



**REVERSE VOLTAGE:** 40 to 100 VOLTS

**FORWARD CURRENT:** 5.0 AMPERE

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- High current capability, low  $V_F$
- Built-in strain relief
- Low profile package
- Metal to silicon rectifier. majority carrier conduction
- High surge capacity
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering : 260°C /10 seconds at terminals

#### MECHANICAL DATA

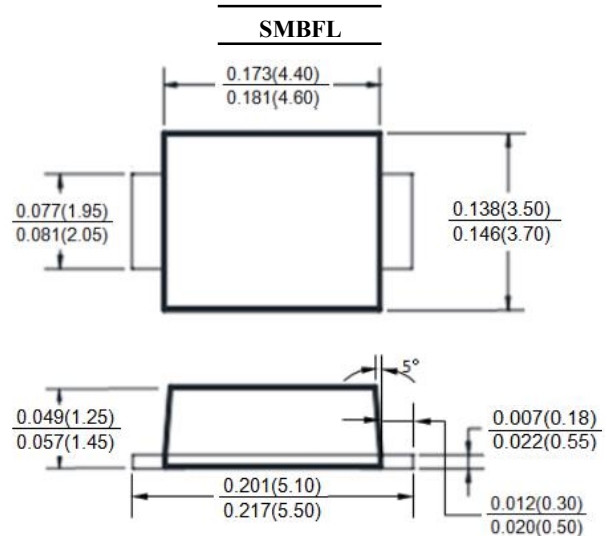
Case: Molded plastic, SMBFL

Terminals: Pure tin plated, lead free

Polarity: Indicated by cathode band

Packaging: 12mm tape per EIA STD RS-481

Weight: 0.060gram



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, derate current by 20%.

|   | Symbols           | SS54L       | SS56L | SS510L | Units |
|---|-------------------|-------------|-------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage  | V <sub>RRM</sub>  | 40          | 60    | 100    | Volts |
| Maximum RMS Voltage   | V <sub>RMS</sub>  | 28          | 42    | 70     | Volts |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>   | 40          | 60    | 100    | Volts |
| Maximum Average Forward Rectified Current<br>at T <sub>L</sub> (See Fig. 1)                             | I <sub>(AV)</sub> | 5.0         |       |        | Amp   |
| Peak Forward Surge Current,<br>8.3ms single half-sine-wave<br>superimposed on rated load (JEDEC method) | I <sub>FSM</sub>  | 120         |       |        | Amp   |
| Maximum Forward Voltage at 5.0A (Note 1)  | V <sub>F</sub>    | 0.45        | 0.60  | 0.75   | Volts |
| Maximum Reverse Current           at T <sub>A</sub> =25℃  | I <sub>R</sub>    | 0.5         |       |        | mAmp  |
| at Rated DC Blocking Voltage       T <sub>A</sub> =125℃   |                   | 20          |       | 10     |       |
| Typical Thermal Resistance (Note 2)   | R <sub>θJA</sub>  | 55          |       |        | ℃/W   |
|   | R <sub>θJL</sub>  | 20          |       |        |       |
| Operating Junction Temperature Range  | T <sub>J</sub>    | -50 to +150 |       |        | ℃     |
| Storage Temperature Range   | T <sub>stg</sub>  | -50 to +150 |       |        | ℃     |

NOTES: 1- Pulse test: 300 $\mu s$  pulse width, 1% duty cycle

2- P.C.B. mounted with 0.4 x 0.4" (10.0 x 10.0mm) Copper Pad Areas



**RATINGS AND CHARACTERISTIC CURVES**

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

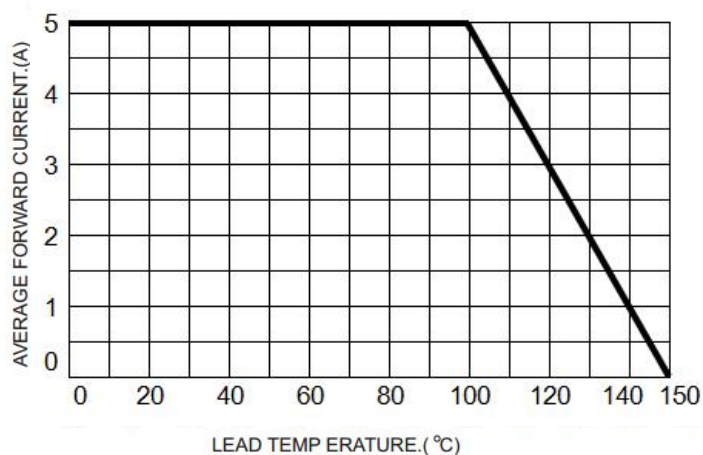


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

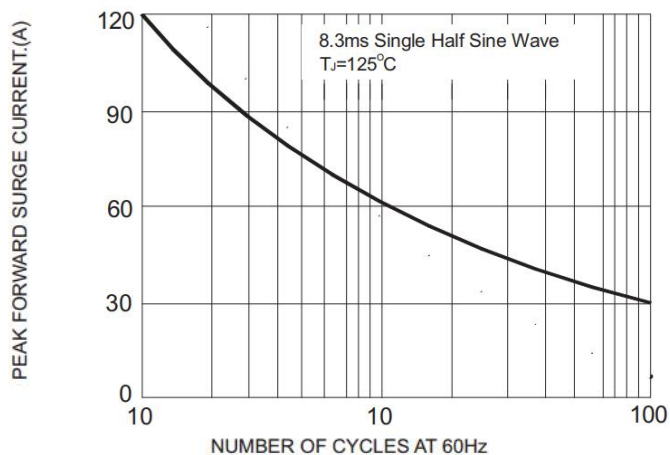


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

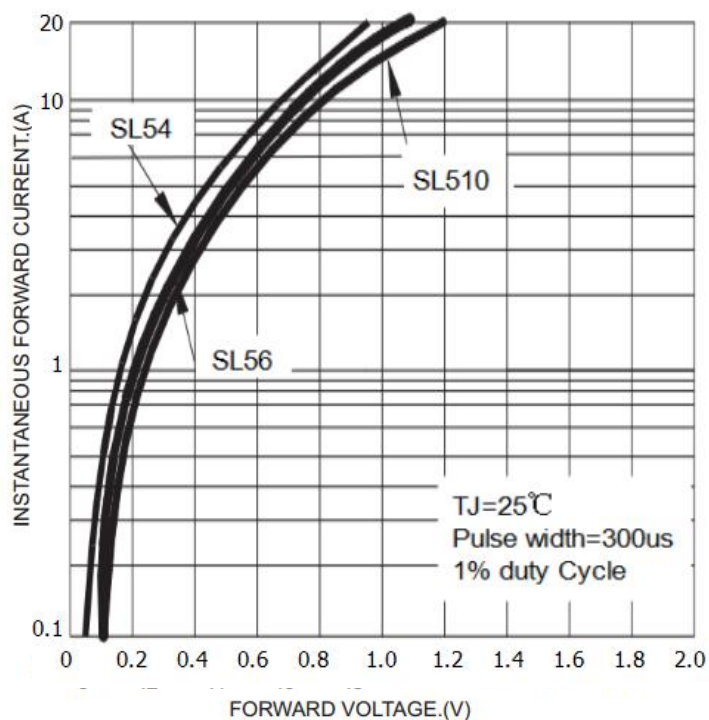


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

