

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

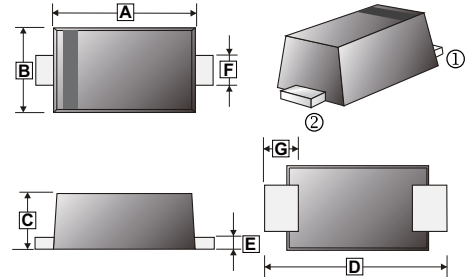
FEATURES

- Glass passivated device
- Ideal for surface mounted applications
- Low leakage current
- Metallurgically bonded construction
- High temperature soldering:
260°C /10 seconds at terminals

MECHANICAL DATA

- Case: JEDEC SOD-123FL, molded plastic over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.0008 ounces, 0.022 gram
- Mounting position: Any

SOD-123FL



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	2.90	E	0.10	0.30
B	1.70	1.90	F	0.80	1.35
C	0.81	1.35	G	0.35	0.85
D	3.50	3.90			

MARKING

Product	Marking Code	Product	Marking Code
SMF102FL	RB / R2	SMF105FL	RJ / R5
SMF103FL	RD / R3	SMF106FL	RK / R6
SMF104FL	R4	SMF107FL	RM / R7

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-123FL	2.5K	7 inch

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, de-rate current by 20%.)

Parameters	Symbol	Part Number						Unit
		SMF 102FL	SMF 103FL	SMF 104FL	SMF 105FL	SMF 106FL	SMF 107FL	
Recurrent Reverse Voltage (Max.)	V_{RRM}	100	200	400	600	800	1000	V
RMS Voltage (Max.)	V_{RMS}	70	140	280	420	560	700	V
DC Blocking Voltage (Max.)	V_{DC}	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ $T_A = 65^\circ C$ ¹	$I_{(AV)}$	1.0						A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load $T_L=25^\circ C$	I_{FSM}	20						A
Typical thermal resistance junction to ambient ²	$R_{\theta JA}$	180						K / W
Maximum reverse recovery time ³	T_{RR}	150		250		500		ns
Operating Temperature Range	T_j	-55~150						°C
Storage Temperature Range	T_{STG}	-55~150						°C

Notes :

1. Averaged over any 20 ms period.
2. Thermal resistance junction to ambient, 6.0 mm² copper pads to each terminal.
3. Measured with $I_F=0.5A$, $I_R=1A$, $I_{RR}=0.25A$.

ELECTRICAL CHARACTERISTICS

Parameters	Symbol	Min.	Typ.	Max.	Units	Testing Conditions
Maximum instantaneous ⁵	V_F	-	-	1.3	V	forward voltage @ 1A
Maximum DC reverse current	I_R	-	-	10	μA	$T_A = 25^\circ C$
At rated DC blocking voltage	I_R	-	-	100	μA	$T_A = 100^\circ C$
Typical junction capacitance ⁶	C_J	-	4	-	pF	

Notes :

4. Pulse test: 300μs pulse width, 1% duty cycle.
5. Measured at 1.0MHz and applied average voltage of 4.0V DC.

RATINGS AND CHARACTERISTIC CURVES

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

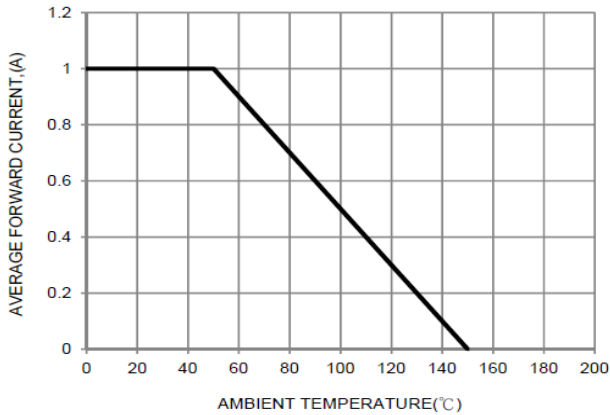


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

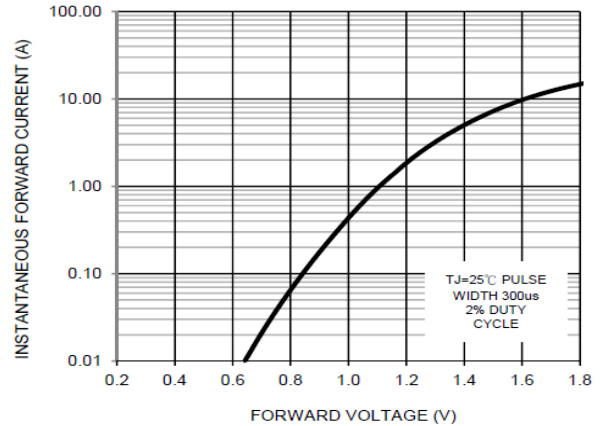


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

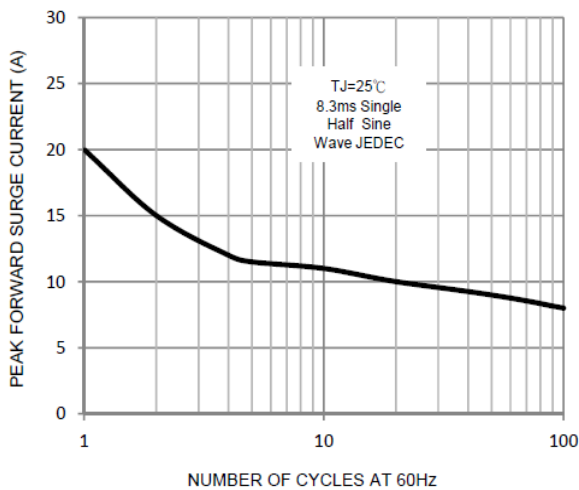


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

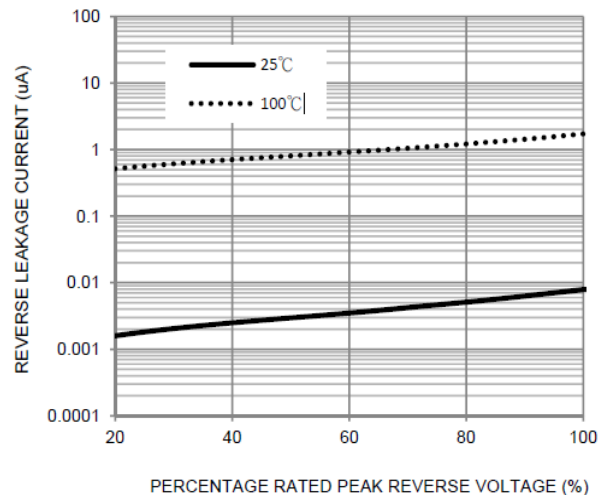


FIG. 5-TYPICAL JUNCTION CAPACITANCE

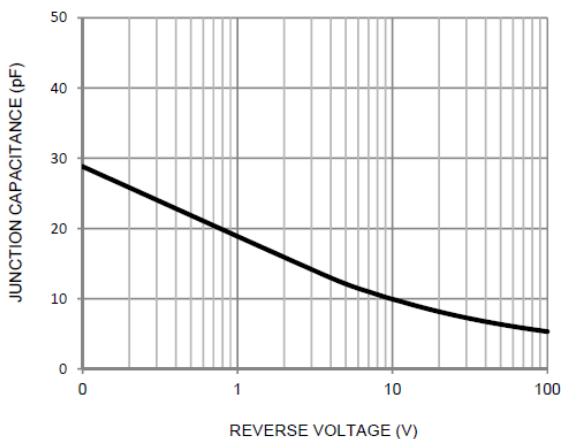


FIG. 6-Reverse Recovery Time Characteristic and Test Circuit

