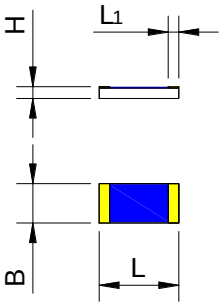
Platinum-Resistance-Temperature-Detector: CRFC Series

Two burned-in top layers of glass reliably protect the platinum layer of the temperature sensor from external influences. The application temperature range for the temperature sensors is designed for -70°C…+400°C. The thermal load capacity is determined by the selected connection technology and housing. Delivery is taped on standard rolls in roll sections or loose in bags. Thanks to the high-quality layer structure, storage in the original packaging is also possible for a very long time without any problems.

Type	**CRFC Series „Flip-Chip“**
Operating temperature range	**-70°C … +400°C**
Temperature tolerance at 25°C	±0.43K (Class B)
Resistance value	Pt100 Pt500 Pt1000
Recommended measuring current	Pt100: <1 mA Pt500: <0.6 mA Pt1000: <0.3 mA
Temperature coefficient	3850 ppm/K
Long-term stability	max. R_0-drift 0.05 %/year
Storage	5 years under normal ambient conditions
Processing notes	All forms of reflow soldering are preferred
Packaging	Packaging unit of 3,500 pieces in an 8-mm belt on a 7" plastic reel with roll feed line
	Small quantity without roll feed line



REACH RoHS Compliance

	Available models									
Temperature sensor						**Connection**		**PU in tape & reel**	**Tolerance class**	
Type	R_0/Ω	Design	B	L	H	Material	L1		A	B
CRFC-0805-100(Au)	100	0805	1.25	2.0	0.58	Gold thick film	0.3	3.500		●
CRFC-0805-500(Au)	500	0805	1.25	2.0	0.58	Gold thick film	0.3	3.500		●
CRFC-0805-1000(Au)	1000	0805	1.25	2.0	0.58	Gold thick film	0.3	3.500		●
CRFC-1206-100(Au)	100	1206	1.6	3.25	0.58	Gold thick film	0.5	3.500		●
CRFC-1206-500(Au)	500	1206	1.6	3.25	0.58	Gold thick film	0.5	3.500		●
CRFC-1206-1000(Au)	1000	1206	1.6	3.25	0.58	Gold thick film	0.5	3.500		●

Dimensional tolerances in mm: ΔB = ± 0.1 / ΔL = ± 0.1 / ΔH = ± 0.1 / ΔL1 = ± 0.1

Self-heating coefficients and response times			
Type	Self-heating coefficient E in K/mW	Response times in seconds	
	Air (v = 1 m/s)	in Water (v = 0.4 m/s)	in Air (v = 1 m/s)
		$t_{0.9}$	$t_{0.9}$
CRFC-0805	0.4	0.3	15
CRFC-1206	0.4	0.3	15

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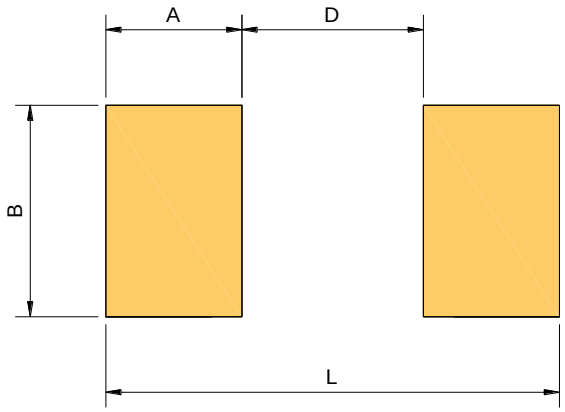
Processing notes

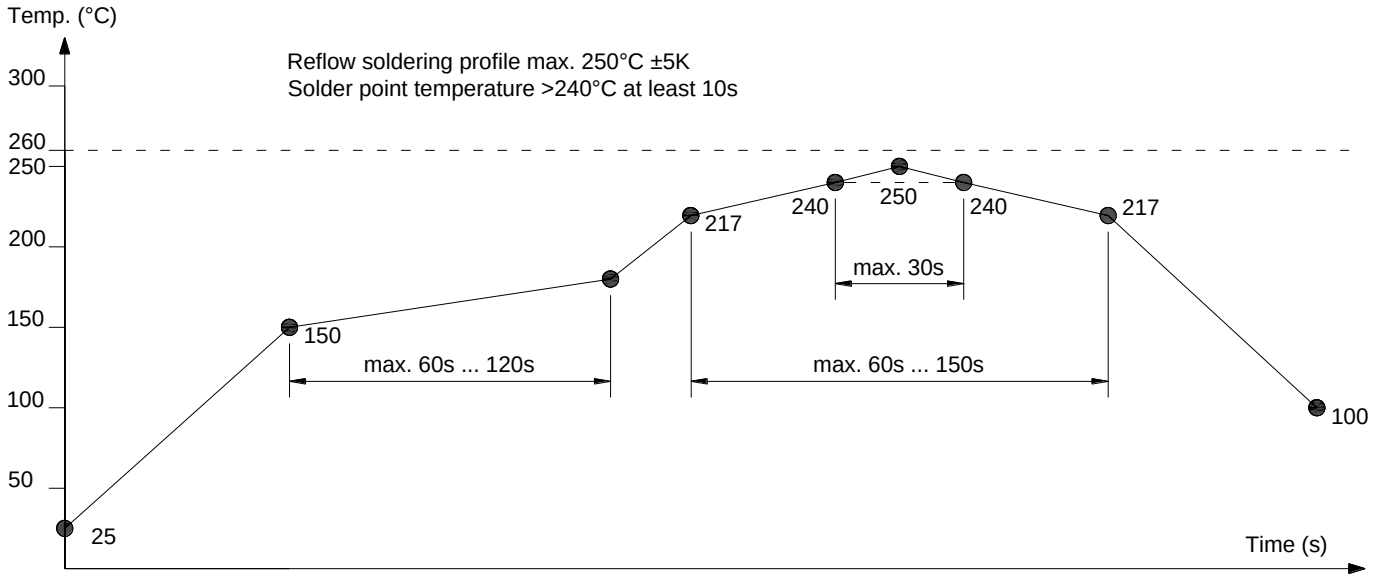
All forms of reflow soldering are preferred. The temperature sensors could be damaged when soldering with a soldering iron. The manufacturer has tested lead-free SAC solder as well as leaded standard solder (up to 95 % Pb). The soldering temperature can be raised slightly in comparison to tin-plated components.
Type CRFSMD (flip chip): Depending on the solder used, it may be necessary to adapt the printed solder quantity compared to a sensor/component with wrap-around contact.
Application of the metallized top side: Optimized for soft-soldering in a reflow method.

Recommended pad dimensions on the circuit board



Type	Design (imperial)	Design (metric)	A (mm)	B (mm)	D (mm)	L (mm)
CRFC-0805	0805	2012M	0.80	1.25	1.00	2.60
CRFC-1206	1206	3216M	0.80	1.50	2.00	3.60

Recommended soldering profile for lead-free solder, type SAC 305/405



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