MAGNETIZABLE CONCRETE

MC60®

MAGMENT ENERGY

August 2026

MATERIAL DATA SHEET

Material Properties

Initial permeability	25°C	μ_i		**60 ± 20%**
Saturation @H=8 kA/m (100 Oe)	25°C	Jmax	[mT]	**380**
	100°C	Jmax	[mT]	**335**
Coercitive field strength	25°C	H_C	[A/m]	**15**
Curie-Temperature		T_C	[°C]	**> 210**
Resistivity	DC	ρ	[Ω m]	**25**
Density		γ	[kg/m³]	**4100**
Relative loss factor	@1 MHz	$\tan\delta/\mu i$	[10^{-3}]	**< 2.5**
Relative temperature coefficient	-40°C…150°C	α_F	[10^{-6}/K]	**< 30**
Hysteresis material constant	10kHz	η_B	[10^{-6}/mT]	**< 50**
DC-Bias (percent permeability change)	@2kA/m (25 Oe)	μ_{rev}/μ_i		**60%**
	@4kA/m (50 Oe)	μ_{rev}/μ_i		**32%**
Realtive core losses	@ 50KHz, 50 mT 80°C	P_V	[kW/m³]	**40**
Specific heat		c_p	[J/kg K]	**700**
Thermal conductivity		λ	[W/mK]	**5**
Young's modulus		E_c	[GPa]	**80**
Compressive strength		f_c	[MPa]	**120**
Tensile strength		f_t	[MPa]	**10**
Linear expansion coefficient		$\Delta l/l$	[10^{-6}/K]	**12**

Magnetic parameters measured on R140/30 and R250/50 ring cores in accordance with IEC60401-3 & IEC62044-1,-2, and -3.

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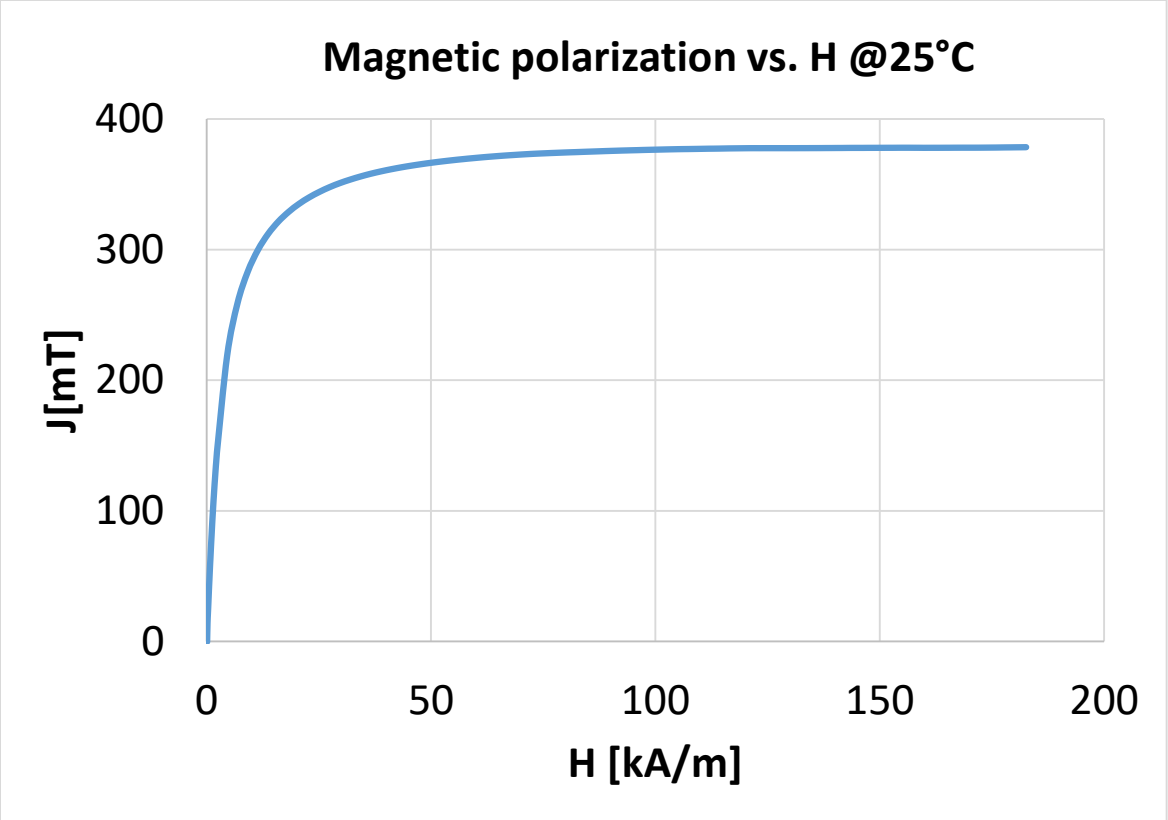

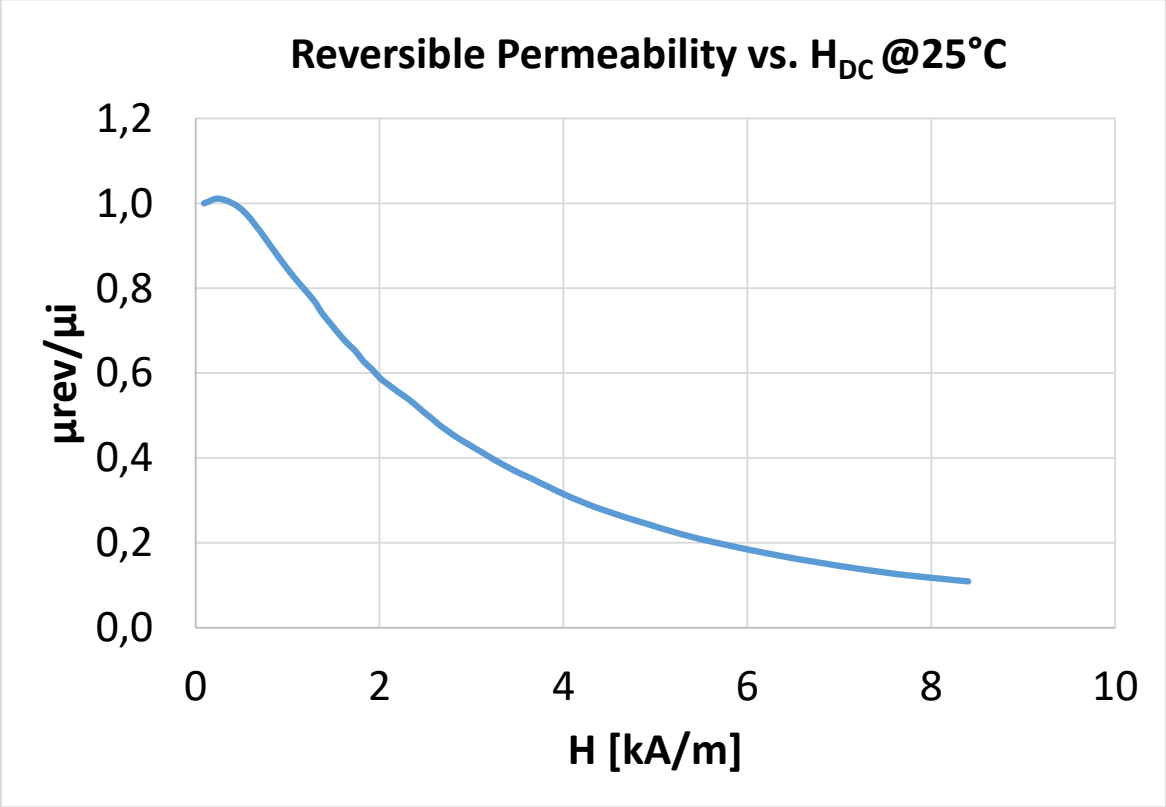

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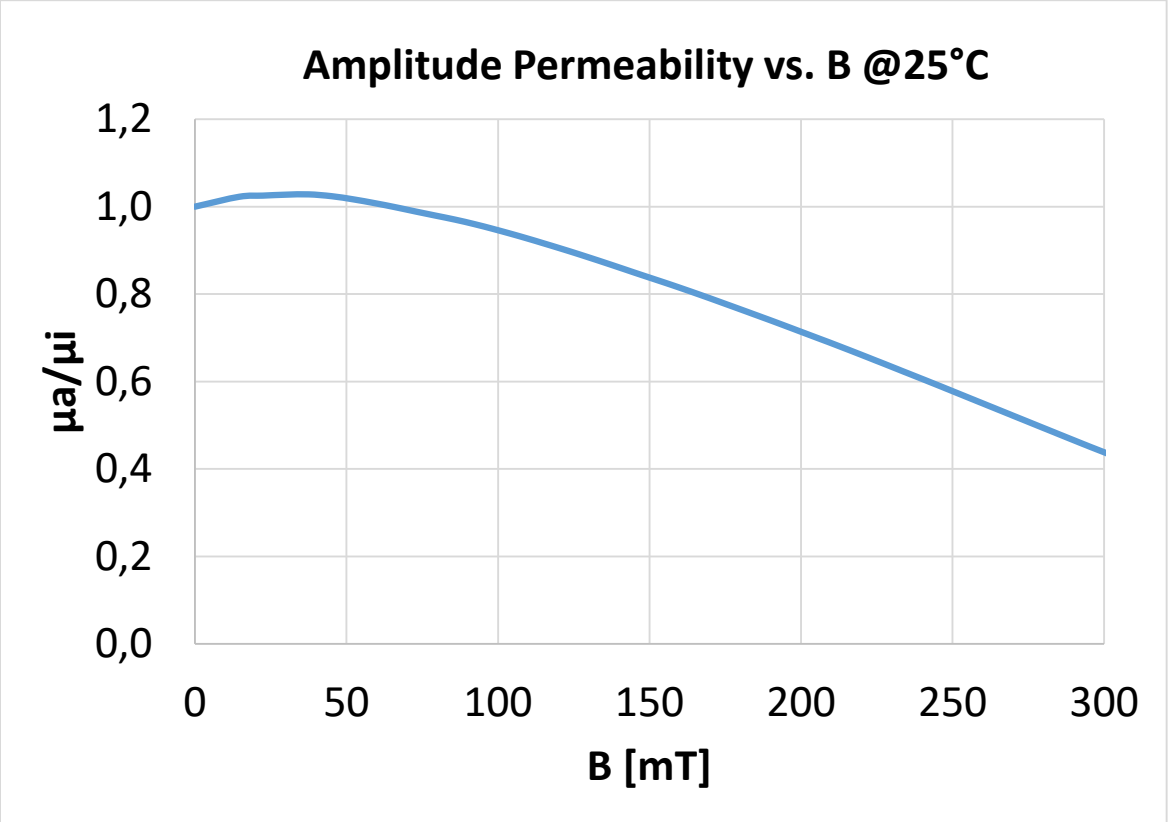

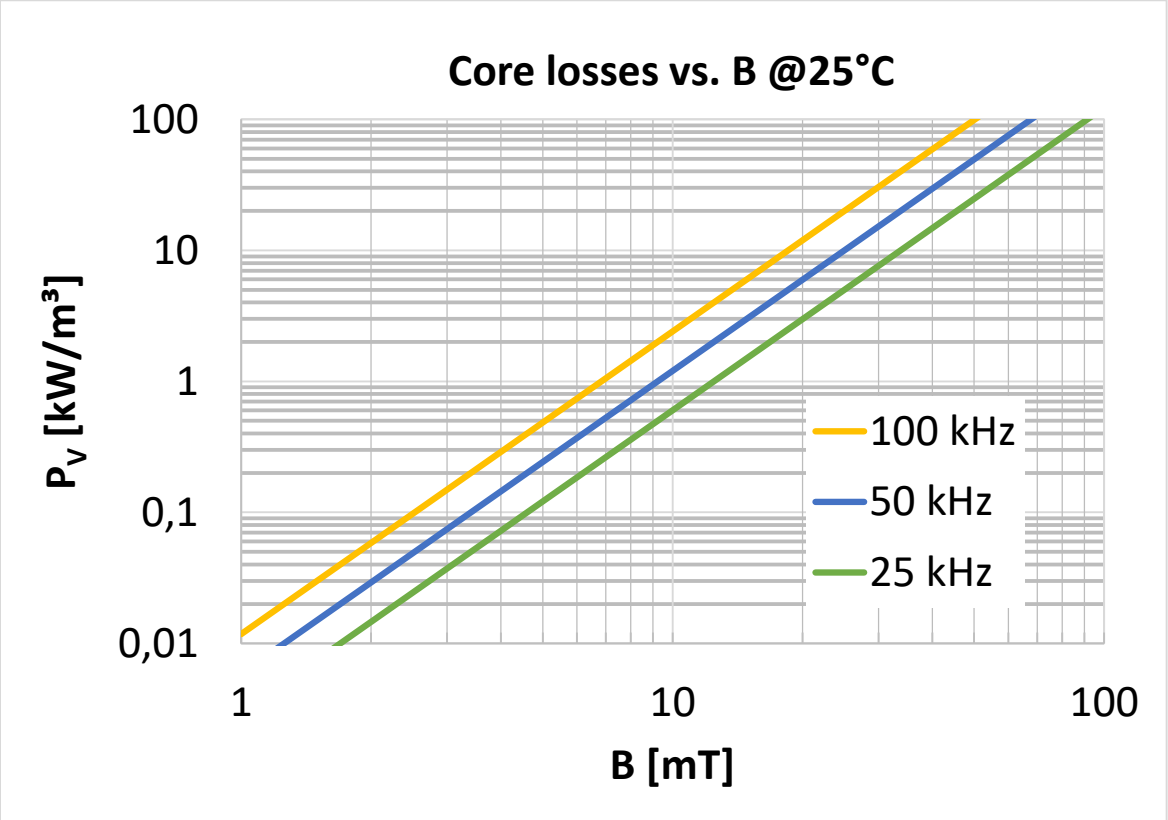

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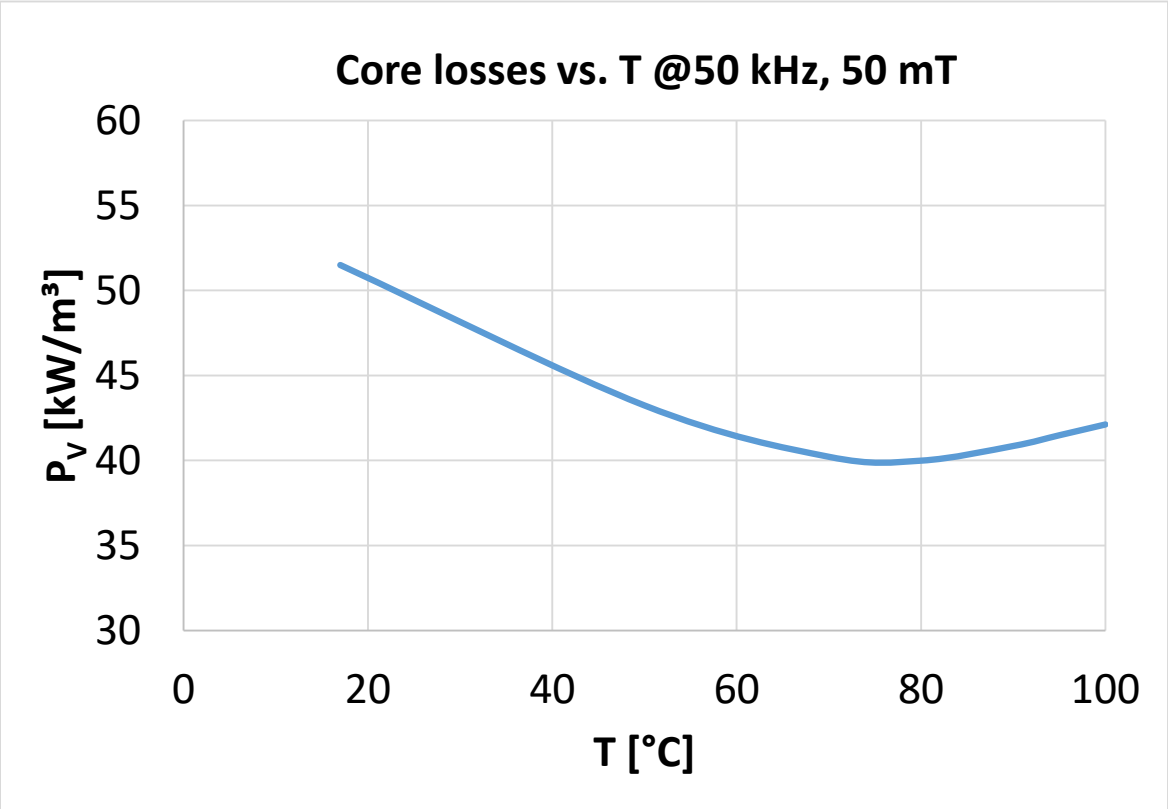

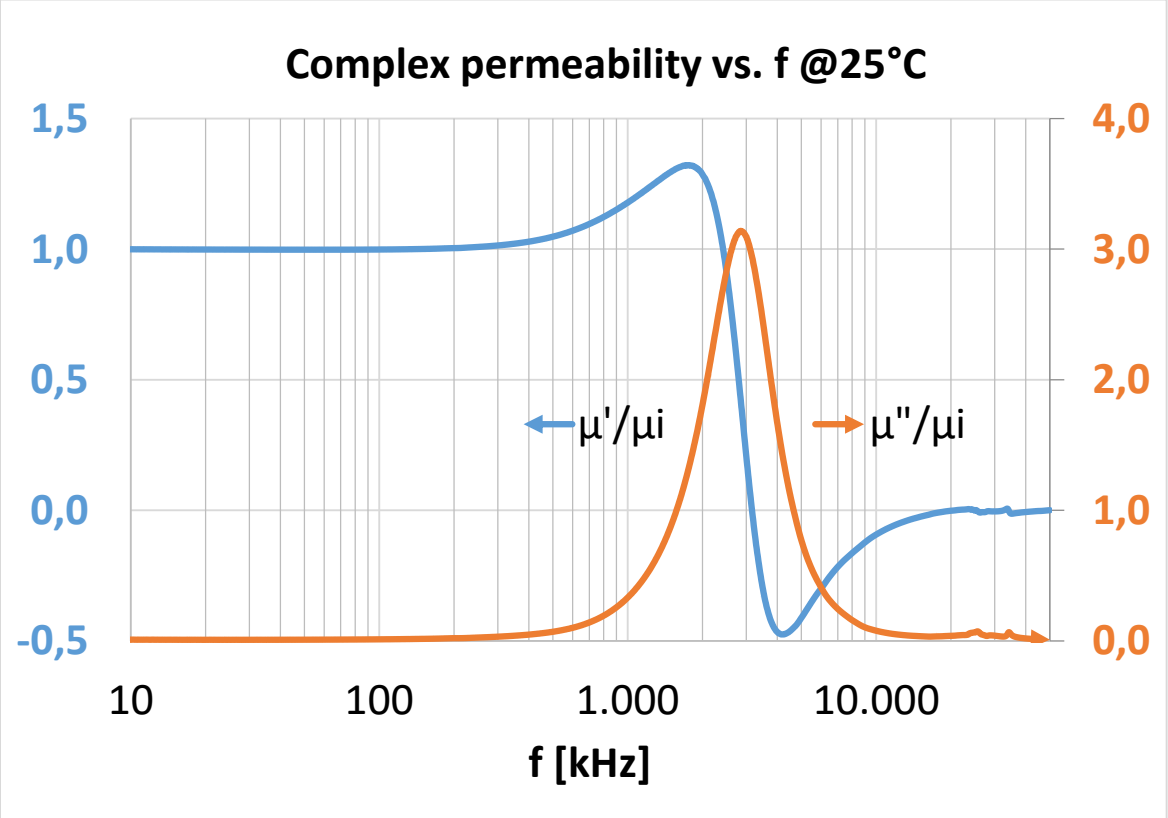

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