

Features

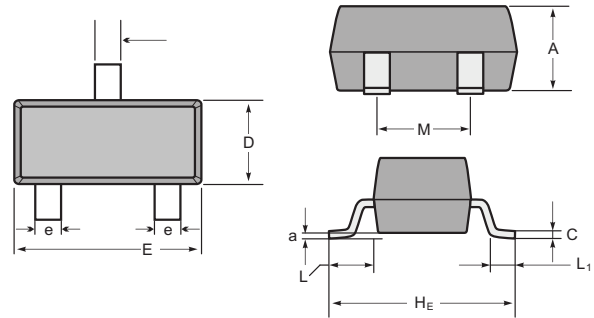
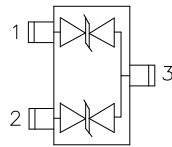
300W peak pulse power(8/20μs)
 Protects two bi-directional lines
 Ultra low leakage: nA level
 Operating voltage: 12V
 Low clamping voltage
 Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 Air discharge: ±30kV
 Contact discharge: ±30kV
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 RoHS Compliant

Mechanical Characteristics

Package: SOT-23
 Lead Finish: Matte Tin
 Case Material: "Green" Molding Compound.
 UL Flammability Classification Rating 94V-0
 Moisture Sensitivity: Level 3 per J STD 020

Applications

Cellular Handsets and Accessories
 Notebooks and Handhelds
 Portable Instrumentation
 Set Top Box
 Industrial Controls



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

Ordering information

Order code	Package	Making
PESD21VL2BT	SOT-23	V5t

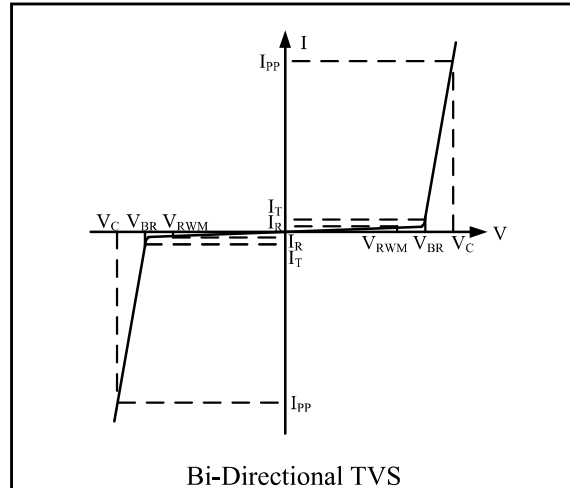
Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power(8/20μs)	Ppk	300	W
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

PESD12VL2BT

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

Symbol	Parameter
V_{RWM}	Nominal Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Reverse Breakdown Voltage @ I_T
I_T	Test Current for Reverse Breakdown
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Maximum Peak Pulse Current
C_{ESD}	Parasitic Capacitance
V_R	Reverse Voltage
f	Small Signal Frequency



Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			12	V	
Breakdown Voltage	V_{BR}	13.3			V	$I_T = 1\text{mA}$
Reverse Leakage Current	I_R		0.01	0.1	μA	$V_{RWM} = 12\text{V}$
Clamping Voltage	V_C		15		V	$I_{PP} = 1\text{A}$ (8 x 20 μs pulse)
Clamping Voltage	V_C		24		V	$I_{PP} = 10\text{A}$ (8 x 20 μs pulse)
Peak Pulse Current	I_{PP}			10	A	$t_P = 8/20\mu\text{s}$
Junction Capacitance	C_J			24	pF	$V_R = 0$, $f = 1\text{MHz}$, Pin 1 to Pin 3 or Pin 2 to Pin 3

RATING AND CHARACTERISTIC CURVES (PESD12VL2BT)

Fig1. 8/20 μ s Pulse Waveform

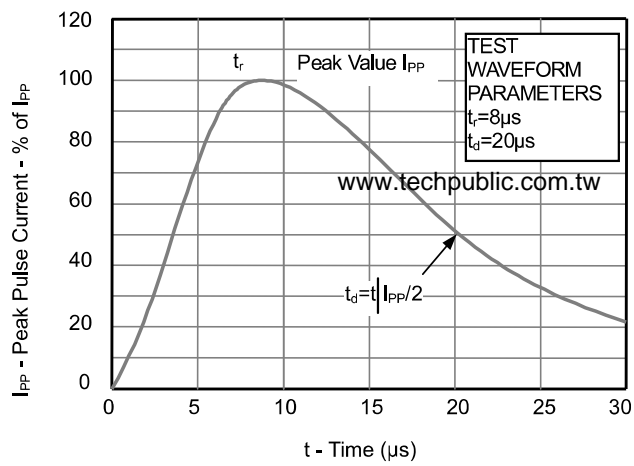


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

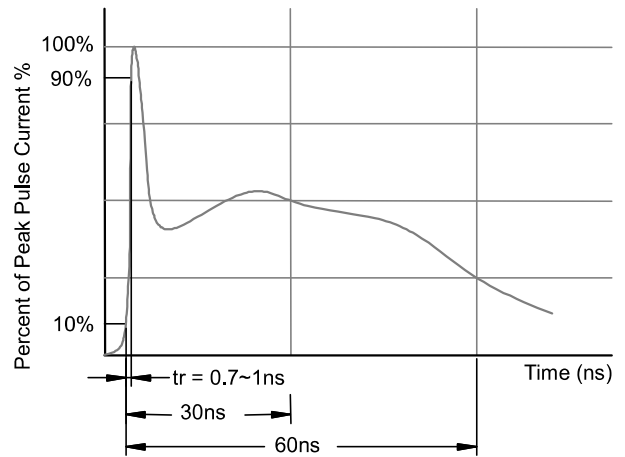
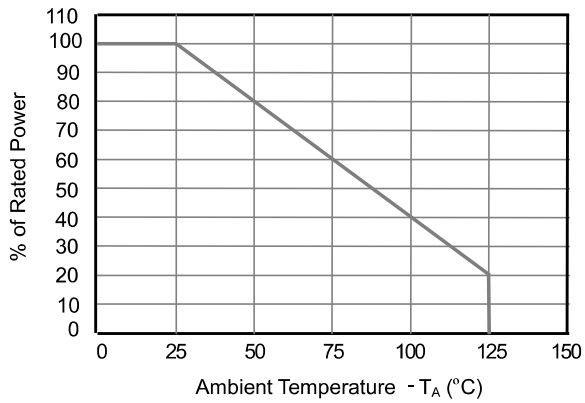


Fig3. Power Derating Curve



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