

Zener Diode 500mW

multicompPRO

**RoHS
Compliant**



Features

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

Applications

Voltage stabilization

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

Parameter	Test Conditions	Symbol	Value	Unit
Power Dissipation	$T_{AMB} \leq 75^\circ\text{C}$	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	$l = 9.5\text{mm (3/8")}$ TL = 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

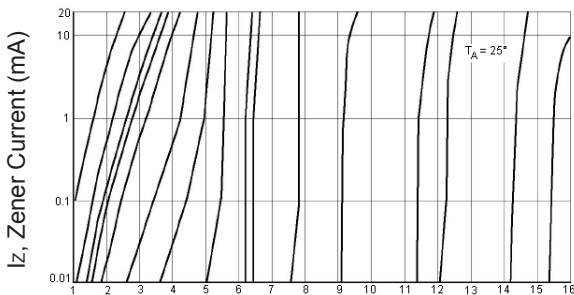
Description	V _{Znom} *	I _{ZT} for r _{zIT}		r _{zIK} at I _{ZK}		I _R at V _R		TK _{Vz}	Part Number
	V	mA	Ω	Ω	mA	μA	V	%/K	
Diode, Zener, 0.5W, 6V, DO-35	6	20	< 7	< 1,600	0.25	< 5	3.5	< +0.038	1N5233B
Diode, Zener, 0.5W, 8.7V, DO-35	8.7		< 8	< 600		< 3	6.5	< +0.065	1N5238B
Diode, Zener, 0.5W, 14V, DO-35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

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

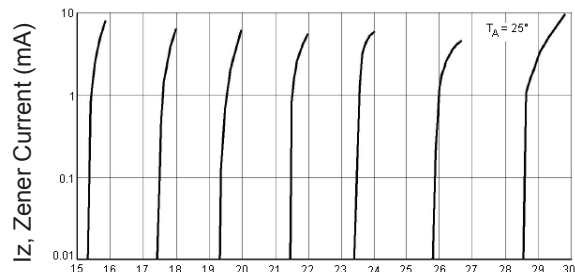
Newark.com/multicomp-pro
Farnell.com/multicomp-pro
Element14.com/multicomp-pro

multicompPRO

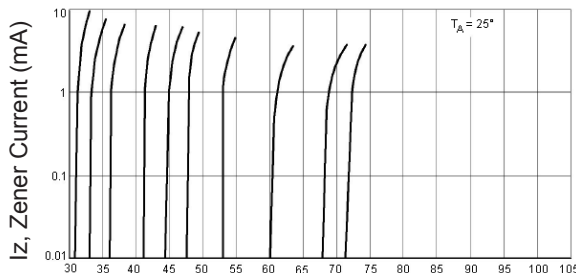
Characteristics ($T_J = 25^\circ\text{C}$ Unless Otherwise Specified)



V_Z, Zener Voltage (Volts)
Figure 1. Zener Voltage Versus
Zener Current - V_Z = 1 thru 16 Volts



V_Z, Zener Voltage (Volts)
Figure 2. Zener Voltage Versus Zener
Current - V_Z = 15 thru 30 Volts



V_Z, Zener Voltage (Volts)
Figure 3. Zener Voltage Versus Zener
Current - V_Z = 30 thru 75 Volts

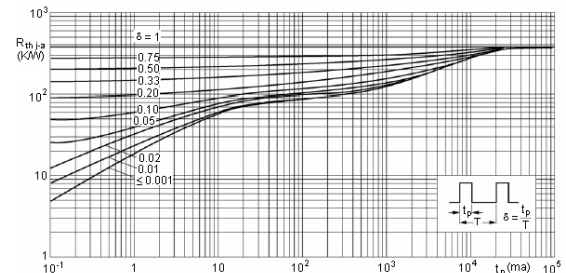
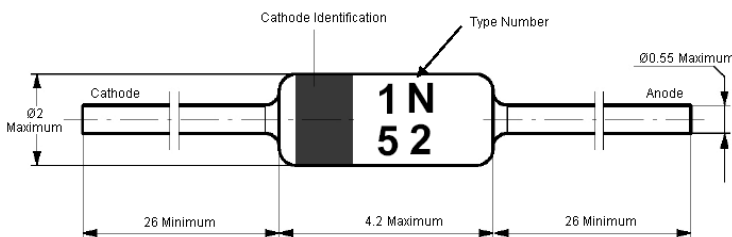


Figure 4. Thermal Resistance from
Junction to Ambient as a Function of
Pulse Duration

Diagram



Dimensions : Millimetres

Part Number Table

Description	Part Number
Diode, Zener, 0.5W, 6V, DO-35	1N5233B
Diode, Zener, 0.5W, 8.7V, DO-35	1N5238B
Diode, Zener, 0.5W, 14V, DO-35	1N5244B
Diode, Zener, 0.5W, 17V, DO-35	1N5247B

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