

Features:

- Small size and light weight
- Reliability and high quality
- “-HP” denotes high power
- “-UP” denotes ultra-high power
- Inner termination engineered to deter sulfur contamination
- RoHS compliant, REACH compliant, and halogen free
- AEC-Q200 qualified



Electrical Specifications - Standard

Type/Code	Power Rating (W) @ 70°C	Maximum Working Voltage ⁽¹⁾ (V)	Maximum Overload Voltage (V)	TCR (ppm/°C)	Ohmic Range (Ω) and Tolerance			
					0.1%	0.5%	1%	5%
RMCA0201	0.05	25	50	±200	-	100 - 10K	10 - 3M	10 - 10M
				+600/-200	-	-	1 - 9.76	-
RMCA0402	0.063	0.12 - 0.25	0.624	±1000	-	-	0.22 - 0.45	
				±800			0.475 - 0.976	0.47 - 0.91
				±400			1 - 9.76	
		50	100	±200			10.2M - 29.4M	11M - 30M
				±100			10 - 10M	
				10 - 1M			10 - 10M	
RMCA0603	0.1	0.1 - 0.31	0.775	±1000	-	-	0.075 - 0.976	
				±800			0.1 - 0.324	0.1 - 0.33
				±600			0.332 - 0.976	0.36 - 0.91
		75	150	±400			1 - 9.76	
				±200			10.2M - 29.4M	11M - 30M
				±100			10 - 10M	
RMCA0805	0.125	0.04 - 0.35	0.875	±1800	-	-	0.01 - 0.049	
				±800			0.05 - 0.976	
				±600			0.1 - 0.976	0.1 - 0.91
		150	300	±400			1 - 9.76	
				±200			10.2M - 29.4M	11M - 30M
				±100			10 - 10M	
RMCA1206	0.25	0.05 - 0.5	1.25	±1800	-	-	0.01 - 0.049	
				±800			0.05 - 0.976	
				±600			0.1 - 0.976	0.1 - 0.91
		200	400	±400			1 - 9.76	
				±200			10.2M - 29.4M	11M - 30M
				±100			10 - 10M	
RMCA1210	0.5	0.07 - 0.7	1.75	±1800	-	-	0.01 - 0.05	0.01 - 0.05
				±800			0.051 - 0.1	0.051 - 0.1
				±600			0.102 - 0.976	0.11 - 0.91
		200	400	±400			1 - 9.76	
				±200			10.2M - 29.4M	11M - 30M
				±100			10 - 10M	

Electrical Specifications - Standard (cont.)

Type/Code	Power Rating (W) @ 70°C	Maximum Working Voltage ⁽¹⁾ (V)	Maximum Overload Voltage (V)	TCR (ppm/°C)	Ohmic Range (Ω) and Tolerance			
					0.1%	0.5%	1%	5%
RMCA2010	0.75	0.08 - 0.8	2.15	±1800	-		0.01 - 0.049	
				±800			0.05 - 0.976	
				±600			0.1 - 0.976	0.1 - 0.91
		200	400	±400			1 - 9.76	
				±200			10.2M - 29.4M	11M - 30M
				±100			10 - 10M	
RMCA2512	1	0.1 - 0.99	2.475	±1800	-		0.01 - 0.049	
				±800			0.05 - 0.976	
				±600			0.1 - 0.976	0.1 - 0.91
		200	400	±400			1 - 9.76	
				±200			10.2M - 29.4M	11M - 30M
				±100			10 - 10M	

(1) Lesser of $\sqrt{P \cdot R}$ or maximum working voltage.

Operating Temperature Range: -55 ~ +155°C

Electrical Specifications - High Power

Type/Code	Power Rating (W) @ 70°C	Maximum Working Voltage ⁽¹⁾ (V)	Maximum Overload Voltage (V)	TCR (ppm/°C)	Ohmic Range (Ω) and Tolerance
					1% and 5%
RMCA0402-HP	0.1	0.15 - 0.31	0.786	±1000	0.22 - 0.45
				±800	0.46 - 0.97
		50	100	±400	1 - 9.76
				±100	10 - 10M
				±200	10.1M - 30M
RMCA0603-HP	0.125	0.1 - 0.35	0.879	±1000	0.075 - 0.097
				±800	0.1 - 0.33
				±600	0.34 - 0.97
		75	150	±400	1 - 9.76
				±100	10 - 10M
RMCA0805-HP	0.25	0.05 - 0.5	1.244	±1800	0.01 - 0.049
				±800	0.05 - 0.097
				±600	0.1 - 0.97
		150	300	±400	1 - 9.76
				±100	10 - 10M
RMCA1206-HP	0.5	0.07 - 0.7	1.759	±1800	0.01 - 0.049
				±800	0.05 - 0.097
				±600	0.1 - 0.97
		200	400	±400	1 - 9.76
				±100	10 - 10M
				±200	10.1M - 30M

Electrical Specifications - High Power (cont.)

Type/Code	Power Rating (W) @ 70°C	Maximum Working Voltage ⁽¹⁾ (V)	Maximum Overload Voltage (V)	TCR (ppm/°C)	Ohmic Range (Ω) and Tolerance	
					1% and 5%	
RMCA1210-HP	0.66	0.07 - 0.7	1.759	±1800	0.01 - 0.049	
				±800	0.05 - 0.097	
				±600	0.1 - 0.97	
		200	400	±400	1 - 9.76	
				±100	10 - 10M	
				±200	10.1M - 30M	
RMCA2010-HP	1	0.1 - 0.99	2.487	±1800	0.01 - 0.049	
				±800	0.05 - 0.097	
				±600	0.1 - 0.97	
		200	400	±400	1 - 9.76	
				±100	10 - 10M	
				±200	10.1M - 30M	
RMCA2512-HP	2	0.14 - 1.41	3.518	±1800	0.01 - 0.049	
				±800	0.05 - 0.097	
				±600	0.1 - 0.97	
		200	400	±400	1 - 9.76	
				±100	10 - 10M	
				±200	10.1M - 30M	

Electrical Specifications - Ultra-High Power

Type/Code	Power Rating (W) @ 70°C	Maximum Working Voltage ⁽¹⁾ (V)	Maximum Overload Voltage (V)	TCR (ppm/°C)	Ohmic Range (Ω) and Tolerance	
					0.5%	1% and 5%
RMCA0402-UP	0.2	50	100	±400	-	1 - 9.76
				±100	10 - 1M	10 - 10M
RMCA0603-UP	0.33	75	125	±400	-	1 - 9.76
				±100	10 - 1M	10 - 10M
RMCA0805-UP	0.5	200	300	±400	-	1 - 9.76
				±100	10 - 1M	10 - 10M
RMCA1206-UP	0.75	200	400	±400	-	1 - 9.76
				±100	10 - 1M	10 - 10M
RMCA1210-UP	1	200	400	±400	-	1 - 9.76
				±100	10 - 1M	10 - 10M
RMCA2010-UP	1.5	200	400	±400	-	1 - 9.76
				±150	10 - 1M	10 - 10M
RMCA2512-UP	3	250	500	±400	-	1 - 9.76
				±150	10 - 1M	10 - 10M

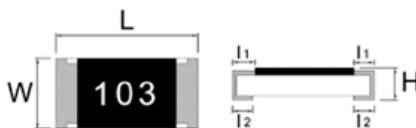
Electrical Specifications - Jumper

Type	0201	0402	0603	0805	1206	1210	1812	2010	2512
Jumper Resistance Value (Ω)	0.05 Ω Max								
Jumper Rated Current (A)	0.5	1			2				

Electrical Specifications - High Power Jumper

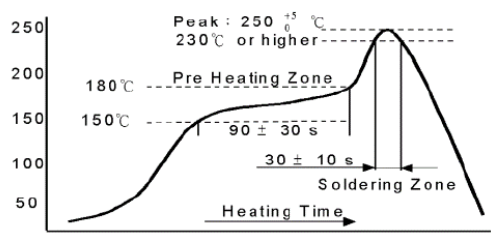
Type	0402	0603	0805	1206	1210	1812	2010	2512
Jumper Resistance Value (Ω)	0.02 Ω Max.							
Jumper Rated Current (A)	2	2.5	3.5	5	6	7	7	10
Max. Overload Current (A) < 1 second and 1 time	6	9	13	16	19	22	22	30

Mechanical Specifications



Type/Code	L Body Length	W Body Width	H Body Height	l_1 Top Termination	l_2 Bottom Termination	Unit
RMCA0201	0.024 $\pm$ 0.001 0.60 $\pm$ 0.03	0.012 $\pm$ 0.001 0.30 $\pm$ 0.03	0.009 $\pm$ 0.001 0.23 $\pm$ 0.03	0.004 $\pm$ 0.002 0.10 $\pm$ 0.05	0.006 $\pm$ 0.004 0.15 $\pm$ 0.05	inches mm
RMCA0402	0.039 $\pm$ 0.004 1.00 $\pm$ 0.10	0.020 $\pm$ 0.002 0.50 $\pm$ 0.05	0.012 $\pm$ 0.002 0.30 $\pm$ 0.05	0.006 $\pm$ 0.004 0.15 $\pm$ 0.10	0.008 $\pm$ 0.004 0.20 $\pm$ 0.10	inches mm
RMCA0603	0.063 $\pm$ 0.008 1.60 $\pm$ 0.20	0.031 $\pm$ 0.006 0.80 $\pm$ 0.15	0.016 $\pm$ 0.004 0.40 $\pm$ 0.10	0.012 $\pm$ 0.008 0.30 $\pm$ 0.20	0.012 $\pm$ 0.004 0.30 $\pm$ 0.10	inches mm
RMCA0805	0.079 $\pm$ 0.008 2.00 $\pm$ 0.20	0.049 $\pm$ 0.006 1.25 $\pm$ 0.15	0.020 $\pm$ 0.006 0.50 $\pm$ 0.15	0.012 $\pm$ 0.006 0.30 $\pm$ 0.15	0.016 $\pm$ 0.006 0.40 $\pm$ 0.15	inches mm
RMCA1206	0.120 $\pm$ 0.004 3.05 $\pm$ 0.10	0.063 $\pm$ 0.008 1.60 $\pm$ 0.20	0.022 $\pm$ 0.006 0.55 $\pm$ 0.15	0.016 $\pm$ 0.008 0.40 $\pm$ 0.20	0.020 $\pm$ 0.008 0.50 $\pm$ 0.20	inches mm
RMCA1210	0.120 $\pm$ 0.004 3.05 $\pm$ 0.10	0.098 $\pm$ 0.008 2.50 $\pm$ 0.20	0.022 $\pm$ 0.006 0.55 $\pm$ 0.15	0.020 $\pm$ 0.008 0.50 $\pm$ 0.20	0.020 $\pm$ 0.008 0.50 $\pm$ 0.20	inches mm
RMCA2010	0.197 $\pm$ 0.008 5.00 $\pm$ 0.20	0.098 $\pm$ 0.008 2.50 $\pm$ 0.20	0.022 $\pm$ 0.004 0.55 $\pm$ 0.10	0.024 $\pm$ 0.008 0.60 $\pm$ 0.20	0.024 $\pm$ 0.008 0.60 $\pm$ 0.20	inches mm
RMCA2512	0.248 $\pm$ 0.008 6.30 $\pm$ 0.20	0.126 $\pm$ 0.008 3.20 $\pm$ 0.20	0.022 $\pm$ 0.004 0.55 $\pm$ 0.10	0.024 $\pm$ 0.008 0.60 $\pm$ 0.20	0.024 $\pm$ 0.008 0.60 $\pm$ 0.20	inches mm
RMCA2512-HP	0.248 $\pm$ 0.008 6.30 $\pm$ 0.20	0.126 $\pm$ 0.008 3.20 $\pm$ 0.20	0.026 $\pm$ 0.006 0.65 $\pm$ 0.15	0.024 $\pm$ 0.008 0.60 $\pm$ 0.20	0.024 $\pm$ 0.008 0.60 $\pm$ 0.20	inches mm
RMCA2512-UP	0.248 $\pm$ 0.008 6.30 $\pm$ 0.20	0.126 $\pm$ 0.008 3.20 $\pm$ 0.20	0.027 $\pm$ 0.006 0.68 $\pm$ 0.15	0.024 $\pm$ 0.008 0.60 $\pm$ 0.20	0.024 $\pm$ 0.008 0.60 $\pm$ 0.20	inches mm

Performance Characteristics

Test	Test Method	Test Specification	Test Condition
Temperature Coefficient of Resistance (TCR)	JIS C-5201-1 4.8 IEC-60115-1 4.8	Refer to Electrical Specifications table	At 25°C/-55°C and 25°C/+155°C, 25°C is the reference temperature, except for 0201 0201: at 25°C/-55°C and 25°C/+125°C
Short Time Overload	JIS-C-5201-1 4.13 IEC-60115-1 4.13	$\pm 1\%: \pm(1\% + 0.05\Omega)$ $\pm 5\%: \pm(2\% + 0.1\Omega)$ Value < 1 Ω : $\pm(2\% + 0.1\Omega)$ 0201: $\pm(3\% + 0.1\Omega)$	RMCA 2.5 times RCWV or Max. Overload voltage, whichever is less for 5 seconds
			RMCA-HP 2.5 times RCWV or Max. Overload voltage, whichever is less for 2 seconds
			RMCA-UP 5 times Rated Power or Max. Overload voltage, whichever is less for 5 seconds
IR Reflow		$\pm 1\%: \pm(1\% + 0.05\Omega)$ $\pm 5\%: \pm(1\% + 0.05\Omega)$	 The graph shows a temperature profile for reflow soldering. The y-axis represents temperature in °C (50 to 250), and the x-axis represents time in seconds. Key points include: Pre Heating Zone (150°C to 180°C), a dwell at 180°C for 90 ± 30 s, a peak at 250 ± 15°C (230°C or higher), a dwell at the peak for 30 ± 10 s, and a Soldering Zone during the cooling phase.
Leaching	JIS-C-5201-1 4.18 IEC-60068-2-58 8.2.1	Individual leaching area ≤ 5% Total leaching area ≤ 10%	260 ± 5°C for 30 seconds
Temperature Cycling	JIS C-5201-1 clause 4.19	0.1%, 0.5%, 1%: $\pm(0.5\% + 0.05\Omega)$ 5%: $\pm(1\% + 0.1\Omega)$ Values < 1 Ω : $\pm(1\% + 0.1\Omega)$	-55 to +155°C, 5 cycles
Electric Iron		$\pm 1\%: \pm(1\% + 0.05\Omega)$ $\pm 5\%: \pm(1\% + 0.05\Omega)$ Values < 1 Ω : $\pm(1\% + 0.05\Omega)$	Preheating temperature: 350 ± 10°C Electric iron preheating time: 3 + 1/-0 seconds
Resistance to Solvent	JIS C-5201-1 clause 4.29	1%: $\pm(0.5\% + 0.05\Omega)$ 5%: $\pm(0.5\% + 0.05\Omega)$ Values < 1 Ω : $\pm(1\% + 0.05\Omega)$	The tested resistor shall be immersed into isopropyl alcohol at 20 ~ 25°C for 60 seconds. Then the resistor is left in the room for 48 hours.
Load Life and Moisture	JIS C-5201-1 clause 4.24	0.1%, 0.5%, 1%: $\pm(1\% + 0.05\Omega)$ 5%: $\pm(2\% + 0.05\Omega)$ Values < 1 Ω : $\pm(2\% + 0.05\Omega)$	40 ± 2°C, 90 ~ 95% R.H. RCWV or Max. Working Voltage, whichever is less for 1000 hours, with 1.5 hours "ON" and 0.5 hour "OFF".
Load Life (Endurance)	JIS C-5201-1 clause 4.25	0.1%, 0.5%, 1%: $\pm(1\% + 0.05\Omega)$ 5%: $\pm(3\% + 0.1\Omega)$ Values < 1 Ω : $\pm(3\% + 0.1\Omega)$	70 ± 2°C, RCWV or Max. Working Voltage, whichever is less for 1000 hours, with 1.5 hours "ON" and 0.5 hour "OFF".
Insulation Resistance	JIS C-5201-1 clause 4.6	≥ 10G Ω	100 V for 1 minute
Terminal Bending Strength	JIS C-5201-1 clause 4.33	$\pm 1\%: \pm(1\% + 0.05\Omega)$ $\pm 5\%: \pm(1\% + 0.05\Omega)$	Bending once for 5 seconds D: 0402, 0603, 0805 = 5 mm 1206, 1210 = 3 mm 2010, 2512 = 2 mm
Sulfur Test (FoS)	ATSM B809-95 ANSI/EIZ-977	For standard and high power products: $\pm(1\% + 0.05\Omega)$	60 ± 2°C, no power rating for 1000 hours
		For ultra high power products: $\pm(1\% + 0.05\Omega)$	105 ± 2°C, no power rating for 1000 hours
		For 0201 0.5% and 1%: $\pm(1\% + 0.05\Omega)$	105 ± 2°C, no power rating for 360 hours

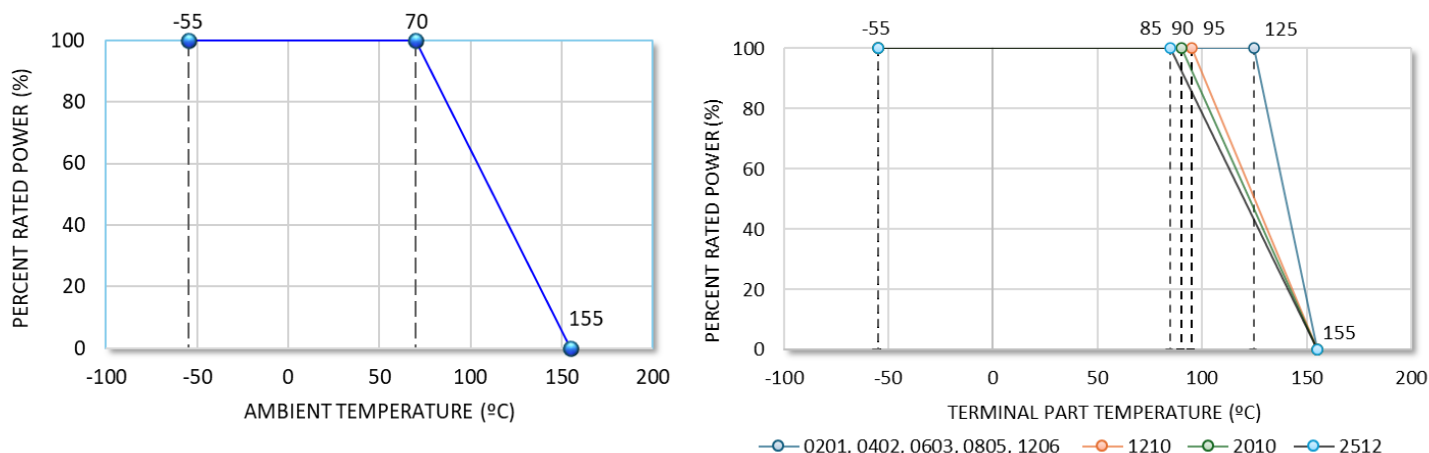
Operating temperature range is -55 to +155°C

AEC-Q200 Test

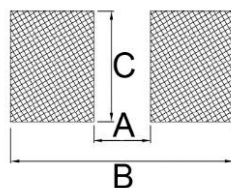
Test	Test Method	Test Specification	Test Condition
Temperature Cycling	JESD22 Method JA-104	0.1%, 0.5%, 1%: $\pm(0.5\% + 0.05\Omega)$ 5%: $\pm(1\% + 0.1\Omega)$	1000 cycles (-55 to +125°C) 'Measurement at 24 ± 4 hours after test conclusion. 30 min. maximum dwell time at each temperature extreme. 1 min. maximum transition time.
Resistance to Solvent	MIL-STD-202 Method 215	1%: $\pm(0.5\% + 0.05\Omega)$ 5%: $\pm(0.5\% + 0.05\Omega)$	Add aqueous wash chemical - OKEM clean or equivalent a: Isopropyl Alcohol: Mineral Spirits = 1:3 b. Terpene Defluxer (Bioact EC-7R) c. Deionized water: Propylene Glycol Monomethyl Ether: monoethanolamide = 42:1:1
Biased Humidity	MIL-STD-202 Method 103	0.1%, 0.5%, 1%: $\pm(1\% + 0.05\Omega)$ 5%: $\pm(3\% + 0.05\Omega)$	1000 hours 85°C/85% R.H. 10% of operation power. Measurement at 24 ± 4 hours after test conclusion
High Temperature Exposure (Storage)	MIL-STD-202 Method 108	0.1%, 0.5%, 1%: $\pm(0.5\% + 0.05\Omega)$ 5%: $\pm(2\% + 0.05\Omega)$	1000 hours. T=155°C Unpowered. 0201: 1000 hours. T=125°C Unpowered. Measurement at 24 ± 2 hours after test conclusion
Operational Life	MIL-STD-202 Method 108	0.1%, 0.5%, 1%: $\pm(1\% + 0.05\Omega)$ 5%: $\pm(3\% + 0.1\Omega)$ 0201: $\pm(5\% + 0.1\Omega)$	Condition D steady state TA = 125°C at derated power. 0201: 1000 hours TA = 125°C at 35% rated power. Measurement at 24 ± 4 hours after test conclusion.
External Visual	MIL-STD-883 Method 2009	-	Electrical test not required. Inspect device construction, marking and workmanship.
Physical Dimension	AEC-Q200 REV D Test 10 JESD22 Method JB-	-	Verify physical dimensions to the applicable device detail specification. Note: User(s) and suppliers spec. Electrical test not required
Mechanical Shock	MIL-STD-202 Method 213	± 1 : $\pm(1\% + 0.05\Omega)$ ± 5 : $\pm(2\% + 0.1\Omega)$	Wave Form: Tolerance for half sine shock pulse. Peak value is 100 g. Normal duration is 6(ms)
Vibration	MIL-STD-202 Method 204	± 1 : $\pm(1\% + 0.05\Omega)$ ± 5 : $\pm(2\% + 0.1\Omega)$	5 g for 20 minutes 12 cycles each of 3 orientations. Note: Test from 10-2000 hours
Resistance to Soldering Heat	JIS-C-5201-1 4.18 IEC-60068-2-58 8.2.1	± 1 : $\pm(0.5\% + 0.05\Omega)$ ± 5 : $\pm(1\% + 0.05\Omega)$ Value < 1Ω: $\pm(1\% + 0.05\Omega)$ 0201: $\pm(2\% + 0.1\Omega)$	260 ± 5°C for 10 seconds
ESD	AEC-Q200-002 or ISO/DIS 10605	$\pm(3\% + 0.05\Omega)$	Human body model 0201: 500 V 0402/0603: 1 KV 0805 and above: 2 KV
Solderability	J-STD-002	± 1 : $\pm(0.5\% + 0.05\Omega)$ ± 5 : $\pm(1\% + 0.05\Omega)$	Method B, aging 4 hours at 155°C dry heat. Lead-free solder bath at 235 ± 3°C. Dipping time: 3 ± 0.5 seconds
Flammability	AEC-Q200 REV D Test 20	V-0 or V-1	V-0 or V-1 are acceptable. Electrical test not required.
Terminal Strength (SMD)	AEC Q200-006	No breakage	Pressurizing force for 60 seconds 0402 / 0603: 8 N 0805 and above: 17.7 N
Board Flex	AEC Q200-005	$\pm(1\% + 0.05\Omega)$	Bending once for 60 seconds. 2010, 2512 sizes: 2 mm; other sizes: 3 mm

RCWV: Rated continuous working voltage

Power Derating Curve:



Recommended Pad Layout



Type/Code	A	B	C	Unit
RMCA0201	0.012 0.30	0.035 0.90	0.016 0.40	inches mm
RMCA0402	0.024 0.60	0.063 1.60	0.028 0.70	inches mm
RMCA0603	0.031 0.80	0.094 2.40	0.039 1.00	inches mm
RMCA0805	0.051 1.30	0.114 2.90	0.055 1.40	inches mm
RMCA1206	0.087 2.20	0.165 4.20	0.067 1.70	inches mm
RMCA1210	0.079 2.00	0.173 4.40	0.106 2.70	inches mm
RMCA2010	0.150 3.80	0.260 6.60	0.106 2.70	inches mm
RMCA2512	0.193 4.90	0.319 8.10	0.134 3.40	inches mm

Recommended Solder Profile

This information is intended as a reference for solder profiles for Stackpole resistive components. These profiles should be compatible with most soldering processes. These are only recommendations. Actual numbers will depend on board density, geometry, packages used, etc., especially those cells labeled with “*”.

100% Matte Tin / RoHS Compliant Terminations

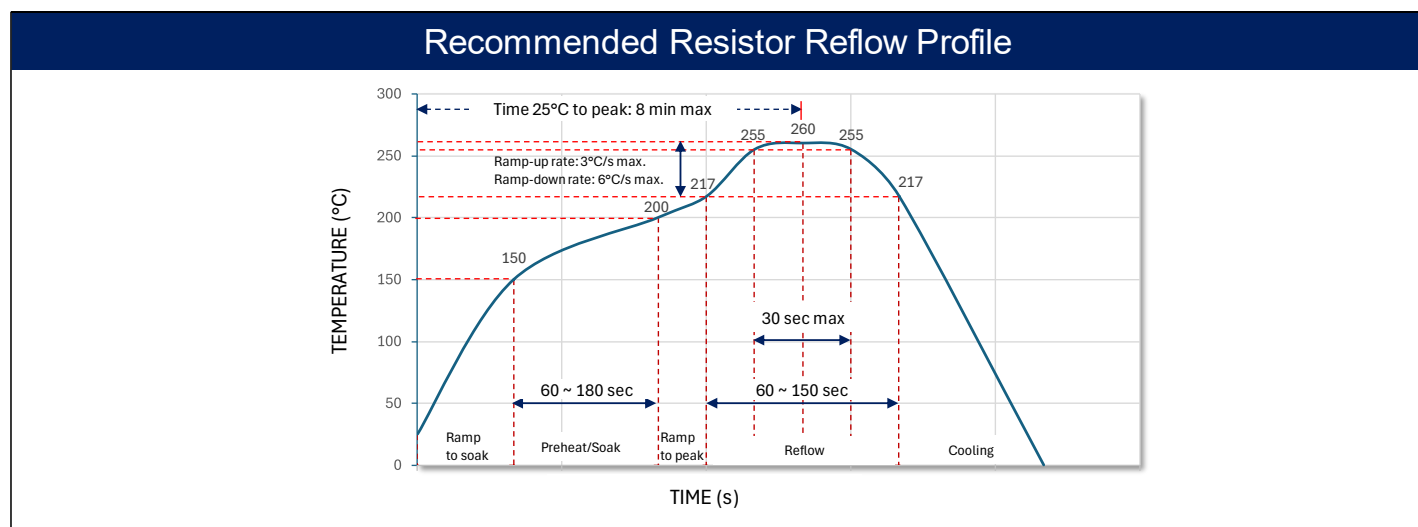
Soldering iron recommended temperatures: 330 to 350°C with minimum duration.

Maximum number of reflow cycles: 3.

Wave Soldering			
Description	Maximum	Recommended	Minimum
Preheat Time	80 seconds	70 seconds	60 seconds
Temperature Diff.	140°C	120°C	100°C
Solder Temp.	260°C	250°C	240°C
Dwell Time at Max.	10 seconds	5 seconds	*
Ramp DN (°C/sec)	N/A	N/A	N/A

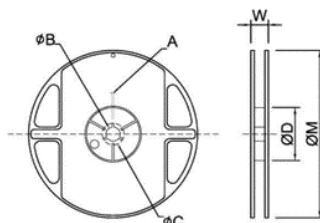
Temperature Diff. = Difference between final preheat stage and soldering stage.

Convection IR Reflow			
Description	Maximum	Recommended	Minimum
Ramp Up (°C/sec)	3°C/sec	2°C/sec	*
Dwell Time > 217°C	150 seconds	90 seconds	60 seconds
Solder Temp.	260°C	245°C	*
Dwell Time at Max.	30 seconds	15 seconds	10 seconds
Ramp DN (°C/sec)	6°C/sec	3°C/sec	*



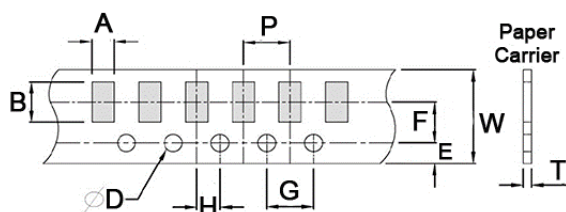
Packaging (EIA Standard RS-481)

Reel Specifications



Size	Size	A	B	C	D	W	M	Unit
0201	7" 10 K	0.079 ± 0.020 2.00 ± 0.50	0.512 ± 0.039 13.00 ± 1.00	0.827 ± 0.039 21.00 ± 1.00	2.362 ± 0.039 60.00 ± 1.00	0.453 ± 0.079 11.50 ± 2.00	7.008 ± 0.079 178.00 ± 2.00	inches mm
0402	7" 10 K	0.079 ± 0.020 2.00 ± 0.50	0.531 ± 0.039 13.50 ± 1.00	0.827 ± 0.039 21.00 ± 1.00	2.362 ± 0.039 60.00 ± 1.00	0.453 ± 0.079 11.50 ± 2.00	7.008 ± 0.079 178.00 ± 2.00	inches mm
0603, 0805 1206, 1210	7" 5 K	0.079 ± 0.020 2.00 ± 0.50	0.531 ± 0.039 13.50 ± 1.00	0.827 ± 0.039 21.00 ± 1.00	2.362 ± 0.039 60.00 ± 1.00	0.453 ± 0.079 11.50 ± 2.00	7.008 ± 0.079 178.00 ± 2.00	inches mm
2010 and 2512	7" 4 K	0.079 ± 0.020 2.00 ± 0.50	0.531 ± 0.039 13.50 ± 1.00	0.827 ± 0.039 21.00 ± 1.00	2.362 ± 0.039 60.00 ± 1.00	0.630 ± 0.079 16.00 ± 2.00	7.008 ± 0.079 178.00 ± 2.00	inches mm

Packaging Specifications - Paper Tape

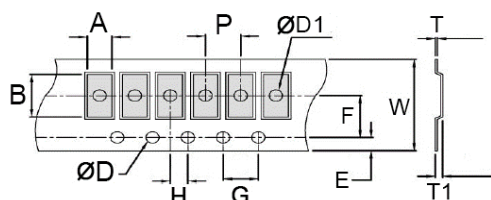


Size	A	B	W	E	F	Unit
RMCA0201	0.015 ± 0.002 0.37 ± 0.05	0.026 ± 0.004 0.67 ± 0.10	0.315 ± 0.008 8.00 ± 0.20	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.002 3.50 ± 0.05	inches mm
RMCA0402	0.028 ± 0.004 0.70 ± 0.10	0.047 ± 0.004 1.20 ± 0.10	0.315 ± 0.008 8.00 ± 0.20	0.069 ± 0.004 1.75 ± 0.10	0.138 ± 0.002 3.50 ± 0.05	inches mm
RMCA0603	0.041 ± 0.008 1.05 ± 0.20	0.071 ± 0.008 1.80 ± 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
RMCA0805	0.061 ± 0.008 1.55 ± 0.20	0.091 ± 0.008 2.30 ± 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
RMCA1206	0.075 ± 0.008 1.90 ± 0.20	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
RMCA1210	0.112 ± 0.008 2.85 ± 0.20	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

Packaging Specifications - Paper Tape (cont.)

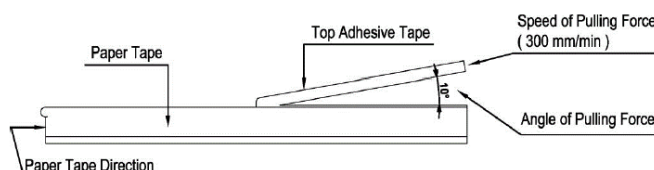
Size	G	H	T	D	P	Unit
RMCA0201	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.015 ± 0.004 0.37 ± 0.10	0.059 +0.004/-0 1.50 +0.1/-0	0.079 ± 0.002 2.00 ± 0.05	inches mm
RMCA0402	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.018 ± 0.004 0.45 ± 0.10	0.059 +0.004/-0 1.50 +0.1/-0	0.079 ± 0.004 2.00 ± 0.10	inches mm
RMCA0603	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.024 ± 0.004 0.60 ± 0.10	0.059 +0.004/-0 1.50 +0.1/-0	0.157 ± 0.004 4.00 ± 0.10	inches mm
RMCA0805	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.030 ± 0.004 0.75 ± 0.10	0.059 +0.004/-0 1.50 +0.1/-0	0.157 ± 0.004 4.00 ± 0.10	inches mm
RMCA1206	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.030 ± 0.004 0.75 ± 0.10	0.059 +0.004/-0 1.50 +0.1/-0	0.157 ± 0.004 4.00 ± 0.10	inches mm
RMCA1210	0.157 ± 0.004 4.00 ± 0.10	0.079 ± 0.002 2.00 ± 0.05	0.030 ± 0.004 0.75 ± 0.10	0.059 +0.004/-0 1.50 +0.1/-0	0.157 ± 0.004 4.00 ± 0.10	inches mm

Packaging Specifications - Plastic Tape



Size	A	B	W	E	F	G	Unit
RMCA2010	0.110 ± 0.008 2.80 ± 0.20	0.220 ± 0.008 5.60 ± 0.20	0.472 ± 0.004 12.00 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.002 5.50 ± 0.05	0.157 ± 0.004 4.00 ± 0.10	inches mm
RMCA2512 (-HP and -UP)	0.134 ± 0.008 3.40 ± 0.20	0.264 ± 0.008 6.70 ± 0.20	0.472 ± 0.004 12.00 ± 0.10	0.069 ± 0.004 1.75 ± 0.10	0.217 ± 0.002 5.50 ± 0.05	0.157 ± 0.004 4.00 ± 0.10	inches mm
Size	H	T	D	D1	T1	P	Unit
RMCA2010	0.079 ± 0.002 2.00 ± 0.05	0.009 ± 0.004 0.23 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	0.059 ± 0.004 1.50 ± 0.10	0.033 ± 0.006 0.85 ± 0.15	0.157 ± 0.004 4.00 ± 0.10	inches mm
RMCA2512	0.079 ± 0.002 2.00 ± 0.05	0.009 ± 0.004 0.23 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	0.059 ± 0.004 1.50 ± 0.10	0.033 ± 0.006 0.85 ± 0.15	0.157 ± 0.004 4.00 ± 0.10	inches mm
RMCA2512-HP RMCA2512-UP	0.079 ± 0.002 2.00 ± 0.05	0.009 ± 0.004 0.23 ± 0.10	0.059 +0.004/-0 1.50 +0.10/-0	0.059 ± 0.004 1.50 ± 0.10	0.037 ± 0.006 0.95 ± 0.15	0.157 ± 0.004 4.00 ± 0.10	inches mm

Peel-Off Strength Specifications



Top Adhesive Peel-off Strength: 10 g ~ 70 g.

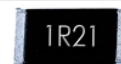
Part Marking Instructions

Sizes 0805-2512, 0.1%, 0.5% and 1% tolerances (E96 and E24 Values)

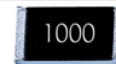
The nominal resistance is marked on the surface of the overcoating with the use of

four character markings.

1. Values $< 100\Omega$ will use "R" as the decimal holder.



1.21 Ω



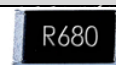
100 Ω

Sizes 0805-2512, 5% tolerance, $\leq 0.91\Omega$ (E24 Values)

The nominal resistance is marked on the surface of the overcoating with the use of

four character markings.

1. Values $\leq 0.91\Omega$ will use "R" as the decimal holder.



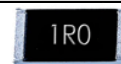
0.68 Ω

Sizes 0805-2512, 5% tolerance, $\geq 1\Omega$ (E24 Values)

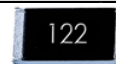
The nominal resistance is marked on the surface of the overcoating with the use of

three character markings.

1. Values between 1Ω and 9.1Ω will use "R" as the decimal holder.



1 Ω



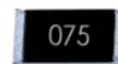
1.2 K Ω

Size 0603 (E24 Values)

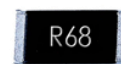
The nominal resistance is marked on the surface of the overcoating with the use of

three character markings.

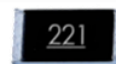
1. Values between 0.075Ω and 0.091Ω will use no decimal holder.
2. Values between 0.1Ω and 9.1Ω will use "R" as the decimal holder.
3. Values $\geq 10\Omega$ will use no decimal holder.
4. 5% tolerance is not underlined. 1% tolerance is underlined.
- (Effective date for 1% underline marking is date codes on/or after April 1, 2025.)
5. Values that are both E24 and E96 follow E96 marking rules.



0.075 Ω 5%



0.68 Ω 5%



220 Ω 1%

Size 0603 (E96 Values)

A two character number is assigned to each standard R-Value (E96) as shown in the chart below. This is followed by one alpha character which is used as a multiplier.

Each letter from "Y" - "F" represents a specific multiplier.



10.5 Ω

Alpha Character = Multiplier	
Y = 0.1	C = 1000
X = 1	D = 10000
A = 10	E = 100000
B = 100	F = 1000000

Chip Marking	Value
01B =	$10.0 \times 100 = 1 \text{ K}\Omega$
25C =	$17.8 \times 1000 = 17.8 \text{ K}\Omega$
93D =	$90.9 \times 10000 = 909 \text{ K}\Omega$

E96

#	R-Value	#	R-Value	#	R-Value	#	R-Value	#	R-Value	#	R-Value
01	10.0	17	14.7	33	21.5	49	31.6	65	46.4	81	68.1
02	10.2	18	15.0	34	22.1	50	32.4	66	47.5	82	69.8
03	10.5	19	15.4	35	22.6	51	33.2	67	48.7	83	71.5
04	10.7	20	15.8	36	23.2	52	34.0	68	49.9	84	73.2
05	11.0	21	16.2	37	23.7	53	34.8	69	51.1	85	75.0
06	11.3	22	16.5	38	24.3	54	35.7	70	52.3	86	76.8
07	11.5	23	16.9	39	24.9	55	36.5	71	53.6	87	78.7
08	11.8	24	17.4	40	25.5	56	37.4	72	54.9	88	80.6
09	12.1	25	17.8	41	26.1	57	38.3	73	56.2	89	82.5
10	12.4	26	18.2	42	26.7	58	39.2	74	57.6	90	84.5
11	12.7	27	18.7	43	27.4	59	40.2	75	59.0	91	86.6
12	13.0	28	19.1	44	28.0	60	41.2	76	60.4	92	88.7
13	13.3	29	19.6	45	28.7	61	42.2	77	61.9	93	90.9
14	13.7	30	20.0	46	29.4	62	43.2	78	63.4	94	93.1
15	14.0	31	20.5	47	30.1	63	44.2	79	64.9	95	95.3
16	14.3	32	21.0	48	30.9	64	45.3	80	66.5	96	97.6

Note: 0201 and 0402 sizes are unmarked.

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