

PEC4102C2A-AU ~ PEC4105C2A-AU Series

ESD Protection

Voltage

2.5~5 V

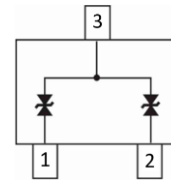
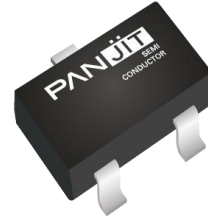
Features

- IEC61000-4-2(ESD) : ± 15 kV Air, ± 8 kV Contact
Compliance with the capability up to ± 30 kV
- IEC61000-4-5(Lightning) : 20~30A(8/20uS)
- 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_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	
Typical Thermal Resistance ^(Note 1)	R _{θJA}	350	°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 ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PEC4102C2A-AU						
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage ^(Note 2)	V_{RWM}	-	-	-	2.5	V
Reverse Breakdown Voltage	V_{BR}	$I_{BR} = 50\text{ mA}$	2.6	-	4	V
Reverse Leakage Current	I_R	$V_R = 2.5\text{ V}$	-	-	0.5	μA
Clamping Voltage	V_{CL}	$I_{PP} = 1\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$	-	-	4.5	V
		$I_{PP} = 30\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$	-	-	9	
Off State Junction Capacitance	C_J	0Vdc Bias $f = 1\text{ MHz}$	-	-	120	pF

PEC4103C2A-AU						
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage ^(Note 2)	V_{RWM}	-	-	-	3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_{BR} = 50\text{ mA}$	3.5	-	4.5	V
Reverse Leakage Current	I_R	$V_R = 3.3\text{ V}$	-	-	0.5	μA
Clamping Voltage	V_{CL}	$I_{PP} = 1\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$	-	-	5.5	V
		$I_{PP} = 30\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$	-	-	9	
Off State Junction Capacitance	C_J	0Vdc Bias $f = 1\text{ MHz}$	-	-	100	pF

PEC4105C2A-AU						
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage ^(Note 2)	V_{RWM}	-	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	$I_{SB} = 50\text{ mA}$	5.5	-	8	V
Reverse Leakage Current	I_R	$V_R = 5\text{ V}$	-	-	0.5	μA
Clamping Voltage	V_{CL}	$I_{PP} = 1\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$	-	-	10	V
		$I_{PP} = 20\text{ A}$, $t_P = 8/20\text{ }\mu\text{s}$	-	-	13	
Off State Junction Capacitance	C_J	0Vdc Bias $f = 1\text{ MHz}$	-	-	80	pF

NOTES :

1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
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.

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TYPICAL CHARACTERISTIC CURVES

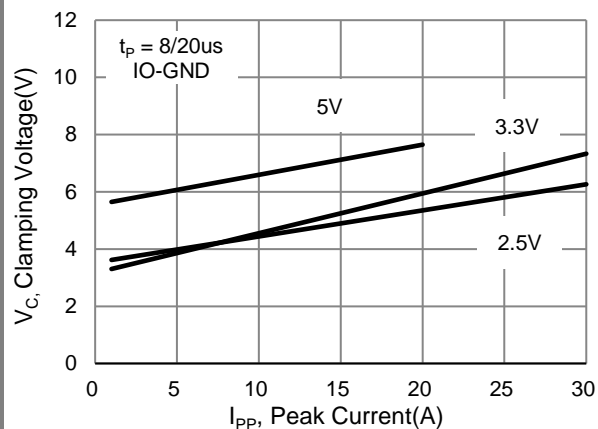


Fig.1 Typical Peak Clamping Voltage

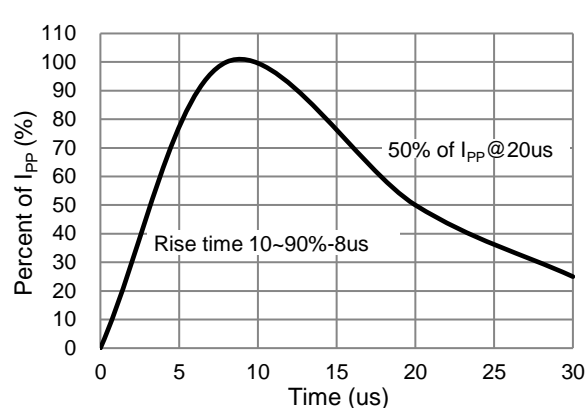


Fig.2 Pulse Waveform

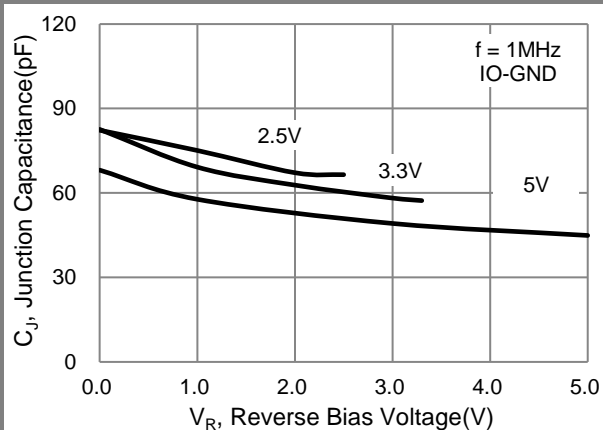


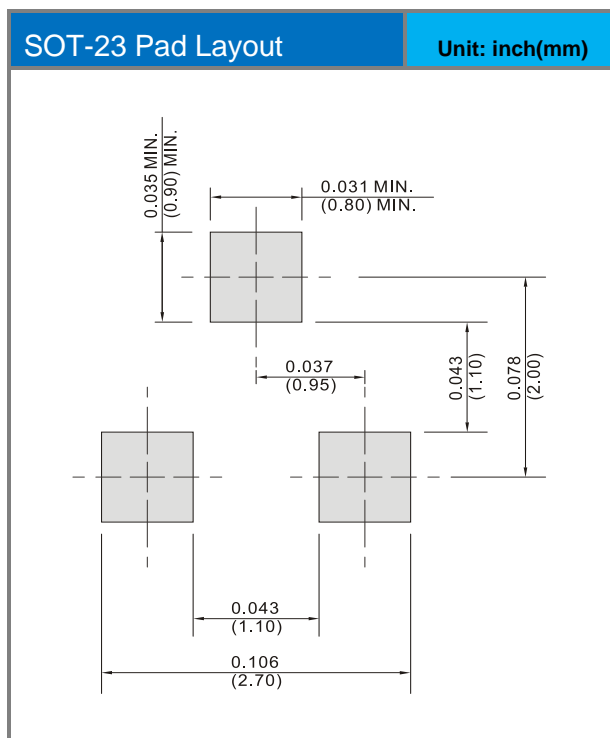
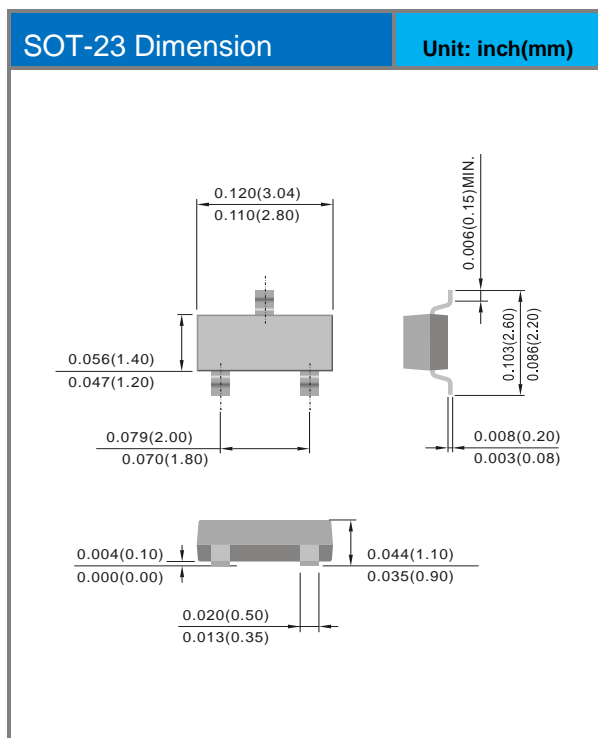
Fig.3 Typical Junction Capacitance

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PEC4102C2A-AU	SOT-23	3K pcs / 7" reel	ACA
PEC4103C2A-AU	SOT-23	3K pcs / 7" reel	ACB
PEC4105C2A-AU	SOT-23	3K pcs / 7" reel	ACC

Packaging Information & Mounting Pad Layout



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