

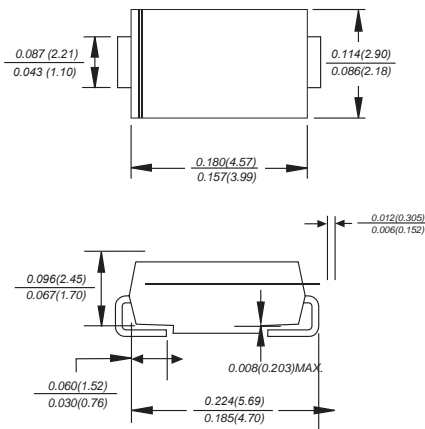


## S1A THRU S1M

## SURFACE MOUNT GENERAL RECTIFIER

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

### DO-214AC



Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals

### MECHANICAL DATA

**Case:** JEDEC DO-214AC molded plastic body

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

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

|   | SYMBOLS         | S1A         | S1B | S1D | S1G | S1J | S1K | S1M  | UNITS              |
|---|-----------------|-------------|-----|-----|-----|-----|-----|------|--------------------|
| Maximum repetitive 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   | $V_{DC}$        | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS              |
| Maximum average forward rectified current at $T_L=55^\circ\text{C}$                                       | $I_{(AV)}$      | 1.0         |     |     |     |     |     |      | Amp                |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on rated load (JEDEC Method)       | $I_{FSM}$       | 30.0        |     |     |     |     |     |      | Amps               |
| Maximum instantaneous forward voltage at 1.0A   | $V_F$           | 1.1         |     |     |     |     |     |      | Volts              |
| Maximum DC reverse current $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage $T_A=100^\circ\text{C}$ | $I_R$           | 5.0<br>50.0 |     |     |     |     |     |      | $\mu\text{A}$      |
| Typical junction capacitance (NOTE 1)   | $C_J$           | 15.0        |     |     |     |     |     |      | pF                 |
| Typical thermal resistance (NOTE 2)   | $R_{\theta JA}$ | 75.0        |     |     |     |     |     |      | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range  | $T_J, T_{STG}$  | -65 to +175 |     |     |     |     |     |      | $^\circ\text{C}$   |

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas



## RATINGS AND CHARACTERISTIC CURVES S1A THRU S1M

