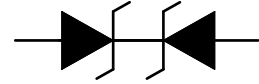
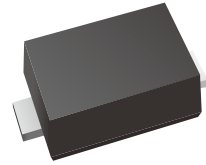


ESD Protection Diodes

Features

- IEC 61000-4-2 (ESD)
 - ±30kV Contact Discharge
 - ±30kV Air Discharge
- 150W Peak pulse Power (8/20us)
- IEC 61000-4-4 EFT Protection
 - 40A (5/50ns)
- Protects one directional I/O line
- Transient protection for high-speed data lines
- Low clamping voltage
- Low leakage current
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case: SOD-523
- Flammability Rating: UL 94V-0
- Approx. Weight: 1.4mg
- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants
- Notebooks / Desktops / Servers
- Portable Instrumentation
- Peripherals & Pagers

Ordering Information

Part Number	Marking	Shipping	Reel
LTE5L12C01-TR3	12C	3000PCS Tape&Reel	7 inchs
LTE5L12C01-TR10	12C	10000PCS Tape&Reel	7 inchs



Absolute Maximum Rating

Over operating free-air temperature range (unless otherwise noted)

Parameters	Symbol	Min	Max	Unit
Peak pulse power (tp=8/20us)@25°C	P _{pk}		150	W
Peak pulse current (tp=8/20us)@25°C	I _{PP}		8	A
ESD (IEC61000-4-2 air discharge) @25°C	V _{ESD}		±30	kV
ESD (IEC61000-4-2 contact discharge) @25°C	V _{ESD}		±30	kV
Junction temperature	T _J		150	°C
Operating temperature	T _{OP}	-40	125	°C
Storage temperature	T _{STG}	-55	150	°C
Lead temperature	T _L		260	°C

Electrical Characteristics

At TA = 25°C unless otherwise noted

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-off Voltage	V _{RWM}				12	V
Reverse Breakdown Voltage	V _{BR}	I _T =1mA	13			V
Reverse Leakage Current	I _R	V _{RWM} =12V			0.1	uA
Clamping Voltage	V _C	I _{PP} =1A; tp=8/20us		16		V
Clamping Voltage	V _C	I _{PP} =8A; tp=8/20us		18		V
Junction Capacitance	C _J	I/O to GND; VR=0V; f=1MHz		8		pF

Characteristics Curve

Fig.1 Pulse rating curve

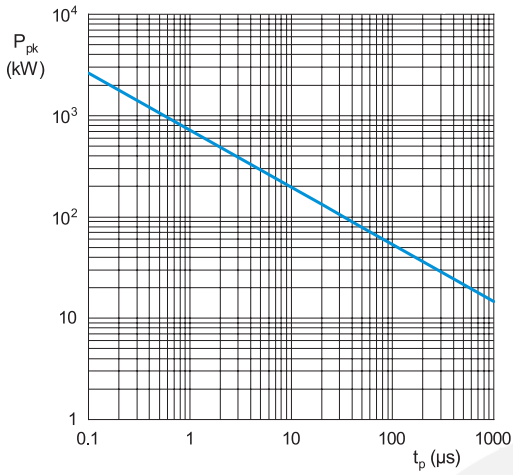


Fig.2 Peak pulse power derating curve

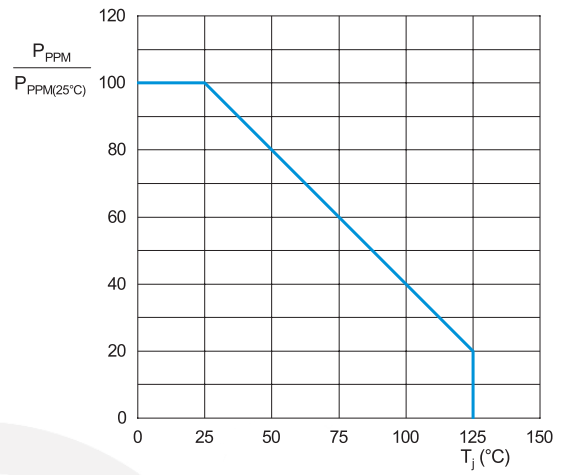


Fig.3 Pulse waveform

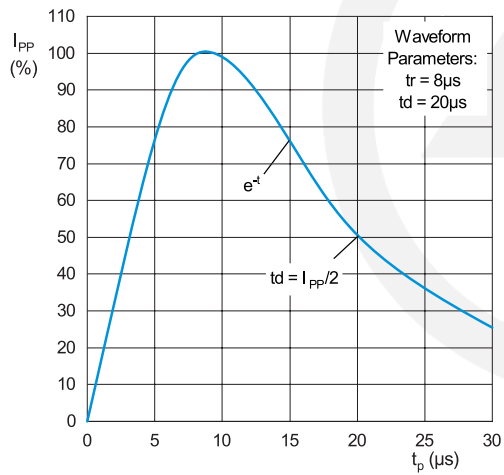
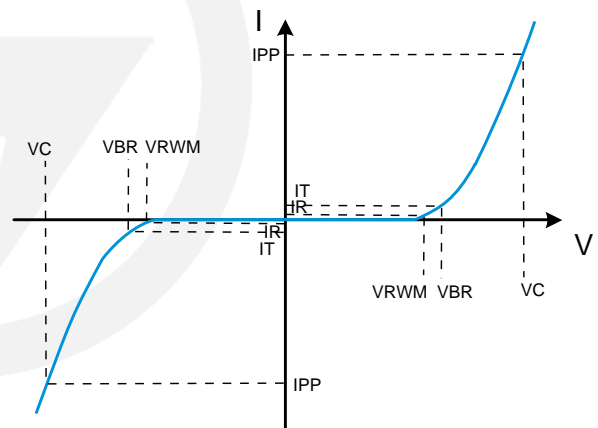


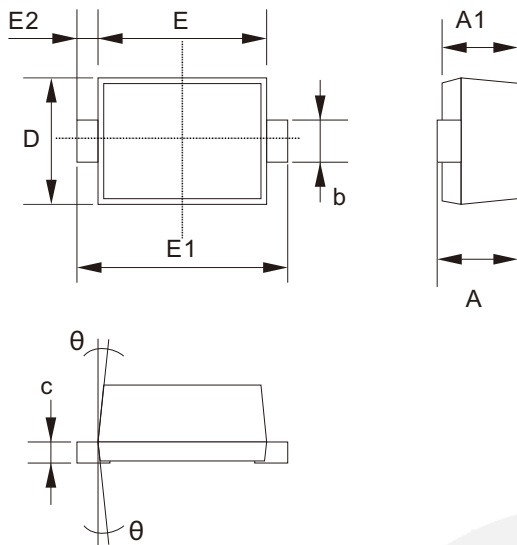
Fig.4 Parameters





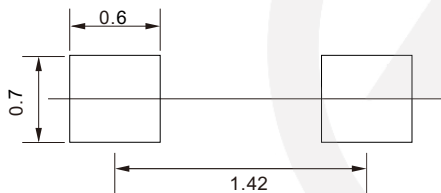
SOD-523 Package Outline

Unit: mm



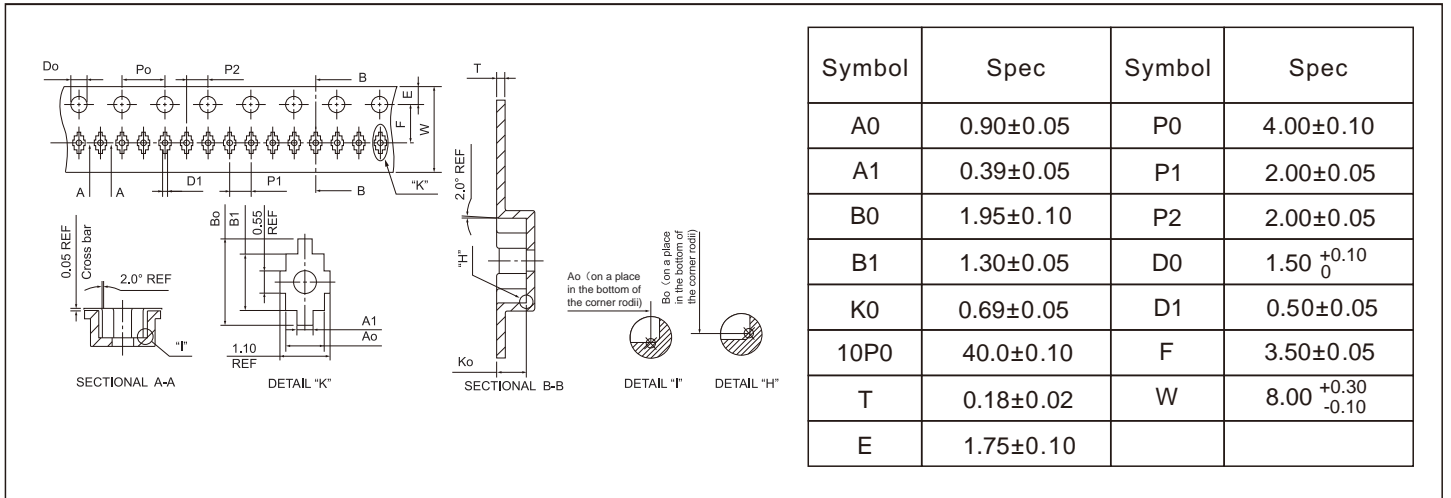
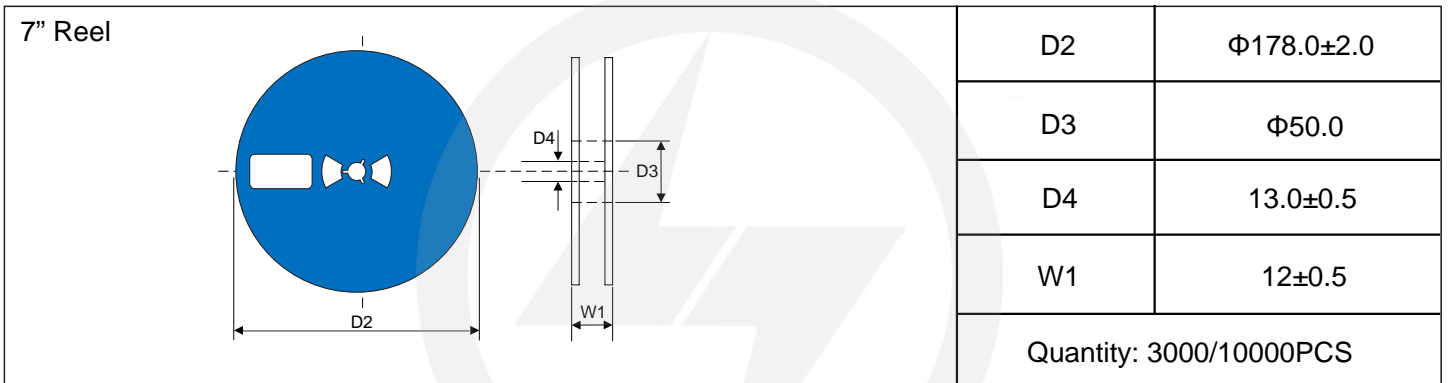
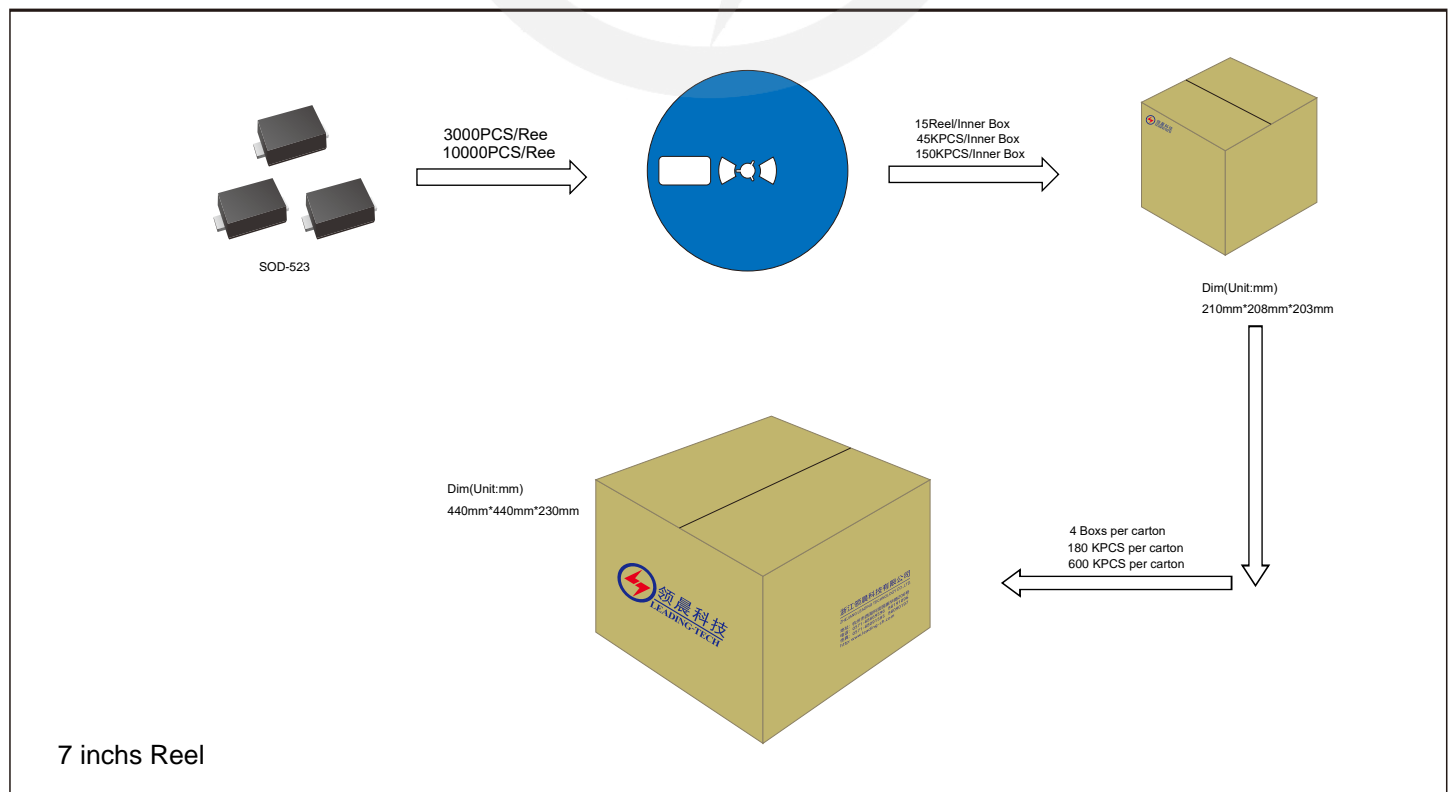
SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.500	0.770
A1	0.500	0.700
b	0.250	0.380
c	0.070	0.200
D	0.700	0.900
E	1.100	1.300
E1	1.500	1.700
E2	0.200 REF	
θ	7° REF	

SOD-523 Suggested Pad Layout



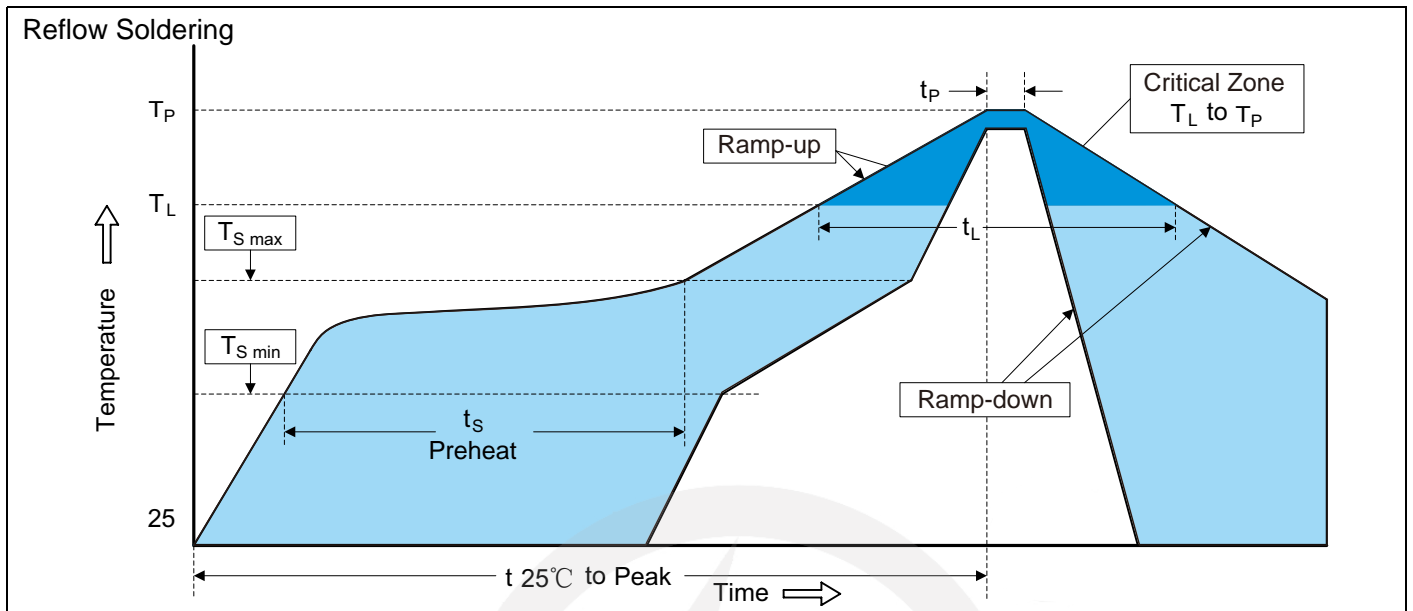
Note:

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	2024.09.27	2024.09.27	3.0	New file	/	Ding	
02	2026.01.29	2026.01.29	3.1	Add weight	/	Ding	