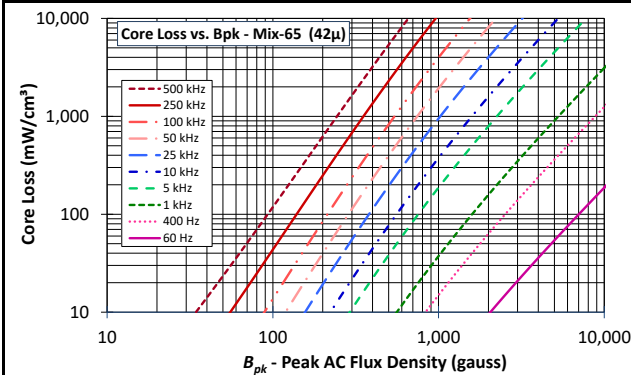




<b>Mix:</b>	<b>-65</b>
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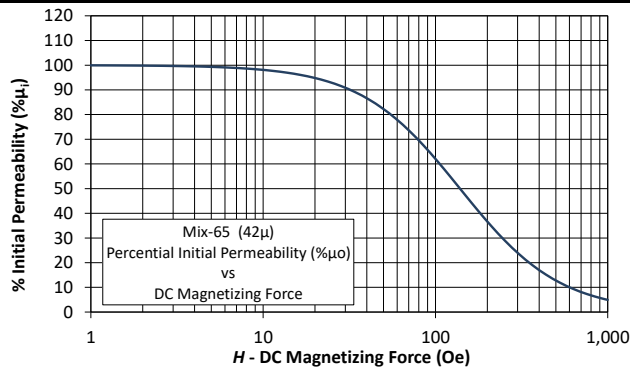
Revision 20190524 - Generated 2019-May-24

$\mu_i$ (reference)	42
Typical AL tolerance	$\pm 10\%$
Color Code	Brown/Yellow
Density	6.1 g/cm <sup>3</sup>
Bsat	16.0kG
Core Loss (100kHz, 140g)	33 mW/cm <sup>3</sup> (nom) 38 mW/cm <sup>3</sup> (max)
%Perm at DC Bias (100 Oe)	62.1% (nom) 55.5% (min)



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

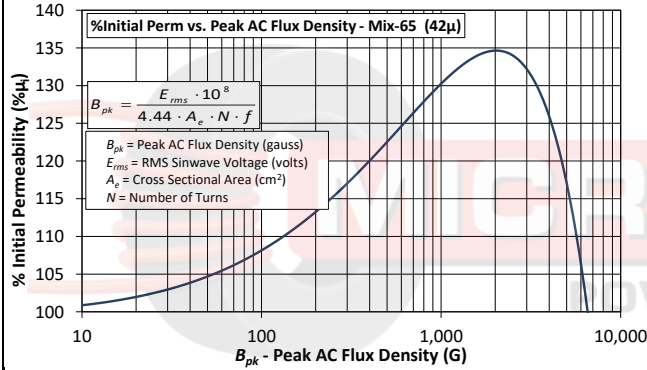
where  $B_{pk}$  expressed in gauss,  $f$  expressed in hertz, and:  
 $a=6.90E+09$ ,  $b=6.00E+07$ ,  $c=1.10E+06$ ,  $d=2.50E-14$



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

where  $H$  expressed in oersteds, and:

$a=1.00E-02$ ,  $b=6.16E-06$ ,  $c=1.50$ ,  $d=0.00$



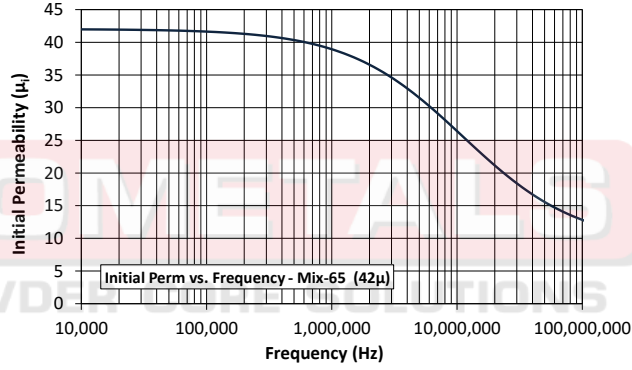
$$B_{pk} = \frac{E_{rms} \cdot 10^8}{4.44 \cdot A_e \cdot N \cdot f}$$

$B_{pk}$  = Peak AC Flux Density (gauss)  
 $E_{rms}$  = RMS Sinwave Voltage (volts)  
 $A_e$  = Cross Sectional Area (cm<sup>2</sup>)  
 $N$  = Number of Turns

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

where  $B_{pk}$  expressed in gauss, and:

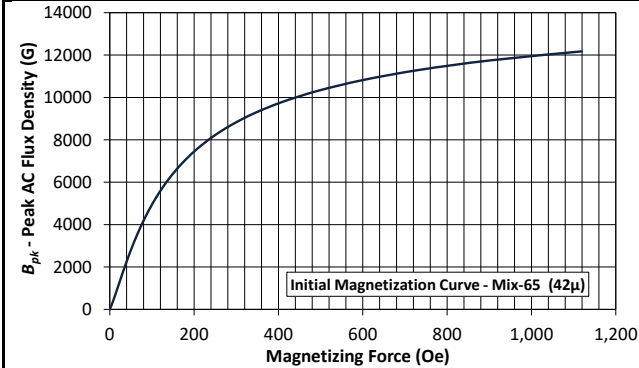
$a=1.97E+02$ ,  $b=3.67E+00$ ,  $c=5.89E-01$ ,  $d=5.72E+11$ ,  $e=-2.45E+00$ ,  $f=1.90E+02$



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

where  $f$  expressed in hertz, and:

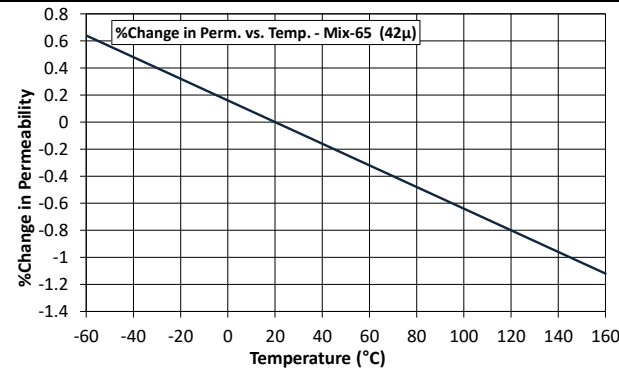
$a=3.04E-02$ ,  $b=7.09E-09$ ,  $c=9.41E-01$ ,  $d=9.13E+00$



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

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

$a=9.23E-02$ ,  $b=1.72E+00$ ,  $c=2.39E+01$ ,  $d=5.70E-01$ ,  $e=3.80E+02$



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

where  $T$  expressed in celsius, and:

$a=-80$