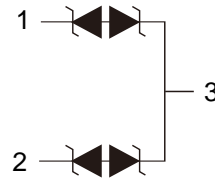
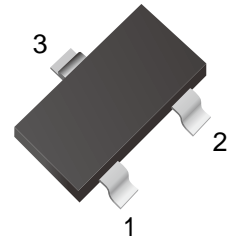


Bi-directional TVS Diode Array

Features

- Transient protection for high-speed data lines
IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (Contact)
 $\pm 30\text{kV}$ (Air)
IEC 61000-4-4 (EFT) 40A (5/50ns)
- Peak power dissipation: 500W (8/20 μs)
- Working voltages: 3.3V, 5V
- Low clamping voltage
- Low leakage current
- Protects two bidirectional lines
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case: SOT-23
- 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
- Networking and Telecom
- Serial and Parallel Ports
- Peripherals

Ordering Information

Part Number	Shipping	Reel
LTE23TxxC02M-TR3	3000PCS Tape&Reel	7 inches
LTE23TxxC02M-TR12	12000PCS Tape&Reel	13 inches

Absolute Maximum Rating

Symbol	Parameter	Value	Unit
V_{ESD}	ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air)	± 30 ± 30	kV
P_{PP}	Peak Pulse Power (8/20 μs)	500	W
T_{OPT}	Operating Temperature	-55 ~ 125	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	-55 ~ 150	$^{\circ}\text{C}$



Electrical Characteristics (Tamb=25°C)

Part Number	Device Marking	V _{RWM} (V) (max.)	V _B (V) (min.)	I _T (mA)	V _{C@1A} (V) (max.)	V _C (V) (max.) (@A)	I _R (μA) (max.)	C _J (pF) (max.)
LTE23T03C02M	3CM	3.3	3.6	1	6.5	18.0	34	75
LTE23T05C02M	5CM	5.0	5.6	1	9.8	22.0	23	65

Characteristic Curves

Fig.1 8x20μs Waveform per IEC 61000-4-5

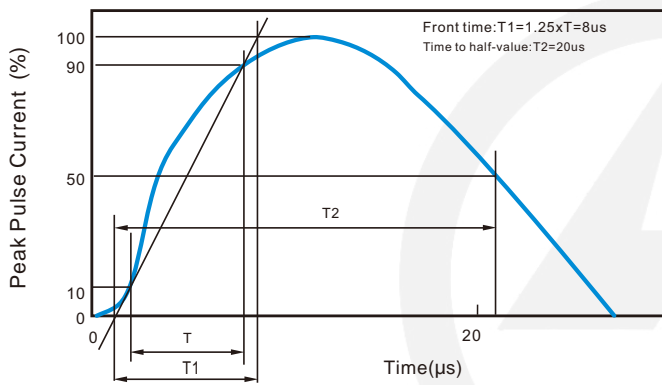


Fig.2 Contact Discharge Current Waveform per IEC 61000-4-2

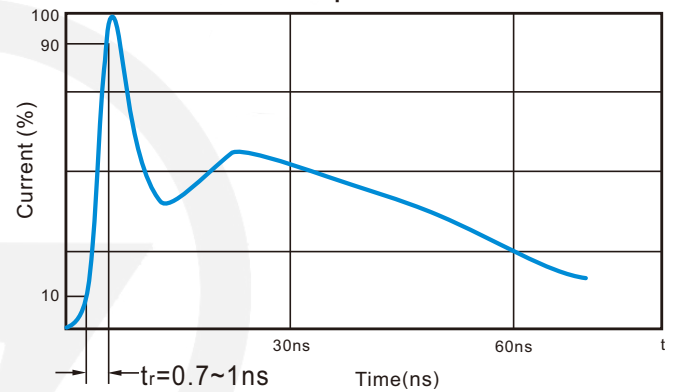


Fig.3 Voltage vs Capacitance

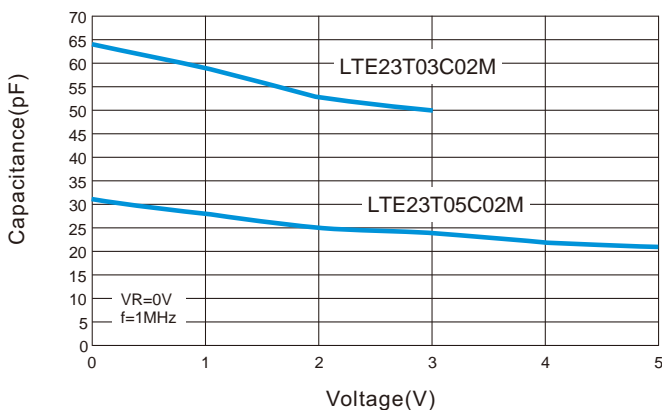
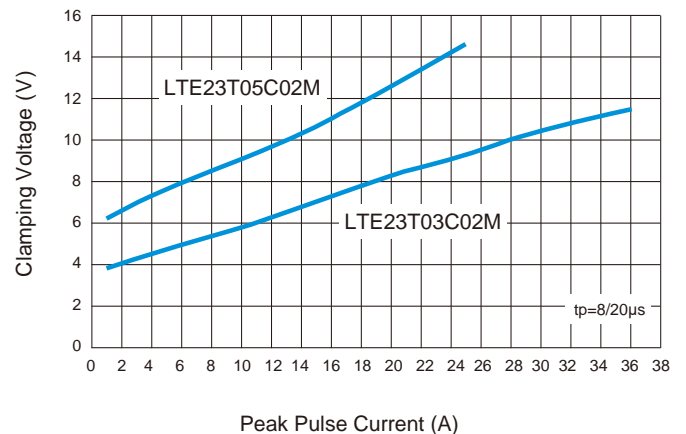
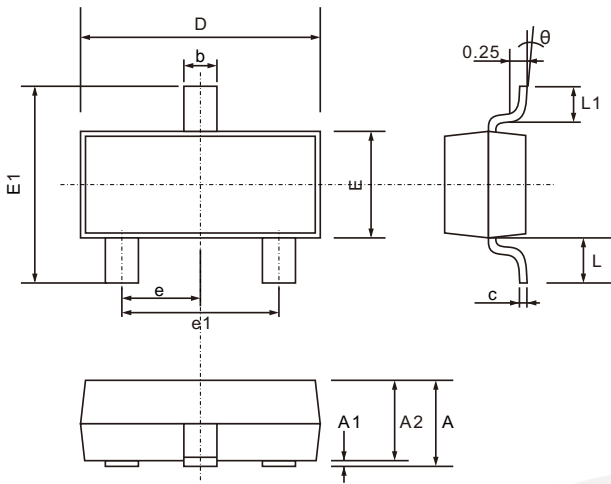


Fig.4 Clamping Voltage vs Peak Pulse Current



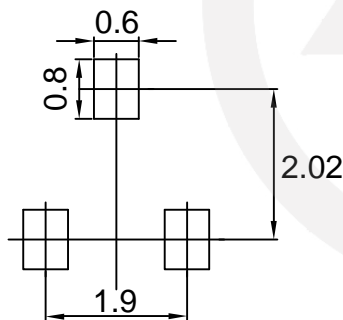
SOT-23 Package Outline

Unit: mm



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.200
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.200
D	2.700	3.100
E	1.200	1.400
E1	2.200	2.600
e	0.950 TYP.	
e1	1.750	2.050
L	0.550 TYP.	
L1	0.300	0.500
θ	0°	8°

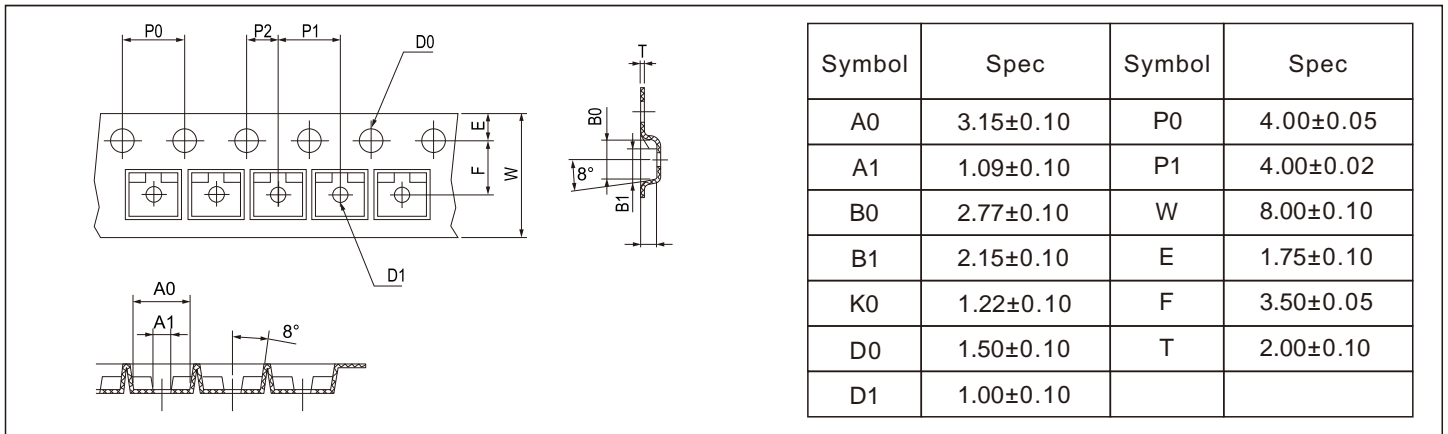
SOT-23 Suggested Pad Layout



Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$
 3. The pad layout is for reference purpose only.

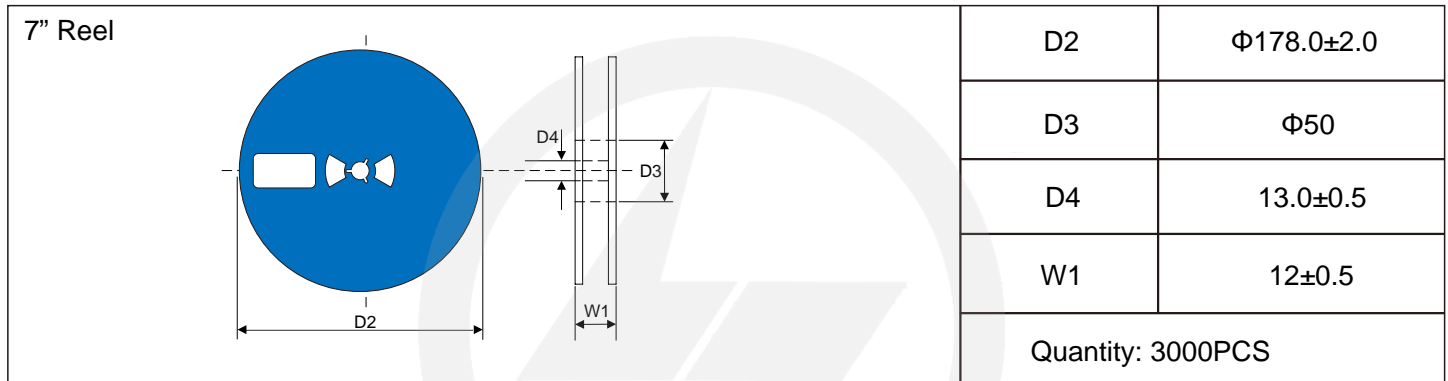
Carrier Tape Dimensions

Unit : mm



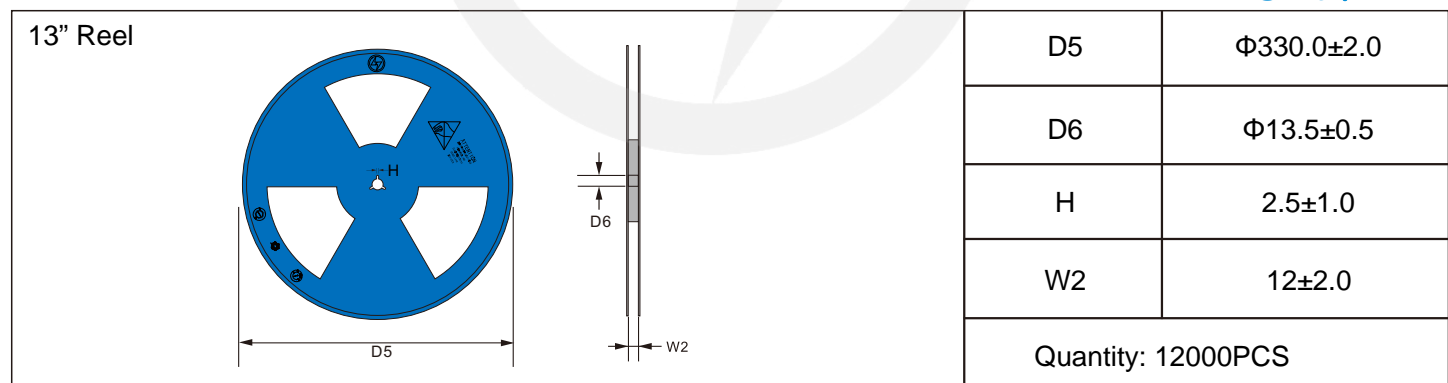
Reel Dimensions

Unit : mm

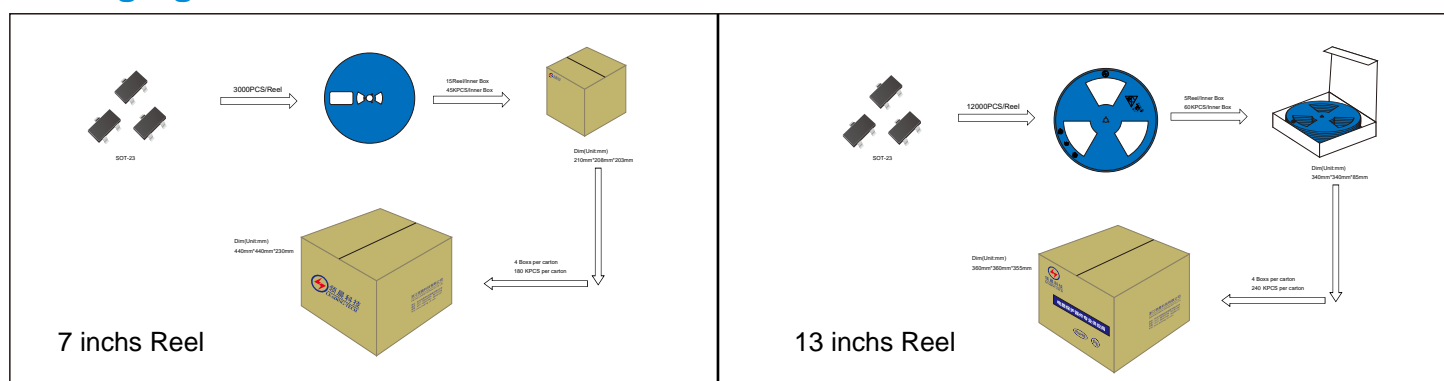


Reel Dimensions

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	2024.05.20	2024.05.20	3.0	New file	/	Ding	
02	2025.06.12	2025.06.12	3.1	Update packaging information	/	Ding	
03	2026.03.04	2026.03.04	3.2	Package outline E1(max)=2.6mm	/	Ding	