

1N957B thru 1N979B

Zener Diodes

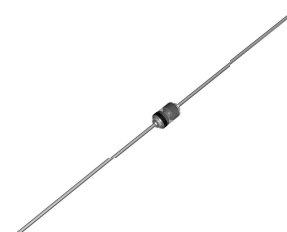
V_Z 6.8V to 56V Power Dissipation 500mW

Features

- Planar die construction
- 500mW power dissipation
- Ideally suited for automated assembly processes
- Lead free in compliance with EU RoHS 2011/65/EU directive

Mechanical Data

- Case: DO-35, Glass case
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode band



(DO-35 Glass)



RoHS
COMPLIANT

Absolute Maximum Ratings

($T_J=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Power Dissipation @ $T_{amb}=25^{\circ}\text{C}$ ¹	P_{tot}	500	mW
Forward Voltage @ $I_F=200\text{mA}$	V_F	1.1	V
Thermal Resistance, Junction to Ambient ¹	$R_{\theta JA}$	300	$^{\circ}\text{C/W}$
Junction Temperature	T_J	175	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-65 To + 175	$^{\circ}\text{C}$

Note:

- Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.

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Zener Diodes

V_Z 6.8V to 56V Power Dissipation 500mW

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

Part Number	V _Z (V) ¹				Z _Z (Ω) ²			I _R @ V _R		I _{ZM} (mA) ³
	Min.	Typ.	Max.	@ I _{ZT} (mA)	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}		μA	V	
						Ω	mA			
1N957B	6.46	6.8	7.14	18.5	4.5	700	1.0	150	5.2	47
1N958B	7.125	7.5	7.875	16.5	5.5	700	0.5	75	5.7	42
1N959B	7.79	8.2	8.61	15	6.5	700	0.5	50	6.2	38
1N960B	8.645	9.1	9.555	14	7.5	700	0.5	25	6.9	35
1N961B	9.50	10	10.50	12.5	8.5	700	0.25	10	7.6	32
1N962B	10.45	11	11.55	11.5	9.5	700	0.25	5	8.4	28
1N963B	11.40	12	12.60	10.5	11.5	700	0.25	5	9.1	26
1N964B	12.35	13	13.65	9.5	13	700	0.25	5	9.9	24
1N965B	14.25	15	15.75	8.5	16	700	0.25	5	11.4	21
1N966B	15.20	16	16.80	7.8	17	700	0.25	5	12.2	19
1N967B	17.10	18	18.90	7.0	21	750	0.25	5	13.7	17
1N968B	19.00	20	21.00	6.2	25	750	0.25	5	15.2	15
1N969B	20.90	22	23.10	5.6	29	750	0.25	5	16.7	14
1N970B	22.80	24	25.20	5.2	33	750	0.25	5	18.2	13
1N971B	25.65	27	28.35	4.6	41	750	0.25	5	20.6	11
1N972B	28.50	30	31.50	4.2	49	1000	0.25	5	22.8	10
1N973B	31.35	33	34.65	3.8	58	1000	0.25	5	25.1	9.2
1N974B	34.20	36	37.80	3.4	70	1000	0.25	5	27.4	8.5
1N975B	37.05	39	40.95	3.2	80	1000	0.25	5	29.7	7.8
1N976B	40.85	43	45.15	3.0	93	1500	0.25	5	32.7	7.0
1N977B	44.65	47	49.35	2.7	105	1500	0.25	5	35.8	6.4
1N978B	48.45	51	53.55	2.5	125	1500	0.25	5	38.8	5.9
1N979B	53.20	56	58.80	2.2	150	2000	0.25	5	42.6	5.4

Notes:

- Zener Voltage (V_Z) Measurement**
Nominal zener voltage is measured with the device junction in the thermal equilibrium at the lead temperature (T_L) at $30^\circ\text{C} \pm 1^\circ\text{C}$ and 3/8" lead length.
- Zener Impedance (Z_Z) Derivation**
 Z_{ZT} and Z_{ZK} are measured by dividing the ac voltage drop across the device by the ac current applied. The specified limits are for $I_{Z(ac)} = 0.1 I_{Z(dc)}$ with the ac frequency = 60Hz.
- Maximum Zener Current Ratings (I_{ZM})**
The maximum current handling capability on a worst case basis is limited by the actual zener voltage at the operation point and the power derating curve.

Typical Characteristics Curves

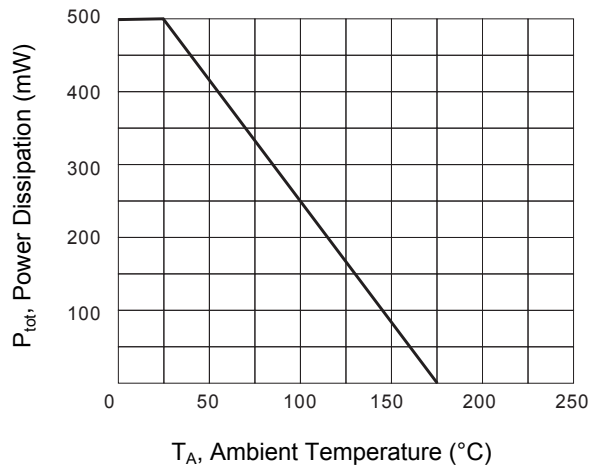
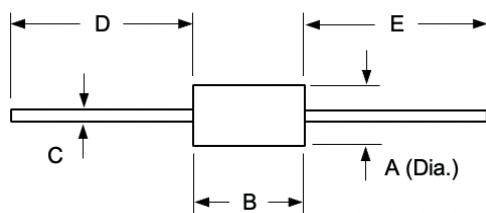


Figure 1. Power Derating Curve

Package Outline Dimensions (DO-35 Glass)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.60	2.10	0.063	0.083
B	3.00	3.60	0.118	0.141
C	0.45	0.55	0.018	0.022
D	26.00	-	1.02	-
E	26.00	-	1.02	-

Order Information

Device	Package	Marking	Carrier	Quantity
1N9xxB	DO-35 Glass	Part Number	Tape & Ammo	5,000pcs / Box

For more information, please contact us at: inquiry@goodarksemi.com