

DATA SHEET

3F31

Material specification

2013 Jun 05

3F31 SPECIFICATIONS

A medium frequency power material for use in power and general purpose transformers at frequencies of 0.2 - 0.5 MHz.

SYMBOL	CONDITIONS	VALUE	UNIT
μ_i	25 °C; ≤ 10 kHz; 0.25 mT	1800 \pm 20%	
μ_a	100 °C; 25 kHz; 200 mT	≈ 3800	
B	25 °C; 10 kHz; 1200 A/m 100 °C; 10 kHz; 1200 A/m	≈ 520 ≈ 420	mT
P_v	100 °C; 400 kHz; 50 mT 100 °C; 500 kHz; 50 mT	≈ 80 ≈ 175	kW/m ³
ρ	DC; 25 °C	≈ 8	Ωm
T_c		≥ 230	°C
density		≈ 4750	kg/m ³

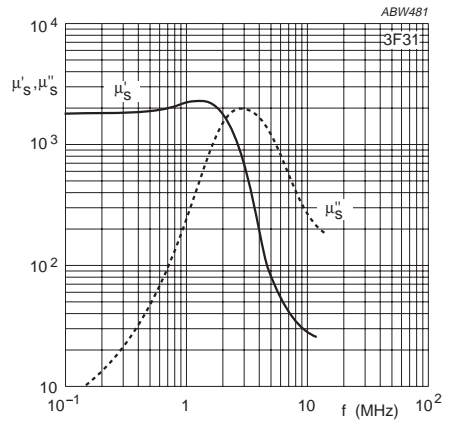


Fig.1 Complex permeability as a function of frequency.

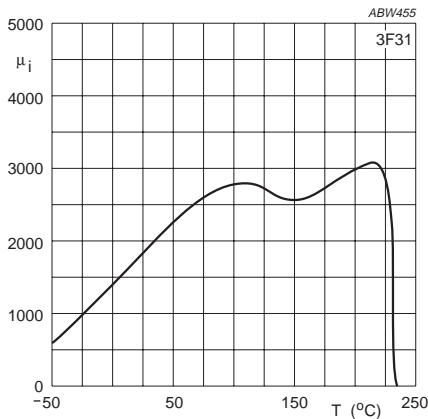


Fig.2 Initial permeability as a function of temperature.

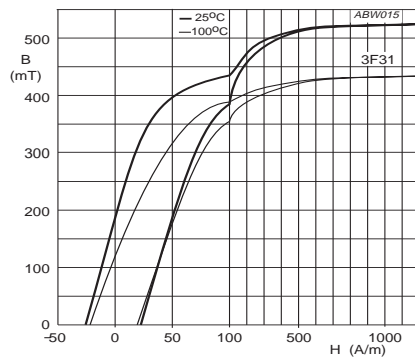
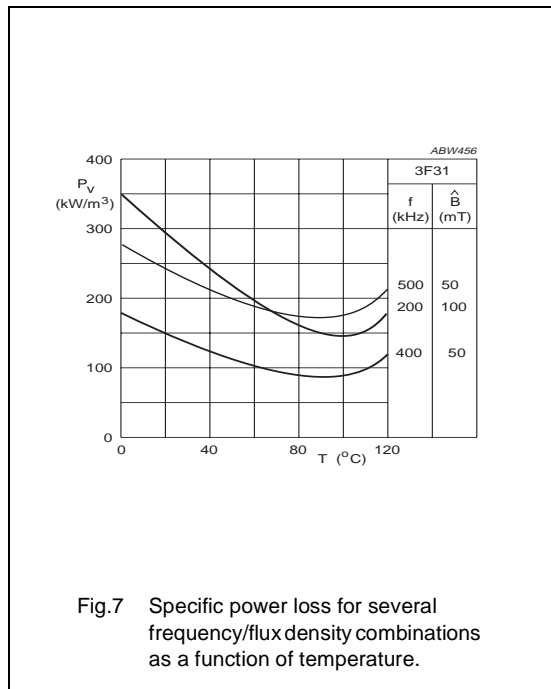
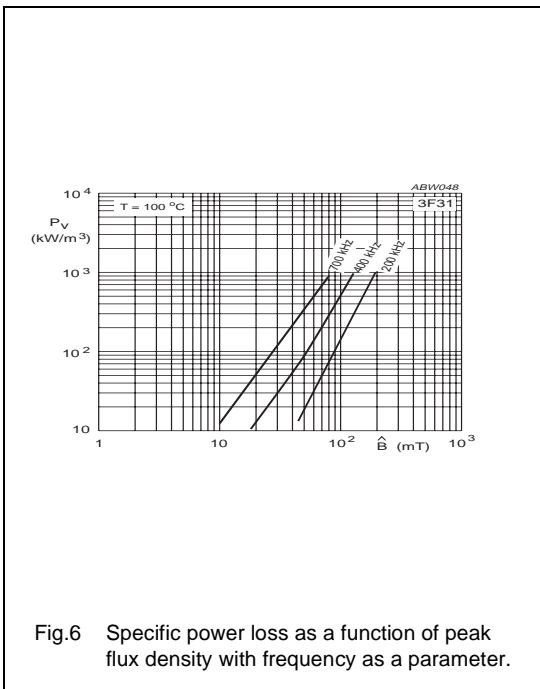
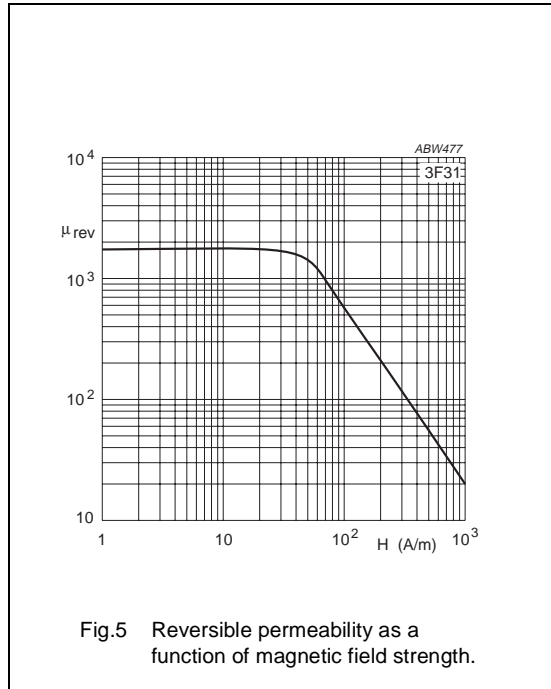
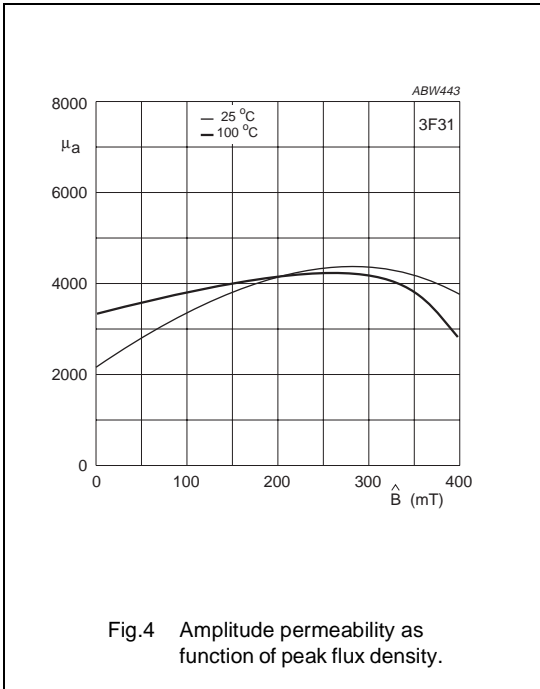


Fig.3 Typical B-H loops.






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

STATUS	INDICATION	DEFINITION
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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.