



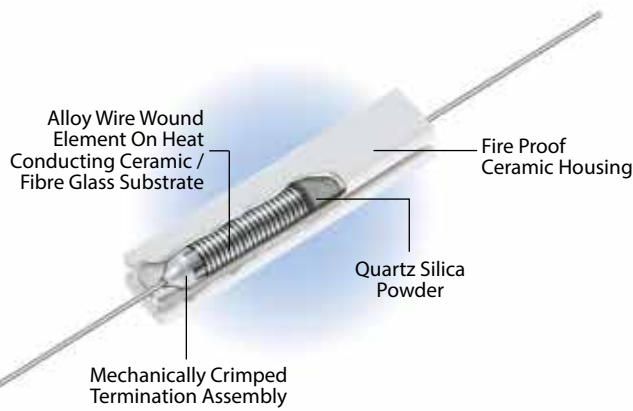
WIRE WOUND RESISTORS
CERAMIC ENCASED TYPE

HSVA/HSVAU
SERIES

AXIAL/VERTICAL MOUNTING
Ceramic Type

- 4 W to 17 W
- R 04 to 82 K
- Non inductive Aryton - Perry type available upto 1K0

AEC-Q200 Qualified

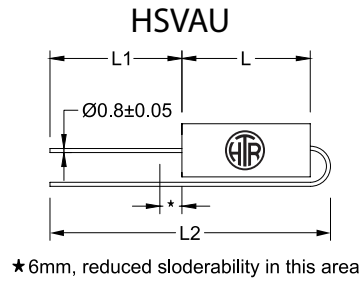
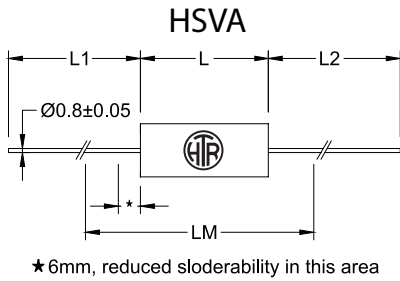




WIRE WOUND
RESISTORS
CERAMIC
ENCASED TYPE

**HSVA/
HSVAU**

PHYSICAL CONFIGURATION



HSVA / HSVAU Series

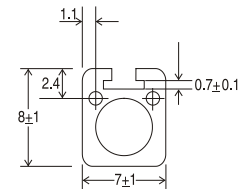
The HSVAU series has been developed in response to the needs of our stockists for a dual purpose resistor - axial mounting and vertical mounting when the longer lead L2 is folded over.

| TYPE | POWER RATING at 70°C | DIMENSIONS (mm) | | | | RESISTANCE RANGE | | TYPICAL WEIGHT PER PC (gms) |
|--------------|----------------------|-----------------|-----------------------|-----------------------|---------|------------------|-----|-----------------------------|
| | | L (±1.5) | L ₁ (±3.0) | L ₂ (±3.0) | ◇ LM ±1 | min | max | |
| SV4A | 4W | 20.0 | 35.0 | 35.0 | 40 | R04 | 11K | 2.3 |
| SV4AU | 4W | 20.0 | 32.0 | 56.5 | 40 | R04 | 11K | 2.4 |
| SV5A | 5W | 25.0 | 35.0 | 35.0 | 45 | R05 | 16K | 2.8 |
| SV5AU | 5W | 25.0 | 32.0 | 61.5 | 45 | R05 | 16K | 2.9 |
| SV7BA | 7W | 38.0 | 35.0 | 35.0 | 60 | R10 | 33K | 4.9 |
| SV7BAU | 7W | 38.0 | 32.0 | 74.0 | 60 | R10 | 33K | 5.0 |
| SV7A /SV8A | 7W/8W | 25.0 | 35.0 | 35.0 | 45 | R05 | 16K | 5.0 |
| SV7AU/SV8AU | 7W/8W | 25.0 | 32.0 | 64.0 | 45 | R05 | 16K | 5.1 |
| SV9A/SV10A | 9W/10W | 38.0 | 35.0 | 35.0 | 60 | R10 | 33K | 7.8 |
| SV9AU/SV10AU | 9W/10W | 38.0 | 32.0 | 77.0 | 60 | R10 | 33K | 7.9 |
| SV11A | 11W | 50.0 | 35.0 | 35.0 | 70 | R10 | 47K | 10.2 |
| SV11AU | 11W | 50.0 | 32.0 | 87.0 | 70 | R10 | 47K | 10.35 |
| SV17A | 17W | 75.0 | 35.0 | 35.0 | 95 | R10 | 82K | 13.8 |
| SV17AU | 17W | 75.0 | 32.0 | 111.5 | 95 | R10 | 82K | 14.0 |

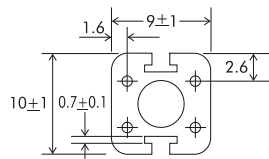
◇ For resistance values less than R10 and tolerance less than ±2%, please measure resistance over centered length LM.

◇ If bending require please add B after part number For Ex. - SV7BAUB*

PROFILE DIMENSIONS

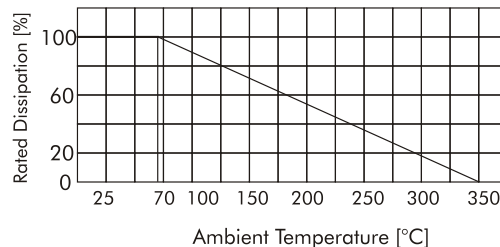


SV4A/SV4AU, SV5A/SV5AU & SV7BA/SV7BAU



SV7A/SV7AU, SV9A/SV9AU, SV11A/SV11AU & SV17A/SV17AU

DERATING CURVE





WIRE WOUND
RESISTORS
CERAMIC
ENCASED TYPE
**HSVA/
HSVAU**

ELECTRICAL & ENVIRONMENTAL CHARACTERISTICS / DATA

| PARAMETER / PERFORMANCE TEST & TEST METHOD | PERFORMANCE REQUIREMENTS |
|---|---|
| Power Rating (Rated Ambient Temperature) | Full Power dissipation at 70°C and linearly derated to zero at 350°C (Refer Derating curve above) |
| Resistance Tolerances Available | ±10% (K); ±5% (J); ±3% (H); ±2% (G); ±1% (F) |
| Temperature Range | -55°C to +350°C with suitable derating as per derating curve |
| Voltage Rating / Limiting Voltage / Max Working Voltage | $V = \sqrt{P \times R}$ |
| Maximum Overload Voltage | Varies depending on resistance value, duration of overload and type of pulse waveform (contact factory for details) |
| Voltage Proof / Dielectric Withstanding Voltage (based on limiting voltage x 2 for 60 secs) | $\Delta R \pm [1\% + R05]$ - No flashover, mechanical damage, arcing or insulation breakdown |
| Short Time Overload (5 x Rated Power for 5 secs) | $\Delta R \pm [2\% + R05]$ |
| Temperature Co-efficient of Resistance | ±120 ppm/°C for <R10 (Average) ±80 ppm/°C for <R100 (Average) ±60 ppm/°C for <R100R (Average) ±90 ppm/°C or ±30 ppm/°C for >R100R depending on wire selected |
| Insulation Resistance | >1000MΩ (Min) |
| Temperature Cycling (Room Temperature → -55°C → Room Temperature → 200°C → Room Temperature for 5 cycles) | $\Delta R \pm [2\% + R05]$ |
| Damp Heat (Steady State) (40°C at 93% R.H for 1000 hours - no load applied) | $\Delta R \pm [2\% + R05]$ - Average |
| Endurance - Load life (70°C with limiting voltage - 1.5 hours on / 0.5 hours off for 1000 hours) | $\Delta R \pm [\leq 3\% + R05]$ - Average |

MECHANICAL SPECIFICATIONS

| PARAMETER / PERFORMANCE TEST & TEST METHOD | PERFORMANCE REQUIREMENTS |
|---|--|
| Terminal Tensile Strength | 50 Newtons |
| Resistance to Soldering Heat (260°C - 270°C for 10 secs) | $\Delta R \pm [0.2\% + R05]$ - Typical |
| Solderability (As per IEC - 60068 - 2 - 20Ta) | Must meet the requirements laid down |
| Marking | As per IEC Pub. 60062 |

TYPICAL APPLICATIONS

The HSVA series enjoys a wide market in TV, power supply and industrial electronics field. Depending upon the resistance value and application, the resistor core may be fibreglass or ceramic.

These resistors are also available for use in pulse applications. For further information, please refer to "Pulse / Surge capability of resistors". In case a tailor-made pulse resistor is required, please refer to "Questionnaire of data required from customers" and provide data accordingly.

The HSVAU series are very popular with stockists as they are capable of dual mounting - axial or vertical hence are instrumental in reducing inventory.

Note :

- The ceramic cases used may be steatite ceramic, cordierite ceramic or high alumina ceramic. Thus, the ceramic cases may be off-white or variations of brown / grey, colours which are inherent to these ceramic material.
- In case the device will be subjected to aggressive solvents, please inform factory so case filling can be changed to solvent resistant type.

ORDERING INFORMATION

| Series | HTR type | Packing | Resistance Value | Tolerance |
|-------------|--|---|------------------|-----------|
| HSVA/ HSVAU | SV9A / SV9A* SV9AU / SV9AU* SV9AUB/SV9AUB* | Bulk SV9A / SV9A* SV9AU / SV9AU* SV9AUB/SV9AUB* | 100R | J |

- For RoHS version - SV9A * / SV9AU *
- For Non Inductive type - N SV9A / N SV9AU
- For Pulse type - SV9A I / SV9AU I
- In case the device will be subjected to aggressive solvents, please inform factory so case filling can be changed to solvent resistant Type- SV9A*(SM) /SV9AU*(SM)