

SOD-323 Plastic-Encapsulate Diodes

ESD3Z36 Uni-direction ESD Protection Diode

DESCRIPTION

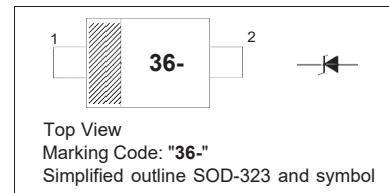
Unidirectional ElectroStatic Discharge (ESD) protection diode designed to protect one signal line from the damage caused by ESD and other transients.

FEATURES

- Uni-directional ESD protection
- Low reverse stand-off voltage: 36V
- 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)

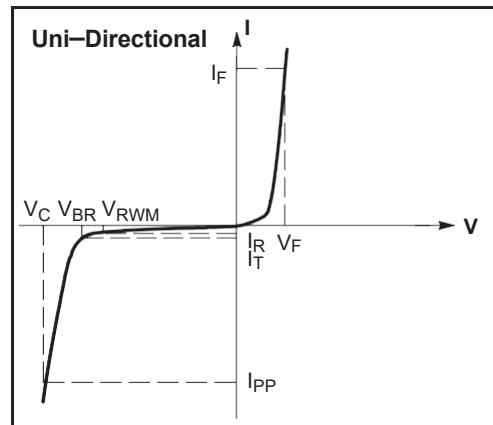
Parameter	Symbol	Limit	Unit
IEC 61000-4-2 ESD Voltage Air Model	$V_{ESD}^{(1)}$	± 12	kV
Contact Model		± 12	
JESD22-A114-B ESD Voltage Per Human Body Model		± 16	
ESD Voltage Machine Model		± 0.4	
Peak Pulse Power	$P_{PP}^{(2)}$	210	W
Peak Pulse Current	$I_{PP}^{(2)}$	4.0	A
Lead Solder Temperature – Maximum (10 Second Duration)	T_L	260	°C
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{stg}	-55 ~ +150	°C

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

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

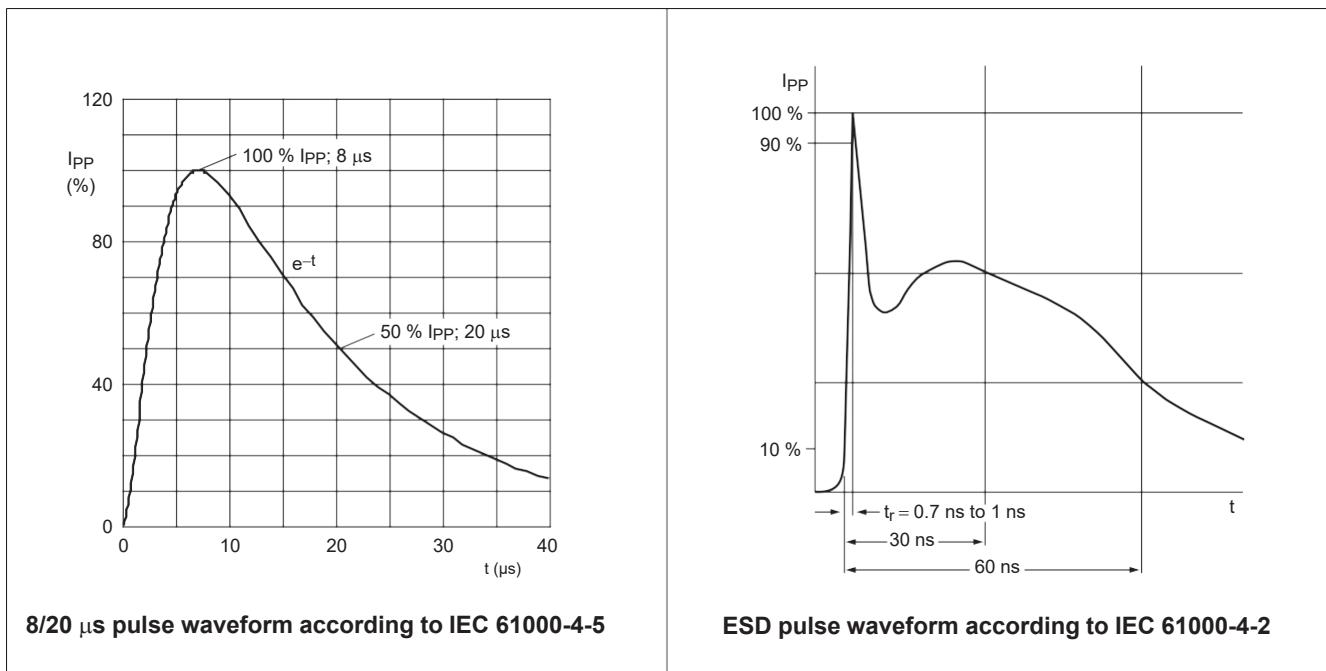
ELECTRICAL PARAMETER

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

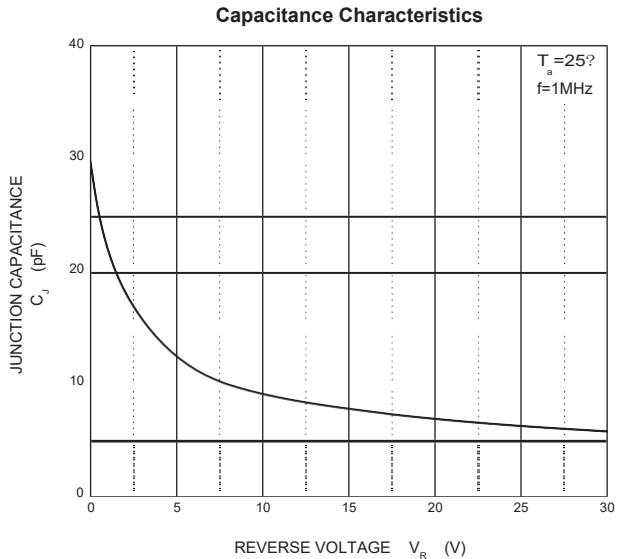
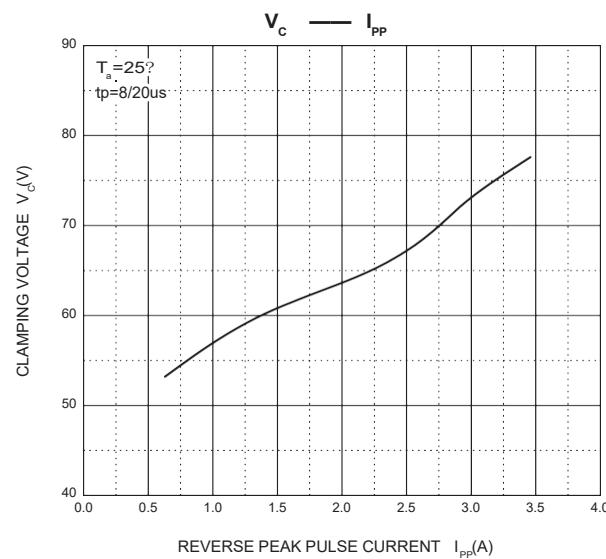
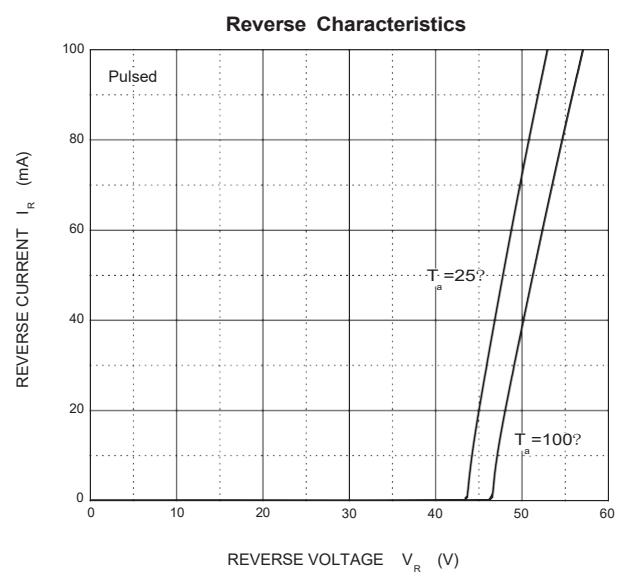
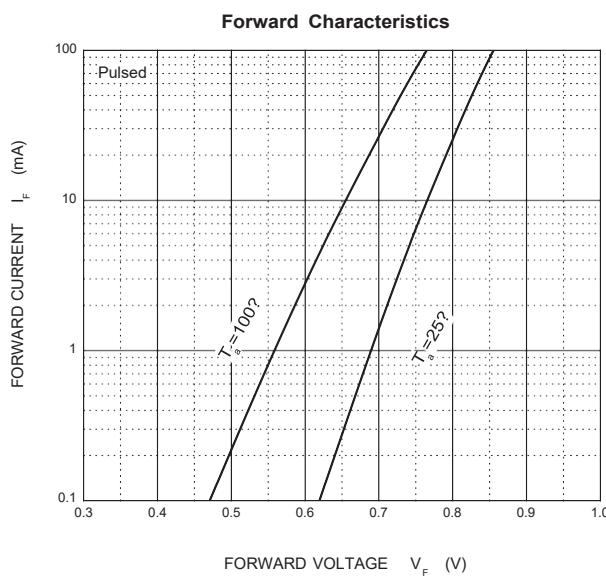
**ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise noted)**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse stand off voltage	V_{RWM} ⁽¹⁾				36	V
Reverse leakage current	I_R	$V_{RWM}=36V$			1.0	μA
Breakdown voltage	$V_{(BR)}$	$I_T=1\text{mA}$	40		48	V
Clamping voltage	V_C ⁽²⁾	$I_{PP}=3.0\text{A}$			80	V
Forward voltage	V_F	$I_F=10\text{mA}$			0.9	V
Junction capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$		30		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

