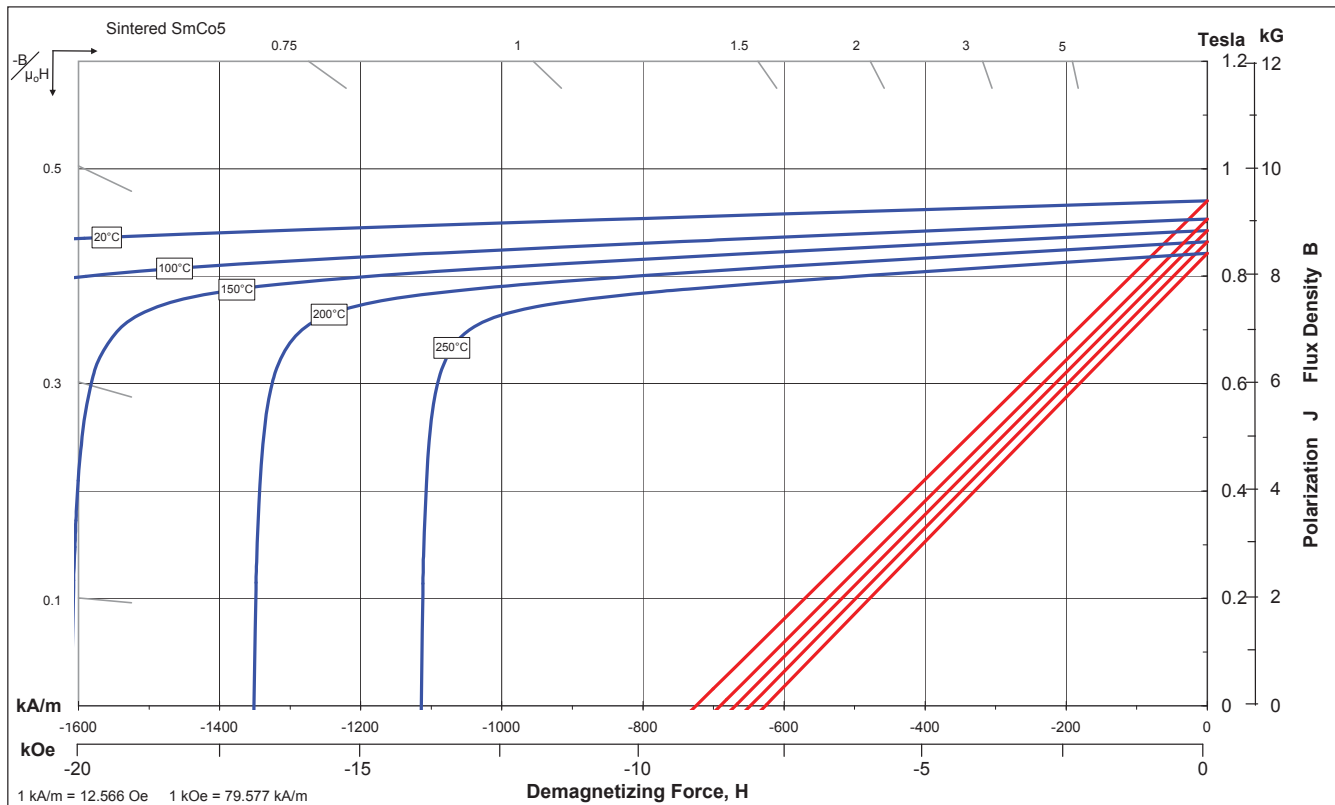


# TDA MAGNETICS

## Samarium Cobalt (Sintered) Grade SM2225

Demagnetization Curves



Magnetic Properties		Units	min.	nominal
Br, Residual Induction	Gauss		9,000	9,400
	Tesla		0.90	0.94
Hc, Coercivity	Oersteds		8,550	9,170
	kA/m		680	730
Hci, Intrinsic Coercivity	Oersteds		25,000	30,000
	kA/m		2,000	2,400
BHmax, Maximum Energy Product	MGOe		20	22
	kJ/m <sup>3</sup>		155	175
Physical Properties		Units	C //	C ⊥
Reversible Temperature Coefficients <sup>(1)</sup>	of Induction, α(Br)	%/°C		-0.045
	of Coercivity, α(Hci)	%/°C		-0.25
Coefficient of Thermal Expansion <sup>(2)</sup>		ΔL/L per °C x 10 <sup>-6</sup>	7	14
Thermal Conductivity		W/(m·K)		11
Specific Heat <sup>(3)</sup>		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 <sup>3</sup>		8.4
Hardness, Vickers		Hv		600
Electrical Resistivity, ρ		Ω · cmμ		55

(1) Coefficients measured between 20 and 150 °C

(2) Between 20 and 200 °C

(3) Between 20 and 150 °C