

Schottky Barrier Rectifiers

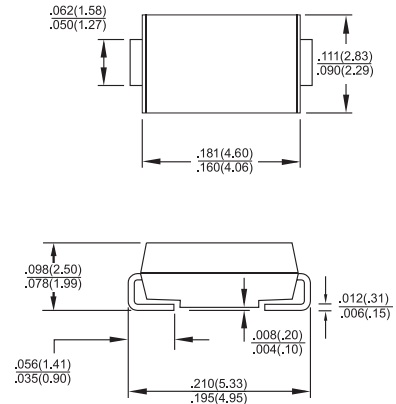
PRODUCT SUMMARY

1.0AMP Surface Mount

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



Dimensions in inches and (millimeters)

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



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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		0.95 0.85		v	
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	I_R	0.4					0.1				mA
		10			5.0		2.0				mA
Maximum DC Reverse Current at $V_R=33\text{V}$ & $T_A=50^\circ\text{C}$	HT_{IR}	-				5.0				uA	
Typical Junction Capacitance (Note 3)	C_j	50								pF	
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	28								°C/W	
	$R_{\theta JA}$	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 usec, 1% Duty Cycle
 2. Measured on P.C.Board with 0.2" x 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

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

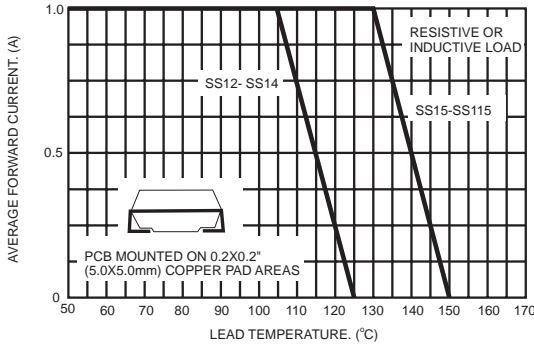


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

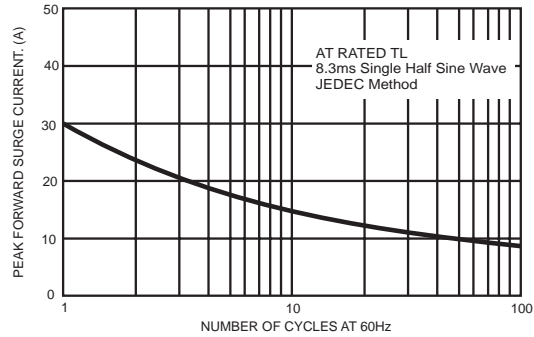


FIG.3- TYPICAL FORWARD CHARACTERISTICS

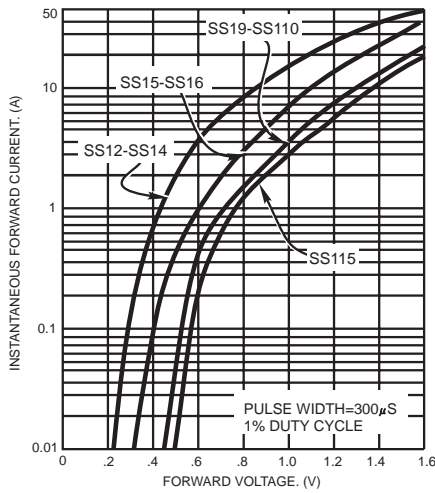


FIG.4- TYPICAL REVERSE CHARACTERISTICS

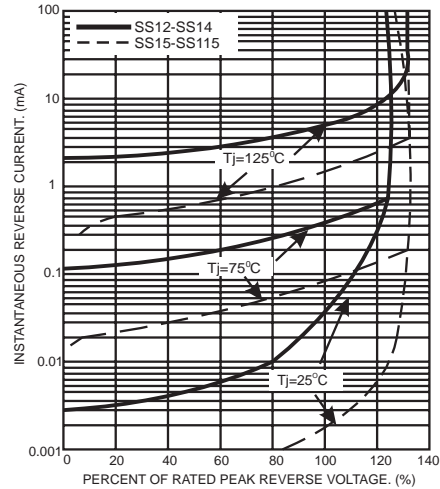


FIG.5- TYPICAL JUNCTION CAPACITANCE

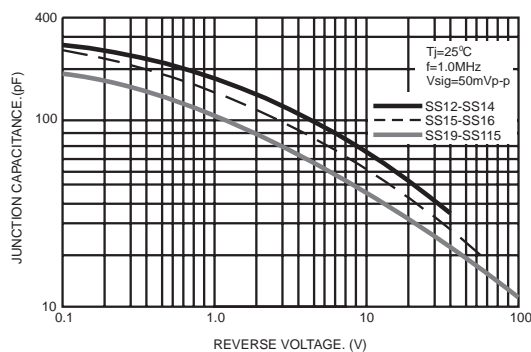
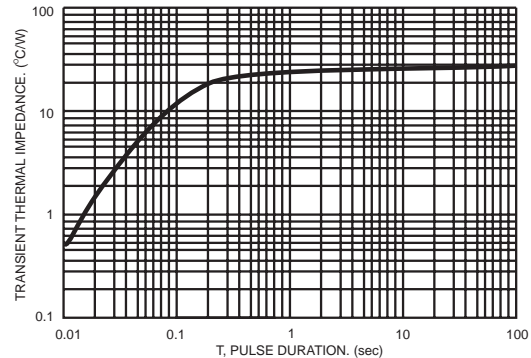


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS



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