

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

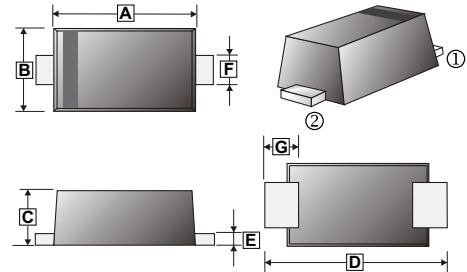
FEATURES

- Low forward surge current
- Ideal for surface mounted applications

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
SM120FL	C2 / S12	SM1100FL	CA / S110
SM140FL	C4 / S14	SM1150FL	CB / S115
SM160FL	C6 / S16	SM1200FL	CC / S120
SM180FL	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
		SM 120FL	SM 140FL	SM 160FL	SM 180FL	SM 1100FL	SM 1150FL	SM 1200FL	
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 ³	C_J	110			80				pF
Typical thermal resistance junction to ambient ¹	$R_{\theta JA}$	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

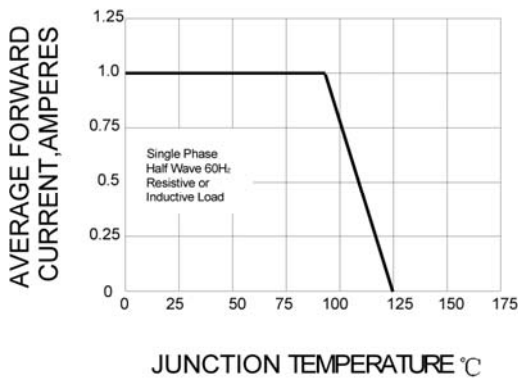


FIG.2– PEAK FORWARD SURGE CURRENT

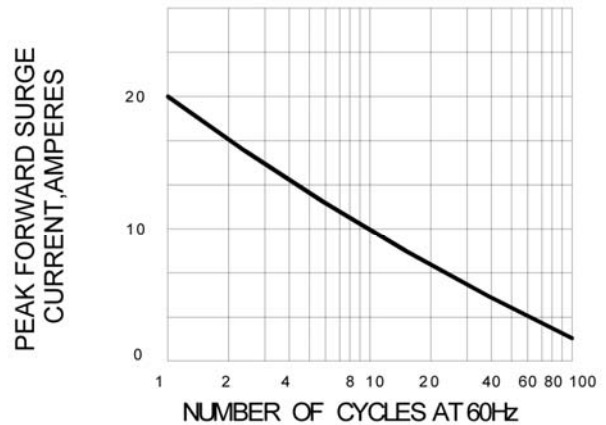


FIG.3 – TYPICAL FORWARD CHARACTERISTICS

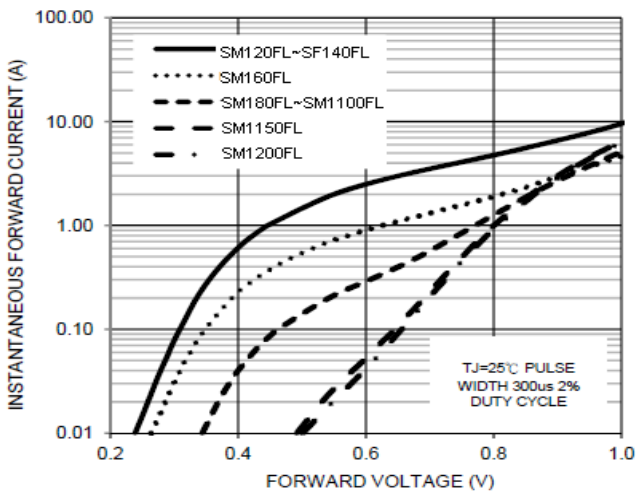


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

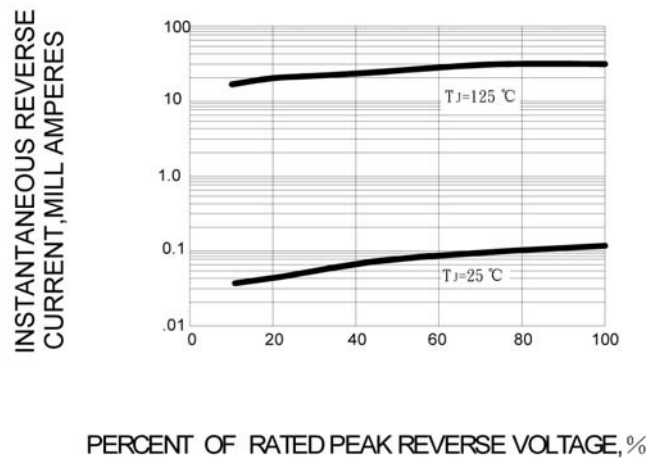


FIG.5–TYPICAL JUNCTION CAPACITANCE

