

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

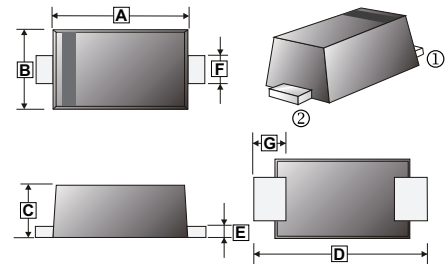
## FEATURES

- Low forward surge current
- Ideal for surface mounted applications
- Low leakage current

## MECHANICAL DATA

- Case: JEDEC SOD-123JD, molded plastic over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end

### SOD-123JD



## MARKING

Product	Marking Code	Product	Marking Code
SM120JD	S14	SM1100JD	S110
SM140JD	S14	SM1150JD	S115
SM160JD	S16	SM1200JD	S120

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.6	2.9	E	0.1	0.2
B	1.7	1.9	F	0.8	1.1
C	0.9	1.1	G	0.7	0.9
D	3.5	3.8			

## PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-123JD	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 120JD	SM 140JD	SM 160JD	SM 1100JD	SM 1150JD	SM 1200JD	
Maximum Recurrent Reverse Voltage	$V_{RRM}$	20	40	60	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	14	28	42	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	20	40	60	100	150	200	V
Maximum Instantaneous Forward Voltage @ $I_{FM} = 1A$	$V_F$	0.55		0.7	0.85	0.9		V
Maximum Average Forward Rectified Current	$I_{(AV)}$	1						A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30						A
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ C$	0.3			0.2			mA
	$T_A = 100^\circ C$	10			5			
Typical Junction Capacitance <sup>1</sup>	$C_J$	110		80				pF
Typical thermal resistance junction to Lead <sup>2</sup>	$R_{\theta JL}$	20						°C / W
Typical thermal resistance junction to Lead <sup>2</sup>	$R_{\theta JC}$	40						°C / W
Operating Temperature Range	$T_J$	-55~125						°C
Storage Temperature Range	$T_{STG}$	-55~150						°C

Notes :

1. Measured at  $f=1.0MHz$ ,  $V_R=4.0V$
2. FR4 Board Heat sink size: 10\*10\*0.2mm.

**CHARACTERISTIC CURVES**

Fig.1 Forward Current Derating Curve

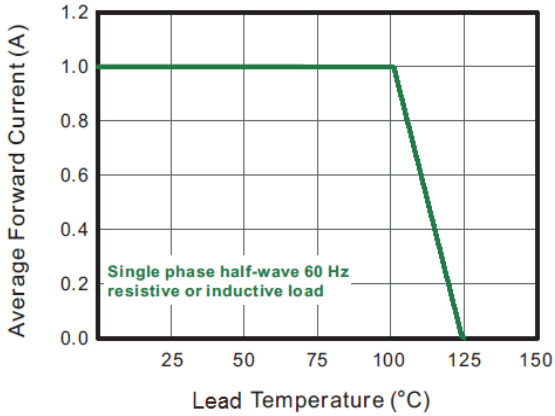


Fig.2 Typical Reverse Characteristics

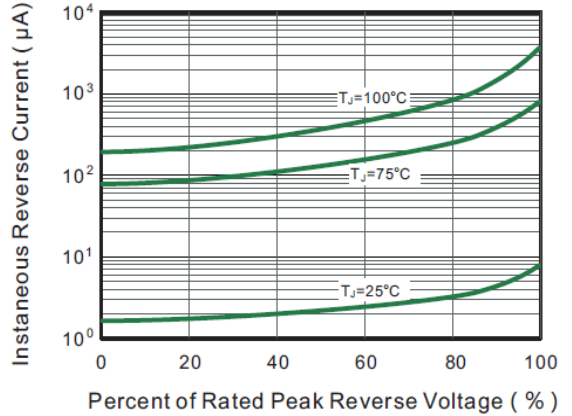


Fig.3 Typical Forward Characteristic

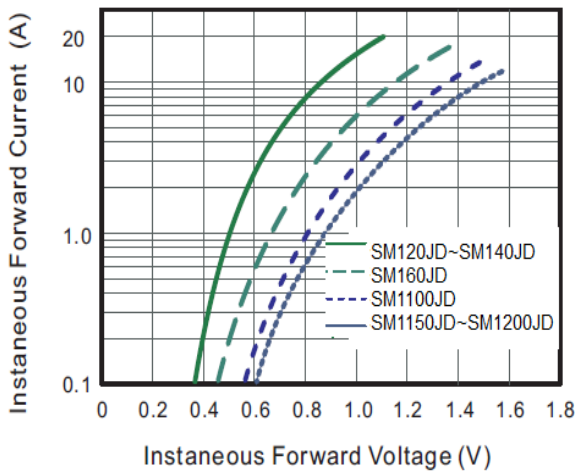


Fig.4 Typical Junction Capacitance

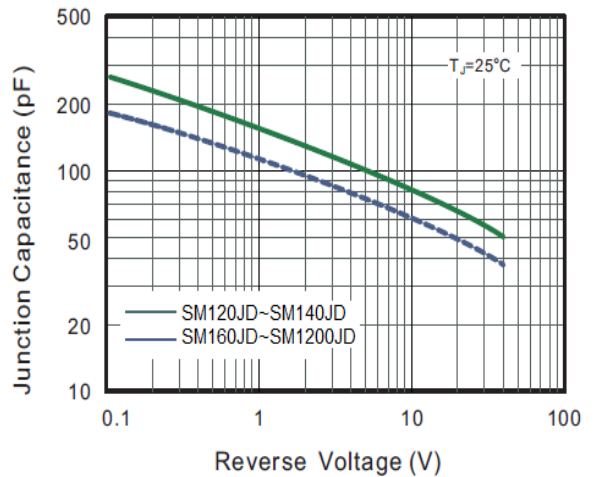


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

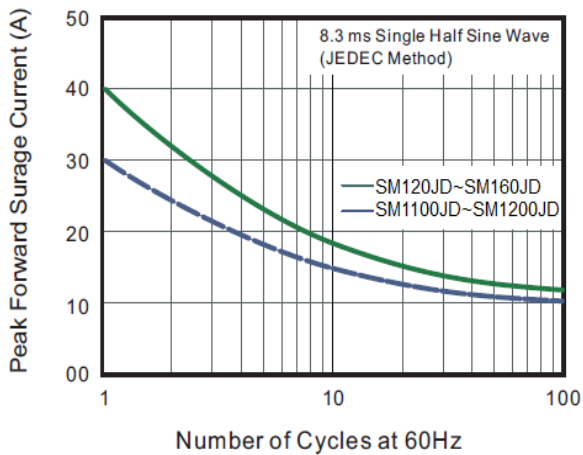


Fig.6- Typical Transient Thermal Impedance

