

# DATA SHEET

## **3F5** Material specification

Supersedes data of September 2004

2008 Sep 01

Material specification

3F5

3F5 SPECIFICATIONS

A very high frequency power material for use in power and general purpose transformers optimized for frequencies of 2 - 4 MHz.

SYMBOL	CONDITIONS	VALUE	UNIT
$\mu_i$	25 °C; $\leq 10$ kHz; 0.25 mT	650 $\pm 20\%$	
$\mu_a$	100 °C; 25 kHz; 200 mT	$\approx 1000$	
B	25 °C; 10 kHz; 1200 A/m 100 °C; 10 kHz; 1200 A/m	$\approx 380$ $\approx 340$	mT
$P_V$	100 °C; 3 MHz; 10 mT 100 °C; 3 MHz; 30 mT	$\approx 100$ $\approx 900$	kW/m <sup>3</sup>
$\rho$	DC; 25 °C	$\approx 10$	$\Omega\text{m}$
$T_C$		$\geq 300$	°C
density		$\approx 4750$	kg/m <sup>3</sup>

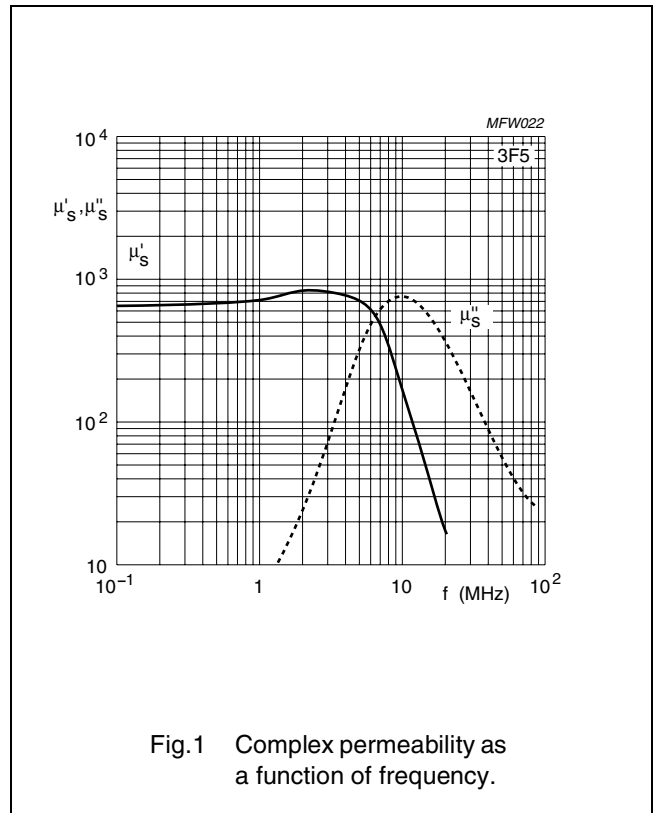


Fig. 1 Complex permeability as a function of frequency.

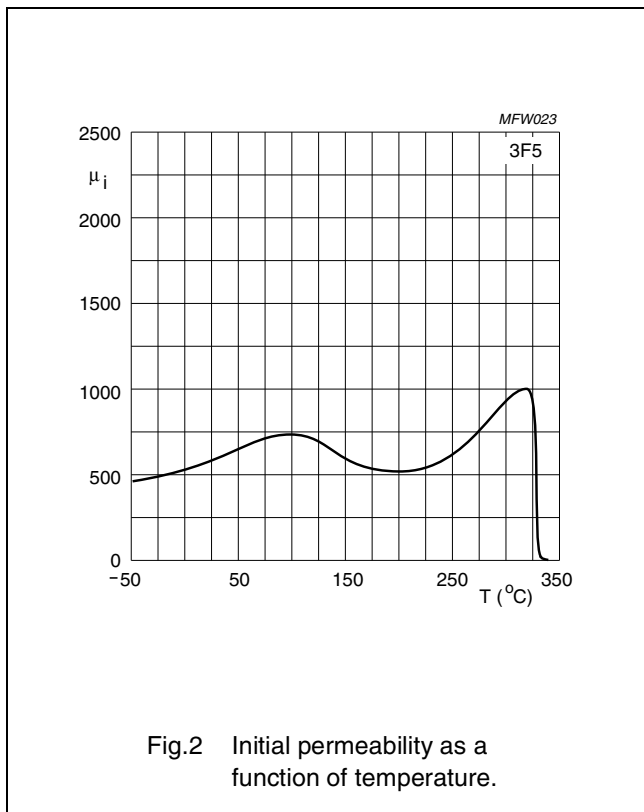


Fig. 2 Initial permeability as a function of temperature.

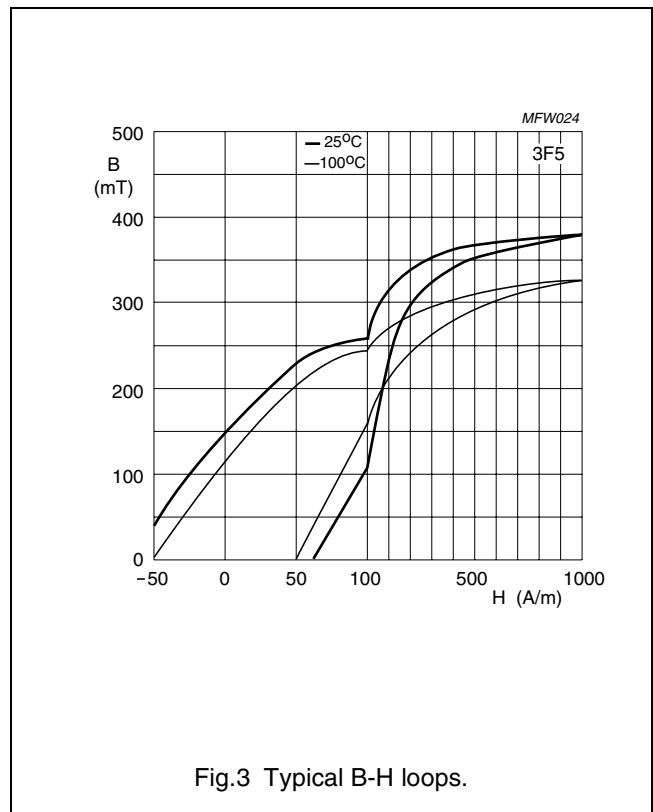
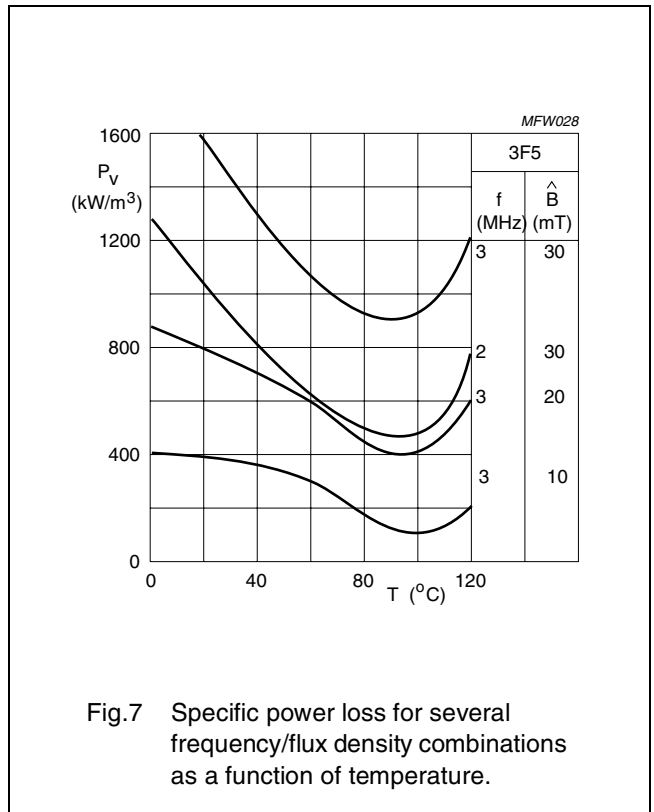
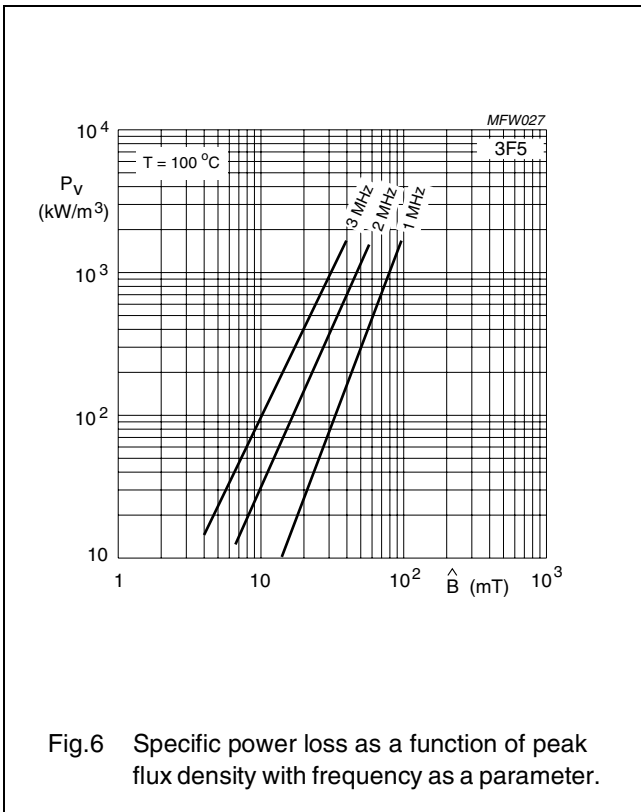
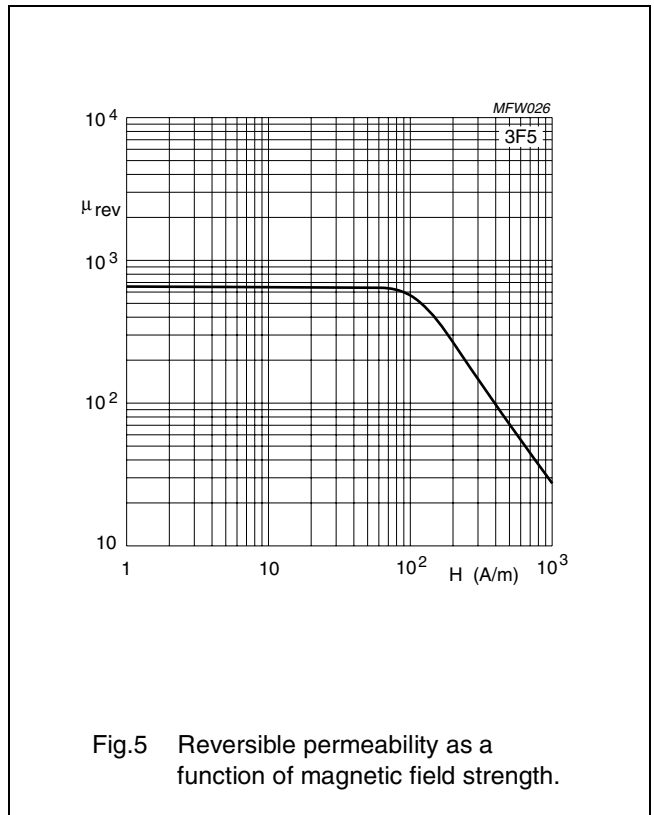
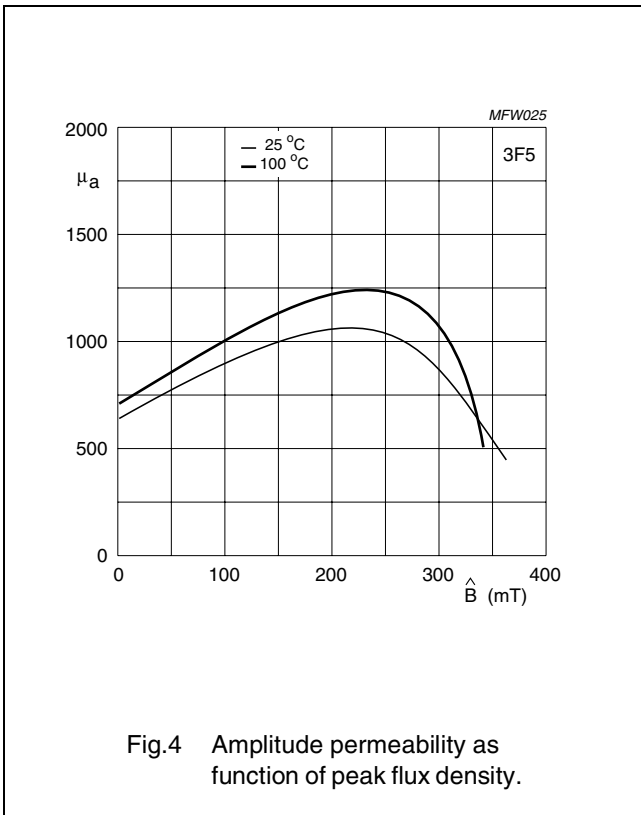


Fig. 3 Typical B-H loops.



**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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**PRODUCT STATUS DEFINITIONS**

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<b>Preferred</b>		These products are recommended for use in current designs and are available via our sales channels.
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