

Low Pass Filter

NLP-70+

50Ω DC to 60 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 NLP models available with wide selection of cut-off frequencies

Applications

- lab use
- test equipment
- video equipment



Generic photo used for illustration purposes only

CASE STYLE: FF57

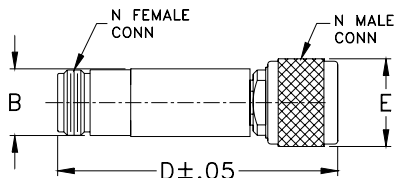
Connectors Model

N-Type NLP-70+

+RoHS Compliant

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

Outline Drawing



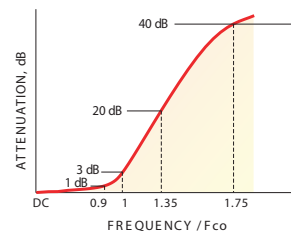
Outline Dimensions (inch/mm)

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

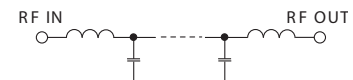
Low Pass Filter Electrical Specifications

PASSBAND (MHz)	fco (MHz) Nom.	STOPBAND (MHz)		VSWR (:1)	
(loss < 1 dB)	(loss 3 dB)	(loss > 20 dB)	(loss > 40 dB)	Passband Typ.	Stopband Typ.
DC-60	67	90-117	117-300	1.7	18

typical frequency response

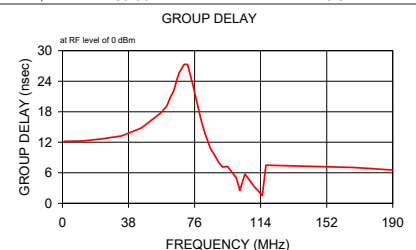
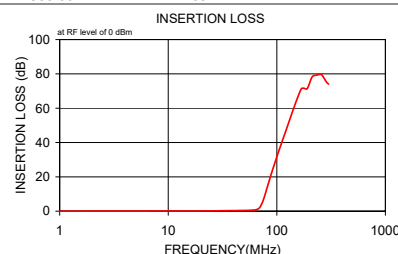
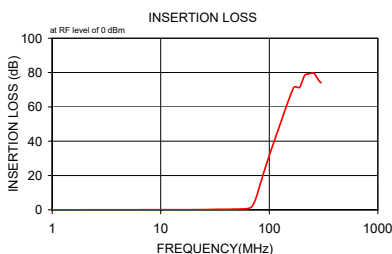


electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$	σ		
1.00	0.02	0.1	1.00	12.18
12.00	0.09	0.1	12.00	12.27
23.00	0.14	0.1	23.00	12.70
34.00	0.30	0.1	34.00	13.24
45.50	0.38	0.1	45.50	14.84
56.50	0.48	0.1	56.50	17.75
60.00	0.57	0.1	60.00	19.13
64.00	0.81	0.1	62.00	20.78
67.00	1.27	0.2	64.00	22.11
70.00	2.40	0.5	66.00	24.56
75.00	6.44	0.7	67.00	25.58
82.00	14.32	0.6	70.00	27.33
85.00	17.61	0.6	72.00	27.29
88.00	20.73	0.5	75.00	23.25
90.00	22.72	0.5	80.00	16.05
92.00	24.63	0.4	82.00	13.76
100.00	31.63	0.3	85.00	10.85
105.00	35.63	0.3	88.00	9.20
110.00	39.22	0.3	90.00	8.00
115.00	42.79	0.3	92.00	7.14
117.00	44.09	0.3	95.00	7.25
167.00	71.03	2.8	100.00	4.98
189.50	71.25	4.9	102.00	2.55
211.50	78.21	8.2	105.00	5.78
233.50	79.29	6.9	110.00	3.41
255.50	79.68	7.6	115.00	1.56
267.00	78.34	9.9	117.00	7.50
278.00	76.60	3.1	167.00	7.04
289.00	75.01	2.8	178.00	6.83
300.00	74.09	4.1	189.50	6.54



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



Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
2.0	0.03	31.80	2.0	13.370
5.0	0.06	24.41	5.0	12.970
10.0	0.11	19.80	10.0	12.520
15.0	0.13	18.59	15.0	13.090
20.0	0.13	19.87	20.0	13.410
25.0	0.12	25.00	25.0	13.850
30.0	0.12	35.55	30.0	14.320
35.0	0.17	21.77	35.0	14.800
40.0	0.25	17.38	40.0	15.300
45.0	0.32	15.92	45.0	16.160
50.0	0.35	16.55	50.0	17.560
60.0	0.55	16.82	60.0	24.470
65.0	1.95	6.35	65.0	29.780
69.0	5.21	2.47	69.0	27.000
73.0	9.84	1.08	73.0	19.650
74.0	11.05	0.92	74.0	17.990
75.0	12.27	0.80	75.0	16.490
100.0	37.18	0.34	100.0	4.170
105.0	41.24	0.33	105.0	3.390
200.0	65.61	0.27	200.0	1.490
250.0	66.60	0.25	250.0	0.550
1000.0	71.07	0.15	1000.0	3.510
1500.0	63.73	0.09	1500.0	0.340
2000.0	59.82	0.09	2000.0	0.830
2500.0	65.88	0.19	2500.0	1.590
3000.0	53.71	0.43	3000.0	0.450

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070603

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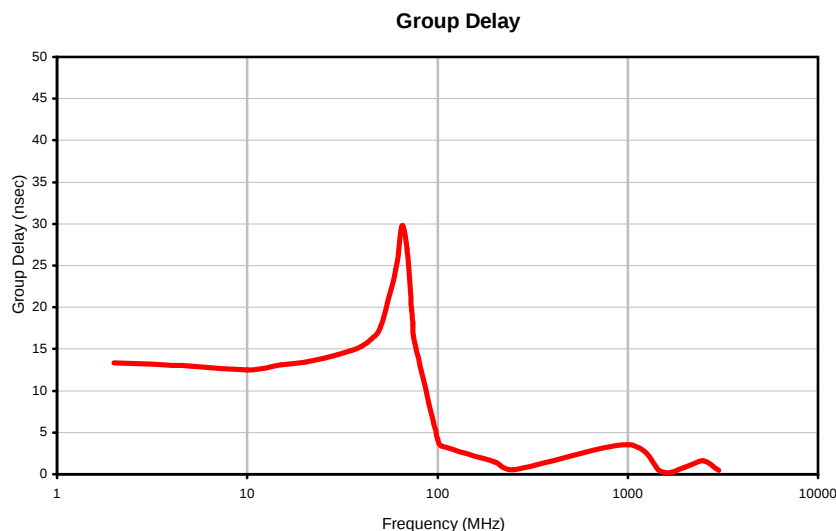
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Typical Performance Curves



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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