

# 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
$\mu_i$	25 °C; $\leq 10$ kHz; 0.25 mT	1800 $\pm 20\%$	
$\mu_a$	100 °C; 25 kHz; 200 mT	$\approx 5000$	
B	25 °C; 10 kHz; 1200 A/m 100 °C; 10 kHz; 1200 A/m 140 °C; 10 kHz; 1200 A/m	$\approx 520$ $\approx 430$ $\approx 360$	mT
$P_V$	140 °C; 100 kHz; 100 mT 140 °C; 100 kHz; 200 mT 140 °C; 500 kHz; 50 mT	$\approx 50$ $\approx 350$ $\approx 300$	kW/m <sup>3</sup>
$\rho$	DC; 25 °C	$\approx 5$	$\Omega m$
$T_C$		$\geq 240$	°C
density		$\approx 4800$	kg/m <sup>3</sup>

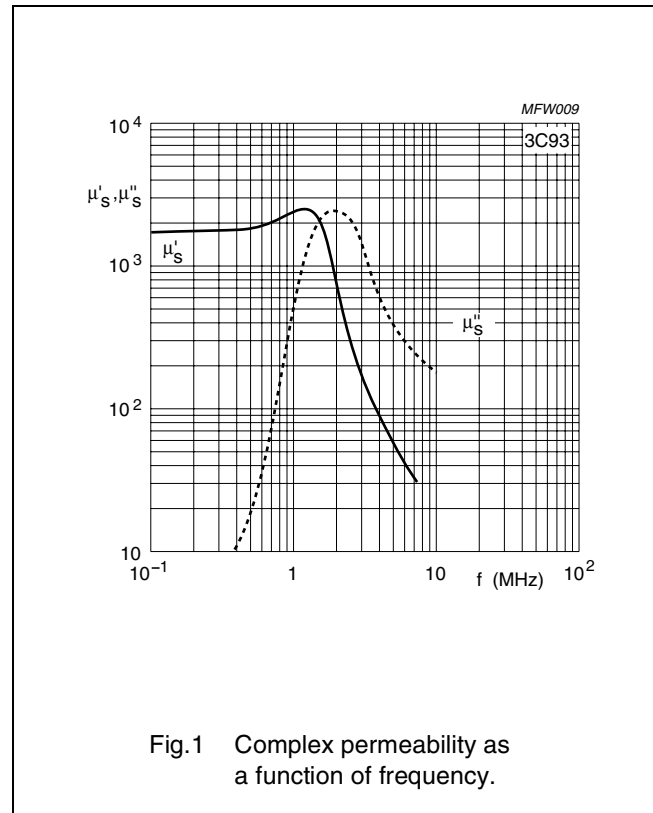


Fig.1 Complex permeability as a function of frequency.

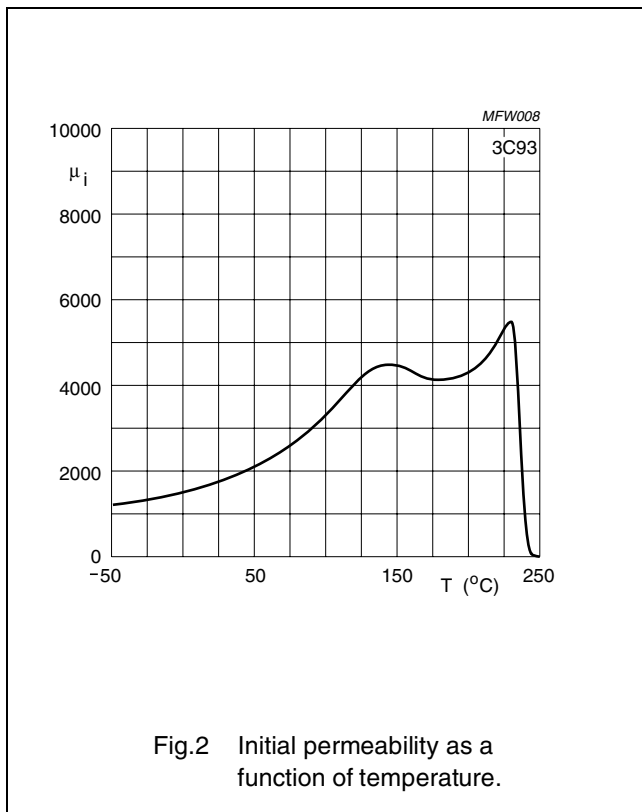


Fig.2 Initial permeability as a function of temperature.

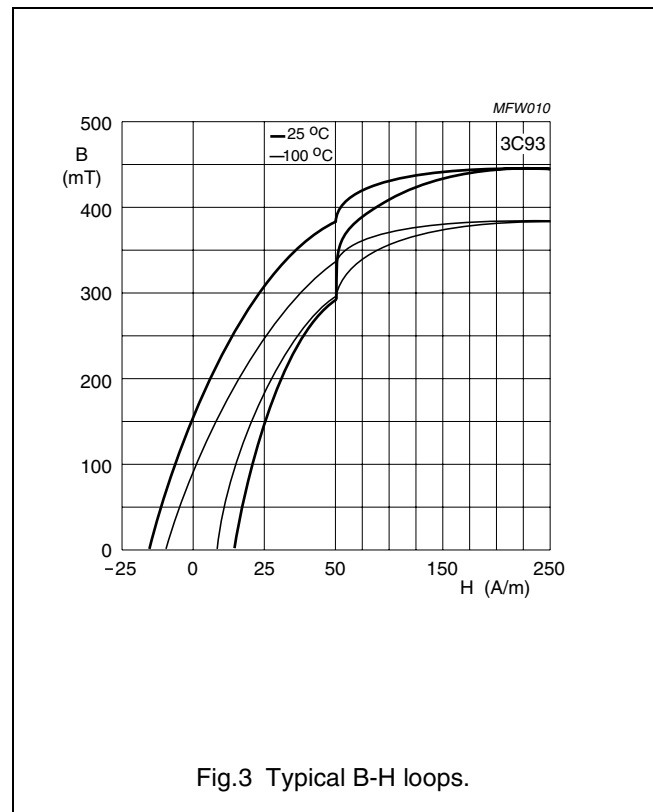
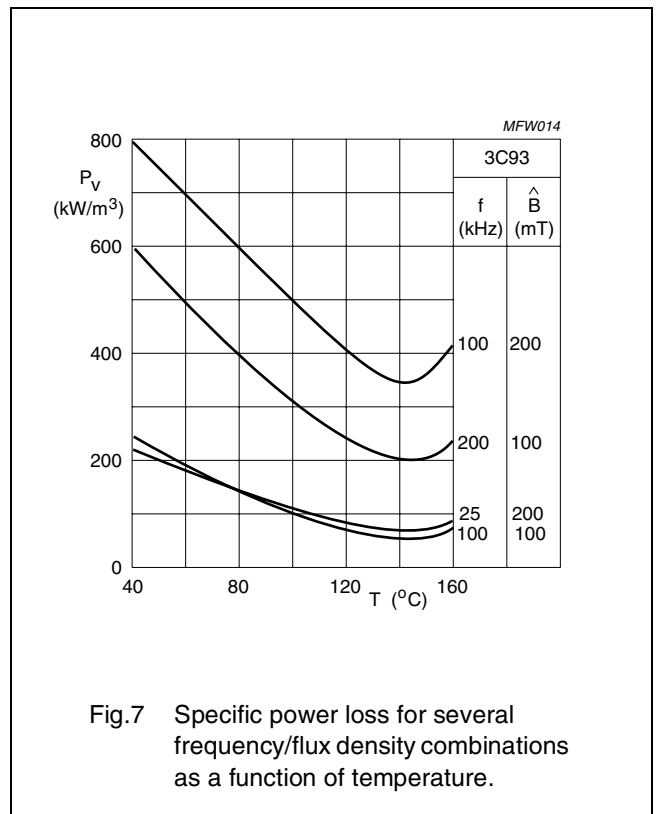
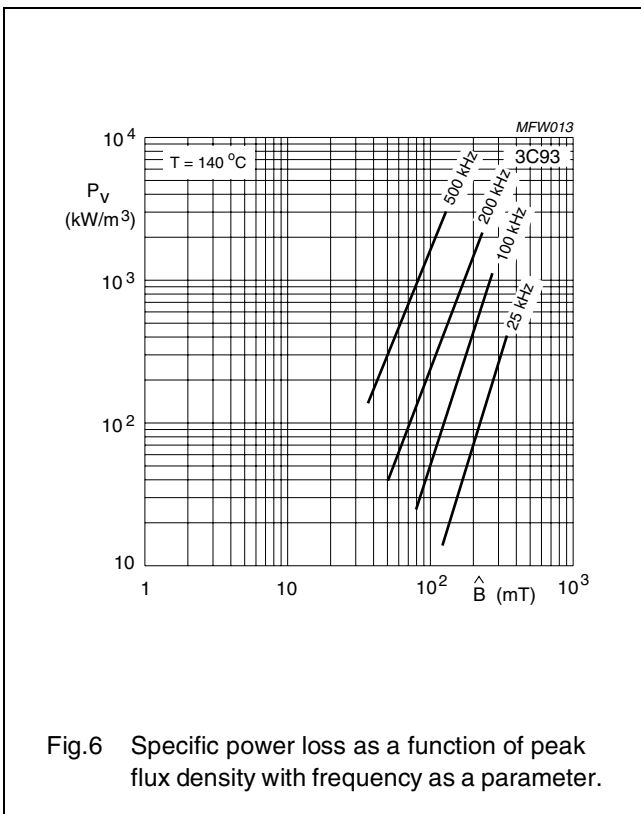
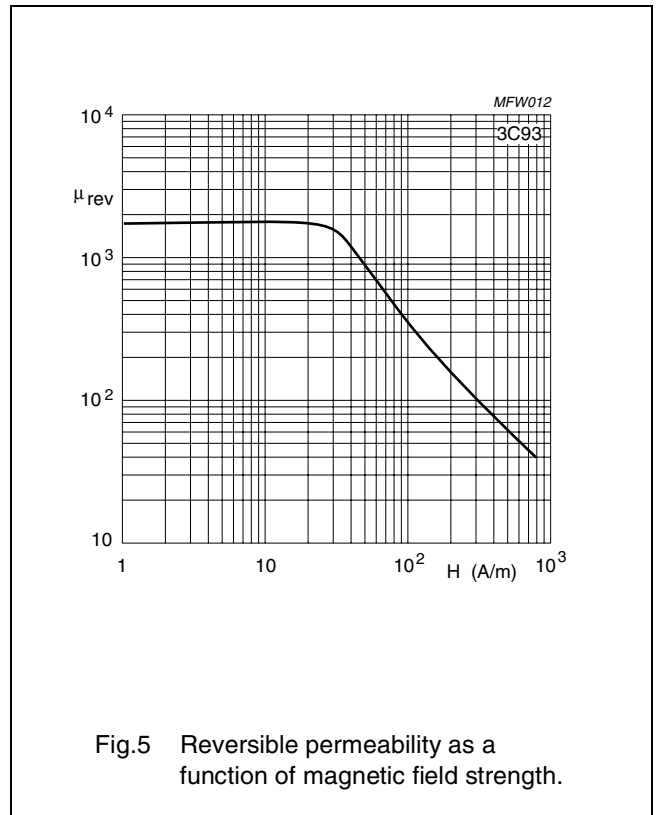
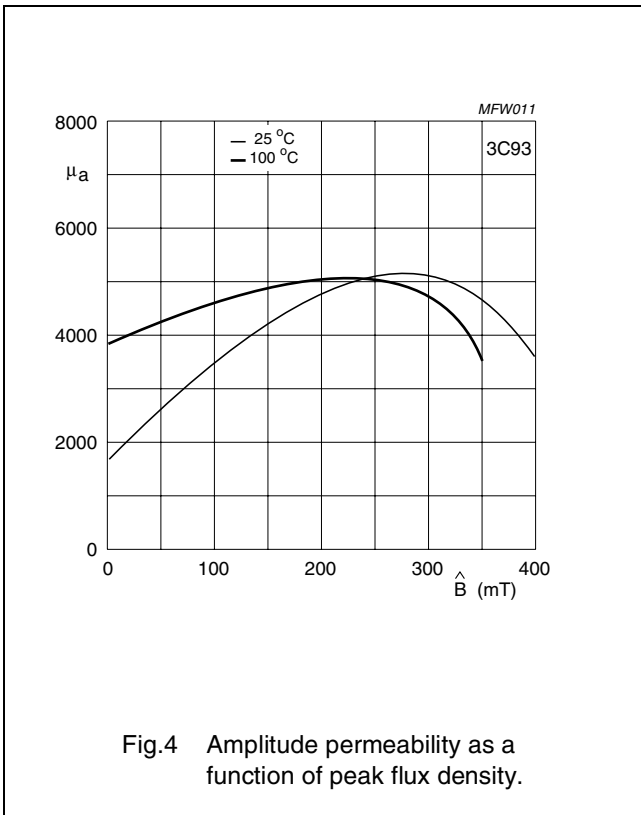


Fig.3 Typical B-H loops.






**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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