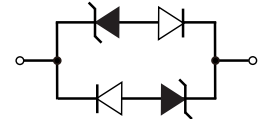
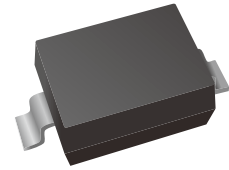


Bidirectional TVS Diode

Features

- IEC61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Lightning) 18A (8/20 μs)
- Protects one I/O line (bidirectional)
- Low clamping voltage
- Working voltages : 5V
- 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

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
LTES05C01LG-TR3	AC or S2	3000PCS Tape&Reel	7 inches
LTES05C01LG-TR12	AC or S2	12000PCS Tape&Reel	13 inches

Absolute Maximum Rating

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

Electrical Characteristics (TA=25 $^{\circ}$ C unless otherwise specified)

Part Number	Device Marking	V_{RWM}	$V_B@1mA$	$V_C@1A$	$V_C@I_{pp}^{*1}$		$V_C@I_{pp}^{*1}$		I_R	C_T^{*2}
		(V) Max	(V) Min	(V) Max	(V) Max	(A) I_{pp}	(V) Max	(A) I_{pp}	(μ A) Max	(pF) Typ.
LTES05C01LG	AC or S2	5.0	6.0	9.8	18.3	8	20.0	18	1	0.8

*1 Surge Pulse waveform tp=8/20 μ s

*2 Capacitance@ VR=0V,f=1MHz

Characteristic Curves

Fig.1 8x20 μ s Pulse Waveform per IEC 61000-4-5

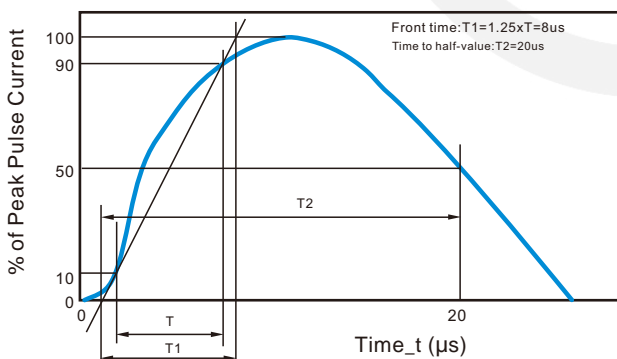


Fig.2 Contact Discharge Current Waveform per IEC 61000-4-2

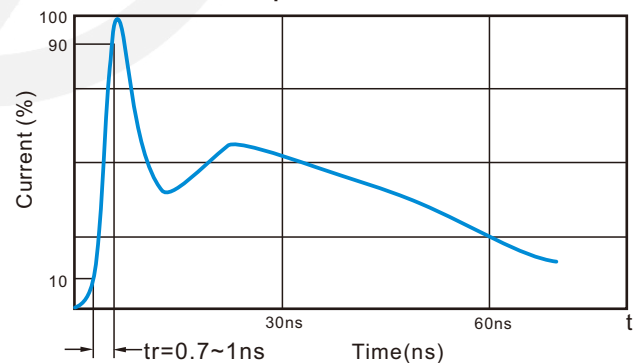


Fig.3 Voltage vs Capacitance

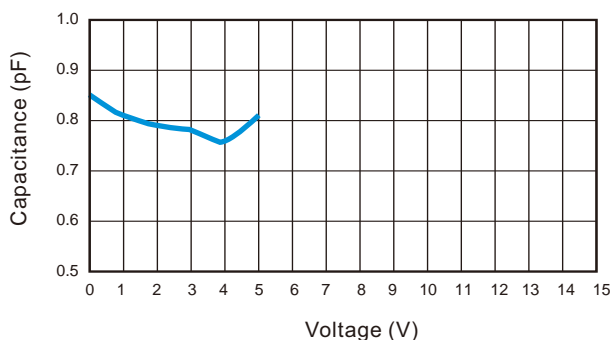
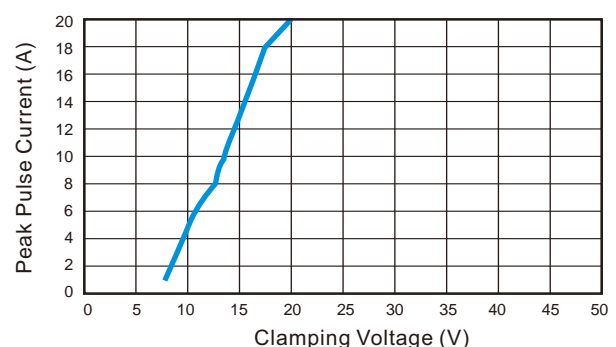


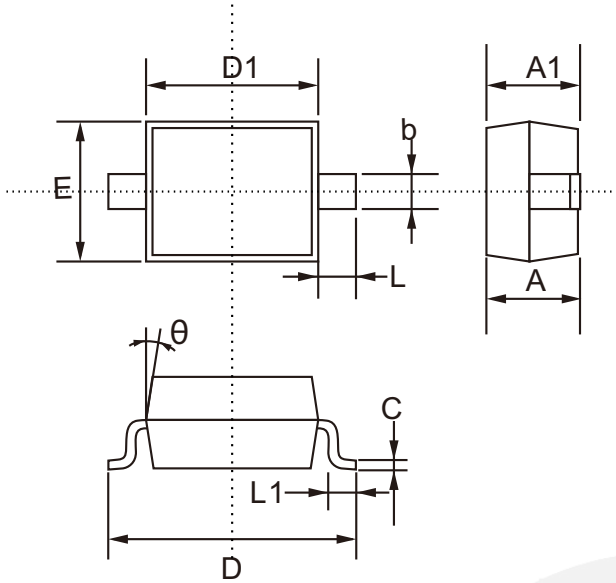
Fig.4 Clamping Voltage vs Peak Pulse Current





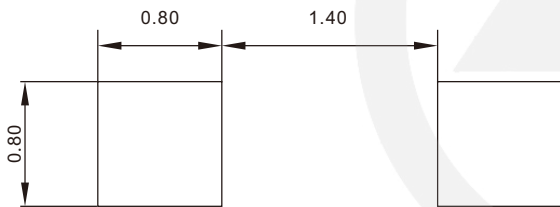
SOD-323 Package Outline

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
L	0.475 TYP.	
θ	8°	

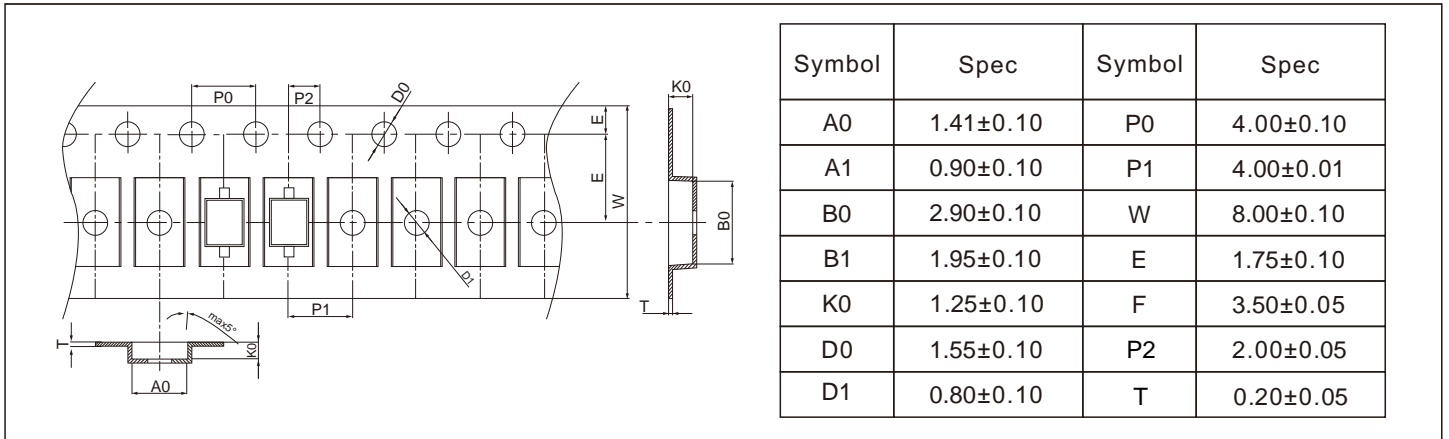
SOD-323 Suggested Pad Layout



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$
 3. The pad layout is for reference purpose only.

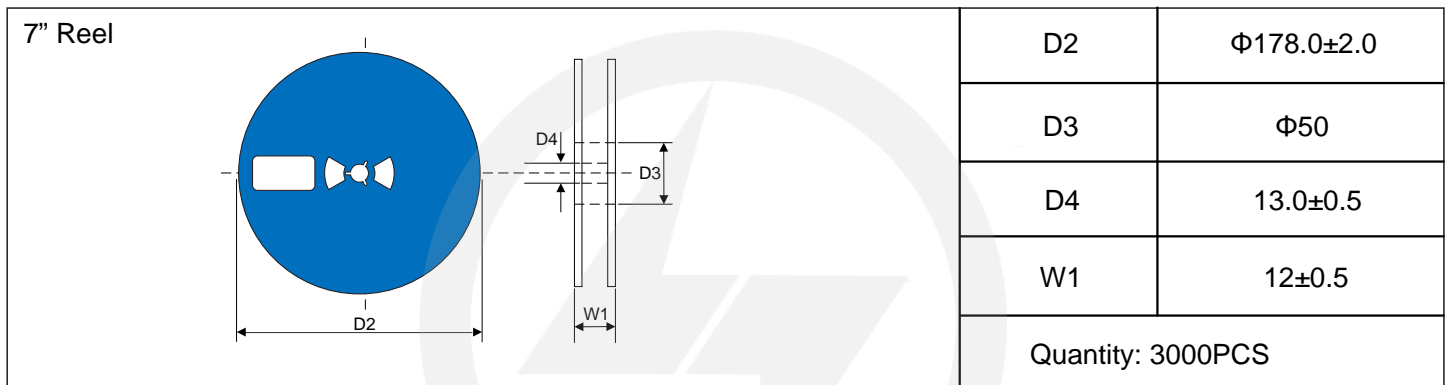
Carrier Tape Dimensions

Unit : mm



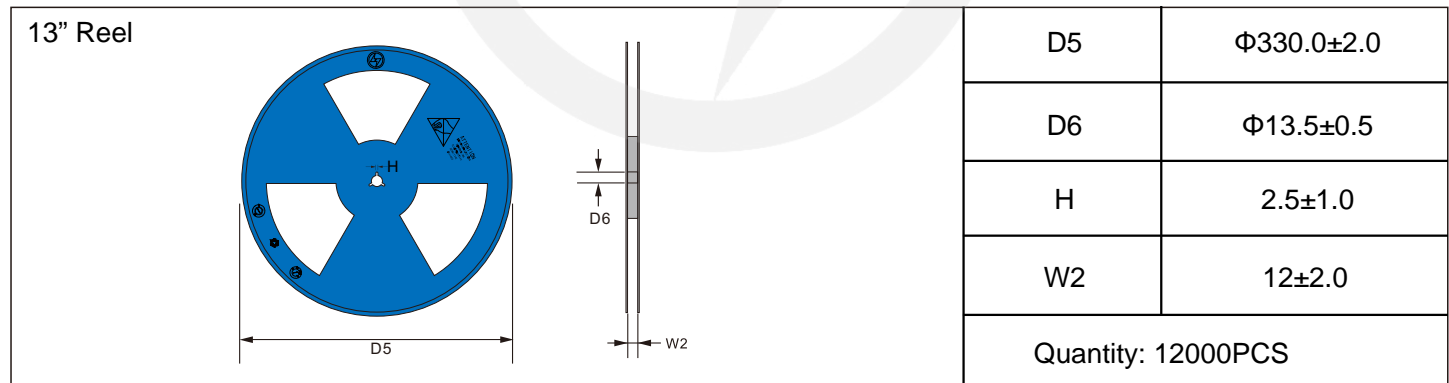
Reel Dimensions

Unit : mm

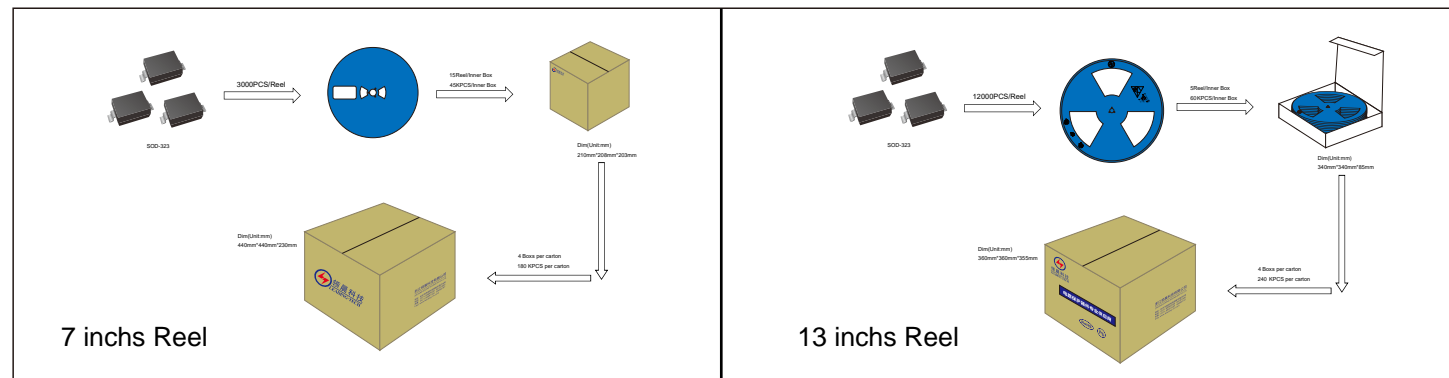


Reel Dimensions

Unit : mm



Packaging





Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat	
-Temperature Min ($T_{S\ min}$)	150°C
-Temperature Max ($T_{S\ max}$)	200°C
-Time (min to max) (t_s)	60-180 seconds
$T_{S\ max}$ to T_L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T_L)	217°C
-Time (t_L)	60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C 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	
02	2025.06.16	2025.06.16	3.1	Update packaging information	/	Ding	