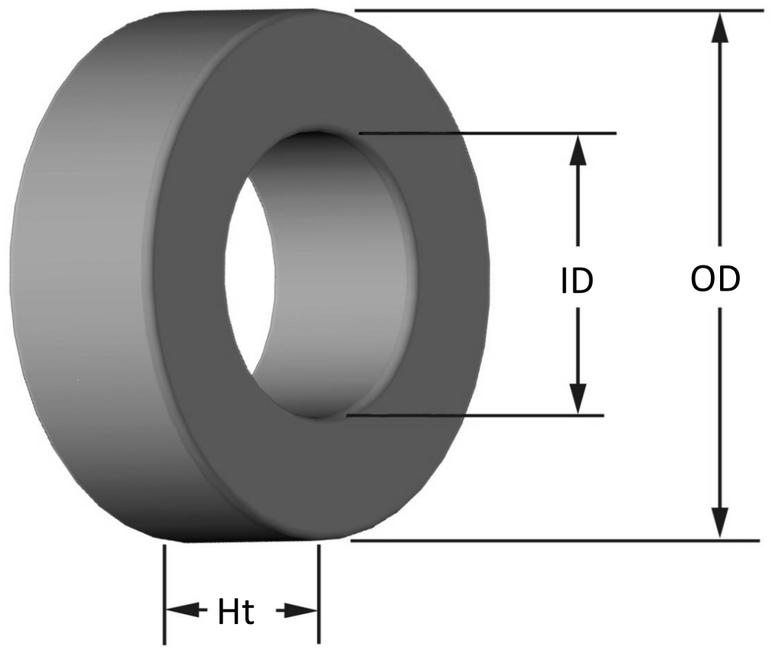
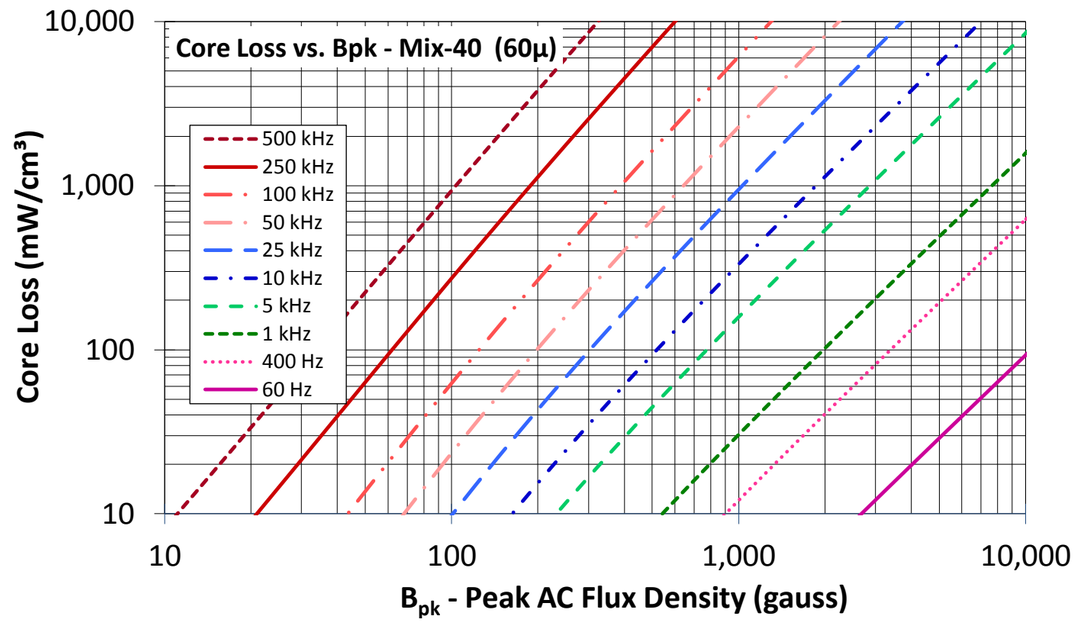
MICROMETALS™
POWDER CORE SOLUTIONS

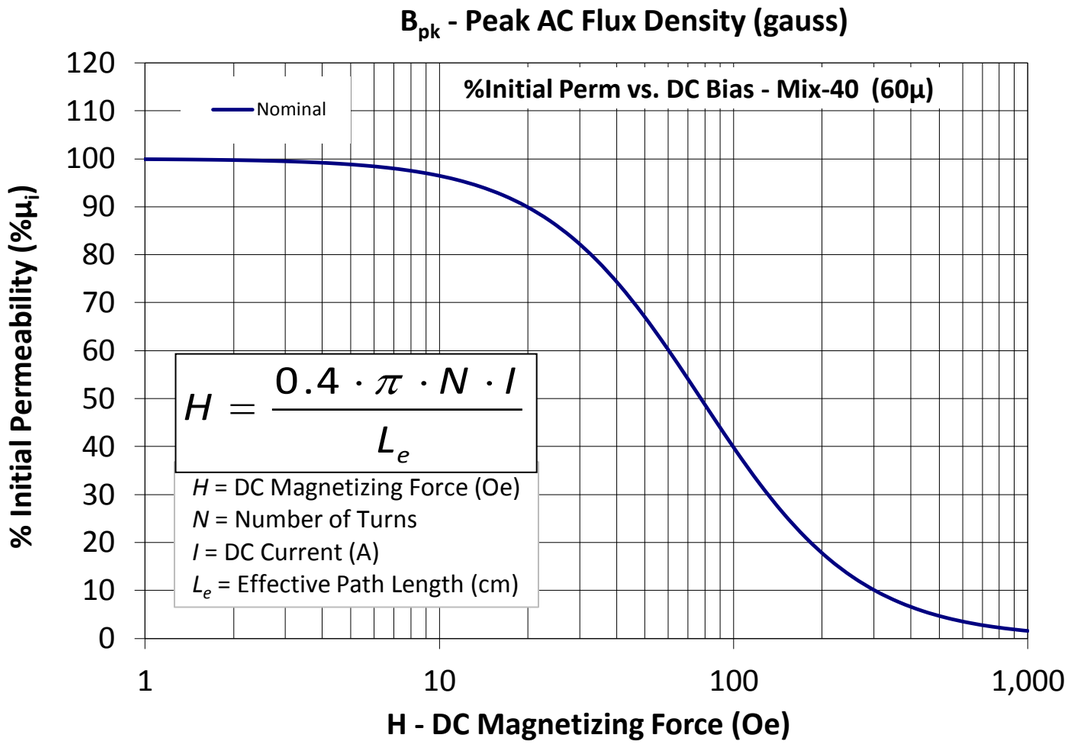
| Part Number: | T300-40D |
|---|---|

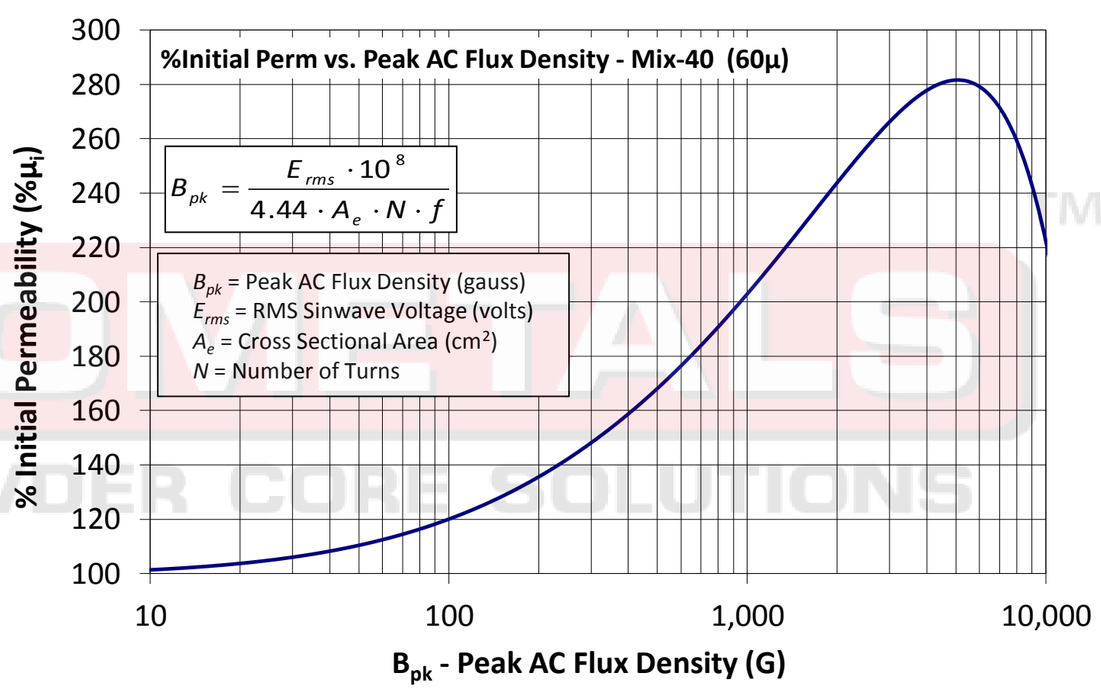
Revision 20190524 - Generated 2019-May-30

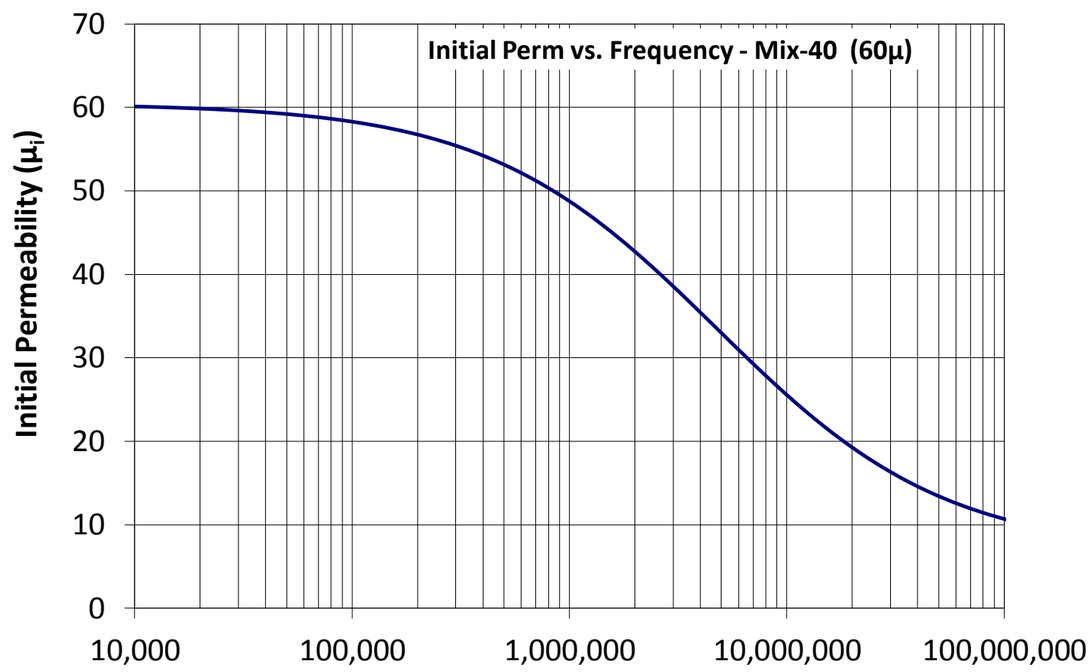



| | | | |
|---|---|---|---|
| **OD** | (nom. - bare core) | 77.22 mm | 3.040 in |
| | (max. - after coating) | 77.98 mm | 3.070 in |
| **ID** | (nom. - bare core) | 49.02 mm | 1.930 in |
| | (min. - after coating) | 48.26 mm | 1.900 in |
| **Ht** | (nom. - bare core) | 25.40 mm | 1.000 in |
| | (max. - after coating) | 26.16 mm | 1.030 in |
| **Mass** | (approximate) | 460 grams | |
| **Magnetic Dimensions** | $A_e$ - Eff. Mag. Cross Section | 3.38 cm² | |
| | $L_e$ - Eff. Mag. Path Length | 19.8 cm | |
| | $V_e$ - Eff. Core Volume | 67.0 cm³ | |
| | WA - Min. Eff. Window Area | 18.3 cm² | |
| | sa - Surface Area | 215 cm² | |
| | mlt - mean length per turn | 10.6 cm | |
| **Inductance** | $\mu_i$(reference) | 60 | |
| | $A_L$ value (nominal) | 142 nH/N² | |
| | Test Winding | N=100, #22 AWG | |
| | Frequency | 10 kHz | |
| | Voltage on Agilent 4284A | 1.5 V | |
| | $A_L$ tolerance | ±10% | |
| **Core Loss** | Core Loss(mW/cm³)= $\frac{f}{\frac{a}{Bpk^{3}}+\frac{b}{Bpk^{2.3}}+\frac{c}{Bpk^{1.65}}}+d\cdot Bpk^{2}\cdot f^{2}$ | | |
| | where $B_{pk}$ expressed in gauss, $f$ expressed in hertz, and: | | |
| | *a=1.10E+09, b=3.30E+07, c=2.50E+06, d=3.10E-13* | | |
| | Bpk | 140 G | |
| | frequency | 100 kHz | |
| | Core Loss (nominal) | 127 mW/cm³ | |
| | Core Loss (maximum) | 146 mW/cm³ | |
| **DC Saturation** | $\%\mu_i = \frac{1}{a+b\cdot H^{c}}+d$ | | |
| | where H expressed in oersteds, and: | | |
| | *a=1.00E-02, b=8.93E-06, c=1.61, d=0.00* | | |
| | $H_{DC}$ | 50 Oe | |
| | Percent Initial Perm(nom.) | 67.0% | |
| | Percent Initial Perm(min.) | 60.2% | |
| **Coating/Pkg** | Coating Type: | Green/Yellow Epoxy Paint | |
| | Voltage Breakdown (min.) | 500 Vrms, 60Hz | |
| | Limit | 3 mA, 5 s | |
| | Package Quantity | 30 Pcs/Box | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Winding Table** | **Wire Size** | AWG | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 |
| | | mm | 3.150 | 2.500 | 2.000 | 1.600 | 1.250 | 1.000 | 0.800 | 0.630 | 0.500 | 0.400 | 0.315 |
| | **Single Layer** | Turns | 38 | 48 | 60 | 76 | 95 | 119 | 149 | 186 | 232 | 289 | 360 |
| | | Rdc(Ω) | 8.3 m | 16.7 m | 33.1 m | 66.7 m | 132.7 m | 264.3 m | 526.3 m | 1.0 | 2.1 | 4.1 | 8.1 |
| | **Full Winding** | Turns | 96 | 148 | 229 | 355 | 549 | 850 | 1,316 | 2,037 | 3,153 | 4,880 | 7,553 |
| | | Rdc(Ω) | 21.0 m | 51.4 m | 126.4 m | 311.7 m | 766.7 m | 1.9 | 4.6 | 11.4 | 28.2 | 69.3 | 170.7 |


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