MICROMETALS

ARNOLD POWDER CORES

SUPER-MSS™ - Sendust Powder Cores

MOLYPERMALLOY - MPP Powder Cores

FLUXSAN™ - Silicon Iron Alloy Powder Cores

HI-FLUX™ - Nickel Iron Powder Cores

OPTILLOY™ - Optimized Alloy Powder Cores

2012

Contents

Arnold Technologies (Shenzhen) Ltd., doing business as **Micrometals Arnold Powder Cores** is a division of Micrometals Incorporated. The Micrometals Arnold Powder Core factory is located in Shenzhen, China with a sales office in Hong Kong. Micrometals Inc. acquired the powder core division from Arnold Magnetic Technologies in January 2010. Micrometals Inc. is headquartered in Anaheim, California.

Warranty

Parts are warranted to conform to the specifications in the latest issue of this catalog. Micrometals Arnold Powder Core liability is limited to return of parts and repayment of price; or replacement of nonconforming parts. Notice of nonconformance must be made within 30 days after delivery. Before using these products, buyer agrees to determine suitability of the product for their intended use or application. Micrometals Arnold Powder Core shall not be liable for any other loss or damage, including but not limited to incidental or consequential damages.

Introduction to Powder Cores

Powder Cores are made from discrete particles of ferromagnetic powder. Prior to being formed into a core, the particles are covered in a thin layer of electrically insulated material to ensure electrical isolation of each particle. The particles are then compacted under high pressure to form the core geometry. The electrical insulation between particles enables the materials to be used at high frequency. The insulation also forms a distributed air gap throughout the core material, giving the material the ability to maintain inductance linearity with a DC biasing field.

Micrometals Arnold Powder Cores manufactures 5 different classes of materials: Super-MSS™ Sendust (MS), Molypermalloy (MP), FluxSan™ Iron Silicon (FS), Hi-Flux™(HF), and the newly introduced Optilloy™(OP). The following table describes size and permeability ranges available for each material class, and also describes the characteristics and applications for these material classes.

Super-MSS™ Sendust

- Iron, Silicon, Aluminum alloy powder material
- Permeabilities: 14µ, 26µ, 40µ, 60µ, 75µ, 90µ and 125µ
- Low Magnetostriction for audibly quiet applications
- Cost effective low loss material
- Operating frequencies to MHz
- No thermal aging
- Wide selection of toroids, E-cores and blocks

MPP Molypermalloy

- Nickel, Iron Molybdenum alloy powder material
- Permeabilities: 14µ, 26µ, 60µ, 125µ, 147µ, 160µ, 173µ, 205µ and 250µ
- Very low loss powder material
- Operating frequencies ≤200kHz
- No thermal aging
- Wide selection of toroids up to 154mm

FluxSan™ Silicon Iron

- 6.5% Silicon, Iron alloy powder material
- Permeabilities: 14µ, 26µ, 40µ, 60µ, 75µ and 90µ
- High saturation characteristics
- Low losses ≤200kHz
- No thermal aging
- Wide selection of toroids, E-cores and blocks

Hi-Flux™ Nickel Iron

- 50/50 Nickel, Iron alloy powder material
- Permeabilities: 14µ, 26µ, 60µ, 125µ, 147µ and 160µ
- High saturation characteristics
- Moderate losses ≤200kHz
- No thermal aging

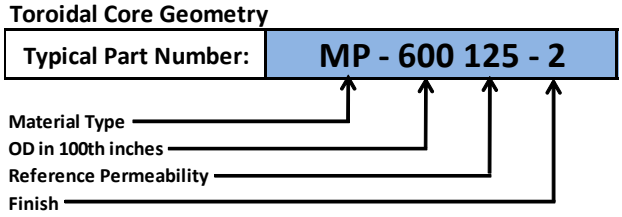
Optilloy™ Optimized Alloy

- Hybrid alloy powder material
- Permeabilities: 14µ, 26µ, 40µ, 60µ, 75µ, 90µ and 125µ
- Moderate losses ≤200kHz
- No thermal aging
- Toroids up to 154mm

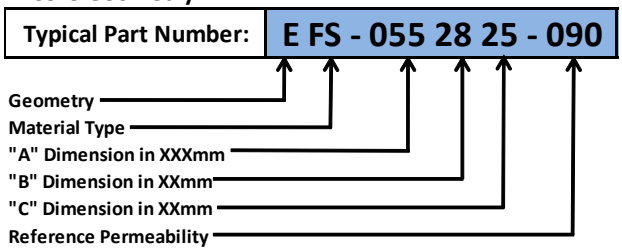
Part Numbers

Micrometals Arnold Powder Core part numbers are constructed as shown below.

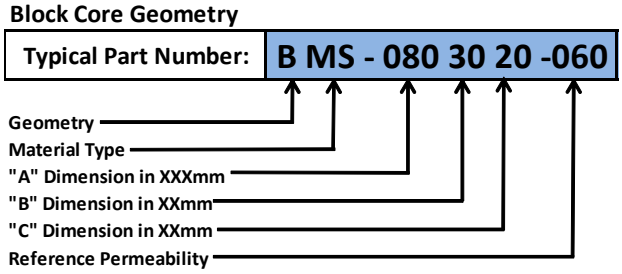
Toroidal Core Geometry



E-Core Geometry



Block Core Geometry



Materials	
MS =	Super-MSS™ Sendust
MP =	MPP Molypermalloy
FS =	FluxSan™ Silicon Iron
HF =	Hi-Flux™ Nickel Iron
OP =	Optilloy™ Optimized Alloy

Finish	
2 =	Blue Epoxy
8 =	Parylene N (Standard)
8C =	Parylene C

Inductance Rating

In this catalog the inductance ratings, also known as A_L values, are expressed in nanohenries (10^{-9} Henries) per turn (N) squared (nH/N^2).

To calculate the number of turns required for a desired inductance (L) in nanohenries (nH) use the following formula:

$$\text{Required turns} = \left[\frac{\text{desired L (nH)}}{A_L\ (nH/N^2)}\right]^{\frac{1}{2}}$$

Inductance Tolerance

The cores are manufactured to the A_L values listed in this catalog with a ±8% inductance tolerance with the exception of small (0.14 to 0.44 inches) toroidal cores with Super-MSS™ material. Refer to catalog part page for details.

Inductance Grading

Binning and marking in 1% grades is possible upon request.

Core Finishes

Standard toroidal cores are all furnished with an isolation coating. Coating type and dielectric strength vary with part sizes, details and test conditions are offered on the part pages. Finished are tested for dielectric strength with conductive foam pads pressed against the two flat surfaces and around the OD/ID corners of the core.

Epoxy coated parts are **UL approved** for Flame Class UL94V-0 per files #OCDT2.E350791, QMFZ2.E257126.

Part numbers are labeled on individual parts on toroid sizes 0.40 in. (10.2mm) and larger. Toroid part sizes less than 0.40 in (10.2mm) are coated with Parylene N. Parylene C is available upon request but is not RoHS compliant.

Engineering Kits

Engineering kits and evaluation samples are available; please refer to Micrometals Arnold Powder Cores website (www.MicrometalsArnoldPowderCores.com) for distributor or local sales contact for details.

Engineering Assistance

Micrometals Arnold will gladly extend engineering and design assistance to aid in your core selection. Please refer questions to Applications@Micrometals.com. In addition Micrometals Arnold Powder Cores offers Induction Design Software which can be downloaded at no charge. Please refer to pages 95 to 96 for details.

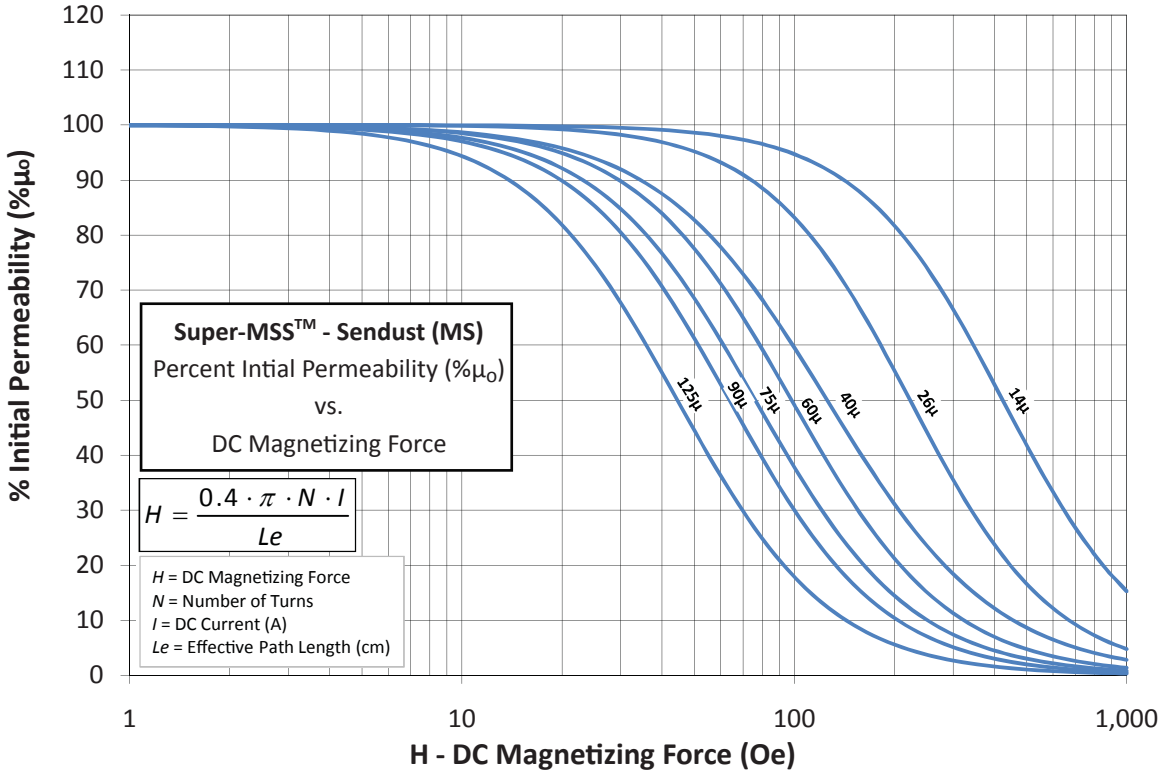
Custom Shapes and Sizes

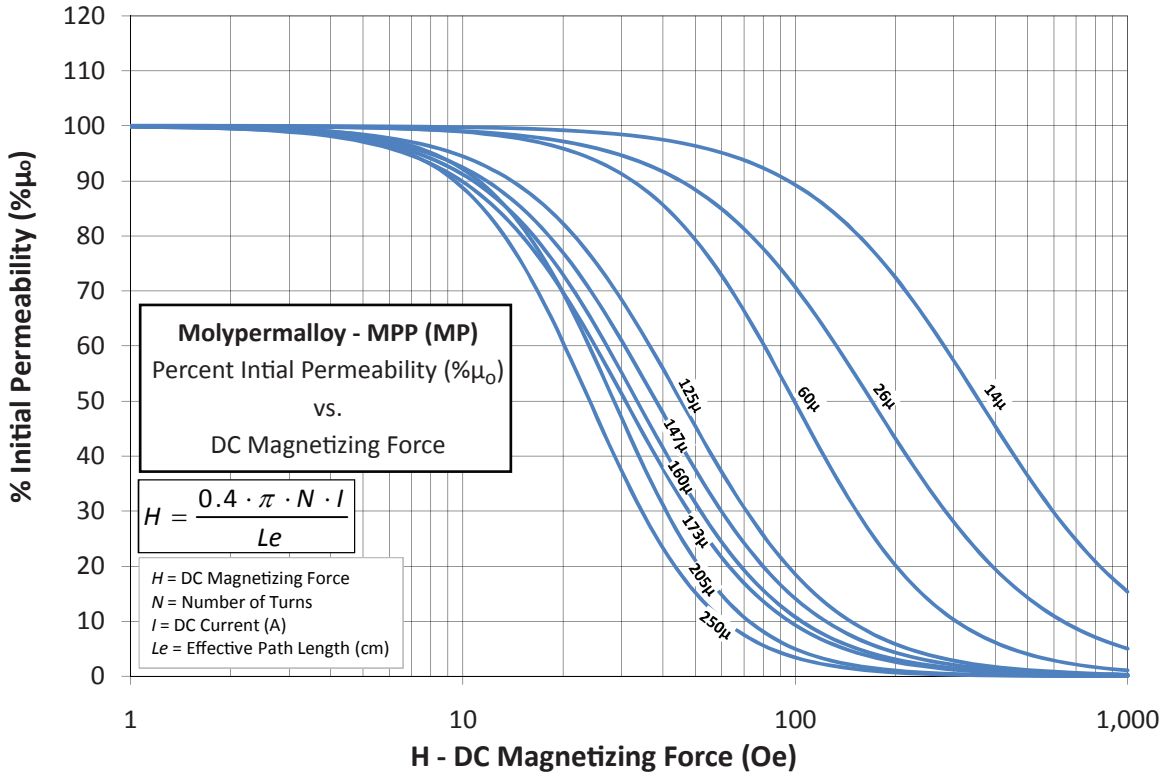
In addition to the items shown in this catalog, Micrometals Arnold Powder Cores will gladly produce custom shapes and sizes.

Packing Information

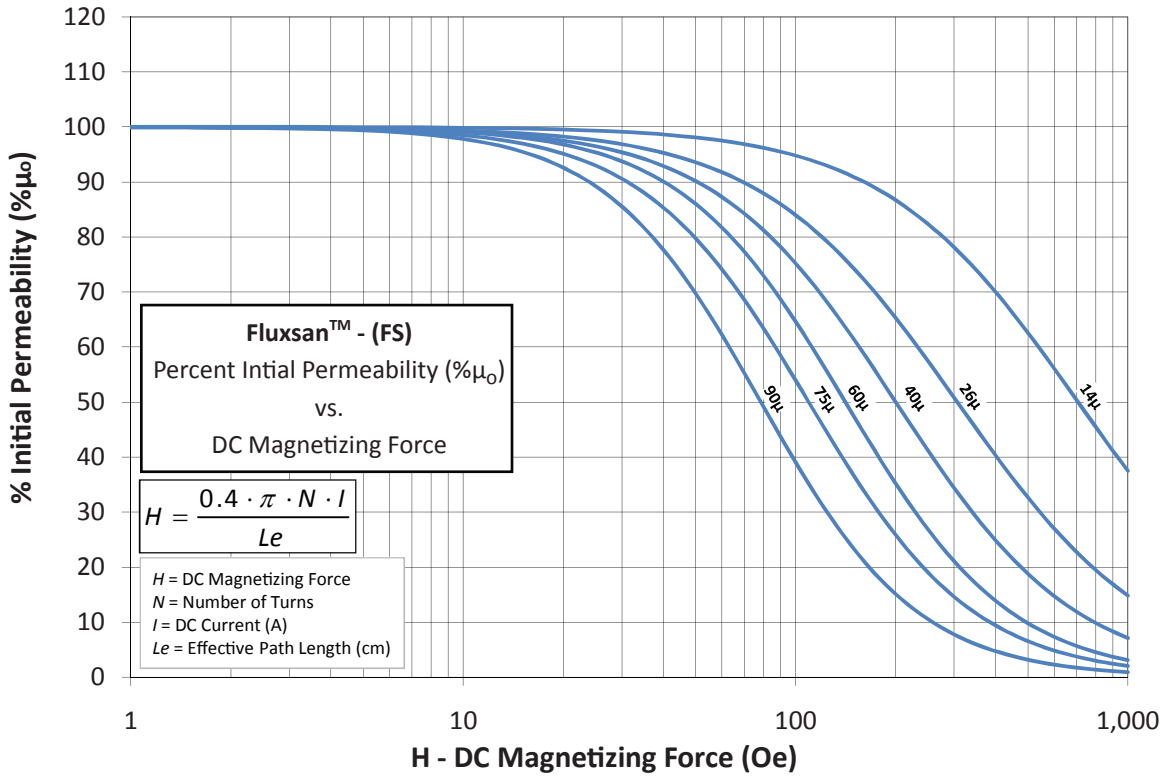
The standard box dimensions are 30.5 x 30.5 x 12.7cm (12 x 12 x 5in.) Part quantity per box can be located on part detail pages.

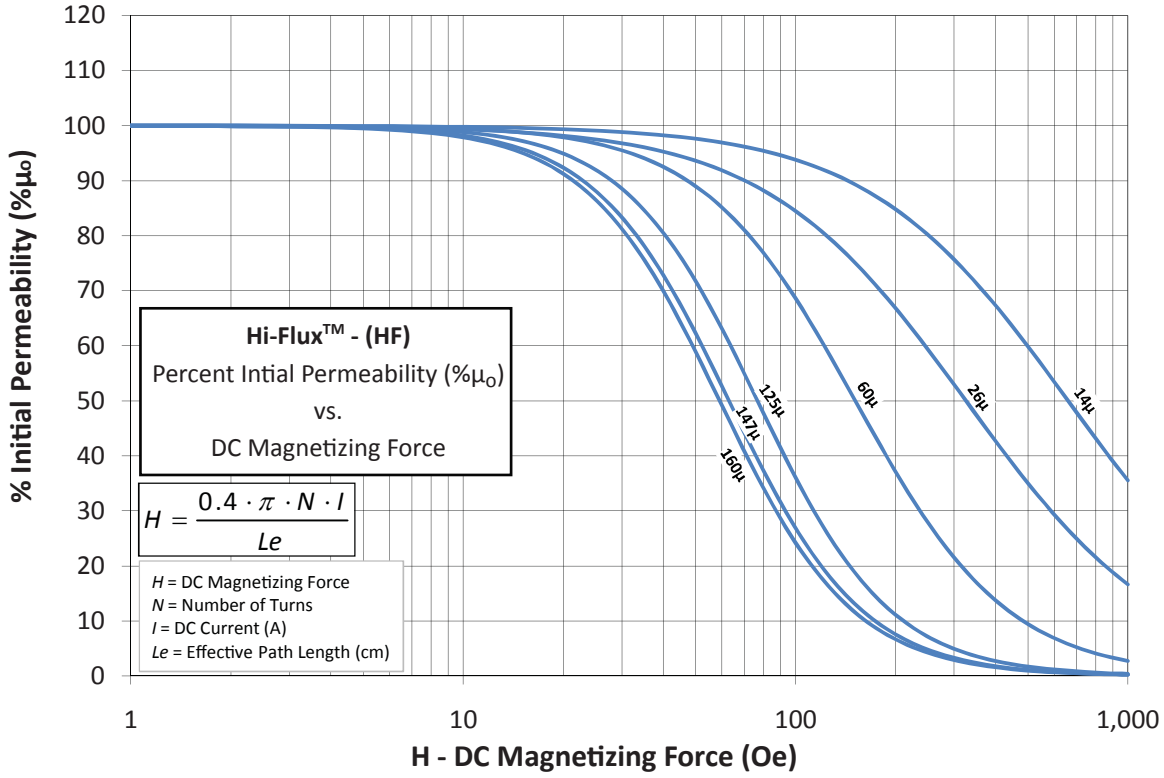
Percent Initial Permeability vs. DC Magnetizing Force

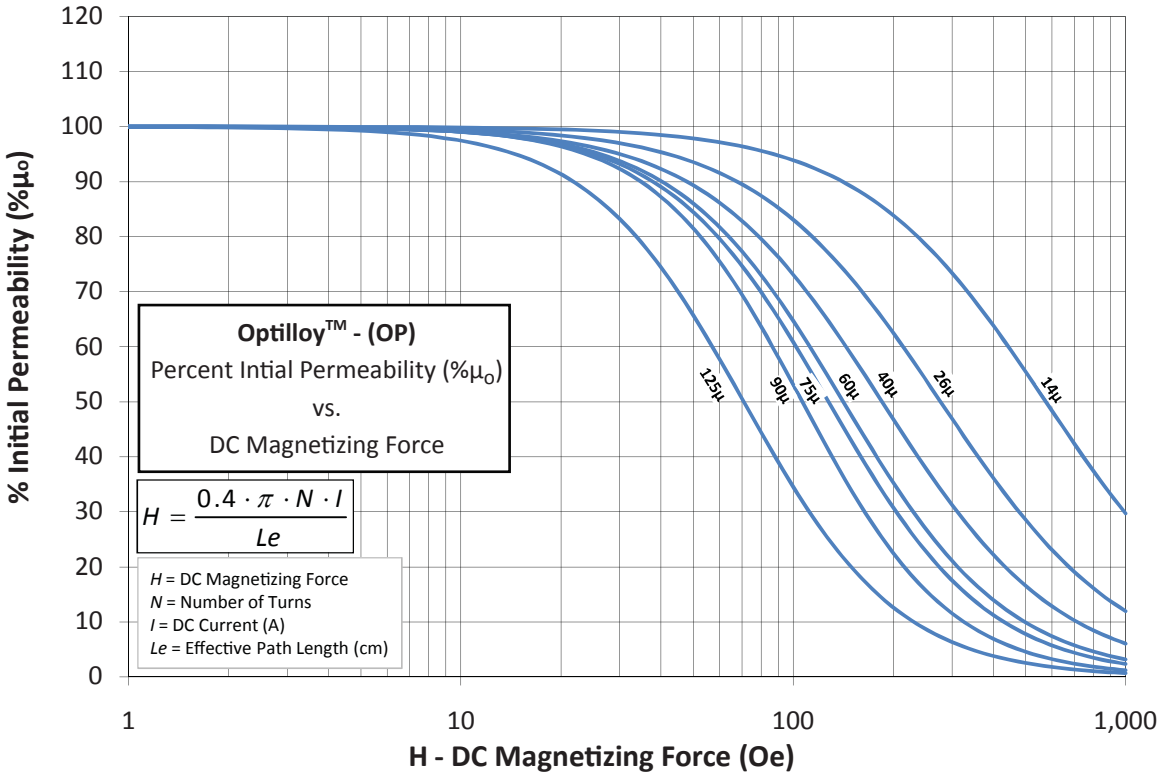


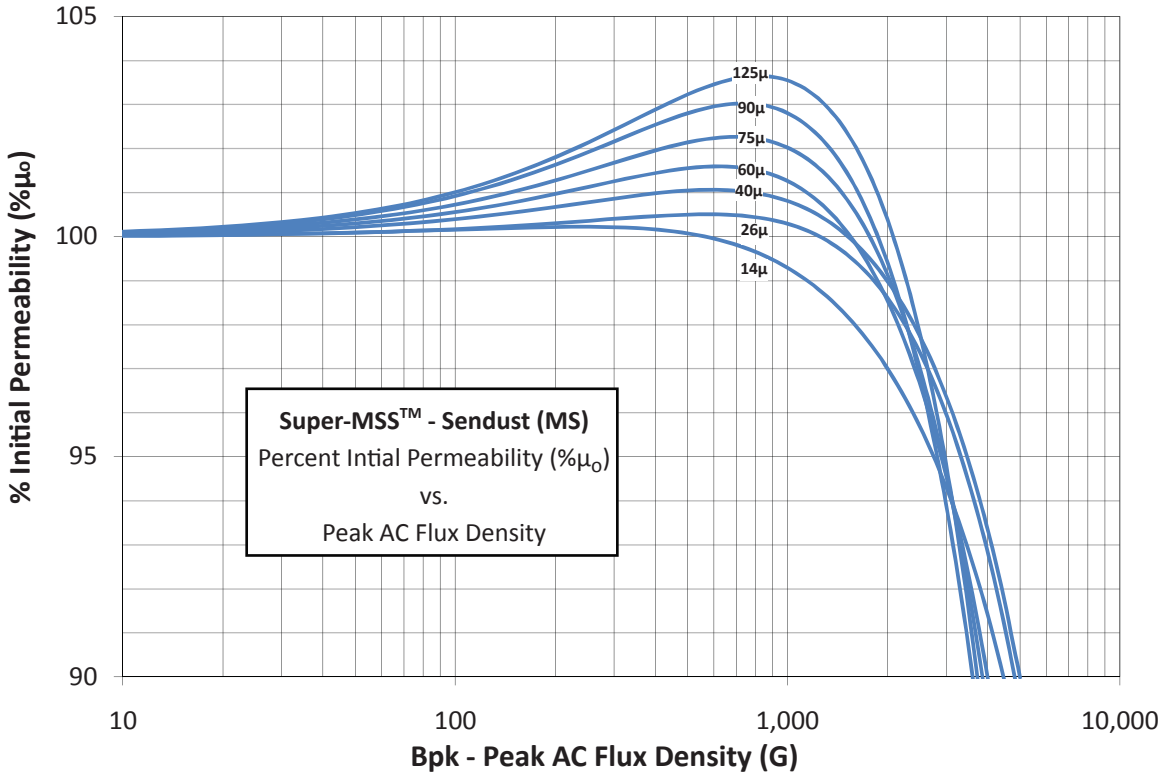


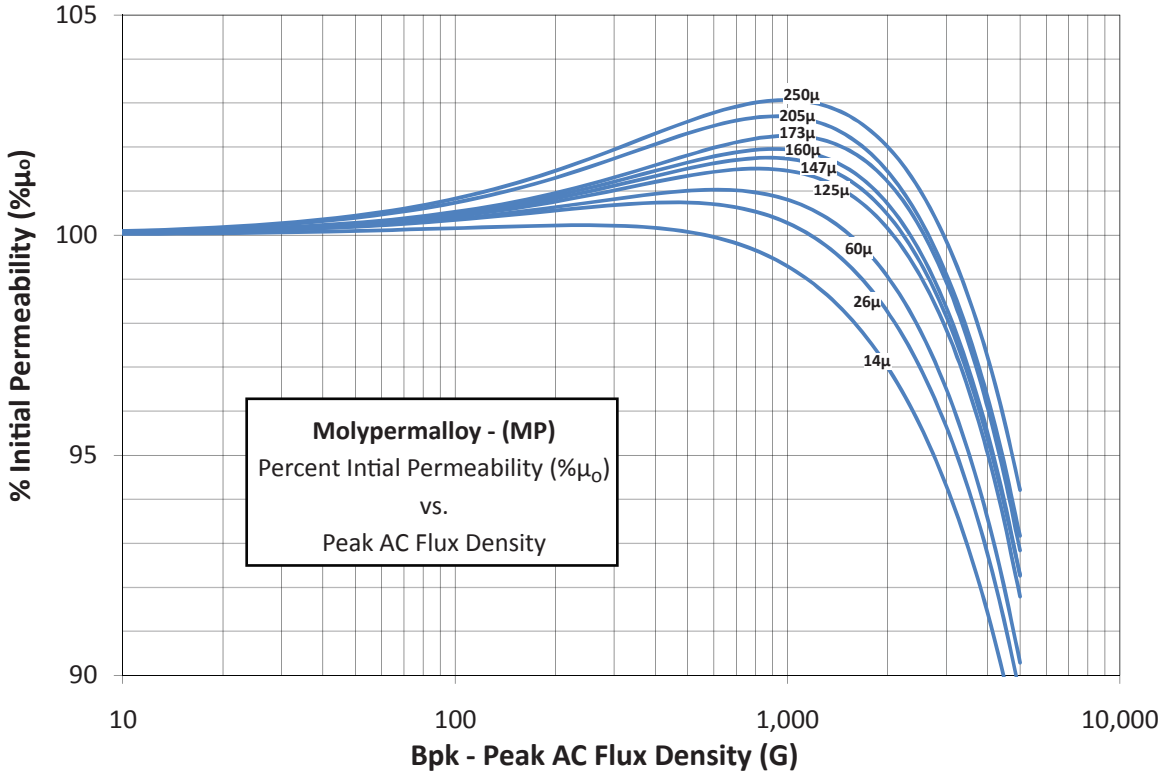
Percent Initial Permeability vs. DC Magnetizing Force



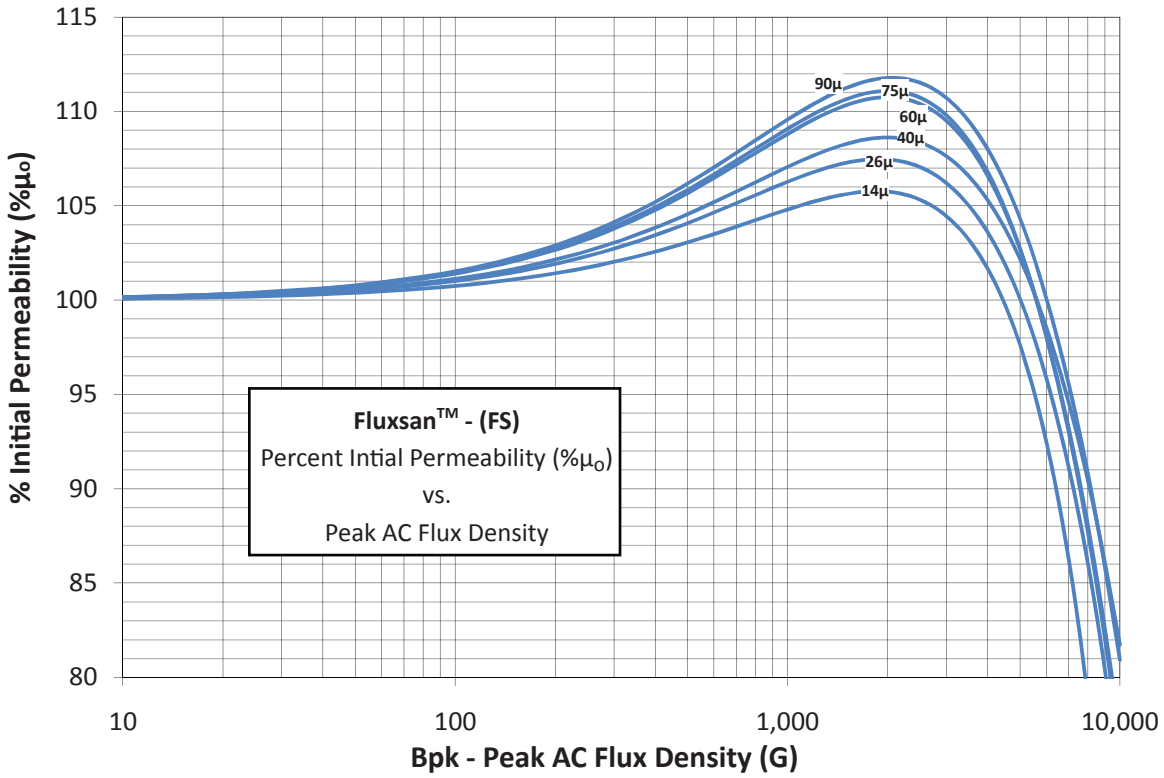


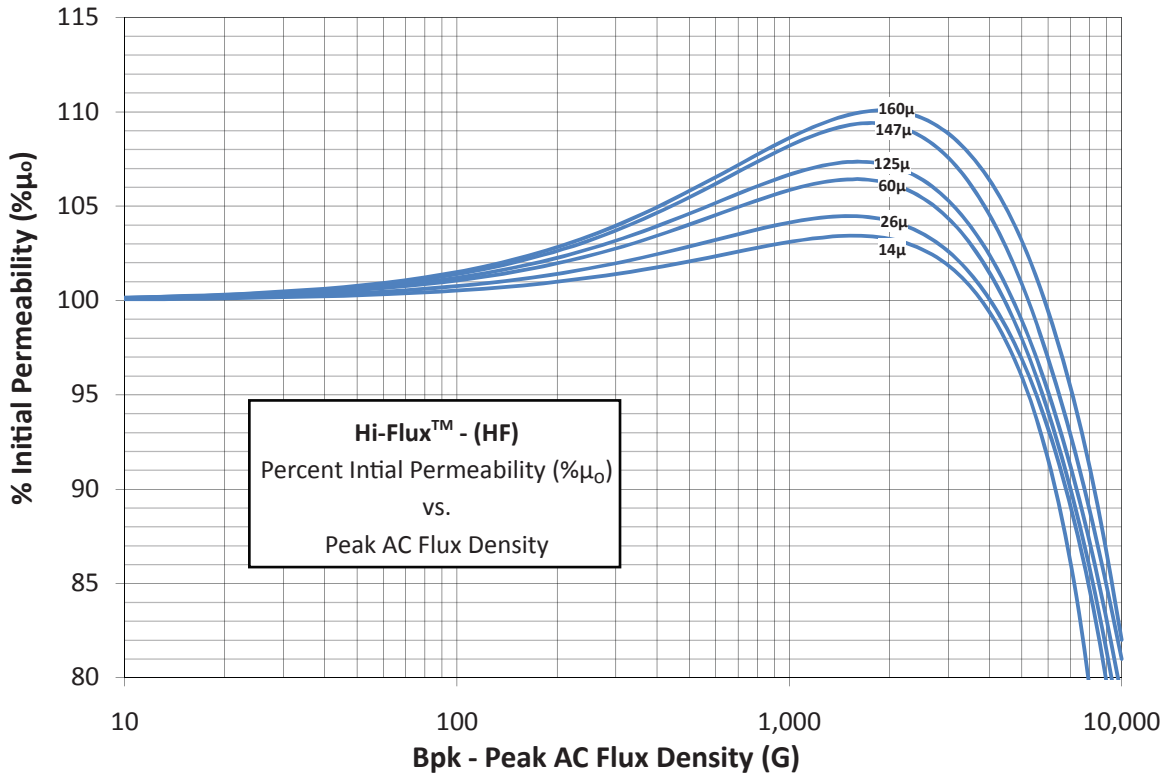

120
110
100
90
80
70
60
50
40
30
20
10
0
% Initial Permeability (%μo)
1
10
100
1,000
H - DC Magnetizing Force (Oe)
Optilloy™ - (OP)
Percent Intial Permeability (%μo)
vs.
DC Magnetizing Force
H = 0.4 · π · N · I / Le
H = DC Magnetizing Force
N = Number of Turns
I = DC Current (A)
Le = Effective Path Length (cm)
125μ
90μ
75μ
60μ
40μ
26μ
14μ


105
100
95
90
% Initial Permeability (%µo)
125µ
90µ
75µ
60µ
40µ
26µ
14µ
Super-MSS™ - Sendust (MS)
Percent Intial Permeability (%µo)
vs.
Peak AC Flux Density
10
100
1,000
10,000
Bpk - Peak AC Flux Density (G)

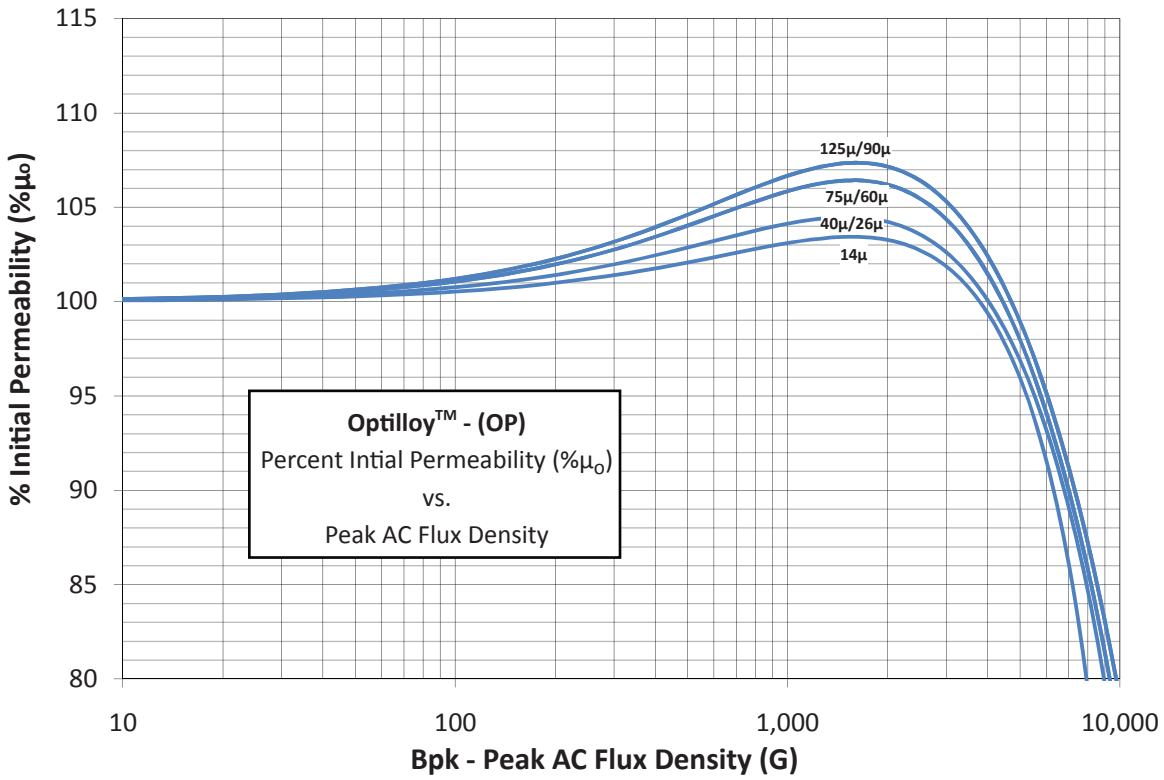

105
100
95
90
% Initial Permeability (%µo)
250µ
205µ
173µ
160µ
147µ
125µ
60µ
26µ
14µ
Molypermalloy - (MP)
Percent Intial Permeability (%µo)
vs.
Peak AC Flux Density
10
100
1,000
10,000
Bpk - Peak AC Flux Density (G)

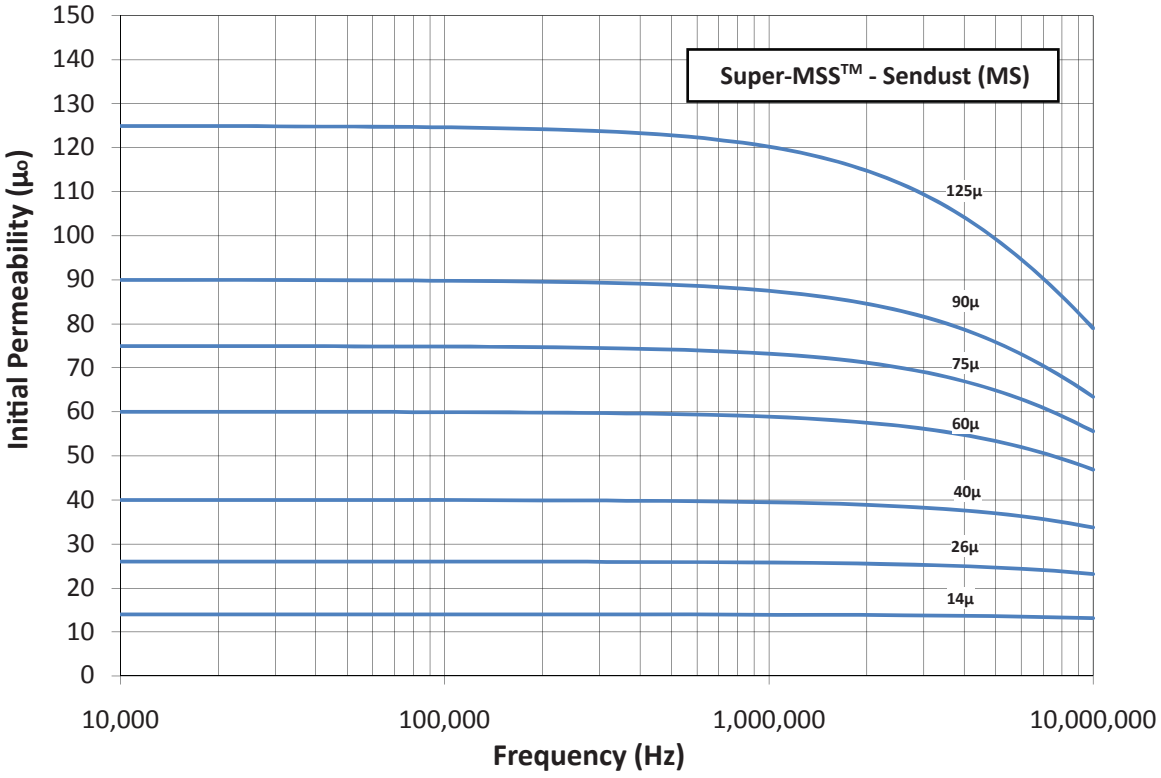
Percent Initial Permeability vs. Peak AC Flux Density

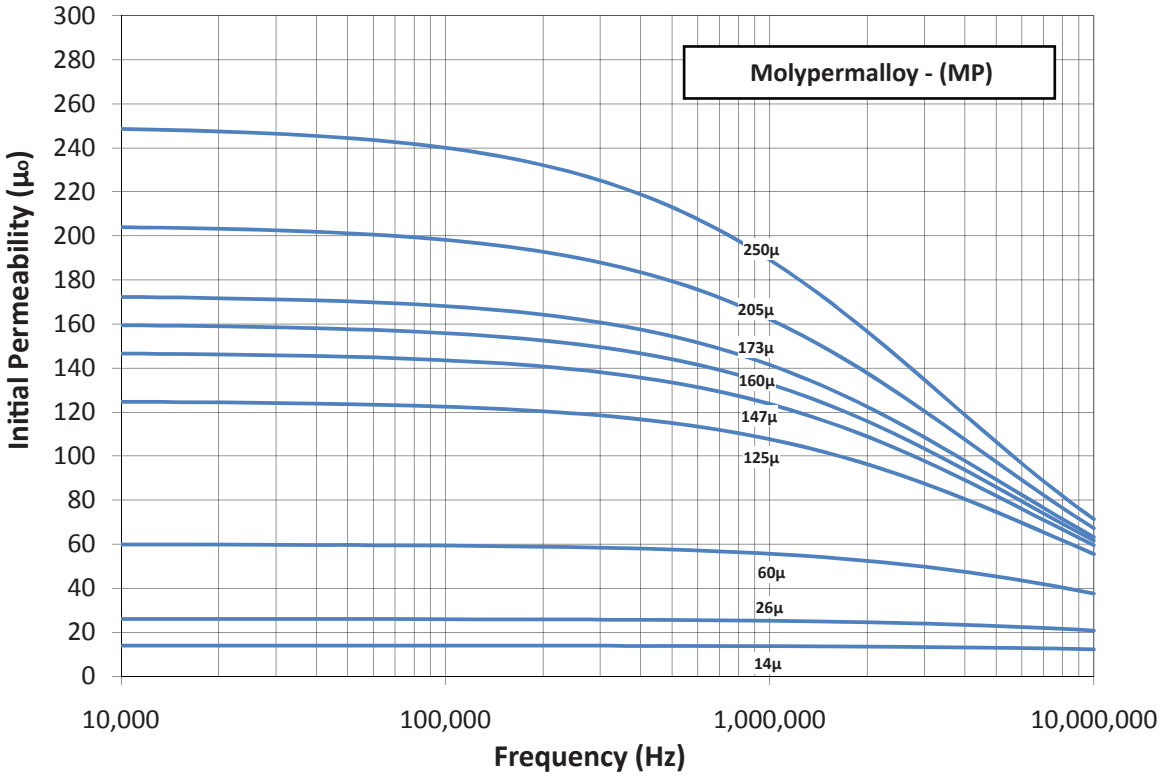


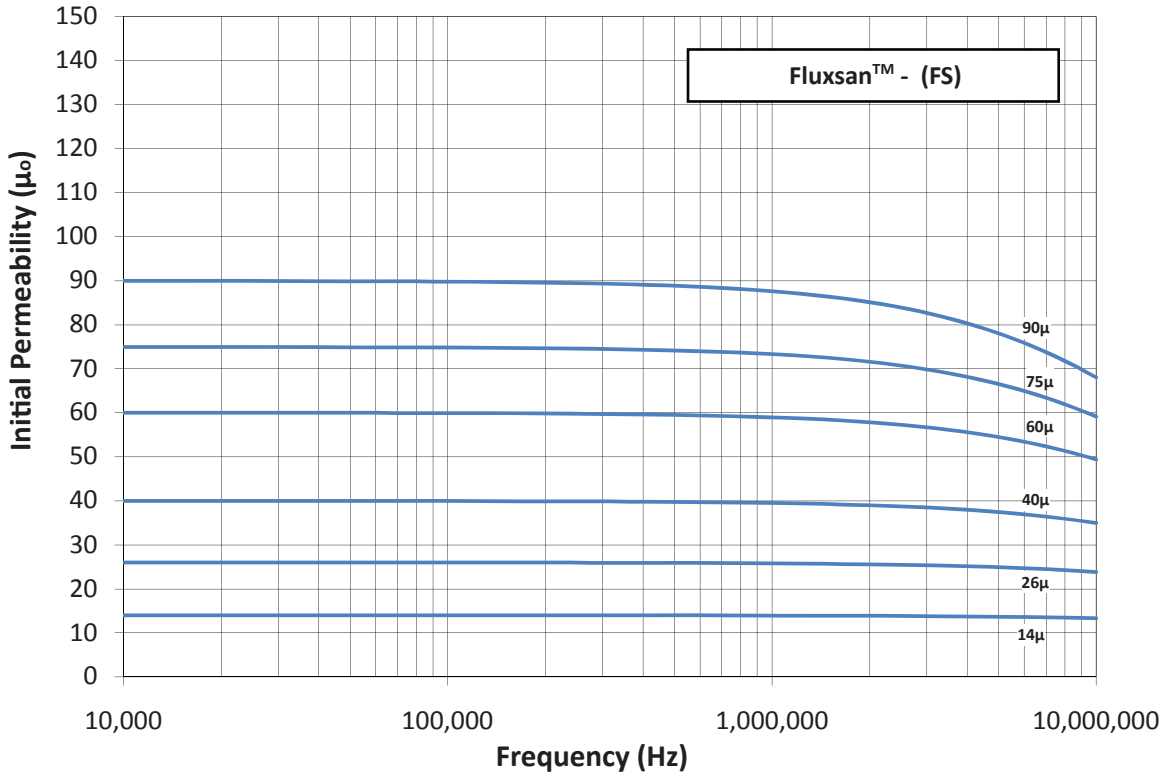


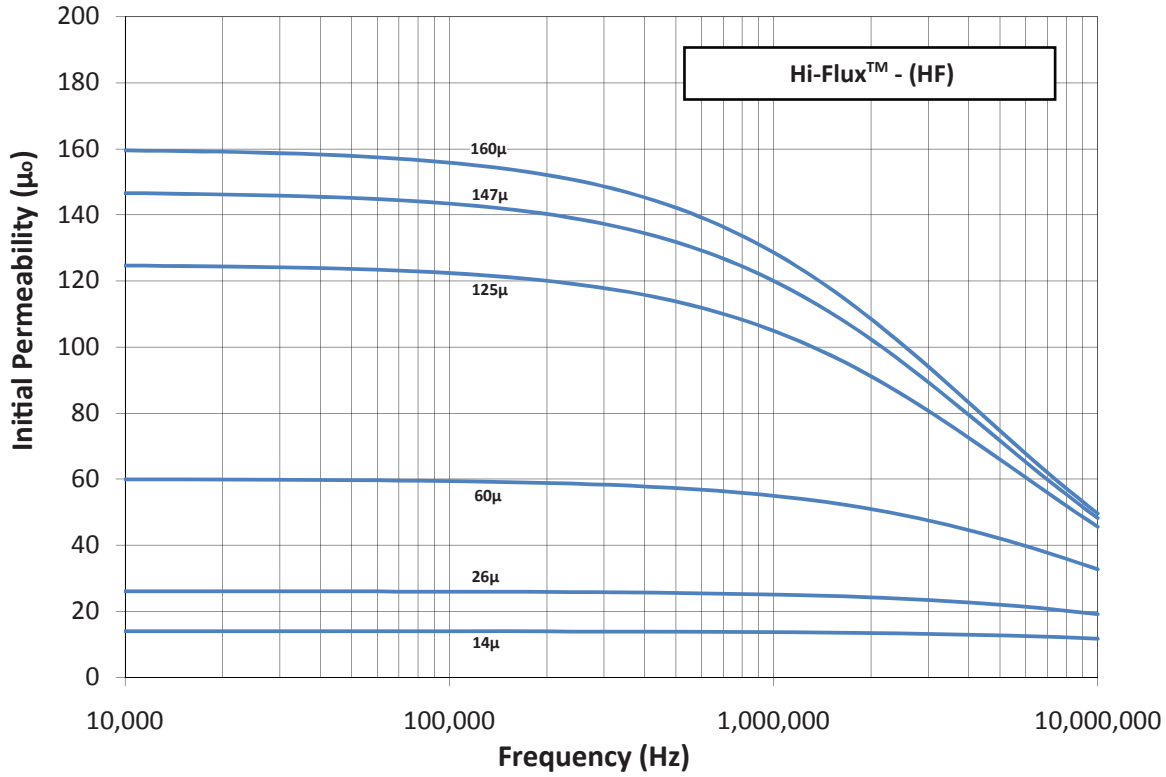
Percent Initial Permeability vs. Peak AC Flux Density

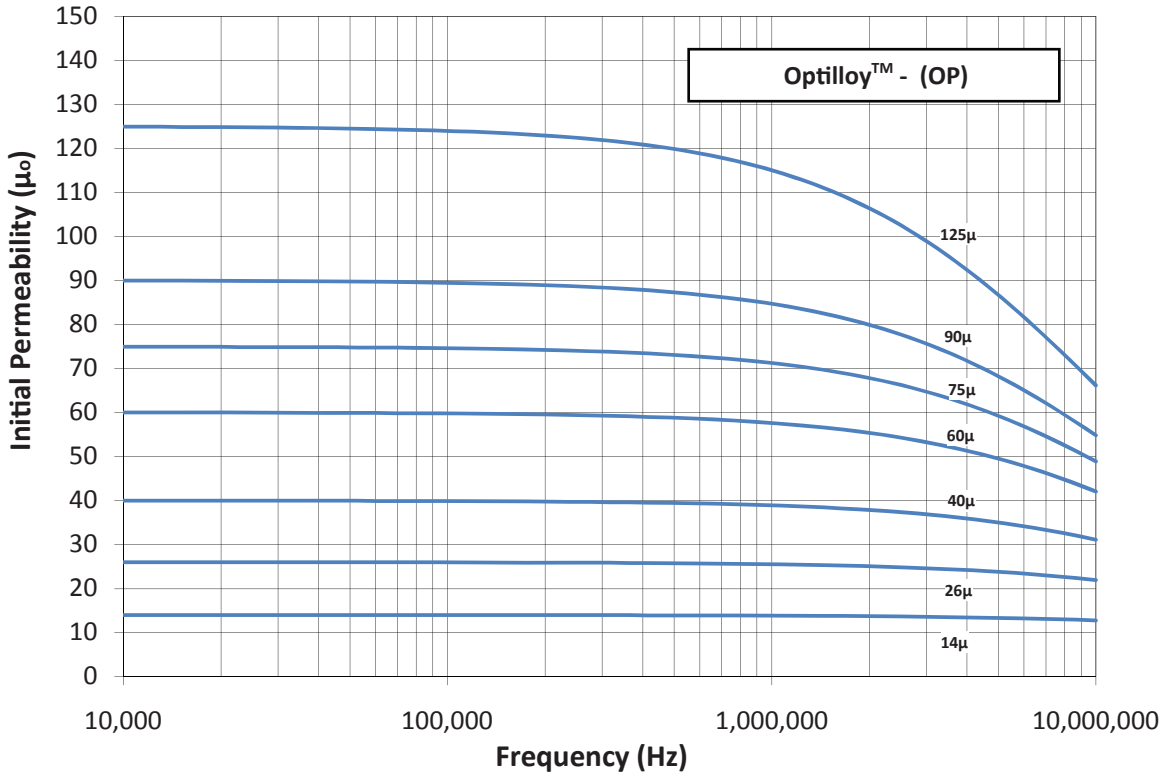


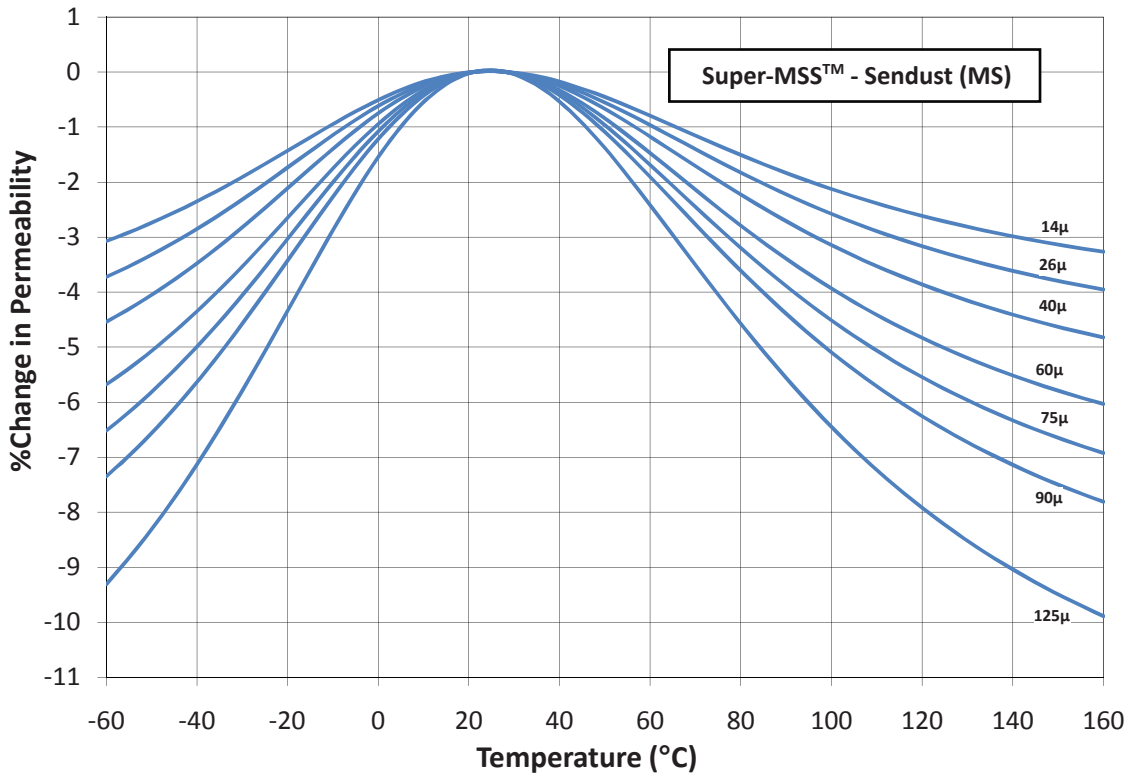

Super-MSS™ - Sendust (MS)
Initial Permeability (µo)
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
125µ
90µ
75µ
60µ
40µ
26µ
14µ
10,000
100,000
1,000,000
10,000,000
Frequency (Hz)

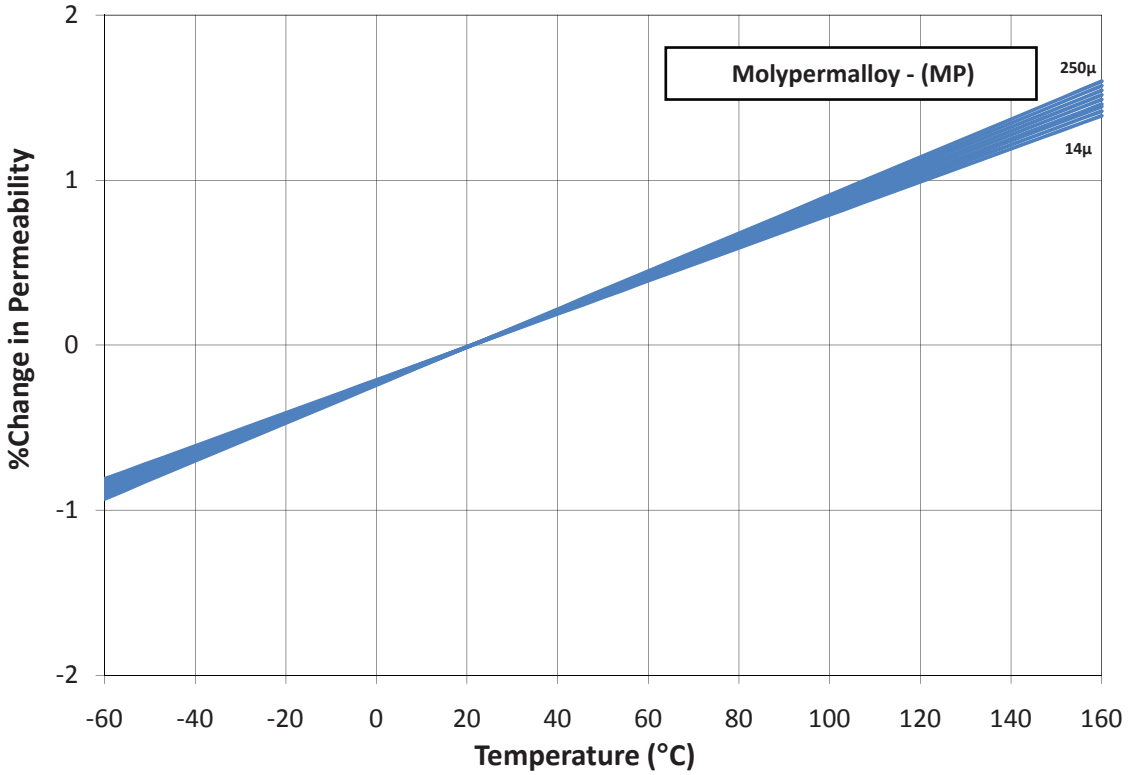

Molypermalloy - (MP)
Initial Permeability (µo)
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
250µ
205µ
173µ
160µ
147µ
125µ
60µ
26µ
14µ
10,000
100,000
1,000,000
10,000,000
Frequency (Hz)

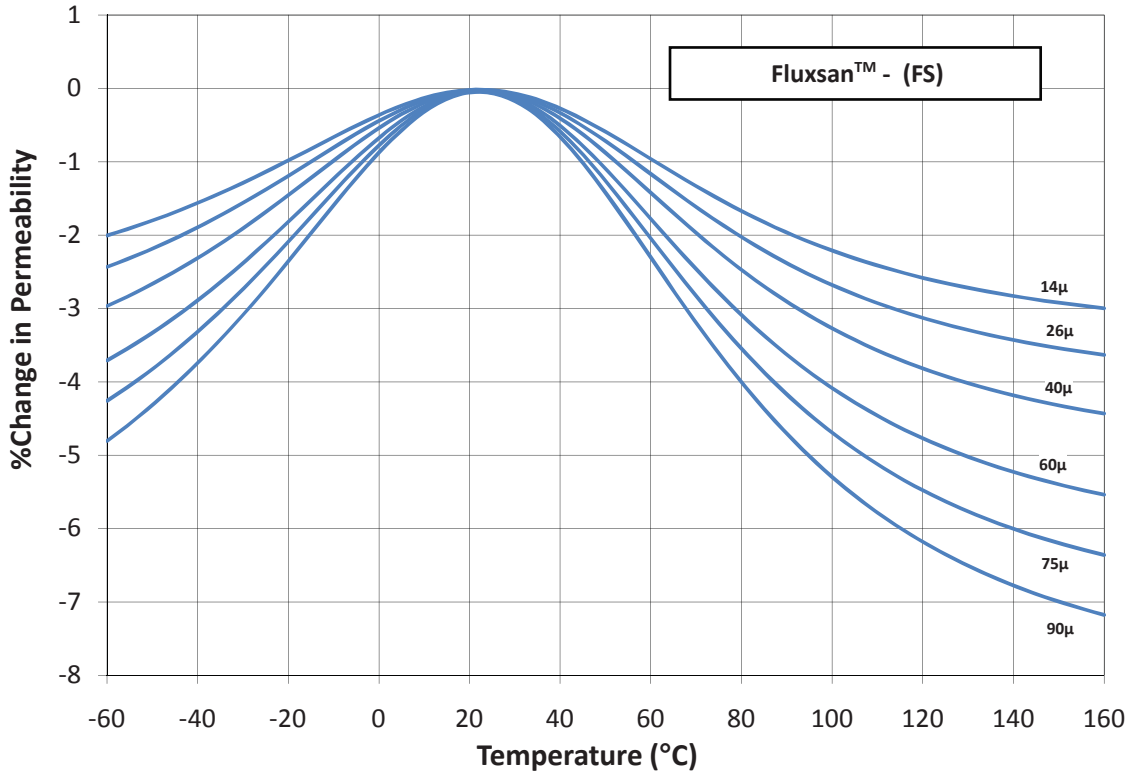

Fluxsan™ - (FS)
Initial Permeability (µo)
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
90µ
75µ
60µ
40µ
26µ
14µ
10,000
100,000
1,000,000
10,000,000
Frequency (Hz)

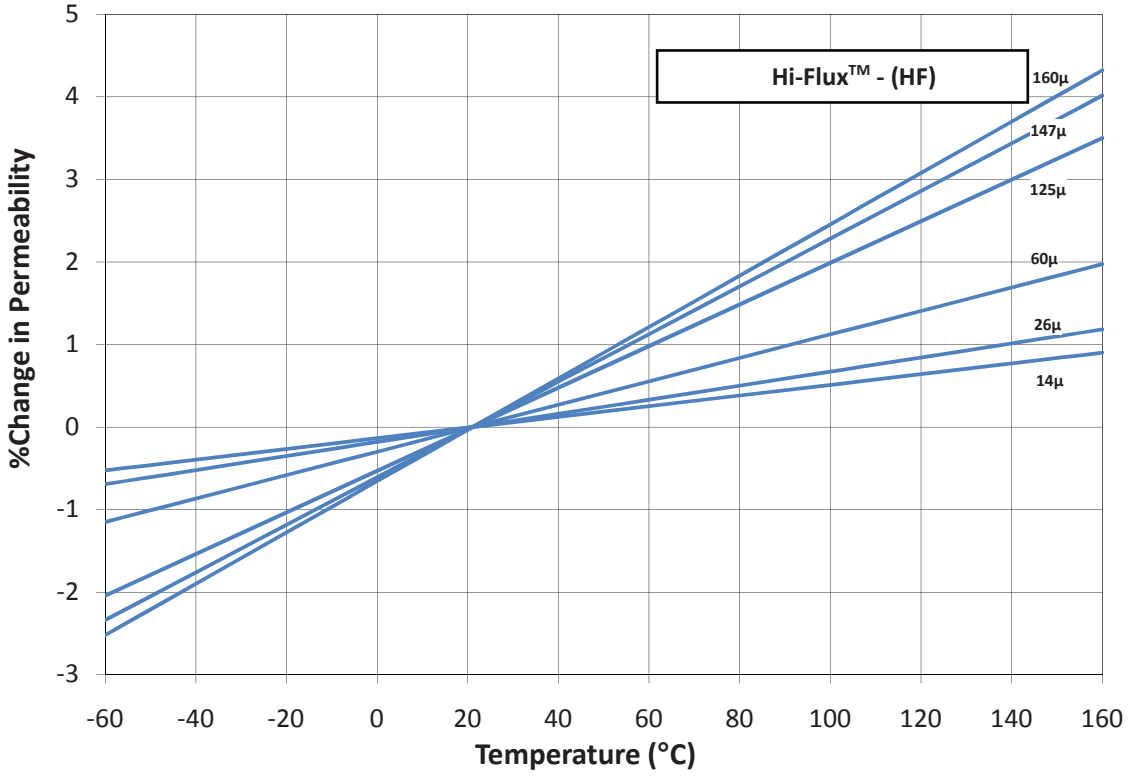

Hi-Flux™ - (HF)
Initial Permeability (µo)
200
180
160
140
120
100
80
60
40
20
0
160µ
147µ
125µ
60µ
26µ
14µ
10,000
100,000
1,000,000
10,000,000
Frequency (Hz)


Optilloy™ - (OP)
125µ
90µ
75µ
60µ
40µ
26µ
14µ
Initial Permeability (µo)
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
10,000
100,000
1,000,000
10,000,000
Frequency (Hz)

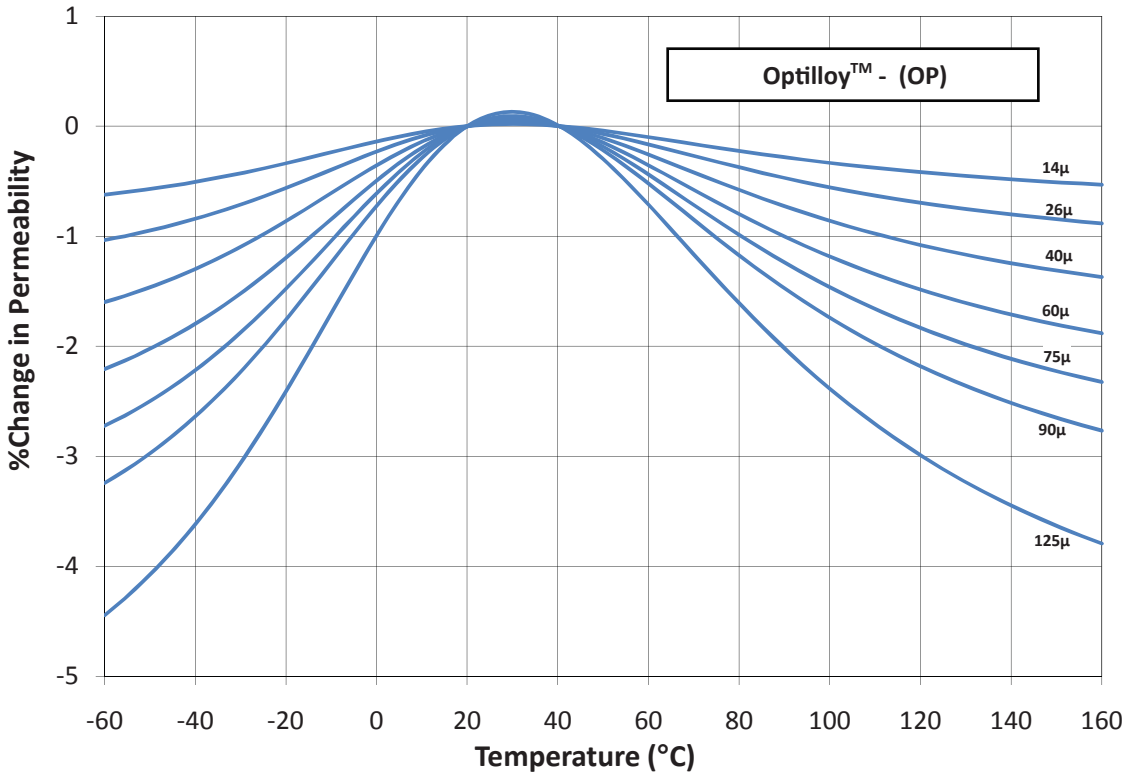

Super-MSS™ - Sendust (MS)
%Change in Permeability
Temperature (°C)
14µ
26µ
40µ
60µ
75µ
90µ
125µ
1
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
-60
-40
-20
0
20
40
60
80
100
120
140
160


Molypermalloy - (MP)
%Change in Permeability
Temperature (°C)
250µ
14µ
2
1
0
-1
-2
-60
-40
-20
0
20
40
60
80
100
120
140
160

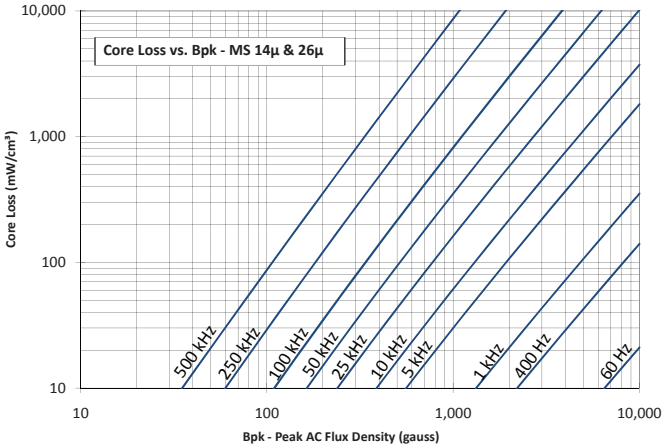

Fluxsan™ - (FS)
%Change in Permeability
Temperature (°C)
1
0
-1
-2
-3
-4
-5
-6
-7
-8
-60
-40
-20
0
20
40
60
80
100
120
140
160
14µ
26µ
40µ
60µ
75µ
90µ

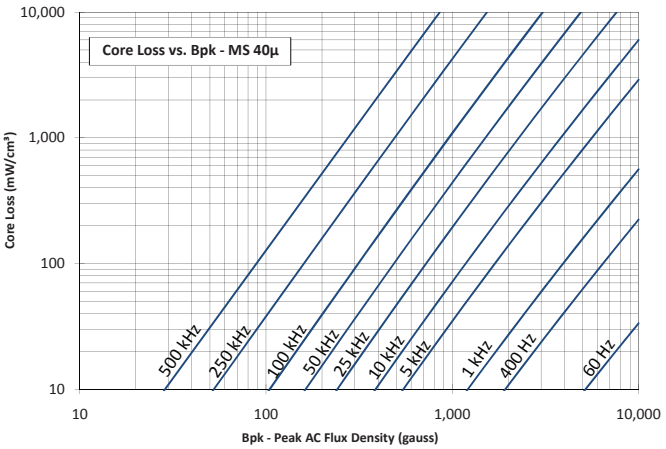

Hi-Flux™ - (HF)
%Change in Permeability
Temperature (°C)
5
4
3
2
1
0
-1
-2
-3
-60
-40
-20
0
20
40
60
80
100
120
140
160
160µ
147µ
125µ
60µ
26µ
14µ

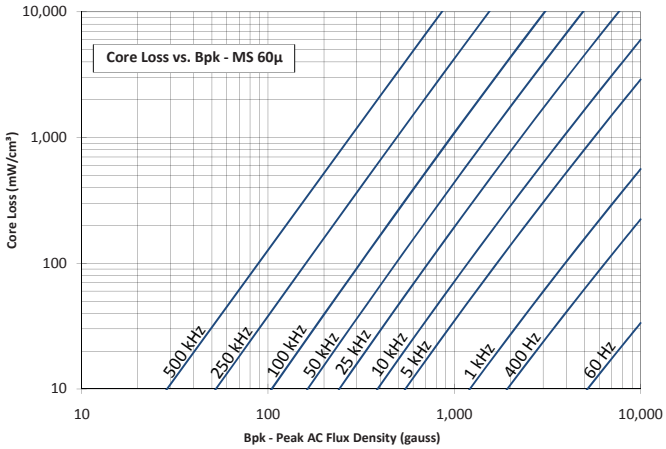
Permeability vs. Temperature

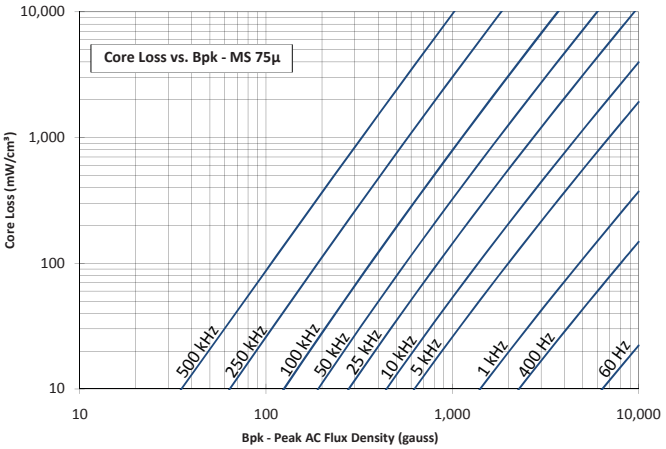


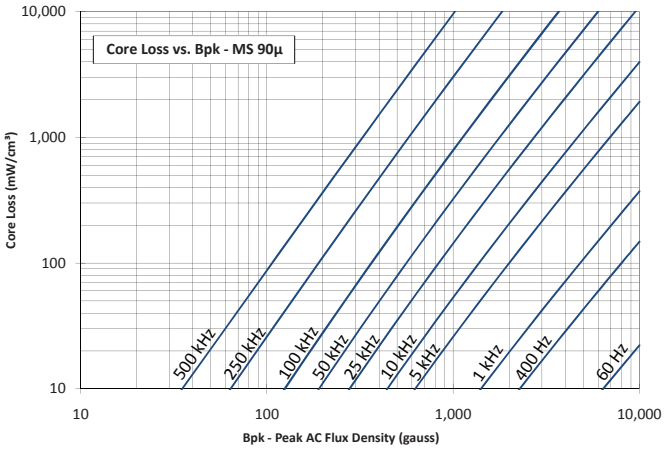
Super-MSS™ - Sendust (MS) Core Loss

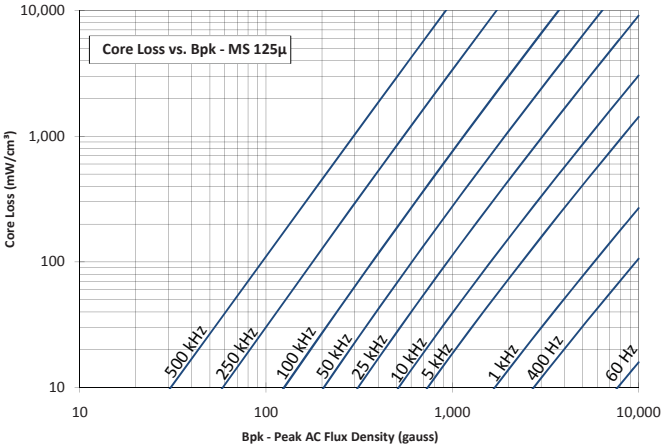




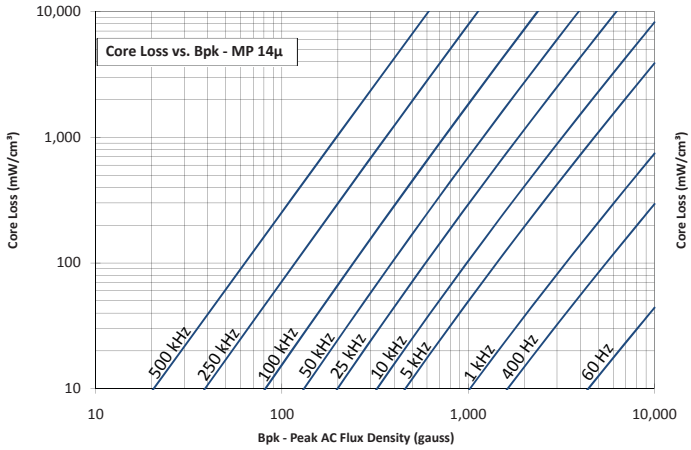


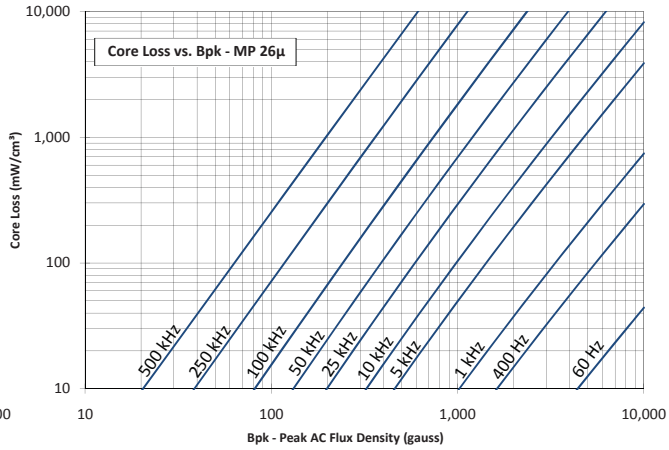


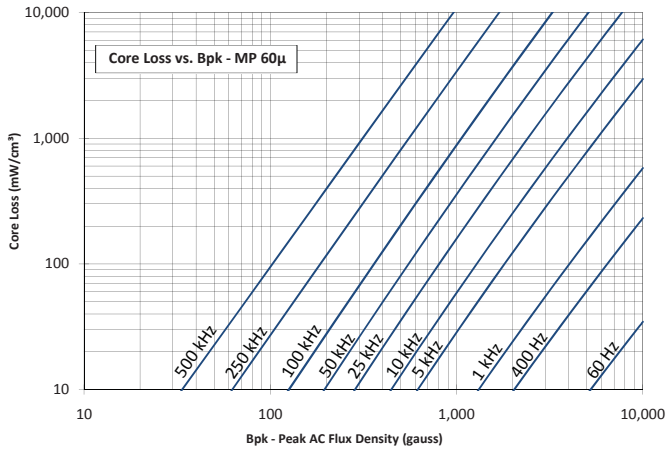


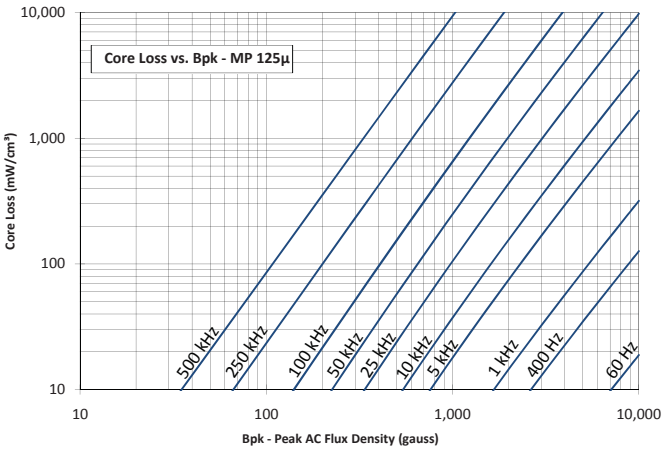


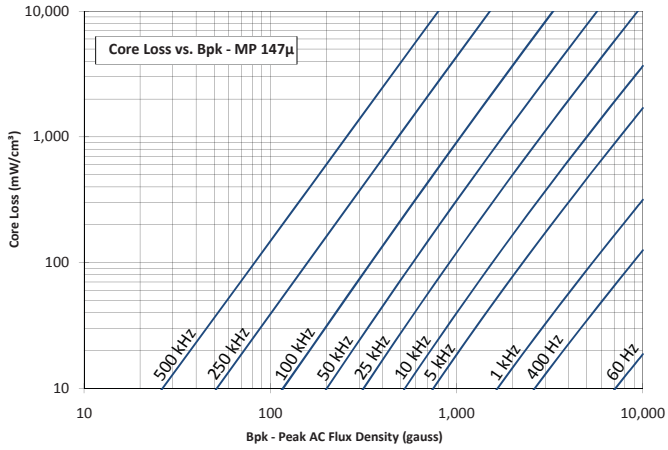
Molypermalloy - MPP (MP) Core Loss

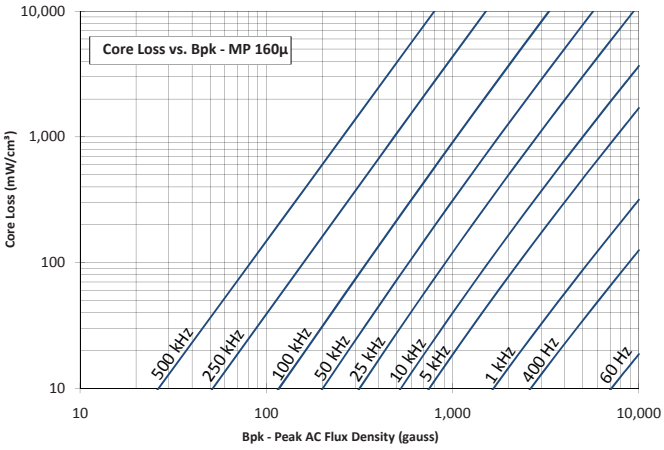




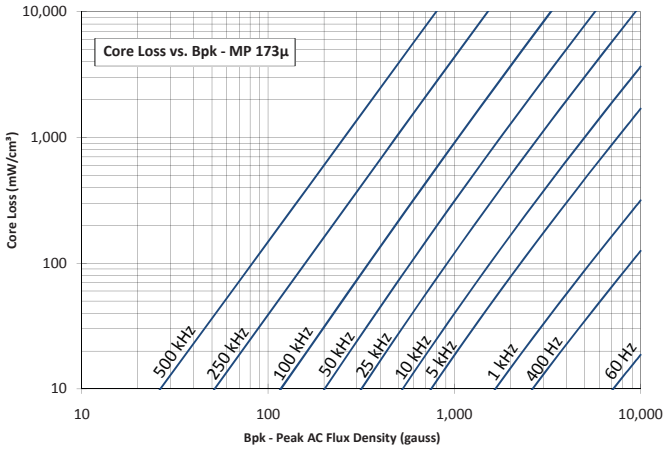


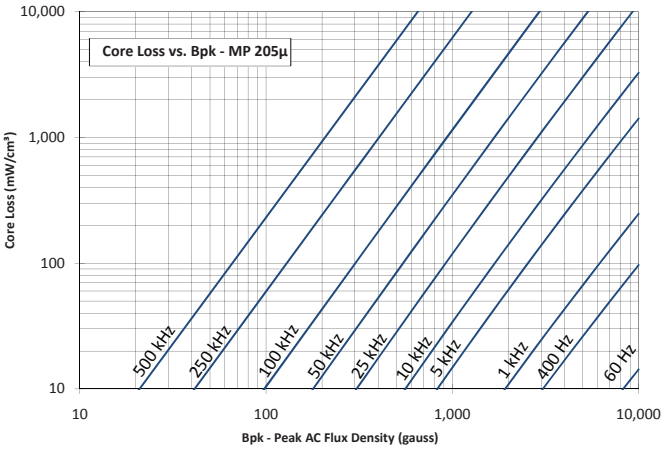


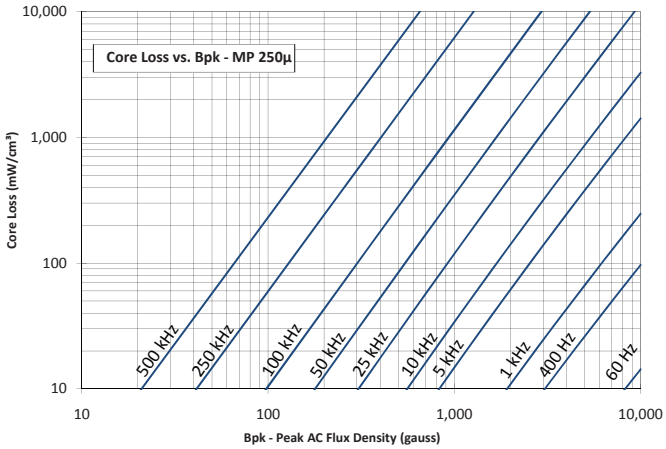




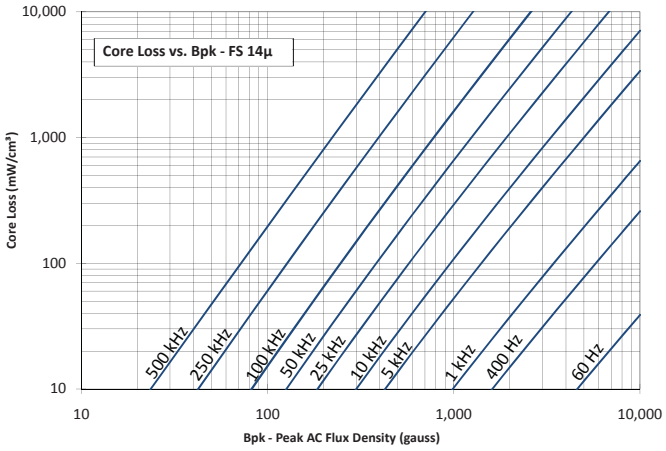
Molypermalloy - MPP (MP) Core Loss

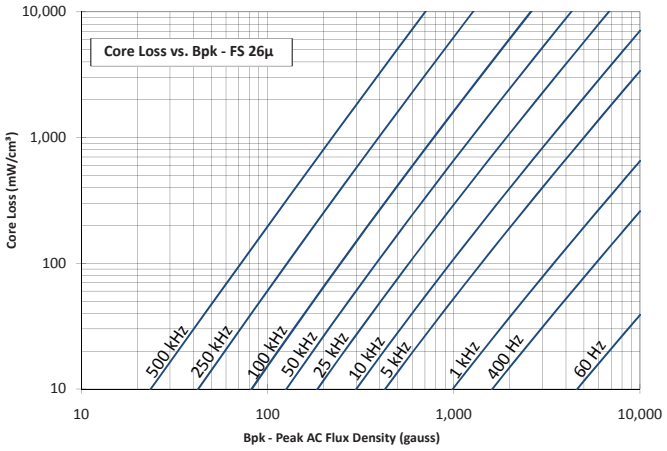


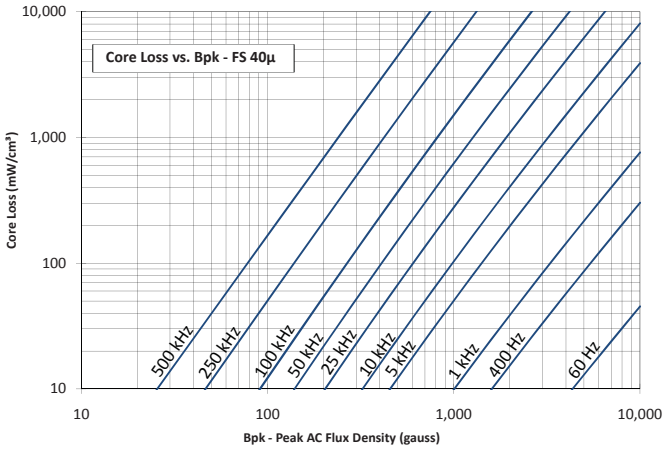


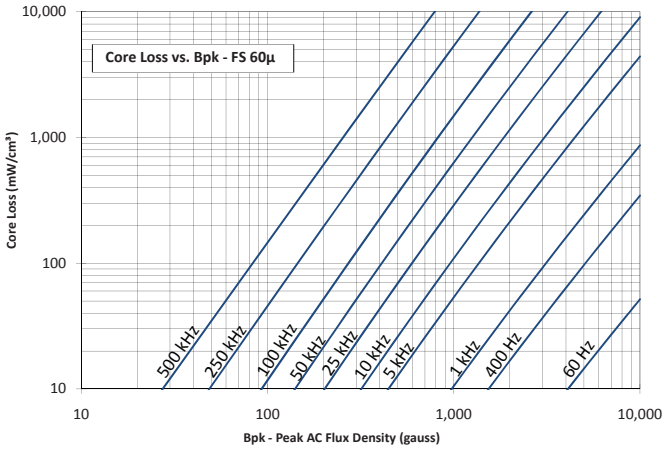


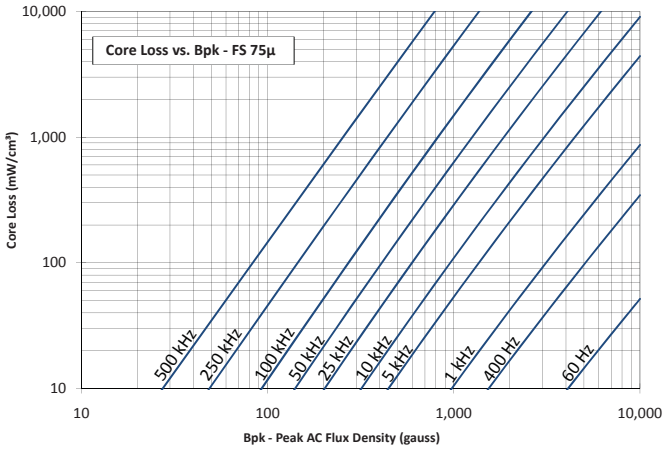
FluxSan™ - (FS) Core Loss

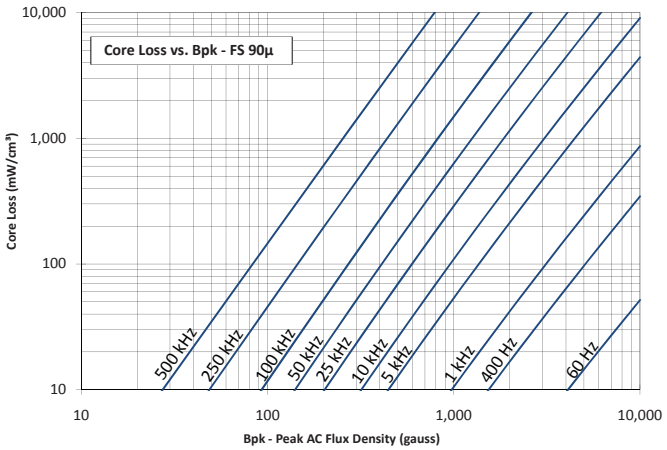


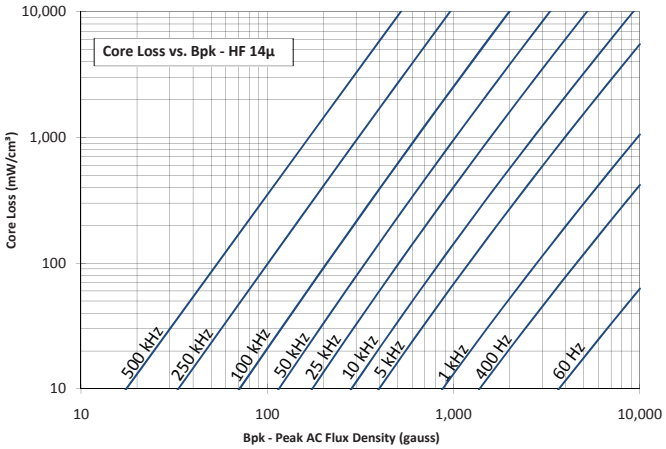


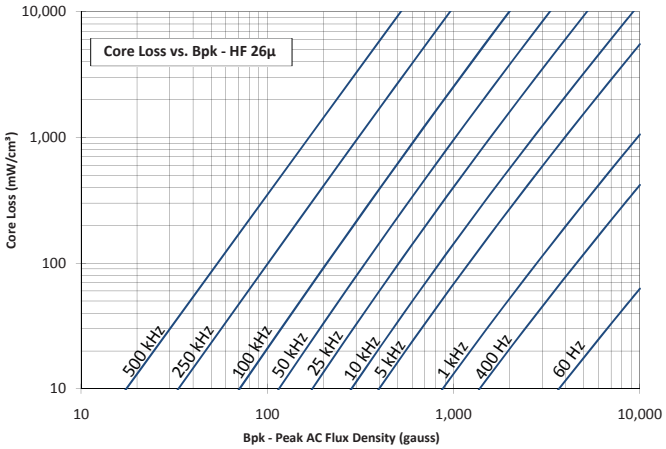


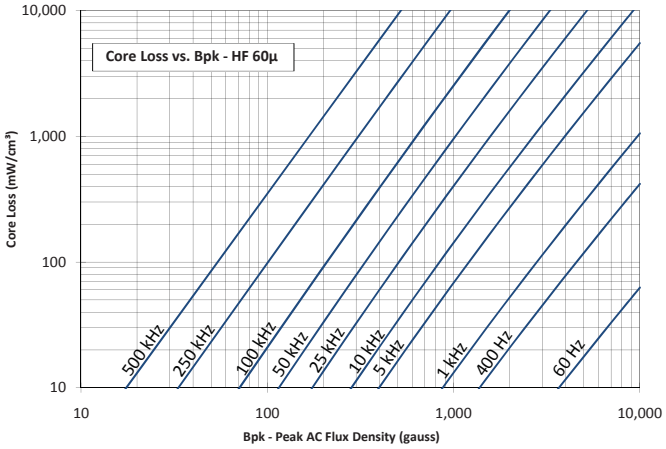


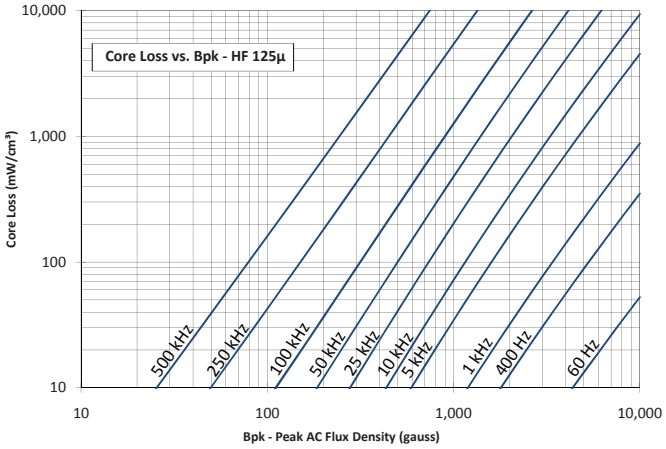


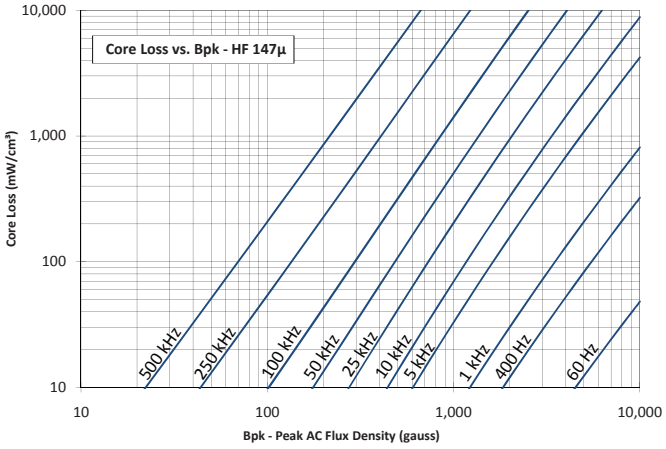


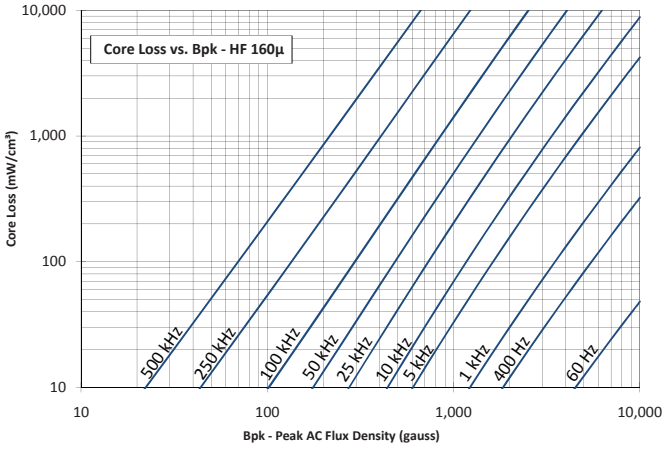

Core Loss vs. Bpk - HF 14µ
Core Loss (mW/cm³)
10,000
1,000
100
10
10
100
1,000
10,000
Bpk - Peak AC Flux Density (gauss)
500 kHz
250 kHz
100 kHz
50 kHz
25 kHz
10 kHz
5 kHz
1 kHz
400 Hz
60 Hz


Core Loss vs. Bpk - HF 26µ
Core Loss (mW/cm³)
10,000
1,000
100
10
10
100
1,000
10,000
Bpk - Peak AC Flux Density (gauss)
500 kHz
250 kHz
100 kHz
50 kHz
25 kHz
10 kHz
5 kHz
1 kHz
400 Hz
60 Hz

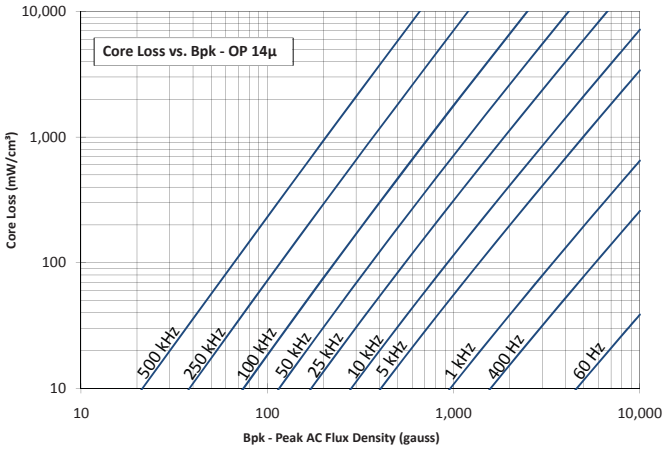

Core Loss vs. Bpk - HF 60µ
Core Loss (mW/cm³)
10,000
1,000
100
10
10
100
1,000
10,000
Bpk - Peak AC Flux Density (gauss)
500 kHz
250 kHz
100 kHz
50 kHz
25 kHz
10 kHz
5 kHz
1 kHz
400 Hz
60 Hz

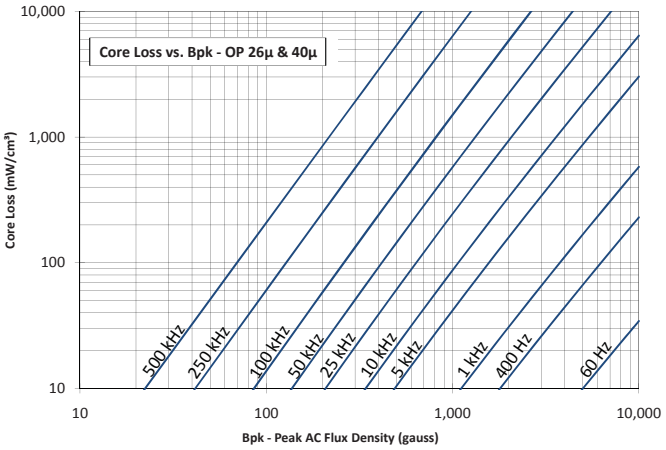

Core Loss vs. Bpk - HF 125µ
Core Loss (mW/cm³)
10,000
1,000
100
10
10
100
1,000
10,000
Bpk - Peak AC Flux Density (gauss)
500 kHz
250 kHz
100 kHz
50 kHz
25 kHz
10 kHz
5 kHz
1 kHz
400 Hz
60 Hz

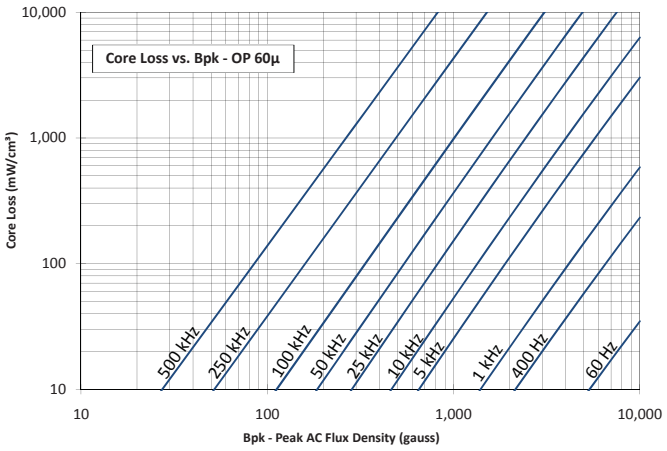

Core Loss vs. Bpk - HF 147µ
Core Loss (mW/cm³)
10,000
1,000
100
10
10
100
1,000
10,000
Bpk - Peak AC Flux Density (gauss)
500 kHz
250 kHz
100 kHz
50 kHz
25 kHz
10 kHz
5 kHz
1 kHz
400 Hz
60 Hz

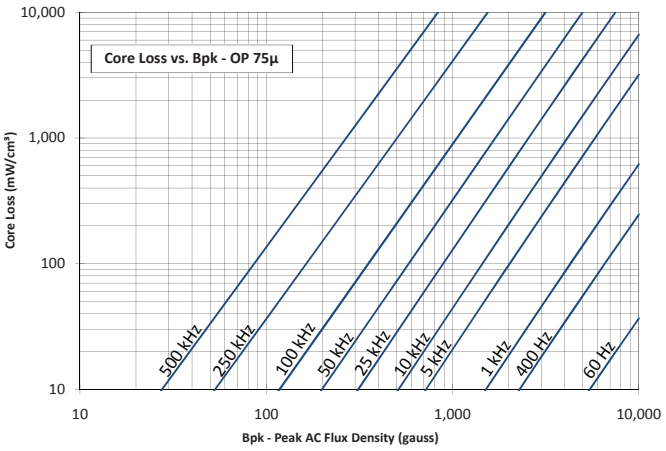

Core Loss vs. Bpk - HF 160µ
Core Loss (mW/cm³)
10,000
1,000
100
10
10
100
1,000
10,000
Bpk - Peak AC Flux Density (gauss)
500 kHz
250 kHz
100 kHz
50 kHz
25 kHz
10 kHz
5 kHz
1 kHz
400 Hz
60 Hz

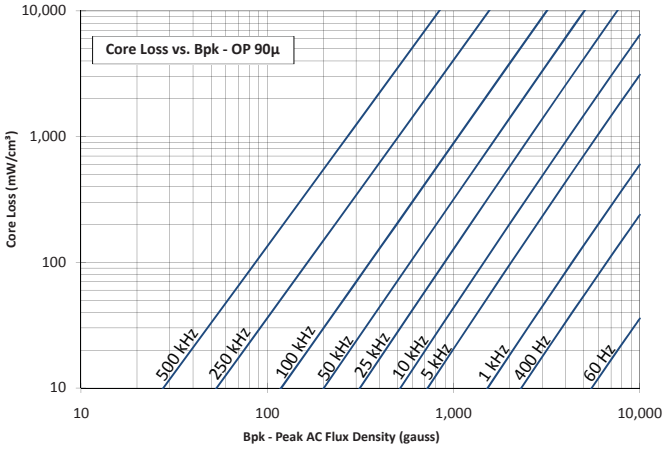
Optilloy™ - (OP) Core Loss

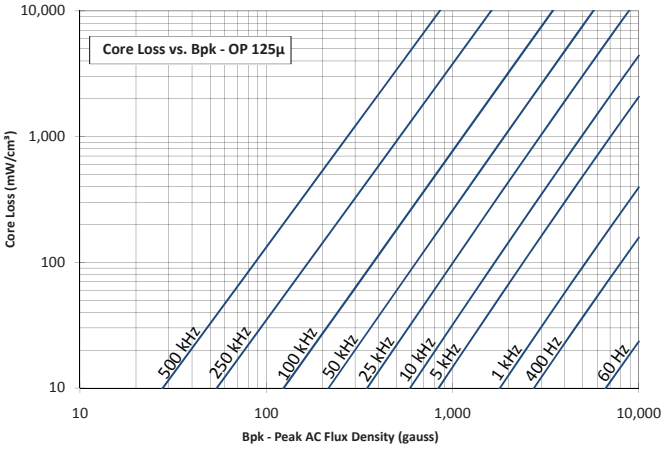












Percent Perm vs. DC Sat. Coef

$$\%\mu = \frac{1}{a + bH^{c}}$$

Where:
H expressed in Oe

Core Loss Coefficients

$$CL(mW/cm^3) = \frac{f}{\frac{a}{B^3} + \frac{b}{B^{2.3}} + \frac{c}{B^{1.65}}} + d \cdot B^2 \cdot f^2$$

Where:
B expressed in G, f expressed in Hz

Material	Permeability	a	b	c	a	b	c	d
FS	14	1.00E-02	6.01E-07	1.48E+00	1.09E+09	2.84E+08	5.44E+06	6.03E-14
FS	26	1.00E-02	2.07E-06	1.48E+00	1.09E+09	2.84E+08	5.44E+06	6.03E-14
FS	40	1.00E-02	2.08E-06	1.60E+00	1.76E+09	4.19E+08	4.22E+06	5.28E-14
FS	60	1.00E-02	1.71E-06	1.75E+00	1.00E+09	4.33E+08	3.53E+06	4.39E-14
FS	75	1.00E-02	2.67E-06	1.75E+00	1.00E+09	4.33E+08	3.53E+06	4.39E-14
FS	90	1.00E-02	3.12E-06	1.85E+00	1.00E+09	4.33E+08	3.53E+06	4.39E-14
HF	14	1.00E-02	8.81E-07	1.44E+00	2.06E+09	3.24E+08	3.00E+06	1.23E-13
HF	26	1.00E-02	2.44E-06	1.44E+00	2.06E+09	3.24E+08	3.00E+06	1.23E-13
HF	60	1.00E-02	7.65E-07	1.89E+00	8.58E+09	7.88E+08	1.65E+06	1.02E-13
HF	125	1.00E-02	7.96E-07	2.17E+00	3.54E+10	6.83E+08	2.69E+06	6.08E-14
HF	147	1.00E-02	1.25E-06	2.17E+00	4.30E+10	6.67E+08	3.11E+06	8.00E-14
HF	160	1.00E-02	1.43E-06	2.17E+00	4.30E+10	6.67E+08	3.11E+06	8.00E-14
MP	14	1.00E-02	5.68E-07	1.66E+00	1.91E+09	4.35E+08	4.33E+06	8.85E-14
MP	26	1.00E-02	1.96E-06	1.66E+00	1.91E+09	4.35E+08	4.33E+06	8.85E-14
MP	60	1.00E-02	1.21E-06	1.96E+00	9.92E+09	9.49E+08	4.49E+06	3.24E-14
MP	125	1.00E-02	7.88E-06	1.87E+00	2.19E+10	1.31E+09	9.30E+06	3.09E-14
MP	147	1.00E-02	1.09E-05	1.87E+00	3.17E+10	1.21E+09	9.66E+06	5.64E-14
MP	160	1.00E-02	1.12E-05	1.93E+00	3.17E+10	1.21E+09	9.66E+06	5.64E-14
MP	173	1.00E-02	1.31E-05	1.93E+00	3.17E+10	1.21E+09	9.66E+06	5.64E-14
MP	205	1.00E-02	3.82E-06	2.35E+00	1.14E+10	2.05E+09	1.16E+07	8.98E-14
MP	250	1.00E-02	5.68E-06	2.35E+00	1.14E+10	2.05E+09	1.16E+07	8.98E-14
MS	14	1.00E-02	5.72E-08	2.00E+00	1.00E+09	4.21E+08	1.03E+07	2.30E-14
MS	26	1.00E-02	2.06E-07	2.00E+00	1.00E+09	4.21E+08	1.03E+07	2.30E-14
MS	40	1.00E-02	2.65E-06	1.70E+00	1.00E+06	6.96E+08	5.40E+06	4.13E-14
MS	60	1.00E-02	2.15E-06	1.84E+00	7.89E+09	7.11E+08	8.98E+06	2.85E-14
MS	75	1.00E-02	3.41E-06	1.84E+00	7.89E+09	7.11E+08	8.98E+06	2.85E-14
MS	90	1.00E-02	3.99E-06	1.88E+00	7.89E+09	7.11E+08	8.98E+06	2.85E-14
MS	125	1.00E-02	7.88E-06	1.88E+00	1.39E+10	1.03E+09	1.24E+07	4.01E-14
OP	14	1.00E-02	4.95E-07	1.56E+00	1.00E+06	2.39E+08	5.60E+06	7.00E-14
OP	26	1.00E-02	1.57E-06	1.56E+00	1.00E+06	4.73E+08	5.79E+06	7.00E-14
OP	40	1.00E-02	2.04E-06	1.63E+00	3.47E+09	6.47E+08	5.24E+06	7.25E-14
OP	60	1.00E-02	1.74E-06	1.75E+00	1.00E+06	1.33E+09	3.53E+06	5.00E-14
OP	75	1.00E-02	1.57E-06	1.81E+00	1.44E+07	1.86E+09	1.82E+06	5.00E-14
OP	90	1.00E-02	1.05E-06	1.96E+00	3.71E+09	1.85E+09	2.02E+06	5.00E-14
OP	125	1.00E-02	3.54E-06	1.86E+00	3.95E+09	2.60E+09	3.65E+06	5.00E-14

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Curve Fit Formula

Percent Perm vs AC Flux Density Coef

$$\%\mu = \left(\frac{a + cB + eB^2}{1 + bB + dB^2} \right)^{1/2}$$

Where:
B expressed in G

Perm vs Freq Coef

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

Where:
f expressed in Hz

Material	Permeability	a	b	c	d	e	a	b	c
FS	14	1.00E+04	2.33E-04	3.89E+00	-3.31E-09	-3.84E-04	7.14E-02	1.03E-10	1.08E+00
FS	26	1.00E+04	3.25E-04	5.41E+00	5.41E-09	-3.74E-04	3.85E-02	1.03E-10	1.08E+00
FS	40	1.00E+04	3.27E-04	5.65E+00	1.32E-08	-2.91E-04	2.50E-02	1.03E-10	1.08E+00
FS	60	1.00E+04	3.10E-04	6.07E+00	1.63E-08	-3.66E-04	1.67E-02	1.03E-10	1.08E+00
FS	75	1.00E+04	3.07E-04	6.12E+00	1.68E-08	-3.76E-04	1.33E-02	1.03E-10	1.08E+00
FS	90	1.00E+04	3.35E-04	6.61E+00	1.84E-08	-3.55E-04	1.11E-02	1.03E-10	1.08E+00
HF	14	1.00E+04	3.20E-04	4.32E+00	-1.34E-08	-4.29E-04	7.14E-02	2.64E-09	9.60E-01
HF	26	1.00E+04	4.49E-04	6.11E+00	-7.22E-10	-4.10E-04	3.85E-02	2.64E-09	9.60E-01
HF	60	1.00E+04	4.41E-04	6.67E+00	1.56E-08	-3.54E-04	1.67E-02	2.64E-09	9.60E-01
HF	125	1.00E+04	4.75E-04	7.36E+00	2.07E-08	-3.49E-04	8.00E-03	2.64E-09	9.60E-01
HF	147	1.00E+04	3.83E-04	6.82E+00	3.07E-08	-2.63E-04	6.80E-03	2.64E-09	9.60E-01
HF	160	1.00E+04	4.96E-04	8.22E+00	1.07E-08	-4.50E-04	6.25E-03	2.64E-09	9.60E-01
MP	14	1.00E+04	1.37E-03	1.41E+01	-5.15E-09	-8.17E-04	7.14E-02	5.72E-09	8.92E-01
MP	26	1.00E+04	1.23E-03	1.32E+01	-9.57E-09	-8.11E-04	3.85E-02	5.72E-09	8.92E-01
MP	60	1.00E+04	8.54E-04	9.39E+00	-3.55E-09	-5.89E-04	1.67E-02	5.72E-09	8.92E-01
MP	125	1.00E+04	6.99E-04	7.95E+00	-7.69E-09	-5.40E-04	8.00E-03	5.72E-09	8.92E-01
MP	147	1.00E+04	6.09E-04	7.12E+00	1.01E-08	-3.60E-04	6.80E-03	5.72E-09	8.92E-01
MP	160	1.00E+04	6.00E-04	7.11E+00	9.61E-09	-3.76E-04	6.25E-03	5.72E-09	8.92E-01
MP	173	1.00E+04	5.34E-04	6.49E+00	1.01E-08	-3.45E-04	5.78E-03	5.72E-09	8.92E-01
MP	205	1.00E+04	9.16E-04	1.08E+01	2.36E-09	-6.11E-04	4.88E-03	5.72E-09	8.92E-01
MP	250	1.00E+04	1.03E-03	1.22E+01	-9.00E-09	-7.37E-04	4.00E-03	5.72E-09	8.92E-01
MS	14	1.00E+04	1.37E-03	1.41E+01	-5.15E-09	-8.17E-04	7.14E-02	3.02E-11	1.17E+00
MS	26	1.00E+04	3.26E-04	3.65E+00	1.22E-08	-1.93E-04	3.85E-02	3.02E-11	1.17E+00
MS	40	1.00E+04	9.59E-04	1.05E+01	-8.41E-09	-6.95E-04	2.50E-02	3.02E-11	1.17E+00
MS	60	1.00E+04	7.85E-04	9.14E+00	9.69E-09	-7.37E-04	1.67E-02	3.02E-11	1.17E+00
MS	75	1.00E+04	7.79E-04	9.46E+00	1.52E-09	-9.35E-04	1.33E-02	3.02E-11	1.17E+00
MS	90	1.00E+04	7.06E-04	9.17E+00	1.23E-08	-1.00E-03	1.11E-02	3.02E-11	1.17E+00
MS	125	1.00E+04	6.01E-04	8.26E+00	1.84E-08	-9.01E-04	8.00E-03	3.02E-11	1.17E+00
OP	14	1.00E+04	3.20E-04	4.32E+00	-1.34E-08	-4.29E-04	7.14E-02	6.06E-10	1.01E+00
OP	26	1.00E+04	4.49E-04	6.11E+00	-7.22E-10	-4.10E-04	3.85E-02	6.06E-10	1.01E+00
OP	40	1.00E+04	4.68E-04	6.20E+00	1.01E-08	-2.42E-04	2.50E-02	6.06E-10	1.01E+00
OP	60	1.00E+04	4.41E-04	6.67E+00	1.56E-08	-3.54E-04	1.67E-02	6.06E-10	1.01E+00
OP	75	1.00E+04	4.41E-04	6.67E+00	1.56E-08	-3.54E-04	1.33E-02	6.06E-10	1.01E+00
OP	90	1.00E+04	4.75E-04	7.36E+00	2.07E-08	-3.49E-04	1.11E-02	6.06E-10	1.01E+00
OP	125	1.00E+04	4.75E-04	7.36E+00	2.07E-08	-3.49E-04	8.00E-03	6.06E-10	1.01E+00

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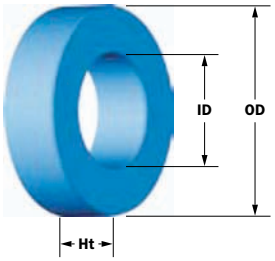
0.140 in./3.56 mm OD Toroid



Typical Part Number:	MS - 014 125 - 8

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	3.56 mm	0.140 in
	Coated Core (max)	3.76 mm	0.148 in
ID	Bare Core Nominal	1.78 mm	0.070 in
	Coated Core (min)	1.52 mm	0.060 in
Ht	Bare Core Nominal	1.52 mm	0.060 in
	Coated Core (max)	1.73 mm	0.068 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.0137 cm^2
Le	Effective Magnetic Path Length	0.817 cm
Ve	Effective Core Volume	0.0107 cm^3
WA	Minimum Effective Window Area	0.0182 cm^2
SA	Surface Area	0.523 cm^2
MLT	Mean Length Per Turn	0.646 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N^2)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	3	MS-014014-8	MP-014014-8	FS-014014-8	HF-014014-8	OP-014014-8
26µ	5.5	MS-014026-8	MP-014026-8	FS-014026-8	HF-014026-8	OP-014026-8
40µ	9	MS-014040-8		FS-014040-8		OP-014040-8
60µ	13	MS-014060-8	MP-014060-8	FS-014060-8	HF-014060-8	OP-014060-8
75µ	16	MS-014075-8		FS-014075-8		OP-014075-8
90µ	19	MS-014090-8		FS-014090-8		OP-014090-8
125µ	26	MS-014125-8	MP-014125-8		HF-014125-8	OP-014125-8
147µ	31		MP-014147-8		HF-014147-8	
160µ	33		MP-014160-8		HF-014160-8	
173µ	36		MP-014173-8			
205µ	43		MP-014205-8			
250µ	52		MP-014250-8			
Approx. Unit Weight:		0.06 g	0.08 g	0.07 g	0.07 g	0.07 g

Test Conditions

Winding	N=30, #36 AWG
Frequency	10 kHz
Voltage	0.002 V
A_L Tolerance	±8% (±15% Super-MSS)

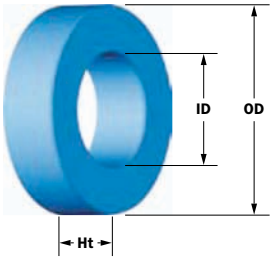
Coating/Packaging Information

Coating Type	Parylene N
Voltage Breakdown	500 Vrms
Limit	0.1 mA, 5 s
Package Quantity	36,000 Pcs/Box

Winding Table

Wire Size	AWG	30	32	34	36	38	40	42	44	-	-	-
	mm	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-	-	-
Single Layer	Turns	11	15	19	25	31	40	50	63	-	-	-
	Rdc(Ω)	24.1 m	52.2 m	105.1 m	219.9 m	433.7 m	890.0 m	1.8	3.5	-	-	-
Full Winding	Turns	12	18	28	43	67	103	159	247	-	-	-
	Rdc(Ω)	26.2 m	62.6 m	154.9 m	378.3 m	937.3 m	2.3	5.6	13.9	-	-	-

0.155 in./3.94 mm OD Toroid



Typical Part Number:	MS - 015 125 - 8

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	3.94 mm	0.155 in
	Coated Core (max)	4.14 mm	0.163 in
ID	Bare Core Nominal	2.21 mm	0.087 in
	Coated Core (min)	2.01 mm	0.079 in
Ht	Bare Core Nominal	2.54 mm	0.100 in
	Coated Core (max)	2.74 mm	0.108 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.0211 cm²
Le	Effective Magnetic Path Length	0.942 cm
Ve	Effective Core Volume	0.0197 cm³
WA	Minimum Effective Window Area	0.0316 cm²
SA	Surface Area	0.776 cm²
MLT	Mean Length Per Turn	0.862 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	4	MS-015014-8	MP-015014-8	FS-015014-8	HF-015014-8	OP-015014-8
26µ	7	MS-015026-8	MP-015026-8	FS-015026-8	HF-015026-8	OP-015026-8
40µ	11	MS-015040-8		FS-015040-8		OP-015040-8
60µ	17	MS-015060-8	MP-015060-8	FS-015060-8	HF-015060-8	OP-015060-8
75µ	21	MS-015075-8		FS-015075-8		OP-015075-8
90µ	25	MS-015090-8		FS-015090-8		OP-015090-8
125µ	35	MS-015125-8	MP-015125-8		HF-015125-8	OP-015125-8
147µ	41		MP-015147-8		HF-015147-8	
160µ	45		MP-015160-8		HF-015160-8	
173µ	48		MP-015173-8			
205µ	57		MP-015205-8			
250µ	70		MP-015250-8			
Approx. Unit Weight:		0.11 g	0.15 g	0.13 g	0.14 g	0.13 g

Test Conditions

Winding	N=30, #32 AWG
Frequency	10 kHz
Voltage	0.003 V
A_L Tolerance	±8% (±15% Super-MSS)

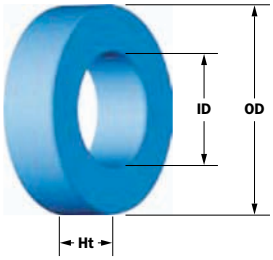
Coating/Packaging Information

Coating Type	Parylene N
Voltage Breakdown	500 Vrms
Limit	0.1 mA, 5 s
Package Quantity	27,000 Pcs/Box

Winding Table

Wire Size	AWG	28	30	32	34	36	38	40	42	44	-	-
	mm	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-	-
Single Layer	Turns	12	16	21	26	33	42	53	67	84	-	-
	Rdc(Ω)	22.0 m	46.7 m	97.4 m	191.8 m	387.1 m	783.6 m	1.6	3.2	6.3	-	-
Full Winding	Turns	13	20	31	49	75	116	180	279	431	-	-
	Rdc(Ω)	23.8 m	58.3 m	143.8 m	361.4 m	879.8 m	2.2	5.3	13.2	32.3	-	-

0.183 in./4.65 mm OD Toroid



Typical Part Number:	MS - 018 125 - 8

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	4.65 mm	0.183 in
	Coated Core (max)	5.21 mm	0.205 in
ID	Bare Core Nominal	2.36 mm	0.093 in
	Coated Core (min)	1.93 mm	0.076 in
Ht	Bare Core Nominal	2.54 mm	0.100 in
	Coated Core (max)	3.3 mm	0.130 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.0285 cm²
Le	Effective Magnetic Path Length	1.06 cm
Ve	Effective Core Volume	0.0302 cm³
WA	Minimum Effective Window Area	0.0293 cm²
SA	Surface Area	1.15 cm²
MLT	Mean Length Per Turn	1.08 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	5	MS-018014-8	MP-018014-8	FS-018014-8	HF-018014-8	OP-018014-8
26µ	9	MS-018026-8	MP-018026-8	FS-018026-8	HF-018026-8	OP-018026-8
40µ	13	MS-018040-8		FS-018040-8		OP-018040-8
60µ	20	MS-018060-8	MP-018060-8	FS-018060-8	HF-018060-8	OP-018060-8
75µ	25	MS-018075-8		FS-018075-8		OP-018075-8
90µ	30	MS-018090-8		FS-018090-8		OP-018090-8
125µ	42	MS-018125-8	MP-018125-8		HF-018125-8	OP-018125-8
147µ	49		MP-018147-8		HF-018147-8	
160µ	53		MP-018160-8		HF-018160-8	
173µ	57		MP-018173-8			
205µ	68		MP-018205-8			
250µ	83		MP-018250-8			
Approx. Unit Weight:		0.17 g	0.22 g	0.20 g	0.21 g	0.20 g

Test Conditions

Winding	N=30, #32 AWG
Frequency	10 kHz
Voltage	0.004 V
A_L Tolerance	±8% (±15% Super-MSS)

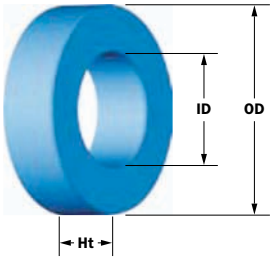
Coating/Packaging Information

Coating Type	Parylene N
Voltage Breakdown	500 Vrms
Limit	0.1 mA, 5 s
Package Quantity	27,000 Pcs/Box

Winding Table

Wire Size	AWG	28	30	32	34	36	38	40	42	44	-	-
	mm	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-	-
Single Layer	Turns	12	15	20	25	32	40	51	64	81	-	-
	Rdc(Ω)	27.7 m	55.1 m	116.8 m	232.1 m	472.6 m	939.5 m	1.9	3.8	7.7	-	-
Full Winding	Turns	12	19	29	45	69	107	166	257	398	-	-
	Rdc(Ω)	27.7 m	69.8 m	169.3 m	417.9 m	1.0	2.5	6.2	15.3	37.6	-	-

0.250 in./6.35 mm OD Toroid



Typical Part Number:	MS - 025 125 - 8

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	6.35 mm	0.250 in
	Coated Core (max)	6.99 mm	0.275 in
ID	Bare Core Nominal	2.79 mm	0.110 in
	Coated Core (min)	2.29 mm	0.090 in
Ht	Bare Core Nominal	2.79 mm	0.110 in
	Coated Core (max)	3.43 mm	0.135 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.0476 cm²
Le	Effective Magnetic Path Length	1.36 cm
Ve	Effective Core Volume	0.0642 cm³
WA	Minimum Effective Window Area	0.0410 cm²
SA	Surface Area	1.80 cm²
MLT	Mean Length Per Turn	1.27 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	6	MS-025014-8	MP-025014-8	FS-025014-8	HF-025014-8	OP-025014-8
26µ	10	MS-025026-8	MP-025026-8	FS-025026-8	HF-025026-8	OP-025026-8
40µ	16	MS-025040-8		FS-025040-8		OP-025040-8
60µ	24	MS-025060-8	MP-025060-8	FS-025060-8	HF-025060-8	OP-025060-8
75µ	30	MS-025075-8		FS-025075-8		OP-025075-8
90µ	36	MS-025090-8		FS-025090-8		OP-025090-8
125µ	52	MS-025125-8	MP-025125-8		HF-025125-8	OP-025125-8
147µ	58		MP-025147-8		HF-025147-8	
160µ	64		MP-025160-8		HF-025160-8	
173µ	69		MP-025173-8			
205µ	82		MP-025205-8			
250µ	100		MP-025250-8			
Approx. Unit Weight:		0.37 g	0.48 g	0.42 g	0.44 g	0.43 g

Test Conditions

Winding	N=30, #32 AWG
Frequency	10 kHz
Voltage	0.006 V
A_L Tolerance	±8% (±12% Super-MSS)

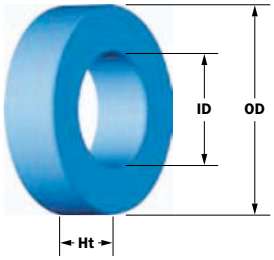
Coating/Packaging Information

Coating Type	Parylene N
Voltage Breakdown	500 Vrms
Limit	0.1 mA, 5 s
Package Quantity	21,600 Pcs/Box

Winding Table

Wire Size	AWG	26	28	30	32	34	36	38	40	42	44	-
	mm	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-
Single Layer	Turns	11	14	19	24	30	38	49	61	77	96	-
	Rdc(Ω)	18.7 m	37.9 m	81.7 m	164.2 m	326.3 m	657.4 m	1.3	2.7	5.4	10.6	-
Full Winding	Turns	11	17	26	41	63	98	151	234	362	560	-
	Rdc(Ω)	18.7 m	46.0 m	111.8 m	280.4 m	685.3 m	1.7	4.2	10.2	25.2	62.0	-

0.260 in./6.6 mm OD Toroid



Typical Part Number:	MS - 026 125 - 8

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	6.6 mm	0.260 in
	Coated Core (max)	7.32 mm	0.288 in
ID	Bare Core Nominal	2.67 mm	0.105 in
	Coated Core (min)	2.21 mm	0.087 in
Ht	Bare Core Nominal	4.78 mm	0.188 in
	Coated Core (max)	5.54 mm	0.218 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.0920 cm²
Le	Effective Magnetic Path Length	1.36 cm
Ve	Effective Core Volume	0.125 cm³
WA	Minimum Effective Window Area	0.0384 cm²
SA	Surface Area	2.44 cm²
MLT	Mean Length Per Turn	1.73 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	12	MS-026014-8	MP-026014-8	FS-026014-8	HF-026014-8	OP-026014-8
26µ	21	MS-026026-8	MP-026026-8	FS-026026-8	HF-026026-8	OP-026026-8
40µ	33	MS-026040-8		FS-026040-8		OP-026040-8
60µ	50	MS-026060-8	MP-026060-8	FS-026060-8	HF-026060-8	OP-026060-8
75µ	62	MS-026075-8		FS-026075-8		OP-026075-8
90µ	74	MS-026090-8		FS-026090-8		OP-026090-8
125µ	103	MS-026125-8	MP-026125-8		HF-026125-8	OP-026125-8
147µ	122		MP-026147-8		HF-026147-8	
160µ	132		MP-026160-8		HF-026160-8	
173µ	144		MP-026173-8			
205µ	170		MP-026205-8			
250µ	206		MP-026250-8			
Approx. Unit Weight:		0.72 g	0.93 g	0.83 g	0.86 g	0.83 g

Test Conditions

Winding	N=35, #32 AWG
Frequency	10 kHz
Voltage	0.014 V
A_L Tolerance	±8% (±12% Super-MSS)

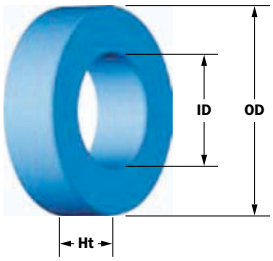
Coating/Packaging Information

Coating Type	Parylene N
Voltage Breakdown	500 Vrms
Limit	0.1 mA, 5 s
Package Quantity	14,400 Pcs/Box

Winding Table

Wire Size	AWG	26	28	30	32	34	36	38	40	42	44	-
	mm	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-
Single Layer	Turns	11	14	18	23	29	37	47	59	74	93	-
	Rdc(Ω)	25.5 m	51.5 m	105.4 m	214.2 m	429.4 m	871.4 m	1.8	3.5	7.0	14.0	-
Full Winding	Turns	10	16	25	38	59	91	141	218	337	522	-
	Rdc(Ω)	23.1 m	58.9 m	146.4 m	353.8 m	873.7 m	2.1	5.3	13.0	31.9	78.6	-

0.260 in./6.6 mm OD Toroid



Typical Part Number:	MS - 027 125 - 8

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	6.6 mm	0.260 in
	Coated Core (max)	7.24 mm	0.285 in
ID	Bare Core Nominal	2.67 mm	0.105 in
	Coated Core (min)	2.29 mm	0.090 in
Ht	Bare Core Nominal	2.54 mm	0.100 in
	Coated Core (max)	3.18 mm	0.125 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.0467 cm²
Le	Effective Magnetic Path Length	1.36 cm
Ve	Effective Core Volume	0.0640 cm³
WA	Minimum Effective Window Area	0.0410 cm²
SA	Surface Area	1.83 cm²
MLT	Mean Length Per Turn	1.25 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	6.05	MS-027014-8	MP-027014-8	FS-027014-8	HF-027014-8	OP-027014-8
26µ	11	MS-027026-8	MP-027026-8	FS-027026-8	HF-027026-8	OP-027026-8
40µ	17	MS-027040-8		FS-027040-8		OP-027040-8
60µ	26	MS-027060-8	MP-027060-8	FS-027060-8	HF-027060-8	OP-027060-8
75µ	32	MS-027075-8		FS-027075-8		OP-027075-8
90µ	39	MS-027090-8		FS-027090-8		OP-027090-8
125µ	54	MS-027125-8	MP-027125-8		HF-027125-8	OP-027125-8
147µ	64		MP-027147-8		HF-027147-8	
160µ	69		MP-027160-8		HF-027160-8	
173µ	75		MP-027173-8			
205µ	89		MP-027205-8			
250µ	108		MP-027250-8			
Approx. Unit Weight:		0.37 g	0.48 g	0.42 g	0.44 g	0.42 g

Test Conditions

Winding	N=35, #32 AWG
Frequency	10 kHz
Voltage	0.007 V
A_L Tolerance	±8% (±12% Super-MSS)

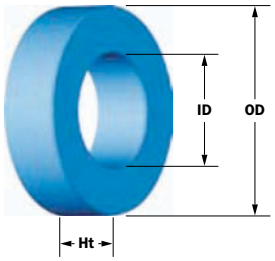
Coating/Packaging Information

Coating Type	Parylene N
Voltage Breakdown	500 Vrms
Limit	0.1 mA, 5 s
Package Quantity	21,600 Pcs/Box

Winding Table

Wire Size	AWG	26	28	30	32	34	36	38	40	42	44	-
	mm	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-
Single Layer	Turns	11	14	19	24	30	38	49	61	77	96	-
	Rdc(Ω)	18.3 m	37.1 m	80.1 m	160.9 m	319.9 m	644.5 m	1.3	2.6	5.3	10.4	-
Full Winding	Turns	11	17	26	41	63	98	151	234	362	560	-
	Rdc(Ω)	18.3 m	45.1 m	109.6 m	274.9 m	671.8 m	1.7	4.1	10.0	24.7	60.8	-

0.277 in./7.04 mm OD Toroid



Typical Part Number:	MS - 028 125 - 8

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	7.04 mm	0.277 in
	Coated Core (max)	7.67 mm	0.302 in
ID	Bare Core Nominal	3.96 mm	0.156 in
	Coated Core (min)	3.45 mm	0.136 in
Ht	Bare Core Nominal	5.08 mm	0.200 in
	Coated Core (max)	5.72 mm	0.225 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.0750 cm²
Le	Effective Magnetic Path Length	1.68 cm
Ve	Effective Core Volume	0.126 cm³
WA	Minimum Effective Window Area	0.0937 cm²
SA	Surface Area	2.80 cm²
MLT	Mean Length Per Turn	1.74 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	8	MS-028014-8	MP-028014-8	FS-028014-8	HF-028014-8	OP-028014-8
26µ	14	MS-028026-8	MP-028026-8	FS-028026-8	HF-028026-8	OP-028026-8
40µ	22	MS-028040-8		FS-028040-8		OP-028040-8
60µ	33	MS-028060-8	MP-028060-8	FS-028060-8	HF-028060-8	OP-028060-8
75µ	42	MS-028075-8		FS-028075-8		OP-028075-8
90µ	50	MS-028090-8		FS-028090-8		OP-028090-8
125µ	70	MS-028125-8	MP-028125-8		HF-028125-8	OP-028125-8
147µ	81		MP-028147-8		HF-028147-8	
160µ	89		MP-028160-8		HF-028160-8	
173µ	95		MP-028173-8			
205µ	113		MP-028205-8			
250µ	138		MP-028250-8			
Approx. Unit Weight:		0.73 g	0.94 g	0.83 g	0.87 g	0.84 g

Test Conditions

Winding	N=40, #32 AWG
Frequency	10 kHz
Voltage	0.013 V
A_L Tolerance	±8% (±12% Super-MSS)

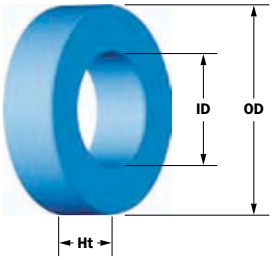
Coating/Packaging Information

Coating Type	Parylene N
Voltage Breakdown	500 Vrms
Limit	0.1 mA, 5 s
Package Quantity	12,600 Pcs/Box

Winding Table

Wire Size	AWG	22	24	26	28	30	32	34	36	38	40	42
	mm	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063
Single Layer	Turns	11	14	18	23	29	37	47	59	75	93	117
	Rdc(Ω)	10.1 m	20.5 m	41.9 m	85.1 m	170.7 m	346.3 m	699.6 m	1.4	2.8	5.6	11.1
Full Winding	Turns	10	16	25	39	60	92	143	222	343	531	821
	Rdc(Ω)	9.2 m	23.4 m	58.2 m	144.3 m	353.1 m	861.1 m	2.1	5.3	12.9	31.8	78.2

0.310 in./7.87 mm OD Toroid



Typical Part Number:	MS - 031 125 - 8

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	7.87 mm	0.310 in
	Coated Core (max)	8.51 mm	0.335 in
ID	Bare Core Nominal	3.96 mm	0.156 in
	Coated Core (min)	3.43 mm	0.135 in
Ht	Bare Core Nominal	3.18 mm	0.125 in
	Coated Core (max)	3.81 mm	0.150 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.0615 cm²
Le	Effective Magnetic Path Length	1.79 cm
Ve	Effective Core Volume	0.110 cm³
WA	Minimum Effective Window Area	0.0924 cm²
SA	Surface Area	2.65 cm²
MLT	Mean Length Per Turn	1.44 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	6	MS-031014-8	MP-031014-8	FS-031014-8	HF-031014-8	OP-031014-8
26µ	14	MS-031026-8	MP-031026-8	FS-031026-8	HF-031026-8	OP-031026-8
40µ	17	MS-031040-8		FS-031040-8		OP-031040-8
60µ	25	MS-031060-8	MP-031060-8	FS-031060-8	HF-031060-8	OP-031060-8
75µ	31	MS-031075-8		FS-031075-8		OP-031075-8
90µ	37	MS-031090-8		FS-031090-8		OP-031090-8
125µ	52	MS-031125-8	MP-031125-8		HF-031125-8	OP-031125-8
147µ	62		MP-031147-8		HF-031147-8	
160µ	66		MP-031160-8		HF-031160-8	
173µ	73		MP-031173-8			
205µ	86		MP-031205-8			
250µ	104		MP-031250-8			
Approx. Unit Weight:		0.64 g	0.82 g	0.73 g	0.76 g	0.73 g

Test Conditions

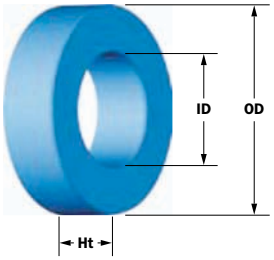
Winding	N=45, #32 AWG
Frequency	10 kHz
Voltage	0.012 V
A_L Tolerance	±8% (±12% Super-MSS)

Coating/Packaging Information

Coating Type	Parylene N
Voltage Breakdown	500 Vrms
Limit	0.1 mA, 5 s
Package Quantity	14,400 Pcs/Box

Winding Table

Wire Size	AWG	22	24	26	28	30	32	34	36	38	40	42
	mm	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063
Single Layer	Turns	11	14	18	23	29	37	47	59	74	93	116
	Rdc(Ω)	8.4 m	17.0 m	34.7 m	70.6 m	141.5 m	287.1 m	580.1 m	1.2	2.3	4.6	9.2
Full Winding	Turns	10	16	25	38	59	91	141	219	339	524	812
	Rdc(Ω)	7.6 m	19.4 m	48.2 m	116.6 m	287.9 m	706.2 m	1.7	4.3	10.6	26.0	64.1



Typical Part Number:	MS - 038 125 - 8

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	9.65 mm	0.380 in
	Coated Core (max)	10.29 mm	0.405 in
ID	Bare Core Nominal	4.78 mm	0.188 in
	Coated Core (min)	4.27 mm	0.168 in
Ht	Bare Core Nominal	3.96 mm	0.156 in
	Coated Core (max)	4.57 mm	0.180 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.0945 cm²
Le	Effective Magnetic Path Length	2.18 cm
Ve	Effective Core Volume	0.206 cm³
WA	Minimum Effective Window Area	0.143 cm²
SA	Surface Area	3.88 cm²
MLT	Mean Length Per Turn	1.73 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	7	MS-038014-8	MP-038014-8	FS-038014-8	HF-038014-8	OP-038014-8
26µ	14	MS-038026-8	MP-038026-8	FS-038026-8	HF-038026-8	OP-038026-8
40µ	21	MS-038040-8		FS-038040-8		OP-038040-8
60µ	32	MS-038060-8	MP-038060-8	FS-038060-8	HF-038060-8	OP-038060-8
75µ	40	MS-038075-8		FS-038075-8		OP-038075-8
90µ	48	MS-038090-8		FS-038090-8		OP-038090-8
125µ	66	MS-038125-8	MP-038125-8		HF-038125-8	OP-038125-8
147µ	78		MP-038147-8		HF-038147-8	
160µ	84		MP-038160-8		HF-038160-8	
173µ	92		MP-038173-8			
205µ	109		MP-038205-8			
250µ	132		MP-038250-8			
Approx. Unit Weight:		1.2 g	1.5 g	1.4 g	1.4 g	1.4 g

Test Conditions

Winding	N=45, #30 AWG
Frequency	10 kHz
Voltage	0.019 V
A_L Tolerance	±8% (±12% Super-MSS)

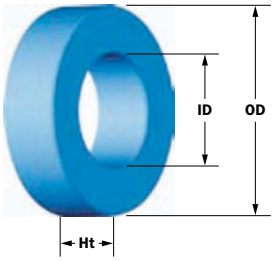
Coating/Packaging Information

Coating Type	Parylene N
Voltage Breakdown	500 Vrms
Limit	0.1 mA, 5 s
Package Quantity	9,000 Pcs/Box

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	11	14	18	23	29	37	47	59	74	93	116
	Rdc(Ω)	6.3 m	12.8 m	26.2 m	53.2 m	106.8 m	216.6 m	437.6 m	873.7 m	1.7	3.5	6.9
Full Winding	Turns	10	16	25	38	59	92	142	219	339	525	813
	Rdc(Ω)	5.8 m	14.6 m	36.4 m	88.0 m	217.2 m	538.6 m	1.3	3.2	8.0	19.7	48.4

0.380 in./9.65 mm OD Toroid



Typical Part Number:	MS - 039 125 - 8

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	9.65 mm	0.380 in
	Coated Core (max)	10.29 mm	0.405 in
ID	Bare Core Nominal	4.78 mm	0.188 in
	Coated Core (min)	4.27 mm	0.168 in
Ht	Bare Core Nominal	3.18 mm	0.125 in
	Coated Core (max)	3.81 mm	0.150 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.0752 cm²
Le	Effective Magnetic Path Length	2.18 cm
Ve	Effective Core Volume	0.164 cm³
WA	Minimum Effective Window Area	0.143 cm²
SA	Surface Area	3.61 cm²
MLT	Mean Length Per Turn	1.58 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	6	MS-039014-8	MP-039014-8	FS-039014-8	HF-039014-8	OP-039014-8
26µ	11	MS-039026-8	MP-039026-8	FS-039026-8	HF-039026-8	OP-039026-8
40µ	17	MS-039040-8		FS-039040-8		OP-039040-8
60µ	25	MS-039060-8	MP-039060-8	FS-039060-8	HF-039060-8	OP-039060-8
75µ	32	MS-039075-8		FS-039075-8		OP-039075-8
90µ	38	MS-039090-8		FS-039090-8		OP-039090-8
125µ	53	MS-039125-8	MP-039125-8		HF-039125-8	OP-039125-8
147µ	63		MP-039147-8		HF-039147-8	
160µ	68		MP-039160-8		HF-039160-8	
173µ	92		MP-039173-8			
205µ	109		MP-039205-8			
250µ	132		MP-039250-8			
Approx. Unit Weight:		0.95 g	1.2 g	1.1 g	1.1 g	1.1 g

Test Conditions

Winding	N=45, #30 AWG
Frequency	10 kHz
Voltage	0.015 V
A_L Tolerance	±8% (±12% Super-MSS)

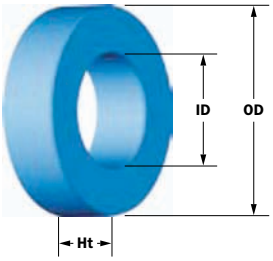
Coating/Packaging Information

Coating Type	Parylene N
Voltage Breakdown	500 Vrms
Limit	0.1 mA, 5 s
Package Quantity	10,800 Pcs/Box

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	11	14	18	23	29	37	47	59	74	93	116
	Rdc(Ω)	5.8 m	11.7 m	23.9 m	48.6 m	97.4 m	197.6 m	399.2 m	796.9 m	1.6	3.2	6.3
Full Winding	Turns	10	16	25	38	59	92	142	219	339	525	813
	Rdc(Ω)	5.2 m	13.4 m	33.2 m	80.2 m	198.1 m	491.3 m	1.2	3.0	7.3	17.9	44.2

0.400 in./10.16 mm OD Toroid



Typical Part Number:	MS - 040 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	10.16 mm	0.400 in
	Coated Core (max)	10.8 mm	0.425 in
ID	Bare Core Nominal	5.08 mm	0.200 in
	Coated Core (min)	4.57 mm	0.180 in
Ht	Bare Core Nominal	3.96 mm	0.156 in
	Coated Core (max)	4.57 mm	0.180 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.100 cm^2
Le	Effective Magnetic Path Length	2.38 cm
Ve	Effective Core Volume	0.238 cm^3
WA	Minimum Effective Window Area	0.164 cm^2
SA	Surface Area	4.20 cm^2
MLT	Mean Length Per Turn	1.77 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N^2)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	7	MS-040014-2	MP-040014-2	FS-040014-2	HF-040014-2	OP-040014-2
26µ	14	MS-040026-2	MP-040026-2	FS-040026-2	HF-040026-2	OP-040026-2
40µ	21	MS-040040-2		FS-040040-2		OP-040040-2
60µ	32	MS-040060-2	MP-040060-2	FS-040060-2	HF-040060-2	OP-040060-2
75µ	40	MS-040075-2		FS-040075-2		OP-040075-2
90µ	48	MS-040090-2		FS-040090-2		OP-040090-2
125µ	66	MS-040125-2	MP-040125-2		HF-040125-2	OP-040125-2
147µ	78		MP-040147-2		HF-040147-2	
160µ	84		MP-040160-2		HF-040160-2	
173µ	92		MP-040173-2			
205µ	105		MP-040205-2			
250µ	132		MP-040250-2			
Approx. Unit Weight:		1.4 g	1.8 g	1.6 g	1.6 g	1.6 g

Test Conditions

Winding	N=55, #30 AWG
Frequency	10 kHz
Voltage	0.024 V
A_L Tolerance	±8% (±12% Super-MSS)

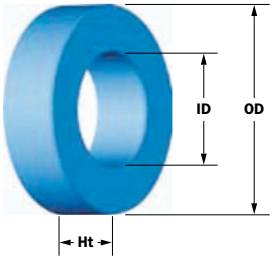
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	5,400 Pcs/Box

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

0.440 in./11.18 mm OD Toroid



Typical Part Number:	MS - 044 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	11.18 mm	0.440 in
	Coated Core (max)	11.89 mm	0.468 in
ID	Bare Core Nominal	6.35 mm	0.250 in
	Coated Core (min)	5.89 mm	0.232 in
Ht	Bare Core Nominal	3.96 mm	0.156 in
	Coated Core (max)	4.72 mm	0.186 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.0906 cm²
Le	Effective Magnetic Path Length	2.69 cm
Ve	Effective Core Volume	0.244 cm³
WA	Minimum Effective Window Area	0.273 cm²
SA	Surface Area	5.10 cm²
MLT	Mean Length Per Turn	1.84 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	6	MS-044014-2	MP-044014-2	FS-044014-2	HF-044014-2	OP-044014-2
26µ	11	MS-044026-2	MP-044026-2	FS-044026-2	HF-044026-2	OP-044026-2
40µ	17	MS-044040-2		FS-044040-2		OP-044040-2
60µ	26	MS-044060-2	MP-044060-2	FS-044060-2	HF-044060-2	OP-044060-2
75µ	32	MS-044075-2		FS-044075-2		OP-044075-2
90µ	38	MS-044090-2		FS-044090-2		OP-044090-2
125µ	53	MS-044125-2	MP-044125-2		HF-044125-2	OP-044125-2
147µ	63		MP-044147-2		HF-044147-2	
160µ	68		MP-044160-2		HF-044160-2	
173µ	74		MP-044173-2			
205µ	88		MP-044205-2			
250µ	106		MP-044250-2			
Approx. Unit Weight:		1.4 g	1.8 g	1.6 g	1.7 g	1.6 g

Test Conditions

Winding	N=60, #30 AWG
Frequency	10 kHz
Voltage	0.024 V
A_L Tolerance	±8% (±12% Super-MSS)

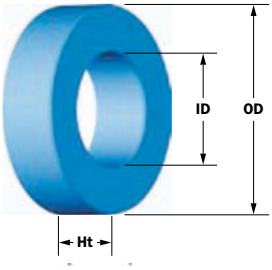
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	5,400 Pcs/Box

Winding Table

Wire Size	AWG	18	20	22	24	26	28	30	32	34	36	38
	mm	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100
Single Layer	Turns	12	16	20	26	33	42	52	66	83	103	129
	Rdc(Ω)	4.6 m	9.8 m	19.5 m	40.2 m	81.2 m	164.4 m	323.6 m	653.3 m	1.3	2.6	5.1
Full Winding	Turns	13	20	30	47	73	113	174	270	417	646	999
	Rdc(Ω)	5.0 m	12.2 m	29.2 m	72.7 m	179.6 m	442.2 m	1.1	2.7	6.6	16.2	39.8

0.500 in./12.7 mm OD Toroid



Typical Part Number:	MS - 050 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	12.7 mm	0.500 in
	Coated Core (max)	13.46 mm	0.530 in
ID	Bare Core Nominal	7.62 mm	0.300 in
	Coated Core (min)	6.99 mm	0.275 in
Ht	Bare Core Nominal	4.75 mm	0.187 in
	Coated Core (max)	5.51 mm	0.217 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.114 cm^2
Le	Effective Magnetic Path Length	3.12 cm
Ve	Effective Core Volume	0.356 cm^3
WA	Minimum Effective Window Area	0.383 cm^2
SA	Surface Area	6.67 cm^2
MLT	Mean Length Per Turn	2.10 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N^2)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	6.4	MS-050014-2	MP-050014-2	FS-050014-2	HF-050014-2	OP-050014-2
26µ	12	MS-050026-2	MP-050026-2	FS-050026-2	HF-050026-2	OP-050026-2
40µ	18	MS-050040-2		FS-050040-2		OP-050040-2
60µ	27	MS-050060-2	MP-050060-2	FS-050060-2	HF-050060-2	OP-050060-2
75µ	34	MS-050075-2		FS-050075-2		OP-050075-2
90µ	40	MS-050090-2		FS-050090-2		OP-050090-2
125µ	56	MS-050125-2	MP-050125-2		HF-050125-2	OP-050125-2
147µ	67		MP-050147-2		HF-050147-2	
160µ	72		MP-050160-2		HF-050160-2	
173µ	79		MP-050173-2			
205µ	93		MP-050205-2			
250µ	112		MP-050250-2			
Approx. Unit Weight:		2.1 g	2.6 g	2.3 g	2.4 g	2.4 g

Test Conditions

Winding	N=50, #28 AWG
Frequency	10 kHz
Voltage	0.025 V
A_L Tolerance	±8%

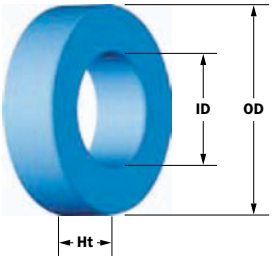
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	4,500 Pcs/Box

Winding Table

Wire Size	AWG	16	18	20	22	24	26	28	30	32	34	36
	mm	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125
Single Layer	Turns	11	15	19	24	31	39	50	63	79	98	123
	Rdc(Ω)	3.0 m	6.6 m	13.3 m	26.6 m	54.7 m	109.5 m	223.3 m	447.5 m	892.5 m	1.8	3.5
Full Winding	Turns	12	18	28	43	66	102	158	245	380	587	909
	Rdc(Ω)	3.3 m	7.9 m	19.5 m	47.7 m	116.6 m	286.5 m	705.7 m	1.7	4.3	10.5	26.0

0.655 in./16.64 mm OD Toroid



Typical Part Number:	MS - 065 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	16.64 mm	0.655 in
	Coated Core (max)	17.4 mm	0.685 in
ID	Bare Core Nominal	10.16 mm	0.400 in
	Coated Core (min)	9.53 mm	0.375 in
Ht	Bare Core Nominal	6.35 mm	0.250 in
	Coated Core (max)	7.11 mm	0.280 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.192 cm^2
Le	Effective Magnetic Path Length	4.11 cm
Ve	Effective Core Volume	0.789 cm^3
WA	Minimum Effective Window Area	0.713 cm^2
SA	Surface Area	11.2 cm^2
MLT	Mean Length Per Turn	2.69 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N^2)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	8	MS-065014-2	MP-065014-2	FS-065014-2	HF-065014-2	OP-065014-2
26µ	15	MS-065026-2	MP-065026-2	FS-065026-2	HF-065026-2	OP-065026-2
40µ	23	MS-065040-2		FS-065040-2		OP-065040-2
60µ	35	MS-065060-2	MP-065060-2	FS-065060-2	HF-065060-2	OP-065060-2
75µ	43	MS-065075-2		FS-065075-2		OP-065075-2
90µ	52	MS-065090-2		FS-065090-2		OP-065090-2
125µ	72	MS-065125-2	MP-065125-2		HF-065125-2	OP-065125-2
147µ	88		MP-065147-2		HF-065147-2	
160µ	92		MP-065160-2		HF-065160-2	
173µ	104		MP-065173-2			
205µ	123		MP-065205-2			
250µ	144		MP-065250-2			
Approx. Unit Weight:		4.6 g	5.9 g	5.2 g	5.4 g	5.2 g

Test Conditions

Winding	N=70, #28 AWG
Frequency	10 kHz
Voltage	0.060 V
A_L Tolerance	±8%

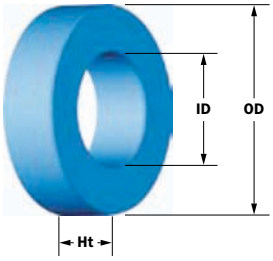
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	2,520 Pcs/Box

Winding Table

Wire Size	AWG	12	14	16	18	20	22	24	26	28	30	32
	mm	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200
Single Layer	Turns	10	13	17	21	27	34	44	55	69	86	108
	Rdc(Ω)	1.4 m	2.9 m	6.0 m	11.8 m	24.1 m	48.3 m	99.4 m	197.7 m	394.4 m	781.8 m	1.6
Full Winding	Turns	9	14	21	33	51	79	123	190	295	456	706
	Rdc(Ω)	1.3 m	3.1 m	7.4 m	18.5 m	45.6 m	112.3 m	278.0 m	682.9 m	1.7	4.1	10.2

0.680 in./17.27 mm OD Toroid



Typical Part Number:	MS - 068 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	17.27 mm	0.680 in
	Coated Core (max)	18.03 mm	0.710 in
ID	Bare Core Nominal	9.65 mm	0.380 in
	Coated Core (min)	9.02 mm	0.355 in
Ht	Bare Core Nominal	6.35 mm	0.250 in
	Coated Core (max)	7.11 mm	0.280 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.232 cm²
Le	Effective Magnetic Path Length	4.14 cm
Ve	Effective Core Volume	0.961 cm³
WA	Minimum Effective Window Area	0.639 cm²
SA	Surface Area	11.7 cm²
MLT	Mean Length Per Turn	2.77 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	10	MS-068014-2	MP-068014-2	FS-068014-2	HF-068014-2	OP-068014-2
26µ	19	MS-068026-2	MP-068026-2	FS-068026-2	HF-068026-2	OP-068026-2
40µ	29	MS-068040-2		FS-068040-2		OP-068040-2
60µ	43	MS-068060-2	MP-068060-2	FS-068060-2	HF-068060-2	OP-068060-2
75µ	53	MS-068075-2		FS-068075-2		OP-068075-2
90µ	64	MS-068090-2		FS-068090-2		OP-068090-2
125µ	89	MS-068125-2	MP-068125-2		HF-068125-2	OP-068125-2
147µ	105		MP-068147-2		HF-068147-2	
160µ	114		MP-068160-2		HF-068160-2	
173µ	123		MP-068173-2			
205µ	146		MP-068205-2			
250µ	178		MP-068250-2			
Approx. Unit Weight:		5.6 g	7.2 g	6.3 g	6.6 g	6.4 g

Test Conditions

Winding	N=70, #28 AWG
Frequency	10 kHz
Voltage	0.072 V
A_L Tolerance	±8%

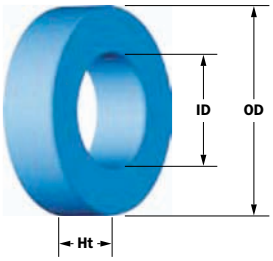
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	1,980 Pcs/Box

Winding Table

Wire Size	AWG	14	16	18	20	22	24	26	28	30	32	34
	mm	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160
Single Layer	Turns	12	15	20	26	32	41	52	65	82	102	128
	Rdc(Ω)	2.8 m	5.5 m	11.6 m	24.0 m	47.0 m	95.7 m	193.1 m	383.8 m	770.0 m	1.5	3.0
Full Winding	Turns	12	19	30	46	71	110	170	264	408	632	978
	Rdc(Ω)	2.8 m	6.9 m	17.4 m	42.5 m	104.2 m	256.8 m	631.1 m	1.6	3.8	9.4	23.2

0.800 in./20.32 mm OD Toroid



Typical Part Number:	MS - 080 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	20.32 mm	0.800 in
	Coated Core (max)	21.08 mm	0.830 in
ID	Bare Core Nominal	12.7 mm	0.500 in
	Coated Core (min)	12.07 mm	0.475 in
Ht	Bare Core Nominal	6.35 mm	0.250 in
	Coated Core (max)	7.11 mm	0.280 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.226 cm^2
Le	Effective Magnetic Path Length	5.09 cm
Ve	Effective Core Volume	1.15 cm^3
WA	Minimum Effective Window Area	1.14 cm^2
SA	Surface Area	15.5 cm^2
MLT	Mean Length Per Turn	2.93 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N^2)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	7.8	MS-080014-2	MP-080014-2	FS-080014-2	HF-080014-2	OP-080014-2
26µ	14	MS-080026-2	MP-080026-2	FS-080026-2	HF-080026-2	OP-080026-2
40µ	21	MS-080040-2		FS-080040-2		OP-080040-2
60µ	32	MS-080060-2	MP-080060-2	FS-080060-2	HF-080060-2	OP-080060-2
75µ	41	MS-080075-2		FS-080075-2		OP-080075-2
90µ	49	MS-080090-2		FS-080090-2		OP-080090-2
125µ	68	MS-080125-2	MP-080125-2		HF-080125-2	OP-080125-2
147µ	81		MP-080147-2		HF-080147-2	
160µ	87		MP-080160-2		HF-080160-2	
173µ	96		MP-080173-2			
205µ	113		MP-080205-2			
250µ	136		MP-080250-2			
Approx. Unit Weight:		6.7 g	8.6 g	7.6 g	7.9 g	7.6 g

Test Conditions

Winding	N=90, #28 AWG
Frequency	10 kHz
Voltage	0.090 V
A_L Tolerance	±8%

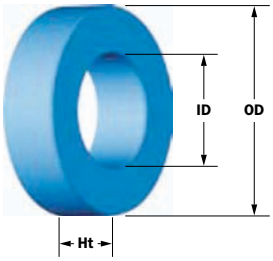
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	900 Pcs/Box

Winding Table

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
	mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
Single Layer	Turns	10	13	17	22	28	35	44	56	70	88	110
	Rdc(Ω)	1.0 m	2.0 m	4.1 m	8.5 m	17.1 m	34.1 m	68.1 m	137.9 m	274.2 m	548.2 m	1.1
Full Winding	Turns	9	14	22	34	53	82	127	197	305	472	731
	Rdc(Ω)	0.9 m	2.1 m	5.3 m	13.1 m	32.4 m	79.8 m	196.7 m	485.2 m	1.2	2.9	7.2

0.900 in./22.86 mm OD Toroid



Typical Part Number:	MS - 090 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	22.86 mm	0.900 in
	Coated Core (max)	23.62 mm	0.930 in
ID	Bare Core Nominal	13.97 mm	0.550 in
	Coated Core (min)	13.39 mm	0.527 in
Ht	Bare Core Nominal	7.62 mm	0.300 in
	Coated Core (max)	8.38 mm	0.330 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.331 cm^2
Le	Effective Magnetic Path Length	5.67 cm
Ve	Effective Core Volume	1.88 cm^3
WA	Minimum Effective Window Area	1.41 cm^2
SA	Surface Area	19.8 cm^2
MLT	Mean Length Per Turn	3.37 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N^2)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	9.9	MS-090014-2	MP-090014-2	FS-090014-2	HF-090014-2	OP-090014-2
26µ	19	MS-090026-2	MP-090026-2	FS-090026-2	HF-090026-2	OP-090026-2
40µ	29	MS-090040-2		FS-090040-2		OP-090040-2
60µ	43	MS-090060-2	MP-090060-2	FS-090060-2	HF-090060-2	OP-090060-2
75µ	54	MS-090075-2		FS-090075-2		OP-090075-2
90µ	65	MS-090090-2		FS-090090-2		OP-090090-2
125µ	90	MS-090125-2	MP-090125-2		HF-090125-2	OP-090125-2
147µ	106		MP-090147-2		HF-090147-2	
160µ	115		MP-090160-2		HF-090160-2	
173µ	124		MP-090173-2			
205µ	147		MP-090205-2			
250µ	180		MP-090250-2			
Approx. Unit Weight:		11 g	14 g	12 g	13 g	12 g

Test Conditions

Winding	N=80, #26 AWG
Frequency	10 kHz
Voltage	0.12 V
A_L Tolerance	±8%

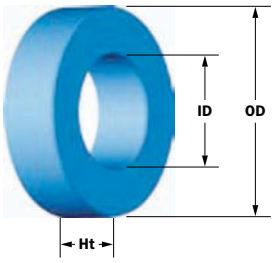
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	1,210 Pcs/Box (1,089: MP, HF, OP)

Winding Table

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
	mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
Single Layer	Turns	11	15	19	24	31	39	50	62	78	98	123
	Rdc(Ω)	1.2 m	2.6 m	5.3 m	10.6 m	21.8 m	43.7 m	89.1 m	175.8 m	351.6 m	702.7 m	1.4
Full Winding	Turns	11	18	27	42	65	101	157	243	376	581	900
	Rdc(Ω)	1.2 m	3.2 m	7.5 m	18.6 m	45.8 m	113.2 m	279.8 m	688.8 m	1.7	4.2	10.3

0.928 in./23.57 mm OD Toroid



Typical Part Number:	MS - 092 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	23.57 mm	0.928 in
	Coated Core (max)	24.28 mm	0.956 in
ID	Bare Core Nominal	14.4 mm	0.567 in
	Coated Core (min)	13.77 mm	0.542 in
Ht	Bare Core Nominal	8.89 mm	0.350 in
	Coated Core (max)	9.7 mm	0.382 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.388 cm^2
Le	Effective Magnetic Path Length	5.88 cm
Ve	Effective Core Volume	2.28 cm^3
WA	Minimum Effective Window Area	1.49 cm^2
SA	Surface Area	21.8 cm^2
MLT	Mean Length Per Turn	3.68 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N^2)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	12	MS-092014-2	MP-092014-2	FS-092014-2	HF-092014-2	OP-092014-2
26µ	22	MS-092026-2	MP-092026-2	FS-092026-2	HF-092026-2	OP-092026-2
40µ	34	MS-092040-2		FS-092040-2		OP-092040-2
60µ	51	MS-092060-2	MP-092060-2	FS-092060-2	HF-092060-2	OP-092060-2
75µ	63	MS-092075-2		FS-092075-2		OP-092075-2
90µ	76	MS-092090-2		FS-092090-2		OP-092090-2
125µ	105	MS-092125-2	MP-092125-2		HF-092125-2	OP-092125-2
147µ	124		MP-092147-2		HF-092147-2	
160µ	135		MP-092160-2		HF-092160-2	
173µ	146		MP-092173-2			
205µ	173		MP-092205-2			
250µ	211		MP-092250-2			
Approx. Unit Weight:		13 g	17 g	15 g	16 g	15 g

Test Conditions

Winding	N=80, #26 AWG
Frequency	10 kHz
Voltage	0.14 V
A_L Tolerance	±8%

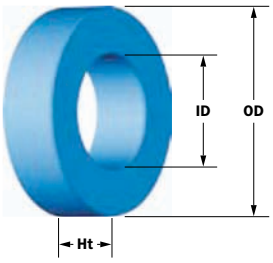
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	1,089 Pcs/Box (968: MP, HF, OP)

Winding Table

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
	mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
Single Layer	Turns	12	15	20	25	32	40	51	64	80	101	126
	Rdc(Ω)	1.4 m	2.9 m	6.1 m	12.1 m	24.6 m	49.0 m	99.3 m	198.2 m	394.0 m	791.0 m	1.6
Full Winding	Turns	12	19	29	45	69	107	166	257	397	615	952
	Rdc(Ω)	1.4 m	3.6 m	8.8 m	21.8 m	53.1 m	131.0 m	323.2 m	795.8 m	2.0	4.8	11.9

1.060 in./26.92 mm OD Toroid



Typical Part Number:	MS - 106 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	26.92 mm	1.060 in
	Coated Core (max)	27.69 mm	1.090 in
ID	Bare Core Nominal	14.73 mm	0.580 in
	Coated Core (min)	14.1 mm	0.555 in
Ht	Bare Core Nominal	11.18 mm	0.440 in
	Coated Core (max)	11.99 mm	0.472 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.654 cm^2
Le	Effective Magnetic Path Length	6.35 cm
Ve	Effective Core Volume	4.15 cm^3
WA	Minimum Effective Window Area	1.56 cm^2
SA	Surface Area	28.8 cm^2
MLT	Mean Length Per Turn	4.46 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N^2)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	18	MS-106014-2	MP-106014-2	FS-106014-2	HF-106014-2	OP-106014-2
26µ	32	MS-106026-2	MP-106026-2	FS-106026-2	HF-106026-2	OP-106026-2
40µ	50	MS-106040-2		FS-106040-2		OP-106040-2
60µ	75	MS-106060-2	MP-106060-2	FS-106060-2	HF-106060-2	OP-106060-2
75µ	94	MS-106075-2		FS-106075-2		OP-106075-2
90µ	113	MS-106090-2		FS-106090-2		OP-106090-2
125µ	157	MS-106125-2	MP-106125-2		HF-106125-2	OP-106125-2
147µ	185		MP-106147-2		HF-106147-2	
160µ	201		MP-106160-2		HF-106160-2	
173µ	217		MP-106173-2			
205µ	257		MP-106205-2			
250µ	314		MP-106250-2			
Approx. Unit Weight:		24 g	31 g	27 g	29 g	28 g

Test Conditions

Winding	N=80, #26 AWG
Frequency	10 kHz
Voltage	0.23 V
A_L Tolerance	±8%

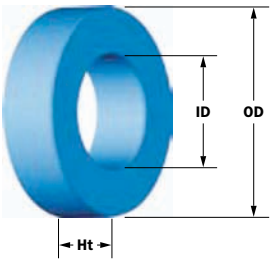
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown Limit	1000 Vrms 0.1 mA, 5 s
Package Quantity	600 Pcs/Box (500: MP, HF, OP)

Winding Table

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
	mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
Single Layer	Turns	12	16	20	26	33	41	52	66	82	103	129
	Rdc(Ω)	1.8 m	3.7 m	7.4 m	15.3 m	30.8 m	60.9 m	122.8 m	247.8 m	489.7 m	978.2 m	1.9
Full Winding	Turns	13	20	30	47	73	112	174	269	417	645	998
	Rdc(Ω)	1.9 m	4.6 m	11.1 m	27.6 m	68.1 m	166.3 m	410.8 m	1.0	2.5	6.1	15.1

1.060 in./26.92 mm OD Toroid



Typical Part Number:	MS - 107 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	26.92 mm	1.060 in
	Coated Core (max)	27.69 mm	1.090 in
ID	Bare Core Nominal	14.73 mm	0.580 in
	Coated Core (min)	14.1 mm	0.555 in
Ht	Bare Core Nominal	8.64 mm	0.340 in
	Coated Core (max)	9.45 mm	0.372 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.497 cm²
Le	Effective Magnetic Path Length	6.35 cm
Ve	Effective Core Volume	3.16 cm³
WA	Minimum Effective Window Area	1.56 cm²
SA	Surface Area	26.3 cm²
MLT	Mean Length Per Turn	3.95 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	13.8	MS-107014-2	MP-107014-2	FS-107014-2	HF-107014-2	OP-107014-2
26µ	25.5	MS-107026-2	MP-107026-2	FS-107026-2	HF-107026-2	OP-107026-2
40µ	39	MS-107040-2		FS-107040-2		OP-107040-2
60µ	59	MS-107060-2	MP-107060-2	FS-107060-2	HF-107060-2	OP-107060-2
75µ	73.7	MS-107075-2		FS-107075-2		OP-107075-2
90µ	88.4	MS-107090-2		FS-107090-2		OP-107090-2
125µ	123	MS-107125-2	MP-107125-2		HF-107125-2	OP-107125-2
147µ	145		MP-107147-2		HF-107147-2	
160µ	157		MP-107160-2		HF-107160-2	
173µ	170		MP-107173-2			
205µ	197		MP-107205-2			
250µ	246		MP-107250-2			
Approx. Unit Weight:		18 g	24 g	21 g	22 g	21 g

Test Conditions

Winding	N=80, #26 AWG
Frequency	10 kHz
Voltage	0.18 V
A_L Tolerance	±8%

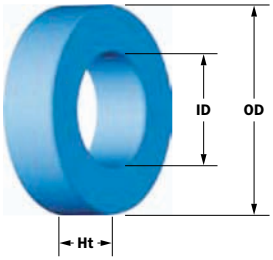
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown Limit	1000 Vrms 0.1 mA, 5 s
Package Quantity	900 Pcs/Box (600: MP, HF, OP)

Winding Table

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
	mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
Single Layer	Turns	12	16	20	26	33	41	52	66	82	103	129
	Rdc(Ω)	1.6 m	3.3 m	6.5 m	13.5 m	27.3 m	53.9 m	108.8 m	219.6 m	433.9 m	866.9 m	1.7
Full Winding	Turns	13	20	30	47	73	112	174	269	417	645	998
	Rdc(Ω)	1.7 m	4.1 m	9.8 m	24.4 m	60.4 m	147.3 m	364.0 m	895.1 m	2.2	5.4	13.4

1.060 in./26.92 mm OD Toroid



Typical Part Number:	MS - 108 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	26.92 mm	1.060 in
	Coated Core (max)	27.81 mm	1.095 in
ID	Bare Core Nominal	14.73 mm	0.580 in
	Coated Core (min)	14.1 mm	0.555 in
Ht	Bare Core Nominal	14 mm	0.551 in
	Coated Core (max)	15 mm	0.591 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.819 cm^2
Le	Effective Magnetic Path Length	6.35 cm
Ve	Effective Core Volume	5.20 cm^3
WA	Minimum Effective Window Area	1.56 cm^2
SA	Surface Area	31.9 cm^2
MLT	Mean Length Per Turn	5.08 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N^2)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	22	MS-108014-2	MP-108014-2	FS-108014-2	HF-108014-2	OP-108014-2
26µ	40.7	MS-108026-2	MP-108026-2	FS-108026-2	HF-108026-2	OP-108026-2
40µ	62.7	MS-108040-2		FS-108040-2		OP-108040-2
60µ	94	MS-108060-2	MP-108060-2	FS-108060-2	HF-108060-2	OP-108060-2
75µ	117.5	MS-108075-2		FS-108075-2		OP-108075-2
90µ	141	MS-108090-2		FS-108090-2		OP-108090-2
125µ	195.8	MS-108125-2	MP-108125-2		HF-108125-2	OP-108125-2
147µ	230.3		MP-108147-2		HF-108147-2	
160µ	250.6		MP-108160-2		HF-108160-2	
173µ	271		MP-108173-2			
205µ	321		MP-108205-2			
250µ	392					
Approx. Unit Weight:		30 g	39 g	34 g	36 g	35 g

Test Conditions

Winding	N=80, #26 AWG
Frequency	10 kHz
Voltage	0.29 V
A_L Tolerance	±8%

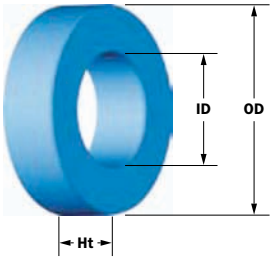
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	500 Pcs/Box (400: MP, HF, OP)

Winding Table

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
	mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
Single Layer	Turns	12	16	20	26	33	41	52	66	82	103	129
	Rdc(Ω)	2.0 m	4.2 m	8.4 m	17.4 m	35.0 m	69.2 m	139.7 m	281.9 m	557.1 m	1.1	2.2
Full Winding	Turns	13	20	30	47	73	112	174	269	417	645	998
	Rdc(Ω)	2.2 m	5.3 m	12.6 m	31.4 m	77.5 m	189.2 m	467.3 m	1.1	2.8	7.0	17.1

1.060 in./26.92 mm OD Toroid



Typical Part Number:	MS - 109 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	26.92 mm	1.060 in
	Coated Core (max)	27.81 mm	1.095 in
ID	Bare Core Nominal	14.73 mm	0.580 in
	Coated Core (min)	14.1 mm	0.555 in
Ht	Bare Core Nominal	18 mm	0.709 in
	Coated Core (max)	19 mm	0.748 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	1.01 cm²
Le	Effective Magnetic Path Length	6.35 cm
Ve	Effective Core Volume	6.43 cm³
WA	Minimum Effective Window Area	1.56 cm²
SA	Surface Area	35.8 cm²
MLT	Mean Length Per Turn	5.88 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	28	MS-109014-2	MP-109014-2	FS-109014-2	HF-109014-2	OP-109014-2
26µ	52	MS-109026-2	MP-109026-2	FS-109026-2	HF-109026-2	OP-109026-2
40µ	80	MS-109040-2		FS-109040-2		OP-109040-2
60µ	120	MS-109060-2	MP-109060-2	FS-109060-2	HF-109060-2	OP-109060-2
75µ	150	MS-109075-2		FS-109075-2		OP-109075-2
90µ	180	MS-109090-2		FS-109090-2		OP-109090-2
125µ	250	MS-109125-2	MP-109125-2		HF-109125-2	OP-109125-2
147µ	294		MP-109147-2		HF-109147-2	
160µ	320		MP-109160-2		HF-109160-2	
173µ	346		MP-109173-2			
205µ	410		MP-109205-2			
250µ	500					
Approx. Unit Weight:		37 g	48 g	42 g	44 g	43 g

Test Conditions

Winding	N=80, #26 AWG
Frequency	10 kHz
Voltage	0.36 V
A_L Tolerance	±8%

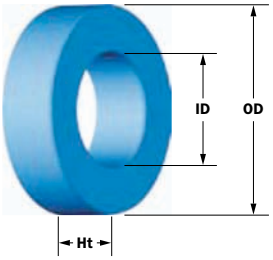
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown Limit	1000 Vrms 0.1 mA, 5 s
Package Quantity	1,200 Pcs/Box (900: MP, HF, OP)

Winding Table

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
	mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
Single Layer	Turns	12	16	20	26	33	41	52	66	82	103	129
	Rdc(Ω)	2.3 m	4.9 m	9.7 m	20.1 m	40.6 m	80.2 m	161.7 m	326.4 m	644.9 m	1.3	2.6
Full Winding	Turns	13	20	30	47	73	112	174	269	417	645	998
	Rdc(Ω)	2.5 m	6.1 m	14.6 m	36.3 m	89.7 m	219.0 m	541.0 m	1.3	3.3	8.1	19.9

1.300 in./33.02 mm OD Toroid



Typical Part Number:	MS - 130 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	33.02 mm	1.300 in
	Coated Core (max)	33.83 mm	1.332 in
ID	Bare Core Nominal	19.94 mm	0.785 in
	Coated Core (min)	19.3 mm	0.760 in
Ht	Bare Core Nominal	10.67 mm	0.420 in
	Coated Core (max)	11.61 mm	0.457 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.672 cm²
Le	Effective Magnetic Path Length	8.15 cm
Ve	Effective Core Volume	5.48 cm³
WA	Minimum Effective Window Area	2.93 cm²
SA	Surface Area	40.1 cm²
MLT	Mean Length Per Turn	4.74 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	14	MS-130014-2	MP-130014-2	FS-130014-2	HF-130014-2	OP-130014-2
26µ	28	MS-130026-2	MP-130026-2	FS-130026-2	HF-130026-2	OP-130026-2
40µ	41	MS-130040-2		FS-130040-2		OP-130040-2
60µ	61	MS-130060-2	MP-130060-2	FS-130060-2	HF-130060-2	OP-130060-2
75µ	76	MS-130075-2		FS-130075-2		OP-130075-2
90µ	91	MS-130090-2		FS-130090-2		OP-130090-2
125µ	127	MS-130125-2	MP-130125-2		HF-130125-2	OP-130125-2
147µ	150		MP-130147-2		HF-130147-2	
160µ	163		MP-130160-2		HF-130160-2	
173µ	176		MP-130173-2			
205µ	208		MP-130205-2			
250µ	254					
Approx. Unit Weight:		32 g	41 g	36 g	38 g	36 g

Test Conditions

Winding	N=70, #22 AWG
Frequency	10 kHz
Voltage	0.21 V
A_L Tolerance	±8%

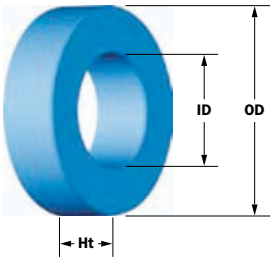
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown Limit	1000 Vrms 0.1 mA, 5 s
Package Quantity	576 Pcs/Box (448: MP, HF, OP)

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	14	18	22	29	36	46	58	73	91	114	142
	Rdc(Ω)	1.4 m	2.8 m	5.4 m	11.4 m	22.4 m	45.6 m	91.5 m	183.1 m	363.0 m	723.2 m	1.4
Full Winding	Turns	15	24	37	57	88	136	211	326	504	780	1,208
	Rdc(Ω)	1.5 m	3.7 m	9.1 m	22.3 m	54.9 m	134.9 m	332.8 m	817.6 m	2.0	4.9	12.2

1.300 in./33.02 mm OD Toroid



Typical Part Number:	MS - 131 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	33.02 mm	1.300 in
	Coated Core (max)	33.83 mm	1.332 in
ID	Bare Core Nominal	19.94 mm	0.785 in
	Coated Core (min)	19.3 mm	0.760 in
Ht	Bare Core Nominal	8.76 mm	0.345 in
	Coated Core (max)	9.7 mm	0.382 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.551 cm^2
Le	Effective Magnetic Path Length	8.15 cm
Ve	Effective Core Volume	4.49 cm^3
WA	Minimum Effective Window Area	2.93 cm^2
SA	Surface Area	37.8 cm^2
MLT	Mean Length Per Turn	4.36 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N^2)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	11.9	MS-131014-2	MP-131014-2	FS-131014-2	HF-131014-2	OP-131014-2
26µ	22.1	MS-131026-2	MP-131026-2	FS-131026-2	HF-131026-2	OP-131026-2
40µ	34	MS-131040-2		FS-131040-2		OP-131040-2
60µ	51	MS-131060-2	MP-131060-2	FS-131060-2	HF-131060-2	OP-131060-2
75µ	63.8	MS-131075-2		FS-131075-2		OP-131075-2
90µ	76.5	MS-131090-2		FS-131090-2		OP-131090-2
125µ	109	MS-131125-2	MP-131125-2		HF-131125-2	OP-131125-2
147µ	129		MP-131147-2		HF-131147-2	
160µ	136		MP-131160-2		HF-131160-2	
173µ	151		MP-131173-2			
205µ	180		MP-131205-2			
250µ	213					
Approx. Unit Weight:		26 g	33 g	30 g	31 g	30 g

Test Conditions

Winding	N=70, #22 AWG
Frequency	10 kHz
Voltage	0.17 V
A_L Tolerance	±8%

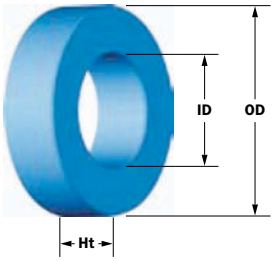
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	512 Pcs/Box (384: MP, HF, OP)

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	14	18	22	29	36	46	58	73	91	114	142
	Rdc(Ω)	1.3 m	2.6 m	5.0 m	10.5 m	20.6 m	41.9 m	84.1 m	168.3 m	333.7 m	664.9 m	1.3
Full Winding	Turns	15	24	37	57	88	136	211	326	504	780	1,208
	Rdc(Ω)	1.3 m	3.4 m	8.4 m	20.5 m	50.4 m	124.0 m	305.9 m	751.8 m	1.8	4.5	11.2

1.300 in./33.02 mm OD Toroid



Typical Part Number:	MS - 132 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	33.02 mm	1.300 in
	Coated Core (max)	33.83 mm	1.332 in
ID	Bare Core Nominal	19.94 mm	0.785 in
	Coated Core (min)	19.3 mm	0.760 in
Ht	Bare Core Nominal	11.18 mm	0.440 in
	Coated Core (max)	11.99 mm	0.472 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.698 cm^2
Le	Effective Magnetic Path Length	8.15 cm
Ve	Effective Core Volume	5.69 cm^3
WA	Minimum Effective Window Area	2.93 cm^2
SA	Surface Area	40.6 cm^2
MLT	Mean Length Per Turn	4.82 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N^2)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	15	MS-132014-2	MP-132014-2	FS-132014-2	HF-132014-2	OP-132014-2
26µ	28	MS-132026-2	MP-132026-2	FS-132026-2	HF-132026-2	OP-132026-2
40µ	43	MS-132040-2		FS-132040-2		OP-132040-2
60µ	65	MS-132060-2	MP-132060-2	FS-132060-2	HF-132060-2	OP-132060-2
75µ	80.8	MS-132075-2		FS-132075-2		OP-132075-2
90µ	96.9	MS-132090-2		FS-132090-2		OP-132090-2
125µ	135	MS-132125-2	MP-132125-2		HF-132125-2	OP-132125-2
147µ	158		MP-132147-2		HF-132147-2	
160µ	172		MP-132160-2		HF-132160-2	
173µ	186		MP-132173-2			
205µ	215		MP-132205-2			
250µ	269					
Approx. Unit Weight:		33 g	42 g	38 g	39 g	38 g

Test Conditions

Winding	N=70, #22 AWG
Frequency	10 kHz
Voltage	0.22 V
A_L Tolerance	±8%

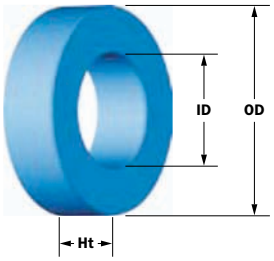
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown Limit	1000 Vrms 0.1 mA, 5 s
Package Quantity	448 Pcs/Box (320: MP, HF, OP)

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	14	18	22	29	36	46	58	73	91	114	142
	Rdc(Ω)	1.4 m	2.8 m	5.5 m	11.6 m	22.8 m	46.3 m	92.9 m	186.0 m	368.8 m	734.8 m	1.5
Full Winding	Turns	15	24	37	57	88	136	211	326	504	780	1,208
	Rdc(Ω)	1.5 m	3.8 m	9.3 m	22.7 m	55.7 m	137.0 m	338.1 m	830.8 m	2.0	5.0	12.4

1.300 in./33.02 mm OD Toroid



Typical Part Number:	MS - 133 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	33.02 mm	1.300 in
	Coated Core (max)	33.83 mm	1.332 in
ID	Bare Core Nominal	19.94 mm	0.785 in
	Coated Core (min)	19.3 mm	0.760 in
Ht	Bare Core Nominal	14 mm	0.551 in
	Coated Core (max)	15 mm	0.591 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.874 cm^2
Le	Effective Magnetic Path Length	8.15 cm
Ve	Effective Core Volume	7.12 cm^3
WA	Minimum Effective Window Area	2.93 cm^2
SA	Surface Area	44.3 cm^2
MLT	Mean Length Per Turn	5.42 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N^2)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	18.7	MS-133014-2	MP-133014-2	FS-133014-2	HF-133014-2	OP-133014-2
26µ	34.7	MS-133026-2	MP-133026-2	FS-133026-2	HF-133026-2	OP-133026-2
40µ	53.3	MS-133040-2		FS-133040-2		OP-133040-2
60µ	80	MS-133060-2	MP-133060-2	FS-133060-2	HF-133060-2	OP-133060-2
75µ	100	MS-133075-2		FS-133075-2		OP-133075-2
90µ	120	MS-133090-2		FS-133090-2		OP-133090-2
125µ	166.7	MS-133125-2	MP-133125-2		HF-133125-2	OP-133125-2
147µ	196		MP-133147-2		HF-133147-2	
160µ	213		MP-133160-2		HF-133160-2	
173µ	230.7		MP-133173-2			
205µ	266.7		MP-133205-2			
250µ	333					
Approx. Unit Weight:		41 g	53 g	47 g	49 g	47 g

Test Conditions

Winding	N=70, #22 AWG
Frequency	10 kHz
Voltage	0.27 V
A_L Tolerance	±8%

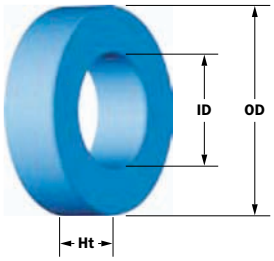
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	384 Pcs/Box (256: MP, HF, OP)

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	14	18	22	29	36	46	58	73	91	114	142
	Rdc(Ω)	1.6 m	3.2 m	6.2 m	13.0 m	25.7 m	52.1 m	104.6 m	209.3 m	414.9 m	826.6 m	1.6
Full Winding	Turns	15	24	37	57	88	136	211	326	504	780	1,208
	Rdc(Ω)	1.7 m	4.3 m	10.4 m	25.5 m	62.7 m	154.2 m	380.4 m	934.6 m	2.3	5.7	13.9

1.300 in./33.02 mm OD Toroid



Typical Part Number:	MS - 134 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	33.02 mm	1.300 in
	Coated Core (max)	33.83 mm	1.332 in
ID	Bare Core Nominal	19.94 mm	0.785 in
	Coated Core (min)	19.3 mm	0.760 in
Ht	Bare Core Nominal	18 mm	0.709 in
	Coated Core (max)	19 mm	0.748 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	1.10 cm²
Le	Effective Magnetic Path Length	8.15 cm
Ve	Effective Core Volume	8.98 cm³
WA	Minimum Effective Window Area	2.93 cm²
SA	Surface Area	49.1 cm²
MLT	Mean Length Per Turn	6.22 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	23.8	MS-134014-2	MP-134014-2	FS-134014-2	HF-134014-2	OP-134014-2
26µ	44	MS-134026-2	MP-134026-2	FS-134026-2	HF-134026-2	OP-134026-2
40µ	68	MS-134040-2		FS-134040-2		OP-134040-2
60µ	102	MS-134060-2	MP-134060-2	FS-134060-2	HF-134060-2	OP-134060-2
75µ	127.5	MS-134075-2		FS-134075-2		OP-134075-2
90µ	153	MS-134090-2		FS-134090-2		OP-134090-2
125µ	214	MS-134125-2	MP-134125-2		HF-134125-2	OP-134125-2
147µ	250		MP-134147-2		HF-134147-2	
160µ	272		MP-134160-2		HF-134160-2	
173µ	294		MP-134173-2			
205µ	340		MP-134205-2			
250µ	424.5					
Approx. Unit Weight:		52 g	67 g	59 g	62 g	60 g

Test Conditions

Winding	N=70, #22 AWG
Frequency	10 kHz
Voltage	0.34 V
A_L Tolerance	±8%

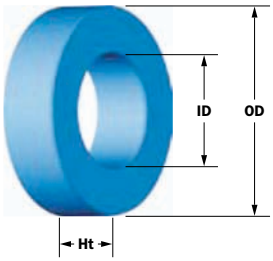
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown Limit	1000 Vrms 0.1 mA, 5 s
Package Quantity	320 Pcs/Box (192: MP, HF, OP)

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	14	18	22	29	36	46	58	73	91	114	142
	Rdc(Ω)	1.8 m	3.7 m	7.1 m	14.9 m	29.4 m	59.8 m	120.0 m	240.2 m	476.2 m	948.7 m	1.9
Full Winding	Turns	15	24	37	57	88	136	211	326	504	780	1,208
	Rdc(Ω)	1.9 m	4.9 m	12.0 m	29.3 m	72.0 m	176.9 m	436.5 m	1.1	2.6	6.5	16.0

1.350 in./34.29 mm OD Toroid



Typical Part Number:	MS - 135 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	34.29 mm	1.350 in
	Coated Core (max)	35.1 mm	1.382 in
ID	Bare Core Nominal	23.37 mm	0.920 in
	Coated Core (min)	22.56 mm	0.888 in
Ht	Bare Core Nominal	8.89 mm	0.350 in
	Coated Core (max)	9.83 mm	0.387 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.454 cm²
Le	Effective Magnetic Path Length	8.95 cm
Ve	Effective Core Volume	4.06 cm³
WA	Minimum Effective Window Area	4.00 cm²
SA	Surface Area	41.4 cm²
MLT	Mean Length Per Turn	4.35 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	9	MS-135014-2	MP-135014-2	FS-135014-2	HF-135014-2	OP-135014-2
26µ	16	MS-135026-2	MP-135026-2	FS-135026-2	HF-135026-2	OP-135026-2
40µ	25	MS-135040-2		FS-135040-2		OP-135040-2
60µ	38	MS-135060-2	MP-135060-2	FS-135060-2	HF-135060-2	OP-135060-2
75µ	47	MS-135075-2		FS-135075-2		OP-135075-2
90µ	56	MS-135090-2		FS-135090-2		OP-135090-2
125µ	79	MS-135125-2	MP-135125-2		HF-135125-2	OP-135125-2
147µ	93		MP-135147-2		HF-135147-2	
160µ	101		MP-135160-2		HF-135160-2	
173µ	109		MP-135173-2			
205µ	130		MP-135205-2			
250µ	N/A					
Approx. Unit Weight:		23 g	30 g	27 g	28 g	27 g

Test Conditions

Winding	N=90, #22 AWG
Frequency	10 kHz
Voltage	0.18 V
A_L Tolerance	±8%

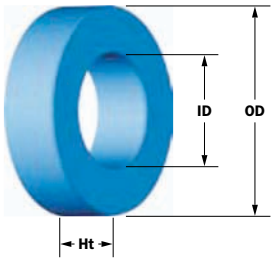
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	441 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	16	21	27	34	43	54	68	85	107	134	167
	Rdc(Ω)	1.4 m	3.0 m	6.1 m	12.2 m	24.6 m	49.1 m	98.4 m	195.6 m	391.5 m	779.8 m	1.5
Full Winding	Turns	21	32	50	78	120	186	288	445	689	1,066	1,651
	Rdc(Ω)	1.9 m	4.5 m	11.3 m	28.1 m	68.6 m	169.2 m	416.6 m	1.0	2.5	6.2	15.3

1.410 in./35.81 mm OD Toroid



Typical Part Number: MS - 141 125 - 2

- Material Type
- OD in 100th inches
- Reference Permeability
- Finish

Physical Dimensions

OD	Bare Core Nominal	35.81 mm	1.410 in
	Coated Core (max)	36.63 mm	1.442 in
ID	Bare Core Nominal	22.35 mm	0.880 in
	Coated Core (min)	21.54 mm	0.848 in
Ht	Bare Core Nominal	10.46 mm	0.412 in
	Coated Core (max)	11.28 mm	0.444 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.678 cm²
Le	Effective Magnetic Path Length	8.98 cm
Ve	Effective Core Volume	6.09 cm³
WA	Minimum Effective Window Area	3.64 cm²
SA	Surface Area	45.6 cm²
MLT	Mean Length Per Turn	4.84 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	13	MS-141014-2	MP-141014-2	FS-141014-2	HF-141014-2	OP-141014-2
26µ	24	MS-141026-2	MP-141026-2	FS-141026-2	HF-141026-2	OP-141026-2
40µ	37	MS-141040-2		FS-141040-2		OP-141040-2
60µ	56	MS-141060-2	MP-141060-2	FS-141060-2	HF-141060-2	OP-141060-2
75µ	70	MS-141075-2		FS-141075-2		OP-141075-2
90µ	84.3	MS-141090-2		FS-141090-2		OP-141090-2
125µ	117	MS-141125-2	MP-141125-2		HF-141125-2	OP-141125-2
147µ	138		MP-141147-2		HF-141147-2	
160µ	150		MP-141160-2		HF-141160-2	
173µ	162		MP-141173-2			
205µ	192		MP-141205-2			
250µ	N/A					
Approx. Unit Weight:		35 g	45 g	40 g	42 g	40 g

Test Conditions

Winding	N=80, #22 AWG
Frequency	10 kHz
Voltage	0.24 V
A_L Tolerance	±8%

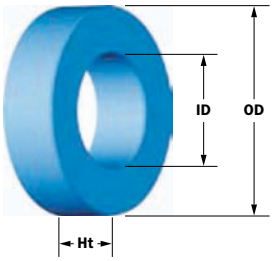
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown Limit	1000 Vrms 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

1.570 in./39.88 mm OD Toroid



Typical Part Number:	MS - 157 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	39.88 mm	1.570 in
	Coated Core (max)	40.69 mm	1.602 in
ID	Bare Core Nominal	24.13 mm	0.950 in
	Coated Core (min)	23.32 mm	0.918 in
Ht	Bare Core Nominal	14.48 mm	0.570 in
	Coated Core (max)	15.37 mm	0.605 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	1.07 cm^2
Le	Effective Magnetic Path Length	9.85 cm
Ve	Effective Core Volume	10.5 cm^3
WA	Minimum Effective Window Area	4.27 cm^2
SA	Surface Area	60.2 cm^2
MLT	Mean Length Per Turn	5.98 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N^2)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	19	MS-157014-2	MP-157014-2	FS-157014-2	HF-157014-2	OP-157014-2
26µ	35	MS-157026-2	MP-157026-2	FS-157026-2	HF-157026-2	OP-157026-2
40µ	54	MS-157040-2		FS-157040-2		OP-157040-2
60µ	81	MS-157060-2	MP-157060-2	FS-157060-2	HF-157060-2	OP-157060-2
75µ	101	MS-157075-2		FS-157075-2		OP-157075-2
90µ	121	MS-157090-2		FS-157090-2		OP-157090-2
125µ	168	MS-157125-2	MP-157125-2		HF-157125-2	OP-157125-2
147µ	198		MP-157147-2		HF-157147-2	
160µ	215		MP-157160-2		HF-157160-2	
173µ	233		MP-157173-2			
205µ	276		MP-157205-2			
250µ	N/A					
Approx. Unit Weight:		61 g	79 g	70 g	72 g	70 g

Test Conditions

Winding	N=70, #20 AWG
Frequency	10 kHz
Voltage	0.33 V
A_L Tolerance	±8%

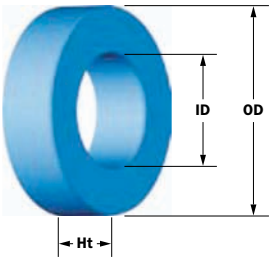
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	216 Pcs/Box (180: MP, HF, OP)

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	17	22	28	35	45	56	70	88	111	138	173
	Rdc(Ω)	2.1 m	4.3 m	8.7 m	17.3 m	35.4 m	70.0 m	139.2 m	278.3 m	558.3 m	1.1	2.2
Full Winding	Turns	22	35	54	83	128	199	307	476	736	1,139	1,764
	Rdc(Ω)	2.7 m	6.8 m	16.8 m	41.0 m	100.6 m	248.8 m	610.5 m	1.5	3.7	9.1	22.4

1.840 in./46.74 mm OD Toroid



Typical Part Number: MS - 184 125 - 2

- Material Type
- OD in 100th inches
- Reference Permeability
- Finish

Physical Dimensions

OD	Bare Core Nominal	46.74 mm	1.840 in
	Coated Core (max)	47.63 mm	1.875 in
ID	Bare Core Nominal	24.13 mm	0.950 in
	Coated Core (min)	23.32 mm	0.918 in
Ht	Bare Core Nominal	18.03 mm	0.710 in
	Coated Core (max)	18.92 mm	0.745 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	1.99 cm²
Le	Effective Magnetic Path Length	10.743 cm
Ve	Effective Core Volume	21.4 cm³
WA	Minimum Effective Window Area	4.27 cm²
SA	Surface Area	81.7 cm²
MLT	Mean Length Per Turn	7.38 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	32	MS-184014-2	MP-184014-2	FS-184014-2	HF-184014-2	OP-184014-2
26µ	59	MS-184026-2	MP-184026-2	FS-184026-2	HF-184026-2	OP-184026-2
40µ	90	MS-184040-2		FS-184040-2		OP-184040-2
60µ	135	MS-184060-2	MP-184060-2	FS-184060-2	HF-184060-2	OP-184060-2
75µ	169	MS-184075-2		FS-184075-2		OP-184075-2
90µ	202	MS-184090-2		FS-184090-2		OP-184090-2
125µ	281	MS-184125-2	MP-184125-2		HF-184125-2	OP-184125-2
147µ	330		MP-184147-2		HF-184147-2	
160µ	360		MP-184160-2		HF-184160-2	
173µ	390		MP-184173-2			
205µ	462		MP-184205-2			
250µ	N/A					
Approx. Unit Weight:		120 g	160 g	140 g	150 g	140 g

Test Conditions

Winding	N=70, #20 AWG
Frequency	10 kHz
Voltage	0.62 V
A_L Tolerance	±8%

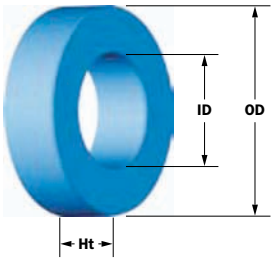
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	100 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	17	22	28	35	45	56	70	88	111	138	173
	Rdc(Ω)	2.6 m	5.3 m	10.7 m	21.4 m	43.7 m	86.5 m	171.9 m	343.7 m	689.5 m	1.4	2.7
Full Winding	Turns	22	35	54	83	128	199	307	476	736	1,139	1,764
	Rdc(Ω)	3.3 m	8.4 m	20.7 m	50.7 m	124.3 m	307.3 m	753.9 m	1.9	4.6	11.3	27.7

1.840 in./46.74 mm OD Toroid



Typical Part Number:	MS - 185 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	46.74 mm	1.840 in
	Coated Core (max)	47.63 mm	1.875 in
ID	Bare Core Nominal	28.7 mm	1.130 in
	Coated Core (min)	27.89 mm	1.098 in
Ht	Bare Core Nominal	15.24 mm	0.600 in
	Coated Core (max)	16.13 mm	0.635 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	1.34 cm^2
Le	Effective Magnetic Path Length	11.62 cm
Ve	Effective Core Volume	15.6 cm^3
WA	Minimum Effective Window Area	6.11 cm^2
SA	Surface Area	79.6 cm^2
MLT	Mean Length Per Turn	6.59 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N^2)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	20	MS-185014-2	MP-185014-2	FS-185014-2	HF-185014-2	OP-185014-2
26µ	37	MS-185026-2	MP-185026-2	FS-185026-2	HF-185026-2	OP-185026-2
40µ	57	MS-185040-2		FS-185040-2		OP-185040-2
60µ	86	MS-185060-2	MP-185060-2	FS-185060-2	HF-185060-2	OP-185060-2
75µ	107	MS-185075-2		FS-185075-2		OP-185075-2
90µ	128	MS-185090-2		FS-185090-2		OP-185090-2
125µ	178	MS-185125-2	MP-185125-2		HF-185125-2	OP-185125-2
147µ	210		MP-185147-2		HF-185147-2	
160µ	228		MP-185160-2		HF-185160-2	
173µ	246		MP-185173-2			
205µ	292		MP-185205-2			
250µ	N/A					
Approx. Unit Weight:		90 g	120 g	100 g	110 g	100 g

Test Conditions

Winding	N=80, #20 AWG
Frequency	10 kHz
Voltage	0.48 V
A_L Tolerance	±8%

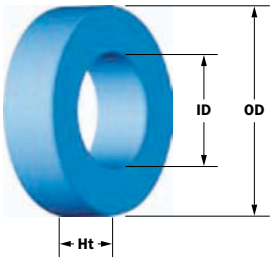
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	125 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	21	27	34	43	54	68	85	106	133	166	207
	Rdc(Ω)	2.8 m	5.8 m	11.7 m	23.5 m	46.8 m	93.8 m	186.5 m	369.9 m	738.1 m	1.5	2.9
Full Winding	Turns	32	49	77	119	184	284	440	680	1,053	1,630	2,523
	Rdc(Ω)	4.3 m	10.6 m	26.4 m	64.9 m	159.6 m	391.8 m	965.4 m	2.4	5.8	14.4	35.4

2.000 in./50.8 mm OD Toroid



Typical Part Number:	MS - 200 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	50.8 mm	2.000 in
	Coated Core (max)	51.69 mm	2.035 in
ID	Bare Core Nominal	31.75 mm	1.250 in
	Coated Core (min)	30.94 mm	1.218 in
Ht	Bare Core Nominal	13.46 mm	0.530 in
	Coated Core (max)	14.35 mm	0.565 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	1.25 cm^2
Le	Effective Magnetic Path Length	12.733 cm
Ve	Effective Core Volume	15.9 cm^3
WA	Minimum Effective Window Area	7.52 cm^2
SA	Surface Area	88.2 cm^2
MLT	Mean Length Per Turn	6.49 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N^2)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	17	MS-200014-2	MP-200014-2	FS-200014-2	HF-200014-2	OP-200014-2
26µ	32	MS-200026-2	MP-200026-2	FS-200026-2	HF-200026-2	OP-200026-2
40µ	49	MS-200040-2		FS-200040-2		OP-200040-2
60µ	73	MS-200060-2	MP-200060-2	FS-200060-2	HF-200060-2	OP-200060-2
75µ	91	MS-200075-2		FS-200075-2		OP-200075-2
90µ	109	MS-200090-2		FS-200090-2		OP-200090-2
125µ	152	MS-200125-2	MP-200125-2		HF-200125-2	OP-200125-2
147µ	179		MP-200147-2		HF-200147-2	
160µ	195		MP-200160-2		HF-200160-2	
173µ	210		MP-200173-2			
205µ	249		MP-200205-2			
250µ	N/A					
Approx. Unit Weight:		92 g	120 g	110 g	110 g	110 g

Test Conditions

Winding	N=70, #18 AWG
Frequency	10 kHz
Voltage	0.39 V
A_L Tolerance	±8%

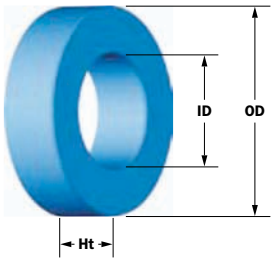
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	125 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	23	30	38	48	60	75	94	118	148	184	230
	Rdc(Ω)	3.1 m	6.4 m	12.8 m	25.8 m	51.2 m	101.9 m	203.0 m	405.4 m	808.6 m	1.6	3.2
Full Winding	Turns	39	61	94	146	226	350	541	837	1,296	2,006	3,104
	Rdc(Ω)	5.2 m	12.9 m	31.7 m	78.4 m	193.0 m	475.3 m	1.2	2.9	7.1	17.4	42.9

2.250 in./57.15 mm OD Toroid



Typical Part Number:	MS - 225 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	57.15 mm	2.250 in
	Coated Core (max)	58.04 mm	2.285 in
ID	Bare Core Nominal	35.56 mm	1.400 in
	Coated Core (min)	34.75 mm	1.368 in
Ht	Bare Core Nominal	13.97 mm	0.550 in
	Coated Core (max)	14.86 mm	0.585 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	1.44 cm²
Le	Effective Magnetic Path Length	14.296 cm
Ve	Effective Core Volume	20.7 cm³
WA	Minimum Effective Window Area	9.48 cm²
SA	Surface Area	109 cm²
MLT	Mean Length Per Turn	7.04 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	18	MS-225014-2	MP-225014-2	FS-225014-2	HF-225014-2	OP-225014-2
26µ	33	MS-225026-2	MP-225026-2	FS-225026-2	HF-225026-2	OP-225026-2
40µ	50	MS-225040-2		FS-225040-2		OP-225040-2
60µ	75	MS-225060-2	MP-225060-2	FS-225060-2	HF-225060-2	OP-225060-2
75µ	94	MS-225075-2		FS-225075-2		OP-225075-2
90µ	112	MS-225090-2		FS-225090-2		OP-225090-2
125µ	156	MS-225125-2	MP-225125-2		HF-225125-2	OP-225125-2
147µ	185		MP-225147-2		HF-225147-2	
160µ	200		MP-225160-2		HF-225160-2	
173µ	218		MP-225173-2			
205µ	259		MP-225205-2			
250µ	N/A					
Approx. Unit Weight:		120 g	150 g	140 g	140 g	140 g

Test Conditions

Winding	N=80, #18 AWG
Frequency	10 kHz
Voltage	0.51 V
A_L Tolerance	±8%

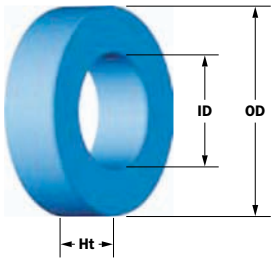
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	80 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	27	34	43	54	68	85	106	133	166	207	259
	Rdc(Ω)	3.9 m	7.8 m	15.7 m	31.4 m	63.0 m	125.2 m	248.2 m	495.3 m	983.2 m	1.9	3.9
Full Winding	Turns	50	77	119	184	285	441	682	1,056	1,635	2,530	3,916
	Rdc(Ω)	7.2 m	17.7 m	43.6 m	107.1 m	263.9 m	649.4 m	1.6	3.9	9.7	23.8	58.7

2.250 in./57.15 mm OD Toroid



Typical Part Number: MS - 226 125 - 2

- Material Type
- OD in 100th inches
- Reference Permeability
- Finish

Physical Dimensions

OD	Bare Core Nominal	57.15 mm	2.250 in
	Coated Core (max)	58.04 mm	2.285 in
ID	Bare Core Nominal	26.39 mm	1.039 in
	Coated Core (min)	25.58 mm	1.007 in
Ht	Bare Core Nominal	15.24 mm	0.600 in
	Coated Core (max)	16.13 mm	0.635 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	2.29 cm²
Le	Effective Magnetic Path Length	12.506 cm
Ve	Effective Core Volume	28.6 cm³
WA	Minimum Effective Window Area	5.14 cm²
SA	Surface Area	105 cm²
MLT	Mean Length Per Turn	7.75 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	32	MS-226014-2	MP-226014-2	FS-226014-2	HF-226014-2	OP-226014-2
26µ	60	MS-226026-2	MP-226026-2	FS-226026-2	HF-226026-2	OP-226026-2
40µ	92	MS-226040-2		FS-226040-2		OP-226040-2
60µ	138	MS-226060-2	MP-226060-2	FS-226060-2	HF-226060-2	OP-226060-2
75µ	172	MS-226075-2		FS-226075-2		OP-226075-2
90µ	207	MS-226090-2		FS-226090-2		OP-226090-2
125µ	287	MS-226125-2	MP-226125-2		HF-226125-2	OP-226125-2
147µ	338		MP-226147-2		HF-226147-2	
160µ	368		MP-226160-2		HF-226160-2	
173µ	398		MP-226173-2			
205µ	460		MP-226205-2			
250µ	N/A					
Approx. Unit Weight:		170 g	210 g	190 g	200 g	190 g

Test Conditions

Winding	N=60, #18 AWG
Frequency	10 kHz
Voltage	0.61 V
A_L Tolerance	±8%

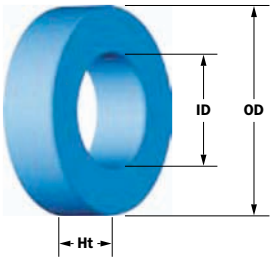
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	80 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	19	24	31	39	49	62	78	97	122	152	190
	Rdc(Ω)	3.0 m	6.1 m	12.5 m	25.0 m	50.0 m	100.5 m	201.2 m	397.8 m	795.8 m	1.6	3.1
Full Winding	Turns	27	42	64	100	154	239	370	572	886	1,371	2,122
	Rdc(Ω)	4.3 m	10.6 m	25.8 m	64.1 m	157.0 m	387.5 m	954.2 m	2.3	5.8	14.2	35.0

2.500 in./63.5 mm OD Toroid



Typical Part Number:	MS - 250 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	63.5 mm	2.500 in
	Coated Core (max)	64.77 mm	2.550 in
ID	Bare Core Nominal	31.37 mm	1.235 in
	Coated Core (min)	30.48 mm	1.200 in
Ht	Bare Core Nominal	25 mm	0.984 in
	Coated Core (max)	25.9 mm	1.020 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	3.89 cm²
Le	Effective Magnetic Path Length	14.314 cm
Ve	Effective Core Volume	55.8 cm³
WA	Minimum Effective Window Area	7.73 cm²
SA	Surface Area	150 cm²
MLT	Mean Length Per Turn	10.1 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	48	MS-250014-2	MP-250014-2	FS-250014-2	HF-250014-2	OP-250014-2
26µ	89	MS-250026-2	MP-250026-2	FS-250026-2	HF-250026-2	OP-250026-2
40µ	137	MS-250040-2		FS-250040-2		OP-250040-2
60µ	206	MS-250060-2	MP-250060-2	FS-250060-2	HF-250060-2	OP-250060-2
75µ	258	MS-250075-2		FS-250075-2		OP-250075-2
90µ	310	MS-250090-2		FS-250090-2		OP-250090-2
125µ	430	MS-250125-2	MP-250125-2		HF-250125-2	OP-250125-2
147µ	506		MP-250147-2		HF-250147-2	
160µ	550		MP-250160-2		HF-250160-2	
173µ	N/A		MP-250173-2			
205µ	705		MP-250205-2			
250µ	N/A					
Approx. Unit Weight:		320 g	420 g	370 g	380 g	370 g

Test Conditions

Winding	N=100, #18 AWG
Frequency	10 kHz
Voltage	1.7 V
A_L Tolerance	±8%

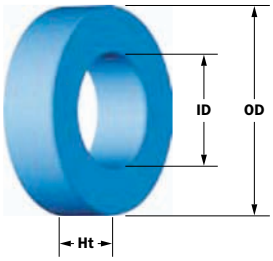
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	64 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	23	29	37	47	59	74	93	116	145	182	227
	Rdc(Ω)	4.8 m	9.6 m	19.5 m	39.4 m	78.6 m	156.9 m	313.5 m	622.0 m	1.2	2.5	4.9
Full Winding	Turns	38	59	91	142	219	339	525	813	1,258	1,947	3,013
	Rdc(Ω)	7.9 m	19.6 m	48.0 m	119.0 m	291.9 m	718.6 m	1.8	4.4	10.7	26.4	65.0

3.063 in./77.8 mm OD Toroid



Typical Part Number:	MS - 300 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	77.8 mm	3.063 in
	Coated Core (max)	78.94 mm	3.108 in
ID	Bare Core Nominal	49.23 mm	1.938 in
	Coated Core (min)	47.96 mm	1.888 in
Ht	Bare Core Nominal	12.7 mm	0.500 in
	Coated Core (max)	13.97 mm	0.550 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	1.77 cm²
Le	Effective Magnetic Path Length	19.612 cm
Ve	Effective Core Volume	34.8 cm³
WA	Minimum Effective Window Area	18.1 cm²
SA	Surface Area	184 cm²
MLT	Mean Length Per Turn	8.29 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	16	MS-300014-2	MP-300014-2	FS-300014-2	HF-300014-2	OP-300014-2
26µ	30	MS-300026-2	MP-300026-2	FS-300026-2	HF-300026-2	OP-300026-2
40µ	45	MS-300040-2		FS-300040-2		OP-300040-2
60µ	68	MS-300060-2	MP-300060-2	FS-300060-2	HF-300060-2	OP-300060-2
75µ	85	MS-300075-2		FS-300075-2		OP-300075-2
90µ	102	MS-300090-2		FS-300090-2		OP-300090-2
125µ	142	MS-300125-2	MP-300125-2		HF-300125-2	OP-300125-2
147µ	167		MP-300147-2		HF-300147-2	
160µ	182		MP-300160-2		HF-300160-2	
173µ	197		MP-300173-2			
205µ	233		MP-300205-2			
250µ	N/A					
Approx. Unit Weight:		200 g	260 g	230 g	240 g	230 g

Test Conditions

Winding	N=120, #18 AWG
Frequency	10 kHz
Voltage	0.94 V
A_L Tolerance	±8%

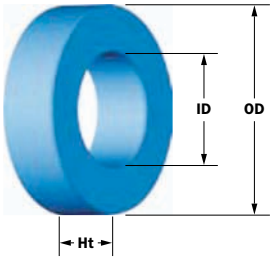
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	45 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	38	48	60	75	95	118	148	185	230	287	358
	Rdc(Ω)	6.5 m	13.0 m	25.9 m	51.4 m	103.6 m	204.6 m	408.2 m	811.5 m	1.6	3.2	6.3
Full Winding	Turns	95	146	227	351	543	840	1,300	2,012	3,114	4,820	7,459
	Rdc(Ω)	16.2 m	39.6 m	97.9 m	240.7 m	592.1 m	1.5	3.6	8.8	21.7	53.5	131.6

3.063 in./77.8 mm OD Toroid



Typical Part Number:	MS - 301 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	77.8 mm	3.063 in
	Coated Core (max)	78.94 mm	3.108 in
ID	Bare Core Nominal	49.23 mm	1.938 in
	Coated Core (min)	47.96 mm	1.888 in
Ht	Bare Core Nominal	15.88 mm	0.625 in
	Coated Core (max)	17.15 mm	0.675 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	2.22 cm²
Le	Effective Magnetic Path Length	19.612 cm
Ve	Effective Core Volume	43.5 cm³
WA	Minimum Effective Window Area	18.1 cm²
SA	Surface Area	193 cm²
MLT	Mean Length Per Turn	8.93 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	19.9	MS-301014-2	MP-301014-2	FS-301014-2	HF-301014-2	OP-301014-2
26µ	37	MS-301026-2	MP-301026-2	FS-301026-2	HF-301026-2	OP-301026-2
40µ	57	MS-301040-2		FS-301040-2		OP-301040-2
60µ	85	MS-301060-2	MP-301060-2	FS-301060-2	HF-301060-2	OP-301060-2
75µ	107	MS-301075-2		FS-301075-2		OP-301075-2
90µ	128	MS-301090-2		FS-301090-2		OP-301090-2
125µ	178	MS-301125-2	MP-301125-2		HF-301125-2	OP-301125-2
147µ	209		MP-301147-2		HF-301147-2	
160µ	228		MP-301160-2		HF-301160-2	
173µ	246		MP-301173-2			
205µ	284		MP-301205-2			
250µ	N/A					
Approx. Unit Weight:		250 g	320 g	290 g	300 g	290 g

Test Conditions

Winding	N=120, #18 AWG
Frequency	10 kHz
Voltage	1.2 V
A_L Tolerance	±8%

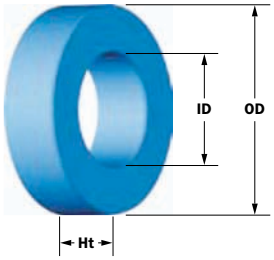
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	45 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	38	48	60	75	95	118	148	185	230	287	358
	Rdc(Ω)	7.0 m	14.0 m	27.9 m	55.4 m	111.5 m	220.3 m	439.5 m	873.8 m	1.7	3.4	6.8
Full Winding	Turns	95	146	227	351	543	840	1,300	2,012	3,114	4,820	7,459
	Rdc(Ω)	17.4 m	42.6 m	105.4 m	259.1 m	637.6 m	1.6	3.9	9.5	23.4	57.6	141.7

4.000 in./101.6 mm OD Toroid



Typical Part Number:	MS - 400 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	101.6 mm	4.000 in
	Coated Core (max)	102.87 mm	4.050 in
ID	Bare Core Nominal	57.15 mm	2.250 in
	Coated Core (min)	55.75 mm	2.195 in
Ht	Bare Core Nominal	16.51 mm	0.650 in
	Coated Core (max)	17.78 mm	0.700 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	3.52 cm²
Le	Effective Magnetic Path Length	24.271 cm
Ve	Effective Core Volume	85.5 cm³
WA	Minimum Effective Window Area	24.4 cm²
SA	Surface Area	303 cm²
MLT	Mean Length Per Turn	11.1 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	25.6	MS-400014-2	MP-400014-2	FS-400014-2	HF-400014-2	OP-400014-2
26µ	47.4	MS-400026-2	MP-400026-2	FS-400026-2	HF-400026-2	OP-400026-2
40µ	75	MS-400040-2		FS-400040-2		OP-400040-2
60µ	112	MS-400060-2	MP-400060-2	FS-400060-2	HF-400060-2	OP-400060-2
75µ	137	MS-400075-2		FS-400075-2		OP-400075-2
90µ	164	MS-400090-2		FS-400090-2		OP-400090-2
125µ	228	MS-400125-2	MP-400125-2		HF-400125-2	OP-400125-2
147µ	268		MP-400147-2		HF-400147-2	
160µ	282		MP-400160-2			
173µ	316		MP-400173-2			
205µ	374					
250µ	N/A					
Approx. Unit Weight:		490 g	640 g	560 g	590 g	570 g

Test Conditions

Winding	N=140, #18 AWG
Frequency	10 kHz
Voltage	2.2 V
A_L Tolerance	±8%

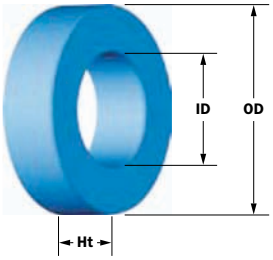
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	16 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	44	56	70	88	110	138	172	215	268	335	417
	Rdc(Ω)	10.0 m	20.2 m	40.2 m	80.5 m	160.0 m	319.2 m	632.7 m	1.3	2.5	5.0	9.8
Full Winding	Turns	128	198	306	474	733	1,135	1,756	2,719	4,208	6,512	10,079
	Rdc(Ω)	29.1 m	71.6 m	175.9 m	433.4 m	1.1	2.6	6.5	15.9	39.1	96.4	237.2

4.000 in./101.6 mm OD Toroid



Typical Part Number:	MS - 401 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	101.6 mm	4.000 in
	Coated Core (max)	102.87 mm	4.050 in
ID	Bare Core Nominal	57.15 mm	2.250 in
	Coated Core (min)	55.75 mm	2.195 in
Ht	Bare Core Nominal	13.59 mm	0.535 in
	Coated Core (max)	14.86 mm	0.585 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	2.97 cm²
Le	Effective Magnetic Path Length	24.271 cm
Ve	Effective Core Volume	72.1 cm³
WA	Minimum Effective Window Area	24.4 cm²
SA	Surface Area	293 cm²
MLT	Mean Length Per Turn	10.5 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	21.5	MS-401014-2	MP-401014-2	FS-401014-2	HF-401014-2	OP-401014-2
26µ	40	MS-401026-2	MP-401026-2	FS-401026-2	HF-401026-2	OP-401026-2
40µ	62	MS-401040-2		FS-401040-2		OP-401040-2
60µ	92.3	MS-401060-2	MP-401060-2	FS-401060-2	HF-401060-2	OP-401060-2
75µ	115	MS-401075-2		FS-401075-2		OP-401075-2
90µ	139	MS-401090-2		FS-401090-2		OP-401090-2
125µ	192	MS-401125-2	MP-401125-2		HF-401125-2	OP-401125-2
147µ	226		MP-401147-2		HF-401147-2	
160µ	246		MP-401160-2			
173µ	266		MP-401173-2			
205µ	N/A					
250µ	N/A					
Approx. Unit Weight:		420 g	540 g	480 g	500 g	480 g

Test Conditions

Winding	N=140, #18 AWG
Frequency	10 kHz
Voltage	1.8 V
A_L Tolerance	±8%

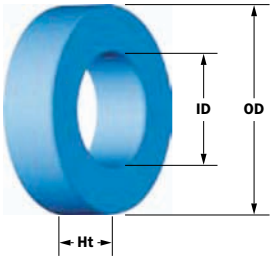
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	16 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	44	56	70	88	110	138	172	215	268	335	417
	Rdc(Ω)	9.5 m	19.2 m	38.1 m	76.2 m	151.5 m	302.3 m	599.2 m	1.2	2.4	4.7	9.3
Full Winding	Turns	128	198	306	474	733	1,135	1,756	2,719	4,208	6,512	10,079
	Rdc(Ω)	27.6 m	67.8 m	166.6 m	410.5 m	1.0	2.5	6.1	15.1	37.1	91.3	224.6

5.218 in./132.54 mm OD Toroid



Typical Part Number:	MS - 520 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	132.54 mm	5.218 in
	Coated Core (max)	134.21 mm	5.284 in
ID	Bare Core Nominal	78.59 mm	3.094 in
	Coated Core (min)	77.04 mm	3.033 in
Ht	Bare Core Nominal	20.32 mm	0.800 in
	Coated Core (max)	21.72 mm	0.855 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	5.35 cm²
Le	Effective Magnetic Path Length	32.429 cm
Ve	Effective Core Volume	173 cm³
WA	Minimum Effective Window Area	46.6 cm²
SA	Surface Area	515 cm²
MLT	Mean Length Per Turn	13.9 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	26	MS-520014-2	MP-520014-2	FS-520014-2	HF-520014-2	OP-520014-2
26µ	54	MS-520026-2	MP-520026-2	FS-520026-2	HF-520026-2	OP-520026-2
40µ	83	MS-520040-2		FS-520040-2		OP-520040-2
60µ	124	MS-520060-2	MP-520060-2	FS-520060-2	HF-520060-2	OP-520060-2
75µ	155	MS-520075-2		FS-520075-2		OP-520075-2
90µ	187	MS-520090-2		FS-520090-2		OP-520090-2
125µ	259	MS-520125-2	MP-520125-2		HF-520125-2	OP-520125-2
147µ	304		MP-520147-2		HF-520147-2	
160µ	332		MP-520160-2			
173µ	358		MP-520173-2			
205µ	N/A					
250µ	N/A					
Approx. Unit Weight:		1,000 g	1,290 g	1,140 g	1,190 g	1,150 g

Test Conditions

Winding	N=200, #18 AWG
Frequency	10 kHz
Voltage	4.7 V
A_L Tolerance	±8%

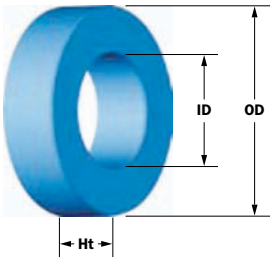
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	6 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	62	78	98	123	154	192	239	298	372	463	577
	Rdc(Ω)	17.7 m	35.5 m	70.9 m	141.5 m	281.8 m	558.8 m	1.1	2.2	4.4	8.6	17.1
Full Winding	Turns	244	378	584	905	1,400	2,167	3,354	5,191	8,035	12,436	19,248
	Rdc(Ω)	69.8 m	172.0 m	422.6 m	1.0	2.6	6.3	15.5	38.2	94.1	231.6	570.0

5.218 in./132.54 mm OD Toroid



Typical Part Number:	MS - 521 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	132.54 mm	5.218 in
	Coated Core (max)	134.21 mm	5.284 in
ID	Bare Core Nominal	78.59 mm	3.094 in
	Coated Core (min)	77.04 mm	3.033 in
Ht	Bare Core Nominal	25.4 mm	1.000 in
	Coated Core (max)	26.8 mm	1.055 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	6.71 cm²
Le	Effective Magnetic Path Length	32.429 cm
Ve	Effective Core Volume	218 cm³
WA	Minimum Effective Window Area	46.6 cm²
SA	Surface Area	540 cm²
MLT	Mean Length Per Turn	14.9 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	36.4	MS-521014-2	MP-521014-2	FS-521014-2	HF-521014-2	OP-521014-2
26µ	67.6	MS-521026-2	MP-521026-2	FS-521026-2	HF-521026-2	OP-521026-2
40µ	104	MS-521040-2		FS-521040-2		OP-521040-2
60µ	156	MS-521060-2	MP-521060-2	FS-521060-2	HF-521060-2	OP-521060-2
75µ	195	MS-521075-2		FS-521075-2		OP-521075-2
90µ	234	MS-521090-2		FS-521090-2		OP-521090-2
125µ	325	MS-521125-2	MP-521125-2		HF-521125-2	OP-521125-2
147µ	382		MP-521147-2		HF-521147-2	
160µ	416		MP-521160-2			
173µ	450		MP-521173-2			
205µ	N/A					
250µ	N/A					
Approx. Unit Weight:		1,260 g	1,620 g	1,440 g	1,490 g	1,440 g

Test Conditions

Winding	N=200, #18 AWG
Frequency	10 kHz
Voltage	6.0 V
A_L Tolerance	±8%

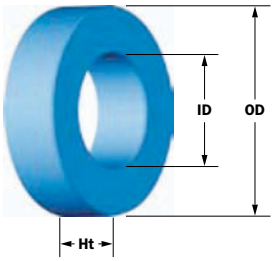
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	6 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	62	78	98	123	154	192	239	298	372	463	577
	Rdc(Ω)	19.0 m	38.1 m	76.1 m	151.9 m	302.4 m	599.6 m	1.2	2.4	4.7	9.3	18.3
Full Winding	Turns	244	378	584	905	1,400	2,167	3,354	5,191	8,035	12,436	19,248
	Rdc(Ω)	74.9 m	184.5 m	453.4 m	1.1	2.7	6.8	16.7	41.0	100.9	248.5	611.6

6.000 in./152.4 mm OD Toroid



Typical Part Number: MS - 600 125 - 2

- Material Type
- OD in 100th inches
- Reference Permeability
- Finish

Physical Dimensions

OD	Bare Core Nominal	152.4 mm	6.000 in
	Coated Core (max)	153.9 mm	6.059 in
ID	Bare Core Nominal	81.28 mm	3.200 in
	Coated Core (min)	79.65 mm	3.136 in
Ht	Bare Core Nominal	20.32 mm	0.800 in
	Coated Core (max)	21.72 mm	0.855 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	7.05 cm²
Le	Effective Magnetic Path Length	35.97 cm
Ve	Effective Core Volume	253 cm³
WA	Minimum Effective Window Area	49.8 cm²
SA	Surface Area	646 cm²
MLT	Mean Length Per Turn	15.8 cm

Permeability / Part Numbers

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	35.3	MS-600014-2	MP-600014-2	FS-600014-2	HF-600014-2	OP-600014-2
26µ	66	MS-600026-2	MP-600026-2	FS-600026-2	HF-600026-2	OP-600026-2
40µ	102	MS-600040-2		FS-600040-2		OP-600040-2
60µ	152.5	MS-600060-2	MP-600060-2	FS-600060-2	HF-600060-2	OP-600060-2
75µ	190.5	MS-600075-2		FS-600075-2		OP-600075-2
90µ	229	MS-600090-2		FS-600090-2		OP-600090-2
125µ	318	MS-600125-2	MP-600125-2		HF-600125-2	OP-600125-2
147µ	374		MP-600147-2		HF-600147-2	
160µ	407		MP-600160-2			
173µ	440		MP-600173-2			
205µ	N/A					
250µ	N/A					
Approx. Unit Weight:		1,460 g	1,890 g	1,670 g	1,740 g	1,680 g

Test Conditions

Winding	N=200, #18 AWG
Frequency	10 kHz
Voltage	6.3 V
A_L Tolerance	±8%

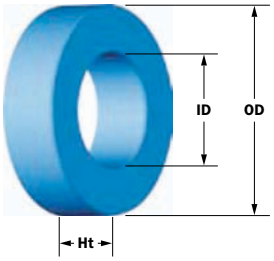
Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	6 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	65	81	102	127	159	198	247	309	385	479	597
	Rdc(Ω)	21.1 m	41.7 m	83.6 m	165.5 m	329.4 m	652.5 m	1.3	2.6	5.1	10.1	20.0
Full Winding	Turns	261	404	625	967	1,497	2,316	3,585	5,549	8,589	13,293	20,574
	Rdc(Ω)	84.5 m	208.1 m	512.0 m	1.3	3.1	7.6	18.8	46.2	113.9	280.2	689.8

6.000 in./152.4 mm OD Toroid



Typical Part Number:	MS - 601 125 - 2

Material Type
OD in 100th inches
Reference Permeability
Finish

Physical Dimensions

OD	Bare Core Nominal	152.4 mm	6.000 in
	Coated Core (max)	153.9 mm	6.059 in
ID	Bare Core Nominal	81.28 mm	3.200 in
	Coated Core (min)	79.65 mm	3.136 in
Ht	Bare Core Nominal	25.4 mm	1.000 in
	Coated Core (max)	26.8 mm	1.055 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	8.81 cm²
Le	Effective Magnetic Path Length	35.97 cm
Ve	Effective Core Volume	317 cm³
WA	Minimum Effective Window Area	49.8 cm²
SA	Surface Area	674 cm²
MLT	Mean Length Per Turn	16.8 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14µ	44.5	MS-601014-2	MP-601014-2	FS-601014-2	HF-601014-2	OP-601014-2
26µ	82.5	MS-601026-2	MP-601026-2	FS-601026-2	HF-601026-2	OP-601026-2
40µ	127	MS-601040-2		FS-601040-2		OP-601040-2
60µ	190.5	MS-601060-2	MP-601060-2	FS-601060-2	HF-601060-2	OP-601060-2
75µ	238	MS-601075-2		FS-601075-2		OP-601075-2
90µ	286	MS-601090-2		FS-601090-2		OP-601090-2
125µ	397	MS-601125-2	MP-601125-2		HF-601125-2	OP-601125-2
147µ	466.5		MP-601147-2		HF-601147-2	
160µ	508		MP-601160-2			
173µ	549		MP-601173-2			
205µ	N/A					
250µ	N/A					
Approx. Unit Weight:		1,830 g	2,360 g	2,090 g	2,180 g	2,100 g

Test Conditions

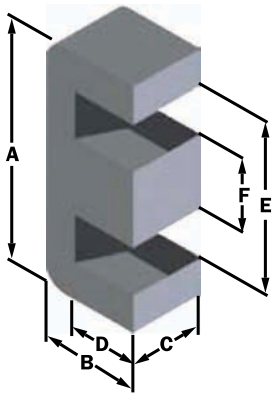
Winding	N=200, #18 AWG
Frequency	10 kHz
Voltage	7.8 V
A_L Tolerance	±8%

Coating/Packaging Information

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	6 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	65	81	102	127	159	198	247	309	385	479	597
	Rdc(Ω)	22.4 m	44.4 m	88.9 m	176.1 m	350.7 m	694.5 m	1.4	2.7	5.4	10.7	21.3
Full Winding	Turns	261	404	625	967	1,497	2,316	3,585	5,549	8,589	13,293	20,574
	Rdc(Ω)	90.0 m	221.5 m	545.0 m	1.3	3.3	8.1	20.0	49.2	121.2	298.3	734.3



Typical Part Number:	E MS - 013 06 04 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	12.7 ± 0.25 mm	0.500 ± 0.010 in
B	6.4 ± 0.10 mm	0.252 ± 0.004 in
C	3.56 ± 0.15 mm	0.140 ± 0.006 in
D	4.42 mm (min.)	0.174 in (min.)
E	8.89 mm (min.)	0.350 in (min.)
F	3.56 ± 0.13 mm	0.140 ± 0.005 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.130 cm²
Le	Effective Magnetic Path Length	2.96 cm
Ve	Effective Core Volume	0.385 cm³
WA	Minimum Effective Window Area	0.230 cm²
SA	Surface Area	6.01 cm²
MLT	Mean Length Per Turn	2.49 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	13	EMS-0130604-014	EFS-0130604-014
26µ	20	EMS-0130604-026	EFS-0130604-026
40µ	28	EMS-0130604-040	EFS-0130604-040
60µ	39	EMS-0130604-060	EFS-0130604-060
75µ	47	EMS-0130604-075	EFS-0130604-075
90µ	55	EMS-0130604-090	EFS-0130604-090
Approximate Unit Weight:		1.1 g/half	1.3 g/half

Test Conditions

Winding	N=100, #28 AWG
Frequency	10 kHz
Voltage	0.058 V
A_L Tolerance	±8%

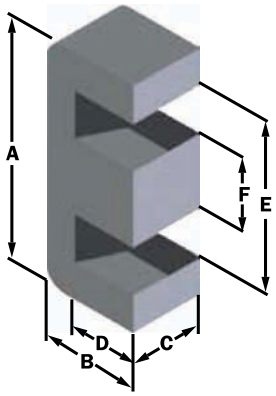
Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	1,500 Halves/Box

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
Full Winding	Turns	17	26	41	63	98	151	234	363	561	869	1,345
	Rdc(Ω)	14.1 m	34.3 m	85.9 m	209.9 m	519.4 m	1.3	3.1	7.7	19.0	46.9	115.3

19.3 mm/0.760 in. E-Core



Typical Part Number:	E MS - 019 08 05 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	19.3 ± 0.30 mm	0.760 ± 0.012 in
B	8.1 ± 0.18 mm	0.319 ± 0.007 in
C	4.78 ± 0.15 mm	0.188 ± 0.006 in
D	5.54 mm (min.)	0.218 in (min.)
E	13.9 mm (min.)	0.547 in (min.)
F	4.78 ± 0.13 mm	0.188 ± 0.005 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.228 cm²
Le	Effective Magnetic Path Length	4.01 cm
Ve	Effective Core Volume	0.914 cm³
WA	Minimum Effective Window Area	0.498 cm²
SA	Surface Area	11.9 cm²
MLT	Mean Length Per Turn	3.74 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	17	EMS-0190805-014	EFS-0190805-014
26µ	26	EMS-0190805-026	EFS-0190805-026
40µ	35	EMS-0190805-040	EFS-0190805-040
60µ	48	EMS-0190805-060	EFS-0190805-060
75µ	61	EMS-0190805-075	EFS-0190805-075
90µ	69	EMS-0190805-090	EFS-0190805-090
Approximate Unit Weight:		2.6 g/half	3.0 g/half

Test Conditions

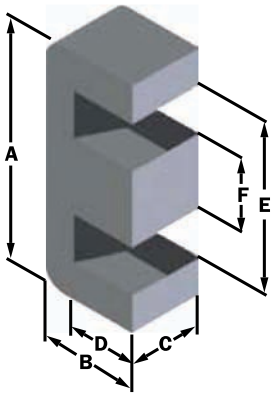
Winding	N=100, #26 AWG
Frequency	10 kHz
Voltage	0.10 V
A_L Tolerance	±8%

Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	1,000 Halves/Box

Winding Table

Wire Size	AWG	16	18	20	22	24	26	28	30	32	34	36
	mm	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125
Full Winding	Turns	15	24	37	57	88	137	212	328	508	786	1,216
	Rdc(Ω)	7.4 m	18.8 m	46.0 m	112.7 m	276.7 m	685.0 m	1.7	4.1	10.2	25.1	61.9



Typical Part Number:	E MS - 025 10 07 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	25.4 ± 0.38 mm	1.000 ± 0.015 in
B	9.5 ± 0.18 mm	0.374 ± 0.007 in
C	6.5 ± 0.10 mm	0.256 ± 0.004 in
D	6.2 mm (min.)	0.244 in (min.)
E	18.8 mm (min.)	0.740 in (min.)
F	6.2 ± 0.13 mm	0.244 ± 0.005 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.385 cm²
Le	Effective Magnetic Path Length	4.85 cm
Ve	Effective Core Volume	1.87 cm³
WA	Minimum Effective Window Area	0.773 cm²
SA	Surface Area	19.4 cm²
MLT	Mean Length Per Turn	5.06 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	24	EMS-0251007-014	EFS-0251007-014
26µ	39	EMS-0251007-026	EFS-0251007-026
40µ	52	EMS-0251007-040	EFS-0251007-040
60µ	70	EMS-0251007-060	EFS-0251007-060
75µ	85	EMS-0251007-075	EFS-0251007-075
90µ	100	EMS-0251007-090	EFS-0251007-090
Approximate Unit Weight:		5.4 g/half	6.2 g/half

Test Conditions

Winding	N=100, #24 AWG
Frequency	10 kHz
Voltage	0.17 V
A_L Tolerance	±8%

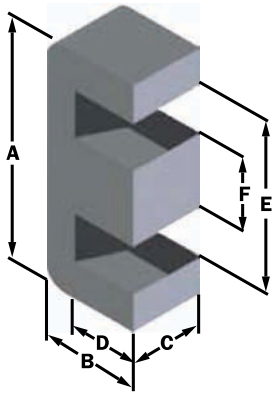
Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	1,000 Halves/Box

Winding Table

Wire Size	AWG	14	16	18	20	22	24	26	28	30	32	34
	mm	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160
Full Winding	Turns	15	24	37	57	89	137	213	329	509	788	1,219
	Rdc(Ω)	6.3 m	16.0 m	39.2 m	96.0 m	238.3 m	583.4 m	1.4	3.5	8.7	21.5	52.8

30.1 mm/1.185 in. E-Core



Typical Part Number:	E MS - 030 15 07 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	30.1 ± 0.46 mm	1.185 ± 0.018 in
B	15.01 ± 0.23 mm	0.591 ± 0.009 in
C	7.06 ± 0.15 mm	0.278 ± 0.006 in
D	9.7 mm (min.)	0.382 in (min.)
E	19.5 mm (min.)	0.768 in (min.)
F	6.96 ± 0.20 mm	0.274 ± 0.008 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.601 cm²
Le	Effective Magnetic Path Length	6.56 cm
Ve	Effective Core Volume	3.94 cm³
WA	Minimum Effective Window Area	1.20 cm²
SA	Surface Area	31.4 cm²
MLT	Mean Length Per Turn	5.31 cm

Permeability / **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	28	EMS-0301507-014	EFS-0301507-014
26µ	40	EMS-0301507-026	EFS-0301507-026
40µ	54	EMS-0301507-040	EFS-0301507-040
60µ	75	EMS-0301507-060	EFS-0301507-060
75µ	98	EMS-0301507-075	EFS-0301507-075
90µ	106	EMS-0301507-090	EFS-0301507-090
Approximate Unit Weight:		11 g/half	13 g/half

Test Conditions

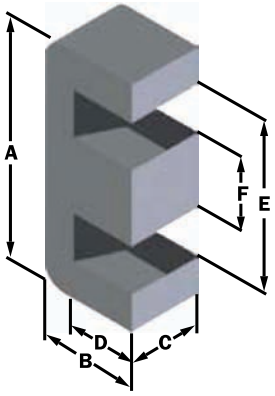
Winding	N=100, #22 AWG
Frequency	10 kHz
Voltage	0.27 V
A_L Tolerance	±8%

Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	500 Halves/Box

Winding Table

Wire Size	AWG	12	14	16	18	20	22	24	26	28	30	32
	mm	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200
Full Winding	Turns	15	24	37	57	89	137	212	329	509	788	1,219
	Rdc(Ω)	4.1 m	10.5 m	25.9 m	63.3 m	157.3 m	385.1 m	947.7 m	2.3	5.8	14.2	34.9



Typical Part Number:	E MS - 035 14 09 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	34.5 ± 0.51 mm	1.358 ± 0.020 in
B	14.1 ± 0.23 mm	0.555 ± 0.009 in
C	9.4 ± 0.18 mm	0.370 ± 0.007 in
D	9.6 mm (min.)	0.378 in (min.)
E	25.3 mm (min.)	0.996 in (min.)
F	9.3 ± 0.20 mm	0.366 ± 0.008 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	0.840 cm²
Le	Effective Magnetic Path Length	6.94 cm
Ve	Effective Core Volume	5.83 cm³
WA	Minimum Effective Window Area	1.52 cm²
SA	Surface Area	38.4 cm²
MLT	Mean Length Per Turn	6.94 cm

Permeability / **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	37	EMS-0351409-014	EFS-0351409-014
26µ	56	EMS-0351409-026	EFS-0351409-026
40µ	75	EMS-0351409-040	EFS-0351409-040
60µ	102	EMS-0351409-060	EFS-0351409-060
75µ	129	EMS-0351409-075	EFS-0351409-075
90µ	146	EMS-0351409-090	EFS-0351409-090
Approximate Unit Weight:		17 g/half	19 g/half

Test Conditions

Winding	N=100, #20 AWG
Frequency	10 kHz
Voltage	0.37 V
A_L Tolerance	±8%

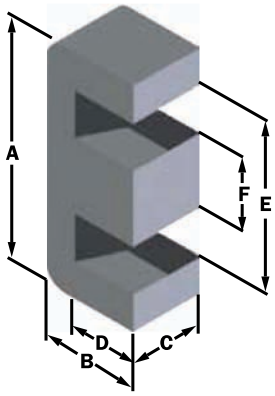
Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	500 Halves/Box

Winding Table

Wire Size	AWG	12	14	16	18	20	22	24	26	28	30	32
	mm	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200
Full Winding	Turns	20	30	47	73	112	174	269	417	645	998	1,545
	Rdc(Ω)	7.2 m	17.2 m	42.9 m	106.0 m	258.6 m	639.0 m	1.6	3.9	9.5	23.4	57.7

40.9 mm/1.610 in. E-Core



Typical Part Number:	E MS - 041 17 13 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	40.9 ± 0.61 mm	1.610 ± 0.024 in
B	16.5 ± 0.28 mm	0.650 ± 0.011 in
C	12.5 ± 0.18 mm	0.492 ± 0.007 in
D	10.4 mm (min.)	0.409 in (min.)
E	28.3 mm (min.)	1.114 in (min.)
F	12.5 ± 0.20 mm	0.492 ± 0.008 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	1.52 cm²
Le	Effective Magnetic Path Length	7.75 cm
Ve	Effective Core Volume	11.8 cm³
WA	Minimum Effective Window Area	1.62 cm²
SA	Surface Area	53.2 cm²
MLT	Mean Length Per Turn	8.16 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	59	EMS-0411713-014	EFS-0411713-014
26µ	88	EMS-0411713-026	EFS-0411713-026
40µ	119	EMS-0411713-040	EFS-0411713-040
60µ	163	EMS-0411713-060	EFS-0411713-060
75µ	209	EMS-0411713-075	EFS-0411713-075
90µ	234	EMS-0411713-090	EFS-0411713-090
Approximate Unit Weight:		34 g/half	39 g/half

Test Conditions

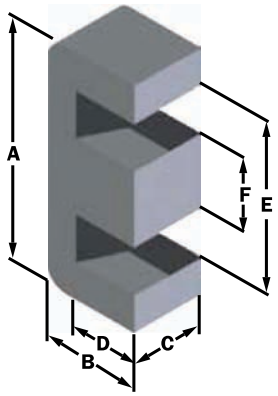
Winding	N=100, #20 AWG
Frequency	10 kHz
Voltage	0.67 V
A_L Tolerance	±8%

Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	250 Halves/Box

Winding Table

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
	mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
Full Winding	Turns	14	21	32	50	78	120	186	288	446	690	1,068
	Rdc(Ω)	3.7 m	8.9 m	21.6 m	53.7 m	133.2 m	325.8 m	803.1 m	2.0	4.9	12.0	29.5



Typical Part Number:	E MS - 043 21 11 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	42.8 ± 0.64 mm	1.685 ± 0.025 in
B	21.1 ± 0.33 mm	0.831 ± 0.013 in
C	10.8 ± 0.25 mm	0.425 ± 0.010 in
D	15 mm (min.)	0.591 in (min.)
E	30.4 mm (min.)	1.197 in (min.)
F	11.9 ± 0.25 mm	0.469 ± 0.010 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	1.28 cm²
Le	Effective Magnetic Path Length	9.84 cm
Ve	Effective Core Volume	12.6 cm³
WA	Minimum Effective Window Area	2.74 cm²
SA	Surface Area	65.7 cm²
MLT	Mean Length Per Turn	8.24 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	39	EMS-0432111-014	EFS-0432111-014
26µ	56	EMS-0432111-026	EFS-0432111-026
40µ	76	EMS-0432111-040	EFS-0432111-040
60µ	105	EMS-0432111-060	EFS-0432111-060
75µ	139	EMS-0432111-075	EFS-0432111-075
90µ	151	EMS-0432111-090	EFS-0432111-090
Approximate Unit Weight:		36 g/half	42 g/half

Test Conditions

Winding	N=100, #18 AWG
Frequency	10 kHz
Voltage	0.57 V
A_L Tolerance	±8%

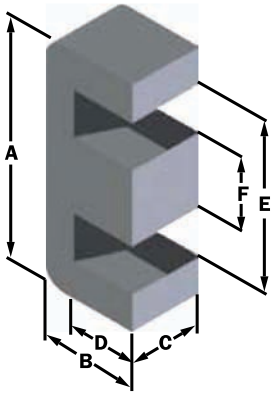
Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	210 Halves/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
Full Winding	Turns	15	23	35	55	85	131	203	314	486	752	1,164
	Rdc(Ω)	2.5 m	6.2 m	15.0 m	37.5 m	92.1 m	225.8 m	556.5 m	1.4	3.4	8.3	20.4

42.8 mm/1.685 in. E-Core



Typical Part Number:	E MS - 043 21 15 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	42.8 ± 0.64 mm	1.685 ± 0.025 in
B	21.1 ± 0.33 mm	0.831 ± 0.013 in
C	15.4 ± 0.25 mm	0.606 ± 0.010 in
D	15 mm (min.)	0.591 in (min.)
E	30.4 mm (min.)	1.197 in (min.)
F	11.9 ± 0.25 mm	0.469 ± 0.010 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	1.83 cm²
Le	Effective Magnetic Path Length	9.84 cm
Ve	Effective Core Volume	18.0 cm³
WA	Minimum Effective Window Area	2.74 cm²
SA	Surface Area	73.5 cm²
MLT	Mean Length Per Turn	9.16 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	56	EMS-0432115-014	EFS-0432115-014
26µ	80	EMS-0432115-026	EFS-0432115-026
40µ	108	EMS-0432115-040	EFS-0432115-040
60µ	150	EMS-0432115-060	EFS-0432115-060
75µ	199	EMS-0432115-075	EFS-0432115-075
90µ	217	EMS-0432115-090	EFS-0432115-090
Approximate Unit Weight:		52 g/half	59 g/half

Test Conditions

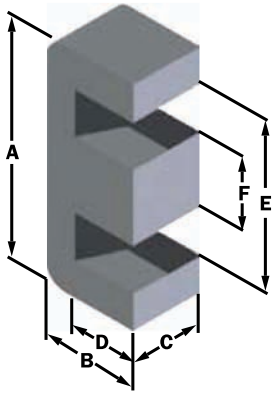
Winding	N=100, #18 AWG
Frequency	10 kHz
Voltage	0.81 V
A_L Tolerance	±8%

Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	175 Halves/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
Full Winding	Turns	15	23	35	55	85	131	203	314	486	752	1,164
	Rdc(Ω)	2.8 m	6.9 m	16.7 m	41.7 m	102.4 m	251.0 m	618.7 m	1.5	3.7	9.2	22.7



Typical Part Number:	E MS - 043 21 20 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	42.8 ± 0.64 mm	1.685 ± 0.025 in
B	21.1 ± 0.33 mm	0.831 ± 0.013 in
C	20 ± 0.25 mm	0.787 ± 0.010 in
D	15 mm (min.)	0.591 in (min.)
E	30.4 mm (min.)	1.197 in (min.)
F	11.9 ± 0.25 mm	0.469 ± 0.010 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	2.37 cm²
Le	Effective Magnetic Path Length	9.84 cm
Ve	Effective Core Volume	23.3 cm³
WA	Minimum Effective Window Area	2.74 cm²
SA	Surface Area	81.3 cm²
MLT	Mean Length Per Turn	10.1 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	73	EMS-0432120-014	EFS-0432120-014
26µ	104	EMS-0432120-026	EFS-0432120-026
40µ	140	EMS-0432120-040	EFS-0432120-040
60µ	194	EMS-0432120-060	EFS-0432120-060
75µ	257	EMS-0432120-075	EFS-0432120-075
90µ	281	EMS-0432120-090	EFS-0432120-090
Approximate Unit Weight:		67 g/half	77 g/half

Test Conditions

Winding	N=100, #18 AWG
Frequency	10 kHz
Voltage	1.1 V
A_L Tolerance	±8%

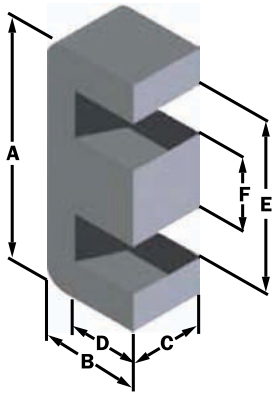
Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	140 Halves/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
Full Winding	Turns	15	23	35	55	85	131	203	314	486	752	1,164
	Rdc(Ω)	3.1 m	7.6 m	18.3 m	45.9 m	112.7 m	276.2 m	680.8 m	1.7	4.1	10.1	25.0

54.9 mm/2.161 in. E-Core



Typical Part Number:	E MS - 055 28 21 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	54.9 ± 0.81 mm	2.161 ± 0.032 in
B	27.6 ± 0.41 mm	1.087 ± 0.016 in
C	20.6 ± 0.41 mm	0.811 ± 0.016 in
D	18.5 mm (min.)	0.728 in (min.)
E	37.5 mm (min.)	1.476 in (min.)
F	16.8 ± 0.33 mm	0.661 ± 0.013 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	3.50 cm²
Le	Effective Magnetic Path Length	12.3 cm
Ve	Effective Core Volume	43.1 cm³
WA	Minimum Effective Window Area	3.77 cm²
SA	Surface Area	121 cm²
MLT	Mean Length Per Turn	11.6 cm

Permeability / **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	86	EMS-0552821-014	EFS-0552821-014
26µ	116	EMS-0552821-026	EFS-0552821-026
40µ	157	EMS-0552821-040	EFS-0552821-040
60µ	219	EMS-0552821-060	EFS-0552821-060
75µ	304	EMS-0552821-075	EFS-0552821-075
90µ	322	EMS-0552821-090	EFS-0552821-090
Approximate Unit Weight:		120 g/half	140 g/half

Test Conditions

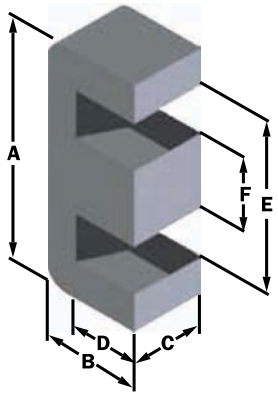
Winding	N=100, #16 AWG
Frequency	10 kHz
Voltage	1.6 V
A_L Tolerance	±8%

Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	96 Halves/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
Full Winding	Turns	20	31	49	75	117	180	279	432	669	1,036	1,603
	Rdc(Ω)	4.8 m	11.8 m	29.6 m	72.1 m	178.8 m	437.6 m	1.1	2.7	6.5	16.1	39.6



Typical Part Number:	E MS - 055 28 25 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	54.9 ± 0.81 mm	2.161 ± 0.032 in
B	27.6 ± 0.41 mm	1.087 ± 0.016 in
C	24.61 ± 0.48 mm	0.969 ± 0.019 in
D	18.5 mm (min.)	0.728 in (min.)
E	37.5 mm (min.)	1.476 in (min.)
F	16.8 ± 0.33 mm	0.661 ± 0.013 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	4.17 cm²
Le	Effective Magnetic Path Length	12.3 cm
Ve	Effective Core Volume	51.4 cm³
WA	Minimum Effective Window Area	3.77 cm²
SA	Surface Area	130 cm²
MLT	Mean Length Per Turn	12.4 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	102	EMS-0552825-014	EFS-0552825-014
26µ	138	EMS-0552825-026	EFS-0552825-026
40µ	187	EMS-0552825-040	EFS-0552825-040
60µ	261	EMS-0552825-060	EFS-0552825-060
75µ	362	EMS-0552825-075	EFS-0552825-075
90µ	338	EMS-0552825-090	EFS-0552825-090
Approximate Unit Weight:		150 g/half	170 g/half

Test Conditions

Winding	N=100, #16 AWG
Frequency	10 kHz
Voltage	1.9 V
A_L Tolerance	±8%

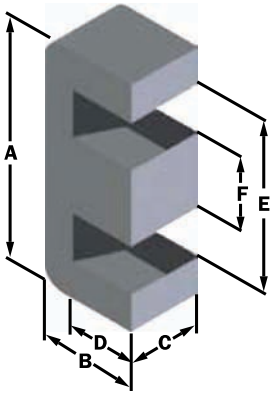
Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	72 Halves/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
Full Winding	Turns	20	31	49	75	117	180	279	432	669	1,036	1,603
	Rdc(Ω)	5.1 m	12.6 m	31.7 m	77.1 m	191.2 m	467.8 m	1.2	2.8	7.0	17.2	42.4

65.1 mm/2.563 in. E-Core



Typical Part Number:	E MS - 065 33 27 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	65.1 ± 0.97 mm	2.563 ± 0.038 in
B	32.5 ± 0.48 mm	1.280 ± 0.019 in
C	27 ± 0.53 mm	1.063 ± 0.021 in
D	22.2 mm (min.)	0.874 in (min.)
E	44.2 mm (min.)	1.740 in (min.)
F	19.7 ± 0.41 mm	0.776 ± 0.016 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	5.40 cm²
Le	Effective Magnetic Path Length	14.7 cm
Ve	Effective Core Volume	79.4 cm³
WA	Minimum Effective Window Area	5.35 cm²
SA	Surface Area	177 cm²
MLT	Mean Length Per Turn	14.2 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	111	EMS-0653327-014	EFS-0653327-014
26µ	162	EMS-0653327-026	EFS-0653327-026
40µ	230	EMS-0653327-040	EFS-0653327-040
60µ	300	EMS-0653327-060	EFS-0653327-060
75µ	392	EMS-0653327-075	EFS-0653327-075
90µ	462	EMS-0653327-090	EFS-0653327-090
Approximate Unit Weight:		230 g/half	260 g/half

Test Conditions

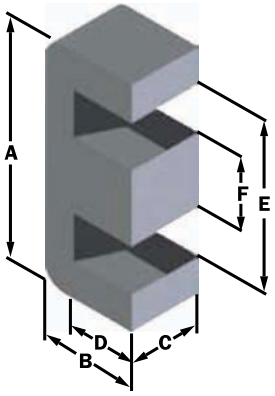
Winding	N=100, #16 AWG
Frequency	10 kHz
Voltage	2.4 V
A_L Tolerance	±8%

Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	54 Halves/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
Full Winding	Turns	29	45	69	107	165	256	396	614	950	1,470	2,275
	Rdc(Ω)	8.5 m	21.0 m	51.1 m	126.0 m	309.1 m	762.6 m	1.9	4.6	11.4	28.0	69.0



Typical Part Number:	E MS - 072 28 19 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	72.4 ± 1.09 mm	2.850 ± 0.043 in
B	27.9 ± 0.41 mm	1.098 ± 0.016 in
C	19.1 ± 0.38 mm	0.752 ± 0.015 in
D	17.8 mm (min.)	0.701 in (min.)
E	52.6 mm (min.)	2.071 in (min.)
F	19.1 ± 0.38 mm	0.752 ± 0.015 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	3.68 cm²
Le	Effective Magnetic Path Length	13.7 cm
Ve	Effective Core Volume	50.3 cm³
WA	Minimum Effective Window Area	5.90 cm²
SA	Surface Area	159 cm²
MLT	Mean Length Per Turn	14.3 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	81	EMS-0722819-014	EFS-0722819-014
26µ	130	EMS-0722819-026	EFS-0722819-026
40µ	173	EMS-0722819-040	EFS-0722819-040
60µ	236	EMS-0722819-060	EFS-0722819-060
75µ	287	EMS-0722819-075	EFS-0722819-075
90µ	338	EMS-0722819-090	EFS-0722819-090
Approximate Unit Weight:		150 g/half	170 g/half

Test Conditions

Winding	N=100, #16 AWG
Frequency	10 kHz
Voltage	1.6 V
A_L Tolerance	±8%

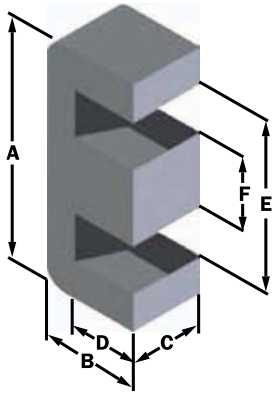
Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	72 Halves/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
Full Winding	Turns	32	49	76	118	182	282	437	676	1,047	1,620	2,507
	Rdc(Ω)	9.4 m	23.0 m	56.7 m	140.0 m	343.3 m	846.0 m	2.1	5.1	12.6	31.1	76.5

80.0 mm/3.150 in. E-Core



Typical Part Number:	E MS - 080 38 20 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	80 ± 1.19 mm	3.150 ± 0.047 in
B	38.1 ± 0.58 mm	1.500 ± 0.023 in
C	19.8 ± 0.41 mm	0.780 ± 0.016 in
D	28.1 mm (min.)	1.106 in (min.)
E	59.3 mm (min.)	2.335 in (min.)
F	19.8 ± 0.41 mm	0.780 ± 0.016 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	3.89 cm²
Le	Effective Magnetic Path Length	18.5 cm
Ve	Effective Core Volume	72.1 cm³
WA	Minimum Effective Window Area	11.0 cm²
SA	Surface Area	229 cm²
MLT	Mean Length Per Turn	15.8 cm

Permeability / **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	63	EMS-0803820-014	EFS-0803820-014
26µ	103	EMS-0803820-026	EFS-0803820-026
40µ	145	EMS-0803820-040	EFS-0803820-040
60µ	190	EMS-0803820-060	EFS-0803820-060
75µ	225	EMS-0803820-075	EFS-0803820-075
90µ	264	EMS-0803820-090	EFS-0803820-090
Approximate Unit Weight:		210 g/half	240 g/half

Test Conditions

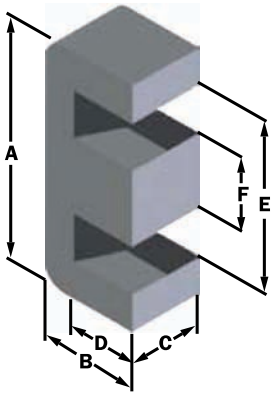
Winding	N=100, #14 AWG
Frequency	10 kHz
Voltage	1.7 V
A_L Tolerance	±8%

Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	60 Halves/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
Full Winding	Turns	59	92	142	220	340	526	814	1,260	1,950	3,019	4,672
	Rdc(Ω)	19.2 m	47.6 m	116.8 m	287.9 m	707.5 m	1.7	4.3	10.5	26.0	63.9	157.3



Typical Part Number:	E MS - 096 42 26 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	96 ± 1.45 mm	3.780 ± 0.057 in
B	41.5 ± 0.64 mm	1.634 ± 0.025 in
C	25.5 ± 0.51 mm	1.004 ± 0.020 in
D	25 mm (min.)	0.984 in (min.)
E	64.4 mm (min.)	2.535 in (min.)
F	31.6 ± 0.64 mm	1.244 ± 0.025 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	8.02 cm²
Le	Effective Magnetic Path Length	18.03 cm
Ve	Effective Core Volume	145 cm³
WA	Minimum Effective Window Area	8.04 cm²
SA	Surface Area	288 cm²
MLT	Mean Length Per Turn	18.0 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	134	EMS-0964226-014	EFS-0964226-014
26µ	201	EMS-0964226-026	EFS-0964226-026
40µ	279	EMS-0964226-040	EFS-0964226-040
60µ	391	EMS-0964226-060	EFS-0964226-060
75µ	475	EMS-0964226-075	EFS-0964226-075
90µ	559	EMS-0964226-090	EFS-0964226-090
Approximate Unit Weight:		420 g/half	480 g/half

Test Conditions

Winding	N=100, #14 AWG
Frequency	10 kHz
Voltage	3.6 V
A_L Tolerance	±8%

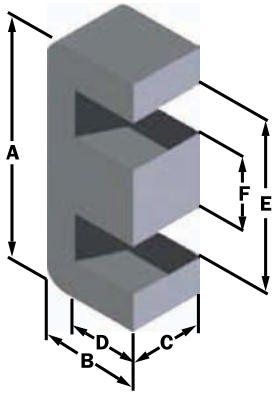
Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	36 Halves/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
Full Winding	Turns	43	67	104	161	249	385	596	922	1,428	2,210	3,420
	Rdc(Ω)	15.9 m	39.4 m	97.2 m	239.4 m	588.9 m	1.4	3.6	8.8	21.6	53.2	130.9

114.0 mm/4.488 in. E-Core



Typical Part Number:	E MS - 114 46 35 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	114 ± 1.70 mm	4.488 ± 0.067 in
B	46.2 ± 0.69 mm	1.819 ± 0.027 in
C	34.9 ± 0.58 mm	1.374 ± 0.023 in
D	28.6 mm (min.)	1.126 in (min.)
E	79.3 mm (min.)	3.122 in (min.)
F	34.9 ± 0.69 mm	1.374 ± 0.027 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	12.2 cm²
Le	Effective Magnetic Path Length	22.9 cm
Ve	Effective Core Volume	280 cm³
WA	Minimum Effective Window Area	12.5 cm²
SA	Surface Area	415 cm²
MLT	Mean Length Per Turn	22.8 cm

Permeability **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	161	EMS-1144635-014	EFS-1144635-014
26µ	241	EMS-1144635-026	EFS-1144635-026
40µ	335	EMS-1144635-040	EFS-1144635-040
60µ	469	EMS-1144635-060	EFS-1144635-060
75µ	569	EMS-1144635-075	EFS-1144635-075
90µ	669	EMS-1144635-090	EFS-1144635-090
Approximate Unit Weight:		810 g/half	920 g/half

Test Conditions

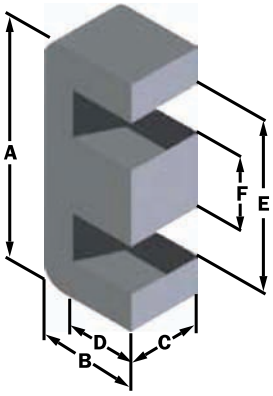
Winding	N=100, #14 AWG
Frequency	10 kHz
Voltage	5.4 V
A_L Tolerance	±8%

Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	8 Halves/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
Full Winding	Turns	67	104	161	250	387	599	927	1,434	2,220	3,436	5,317
	Rdc(Ω)	31.5 m	77.7 m	191.2 m	472.3 m	1.2	2.9	7.0	17.3	42.7	105.0	258.5



Typical Part Number:	E MS - 120 52 32 - 090

Geometry
Material Type
"A" Dimension in XXXmm
"B" Dimension in XXmm
"C" Dimension in XXmm
Reference Permeability

Physical Dimensions

A	120 ± 1.80 mm	4.724 ± 0.071 in
B	52 ± 0.79 mm	2.047 ± 0.031 in
C	31.5 ± 0.64 mm	1.240 ± 0.025 in
D	31.5 mm (min.)	1.240 in (min.)
E	80.4 mm (min.)	3.165 in (min.)
F	39.6 ± 0.71 mm	1.559 ± 0.028 in

Magnetic Dimensions

Ae	Effective Magnetic Cross Section	13.03 cm²
Le	Effective Magnetic Path Length	23.78 cm
Ve	Effective Core Volume	310 cm³
WA	Minimum Effective Window Area	12.6 cm²
SA	Surface Area	449 cm²
MLT	Mean Length Per Turn	22.4 cm

Permeability / **Part Numbers**

Reference Permeability	A_L Value (nH/N²)	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14µ	165	EMS-1205232-014	EFS-1205232-014
26µ	248	EMS-1205232-026	EFS-1205232-026
40µ	344	EMS-1205232-040	EFS-1205232-040
60µ	482	EMS-1205232-060	EFS-1205232-060
75µ	585	EMS-1205232-075	EFS-1205232-075
90µ	689	EMS-1205232-090	EFS-1205232-090
Approximate Unit Weight:		900 g/half	1,020 g/half

Test Conditions

Winding	N=100, #14 AWG
Frequency	10 kHz
Voltage	5.8 V
A_L Tolerance	±8%

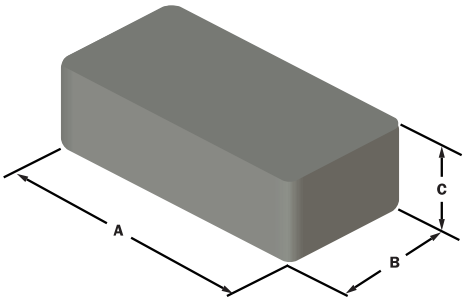
Coating/Packaging Information

Coating Type	None
Voltage Breakdown	N/A
Limit	N/A
Package Quantity	8 Halves/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
Full Winding	Turns	68	105	163	252	391	605	936	1,449	2,242	3,470	5,371
	Rdc(Ω)	31.3 m	76.8 m	189.7 m	466.5 m	1.2	2.8	7.0	17.2	42.2	103.9	255.9

Block Cores



Typical Part Number: **B MS - 080 30 20 -060**

- Geometry
- Material Type
- "A" Dimension in XXXmm
- "B" Dimension in XXmm
- "C" Dimension in XXmm
- Reference Permeability

Physical Dimensions **Part Numbers**

A	B	C	26µ	40µ	60µ
47.5 mm 1.870 in	41.0 mm 1.614 in	20.1 mm 0.791 in	BMS- BFS- 0474120-026	BMS- BFS- 0474120-040	BMS- BFS- 0474120-060
47.5 mm 1.870 in	41.0 mm 1.614 in	27.5 mm 1.083 in	BMS- BFS- 0474128-026	BMS- BFS- 0474128-040	BMS- BFS- 0474128-060
50.0 mm 1.969 in	30.0 mm 1.181 in	15.0 mm 0.591 in	BMS- BFS- 0503015-026	BMS- BFS- 0503015-040	BMS- BFS- 0503015-060
50.0 mm 1.969 in	30.0 mm 1.181 in	20.0 mm 0.787 in	BMS- BFS- 0503020-026	BMS- BFS- 0503020-040	BMS- BFS- 0503020-060
60.0 mm 2.362 in	30.0 mm 1.181 in	15.0 mm 0.591 in	BMS- BFS- 0603015-026	BMS- BFS- 0603015-040	BMS- BFS- 0603015-060
60.0 mm 2.362 in	30.0 mm 1.181 in	20.0 mm 0.787 in	BMS- BFS- 0603020-026	BMS- BFS- 0603020-040	BMS- BFS- 0603020-060
70.0 mm 2.756 in	30.0 mm 1.181 in	15.0 mm 0.591 in	BMS- BFS- 0703015-026	BMS- BFS- 0703015-040	BMS- BFS- 0703015-060
70.0 mm 2.756 in	30.0 mm 1.181 in	20.0 mm 0.787 in	BMS- BFS- 0703020-026	BMS- BFS- 0703020-040	BMS- BFS- 0703020-060
70.0 mm 2.756 in	30.0 mm 1.181 in	25.0 mm 0.984 in	BMS- BFS- 0703025-026	BMS- BFS- 0703025-040	BMS- BFS- 0703025-060
80.0 mm 3.150 in	30.0 mm 1.181 in	15.0 mm 0.591 in	BMS- BFS- 0803015-026	BMS- BFS- 0803015-040	BMS- BFS- 0803015-060
80.0 mm 3.150 in	30.0 mm 1.181 in	20.0 mm 0.787 in	BMS- BFS- 0803020-026	BMS- BFS- 0803020-040	BMS- BFS- 0803020-060
80.0 mm 3.150 in	30.0 mm 1.181 in	25.0 mm 0.984 in	BMS- BFS- 0803025-026	BMS- BFS- 0803025-040	BMS- BFS- 0803025-060
80.0 mm 3.150 in	30.0 mm 1.181 in	35.0 mm 1.378 in	BMS- BFS- 0803035-026	BMS- BFS- 0803035-040	BMS- BFS- 0803035-060
±0.5 mm ±0.020 in	±0.5 mm ±0.020 in	±0.5 mm ±0.020 in			
Tolerance					

MS = Super-MSS™ (Sendust) **FS = FluxSan™ (Silicon Iron)**

Part Number Cross Reference - Old/New

Old Part No.	New Part No.
A-050056-2	MP-050125-2
A-051027-2	MP-050060-2
A-052012-2	MP-050026-2
A-053006-2	MP-050014-2
A-057008-2	MP-080014-2
A-059043-2	MP-090060-2
A-060019-2	MP-090026-2
A-062010-2	MP-090014-2
A-066032-2	MP-106026-2
A-068018-2	MP-106014-2
A-071065-2	MP-132060-2
A-073028-2	MP-132026-2
A-074015-2	MP-132014-2
A-076056-2	MP-141060-2
A-078024-2	MP-141026-2
A-080013-2	MP-141014-2
A-083081-2	MP-157060-2
A-085035-2	MP-157026-2
A-086019-2	MP-157014-2
A-087059-2	MP-184026-2
A-088032-2	MP-184014-2
A-089178-2	MP-185125-2
A-090086-2	MP-185060-2
A-091037-2	MP-185026-2
A-092020-2	MP-185014-2
A-094033-2	MP-225026-2
A-096018-2	MP-225014-2
A-106073-2	MP-200060-2
A-109156-2	MP-225125-2
A-123068-2	MP-300060-2
A-124030-2	MP-300026-2
A-125112-2	MP-400060-2
A-126040-2	MP-401026-2
A-127259-2	MP-520125-2
A-128124-2	MP-520060-2
A-129054-2	MP-520026-2
A-134103-8	MP-026125-8
A-135050-8	MP-026060-8
A-137052-8	MP-031125-8
A-138025-8	MP-031060-8
A-143067-2	MP-050147-2
A-144081-2	MP-080147-2
A-145185-2	MP-106147-2
A-147106-2	MP-090147-2
A-148150-2	MP-130147-2
A-149093-2	MP-135147-2
A-150138-2	MP-141147-2
A-151198-2	MP-157147-2
A-152330-2	MP-184147-2
A-153210-2	MP-185147-2
A-154179-2	MP-200147-2
A-155185-2	MP-225147-2

Old Part No.	New Part No.
A-156167-2	MP-300147-2
A-157268-2	MP-400147-2
A-158304-2	MP-520147-2
A-162129-2	MP-131147-2
A-166151-2	MP-131173-2
A-172079-2	MP-050173-2
A-173096-2	MP-080173-2
A-174124-2	MP-090173-2
A-175217-5	MP-106173-2
A-176176-2	MP-130173-2
A-177109-2	MP-135173-2
A-178162-2	MP-141173-2
A-179233-2	MP-157173-2
A-180390-2	MP-184173-2
A-181210-2	MP-200173-2
A-182218-2	MP-225173-2
A-183197-2	MP-300173-2
A-184316-2	MP-400173-2
A-185358-2	MP-520173-2
A-187010-2	MP-068014-2
A-188019-2	MP-068026-2
A-189043-2	MP-068060-2
A-190089-2	MP-068125-2
A-193105-2	MP-068147-2
A-194123-2	MP-068173-2
A-195246-2	MP-185173-2
A-197109-2	MP-131125-2
A-200170-8	MP-026205-8
A-201086-8	MP-031205-8
A-202109-8	MP-038205-8
A-203088-2	MP-044205-2
A-204093-2	MP-050205-2
A-205146-2	MP-068205-2
A-206068-2	MP-080125-2
A-207113-2	MP-080205-2
A-208147-2	MP-090205-2
A-209257-2	MP-106205-2
A-210180-2	MP-131205-2
A-211208-2	MP-130205-2
A-212130-2	MP-135205-2
A-213192-2	MP-141205-2
A-214276-2	MP-157205-2
A-215462-2	MP-184205-2
A-216292-2	MP-185205-2
A-217249-2	MP-200205-2
A-218259-2	MP-225205-2
A-219233-2	MP-300205-2
A-222144-8	MP-026173-8
A-223073-8	MP-031173-8
A-224122-8	MP-026147-8
A-225062-8	MP-031147-8
A-238092-2	MP-040173-2

Old Part No.	New Part No.
A-239078-2	MP-040147-2
A-240084-8	MP-038160-8
A-244092-8	MP-038173-8
A-245078-8	MP-038147-8
A-246066-8	MP-038125-8
A-247032-8	MP-038060-8
A-248014-8	MP-038026-8
A-249007-8	MP-038014-8
A-250053-8	MP-039125-8
A-251074-2	MP-044173-2
A-252063-2	MP-044147-2
A-253053-2	MP-044125-2
A-254168-2	MP-157125-2
A-255026-2	MP-044060-2
A-256011-2	MP-044026-2
A-257006-2	MP-044014-2
A-262123-2	MP-065205-2
A-263104-2	MP-065173-2
A-264088-2	MP-065147-2
A-266036-2	MP-065060-2
A-267015-2	MP-065026-2
A-268008-2	MP-065014-2
A-271087-2	MP-080160-2
A-272173-2	MP-092205-2
A-281072-2	MP-065125-2
A-285092-2	MP-065160-2
A-291061-2	MP-130060-2
A-292066-2	MP-040125-2
A-298028-2	MP-130026-2
A-300115-2	MP-090160-2
A-301072-2	MP-050160-2
A-302201-2	MP-106160-2
A-303163-2	MP-130160-2
A-304101-2	MP-135160-2
A-305150-2	MP-141160-2
A-306215-2	MP-157160-2
A-307032-2	MP-040060-2
A-308084-2	MP-040160-2
A-309105-2	MP-040205-2
A-310090-2	MP-090125-2
A-324117-2	MP-141125-2
A-325360-2	MP-184160-2
A-326228-2	MP-185160-2
A-327195-2	MP-200160-2
A-328200-2	MP-225160-2
A-330170-2	MP-107173-2
A-331054-8	MP-027125-8
A-335016-2	MP-300014-2
A-338066-8	MP-031160-8
A-339011-8	MP-031026-8
A-340006-8	MP-031014-8
A-341014-2	MP-040026-2

Part Number Cross Reference - Old/New

Old Part No.	New Part No.
A-342007-2	MP-040014-2
A-344014-2	MP-130014-2
A-345038-2	MP-135060-2
A-346016-2	MP-135026-2
A-347009-2	MP-135014-2
A-348032-2	MP-200026-2
A-349017-2	MP-200014-2
A-350005-8	MP-018014-8
A-351009-8	MP-018026-8
A-352020-8	MP-018060-8
A-353042-8	MP-018125-8
A-354049-8	MP-018147-8
A-355053-8	MP-018160-8
A-356057-8	MP-018173-8
A-357068-8	MP-018205-8
A-358083-8	MP-018250-8
A-362108-8	MP-027250-8
A-363206-8	MP-026250-8
A-364104-8	MP-031250-8
A-365132-8	MP-038250-8
A-366132-2	MP-040250-2
A-367106-2	MP-044250-2
A-368112-2	MP-050250-2
A-369144-2	MP-065250-2
A-370178-2	MP-068250-2
A-371136-2	MP-080250-2
A-372180-2	MP-090250-2
A-373314-2	MP-106250-2
A-374254-2	MP-130250-2
A-430026-2	MP-520014-2
A-438281-2	MP-184125-2
A-439012-2	MP-092014-2
A-440022-2	MP-092026-2
A-441051-2	MP-092060-2
A-442105-2	MP-092125-2
A-443124-2	MP-092147-2
A-444135-2	MP-092160-2
A-445146-2	MP-092173-2
A-446211-2	MP-092250-2
A-453113-8	MP-028205-8
A-460026-8	MP-027060-8
A-461069-8	MP-027160-8
A-462089-8	MP-027205-8
A-464064-8	MP-027147-8
A-465075-8	MP-027173-8
A-467004-8	MP-015014-8
A-468007-8	MP-015026-8
A-469017-8	MP-015060-8
A-470035-8	MP-015125-8
A-471041-8	MP-015147-8
A-472045-8	MP-015160-8
A-473048-8	MP-015173-8

Old Part No.	New Part No.
A-474057-8	MP-015205-8
A-475070-8	MP-015250-8
A-479026-8	MP-014125-8
A-480031-8	MP-014147-8
A-481033-8	MP-014160-8
A-482036-8	MP-014173-8
A-483052-8	MP-014250-8
A-488075-2	MP-225060-2
A-495106-8	MP-039250-8
A-496084-8	MP-039205-8
A-497074-8	MP-039173-8
A-498068-8	MP-039160-8
A-499063-8	MP-039147-8
A-500025-8	MP-039060-8
A-501011-8	MP-039026-8
A-502006-8	MP-039014-8
A-511014-2	MP-080026-2
A-512082-8	MP-025205-8
A-520052-8	MP-025125-8
A-522043-8	MP-014205-8
A-525100-8	MP-025250-8
A-526069-8	MP-025173-8
A-527064-8	MP-025160-8
A-528058-8	MP-025147-8
A-529024-8	MP-025060-8
A-530010-8	MP-025026-8
A-531006-8	MP-025014-8
A-534138-8	MP-028250-8
A-535095-8	MP-028173-8
A-536089-8	MP-028160-8
A-537081-8	MP-028147-8
A-538070-8	MP-028125-8
A-539033-8	MP-028060-8
A-540014-8	MP-028026-8
A-541008-8	MP-028014-8
A-542228-2	MP-400125-2
A-548127-2	MP-130125-2
A-559114-2	MP-068160-2
A-585079-2	MP-135125-2
A-630012-8	MP-026014-8
A-638132-8	MP-026160-8
A-639021-8	MP-026026-8
A-640012-2	MP-131014-2
A-641022-2	MP-131026-2
A-642051-2	MP-131060-2
A-643136-2	MP-131160-2
A-644213-2	MP-131250-2
A-645135-2	MP-132125-2
A-646158-2	MP-132147-2
A-647172-2	MP-132160-2
A-648186-2	MP-132173-2
A-649215-2	MP-132205-2

Old Part No.	New Part No.
A-650269-2	MP-132250-2
A-651022-2	MP-401014-2
A-652092-2	MP-401060-2
A-653192-2	MP-401125-2
A-654226-2	MP-401147-2
A-655246-2	MP-401160-2
A-656266-2	MP-401173-2
A-658026-2	MP-400014-2
A-659047-2	MP-400026-2
A-660292-2	MP-400160-2
A-661332-2	MP-520160-2
A-662036-2	MP-521014-2
A-663068-2	MP-521026-2
A-664156-2	MP-521060-2
A-665325-2	MP-521125-2
A-666382-2	MP-521147-2
A-667416-2	MP-521160-2
A-668450-2	MP-521173-2
A-670068-2	MP-044160-2
A-674006-8	MP-027014-8
A-675011-8	MP-027026-8
A-676014-2	MP-107014-2
A-677026-2	MP-107026-2
A-678059-2	MP-107060-2
A-679123-2	MP-107125-2
A-680145-2	MP-107147-2
A-681157-2	MP-107160-2
A-682197-2	MP-107205-2
A-683246-2	MP-107250-2
A-685182-2	MP-300160-2
A-710032-2	MP-226014-2
A-711060-2	MP-226026-2
A-712138-2	MP-226060-2
A-713287-2	MP-226125-2
A-714338-2	MP-226147-2
A-715152-2	MP-200125-2
A-716368-2	MP-226160-2
A-717398-2	MP-226173-2
A-718460-2	MP-226205-2
A-735020-2	MP-301014-2
A-736037-2	MP-301026-2
A-737085-2	MP-301060-2
A-740178-2	MP-301125-2
A-741209-2	MP-301147-2
A-742228-2	MP-301160-2
A-743246-2	MP-301173-2
A-744284-2	MP-301205-2
A-759135-2	MP-184060-2
A-848032-2	MP-080060-2
A-866142-2	MP-300125-2
A-894075-2	MP-106060-2
A-930157-1	MP-106125-2

Part Number Cross Reference - CSC/Micrometals Arnold

CSC P/N	MA P/N
BK5315-026	BFS-0503015-026
BK5315-040	BFS-0503015-040
BK5315-060	BFS-0503015-060
BK5320-026	BFS-0503020-026
BK5320-040	BFS-0503020-040
BK5320-060	BFS-0503020-060
BK6315-026	BFS-0603015-026
BK6315-040	BFS-0603015-040
BK6315-060	BFS-0603015-060
BK6320-026	BFS-0603020-026
BK6320-040	BFS-0603020-040
BK6320-060	BFS-0603020-060
BK7315-026	BFS-0703015-026
BK7315-040	BFS-0703015-040
BK7315-060	BFS-0703015-060
BK7320-026	BFS-0703020-026
BK7320-040	BFS-0703020-040
BK7320-060	BFS-0703020-060
BK8315-026	BFS-0803015-026
BK8315-040	BFS-0803015-040
BK8315-060	BFS-0803015-060
BK8320-026	BFS-0803020-026
BK8320-040	BFS-0803020-040
BK8320-060	BFS-0803020-060
BS5315-026	BMS-0503015-026
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BS5315-060	BMS-0503015-060
BS5320-026	BMS-0503020-026
BS5320-040	BMS-0503020-040
BS5320-060	BMS-0503020-060
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BS6315-040	BMS-0603015-040
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BS6320-026	BMS-0603020-026
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BS6320-060	BMS-0603020-060
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BS7320-026	BMS-0703020-026
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BS7320-060	BMS-0703020-060
BS8315-026	BMS-0803015-026
BS8315-040	BMS-0803015-040
BS8315-060	BMS-0803015-060
BS8320-026	BMS-0803020-026
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BS8320-060	BMS-0803020-060
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CH-035125	HF-014125-8
CH-035147	HF-014147-8
CH-035160	HF-014160-8
CH-039026	HF-015026-8
CH-039060	HF-015060-8
CH-039125	HF-015125-8
CH-039147	HF-015147-8
CH-039160	HF-015160-8
CH-046026	HF-018026-8
CH-046060	HF-018060-8
CH-046125	HF-018125-8
CH-046147	HF-018147-8

CSC P/N	MA P/N
CH-046160	HF-018160-8
CH-063026	HF-025026-8
CH-063060	HF-025060-8
CH-063125	HF-025125-8
CH-063147	HF-025147-8
CH-063160	HF-025160-8
CH-066026	HF-027026-8
CH-066060	HF-027060-8
CH-066125	HF-027125-8
CH-066147	HF-027147-8
CH-066160	HF-027160-8
CH-067026	HF-026026-8
CH-067060	HF-026060-8
CH-067125	HF-026125-8
CH-067147	HF-026147-8
CH-067160	HF-026160-8
CH-068026	HF-028026-8
CH-068060	HF-028060-8
CH-068125	HF-028125-8
CH-068147	HF-028147-8
CH-068160	HF-028160-8
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CH-078060	HF-031060-8
CH-078125	HF-031125-8
CH-078147	HF-031147-8
CH-078160	HF-031160-8
CH-096026	HF-039026-8
CH-096060	HF-039060-8
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CH-096147	HF-039147-8
CH-096160	HF-039160-8
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CH-097060	HF-038060-8
CH-097125	HF-038125-8
CH-097147	HF-038147-8
CH-097160	HF-038160-8
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CH-102060	HF-040060-2
CH-102125	HF-040125-2
CH-102147	HF-040147-2
CH-102160	HF-040160-2
CH-112026	HF-044026-2
CH-112060	HF-044060-2
CH-112125	HF-044125-2
CH-112147	HF-044147-2
CH-112160	HF-044160-2
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CH-127060	HF-050060-2
CH-127125	HF-050125-2
CH-127147	HF-050147-2
CH-127160	HF-050160-2
CH-166026	HF-065026-2
CH-166060	HF-065060-2
CH-166125	HF-065125-2
CH-166147	HF-065147-2
CH-166160	HF-065160-2
CH-172026	HF-068026-2
CH-172060	HF-068060-2
CH-172125	HF-068125-2
CH-172147	HF-068147-2
CH-172160	HF-068160-2

CSC P/N	MA P/N
CH-203026	HF-080026-2
CH-203060	HF-080060-2
CH-203125	HF-080125-2
CH-203147	HF-080147-2
CH-203160	HF-080160-2
CH-229026	HF-090026-2
CH-229060	HF-090060-2
CH-229125	HF-090125-2
CH-229147	HF-090147-2
CH-229160	HF-090160-2
CH-234026	HF-092026-2
CH-234060	HF-092060-2
CH-234125	HF-092125-2
CH-234147	HF-092147-2
CH-234160	HF-092160-2
CH-270026	HF-106026-2
CH-270060	HF-106060-2
CH-270125	HF-106125-2
CH-270147	HF-106147-2
CH-270160	HF-106160-2
CH-330026	HF-130026-2
CH-330060	HF-130060-2
CH-330125	HF-130125-2
CH-330147	HF-130147-2
CH-330160	HF-130160-2
CH-343026	HF-135026-2
CH-343060	HF-135060-2
CH-343125	HF-135125-2
CH-343147	HF-135147-2
CH-343160	HF-135160-2
CH-358026	HF-141026-2
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CH-358125	HF-141125-2
CH-358147	HF-141147-2
CH-358160	HF-141160-2
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CH-400060	HF-157060-2
CH-400125	HF-157125-2
CH-400147	HF-157147-2
CH-400160	HF-157160-2
CH-467026	HF-184026-2
CH-467060	HF-184060-2
CH-467125	HF-184125-2
CH-467147	HF-184147-2
CH-467160	HF-184160-2
CH-468026	HF-185026-2
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CH-468125	HF-185125-2
CH-468147	HF-185147-2
CH-468160	HF-185160-2
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CH-508060	HF-200060-2
CH-508125	HF-200125-2
CH-508147	HF-200147-2
CH-508160	HF-200160-2
CH-571026	HF-226026-2
CH-571060	HF-226060-2
CH-571125	HF-226125-2
CH-571147	HF-226147-2
CH-571160	HF-226160-2
CH-572026	HF-225026-2

Part Number Cross Reference - CSC/Micrometals Arnold

CSC P/N	MA P/N
CH-572060	HF-225060-2
CH-572125	HF-225125-2
CH-572147	HF-225147-2
CH-572160	HF-225160-2
CH-777026	HF-300026-2
CH-777060	HF-300060-2
CH-777125	HF-300125-2
CH-777147	HF-300147-2
CH-777160	HF-300160-2
CK-035060	FS-014060-8
CK-035075	FS-014075-8
CK-035090	FS-014090-8
CK-039014	FS-015014-8
CK-039026	FS-015026-8
CK-039060	FS-015060-8
CK-039075	FS-015075-8
CK-039090	FS-015090-8
CK-046014	FS-018014-8
CK-046026	FS-018026-8
CK-046060	FS-018060-8
CK-046075	FS-018075-8
CK-046090	FS-018090-8
CK-063014	FS-025014-8
CK-063026	FS-025026-8
CK-063060	FS-025060-8
CK-063075	FS-025075-8
CK-063090	FS-025090-8
CK-066014	FS-027014-8
CK-066026	FS-027026-8
CK-066060	FS-027060-8
CK-066075	FS-027075-8
CK-066090	FS-027090-8
CK-067014	FS-026014-8
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CK-067060	FS-026060-8
CK-067075	FS-026075-8
CK-067090	FS-026090-8
CK-068014	FS-028014-8
CK-068026	FS-028026-8
CK-068060	FS-028060-8
CK-068075	FS-028075-8
CK-068090	FS-028090-8
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CK-078060	FS-031060-8
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CK-096090	FS-039090-8
CK-097014	FS-038014-8
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CK-097060	FS-038060-8
CK-097075	FS-038075-8
CK-097090	FS-038090-8
CK-102014	FS-040014-2
CK-102026	FS-040026-2
CK-102060	FS-040060-2
CK-102075	FS-040075-2

CSC P/N	MA P/N
CK-102090	FS-040090-2
CK-112014	FS-044014-2
CK-112026	FS-044026-2
CK-112060	FS-044060-2
CK-112075	FS-044075-2
CK-112090	FS-044090-2
CK-127014	FS-050014-2
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CK-127075	FS-050075-2
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CK-270026	FS-106026-2
CK-270060	FS-106060-2
CK-270075	FS-106075-2
CK-270090	FS-106090-2
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CK-330026	FS-130026-2
CK-330060	FS-130060-2
CK-330075	FS-130075-2
CK-330090	FS-130090-2
CK-343014	FS-135014-2
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CK-358060	FS-141060-2
CK-358075	FS-141075-2
CK-358090	FS-141090-2
CK-400014	FS-157014-2
CK-400026	FS-157026-2
CK-400060	FS-157060-2
CK-400075	FS-157075-2
CK-400090	FS-157090-2

CSC P/N	MA P/N
CK-467014	FS-184014-2
CK-467026	FS-184026-2
CK-467060	FS-184060-2
CK-467075	FS-184075-2
CK-467090	FS-184090-2
CK-468014	FS-185014-2
CK-468026	FS-185026-2
CK-468060	FS-185060-2
CK-468075	FS-185075-2
CK-468090	FS-185090-2
CK-508014	FS-200014-2
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CK-508075	FS-200075-2
CK-508090	FS-200090-2
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CK-571075	FS-226075-2
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CK-572026	FS-225026-2
CK-572060	FS-225060-2
CK-572075	FS-225075-2
CK-572090	FS-225090-2
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CK-777075	FS-300075-2
CK-777090	FS-300090-2
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CK-778075	FS-301075-2
CK-778090	FS-301090-2
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CM-035147	MP-014147-8
CM-035160	MP-014160-8
CM-035173	MP-014173-8
CM-035200	MP-014205-8
CM-039026	MP-015026-8
CM-039060	MP-015060-8
CM-039125	MP-015125-8
CM-039147	MP-015147-8
CM-039160	MP-015160-8
CM-039173	MP-015173-8
CM-039200	MP-015205-8
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CM-046060	MP-018060-8
CM-046125	MP-018125-8
CM-046147	MP-018147-8
CM-046160	MP-018160-8
CM-046173	MP-018173-8
CM-046200	MP-018205-8
CM-063026	MP-025026-8
CM-063060	MP-025060-8
CM-063125	MP-025125-8
CM-063147	MP-025147-8
CM-063160	MP-025160-8
CM-063173	MP-025173-8
CM-063200	MP-025205-8

Part Number Cross Reference - CSC/Micrometals Arnold

CSC P/N	MA P/N
CM-066026	MP-027026-8
CM-066060	MP-027060-8
CM-066125	MP-027125-8
CM-066147	MP-027147-8
CM-066160	MP-027160-8
CM-066173	MP-027173-8
CM-066200	MP-027205-8
CM-067026	MP-026026-8
CM-067060	MP-026060-8
CM-067125	MP-026125-8
CM-067147	MP-026147-8
CM-067160	MP-026160-8
CM-067160	MP-028160-8
CM-067173	MP-026173-8
CM-067200	MP-026205-8
CM-068026	MP-028026-8
CM-068060	MP-028060-8
CM-068125	MP-028125-8
CM-068147	MP-028147-8
CM-068173	MP-028173-8
CM-068200	MP-028205-8
CM-078026	MP-031026-8
CM-078060	MP-031060-8
CM-078125	MP-031125-8
CM-078147	MP-031147-8
CM-078160	MP-031160-8
CM-078173	MP-031173-8
CM-078200	MP-031205-8
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CM-096060	MP-039060-8
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CM-096147	MP-039147-8
CM-096160	MP-039160-8
CM-096173	MP-039173-8
CM-096200	MP-039205-8
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CM-097060	MP-038060-8
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CM-097147	MP-038147-8
CM-097160	MP-038160-8
CM-097173	MP-038173-8
CM-097200	MP-038205-8
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CM-102160	MP-040160-2
CM-102173	MP-040173-2
CM-102200	MP-040205-2
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CM-112147	MP-044147-2
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CM-112173	MP-044173-2
CM-112200	MP-044205-2
CM-127026	MP-050026-2
CM-127060	MP-050060-2
CM-127125	MP-050125-2
CM-127147	MP-050147-2
CM-127160	MP-050160-2

CSC P/N	MA P/N
CM-127173	MP-050173-2
CM-127200	MP-050205-2
CM-166026	MP-065026-2
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CM-166147	MP-065147-2
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CM-229160	MP-090160-2
CM-229173	MP-090173-2
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CM-234160	MP-092160-2
CM-234173	MP-092173-2
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CM-270125	MP-106125-2
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CM-330173	MP-130173-2
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CM-343060	MP-135060-2
CM-343125	MP-135125-2
CM-343147	MP-135147-2
CM-343160	MP-135160-2
CM-343173	MP-135173-2
CM-343200	MP-135205-2
CM-358026	MP-141026-2
CM-358060	MP-141060-2
CM-358125	MP-141125-2

CSC P/N	MA P/N
CM-358147	MP-141147-2
CM-358160	MP-141160-2
CM-358173	MP-141173-2
CM-358200	MP-141205-2
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CM-400060	MP-157060-2
CM-400125	MP-157125-2
CM-400147	MP-157147-2
CM-400160	MP-157160-2
CM-400173	MP-157173-2
CM-400200	MP-157205-2
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CM-467060	MP-184060-2
CM-467125	MP-184125-2
CM-467147	MP-184147-2
CM-467160	MP-184160-2
CM-467173	MP-184173-2
CM-467200	MP-184205-2
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CM-468060	MP-185060-2
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CM-468173	MP-185173-2
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CM-508160	MP-200160-2
CM-508173	MP-200173-2
CM-508200	MP-200205-2
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CM-571125	MP-226125-2
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CM-571173	MP-226173-2
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CM-572147	MP-225147-2
CM-572160	MP-225160-2
CM-572173	MP-225173-2
CM-572200	MP-225205-2
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CM-777060	MP-300060-2
CM-777125	MP-300125-2
CM-777147	MP-300147-2
CM-777160	MP-300160-2
CM-777173	MP-300173-2
CM-777200	MP-300205-2
CS-035060	MS-014060-8
CS-035075	MS-014075-8
CS-035090	MS-014090-8
CS-035125	MS-014125-8
CS-039060	MS-015060-8
CS-039075	MS-015075-8
CS-039090	MS-015090-8
CS-039125	MS-015125-8

Part Number Cross Reference - CSC/Micrometals Arnold

CSC P/N	MA P/N
CS-046060	MS-018060-8
CS-046075	MS-018075-8
CS-046090	MS-018090-8
CS-046125	MS-018125-8
CS-063060	MS-025060-8
CS-063075	MS-025075-8
CS-063090	MS-025090-8
CS-063125	MS-025125-8
CS-066060	MS-027060-8
CS-066075	MS-027075-8
CS-066090	MS-027090-8
CS-066125	MS-027125-8
CS-067060	MS-026060-8
CS-067075	MS-026075-8
CS-067090	MS-026090-8
CS-067125	MS-026125-8
CS-068060	MS-028060-8
CS-068075	MS-028075-8
CS-068090	MS-028090-8
CS-068125	MS-028125-8
CS-078060	MS-031060-8
CS-078075	MS-031075-8
CS-078090	MS-031090-8
CS-078125	MS-031125-8
CS-096060	MS-039060-8
CS-096075	MS-039075-8
CS-096090	MS-039090-8
CS-096125	MS-039125-8
CS-097060	MS-038060-8
CS-097075	MS-038075-8
CS-097090	MS-038090-8
CS-097125	MS-038125-8
CS-102060	MS-040060-2
CS-102075	MS-040075-2
CS-102090	MS-040090-2
CS-102125	MS-040125-2
CS-112060	MS-044060-2
CS-112075	MS-044075-2
CS-112090	MS-044090-2
CS-112125	MS-044125-2
CS-127060	MS-050060-2
CS-127075	MS-050075-2
CS-127090	MS-050090-2
CS-127125	MS-050125-2
CS-166060	MS-065060-2
CS-166075	MS-065075-2
CS-166090	MS-065090-2
CS-166125	MS-065125-2
CS-172060	MS-068060-2
CS-172075	MS-068075-2
CS-172090	MS-068090-2
CS-172125	MS-068125-2
CS-203060	MS-080060-2
CS-203075	MS-080075-2
CS-203090	MS-080090-2
CS-203125	MS-080125-2
CS-229026	MS-090026-2
CS-229060	MS-090060-2
CS-229075	MS-090075-2
CS-229090	MS-090090-2
CS-229125	MS-090125-2

CSC P/N	MA P/N
CS-234026	MS-092026-2
CS-234060	MS-092060-2
CS-234075	MS-092075-2
CS-234090	MS-092090-2
CS-234125	MS-092125-2
CS-270026	MS-106026-2
CS-270060	MS-106060-2
CS-270075	MS-106075-2
CS-270090	MS-106090-2
CS-270125	MS-106125-2
CS-330026	MS-130026-2
CS-330060	MS-130060-2
CS-330075	MS-130075-2
CS-330090	MS-130090-2
CS-330125	MS-130125-2
CS-343026	MS-135026-2
CS-343060	MS-135060-2
CS-343075	MS-135075-2
CS-343090	MS-135090-2
CS-343125	MS-135125-2
CS-358026	MS-141026-2
CS-358060	MS-141060-2
CS-358075	MS-141075-2
CS-358090	MS-141090-2
CS-358125	MS-141125-2
CS-400026	MS-157026-2
CS-400060	MS-157060-2
CS-400075	MS-157075-2
CS-400090	MS-157090-2
CS-400125	MS-157125-2
CS-467026	MS-184026-2
CS-467060	MS-184060-2
CS-467075	MS-184075-2
CS-467090	MS-184090-2
CS-467125	MS-184125-2
CS-468026	MS-185026-2
CS-468060	MS-185060-2
CS-468075	MS-185075-2
CS-468090	MS-185090-2
CS-468125	MS-185125-2
CS-508026	MS-200026-2
CS-508060	MS-200060-2
CS-508075	MS-200075-2
CS-508090	MS-200090-2
CS-508125	MS-200125-2
CS-571026	MS-226026-2
CS-571060	MS-226060-2
CS-571075	MS-226075-2
CS-571090	MS-226090-2
CS-571125	MS-226125-2
CS-572026	MS-225026-2
CS-572060	MS-225060-2
CS-572075	MS-225075-2
CS-572090	MS-225090-2
CS-572125	MS-225125-2
CS-777026	MS-300026-2
CS-777060	MS-300060-2
CS-777075	MS-300075-2
CS-777090	MS-300090-2
CS-777125	MS-300125-2
ES1908A014	EMS-0190805-014

CSC P/N	MA P/N
ES1908A026	EMS-0190805-026
ES1908A060	EMS-0190805-060
ES1908A075	EMS-0190805-075
ES1908A090	EMS-0190805-090
ES2510A014	EMS-0251007-014
ES2510A026	EMS-0251007-026
ES2510A060	EMS-0251007-060
ES2510A075	EMS-0251007-075
ES2510A090	EMS-0251007-090
ES3515A014	EMS-0351409-014
ES3515A026	EMS-0351409-026
ES3515A060	EMS-0351409-060
ES3515A075	EMS-0351409-075
ES3515A090	EMS-0351409-090
ES4117A014	EMS-0411713-014
ES4117A026	EMS-0411713-026
ES4117A060	EMS-0411713-060
ES4117A075	EMS-0411713-075
ES4117A090	EMS-0411713-090
ES4321A014	EMS-0432111-014
ES4321A026	EMS-0432111-026
ES4321A060	EMS-0432111-060
ES4321A075	EMS-0432111-075
ES4321A090	EMS-0432111-090
ES4321B014	EMS-0432115-014
ES4321B026	EMS-0432115-026
ES4321B060	EMS-0432115-060
ES4321B075	EMS-0432115-075
ES4321B090	EMS-0432115-090
ES4321C014	EMS-0432120-014
ES4321C026	EMS-0432120-026
ES4321C060	EMS-0432120-060
ES4321C075	EMS-0432120-075
ES4321C090	EMS-0432120-090
ES5528A014	EMS-0552821-014
ES5528A026	EMS-0552821-026
ES5528A060	EMS-0552821-060
ES5528A075	EMS-0552821-075
ES5528A090	EMS-0552821-090
ES5528B014	EMS-0552825-014
ES5528B026	EMS-0552825-026
ES5528B060	EMS-0552825-060
ES5528B075	EMS-0552825-075
ES5528B090	EMS-0552825-090
ES6533A014	EMS-0653327-014
ES6533A026	EMS-0653327-026
ES6533A060	EMS-0653327-060
ES6533A075	EMS-0653327-075
ES6533A090	EMS-0653327-090
ES7228A014	EMS-0722819-014
ES7228A026	EMS-0722819-026
ES7228A060	EMS-0722819-060
ES7228A075	EMS-0722819-075
ES7228A090	EMS-0722819-090
ES8038A014	EMS-0803820-014
ES8038A026	EMS-0803820-026
ES8038A060	EMS-0803820-060
ES8038A075	EMS-0803820-075
ES8038A090	EMS-0803820-090

Mag Inc P/N	MA P/N
00K1207E014	EMS-0130604-014
00K1207E026	EMS-0130604-026
00K1207E060	EMS-0130604-060
00K1207E075	EMS-0130604-075
00K1207E090	EMS-0130604-090
00K1808E014	EMS-0190805-014
00K1808E026	EMS-0190805-026
00K1808E060	EMS-0190805-060
00K1808E075	EMS-0190805-075
00K1808E090	EMS-0190805-090
00K2510E014	EMS-0251007-014
00K2510E026	EMS-0251007-026
00K2510E060	EMS-0251007-060
00K2510E075	EMS-0251007-075
00K2510E090	EMS-0251007-090
00K3007E014	EMS-0301507-014
00K3007E026	EMS-0301507-026
00K3007E060	EMS-0301507-060
00K3007E075	EMS-0301507-075
00K3007E090	EMS-0301507-090
00K3515E014	EMS-0351409-014
00K3515E026	EMS-0351409-026
00K3515E060	EMS-0351409-060
00K3515E075	EMS-0351409-075
00K3515E090	EMS-0351409-090
00K4017E014	EMS-0432111-014
00K4017E026	EMS-0432111-026
00K4017E060	EMS-0432111-060
00K4017E075	EMS-0432111-075
00K4017E090	EMS-0432111-090
00K4020E014	EMS-0432115-014
00K4020E026	EMS-0432115-026
00K4020E060	EMS-0432115-060
00K4020E075	EMS-0432115-075
00K4020E090	EMS-0432115-090
00K4022E014	EMS-0432120-014
00K4022E026	EMS-0432120-026
00K4022E060	EMS-0432120-060
00K4022E075	EMS-0432120-075
00K4022E090	EMS-0432120-090
00K4317E014	EMS-0411713-014
00K4317E026	EMS-0411713-026
00K4317E060	EMS-0411713-060
00K4317E075	EMS-0411713-075
00K4317E090	EMS-0411713-090
00K4741B026	BMS-0474128-026
00K4741B02603	BMS-0474120-026
00K4741B060	BMS-0474128-060
00K5528E014	EMS-0552821-014
00K5528E026	EMS-0552821-026
00K5528E060	EMS-0552821-060
00K5528E075	EMS-0552821-075
00K5528E090	EMS-0552821-090
00K5530E014	EMS-0552825-014
00K5530E026	EMS-0552825-026
00K5530E060	EMS-0552825-060
00K5530E075	EMS-0552825-075
00K5530E090	EMS-0552825-090
00K6030B026	BMS-0603015-026
00K6030B060	BMS-0603015-060

Mag Inc P/N	MA P/N
00K6527E014	EMS-0653327-014
00K6527E026	EMS-0653327-026
00K6527E060	EMS-0653327-060
00K6527E075	EMS-0653327-075
00K6527E090	EMS-0653327-090
00K7228E014	EMS-0722819-014
00K7228E026	EMS-0722819-026
00K7228E060	EMS-0722819-060
00K7228E075	EMS-0722819-075
00K7228E090	EMS-0722819-090
00K8020E014	EMS-0803820-014
00K8020E026	EMS-0803820-026
00K8020E060	EMS-0803820-060
00K8020E075	EMS-0803820-075
00K8020E090	EMS-0803820-090
55014-A2	MP-025173-8
55017-A2	MP-025205-8
55018-A2	MP-025160-8
55019-A2	MP-025147-8
55020-A2	MP-025125-8
55021-A2	MP-025060-8
55022-A2	MP-025026-8
55023-A2	MP-025014-8
55024-A2	MP-031173-8
55027-A2	MP-031205-8
55028-A2	MP-031160-8
55029-A2	MP-031147-8
55030-A2	MP-031125-8
55031-A2	MP-031060-8
55032-A2	MP-031026-8
55033-A2	MP-031014-8
55034-A2	MP-040173-2
55037-A2	MP-040205-2
55038-A2	MP-040160-2
55039-A2	MP-040147-2
55040-A2	MP-040125-2
55041-A2	MP-040060-2
55042-A2	MP-040026-2
55043-A2	MP-040014-2
55044-A2	MP-050173-2
55047-A2	MP-050205-2
55048-A2	MP-050160-2
55049-A2	MP-050147-2
55050-A2	MP-050125-2
55051-A2	MP-050060-2
55052-A2	MP-050026-2
55053-A2	MP-050014-2
55059-A2	MP-090060-2
55071-A2	MP-130060-2
55076-A2	MP-141060-2
55082-A2	MP-185173-2
55083-A2	MP-157060-2
55086-A2	MP-185205-2
55087-A2	MP-185160-2
55088-A2	MP-185147-2
55089-A2	MP-185125-2
55090-A2	MP-185060-2
55091-A2	MP-185026-2
55092-A2	MP-185014-2
55103-A2	MP-225173-2

Mag Inc P/N	MA P/N
55106-A2	MP-225205-2
55107-A2	MP-225160-2
55108-A2	MP-225147-2
55109-A2	MP-225125-2
55110-A2	MP-225060-2
55111-A2	MP-225026-2
55112-A2	MP-225014-2
55114-A2	MP-065173-2
55117-A2	MP-065205-2
55118-A2	MP-065160-2
55119-A2	MP-065147-2
55120-A2	MP-065125-2
55121-A2	MP-065060-2
55122-A2	MP-065026-2
55123-A2	MP-065014-2
55124-A2	MP-044173-2
55127-A2	MP-044205-2
55128-A2	MP-044160-2
55129-A2	MP-044147-2
55130-A2	MP-044125-2
55131-A2	MP-044060-2
55132-A2	MP-044026-2
55133-A2	MP-044014-2
55134-AY	MP-014173-8
55137-AY	MP-014205-8
55138-AY	MP-014160-8
55139-AY	MP-014147-8
55140-AY	MP-014125-8
55144-A2	MP-015173-8
55147-A2	MP-015205-8
55148-A2	MP-015160-8
55149-A2	MP-015147-8
55150-A2	MP-015125-8
55174-AY	MP-018173-8
55177-AY	MP-018205-8
55178-AY	MP-018160-8
55179-AY	MP-018147-8
55180-AY	MP-018125-8
55181-A2	MP-018060-8
55190-A2	MP-226014-2
55191-A2	MP-226026-2
55192-A2	MP-226060-2
55195-A2	MP-226125-2
55196-A2	MP-226147-2
55197-A2	MP-226160-2
55198-A2	MP-226173-2
55199-A2	MP-226205-2
55200-A2	MP-080173-2
55203-A2	MP-080205-2
55204-A2	MP-080160-2
55205-A2	MP-080147-2
55206-A2	MP-080125-2
55208-A2	MP-080026-2
55209-A2	MP-080014-2
55234-A2	MP-027173-8
55237-A2	MP-027205-8
55238-A2	MP-027160-8
55239-A2	MP-027147-8
55240-A2	MP-027125-8
55241-A2	MP-027060-8

Part Number Cross Reference - Mag Inc./Micrometals Arnold

Mag Inc P/N	MA P/N
55242-A2	MP-027026-8
55243-A2	MP-027014-8
55248-A2	MP-157173-2
55251-A2	MP-157205-2
55252-A2	MP-157160-2
55253-A2	MP-157147-2
55254-A2	MP-157125-2
55256-A2	MP-157026-2
55257-A2	MP-157014-2
55264-A3	MP-026173-8
55267-A2	MP-026205-8
55268-A2	MP-026160-8
55269-A2	MP-026147-8
55270-A2	MP-026125-8
55271-A2	MP-026060-8
55272-A2	MP-026026-8
55273-A2	MP-026014-8
55274-A2	MP-039173-8
55277-A2	MP-039205-8
55278-A2	MP-039160-8
55279-A2	MP-039147-8
55280-A2	MP-039125-8
55281-A2	MP-039060-8
55282-A2	MP-039026-8
55283-A2	MP-039014-8
55284-A2	MP-038173-8
55287-A2	MP-038205-8
55288-A2	MP-038160-8
55289-A2	MP-038147-8
55290-A2	MP-038125-8
55291-A2	MP-038060-8
55292-A2	MP-038026-8
55293-A2	MP-038014-8
55304-A2	MP-090173-2
55307-A2	MP-090205-2
55308-A2	MP-090160-2
55309-A2	MP-090147-2
55310-A2	MP-090125-2
55312-A2	MP-090026-2
55313-A2	MP-090014-2
55318-A3	MP-141173-2
55321-A2	MP-141205-2
55322-A2	MP-141160-2
55323-A2	MP-141147-2
55324-A2	MP-141125-2
55326-A2	MP-141026-2
55327-A2	MP-141014-2
55344-A2	MP-092173-2
55347-A2	MP-092205-2
55348-A2	MP-092160-2
55349-A2	MP-092147-2
55350-A2	MP-092125-2
55351-A2	MP-092060-2
55352-A2	MP-092026-2
55353-A2	MP-092014-2
55374-A2	MP-068173-2
55377-A2	MP-068205-2
55378-A2	MP-068160-2
55379-A2	MP-068147-2
55380-A2	MP-068125-2

Mag Inc P/N	MA P/N
55381-A2	MP-068060-2
55382-A2	MP-068026-2
55383-A2	MP-068014-2
55404-A2	MP-028173-8
55407-A2	MP-028205-8
55408-A2	MP-028160-8
55409-A2	MP-028147-8
55410-A2	MP-028125-8
55411-A2	MP-028060-8
55412-A2	MP-028026-8
55413-A2	MP-028014-8
55432-A2	MP-184173-2
55435-A2	MP-184205-2
55436-A2	MP-184160-2
55437-A2	MP-184147-2
55438-A2	MP-184125-2
55439-A2	MP-184060-2
55440-A2	MP-184026-2
55441-A2	MP-184014-2
55542-A2	MP-130173-2
55545-A2	MP-130205-2
55546-A2	MP-130160-2
55547-A2	MP-130147-2
55548-A2	MP-130125-2
55550-A2	MP-130026-2
55551-A2	MP-130014-2
55579-A1	MP-135173-2
55582-A2	MP-135205-2
55583-A2	MP-135160-2
55584-A2	MP-135147-2
55585-A2	MP-135125-2
55586-A2	MP-135060-2
55587-A2	MP-135026-2
55588-A2	MP-135014-2
55709-A2	MP-200173-2
55712-A2	MP-200205-2
55713-A2	MP-200160-2
55714-A2	MP-200147-2
55715-A2	MP-200125-2
55716-A2	MP-200060-2
55717-A2	MP-200026-2
55718-A2	MP-200014-2
55848-A2	MP-080060-2
55866-A2	MP-300125-2
55867-A2	MP-300060-2
55868-A2	MP-300026-2
55869-A2	MP-300014-2
55894-A2	MP-106060-2
55906-A2	MP-301125-2
55907-A2	MP-301060-2
55908-A2	MP-301026-2
55909-A2	MP-301014-2
55924-A5	MP-106173-2
55927-A2	MP-106205-2
55928-A2	MP-106160-2
55929-A2	MP-106147-2
55930-A1	MP-106125-2
55932-A2	MP-106026-2
55933-A2	MP-106014-2
58018-A2	HF-025160-8

Mag Inc P/N	MA P/N
58019-A2	HF-025147-8
58020-A2	HF-025125-8
58021-A2	HF-025060-8
58022-A2	HF-025026-8
58023-A2	HF-025014-8
58028-A2	HF-031160-8
58029-A2	HF-031147-8
58030-A2	HF-031125-8
58031-A2	HF-031060-8
58032-A2	HF-031026-8
58033-A2	HF-031014-8
58038-A2	HF-040160-2
58039-A2	HF-040147-2
58040-A2	HF-040125-2
58041-A2	HF-040060-2
58042-A2	HF-040026-2
58043-A2	HF-040014-2
58048-A2	HF-050160-2
58049-A2	HF-050147-2
58050-A2	HF-050125-2
58051-A2	HF-050060-2
58052-A2	HF-050026-2
58053-A2	HF-050014-2
58059-A2	HF-090060-2
58071-A2	HF-130060-2
58076-A2	HF-141060-2
58083-A2	HF-157060-2
58089-A2	HF-185125-2
58090-A2	HF-185060-2
58091-A2	HF-185026-2
58092-A2	HF-185014-2
58109-A2	HF-225125-2
58110-A2	HF-225060-2
58111-A2	HF-225026-2
58112-A2	HF-225014-2
58118-A2	HF-065160-2
58119-A2	HF-065147-2
58120-A2	HF-065125-2
58121-A2	HF-065060-2
58122-A2	HF-065026-2
58123-A2	HF-065014-2
58128-A2	HF-044160-2
58129-A2	HF-044147-2
58130-A2	HF-044125-2
58131-A2	HF-044060-2
58132-A2	HF-044026-2
58133-A2	HF-044014-2
58190-A2	HF-226014-2
58191-A2	HF-226026-2
58192-A2	HF-226060-2
58195-A2	HF-226125-2
58204-A2	HF-080160-2
58205-A2	HF-080147-2
58206-A2	HF-080125-2
58208-A2	HF-080026-2
58209-A2	HF-080014-2
58238-A2	HF-027160-8
58239-A2	HF-027147-8
58240-A2	HF-027125-8
58241-A2	HF-027060-8

Part Number Cross Reference - Mag Inc./Micrometals Arnold

Mag Inc P/N	MA P/N
58242-A2	HF-027026-8
58243-A2	HF-027014-8
58252-A2	HF-157160-2
58253-A2	HF-157147-2
58254-A2	HF-157125-2
58256-A2	HF-157026-2
58257-A2	HF-157014-2
58268-A2	HF-026160-8
58269-A2	HF-026147-8
58270-A2	HF-026125-8
58271-A2	HF-026060-8
58272-A2	HF-026026-8
58273-A2	HF-026014-8
58278-A2	HF-039160-8
58279-A2	HF-039147-8
58280-A2	HF-039125-8
58281-A2	HF-039060-8
58282-A2	HF-039026-8
58283-A2	HF-039014-8
58288-A2	HF-038160-8
58289-A2	HF-038147-8
58290-A2	HF-038125-8
58291-A2	HF-038060-8
58292-A2	HF-038026-8
58293-A2	HF-038014-8
58308-A2	HF-090160-2
58309-A2	HF-090147-2
58310-A2	HF-090125-2
58312-A2	HF-090026-2
58313-A2	HF-090014-2
58322-A2	HF-141160-2
58323-A2	HF-141147-2
58324-A2	HF-141125-2
58326-A2	HF-141026-2
58327-A2	HF-141014-2
58348-A2	HF-092160-2
58349-A2	HF-092147-2
58350-A2	HF-092125-2
58351-A2	HF-092060-2
58352-A2	HF-092026-2
58353-A2	HF-092014-2
58378-A2	HF-068160-2
58379-A2	HF-068147-2
58380-A2	HF-068125-2
58381-A2	HF-068060-2
58382-A2	HF-068026-2
58383-A2	HF-068014-2
58408-A2	HF-028160-8
58409-A2	HF-028147-8
58410-A2	HF-028125-8
58411-A2	HF-028060-8
58412-A2	HF-028026-8
58413-A2	HF-028014-8
58438-A2	HF-184125-2
58439-A2	HF-184060-2
58440-A2	HF-184026-2
58441-A2	HF-184014-2
58546-A2	HF-130160-2
58547-A2	HF-130147-2
58548-A2	HF-130125-2
58550-A2	HF-130026-2
58551-A2	HF-130014-2
58583-A2	HF-135160-2
58584-A2	HF-135147-2
58585-A2	HF-135125-2
58586-A2	HF-135060-2
58587-A2	HF-135026-2
58588-A2	HF-135014-2
58715-A2	HF-200125-2
58716-A2	HF-200060-2
58717-A2	HF-200026-2
58718-A2	HF-200014-2
58848-A2	HF-080060-2
58866-A2	HF-300125-2
58867-A2	HF-300060-2
58868-A2	HF-300026-2
58869-A2	HF-300014-2
58894-A2	HF-106060-2
58906-A2	HF-301125-2
58907-A2	HF-301060-2
58908-A2	HF-301026-2
58909-A2	HF-301014-2
58928-A2	HF-106160-2
58929-A2	HF-106147-2
58930-A2	HF-106125-2
58932-A2	HF-106026-2
58933-A2	HF-106014-2
77020-A7	MS-025125-8
77021-A7	MS-025060-8
77030-A7	MS-031125-8
77031-A7	MS-031060-8
77040-A7	MS-040125-2
77041-A7	MS-040060-2
77050-A7	MS-050125-2
77051-A7	MS-050060-2
77054-A7	MS-050090-2
77055-A7	MS-050075-2
77059-A7	MS-090060-2
77071-A7	MS-130060-2
77076-A7	MS-141060-2
77083-A7	MS-157060-2
77089-A7	MS-185125-2
77090-A7	MS-185060-2
77091-A7	MS-185026-2
77093-A7	MS-185090-2
77094-A7	MS-185075-2
77109-A7	MS-225125-2
77110-A7	MS-225060-2
77111-A7	MS-225026-2
77120-A7	MS-065125-2
77121-A7	MS-065060-2
77130-A7	MS-044125-2
77131-A7	MS-044060-2
77140-AY	MS-014125-8
77141-AY	MS-014060-8
77150-AY	MS-015125-8
77151-AY	MS-015060-8
77154-AY	MS-015090-8
77155-AY	MS-015075-8
77180-AY	MS-018125-8
77181-AY	MS-018060-8
77184-AY	MS-018090-8
77185-AY	MS-018075-8
77191-A7	MS-226026-2
77192-A7	MS-226060-2
77193-A7	MS-226075-2
77194-A7	MS-226090-2
77195-A7	MS-226125-2
77206-A7	MS-080125-2
77210-A7	MS-080090-2
77211-A7	MS-080075-2
77213-A7	MS-225090-2
77214-A7	MS-225075-2
77224-A7	MS-065090-2
77225-A7	MS-065075-2
77240-A7	MS-027125-8
77241-A7	MS-027060-8
77244-A7	MS-027090-8
77245-A7	MS-027075-8
77254-A7	MS-157125-2
77256-A7	MS-157026-2
77258-A7	MS-157090-2
77259-A7	MS-157075-2
77270-A7	MS-026125-8
77271-A7	MS-026060-8
77280-A7	MS-039125-8
77281-A7	MS-039060-8
77290-A7	MS-038125-8
77291-A7	MS-038060-8
77294-A7	MS-038090-8
77295-A7	MS-038075-8
77310-A7	MS-090125-2
77312-A7	MS-090026-2
77314-A7	MS-090090-2
77315-A7	MS-090075-2
77324-A7	MS-141125-2
77326-A7	MS-141026-2
77328-A7	MS-141090-2
77329-A7	MS-141075-2
77334-A7	MS-044090-2
77335-A7	MS-044075-2
77350-A7	MS-092125-2
77351-A7	MS-092060-2
77352-A7	MS-092026-2
77354-A7	MS-092090-2
77355-A7	MS-092075-2
77380-A7	MS-068125-2
77381-A7	MS-068060-2
77384-A7	MS-068090-2
77385-A7	MS-068075-2
77410-A7	MS-028125-8
77411-A7	MS-028060-8
77414-A7	MS-028090-8
77415-A7	MS-028075-8
77438-A7	MS-184125-2
77439-A7	MS-184060-2
77440-A7	MS-184026-2
77442-A7	MS-184090-2
77443-A7	MS-184075-2
77444-AY	MS-014090-8

Part Number Cross Reference - Mag Inc./Micrometals Arnold

Mag Inc P/N	MA P/N
77445-AY	MS-014075-8
77548-A7	MS-130125-2
77550-A7	MS-130026-2
77552-A7	MS-130090-2
77553-A7	MS-130075-2
77585-A7	MS-135125-2
77586-A7	MS-135060-2
77587-A7	MS-135026-2
77589-A7	MS-135090-2
77590-A7	MS-135075-2
77715-A7	MS-200125-2
77716-A7	MS-200060-2
77717-A7	MS-200026-2
77719-A7	MS-200090-2
77720-A7	MS-200075-2
77824-A7	MS-025090-8
77825-A7	MS-025075-8
77834-A7	MS-031090-8
77835-A7	MS-031075-8
77844-A7	MS-040090-2
77845-A7	MS-040075-2
77848-A7	MS-080060-2
77868-A7	MS-300026-2
77874-A7	MS-026090-8
77875-A7	MS-026075-8
77884-A7	MS-039090-8
77885-A7	MS-039075-8
77894-A7	MS-106060-2
77908-A7	MS-301026-2
77930-A7	MS-106125-2
77932-A7	MS-106026-2
77934-A7	MS-106090-2
77935-A7	MS-106075-2
78021-A7	FS-025060-8
78022-A7	FS-025026-8
78023-A7	FS-025014-8
78031-A7	FS-031060-8
78032-A7	FS-031026-8
78033-A7	FS-031014-8
78041-A7	FS-040060-2
78042-A7	FS-040026-2
78043-A7	FS-040014-2
78051-A7	FS-050060-2
78052-A7	FS-050026-2
78053-A7	FS-050014-2
78054-A7	FS-050090-2
78055-A7	FS-050075-2
78059-A7	FS-090060-2
78071-A7	FS-130060-2
78076-A7	FS-141060-2
78083-A7	FS-157060-2
78090-A7	FS-185060-2
78091-A7	FS-185026-2
78092-A7	FS-185014-2
78094-A7	FS-185075-2
78110-A7	FS-225060-2
78111-A7	FS-225026-2
78112-A7	FS-225014-2
78121-A7	FS-065060-2
78122-A7	FS-065026-2

Mag Inc P/N	MA P/N
78123-A7	FS-065014-2
78131-A7	FS-044060-2
78132-A7	FS-044026-2
78133-A7	FS-044014-2
78141-AY	FS-014060-8
78151-AY	FS-015060-8
78154-AY	FS-015090-8
78155-AY	FS-015075-8
78181-AY	FS-018060-8
78184-AY	FS-018090-8
78185-AY	FS-018075-8
78190-A7	FS-226014-2
78191-A7	FS-226026-2
78192-A7	FS-226060-2
78193-A7	FS-226075-2
78194-A7	FS-226090-2
78208-A7	FS-080026-2
78209-A7	FS-080014-2
78210-A7	FS-080090-2
78211-A7	FS-080075-2
78213-A7	FS-225090-2
78214-A7	FS-225075-2
78224-A7	FS-065090-2
78225-A7	FS-065075-2
78241-A7	FS-027060-8
78242-A7	FS-027026-8
78243-A7	FS-027014-8
78244-A7	FS-027090-8
78245-A7	FS-027075-8
78256-A7	FS-157026-2
78257-A7	FS-157014-2
78258-A7	FS-157090-2
78259-A7	FS-157075-2
78271-A7	FS-026060-8
78272-A7	FS-026026-8
78273-A7	FS-026014-8
78281-A7	FS-039060-8
78282-A7	FS-039026-8
78283-A7	FS-039014-8
78291-A7	FS-038060-8
78292-A7	FS-038026-8
78293-A7	FS-038014-8
78294-A7	FS-038090-8
78295-A7	FS-038075-8
78312-A7	FS-090026-2
78313-A7	FS-090014-2
78314-A7	FS-090090-2
78315-A7	FS-090075-2
78326-A7	FS-141026-2
78327-A7	FS-141014-2
78328-A7	FS-141090-2
78329-A7	FS-141075-2
78334-A7	FS-044090-2
78335-A7	FS-044075-2
78351-A7	FS-092060-2
78352-A7	FS-092026-2
78353-A7	FS-092014-2
78354-A7	FS-092090-2
78355-A7	FS-092075-2
78381-A7	FS-068060-2

Mag Inc P/N	MA P/N
78382-A7	FS-068026-2
78383-A7	FS-068014-2
78384-A7	FS-068090-2
78385-A7	FS-068075-2
78411-A7	FS-028060-8
78412-A7	FS-028026-8
78413-A7	FS-028014-8
78414-A7	FS-028090-8
78415-A7	FS-028075-8
78439-A7	FS-184060-2
78440-A7	FS-184026-2
78441-A7	FS-184014-2
78442-A7	FS-184090-2
78443-A7	FS-184075-2
78444-AY	FS-014090-8
78445-AY	FS-014075-8
78550-A7	FS-130026-2
78551-A7	FS-130014-2
78552-A7	FS-130090-2
78553-A7	FS-130075-2
78586-A7	FS-135060-2
78587-A7	FS-135026-2
78588-A7	FS-135014-2
78589-A7	FS-135090-2
78590-A7	FS-135075-2
78716-A7	FS-200060-2
78717-A7	FS-200026-2
78718-A7	FS-200014-2
78719-A7	FS-200090-2
78720-A7	FS-200075-2
78824-A7	FS-025090-8
78825-A7	FS-025075-8
78834-A7	FS-031090-8
78835-A7	FS-031075-8
78844-A7	FS-040090-2
78845-A7	FS-040075-2
78848-A7	FS-080060-2
78867-A7	FS-300060-2
78868-A7	FS-300026-2
78869-A7	FS-300014-2
78874-A7	FS-026090-8
78875-A7	FS-026075-8
78884-A7	FS-039090-8
78885-A7	FS-039075-8
78894A7	FS-106060-2
78907-A7	FS-301060-2
78908-A7	FS-301026-2
78909-A7	FS-301014-2
78932-A7	FS-106026-2
78933-A7	FS-106014-2
78934-A7	FS-106090-2
78935-A7	FS-106075-2
79093-A7	FS-185090-2

Micrometals Arnold Powder Core Inductor Design Software is a flexible user-friendly tool designed to assist in the selection of powder cores. The software file size about 4.5 MB, and is available for free download from www.MicrometalsArnoldPowderCores.com.

The user will have the opportunity to select from two different inductor applications:

1) Design of DC output inductors, typically used in Switch Mode Power Supplies (SMPS)

2) Design of a power factor boost inductor, commonly referred to as a PFC choke.

The program accepts user defined design requirements in terms of required inductance, dc resistance, dc bias current and applied ac voltage. The user has the option of specifying core geometry (Toroids only in this release), specific core materials or all materials, metric units or English units, maximum window fill factor, temperature rise, ambient temperature, etc.

The program will automatically calculate the smallest core size possible and will display;

1) Micrometals Arnold Part Number
2) Approximate unit price*
3) Core A_L Value
4) Required Number of Turns
5) Wire Size
6) Percent Window Fill
7) DC Winding Resistance
8) B_{pk} - Peak AC Flux Density
9) Percent Initial Permeability
10) Core Loss
11) Copper Loss
12) Temperature Rise

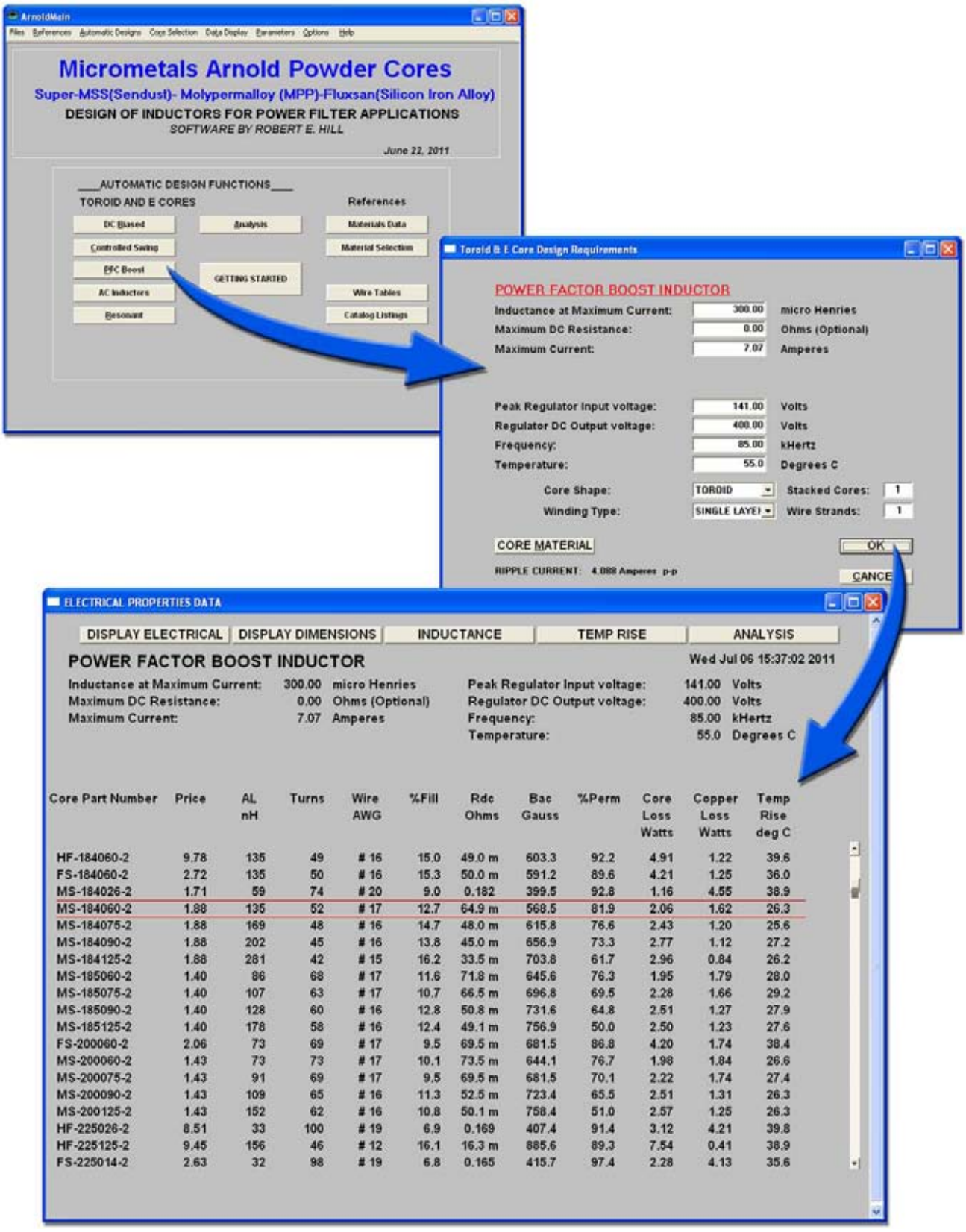
*Unit price is an estimate and intended to demonstrate relative prices between materials and sizes and provide design engineer value judgment and not a procurement offer.

In addition, the software allows the user to analyze specific designs using the analysis function.

The software allows the design engineer to quickly work up multiple design solutions based on user specified electrical requirements which all can easily printed for hard copies. Designs can also be saved to a file by using the 'F' key.

Detailed instructions can be found in the “Help” section of the software. The Applications department at Micrometals can offer technical assistance regarding the use of this software and can be contacted at the Anaheim California headquarters at Applications@Micrometals.com.

Inductor Design Software Example



Core Part Number	Price	AL nH	Turns	Wire AWG	%Fill	Rdc Ohms	Bac Gauss	%Perm	Core Loss Watts	Copper Loss Watts	Temp Rise deg C
HF-184060-2	9.78	135	49	# 16	15.0	49.0 m	603.3	92.2	4.91	1.22	39.6
FS-184060-2	2.72	135	50	# 16	15.3	50.0 m	591.2	89.6	4.21	1.25	36.0
MS-184026-2	1.71	59	74	# 20	9.0	0.182	399.5	92.8	1.16	4.55	38.9
MS-184060-2	1.88	135	52	# 17	12.7	64.9 m	568.5	81.9	2.06	1.62	26.3
MS-184075-2	1.88	169	48	# 16	14.7	48.0 m	615.8	76.6	2.43	1.20	25.6
MS-184090-2	1.88	202	45	# 16	13.8	45.0 m	656.9	73.3	2.77	1.12	27.2
MS-184125-2	1.88	281	42	# 15	16.2	33.5 m	703.8	61.7	2.96	0.84	26.2
MS-185060-2	1.40	86	68	# 17	11.6	71.8 m	645.6	76.3	1.95	1.79	28.0
MS-185075-2	1.40	107	63	# 17	10.7	66.5 m	696.8	69.5	2.28	1.66	29.2
MS-185090-2	1.40	128	60	# 16	12.8	50.8 m	731.6	64.8	2.51	1.27	27.9
MS-185125-2	1.40	178	58	# 16	12.4	49.1 m	756.9	50.0	2.50	1.23	27.6
FS-200060-2	2.06	73	69	# 17	9.5	69.5 m	681.5	86.8	4.20	1.74	38.4
MS-200060-2	1.43	73	73	# 17	10.1	73.5 m	644.1	76.7	1.98	1.84	26.6
MS-200075-2	1.43	91	69	# 17	9.5	69.5 m	681.5	70.1	2.22	1.74	27.4
MS-200090-2	1.43	109	65	# 16	11.3	52.5 m	723.4	65.5	2.51	1.31	26.3
MS-200125-2	1.43	152	62	# 16	10.8	50.1 m	758.4	51.0	2.57	1.25	26.3
HF-225026-2	8.51	33	100	# 19	6.9	0.169	407.4	91.4	3.12	4.21	39.8
HF-225125-2	9.45	156	46	# 12	16.1	16.3 m	885.6	89.3	7.54	0.41	38.9
FS-225014-2	2.63	32	98	# 19	6.8	0.165	415.7	97.4	2.28	4.13	35.6

Inductor design software is available for download at no charge from www.MicrometalsArnoldPowderCores.com

	Super-MSS™ Sendust	MPP	FluxSan™	Hi-Flux™	Optilloy™
Material Type	85% Fe 9% Si 6% Al	81% Ni 17% Fe 2% Mo	93.5% Fe 6.5% Si	50% Ni 50% Fe	Fe Si Al Ni
Material Designation	MS	MP	FS	HF	OP
Comparison made with:	60µ	60µ	60µ	60µ	60µ
Saturation Flux Density					
Bsat (G)	8,900	8,800	16,700	14,800	13,000
H at 50% µi (Oe)	99	100	142	151	141
Core Loss					
60Hz, 5000G	6.4	9.1	14.5	15.7	8.7
10kHz, 500G	12.9	12.9	26.1	18.8	11.8
100kHz, 140G	12.9	12.6	24.2	27.8	15.9
1MHz, 40G	49.0	54.6	79.1	166.5	83.5
Shapes	T, E & B	T	T, E & B	T	T
Max Size Toroid (T)	154mm	154mm	154mm	154mm	154mm
Max Size E-Core (E)	120mm	—	120mm	—	—
Max Size Block (B)	80mm	—	80mm	—	—
Relative Price*	2 - 3	10 - 18	2 - 4	7 - 9	6 - 7

*Pricing estimate relative to Micrometals least expensive iron powder material based on 25mm toroidal geometry.

MICROMETALS
ARNOLD POWDER CORES

Please refer to our website for application assistance and closest distributor:

www.MicrometalsArnoldPowderCores.com

Micrometals Arnold Powder Cores
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