



Description

The JLE24BLS3-2 is designed to replace multilayer varistors (MLVs) in portable applications such as cell phones, notebook computers and PDA's, using monolithic silicon technology to provide fast response time and ultra low ESD clamping voltage, making this device an ideal solution for protecting sensitive semiconductor components from damage. The JLE24BLS3-2 complies with the IEC 61000-4-2 (ESD) with $\pm 30\text{kV}$ air and $\pm 30\text{kV}$ contact discharge. The JLE24BLS3-2 is assembled into a lead-free SOD-323 package and will protect one unidirectional line. These devices will fit on the same PCB pad area as an 0805 MLV device.

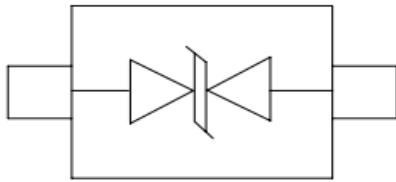
Features

- * 500W peak pulse power (8/20 μs)
- * Ultra Low leakage:nA level
- * Operating voltage: 24V
- * Low clamping voltage
- * One power line protects
- * Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
 - IEC 61000-4-5 (Lightning) 8A (8/20 μs)
- * RoHS Compliant
- * Package: SOD-323

Applications

- * Cellular Handsets and Accessories
- * Personal Digital Assistants
- * Notebooks and Handhelds
- * Portable Instrumentation
- * Peripherals
- * Pagers Peripherals
- * Desktop and Servers

Circuit Diagram



Circuit and Pin Schematic

Marking Diagram



Transparent top view

24:Device Marking Code

Ordering Information

Part Number	Packaging	Reel Size
JLE24BLS3-2	3000/Tape & Reel	7 inch



JLE24BLS3-2

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise specified)

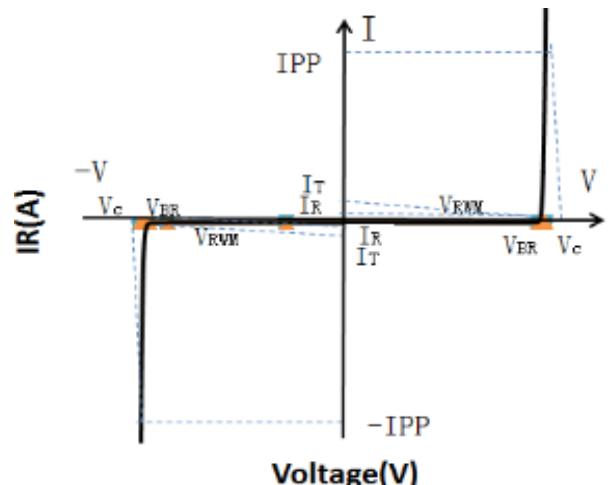
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	500	W
Peak Pulse Current (8/20μs)	IPP	8	A
ESD per IEC 61000-4-2 (Air)	VESD	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

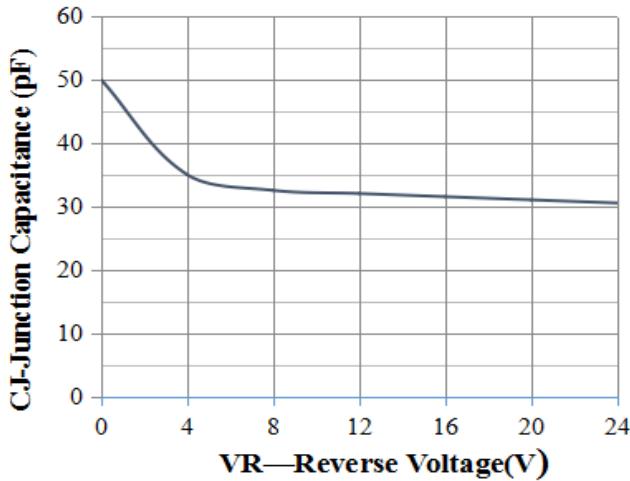
Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}				24	V
Breakdown Voltage	V _{BR}	I _T = 1mA	27			V
Reverse Leakage Current	I _R	V _{RWM} = 24V			0.2	uA
Clamping Voltage	V _C	IPP = 1A (8 x 20μs pulse)			40	V
Clamping Voltage	V _C	IPP = 8A (8 x 20μs pulse)			50	V
Junction Capacitance	C _J	VR = 0V, f = 1MHz,)			50	pF

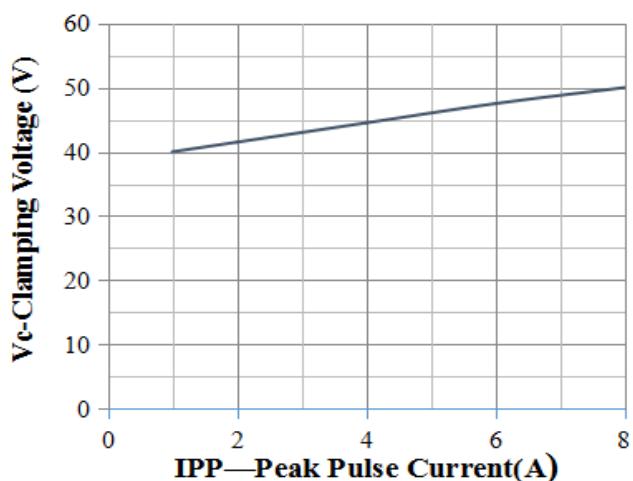
Portion Electronics Parameter

Symbol	Parameter
I _T	Test Current
IPP	Maximum Reverse Peak Pulse Current
V _C	Clamping Voltage @I _c

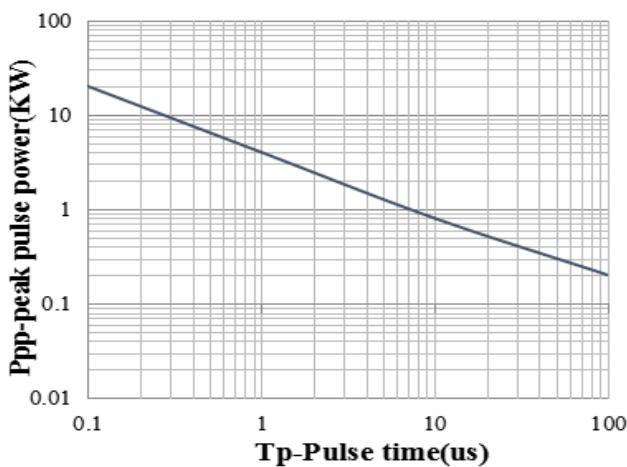


**Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)**

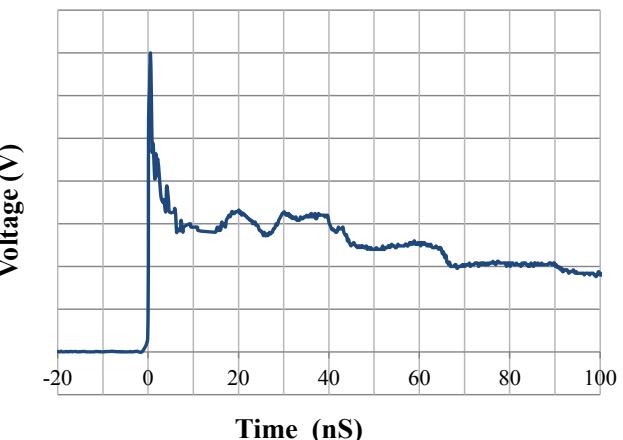
Junction Capacitance vs. Reverse Voltage



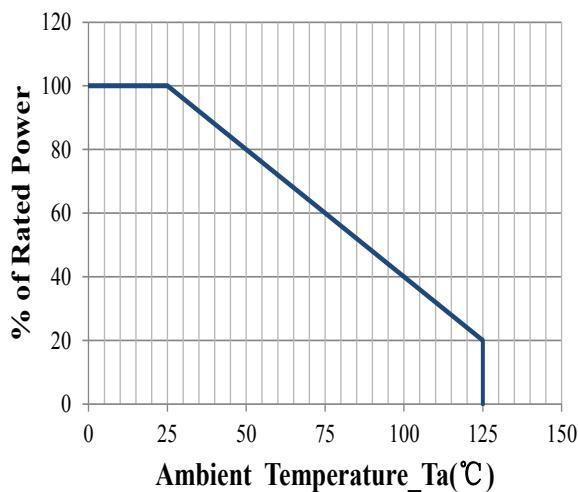
Clamping Voltage vs. Peak Pulse Current



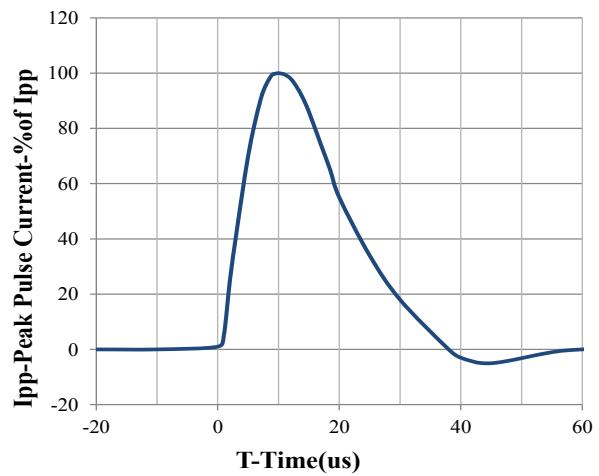
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



Power Derating Curve

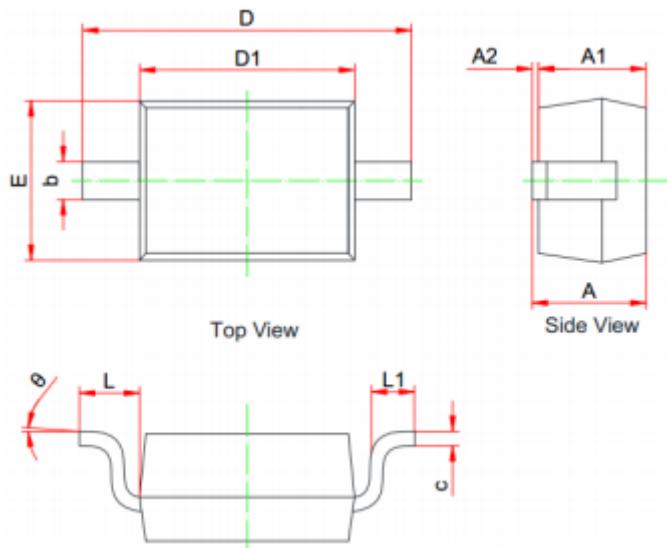


8 X 20us Pulse Waveform



JLE24BLS3-2

SOD-323 Package Outline Drawing (Dimensions in millimeters)



SYM	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



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