

# 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	°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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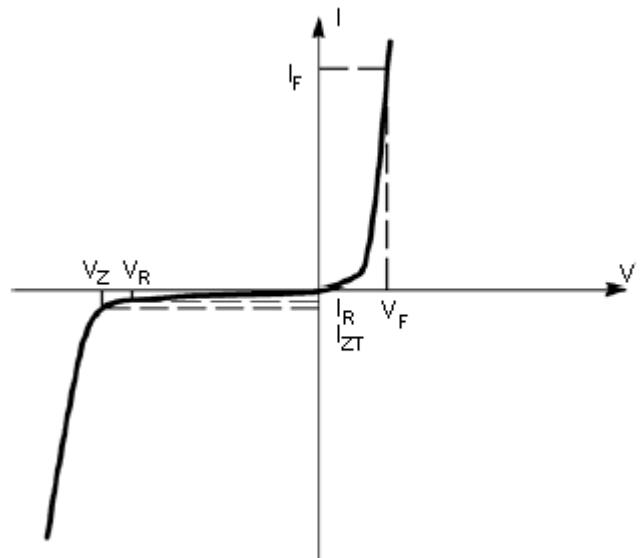
### Specification Table

Description	$V_{Znom}^{1)}$	$I_{ZT}$ for	$r_{ziT}$	$r_{ziK}$ at	$I_{ZK}$	$I_R$ at	$V_R$	Part Number
	V	mA	$\Omega$	$\Omega$	mA	$\mu A$	V	
Zener Diode	3.3	76	< 10	< 400	1	< 100	1	1N4728A
Zener Diode	3.6	69						1N4729A
Zener Diode	3.9	64						1N4730A
Zener Diode	4.7	53	< 8	< 500		< 10	2	1N4732A
Zener Diode	5.1	49	< 7	< 550				1N4733A
Zener Diode	5.6	45	< 5	< 600				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		0.25	6	1N4738A	
Zener Diode	9.1	28	< 5			7	1N4739A	
Zener Diode	10	25	< 7			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 $I_F$

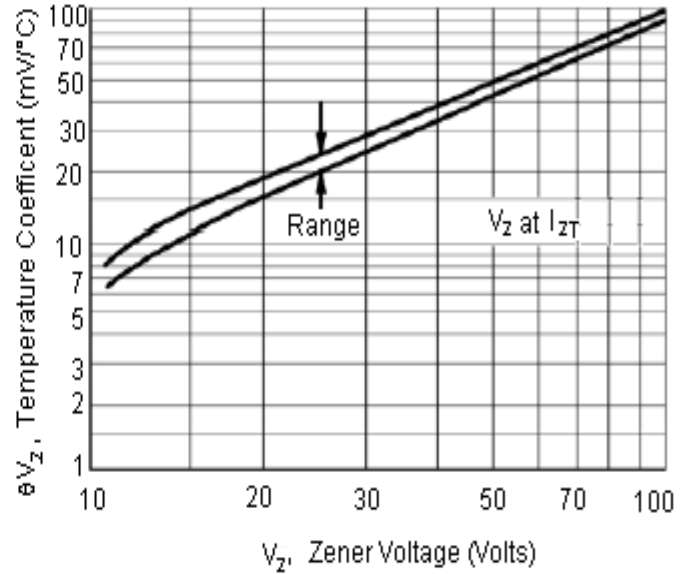
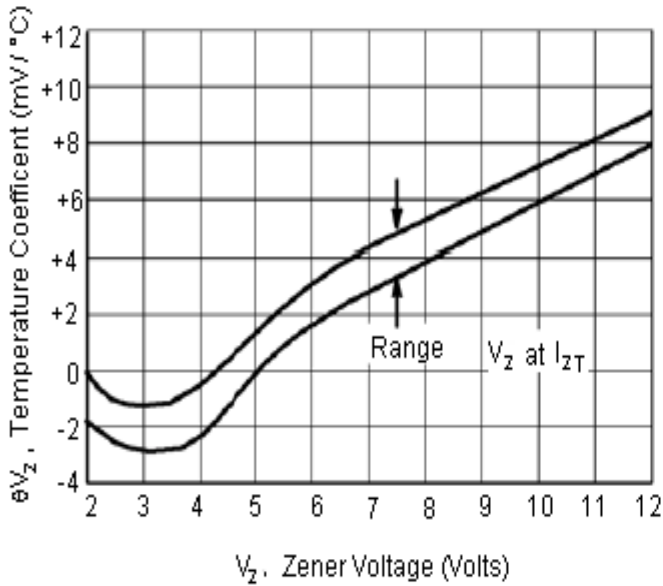


Zener Voltage Regulator

# Zener Diode

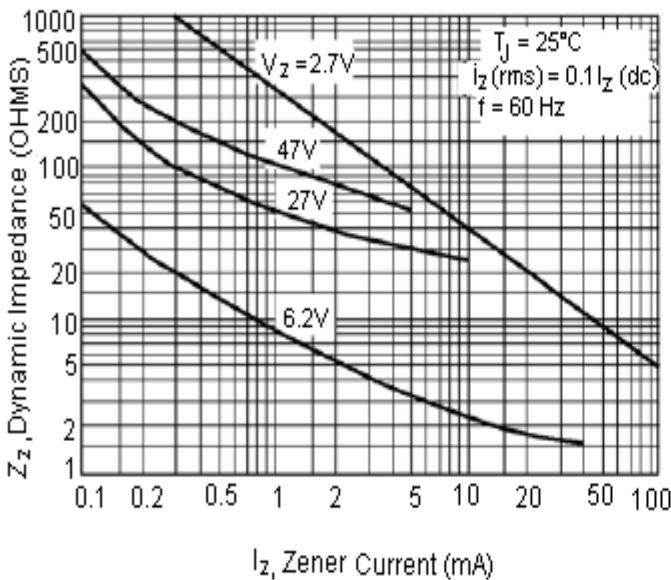
1N4728A-1N4764A

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

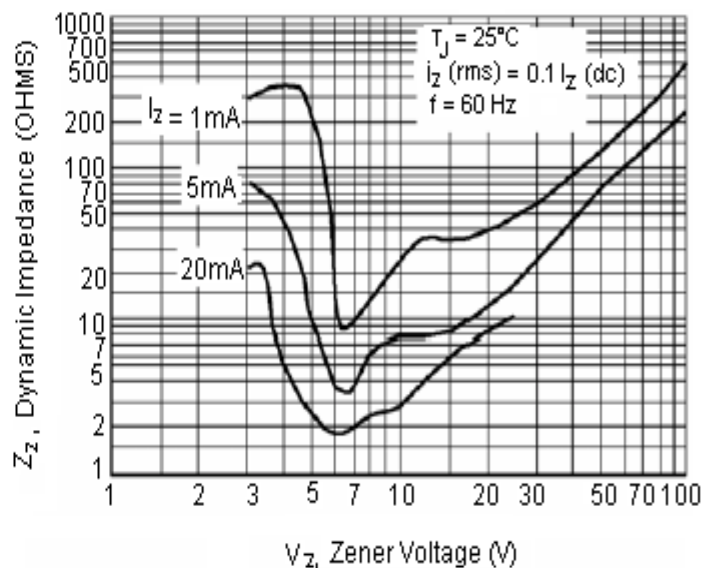


Temperature Coefficients

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



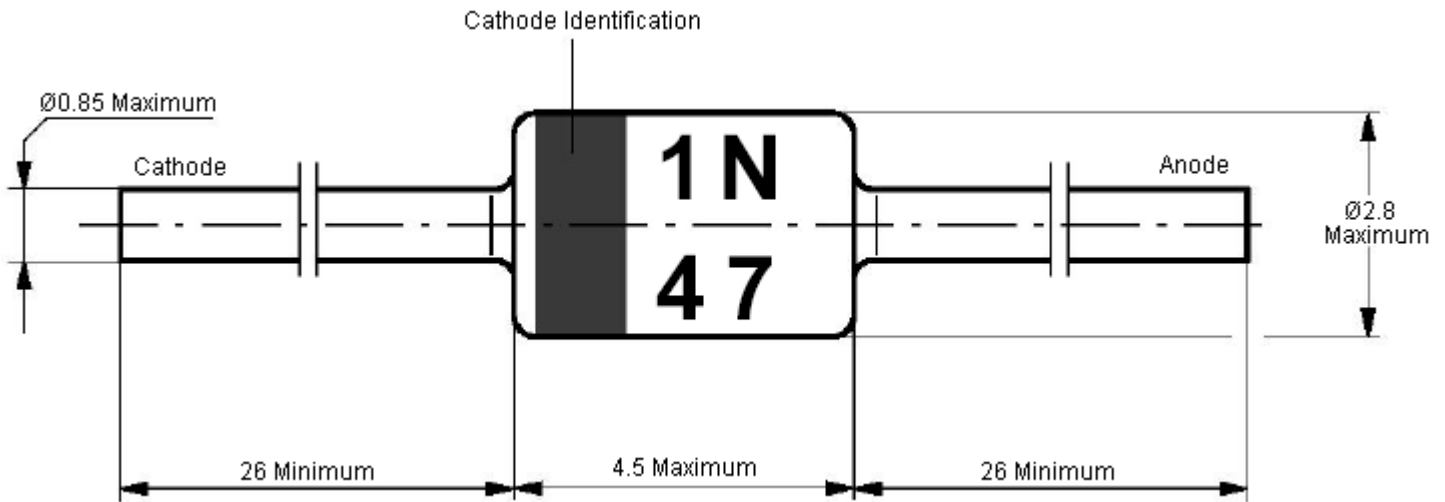
Effect of Zener Current on Zener Impedance



Effect of Zener Voltage on Zener Impedance

# Zener Diode

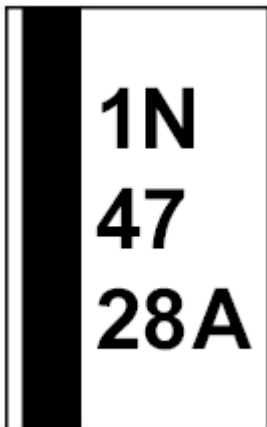
1N4728A-1N4764A



Standard Glass case  
JEDEC DO-41

Dimensions: Millimetres

## Marking



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