

# LESD23H12CLT1G/S-LESD23H12CLT1G ESD PROTECTION DIODE

## Discription

The LESD23H12CLT1G is designed to protect voltage sensitive components from ESD. Excellent clamping capability, low leakage, and fast response time ,make these parts ideal for ESD protection on designs where board space is at a premium. Because of its small size, it is suited for use in cellular phones, MP3 players, digital cameras and many other portable applications where board space is at a premium.

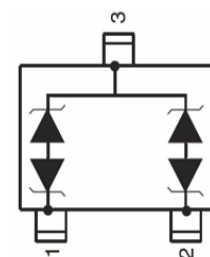
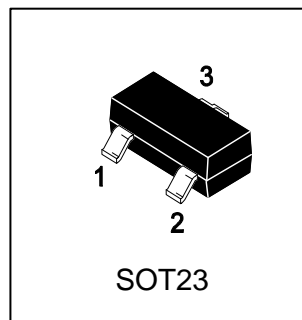
## Applications

- I Cellular phones audio
- I MP3 players
- I Digital cameras
- I Portable applications
- I mobile telephone

## Features

- I Low Leakage
- I IEC61000-4-2 Level 4 ESD Protection
- I We declare that the material of product compliant with RoHS requirements and Halogen Free.
- I S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

LESD23H12CLT1G  
S-LESD23H12CLT1G



## Ordering information

Device	Package	Shipping
LESD23H12CLT1G	SOT23	3000/Tape&Reel
S-LESD23H12CLT1G	SOT23	3000/Tape&Reel

## MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD)	Air discharge	±30	kV
	Contact discharge	±30	kV
Junction and Storage Temperature Range	TJ,TSTG	-55 to 150	°C

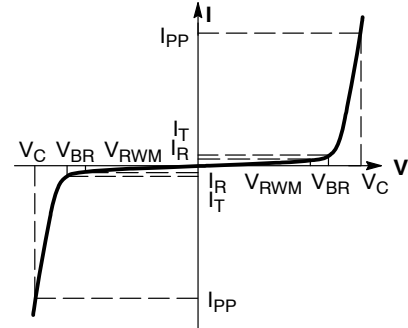
Stresses exceeding Maximum Ratings may damage the device. Maximum Rating are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

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## ELECTRICAL CHARACTERISTICS

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$P_{pk}$	Peak Power Dissipation
$C$	Capacitance @ $V_R = 0$ and $f = 1.0$ MHz



## ELECTRICAL CHARACTERISTICS

Device	$V_{RWM}$ (V)	$I_R$ ( $\mu\text{A}$ ) @ $V_{RWM}$	$V_{BR}$ (V) @ $I_T$ (Note 1)		$I_T$	$V_C$ (V) @ $I_{PP} = 1$ A (Note 2)	$V_C$ (V) @ MAX $I_{PP}$ (Note 2)	$I_{PP}$ (A) (Note 2)	$P_{PK}$ (W) (Note 2)	$C$ (pF)
	Max	Max	Min	Max	mA	Max	Max	Max	Max	Typ
LESD23H12CLT1G	12	0.5	12	15.8	1	16	25	8	200	20

Other voltage available upon request.

- $V_{BR}$  is measured with a pulse test current  $I_T$  at an ambient temperature of  $25^\circ\text{C}$
- Surge current waveform per Figure 1.

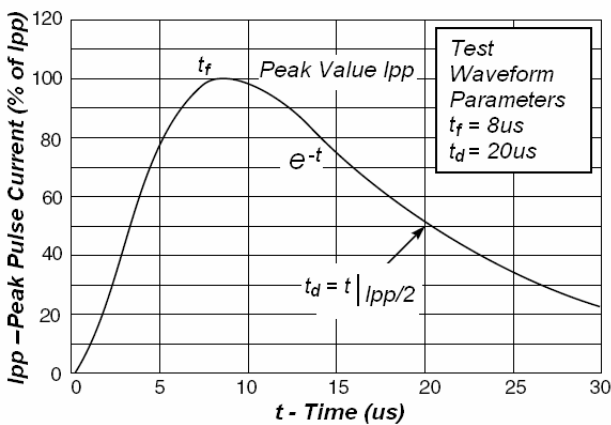


Fig1. Pulse Waveform

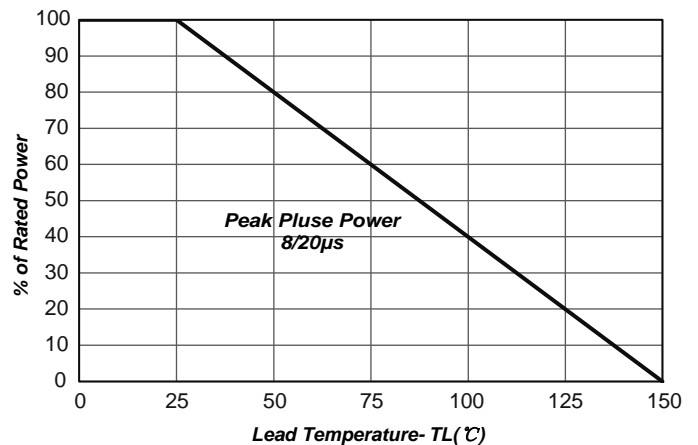
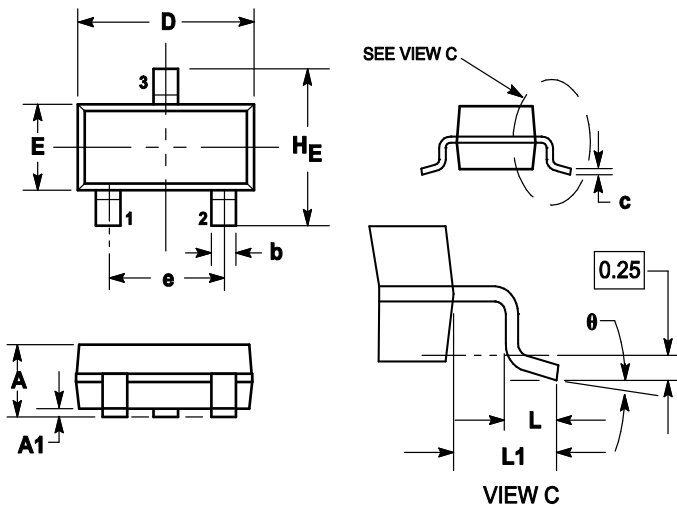


Fig2. Power Derating Curve

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## OUTLINE AND DIMENSIONS



DIM	MILLIMETERS			INCHES		
	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
HE	2.10	2.4	2.64	0.083	0.094	0.104
θ	0°	---	10°	0°	---	10°

## SOLDERING FOOTPRINT

