



Reverse Voltage - 45V

Forward Current - 5.0A

## FEATURES

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

## MECHANICAL DATA

- Case: SMAF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 27mg / 0.00095oz

## Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

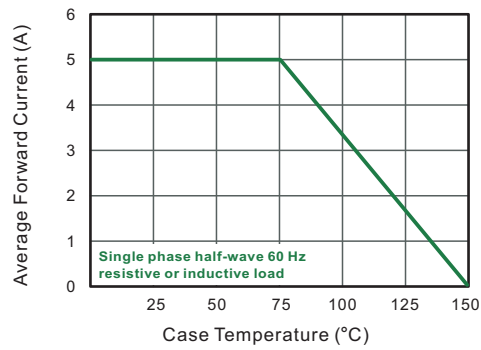
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter                                                                                  | Symbols         | SSL545F    | Units                |
|--------------------------------------------------------------------------------------------|-----------------|------------|----------------------|
| Maximum Repetitive Peak Reverse Voltage                                                    | $V_{RRM}$       | 45         | V                    |
| Maximum RMS voltage                                                                        | $V_{RMS}$       | 32         | V                    |
| Maximum DC Blocking Voltage                                                                | $V_{DC}$        | 45         | V                    |
| Maximum Average Forward Rectified Current                                                  | $I_{F(AV)}$     | 5          | A                    |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load         | $I_{FSM}$       | 150        | A                    |
| Maximum Instantaneous Forward Voltage at 5A                                                | $V_F$           | 0.46       | V                    |
| Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25\text{ }^{\circ}\text{C}$ | $I_R$           | 0.5        | mA                   |
| Typical Junction Capacitance <sup>(1)</sup>                                                | $C_j$           | 700        | pF                   |
| Typical Thermal Resistance <sup>(2)</sup>                                                  | $R_{\theta JA}$ | 50         | $^{\circ}\text{C/W}$ |
| Operating Junction Temperature Range                                                       | $T_j$           | -55 ~ +150 | $^{\circ}\text{C}$   |
| Storage Temperature Range                                                                  | $T_{stg}$       | -55 ~ +150 | $^{\circ}\text{C}$   |

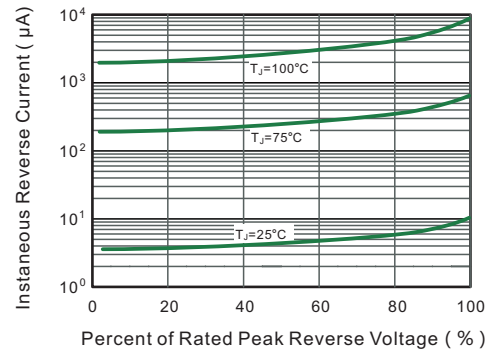
( 1 ) Measured at 1 MHz and applied reverse voltage of 4 V D.C

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

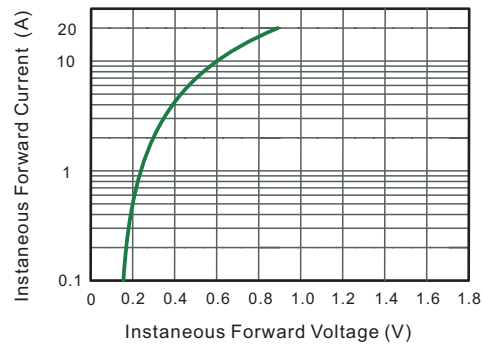
**Fig.1 Forward Current Derating Curve**



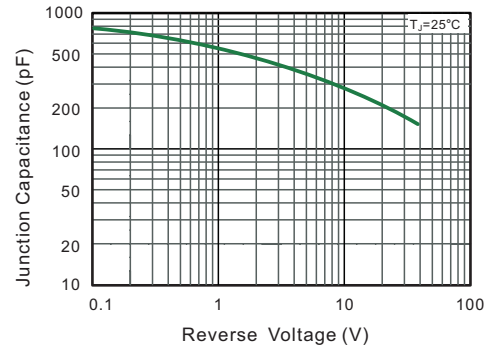
**Fig.2 Typical Reverse Characteristics**



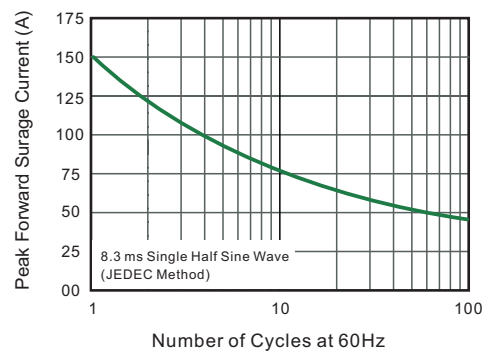
**Fig.3 Typical Forward Characteristic**



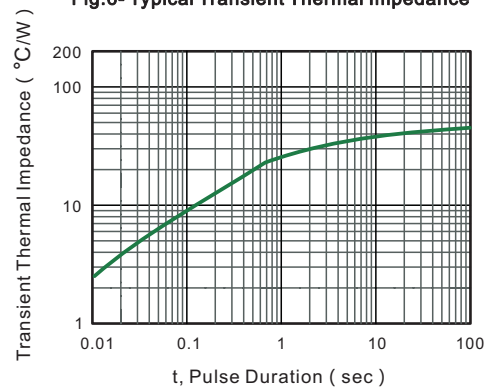
**Fig.4 Typical Junction Capacitance**



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



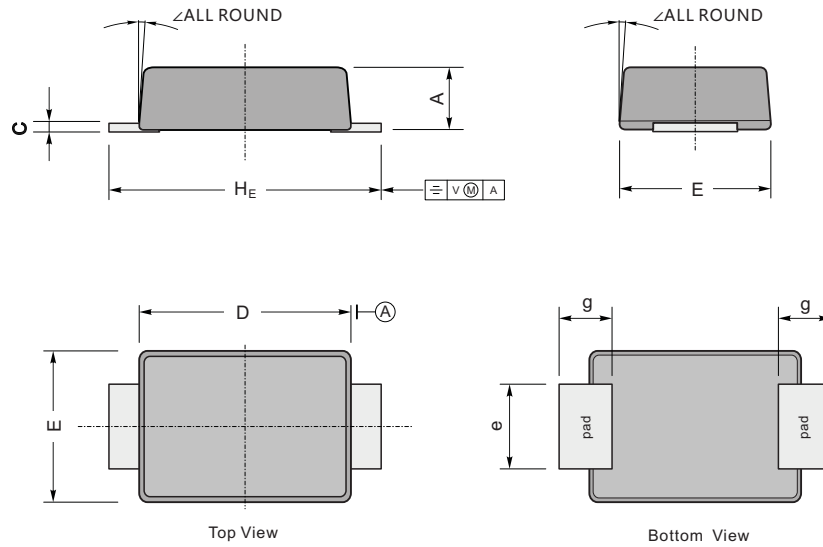
**Fig.6- Typical Transient Thermal Impedance**



## PACKAGE OUTLINE

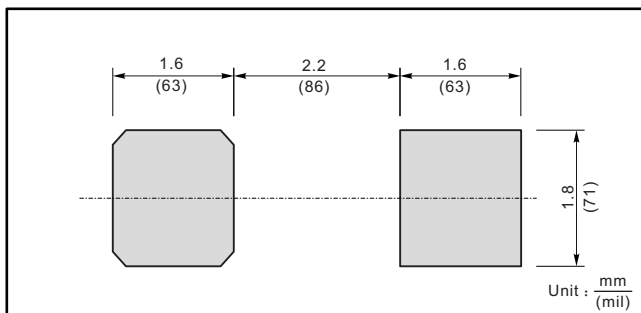
Plastic surface mounted package; 2 leads

**SMAF**



| UNIT |     | A   | C    | D   | E   | e   | g   | H <sub>E</sub> | $\angle$ |
|------|-----|-----|------|-----|-----|-----|-----|----------------|----------|
| mm   | max | 1.2 | 0.20 | 3.7 | 2.7 | 1.6 | 1.2 | 4.9            | 7°       |
|      | min | 0.9 | 0.12 | 3.3 | 2.4 | 1.3 | 0.8 | 4.4            |          |
| mil  | max | 47  | 7.9  | 146 | 106 | 63  | 47  | 193            |          |
|      | min | 35  | 4.7  | 130 | 94  | 51  | 31  | 173            |          |

## The recommended mounting pad size



## Marking

| Type number | Marking code |
|-------------|--------------|
| SSL545F     | SL545        |