



# PE1805C4A6

## Ultra Low Capacitance ESD Protection

**Voltage**

**5 V**

### Features

- IEC61000-4-2(ESD): ±20kV Air, ±15kV Contact Compliance
- IEC61000-4-4(EFT): 40A(5/50nS)
- IEC61000-4-5(Lightning): 5A(8/20μS)
- Low leakage current, maximum 1μA at rated voltage
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)
- Green molding compound as per IEC61249 Std.. (Halogen Free)

### Mechanical Data

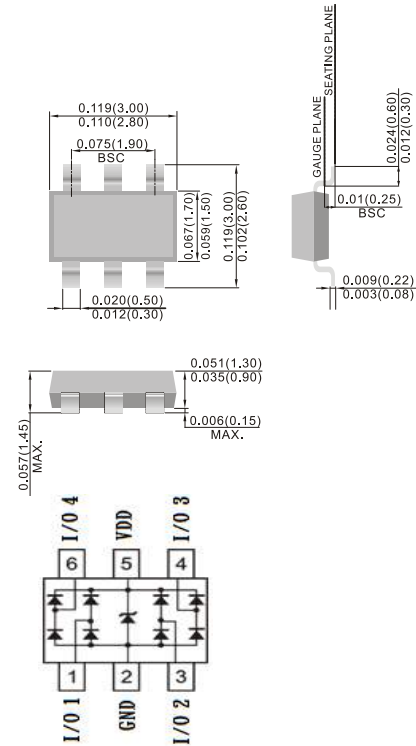
- Case: SOT-23 6L, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026

### Applications

- USB2.0 Data 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

SOT-23 6L

Unit: inch(mm)



### Maximum Ratings

PARAMETER	SYMBOL	VALUE	UNITS
ESD IEC61000-4-2(Air)	$V_{ESD}$	±20	kV
ESD IEC61000-4-2(Contact)		±15	
Operating Junction Temperature Range	$T_J$	-55 to +150	°C
Storage Temperature Range	$T_{STG}$	-55 to +150	°C



## PE1805C4A6

### Electrical Characteristics

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage <sup>(Note 1)</sup>	$V_{RWM}$	-	-	-	5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_{BR}=1\text{mA}$ , Pin5 to Pin2	6	-	9	V
Reverse Leakage Current	$I_R$	$V_R=5.0\text{V}$	-	-	1	$\mu\text{A}$
Forward Voltage	$V_F$	$I_F=1\text{mA}$ , Pin2 to Pin5	-	-	1	V
Clamping Voltage	$V_{CL}$	$I_{PP}=1\text{A}$ , $t_p=8/20\mu\text{s}$ , any I/O pin to Pin2	-	-	12	V
		$I_{PP}=5\text{A}$ , $t_p=8/20\mu\text{s}$ any I/O pin to Pin2	-	-	20	
Off State Junction Capacitance	$C_J$	0Vdc Bias $f=1\text{MHz}$ , Between any I/O pins to Pin2	-	-	0.8	pF
		0Vdc Bias $f=1\text{MHz}$ , Between any I/O pins	-	-	0.4	

Note : 1.A transient suppressor is selected according to the working peak reverse voltage( $V_{RWM}$ ), which should be equal to or greater than the DC or continuous peak operation voltage level.



# PE1805C4A6

## TYPICAL CHARACTERISTIC CURVES

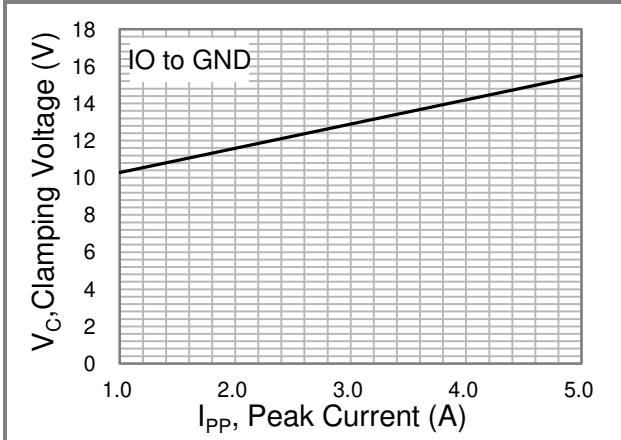


Fig.1 Typical Junction Capacitance

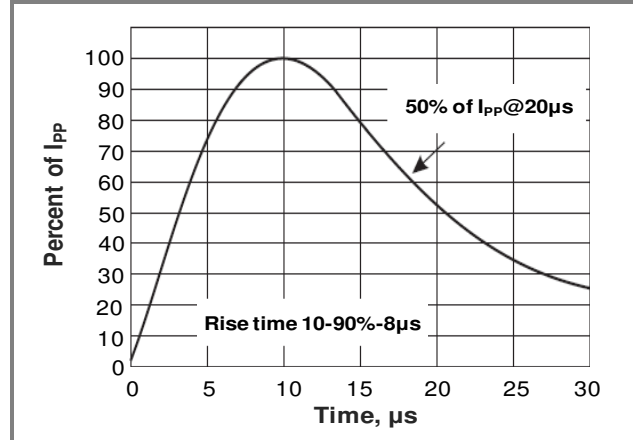


Fig.2 8/20μs Pulse Waveform

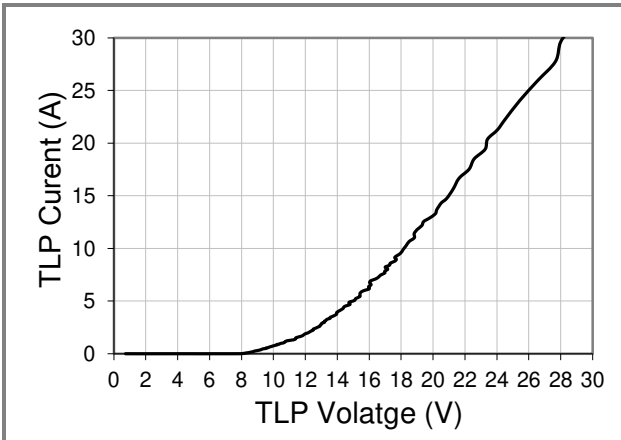


Fig.3 Transmission Line Pulsing (TLP) Measurement

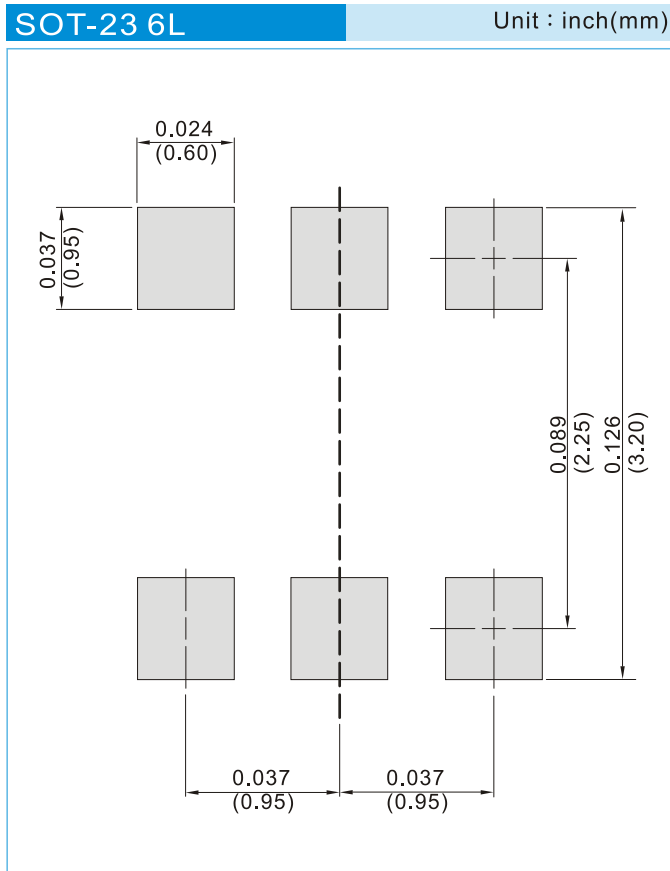


# PE1805C4A6

## PART NO PACKING CODE VERSION

Part No Packing Code	Package Type	Packing Type	Marking	Version
PE1805C4A6_R1_00001	SOT-23 6L	3K pcs / 7" reel	C2B	Halogen free
PE1805C4A6_R2_00001	SOT-23 6L	10K pcs / 13" reel	C2B	Halogen free

## MOUNTING PAD LAYOUT





## PE1805C4A6

### Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.