

## 20W Zener Diodes

### Features

- Voltage Range 7.5 – 75 Volts
- Glass passivated junction
- 20 Watt steady state @ 75°C
- 1500 Watt peak pulse power
- Operating temperature -55°C to +175°C
- 1500 Watt surge capability at 1 ms
- Typically  $I_R \leq 5 \mu A$  above 10V
- Good clamping ability
- Available in Normal and Reverse polarity
- Metric and UNF thread type



DO-203AA (DO-4)

### Mechanical Characteristics

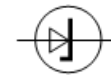
- Hermetically sealed DO-4 outline
- Polarity: Indicated by direction of Zener symbol
- External surfaces corrosion resistant & terminal Solderable
- Weight: 6 grams
- Torque Setting: 1.5 Nm

### Electrical Data

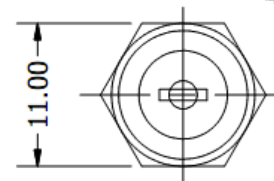
- Forward Voltage,  $V_F = 1.5V$  max. (at  $I_F \leq 5A$ , 300 $\mu s$  square wave pulse)]
- $V_Z$  measured with pulse  $\leq 100\mu s$   
Duty cycle  $\leq 0.001$
- $R_z$  determined with DC plus 10% superimposed AC @ 1KHz



STUD CATHODE NORMAL



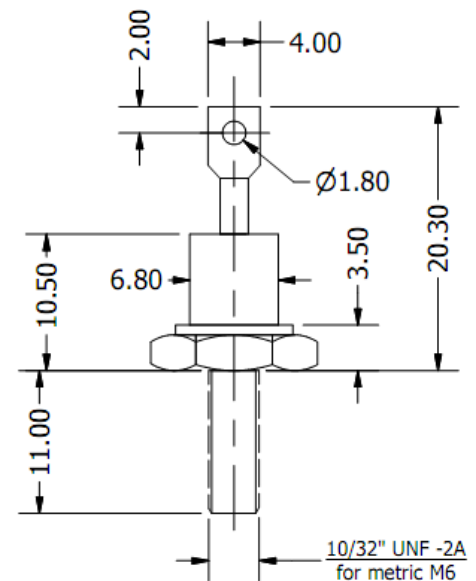
STUD ANODE REVERSE



### Ordering Table

BZY	93C	-	R
1	2	3	4

- 1 – Zener Diode
- 2 – Wattage = 20W
- 3 – Zener Voltage
- 4 – Polarity:
  - > None = Stud Cathode Normal
  - > R = Stud Anode Reverse



ALL DIMENSIONS IN MM

## 20W Zener Diodes

Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise specified)								
Stud Cathode Part number	Stud Anode Part number	Zener Voltage $V_Z @ I_Z$ (V)		$I_Z$ (A)	Zener Resistance $R_Z @ I_Z$ ( $\Omega$ )		Maximum Reverse Leakage Current $I_R @ V_R$	
		MIN	MAX		Typ.	Max	(mA)	(V)
BZY93C7V5	BZY93C7V5R	7.0	7.9	2.0	0.04	0.3	0.10	5.1
BZY93C8V2	BZY93C8V2R	7.7	8.7	2.0	0.05	0.3	0.10	5.6
BZY93C9V1	BZY93C9V1R	8.5	9.6	1.0	0.07	0.5	0.05	6.2
BZY93C10	BZY93C10R	9.4	10.6	1.0	0.09	0.5	0.05	6.8
BZY93C11	BZY93C11R	10.4	11.6	1.0	0.08	1.0	0.05	7.5
BZY93C12	BZY93C12R	11.4	12.7	1.0	0.08	1.0	0.05	8.2
BZY93C13	BZY93C13R	12.4	14.1	1.0	0.08	1.0	0.05	9.1
BZY93C15	BZY93C15R	13.8	15.6	1.0	0.10	1.2	0.05	10
BZY93C16	BZY93C16R	15.3	17.1	0.5	0.18	1.2	0.05	11
BZY93C18	BZY93C18R	16.8	19.1	0.5	0.20	1.5	0.05	12
BZY93C20	BZY93C20R	18.8	21.2	0.5	0.20	1.5	0.05	13
BZY93C22	BZY93C22R	20.8	23.3	0.5	0.21	1.8	0.05	15
BZY93C24	BZY93C24R	22.7	25.9	0.5	0.22	2.0	0.05	16
BZY93C27	BZY93C27R	25.1	28.9	0.5	0.25	2.0	0.05	18
BZY93C30	BZY93C30R	28.0	32.0	0.5	0.30	2.5	0.05	20
BZY93C33	BZY93C33R	31.0	35.0	0.5	0.75	4.0	0.05	22
BZY93C36	BZY93C36R	34.0	38.0	0.2	0.85	5.0	0.05	24
BZY93C39	BZY93C39R	37.0	41.0	0.2	0.90	6.5	0.05	27
BZY93C43	BZY93C43R	40.0	46.0	0.2	1.00	7.0	0.05	30
BZY93C47	BZY93C47R	44.0	50.0	0.2	1.00	7.5	0.05	33
BZY93C51	BZY93C51R	48.0	54.0	0.2	1.20	8.0	0.05	36
BZY93C56	BZY93C56R	52.0	60.0	0.2	1.30	9.0	0.05	39
BZY93C62	BZY93C62R	58.0	66.0	0.2	1.50	10.0	0.05	43
BZY93C68	BZY93C68R	64.0	72.0	0.2	1.80	11.0	0.05	47
BZY93C75	BZY93C75R	70.0	79.0	0.2	2.00	15.0	0.05	51

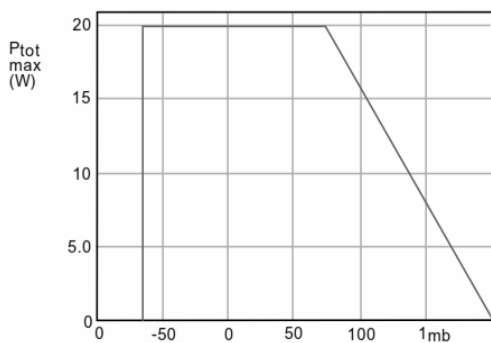


Figure 1. Maximum total dissipation plotted against mounting base temp

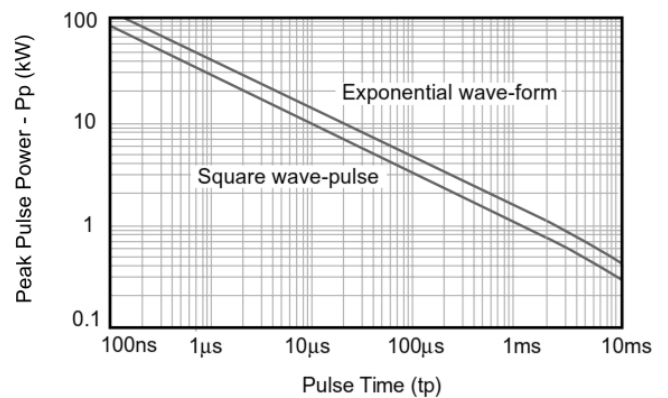


Figure 2. Non-repetitive peak pulse power rating curve