



# DATA SHEET

SEMICONDUCTOR

SS0520 THRU SS0540

## SURFACE MOUNT SCHOTTKY BARRIER

VOLTAGE 20 to 40 Volts CURRENT 0.50 Amperes



### FEATURES

- Low turn-on voltage
- Fast switching
- PN Junction Guard Ring for Transient and ESD Protection.

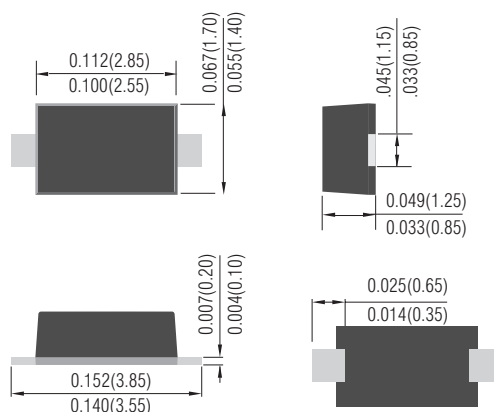
SOD-123S Unit:inch(mm)

### MECHANICAL DATA

Case: SOD-123S, Plastic

Terminals: Solderable per MIL-STD-202, Method 208

Polarity: See Diagram Below



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

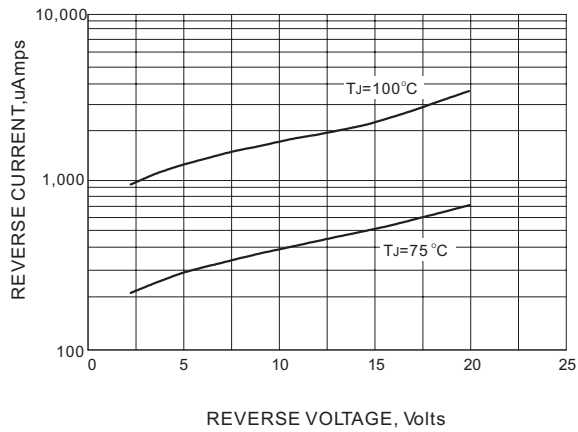
Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

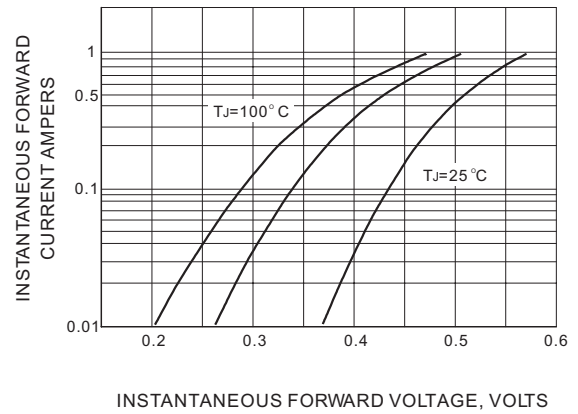
Parameter	Symbol	SS0520	SS0530	SS0540	Units
Marking Code		SD	SE	SF	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	V
Maximum Average Forward Current at $T_a=75^{\circ}C$	$I_{AV}$	0.5	0.5	0.5	A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	5.5	5.5	5.5	A
Maximum Instantaneous Forward Voltage at	$V_F$	0.3@ 0.1A 0.385@ 0.5A	0.375@ 0.1A 0.430@ 0.5A	0.51@ 0.5A	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	0.25	0.13	0.02	mA
Maximum Thermal Resistance	$R_{qJL}$ $R_{qJA}$	150 206			$^{\circ}C / W$
Operating Junction Temperature Range	$T_J$	-55 TO +150			$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-55 TO +150			$^{\circ}C$

# DEVICE CHARACTERISTICS

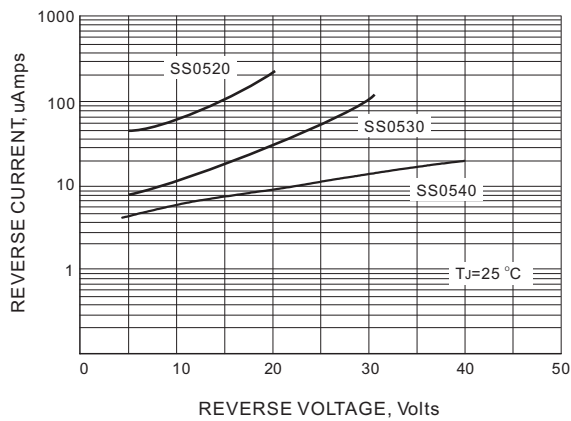
## SS0520 THRU SS0540



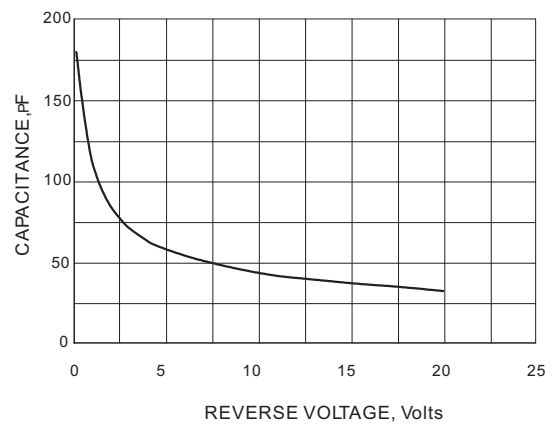
**TYPICAL REVERSE CURRENT**



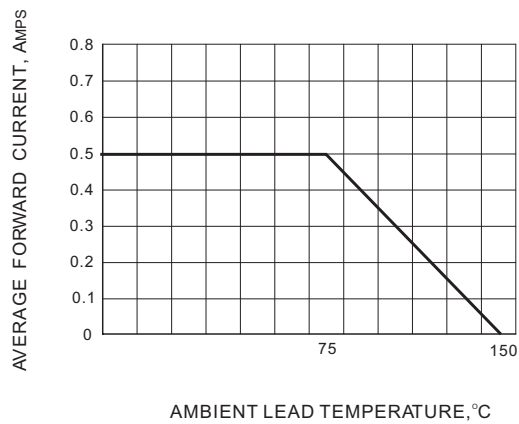
**TYPICAL FORWARD VOLTAGE**



**TYPICAL REVERSE CURRENT**



**TYPICAL JUNCTION CAPACITANCE**



**CURRENT DERATING**