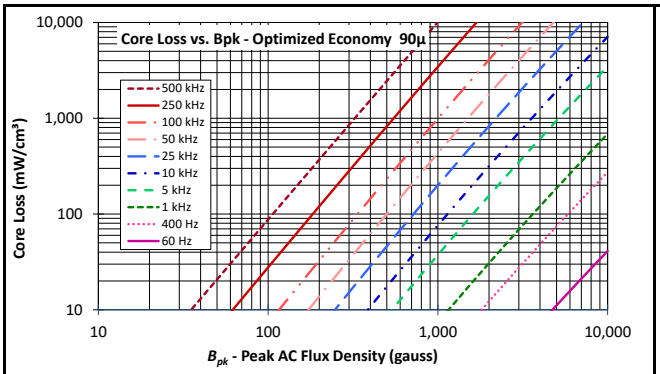
Material:	Optimized Economy 90µ Toroid

Revision 20200519 - Generated 2020-May-26

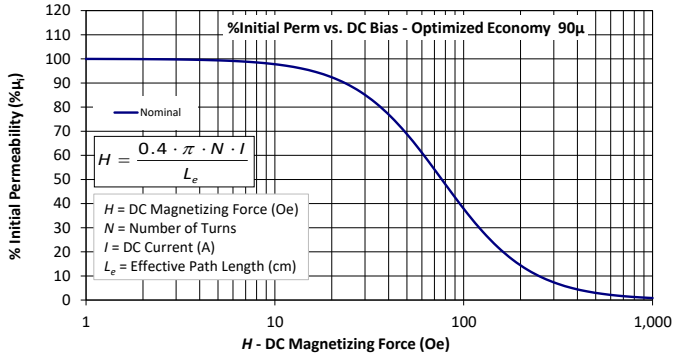
µi (reference)	090
Typical AL tolerance	± 8%
Density	6.4 g/cm³
Bsat	13.2 kG
Core Loss (50kHz, 1000g)	431 mW/cm³ (nom) 496 mW/cm³ (max)
%Perm at DC Bias (50 Oe)	68.8% (nom) 61.1% (min)



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

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

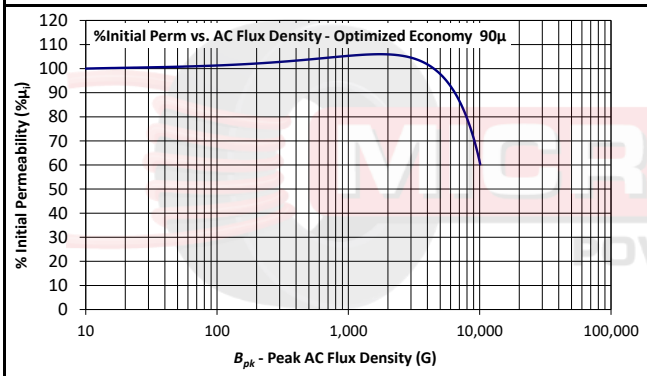
a=1.655E+09, b=7.086E+08, c=4.038E+06, d=2.568E-14



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

where H expressed in oersted, and:

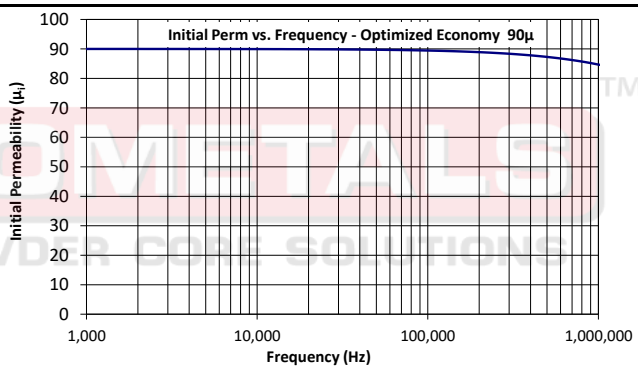
a=1.000E-02, b=3.156E-06, c=1.858E+00, d=0.000E+00



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

where B_{pk} expressed in gauss, and:

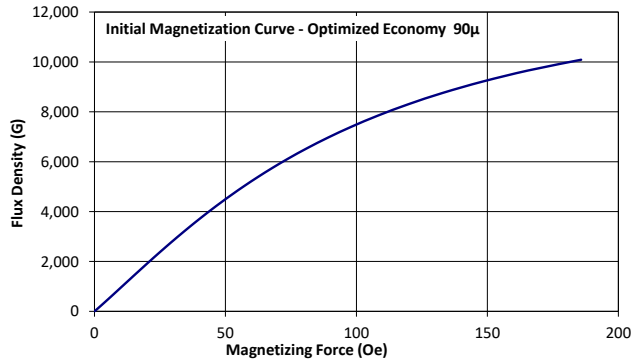
a=9.581E+02, b=5.682E-01, c=1.164E+00, d=4.792E+09, e=-1.812E+00, f=1.117E+02



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

where f expressed in hertz, and:

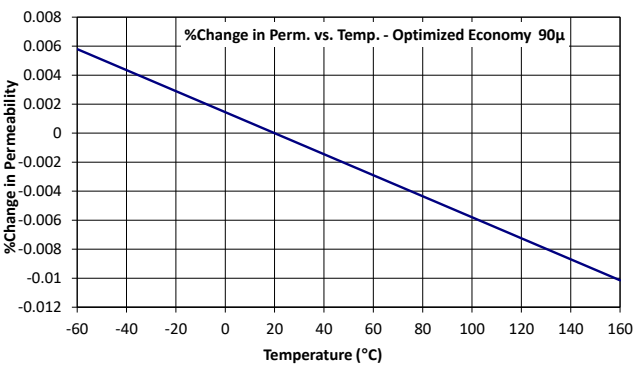
a=1.111E-02, b=6.059E-10, c=1.010E+00, d=0.000E+00



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

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

a=1.924E-02, b=1.840E+00, c=4.785E+04, d=3.113E+00, e=1.468E+02



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

where T expressed in celsius, and:

a=-7.246E-01, b=-7.252E-03, c=5.410E-02, d=2.183E-04, e=-8.961E-04

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