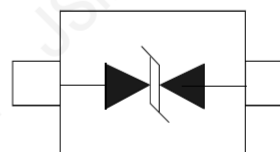
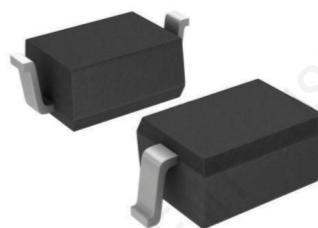


Features

- 230 Watts peak pulse power ($t_p=8/20\mu s$)
- Tiny 0805 package
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ($C_j=1.4pF$ typ.)
- Protection one data/power line
- EC 61000-4-2 $\pm 30V$ contact $\pm 30kV$ air
- 1.2/50 μs 12ohm 2kV (GbE PHY side)
- 10/700 μs 40ohm 4kV (GbE PHY side)



SOD-323

Application

- 10/100/1000 Ethernet
- Integrated Magnetics/RJ45 connectors
- LAN/WAN Equipment
- Notebooks, Desktops, and Servers
- Portable Instrumentation

Mechanical Data

- SOD-323 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	230	Watts
Peak Pulse Current ($t_p=8/20\mu s$) (note 1)	I_{pp}	14	A
ESD per IEC61000-4-2 (Air) ESD per IEC61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	TL	260 (10 seconds)	$^{\circ}C$
Junction Temperature	T_J	-55 to +125	$^{\circ}C$
Storage Temperature	T_{stg}	-55 to +125	$^{\circ}C$

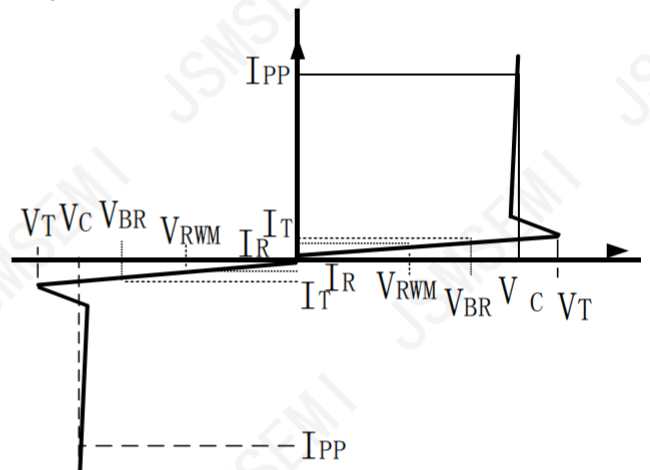
Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Revers Stand-Of Voltage	V_{RWM}				5.0	V
Revers Breakdow Voltage	V_{BR}	$I_T=1mA$	6.0			V
Revers Leakag Current	I_R	$V_{RWM}=5.0V, T=25^{\circ}C$			1	μA
Clamping Voltage	V_C	$I_{PP}=7A, t_p=8/20V$			13	V
Clamping Voltage	V_C	$I_{PP}=14A, t_p=8/20\mu s$			17	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		1.4		pF

Electrical Parameters($T_A=25^{\circ}C$ unless otherwise noted)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage@ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current@ V_{RWM}
V_T	Trigger Voltage@ I_T
I_T	Test Current

Note.: 8/20 μs pulse waveform.



Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

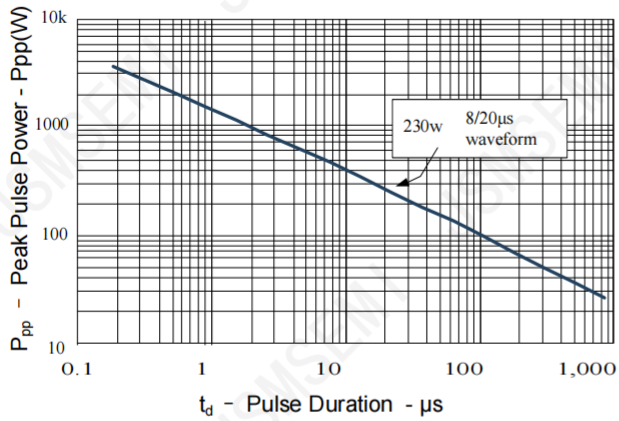


Figure 2: Power Derating Curve

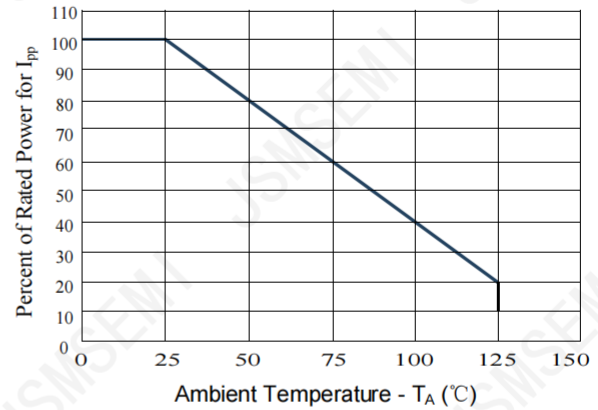


Figure3: Pulse Waveform

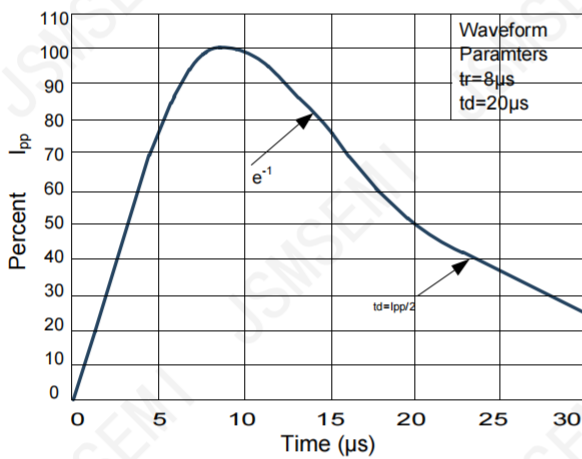
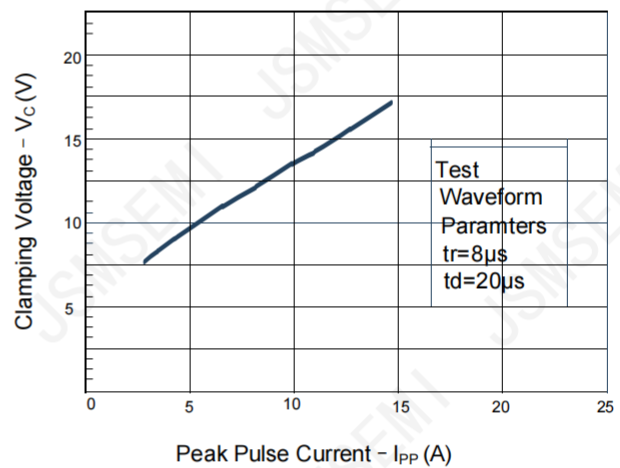
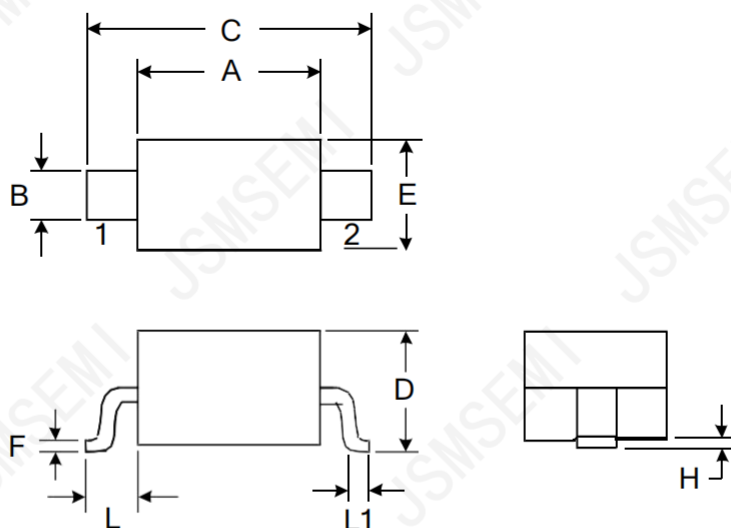


Figure 4: Clamping Voltage vs. Ipp



Outline Drawing— SOD323



DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	1.600	1.800	0.063	0.071
B	0.250	0.350	0.010	0.014
C	2.500	2.700	0.098	0.106
D		1.000		0.039
E	1.200	1.400	0.047	0.055
F	0.080	0.150	0.003	0.006
L	0.475 REF		0.019REF	
L1	0.250	0.400	0.010	0.016
H	0.000	0.100	0.000	0.004

Revision History

Rev.	Change	Date
V1.0	Initial version	6/27/2021

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