



PE1805C4C6

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 RoHS2.0 (2011/65/EU & 2015/865/EU directive)
- Green molding compound as per IEC61249 Std.. (Halogen Free)

Mechanical Data

- Case: SOT-363, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026

Applications

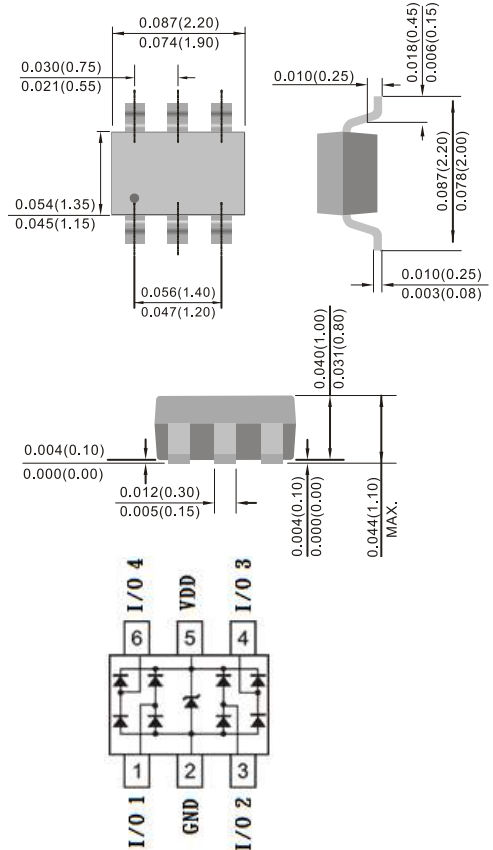
- USB2.0 Data Line Protection
- Video Graphics Cards
- Monitors and Flat Panel Displays Notebook computers
- Digital Video Interface(DVI)
- 10/100/1000 Ethernet
- ATM Interfaces
- Control Signal Lines Protection

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-363

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

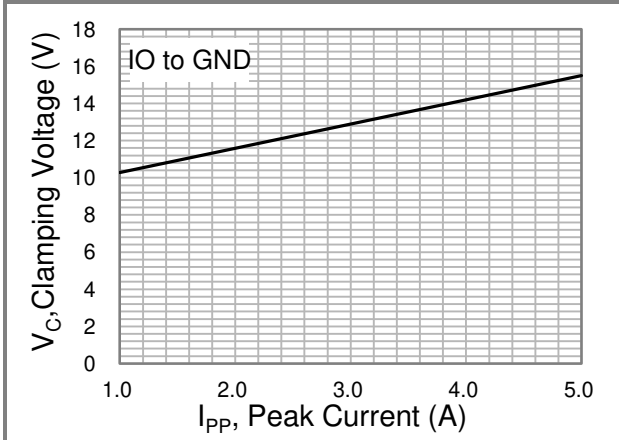


Fig.1 Typical Junction Capacitance

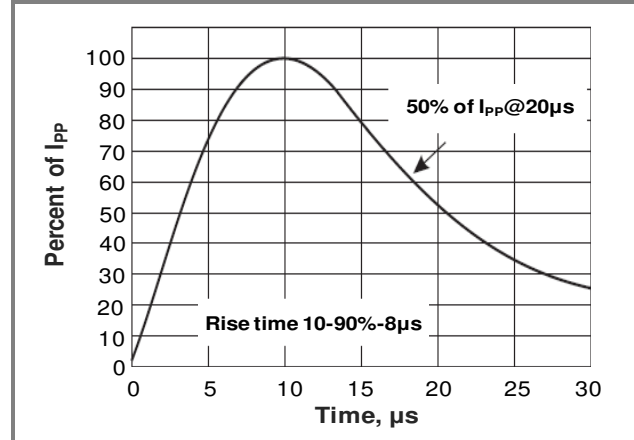


Fig.2 8/20 μ s Pulse Waveform

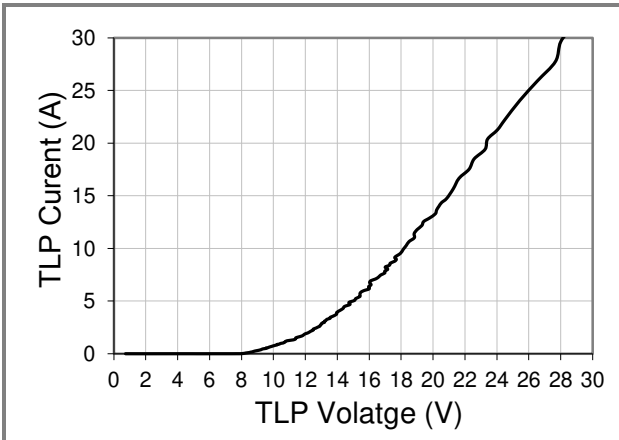


Fig.3 Transmission Line Pulsing (TLP) Measurement

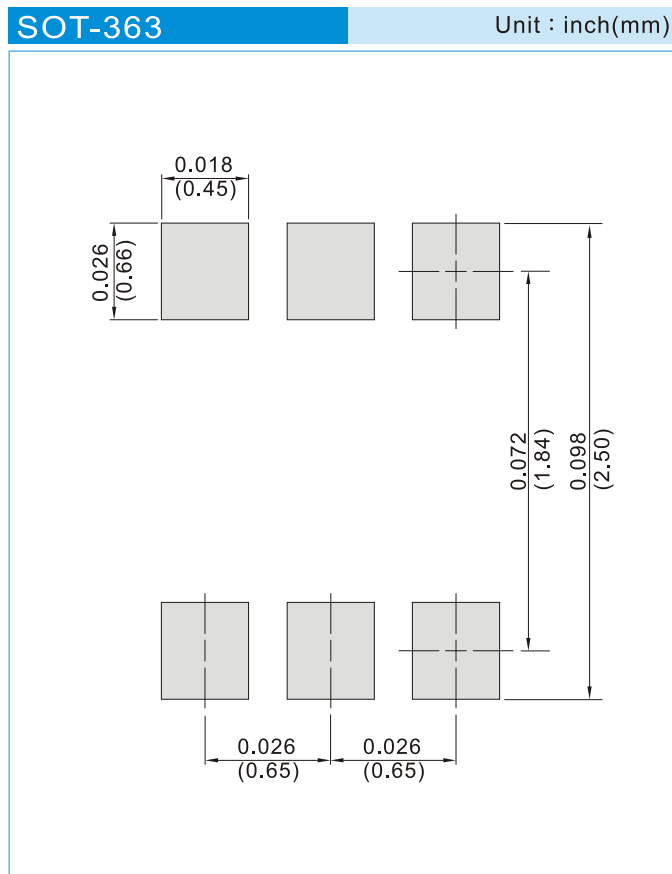


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Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type | Marking | Version |
|----------------------|--------------|--------------------|---------|--------------|
| PE1805C4C6_R1_00001 | SOT-363 | 3K pcs / 7" reel | C2B | Halogen free |
| PE1805C4C6_R2_00001 | SOT-363 | 10K pcs / 13" reel | C2B | Halogen free |

MOUNTING PAD LAYOUT





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