

### SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE: 20 - 100 V  
FORWARD CURRENT: 1.0 A

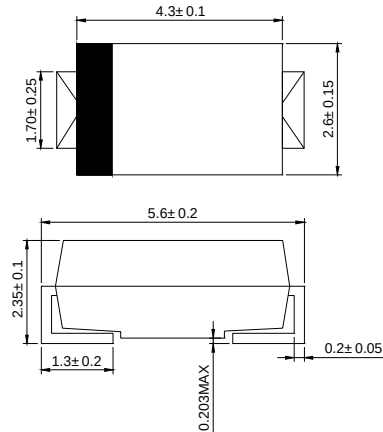
#### FEATURES

- ◇ Schottky barrier rectifier
- ◇ Guardring protection
- ◇ Low forward voltage
- ◇ Reverse energy tested
- ◇ High current capability
- ◇ Extremely low thermal resistance

#### MECHANICAL DATA

- ◇ Case: SMAJ molded plastic body
- ◇ Polarity: Color band denotes cathode end
- ◇ Mounting position: ANY
- ◇ Weight: 0.003 ounces, 0.084 grams

#### SMAJ



Dimensions in millimeters

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

|                                                                                                     |                    | SS12J         | SS13J | SS14J | SS15J | SS16J | SS18J | SS19J | SS110J | UNITS |
|-----------------------------------------------------------------------------------------------------|--------------------|---------------|-------|-------|-------|-------|-------|-------|--------|-------|
| Device marking code                                                                                 |                    | SS12          | SS13  | SS14  | SS15  | SS16  | SS18  | SS19  | S110   |       |
| Maximum repetitive peak reverse voltage                                                             | V <sub>RRM</sub>   | 20            | 30    | 40    | 50    | 60    | 80    | 90    | 100    | V     |
| Maximum RMS voltage                                                                                 | V <sub>RWS</sub>   | 14            | 21    | 28    | 35    | 42    | 56    | 63    | 70     | V     |
| Maximum DC blocking voltage                                                                         | V <sub>DC</sub>    | 20            | 30    | 40    | 50    | 60    | 80    | 90    | 100    | V     |
| Maximum average forward rectified current at<br>T <sub>L</sub> =90℃                                 | I <sub>F(AV)</sub> | 1.0           |       |       |       |       |       |       |        | A     |
| Peak forward surge current 8.3ms single<br>half-sine-wave                                           | I <sub>FSM</sub>   | 40            |       |       |       |       |       |       |        | A     |
| Maximum instantaneous forward voltage<br>at I <sub>FM</sub> =1.0A (NOTE1)                           | V <sub>F</sub>     | 0.50          |       |       | 0.75  |       | 0.85  |       |        | V     |
| Maximum DC reverse current T <sub>J</sub> =25℃<br>at rated DC blocking voltage T <sub>J</sub> =125℃ | I <sub>R</sub>     | 0.2           |       |       |       |       | 0.5   |       |        | m A   |
|                                                                                                     |                    | 6.0           |       |       | 5.0   |       |       |       |        |       |
| Maximum thermal resistance                                                                          | R <sub>θ JL</sub>  | 28            |       |       |       |       |       |       |        | ℃/W   |
| Operating temperature range                                                                         | T <sub>J</sub>     | -55 ---- +125 |       |       |       |       |       |       |        | ℃     |
| Storage temperature range                                                                           | T <sub>STG</sub>   | -55 ---- +150 |       |       |       |       |       |       |        | ℃     |

NOTE: 1.Pulse test: Pulse width 300us,duty cycle 1 %

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FIG.1 -- FORWARD DERATING CURVE

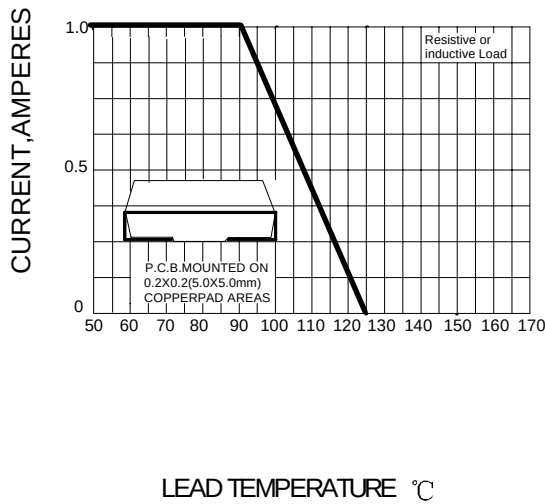


FIG.2- PEAK FORWARD SURGE CURRENT

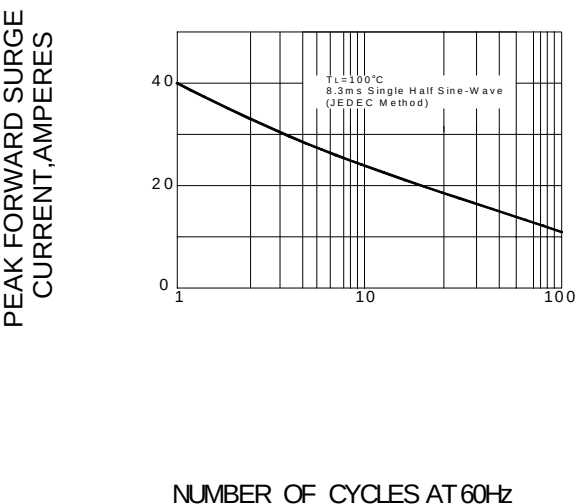


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

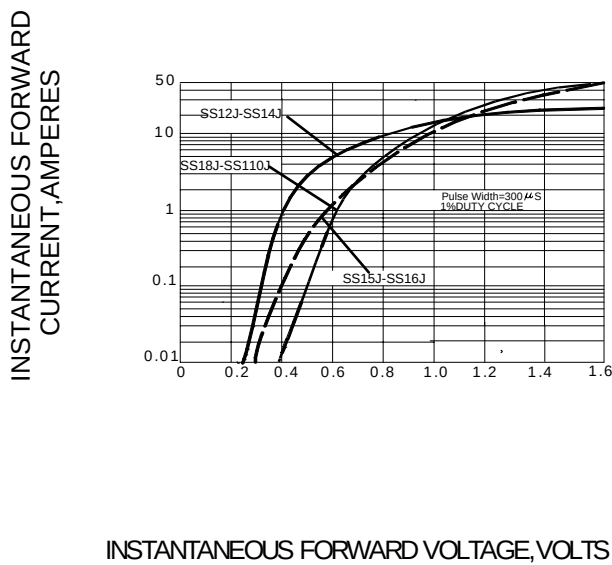


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

