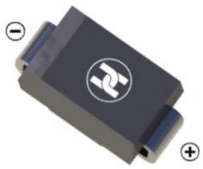
**3.0A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

## Features

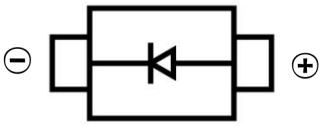
- Small Surface Mount device
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications



**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 Electrical Characteristics @$T_A$ = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristic | Symbol | B320A | B330A | B340A | B350A | B360A | Unit |
|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 20 | 30 | 40 | 50 | 60 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 14 | 21 | 28 | 35 | 42 | V |
| Average Rectified Output Current @ $T_T$ =100C° | $I_O$ | 3.0 | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$ | 60 | | | | | A |
| Forward Voltage (Note 3) @ $I_F$ = 3.0A | $V_{FM}$ | 0.50 | | | 0.70 | | V |
| Peak Reverse Current @ $T_A$ = 25°C<br>at Rated DC Blocking Voltage (Note 3) @ $T_A$ = 100°C | $I_{RM}$ | 0.5<br>20 | | | | | mA |
| Typical Capacitance (Note 2) | $C_T$ | 200 | | | | | pF |
| Typical Thermal Resistance, Junction to Terminal | $R_{\theta JT}$ | 25 | | | | | °C/W |
| Typical Thermal Resistance, Junction to Ambient (Note 1) | $R_{\theta JA}$ | 95 | | | | | °C/W |
| Operating Temperature Range | $T_j$ | -55 to +125 | | | | | °C |
| Storage Temperature Range | $T_{STG}$ | -55 to +150 | | | | | °C |

Notes:
1. Thermal Resistance: Junction to terminal, unit mounted on glass epoxy substrate with 2x3mm copper pad
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Short duration test pulse used to minimize self-heating effect.
4. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, see *EU Directive Annex Notes 5 and 7.*

## Typical Characteristics

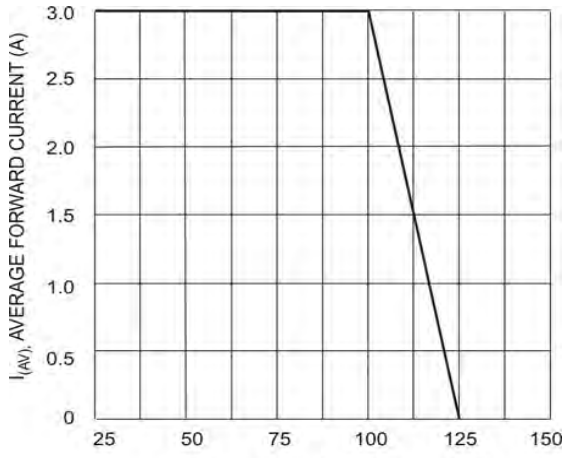



Fig. 1 Forward Current Derating Curve

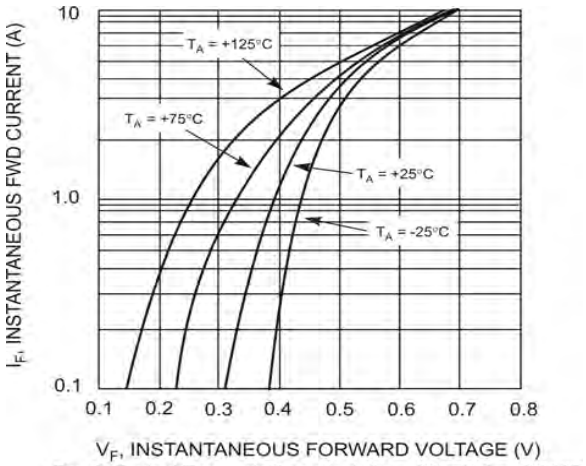



Fig. 2 Typical Forward Characteristics - B320B thru B340B

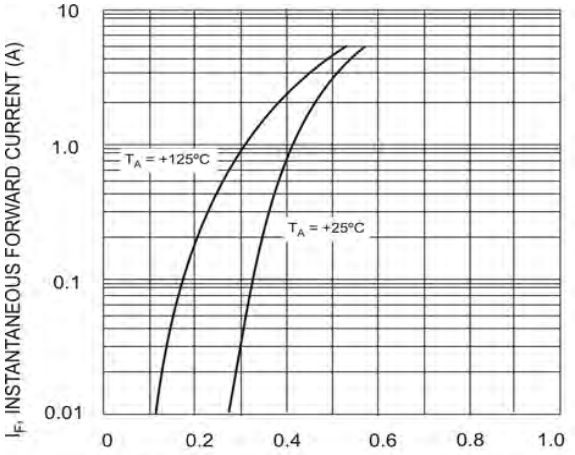



Fig. 3 Typ. Forward Characteristics - B350B thru B360B

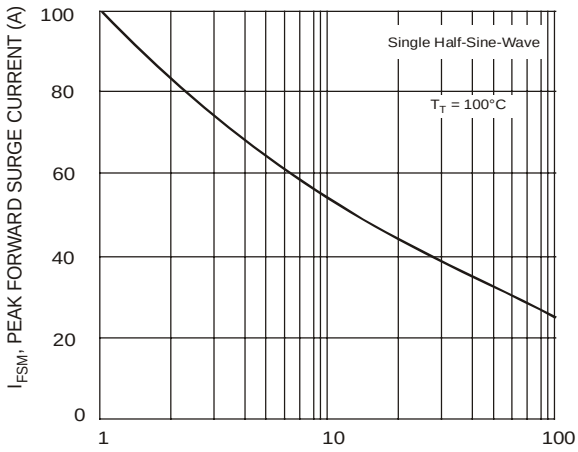



Fig. 4 Max Non-Repetitive Peak Forward Surge Current

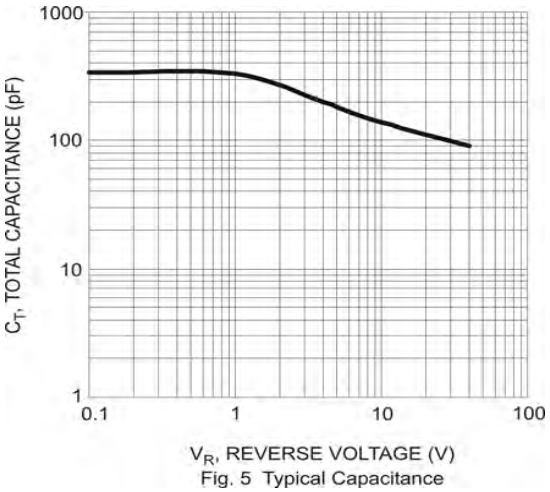



Fig. 5 Typical Capacitance

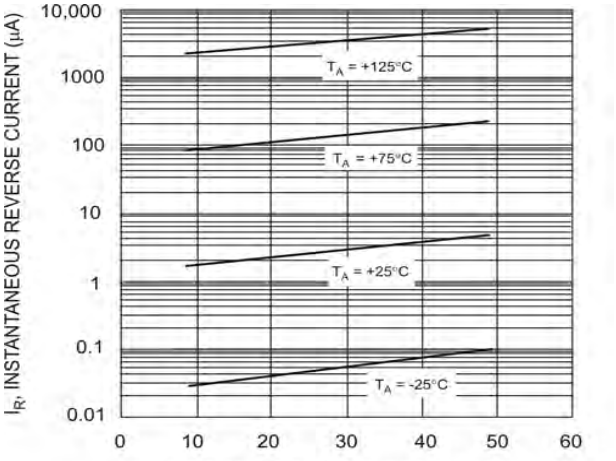
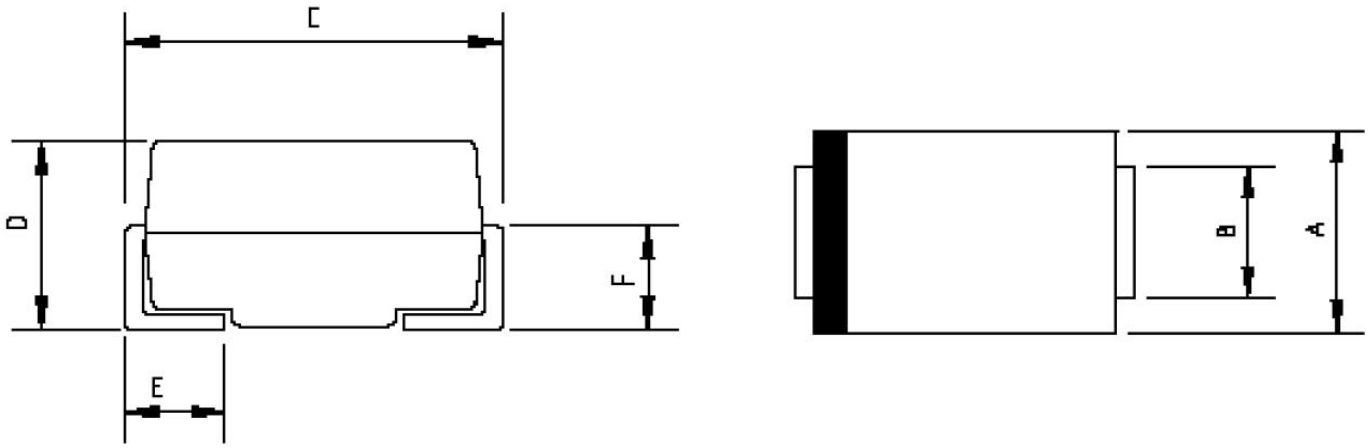



Fig. 6 Typical Reverse Characteristics, B320B thru B340B

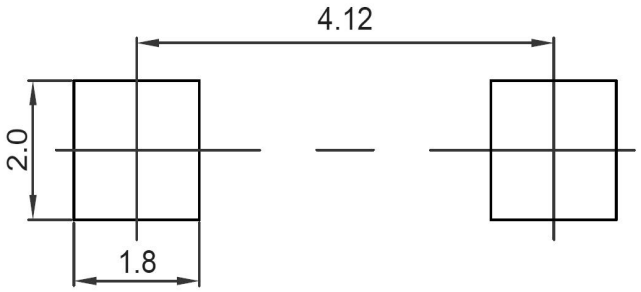
SCHOTTKY BARRIER DIODE

## 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

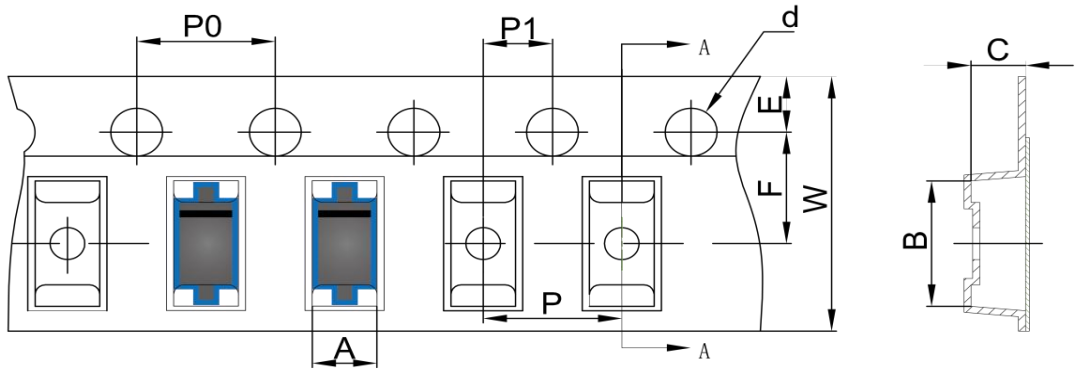
2.General tolerance: ±0.05mm

3.The pad layout is for reference purposes only

SCHOTTKY BARRIER DIODE

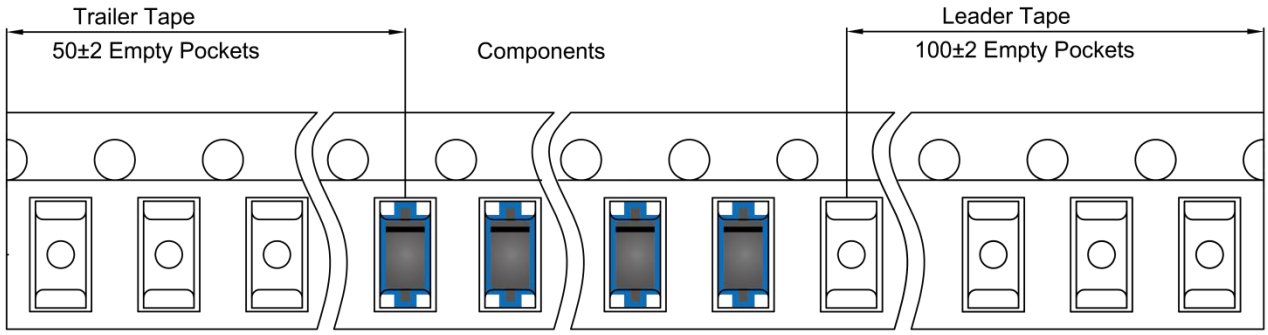
# SMA Tape and Reel

## SMA Embossed Carrier Tape

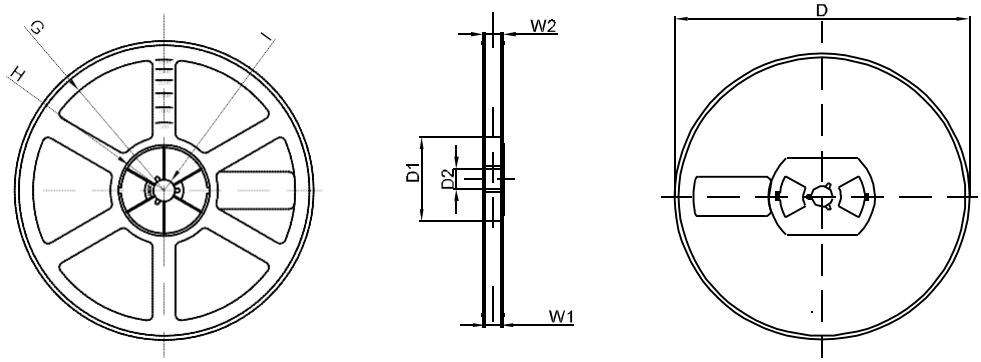



| | DIMENSIONS ARE IN MILLIMETER | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| TYPE | A | B | C | d | E | F | P0 | P | P1 | W |
| SMA | 2.89 | 5.35 | 2.68 | Ø1.50 | 1.75 | 5.50 | 4.00 | 4.00 | 2.00 | 12.00 |
| TOLERANCE | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1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