

## FEATURES

| 85Watts peak pulse power( $t_p=8/20\mu s$ )

| Bi-directional configurations

| Solid-state silicon-avalanche technology

| Low leakage current

| Low clamping voltage

## APPLICATIONS

| Microprocessor based equipment

| Personal Digital Assestants(PDA's)

| Portable Instrumentation

| Notebooks, Desktops, and Servers

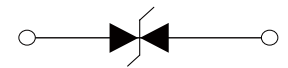
| Pagers Peripherals



SOD-523



Marking



Schematic Symbol

## IEC COMPATIBILITY

| IEC61000-4-2 (ESD)  $\pm 25kV$  (air),  $\pm 25kV$  (contact)

| IEC61000-4-4 (EFT) 40A (5/50ns)

## APPROVALS

**RoHS** Compliance with 2011/65/EU

**HF** Compliance with IEC61249-2-21:2003

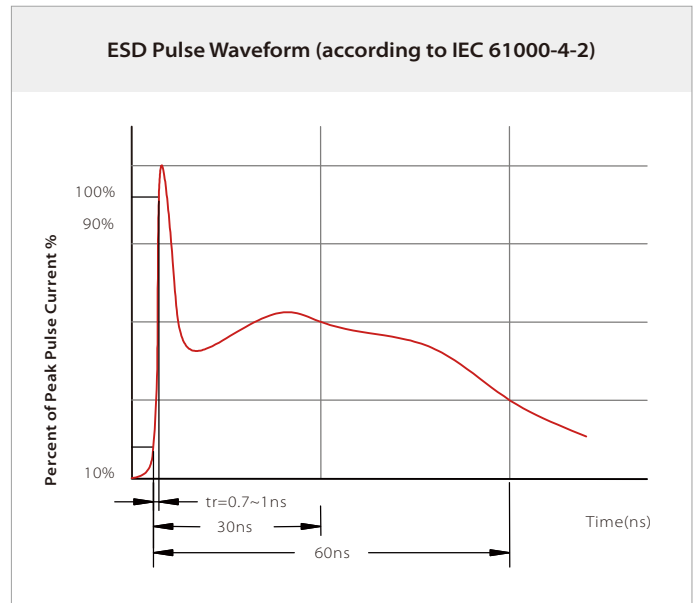
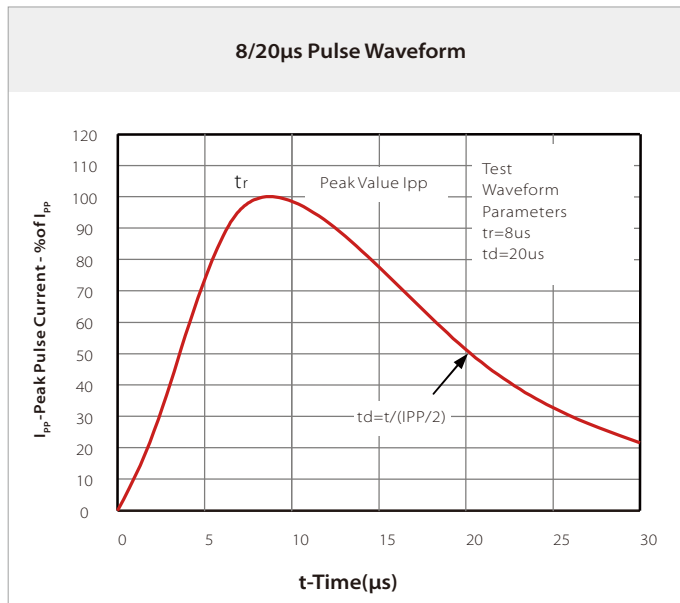
## THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
$P_{PP}$	Peak Pulse Power ( $t_p=8/20\mu s$ waveform)	85	Watts
$T_J$	Operating Temperature Range	-55 to +125	$^{\circ}C$
$T_{STG}$	Storage Temperature Range	-55 to +125	$^{\circ}C$

## ELECTRICAL CHARACTERISTICS

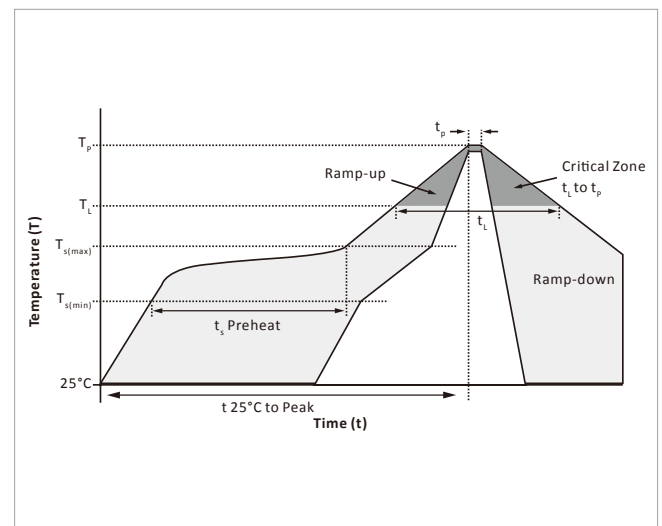
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				5	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T=1mA$	6			V
$I_R$	Reverse Leakage Current	$V_{RWM}=5V, T=25^{\circ}C$			1	$\mu A$
$V_C$	Clamping Voltage	$I_{PP}=6A, t_p=8/20\mu s$			14	V
$V_C$	ESD Clamping Voltage	$I_{PP}=4A, t_p=0.2/100ns(TLP)$		9.5		V
$V_C$	ESD Clamping Voltage	$I_{PP}=16A, t_p=0.2/100ns(TLP)$		12.5		V
$R_{DYN}$	Dynamic Resistance	$TLP=0.2/100ns$		0.25		$\Omega$
$I_{PP}$	Peak Pulse Current( $T_p=8/20\mu s$ )	$t_p=8/20\mu s$			6	A
$C_J$	Off State Junction Capacitance	$V_R=0V, f=1MHz$		6	8	pF

## CHARACTERISTIC CURVES

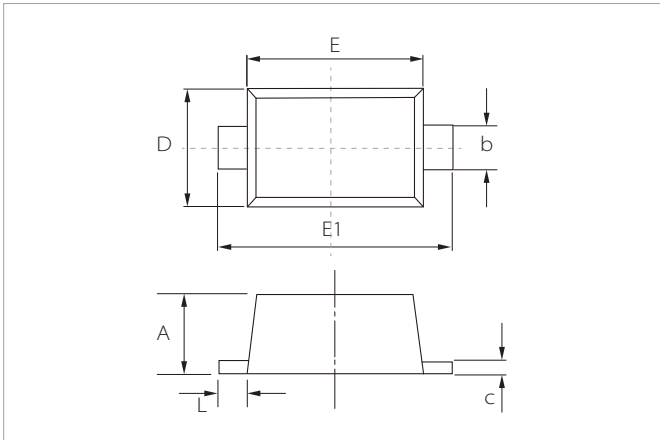


## SOLDERING PARAMETERS

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

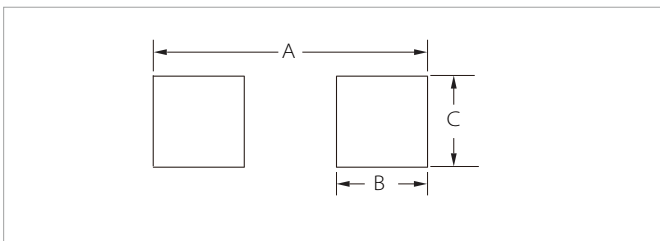


## SOD-523 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.50	0.80	0.020	0.031
b	0.25	0.35	0.010	0.014
c	0.07	0.20	0.003	0.008
D	0.70	0.90	0.028	0.035
E	1.10	1.30	0.043	0.051
E1	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Min.	Min.	Min.
A	2.00		0.0787	
B	0.60		0.0236	
C	0.70		0.0276	

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE5D09B5.0LA	SOD-523	5000PCS	7"

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