

## FEATURES

- | 350W Peak Pulse Power per Line (tp=8/20μs)
- | Protects one power or I/O Port
- | Low Clamping Voltage
- | Low Leakage current
- | Meet AEC-Q101 Requirements

## APPLICATIONS

- | Ethernet-10/100/1000 Base T
- | Cellular phones
- | I<sup>2</sup>C Bus Protection
- | Parallel & Serial Port Protection
- | Personal Digital Assistant (PDA)
- | Microcontroller Input Protection
- | WAN/LAN Equipment



SOD-323



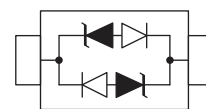
Marking

## 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

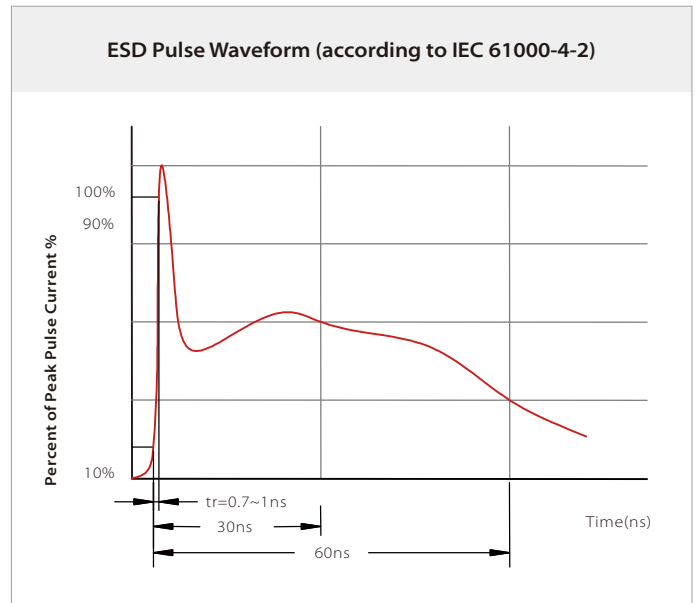
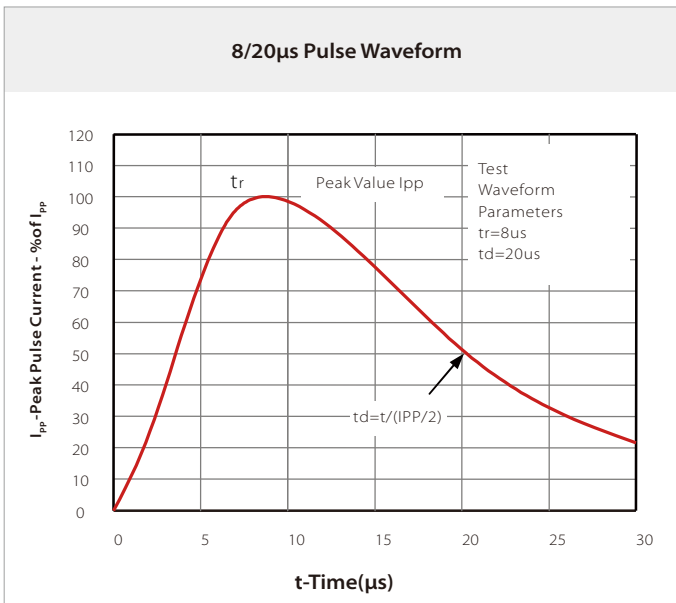
## THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
$P_{PP}$	Peak Pulse Power (tp=8/20μs waveform)	350	Watts
$T_J$	Operating Temperature Range	-55 to +150	°C
$T_{STG}$	Storage Temperature Range	-55 to +150	°C

## ELECTRICAL CHARACTERISTICS

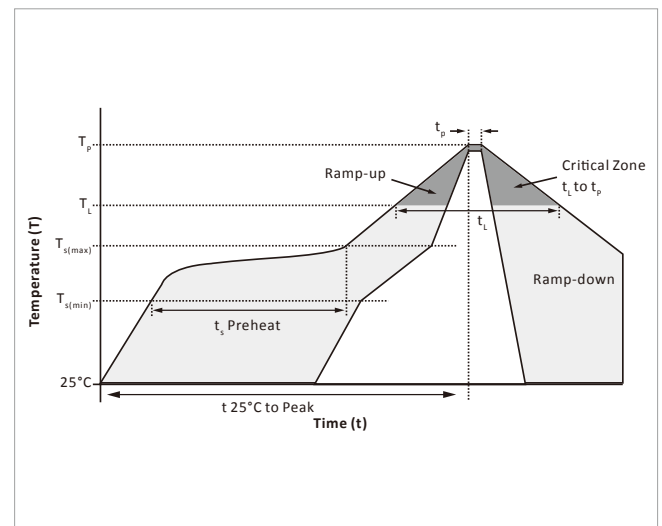
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				24	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T=1\text{mA}$	26.7			V
$I_R$	Reverse Leakage Current	$V_{RWM}=24\text{V}$			0.2	μA
$V_C$	Clamping Voltage (Tp=8/20us)	$I_{pp}=1\text{A}, tp=8/20\text{us}$			43	V
$V_C$	Clamping Voltage (Tp=8/20us)	$I_{pp}=6\text{A}, tp=8/20\text{us}$			56	V
$I_{pp}$	Peak Pulse Current (Tp=8/20us)	tp=8/20us			6	A
$C_J$	Off State Junction Capacitance	$V_R=0\text{V}, f=1\text{MHz}$		1		pF

## CHARACTERISTIC CURVES

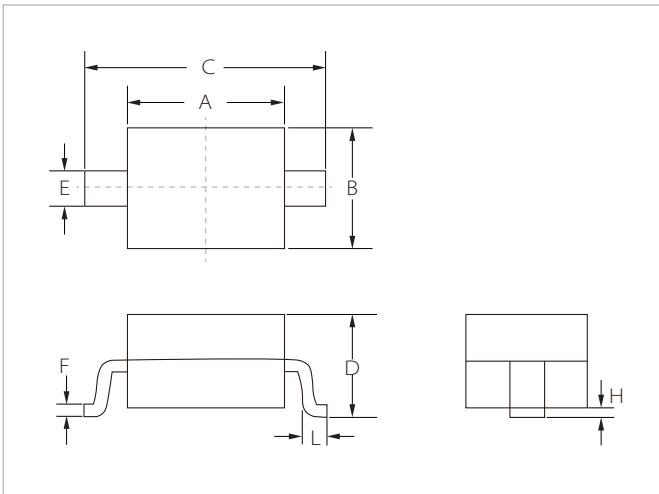


## SOLDERING PARAMETERS

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

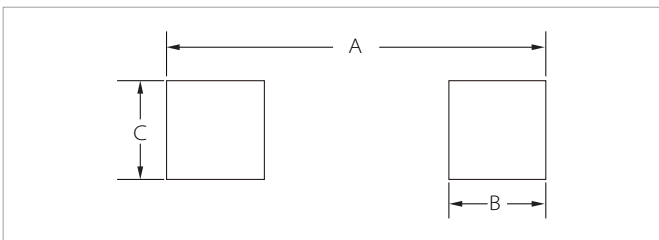


## SOD-323 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.60	1.90	0.063	0.075
B	1.15	1.45	0.045	0.057
C	2.39	2.75	0.094	0.108
D	0.80	1.10	0.031	0.043
E	0.25	0.40	0.010	0.016
F	0.10	0.20	0.004	0.008
H	-	0.10	-	0.004
L	0.20	0.40	0.008	0.016

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.87	3.12	0.113	0.123
B	0.66	0.91	0.026	0.036
C	0.66	0.91	0.026	0.036

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
TPSE3D35B24MA	SOD-323	3000PCS	7"

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