Coaxial

Bandpass Filter

NIF-70+
NIF-70

50Ω Constant Impedance 58 to 82 MHz

CASE STYLE: FF57

Connectors	Model	Price	Qty.
N-Type	NIF-70(+)	Contact Sales Dept.	

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W max.

Features

- low VSWR in pass & stopbands, 1.3:1 typ.
- rugged shielded case
- custom fo models available

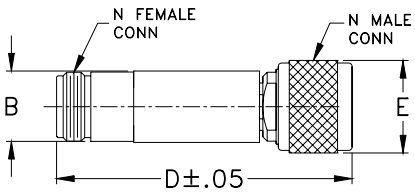
Applications

- harmonic rejection
- lab use

Bandpass Filter Electrical Specifications

MODEL NO.	CENTER FREQ. (MHz)	PASSBAND (MHz) (loss<1 dB)	STOPBANDS (loss > 10 dB) at MHz	STOPBANDS (loss > 20 dB) at MHz	VSWR, 1.3:1 Typ. TOTAL BAND (MHz)
NIF-70(+)	70	58-82	16 & 280	4.4 & 490	DC-550

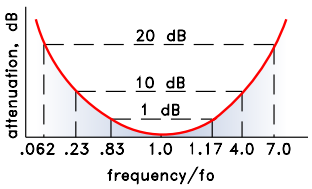
Outline Drawing



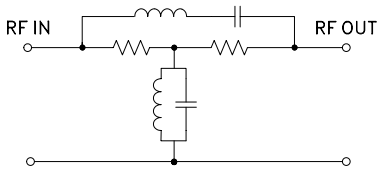
Outline Dimensions (inch / mm)

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

typical frequency response



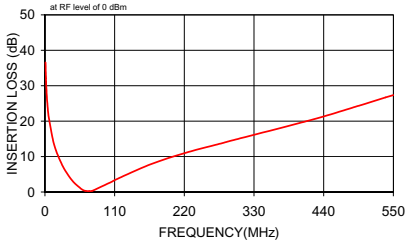
Electrical Schematic



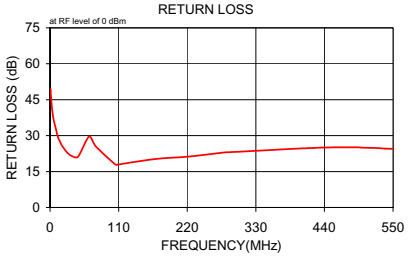
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) x̄	Insertion Loss (dB) σ	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
1.0	36.56	0.2	49.5	4.4	1.965
1.7	32.08	0.2	45.9	4.5	1.803
2.4	29.16	0.2	43.7	8.4	2.416
3.0	27.01	0.2	41.6	12.2	2.736
3.7	25.26	0.2	40.1	16.1	2.984
4.4	23.82	0.2	38.7	17.0	3.059
6.0	21.13	0.2	36.2	26.2	3.326
12.7	14.61	0.2	29.4	35.1	3.817
16.0	12.53	0.2	27.5	43.9	4.422
20.0	10.51	0.2	25.5	44.7	4.419
28.3	7.27	0.2	22.7	57.9	5.270
36.7	4.76	0.2	21.3	58.9	5.288
45.0	2.79	0.1	21.3	62.0	5.357
58.0	0.77	0.1	27.9	65.3	5.248
63.7	0.34	0.1	29.7	68.8	5.146
70.0	0.24	0.1	26.9	72.4	4.843
74.7	0.35	0.1	25.1	75.0	4.639
105.0	2.87	0.1	17.9	79.0	4.231
110.0	3.34	0.2	18.0	81.8	3.959
166.7	7.80	0.2	20.2	83.2	3.803
223.3	11.10	0.2	21.3	105.9	2.168
280.0	13.80	0.3	23.0	107.8	2.082
290.0	14.28	0.3	23.1	166.0	0.886
423.3	20.50	0.9	24.9	222.6	0.581
490.0	24.04	1.4	25.1	278.6	0.458
500.0	24.60	1.5	25.0	342.8	0.360
512.5	25.30	1.5	24.9	348.7	0.351
525.0	25.98	1.6	24.8	421.7	0.199
537.5	26.70	1.6	24.6	484.2	0.031
550.0	27.34	1.4	24.5	492.6	0.079

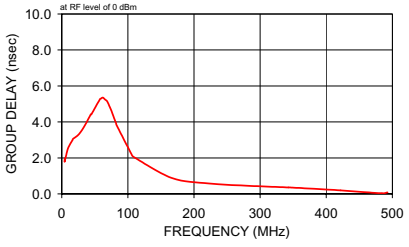
INSERTION LOSS



RETURN LOSS



GROUP DELAY



REV. A
M122594
NIF-70
100223

Coaxial Band Pass Filter (Constant Impedance) NIF-70

Typical Performance Data

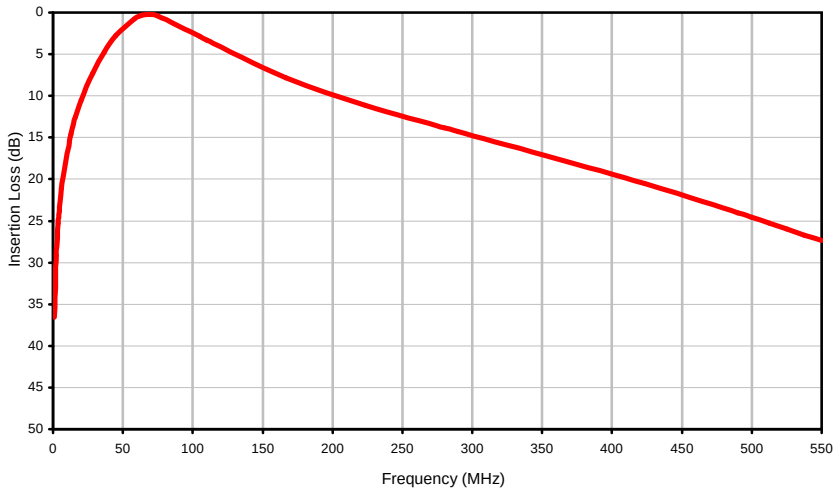
FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)
1.00	36.56	49.50
1.70	32.08	45.90
2.40	29.16	43.70
3.00	27.01	41.60
3.70	25.26	40.10
4.40	23.82	38.70
6.00	21.13	36.20
12.70	14.61	29.40
16.00	12.53	27.50
20.00	10.51	25.50
28.30	7.27	22.70
36.70	4.76	21.30
45.00	2.79	21.30
58.00	0.77	27.90
63.70	0.34	29.70
70.00	0.24	26.90
74.70	0.35	25.10
105.00	2.87	17.90
110.00	3.34	18.00
166.70	7.80	20.20
223.30	11.10	21.30
280.00	13.80	23.00
290.00	14.28	23.10
423.30	20.50	24.90
490.00	24.04	25.10
500.00	24.60	25.00
512.50	25.30	24.90
525.00	25.98	24.80
537.50	26.70	24.60
550.00	27.34	24.50

FREQUENCY (MHz)	GROUP DELAY (nsec)
4.4	1.965
4.5	1.803
8.4	2.416
12.2	2.736
16.1	2.984
17.0	3.059
26.2	3.326
35.1	3.817
43.9	4.422
44.7	4.419
57.9	5.270
58.9	5.288
62.0	5.357
65.3	5.248
68.8	5.146
72.4	4.843
75.0	4.639
79.0	4.231
81.8	3.959
83.2	3.803
105.9	2.168
107.8	2.082
166.0	0.886
222.6	0.581
278.6	0.458
342.8	0.360
348.7	0.351
421.7	0.199
484.2	0.031
492.6	0.079

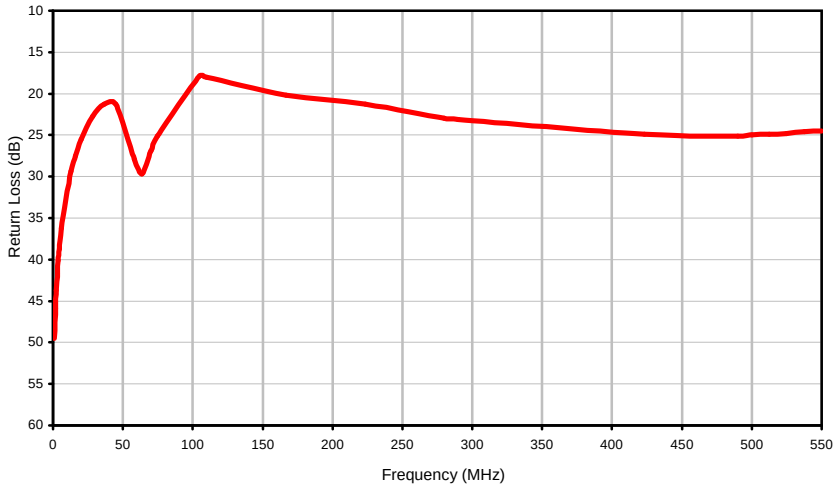
Coaxial Band Pass Filter (Constant Impedance) NIF-70

Typical Performance Curves

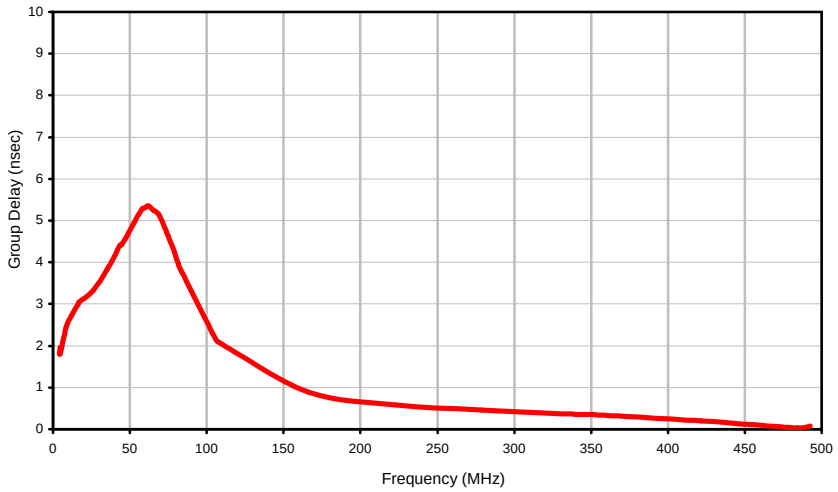
Insertion Loss



Return Loss



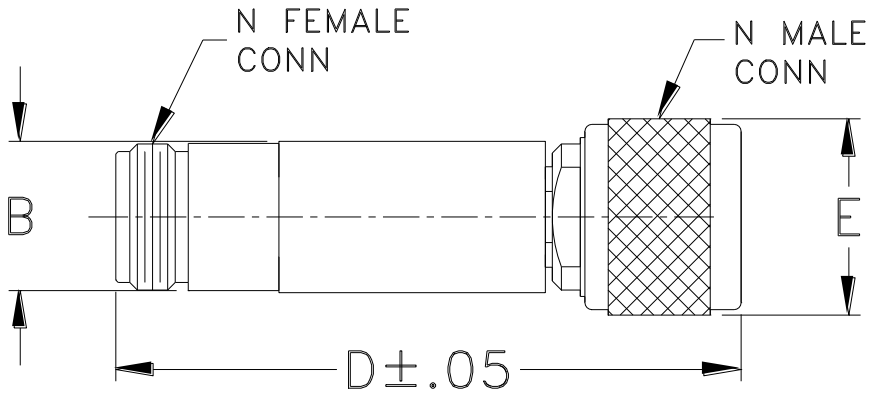
Group Delay



Case Style FF

FF57

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.

Mini-Circuits

Environmental Specifications ENV28

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