

# Schottky Barrier Rectifiers

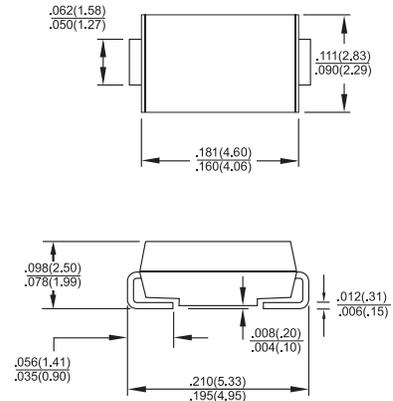
## PRODUCT SUMMARY

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.

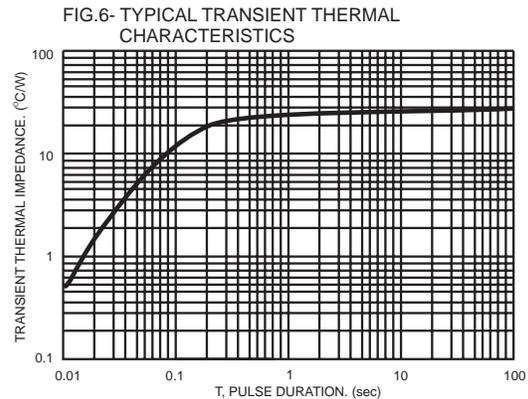
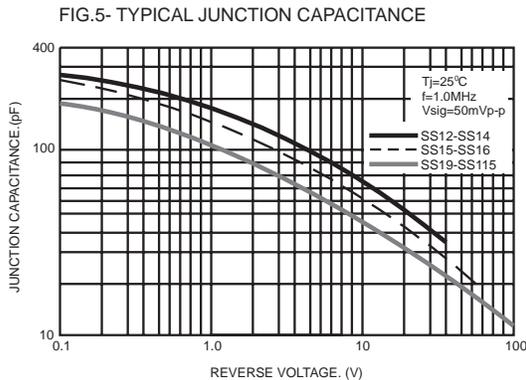
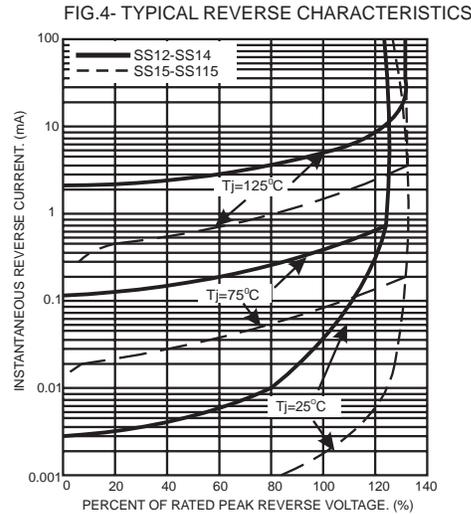
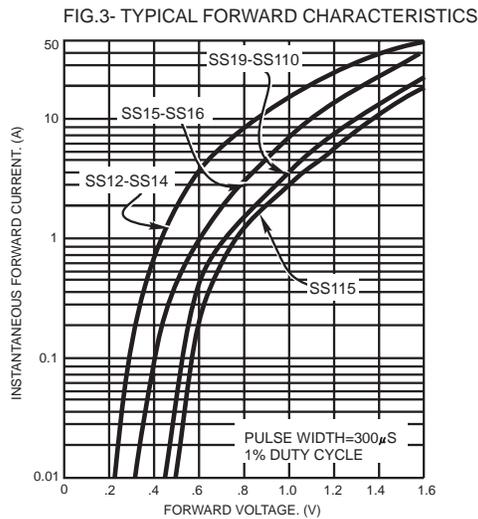
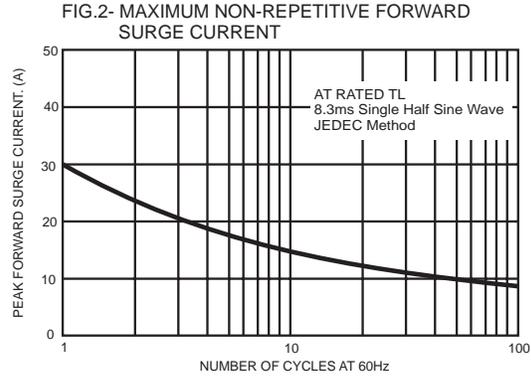
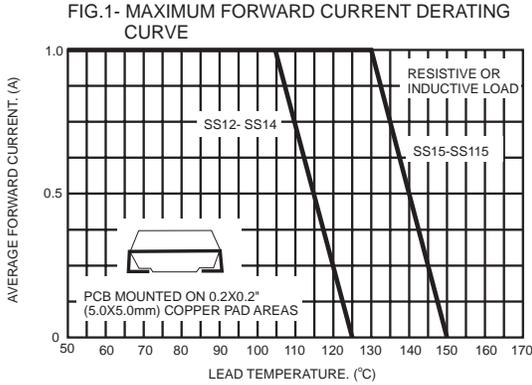
Single phase, half wave, 60 Hz, resistive or inductive load.

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



Information furnished by Silicon Standard Corporation is believed to be accurate and reliable. However, Silicon Standard Corporation makes no guarantee or warranty, expressed or implied, as to the reliability, accuracy, timeliness or completeness of such information and assumes no responsibility for its use, or for infringement of any patent or other intellectual property rights of third parties that may result from its use. Silicon Standard reserves the right to make changes as it deems necessary to any products described herein for any reason, including without limitation enhancement in reliability, functionality or design. No license is granted, whether expressly or by implication, in relation to the use of any products described herein or to the use of any information provided herein, under any patent or other intellectual property rights of Silicon Standard Corporation or any third parties.