DATA SHEET

4F5

Material specification

2020 November 19th

FERROXCUBE

4F5 SPECIFICATION

Medium permeability NiZn ferrite material suitable for EMI applications, but also recommended for particle acceleration applications with high bias currents at elevated temperatures.

SYMBOL	CONDITIONS	VALUE	UNIT
µi	25ºC; 10kHz; 0.25mT	400±20%	
B	25ºC; 10kHz; 1200A/m	≈ 420	mT
	100ºC; 10kHz; 1200A/m	≈ 340	
	150ºC; 10kHz; 1200A/m	≈ 300	
tand/µi	25ºC; 0.1MHz; 0.250mT	≈ 20	10^6
	25ºC; 1MHz; 0.250mT	≈ 40	
Z	25ºC; 30MHz; 0.250mT	≈ 36	Ω
	25ºC; 100MHz; 0.250mT	≈ 72	
Df	0.25mT; 10kHz; 25ºC	≈ 2	10^6
ρDC	25ºC	≈ 10^6	Ωm
Tc		≥ 240	ºC
density		≈ 5200	kg/m^3

typical paremeters measured on T25/15/10

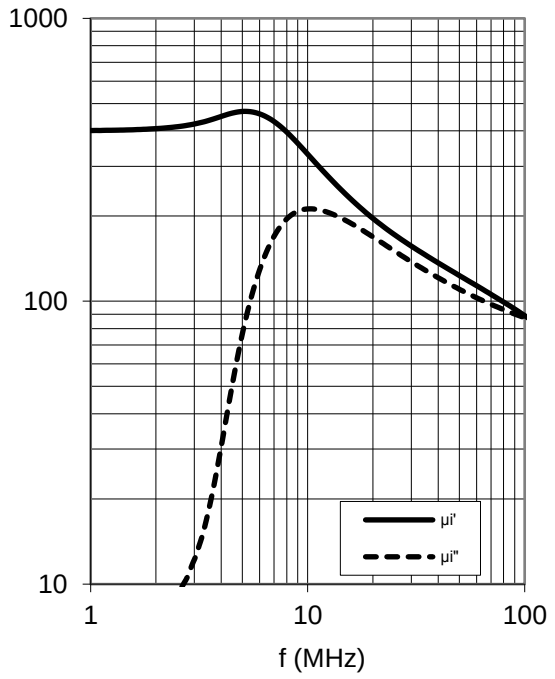

Fig.1 Complex permeability as a function of frequency

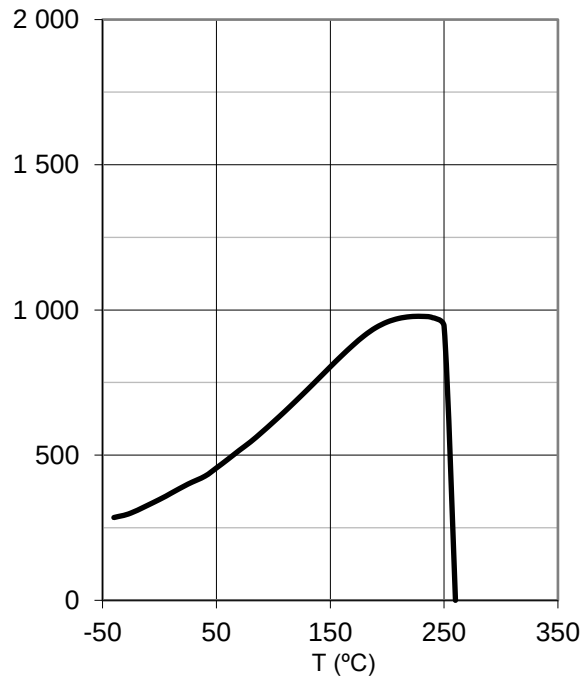

Fig.2 Permeability as a function of temperature

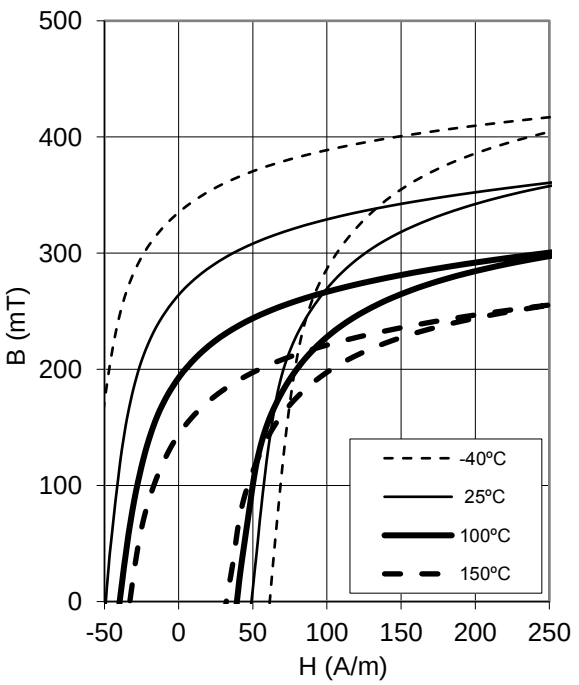

Fig.3 Typical BH loop

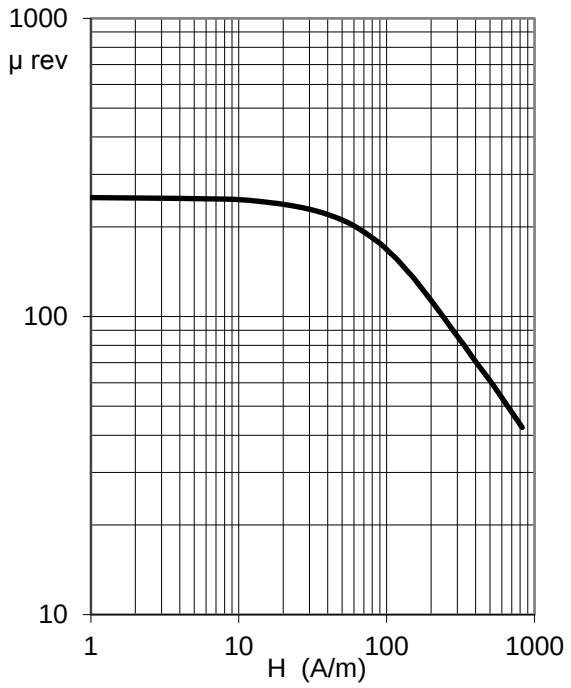

Fig.4 Reversible permeability at 25°C, measured on magneized core

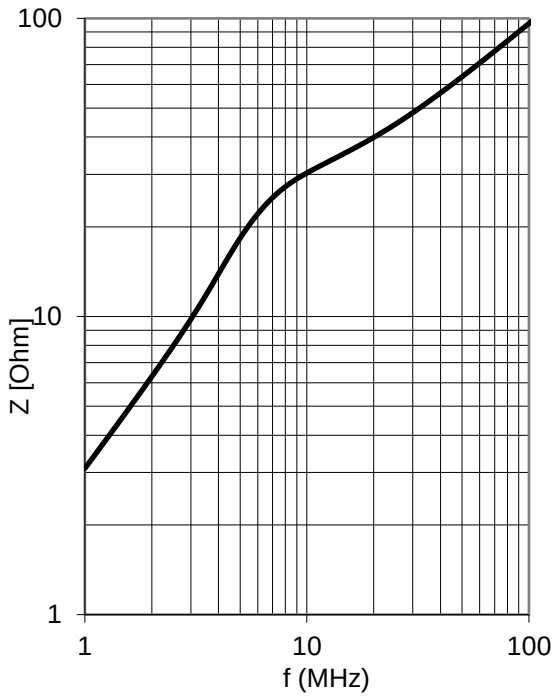

Fig.5 Impedance as a function of frequency