

# Coaxial Bandpass Filter

NON-CATALOG

NIF-30+  
NIF-30

50Ω Constant Impedance 25 to 35 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 fo models available

## Applications

- harmonic rejection
- lab use



CASE STYLE: FF57

Connectors	Model	Price	Qty.
N-Type	NIF-30(+)	Contact Sales Dept.	

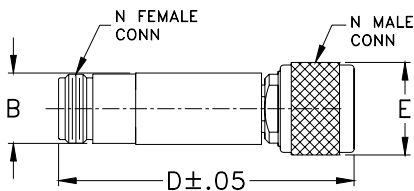
+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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) (loss < 1 dB)	STOPBANDS		VSWR, 1.3:1 Typ. TOTAL BAND (MHz)
			(loss > 10 dB at MHz)	(loss > 20 dB at MHz)	
NIF-30(+)	30	25-35	7 & 120	1.9 & 210	DC-330

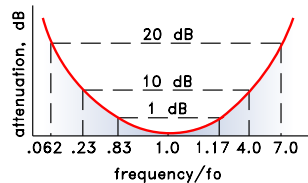
## Outline Drawing



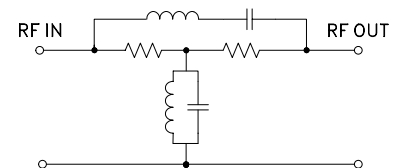
## Outline Dimensions (inch/mm)

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

## typical frequency response

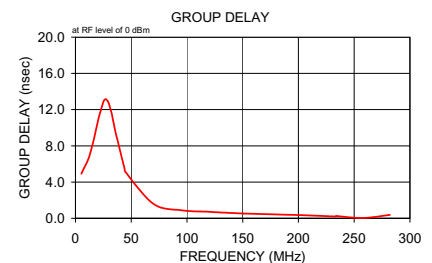


## Electrical Schematic



## Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$	$\sigma$			
1.0	30.97	0.1	59.5	5.3	4.911
1.2	29.52	0.1	57.9	7.0	5.392
1.4	28.29	0.1	57.1	8.0	5.612
1.5	27.23	0.1	56.5	12.0	6.685
1.7	26.25	0.1	56.0	16.0	8.448
1.9	25.40	0.1	55.5	20.0	10.612
2.0	24.95	0.1	55.8	21.0	11.190
5.3	16.33	0.1	49.5	25.0	12.864
7.0	13.88	0.1	47.5	26.0	13.075
8.0	12.64	0.1	46.0	27.3	13.145
12.0	8.66	0.1	41.6	28.8	12.980
16.0	5.59	0.1	37.4	30.0	12.639
20.0	3.10	0.1	33.5	31.0	12.237
26.0	0.66	0.1	29.6	32.3	11.647
28.7	0.26	0.1	28.0	33.8	10.775
31.0	0.25	0.1	26.7	35.0	10.047
33.7	0.55	0.1	26.1	36.0	9.449
44.0	2.99	0.1	27.1	44.0	5.471
45.0	3.25	0.1	27.2	45.0	5.093
70.0	8.33	0.1	30.4	70.0	1.581
95.0	11.72	0.1	31.5	95.0	0.883
120.0	14.33	0.1	31.8	120.0	0.718
121.0	14.43	0.1	31.8	121.0	0.703
180.0	19.47	0.1	31.2	150.8	0.518
210.0	21.85	0.1	30.8	180.3	0.428
211.0	21.93	0.1	30.8	210.0	0.305
258.6	26.09	0.2	29.8	233.8	0.196
282.4	28.52	0.2	29.3	234.0	0.244
306.2	31.23	0.3	28.7	258.0	0.031
330.0	34.20	0.4	28.2	282.0	0.378



**Mini-Circuits®**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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](http://www.minicircuits.com/MCLStore/terms.jsp).

REV. A  
M122594  
NIF-30  
100223

# Coaxial Band Pass Filter (Constant Impedance)

# NIF-30

## Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
1.0	30.97	59.50	5.3	4.911
1.2	29.52	57.90	7.0	5.392
1.4	28.29	57.10	8.0	5.612
1.5	27.23	56.50	12.0	6.685
1.7	26.25	56.00	16.0	8.448
1.9	25.40	55.50	20.0	10.612
2.0	24.95	55.80	21.0	11.190
5.3	16.33	49.50	25.0	12.864
7.0	13.88	47.50	26.0	13.075
8.0	12.64	46.00	27.3	13.145
12.0	8.66	41.60	28.8	12.980
16.0	5.59	37.40	30.0	12.639
20.0	3.10	33.50	31.0	12.237
26.0	0.66	29.60	32.3	11.647
28.7	0.26	28.00	33.8	10.775
31.0	0.25	26.70	35.0	10.047
33.7	0.55	26.10	36.0	9.449
44.0	2.99	27.10	44.0	5.471
45.0	3.25	27.20	45.0	5.093
70.0	8.33	30.40	70.0	1.581
95.0	11.72	31.50	95.0	0.883
120.0	14.33	31.80	120.0	0.718
121.0	14.43	31.80	121.0	0.703
180.0	19.47	31.20	150.8	0.518
210.0	21.85	30.80	180.3	0.428
211.0	21.93	30.80	210.0	0.305
258.6	26.09	29.80	233.8	0.196
282.4	28.52	29.30	234.0	0.244
306.2	31.23	28.70	258.0	0.031
330.0	34.20	28.20	282.0	0.378

REV. X1  
NIF-30  
060725  
Page 1 of 1



IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED • RoHS compliant  
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see

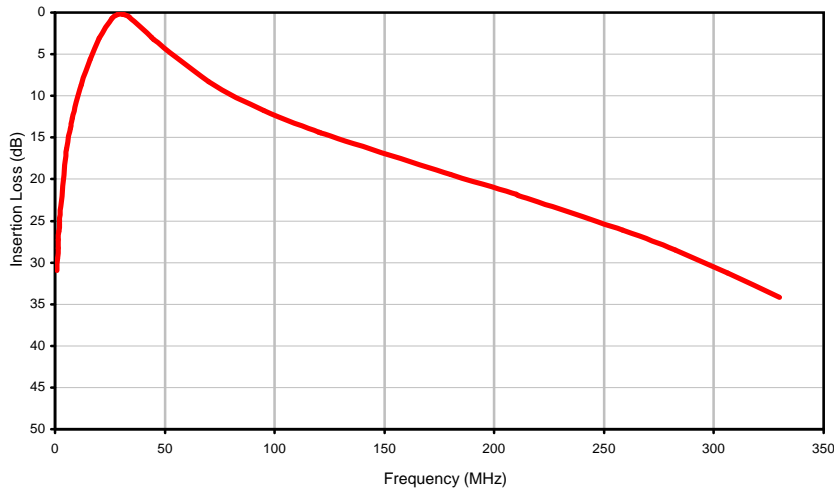


# Coaxial Band Pass Filter (Constant Impedance)

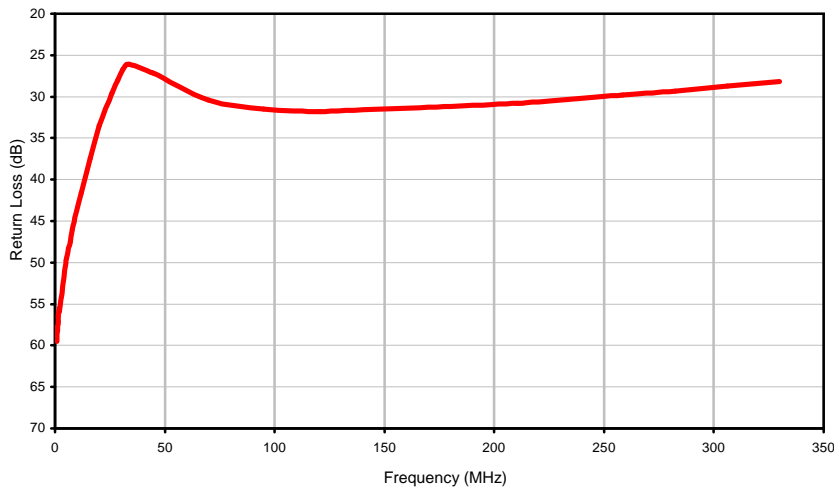
NIF-30

## Typical Performance Curves

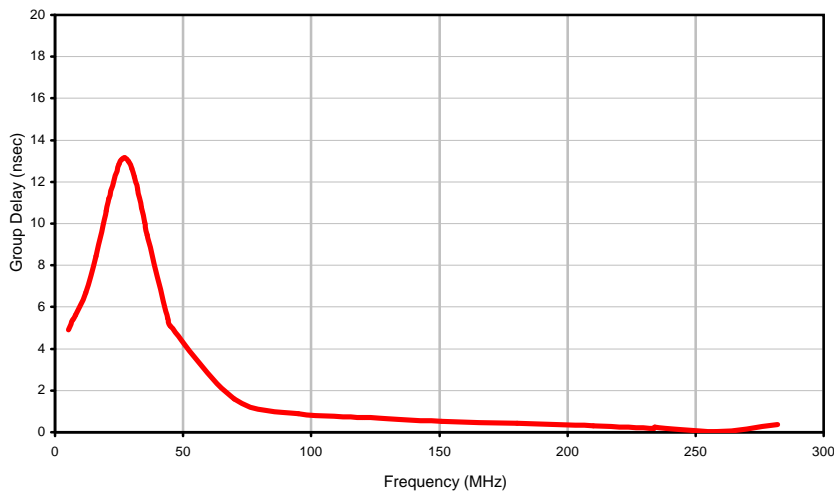
Insertion Loss



Return Loss



Group Delay



REV. X1  
NIF-30  
060725

Page 1 of 1



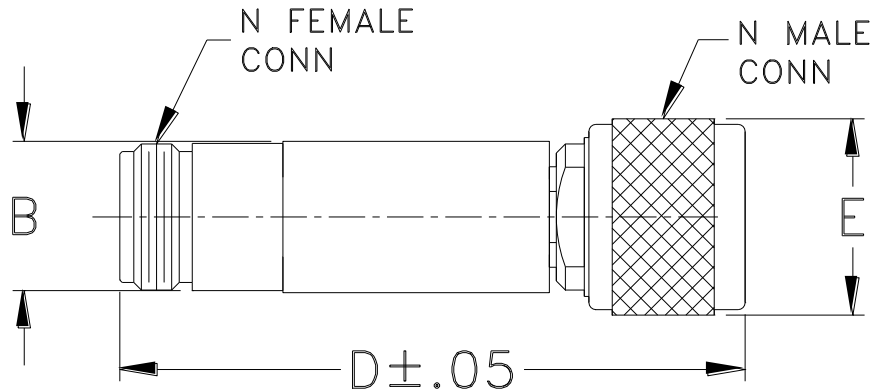
RF/MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED RoHS compliant  
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see



### 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.

<b>Specification</b>	<b>Test/Inspection Condition</b>	<b>Reference/Spec</b>
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