

Eneflux Armtek Magnetics, Inc .

Magnetic and Physical Properties

Compression Bonded Neodymium

MAGNETIC CHARACTERISTICS	EAM-A 9H	EAM-B 10	EAM-C 9H	EAM-D 10	EAM-O 8
Residual Introduction B _r	6.3 kG 0.63 Tesla	6.9 kG 0.69 Tesla	6.3 kG 0.63 Tesla	6.8 kG 0.68 Tesla	6.1 kG 0.61 Tesla
Coercive Force H _c	5.6 kOe 446 kA/m	5.2 kOe 414 kA/m	5.6 kOe 446 kA/m	5.6 kOe 446 kA/m	5.3 kOe 422 kA/m
Intrinsic Coercivity H _{ci}	15 kOe 1194 kA/m	9 kOe 716 kA/m	16 kOe 1274 kA/m	10.2 kOe 812 kA/m	12.5 kOe 995 kA/m
Energy Product (BH) max	9 MGOe 72 kJ/M ³	10 MGOe 80 kJ/M ³	9 MGOe 72 kJ/M ³	10 MGOe 80 kJ/M ³	8.5 MGOe 68 kJ/M ³
Recoil Permeability	1.15	1.22	1.15	1.22	1.15
Temperature Coefficient of B _r to 100°C	-0.13 %/°C	-0.105 %/°C	-0.07 %/°C	-0.07 %/°C	-0.13 %/°C
Temperature Coefficient of H _{ci} to 100°C	-0.40 %/°C	-0.40 %/°C	-0.40 %/°C	-0.40 %/°C	-0.40 %/°C
Rq'd Magnetizing Force (open circuit) H _s	45 kOe 3582 kA/m	35 kOe 2786 kA/m	45 kOe 3582 kA/m	35 kOe 2786 kA/m	45 kOe 3582 kA/m
Maximum Operating Temperature* °C	110°C	110°C	125°C	110°C	140°C
PHYSICAL PROPERTIES	EAM-A 9H	EAM-B 10	EAM-C 9H	EAM-D 10	EAM-O 8
Density	6.0 g/cm ³	6.0 g/cm ³	6.1 g/cm ³	6.1 g/cm ³	6.0 g/cm ³
Coef of Thermal Expansion (25° to 200°C)	4.8 μm/m°C	4.8 μm/m°C	4.8 μm/m°C	4.8 μm/m°C	4.8 μm/m°C
Compressive Strength	396 kg/cm ²	396 kg/cm ²	396 kg/cm ²	396 kg/cm ²	396 kg/cm ²
Tensile Strength	380 kg/cm ²	380 kg/cm ²	380 kg/cm ²	380 kg/cm ²	380 kg/cm ²
Young's Modulus	8600 kg/cm ²	8600 kg/cm ²	8600 kg/cm ²	8600 kg/cm ²	8600 kg/cm ²
Poisson Ratio	0.2	0.2	0.2	0.2	0.2
Transverse Rupture Strength	320 kg/cm ²	320 kg/cm ²	320 kg/cm ²	320 kg/cm ²	320 kg/cm ²
Hardness	30 Rockwell B	30 Rockwell B	30 Rockwell B	30 Rockwell B	30 Rockwell B
Electrical Resistivity	14000 μohm-cm	14000 μohm-cm	14000 μohm-cm	14000 μohm-cm	14000 μohm-cm
Specific Heat	0.42 Ws/g°C	0.42 Ws/g°C	0.42 Ws/g°C	0.42 Ws/g°C	0.42 Ws/g°C
Thermal Conductivity	0.02 W/cm°C	0.02 W/cm°C	0.02 W/cm°C	0.02 W/cm°C	0.02 W/cm°C
Curie Temperature	305°C	360°C	470°C	470°C	305°C

Note: Magnetic and physical properties are typical at room temperature.

* Maximum operating temperature is dependent upon permeance coefficient, coating and environment.

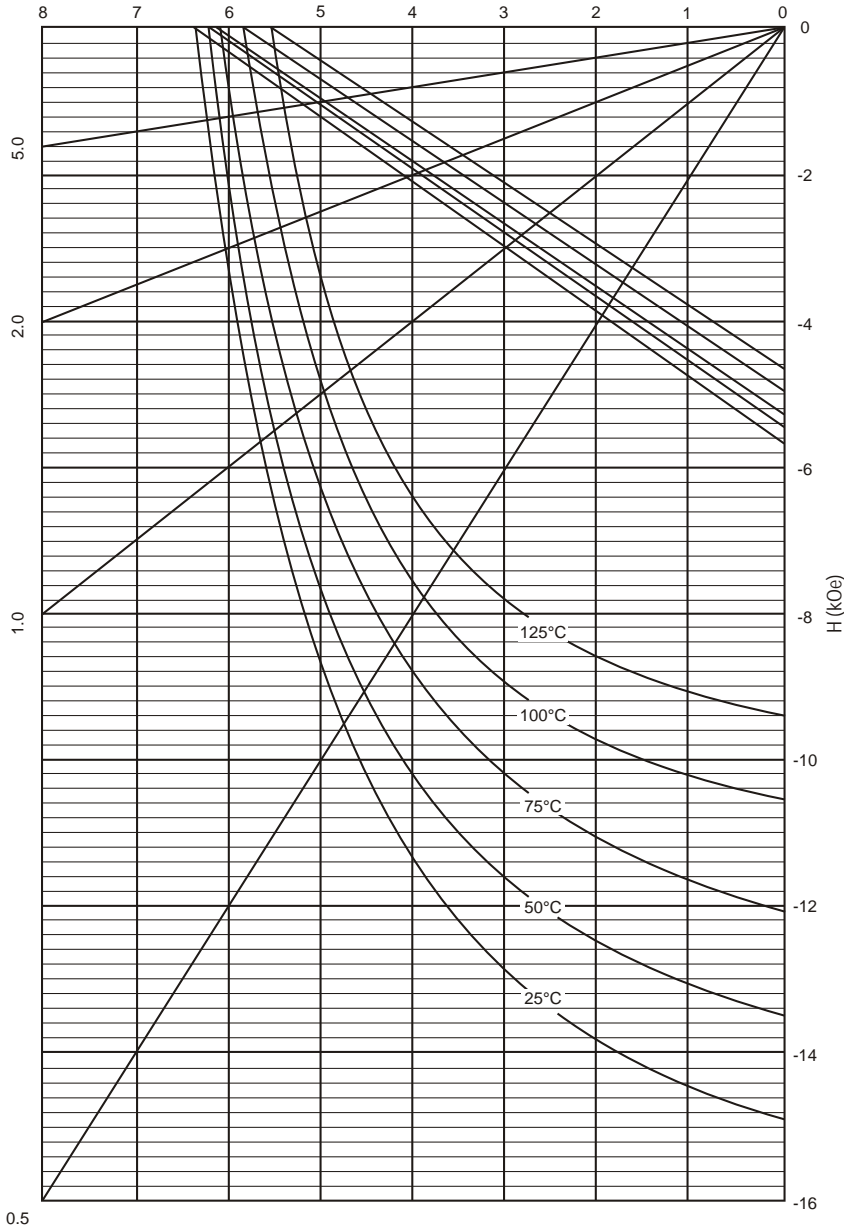
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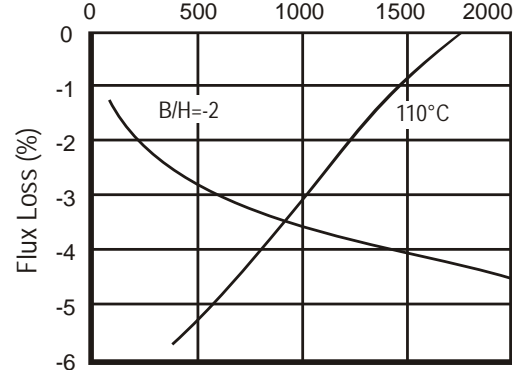
EAM-A 9H

DEMAGNETIZATION CURVES | 4 M or B (kG)



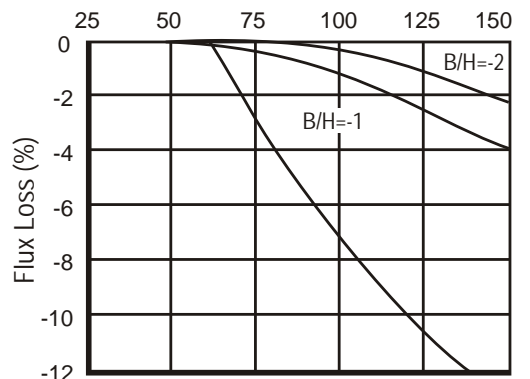
TOTAL FLUX LOSS

Time (Hours)

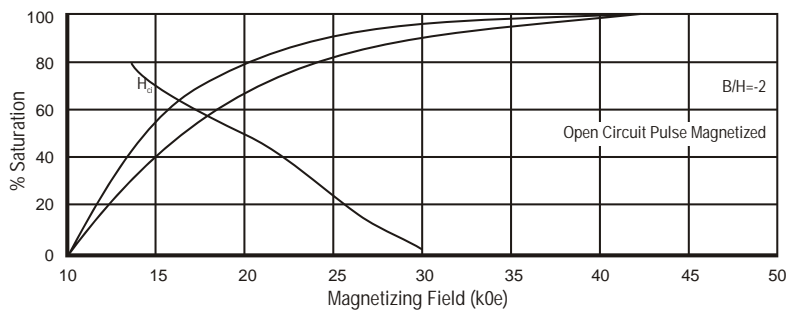


IRREVERSIBLE FLUX LOSS

Temperature (°C)



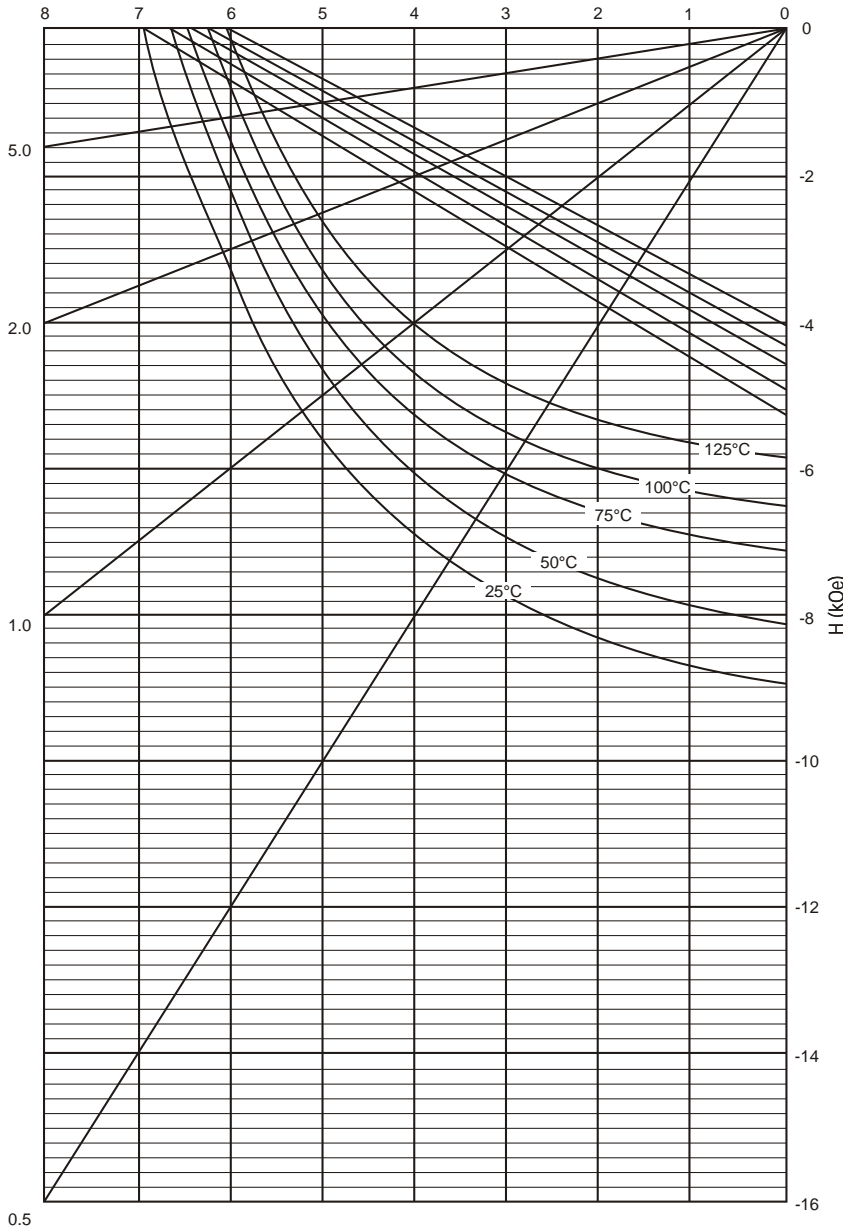
MAGNETIZATION CURVES



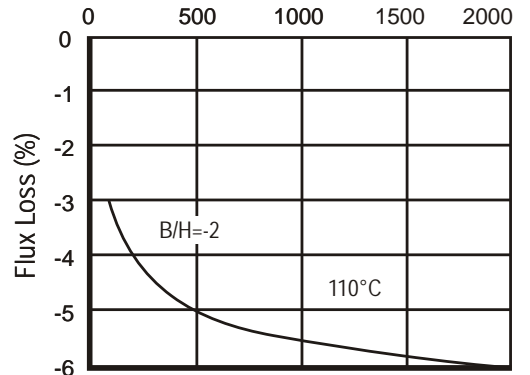


EAM-B 10

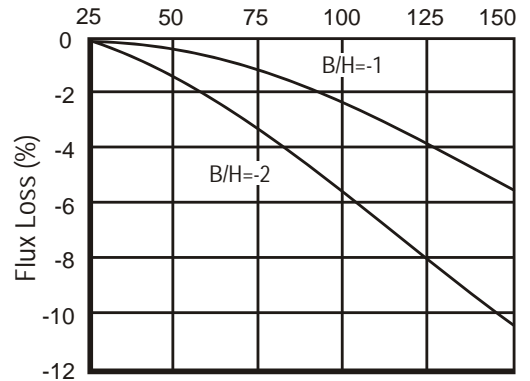
DEMAGNETIZATION CURVES | 4 M or B (kG)



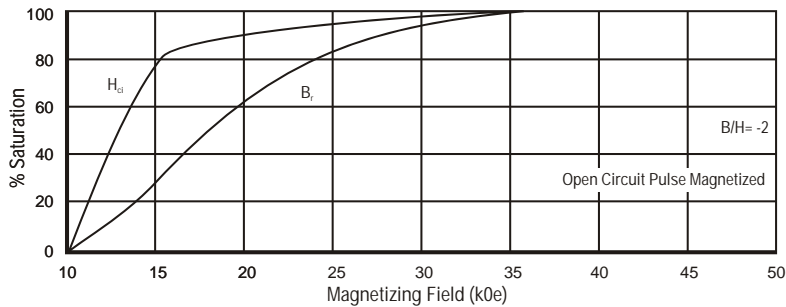
TOTAL FLUX LOSS Time (Hours)



IRREVERSIBLE FLUX LOSS Temperature (°C)



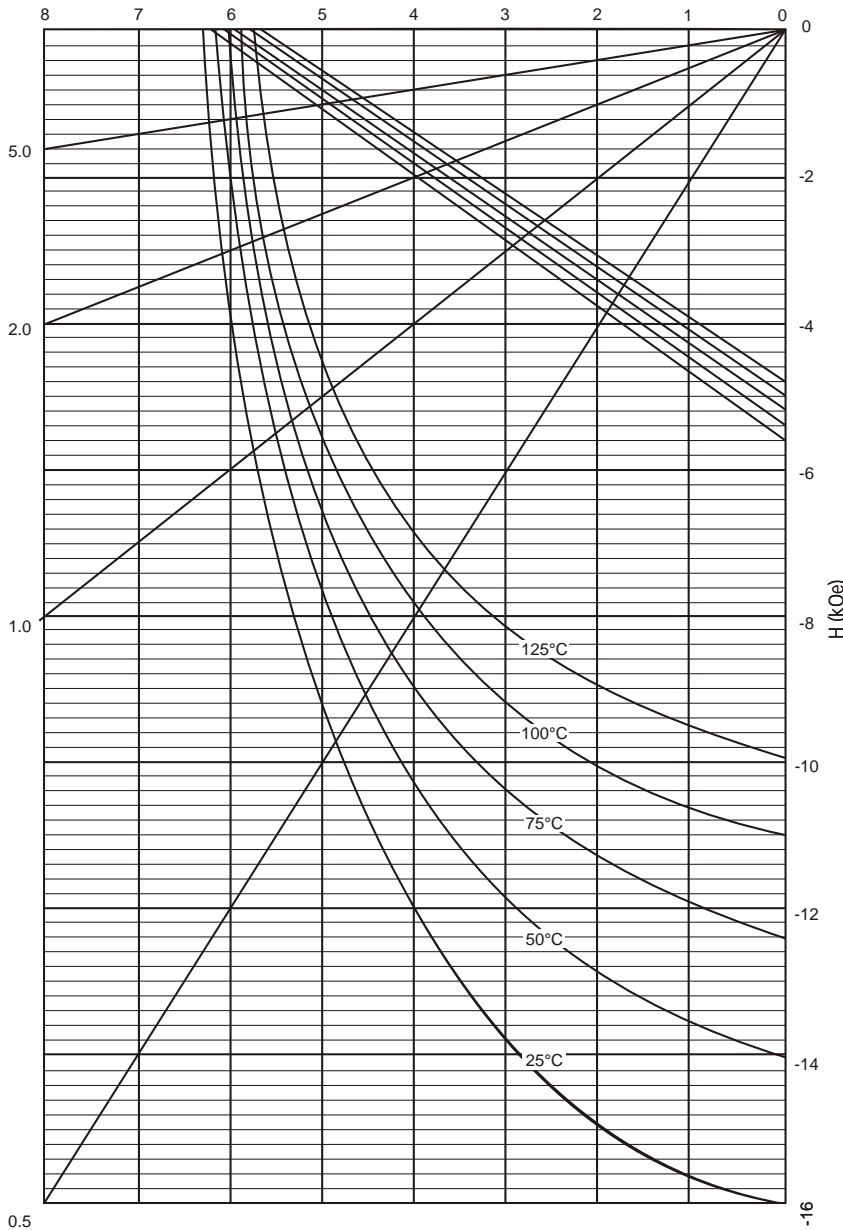
MAGNETIZATION CURVES





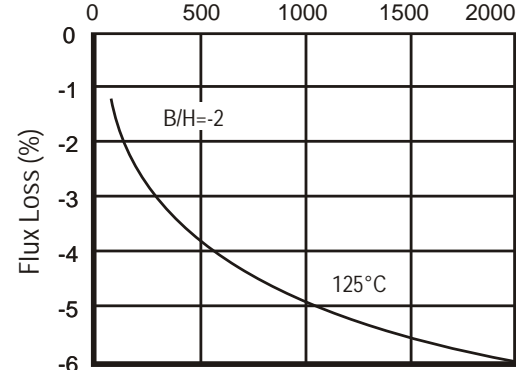
EAM-C-9H

DEMAGNETIZATION CURVES | 4 M or B (kG)



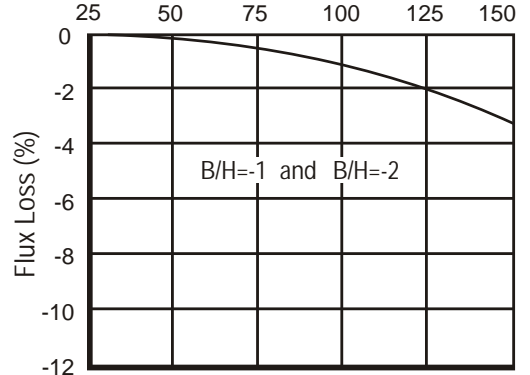
TOTAL FLUX LOSS

Time (Hours)

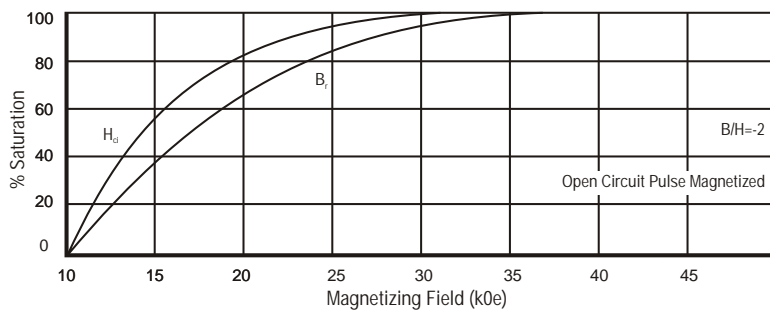


IRREVERSIBLE FLUX LOSS

Temperature (°C)



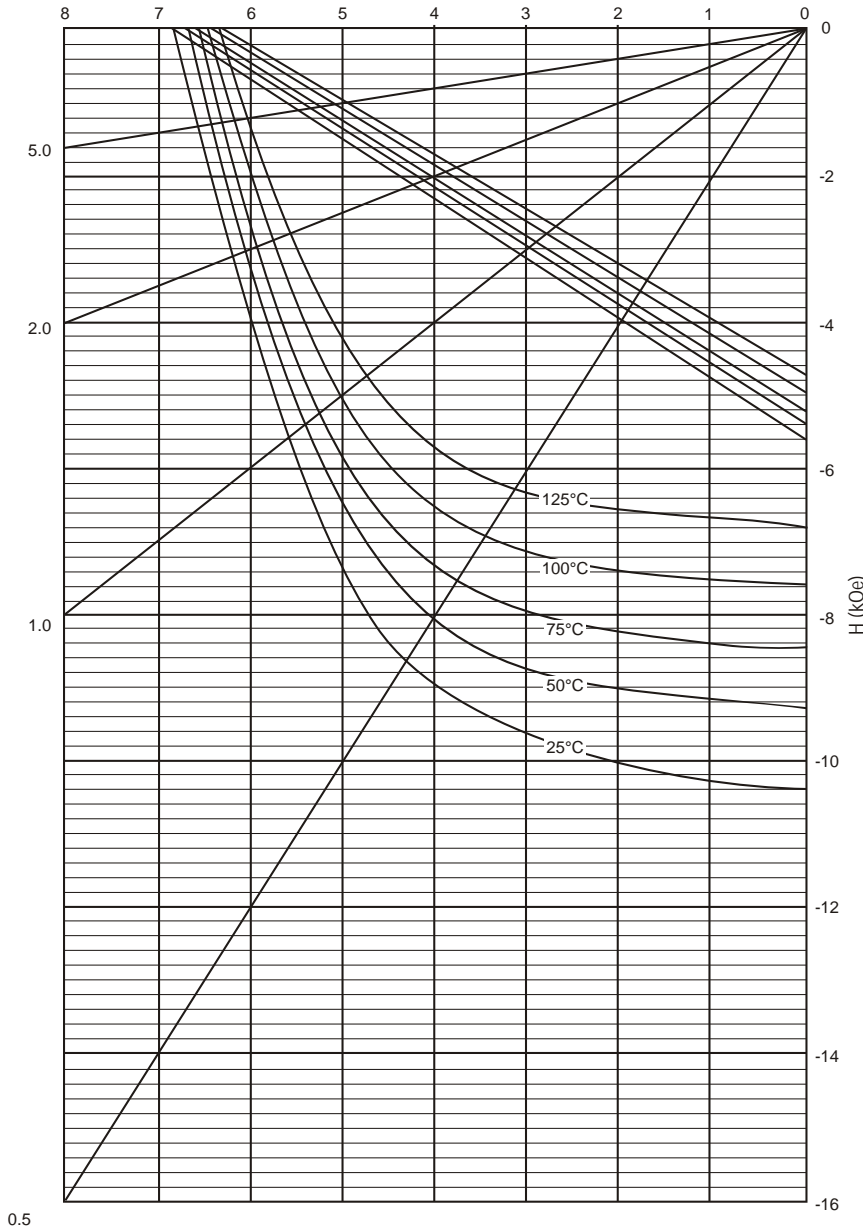
MAGNETIZATION CURVES





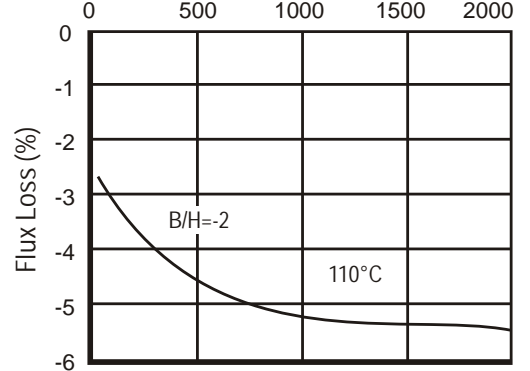
EAM-D 10

DEMAGNETIZATION CURVES μ_4 M or B (kG)



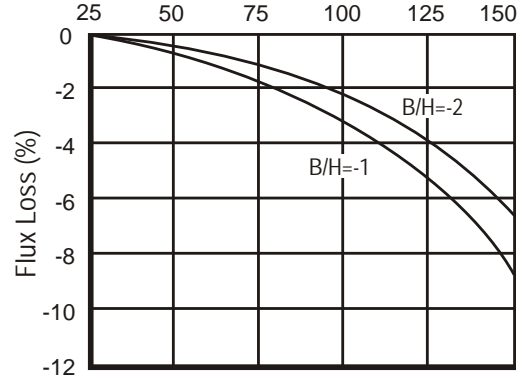
TOTAL FLUX LOSS

Time (Hours)

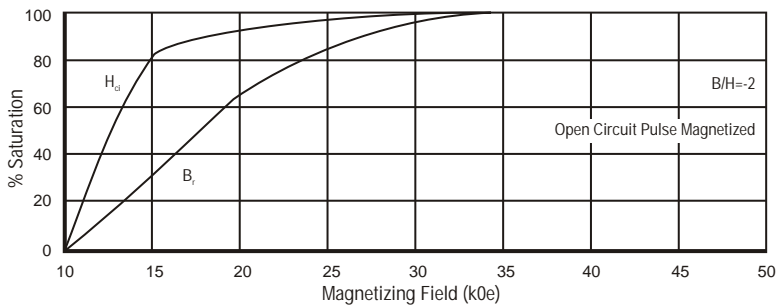


IRREVERSIBLE FLUX LOSS

Temperature (°C)



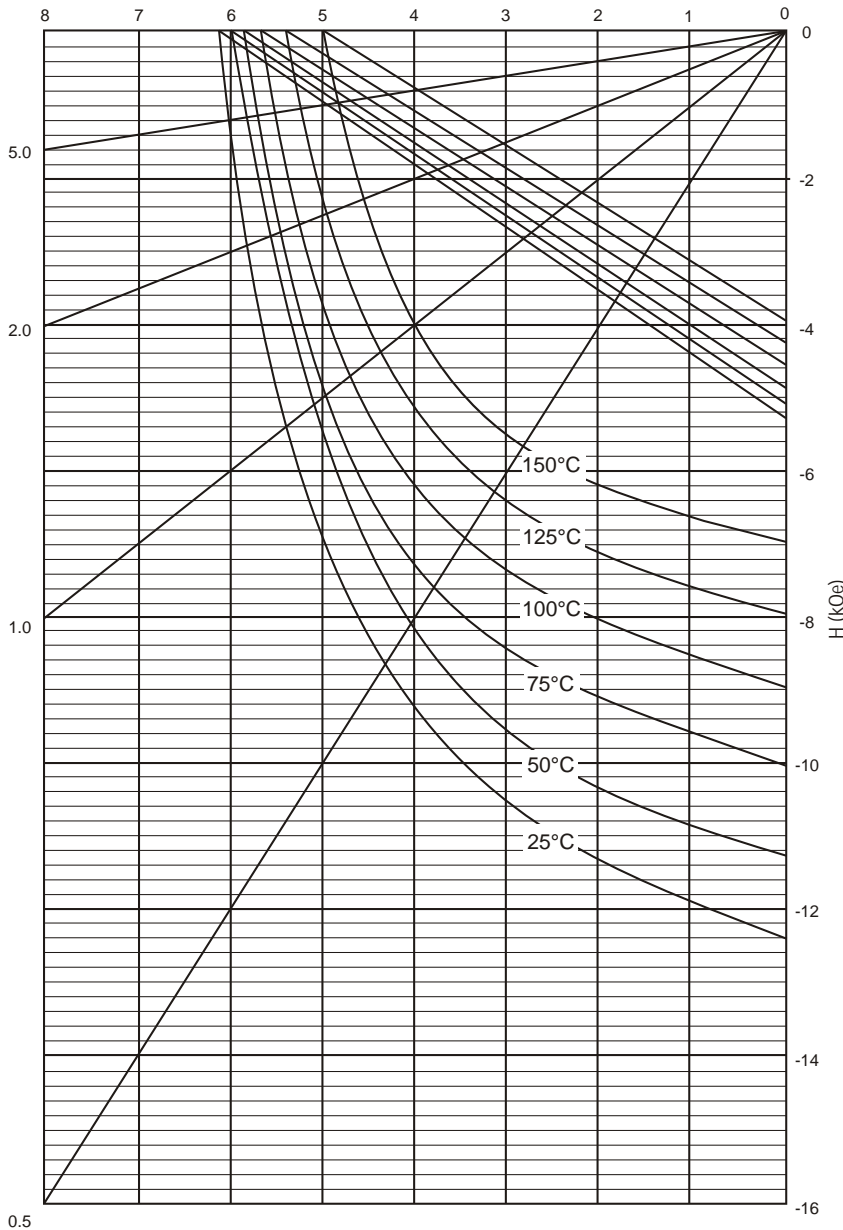
MAGNETIZATION CURVES





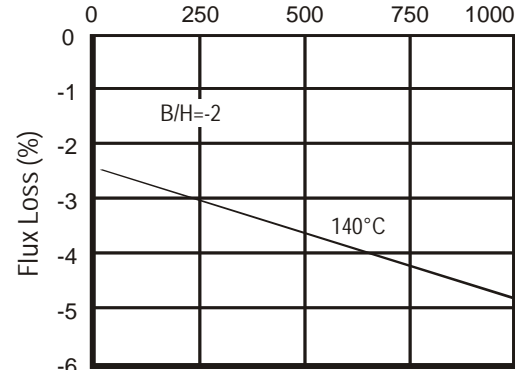
EAM-O 8

DEMAGNETIZATION CURVES $\frac{1}{4}$ M or B (kG)



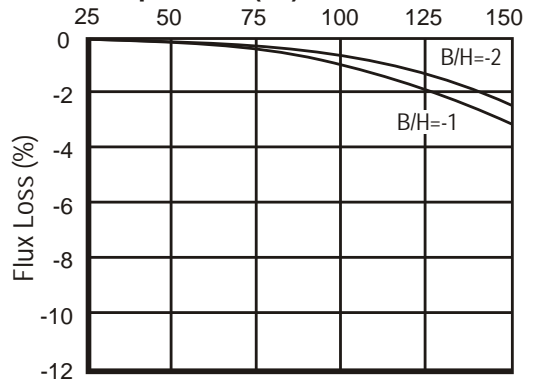
TOTAL FLUX LOSS

Time (Hours)



IRREVERSIBLE FLUX LOSS

Temperature (°C)



MAGNETIZATION CURVES

