

P6BF8.5A-AU ~ P6BF78A-AU Series

Transient Voltage Suppressor

Voltage

8.5~78 V

Power

600 W

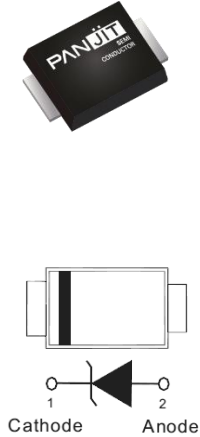
Features

- 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 : SMBF Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.05 grams

SMBF



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}	600	W
Peak Pulse Power Dissipation(tp = 8 / 20 us) ^(Note 3,4)	P _{PP}	4000	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 5)	R _{θJA}	135	°C/W
Operating Junction Temperature Range	T _J	-55~150	°C
Storage Temperature Range	T _{STG}	-55~150	°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. 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.

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

Part Number	V_{RWM}	V_{BR}			Reverse Leakage	$V_C@I_{PP}(\text{Note } 1)$		Typical Temp. Coefficient of V_{BR}	Marking Code
		Min.	Max.	I_T	$I_R@V_{RWM}$				
	V	V	V	mA	μA	V	A	$\%/^\circ\text{C}$	
P6BF8.5A-AU	8.5	9.44	10.4	1	10	14.4	41.7	0.057	BFAH
P6BF9.0A-AU	9	10	11.1	1	5	15.4	39	0.058	BFAJ
P6BF10A-AU	10	11	12.3	1	5	17.0	35.3	0.060	BFAK
P6BF11A-AU	11	12.2	13.5	1	1	18.2	33	0.061	BFAL
P6BF12A-AU	12	13.3	14.7	1	1	19.9	30.2	0.062	BFAM
P6BF13A-AU	13	14.4	15.9	1	1	21.5	27.9	0.063	BFAN
P6BF14A-AU	14	15.6	17.2	1	1	23.2	25.8	0.065	BFAP
P6BF15A-AU	15	16.7	18.5	1	1	24.4	24	0.066	BFAR
P6BF16A-AU	16	17.8	19.7	1	1	26.0	23.1	0.067	BFAS
P6BF17A-AU	17	18.9	20.9	1	1	27.6	21.7	0.068	BFAT
P6BF18A-AU	18	20	22.1	1	1	29.2	20.5	0.069	BFAU
P6BF20A-AU	20	22.2	24.5	1	1	32.4	18.5	0.069	BFAW
P6BF22A-AU	22	24.4	26.9	1	1	35.5	16.9	0.070	BFAX
P6BF24A-AU	24	26.7	29.5	1	1	38.9	15.4	0.071	BFAY
P6BF26A-AU	26	28.9	31.9	1	1	42.1	14.2	0.071	BFAZ
P6BF28A-AU	28	31.1	34.4	1	1	45.4	13.2	0.071	BFBA
P6BF30A-AU	30	33.3	36.8	1	1	48.4	12.4	0.072	BFBB
P6BF33A-AU	33	36.7	40.6	1	1	53.3	11.3	0.073	BFBC
P6BF36A-AU	36	40	44.2	1	1	58.1	10.3	0.073	BFBD
P6BF40A-AU	40	44.4	49.1	1	1	64.5	9.3	0.074	BFBE
P6BF43A-AU	43	47.8	52.8	1	1	69.4	8.6	0.075	BFBF
P6BF45A-AU	45	50	55.3	1	1	72.7	8.3	0.075	BFBH
P6BF48A-AU	48	53.3	58.9	1	1	77.4	7.7	0.076	BFBJ
P6BF51A-AU	51	56.7	62.7	1	1	82.4	7.3	0.076	BFBK
P6BF54A-AU	54	60	66.3	1	1	87.1	6.9	0.077	BFBL
P6BF58A-AU	58	64.4	71.2	1	1	93.6	6.4	0.078	BFBM
P6BF60A-AU	60	66.7	73.7	1	1	96.8	6.2	0.078	BFBN
P6BF64A-AU	64	71.1	78.6	1	1	103.0	5.8	0.079	BFBP
P6BF70A-AU	70	77.8	86	1	1	113.0	5.3	0.08	BFBR
P6BF75A-AU	75	83.3	92.1	1	1	121.0	4.9	0.081	BFBS
P6BF78A-AU	78	86.7	95.8	1	1	126.0	4.7	0.082	BFBT

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TYPICAL CHARACTERISTIC CURVES

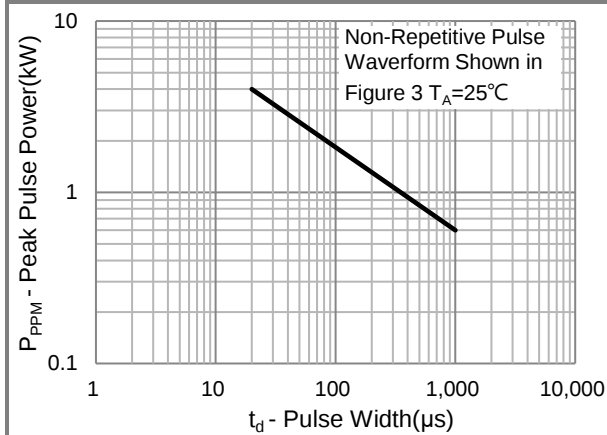


Fig.1 Pulse Power Rating Curve

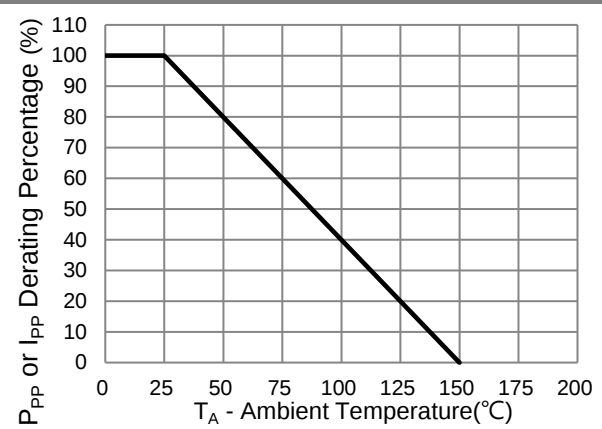


Fig.2 Derating Curve

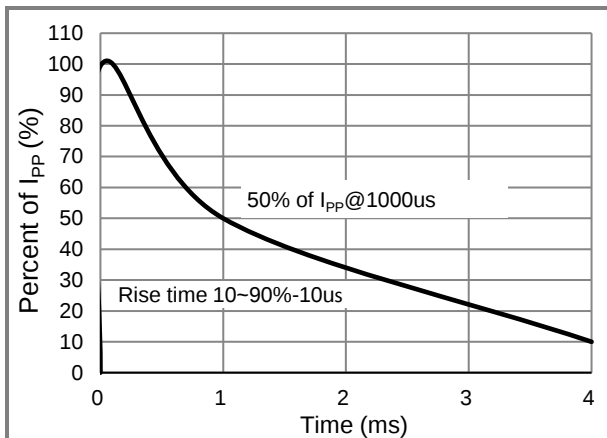


Fig.3 10/1000 μs Pulse Waveform

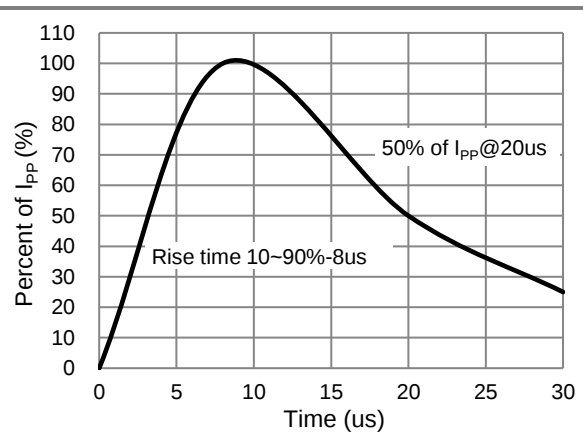


Fig.4 8/20us Pulse Waveform

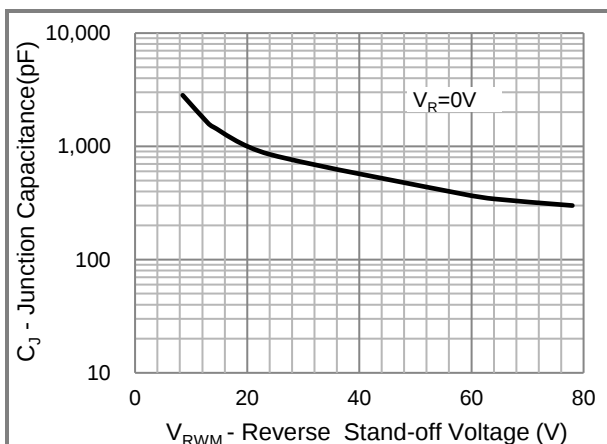


Fig.5 Typical Capacitance

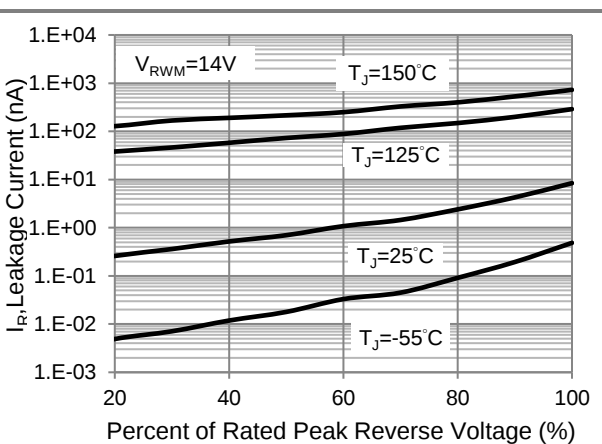
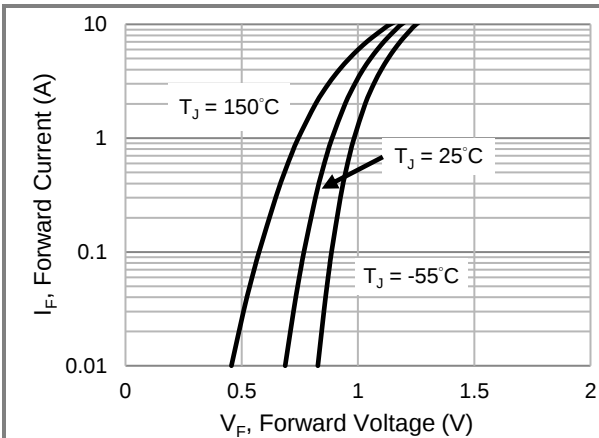
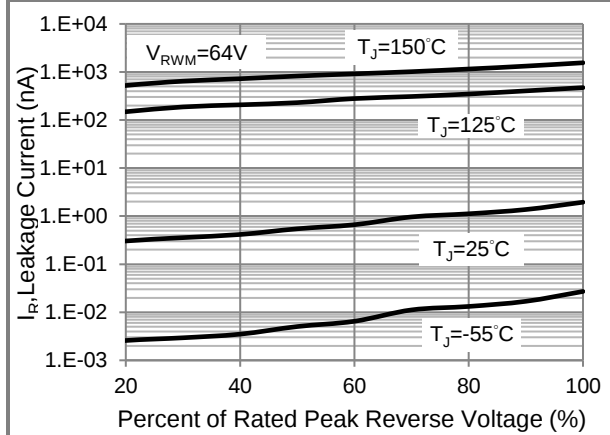
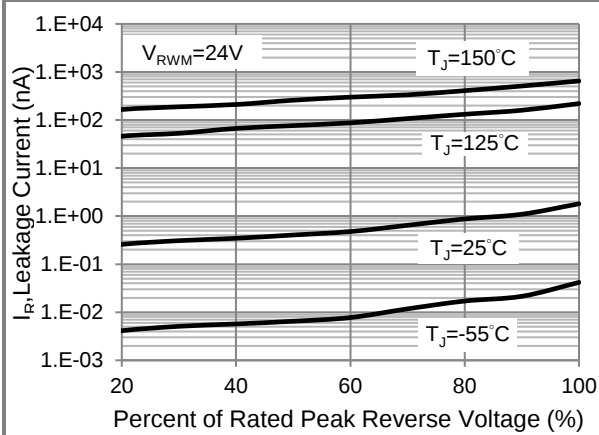


Fig.6 Typical Reverse Characteristics

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TYPICAL CHARACTERISTIC CURVES

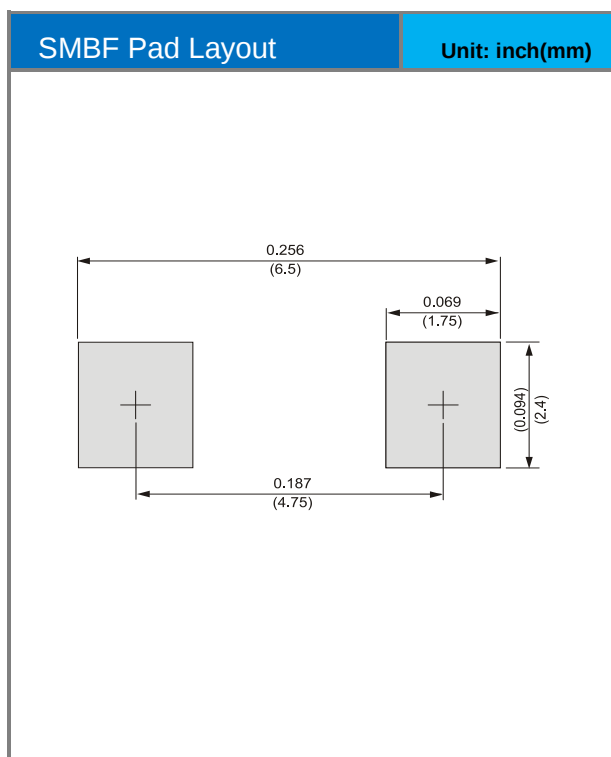
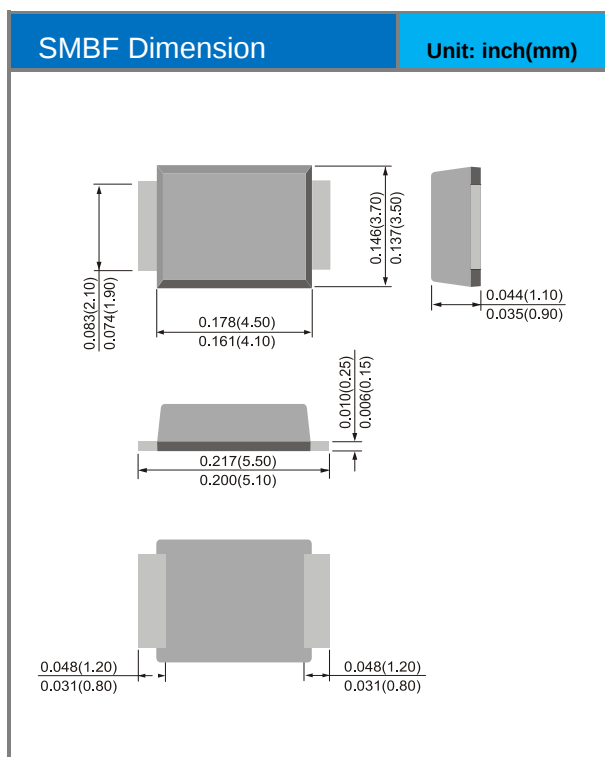


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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
P6BFxxxA-AU	SMBF	5K pcs / 13" reel	See Table

Packaging Information & Mounting Pad Layout



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