UDZ5V6B-UDZ15B

SURFACE MOUNT PRECISION ZENER DIODE

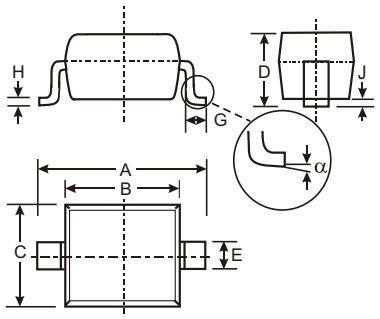
Lead-free

Features

- Ultra-Small Surface Mount Package
- Ideally suited for Automated Assembly Processes
- Very Sharp Breakdown Characteristics
- Very Tight Tolerance on Zener Breakdown Voltage
- **Lead Free By Design/RoHS Compliant (Note 4)**

Mechanical Data

- Case: SOD-323
- Case Material: UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminal Connections: Cathode Band
- Terminals: Finish - Matte Tin annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Marking & Type Code Information: See Electrical Specifications Table
- Ordering Information: See Last Page
- Weight: 0.004 grams (approximate)



SOD-323		
Dim	**Min**	**Max**
A	2.30	2.70
B	1.60	1.80
C	1.20	1.40
D	1.05 Typical	
E	0.25	0.35
G	0.20	0.40
H	0.10	0.15
J	0.05 Typical	
	0	8
All Dimensions in mm		

Maximum Ratings @ T_A = 25 C unless otherwise specified

Characteristic	Symbol	Value	Unit
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	C

Thermal Characteristics @ T_A = 25 C unless otherwise specified

Characteristic	Symbol	Value	Unit
Thermal Resistance Junction to Ambient Air (Note 1)	R_{JA}	625	C/W
Power Dissipation (Note 1)	P_d	200	mW

Electrical Characteristics @ T_A = 25 C unless otherwise specified

Type Number	Marking Code	Zener Voltage Range (Note 2)			Maximum Zener Impedance (Note 3)			Maximum Reverse Current (Note 2)	
		V_{ZT} @ I_{ZT}		I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R	V_R
		Min (V)	Max (V)	mA			mA	uA	V
UDZ5V6B	BC	5.490	5.730	5	60	200	0.5	1	2.5
UDZ6V2B	BD	6.060	6.330	5	60	100	0.5	1	3.0
UDZ6V8B	BE	6.650	6.930	5	40	60	0.5	0.5	3.5
UDZ7V5B	BF	7.280	7.600	5	30	60	0.5	0.5	4.0
UDZ8V2B	BG	8.020	8.360	5	30	60	0.5	0.5	5.0
UDZ9V1B	BH	8.850	9.230	5	30	60	0.5	0.5	6.0
UDZ10B	BI	9.770	10.210	5	30	60	0.5	0.1	7.0
UDZ11B	BJ	10.760	11.220	5	30	60	0.5	0.1	8.0
UDZ12B	BK	11.740	12.240	5	30	80	0.5	0.1	9.0
UDZ13B	BL	12.910	13.490	5	37	80	0.5	0.1	10.0
UDZ15B	BM	14.340	14.980	5	42	80	0.5	0.1	11.0

Notes:
1. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.
2. Short duration test pulse used to minimize self-heating effect.
3. The zener impedances (Z_{ZT}, Z_{ZK}) are measured by superimposing a minute alternating current on the regulated current (I_Z).
4. No purposefully added lead.

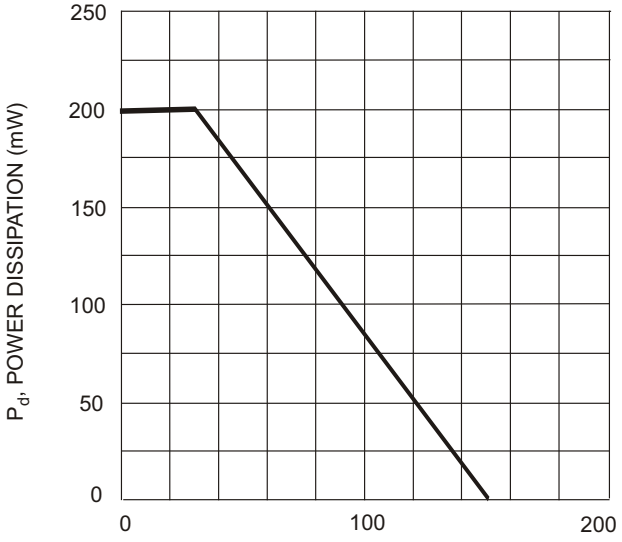


Fig. 1 Power Derating Curve

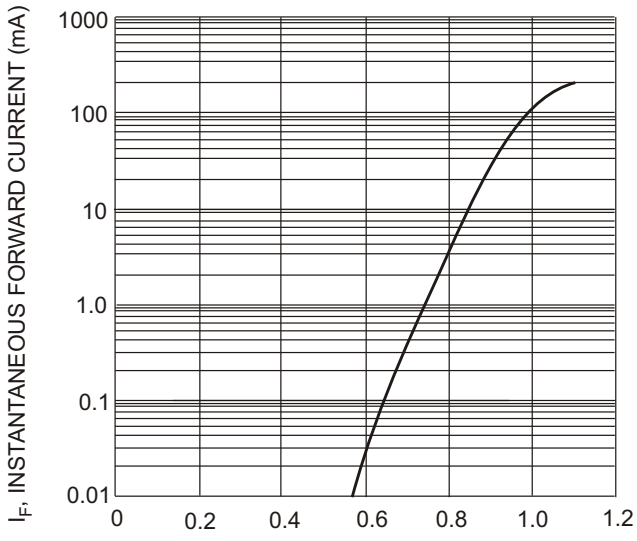


Fig. 2 Typical Forward Characteristics

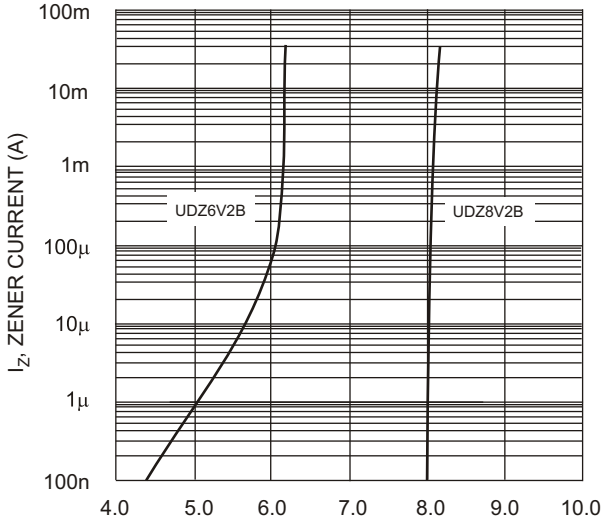


Fig. 3 Typical Reverse Characteristics, UDZ6V2B - UDZ8V2B

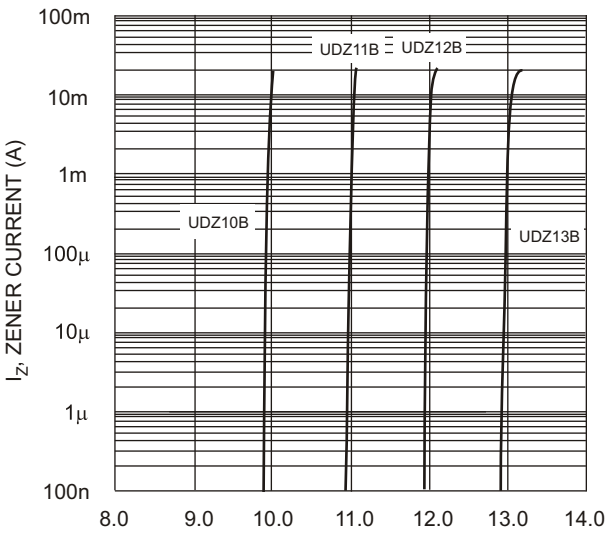


Fig. 4 Typical Reverse Characteristics, UDZ10B - UDZ13B

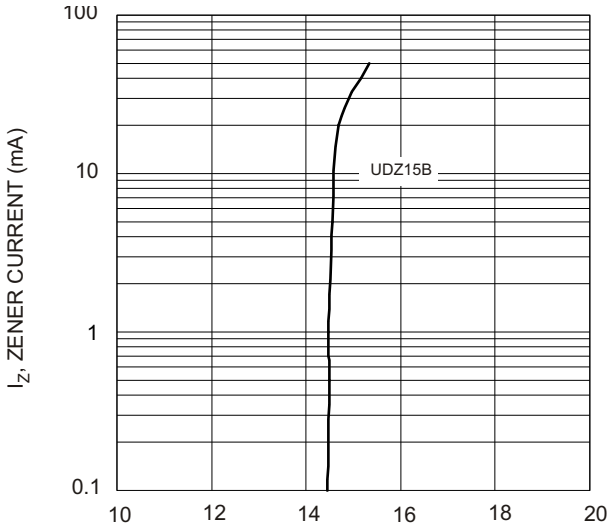


Fig. 5 Typical Reverse Characteristics, UDZ15B

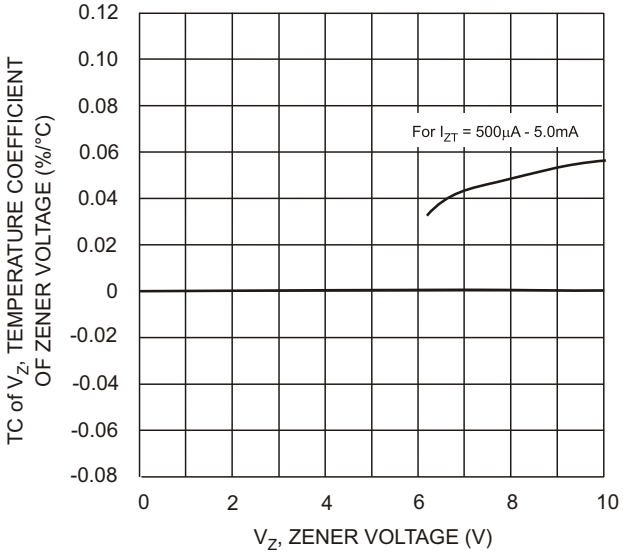


Fig. 6 Typical Temperature Coefficient of Zener Voltage vs. Zener Voltage, UDZ6V2B-UDZ10B

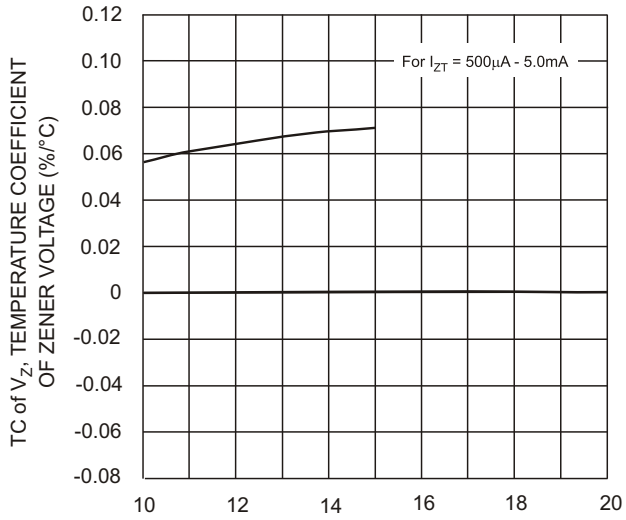


Fig. 7 Typical Temperature Coefficient of Zener Voltage vs. Zener Voltage, UDZ10B-UDZ15B

Ordering Information (Note 5)

Device	Packaging	Shipping
(Type Number)-7*	SOD-323	3000/Tape & Reel

* Add "-7" to the appropriate type number in Table 1 from Page 1 example: 6.2V Zener = UDZ6V2B-7.

Notes: 5. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information

XX = Product Type Marking Code