

50W Zener Diodes

Features

- Glass passivated junction
- Good clamping ability
- Available in Normal and Reverse polarity
- Metric and UNF thread type

Mechanical Characteristics

- Hermetically sealed DO-5 outline
- Polarity: Indicated by direction of Zener symbol
- External surfaces corrosion resistant & terminal Solderable
- Weight: 16 grams
- Torque Setting: 3.5 Nm

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

Device Tolerances

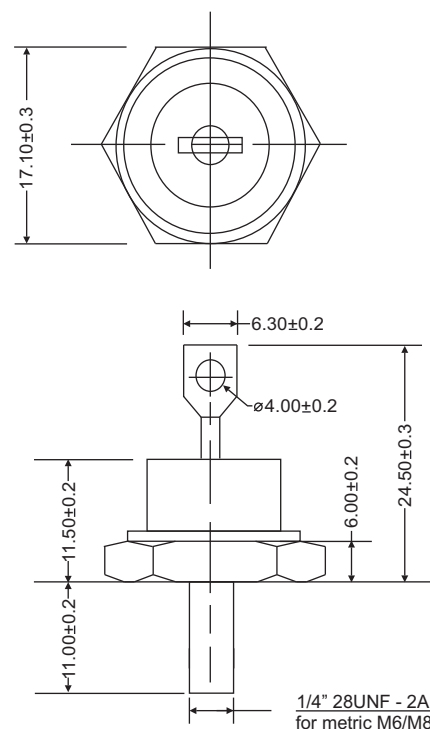
- +/- 5%, B suffix (Standard voltage tolerance)
- +/- 10%, A suffix
- +/- 20%, no suffix
- +/- 2%, C suffix (consult factory for availability)
- +/- 1%, D suffix (consult factory for availability)

Stud Anode Normal

Stud Cathode Reverse ("R" suffix)



DO-203AB (DO-5)



ALL DIMENSIONS IN MM

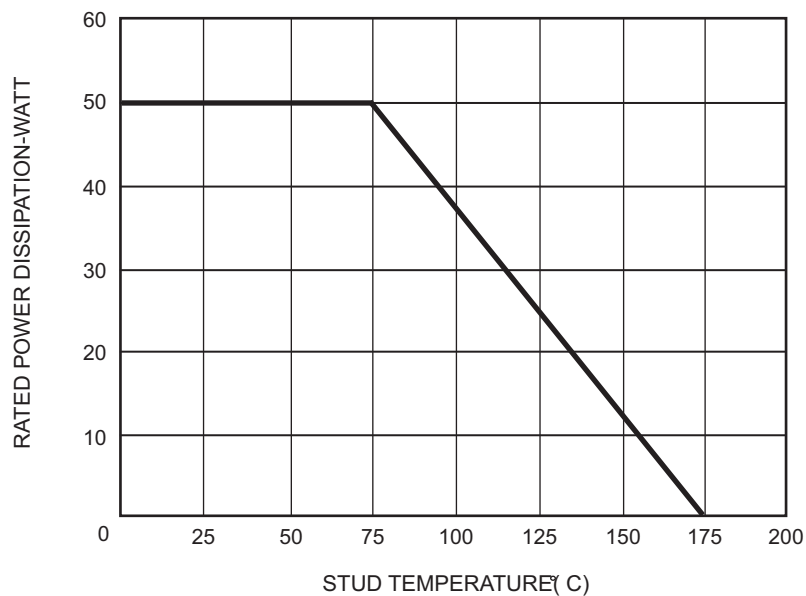


Fig. 1 - Power Derating Curve

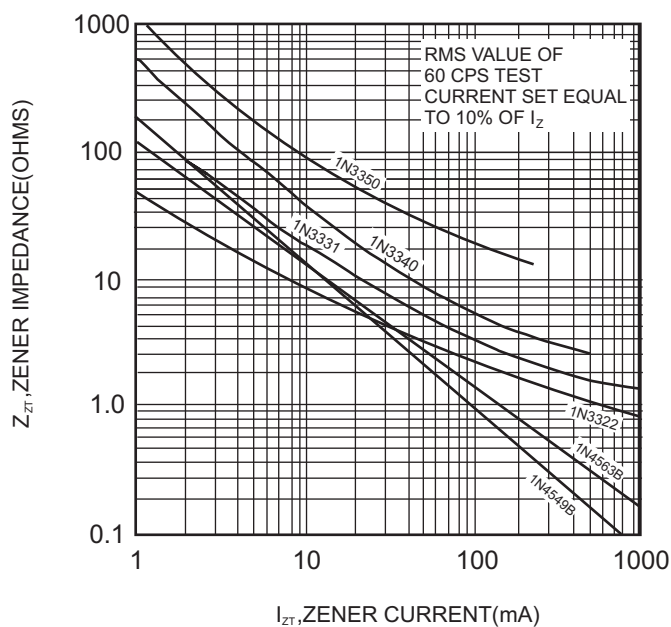


Fig. 2 - Typical Zener Impedance Vs Zener Current

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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)
1N3305B	6.8	1850	0.20	70	6600	0.040	300	4.5
1N3306B	7.5	1700	0.30	70	5900	0.045	125	5.0
1N3307B	8.2	1500	0.40	70	5200	0.048	50	5.4
1N3308B	9.1	1370	0.50	70	4800	0.051	25	6.1
1N3309B	10.0	1200	0.60	80	4300	0.055	25	6.7
1N3310B	11.0	1100	0.80	80	3900	0.060	10	8.4
1N3311B	12.0	1000	1.00	80	3800	0.065	10	9.1
1N3312B	13.0	960	1.10	80	3300	0.065	10	9.9
1N3313B	14.0	890	1.20	80	3000	0.070	10	11.4
1N3314B	15.0	830	1.40	80	2800	0.070	10	11.4
1N3315B	16.0	780	1.60	80	2650	0.070	10	12.2
1N3316B	17.0	740	1.80	80	2500	0.075	10	13.0
1N3317B	18.0	700	2.00	80	2300	0.075	10	13.7
1N3318B	19.0	660	2.20	80	2200	0.075	10	13.7
1N3319B	20.0	630	2.40	80	2100	0.075	10	15.2
1N3320B	22.0	570	2.50	80	1900	0.080	10	16.7
1N3321B	24.0	520	2.60	80	1750	0.080	10	18.2
1N3322B	25.0	500	2.70	90	1550	0.080	10	18.2
1N3323B	27.0	460	2.80	90	1500	0.085	10	20.6
1N3324B	30.0	420	3.00	90	1400	0.085	10	22.8
1N3325B	33.0	380	3.20	90	1300	0.085	10	25.1
1N3326B	36.0	350	3.50	90	1150	0.085	10	27.4
1N3327B	39.0	320	4.00	90	1050	0.090	10	29.7
1N3328B	43.0	290	4.50	90	975	0.090	10	32.7
1N3329B	45.0	280	4.50	100	930	0.090	10	32.7
1N3330B	47.0	270	5.00	100	880	0.090	10	35.8
1N3331B	50.0	250	5.00	100	830	0.090	10	36.0
1N3332B	51.0	245	5.20	100	810	0.090	10	38.8
1N3333B	52.0	240	5.50	100	790	0.090	10	42.6
1N3334B	56.0	220	6.00	110	740	0.090	10	42.6
1N3335B	62.0	200	7.00	120	660	0.090	10	47.1
1N3336B	68.0	180	8.00	140	600	0.090	10	51.7
1N3337B	75.0	170	9.00	150	540	0.090	10	56.0
1N3338B	82.0	150	11.00	160	490	0.090	10	62.2
1N3339B	91.0	140	15.00	180	420	0.090	10	69.2
1N3340B	100.0	120	20.00	200	400	0.090	10	76.0
1N3341B	105.0	120	25.00	210	380	0.095	10	83.0
1N3342B	110.0	110	30.00	220	365	0.095	10	83.0
1N3343B	120.0	100	40.00	240	335	0.095	10	91.2
1N3344B	130.0	95	50.00	275	310	0.095	10	99.8
1N3345B	140.0	90	60.00	325	290	0.095	10	114.0
1N3346B	150.0	85	75.00	400	270	0.095	10	114.0
1N3347B	160.0	80	80.00	450	250	0.095	10	121.6
1N3348B	175.0	70	85.00	500	230	0.095	10	121.6
1N3349B	180.0	68	90.00	525	220	0.095	10	136.8
1N3350B	200.0	65	100.0	600	200	0.100	10	152.0

- 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
- I_{ZM} values are derived for a ±5% V_Z tolerance

Standard voltage tolerances are ±5% (B suffix), ±10% (A suffix) & ±20% (no suffix)