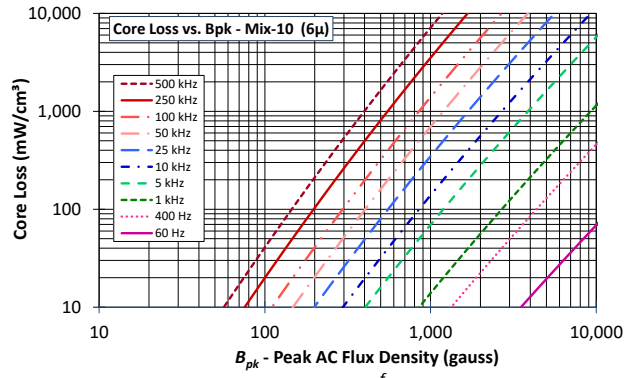
Mix:	-10

Revision 20190524 - Generated 2019-May-24

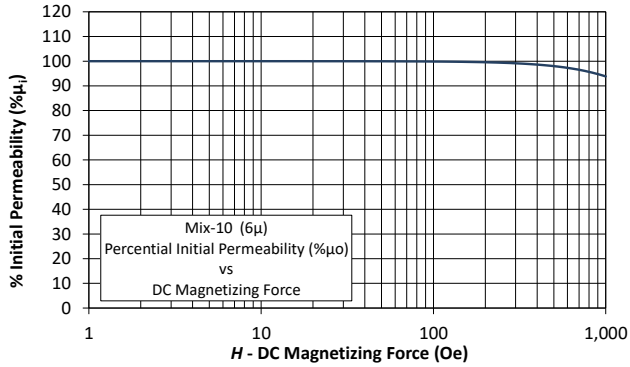
µi(reference)	6
Typical AL tolerance	± 5%
Color Code	Black/Clear
Density	4.9 g/cm³
Bsat	14.6kG
Core Loss (100kHz, 140g)	18 mW/cm³ (nom) 20 mW/cm³ (max)
%Perm at DC Bias (200 Oe)	99.6% (nom) 99.4% (min)



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

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

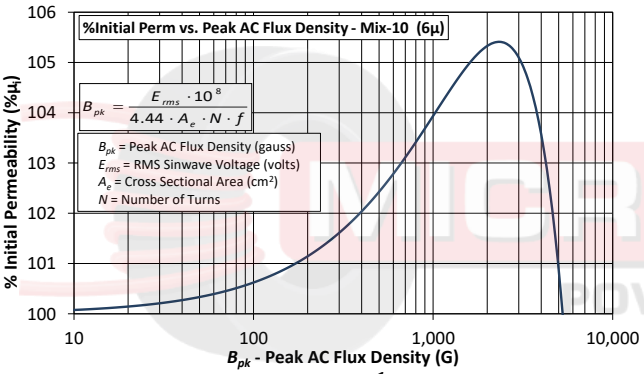
a=4.00E+09, b=3.00E+08, c=2.70E+06, d=8.00E-16



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

where H expressed in oersteds, and:

a=1.00E-02, b=5.54E-09, c=1.69, d=0.00

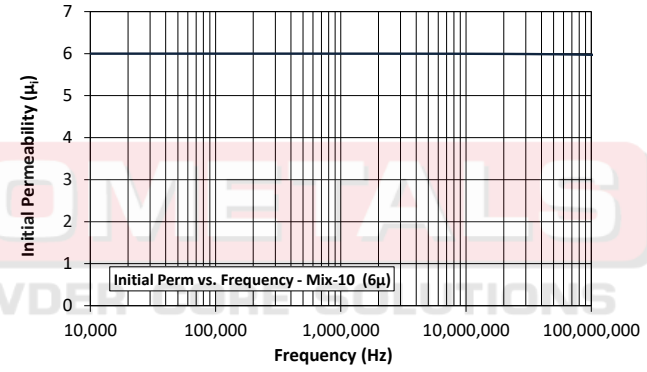


$$B_{pk} = \frac{E_{rms} \cdot 10^{8}}{4.44 \cdot A_e \cdot N \cdot f}$$

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

where B_{pk} expressed in gauss, and:

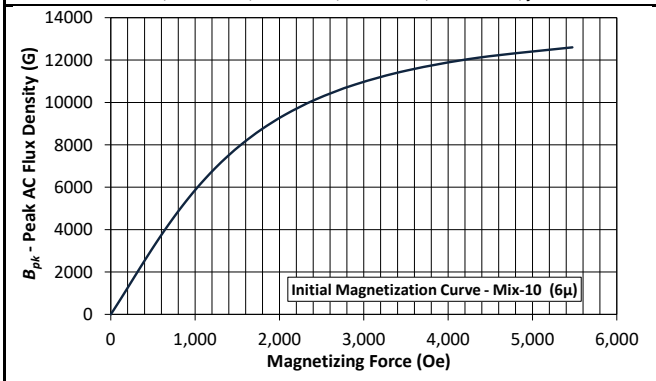
a=1.57E+03, b=4.50E-01, c=1.25E+00, d=1.16E+17, e=-3.70E+00, f=1.07E+02



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

where f expressed in hertz, and:

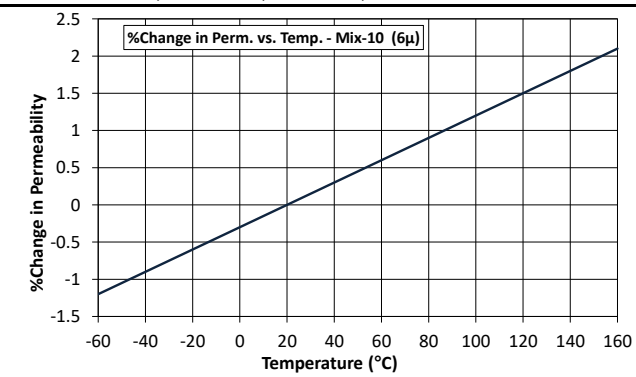
a=2.00E-01, b=7.01E-11, c=9.00E-01, d=1.00E+00



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

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

a=9.13E-04, b=1.96E+00, c=3.83E+04, d=9.23E-04, e=2.43E+03



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

where T expressed in celsius, and:

a=150

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