NexTek
101 Billerica Ave, Building 5, Suite 101
North Billerica, MA 01862
978-486-0582 | nextek.com

FPHNFNFJAx0-B

HEMP and LEMP Protection for High Power HF Bands MIL-STD-188-125, MIL-STD-461, AECTP-500, VG96903-80

These coaxial protectors dramatically reduce electrical energy from high-speed HEMP or Electro-Static Discharge (ESD) or lightning activity. The HF bands are particularly difficult to protect, since much of the energy is in the pass band. NexTek has optimized the circuits to provide maximum suppression, while allowing desired operational throughput. These compact protectors are compliant to MIL-STD 188-125 and MIL-STD 461 pulses.

FEATURES:

- High-Speed Protection Design
- Ultra-Low Let-Through Energy
- Type N Connectors
- 1-40 MHz Operating Frequency
- DC Block
- HEMP Tested and Verified Design
- Excellent Insertion Loss and Return Loss
- Bulkhead Mounting

APPLICATIONS:

- Mid Power Transmitters up to 3500W
- MIL STD 188-125 Transmitter Applications

MODEL NUMBERS:

- FPHNFNFJAT0-B (1250W)
- FPHNFNFJAU0-B (2000W)
- FPHNFNFJAV0-B (3500W)

RF Specifications	
Impedance	50Ω
Frequency	1-40MHz
VSWR (Typ./Max.)	1.1/1.25 @ 1-30MHz 1.3/1.35 @ 30-40MHz
Return Loss	26.44dB/19.08dB @ 1-30MHz 17.69dB/16.54dB @ 30-40MHz
Insertion Loss (Typ./Max.)	0.02dB/0.03dB @ 1-30MHz 0.03dB/0.05dB @ 30-40MHz
Maximum RF Power	1250W, 2500W, or 3500W

HEMP & LEMP Pulses	
LEMP Rating 8x20us Pulses per IEC61000-4-5	In 5kA (10x) Imax 10kA (1x)
HEMP Rating 20x500ns Pulse	300kV/5kA 3000 Pulses MIL-STD 188-125

Model Number	RF Watts 1-30MHz | 30-40MHz	RF V max Peak Volts	LEMP Let-Thru @ 2kA Peak Voltage (V) | Energy into 50W (mJ)	HEMP Residual 20x500ns @ 5kA		
				Peak Amps (A)	Peak Rate of Rise	Root Action
FPHNFNFJAT0-B	1250 | 1000	350	890 | 2.5	28	$16x10^9$	$1.6x10^{-3}$
FPHNFNFJAU0-B	2000 | 1600	450	1100 | 6	34	$20x10^9$	$2.0x10^{-3}$
FPHNFNFJAV0-B	3500 | 2800	600	1400 | 10	45	$27x10^9$	$2.7x10^{-3}$

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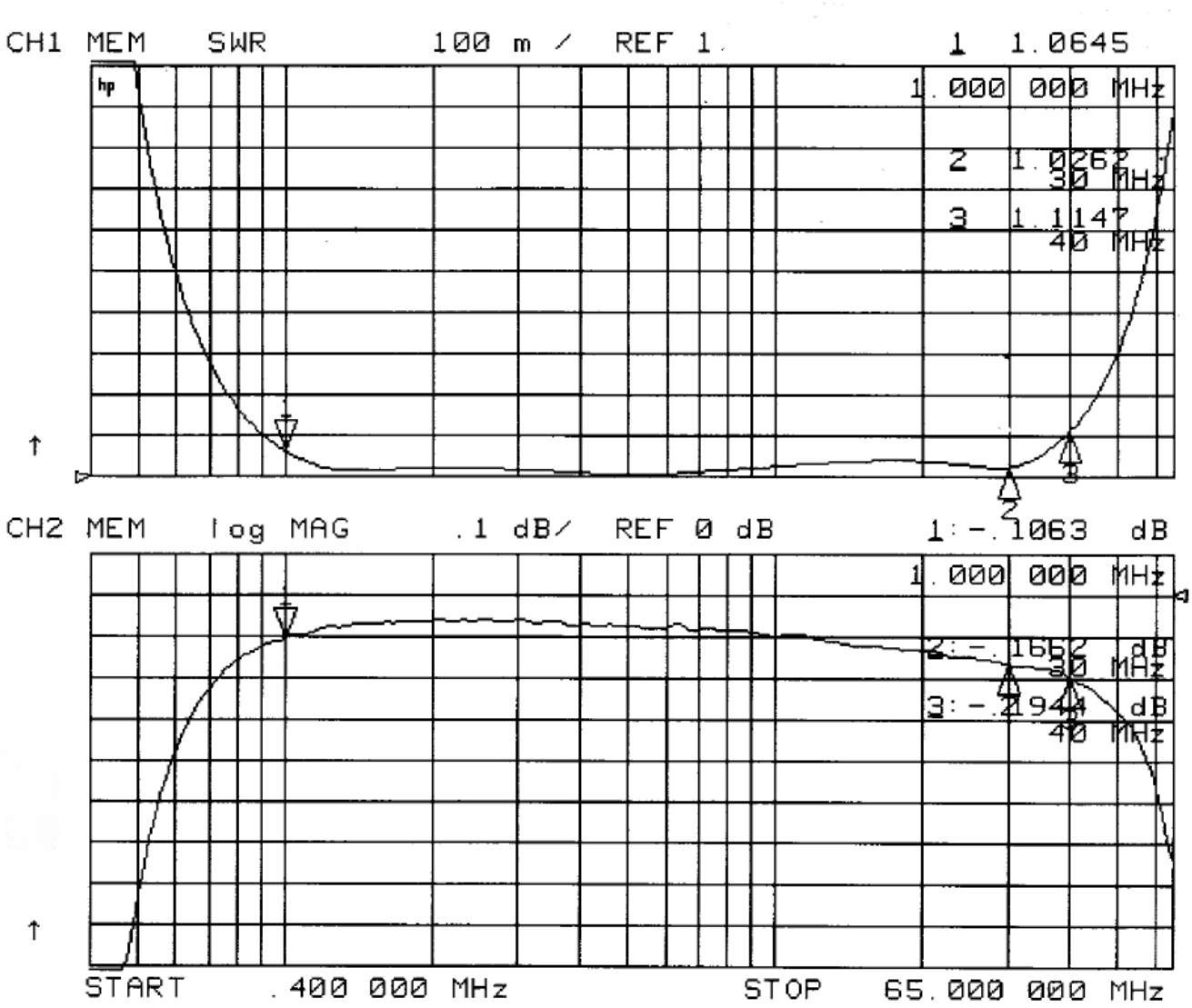
VSWR, Insertion Loss, & Derating Information



Altitude RFcw Derating

kft	RFcw	km
0	100%	0
10	90%	3
20	80%	6
30	70%	12
50	50%	18

Temperature RFcw Derating
(Ambient Air Temp)

Temp(°C)	RFcw
<32	100%
40	93%
50	82%
70	55%
90	25%

(Max Case Temp −105°C)

System SWR RFcw Derating

SWR	RFcw
1.0	100%
1.1	91%
1.2	84%
1.5	69%
2.0	56%
3.0	44%
5.0	36%
∞	25%

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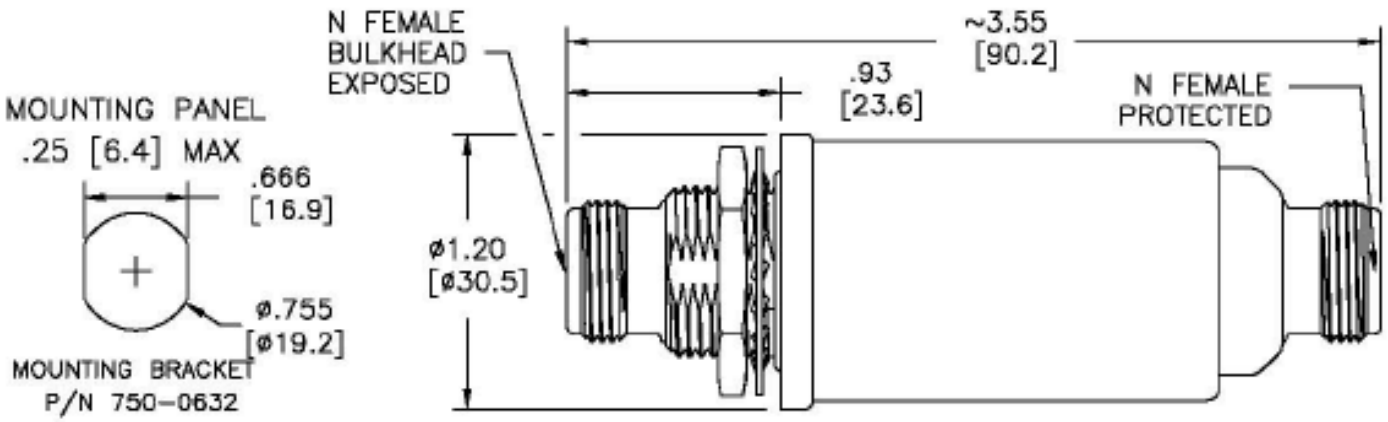
Mechanical Outline & Dimensions



Material/Finish Specifications

Component	Material	Finish
Outer Parts	Aluminum	Nickel
Connectors	Brass	Nickel
Insulators	PTFE	---
Center Contact	Be Cu / Brass	Gold
Gasket	Conductive	---

Environmental Specifications

Component	Material
Storage / Operational Temp	IP68 IEC 529
Water Protection Temp. Shock	-55°C to +90°C -65°C to +125°C 25x
Weight	0.23lbs. (104g) Typ.
RoHS Compliant	Yes
CE	Yes