

# PE1605C4C6

## ULTRA LOW CAPACITANCE ESD PROTECTION

**Voltage** 5 V

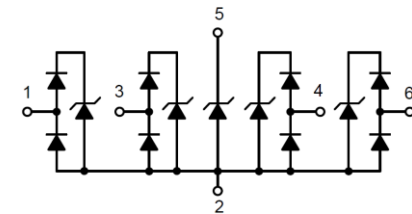
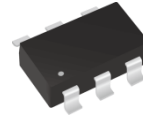
### Features

- IEC61000-4-2(ESD):  $\pm 20$  kV Air,  $\pm 15$  kV Contact
- IEC61000-4-4(EFT): 40 A(5/50 ns)
- IEC61000-4-5(Lightning): 4 A(8/20  $\mu$ S)
- 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-363
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00021 ounces, 0.006 grams

SOT-363



## Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	V <sub>ESD</sub>	$\pm 20$	kV
ESD IEC61000-4-2(Contact)		$\pm 15$	
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C

# PE1605C4C6

## Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage	V <sub>RWM</sub> <sup>(1)</sup>	-	-	-	5.5	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>BR</sub> = 1 mA, any I/O pins to GND	6	6.9	-	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> = 5 V	-	-	1	μA
Clamping Voltage	V <sub>CL</sub>	I <sub>PP</sub> = 1 A, t <sub>P</sub> = 8/20 μs, any I/O pins to GND	-	-	10	V
		I <sub>PP</sub> = 4A, t <sub>P</sub> = 8/20 μs, any I/O pins to GND	-	-	15	
Clamping Voltage TLP	V <sub>CL</sub> <sup>(2)</sup>	I <sub>PP</sub> = 8 A, t <sub>P</sub> = 100 ns, any I/O pins to GND	-	16	-	V
		I <sub>PP</sub> = 16 A, t <sub>P</sub> = 100 ns, any I/O pins to GND	-	23.5	-	
Dynamic Resistance	R <sub>DYN</sub>	t <sub>P</sub> = 100 ns	-	0.94	-	Ω
Off State Junction Capacitance	C <sub>J</sub>	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<sub>RWM</sub>), which should be equal to or greater than the DC or continuous peak operation voltage level.
2. Testing using Transmission Line Pulse (TLP) conditions: Z<sub>0</sub> = 50 Ω, t<sub>P</sub> = 100 ns.

# PE1605C4C6

## TYPICAL CHARACTERISTIC CURVES

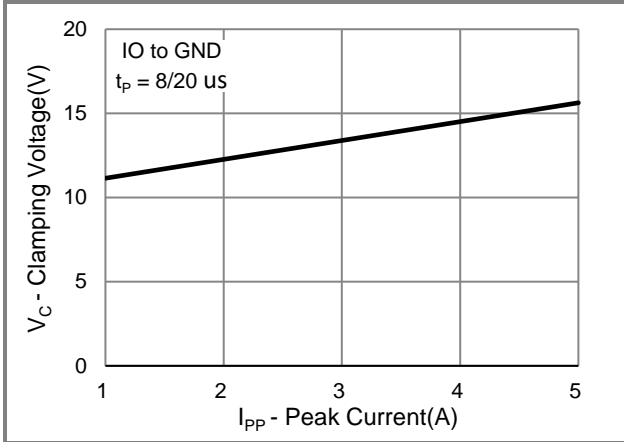


Fig.1 Typical Peak Clamping Voltage

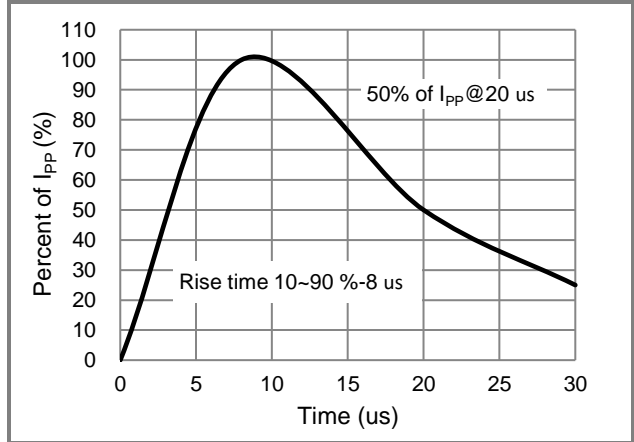


Fig.2 Pulse Waveform

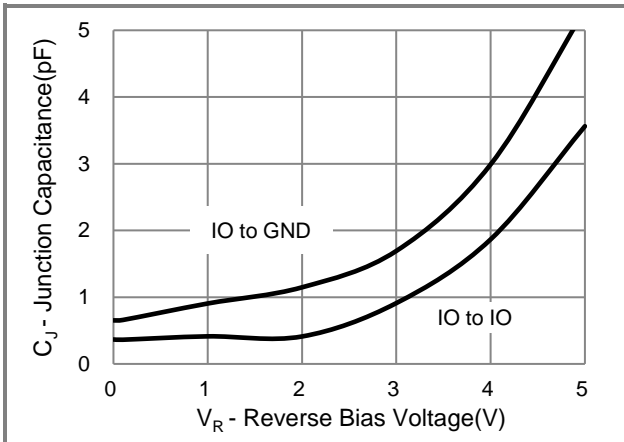


Fig.3 Typical Junction Capacitance

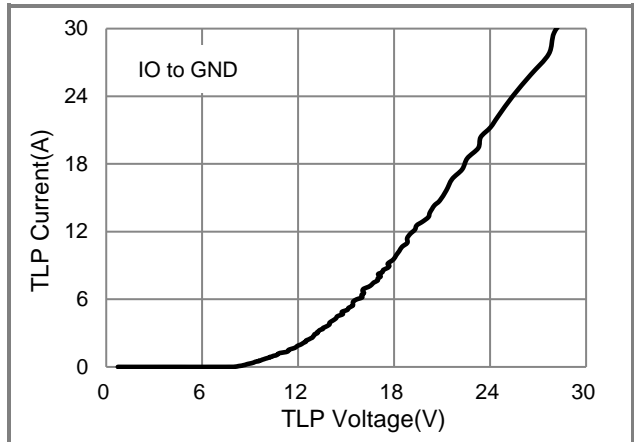


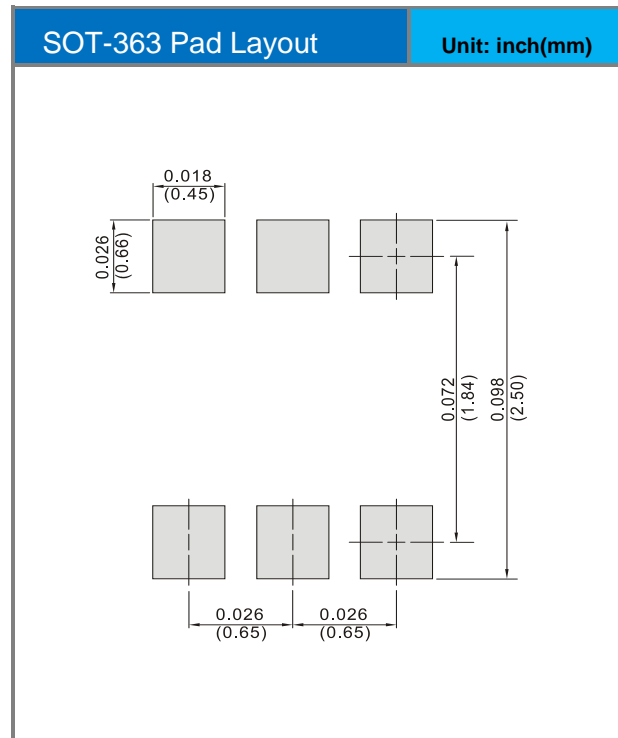
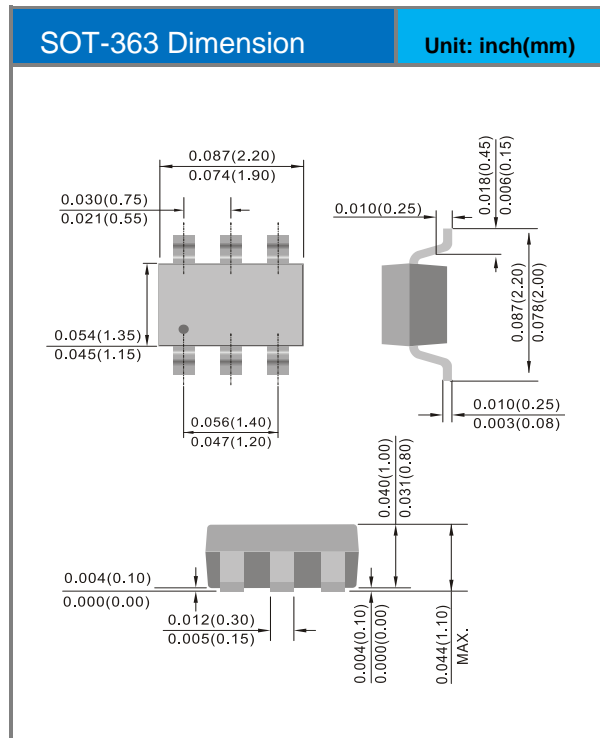
Fig.4 TLP Measurement

# PE1605C4C6

## Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PE1605C4C6	SOT-363	3K / 7" Reel	KCC

## Packaging Information & Mounting Pad Layout



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