

## PZ1AFC2V5B ~ PZ1AFC75B Series

### Silicon Zener Diode

**Voltage**

**2.5~75 V**

**Power**

**1 W**

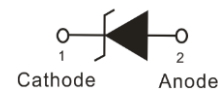
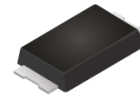
#### Features

- Silicon planar Zener diode
- Low leakage current
- Excellent stability
- Small plastic package suitable for surface-mounted design
- Very low package height: 1 mm
- High temperature soldering : 260 °C/10 seconds at terminals
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

#### Mechanical Data

- Case: Molded plastic, SMAF-C
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0012 ounces, 0.034 grams

#### SMAF-C



### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation at T <sub>A</sub> = 25°C <sup>(Note 1)</sup>	P <sub>D</sub>	1	W
ESD Voltage per IEC61000-4-2 (Air)	V <sub>ESD</sub>	±30	kV
ESD Voltage per IEC61000-4-2 (Contact)		±30	
Typical Thermal Resistance <sup>(Note 2)</sup>	R <sub>θJA</sub>	150	°C /W
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

## PZ1AFC2V5B ~ PZ1AFC75B Series

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

Part Number	Nominal Zener Voltage				Nominal Zener Impedance				Max. Reverse Leakage Current		Marking Code
	$V_Z @ I_{ZT}$				$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$		
	Nom. V	Min. V	Max. V	mA	$\Omega$	mA	$\Omega$	mA	$\mu\text{A}$	V	
PZ1AFC2V5B	2.5	2.37	2.63	40	15	40	1500	1	200	0.7	1Z2V5B
PZ1AFC3V6B	3.6	3.42	3.78	100	8	100	400	1	100	1	1Z3V6B
PZ1AFC3V9B	3.9	3.71	4.10	100	8	100	400	1	50	1	1Z3V9B
PZ1AFC4V3B	4.3	4.09	4.52	100	7	100	400	1	25	1	1Z4V3B
PZ1AFC4V7B	4.7	4.47	4.94	100	7	100	400	1	10	1	1Z4V7B
PZ1AFC5V1B	5.1	4.85	5.36	100	6	100	550	1	5	1	1Z5V1B
PZ1AFC5V6B	5.6	5.32	5.88	100	4	100	600	1	10	2	1Z5V6B
PZ1AFC6V0B	6	5.7	6.3	100	3	100	600	1	8	2	1Z6V0B
PZ1AFC6V2B	6.2	5.89	6.51	100	3	100	700	1	5	2	1Z6V2B
PZ1AFC6V8B	6.8	6.46	7.14	100	3	100	700	1	10	3	1Z6V8B
PZ1AFC7V5B	7.5	7.13	7.88	100	2	100	700	0.5	50	3	1Z7V5B
PZ1AFC8V2B	8.2	7.79	8.61	100	2	100	700	0.5	10	3	1Z8V2B
PZ1AFC8V7B	8.7	8.27	9.14	50	3	50	700	0.5	10	4	1Z8V7B
PZ1AFC9V1B	9.1	8.65	9.56	50	4	50	700	0.5	10	5	1Z9V1B
PZ1AFC10B	10	9.50	10.50	50	4	50	700	0.25	7	7.5	1Z10B
PZ1AFC11B	11	10.45	11.55	50	7	50	700	0.25	4	8.2	1Z11B
PZ1AFC12B	12	11.40	12.60	50	7	50	700	0.25	3	9.1	1Z12B
PZ1AFC13B	13	12.35	13.65	50	10	50	700	0.25	2	10	1Z13B
PZ1AFC14B	14	13.30	14.70	50	10	50	700	0.25	2	11	1Z14B
PZ1AFC15B	15	14.25	15.75	50	10	50	700	0.25	1	11	1Z15B
PZ1AFC16B	16	15.20	16.80	25	15	25	700	0.25	1	12	1Z16B
PZ1AFC17B	17	16.15	17.85	25	15	25	750	0.25	1	13	1Z17B
PZ1AFC18B	18	17.10	18.90	25	15	25	750	0.25	1	13	1Z18B
PZ1AFC19B	19	18.05	19.95	25	15	25	750	0.25	1	14	1Z19B
PZ1AFC20B	20	19.00	21.00	25	15	25	750	0.25	1	15	1Z20B
PZ1AFC22B	22	20.90	23.10	25	15	25	750	0.25	1	16	1Z22B
PZ1AFC24B	24	22.80	25.20	25	15	25	750	0.25	1	18	1Z24B
PZ1AFC25B	25	23.75	26.25	25	15	25	750	0.25	1	19	1Z25B
PZ1AFC27B	27	25.65	28.35	25	15	25	750	0.25	1	20	1Z27B

## PZ1AFC2V5B ~ PZ1AFC75B Series

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

Part Number	Nominal Zener Voltage				Nominal Zener Impedance				Max. Reverse Leakage Current		Marking Code
	$V_Z@I_{ZT}$				$Z_{ZT}@I_{ZT}$		$Z_{ZK}@I_{ZK}$		$I_R@V_R$		
	Nom. V	Min. V	Max. V	mA	$\Omega$	mA	$\Omega$	mA	uA	V	
PZ1AFC28B	28	26.60	29.40	25	15	25	1000	0.25	1	21	1Z28B
PZ1AFC30B	30	28.50	31.50	25	15	25	1000	0.25	1	22	1Z30B
PZ1AFC33B	33	31.35	34.65	25	15	25	1000	0.25	1	24	1Z33B
PZ1AFC36B	36	34.20	37.80	10	40	10	1000	0.25	1	27	1Z36B
PZ1AFC39B	39	37.05	40.95	10	40	10	1000	0.25	1	30	1Z39B
PZ1AFC43B	43	40.85	45.15	10	45	10	1500	0.25	1	33	1Z43B
PZ1AFC47B	47	44.65	49.35	10	45	10	1500	0.25	1	36	1Z47B
PZ1AFC51B	51	48.45	53.55	10	60	10	1500	0.25	1	39	1Z51B
PZ1AFC56B	56	53.20	58.80	10	60	10	2000	0.25	1	43	1Z56B
PZ1AFC62B	62	58.90	65.10	10	80	10	2000	0.25	1	47	1Z62B
PZ1AFC68B	68	64.60	71.40	10	80	10	2000	0.25	1	51	1Z68B
PZ1AFC75B	75	71.25	78.75	10	100	10	2000	0.25	1	56	1Z75B

**NOTES:**

1. Mounted on 1 inch square copper pads to each terminal.
2. Mounted on a FR-4 PCB, single-sided copper, standard footprint.

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## TYPICAL CHARACTERISTIC CURVES

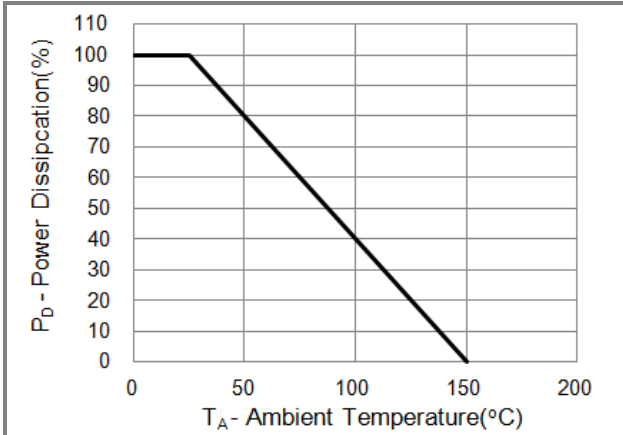


Fig.1 Power Derating Curve

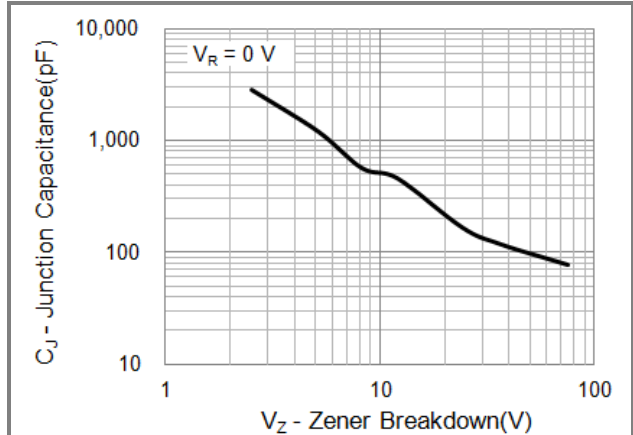


Fig.2 Typical Junction Capacitance

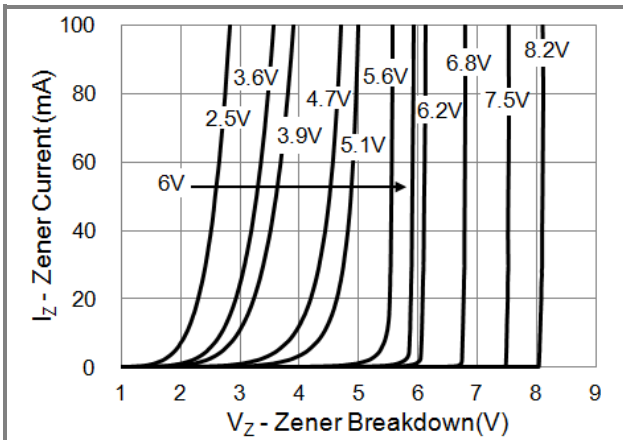


Fig.3 Typical Zener Breakdown

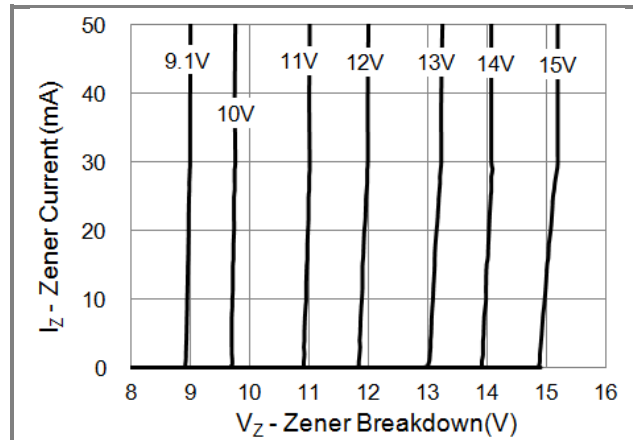


Fig.4 Typical Zener Breakdown

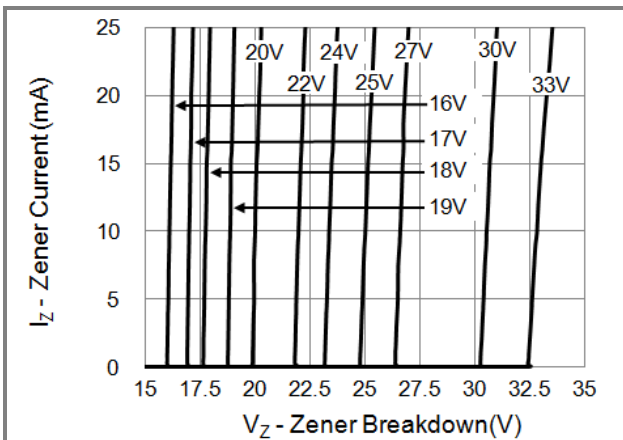


Fig.5 Typical Zener Breakdown

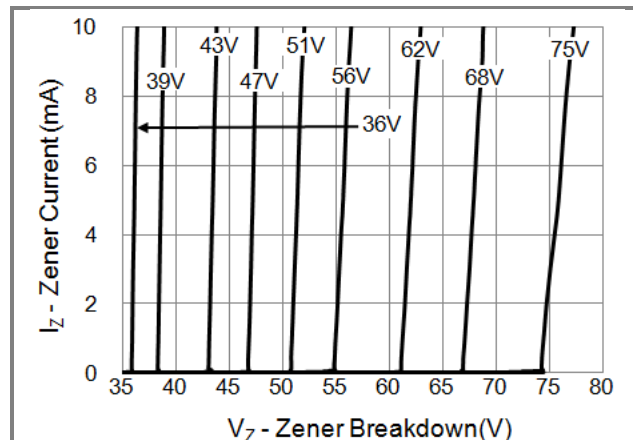


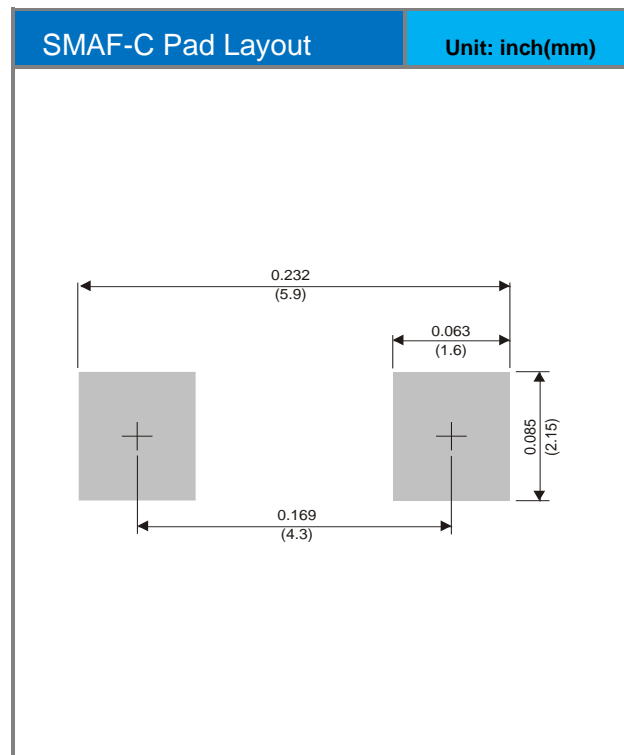
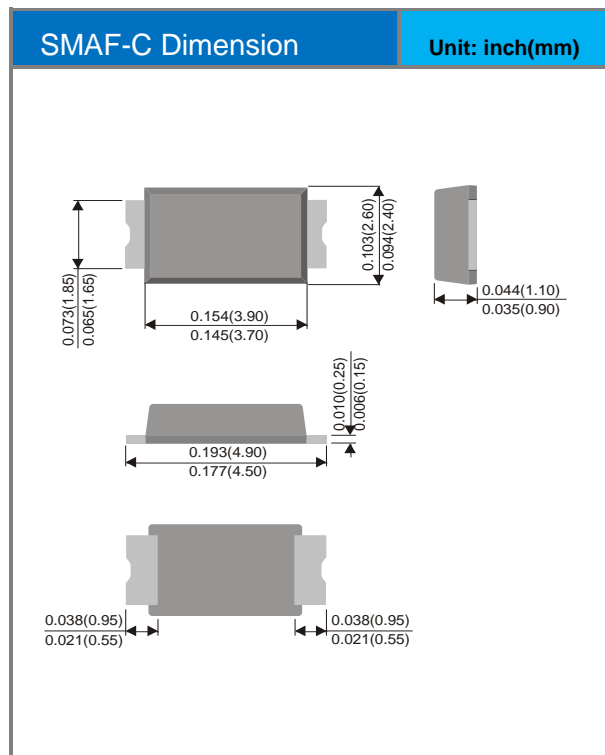
Fig.6 Typical Zener Breakdown

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### Product and Packing Information

Part No.	Package Type	Packing Type	Marking
PZ1AFCxxxB	SMAF-C	3K pcs / 7" reel	See Table

### Packaging Information & Mounting Pad Layout



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