



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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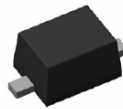
NEW PRODUCT

Features

- 500mW Power Dissipation on FR-4 PCB
- Very Tight Tolerance on V_Z
- Low Reverse Leakage Current
- Ideally Suited for Automated Assembly Processes
- **Lead, Halogen and Antimony Free, RoHS Compliant (Note 2)**
- **"Green" Device (Note 3)**

Mechanical Data

- Case: SOD-323F
- Case Material: Molded Plastic, "Green Molding Compound". UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: Cathode Band
- Terminals: Finish - Matte Tin annealed over Copper Alloy leadframe. Solderable per MIL-STD-202, Method 208
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.01 grams (approximate)



Top View

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage @ $I_F = 10\text{mA}$	V_F	0.95	V

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P_D	500	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	200	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Type Number	Marking Code	Zener Voltage Range (Notes 4, 5)			Maximum Zener Impedance (Note 6)			Maximum Reverse Current (Note 7)	
		$V_Z @ I_{ZT}$		I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	I_R	@ V_R
		Min (V)	Max (V)	mA	Ω	mA	μA	V	
UDZ5V1BF	GM	4.98	5.20	5	80	500	0.5	2	1.5

- Notes:
1. Device mounted on FR-4 PCB with 10mm x 10mm pad, board size 35mm * 25mm.
 2. No purposefully added lead. Halogen and Antimony Free.
 3. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
 4. The Zener voltage is measured 40ms after power is supplied.
 5. For inquiries on alternate nominal zener voltages, please contact your Diodes Inc. sales representative for availability and minimum order details.
 6. $f = 1\text{kHz}$.
 7. Short duration pulse test used to minimize self-heating effect.

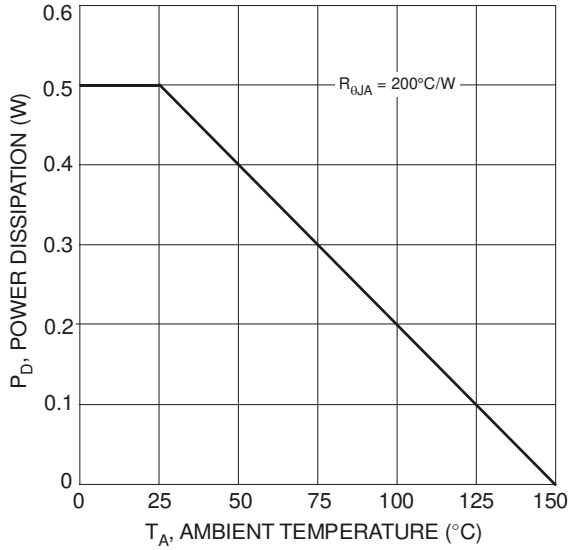


Fig. 1 Power Derating Curve

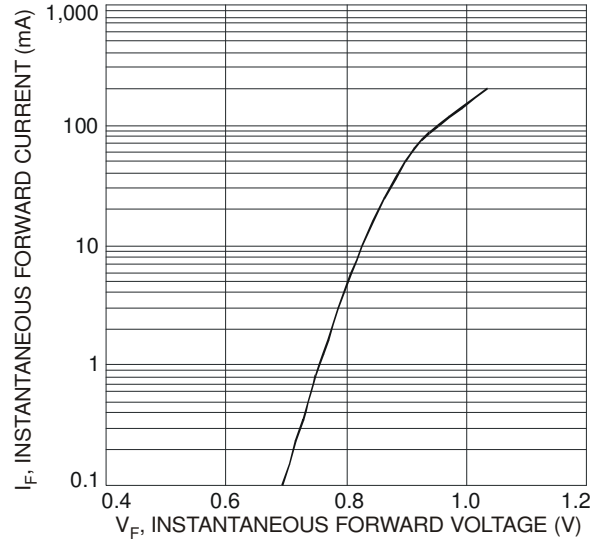


Fig. 2 Typical Forward Characteristics

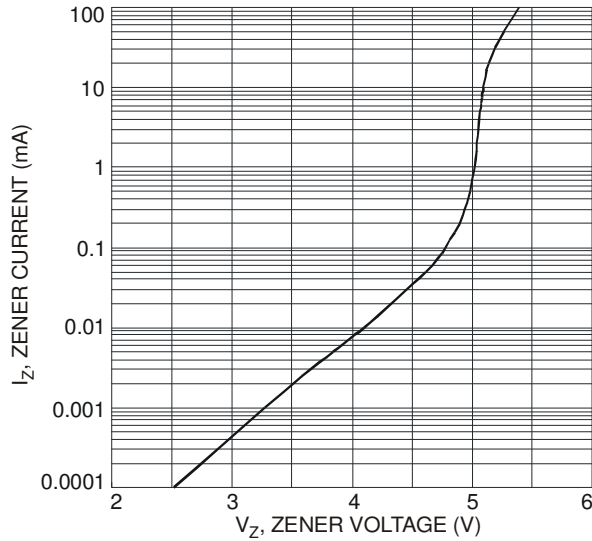


Fig. 3 Typical Zener Breakdown Characteristics

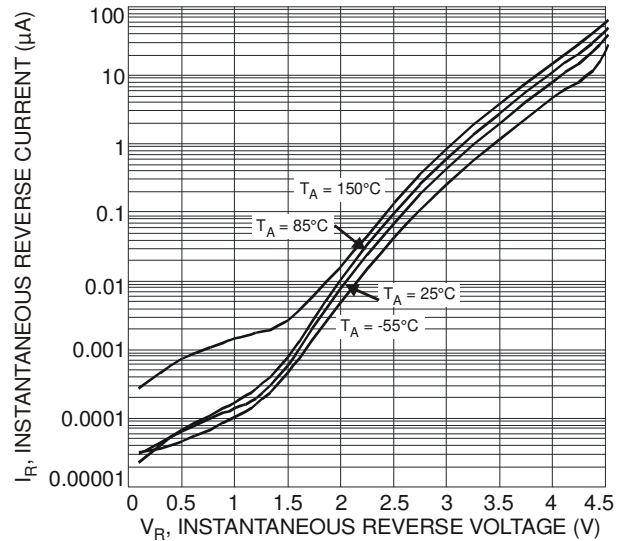


Fig. 4 Typical Reverse Characteristics

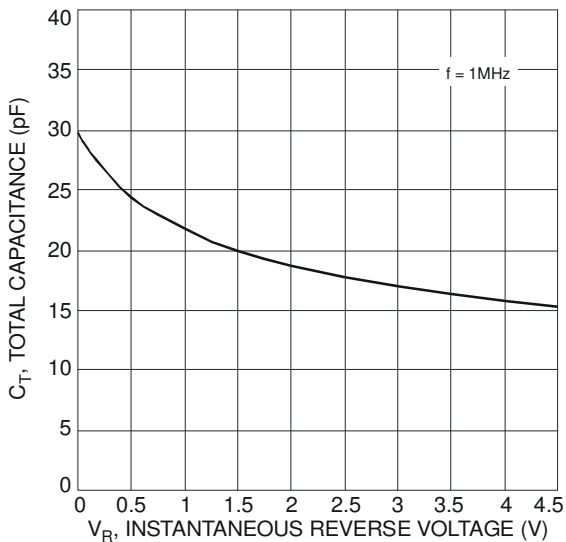


Fig. 5 Typical Total Capacitance

NEW PRODUCT

Ordering Information (Note 8)

Part Number	Case	Packaging
UDZ5V1BF-7	SOD-323F	3000/Tape & Reel

Notes: 8. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



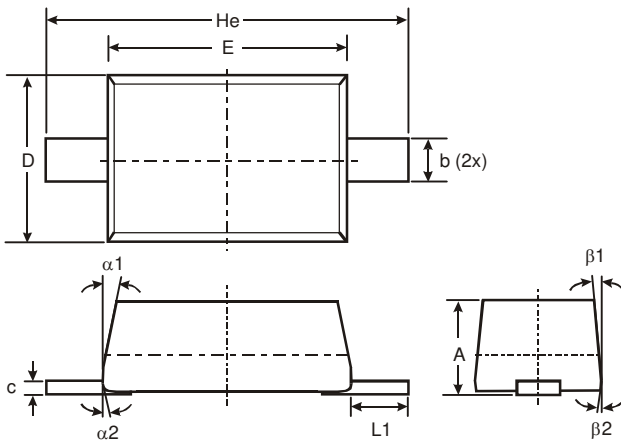
GM = Product Type Marking Code
 (See Electrical Characteristics Table)
 YM = Date Code Marking
 Y = Year (ex: X = 2010)
 M = Month (ex: 9 = September)

Date Code Key

Year Code	2010	2011	2012	2013	2014	2015	2016
Year Code	X	Y	Z	A	B	C	D

Month Code	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Month Code	1	2	3	4	5	6	7	8	9	O	N	D

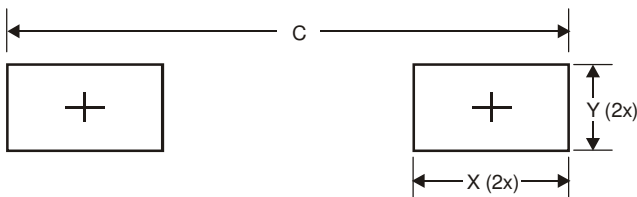
Package Outline Dimensions



SOD-323F			
Dim	Min	Max	Typ
A	0.60	0.75	—
b	0.25	0.35	—
c	0.05	0.26	—
D	1.15	1.35	1.25
E	1.60	1.80	1.70
He	2.30	2.70	2.50
L1	0.30	0.50	0.40
$\alpha 1$	—	—	7°
$\alpha 2$	—	—	3°
$\beta 1$	—	—	7°
$\beta 2$	—	—	3°

All Dimensions in mm

Suggested Pad Layout



Dimensions	Value (in mm)
X	0.710
Y	0.403
C	2.700

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