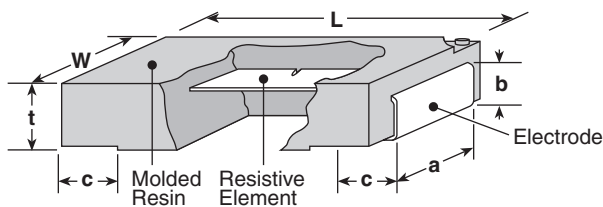


features

- 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.
- AEC-Q200 Qualified

dimensions and construction



Size Code	Dimensions inches (mm)					
	L	W	t	a	b	c
SL07 (2010)	.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)
TSL1 (2512)	.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)
SL1,SLZ1 (2512)	.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 (4528)	.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 (4528)	.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)

ordering information

New Part #	SL	1	T	TE	10L0	F					
Type	TSL SL SLN SLZ	Power Rating	07: 0.75W 1: 1W 2: 2W	Termination Material	T: Sn L: Sn/Pb*	Packaging	TE: Embossed plastic TED: 10" embossed plastic For further information on packaging please refer to Appendix A	Nominal Resistance	±0.5%, ±1%: 4 digits ±2%, ±5%: 3 digits Example: 0.1Ω: R100 5mΩ: 5L0	Tolerance	D: ±0.5% F: ±1% G: ±2% J: ±5%

* SL07 and SLN2, only the symbol T is available as the terminal surface material

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	Rated Ambient Temperature	Rated Terminal Part Temperature	Operating Temperature Range	
SL07	0.75W	0~200: R=<10mΩ 0~150: R=>11mΩ	5mΩ - 100mΩ	(F: ±1%) (J: ±5%)	—	—	70°C	125°C	-55°C to +180°C	
TSL1	1W	±180: R=<13mΩ ±100: R=>15mΩ	10mΩ - 100mΩ	(D: ±0.5%)	—	—		125°C		
			5mΩ - 100mΩ	(F: ±1%)				125°C		
			5mΩ - 100mΩ	(J: ±5%)				125°C		
SL1	1W	±180: R=<13mΩ ±100: R=>15mΩ	10mΩ - 1MΩ	(D: ±0.5%)	200V	400V		125°C: R≤100mΩ		
			5mΩ - 1MΩ	(F: ±1%)				90°C: R≥110mΩ		
			3mΩ, 4mΩ	(G: ±2%)						
			3mΩ ~ 22MΩ	(J: ±5%)						
SLZ1***	—	4000 Max.	0.5mΩ Max.	—	—	—		—		
SL2	2W	±180: R=<10mΩ ±100: R=>11mΩ	10mΩ - 1MΩ	(D: ±0.5%)	500V	1000V		125°C: R≤100mΩ		
			5mΩ ~ 1MΩ	(F: ±1%)			90°C: R≥110mΩ			
			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%)	—	—	120°C			
SL3	3W	±180: R=<10mΩ ±100: R=>11mΩ	10mΩ - 100mΩ	(D: ±0.5%)	—	—	125°C: R≤100mΩ			
			5mΩ - 100mΩ	(F: ±1%)			90°C: R≥110mΩ			
			5mΩ - 100mΩ	(J: ±5%)						

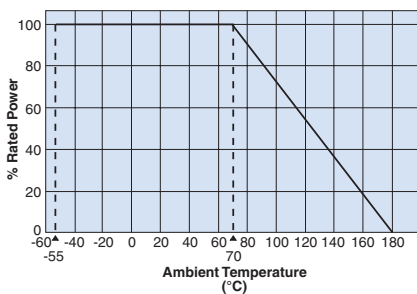
* 3m, 4m, 5m, 6m, 7m, 8m, 9m also available inside resistance range

** Please contact factory for T.C.R.: ±50ppm/°C and ±75ppm/°C

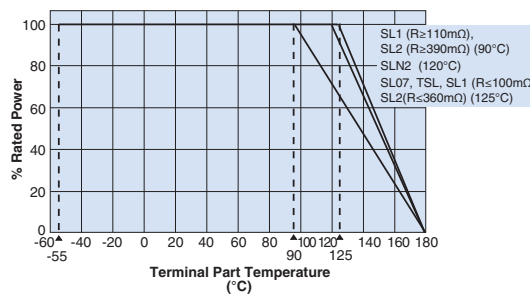
*** SLZ1: Current rating:44A

environmental applications

Derating Curve



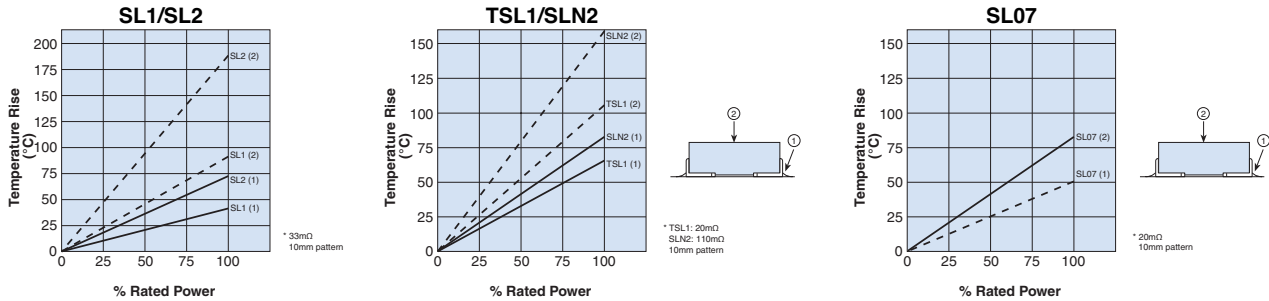
For resistors operated at an ambient temperature of 70°C or above, a power rating shall be derated in accordance with the above derating curve.



For resistors operated at a terminal part temperature of described for each size or above, a power rating shall be derated in accordance with the derating curve.

Please refer to "Introduction of the derating curve based on the terminal part temperature" on the beginning of our catalog before use.

Surface Temperature Rise



Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions.

Performance Characteristics

Parameter	Requirement $\Delta R \pm\%$		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)	$\pm 1\%$: SL07, TSL1, SL1, SL2, SL3 $\pm 0.5\%$: SLN2	$\pm 1\%$: SL07, TSL1, SL1, SL2, SL3 $\pm 0.25\%$: SLN2	SL07: Rated power x 4 for 5 seconds, TSL1: Rated power x 2.5 for 5 seconds, SL1, SL2, SLN2, SL3: Rated power x 5 for 5 seconds,
Resistance to Solder Heat	$\pm 1\%$: SL07, TSL1, SL1, SL2, SL3	$\pm 1\%$: SL07, TSL1, SL1, SL2, SL3	260°C \pm 5°C, 10 \pm 1 second
	$\pm 0.5\%$: SLN2	$\pm 0.5\%$: SLN2	260°C \pm 5°C, 10~12 seconds
Rapid Change of Temperature	$\pm 1\%$: SL07, TSL1, SL1, SL2, SL3	$\pm 0.5\%$: SL07, TSL1, SL1, SL2, SL3	-55°C (30 minutes), +150°C (30 minutes), 100 cycles
	$\pm 0.5\%$: SLN2	$\pm 0.25\%$: SLN2	-55°C (15 minutes), +150°C (15 minutes), 1000 cycles
Moisture Resistance	$\pm 2\%$: SL07, TSL1, SL1, SL2, SL3	$\pm 0.5\%$: SL07, TSL1, SL1, SL2, SL3	40°C \pm 2°C, 90%~95%RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
	$\pm 0.5\%$: SLN2	$\pm 0.25\%$: SLN2	85°C \pm 2°C, 85% \pm 3%RH, 1000 hours, Rated power x 0.1
Endurance at 70°C	$\pm 2\%$: SL07, TSL1, SL1, SL2, SL3 $\pm 1\%$: SLN2	$\pm 0.5\%$	70°C \pm 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Low Temperature Exposure	$\pm 0.5\%$	$\pm 0.25\%$	SL07, TSL1, SL1, SL2, SL3: -55°C, 1 hour; SLN2: -65°C, 24 hours

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