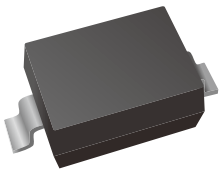
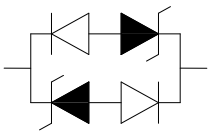
LTES03C01LBA

ESD Protection Diddes

Features





- IEC 61000-4-2 (ESD)
  - ±30kV Contact Discharge
  - ±30kV Air Discharge
- 400W 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

Machanical Data

- Case: SOD-323
- Flammability Rating: UL 94V-0
- 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
LTES03C01LBA-TR3	CC	3000PCS Tape&Reel	7 inchs
LTES03C01LBA-TR12	CC	12000PCS Tape&Reel	13 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℃	P_{pk}		400	W
Peak pulse current (tp=8/20us)@25℃	I_{PP}		25	A
ESD (IEC61000-4-2 air discharge) @25℃	V_{ESD}		±30	kV
ESD (IEC61000-4-2 contact discharge) @25℃	V_{ESD}		±30	kV
Junction temperature	T_J		125	℃
Operating temperature	T_{OP}	-40	125	℃
Storage temperature	T_{STG}	-55	150	℃
Lead temperature	T_L		260	℃

Eletrical Characteristics

At TA = 25℃ unless otherwise noted

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Stand-off Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	IT=1mA	4.0			V
Reverse Leakage Current	I_R	V_{RWM}=3.3V			1	uA
Clamping Voltage	V_C	I_{PP}=1A; tp=8/20us		8.5		V
Clamping Voltage	V_C	I_{PP}=25A; tp=8/20us		15		V
Junction Capacitance	C_J	I/O to GND; VR=0V; f=1MHz		0.8		pF

Characteristics Curve

Fig.1 Pulse rating curve

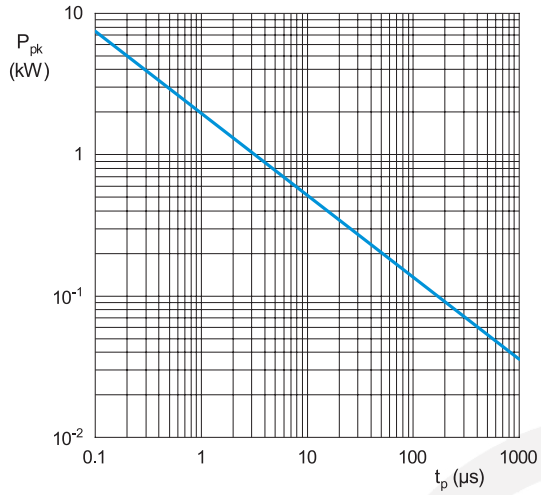


Fig.2 Peak pulse power derating curve

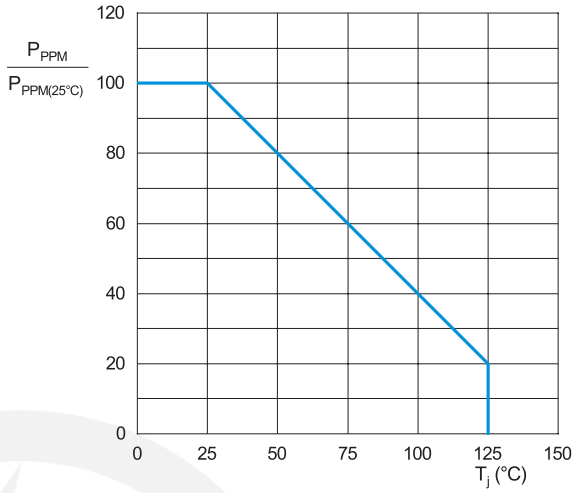


Fig.3 Pulse waveform

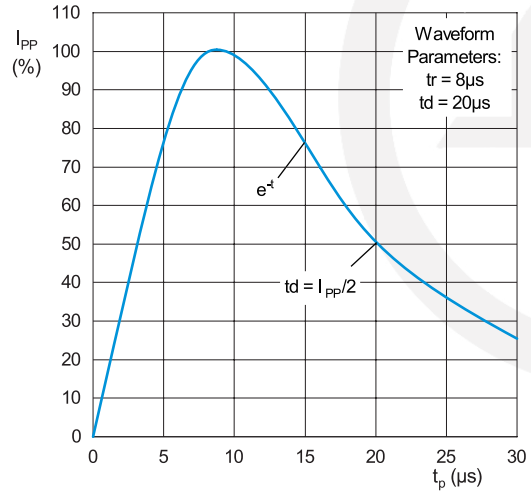
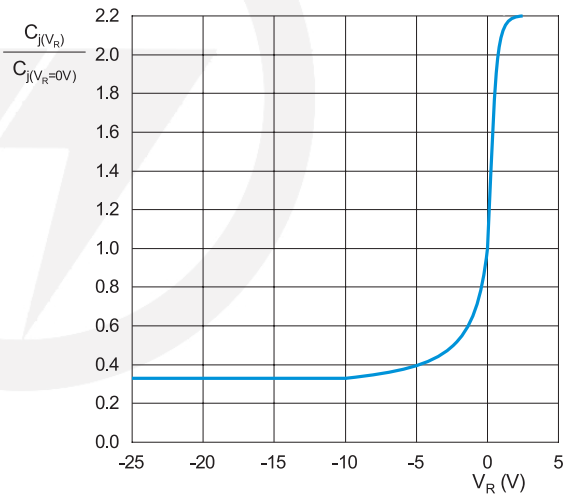
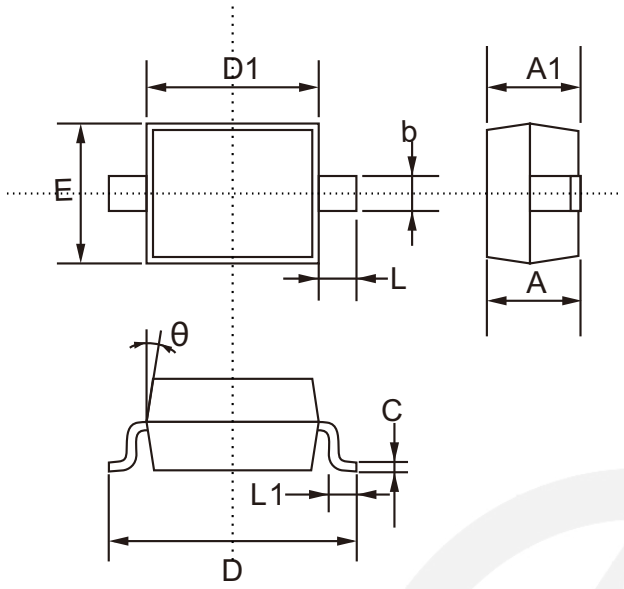


Fig.4 Capacitance vs reverse voltage



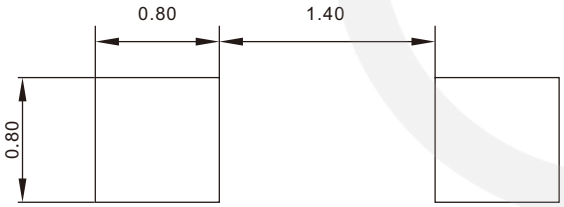
SOD-323 Package Outline



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
L1	0.100	0.400
L	0.475 TYP.	
θ	8°	

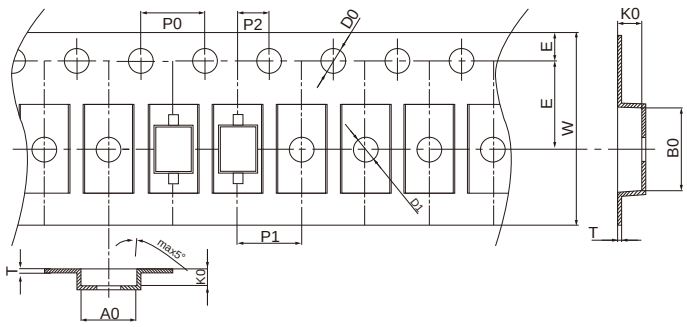
SOD-323 Suggested Pad Layout



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

Carrier Tape Dimensions

Unit：mm

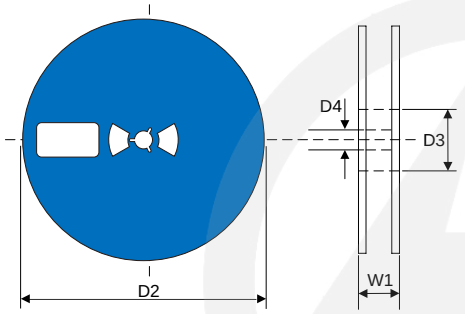


Symbol	Spec	Symbol	Spec
A0	1.41±0.10	P0	4.00±0.10
A1	0.90±0.10	P1	4.00±0.01
B0	2.90±0.10	W	8.00±0.10
B1	1.95±0.10	E	1.75±0.10
K0	1.25±0.10	F	3.50±0.05
D0	1.55±0.10	P2	2.00±0.05
D1	0.80±0.10	T	0.20±0.05

Reel Dimensions

Unit：mm

7” Reel

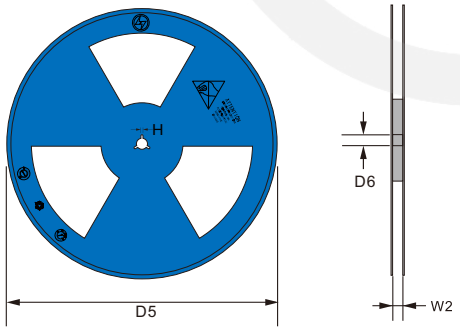


D2	Φ178.0±2.0
D3	Φ50
D4	13.0±0.5
W1	12±0.5
Quantity: 3000PCS	

Reel Dimensions

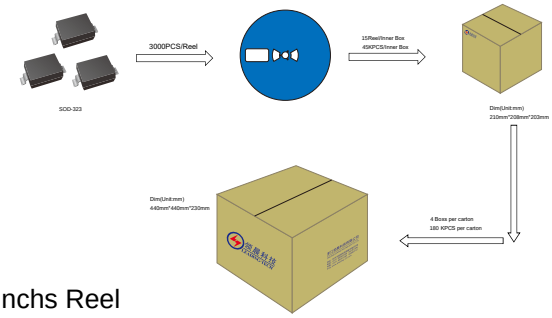
Unit：mm

13” Reel

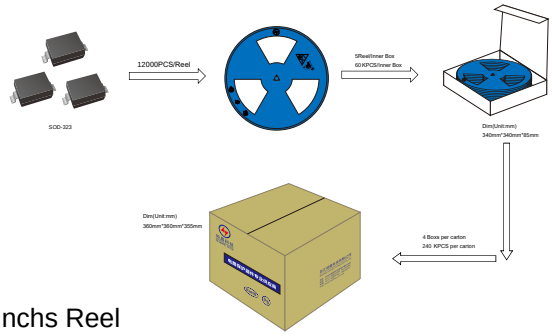


D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 12000PCS	

Packaging



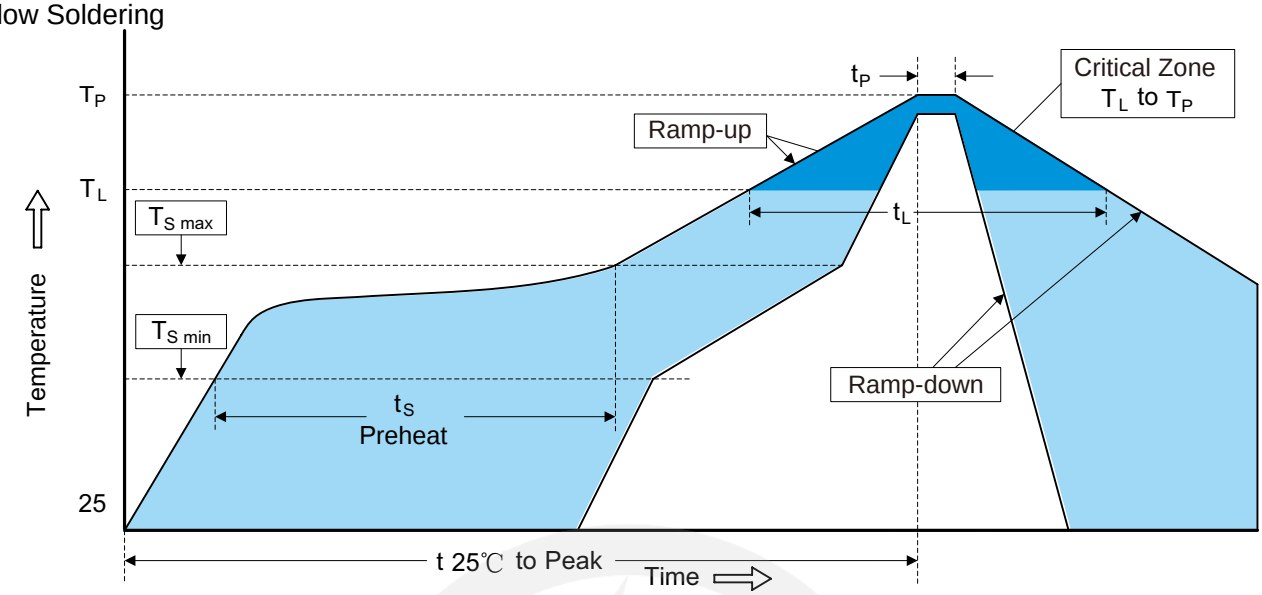
7 inchs Reel



13 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	2024.9.27	2024.9.27	3.0	New File	/	Ding	
02	2025.06.11	2025.06.11	3.1	Update packaging information	/	Ding	