

# DATA SHEET

## **MPP** Material specification

New data

2008 Sep 01

Material specification

MPP

MPP SPECIFICATIONS

A medium frequency alloy powder material with the lowest loss density for use in power inductors and output chokes.

	CONDITIONS	VALUE	UNIT
$\mu_i$	25 °C; $\leq 10$ kHz; 0.25 mT	14 – 300	
$T_C$		$\geq 460$	°C
thermal conductivity		0.08	W.mm <sup>-1</sup> .K <sup>-1</sup>
linear expansion coefficient		$12.9 \times 10^{-6}$	K <sup>-1</sup>
density for 125 $\mu$		$\approx 8700$	kg/m <sup>3</sup>

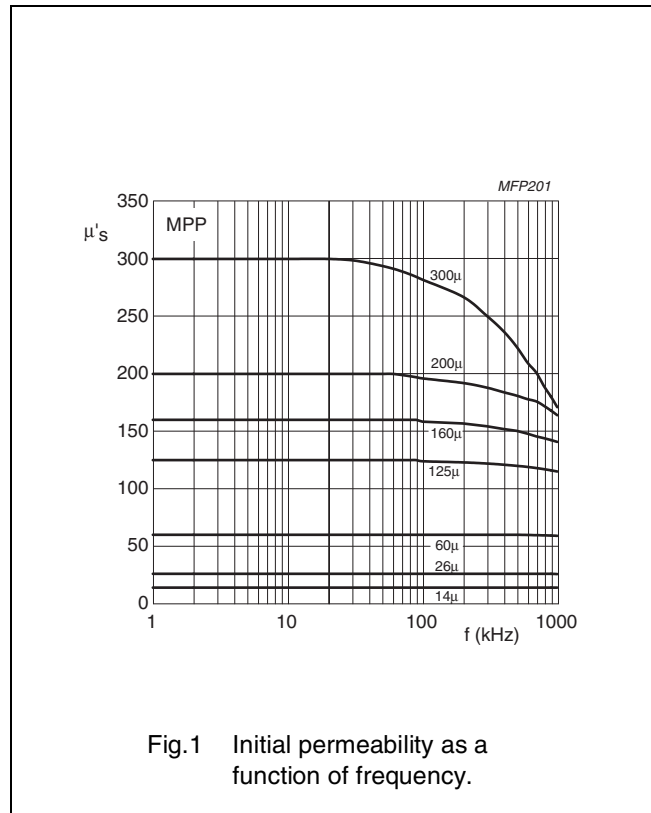


Fig.1 Initial permeability as a function of frequency.

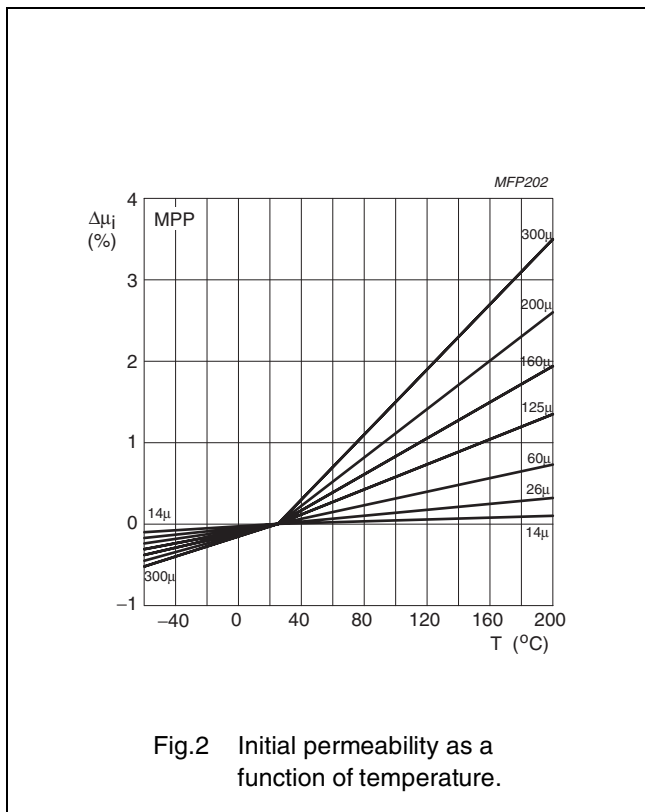


Fig.2 Initial permeability as a function of temperature.

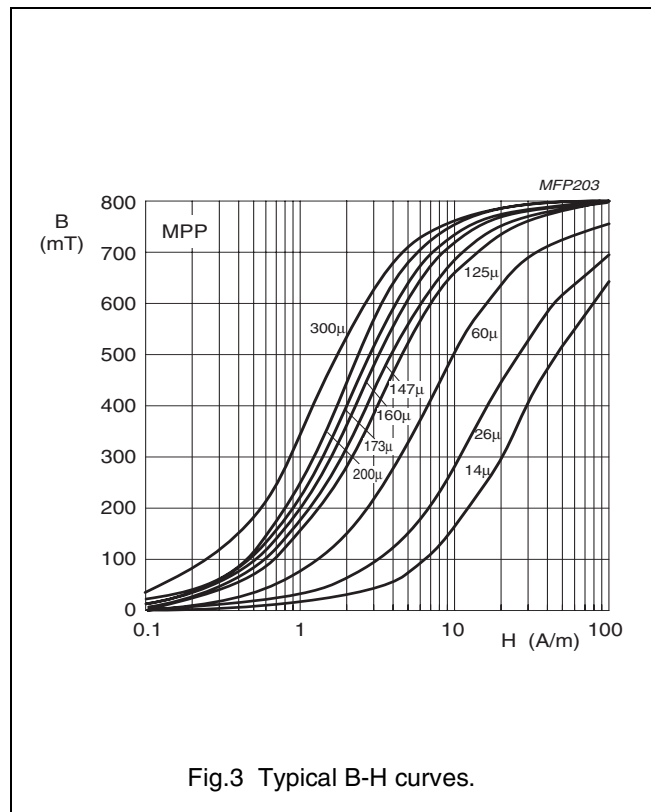


Fig.3 Typical B-H curves.

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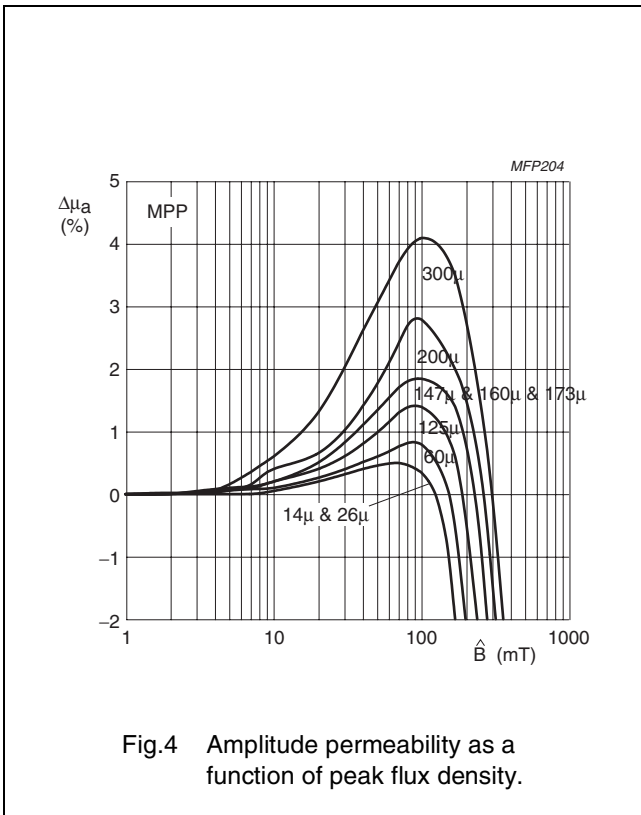


Fig.4 Amplitude permeability as a function of peak flux density.

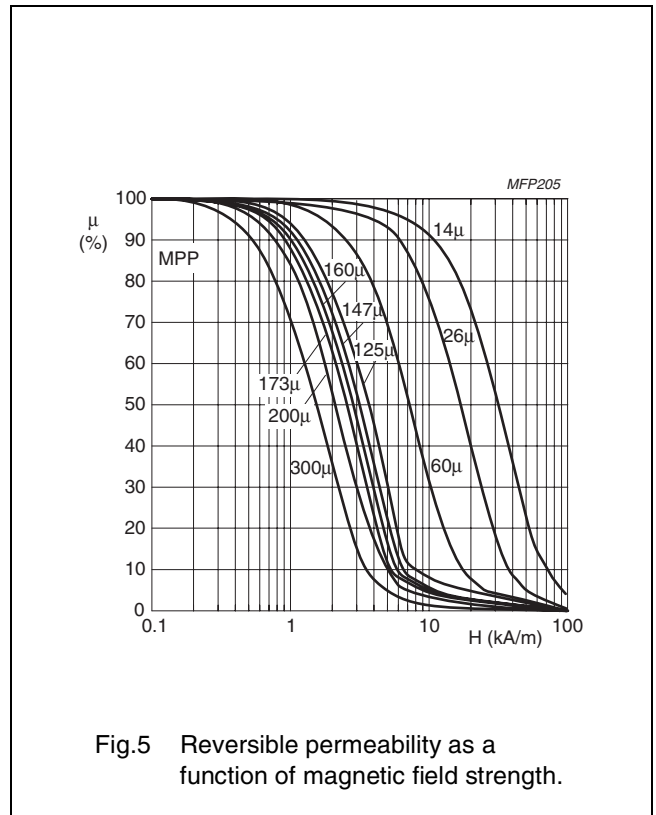


Fig.5 Reversible permeability as a function of magnetic field strength.

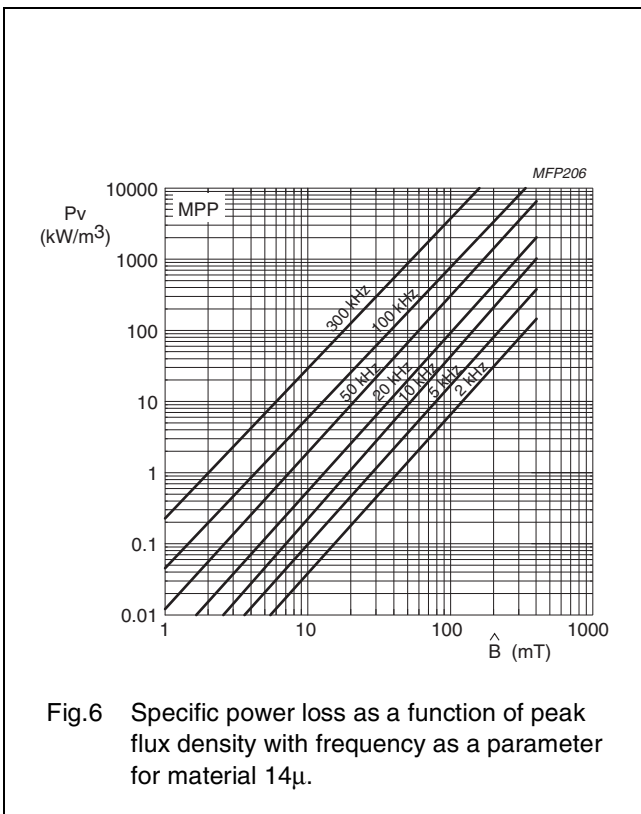


Fig.6 Specific power loss as a function of peak flux density with frequency as a parameter for material 14 $\mu$ .

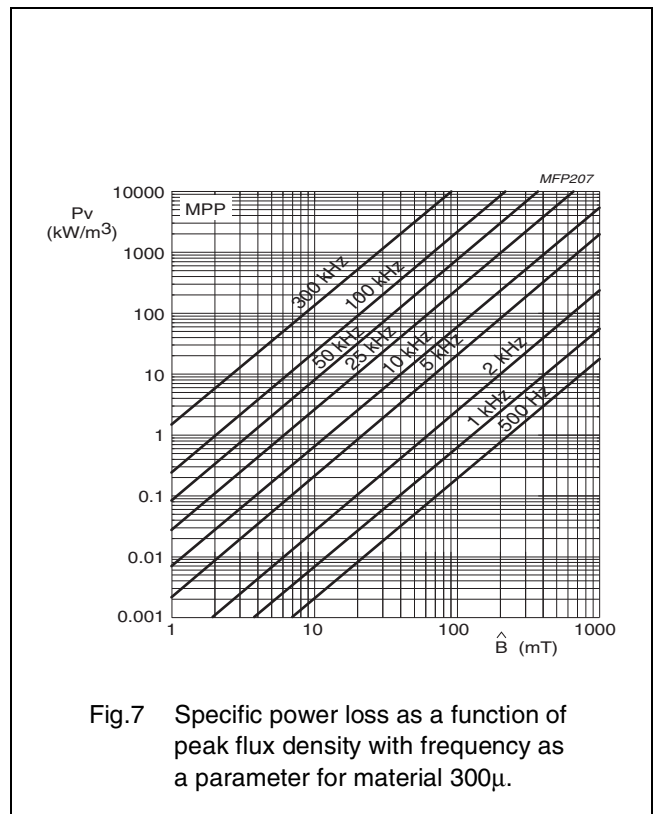


Fig.7 Specific power loss as a function of peak flux density with frequency as a parameter for material 300 $\mu$ .




**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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STATUS	INDICATION	DEFINITION
<b>Prototype</b>		These are products that have been made as development samples for the purposes of technical evaluation only. The data for these types is provisional and is subject to change.
<b>Design-in</b>		These products are recommended for new designs.
<b>Preferred</b>		These products are recommended for use in current designs and are available via our sales channels.
<b>Support</b>		These products are <b>not</b> recommended for new designs and may not be available through all of our sales channels. Customers are advised to check for availability.