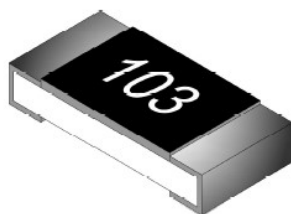


HIGH VOLTAGE SMD POWER RESISTORS

(RVC/RVCH SERIES)

Features

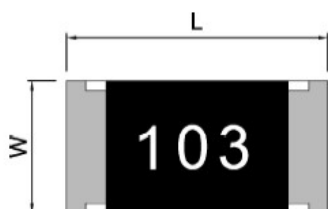
- * Special material and design for higher working voltage application



Applications

- * Power supply, Industrial control system
- * Backlight inverter
- * Measurement instrument
- * Medical, precision equipments

Dimensions (mm)



Style	L	W	H	l1	l2
RVC-04 0402	1.00±0.01	0.50±0.05	0.30±0.05	0.15±0.10	0.20±0.10
RVC-06 0603	1.60±0.20	0.80±0.15	0.40±0.10	0.30±0.20	0.30±0.10
RVC-10 0805	2.00±0.20	1.25±0.15	0.50±0.15	0.30±0.15	0.40±0.15
RVC-18 1206	3.05±0.10	1.60±0.20	0.55±0.15	0.40±0.20	0.50±0.20
RVC-20 1210	3.05±0.10	2.50±0.20	0.55±0.15	0.50±0.20	0.55±0.20
RVC-22 2010	5.00±0.20	2.50±0.20	0.55±0.10	0.60±0.20	0.60±0.20
RVC-24 2512	6.30±0.20	3.20±0.20	0.55±0.10	0.60±0.20	0.60±0.20

Style	L	W	H	l1	l2
RVCH-22 2010	5.00±0.20	2.50±0.20	0.55±0.10	0.40±0.20	0.60±0.20
RVCH-24 2512	6.30±0.20	3.20±0.20	0.55±0.10	0.40±0.20	0.60±0.20



Standard Electrical Specifications

Style	Power Rating at 70 °C	Max. Operating Voltage	Max. Overload Voltage	T.C.R. (ppm/°C)	Resistance Range		
					D: ±0.5%	J: ±5%	F: ±1%
RVC-04 0402	1/16W	100V	200V	±100	-	100Ω~10MΩ	
RVC-06 0603	1/10W	200V	400V	±100	-	47Ω~10MΩ	
				±200	-	10MΩ~30MΩ	
RVC-10 0805	1/8W	400V	800V	±100	100KΩ~1MΩ	47Ω~10MΩ	
				±200	-	10MΩ~30MΩ	
RVC-18 1206	1/4W	500V	1000V	±100	100KΩ~1MΩ	47Ω~10MΩ	
				±200	-	10MΩ~30MΩ	
RVC-20 1210	1/3W			±100	100KΩ~1MΩ	47Ω~10MΩ	
				±200	-	10MΩ~30MΩ	
RVC-22 2010	1/2W			±100	100KΩ~1MΩ	47Ω~10MΩ	
				±200	-	10MΩ~30MΩ	
RVC-24 2512	1W			±100	100KΩ~1MΩ	47Ω~10MΩ	
				±200	-	10MΩ~30MΩ	

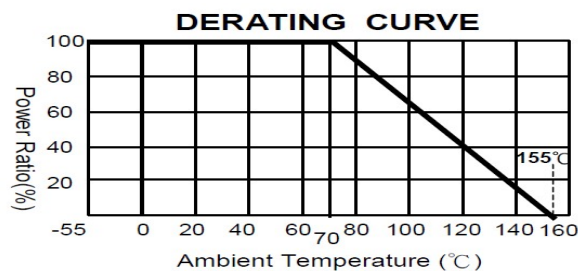
Style	Power Rating at 70 °C	Max. Operating Voltage	Max. Overload Voltage	T.C.R. (ppm/°C)	Resistance Range		
					D: ±0.5%	J: ±5%	F: ±1%
RVCH-22 2010	1/2W	2000V	3000V	±100	100KΩ~1MΩ	100KΩ~10MΩ	
RVCH-24 2512	1W	3000V	4000V	±100	43KΩ~1MΩ		

- For non-standard parts, please contact our sales dept.

- Operating temperature range: -55°C ~+115°C

Performance Characteristics

* Power Derating Curve



Power rating or current rating is the case based on continuous full-load at ambient temperatures of 70°C. For operating at ambient temperature in excess of 70°C, the load should be derated in accordance with figure of derating curve.

* Voltage Rating or Current Rating

Resistance Range: $\geq 1\Omega$

Rated Voltage: The resistor shall have a DC continuous working voltage or a RMS AC continuous working voltage at commercial-line frequency and wave form corresponding to the power rating, as determined formula as following:

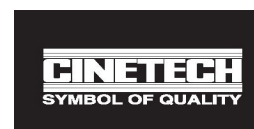
$$E(RCWV) = \sqrt{P \times R}$$

E=Rated voltage(V)
P=Power rating(W)
R=Nominal resistance(Ω)



Reliability test and Requirement

Test Item	Test Method	Procedure	Requirements	
			RVC	RVCH
Temperature Coefficient of Resistance(TCR)	JIS -C- 5201-1 4.8 IEC-60115-1 4.8	At 25/-55°C and 25°C /+155°C , 25°C is the reference temperature	As Spec	
Short time Overload	JIS -C- 5201-1 4.13 IEC -60115-1 4.13	2.5 times RCWV or Max. Overload voltage whichever is less for 5 seconds.	1% and below : ± (1.0% + 0.05Ω) 5%: ± (2.0% + 0.1Ω)	±2.0%
Leaching	JIS -C- 5201-1 4.18 IEC -60068-2-58 8.2.1	260±5°C for 30 seconds.	Individual leaching area≤5% Total leaching area ≤10%	
Resistance to Soldering Heat	JIS -C- 5201-1 4.18 IEC -60115-1 4.18	260±5°C for 10 seconds.	1% and below: ±(0.5% + 0.05Ω) 5%: ± (1.0% + 0.05Ω)	±1.0%
Rapid Change of Temperature	JIS -C- 5201-1 4.19 IEC -60115-1 4.19	-55°C to+155°C, 5 cycles	1% and below: ±(0.5% + 0.05Ω) 5%: ± (1.0% + 0.10Ω)	±1.0%
Resistance to Solvent	JIS-C-5201-1 4.29	The tested resistor be immersed into isopropyl alcohol of 20~25°C for 60 secs. Then the resistor is left in the room for 48 hrs.	1% and below: ±(0.5% + 0.05Ω) 5%: ± (0.5% + 0.05Ω)	±1.0%
Damp Heat with Load	JIS -C- 5201-1 4.24 IEC -60115-1 4.24	40±2°C,90~95% R.H.RCWV or Max.working voltage whichever is less for 1000hrs with1.5hrs "ON" and 0.5hrs"OFF".	1% and below: ±(1.0% + 0.05Ω) 5%: ± (2.0% + 0.05Ω)	±3.0%
Load Life (Endurance)	JIS -C- 5201-1 4.25 IEC -60115-1 4.25.1	70±2°C,RCWV or Max.working voltage whichever is less for 1000hrs with1.5hrs "ON" and 0.5hrs"OFF".	1% and below: ±(1.0% + 0.05Ω) 5%: ± (3.0% + 0.10Ω)	±3.0%
Insulation Resistance	JIS -C- 5201-1 4.6 IEC -60115-1 4.6	Apply 100VDC for 1 minute.	≥10GΩ	
Bending Strength	JIS -C- 5201-1 4.33 IEC -60115-1 4.33	Bending once for 5 seconds D: 0402·0603·0805= 5mm 1206·1210·1812= 3mm 1218·2010·2512·2030= 2mm	1% and below: ±(1.0% + 0.05Ω) 5%: ± (1.0% + 0.05Ω)	±1.0%



Parts Number System

RVC -	10 -	1002	F	R
Type	Size	Resistance	Tolerance	Standard Packing
RVC/RVCH- High Voltage SMD Power Resistor	02=0201 04=0402 06=0603 10=0805 18=1206 20=1210 22=2010 24=2512	3 Digits: for 5% First 2 digits are significant figure third Digits is number of zero	D=±0.5% J=±5% F=±1%	R=Paper tape reel 10,000pcs/Reel Size:0201~0402 5,000pcs/Reel Size:0603~1206 K=Embossed plastic tape reel 4,000pcs/Reel Size: 2010~2512

