

SOD-323 Plastic-Encapsulate Diodes

ESD3Z5V0 Uni-direction ESD Protection Diode

DESCRIPTION

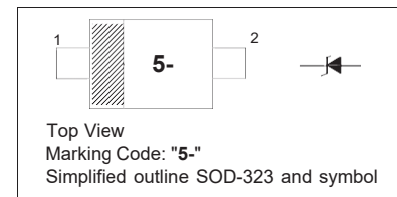
Unidirectional ElectroStatic Discharge (ESD) protection diode designed to protect one signal line from the damage caused by ESD and other transients.

FEATURES

- Uni-directional ESD protection
- Low reverse stand-off voltage: 5V
- Low reverse clamping voltage
- Low leakage current
- Fast response time
- JESD22-A114-B ESD Rating of class 3B per human body model
- IEC 61000-4-2 Level 4 ESD protection

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

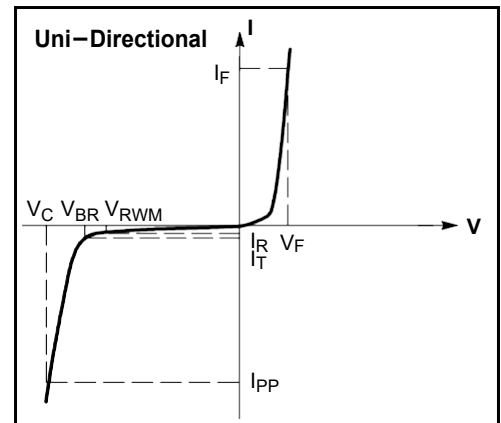
Parameter	Symbol	Limit	Unit
IEC 61000-4-2 ESD Voltage	Air Model	± 25	kV
		Contact Model	
JESD22-A114-B ESD Voltage	Per Human Body Model	± 16	
ESD Voltage	Machine Model	± 0.4	
Peak Pulse Power	$P_{PP}^{(2)}$	210	W
Peak Pulse Current	$I_{PP}^{(2)}$	13	A
Lead Solder Temperature – Maximum (10 Second Duration)	T_L	260	$^{\circ}\text{C}$
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ +150	$^{\circ}\text{C}$

(1).Device stressed with ten non-repetitive ESD pulses.

(2).Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5.

ELECTRICAL PARAMETER

Symbol	Parameter
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Peak Pulse Current
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_R	Reverse Leakage Current @ V_{RWM}
V_{RWM}	Reverse Standoff Voltage
V_F	Forward Voltage @ I_F
I_F	Forward Current

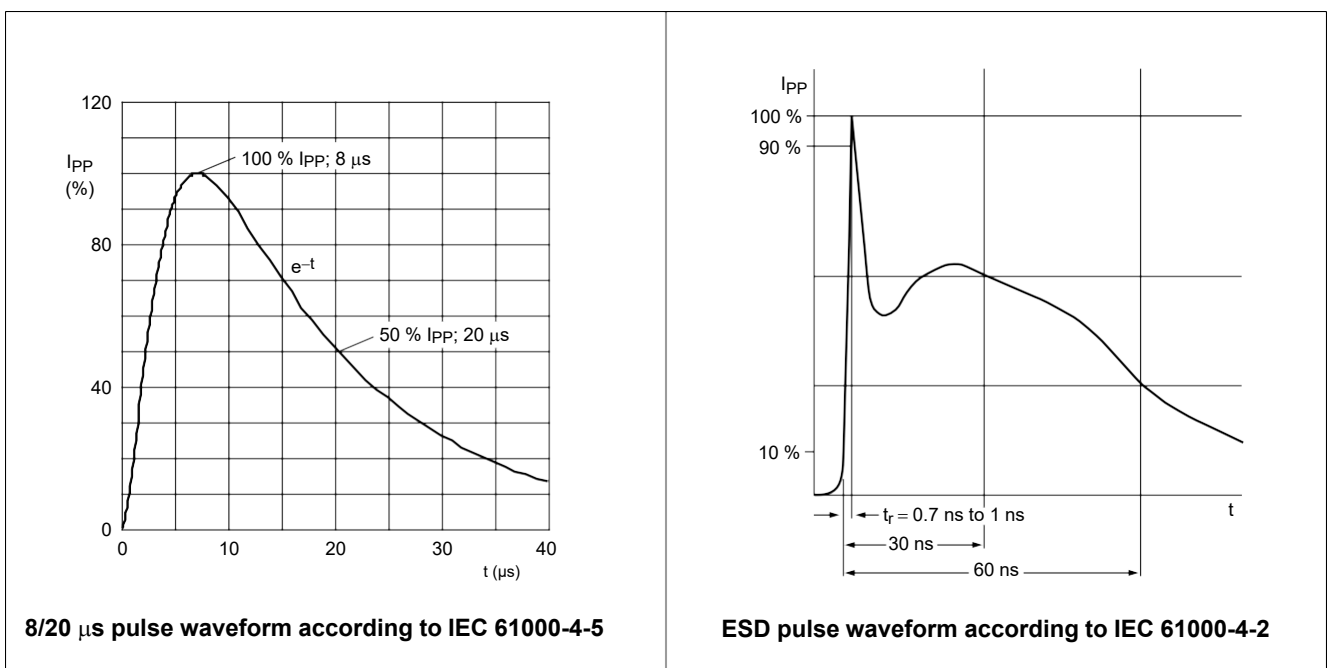


ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise noted)

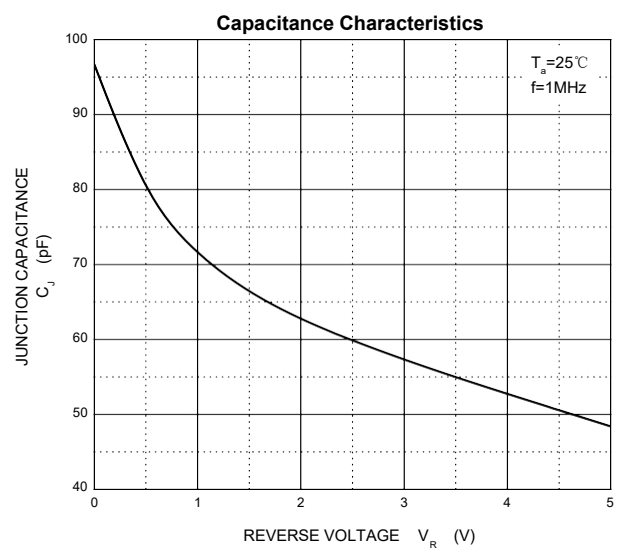
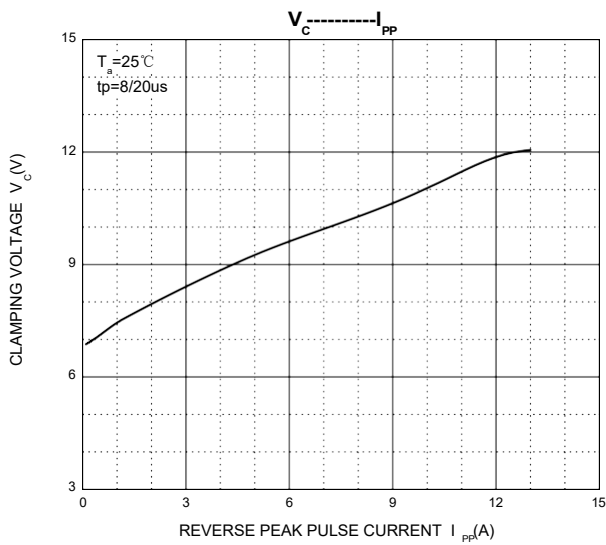
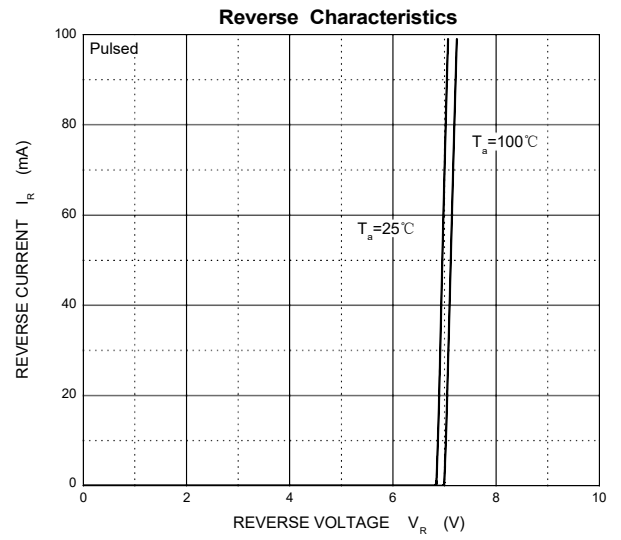
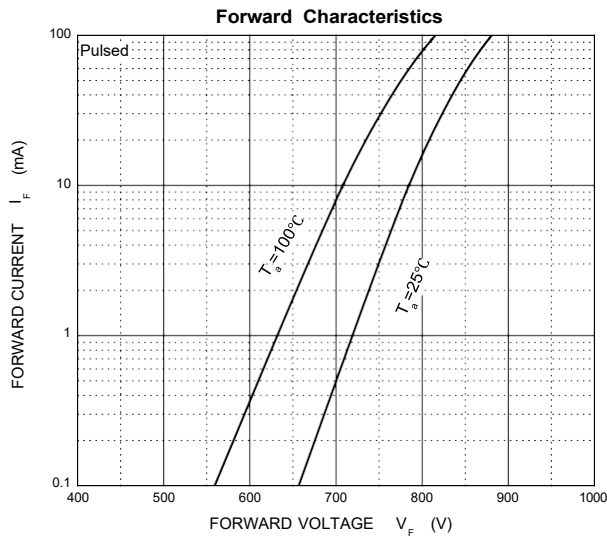
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse stand off voltage	$V_{RWM}^{(1)}$				5.0	V
Reverse leakage current	I_R	$V_{RWM}=5.0\text{V}$			1.0	μA
Breakdown voltage	$V_{(BR)}$	$I_T=1\text{mA}$	6.2		7.3	V
Clamping voltage	$V_C^{(2)}$	$I_{PP}=13\text{A}$			13	V
Junction capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$		95		pF

(1). Other voltages available upon request.

(2). Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5



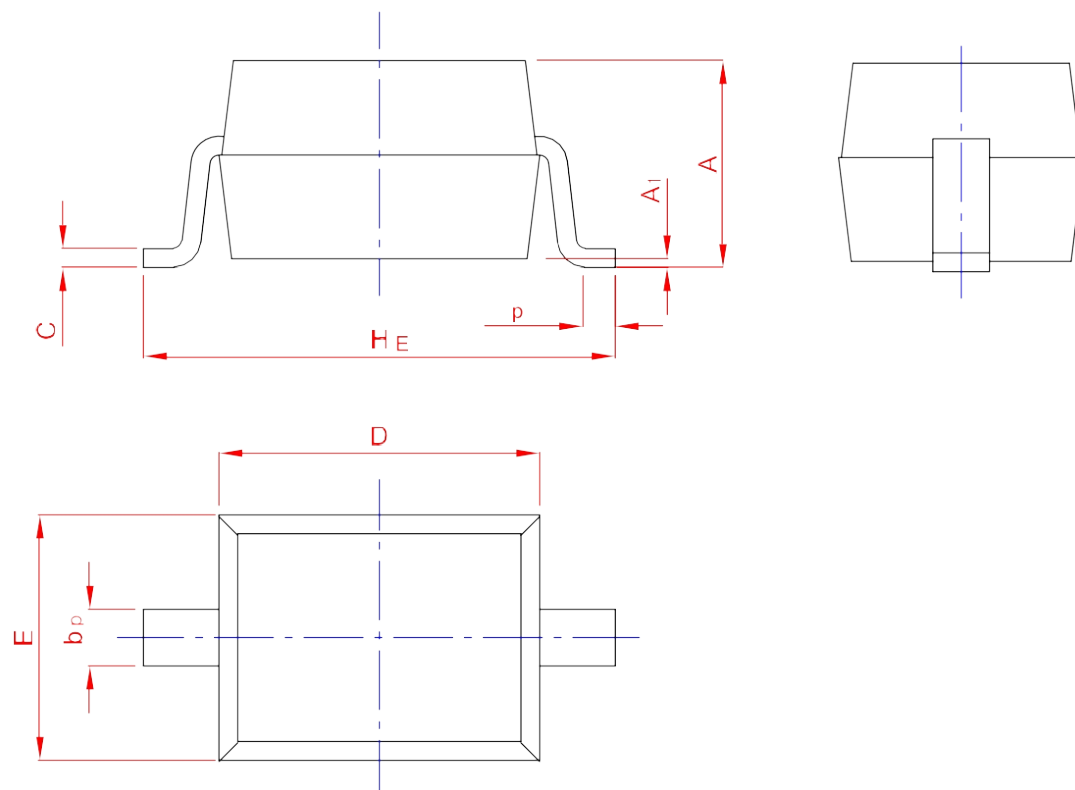
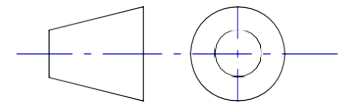
TYPICAL CHARACTERISTICS



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



UNIT	A	b _p	C	D	E	HE	A ₁	L _p
mm	1.20	0.40	0.15	1.80	1.35	2.80	0.10	0.50
	0.90	0.25	0.10	1.60	1.15	2.30	0.01	0.20

DISCLAIMER

- Before you use our Products, you are requested to carefully read this document and fully understand its contents. BLUECOLOUR shall not be in any way responsible or liable for failure, malfunction or accident arising from the use of any BLUECOLOUR's Products against warning, caution or note contained in this document.
- All information contained in this document is current as of the issuing date and subject to change without any prior notice. Before purchasing or using BLUECOLOUR's Products, please confirm the latest information with a BLUECOLOUR sales representative.