

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

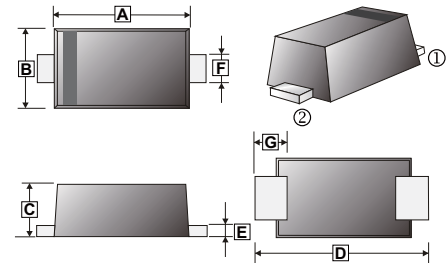
FEATURES

- 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	2.60	3.10	E	0.10	0.30
B	1.60	2.00	F	0.80	1.35
C	0.81	1.55	G	0.35	0.85
D	3.50	3.90			

MARKING

Product	Marking Code	Product	Marking Code
SMF102FL	RB / F2	SMF105FL	RJ / F5
SMF103FL	RD / F3	SMF106FL	RK / F6
SMF104FL	RG / F4	SMF107FL	RM / F7

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-123FL	3K	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	$I_{(AV)}$	1.0						A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load TL=25°C	I_{FSM}	20						A
Typical thermal resistance junction to ambient	$R_{\theta JA}$	80						°C / W
Typical thermal resistance junction to Case	$R_{\theta JC}$	38						°C / W
Maximum reverse recovery time ¹	T_{RR}	150		250		500		ns
Operating Temperature Range	T_j	-55~150						°C
Storage Temperature Range	T_{STG}	-55~150						°C

Notes :

1. 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 ²	V_F	-	-	1.3	V	forward voltage @ 1A
Maximum DC reverse current	I_R	-	-	10	μA	$T_C=25^\circ C$
At rated DC blocking voltage	I_R	-	-	50	μA	$T_C=125^\circ C$
Typical junction capacitance ³	C_J	-	4	-	pF	

Notes :

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

RATINGS AND CHARACTERISTIC CURVES

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

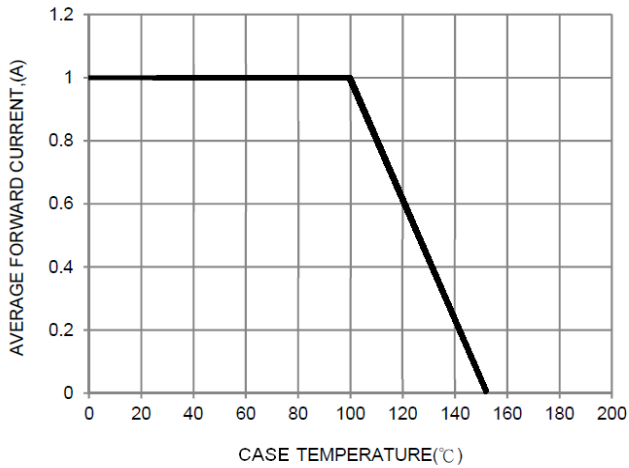


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

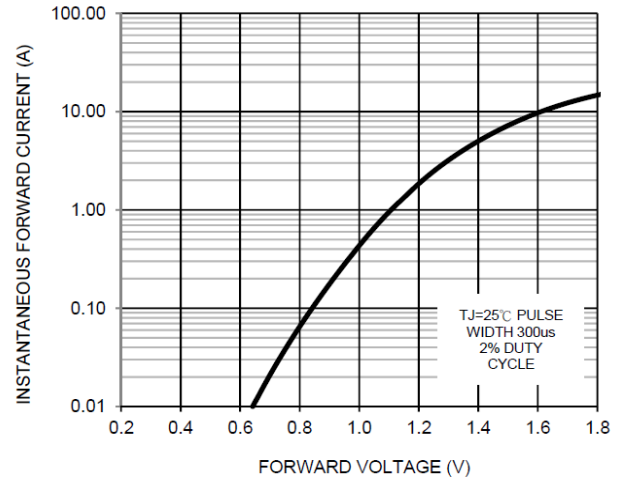


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

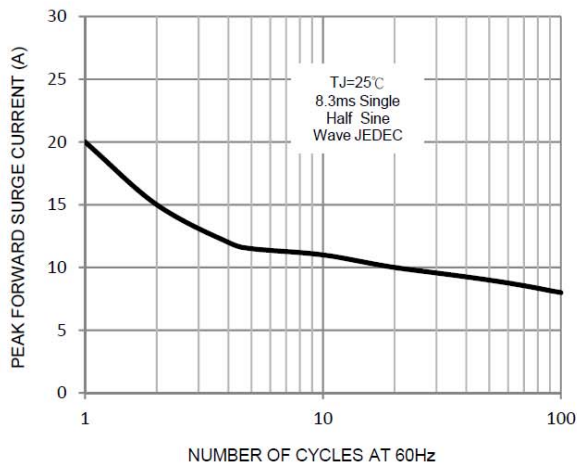


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

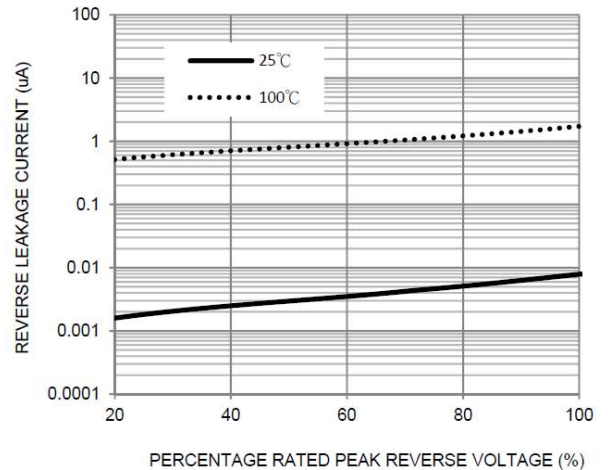


FIG. 5-TYPICAL JUNCTION CAPACITANCE

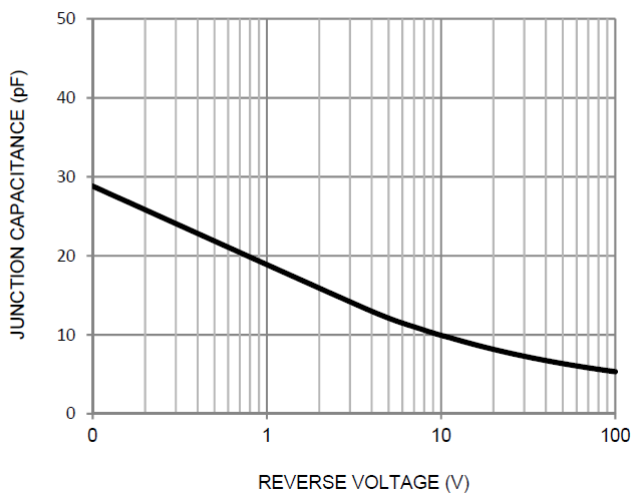


FIG. 6-Reverse Recovery Time Characteristic and Test Circuit

