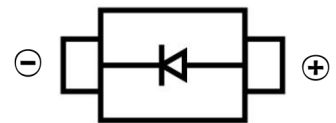


**SCHOTTKY BARRIER DIODE**
**FEATURES**

- 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


**SMAF**
**MECHANICAL DATA**

- Case: SMAF
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.027 grams (approximate)


**MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise noted)**

| Parameter  | Symbol           | Value     | Unit |
|--|------------------|-----------|------|
| Repetitive peak reverse voltage                        | V <sub>RRM</sub> | 60        | V    |
| DC Reverse Voltage                                     | V <sub>R</sub>   | 60        | V    |
| RMS Reverse Voltage                                    | V <sub>RMS</sub> | 42        | V    |
| Non-Repetitive Peak Forward Surge Current @ t = 8.3 ms | I <sub>FSM</sub> | 50        | A    |
| Mean rectifying current                                | I <sub>F</sub>   | 2         | A    |
| Thermal Resistance From Junction To Ambient            | R <sub>θJA</sub> | 85        | °C/W |
| Junction Temperature                                   | T <sub>J</sub>   | 125       | °C   |
| Storage Temperature                                    | T <sub>STG</sub> | -55 ~+150 | °C   |

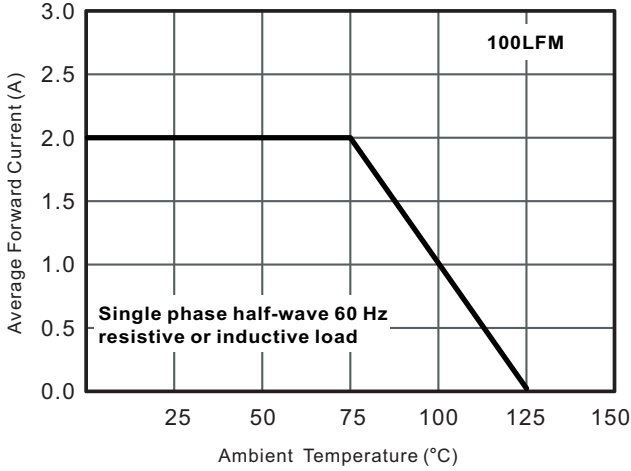
**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise specified)**

| Parameter               | Symbol         | Min | Max  | Unit | Conditions                 |
|-------------------------|----------------|-----|------|------|----------------------------|
| Forward voltage         | V <sub>F</sub> |     | 0.70 | V    | I <sub>F</sub> =2A         |
| Reverse current T=25°C  | I <sub>R</sub> |     | 0.50 | mA   | V <sub>R</sub> =60V        |
| Reverse current T=100°C | I <sub>R</sub> |     | 10   | mA   | V <sub>R</sub> =60V        |
| Junction capacitance    | C <sub>J</sub> |     | 80   | pF   | V <sub>R</sub> =4V, f=1MHz |

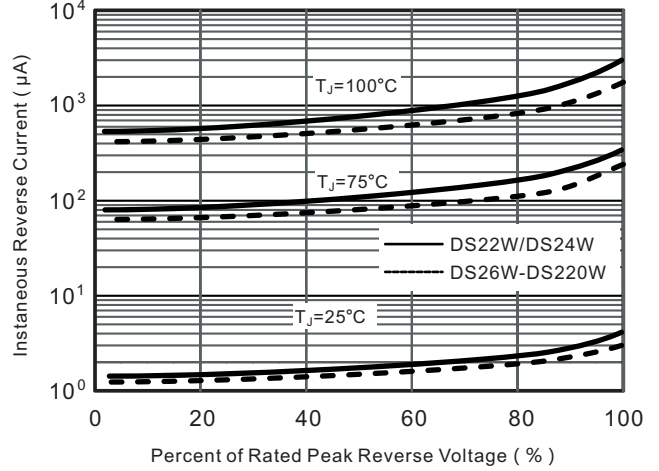
**SCHOTTKY BARRIER DIODE**

**Typical Characteristics**

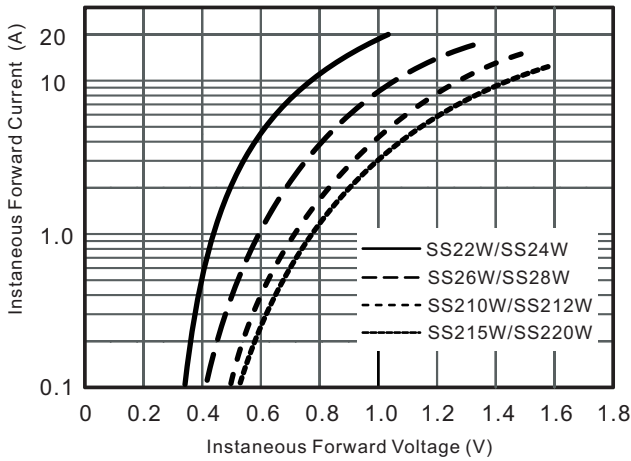
**Fig.1 Forward Current Derating Curve**



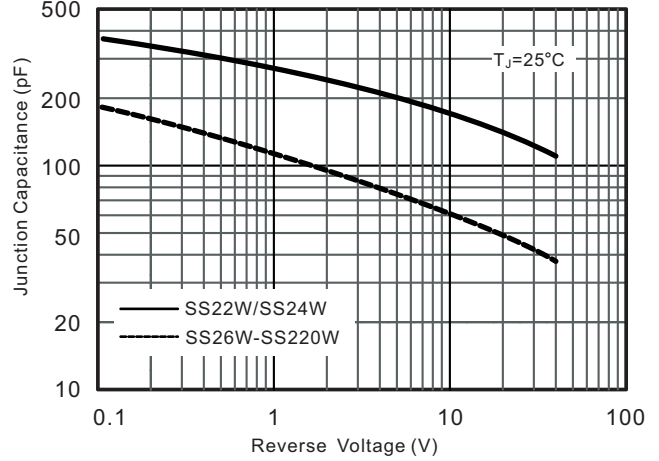
**Fig.2 Typical Reverse Characteristics**



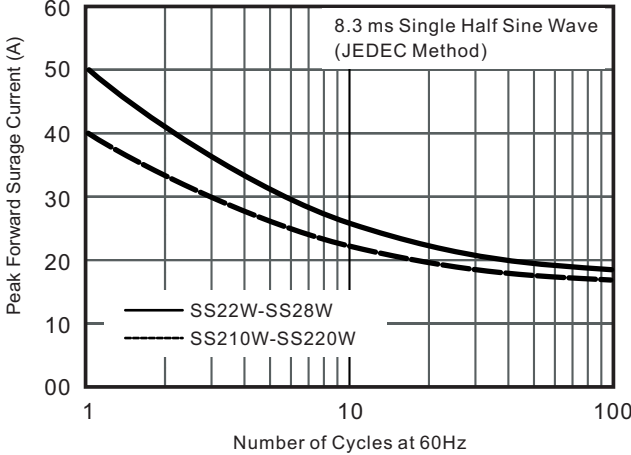
**Fig.3 Typical Forward Characteristic**



**Fig.4 Typical Junction Capacitance**

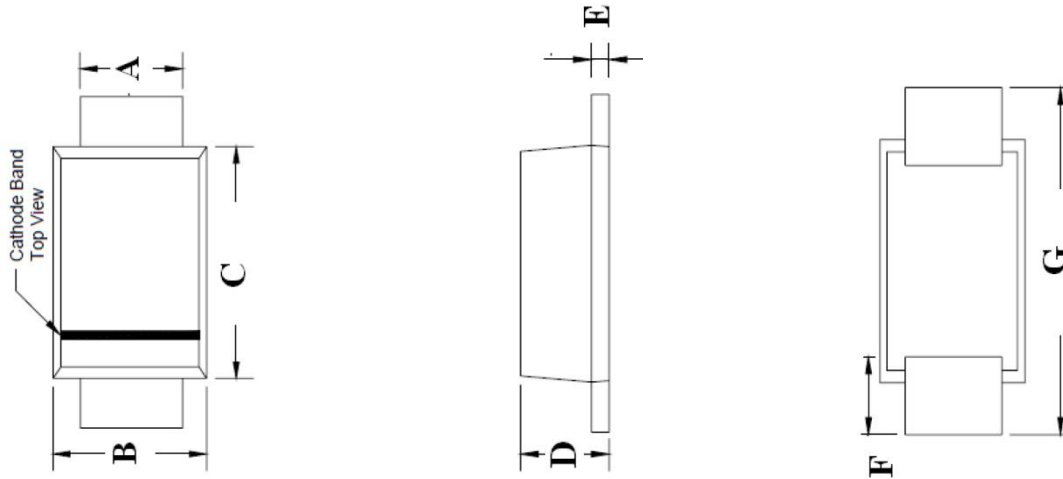


**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



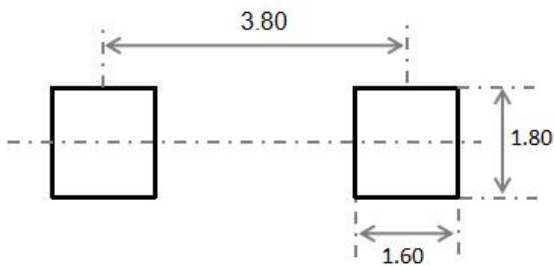
SCHOTTKY BARRIER DIODE

SMAF Package Outline Dimensions



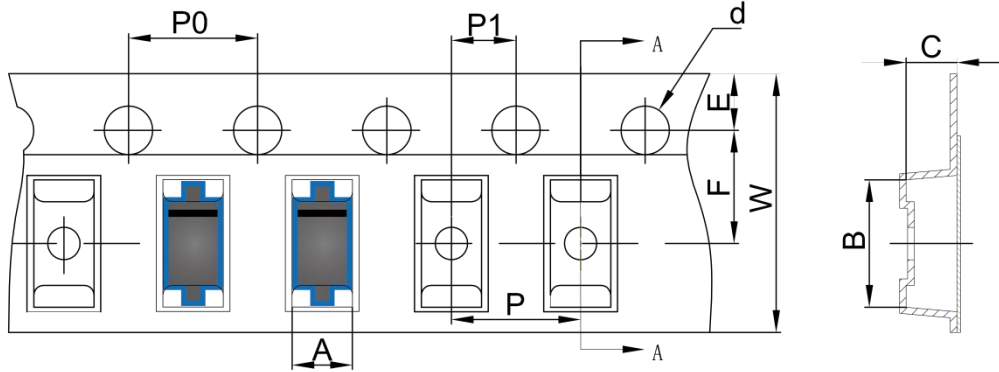
| Symbol | Dimensions In Millimeters |      | Dimensions In Inches |       |
|--------|---------------------------|------|----------------------|-------|
|        | Min.                      | Max. | Min.                 | Max.  |
| A      | 1.30                      | 1.60 | 0.051                | 0.063 |
| B      | 2.40                      | 2.80 | 0.094                | 0.110 |
| C      | 3.25                      | 3.65 | 0.128                | 0.144 |
| D      | 1.10                      | 1.40 | 0.043                | 0.055 |
| E      | 0.15                      | 0.25 | 0.006                | 0.010 |
| F      | 0.70                      | 1.20 | 0.028                | 0.047 |
| G      | 4.40                      | 4.90 | 0.173                | 0.193 |

SMAF Suggested Pad Layout

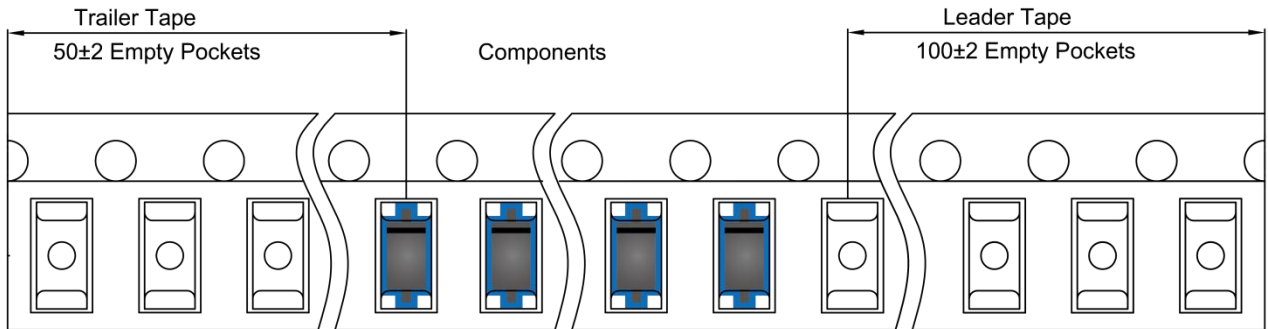
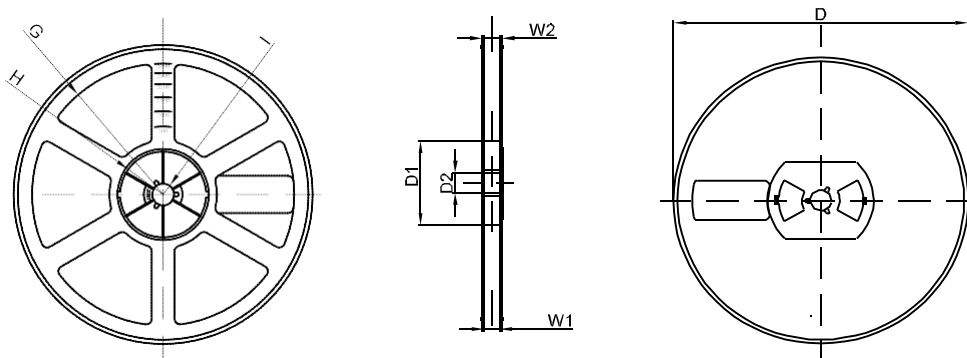


Note:

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**
**SMAF Tape and Reel**
**SMAF Embossed Carrier Tape**


| DIMENSIONS ARE IN MILLIMETER |      |      |      |       |      |      |      |      |      |       |
|------------------------------|------|------|------|-------|------|------|------|------|------|-------|
| TYPE                         | A    | B    | C    | d     | E    | F    | P0   | P    | P1   | W     |
| SMAF                         | 2.79 | 5.35 | 1.48 | 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  |

**SMAF Tape Leader and Trailer**

**SMAF 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    |