



PEC3808AS-AU ~ PEC3836AS-AU Series

ESD Protection

Voltage

8~36 V

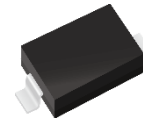
Features

- ISO10605(C=330pF, R=330Ω) :
-±30kV Air, ±30kV Contact for 8V ~ 24V
-±25kV Air, ±20kV Contact for 36V
- HBM ≥ ±8KV & CDM ≥ ±2KV
- ISO7637-3(Notes 3) :
-Pulse 3a : VS = -150V
-Pulse 3b : VS = +100V
- IEC61000-4-5(Lightning) : 8~1.5A(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 : SOD-123 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0004 ounces, 0.0104 grams

SOD-123



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(Notes 1)	R _{θJA}	510	°C/W
Operating Junction Temperature Range	T _J	-55~150	°C
Storage Temperature Range	T _{STG}	-55~150	°C



PEC3808AS-AU ~ PEC3836AS-AU Series

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

PEC3808AS-AU						
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage ^(Note 2)	V _{RWM}	-	-	-	8	V
Reverse Breakdown Voltage	V _{BR}	I _{BR} = 1 mA	8.5	-	12.5	V
Reverse Leakage Current	I _R	V _R = 8 V	-	-	500	nA
Clamping Voltage	V _{CL}	I _{PP} = 1 A, t _P = 8/20 us	-	-	14	V
		I _{PP} = 8 A, t _P = 8/20 us	-	-	18	V
Off State Junction Capacitance	C _J	0Vdc Bias f = 1 MHz	-	-	70	pF

PEC3812AS-AU						
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage ^(Note 2)	V _{RWM}	-	-	-	12	V
Reverse Breakdown Voltage	V _{BR}	I _{BR} = 1 mA	13	-	18	V
Reverse Leakage Current	I _R	V _R = 12 V	-	-	500	nA
Clamping Voltage	V _{CL}	I _{PP} = 1 A, t _P = 8/20 us	-	-	19	V
		I _{PP} = 4.5 A, t _P = 8/20 us	-	-	27	V
Off State Junction Capacitance	C _J	0Vdc Bias f = 1 MHz	-	-	45	pF

PEC3815AS-AU						
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage ^(Note 2)	V _{RWM}	-	-	-	15	V
Reverse Breakdown Voltage	V _{BR}	I _{BR} = 1 mA	16	-	22.5	V
Reverse Leakage Current	I _R	V _R = 15 V	-	-	500	nA
Clamping Voltage	V _{CL}	I _{PP} = 1 A, t _P = 8/20 us	-	-	24	V
		I _{PP} = 3.5 A, t _P = 8/20 us	-	-	33	V
Off State Junction Capacitance	C _J	0Vdc Bias f = 1 MHz	-	-	40	pF



PEC3808AS-AU ~ PEC3836AS-AU Series

PEC3824AS-AU

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage ^(Note 2)	V_{RWM}	-	-	-	24	V
Reverse Breakdown Voltage	V_{BR}	$I_{BR} = 1 \text{ mA}$	25.5	-	35.5	V
Reverse Leakage Current	I_R	$V_R = 24 \text{ V}$	-	-	50	nA
Clamping Voltage	V_{CL}	$I_{PP} = 1 \text{ A}, t_P = 8/20 \text{ us}$	-	-	40	V
		$I_{PP} = 3 \text{ A}, t_P = 8/20 \text{ us}$	-	-	45	V
Off State Junction Capacitance	C_J	0Vdc Bias $f = 1 \text{ MHz}$	-	-	20	pF

PEC3836AS-AU

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage ^(Note 2)	V_{RWM}	-	-	-	36	V
Reverse Breakdown Voltage	V_{BR}	$I_{BR} = 1 \text{ mA}$	37.5	-	52.5	V
Reverse Leakage Current	I_R	$V_R = 36 \text{ V}$	-	-	50	nA
Clamping Voltage	V_{CL}	$I_{PP} = 1 \text{ A}, t_P = 8/20 \text{ us}$	-	-	61	V
		$I_{PP} = 1.5 \text{ A}, t_P = 8/20 \text{ us}$	-	-	70	V
Off State Junction Capacitance	C_J	0Vdc Bias $f = 1 \text{ MHz}$	-	-	15	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.
3. Not applicable to parts with V_{RWM} lower than battery voltage.



PEC3808AS-AU ~ PEC3836AS-AU Series

TYPICAL CHARACTERISTIC CURVES

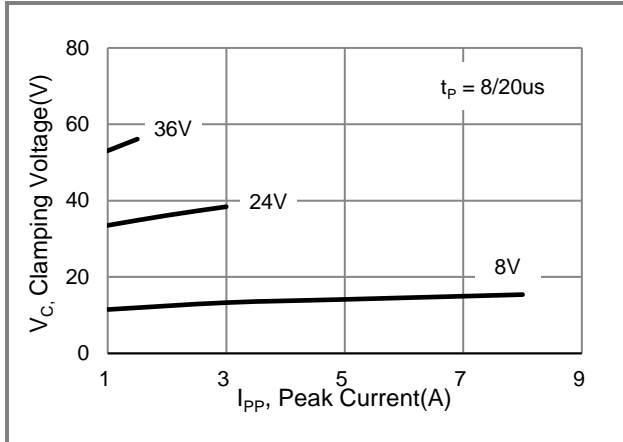


Fig.1 Typical Peak Clamping Voltage

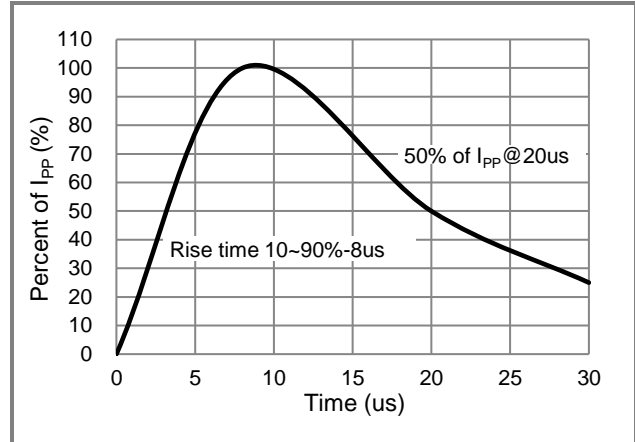


Fig.2 Pulse Waveform

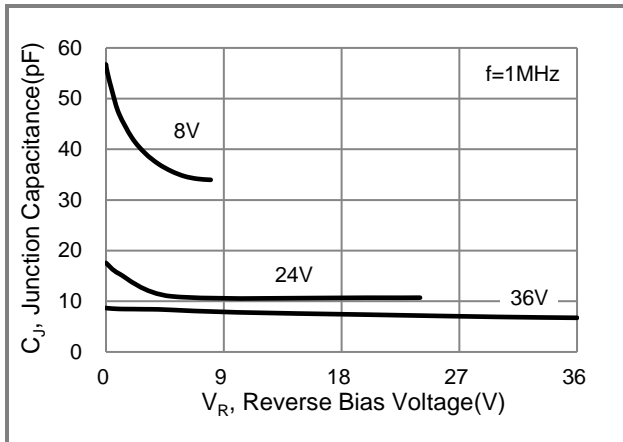


Fig.3 Typical Junction Capacitance

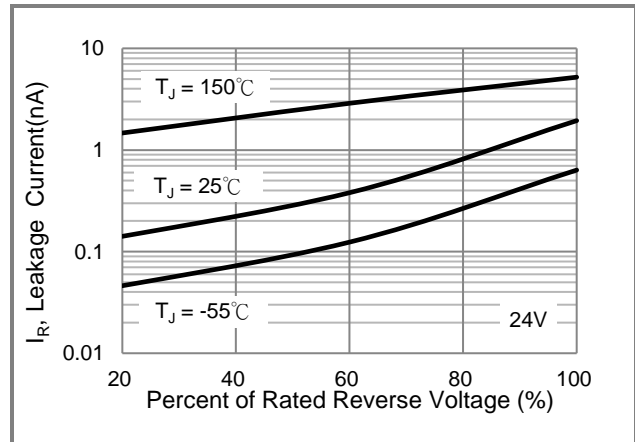


Fig.4 Typical Reverse Characteristics

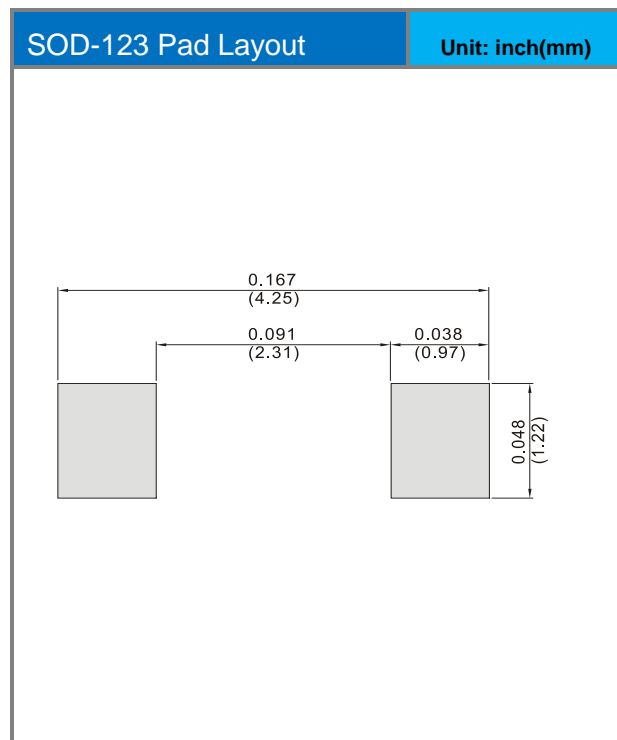
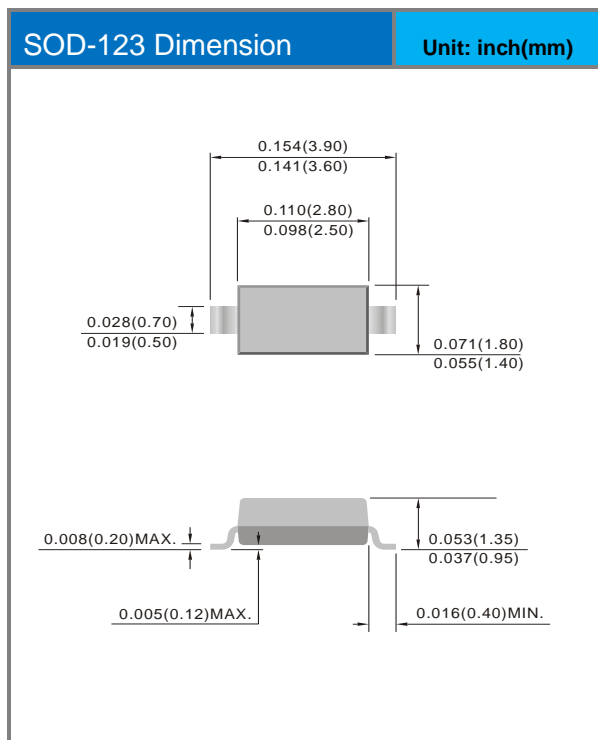


PEC3808AS-AU ~ PEC3836AS-AU Series

Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
PEC3808AS-AU_R1_000A1	SOD-123	3K pcs / 7" reel	5AS	Halogen free RoHS compliant
PEC3812AS-AU_R1_000A1	SOD-123	3K pcs / 7" reel	6AS	Halogen free RoHS compliant
PEC3815AS-AU_R1_000A1	SOD-123	3K pcs / 7" reel	7AS	Halogen free RoHS compliant
PEC3824AS-AU_R1_000A1	SOD-123	3K pcs / 7" reel	8AS	Halogen free RoHS compliant
PEC3836AS-AU_R1_000A1	SOD-123	3K pcs / 7" reel	9AS	Halogen free RoHS compliant

Packaging Information & Mounting Pad Layout





PEC3808AS-AU ~ PEC3836AS-AU Series

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.