



500 mA SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

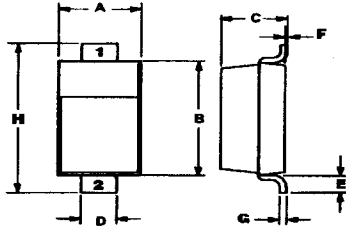
SS0520 . . . 540 Series

Description

Mechanical Dimensions



SOD-123



1. CATHODE 2. ANODE

| DIM | IN | | MM | |
|-----|-------|-------|------|------|
| | MIN | MAX | MIN | MAX |
| A | 0.055 | 0.071 | 1.40 | 1.80 |
| B | 0.100 | 0.112 | 2.55 | 2.85 |
| C | 0.037 | 0.053 | 0.95 | 1.35 |
| D | 0.020 | 0.028 | 0.50 | 0.70 |
| E | 0.004 | - | 0.25 | - |
| F | .000 | 0.004 | 0.00 | 0.10 |
| G | - | 0.006 | - | 0.15 |
| H | 0.140 | 0.152 | 3.55 | 3.85 |

Features

- EXTREMELY LOW V_f
- LOW STORED CHARGE
- LOW PROFILE PACKAGE
- MAJORITY CARRIER CONDUCTION
- MEETS UL SPECIFICATION 94V-0

| Electrical Characteristics @ 25°C. | SS520 . . . 540 Series | | | Units |
|--|------------------------|-------|-------|------------------------|
| | SS520 | SS530 | SS540 | |
| Maximum Ratings | | | | |
| Peak Repetitive Reverse Voltage... V_{RRM} | 20 | 30 | 40 | Volts |
| Working Peak Reverse Voltage... V_{RWM} | 20 | 30 | 40 | Volts |
| DC Blocking Voltage... V_{DC} | 20 | 30 | 40 | Volts |
| Average Forward Rectified Current... $I_{F(AV)}$ | | 0.5 | | Amps |
| Peak Repetitive Forward Surge Current... I_{FRM} | | | 1 | Amps |
| Non-Repetitive Peak Forward Surge Current... I_{FSM} | | 5.5 | | Amps |
| Forward Voltage... V_f | | | | |
| $T_J = 25^\circ\text{C}$ ($I_f = 0.5\text{ A}$) | 0.385 | .43 | 0.51 | Volts |
| $T_J = 25^\circ\text{C}$ ($I_f = 1.0\text{ A}$) | 0.3 | 0.375 | 0.62 | Volts |
| $T_J = 100^\circ\text{C}$ ($I_f = 0.5\text{ A}$) | 0.330 | - | 0.46 | Volts |
| $T_J = 100^\circ\text{C}$ ($I_f = 1.0\text{ A}$) | 0.22 | - | 0.61 | Volts |
| DC Reverse Current... I_R | | | | |
| @ Rated DC Blocking Voltage $T_J = 25^\circ\text{C}$ | 250 | 130 | 20 | μamps |
| $T_J = 100^\circ\text{C}$ | 8 | - | 13 | mAmps |
| Typical Thermal Resistance-Junction to Lead... θ_{jL} | 150 | 150 | 118 | $^\circ\text{C/W}$ |
| Typical Thermal Resistance-Junction to Lead... θ_{jA} | | 206 | | $^\circ\text{C/W}$ |
| Maximum Operating and Storage Temperature... T_J, T_{stg} | -65 to + 125 | | | $^\circ\text{C}$ |
| Voltage Rate of Change (Rated V_R) | 1000 | | | $\text{V}/\mu\text{s}$ |



Fig. 1 – Derating Curve Output Rectified Current

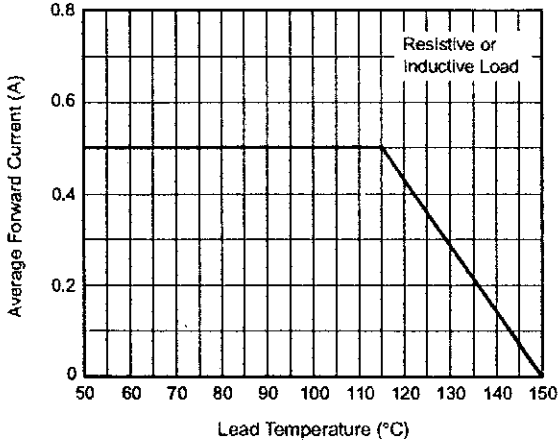


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

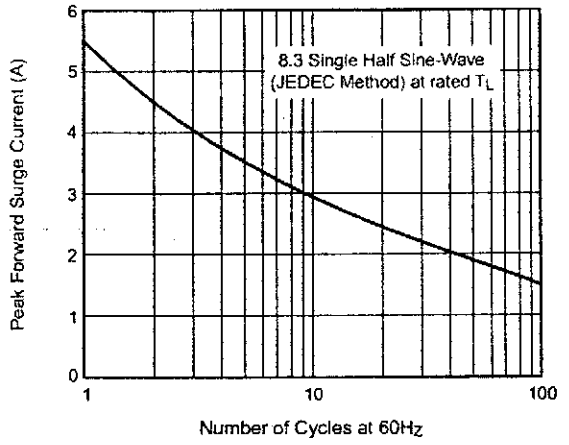


Fig. 3 – Typical Instantaneous Forward Characteristics

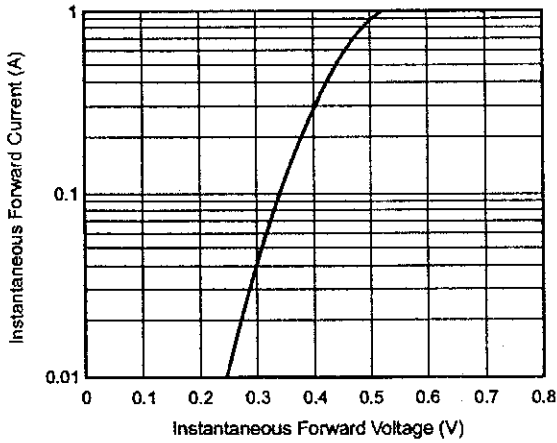


Fig. 4 – Typical Reverse Characteristics

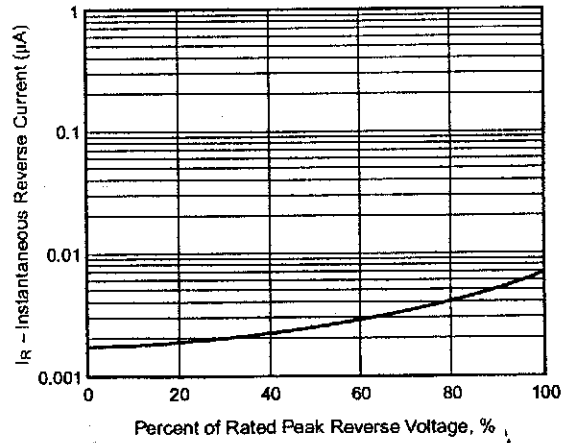


Fig. 5 – Typical Junction Capacitance

