

Features

- * Ultra small package: 1.6x1.0x0.5mm
- * Protects one data or power line
- * Ultra low leakage: nA level
- * Low clamping voltage
- * 2-pin leadless package
- * Complies with following standards:
 - * – IEC 61000-4-2 (ESD) immunity test
 - * Air discharge: $\pm 30\text{kV}$
 - * Contact discharge: $\pm 30\text{kV}$
 - * – IEC61000-4-4 (EFT) 120A (5/50ns)
 - * – IEC61000-4-5 (Lightning) 100A (8/20 μs)
- * RoHS Compliant
- * Package: DFN1610-2
- * Lead Finish: NiPdAu

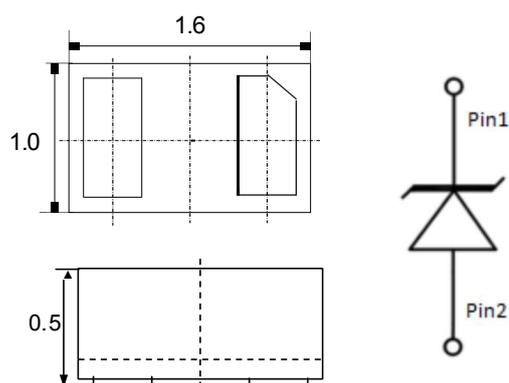
Applications

- * Mobile Phones
- * Battery Protection
- * Power Line Protection
- * Vbat pin for Mobile Devices
- * Hand Held Portable Applications

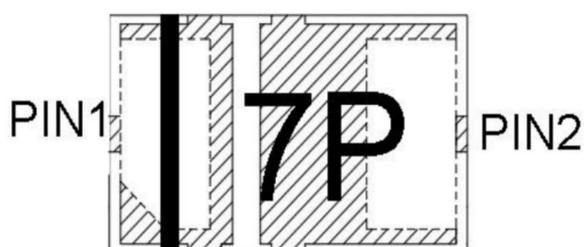
Description

The JED0771P6W is an uni-directional TVS diode, utilizing leading 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 power line. The JED0771P6W complies with the IEC 61000-4-2 (ESD) standard with $\pm 15\text{kV}$ air and $\pm 8\text{kV}$ contact discharge. It is assembled into an ultra-small 1.6x1.0x0.5mm lead-free DFN package. The small size and high ESD surge protection make JED0771P6W an ideal choice to protect cell phone, digital cameras, audio players and many other portable applications.

Circuit Diagram



Marking Diagram



Transparent top view

7P: Device Marking Code
 Bar denotes cathode

Ordering Information

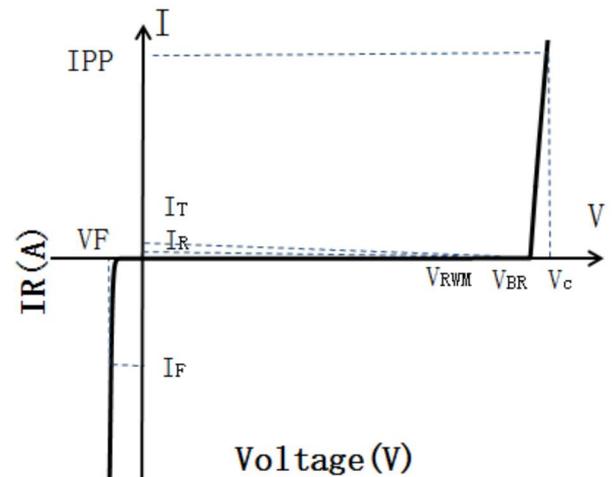
Part Number	Packaging	Reel Size
JED0771P6W	3000/Tape & Reel	7 inch

Absolute Maximum Ratings (TA=25°C unless otherwise specified)

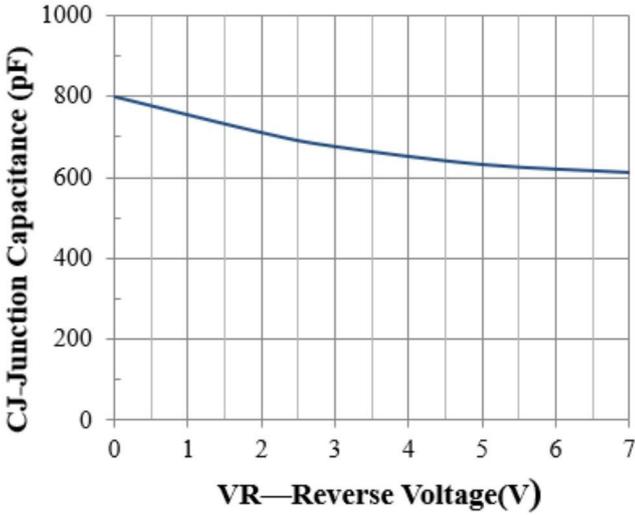
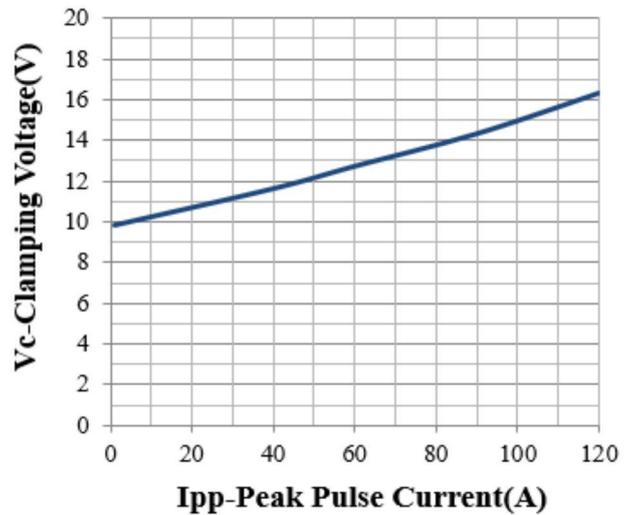
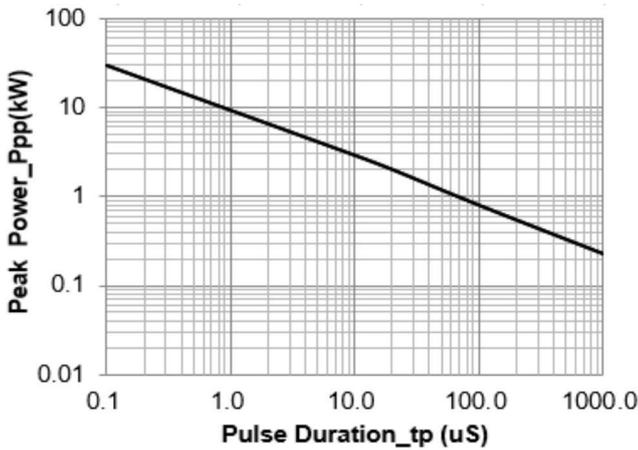
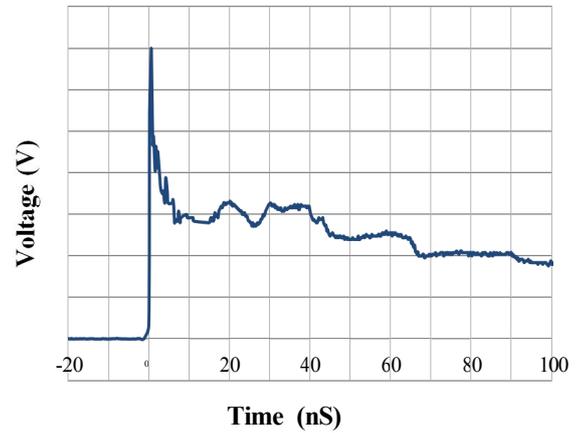
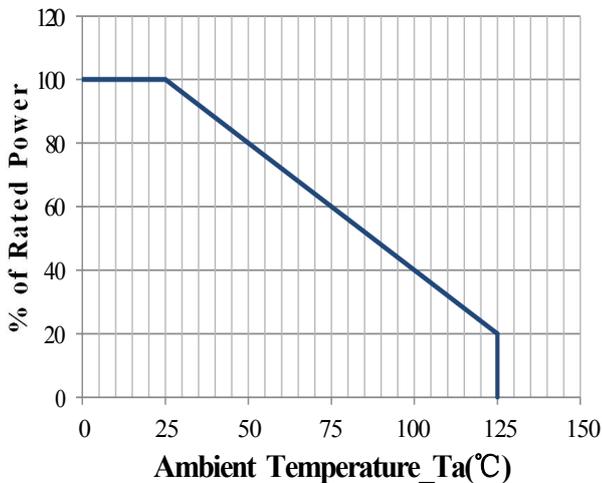
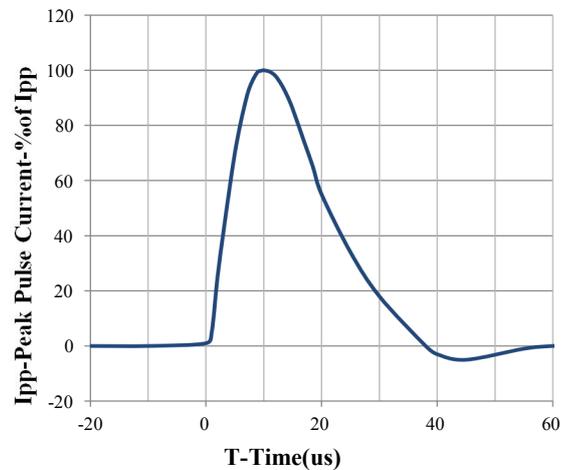
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	2000	W
Peak Pulse Current (8/20μs)	IPP	100	A
ESD per IEC 61000-4-2 (Air)	VESD	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

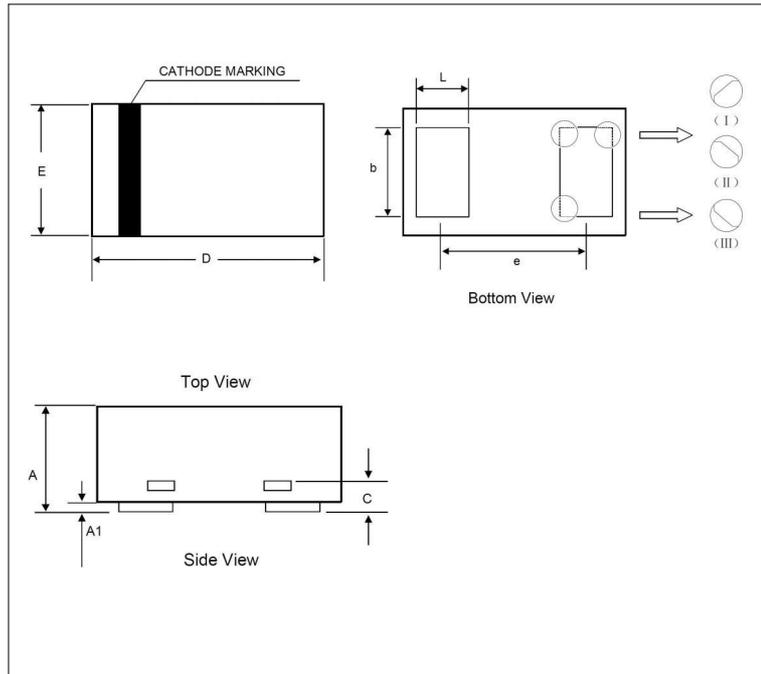
Portion Electronics Parameter

Symbol	Parameter
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @Ic
I_F	Forward Current
V_F	Forward Voltage @I _F


Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				7	V
Breakdown Voltage	V_{BR}	$I_T = 1mA$	7.5	8	10	V
Reverse Leakage Current	I_R	$V_{RWM} = 7V$			1.0	μA
Clamping Voltage	V_C	$I_{PP} = 1A$ (8 x 20μs pulse)		10		V
Clamping Voltage	V_C	$I_{PP} = 100A$ (8 x 20μs pulse)		16	20	V
Junction Capacitance	C_J	$V_R = 0V, f = 1MHz$		800	900	pF

Typical Performance Characteristics (TA=25°C unless otherwise Specified)

Junction Capacitance vs. Reverse Voltage

Clamping Voltage vs. Peak Pulse Current

Peak Pulse Power vs. Pulse Time

IEC61000-4-2 Pulse Waveform

Power Derating Curve

8 X 20us Pulse Waveform

DFN1610-2L Package Outline Drawing


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
b	0.75	0.80	0.85	0.030	0.032	0.034
c	0.10	0.15	0.20	0.004	0.006	0.008
D	1.55	1.60	1.65	0.062	0.064	0.066
e	1.10BSC			0.044BSC		
E	0.95	1.00	1.05	0.038	0.040	0.042
L	0.35	0.40	0.45	0.014	0.016	0.018