DATA SHEET

3F46

Material specification

2016 March 03

FERROXCUBE
A YAGEO COMPANY

3F46 SPECIFICATION

A high frequency power material for use in power and general purpose transformers at frequencies of 1-3MHz. Temperature characteristic tuned for stable operation in range 25-100°C. Available in product size up to 40mm.

SYMBOL	CONDITIONS	VALUE	UNIT
μi	25ºC; 10kHz; 0.25mT	750 ± 20%	
μa	100ºC; 25kHz; 200mT	≈ 1500	
B	25ºC; 10kHz; 1200A/m	≈ 520	mT
	100ºC; 10kHz; 1200A/m	≈ 430	
Pv	100ºC; 1MHz; 50mT	≈ 150	mW/cm^3
	100ºC; 3MHz; 10mT	≈ 50	
	100ºC; 3MHz; 30mT	≈ 500	
ρDC	25ºC	≈ 5	Ωm
Tc		≥ 280	ºC
density		≈ 4750	kg/m^3

based on T14/9/5

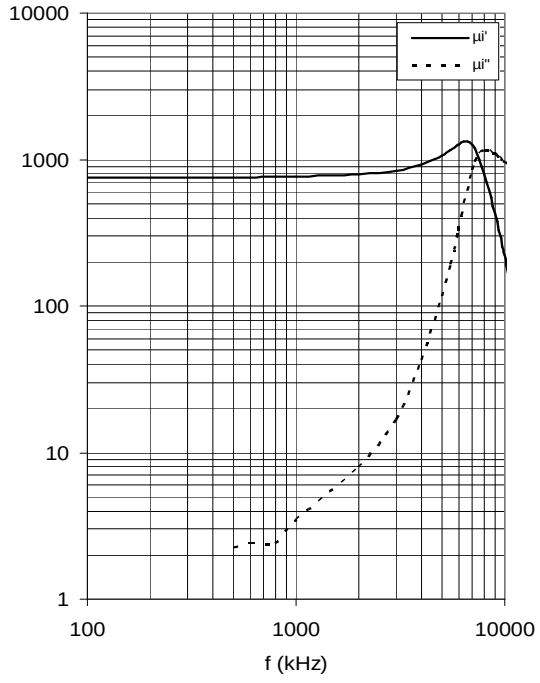

Fig.1 Complex permeability as a function of frequency

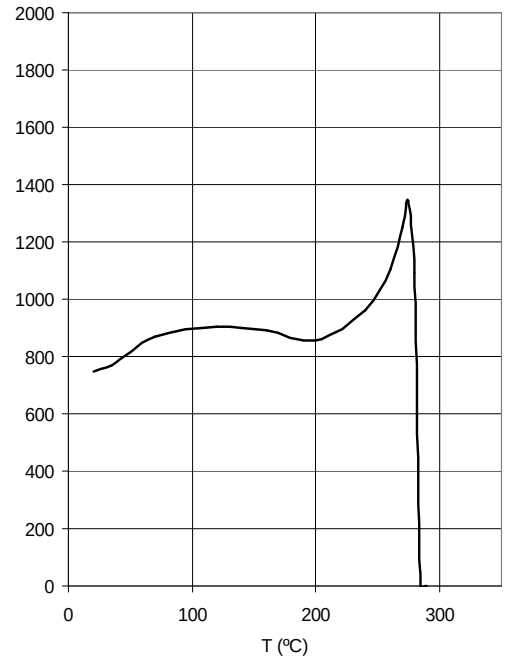

Fig.2 Permeability as a function of temperature

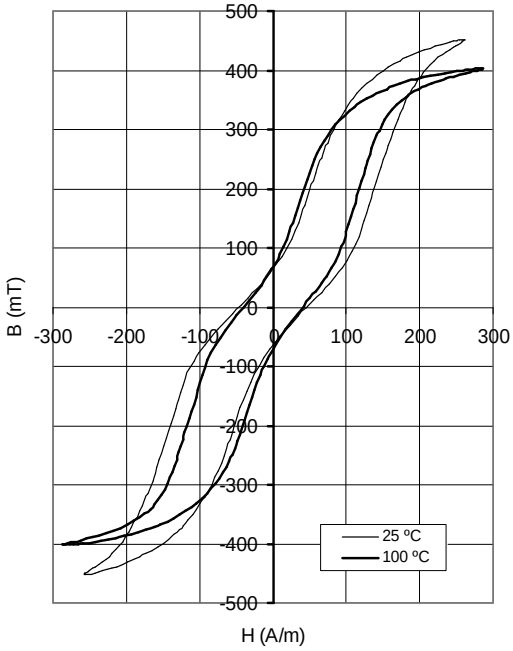

Fig.3 Typical BH loop measured at 10kHz

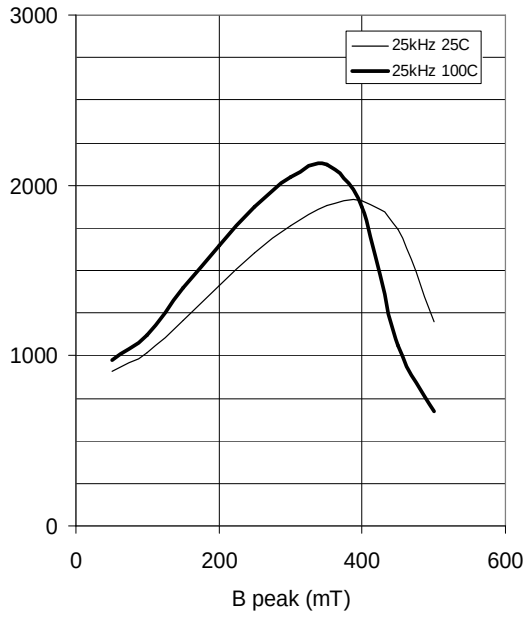

Fig.4 Amplitude permeability measured at 25kHz

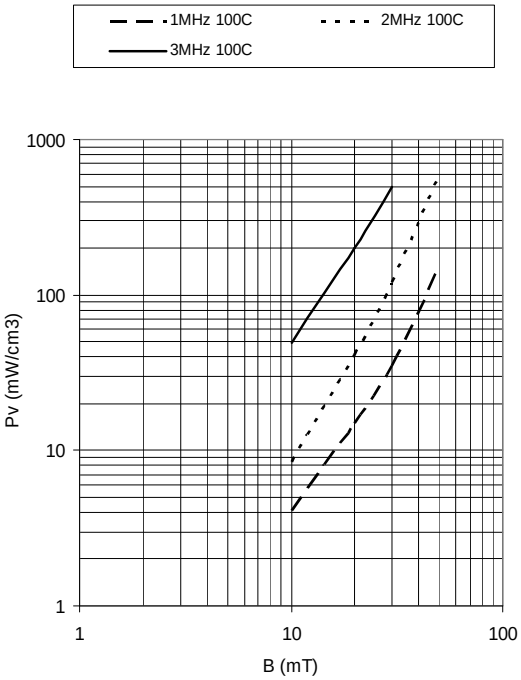

Fig.5 Power loss as a function of peak flux density

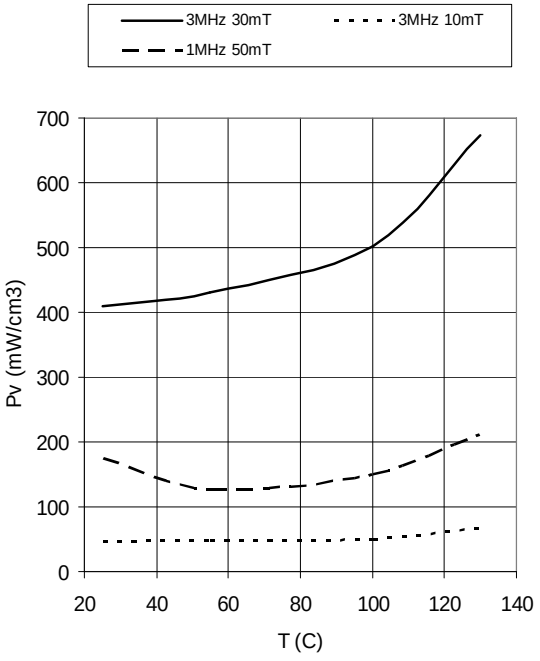

Fig.6 Power loss as a function of temperature

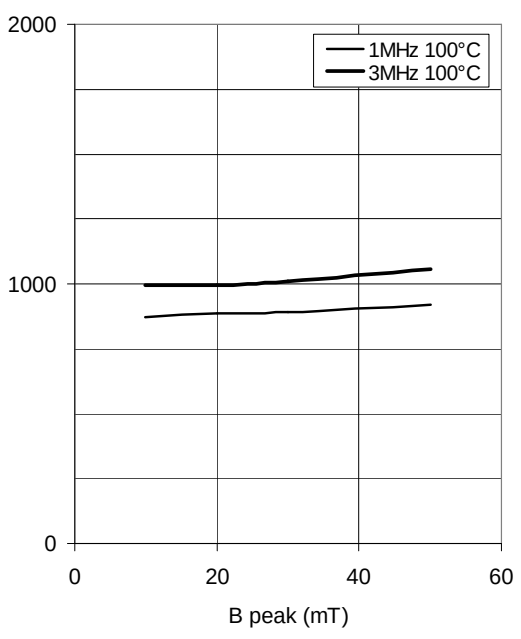

Fig.7 Amplitude permeability measured at high frequency