



Non-Magnetic Chip Resistors

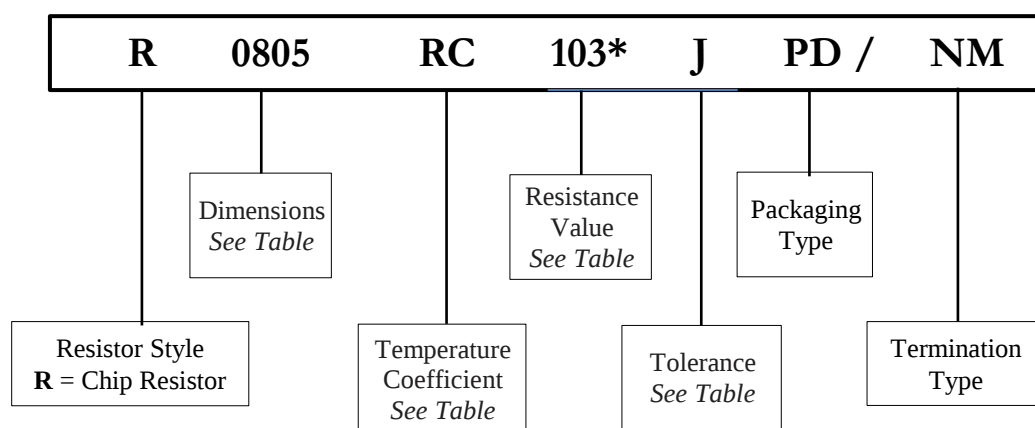
Product Features

- Miniature
- Light Weight
- Low Assembly Cost
- RoHS Compliant
- Thick Film Process

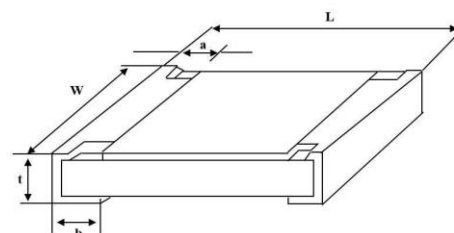
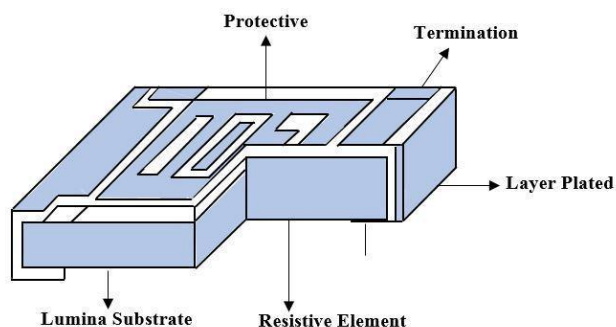
Product Applications

- Suited for Reflow & Flow Solder
- Non-magnetism resistive are applicable for MRI

Part Numbering



Construction and Dimensions



Size / Code	Dimensions (Unit: mm)				
	L	W	t (max)	a	b
0603	1.6 ± 0.15	0.80 ± 0.15	0.45 ± 0.10	0.30 ± 0.15	0.20 ± 0.15
0805	2.0 ± 0.15	1.25 ± 0.15	0.50 ± 0.10	0.40 ± 0.20	0.30 ± 0.15
1206	3.1 ± 0.15	1.60 ± 0.15	0.60 ± 0.10	0.50 ± 0.20	0.40 ± 0.15



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Temperature Coefficients

Temperature Coefficients	Code
$\leq \pm 100\text{PPM}/^{\circ}\text{C}$	RC
$\leq \pm 200\text{PPM}/^{\circ}\text{C}$	RD

Resistance Value

Resistance	Tolerance	Code
1.0	J = $\pm 5\%$	1R0
10K	J = $\pm 5\%$	103
100K	F = $\pm 1\%$	1003
Chip Jumper	0	000

Note: The resistance of jumper is defined less 0.05 Ω .

Tolerance

Capacitance Tolerance			
Code	F	J	0
Tolerance	$\pm 1\%$	$\pm 5\%$	Chip Jumper

Packaging Type

Packaging Type	Code
Tape Carrier Packaging	PD

Packaging Type

Termination Type	Code
 Non-Magnetic Copper Plated 100% Sn RoHS Compliant	/NM





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Standard Resistance Series – E-24 Tolerance $\pm 5\%$

1.00	1.10	1.20	1.30	1.60	1.80	2.00	2.20	2.40	2.70	3.00
3.30	3.60	3.90	4.30	5.10	5.60	6.20	6.80	7.50	8.20	9.10

Standard Resistance Series – E-96 Tolerance $\pm 1\%$

1.00	1.02	1.05	1.07	1.10	1.13	1.15	1.18	1.21	1.24	1.27	1.30
1.33	1.37	1.40	1.43	1.47	1.50	1.54	1.58	1.62	1.65	1.69	1.74
1.78	1.82	1.87	1.91	1.96	2.00	2.05	2.10	2.15	2.21	2.26	2.32
2.37	2.43	2.49	2.55	2.61	2.67	2.74	2.80	2.87	2.94	3.01	3.09
3.16	3.24	3.32	3.40	3.48	3.57	3.65	3.74	3.83	3.92	4.02	4.12
4.22	4.32	4.42	4.53	4.64	4.75	4.87	4.99	5.11	5.23	5.36	5.49
5.62	5.76	5.96	6.04	6.19	6.34	6.49	6.65	6.81	6.98	7.15	7.32
7.50	7.68	7.87	8.06	8.25	8.45	8.66	8.87	9.09	9.31	9.53	9.76

Rated Power

	0603	0805	1206
Rated Power	1/10W	1/8W	1/4W
Maximum Operating Voltage	50V	150V	200V
Maximum Over Load Voltage	100V	200V	400V
Resistance Tolerance	$\pm 1\%$ (F) $\pm 5\%$ (J)		
Resistance Range	E-24 E-96		
Jumper Rated Current	1A	2A	2A
Jumper Resistance Value	50m Ω MAX		
Operating Temperature Range	-55°C to +125°C		
Temperature Coefficient (TC)	$\pm 100\text{ppm}/^\circ\text{C}$ or $\pm 200\text{ppm}/^\circ\text{C}$		
Rated Temperature	+70°C		



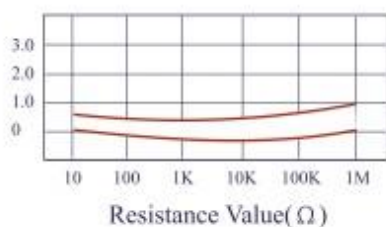
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Characteristics

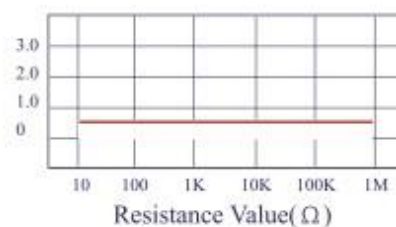
	1%	5%	Test Methods (JIS C 5202)
Temperature Cycling	$\pm (0.50\% + 0.05\Omega)$	$\pm (1.0\% + 0.05\Omega)$	-55°C ~ +125°C For 5 cycles
Short Time Over Load	$\pm (1.0\% + 0.05\Omega)$	$\pm (2.0\% + 0.10\Omega)$	Rated Voltage x 2.5 for 5 seconds
Resistance to Soldering Heat	$\pm (0.50\% + 0.05\Omega)$	$\pm (1.0\% + 0.05\Omega)$	260°C $\pm$ 5°C for 10 seconds
Moisture Loading Life	$\pm (0.50\% + 0.05\Omega)$	$\pm (3.0\% + 0.10\Omega)$	60°C $\pm$ 2°C, 90 ~ 95% RH 1000 hours @ RCWV 1.5 hours ON; 0.5 hours OFF
Load Life	$\pm (1.0\% + 0.05\Omega)$	$\pm (3.0\% + 0.10\Omega)$	70°C $\pm$ 2°C 1000 Hours @ RCWV 1.5 hours ON; 0.5 hours OFF
Solderability	Coverage $\geq$ 95%	Coverage $\geq$ 95%	230°C $\pm$ 5°C For 3 seconds
Bending Strength	$\pm (1.0\% + 0.05\Omega)$	$\pm (1.0\% + 0.05\Omega)$	Bending Distance: 3mm (10 seconds)

Characteristics Data

Load Life 1000Hrs $\Delta R/R(\%)$



Moisture Loading Life 1000Hrs $\Delta R/R(\%)$



Short time overload $\Delta R/R(\%)$

