



# SS12 THRU SS110

## 1.0 AMP. Surface Mount Schottky Barrier Rectifiers



Voltage Range  
20 to 100 Volts  
Current  
1.0 Ampere

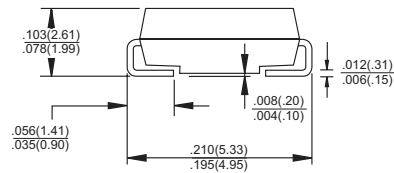
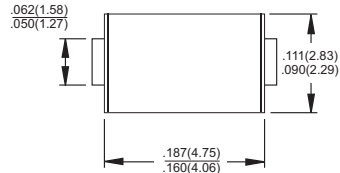
### Features

- ✧ For surface mounted application
- ✧ Metal to silicon rectifier, majority carrier conduction
- ✧ Low forward voltage drop
- ✧ Easy pick and place
- ✧ High surge current capability
- ✧ Plastic material used carriers Underwriters Laboratory Classification 94V-0
- ✧ Epitaxial construction
- ✧ High temperature soldering: 260°C/ 10 seconds at terminals

### Mechanical Data

- ✧ Case: Molded plastic
- ✧ Terminals: Solder plated
- ✧ Polarity: Indicated by cathode band
- ✧ Packaging: 12mm tape per EIA STD RS-481
- ✧ Weight: 0.064 gram

### SMA/DO-214AC



Dimensions in inches and (millimeters)

## 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%

Type Number	Symbol	SS 12	SS 13	SS 14	SS 15	SS 16	SS 19	SS 110	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	90	100	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	63	70	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	90	100	V
Maximum Average Forward Rectified Current at $T_L$ (See Fig. 1)	$I_{(AV)}$	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 Forward Voltage (Note 1) @ 1.0A	$V_F$	0.5		0.75		0.80		V	
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	0.4					0.05		mA
		10		5.0		0.5			
Maximum DC Reverse Current at $V_R=33\text{V}$ & $T_A=50^\circ\text{C}$	$HT_{IR}$	-				5.0		$\mu\text{A}$	
Typical Junction Capacitance (Note 3)	$C_j$	50							pF
Typical Thermal Resistance ( Note 2 )	$R_{\theta_{JL}}$	28							$^\circ\text{C}/\text{W}$
	$R_{\theta_{JA}}$	88							$^\circ\text{C}/\text{W}$
Operating Temperature Range	$T_J$	-65 to +125			-65 to +150			$^\circ\text{C}$	
Storage Temperature Range	$T_{STG}$	-65 to +150							$^\circ\text{C}$

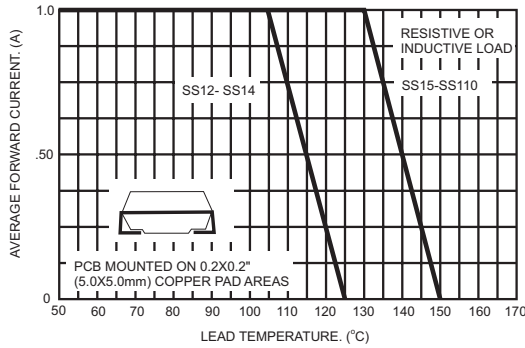
Notes: 1. Pulse Test with  $PW=300$  usec, 1% Duty Cycle

2. Measured on P.C.Board with  $0.2 \times 0.2''$  ( $5.0 \times 5.0\text{mm}$ ) Copper Pad Areas.

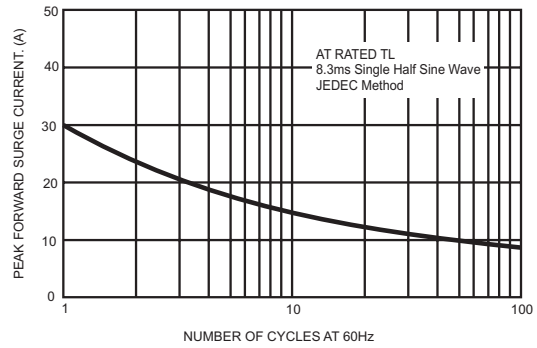
3. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

## RATINGS AND CHARACTERISTIC CURVES (SS12 THRU SS110)

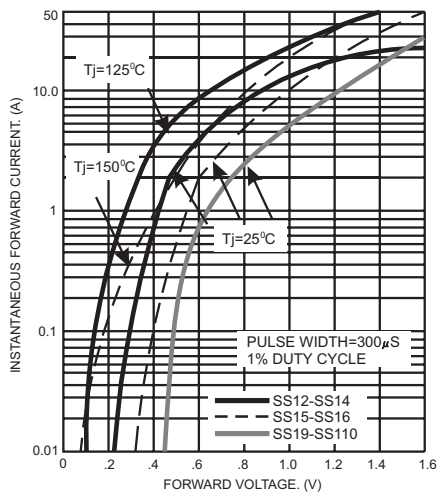
**FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE**



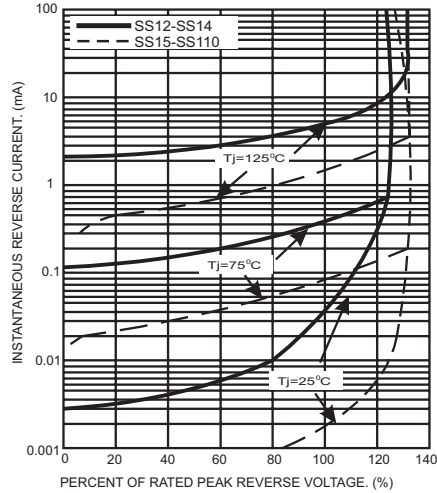
**FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



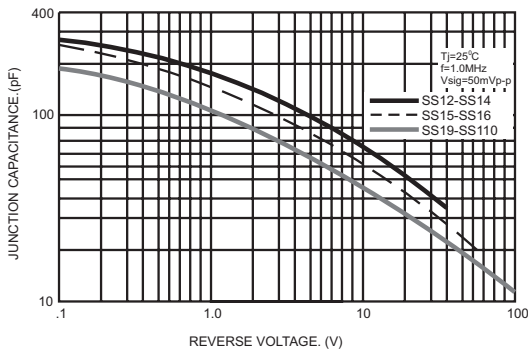
**FIG. 3- TYPICAL FORWARD CHARACTERISTICS**



**FIG. 4- TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5- TYPICAL JUNCTION CAPACITANCE**



**FIG. 6- TYPICAL CAPACITANCE**

