

PTC-NF_x-xxx Series

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

The PTC-NF_x-xxx Series 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 arrester is bi-directional in implementation and operation.

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

The RF Surge Protector Device is furnished with Aluminum L-Bracket & associated hardware and the Bulkhead Mount Kit (Ring Terminal, O-Ring, Washer and Hex Nut) included.



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
- Wi-Fi
- Power Over Coax Applications

RF Specifications:

Impedance	50 Ω
Frequency	DC to 7 GHz
VSWR	DC - 6.5 GHz @ ≤1.25 ; 6.5- 7GHz @ ≤1.5:1
Return Loss	DC - 6.5GHz @ ≥19dB ; 6.5 - 7GHz @ ≥13.98dB
Insertion Loss	DC - 6.5GHz @ ≤0.25dB ; 6.5 - 7GHz @ ≤0.5dB
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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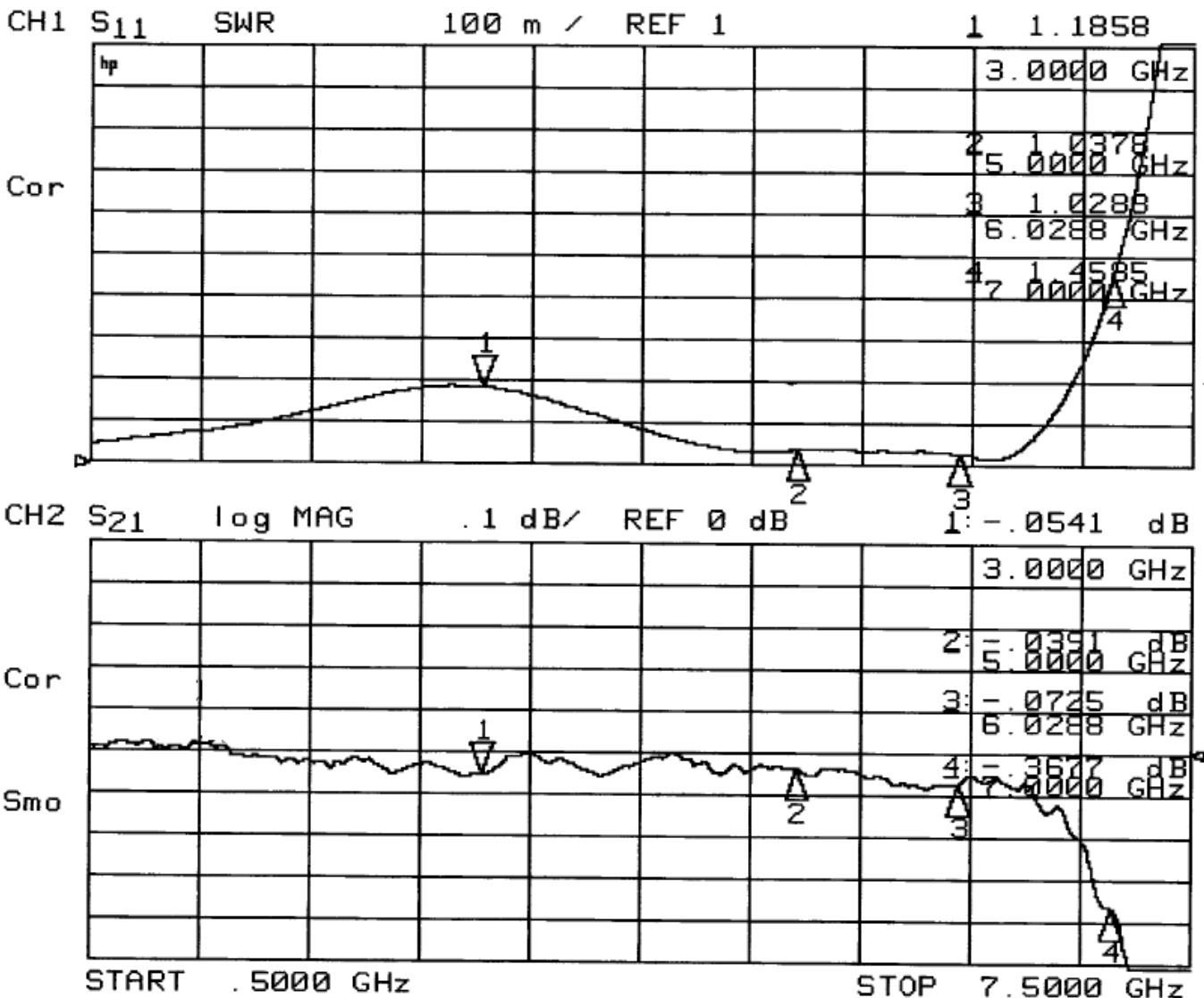
Environmental Specifications:

Storage / Operational Temp	-55°C to +90°C
Ingress Protection / Bellcore	IP67 IEC 60529 / TA-NWT-000487
Weight	F-F: 0.1 lb. (45 g); F-M 0.11 lb. (51 g)
RoHS Compliant	Yes
CE	Yes

Material and Finish:

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

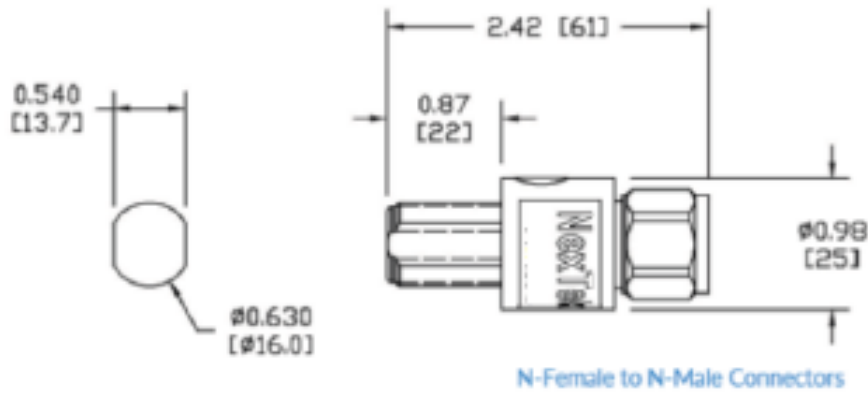
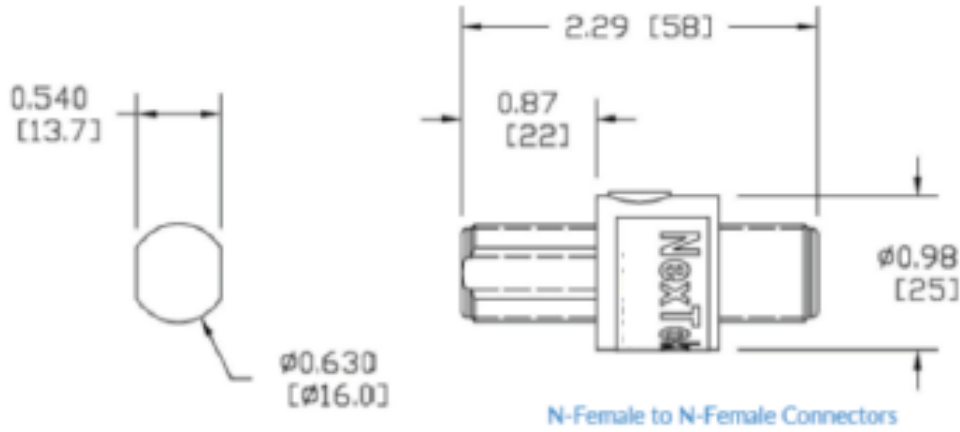
Return Loss & Insertion Loss Graphs:



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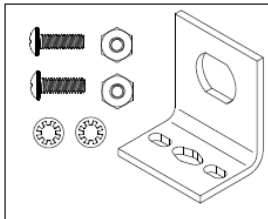
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Mechanical Drawings:



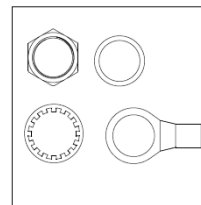
Included Hardware with Surge Arrestor (Can be Purchased Separately, if Required):

- **750-0088-05**



HARDWARE KIT INCLUDES:	
QTY	DESCRIPTION
1	BRACKET MOUNT N FLANGE
2	NUT HEX 8-32 18-8 SS
2	SCREW 8-32x.50 PHIL PAN SS
2	WASHER #8 410 SS INTERNAL

- **GRDKIT-NFF**



HARDWARE KIT INCLUDES:	
QTY	DESCRIPTION
1	HEX NUT 5/8-24 303 SS
1	WASHER 5/8 410 SS INTERNAL
1	O-RING AS568A-016 SIR
1	RING TERM 5/8" STUD 6AWG

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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 these products from its Billerica, Massachusetts USA headquarters. All NexTek products feature field proven designs and construction of the highest quality. 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 on-time 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