



Features

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

Application

Voltage stabilization

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

Parameter	Test Conditions	Symbol	Value	Unit
Power dissipation	$T_{\text{amb}} \leq 50^\circ\text{C}$	P_V	1	W
Z-current	-	I_Z	P_V / V_Z	mA
Junction temperature	-	T_J	200	°C
Storage temperature range	-	T_{STG}	-65 to +175	

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}	100	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	Value	Unit
Forward voltage	$I_F = 200\text{mA}$	V_F	1.2 (Max.)	V

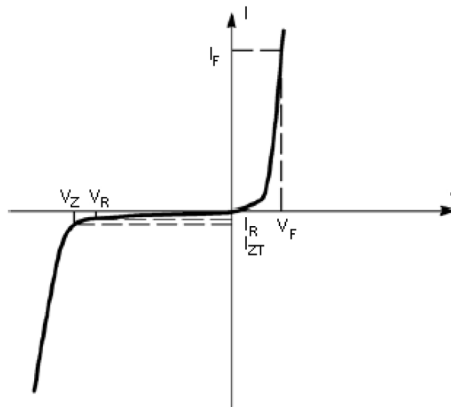
Specification Table

$V_{Z\text{nom}}^*$	I_{ZT} for r_{zIT}		r_{zIK} at I_{ZK}		I_R at V_R		Part Number
	V	mA	Ω	mA	μA	V	
27	9.5	<35	<750	0.25	<5	20.6	1N4750A+
33	7.5	<45	<1000	0.25	<5	25.1	1N4752A+

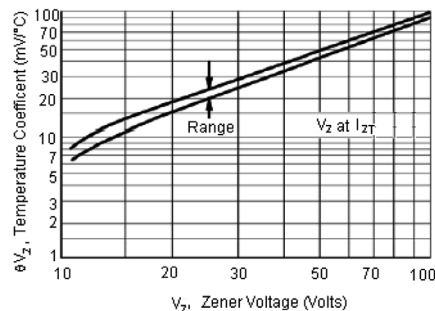
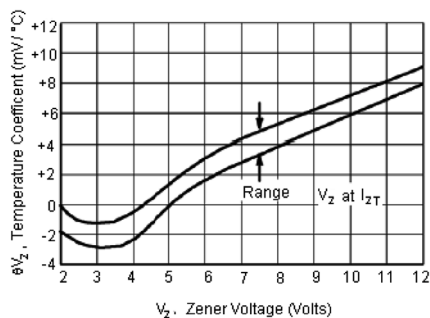
*Based on DC-measurement at thermal equilibrium while maintaining the lead temperature (TL) at 30°C 9.5mm (3/8") from the diode body.

Characteristics ($T_J = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter
V_Z	Reverse zener voltage at I_{ZT}
I_{ZT}	Reverse current
Z_{ZT}	Maximum zener impedance at I_{ZT}
I_{ZK}	Reverse current
Z_{ZK}	Maximum zener impedance at I_{ZK}
I_R	Reverse leakage current at V_R
V_R	Breakdown voltage
I_F	Forward current
V_F	Forward voltage at I_F

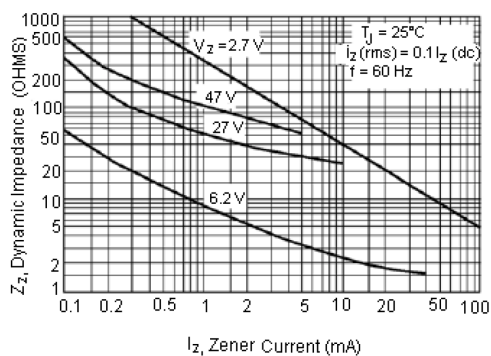


Zener Voltage Regulator

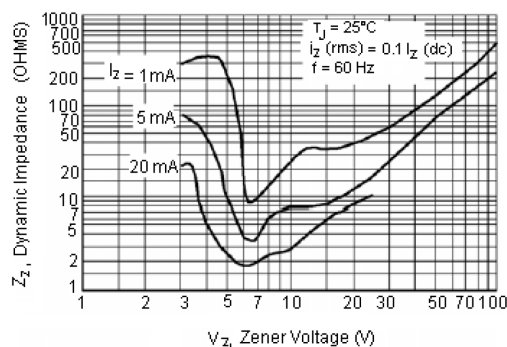


Temperature Coefficients

(-55°C to $+150^\circ\text{C}$ temperature range; 90% of the units are in the ranges indicated)

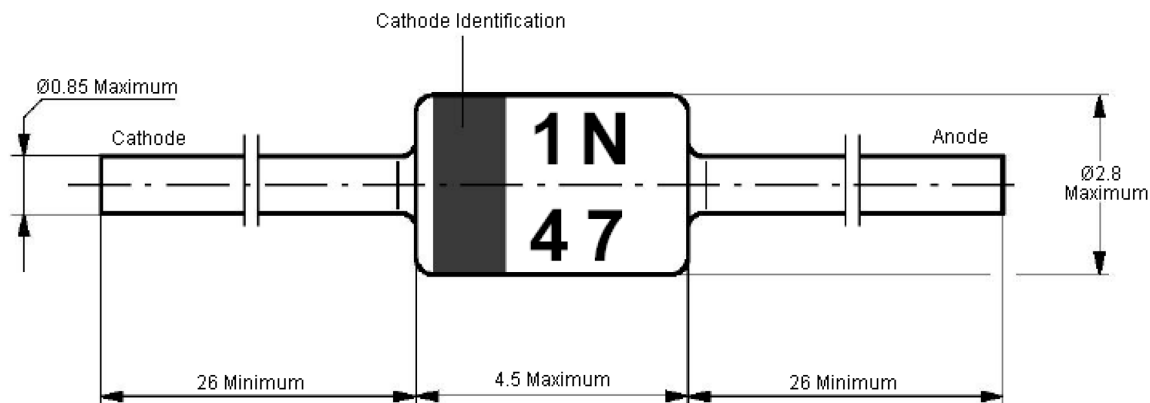


Effect of Zener Current on Zener Impedance



Effect of Zener Voltage on Zener Impedance

Dimensions:



Standard Glass case
JEDEC DO-41

Dimensions: Millimetres

Part Number Table

Description	Part Number
Zener Single Diode, 27V	1N4750A+
Zener Single Diode, 33V	1N4752A+

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