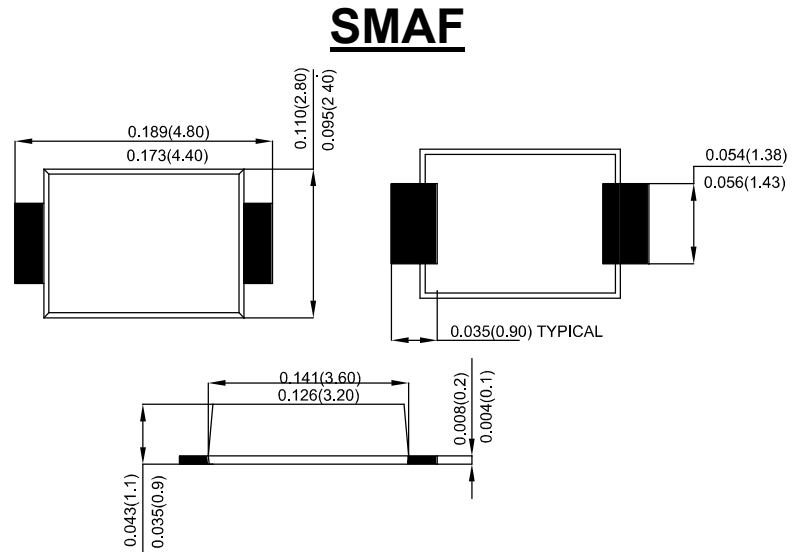


### Features

- Schottky Brier Chip
- Low Power Loss,High Efficiency
- Ideally Suited for Automatic Assembly
- Surge Overload Rating to 30A Peak
- Plastic Case Material has UL Flammability Classification Rating 94V-0

### Mechanical Data

- Case: Molded plastic SMAF
- Terminals: Plated leads solderable per MIL-STD-750,Method 2026 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Making: Type Number



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load

For capacitive load derate current by 20%

| Type Number  | SYMBOL          | S12         | S13 | S14 | S145 | S15 | S16  | S18  | S110 | S115 | S120 | S125 | Unit             |    |
|--|-----------------|-------------|-----|-----|------|-----|------|------|------|------|------|------|------------------|----|
| Maximum Recurrent Peak Reverse Voltage   | $V_{RRM}$       | 20          | 30  | 40  | 45   | 50  | 60   | 80   | 100  | 150  | 200  | 250  | V                |    |
| Maximum RMS Voltage  | $V_{RMS}$       | 14          | 21  | 28  | 31   | 35  | 42   | 56   | 70   | 105  | 140  | 175  | V                |    |
| Maximum DC Blocking Voltage  | $V_{DC}$        | 20          | 30  | 40  | 45   | 50  | 60   | 80   | 100  | 150  | 200  | 250  | V                |    |
| Average Rectified Output Current<br>@ $T_L=90^\circ C$   | $I_{F(AV)}$     | 1.0         |     |     |      |     |      |      |      |      |      |      | A                |    |
| Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$       | 30          |     |     |      |     |      |      |      |      |      |      | A                |    |
| $I^2t$ Rating for Fusing ( $t < 8.3ms$ )   | $I^2t$          | 3.735       |     |     |      |     |      |      |      |      |      |      | A <sup>2</sup> s |    |
| Forward Voltage @ $I_F=1.0A$ (Note 1)  | $V_{FM}$        | 0.55        |     |     | 0.7  |     | 0.85 |      | 0.92 |      | 0.95 |      | V                |    |
| Peak Reverse Current @ $T_A=25^\circ C$  | $I_R$           | 0.1         |     |     |      |     |      | 0.05 |      |      |      |      |                  | mA |
| At Rated DC Blocking Voltage @ $T_A=100^\circ C$   |                 | 10          |     |     |      |     |      | 5    |      |      |      |      |                  |    |
| Typical Junction Capacitance   | $C_J$           | 28          |     |     |      |     |      |      |      |      |      |      | pF               |    |
| Typical Thermal Resistance per leg (Note 2)  | $R_{\theta JL}$ | 88          |     |     |      |     |      |      |      |      |      |      | °C/W             |    |
| Operating Temperature Range  | $T_J$           | -55 to +150 |     |     |      |     |      |      |      |      |      |      | °C               |    |
| Storage Temperature Range  | $T_{STG}$       | -55 to +150 |     |     |      |     |      |      |      |      |      |      | °C               |    |

Note: 1.Pulse Test with PW=300usec,1%Duty Cycle.

2.Mounted on P.C.Board with 5.0 mm<sup>2</sup> (0.13mm thick) copper pad areas.

Fig. 1 Forward Current Derating Curve

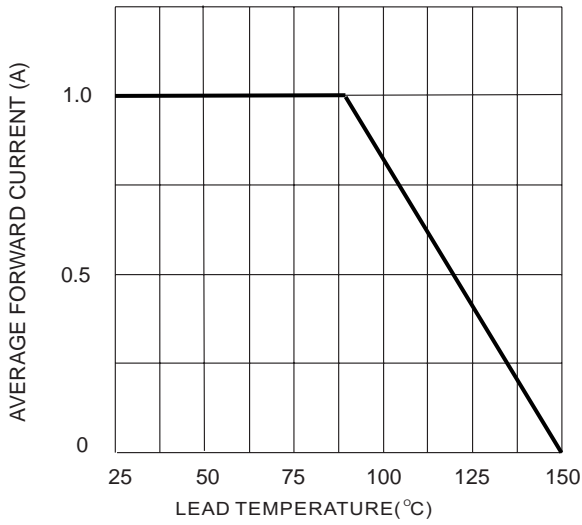


Fig. 2 Typ. Forward Characteristics

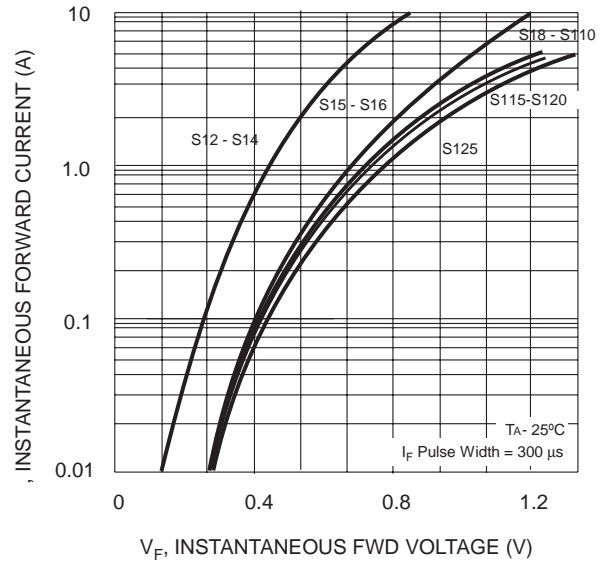


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

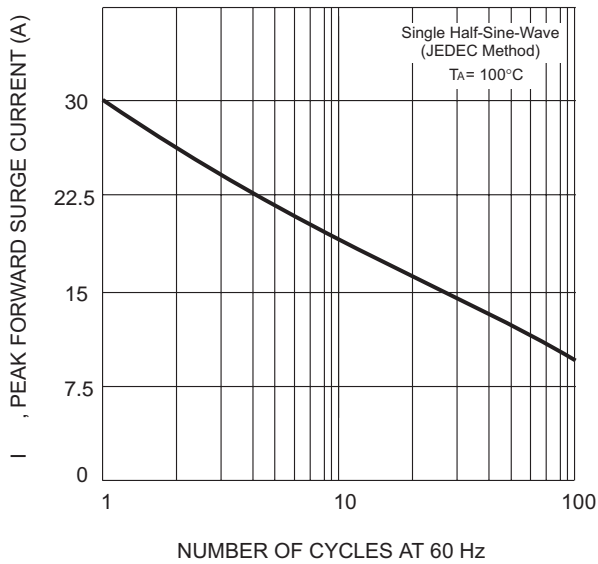


Fig. 4 T typical Reverse Characteristics (per element)

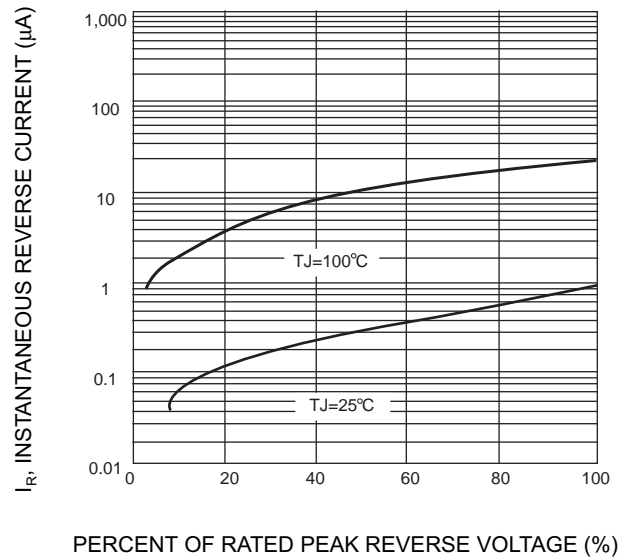
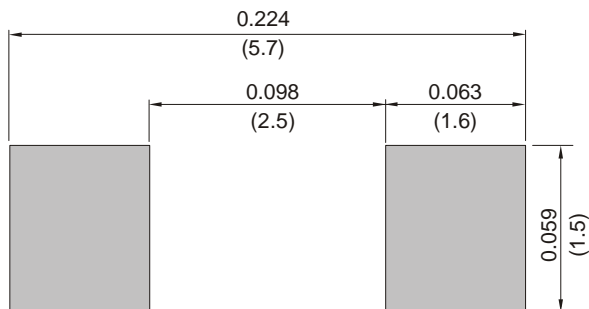


Fig.5 TYPICAL CAPACITANCE



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