

DATA SHEET

3E7 Material specification

Supersedes data of September 2004

2008 Sep 01

Material specification

3E7

3E7 SPECIFICATIONS

A high permeability material optimized for use in wideband transformers where small size or a low number of turns are important design parameters.

	CONDITIONS	VALUE ⁽¹⁾	UNIT
μ_i	25 °C; ≤ 10 kHz; 0.25 mT	$15000 \pm 20\%$	
B	25 °C; 10 kHz; 1200 A/m 100 °C; 10 kHz; 1200 A/m	≈ 390 ≈ 220	mT
$\tan\delta/\mu_i$	25 °C; 10 kHz; 0.25 mT 25 °C; 30 kHz; 0.25 mT	$\leq 10 \times 10^{-6}$ $\leq 30 \times 10^{-6}$	
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 $\varnothing 14 \times \varnothing 9 \times 5$ which are not subjected to external stresses.

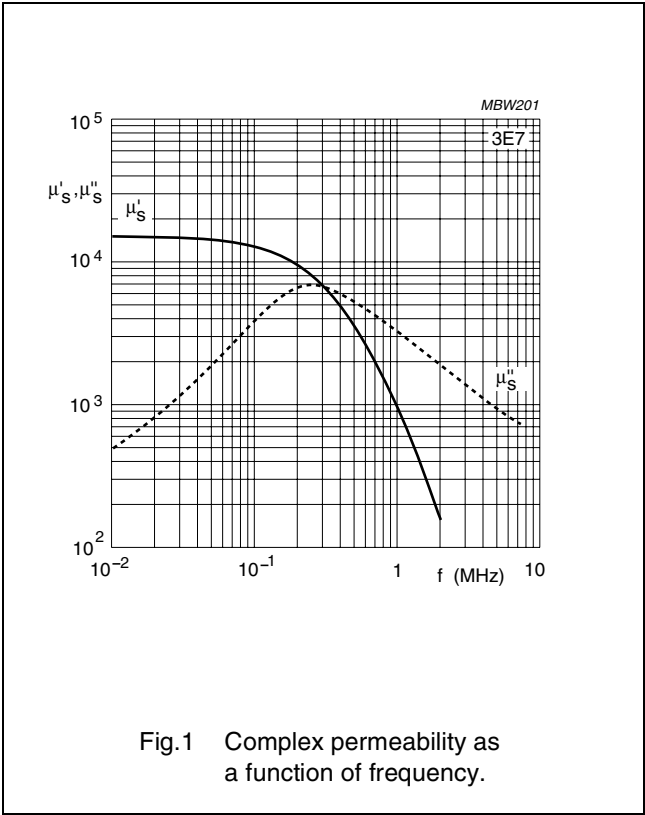


Fig.1 Complex permeability as a function of frequency.

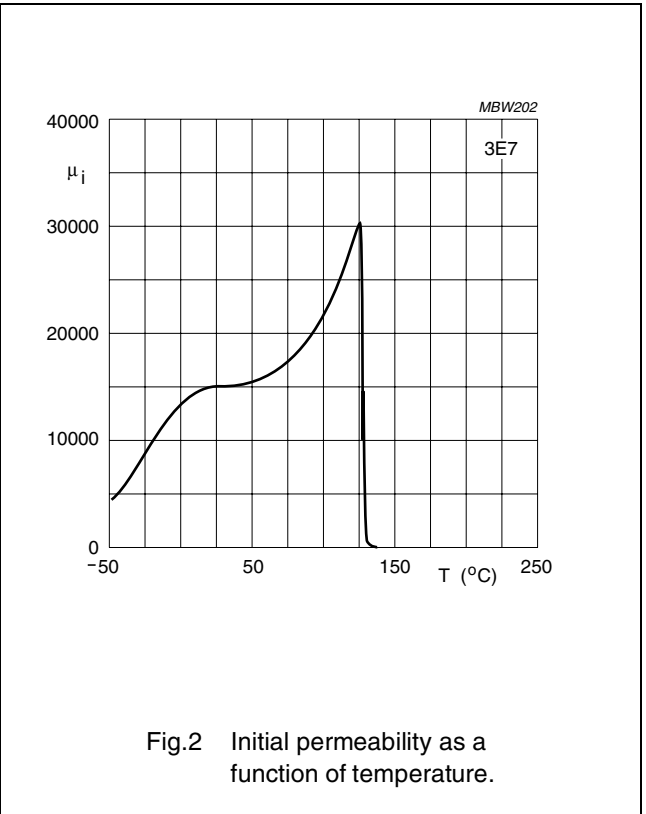


Fig.2 Initial permeability as a function of temperature.

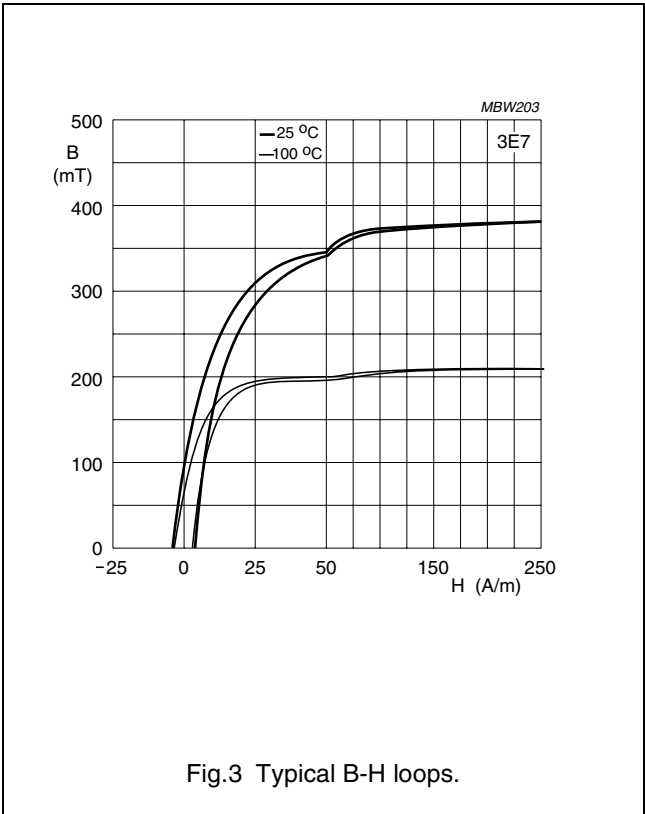
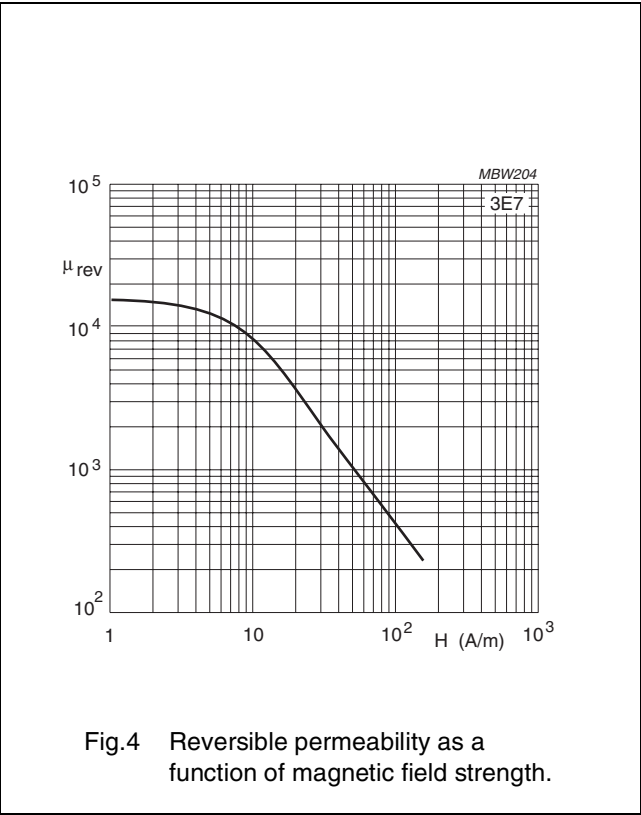


Fig.3 Typical B-H loops.



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DATA SHEET STATUS DEFINITIONS

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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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