



Zener Diodes

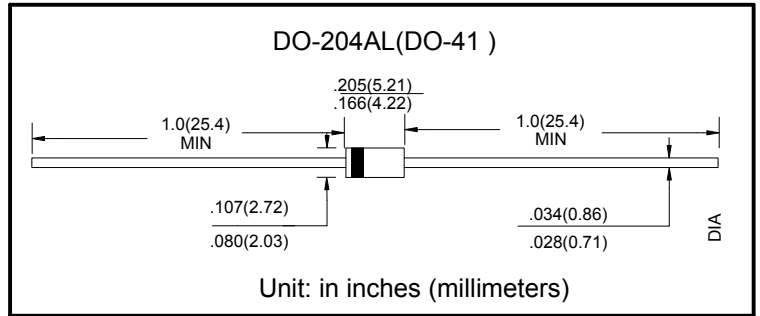
■ Features

- P_{tot} 1.0W
- V_z 3.3V-100V

■ Applications

- Stabilizing Voltage

■ External and internal structure



■ Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Limit
Power Dissipation	P_t	W		1.0
Zener current	I_z	mA		P_v / V_z
Forward Voltage	V_F	V	$I_F=200\text{mA}$	1.5
Junction Temperature	T_J	$^{\circ}\text{C}$		-55 to +150
Storage Temperature	T_{STG}	$^{\circ}\text{C}$		-55 to +150

■ Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Part Number	V_z at I_{zT}	I_{zT}	Z_{zT} at I_{zT}	Z_{zK} at I_{zK}	I_{zK}	I_R @ V_R	V_R	I_{zM} @ 50°
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1N4736	6.8	37	3.5	700	1	10	4	133
1N4737	7.5	31	4	700	0.5	10	5	121
1N4738	8.2	31	4.5	700	0.5	10	6	110
1N4739	9.1	28	5	700	0.25	10	7	100
1N4740	10	25	7	700	0.25	10	7.6	91
1N4741	11	23	8	700	0.25	5	8.4	83
1N4742	12	21	9	700	0.25	5	9.1	76
1N4743	13	19	10	700	0.25	5	9.9	69
1N4744	15	17	14	700	0.25	5	11.4	61
1N4745	16	15.5	16	700	0.25	5	12.2	57
1N4746	18	14	20	750	0.25	5	13.7	50
1N4747	20	12.5	22	750	0.25	5	15.2	45
1N4748	22	11.5	23	750	0.25	5	16.7	41
1N4749	24	10.5	25	750	0.25	5	18.2	38
1N4750	27	9.5	35	750	0.25	5	20.6	34

■ Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Part Number	V_Z at I_{ZT}	I_{ZT}	Z_{ZT} at I_{ZT}	Z_{ZK} at I_{ZK}	I_{ZK}	I_R @ V_R	V_R	I_{ZM} @ 50°
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1N4751	30	8.5	40	1000	0.25	5	22.8	30
1N4752	33	7.5	45	1000	0.25	5	25.1	27
1N4753	36	7	50	1000	0.25	5	27.4	25
1N4754	39	6.5	60	1000	0.25	5	29.7	23
1N4755	43	6	70	1500	0.25	5	32.7	22
1N4756	47	5.5	80	1500	0.25	5	35.8	19
1N4757	51	5	95	1500	0.25	5	38.8	18
1N4758	56	4.5	110	2000	0.25	5	42.6	16
1N4759	62	4	125	2000	0.25	5	47.1	14
1N4760	68	3.7	150	2000	0.25	5	51.7	13
1N4761	75	3.3	175	2000	0.25	5	56	12
1N4762	82	3	200	3000	0.25	5	62.2	11
1N4763	91	2.8	250	3000	0.25	5	69.2	10
1N4764	100	2.5	350	3000	0.25	5	76	9
1N4765	110	2.3	450	4000	0.25	5	83.6	7.2
1N4766	120	2	550	4500	0.25	5	91.2	7
1N4767	130	1.9	700	5000	0.25	5	98.8	6.0
1N4768	150	1.7	1000	6000	0.25	5	114.0	5.5
1N4769	160	1.6	1100	6500	0.25	5	121.6	5.2
1N4770	180	1.4	1200	7000	0.25	5	136.8	4.6
1N4771	200	1.2	1500	8000	0.25	5	152.0	4.0

注释:

标准型的齐纳电压值偏差为 10%；附加标“A”的特选型，其偏差为 5%

齐纳阻抗是来自 60 秒的交流电压，结果当交流电流的均方根值等于 10%的直流稳压电流 (I_{ZT} 或 I_{ZK}) %是 I_{ZT} 或 I_{ZK} 叠加

这里的最大齐纳电流值并非是绝对的，在实际稳态应用中，应保证电压和电流的乘积不超过额定功率值



■ Characteristics(Typical)

Fig 1: Admissible Power Dissipatio vs. Ambient temperature

