

DATA SHEET

3C97

Material specification

2013 Jun 06

3C97 SPECIFICATIONS

A low to medium frequency power material with low power losses from 50 to 140 °C for use in power and general purpose transformers at frequencies up to 0.5MHz. Especially suited for broad temperature range applications like automotive.

SYMBOL	CONDITIONS	VALUE	UNIT
μ_i	25 °C; ≤ 10 kHz; 0.25 mT	$3000 \pm 20 \%$	
μ_a	100 °C; 25 kHz; 200 mT	≈ 5000	
B	25 °C; 10 kHz; 1200 A/m 100 °C; 10 kHz; 1200 A/m	≈ 530 ≈ 410	mT
P_v	60 °C; 100 kHz; 200 mT 120 °C; 100 kHz; 200 mT 140 °C; 100 kHz; 200 mT	≈ 320 ≈ 320 ≈ 380	kW/m ³
ρ	DC, 25 °C	≈ 5	Ωm
T_c		≥ 215	°C
density		≈ 4800	kg/m ³

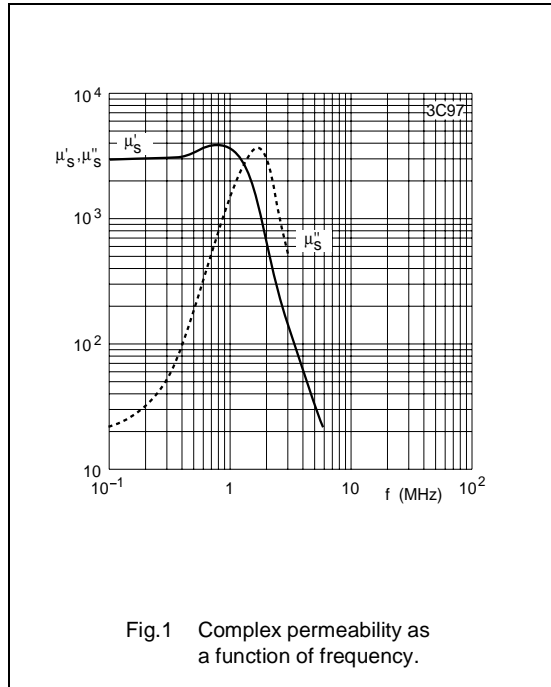


Fig.1 Complex permeability as a function of frequency.

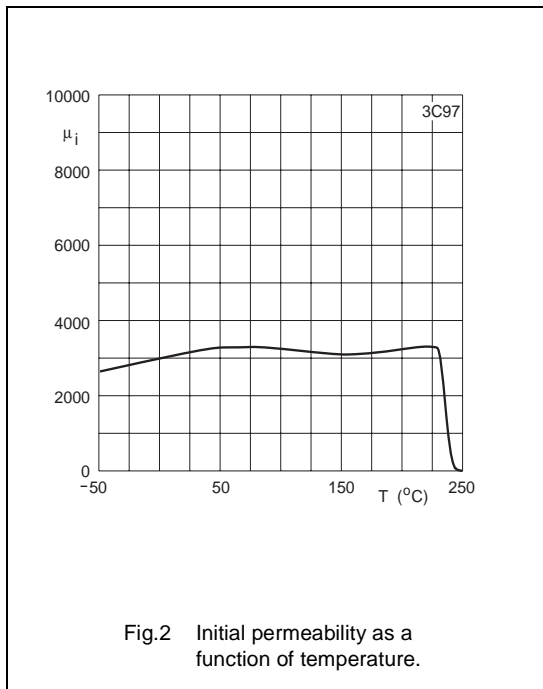


Fig.2 Initial permeability as a function of temperature.

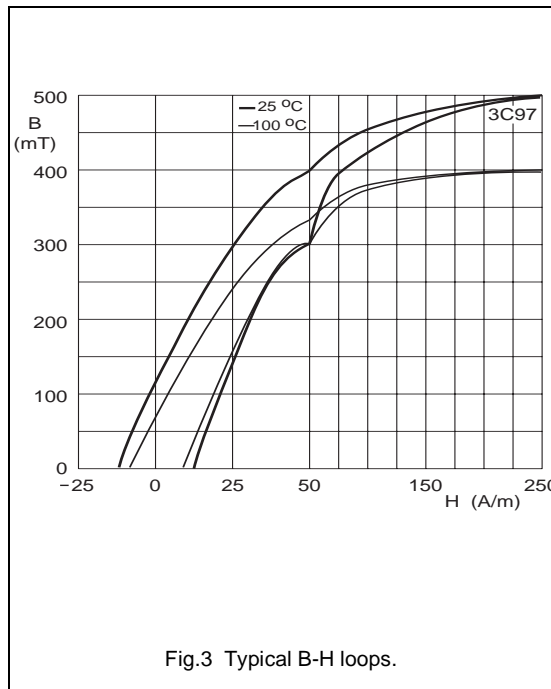
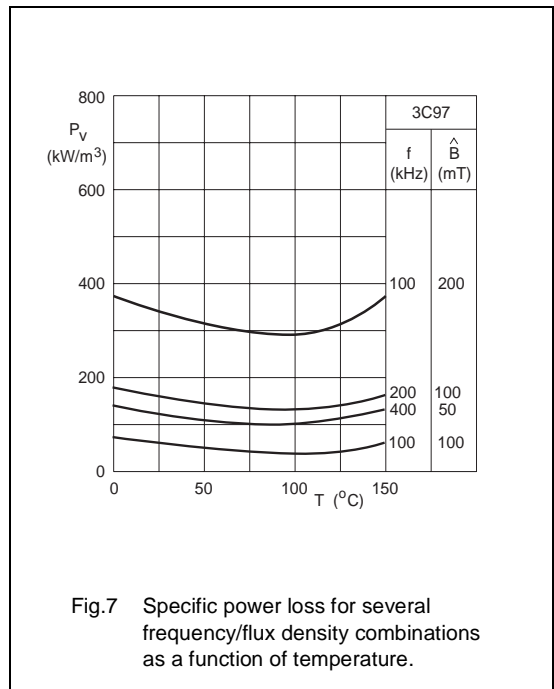
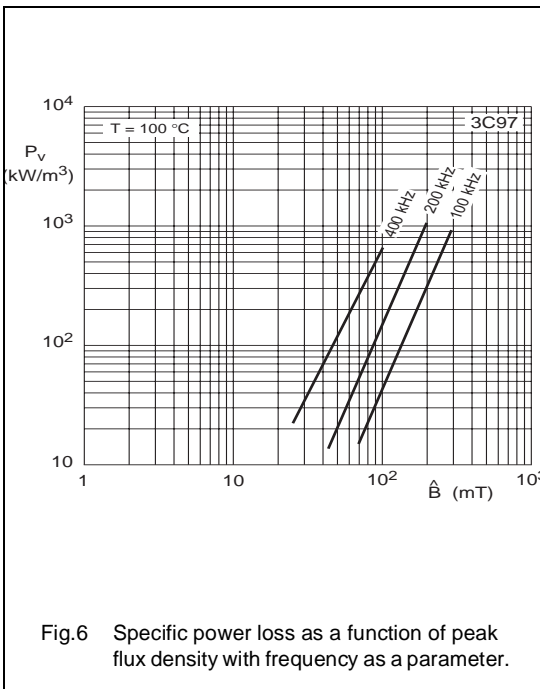
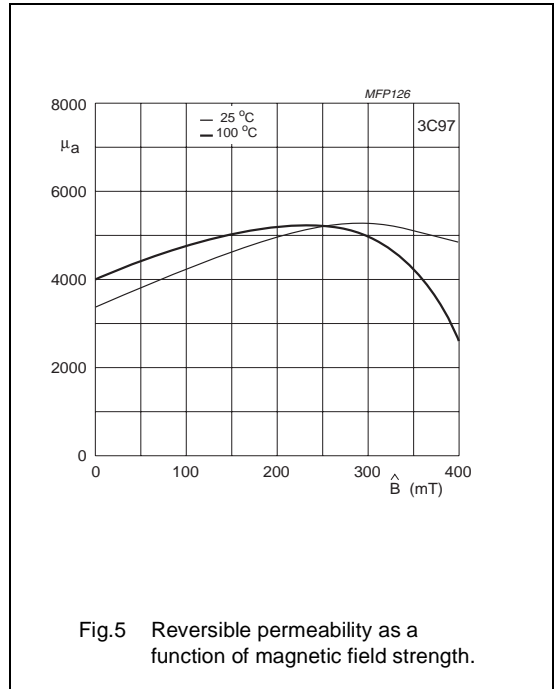
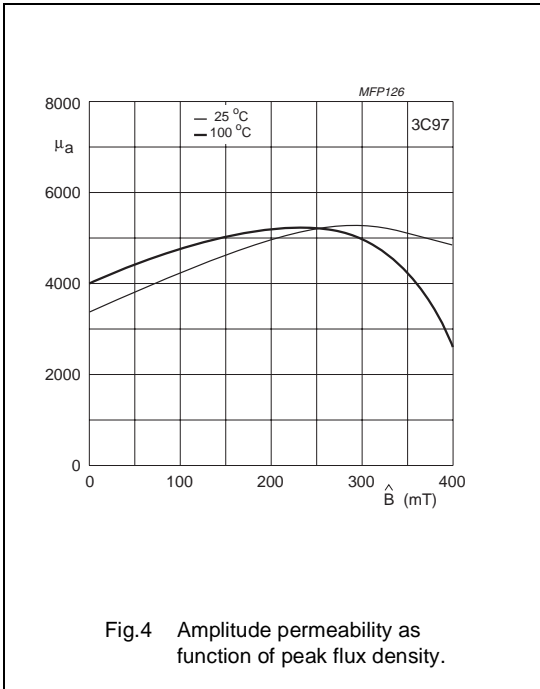


Fig.3 Typical B-H loops.






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

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.