

Thick Film Chip Resistors, High Voltage

| MODEL | RESISTANCE RANGE (ohms) | POWER RATING (MW) | VOLTAGE RATING (V Max.) |
|----------|-------------------------|-------------------|-------------------------|
| CRHV1206 | 2 M - 8 G | 300 | 1500 |
| CRHV1210 | 4 M - 10 G | 450 | 1750 |
| CRHV2010 | 6 M - 35 G | 500 | 2000 |
| CRHV2510 | 10 M - 40 G | 600 | 2500 |
| CRHV2512 | 12 M - 50 G | 700 | 3000 |



KEY BENEFITS

- High voltage: to 3000 volts
- High ohmic values/small packages: from 2 MΩ to 50 GΩ
- Five industrial sizes
- Nickel barrier termination standard, other termination materials available
- Proprietary Cermet material

APPLICATIONS

- High-voltage power supplies
- Circuit breakers
- Lighting controls
- High-voltage applications

RESOURCES

- Datasheet: CRHV - <http://www.vishay.com/doc?68002>
- For technical questions contact te1resistors@vishay.com



Thick Film Chip Resistors, High Voltage



FEATURES

- High voltage up to 3000 V
- Outstanding stability < 0.5 %
- Flow solderable
- Custom sizes available
- Automatic placement capability
- Available with either wraparound terminations or as a single termination flip chip
- Tape and reel packaging available
- Internationally standardized sizes
- Suitable for solderable, epoxy bondable, or wire bondable applications
- Termination: Gold, palladium silver, platinum gold, platinum silver, platinum palladium gold or solder-coated nickel barrier available
- Multiple styles, termination materials and configurations, allow wide design flexibility
- Non-magnetic terminations available
- Compliant to RoHS Directive 2011/65/EU
- Halogen-free according to IEC 61249-2-21 definition



Available
RoHS*
 COMPLIANT
 HALOGEN
FREE

Note

* Pb containing terminations are not RoHS compliant, exemptions may apply

| STANDARD ELECTRICAL SPECIFICATIONS | | | | | | |
|------------------------------------|-----------|---|---|---|-------------------------------------|---|
| GLOBAL MODEL | CASE SIZE | POWER RATING $P_{70^{\circ}\text{C}}$ W | MAXIMUM WORKING VOLTAGE ⁽¹⁾ V | RESISTANCE RANGE ⁽²⁾ Ω | TOLERANCE ⁽³⁾ \pm % | TEMPERATURE COEFFICIENT ⁽⁴⁾ (- 55 °C to + 150 °C) \pm ppm/°C |
| CRHV1206 | 1206 | 0.30 | 1500 | 2M to 1G | 1, 2, 5, 10, 20 | 100 |
| | | | | 1.1G to 8G | 2, 5, 10, 20 | |
| CRHV1210 | 1210 | 0.45 | 1750 | 4M to 1G | 1, 2, 5, 10, 20 | 100 |
| | | | | 1.1G to 10G | 2, 5, 10, 20 | |
| CRHV2010 | 2010 | 0.50 | 2000 | 6M to 1G | 1, 2, 5, 10, 20 | 100 |
| | | | | 1.1G to 10G | 2, 5, 10, 20 | |
| CRHV2510 | 2510 | 0.60 | 2500 | 11G to 35G | 5, 10, 20 | 100 |
| | | | | 10M to 1G | 1, 2, 5, 10, 20 | |
| CRHV2512 | 2512 | 0.70 | 3000 | 1.1G to 10G | 2, 5, 10, 20 | 100 |
| | | | | 11G to 40G | 5, 10, 20 | |
| CRHV2512 | 2512 | 0.70 | 3000 | 12M to 1G | 1, 2, 5, 10, 20 | 100 |
| | | | | 1.1G to 10G | 2, 5, 10, 20 | |
| CRHV2512 | 2512 | 0.70 | 3000 | 11G to 50G | 5, 10, 20 | 100 |
| | | | | | | |

Notes

- For non-standard sizes, lower values or higher power rating requirement, contact factory.
- ⁽¹⁾ Continuous working voltage shall be $\sqrt{P \times R}$ or maximum working voltage, whichever is less.
- ⁽²⁾ Resistance values are calibrated at 100 V_{DC}. Calibration at other voltages available upon request.
- ⁽³⁾ Contact factory for tighter tolerances.
- ⁽⁴⁾ Reference only: Not for all values specified. Consult factory for your size and value.

| GLOBAL PART NUMBER INFORMATION | | | | | | | | | | | | | | | | | |
|---|--------------------------------------|--|---|--|---|---|--|--|---|---|---|---|---|---|---|---|---|
| New Global Part Numbering: CRHV1206AF100MFKFB (preferred part number format) | | | | | | | | | | | | | | | | | |
| C | R | H | V | 1 | 2 | 0 | 6 | A | F | 1 | 0 | 0 | M | F | K | F | B |
| GLOBAL MODEL | SIZE | TERM STYLE | TERM MATERIAL | RESISTANCE VALUE | TOLERANCE | TCR | SOLDER TERMINATION | PACKAGING | | | | | | | | | |
| CRHV | 1206 1210 2010 2510 2512 | A = 3-sided B = Top only C = 5-sided | F = Nickel barrier A = Palladium silver B = Platinum gold C = Gold D = Platinum silver E = Platinum palladium gold | M = M Ω G = G Ω 4M70 = 4.7 M Ω 10M0 = 10 M Ω 1G00 = 1 G Ω | F = \pm 1 % G = \pm 2 % J = \pm 5 % K = \pm 10 % M = \pm 20 % | K = 100 ppm L = 150 ppm N = 200 ppm R = 250 ppm M = 300 ppm W = 350 ppm P = 500 ppm | D = Sn95/Ag5, HSD E = Sn100 F = Sn95/Ag5 N = No solder S = Sn62/Pb36/Ag2, HSD T = Sn90/Pb10 | B = Bulk F = T/R (full reel) 1 = T/R (1000 pcs) 5 = T/R (500 pcs) T = T/R (250 pcs min.) W = Wafler | | | | | | | | | |
| Historical Part Numbering: CRHV1206AF100F100e2 (will continue to be accepted) | | | | | | | | | | | | | | | | | |
| CRHV | 1206 | A | F | 1006 | F | 100 | e2 | | | | | | | | | | |
| HISTORICAL MODEL | SIZE | TERM STYLE | TERM MATERIAL | RESISTANCE VALUE | TOLERANCE | TCR | SOLDER TERMINATION | | | | | | | | | | |

Revision 23-Nov-11

Resistors - High-Voltage Capability to 3000 V