

# PTI-BB50 Series

DC Block, Broad Band, Type N Bulkhead Surge Protectors, 1.5-1000 MHz



DC Block Coaxial RF Surge Protectors incorporate a blocking capacitor and gas discharge tube (GDT) to provide isolation and maximum RF power of 2.0kW.

PTI-BB50 Series lightning and surge protectors help protect your equipment from electromagnetic pulse (EMP) or power surges that are commonly caused by lightning or other strong electrical charges.

## Features:

- Broad frequency range
- Low VSWR and insertion loss
- DC Block
- Multi-strike capability
- Surge current of 50kA
- Max power 2kW
- RoHS & CE compliant
- Grounding bracket for flange or bulkhead mounting

## Applications:

- HF, UHF and VHF radios
- Amateur (HAM) radios
- Remote industrial monitoring and SCADA

## Model Numbers:

- **PTI-BB50NFF**  
N Female connector on surge and protected side
- **PTI-BB50NMP**  
N Female connector on surge and N Male on protected side
- **PTI-BB50NMS**  
N Male connector on surge and N female on protected side

## Electrical Specifications:

|                               |   |
|-------------------------------|---|
| Impedance                     | 50 $\Omega$   |
| Frequency                     | 1.5 - 1000 MHz  |
| VSWR                          | $\leq 1.1:1$ (Over Frequency Range)   |
| Insertion Loss                | $\leq 0.1$ dB (Over Frequency Range)  |
| Maximum RF Power at Frequency | 2.0kW (1.5 - 50 MHz)<br>375W (50 - 220 MHz)<br>125W (220 - 700 MHz)<br>50W (700 - 1000 MHz) |

## Transient Specifications:

|                                 |   |
|---------------------------------|---|
| Protection Circuit              | DC Block  |
| Surge Current                   | IEC 61000-4-5 8/20 $\mu$ s Waveform                 |
| Maximum Surge                   | 50 kA (1x)  |
| Rated Impulse Discharge Current | 20 kA Multiple (10x) 8x20 $\mu$ s Waveform          |
| Turn-on Voltage                 | 600V $\pm 20\%$ @ 1kV/ $\mu$ s                      |
| Turn-on Time                    | 2.5ns for 2kV/ns                                    |
| Let-Through Energy              | $\leq 5$ mJ $\leq 20\%$ @ 3kA 8/20 $\mu$ s Waveform |

# PTI-BB50 Series

DC Block, Broad Band, Type N Bulkhead Surge Protectors, 1.5-1000 MHz

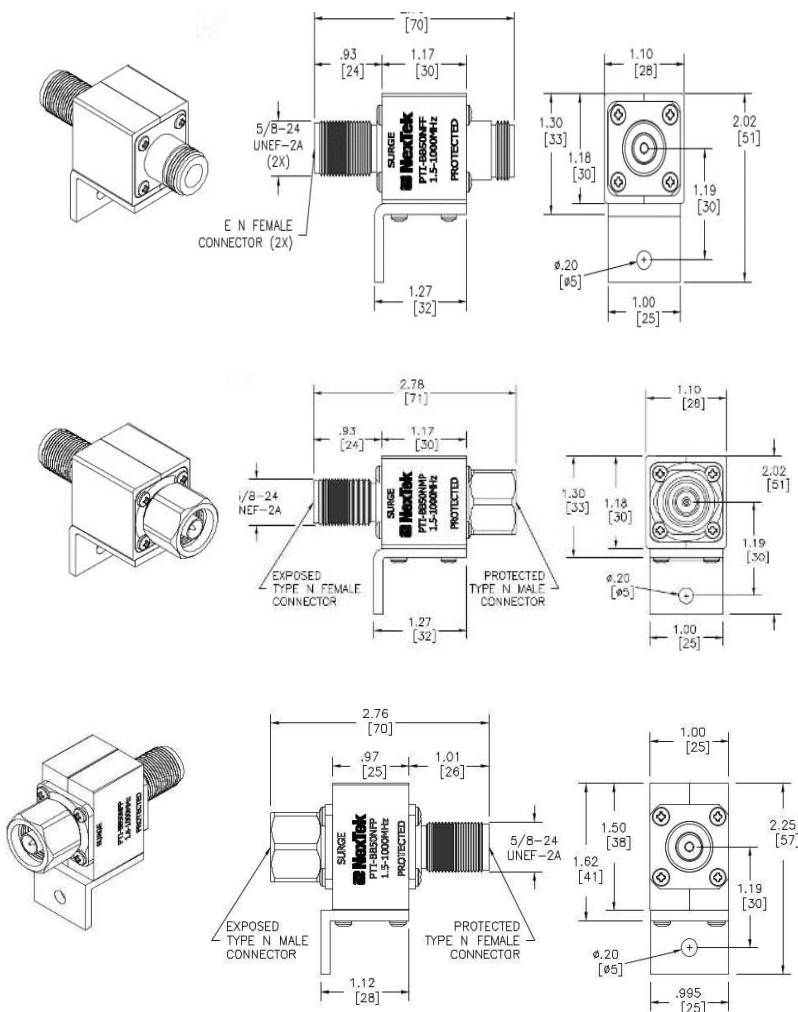
## Mechanical/Environmental Specifications:

|                                |                   |
|--------------------------------|-------------------|
| Storage/Operational Temp       | -55°C to 85°C     |
| Ingress Protection (IP Rating) | IP65 IEC60529     |
| Weight                         | 0.31 lb. (0.14kg) |
| Vibration                      | 1G up to 100Hz    |
| RoHS compliant                 | Yes               |
| CE                             | Yes               |

## Material & Finish Specifications:

| Component             | Material      | Finish       |
|-----------------------|---------------|--------------|
| Outer Parts           | Aluminum      | Ball Burnish |
| Connectors            | Brass         | Tri-Metal    |
| Coupling Nut & Washer | SST           | ---          |
| Center Contact        | Be Cu / Brass | Gold         |
| Insulator             | PTFE          | ---          |

## Mechanical Outlines:



## Hardware Kit - Included:

| Item | Description                       | Qty |
|------|-----------------------------------|-----|
| 1    | Screw 10-32 x 0.75 HEX MS 18-8 SS | 1   |
| 2    | Nut 10-32 HEX 18-8 SS             | 1   |
| 3    | Washer 10 INT4-10 SS              | 2   |
| 4    | Nut 5/8-24 303 HEX SS             | 1   |
| 5    | Washer 5/8 410 SS                 | 1   |
| 6    | Type N Female O-Ring 114 EPDM     | 1   |
| 7    | Bag                               | 1   |
| 8    | Kit Number Label for Replacement  | 1   |

