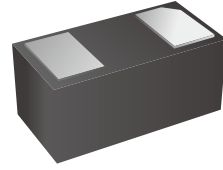


## TVS/ESD Protection Diode

### Features

- Transient protection for high-speed data lines  
IEC 61000-4-2 (ESD)    ±30kV (Contact)  
   ±30kV (Air)
- Protects one directional I/O or Vcc line
- Low clamping voltage
- Working voltages : 36V
- Low leakage current
- Lead free in comply with EU RoHS 011/65/EU directives



### Mechanical Data

- Case:DFN1006
- 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
- LED bypass

### Ordering Information

Part Number	Marking	Shipping	Reel
LTE10N36A01-TR10	YN	10000PCS Tape&Reel	7 inches

### Absolute Maximum Ratings

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 (8/20us)	55	W
$T_{OPT}$	Operating Temperature	-55~125	°C
$T_{STG}$	Storage Temperature	-55~150	°C



Electrical Characteristics (Tamb=25°C)

Symbol	Parameter	Test Condition	Min	Typ	Max	Unit
V <sub>RWM</sub>	Reverse Working Voltage				36	V
V <sub>BR</sub>	Reverse Breakdown Voltage	I <sub>T</sub> = 1mA	40			V
I <sub>R</sub>	Reverse Leakage Current	V <sub>RWM</sub> = 36V			5	μA
V <sub>C</sub>	Clamping Voltage	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs			55	V
C <sub>J</sub>	Junction Capacitance	V <sub>R</sub> = 0V, f = 1MHz			28	pF

Characteristics Curve

Fig.1 8/20us Waveform per IEC61000-4-5

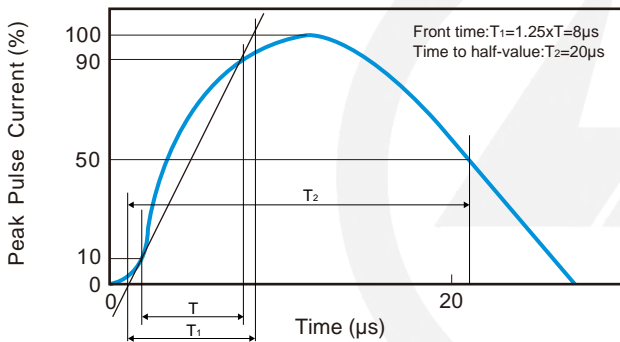


Fig.2 Contact Discharge Current Waveform per IEC 61000-4-2

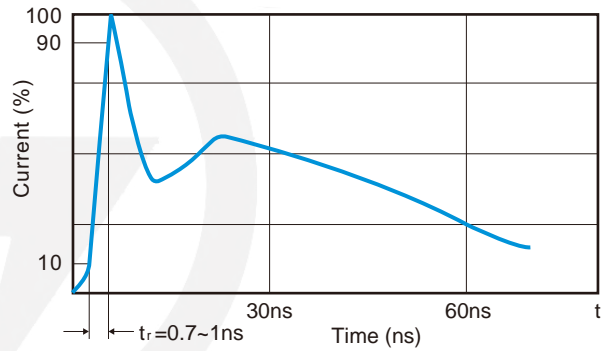


Fig.3 Power Derating Curve

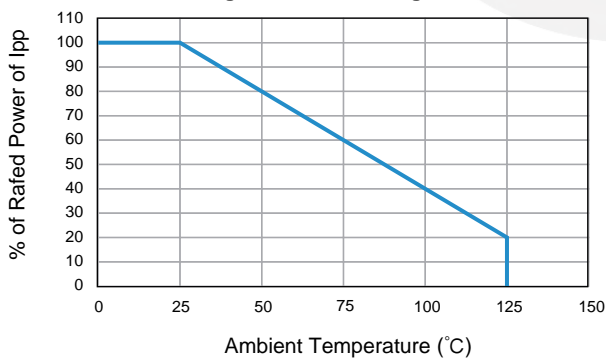


Fig.4 Voltage Sweeping

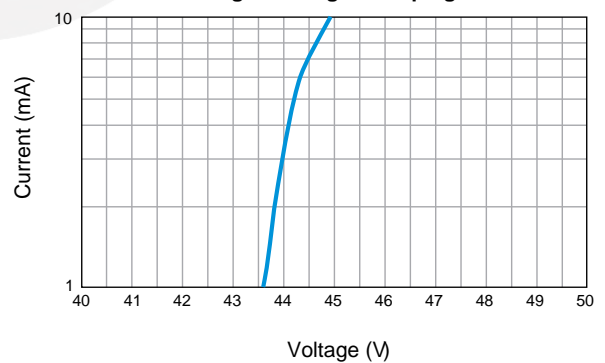


Fig.5 Voltage vs Capacitance

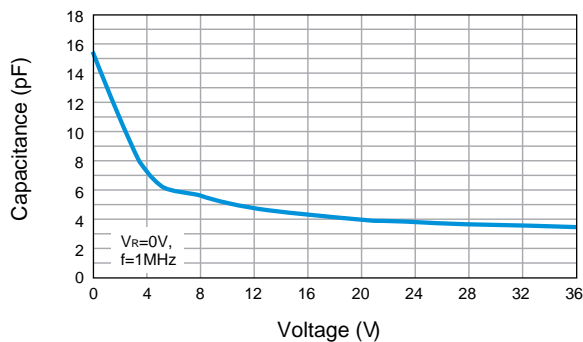
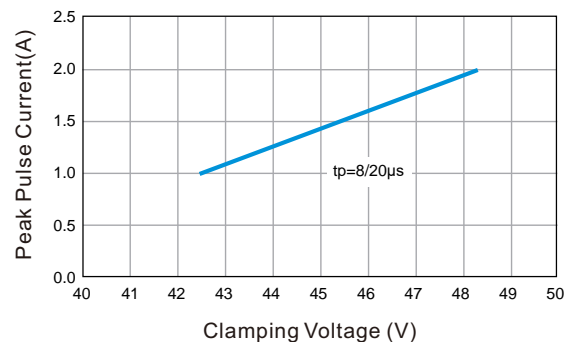
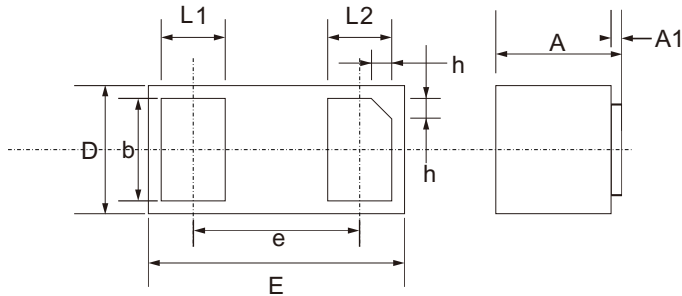


Fig.6 Clamping Voltage vs Peak Pulse Current



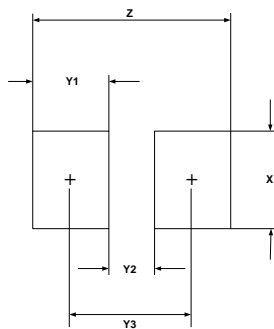
## DFN-1006 Package Outline

Unit : mm



SYMBOL	DIMENSIONS	
	MIN.	MAX.
D	0.550	0.650
E	0.950	1.050
L1	0.200	0.300
L2	0.200	0.300
b	0.450	0.550
e	0.650 TYP.	
A	0.450	0.550
A1	0.000	0.050
h	0.070	0.170

## DFN-1006 Suggested Pad Layout



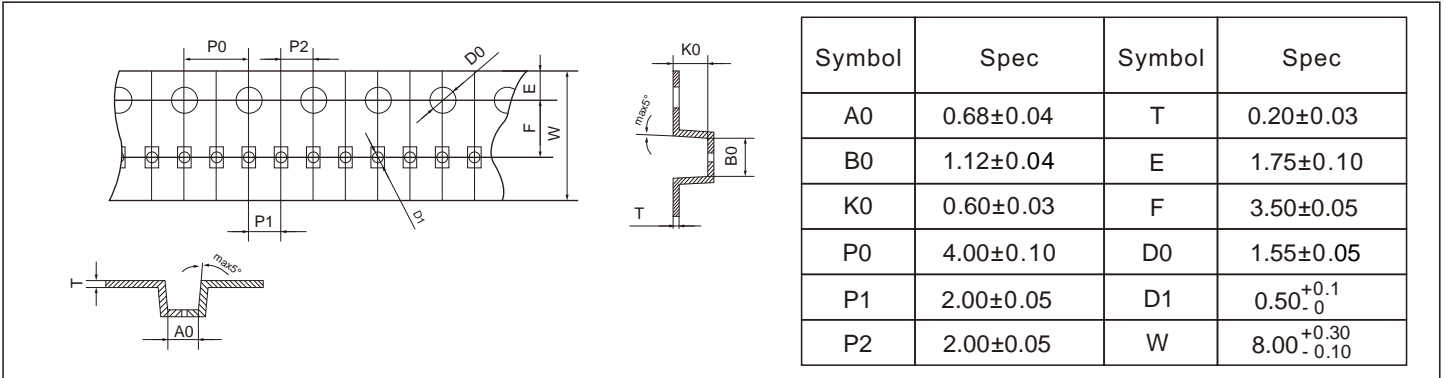
SYM	DIMENSIONS
	MILLIMETERS
X	0.60
Y1	0.50
Y2	0.30
Y3	0.80
Z	1.30

**Note:**

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

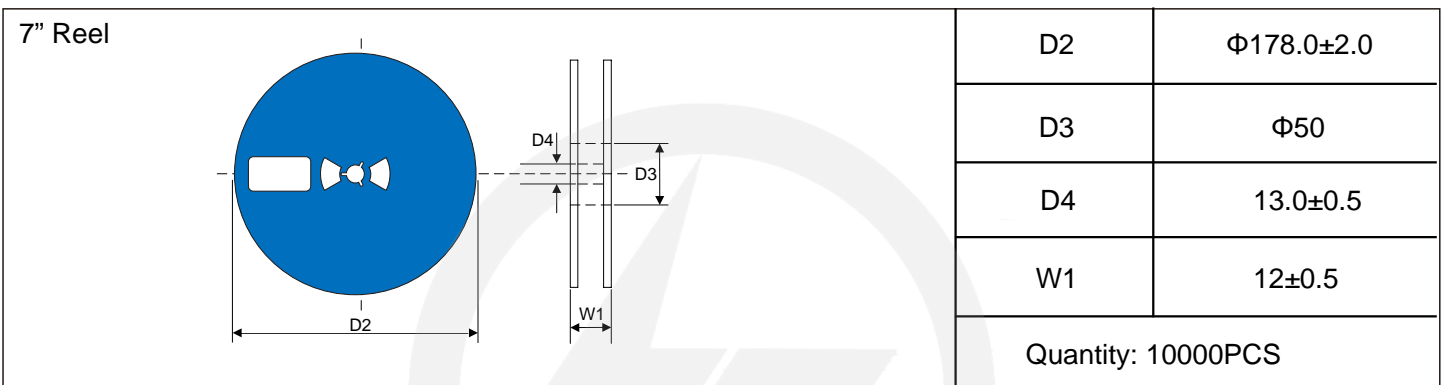
**Carrier Tape Dimensions**

Unit : mm

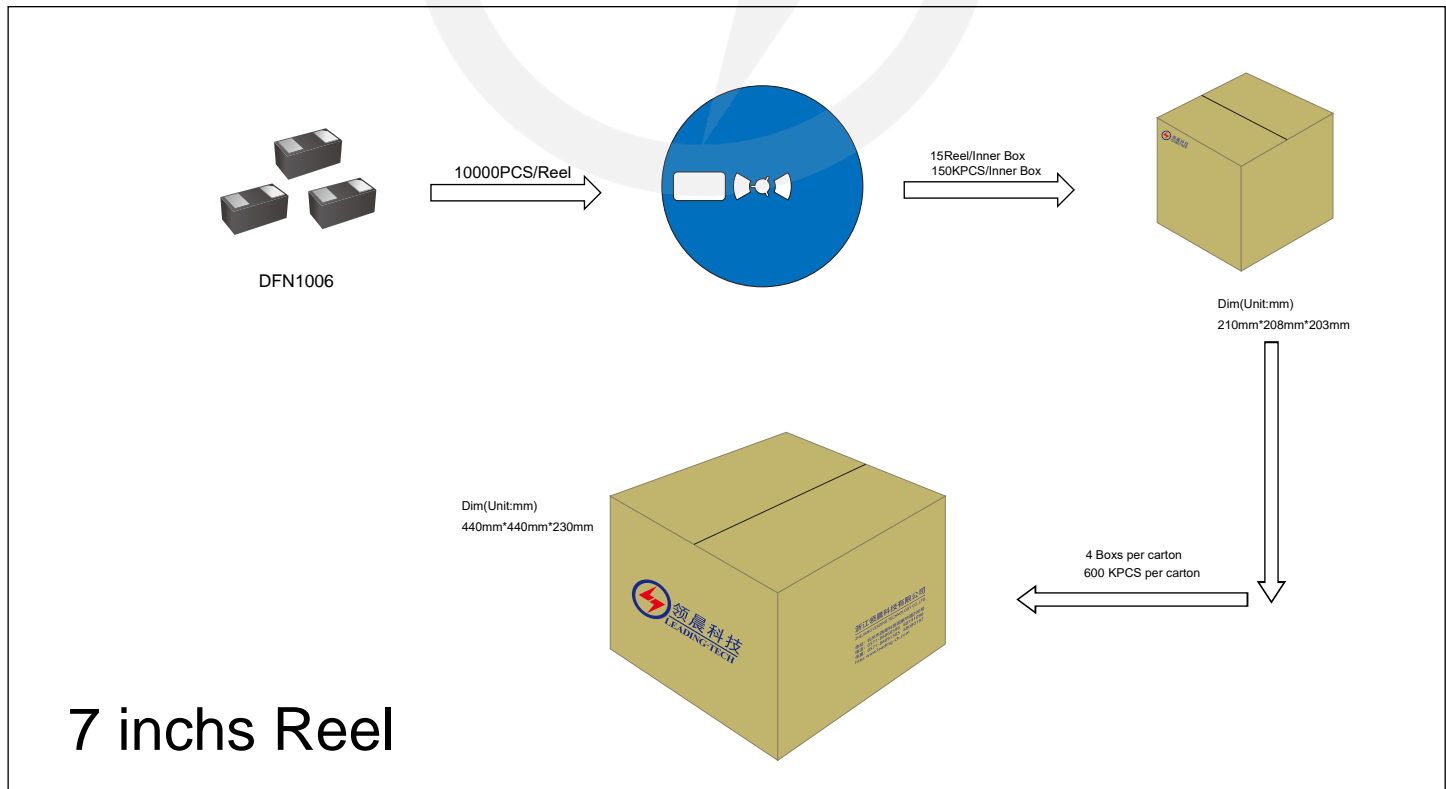


**Reel Dimensions**

Unit : mm



**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	2024.05.16	2024.05.16	3.0	New File	/	Ding	