

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

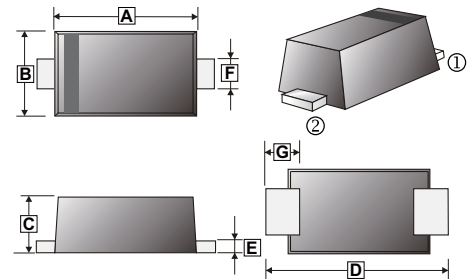
FEATURES

- Low forward surge current
- Ideal for surface mounted applications
- Low leakage current

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: 0.006 ounces, 0.02 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

Part Number	Marking Code	Part Number	Marking Code
SM4001FL	D1	SM4005FL	D5
SM4002FL	D2	SM4006FL	D6
SM4003FL	D3	SM4007FL	D7
SM4004FL	D4		

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%.)

Parameter	Symbol	Part Number							Unit
		SM 4001FL	SM 4002FL	SM 4003FL	SM 4004FL	SM 4005FL	SM 4006FL	SM 4007FL	
Maximum Recurrent 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 Instantaneous Forward Voltage @ $I_{FM}=1A$ ¹	V_F	1.1							V
Average Forward Rectified Current @ $T_A=75^\circ C$	$I_{(AV)}$	1.0							A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	20							A
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A=25^\circ C$	10							μA
	$T_A=125^\circ C$	100							
Typical Thermal Resistance Junction-Lead	$R_{\theta JL}$	20							°C / W
Typical Junction Capacitance ²	C_J	30							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 ~ 150							°C

Notes :

1. Pulse test : Pulse width 300 μs , duty cycle 2%.
2. $f=1MHz, V_R=4.0V$

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

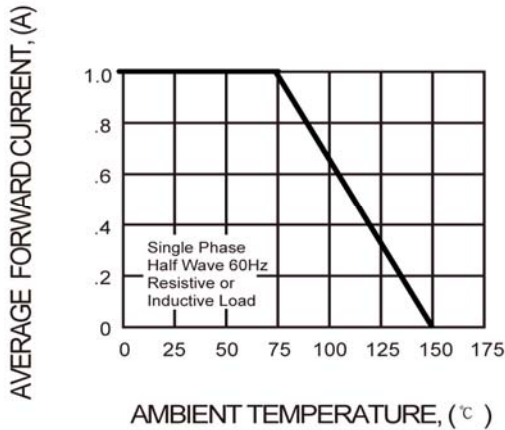


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

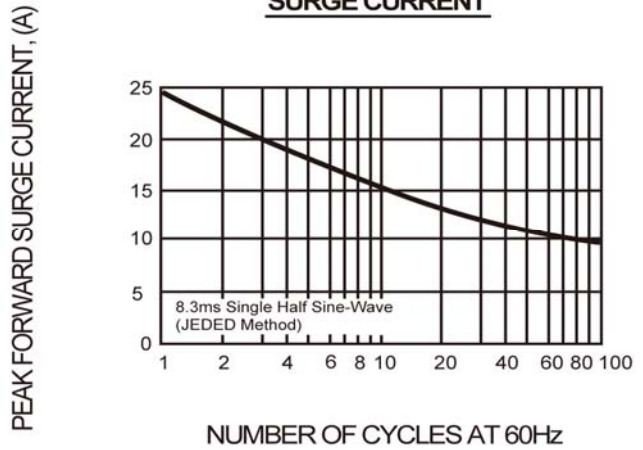


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

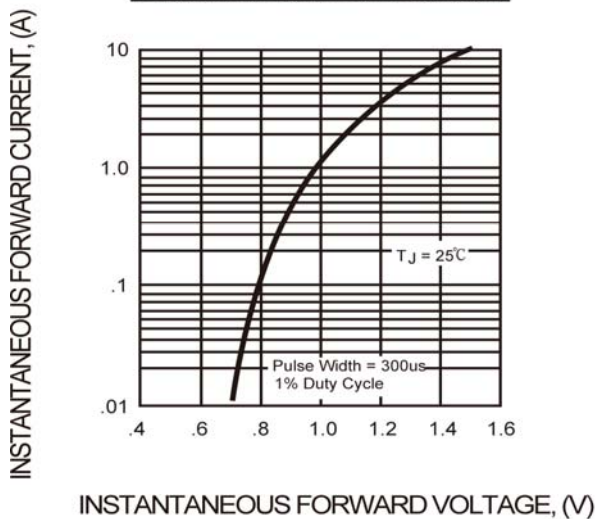


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

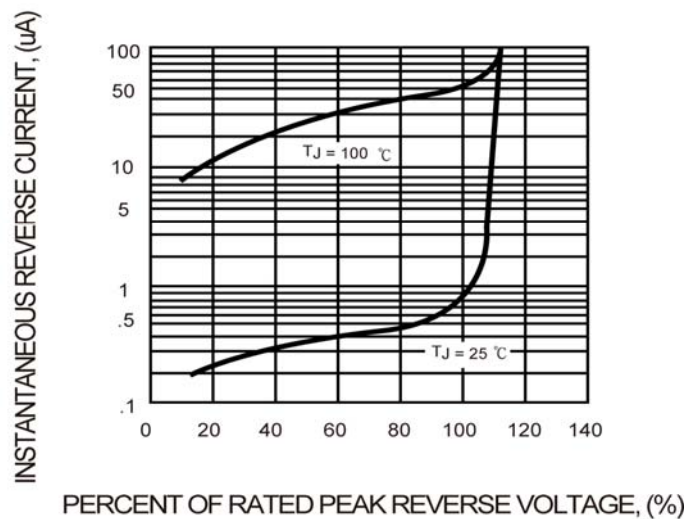


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

