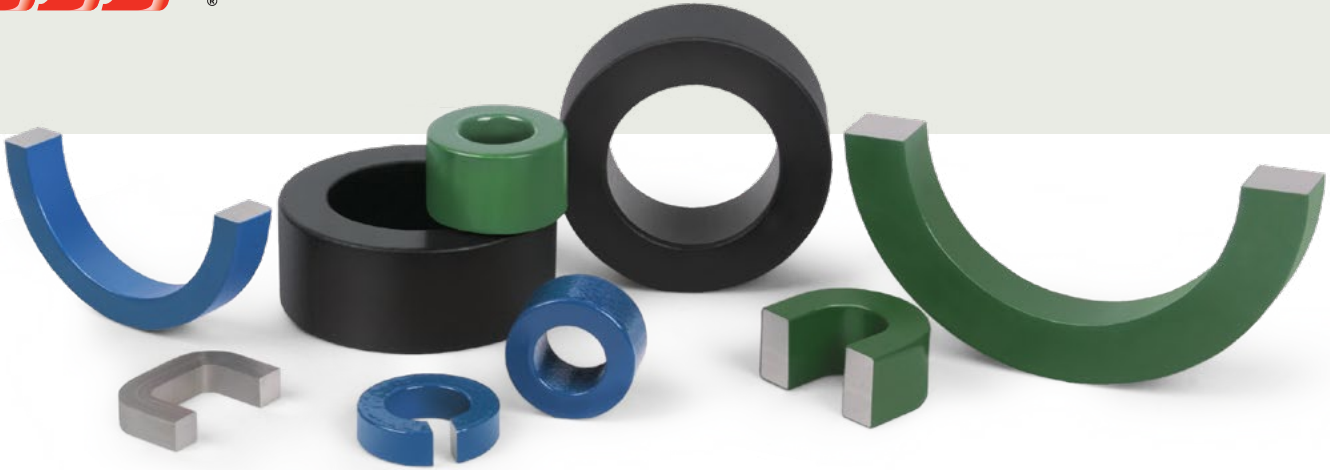




Nanocrystalline Cores

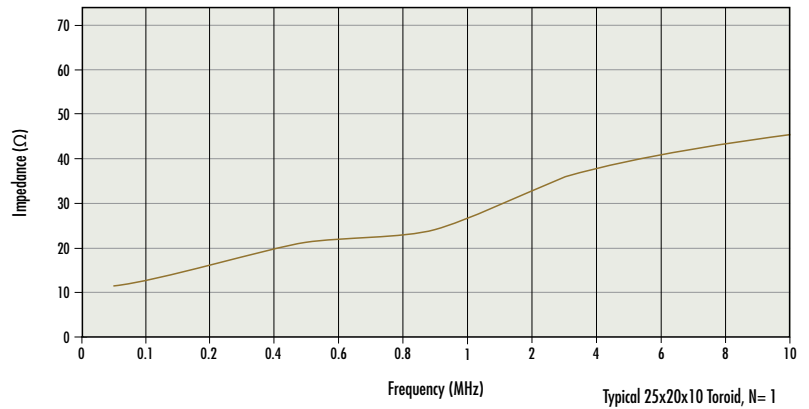


Nanocrystalline cores are a choice solution for applications such as common mode chokes and current transformers as they exhibit high permeability, low power loss, and high saturation. Available in toroids and split cores from 5 mm to 145 mm, Magnetics' nanocrystalline cores can also be used in switched-mode power supplies (SMPS), uninterruptible power supplies (UPS), solar inverters, frequency converters, EMC filters, and automotive and welding applications.

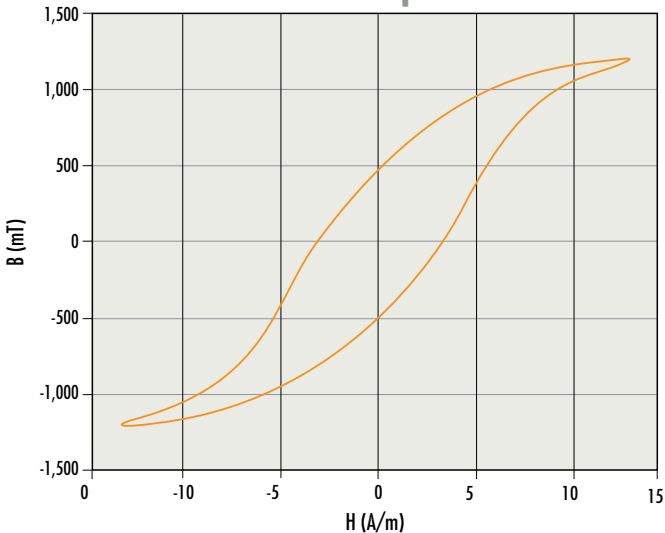
When compared to ferrite cores, nanocrystalline cores provide significantly higher impedance at high frequencies. Due to nanocrystalline's high permeability, common mode chokes and current transformers can be smaller in size, lighter in weight, and handle higher current. Saturation induction of 1.25T and a wide temperature range mean that common mode chokes and current transformers made with nanocrystalline cores are less vulnerable to current imbalance and loss of performance at high temperature.

Nanocrystalline cores are a lower cost alternative to permalloy and exhibit improved accuracy compared to silicon steel. The material's low AC losses result in excellent efficiency, and the option of durable cases - available in polyester (<math><130^{\circ}\text{C}</math>) and rynite polyester (<math><155^{\circ}\text{C}</math>) - makes cores suitable for winding with thick wire.

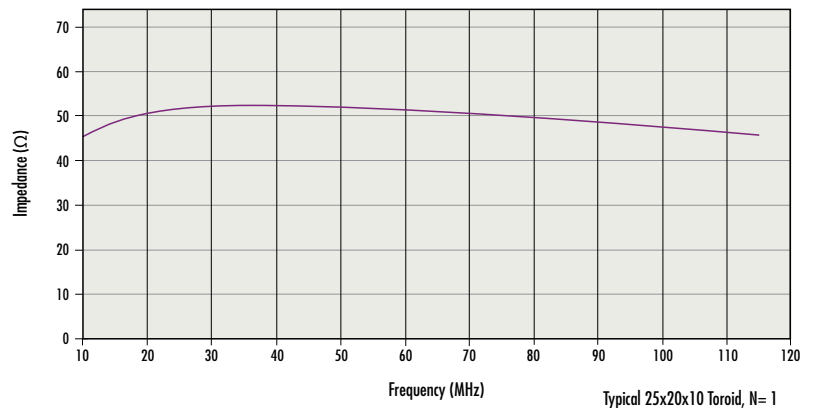
Impedance vs. Frequency 100 kHz – 10 MHz



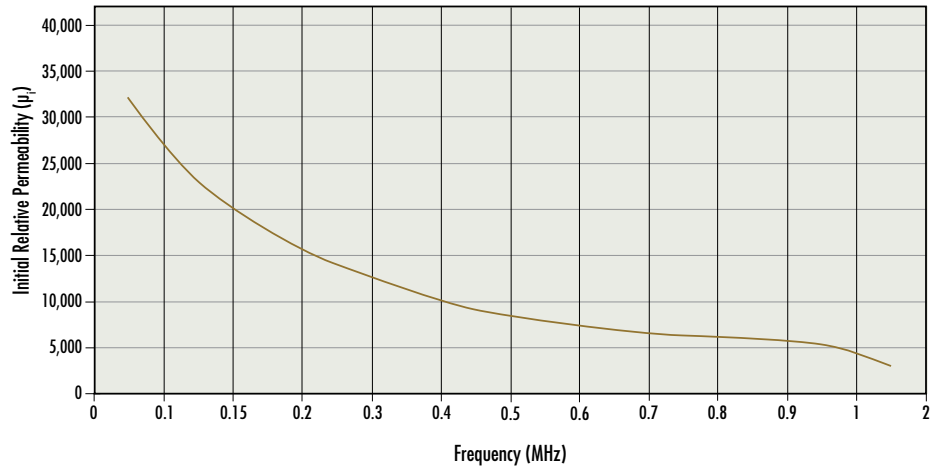
BH Loop



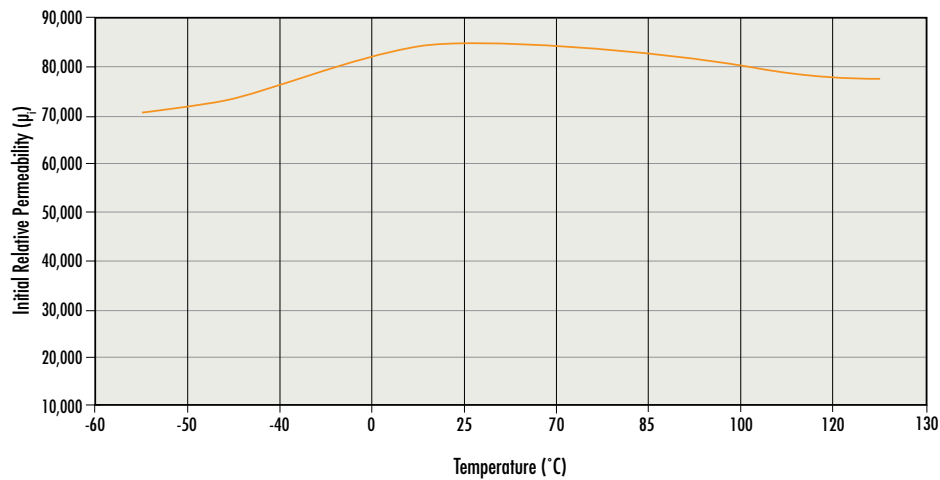
Impedance vs. Frequency 10 MHz – 120 MHz



Permeability vs. Frequency



Permeability vs. Temperature @ 10kHz

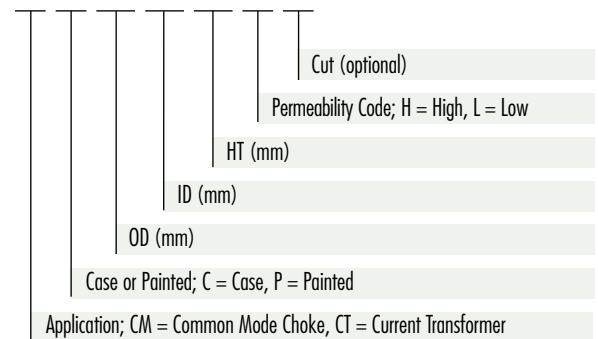


Available Sizes

PART NUMBER	OD (mm)	ID (mm)	HT (mm)
CMC016010006H	16	10	6
CMC020012008H	20	12	8
CMC025016010H	25	16	10
CMC030020010H	30	20	10
CMC030020012H	30	20	12
CMC030020015H	30	20	15
CMC040025015H	40	25	15
CMC040032015H	40	32	15

NANOCRYSTALLINE CORE IDENTIFICATION

CM C 016 010 008 H C



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