Amorphous Cut Cores

Amorphous cut cores are made from metallic glass materials without a crystalline structure (as seen in silicon steels, permalloys, orthonol, and nanocrystalline cores). The amorphous atomic structure results in much higher resistivity than what is exhibited by crystalline alloys; therefore, amorphous cut cores offer excellent frequency response and efficiency.

Amorphous cut cores are a choice solution for high frequency, low loss applications such as uninterruptible power supplies (UPS), SMPS power factor correction (PFC) chokes, filter inductors, and high frequency power transformers and inductors. When compared to ferrite cores, amorphous cores provide a wider operational temperature range, much higher flux capacity, and significantly higher impedance at high frequencies.

Amorphous cut cores are strong in both compression and tension. They resist fracture and corrosion.

Currently available in cut (C-shape) cores, toroids, split cores, and blocks.

AMORPHOUS CUT CORE IDENTIFICATION

AE B 108 095 051

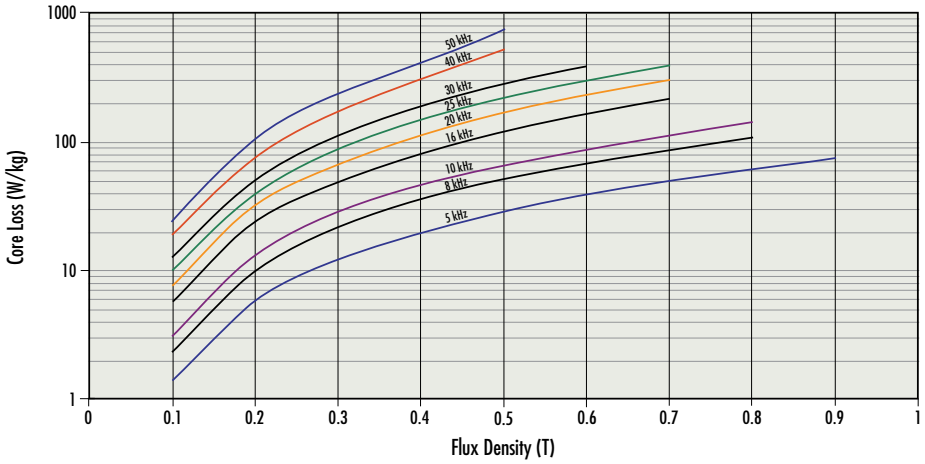
- 051 — Height (rounded mm)
- 095 — Length of other side (rounded mm)
- 108 — Length of side containing cut or longest side if uncut (rounded mm)
- B — Protective Coating; C = Standard Case, P = Painted, B = Bare, F = FR530 Case
- AE — Shape; AE = E core, AC = C core, AB = Block

AMORPHOUS TOROID CORE IDENTIFICATION

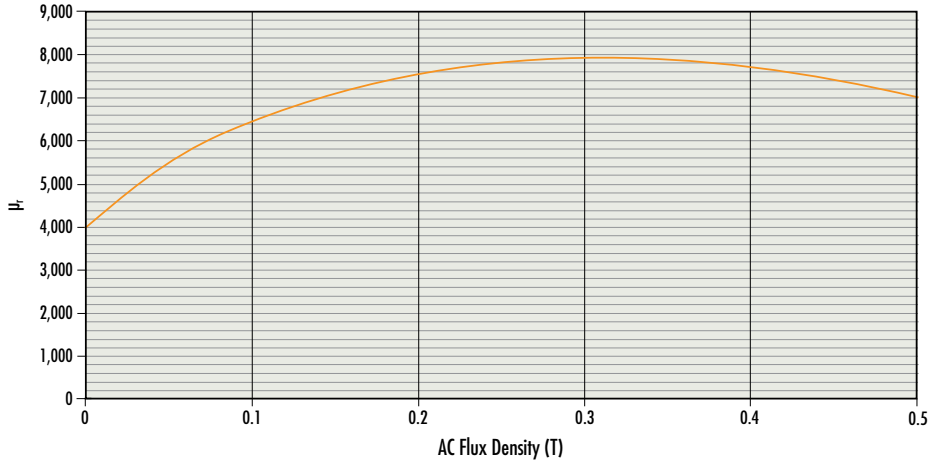
AT B 108 095 051 C

- C — C = Cut in half (optional)
- 051 — Height (rounded mm)
- 095 — ID (rounded mm)
- 108 — OD (rounded mm)
- B — Protective Coating; C = Standard Case, B = Bare
- AT — AT = Amorphous Toroid

Core Loss vs. Flux Density



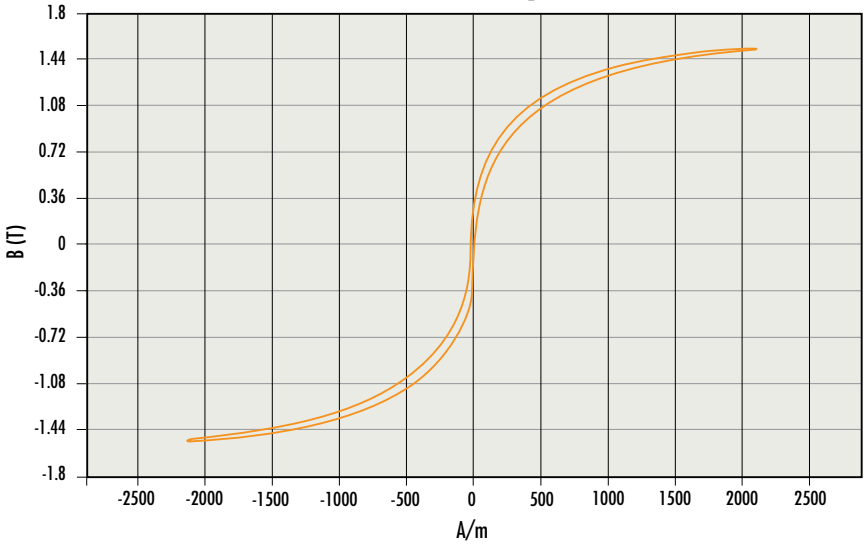
Typical Permeability vs. Flux Density @ 10 kHz



Properties

Saturation Flux Density	1.56 T
Coercive Force	<6 A/m
Density	7.2 g/cm^3
Working Temperature	-55°C to 150°C
Curie Temperature	410°C
Crystallization Temperature	550°C
Resistivity	130 μΩ·cm
CTE	27 x10^{-6}/°C
Hardness HV	960 kg/mm^2

BH Loop



MAGNETICS®

www.mag-inc.com

HEADQUARTERS
110 Delta Drive
Pittsburgh, PA 15238
(p) **1.412.696.1333**
1.800.245.3984
magnetics@spang.com

MAGNETICS INTERNATIONAL
13/F 1-3 Chatham Road South
Tsim Sha Tsui, Kowloon, Hong Kong
(p) **+852.2731.9700**
+86.139.1147.1417
asiasales@spang.com

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