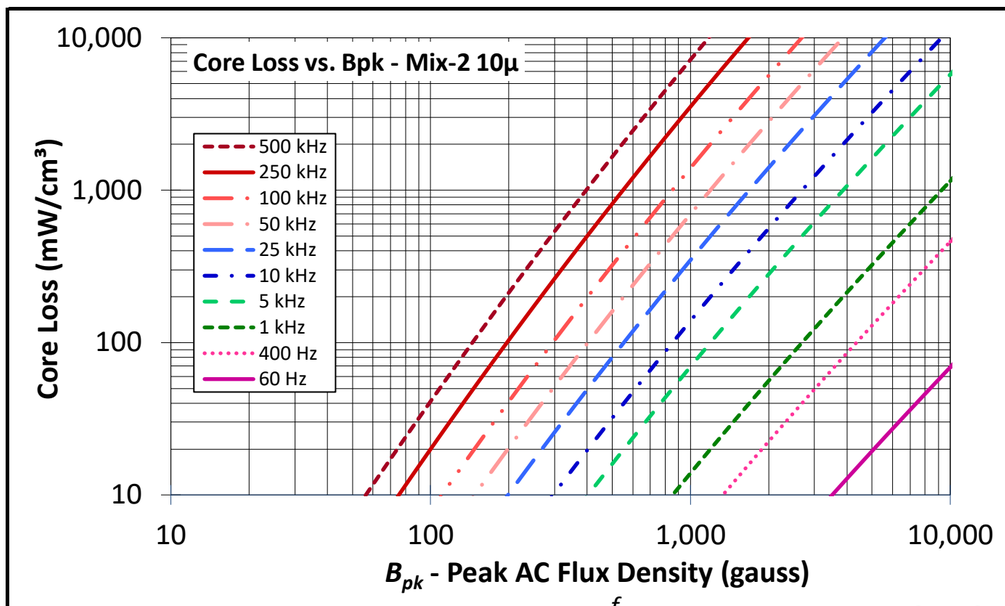
Mix:	-2

Revision 2023-Dec-15 - Generated 2023-Dec-15

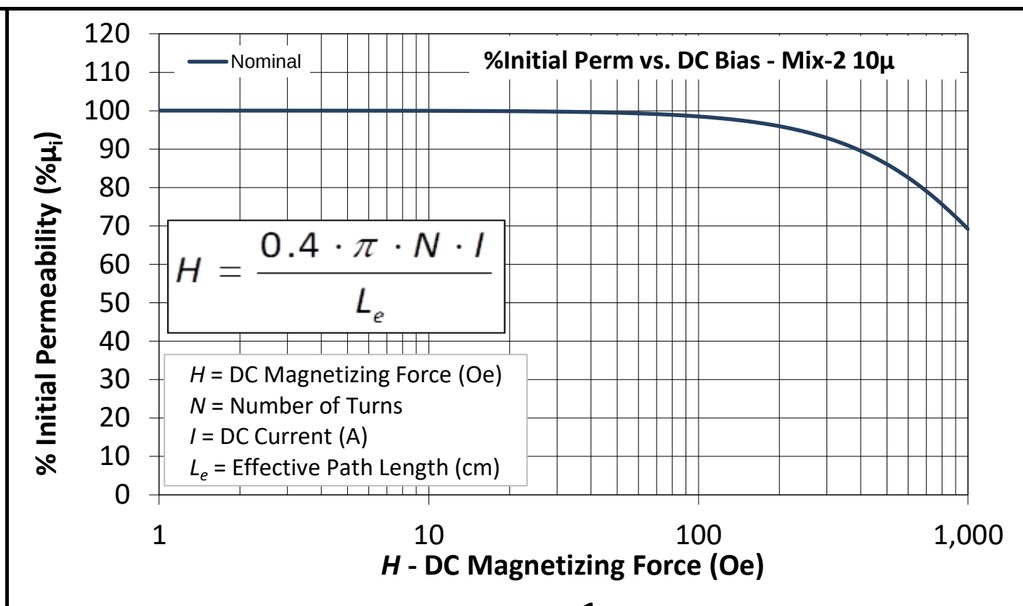
µi(reference)	10
Typical AL tolerance	± 5%
Color Code	Red/Clear
Density	5.0 g/cm³
Bsat	14.8kG
Core Loss (100kHz, 140g)	18 mW/cm³ (nom) 20 mW/cm³ (max)
%Perm at DC Bias (200 Oe)	95.9% (nom) 94.8% (min)



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

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

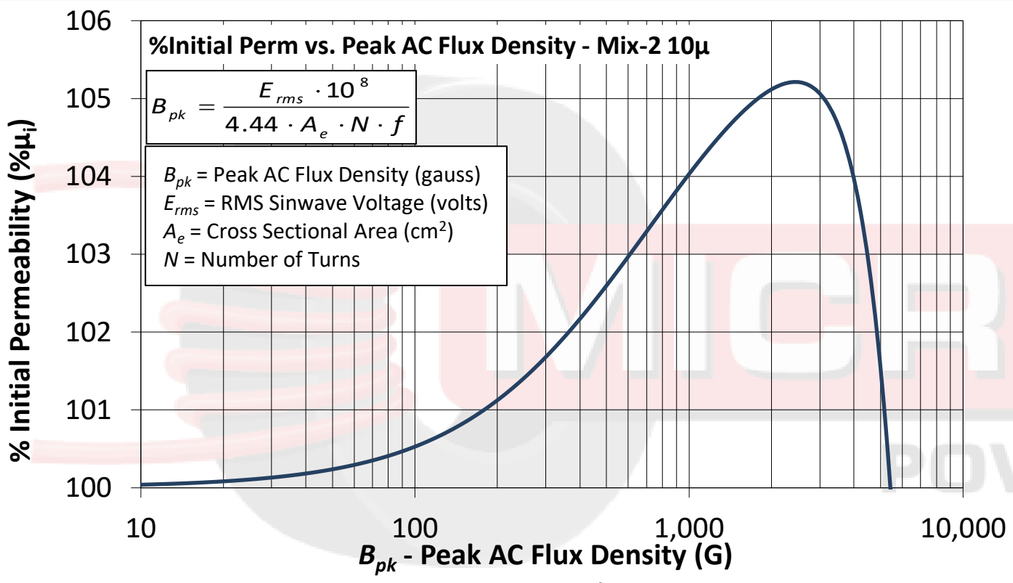
a=4.00E+09, b=3.00E+08, c=2.70E+06, d=9.60E-16



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

where H expressed in oersteds, and:

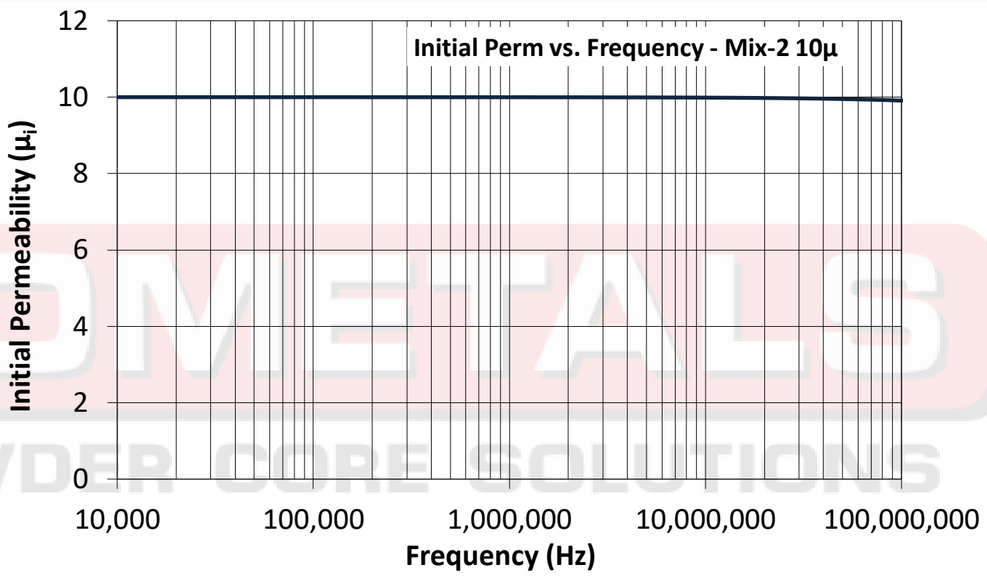
a=1.00E-02, b=1.83E-07, c=1.46, d=0.00



$$\%\mu_i = \frac{1}{\frac{1}{a + bB_{pk}^{\ c}} + \frac{1}{dB_{pk}^{\ e}} + \frac{1}{f}}$$

where B_{pk} expressed in gauss, and:

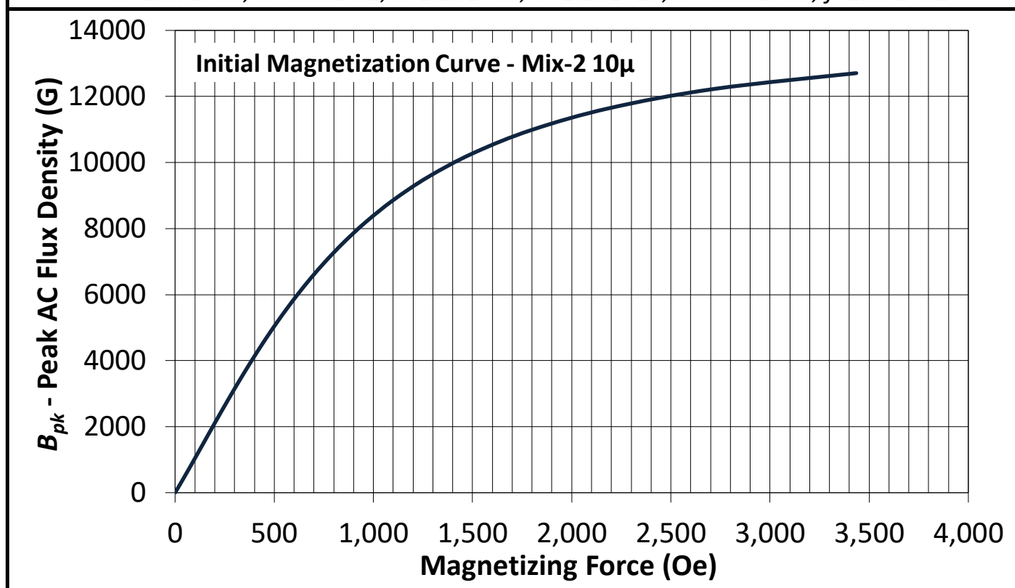
a=1.57E+03, b=4.50E-01, c=1.25E+00, d=1.16E+17, e=-3.70E+00, f=1.07E+02



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

where f expressed in hertz, and:

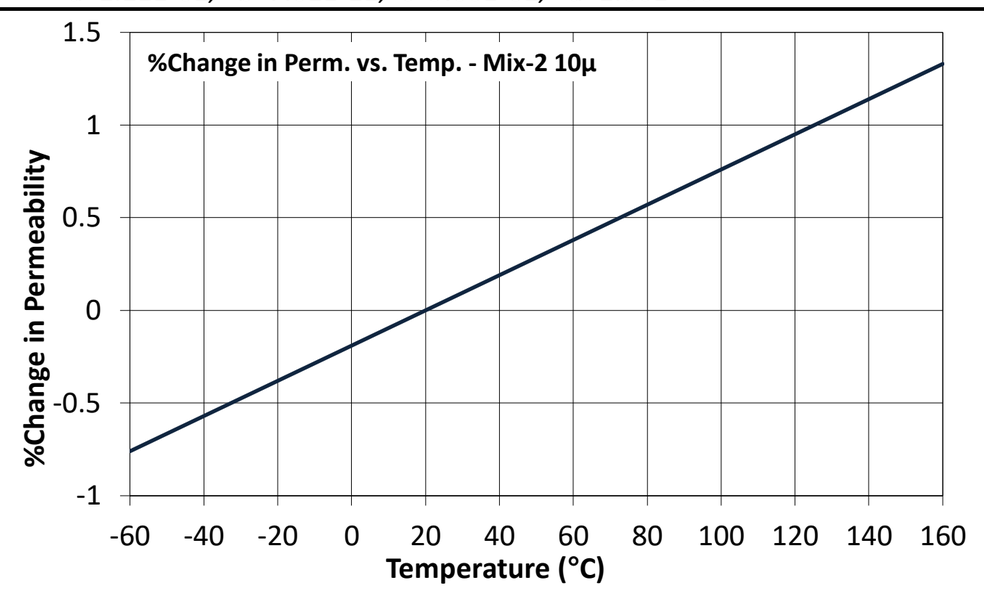
a=1.11E-01, b=7.01E-11, c=9.00E-01, d=1.00E+00



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

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

a=1.50E-03, b=1.96E+00, c=1.97E+04, d=9.18E-04, e=1.48E+03



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

where T expressed in celsius, and:

a=95

Micrometals Iron Powder Cores, A Division of Micrometals, Inc. - 5615 E. La Palma Ave., Anaheim, California 92807 USA

Ph: +1-714-970-9400, Toll Free in USA: +1-800-356-5977

www.Micrometals.com