

## FEATURES

- | 180W Peak Pulse Power per Line(tp=8/20us)
- | Protects One Bidirectional I/O Line
- | Working voltages : 1.8V
- | Low Clamping Voltage

## APPLICATIONS

- | Portable Instrumentation
- | Cellular Handsets & Accessories
- | Automobile Applications
- | Low-voltage interfaces
- | Central Office Equipment
- | Integrated magnetics



SOD-523



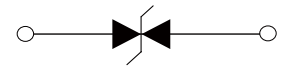
Marking

## IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±30kV (air), ±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

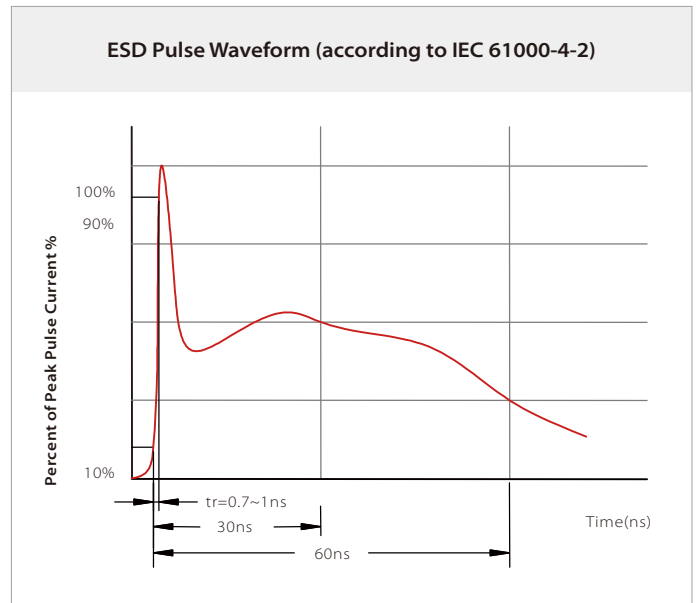
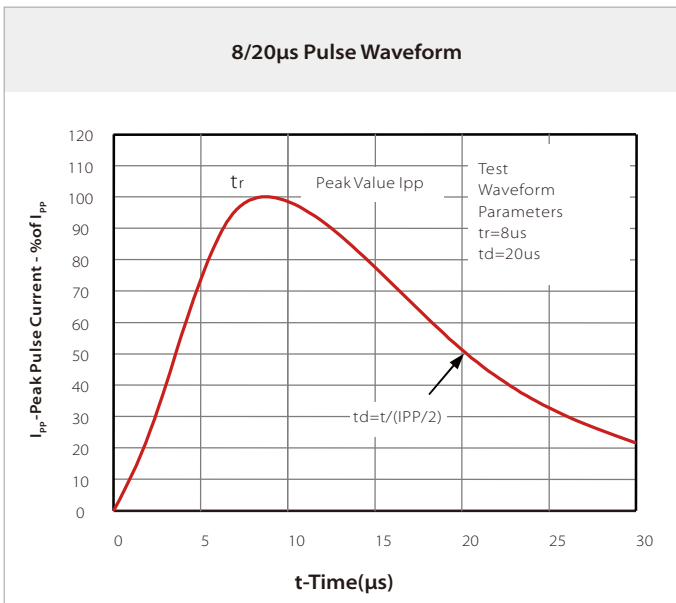
## THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
$P_{PP}$	Peak Pulse Power (tp=8/20μs waveform)	180	Watts
$T_J$	Operating Temperature Range	-40 to +125	°C
$T_{STG}$	Storage Temperature Range	-55 to +150	°C

## ELECTRICAL CHARACTERISTICS

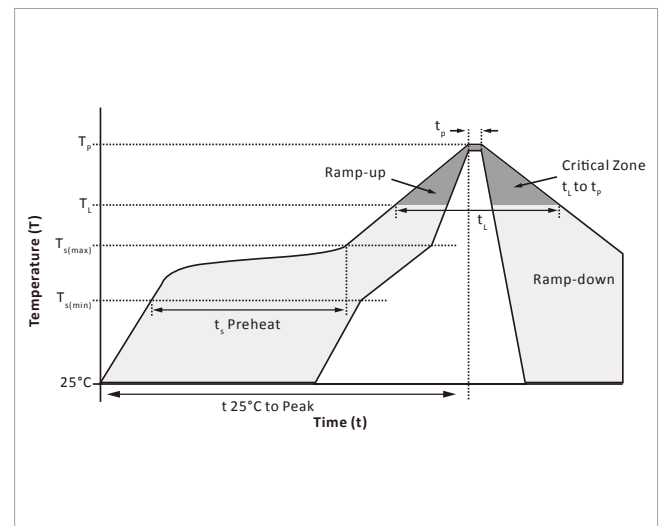
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				1.8	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T=1mA$	2.3			V
$I_R$	Reverse Leakage Current	$V_{RWM}=1.8V$			0.1	uA
$V_C$	Clamping Voltage	$I_{pp}=1A, tp=8/20us$			3.5	V
$V_C$	Clamping Voltage	$I_{pp}=10A, tp=8/20us$			6	V
$V_C$	Clamping Voltage	$I_{pp}=20A, tp=8/20us$			9	V
$I_{PP}$	Peak Pulse Current	tp=8/20us			20	A
$C_J$	Off State Junction Capacitance	$V_R=0V, f=1MHz$		25		pF

## CHARACTERISTIC CURVES

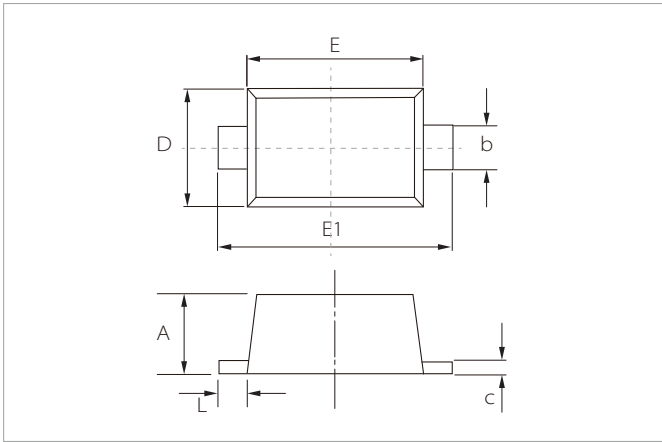


## SOLDERING PARAMETERS

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

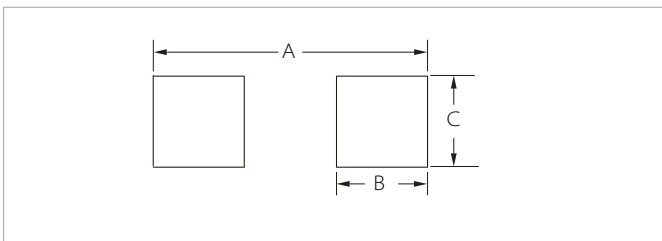


## SOD-523 PACKAGE INFORMATION



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
SE5D20B1.8A	SOD-523	3000PCS	7"

**Headquarters**

No.3387 Shendu Road Pujiang  
I&E Park  
Minhang Shanghai China  
201000

**Hotline**

400-021-5756

**Web**

<https://www.semiware.com>

**Sales Center**

Tel: 86-21-3463-7458  
Email: [sales18@semiware.com](mailto:sales18@semiware.com)

**Customer Service**

Tel: 86-21-5484-1001  
Email: [sales17@semiware.com](mailto:sales17@semiware.com)

**Technical Support**

Tel: 86-21-3463-7654  
Email: [fae01@semiware.com](mailto:fae01@semiware.com)

**Complaint & Suggestions**

Tel: 86-21-3463-7172  
Ext: 8868  
Email: [cs03@semiware.com](mailto:cs03@semiware.com)

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