

# DATA SHEET

## **3D3** Material specification

Supersedes data of February 2002

2004 Sep 01

Material specification

3D3

3D3 SPECIFICATIONS

A medium frequency filter and tuning material optimized for frequencies from 0.2 up to 2 MHz.

SYMBOL	CONDITIONS	VALUE	UNIT
$\mu_i$	25 °C; $\leq 10$ kHz; 0.25 mT	$750 \pm 20\%$	
B	25 °C; 10 kHz; 1200 A/m	$\approx 380$	mT
	100 °C; 10 kHz; 1200 A/m	$\approx 310$	
$\tan\delta/\mu_i$	25 °C; 300 kHz; 0.25 mT	$\leq 10 \times 10^{-6}$	
	25 °C; 1 MHz; 0.25 mT	$\leq 30 \times 10^{-6}$	
$\eta_B$	25 °C; 100 kHz; 1.5 to 3 mT	$\leq 1.8 \times 10^{-3}$	T <sup>-1</sup>
D <sub>F</sub>	25 °C; 10 kHz; 0.25 mT	$\leq 12 \times 10^{-6}$	
$\alpha_F$	25 to 70 °C; $\leq 10$ kHz; 0.25 mT	$(1.5 \pm 1) \times 10^{-6}$	K <sup>-1</sup>
$\rho$	DC; 25 °C	$\approx 2$	$\Omega\text{m}$
T <sub>C</sub>		$\geq 200$	°C
density		$\approx 4700$	kg/m <sup>3</sup>

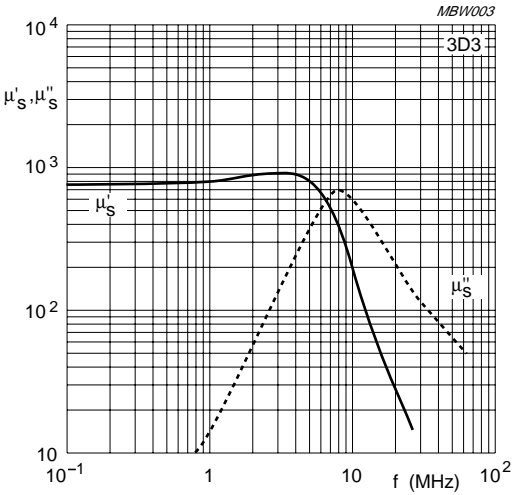


Fig.1 Complex permeability as a function of frequency.

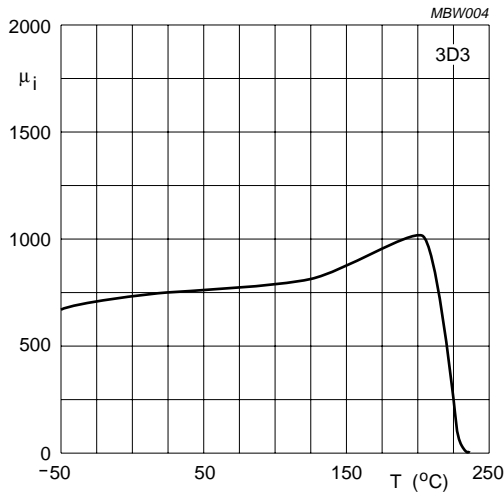


Fig.2 Initial permeability as a function of temperature.

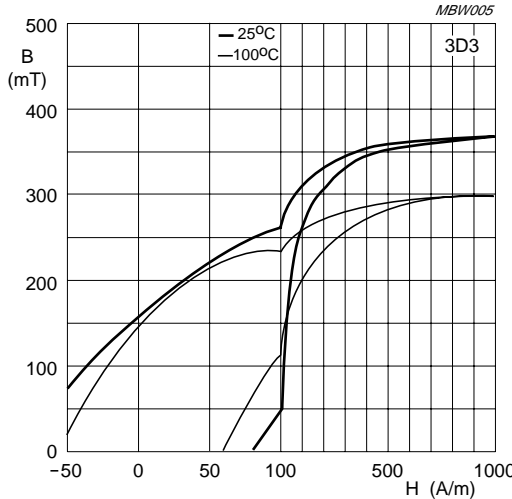


Fig.3 Typical B-H loops.

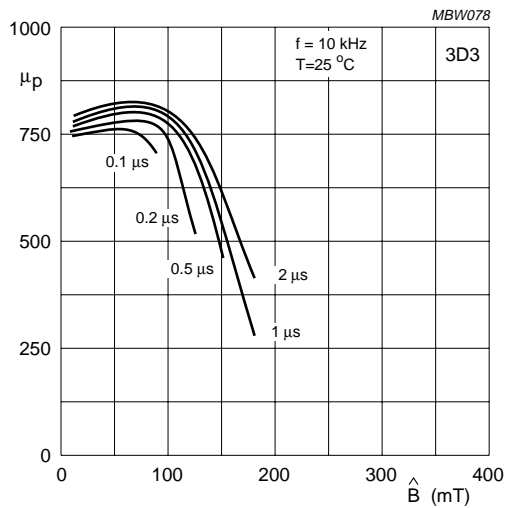


Fig.4 Pulse characteristics (unipolar pulses).

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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

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