



FEATURES

- ◇ 5000 Watts peak pulse power ($t_P=8/20\mu s$)
- ◇ Low leakage current
- ◇ Low clamping voltage
- ◇ Solid-state silicon-avalanche technology
- ◇ RoHS compliant

MAIN APPLICATIONS

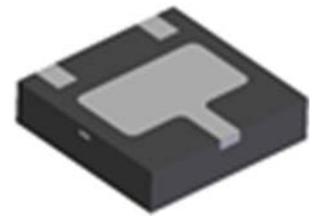
- ◇ Power supply protection
- ◇ Personal digital assistants (PDA's)
- ◇ Microprocessors based equipment
- ◇ Power management
- ◇ Cell phone handsets and accessories
- ◇ Portable electronics
- ◇ Peripherals

PROTECTION SOLUTION TO MEET

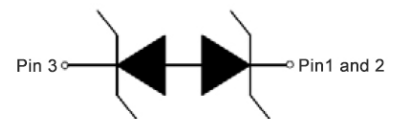
- ◇ IEC61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact)
- ◇ IEC61000-4-4 (EFT) 40A (5/50ns)
- ◇ IEC61000-4-5 (Lightning) 240A (8/20 μs)

MECHANICAL CHARACTERISTICS

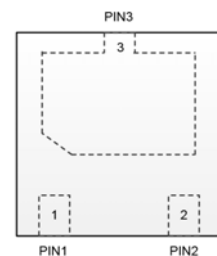
- ◇ DFN2x2-3L package
- ◇ Molding compound flammability rating: UL 94V-0
- ◇ Quantity per reel: 3,000pcs
- ◇ Lead finish: lead free
- ◇ Marking code: T45 008



DFN2x2-3L



Circuit Diagram



PIN Configuration

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

Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 8/20 μs waveform	P_{PP}	5000	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}				4.5	V
Reverse breakdown voltage	V_{BR}	$I_T=1\text{mA}$	4.8	5.4	6	V
Reverse leakage current	I_R	$V_{RWM}=4.5\text{V}$			0.2	μA
Peak pulse current	I_{PP}	$t_P=8/20\mu\text{s}$			240	A
Clamping voltage	V_C	$I_{PP}=150\text{A}$, $t_P=8/20\mu\text{s}$		12	16	V
		$I_{PP}=200\text{A}$, $t_P=8/20\mu\text{s}$		14	18	
		$I_{PP}=240\text{A}$, $t_P=8/20\mu\text{s}$		16	21	
Junction capacitance	C_J	$V_{RWM}=0\text{V}$, $f=1\text{MHz}$		1000	1200	pF

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

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

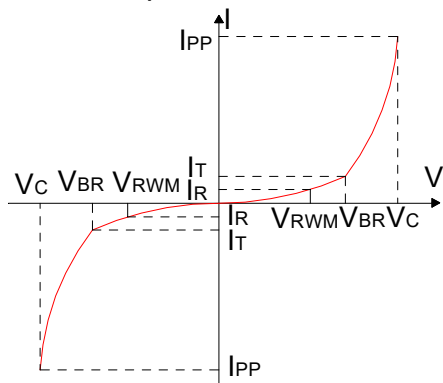


FIG.2: Pulse waveform (8/20 μs)

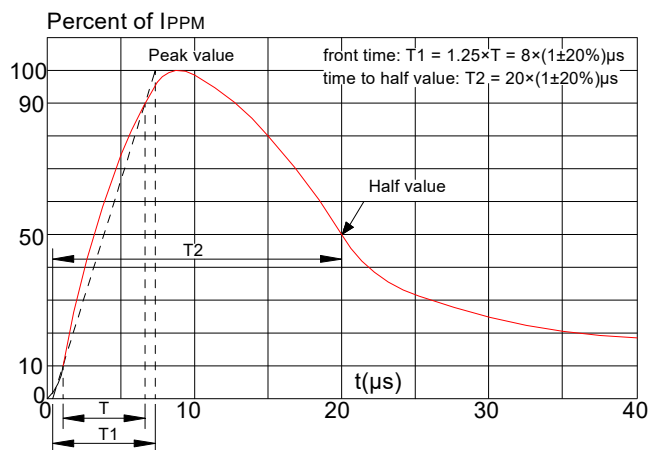


FIG.3: Pulse derating curve

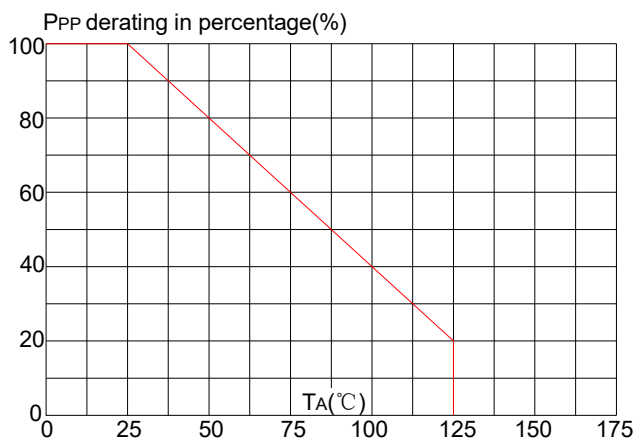


FIG.4: ESD clamping

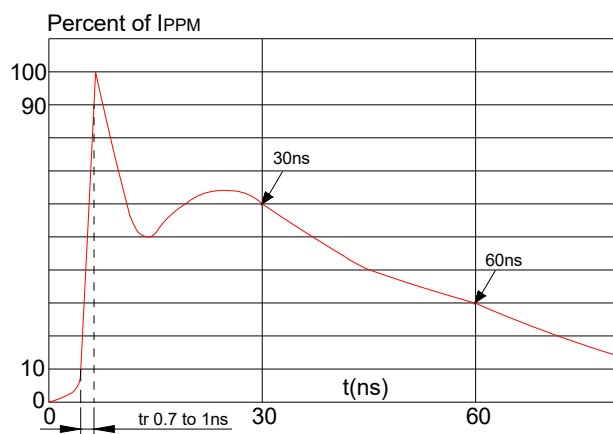


FIG.5: Clamping voltage vs. peak pulse current

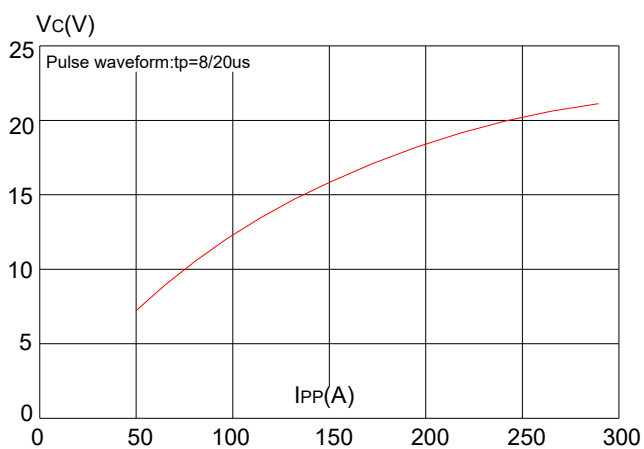
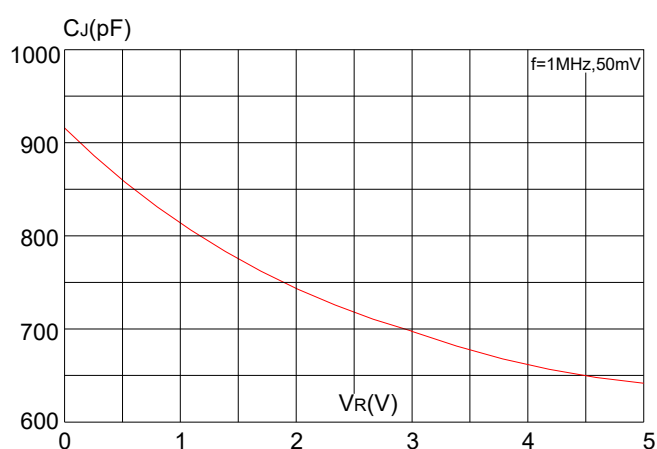
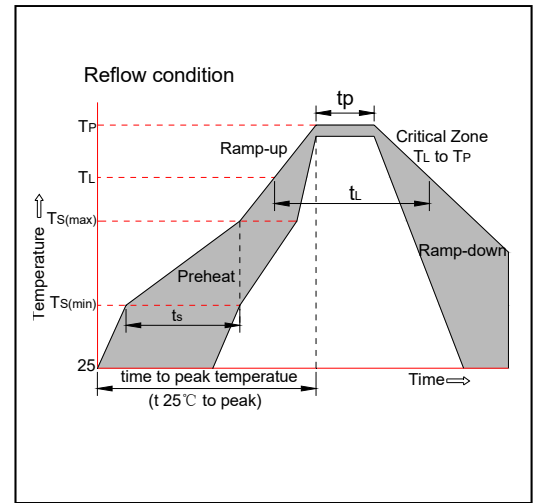


FIG.6: Capacitance vs. reverse voltage

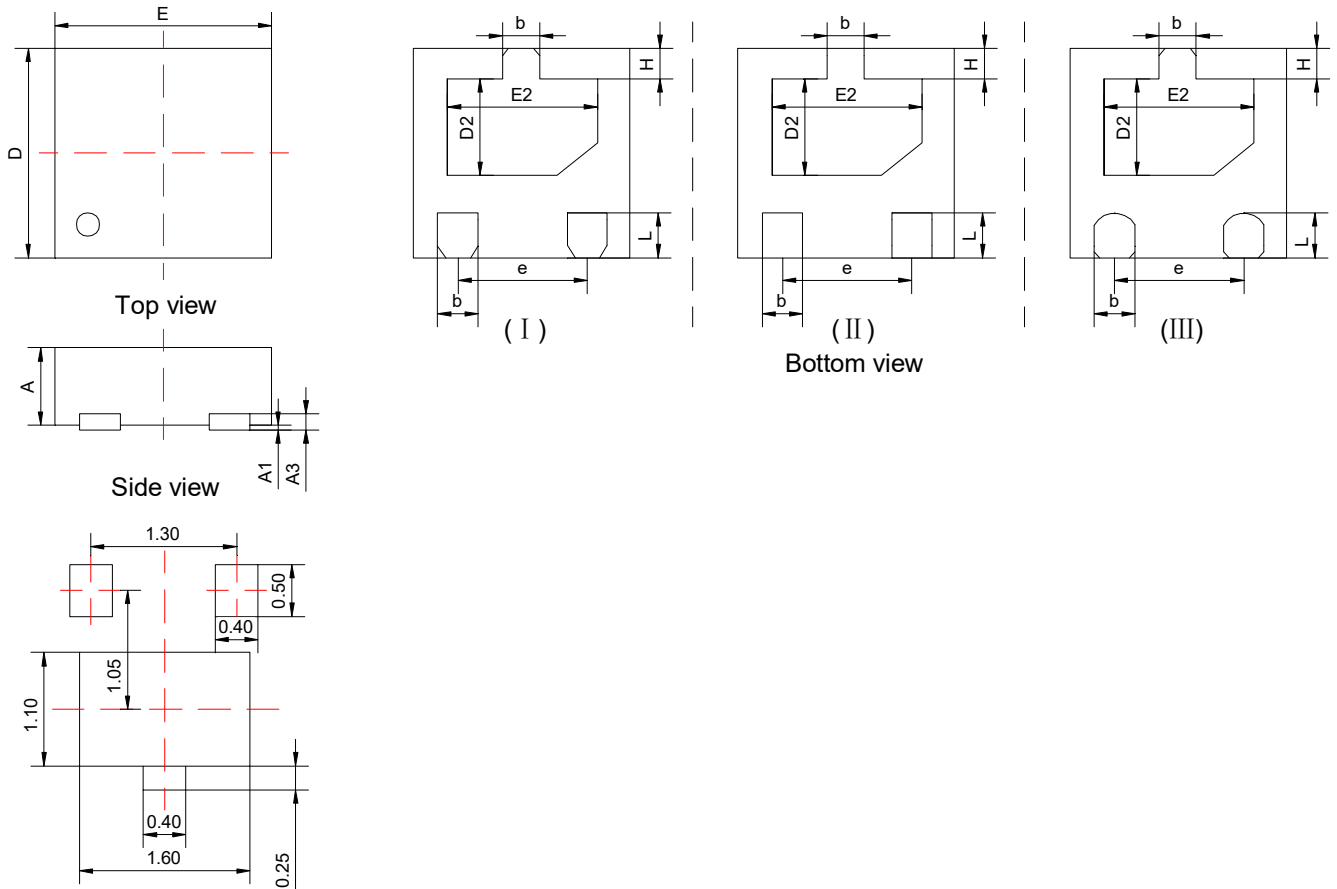


SOLDERING PARAMETERS

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) (t_s)	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



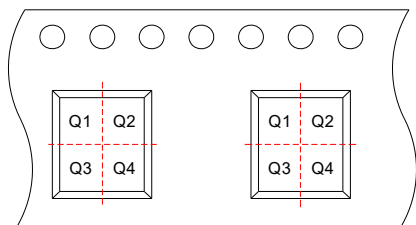
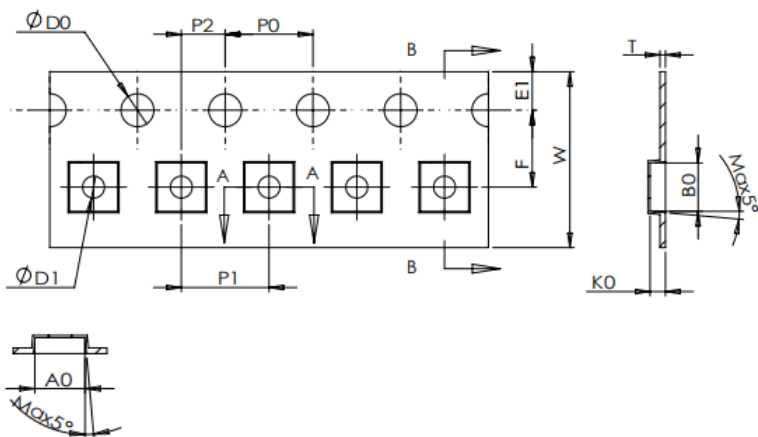
PACKAGE MECHANICAL DATA



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



➔ User direction of feed


Pin 1 quadrant: Q3

Symbol	Dimensions	
	Millimeters	Inches
	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
P1	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	DESCRIPTION
JEB4V5N3	DFN2x2-3L	3,000	7 Inch

MARKING CODE

Part Number	Marking Code
JEB4V5N3	<div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-right: 10px;"> <p>T45 008</p>  <p>Pin1 Indicator</p> </div> <div> <p>T45=Device Code 008=Control Code</p> </div> </div>


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 1.7th version which is made in 21-Mar.-2023. This document supersedes and replaces all information previously supplied.

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

Copyright ©2023 Jiangsu JieJie Microelectronics Co., Ltd. Printed All rights reserved.