



SL12 THRU SL110

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts Forward Current - 1.0 Ampere

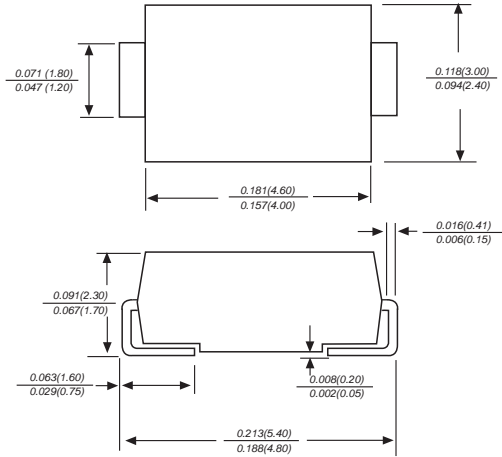
FEATURES

The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
 For surface mounted applications
 Metal silicon junction, majority carrier conduction
 Low power loss, high efficiency
 Built-in strain relief, ideal for automated placement
 High forward surge current capability
 High temperature soldering guaranteed:
 260°C/10 seconds at terminals

MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic body
Terminals: leads solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.002 ounce, 0.07 grams

DO-214AC



Dimensions in inches and (millimeters)

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 | SL12 | SL13 | SL14 | SL15 | SL16 | SL18 | SL110 | UNITS |
|--|-----------------|-------------|------|------|------|------|-------------|-------|-------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | V |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| Maximum average forward rectified current at TL (see fig.1) | $I_{(AV)}$ | 1.0 | | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 30.0 | | | | | | | A |
| Maximum instantaneous forward voltage at 1.0A | V_F | 0.45 | | 0.55 | | 0.7 | | V | |
| Maximum DC reverse current at rated DC blocking voltage | I_R | 0.5 | | 10.0 | | 0.2 | | mA | |
| $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$ | | | | | | 5.0 | | | |
| Typical junction capacitance (NOTE 1) | C_J | 110 | | | 90 | | | pF | |
| Typical thermal resistance (NOTE 2) | $R_{\theta JA}$ | 75.0 | | | | | | | °C/W |
| Operating junction temperature range | T_J | -55 to +125 | | | | | -55 to +150 | | °C |
| Storage temperature range | T_{STG} | -55 to +150 | | | | | | | °C |

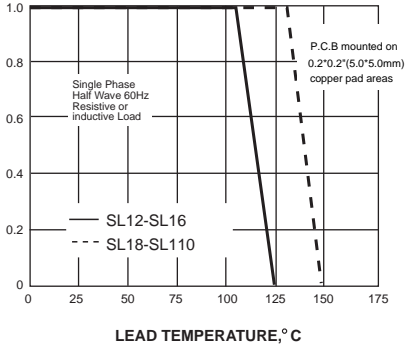
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas



RATINGS AND CHARACTERISTIC CURVES SL12 THRU SL110

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

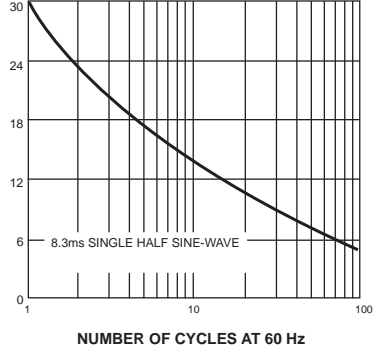


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

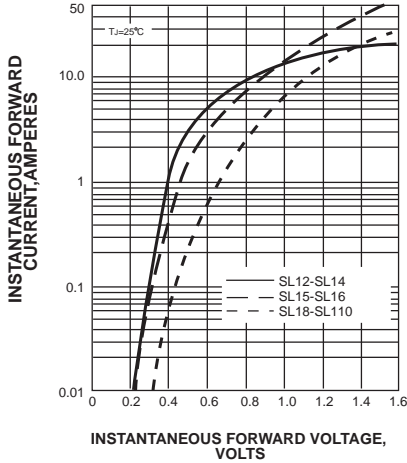


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

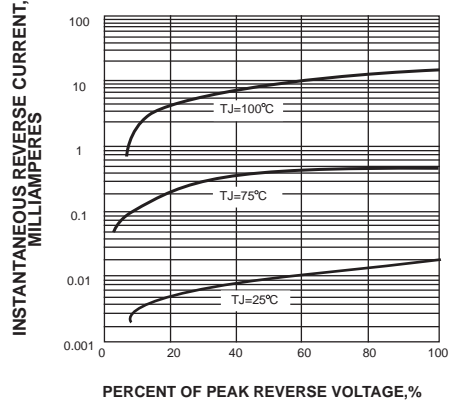
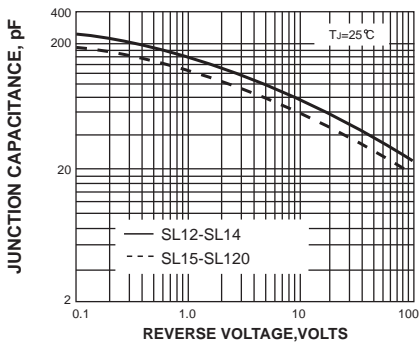


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

