

Coaxial

Bandpass Filter

NON-CATALOG

NIF-40+
NIF-40

50Ω Constant Impedance 35 to 49 MHz

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 to models available

Applications

- harmonic rejection
- lab use



CASE STYLE: FF57

Connectors	Model	Price	Qty.
N-Type	NIF-40(+)	Contact Sales Dept.	

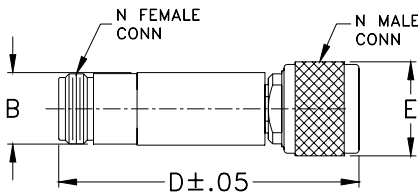
+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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

Bandpass Filter Electrical Specifications

MODEL NO.	CENTER FREQ. (MHz)	PASSBAND (MHz)	STOPBANDS		VSWR, 1.3:1 Typ. TOTAL BAND (MHz)
		(loss < 1 dB)	(loss > 10 dB) at MHz	(loss > 20 dB) at MHz	
NIF-40(+)	42	35-49	10 & 168	2.6 & 300	DC-400

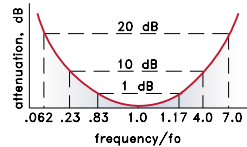
Outline Drawing



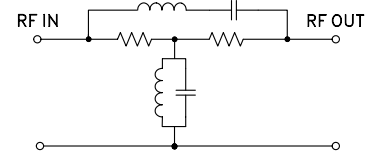
Outline Dimensions (inch/mm)

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

typical frequency response

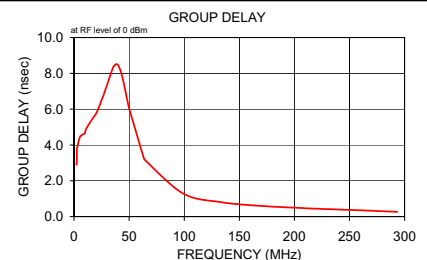
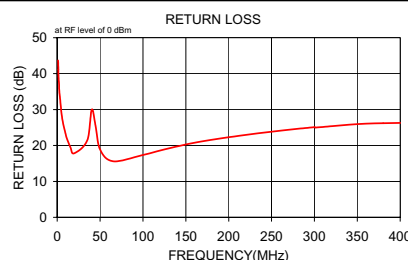


Electrical Schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$	σ			
1.0	31.97	0.1	43.7	2.3	2.895
1.3	29.62	0.1	41.1	2.6	3.319
1.6	27.72	0.1	39.1	2.7	3.755
2.0	26.20	0.1	37.6	5.2	4.422
2.3	24.90	0.1	36.1	7.5	4.574
2.6	23.77	0.1	34.9	9.9	4.649
3.0	22.54	0.1	33.7	11.0	4.904
5.3	17.56	0.1	28.5	16.1	5.402
7.7	14.41	0.1	25.3	20.9	5.852
10.0	12.05	0.1	23.0	26.2	6.700
11.0	11.21	0.1	22.2	27.1	6.840
15.3	8.20	0.1	19.5	35.1	8.288
19.7	5.92	0.1	17.8	36.3	8.399
35.0	0.86	0.1	21.4	37.6	8.498
40.3	0.23	0.1	30.0	39.6	8.488
44.7	0.31	0.1	25.5	41.7	8.249
50.0	0.88	0.1	18.9	43.2	7.937
65.0	3.17	0.1	15.6	45.4	7.393
99.3	7.37	0.2	17.3	47.0	6.910
133.7	10.43	0.2	19.4	48.7	6.395
168.0	12.93	0.3	21.1	50.4	5.956
212.0	15.76	0.3	22.7	63.1	3.323
256.0	18.46	0.4	24.0	64.2	3.167
300.0	21.25	0.5	25.1	98.9	1.296
301.0	21.32	0.5	25.0	132.6	0.812
320.8	22.67	0.6	25.4	168.9	0.599
340.60	24.13	0.7	25.8	207.7	0.474
360.40	25.67	0.9	26.1	211.3	0.462
380.20	27.40	1.1	26.2	255.6	0.363
400.00	29.24	1.4	26.3	293.4	0.264



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REV. A
 M98898
 NIF-40
 070509

Coaxial Band Pass Filter (Constant Impedance)

NIF-40

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
1.0	31.97	43.70	2.3	2.895
1.3	29.62	41.10	2.6	3.319
1.6	27.72	39.10	2.7	3.755
2.0	26.20	37.60	5.2	4.422
2.3	24.90	36.10	7.5	4.574
2.6	23.77	34.90	9.9	4.649
3.0	22.54	33.70	11.0	4.904
5.3	17.56	28.50	16.1	5.402
7.7	14.41	25.30	20.9	5.852
10.0	12.05	23.00	26.2	6.700
11.0	11.21	22.20	27.1	6.840
15.3	8.20	19.50	35.1	8.288
19.7	5.92	17.80	36.3	8.399
35.0	0.86	21.40	37.6	8.498
40.3	0.23	30.00	39.6	8.488
44.7	0.31	25.50	41.7	8.249
50.0	0.88	18.90	43.2	7.937
65.0	3.17	15.60	45.4	7.393
99.3	7.37	17.30	47.0	6.910
133.7	10.43	19.40	48.7	6.395
168.0	12.93	21.10	50.4	5.956
212.0	15.76	22.70	63.1	3.323
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300.0	21.25	25.10	98.9	1.296
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380.2	27.40	26.20	255.6	0.363
400.0	29.24	26.30	293.4	0.264

REV. X1

NIF-40

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Page 1 of 1



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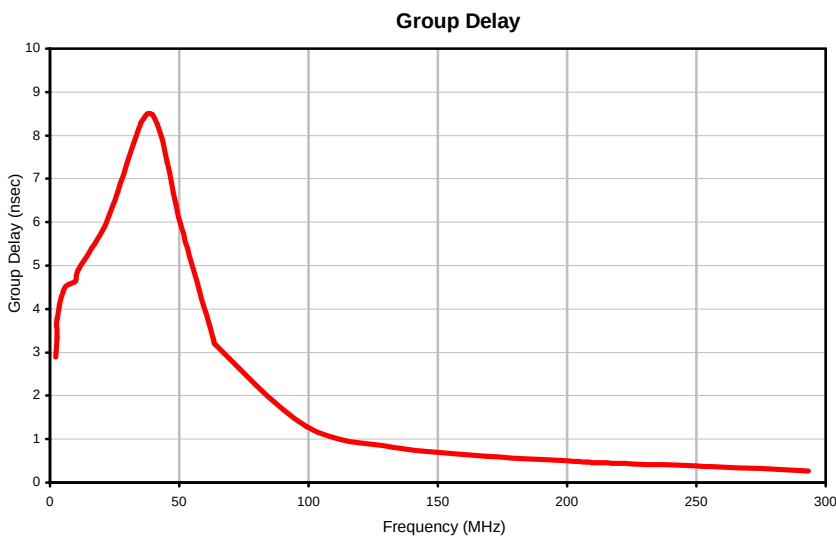
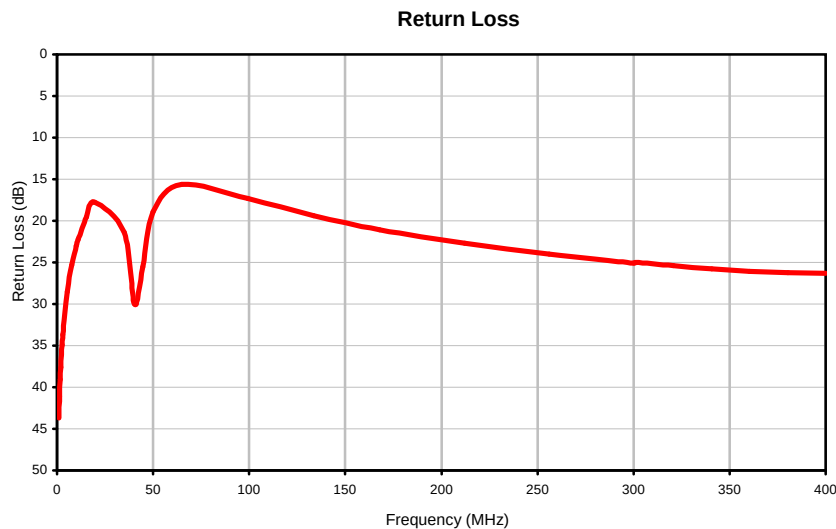
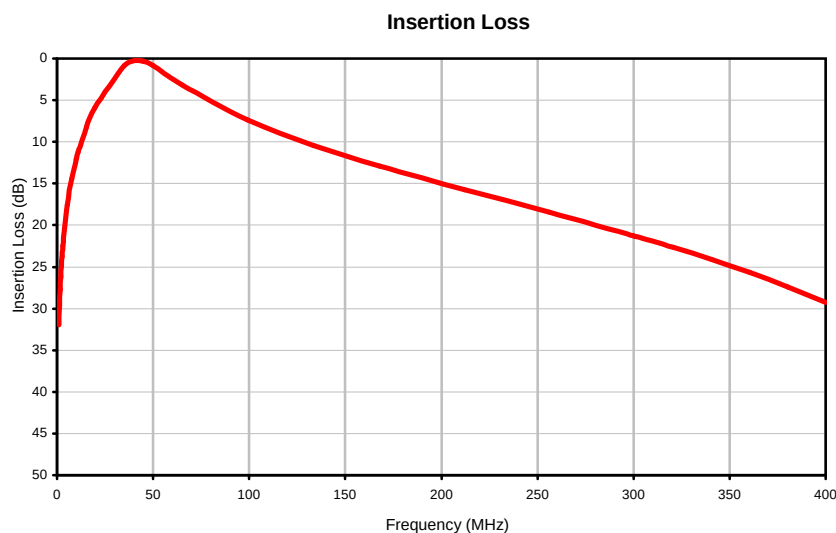
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Coaxial Band Pass Filter (Constant Impedance)

NIF-40

Typical Performance Curves



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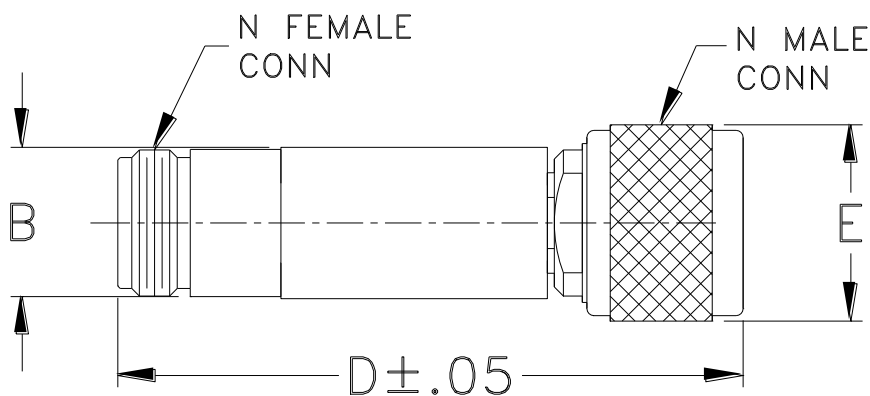


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REV. X1
NIF-40
080710
Page 1 of 1

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