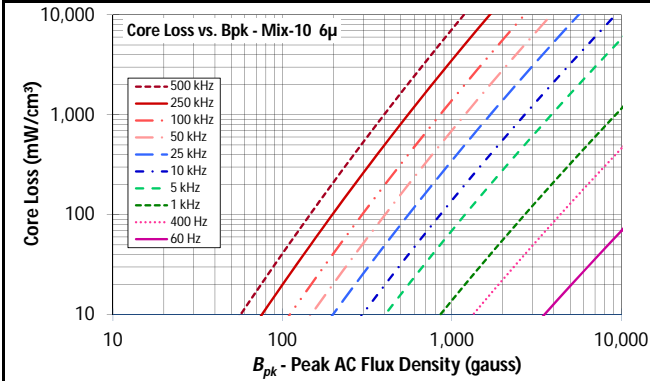




Mix: -10

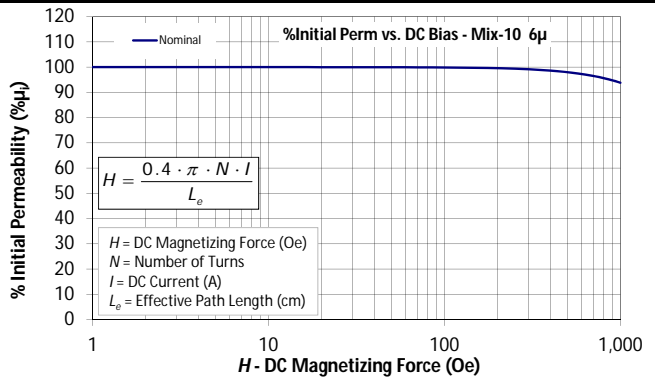
Revision 20161006 - Generated 2016-Oct-10

μ (reference)	6
Color Code	Black/Clear
Density	4.9 g/cm ³
Bsat	14.6kG
Core Loss (100kHz, 140g)	18 mW/cm ³ (nom) 20 mW/cm ³ (max)
%Perm at DC Bias (200 Oe)	99.6% (nom) 99.4% (min)



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

where B_{pk} expressed in gauss, f expressed in hertz, and:
 $a=4.00E+09$, $b=3.00E+08$, $c=2.70E+06$, $d=8.00E-16$

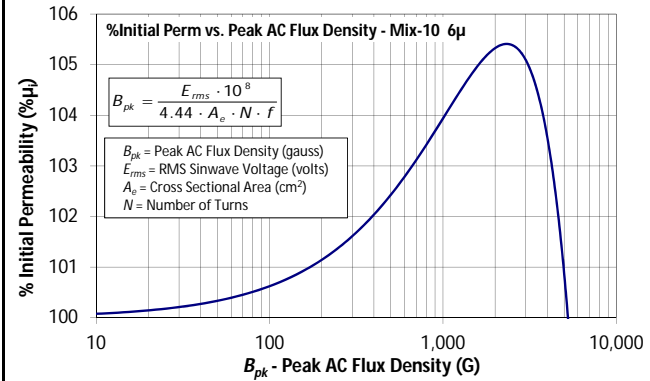


$$H = \frac{0.4 \cdot \pi \cdot N \cdot I}{L_e}$$

H = DC Magnetizing Force (Oe)
 N = Number of Turns
 I = DC Current (A)
 L_e = Effective Path Length (cm)

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

where H expressed in oersteds, and:
 $a=1.00E-02$, $b=5.54E-09$, $c=1.69$, $d=0.00$

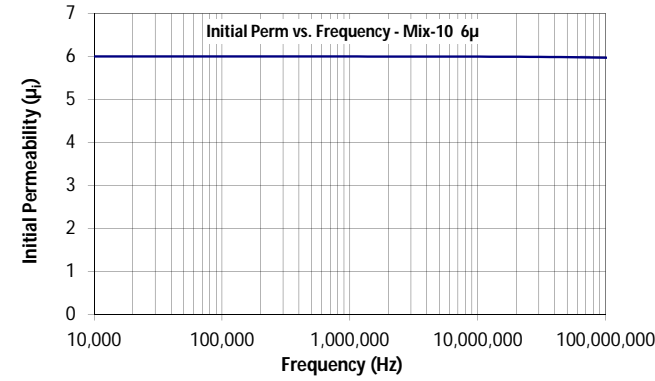


$$B_{pk} = \frac{E_{rms} \cdot 10^8}{4.44 \cdot A_e \cdot N \cdot f}$$

B_{pk} = Peak AC Flux Density (gauss)
 E_{rms} = RMS Sinwave Voltage (volts)
 A_e = Cross Sectional Area (cm²)
 N = Number of Turns

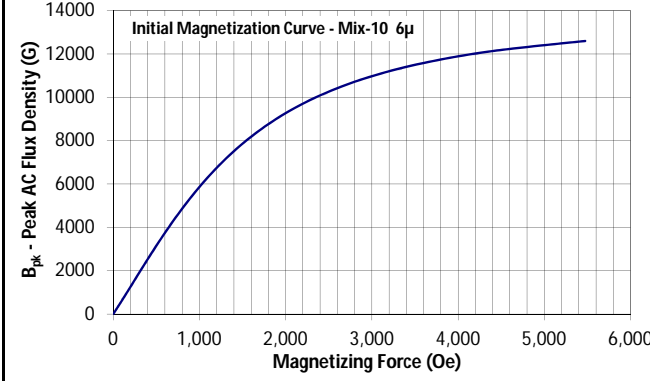
$$\% \mu_i = \frac{1}{a + bB_{pk}^c} + \frac{1}{dB_{pk}^e + f}$$

where B_{pk} expressed in gauss, and:
 $a=1.57E+03$, $b=4.50E-01$, $c=1.25E+00$, $d=1.16E+17$, $e=-3.70E+00$, $f=1.07E+02$



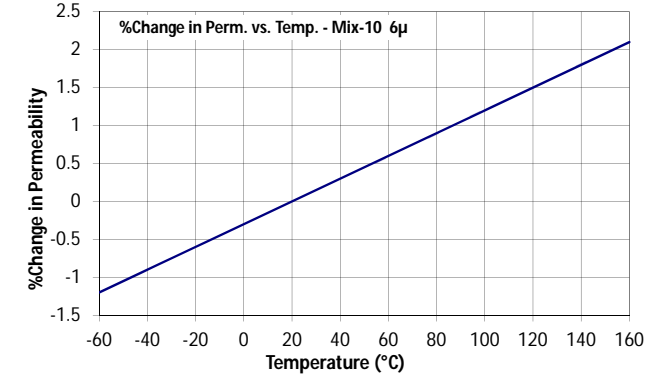
$$\mu_i = \frac{1}{a + bf^c} + d$$

where f expressed in hertz, and:
 $a=2.00E-01$, $b=7.01E-11$, $c=9.00E-01$, $d=1.00E+00$



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

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:
 $a=150$