

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

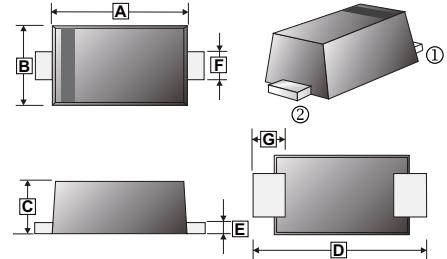
## FEATURES

- 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



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
SM220FL	2S / T2	SM280FL	8S / T8
SM230FL	3S / T3	SM2100FL	AS / TA
SM240FL	4S / T4	SM2150FL	ES / TB
SM260FL	6S / T6	SM2200FL	HS / TC

## 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%.)

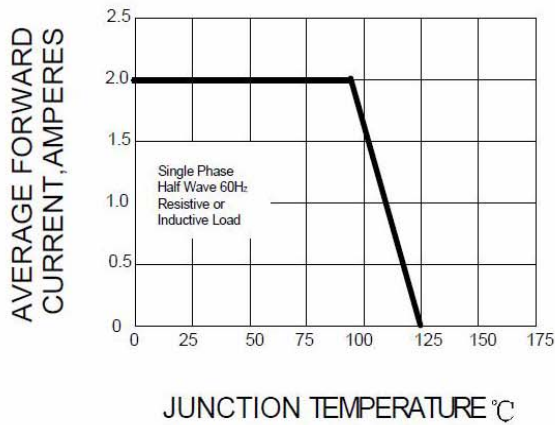
Parameter	Symbol	Part Number								Unit
		SM 220FL	SM 230FL	SM 240FL	SM 260FL	SM 280FL	SM 2100FL	SM 2150FL	SM 2200FL	
Maximum Recurrent Reverse Voltage	$V_{RRM}$	20	30	40	60	80	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	42	56	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	60	80	100	150	200	V
Maximum Instantaneous Forward Voltage @ $I_{FM} = 2.0A$	$V_F$	0.52		0.66	0.83		0.87	0.9		V
Average Forward Current	$I_F$	2.0								A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	40								A
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	0.5				0.2				mA
Typical Junction Capacitance <sup>1</sup>	$C_J$	100			70	50		30		pF
Maximum Reverse Recovery Time <sup>2</sup>	$R_{\theta JA}$	310								°C/W
Operating Temperature Range	$T_J$	-55~125						-55~150		°C
Storage Temperature Range	$T_{STG}$	-55~150								°C

Notes :

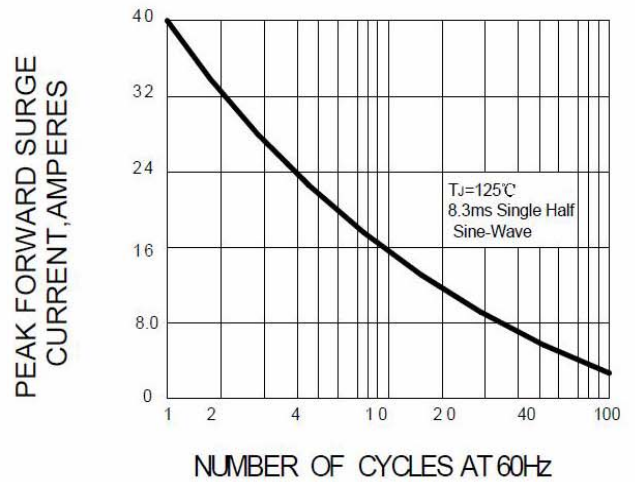
1. Measured at  $f=1.0MHz$ ,  $V_R=4.0V$
2. FR-4 PCB, 2oz. 0.7mm×1.2mm copper pad.

**CHARACTERISTIC CURVES**

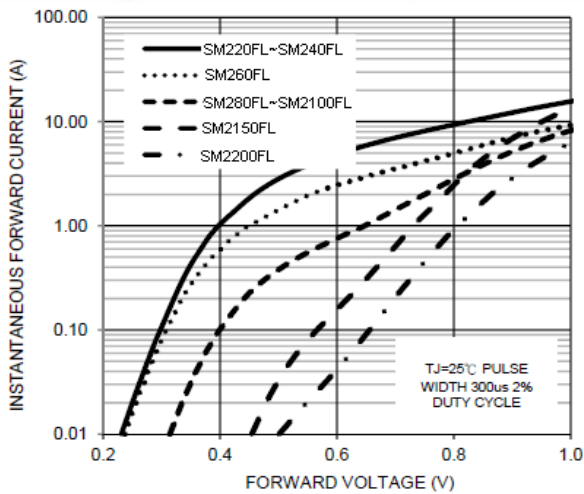
**FIG.1 – FORWARD DERATING CURVE**



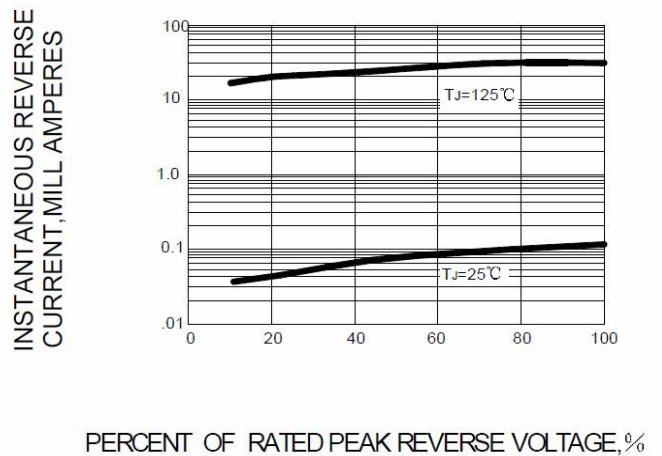
**FIG.2- PEAK FORWARD SURGE CURRENT**



**FIG.3 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**

