

# SK53SMB

**PRV : 30 Volts**  
**I<sub>o</sub> : 5.0 Amperes**

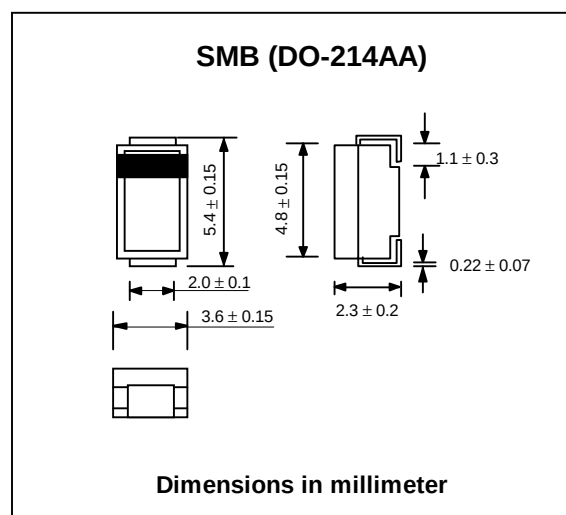
## FEATURES :

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

## MECHANICAL DATA :

- \* Case : SMB Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Lead Formed for Surface Mount
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.1079 gram

# SCHOTTKY BARRIER RECTIFIER DIODES



## 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             | SK53SMB       | UNIT |
|-----------------------------------------------------------------------------------------------------------|--------------------|---------------|------|
| Maximum Recurrent Peak Reverse Voltage                                                                    | V <sub>RRM</sub>   | 30            | V    |
| Maximum RMS Voltage                                                                                       | V <sub>RMS</sub>   | 21            | V    |
| Maximum DC Blocking Voltage                                                                               | V <sub>DC</sub>    | 30            | V    |
| Maximum Average Forward Current See Fig.1                                                                 | I <sub>F(AV)</sub> | 5.0           | A    |
| Maximum Peak Forward Surge Current, 8.3ms single half sine wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>   | 150           | A    |
| Maximum Forward Voltage at I <sub>F</sub> = 5 A (Note 1)                                                  | V <sub>F</sub>     | 0.55          | V    |
| Maximum Reverse Current at Ta = 25 °C                                                                     | I <sub>R</sub>     | 0.5           | mA   |
| Rated DC Blocking Voltage (Note 1) Ta = 100 °C                                                            | I <sub>R(H)</sub>  | 50            | mA   |
| Junction Temperature Range                                                                                | T <sub>J</sub>     | - 65 to + 125 | °C   |
| Storage Temperature Range                                                                                 | T <sub>STG</sub>   | - 65 to + 150 | °C   |

## Note :

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

## RATING AND CHARACTERISTIC CURVES ( SK53SMB )

FIG.1 - FORWARD CURRENT DERATING CURVE

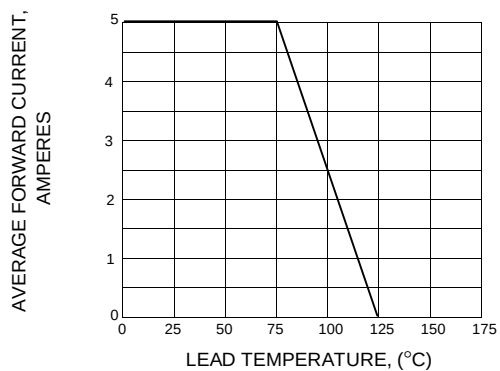


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

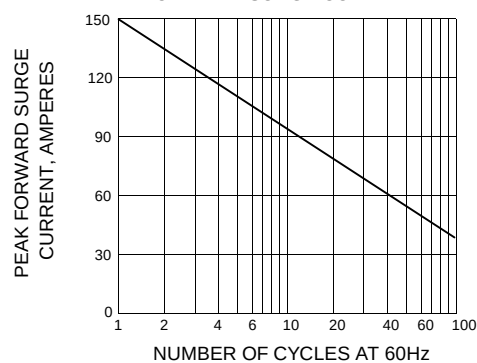


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

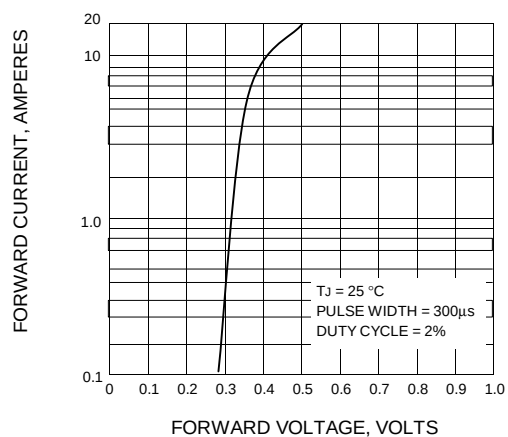


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

