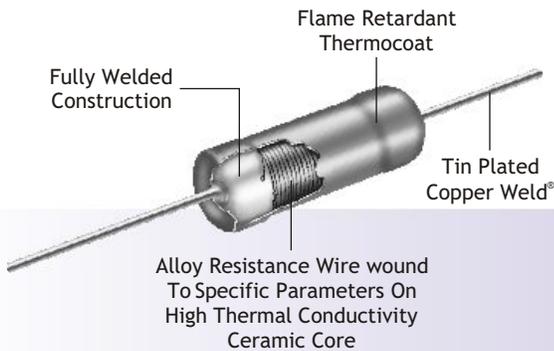




VHIA SERIES

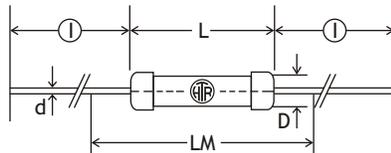
HIGH SURFACE TEMPERATURE
Power Silicone "Thermo Coat" Wire Wound Resistors
Industrial / Professional Applications



- Small Size : Power Ratio
- 0.5W to 10 Watts (at 25 °C)
- Tolerances as close as 1%
- R01 to 100K
- TCR as low as +20ppm/ °C available depending on application and resistance value



PHYSICAL CONFIGURATION



HTR TYPE	POWER RATING at 25 °C (Ambient)	DIMENSIONS (mm)					RESISTANCE RANGE		TYPICAL WT. PER PC (gms)
		L (max)	D (max)	l ±1.5	d ±0.05	* LM ±1	min	max	
0.5MC	0.5W	7.0	2.7	38	0.5	30	R01	1K2	0.21
1MC	1W	10.7	3.2	38	0.5	30	R01	3K6	0.36
4C	4W	16.5	6.9	38	1.02	40	R01	12K	2.1
3MC	3W	12.5	5.1	38	0.8	35	R01	7K0	0.7
3C	3W	15.2	6.0	38	0.8	40	R01	12K	0.78
4MC	4W	13.2	5.5	38	0.8	35	R01	6K8	0.9
2.5C1	2.5W	13.0	5.5	38	1.02	35	R01	10K	1.8
2.5C	2.5W	13.0	5.5	38	0.8	35	R01	10K	1.2
5C1	5W	23.5	8.5	38	1.02	45	R01	39K	4.2
5C	5W	23.5	8.5	38	0.8	45	R01	39K	4.2
4CL	4W	23.0	7.2	38	0.8	45	R01	39K	3.6
7C1	7W	32.5	9.5	38	1.02	55	R01	68K	5.0
10C1	10W	45.0	10.0	38	1.02	65	R01	100K	7.5
10C	10W	45.0	10.0	38	0.8	65	R01	100K	7.5

▲ For non-inductive types and for resistance values < 1R0 + 0.8mm allowed.

*For resistance values less than R10 and tolerance less than ±2% please measure resistance over centered length LM.

Note

1. The standard terminals in this series is tinned Copper Weld®.
2. Resistors for use under pulse conditions as per IEC Pub: 61000-4-5 are available in this series.

NON INDUCTIVE RESISTOR

Low inductance Aryton - Perry winding type resistors are available in this series. For non-inductive types reduce maximum resistance values shown to 50% and the continuous working voltage to 70%.

PRE-FORMED LEADS

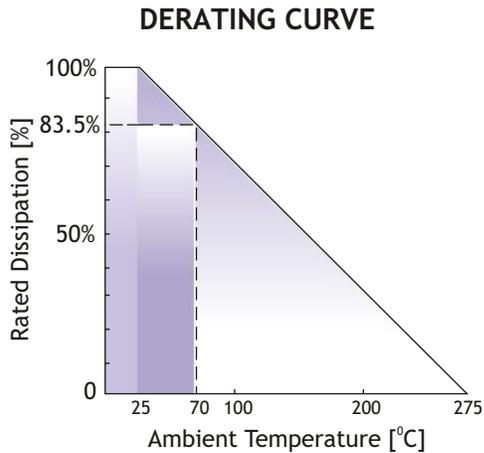
The resistor terminations can be bent and cut as per requirements for quick PCB mounting. Please send detailed drawings of the type of preforming required.



ELECTRICAL DATA/CHARACTERISTICS

Resistance tolerances available

$\pm 10\%$ [K], $\pm 5\%$ [J], $\pm 3\%$ [H] $\pm 2\%$ [G], $\pm 1\%$ [F],
[Test method no. 303 of MIL 202 F]



Dielectric withstanding voltage

Max. $R_{\pm}(1\%+R05)$. No flashover, mechanical damage, arcing or insulation breakdown.
[Test method no. 301 of MIL 202 F]

Insulation resistance

> 1000 M (dry) > 100 M (wet)
[Test method no. 302 of MIL 202 F]

Short time overload

Max. $R_{\pm}(2\%+R05)$. No arcing, burning or charring.
[Test method - 5 secs at 5 times rated power for 3 watts and smaller; 5 secs at 10 times rated power for 4 watts and larger]

Voltage rating

The resistors shall have a rated DC, continuous working voltage or an approximate sine-wave root mean square (rms) working voltage at commercial line frequency corresponding to the power rating as determined by the following formula

$$E = \sqrt{PR}$$

where,

E = rated DC or rms continuous working voltage.

P = Power rating in watts.

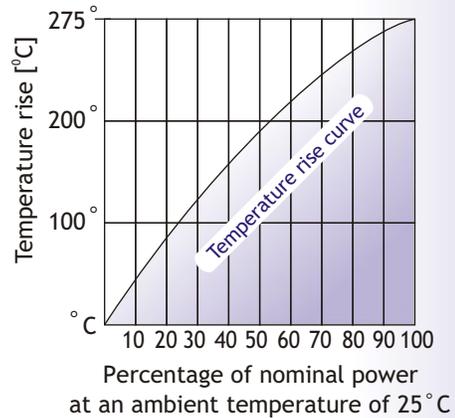
R = Nominal resistance in ohms.

Rated ambient temperature - 25°C

Full power dissipation at upto 25°C and linearly derated down to zero dissipation at 275°C. [See derating curve]

Resistor temperature rise as a function of applied power

[see graph displayed below]



ENVIRONMENTAL SPECIFICATIONS

Temp. co-efficient - < 1 ohm ± 150 ppm/°C, < 50 ohms ± 80 ppm/°C, above 50 ohms ± 60 ppm/°C [Test method no. 304 of MIL 202 F].

[TCR figures given are based on the usage of normally selected cost effective resistance elements and can be significantly lowered on request].

Moisture resistance

Max. $R_{\pm}[3\% + R05]$.
No mechanical damage.
[Test method no. 106 E of MIL 202 F].

Load life

Max. $R_{\pm}[5\% \pm R05 \text{ ohms}]$.
No mechanical damage.
[Test method no. 108 A of MIL 202 F].

MECHANICAL SPECIFICATIONS

Pull test

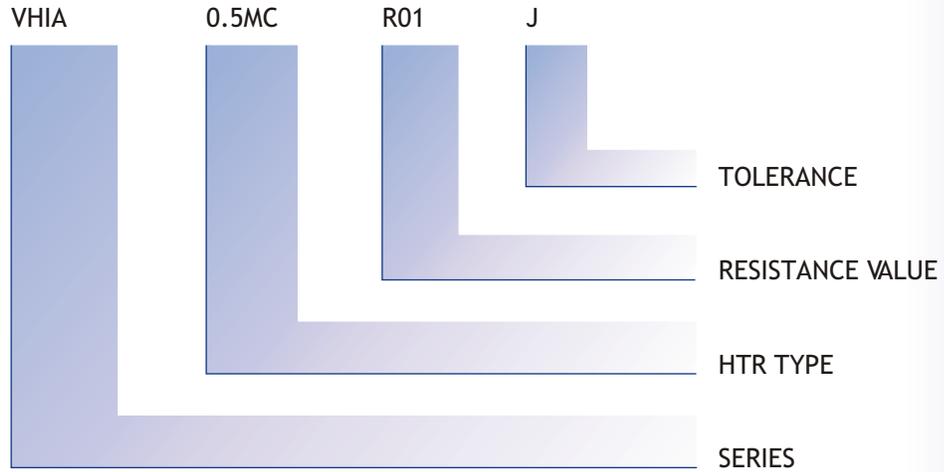
No mechanical damage.
[Force supplied from 2 to 4.5 Kgs depending on size].

Solderability

Continuous and satisfactory.
[Test method no. 208 F of MIL 202 F].



ORDERING INFORMATION



Taping Types 0.5MC, 1MC, 4C, 3C, 3MC, 4MC, 2.5C1, 2.5C, 5C1, 5C & 4CL are available in taped form. Please refer [tape/ ammo pack specifications](#). [Tape/Reel](#) on request.

Note : In case non inductive type is required please prefix HTR TYPE with 'N' eg : N1MC.