

Low Pass Filter

50Ω DC to 98 MHz
NLP-100+

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



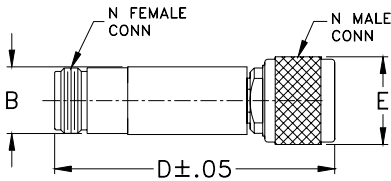
CASE STYLE: FF57

Connectors	Model
N-Type	NLP-100+

+RoHS Compliant

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

Outline Drawing



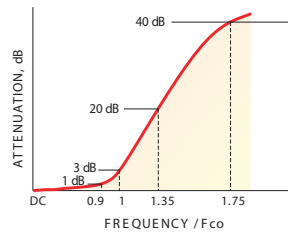
Outline Dimensions (inch/mm)

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

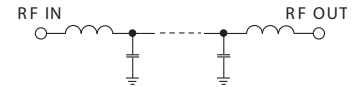
Low Pass Filter Electrical Specifications

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-98	108	146-189	189-400	1.7	18

typical frequency response

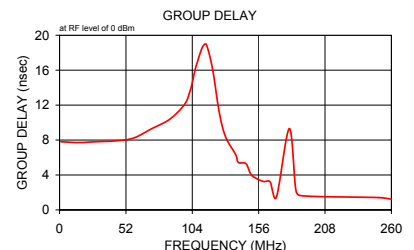
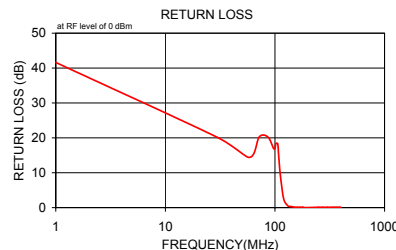
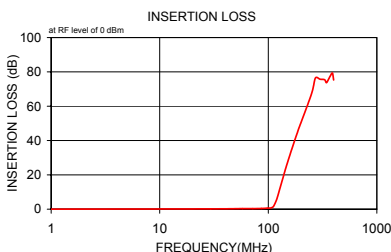


electrical schematic



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	41.6	1.00	7.802
29.50	0.16	0.1	20.2	15.00	7.718
58.00	0.34	0.1	14.4	29.50	7.812
72.00	0.31	0.1	20.3	43.50	7.901
86.50	0.41	0.1	20.2	58.00	8.226
98.00	0.58	0.1	16.8	72.00	9.283
102.00	0.62	0.1	18.4	86.50	10.402
106.00	0.75	0.1	18.3	98.00	12.091
108.00	0.93	0.2	15.0	102.00	13.505
112.00	1.72	0.5	9.3	104.00	14.551
120.00	5.98	1.3	2.5	106.00	15.904
130.01	13.62	1.3	0.6	108.00	16.952
138.02	19.37	1.2	0.3	112.00	18.647
140.02	20.73	1.2	0.3	115.00	18.923
146.02	24.55	1.2	0.2	120.00	16.027
150.03	26.95	1.1	0.1	125.00	11.256
160.03	32.54	1.2	0.1	130.00	8.381
170.04	37.64	1.2	0.1	138.00	6.335
180.04	42.35	1.2	0.1	140.00	5.440
185.04	44.43	1.3	0.0	146.00	5.302
189.05	46.24	1.4	0.0	150.00	4.068
250.07	67.20	3.6	0.1	155.00	3.545
271.58	76.41	8.4	0.1	160.00	3.249
300.08	75.73	6.4	0.1	165.00	3.192
330.08	75.45	3.9	0.1	170.00	1.495
343.07	73.72	2.6	0.1	180.00	9.308
360.08	75.87	4.3	0.1	185.00	2.440
371.58	77.51	9.8	0.1	189.00	1.634
390.08	79.32	7.8	0.1	250.00	1.412
400.08	75.26	2.4	0.1	260.00	1.228



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-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp



Coaxial Low Pass Filter

NLP-100+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
10.0	0.15	26.96	10.0	7.940
20.0	0.20	21.94	20.0	8.000
25.0	0.24	21.82	25.0	8.050
30.0	0.24	22.21	30.0	8.180
35.0	0.29	23.91	35.0	8.300
40.0	0.28	27.14	40.0	8.480
50.0	0.27	39.46	50.0	8.780
55.0	0.30	39.81	55.0	9.030
60.0	0.32	34.60	60.0	9.210
65.0	0.28	32.24	65.0	9.500
70.0	0.33	30.16	70.0	9.880
80.0	0.44	22.13	80.0	10.770
85.0	0.48	19.80	85.0	11.440
90.0	0.53	18.91	90.0	12.320
95.0	0.59	19.55	95.0	13.820
100.0	0.76	16.25	100.0	16.170
105.0	1.43	9.08	105.0	18.400
110.0	3.33	4.31	110.0	18.110
120.0	10.34	1.06	120.0	11.270
125.0	14.11	0.68	125.0	8.590
130.0	17.69	0.50	130.0	6.760
140.0	24.23	0.37	140.0	4.690
145.0	27.16	0.33	145.0	4.070
150.0	29.99	0.30	150.0	3.510
160.0	35.25	0.31	160.0	2.840
170.0	39.97	0.29	170.0	2.330
200.0	52.67	0.22	200.0	1.360
250.0	77.12	0.19	250.0	2.740
500.0	72.72	0.16	500.0	0.390
1000.0	74.22	0.15	1000.0	0.310
1500.0	68.27	0.23	1500.0	0.250
2500.0	56.98	0.29	2500.0	0.230
3000.0	56.83	0.32	3000.0	0.570

REV. X1
NLP-100+
070603
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Patent Pending



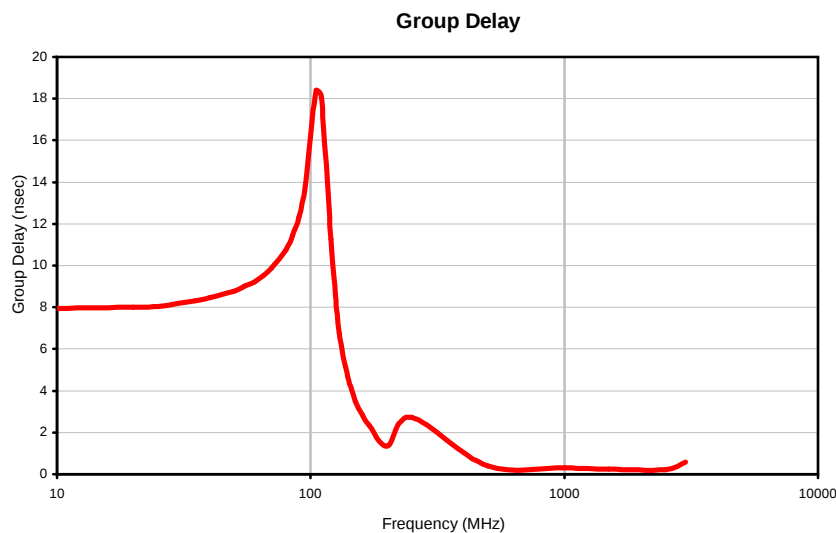
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Typical Performance Curves



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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