

PEC22SD48C2A-AU

ESD Protection

Voltage

48 V

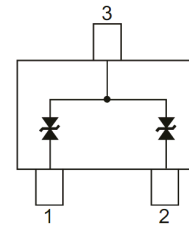
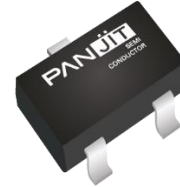
Features

- ISO10605(C=330pF, R=330Ω) : ±30kV Air, ±30kV Contact
- HBM ≥ ±8kV & CDM ≥ ±2kV
- 1000 contact discharges (OPEN Alliance specification) with 15 kV (ISO10605 C=150pF, R=330Ω)
- OPEN Alliance 100BASE-T1 and 1000BASE-T1 qualified
- IEC61000-4-5(Lightning) : 2.5A(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	UNIT
ESD IEC61000-4-2(Contact) ^(Note1,3)	V _{ESD}	±30	kV
ESD ISO10605 C=150pF, R=2kΩ(Contact) ^(Note 1,2)	V _{ESD}	±30	kV
ESD ISO10605 C=330pF, R=330Ω(Contact) ^(Note 1,2)	V _{ESD}	±30	kV
ESD ISO10605 C=330pF, R=2kΩ(Contact) ^(Note 1,2)	V _{ESD}	±30	kV
ESD ISO10605 C=150pF, R=330Ω(1000 contact discharges) , OPEN Alliance specification ^(Note 2)	V _{ESD}	±15	kV
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.	UNIT
Reverse Stand-Off Voltage	V _{RWM}	-	-	-	48	V
Reverse Leakage Current	I _R	V _R = 48 V	-	-	100	nA
Clamping Voltage	V _{CL}	I _{PP} = 2.3 A, t _P = 8/20 us, I/O Pin to GND	-	64	-	V
Clamping Voltage TLP ^(Note 4)	V _{CL}	I _{PP} = 8 A, t _P = 100 ns, I/O Pin to GND	-	59	-	V
		I _{PP} = 16 A, t _P = 100 ns, I/O Pin to GND	-	62	-	V
Peak Pulse Current ^(Note 1,3)	I _{PP}	t _P = 8/20us	-	2.3	2.5	A
Holding Voltage ^(Note 4)	V _h	t _P = 100ns	48	-	-	V
Trigger Voltage ^(Note 4)	V _t	t _P = 100ns	100	-	-	V
Dynamic Resistance ^(Note 4)	R _{DYM}	t _P = 100ns	-	0.38	-	Ω
Off State Junction Capacitance	C _J	0Vdc Bias f = 1 MHz	-	-	2.3	pF

NOTES :

1. Measured from pin 1 or 2 to pin 3.
2. Device stressed with ten non-repetitive ESD pulses.
3. Device stressed with non-repetitive 8/20 us exponential decay waveform.
4. Testing using Transmission Line Pulse (TLP) conditions: Z₀ = 50 Ω, t_P = 100 ns.

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TYPICAL CHARACTERISTIC CURVES

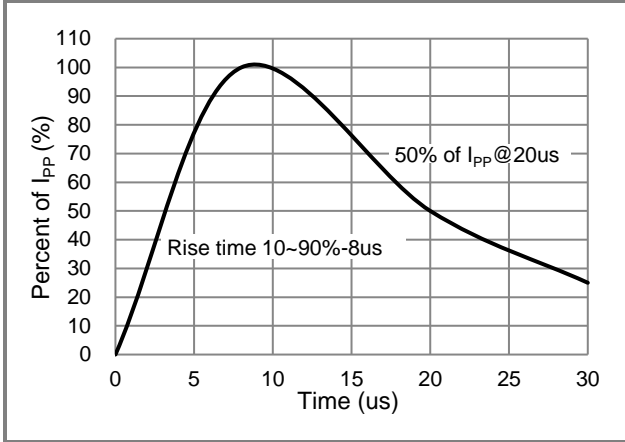


Fig.1 Pulse Waveform

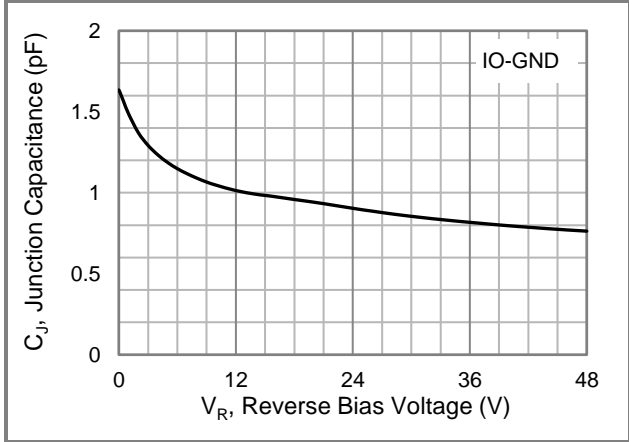


Fig.2 Typical Peak Clamping Voltage

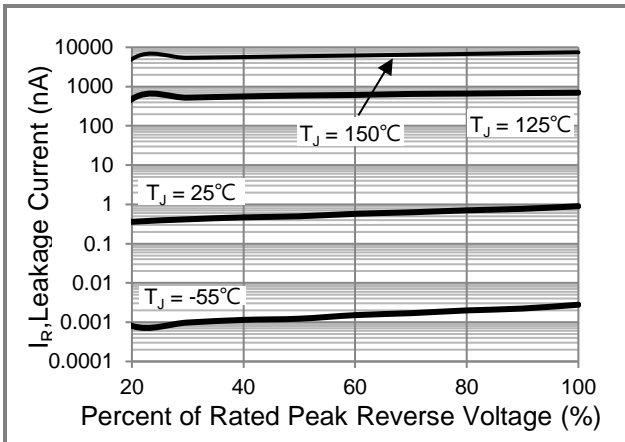


Fig.3 Typical Reverse Characteristics

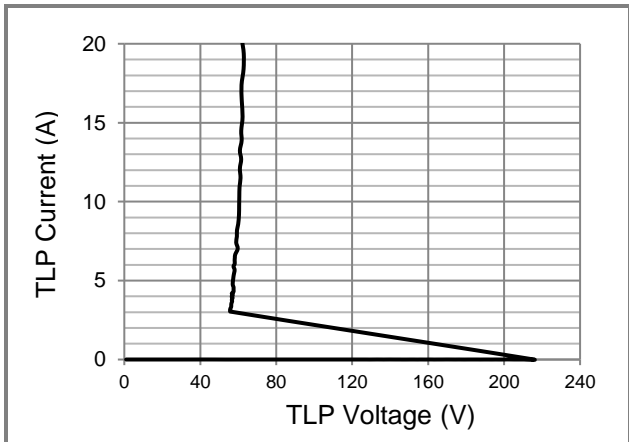


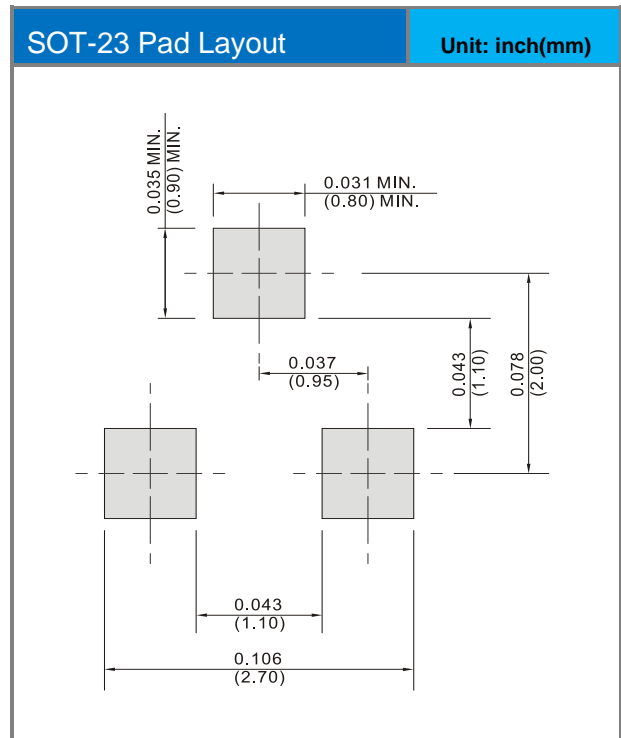
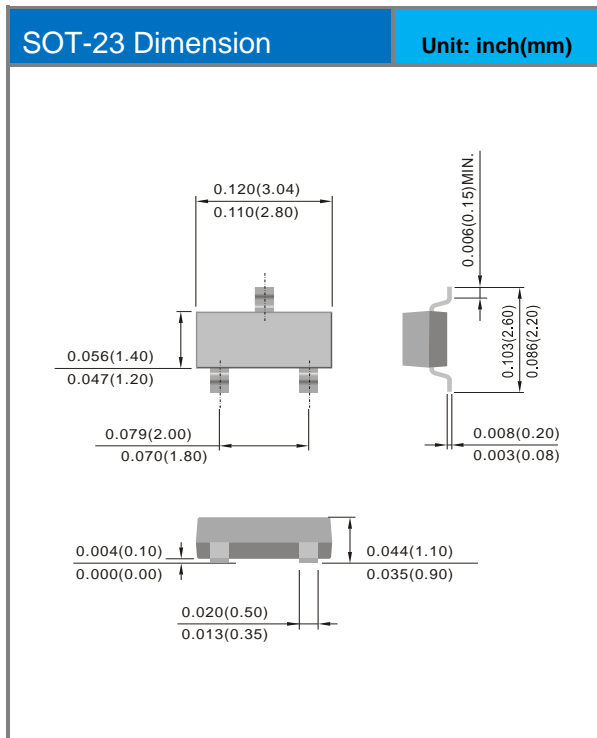
Fig.4 TLP Measurement

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PEC22SD48C2A-AU	SOT-23	3K pcs / 7" reel	AAW

Packaging Information & Mounting Pad Layout



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