Elektronische Bauelemente

SM120JD-C~SM1200JD-C

Voltage 20~200V

1.0 Amp Schottky Barrier Rectifiers

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

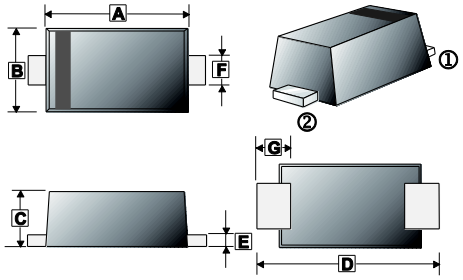
FEATURES

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

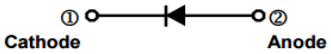
MECHANICAL DATA

- 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



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			



MARKING

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

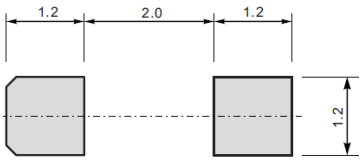
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-123JD	3K	7 inch

ORDER INFORMATION

Part Number	Type
SM120JD-C~SM1200JD-C	Lead (Pb)-free and Halogen-free

Mounting Pad Layout



*Dimensions in millimeters

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 JD-C	SM140 JD-C	SM160 JD-C	SM1100 JD-C	SM1150 JD-C	SM1200 JD-C	
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°C	I_R	0.3			0.2			mA
	T_A=100°C		10			5			
Typical Junction Capacitance [1]		C_J	110		80				pF
Typical Thermal Resistance Junction-Lead [2]		$R_{\theta JL}$	20						°C/W
Typical Thermal Resistance Junction-Case [2]		$R_{\theta JC}$	40						
Operating Temperature Range		T_J	-55~125						°C
Storage Temperature Range		T_{STG}	-55~150						

Notes:

1. Measured at f=1MHz, V_R=4V.
2. FR-4 Board Heat sink size: 10*10*0.2mm.

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CHARACTERISTIC CURVES SM160JD-C~SM1200JD-C

Fig.1 Forward Current Derating Curve

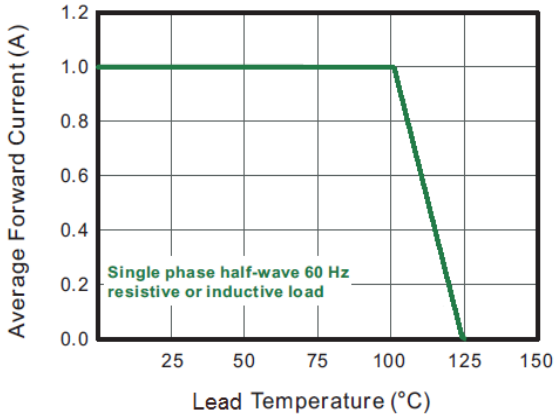

Fig.2 Typical Reverse Characteristics

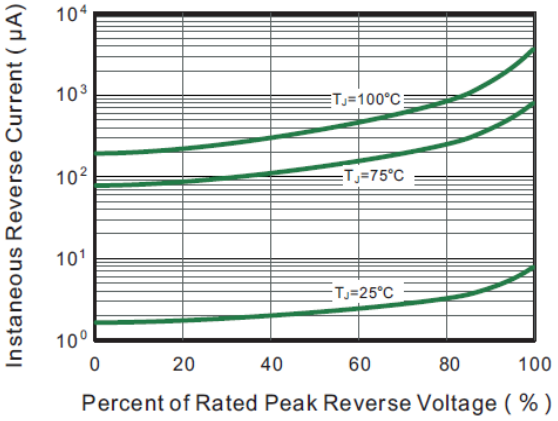

Fig.3 Typical Forward Characteristic

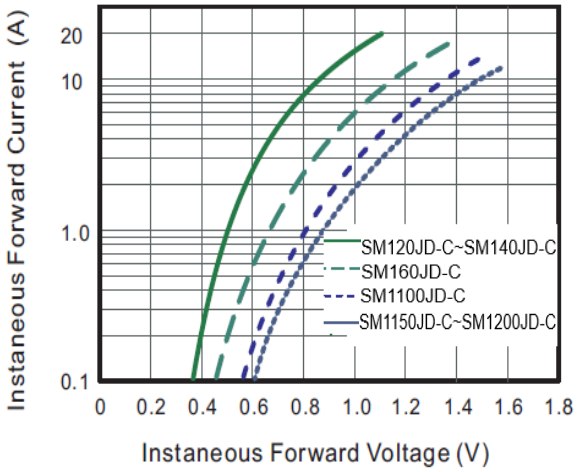

Fig.4 Typical Junction Capacitance

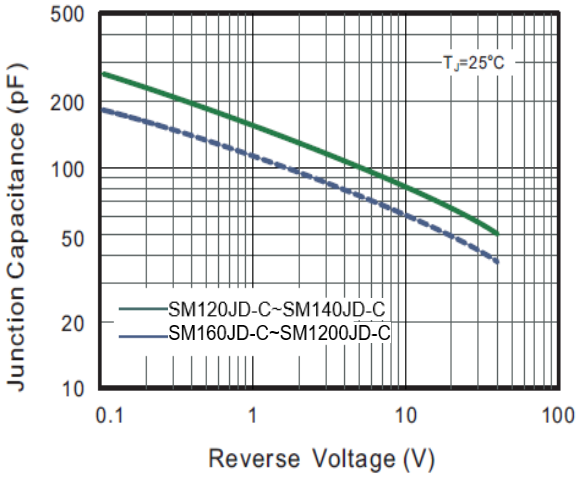

Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

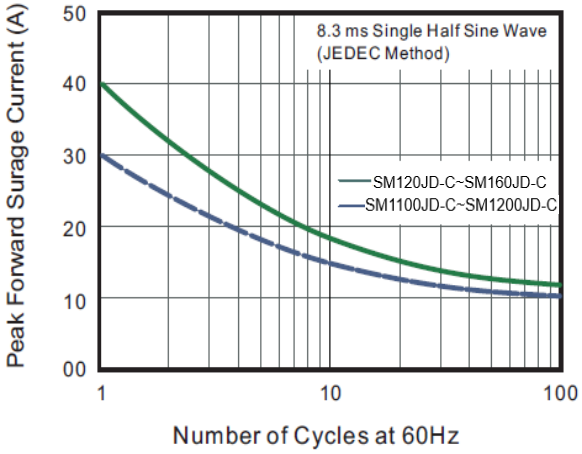

Fig.6- Typical Transient Thermal Impedance