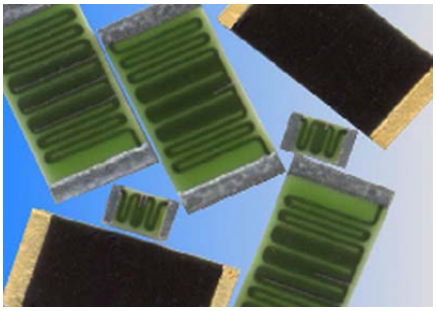
Features:

- Absolute voltage ratings up to 40,000 volts
- Ohmic values to 50G
- Available with wire bondable terminations
- Tight tolerances to 0.1%
- Utilizes fine film resistor deposition technology
- Superior pulse handling capabilities
- Low TCR to 25 ppm/ºC
- Low VCR to 1 ppm/volt
- Very low noise
- Ultra high stability
- Custom sizes available
- Higher or lower resistance values may be available (contact factory)
- Standard HVC parts are unmarked
- RoHS compliant



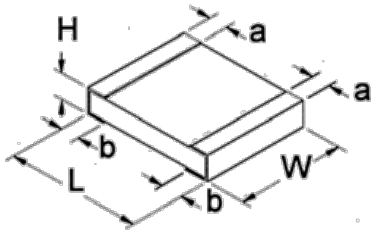
Electrical Specifications

Type / Code	Power Rating (Watts) @ 70ºC	Maximum Working Voltage (1)	Resistane Temperature Coefficient	Ohmic Range (Ω) and Tolerance							
				0.1%	0.25%	0.5%	1%	2%	5%	10%	20%
HVC0603	0.06W	400V	± 50 ppm/ºC	-		10K - 10M	10K - 100M	10K - 500M			
			± 100 ppm/ºC				10K - 500M	10K - 1G		10K - 1G	
			± 200 ppm/ºC							10K - 10G	10K - 50G
HVC0805	0.2W	600V	± 50 ppm/ºC	-		10K - 10M	10K - 500M				
			± 100 ppm/ºC				10K - 1G		10K - 1G		
			± 200 ppm/ºC						10K - 10G		10K - 50G
HVC1206	0.33	1500V	± 25 ppm/ºC	1M - 100M	1M - 100M						
			± 50 ppm/ºC	100K - 100M	100K - 100M	100K - 500M					
			± 100 ppm/ºC	10K - 100M	10K - 100M	10K - 500M	10K - 1G	10K - 1G			
			± 200 ppm/ºC					10K - 10G			10K - 50G
HVC2010	1W	2000V	± 25 ppm/ºC	1M - 100M	1M - 100M						
			± 50 ppm/ºC	100K - 100M	100K - 100M	100K - 500M					
			± 100 ppm/ºC	10K - 100M	10K - 100M	10K - 500M	10K - 1G	10K - 1G			
			± 200 ppm/ºC					10K - 10G			10K - 50G
HVC2512	2W	3000V	± 25 ppm/ºC	1M - 100M	1M - 500M						
			± 50 ppm/ºC	100K - 100M	100K - 500M	100K - 1G					
			± 100 ppm/ºC	10K - 100M	10K - 500M	10K - 1G	10K - 10G			100K - 10G	
			± 200 ppm/ºC							100K - 50G	
HVC3512	3W	3500V	± 25 ppm/ºC	1M - 100M	1M - 500M						
			± 50 ppm/ºC	100K - 100M	100K - 500M	100K - 1G					
			± 100 ppm/ºC	10K - 100M	10K - 500M	10K - 1G	10K - 10G			100K - 10G	
			± 200 ppm/ºC							100K - 50G	

(1) The continuous maximum voltage applied cannot exceed the maximum power rating and is ohmic value dependent.

Note: Other case sizes and tolerances are available.

Mechanical Specifications



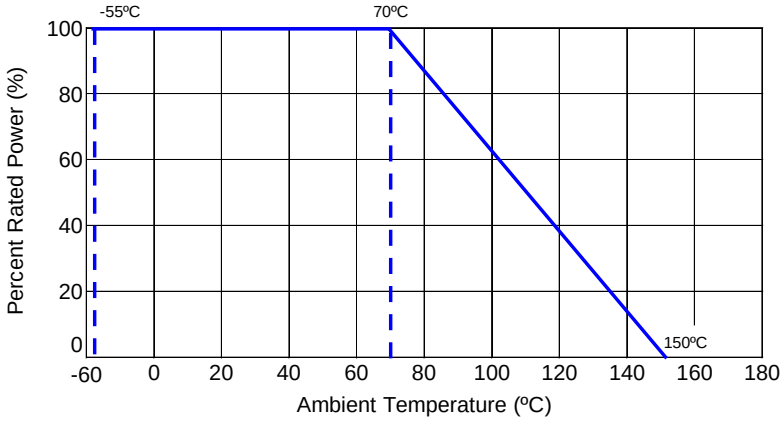
Type / Code	L Body Length	W Body Width	H Body Height (Max.)	a Top Termination	b Bottom Termination	Unit
HVC0603	0.063 ± 0.01 1.60 ± 0.25	0.031 ± 0.005 0.79 ± 0.13	0.020 0.51	0.010 ± 0.005 0.25 ± 0.13	0.012 ± 0.008 0.30 ± 0.20	inches mm
HVC0805	0.079 ± 0.01 2.01 ± 0.25	0.050 ± 0.005 1.27 ± 0.13	0.025 0.64	0.010 ± 0.005 0.25 ± 0.13	0.013 ± 0.008 0.33 ± 0.20	inches mm
HVC1206	0.126 ± 0.01 3.20 ± 0.25	0.063 ± 0.005 1.60 ± 0.13	0.030 0.76	0.010 ± 0.005 0.25 ± 0.13	0.020 ± 0.010 0.51 ± 0.25	inches mm
HVC2010	0.200 ± 0.01 5.08 ± 0.25	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
HVC2512	0.250 ± 0.01 6.35 ± 0.25	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
HVC3512	0.350 ± 0.01 8.89 ± 0.25	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

Performance Characteristics

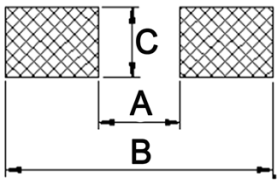
Test	Typical Performance
Short Time Overload	0.1%
Load Life	0.1%
Temperature Cycle	0.1%
Moisture Resistance	0.1%
Shock	0.05%
Vibration	0.05%
Dielectric Withstanding Voltage	0.05%
Resistance to Soldering Heat	0.05%

Parameter	Typical
Operating Temperature	-55°C to 150°C
TCR	measured from 25°C to 75°C
Pulse Capability	10X rated wattage Consult factory for custom pulse applications
Resistance Value	Measured at 100V Consult factory for custom test voltages

Power Derating Curve:



Solder Land Pattern



Type / Code	A	B	C	Unit
HVC0603	0.031 0.80	0.083 2.10	0.035 0.90	inches mm
HVC0805	0.047 1.20	0.118 3.00	0.051 1.30	inches mm
HVC1206	0.087 2.20	0.165 4.20	0.063 1.60	inches mm
HVC2010	0.138 3.50	0.240 6.10	0.110 2.80	inches mm
HVC2512	0.150 3.80	0.315 8.00	0.138 3.50	inches mm

RoHS Compliance

Stackpole Electronics has joined the worldwide effort to reduce the amount of lead in electronic components and to meet the various regulatory requirements now prevalent, such as the European Union's directive regarding "Restrictions on Hazardous Substances" (RoHS 2). As part of this ongoing program, we periodically update this document with the status regarding the availability of our compliant components. All our standard part numbers are compliant to EU Directive 2011/65/EU of the European Parliament.

RoHS Compliance Status

Standard Product Series	Description	Package / Termination Type	Standard Series RoHS Compliant	Lead-Free Termination Composition	Lead-Free Mfg. Effective Date (Std Product Series)	Lead-Free Effective Date Code (YY/WW)
HVC	High Voltage Thick Film Surface Mount Chip Resistor	SMD	YES(1)	100% Matte Sn ("T")	Always	Always

Note (1): RoHS Compliant by means of exemption 7c-I.

"Conflict Metals" Commitment

We at Stackpole electronics, Inc. are joined with our industry in opposing the use of metals mined in the "conflict region" of the Easter Democratic Republic of the Congo (DRC) in our products. Recognizing that the supply chain for metals used in the electronics industry is very complex, we work closely with our own suppliers to verify to the extent possible that the materials and products we supply do not contain metals sourced from this conflict region. As such, we are in compliance with the requirements of Dodd-Frank Act regarding Conflict Minerals.

Compliance to "REACH"

We certify that all passive components supplied by Stackpole Electronics, Inc. are SVHC (Substances of Very High Concern) free and compliant with the requirements of EU Directive 1907/2006/EC, "The Registration, Evaluation, Authorization and Restriction of Chemicals", otherwise referred to as REACH. Contact us for complete list of REACH Substance Candidate List.

Environmental Policy

It is the policy of Stackpole Electronics, Inc. (SEI) to protect the environment in all localities in which we operate. We continually strive to improve our effect on the environment. We observe all applicable laws and regulations regarding the protection of our environment and all requests related to the environment to which we have agreed. We are committed to the prevention of all forms of pollution.

How to Order

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
H	V	C	B	2	5	1	2	F	K	C	1	0	M	0

Product Series	
HVCB	Solderable wraparound (100% matte tin)
HVCG	Wire bondable (gold)
HVCS	Solderable single surface (Sn/Pb)
HVCZ	Solderable single surface (100% matte tin)

Size	Power
0603	0.06W
0805	0.2W
1206	0.33W
2010	1W
2512	2W
3512	3W

Tolerance	
Code	Tol
B	0.1%
C	0.25%
D	0.5%
F	1%
G	2%
J	5%
K	10%
M	20%

Packaging			
Code	Description	Size	Quantity
T	7" Reel - Paper Tape	0603, 0805	5,000
		1206	4,000
	7" Reel - Plastic Tape	2010	4,000
		2512	2,000
K	7" Reel - Paper Tape	0603, 0805, 1206	1,000
	7" Reel - Plastic Tape	2010, 2512, 3512	1,000
D	7" Reel - Paper Tape	0603, 0805, 1206	500
	7" Reel - Plastic Tape	2010, 2512, 3512	500
B	Bulk	All Sizes	1,000

TCR	
Code	ppm
E	25
C	50
D	100
L	200
M	300

Resistance Value
Four characters with the multiplier used as the decimal holder.
10 Kohm = 10K0
1 Mohm = 1M00
10 Gohm = 10G0