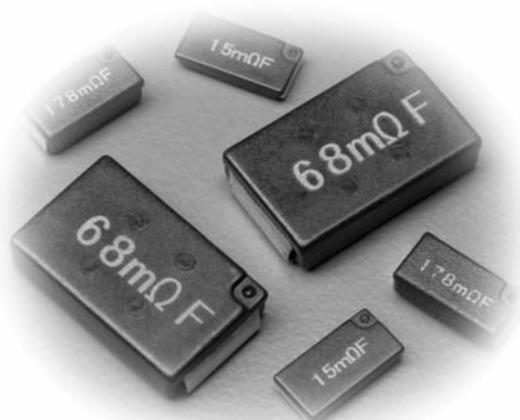




# SL, SLN, TSL

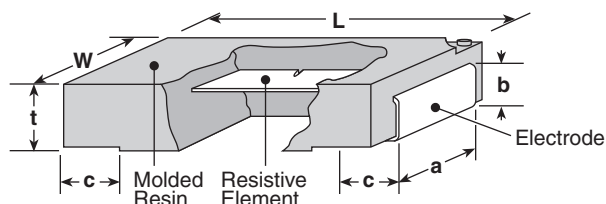
## surface mount molded current sense resistors



### features

- Surface mount type
- Flameproof UL94V0 molded polymer case
- Excellent dimension accuracy, mountability and shock resistance
- Suitable for flow, reflow and hand soldering
- Low profile type available (TSL)
- Marking: Black body color with white marking or laser marking
- Products with lead-free terminations meet EU RoHS requirements. Pb located in glass material, electrode and resistor element is exempt per Annex 1, exemption 5 of EU directive 2005/95/EC

### dimensions and construction



NEW	Size Code	Dimensions inches (mm)					
		L	W	t	a	b	c
	SL07	.197±.012 (5.0±0.3)	.098±.008 (2.5±0.2)	.067±.008 (1.7±0.2)	.079±.008 (2.0±0.2)	.047±.008 (0.9±0.2)	.035±.012 (1.2±0.3)
	SL1	.248±.012 (6.3±0.3)	.122±.008 (3.1±0.2)	.075±.008 (1.9±0.2)	.094±.008 (2.4±0.2)	.047±.008 (1.2±0.2)	.047±.012 (1.2±0.3)
	SL2	.453±.012 (11.5±0.3)	.276±.008 (7.0±0.2)	.098±.008 (2.5±0.2)	.197±.008 (5.0±0.2)	.067±.008 (1.7±0.2)	.102±.02 (2.6±0.5)
	SLN2	.453±.012 (11.5±0.3)	.276±.008 (7.0±0.2)	.094±.008 (2.4±0.2)	.217±.008 (5.5±0.2)	.063±.008 (1.6±0.2)	.100±.016 (2.55±0.4)
	SL3	.453±.012 (11.5±0.3)	.276±.008 (7.0±0.2)	.098±.008 (2.5±0.2)	.197±.008 (5.0±0.2)	.067±.008 (1.7±0.2)	.102±.02 (2.6±0.5)
	TSL1	.248±.012 (6.3±0.3)	.122±.008 (3.1±0.2)	.039±.008 (1.0±0.2)	.094±.008 (2.4±0.2)	.028±.008 (0.7±0.2)	.047±.012 (1.2±0.3)

### ordering information

New Part #	SL	1	T	TE	20L0	F					
Type	SL SLN TSL	Size	0.75 Watt 1 Watt 2 Watt 3 Watt	Termination Material	T: Sn (Other termination styles may be available, please contact factory for options)	Packaging	SL07, SL1, TSL- (TE: 7" embossed plastic) SL2, SLN2, SL3- (TED: 10" embossed plastic) For further information on packaging please refer to Appendix A	Nominal Resistance	±5%: 2 significant figures + 1 multiplier "R" indicates decimal on value <10Ω ±1%: 3 significant figures + 1 multiplier "R" indicates decimal on value <100Ω All values less than 0.1Ω (100mΩ) are expressed in mΩ with "L" as decimal Example: 20mΩ, 1% = 20L0	Tolerance	D: ±0.5% F: ±1% G: ±2% J: ±5%

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

12/16/08



# SL, SLN, TSL

surface mount molded current sense resistors

resistors

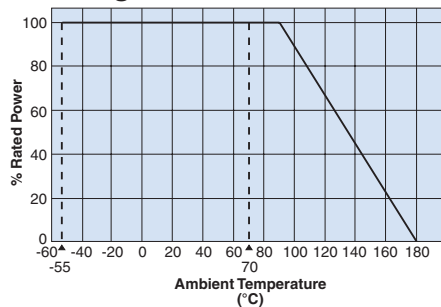
## applications and ratings

Part Designation	Power Rating	T.C.R. (ppm/°C) Max.	Resistance Range	Resistance Tolerance E-24*	Absolute Maximum Working Voltage	Absolute Maximum Overload Voltage	Operating Temperature Range
<b>NEW</b> SL07	0.75W	0~200: R=<10mΩ 0~150: R=>11mΩ	5mΩ - 100mΩ	(F: ±1%) (J: ±5%)	—	—	-55°C to +180°C
SL1	1W	±180: R=<13mΩ ±100: R=>15mΩ	10mΩ - 1MΩ	(D: ±0.5%)	200V	400V	
			5mΩ - 1MΩ	(F: ±1%)			
			3mΩ, 4mΩ	(G: ±2%)			
SL2	2W	±180: R=<10mΩ ±100: R=>11mΩ	3mΩ ~ 22MΩ	(J: ±5%)	500V	1000V	
			10mΩ - 1MΩ	(D: ±0.5%)			
			5mΩ ~ 1MΩ	(F: ±1%)			
SLN2	2W	±110: R<10mΩ ±75: R=>10mΩ	3mΩ, 4mΩ	(G: ±2%)	—	—	
			3mΩ - 22MΩ	(J: ±5%)			
			10mΩ - 100mΩ	(D: ±0.5%)			
SL3	3W	±180: R=<10mΩ ±100: R=>11mΩ	5mΩ - 100mΩ	(F: ±1%) (J: ±5%)	√P·R	√P·R	
TSL1	1W	±180: R=<13mΩ ±100: R=>15mΩ	10mΩ - 100mΩ	(D: ±0.5%)	√P·R	√P·R	
			5mΩ - 100mΩ	(F: ±1%) (J: ±5%)			

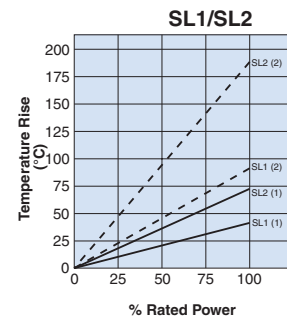
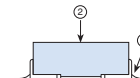
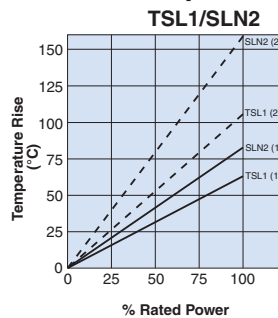
\* 3m, 4m, 5m, 6m, 7m, 8m, 9m resistance values also available

## environmental applications

### Derating Curve



### Surface Temperature Rise



## Performance Characteristics

Parameter	Requirement Δ R		Test Method
	Limit	Typical	
Resistance	Within specified tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+25°C/+125°C
Overload (Short time)	±1%*, ±0.5%**	±1%*, ±0.25%**	SL07: Rated power x 4 for 5 seconds, TSL1: Rated power x 2.5 for 5 seconds, SL1, SL2, SLN2: Rated power x 5 for 5 seconds,
Resistance to Solder Heat	±1%*	±1%*	260°C ± 5°C, 10 ± 1 second
	±0.5%**	±0.5%**	260°C ± 5°C, 10~12 seconds
Rapid Change of Temperature	±1%*	±0.5%*	-55°C (30 minutes), +150°C (30 minutes), 100 cycles
	±0.5%**	±0.25%**	-55°C (15 minutes), +150°C (15 minutes), 1000 cycles
Moisture Resistance	±2%*	±0.5%*	40°C ± 2°C, 90%~95%RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
	±0.5%**	±0.25%**	85°C ± 2°C, 85% ±3%RH, 1000 hours, Rated power x 0.1
Endurance at 70°C	±2%*, ±1%**	±0.5%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Low Temperature Operation	±0.5%	±0.25%	SL07, TSL1, SL1, SL2: -55°C, 1 hour; SLN2: -65°C, 24 hours

\* SL07, TSL1, SL1, SL2

\*\* SLN2

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[SR731ERTTP2R2J](#) [SR731ERTTP5R1J](#) [SR731ERTTP6R8J](#) [SR731ERTTP9R10F](#)