MEGATRON AG
FERROXCUBE DISTRIBUTOR FOR MAGNETIC COMPONENTS

DATA SHEET

3E6
Material specification

Supersedes data of September 2004 2008 Sep 01

FERROXCUBE
A YAGEO COMPANY

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Material specification 3E6

3E6 SPECIFICATIONS

A high permeability material optimized for use in wideband transformers as well as EMI-suppression filters.

	CONDITIONS	VALUE(1)	UNIT
μ_i	25 °C; ≤10 kHz; 0.25 mT	12000 ± 20%	
B	25 °C; 10 kHz; 1200 A/m	≈ 390	mT
	100 °C; 10 kHz; 1200 A/m	≈ 220	
$\tan\delta/\mu_i$	25 °C; 10 kHz; 0.25 mT	$\leq 10 \times 10^{-6}$	
	25 °C; 30 kHz; 0.25 mT	$\leq 30 \times 10^{-6}$	
η_B	25 °C; 10 kHz; 1.5 to 3 mT	$\leq 1 \times 10^{-3}$	T^{-1}
ρ	DC; 25 °C	≈ 0.1	Ωm
T_C		≥ 130	°C
density		≈ 4900	kg/m^3

Note

1. Measured on sintered, non-ground ring cores of dimensions Ø14 × Ø9 × 5 which are not subjected to external stresses.

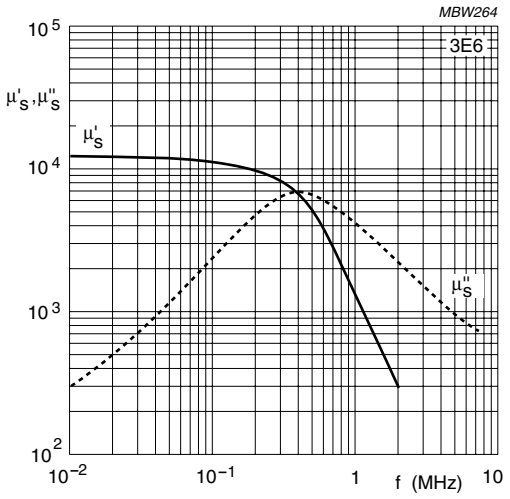

Fig.1 Complex permeability as a function of frequency.

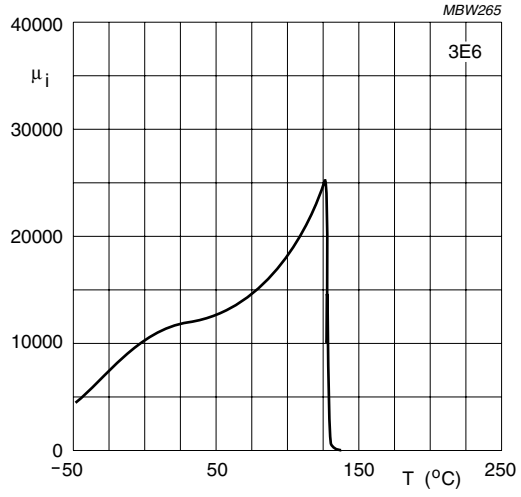

Fig.2 Initial permeability as a function of temperature.

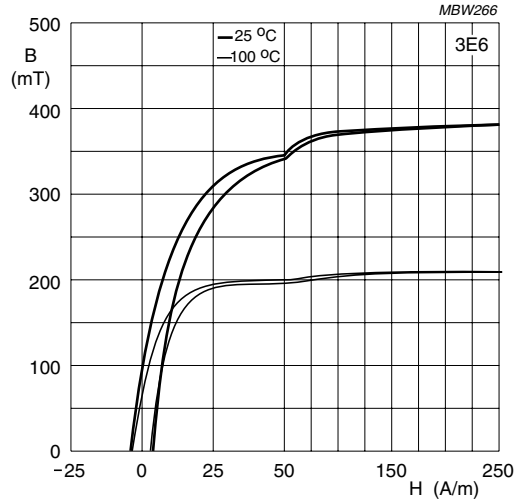

Fig.3 Typical B-H loops.

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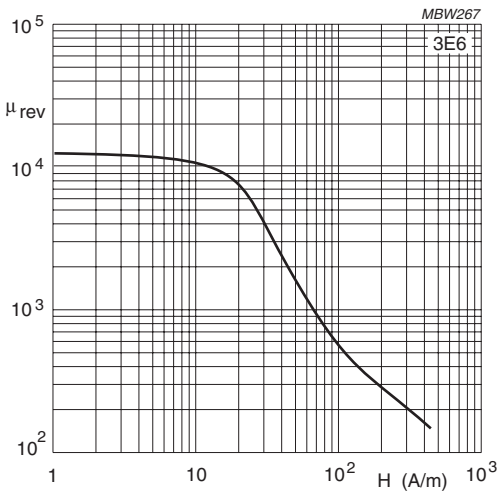

Fig.4 Reversible permeability as a function of magnetic field strength.

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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	prot	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	des	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	sup	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.

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