



PEC33712C2A

ESD PROTECTION

Voltage

7 V / 12 V

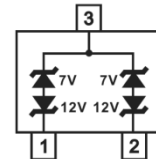
Features

- Protects two +12V to -7V line
- IEC61000-4-2(ESD): ± 30 kV Air, ± 30 kV Contact
- IEC61000-4-4(EFT): 40 A(5/50 ns)
- IEC61000-4-5(Lightning): 5A(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-23
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0003 ounces, 0.0084 grams

SOT-23



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

| PARAMETER | SYMBOL | LIMIT | UNITS |
|--------------------------------------|------------------|----------|-------|
| ESD IEC61000-4-2(Air) | V _{ESD} | ± 30 | kV |
| ESD IEC61000-4-2(Contact) | | ± 30 | |
| Operating Junction Temperature Range | T _J | -55~150 | °C |
| Storage Temperature Range | T _{STG} | -55~150 | °C |



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Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNITS |
|--------------------------------|-----------------|---|------|------|------|-------|
| Reverse Stand-Off Voltage | $V_{RWM}^{(1)}$ | Pin1 to Pin3 or Pin2 to Pin3 | - | - | 12 | V |
| | | Pin3 to Pin1 or Pin3 to Pin2 | - | - | 7 | |
| Reverse Breakdown Voltage | V_{BR} | Pin1 to Pin3 or Pin2 to Pin3, $I_R = 1\text{ mA}$ | 13.3 | - | - | V |
| | | Pin3 to Pin1 or Pin3 to Pin2, $I_R = 1\text{ mA}$ | 7.5 | - | - | |
| Reverse Leakage Current | I_R | Pin1 to Pin3 or Pin2 to Pin3, $V_R = 12\text{ V}$ | - | - | 1 | uA |
| | | Pin3 to Pin1 or Pin3 to Pin2, $V_R = 7\text{ V}$ | - | - | 1 | |
| Clamping Voltage | V_{CL} | Pin1 to Pin3 or Pin2 to Pin3, $I_{PP} = 1\text{ A}$, $t_P = 8/20\text{ us}$ | - | - | 19 | V |
| | | Pin1 to Pin3 or Pin2 to Pin3, $I_{PP} = 5\text{ A}$, $t_P = 8/20\text{ us}$ | - | - | 25 | |
| | | Pin3 to Pin1 or Pin3 to Pin2, $I_{PP} = 1\text{ A}$, $t_P = 8/20\text{ us}$ | - | - | 12 | |
| | | Pin3 to Pin1 or Pin3 to Pin2, $I_{PP} = 8\text{ A}$, $t_P = 8/20\text{ us}$ | - | - | 15 | |
| Off State Junction Capacitance | C_J | 0Vdc Bias $f = 1\text{ MHz}$ | - | 29 | 35 | pF |

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

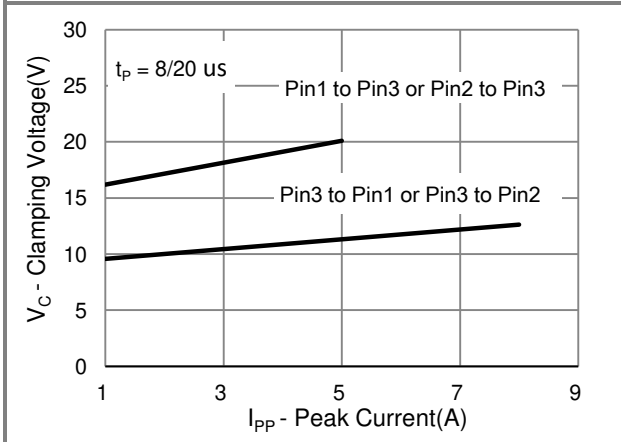


Fig.1 Typical Peak Clamping Voltage

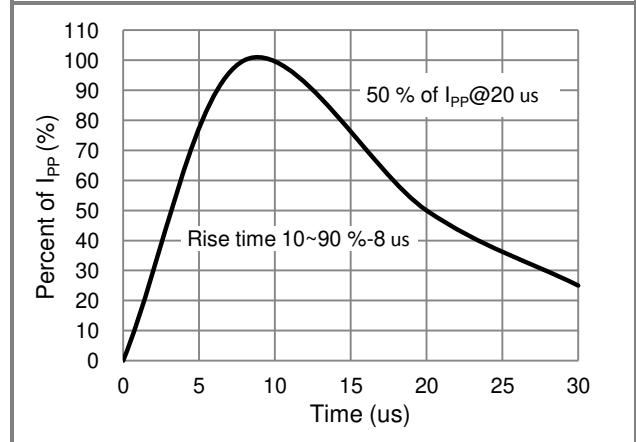


Fig.2 Pulse Waveform

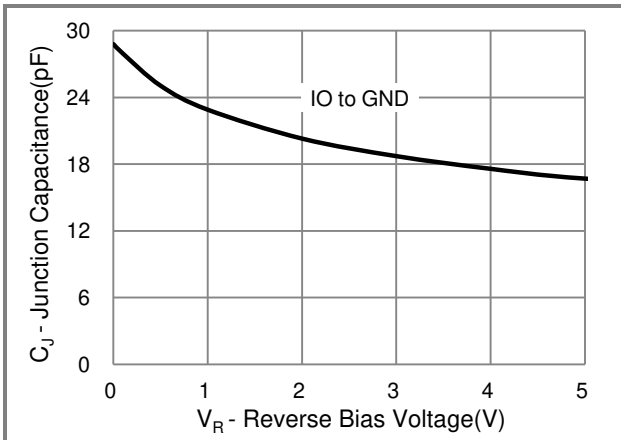


Fig.3 Typical Junction Capacitance

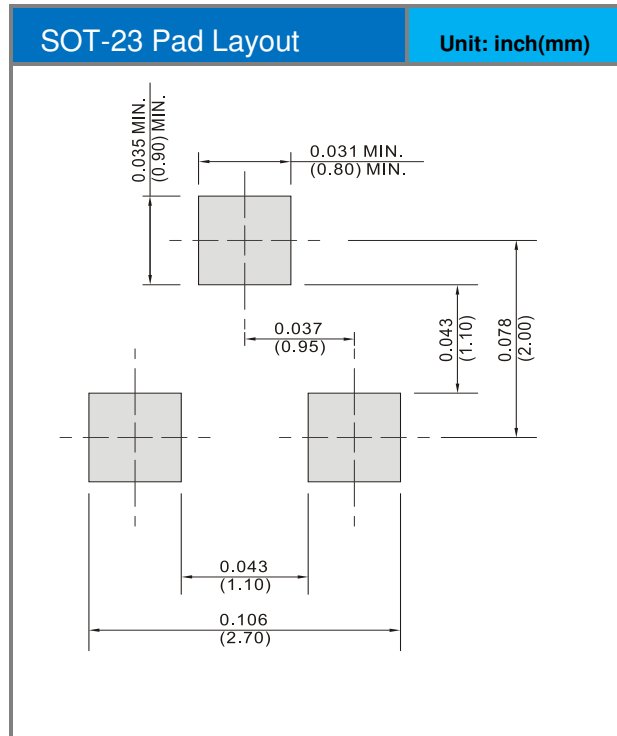
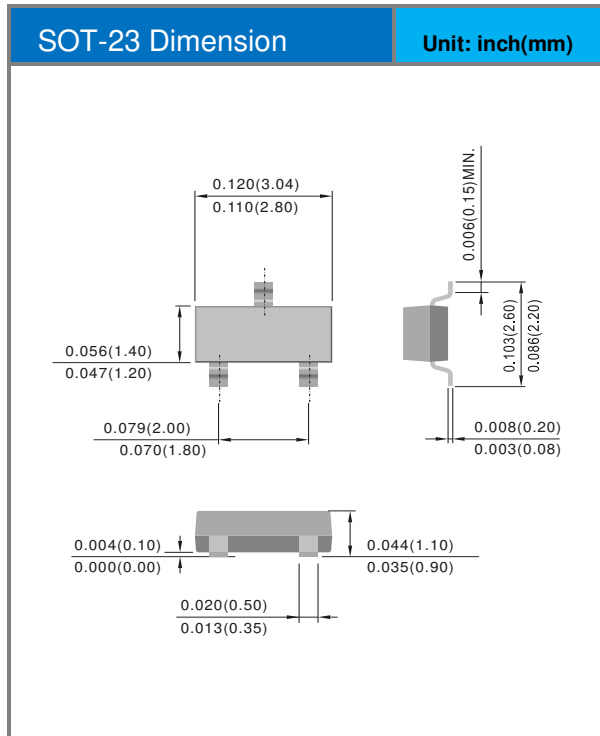


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Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type | Marking | Version |
|----------------------|--------------|--------------|---------|--------------|
| PEC33712C2A_R1_00001 | SOT-23 | 3K / 7" Reel | 3TA | Halogen Free |

Packaging Information & Mounting Pad Layout





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