

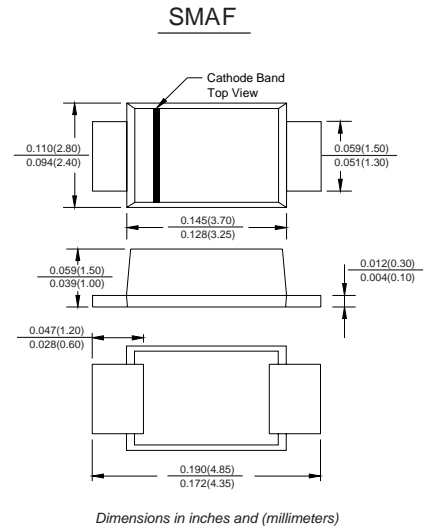


FEATURES

- Low profile package
- For surface mounted applications
- Built-in strain relief, ideal for automated placement
- Plastic package has Underwriters Laboratory Flammability Classification
- High temperature soldering: 260°C/10 seconds at terminals

MECHANICAL DATA

- Case: JEDEC SMAFL, molded plastic over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD- 750, Method 2026
- Polarity: Color band denotes cathode end



Maximum Ratings(@TA = 25°C unless otherwise specified)

| Characteristic | Symbol | S1AAF | S1BAF | S1DAF | S1GAF | S1JAF | S1KAF | S1MAF | UNITS |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Marking code | | S1A | S1B | S1D | S1G | S1J | S1K | S1M | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current at $T_c=110^\circ\text{C}$ | $I_{F(AV)}$ | 1.0 | | | | | | | A |
| Peak forward surge current @ $T_c=110^\circ\text{C}$ 8.3ms single half-sine-wave superimposed on rated load(JEDEC Method) | I_{FSM} | 30.0 | | | | | | | A |

Thermal Characteristics

| Characteristic | Symbol | S1AAF | S1BAF | S1DAF | S1GAF | S1JAF | S1KAF | S1MAF | UNITS |
|--|-----------------|--------------|-------|-------|-------|-------|-------|-------|-------|
| Typical junction capacitance (NOTE 1) | C_j | 12.0 | | | | | | | pF |
| Typical thermal resistance (NOTE 2) | $R_{\theta JA}$ | 50.0 | | | | | | | °C/W |
| Operating junction and storage temperature range | T_{JSTG} | -55-----+175 | | | | | | | °C |

Electrical Characteristics (@TA = 25°C unless otherwise specified)

| Characteristic | Symbol | S1AAF | S1BAF | S1DAF | S1GAF | S1JAF | S1KAF | S1MAF | UNITS |
|---|--------|-------|-------|-------|-------|-------|-------|-------|---------------|
| Maximum Instantaneous Forward Voltage at 1.0A | V_F | 1.1 | | | | | | | V |
| Maximum DC reverse current $T_a=25^\circ\text{C}$ at rated DC blocking voltage $T_a=125^\circ\text{C}$ | I_R | 1.0 | | | | | | | μA |
| | | 50 | | | | | | | |

NOTE: 1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts

2. Thermal resistance from junction to ambient and junction to lead P.C.B. mounted on 0.27"X0.27"(7.0X7.0mm2) copper pad areas



FIG.1 – FORWARD DERATING CURVE

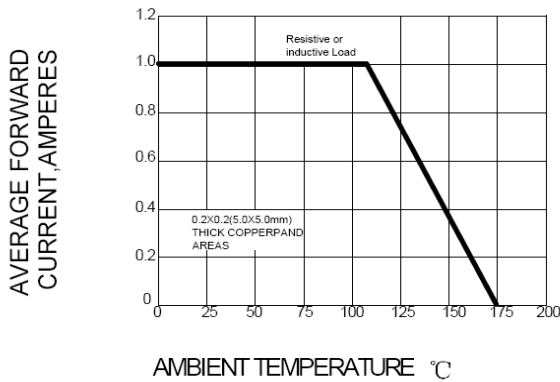


FIG.2 PEAK FORWARD SURGE CURRENT

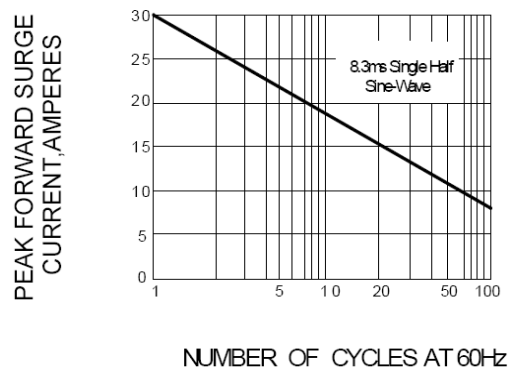


FIG.3 -- TYPICAL FORWARD CHARACTERISTICS

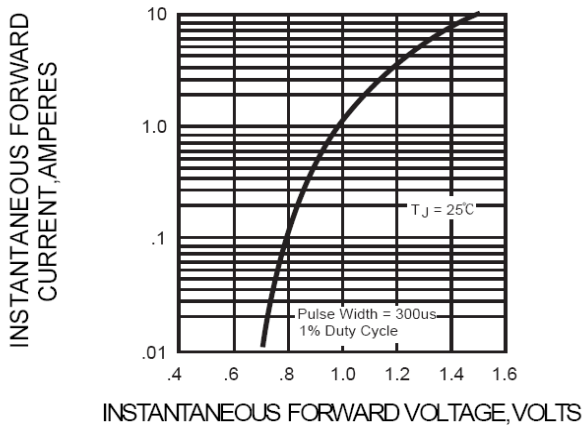


FIG.4 -- TYPICAL REVERSE CHARACTERISTICS

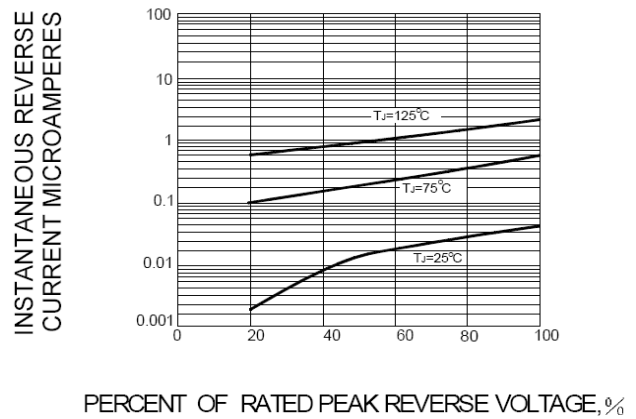


FIG.5-TYPICAL JUNCTION CAPACITANCE

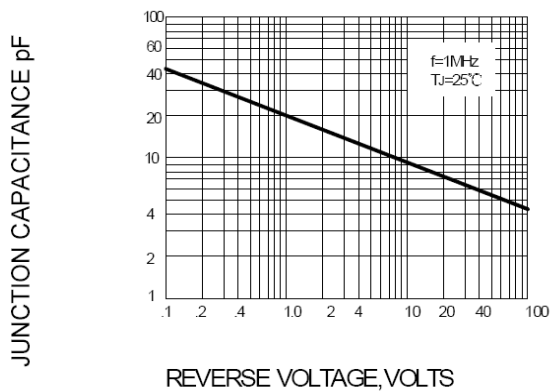
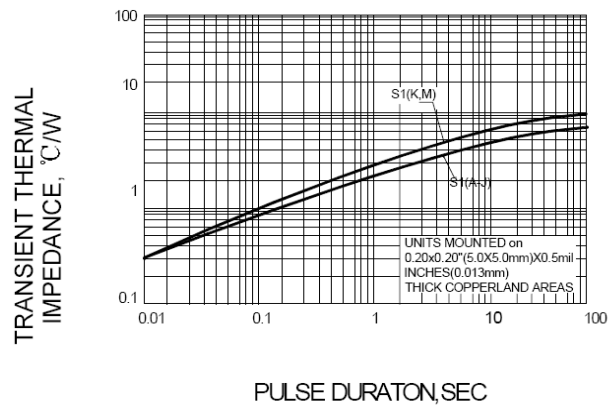


FIG.6-TRANSIENT THERMAL IMPEDANCE



| PACKAGE | SPQ/PCS | CARTON SPQ/PCS | CARTON SIZE/CM | CARTON GW/KG | CARTON NW/KG |
|---------|-----------|----------------|----------------|--------------|--------------|
| SMAF | 5000/REEL | 80000 | 36X30.6X31 | 12.00 | 11.00 |