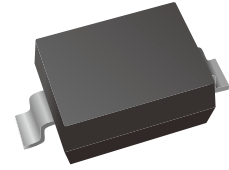


Transient Voltage Suppressors for ESD Protection

Features

- IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (air),
 $\pm 30\text{kV}$ (contact)
- IEC61000-4-4 (EFT) 40A (5/50 μs)
- Peak power dissipation: 60W (8/20 μs)
- Protects one I/O line
- Low clamping voltage
- Working voltages : 5V
- Low leakage current
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case: SOD-323
- Terminals: Tin plated, solderable perMIL-STD-750, method 2026

Applications

- High Speed Line :USB1.0/2.0, VGA, DVI, SDI,
- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Projection TV
- Cellular handsets and accessories
- Portable instrumentation
- Peripherals

Ordering Information

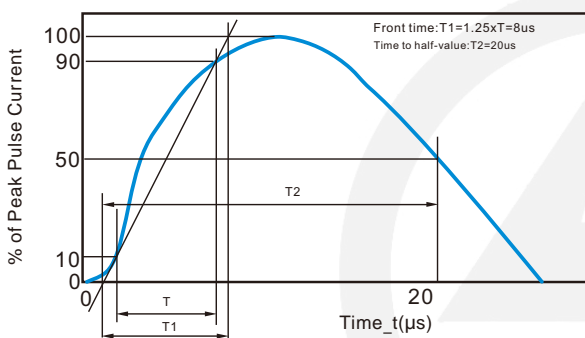
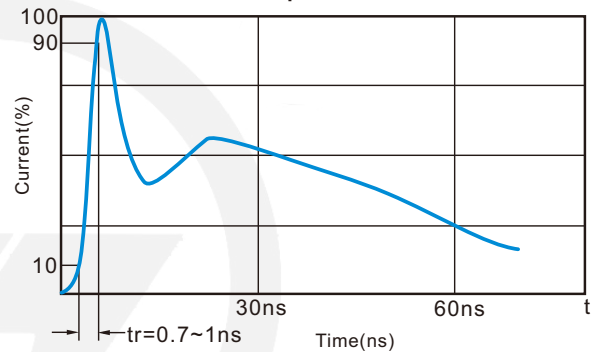
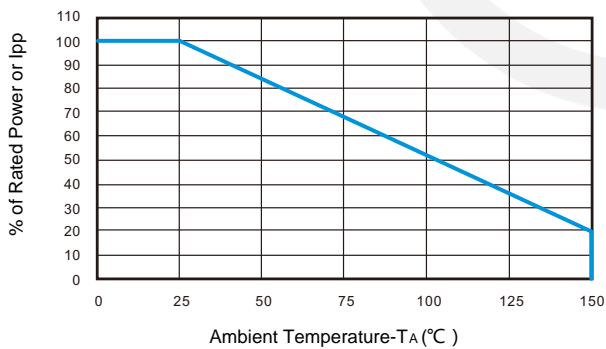
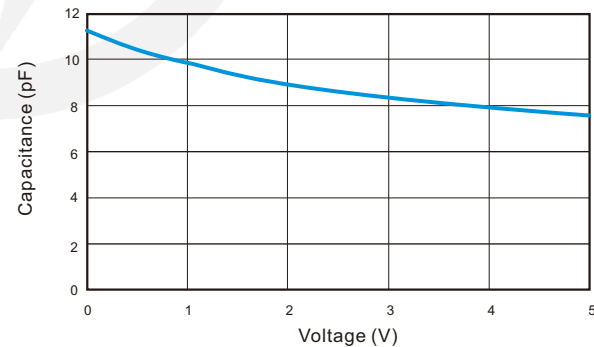
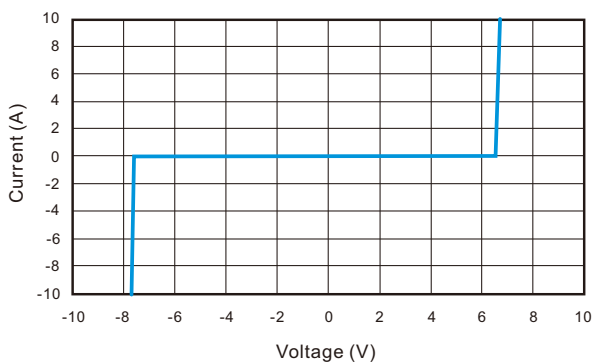
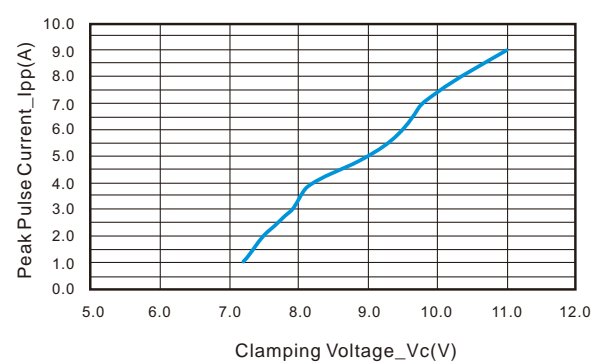
Part Number	Marking	Shipping	Reel
LTES05C01-TR3	3M or AC	3000PCS Tape&Reel	7 inches
LTES05C01-TR12	3M or AC	12000PCS Tape&Reel	13 inches

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

Symbol	Parameter	Value	Units
V _{ESD}	ESD per IEC 61000-4-2 (Contact)	± 30	kV
	ESD per IEC 61000-4-2 (Air)	± 30	
P _{PP}	Peak Pulse Power (8/20 μs)	60	W
T _{OPT}	Operating Temperature	-55~150	°C
T _{STG}	Storage Temperature	-55~150	°C

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

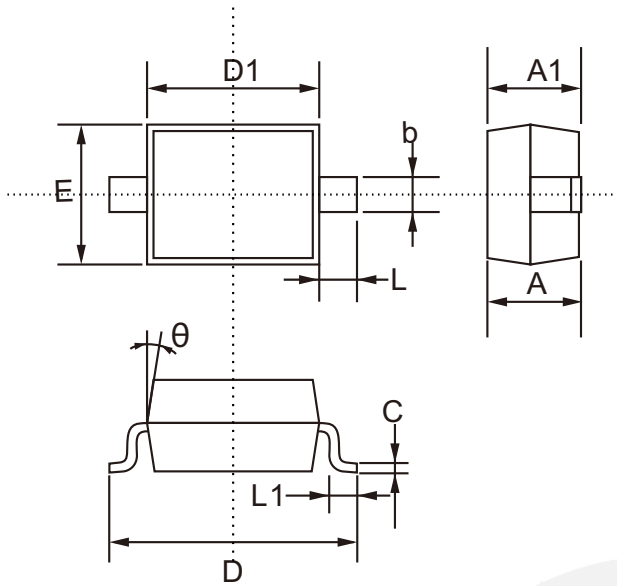
Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				5.0	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	5.6		7.8	V
I_R	Reverse Leakage Current	$V_{RWM} = 5\text{V}$			1.0	μA
V_C	Clamping Voltage	$I_{PP} = 5\text{A}$, $t_p = 8/20\mu\text{s}$			12.0	V
C_J	Junction Capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$			18	pF

Characteristic Curves
Fig.1 8x20 μs Waveform per IEC61000-4-5

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

Fig.3 Power Derating Curve

Fig.4 Voltage vs Capacitance

Fig.5 Voltage Sweeping

Fig.6 Clamping Voltage vs Peak Pulse Current($t_p=8/20\mu\text{s}$)




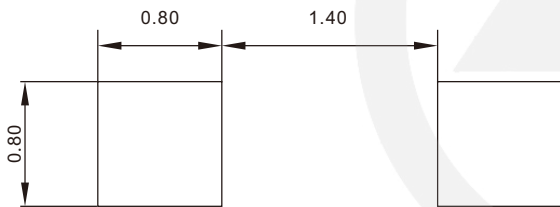
SOD-323 Package Outline

Unit: mm

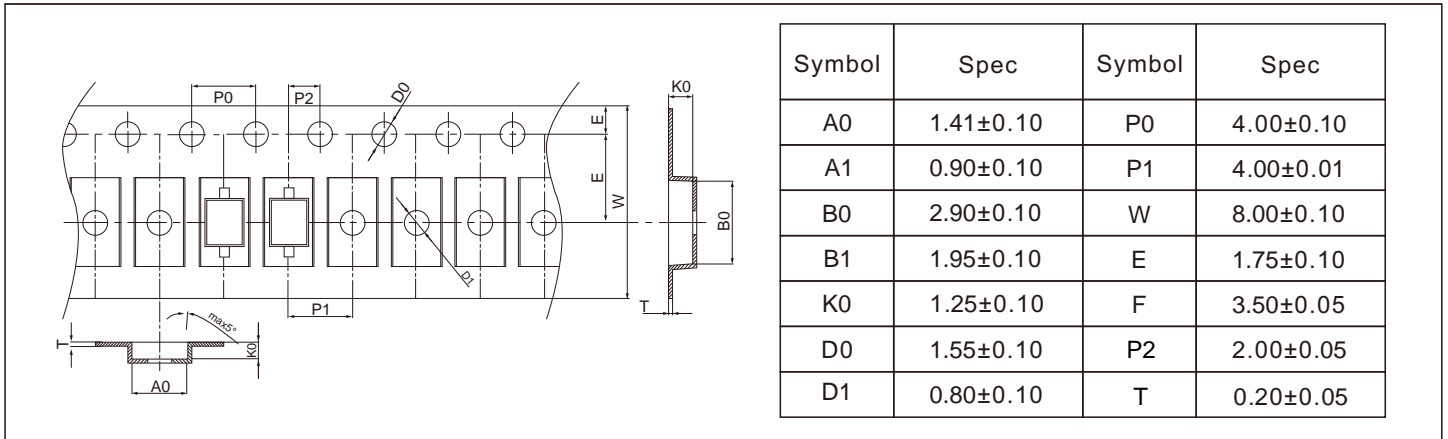
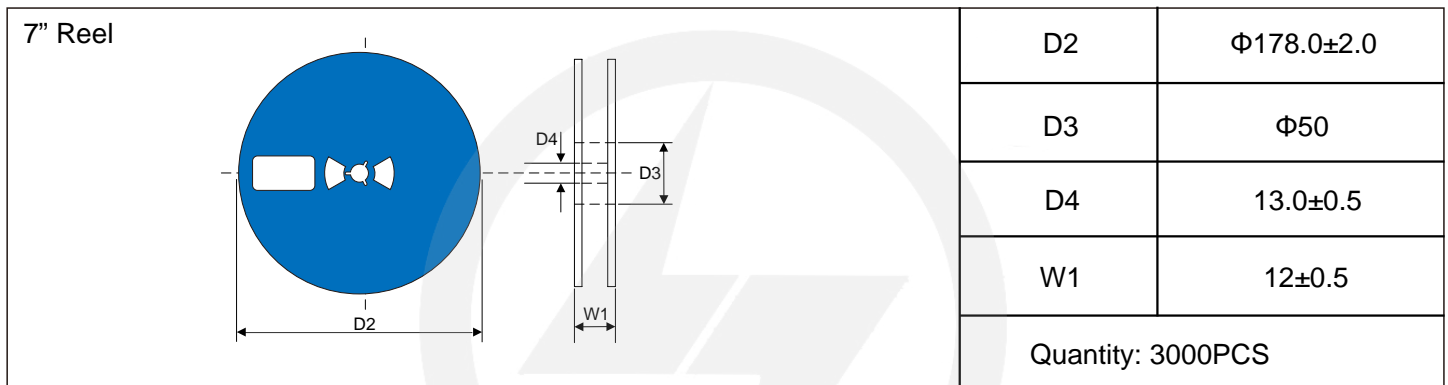
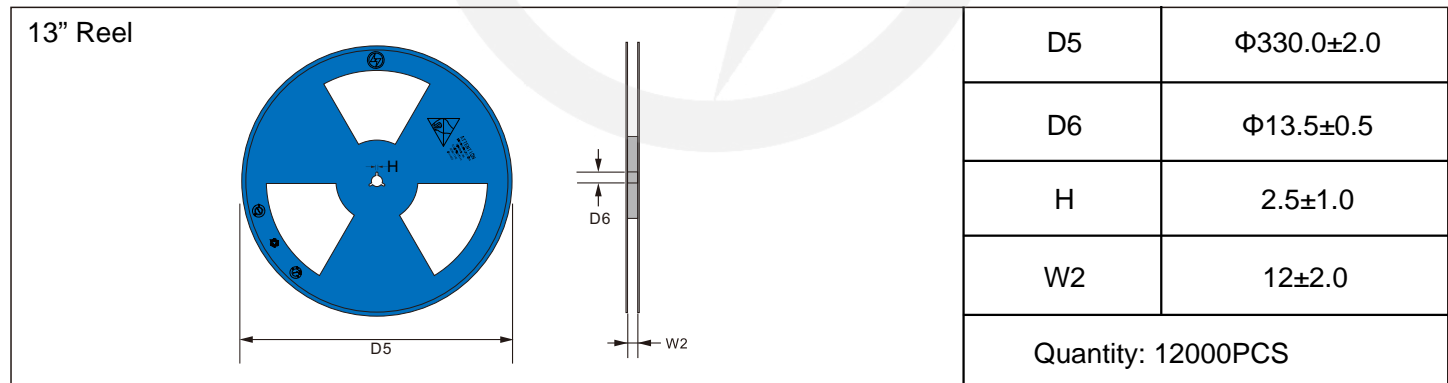
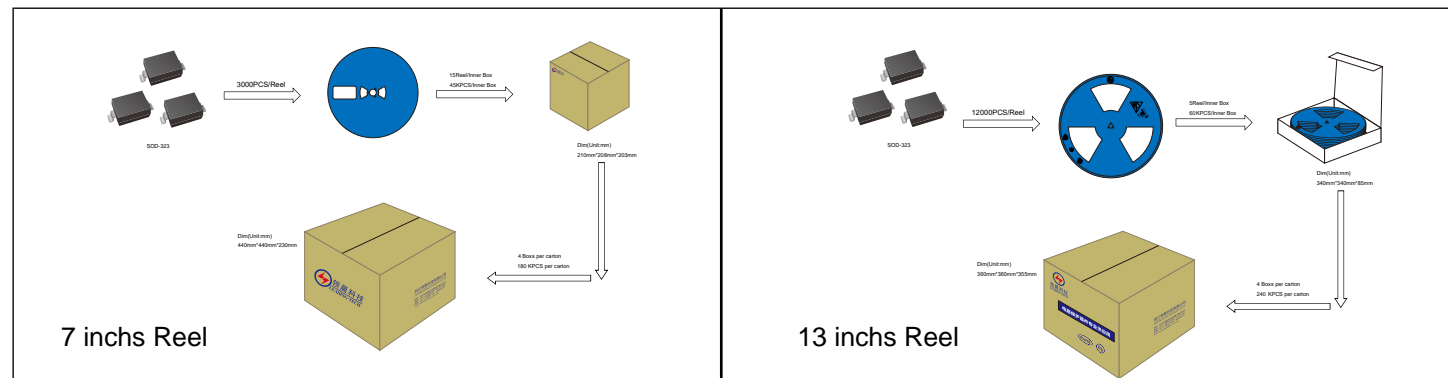


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.800	1.100
A1	0.800	0.900
b	0.250	0.400
C	0.080	0.177
D	2.300	2.800
D1	1.400	1.800
E	1.150	1.400
L	0.475 TYP.	
θ	8°	

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	2024.08.18	2024.08.18	3.0	New File	/	Ding	
02	2025.06.12	2025.06.12	3.1	Update packaging information	/	Ding	