

Axial Lead Zener Diodes

(Pb) Lead(Pb)-Free

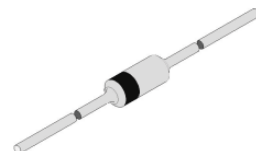
Features:

- * 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

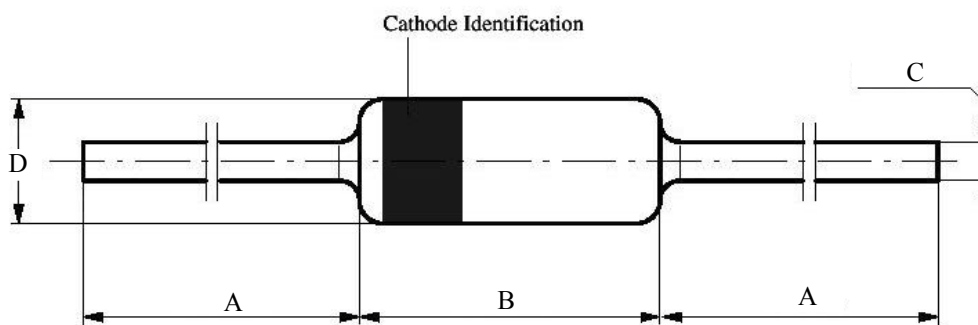
**SMALL SIGNAL
ZENER DIODES
1.0 WATTS**



DO-41

DO-41 Outline Dimensions

Unit:mm



	A		B		C		D	
DIM	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	°C
Storage temperature range	T_{stg}	-65~+175	°C

Electrical Characteristics

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

Type	$V_{Znom}^{1)}$ V	I_{ZT} mA	for r_{zjT} Ω	r_{zjK} at Ω	I_{ZK} mA	I_R at μA	V_R 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

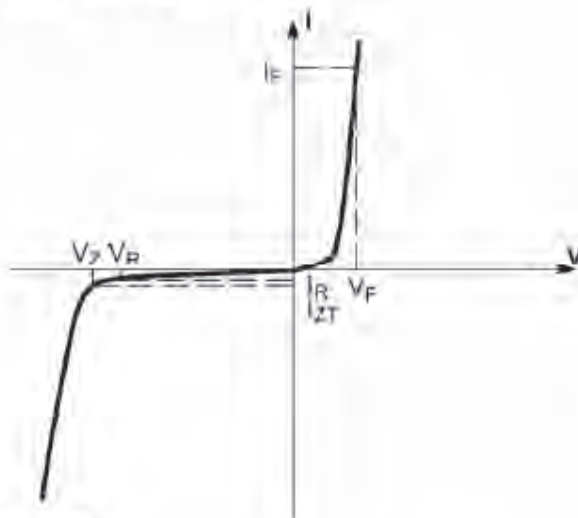


Figure 1. Zener voltage regulator

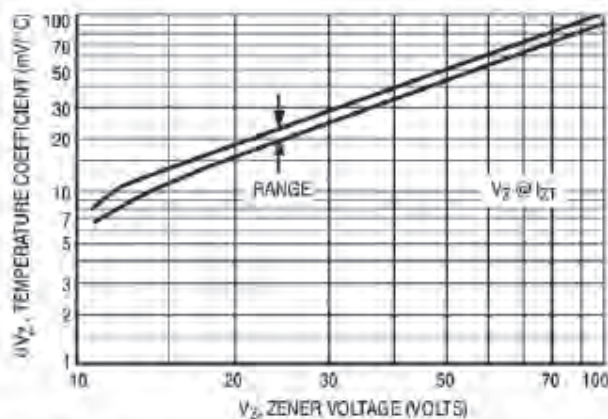
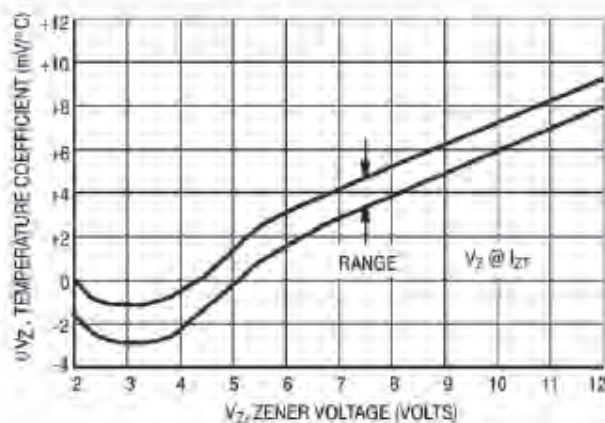


Figure 2. Temperature coefficients

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

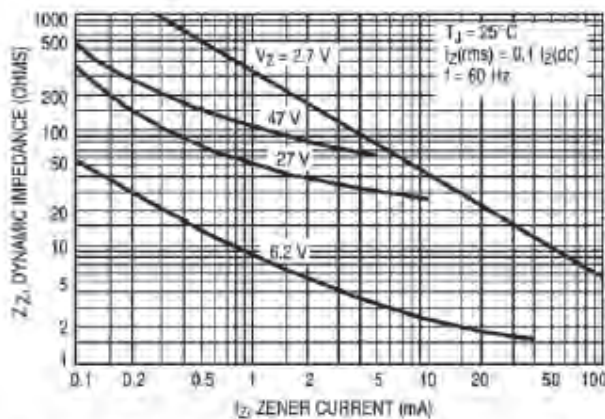


Figure 3. Effect of zener current on zener impedance

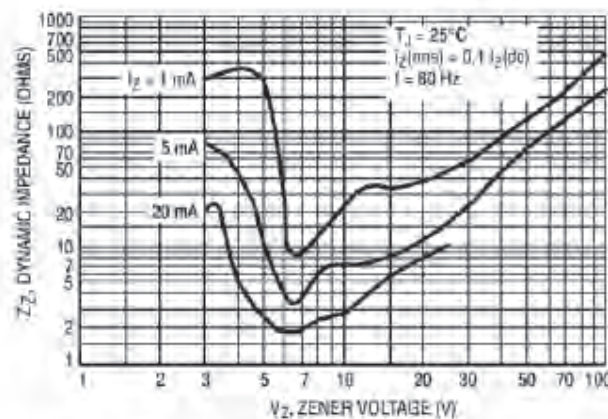


Figure 4. Effect of zener voltage on zener impedance