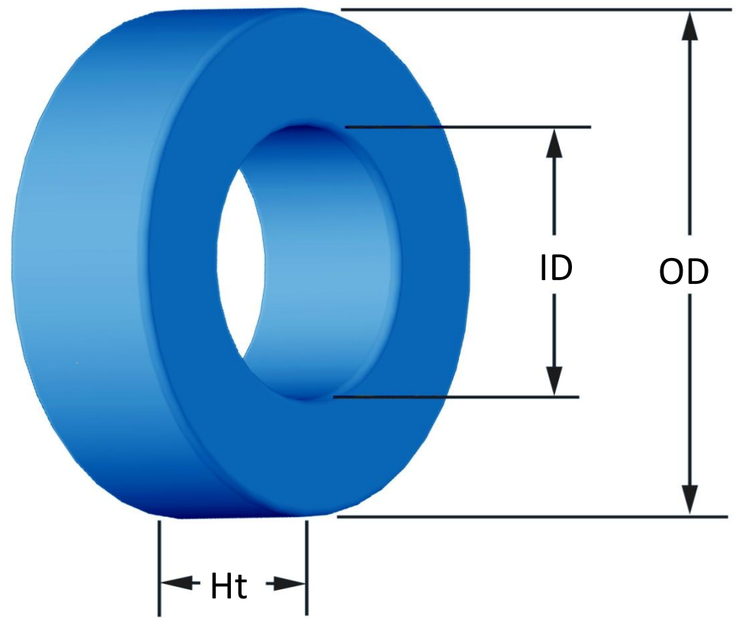
MICROMETALS™
POWDER CORE SOLUTIONS

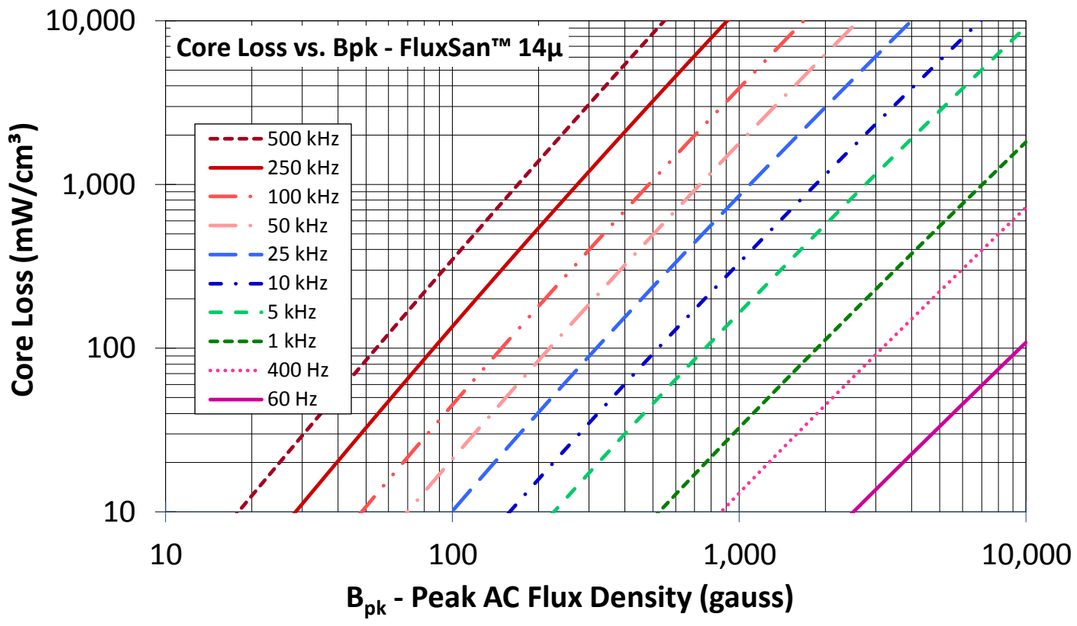
| Part Number: | FS-141014-2 |
|---|---|

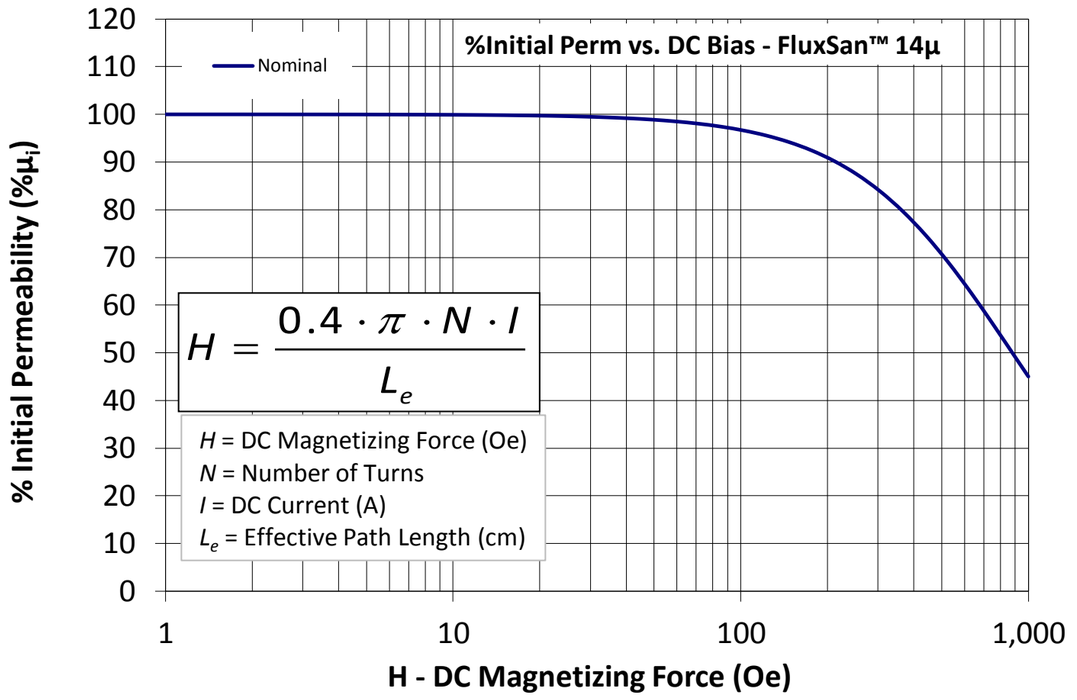
Revision 20190529 - Generated 2019-May-29

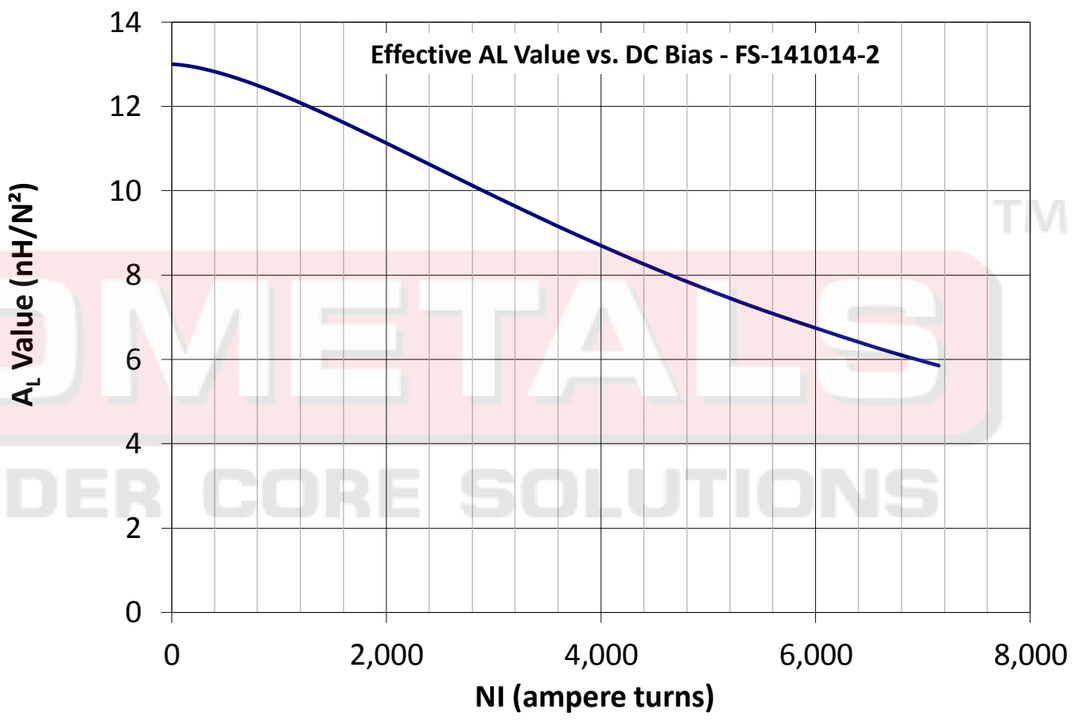


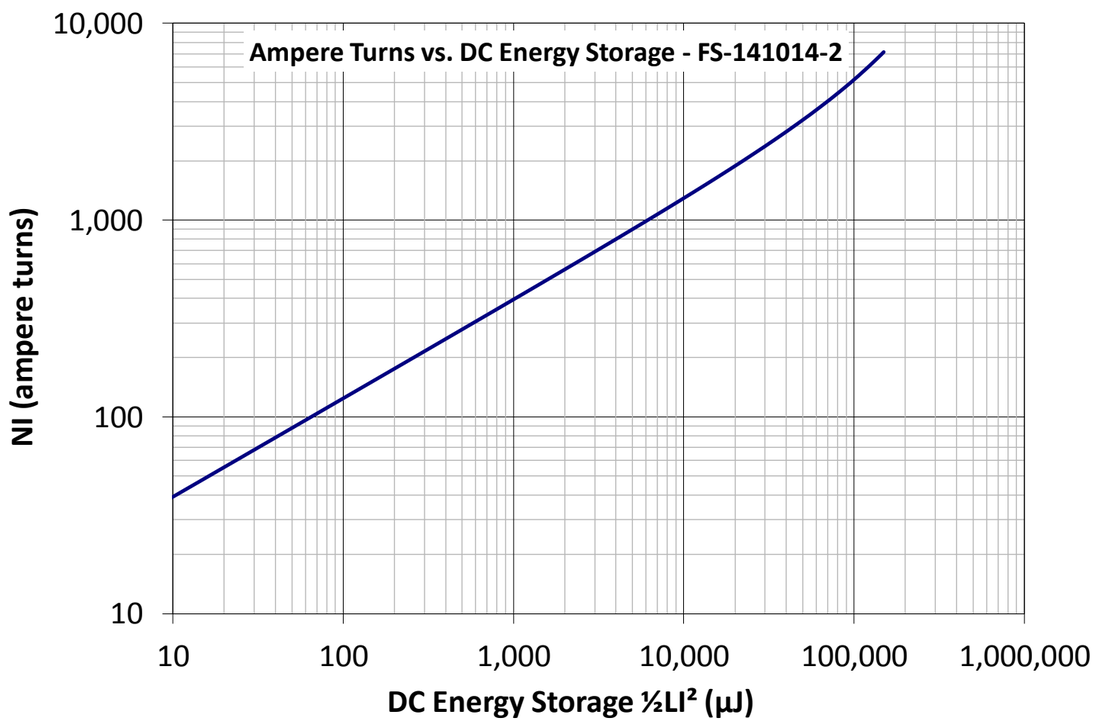

(If coated, Max./Min. includes coating)

| | | | |
|---|---|---|---|
| **OD** | (nom. - bare core) | 35.81 mm | 1.410 in |
| | (max.) | 36.63 mm | 1.442 in |
| **ID** | (nom. - bare core) | 22.35 mm | 0.880 in |
| | (min.) | 21.54 mm | 0.848 in |
| **HT** | (nom. - bare core) | 10.46 mm | 0.412 in |
| | (max.) | 11.28 mm | 0.444 in |
| **Mass** | (approximate) | 33 grams | |
| **Magnetic Dimensions** | $A_e$ - Eff. Mag. Cross Section | 0.678 cm² | |
| | $L_e$ - Eff. Mag. Path Length | 8.98 cm | |
| | $V_e$ - Eff. Core Volume | 6.09 cm³ | |
| | WA - Min. Eff. Window Area | 3.64 cm² | |
| | sa - Surface Area | 45.6 cm² | |
| | mlt - mean length per turn | 4.84 cm | |
| **Inductance** | $\mu_i$(reference) | 14 | |
| | $A_L$ value (nominal) | 13 nH/N² | |
| | Test Winding | N=80, #22 AWG | |
| | Frequency | 10 kHz | |
| | Voltage on Agilent 4284A | 0.24 V | |
| | AL tolerance | ±8% | |
| **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=6.131E+07, c=2.047E+06, d=6.095E-14* | | |
| | $B_{pk}$ | 300 G | |
| | frequency | 100 kHz | |
| | Core Loss (nominal) | 399 mW/cm³ | |
| | Core Loss (maximum) | 459 mW/cm³ | |
| **DC Saturation** | $\%\mu_i = \frac{1}{a+b\cdot H^{c}}+d$ | | |
| | where H expressed in oersteds, and: | | |
| | *a=1.000E-02, b=2.600E-07, c=1.557, d=0.000* | | |
| | $H_{DC}$ | 200 Oe | |
| | Percent Initial Perm(nom.) | 90.9% | |
| | Percent Initial Perm(min.) | 88.3% | |
| **Coating/Pkg** | Coating Type: | Blue Epoxy | |
| | Voltage Breakdown (min.) | 1000 Vrms | |
| | Limit | 0.1 mA, 5 s | |
| | Package Quantity | 343 Pcs/Box | |




| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **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 | 15 | 20 | 25 | 32 | 41 | 52 | 65 | 81 | 102 | 128 | 159 |
| | | Rdc(Ω) | 1.5 m | 3.2 m | 6.3 m | 12.8 m | 26.1 m | 52.7 m | 104.7 m | 207.5 m | 415.6 m | 829.5 m | 1.6 |
| | **Full Winding** | Turns | 19 | 30 | 46 | 71 | 109 | 169 | 262 | 406 | 628 | 972 | 1,505 |
| | | Rdc(Ω) | 1.9 m | 4.8 m | 11.6 m | 28.4 m | 69.4 m | 171.2 m | 422.1 m | 1.0 | 2.6 | 6.3 | 15.5 |


Micrometals Alloy 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, Asia Pacific Sales: +852 3106 3736
www.MicrometalsAPC.com