

Material Characteristics

ITEM	Symbol	Unit	Measurtionsing Conditions		Material
			settings	Temp.	KM42B
Initial permeability	μ_i			20°C	4200 ± 25%
Saturation magnetic flux density	Bs	mT	H=1200A/m	20°C	530
				100°C	420
Remanent flux density	Br	mT	H=1200A/m	20°C	75
				100°C	245
Coercive force	Hc	A/m	H=1200A/m	20°C	7
				100°C	12
Relative loss factor	$\tan \delta / \mu_i$	$\times 10^{-6}$	100kHz; <0.25 mT	20°C	<2.5
Relative temperature factor	$\alpha_{\mu\gamma}$	$\times 10^{-6}$		-20~20°C	7~9
				20~60°C	<-4~-2
Hysteresis Material Constant	ηB	$10^{-6}/\text{mT}$	10kHz; 1.5~3.0mT	20°C	<0.3
Curie temperature	Tc	°C			250
Electrical resistivity	ρ	$\Omega \cdot \text{m}$			5
Density	ds	g/cm^3			4.8

