

## FEATURES

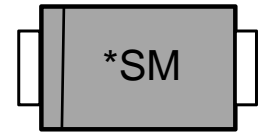
- Guard ring protection
- Low forward voltage drop
- For use in low voltage, high frequency inverters
- High surge current capability

VOLTAGE RANGE

60 Volts

CURRENT

1.0 A



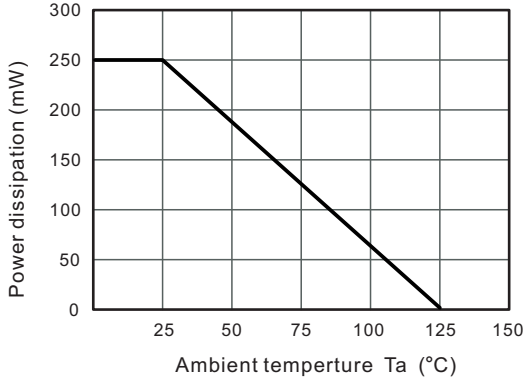
SOD- 323

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

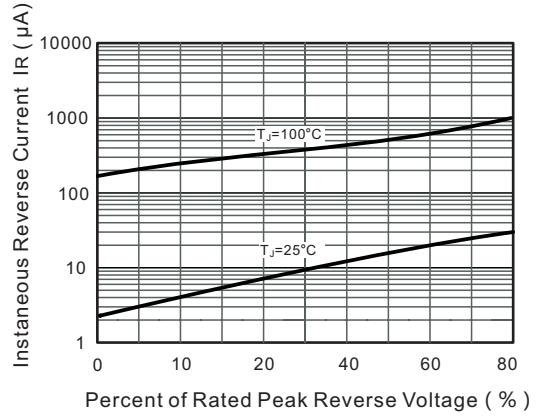
Parameter	Symbols	PMEG6010CEJ	Units
Maximum recurrent peak reverse voltage	$V_{RRM}$	60	V
Maximum RMS voltage	$V_{RMS}$	42	V
Maximum DC blocking voltage	$V_{DC}$	60	V
Continuous forward current	$I_F$	1	A
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	0.1 @ $V_R=60V$	mA
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	25	A
Maximum Instantaneous Forward Voltage	$V_F$	0.7 @ $I_F=1.0A$	V
Total capacitance $V_R=4V, f=1MHz$	$C_{tot}$	120	pF
Total power dissipation	$P_{tot}$	250	mW
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	400	°C/W
Junction Temperature	$T_j$	125	°C
Storage Temperature	$T_{stg}$	-55 ~ +150	°C

**RATING AND CHARACTERISTIC CURVES**

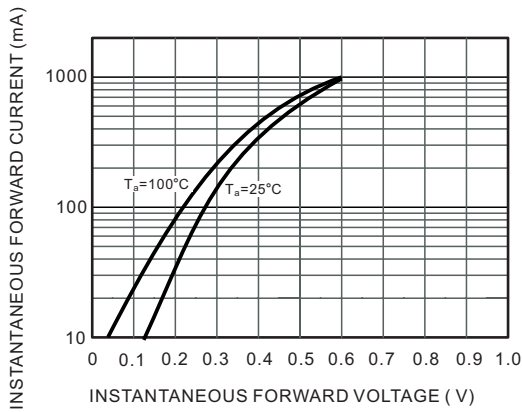
**Fig.1 Power Derating Curve**



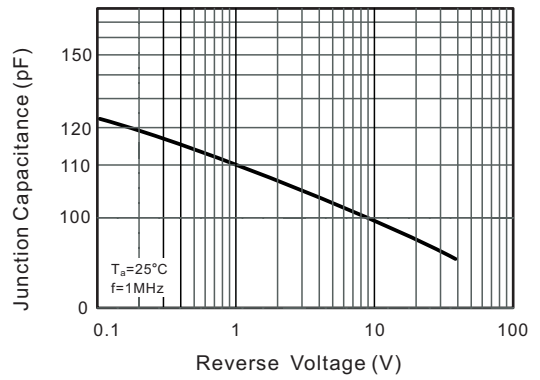
**Fig.2 Typical Reverse Characteristics**



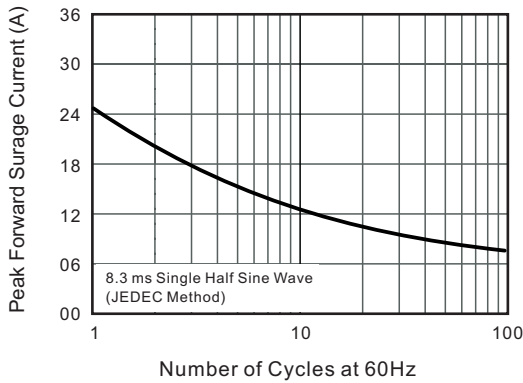
**Fig.3 TYPICAL FORWARD VOLTAGE**



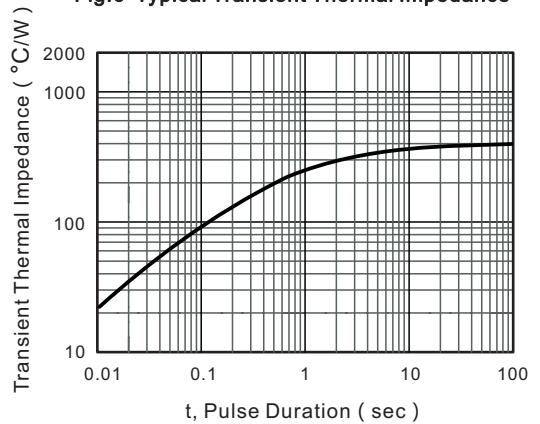
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**

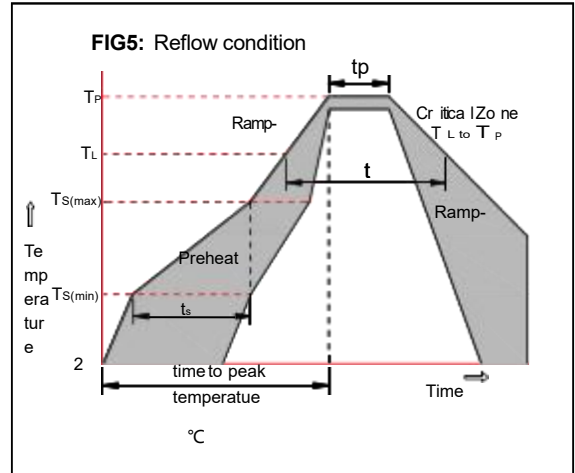


**Fig.6 Typical Transient Thermal Impedance**



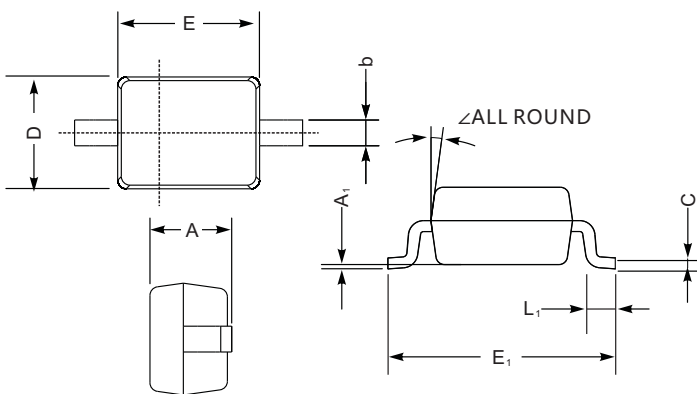
**Soldering parameters**

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ( $T_{s(min)}$ )	+150°C
	-Temperature Max( $T_{s(max)}$ )	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp ( $T_L$ ) to peak)		3°C/sec. Max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature( $T_L$ )(Liquid us)	+217°C
	-Temperature( $t_L$ )	60-150 secs.
Peak Temp ( $T_P$ )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp ( $t_p$ )		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp ( $T_P$ )		8 min. Max
Do not exceed		+260°C



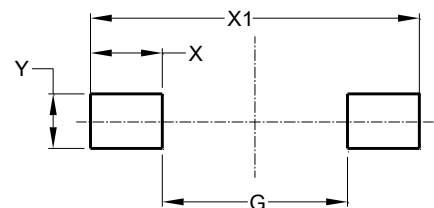
**Package Dimensions & Suggested Pad Layout**

**SOD323**



SOD-323 mechanical data

UNIT		A	C	D	E	E <sub>1</sub>	b	L <sub>1</sub>	A <sub>1</sub>	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	



Dimensions	Value (in mm)
<b>G</b>	1.40
<b>X</b>	1.20
<b>X1</b>	3.80
<b>Y</b>	1.00

Tape & reel specification

Tape		Symbol	Dimension (mm)		
		P0	4.00±0.20		
		P1	4.00±0.20		
		P2	2.00±0.20		
		D0	1.55±0.20		
		D1	1.00±0.20		
		E	1.55±0.25		
		F	3.60±0.20		
		W	8.00±0.20		
		A0	2.00±0.20		
		B0	3.25±0.20		
		K0	1.35±0.20		
		T	0.23±0.10		
		7" Reel		D2	177.0±5.0
				D3	55Min.
				D4	R24.6±2.0
				G	R82.0±2.0
I	13.0±2.0				
W1	10.20±3.0				
		Quantity: 3000PCS			