

Coaxial High Pass Filter

50Ω 90 to 2000 MHz

Maximum Ratings

Operating Temperature -55°C to +100°C

Storage Temperature -55°C to +100°C

RF Power Input 0.5 W 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-100+



Generic photo used for illustration purposes only

CASE STYLE: FF57

Connectors	Model
N-Type	NHP-100+

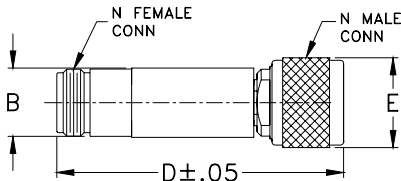
+RoHS Compliant

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

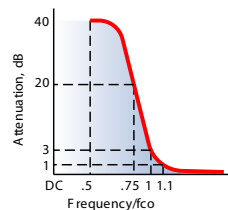
High Pass Filter Electrical Specifications

STOPBAND (MHz)	fco (MHz) Nom.	PASSBAND (MHz)	VSWR (:1)
(loss > 40 dB)	(loss 3 dB)	(loss < 1 dB)	Stopband Typ.
DC-40	82	90-2000	17
(loss > 20 dB)			Passband Typ.
40-55			1.5

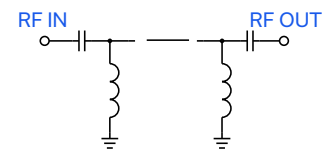
Outline Drawing



typical frequency response



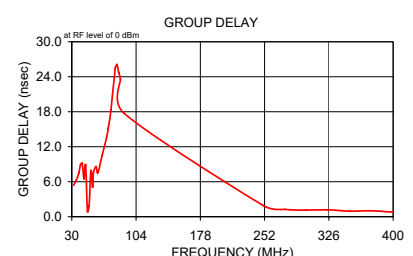
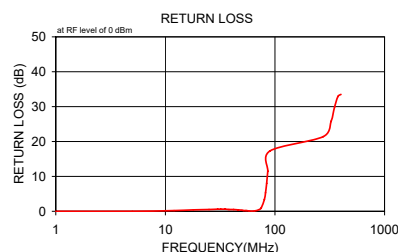
electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$	σ		
0.30	89.11	2.62	31.00	8.89
8.00	99.03	2.59	39.00	6.70
15.00	99.15	9.35	46.00	3.14
23.00	85.95	3.83	54.00	7.36
31.00	70.59	1.33	62.00	10.03
39.00	57.79	1.32	70.00	15.90
46.00	47.39	1.59	71.00	17.05
54.00	35.98	1.77	72.00	18.27
62.00	25.00	2.07	73.00	19.57
70.00	14.11	2.38	74.00	20.91
74.00	8.90	2.38	78.00	25.23
78.00	4.58	1.93	82.00	24.35
80.00	3.05	1.49	84.00	22.20
82.00	1.97	1.01	90.00	15.92
83.00	1.59	0.78	95.00	2.32
85.00	1.07	0.43	116.00	0.70
90.00	0.60	0.07	17.02	0.55
195.00	0.20	0.02	20.29	0.47
305.00	0.26	0.03	16.03	0.44
635.00	0.23	0.02	20.93	0.38
745.00	0.22	0.01	23.04	0.42
855.00	0.24	0.01	25.13	0.37
1075.00	0.21	0.01	28.66	0.34
1180.00	0.19	0.01	29.41	0.33
1290.00	0.23	0.01	29.30	0.31
1400.00	0.24	0.02	28.38	0.31
1510.00	0.24	0.02	27.07	0.29
1730.00	0.28	0.03	23.89	0.36
1840.00	0.27	0.03	22.20	0.34
2060.00	0.21	0.02	18.99	0.33
			2495.00	

Outline Dimensions (inch/mm)			
B	D	E	wt
.70	2.90	.82	grams
17.78	73.66	20.83	90.0



Notes

- A. 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.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. 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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REV. E
ECO-024530
NHP-100+
MCL NY
250214

Coaxial High Pass Filter

NHP-100+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
1.00	66.80	0.00	32.0	5.380
5.00	69.56	0.00	35.0	6.180
12.00	76.93	0.20	38.0	7.450
18.00	72.01	0.40	40.0	8.910
25.00	74.64	0.50	42.0	9.150
30.00	70.54	0.60	44.0	6.490
32.00	70.63	0.60	46.0	8.820
35.00	70.04	0.60	48.0	0.920
38.00	63.40	0.50	50.0	1.830
40.00	59.85	0.50	52.0	7.910
42.00	55.56	0.50	54.0	5.060
46.00	49.83	0.40	55.0	7.570
50.00	43.77	0.30	58.0	8.590
52.00	40.75	0.20	60.0	7.490
54.00	37.94	0.20	65.0	10.520
55.00	36.57	0.20	70.0	13.560
58.00	32.40	0.10	72.0	15.210
65.00	22.98	0.10	75.0	18.220
72.00	13.63	0.50	80.0	25.450
75.00	9.75	1.00	82.0	26.110
80.00	4.23	3.40	84.0	24.720
82.00	2.74	5.30	86.0	23.580
84.00	1.74	8.00	90.0	17.770
86.00	1.16	11.50	250.5	1.920
90.00	0.72	17.30	275.5	1.260
275.50	0.23	21.40	300.0	1.140
325.00	0.21	25.80	325.0	1.180
350.00	0.21	29.90	350.0	0.950
375.00	0.21	32.90	375.0	1.010
400.00	0.21	33.50	400.0	0.780

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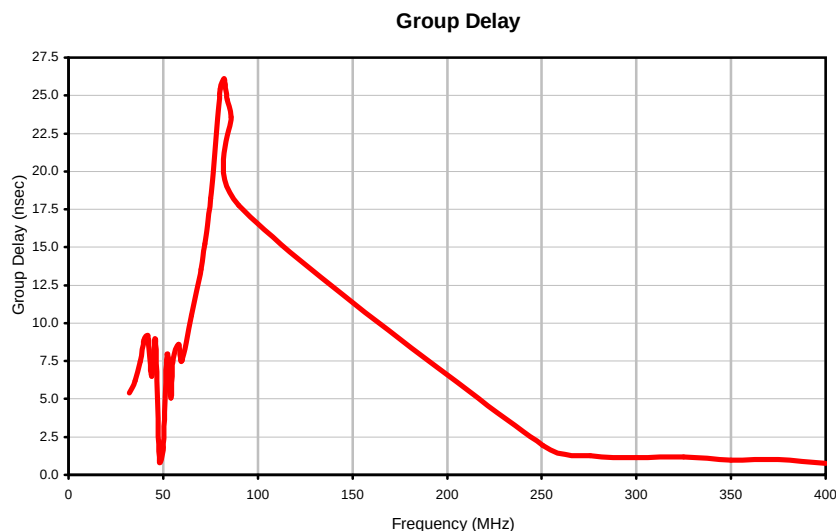
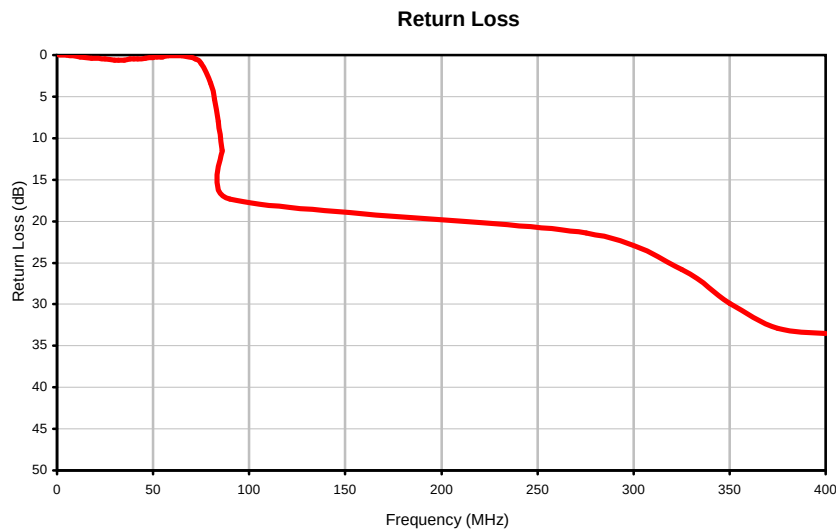
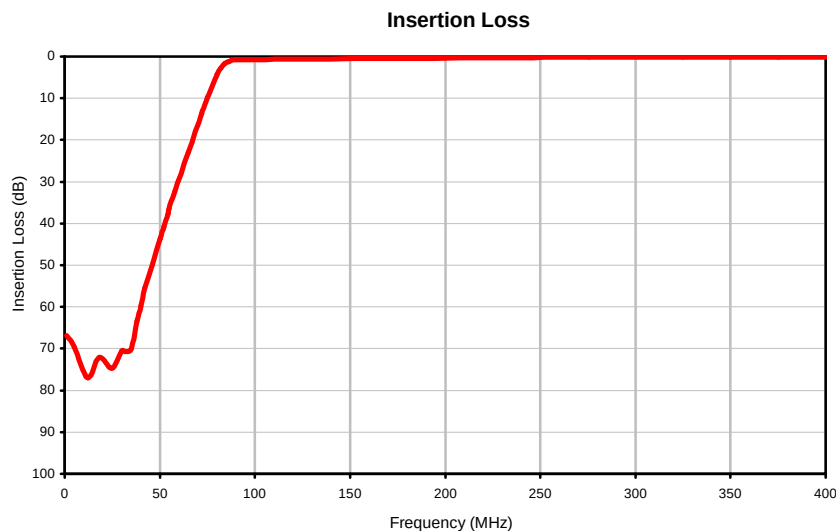
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NHP-100+

Typical Performance Curves



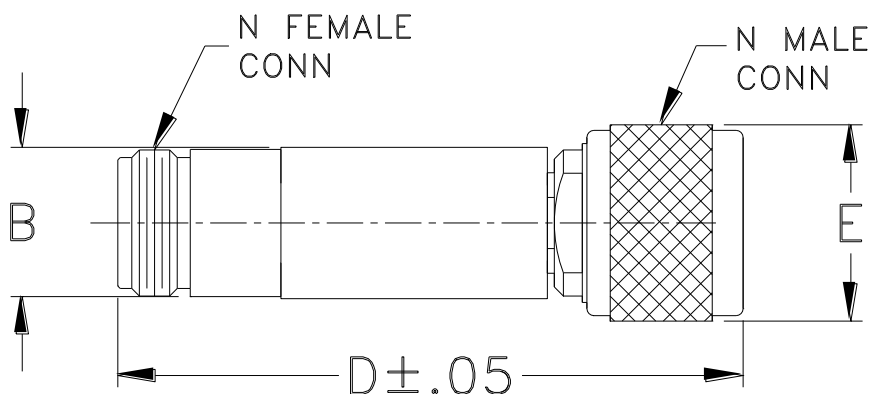
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Outline Dimensions



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