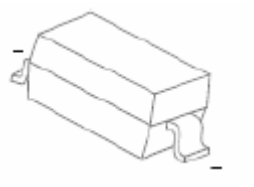
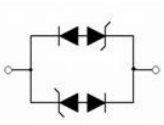
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOD-323 Plastic-Encapsulate Diodes

ESDBKU3V0D3 ESD PROTECTION DIODE

SOD-323





DESCRIPTION

The ESDBKU3V0D3 is designed to protect voltage sensitive components from ESD. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD.

FEATURE

- Low Reverse Stand−off Voltage: 3.0 V
- Low Leakage Current
- Response Time is Typically < 1 ns
- ESD Rating of Class 3(<16kV) Per Human Body Model
- IEC61000−4−2 Level 4 ESD Protection
- These are Pb−Free Devices
- Low Capacitance Steering Diodes and a TVS Diode in a Single Package

APPLICATION

- Computers and peripherals
- Communications systems
- Audio and video equipment
- High speed data lines
- Parallel ports

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

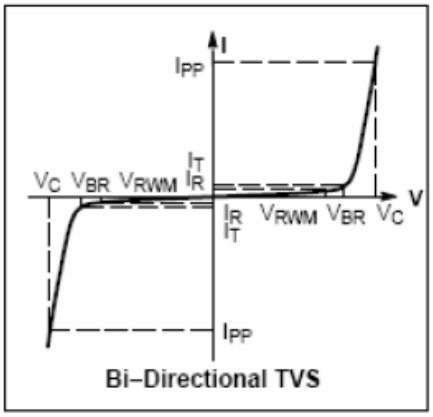
Parameter	Symbol	Limit	Unit
Electrostatic Discharge Voltage (IEC61000−4−2) (note1) Air model	V_{ESD}	±30	kV
Contact model		±30	
ESD Voltage(JESD22-A114-B) (note 1) Per human body model		16	
ESD Voltage (note 1) Machine model		0.4	
Peak Pulse Power (8/20μs Waveform)	P_{PP}	300	W
Peak Pulse Current (8/20μs Waveform)	I_{PP}	19	A
Lead Solder Temperature − Maximum (10 Second Duration)	T_L	260	℃
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 ~ +150	℃

Note: 1.Device stressed with ten non-repetitive ESD pulses.

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only.Functional operation above the Recommended.Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

ELECTRICAL PARAMETER

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_{BR}	Breakdown Voltage @ I_T
I_T	Test Current



ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Device[1]	Device Marking	V_{RWM} (V)	I_R (μA) @ V_{RWM}	V_{BR} (V) [2] @ I_T=1mA		V_{C1}(V) @I_{PP}[3]=1 A	V_{C2}(V) @I_{PP}[3]=5 A	V_{CMAX}(V) @$I_{PP(max)}$[3]=19 A	C (pF) @V_R=0,f=1MHz	
		Max	Max	Min	Max	Max	Max	Max	Typ	Max
ESDBKU3V0D3	**AC**	3	20	4	6	7	10	15.8	1.5	2

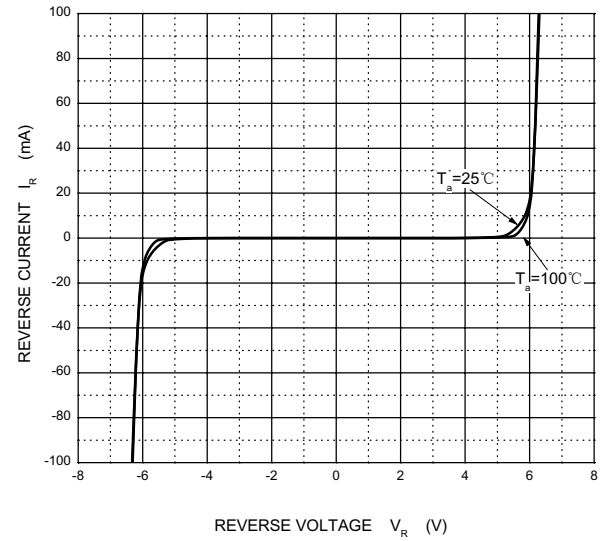
(1)Other voltages available upon request.

(2)V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.

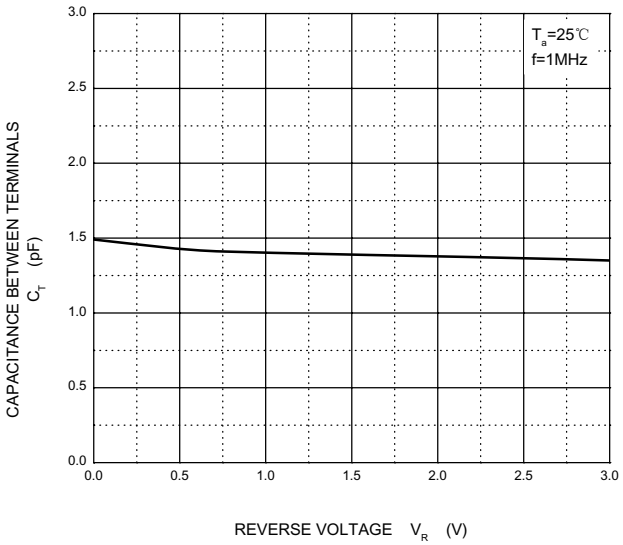
(3) Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC 61000-4-5.

Typical Characteristics ESDBKU3V0D3

Reverse Characteristics



Capacitance Characteristics



Power Derating Curve