

# PTC-NFx-xxx

## Type-N F/F or F/M Bulkhead Coaxial RF Surge Protectors, DC - 7GHz, DC Pass, 650μJ, 20kA, Gas Discharge Tube

The PTC-NFx-xxx unit offers excellent surge / lightning suppression protection for DC Pass Applications over an extended frequency band of operation, DC to 7 GHz. This Gas Discharge Tube (GDT) technology RF coaxial surge arrestor is bi-directional in implementation and operation.

The PTC-NFx-xxx device demonstrates excellent RF characteristics while offering outstanding surge protection in a low weight and economical RF surge arrestor with various application potential.



### Connectors:

- N-Female to N-Female
  - PTC-NFF-180
  - PTC-NFF-300
  - PTC-NFF-700
- N-Female to N-Male
  - PTC-NFM-180
  - PTC-NFM-300
  - PTC-NFM-700

### Features:

- Frequency: DC to 7GHz
- Ultra Compact and Mechanical Design
- Excellent RF Performance
- Multiple Strike Capability
- 20 kA (8x20 μs) Surge Capability
- Rugged and Waterproof (IP67 rated)
- Bi-directional Protection

### Applications:

- Public Safety
- HAM Radio
- Distributed Antenna Systems
- 4G and 5G Communications Systems
- GPS systems
- Tower Mounted Amplifiers
- WiFi
- Wireless applications that require DC Pass

### RF Specifications:

Impedance	50 Ω
Frequency	DC to 7 GHz
VSWR	DC - 5.0GHz @ ≤1.1:1 ; DC - 7GHz @ ≤1.2:1
Return Loss	DC - 5.0GHz @ ≥26dB ; DC - 7GHz @ ≥21dB
Insertion Loss	DC - 5.0GHz @ ≤0.1dB ; DC - 7GHz @ ≤0.25dB
RF Power	150W, 450W, or 1.0kW Max.
DC Current	10A Max
Operating Voltage	+/- 60 Vdc

### Transient Specifications:

Protection Circuit	180V, 300V, or 700V GDT DC Pass
Surge Current	IEC 61000-4-5 8/20μs Waveform
Maximum Surge	20 kA (1x)
Multi-Strike	10kA Multiple
Turn-on Voltage	180Vdc - 700Vdc ±20%
Turn-on Time	4ns for 2kv/ns
Let-through Energy	≤650μJ ±20% @3kA 8/20μs Waveform (180V)
Let-through Voltage	700Vdc Peak @ 10kA 8/20μs Waveform (180V)

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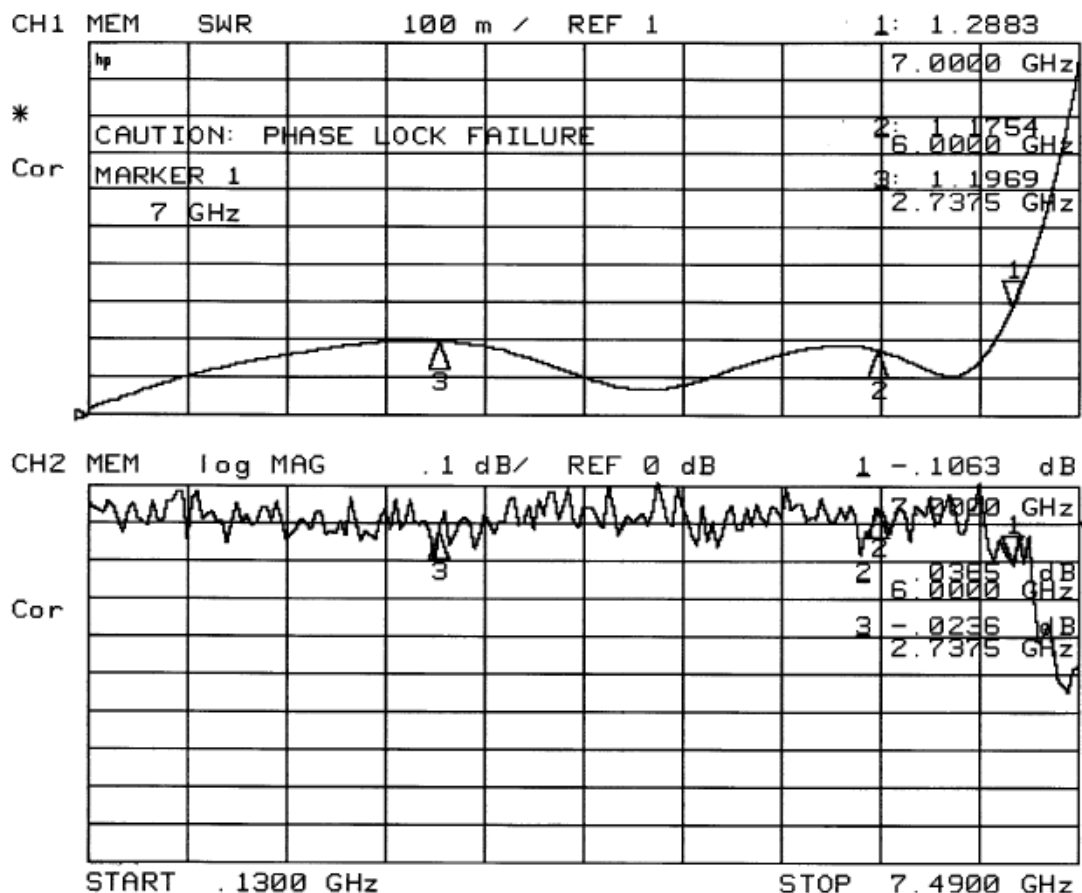
## Environmental Specifications:

Storage / Operational Temp	-55°C to +90°C
Ingress Protection / Bellcore	IP67 IEC 60529 / TA-NWT-000487
Weight	0.1 lb. (45 g)
RoHS Compliant	Yes
CE	Yes

## Material and Finish:

Body Material	Aluminum	None
Connectors	Aluminum	None
Coupling Nut & Washer	Stainless Steel	---
Center Contact	Phosphor Bronze	Silver
Insulator	PTFE	---

## Return Loss & Insertion Loss Graphs:

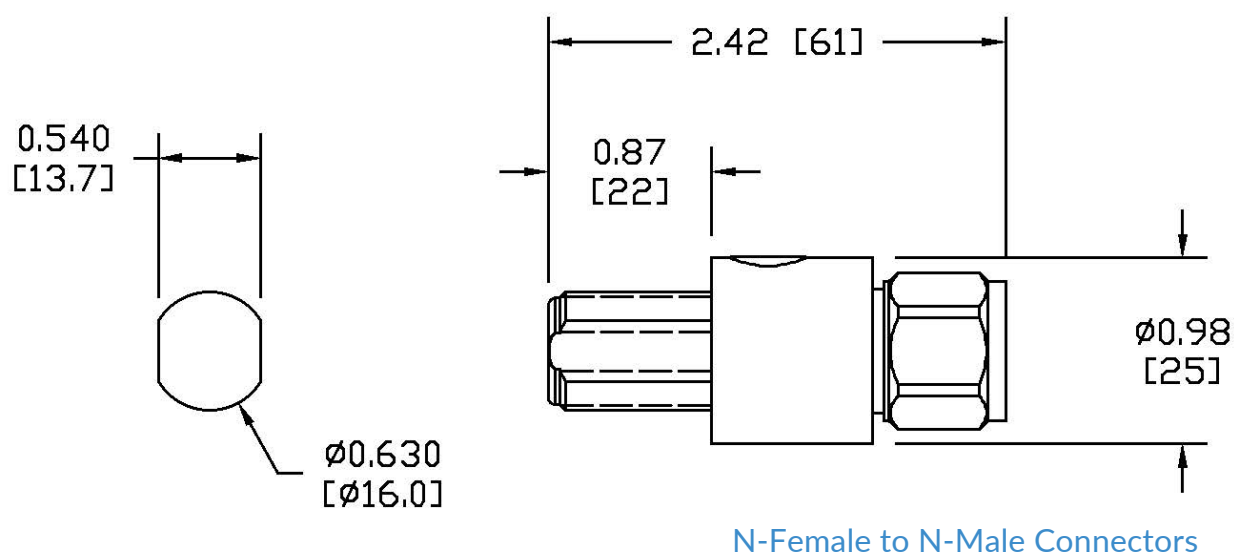
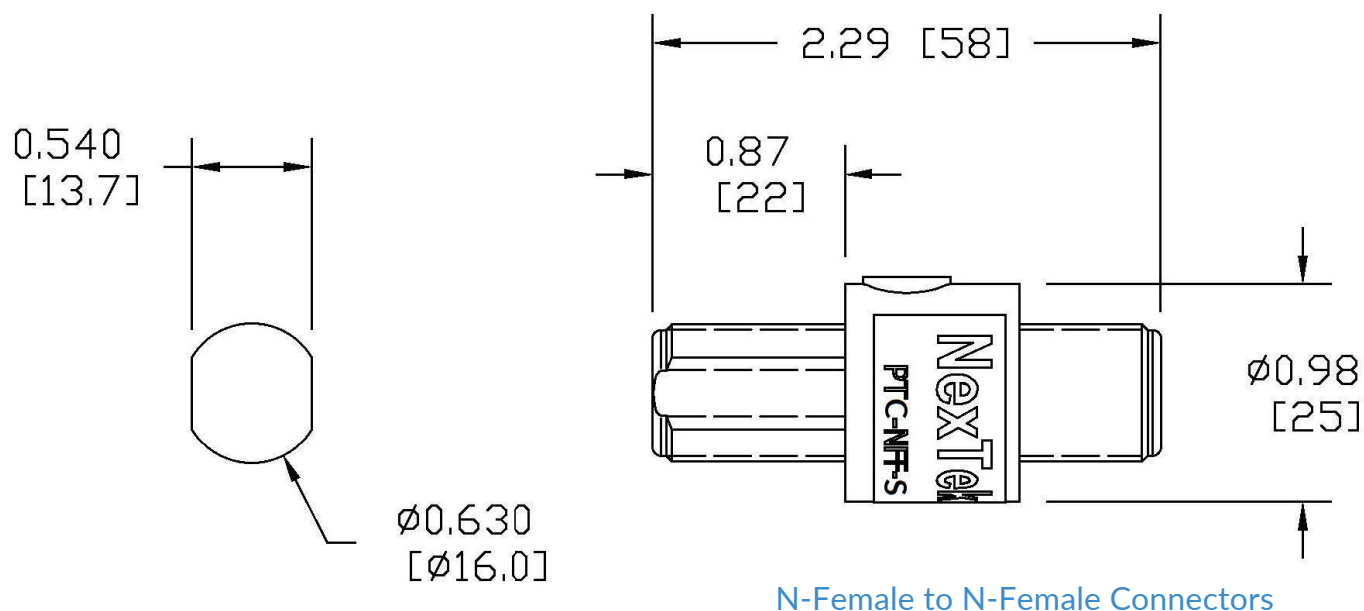


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## Mechanical Drawings:



## Optional Mounting Bracket:

- 750-088-05

## Optional Ground Wire Kit:

- GRDKIT-NFF

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## Mounting Torque:

Component	N Mount Nut	N Coupling Nut
Inch-pounds	64	9.6
N-m	8	1.12

## Part Numbers:

Part Number	Connectors	Voltage	RF Power
PTC-NFF-180	N-Female to N-Female	180V ±20%	150W Max.
PTC-NFF-300	N-Female to N-Female	300V ±20%	450W Max.
PTC-NFF-700	N-Female to N-Female	700V ±20%	1kW Max.
PTC-NFM-180	N-Female to N-Male	180V ±20%	150W Max.
PTC-NFM-300	N-Female to N-Male	300V ±20%	450W Max.
PTC-NFM-700	N-Female to N-Male	700V ±20%	1kW Max.

## Who we are and what we do

Since 1986, NexTek is recognized as a World-Class leading supplier of innovative, high-quality coaxial RF surge protection devices (SPDs) that protect critical and sensitive electronic equipment from the harmful effects of lightning and other sources of electrical surges.

Nextek is a proven supplier with an extensive coaxial product offering covering a vast range from DC to 18 GHz. Nextek designs and manufactures a majority of these products from its Billerica, Massachusetts USA headquarters, approximately 30 minutes from Boston. All Nextek products feature field proven designs and construction. These RF surge protection devices are designed to withstand harsh environmental conditions. With hundreds of thousands of SPDs installed and operational on all seven (7) continents and in many space applications, NexTek has built an exceptional reputation for quality and service.

NexTek is continually expanding its product offering, so please click the link below to our website for the latest news and product releases. [www.nextek.com](http://www.nextek.com)