



PEC2305C2E

VERY LOW CAPACITANCE ESD PROTECTION

Voltage

5 V

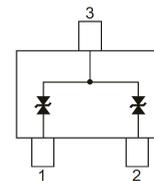
Features

- IEC61000-4-2(ESD): ± 15 kV Air, ± 8 kV Contact
- IEC61000-4-4(EFT): 20 A(5/50 ns)
- IEC61000-4-5(Lightning): 2 A(8/20 μ 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-523
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.002 grams

SOT-523



Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

| PARAMETER | SYMBOL | LIMIT | UNITS |
|--------------------------------------|-----------------------------------|----------|-------|
| ESD IEC61000-4-2(Air) | V _{ESD} | ± 15 | kV |
| ESD IEC61000-4-2(Contact) | | ± 8 | |
| Typical Thermal Resistance | R _{θJA} (¹) | 630 | °C/W |
| 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} ⁽²⁾ | - | - | - | 5 | V |
| Reverse Breakdown Voltage | V _{BR} | I _{BR} = 1 mA | 5.5 | - | 10 | V |
| Reverse Leakage Current | I _R | V _R = 5 V | - | - | 100 | nA |
| Clamping Voltage | V _{CL} | I _{PP} = 1 A, t _P = 8/20 μs | - | - | 12 | V |
| | | I _{PP} = 2 A, t _P = 8/20 μs | - | - | 15 | |
| Clamping Voltage TLP | V _{CL} ⁽³⁾ | I _{PP} = 8 A, t _P = 100 ns | - | 12.1 | - | V |
| | | I _{PP} = 16 A, t _P = 100 ns | - | 13.7 | - | |
| Dynamic Resistance | R _{DYN} | t _P = 100 ns | - | 0.2 | - | Ω |
| Off State Junction Capacitance | C _J | 0Vdc Bias f = 1 MHz | - | - | 3.5 | pF |

NOTES :

1. Mounted on a FR4 PCB, Single-sided copper, mini pad.
2. 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.
3. Testing using Transmission Line Pulse (TLP) conditions: Z₀ = 50 Ω, t_P = 100 ns.



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TYPICAL CHARACTERISTIC CURVES

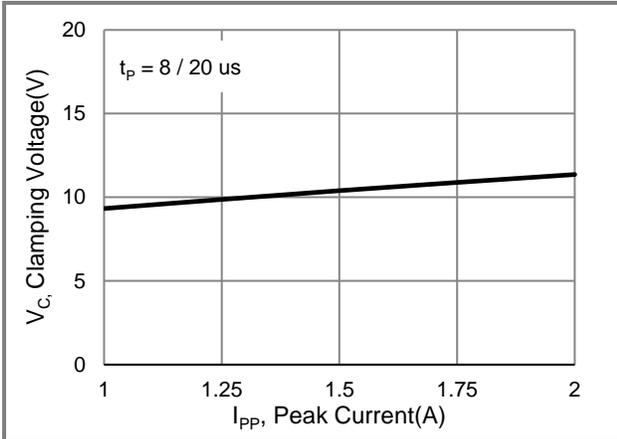


Fig.1 Typical Peak Clamping Voltage

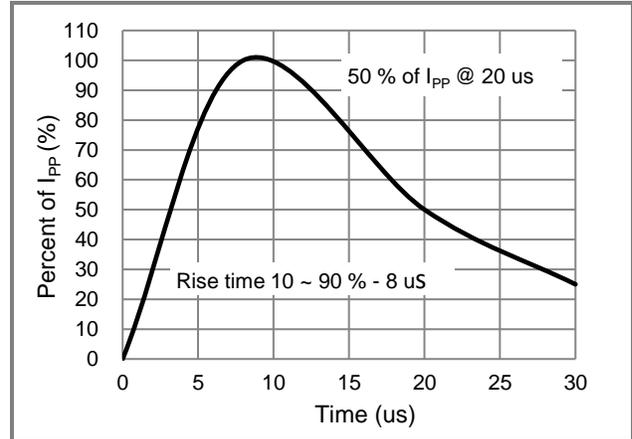


Fig.2 Pulse Waveform

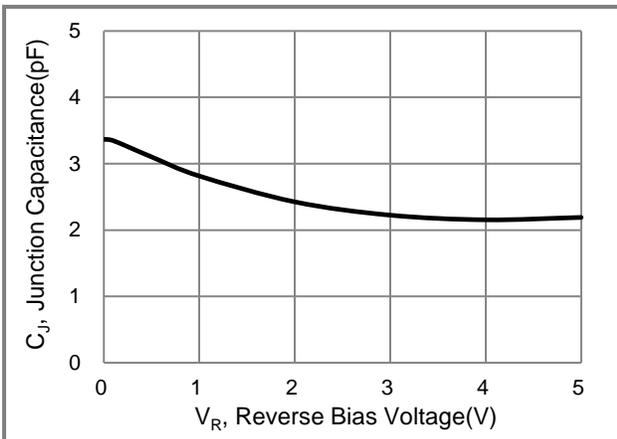


Fig.3 Typical Junction Capacitance

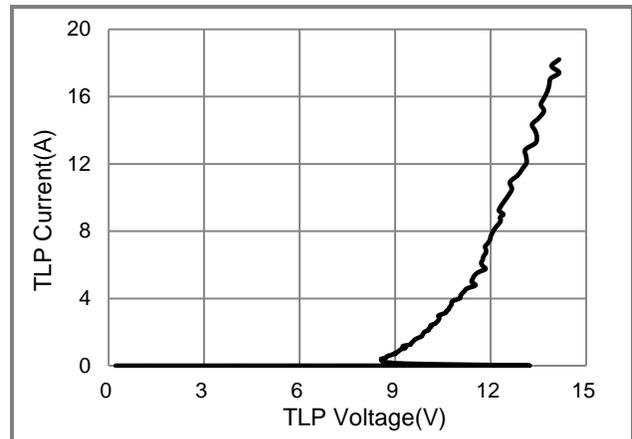


Fig.4 TLP Measurement

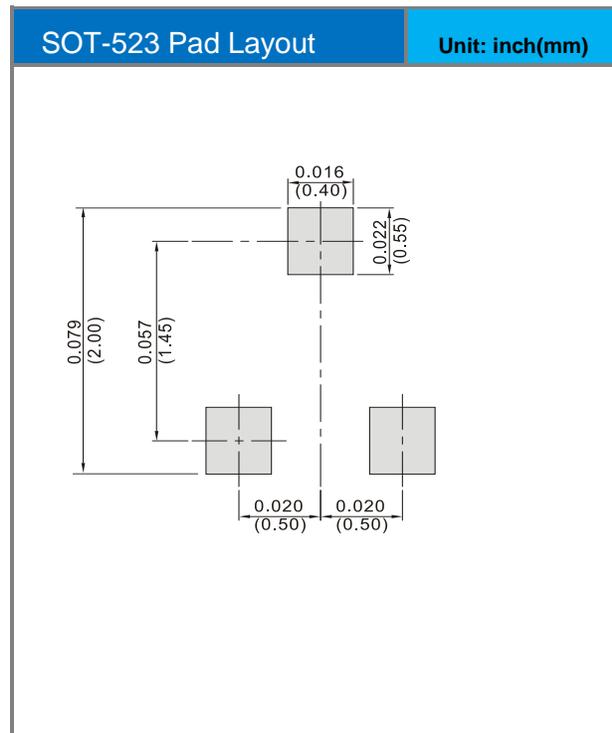
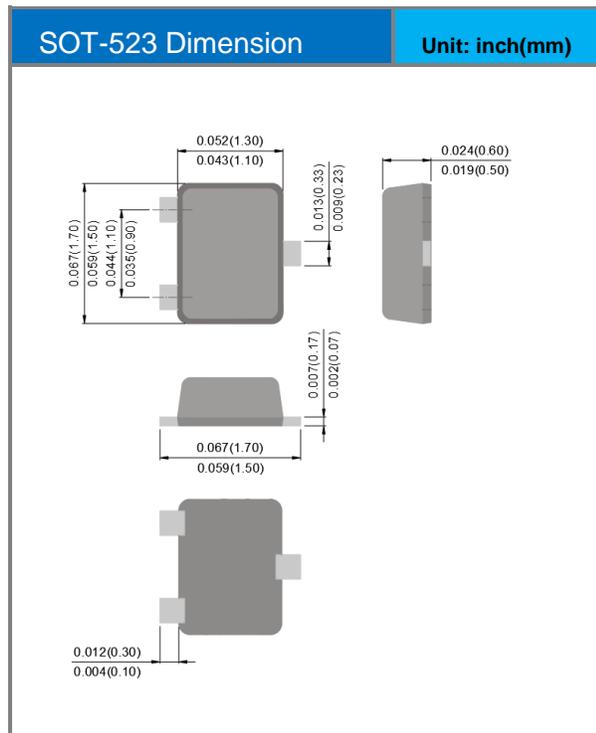


PEC2305C2E

Part No. Packing Code Version

| Part No. Packing Code | Package Type | Packing Type | Marking | Version |
|-----------------------|--------------|--------------|---------|--------------------------------|
| PEC2305C2E_R1_00001 | SOT-523 | 4K / 7" Reel | 32E | Halogen free RoHS compliant |

Packaging Information & Mounting Pad Layout





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