

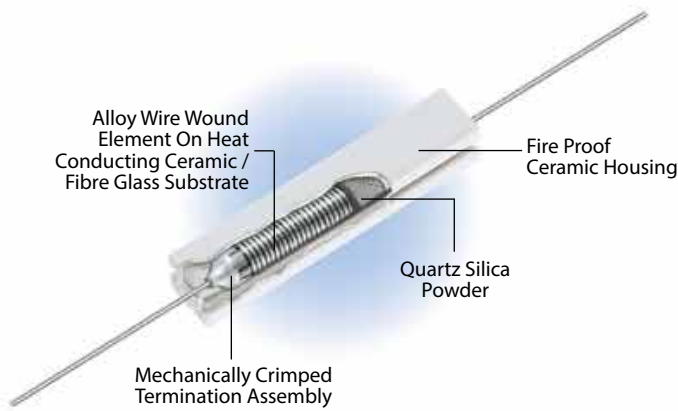


WIRE WOUND RESISTORS  
CERAMIC ENCASED TYPE

**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



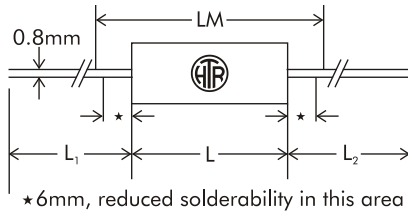
As per AEC-Q200





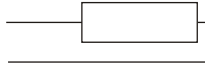
WIRE WOUND  
RESISTORS  
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ENCASED TYPE  
**HSVA/  
HSVAU**

**PHYSICAL CONFIGURATION**



**HSVA / HSVAU Series**

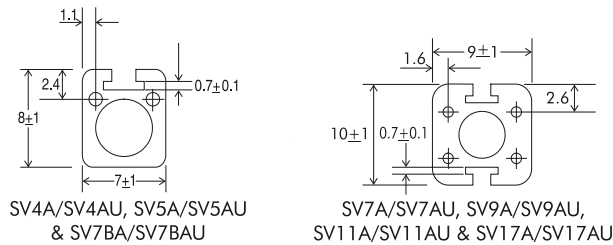
The HSVAU series has been developed in response to the needs of our stockists for a dual purpose resistor - axial mounting and vertical mounting when the longer lead L2 is folded over.



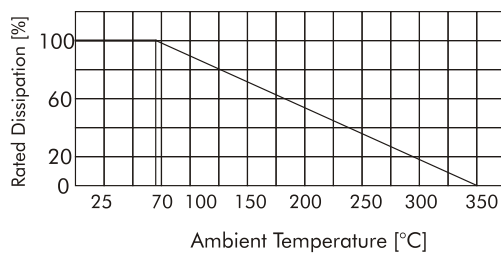
TYPE	POWER RATING at 70°C	DIMENSIONS (mm)				RESISTANCE RANGE		TYPICAL WEIGHT PER PC (gms)
		L (±1.5)	L <sub>1</sub> (±3.0)	L <sub>2</sub> (±3.0)	◇ LM ±1	min	max	
SV4A	4W	20.0	35.0	35.0	40	R04	11K	2.3
SV4AU	4W	20.0	32.0	56.5	40	R04	11K	2.4
SV5A	5W	25.0	35.0	35.0	45	R05	16K	2.8
SV5AU	5W	25.0	32.0	61.5	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.

**PROFILE DIMENSIONS**



**DERATING CURVE**





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

## ELECTRICAL & ENVIRONMENTAL CHARACTERISTICS / DATA

PARAMETER / PERFORMANCE TEST & TEST METHOD	PERFORMANCE REQUIREMENTS
<b>Power Rating</b> (Rated Ambient Temperature)	Full Power dissipation at 70°C and linearly derated to zero at 350°C (Refer Derating curve above)
<b>Resistance Tolerances Available</b>	±10% (K); ±5% (J); ±3% (H); ±2% (G); ±1% (F)
<b>Temperature Range</b>	-55°C to +350°C with suitable derating as per derating curve
<b>Voltage Rating / Limiting Voltage / Max Working Voltage</b>	$V = \sqrt{P \times R}$
<b>Maximum Overload Voltage</b>	Varies depending on resistance value, duration of overload and type of pulse waveform (contact factory for details)
<b>Voltage Proof / Dielectric Withstanding Voltage</b> (based on limiting voltage x 2 for 60 secs)	$\Delta R \pm [1\% + R05]$ - No flashover, mechanical damage, arcing or insulation breakdown
<b>Short Time Overload</b> (5 x Rated Power for 5 secs)	$\Delta R \pm [2\% + R05]$
<b>Temperature Co-efficient of Resistance</b>	±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
<b>Insulation Resistance</b>	>1000MΩ (Min)
<b>Temperature Cycling</b> (Room Temperature → -55°C → Room Temperature → 200°C → Room Temperature for 5 cycles)	$\Delta R \pm [2\% + R05]$
<b>Damp Heat</b> (Steady State) (40°C at 93% R.H for 1000 hours - no load applied)	$\Delta R \pm [2\% + R05]$ - Average
<b>Endurance - Load life</b> (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
<b>Terminal Tensile Strength</b>	50 Newtons
<b>Resistance to Soldering Heat</b> (260°C - 270°C for 10 secs)	$\Delta R \pm [0.2\% + R05]$ - Typical
<b>Solderability</b> (As per IEC - 60068 - 2 - 20Ta)	Must meet the requirements laid down
<b>Marking</b>	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*	Bulk SV9A / SV9A* SV9AU / SV9AU*	100R	J

- For RoHS version - SV9A \* / SV9AU \*
- For Non Inductive type - N SV9A / N SV9AU
- For Pulse type - SV9A I / SV9AU I