

## SK12 - SK1B

**PRV : 20 - 100 Volts**  
**I<sub>o</sub> : 1.0 Ampere**

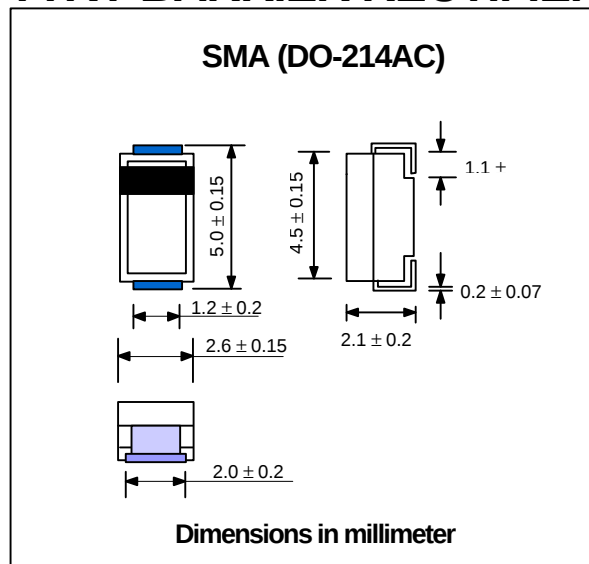
### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* High efficiency
- \* Low power loss
- \* Low forward voltage drop
- \* Low cost

### MECHANICAL DATA :

- \* Case : SMA Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Lead Formed for Surface Mount
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.064 gram

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| RATING                                                                                                  | SYMBOL             | SK<br>12      | SK<br>13 | SK<br>14 | SK<br>15 | SK<br>16 | SK<br>17      | SK<br>18 | SK<br>19 | SK<br>1B | UNITS |    |
|---------------------------------------------------------------------------------------------------------|--------------------|---------------|----------|----------|----------|----------|---------------|----------|----------|----------|-------|----|
| Maximum Recurrent Peak Reverse Voltage                                                                  | V <sub>RRM</sub>   | 20            | 30       | 40       | 50       | 60       | 70            | 80       | 90       | 100      | Volts |    |
| Maximum RMS Voltage                                                                                     | V <sub>RMS</sub>   | 14            | 21       | 28       | 35       | 42       | 49            | 56       | 63       | 70       | Volts |    |
| Maximum DC Blocking Voltage                                                                             | V <sub>DC</sub>    | 20            | 30       | 40       | 50       | 60       | 70            | 80       | 90       | 100      | Volts |    |
| Maximum Average Forward Current    See Fig.1                                                            | I <sub>F(AV)</sub> | 1.0           |          |          |          |          |               |          |          |          | Amp.  |    |
| Peak Forward Surge Current,<br>8.3ms single half sine wave superimposed<br>on rated load (JEDEC Method) | I <sub>FSM</sub>   | 40            |          |          |          |          |               |          |          |          | Amps. |    |
| Maximum Forward Voltage at I <sub>F</sub> = 1.0 Amp.                                                    | V <sub>F</sub>     | 0.5           |          |          | 0.7      |          |               | 0.79     |          |          | Volt. |    |
| Maximum Reverse Current at                    T <sub>a</sub> = 25 °C                                    | I <sub>R</sub>     | 0.5           |          |          |          |          |               |          |          |          | mA    |    |
| Rated DC Blocking Voltage (Note 1)    T <sub>a</sub> = 100 °C                                           | I <sub>R(H)</sub>  | 10.0          |          |          | 5.0      |          |               |          |          |          | mA    |    |
| Typical Thermal Resistance                                                                              | R <sub>θJL</sub>   | 15            |          |          |          |          |               |          |          |          | °C/W  |    |
| Junction Temperature Range                                                                              | T <sub>J</sub>     | - 40 to + 125 |          |          |          |          | - 65 to + 150 |          |          |          |       | °C |
| Storage Temperature Range                                                                               | T <sub>STG</sub>   | - 65 to + 150 |          |          |          |          |               |          |          |          | °C    |    |

### Notes :

(1) Pulse Test : Pulse Width = 300 μs, Duty Cycle = 2%.

**UPDATE : SEPTEMBER 12, 1998**

## RATING AND CHARACTERISTIC CURVES ( SK12 - SK1B )

FIG.1 - FORWARD CURRENT DERATING CURVE

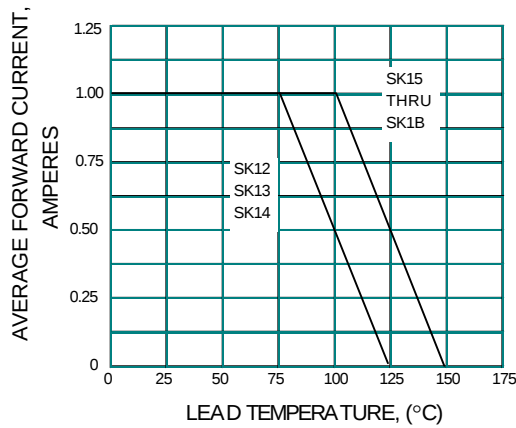


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

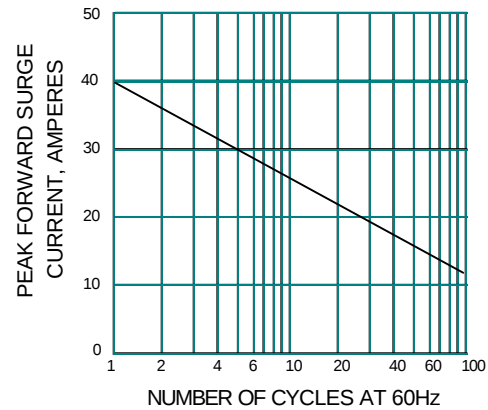


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

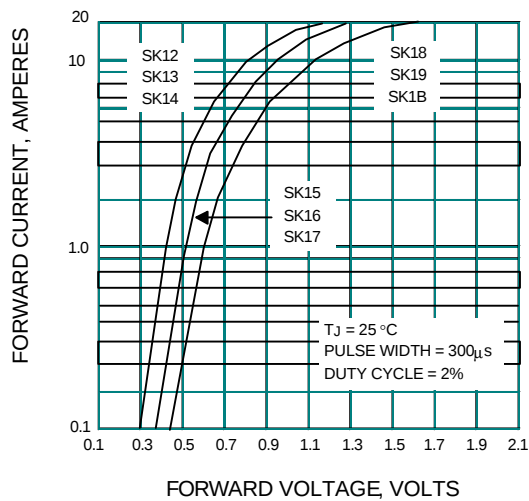


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

