



# PJE5V0V1W6

## Very Low Capacitance ESD Protection

$V_{RWM}$

**5 V**

### Features

- Bidirectional ESD protection of one line
- IEC61000-4-2(ESD):  $\pm 15$ kV Air,  $\pm 8$ kV Contact
- IEC61000-4-4(EFT): 40A(5/50nS)
- IEC61000-4-5(Lightning): 3A(8/20 $\mu$ S)
- Low leakage current, maximum of 0.1 $\mu$ A at rated voltage
- 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: K6E

### Applications

- USB2.0 Data Line & Power Line Protection
- Video Graphics Cards
- Monitors and Flat Panel Displays Notebook computers
- Digital Video Interface(DVI)
- 10/100/1000 Ethernet
- ATM Interfaces
- Control Signal Lines Protection

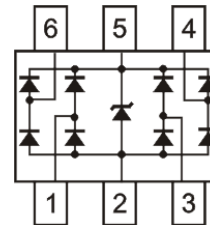
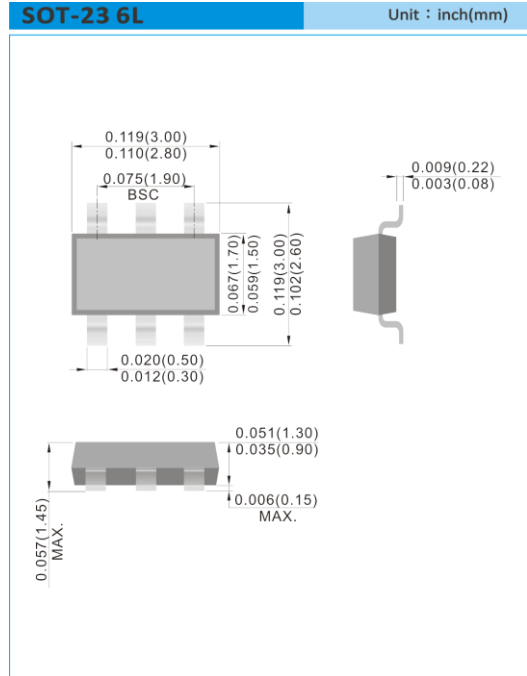


Fig.70(Top View)

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

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Current(8/20 $\mu$ s)	$I_{PP}$	3	A
ESD IEC61000-4-2(Air)	$V_{ESD}$	$\pm 15$	kV
ESD IEC61000-4-2(Contact)		$\pm 8$	
Operating Junction Temperature	$T_J$	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$



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Electrical Characteristics ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	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 GND	6	-	8.8	V
Reverse leakage current	$I_R$	$V_R=5\text{V}$ , PIN 5 to GND	-	-	0.5	$\mu\text{A}$
Clamping Voltage	$V_{CL}$	$I_{PP}=1\text{A}$ , $t_P=8/20\mu\text{s}$	-	9	12	V
		$I_{PP}=3\text{A}$ , $t_P=8/20\mu\text{s}$	-	12	20	
Off State Junction Capacitance	$C_J$	0Vdc Bias $f=1\text{MHz}$ , Between any I/O pins to GND	-	0.8	1	pF
		0Vdc Bias $f=1\text{MHz}$ , Between any I/O pins	-	0.4	-	



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## TYPICAL CHARACTERISTIC CURVES

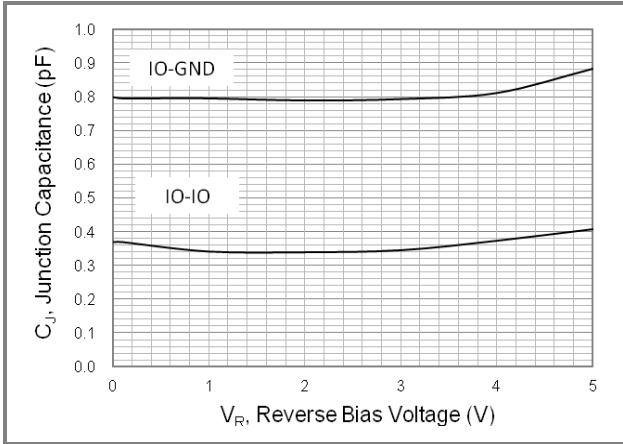


Fig.1 Typical Junction Capacitance

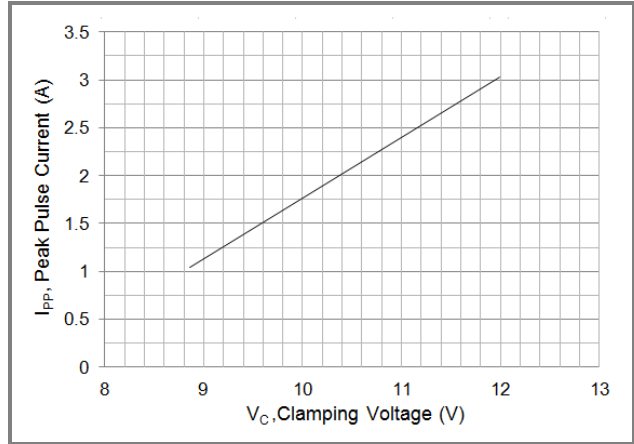


Fig.2 Typical Peak Clamping Voltage(8/20 $\mu$ s)

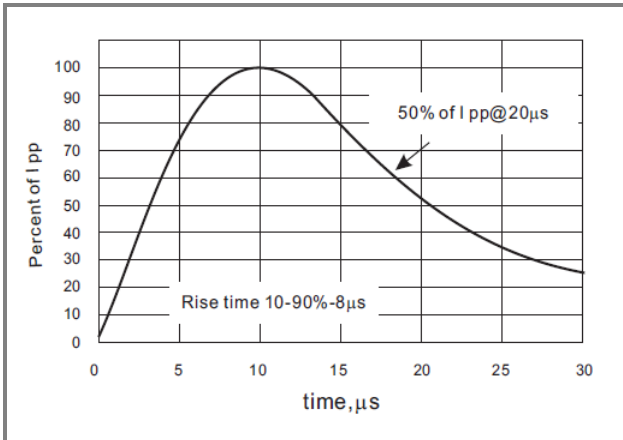
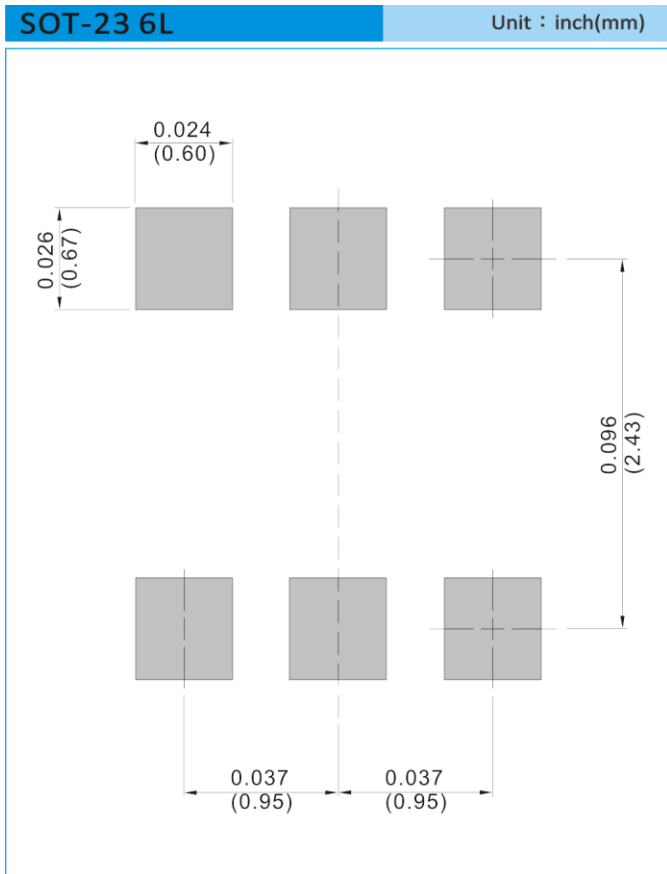


Fig.3 8/20 $\mu$ s Pulse Waveform



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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



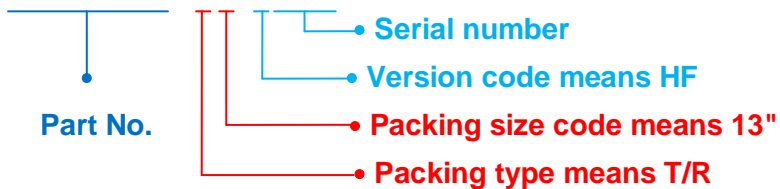
# PJE5V0V1W6

## Part No\_packing code\_Version

PJE5V0V1W6\_R1\_00001  
 PJE5V0V1W6\_R2\_00001  
 PJE5V0V1W6\_S1\_00001  
 PJE5V0V1W6\_S2\_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>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<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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