

## FEATURES

- | 400Watts peak pulse power ( $t_p = 8/20\mu s$ )
- | Bidirectional configurations
- | Solid-state silicon-avalanche technology
- | Low clamping voltage
- | Low leakage current

## APPLICATIONS

- | Microprocessor based equipment
- | RS232, RS485 Interfaces
- | Personal Digital Assistants (PDA's)
- | Notebooks, Desktops, and Servers
- | Power line protection
- | Peripherals



SOD-123



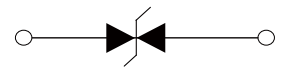
Marking

## IEC COMPATIBILITY

- | IEC61000-4-2 (ESD)  $\pm 30kV$  (air),  $\pm 30kV$  (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

## APPROVALS

<b>RoHS</b>	Compliance with 2011/65/EU
<b>HF</b>	Compliance with IEC61249-2-21:2003



Schematic Symbol

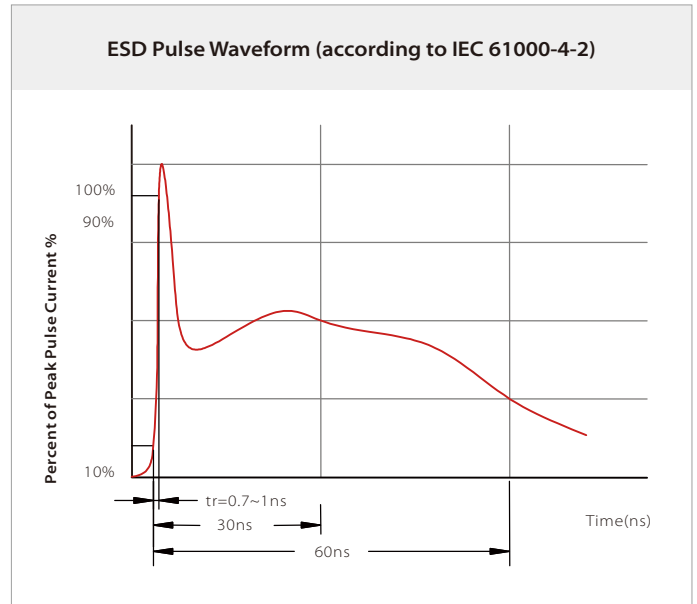
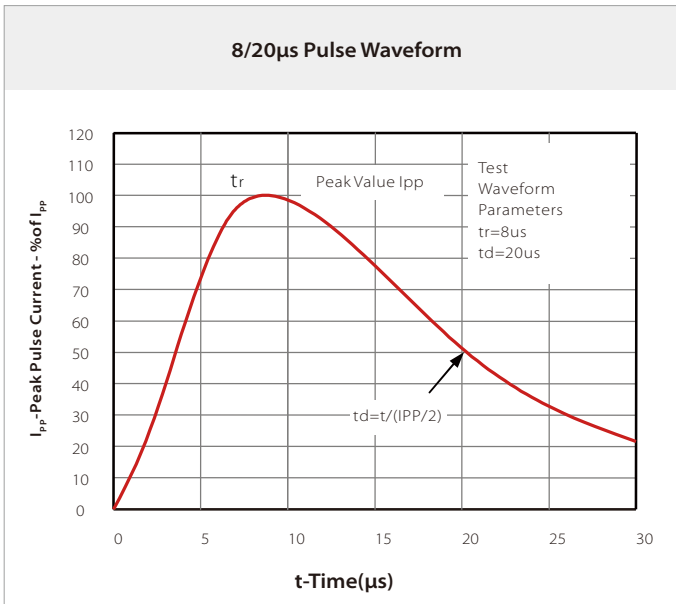
## THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
$P_{PP}$	Peak Pulse Power ( $t_p=8/20\mu s$ waveform)	400	Watts
$T_J$	Operating Temperature Range	-55 to +150	$^{\circ}C$
$T_{STG}$	Storage Temperature Range	-55 to +150	$^{\circ}C$

## ELECTRICAL CHARACTERISTICS

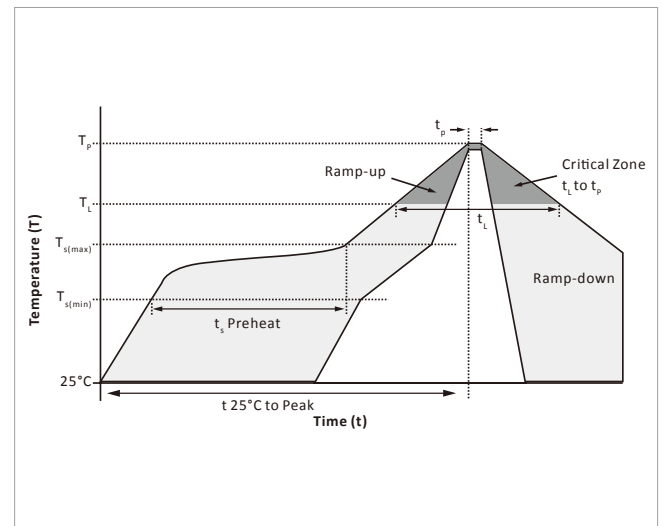
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				2.5	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T=1mA$	3.3			V
$I_R$	Reverse Leakage Current	$V_{RWM}=2.5V$			1	$\mu A$
$V_C$	Clamping Voltage ( $T_p=8/20\mu s$ )	$I_{PP}=40A, t_p=8/20\mu s$		10		V
$I_{PP}$	Peak Pulse Current ( $T_p=8/20\mu s$ )	$t_p=8/20\mu s$			40	A
$C_J$	Off State Junction Capacitance	$V_R=0V, f=1MHz$		85		pF

## CHARACTERISTIC CURVES

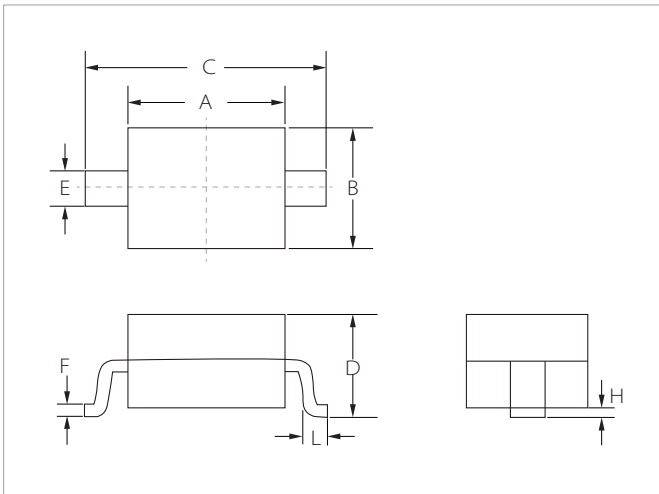


## SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ( $T_{s(min)}$ )	150°C
	Temperature Max ( $T_{s(max)}$ )	200°C
	Time (min to max) ( $t_s$ )	60 – 180 secs
Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak)		3°C/second max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/second max
Reflow	Temperature ( $T_L$ ) (Liquidus)	217°C
	Time (min to max) ( $t_L$ )	60 – 150 seconds
Peak Temperature ( $T_p$ )		260°C
Time within 5°C of actual peak Temperature ( $t_p$ )		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature ( $T_p$ )		8 minutes max.
Do not exceed		260°C

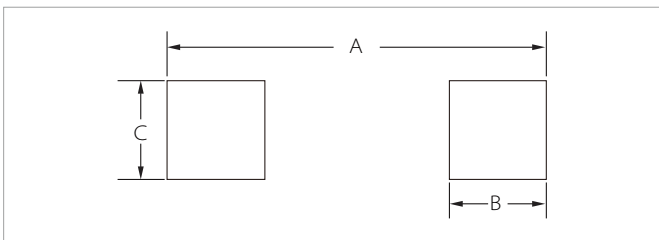


## SOD-123 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.60	2.80	0.102	0.110
B	1.50	1.70	0.059	0.067
C	3.55	3.85	0.140	0.152
D	1.05	1.25	0.041	0.049
E	0.45	0.65	0.018	0.026
F	0.08	0.15	0.003	0.006
H	0.00	0.10	0.000	0.004
L	0.25	0.45	0.010	0.018

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.00	4.30	0.157	0.169
B	0.75	0.85	0.030	0.033
C	0.95	1.05	0.037	0.041

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE1D40B2.5A	SOD-123	3000PCS	7"

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