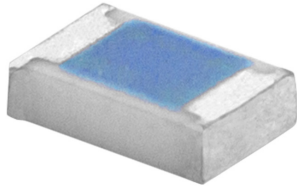


# General Purpose RoHS 6/6 Green Resistors (CRG Series)



## Features:

- RoHS 6/6 and Halogen Free
- TCR as low as  $\pm 100\text{ppm}$
- Available Sizes 01005 to 1210
- 100% matte Tin over Nickel with wrap around termination for excellent solderability

## Part Number Structure

<b>CRG</b>	<b>1206</b>	<b>- T</b>	<b>- 103</b>	<b>J</b>	<b>T</b>	<input type="checkbox"/>					
<b>Series</b>	<b>Size</b>	<b>Power Rating</b>	<b>Resistance</b>	<b>Tolerance</b>	<b>Packaging</b>	<b>Optional Reel Identifier</b>					
01005	M = $1/32\text{W}$ (0.03W)	<table border="1"> <tr> <td>3 DIGIT (J TOL.)</td> <td>2R2=2.2<math>\Omega</math> 103=10K<math>\Omega</math></td> </tr> <tr> <td>4 DIGIT (F TOL.)</td> <td>10R2=10.2<math>\Omega</math> 1002=10K<math>\Omega</math></td> </tr> <tr> <td>Jumper</td> <td>3 zeros</td> </tr> </table>	3 DIGIT (J TOL.)	2R2=2.2 $\Omega$ 103=10K $\Omega$	4 DIGIT (F TOL.)	10R2=10.2 $\Omega$ 1002=10K $\Omega$	Jumper	3 zeros	F = $\pm 1\%$ J = $\pm 5\%$  No tolerance specified for the zero ohm  Leave blank for zero ohm value	T = Tape & Reel	Leave blank if standard Reel size.  Add "-13" if 13" Reel is required
3 DIGIT (J TOL.)	2R2=2.2 $\Omega$ 103=10K $\Omega$										
4 DIGIT (F TOL.)	10R2=10.2 $\Omega$ 1002=10K $\Omega$										
Jumper	3 zeros										
0201	N = $1/20\text{W}$ (0.05W)										
0402	P = $1/16\text{W}$ (0.063W)										
0603	Q = $1/10\text{W}$ (0.10W)										
0805	R = $1/8\text{W}$ (0.125W)										
1206	T = $1/4\text{W}$ (0.25W)										
1210	U = $1/3\text{W}$ (0.33W)										

**Example P/N:** CRG1206-T-103JT

Standard termination finish is 100% matte Tin (Sn) over Nickel.

## Dimensions

Size	L	W	T	C <sub>1</sub>	C <sub>2</sub>
01005	0.016 ± 0.0008 (0.40 ± 0.02)	0.008 ± 0.0008 (0.20 ± 0.02)	0.005 ± 0.0008 (0.13 ± 0.02)	0.003 ± 0.001 (0.08 ± 0.03)	0.003 ± 0.001 (0.10 ± 0.03)
0201	0.023 ± 0.001 (0.60 ± 0.03)	0.011 ± 0.001 (0.30 ± 0.03)	0.009 ± 0.001 (0.23 ± 0.03)	0.003 ± 0.002 (0.08 ± 0.05)	0.005 ± 0.002 (0.15 ± 0.05)
0402	0.039 ± 0.002 (1.00 ± 0.05)	0.019 ± 0.002 (0.50 ± 0.05)	0.013 ± 0.002 (0.35 ± 0.05)	0.007 ± 0.003 (0.20 ± 0.10)	0.010 ± 0.003 (0.25 ± 0.10)
0603	0.062 ± 0.003 (1.60 ± 0.10)	0.031 ± 0.003 (0.80 ± 0.10)	0.017 ± 0.005 (0.45 ± 0.15)	0.011 ± 0.003 (0.30 ± 0.10)	0.011 ± 0.005 (0.30 ± 0.15)
0805	0.078 ± 0.003 (2.00 ± 0.10)	0.049 ± 0.003 (1.25 ± 0.10)	0.019 ± 0.005 (0.50 ± 0.15)	0.015 ± 0.007 (0.40 ± 0.20)	0.015 ± 0.007 (0.40 ± 0.20)
1206	0.122 ± 0.003 (3.10 ± 0.10)	0.062 ± 0.003 (1.60 ± 0.10)	0.023 ± 0.005 (0.60 ± 0.15)	0.019 ± 0.007 (0.50 ± 0.20)	0.017 ± 0.007 (0.45 ± 0.20)
1210	0.122 ± 0.003 (3.10 ± 0.10)	0.102 ± 0.003 (2.60 ± 0.10)	0.021 ± 0.003 (0.55 ± 0.10)	0.019 ± 0.007 (0.50 ± 0.20)	0.019 ± 0.007 (0.50 ± 0.20)

Unit: inches (mm)

## Structure

1	Alumina Substrate	6	Primary Coating
2	Backside Electrode	7	Protective Coating
3	Topside Electrode	8	Barrier Layer (Ni)
4	Edge Electrode	9	Termination-100% matte Tin
5	Resistive Layer		

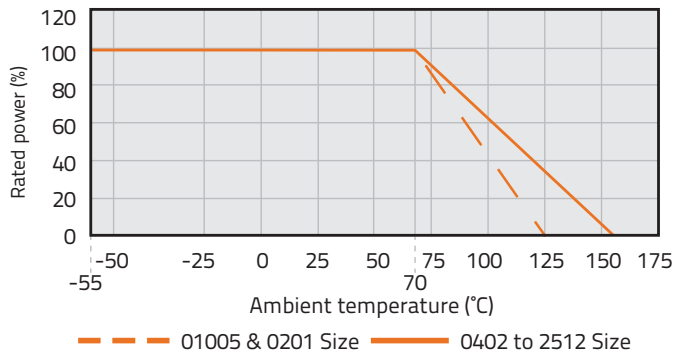
# General Purpose RoHS 6/6 Green Resistors (CRG Series)

## Electrical Specifications and Range

	Size	01005	0201	0402	0603	0805	1206	1210
	Power Rating at 70°C (W)	0.03W (1/32W)	0.05W (1/20W)	0.063W (1/16W)	0.10W (1/10W)	0.125W (1/8W)	0.25W (1/4W)	0.33W (1/3W)
	Max. Working Voltage	√PR or 25V whichever is less	√PR or 25V whichever is less	√PR or 50V whichever is less	√PR or 50V whichever is less	√PR or 150V whichever is less	√PR or 200V whichever is less	√PR or 200V whichever is less
	Operating Temp. Range	-55 to +125°C	-55 to +125°C	-55 to +155°C	-55 to +155°C	-55 to +155°C	-55 to +155°C	-55 to +155°C
Zero ohm (Jumpers)	Current Rating	0.5A	0.5A	1A	1A	1.5A	2A	2.5A
Tolerance	TCR	Resistance Range	Resistance Range	Resistance Range	Resistance Range	Resistance Range	Resistance Range	Resistance Range
±1% (F)	± 100	-	-	10.2Ω - 976KΩ	10.2Ω - 976KΩ	10.2Ω - 976KΩ	10.2Ω - 976KΩ	10.2Ω - 976KΩ
	± 200	10KΩ - 1MΩ	100Ω - 1MΩ	-	1MΩ - 10MΩ	1MΩ - 10MΩ	1MΩ - 10MΩ	1MΩ - 10MΩ
	± 300	-	-	1MΩ - 10MΩ	-	-	-	-
	-300/+ 500	-	-	1Ω - 10Ω	1Ω - 10Ω	1Ω - 10Ω	1Ω - 10Ω	1Ω - 10Ω
	+600/- 0	10Ω - 9.76KΩ	10Ω - 97.6Ω	-	-	-	-	-
	+800/-100	-	1Ω - 9.76Ω	-	-	-	-	-
±5% (J)	± 100	-	-	-	-	-	-	-
	± 200	10KΩ - 1MΩ	100Ω - 10MΩ	10.2Ω - 910KΩ	11Ω - 10MΩ	11Ω - 10MΩ	11Ω - 10MΩ	11Ω - 10MΩ
	± 300	-	-	1MΩ - 10MΩ	-	-	-	-
	-300/+ 500	-	-	1Ω - 10Ω	1Ω - 10Ω	1Ω - 10Ω	1Ω - 10Ω	1Ω - 10Ω
	+600/- 0	10Ω - 9.1KΩ	10Ω - 91Ω	-	-	-	-	-
	+800/-100	-	1Ω - 9.1Ω	-	-	-	-	-

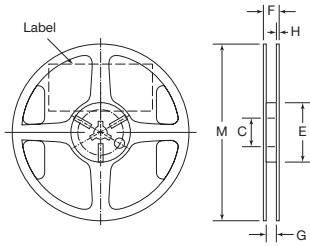
NOTE: Overload Voltage=2.5\*√(P\*R).

## Derating Curve



# General Purpose RoHS 6/6 Green Resistors (CRG Series)

## Reel Specifications

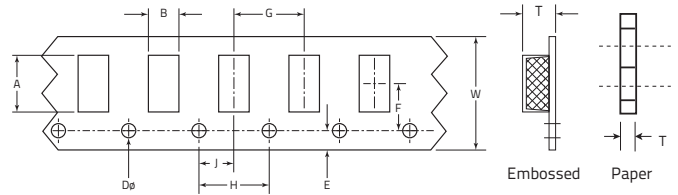


Unit: mm (inch)

C	E	F	G	H	M
13.0 ± 0.20 (0.51 ± 0.008)	60.0 ± 1.0 (2.36 ± 0.03)	11.4 ± 1.0 (0.345 ± 0.04)	9.0 ± 0.30 (0.35 ± 0.012)	1.5 ± 0.30 (0.06 ± 0.012)	178.0 ± 2.0 (7.00 ± 0.08)

Minimum of 30 empty pockets at the beginning of reel, 65 minimum empty pockets at the end.

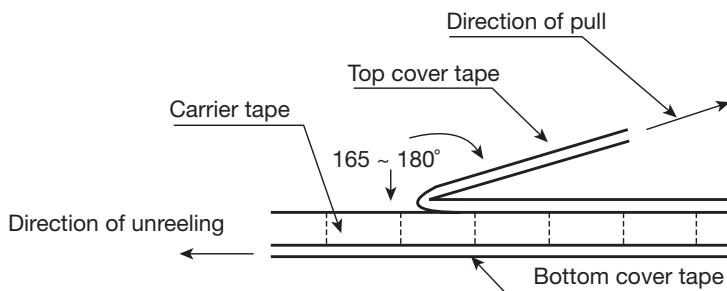
## Tape Specifications



All dimensions in mm.

Tape	Size (inches)	A	B	W	E	F	T	G	H	J	Dø
Paper	01005	0.45 ± 0.03	0.24 ± 0.03	8.00 ± 0.30	1.75 ± 0.10	3.50 ± 0.20	0.40 ± 0.05	2.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.50 +0.1 - 0.0
	0201	0.67 ± 0.05	0.37 ± 0.05	8.00 ± 0.30	1.75 ± 0.10	3.50 ± 0.20	0.45 ± 0.05	2.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.50 +0.1 - 0.0
	0402	1.20 ± 0.10	0.70 ± 0.10	8.00 ± 0.30	1.75 ± 0.10	3.50 ± 0.20	0.40 ± 0.05	2.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.50 +0.1 - 0.0
	0603	1.90 ± 0.20	1.10 ± 0.20	8.00 ± 0.30	1.75 ± 0.10	3.50 ± 0.20	0.65 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.50 +0.1 - 0.0
	0805	2.40 ± 0.20	1.65 ± 0.20	8.00 ± 0.30	1.75 ± 0.10	3.50 ± 0.20	1.0 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.50 +0.1 - 0.0
	1206	3.60 ± 0.20	2.00 ± 0.20	8.00 ± 0.30	1.75 ± 0.10	3.50 ± 0.20	1.0 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.50 +0.1 - 0.0
	1210	3.60 ± 0.20	3.00 ± 0.20	8.00 ± 0.30	1.75 ± 0.10	3.50 ± 0.20	1.0 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.50 +0.1 - 0.0

## Peel Back Force and Direction Diagram



Peel back force and direction of peel back angle should follow EIA481-1-A. Peel back force should be between 0.1N – 1.3N and peel back angle of 165° – 180°.