0.5W Hermetically Sealed Glass Zener Diodes

FEATURES

- Zener voltage range 2.4 to 56 volts
- DO-35 package
- Through-hole device type mounting
- Hemetically sealed glass
- Compression bonded construction
- All extermal surfaces are corrosion resistant and leads are readily solderable
- ROHS complaint
- Solder hot dip Tin(Sn) lead finish
- Cathode indicated by polarity band
- Packing code with suffix "G" means Halogen-free

DO-35

Pb-Free

RoHS COMPLIANT

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNITS
Power dissipation	P_D	500	mW
Forward Voltage @I_F=200mA	V_F	1.1	V
Operating and Storage Temperature Range	T_J , T_{STG}	100	°C

Small Signal Product

ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX (Note 2)	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
1N52xxB (Note 1)	-xx	R0	G	DO-35	10K / 14" Reel
		A0			5K / Box (Ammo)

Note 1: "xx" defines voltage from 2.4V (1N5221B) to 56V (1N5263B)

Note 2: Part No. Suffix „-xx “ would be used for special requirement

EXAMPLE					
PREFERRED PART NO.	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
1N5221B R0G	1N5221B		R0	G	Multiple manufacture source Halogen free
1N5221B-L0 R0G	1N5221B	L0	R0	G	Define manufacture source Halogen free
1N5221B-B0 R0G	1N5221B	B0	R0	G	Define manufacture source Halogen free

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

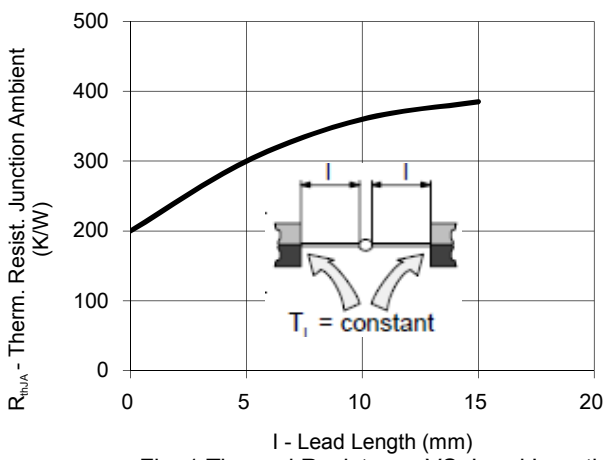


Fig. 1 Thermal Resistance VS. Lead Length

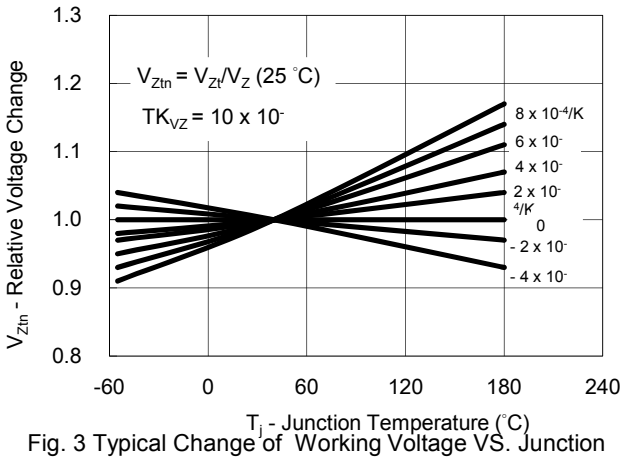


Fig. 3 Typical Change of Working Voltage VS. Junction

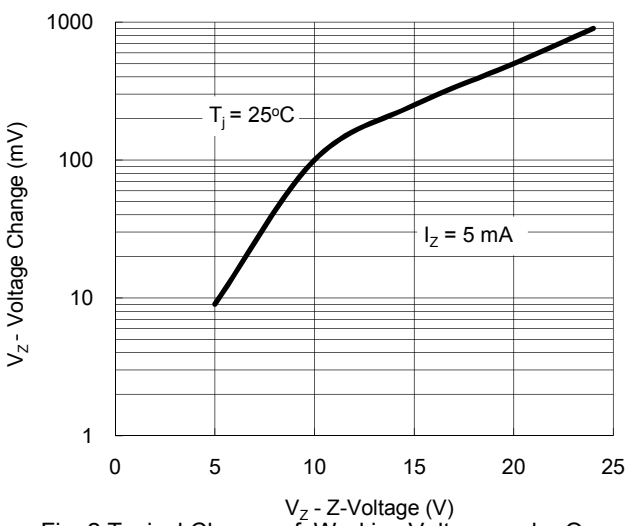


Fig. 2 Typical Change of Working Voltage under Operating Conditions at T_{amb} = 25 ºC

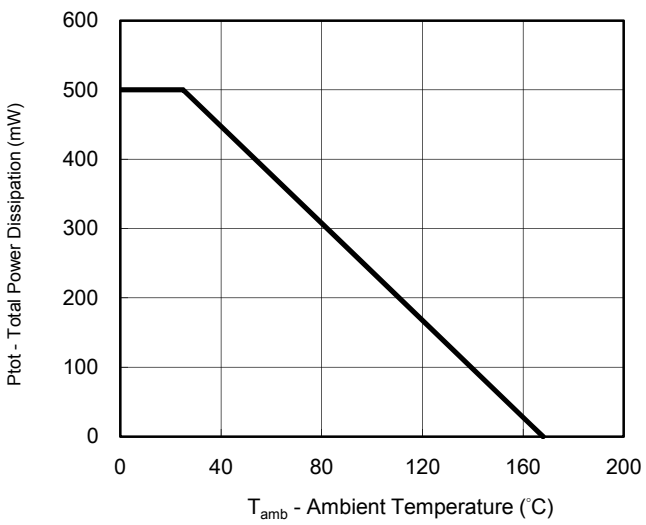


Fig.4 Total Power Dissipation VS. Ambient Temperature

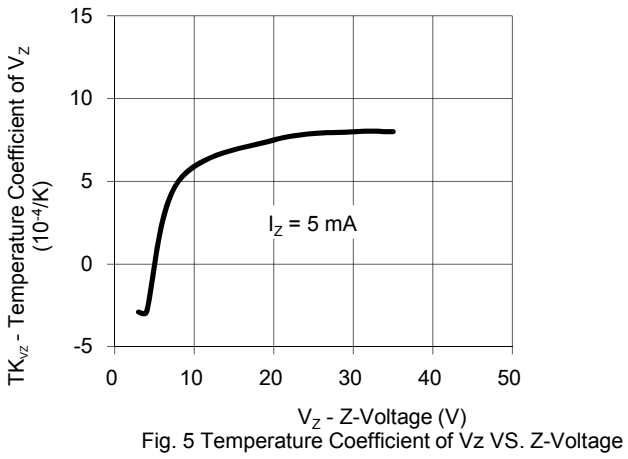


Fig. 5 Temperature Coefficient of Vz VS. Z-Voltage

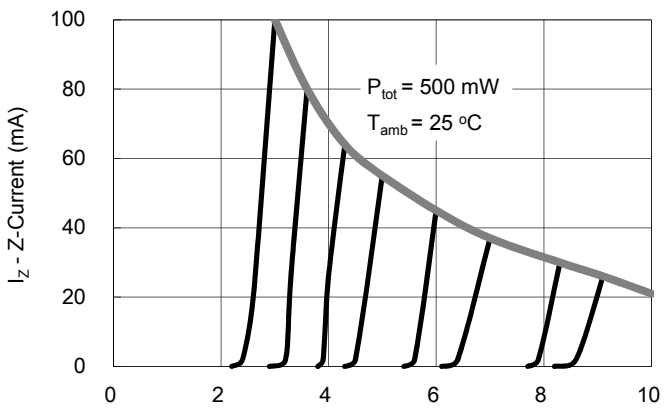


Fig.8 Z-Current VS. Z-Voltage

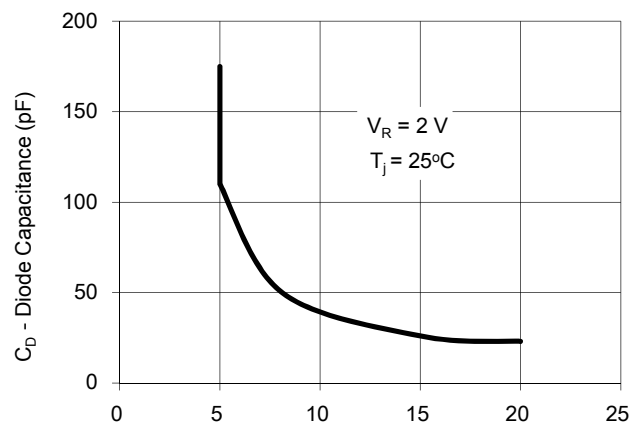


Fig.6 Diode Capacitance VS. Z-Voltage

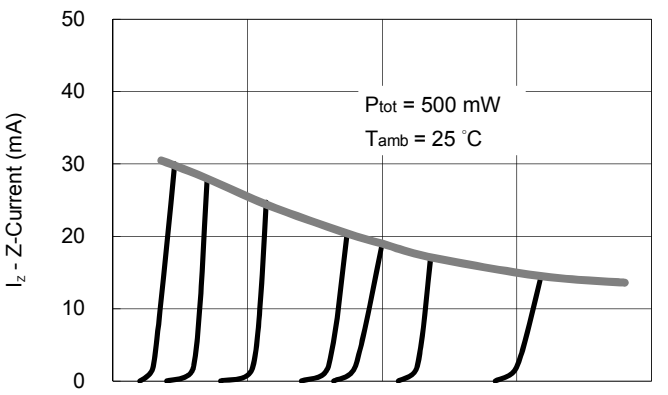


Fig. 9 Z-Current VS. Z-Voltage

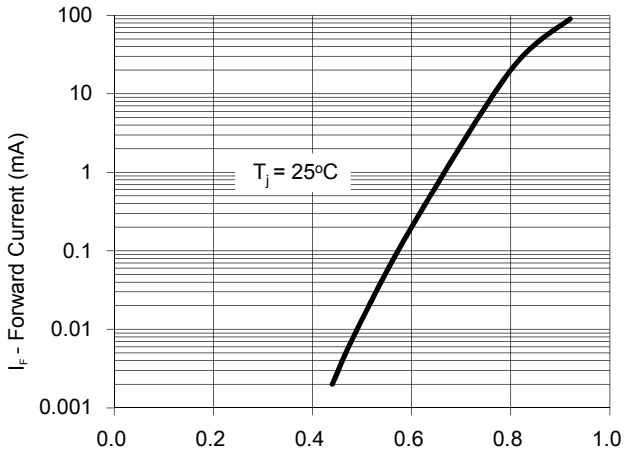


Figure 7. Forward Current VS. Forward Voltage

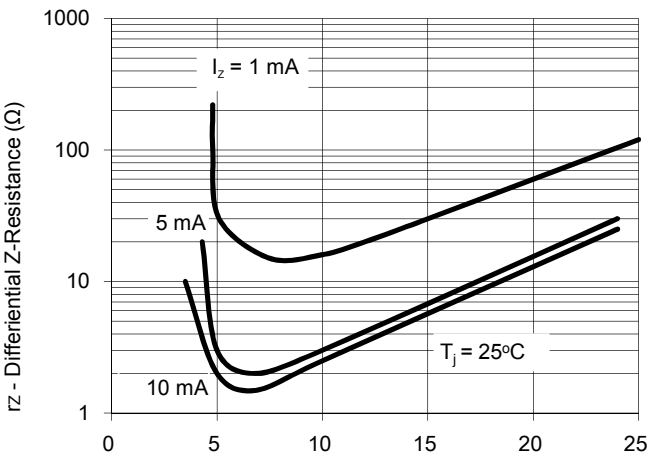


Fig.10 Differential Z-Resistance VS. Z-Voltage

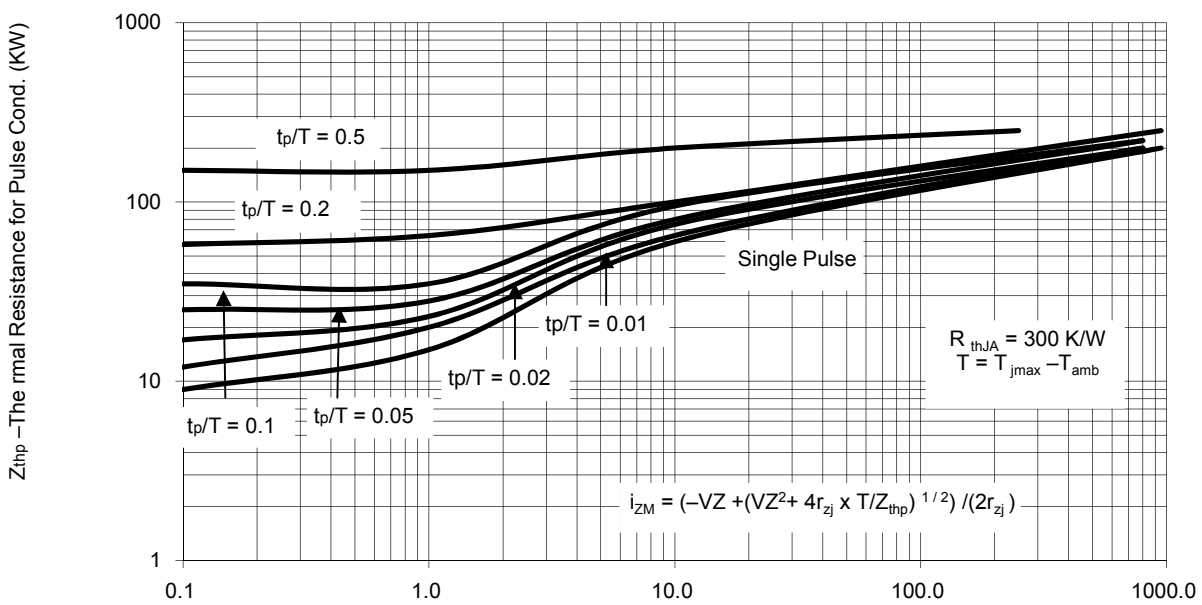


Fig. 11 Thermal Response

Electrical Characteristics (Ratings at T_A=25°C ambient temperature unless otherwise specified)

Device	Vz @ Izt Voltage Nominal	Current I_{ZT} (mA)	Z_{ZT} @ I_{ZT} Ω Max.	Z_{ZK} @I_{ZK}=0.25mA Ω Max.	I_R @ V_R μA Max.	V_R (Volts)
1N5221B	2.4	20	30	1200	100	1.0
1N5222B	2.5	20	30	1250	100	1.0
1N5223B	2.7	20	30	1300	75	1.0
1N5224B	2.8	20	30	1400	75	1.0
1N5225B	3.0	20	29	1600	50.0	1.0
1N5226B	3.3	20	28	1600	25.0	1.0
1N5227B	3.6	20	24	1700	15.0	1.0
1N5228B	3.9	20	23	1900	10.0	1.0
1N5229B	4.3	20	22	2000	5.0	1.0
1N5230B	4.7	20	19	1900	5.0	2.0
1N5231B	5.1	20	17	1600	5.0	2.0
1N5232B	5.6	20	11	1600	5.0	3.0
1N5233B	6.0	20	7	1600	5.0	3.5
1N5234B	6.2	20	7	1000	5.0	4.0
1N5235B	6.8	20	5	750	3.0	5.0
1N5236B	7.5	20	6	500	3.0	6.0
1N5237B	8.2	20	8	500	3.0	6.5
1N5238B	8.7	20	8	600	3.0	6.5
1N5239B	9.1	20	10	600	3.0	7.0
1N5240B	10	20	17	600	2.0	8
1N5241B	11	20	22	600	1.0	8.4
1N5242B	12	20	30	600	0.5	9
1N5243B	13	9.5	13	600	0.1	10
1N5244B	14	9.0	15	600	0.1	10
1N5245B	15	8.5	16	600	0.1	11
1N5246B	16	7.8	17	600	0.1	12
1N5247B	17	7.4	19	600	0.1	13
1N5248B	18	7.0	21	600	0.1	14
1N5249B	19	6.6	23	600	0.1	14
1N5250B	20	6.2	25	600	0.1	15
1N5251B	22	5.6	29	600	0.1	17
1N5252B	24	5.2	33	600	0.1	18
1N5253B	25	5.0	35	600	0.1	18
1N5254B	27	4.6	41	600	0.1	21
1N5255B	28	4.5	44	600	0.1	21
1N5256B	30	4.2	49	600	0.1	23

Device	Vz @ Izt Voltage Nominal	Current I_{ZT} (mA)	Z_{ZT} @ I_{ZT} Ω Max.	Z_{ZK} @I_{ZK}=0.25mA Ω Max.	I_R @ V_R μA Max.	V_R (Volts)
1N5257B	33	3.8	58	700	0.1	25
1N5258B	36	3.4	70	700	0.1	27
1N5259B	39	3.2	80	800	0.1	30
1N5260B	43	3.0	93	900	0.1	33
1N5261B	47	2.7	105	1000	0.1	36
1N5262B	51	2.5	125	1100	0.1	39
1N5263B	56	2.2	150	1300	0.1	43

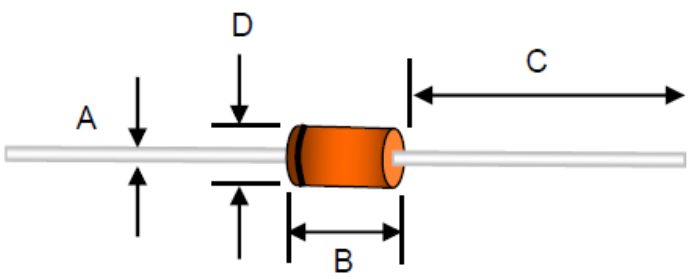
Notes: 1. Nominal zener voltages between the voltages shown and tighter voltage, for detalied information on price, availability and delivery.

2. The zener voltage(V_Z) is tested under pulse condition. The measured V_Z is guaranteed to be within specification with device junction in thermal equilibrium.

3. Zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an RMS value equal to 10% of the dc zener current (I_{ZT}) is superimposed to I_{ZT}.

PACKAGE OUTLINE DIMENSIONS

DO-35



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	0.34	0.60	0.013	0.024
B	2.90	5.08	0.114	0.200
C	25.40	38.10	1.000	1.500
D	1.30	2.28	0.051	0.090

MARKING DIAGRAM

1N
52
XX
B

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