



### **ULTRA LOW CAPACITANCE ESD PROTECTION**

Voltage

5 V

### **Features**

• IEC61000-4-2(ESD): ± 20 kV Air, ± 15 kV Contact

• IEC61000-4-4(EFT): 40 A(5/50 ns)

• IEC61000-4-5(Lightning): 4 A(8/20 uS)

• Low clamping voltage

• Lead free in compliance with EU RoHS 2.0

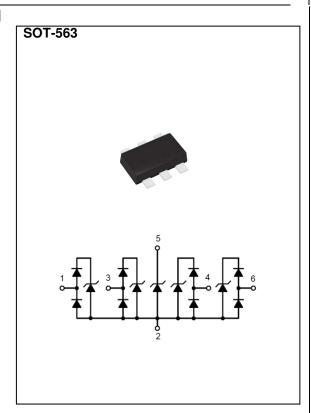
• Green molding compound as per IEC 61249 standard

### **Mechanical Data**

• Case: SOT-563 Package

• Terminals : Solderable per MIL-STD-750, Method 2026

• Approx. Weight: 0.0026 grams



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

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	±20		14)/
ESD IEC61000-4-2(Contact)	V <sub>ESD</sub>	±15	kV
Operating Junction Temperature Range	TJ	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C





## **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>	$V_R = 5 V$	-	-	1	uA	
Clamping Voltage	V <sub>CL</sub>	$I_{PP} = 1 \text{ A}, t_P = 8/20 \text{ us},$ 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 <sub>CL</sub> (2)	$I_{PP} = 8 \text{ A}, t_P = 100 \text{ ns},$ any I/O pins to GND	-	16	-	V	
		$I_{PP} = 16 \text{ A}, t_P = 100 \text{ ns},$ any I/O pins to GND	-	23.5	-	V	
Dynamic Resistance	R <sub>DYN</sub>	t <sub>P</sub> = 100 ns	-	0.94	-	Ω	
Off State Junction Capacitance	CJ	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: Z0 =  $50 \Omega$ ,  $t_P = 100 \text{ ns}$ .





### **TYPICAL CHARACTERISTIC CURVES**

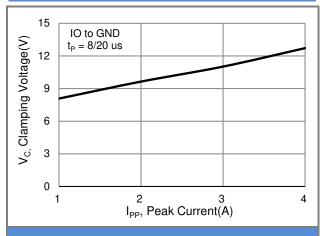


Fig.1 Typical Peak Clamping Voltage

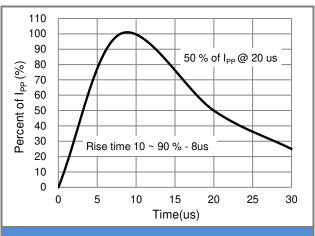


Fig.2 Pulse Waveform

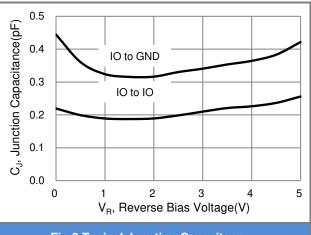
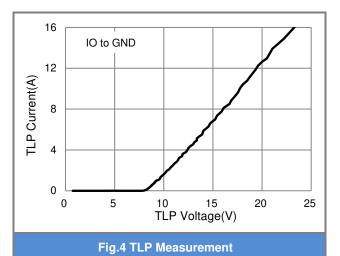


Fig.3 Typical Junction Capacitance



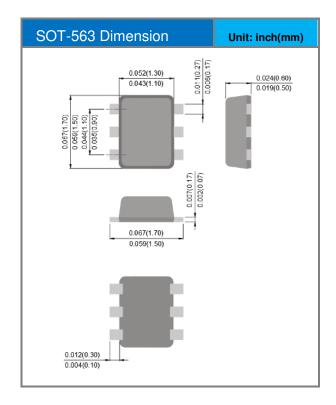


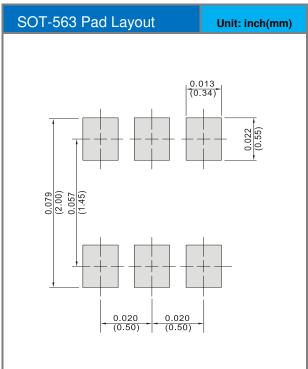


### Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
PE1605C4E6_R1_00001	SOT-563	4K / 7" Reel	KCC	Halogen free RoHS compliant

### **Packaging Information & Mounting Pad Layout**









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