



SL32C THRU SL310C

Reverse Voltage - 20 to 100 Volts Forward Current - 3.0 Ampere

LOW FORWARD VOLTAGE SCHOTTKY BARRIER DIODES

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

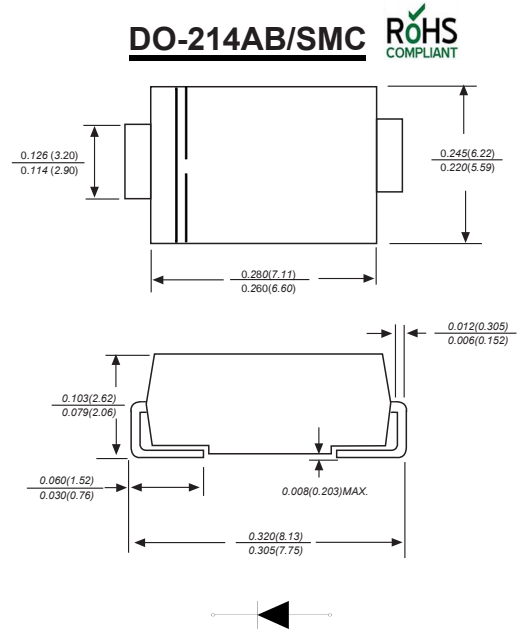
Case : JEDEC DO-214AB/SMC Molded plastic body

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

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.007ounce, 0.25 grams



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%.

| Parameter | SYMBOLS | MDD SL32C | MDD SL33C | MDD SL34C | MDD SL35C | MDD SL36C | MDD SL38C | MDD SL310C | UNITS |
|---|-----------------|-------------|-----------|-----------|-----------|-----------|-------------|------------|-------|
| Marking Code | | | | | | | | | |
| 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 $T_L=90^\circ\text{C}$ | $I_{(AV)}$ | 3.0 | | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 100 | | | | | | | A |
| Maximum instantaneous forward voltage at 3.0A | V_F | 0.45 | | | 0.50 | | 0.70 | | V |
| Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$ | I_R | 0.5 20.0 | | | | | 0.2 10.0 | | mA |
| Typical junction capacitance (NOTE 2) | C_J | 500 | | | 300 | | | | pF |
| Typical thermal resistance (NOTE 3) | $R_{\theta JA}$ | 55.0 | | | | | | | °C/W |
| Operating junction and storage temperature range | T_J, 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



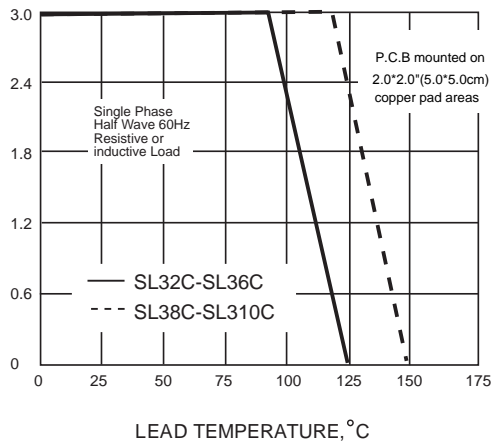
SL32C THRU SL310C

Reverse Voltage - 20 to 100 Volts Forward Current - 3.0 Ampere

Ratings And Characteristic Curves

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

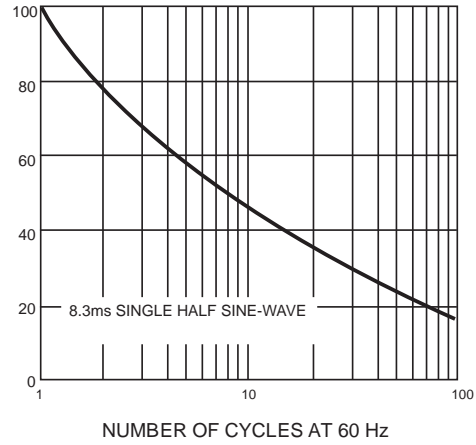


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

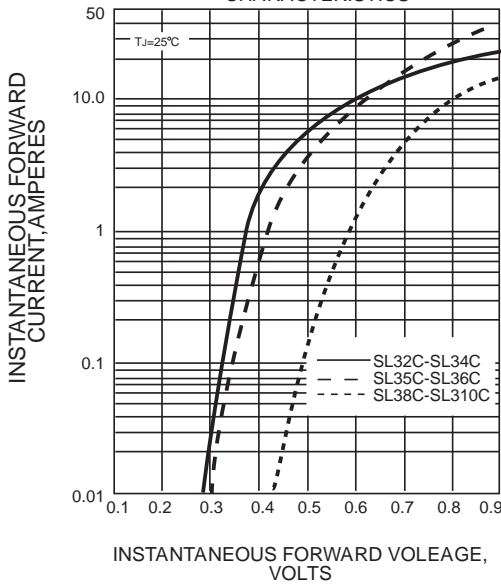


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

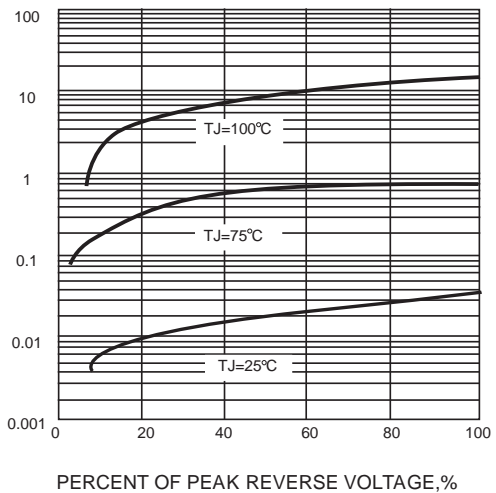
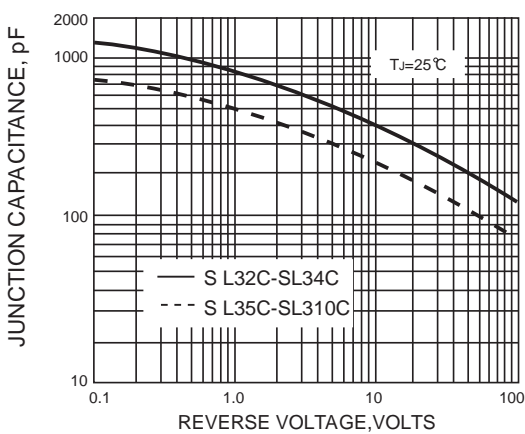
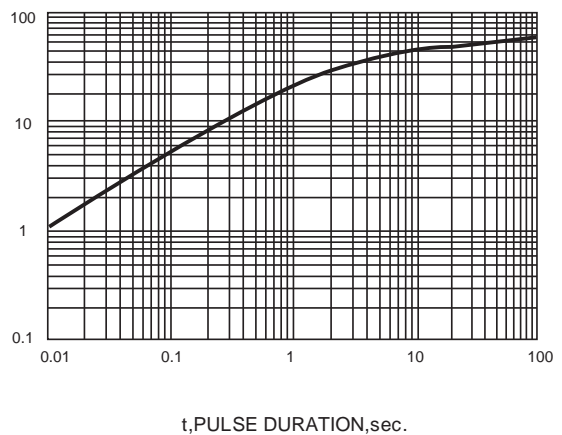


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



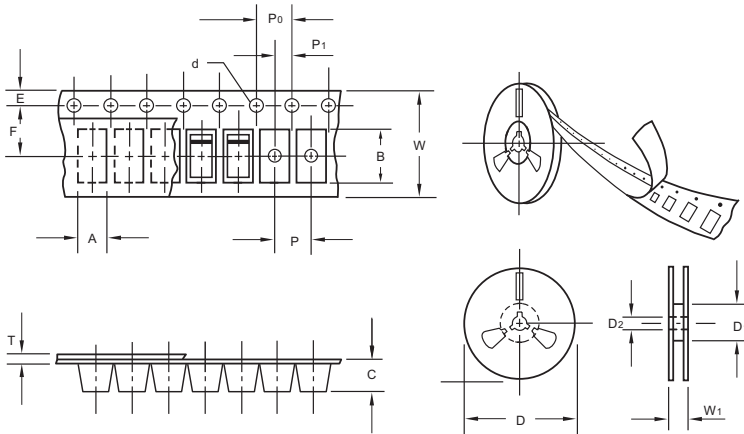
The curve above is for reference only.



SL32C THRU SL310C

Reverse Voltage - 20 to 100 Volts Forward Current - 3.0 Ampere

Packing information



unit:mm

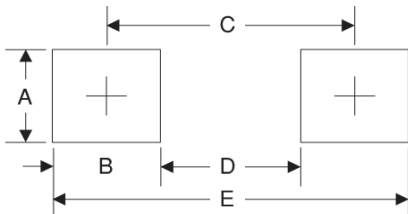
| Item | Symbol | Tolerance | SMC |
|---------------------------|----------------|-----------|--------|
| Carrier width | A | 0.1 | 6.15 |
| Carrier length | B | 0.1 | 8.41 |
| Carrier depth | C | 0.1 | 2.42 |
| Sprocket hole | d | 0.05 | 1.50 |
| 13" Reel outside diameter | D | 2.0 | 330.00 |
| 13" Reel inner diameter | D ₁ | min | 50.00 |
| Feed hole diameter | D ₂ | 0.5 | 13.00 |
| Sprocket hole position | E | 0.1 | 1.75 |
| Punch hole position | F | 0.1 | 7.50 |
| Punch hole pitch | P | 0.1 | 8.00 |
| Sprocket hole pitch | P ₀ | 0.1 | 4.00 |
| Embossment center | P ₁ | 0.1 | 2.00 |
| Overall tape thickness | T | 0.1 | 0.25 |
| Tape width | W | 0.3 | 16.00 |
| Reel width | W ₁ | 1.0 | 16.50 |

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

Reel packing

| PACKAGE | REEL SIZE | REEL (pcs) | COMPONENT SPACING (mm) | BOX (pcs) | INNER BOX (mm) | REEL DIA, (mm) | CARTON SIZE (mm) | CARTON (pcs) | APPROX. GROSS WEIGHT (kg) |
|---------|-----------|------------|------------------------|-----------|----------------|----------------|------------------|--------------|---------------------------|
| SMC | 13" | 3,000 | 4.0 | 6000 | 190*190*41 | 330 | 365*365*340 | 42000 | 14.0 |

Suggested Pad Layout



| Symbol | Unit (mm) | Unit (inch) |
|--------|-----------|-------------|
| A | 4.3 | 0.170 |
| B | 4.1 | 0.160 |
| C | 7.9 | 0.311 |
| D | 3.8 | 0.150 |
| E | 12 | 0.472 |