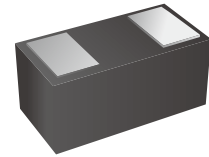


ESD Protection Diddes

Features

- 1000 Watts peak pulse power (tP=8/20μs)
- Low leakage current
- Low clamping voltage
- Solid-state silicon-avalanche technology
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case:DFN1006
- Flammability Rating: UL 94V-0
- Material: Halogen free
- Approx. Weight: 0.84mg

Applications

- Power lines
- Personal digital assistants (PDA's)
- Microprocessors based equipment
- Notebooks, desktops, and servers
- Cell phone handsets and accessories
- Portable electronics
- Peripherals

Ordering Information

Part Number	Marking	Shipping	Reel
LTE10N05C01HD-TR10	5H	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}	-	1000	W
Peak pulse current (tp=8/20us)@25°C	I _{PP}	-	90	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	-	125	°C
Operating temperature	T _{OP}	-40	125	°C
Storage temperature	T _{STG}	-55	150	°C
Lead temperature	T _L	-	260	°C

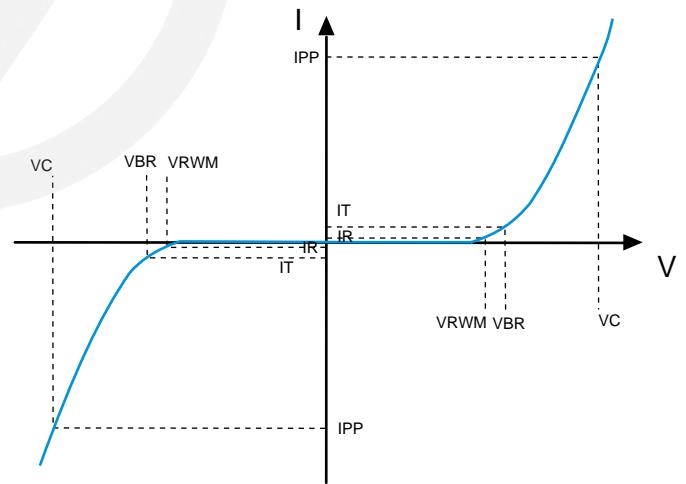


Electrical Characteristics

At TA = 25°C unless otherwise noted

Parameters	Symbol	conditions	Min	Typ	Max	Unit
Reverse stand-off voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	5.5			V
Reverse Leakage Current	I_R	$V_{RWM} = 5V$			1	μA
Clamping Voltage	V_{CL}	$I_{PP} = 1A; TP = 8/20\mu s$		7		V
		$I_{PP} = 50A; TP = 8/20\mu s$		9		
		$I_{PP} = 90A; TP = 8/20\mu s$		10		
Junction capacitance	CJ	$V_{RWM} = 0V, f = 1MHz$		200		pF

Symbol	Parameters
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}





Characteristic Curves

Fig.1 Pulse rating curve

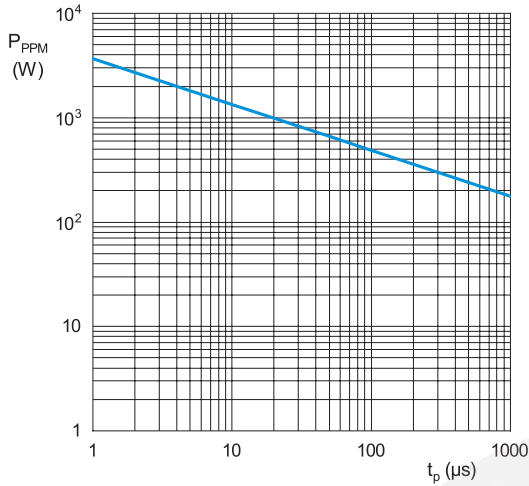


Fig.2 Peak pulse power derating curve

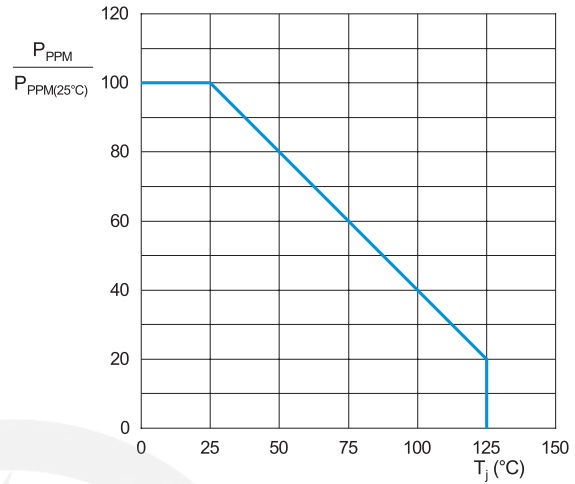


Fig.3 Pulse waveform

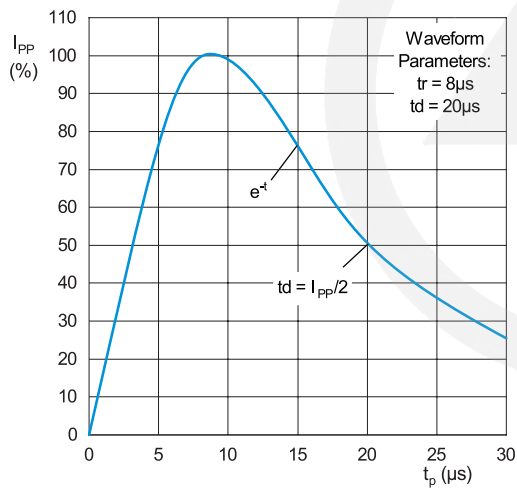
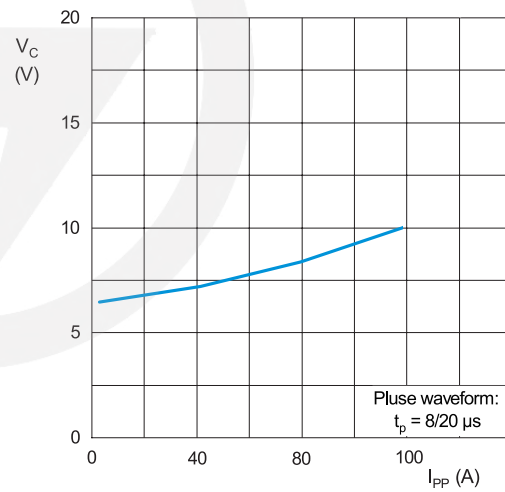
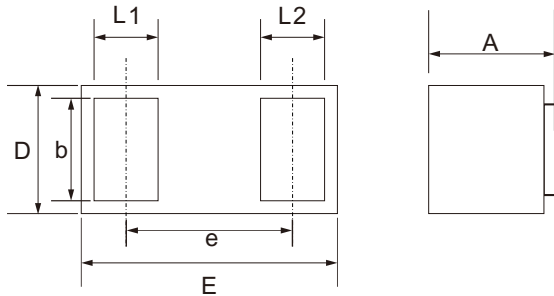


Fig.4 Clamping voltage vs Peak pulse current



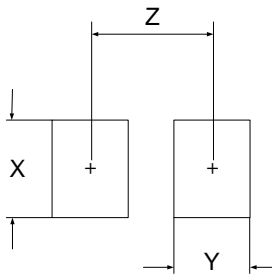
DFN1006 Package Outline

Unit: mm



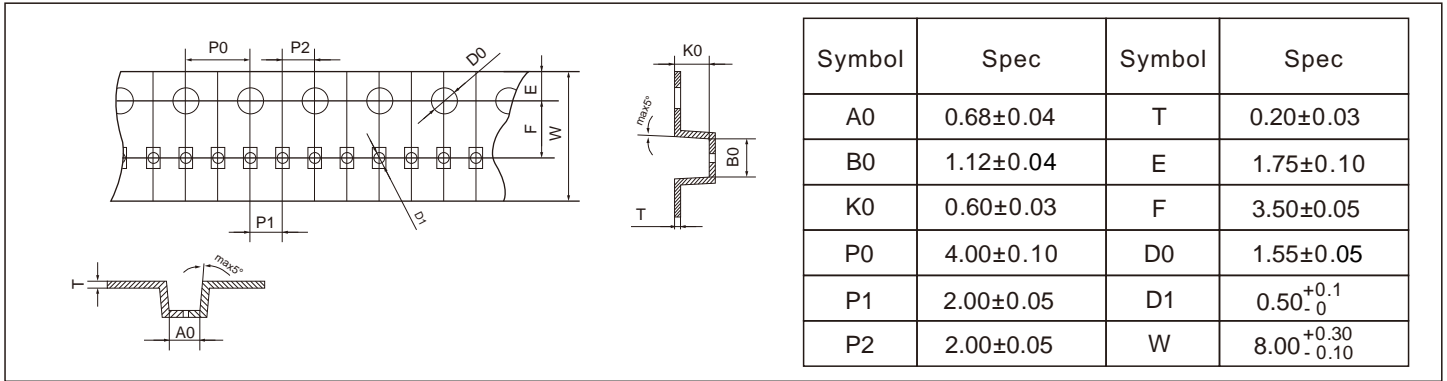
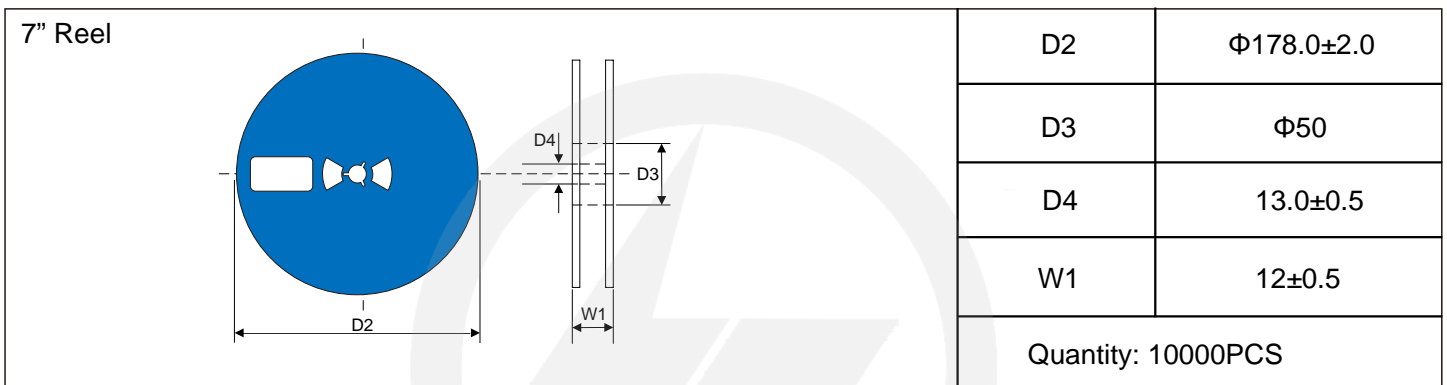
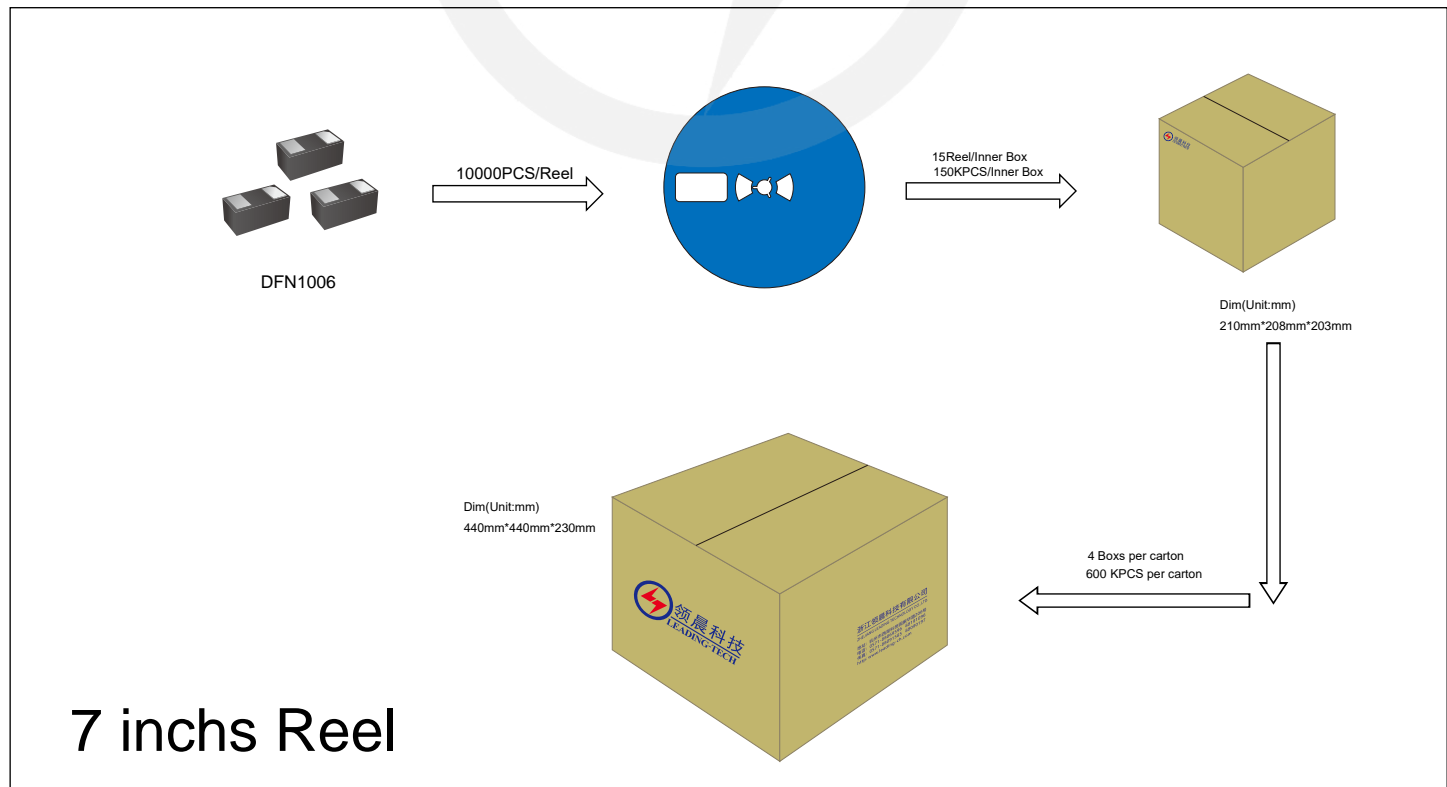
SYMBOL	DIMENSIONS	
	MIN.	MAX.
D	0.550	0.650
E	0.950	1.050
L1	0.200	0.300
L2	0.200	0.300
b	0.450	0.550
e	0.650 TYP.	
A	0.450	0.550

DFN1006 Suggested Pad Layout



SYM	DIMENSIONS
	MILLIMETERS
X	0.50
Y	0.50
Z	0.90

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.

Important Notice and Disclaimer

Leading-Tech reverses the right to make changes to this document and its products and specifications at any time without notice.

Customers should obtain and confirm the latest product information and specifications before final design,purchase or use.

Leading-Tech makes no warranty,representation or guarantee regarding the suitability of its products for any particular purpose,not does Leading-Tech assume any liability for application assistance or customer product design.

Leading-Tech does not warrant or accept any liability with products which are purchase or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Leading-Tech.

Leading-Tech products are not authorized for use as critical components in life support devices or systems without express written approval of Leading-tech.

Version Update Information

Series NO.	Enactment/Revision Date	Effective Date	Version	Revision content	Revision Reason	Revision Person	Note
01	2025.03.03	2025.03.03	3.0	New File	/	Ding	