

## Small Signal Product

## Surface Mount Schottky Barrier Rectifiers

### FEATURES

- Plastic package has carries underwriters
- Ideal for automated placement
- Surge overload rating to 25 Amperes peak
- Reliable low cost construction utilizing molded plastic technique results in in-expensive product
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Terminal : Pure tin plated, lead free
- Weight : 0.12 grams


**MELF**


### MECHANICAL DATA

- Polarity: Indicated by blue cathode band

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted) |                    |        |        |        |        |        |      |
|----------------------------------------------------------------------------------------------|--------------------|--------|--------|--------|--------|--------|------|
| PARAMETER                                                                                    | SYMBOL             | LSR102 | LSR103 | LSR104 | LSR105 | LSR106 | UNIT |
| Maximum repetitive peak reverse voltage                                                      | V <sub>RRM</sub>   | 20     | 30     | 40     | 50     | 60     | V    |
| Maximum RMS voltage                                                                          | V <sub>RMS</sub>   | 14     | 21     | 28     | 35     | 42     | V    |
| Maximum DC blocking voltage                                                                  | V <sub>DC</sub>    | 20     | 30     | 40     | 50     | 60     | V    |
| Maximum average forward rectified current                                                    | I <sub>F(AV)</sub> | 1      |        |        |        |        | A    |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load          | I <sub>FSM</sub>   | 25     |        |        |        |        | A    |
| Maximum instantaneous forward voltage (Note 1)<br>@ 1 A                                      | V <sub>F</sub>     | 0.55   |        |        | 0.70   |        | V    |
| Maximum reverse current @ rated VR    T <sub>J</sub> =25 °C<br>                              |                    |        |        |        |        |        |      |

Note 1: Pulse test with PW=300μs, 1% duty cycle

Note 2: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

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## RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

Fig.1 Maximum Forward Current Derating Curve

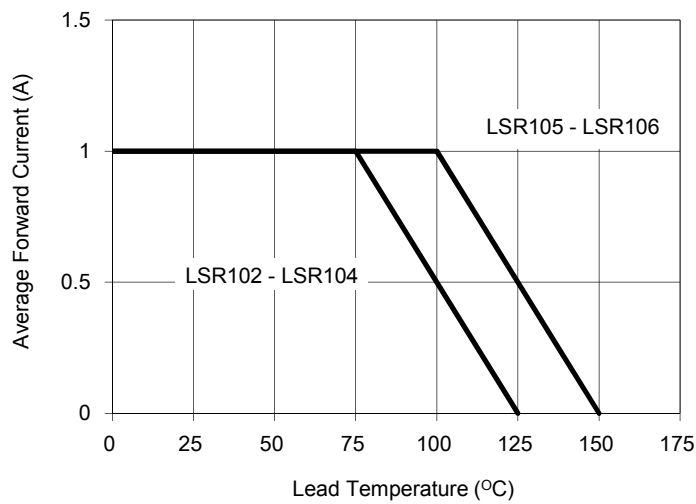


Fig.2 Maximum Non-Repetitive Forward Surge Current

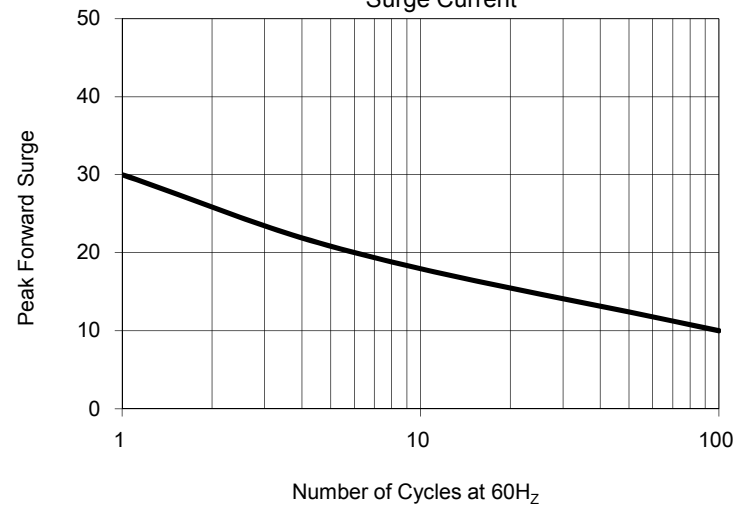


Fig.3 Typical Forward Characteristics

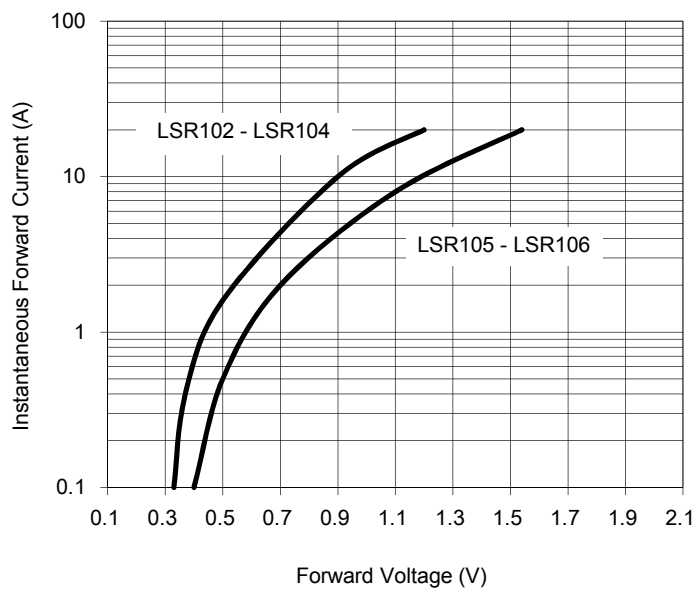


Fig.4 Typical Reverse Characteristics

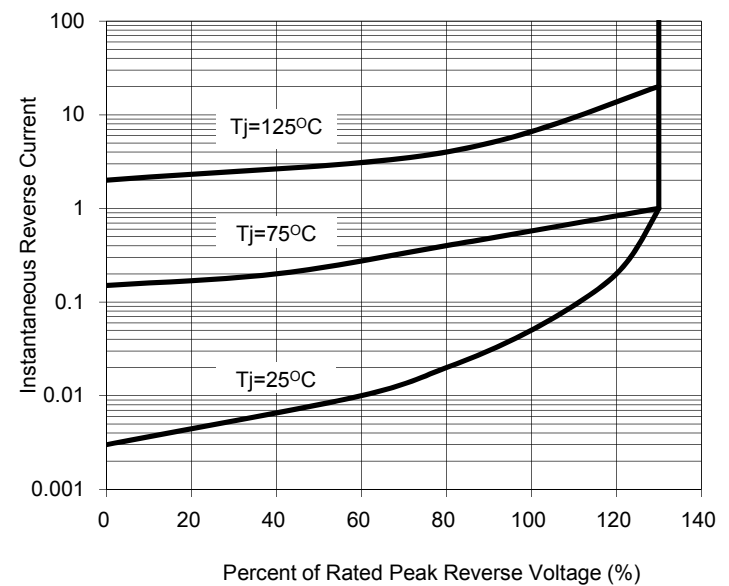


Fig.5 Typical Junction Capacitance

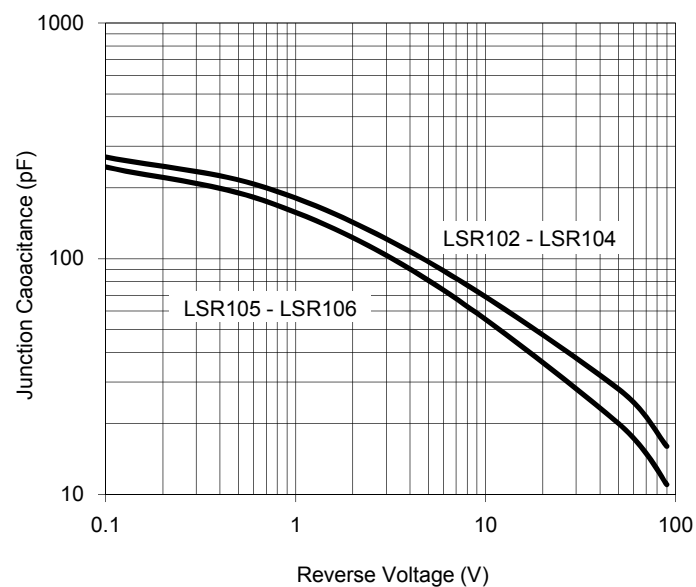
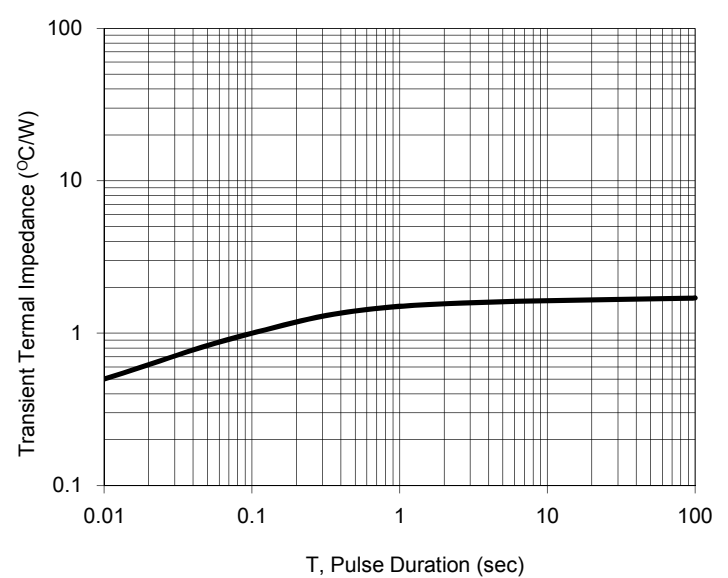


Fig.6 Typical Transient Thermal Characteristics



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| ORDERING INFORMATION |                             |              |         |               |
|----------------------|-----------------------------|--------------|---------|---------------|
| PART NO.             | PART NO. SUFFIX<br>(Note 2) | PACKING CODE | PACKAGE | PACKING       |
| LSR10x<br>(Note 1)   | -xx                         | L0           | MELF    | 5K / 13" Reel |

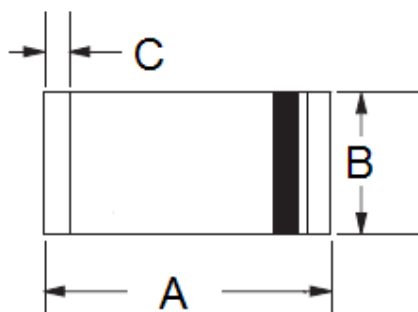
Note 1: "x" defines voltage from 20V (LSR102) to 60V (LSR106)

Note 2: Part No. Suffix „-xx “ would be used for special requirement

| EXAMPLE       |          |                 |              |                             |
|---------------|----------|-----------------|--------------|-----------------------------|
| PREFERRED P/N | PART NO. | PART NO. SUFFIX | PACKING CODE | DESCRIPTION                 |
| LSR102 L0     | LSR102   |                 | L0           | Multiple manufacture source |
| LSR102-J0 L0  | LSR102   | -J0             | L0           | Define manufacture source   |

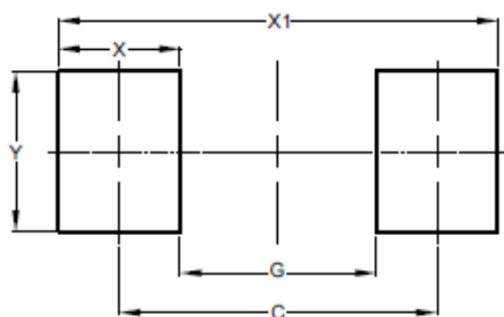
PACKAGE OUTLINE DIMENSIONS

**MELF**



| DIM. | Unit (mm) |      | Unit (inch) |       |
|------|-----------|------|-------------|-------|
|      | Min       | Max  | Min         | Max   |
| A    | 4.80      | 5.50 | 0.189       | 0.217 |
| B    | 2.25      | 2.67 | 0.089       | 0.105 |
| C    | 0.30      | 0.60 | 0.012       | 0.024 |

SUGGEST PAD LAYOUT



| DIM. | Unit (mm) | Unit (inch) |
|------|-----------|-------------|
|      | Typ.      | Typ.        |
| C    | 4.80      | 0.189       |
| G    | 3.30      | 0.130       |
| X    | 1.50      | 0.059       |
| X1   | 6.30      | 0.248       |
| Y    | 2.70      | 0.106       |

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