

## Low VF Surface Mount Schottky Barrier Rectifiers

**(Pb)** Lead(Pb)-Free

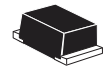
### Features:

- \* 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

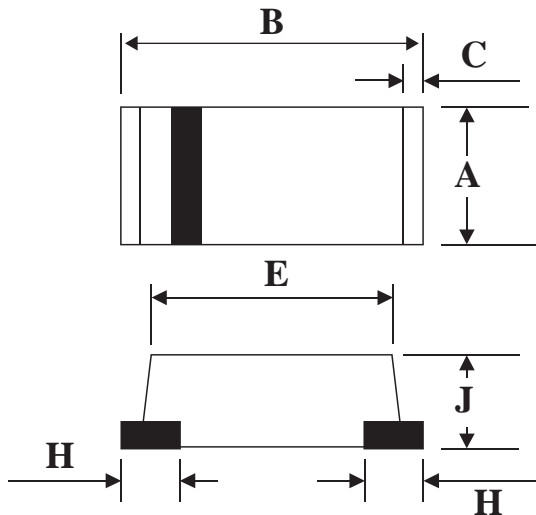
**REVERSE VOLTAGE**  
40Volts  
**FORWARD CURRENT**  
1.0 Ampere



**SMA-1**

## SMA-1 Outline Dimension

unit:mm



Dimensions in inches

<b>SMA-1</b>		
<b>Dim</b>	<b>Min</b>	<b>Max</b>
<b>A</b>	2.40	2.80
<b>B</b>	4.40	4.80
<b>C</b>	0.30	0.30
<b>E</b>	3.80	4.20
<b>H</b>	1.00	1.00
<b>J</b>	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 <sub>C</sub> =105°C	I <sub>F(AV)</sub>	1.0	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	30	A
Maximum Instantaneous @ T <sub>j</sub> =25°C Forward Voltage @I <sub>F</sub> =1.0A @ T <sub>j</sub> =100°C	V <sub>F</sub>	0.40 0.35	V
Maximum DC Reverse Current @T <sub>j</sub> =25°C At Rated DC Blocking Voltage @T <sub>j</sub> =100°C	I <sub>R</sub>	1.0 25	mA
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	100	pF
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>	35	°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to+125	°C
Storage Temperature Range	T <sub>STG</sub>	-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)

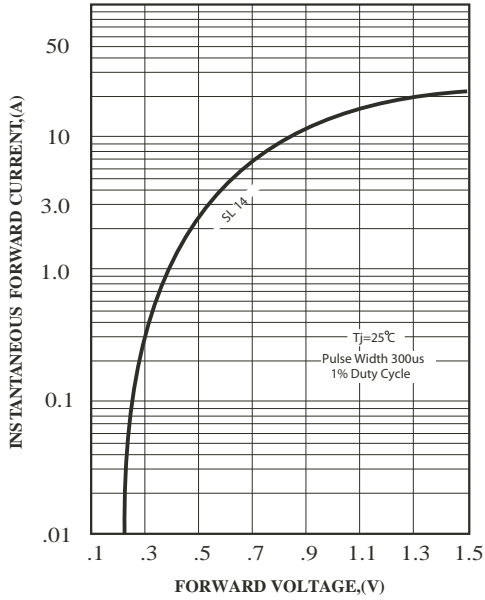


FIG.1-TYPICAL FORWARD CHARACTERISTICS

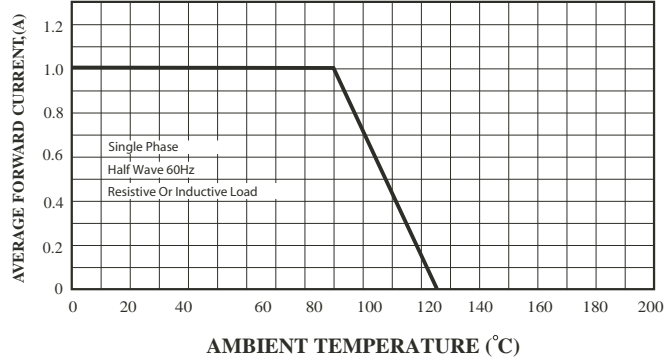


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

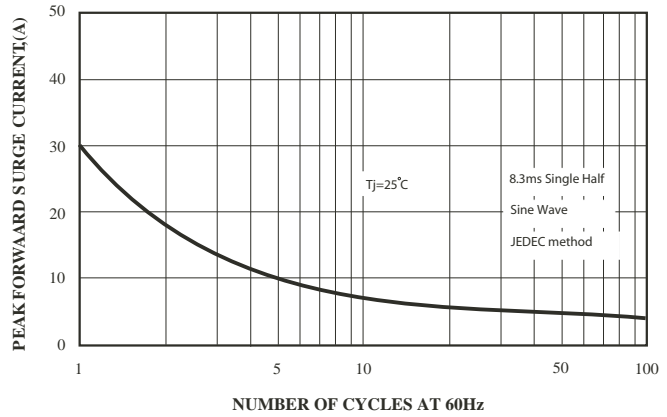


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

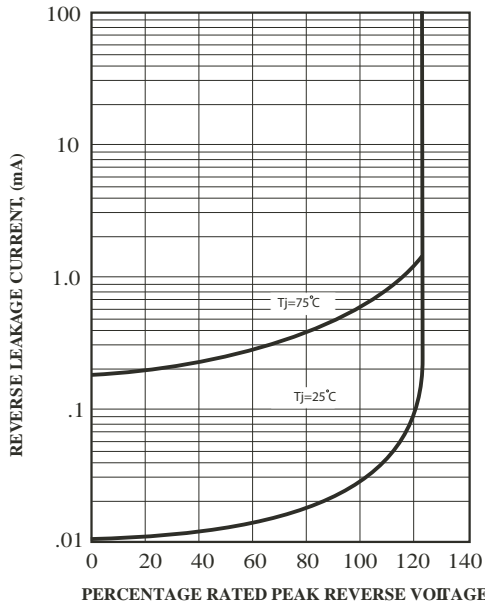


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

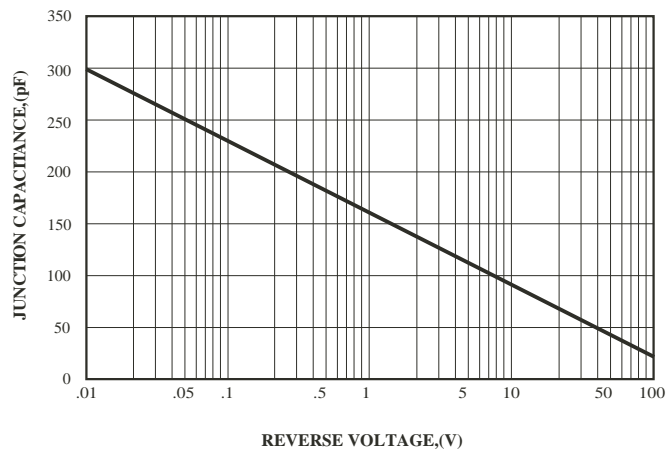


FIG.5-TYPICAL JUNCTION CAPACITANCE