

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

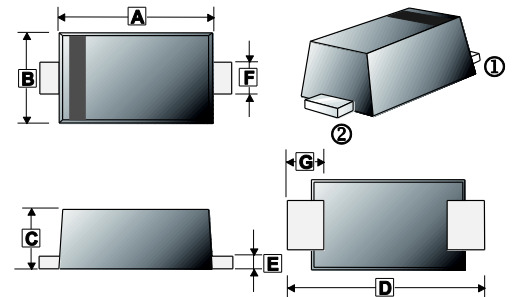
FEATURES

- 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
- Mounting position: Any

SOD-123FL



MARKING

Part Number	Marking Code	Part Number	Marking Code
SM4001FL-C	D1 / A1	SM4005FL-C	D5 / A5
SM4002FL-C	D2 / A2	SM4006FL-C	D6 / A6
SM4003FL-C	D3 / A3	SM4007FL-C	D7 / A7
SM4004FL-C	D4 / A4		

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.40	3.10	E	0.05	0.30
B	1.40	2.10	F	0.50	1.35
C	0.80	1.55	G	0.80 TYP.	
D	3.30	3.95			

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-123FL	3K	7 inch

ORDER INFORMATION

Part Number	Type
SM4001FL-C~SM4007FL-C	Lead (Pb)-free and Halogen-free

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
		SM4001 FL-C	SM4002 FL-C	SM4003 FL-C	SM4004 FL-C	SM4005 FL-C	SM4006 FL-C	SM4007 FL-C	
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	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	
Maximum Instantaneous Forward Voltage @ $I_F=1A$ ¹	V_F	1.1							V
Average Forward Rectified Current	I_F	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 @Rated DC Blocking Voltage	$T_C=25^\circ C$	10							μA
	$T_C=100^\circ C$								
Typical Thermal Resistance	$R_{\theta JL}$	20							°C/W
Typical Junction Capacitance ²	C_J	5.7							pF
Operating & Storage Temperature Range	T_J, T_{STG}	-55 ~ 150							°C

Notes :

1. Pulse test : Pulse width 300 μs , duty cycle 2%.
2. $f=1MHz, V_R=4V$.

RATINGS AND CHARACTERISTIC CURVES

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

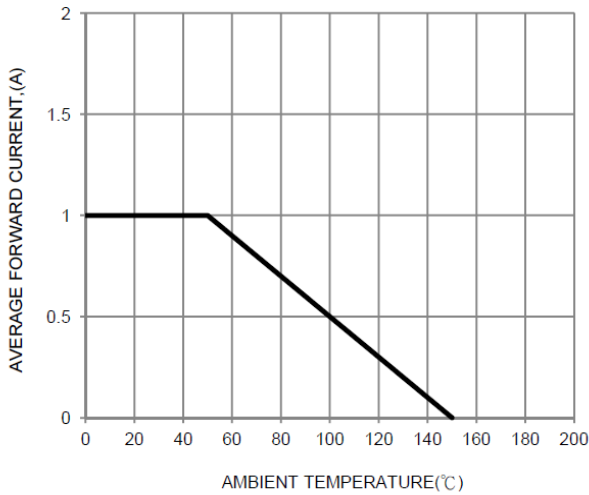


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

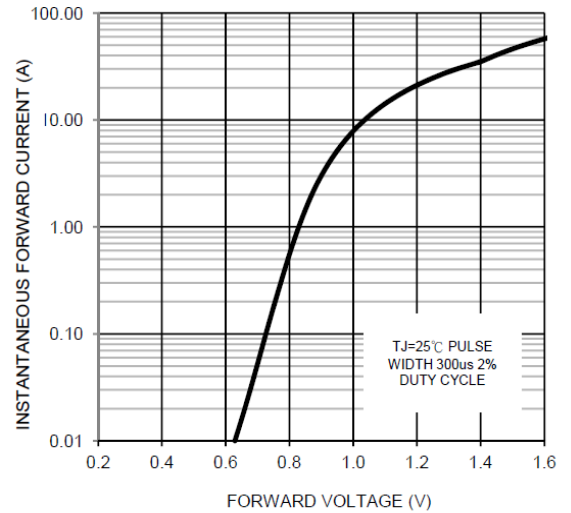


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

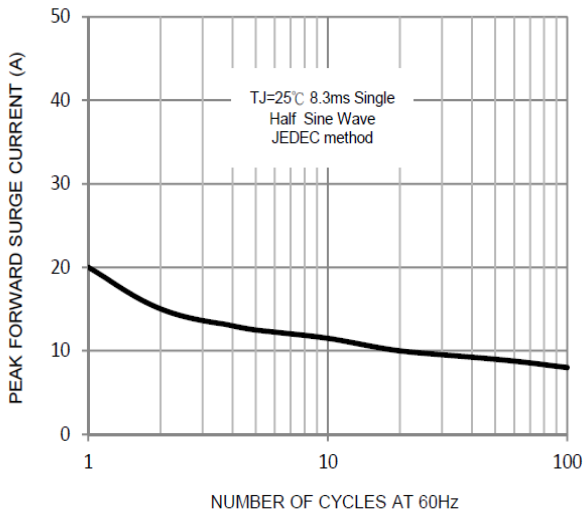


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

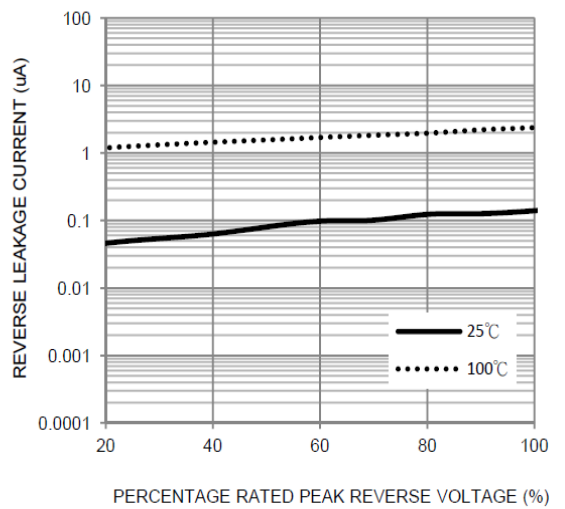


FIG. 5-TYPICAL JUNCTION CAPACITANCE

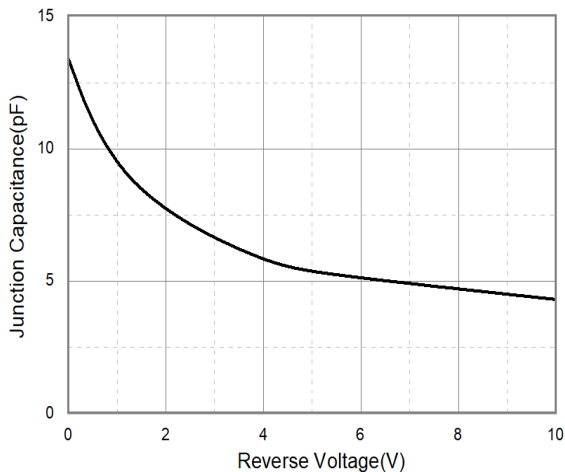


FIG. 6-MOUNTING PAD LAYOUT

