

DESCRIPTION

The JUB12CD2 is a bi-directional TVS diode, utilizing lead-ing monolithic silicon technology to provide fast Response time and low ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive data and pow-er line. The JUB12CD2 complies with the IEC 61000-4-2 (ESD) standard with ± 15 kV air and ± 8 kV contact dischar-ge. It is assembled into an ultra- small 1.0x0.6x0.5mm lead-free 0402 package. The small size and high ESD su-rge protection make JUB12CD2 an ideal choice to protect cell phone, digitalcameras, audio players and many other portable applications.

APPLICATIONS

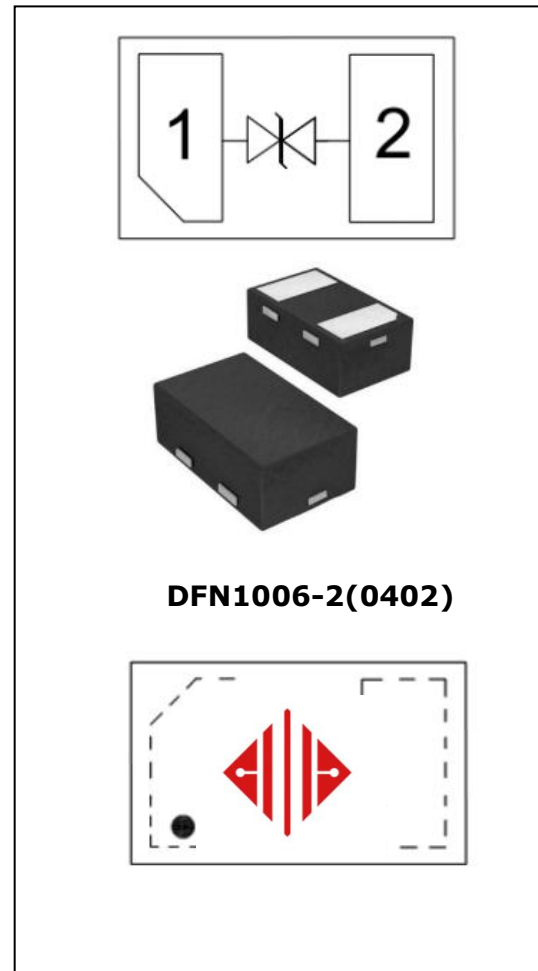
- ✧ Cellular Handsets and Accessories.
- ✧ Personal Digital Assistants.
- ✧ Notebooks and Handhelds.
- ✧ Portable Instrumentation.
- ✧ Digital Cameras.
- ✧ Peripherals.
- ✧ Audio Players.
- ✧ Keypads, Side Keys, LCD Displays.

FEATURES

- ✧ Ultra small package: 1.0x0.6x0.5mm.
- ✧ Ultra low capacitance: 8pF typical.
- ✧ Ultra low leakage: nA level.
- ✧ Low operating voltage: 12V.
- ✧ Low clamping voltage.
- ✧ 2-pin leadless package.
- ✧ Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: ± 15 kV
 - Contact discharge: ± 8 kV
 - IEC61000-4-5 (Lightning) 7A (8/20 μ s).
- ✧ RoHS Compliant.

MECHANICAL CHARACTERISTICS

- ✧ DFN1006-2(0402) Package.
- ✧ Tape & Reel : 10,000pcs.
- ✧ Reel Size : 7 inch.



DEVICE CHARACTERISTICS
Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

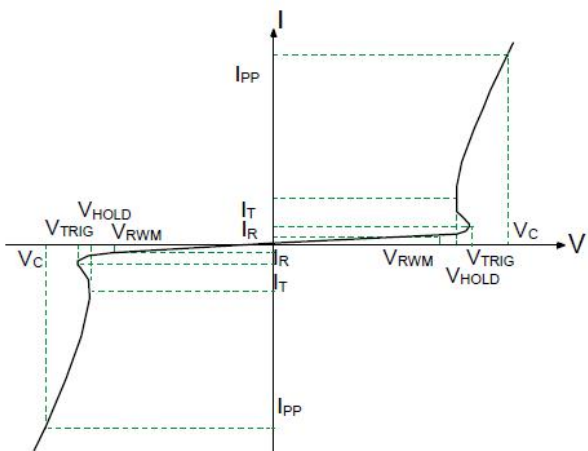
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{pp}	140	W
Peak Pulse Current (8/20μs)	I _{PP}	7	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±15 ±8	kV
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS(T_A=25°C unless otherwise specified)

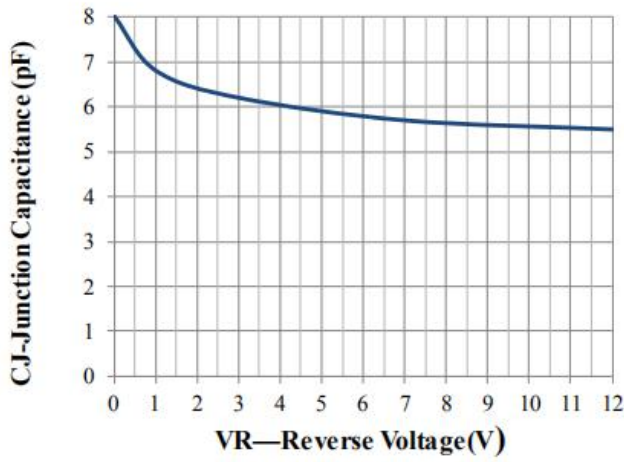
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}				12	V
Breakdown Voltage	V _{BR}	I _T = 1mA	13	15		V
Reverse Leakage Current	I _R	V _{RWM} = 12V			0.2	μA
Clamping Voltage	V _C	I _{PP} = 7A (8 x 20μs pulse)		18	20	V
Junction Capacitance	C _J	V _R = 0V, f = 1MHz		8	10	pF

ELECTRICAL PARAMETER

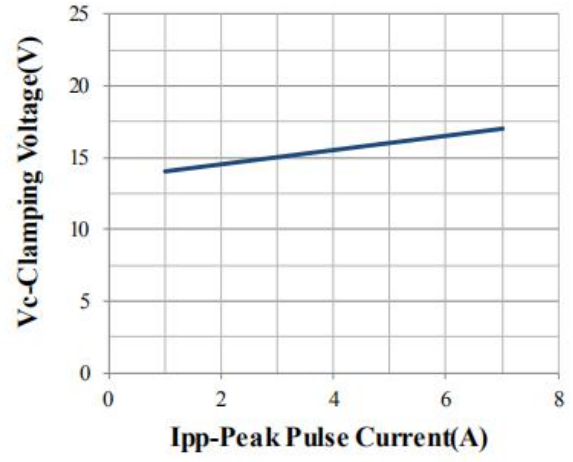
Symbol	Parameter
I _T	Test Current
I _{PP}	Maximum Reverse Peak Pulse Current
V _C	Clamping Voltage @I _{PP}



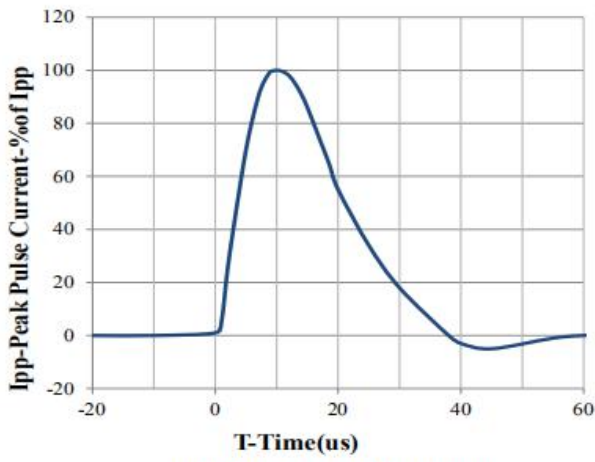
TYPICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$ unless otherwise Specified)



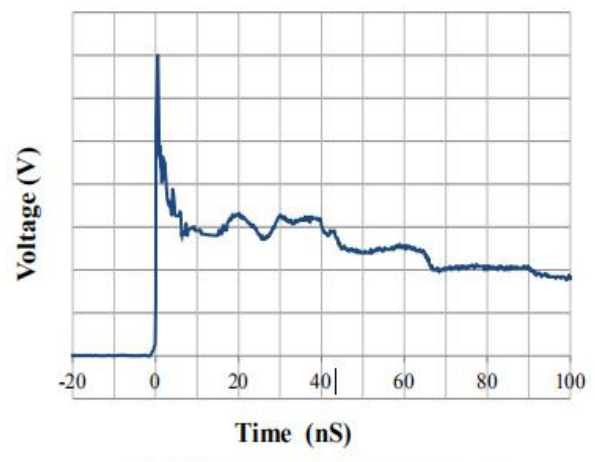
Junction Capacitance vs. Reverse Voltage



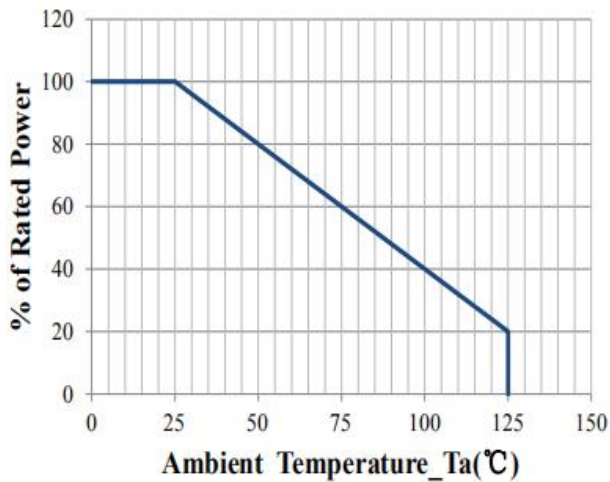
Clamping Voltage vs. Peak Pulse Current



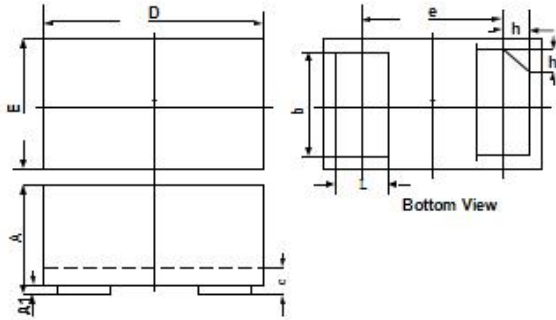
8 X 20us Pulse Waveform



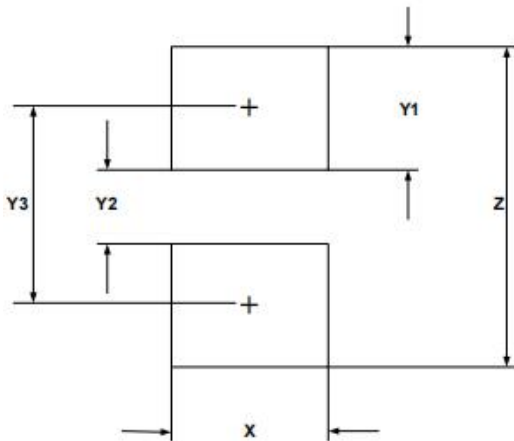
IEC61000-4-2 Pulse Waveform



Power Derating Curve

DFN1006-2(0402) PACKAGE OUTLINE & DIMENSIONS


SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.45	0.50	0.55	0.018	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.45	0.50	0.55	0.018	0.020	0.022
c	0.12	0.15	0.18	0.005	0.006	0.007
D	0.95	1.00	1.05	0.037	0.039	0.041
e	0.65 BSC			0.026 BSC		
E	0.55	0.60	0.65	0.022	0.024	0.026
L	0.20	0.25	0.30	0.008	0.010	0.012
h	0.07	0.12	0.17	0.003	0.005	0.007

SUGGESTED LAND PATTERN


SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	0.60	0.024
Y1	0.50	0.020
Y2	0.30	0.012
Y3	0.80	0.032
Z	1.30	0.052

Website: <http://www.jksemi.com>

For additional information, please contact your local Sales Representative.

©Copyright 2016, jksemi