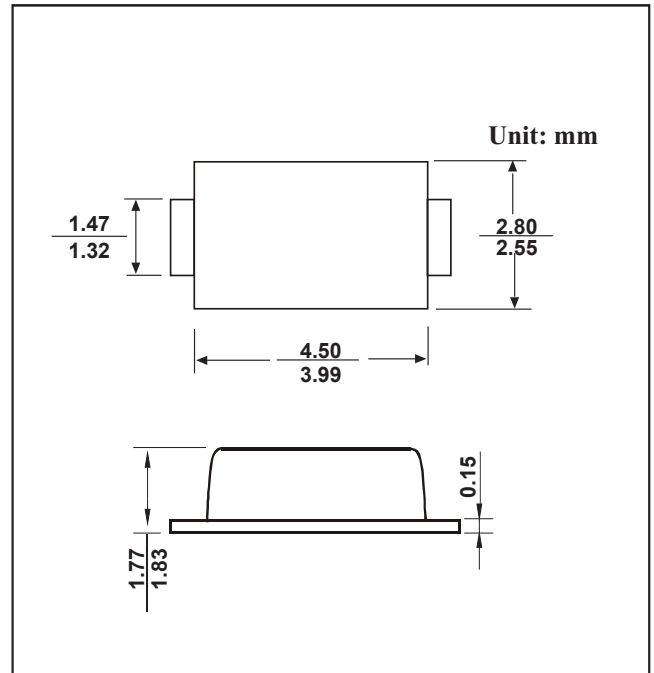


SMAF PLASTIC SILICON RECTIFIERS
Features

- Metal silicon junction, majority carrier conduction
- High surge capability
- High temperature soldering guaranteed: 260° C/10 seconds
- High current capability, low forward voltage drop
- RoHS Compliant

Mechanical Data

- Case: SMAF molded plastic
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Solder plated, solderable per MIL- STD-202, Method 208
- Polarity: Color band denotes cathode end


MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

| Characteristic | Symbol | SS22F | SS23F | SS24F | SS245F | Units |
|---|-----------------|-----------------|-------|-------|--------|-------|
| Peak repetitive reverse voltage | V_{RRM} | 20 | 30 | 40 | 45 | V |
| RMS reverse voltage | V_{RMS} | 14 | 21 | 28 | 31.5 | V |
| DC blocking voltage | V_{DC} | 20 | 30 | 40 | 45 | V |
| Maximum average forward output current | $I_{F(AV)}$ | 2.0 | | | | A |
| Peak forward surge current, 8.3ms single half-sine-wave | I_{FSM} | 50 | | | | A |
| Typical thermal resistance (Note 1) | $R_{\theta JA}$ | 78 | | | | |
| | $R_{\theta JC}$ | 18 | | | | °C/W |
| | $R_{\theta JL}$ | 20 | | | | |
| Operating junction temperature range | T_J | - 55 ---- + 125 | | | | °C |
| Storage temperature range | T_{STG} | - 55 ---- + 150 | | | | °C |

Note:

1. Device mounted on PCB with 10 mm x 20 mm x 0.1mm copper pad areas

| Parameter | Symbol | Test conditions | | Typ. | Max. Units | |
|---|--------|-----------------|-----------------------|------|------------|---------|
| Maximum instantaneous forward voltage(Note 1) | V_F | $I_F = 2.0A$ | @ $T_A = 25^\circ C$ | -- | 0.5 | V |
| Maximum Reverse current (Note 2) | I_R | Rated V_R , | @ $T_J = 25^\circ C$ | -- | 500 | μA |
| | | | @ $T_J = 100^\circ C$ | -- | 20 | m A |

Note:

- 1.Pulse test: 300us pulse width, 1 % duty cycle
- 2.Pulse test: Pulse width 40ms

RATINGS AND CHARACTERISTIC CURVES

Fig.1-Forward Current Derating Curve

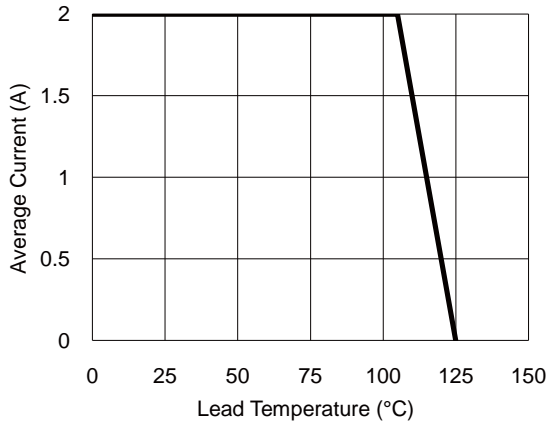


Fig.2- Surge Current Derating Curve

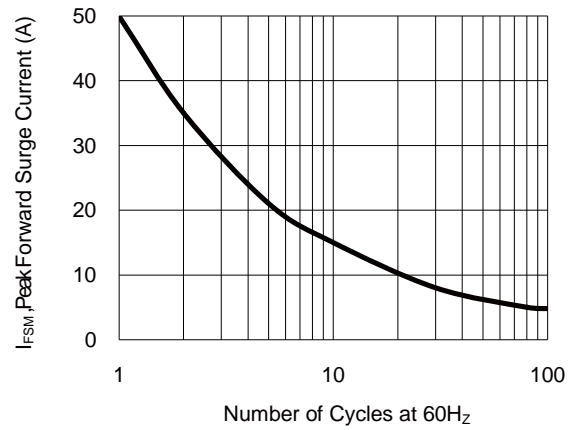


Fig.3- Typical Forward Voltage Characteristic

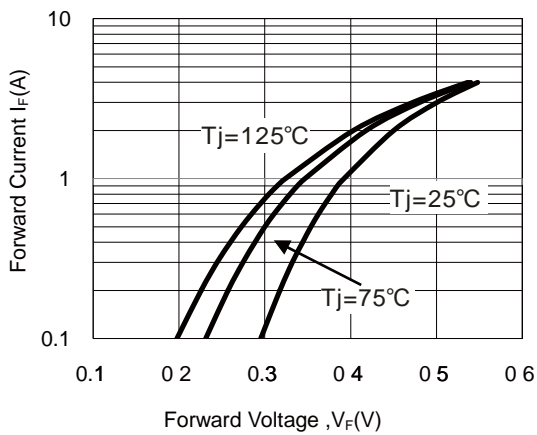


Fig.4- Typical Reverse Characteristic

