

P2HAL8.5CA-AU ~ P2HAL85CA-AU Series

Transient Voltage Suppressor

Voltage

8.5~85 V

Power

200 W

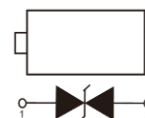
Features

- ISO10605(C=330pF, R=330Ω): ±30kV Air, ±30kV Contact
- ISO7637-2(Note 1):
 - Pulse 1: VS = -150V
 - Pulse 2a: VS = +112V
 - Pulse 3a: VS = -220V
 - Pulse 3b: VS = +150V
- High temperature soldering : 260°C/10 seconds at terminals
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : SOD-123FL Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0173 grams

SOD-123FL



Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation(tp = 10 / 1000 us) (Note 2,4)	P _{PP}	200	W
Peak Pulse Power Dissipation(tp = 8 / 20 us) (Note 3,4)	P _{PP}	1000	W
Peak Pulse Current on tp = 10 / 1000 us waveform (Fig.2) (Note 2)	I _{PPM}	See table 1	A
ESD IEC61000-4-2(Air)	V _{ESD}	±30	KV
ESD IEC61000-4-2(Contact)		±30	
Typical Thermal Resistance Junction to Ambient (Note 4)	R _{θJA}	200	°C/W
Operating Junction Temperature Range	T _J	-55~175	°C
Storage Temperature Range	T _{STG}	-55~175	°C

NOTE :

1. Not applicable to parts with V_{RWM} lower than battery voltage.
2. Non-repetitive current pulse, per Fig.3 and derated above T_A=25°C per Fig.2.
3. Non-repetitive current pulse, per Fig.4 and derated above T_A=25°C per Fig.2.
4. Mounted on 100cm² copper pads to each terminal.
5. Mounted on a FR4 PCB, single-sided copper, standard footprint.

P2HAL8.5CA-AU ~ P2HAL85CA-AU Series

Electrical Characteristics ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Part Number	V_{RWM}	V_{BR}			Reverse Leakage	$V_C@I_{PP}$ (Note 1)		Typical Temp. Coefficient of V_{BR}	Marking Code
		Min	Max.	I_T					
		V	V	mA	$I_R@V_{RWM}$	V	A	%/ $^{\circ}\text{C}$	
P2HAL8.5CA-AU	8.5	9.44	10.4	1	10	14.4	13.9	0.057	AAA
P2HAL9.0CA-AU	9	10.0	11.1	1	5	15.4	13	0.058	AAB
P2HAL10CA-AU	10	11.1	12.3	1	2.5	17	11.8	0.060	AAC
P2HAL11CA-AU	11	12.2	13.5	1	2.5	18.2	11	0.061	AAD
P2HAL12CA-AU	12	13.3	14.7	1	2.5	19.9	10.1	0.062	AAE
P2HAL13CA-AU	13	14.4	15.9	1	1	21.5	9.3	0.063	AAF
P2HAL14CA-AU	14	15.6	17.2	1	1	23.2	8.6	0.065	AAG
P2HAL15CA-AU	15	16.7	18.5	1	1	24.4	8.2	0.066	AAH
P2HAL16CA-AU	16	17.8	19.7	1	1	26	7.7	0.067	AAJ
P2HAL17CA-AU	17	18.9	20.9	1	1	27.6	7.2	0.068	AAK
P2HAL18CA-AU	18	20.0	22.1	1	1	29.2	6.8	0.069	AAL
P2HAL20CA-AU	20	22.2	24.5	1	1	32.4	6.2	0.069	AAM
P2HAL22CA-AU	22	24.4	26.9	1	1	35.5	5.6	0.070	AAN
P2HAL24CA-AU	24	26.7	29.5	1	1	38.9	5.1	0.071	AAP
P2HAL26CA-AU	26	28.9	31.9	1	1	42.1	4.8	0.071	AAR
P2HAL28CA-AU	28	31.1	34.4	1	1	45.4	4.4	0.071	AAS
P2HAL30CA-AU	30	33.3	36.8	1	1	48.4	4.1	0.072	AAT
P2HAL33CA-AU	33	36.7	40.6	1	1	53.3	3.8	0.073	AAU
P2HAL36CA-AU	36	40.0	44.2	1	1	58.1	3.4	0.073	AAV
P2HAL40CA-AU	40	44.4	49.1	1	1	64.5	3.1	0.074	AAW
P2HAL43CA-AU	43	47.8	52.8	1	1	69.4	2.9	0.075	AAX
P2HAL45CA-AU	45	50.0	55.3	1	1	72.7	2.8	0.075	AAZ
P2HAL48CA-AU	48	53.3	58.9	1	1	77.4	2.6	0.076	AA1
P2HAL51CA-AU	51	56.7	62.7	1	1	82.4	2.4	0.076	AA2
P2HAL54CA-AU	54	60.0	66.3	1	1	87.1	2.3	0.077	AA3
P2HAL58CA-AU	58	64.4	71.2	1	1	93.6	2.1	0.078	AA4
P2HAL60CA-AU	60	66.7	73.7	1	1	96.8	1.8	0.078	AA5
P2HAL64CA-AU	64	71.1	78.6	1	1	103	1.7	0.079	AA6
P2HAL70CA-AU	70	77.8	86.0	1	1	113	1.5	0.08	AA7
P2HAL75CA-AU	75	83.3	92.1	1	1	121	1.4	0.081	AA8
P2HAL78CA-AU	78	86.7	95.8	1	1	126	1.4	0.082	AA9
P2HAL85CA-AU	85	94.4	104	1	1	137	1.3	0.084	AA9

P2HAL8.5CA-AU ~ P2HAL85CA-AU Series

TYPICAL CHARACTERISTIC CURVES

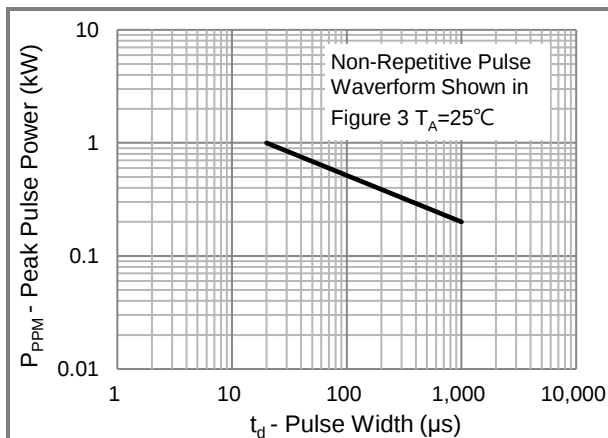


Fig.1 Pulse Power Rating Curve

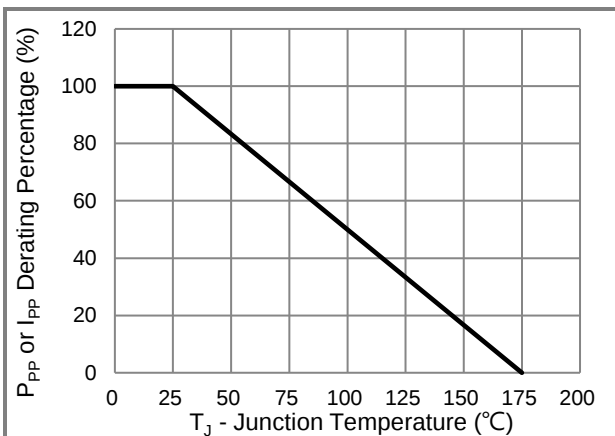


Fig.2 Derating Curve

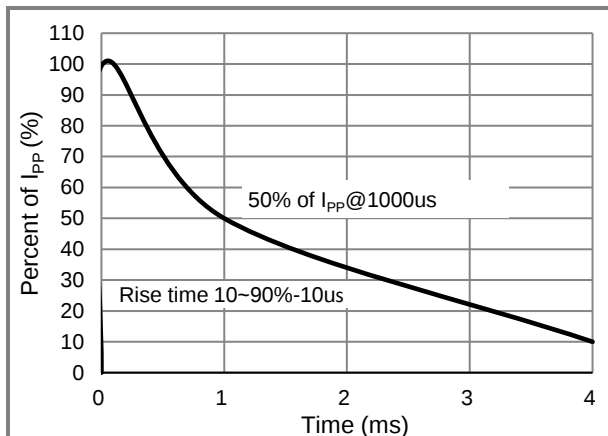


Fig.3 10/1000μs Pulse Wavform

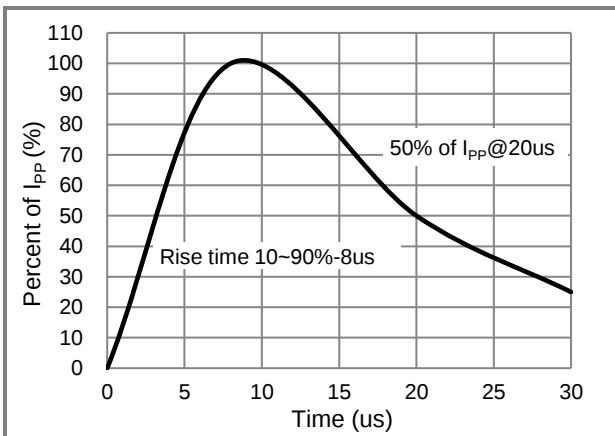


Fig.4 8/20us Pulse Wavform

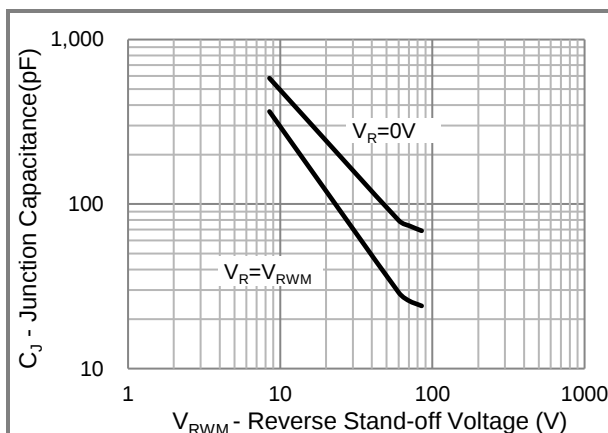


Fig.5 Typical Capacitance

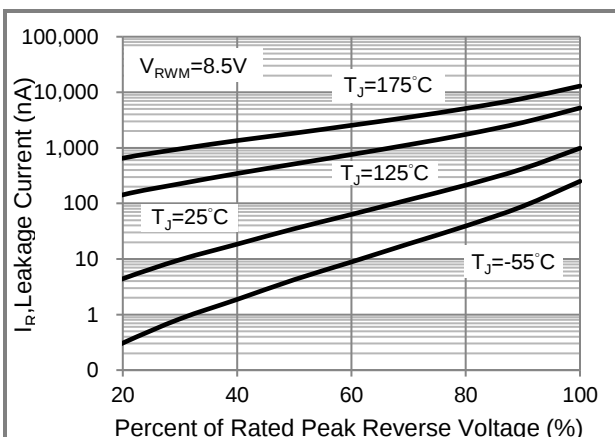


Fig.6 Typical Reverse Characteristics

P2HAL8.5CA-AU ~ P2HAL85CA-AU Series

TYPICAL CHARACTERISTIC CURVES

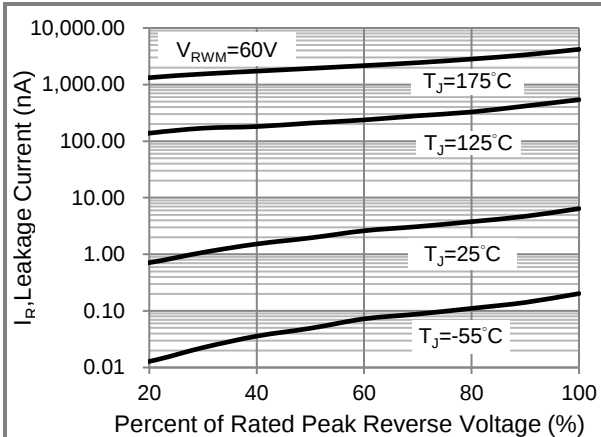


Fig.7 Typical Reverse Characteristics

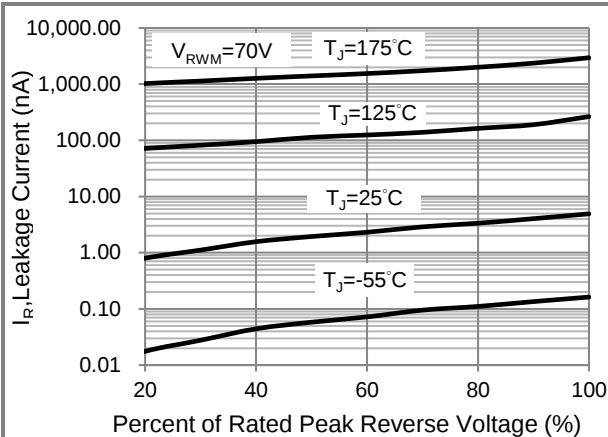


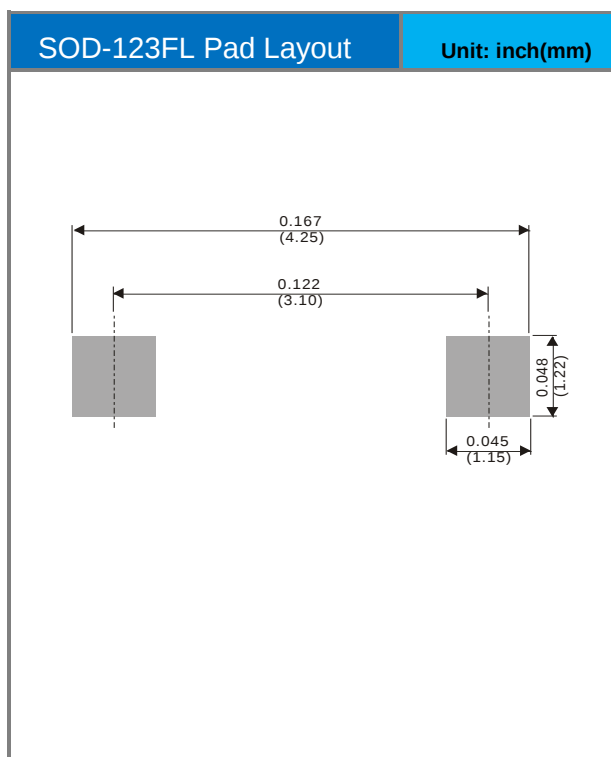
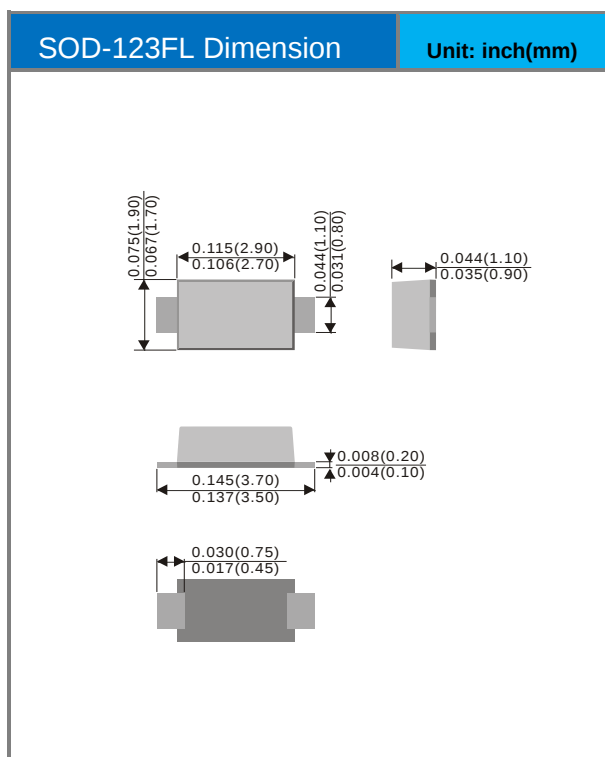
Fig.8 Typical Reverse Characteristics

P2HAL8.5CA-AU ~ P2HAL85CA-AU Series

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
P2HALxxxCA-AU	SOD-123FL	3K pcs / 7" reel	See Table

Packaging Information & Mounting Pad Layout



P2HAL8.5CA-AU ~ P2HAL85CA-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.