



# SS0520 - SS0540

## SURFACE MOUNT SCHOTTKY BARRIER DIODES

**VOLTAGE** 20 to 40 Volts **CURRENT** 0.5 Amperes

### FEATURES

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

### MECHANICAL DATA

- Case: SOD-123, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram Below
- Approx. Weight: 0.008 grams
- Mounting Position: Any



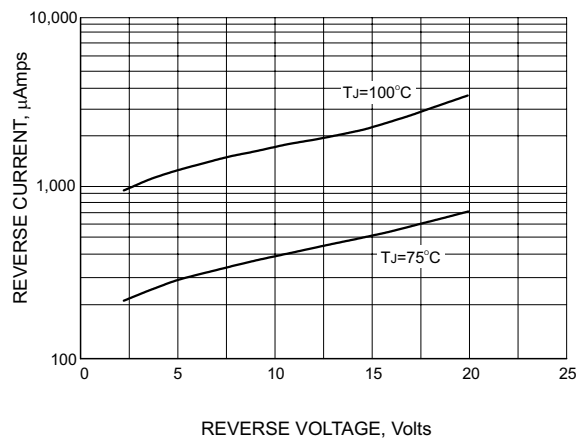
SOD-123

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

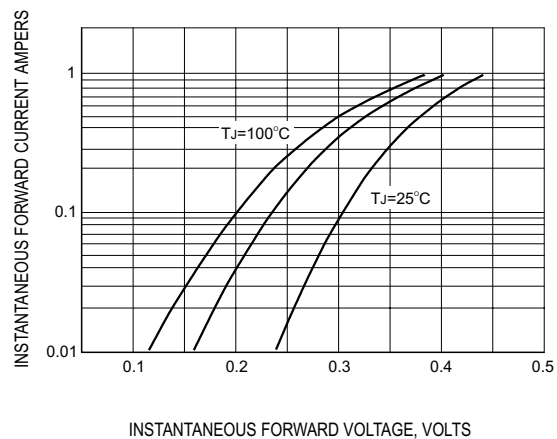
| Parameter                                                                                         | Symbol                             | SS0520                              | SS0530                             | SS0540                             | Units           |
|---------------------------------------------------------------------------------------------------|------------------------------------|-------------------------------------|------------------------------------|------------------------------------|-----------------|
| 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 $T_a=25^{\circ}C$                                              | $I_{AV}$                           | 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 0.1A<br>0.5A                                             | $V_F$                              | 0.3<br>0.385                        | 0.375<br>0.430                     | -<br>0.51                          | V               |
| Maximum DC Reverse Current at Rated DC Blocking Voltage                                           | $I_R$                              | 0.075 @ $V_R=10$<br>0.25 @ $V_R=20$ | 0.02 @ $V_R=15$<br>0.13 @ $V_R=30$ | 0.01 @ $V_R=20$<br>0.02 @ $V_R=40$ | mA              |
| Maximum Thermal Resistance                                                                        | $R_{\theta JL}$<br>$R_{\theta JA}$ |                                     | 150<br>206                         |                                    | $^{\circ}C / W$ |
| Operating Junction Temperature Range                                                              | $T_J$                              |                                     | -55 TO +125                        |                                    | $^{\circ}C$     |
| Storage Temperature Range                                                                         | $T_{STG}$                          |                                     | -55 TO +125                        |                                    | $^{\circ}C$     |



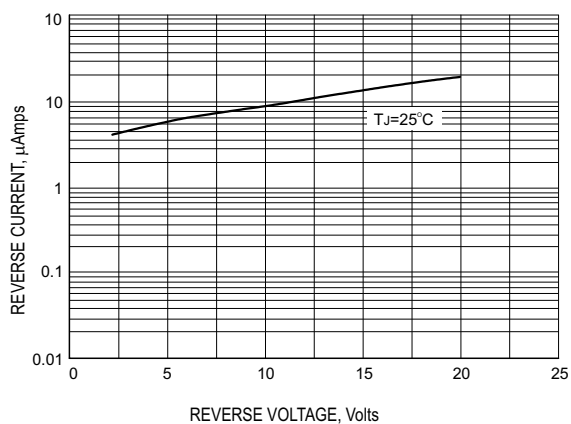
## RATING and CHARACTERISTIC CURVES



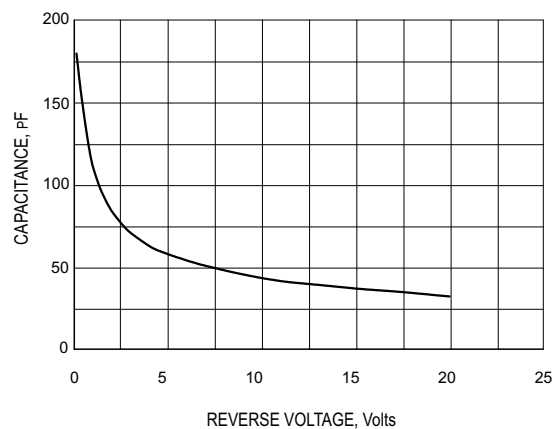
TYPICAL REVERSE CURRENT



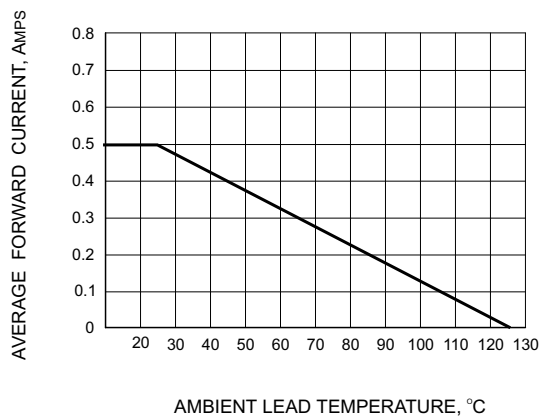
TYPICAL FORWARD VOLTAGE



TYPICAL REVERSE CURRENT

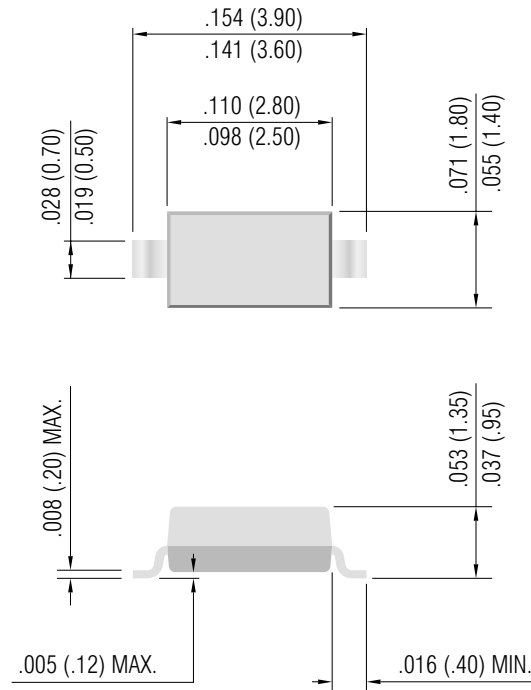


TYPICAL JUNCTION CAPACITANCE



CURRENT DERATING

## SOD-123



Dimensions in inches and (millimeters)