


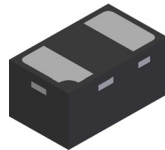
## Features

- Small Leadless Surface Mount Package
- Ideally Suited for Automated Assembly Processes
- Tight Tolerance on Zener Breakdown Voltage ( $\pm 2\%$ )
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

## Mechanical Data

- Case: X1-DFN1006-2
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: Cathode Bar (See Marking Information)
- Terminals: Finish – NiPdAu Over Copper Leadframe. Solderable per MIL-STD-202, Method 208 
- Weight: 0.001 grams (approximate)

X1-DFN1006-2



Bottom View

## Ordering Information (Note 4)

Part Number	Case	Packaging
BZT52B15LP-7B	X1-DFN1006-2	10,000/Tape & Reel

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.
  2. See [http://www.diodes.com/quality/lead\\_free.html](http://www.diodes.com/quality/lead_free.html) for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
  3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
  4. For packaging details, go to our website at <http://www.diodes.com/products/packages.html>.

## Marking Information



6L= Product Type Marking Code:

**Maximum Ratings** (@ $T_A = +25^\circ\text{C}$ , unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Forward Voltage	$V_F$	0.9	V

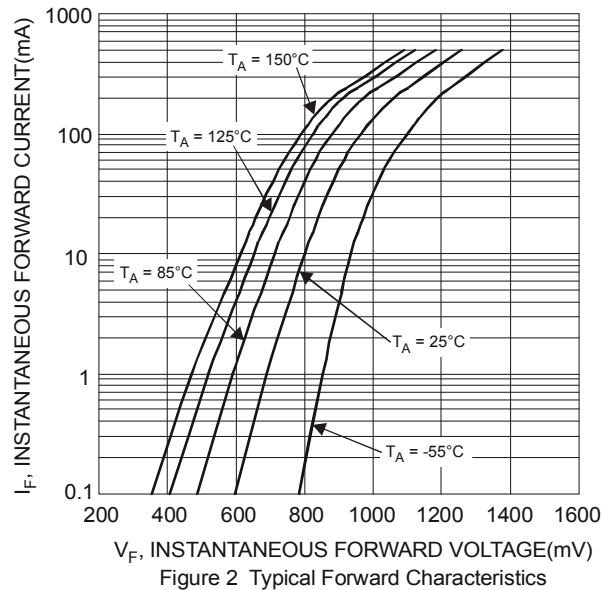
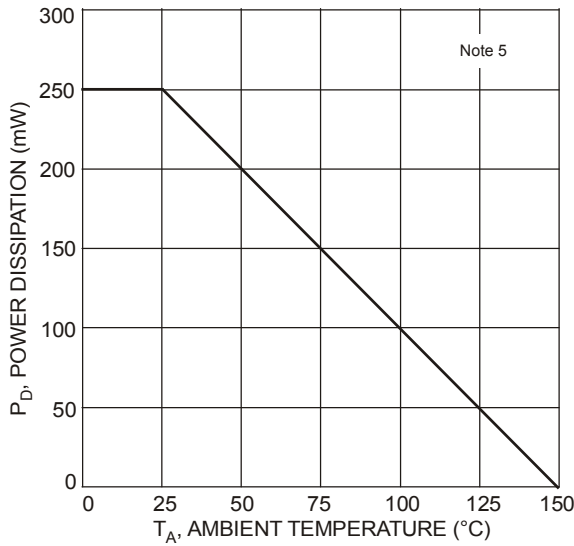
**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5) $T_A = +25^\circ\text{C}$	$P_D$	250	mW
Thermal Resistance, Junction to Ambient Air (Note 5) $T_A = +25^\circ\text{C}$	$R_{\theta JA}$	500	$^\circ\text{C}/\text{W}$
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 (Note 6)				Maximum Zener Impedance $f = 1\text{kHz}$			Maximum Reverse Current (Note 6)		Temperature Coefficient @ $I_{ZTC}$ $\text{mV}/^\circ\text{C}$		Test Current $I_{ZTC}$	Maximum Capacitance (Note 7)
		$V_Z @ I_{ZT}$			$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_{ZK}$	$I_R$	@ $V_R$	Min	Max		
		Nom (V)	Min (V)	Max (V)	mA	$\Omega$	mA	$\mu\text{A}$	V	Min	Max	mA	pF	
BZT52B15LP	6L	15	14.70	15.30	5	15	200	1	0.05	10.5	9.2	13.0	5	100

- Notes: 5. Device mounted on FR-4 PCB with minimum recommended pad layout which can be found on our website at <http://www.diodes.com>.  
6. Short duration pulse test used to minimize self-heating effect.  
7.  $f = 1\text{MHz}$ ,  $V_R = 0\text{V}$ ,  $T_A = +25^\circ\text{C}$ .



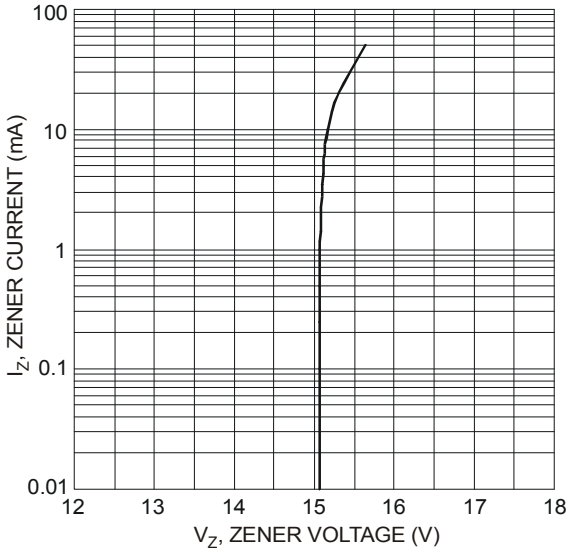
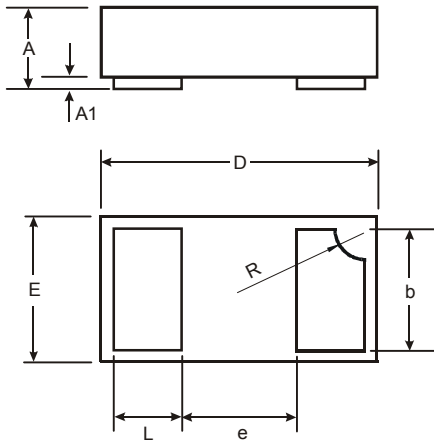


Figure 3 Typical Zener Breakdown Characteristics

### Package Outline Dimensions

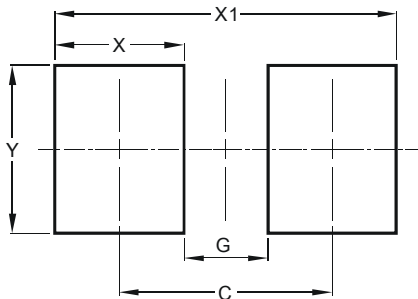
Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for latest version.



X1-DFN1006-2			
Dim	Min	Max	Typ
A	0.47	0.53	0.50
A1	0	0.05	0.03
b	0.45	0.55	0.50
D	0.95	1.075	1.00
E	0.55	0.675	0.60
e	-	-	0.40
L	0.20	0.30	0.25
R	0.05	0.15	0.10
All Dimensions in mm			

### Suggested Pad Layout

Please see AP02001 at <http://www.diodes.com/datasheets/ap02001.pdf> for the latest version.



Dimensions	Value (in mm)
C	0.70
G	0.30
X	0.40
X1	1.10
Y	0.70

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