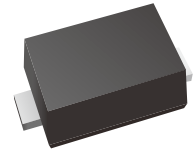


Transient Voltage Suppressors for ESD Protection

Features

- IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (air),
 $\pm 30\text{kV}$ (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- Peak power dissipation: 128W (8/20 μs)
- Protects one directional 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-523
- Terminals: Tin plated, solderable per MIL-STD-750, method 2026
- MSL1

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

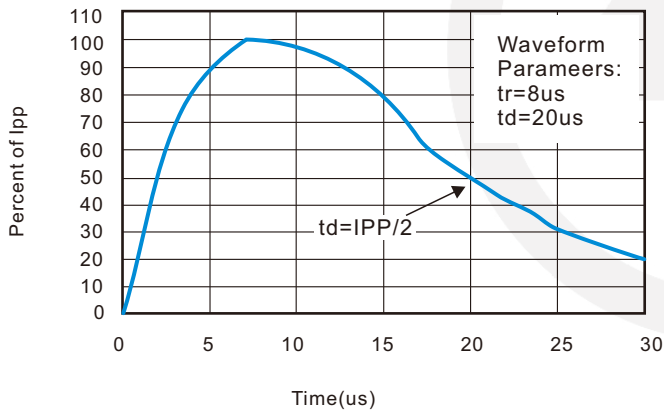
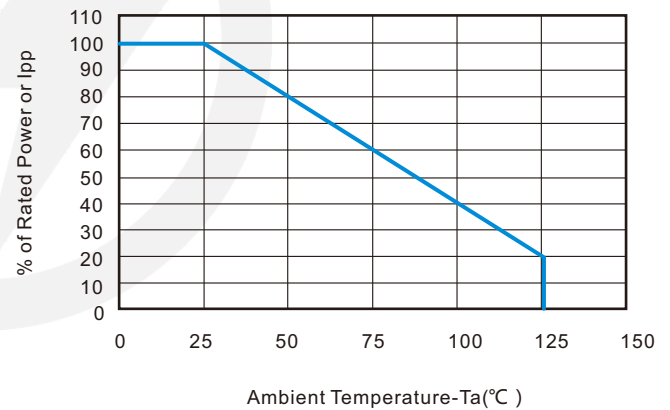
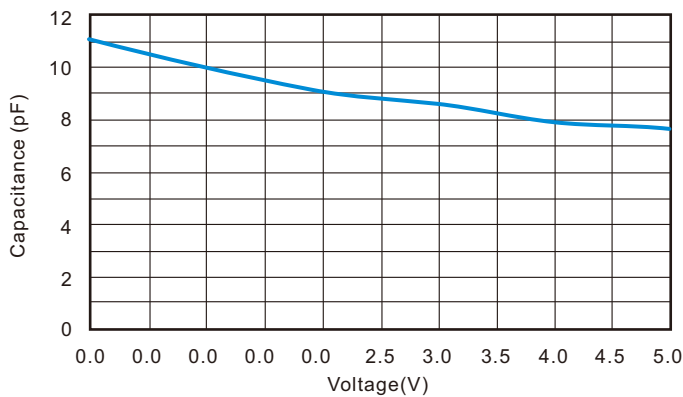
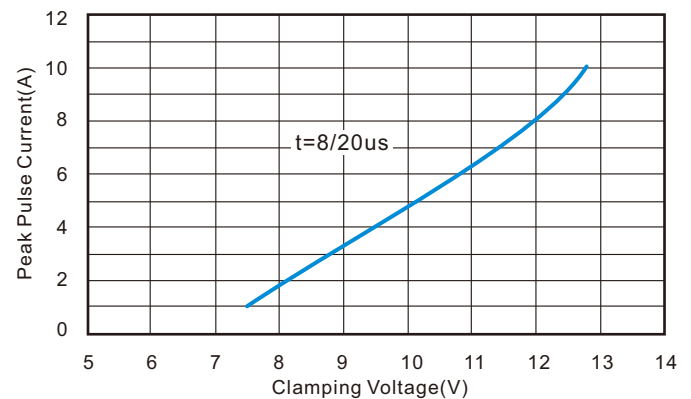
Part Number	Marking	Shipping	Reel
LTE5L05C01-TR3	5C ∞	3000PCS Tape&Reel	7 inchs
LTE5L05C01-TR10	5C ∞	10000PCS Tape&Reel	7 inchs

Absolute Maximum Ratings (T_{amb}=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 ± 30	kV
P _{PP}	Peak Pulse Power (8/20 μs)	128	W
T _{OPT}	Operating Temperature	-40~150	°C
T _{STG}	Storage Temperature	-40~150	°C

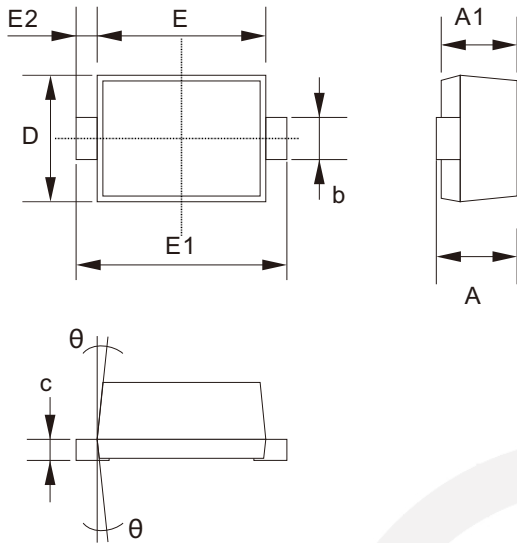
Electrical Characteristics (TA=25°C unless otherwise specified)

Symbol	Parameter	Test Condition	Min	Typ	Max	Unit
V_{RWM}	Reverse Working Voltage				5.0	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1mA$	5.6		9.0	V
I_R	Reverse Leakage Current	$V_{RWM} = 5V$			1.0	μA
V_C	Clamping Voltage	$I_{PP} = 5A, t_p = 8/20\mu s$			11.6	V
V_C	Clamping Voltage	$I_{PPmax} = 8A, t_p = 8/20\mu s$			16.0	V
C_J	Junction Capacitance	$V_R = 0V, f = 1MHz$		10	15	pF

Characteristic Curves
Fig.1 Pulse Waveform

Fig.2 Power Derating Curve

Fig.3 Voltage vs Capacitance

Fig.4 Clamping Voltage vs Peak Pulse Current


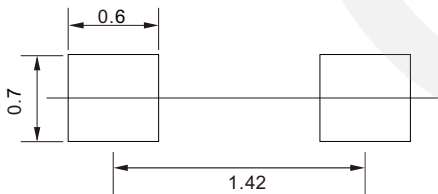
SOD-523 Package Outline

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	

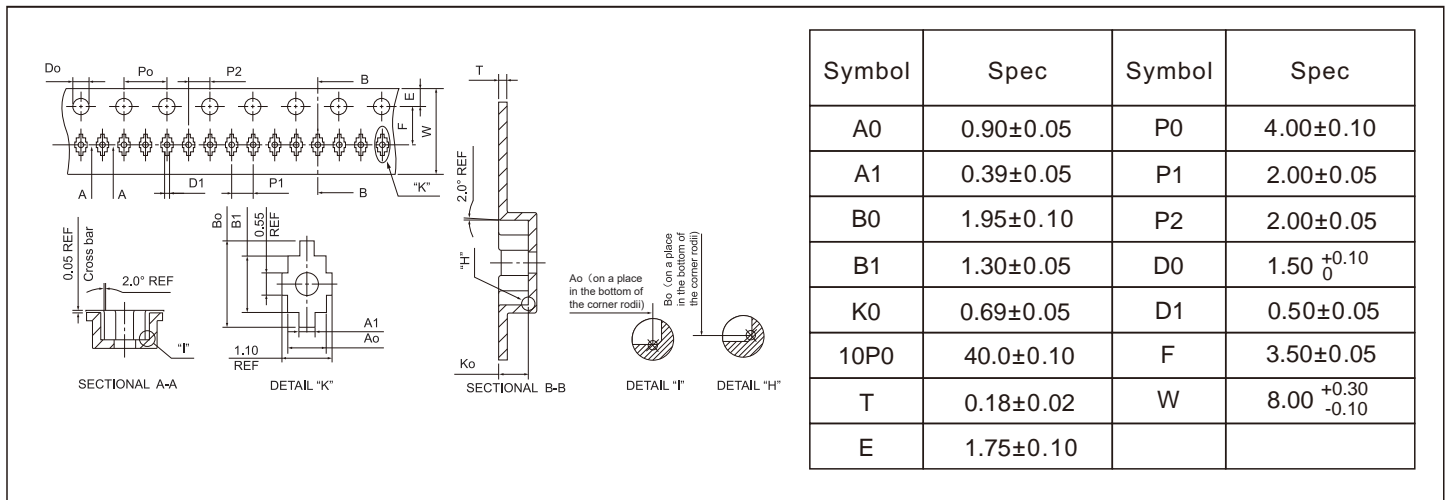
SOD-523 Suggested Pad Layout


Note:

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

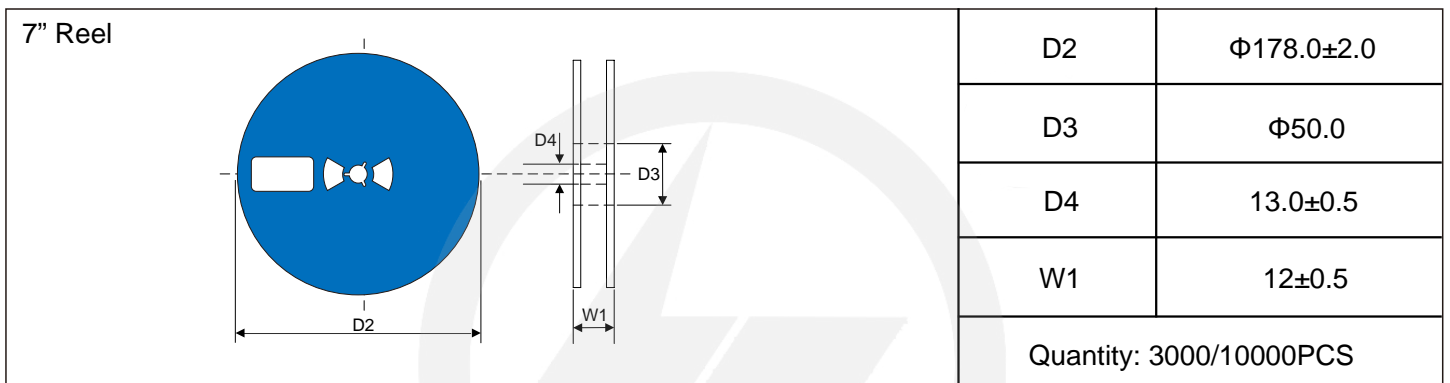
Carrier Tape Dimensions

Unit : mm

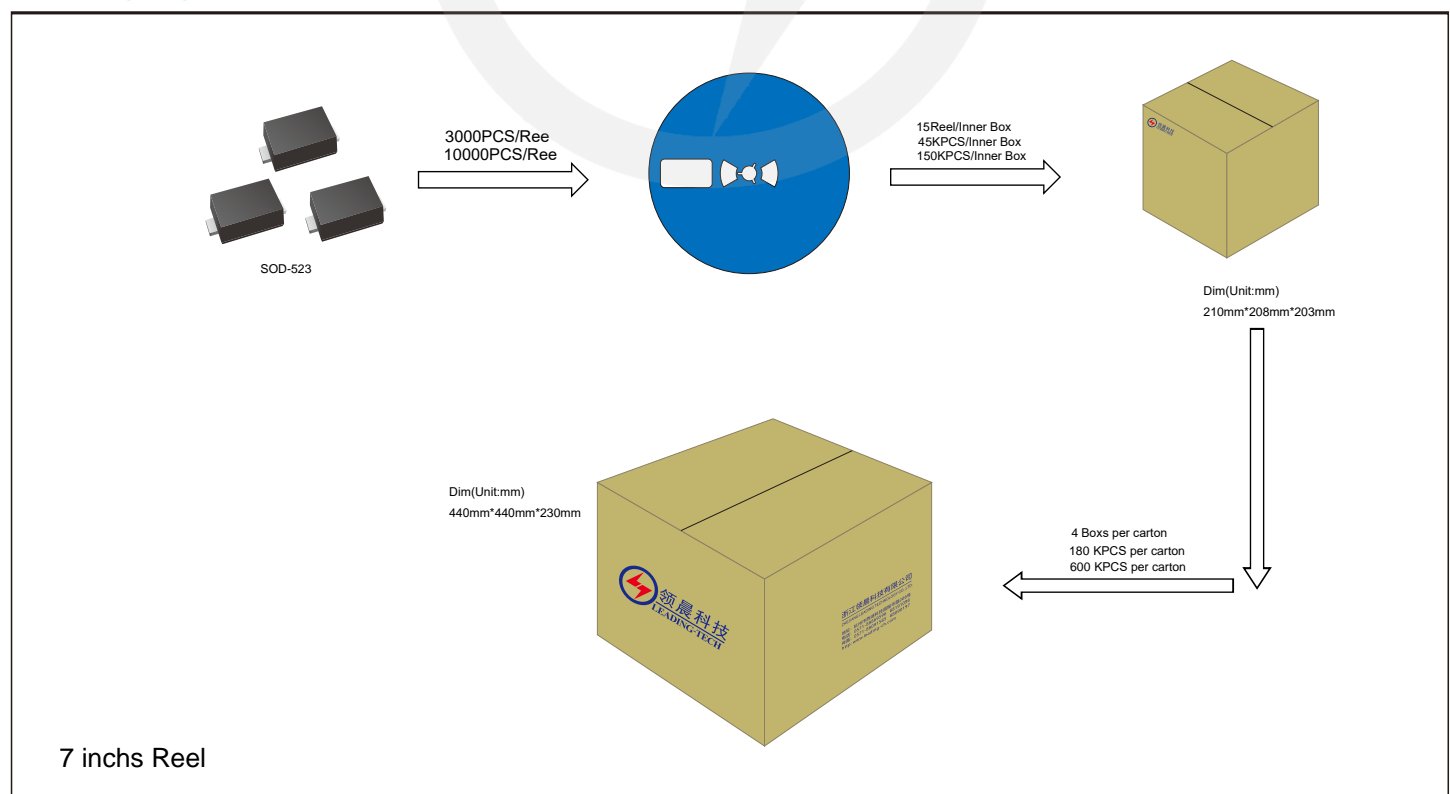


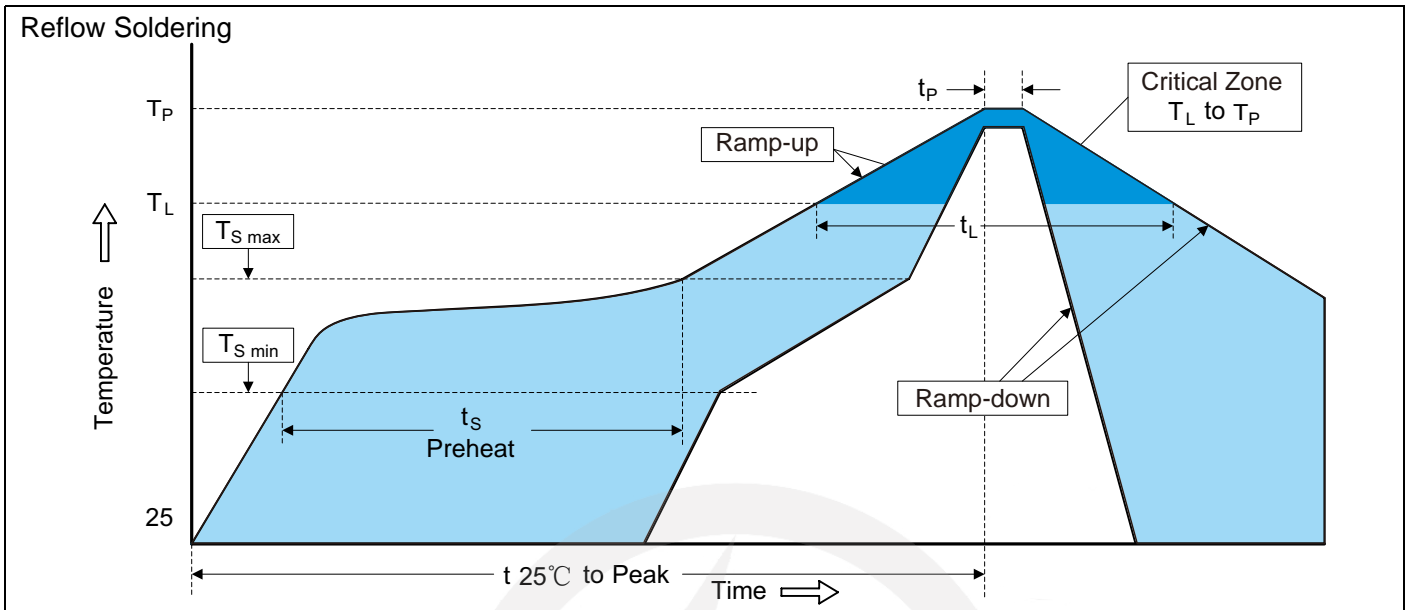
Reel Dimensions

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 ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s)	150°C 200°C 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	217°C 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	2024.4.5	2024.4.5	3.0	New File	/	Ding	