

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

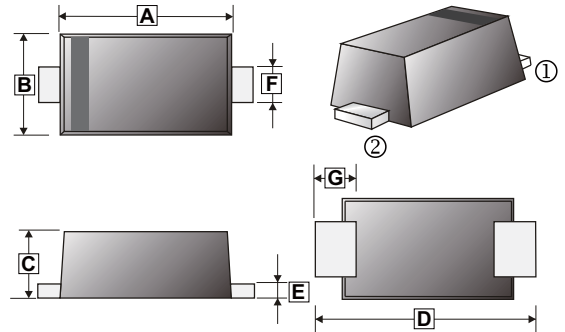
### FEATURES

- 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



### MARKING

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

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	2.90	E	0.10	0.30
B	2.00	1.80	F	0.80	1.20
C	1.55	1.25	G	0.35	0.85
D	3.50	3.90			

### PACKAGE INFORMATION

Package	MPQ	LeaderSize
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, derate current by 20%.

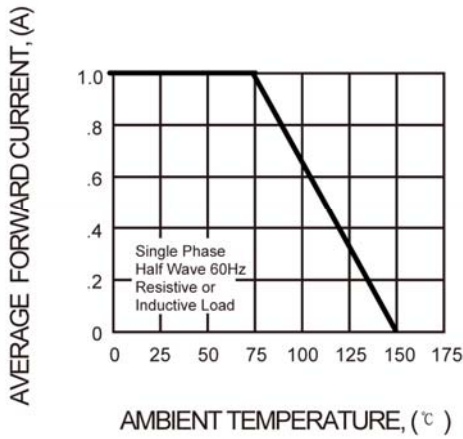
PARAMETERS	SYMBOL	PART NUMBERS							UNITS	TESTING CONDITIONS
		SM 4001 FL	SM 4002 FL	SM 4003 FL	SM 4004 FL	SM 4005 FL	SM 4006 FL	SM 4007 FL		
Recurrent Reverse Voltage (Max.)	$V_{RRM}$	50	100	200	400	600	800	1000	V	
RMS Voltage (Max.)	$V_{RMS}$	35	70	140	280	420	560	700	V	
DC Blocking Voltage (Max.)	$V_{DC}$	50	100	200	400	600	800	1000	V	
Instantaneous Forward Voltage (Max.) (Note 1)	$V_F$	1.1							V	$I_{FM} = 1.0A$
Average Forward Rectified Current (Max.)	$I_{(AV)}$	1.0							A	$T_A = 75^\circ C$
Peak Forward Surge Current	$I_{FSM}$	25							A	8.3ms single half sine-wave superimposed on rated load (JEDEC method)
DC Reverse Current at Rated DC Blocking Voltage (Max.)	$I_R$	5.0							$\mu A$	$T_A = 25^\circ C$
		50								$T_A = 125^\circ C$
Typical Thermal Resistance Junction-Lead	$R_{\theta JL}$	20							$^\circ C / W$	
Typical Junction Capacitance	$C_J$	15							pF	$f = 1MHz, V_R = 4.0V$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 ~ 150							$^\circ C$	

Notes :

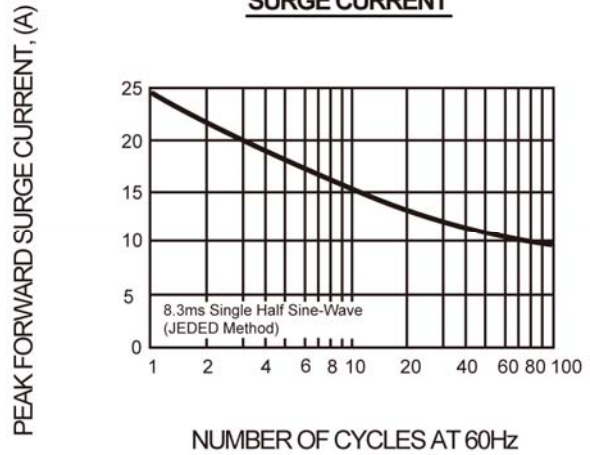
1. Pulse test : Pulse width 300  $\mu sec$ , duty cycle 2%.

**RATINGS AND CHARACTERISTIC CURVES (SM4001FL~SM4007FL)**

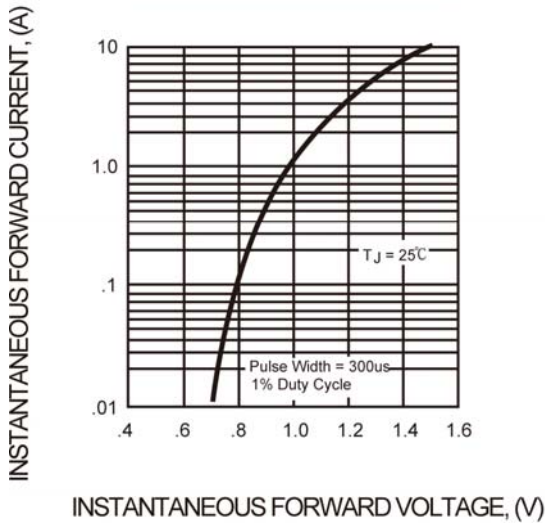
**FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE**



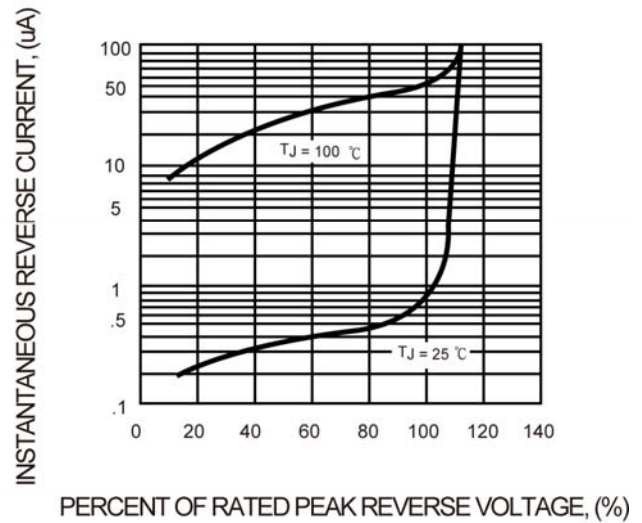
**FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

