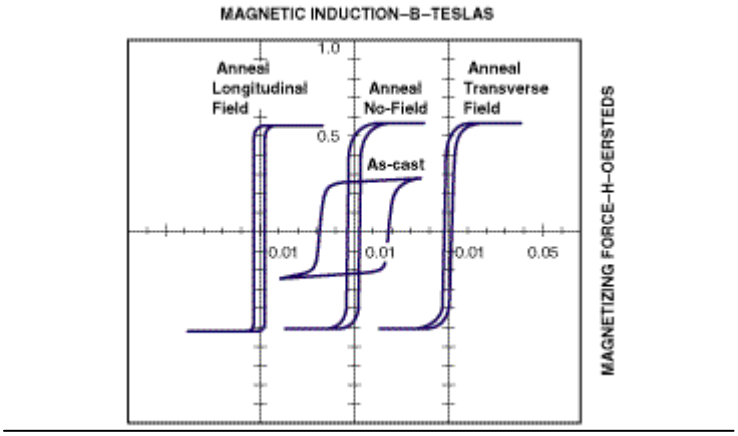
Magnaperm® High Permeability Toroidal Cores are manufactured with cobalt-based Metglas® amorphous alloy 2714A for high frequency applications.
These flat loop toroidal cores offer a unique combination of ultra-high permeability, high saturation flux density and extremely low core loss for electronic component designers.
These properties make Metglas® Magnaperm® cores ideal for a diverse range of applications such as:

- EMI common mode filtering
- Telecommunications & data communications interface transformers
- High accuracy current transformers
- High accuracy pulse transformers
- Ground fault protection devices

Standard sizes are available from 9.6 mm to 34.1 mm OD and the possibility of manufacturing custom sizes also exists. Core coatings meeting UL94V-0 and temperature class F are available upon request.

Typical DC Hysteresis Loop 2714A



Benefits

- Higher initial permeability – which reduces the number of turns
- High permeability over a wide range of operating frequencies
- High attenuation – reduces the need for multi stage filtering
- Low profile – enabling weight and volume reduction up to 50%

Physical Properties METGLAS® Alloy 2714A

Ribbon Thickness (µm)	.18
Density (g/cm^3)	7.59
Thermal Expansion (ppm/°C)	12.7
Crystallization Temperature (°C)	560
Curie Temperature (°C)	225
Continuous Service Temperature (°C)	90
Tensile Strength (MN/m^2)	1k-1.7k
Elastic Modulus (GN/m^2)	100-110
Vicker's Hardness (50g load)	960

Magnetic Properties METGLAS® Magnaperm® Cores

Saturation Flux Density (Tesla)	0.57
Permeability (µ @ 1 kHz, 2.0 mA/cm)	>72,000
Saturation Magnetostriction (ppm)	<<1
Electrical Resistivity (µ-Ω-cm)	142

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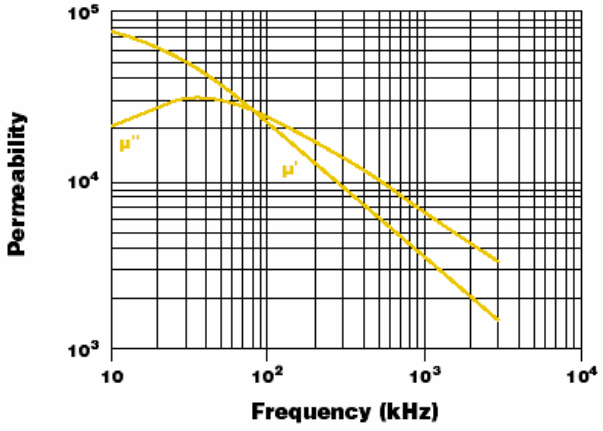
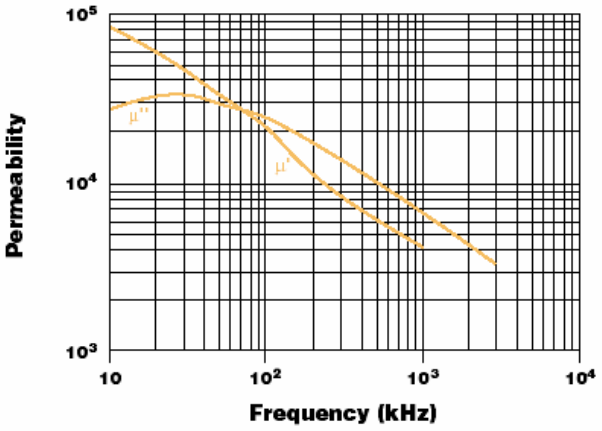
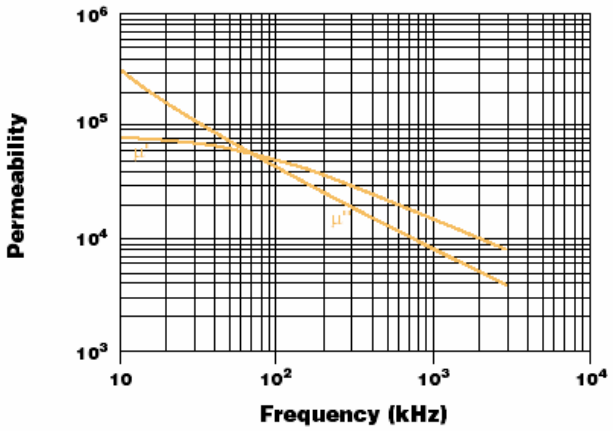
Complex Series Permeability vs. Frequency @ 25°C, 1.6 mA/cm



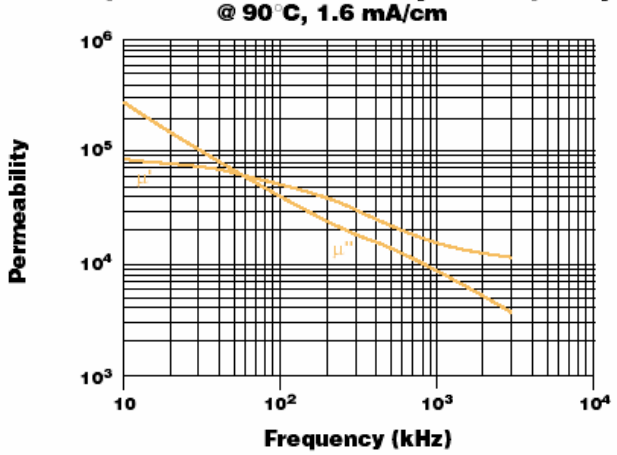
Complex Series Permeability vs. Frequency @ 90°C, 1.6 mA/cm



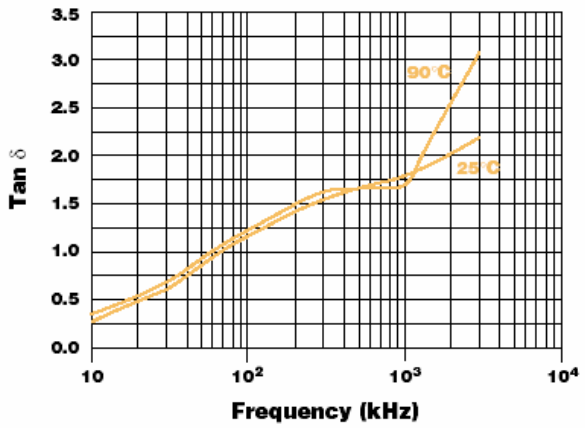
Complex Parallel Permeability vs. Frequency @ 25°C, 1.6 mA/cm



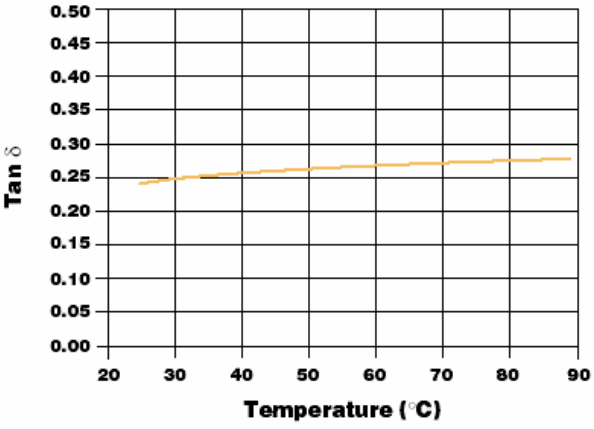
Complex Parallel Permeability vs. Frequency @ 90°C, 1.6 mA/cm



Tan δ vs. Frequency @ 1.6 mA/cm



Tan δ vs. Temperature @ 10 kHz



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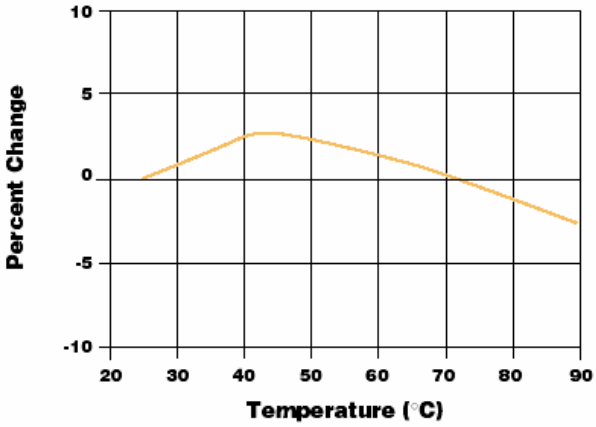
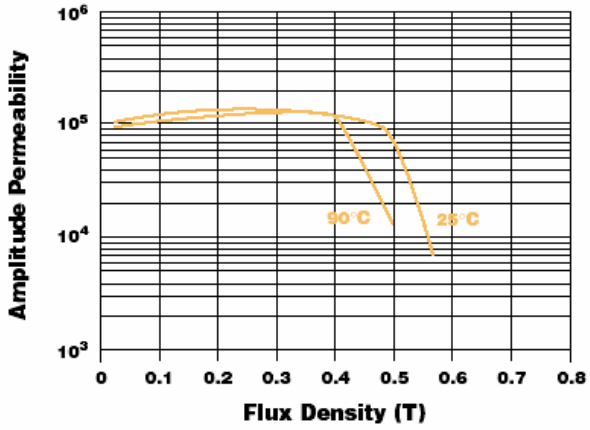
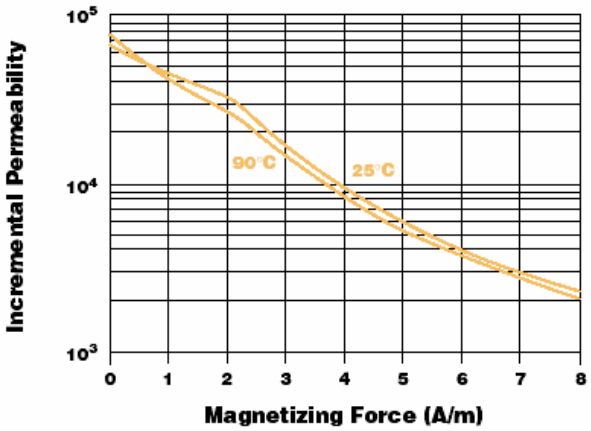
Percent Change of Permeability vs. Temperature @ 10 kHz



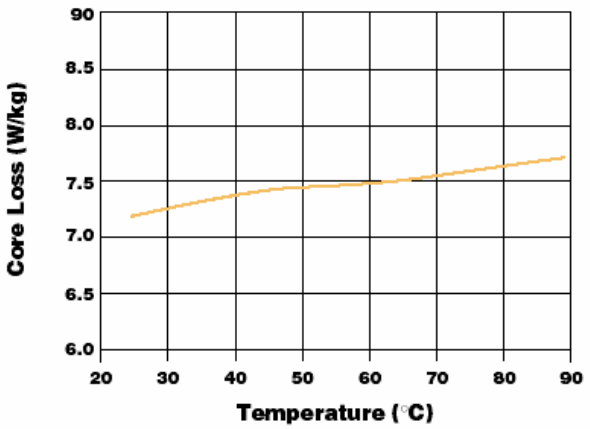
Amplitude Permeability vs. Flux Density @ 10 kHz



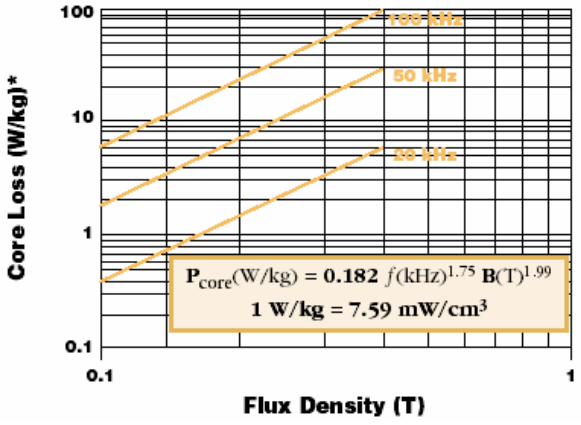
Incremental Permeability vs. dc Bias @ 10 kHz



Core Loss vs. Temperature @ 0.1 T/100 kHz



Core Loss vs. Flux Density† @ 25°C



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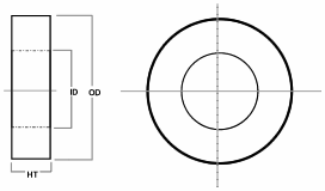
Core Ordering Specifications

MP1305X4AF

- Metglas® Product
- Outside Diameter (OD)
- Height (HT)
- Box Type:(X)
- Flat Loop Core
- Metglas® 2714A Alloy

Case Material:

	Material:	UL File No.	Flam Rat. UL 94	Elec. Rel. Temp Rec. Index (UL746B) Temp.
P	Zytel® 70G33L	E41938	HB	120°C
L	Zytel® FR50	E41938	V-O	130°C
V	Rynite® FR530L	E69578	V-O	150°C



	O.D. Max (mm)	I.D. Min (mm)	HT Max (mm)	L_m (cm)	A_c (cm^2)	Vol (cm^3)	W_a (cm^2)	W_aA_c (cm^4)	Mass (g)	A_L* ($\mu H/N^2$)
MP0805X4AF	9.60	4.00	6.30	2.120	0.066	0.140	0.130	0.008	1.11	28.3
MP1305X4AF	14.40	7.90	6.70	3.460	0.057	0.200	0.490	0.028	1.56	14.9
MP1405X4AF	15.80	7.90	6.70	3.670	0.083	0.300	0.490	0.040	2.41	20.4
MP1506X4AF	17.10	7.80	8.30	3.860	0.140	0.540	0.480	0.067	4.27	32.8
MP1805X4AF	20.80	10.80	6.80	4.880	0.108	0.530	0.920	0.099	4.17	20.1
MP1906X4AF	21.20	11.00	8.30	4.990	0.161	0.800	0.960	0.155	6.36	29.3
MP2008X4AF	22.20	11.00	10.40	5.150	0.248	1.280	0.960	0.238	9.72	43.5
MP2410X4AF	27.80	17.30	11.50	6.830	0.206	1.410	2.340	0.483	10.75	27.3
MP2510X4AF	27.80	17.30	11.50	7.010	0.249	1.740	2.340	0.583	13.28	32.1
MP2705X4AF	29.50	14.80	6.70	6.890	0.207	1.420	1.720	0.356	10.81	27.1
MP3210X4AF	35.00	19.90	11.50	8.580	0.388	3.330	3.100	1.202	25.20	40.9

*A_L value($\mu H/n^2$) 1kHz

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At the time of publishing, the contact information was current and accurate.
Please check http://www.metglas.com/contacts for a distributor near you.