

## PJUSBLC6-2W6

### LOW CAPACITANCE TVS DIODE ARRAY

The PJUSBLC6-2W6 has a low typical capacitance of 1pF and operates with virtually no insertion loss to 1GHz. This makes the device ideal for protection of high-speed data lines such as USB2.0, Firewire, DVI, and Gigabit Ethernet interfaces.

The low capacitance array configuration allows the user to protect four high-speed data or transmission lines. The low inductance construction minimizes voltage overshoot during high current surge.

#### FEATURES

- IEC 61000-4-2  $\pm 15$ kV air,  $\pm 8$ kV Contact
- IEC 61000-4-5 (Lightning) 4A (8/20 $\mu$ s)
- IEC 61000-4-4 (EFT) (5/50ns) Level-4, 40A for I/O, 80A for Power
- Low leakage current
- Low clamping voltage
- Protect four I/O lines
- Molded JEDEC SOT-23 6L package
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

#### MECHANICAL DATA

- Case: SOT-23 6L, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx weight : 0.0005 ounces, 0.014 grams
- Marking: K6A

#### APPLICATIONS

- USB 2.0 Power and Data Line Protection
- Video Graphics Cards
- Monitors and Flat Panel Displays
- Digital Video Interface (DVI)
- 10/100/1000 Ethernet
- ATM Interfaces

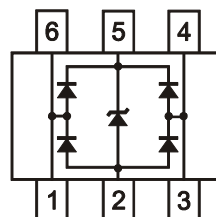
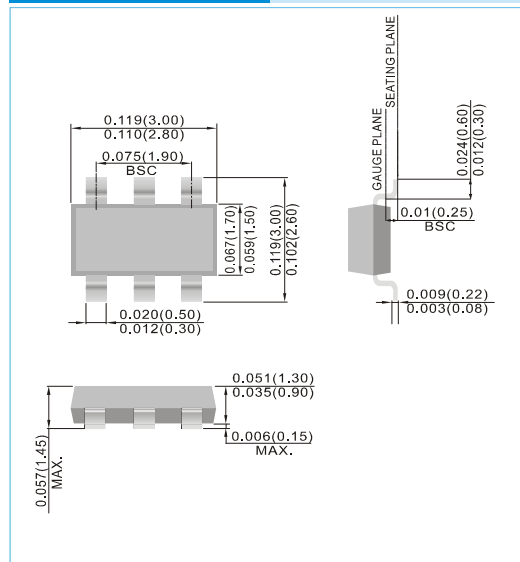


Fig. 72(TOP VIEW)

#### SOT-23 6L

Unit : inch(mm)



#### ABSOLUTE MAXIMUM RATINGS ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

RATING	SYMBOL	VALUE	UNIT
Peak Pulse Current (8/20 $\mu$ s waveform)	I <sub>PPM</sub>	5	A
ESD per IEC61000-4-2 (Air) ESD per IEC61000-4-2 (Contact)	V <sub>ESD</sub>	$\pm 15$ $\pm 8$	kV
Operating Junction Temperature and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	$^{\circ}\text{C}$

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### ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	$V_{RWM}$		-	-	5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1\text{mA}$ , PIN 5 to 2	6	-	8	V
Reverse Leakage Current	$I_R$	$V_R=5\text{V}$ , PIN 5 to 2	-	-	150	nA
Clamping Voltage (8/20 $\mu\text{s}$ )	$V_C$	$I_{PP}=1\text{A}$ , Any I/O pin to pin 2	-	-	8	V
Clamping Voltage (8/20 $\mu\text{s}$ )	$V_C$	$I_{PP}=5\text{A}$ , Any I/O pin to pin 2	-	-	10	V
Off State Junction Capacitance	$C_J$	0 Vdc, f=1MHz between I/O lines and GND	-	-	1.2	pF
Off State Junction Capacitance	$C_J$	0 Vdc, f=1MHz between I/O lines	-	-	0.6	pF

### RATING AND CHARACTERISTIC CURVES

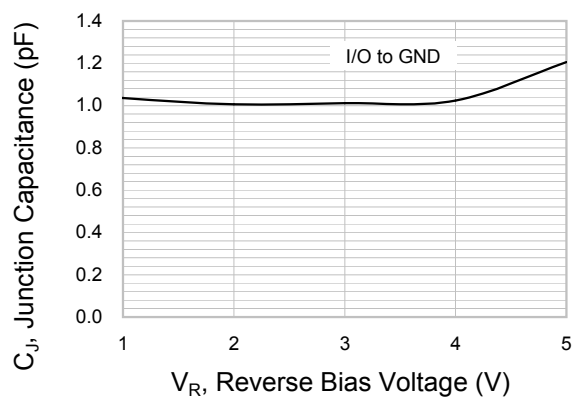


Fig.1 Typical Junction Capacitance

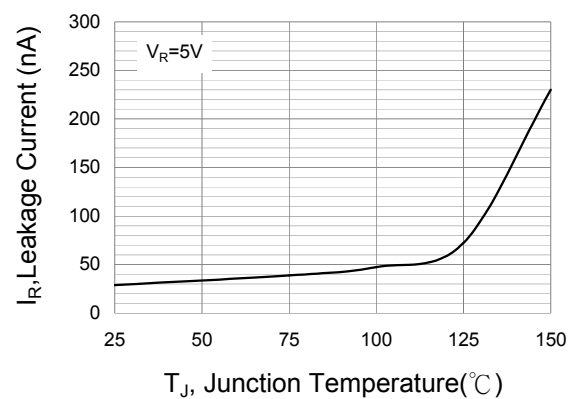


Fig.2 Typical Reverse Characteristics

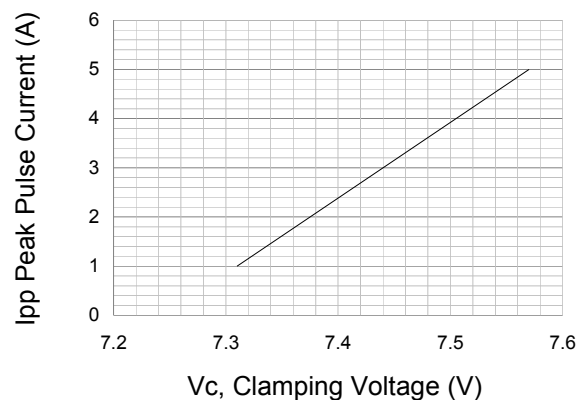


Fig.3 Typical Peak Clamping Voltage(8/20uS)

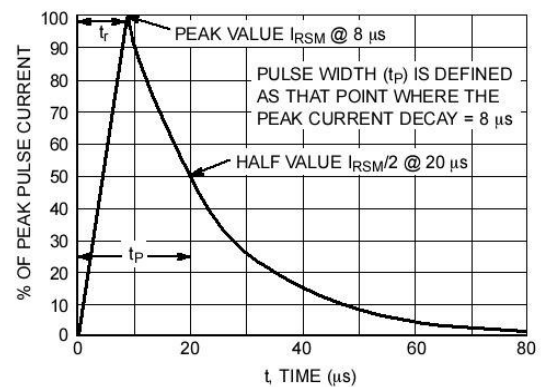


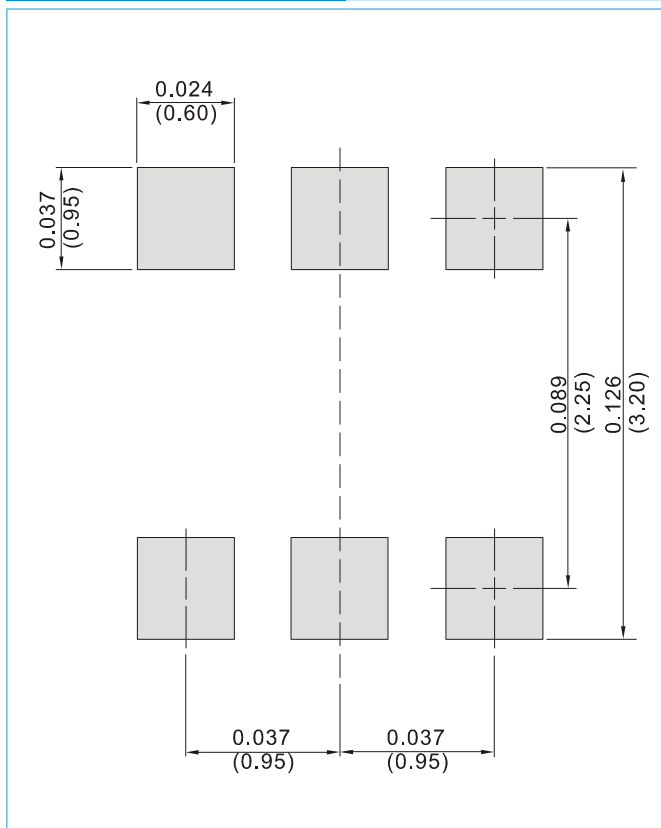
Fig.4 8/20uS Peak Pulse Current Waveform

## PJUSBLC6-2W6

### MOUNTING PAD LAYOUT

**SOT-23 6L**

Unit : inch(mm)



### ORDER INFORMATION

- Packing information
  - T/R - 10K per 13" plastic Reel
  - T/R - 3K per 7" plastic Reel

## PJUSBLC6-2W6

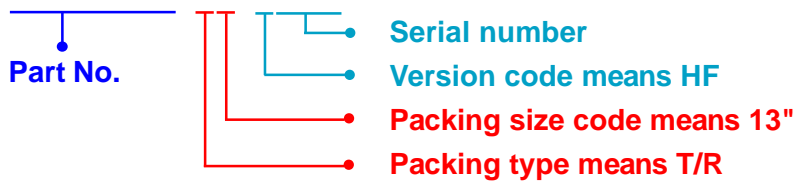
### Part No\_packing code\_Version

PJUSBLC6-2W6\_R1\_00001

PJUSBLC6-2W6\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	HF	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	RoHS	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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