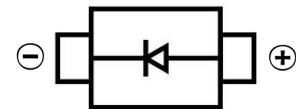


SCHOTTKY BARRIER DIODE
FEATURES

- Small Surface Mount device
- Low forward voltage drop
- Low power losses, high efficiency
- High surge current capability


SMC

MECHANICAL DATA

- Case: SMC(DO-214AB)
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.21 grams (approximate)

MAXIMUM RATINGS AND CHARACTERISTICS(T_A = 25°C unless otherwise noted)

| Parameter | Symbol | SS32 | SS33 | SS34 | SS35 | SS36 | SS38 | SS39 | SS310 | SS315 | SS320 | Unit |
|--|------------------|-----------|------|------|------|------|-----------|------|-------|-------|-------|------|
| Repetitive peak reverse voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | 150 | 200 | V |
| RMS Reverse Voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 63 | 70 | 105 | 140 | V |
| DC Reverse Voltage | V _R | 20 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | 150 | 200 | V |
| Non-Repetitive Peak Forward Surge Current @ t = 8.3 ms | I _{FSM} | 100 | | | | | | | | | | A |
| Maximum Average Forward Rectified Current | I _F | 3.0 | | | | | | | | | | A |
| Typical thermal resistance (NOTE 1) | R _{θJA} | 55.0 | | | | | | | | | | °C/W |
| | R _{θJL} | 17 | | | | | | | | | | °C/W |
| Junction Temperature | T _J | -50 ~+125 | | | | | -50 ~+150 | | | | | °C |
| Storage Temperature | T _{STG} | -50 ~+150 | | | | | | | | | | °C |

Note:1.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

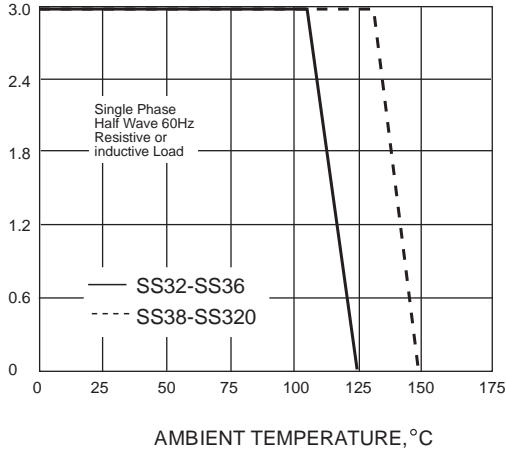
| Parameter | Symbol | SS32 | SS33 | SS34 | SS35 | SS36 | SS38 | SS39 | SS310 | SS315 | SS320 | Unit | Conditions |
|---------------------------------------|----------------|------|------|------|------|------|------|------|-------|-------|-------|------|---------------------------|
| Forward voltage | V _F | 0.55 | | 0.70 | | 0.85 | | 0.95 | | | | V | I _F =3A |
| Reverse current T _A =25°C | I _R | 0.5 | | | | 0.1 | | | | | | mA | V=V _R |
| Reverse current T _A =100°C | I _R | 10.0 | | 5 | | | | | | | | mA | |
| Junction capacitance | C _J | 500 | | 300 | | | | | | | | pF | V _R =4V,f=1MHZ |

SCHOTTKY BARRIER DIODE

Typical Characteristics

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

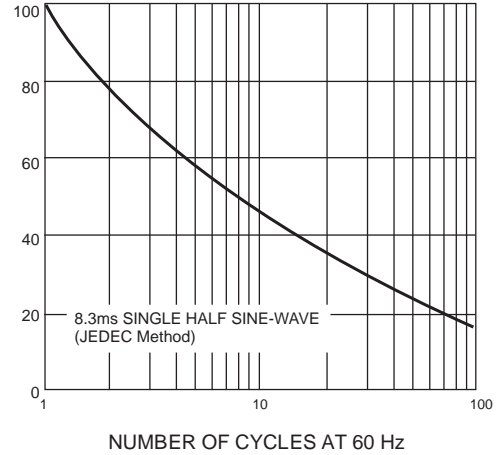
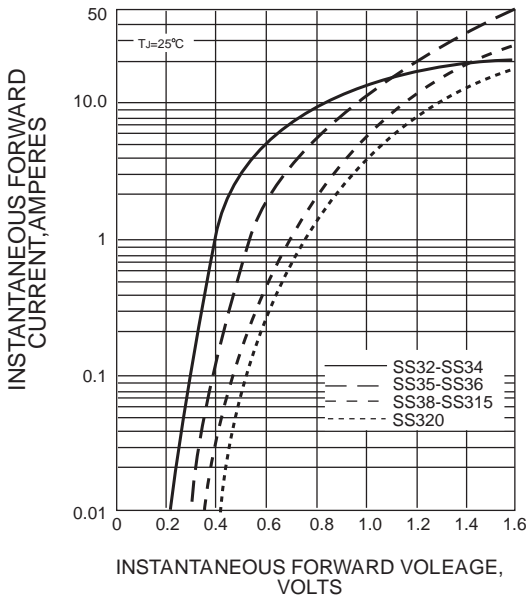


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

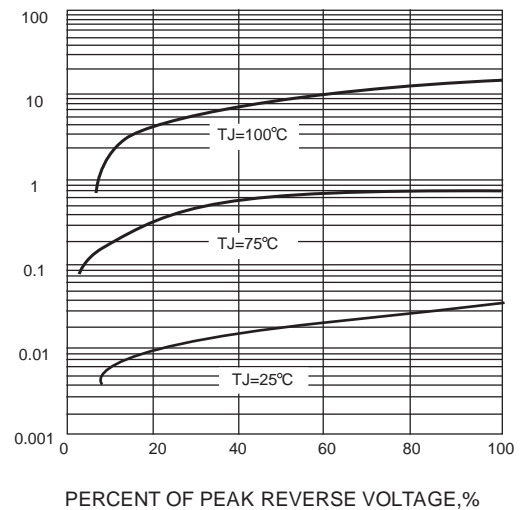
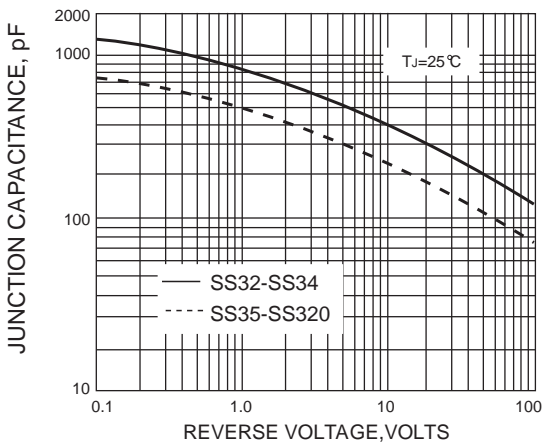
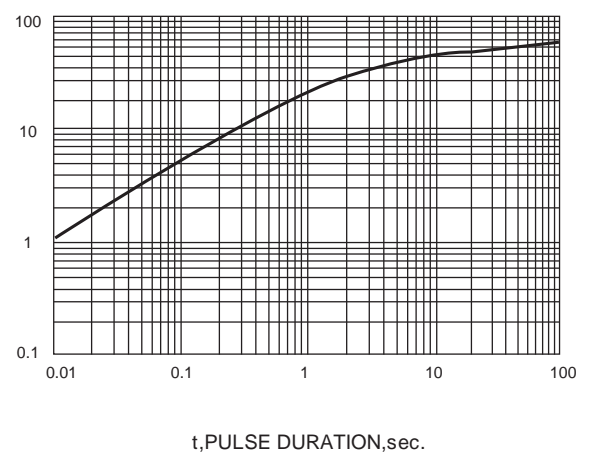


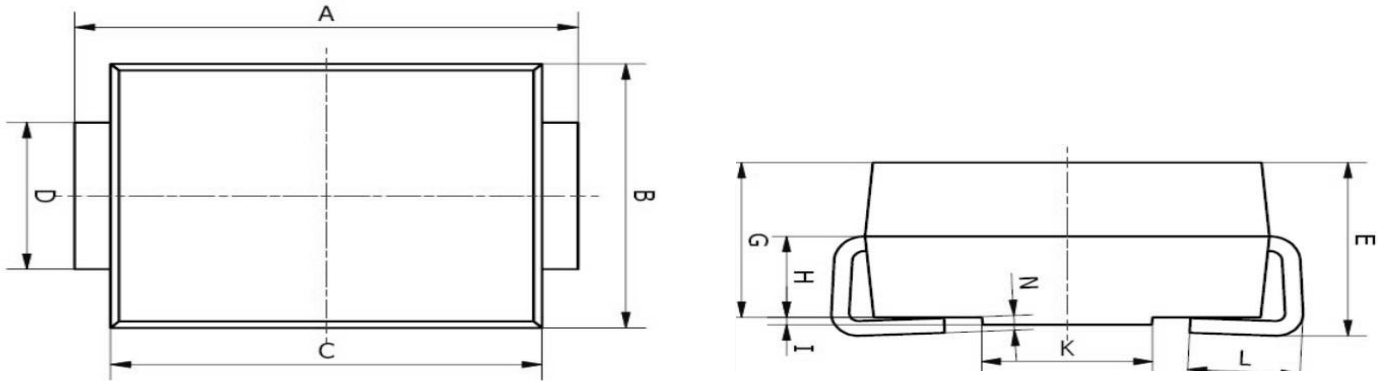
FIG. 5-TYPICAL JUNCTION CAPACITANCE



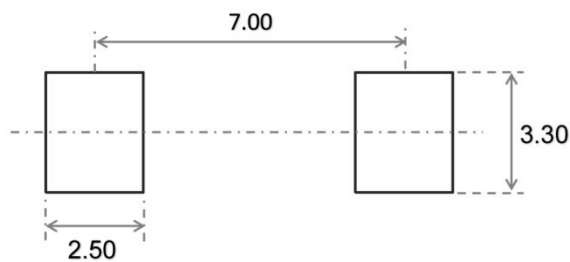
TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

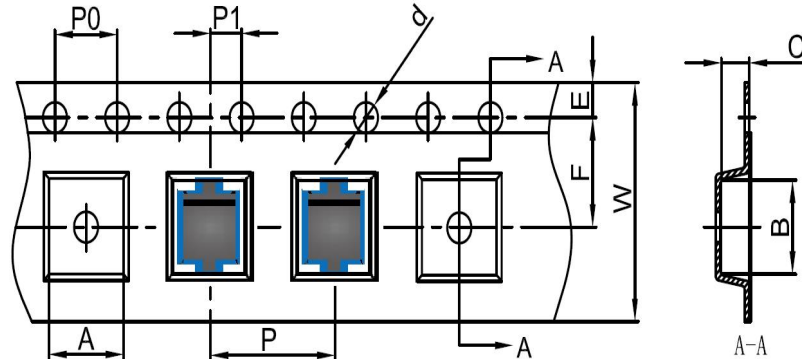


SCHOTTKY BARRIER DIODE
SMC Package Outline Dimensions


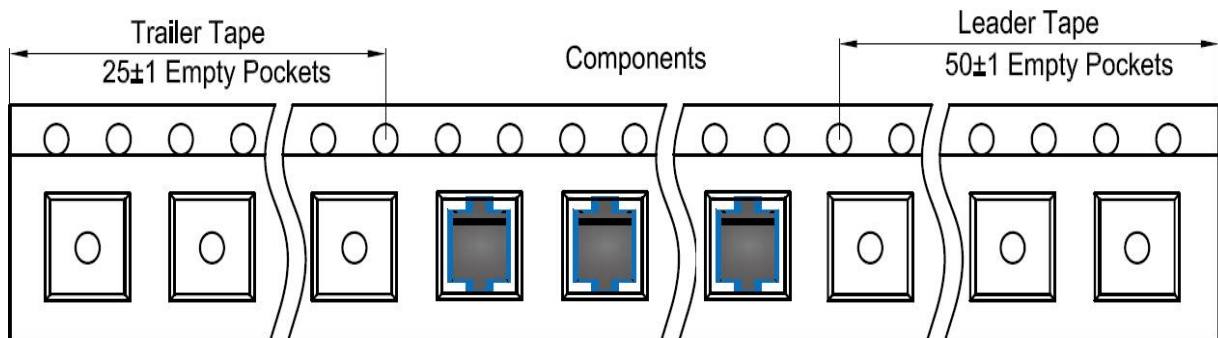
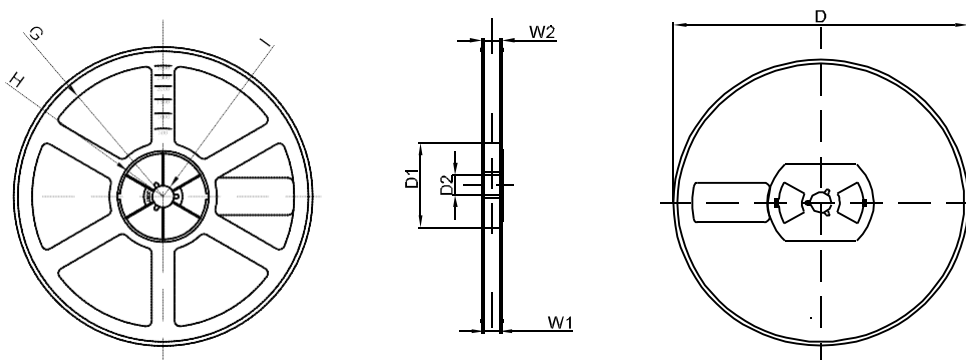
| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 7.75 | 8.13 | 0.305 | 0.320 |
| B | 5.59 | 6.22 | 0.220 | 0.245 |
| C | 6.60 | 7.11 | 0.260 | 0.280 |
| D | 2.75 | 3.25 | 0.108 | 0.128 |
| E | 2.25 | 2.82 | 0.089 | 0.111 |
| G | 2.00 | 2.62 | 0.079 | 0.103 |
| H | 1.26 | 1.56 | 0.050 | 0.061 |
| I | 0.05 | 0.15 | 0.002 | 0.006 |
| K | 4.30 | 6.00 | 0.169 | 0.236 |
| L | 1.25 | 1.75 | 0.049 | 0.069 |
| N | 0.10 | 0.30 | 0.004 | 0.012 |

SMC Suggested Pad Layout

Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

SCHOTTKY BARRIER DIODE
SMC Tape and Reel
SMC Embossed Carrier Tape


| DIMENSIONS ARE IN MILLIMETER | | | | | | | | | | |
|------------------------------|------|------|------|-------|------|------|------|------|------|-------|
| TYPE | A | B | C | d | E | F | P0 | P | P1 | W |
| SMC | 6.3 | 8.25 | 2.90 | Ø1.55 | 1.75 | 7.50 | 4.00 | 8.00 | 2.00 | 16.00 |
| TOLERANCE | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 |

SMC Tape Leader and Trailer

SMC Reel


| DIMENSIONS ARE IN MILLIMETER | | | | | | | | |
|------------------------------|------|-----|----|------|-----|-------|------|-------|
| REEL OPTION | D | D1 | D2 | G | H | I | W1 | W2 |
| 13" DIA | Ø330 | 100 | 21 | R165 | R50 | R6.50 | 16.4 | 21.00 |
| TOLERANCE | ±2 | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 |