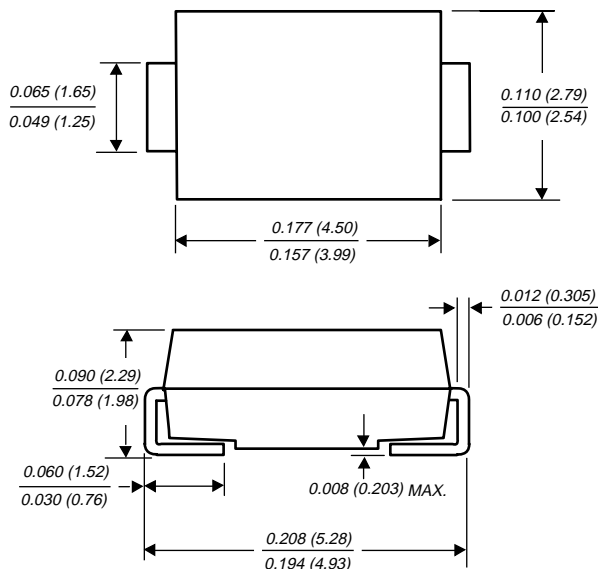


S1A THRU S1M

SURFACE MOUNT RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

DO-214AC



FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Built-in strain relief, ideal for automated placement
- ◆ Glass passivated chip junction
- ◆ High temperature soldering: 250°C/10 seconds at terminals



MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic over passivated chip

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Weight: 0.002 ounce, 0.064 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| | SYMBOLS | S1A | S1B | S1D | S1G | S1J | S1K | S1M | UNITS |
|--|-----------------|-------------|-----|-----|-----|------|------|------|--------------------|
| Device marking code | | SA | SB | SD | SG | SJ | SK | SM | |
| Maximum recurrent peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC blocking voltage | VDC | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum average forward rectified current See Figure 1 | $I_{(AV)}$ | 1.0 | | | | | | | Amp |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_L=110^\circ\text{C}$ | I_{FSM} | | | | | 40.0 | 30.0 | | Amps |
| Maximum instantaneous forward voltage at 1.0A | V_F | 1.10 | | | | | | | Volts |
| Maximum DC reverse current at Rated DC blocking voltage | I_R | | | | | 1.0 | 5.0 | | μA |
| | | | | | | 50.0 | | | |
| Typical reverse recovery time (NOTE 1) | t_{rr} | 1.8 | | | | | | | μs |
| Typical junction capacitance (NOTE 2) | C_J | 12.0 | | | | | | | pF |
| Typical thermal resistance (NOTE 3) | $R_{\theta JA}$ | | | | | 75.0 | 85.0 | | $^\circ\text{C/W}$ |
| | $R_{\theta JL}$ | | | | | 27.0 | 30.0 | | |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |

NOTES:

(1) Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(3) Thermal resistance from junction to ambient and from junction to lead mounted on 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

RATING AND CHARACTERISTIC CURVES S1A THRU S1M

