



features

- Surface mount type
- Flameproof UL94V0 molded polymer case
- Excellent dimension accuracy, mountability and shock resistance
- Low profile type available (TSL)
- Marking: Black body color with white marking or laser marking
- Products with lead-free terminations meet EU RoHS requirements. EU RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.

dimensions and construction



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/SLZ1	.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	Size	Termination Material	Packaging	Nominal Resistance	Tolerance
	SL SLN SLZ TSL	07: 0.75W 1: 1W 2: 2W 3: 3W	T: Sn (Other termination styles may be available, please contact factory for options)	SL07, SL1, SLZ1, TSL- (TE: 7" embossed plastic) SL2, SLN2, SL3- TED: 10" embossed plastic For further information on packaging please refer to Appendix A	±2%, ±5%: 2 significant figures + 1 multiplier "R" indicates decimal on value <10Ω ±0.5%, ±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	D: ±0.5% F: ±1% G: ±2% J: ±5%

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
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%)			
			3mΩ ~ 22MΩ	(J: ±5%)			

applications and ratings (cont.)

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
SL2	2W	±180: R=<10mΩ ±100: R=>11mΩ	10mΩ - 1MΩ	(D: ±0.5%)	500V	1000V	-55°C to +180°C
			5mΩ ~ 1MΩ	(F: ±1%)			
			3mΩ, 4mΩ	(G: ±2%)			
			3mΩ - 22MΩ	(J: ±5%)			
SLN2	2W	±110: R<10mΩ ±75: R=>10mΩ	5mΩ - 200mΩ	(D: ±0.5%) (F: ±1%) (J: ±5%)	—	—	
SL3	3W	±180: R=<10mΩ ±100: R=>11mΩ	10mΩ - 100mΩ	(D: ±0.5%)	—	—	
			5mΩ - 100mΩ	(F: ±1%) (J: ±5%)			
SLZ1**	—	4000 Max.	0.5mΩ Max.	—	—	—	
TSL1	1W	±180: R=<13mΩ ±100: R=>15mΩ	10mΩ - 100mΩ	(D: ±0.5%)	—	—	
			5mΩ - 100mΩ	(F: ±1%) (J: ±5%)			

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

** SLZ1: Current rating: 44A

environmental applications

Derating Curve



Surface Temperature Rise



* TSL1: 20mΩ
SLN2: 110mΩ
10mm pattern

Performance Characteristics

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