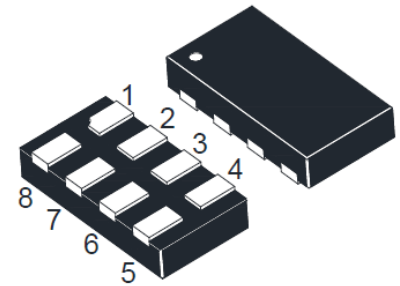




FEATURES

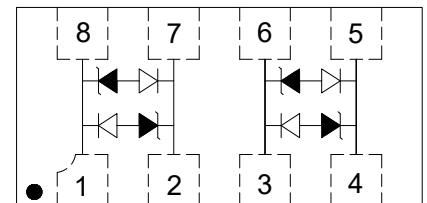
- ◇ Protects two line pairs
- ◇ Low operating voltage: 3.3V
- ◇ Low capacitance: 1.0pF maximum
- ◇ 350W peak pulse power per line ($t_P=8/20\mu s$)
- ◇ Low operating and clamping voltage
- ◇ Low leakage current
- ◇ RoHS compliant



DFN2010-8L

MAIN APPLICATIONS

- ◇ 10/100/1000 ethernet
- ◇ Integrated magnetics /RJ-45 connectors
- ◇ LAN/WAN equipment
- ◇ Security cameras
- ◇ Industrial controls
- ◇ Notebooks & desktop computers



Pin configuration

PROTECTION SOLUTION TO MEET

- ◇ IEC61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact)
- ◇ IEC61000-4-4 (EFT) 40A (5/50ns)
- ◇ IEC61000-4-5 (Lightning) 20A (8/20 μs)

MECHANICAL CHARACTERISTICS

- ◇ DFN2010-8L package
- ◇ Molding compound flammability rating: UL 94V-0
- ◇ Quantity per reel: 3,000pcs
- ◇ Lead finish: lead free
- ◇ Marking code: LC33

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation at 8/20 μs waveform	P_{PP}	350	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 30 ± 30	kV
Lead soldering temperature	T_L	260 (10 sec.)	$^{\circ}\text{C}$
Operating junction temperature range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse working voltage	V_{RWM}				3.3	V
Reverse breakdown voltage	V_{BR}	$I_T=1\text{mA}$	3.5	4.2		V
Reverse leakage current	I_R	$V_{RWM}=3.3\text{V}$		0.01	0.1	μA
Clamping voltage	V_C	$I_{PP}=1\text{A}$, $t_P=8/20\mu\text{s}$		6	7	V
		$I_{PP}=12\text{A}$, $t_P=8/20\mu\text{s}$		11	15	
		$I_{PP}=20\text{A}$, $t_P=8/20\mu\text{s}$		15	18	
Junction capacitance	C_J	$V_{RWM}=0\text{V}$, $f=1\text{MHz}$, pins 1, 8 to 2, 7 and pins 3, 6 to 4, 5		0.6	1.0	pF

RATINGS AND V-I CHARACTERISTICS CURVES ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

FIG.1: V- I curve characteristics (Bi-directional)

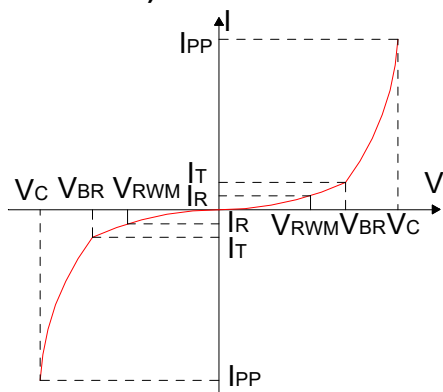


FIG.2: Pulse waveform (8/20 μs)

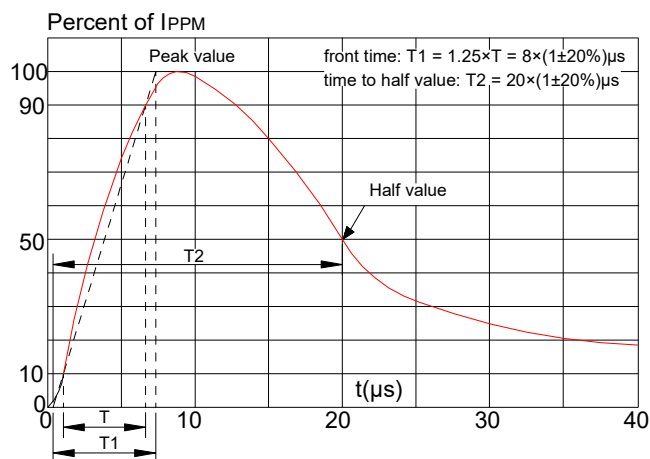


FIG.3: Pulse derating curve

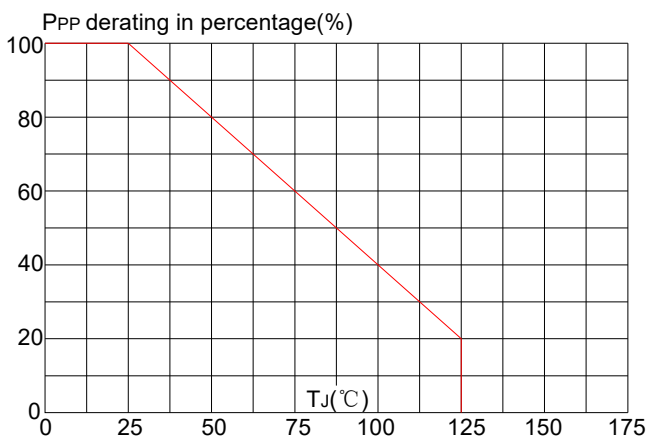
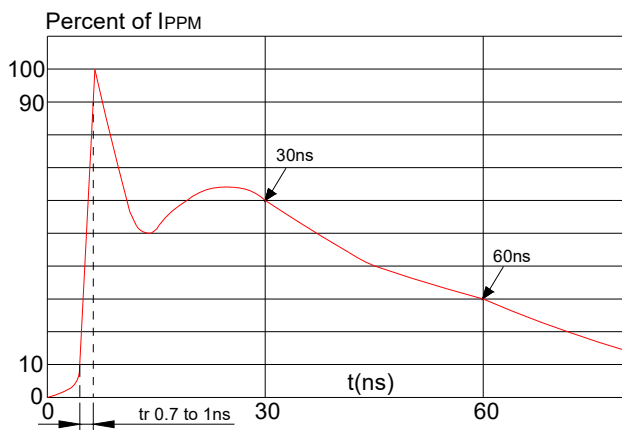
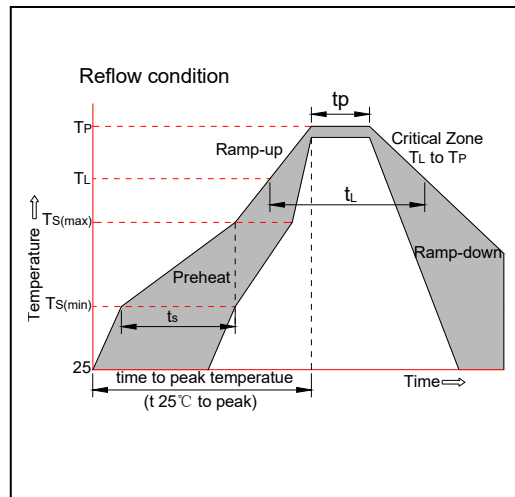


FIG.4: ESD clamping (30kV contact)

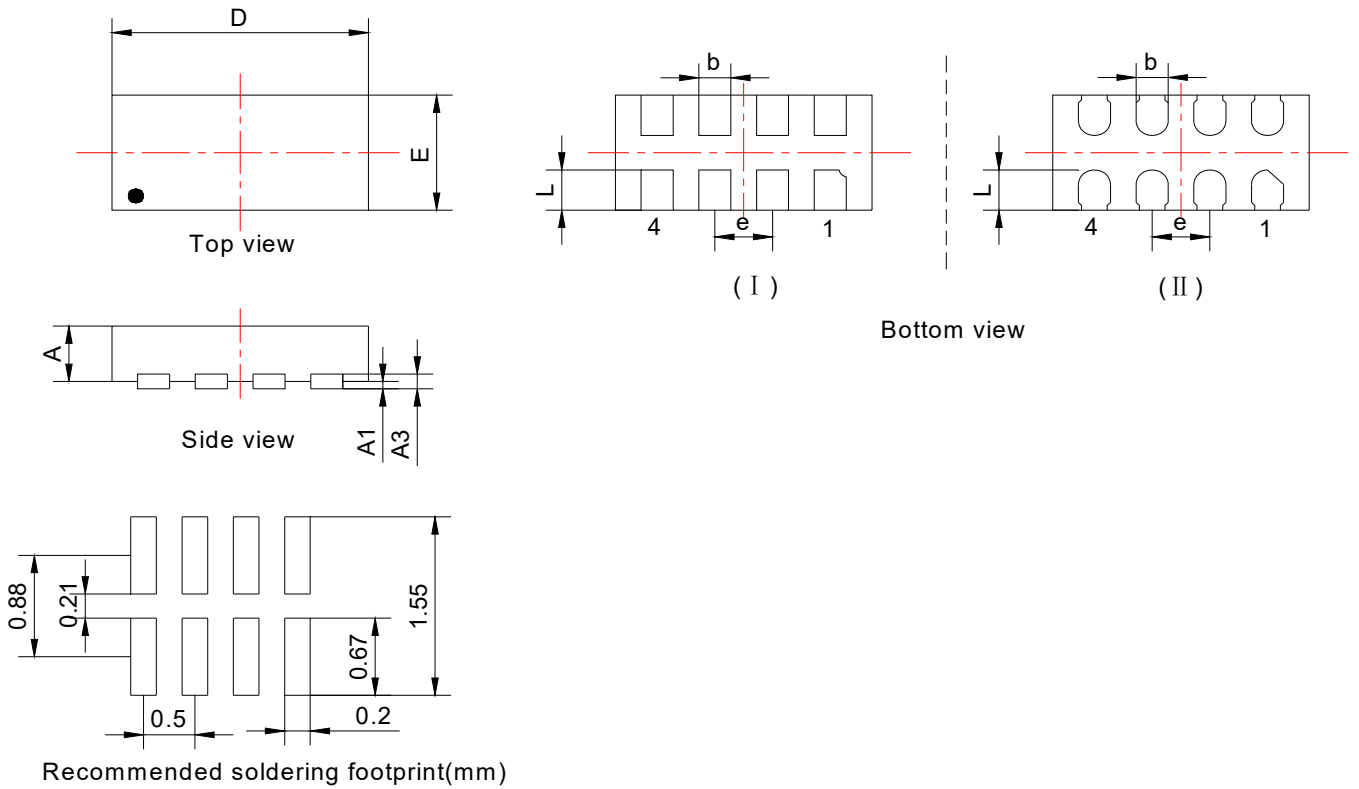


SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min (T _{s(min)})	+150°C
	-Temperature Max(T _{s(max)})	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquidus Temp (T _L) to peak)		3°C/sec. Max
T _{s(max)} to T _L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T _L)(Liquidus)	+217°C
	-Temperature(t _L)	60-150 secs.
Peak Temp (T _p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t _p)		20-40secs.
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T _p)		8 min. Max
Do not exceed		+260°C

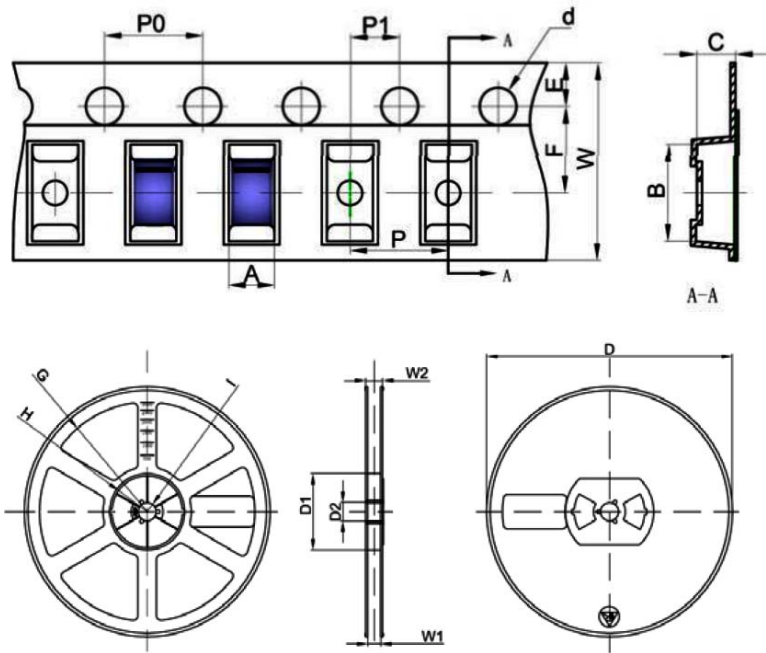


PACKAGE MECHANICAL DATA



Symbol	Millimeters			Inches		
	Min	Typ	Max	Min	Typ	Max
A	0.42	0.48	0.55	0.017	0.019	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	-	0.127	-	-	0.005	-
b	0.20	0.25	0.30	0.008	0.010	0.012
D	1.90	2.00	2.10	0.075	0.079	0.083
E	0.90	1.00	1.10	0.035	0.039	0.043
e	-	0.50	-	-	0.020	-
L	0.30	0.36	0.43	0.012	0.014	0.017

TAPE AND REEL INFORMATION-DFN2010-8L



Symbol	Millimeters	Inches
	Typ	Typ
A	1.12	0.044
B	2.20	0.087
C	0.63	0.025
d	Φ1.50	Φ0.059
D	Φ178	7.008
D1	54.40	2.142
D2	13.00	0.512
E	1.75	0.069
F	3.50	0.138
G	R78.00	3.071
H	R25.60	1.008
I	R6.50	0.256
P0	4.00	0.157
P	4.00	0.157
P1	2.00	0.079
W	8.00	0.315
W1	9.50	0.374
W2	12.30	0.484

ORDERING INFORMATION

PART No.	Package	Quantity Per Reel (PCS)	Reel Size
JEB3312T	DFN2010-8L	3,000	7 Inch

MARKING CODE

Part Number	Marking Code
JEB3312T	<p>LC33</p>


JieJie products are not designed for, and shall not be used for, any purpose (including, without limitation, automotive, military, aerospace, medical, life-saving, life-sustaining or nuclear facility applications, devices intended for surgical implant into the body, or any other application in which the failure or lack of desired operation of the product may result in personal injury, death, or property damage) other than those expressly set forth in applicable JieJie product documentation. Warranties granted by JieJie shall be deemed void for products used for any purpose not expressly set forth in applicable JieJie documentation. JieJie shall not be liable for any claims or damages arising out of products used in applications not expressly intended by JieJie as set forth in applicable JieJie documentation. The sale and use of JieJie products is subject to JieJie terms and conditions of sale, unless otherwise agreed by JieJie.

Information furnished in this document is believed to be accurate and reliable. However, Jiangsu JieJie Microelectronics Co., Ltd. assumes no responsibility for the consequences of use without consideration for such information nor use beyond it.

Information mentioned in this document is subject to change without notice, apart from that when an agreement is signed, Jiangsu JieJie complies with the agreement.

Products and information provided in this document have no infringement of patents. Jiangsu JieJie assumes no responsibility for any infringement of other rights of third parties which may result from the use of such products and information.

This document is the second version which is made in 13-Aug.-2024. This document supersedes and replaces all information previously supplied.

 is a registered trademark of Jiangsu JieJie Microelectronics Co., Ltd.

Copyright ©2024 Jiangsu JieJie Microelectronics Co., Ltd. Printed All rights reserved.