



# PEC33712C2A

## ESD PROTECTION

**Voltage**

7 V / 12 V

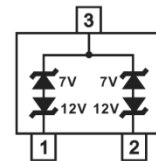
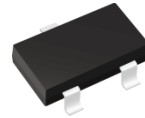
### Features

- Protects two +12V to -7V line
- IEC61000-4-2(ESD):  $\pm 30$  kV Air,  $\pm 30$  kV Contact
- IEC61000-4-4(EFT): 40 A(5/50 ns)
- IEC61000-4-5(Lightning): 5A(8/20  $\mu$ 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<sub>A</sub> = 25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air)	V <sub>ESD</sub>	$\pm 30$	kV
ESD IEC61000-4-2(Contact)		$\pm 30$	
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C



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## 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>	Pin1 to Pin3 or Pin2 to Pin3	-	-	12	V
		Pin3 to Pin1 or Pin3 to Pin2	-	-	7	
Reverse Breakdown Voltage	V <sub>BR</sub>	Pin1 to Pin3 or Pin2 to Pin3, I <sub>R</sub> = 1 mA	13.3	-	-	V
		Pin3 to Pin1 or Pin3 to Pin2, I <sub>R</sub> = 1 mA	7.5	-	-	
Reverse Leakage Current	I <sub>R</sub>	Pin1 to Pin3 or Pin2 to Pin3, V <sub>R</sub> = 12 V	-	-	1	uA
		Pin3 to Pin1 or Pin3 to Pin2, V <sub>R</sub> = 7 V	-	-	1	
Clamping Voltage	V <sub>CL</sub>	Pin1 to Pin3 or Pin2 to Pin3, I <sub>PP</sub> = 1 A, t <sub>P</sub> = 8/20 us	-	-	19	V
		Pin1 to Pin3 or Pin2 to Pin3, I <sub>PP</sub> = 5 A, t <sub>P</sub> = 8/20 us	-	-	25	
		Pin3 to Pin1 or Pin3 to Pin2, I <sub>PP</sub> = 1 A, t <sub>P</sub> = 8/20 us	-	-	12	
		Pin3 to Pin1 or Pin3 to Pin2, I <sub>PP</sub> = 8 A, t <sub>P</sub> = 8/20 us	-	-	15	
Off State Junction Capacitance	C <sub>J</sub>	0Vdc Bias f = 1 MHz	-	29	35	pF

**NOTE:**

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.



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## TYPICAL CHARACTERISTIC CURVES

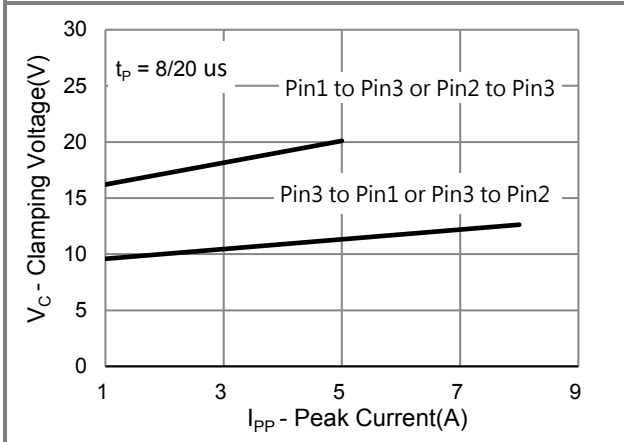


Fig.1 Typical Peak Clamping Voltage

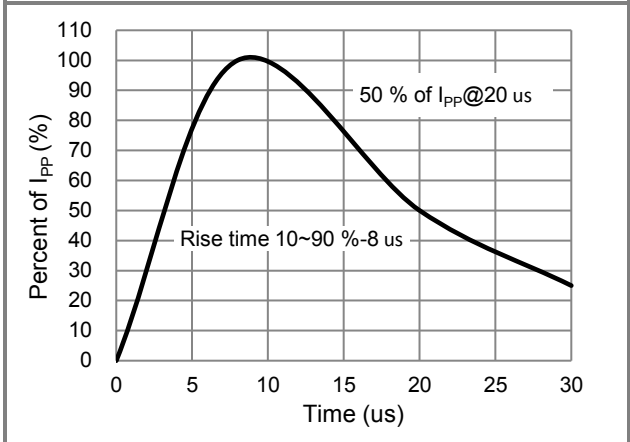


Fig.2 Pulse Waveform

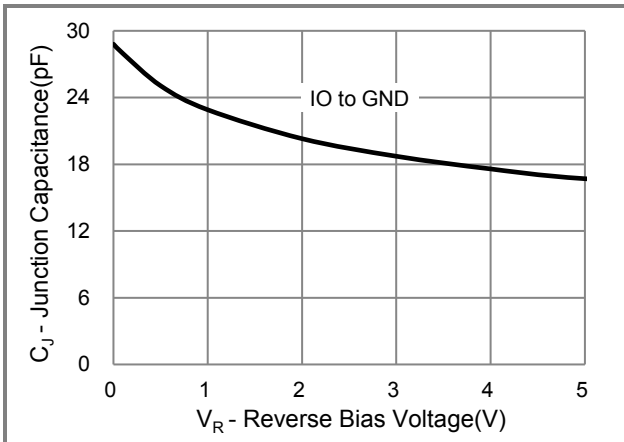


Fig.3 Typical Junction Capacitance

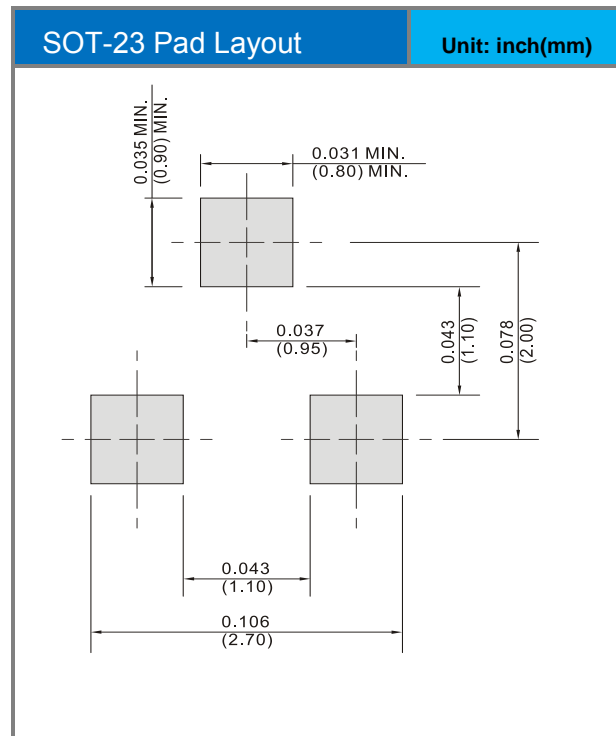
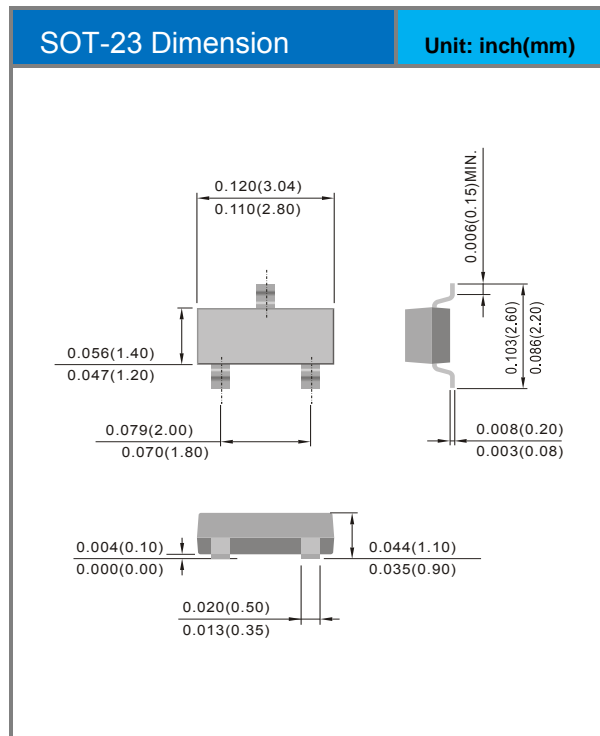


# PEC33712C2A

## 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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