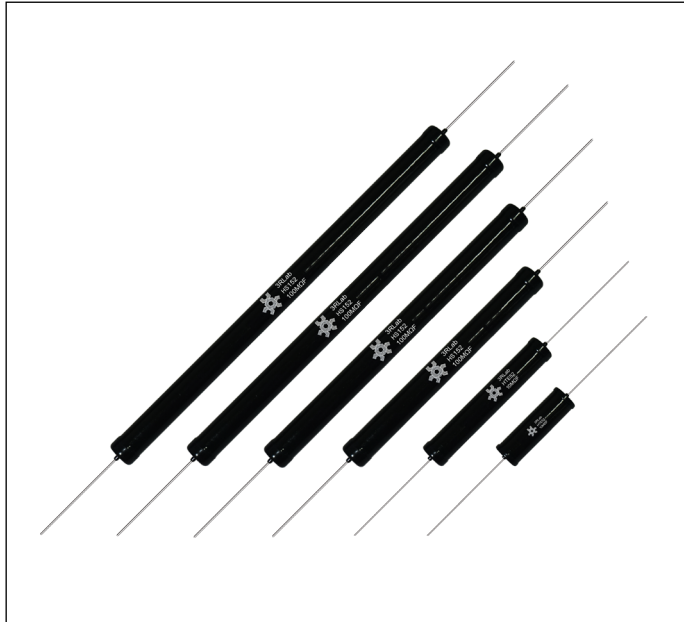


Cylindrical High Voltage ,Low TCR & VCR Resistors,
Thick film,Non-Inductive

VOICE : +82-31-429-6379
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High Voltage Non-Inductive Resistors for HV Dividers, Precision HV circuits

3RLAB offers HS - series to meet applications very Low TCR , Low VCR requirements , Especially for High Voltage - Functional Non-Inductive Divider Sets, High Voltage Precision Measurements Systems .

HS Precision High Voltage Resistor, Non-Inductive Thick Film

Epoxy conformal full coat for excellent humidity protection
Resistance tolerance offered : 0.5% 1% 2% 5%
(0.1% special upto 100Megohm of HS15 HS19 HS25)

- * Temperature Coefficient of Resistance: 75ppm/°C std.
and (20ppm/°C 35ppm/°C 50ppm/°C 60ppm/°C 85ppm/°C as special)
- * Load Life Stability of 0.25% per 1000hours at rated power.
- * Resistance range : 100kΩ to 1GΩ, and extended to 100Terohms
- * Various Models related with Voltage Ratings from 2.5kV to 48kV in free air.
- * NCR: Non-contact resistance design between resistive parts and termination.

| Model Nr. | Wattage in 25°C free air | 1) Wattage in Molded | 2) Max. Working Voltage[kV] | Impulse Voltage [kV] 1.2/50µS | Std. Resistance [ohm] | | Extended Resistance [ohm] | Dimensions in millimeters (inches) | | | SMD type |
|-----------|--------------------------|----------------------|-----------------------------|-------------------------------|-------------------------|------|-----------------------------|------------------------------------|----------------|-----|------------|
| | | | | | Min. | Max. | | A | B | C | |
| HS15 | 0.2 | N/A | 2.0 | 4.0 | 100K | 500M | see UR-series | 15+/-1.5 (.590) | 5+/-1.5 (.197) | 0.8 | N/A |
| HS19 | 0.3 | N/A | 2.5 | 5.0 | 100K | 500M | see UR-series | 19+/-1.5 (.748) | 5+/-1.5 (.197) | 0.8 | N/A |
| HS25 | 0.5 | N/A | 4.5 | 9.0 | 100K | 500M | see UR-series | 25.4+/-1.5 (1.0) | 5+/-1.5 (.197) | 0.8 | N/A |
| HS24 | 1.5 | N/A | 4.0 | 8.0 | 100K | 500M | see UR-series | 24.0+/-1.5 (.944) | 8+/-1.0 (.314) | 1.0 | available |
| HS39 | 2.5 | 0.8 | 10.0 | 20 | 100K | 1G | see UR-series | 39.0+/-1.5 (1.50) | 8+/-1.0 (.314) | 1.0 | available |
| HS52 | 3.0 | 1.0 | 15.0 | 30 | 100K | 1G | see UR-series | 52.0+/-1.5 (2.04) | 8+/-1.0 (.314) | 1.0 | available |
| HS76 | 4.5 | 1.5 | 22.5 | 40 | 1M | 1G | upto 10T | 76.0+/-2 (3.0) | 8+/-1.5 (.314) | 1.0 | on request |
| HS102 | 6.0 | 2.0 | 32.0 | 50 | 1M | 1G | upto 100T | 102+/-2 (4.01) | 9+/-1.0 (.354) | 1.0 | N/A |
| HS117 | 7.0 | 2.3 | 35.0 | 60 | 1M | 1G | 1K~900K | 117+/-2 (4.6) | 9+/-1.0 (.354) | 1.0 | N/A |
| HS127 | 7.5 | 2.5 | 37.0 | 65 | 1M | 1G | | 127+/-2 (5.0) | 9+/-1.0 (.354) | 1.0 | N/A |
| HS137 | 8.0 | 2.7 | 40.0 | 70 | 1M | 1G | 1K~900K | 137+/-2 (5.4) | 9+/-1.0 (.354) | 1.0 | N/A |
| HS152 | 9.0 | 3.0 | 48.0 | 77 | 1M | 1G | upto 100T | 152+/-2 (6.0) | 9+/-1.0 (.354) | 1.0 | N/A |

+ Custom dimension & specification , Ohmic Value available upon request.

+ Voltage restricted by the rated power

+ Above Electrical specification applicable for : From HS15 to HS24 ; 0.1MΩ to 200MΩ . From HS39 to HS152 ; 0.1MΩ to 1GΩ only

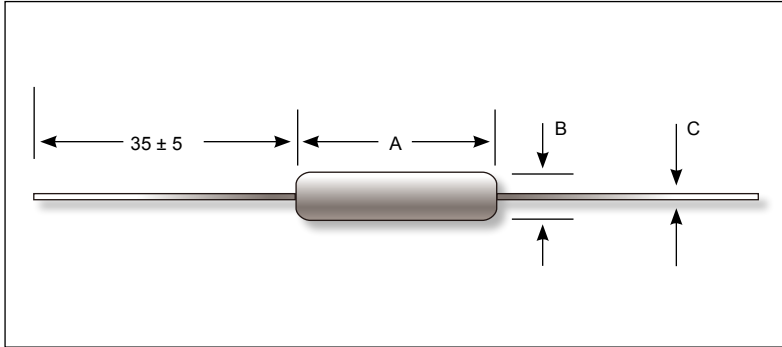
1) in fully epoxy/silicone rubber molded case condition, precision high voltage dividers required very long life stability in harsh condition

2) Vdc, Vrms standard.

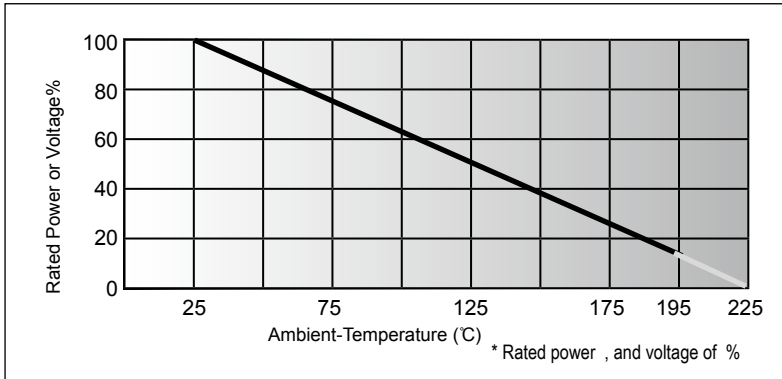
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DIMENSIONS [mm]



DERATING CURVE



APPLICATION GUIDE ; HS SERIES

- Automated Test (ATE)
- Medical (Imaging)
- Ion Source
- Chromatography (Gas)
- Medical (Radiation Therapy)
- Military , Radar ,Laser ,Plasma
- Measurements (High Voltage)
- HV Capacitor Charging, Discharging
- Electric Power Transmission High Voltage
- Medical (Blood Analyzers)
- Corona Generators
- Multichannel Analyzers
- Ozone Generating
- Detectors
- Nuclear Instrumentation
- Electron Beam
- Pulse Generators
- Surface Analysis
- C T , MRI
- Electrophoresis
- Image Intensifier
- Surface Analysis
- Piezo. Focusing (Poling)
- High Voltage Dividers
- Stress Testing
- Agricultural Sensors
- Klystron, Magnetron ,Microwave

SPECIFICATIONS

Resistance Tolerance :

1% 2% 5% & 0.5%. And special tolerance (from 0.1MΩ to 100MΩ ; 0.1%, 0.25% as special order available upon request for HS15 HS19 HS25)

Endurable Harsh to Environment (Temperature) :

-55°C to +195°C , Max.

breakable temperature on resistives is 600°C (for70min.)

Temperature Coefficient of Resistance:

Std. 75ppm/°C referenced to 25°C,

ΔR taken at -25°C and +70°C,

Other special TCR on request

(20ppm/°C,35ppm/°C,50ppm/°C,60ppm/°C ,85ppm/°C)

Overload/Voltage :

5 times rated power with applied voltage not to exceed

1.5times maximum continuous operating

voltage for 5 seconds ΔR 0.2% max.

Thermal Shock :

Mil-Std-202, Method- 107, Cond. C, ΔR 0.2% max.

Load Life :

1.000 hours at rated power ΔR 0.2% max.

Moisture Resistance :

Mil-Std-202, Method 106, ΔR 0.25% max.

Lead Material :

Tinned plated copper solderable semi-flexible axial wire.

Insulation Resistance :

10,000MΩ Min.

Termination Cap of Material:

Tinned Cap.

Encapsulation :

Epoxy conformal.

Resistive Material :

Thick Film.

Contact method between Resistives and

Termination Caps :

Individual Conductive Pads . So , called "NCR"

Non-contact resistance.

cf.: The described specifications & dimensions subject to change without notice.