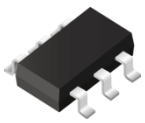
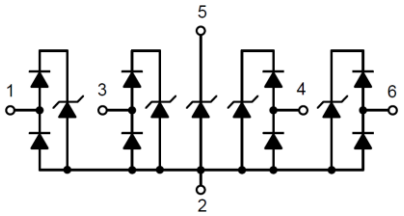
PE1605C4A6-AU

ULTRA LOW CAPACITANCE ESD PROTECTION

Voltage **5 V**

SOT-23 6L





Features

- IEC61000-4-2(ESD): ±20kV Air, ±15kV Contact
- IEC61000-4-4(EFT): 40A(5/50ns)
- IEC61000-4-5(Lightning): 4A(8/20uS)
- Low clamping voltage
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

Mechanical Data

- Case: Molded plastic, SOT-23 6L
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0005 ounces, 0.014 grams

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNIT
ESD IEC61000-4-2(Air) ESD IEC61000-4-2(Contact)	V_{ESD}	±20 ±15	kV
Operating Junction Temperature Range	T_J	-55~150	°C
Storage Temperature Range	T_{STG}	-55~150	°C

PE1605C4A6-AU

Electrical Characteristics (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Reverse Stand-Off Voltage	V_{RWM} (1)	-	-	-	5.5	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 1 mA, any I/O pins to GND	6	6.9	-	V
Reverse Leakage Current	I_R	V_R = 5 V	-	-	1	uA
Clamping Voltage	V_{CL}	I_{PP} = 1 A, t_P = 8/20 us, any I/O pins to GND	-	-	10	V
		I_{PP} = 4A, t_P = 8/20 us, any I/O pins to GND	-	-	15	
Clamping Voltage TLP	V_{CL}(2)	I_{PP} = 8 A, t_P = 100 ns, any I/O pins to GND	-	16	-	V
		I_{PP} = 16 A, t_P = 100 ns, any I/O pins to GND	-	23.5	-	
Dynamic Resistance	R_{DYN}	t_P = 100 ns	-	0.94	-	Ω
Off State Junction Capacitance	C_J	0Vdc Bias f = 1 MHz, Between any I/O pins to GND	-	-	0.6	pF
		0Vdc Bias f = 1 MHz, Between any I/O pins	-	-	0.3	

NOTES :

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.
2. Testing using Transmission Line Pulse (TLP) conditions: Z0 = 50Ω, t_P = 100 ns.

PE1605C4A6-AU

TYPICAL CHARACTERISTIC CURVES

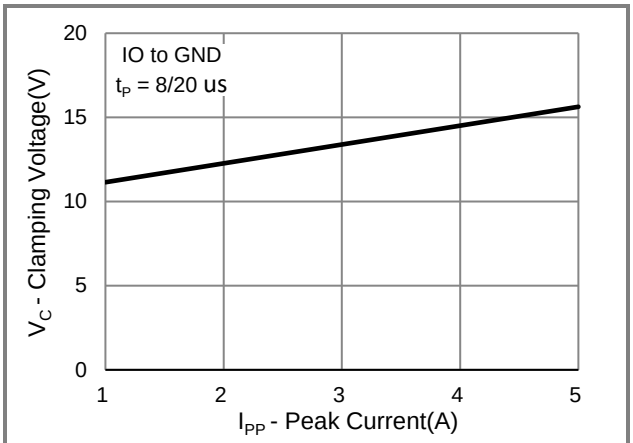


Fig.1 Typical Peak Clamping Voltage

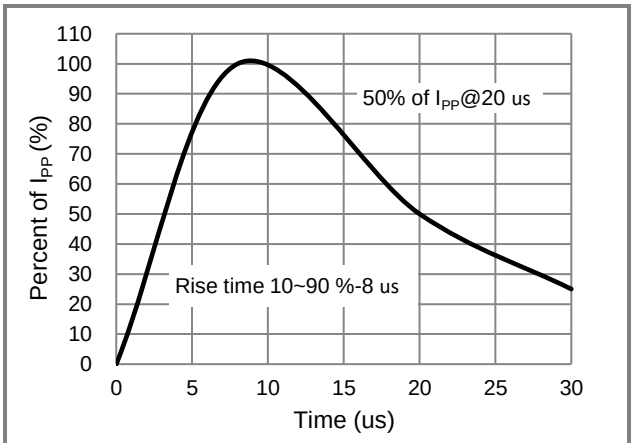


Fig.2 Pulse Waveform

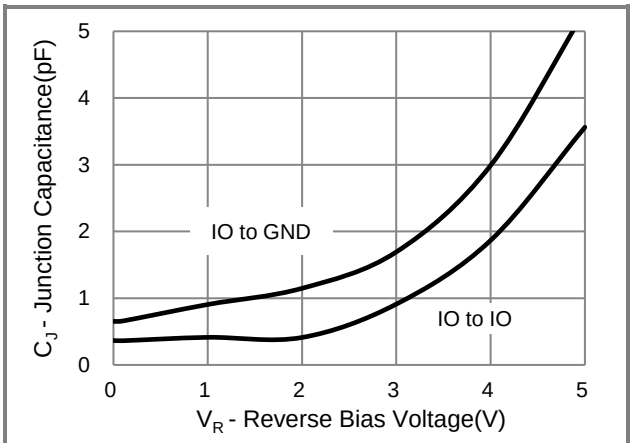


Fig.3 Typical Junction Capacitance

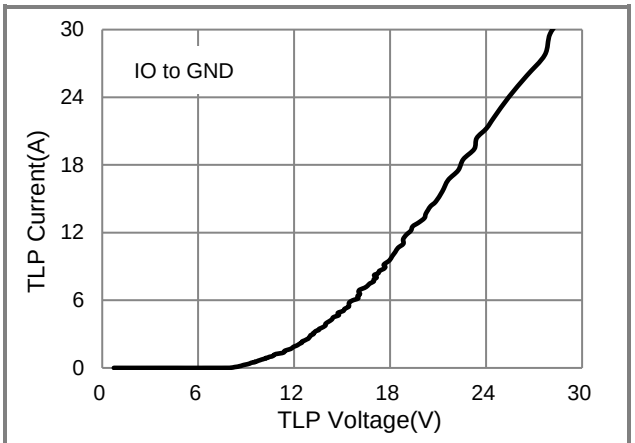


Fig.4 TLP Measurement

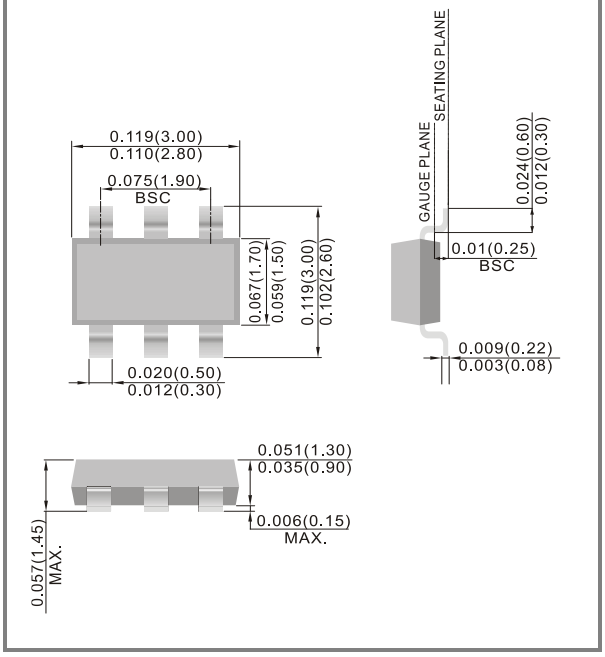
PE1605C4A6-AU

Product and Packing Information

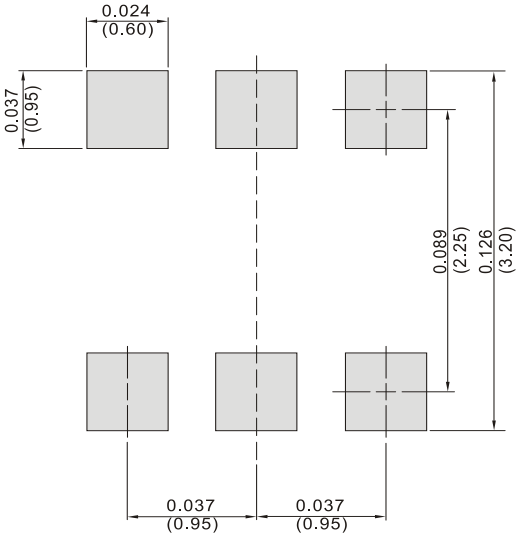
Part No.	Package Type	Packing Type	Marking
PE1605C4A6-AU	SOT-23 6L	3K / 7" Reel	KCC

Packaging Information & Mounting Pad Layout

SOT-23 6L Dimension — Unit: inch(mm)



SOT-23 6L Pad Layout — Unit: inch(mm)



PE1605C4A6-AU

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 follow PCN procedure. 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 or authorized for equipment relating to human life, life-saving or life-sustaining applications, such as medical instruments, transportation equipment, aerospace machinery, or for other applications intended to cause personal injury. 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. For additional terms and conditions regarding the use of PANJIT products, please refer to the Terms of Use available on the PANJIT website.
- Since PANJIT uses lot number as the tracking base, please provide the lot number for tracking when complaining.