



JEU24P3 TVS Diode array for ESD Protection

Rev.1.1

FEATURES

- ✧ 5100 Watts peak pulse power dissipation($t_P=8/20\mu s$)
- ✧ Low leakage current
- ✧ Low clamping voltage
- ✧ Solid-state silicon-avalanche technology
- ✧ RoHS compliant



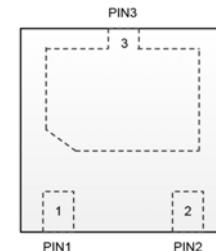
DFN2x2-3L

MAIN APPLICATIONS

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



Circuit Diagram



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) 200A ($8/20\mu s$)

MECHANICAL CHARACTERISTICS

- ✧ DFN2x2-3L package
- ✧ Molding compound flammability rating: UL 94V-0
- ✧ Quantity per reel: 3,000pcs
- ✧ Lead finish: lead free
- ✧ Marking code: H24

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

Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 8/20 μs waveform	P_{PP}	5100	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}				24	V
Reverse breakdown voltage	V_{BR}	$I_T=1\text{mA}$	26			V
Reverse leakage current	I_R	$V_{RWM}=24\text{V}$			0.5	μA
Clamping voltage	V_c	$I_{PP}=200\text{A}, t_P=8/20\mu\text{s}$		33	35	V
Junction capacitance	C_J	$V_{RWM}=0\text{V}, f=1\text{MHz}$		750		pF

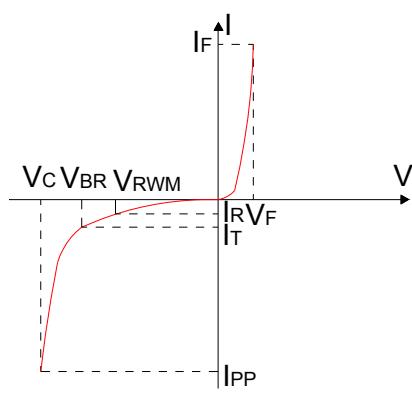
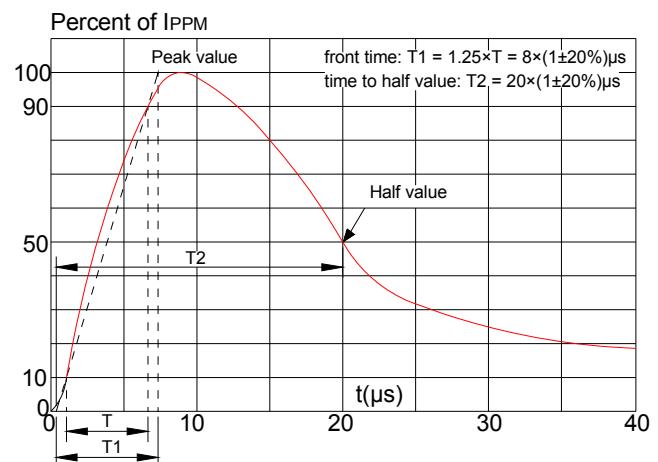
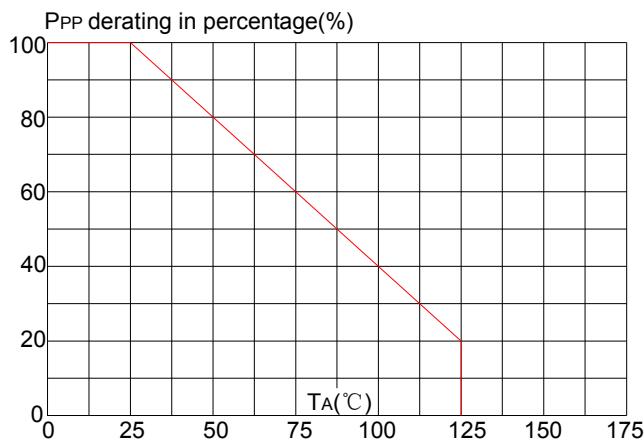
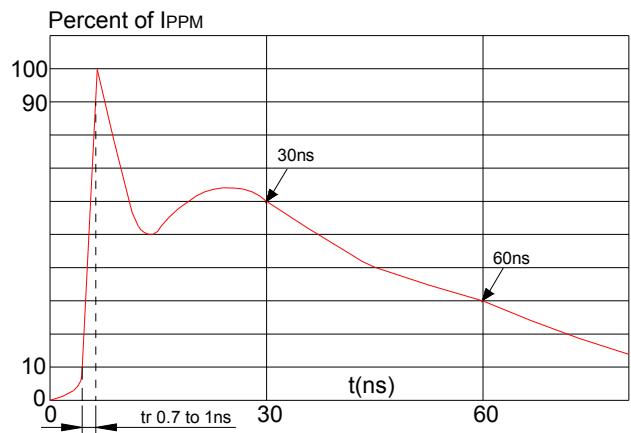
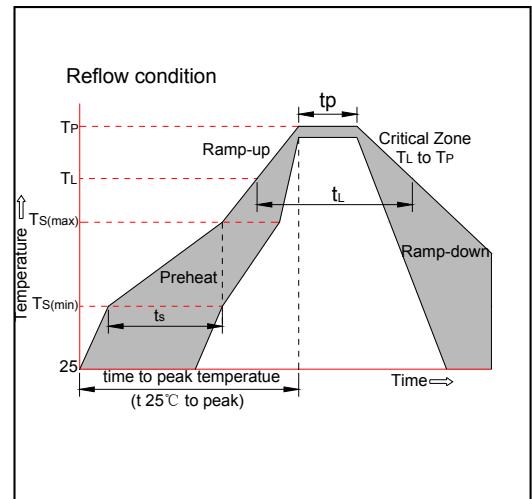
RATINGS AND V-I CHARACTERISTICS CURVES ($T_A=25^\circ\text{C}$, unless otherwise noted)**FIG.1:V- I curve characteristics
(Uni-directional)****FIG.2: Pulse waveform (8/20 μs)**

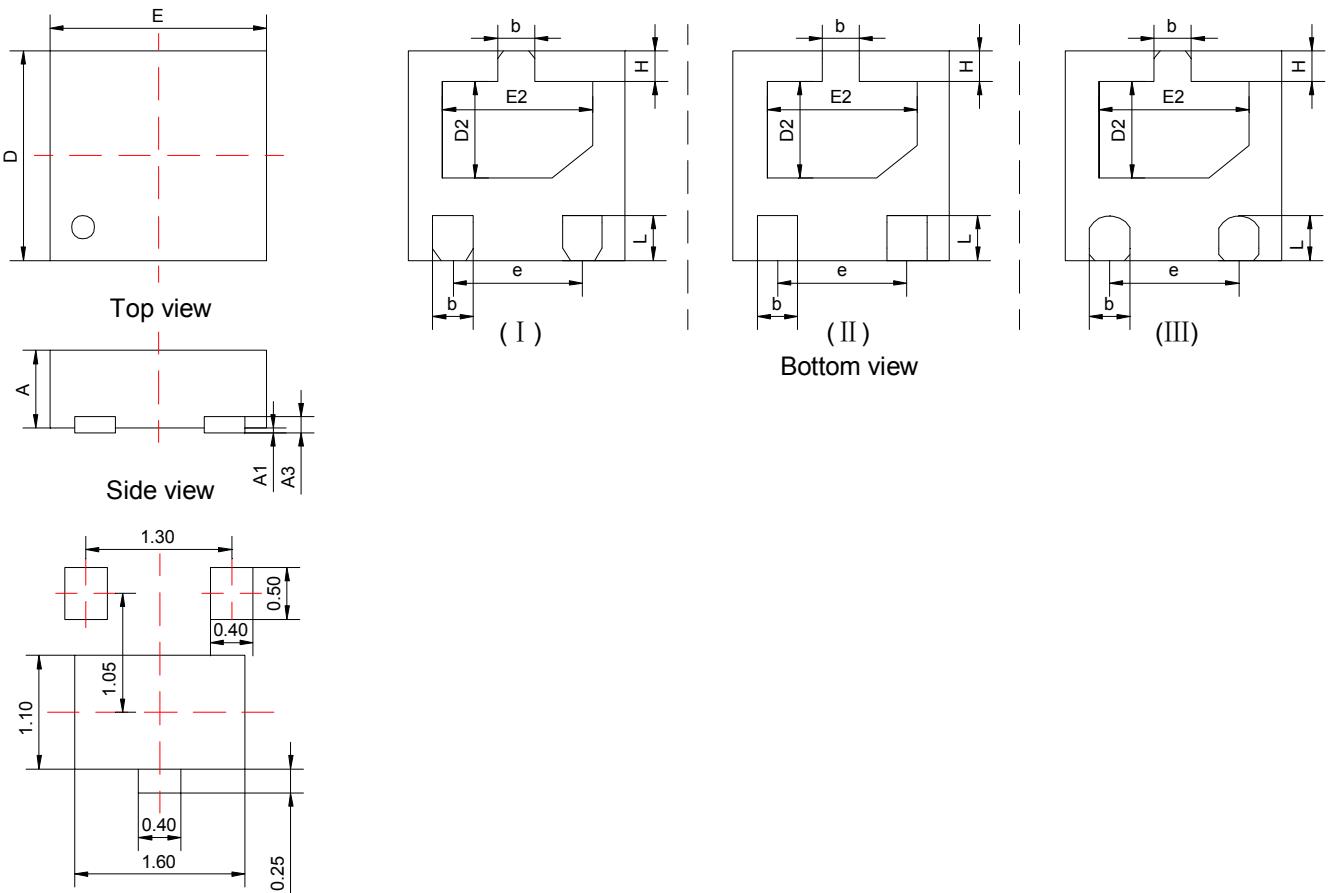
FIG.3: Pulse derating curve**FIG.4: ESD clamping(30kV contact)**

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



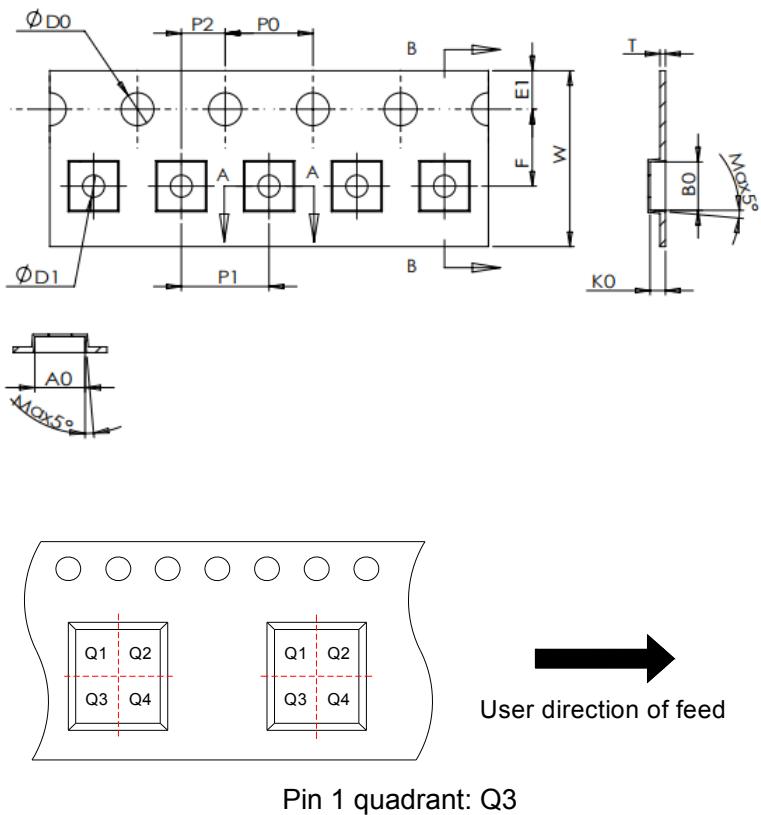
PACKAGE MECHANICAL DATA



Recommended soldering footprint(mm)

Symbol	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	0.45	0.50	0.60	0.018	0.020	0.024
A1	0.00	0.02	0.05	0.000	0.001	0.002
A3	0.15REF			0.006REF		
b	0.25	0.30	0.35	0.010	0.012	0.014
D	1.90	2.00	2.10	0.075	0.079	0.083
E	1.90	2.00	2.10	0.075	0.079	0.083
D2	0.85	1.05	1.15	0.033	0.041	0.045
E2	1.40	1.50	1.60	0.055	0.059	0.063
e	1.30BSC			0.051BSC		
H	0.20	0.25	0.30	0.008	0.010	0.012
L	0.35	0.40	0.45	0.014	0.016	0.018

TAPE AND REEL INFORMATION-DFN2x2-3L



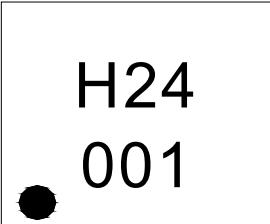
Symbol	Dimensions	
	Millimeters	
	Typ.	Typ.
W	8.00	0.315
P1	4.00	0.157
E1	1.75	0.069
F	3.50	0.138
D0	1.55	0.061
D1	1.00	0.039
P0	4.00	0.157
P2	2.00	0.079
A0	2.20	0.087
B0	2.20	0.087
K0	0.70	0.028
T	0.23	0.009

ORDERING INFORMATION

PART No.	PACKAGE TYPE	QUANTITY(PCS) REEL	DESCIPTION
JEU24P3	DFN2x2-3L	3,000	7 Inch



MARKING CODE

Part Number	Marking Code
JEU24P3	

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 1.1st version which is made in 22-Oct.-2021. This document supersedes and replaces all information previously supplied.

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

Copyright ©2021 Jiangsu JieJie Microelectronics Co.,Ltd. Printed All rights reserved.