



# DATA SHEET

SEMICONDUCTOR

S12 THRU S110

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER



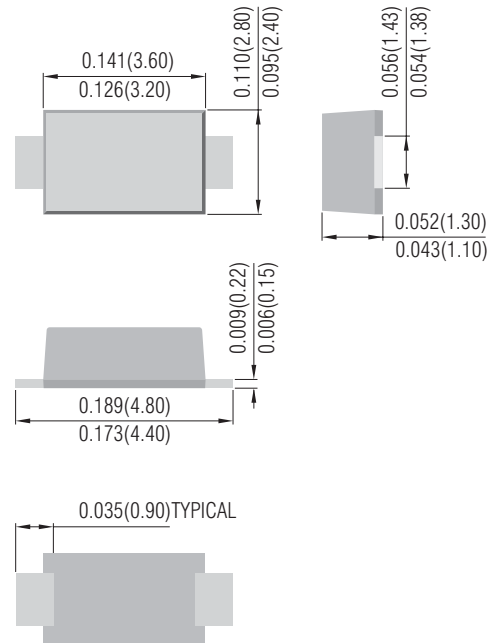
VOLTAGE- 20 to 100 Volts CURRENT- 1.0 Amperes

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier. majority carrier conduction
- Low power loss,high efficiency
- High surge capacity
- High current capacity ,low VF
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications.
- High temperature soldering guaranteed: 260°C /10 seconds at terminals
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- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

SMF

Unit:inch(mm)



### MECHANICAL DATA

- Case: SMF mold ed plastic
- Terminals:Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes positive end (cathode)
- Standard packaging: 12mm tape (EIA-481)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
Resistive or inductive load.

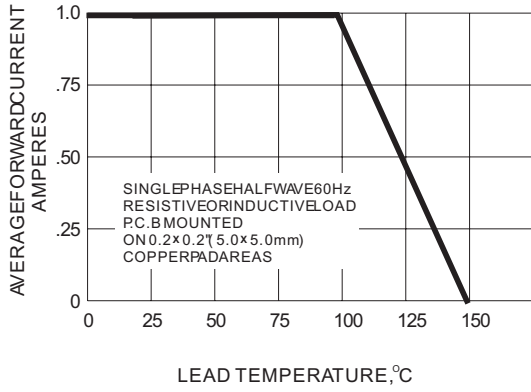
	SYMBOLS	S12	S13	S14	S15	S16	S18	S19	S110	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	90	100	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	56	64	71	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	80	90	100	V
Maximum Average Forward Rectified Current at TL (See figure 1)	I(AV)	1.0								A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30.0								A
Maximum Instantaneous Forward Voltage at 1.0A (Note 1)	V <sub>F</sub>	0.50			0.70		0.85			V
Maximum DC Reverse Current (Note 1) Ta= 25°C at Rated DC Blocking Voltage Ta=100°C	I <sub>R</sub>	0.5								mA
Maximum Thermal Resistance(Note 2)	R <sub>θJL</sub> R <sub>θJA</sub>	28.0 88.0								
Operating Temperature Range	T <sub>J</sub>	-55 to +150								°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150								°C

#### NOTES:

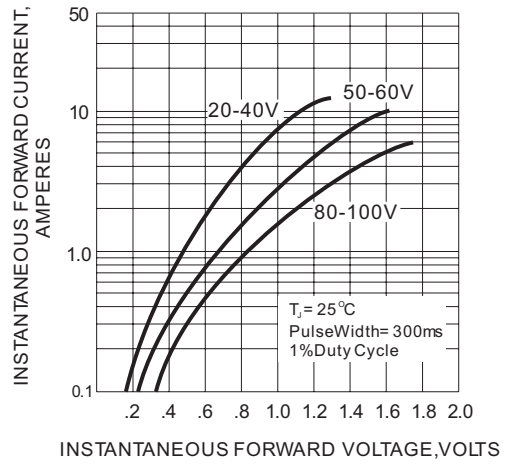
- A.Pulse Test with PW =300μsec, 2% Duty Cycle.
- B.Mounted on P.C. Board with 5.0mm<sup>2</sup> (.013mm thick) copper pad areas.

# DEVICE CHARACTERISTICS

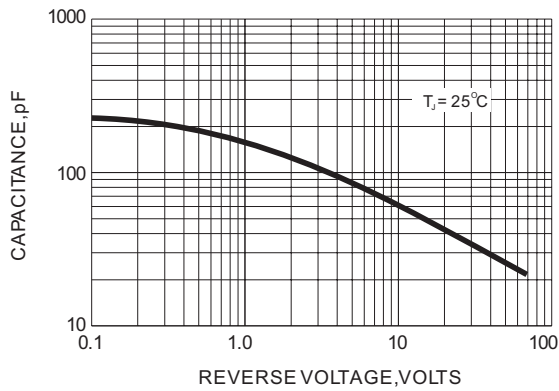
## S12 THRU S110



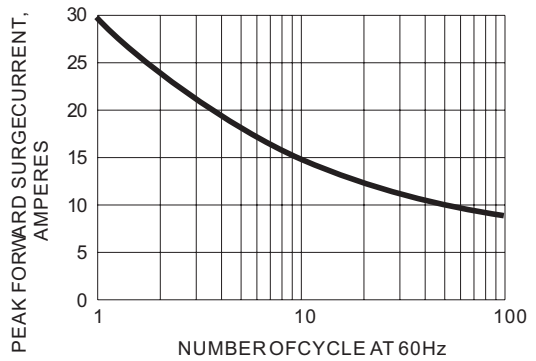
**Fig. 1-FORWARD CURRENT DERATING CURVE**



**Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC**



**Fig. 3-TYPICAL JUNCTION CAPACITANCE**



**Fig. 4-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**