

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

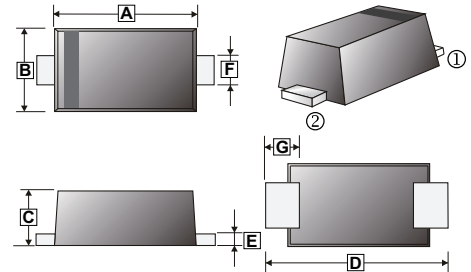
## FEATURES

- Low forward surge current
- Ideal for surface mounted applications
- Qualified to AEC-Q101 standards for high reliability

## 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
SM120FLCR	C2 / S12	SM1100FLCR	CA / S110
SM140FLCR	C4 / S14	SM1150FLCR	CB / S115
SM160FLCR	C6 / S16	SM1200FLCR	CC / S120
SM180FLCR	C8 / S18		

## 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%.)

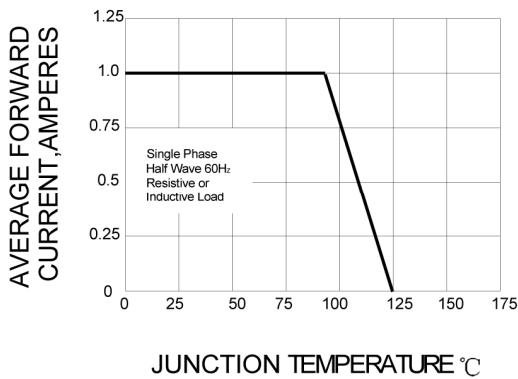
Parameter	Symbol	Part Number							Unit
		SM120 FLCR	SM140 FLCR	SM160 FLCR	SM180 FLCR	SM1100 FLCR	SM1150 FLCR	SM1200 FLCR	
Maximum Recurrent Reverse Voltage	$V_{RRM}$	20	40	60	80	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	14	28	42	56	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	20	40	60	80	100	150	200	V
Maximum Instantaneous Forward Voltage	$V_F$	0.55		0.7		0.85	0.9		V
Average Forward Rectified Current	$I_F$	1							A
Maximum DC Reverse Current	$T_A=25^\circ\text{C}$	0.3			0.2	0.1			mA
	$T_A=100^\circ\text{C}$	10			5	2			
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	20							A
Typical Junction Capacitance <sup>3</sup>	$C_J$	110			80				pF
Typical thermal resistance junction to ambient <sup>1</sup>	$R_{\theta JA}$	310							°C/ W
Operating Temperature Range	$T_J$	-55~125							°C
Storage Temperature Range	$T_{STG}$	-55~150							°C

Notes :

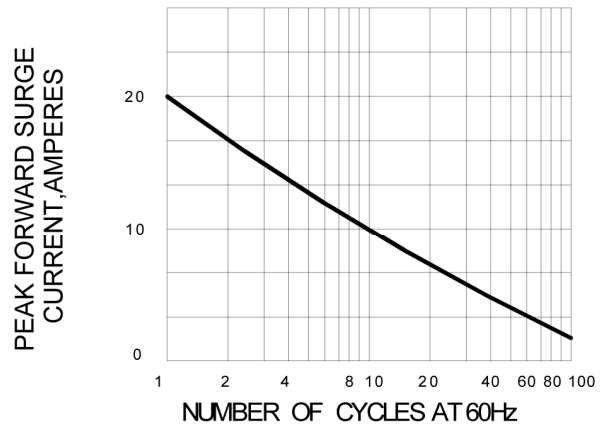
1. FR-4 PCB, 2 oz. 0.7mm x 1.2mm copper pad.
2. Measured at 1MHZ and applied reverse of 4V DC.

**RATINGS AND CHARACTERISTIC CURVES**

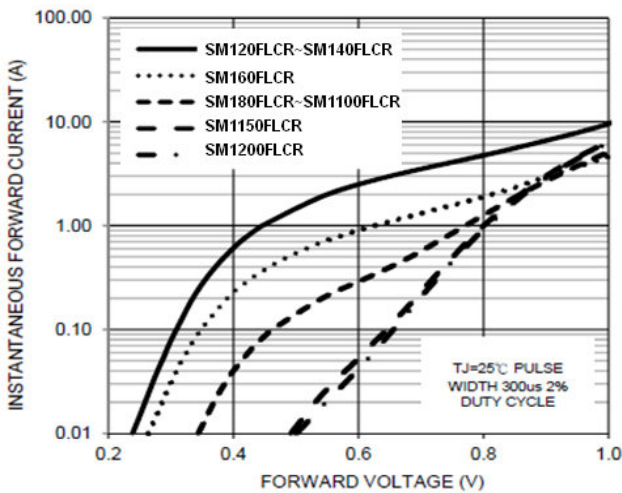
**FIG.1 – FORWARD DERATING CURVE**



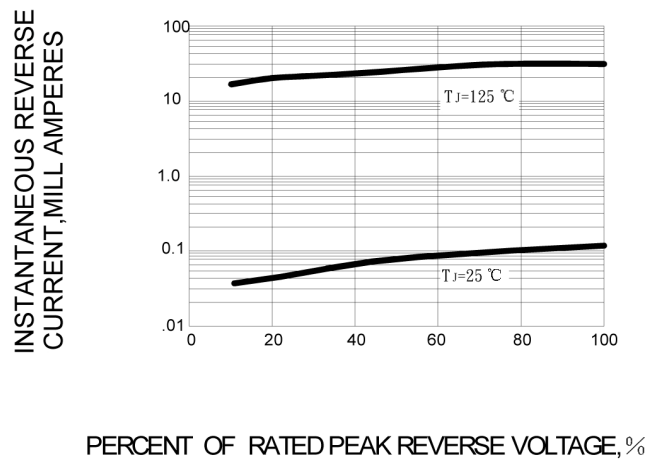
**FIG.2-- PEAK FORWARD SURGE CURRENT**



**FIG.3 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



**FIG.5--TYPICAL JUNCTION CAPACITANCE**

