



**THE DATASHEET OF  
SLR1TTER620F**

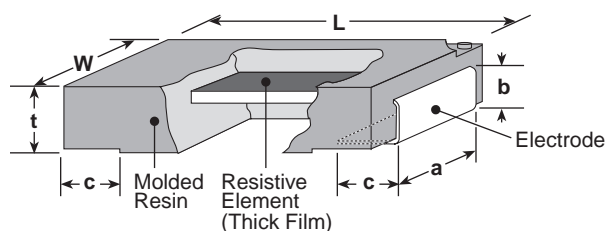




## features

- Thick film resistor protected by liquid crystal polymer resin
- Excellent heat cycle characteristics
- Encapsulated with flame retardant resin molding. (UL94 V-0)
- High operating temperature range up to 180°C
- Products meet EU RoHS requirements. EU RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.
- AEC-Q200 Tested

## dimensions and construction



| Size Code   | Dimensions inches (mm) |                        |                        |                        |                        |                        |
|-------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
|             | L                      | W                      | t                      | a                      | b                      | c                      |
| SLR1 (2512) | .248±.012<br>(6.3±0.3) | .122±.008<br>(3.1±0.2) | .075±.008<br>(1.9±0.2) | .094±.008<br>(2.4±0.2) | .047±.008<br>(1.2±0.2) | .047±.012<br>(1.2±0.3) |

## ordering information

| SLR  | 1            | T                         | TE  | R301                          | F                            |
|------|--------------|---------------------------|---|-------------------------------|------------------------------|
| Type | Power Rating | Terminal Surface Material | Packaging   | Nominal Resistance            | Resistance Tolerance         |
| SLR  | 1: 1.0W      | T: Sn                     | TE: 8mm Pitch embossed plastic<br>TED: 8mm Pitch embossed plastic | D, F: 4 digits<br>J: 3 digits | D: ±0.5%<br>F: ±1%<br>J: ±5% |

| Resistance Value (Ω) | 3 Digits  | Resistance Value (Ω) | 4 Digits    |
|----------------------|-----------|----------------------|-------------|
| 0.33 ~ 0.91          | R33 ~ R91 | 0.301 ~ 0.976        | R301 ~ R976 |
| 1 ~ 9.1              | 1R0 ~ 9R1 | 1 ~ 9.76             | R100 ~ 9R76 |

Contact us when you have control request for environmental hazardous material other than the substance specified by EU RoHS.

For further information on packaging please refer to Appendix A.

## applications and ratings

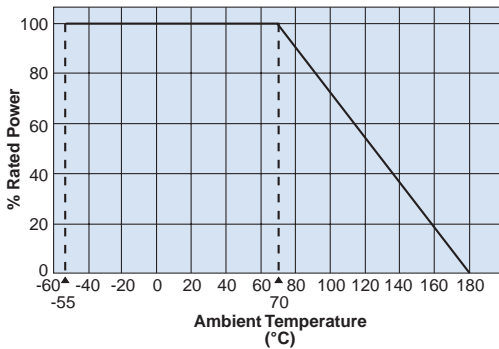
| Part Designation | Power Rating | Rated Ambient Temp. | Rated Terminal Part Temperature | Resistance Range (Ω) |                    |               | T.C.R. (X10 <sup>-6</sup> /K) | Maximum Working Voltage | Maximum Overload Voltage | Operating Temp. Range |
|------------------|--------------|---------------------|---------------------------------|----------------------|--------------------|---------------|-------------------------------|-------------------------|--------------------------|-----------------------|
|                  |              |                     |                                 | D: ±0.5%<br>E24, E96 | F: ±1%<br>E24, E96 | J: ±5%<br>E24 |                               |                         |                          |                       |
| SLR1             | 1W           | 70°C                | 90°C                            | 301m - 1M            | 301m - 1M          | 330m - 1M     | ±100                          | 200V                    | 400V                     | -55°C to +180°C       |

Rated voltage =  $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$  or Max. working voltage, whichever is lower

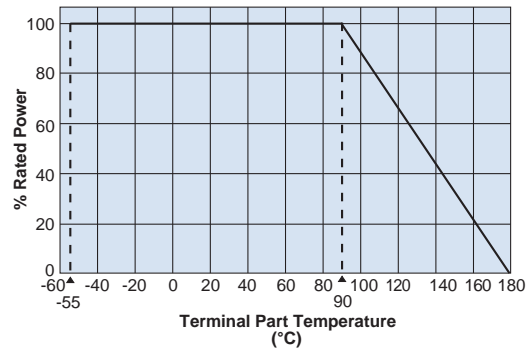
If any questions should arise whether to use the "Rated Ambient Temperature" or the "Rated Terminal Part Temperature," please give priority to the "Rated Terminal Part Temperature." Prior to use and for more details refer to "Introduction of the derating curves on the terminal part temperature" in the beginning of the catalog.

## environmental applications

### Derating Curve

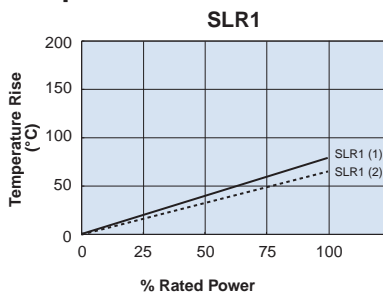


For resistors operated at an ambient temperature of 70°C or above, a power rating shall be derated in accordance with the above derating curve.

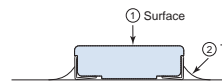


For resistors operated at a terminal part temperature of described for each size or above, a power rating shall be derated in accordance with the derating curve. Please refer to "Introduction of the derating curve based on the terminal part temperature" in the beginning of our catalog before use.

### Temperature Rise

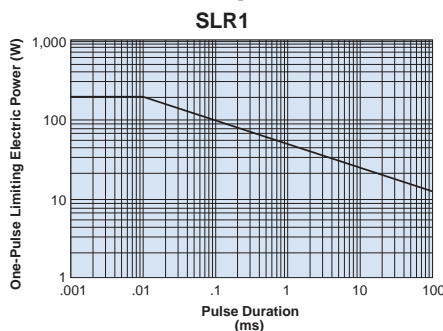


Regarding the temperature rise, the value of the temperature varies per conditions and board for use since the temperature is measured under our measuring conditions.



Measurement condition  
Room temperature: 25°C  
PCB: FR-4t = 1.6mm  
Cu foil thickness: 35µm

### One-Pulse Limiting Electric Power



The maximum applicable voltage is equal to the max. overload voltage.

Please ask us about the resistance characteristic of continuous applied pulse.

The pulse endurance values are not assured values, so be sure to check the products on actual equipment when you use them.

### 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)       | $\pm 1\%$                    | $\pm 0.1\%$ | Rated power times 5 for 5 seconds                                  |
| Resistance to Solder Heat   | $\pm 1\%$                    | $\pm 0.3\%$ | 260°C $\pm$ 5°C, 10 $\pm$ 1 second                                 |
| Rapid Change of Temperature | $\pm 1\%$                    | $\pm 0.4\%$ | -55°C (30 minutes), +155°C (30 minutes), 1000 cycles               |
| Moisture Resistance         | $\pm 2\%$                    | $\pm 0.2\%$ | 40°C $\pm$ 2°C, 90%~95%RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle |
| Endurance at 70°C           | $\pm 2\%$                    | $\pm 0.2\%$ | 70°C $\pm$ 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle            |

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