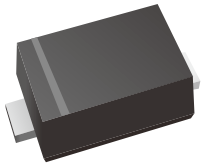
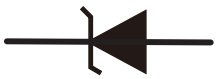
LTE5LxxA01

Transient Voltage Suppressors

Features



- IEC61000-4-2 Level 4 ESD Protection
- Protects one directional I/O line
- Low clamping voltage
- Working voltages : 2.5V-15V
- Low leakage current
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case:SOD-523
- 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
- Pagers

Ordering Information

Part Number	Shipping	Reel
LTE5LxxA01-TR3	3000PCS Tape&Reel	7 inchs
LTE5LxxA01-TR10	10000PCS Tape&Reel	7 inchs

Absolute Maximum Rating

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	±30 ±22	kV
ESD	ESD Voltage per human body model ESD Voltage per machine model	16 400	kV V
P_D	Total Power Dissipation on FR-5 Board (Note 1) @ Ta=25℃	150	mW
T_J, T_{STG}	Junction and Storage Temperature	-55/+150	℃
T_L	Lead Solder Temperature – Maximum (10 Second Duration)	260	℃

These ratings are limiting values above which the serviceability of the diode may be impaired
Note 1. FR-5=1.0x0.75x0.62 in.

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

Part Number	Device Marking	V_{RWM} (V)	I_R (μA)	V_B (V)	V_B (V)	I_T (mA)	V_C (V)		V_C (V)		P_{PK} (W)	C_J (pF)
		Max	Max	Min	Max		Max	@A	Max	@A	Max	Max
LTE5L025A01	ZD + code	2.5	6.0	4.0	-	1	9.0	5.0	11.5	9.0	104	145
LTE5L03A01	ZE + code	3.3	0.90	5.0	-	1	10.0	5.0	14.0	7.5	105	105
LTE5L05A01	ZF + code	5.0	0.08	6.2	-	1	11.6	5.0	15.0	7.0	105	80
LTE5L06A01	ZG + code	6.0	0.05	6.8	-	1	13.5	5.0	17.5	6.0	105	70
LTE5L07A01	ZH + code	7.0	0.03	7.5	-	1	14.0	5.0	18.0	6.0	108	65
LTE5L12A01	ZM + code	12.0	0.03	14.1	-	1	20.0	1.0	26.0	4.0	104	45
LTE5L15A01	ZN + code	15.0	0.50	16.0	-	1	23.0	1.0	30.0	4.0	120	28

Characteristic Curves

Fig 1 8/20μs Waveform per IEC61000-4-5

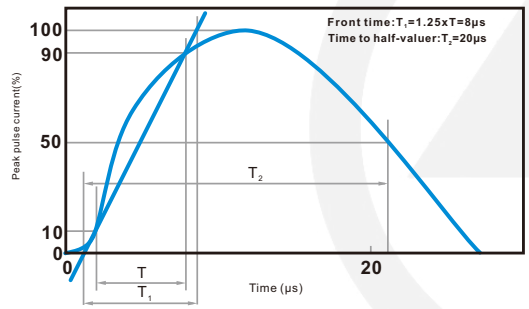


Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2

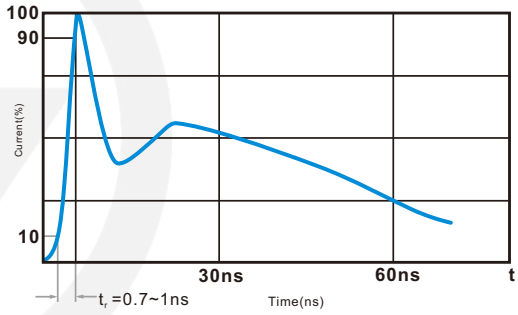


Fig 3 Voltage vs Capacitance

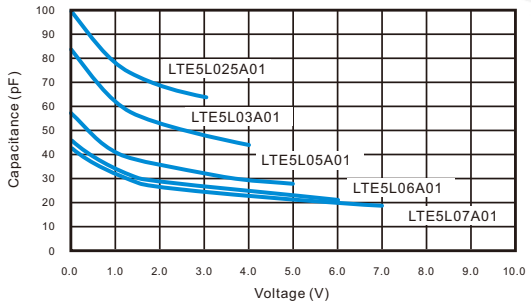


Fig 4 Voltage vs Capacitance

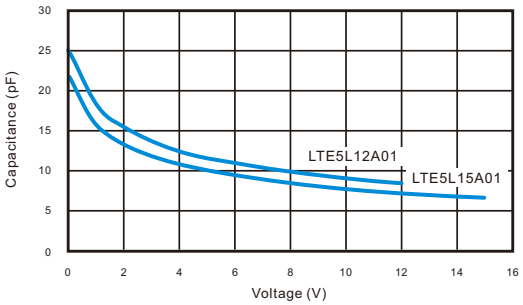


Fig 5 Clamping Voltage vs Peak Pulse Current

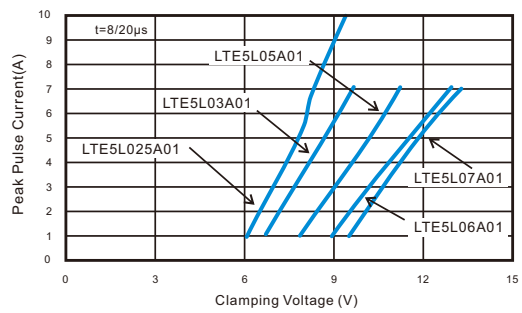
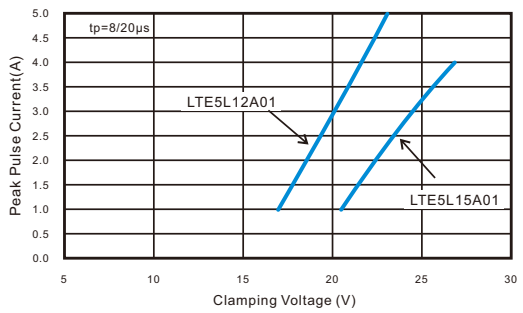
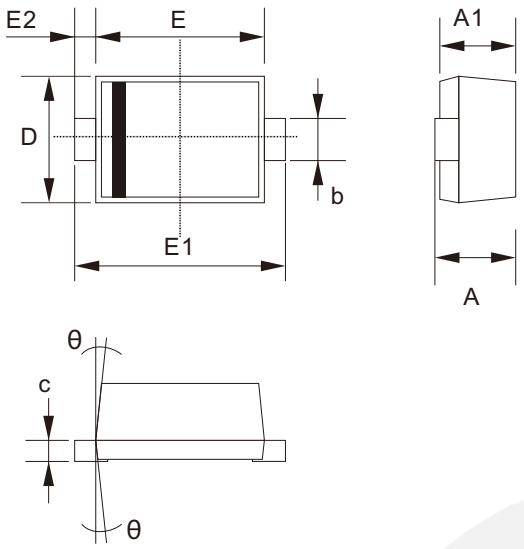


Fig 6 Clamping Voltage vs Peak Pulse Current



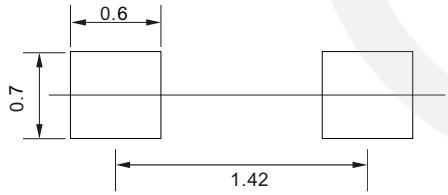
SOD-523 Package Outline



Unit: mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.500	0.770
A1	0.500	0.700
b	0.250	0.380
c	0.070	0.200
D	0.700	0.900
E	1.100	1.300
E1	1.500	1.700
E2	0.200 REF	
θ	7° REF	

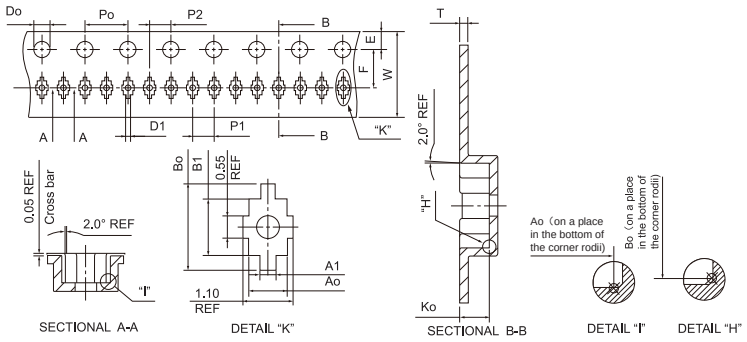
SOD-523 Suggested Pad Layout



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

Carrier Tape Dimensions

Unit：mm

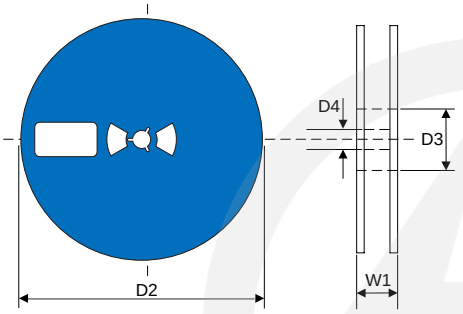


Symbol	Spec	Symbol	Spec
A0	0.90±0.05	P0	4.00±0.10
A1	0.39±0.05	P1	2.00±0.05
B0	1.95±0.10	P2	2.00±0.05
B1	1.30±0.05	D0	$1.50^{+0.10}_{0}$
K0	0.69±0.05	D1	0.50±0.05
10P0	40.0±0.10	F	3.50±0.05
T	0.18±0.02	W	$8.00^{+0.30}_{-0.10}$
E	1.75±0.10		

Reel Dimensions

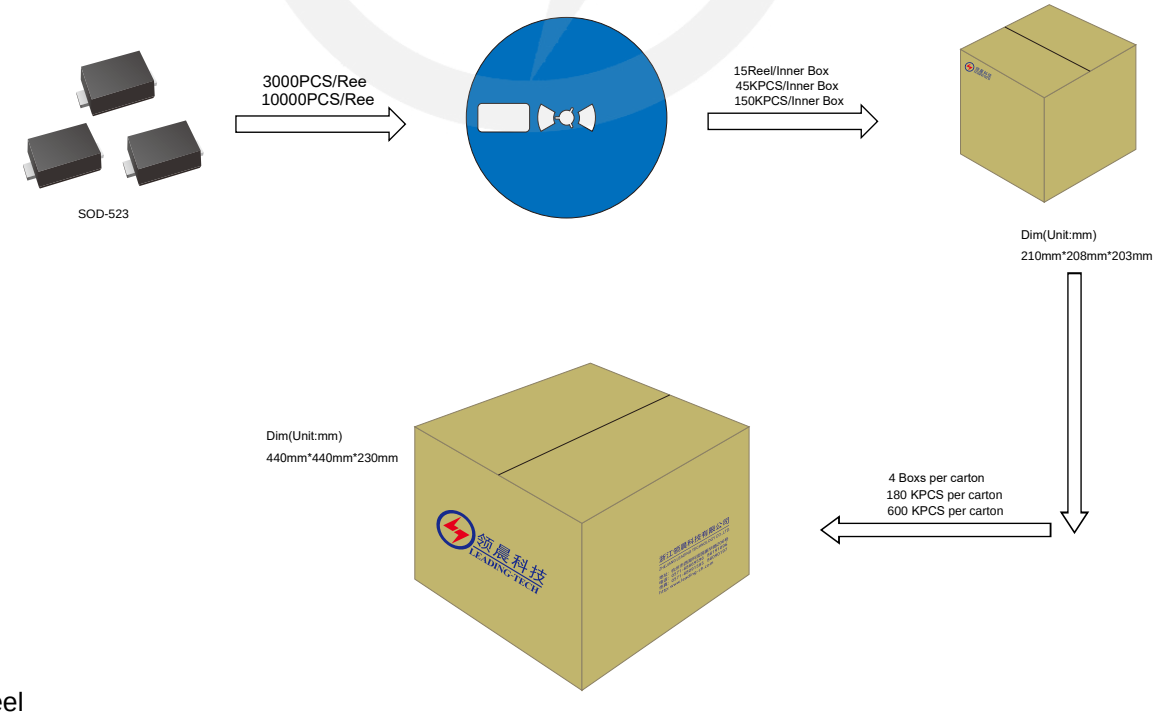
Unit：mm

7” Reel



D2	Φ178.0±2.0
D3	Φ50.0
D4	13.0±0.5
W1	12±0.5
Quantity: 3000/10000PCS	

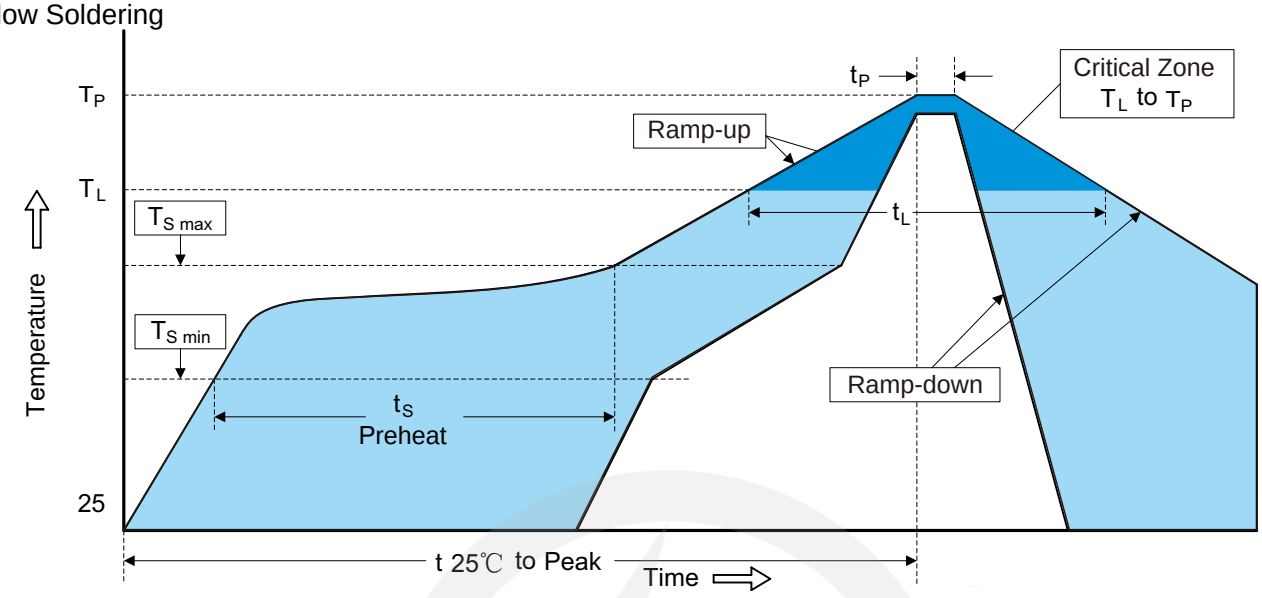
Packaging



7 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	2024.8.19	2024.8.19	3.0	New File	/	Ding	