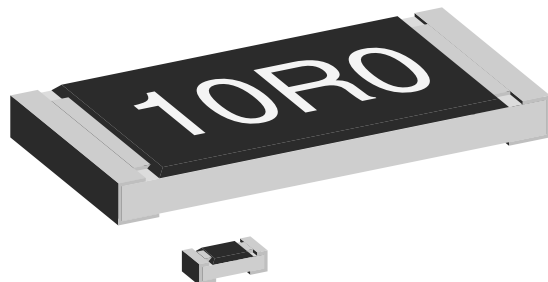


## Automotive Grade Thick Film, Rectangular Chip Resistors



### FEATURES

- Metal glaze on high quality ceramic with protective overglaze
- Sulfur resistant
- Superior resistance against H<sub>2</sub>S-atmosphere than standard Ag contacts
- Solder contacts on Ni barrier layer
- Excellent stability in critical environmental conditions
- High volume product suitable for commercial and special applications

### STANDARD ELECTRICAL SPECIFICATIONS

MODEL	SIZE		POWER RATING $P_{70^{\circ}\text{C}}$ W	LIMITING ELEMENT VOLTAGE MAX $V_{\cong}$	TEMPERATURE COEFFICIENT  ppm/K	TOLERANCE  %	RESISTANCE RANGE  $\Omega$	E-SERIES
	INCH	METRIC						
RCA0402	0402	1005	0.063	50	50	0.5, 1	100R - 1M0	24 + 96
					100	0.5	10R - 1M0	24 + 96
					100	1	10R - 4M7	24 + 96
					200	1	1R0 - 9R76	24 + 96
					200	5	1R0 - 10M	24
Zero-Ohm-Resistor : $R_{\text{max}} = 20\text{m}\Omega$					$I_{\text{max}} = 1\text{A}$			
RCA0603	0603	1608	0.10	75	50	0.5, 1	100R - 10M	24 + 96
					100	0.5, 1	10R - 10M	24 + 96
					200	1	1R0 - 9R76	24 + 96
					200	5	1R0 - 10M	24
Zero-Ohm-Resistor : $R_{\text{max}} = 20\text{m}\Omega$					$I_{\text{max}} = 1.5\text{A}$			
RCA0805	0805	2012	0.125	150	50	0.5, 1	100R - 10M	24 + 96
					100	0.5	10R - 10M	24 + 96
					100	1	1R0 - 10M	24 + 96
					200	5	1R0 - 10M	24
Zero-Ohm-Resistor : $R_{\text{max}} = 20\text{m}\Omega$					$I_{\text{max}} = 2\text{A}$			
RCA1206	1206	3216	0.25	200	50	0.5, 1	100R - 10M	24 + 96
					100	0.5, 1	10R - 10M	24 + 96
					100	1	1R0 - 10M	24 + 96
					200	5	1R0 - 10M	24
Zero-Ohm-Resistor : $R_{\text{max}} = 20\text{m}\Omega$					$I_{\text{max}} = 2.5\text{A}$			
RCA1210	1210	3225	0.33	200	50	0.5, 1	100R - 1M0	24 + 96
					100	0.5	100R - 1M0	24 + 96
					100	1	1R0 - 1M0	24 + 96
					200	5	1R0 - 1M0	24
Zero-Ohm-Resistor : $R_{\text{max}} = 20\text{m}\Omega$					$I_{\text{max}} = 2.5\text{A}$			
RCA1218	1218	3246	1.0	200	50	0.5, 1	100R - 2M2	24 + 96
					100	0.5	100R - 2M2	24 + 96
					100	1	1R0 - 2M2	24 + 96
					200	5	1R0 - 2M2	24
Zero-Ohm-Resistor : $R_{\text{max}} = 20\text{m}\Omega$					$I_{\text{max}} = 4\text{A}$			
RCA2010	2010	5025	0.50	400	50	0.5, 1	100R - 10M	24 + 96
					100	0.5	10R - 10M	24 + 96
					100	1	1R0 - 10M	24 + 96
					200	5	1R0 - 10M	24
Zero-Ohm-Resistor : $R_{\text{max}} = 20\text{m}\Omega$					$I_{\text{max}} = 3\text{A}$			
RCA2512	2512	6332	1.0	500	50	0.5, 1	100R - 10M	24 + 96
					100	0.5	10R - 10M	24 + 96
					100	1	1R0 - 10M	24 + 96
					200	5	1R0 - 10M	24
Zero-Ohm-Resistor : $R_{\text{max}} = 20\text{m}\Omega$					$I_{\text{max}} = 4\text{A}$			

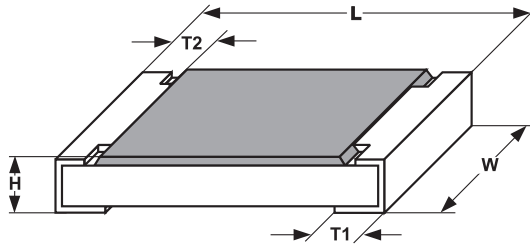
• Ask about further value ranges

• Marking and packaging: see appropriate catalog or web pages

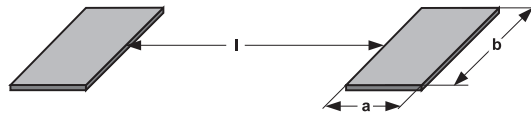
• Power rating depends on the max. temperature at the solder

point, the component placement density and the substrate material

**DIMENSIONS**



SIZE		DIMENSIONS [in millimeters]				
INCH	METRIC	L	W	H	T1	T2
0402	1005	1.0 ±0.05	0.5 ±0.05	0.35 ±0.05	0.25 ±0.05	0.2 ±0.1
0603	1608	1.55 <sup>+0.10</sup> / <sub>-0.05</sub>	0.85 ±0.1	0.45 ±0.05	0.3 ±0.2	0.3 ±0.2
0805	2012	2.0 <sup>+0.20</sup> / <sub>-0.10</sub>	1.25 ±0.15	0.45 ±0.05	0.3 <sup>+0.20</sup> / <sub>-0.10</sub>	0.3 ±0.2
1206	3216	3.2 <sup>+0.10</sup> / <sub>-0.20</sub>	1.6 ±0.15	0.55 ±0.05	0.45 ±0.2	0.4 ±0.2
1210	3225	3.2 ±0.2	2.5 ±0.2	0.55 ±0.05	0.45 ±0.2	0.4 ±0.2
1218	3246	3.2 <sup>+0.10</sup> / <sub>-0.20</sub>	4.6 ±0.15	0.55 ±0.05	0.45 ±0.2	0.4 ±0.2
2010	5025	5.0 ±0.15	2.5 ±0.15	0.6 ±0.05	0.6 ±0.2	0.6 ±0.2
2512	6332	6.3 ±0.2	3.15 ±0.15	0.6 ±0.05	0.6 ±0.2	0.6 ±0.2



SIZE		SOLDER PAD DIMENSIONS [in millimeters]					
INCH	METRIC	REFLOW SOLDERING			WAVE SOLDERING		
		a	b	l	a	b	l
0402	1005	0.4	0.6	0.5			
0603	1608	0.5	0.9	1.0	0.9	0.9	1.0
0805	2012	0.7	1.3	1.2	0.9	1.3	1.3
1206	3216	0.9	1.7	2.0	1.1	1.7	2.3
1210	3225	0.9	2.5	2.0	1.1	2.5	2.2
1218	3246	1.05	4.9	1.9	1.25	4.8	1.9
2010	5025	1.0	2.5	3.9	1.2	2.5	3.9
2512	6332	1.0	3.2	5.2	1.2	3.2	5.2

**TECHNICAL SPECIFICATIONS**

PARAMETER	UNIT	RCA0402	RCA0603	RCA0805	RCA1206	RCA1210	RCA1218	RCA2010	RCA2512
Rated Dissipation at 70°C (CECC 40401/EIA 575)	W	0.063	0.10	0.125	0.25	0.33	1.0	0.5	1.0
Limiting Element Voltage <sup>2)</sup>	V <sub>≅</sub>	50	75	150	200	200	200	400	500
Insulation Voltage (1 min)	V <sub>peak</sub>	> 75	> 100	> 200	> 300	> 300	> 300	> 300	> 300
Thermal Resistance	K/W	≤ 870 <sup>1)</sup>	≤ 550 <sup>1)</sup>	≤ 440 <sup>1)</sup>	≤ 220 <sup>1)</sup>	≤ 140 <sup>3)</sup>	<sup>3)</sup>	≤ 88 <sup>3)</sup>	≤ 65 <sup>3)</sup>
Insulation Resistance	Ω	> 10 <sup>9</sup>							
Category Temperature Range	°C	- 55 / + 125 (+ 155)							
Failure Rate	h <sup>-1</sup>	0.3 · 10 <sup>-9</sup>							
Weight / 1000pcs	g	0.65	2	5.5	10	16	29.5	25.5	40.5

<sup>1)</sup> Measuring conditions in acc. to CECC 40401

<sup>3)</sup> Depending on solder pad dimensions

<sup>2)</sup> Rated voltage:  $\sqrt{P \times R}$

**ORDERING INFORMATION**

RCA MODEL	0603 SIZE	5620 RESISTANCE VALUE	F TOLERANCE	100 TC*	RT6 PACKAGING
		Ω	± %	100ppm	Papertape 20000 pcs
		± 1% = 3 sig. digits, plus multiplier	F = ± 1%, J = ± 5%	200ppm	
		± 5% = 2 sig. digits, plus multiplier		50ppm	
		EX: 49R9F = 49.9Ω, ± 1%			
		5R1J = 5.1Ω, ± 5%			
		3011F = 3.01KΩ, ± 1%			
				*NOTE: Entering a TC value in this field is optional. If no TC is specified by the Customer, the default TC will be entered by the factory.	