Zener Diode

1N746A-1N759A

Features:

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

Applications:

Voltage stabilization

Absolute Maximum Ratings T_j = 25°C

Parameter	Test Conditions	Symbol	Value	Unit
Power dissipation	$T_{amb} \leq 75°C$	P_v	500	mW
Z-current	-	I_z	P_v/V_z	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	I = 9.5mm (3/8 inches) T_L = 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

Description	V_{Znom} [1]	I_{ZT} for Z_{ZT}		I_R at V_R		I_{ZM} [2]	Part Number
	V	mA	Ω	µA	V	mA	
Zener Diode	3.3	20	28	10	1	110	1N746A
Zener Diode	3.6		24			100	1N747A
Zener Diode	3.9		23			95	1N748A
Zener Diode	4.3		22	2		85	1N749A
Zener Diode	4.7		19			75	1N750A
Zener Diode	5.1		17	1		70	1N751A
Zener Diode	5.6		11			65	1N752A
Zener Diode	6.2		7	0.1		60	1N753A
Zener Diode	6.8		5			55	1N754A
Zener Diode	7.5		6			50	1N755A
Zener Diode	8.2		8			45	1N756A
Zener Diode	9.1		10			40	1N757A
Zener Diode	10		17			35	1N758A
Zener Diode	12		30			30	1N759A

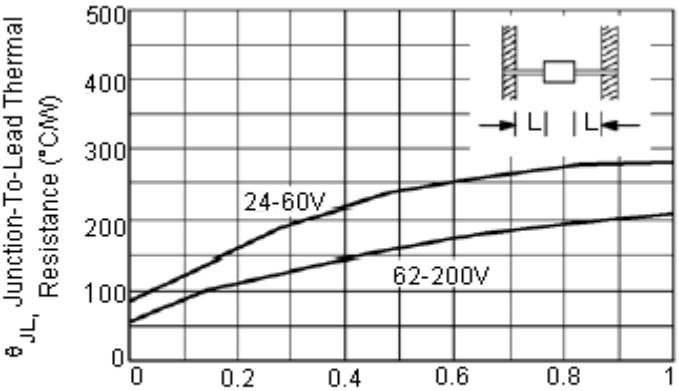
[1] Tolerance and voltage designation (V_Z)

The type numbers shown have a standard tolerance of ±5% on the nominal zener voltage, C for ±2%, D for ±1%.

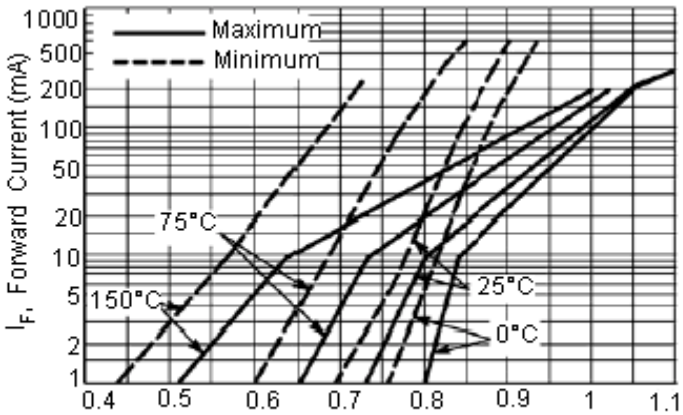
[2] Maximum zener current ratings (I_{ZM})

Maximum zener current ratings are based on maximum zener voltage of the individual units and JEDEC 250 mW rating.

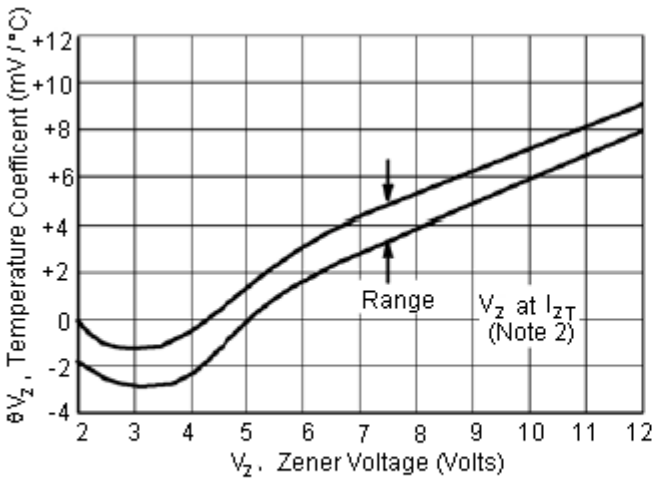
Characteristics (T_j = 25°C unless otherwise specified)

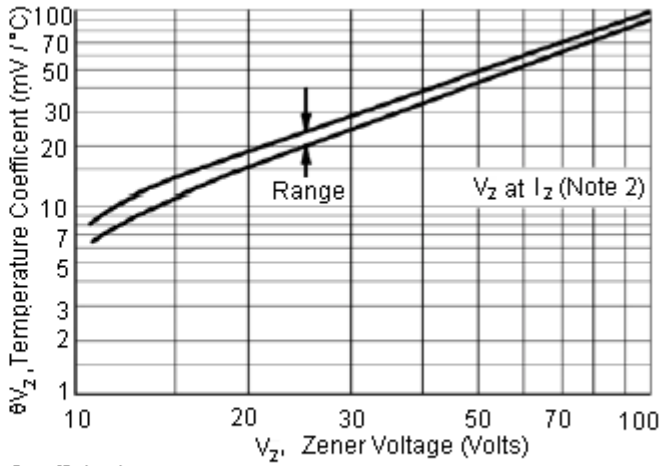


Typical Thermal Resistance



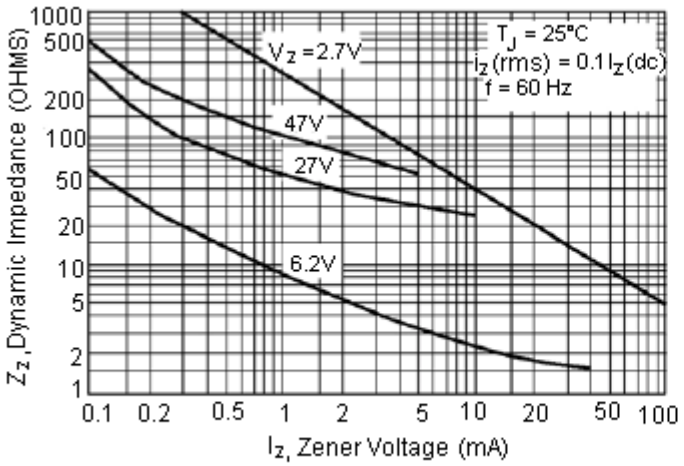
Typical Forward Characteristics



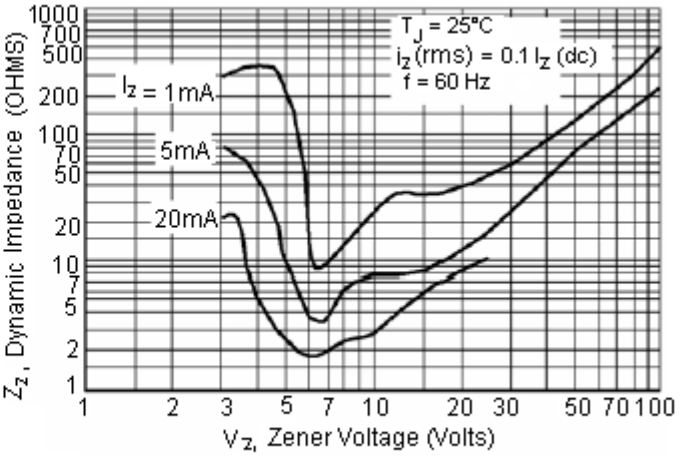


Temperature Coefficients

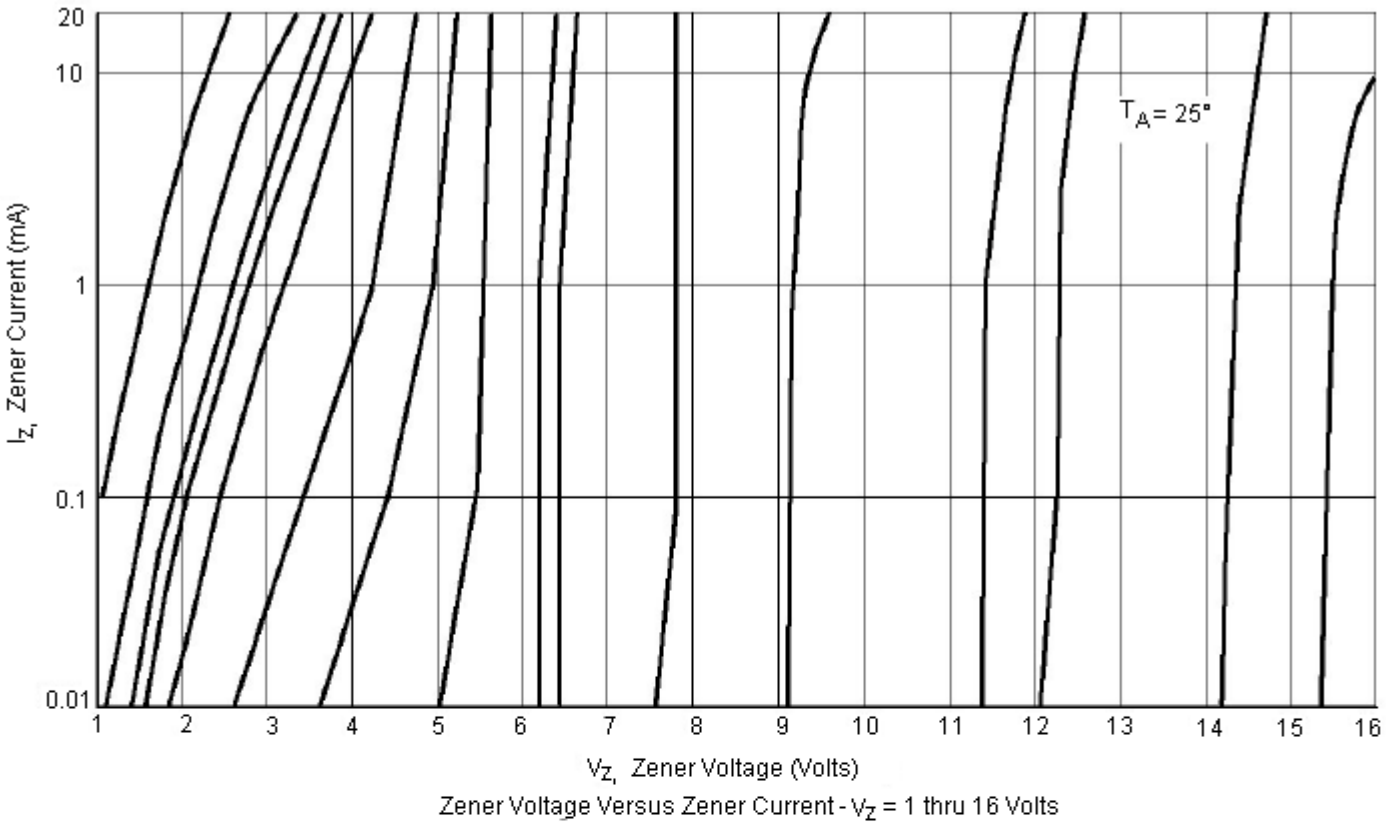
(-55°C to +150°C temperature range; 90% of the units are in the ranges indicated.)



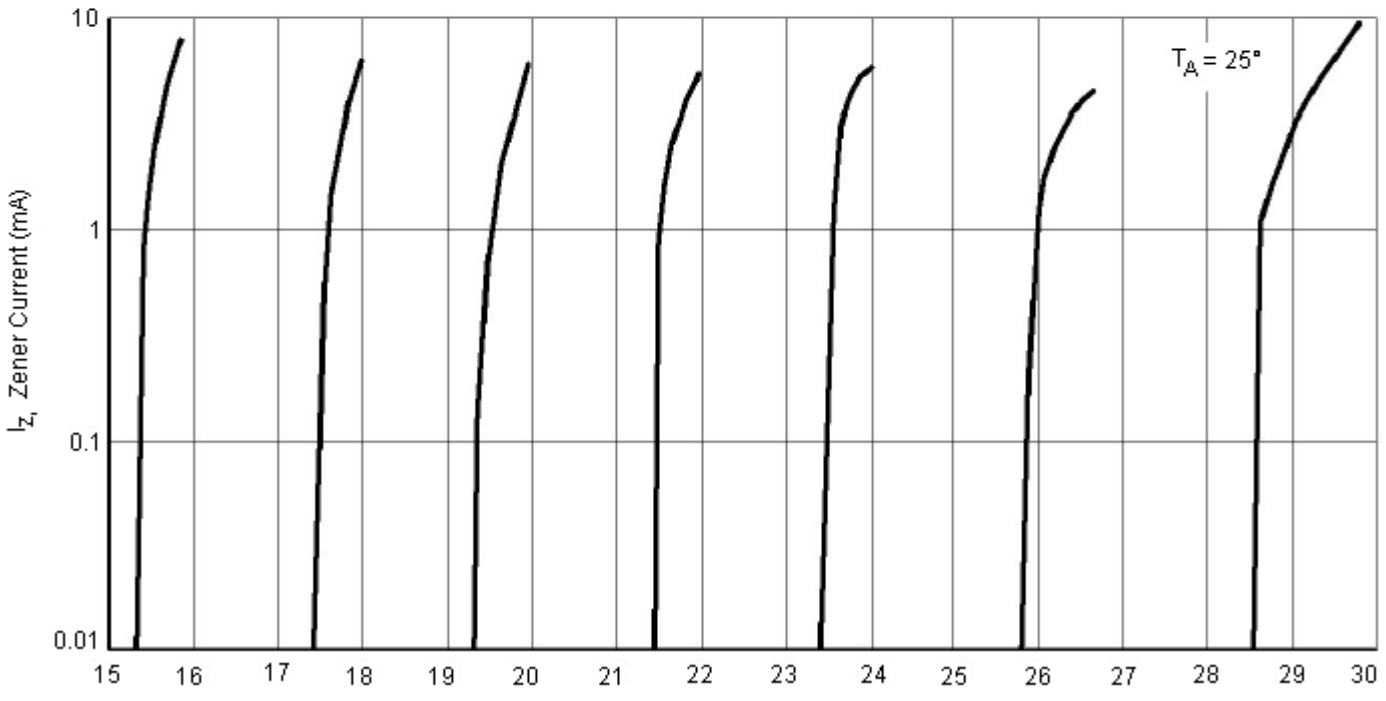
Effect of Zener Current on Zener Impedance



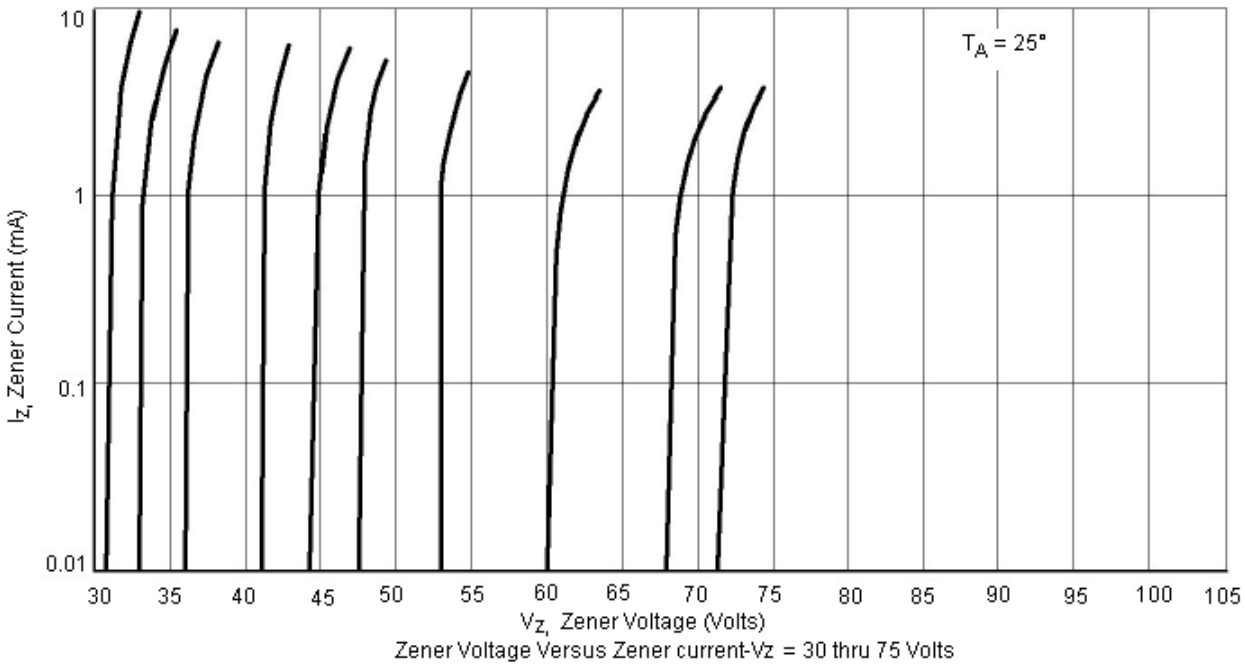
Effect of Zener Voltage on Zener Impedance



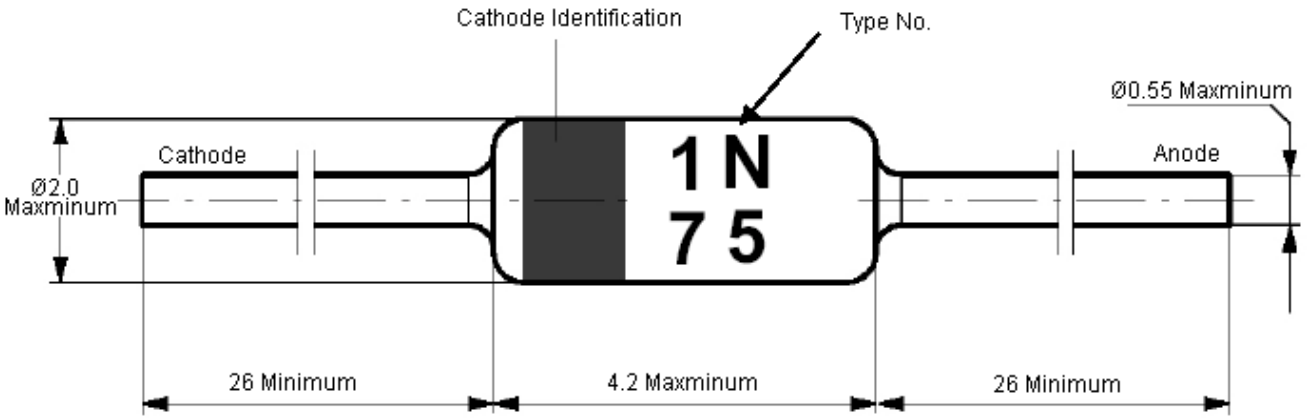
Zener Voltage Versus Zener Current - V_Z = 1 thru 16 Volts



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



Zener Voltage Versus Zener current-Vz = 30 thru 75 Volts



Standard Glass case
JEDEC DO-35

Dimensions: Millimetres

Marking