

# SDB12FW THRU SDB120FW

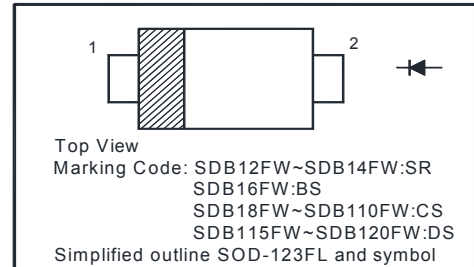
## Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 20 to 200 V

Forward Current - 1 A

### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



### Absolute Maximum Ratings and Characteristics

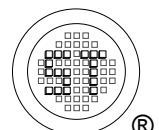
Ratings at  $T_a = 25^\circ\text{C}$  ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Parameter                                                                                                  | Symbols            | SDB<br>12FW       | SDB<br>14FW | SDB<br>16FW | SDB<br>18FW | SDB<br>110FW | SDB<br>115FW     | SDB<br>120FW | Units |
|------------------------------------------------------------------------------------------------------------|--------------------|-------------------|-------------|-------------|-------------|--------------|------------------|--------------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                     | V <sub>RRM</sub>   | 20                | 40          | 60          | 80          | 100          | 150              | 200          | V     |
| Maximum RMS Voltage                                                                                        | V <sub>RMS</sub>   | 14                | 28          | 42          | 56          | 80           | 105              | 141          | V     |
| Maximum DC Blocking Voltage                                                                                | V <sub>DC</sub>    | 20                | 40          | 60          | 80          | 100          | 150              | 200          | V     |
| Maximum Average Forward Rectified Current<br>at T <sub>L</sub> = 75°C                                      | I <sub>F(AV)</sub> | 1                 |             |             |             |              |                  |              | A     |
| Peak Forward Surge Current 8.3 ms Single Half<br>Sine-Wave Superimposed on Rated Load (JEDEC Method)       | I <sub>FSM</sub>   | 30                |             |             |             |              |                  |              | A     |
| Maximum Forward Voltage at 1 A                                                                             | V <sub>F</sub>     | 0.55              |             | 0.7         |             | 0.85         |                  |              | V     |
| Maximum Reverse Current<br>T <sub>a</sub> = 25°C<br>at Rated DC Blocking Voltage<br>T <sub>a</sub> = 100°C | I <sub>R</sub>     | 0.1<br>10         |             |             |             |              | 0.002<br>10      |              | mA    |
| Typical Junction Capacitance                                                                               | C <sub>J</sub>     | 110 <sup>1)</sup> |             |             |             |              | 23 <sup>2)</sup> |              | pF    |
| Typical Thermal Resistance <sup>3)</sup>                                                                   | R <sub>θJA</sub>   | 75                |             |             |             |              | 132              |              | °C/W  |
| Operating Junction Temperature Range                                                                       | T <sub>j</sub>     | - 55 to + 125     |             |             |             |              |                  |              | °C    |
| Storage Temperature Range                                                                                  | T <sub>stg</sub>   | - 55 to + 150     |             |             |             |              |                  |              | °C    |

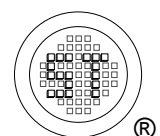
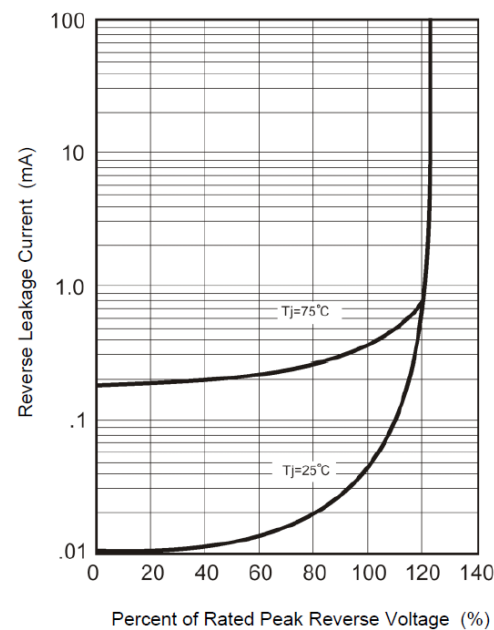
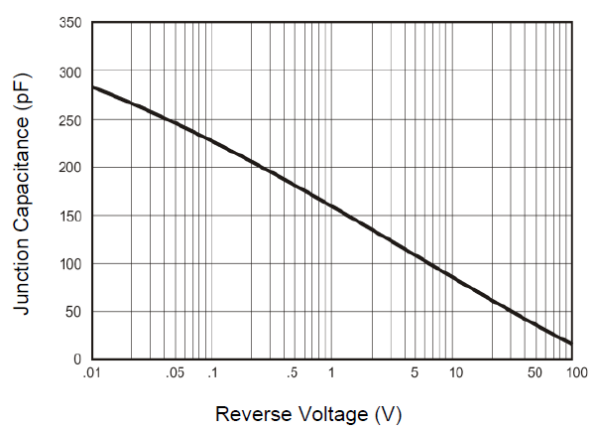
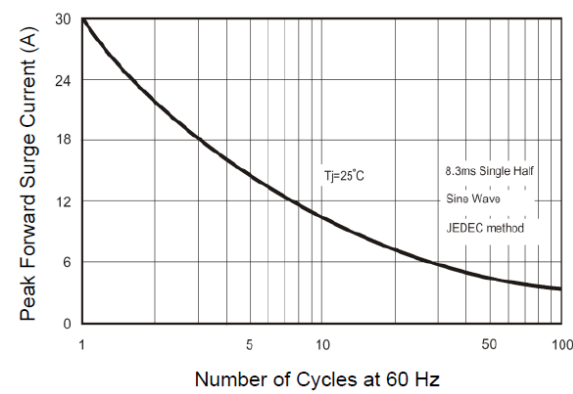
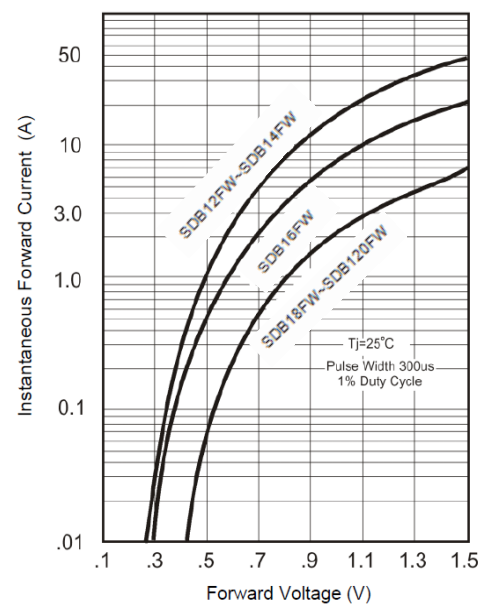
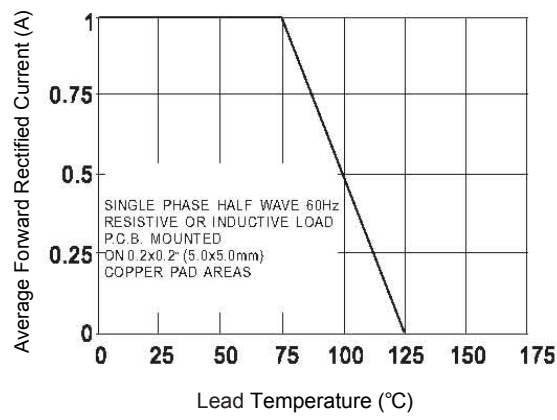
<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 V.

<sup>2)</sup> Measured at 1 MHz and applied reverse voltage of 5 V.

<sup>3)</sup> Thermal resistance junction to ambient 0.24" x 0.24" (6 x 6 mm) copper pads to each terminals



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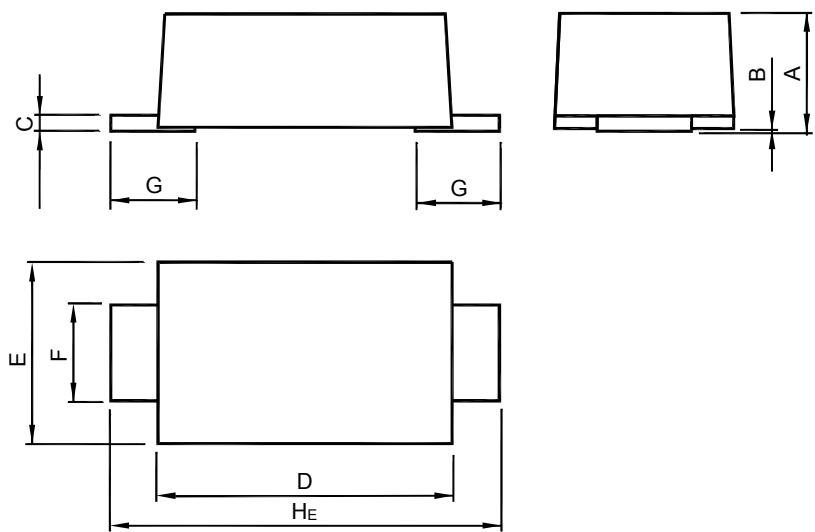


# SDB12FW THRU SDB120FW

## PACKAGE OUTLINE

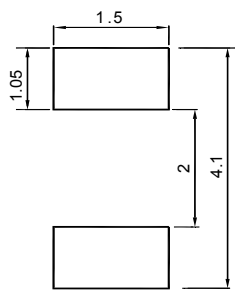
Plastic surface mounted package; 2 leads

SOD-123FL



| UNIT | A            | B        | C          | D          | E          | F          | G            | H <sub>E</sub> |
|------|--------------|----------|------------|------------|------------|------------|--------------|----------------|
| mm   | 1.08<br>0.88 | 0.1<br>0 | 0.2<br>0.1 | 2.9<br>2.7 | 1.9<br>1.7 | 1.1<br>0.8 | 0.85<br>0.45 | 3.9<br>3.5     |

## Recommended Soldering Footprint



## Packing information

| Package   | Tape Width (mm) | Pitch   |               | Reel Size |      | Per Reel Packing Quantity |
|-----------|-----------------|---------|---------------|-----------|------|---------------------------|
|           |                 | mm      | inch          | mm        | inch |                           |
| SOD-123FL | 8               | 4 ± 0.1 | 0.157 ± 0.004 | 178       | 7    | 3,000                     |

## Marking information

" III " = Cathode line

" \*\* " = Part No.

Font type: Arial

