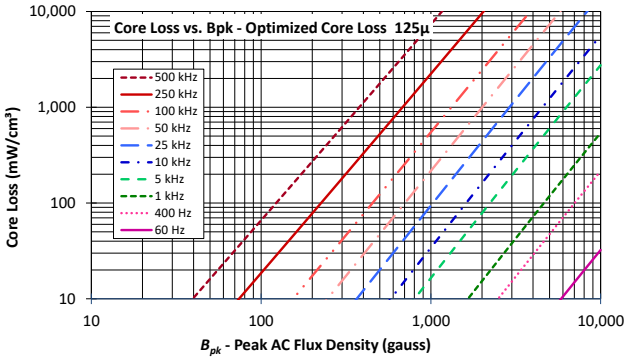
Material:	Optimized Core Loss 125µ Toroid

Revision 20200519 - Generated 2020-May-26

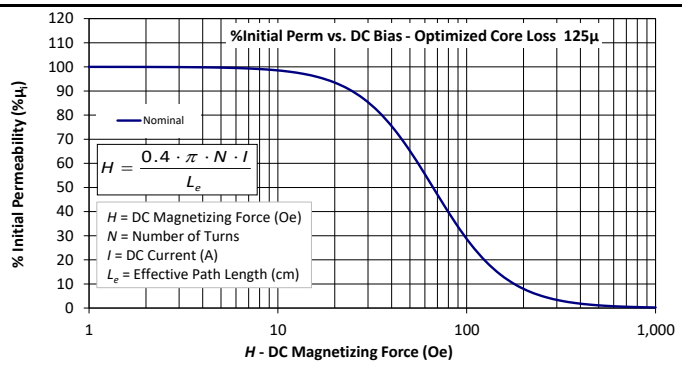
µi (reference)	125
Typical AL tolerance	± 8%
Density	6.9 g/cm³
Bsat	12.1 kG
Core Loss (50kHz, 1000g)	217 mW/cm³ (nom) 249 mW/cm³ (max)
%Perm at DC Bias (40 Oe)	75.5% (nom) 67.2% (min)



$$Core\ Loss\ (mW/cc) = \frac{f}{\frac{a}{B_{pk}^{3}} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}}} + d \cdot B_{pk}^{2} \cdot f^{2}$$

where B_{pk} expressed in gauss, f in hertz, and:

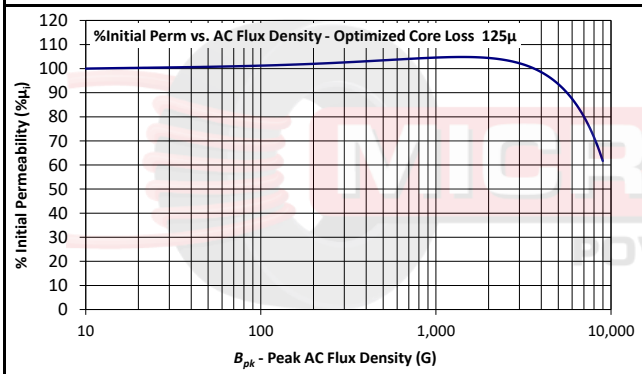
a=1.000E+06, b=2.369E+09, c=1.449E+06, d=2.303E-14



$$\%\mu_i = \frac{1}{a + b \cdot H^{c}} + d$$

where H expressed in oersted, and:

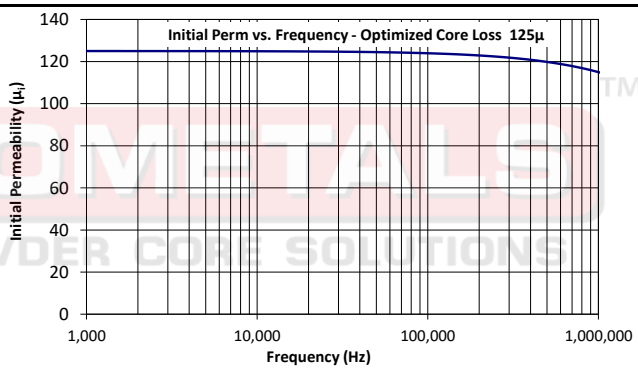
a=1.000E-02, b=8.990E-07, c=2.221E+00, d=0.000E+00



$$\%\mu_i = \frac{1}{\frac{1}{a + bB^{c}} + \frac{1}{dB^{e}} + \frac{1}{f}}$$

where B_{pk} expressed in gauss, and:

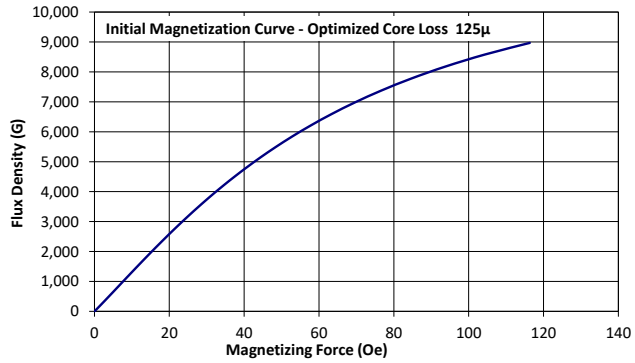
a=9.581E+02, b=5.682E-01, c=1.164E+00, d=4.792E+09, e=-1.812E+00, f=1.117E+02



$$\mu_i = \frac{1}{a + bf^{c}} + d$$

where f expressed in hertz, and:

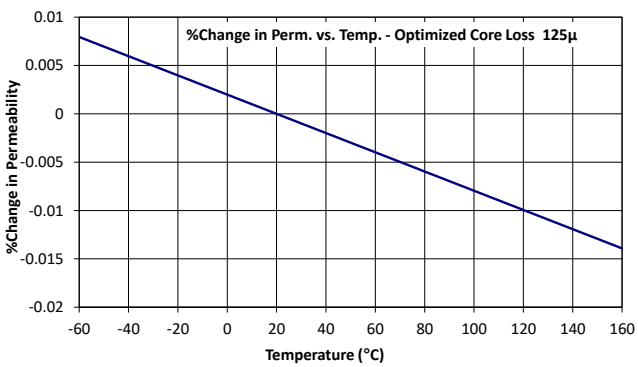
a=8.000E-03, b=6.059E-10, c=1.010E+00, d=0.000E+00



$$B_{pk} = \frac{\mu_i}{\frac{1}{H + aH^{b}} + \frac{1}{cH^{d}} + \frac{1}{e}}$$

where B_{pk} expressed in gauss, H in oersted, and:

a=2.540E-02, b=1.839E+00, c=4.900E+04, d=2.856E+00, e=9.699E+01



$$\%\left(\frac{\Delta\mu_i}{\mu_i}\right) = a(T - 20) * 0.0001$$

where T expressed in celsius, and:

a=-9.940E-01, b=-7.252E-03, c=7.421E-02, d=2.183E-04, e=-1.229E-03

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