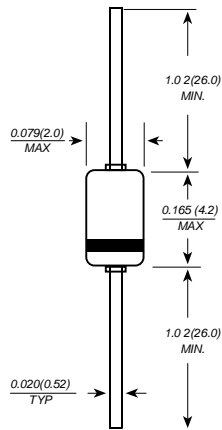


Data Sheet 2593 Rev. -

**1N52-SERIES**  
**ZENER DIODES**

Zener Voltage :2.4-56V    Peak Pulse Power :500mW

**DO-35(GLASS)**



Dimensions in inches and (millimeters)

**FEATURE**

- ◆ Low zener impedance
- ◆ Low regulation factor
- ◆ Glass passivated junction
- ◆ High temperature soldering guaranteed:  
260°C/10S/9.5mm lead length at 5 lbs tension

**MECHANICAL DATA**

**Case:** JEDEC DO-35(GLASS) molded glass body

**Terminals:** Plated axial leads, solderable per MIL-STD 750, method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.05 ounce,0.14 grams

Datasheet Directory

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	VALUE	UNITS
Zener Current see Table Characteristics			
Power Dissipation at Tamb=25°C(Note 1)	P <sub>tot</sub>	500	mW
Junction Temperature	T <sub>j</sub>	200	°C
Storage Temperature Range	T <sub>STG</sub>	-65 to + 200	°C
Thermal resistance junction ambient(Note 1)	R <sub>θJA</sub>	0.3	K/mW
Forward voltage at I <sub>F</sub> =200mA	V <sub>F</sub>	1.1	V

Note 1: Valid provided that leads at a distance of 10mm from case are kept at ambient temperature

Data Sheet 2593, Rev. -

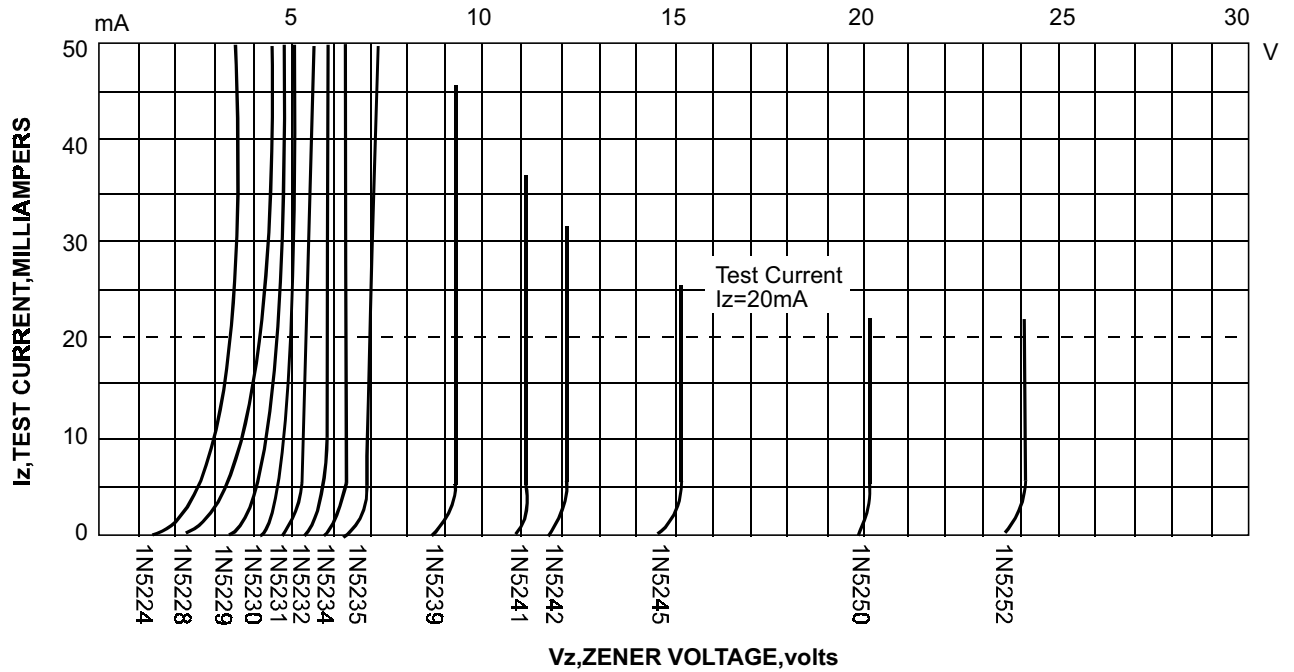
**ELECTRICAL CHARACTERISTICS (at TA=25°C unless otherwise noted)**

Device Type	Nominal Zener Voltage Vz@IzT (Volts)	Test Current IzT (mA)	Maximum Zener Impedance		Maximum Reverse Leakage Current		Typical Temperature Coefficient (%/°C)	Maximum Regulator Current IzM (mA)
			ZzT@IzT	Zzk@Izk=0.25mA	IR	@VR		
			Ohms	Ohms	μA	Volts		
1N5221B	2.4	20	30	1200	100	1.0	-0.085	191
1N5222B	2.5	20	30	1250	100	1.0	-0.085	182
1N5223B	2.7	20	30	1300	75	1.0	-0.080	168
1N5224B	2.8	20	30	1400	75	1.0	-0.080	162
1N5225B	3.0	20	29	1600	50	1.0	-0.075	151
1N5226B	3.3	20	28	1600	25	1.0	-0.070	138
1N5227B	3.6	20	24	1700	15	1.0	-0.065	126
1N5228B	3.9	20	23	1900	10	1.0	-0.060	115
1N5229B	4.3	20	22	2000	5.0	1.0	±0.055	106
1N5230B	4.7	20	19	1900	5.0	2.0	±0.030	97
1N5231B	5.1	20	17	1600	5.0	2.0	±0.030	89
1N5232B	5.6	20	11	1600	5.0	3.0	+0.038	81
1N5233B	6.0	20	7	1600	5.0	3.5	+0.038	76
1N5234B	6.2	20	7	1000	5.0	4.0	+0.045	73
1N5235B	6.8	20	5	750	3.0	5.0	+0.050	67
1N5236B	7.5	20	6	500	3.0	6.0	+0.058	61
1N5237B	8.2	20	8	500	3.0	6.5	+0.062	55
1N5238B	8.7	20	8	600	3.0	6.5	+0.065	52
1N5239B	9.1	20	10	600	3.0	7.0	+0.068	50
1N5240B	10	20	17	600	3.0	8.0	+0.075	45
1N5241B	11	20	22	600	2.0	8.4	+0.076	41
1N5242B	12	20	30	600	1.0	9.1	+0.077	38
1N5243B	13	9.5	13	600	0.5	9.9	+0.079	35
1N5244B	14	9.0	15	600	0.1	10	+0.082	32
1N5245B	15	8.5	16	600	0.1	11	+0.082	30
1N5246B	16	7.8	17	600	0.1	12	+0.083	28
1N5247B	17	7.4	19	600	0.1	13	+0.084	27
1N5248B	18	7.0	21	600	0.1	14	+0.085	25
1N5249B	19	6.6	23	600	0.1	14	+0.085	24
1N5250B	20	6.2	25	600	0.1	15	+0.086	23
1N5251B	22	5.6	29	600	0.1	17	+0.087	21.2
1N5252B	24	5.2	33	600	0.1	18	+0.088	19.1
1N5253B	25	5.0	35	600	0.1	19	+0.089	18.2
1N5254B	27	4.6	41	600	0.1	21	+0.090	16.8
1N5255B	28	4.5	44	600	0.1	21	+0.091	16.2
1N5256B	30	4.2	49	600	0.1	23	+0.091	15.1
1N5257B	33	3.8	58	700	0.1	25	+0.092	13.8
1N5258B	36	3.4	70	700	0.1	27	+0.093	12.6
1N5259B	39	3.2	80	800	0.1	30	+0.094	11.5
1N5260B	43	3.0	93	900	0.1	33	+0.095	10.6
1N5261B	47	2.7	150	1000	0.1	36	+0.095	9.7
1N5262B	51	2.5	125	1100	0.1	39	+0.096	8.9
1N5263B	56	2.2	150	1300	0.1	43	+0.096	8.1

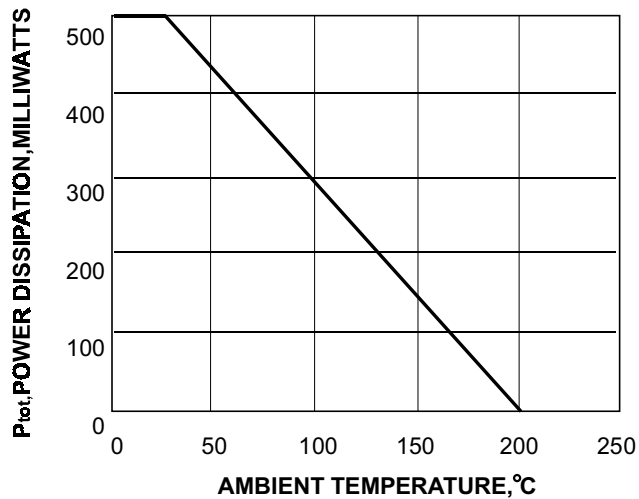
Note 1: Suffix "B" indicate ±5% tolerance

Data Sheet 2593, Rev. -

**RATINGS AND CHARACTERISTIC CURVES 1N52 SERIES**  
**Breakdown characteristics**



**Admissible power dissipation versus ambient temperature**  
 Valid provided that leads are kept at ambient temperature at a distance of 10mm from case



**TECHNICAL DATA**

**DISCLAIMER:**

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).
- 2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- 4- In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.