

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

## FEATURES

- Super Low  $V_F$  Schottky Barrier Diodes
- Very Low Profile - Typical Height of 1.0 mm
- Low Forward Voltage Drop
- Low Leakage Current
- Moisture Sensitivity: Level 1, per J-STD-020
- High Temperature Soldering Guaranteed: 260°C/10s
- Qualified to AEC-Q101 Standards for High Reliability

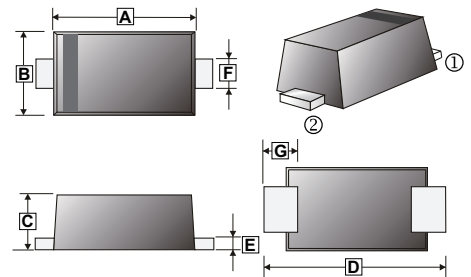
## MECHANICAL DATA

- Case: SOD-123FL
- Polarity: Color band denotes cathode end
- Mounting position: Any

## MARKING

A45

### SOD-123FL



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.40	3.10	E	0.05	0.30
B	1.40	2.10	F	0.60	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
SMH320FLCR-C~SMH345FLCR-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
		SMH320 FLCR-C	SMH330 FLCR-C	SMH340 FLCR-C	SMH345 FLCR-C	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	30	40	45	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	31.5	
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	45	
Maximum Instantaneous Forward Voltage @ $I_F=3A$	$V_F$	0.51				V
Maximum Average Forward Rectified Current	$I_F$	3				A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	60				A
Maximum DC Reverse Current @ Rated DC Blocking Voltage	$T_A=25^\circ C$	30				$\mu A$
	$T_A=125^\circ C$	10				mA
Typical Junction Capacitance <sup>1</sup>	$C_J$	195				pF
Typical Thermal Resistance Junction-Ambient <sup>3</sup>	$R_{\theta JA}$	100				°C/W
Typical Thermal Resistance Junction-Mount <sup>2</sup>	$R_{\theta JM}$	30				
Operating & Storage Temperature Range	$T_J, T_{STG}$	-55~150				°C

Notes:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. The thermal resistance from junction to mount, mounted on aluminum P.C.B with recommended copper pads.
3. The thermal resistance from junction to ambient, mounted on P.C.B with 5x5mm copper pads, 2 OZ, FR4 PCB.

**RATINGS AND CHARACTERISTIC CURVES**

Figure 1. Forward Current Derating Curve

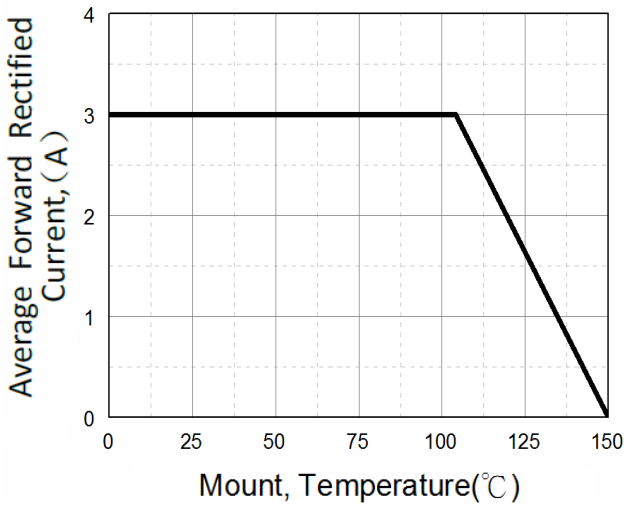


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

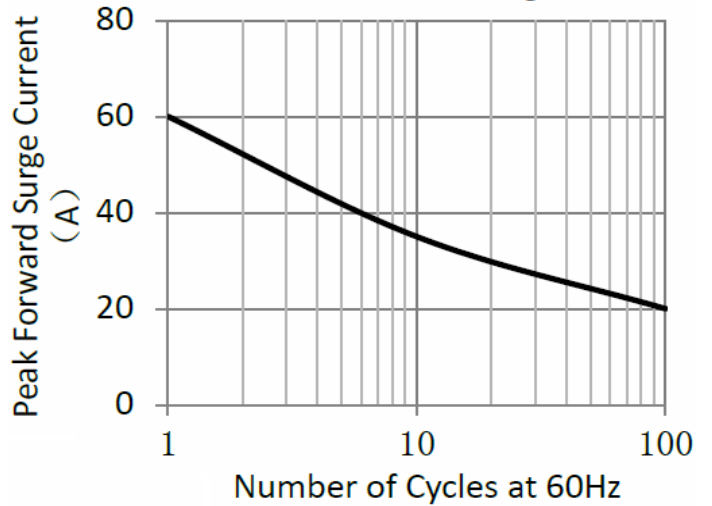


Figure 3. Typical Instantaneous Forward Characteristics

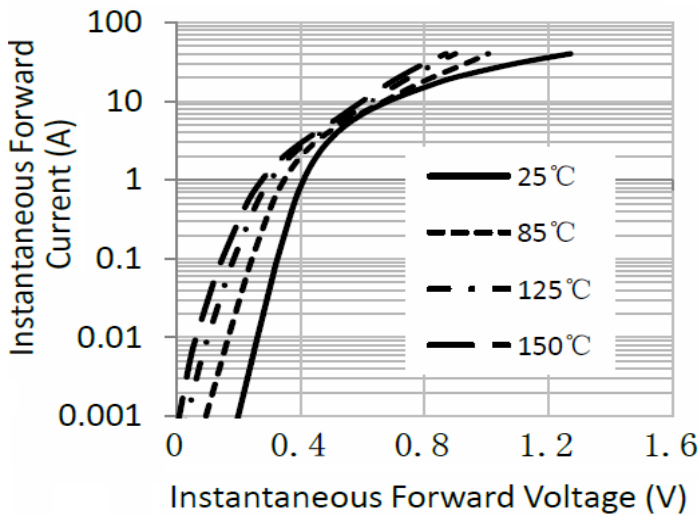


Figure 4. Typical Reverse Characteristics

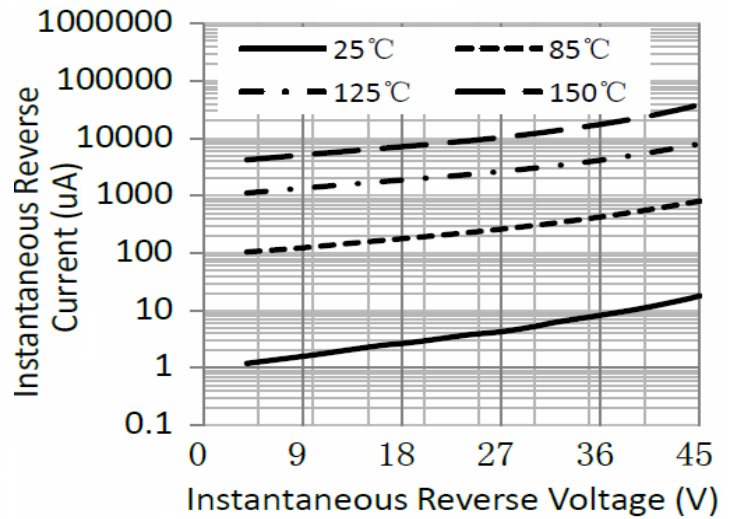


Figure 5. Typical Junction Capacitance

