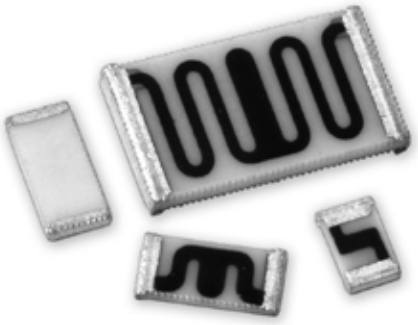
HVC Series

Precision High-Value High-voltage Wraparound Chip



FEATURES

- High value chip resistors in thick film technology
- Low temperature and voltage dependency (low TCR and VCR)
- High working voltage up to 3000V
- Suitable for high vacuum applications—no organics
- Contact areas: Nickel-barrier/matte tin
- Wraparound terminals

SERIES SPECIFICATIONS

Series	Type	Wattage[1] P_{70} (mW)	Oper. Voltage (V) std.	Oper. Voltage (V) untrimmed (≥5%)	Resistance Range	Tolerance	TCR[2,3] (ppm)	VCR[2] (ppm)
HVC0402---	0402	50	30	60	100k-100M	5-10%	50, 100	500
					>100M-1G	5-20%	250, 500	1000
					>1G-10G	10-30%	2000	2000
HVC0603---	0603	100	75	150	100k-100M	1-10%	50, 100	500
					>100M-1G	5-20%	250, 500	1000
					>1G-10G	5-20%	500, 1000	2000
HVC0805---	0805	125	200	400	100K-100M	0.5-10%	25, 50, 100	100
					>100M-1G	2-20%	50, 100, 250	250
					>1G-10G	5-20%	250, 500	500
					>10G-100G	10-30%	1000, 2000	2000
HVC1206---	1206	250	600	1000	100K-100M	0.5-10%	25, 50, 100	50
					>100M-1G	2-20%	50, 100, 250	100
					>1G-10G	5-20%	50, 100, 250	250
					>10G-100G	10-30%	250, 500, 1000	1000
HVC2512---	2512	1000	2000	3000	100K-100M	0.5-10%	25, 50, 100	10
					>100M-1G	1-20%	25, 50, 100	25
					>1G-10G	2-20%	25, 50, 100	50
					>10G-100G	5-30%	100, 250, 500	100
HVC4020---	4020	1500	4000	6000	100k-100M	0.25-10%	25, 50, 100	5
					>100M-1G	0.5-20%	25, 50, 100	10
					>1G-10G	1-20%	25, 50, 100	10
					>10G-100G	2-30%	50, 100, 250	50
					>100G-1T	5-30%	250/500	250

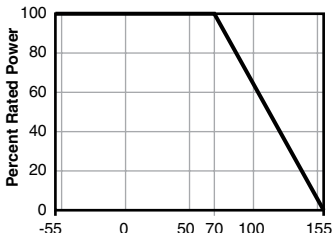
1. At continuous power dissipation the dimensions of the solder pads have to be capable of sufficient heat conduction.
2. Not all TCR/VCR combinations available in all resistance values
3. HVC2512 10M-10G TCR's available: 10ppm and 15ppm

Datasheet.Directory

CHARACTERISTICS

Operating temperature range	-55°C ~ +155°C			
Climatic category	55/155/56, acc. to EN 60068-1			
Solderability	250°C, 3s, acc. to EN 60068-2-58			
Max. soldering temperature	260°C, 10s, acc. to IEC 68-2-58			
Long Term Stability		<1G	<10G	≥10G
	Load Life 70°C/1000h	<0.25%	<0.5%	<1%
	Storage 125°C/1000h	<0.5%	<1%	<2%
	Max. Voltage/1000h	<0.5%	<1%	<2%

Derating



Data not specified according to EN 140401-802 (CECC 40401-802)

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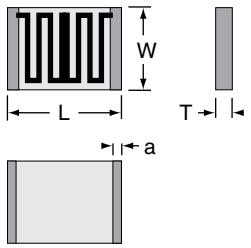
TERMINAL DETAILS

Base Metal	PdAg
Termination Finish	100% electroplated matte Sn100
Thickness of Finish	5 microns
Barrier Material between Base Metal and Finish	Porosity-free Ni (5-8 microns thickness)
Baking/Annealing Process after Sn Plating	150°C; > 4 hours
Peak Process Body Temperature (Classification Temperature) and Maximum Time	260°C for 10 seconds

DIMENSIONS

(mm)



Size	Power Rating (mW)	L	W	T	a
0402	50	1.04 ±.05	0.50 ±.05	0.30 ±.05	0.1 +.1/-.05
0603	100	1.50 +.15/-.05	0.80 +.15/-.05	0.40 +.15/-.05	0.2 +.2/-.1
0805	125	2.00 +.15/-.05	1.25 +.15/-.05	0.40 +.15/-.05	0.3 +.2/-.1
1206	250	3.20 +.15/-.05	1.50 +.2/-.05	0.40 +.15/-.05	0.3 +.2/-.1
2512	1000	6.30 +.15/-.05	3.50 +.2/-.05	0.60 +.15/-.05	0.9 ±.2
4020	1500	10.20 +.20/-.05	5.10 +.2/-.05	0.60 +.20/-.1	0.9 ±.2

HOW TO ORDER

RoHS Compliant

H V C 1 2 0 6 T 1 0 0 4 J E T

Series	**Package Size**	(ppm) **TCR**	**Ohms**	**Tolerance**	**Tape & Reel**
High Voltage Wrap Around Chip		W = 25 V = 50 T = 100 Z = 250 E = 500 N = 1000 U = 2000	1004 = 1MΩ 5006 = 500MΩ	D = 0.50% F = 1% G = 2% J = 5% K = 10% M = 20% P = 30%	500 pc/reel

Standard Part Numbers

HVC0603N1007KET	HVC0603N1007KET	HVC0805E1008KET	HVC1206T1004JET	HVC2512T1004JET	HVC4020V1004JET
HVC0402E5006KET	HVC0603E5007KET	HVC0805T1004JET	HVC1206T1005JET	HVC2512T1005JET	HVC4020V1005JET
HVC0402N5007KET	HVC0603T1004FET	HVC0805T1005JET	HVC1206T1006JET	HVC2512T1006JET	HVC4020V1006JET
HVC0402T1004JET	HVC0603T1005FET	HVC0805T1006JET	HVC1206T2504JET	HVC2512T1007JET	HVC4020V1007JET
HVC0402T1005JET	HVC0603T1006FET	HVC0805T2504JET	HVC1206T2505JET	HVC2512T1008KET	HVC4020V1008KET
HVC0402T1006JET	HVC0603T2504FET	HVC0805T2505JET	HVC1206T2506JET	HVC2512T2504JET	HVC4020V2504JET
HVC0402T2504JET	HVC0603T2505FET	HVC0805Z2506JET	HVC1206T5004JET	HVC2512T2505JET	HVC4020V2505JET
HVC0402T2505JET	HVC0603Z2506KET	HVC0805T5004JET	HVC1206T5005JET	HVC2512T2506JET	HVC4020V2506JET
HVC0402Z2506JET	HVC0603T5004FET	HVC0805T5005JET	HVC1206Z5007KET	HVC2512T5004JET	HVC4020Z2508KET
HVC0402T5004JET	HVC0603T5005FET	HVC0805T5007JET	HVC1206Z1007JET	HVC2512T5005JET	HVC4020V5004JET
HVC0402T5005JET	HVC0603Z5006JET	HVC0805Z1007JET	HVC1206Z1008KET	HVC2512T5006JET	HVC4020V5005JET
		HVC0805Z5006JET	HVC1206Z5006JET	HVC2512T5007JET	HVC4020V5006JET
					HVC4020V5007JET