

Coaxial Low Pass Filter

NON-CATALOG

NBLP-117+
NBLP-117

50Ω Flat Time Delay DC to 65 MHz

Maximum Ratings

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

Features

- flat group delay for low pulse distortion
- rugged shielded case
- other NBLP models available with wide selection of cut-off frequencies

Applications

- linear modulation techniques
- voice transmission applications
- digital communications



CASE STYLE: FF57

Connectors	Model	Price	Qty.
N-Type	NBLP-117(+)	Contact Sales Dept.	

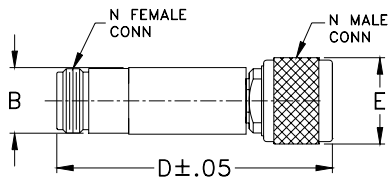
+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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

Low Pass Filter Electrical Specifications

PASSBAND (MHz)	fco, MHz Nom.	STOPBAND (MHz)	VSWR (:1)	GROUP DELAY VARIATION (nsec)
(loss < 1.2 dB) Min.	(loss 3 dB)	(loss > 10 dB) (loss > 20 dB)	DC-0.2fco DC-0.6fco	DC-fco DC-2fco DC-2.67fco
DC-65	117	234-312 312	1.3:1 2.4:1	0.35 1.4 1.9

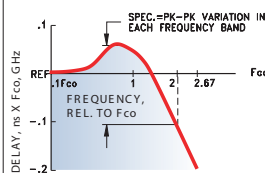
Outline Drawing



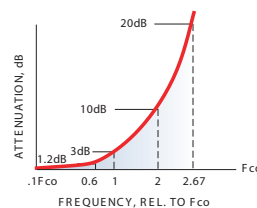
Outline Dimensions (inch/mm)

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

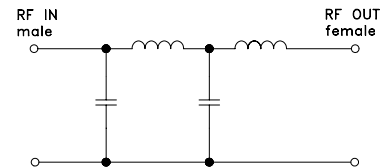
TYPICAL GROUP DELAY



TYPICAL FREQUENCY RESPONSE INSERTION LOSS

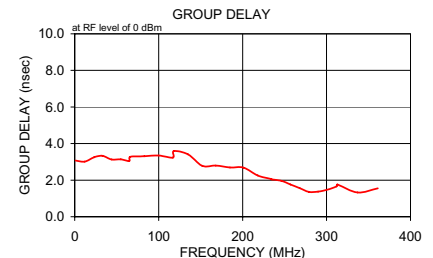
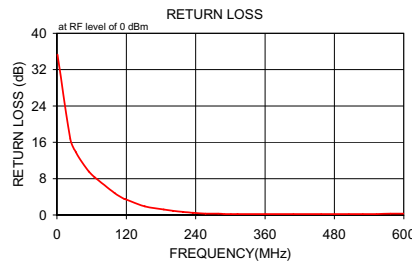
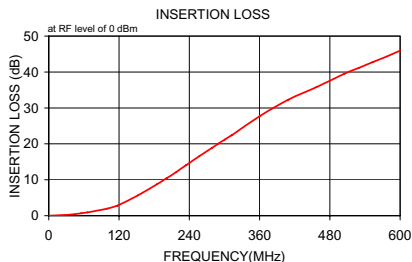


Electrical Schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
1.0	0.02	0.1	1.0	3.075
23.0	0.15	0.1	12.0	3.015
33.0	0.26	0.1	23.0	3.252
44.0	0.42	0.1	33.0	3.331
55.0	0.65	0.1	44.0	3.126
65.0	0.90	0.1	55.0	3.140
66.0	0.92	0.1	65.0	3.044
100.0	1.96	0.1	66.0	3.271
117.0	2.80	0.1	83.0	3.303
118.0	2.86	0.1	100.0	3.348
152.0	5.63	0.1	117.0	3.233
185.0	8.79	0.2	118.0	3.593
201.0	10.40	0.2	135.0	3.409
218.0	12.20	0.2	152.0	2.782
234.0	13.99	0.2	168.0	2.798
235.0	14.10	0.2	185.0	2.689
257.0	16.54	0.3	201.0	2.681
279.0	18.92	0.4	218.0	2.252
290.0	20.08	0.5	234.0	2.060
301.0	21.23	0.5	235.0	2.038
312.0	22.36	0.6	246.0	1.965
313.0	22.46	0.6	257.0	1.759
361.0	27.82	0.7	268.0	1.562
409.0	32.27	0.9	279.0	1.358
457.0	35.79	1.0	290.0	1.372
505.0	39.52	1.3	301.0	1.483
529.0	41.10	1.4	312.0	1.659
553.0	42.74	1.6	313.0	1.765
577.0	44.30	1.5	337.0	1.324
600.0	45.95	2.0	361.0	1.555



Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

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

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-Circuits' 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.

REV. A
M122594
NBLP-117
100201

Coaxial Low Pass Filter (Flat Time Delay)

NBLP-117+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
1.0	0.02	35.30	1.0	3.075
23.0	0.15	16.80	12.0	3.015
33.0	0.26	13.80	23.0	3.252
44.0	0.42	11.50	33.0	3.331
55.0	0.65	9.60	44.0	3.126
65.0	0.90	8.30	55.0	3.140
66.0	0.92	8.20	65.0	3.044
100.0	1.96	4.80	66.0	3.271
117.0	2.80	3.50	83.0	3.303
118.0	2.86	3.50	100.0	3.348
152.0	5.63	1.90	117.0	3.233
185.0	8.79	1.20	118.0	3.593
201.0	10.40	0.90	135.0	3.409
218.0	12.20	0.70	152.0	2.782
234.0	13.99	0.50	168.0	2.798
235.0	14.10	0.50	185.0	2.689
257.0	16.54	0.30	201.0	2.681
279.0	18.92	0.30	218.0	2.252
290.0	20.08	0.20	234.0	2.060
301.0	21.23	0.20	235.0	2.038
312.0	22.36	0.20	246.0	1.965
313.0	22.46	0.20	257.0	1.759
361.0	27.82	0.20	268.0	1.562
409.0	32.27	0.20	279.0	1.358
457.0	35.79	0.20	290.0	1.372
505.0	39.52	0.20	301.0	1.483
529.0	41.10	0.20	312.0	1.659
553.0	42.74	0.20	313.0	1.765
577.0	44.30	0.30	337.0	1.324
600.0	45.95	0.30	361.0	1.555

REV. X1
NBLP-117+
060724
Page 1 of 1



Mini-Circuits®
IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS9100 CERTIFIED • RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

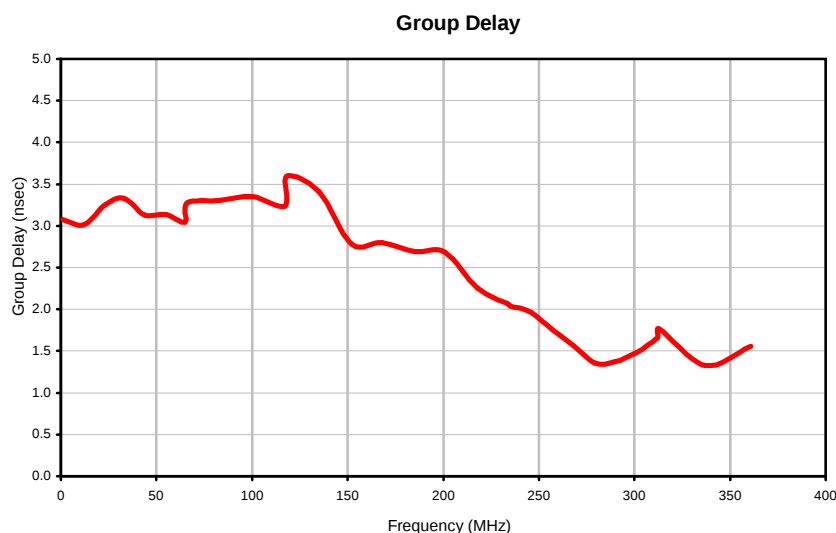
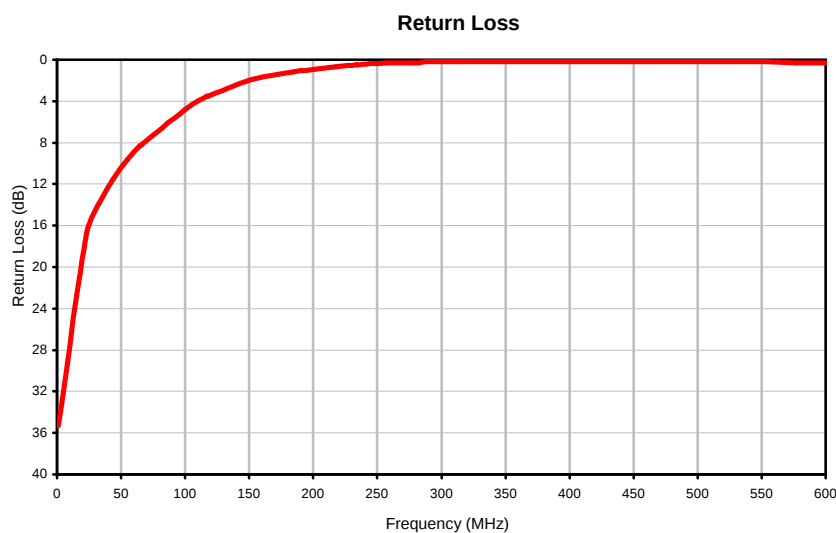
The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see



Coaxial Low Pass Filter (Flat Time Delay)

NBLP-117+

Typical Performance Curves



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



REV. X1
NBLP-117+
060724
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 85°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
HAST	130°C, 85% RH, 96 hours	JESD22-A110
Humidity	90 to 95% RH, 240 hours, 50°C	MIL-STD-202, Method 103, Condition A, Except 50°C and end-point electrical test done within 12 hours
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
Solder Reflow Heat	Sn-Pb Eutectic Process: 225°C peak Pb-Free Process, 245°C peak	J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1
Solderability	10X Magnification	J-STD-002, Para 4.2.5, Test S, 95% Coverage
Vibration (High Frequency)	20g peak, 20-2000 Hz, 4 times in each of three axes (total 12)	MIL-STD-883, Method 2007.3, Condition A
Mechanical Shock	50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes	MIL-STD-202, Method 213, Condition A
Marking Resistance to Solvents	Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C; distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C	MIL-STD-202, Method 215