1N5913B THRU 1N5956B

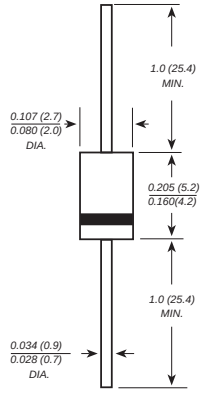
ZENER DIODES

Zener Voltage: 3.3-200V Peak Pulse Power: 3.0W

Features

- Surface Mount Applications
- 3.3 thru 200 Volt Voltage Range
- Ideal For High Density, Low Profile Mounting
- Withstands Large Surge Stresses
- Available on Tape and Reel

DO-41



Dimensions in inches and (millimeters)

Mechanical Data

- **Case**: JEDEC DO-41 molded plastic body
- Terminals solderable per MIL-STD-750, Method 2026
- Polarity is indicated by cathode band
- Packaging: Standard 12mm Tape (see EIA 481)
- Maximum temperature for soldering: 260^{O}C for 10 seconds
- For surface mount applications with flame retardent epoxy Meeting UL94V-0

Maximum Ratings @ 25°C

Steady State Power Dissipation	$P_{(AV)}$	3.0W	(Note:1)
Operation And Storage Temperature	T_J, T_{STG}	-55^{O}C to +150^{O}C	
Thermal Resistance	R	25^{O}C/W	

NOTE:

1. Mounted on 4.0mm^2 copper pads to each terminal.
   Lead temperature at T_L=75^{O}C

ELECTRICAL CHARACTERISTICS

JEDEC TYPE NUMBER (note 1)	ZENER VOLTAGE V_Z	TEST CURRENT I_{ZT}	MAXIMUM DYNAMIC Z_{ZT}	KNEE CURRENT I_{ZK}	MAXIMUM KNEE IMPEDANCE Z_{ZK}	MAXIMUM REVERSE CURRENT $I_R@V_R$	REVERSE VOLTAGE V_R	MAX.DC CURRENT I_{ZM}
	Volts	m A	Ohms	m A	Ohms	μAdc	Volts	m A
1N5913B	3.3	113.6	10	1.0	500	100	1.0	454
1N5914B	3.6	104.2	9.0	1.0	500	75	1.0	416
1N5915B	3.9	96.1	7.5	1.0	500	25	1.0	384
1N5916B	4.3	87.2	6.0	1.0	500	5.0	1.0	348
1N5917B	4.7	79.8	5.0	1.0	500	5.0	1.5	319
1N5918B	5.1	73.5	4.0	1.0	350	5.0	2.0	294
1N5919B	5.6	66.9	2.0	1.0	250	5.0	3.0	267
1N5920B	6.2	60.5	2.0	1.0	200	5.0	4.0	241
1N5921B	6.8	55.1	2.5	1.0	200	5.0	5.2	220
1N5922B	7.5	50.0	3.0	0.5	400	5.0	6.0	200
1N5923B	8.2	45.7	3.5	0.5	400	5.0	6.5	182
1N5924B	9.1	41.2	4.0	0.5	500	5.0	7.0	164
1N5925B	10	37.5	4.5	0.25	500	5.0	8.0	150
1N5926B	11	34.1	5.5	0.25	550	1.0	8.4	136
1N5927B	12	31.2	6.5	0.25	550	1.0	9.1	125
1N5928B	13	28.8	7.0	0.25	550	1.0	9.9	115
1N5929B	15	25.0	9.0	0.25	600	1.0	11.4	110
1N5930B	16	23.4	10	0.25	600	1.0	12.2	93
1N5931B	18	20.8	12	0.25	650	1.0	13.7	83
1N5932B	20	18.7	14	0.25	650	1.0	15.2	75
1N5933B	22	17.0	17.5	0.25	650	1.0	16.7	68
1N5934B	24	15.6	19	0.25	700	1.0	18.2	62
1N5935B	27	13.9	23	0.25	700	1.0	20.6	55
1N5936B	30	12.5	28	0.25	750	1.0	22.8	50
1N5937B	33	11.4	33	0.25	800	1.0	25.1	45
1N5938B	36	10.4	38	0.25	850	1.0	27.4	41
1N5939B	39	9.6	45	0.25	900	1.0	29.7	38
1N5940B	43	8.7	53	0.25	950	1.0	32.7	34
1N5941B	47	8.0	67	0.25	1000	1.0	35.8	31
1N5942B	51	7.3	70	0.25	1100	1.0	38.8	29
1N5943B	56	6.7	86	0.25	1300	1.0	42.6	26
1N5944B	62	6.0	100	0.25	1500	1.0	47.1	24
1N5945B	68	5.5	120	0.25	1700	1.0	51.2	22
1N5946B	75	5.0	140	0.25	2000	1.0	56.0	20
1N5947B	82	4.6	160	0.25	2500	1.0	62.2	18
1N5948B	91	4.1	200	0.25	3000	1.0	69.2	16
1N5949B	100	3.7	250	0.25	3100	1.0	76.0	15
1N5950B	110	3.4	300	0.25	4000	1.0	83.6	13
1N5951B	120	3.1	380	0.25	4500	1.0	91.2	12
1N5952B	130	2.9	450	0.25	5000	1.0	98.8	11
1N5953B	150	2.5	600	0.25	6000	1.0	114.0	10
1N5954B	160	2.3	700	0.25	6500	1.0	121.6	9
1N5955B	180	2.1	900	0.25	7000	1.0	136.8	8
1N5956B	200	1.9	1200	0.25	8000	1.0	152.0	7

1. **TOLERANCE AND TYPE NUMBER DESIGNATION**
   Tolerance designation − device tolerance of ±5% are indicated by a “B” suffix.
2. **ZENER IMPEDANCE (Z_Z) DERIVATION**
   The zener impedance is derived from 60 seconds AC voltage, which results when an AC current having an rms value equal to 10% of the DC zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}.

RATINGD AND CHARACTEISTIC CURVES 1N5913B THRU 1N5956B

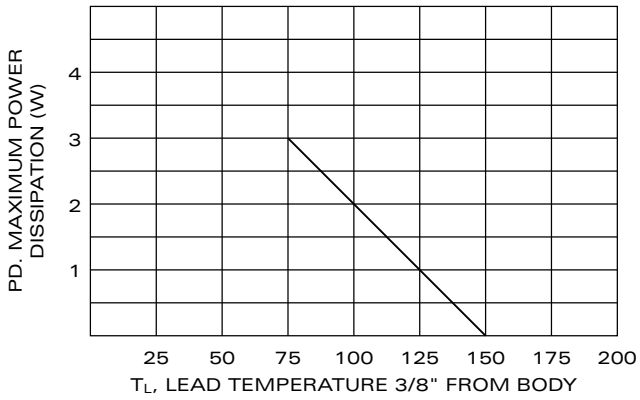


FIGURE 1.
POWER DERATING CURVE

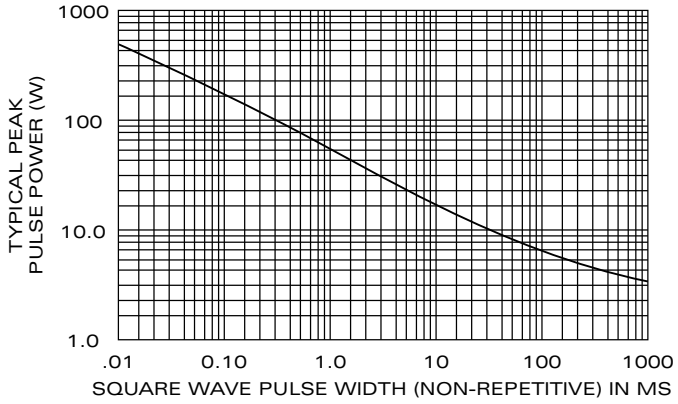
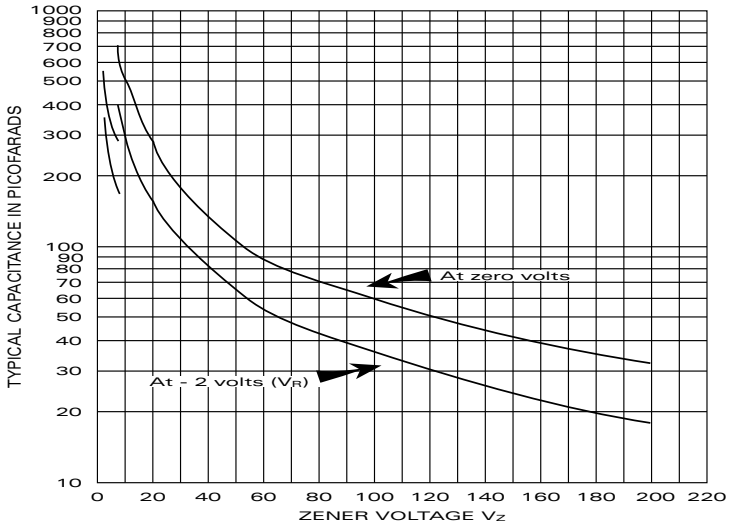


FIGURE 2.
TRANSIENT SURGE CAPABILITY



CAPACITANCE vs. V_Z CURVE