



PE1805C4E6

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 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

Applications

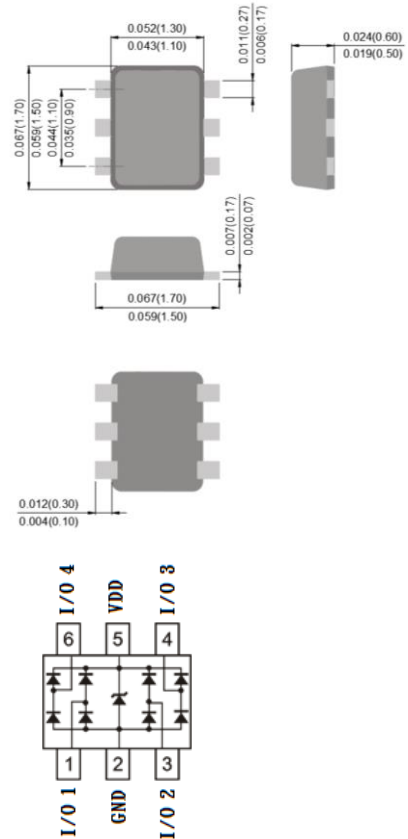
- USB2.0 Data Line Protection
- Video Graphics Cards
- Monitors and Flat Panel Displays Notebook computers
- Digital Video Interface(DVI)
- 10/100/1000 Ethernet
- ATM Interfaces
- Control Signal Lines Protection

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

SOT-563

Unit: inch(mm)





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Electrical Characteristics

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage (Note 1)	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	μA
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.



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TYPICAL CHARACTERISTIC CURVES

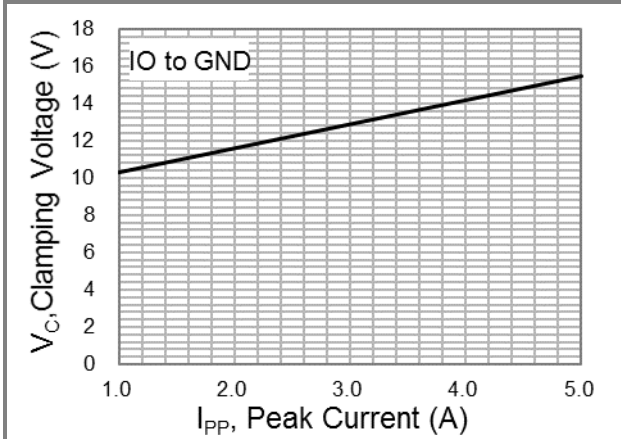


Fig.1 Typical Junction Capacitance

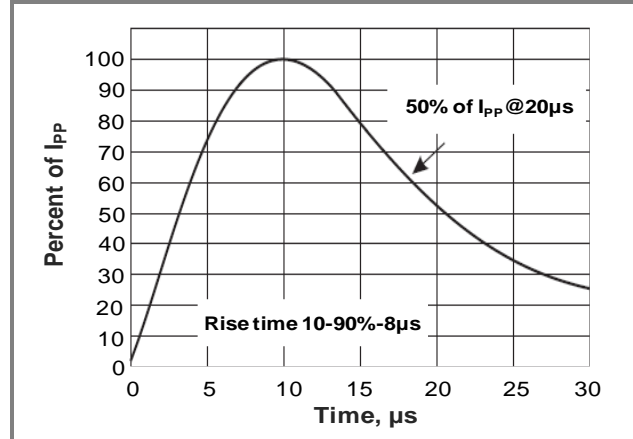


Fig.2 8/20 μs Pulse Waveform

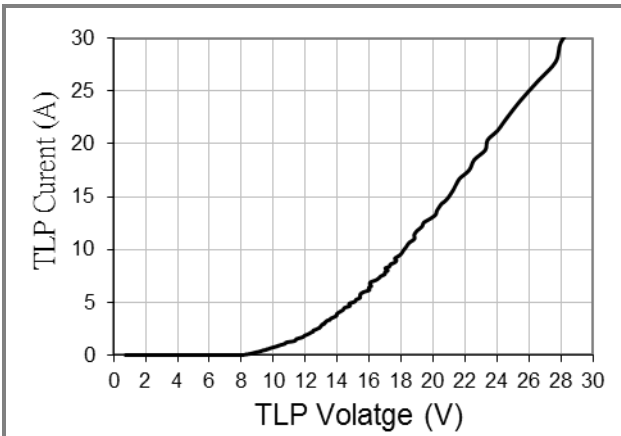


Fig.3 Transmission Line Pulsing (TLP) Measurement

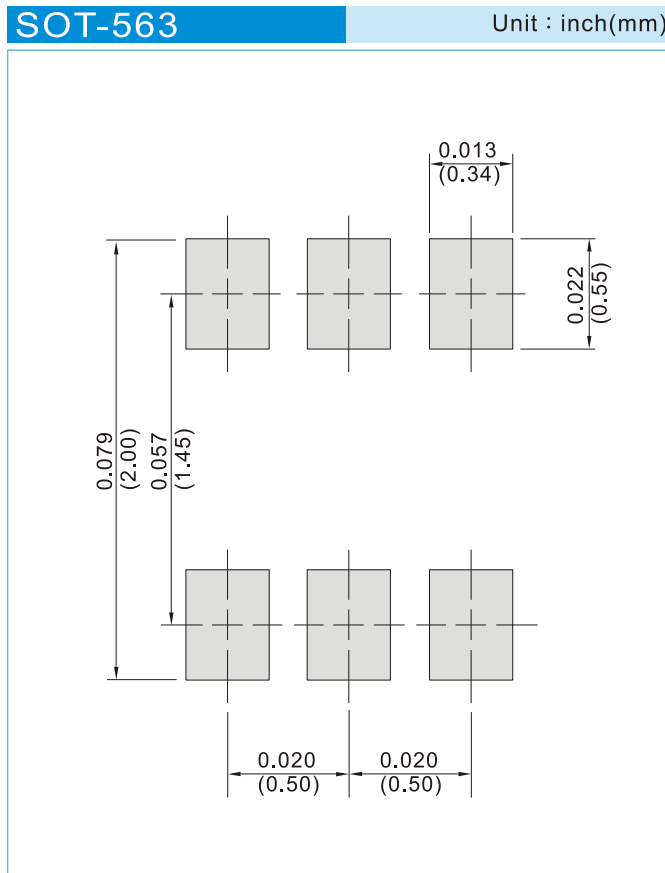


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Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
PE1805C4E6_R1_00001	SOT-563	4K pcs / 7" reel	C2B	Halogen free RoHS compliant
PE1805C4E6_R2_00001	SOT-563	10K pcs / 13" reel	C2B	Halogen free RoHS compliant
PE1805C4E6_R1_00002	SOT-563	8K pcs / 7" reel	C2B	Halogen free RoHS compliant
PE1805C4E6_R2_00002	SOT-563	20K pcs / 13" reel	C2B	Halogen free RoHS compliant

Mounting Pad Layout





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