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SEMICONDUCTOR



ESD



TVS



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GDT



PLED

ESD9B5V-MS

Product specification

FEATURES

- 80W peak pulse power per line (tP = 8/20μs)
- SOD-923 package
- Replacement for MLV(0402)
- Bidirectional configurations
- Response time is typically < 1ns
- Low clamping voltage
- RoHS compliant
- Transient protection for data lines to
IEC61000-4-2(ESD) ± 30KV(air), ± 30KV(contact)
IEC61000-4-4 (EFT) 40A (5/50ns)


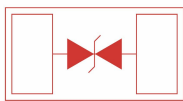

MACHANICAL DATA

- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:260 °C
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 um
- Pin flatness:≤3mil

APPLICATIONS

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

Reference News

PACKAGE OUTLINE	PIN CONFIGURATION	Marking
		
<p>SOD-923</p>		

ABSOLUTE MAXIMUM RATING

Rating	Symbol	Value	Units
Peak Pulse Power (tp=8/20μs)	Ppp	80	W
Operating Temperature	TJ	-55 to + 150	°C
Storage Temperature	TSTG	-55 to + 150	°C

ELECTRICAL CHARACTERISTICS (Tamb=25 °C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Peak Reverse Working Voltage	VRWM				5	V
Breakdown Voltage	VBR	It = 1mA	5.6	6.7	7.8	V
Reverse Leakage Current	IR	VRWM=5V T=25C			1.0	A
Maximum Reverse Peak Pulse Current	IPP			5		A
Clamping Voltage	VC	IPP=1A			8	V
Clamping Voltage	VC	IPP=3A			13	V
Clamping Voltage	VC	IPP=5A			15	V
Junction Capacitance	Cj	VR=0V f = 1MHz		12	15	pF

ELECTRICAL CHARACTERISTICS CURVE

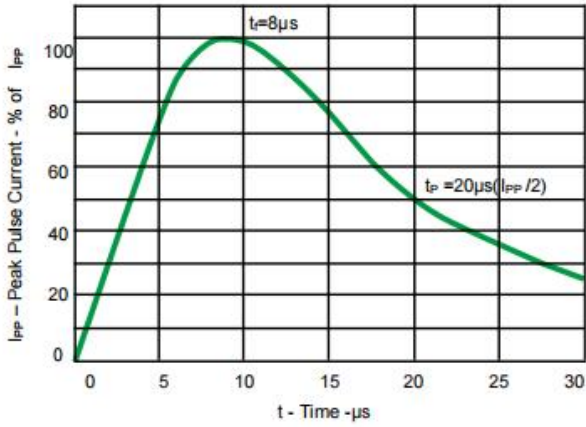


Fig 1. Pulse Waveform

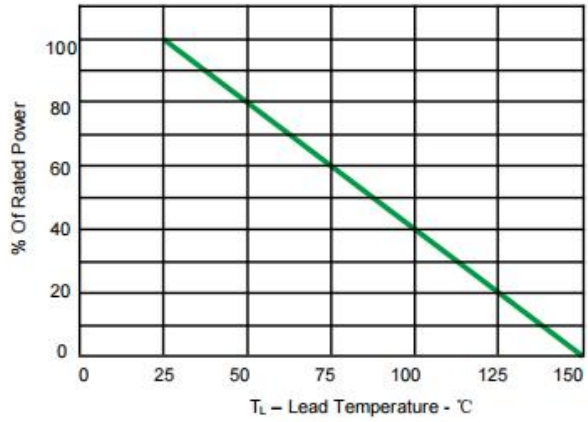


Fig 2. Power Derating Curve

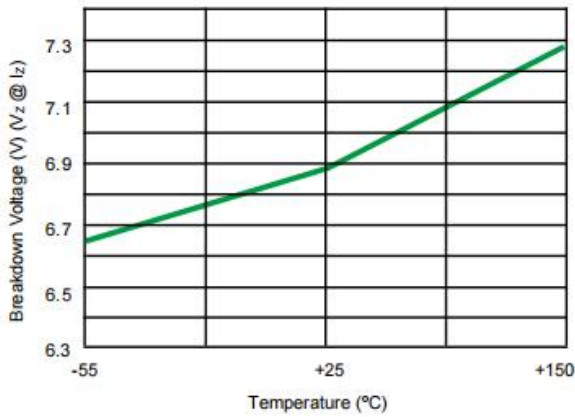


Fig 3. Typical Breakdown Voltage vs. Temperature

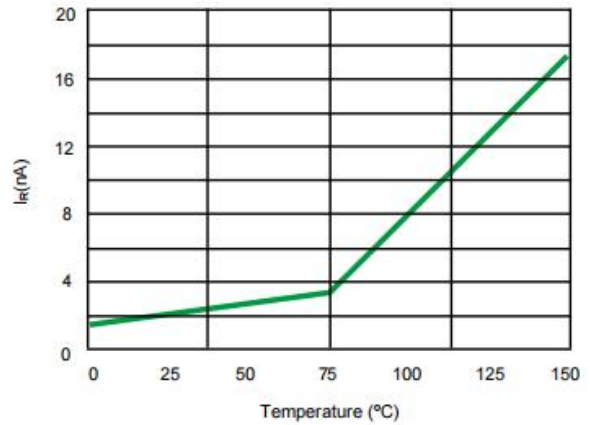


Fig 4. Typical Leakage Current vs. Temperature

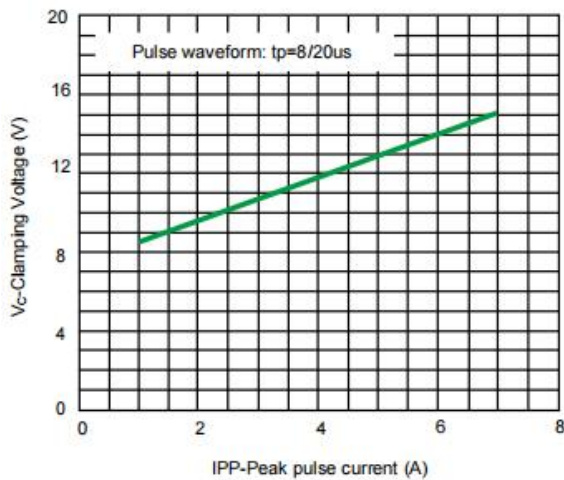


Fig 5. Clamping voltage vs. Peak pulse current

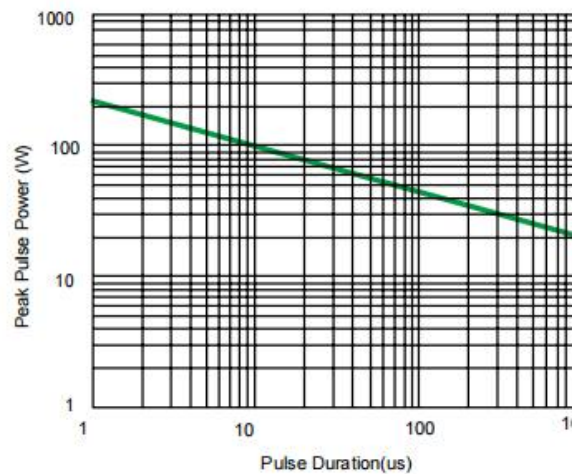
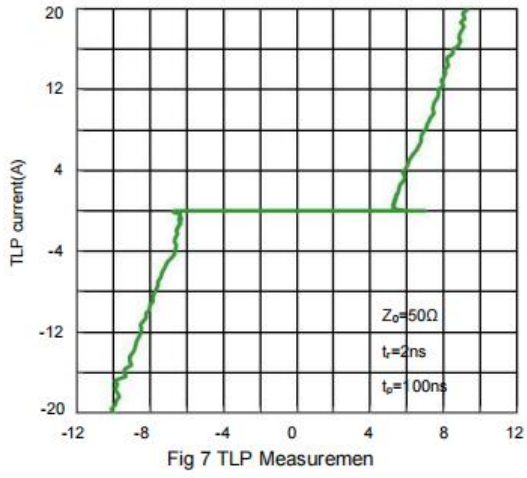
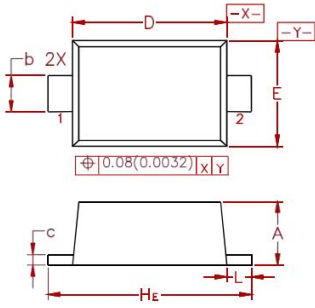


Fig 6. Non-Repetitive Peak Pulse Power vs. Pulse time

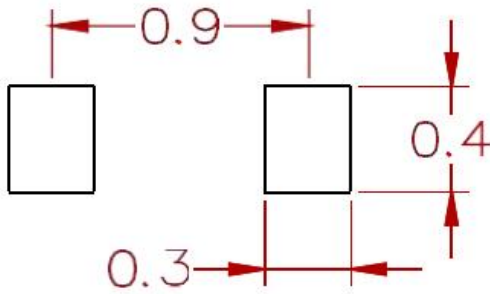


PACKAGE MECHANICAL DATA



Dim	Millimeters			Inches		
	Min	Nom	Max	Min	Nom	Max
A	0.36	0.40	0.43	0.014	0.016	0.017
b	0.15	0.20	0.25	0.006	0.008	0.010
c	0.07	0.12	0.17	0.003	0.005	0.007
D	0.75	0.80	0.85	0.030	0.031	0.033
E	0.55	0.60	0.65	0.022	0.024	0.026
HE	0.95	1.00	1.05	0.037	0.039	0.041
L	0.05	0.10	0.15	0.002	0.004	0.006

Suggested Pad Layout



Dimensions: Millimeters

REEL SPECIFICATION

P/N	PKG	QTY
ESD9B5V-MS	SOD-923	8000

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