



Data Sheet

Index of symbols

A_e		Effective cross-sectional area
A_{min}	mm ²	Minimum cross-sectional area
A_L	nH	Inductance factor
B	T	Magnetic flux density
B_r	T	Remanent magnetic flux density
B_s	T	Saturation magnetic flux density
d	mm	Diameter
d_i	mm	Inner diameter
d_o	mm	Outer diameter
D_F		Disaccommodation factor
f	Hz	Frequency
h	mm	Height of toroid core
H	A/m	Magnetic field strength
H_c	A/m	Coercitive magnetic strength
l	mm	Length
l_e	mm	Effective magnetic path length
L	H	Inductance of coil with the core
L_o	H	Inductance of coil without core
N		Number of coil turns
P_v	W	Power losses
R_s	Ω	Series resistance
R_r	Ω	Residual loss resistance
R_e	Ω	Eddy current loss resistance
R_h	Ω	Hysteresis loss resistance
$\tan \delta$		Loss factor
T	$^{\circ}\text{C}$	Temperature
T_c	$^{\circ}\text{C}$	Curie temperature
T_{max}	$^{\circ}\text{C}$	Maximum temperature
V_e	mm ³	Effective magnetic volume
Z	Ω	Impedance
α_F	1/K	Relative temperature coefficient of permeability
η_B	1/T	Hysteresis material constant
μ		Absolute permeability
$\underline{\mu}$		Complex permeability
μ_a		Amplitude permeability
μ_{app}		Apparent permeability
μ_e		Effective permeability
μ_i		Initial permeability
μ_{i1}		Initial permeability measured at a time t_1
μ_{i2}		Initial permeability measured at a time t_2
μ_r		Relative permeability
μ_{rev}		Reversive permeability (incremental)
μ_o	$4\pi 10^{-7} \text{Vs/Am}$	Magnetic constant
ρ	Ωm	Specific resistivity
ω	s^{-1}	Angular frequency
Q		Quality factor
$\sum 1/A$	mm ⁻¹	Dimensional constant of the core