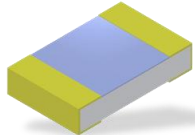
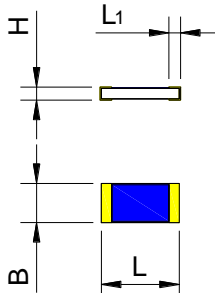


Platinum-Resistance-Temperature-Detector: CRSMD Series

Two baked-in glass cover layers reliably protect the platinum layer from external influences. Platinum-chip temperature sensors designed for use in temperature ranges from -50 to +150°C. If suitable connection techniques are used, the temperature sensors can even use in a range from -70°C ... +250°C. Adherence to tolerance limits then has to check according to the application. The connection technology and housing selected by the customer determine the thermal resistance.

Type	CRSMD Series		 
Operating temperature range	-70 ... +250°C		
Temperature validity range DIN EN 60571	1/3B (F 0.1)	0°C ... +150°C	
	A (F 0.15)	-30°C ... +150°C	
	B (F 0.3)	-50°C ... +250°C	
	2B (F 0.6)	-70°C ... +250°C	
Resistance value	Pt100 Pt500 Pt1000		
Measuring/maximum current	Pt100: 1 mA ... 7 mA Pt500: 0,7 mA ... 3 mA Pt1000: 0,1 mA ... 1 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 5,000 pieces in an 8-mm belt on a 7" plastic reel with roll feed line		
	Small quantity without roll feed line		



Available models												
Temperature sensor						Solder terminals		PU in Belt On spool	Tolerance class			
Type	R ₀ /Ω	Design	B	L	H	Material	L1		1/3B	A	B	2B
CRSMD-0805-100	100	0805	1.25	2.0	0.4	Au plated Ni	0.4	5.000	●	●	●	○
CRSMD-0805-500	500	0805	1.25	2.0	0.4	Au plated Ni	0.4	5.000	○	○	●	○
CRSMD-0805-1000	1000	0805	1.25	2.0	0.4	Au plated Ni	0.4	5.000	●	●	●	●
CRSMD-1206-100	100	1206	1.5	3.0	0.4	Au plated Ni	0.4	5.000	●	●	●	○
CRSMD-1206-500	500	1206	1.5	3.0	0.4	Au plated Ni	0.4	5.000	○	○	●	○
CRSMD-1206-1000	1000	1206	1.5	3.0	0.4	Au plated Ni	0.4	5.000	●	●	●	○

○ upon request

Dimensional tolerances: ΔB = ± 0.2 / ΔL = ± 0.5 / ΔH = ± 0.2 / ΔD1 = ± 0.01 / ΔL1 = ± 0.5
Dimensions in mm

Self-heating coefficients and response times						
Type	Self-heating coefficient E in K/mW			Response times in seconds		
	Water (v = ≥0.2 m/s)			in Water (v = 0.4 m/s)		in Air (v = 1 m/s)
				t _{0.5}	t _{0.9}	t _{0.5}
CRSMD-0805-100	0.15			0.1	0.3	2.6
CRSMD-0805-500	0.15			0.1	0.3	2.6
CRSMD-0805-1000	0.15			0.1	0.3	2.6
CRSMD-1206-100	0.09			0.1	0.3	3.3
CRSMD-1206-500	0.09			0.1	0.3	3.3
CRSMD-1206-1000	0.09			0.1	0.3	3.3

Changes and errors expected

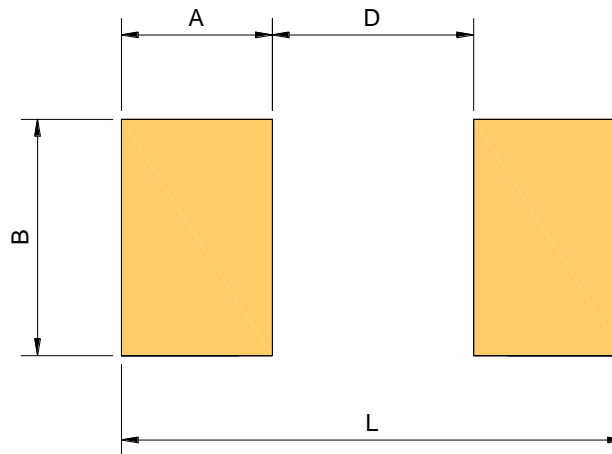
Processing notes

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)
CRSMD-0805	0805	2012M	0.80	1.25	1.00	2.60
CRSMD-1206	1206	3216M	0.80	1.50	2.00	3.60
CRFSMD-0805	0805	2012M	0.65	1.25	0.90	2.20

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

