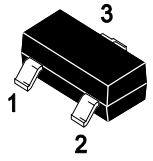
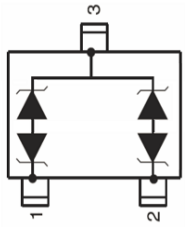
LESD23H5.0CLT1G

ESD Protection Diode



SOT23(TO-236)



1. FEATURES

- Ultra low leakage
- 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

- Cellular phones audio
- Digital cameras
- Portable applications
- Mobile telephone

3. DEVICE MARKING AND ORDERING INFORMATION

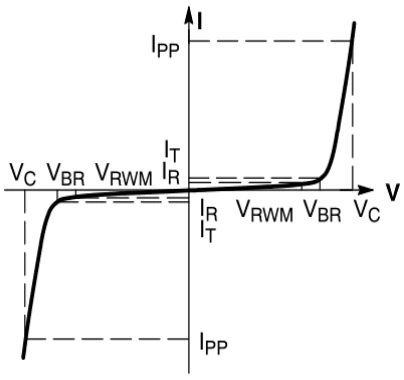
Device	Marking	Shipping
LESD23H5.0CLT1G	5CL	3000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25ºC)

Parameter		Symbol	Limits	Unit
IEC 61000−4−2 (ESD)	Contact		± 30	kV
	Air		± 30	
peak pulse power@8/20 μs(Note 1)		PPP	160	W
peak pulse current @8/20 μs(Note 1)		IPP	15	A
Storage Temperature Range		Tstg	−55～+150	ºC
Operating Temperature Range		TJ	−55～+150	ºC

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
Ppk	Peak Power Dissipation
C	Capacitance @ VR = 0 and f = 1.0 MHz



6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
reverse stand-off voltage	VRWM	-	-	5.0	V
reverse leakage current (VRWM = 5.0 V)	IRM	-	-	1	μA
breakdown voltage (IT = 1 mA)	VBR	6.0	-	8.0	V
Clamping Voltage(Note 1) (IPP = 1 A)(8 x 20μs pulse) (IPP = 15 A)(8 x 20μs pulse)	VC	- -	- -	8 12	V
Junction Capacitance (VR = 0V, f = 1MHz)	CJ	-	-	50	pF

Note 1.Surge current waveform per Figure 2 according to IEC 61000-4-5.

7. ELECTRICAL CHARACTERISTICS CURVES

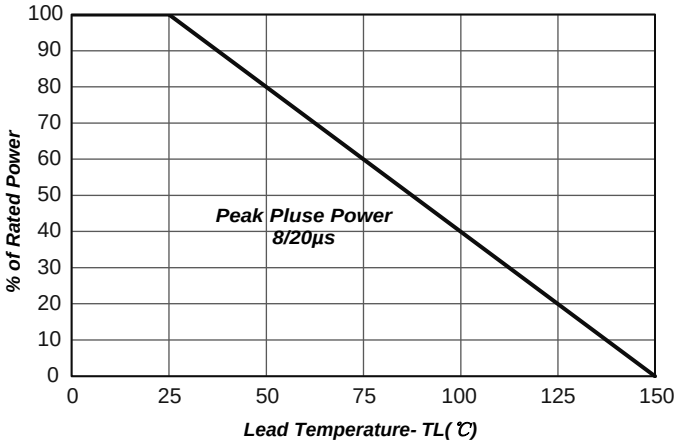


Figure 1. Power Derating Curve

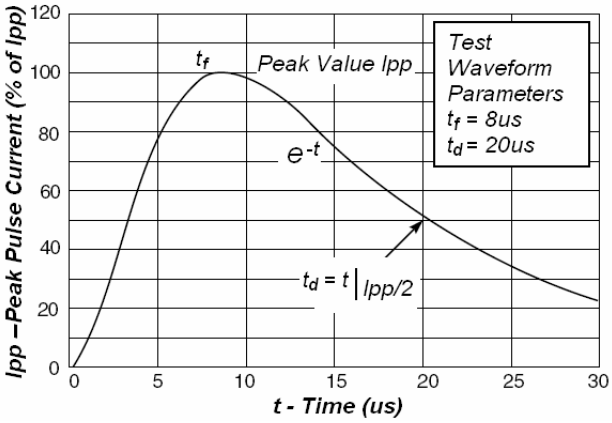


Figure 2. 8 X 20uS Pulse Waveform according to IEC 61000-4-5

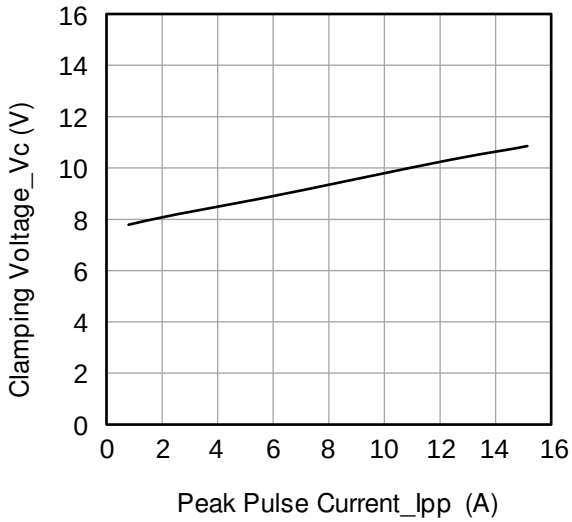


Figure 3.Clamping Voltage vs.Peak Pulse Current according to IEC 61000-4-5.

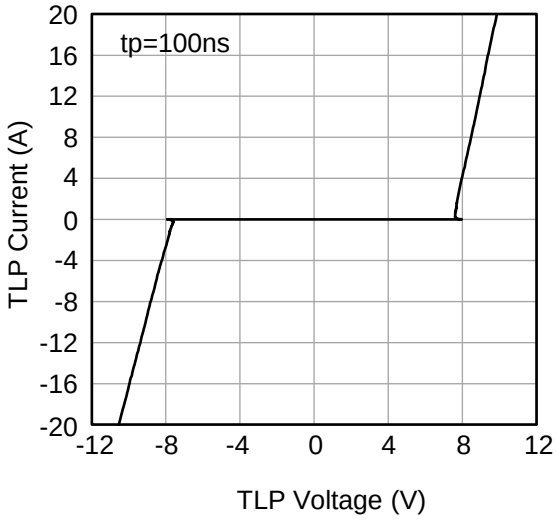
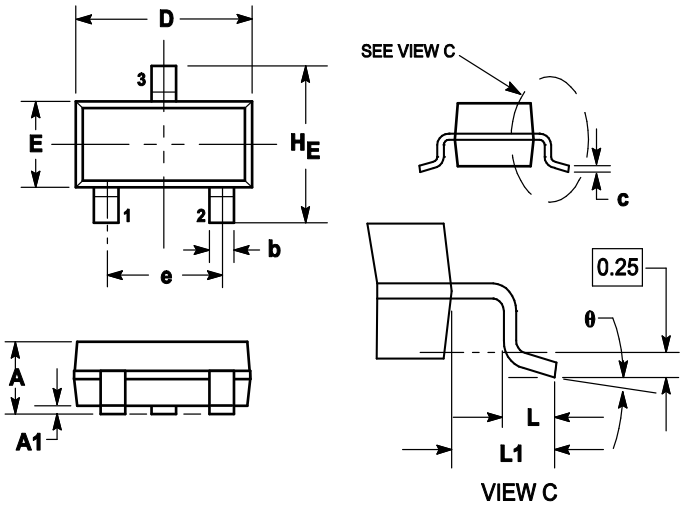


Figure 4. TLP Measurement

8.OUTLINE AND DIMENSIONS

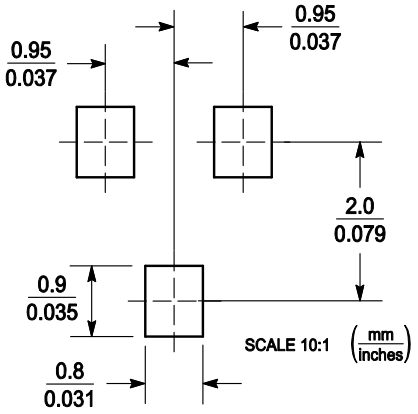


Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1	1.11	0.035	0.04	0.044
A1	0.01	0.06	0.1	0.001	0.002	0.004
b	0.37	0.44	0.5	0.015	0.018	0.02
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.9	3.04	0.11	0.114	0.12
E	1.20	1.3	1.4	0.047	0.051	0.055
e	1.78	1.9	2.04	0.07	0.075	0.081
L	0.10	0.2	0.3	0.004	0.008	0.012
L1	0.35	0.54	0.69	0.014	0.021	0.029
H_E	2.10	2.4	2.64	0.083	0.094	0.104
θ	0°	---	10°	0°	---	10°

9.SOLDERING FOOTPRINT



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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