

# PEC33712C2A-AU

## ESD PROTECTION

**Voltage**

**7 V / 12 V**

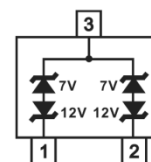
## Features

- 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
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

## Mechanical Data

- Case : SOT-23 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 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 ( $T_A = 25^\circ\text{C}$ 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	$\mu\text{A}$
		Pin3 to Pin1 or Pin3 to Pin2, $V_R = 7\text{ V}$	-	-	1	
Clamping Voltage	$V_{CL}$	Pin1 to Pin3 or Pin2 to Pin3, $I_{PP} = 1\text{ A}$ , $t_P = 8/20\text{ }\mu\text{s}$	-	-	19	V
		Pin1 to Pin3 or Pin2 to Pin3, $I_{PP} = 5\text{ A}$ , $t_P = 8/20\text{ }\mu\text{s}$	-	-	25	
		Pin3 to Pin1 or Pin3 to Pin2, $I_{PP} = 1\text{ A}$ , $t_P = 8/20\text{ }\mu\text{s}$	-	-	12	
		Pin3 to Pin1 or Pin3 to Pin2, $I_{PP} = 8\text{ A}$ , $t_P = 8/20\text{ }\mu\text{s}$	-	-	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

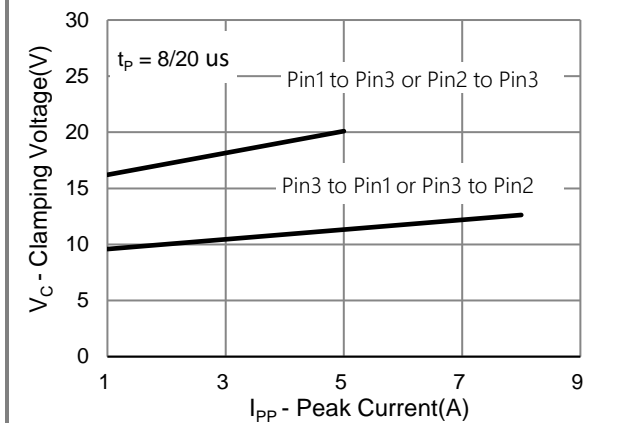


Fig.1 Typical Peak Clamping Voltage

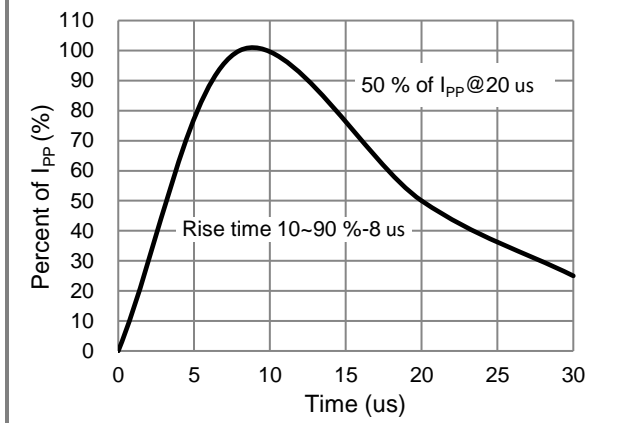


Fig.2 Pulse Waveform

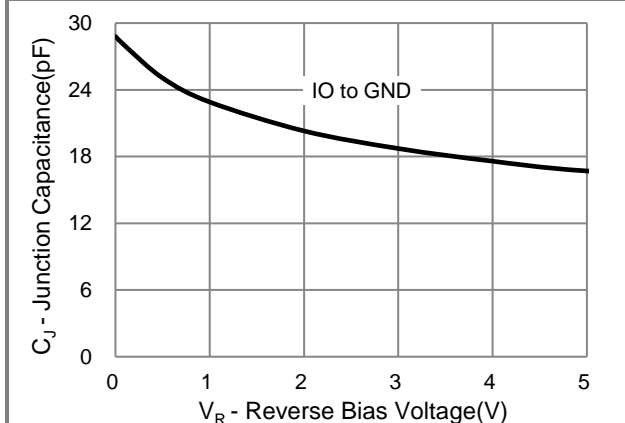


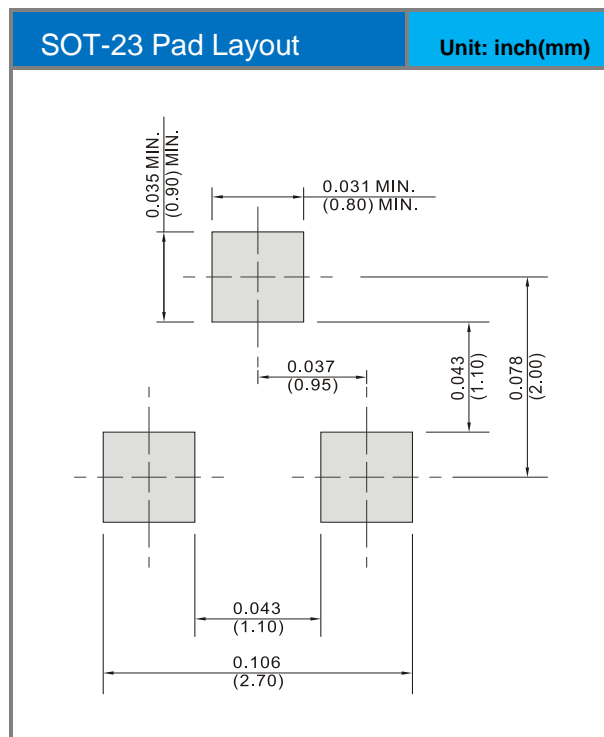
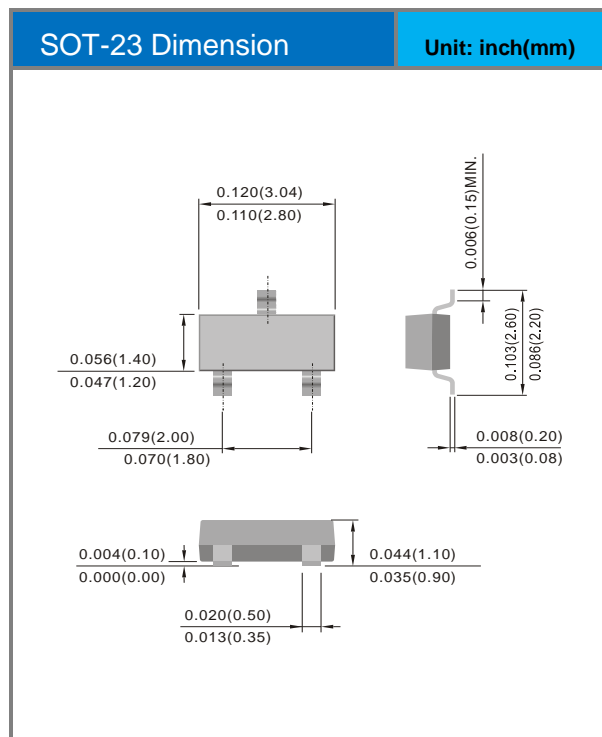
Fig.3 Typical Junction Capacitance

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## Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PEC33712C2A-AU	SOT-23	3K / 7" Reel	3TA

## Packaging Information & Mounting Pad Layout



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