Thick Film Chip Resistors, Alternate Terminations

FEATURES

- Suitable for solderable, epoxy bondable, or wire bondable applications
- Termination: Gold, palladium silver, platinum gold, platinum silver or platinum palladium gold available
- Multiple styles, termination materials and configurations, allow wide design flexibility
- Non-magnetic terminations
- Flow solderable
- Custom sizes available
- Burn-in data available
- Automatic placement capability
- Available with either wraparound terminations or as a single termination flip chip
- Tape and reel packaging available
- Internationally standardized sizes
- Compliant to RoHS Directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition

Pb Available

RoHS* COMPLIANT

HALOGEN FREE

Note

* Pb containing terminations are not RoHS compliant, exemptions may apply

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	CASE SIZE	POWER RATING $P_{70\,°C}$ W	MAXIMUM WORKING VOLTAGE (1) V	RESISTANCE RANGE (2) Ω	TOLERANCE ± %	TEMPERATURE COEFFICIENT (3) (- 55 °C to + 150 °C) ± ppm/°C
RC0540	0504	0.100	40	10 to 500K	1, 2, 5, 10, 20	100
RC0550	0505	0.100	50	10 to 500K	1, 2, 5, 10, 20	100
RC0575	0705 (4)	0.200	70	10 to 1M	1, 2, 5, 10, 20	100
RC5100	1005	0.250	100	10 to 1M	1, 2, 5, 10, 20	100
RC1100	1010	0.450	100	10 to 1M	1, 2, 5, 10, 20	100
RC1206	1206	0.300	100	10 to 1M	1, 2, 5, 10, 20	100
RC5150	1505	0.325	125	10 to 1M	1, 2, 5, 10, 20	100
RC7225	2208	0.525	200	10 to 1M	1, 2, 5, 10, 20	100
RC2010	2010	0.575	200	10 to 1M	1, 2, 5, 10, 20	100

Notes

(1) Continuous working voltage shall be $\sqrt{P \times R}$ or maximum working voltage, whichever is less.

(2) Higher values available. Please consult factory.

(3) ± 100 ppm/°C standard thru 1 MΩ, ± 200 ppm/°C offered from 1.1 MΩ to 10 MΩ.

(4) MIL case size 0705 and EIA case size 0805 are dimensionally the same.

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: RC0540AA1K00FKSB (preferred part number format)

R	C	0	5	4	0	A	A	1	K	0	0	F	K	S	B

GLOBAL MODEL	SIZE	TERM STYLE	TERM MATERIAL	RESISTANCE VALUE	TOLERANCE	TCR	SOLDER TERMINATION	PACKAGING
RC	**0540** **0550** **0575** **5100** **1100** **1206** **5150** **7225** **2010**	**A** = 3-sided **B** = Top only **C** = 5-sided	**A** = Palladium silver **B** = Platinum gold **C** = Gold **D** = Platinum silver **E** = Platinum palladium gold	R = Ω K = kΩ M = MΩ **100R** = 100 Ω **1K00** = 1 kΩ **1M00** = 1 MΩ	**F** = ± 1 % **G** = ± 2 % **J** = ± 5 % **K** = ± 10 % **M** = ± 20 %	**K** = 100 ppm **L** = 150 ppm **N** = 200 ppm **W** = 350 ppm	**D** = Sn95/Ag5, HSD **S** = Sn62/Pb36/Ag2, HSD **N** = No solder	**B** = Bulk **F** = T/R (full reel) **1** = T/R (1000 pcs) **5** = T/R (500 pcs) **T** = T/R (250 pcs min.) **W** = Waffle

Historical Part Numbering: CR1AA1001F100S2 (will continue to be accepted)

CR	1	A	A	1001	F	100	S2
HISTORICAL MODEL	SIZE	TERM STYLE	TERM MATERIAL	RESISTANCE VALUE	TOLERANCE	TCR	SOLDER TERMINATION

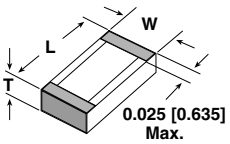
MECHANICAL SPECIFICATIONS	
Resistive element	Ruthenium oxide
Encapsulation	Glass
Substrate	96 % alumina
Termination	Gold, palladium silver, platinum gold, platinum silver, platinum palladium gold terminations available.
Solder finish	Base metallization without a solder finish standard. Hot solder dipped tin/silver or tin/lead/silver solder alloys available.

ENVIRONMENTAL SPECIFICATIONS

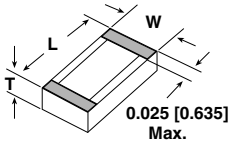
Operating Temperature: - 55 °C to + 150 °C
Moisture Resistance: Less than 0.5 % change when tested per method 106 of MIL-STD-202
Life: Less than 1 % change when tested per method 108D (+ 85 °C) of MIL-STD-202
Short Time Overload: Less than 0.5 % ΔR

DIMENSIONS in inches (millimeters)

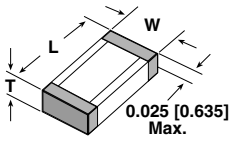
Termination Style A (3-sided wraparound)



Termination Style B (Top conductor only)



Termination Style C (5-sided wraparound)



MODEL	LENGTH (L) (1) ± 0.006 (0.152)	WIDTH (W) (1) ± 0.006 (0.152)	THICKNESS (T) (1) ± 0.005 (0.127)
RC0540	0.050 (1.27)	0.040 (1.02)	0.020 (0.508)
RC0550	0.050 (1.27)	0.050 (1.27)	0.020 (0.508)
RC0575	0.075 (1.90)	0.050 (1.27)	0.020 (0.508)
RC5100	0.100 (2.54)	0.050 (1.27)	0.020 (0.508)
RC1100	0.100 (2.54)	0.100 (2.54)	0.020 (0.508)
RC1206	0.125 (3.18)	0.062 (1.57)	0.025 (0.635)
RC5150	0.150 (3.81)	0.050 (1.27)	0.020 (0.508)
RC7225	0.225 (5.72)	0.075 (1.90)	0.020 (0.508)
RC2010	0.200 (5.08)	0.100 (2.54)	0.025 (0.635)

Note
(1) All dimensions are before solder coating.

TYPE	TERMINATION MATERIAL	TERMINATION STYLE	TERMINATION STYLE/ MATERIAL CODE	SOLDER TERMINATION CODE
Wire bondable/ solderable	Platinum palladium gold	3-sided (wraparound)	AE	N (standard); D or S (optional) (2)
		Top only (flip chip)	BE	
		5-sided (wraparound)	CE	
Wire bondable/ Epoxy bondable	Gold	3-sided (wraparound)	AC	N
		Top only (flip chip)	BC	
		5-sided (wraparound)	CC	
Epoxy bondable	Palladium silver (3)	3-sided (wraparound)	AA	N
		Top only (flip chip)	BA	
		5-sided (wraparound)	CA	
	Platinum gold	3-sided (wraparound)	AB	
		Top only (flip chip)	BB	
		5-sided (wraparound)	CB	
	Platinum silver	3-sided (wraparound)	AD	
		Top only (flip chip)	BD	
		5-sided (wraparound)	CD	

Notes
(2) Use solder termination N for applications requiring wire bondable mounting, and solder terminations D or S for applications requiring solderable mounting.
(3) While not recommended, palladium silver terminations could be used for solderable applications when using a solder alloy containing silver.

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