



# SL1045 THRU SL10200

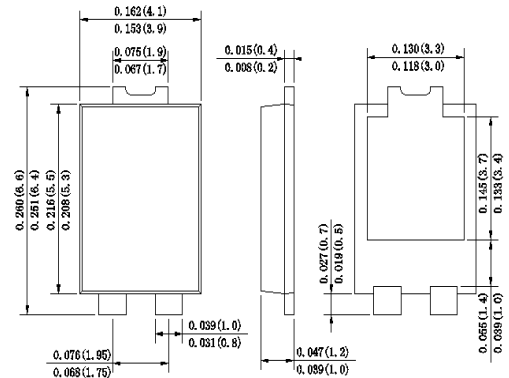
Reverse Voltage - 45 to 200 Volts Forward Current -10.0 Ampere

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### Features

- ◆ Schottky Barrier Chip
- ◆ High Thermal Reliability
- ◆ Patented Super Barrier Rectifier Technology
- ◆ High Forward Surge Capability
- ◆ Ultra Low Power Loss, High Efficiency
- ◆ Excellent High temperature Stability
- ◆ Plastic material-UL flammability 94V-0

TO-277



### Mechanical Data

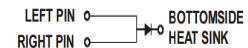
**Case** : JEDEC TO-277 Molded plastic body

**Terminals** :Plated Leads Solderable per MIL-STD-202,Method 208

**Polarity** : Polarity symbol marking on body

**Mounting Position** : Any

**Weight** : 0.003 ounce, 0.092 grams



Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Parameter                                                                                                              | SYMBOLS                              | MDD         | MDD    | MDD    | MDD    | MDD     | MDD     | MDD     | UNIT |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------|--------|--------|--------|---------|---------|---------|------|
| Marking Code                                                                                                           |                                      | SL1045      | SL1050 | SL1060 | SL1080 | SL10100 | SL10150 | SL10200 |      |
| Maximum repetitive peak reverse voltage                                                                                | V <sub>RRM</sub>                     | 45          | 50     | 60     | 80     | 100     | 150     | 200     | V    |
| Maximum working peak reverse voltage                                                                                   | V <sub>RWM</sub>                     |             |        |        |        |         |         |         |      |
| Maximum DC blocking voltage                                                                                            | V <sub>DC</sub>                      |             |        |        |        |         |         |         |      |
| RMS Reverse voltage                                                                                                    | V <sub>RMS</sub>                     | 32          | 35     | 42     | 56     | 70      | 105     | 140     | V    |
| Average Rectified Output Current                                                                                       | I <sub>O</sub>                       | 10          |        |        |        |         |         |         | A    |
| Non-Repetitive Peak Forward Surge8.3ms<br>Single Half Sine-Wave Superimposed on<br>rated load(JEDEC Method)            | I <sub>FSM</sub>                     | 250         |        |        |        |         |         |         | A    |
| Forward Voltage Drop at 10.0A    T <sub>A</sub> =25℃                                                                   | V <sub>F</sub>                       | 0.45        |        | 0.50   | 0.75   |         | 0.78    |         | V    |
| Peak reverse curent                    T <sub>A</sub> =25℃<br>at rated DC blocking voltage        T <sub>A</sub> =125℃ | I <sub>R</sub>                       | 0.3<br>15   |        |        |        |         |         |         | mA   |
| Typical thermal resistance<br>Junctionto Ambient                                                                       | R <sub>θJA</sub><br>R <sub>θJL</sub> | 80<br>15    |        |        |        |         |         |         | ℃/W  |
| Operating junction and storage temperaturerange                                                                        | T <sub>J</sub> ,T <sub>STG</sub>     | -55 to +150 |        |        |        |         |         |         | ℃    |

Note: 1. Valid Provided that are kept at ambient temperature at a distance of 9.5mm from the case.

2. Fr-4 pcb. 2oz. Copper, minimum recommend pad layout .188mm x 14.4. Anode pad dimensions 5.6mm x 14.4mm.



## Ratings And Characteristic Curves

Fig.1 - Forward Current Derating Curve

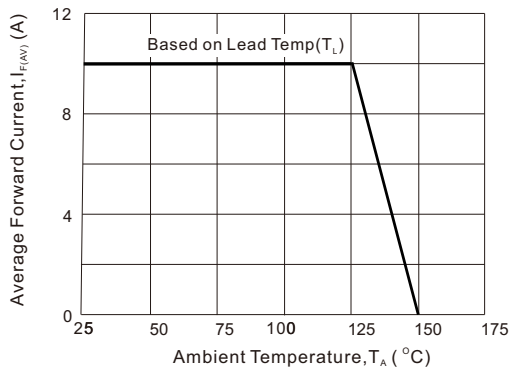


Fig2 : Instantaneous Forward Voltage

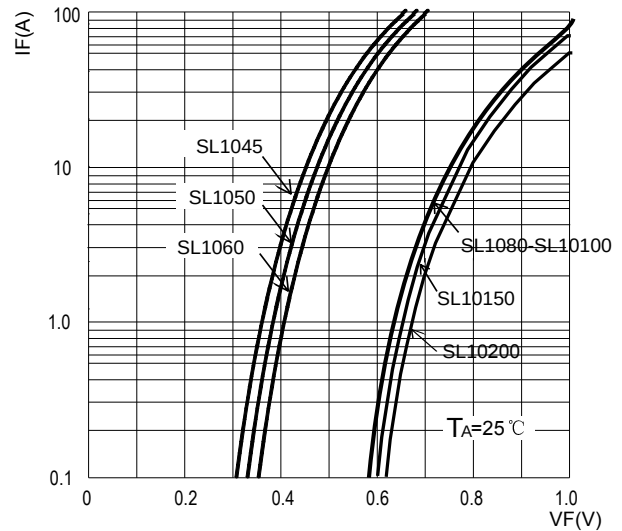


Fig3: Surge Forward Current Capability

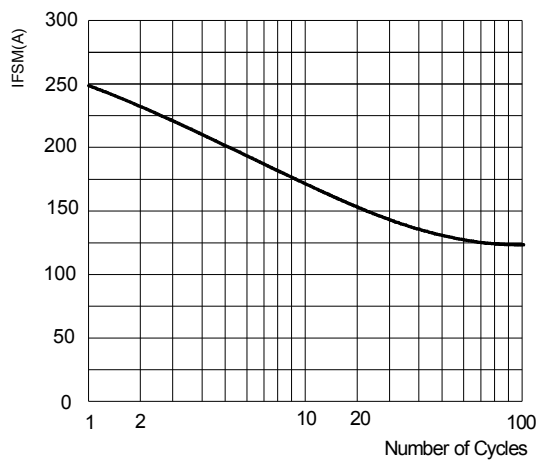
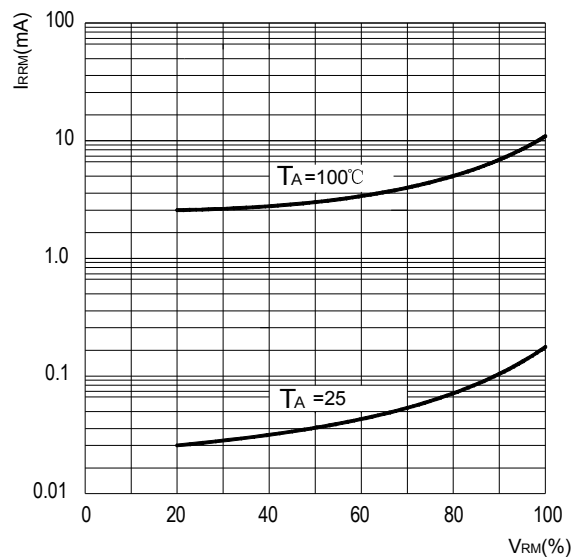


Fig4: Typical Reverse Characteristics



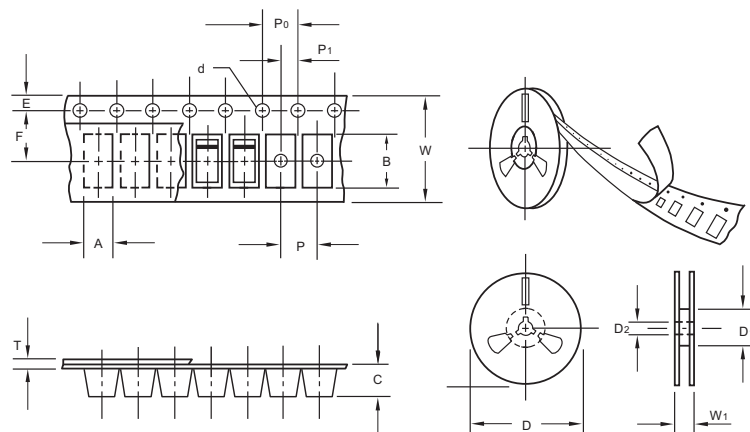
The curve above is for reference only.



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## Packing information



unit:mm

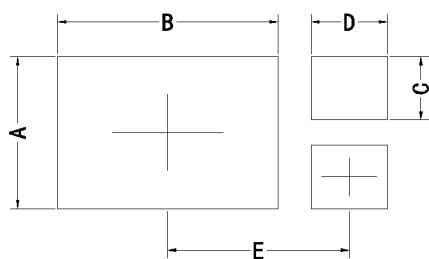
| Item                      | Symbol | Tolerance | TO-277 |
|---------------------------|--------|-----------|--------|
| Carrier width             | A      | 0.1       | 4.45   |
| Carrier length            | B      | 0.1       | 7.0    |
| Carrier depth             | C      | 0.1       | 1.60   |
| Sprocket hole             | d      | 0.05      | 1.55   |
| 13" Reel outside diameter | D      | 2.0       | 330.00 |
| 13" Reel inner diameter   | D1     | min       | 50.0   |
| Feed hole diameter        | D2     | 0.5       | 13.00  |
| Sprocket hole position    | E      | 0.1       | 1.75   |
| Punch hole position       | F      | 0.1       | 7.50   |
| Punch hole pitch          | P      | 0.1       | 8.00   |
| Sprocket hole pitch       | P0     | 0.1       | 4.00   |
| Embossment center         | P1     | 0.1       | 2.00   |
| Overall tape thickness    | T      | 0.1       | 0.25   |
| Tape width                | W      | 0.3       | 12.00  |
| Reel width                | W1     | 1.0       | 12.30  |

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

## Reel packing

| PACKAGE | REEL SIZE | REEL (pcs) | COMPONENT SPACING (m/m) | BOX (pcs) | INNER BOX (m/m) | REEL DIA, (m/m) | CARTON SIZE (m/m) | CARTON (pcs) | APPROX. GROSS WEIGHT (kg) |
|---------|-----------|------------|-------------------------|-----------|-----------------|-----------------|-------------------|--------------|---------------------------|
| TO-277  | 11"       | 3,000      | 5.0                     | 6,000     | 340*340*43      | 280             | 380*380*380       | 48,000       | 9.0                       |
| TO-277  | 13"       | 5,000      | 4.0                     | 10,000    | 340*340*43      | 330             | 380*380*380       | 80,000       | 13.0                      |

## Suggested Pad Layout



| Symbol | Unit (mm) | Unit (inch) |
|--------|-----------|-------------|
| A      | 3.60      | 0.142       |
| B      | 5.35      | 0.211       |
| C      | 1.50      | 0.059       |
| D      | 1.85      | 0.073       |
| E      | 4.30      | 0.169       |