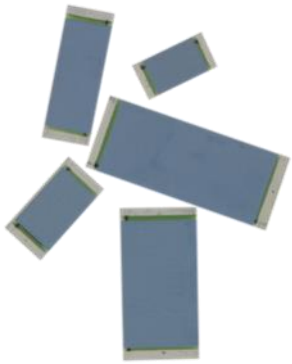
UHVC SERIES

Ultra High Voltage Chip Resistors



Advantages

- **Highest voltage ratings available in a surface mount resistor (up to 20,000 Volts).**
- **Replace leaded thru-hole resistors with surface mount resistors saving assembly and board space costs.**
- **Replace multiple resistor arrays with a single resistor.**

Our patented Micropen® precision printing technology provides a superior surface mount resistor with the highest voltage ratings available in the industry. These ultra high voltage resistors also meet Ohmcraft's superior electrical

- **Voltage Ratings to 20,000 Volts**
- **Resistance Values to 50 Gigohms**
- **Ultra High Stability**
- **Very Low Noise**
- **Tolerances to 1%**
- **TCR to 100 ppm/°C**

Electrical Specification —Minimum Ohmic Value for Specified Voltage Rating

	Voltage Rating (volts)								
Case Size	**3,000**	**4,000**	**6,000**	**8,000**	**10,000**	**12,000**	**14,000**	**16,000**	**20,000**
2010	≥ 90M	≥ 160M	≥ 360M	NA	NA	NA	NA	NA	NA
2512	Note [1]	≥ 120M	≥ 250M	≥ 450M	≥ 700M	NA	NA	NA	NA
3512	Note [1]	≥ 85M	≥ 200M	≥ 330M	≥ 525M	≥ 750M	≥ 1,000M	NA	NA
4020	Note [1]	Note [1]	≥ 150M	≥ 250M	≥ 400M	≥ 575M	≥ 775M	≥ 1,000M	NA
5020	Note [1]	Note [1]	≥ 90M	≥ 160M	≥ 250M	≥ 360M	≥ 490M	≥ 640M	≥ 1,000M

Note [1]: For these values and package size, refer to our standard HVC series.

Due to the high voltage ratings, these resistors must be potted upon assembly.

For other configurations or requirements, contact us.

How to Order

UHVC + [ ] + [ ] + [ ] + [ ] + [ ]

Type

Ultra High-Voltage Chips

Case Size

2010

2512

3512

4020

5020

TCR

K ±100ppm/°C

L ±200ppm/°C

Value

Resistance value expressed as a four digit number, where the first three numbers are the significant value, and the fourth number is the number of zeroes.

Tolerance

F ±1.0%

G ±2.0%

J ±5.0%

K ±10% (untrimmed)

L ±20% (untrimmed)

Terminati n

T Solderable wraparound ma e n Sn99.9 on Ni barrier, RoHS

B Solderable wraparound Sn63Pb37 solder over Ni barrier

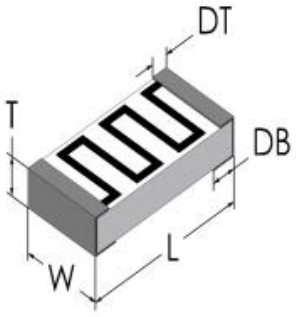
Packaging options Bulk, Tape & Reel or Flat Pack

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Chip Dimensions

Wrap-around
B and T Terminations



Case Size	Length	Width	Thick-ness (Max.)	DT	DB	Units
2010	0.200 +0.01/-0.005 5.08 +0.25/-0.13	0.100 ±0.005 2.54 ±0.13	0.030 0.76	0.018 ±0.010 0.46 ±0.25	0.020 ±0.010 0.51 ±0.25	inches mm
2512	0.250 +0.01/-0.005 6.35 +0.25/-0.13	0.125 ±0.005 3.18 ±0.13	0.030 0.76	0.020 ±0.010 0.51 ±0.25	0.024 ±0.010 0.61 ±0.25	inches mm
3512	0.350 +0.01/-0.005 8.89 +0.25/-0.13	0.125 ±0.005 3.18 ±0.13	0.030 0.76	0.020 ±0.010 0.51 ±0.25	0.024 ±0.010 0.61 ±0.25	inches mm
4020	0.400 +0.01/-0.005 10.16 +0.25/-0.13	0.200 ±0.005 5.08 ±0.13	0.030 0.76	0.025 ±0.010 0.64 ±0.25	0.030 ±0.010 0.76 ±0.25	inches mm
5020	0.500 +0.01/-0.005 12.70 +0.25/-0.13	0.200 ±0.005 5.08 ±0.13	0.030 0.76	0.030 ±0.010 0.76 ±0.25	0.030 ±0.010 0.76 ±0.25	inches mm

Typical Performance Characteristics

Test	Maximum ΔR
Short Time Overload	0.5%
Load Life	0.5%
Temperature Cycle	0.5%
Moisture Resistance	0.5%
Shock	0.25%
Vibration	0.25%
Dielectric Withstanding Voltage	0.25%
Resistance to Soldering Heat	0.25%

Parameter	Typical
Operating Temperature	-55°C to 150°C
TCR	Measured from 25°C to 75°C
Resistance Value	Measured at 1000 VDC for custom test voltages consult factory

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Ultra High Voltage Chip Resistors

Tape and Reel Specification

Parts are packaged in accordance with EIA-481 tape and reel specifications.

Material Construction

Resistive Element	Thick Film
Substrate	96% Alumina
Encapsulation	Epoxy
Termination	Tin over nickel barrier, lead solder over nickel barrier.

Custom Configurations Available Upon Request

Please consult us with our knowledgeable sales staff for help specifying custom parts to meet your needs.

