



**ZEONICS SYSTECH**  
DEFENCE & AEROSPACE ENGINEERS (P) LTD.



# PFN (Pulse Forming Networks) & Modulators



There is a continuous requirement of different type of modulators or pulse source where one requires pulse width, generated pulse wave with fast rise times, fast fall times different type of applications for pulse electric field and other similar kind of modulator applications like Radars and low frequency pulsers.

**Proudly Made in INDIA**





### High Voltage Compact PFN System

- |                    |              |
|--------------------|--------------|
| 1. Working Voltage | : 50kV       |
| 2. Pulse Width     | : 10 $\mu$ s |
| 3. Rise Time       | : 900 ns     |
| 4. PRR             | : 100Hz      |
| 5. Zo              | : 50 Ohms    |
| 6. No of Stage     | : 10         |
| 7.                 |              |
| 8. Rise Time       | : 900 ns     |
| 9. PRR             | : 100Hz      |
| 10. Zo             | : 50 Ohms    |
| 11. No of Stage    | : 10         |



### Compact One Microsecond PFN System

- |    |                 |                                    |
|----|-----------------|------------------------------------|
| 1  | No of Stage     | : Ten                              |
| 1. | Working Voltage | : 20kV                             |
| 2. | Output Zo       | : 50 Ohms                          |
| 3. | Frequency       | : 20Hz, 50Hz or 100Hz              |
| 4. | Energy          | : 20 Joules, 50 Joules, 100 Joules |



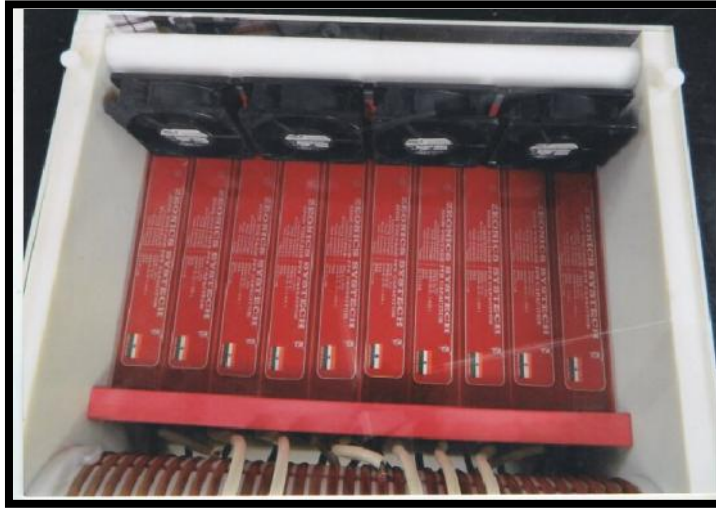
### Pre moulded Fixed Delay Line

- |    |                 |                                      |
|----|-----------------|--------------------------------------|
| 1. | Delay           | : 2 $\mu$ s / 6 $\mu$ s / 10 $\mu$ s |
| 2. | Working Voltage | : 2kV DC/10kV DC/15 kV DC            |
| 3. | No of Section   | : 4/6/8 T Lines                      |



### Ignitron Based PFN

- |    |                 |                 |
|----|-----------------|-----------------|
| 1. | Working Voltage | : 20kV D.C.     |
| 2. | Frequency       | : 10Hz          |
| 3. | Pulse Width     | : 5 Millisecond |
| 4. | Impedance       | : 1 Ohm         |
| 5. | Energy          | : 5000 Joules   |



### Open Frame Air Modulators

1. Working Voltage : 30kV
2. Frequency : 300Hz
3. Pulse Width : 25 $\mu$ s
- 4.
5. Impedance : 100 Ohms
6. Energy :  $\approx$  500 Joules

### Applications

The applications range right from purification of fluids, gases, Ozone Generation, Compact PFN for electromagnetic radiation, sources as Magnetrons also micro second and Milli second pulse forming networks which can be used for different kind of washer guns and other applications. Pre moulded delay lines also are used for compact pulse forming network for Radar applications where frequency go in the region of several Kilo Hertz as a source.

### Advantages

All the PFN network which are made assembled fixed whether oil sealed or oil filled or in air, consist of different type of capacitors which can deliver certain, voltages and currents for high frequency applications where pulse repetition rate is very high we suggest oil immersed PFN for heat dissipation. Advantage being they are made in India with local material and can be always replace repaired very easily with a short down time.

### Installations

Yes there are specific requirements of installation and when the PFN is made, it is very important that the customer and the manufacturer specifically work on the impedance part and tune the PFN as per their requirement; these are all used for laser firing and such similar applications.

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