

Fast Recovery Rectifiers

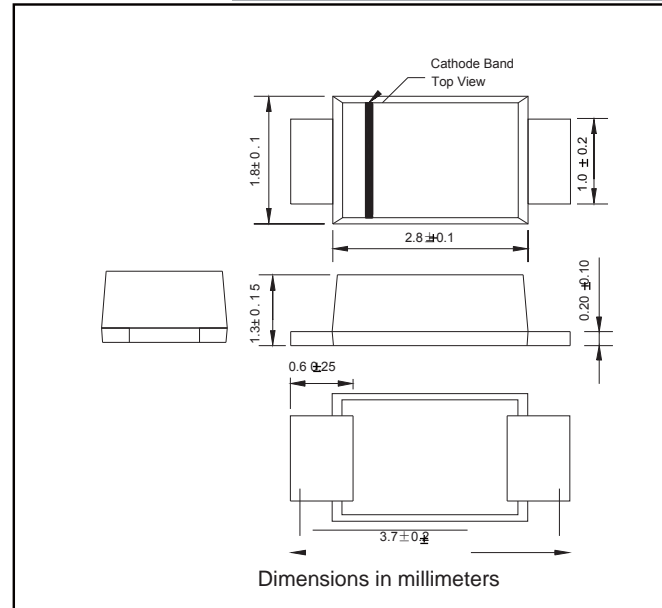
VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 1.0 A

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							°C

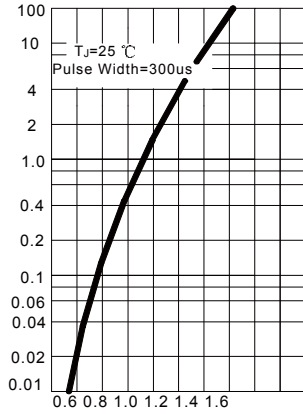
- Note:**
1. Averaged over any 20ms period.
 2. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.
 3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 4. Thermal resistance junction to ambient, 6.0 mm² copper pads to each terminal.



RATINGS AND CHARACTERISTIC CURVES

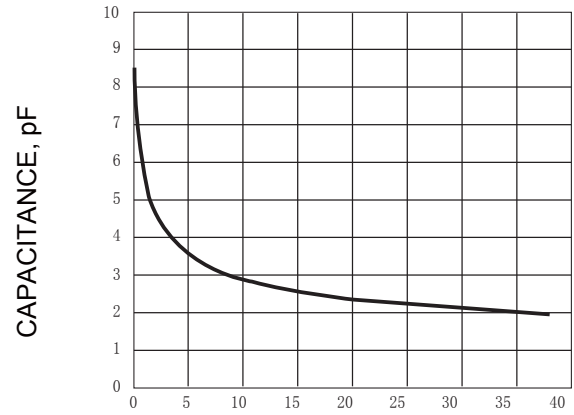
INSTANTANEOUS FORWARD CURRENT
AMPERES

FIG.1 --TYPICAL FORWARD CHARACTERISTIC



INSTANTANEOUS FORWARD VOLTAGE, V

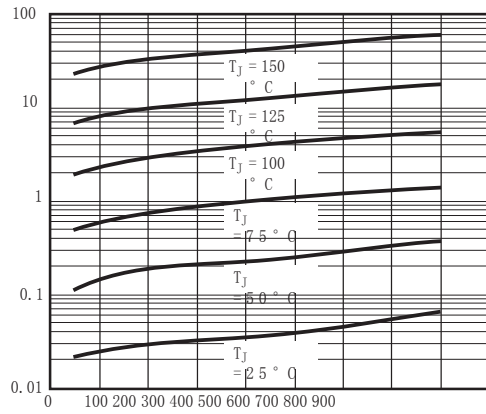
FIG.2 -- TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS

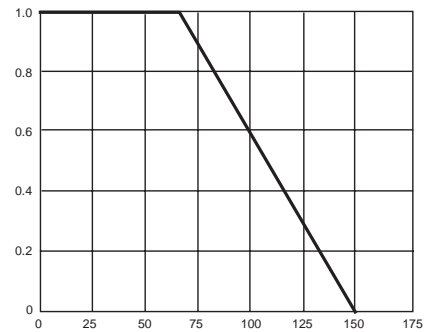
INSTANTANEOUS REVERSE CURRENT
 μ AMPERES



INSTANTANEOUS REVERSE VOLTAGE, V

FIG.4 – FORWARD DERATING CURVE

AVERAGE FORWARD CURRENT,
AMPERES



AMBIENT TEMPERATURE, $^\circ\text{C}$