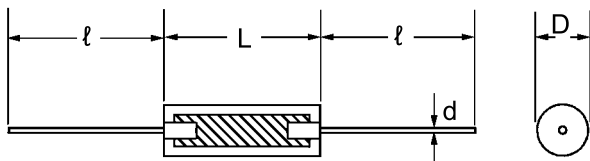


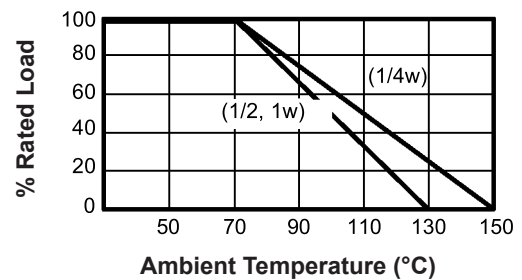
RoHS  
Compliant



## Dimensions



## Derating Curve



## Ratings and Dimensions

Rated Power (W)	Dimensions in mm				Max. Rated Voltage (V)	Max. Overload Voltage (V)	Resistance Range ( $\Omega$ )	Resistance Tolerance (%)
	L	D	l	d				
0.25	6.3 $\pm$ 0.7	2.4 $\pm$ 0.1	30 $\pm$ 3	$\pm$ 0.06 0.02	250	400	2.2 $\Omega$ - 22M $\Omega$	$\pm$ 5/ $\pm$ 10
0.5	9.5 $^{+0.8}_{-0.7}$	3.6 $\pm$ 0.2	25 $\pm$ 1	$\pm$ 0.7 $\pm$ 0.02	350	700	2.2 $\Omega$ - 22M $\Omega$	$\pm$ 5/ $\pm$ 10
1	14.3 $\pm$ 0.07	5.7 $\pm$ 0.3	30 $\pm$ 3	$\pm$ 0.92 0.02	500	1,000	2.2 $\Omega$ - 22M $\Omega$	$\pm$ 10

## 1 Watt

DC Resistance	DC resistance value must be within the specified tolerance	DC resistance value measured at the test voltage specified below:	
		Nominal Resistance	DC test voltage
		99 $\Omega$ and lower	0.5V to 1V
		10 $\Omega$ to 999 $\Omega$	2.5V to 3V
		1,000 $\Omega$ to 9,999 $\Omega$	8V to 10V
		10,000 $\Omega$ to 99,999 $\Omega$	24V to 30V
		100,000 $\Omega$ and higher	80V to 100V

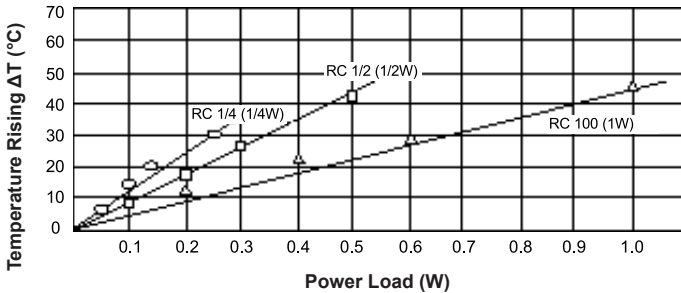
## 1 Watt

Resistance THumidity (Steady State)	<b>Nominal Resistance</b>	<b>Test Temperature at -55°C</b>	<b>Test Temperature at 100°C</b>	$\frac{R2 - R1}{R1} \times 100 (\%)$ <p>R1: Resistance value at reference temperature R2 : Resistance value at test temperature Sequence of temp. : -25°C, -15°C, -55°C, 25°C, 60°C, 100°C</p>															
	1KΩ and under	6.5 to -3%	5 to 4%																
	1.1KΩ to 10KΩ	10 to -3%	6 to 5%																
	11KΩ to 100KΩ	13 to -3%	7.5 to 6%																
	110KΩ to 1MΩ	15 to -3%	10 to 7%																
	1.1MΩ to 10MΩ	20 to -3%	10 to 7%																
11 MΩ and over	25 to -3%	10 to 7%																	
Voltage Coefficient (Application for 1KΩ min.)	A total resistance change of 2% maximum or chart below			Instantaneous change in resistance per volt based on:  $\frac{R - r}{r} \times \frac{100}{0.9 \times RCWV} (\% / V)$															
	<b>Rated Power</b>	<b>Coefficient Voltage</b>																	
	1 Watt	-0.02 % / V																	
Dielectric Withstanding Voltage	No evidence of flashover, mechanical damage, arcing or insulation breakdown			Resistors shall be clamped in the trough of a 90° metallic V-block and shall be tested at AC potential respectively specified in the above list for 5 s															
Insulation Resistance	10,000MΩ Minimum			Resistors shall be clamped in the trough of a 90° metallic V-block and shall be measured at DC 100 V for 1/4 W and DC 500 V for 1/2 W and 1 W															
Temperature Cycling	±4% Maximum with no evidence of mechanical damage			Resistance change after continuous five cycles for duty cycle specified below															
				<table border="1"> <thead> <tr> <th>Step</th> <th>Temperature</th> <th>Time (minute)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-55°C</td> <td>30</td> </tr> <tr> <td>2</td> <td>25°C</td> <td>10 to 15</td> </tr> <tr> <td>2</td> <td>85°C</td> <td>30</td> </tr> <tr> <td>4</td> <td>25°C</td> <td>10 to 15</td> </tr> </tbody> </table>	Step	Temperature	Time (minute)	1	-55°C	30	2	25°C	10 to 15	2	85°C	30	4	25°C	10 to 15
				Step	Temperature	Time (minute)													
				1	-55°C	30													
2	25°C	10 to 15																	
2	85°C	30																	
4	25°C	10 to 15																	
Humidity (Steady State)	± (2.5% + 0.05Q) Maximum with no evidence of arcing, burning, or charring			Permanent resistance change after the application of a potential of 2.5 time RCWV, or the maximum overload voltage respectively specified in the above list, whichever is less for 5 s															
Load Life in Humidity	±20% Maximum with no evidence of mechanical damage			500 hours exposure in a humidity test chamber controlled at 40° ±2°C and 90 to 95 relative humidity															
Load Life	<b>Resistance Change</b>			Permanent resistance change after 1,000 hours operating at RCWV, or maximum RCWV, whichever is less with a duty cycle of 1.5 hours "ON", 0.5 hour "OFF" at 70° ±2°C ambient															
	<b>Average</b>	±6%																	
	<b>Maximum</b>	±10%																	

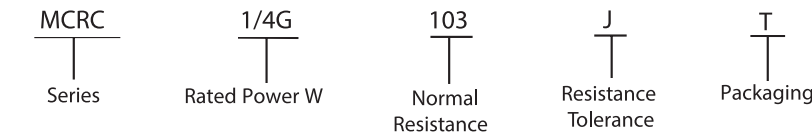
## 1 Watt

Terminal Strength	$\pm (1\% + 0.05\Omega)$ Maximum with no evidence of mechanical damage	<p><b>Direct load:</b> Resistance to a 2.5 kgf (25N) direct load for 5 seconds in the direction of the longitudinal axis of the terminal leads</p> <p><b>Twist test:</b> Terminal leads shall be bent through 90° at a point of 6.35mm from the body of the resistor and shall be rotated through 360° about the original axis of the bent terminal in alternating direction for a total of 3 rotations</p>
Resistance to Soldering Heat	$\pm (3\% + 0.05 \Omega)$ Maximum with no evidence of mechanical damage	Permanent resistance change when leads immersed 4 $\pm$ 0.8 mm from the body in 350° $\pm$ 10°C, solder for 3 $\pm$ 0.5 s
Vibration	$\pm (1\% + 0.05\Omega)$ Maximum with no evidence of mechanical, electrical damage and electrical discontinuity	A single vibration having an amplitude for 1.6mm. for 2 hours in each X, Y, Z, direction. One minute between 10 and 55 Hz
Low Temperature Operation	$\pm 3\%$ Maximum with no evidence of mechanical damage	Resistor shall be placed in a cold chamber at room temperature, the temperature shall be gradually decreased to -65 + 10/-5°C. After 1 hour of stabilization at this temperature, RCWV or maximum RCWV, whichever less shall be applied for 45 minutes. Return to room temperature. Resistance change measured 24 hours after the test
Solderability	95% coverage Minimum	Test temperature of solder: 230 $\pm$ 5°C, Dwell time in solder: 3 $\pm$ 0.5 s
Resistance to Solvents	No deterioration of colour code paints	Colour code paints must resist the solvent
Overload Test	$\pm 10\%$ Maximum with no evidence of mechanical damage	In room temperature, 1,350 V ac in 1 second or 1,000 V AC in 1 minute shall be applied
High Voltage Pulse	$\pm 50\%$ Maximum with no evidence of mechanical damage	<p>The resistors are subjected to 50 discharges at a maximum rate of 12 per minute, from a 1,000 pF capacitor charged to 10 kV, in test circuit as shown below</p>

## Hot-Spot Temperature Due to Rate of Power Dissipation



## Part Number Explanation:



- Series : MCRC
- Rated Power W : 1/4G = 1/4W  
1/2G = 1/2W  
100G = 1W
- Normal Resistance : 5%  
3 Digits  
e.g. 2R2 = 2.2 to  
e.g. 102 = 1K to
- Resistance Tolerance : J =  $\pm 5\%$   
K =  $\pm 10\%$
- Packaging : B = Bulk  
T = Tape and Reel

## Material Breakdown RC12W

1/2W	Material	% of total Wt.	Substance	Substance Name	% of total Wt.	CAS No.
422 mg	Res element	7.3	SiO <sub>2</sub>	Sillicon dioxide	81.3	7631-86-9
			C	Carbon	5.7	7440-44-0
			Xylene resin	Xylene resin	13.0	26139-75-3
	Over coating	23.6	SiO <sub>2</sub>	Sillicon dioxide	63.5	7631-86-9
			Al <sub>2</sub> O <sub>3</sub>	Aluminium oxide	3.1	1344-28-1
			MgO	Magnesium oxide	12.1	1309-48-4
			Fe <sub>2</sub> O <sub>3</sub>	Diiron trioxide	0.7	1309-37-1
			Polyethylene	Polyethylene	20.6	9002-88-4
	Protect coating	0.8	Epoxy resin	Epoxy resin	77.8	25068-38-6
			Polyester resin	Polyester resin	11.1	60088-52-0
			TiO <sub>2</sub>	Titanium oxide	11.1	13463-67-7
	Lead wire	65.4	Cu	Copper	95.4	7440-50-8
			Sn	Tin	4.6	7440-31-5
	Marking	2.9	Plasticity	Acrylamide	100.0	#79-06-1

# Carbon Composition Resistor



## Part Number Table

Description	Part Number	Description	Part Number
<b>250mW, ±5%</b>		Resistor, Carbon, 160Ω, 250mW, 5%	MCRC1/4G161JT-RH
Resistor, Carbon, 2.2Ω, 250mW, 5%	MCRC1/4G2R2JT-RH	Resistor, Carbon, 180Ω, 250mW, 5%	MCRC1/4G181JT-RH
Resistor, Carbon, 2.4Ω, 250mW, 5%	MCRC1/4G2R4JT-RH	Resistor, Carbon, 200Ω, 250mW, 5%	MCRC1/4G201JT-RH
Resistor, Carbon, 2.7Ω, 250mW, 5%	MCRC1/4G2R7JT-RH	Resistor, Carbon, 220Ω, 250mW, 5%	MCRC1/4G221JT-RH
Resistor, Carbon, 3.3Ω, 250mW, 5%	MCRC1/4G3R3JT-RH	Resistor, Carbon, 240Ω, 250mW, 5%	MCRC1/4G241JT-RH
Resistor, Carbon, 3.6Ω, 250mW, 5%	MCRC1/4G3R6JT-RH	Resistor, Carbon, 270Ω, 250mW, 5%	MCRC1/4G271JT-RH
Resistor, Carbon, 3.9Ω, 250mW, 5%	MCRC1/4G3R9JT-RH	Resistor, Carbon, 300Ω, 250mW, 5%	MCRC1/4G301JT-RH
Resistor, Carbon, 4.3Ω, 250mW, 5%	MCRC1/4G4R3JT-RH	Resistor, Carbon, 330Ω, 250mW, 5%	MCRC1/4G331JT-RH
Resistor, Carbon, 4.7Ω, 250mW, 5%	MCRC1/4G4R7JT-RH	Resistor, Carbon, 360Ω, 250mW, 5%	MCRC1/4G361JT-RH
Resistor, Carbon, 5.1Ω, 250mW, 5%	MCRC1/4G5R1JT-RH	Resistor, Carbon, 390Ω, 250mW, 5%	MCRC1/4G391JT-RH
Resistor, Carbon, 5.6Ω, 250mW, 5%	MCRC1/4G5R6JT-RH	Resistor, Carbon, 430Ω, 250mW, 5%	MCRC1/4G431JT-RH
Resistor, Carbon, 6.8Ω, 250mW, 5%	MCRC1/4G6R8JT-RH	Resistor, Carbon, 470Ω, 250mW, 5%	MCRC1/4G471JT-RH
Resistor, Carbon, 8.2Ω, 250mW, 5%	MCRC1/4G8R2JT-RH	Resistor, Carbon, 510Ω, 250mW, 5%	MCRC1/4G511JT-RH
Resistor, Carbon, 10Ω, 250mW, 5%	MCRC1/4G100JT-RH	Resistor, Carbon, 560Ω, 250mW, 5%	MCRC1/4G561JT-RH
Resistor, Carbon, 15Ω, 250mW, 5%	MCRC1/4G150JT-RH	Resistor, Carbon, 620Ω, 250mW, 5%	MCRC1/4G621JT-RH
Resistor, Carbon, 20Ω, 250mW, 5%	MCRC1/4G200JT-RH	Resistor, Carbon, 680Ω, 250mW, 5%	MCRC1/4G681JT-RH
Resistor, Carbon, 22Ω, 250mW, 5%	MCRC1/4G220JT-RH	Resistor, Carbon, 750Ω, 250mW, 5%	MCRC1/4G751JT-RH
Resistor, Carbon, 24Ω, 250mW, 5%	MCRC1/4G240JT-RH	Resistor, Carbon, 820Ω, 250mW, 5%	MCRC1/4G821JT-RH
Resistor, Carbon, 27Ω, 250mW, 5%	MCRC1/4G270JT-RH	Resistor, Carbon, 910Ω, 250mW, 5%	MCRC1/4G911JT-RH
Resistor, Carbon, 30Ω, 250mW, 5%	MCRC1/4G300JT-RH	Resistor, Carbon, 1kΩ, 250mW, 5%	MCRC1/4G102JT-RH
Resistor, Carbon, 33Ω, 250mW, 5%	MCRC1/4G330JT-RH	Resistor, Carbon, 1.1kΩ, 250mW, 5%	MCRC1/4G112JT-RH
Resistor, Carbon, 36Ω, 250mW, 5%	MCRC1/4G360JT-RH	Resistor, Carbon, 1.2kΩ, 250mW, 5%	MCRC1/4G122JT-RH
Resistor, Carbon, 39Ω, 250mW, 5%	MCRC1/4G390JT-RH	Resistor, Carbon, 1.3kΩ, 250mW, 5%	MCRC1/4G132JT-RH
Resistor, Carbon, 43Ω, 250mW, 5%	MCRC1/4G430JT-RH	Resistor, Carbon, 1.5kΩ, 250mW, 5%	MCRC1/4G152JT-RH
Resistor, Carbon, 47Ω, 250mW, 5%	MCRC1/4G470JT-RH	Resistor, Carbon, 1.6kΩ, 250mW, 5%	MCRC1/4G162JT-RH
Resistor, Carbon, 51Ω, 250mW, 5%	MCRC1/4G510JT-RH	Resistor, Carbon, 1.8kΩ, 250mW, 5%	MCRC1/4G182JT-RH
Resistor, Carbon, 56Ω, 250mW, 5%	MCRC1/4G560JT-RH	Resistor, Carbon, 2kΩ, 250mW, 5%	MCRC1/4G202JT-RH
Resistor, Carbon, 62Ω, 250mW, 5%	MCRC1/4G620JT-RH	Resistor, Carbon, 2.2kΩ, 250mW, 5%	MCRC1/4G222JT-RH
Resistor, Carbon, 68Ω, 250mW, 5%	MCRC1/4G680JT-RH	Resistor, Carbon, 2.4kΩ, 250mW, 5%	MCRC1/4G242JT-RH
Resistor, Carbon, 75Ω, 250mW, 5%	MCRC1/4G750JT-RH	Resistor, Carbon, 2.7kΩ, 250mW, 5%	MCRC1/4G272JT-RH
Resistor, Carbon, 82Ω, 250mW, 5%	MCRC1/4G820JT-RH	Resistor, Carbon, 3kΩ, 250mW, 5%	MCRC1/4G302JT-RH
Resistor, Carbon, 91Ω, 250mW, 5%	MCRC1/4G910JT-RH	Resistor, Carbon, 3.3kΩ, 250mW, 5%	MCRC1/4G332JT-RH
Resistor, Carbon, 100Ω, 250mW, 5%	MCRC1/4G101JT-RH	Resistor, Carbon, 3.6kΩ, 250mW, 5%	MCRC1/4G362JT-RH
Resistor, Carbon, 110Ω, 250mW, 5%	MCRC1/4G111JT-RH	Resistor, Carbon, 3.9kΩ, 250mW, 5%	MCRC1/4G392JT-RH
Resistor, Carbon, 120Ω, 250mW, 5%	MCRC1/4G121JT-RH	Resistor, Carbon, 4.3kΩ, 250mW, 5%	MCRC1/4G432JT-RH
Resistor, Carbon, 130Ω, 250mW, 5%	MCRC1/4G131JT-RH	Resistor, Carbon, 4.7kΩ, 250mW, 5%	MCRC1/4G472JT-RH
Resistor, Carbon, 150Ω, 250mW, 5%	MCRC1/4G151JT-RH	Resistor, Carbon, 5.1kΩ, 250mW, 5%	MCRC1/4G512JT-RH

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# Carbon Composition Resistor

**multicomp** PRO

Description	Part Number	Description	Part Number
Resistor, Carbon, 5.6kΩ, 250mW, 5%	MCRC1/4G562JT-RH	Resistor, Carbon, 510kΩ, 250mW, 5%	MCRC1/4G514JT-RH
Resistor, Carbon, 6.2kΩ, 250mW, 5%	MCRC1/4G622JT-RH	Resistor, Carbon, 560kΩ, 250mW, 5%	MCRC1/4G564JT-RH
Resistor, Carbon, 6.8kΩ, 250mW, 5%	MCRC1/4G682JT-RH	Resistor, Carbon, 680kΩ, 250mW, 5%	MCRC1/4G684JT-RH
Resistor, Carbon, 7.5kΩ, 250mW, 5%	MCRC1/4G752JT-RH	Resistor, Carbon, 910kΩ, 250mW, 5%	MCRC1/4G914JT-RH
Resistor, Carbon, 8.2kΩ, 250mW, 5%	MCRC1/4G822JT-RH	Resistor, Carbon, 1MΩ, 250mW, 5%	MCRC1/4G105JT-RH
Resistor, Carbon, 9.1kΩ, 250mW, 5%	MCRC1/4G912JT-RH	Resistor, Carbon, 1.1MΩ, 250mW, 5%	MCRC1/4G115JT-RH
Resistor, Carbon, 10kΩ, 250mW, 5%	MCRC1/4G103JT-RH	Resistor, Carbon, 1.2MΩ, 250mW, 5%	MCRC1/4G125JT-RH
Resistor, Carbon, 12kΩ, 250mW, 5%	MCRC1/4G123JT-RH	Resistor, Carbon, 1.5MΩ, 250mW, 5%	MCRC1/4G155JT-RH
Resistor, Carbon, 15kΩ, 250mW, 5%	MCRC1/4G153JT-RH	Resistor, Carbon, 1.6MΩ, 250mW, 5%	MCRC1/4G165JT-RH
Resistor, Carbon, 18kΩ, 250mW, 5%	MCRC1/4G183JT-RH	Resistor, Carbon, 1.8MΩ, 250mW, 5%	MCRC1/4G185JT-RH
Resistor, Carbon, 20kΩ, 250mW, 5%	MCRC1/4G203JT-RH	Resistor, Carbon, 2MΩ, 250mW, 5%	MCRC1/4G205JT-RH
Resistor, Carbon, 22kΩ, 250mW, 5%	MCRC1/4G223JT-RH	Resistor, Carbon, 2.2MΩ, 250mW, 5%	MCRC1/4G225JT-RH
Resistor, Carbon, 24kΩ, 250mW, 5%	MCRC1/4G243JT-RH	Resistor, Carbon, 2.4MΩ, 250mW, 5%	MCRC1/4G245JT-RH
Resistor, Carbon, 27kΩ, 250mW, 5%	MCRC1/4G273JT-RH	Resistor, Carbon, 2.7MΩ, 250mW, 5%	MCRC1/4G275JT-RH
Resistor, Carbon, 30kΩ, 250mW, 5%	MCRC1/4G303JT-RH	Resistor, Carbon, 3MΩ, 250mW, 5%	MCRC1/4G305JT-RH
Resistor, Carbon, 33kΩ, 250mW, 5%	MCRC1/4G333JT-RH	Resistor, Carbon, 3.9MΩ, 250mW, 5%	MCRC1/4G395JT-RH
Resistor, Carbon, 36kΩ, 250mW, 5%	MCRC1/4G363JT-RH	Resistor, Carbon, 4.3MΩ, 250mW, 5%	MCRC1/4G435JT-RH
Resistor, Carbon, 39kΩ, 250mW, 5%	MCRC1/4G393JT-RH	Resistor, Carbon, 4.7MΩ, 250mW, 5%	MCRC1/4G475JT-RH
Resistor, Carbon, 43kΩ, 250mW, 5%	MCRC1/4G433JT-RH	Resistor, Carbon, 5.1MΩ, 250mW, 5%	MCRC1/4G515JT-RH
Resistor, Carbon, 47kΩ, 250mW, 5%	MCRC1/4G473JT-RH	Resistor, Carbon, 5.6MΩ, 250mW, 5%	MCRC1/4G565JT-RH
Resistor, Carbon, 51kΩ, 250mW, 5%	MCRC1/4G513JT-RH	<b>500mW, ±5%</b>	
Resistor, Carbon, 56kΩ, 250mW, 5%	MCRC1/4G563JT-RH	Resistor, Carbon, 2.2Ω, 500mW, 5%	MCRC1/2G2R2JT-RH
Resistor, Carbon, 68kΩ, 250mW, 5%	MCRC1/4G683JT-RH	Resistor, Carbon, 2.4Ω, 500mW, 5%	MCRC1/2G2R4JT-RH
Resistor, Carbon, 75kΩ, 250mW, 5%	MCRC1/4G753JT-RH	Resistor, Carbon, 2.7Ω, 500mW, 5%	MCRC1/2G2R7JT-RH
Resistor, Carbon, 82kΩ, 250mW, 5%	MCRC1/4G823JT-RH	Resistor, Carbon, 3Ω, 500mW, 5%	MCRC1/2G3R0JT-RH
Resistor, Carbon, 100kΩ, 250mW, 5%	MCRC1/4G104JT-RH	Resistor, Carbon, 3.3Ω, 500mW, 5%	MCRC1/2G3R3JT-RH
Resistor, Carbon, 110kΩ, 250mW, 5%	MCRC1/4G114JT-RH	Resistor, Carbon, 3.9Ω, 500mW, 5%	MCRC1/2G3R9JT-RH
Resistor, Carbon, 120kΩ, 250mW, 5%	MCRC1/4G124JT-RH	Resistor, Carbon, 4.7Ω, 500mW, 5%	MCRC1/2G4R7JT-RH
Resistor, Carbon, 150kΩ, 250mW, 5%	MCRC1/4G154JT-RH	Resistor, Carbon, 5.1Ω, 500mW, 5%	MCRC1/2G5R1JT-RH
Resistor, Carbon, 160kΩ, 250mW, 5%	MCRC1/4G164JT-RH	Resistor, Carbon, 5.6Ω, 500mW, 5%	MCRC1/2G5R6JT-RH
Resistor, Carbon, 200kΩ, 250mW, 5%	MCRC1/4G204JT-RH	Resistor, Carbon, 6.2Ω, 500mW, 5%	MCRC1/2G6R2JT-RH
Resistor, Carbon, 220kΩ, 250mW, 5%	MCRC1/4G224JT-RH	Resistor, Carbon, 6.8Ω, 500mW, 5%	MCRC1/2G6R8JT-RH
Resistor, Carbon, 270kΩ, 250mW, 5%	MCRC1/4G274JT-RH	Resistor, Carbon, 8.2Ω, 500mW, 5%	MCRC1/2G8R2JT-RH
Resistor, Carbon, 300kΩ, 250mW, 5%	MCRC1/4G304JT-RH	Resistor, Carbon, 10Ω, 500mW, 5%	MCRC1/2G100JT-RH
Resistor, Carbon, 330kΩ, 250mW, 5%	MCRC1/4G334JT-RH	Resistor, Carbon, 12Ω, 500mW, 5%	MCRC1/2G120JT-RH
Resistor, Carbon, 390kΩ, 250mW, 5%	MCRC1/4G394JT-RH	Resistor, Carbon, 15Ω, 500mW, 5%	MCRC1/2G150JT-RH
Resistor, Carbon, 430kΩ, 250mW, 5%	MCRC1/4G434JT-RH	Resistor, Carbon, 16Ω, 500mW, 5%	MCRC1/2G160JT-RH
Resistor, Carbon, 470kΩ, 250mW, 5%	MCRC1/4G474JT-RH	Resistor, Carbon, 20Ω, 500mW, 5%	MCRC1/2G200JT-RH

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# Carbon Composition Resistor

**multicomp** PRO

Description	Part Number	Description	Part Number
Resistor, Carbon, 24Ω, 500mW, 5%	MCRC1/2G240JT-RH	Resistor, Carbon, 1.1kΩ, 500mW, 5%	MCRC1/2G112JT-RH
Resistor, Carbon, 27Ω, 500mW, 5%	MCRC1/2G270JT-RH	Resistor, Carbon, 1.2kΩ, 500mW, 5%	MCRC1/2G122JT-RH
Resistor, Carbon, 30Ω, 500mW, 5%	MCRC1/2G300JT-RH	Resistor, Carbon, 1.3kΩ, 500mW, 5%	MCRC1/2G132JT-RH
Resistor, Carbon, 33Ω, 500mW, 5%	MCRC1/2G330JT-RH	Resistor, Carbon, 1.5kΩ, 500mW, 5%	MCRC1/2G152JT-RH
Resistor, Carbon, 39Ω, 500mW, 5%	MCRC1/2G390JT-RH	Resistor, Carbon, 1.6kΩ, 500mW, 5%	MCRC1/2G162JT-RH
Resistor, Carbon, 47Ω, 500mW, 5%	MCRC1/2G470JT-RH	Resistor, Carbon, 1.8kΩ, 500mW, 5%	MCRC1/2G182JT-RH
Resistor, Carbon, 51Ω, 500mW, 5%	MCRC1/2G510JT-RH	Resistor, Carbon, 2kΩ, 500mW, 5%	MCRC1/2G202JT-RH
Resistor, Carbon, 56Ω, 500mW, 5%	MCRC1/2G560JT-RH	Resistor, Carbon, 2.2kΩ, 500mW, 5%	MCRC1/2G222JT-RH
Resistor, Carbon, 62Ω, 500mW, 5%	MCRC1/2G620JT-RH	Resistor, Carbon, 2.4kΩ, 500mW, 5%	MCRC1/2G242JT-RH
Resistor, Carbon, 68Ω, 500mW, 5%	MCRC1/2G680JT-RH	Resistor, Carbon, 2.7kΩ, 500mW, 5%	MCRC1/2G272JT-RH
Resistor, Carbon, 75Ω, 500mW, 5%	MCRC1/2G750JT-RH	Resistor, Carbon, 3kΩ, 500mW, 5%	MCRC1/2G302JT-RH
Resistor, Carbon, 82Ω, 500mW, 5%	MCRC1/2G820JT-RH	Resistor, Carbon, 3.3kΩ, 500mW, 5%	MCRC1/2G332JT-RH
Resistor, Carbon, 91Ω, 500mW, 5%	MCRC1/2G910JT-RH	Resistor, Carbon, 3.6kΩ, 500mW, 5%	MCRC1/2G362JT-RH
Resistor, Carbon, 100Ω, 500mW, 5%	MCRC1/2G101JT-RH	Resistor, Carbon, 3.9kΩ, 500mW, 5%	MCRC1/2G392JT-RH
Resistor, Carbon, 110Ω, 500mW, 5%	MCRC1/2G111JT-RH	Resistor, Carbon, 4.7kΩ, 500mW, 5%	MCRC1/2G472JT-RH
Resistor, Carbon, 120Ω, 500mW, 5%	MCRC1/2G121JT-RH	Resistor, Carbon, 5.6kΩ, 500mW, 5%	MCRC1/2G562JT-RH
Resistor, Carbon, 130Ω, 500mW, 5%	MCRC1/2G131JT-RH	Resistor, Carbon, 6.2kΩ, 500mW, 5%	MCRC1/2G622JT-RH
Resistor, Carbon, 150Ω, 500mW, 5%	MCRC1/2G151JT-RH	Resistor, Carbon, 6.8kΩ, 500mW, 5%	MCRC1/2G682JT-RH
Resistor, Carbon, 160Ω, 500mW, 5%	MCRC1/2G161JT-RH	Resistor, Carbon, 7.5kΩ, 500mW, 5%	MCRC1/2G752JT-RH
Resistor, Carbon, 180Ω, 500mW, 5%	MCRC1/2G181JT-RH	Resistor, Carbon, 8.2kΩ, 500mW, 5%	MCRC1/2G822JT-RH
Resistor, Carbon, 200Ω, 500mW, 5%	MCRC1/2G201JT-RH	Resistor, Carbon, 9.1kΩ, 500mW, 5%	MCRC1/2G912JT-RH
Resistor, Carbon, 220Ω, 500mW, 5%	MCRC1/2G221JT-RH	Resistor, Carbon, 10kΩ, 500mW, 5%	MCRC1/2G103JT-RH
Resistor, Carbon, 240Ω, 500mW, 5%	MCRC1/2G241JT-RH	Resistor, Carbon, 12kΩ, 500mW, 5%	MCRC1/2G123JT-RH
Resistor, Carbon, 270Ω, 500mW, 5%	MCRC1/2G271JT-RH	Resistor, Carbon, 13kΩ, 500mW, 5%	MCRC1/2G133JT-RH
Resistor, Carbon, 300Ω, 500mW, 5%	MCRC1/2G301JT-RH	Resistor, Carbon, 15kΩ, 500mW, 5%	MCRC1/2G153JT-RH
Resistor, Carbon, 330Ω, 500mW, 5%	MCRC1/2G331JT-RH	Resistor, Carbon, 18kΩ, 500mW, 5%	MCRC1/2G183JT-RH
Resistor, Carbon, 360Ω, 500mW, 5%	MCRC1/2G361JT-RH	Resistor, Carbon, 20kΩ, 500mW, 5%	MCRC1/2G203JT-RH
Resistor, Carbon, 390Ω, 500mW, 5%	MCRC1/2G391JT-RH	Resistor, Carbon, 22kΩ, 500mW, 5%	MCRC1/2G223JT-RH
Resistor, Carbon, 430Ω, 500mW, 5%	MCRC1/2G431JT-RH	Resistor, Carbon, 24kΩ, 500mW, 5%	MCRC1/2G243JT-RH
Resistor, Carbon, 470Ω, 500mW, 5%	MCRC1/2G471JT-RH	Resistor, Carbon, 27kΩ, 500mW, 5%	MCRC1/2G273JT-RH
Resistor, Carbon, 510Ω, 500mW, 5%	MCRC1/2G511JT-RH	Resistor, Carbon, 30kΩ, 500mW, 5%	MCRC1/2G303JT-RH
Resistor, Carbon, 560Ω, 500mW, 5%	MCRC1/2G561JT-RH	Resistor, Carbon, 33kΩ, 500mW, 5%	MCRC1/2G333JT-RH
Resistor, Carbon, 620Ω, 500mW, 5%	MCRC1/2G621JT-RH	Resistor, Carbon, 36kΩ, 500mW, 5%	MCRC1/2G363JT-RH
Resistor, Carbon, 680Ω, 500mW, 5%	MCRC1/2G681JT-RH	Resistor, Carbon, 39kΩ, 500mW, 5%	MCRC1/2G393JT-RH
Resistor, Carbon, 750Ω, 500mW, 5%	MCRC1/2G751JT-RH	Resistor, Carbon, 47kΩ, 500mW, 5%	MCRC1/2G473JT-RH
Resistor, Carbon, 820Ω, 500mW, 5%	MCRC1/2G821JT-RH	Resistor, Carbon, 51kΩ, 500mW, 5%	MCRC1/2G513JT-RH
Resistor, Carbon, 910Ω, 500mW, 5%	MCRC1/2G911JT-RH	Resistor, Carbon, 56kΩ, 500mW, 5%	MCRC1/2G563JT-RH
Resistor, Carbon, 1kΩ, 500mW, 5%	MCRC1/2G102JT-RH	Resistor, Carbon, 62kΩ, 500mW, 5%	MCRC1/2G623JT-RH

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# Carbon Composition Resistor



Description	Part Number	Description	Part Number
Resistor, Carbon, 68kΩ, 500mW, 5%	MCRC1/2G683JT-RH	Resistor, Carbon, 22Ω, 1W, 10%	MCRC100G220KB-RH
Resistor, Carbon, 75kΩ, 500mW, 5%	MCRC1/2G753JT-RH	Resistor, Carbon, 27Ω, 1W, 10%	MCRC100G270KB-RH
Resistor, Carbon, 82kΩ, 500mW, 5%	MCRC1/2G823JT-RH	Resistor, Carbon, 33Ω, 1W, 10%	MCRC100G330KB-RH
Resistor, Carbon, 100kΩ, 500mW, 5%	MCRC1/2G104JT-RH	Resistor, Carbon, 39Ω, 1W, 10%	MCRC100G390KB-RH
Resistor, Carbon, 110kΩ, 500mW, 5%	MCRC1/2G114JT-RH	Resistor, Carbon, 47Ω, 1W, 10%	MCRC100G470KB-RH
Resistor, Carbon, 120kΩ, 500mW, 5%	MCRC1/2G124JT-RH	Resistor, Carbon, 56Ω, 1W, 10%	MCRC100G560KB-RH
Resistor, Carbon, 150kΩ, 500mW, 5%	MCRC1/2G154JT-RH	Resistor, Carbon, 68Ω, 1W, 10%	MCRC100G680KB-RH
Resistor, Carbon, 180kΩ, 500mW, 5%	MCRC1/2G184JT-RH	Resistor, Carbon, 82Ω, 1W, 10%	MCRC100G820KB-RH
Resistor, Carbon, 200kΩ, 500mW, 5%	MCRC1/2G204JT-RH	Resistor, Carbon, 100Ω, 1W, 10%	MCRC100G101KB-RH
Resistor, Carbon, 220kΩ, 500mW, 5%	MCRC1/2G224JT-RH	Resistor, Carbon, 120Ω, 1W, 10%	MCRC100G121KB-RH
Resistor, Carbon, 270kΩ, 500mW, 5%	MCRC1/2G274JT-RH	Resistor, Carbon, 150Ω, 1W, 10%	MCRC100G151KB-RH
Resistor, Carbon, 300kΩ, 500mW, 5%	MCRC1/2G304JT-RH	Resistor, Carbon, 180Ω, 1W, 10%	MCRC100G181KB-RH
Resistor, Carbon, 330kΩ, 500mW, 5%	MCRC1/2G334JT-RH	Resistor, Carbon, 220Ω, 1W, 10%	MCRC100G221KB-RH
Resistor, Carbon, 390kΩ, 500mW, 5%	MCRC1/2G394JT-RH	Resistor, Carbon, 270Ω, 1W, 10%	MCRC100G271KB-RH
Resistor, Carbon, 430kΩ, 500mW, 5%	MCRC1/2G434JT-RH	Resistor, Carbon, 330Ω, 1W, 10%	MCRC100G331KB-RH
Resistor, Carbon, 470kΩ, 500mW, 5%	MCRC1/2G474JT-RH	Resistor, Carbon, 470Ω, 1W, 10%	MCRC100G471KB-RH
Resistor, Carbon, 510kΩ, 500mW, 5%	MCRC1/2G514JT-RH	Resistor, Carbon, 560Ω, 1W, 10%	MCRC100G561KB-RH
Resistor, Carbon, 560kΩ, 500mW, 5%	MCRC1/2G564JT-RH	Resistor, Carbon, 680Ω, 1W, 10%	MCRC100G681KB-RH
Resistor, Carbon, 620kΩ, 500mW, 5%	MCRC1/2G624JT-RH	Resistor, Carbon, 820Ω, 1W, 10%	MCRC100G821KB-RH
Resistor, Carbon, 1MΩ, 500mW, 5%	MCRC1/2G105JT-RH	Resistor, Carbon, 1kΩ, 1W, 10%	MCRC100G102KB-RH
Resistor, Carbon, 1.5MΩ, 500mW, 5%	MCRC1/2G155JT-RH	Resistor, Carbon, 1.2kΩ, 1W, 10%	MCRC100G122KB-RH
Resistor, Carbon, 2.2MΩ, 500mW, 5%	MCRC1/2G225JT-RH	Resistor, Carbon, 1.5kΩ, 1W, 10%	MCRC100G152KB-RH
Resistor, Carbon, 2.7MΩ, 500mW, 5%	MCRC1/2G275JT-RH	Resistor, Carbon, 1.8kΩ, 1W, 10%	MCRC100G182KB-RH
Resistor, Carbon, 3.3MΩ, 500mW, 5%	MCRC1/2G335JT-RH	Resistor, Carbon, 2.2kΩ, 1W, 10%	MCRC100G222KB-RH
Resistor, Carbon, 10MΩ, 500mW, 5%	MCRC1/2G106JT-RH	Resistor, Carbon, 2.7kΩ, 1W, 10%	MCRC100G272KB-RH
Resistor, Carbon, 11MΩ, 500mW, 5%	MCRC1/2G116JT-RH	Resistor, Carbon, 3.3kΩ, 1W, 10%	MCRC100G332KB-RH
Resistor, Carbon, 12MΩ, 500mW, 5%	MCRC1/2G126JT-RH	Resistor, Carbon, 3.9kΩ, 1W, 10%	MCRC100G392KB-RH
Resistor, Carbon, 15MΩ, 500mW, 5%	MCRC1/2G156JT-RH	Resistor, Carbon, 4.7kΩ, 1W, 10%	MCRC100G472KB-RH
<b>1W, ±10%</b>		Resistor, Carbon, 5.6kΩ, 1W, 10%	MCRC100G562KB-RH
Resistor, Carbon, 2.7Ω, 1W, 10%	MCRC100G2R7KB-RH	Resistor, Carbon, 6.8kΩ, 1W, 10%	MCRC100G682KB-RH
Resistor, Carbon, 4.7Ω, 1W, 10%	MCRC100G4R7KB-RH	Resistor, Carbon, 10kΩ, 1W, 10%	MCRC100G103KB-RH
Resistor, Carbon, 5.6Ω, 1W, 10%	MCRC100G5R6KB-RH	Resistor, Carbon, 12kΩ, 1W, 10%	MCRC100G123KB-RH
Resistor, Carbon, 6.8Ω, 1W, 10%	MCRC100G6R8KB-RH	Resistor, Carbon, 15kΩ, 1W, 10%	MCRC100G153KB-RH
Resistor, Carbon, 8.2Ω, 1W, 10%	MCRC100G8R2KB-RH	Resistor, Carbon, 18kΩ, 1W, 10%	MCRC100G183KB-RH
Resistor, Carbon, 10Ω, 1W, 10%	MCRC100G100KB-RH	Resistor, Carbon, 22kΩ, 1W, 10%	MCRC100G223KB-RH
Resistor, Carbon, 12Ω, 1W, 10%	MCRC100G120KB-RH	Resistor, Carbon, 27kΩ, 1W, 10%	MCRC100G273KB-RH
Resistor, Carbon, 15Ω, 1W, 10%	MCRC100G150KB-RH	Resistor, Carbon, 33kΩ, 1W, 10%	MCRC100G333KB-RH
Resistor, Carbon, 18Ω, 1W, 10%	MCRC100G180KB-RH	Resistor, Carbon, 39kΩ, 1W, 10%	MCRC100G393KB-RH

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# Carbon Composition Resistor



Description	Part Number	Description	Part Number
Resistor, Carbon, 47kΩ, 1W, 10%	MCRC100G473KB-RH	Resistor, Carbon, 390kΩ, 500mW, 10%	MCRC1/2G394KT
Resistor, Carbon, 68kΩ, 1W, 10%	MCRC100G683KB-RH	Resistor, Carbon, 430kΩ, 500mW, 10%	MCRC1/2G434KT
Resistor, Carbon, 82kΩ, 1W, 10%	MCRC100G823KB-RH	Resistor, Carbon, 470kΩ, 500mW, 10%	MCRC1/2G474KT
Resistor, Carbon, 100kΩ, 1W, 10%	MCRC100G104KB-RH	Resistor, Carbon, 510kΩ, 500mW, 10%	MCRC1/2G514KT
Resistor, Carbon, 120kΩ, 1W, 10%	MCRC100G124KB-RH	Resistor, Carbon, 1MΩ, 500mW, 10%	MCRC1/2G105KT
Resistor, Carbon, 150kΩ, 1W, 10%	MCRC100G154KB-RH	Resistor, Carbon, 10MΩ, 500mW, 10%	MCRC1/2G106KT
Resistor, Carbon, 180kΩ, 1W, 10%	MCRC100G184KB-RH	Resistor, Carbon, 11MΩ, 500mW, 10%	MCRC1/2G116KT
Resistor, Carbon, 220kΩ, 1W, 10%	MCRC100G224KB-RH	<b>250mW, 10%</b>	
Resistor, Carbon, 270kΩ, 1W, 10%	MCRC100G274KB-RH	Resistor, Carbon, 100kΩ, 250mW, 10%	MCRC1/4G104KT
Resistor, Carbon, 330kΩ, 1W, 10%	MCRC100G334KB-RH	Resistor, Carbon, 150kΩ, 250mW, 10%	MCRC1/4G154KT
Resistor, Carbon, 470kΩ, 1W, 10%	MCRC100G474KB-RH	Resistor, Carbon, 160kΩ, 250mW, 10%	MCRC1/4G164KT
Resistor, Carbon, 560kΩ, 1W, 10%	MCRC100G564KB-RH	Resistor, Carbon, 200kΩ, 250mW, 10%	MCRC1/4G204KT
Resistor, Carbon, 820kΩ, 1W, 10%	MCRC100G824KB-RH	Resistor, Carbon, 220kΩ, 250mW, 10%	MCRC1/4G224KT
Resistor, Carbon, 1MΩ, 1W, 10%	MCRC100G105KB-RH	Resistor, Carbon, 430kΩ, 250mW, 10%	MCRC1/4G434KT
<b>500mW, 10%</b>		Resistor, Carbon, 470kΩ, 250mW, 10%	MCRC1/4G474KT
Resistor, Carbon, 100kΩ, 500mW, 10%	MCRC1/2G104KT	Resistor, Carbon, 910kΩ, 250mW, 10%	MCRC1/4G914KT
Resistor, Carbon, 110kΩ, 500mW, 10%	MCRC1/2G114KT	Resistor, Carbon, 1MΩ, 250mW, 10%	MCRC1/4G105KT
Resistor, Carbon, 120kΩ, 500mW, 10%	MCRC1/2G124KT	Resistor, Carbon, 1.1MΩ, 250mW, 10%	MCRC1/4G115KT
Resistor, Carbon, 150kΩ, 500mW, 10%	MCRC1/2G154KT	Resistor, Carbon, 1.5MΩ, 250mW, 10%	MCRC1/4G155KT
Resistor, Carbon, 180kΩ, 500mW, 10%	MCRC1/2G184KT	Resistor, Carbon, 2MΩ, 250mW, 10%	MCRC1/4G205KT
Resistor, Carbon, 200kΩ, 500mW, 10%	MCRC1/2G204KT	Resistor, Carbon, 2.2MΩ, 250mW, 10%	MCRC1/4G225KT
Resistor, Carbon, 220kΩ, 500mW, 10%	MCRC1/2G224KT	Resistor, Carbon, 2.4MΩ, 250mW, 10%	MCRC1/4G245KT
Resistor, Carbon, 270kΩ, 500mW, 10%	MCRC1/2G274KT	Resistor, Carbon, 3MΩ, 250mW, 10%	MCRC1/4G305KT
Resistor, Carbon, 300kΩ, 500mW, 10%	MCRC1/2G304KT	Resistor, Carbon, 4.7MΩ, 250mW, 10%	MCRC1/4G475KT
Resistor, Carbon, 330kΩ, 500mW, 10%	MCRC1/2G334KT		

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