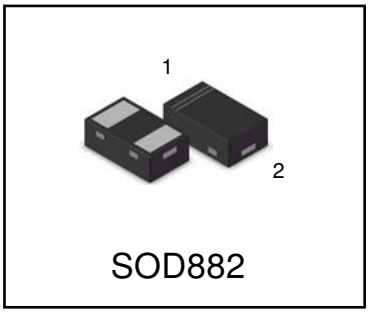
LESD8D12CBT5G

ESD PROTECTION DIODE



1. FEATURES

- Low operating voltage: 12V
- Low clamping voltage.
- Ultra low leakage: nA level
- 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
LESD8D12CBT5G	DC	10000/Tape&Reel

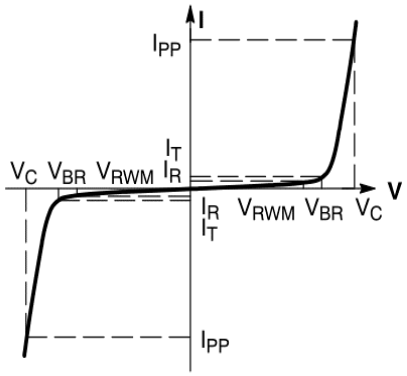
4. MAXIMUM RATINGS(Ta = 25ºC)

Parameter	Symbol	Limits	Unit
IEC 61000−4−2 (ESD) Contact Air		± 30 ± 30	KV
Peak pulse power@8/20 μs(Note 1)	PPP	120	W
Peak pulse current @8/20 μs(Note 1)	IPP	9	A
Junction Temperature Range	TJ	-55~+150	℃
Storage Temperature Range	Tstg	-55~+150	℃

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



6. ELECTRICAL CHARACTERISTICS (Ta= 25ºC)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	VRWM				12	V
Breakdown Voltage	VBR	IT = 1mA	13	14.5	16	V
Reverse leakage current	IR	VR = 12V		50	100	nA
Clamping Voltage(Note 1)	VC	IPP = 1A, tp=8/20μs IPP = 8A, tp=8/20μs		 17	16 19	V
Dynamic resistance	RDYN			0.2	0.3	Ω
Junction Capacitance	Cj	VR = 0V, f = 1MHz		9	12	pF

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

7. ELECTRICAL CHARACTERISTICS CURVES

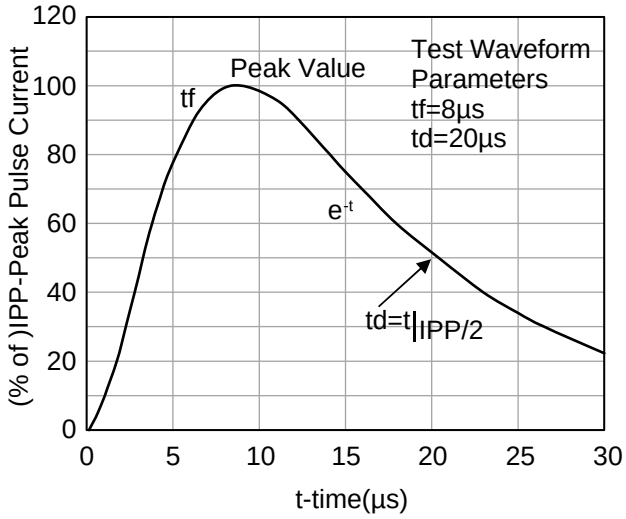


Figure 1. Pulse Waveform
according to IEC 61000-4-5

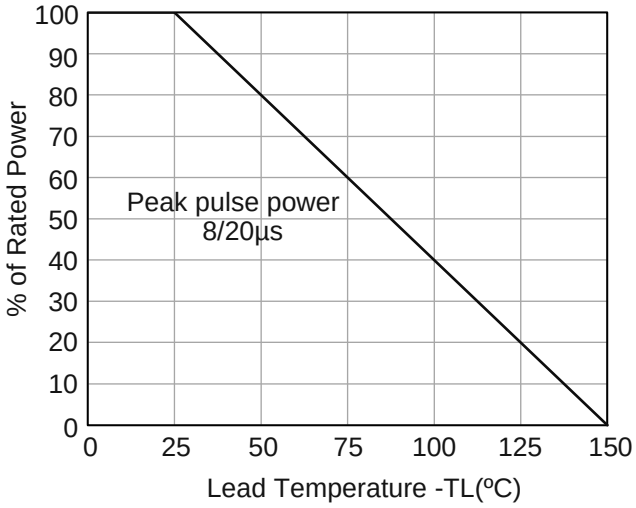


Figure 2. Power Derating Curve

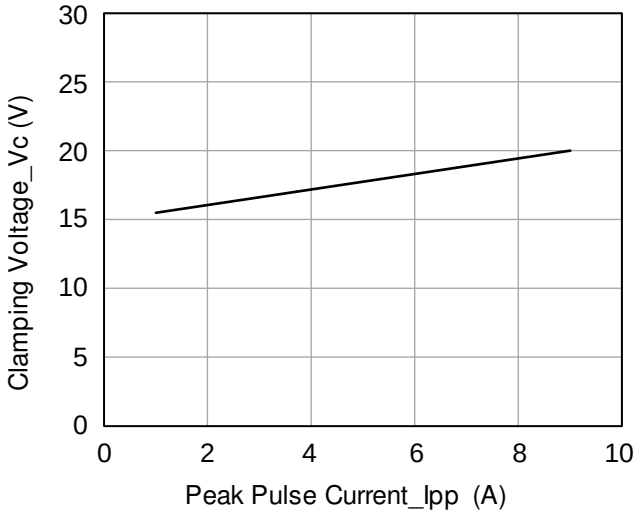


Figure 3.Clamping Voltage vs.Peak Pulse Current
according to IEC 61000-4-5.

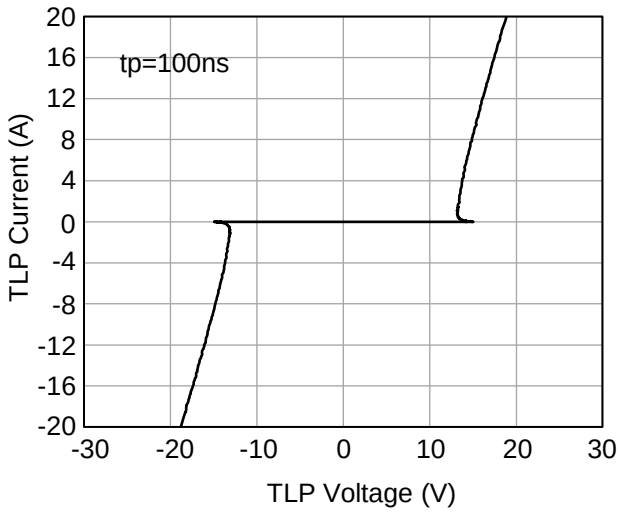


Figure 4. TLP Measurement

8.OUTLINE AND DIMENSIONS

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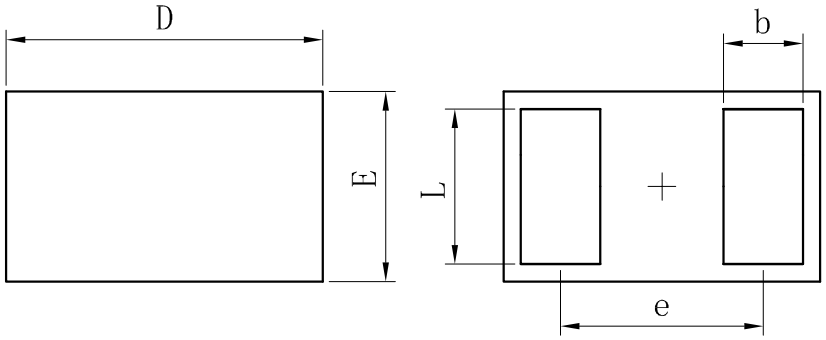

TOP VIEW BOTTOM VIEW

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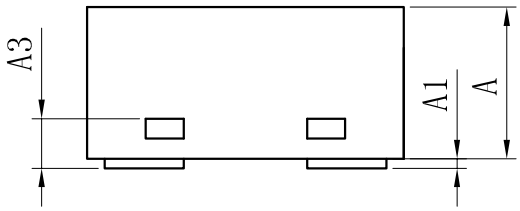
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	-	0.64	-
L	0.44	0.49	0.54
b	0.20	0.25	0.30
A	0.43	0.48	0.53
A1	0	-	0.05
A3	0.127REF.		
All Dimensions in mm			



SIDE VIEW

9.SOLDERING FOOTPRINT

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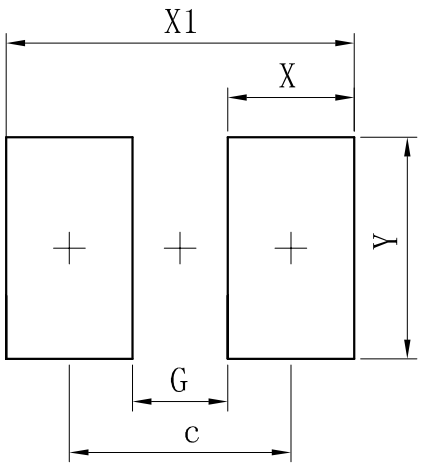

Dimensions	(mm)
c	0.70
G	0.30
X	0.40
X1	1.10
Y	0.70

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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