



# PEC3124C2A-AU

## ESD Protection

**Voltage**

**24 V**

### Features

- Bidirectional ESD protection
- IEC61000-4-2(ESD): ±20kV Air, ±18kV Contact
- IEC61000-4-4(EFT): 40A(5/50nS)
- IEC61000-4-5(Lightning): 3A(8/20µS)
- Low leakage current, maximum of 0.05µA at rated voltage
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### Mechanical Data

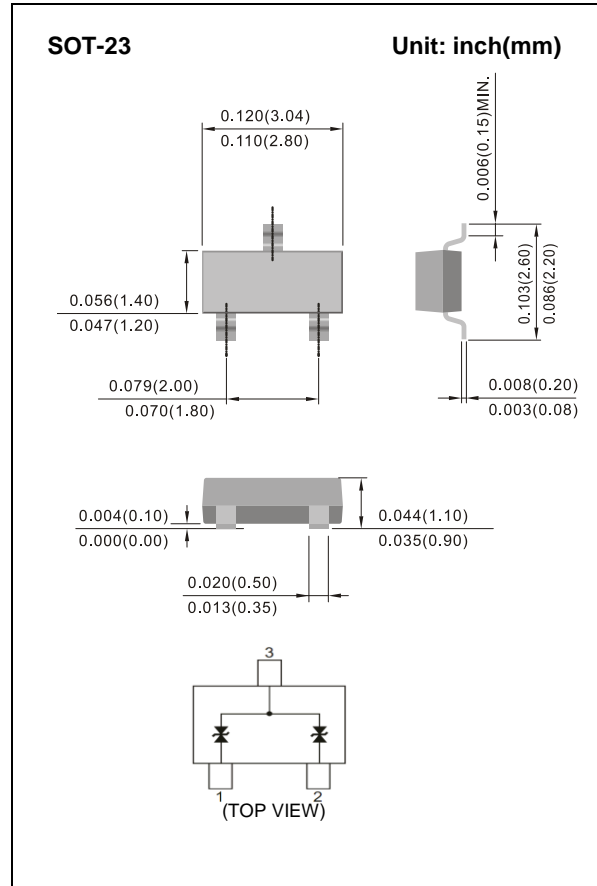
- Case: SOT-23, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0003 ounces, 0.0084 grams

### Applications

- CAN bus protection
- Automotive applications

### Maximum Ratings

PARAMETER	SYMBOL	VALUE	UNITS
ESD IEC61000-4-2(Air)	$V_{ESD}$	±20	kV
ESD IEC61000-4-2(Contact)		±18	
Operating Junction Temperature Range	$T_J$	-55 to +150	°C
Storage Temperature Range	$T_{STG}$	-55 to +150	°C





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## Electrical Characteristics

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage <sup>(Note 1)</sup>	$V_{RWM}$	-	-	-	24	V
Reverse Breakdown Voltage	$V_{BR}$	$I_R=5mA$	25.4	-	30.3	V
Reverse Leakage Current	$I_R$	$V_R=24V$	-	-	50	nA
Clamping Voltage	$V_{CL}$	$I_{PP}=1A, t_P=8/20\mu s$	-	-	40	V
		$I_{PP}=3A, t_P=8/20\mu s$	-	-	60	V
Clamping Voltage TLP <sup>(Note 2)</sup>	$V_{CL}$	$I_{PP}=4A, t_P=100ns$	-	34.5	-	V
		$I_{PP}=8A, t_P=100ns$	-	38	-	V
Dynamic Resistance	$R_{DYN}$	$t_P=100ns$	-	0.88	-	$\Omega$
Off State Junction Capacitance	$C_J$	0Vdc Bias f=1MHz	-	11	15	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.

2. Testing using Transmission Line Pulse (TLP) conditions:  $Z_0 = 50\Omega$  ,  $t_P = 100 ns$ .



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## TYPICAL CHARACTERISTIC CURVES

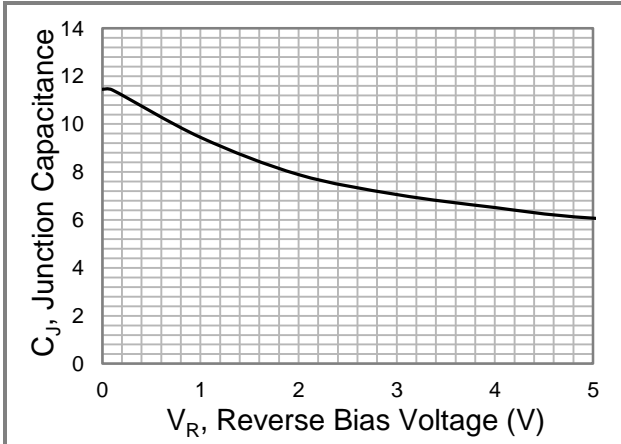


Fig.1 Typical Junction Capacitance

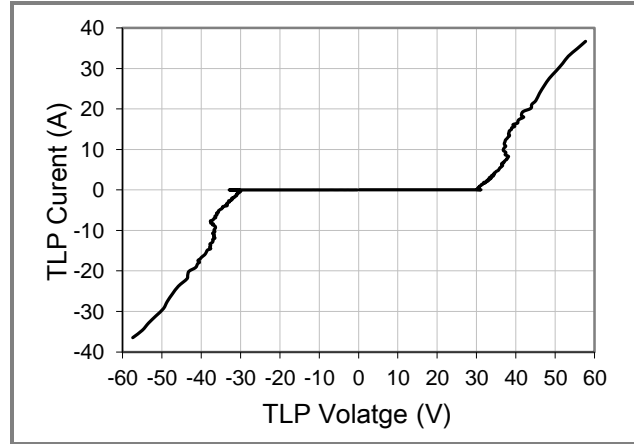


Fig.2 TLP Measurement

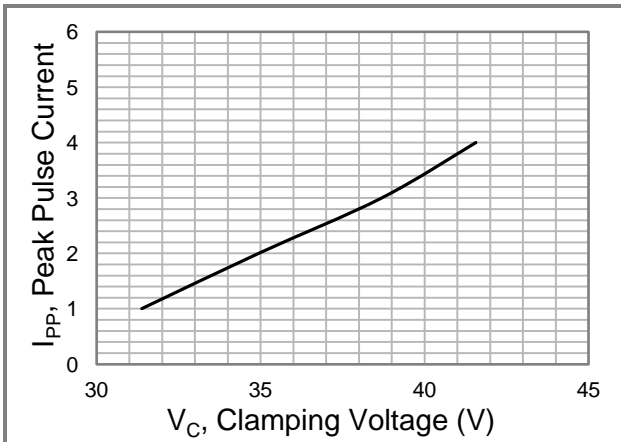


Fig.3 Typical Peak Clamping Voltage(8/20 $\mu$ s)

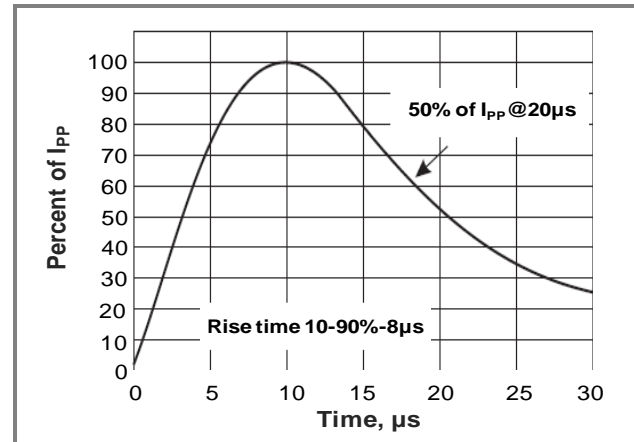


Fig.4 8/20 $\mu$ s Pulse Waveform

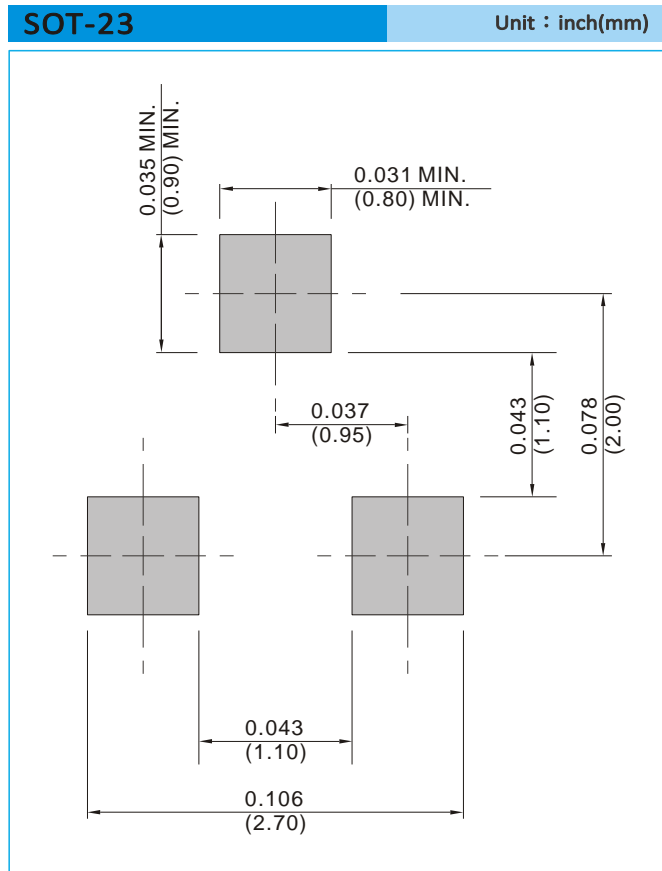


# PEC3124C2A-AU

## Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
PEC3124C2A-AU_R1_000A1	SOT-23	3K / 7" Reel	24A	Halogen Free
PEC3124C2A-AU_R2_000A1	SOT-23	12K / 13" Reel	24A	Halogen Free

## MOUNTING PAD LAYOUT





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