

1K5PC12AS-AU ~ 1K5PC48AS-AU Series

Transient Voltage Suppressor

Voltage 12~48 V **Power** 1500 W

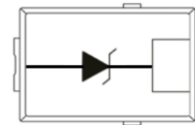
Features

- ISO10605(C=330pF, R=330Ω): ±30kV Air, ±30kV Contact
- ISO7637-2^(Note 1):
 - Pulse 1: $V_S = -150V$
 - Pulse 2a: $V_S = +112V$
 - Pulse 3a: $V_S = -220V$
 - Pulse 3b: $V_S = +150V$
- 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 : TO-277C package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.11 grams

TO-277C



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 2,3)	P _{PP}	1500	W
Peak Pulse Current on tp = 10 / 1000 us waveform ^(Fig.2) <small>(Note 2)</small>	I _{PPM}	See next table	A
Maximum instantaneous forward voltage at 0.2 A	V _F	0.95	V
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}	65	°C/W
Operating Junction Temperature Range	T _J	-55~175	°C
Storage Temperature Range	T _{STG}	-55~175	°C

NOTES :

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. Mounted on 100cm² copper pads to each terminal.
4. Mounted on a FR4 PCB, single-sided copper, standard footprint.
5. To calculate V_{BR} versus T_J : V_{BR} at T_J = V_{BR} at 25 °C x (1 + αT x (T_J - 25)).
6. To calculate V_C versus T_J : V_C at T_J = V_C at 25 °C x (1 + αT x (T_J - 25)).

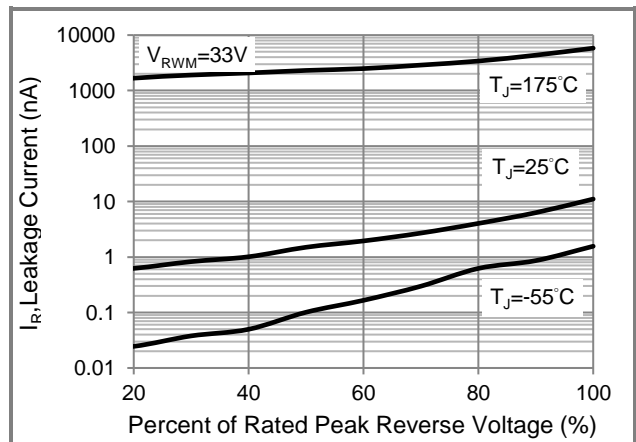
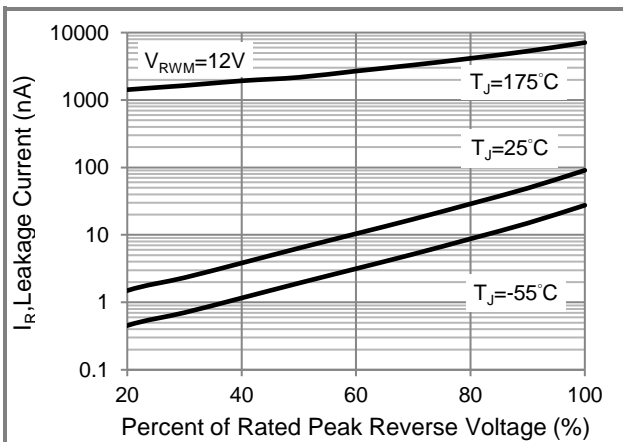
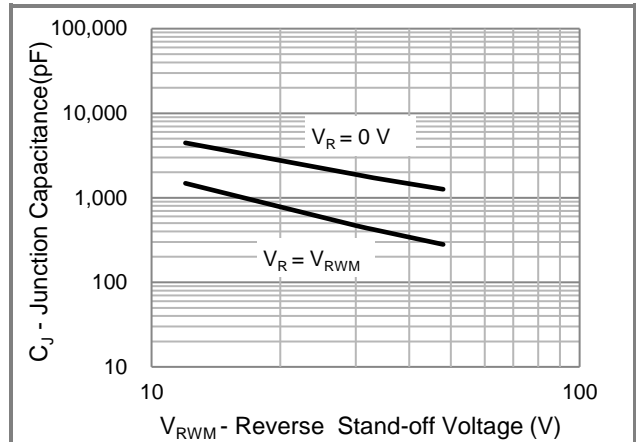
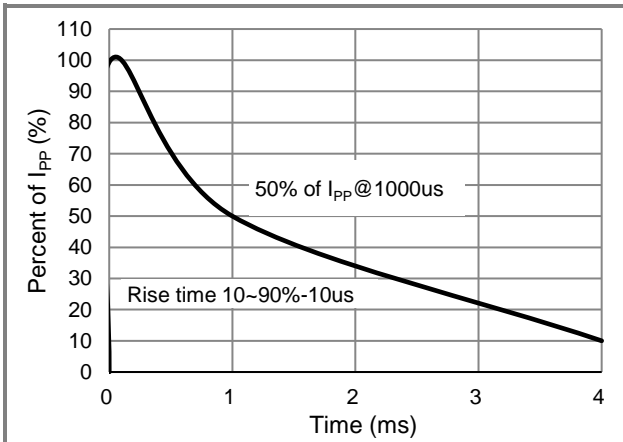
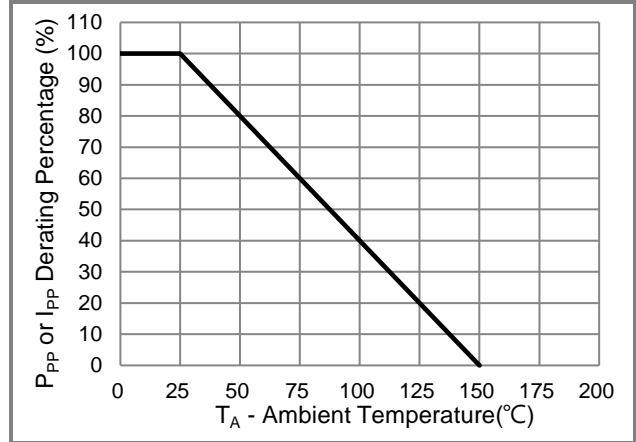
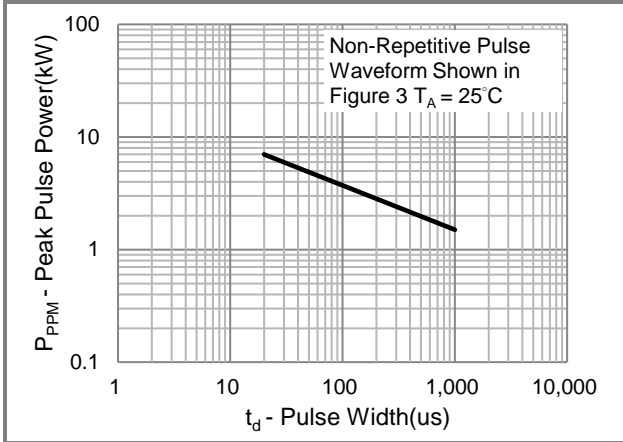
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Electrical Characteristics ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

Part Number	V_{RWM}	V_{BR}			$I_R @$ V_{RWM}	$V_C @ I_{PP}$		Typical Temp. Coefficient of V_{BR}	Marking Code
		Min.	Max.	I_T		V	A		
	V	V	V	mA	uA	V	A	%/ $^\circ\text{C}$	
1500W Transient Voltage Suppressor									
1K5PC12AS-AU	12	13.3	14.7	1	2	19.9	75.4	0.062	1K5PC12A
1K5PC14AS-AU	14	15.6	17.2	1	1	23.2	64.7	0.065	1K5PC14A
1K5PC20AS-AU	20	22	24.5	1	1	32.4	46.3	0.069	1K5PC20A
1K5PC22AS-AU	22	24.4	26.9	1	1	35.5	42.3	0.07	1K5PC22A
1K5PC24AS-AU	24	26.7	29.5	1	1	38.9	38.6	0.071	1K5PC24A
1K5PC30AS-AU	30	33.3	36.9	1	1	48.4	31	0.072	1K5PC30A
1K5PC33AS-AU	33	36.7	40.6	1	1	53.3	28.1	0.073	1K5PC33A
1K5PC36AS-AU	36	40	44.2	1	1	58.1	25.8	0.073	1K5PC36A
1K5PC40AS-AU	40	44.4	49.1	1	1	64.5	23.3	0.074	1K5PC40A
1K5PC43AS-AU	43	47.8	52.8	1	1	69.4	21.6	0.075	1K5PC43A
1K5PC45AS-AU	45	50	55.3	1	1	72.7	20.6	0.075	1K5PC45A
1K5PC48AS-AU	48	53.3	58.9	1	1	77.4	19.4	0.076	1K5PC48A

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TYPICAL CHARACTERISTIC CURVES

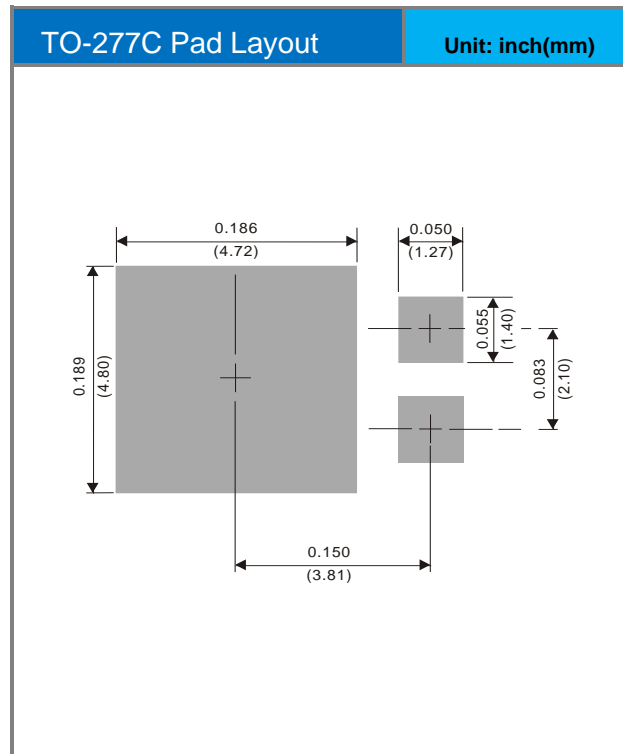
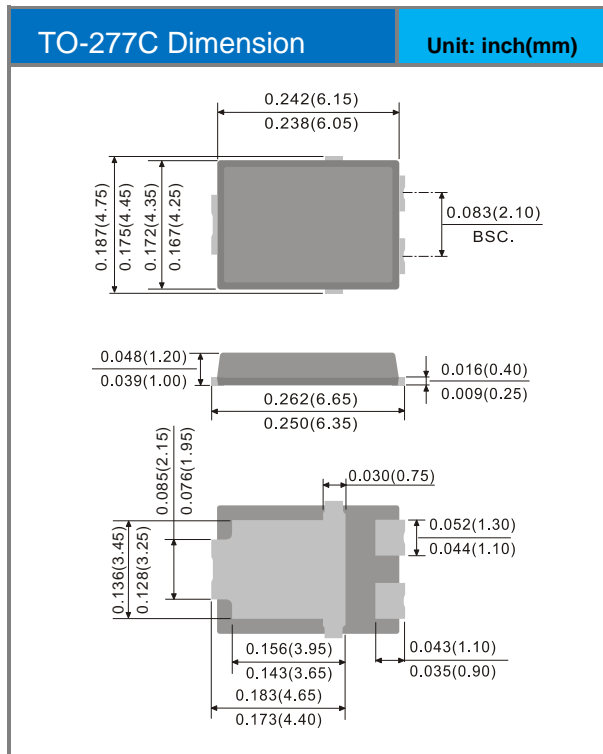


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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
1K5PCxxAS-AU	TO-277C	5K pcs / 13" reel	See table

Packaging Information & Mounting Pad Layout



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