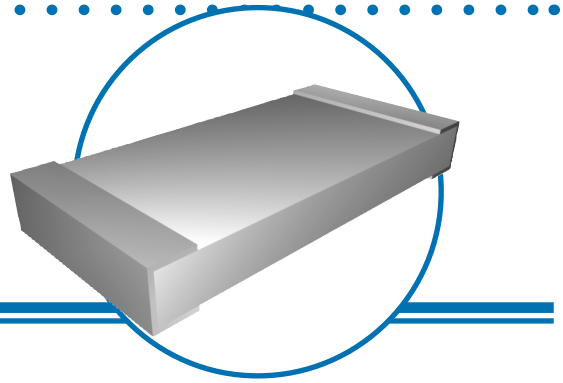
High Voltage Chip Resistors

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[1]	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%[2],±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 $\sqrt{PxR}$
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%

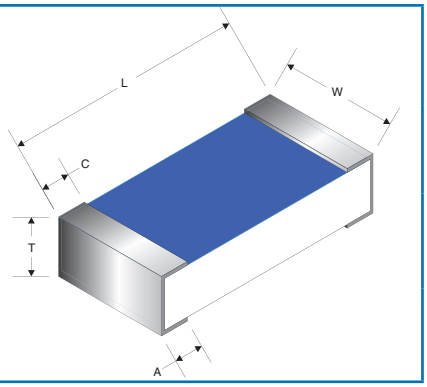
Advanced Film Division • 4222 South Staples Street • Corpus Christi Texas 78411 USA
Telephone: 361 992 7900 • Facsimile: 361 992 3377 • Website: www.irctt.com

A subsidiary of
TTelectronics plc
PWC Series Issue July 2008

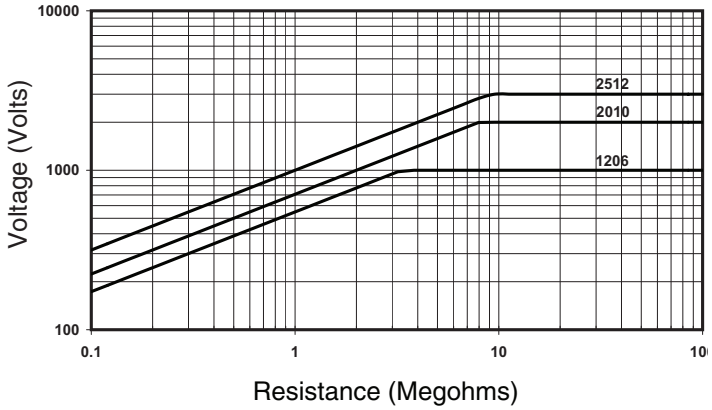
High Voltage Chip Resistors

Physical Data

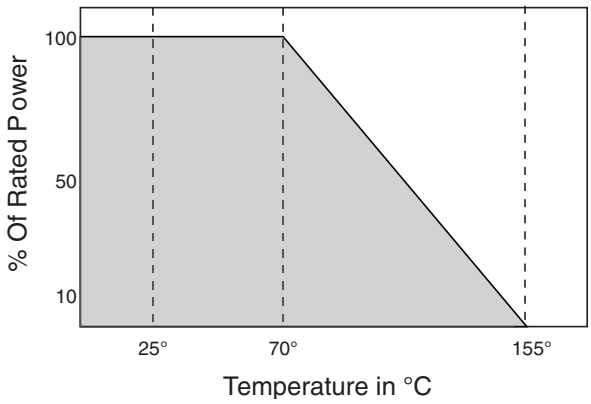
	L (mm)	W (mm)	T max (mm)	A (mm)	C (mm)	Weight (grams)
1206	3.2±0.2	1.6±0.2	0.6	0.5±0.2	0.5±0.2	0.010
2010	5.3±0.2	2.5±0.2	0.7	0.5±0.2	0.5±0.2	0.035
2512	6.6±0.2	3.2±0.2	0.7	0.5±0.2	0.5±0.2	0.055



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.

Advanced Film Division • 4222 South Staples Street • Corpus Christi Texas 78411 USA
Telephone: 361 992 7900 • Facsimile: 361 992 3377 • Website: www.irctt.com