

Coaxial

High Pass Filter

50Ω 41 to 800 MHz

Maximum Ratings

Operating Temperature -55°C to 100°C

Storage Temperature -55°C to 100°C

RF Power Input 0.5W max.

Permanent damage may occur if any of these limits are exceeded.

Features

- rugged shielded case
- other standard and custom NHP models available with wide selection of fco

Applications

- lab use
- transmitters/receivers
- radio communications

NHP-50+



Generic photo used for illustration purposes only

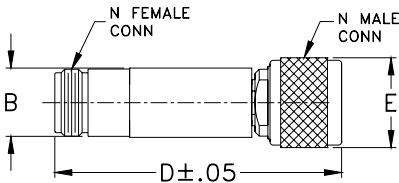
CASE STYLE: FF57

Connectors Model
N-Type NHP-50+

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Outline Drawing



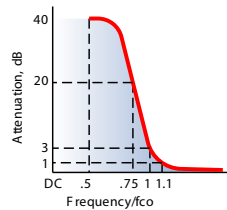
Outline Dimensions (inch/mm)

B	D	E	wt
.67	2.90	.82	grams
17.02	73.66	20.83	90.0

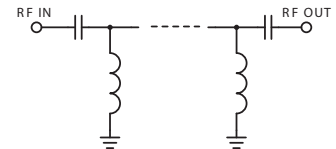
High Pass Filter Electrical Specifications

STOPBAND (MHz)		fco (MHz) Nom.	PASSBAND (MHz)	VSWR (:1)	
(loss > 40 dB)	(loss > 20 dB)	(loss 3 dB)	(loss < 1 dB)	Stopband Typ.	Passband Typ.
DC-20	20-26	37	41-800	17	1.5

typical frequency response

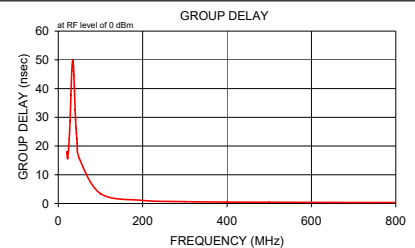
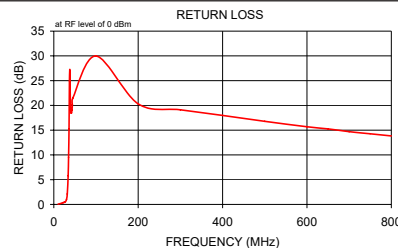
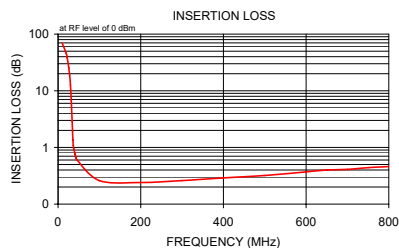


electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
$\bar{x}$	σ			
10.00	69.20	3.81	20.00	18.03
20.00	45.38	0.93	22.00	15.59
22.00	38.53	1.25	24.00	18.34
24.00	31.83	1.18	26.00	22.61
26.00	25.35	1.28	28.00	28.85
28.00	18.94	1.39	30.00	37.79
30.00	12.65	1.53	32.00	46.09
32.00	6.90	1.45	34.00	49.90
34.00	2.95	0.88	35.00	49.53
35.00	1.94	0.57	36.00	47.70
36.00	1.35	0.34	37.00	44.59
37.00	1.09	0.20	38.00	40.68
38.00	0.94	0.11	39.00	36.49
39.00	0.89	0.08	40.00	32.54
40.00	0.82	0.05	41.00	29.16
41.00	0.77	0.04	42.00	26.41
42.00	0.72	0.03	43.00	24.22
43.00	0.69	0.02	44.00	22.42
44.00	0.65	0.03	45.00	20.92
45.00	0.61	0.02	50.00	15.63
100.00	0.26	0.01	100.00	3.44
200.00	0.24	0.01	200.00	1.07
300.00	0.26	0.01	300.00	0.65
400.00	0.29	0.01	400.00	0.50
500.00	0.32	0.01	500.00	0.44
600.00	0.37	0.01	600.00	0.40
650.00	0.40	0.01	650.00	0.38
700.00	0.41	0.02	700.00	0.36
750.00	0.44	0.02	750.00	0.36
800.00	0.46	0.02	800.00	0.36



Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp


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 M151107
 NHP-50+
 200515

Coaxial High Pass Filter

NHP-50+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
10.0	69.20	0.15	20.0	18.030
20.0	45.38	0.39	21.0	16.560
21.0	41.80	0.43	22.0	15.590
22.0	38.53	0.46	23.0	17.250
23.0	35.12	0.45	24.0	18.340
24.0	31.83	0.49	25.0	20.490
25.0	28.58	0.56	26.0	22.610
26.0	25.35	0.57	27.0	25.360
27.0	22.14	0.65	28.0	28.850
28.0	18.94	0.70	29.0	33.070
29.0	15.74	0.83	30.0	37.790
30.0	12.65	1.08	31.0	42.270
31.0	9.66	1.46	32.0	46.090
32.0	6.90	2.21	33.0	48.740
34.0	2.95	5.90	34.0	49.900
35.0	1.94	9.57	35.0	49.530
36.0	1.35	15.32	36.0	47.700
37.0	1.09	25.05	37.0	44.590
38.0	0.94	27.33	38.0	40.680
39.0	0.89	21.46	39.0	36.490
40.0	0.82	19.28	40.0	32.540
41.0	0.77	18.56	41.0	29.160
42.0	0.72	18.59	42.0	26.410
43.0	0.69	19.15	43.0	24.220
44.0	0.65	20.27	44.0	22.420
45.0	0.61	21.55	45.0	20.920
50.0	0.51	37.04	50.0	15.630
100.0	0.26	30.08	100.0	3.440
150.0	0.24	22.26	150.0	1.650
200.0	0.24	20.42	200.0	1.070
250.0	0.25	19.84	250.0	0.790
300.0	0.26	19.21	300.0	0.650
350.0	0.28	18.69	350.0	0.560
400.0	0.29	18.08	400.0	0.500
450.0	0.31	17.49	450.0	0.460
500.0	0.32	16.88	500.0	0.440
550.0	0.35	16.38	550.0	0.420
600.0	0.37	15.79	600.0	0.400
650.0	0.40	15.36	650.0	0.380
700.0	0.41	14.80	700.0	0.360
750.0	0.44	14.36	750.0	0.360
800.0	0.46	13.93	800.0	0.360
850.0	0.49	13.55	850.0	0.340
900.0	0.51	13.17	900.0	0.350
950.0	0.54	12.86	950.0	0.340
1000.0	0.56	12.53	1000.0	0.350
1500.0	0.85	10.33	1500.0	0.360
2000.0	1.91	9.70	2000.0	0.420
3000.0	2.72	15.11	3000.0	0.420

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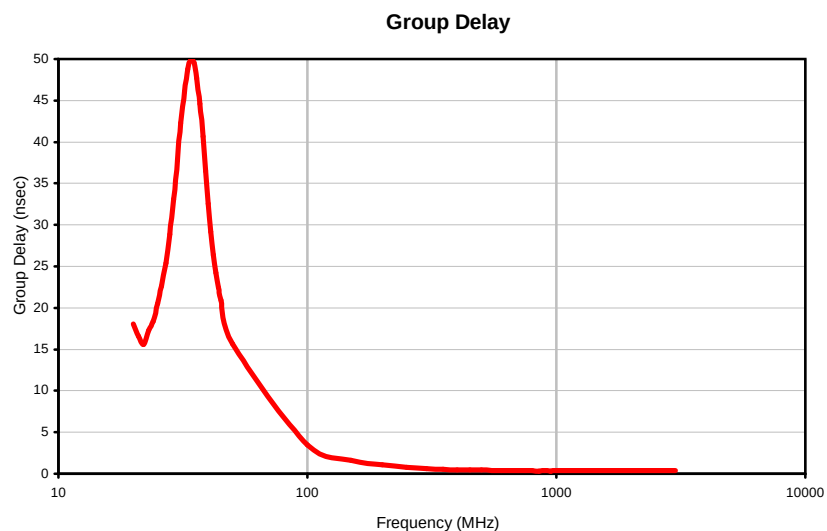
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NHP-50+

Typical Performance Curves



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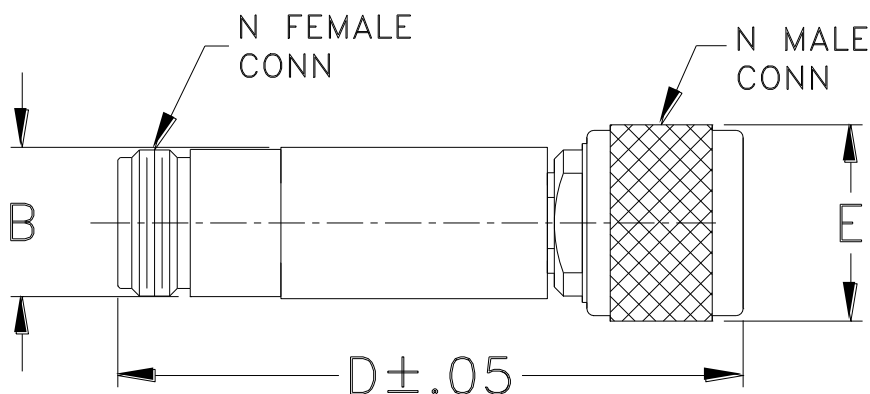


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Outline Dimensions



CASE #.	A	B	C	D	E	WT GRAMS
FF57	--	.70 (17.78)	--	2.90 (73.66)	.82 (20.83)	90.0

Dimensions are in inches (mm). Tolerances: 2Pl. ± .03; 3Pl. ± .015

Note:

1. Case material: Stainless steel.



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I