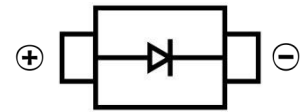


SCHOTTKY BARRIER DIODE
FEATURES

- Small Surface Mount device
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications


SMA
MECHANICAL DATA

- Case: SMA(DO-214AC)
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.065 grams (approximate)


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

| Parameter | Symbol | SS52A | SS53A | SS54A | SS55A | SS56A | SS58A | SS510A | SS515A | SS520A | Unit | |
|--|------------------|-----------|-------|-------|-------|-----------|-------|--------|--------|--------|------|----|
| Repetitive peak reverse voltage | V _{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | V | |
| RMS Reverse Voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | 140 | V | |
| DC Reverse Voltage | V _R | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | V | |
| Mean rectifying current | I _F | 5.0 | | | | | | | | | A | |
| Non-Repetitive Peak Forward Surge Current @ t = 8.3 ms | I _{FSM} | 100 | | | | | | | | | A | |
| Thermal Resistance From Junction To Ambient(1) | R _{θJA} | 60 | | | | | | | | | °C/W | |
| | R _{θJL} | 22 | | | | | | | | | | |
| Junction Temperature | T _J | -55 ~+125 | | | | | | | | | °C | |
| Storage Temperature | T _{STG} | -55 ~+125 | | | | -55 ~+150 | | | | | | °C |

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

| Parameter | Symbol | SS52A | SS53A | SS54A | SS55A | SS56A | SS58A | SS510A | SS515A | SS520A | Unit | Conditions | |
|----------------------|----------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|------|----------------------------|--|
| Forward voltage | V _F | 0.60 | | 0.70 | | 0.85 | | 0.90 | | | V | I _F =5A | |
| Reverse current | I _R | 0.5 | | | | 0.1 | | | | | | mA | V=V _R , T _a =25°C |
| | | 10 | | | | 5 | | | | | | mA | V=V _R , T _a =100°C |
| Junction capacitance | C _J | 265 | | 210 | | 150 | | 100 | | | pF | V _R =4V, f=1MHZ | |

NOTE:

(1) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

SCHOTTKY BARRIER DIODE

Typical Characteristics

FIG.1: I_o - T_L Curve

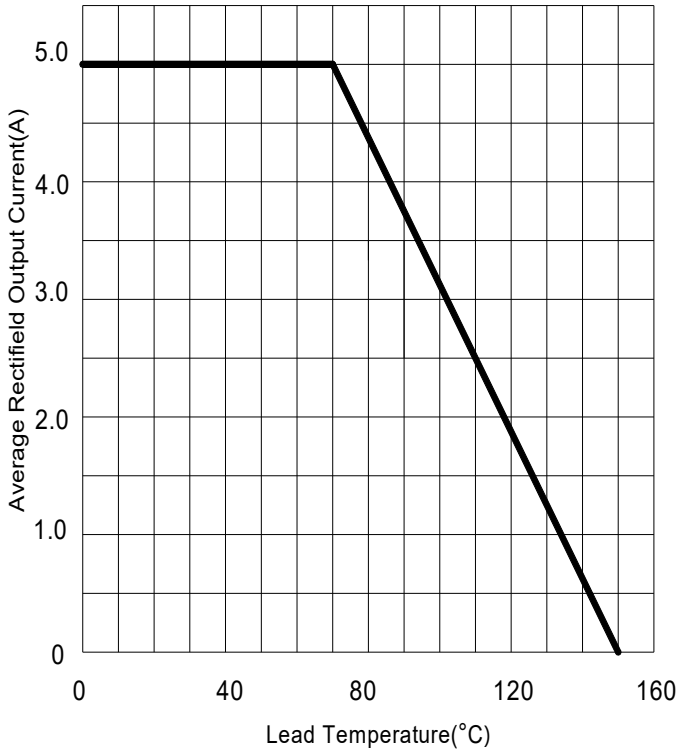


FIG.2: Surge Forward Current Capability

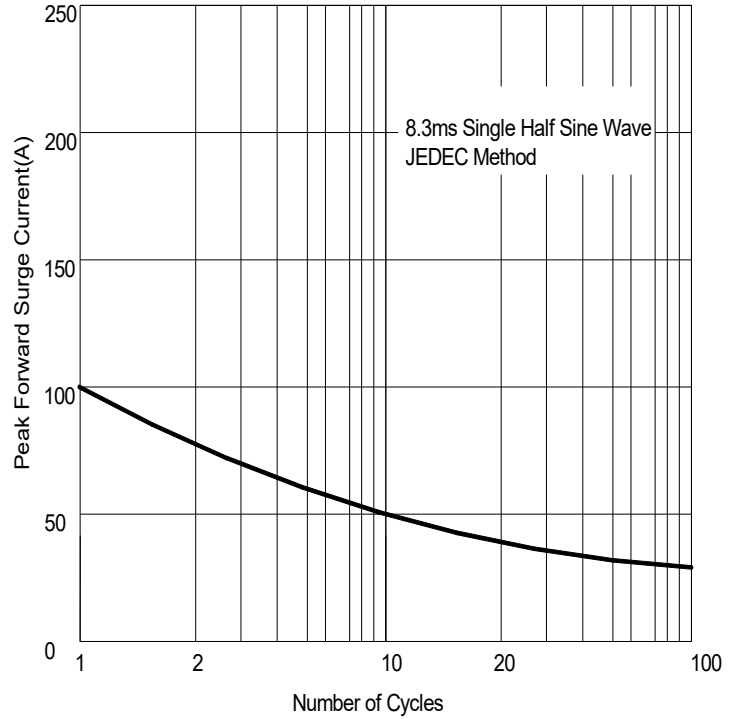


FIG.3: Typical Forward Characteristics

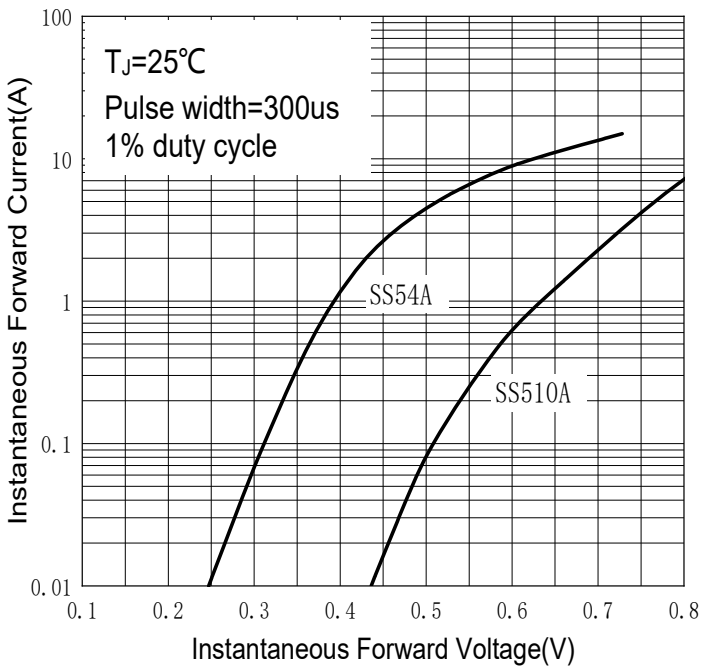
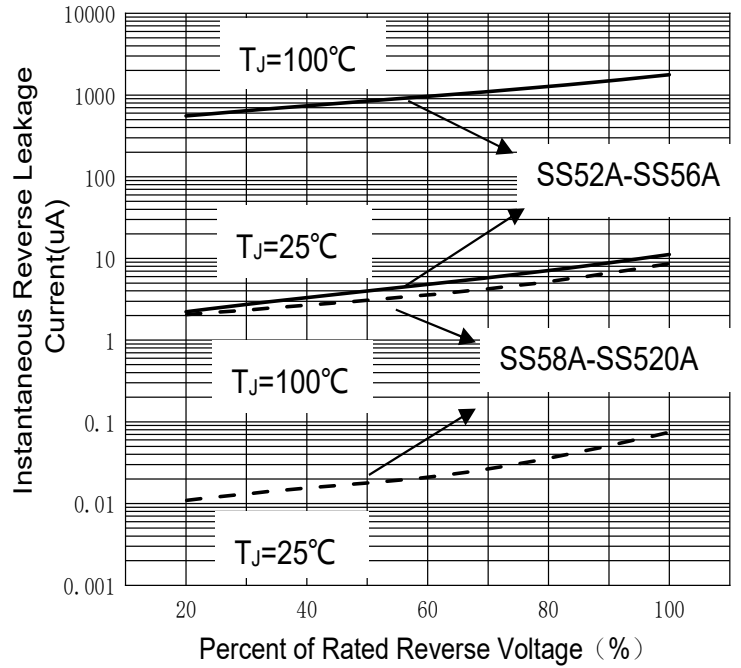
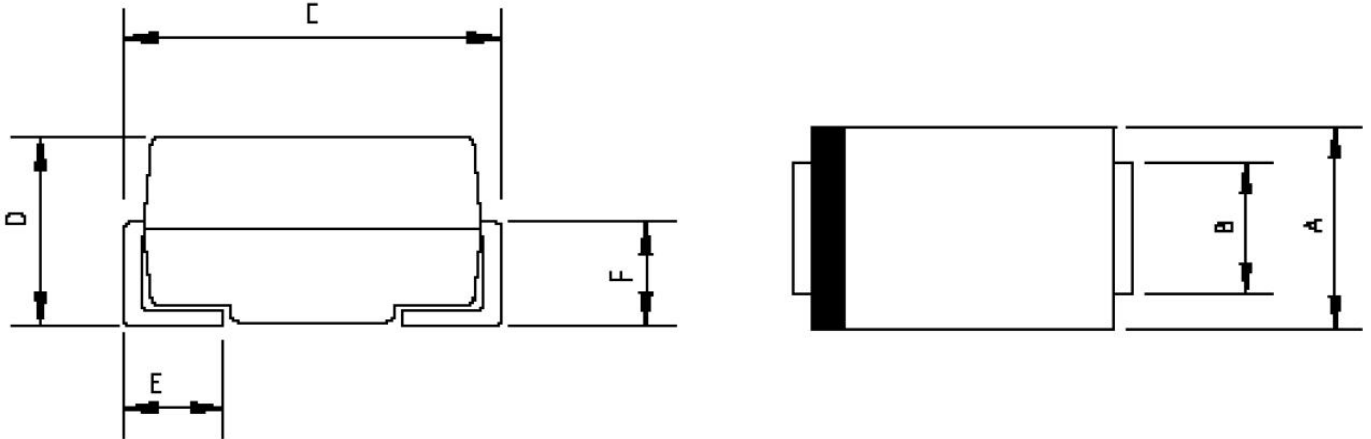


FIG.4: Typical Reverse Characteristics



SCHOTTKY BARRIER DIODE

SMA Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 2.20 | 2.80 | 0.086 | 0.110 |
| B | 1.30 | 1.70 | 0.051 | 0.067 |
| C | 4.70 | 5.30 | 0.185 | 0.209 |
| D | 1.70 | 2.55 | 0.067 | 0.100 |
| E | 0.90 | 1.50 | 0.035 | 0.059 |
| F | 0.90 | 1.50 | 0.035 | 0.059 |

SMA Suggested Pad Layout



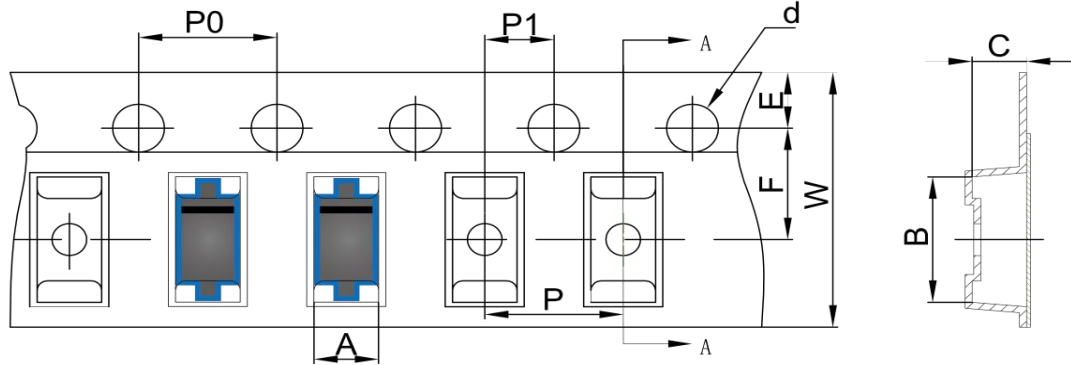
Note:

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

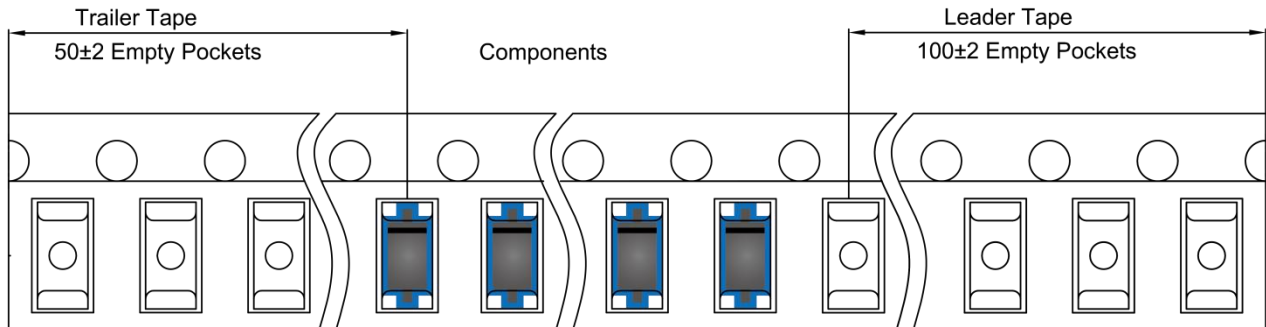
SMA Tape and Reel

SMA Embossed Carrier Tape

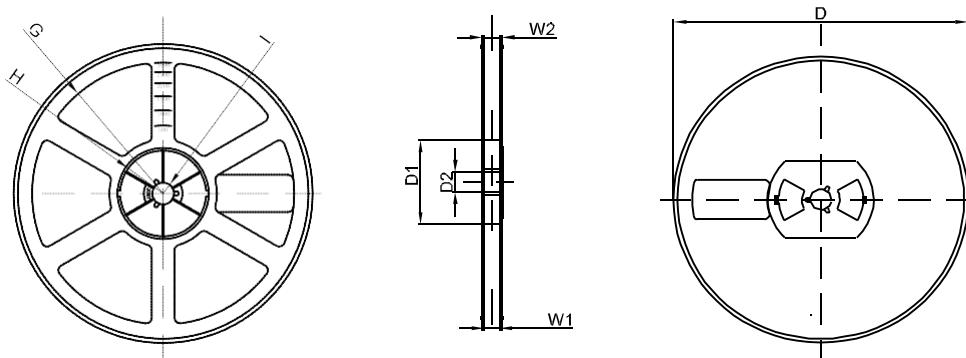


| DIMENSIONS ARE IN MILLIMETER | | | | | | | | | | |
|------------------------------|------|------|------|-------|------|------|------|------|------|-------|
| TYPE | A | B | C | d | E | F | P0 | P | P1 | W |
| SMA | 2.89 | 5.35 | 2.68 | Ø1.50 | 1.75 | 5.50 | 4.00 | 4.00 | 2.00 | 12.00 |
| TOLERANCE | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 |

SMA Tape Leader and Trailer



SMA Reel



| DIMENSIONS ARE IN MILLIMETER | | | | | | | | |
|------------------------------|------|-------|-------|-----|--------|-------|-------|-------|
| REEL OPTION | D | D1 | D2 | G | H | I | W1 | W2 |
| 7" DIA | Ø178 | 54.40 | 13.00 | R78 | R25.60 | R6.50 | 12.40 | 17.60 |
| TOLERANCE | ±2 | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 |