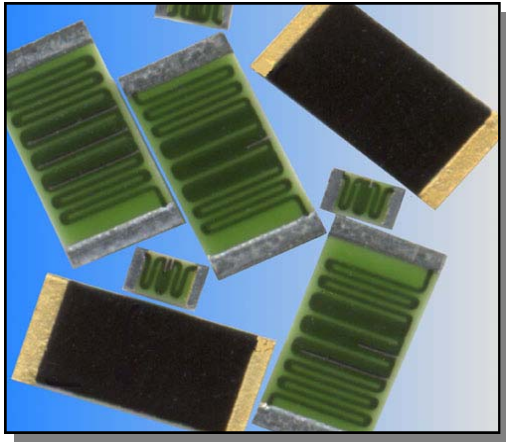


MCH Series

Military Grade High Voltage Chip Resistors



Ohmcraft's fine line, thick film patterning technology provides high level of stability and voltage ratings in surface mount chip resistors. Our MCH series of resistors meets the same high standards as our HVC series, but with the added feature of an extended temperature range.



- ◆ **Voltage Ratings to 3500 Volts**
- ◆ **Resistance Values to 2,000 Gigohms**
- ◆ **Ultra High Stability**
- ◆ **Tight Tolerances (to 0.1%)**
- ◆ **Low TCR and VCR**
- ◆ **Very Low noise**
- ◆ **Extended Temperature Range (-55°C to +125°C)**
- ◆ **Custom Configurations**

The usual technologies for manufacturing resistors depend upon composite materials that have limitations. Traditional thick-film process methods limit performance characteristics and thin-film methods are limited in attainable ohmic values. **Ohmcraft's** fine line patterning offers the best characteristics of both methods, plus adds many unique features. **Ohmcraft's** resistors feature a longer, high-aspect ratio trace of lower resistivity film. The combination of long line, high-aspect ratio, and higher conductivity film, give **Ohmcraft** resistors

unmatched design efficiency, versatility, linearity, stability and low noise. The **Ohmcraft** fine line patterning methods allows control of process parameters to very tight tolerances. The result is chip resistors with outstanding stability and high voltage ratings.

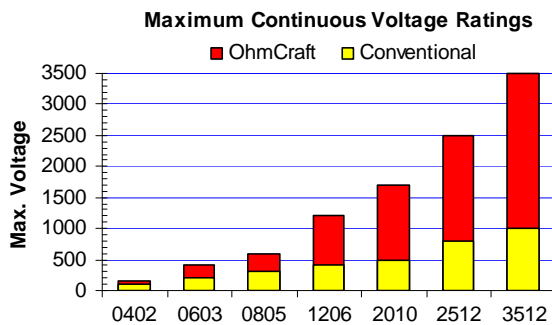
Leaded resistors, dividers and networks are manufactured using the same fine line patterning technologies. For additional information on those products, please refer to the appropriate data sheets.

Maximum Continuous Voltage:

Ohmcraft's high voltage chip resistors offer voltage ratings that are much higher than conventional screen printed resistors of the same size and resistive value.

Superior Pulse Handing Capabilities:

OhmCraft's HVC resistors are able to withstand a wide range of pulses. Contact OhmCraft to discuss your pulse handling requirements.



Ratings

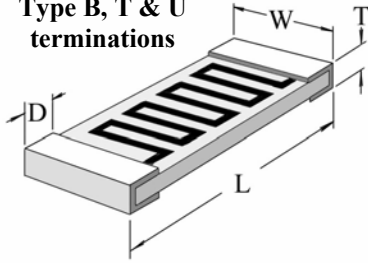
	Case Size ¹						
	0402	0603	0805	1206	2010	2512	3512
Max. Power (W)	0.040	0.060	0.200	0.330	1.000	2.000	3.000
Max. Voltage ² (V) (In air)	150	400	600	1200	1700	2500	3500
Resistance Range (ohms)	1K-20G	1K-300G	1K-350G	1K-500G	10K-1T	10K-2.0T	10K-2.0T

Note 1: Other standard & custom case sizes are available.

Note 2: The continuous maximum voltage applied cannot exceed the maximum power rating.

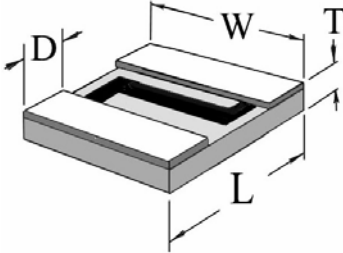
Dimensions

Wrap-around Type B, T & U terminations



L = Length
W = Width
T = Thickness
D = Pad dimension

Bondable Type G, Z & S terminations



Case Size ▼	Length (L) (mils)	Width (W) (mils)	Thickness (T) Max. (mils)	Pad (D) (mils)
0402	40 ± 5	20 ± 3	20	10 (± 5)
0603	63 (+10,-5)	31 ± 5	20	10 (+10,-5)
0805	79 (+10,-5)	50 ± 5	25	10 (+10,-5)
1206	126 ± 10	61 ± 7	30	15 (+10,-5)
2010	200 (+10,-5)	100 ± 5	30	20 (+10,-5)
2512	250 (+10,-5)	125 (+ 5,-10)	30	20 (+10,-5)
3512	350(=10-5)	125 ± 5	30	20 (+10,-5)

How to build a part number....

Type	Case size	TCR ¹	Value ²	Tolerance ³	Termination
MCH					
High Voltage Chip	See dimension table above	E = ± 25ppm/°C H = ± 50ppm/°C K = ± 100ppm/°C L = ± 200ppm/°C	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 zeros.	B = ± 0.1 % C = ± 0.25 % D = ± 0.5 % F = ± 1.0 % G = ± 2.0% J = ± 5.0 % K = ± 10 % L = ± 20 %	T = Solderable wrap-around matte Tin Z = Solderable single surface matte Tin B = Solderable wrap-around (Sn63Pb37 solder over nickel barrier) S = Solderable single surface (flip-chip) G = Wire Bondable (gold)

Note 1: TCR measured from -55°C to +125°C.

Note 2: Value is dependent on case size.

Note 3: Tolerance is measured at 100VDC and dependent on case size & value.

Example: For a High Voltage, 125 Meg-ohm resistor with case size of 0805, a TCR of ± 50 ppm/C, a ±1% tolerance, and wrap-around solderable terminations - the part number would be:

MCH0805H1256FB



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