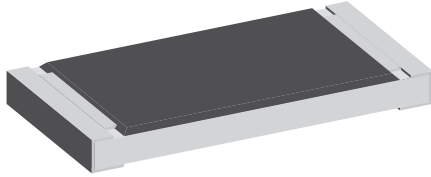


Thick Film, Rectangular Commodity Chip Resistors



FEATURES

- Commodity chip resistors, commercial grade
- Metal glaze on ceramic
- Protective overglaze
- Lead-free soldering terminations
- High volume product suitable for commercial applications

STANDARD ELECTRICAL SPECIFICATIONS

MODEL	SIZE		POWER RATING $P_{70^{\circ}\text{C}}$ W CECC 40401-802/EIA-575	LIMITING ELEMENT VOLTAGE MAX V_{\cong}	TEMPERATURE COEFFICIENT PPM/K	TOLERANCE %	RESISTANCE RANGE Ω	E-SERIES
	INCH	METRIC						
CRCW0402...BC	0402	1005	0.063	50	400	1	1R-9R76	24 + 96
					200	1	10R-1M	24 + 96
					300	1	1M02-4M7	24 + 96
					400	5	1R-9R1	24
					200	5	10R-10M	24
Zero-Ohm-Resistor: $R_{\text{max}} = 50\text{m}\Omega$ $I_{\text{max}} = 0.6\text{A}$								
CRCW0603...BC	0603	1608	0.10	50	400	1	1R-9R76	24 + 96
					100	1	10R-1M	24 + 96
					200	1	1M02-10M	24 + 96
					400	5	1R-9R1	24
					200	5	10R-10M	24
Zero-Ohm-Resistor: $R_{\text{max}} = 50\text{m}\Omega$ $I_{\text{max}} = 0.8\text{A}$								
CRCW0805...BC	0805	2012	0.125	150	400	1	1R-9R76	24 + 96
					100	1	10R-1M	24 + 96
					200	1	1M02-10M	24 + 96
					400	5	1R-9R1	24
					200	5	10R-10M	24
Zero-Ohm-Resistor: $R_{\text{max}} = 50\text{m}\Omega$ $I_{\text{max}} = 1.2\text{A}$								
CRCW1206...BC	1206	3216	0.25	200	400	1	1R-9R76	24 + 96
					100	1	10R-1M	24 + 96
					200	1	1M02-10M	24 + 96
					400	5	1R-9R1	24
					200	5	10R-10M	24
Zero-Ohm-Resistor: $R_{\text{max}} = 50\text{m}\Omega$ $I_{\text{max}} = 1.6\text{A}$								

- Packaging: see appropriate catalog or web pages
- Marking: according EIA 575, exceptionally CRCW0603...BC 1% could be marked with 3 coded digits
- Power rating depends on the maximum temperature at the solder point, the component placement density and the substrate material.

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	CRCW0402...BC	CRCW0603...BC	CRCW0805...BC	CRCW1206...BC
Rated Dissipation at 70°C (CECC 40401/EIA 575)	W	0.063	0.10	0.125	0.25
Limiting Element Voltage ²⁾	V_{\cong}	50	50	150	200
Insulation Voltage (1 min)	V_{peak}	> 75	> 100	> 200	> 300
Thermal Resistance	K/W	$\leq 870^1)$	$\leq 550^1)$	$\leq 440^1)$	$\leq 220^1)$
Insulation Resistance	Ω	$> 10^9$			
Category Temperature Range	°C	- 55/+ 125			
Failure Rate	h^{-1}	$3 \cdot 10^{-9}$			
Weight/1000pcs	g	0.65	2	5.5	10

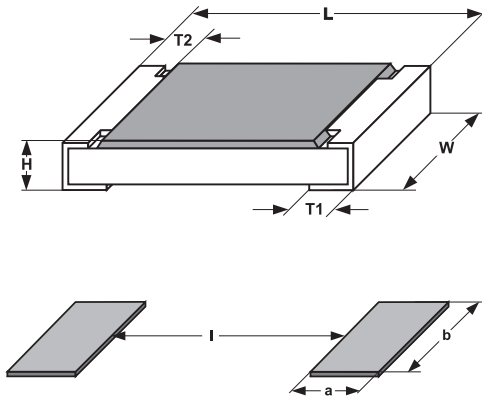
¹⁾ Measuring conditions in acc. to CECC 40401

²⁾ Rated voltage $\sqrt{P \times R}$

ORDERING INFORMATION

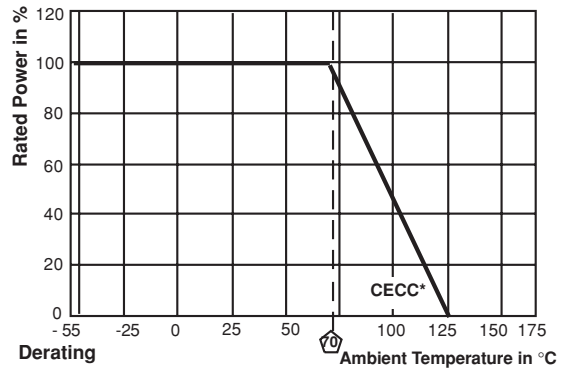
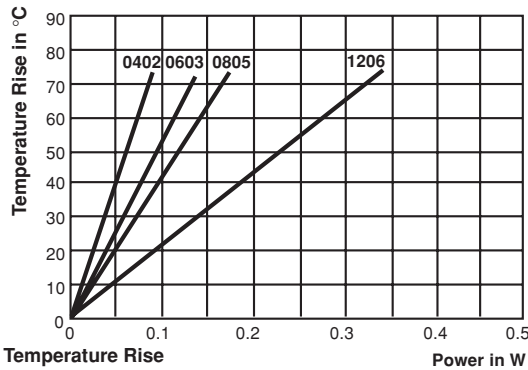
CRCW0603	5620	1%	100	RT1	BC
SIZE	RESISTANCE VALUE	TOLERANCE	TC	PACKAGING	SERIES
	Ω	$\pm \%$	ppm/K		
	$\pm 1\% = 3$ sig. digits, plus multiplier $\pm 5\% = 2$ sig. digits, plus multiplier Example: 49R9F = 49.9 Ω , $\pm 1\%$ 5R1J = 5.1 Ω , $\pm 5\%$ 3011F = 3.01K Ω , $\pm 1\%$ 000Z = 0 Ω Jumper	F = $\pm 1\%$, J = $\pm 5\%$	100ppm 200ppm 400ppm	Papertape 5000pcs	

DIMENSIONS



SIZE		DIMENSIONS [in millimeters]				
INCH	METRIC	L	W	H	T1	T2
0402	1005	1.0 ± 0.05	0.5 ± 0.05	0.30 ± 0.05	0.25 ± 0.1	0.20 ± 0.1
0603	1608	1.55 +0.10 -0.05	0.85 ± 0.1	0.45 ± 0.10	0.3 ± 0.2	0.3 ± 0.2
0805	2012	2.10 ± 0.15	1.25 ± 0.15	0.50 ± 0.10	0.35 ± 0.20	0.30 ± 0.2
1206	3216	3.2 +0.10 -0.20	1.6 ± 0.15	0.55 ± 0.10	0.45 ± 0.2	0.4 ± 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	1606	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



PACKAGING

MODEL	REEL				
	TAPE WIDTH	DIAMETER	PIECES/REEL	PITCH	PACKAGING CODE PAPER
CRCW0402....BC	8mm Papertape	180mm/7"	10000	2mm	RT7
CRCW0603....BC	8mm Papertape	180mm/7"	10000	2mm	RT7
			5000	4mm	RT1
CRCW0805....BC	8mm Papertape	180mm/7"	5000	4mm	RT1
CRCW1206....BC	8mm Papertape	180mm/7"	5000	4mm	RT1

• Further information about packaging: see appropriate catalog or web page.

PERFORMANCE

TEST	CONDITIONS OF TEST	PERFORMANCE
		0402, 0603 0805, 1206
Endurance Test at 70°C IEC 60115-1 4.25.1: EIA-575	1000 hours at 70°C 1.5 hours "ON" 0.5 hours "OFF"	≤ ± (2% + 0.1R)
Endurance at UCT IEC 60115-1 4.25.3	1000 hours at 125°C without load	≤ ± (2% + 0.1R)
Overload Test IEC 60115-1 4.13: EIA-575	Short time overload 2.5 x rated voltage or 2 x limiting element voltage	≤ ± (2% + 0.1R)
Thermal Shock IEC 60115-1 4.19 IEC 60068-2-14: EIA-575	Rapid change between upper and lower category temperature	≤ ± (1% + 0.05R)
Damp Heat Steady State IEC 60115-1 4.24: IEC 60068-2-3	56 days at 40°C and 93% relative humidity	≤ ± (2% + 0.1R)
Resistance to Soldering Heat IEC 60115-1 4.16: IEC 600 68-2-20: EIA-575	10 seconds at 260°C solder bath temperature	≤ ± (1% + 0.05R)