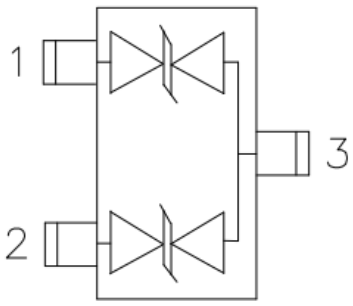
Description

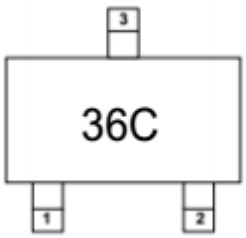
The JLE36BUT1-3 is a bi-directional TVS diode array, utilizing leading monolithic silicon technology to provide fast response time and low ESD clamping voltage, making this device an ideal solution for protecting sensitive semiconductor components from damage. The JLE36BUT1-3 complies with the IEC 61000-4-2 (ESD) with ±30kV air and±30kV contact discharge. It is assembled into a lead-free SOT-23 package. It is designed to protect components which are connected to data and transmission lines from voltage surges.

Circuit Diagram



Circuit and Pin Schematic

Marking Diagram



Transparent top view

36C:Device Marking Code

Features

* 300W peak pulse power (8/20μs)
* Low leakage：nA level
* Operating voltage: 36V
* Ultra low clamping voltage
* Two power line protects
* Complies with following standards:
  – IEC 61000-4-2 (ESD) immunity test
    Air discharge: ±30kV
    Contact discharge: ±30kV
  – IEC61000-4-5 (Lightning) 4A (8/20μs)
* RoHS Compliant
* Package: SOT-23

Applications

* Fast-charge battery chargers
* Power management system
* Cellular Handsets and Accessories
* Personal Digital Assistants
* Notebooks and Handhelds
* Portable Instrumentation
* Digital Cameras

Ordering Information

Part Number	Packaging	Reel Size
JLE36BUT1-3	3000/Tape & Reel	7 inch

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

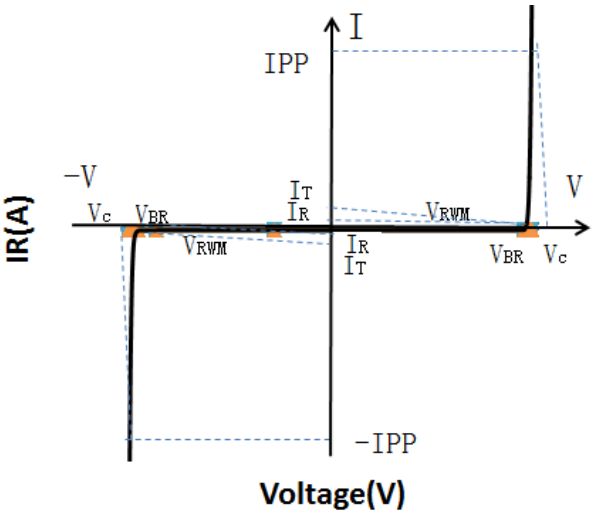
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	300	W
Peak Pulse Current (8/20μs)	IPP	4	A
ESD per IEC 61000−4−2 (Air) ESD per IEC 61000−4−2 (Contact)	VESD	±30 ±30	kV
Operating Temperature Range	TJ	−55 to +125	°C
Storage Temperature Range	Tstg	−55 to +150	°C

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

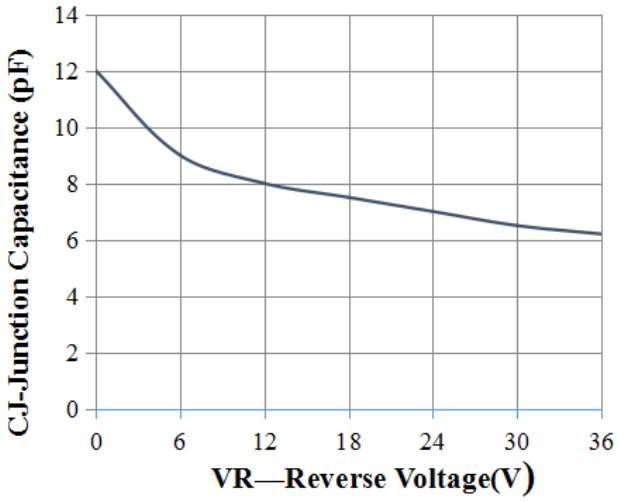
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				36	V
Breakdown Voltage	V_{BR}	I_T = 1mA	38			V
Reverse Leakage Current	I_R	V_{RWM} = 36V			0.2	μA
Clamping Voltage	V_C	I_{PP} = 1A (8 x 20μs pulse)			50	V
Clamping Voltage	V_C	I_{PP} = 4A (8 x 20μs pulse)			75	V
Junction Capacitance	C_J	VR = 0V, f = 1MHz,Pin 1 to Pin 3 or Pin 2 to Pin 3		12		pF

Portion Electronics Parameter

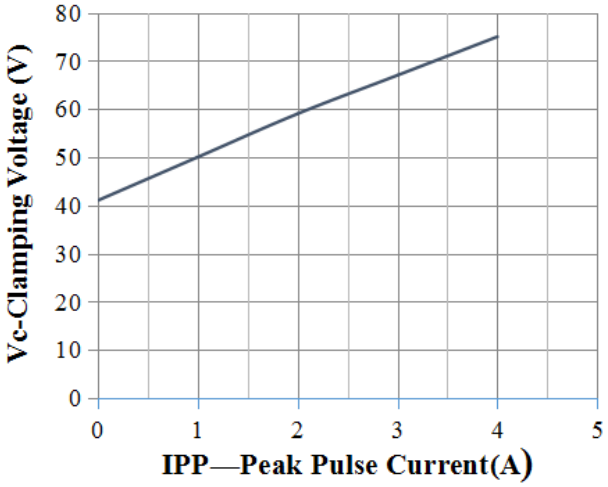
Symbol	Parameter
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
Vc	Clamping Voltage @Ic



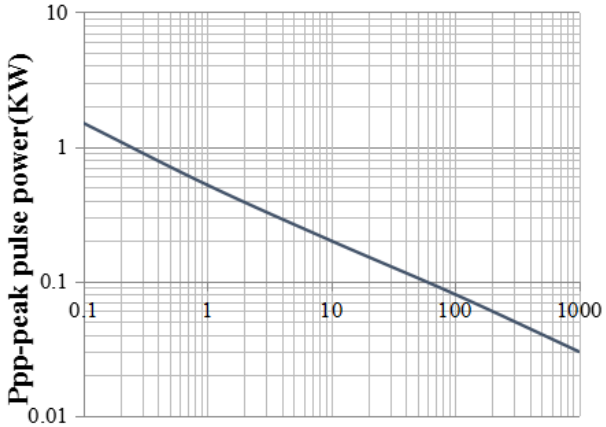
Typical Performance Characteristics (T_A=25°C unless otherwise Specified)



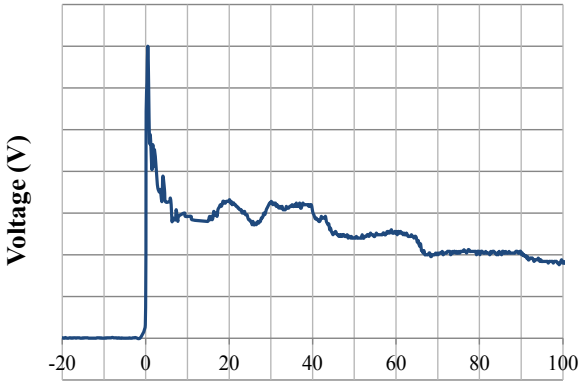
Junction Capacitance vs. Reverse Voltage



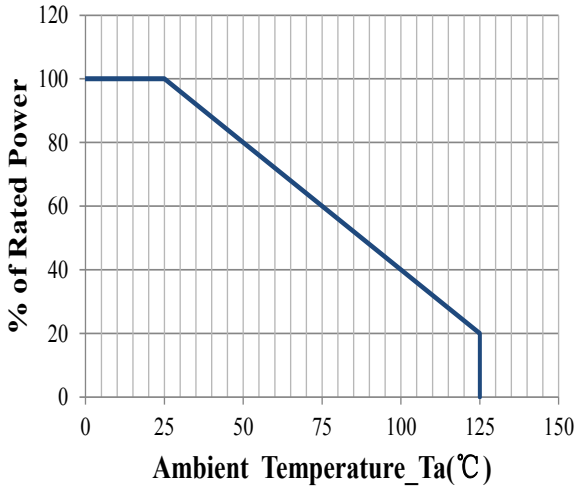
Clamping Voltage vs. Peak Pulse Current



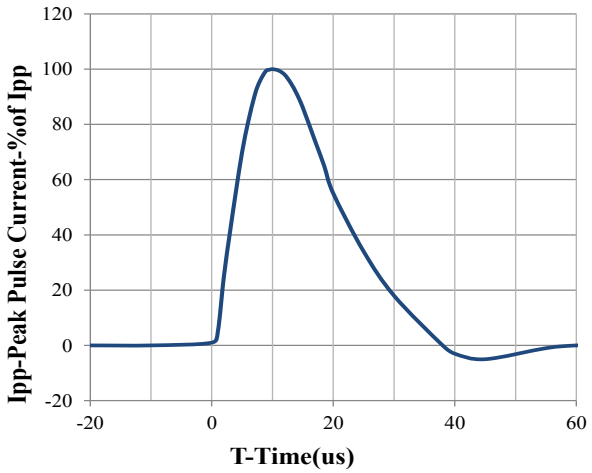
Peak Pulse Power vs. Pulse Time



IEC61000−4−2 Pulse Waveform

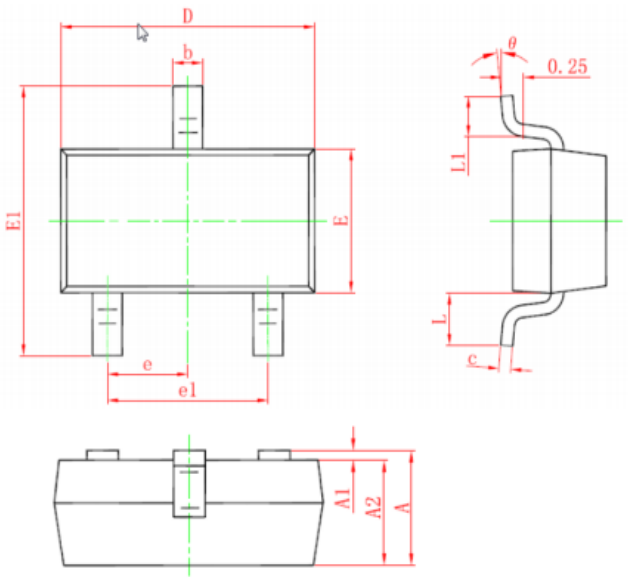


Power Derating Curve



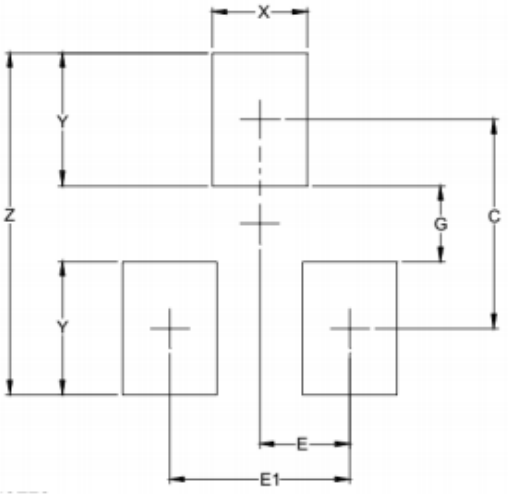
8 X 20us Pulse Waveform

SOT-23 Package Outline Drawing (Dimensions in millimeters)



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.90	--	1.15	0.035	--	0.045
A1	0.00	--	0.10	0.000	--	0.004
A2	0.90	--	1.05	0.035	--	0.041
b	0.30	--	0.50	0.012	--	0.020
c	0.08	--	0.15	0.003	--	0.006
D	2.80	--	3.00	0.110	--	0.118
E	1.20	--	1.40	0.047	--	0.055
E1	2.25	--	2.25	0.089		0.100
e	0.95TYP			0.037TYP		
e1	1.80	--	2.00	0.071	--	0.079
L	0.55REF			0.022REF		
L1	0.30	--	0.50	0.012	--	0.020
Θ	0°	--	8°	0°	--	8°

Suggested Land Pattern



SYM	DIMENSIONS	
	INCHES	MILLIMETERS
C	.087	2.20
E	.037	0.95
E1	.075	1.90
G	.031	0.80
X	.039	1.00
Y	.055	1.40
Z	.141	3.60

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