Zener Diode

multicomp PRO

RoHS Compliant

Features

- High reliability
- Very sharp reverse characteristic
- Zener voltage 3.3 to 12V
- Vz-tolerance ±5%

Applications

- Voltage stabilization

Absolute Maximum Ratings T_J = 25°C

Parameter	Test Conditions	Symbol	Value	Unit
Power dissipation	Tamb ≤ 75°C	Pv	500	mW
Z-current	-	Iz	Pv / Vz	mA
Junction Temperature	-	Tj	200	°C
Storage Temperature Range	-	Tstg	-65 to +200	°C

Maximum Thermal Resistance T_J = 25°C

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	l = 9.5 mm (3/8 inches) 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 = 200mA	V_F	1.5	V

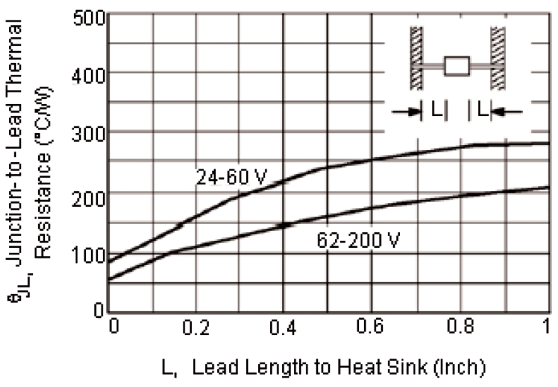
Specification Table

Type	VZnom[1]	I_{ZT} for Z_{ZT}		I_R at V_R		I_{ZM}[2]
	V	mA	Ω	µA	V	mA
1N746A	3.3	20	28	10	1	110
1N747A	3.6	20	24	10	1	100
1N748A	3.9	20	23	10	1	95
1N749A	4.3	20	22	2	1	85
1N750A	4.7	20	19	2	1	75
1N751A	5.1	20	17	1	1	70
1N752A	5.6	20	11	1	1	65
1N753A	6.2	20	7	0.1	1	60
1N754A	6.8	20	5	0.1	1	55
1N755A	7.5	20	6	0.1	1	50

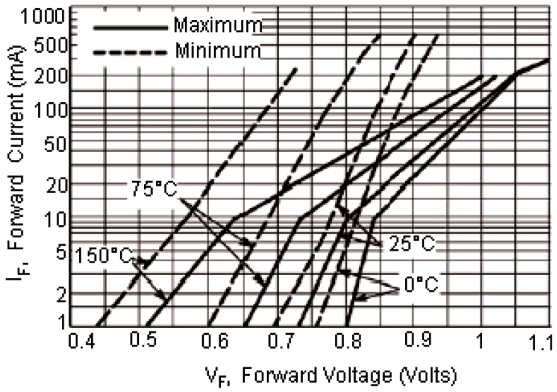
Type	VZnom[1]	IZT for ZZT		IR at VR		IZM[2]
	V	mA	Ω	µA	V	mA
1N756A	8.2	20	8	0.1	1	45
1N757A	9.1	20	10	0.1	1	40
1N758A	10	20	17	0.1	1	35
1N759A	12	20	30	0.1	1	30

[1] Tolerance and voltage designation (VZ):
The type numbers shown have a standard tolerance of ±5% on the nominal zener voltage, C for ±2%, D for ±1%
[2] Maximum zener current ratings (IZM):
Maximum zener current ratings are based on maximum zener voltage of the individual units and JEDEC 250 mW rating

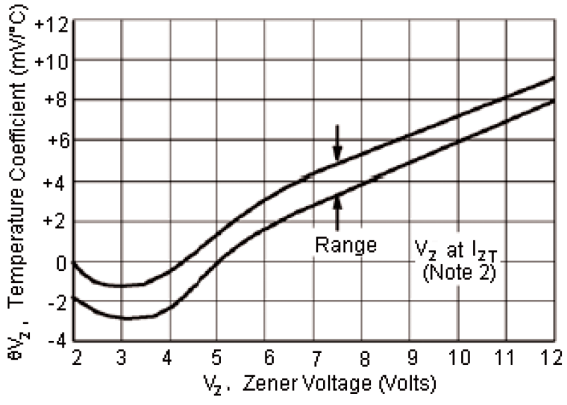
Characteristics (TJ = 25°C unless otherwise specified)

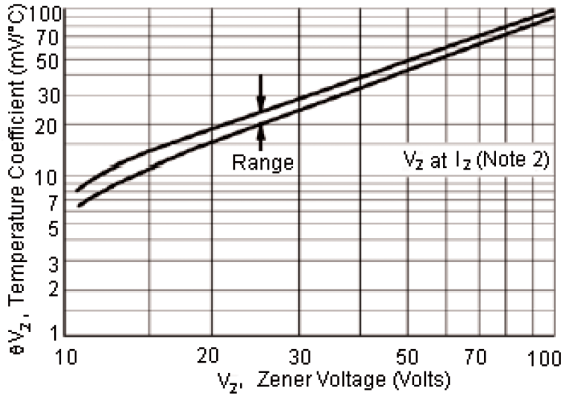


Typical Thermal Resistance



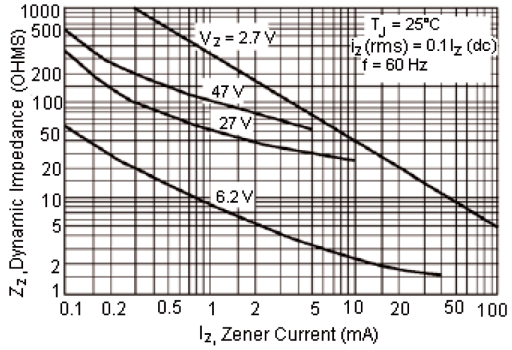
Typical Forward Characteristics



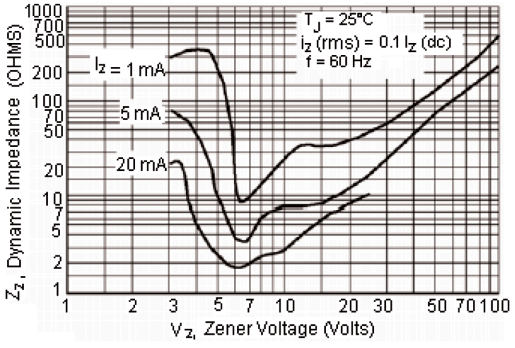


Temperature Coefficients

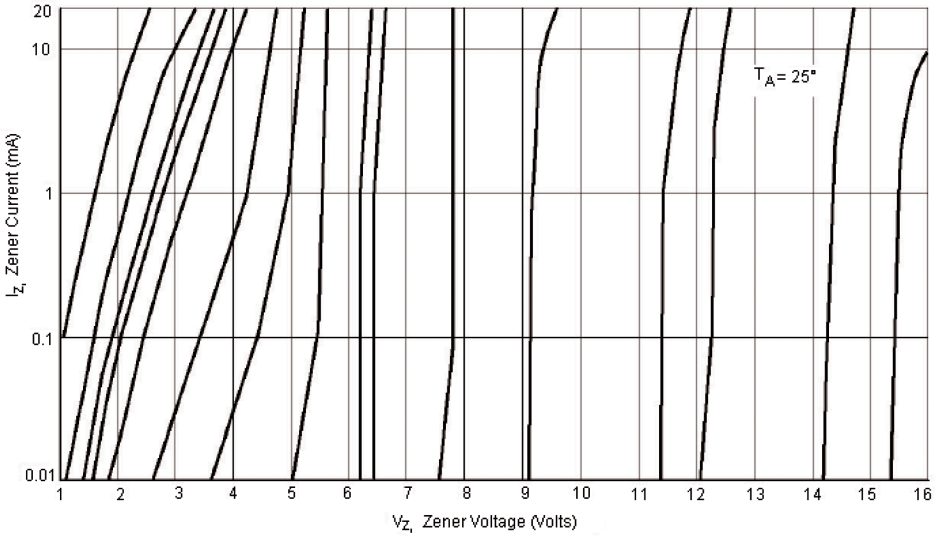
(-55°C to +150°C temperature range; 90% of the units are in the ranges indicated.)



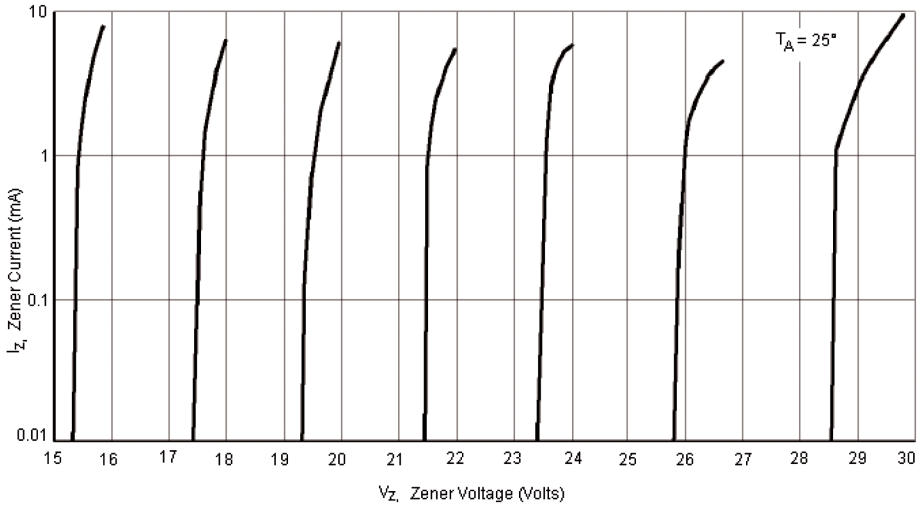
Effect of zener current on zener impedance



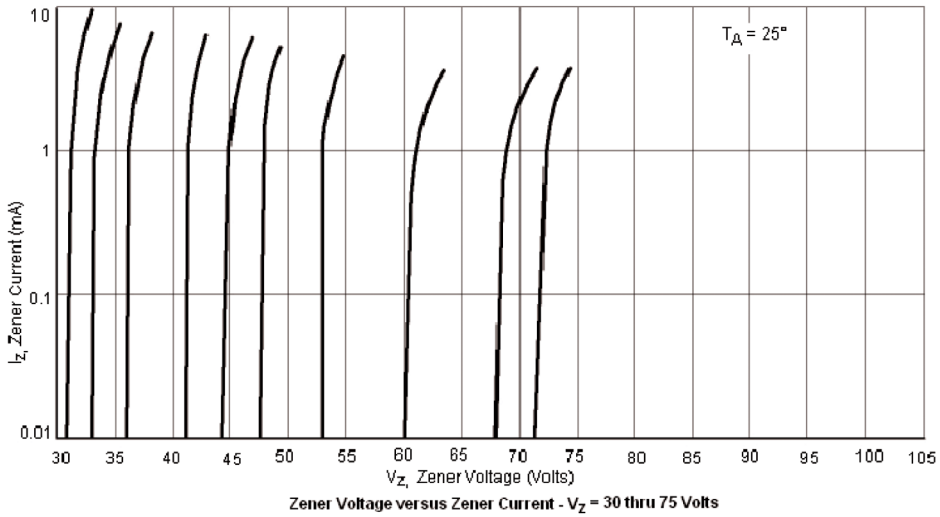
Effect of zener voltage on zener impedance



Zener Voltqge versus Zener Current - V_Z = 1 thru 16 Volts

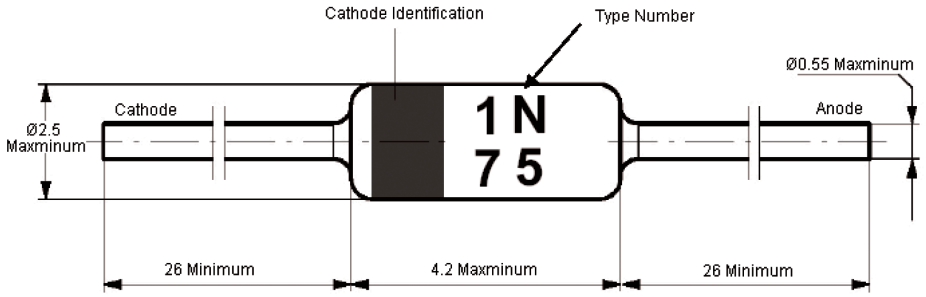


Zener Voltage versus Zener Current - V_Z = 15 thru 30 Volts



Zener Voltage versus Zener Current - V_Z = 30 thru 75 Volts

Diagram



Standard Glass case
JEDEC DO-35

Dimensions : Millimetres

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