

SS12 - SS115

1.0 AMP. Surface Mount Schottky Barrier Rectifiers

SMA/DO-214AC

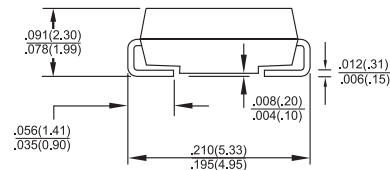
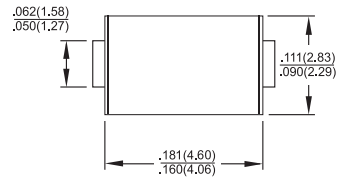


Features

- ✧ For surface mounted application
- ✧ Easy pick and place
- ✧ Metal to silicon rectifier, majority carrier conduction
- ✧ Low power loss, high efficiency
- ✧ High current capability, low VF
- ✧ 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: JEDEC SMA/DO-214AC Molded plastic
- ✧ Terminals: Pure tin plated, lead free
- ✧ Polarity: Indicated by cathode band
- ✧ Packaging: 12mm tape per EIA STD RS-481
- ✧ Weight: 0.066 gram



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	SS 115	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	20	30	40	50	60	90	100	150	V
Maximum RMS Voltage	V _{RMS}	14	21	28	35	42	63	70	105	V
Maximum DC Blocking Voltage	V _{DC}	20	30	40	50	60	90	100	150	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) IF= 1.0A @ 25°C @ 100°C	V _F	0.5 0.4			0.75 0.65		0.80 0.70			V
Maximum DC Reverse Current @ T _A =25 °C at Rated DC Blocking Voltage @ T _A =125 °C	I _R	0.4					0.1			mA
		10			5.0		2.0		mA	
Maximum DC Reverse Current at VR=33V & T _A =50 °C	HT _{IR}	—				5.0				uA
Typical Junction Capacitance (Note 3)	C _j	50								pF
Typical Thermal Resistance (Note 2)	R _{ΘJL}	28								°C/W
	R _{ΘJA}	88								
Operating Temperature Range	T _J	-65 to +125			-65 to +150					°C
Storage Temperature Range	T _{STG}	-65 to +150								°C

- Notes:
1. Pulse Test with $PW = 300 \mu\text{sec}$, 1% Duty Cycle
 2. Measured on P.C.Board with $0.2" \times 0.2"$ (5.0mm 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 SS115)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

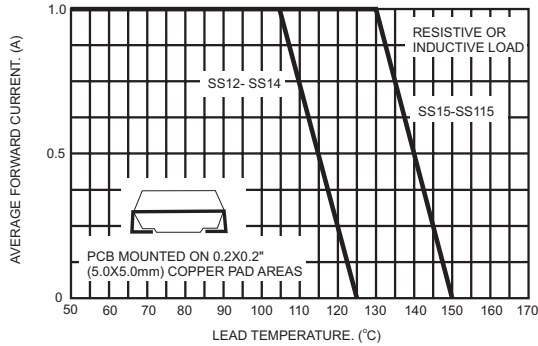


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

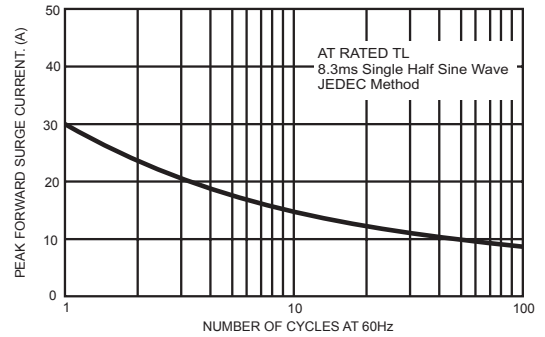


FIG.3- TYPICAL FORWARD CHARACTERISTICS

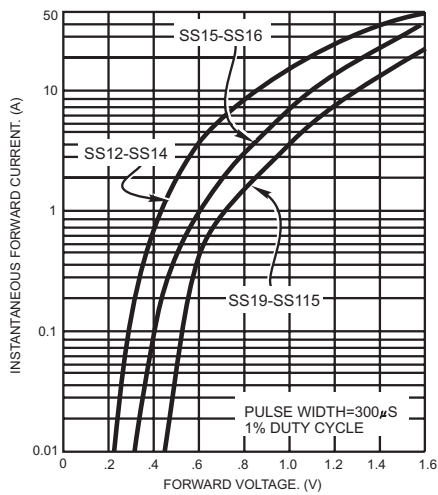


FIG.4- TYPICAL REVERSE CHARACTERISTICS

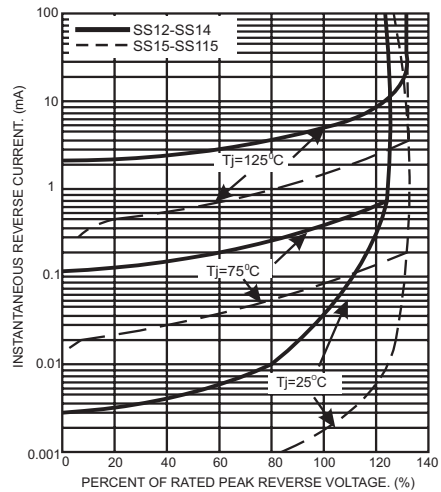


FIG.5- TYPICAL JUNCTION CAPACITANCE

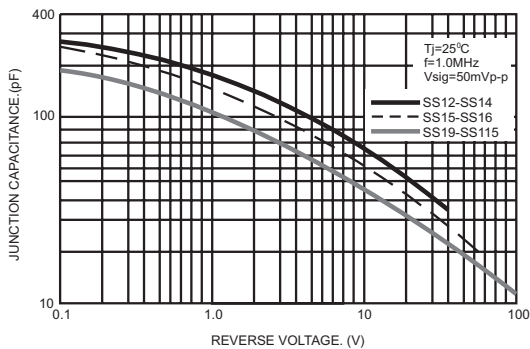


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

