

DATA SHEET

3C93 Material specification

Supersedes data of September 2004

2008 Sep 01

Material specification

3C93

3C93 SPECIFICATIONS

A low to medium frequency power material with minimum power losses around 140 °C for use in power transformers at frequencies up to 0.5 MHz.

	CONDITIONS	VALUE	UNIT
μ_i	25 °C; ≤ 10 kHz; 0.25 mT	1800 $\pm 20\%$	
μ_a	100 °C; 25 kHz; 200 mT	≈ 5000	
B	25 °C; 10 kHz; 1200 A/m 100 °C; 10 kHz; 1200 A/m 140 °C; 10 kHz; 1200 A/m	≈ 520 ≈ 430 ≈ 360	mT
P_V	140 °C; 100 kHz; 100 mT 140 °C; 100 kHz; 200 mT 140 °C; 500 kHz; 50 mT	≈ 50 ≈ 350 ≈ 300	kW/m ³
ρ	DC; 25 °C	≈ 5	Ωm
T_C		≥ 240	°C
density		≈ 4800	kg/m ³

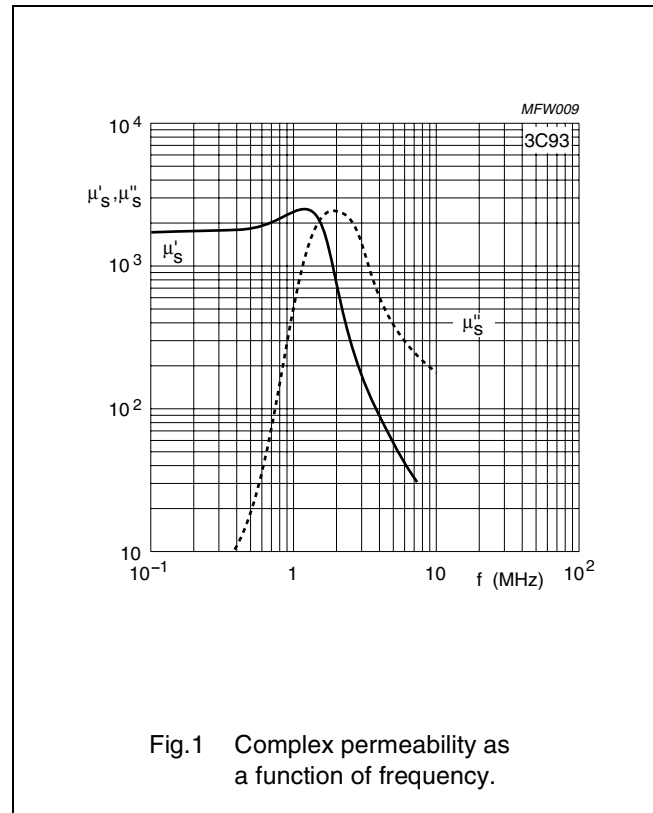


Fig.1 Complex permeability as a function of frequency.

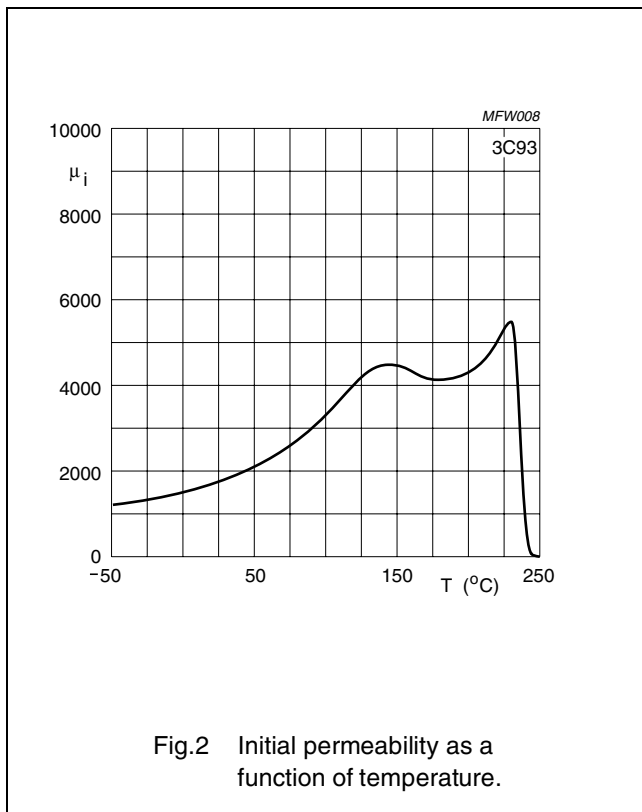


Fig.2 Initial permeability as a function of temperature.

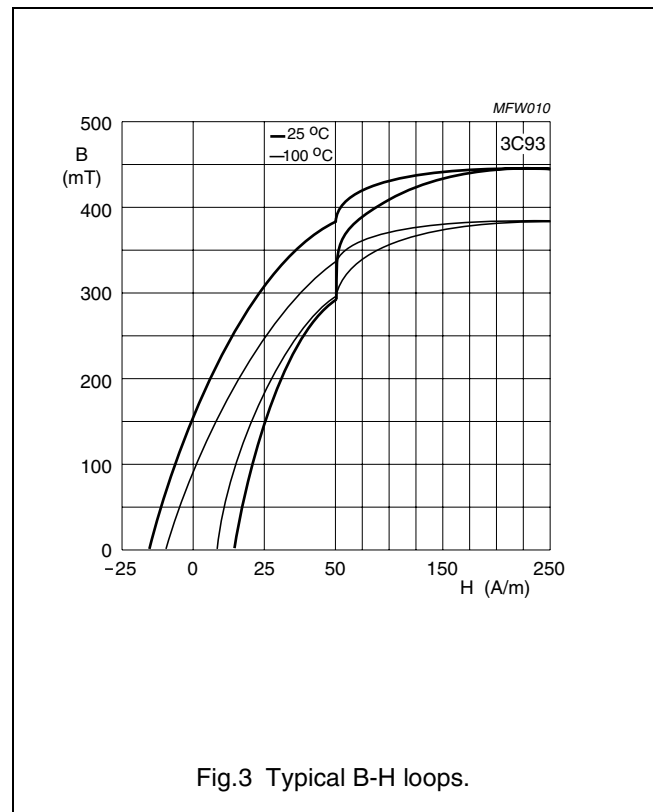
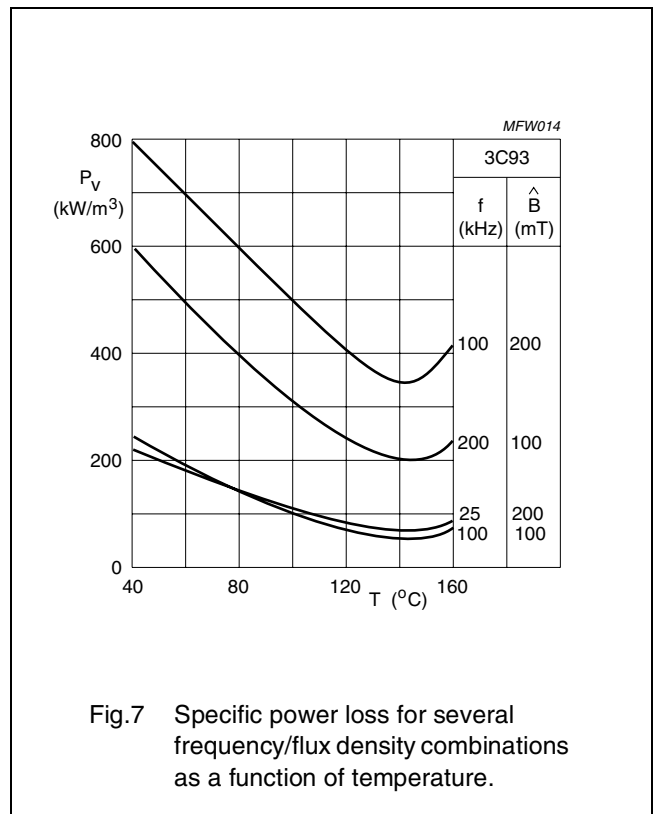
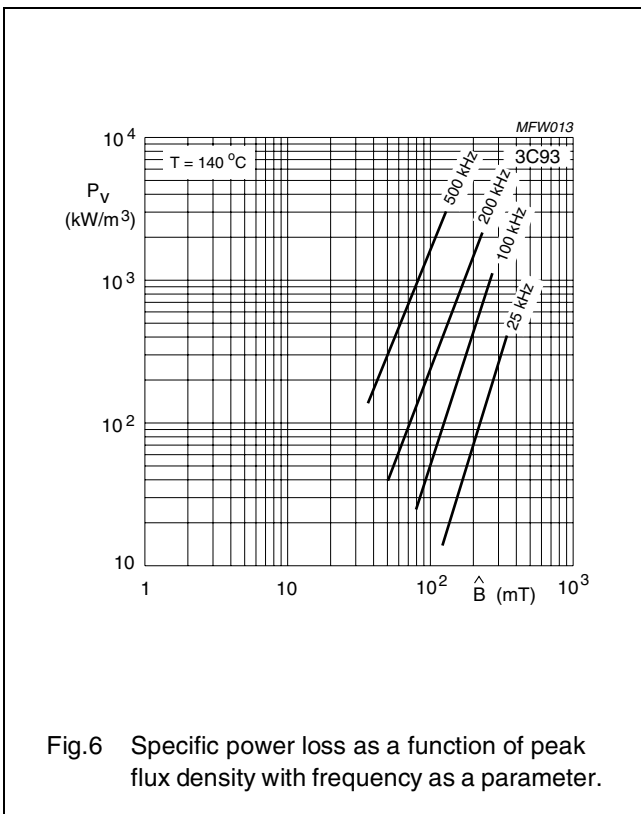
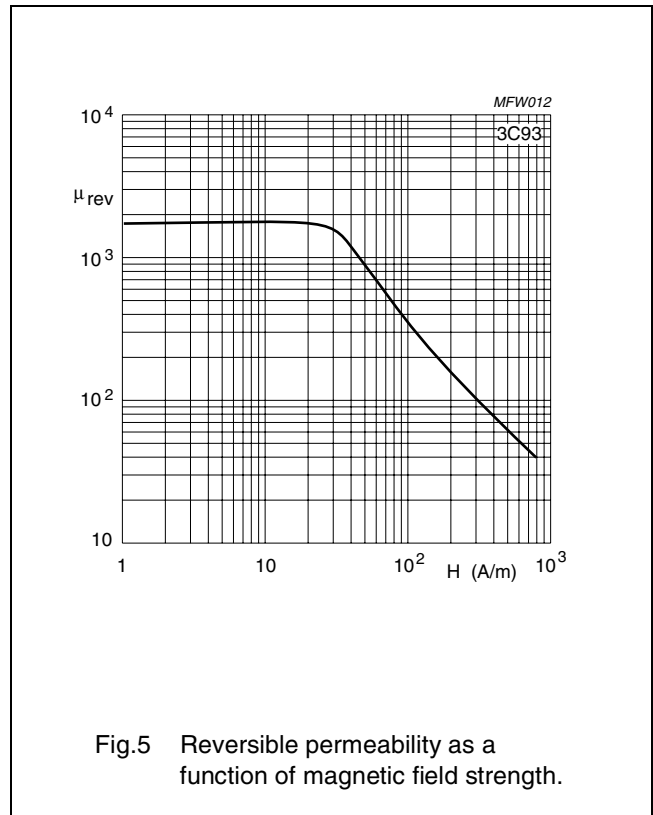
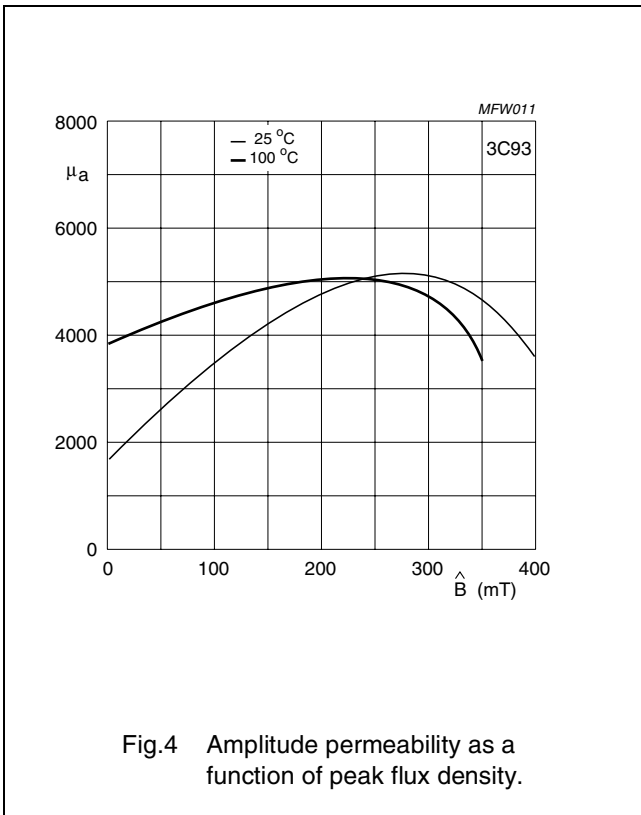


Fig.3 Typical B-H loops.






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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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.