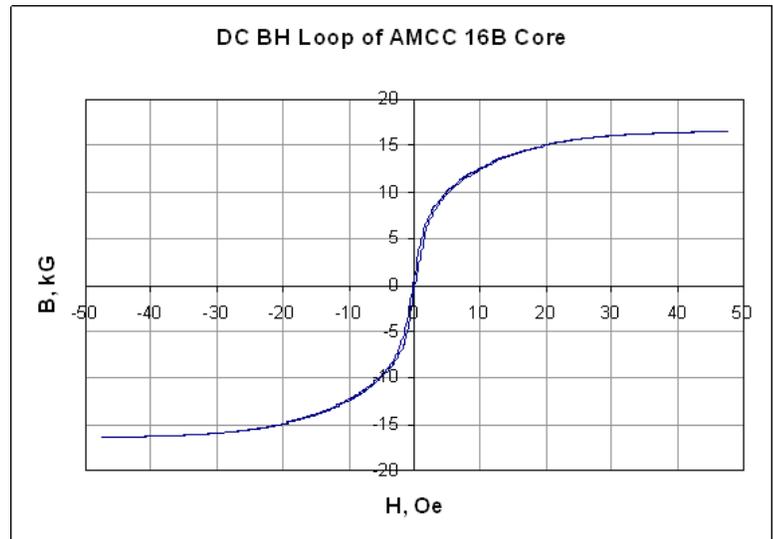


POWERLITE® C-Cores are manufactured with iron based Metglas® amorphous Alloy 2605SA1. Their unique combination of low loss and high saturation flux density provide for size reduction and improvements in energy efficiency making them an ideal solution for automotive inductor applications

Typical DC Hysteresis Loop
Metglas® Alloy 2605SA1



Benefits

Manufactured in a variety of ultra-efficient core configurations, POWERLITE C-Cores provide significant cost, design and performance benefits over ordinary Si-Fe, ferrite and MPP cores such as:

- High Saturation Flux Density (1.56 T)
- Low Profile – enables weight and volume reductions of up to 50%
- Low Temperature Rise – enabling smaller compact designs
- Low Loss – resulting from micro-thin Metglas ribbon (25 µm)

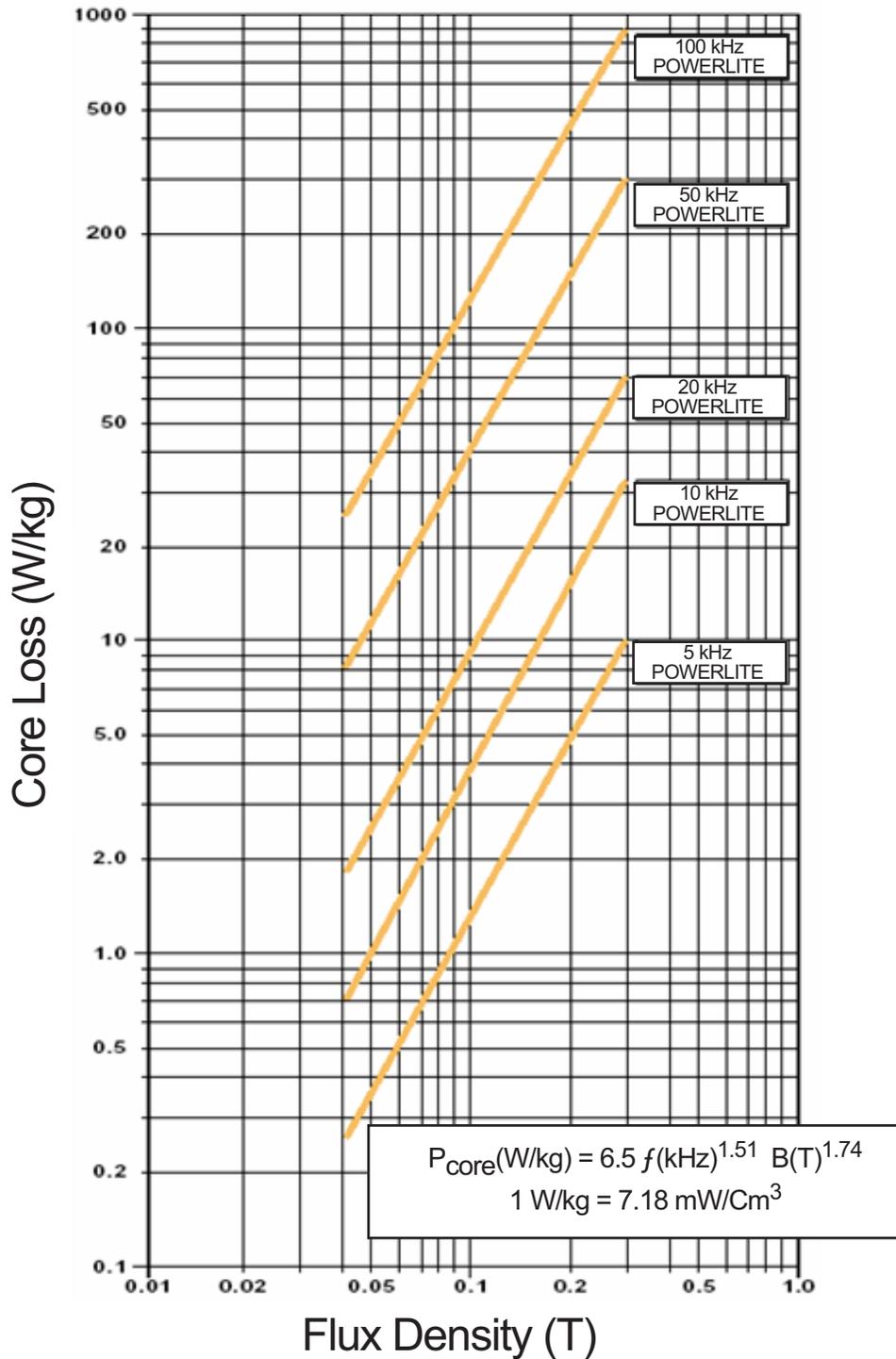
Physical Properties METGLAS Alloy 2605SA1

Ribbon Thickness (µm)	.25
Density (g/cm ³)	7.18
Thermal Expansion (ppm/°C)	7.6
Crystallization Temperature (°C)	505
Curie Temperature (°C)	392
Continuous Service Temperature (°C)	150
Tensile Strength (MN/m ²)	1k-1.7k
Elastic Modulus (GN/m ²)	100-110
Vicker's Hardness (50g load)	860

Magnetic Properties METGLAS Powerlite Cores

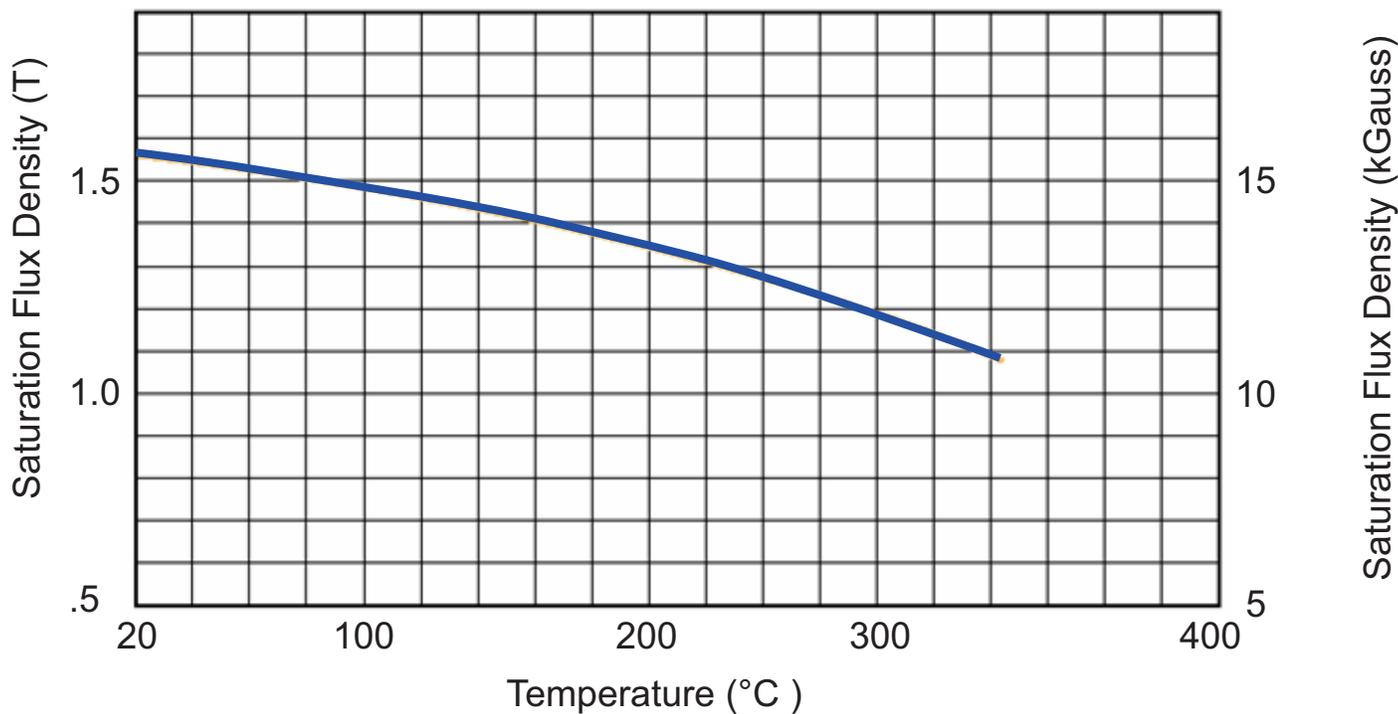
Saturation Flux Density (Tesla)	1.56
Permeability (depending on gap size)	VARIABLE
Saturation Magnetostriction (ppm)	27
Electrical Resistivity (µ Ω cm)	137

Core Loss vs. Flux Density* @ 25°C

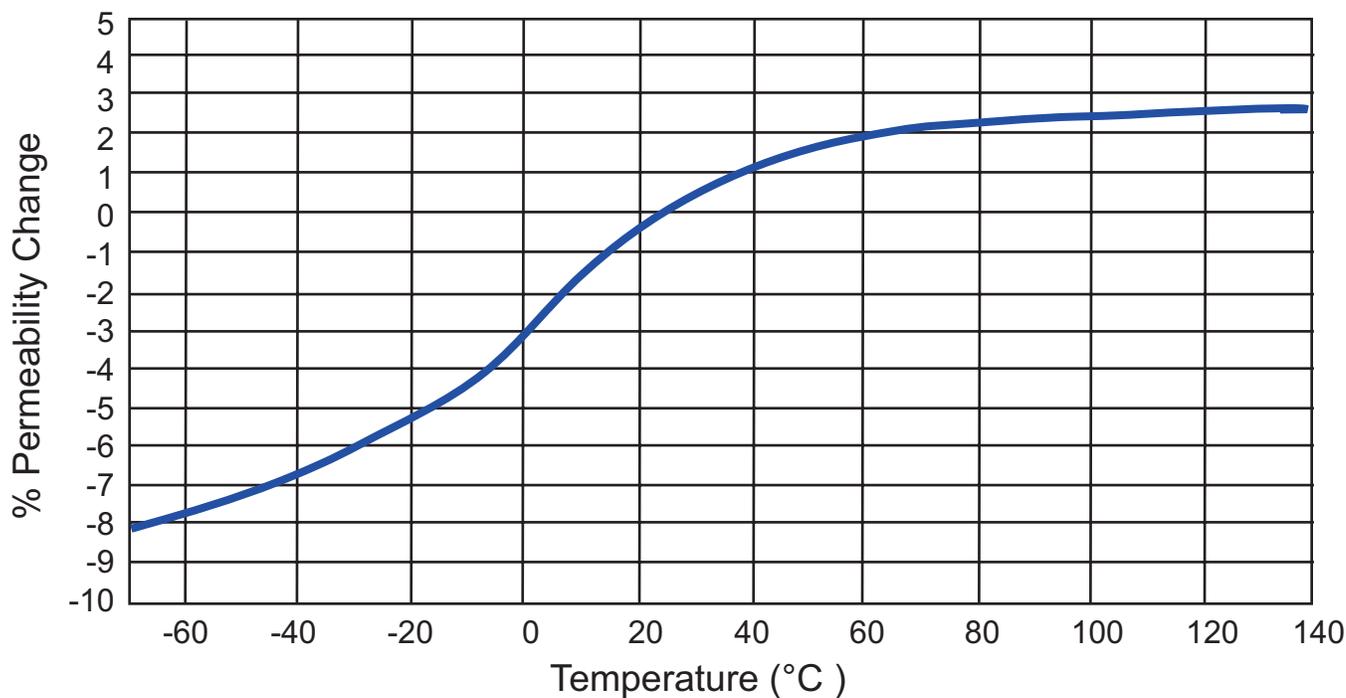


* These curves were determined from ac data; use 1/2 the actual .B to determine core loss for unidirectional applications.

Saturation Induction vs. Temperature

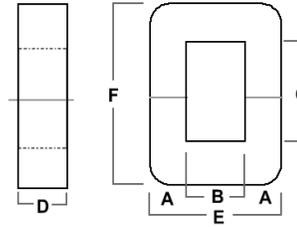


Permeability vs. Temperature



Standard Core Specifications

AMCC1000
Amorphous Metal
C-Core
Part Designation



	Core Dimensions										Performance Parameters				
	a(mm)	±	b(mm)	c(mm)	d(mm)	±	e(mm)	±	f(mm)	±	(lm) cm	ac (cm ²)	Wa (cm ²)	Ap (cm ⁴)	(gms)
AMCC 4	9.00	0.50	10.50	32.75	15.25	0.25	28.50	0.50	51.00	1.00	12.70	1.11	3.44	3.82	102
AMCC 6.3	10.0	0.50	11.00	33.0	20.00	0.50	31.00	1.00	53.00	2.00	13.10	1.60	3.60	5.80	150
AMCC 10	11.0	0.80	13.00	40.0	20.00	0.50	35.00	1.00	62.00	2.00	15.40	1.80	5.20	9.40	200
AMCC 8	11.0	0.80	13.00	30.0	20.00	0.50	35.00	1.00	52.00	2.00	13.20	1.80	3.90	7.00	170
AMCC 16B	11.0	0.80	13.00	50.0	25.00	0.50	35.00	1.00	72.00	2.00	16.90	2.30	6.50	15.0	280
AMCC 16A	11.0	0.80	13.00	40.0	25.00	0.50	35.00	1.00	62.00	2.00	15.10	2.30	5.20	12.0	250
AMCC 20	11.0	0.80	13.00	50.0	30.00	0.50	35.00	1.00	72.00	2.00	17.50	2.70	6.50	17.6	340
AMCC 40	13.0	0.80	15.00	56.0	35.00	0.50	41.00	1.00	82.00	2.00	19.90	3.70	8.40	31.1	530
AMCC 25	13.0	0.80	15.00	56.0	25.00	0.50	41.00	1.00	82.00	2.00	19.60	2.70	8.40	22.7	380
AMCC 32	13.0	0.80	15.00	56.0	30.00	0.50	41.00	1.00	82.00	2.00	20.00	3.20	8.40	26.9	460
AMCC 50	16.0	1.00	20.00	70.0	25.00	0.50	52.00	1.00	102.0	3.00	24.90	3.30	14.0	46.2	590
AMCC 63	16.0	1.00	20.00	70.0	30.00	0.50	52.00	1.00	102.0	3.00	25.30	3.90	14.0	54.6	710
AMCC 80	16.0	1.00	20.00	70.0	40.00	1.00	52.00	1.00	102.0	3.00	25.40	5.20	14.0	72.8	950
AMCC 100	16.0	1.00	20.00	70.0	45.00	1.00	52.00	1.00	102.0	3.00	25.00	5.90	14.0	82.6	1,060
AMCC 160	19.0	1.00	25.00	83.0	40.00	1.00	63.00	1.00	121.0	3.00	28.50	6.50	20.8	135.2	1,330
AMCC 125	19.0	1.00	25.00	83.0	35.00	1.00	63.00	1.00	121.0	3.00	30.20	5.40	20.8	112.1	1,170
AMCC 250	19.0	1.00	25.00	90.0	60.00	1.00	63.00	1.00	128.0	3.00	31.40	9.30	22.5	209.3	2,100
AMCC 200	19.0	1.00	25.00	83.0	50.00	1.00	63.00	1.00	121.0	3.00	29.80	7.80	20.8	162.2	1,670
AMCC 168S	20.4	0.50	30.20	155.2	20.00	0.50	71.00	0.75	196.0	2.00	45.40	3.35	45.7	153.0	1,090
AMCC 320	22.0	1.00	35.00	85.0	50.00	1.00	79.00	1.00	129.0	4.00	32.50	9.00	29.8	267.8	2,170
AMCC 400	22.0	1.00	35.00	85.0	65.00	1.00	79.00	1.00	129.0	4.00	33.60	11.7	29.8	348.1	2,820
AMCC 500	25.0	1.00	40.00	85.0	55.00	1.00	90.00	1.00	135.0	4.00	35.60	11.3	34.0	384.2	2,900
AMCC 630	25.0	1.00	40.00	85.0	70.00	1.00	90.00	1.00	135.0	4.00	35.60	14.3	34.0	486.2	3,670
AMCC 800A	25.0	1.00	40.00	85.0	85.00	1.50	90.00	1.00	135.0	4.00	35.60	17.4	34.0	591.6	4,450
AMCC 367S	25.8	1.00	66.00	97.8	25.00	0.70	117.6	1.50	149.4	1.50	43.78	5.29	63.8	338.0	1,662
AMCC 800B	30.0	1.00	40.00	95.0	85.00	1.50	100.0	1.00	155.0	4.00	39.30	21.0	38.0	798.0	5,930
AMCC 1000	33.0	1.00	40.00	105.0	85.00	1.50	106.0	1.00	171.0	5.00	42.70	23.0	42.0	966.0	7,060

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