

DATA SHEET

3S5 Material specification

Supersedes data of September 2004

2008 Sep 01

Material specification

3S5

3S5 SPECIFICATIONS

A low frequency EMI-suppression material specified on impedance and optimized for frequencies up to 30 MHz in applications with high bias currents at elevated temperatures (e.g. automotive and industrial).

SYMBOL	CONDITIONS	VALUE	UNIT
μ_i	25 °C; ≤ 10 kHz; 0.25 mT	$3800 \pm 20\%$	
B	25 °C; 10 kHz; 1200 A/m 100 °C; 10 kHz; 1200 A/m	≈ 545 ≈ 435	mT
$ Z ^{(1)}$	25 °C; 1 MHz 25 °C; 10 MHz	≥ 20 ≥ 40	Ω
ρ	DC; 25 °C	≈ 10	Ωm
T_C		≥ 255	°C
density		≈ 4800	kg/m ³

1. Measured on a bead $\varnothing 5 \times \varnothing 2 \times 10$ mm.

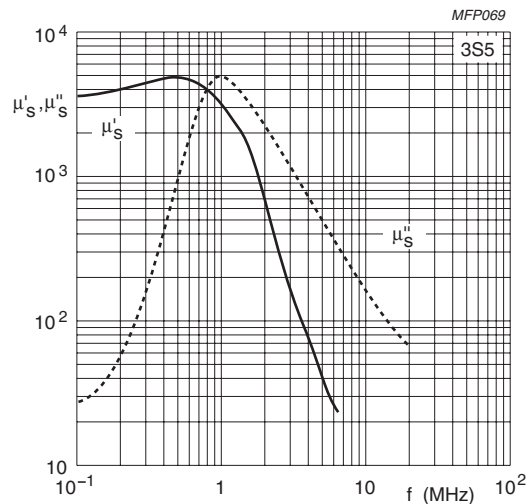


Fig.1 Complex permeability as a function of frequency.

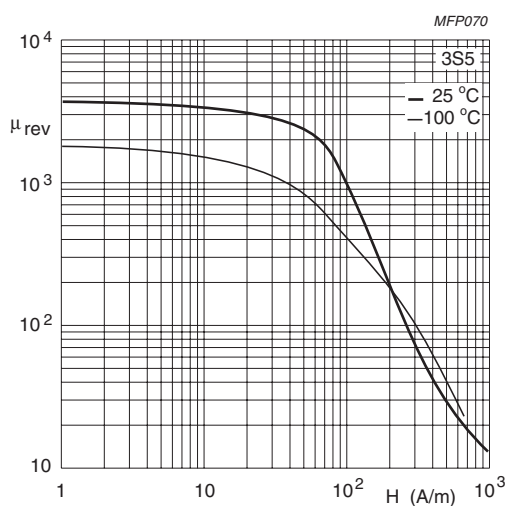


Fig.2 Reversible permeability as a function of magnetic field strength.

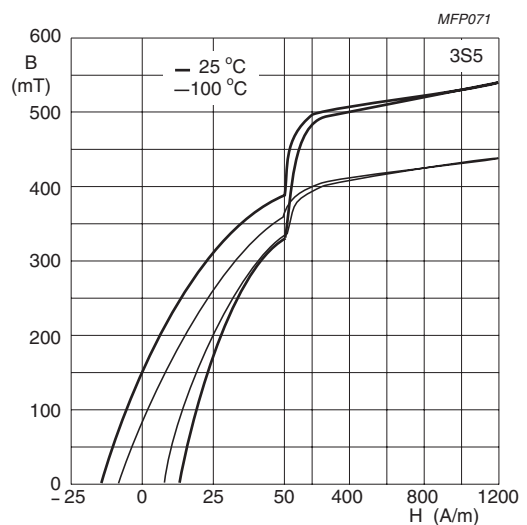


Fig.3 Typical B-H loops.

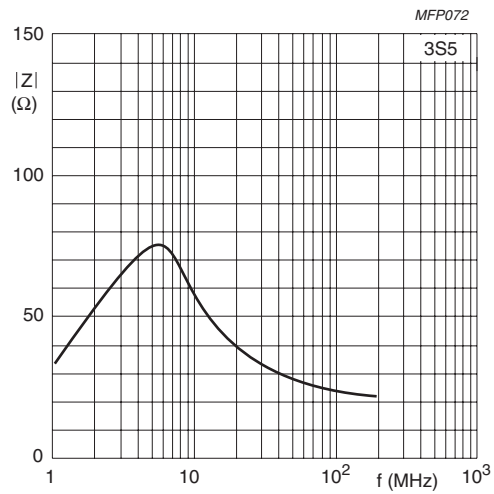


Fig.4 Impedance as a function of frequency.
 measured on a bead $\varnothing 5 \times \varnothing 2 \times 10$ mm.

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DATA SHEET STATUS DEFINITIONS

DATA SHEET STATUS	PRODUCT STATUS	DEFINITIONS
Preliminary specification	Development	This data sheet contains preliminary data. Ferroxcube reserves the right to make changes at any time without notice in order to improve design and supply the best possible product.
Product specification	Production	This data sheet contains final specifications. Ferroxcube reserves the right to make changes at any time without notice in order to improve design and supply the best possible product.

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PRODUCT STATUS DEFINITIONS

STATUS	INDICATION	DEFINITION
Prototype		These are products that have been made as development samples for the purposes of technical evaluation only. The data for these types is provisional and is subject to change.
Design-in		These products are recommended for new designs.
Preferred		These products are recommended for use in current designs and are available via our sales channels.
Support		These products are not recommended for new designs and may not be available through all of our sales channels. Customers are advised to check for availability.