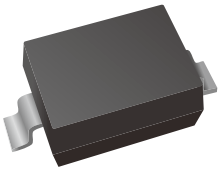
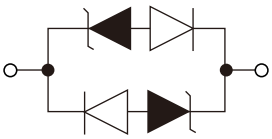
LTES15C01LG

Bidirectional TVS Diode

Features





- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50μs)
- IEC61000-4-5 (Lightning) 12A (8/20μs)
- Protects one I/O line (bidirectional)
- Low clamping voltage
- Working voltages : 15V
- Low leakage current
- Response Time is < 1 ns
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

- Case:SOD-323
- Flammability Rating: UL 94V-0
- Approx. Weight: 4.6mg

Applications

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Peripherals
- USB Interface

Ordering Information

Part Number	Marking	Shipping	Reel
LTES15C01LG-TR3	EC	3000PCS Tape&Reel	7 inchs
LTES15C01LG-TR12	EC	12000PCS Tape&Reel	13 inchs

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

Symbol	Parameter	Value	Unit
V_{ESD}	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	±30	kV
P_{PP}	Peak Pulse Power (8/20μs)	350	W
T_{OPT}	Operating Temperature	-55/+150	°C
T_{STG}	Storage Temperature	-55/+150	°C
T_L	Lead Soldering Temperature	260	°C

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

Part Number	V_{RWM} (V)	V_B@1mA (V)	V_C@1A (V)	V_C@Ipp (V)		V_C@Ipp (V)		I_R (μA)	C_T (pF)
	Max	Min	Max	Max	Ipp (A)	Max	Ipp (A)	Max	Typ.
LTES15C01LG	15.0	16.7	24.0	29.0	5	31.8	10	1	0.8

Characteristic Curves

Fig1. 8/20us Waveform per IEC61000-4-5

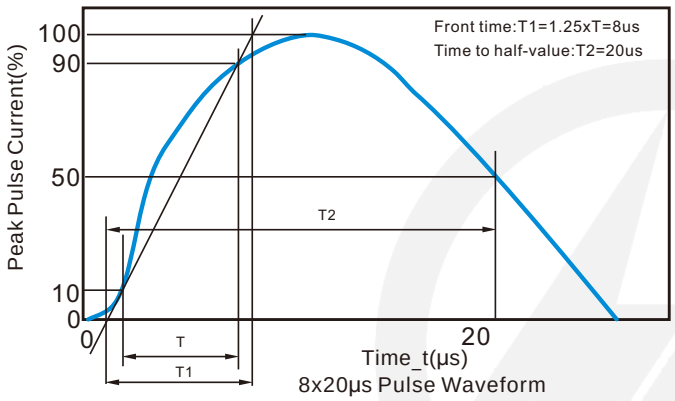


Fig2.Contact Discharge Current Waveform per IEC 61000-4-2

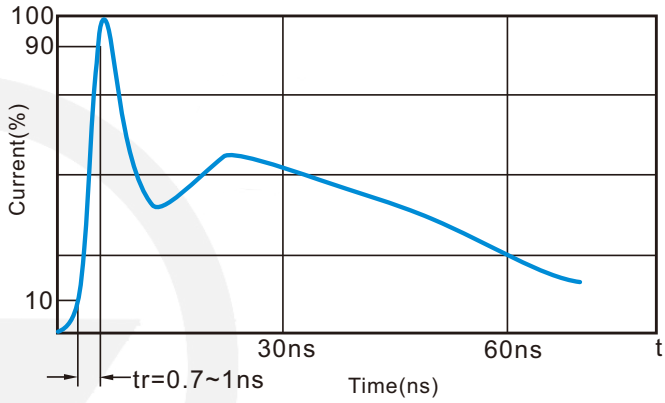


Fig3. Voltage vs Capacitance

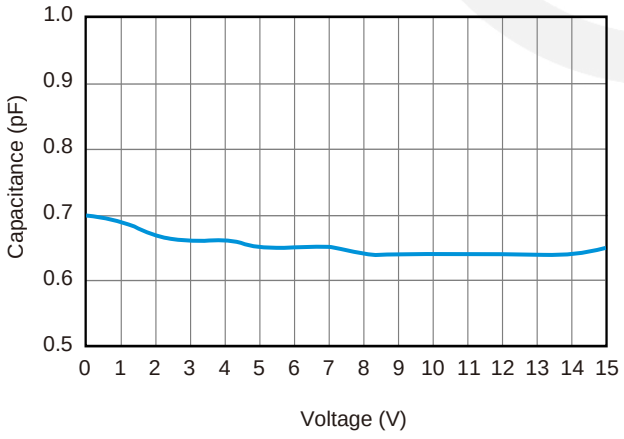
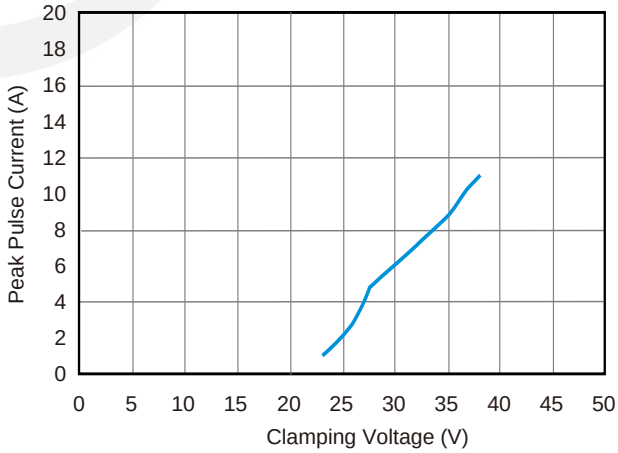
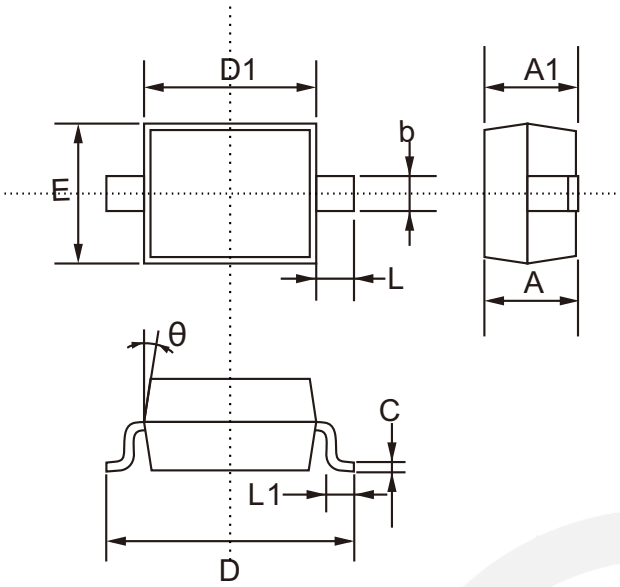


Fig4. Clamping Voltage vs Peak Pulse Current



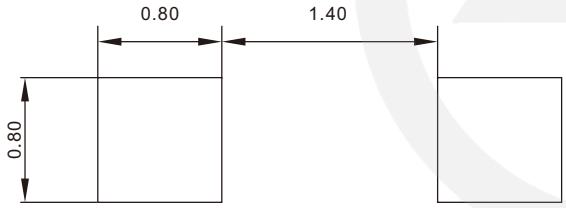
SOD-323 Package Outline



Unit : mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.800	1.100
A1	0.800	0.900
b	0.250	0.400
C	0.080	0.177
D	2.300	2.800
D1	1.400	1.800
E	1.150	1.400
L1	0.100	0.400
L	0.475 TYP.	
θ	8°	

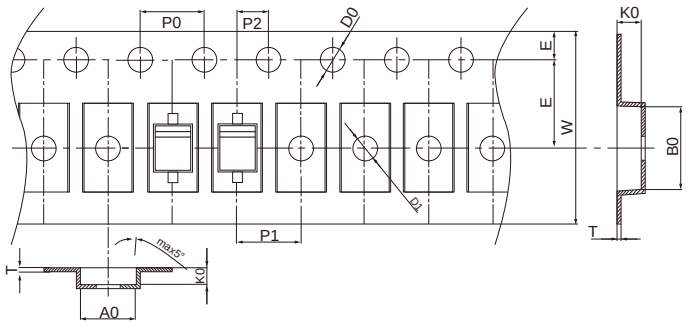
SOD-323 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm
3.The pad layout is for reference purpose only.

Carrier Tape Dimensions

Unit：mm

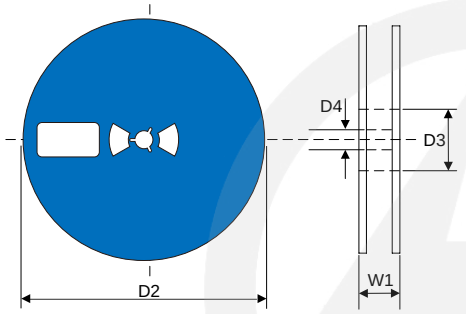


Symbol	Spec	Symbol	Spec
A0	1.41±0.10	P0	4.00±0.10
A1	0.90±0.10	P1	4.00±0.01
B0	2.90±0.10	W	8.00±0.10
B1	1.95±0.10	E	1.75±0.10
K0	1.25±0.10	F	3.50±0.05
D0	1.55±0.10	P2	2.00±0.05
D1	0.80±0.10	T	0.20±0.05

Reel Dimensions

Unit：mm

7” Reel

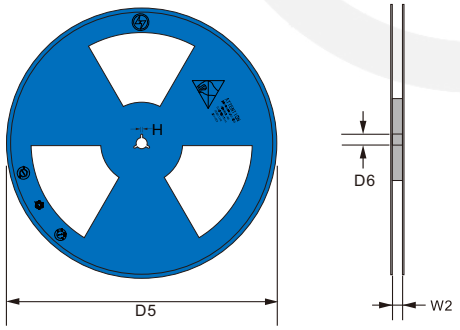


D2	Φ178.0±2.0
D3	Φ50
D4	13.0±0.5
W1	12±0.5
Quantity: 3000PCS	

Reel Dimensions

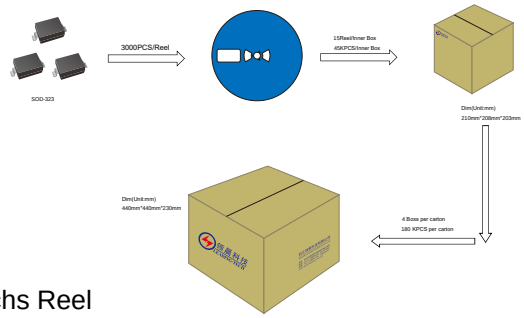
Unit：mm

13” Reel

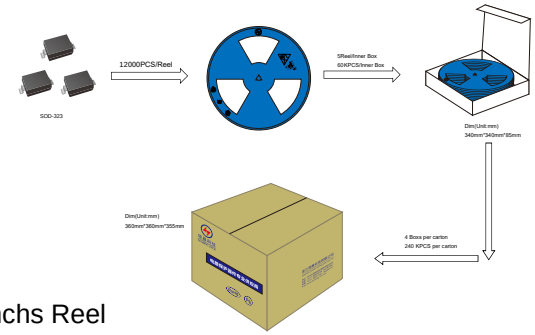


D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 12000PCS	

Packaging



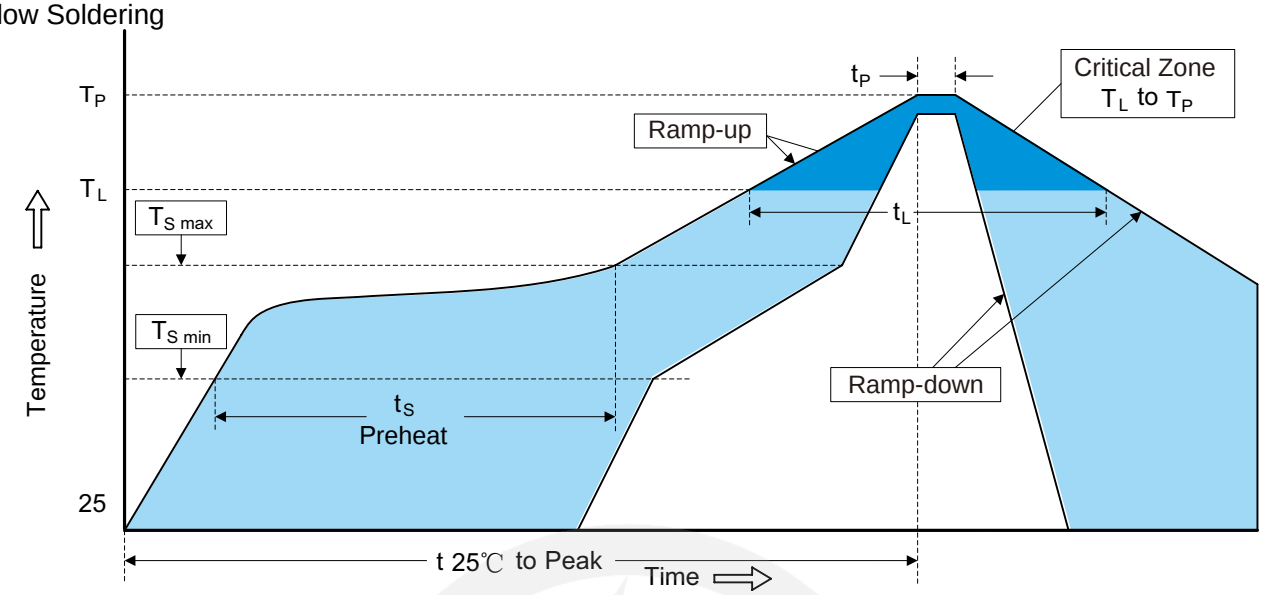
7 inchs Reel



13 inchs Reel

Recommended Soldering Conditions

Reflow Soldering



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3℃/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_S)	 150℃ 200℃ 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	 3℃/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	 217℃ 60-150 seconds
Peak Temperature (T_P)	260℃
Time within 5℃ of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6℃/second max.
Time 25℃ to Peak Temperature	8 minutes max.

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Version Update Information

Series NO.	Enactment/Revision Date	Effective Date	Version	Revision Content	Revision Reason	Revision Person	Note
01	2024.03.16	2024.03.16	3.0	New file	/	Ding	