

DATA SHEET

3B7 Material specification

Supersedes data of September 2004

2008 Sep 01

Material specification

3B7

3B7 SPECIFICATIONS

A low frequency filter material optimized for frequencies up to 0.1 MHz.

SYMBOL	CONDITIONS	VALUE	UNIT
μ_i	25 °C; ≤ 10 kHz; 0.25 mT	$2300 \pm 20\%$	
B	25 °C; 10 kHz; 1200 A/m	≈ 440	mT
	100 °C; 10 kHz; 1200 A/m	≈ 320	
$\tan\delta/\mu_i$	25 °C; 100 kHz; 0.25 mT	$\leq 5 \times 10^{-6}$	
	25 °C; 500 kHz; 0.25 mT	$\approx 25 \times 10^{-6}$	
	25 °C; 1 MHz; 0.25 mT	$\approx 120 \times 10^{-6}$	
D_F	25 °C; 10 kHz; 0.25 mT	$\leq 4.5 \times 10^{-6}$	
α_F	+20 to 70 °C; ≤ 10 kHz; 0.25 mT	$(0 \pm 0.6) \times 10^{-6}$	K ⁻¹
ρ	DC, 25 °C	≈ 1	Ωm
T_C		≥ 170	°C
density		≈ 4800	kg/m ³

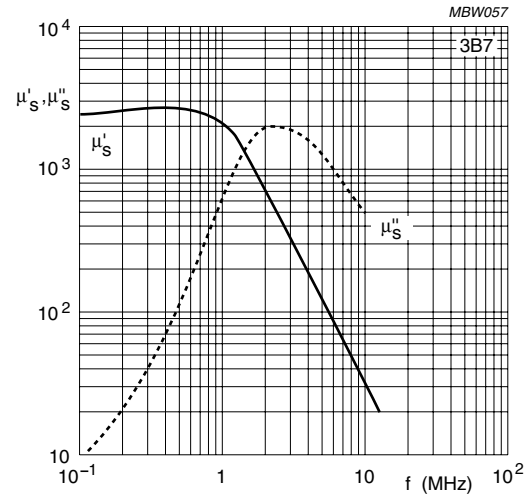


Fig.1 Complex permeability as a function of frequency.

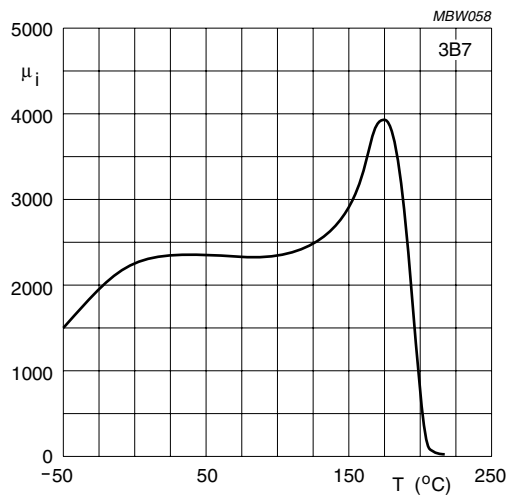


Fig.2 Initial permeability as a function of temperature.

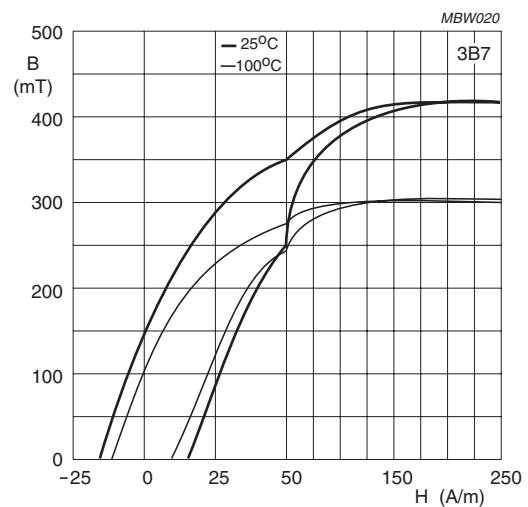


Fig.3 Typical B-H loops.

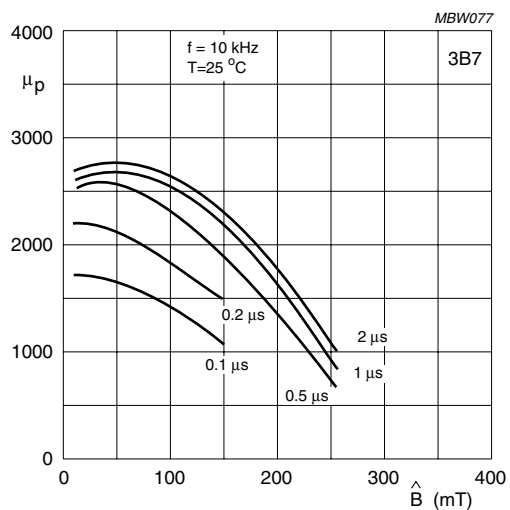


Fig.4 Pulse characteristics (unipolar pulses).

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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

STATUS	INDICATION	DEFINITION
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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.