

Coaxial

Low Pass Filter

NON-CATALOG

NBLP-933

50Ω Flat Time Delay DC to 560 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



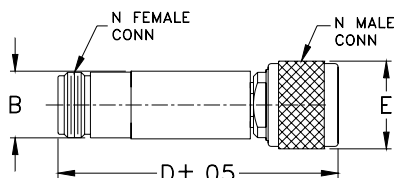
CASE STYLE: FF57

Connectors	Model	Price	Qty.
N-Type	NBLP-933	Contact Sales Dept.	

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 $\bar{X}$ $\bar{X}$	DC-fco DC-2fco DC-2.67fco $\bar{X}$ $\bar{X}$ $\bar{X}$
DC-560	933	1866-2490 2490	1.3:1 2.2:1	0.09 0.2 0.28

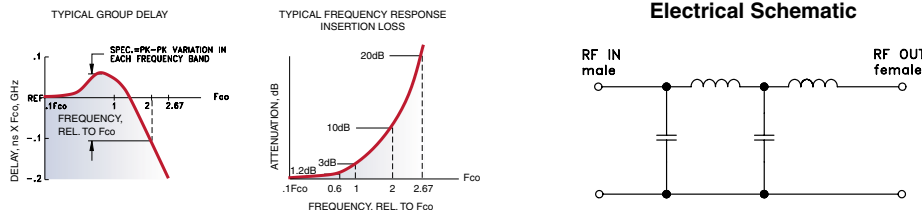
Outline Drawing



Outline Dimensions (inch/mm)

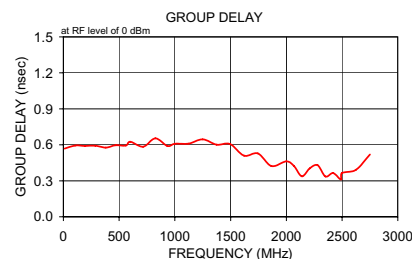
B	D	E	wt
.67	2.90	.82	grams
17.02	73.66	20.83	90.0

Electrical Schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{X}$ σ			
10.0	0.01	0.1	10.0	0.568
195.0	0.11	0.1	105.0	0.594
285.0	0.21	0.1	195.0	0.591
380.0	0.38	0.1	285.0	0.593
470.0	0.59	0.1	380.0	0.577
560.0	0.88	0.1	470.0	0.596
600.0	1.05	0.1	560.0	0.594
825.0	2.24	0.1	600.0	0.626
933.0	3.00	0.1	715.0	0.584
1000.0	3.49	0.1	825.0	0.654
1250.0	5.97	0.1	933.0	0.591
1495.0	9.72	0.1	1000.0	0.609
1620.0	12.16	0.2	1125.0	0.610
1745.0	14.88	0.2	1250.0	0.645
1866.0	17.63	0.3	1375.0	0.601
2000.0	20.52	0.3	1495.0	0.606
2140.0	23.58	0.3	1620.0	0.510
2280.0	26.55	0.2	1745.0	0.528
2350.0	28.00	0.2	1866.0	0.423
2420.0	29.40	0.2	2000.0	0.462
2490.0	30.81	0.3	2070.0	0.422
2500.0	30.99	0.3	2140.0	0.338
2750.0	35.70	0.5	2210.0	0.404
3000.0	35.69	1.0	2280.0	0.430
3250.0	44.45	2.1	2350.0	0.336
3500.0	50.66	4.7	2420.0	0.364
3625.0	52.33	4.9	2490.0	0.310
3750.0	52.01	3.4	2500.0	0.366
3875.0	50.70	2.2	2625.0	0.392
4000.0	49.92	2.5	2750.0	0.519



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RF/IF MICROWAVE COMPONENTS

REV. OR
M97867
NBLP-933
070509

Coaxial Low Pass Filter (Flat Time Delay)

NBLP-933

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
10.0	0.01	43.30	10.0	0.568
195.0	0.11	18.10	105.0	0.594
285.0	0.21	14.50	195.0	0.591
380.0	0.38	11.60	285.0	0.593
470.0	0.59	9.40	380.0	0.577
560.0	0.88	7.60	470.0	0.596
600.0	1.05	7.00	560.0	0.594
825.0	2.24	4.20	600.0	0.626
933.0	3.00	3.30	715.0	0.584
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3625.0	52.33	0.30	2490.0	0.310
3750.0	52.01	0.30	2500.0	0.366
3875.0	50.70	0.30	2625.0	0.392
4000.0	49.92	0.30	2750.0	0.519

REV. X1
NBLP-933
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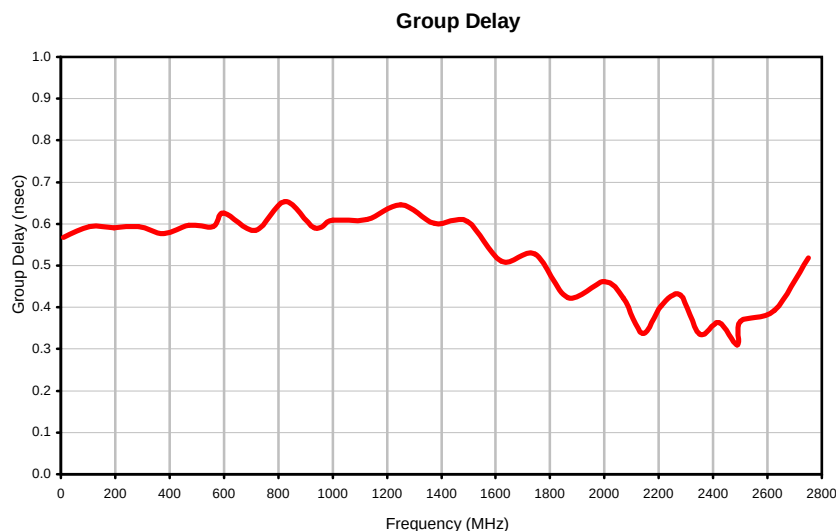


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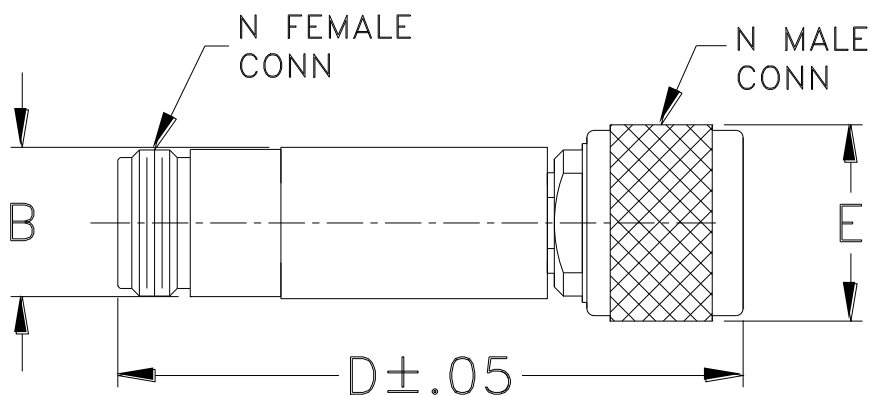
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Typical Performance Curves



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