



## PZS513V9BAS-AU ~ PZS5143BAS-AU Series

### SILICON ZENER DIODE

**Voltage**

**3.9~43V**

**Power**

**500 mW**

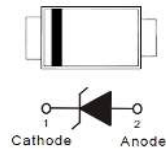
#### Features

- Planar Die construction
- 500mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard
- AEC-Q101 qualified

#### Mechanical Data

- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 0.0004 ounces, 0.001 grams

SOD-123



### Maximum Ratings and Thermal Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation at $T_A=25^\circ\text{C}$	$P_D^{(1)}$	500	mW
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}^{(2)}$	250	$^\circ\text{C} / \text{W}$
Operating Junction Temperature Range	$T_J$	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

#### NOTES:

1. Mounted on a  $5\text{mm}^2$  copper pads to each terminal.
2. Mounted on a FR-4 PCB, single-sided copper, mini pad .



## PZS513V9BAS-AU ~ PZS5143BAS-AU Series

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

Part Number	Nominal Zener Voltage				Max. Reverse Leakage Current		Marking Code
	$V_Z@I_{ZT}$				$I_R@V_R$		
	Nom. V	Min.V	Max.V	mA	$\mu\text{A}$	V	
PZS513V9BAS-AU	3.9	3.71	4.10	0.05	5	2	ACH
PZS514V3BAS-AU	4.3	4.09	4.52	0.05	4	2	BCH
PZS514V7BAS-AU	4.7	4.47	4.94	0.05	10	3	CCH
PZS515V1BAS-AU	5.1	4.85	5.36	0.05	10	3	DCH
PZS515V3BAS-AU	5.3	5.03	5.57	0.05	10	4	ECH
PZS515V6BAS-AU	5.6	5.32	5.88	0.05	7	4.2	FCH
PZS516V2BAS-AU	6.2	5.89	6.51	0.05	10	5	HCH
PZS516V8BAS-AU	6.8	6.46	7.14	0.05	10	5.1	ICH
PZS517V5BAS-AU	7.5	7.13	7.88	0.05	10	5.7	JCH
PZS518V2BAS-AU	8.2	7.79	8.61	0.05	1	6.2	KCH
PZS518V7BAS-AU	8.7	8.27	9.14	0.05	1	6.6	LCH
PZS519V1BAS-AU	9.1	8.65	9.56	0.05	1	6.9	MCH
PZS5110BAS-AU	10	9.5	10.5	0.05	1	7.6	NCH
PZS5111BAS-AU	11	10.5	11.6	0.05	0.05	8.4	PCH
PZS5112BAS-AU	12	11.4	12.6	0.05	0.05	9.1	RCH
PZS5113BAS-AU	13	12.4	13.7	0.05	0.05	9.8	SCH
PZS5114BAS-AU	14	13.3	14.7	0.05	0.05	10.6	TCH
PZS5115BAS-AU	15	14.3	15.8	0.05	0.05	11.4	UCH
PZS5116BAS-AU	16	15.2	16.8	0.05	0.05	12.1	VCH
PZS5117BAS-AU	17	16.2	17.9	0.05	0.05	12.9	WCH
PZS5118BAS-AU	18	17.1	18.9	0.05	0.05	13.6	XCH
PZS5119BAS-AU	19	18.1	20	0.05	0.05	14.4	YCH
PZS5120BAS-AU	20	19	21	0.05	0.01	15.2	ZCH
PZS5122BAS-AU	22	20.9	23.1	0.05	0.01	16.7	2CH
PZS5124BAS-AU	24	22.8	25.2	0.05	0.01	18.2	3CH
PZS5125BAS-AU	25	23.8	26.3	0.05	0.01	19	4CH
PZS5127BAS-AU	27	25.7	28.4	0.05	0.01	20.4	6CH
PZS5128BAS-AU	28	26.6	29.4	0.05	0.01	21.2	7CH
PZS5130BAS-AU	30	28.5	31.5	0.05	0.01	22.8	9CH
PZS5133BAS-AU	33	31.4	34.7	0.05	0.01	25	AEH
PZS5136BAS-AU	36	34.2	37.8	0.05	0.01	27.3	BEH
PZS5139BAS-AU	39	37.1	41	0.05	0.01	29.6	CEH
PZS5143BAS-AU	43	40.9	45.2	0.05	0.01	32.6	DEH



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## TYPICAL CHARACTERISTIC CURVES

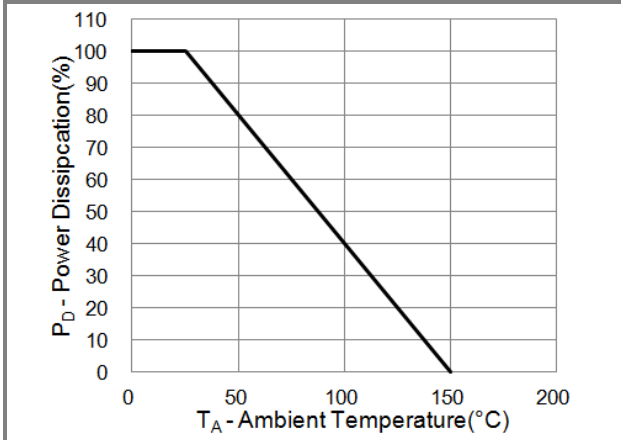


Fig.1 Power Derating Curve

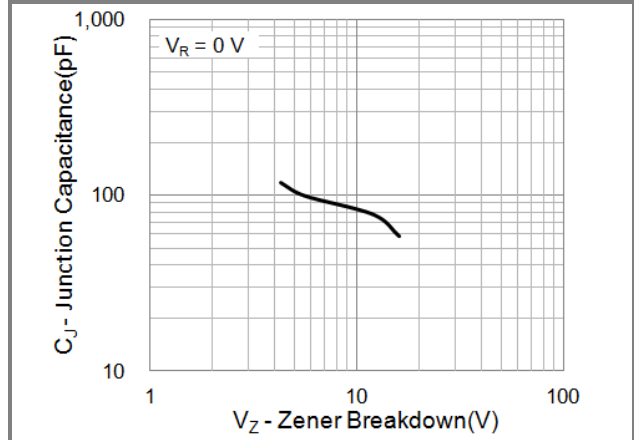


Fig.2 Typical Junction Capacitance

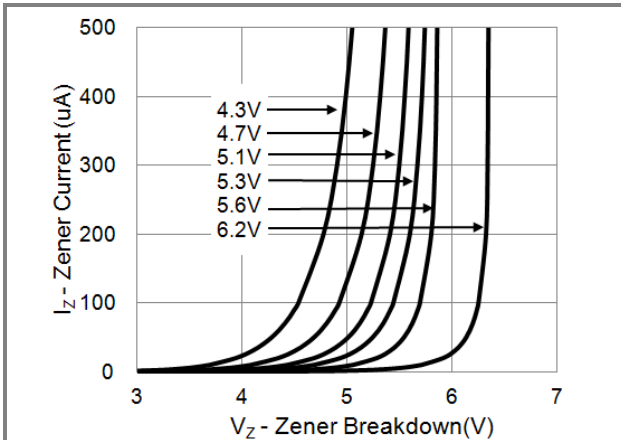


Fig.3 Typical Zener Breakdown

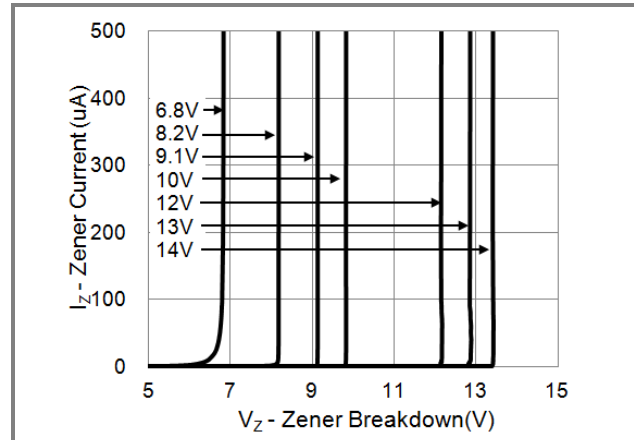


Fig.4 Typical Zener Breakdown

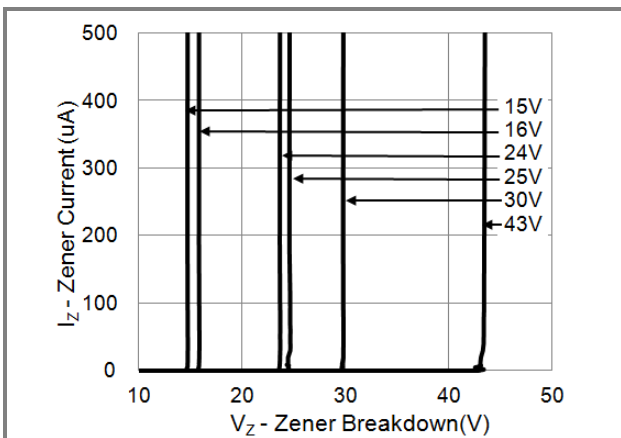


Fig.5 Typical Zener Breakdown

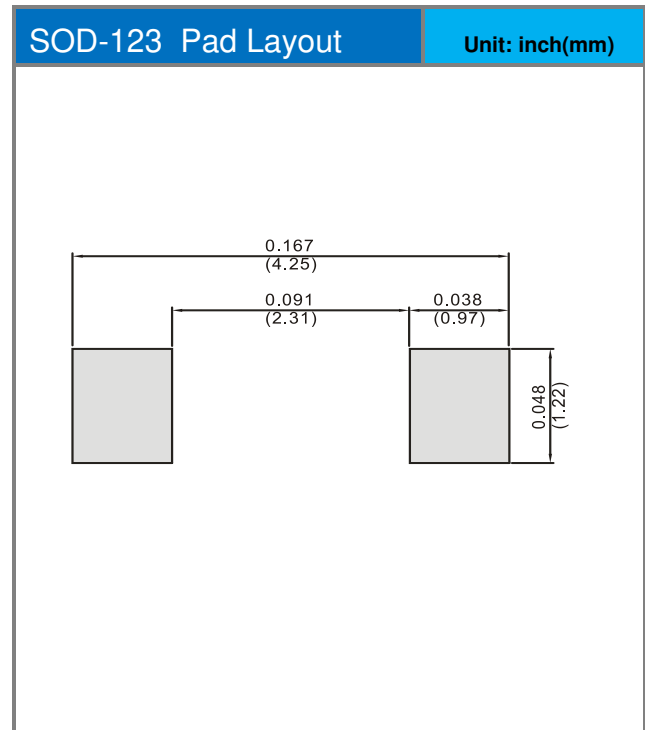
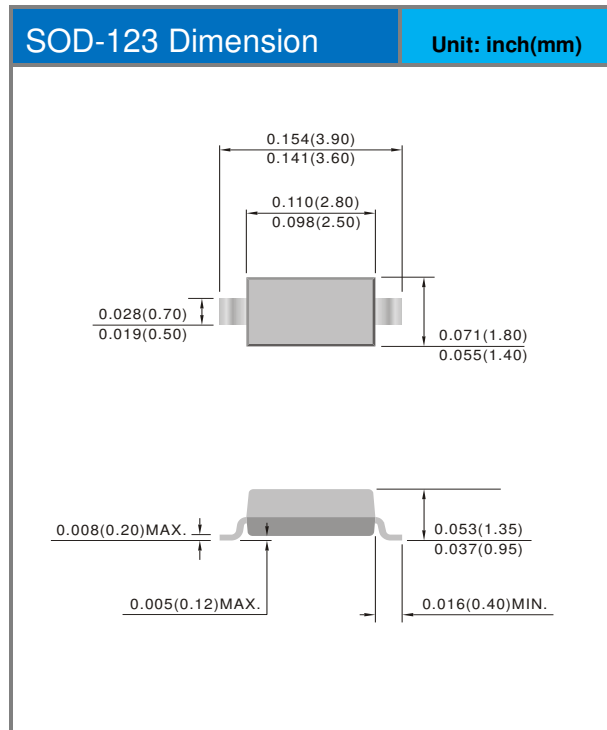


## PZS513V9BAS-AU ~ PZS5143BAS-AU Series

### Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
PZS51xxxBAS-AU_R1_000A1	SOD-123	3K / 7" Reel	See Table	Halogen Free

### Packaging Information & Mounting Pad Layout





## **PZS513V9BAS-AU ~ PZS5143BAS-AU Series**

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