

## FEATURES

- | 150W Peak Pulse Power per Line (tp=8/20μs)
- | Protects one Bidirectional I/O line
- | Low clamping voltage
- | Working voltages : 5 V
- | Low Leakage current
- | Meet AEC-Q101 Requirements

## APPLICATIONS

- | Microprocessor based equipment
- | Personal Digital Assistants (PDA' s)
- | Parallel & Serial Port Protection
- | Portable Instrumentation
- | Microcontroller Input Protection
- | ISDN S/T Interface
- | WAN/LAN Equipment



SOD-923



Marking

## IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±15kV (air), ±8kV (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

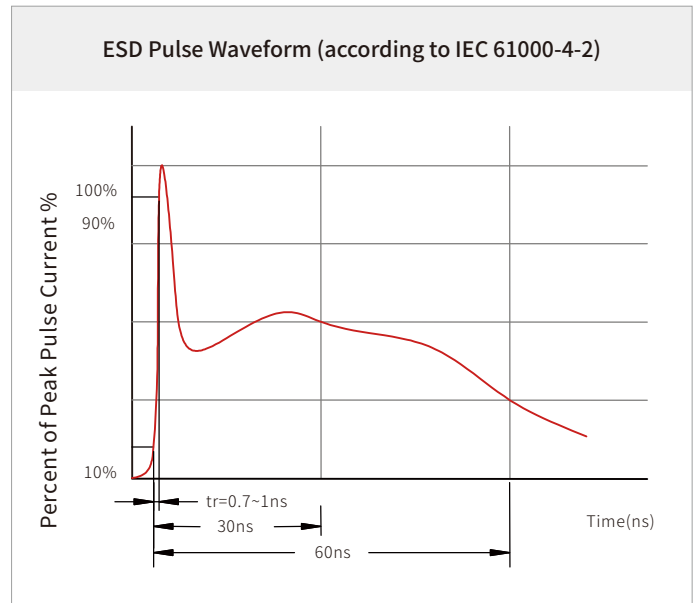
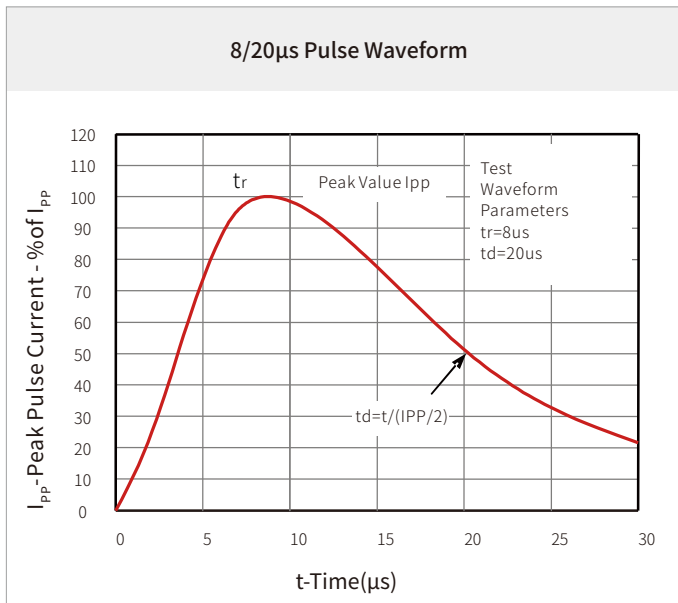
## THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
$P_{PP}$	Peak Pulse Power (tp=8/20μs waveform)	150	Watts
$T_J$	Operating Temperature Range	-55 to +125	°C
$T_{STG}$	Storage Temperature Range	-55 to +150	°C
$T_L$	Lead Soldering Temperature	260 (10 sec.)	°C

## ELECTRICAL CHARACTERISTICS

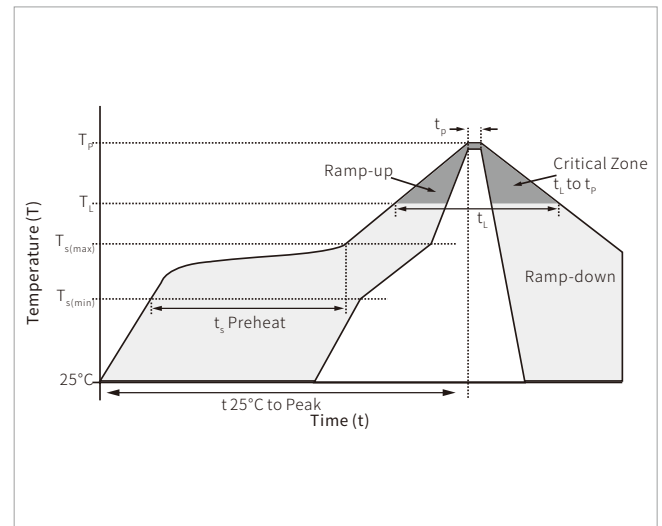
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				5	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T=1mA$	5.6			V
$I_R$	Reverse Leakage Current	$V_{RWM}=5V$			1	μA
$V_C$	Clamping Voltage	$I_{PP}=1A, tp=8/20\mu s$			8	V
$V_C$	Clamping Voltage	$I_{PP}=5A, tp=8/20\mu s$			11	V
$I_{PP}$	Peak Pulse Current	tp=8/20μs			5	A
$C_J$	Off State Junction Capacitance	$V_R=0V, f=1MHz$		13		pF

## CHARACTERISTIC CURVES

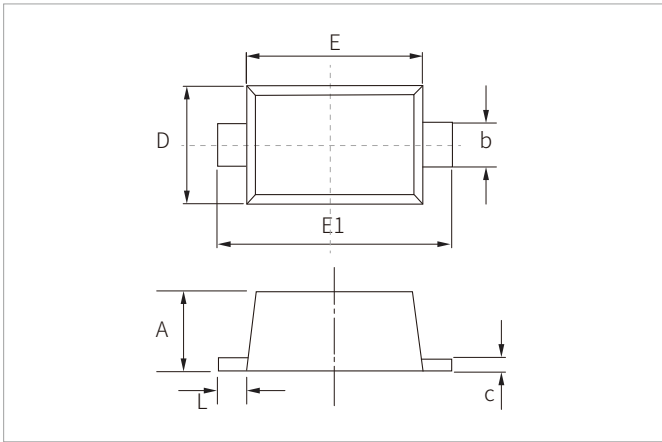


## SOLDERING PARAMETERS

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

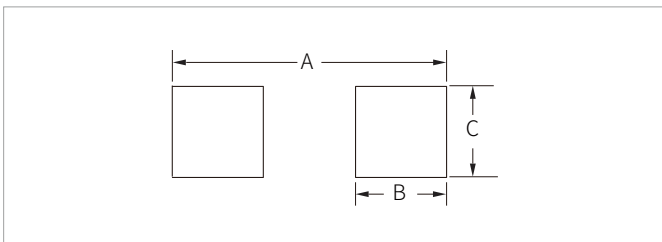


## SOD-923 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.34	0.50	0.013	0.020
b	0.15	0.3	0.006	0.012
c	0.07	0.15	0.003	0.006
D	0.50	0.70	0.020	0.028
E	0.70	0.90	0.028	0.036
E1	0.90	1.10	0.036	0.044
L	0.05	0.15	0.002	0.006

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
A	1.10	0.043
B	0.30	0.012
C	0.40	0.016

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
TPSE9D15B5.0A	SOD-923	8000PCS	7"

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