500mW, 2.4V - 56V Zener Diode

FEATURES

- Wide Zener voltage range selection: 2.4V to 56V
- V_Z tolerance selection of ± 5%
- Hermetically sealed glass
- RoHS Compliant

APPLICATIONS

- Low voltage stabilizers or voltage references
- Adapters
- Lighting application
- On-board DC/DC converter

MECHANICAL DATA

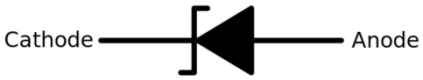
- Case: DO-35
- Terminal: Pure tin plated leads, solderable per J-STD-002
- Polarity: Indicated by cathode band
- Weight: 101.67mg (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
V_Z	2.4 - 56	V
Test current I_{ZT}	2.2 - 20	mA
P_D	500	mW
V_F at I_F = 200mA	1.1	V
$T_{J\ MAX}$	200	°C
Package	DO-35	
Configuration	Single die	

Pb-Free RoHS COMPLIANT



DO-35



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)			
PARAMETER	**SYMBOL**	**VALUE**	**UNIT**
Power dissipation	P_D	500	mW
Forward voltage @ I_F = 200mA	V_F	1.1	V
Junction temperature range	T_J	-65 to +200	°C
Storage temperature range	T_{STG}	-65 to +200	°C

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PART NUMBER	MARKING CODE	ZENER VOLTAGE	TEST CURRENT	REGULAR IMPEDANCE		TEST CURRENT	LEAKAGE CURRENT	
		V_Z @ I_{ZT} (1)	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R @ V_R	
		V	mA	Ω	Ω	mA	μA	V
		Nom		Max	Max		Max	
1N5221B	1N5221B	2.4	20	30	1200	0.25	100	1.0
1N5222B	1N5222B	2.5	20	30	1250	0.25	100	1.0
1N5223B	1N5223B	2.7	20	30	1300	0.25	75	1.0
1N5224B	1N5224B	2.8	20	30	1400	0.25	75	1.0
1N5225B	1N5225B	3.0	20	29	1600	0.25	50.0	1.0
1N5226B	1N5226B	3.3	20	28	1600	0.25	25.0	1.0
1N5227B	1N5227B	3.6	20	24	1700	0.25	15.0	1.0
1N5228B	1N5228B	3.9	20	23	1900	0.25	10.0	1.0
1N5229B	1N5229B	4.3	20	22	2000	0.25	5.0	1.0
1N5230B	1N5230B	4.7	20	19	1900	0.25	5.0	2.0
1N5231B	1N5231B	5.1	20	17	1600	0.25	5.0	2.0
1N5232B	1N5232B	5.6	20	11	1600	0.25	5.0	3.0
1N5233B	1N5233B	6.0	20	7	1600	0.25	5.0	3.5
1N5234B	1N5234B	6.2	20	7	1000	0.25	5.0	4.0
1N5235B	1N5235B	6.8	20	5	750	0.25	3.0	5.0
1N5236B	1N5236B	7.5	20	6	500	0.25	3.0	6.0
1N5237B	1N5237B	8.2	20	8	500	0.25	3.0	6.5
1N5238B	1N5238B	8.7	20	8	600	0.25	3.0	6.5
1N5239B	1N5239B	9.1	20	10	600	0.25	3.0	7.0
1N5240B	1N5240B	10	20	17	600	0.25	2.0	8
1N5241B	1N5241B	11	20	22	600	0.25	1.0	8.4
1N5242B	1N5242B	12	20	30	600	0.25	0.5	9
1N5243B	1N5243B	13	9.5	13	600	0.25	0.1	10
1N5244B	1N5244B	14	9.0	15	600	0.25	0.1	10
1N5245B	1N5245B	15	8.5	16	600	0.25	0.1	11
1N5246B	1N5246B	16	7.8	17	600	0.25	0.1	12
1N5247B	1N5247B	17	7.4	19	600	0.25	0.1	13
1N5248B	1N5248B	18	7.0	21	600	0.25	0.1	14
1N5249B	1N5249B	19	6.6	23	600	0.25	0.1	14
1N5250B	1N5250B	20	6.2	25	600	0.25	0.1	15
1N5251B	1N5251B	22	5.6	29	600	0.25	0.1	17
1N5252B	1N5252B	24	5.2	33	600	0.25	0.1	18
1N5253B	1N5253B	25	5.0	35	600	0.25	0.1	18
1N5254B	1N5254B	27	4.6	41	600	0.25	0.1	21
1N5255B	1N5255B	28	4.5	44	600	0.25	0.1	21
1N5256B	1N5256B	30	4.2	49	600	0.25	0.1	23
1N5257B	1N5257B	33	3.8	58	700	0.25	0.1	25
1N5258B	1N5258B	36	3.4	70	700	0.25	0.1	27

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PART NUMBER	MARKING CODE	ZENER VOLTAGE	TEST CURRENT	REGULAR IMPEDANCE		TEST CURRENT	LEAKAGE CURRENT	
		V_Z @ I_{ZT} (1)	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R @ V_R	
		V	mA	Ω	Ω	mA	μA	V
		Nom		Max	Max		Max	
1N5259B	1N5259B	39	3.2	80	800	0.25	0.1	30
1N5260B	1N5260B	43	3.0	93	900	0.25	0.1	33
1N5261B	1N5261B	47	2.7	105	1000	0.25	0.1	36
1N5262B	1N5262B	51	2.5	125	1100	0.25	0.1	39
1N5263B	1N5263B	56	2.2	150	1300	0.25	0.1	43

Notes:

1. Nominal Zener voltages between the voltages shown and tighter voltage, for detalied information onprice, availability and delivery.
2. The Zener voltage(V_Z) is tested under pulse condition. The measured V_Z is guaranteed to be withinspecification 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 R_{MS} value equal to 10% of the DC Zener current (I_{ZT}) is superimposed to I_{ZT}.
4. Zener voltage has a standard tolerance on the nominal Zener voltage of ±5%.

ORDERING INFORMATION

ORDERING CODE(1)(2)	PACKAGE	PACKING
1N52xB R0	DO-35	10,000 / 14" Reel
1N52xB A0	DO-35	5,000 / Ammo Box
1N52xB R0G	DO-35	10,000 / 14" Reel
1N52xB A0G	DO-35	5,000 / Ammo Box

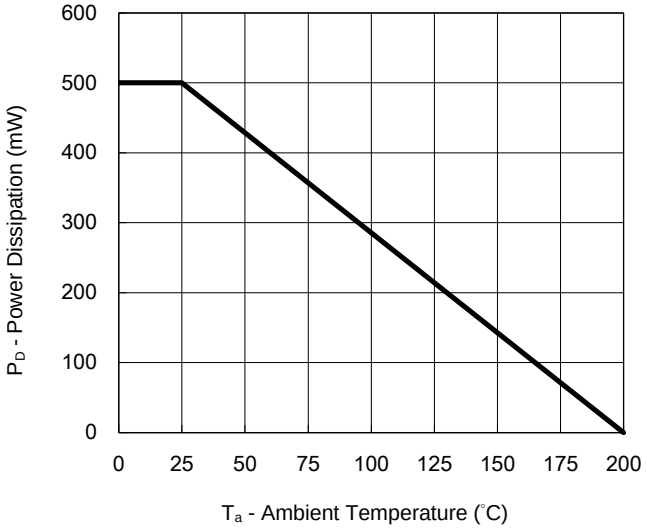
Notes:

1. "x" defines voltage from 2.4V (1N5221B) to 56V (1N5263B)
2. Above ordering codes A0/A0G/R0/R0G refer to physically identical parts without any differences

CHARACTERISTICS CURVES

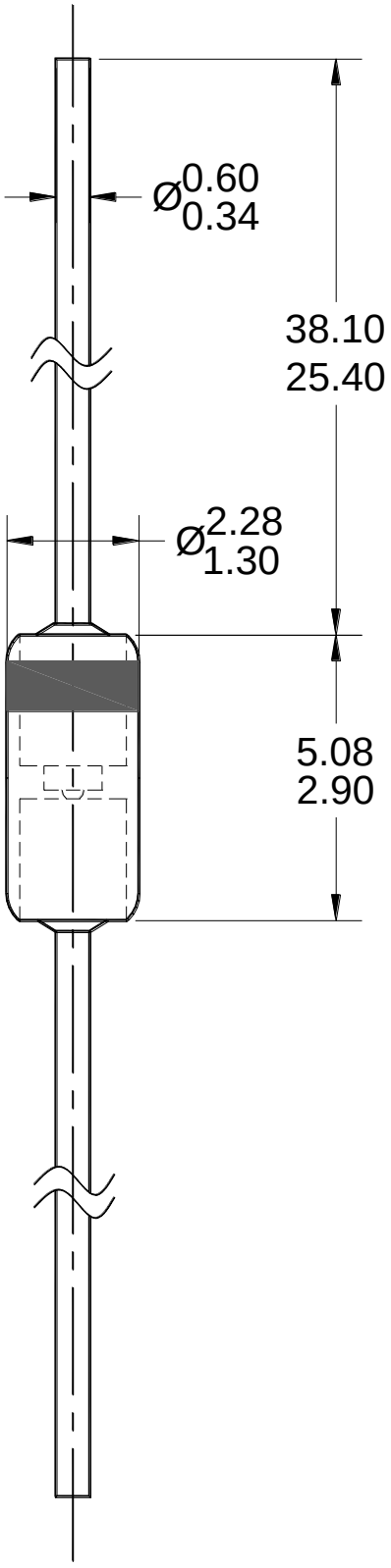
(T_A = 25°C unless otherwise noted)

Fig.1 Power dissipation VS. Ambient temperature



PACKAGE OUTLINE DIMENSIONS

DO-35



NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. DWG NO. REF: HQ2SD07-DO35-058 REV A.



XX = MARKING CODE

MARKING DIAGRAM

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