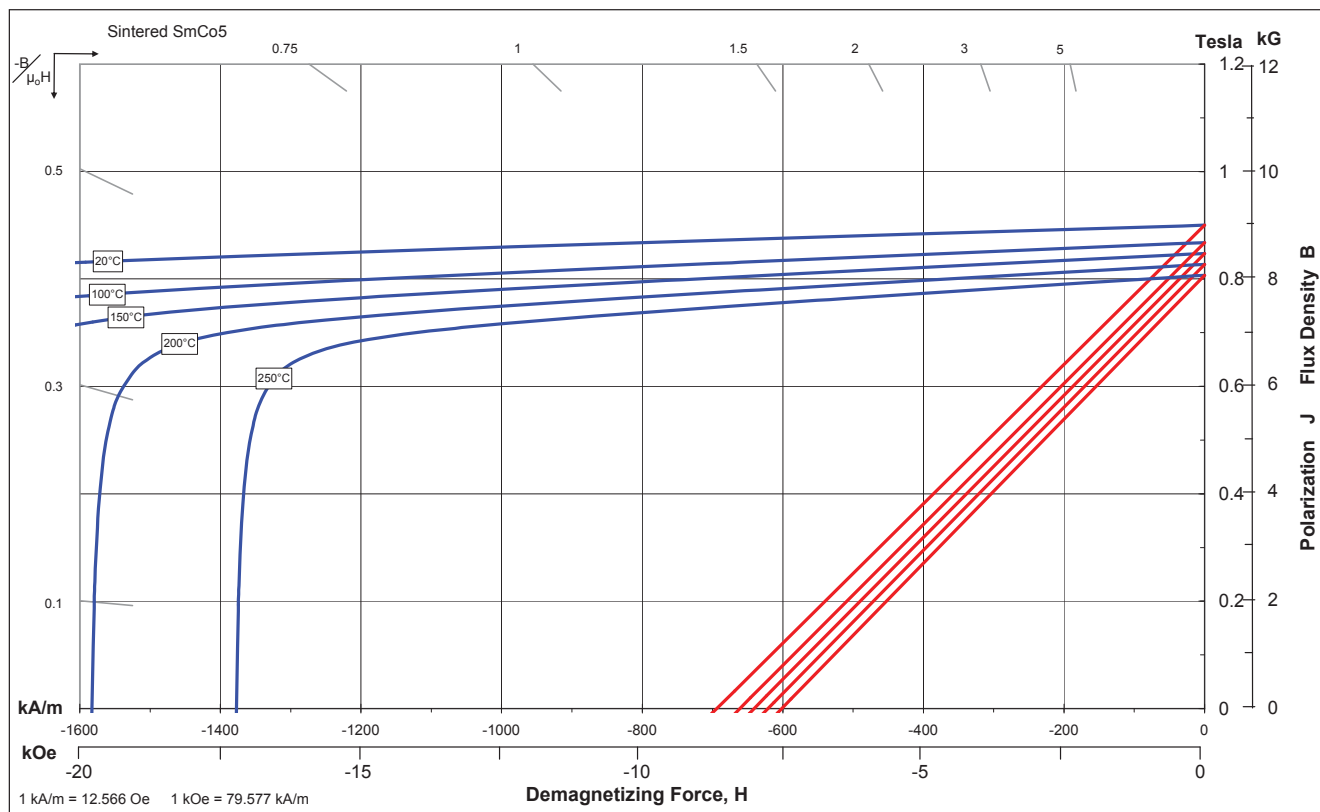


TDA MAGNETICS

Samarium Cobalt (Sintered) Grade SM2025

Demagnetization Curves



Magnetic Properties		Units	min.	nominal
Br, Residual Induction		Gauss	8,500	9,000
		Tesla	0.85	0.9
Hc, Coercivity		Oersteds	8,040	8,800
		kA/m	640	700
Hci, Intrinsic Coercivity		Oersteds	25,000	30,000
		kA/m	2,000	2,400
BHmax, Maximum Energy Product		MGOe	18	20
		kJ/m ³	140	160
Physical Properties		Units	C //	C ⊥
Reversible Temperature Coefficients ⁽¹⁾	of Induction, α(Br)	%/°C		-0.045
	of Coercivity, α(Hci)	%/°C		-0.19
Coefficient of Thermal Expansion ⁽²⁾		ΔL/L per °C x 10 ⁻⁶	7	14
Thermal Conductivity		W/(m·K)		11
Specific Heat ⁽³⁾		J/(kg·K)		370
Max. Recommended Use Temperature		°C		250
Curie Temperature, Tc		°C		725
Flexural Strength		psi		17,400
		MPa		120
Compressive Strength		psi		145,000
		MPa		1000
Young's Modulus		GPa		140
Density		g/cm ³		8.4
Hardness, Vickers		Hv		600
Electrical Resistivity, ρ		Ω · cmμ		55

(1) Coefficients measured between 20 and 200 °C

(2) Between 20 and 200 °C

(3) Between 20 and 150 °C