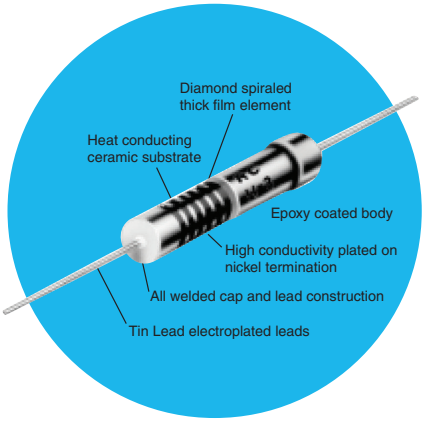
Thick Film High Voltage/ High Reliability MIL-Approved Metal Glaze™ Resistors



CMH Series

- 1/4 watt to 5 watt
- TCR of ±100 ppm/°C
- Qualified to MIL-PRF-49462
- 330K ohm to 1G ohm range
- ±1%, ±2%, or ±5% tolerance

Electrical Data

IRC Type	MIL Type[3]	Power Rating @ 70°C (watts)[1]	Voltage Rating (volts)[2]	Resistance Range (ohms)[4]	Tolerance (±%)	Maximum TCR (±ppm/°C)[4]	VCR (ppm/V)
CMH - 1/4	RHV30	1/4	750	330K - 100M	1, 2, 5	100	0 to -5
CMH - 1/2	RHV31	1/2	1,500	330K - 392M			
CMH - 1	RHV32	1	3,000	330K - 499M			
CMH - 2	RHV33	2	5,000	330K - 499M			
CMH - 3	RHV34	3	10,000	330K - 1000M			
CMH - 5	RHV35	5	20,000	330K - 1000M			

Notes:

1. For power rating above 70C, see derating curve.
2. Voltage rating shown is the rated DC continuous working voltage or the sine-wave RMS absolute maximum voltage at commercial line frequency.
3. Marked per MIL-PRF-49462
4. Values greater than 100 meg and less than 500 meg, ±200ppm; values greater than or equal to 500 meg, ±500ppm.

Environmental Data

Test Condition*	Maximum ΔR (±3σ)	Typical ΔR
Thermal Shock	±0.25%	±0.10%
Solder Effect	±0.15%	±0.05%
Terminal Strength	±0.20%	±0.10%
Moisture Resistance	±0.50%	±0.20%
Load Life (1000 Hours at 25°C)	±1.00%	±0.25%
Shelf Life (1 year at 25°C)	±0.10%	±0.03%
Low-Temperature Operation	±0.15%	±0.05%
Shock	±0.35%	±0.10%
Vibration	±0.35%	±0.10%
Dielectric Strength	±0.15%	±0.05%
Insulation Resistance at 500 VDC	$\pm 10^{9}\Omega$ min	$5 \times 10^{12}\Omega$ typ

Notes:

*Test per MIL-PRF-49462 and MIL-STD-202

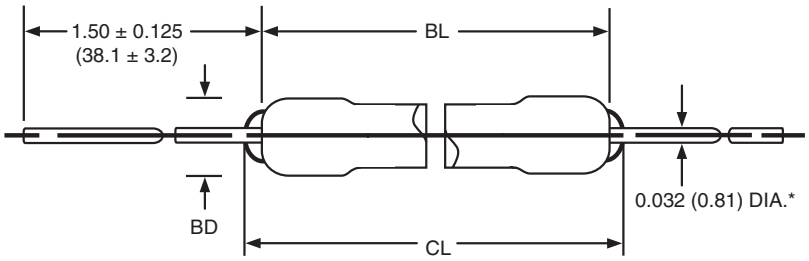
General Note

TT Electronics reserves the right to make changes in product specification without notice or liability.

All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

© TT Electronics plc

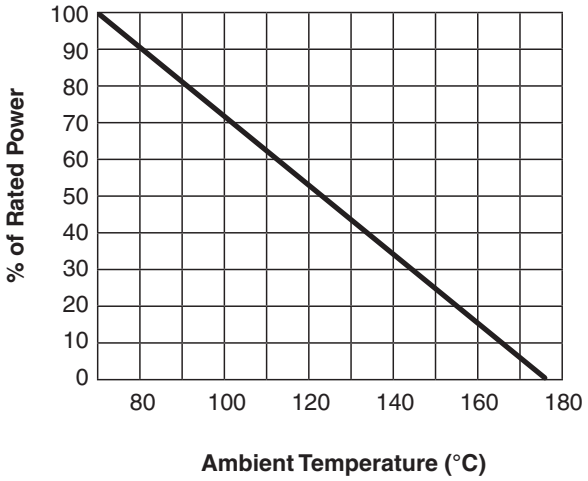
Physical Data



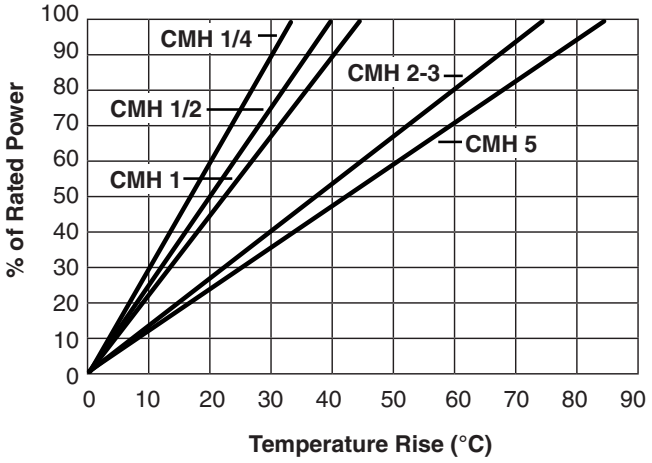
*CMH 1/4 leads are
0.025 (0.64) in diameter

Dimensions (Inches and (mm))			
IRC Type	**Body Length - BL**	**Body Diameter - BD**	**Clean Lead to Clean Lead - CL**
CMH - 1/4	0.275 ± 0.031 (6.98 ± 0.79)	0.088 ± 0.010 (2.22 ± 0.25)	0.400 (10.16)
CMH - 1/2	0.400 ± 0.031 (10.16 ± 0.79)	0.138 ± 0.016 (3.51 ± 0.41)	0.525 (13.34)
CMH - 1	0.690 ± 0.062 (17.53 ± 1.57)	0.297 ± 0.031 (7.54 ± 0.79)	0.900 (22.86)
CMH - 2	1.062 ± 0.062 (26.97 ± 1.57)	0.297 ± 0.031 (7.54 ± 0.79)	1.250 (31.75)
CMH - 3	2.062 ± 0.062 (52.37 ± 1.57)	0.297 ± 0.031 (7.54 ± 0.79)	2.250 (57.15)
CMH - 5	3.062 ± 0.062 (77.77 ± 1.57)	0.297 ± 0.031 (7.54 ± 0.79)	3.250 (82.55)

Power Derating Curve



Temperature Rise Chart



General Note
TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

© TT Electronics plc

Ordering Data

Sample Part No. CMH 3 - 100 - 2206 - F

IRC Type
CMH 1/4, CMH 1/2, CMH 1, CMH 2, CMH 3, CMH 5

Temperature Coefficient
±100 ppm/°C

Resistance
(≥100Ω - First 3 significant digits plus 4th digit multiplier)
Example: 100Ω = 1000; 1000Ω = 1001, 150,000Ω = 1503
(>100Ω - "R" is used to designate decimal)
Example: 51Ω = 51R0; 1Ω = 1R00; 0.25Ω = R250

Tolerance
F = ±1%
G = ±2%
J = ±5%

General Note
TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

© TT Electronics plc