

Axial Lead Zener Diodes

(Pb) Lead(Pb)-Free

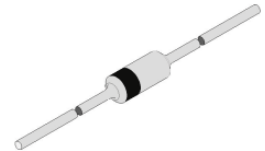
**SMALL SIGNAL
ZENER DIODES
1.0 WATTS**

Features:

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

Mechanical Data:

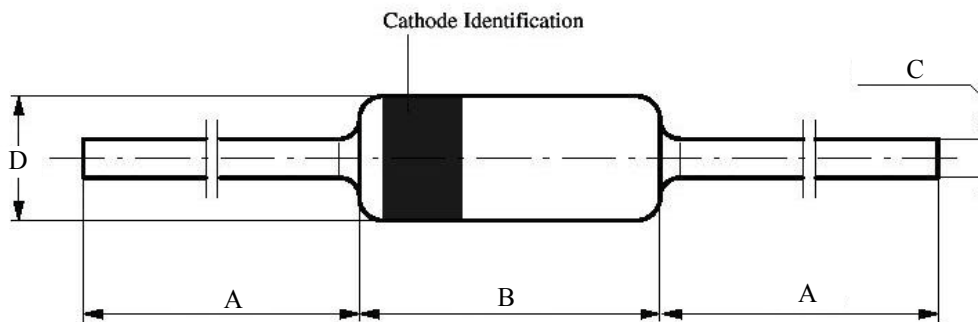
- * Voltage stabilization
- * Case : DO-41 Glass Case
- * Weight : Approx 0.33 gram



DO-41

DO-41 Outline Dimensions

Unit:mm



DIM	A		B		C		D	
	Min	Max	Min	Max	Min	Max	Min	Max
DO-41	26.0	-	-	4.50	-	0.85	-	2.7

Maximum Ratings and Electrical Characteristics (TA=25°C Unless Otherwise Noted)

Parameter	Symbol	Value	Unit
Power dissipation $T_A \leq 50^\circ\text{C}$	P_V	1.0	W
Z-current	I_Z	P_V/V_Z	mA
Junction ambient $l=9.5\text{mm}(3/8") T_L=\text{constant}$	$R_{\theta JA}$	100	K/W
Junction temperature	T_j	200	$^\circ\text{C}$
Storage temperature range	T_{stg}	-65~+175	$^\circ\text{C}$

Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit
Forward voltage $I_F=200\text{mA}$	V_F	-	-	1.2	V

Type	$V_{Znom}^{1)}$	I_{ZT} mA	for	r_{zIT} Ω	r_{zjK} Ω	at	I_{ZK} mA	I_R μA	at	V_R V
	V									
1N4728A	3.3	76		<10	<400		1	<100		1
1N4729A	3.6	69		<10	<400		1	<100		1
1N4730A	3.9	64		<9	<400		1	<50		1
1N4731A	4.3	58		<9	<400		1	<10		1
1N4732A	4.7	53		<8	<500		1	<10		1
1N4733A	5.1	49		<7	<550		1	<10		1
1N4734A	5.6	45		<5	<600		1	<10		2
1N4735A	6.2	41		<2	<700		1	<10		3
1N4736A	6.8	37		<3.5	<700		1	<10		4
1N4737A	7.5	34		<4.0	<700		0.5	<10		5
1N4738A	8.2	31		<4.5	<700		0.5	<10		6
1N4739A	9.1	28		<5.0	<700		0.5	<10		7
1N4740A	10	25		<7	<700		0.25	<10		7.6
1N4741A	11	23		<8	<700		0.25	<5		8.4
1N4742A	12	21		<9	<700		0.25	<5		9.1
1N4743A	13	19		<10	<700		0.25	<5		9.9
1N4744A	15	17		<14	<700		0.25	<5		11.4
1N4745A	16	15.5		<16	<700		0.25	<5		12.2
1N4746A	18	14		<20	<750		0.25	<5		13.7
1N4747A	20	12.5		<22	<750		0.25	<5		15.2
1N4748A	22	11.5		<23	<750		0.25	<5		16.7
1N4749A	24	10.5		<25	<750		0.25	<5		18.2
1N4750A	27	9.5		<35	<750		0.25	<5		20.6
1N4751A	30	8.5		<40	<1000		0.25	<5		22.8
1N4752A	33	7.5		<45	<1000		0.25	<5		25.1
1N4753A	36	7.0		<50	<1000		0.25	<5		27.4
1N4754A	39	6.5		<60	<1000		0.25	<5		29.7
1N4755A	43	6.0		<70	<1500		0.25	<5		32.7
1N4756A	47	5.5		<80	<1500		0.25	<5		35.8
1N4757A	51	5.0		<95	<1500		0.25	<5		38.8
1N4758A	56	4.5		<110	<2000		0.25	<5		42.6
1N4759A	62	4.0		<125	<2000		0.25	<5		47.1
1N4760A	68	3.7		<150	<2000		0.25	<5		51.7
1N4761A	75	3.3		<175	<2000		0.25	<5		56
1N4762A	82	3.0		<200	<3000		0.25	<5		62.2

1) Based on DC-measurement at thermal equilibrium while maintaining the lead temperature(T_L)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 @ I_{ZT}
I_{ZT}	Reverse current
Z_{ZT}	Maximum zener impedance @ I_{ZT}
I_{ZK}	Reverse current
Z_{ZK}	Maximum zener impedance @ I_{ZK}
I_R	Reverse leakage current @ V_R
V_R	Breakdown voltage
I_F	Forward current
V_F	Forward voltage @ I_F

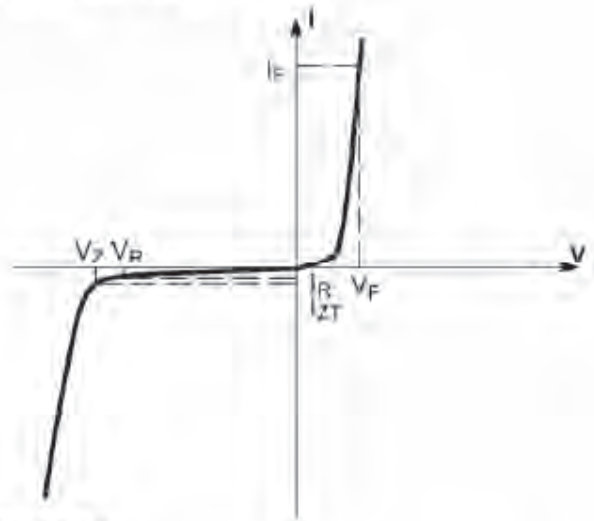


Figure 1. Zener voltage regulator

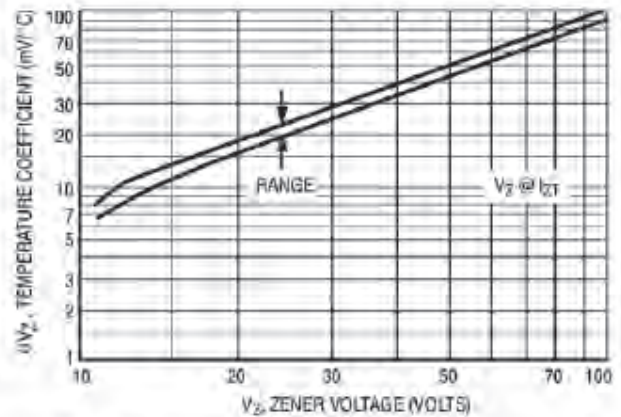
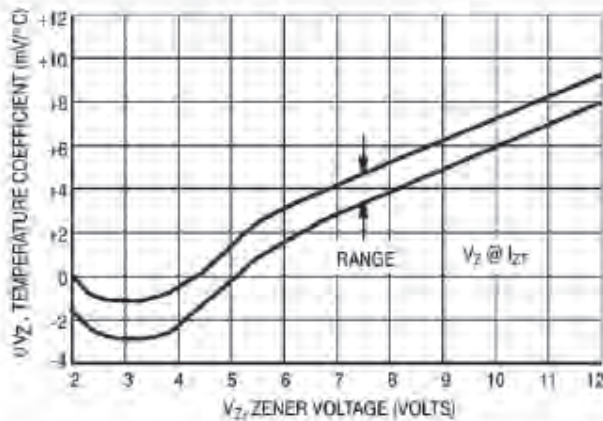


Figure 2. Temperature coefficients

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

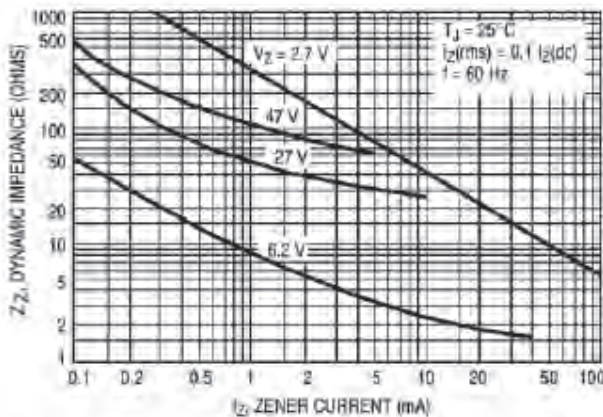


Figure 3. Effect of zener current on zener impedance

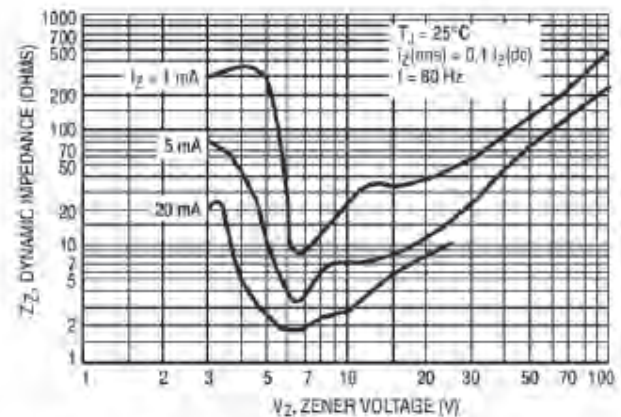


Figure 4. Effect of zener voltage on zener impedance