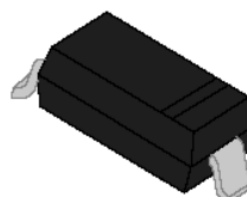


Features

- ❖ ESD/Surge protection for one line with bi-direction
- ❖ Small SOD-323 package
- ❖ Protects one data or power line
- ❖ For operating voltage of 3.3V and below
- ❖ High peak pulse current capability
- ❖ Fast turn-on and Ultra low clamping voltage
- ❖ Complies with following standards:
IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 30\text{kV}$
Contact discharge: $\pm 30\text{kV}$
IEC61000-4-5 (Lightning) 150A (8/20 μs)
- ❖ RoHS Compliant



SOD-323



symbol

Applications

- ❖ Mobile Phones and Accessories
- ❖ Battery Protection
- ❖ Power Supply Protection
- ❖ Hand Held Portable Applications
- ❖ Peripherals

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$, RH=45%-75%, unless otherwise noted)

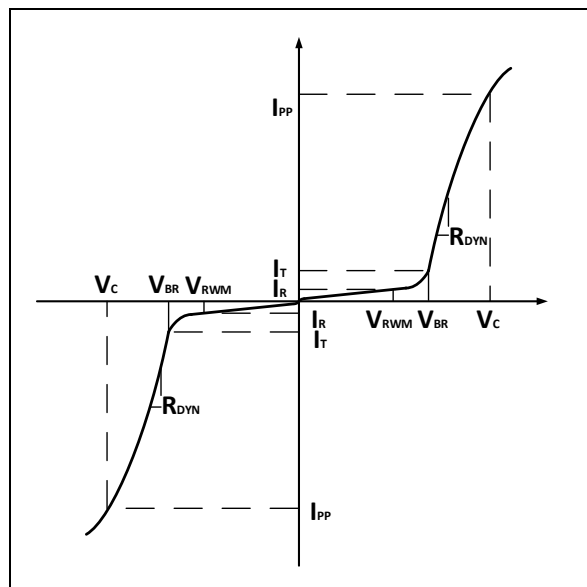
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P_{PK}	1950	W
Peak Pulse Current ($t_p=8/20\mu\text{s}$)	I_{PP}	150	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 30 ± 30	KV
Operating temperature range	T_J	-55 to +125	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^\circ\text{C}$

Electronics Characteristics (T_A=25°C, continued)

Symbol	Parameter	Conditons	Min.	Typ.	Max.	Units
V _{RWM}	Reverse Working Voltage		-3.3		3.3	V
V _{BR}	Reverse Breakdown Voltage	I _T =1mA	3.7			V
I _R	Reverse Leakage Current	V _{RWM} =±3.3V			1.0	μA
V _C	Clamping Voltage	I _{pp} =1A, tp=8/20μs		5.4		V
		I _{pp} =20A, tp=8/20μs		5.9		V
		I _{pp} =150A, tp=8/20μs		10	13	V
C _J	Junction Capacitance	V _R =0V, f=1MHz		350		pF

Electrical Characteristics

Symbol	Parameter
V _{RWM}	Reverse Standoff Voltage
I _R	Max Reverse Leakage Current @ V _{RWM}
V _{BR}	Breakdown Voltage @ I _T
I _T	Test Current
V _C	Clamping Voltage @ I _{pp}
I _{pp}	Max Peak Pulse Current
R _{DYN}	Dynamic Resistance



Typical Characteristics

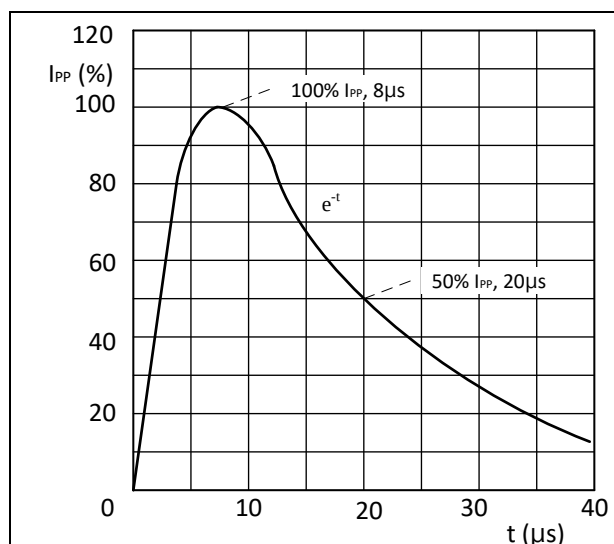


Fig. 1. 8/20 μs pulse waveform according to IEC 61000-4-5 and IEC 61643-321

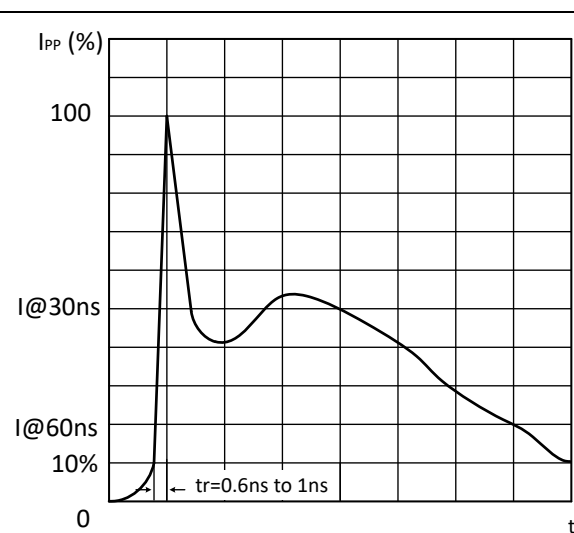


Fig. 2. ESD pulse waveform according to IEC 61000-4-2

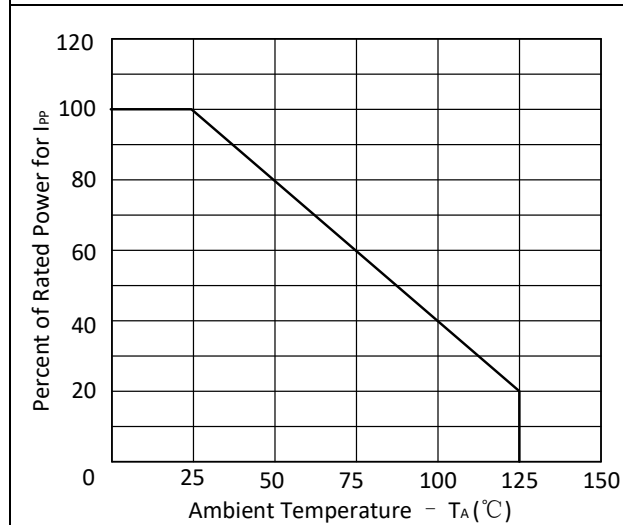


Fig. 3. Power Derating Curve

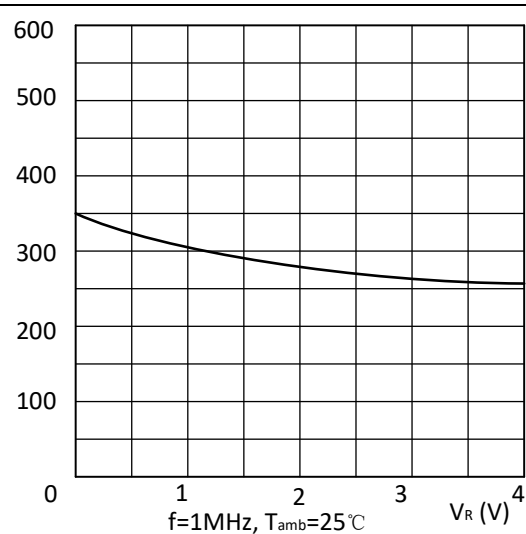
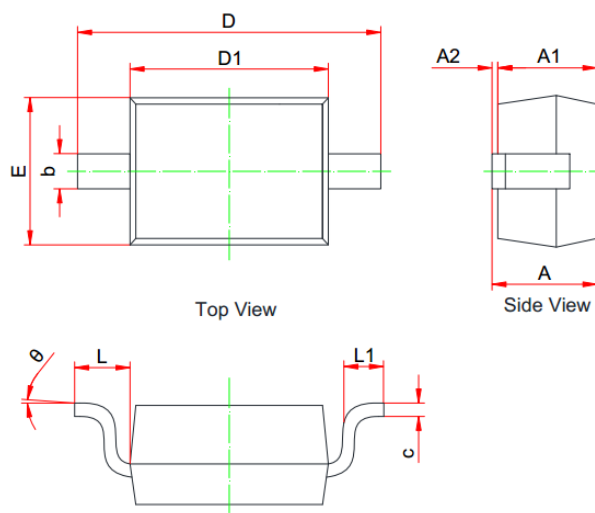


Fig. 4. Junction Capacitance vs V_R

Package Mechanical Data



Symbol	Millimeters		
	min	nom	max
A	0.800	--	1.100
A1	0.800	--	0.900
A2	0.000	--	0.100
b	0.250	--	0.400
c	0.080	--	0.177
D1	1.600	1.700	1.800
D	2.300	--	2.800
E	1.150	--	1.400
L	0.475REF		
L1	0.100		0.500
θ	0°		8°

Ordering Information

Device	Package	Quantity	Delivery Mode	Reel Size
YZPST-ESD3V3S1BBA	SOD-323	3000/Reel	Tape and Reel	7 inch

Revision History

Revision	Modification Description
Revision 2020/04/29	Preliminary Release.