Zener Diode

1N4728A-1N4764A

Features:

- High reliability.
- Very sharp reverse characteristic.
- Low reverse current level.
- V_Z-tolerance ±5%.

Applications:

Voltage stabilization

Absolute Maximum Ratings T_j = 25°C

Parameter	Test Conditions	Symbol	Value	Unit
Power dissipation	$T_{amb} \leq 50°C$	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°C

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	I = 9.5mm (3/8 inches) T_L = 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°C

Parameter	Test Conditions	Symbol	Maximum	Unit
Forward voltage	I_F = 200mA	V_F	1.2	V

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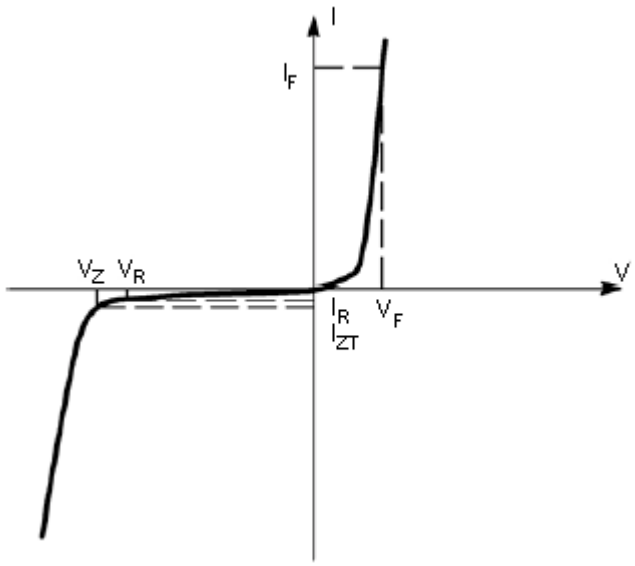
Specification Table

Description	V_{Znom} [1]	I_{ZT} for r_{ziT}		r_{ziK} at I_{ZK}		I_R at V_R		Part Number
	V	mA	Ω	Ω	mA	µA	V	
Zener Diode	3.3	76	< 10	< 400	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		< 10		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			3	1N4735A
Zener Diode	6.8	37	< 3.5				4	1N4736A
Zener Diode	7.5	34	< 4		0.5		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.

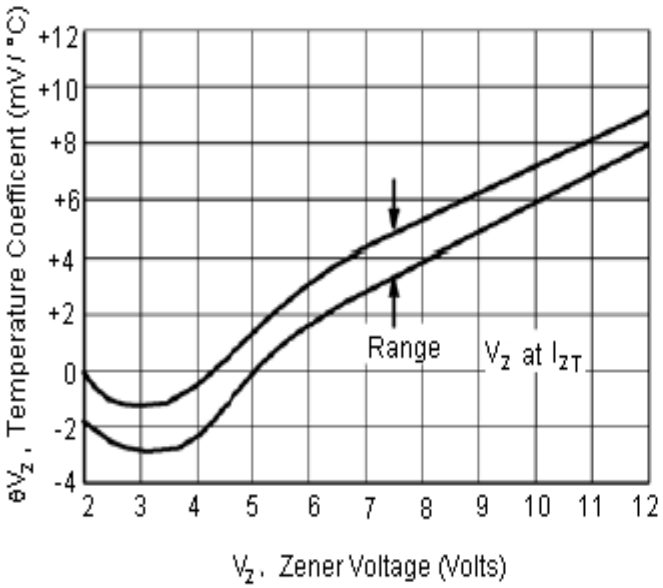
Characteristics (T_j = 25°C unless otherwise specified)

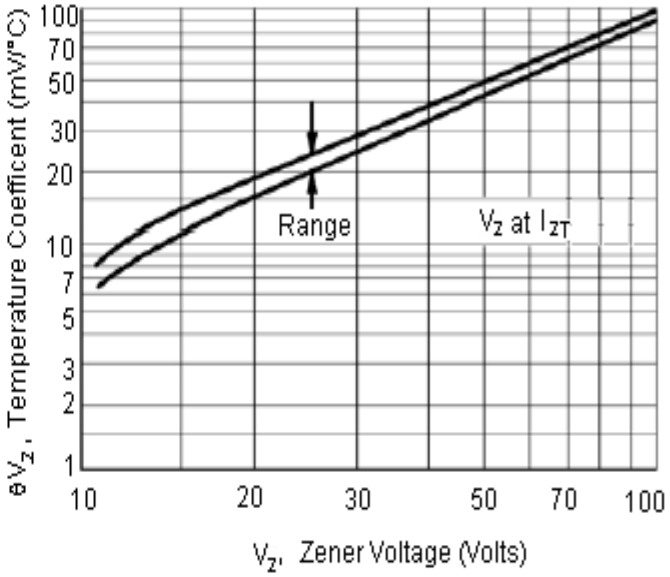
Symbol	Parameter
V_Z	Reverse zener voltage at I_{ZT}
I_{ZT}	Reverse current
Z_{ZT}	Maximum zener impedance at I_{ZT}
I_{ZK}	Reverse current
Z_{ZK}	Maximum zener impedance at I_{Zk}
I_R	Reverse leakage current at V_R
V_R	Breakdown voltage
I_F	Forward current
V_F	Forward voltage at I_F



Zener Voltage Regulator

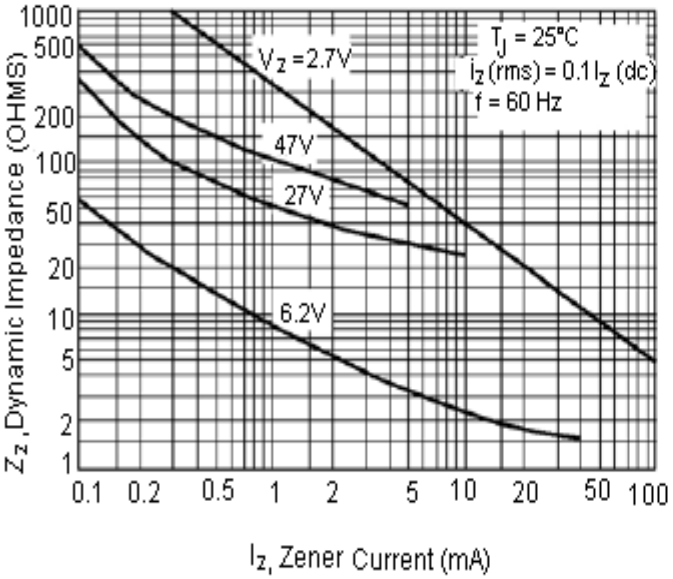
Characteristics (T_j = 25°C unless otherwise specified)



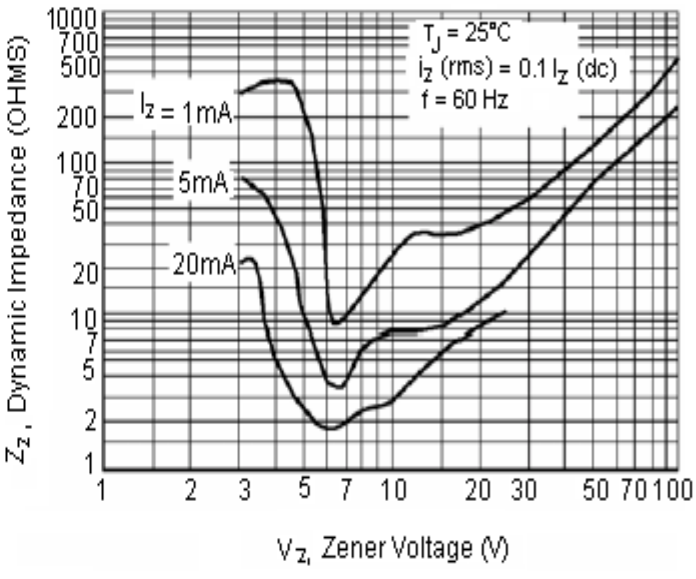


Temperature Coefficients

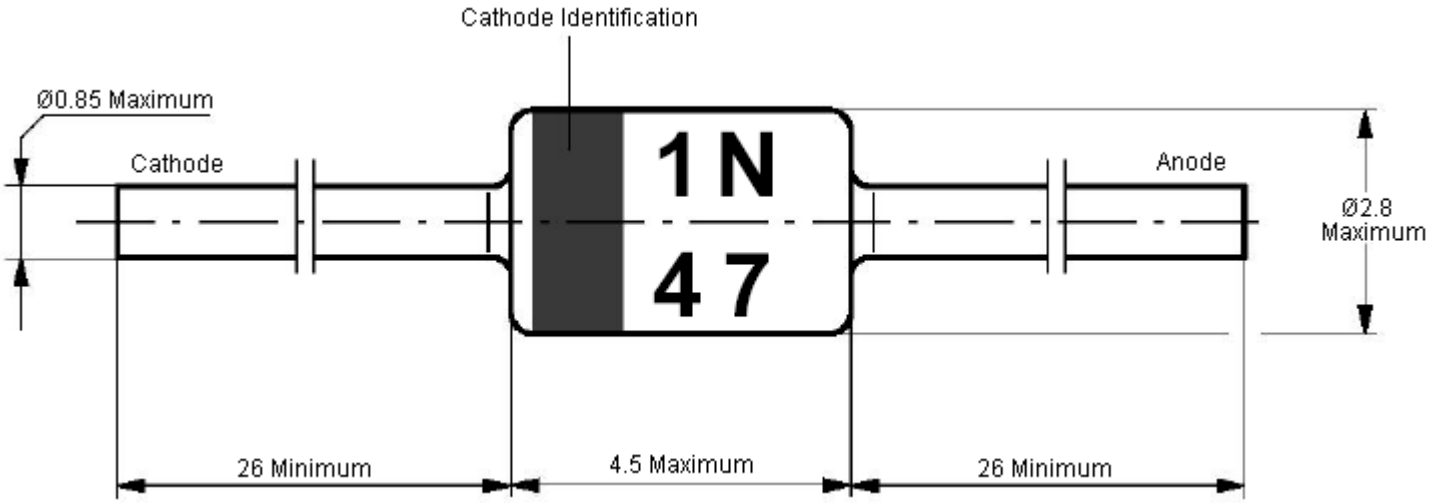
(-55°C to +150°C temperature range; 90% of the units are in the ranges indicated.)



Effect of Zener Current on Zener Impedance



Effect of Zener Voltage on Zener Impedance



Standard Glass case
JEDEC DO-41

Dimensions: Millimetres

Marking