

Features

- 420W peak pulse power (8/20 μ s)
- Protects two bi-directional lines
- Ultra low leakage: nA level
- Operating voltage: 24V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: ± 30 kV
Contact discharge: ± 30 kV
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 9A (8/20 μ s)

- RoHS Compliant

Applications

- Cellular Handsets and Accessories
- Notebooks and Handhelds
- Portable Instrumentation
- Set Top Box
- Industrial Controls
- Server and Desktop PC
- CAN BUS PROTECTION

Mechanical Characteristics

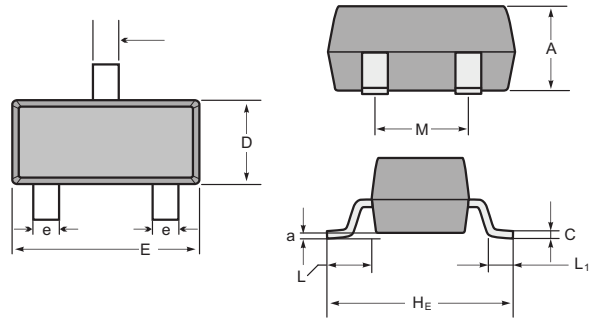
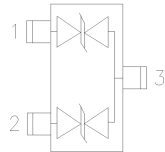
- Package: SOT-23
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3,000pcs
- Reel Size: 7inch

Ordering information

Order code	Package	Marking
PESD24VL2BT	SOT-23	V7t



SOT-23



SOT-23 mechanical data

UNIT		A	C	D	E	He	e	M	L	L ₁	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)	0.0
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	0.0
	min	35	3	47	110	87	12	67			6

Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

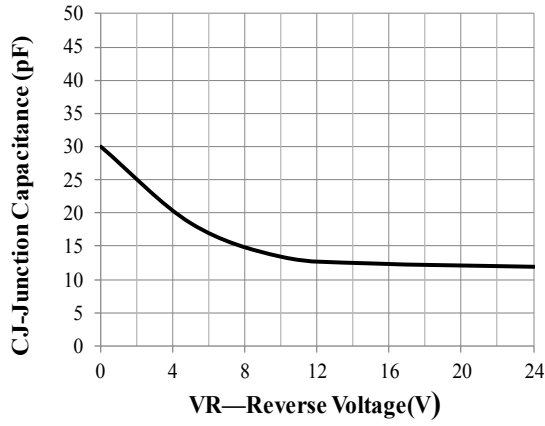
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μ s)	Ppk	420	W
Peak Pulse Current (8/20 μ s)	IPP	9	A
ESD per IEC 61000-4-2 (Air)	VESD	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

PESD24VL2BT

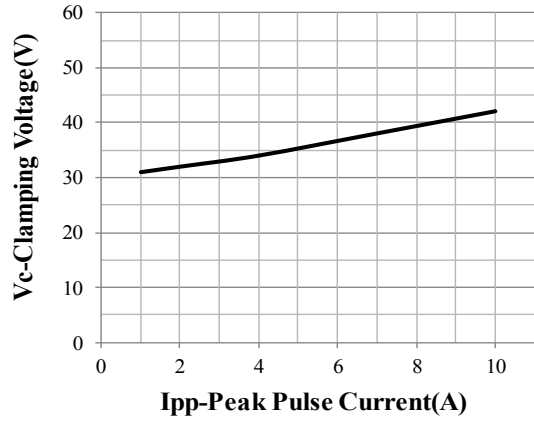
Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}				24	V
Breakdown Voltage	V _{BR}	I _T = 1mA	26	28.5	30.5	V
Reverse Leakage Current	I _R	V _{RWM} = 24V			0.5	μA
Clamping Voltage	V _C	I _{PP} = 1A (8 x 20μs pulse)		35	40	V
Clamping Voltage	V _C	I _{PP} = 9A (8 x 20μs pulse)		45	58	V
Junction Capacitance	C _J	V _R = 0V, f = 1MHz		30	50	pF

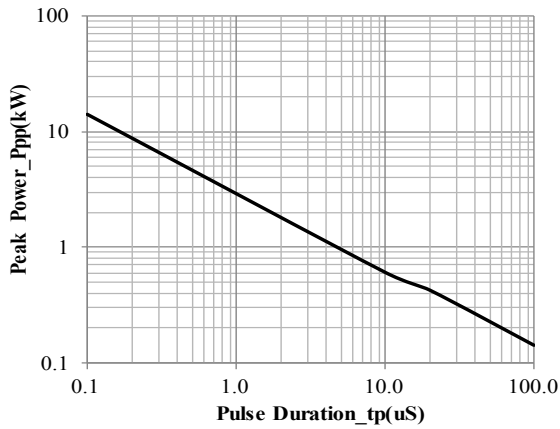
RATING AND CHARACTERISTIC CURVES (PESD24VL2BT)



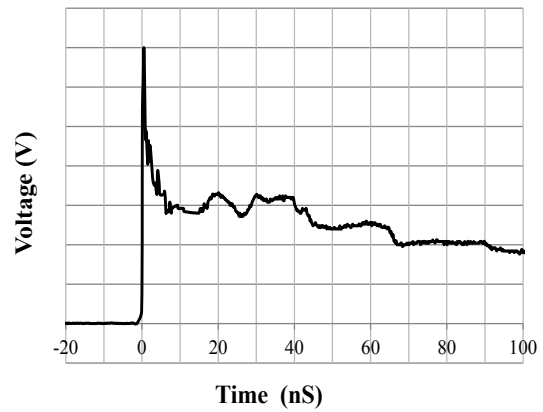
Junction Capacitance vs. Reverse Voltage



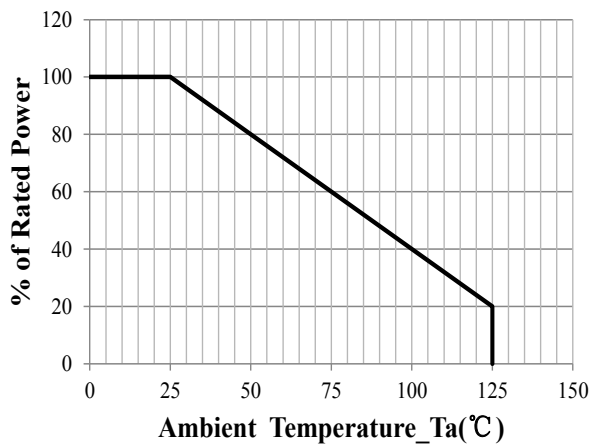
Clamping Voltage vs. Peak Pulse Current



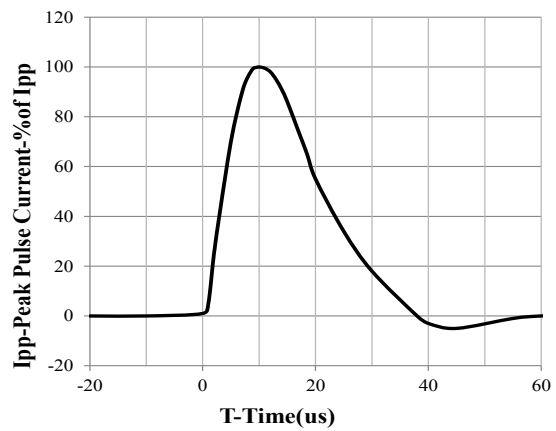
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



Power Derating Curve



8 X 20us Pulse Waveform