

Fast Recovery Rectifiers

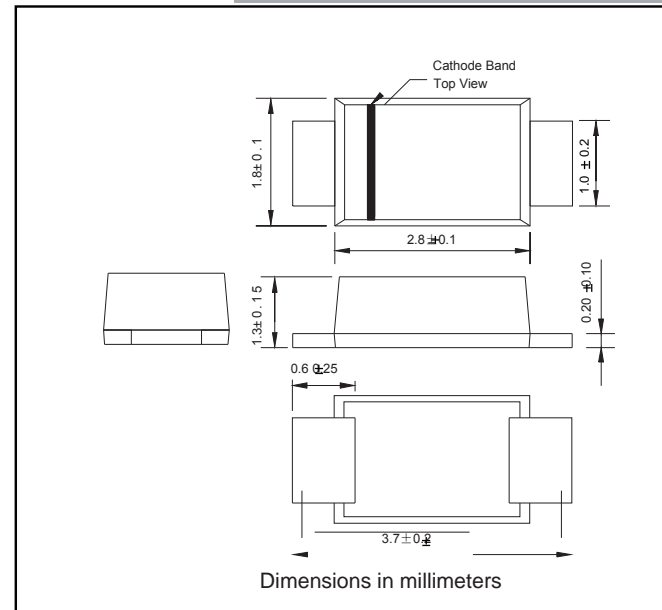
VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 1.0 A

FEATURES

- Glass passivated device
- Ideal for surface mouted applications
- Low reverse leakage
- Metallurgically bonded construction
- High temperature soldering guaranteed:
250 C/10 seconds,0.375"(9.5mm) lead length,

MECHANICAL DATA

- Case : JEDEC SOD-123FL molded plastic bodyover
- passivated chip
- Terminals: Plated axial leads, solderable per MIL-STD-750,Method 2026
- Polarity: Color band denotes cathode end Mounting Position: Any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

| | SYMBOLS | F1A | F1B | F1D | F1G | F1J | F1K | F1M | UNITS |
|---|-----------------|-------------|-----|-----|-----|-----|-----|------|--------------------|
| | MARK | F1A | F1B | F1D | F1G | F1J | F1K | F1M | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | VOLTS |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | VOLTS |
| Maximum average forward rectified current at $T_A=65\text{ C}$ (NOTE 1) | $I_{(AV)}$ | 1.0 | | | | | | | Amp |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_L=25\text{ C}$ | I_{FSM} | 20.0 | | | | | | | Amps |
| Maximum instantaneous forward voltage at 1.0A | V_F | 1.3 | | | | | | | Volts |
| Maximum DC reverse current $T_A=25\text{ C}$ at rated DC blocking voltage $T_A=125\text{ C}$ | I_R | 5.0 50.0 | | | | | | | μA |
| Maximum reverse recovery time (NOTE 2) | t_{rr} | 150 | | | 250 | | 500 | | ns |
| Typical junction capacitance (NOTE 3) | C_J | 4 | | | | | | | pF |
| Typical thermal resistance (NOTE 4) | $R_{\theta JA}$ | 180 | | | | | | | K/W |
| Operating junction and storage temperature range | $T_J T_{STG}$ | -55 to +150 | | | | | | | $^{\circ}\text{C}$ |

- Note:**
- 1.Averaged over any 20ms period.
 2. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.
 - 3.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 - 4.Thermal resistance junction to ambient, 6.0 mm² copper pads to each terminal.



RATINGS AND CHARACTERISTIC CURVES

FIG.1 --TYPICAL FORWARD CHARACTERISTIC

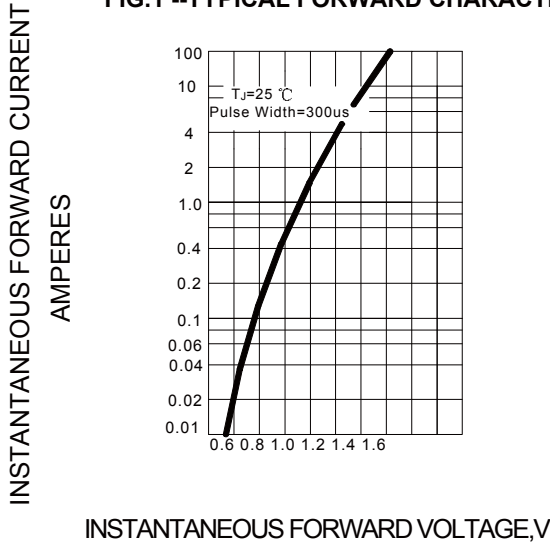


FIG.2 -- TYPICAL JUNCTION CAPACITANCE

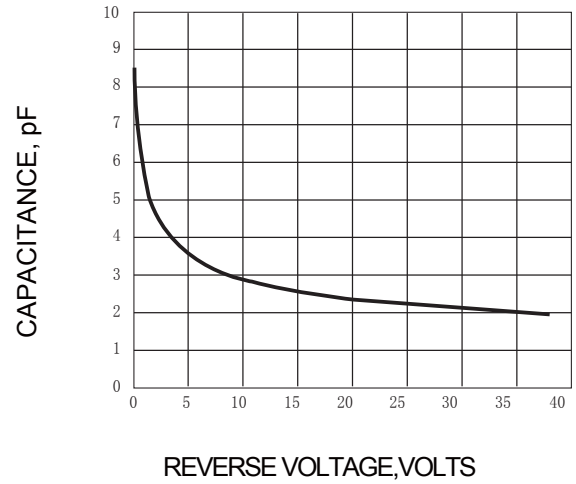


FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS

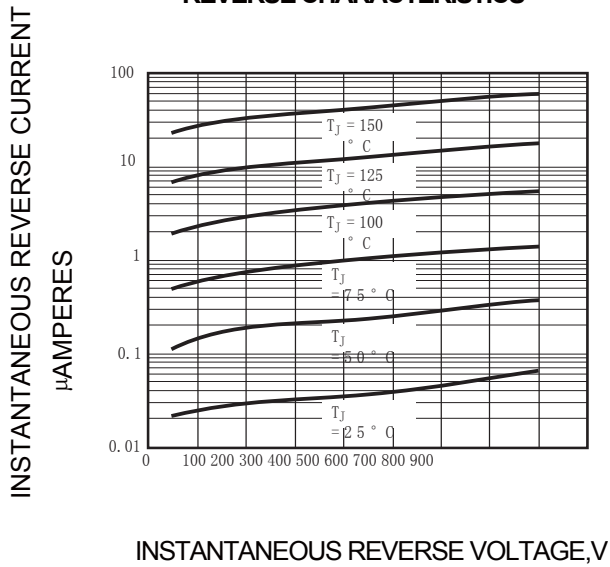


FIG.4 – FORWARD DERATING CURVE

