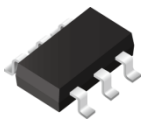
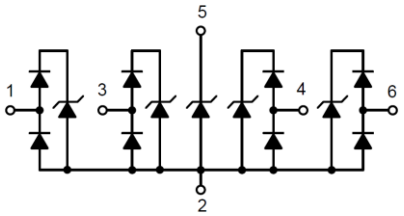
PE1605C4A6

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

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	UNITS
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

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
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.

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TYPICAL CHARACTERISTIC CURVES

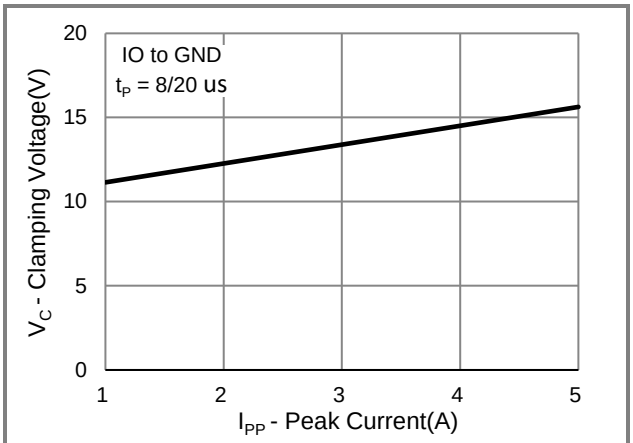

Fig.1 Typical Peak Clamping Voltage

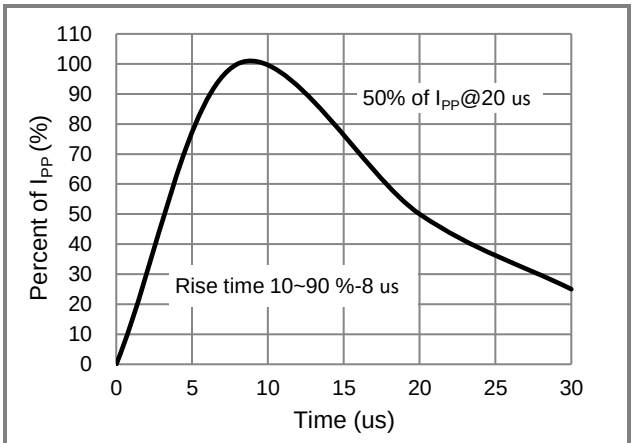

Fig.2 Pulse Waveform

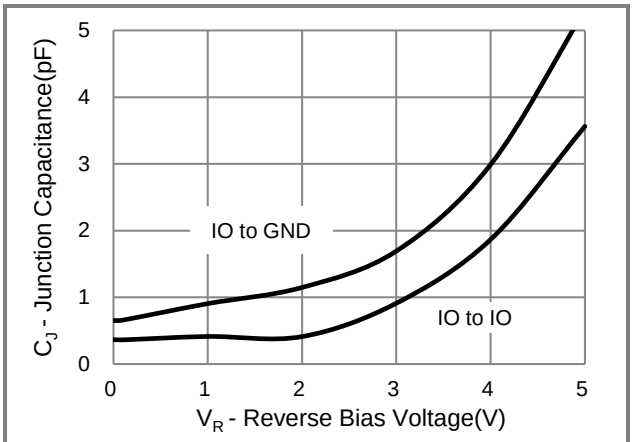

Fig.3 Typical Junction Capacitance

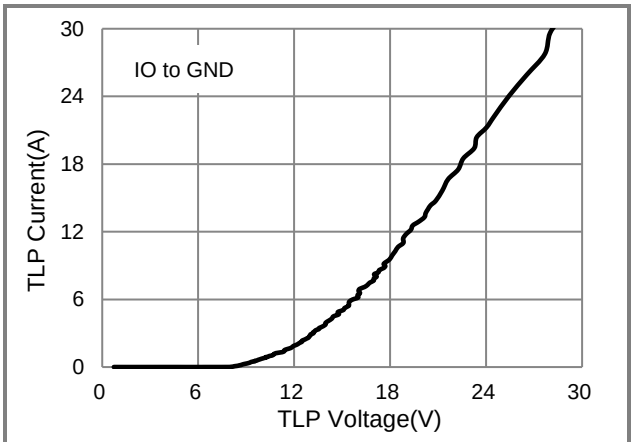

Fig.4 TLP Measurement

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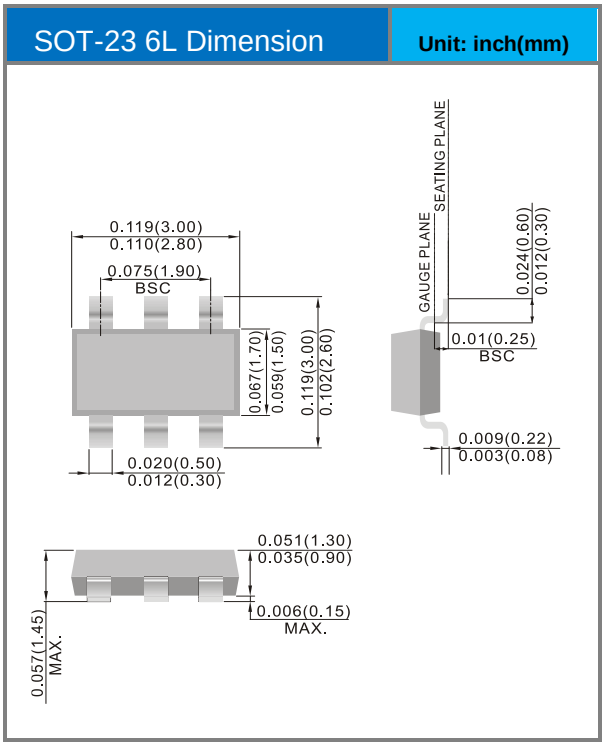
Product and Packing Information

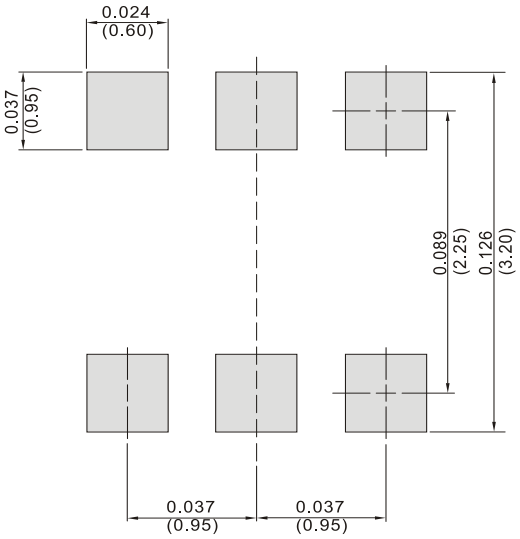
Part No.	Package Type	Packing Type	Marking
PE1605C4A6	SOT-23 6L	3K / 7" Reel	KCC

Packaging Information & Mounting Pad Layout

SOT-23 6L Dimension — Unit: inch(mm)



SOT-23 6L Pad Layout — Unit: inch(mm)



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