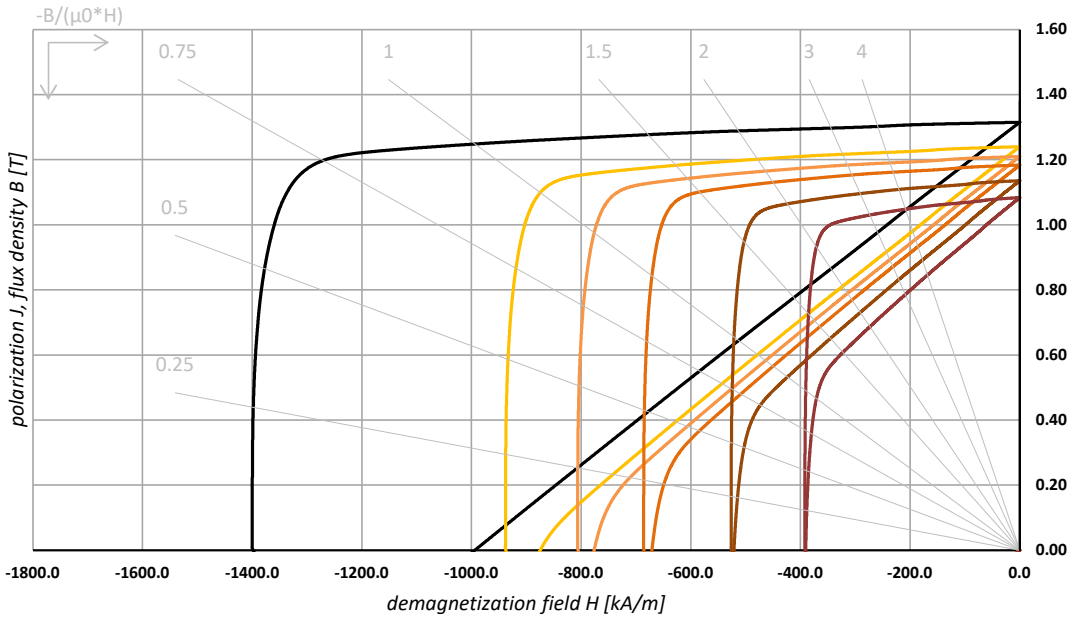
BOMATEC
MORE THAN JUST MAGNETS

BMNHPa-42SH(R)

NdFeB hot pressed, radial anisotropy



Temperature in [°C]:		**20.0**	80.0	100.0	120.0	150.0	180.0
magnetic properties							
Remanence 20°C	Br min	1.280	T	12.8	kG		
	Br nom	1.315	T	13.2	kG		
Coercitivity 20°C	HcB min	965	kA/m	12.1	kOe		
	HcB nom	995	kA/m	12.5	kOe		
Intrinsic Coercitivity 20°C	HcJ min	1350	kA/m	17.0	kOe		
	HcJ nom	1400	kA/m	17.6	kOe		
Maximum Energy Product 20°C	BH max, min	310	kJ/m^3	38.9	MGOe		
	BH max, nom	334	kJ/m^3	42.0	MGOe		
Reversible Temperature Coefficient [1]	α Br nom	-0.085 ~ -0.120	%/°C				
	β HcJ nom	-0.43 ~ -0.57	%/°C				
material properties (typical values)							
Max. Operating Temperature [2]	T max	180	°C				
Density	ρ	7.6	g/cm^3				
Permeability 20°C	μr	1.05					
Vickers Hardness		750	HV				
Modulus of Elasticity	E	150	kN/mm^2				
Compressive Strength		750	N/mm^2				
Flexural Strength		200	N/mm^2				
Expansion Coefficient		-	$10^{-6}/K$				
Expansion Coefficient in direction of anisotropy	⊥	-1 ~ 0	$10^{-6}/K$				
	//	1 ~ 2	$10^{-6}/K$				
Specific Electric Resistance	ρel	1.35	μΩ·m				
Specific Heat Capacity	c	550	J/(kg·K)				
Thermal Conductivity	λ	5	W/m·K				

1) The shown temperature coefficients are nominal reference values only . They can vary for different temperatures and don't need to be linear.

2) The maximum operating temperature is depending on the magnet shape, size and on the specific application.

Note: The above plotted graphs are idealized and represent theoretical values of the material. Shown are curves according nominal values based on uncoated material samples according to IEC 60404-5. Material and magnetic data represent typical data that may vary due to product shape, size and coating. Please contact Bomatec regarding specific requirements for your application.

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