



element14

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Cette fiche technique est  
présentée par le fabricant

# Zener Diode

1N4728A-1N4764A



## Features:

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

## Applications:

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	$^\circ\text{C}$
Storage temperature range	-	$T_{\text{stg}}$	-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 inches) $T_L = \text{constant}$	$R_{\text{thJA}}$	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	Maximum	Unit
Forward voltage	$I_F = 200\text{mA}$	$V_F$	1.2	V

# Zener Diode

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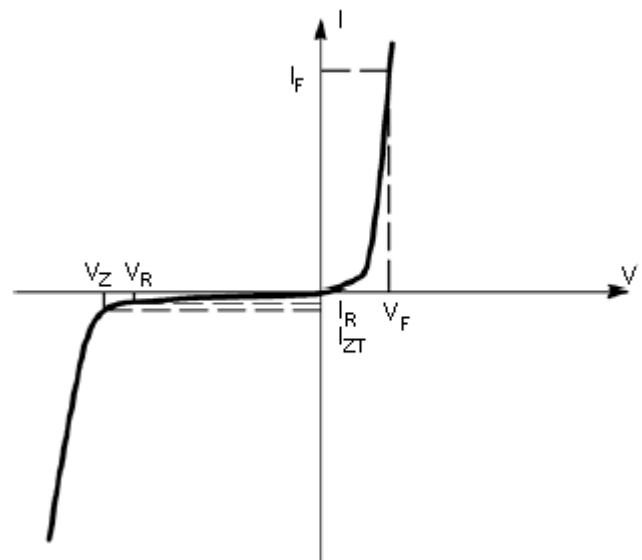
## Specification Table

Description	V <sub>Znom</sub> <sup>1)</sup>	I <sub>ZT</sub>	for	r <sub>ziT</sub>	r <sub>ziK</sub>	at	I <sub>ZK</sub>	I <sub>R</sub>	at	V <sub>R</sub>	Part Number
	V	mA		Ω	Ω		mA	μA		V	
Zener Diode	3.3	76	< 10	< 400	1		1	< 100	1		1N4728A
Zener Diode	3.6	69								1N4729A	
Zener Diode	3.9	64						< 9		< 50	1N4730A
Zener Diode	4.7	53	< 8	< 500				1N4732A			
Zener Diode	5.1	49	< 7	< 550				1N4733A			
Zener Diode	5.6	45	< 5	< 600				2	1N4734A		
Zener Diode	6.2	41	< 2	< 700				0.5	3	1N4735A	
Zener Diode	6.8	37	< 3.5		4	1N4736A					
Zener Diode	7.5	34	< 4		5	1N4737A					
Zener Diode	8.2	31	< 4.5		6	1N4738A					
Zener Diode	9.1	28	< 5		7	1N4739A					
Zener Diode	10	25	< 7	0.25	7.6	1N4740A					
Zener Diode	62	4	< 125		< 2000	< 5	47.1	1N4759A			

1) Based on DC-measurement at thermal equilibrium while maintaining the lead temperature ( $T_L$ ) at 30°C, 9.5mm (3/8 inches) from the diode body.

## Characteristics ( $T_j = 25^\circ C$ 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 $I_F$

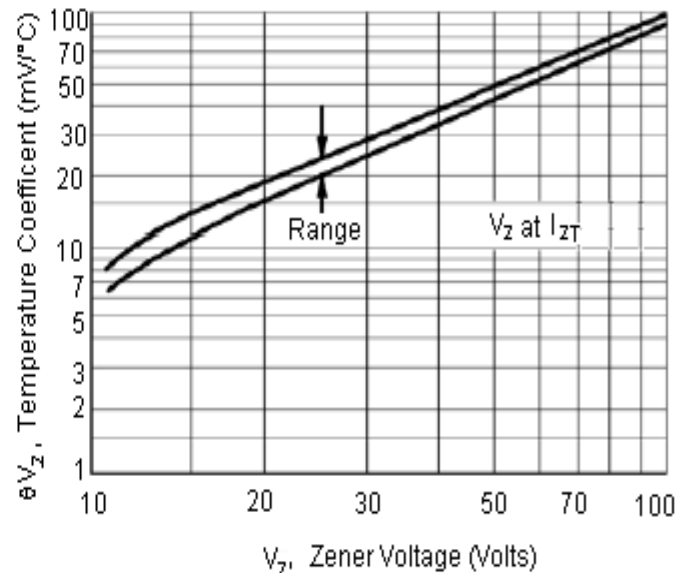
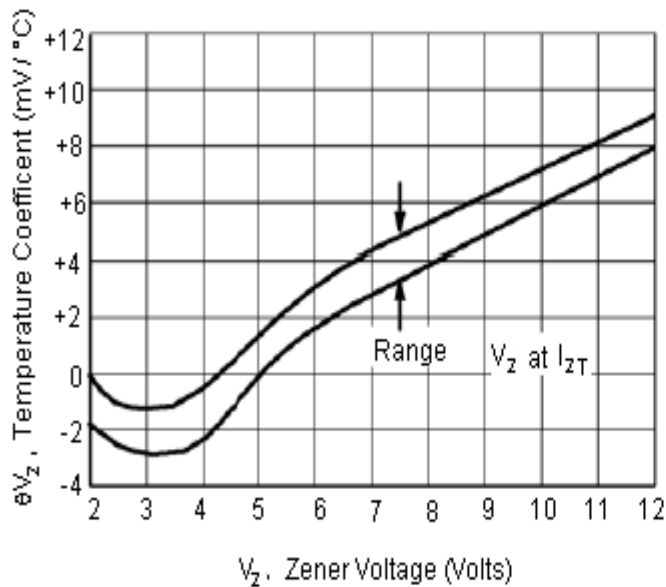


Zener Voltage Regulator

# Zener Diode

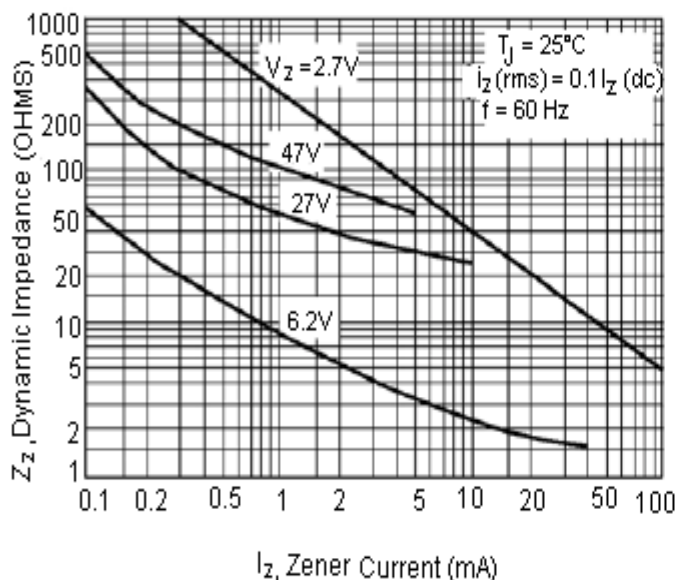
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Characteristics ( $T_J = 25^\circ\text{C}$  unless otherwise specified)

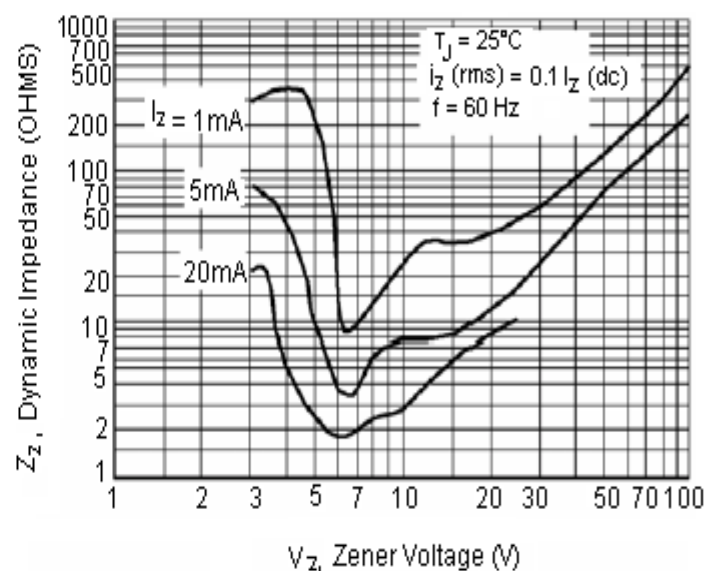


Temperature Coefficients

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



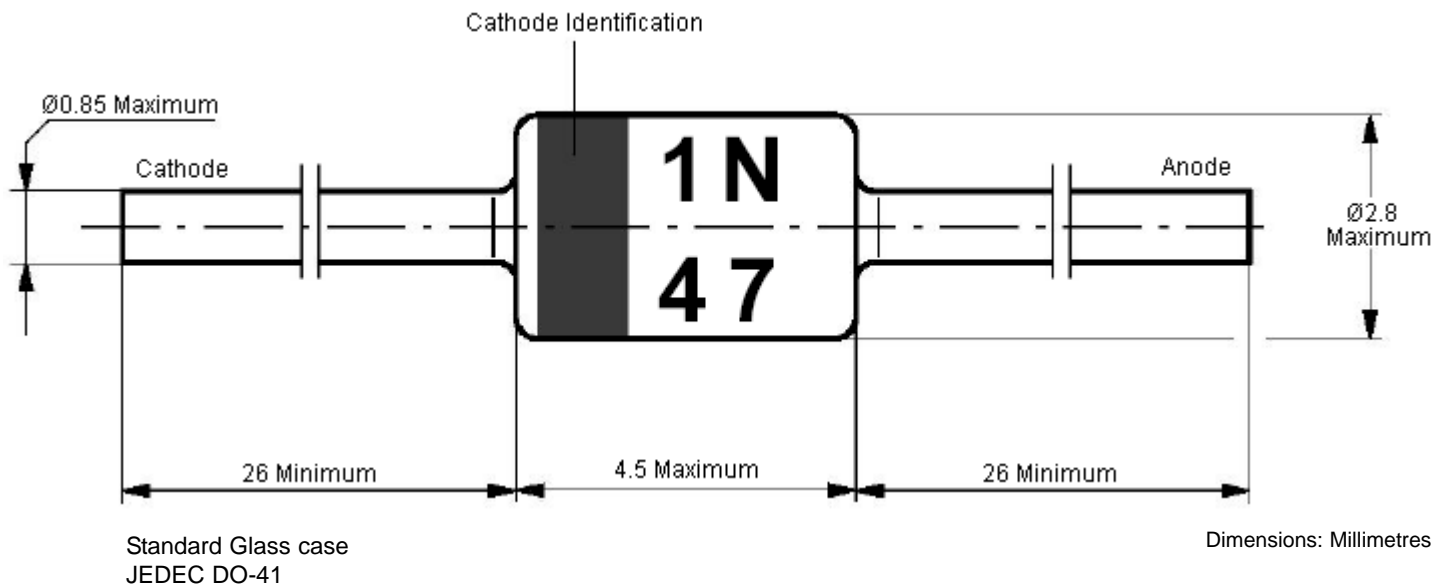
Effect of Zener Current on Zener Impedance



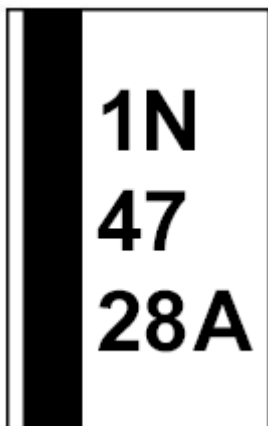
Effect of Zener Voltage on Zener Impedance

# Zener Diode

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## Marking



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