



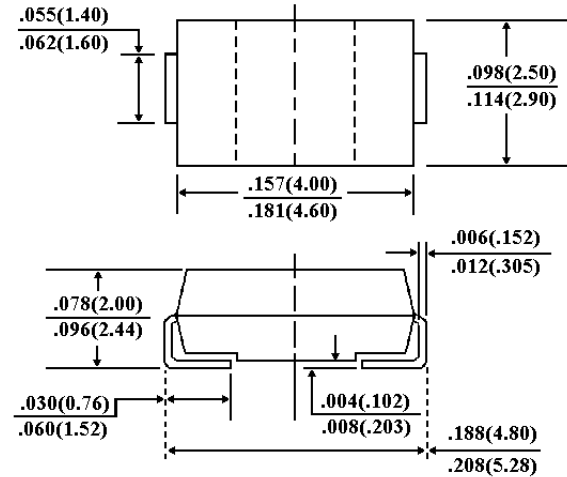
## LOW VF SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### SL12 THRU SL14

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier majority carrier conduction
- Low power loss, High efficiency
- High current capability, low  $V_F$
- High surge capacity
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed: 260 °C/10 seconds at terminals

#### SMA/DO-214AC



Dimensions in inches and (millimeters)

#### MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic

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

Polarity: Color band denotes cathode

Standard packaging: 12mm tape (EIA-481)

Weight: 0.002 ounce, 0.064 gram

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

Resistive or inductive load.

|                                                                                                 | SYMBOLS                              | SL12        | SL13 | SL14 | UNITS |
|-------------------------------------------------------------------------------------------------|--------------------------------------|-------------|------|------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                          | $V_{RRM}$                            | 20          | 30   | 40   | Volts |
| Maximum RMS Voltage                                                                             | $V_{RMS}$                            | 14          | 21   | 28   | Volts |
| Maximum DC Blocking Voltage                                                                     | $V_{DC}$                             | 20          | 30   | 40   | Volts |
| Maximum Average Forward Rectified Current at $T_A$ (See Figure 1)                               | $I_{AV}$                             | 1.0         |      |      | Amps  |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method) | $I_{FSM}$                            | 30.0        |      |      | Amps  |
| Maximum Instantaneous Forward Voltage at 1.0A (Note 1)                                          | $V_F$                                | 0.38        | 0.38 | 0.40 | Volts |
| Maximum DC Reverse Current $T_A=25$ °C (Note 1)<br>At Rated DC Blocking Voltage $T_A=100$ °C    | $I_R$                                | 0.5<br>20.0 |      |      | mA    |
| Maximum Thermal Resistance (Note 2)                                                             | $R_{\theta KJL}$<br>$R_{\theta KJA}$ | 28<br>88    |      |      | °C/W  |
| Operating Junction Temperature Range                                                            | $T_J$                                | -50 to +125 |      |      | °C    |
| Storage Temperature Range                                                                       | $T_{STG}$                            | -50 to +150 |      |      | °C    |

#### NOTES:

1. Pulse Test with  $PW=300$   $\mu$ sec, 1% Duty Cycle.
2. Mounted on P.C.Board with  $5.0\text{mm}^2$  (.013mm thick) copper pad areas.



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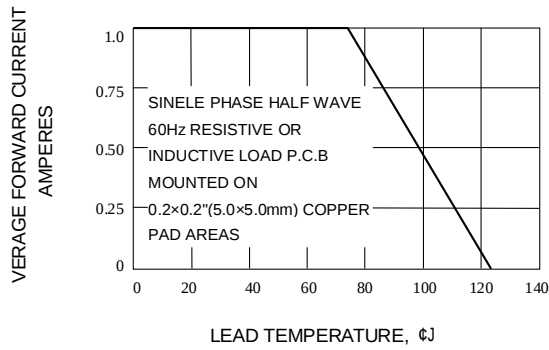


Fig. 1-FORWARD CURRENT DERATING CURVEE

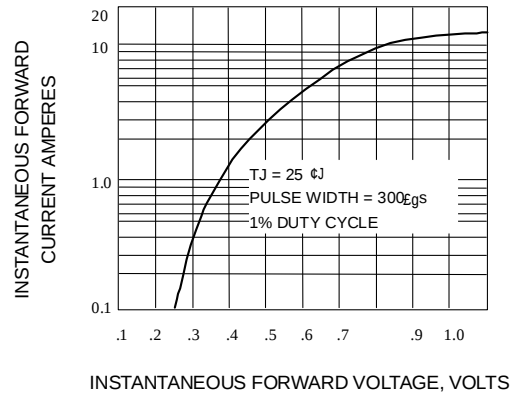


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

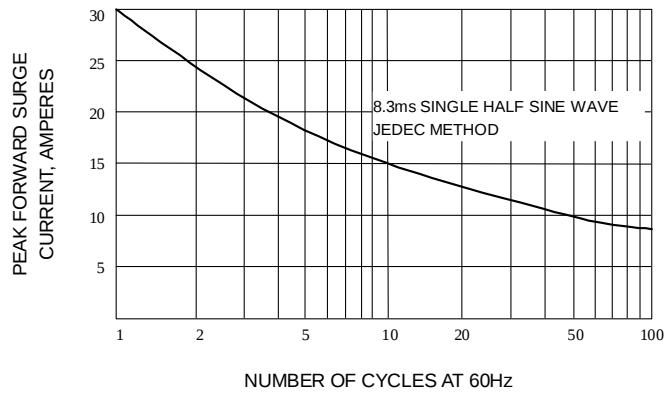


Fig. 3-MAXIMUM NON-REPETITIVE SURGE CURRENT

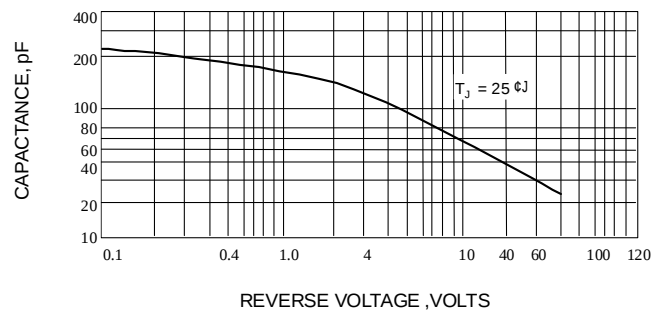


Fig. 4-TYPICAL JUNCTION CAPACITANCE