

Zener Diode 500mW

1N5221B - 1N5281B



Features:

- High reliability
- Very sharp reverse characteristic
- Low reverse current level
- V_Z -tolerance $\pm 5\%$

Applications:

Voltage stabilization

Absolute Maximum Ratings $T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Symbol	Value	Unit
Power Dissipation	$T_{\text{amb}} \leq 75^\circ\text{C}$	P_V	500	mW
Z-Current	-	I_Z	P_V / V_Z	mA
Junction Temperature	-	T_j	200	$^\circ\text{C}$
Storage Temperature Range	-	T_{stg}	-65 to +200	

Maximum Thermal Resistance $T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Symbol	Value	Unit
Junction Ambient	$l = 9.5 \text{ mm (3/8 Inches)}$ $T_L = \text{Constant}$	R_{thJA}	300	K/W

Stresses exceeding maximum ratings may damage the device. Maximum ratings are stress ratings only. Functional operation above the recommended operating conditions is not implied. Extended exposure to stresses above the recommended operating conditions may affect device reliability.

Electrical Characteristics $T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Symbol	Maximum	Unit
Forward Voltage	$I_F = 200 \text{ mA}$	V_F	1.1	V

Specification Table

Description	V _{Znom} ¹⁾	I _{ZT}	for	r _{zIT}	r _{zIK}	at	I _{ZK}	I _R	at	V _R	TK _{VZ}	Part Number
	V	mA		Ω	Ω		mA	μA		V	%/K	
Diode, Zener, 0.5W, 6V, DO-35	6	20		< 7	< 1,600	0.25		< 5		3.5	< +0.038	1N5233B
Diode, Zener, 0.5W, 8.7V, DO-35	8.7			< 8	< 600			< 3		6.5	< +0.065	1N5238B
Diode, Zener, 0.5W, 14V, DO-35	14	9	< 15	< 0.1					10	< +0.082	1N5244B	
Diode, Zener, 0.5W, 17V, DO-35	17	7.4	< 19							13	< +0.084	1N5247B

¹⁾ Based on DC-measurement at thermal equilibrium while maintaining the lead temperature (T_L) at 30°C , 9.5 mm (3/8 inches) from the diode body

Zener Diode 500mW



1N5221B - 1N5281B

Characteristics ($T_j = 25^\circ\text{C}$ Unless Otherwise Specified)

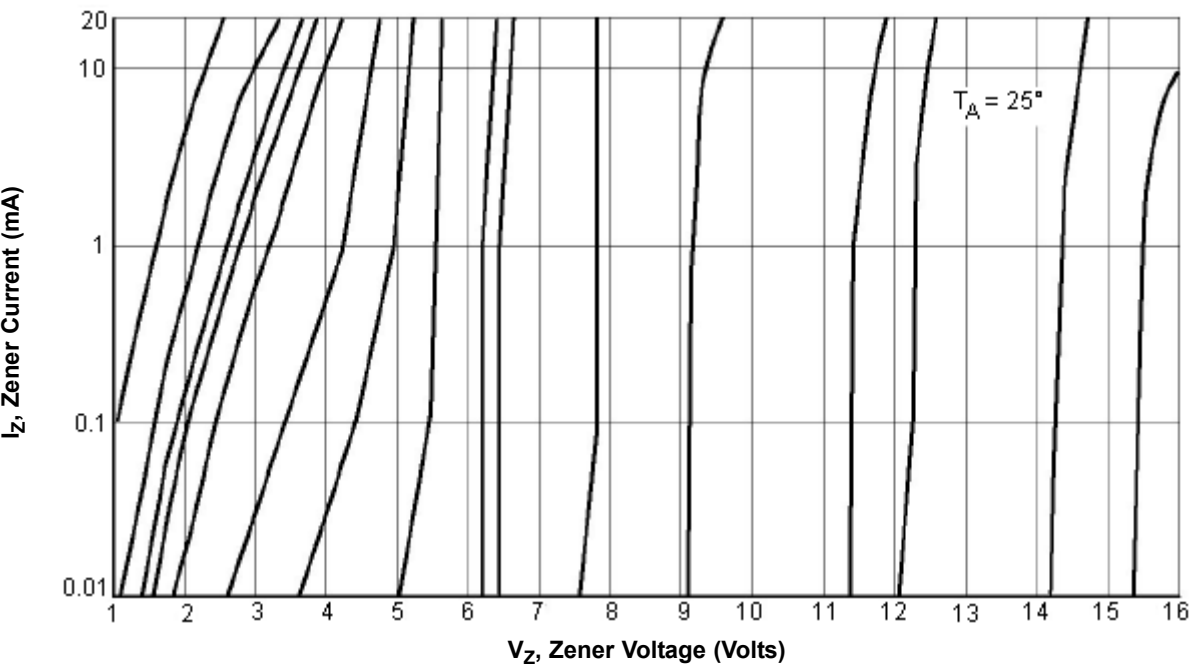


Figure 1. Zener Voltage Versus Zener Current - $V_Z = 1$ thru 16 Volts

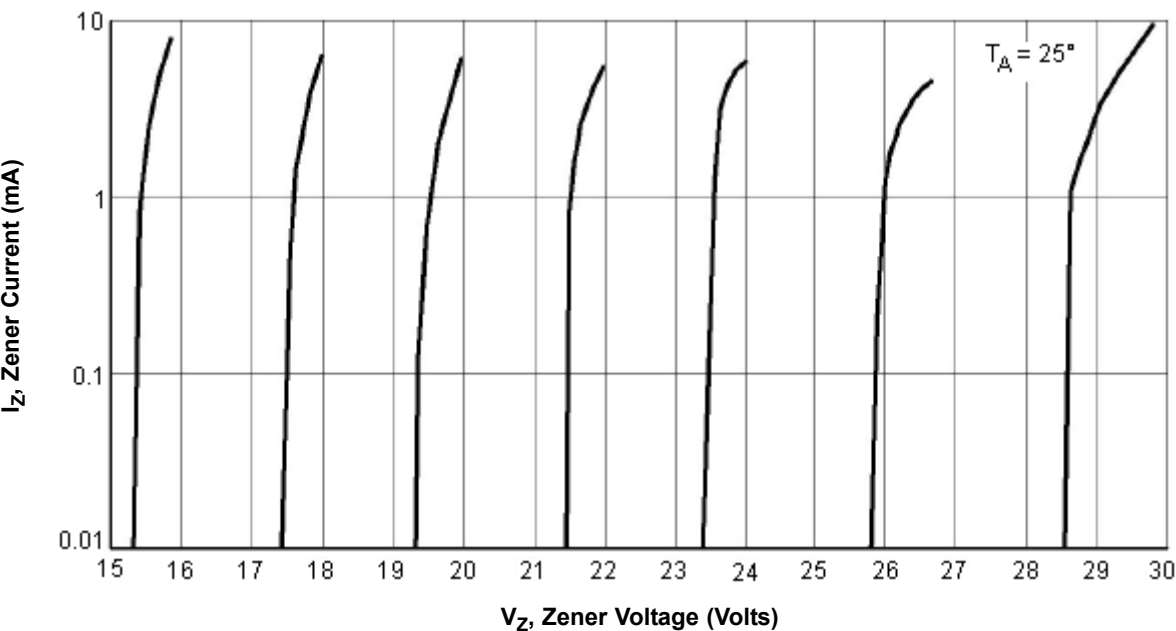


Figure 2. Zener Voltage Versus Zener Current - $V_Z = 15$ thru 30 Volts



Zener Diode 500mW



1N5221B - 1N5281B

Characteristics ($T_j = 25^\circ\text{C}$ Unless Otherwise Specified)

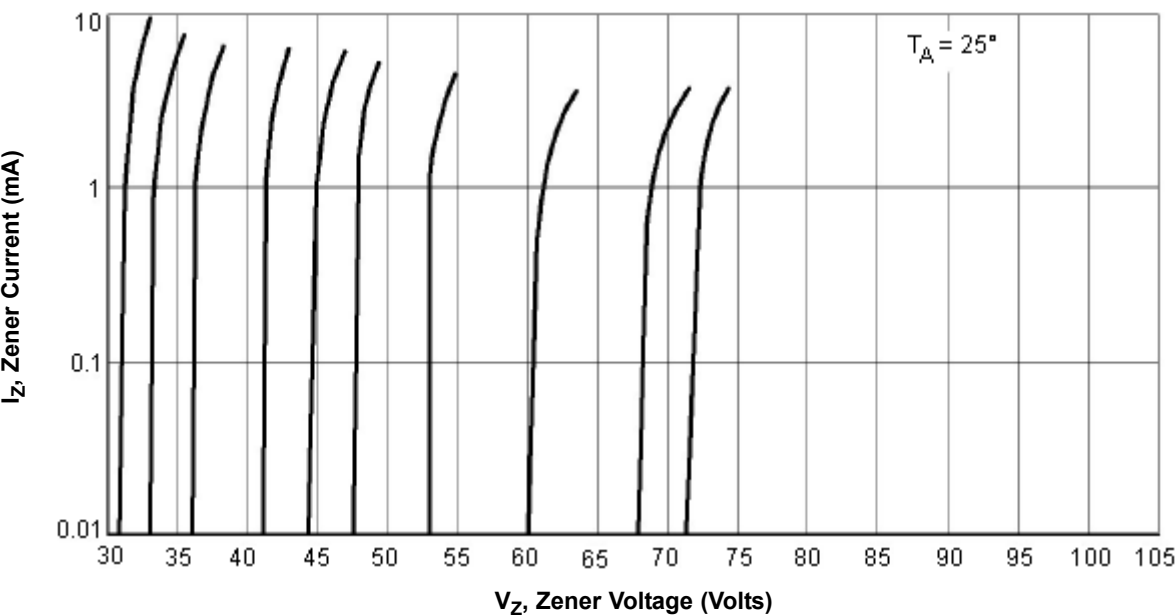


Figure 3. Zener Voltage Versus Zener Current - $V_Z = 30$ thru 75 Volts

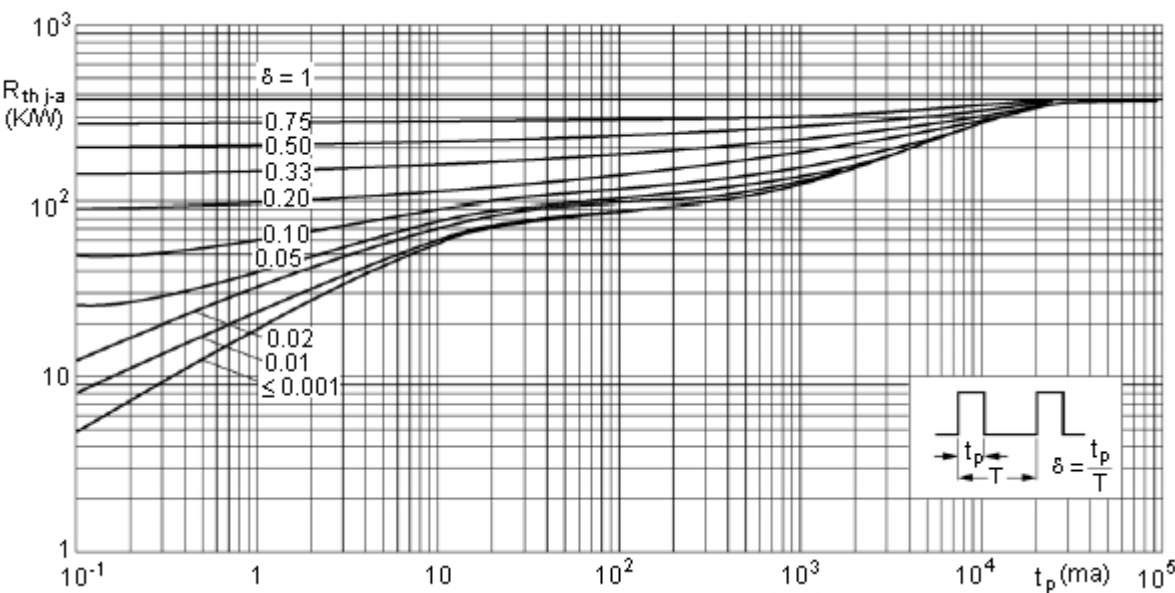


Figure 4. Thermal Resistance from Junction to Ambient as a Function of Pulse Duration

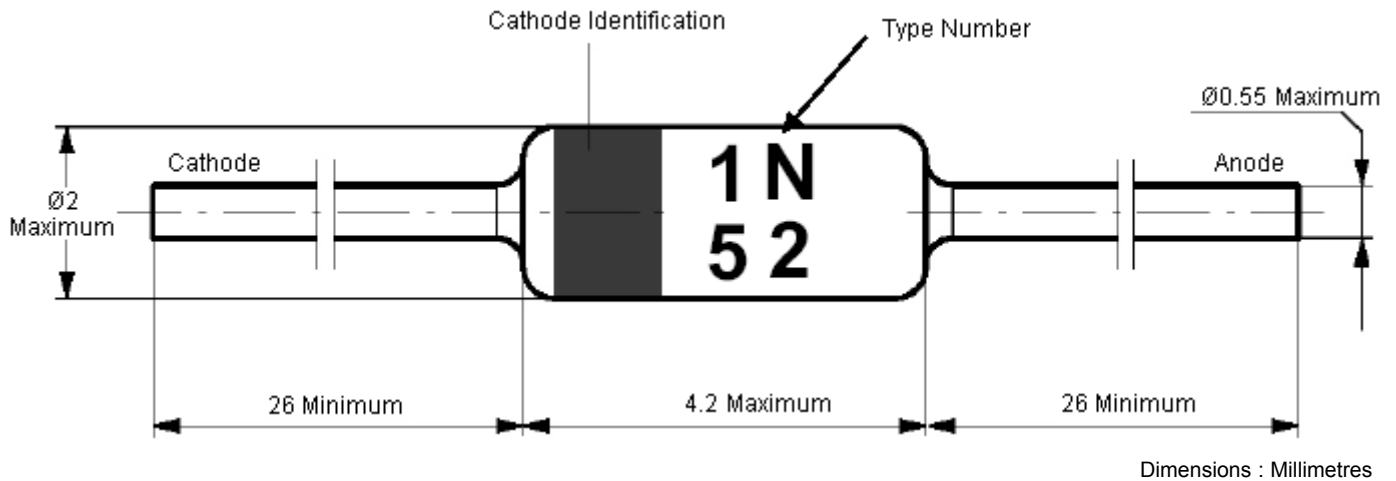


Zener Diode 500mW



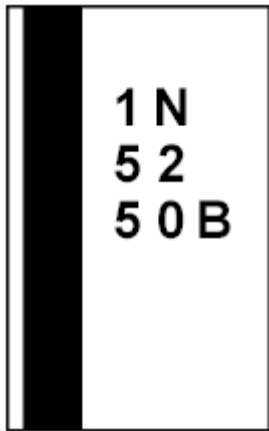
1N5221B - 1N5281B

Dimensions in mm



Standard Glass case
JEDEC DO-35

Marking



Important Notice : This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell plc 2011.