

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



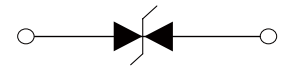
Marking

IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

APPROVALS

- | | |
|-------------|------------------------------------|
| RoHS | Compliance with 2011/65/EU |
| HF | Compliance with IEC61249-2-21:2003 |



Schematic Symbol

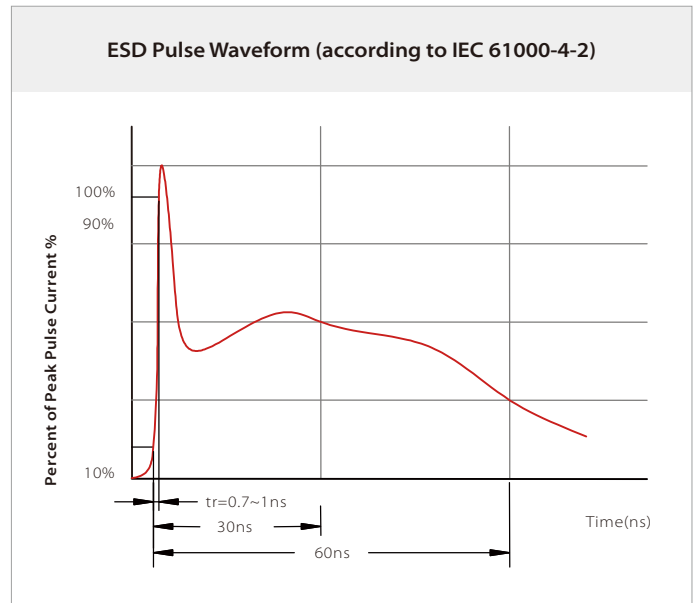
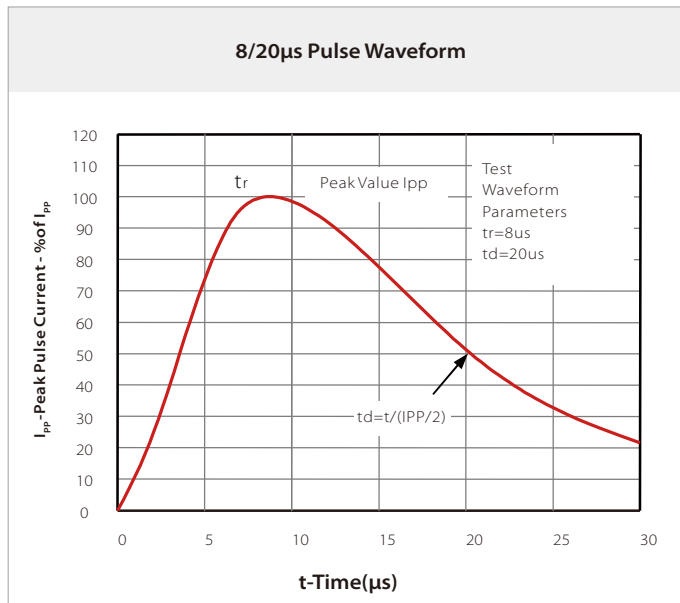
THERMAL CONSIDERATIONS

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

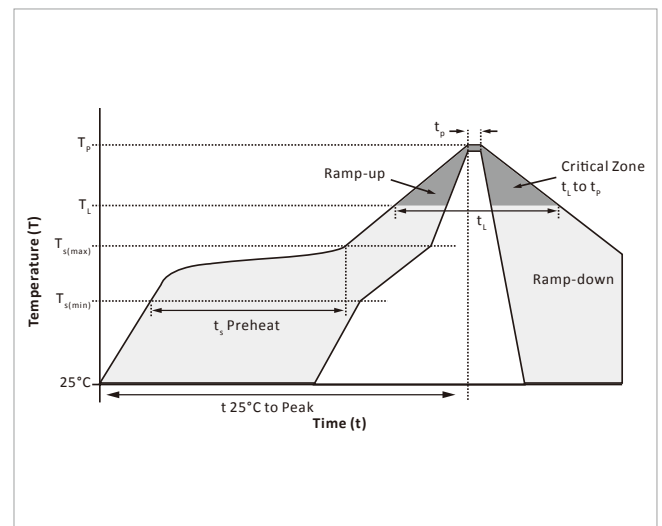
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage				5	V
V_{BR}	Reverse Breakdown Voltage	$I_T=1mA$	5.6			V
I_R	Reverse Leakage Current	$V_{RWM}=5V$			1	μA
V_C	Clamping Voltage (Tp=8/20us)	$I_{pp}=1A, tp=8/20us$			8	V
V_C	Clamping Voltage (Tp=8/20us)	$I_{pp}=5A, tp=8/20us$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

CHARACTERISTIC CURVES

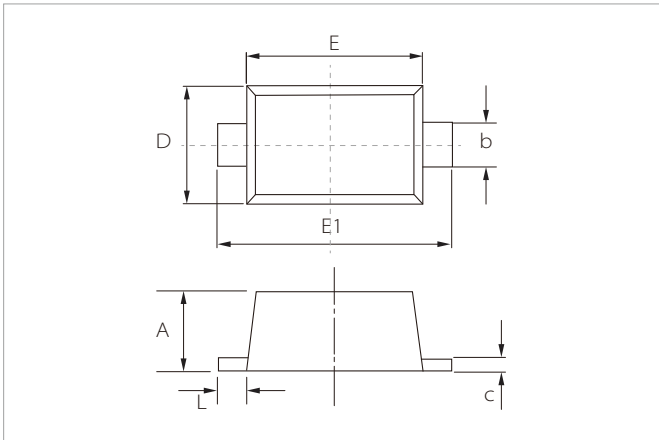


SOLDERING PARAMETERS

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_r)	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

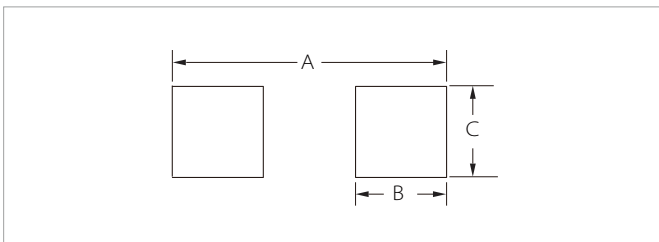


SOD-923 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.34	0.45	0.013	0.002
b	0.15	0.3	0.006	0.012
c	0.07	0.15	0.003	0.006
D	0.55	0.65	0.022	0.026
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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