

### 10W 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-4 outline
- Polarity: Indicated by direction of Zener symbol
- External surfaces corrosion resistant & terminal Solderable
- Weight: 6 grams
- Torque Setting: 1.5 Nm

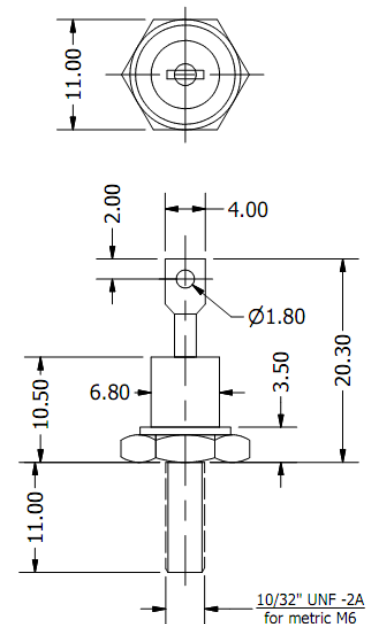
#### Electrical Data

- DC Power Dissipation: **10 Watts**
- Voltage Range 6.8 – 200 Volts
- Operating temperature -65°C to +175°C
- Derating: 80 mW/°C above 50°C
- Forward Voltage @ 2.0A: 1.4 Volts



DO-203AA (DO-4)

Stud Anode Normal
Stud Cathode Reverse ("R" suffix)



ALL DIMENSIONS IN MM

**10W Zener Diodes**

Electrical Characteristics (T <sub>c</sub> = 25°C unless otherwise specified)								
Type number	Nominal Zener Voltage V <sub>Z</sub> @I <sub>ZT</sub> (Volts)	Zener Test Current I <sub>ZT</sub> (mA)	Max Zener Impedance		Max DC Zener Current I <sub>ZM</sub> @75°C (mA)	Typical Temp. Coeff. a <sub>vz</sub> (%/°C)	Max Reverse Current	
			Z <sub>ZT</sub> @I <sub>ZT</sub> (Ohms)	Z <sub>ZK</sub> @1mA(I <sub>ZK</sub> ) (Ohms)			I <sub>R</sub> (µA)	V <sub>R</sub> (Volts)
1N2970A	6.8	370	1.2	500	1320	0.040	150	5.2
1N2971A	7.5	335	1.3	250	1180	0.045	100	5.7
1N2972A	8.2	305	1.5	250	1040	0.048	50	6.2
1N2973A	9.1	275	2.0	250	960	0.051	25	6.9
1N2974A	10	250	3	250	860	0.055	25	7.6
1N2975A	11	230	3	250	780	0.060	10	8.4
1N2976A	12	210	3	250	720	0.065	10	9.1
1N2977A	13	190	3	250	660	0.065	10	9.9
1N2978A	14	180	3	250	600	0.070	10	10.5
1N2979A	15	170	3	250	560	0.070	10	11.4
1N2980A	16	155	4	250	530	0.070	10	12.2
1N2981A	17	145	4	250	500	0.075	10	13.0
1N2982A	18	140	4	250	460	0.075	10	13.7
1N2983A	19	130	4	250	440	0.075	10	14.0
1N2984A	20	125	4	250	420	0.075	10	15.2
1N2985A	22	115	5	250	380	0.080	10	16.7
1N2986A	24	105	5	250	350	0.080	10	18.2
1N2987A	25	100	6	250	310	0.080	10	18.2
1N2988A	27	95	7	250	300	0.085	10	20.6
1N2989A	30	85	8	300	280	0.085	10	22.8
1N2990A	33	75	9	300	260	0.085	10	25.1
1N2991A	36	70	10	300	230	0.085	10	27.4
1N2992A	39	65	11	300	210	0.090	10	29.7
1N2993A	43	60	12	400	195	0.090	10	32.7
1N2994A	45	55	13	400	185	0.090	10	33.0
1N2995A	47	55	14	400	175	0.090	10	35.8
1N2996A	50	50	15	500	165	0.090	10	36.0
1N2997A	51	50	15	500	160	0.090	10	38.8
1N2998A	52	50	15	500	160	0.090	10	39.0
1N2999A	56	45	16	500	150	0.090	10	42.6
1N3000A	62	40	17	600	130	0.090	10	47.1
1N3001A	68	37	18	600	120	0.090	10	51.7
1N3002A	75	33	22	600	110	0.090	10	56.0
1N3003A	82	30	25	700	100	0.090	10	62.2
1N3004A	91	28	35	800	85	0.090	10	69.2
1N3005A	100	25	40	900	80	0.090	10	76.0
1N3006A	105	25	45	1000	75	0.095	10	76.0
1N3007A	110	23	55	1100	72	0.095	10	83.6
1N3008A	120	20	75	1200	67	0.095	10	91.2
1N3009A	130	19	100	1300	62	0.095	10	98.8
1N3010A	140	18	125	1400	58	0.095	10	100.0
1N3011A	150	17	175	1500	54	0.095	10	114.0
1N3012A	160	16	200	1600	50	0.095	10	121.6
1N3013A	175	14	250	1750	46	0.095	10	135.0
1N3014A	180	14	260	1850	45	0.095	10	136.8
1N3015A	200	12	300	2000	40	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<sub>Z</sub>
- I<sub>ZM</sub> values are derived for a ±5% V<sub>Z</sub> tolerance

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