



THORNTON

Thornton
Eletrônica Ltda

TERMINOLOGY

SYMB.	DESCRIPTION
H	Magnetic Field Strength The externally applied magnetizing force that induces magnetic flux in a magnetic material.
H _s	Saturation Field Strength The magnetic force (H) needed to achieve saturation.
H _c	Coercive Force The magnetic force required to reduce the magnetic induction (B _r) to zero.
B	Flux Density The flux per unit area induced by a field strength (H).
B _s	Saturation The value of magnetic flux density at saturation.
B _r	Remanance The residual magnetic induction (B) in a material after the magnetizing force (H) is reduced to zero.
μ	Permeability (relative) The capacity of a material to conduct a magnetic flux in relation to air. (Air is assumed to have permeability of 1), or the magnetic flux (B) divided by the magnetic force (H).
μ _i	Permeability (initial) The relative permeability at very low magnetic field strength.
μ _e	Permeability (effective) The relative permeability of a core including any air gaps.
μ _{ap}	Permeability (apparent) The inductance of a winding with a core divided by the inductance of the same winding without the core. (μ _{ap} =L/L ₀)
AL	Inductance Factor The inductance in nH of 1 turn. (B < 0,25 mT or 2,5 Gauss)
T _c	Curie Temperature The temperature at which the material loses all of its magnetic properties. Permeability falls to 1, that of free air.
L _e	Effective Length of Magnetic Field The length that the magnetic flux takes through a core.
A _e	Effective Area The normalized core area perpendicular to the magnetic flux.
V _e	Effective Volume The effective magnetic volume of a core.
Σ I/A	Core Factor
T _F	Temperature Factor
D _F	Disaccommodation Factor
P _P	Core Loss (power)
η _B	Hysteresis Constant
ρ	Densidade
tan δ/μ _i	Dissipation Factor