

50Ω Flat Time Delay DC to 280 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

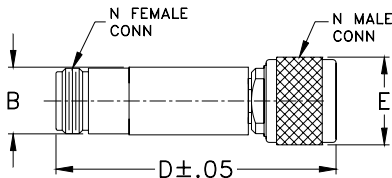


CASE STYLE: FF57

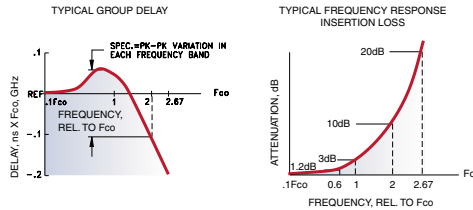
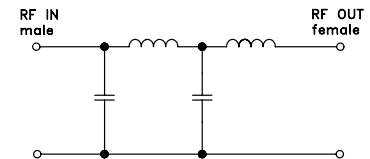
Connectors	Model	Price	Qty.
N-Type	NBLP-467	Contact Sales Dept.	

Low Pass Filter Electrical Specifications

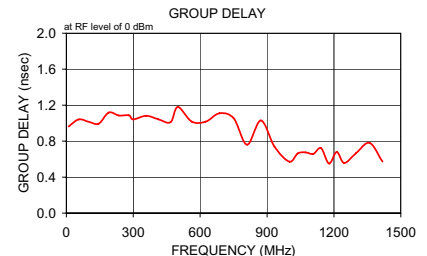
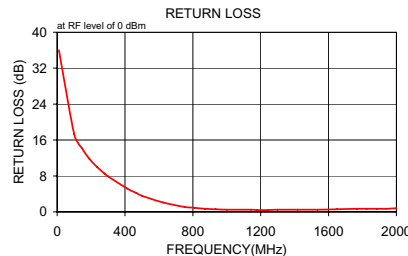
PASSBAND (MHz)	fco, MHz Nom.	STOPBAND (MHz)		VSWR (:1)		GROUP DELAY VARIATION (nsec)		
		(loss > 10 dB)	(loss > 20 dB)	DC-0.2fco	DC-0.6fco	DC-fco	DC-2fco	DC-2.67fco
(loss < 1.2 dB) Min.	(loss 3 dB)			$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$
DC-280	467	934-1246	1246	1.25:1	2.2:1	0.15	0.4	0.55

Outline Drawing**Outline Dimensions (inch/mm)**

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

Electrical Schematic**Typical Performance Data**

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{X}$	σ			
10.0	0.07	0.1	36.0	10.0	0.963
100.0	0.18	0.1	17.3	55.0	1.041
145.0	0.28	0.1	14.2	100.0	1.016
190.0	0.42	0.1	11.8	145.0	0.994
235.0	0.61	0.1	10.0	190.0	1.118
280.0	0.85	0.1	8.5	235.0	1.085
300.0	0.98	0.1	7.9	280.0	1.088
412.0	2.01	0.1	5.2	300.0	1.042
467.0	2.72	0.1	4.2	357.5	1.083
500.0	3.19	0.2	3.6	412.5	1.043
625.0	5.57	0.2	2.1	467.0	1.010
750.0	8.71	0.3	1.1	500.0	1.180
810.0	10.34	0.4	0.9	562.5	1.017
872.0	12.19	0.4	0.7	625.0	1.017
934.0	14.02	0.5	0.6	687.5	1.110
1000.0	15.94	0.5	0.5	750.0	1.055
1072.5	18.12	0.6	0.5	810.0	0.762
1142.5	20.11	0.7	0.5	872.5	1.030
1177.5	21.14	0.7	0.4	934.0	0.736
1212.5	22.15	0.7	0.4	1000.0	0.572
1246.0	23.12	0.8	0.4	1037.5	0.663
1300.0	24.56	0.8	0.5	1072.5	0.675
1417.5	27.75	0.9	0.5	1107.5	0.659
1535.0	30.82	1.0	0.5	1142.5	0.722
1650.0	33.70	1.1	0.6	1177.5	0.551
1767.5	36.46	1.2	0.7	1212.5	0.679
1825.0	37.83	1.5	0.7	1246.0	0.558
1885.0	39.23	1.6	0.7	1300.0	0.668
1942.5	40.45	1.6	0.7	1360.0	0.781
2000.0	41.59	1.8	0.8	1417.5	0.573



Coaxial Low Pass Filter (Flat Time Delay)

NBLP-467

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
10.0	0.07	36.00	10.0	0.963
100.0	0.18	17.30	55.0	1.041
145.0	0.28	14.20	100.0	1.016
190.0	0.42	11.80	145.0	0.994
235.0	0.61	10.00	190.0	1.118
280.0	0.85	8.50	235.0	1.085
300.0	0.98	7.90	280.0	1.088
412.0	2.01	5.20	300.0	1.042
467.0	2.72	4.20	357.5	1.083
500.0	3.19	3.60	412.5	1.043
625.0	5.57	2.10	467.0	1.010
750.0	8.71	1.10	500.0	1.180
810.0	10.34	0.90	562.5	1.017
872.0	12.19	0.70	625.0	1.017
934.0	14.02	0.60	687.5	1.110
1000.0	15.94	0.50	750.0	1.055
1072.5	18.12	0.50	810.0	0.762
1142.5	20.11	0.50	872.5	1.030
1177.5	21.14	0.40	934.0	0.736
1212.5	22.15	0.40	1000.0	0.572
1246.0	23.12	0.40	1037.5	0.663
1300.0	24.56	0.50	1072.5	0.675
1417.5	27.75	0.50	1107.5	0.659
1535.0	30.82	0.50	1142.5	0.722
1650.0	33.70	0.60	1177.5	0.551
1767.5	36.46	0.70	1212.5	0.679
1825.0	37.83	0.70	1246.0	0.558
1885.0	39.23	0.70	1300.0	0.668
1942.5	40.45	0.70	1360.0	0.781
2000.0	41.59	0.80	1417.5	0.573

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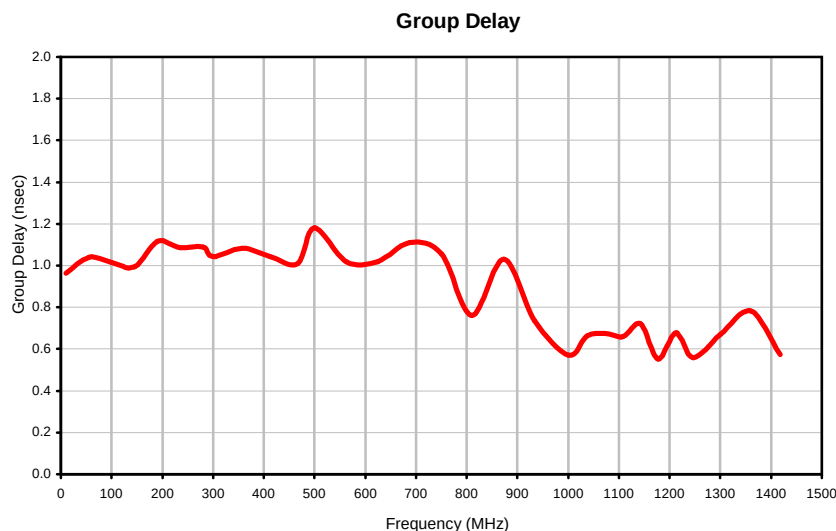
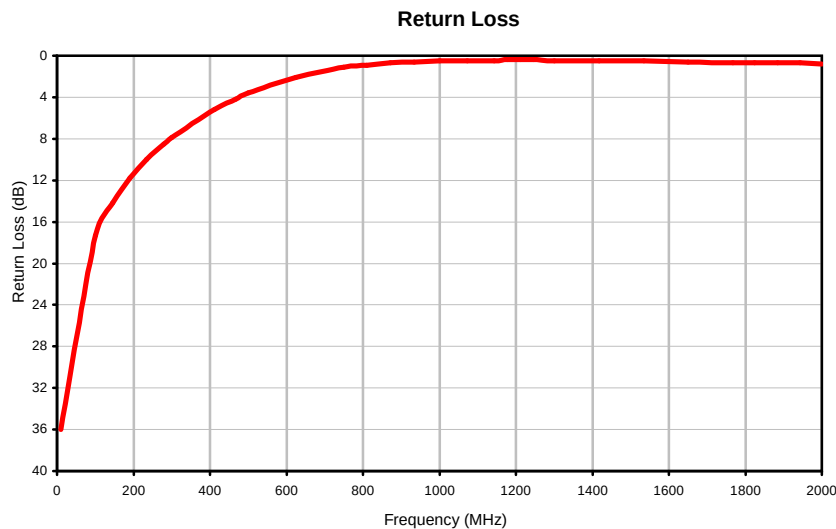
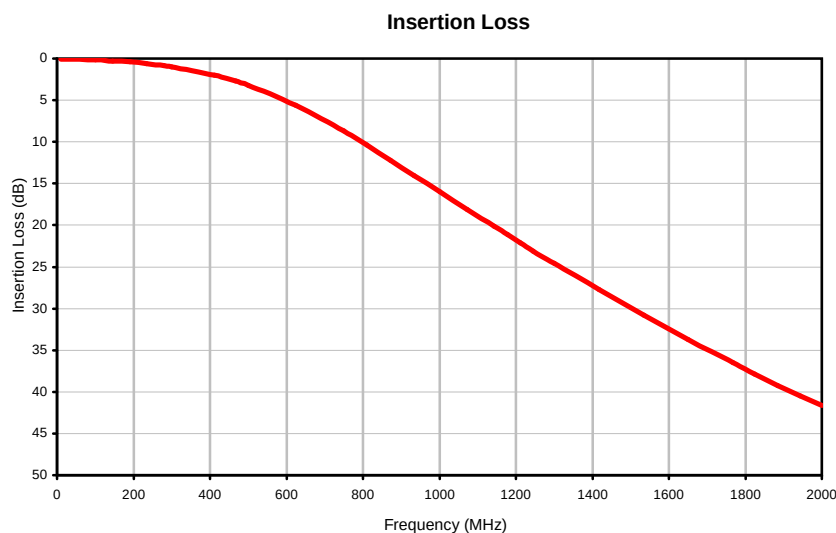
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Coaxial Low Pass Filter (Flat Time Delay)

NBLP-467

Typical Performance Curves



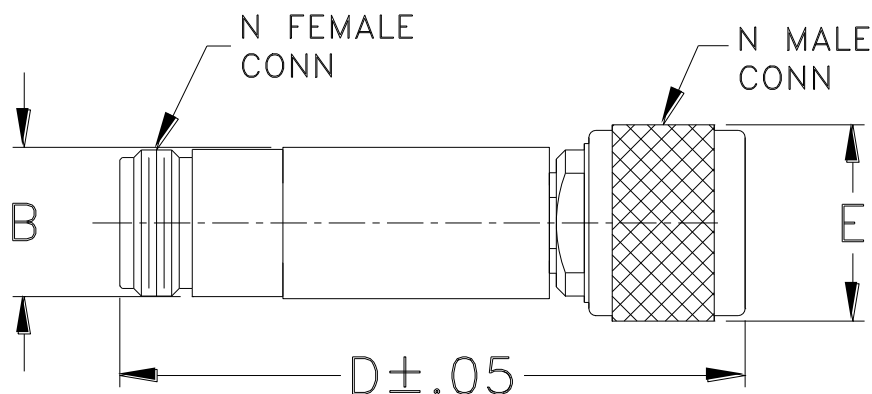
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Outline Dimensions



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