

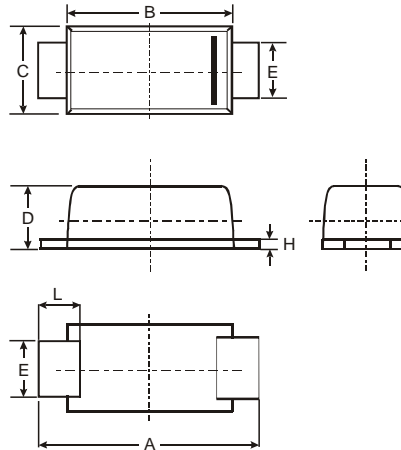
SURFACE MOUNT FAST RECOVERY RECTIFIER DIODES

FSM11PL - FSM17PL

Vishaymas General Semiconductor

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



SOD-123FL			
Dim	Min	Max	Typ
A	3.58	3.72	3.65
B	2.72	2.78	2.75
C	1.77	1.83	1.80
D	1.02	1.08	1.05
E	0.097	1.03	1.00
H	0.13	0.17	0.15
L	0.53	0.57	0.55
All Dimensions in mm			

Mechanical Data

Case: JEDEC SOD-123FL molded

plastic body over passivated junction

Terminals: Plated axial leads,

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

$T_A = 25^\circ\text{C}$ unless otherwise specified Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	FSM11PL	FSM12PL	FSM13PL	FSM14PL	FSM15PL	FSM16PL	FSM17PL	Unit
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 $T_A=65^\circ\text{C}$ (NOTE 1)	I_{AV}	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_L=25^\circ\text{C}$	I_{FSM}	30.0							A
Maximum instantaneous forward voltage at 1.0A	V_F	1.3							V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	5.0 100.0							μA
Maximum reverse recovery time (NOTE 2)	t_{rr}	150			250		500		ns
Typical junction capacitance (NOTE 3)	C_J	15							pF
Typical thermal resistance (NOTE 4)	$R_{\theta JA}$	180							K/W
Operating junction and storage temperature range	T_J, T_{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.

FIG. 1- FORWARD CURRENT DERATING CURVE

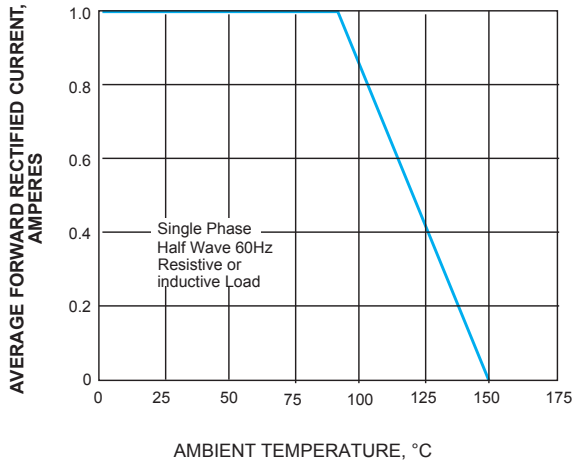


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

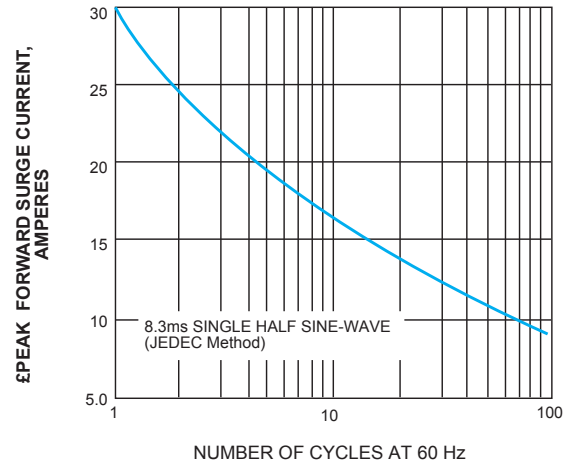


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

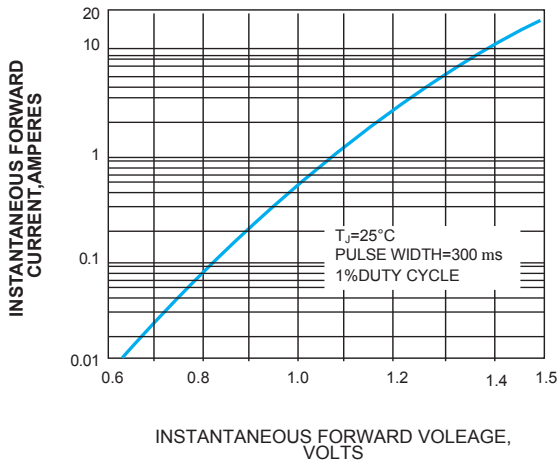


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

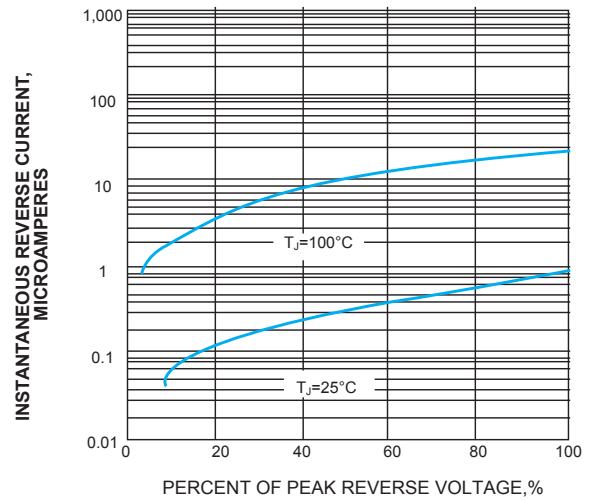


FIG. 5-TYPICAL JUNCTION CAPACITANCE

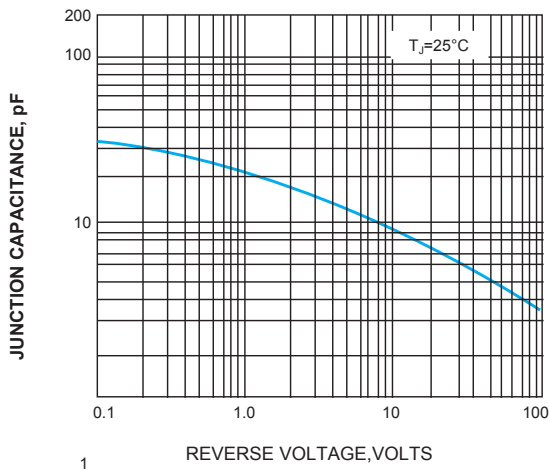


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

