



# PE9180C1A-AU

## Low Capacitance Diode Array

**Voltage** 80 V

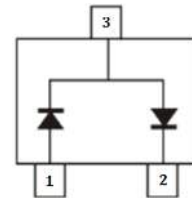
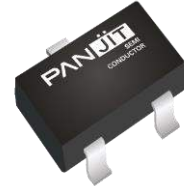
### Features

- ISO10605(C=330pF, R=330Ω) :±30kV Air, ±30kV Contact
- HBM ≥ ±8KV & CDM ≥ ±2KV
- IEC61000-4-5(Lightning) : 11A(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<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
ESD IEC61000-4-2(Air) <sup>(Note 3)</sup>	V <sub>ESD</sub>	±30	kV
ESD IEC61000-4-2(Contact) <sup>(Note 3)</sup>		±30	
Typical Thermal Resistance <sup>(Note 1)</sup>	R <sub>θJA</sub>	350	°C/W
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 <sup>(Note 2)</sup>	V <sub>RWM</sub>	-	-	-	80	V
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>R</sub> = 100uA	100	-	-	V
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 1mA	-	-	715	mV
		I <sub>F</sub> = 10mA	-	-	855	mV
		I <sub>F</sub> = 50mA	-	-	1	V
		I <sub>F</sub> = 150mA	-	-	1.25	V
Reverse Leakage Current	I <sub>R</sub>	V <sub>R</sub> = 25V	-	-	30	nA
		V <sub>R</sub> = 80V	-	-	100	nA
Clamping Voltage <sup>(Note 3)</sup>	V <sub>CL</sub>	I <sub>PP</sub> = 1A, t <sub>P</sub> = 8/20us	-	-	3	V
		I <sub>PP</sub> = 11A, t <sub>P</sub> = 8/20us	-	-	20	V
Off State Junction Capacitance	C <sub>J</sub>	0Vdc Bias f = 1MHz	-	0.6	2	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<sub>RWM</sub>), which should be equal to or greater than the DC or continuous peak operation voltage level.
3. Measured from pin 3 to pins 1 and 2 (pins 1 and 2 are connected).



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## TYPICAL CHARACTERISTIC CURVES

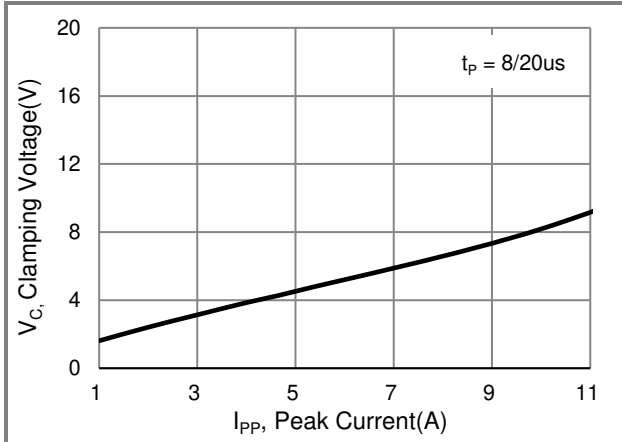


Fig.1 Typical Peak Clamping Voltage

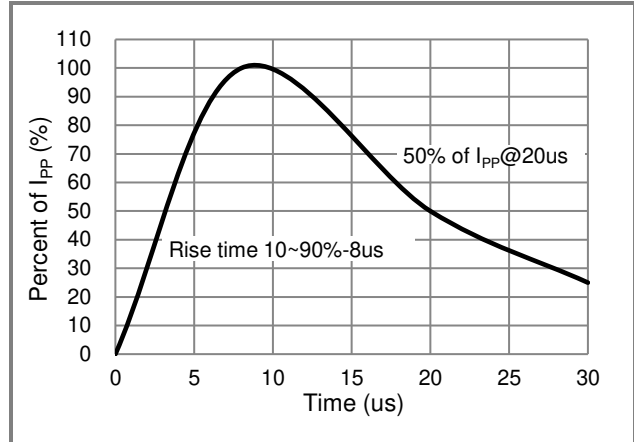


Fig.2 Pulse Waveform

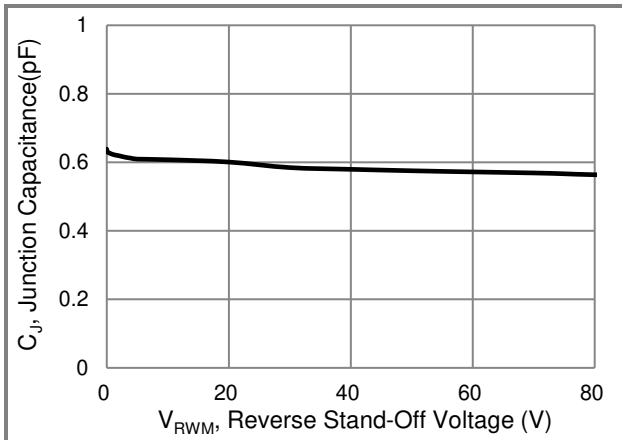


Fig.3 Typical Junction Capacitance

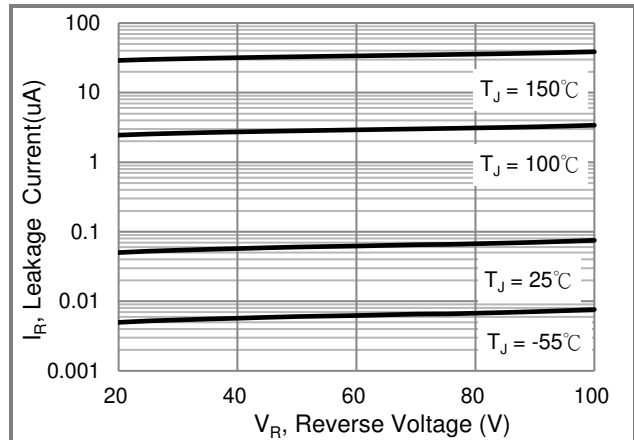


Fig.4 Typical Reverse Characteristics

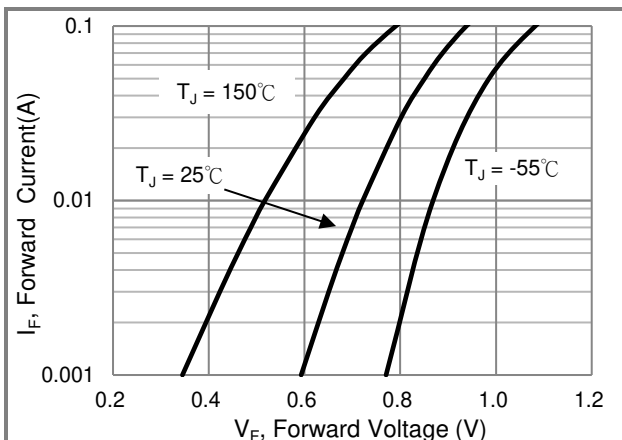


Fig.5 Typical Forward Characteristics

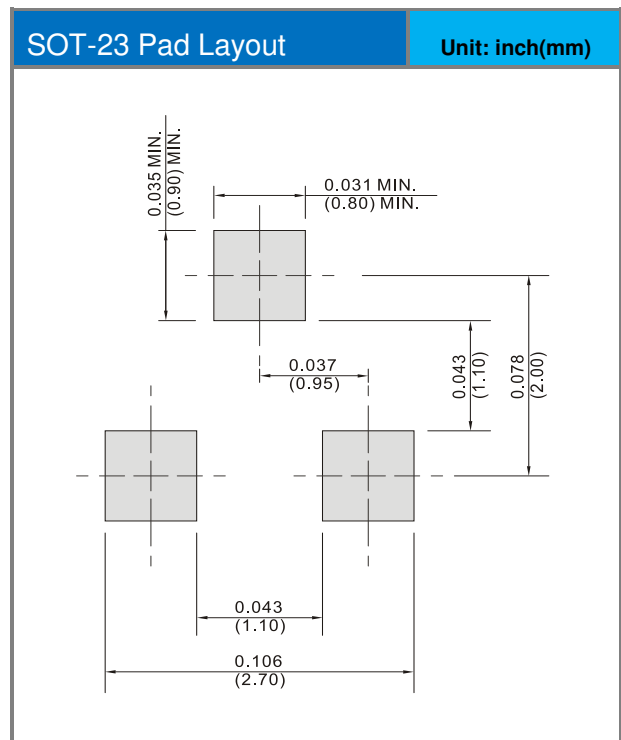
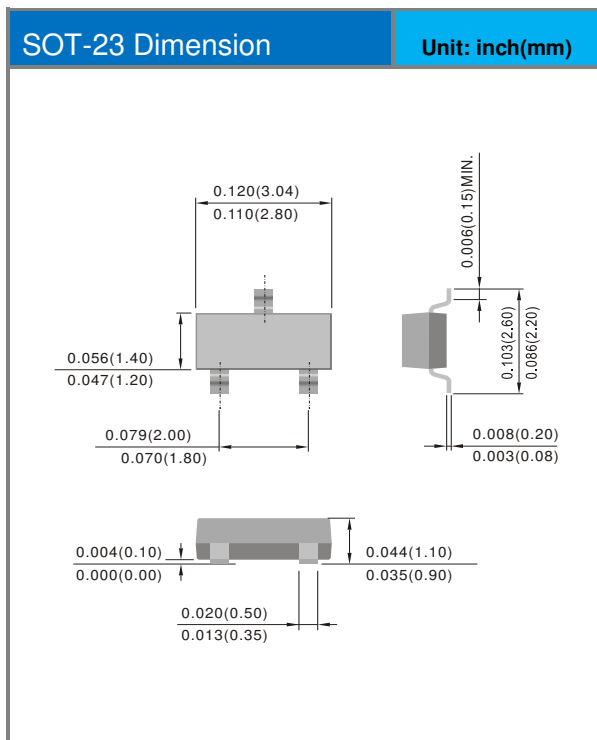


# PE9180C1A-AU

## Part No. Packing Code Version

Part No.	Package Type	Packing Type	Marking	Version
PE9180C1A-AU	SOT-23	3K pcs / 7" reel	ABK	Halogen free RoHS compliant

## Packaging Information & Mounting Pad Layout





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