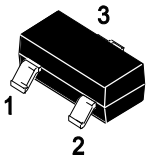
LTVS23H5.0LT1G

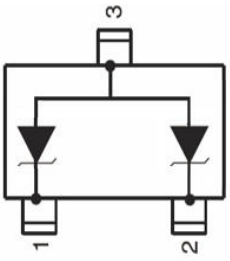
Uni-directional, Transient Voltage Suppressors



SOT23(TO-236)

1. FEATURES

- Reverse stand-off voltage: 5V max
- Low clamping voltage.
- Complies with IEC 61000-4-2 standards:Air discharge: ± 30kV
  Contact discharge: ± 30kV
- We declare that the material of product compliance with RoHS requirements and Halogen Free.



2. APPLICATIONS

- Power supply protection
- Power management

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LTVS23H5.0LT1G	XL	3000/Tape&Reel

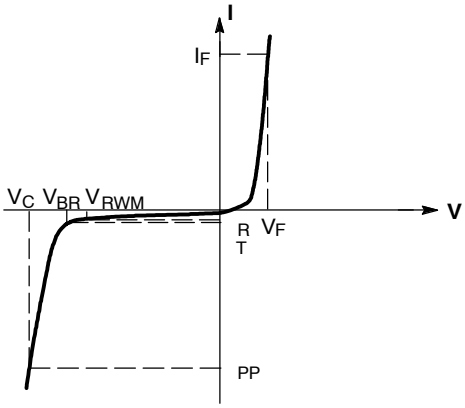
4. MAXIMUM RATINGS(Ta = 25ºC)

Parameter		Symbol	Limits	Unit
IEC 61000−4−2 (ESD)	Contact Air		± 30 ± 30	kV
peak pulse power@8/20 μs(Note 1)		PPP	300	W
peak pulse current @8/20 μs(Note 1)		IPP	24	A
Storage Temperature Range		Tstg	−55～+150	ºC
Operating Temperature Range		TJ	−55～+150	ºC

Note 1.Surge current waveform per Figure 1 according to IEC 61000-4-5.

5. ELECTRICAL CHARACTERISTICS (Ta= 25ºC)

Symbol	Parameter
IPP	Maximum Reverse Peak Pulse Current
VC	Clamping Voltage @ IPP
VRWM	Working Peak Reverse Voltage
IR	Maximum Reverse Leakage Current @ VRWM
VBR	Breakdown Voltage @ IT
IT	Test Current
IF	Forward Current
VF	Forward Voltage @ IF
Ppk	Peak Power Dissipation
C	Capacitance @ VR = 0 and f = 1.0 MHz



Uni–Directional TVS

6. ELECTRICAL CHARACTERISTICS (Ta= 25ºC)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	VRWM				5	V
Breakdown Voltage	VBR	IT = 1mA	6.2			V
Reverse leakage current	IR	VR = 5V			500	nA
Forward Voltage	VF	IF=10mA			1.2	V
Clamping Voltage(Note 1)	VC	IPP = 10A, tp=8/20μs IPP = 24A, tp=8/20μs			12 14	V
Junction Capacitance	CJ	VR = 0V, f = 1MHz		158	200	pF

Note 1.Surge current waveform per Figure 1 according to IEC 61000-4-5.

7. ELECTRICAL CHARACTERISTICS CURVES

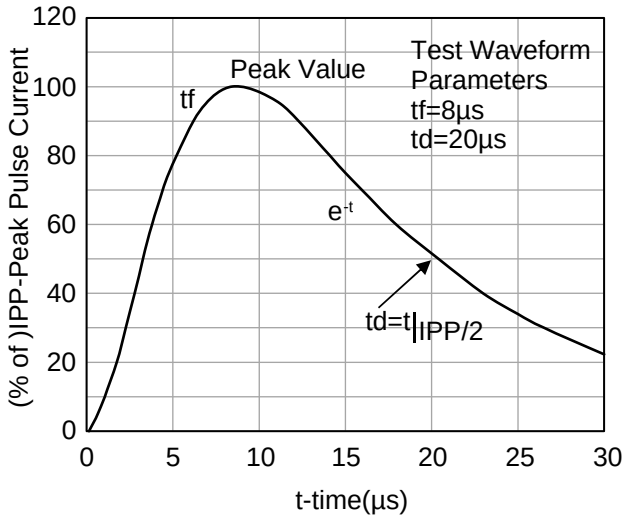


Figure 1. Pulse Waveform
according to IEC 61000-4-5

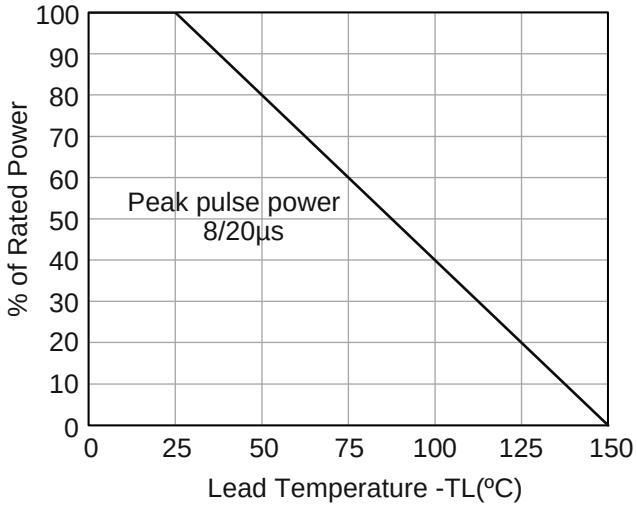


Figure 2. Power Derating Curve

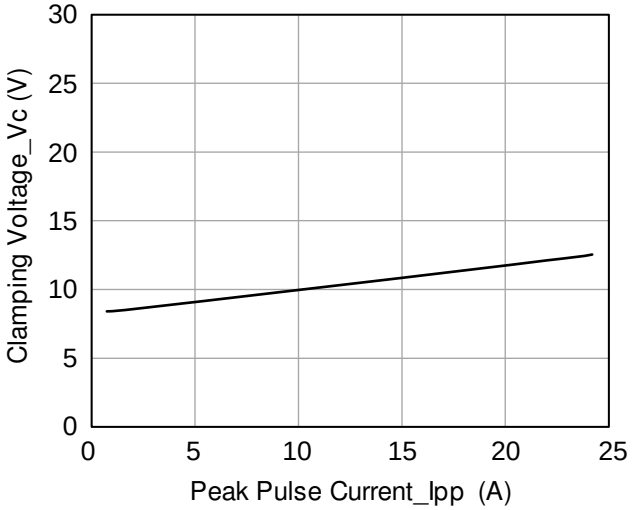


Figure 3.Clamping Voltage vs.Peak Pulse Current
according to IEC 61000-4-5.

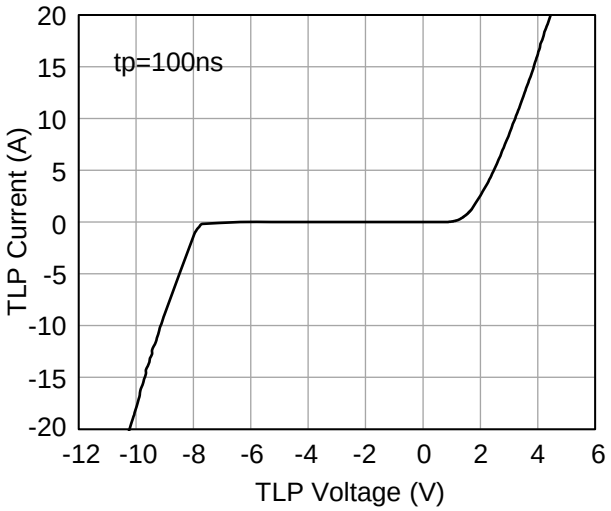


Figure 4. TLP Measurement

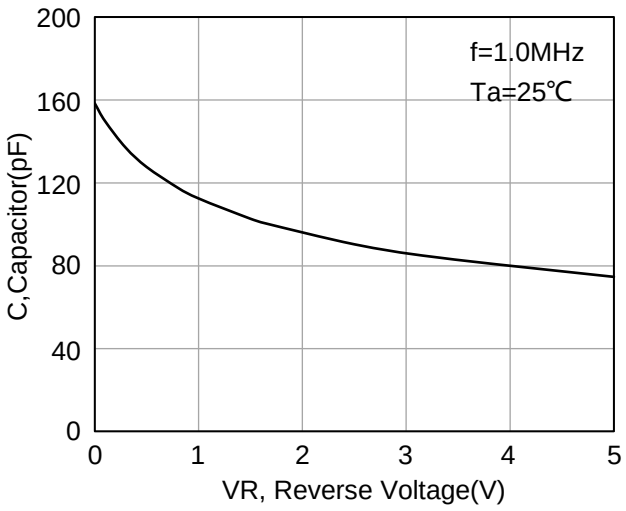
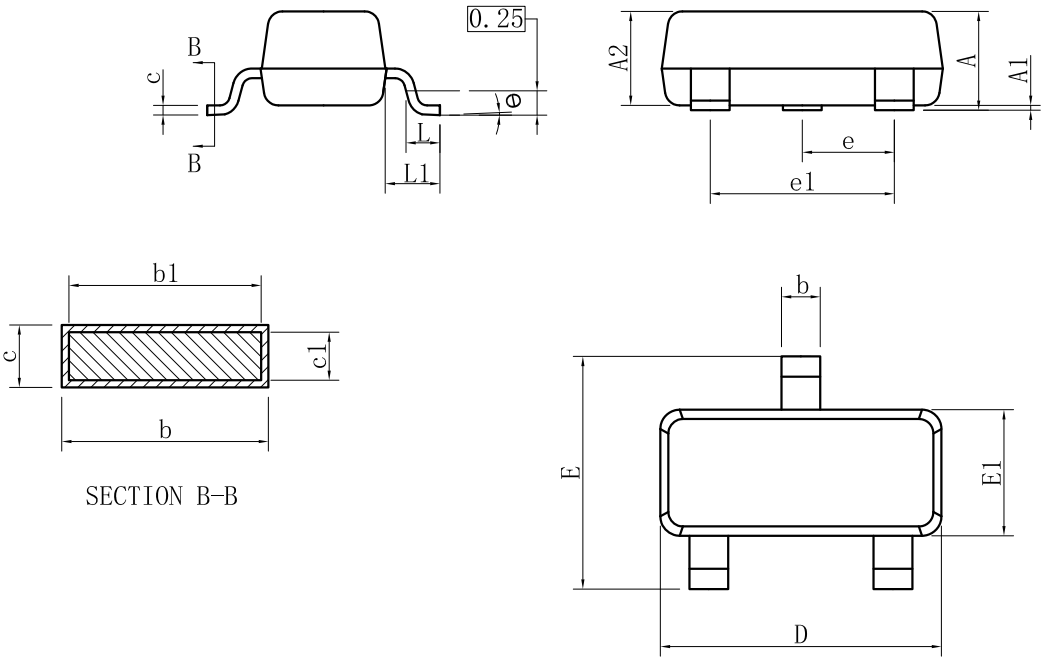


Figure 5. Capacitor Characteristics

8.OUTLINE AND DIMENSIONS

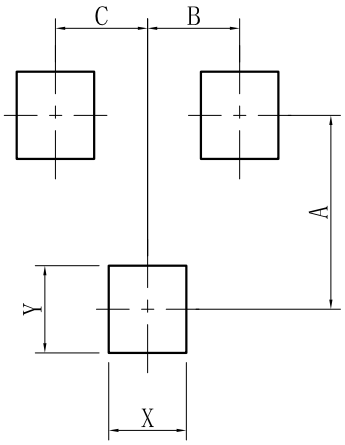


SOT23			
DIM	MIN	NOR	MAX
A	0.89	-	1.12
A1	0.01	-	0.10
A2	0.88	0.95	1.02
b	0.30	-	0.50
b1	0.30	0.40	0.45
c	0.08	-	0.20
c1	0.08	0.10	0.16
D	2.80	2.90	3.04
E	2.10	-	2.64
E1	1.20	1.30	1.40
e	0.95BSC		
e1	1.90BSC		
L	0.40	0.46	0.60
L1	0.54REF		
θ	0°	-	8°
All Dimensions in mm			

GENERAL NOTES

1. Top package surface finish Ra0.4±0.2um
2. Bottom package surface finish Ra0.7±0.2um
3. Side package surface finish Ra0.4±0.2um

9.SOLDERING FOOTPRINT



SOT-23	
DIM	(mm)
X	0.80
Y	0.90
A	2.00
B	0.95
C	0.95

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.

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