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PRODUCT DATASHEET

Electro-Static Discharge

JED323-5V-LC ESD

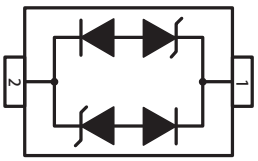
Features

- Package: SOD-323
- 360W peak pulse power (8/20μs)
- Ultra low capacitance: 1pF typical
- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Protects one power line or data line
- Complies with following standards:
  - – IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±30kV
    - Contact discharge: ±30kV
  - – IEC61000-4-5 (Lightning) 18A (8/20μs)
- RoHS compliant

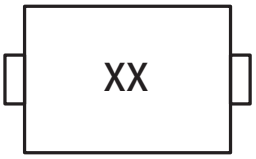
Applications

- USB Ports
- Smart Phones
- Wireless Systems
- Ethernet 10/100/1000 Base T

Schematic Diagram



Pin Description



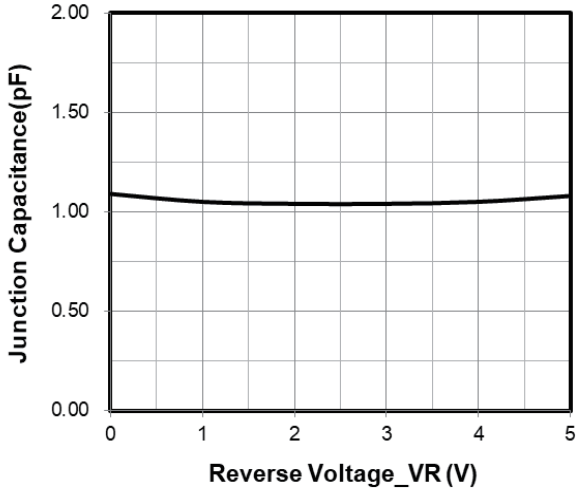
Limiting Values(T_A = 25 °C, unless otherwise specified)

Symbol	Parameter	Conditions	Value	Unit
V_{ESD}	Electrostatic Discharge Voltage	IEC 61000-4-2;Contact Discharge	±30	kV
		IEC 61000-4-2;Air Discharge	±30	kV
P_{Pk}	Peak Pulse Power	t_P=8/20μs	360	W
I_{PP}	Peak Pulse Current	t_P=8/20μs	18	A
T_J	Operating Temperature Range	-	-55 to +125	°C
T_{stg}	Storage Temperature Range	-	-55 to +150	°C

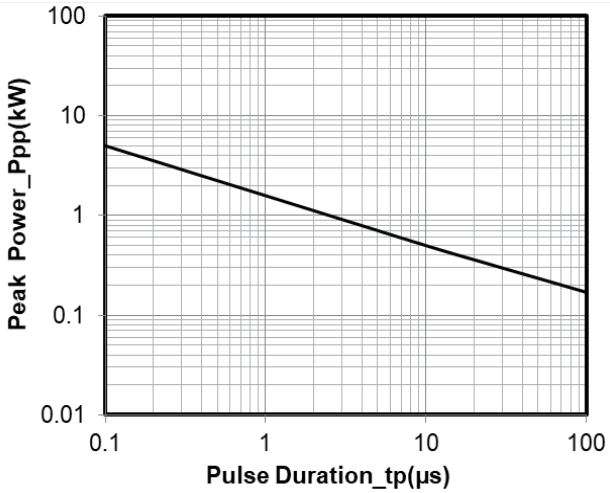
Electrical Characteristics(T_A = 25 °C, unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V_{RWM}	Reverse Working Voltage	T_A=25°C	-	-	5	V
V_{BR}	Breakdown Voltage	I_T=1mA	6	-	-	V
I_R	Reverse Leakage Current	V_{RWM}=5V;T_A=25°C	-	-	0.2	μA
V_C	Clamping Voltage	I_{PP}=1A(8x20μs pulse)	-	-	10	V
V_C	Clamping Voltage	I_{PP}=18A(8x20μs pulse)	-	-	20	V
C_J	Junction Capacitance	V_R=0V,f=1 MHZ	-	1	-	pF

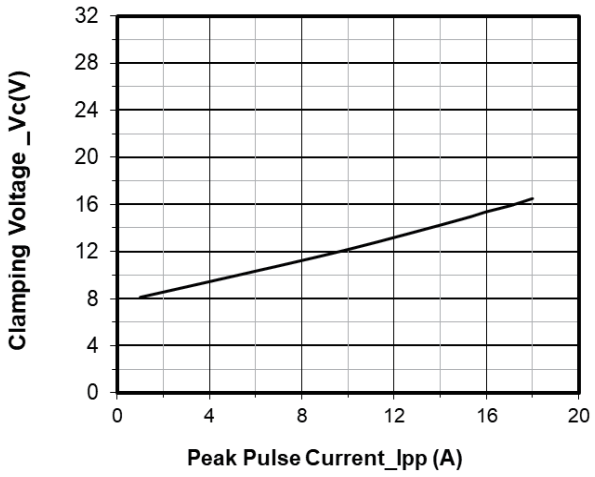
Typical Characteristics



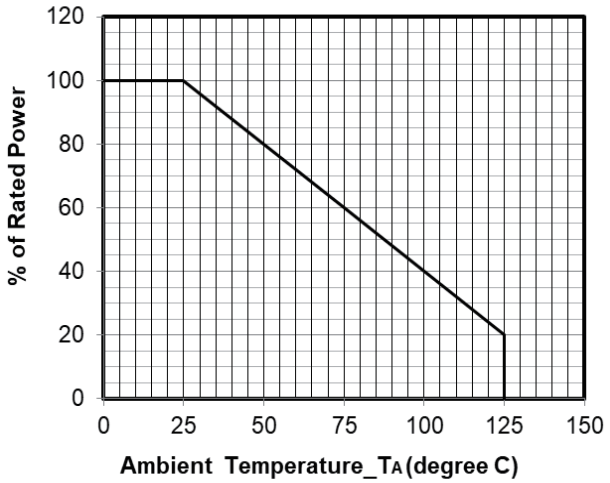
Junction Capacitance vs. Reverse Voltage



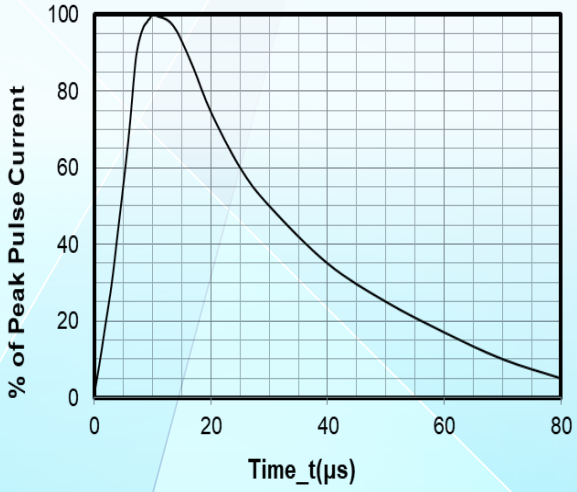
Peak Pulse Power vs. Pulse Time



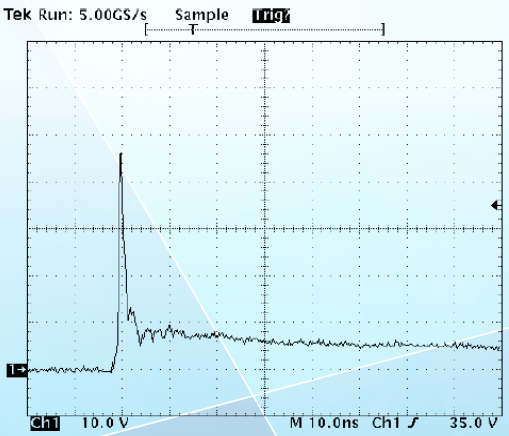
Clamping Voltage vs. Peak Pulse Current (tp = 8/20 μs)



Power Derating Curve

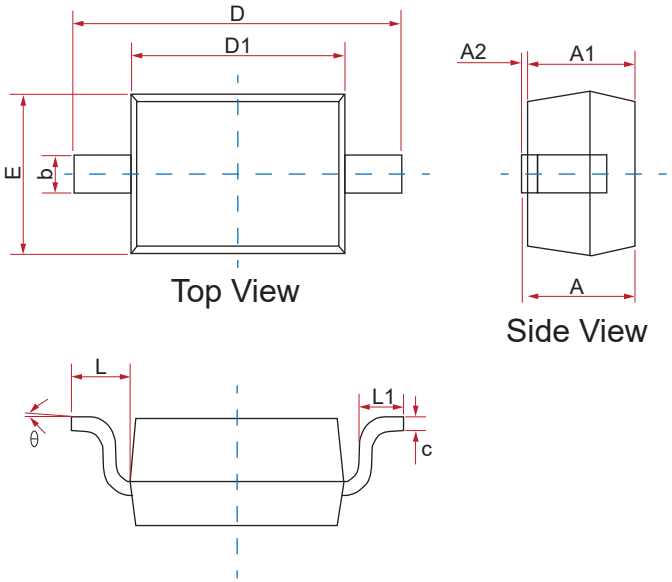


8 X 20 μs Pulse Waveform



ESD Clamping Voltage
8 kV Contact per IEC61000-4-2

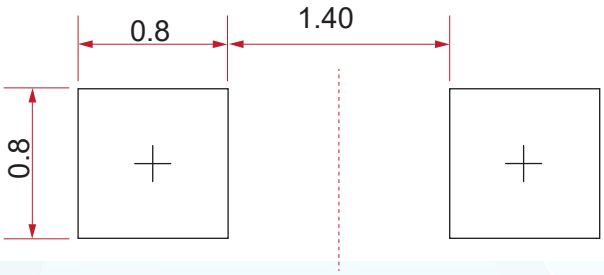
Physical Dimensions(mm.)



Symbol	Dimensions In 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°

Suggested Land Pattern

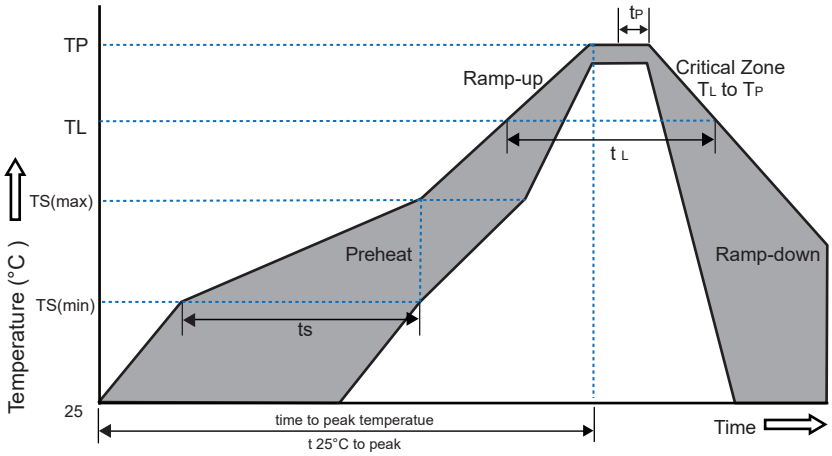
Unit:mm



Packaging Quantity

Part Number	Delivery Form	Delivery Quantity
JED323-5V-LC	7"T&R	3,000

Soldering Parameters



Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time(Min to Max)(ts)	60~180 secs.
Average ramp up rate (Liquid us Temp(T_L) to peak)		3°C/sec. Max
Ts(max) to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature (t_L)	60~150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp (TP)		8 min. Max
Do not exceed		+260°C

Part Number System

JE D323 - 5V - L C

- C=Bi-directional
  Blank=Uni-directional
- L=Low Capacitance
- Working Voltage: 5V
- SOD-323
- JDT ESD

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

JDT FUSE:

A16-1400 A600-160 JFC1206-1450FS A72-250 JEN2510-3.3V-UL4 JESD0603V24 ASMD0603-020 ASMD1812-050-60V JFC2410-1400TS ESD36V32D-A JFC2410-2100TS JFC2410-2150TS A30-300 ASMD0603-010-30V ASMD0603-050-12V ASMD1206-075-30V ASMD1812-020-60V ASMD1812-300 ASMD2920-260 ASMD2920-260-24V ASMD1206-100-24V ASMD1210-110-16V ASMD2920-300-30V JEN1006-9V-C A250-200 A30-110 ASMD0603-035 ASMD0805-010-30V JED323-15V-C A250-800