Zener Diode 500mW

multicomp PRO

RoHS Compliant

Features

- High reliability
- Very sharp reverse characteristic
- Low reverse current level
- Vz-tolerance ±5%

Applications

Voltage stabilization

Absolute Maximum Ratings T_J = 25°C

Parameter	Test Conditions	Symbol	Value	Unit
Power Dissipation	T_{AMB} ≤ 75°C	P_V	500	mW
Z-Current	-	I_Z	Pv / Vz	mA
Junction Temperature	-	T_J	200	°C
Storage Temperature Range	-	T_{STG}	-65 to +200	

Maximum Thermal Resistance T_J = 25°C

Parameter	Test Conditions	Symbol	Value	Unit
Junction Ambient	l = 9.5mm (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°C

Parameter	Test Conditions	Symbol	Maximum	Unit
Forward Voltage	I_F = 200 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

Characteristics (T_J = 25°C Unless Otherwise Specified)

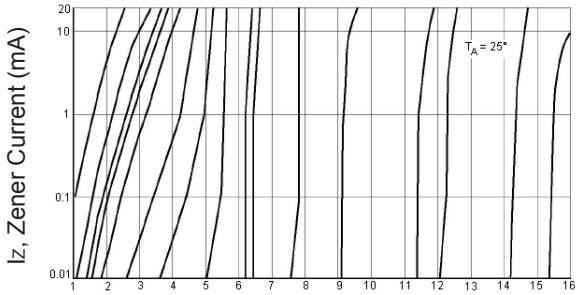


Figure 1. Zener Voltage Versus Zener Current - Vz = 1 thru 16 Volts

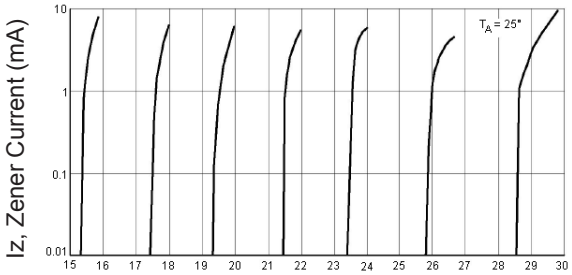


Figure 2. Zener Voltage Versus Zener Current - Vz = 15 thru 30 Volts

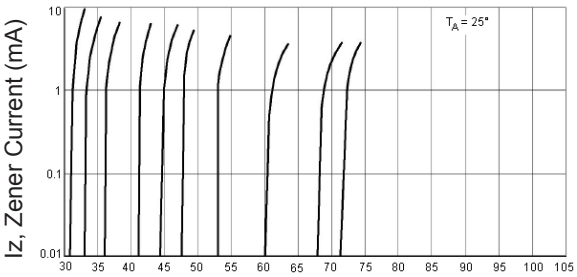


Figure 3. Zener Voltage Versus Zener Current - Vz = 30 thru 75 Volts

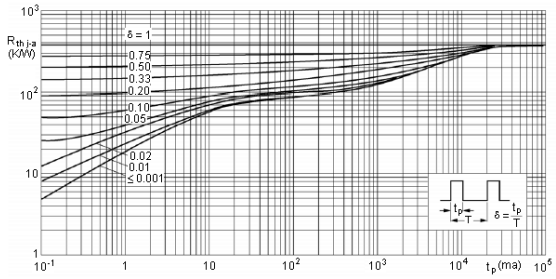
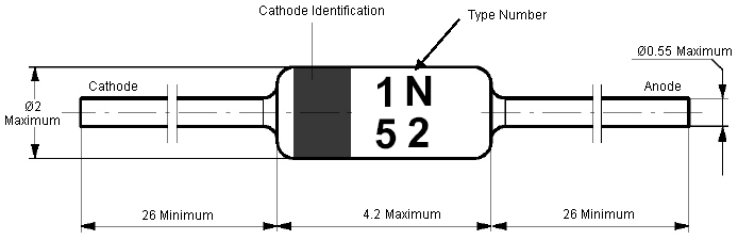


Figure 4. Thermal Resistance from Junction to Ambient as a Function of Pulse Duration

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