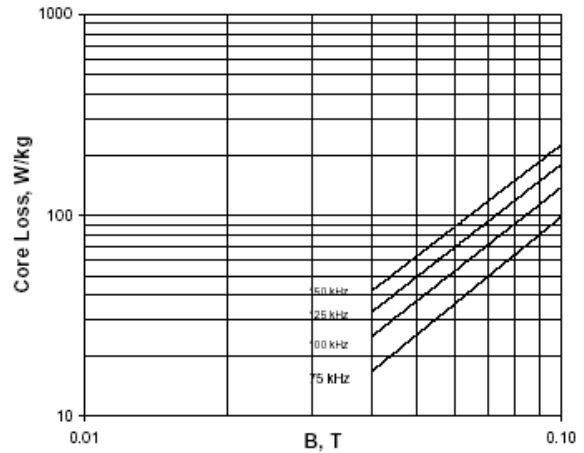


**MICROLITE<sup>®</sup> 100μ CORES**

MICROLITE<sup>®</sup> 100 μ cores are gapped toroids made from iron-based Metglas<sup>®</sup> amorphous alloy 2605SA1. They offer a unique combination of high saturation induction (1.56 T), high permeability and low core loss. MICROLITE<sup>®</sup> 100μ cores are suitable in high frequency, energy storage applications. As with all other METGLAS products, MICROLITE<sup>®</sup> 100μ cores allow the use of significantly smaller sizes than other conventional soft magnetic materials.

**Core loss vs. Magnetic Induction and Frequency**



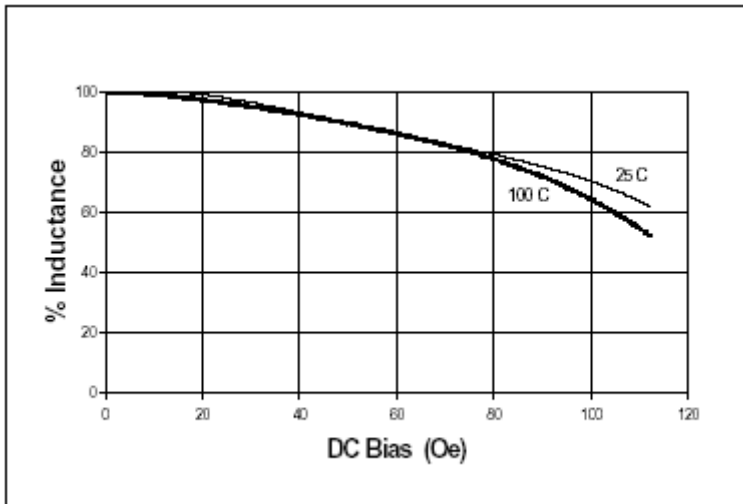
$$\text{Core Loss (W/kg)} = 40.43 \cdot f(\text{kHz})^{1.21} \cdot B(\text{T})^{1.88}$$

**Physical Properties METGLAS MICROLITE 100μ Cores**

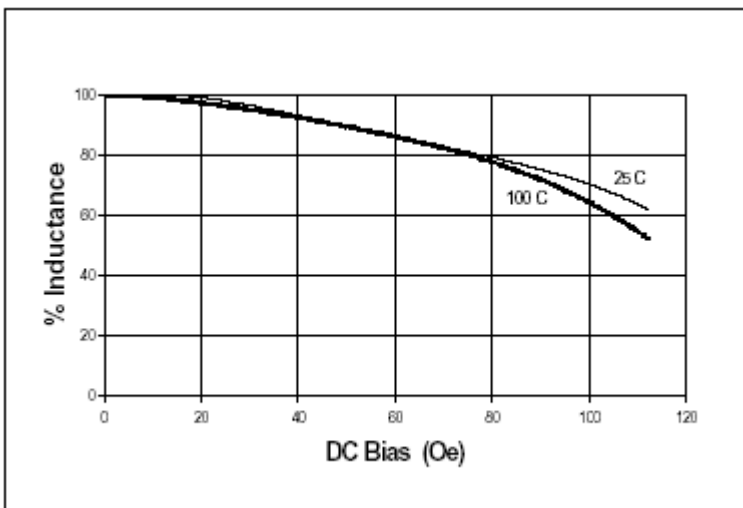
Ribbon Thickness (μm) .....	.22
Density (g/cm <sup>3</sup> ) .....	7.18
Thermal Expansion (ppm/°C) .....	7.6
Crystallization Temperature (°C) .....	505
Curie Temperature (°C) .....	392

**Magnetic Properties METGLAS MICROLITE 100μ Cores**

Saturation Flux Density (Tesla) .....	1.56
Effective Permeability .....	100
Electrical Resistivity (μΩ.cm) .....	137



Bias Characteristics of Inductance



Temperature Dependence of Inductance vs. DC Bias

MICROLITE 100 $\mu$ Gapped Toroidal Cores										
Core No.	CORE DIMENSION			Performance Parameters						
	O.D.Max (mm)	I.D.Min (mm)	Ht. Max (mm)	l <sub>m</sub> (cm)	A <sub>c</sub> (cm <sup>2</sup> )	Vol (cm <sup>3</sup> )	W <sub>a</sub> (cm <sup>2</sup> )	W <sub>a</sub> A <sub>c</sub> (cm <sup>4</sup> )	Initial Perm	A <sub>L</sub> * (nH/N <sup>2</sup> )
MP1205MPFC	12.4714	8.00	4.76	3.22	0.09	0.298	0.437	0.041	100	36.19
MP1306MPFC	13.462	8.00	6.35	3.37	0.15	0.509	0.437	0.066	100	56.23
MP1603MPFC	15.7988	9.53	3.18	3.98	0.09	0.345	0.634	0.055	100	27.37
MP1710MPFC	17.4752	12.70	9.53	4.74	0.20	0.938	1.162	0.230	100	52.45
MP2010MPFC	19.939	12.70	9.53	5.13	0.30	1.538	1.162	0.348	100	73.52
MP2310MPFC	22.9616	12.70	9.53	5.60	0.43	2.382	1.162	0.494	100	95.38
MP2510MPFC	25.5524	19.05	9.53	7.01	0.27	1.888	2.692	0.725	100	48.32
MP2610MPFC	25.5524	16.51	9.53	6.61	0.37	2.475	2.004	0.751	100	71.26
MP2616MPFC	25.5524	14.00	15.54	6.21	0.78	4.852	1.422	1.111	100	157.95
MP3210MPFC	32.1564	22.23	9.53	8.54	0.41	3.515	3.694	1.520	100	60.53
MP3310MPFC	32.4358	15.24	9.53	7.49	0.71	5.336	1.698	1.210	100	119.56
MP3510MPFC	34.925	19.05	9.53	8.48	0.66	5.577	2.692	1.770	100	97.49
MP4010MPFC	39.9034	22.23	9.53	9.76	0.73	7.148	3.694	2.706	100	94.32
MP4510MPFC	44.9072	22.23	9.53	10.55	0.94	9.910	3.694	3.472	100	111.99
MP4520MPFC	44.9072	22.23	19.05	10.55	1.88	19.821	3.695	6.945	100	223.99
MP5812MPFC	58	25.40	12.70	13.10	1.80	23.594	4.854	8.742	100	172.76
MP7050MPFC	11.9888	8.00	4.60	3.14	0.08	0.250	0.437	0.035	100	31.92
MP7089MPFC	44.67	29.49	14.19	11.65	0.94	10.918	6.583	6.170	100	101.11
MP7109MPFC	55.2	37.97	13.79	14.64	1.03	15.127	11.006	11.376	100	88.74
MP7120MPFC	16.002	11.00	6.35	4.24	0.14	0.586	0.859	0.119	100	40.95
MP7195MPFC	52.02	27.51	15.00	12.49	1.60	19.978	5.713	9.136	100	160.87
MP7206MPFC	20.0406	14.00	6.35	5.35	0.17	0.893	1.422	0.238	100	39.25
MP7254MPFC	37.66	25.40	14.12	9.91	0.75	7.460	4.855	3.656	100	95.55
MP7310MPFC	22.0218	14.00	6.35	5.66	0.22	1.254	1.422	0.315	100	49.25
MP7324MPFC	35.306	23.55	9.53	9.24	0.49	4.505	4.158	2.026	100	66.24
MP7350MPFC	22.098	14.76	8.38	5.79	0.27	1.549	1.588	0.425	100	58.10
MP7380MPFC	16.9418	10.77	6.35	4.35	0.17	0.742	0.822	0.140	100	49.22
MP7438MPFC	44.577	25.76	17.46	11.05	1.43	15.795	4.995	7.141	100	162.62
MP7548MPFC	31.5976	20.27	9.53	8.15	0.47	3.824	3.058	1.435	100	72.40
MP7585MPFC	33.3248	24.49	8.38	9.08	0.32	2.927	4.504	1.452	100	44.60
MP7715MPFC	49.57	32.99	12.37	12.97	0.89	11.567	8.274	7.379	100	86.42
MP7930MPFC	25.5524	14.00	9.53	6.21	0.48	2.975	1.422	0.681	100	96.87

## Core Sizes\*

\* $\mu$  and A<sub>L</sub> are  $\pm$  15%. Custom sizes are available.

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