



50W Zener Diodes

Features

- Hermetically sealed (welded)
- Available in Normal and Reverse polarity
- Standard polarity is anode to case
- Reverse polarity with cathode to case by designating 'R' suffix in part no., e.g. 1N2804RB etc.

Mechanical Characteristics

- Approximate weight is 15 grams
- Typical Lead diameter is 50 mil
- High reliability industrial applications.



TO-3 (TO-204AD)

Electrical Data

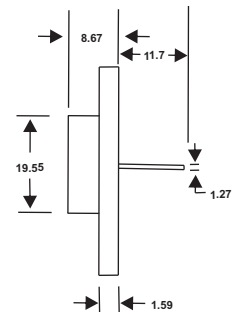
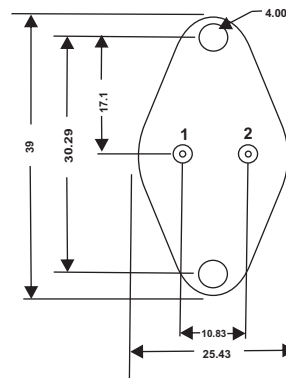
- DC Power Dissipation: **50 Watts**
- Voltage Range 6.8 – 200 Volts
- Operating temperature -65°C to +175°C
- Derating: 0.5 W/°C over 75°C
- Forward Voltage @ 10A: 1.5 Volts
- Voltage tolerances of 10%, 5%, 2% & 1% available

Lead Code:

1. Cathode
 2. Cathode
- Case- Anode

Lead Code:

- (Reverse polarity)
1. Anode
 2. Anode
- Case- Cathode



ALL DIMENSIONS IN MM



50W Zener Diodes

Electrical Characteristics (T _c = 25°C unless otherwise specified)								
Type number	Nominal Zener Voltage V _Z @I _{ZT} (Volts)	Zener Test Current I _{ZT} (mA)	Max Zener Impedance		Max DC Zener Current I _{ZM} (mA)	Typical Temp. Coeff. a _{vz} (%/°C)	Max Reverse Current	
			Z _{ZT} @I _{ZT} (Ohms)	Z _{ZK} @5mA(I _{ZK}) (Ohms)			I _R (µA)	V _R (Volts)
1N2804B	6.8	1850	0.20	70	6600	0.040	150	4.5
1N2805B	7.5	1700	0.30	70	5900	0.045	75	5.0
1N2806B	8.2	1500	0.40	70	5200	0.048	50	5.4
1N2807B	9.1	1370	0.50	70	4800	0.051	25	6.1
1N2808B	10.0	1200	0.60	80	4300	0.055	15	6.7
1N2809B	11.0	1100	0.80	80	3900	0.060	10	8.4
1N2810B	12.0	1000	1.00	80	3600	0.065	5.0	9.1
1N2811B	13.0	960	1.10	80	3300	0.065	5.0	9.9
1N2812B	14.0	890	1.20	80	3000	0.070	5.0	10.6
1N2813B	15.0	830	1.40	80	2800	0.070	5.0	11.4
1N2814B	16.0	780	1.60	80	2650	0.070	5.0	12.2
1N2815B	17.0	740	1.80	80	2500	0.075	5.0	13.0
1N2816B	18.0	700	2.00	80	2300	0.075	5.0	13.7
1N2817B	19.0	660	2.20	80	2200	0.075	5.0	14.4
1N2818B	20.0	630	2.40	80	2100	0.075	5.0	15.2
1N2819B	22.0	570	2.50	80	1900	0.080	5.0	16.7
1N2820B	24.0	520	2.60	80	1750	0.080	5.0	18.2
1N2821B	25.0	500	2.70	90	1550	0.080	5.0	19.0
1N2822B	27.0	460	2.80	90	1500	0.085	5.0	20.6
1N2823B	30.0	420	3.00	90	1400	0.085	5.0	22.8
1N2824B	33.0	380	3.20	90	1300	0.085	5.0	25.1
1N2825B	36.0	350	3.50	90	1150	0.085	5.0	27.4
1N2826B	39.0	320	4.00	90	1050	0.090	5.0	29.7
1N2827B	43.0	290	4.50	90	975	0.090	5.0	32.7
1N2828B	45.0	280	4.50	100	930	0.090	5.0	34.2
1N2829B	47.0	270	5.00	100	880	0.090	5.0	35.8
1N2830B	50.0	250	5.00	100	830	0.090	5.0	38.0
1N2831B	51.0	245	5.20	100	810	0.090	5.0	38.8
1N2832B	56.0	220	6.00	110	740	0.090	5.0	42.6
1N2833B	62.0	200	7.00	120	660	0.090	5.0	47.1
1N2834B	68.0	180	8.00	140	600	0.090	5.0	51.7
1N2835B	75.0	170	9.00	150	540	0.090	5.0	56.0
1N2836B	82.0	150	11.00	160	490	0.090	5.0	62.2
1N2837B	91.0	140	15.00	180	420	0.090	5.0	69.2
1N2838B	100.0	120	20.00	200	400	0.090	5.0	76.0
1N2839B	105.0	120	25.00	210	380	0.095	5.0	79.8
1N2840B	110.0	110	30.00	220	365	0.095	5.0	83.6
1N2841B	120.0	100	40.00	240	335	0.095	5.0	91.2
1N2842B	130.0	95	50.00	275	310	0.095	5.0	98.8
1N2843B	150.0	85	75.00	400	270	0.095	5.0	114.0
1N2844B	160.0	80	80.00	450	250	0.095	5.0	121.6
1N2845B	180.0	68	90.00	525	220	0.095	5.0	136.8
1N2846B	200.0	65	100.00	600	200	0.100	5.0	152.0

Notes:

1. The JEDEC type numbers mentioned above are with +/- 5% tolerance (B suffix)
2. Zener impedance is derived from 60Hz ac voltage which results when ac current RMS value (which equals 10% of the DC zener current) is superimposed on I_Z
3. I_{ZM} are calculated for a +/- 5% tolerance on nominal zener voltage.