

- Features:**
- Voltage ratings 2x or more compared to standard chip resistors
  - Values up to 100M
  - Lower resistance values may be available. Contact factory.
  - Proportionally higher pulse power capability
  - RoHS compliant

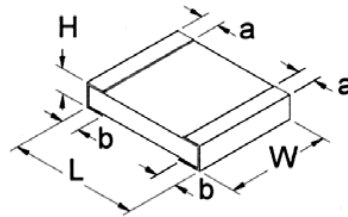


Electrical Specifications						
Type / Code	Power Rating (Watts) @ 70°C	Max Working Voltage	Max Overload Voltage	Resistance Temperature Coefficient	Ohmic Range (Ω) and Tolerance	
					1%	5%
RVC0402	0.063W	100V	200V	±100 ppm/°C ±200 ppm/°C ±400 ppm/°C	39K - 1M	
					1.02M - 10M	1.1M - 20M 22M - 100M
RVC0603	0.1W	200V	400V	±100 ppm/°C ±200 ppm/°C ±400 ppm/°C	56K - 1M	
					1.02M - 10M	1.1M - 20M 22M - 100M
RVC0805	0.125W	400V	800V	±100 ppm/°C ±200 ppm/°C ±400 ppm/°C	100K - 1M	
					1.02M - 10M	1.1M - 20M 22M - 100M
RVC1206	0.25W	500V	1,000V	±100 ppm/°C ±200 ppm/°C ±400 ppm/°C	100K - 1M	
					1.02M - 10M	1.1M - 20M 22M - 100M
RVC2010	0.5W	2,000V	3,000V	±100 ppm/°C ±200 ppm/°C ±400 ppm/°C	51K - 1M	
					1.02M - 20M	1.1M - 20M 22M - 100M
RVC2512	1W	3,000V	4,000V	±100 ppm/°C ±200 ppm/°C ±400 ppm/°C	30K - 1M	
					1.02M - 20M	1.1M - 20M 22M - 100M

Working Voltage =  $\sqrt{(P \cdot R)}$  or maximum working voltage listed above, whichever is lower.

Overload Voltage =  $2.5 \cdot \sqrt{(P \cdot R)}$  or maximum overload voltage listed above, whichever is lower.

**Mechanical Specifications**



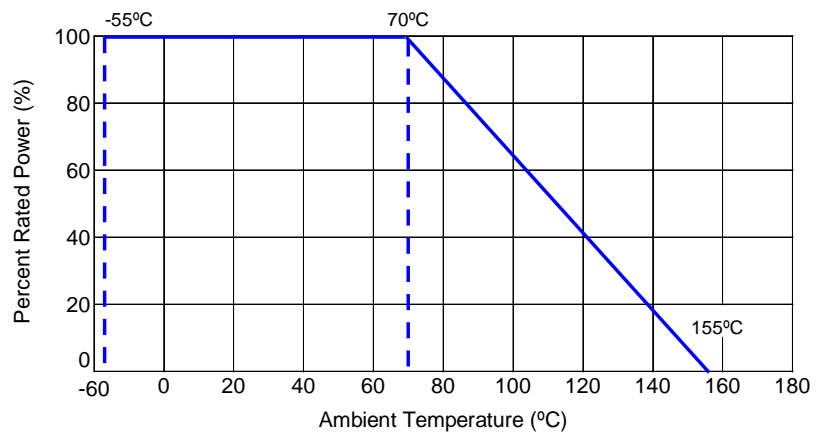
Type / Code	Weight (g) (1000 pc)	L Body Length	W Body Width	H Body Height	a Top Termination	b Bottom Termination	Unit
RVC0402	0.620	0.039 ± 0.002 1.00 ± 0.05	0.020 ± 0.002 0.50 ± 0.05	0.014 ± 0.002 0.35 ± 0.05	0.008 ± 0.004 0.20 ± 0.10	0.008 ± 0.004 0.20 ± 0.10	inches mm
RVC0603	2.042	0.063 ± 0.004 1.60 ± 0.10	0.031 ± 0.004 0.80 ± 0.10	0.018 ± 0.004 0.45 ± 0.10	0.012 ± 0.008 0.30 ± 0.20	0.012 ± 0.008 0.30 ± 0.20	inches mm
RVC0805	4.368	0.079 ± 0.004 2.00 ± 0.10	0.049 ± 0.004 1.25 ± 0.10	0.020 ± 0.004 0.50 ± 0.10	0.014 ± 0.008 0.35 ± 0.20	0.016 ± 0.008 0.40 ± 0.20	inches mm
RVC1206	8.947	0.122 ± 0.004 3.10 ± 0.10	0.061 ± 0.004 1.55 ± 0.10	0.022 ± 0.004 0.55 ± 0.10	0.020 ± 0.010 0.50 ± 0.25	0.020 ± 0.008 0.50 ± 0.20	inches mm
RVC2010	24.241	0.197 ± 0.008 5.00 ± 0.20	0.098 ± 0.006 2.50 ± 0.15	0.022 ± 0.004 0.55 ± 0.10	0.024 ± 0.010 0.60 ± 0.25	0.020 ± 0.008 0.50 ± 0.20	inches mm
RVC2512	39.448	0.250 ± 0.008 6.35 ± 0.20	0.126 ± 0.006 3.20 ± 0.15	0.022 ± 0.004 0.55 ± 0.10	0.024 ± 0.010 0.60 ± 0.25	0.020 ± 0.008 0.50 ± 0.20	inches mm

Performance Characteristics			
Item	Requirement		Test Method
	± 1%	± 5%	
Temperature Coefficient of Resistance (TCR)	As specified by Electrical Specification Table		JIS-C-5201-1 4.8 IEC-60115-1 4.8 -55°C ~ +125°C, 25°C is the reference temperature
Short Time Overload	±(1%+0.05Ω)	±(2%+0.05Ω)	JIS-C-5201-1 4.13 IEC-60115-1 4.13 RCWV*2.5 or Max. Overload Voltage whichever is lower for 5 seconds
Insulation Resistance	≥10G		JIS-C-5201-1 4.6 IEC-60115-1 4.6 Max. Overload voltage for 1 minute
Endurance	±(2%+0.1Ω)	±(3%+0.1Ω)	JIS-C-5201-1 4.25 IEC-60115-1 4.25.1 70±2°C, RCWV for 1000 h with 1.5 h "ON" and 0.5 h "OFF"
Damp Heat with Load	±(2%+0.1Ω)	±(3%+0.1Ω)	JIS-C-5201- 4.24 IEC-60115-1 4.24 40±2°C, 90~95% R.H., RCWV for 1000 h with 1.5 h "ON" and 0.5 h "OFF"
Dry Heat	±(1%+0.05Ω)	±(1.5%+0.1Ω)	JIS-C-5201-1 4.23 IEC-60115-1 4.23.2 at +155°C for 1000 h
Bending Strength	±(1%+0.05Ω)	±(1%+0.05Ω)	JIS-C-5201-1 4.33 IEC-60115-1 4.33 Bending once for 5 seconds 2010, 2512 sizes: 2mm; other sizes: 3mm
Solderability	95% min. coverage		JIS-C-5201-1 4.17 IEC-60115-1 4.17 245±5°C for 3 seconds
Resistance to Soldering Heat	±(0.5%+0.05Ω)	±(1%+0.05Ω)	JIS-C-5201-1 4.18 IEC-60115-1 4.18 260±5°C for 10 seconds
Voltage Proof	No breakdown or flashover		JIS-C-5201-1 4.7 IEC-60115-1 4.7 0402: 150V for 1 minute 0603: 300V for 1 minute 0805, 1206, 2010, 2512: 500V for 1 minute
Leaching	Individual leaching area ≤5% Total leaching area ≤10%		JIS-C-5201-1 4.18 IEC-60068-2-58 8.2.1 260±5°C for 30 seconds
Rapid Change of Temperature	±(0.5%+0.05Ω)	±(1%+0.05Ω)	JIS-C-5201-1 4.19 IEC-60115-1 4.19 -55°C to +155°C, 5 cycles

RCWV (Rated continuous working voltage) =  $\sqrt{P \cdot R}$  or Max. Operating Voltage whichever is lower.

Storage temperature: 25±3°C; humidity < 80%RH

**Power Derating Curve:**



Recommended Pad Layout					
Type / Code	A	B	C	Unit	
RVC0402	0.020	0.018	0.024	inches	
	0.50	0.45	0.60	mm	
RVC0603	0.035	0.024	0.035	inches	
	0.90	0.60	0.90	mm	
RVC0805	0.047	0.028	0.051	inches	
	1.20	0.70	1.30	mm	
RVC1206	0.079	0.035	0.063	inches	
	2.00	0.90	1.60	mm	
RVC2010	0.150	0.035	0.110	inches	
	3.80	0.90	2.80	mm	
RVC2512	0.150	0.063	0.138	inches	
	3.80	1.60	3.50	mm	

### Soldering Conditions

**IR Reflow Soldering**

Number of reflow cycles allowed: 3 times

**Wave Soldering (Flow Soldering)**

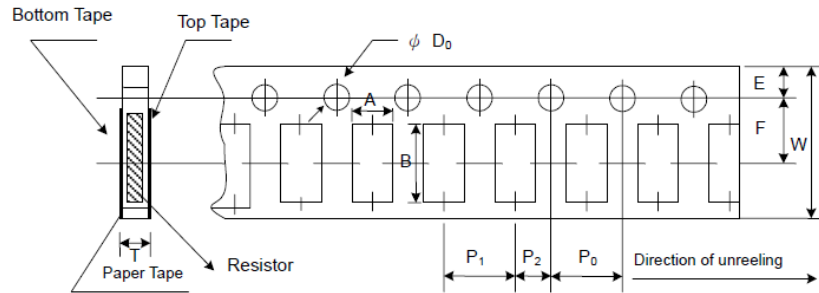
Number of flow cycles allowed: 2 times

- (1) Time of IR reflow soldering at maximum temperature point 260°C : 10s
- (2) Time of wave soldering at maximum temperature point 260°C : 10s
- (3) Time of soldering iron at maximum temperature point 410°C : 5s

### Reel Specifications

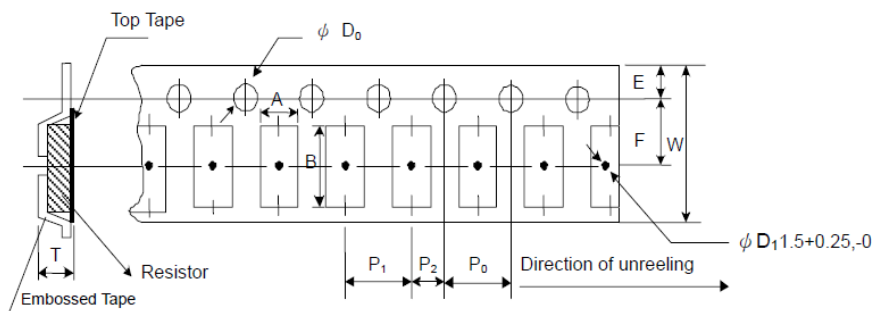
Type / Code	Tape Width (mm)	Reel Diameter (inches)	A	B	C	W	T	Unit
RVC0402, RVC0603 RVC0805, RVC1206	8mm	7"	7.028 ± 0.059	2.362 ± 0.039	0.512 ± 0.008	0.354 ± 0.020	0.492 ± 0.020	inches
			178.50 ± 1.50	60.00 ± 1.00	13.00 ± 0.20	9.00 ± 0.50	12.50 ± 0.50	mm
RVC2010, RVC2512	12mm	7"	7.028 ± 0.059	2.362 ± 0.039	0.512 ± 0.020	0.512 ± 0.020	0.610 ± 0.020	inches
			178.50 ± 1.50	60.00 ± 1.00	13.00 ± 0.50	13.00 ± 0.50	15.50 ± 0.50	mm

**Paper Tape Specifications**



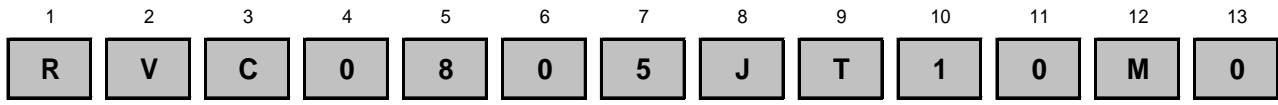
Type / Code	A	B	W	E	F	Unit
RVC0402	0.026 ± 0.004 0.65 ± 0.10	0.045 ± 0.004 1.15 ± 0.10	0.315 ± 0.008 8.00 ± 0.20	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.002 3.50 ± 0.05	inches mm
RVC0603	0.043 ± 0.004 1.10 ± 0.10	0.075 ± 0.004 1.90 ± 0.10	0.315 ± 0.008 8.00 ± 0.20	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.002 3.50 ± 0.05	inches mm
RVC0805	0.063 ± 0.004 1.60 ± 0.10	0.094 ± 0.008 2.40 ± 0.20	0.315 ± 0.008 8.00 ± 0.20	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.002 3.50 ± 0.05	inches mm
RVC1206	0.075 ± 0.004 1.90 ± 0.10	0.138 ± 0.008 3.50 ± 0.20	0.315 ± 0.008 8.00 ± 0.20	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.002 3.50 ± 0.05	inches mm
Type / Code	P0	P1	P2	D	T	Unit
RVC0402	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.079 ± 0.002 2.00 ± 0.05	0.059 ± 0.004 1.50 ± 0.10	0.018 ± 0.004 0.45 ± 0.10	inches mm
RVC0603	0.157 ± 0.004 4.00 ± 0.10	0.157 ± 0.002 4.00 ± 0.05	0.079 ± 0.002 2.00 ± 0.05	0.059 ± 0.004 1.50 ± 0.10	0.028 ± 0.004 0.70 ± 0.10	inches mm
RVC0805	0.157 ± 0.004 4.00 ± 0.10	0.157 ± 0.002 4.00 ± 0.05	0.079 ± 0.002 2.00 ± 0.05	0.059 ± 0.004 1.50 ± 0.10	0.031 ± 0.004 0.80 ± 0.10	inches mm
RVC1206	0.157 ± 0.004 4.00 ± 0.10	0.157 ± 0.002 4.00 ± 0.05	0.079 ± 0.002 2.00 ± 0.05	0.059 ± 0.004 1.50 ± 0.10	0.033 ± 0.004 0.85 ± 0.10	inches mm

**Embossed Plastic Tape Specifications**



Type / Code	A	B	W	E	F	Unit
RVC2010	0.110 ± 0.004 2.80 ± 0.10	0.217 ± 0.004 5.50 ± 0.10	0.472 ± 0.012 12.00 ± 0.30	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.002 5.50 ± 0.05	inches mm
RVC2512	0.138 ± 0.004 3.50 ± 0.10	0.264 ± 0.004 6.70 ± 0.10	0.472 ± 0.012 12.00 ± 0.30	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.002 5.50 ± 0.05	inches mm
Type / Code	P0	P1	P2	D	T	Unit
RVC2010	0.157 ± 0.004 4.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.059 ± 0.004 1.50 ± 0.10	0.047 1.20	inches mm
RVC2512	0.157 ± 0.004 4.00 ± 0.10	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.059 ± 0.004 1.50 ± 0.10	0.047 1.20	inches mm

**How to Order**



Product Series	
RVC	Medium Voltage

Size	Power
0402	0.063W
0603	0.1W
0805	0.125W
1206	0.25W
2010	0.5W
2512	1W

Tolerance		
Code	Tol	Value
F	1%	E96, E24
J	5%	E24

Packaging			
Code	Description	Size	Quantity
T	7" Reel - Paper Tape	0402	10,000
	7" Reel - Plastic Tape	2010, 2512	4,000

Resistance Value
Four characters with the multiplier used as the decimal holder.
10 ohm = 10R0
10 Kohm = 10K0
1 Mohm = 1M00
100 Mohm = 100M