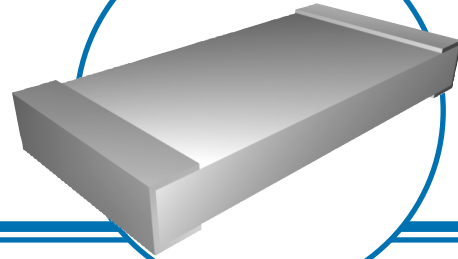


# High Voltage Chip Resistors

## HVC Series

- Continuous voltages up to 3KV
- Resistance Values from 100KΩ to 100MΩ
- Tolerances of ±0.5% to ±10%
- Sn/Pb or Matte Sn wrap-around terminations
- Standard chip sizes available from 1206 to 2512
- Robust thick film construction



## Electrical Data

Characteristic	1206	2010	2512
Maximum Rated Voltage <sup>1</sup>	1000V	2000V	3000V
Voltage Coefficient of Resistance	-25 ppm/V Max. -15 ppm/V Typ.	-15 ppm/V Max. -5 ppm/V Typ.	-5 ppm/V Max. -1.5 ppm/V Typ.
Resistance Range (Tolerance)	100KΩ to 10M (±0.5%, ±1%, ±2%, ±5%, ±10%) 10MΩ to 100MΩ (±5%, ±10%)		
Power @ 70°C	300mW	500mW	1000mW
Operating Temperature	-55°C to +155°C		
Thermal Impedance	200°C/W	80°C/W	70°C/W
TCR	±100ppm/°C		
Termination	Wrap-around Sn/Pb or matte Sn with leach resistant Ni barrier		

Notes: 1. Voltage Limited to  $\sqrt{P \times R}$   
2. ±0.5% in 2512 package only

## Environmental Data

Test	Maximum ΔR	Typical ΔR
Load life at rated power (1000 hours @ 70°C)	0.50%	0.25%
Overload (6.25 X rated power for 2 seconds)	0.50%	0.10%
High temperature storage (1000 hours @ 155°C)	0.50%	0.20%
Moisture resistance	0.50%	0.25%
Thermal shock	0.25%	0.05%
Resistance to soldering heat	0.25%	0.05%

### General Note

IRC reserves the right to make changes in product specification without notice or liability. All information is subject to IRC's own data and is considered accurate at time of going to print.

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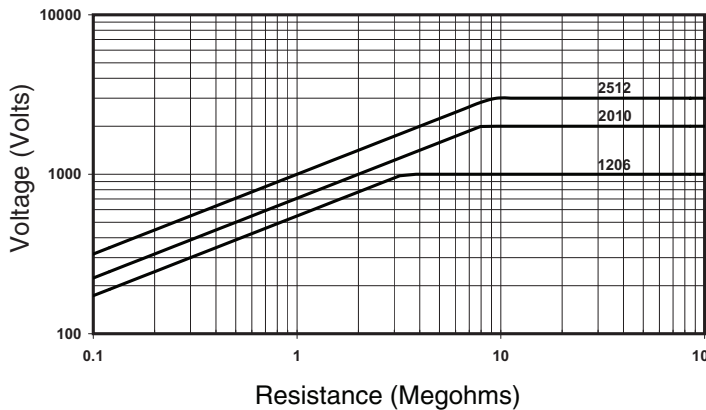
# High Voltage Chip Resistors



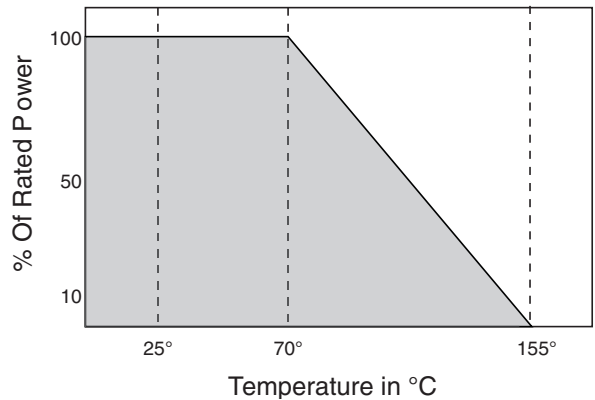
## Physical Data

	L (mm)	W (mm)	T max (mm)	A (mm)	C (mm)	Weight (grams)	
1206	3.2±0.2	1.6±0.2	0.6	0.5±0.2	0.5±0.2	0.010	
2010	5.3±0.2	2.5±0.2	0.7	0.5±0.2	0.5±0.2	0.035	
2512	6.6±0.2	3.2±0.2	0.7	0.5±0.2	0.5±0.2	0.055	

## Maximum Continuous Voltage



## Power Derating Data



**Construction:** Thick film resistor material, overglaze and organic protection are screen printed on a 96% alumina substrate. Wrap-around terminations have an electroplated nickel barrier and tin-lead solder or matte-tin finish, ensuring excellent 'leach' resistance properties and solderability. Wrap around terminations ensure reliable contact. This robust construction enables the resistor to be mounted on one side of a printed circuit board and a wire-leaded component applied on the opposite side.

**Marking:** Components are not marked. Reels are marked with type, value, tolerance, date code and quantity.

**Solvent resistance:** The body protection is resistance to all normal industrial cleaning solvents suitable for printed circuits.

**PCB Layout Recommendation:** Avoid running conducting traces between the HVC mounting pads, as this would compromise the rated voltage.

## Ordering Data

Prefix ..... **TKC** - **HVC** **2512LF** - **3M30** - **F**

Chip Type .....  
HVC

Size and Termination .....  
1206 = Sn/Pb solder termination  
1206LF = 100% Tin (pb-free) termination  
2010 = Sn/Pb solder termination  
2010LF = 100% Tin (pb-free) termination  
2512 = Sn/Pb solder termination  
2512LF = 100% Tin (pb-free) termination

Resistance Value .....  
4 digit code: 100K=100,000 ohms, 1M20=1,200,000 ohms

Tolerance Code .....  
K = ±10%; J = ±5%; G = ±2%; F = ±1%; D = ±0.5%

For additional information or to discuss your specific requirements, please contact our Applications Team using the contact details below.