



1N52 SERIES

稳压（齐纳）二极管 Zener Diodes

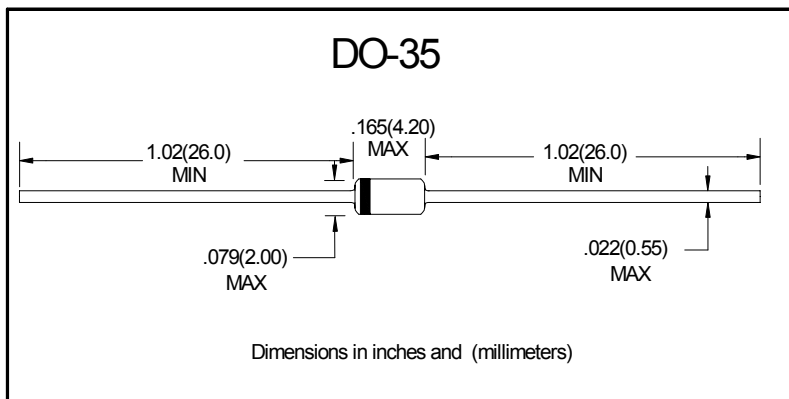
■特征 Features

- P_{tot} 500mW
- V_z 2.4V-75V

■用途 Applications

- 稳定电压用 Stabilizing Voltage

■外形尺寸和印记 Outline Dimensions and Mark



■极限值（绝对最大额定值）

Limiting Values (Absolute Maximum Rating)

参数名称 Item	符号 Symbol	单位 Unit	条件 Conditions	最大值 Max
损耗功率 Power dissipation	P_{tot}	mW	$T_L=25^\circ\text{C}$	500
齐纳电流 Zener current	I_z	mA		P_{tot}/V_z
最大结温 Maximum junction temperature	T_j	$^\circ\text{C}$		175
存储温度范围 Storage temperature range	T_{stg}	$^\circ\text{C}$		-65 to +175

■电特性（ $T_a=25^\circ\text{C}$ 除非另有规定）

Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

参数名称 Item	符号 Symbol	单位 Unit	条件 Conditions	最大值 Max
典型热阻(1) Thermal resistance	$R_{\theta JA}$	$^\circ\text{C}/\text{W}$	结到环境, $L=4$ 毫米, $T_L=$ 常温 junction to ambient air, $L=4\text{mm}$, $T_L=\text{constant}$	300
正向电压 Forward voltage	V_F	V	$I_F=200\text{mA}$	1.1

■ 电性参数 ($T_A=25^\circ\text{C}$ 除非另有规定)

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

1N5221B...1N5267B

产品型号 Part Number	额定齐纳电压 Nominal Zener voltage ¹⁾	测试电流 Test current	最大动态阻抗 Maximum dynamic impedance resistance ¹⁾	最大动态阻抗 Maximum dynamic impedance resistance	温度系数 Temperature of Coefficient	反向漏电流 Reverse leakage current	
	at I_{ZT} , V_Z	I_{ZT}	Z_{ZT} at I_{ZT}	Z_{ZK} at $I_{ZK}=0.25\text{mA}$	at I_{ZT}	I_R	V_R
	V	mA	Ω	Ω	α (%/K)	μA	V
1N5221B	2.4	20	30	1200	- 0.085	100	1
1N5222B	2.5	20	30	1250	- 0.085	100	1
1N5223B	2.7	20	30	1300	- 0.080	75	1
1N5224B	2.8	20	30	1400	- 0.080	75	1
1N5225B	3	20	29	1600	- 0.075	50	1
1N5226B	3.3	20	28	1600	- 0.070	25	1
1N5227B	3.6	20	24	1700	- 0.065	15	1
1N5228B	3.9	20	23	1900	- 0.060	10	1
1N5229B	4.3	20	22	2000	+ 0.055	5	1
1N5230B	4.7	20	19	1900	+ 0.030	5	2
1N5231B	5.1	20	17	1600	+ 0.030	5	2
1N5232B	5.6	20	11	1600	+ 0.038	5	3
1N5233B	6	20	7	1600	+ 0.038	5	3.5
1N5234B	6.2	20	7	1000	+ 0.045	5	4
1N5235B	6.8	20	5	750	+ 0.050	3	5
1N5236B	7.5	20	6	500	+ 0.058	3	6
1N5237B	8.2	20	8	500	+ 0.062	3	6.5
1N5238B	8.7	20	8	600	+ 0.065	3	6.5
1N5239B	9.1	20	10	600	+ 0.068	3	7
1N5240B	10	20	17	600	+ 0.075	3	8
1N5241B	11	20	22	600	+ 0.076	2	8.4
1N5242B	12	20	30	600	+ 0.077	1	9.1
1N5243B	13	9.5	13	600	+ 0.079	0.5	9.9
1N5244B	14	9	15	600	+ 0.082	0.1	10
1N5245B	15	8.5	16	600	+ 0.082	0.1	11
1N5246B	16	7.8	17	600	+ 0.083	0.1	12
1N5247B	17	7.4	19	600	+ 0.084	0.1	13
1N5248B	18	7	21	600	+ 0.085	0.1	14
1N5249B	19	6.6	23	600	+ 0.086	0.1	14
1N5250B	20	6.2	25	600	+ 0.086	0.1	15
1N5251B	22	5.6	29	600	+ 0.087	0.1	17
1N5252B	24	5.2	33	600	+ 0.088	0.1	18
1N5253B	25	5	35	600	+ 0.089	0.1	19
1N5254B	27	4.6	41	600	+ 0.090	0.1	21
1N5255B	28	4.5	44	600	+ 0.091	0.1	21
1N5256B	30	4.2	49	600	+ 0.091	0.1	23
1N5257B	33	3.8	58	700	+ 0.092	0.1	25
1N5258B	36	3.4	70	700	+ 0.093	0.1	27
1N5259B	39	3.2	80	800	+ 0.094	0.1	30
1N5260B	43	3	93	900	+ 0.095	0.1	33



■ 电性参数 (T_A=25℃ 除非另有规定)

Electrical Characteristics (T_A=25℃ unless otherwise noted)

1N5221B...1N5267B

产品型号 Part Number	额定齐纳电压 Nominal Zener voltage ¹⁾	测试电流 Test current	最大动态阻抗 Maximum dynamic impedance resistance ¹⁾	最大动态阻抗 Maximum dynamic impedance resistance	温度系数 Temperature of Coefficient	反向漏电流 Reverse leakage current	
	at I _{ZT} , V _Z	I _{ZT}	Z _{ZT} at I _{ZT}	Z _{ZK} at I _{ZK} =0.25mA	at I _{ZT}	I _R	V _R
	V	mA	Ω	Ω	α (%/K)	μA	V
1N5261B	47	2.7	105	1000	+0.095	0.1	36
1N5262B	51	2.5	125	1100	+0.096	0.1	39
1N5263B	56	2.2	150	1300	+0.096	0.1	43
1N5264B	60	2.1	170	1400	+0.097	0.1	46
1N5265B	62	2	185	1400	+0.097	0.1	47
1N5266B	68	1.8	230	1600	+0.097	0.1	52
1N5267B	75	1.7	270	1700	+0.098	0.1	56

备注: Notes:

¹⁾ 基于直流测试下的热平衡; 引线长度=9.5 (3/8"); 散热器的热阻为 30℃/W

Based on dc-measurement at thermal equilibrium; lead length = 9.5 (3/8 "); thermal resistance of heat sink = 30 °C/W

■特性曲线（典型） Characteristics(Typical)

图1: 总功率损耗与环境温度关系

FIG1: Total Power Dissipation vs. Ambient Temperature

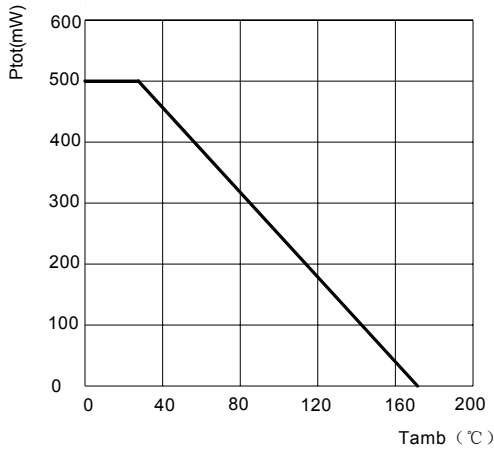


图2: 热阻与引线长度关系

FIG2: Thermal Resistance vs. Lead Length

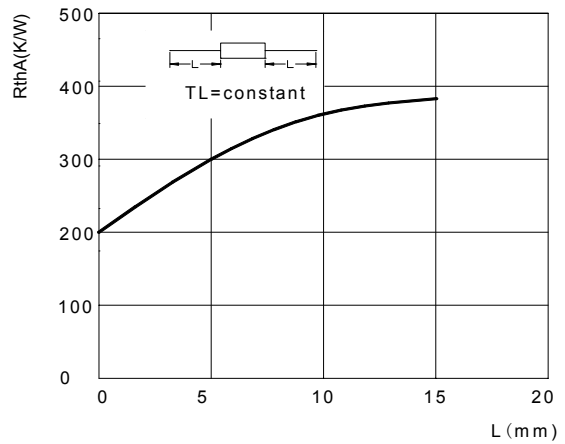


图3: 工作电压在工作条件Tamb=25度下的典型变化

FIG3: Typical Change of Working Voltage under Operating Conditions at Tamb=25°C

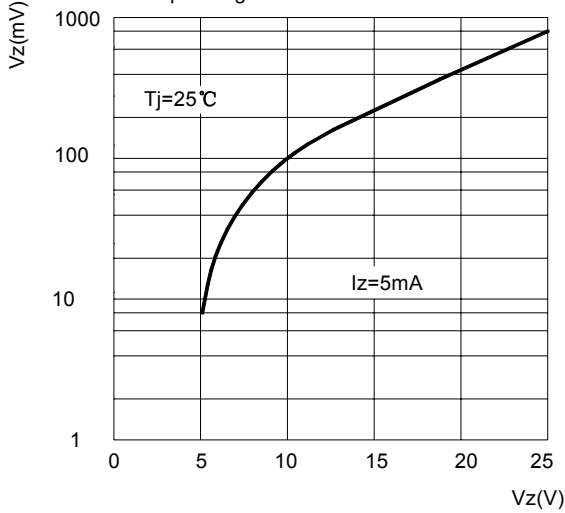


图4: 工作电压的典型变化与结温的关系

FIG4: Typical Change of Working Voltage vs. Junction Temperature

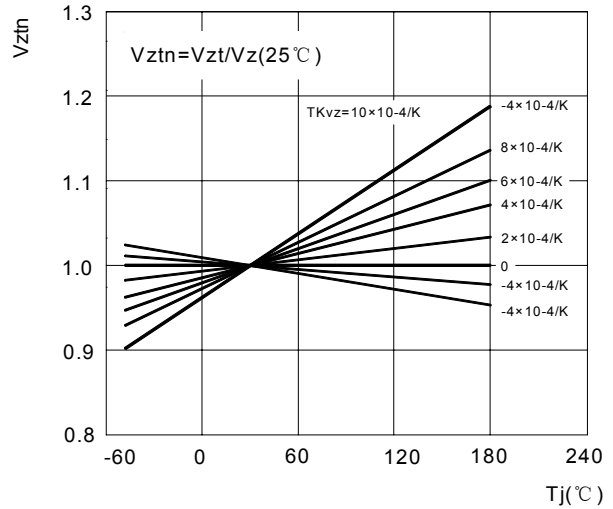


图5: 温度系数与齐纳电压的关系

FIG5: Temperature Coefficient of Vz vs. Z-voltage

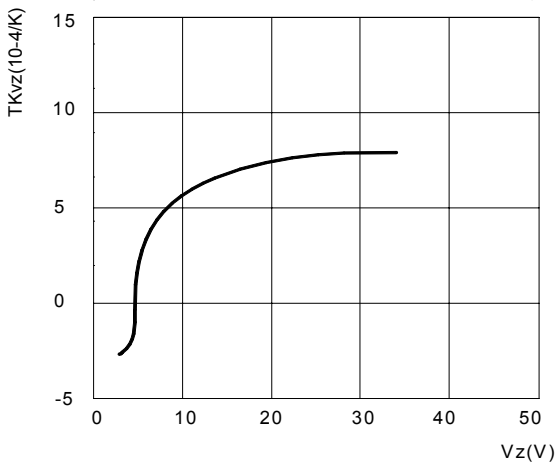
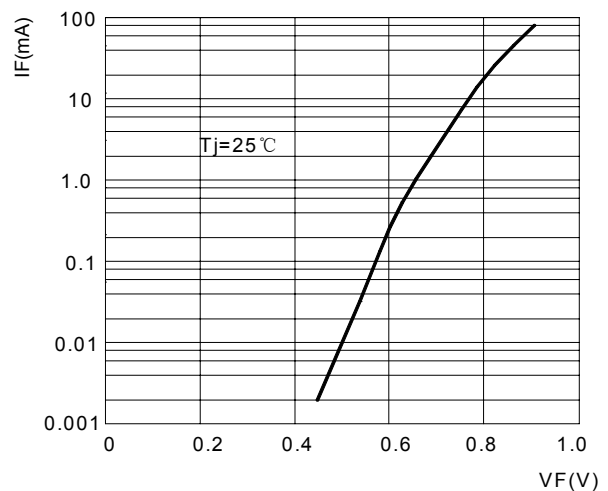


图6: 正向电流与正向电压的关系

FIG6: Forward Current vs. Forward Voltage





■特性曲线（典型） Characteristics(Typical)

图7: 齐纳电流与齐纳电压的关系
FIG7: Z-Current vs. Z-Voltage

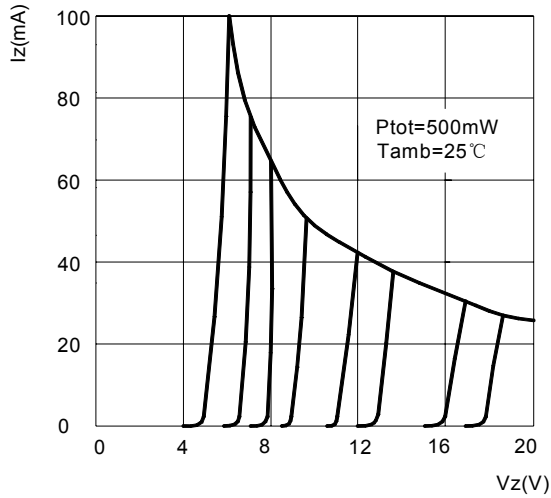


图8: 齐纳电流与齐纳电压的关系
FIG8: Z-Current vs. Z-Voltage

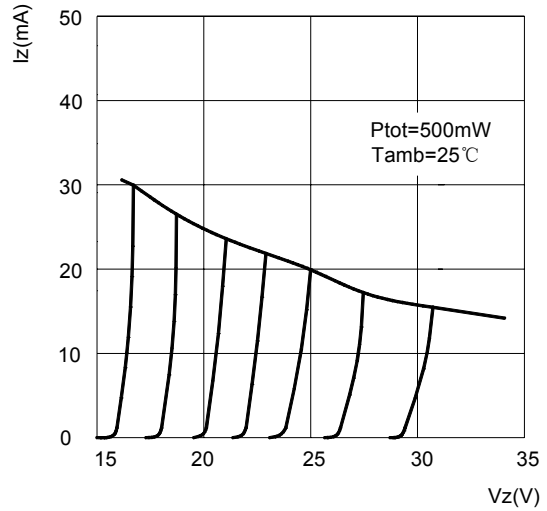


图9: 不同齐纳阻抗与齐纳电压的关系
FIG9: Differential Z-Resistance vs. Z-Voltage

