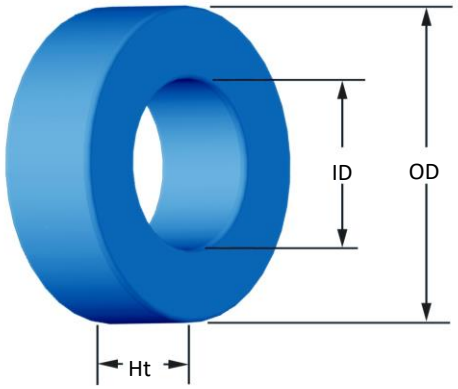
MICROMETALS
ALLOY POWDER CORES

| Part Number: | SH-040026-2 |
|---|---|

Revision 20170403 - Generated 2017-Apr-03

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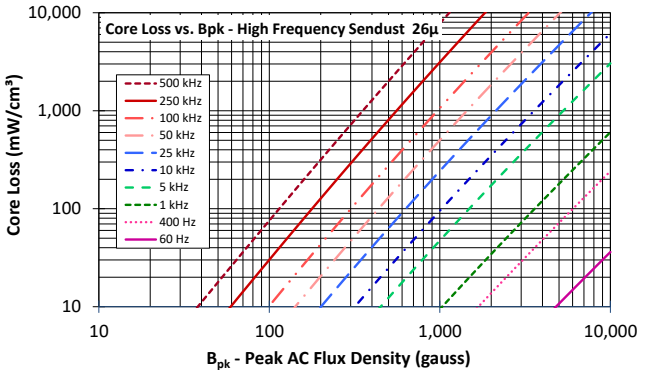
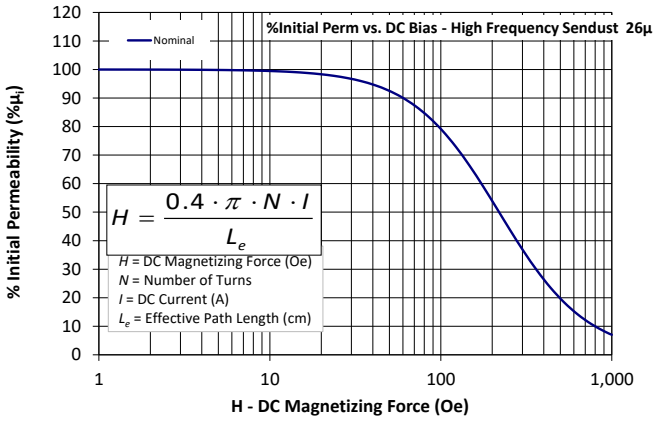
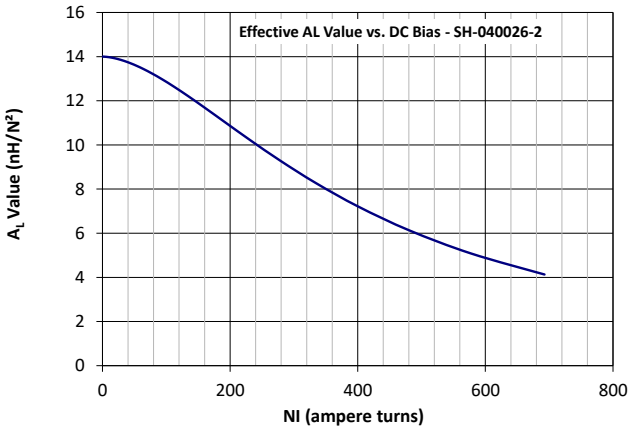
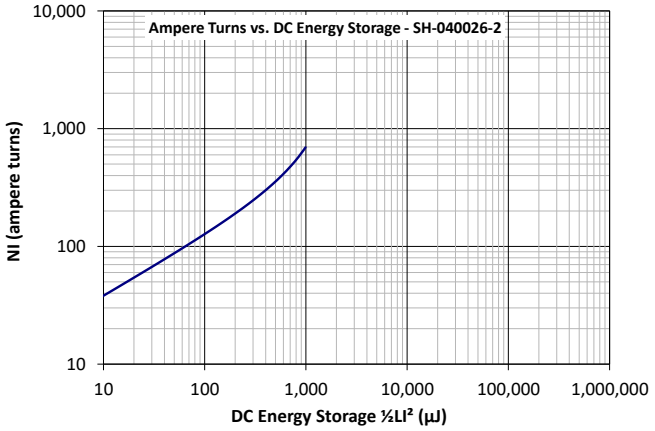
|---|---|---|---|
| **OD** | (nom. - bare core) | 10.16 mm | 0.400 in |
| | (max. - after coating) | 10.80 mm | 0.425 in |
| **ID** | (nom. - bare core) | 5.08 mm | 0.200 in |
| | (min. - after coating) | 4.57 mm | 0.180 in |
| **Ht** | (nom. - bare core) | 3.96 mm | 0.156 in |
| | (max. - after coating) | 4.57 mm | 0.180 in |
| **Mass** | (approximate) | 1.2 grams | |
| **Magnetic Dimensions** | $A_e$ - Eff. Mag. Cross Section | 0.100 cm² | |
| | $L_e$ - Eff. Mag. Path Length | 2.38 cm | |
| | $V_e$ - Eff. Core Volume | 0.238 cm³ | |
| | WA - Min. Eff. Window Area | 0.164 cm² | |
| | sa - Surface Area | 4.20 cm² | |
| | mlt - mean length per turn | 1.77 cm | |
| **Inductance** | $\mu_i$(reference) | 26 | |
| | $A_L$ value (nominal) | 14 nH/N² | |
| | Test Winding | N=55, #30 AWG | |
| | Frequency | 10 kHz | |
| | Voltage on Agilent 4284A | 0.024 V | |
| | AL tolerance | ±12% | |
| **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=1.000E+06, b=3.287E+08, c=5.779E+06, d=1.240E-14* | | |
| | $B_{pk}$ | 500 G | |
| | frequency | 100 kHz | |
| | Core Loss (nominal) | 277 mW/cm³ | |
| | Core Loss (maximum) | 318 mW/cm³ | |
| **DC Saturation** | $\%\mu_i \cdot \frac{1}{a+b\cdot H^c}+d$ | | |
| | where H expressed in oersteds, and: | | |
| | *a=1.000E-02, b=1.042E-06, c=1.701, d=0.000* | | |
| | $H_{DC}$ | 200 Oe | |
| | Percent Initial Perm(nom.) | 53.9% | |
| | Percent Initial Perm(min.) | 46.1% | |
| **Coating/Pkg** | Coating Type: | Blue Epoxy | |
| | Voltage Breakdown (min.) | 1000 Vrms | |
| | Limit | 0.1 mA, 5 s | |
| | Package Quantity | 9,000 Pcs/Box | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Winding Table** | **Wire Size** | AWG | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 |
| | | mm | 0.800 | 0.630 | 0.500 | 0.400 | 0.315 | 0.250 | 0.200 | 0.160 | 0.125 | 0.100 | 0.080 |
| | **Single Layer** | Turns | 12 | 15 | 19 | 25 | 32 | 40 | 50 | 63 | 80 | 100 | 125 |
| | | Rdc(Ω) | 7.0 m | 14.0 m | 28.2 m | 59.1 m | 120.3 m | 239.1 m | 475.2 m | 952.3 m | 1.9 | 3.8 | 7.6 |
| | **Full Winding** | Turns | 12 | 18 | 28 | 44 | 68 | 105 | 162 | 251 | 389 | 602 | 931 |
| | | Rdc(Ω) | 7.0 m | 16.8 m | 41.6 m | 104.0 m | 255.5 m | 627.5 m | 1.5 | 3.8 | 9.4 | 23.0 | 56.6 |


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