INDIVIDUAL SPECIFICATION SHEET

Product Name: Current Sensing Resistors

Part Number:SRC59 Series

Revision: A

Dongguan TLC Electronic Technology Co., LTD
No.18,5th GaoLi Road,TangXia Town,DongGuan,GuangDong,P.R China 523710
TEL: 86-0769-3892 0511
FAX: 86-0769-8793 2077
Http: www.tlcet.com.cn

Rev.	Effective Date	Changed Contents
A	2019-9-05	New release

PREPEARED BY	APPROVED BY

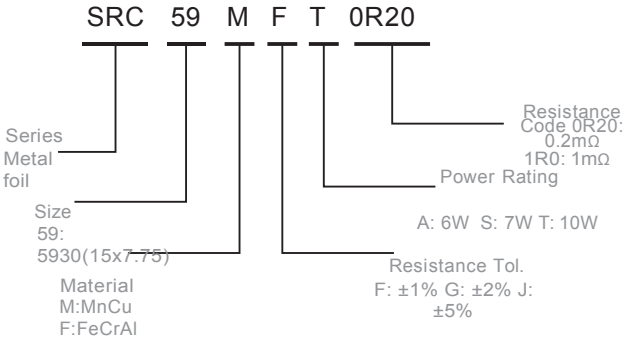
SRC59 Series Current Shunt Resistors aid precision measurement and high-current applications. A wide range of precision shunts, designed for use with kilowatt-hour meters and other high-current applications where a high level of accuracy is required, is now available from PROSEMI.

Features

- Power rating up to 10 W at 100°C
- Excellent long term stability
- Extremely low resistance values (down to 0.2mΩ)
- Halogen free, lead free and RoHS compliant

Appications

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



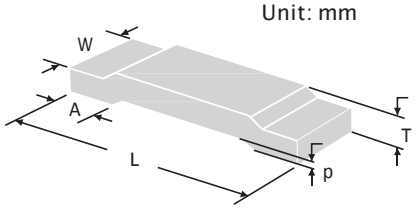
Specifications

Part Numbe	Power Rating *P* 100°C	*P* 70°C	Resistance Range	TCR	Thickness
	(W)	(W)	(mΩ)	(ppm/°C)	(mm)
SRC59F_A2R0	4	7	2	±50	0.94±0.1
SRC59F_A1R0	6	9	1	±50	1.37±0.1
SRC59M_A0R50	6	8	0.5	±75	1.09±0.1
SRC59M_S0R30	7	10	0.3	±100	1.45±0.1
SRC59M_T0R20	10	15	0.2	±100	1.93±0.1

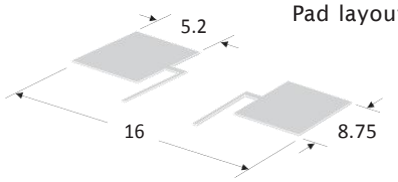
- Applicable temperature range of -55°C to +170°C
- Power rating is guaranteed for use an aluminum
- substrate (MCPCB) Part Number definition "_" of Resistance Tolerance

Dimension

Unit: mm



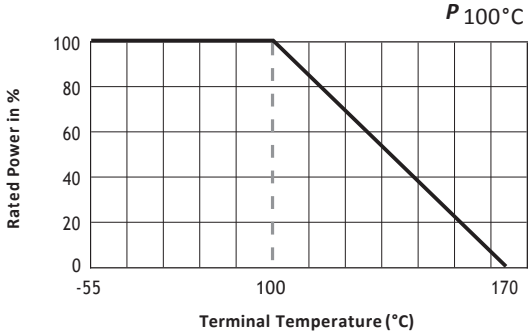
Pad layout



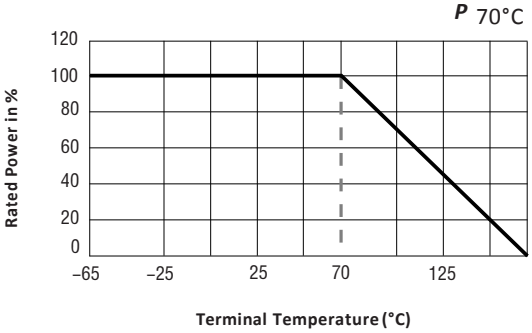
Type	L	W	T	A	p
SRC59F_A2R0	15±0.2	7.75±0.1	0.94±0.1	4.2±0.1	1.0±0.1
SRC59F_A1R0	15±0.2	7.75±0.1	1.37±0.1	4.2±0.1	1.0±0.1
SRC59M_A0R50	15±0.2	7.75±0.1	1.09±0.1	4.2±0.1	1.0±0.1
SRC59M_S0R30	15±0.2	7.75±0.1	1.45±0.1	4.2±0.1	1.0±0.1
SRC59M_T0R20	15±0.2	7.75±0.1	1.93±0.1	4.2±0.1	1.0±0.1
Packaging			Storage Conditions		

- Quantity: 2,000pcs
- 24mm wide tape on 330mm(13 inch) diameter reel -specification EIA Standard 481.
- Temperature: 22~28°C, Humidity: 40~75%

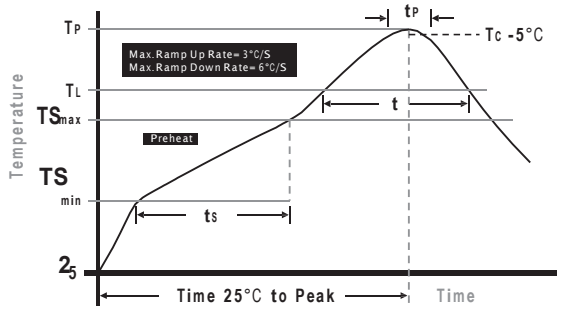
Power derating curve at 100 °C



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

Preheat Heat Temperature min (Tsmin) Temperature max(Tsmax) Time (Tsmin to Tsmax) (ts)	 150°C 200°C 60 -120 seconds
Average ramp-up rate (Tsmax to Tp)	3°C/second max.
Liquidous temperature (TL) Time at liquidous (tL)	217°C 60 - 150 seconds
Peak temperature(Tp)	260+0/-5°C
Time within 5°C of actual peak Temperature (tp)	10 – 30 seconds
Average ramp-down rate (Tp to Tsmax)	6°C/second max.
Time 25 °C to peak temperature	8 minutes max.

Performances

Short Time Overload	Loading 5 times rate power 5sec
Moisture Resistance	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
High Temperature Exposure	The chip (mounted on board) is exposed in the heat chamber 125°C for 1000 hrs.
Rapid Change of Temperature	The chip (mounted on board) is exposed, -55±3°C (30min.)/+125±2°C (30min.) for 5 cycles.
Load Life	Apply rated power for 1000 hours with 1.5 hours ON and 0.5 hour OFF.