



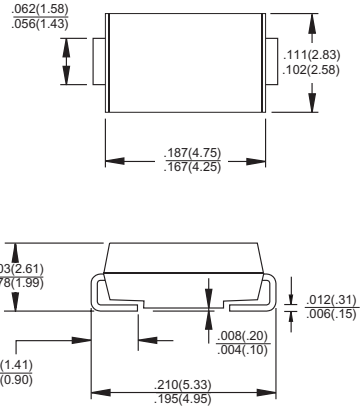
SS12 THRU SS110

1.0 AMP. Surface Mount Schottky Barrier Rectifiers



Voltage Range
20 to 100 Volts
Current
1.0 Ampere

SMA/DO-214AC



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-O
- ✧ 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

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			
Typical Junction Capacitance (Note 3)	C_j	50							pF
Typical Thermal Resistance (Note 2)	$R \theta_{jI}$	28							$^\circ\text{C}/\text{W}$
	$R \theta_{JA}$	88							
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 x 0.2" (5.0 x 5.0mm) 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

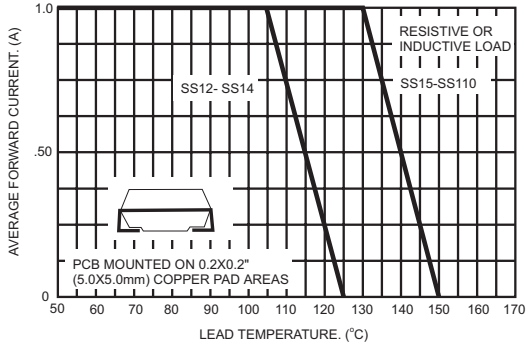


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

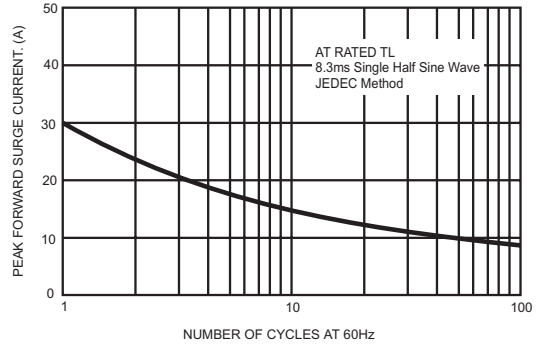


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

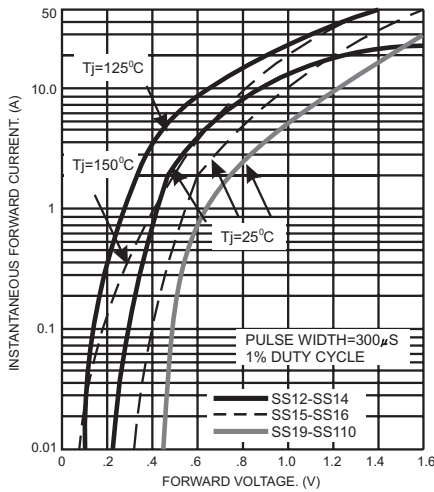


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

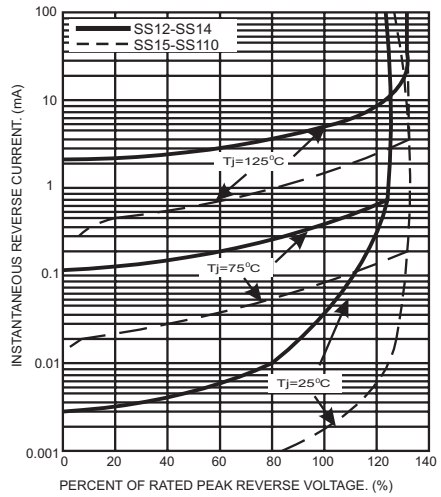


FIG. 5- TYPICAL JUNCTION CAPACITANCE

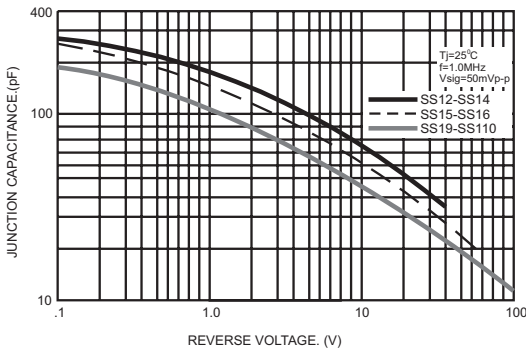


FIG. 6- TYPICAL CAPACITANCE

