

Low VF Surface Mount Schottky Barrier Rectifiers

(Pb) Lead(Pb)-Free

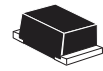
Features:

- * Low Surface Mounted Applications
- * Metal-Semiconductor Junction with Guardring
- * Epitaxial Construction
- * Very Low Forward Voltage Drop
- * High Current Capability
- * Plastic Material Has UL Flammability Classification 94V-0
- * For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications

Mechanical Data

- * Case : Molded Plastic
- * Polarity : Indicated By Cathode Band
- * Weight : 0.060 grams

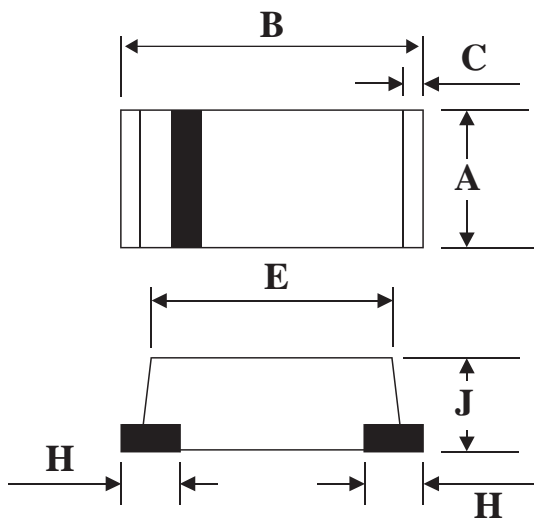
REVERSE VOLTAGE
40Volts
FORWARD CURRENT
1.0 Ampere



SMA-1

SMA-1 Outline Dimension

unit:mm



Dimensions in inches

| SMA-1 | | |
|--------------|------------|------------|
| Dim | Min | Max |
| A | 2.40 | 2.80 |
| B | 4.40 | 4.80 |
| C | 0.30 | 0.30 |
| E | 3.80 | 4.20 |
| H | 1.00 | 1.00 |
| J | 1.50 | 1.70 |

Maximum Ratings and Electrical Characteristics

Rating 25°C Ambient Temperature Unless Otherwise Specified.

Single Phase Half Wave, 60Hz , Resistive or Inductive Load.

For Capacitive Load, Derate Current by 20%.

| Characteristics | Symbol | SL14 | Unit |
|---|--------------------|--------------|------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 40 | V |
| Maximum RMS Voltage | VRMS | 28 | V |
| Maximum DC Blocking Voltage | VDC | 40 | V |
| Maximum Average Forward Rectified Current @T _C =105°C | I _{F(AV)} | 1.0 | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) | I _{FSM} | 30 | A |
| Maximum Instantaneous @ T _j =25°C Forward Voltage @I _F =1.0A @ T _j =100°C | V _F | 0.40 0.35 | V |
| Maximum DC Reverse Current @T _j =25°C At Rated DC Blocking Voltage @T _j =100°C | I _R | 1.0 25 | mA |
| Typical Junction Capacitance (Note 1) | C _J | 100 | pF |
| Typical Thermal Resistance (Note 2) | R _{θJA} | 35 | °C/W |
| Operating Temperature Range | T _J | -55 to+125 | °C |
| Storage Temperature Range | T _{STG} | -55 to+150 | °C |

NOTES:

1. Measured at 1.0MHz applied reverse voltage of 4.0V DC.
2. Thermal Resistance Junction to case.

RATING AND CHARACTERISTIC CURVES (SL12 AND SL14)

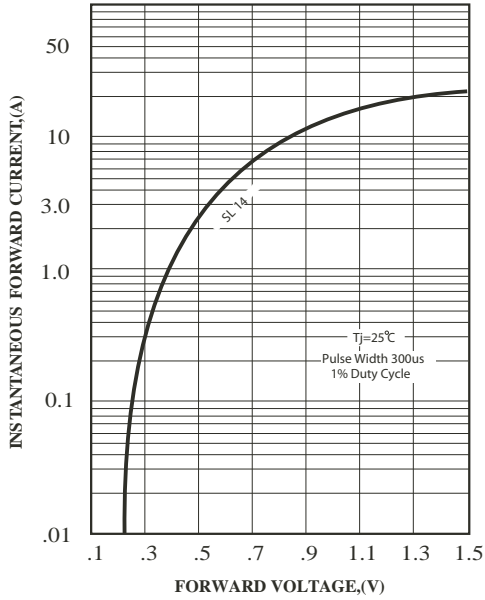


FIG.1-TYPICAL FORWARD CHARACTERISTICS

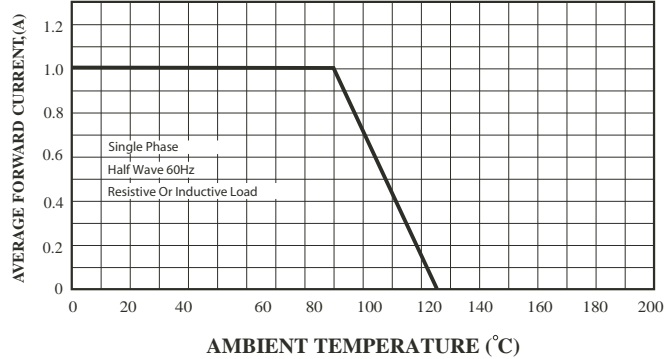


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

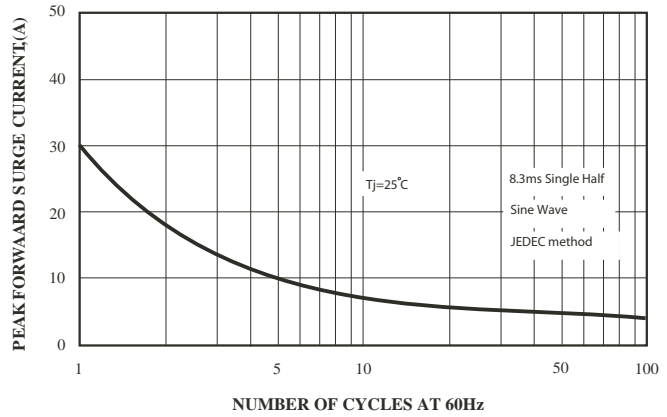


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

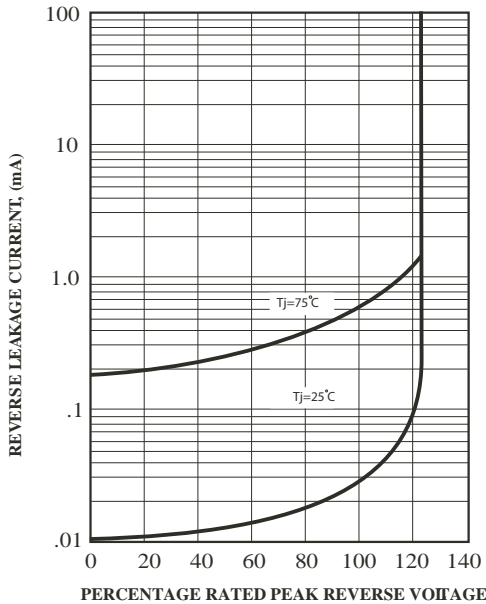


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

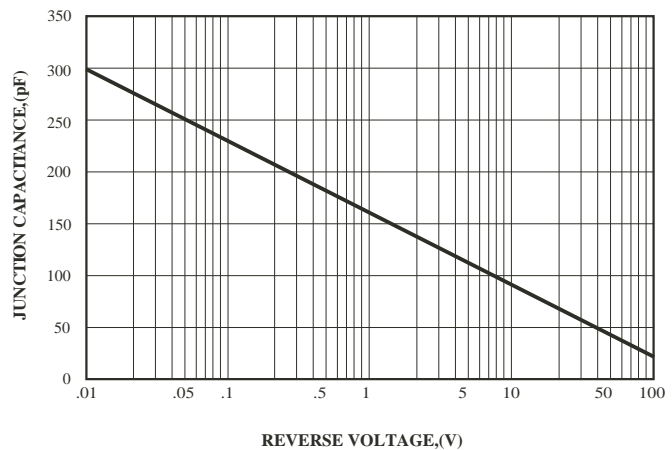


FIG.5-TYPICAL JUNCTION CAPACITANCE