

# INDIVIDUAL SPECIFICATION SHEET

**Product Name:** Current Sensing Resistors

**Part Number:** SRC25 Series

**Revision:** A



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Rev.	Effective Date	Changed Contents
A	2020-6-15	New release

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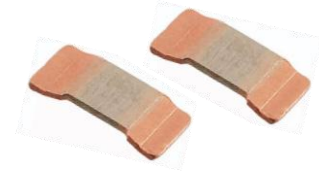
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SRC25 Series Current Shunt Resistors aid precision measurement and high-current applications. A wide range of precision shunts, designed for use with kilowatt-hour meters and other high-current applications where a high level of accuracy is required, is now available from TLC.

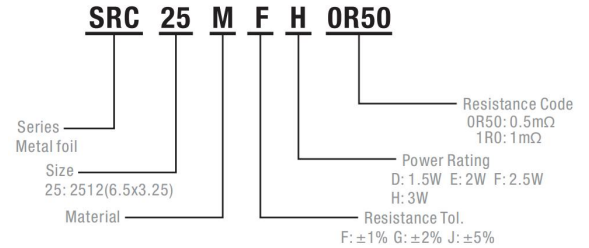


### Features

- Power rating up to 3 W at 100°C Excellent
- long term stability
- Extremely low resistance values (down to 0.3mΩ)
- Halogen free, lead free and RoHS compliant

### Applications

- Power modules Frequency converters
- Current sensor for power hybrid sources High current for automotive
- Lithium battery protection board



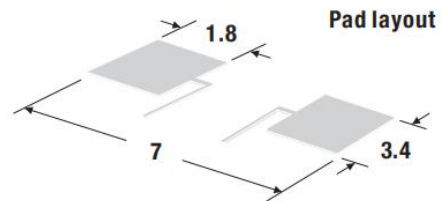
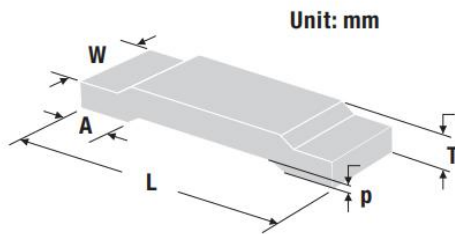
### Specification

#### Part

Number	Power Rating		Resistance Range (mΩ)	TCR (ppm/°C)	Thickness (mm)
	P 100°C (W)	P 70°C (W)			
SRC25F_D5R0	1.5	2.5	5	±50	0.78±0.1
SRC25F_E4R0	2	3	4	±50	0.80±0.1
SRC25F_E3R0	2	4	3	±50	0.93±0.1
SRC25F_H2R0	3	5	2	±50	1.15±0.1
SRC25M_H1R0	3	5	1	±100	1.00±0.1
SRC25M_H0R50	3	6	0.5	±115	1.38±0.1
SRC25S_H0R30	3	6	0.3	±175	2.00±0.1

- Applicable temperature range of -55°C to +170°C
- Power rating is guaranteed for use on an aluminum substrate (MCPCB)
- Part Number definition "-" of Resistance Tolerance

### Dimension



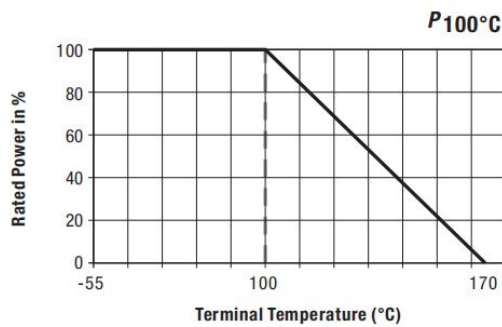
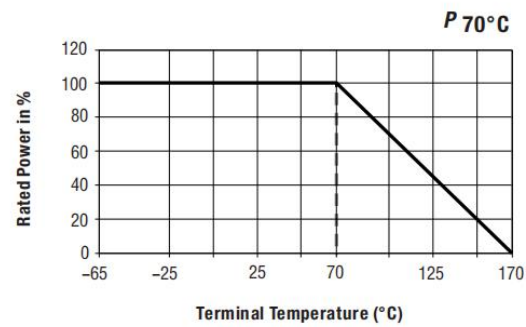
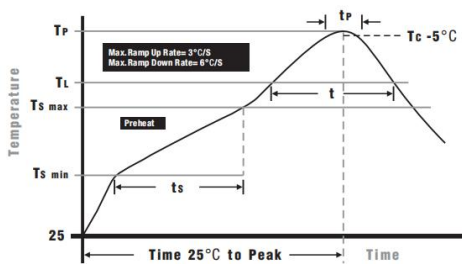
Type	L	W	T	A	p
SRC25F_D5R0	6.3±0.2	3.10±0.2	0.78±0.1	1.20±0.2	0.50±0.1
SRC25F_E4R0	6.3±0.2	3.10±0.2	0.80±0.1	1.20±0.2	0.50±0.1
SRC25F_E3R0	6.3±0.2	3.10±0.2	0.93±0.1	1.20±0.2	0.50±0.1
SRC25F_H2R0	6.3±0.2	3.10±0.2	1.15±0.1	1.20±0.2	0.50±0.1
SRC25M_H1R0	6.3±0.2	3.10±0.2	1.00±0.1	1.20±0.2	0.50±0.1

**Packaging**

- Quantity: 1,000pcs
- 16mm wide tape on 330mm(13 inch) diameter reel -specification EIA Standard 481.

**Storage Conditions**

- Temperature: 22~28°C, Humidity: 40~75%

**Power derating curve at 100 °C**

**Power derating curve at 70 °C**

**Soldering Parameters**


Wave Soldering: 260°C, 10 seconds max.  
Infrared Reflow: 260°C, 30 seconds max.

**IR Reflow Profile**

<b>Preheat Heat</b>	
Temperature min (T <sub>min</sub> )	150°C
Temperature max(T <sub>max</sub> )	200°C
Time (T <sub>min</sub> to T <sub>max</sub> ) (ts)	60 -120 seconds
<b>Average ramp-up rate (T<sub>max</sub> to T<sub>p</sub>)</b>	3°C/second max.
<b>Liquidous temperature (T<sub>l</sub>)</b>	
Time at liquidous (t <sub>l</sub> )	60 - 150 seconds
<b>Peak temperature(T<sub>p</sub>)</b>	260+0/-5°C
<b>Time within 5°C of actual peak Temperature (t<sub>p</sub>)</b>	10 - 30 seconds
<b>Average ramp-down rate (T<sub>p</sub> to T<sub>max</sub>)</b>	6°C/second max.
<b>Time 25 °C to peak temperature</b>	8 minutes max.

**Performances**

<b>Short Time Overload</b>	Loading 5 times rate power 5sec
<b>Moisture Resistance</b>	The specimens shall be placed in a chamber and subjected to a relative humidity of 90~98% percent and a temperature of 25°C / 65°C 10 cycles
<b>High Temperature Exposure</b>	The chip (mounted on board) is exposed in the heat chamber 125°C for 1000 hrs.
<b>Rapid Change of Temperature</b>	The chip (mounted on board) is exposed, -55±3°C (30min.)/+125±2°C (30min.) for 5 cycles.
<b>Load Life</b>	Apply rated power for 1000 hours with 1.5 hours ON and 0.5 hour OFF.