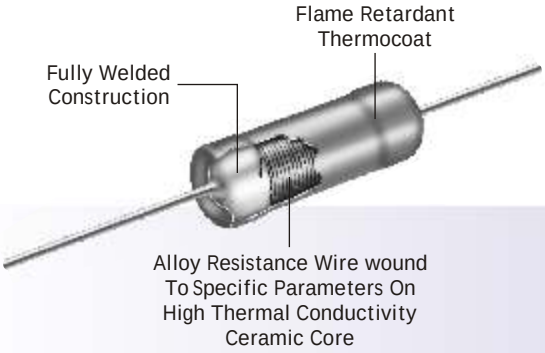
HTA SERIES

HIGH SURFACE TEMPERATURE

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

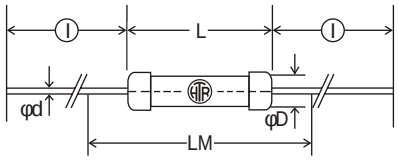


- Axial Termination
- Flame retardant coating compatible with UL standards
- 0.75 W to 12 Watts
- Tolerances as close as 1%
- TCR as low as ± 20ppm / °C [on request]
  Pulse types available as per-IEC - 61000 - 4 - 5.

APPLICABLE STANDARDS

JSS- 50402 [Pattern RFHT - 1], IS - 8909 [Type FRP3]
IEC-Pub 266 and Pub 266 A [Type - 2E]

PHYSICAL CONFIGURATION



HTR TYPE	POWER RATING at 70°C (Ambient)	DIMENSIONS (mm)					RESISTANCE RANGE		TYPICAL WT. PER PC (gms)
		L (max)	D (max)	d +0.08 -0.05	l ±1.5	* LM ±1	min	max	
H-1B	0.75W	9.0	3.5	0.8	38	30	R05	2K2	0.6
H-2B	2.5W	13.0	5.5	0.8	38	35	R05	10K	1.1
H-6	6W	23.0	8.0	0.8	38	45	R05	33K	3.2
H-9	9W	39.0	8.0	0.8	38	60	R05	68K	5.4
H-12	12W	53.0	8.0	0.8	38	75	R05	100K	6.3

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

NON INDUCTIVE RESISTORS

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% (Please refer to note (1) of ordering information for placing orders).

PULSE TYPE RESISTORS

Resistors for use under Pulse conditions as per IEC - 61000 - 4 - 5 available. For further information please refer to "Understanding pulse & over load capability of wire wound resistors".
In case a tailor-made pulse resistor is required, please refer to "Questionnaire of data required" and provide data accordingly.

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. Depending on application the resistor leads may be tin plated Copper Weld® instead of tin plated copper.

TAPING

Types H-1B, H-2B, & H-6 can be supplied in taped form. Please refer tape/ammo pack specifications on page no. 81. Tape/Reel on request.

ELECTRICAL DATA / CHARACTERISTICS

Resistance Tolerances Available
± 10% [K], ± 5% [J], ± 3% [H] ± 2% [G], ±1% [F]
[Test method no. 13.2 of JSS - 50402 and 50400]

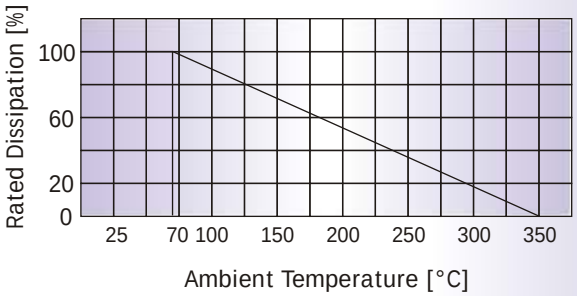
Voltage Rating
The resistors shall have a rated DC, continuous working voltage or an approximate sine-wave root mean square (rms) working voltage at commercial line frequency corresponding to the power rating, as determined by the following formula
$E=\sqrt{PR}$
where,
E= rated DC or rms continuous working voltage.
P= Power rating in watts.
R= Nominal resistance in ohms.

Voltage Proof - Dielectric Withstanding Voltage
[applicable to insulated styles only]
No breakdown or flashover
[Test No. 13.3.1 of JSS - 50400]

Insulation Resistance
1000 M [Dry]
[Test No. 13.4 of JSS - 50402 and JSS - 50400]

Rated Ambient Temperature - 70°C
Full power dissipation at upto 70°C and linearly derated down to zero dissipation at 350°C.
[See derating curve below]

DERATING CURVE



Short-time Overload
Max. ΔR ± (2% + R05)
[Test No.13.19 of JSS - 50402 and JSS - 50400]

ENVIRONMENTAL SPECIFICATIONS

Temperature Cycling
Max. ΔR ± (2% + R05)
[Test No.13.14 of JSS - 50402 and JSS - 50400]

Climatic and Damp Heat
Max. ΔR ± (<5%). No physical damage.
[Test No.13.15 and 13.16 of JSS - 50402 and
JSS -50400]
[Severity H - 13]

Life (Electrical)
Max. ΔR ± (≤5% + R05).
[Test No.13.17 of JSS - 50402 and JSS - 50400]

Flammability
Within the specified limits.
[Test No. 10 of JSS - 50101]

Temperature Characteristic of Resistance
±100 to 200 ppm / °C, can be significantly lowered on request.
[Test No. 13.24 of JSS - 50402 and JSS - 50400]

MECHANICAL SPECIFICATIONS

Pull Test
No mechanical damage
[Force applied from 2 to 4.5 Kgs depending on size]

Solderability
Continuous and satisfactory
[Test method No. 19 of JSS 50101]

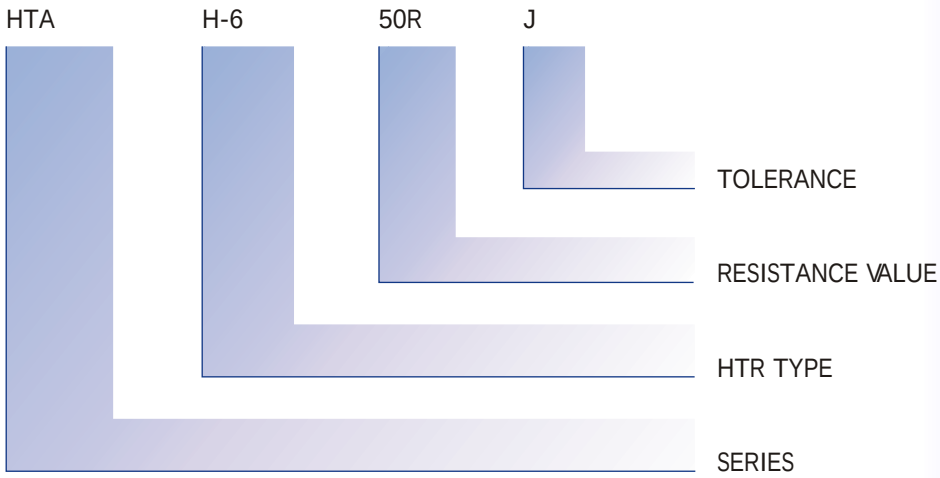
TYPICAL APPLICATIONS

HTA series is unique due to its special flame proof "Thermocoat" which resists hot spot temperature of 350°C and uses specially selected resistance elements and substrates.

These unique features can be effectively used by the circuit designer in all industrial, electrical, electronic and telecommunication equipment where large power dissipation : size ratio are required and where the ambient operating temperature is elevated without sacrificing accuracy and reliability.

HTA series when wound by Aryton-Perry method can be used effectively for high frequency applications, if required.

ORDERING INFORMATION



Note :

(1) In case non-inductive type is required, please prefix HTR type with 'N' eg : NH-6.
(2) In case pulse type is required please suffix HTR type with 'I' for e.g. H2BI.
(3) When thermal efficient cores are used the type shall be suffixed with alphabet 'A'.

The words - "Applicable standards" do not necessarily signify certification to that standard, however the tests mentioned are carried out on the broad based guidelines set out in these standards.