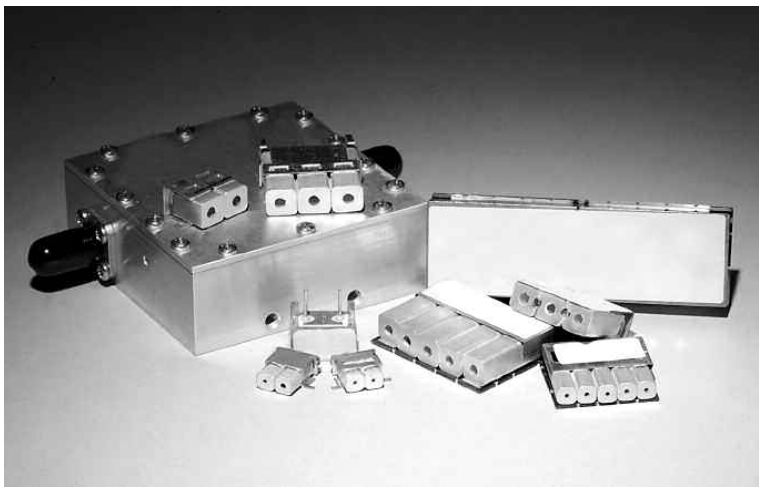
DATA SHEET

Microwave Garnets



Aluminum Doped

Composition and Type Number	Magnetization 4πMs (Gauss)	Lande'§ G-factor g-eff (Nominal Value)	Line Width§ Δh Oe @ -3 dB	Dielectric§ Constant ε'	Dielectric Loss Tangent Tan δ = ε"/ε'	Curie Temperature Tc (°C) (Nominal Value)	Spin Wave Line Width ΔHk oe (Nominal Value)	Remanent Induction* B_r (Gauss) (Nominal Value)	Coercive Force* H_C (oe) (Nominal Value)	Initial Permeability† μo (Nominal Value)
G-1009	175 ± 25g	2.03	≤50	13.8 ± 5%	≤ 0.0002	85	1.5	40	0.90	11
G-250	250 ± 25g	2.02	≤45	13.8 ± 5%	≤ 0.0002	105	1.4	123	0.62	34
G-300	300 ± 25g	2.02	≤45	14.0 ± 5%	≤ 0.0002	120	2	162	0.62	46
G-350	350 ± 25g	2.01	≤45	14.0 ± 5%	≤ 0.0002	130	1.4	213	0.66	31
G-400	400 ± 25g	2.01	≤45	14.1 ± 5%	≤ 0.0002	135	1.4	224	0.69	41
G-475	475 ± 25g	2.01	≤45	14.1 ± 5%	≤ 0.0002	140	1.4	310	0.60	40
G-510	550 ± 5%	2.00	≤48	14.3 ± 5%	≤ 0.0002	155	1.3	398	0.55	37
G-610	680 ± 5%	2.00	≤48	14.5 ± 5%	≤ 0.0002	185	1.5	515	0.70	50

§ Measured @ 9.4 GHz
† Measured @ 1 KHz
* Measured @ 60 Hz or 2 KHz with H_{app} = 5xHc

For any composition the minimum line width is fixed by KI/Ms. For some shapes and sizes, line widths even closer to the theoretical limit are possible. Typical value for this series is 20oe, which is available in some shapes and sizes.
Bars and Rods are Available for All Material Types, as well as discs, triangles and composites.

Gadolinium Doped

Composition and Type Number	Magnetization $4\pi M_s$ (Gauss)	Lande'§ G-factor g-eff (Nominal Value)	Line Width§ Δh Oe @ -3 dB	Dielectric§ Constant ε'	Dielectric Loss Tangent Tan δ = ε"/ε'	Curie Temperature T^c (°C) (Nominal Value)	Spin Wave Line Width ΔH_k oe (Nominal Value)	Remanent Induction* B_r (Gauss) (Nominal Value)	Coercive Force* H_c (oe) (Nominal Value)	Initial Permeability† μo (Nominal Value)
G-1005	725 ± 5%	2.02	≤300	15.4 ± 5%	≤ 0.0002	280	7.6	357	1.51	26
G-1003	870 ± 5%	2.00	≤186	15.4 ± 5%	≤ 0.0002	280	6.4	543	1.10	36
G-1002	1000 ± 5%	1.99	≤132	15.4 ± 5%	≤ 0.0002	280	5.8	672	0.93	48
G-1001	1200 ± 5%	1.99	≤96	15.2 ± 5%	≤ 0.0002	280	4.3	717	1.00	72
G-1600	1600 ± 5%	1.98	≤66	15.1 ± 5%	≤ 0.0002	280	3.8	986	0.83	116

Gadolinium Aluminum Doped

Composition and Type Number	Magnetization $4\pi M_s$ (Gauss)	Lande'§ G-factor g-eff (Nominal Value)	Line Width§ Δh Oe @ -3 dB	Dielectric§ Constant ε'	Dielectric Loss Tangent Tan δ = ε"/ε'	Curie Temperature T^c (°C) (Nominal Value)	Spin Wave Line Width ΔH_k oe (Nominal Value)	Remanent Induction* B_r (Gauss) (Nominal Value)	Coercive Force* H_c (oe) (Nominal Value)	Initial Permeability† μo (Nominal Value)
G-1006	400 ± 25g	2.01	<78	14.2 ± 5%	< 0.0002	150	4.2	185	1.00	23
G-500	550 ± 5%	2.00	<78	14.4 ± 5%	< 0.0002	180	3.5	280	0.80	28
G-600	680 ± 5%	2.00	<72	14.6 ± 5%	< 0.0002	200	4.0	375	0.69	347
G-1004	800 ± 5%	2.00	<90	14.8 ± 5%	< 0.0002	240	5.2	493	0.93	38
G-800	800 ± 5%	2.00	<66	14.7 ± 5%	< 0.0002	230	4.3	504	0.69	60
G-1000	1000 ± 5%	1.99	<66	14.7 ± 5%	< 0.0002	250	3.6	641	0.97	56
G-1021	1100 ± 5%	1.99	<108	15.2 ± 5%	< 0.0002	280	5.4	722	0.76	54
G-1200	1200 ± 5%	1.98	<60	15.1 ± 5%	< 0.0002	260	3.2	795	0.83	65
G-1400	1400 ± 5%	1.98	<60	15.1 ± 5%	< 0.0002	265	3.1	918	0.69	89

Holmium Doped

Composition and Type Number	Magnetization $4\pi M_s$ (Gauss)	Lande'§ G-factor g-eff (Nominal Value)	Line Width§ Δh Oe @ -3 dB	Dielectric§ Constant ε'	Dielectric Loss Tangent Tan δ = ε"/ε'	Curie Temperature T^c (°C) (Nominal Value)	Spin Wave Line Width ΔH_k oe (Nominal Value)	Remanent Induction* B_r (Gauss) (Nominal Value)	Coercive Force* H_c (oe) (Nominal Value)	Initial Permeability† μo (Nominal Value)
G-4260	550 ± 5%	2.00	≤120	14.4 ± 5%	≤ 0.0002	180	8.5	280	0.80	28
G-4259	800 ± 5%	2.00	≤132	14.8 ± 5%	≤ 0.0002	240	8.1	493	0.93	38
G-4258	1000 ± 5%	1.99	≤156	15.4 ± 5%	≤ 0.0002	280	8.9	672	0.93	48
G-4257	1200 ± 5%	1.99	≤120	15.2 ± 5%	≤ 0.0002	280	8.1	717	1.00	72
G-4256	1600 ± 5%	1.98	≤84	15.1 ± 5%	≤ 0.0002	280	5.4	986	0.83	116

§ Measured @ 9.4 GHz

† Measured @ 1 KHz

* Measured @ 60 Hz or 2 KHz with H_{app} = 5xHc

For any composition the minimum line width is fixed by KI/Ms. For some shapes and sizes, line widths even closer to the theoretical limit are possible. Typical value for this series is 20oe, which is available in some shapes and sizes.

Bars and Rods are Available for All Material Types, as well as discs, triangles and composites.

Narrow Line Width Series*

Composition and Type Number	Magnetization $4\pi M_s$ (Gauss)	Lande'§ G-factor g-eff (Nominal Value)	Line Width§ Δh Oe @ -3 dB	Dielectric§ Constant ε'	Dielectric Loss Tangent Tan δ = ε"/ε'	Curie Temperature T^c (°C) (Nominal Value)	Spin Wave Line Width ΔH_k oe (Nominal Value)	Remanent Induction* B_r (Gauss) (Nominal Value)	Coercive Force* H_c (oe) (Nominal Value)	Initial Permeability† μo (Nominal Value)
G-113	1780 ± 5%	1.97	≤25	15.0 ± 5%	≤ 0.0002	280	1.4	1277	0.45	134
G-810	800 ± 5%	1.99	≤25	14.6 ± 5%	≤ 0.0002	200	1.5	543	0.62	46
G-1010	1000 ± 5%	1.99	≤25	14.7 ± 5%	≤ 0.0002	210	1.4	694	1.55	66
G-1210	1200 ± 5%	1.98	≤25	14.8 ± 5%	≤ 0.0002	220	1.3	784	0.69	87

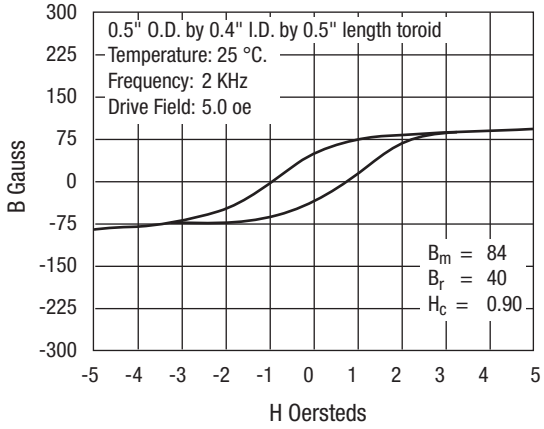
Calcium Vanadium Doped

Composition and Type Number	Magnetization $4\pi M_s$ (Gauss)	Lande'§ G-factor g-eff (Nominal Value)	Line Width§ Δh Oe @ -3 dB	Dielectric§ Constant ε'	Dielectric Loss Tangent Tan δ = ε"/ε'	Curie Temperature T^c (°C) (Nominal Value)	Spin Wave Line Width ΔH_k oe (Nominal Value)	Remanent Induction* B_r (Gauss) (Nominal Value)	Coercive Force* H_c (oe) (Nominal Value)	Initial Permeability† μo (Nominal Value)
TTVG-800	800 ± 5%	2	≤15	13.9 ± 5%	≤ 0.0002	192	2	560	0.6	129
TTVG-930	930 ± 5%	2	≤10	14.0 ± 5%	≤ 0.0002	188	2	380	0.4	225
TTVG-1000	1000 ± 5%	2	≤10	14.0 ± 5%	≤ 0.0002	199	2	320	0.3	210
TTVG- 1100	1100 ± 5%	2	≤10	14.1 ± 5%	≤ 0.0002	205	2	600	0.6	209
TTVG-1200	1200 ± 5%	2	≤10	14.4 ± 5%	≤ 0.0002	208	2	635	0.3	221
TTVG-1400	1400 ± 5%	2	≤10	14.5 ± 5%	≤ 0.0002	215	2	825	0.3	263
TTVG-1600	1600 ± 5%	2	≤10	14.6 ± 5%	≤ 0.0002	220	2	1000	0.6	227
TTVG-1850	1850 ± 5%	2	≤10	14.8 ± 5%	≤ 0.0002	200	2	1232	0.5	388
TTZ1950	1950 ± 5%	2	≤15	15.0 ± 5%	≤ 0.0002	235	2	—	—	—

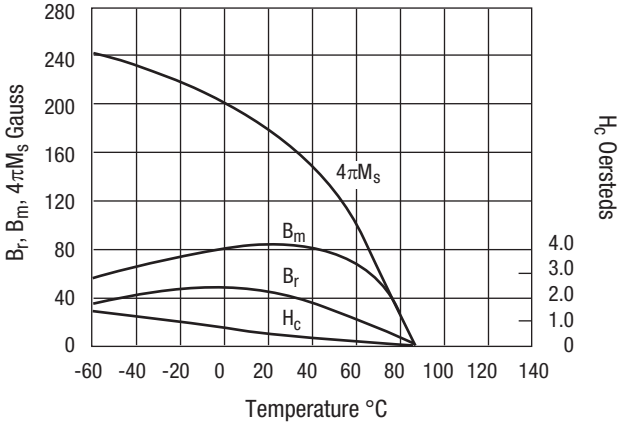
§ Measured @ 9.4 GHz
† Measured @ 1 KHz
* Measured @ 60 Hz or 2 KHz with H_{app} = 5xHc

For any composition the minimum line width is fixed by KI/Ms. For some shapes and sizes, line widths even closer to the theoretical limit are possible. Typical value for this series is 20oe, which is available in some shapes and sizes.
Bars and Rods are Available for All Material Types, as well as discs, triangles and composites.

G-1009 Aluminum Doped



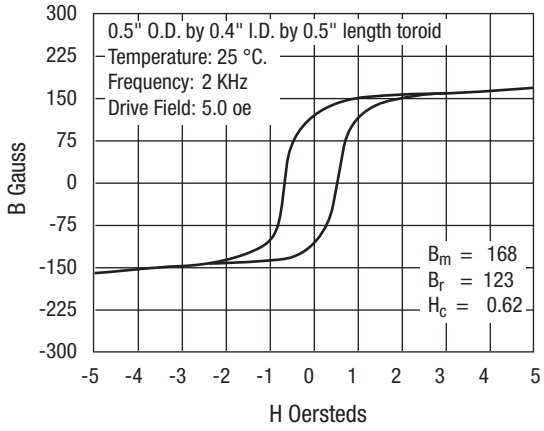
Hysteresis Loop



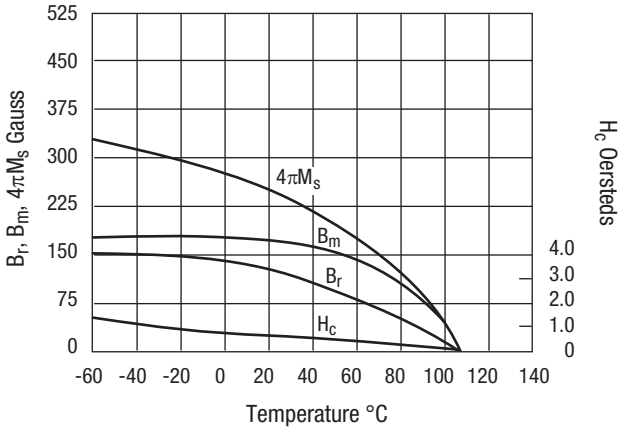
Hysteresis Loop

204672-001

G-250 Aluminum Doped



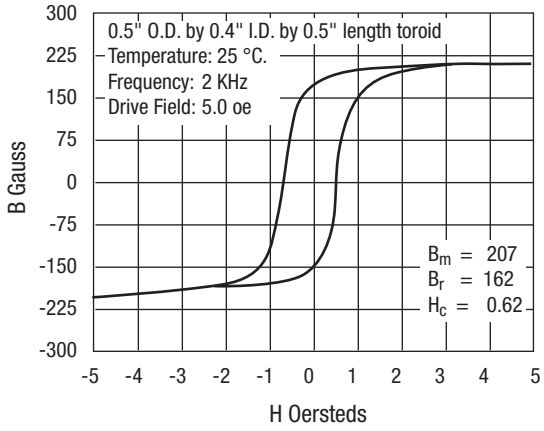
Hysteresis Loop



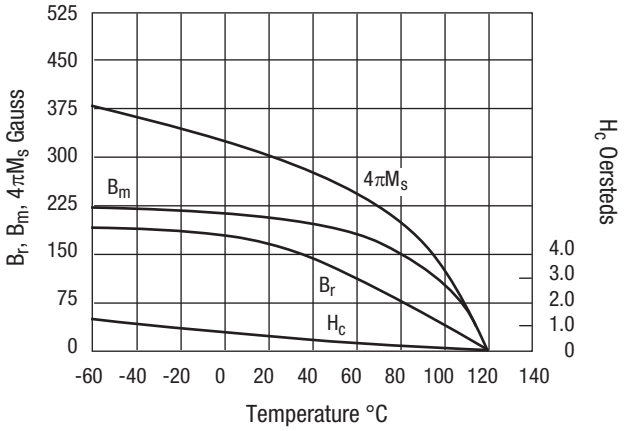
Hysteresis Loop

204672-002

G-300 Aluminum Doped



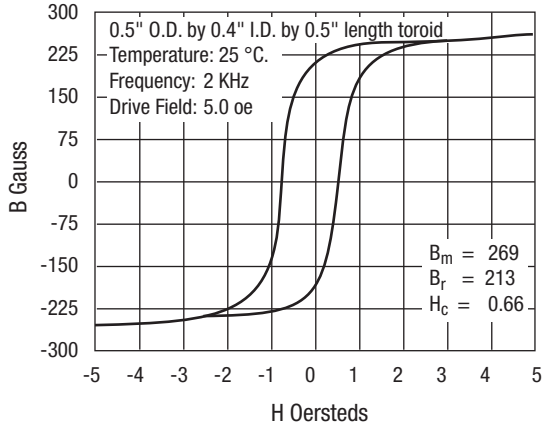
Hysteresis Loop



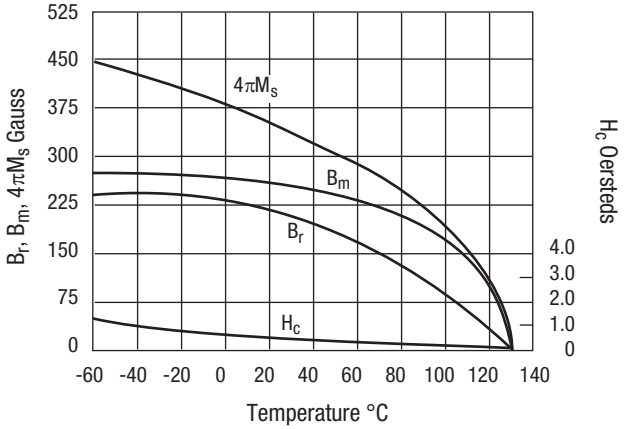
Hysteresis Loop

204672-003

G-350 Aluminum Doped



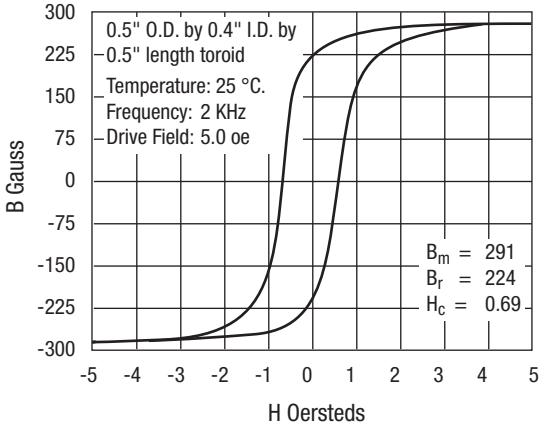
Hysteresis Loop



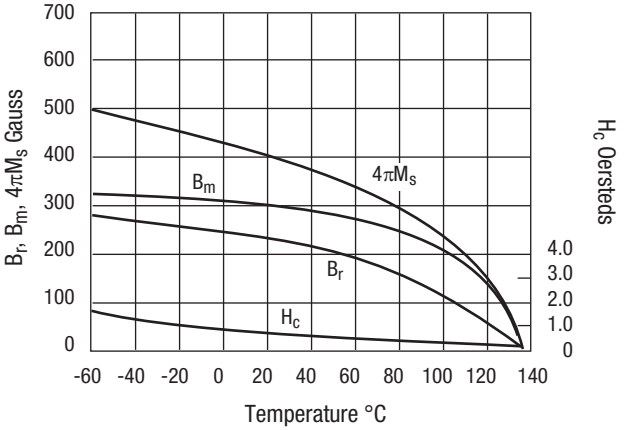
Hysteresis Loop

204672-004

G-400 Aluminum Doped



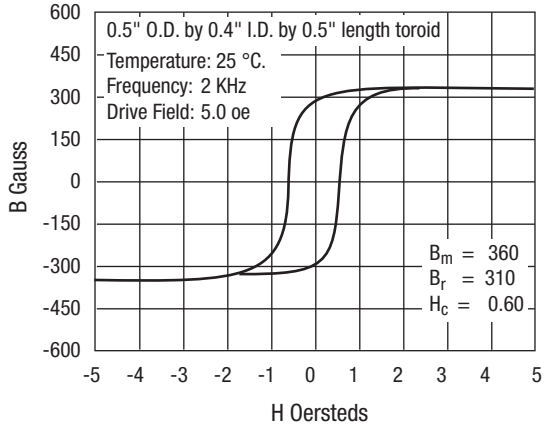
Hysteresis Loop



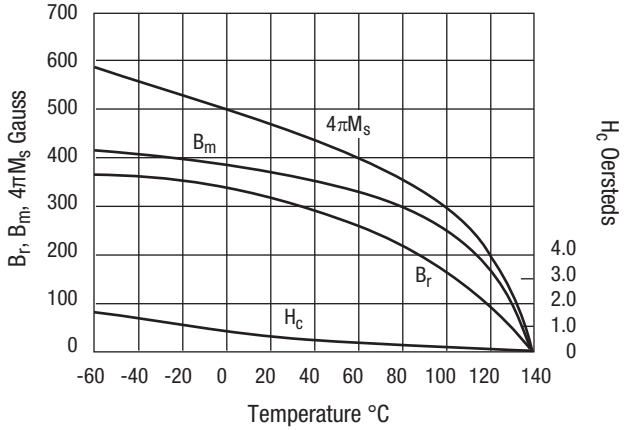
Hysteresis Loop

204672-005

G-475 Aluminum Doped



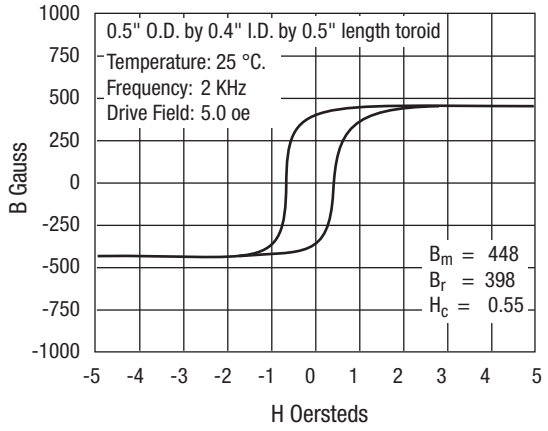
Hysteresis Loop



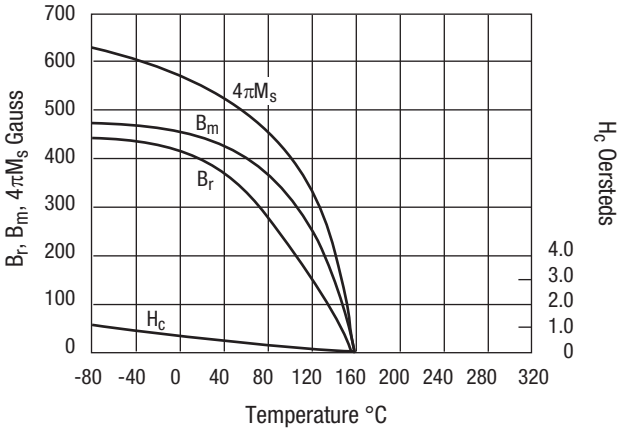
Hysteresis Loop

204672-006

G-510 Aluminum Doped



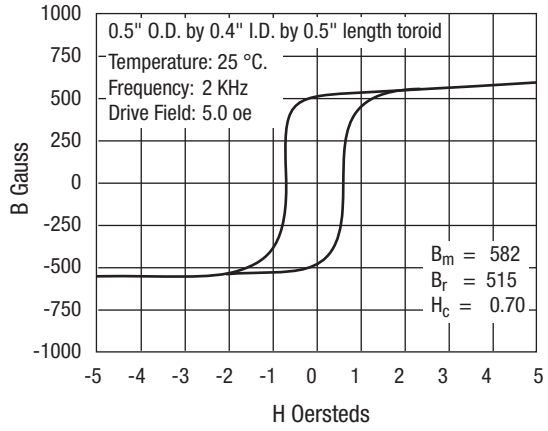
Hysteresis Loop



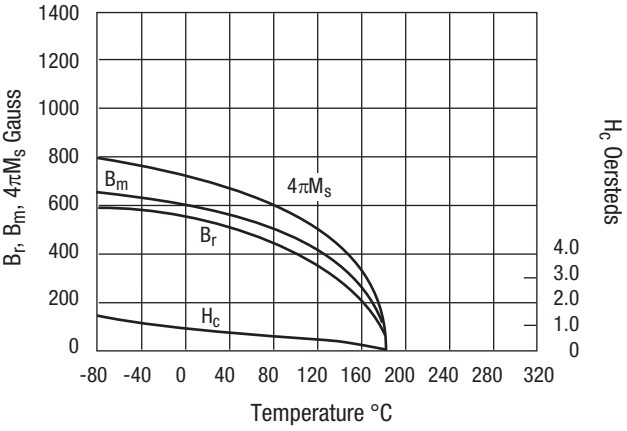
Hysteresis Loop

204672-007

G-610 Aluminum Doped



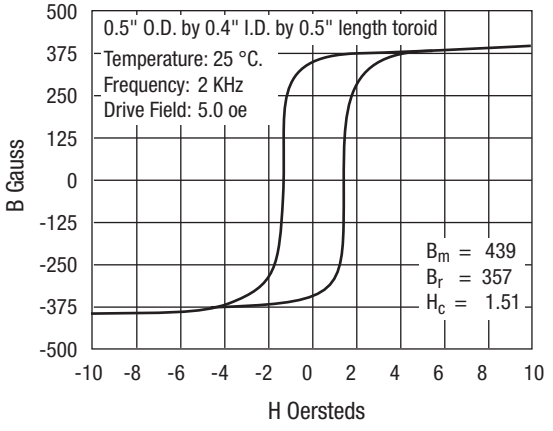
Hysteresis Loop



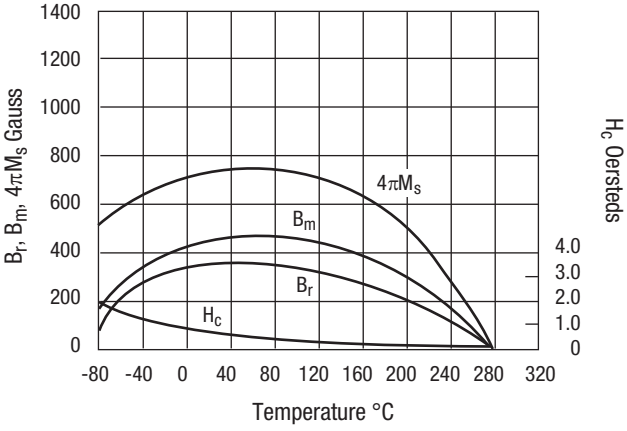
Hysteresis Loop

204672-008

G-1005 Gadolinium Doped



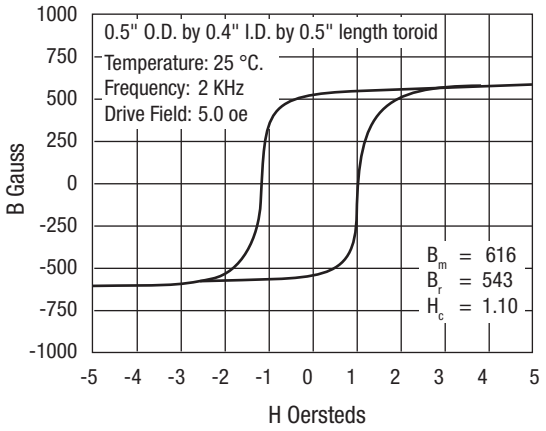
Hysteresis Loop



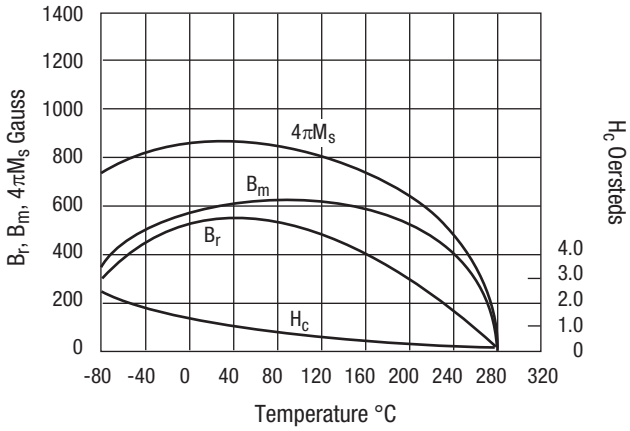
Hysteresis Loop

204672-009

G-1003 Gadolinium Doped



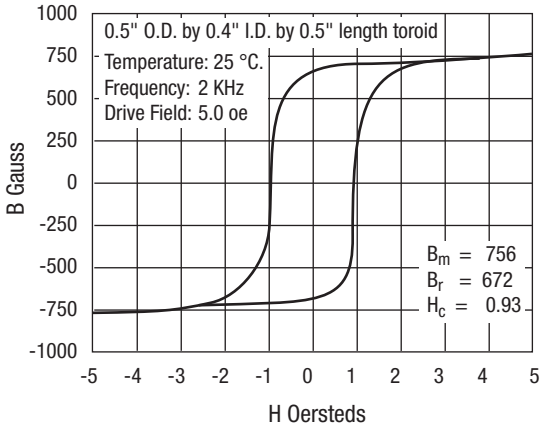
Hysteresis Loop



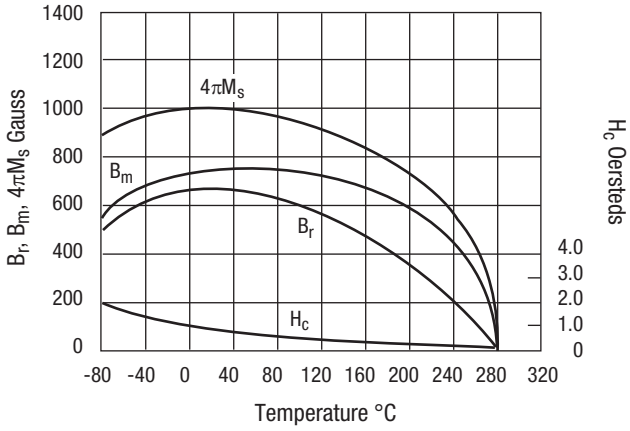
Hysteresis Loop

204672-010

G-1002 Gadolinium Doped



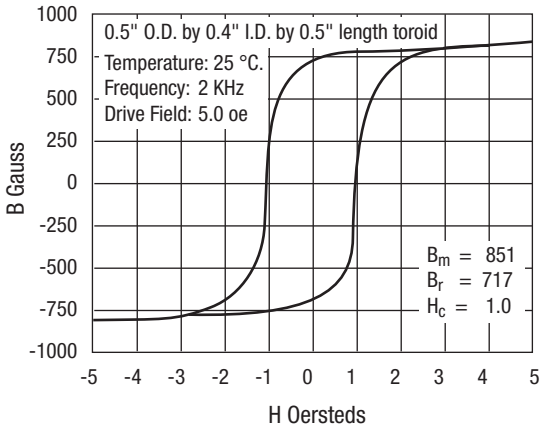
Hysteresis Loop



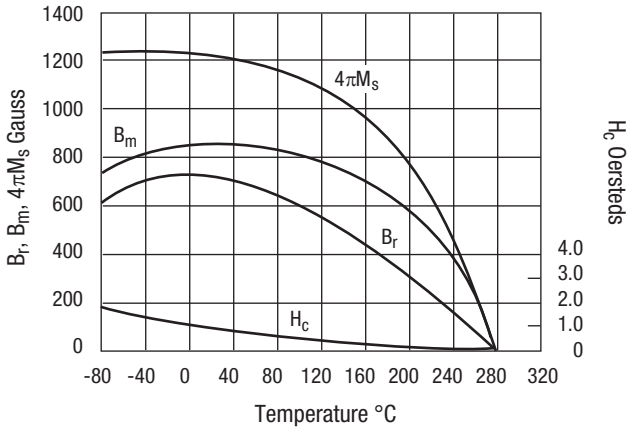
Hysteresis Loop

204672-011

G-1001 Gadolinium Doped



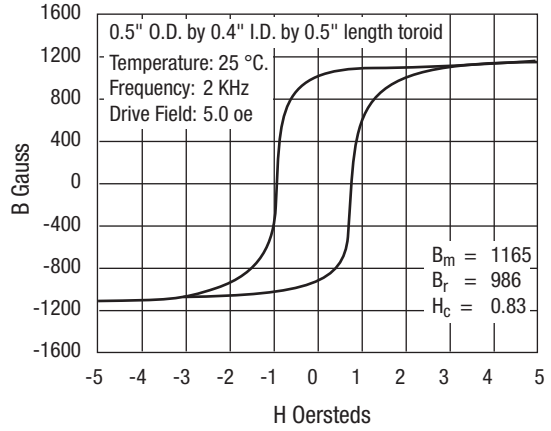
Hysteresis Loop



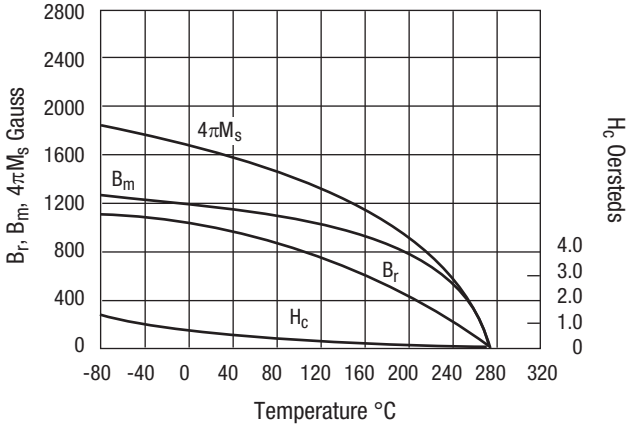
Hysteresis Loop

204672-012

G-1600 Gadolinium Doped



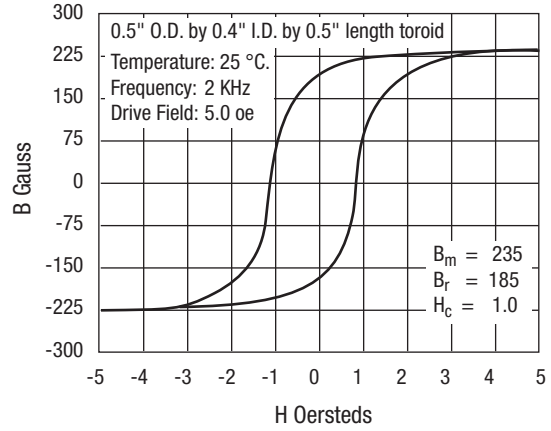
Hysteresis Loop



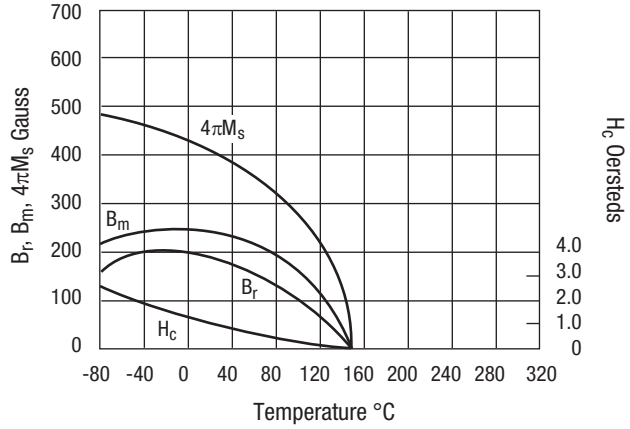
Hysteresis Loop

204672-013

G-1006 Gadolinium Aluminum Doped



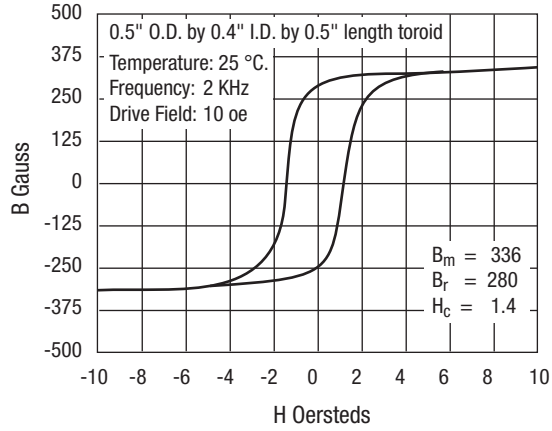
Hysteresis Loop



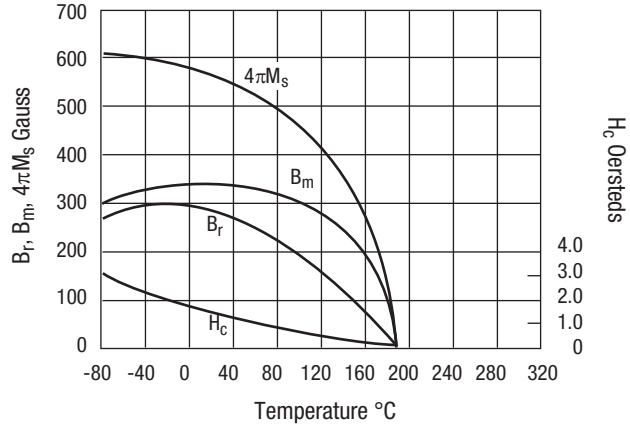
Hysteresis Loop

204672-014

G-500 Gadolinium Aluminum Doped



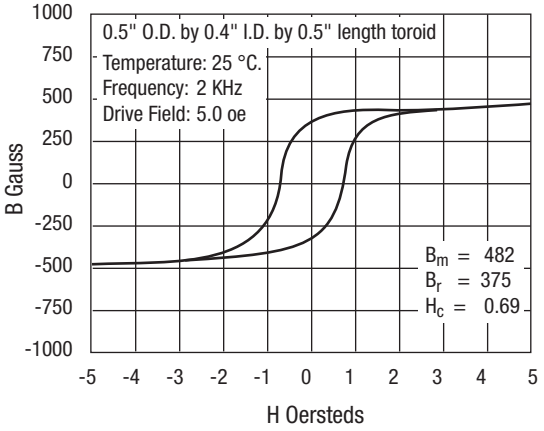
Hysteresis Loop



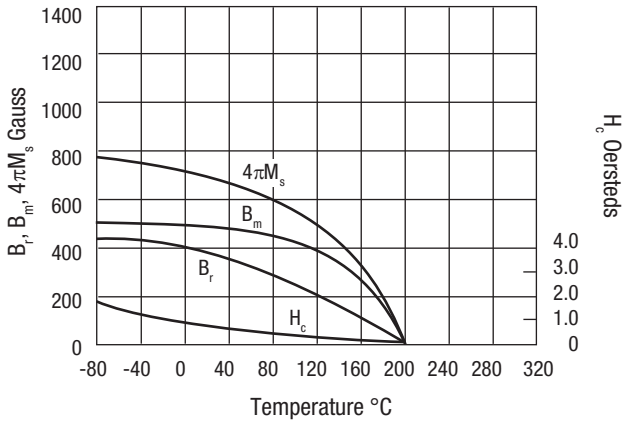
Hysteresis Loop

204672-015

G-600 Gadolinium Aluminum Doped



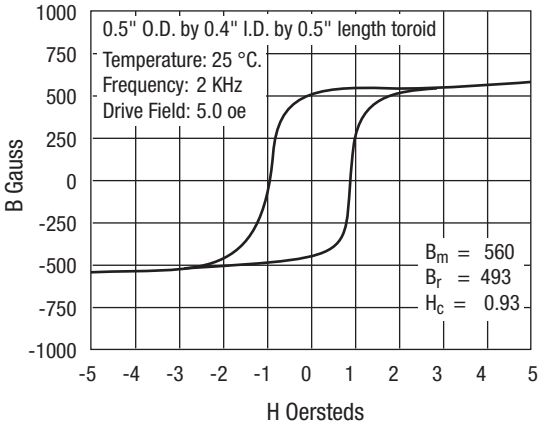
Hysteresis Loop



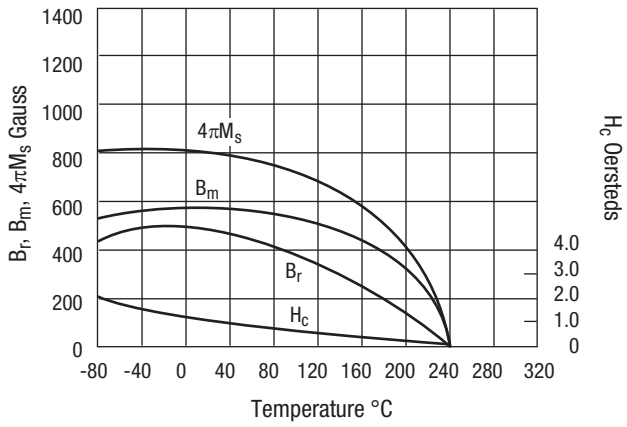
Hysteresis Loop

204672-016

G-1004 Gadolinium Aluminum Doped



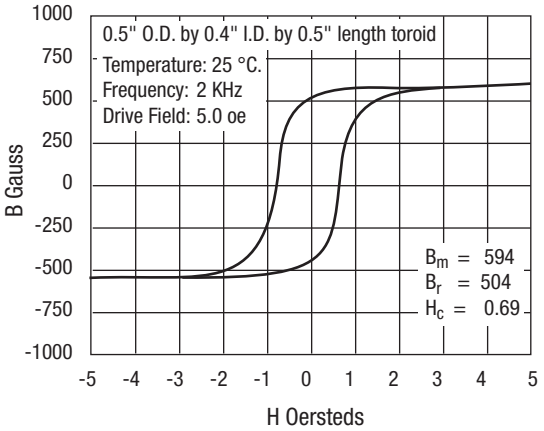
Hysteresis Loop



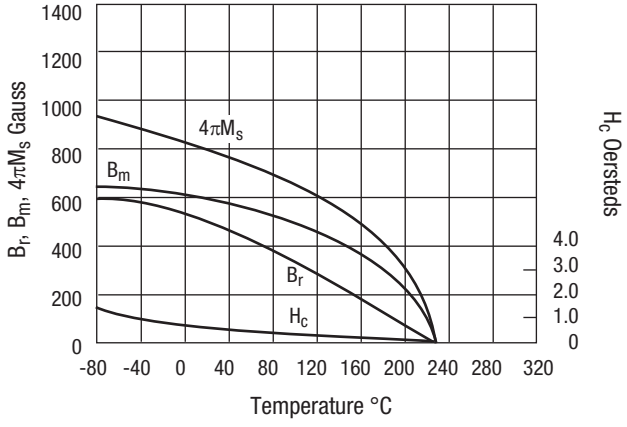
Hysteresis Loop

204672-017

G-800 Gadolinium Aluminum Doped



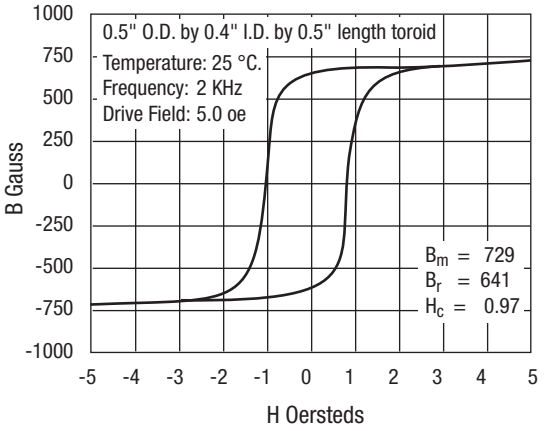
Hysteresis Loop



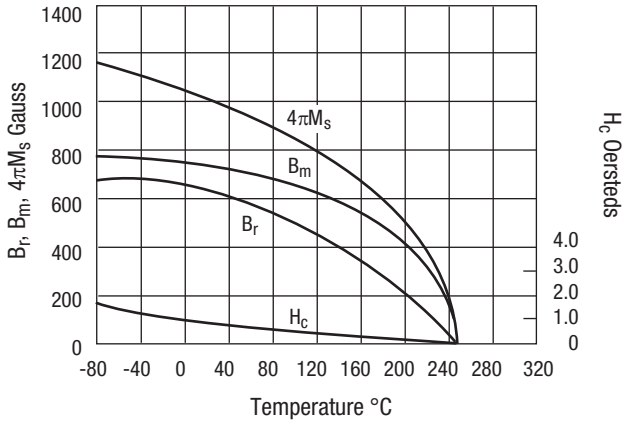
Hysteresis Loop

204672-018

G-1000 Gadolinium Aluminum Doped



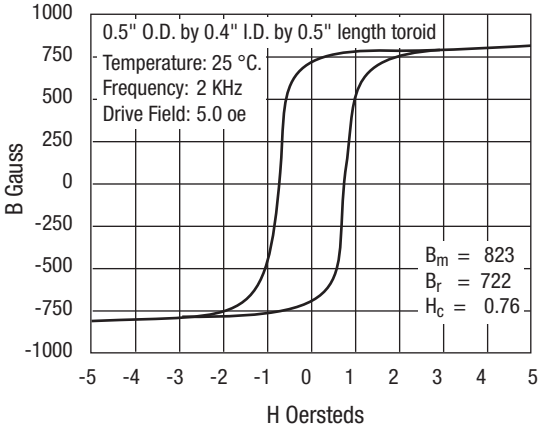
Hysteresis Loop



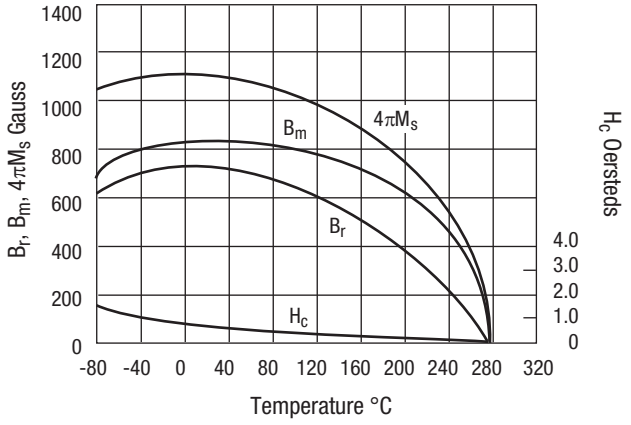
Hysteresis Loop

204672-019

G-1021 Gadolinium Aluminum Doped



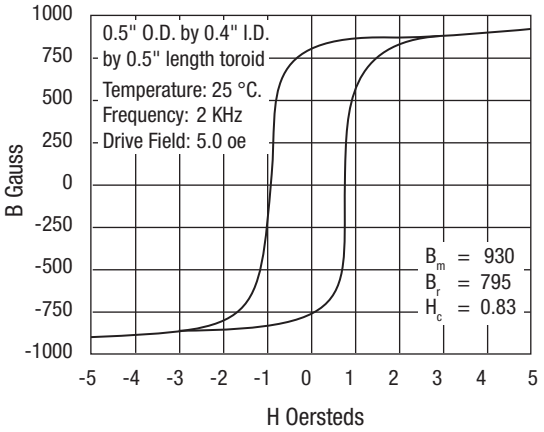
Hysteresis Loop



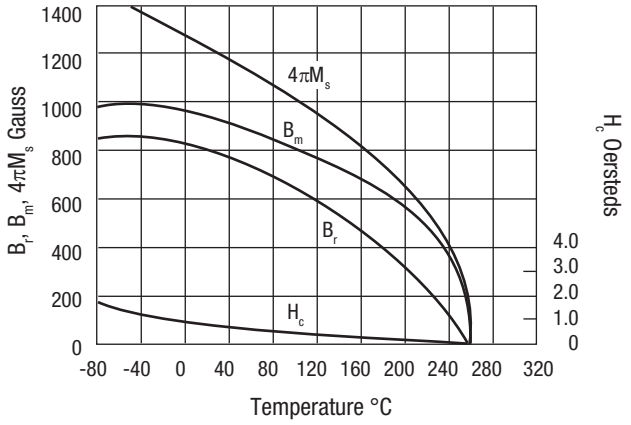
Hysteresis Loop

204672-020

G-1200 Gadolinium Aluminum Doped



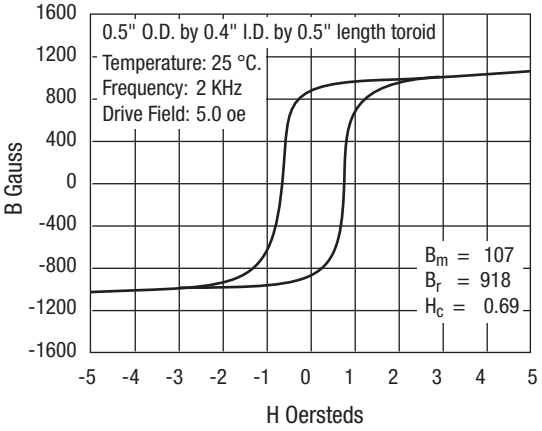
Hysteresis Loop



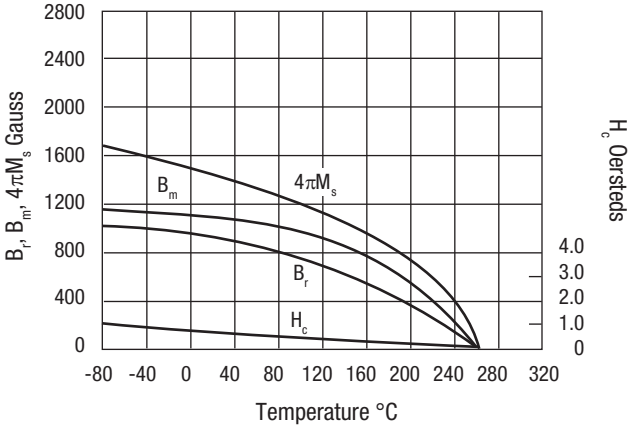
Hysteresis Loop

204672-021

G-1400 Gadolinium Aluminum Doped



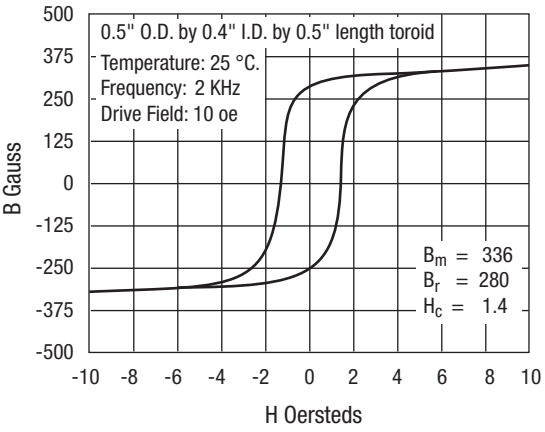
Hysteresis Loop



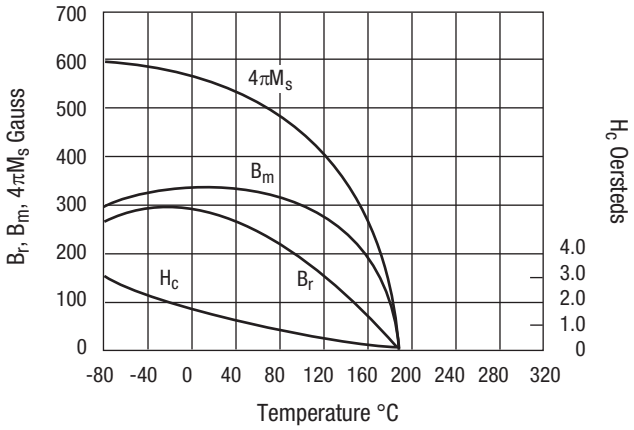
Hysteresis Loop

204672-022

G-4260 Gadolinium & Aluminum Holmium Doped



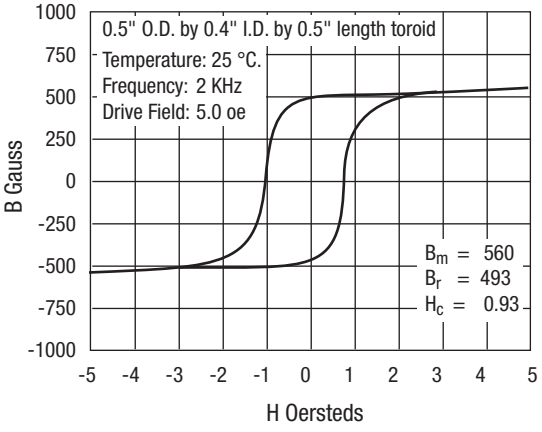
Hysteresis Loop



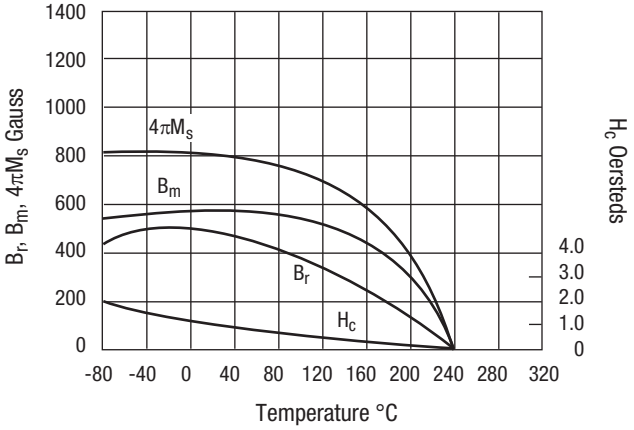
Hysteresis Loop

204672-023

G-4259 Gadolinium & Aluminum Holmium Doped



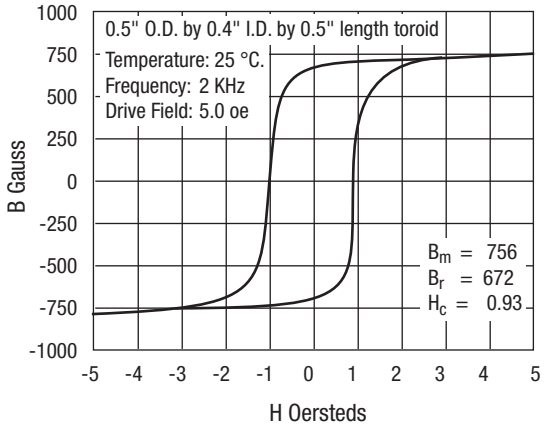
Hysteresis Loop



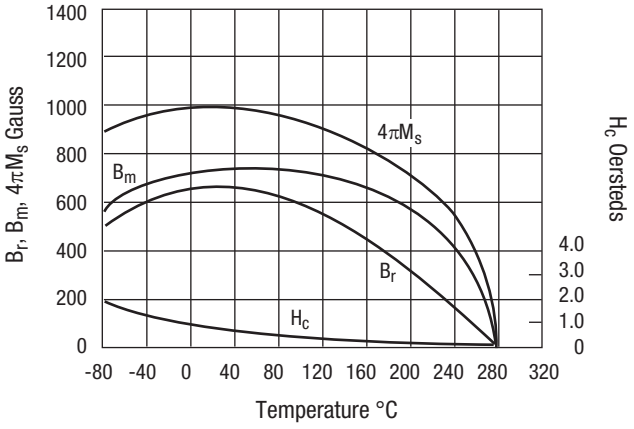
Hysteresis Loop

204672-024

G-4258 Gadolinium & Aluminum Holmium Doped



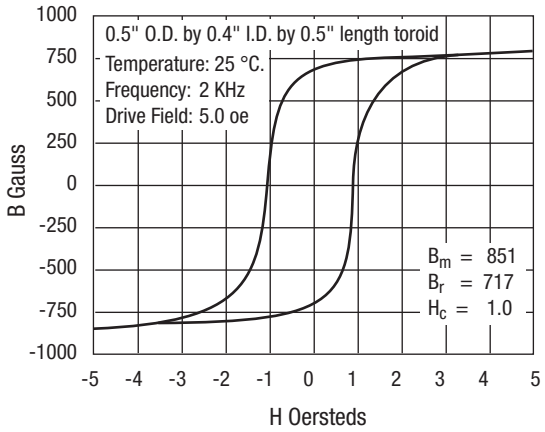
Hysteresis Loop



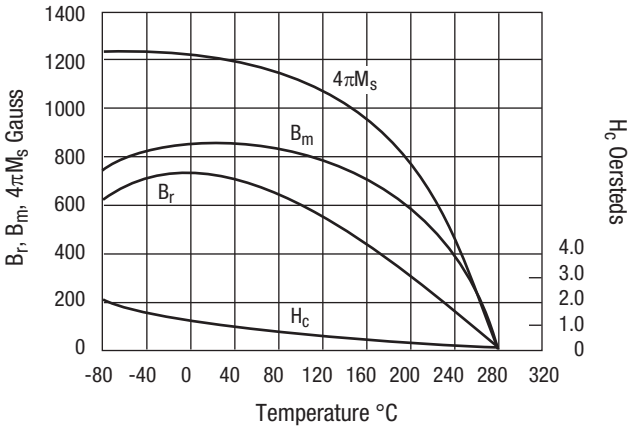
Hysteresis Loop

204672-025

G-4257 Gadolinium & Aluminum Holmium Doped



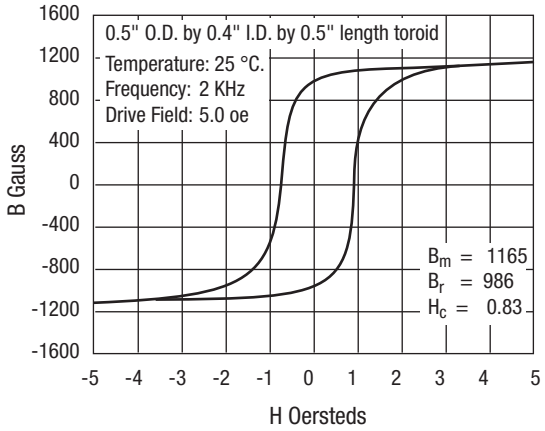
Hysteresis Loop



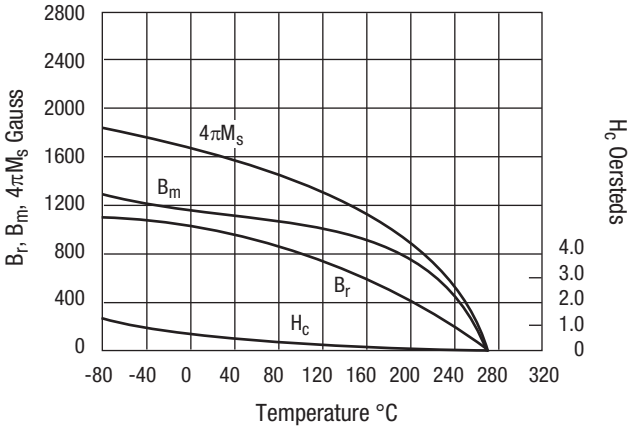
Hysteresis Loop

204672-026

G-4256 Gadolinium & Aluminum Holmium Doped



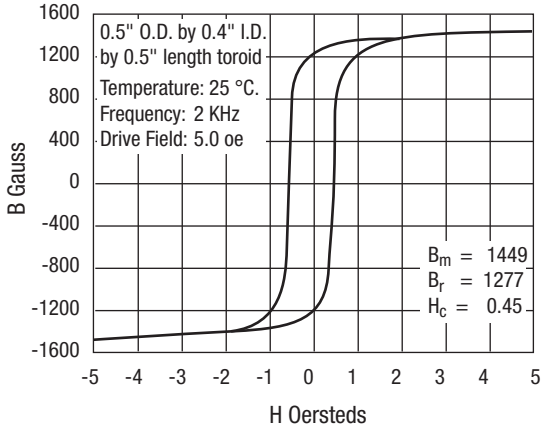
Hysteresis Loop



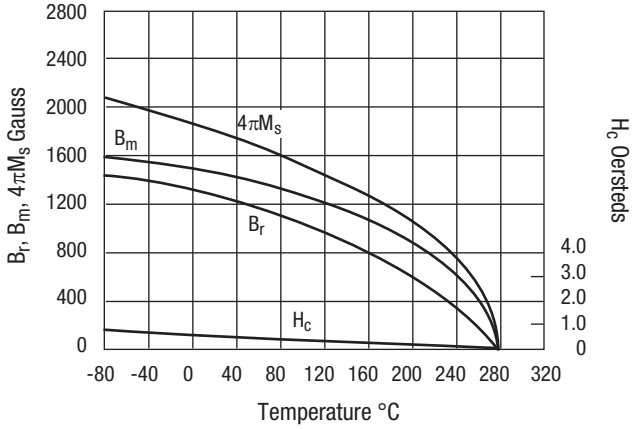
Hysteresis Loop

204672-027

G-113 Yttrium



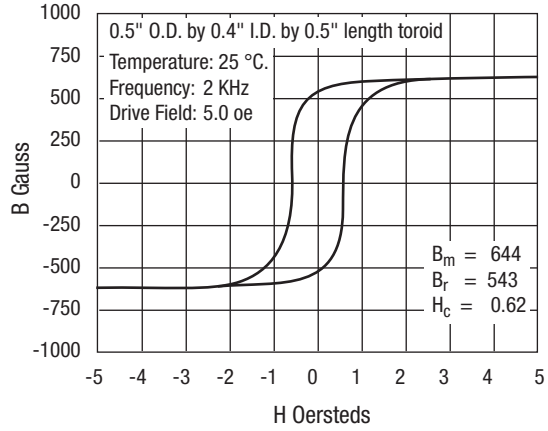
Hysteresis Loop



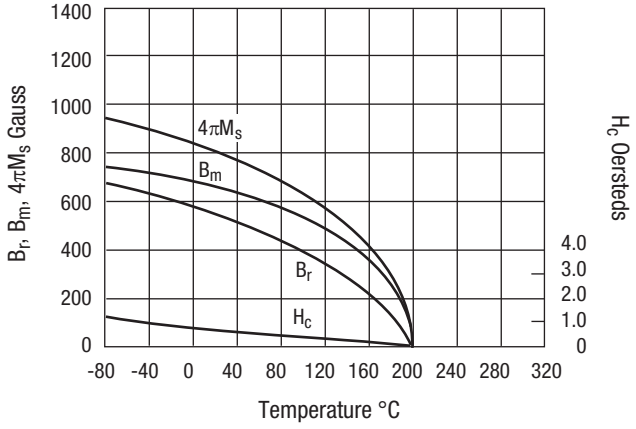
Hysteresis Loop

204672-028

G-810 Aluminum Doped



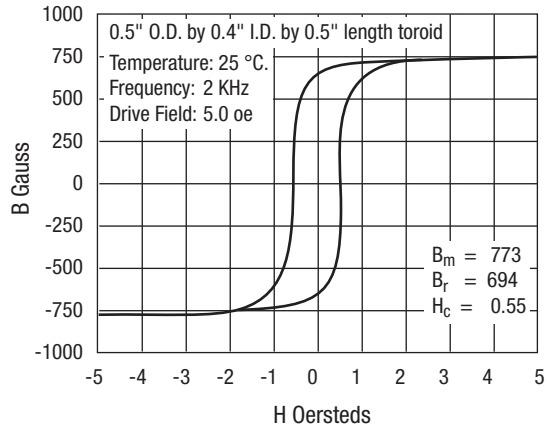
Hysteresis Loop



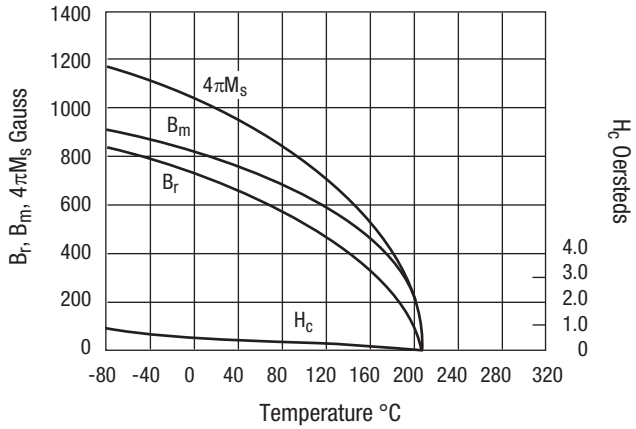
Hysteresis Loop

204672-029

G-1010 Aluminum Doped



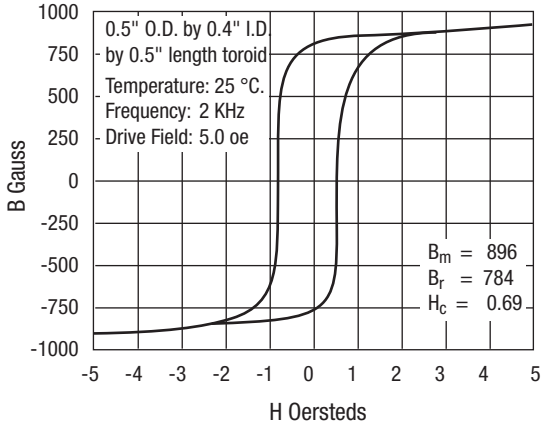
Hysteresis Loop



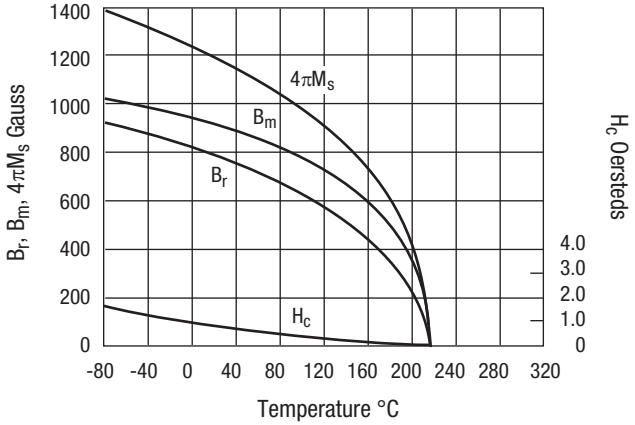
Hysteresis Loop

204672-030

G-1210 Aluminum Doped



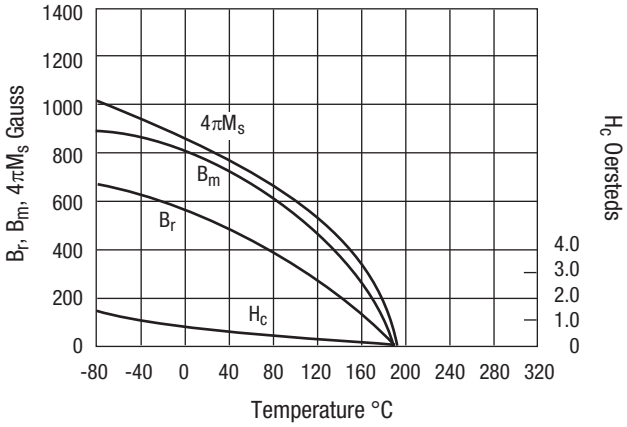
Hysteresis Loop



Hysteresis Loop

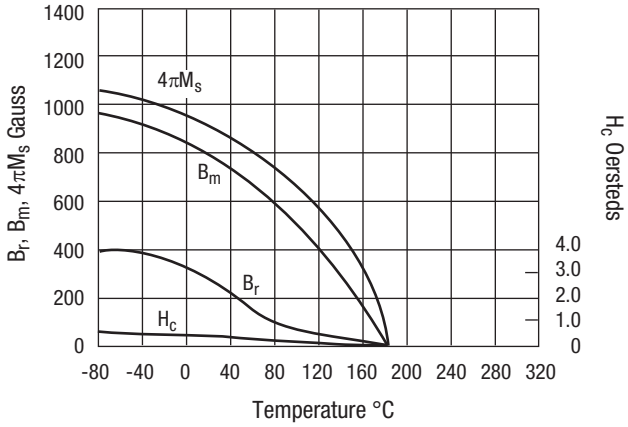
204672-031

TTVG-800 Narrow Line Width Garnet



Hysteresis Loop

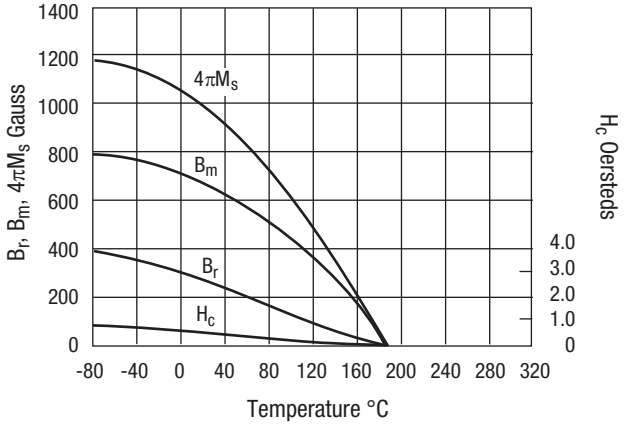
TTVG-930 Narrow Line Width Garnet



Hysteresis Loop

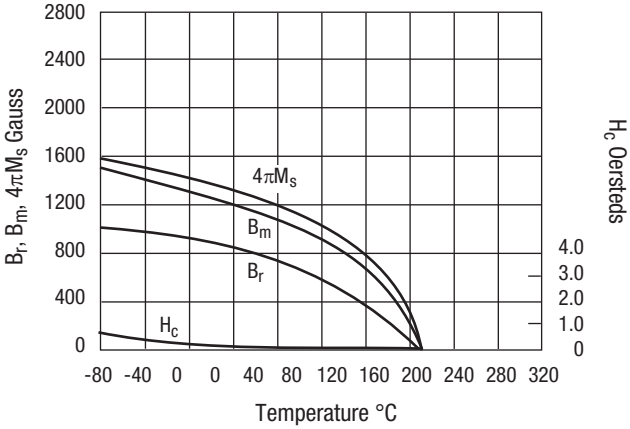
204672-032

TTVG-1000 Narrow Line Width Garnet



Hysteresis Loop

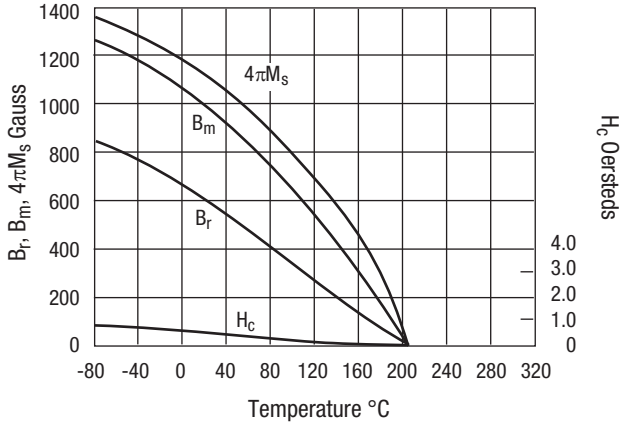
TTVG-1400 Narrow Line Width Garnet



Hysteresis Loop

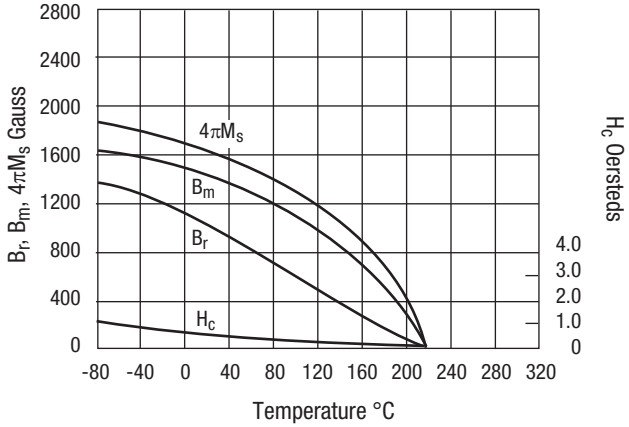
204672-033

TTVG-1100 Narrow Line Width Garnet



Hysteresis Loop

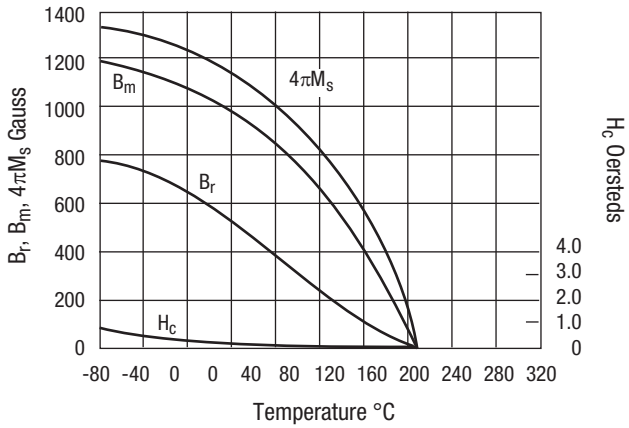
TTVG-1600 Narrow Line Width Garnet



Hysteresis Loop

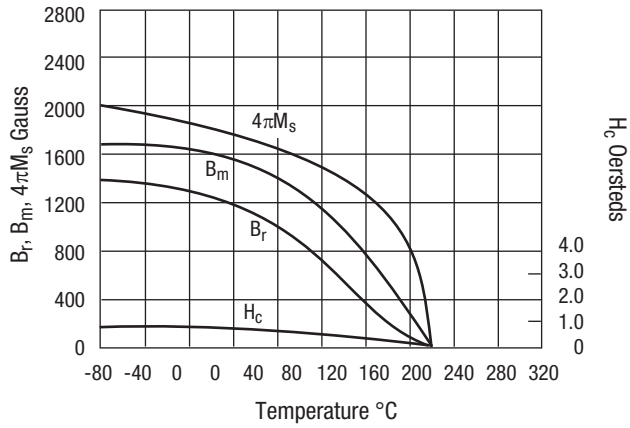
204672-034

TTVG-1200 Narrow Line Width Garnet



Hysteresis Loop

TTVG-1850 Narrow Line Width Garnet



Hysteresis Loop

204672-035