

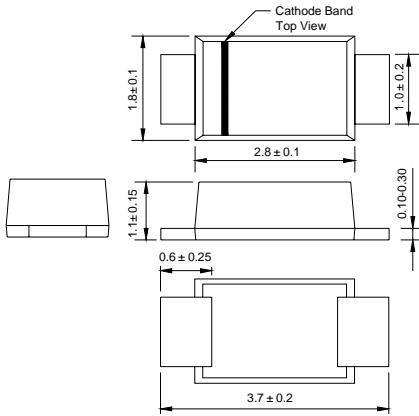


SOD1F1 THRU SOD1F7

SURFACE MOUNT FAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

SOD-123FL



Dimensions in millimeters

FEATURES

- ◆ Glass passivated device
- ◆ Ideal for surface mounted applications
- ◆ Low reverse leakage
- ◆ Metallurgically bonded construction
- ◆ High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC SOD-123FL molded plastic body over passivated chip
Terminals: Solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.0007 ounce, 0.02 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
 Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

MDD Catalog Number	SYMBOLS	SOD1F1	SOD1F2	SOD1F3	SOD1F4	SOD1F5	SOD1F6	SOD1F7	UNITS
		F1	F2	F3	F4	F5	F6	F7	
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 $T_A=65^\circ\text{C}$ (NOTE 1)	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_L=25^\circ\text{C}$	I_{FSM}	25.0							Amps
Maximum instantaneous forward voltage at 1.0A	V_F	1.3							Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	I_R	10.0 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							$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_{J,STG}$	-50 to +150							$^\circ\text{C}$

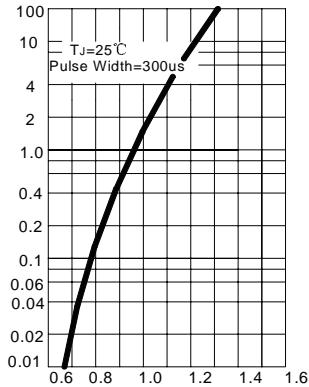
- Note:** 1. Averaged over any 20ms period.
 2. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.
 3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 4. Thermal resistance junction to ambient, 6.0 mm² copper pads to each terminal.



RATINGS AND CHARACTERISTIC CURVES SOD1F1 THRU SOD1F7

FIG.1 – TYPICAL FORWARD CHARACTERISTIC

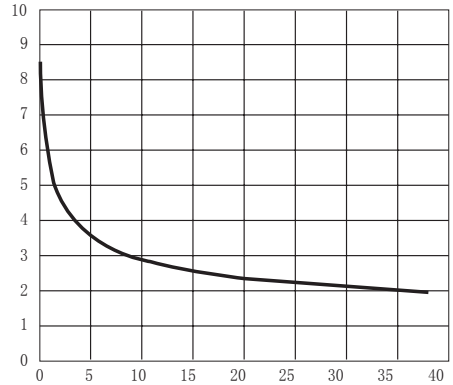
INSTANTANEOUS FORWARD CURRENT
AMPERES



INSTANTANEOUS FORWARD VOLTAGE, V

FIG.2 – TYPICAL JUNCTION CAPACITANCE

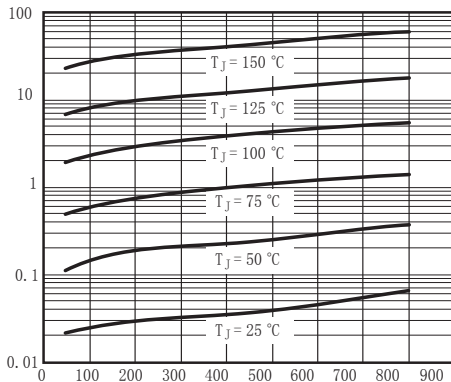
CAPACITANCE, pF



REVERSE VOLTAGE, VOLTS

FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS

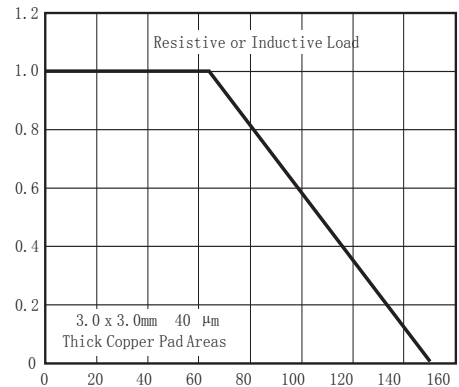
INSTANTANEOUS REVERSE CURRENT
μAMPERES



INSTANTANEOUS REVERSE VOLTAGE, V

FIG.4 – FORWARD DERATING CURVE

AVERAGE FORWARD CURRENT,
AMPERES



AMBIENT TEMPERATURE, °C

The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!



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