NON-CATALOG

Coaxial

Low Pass Filter

BBLP-467+
BBLP-467

50Ω Flat Time Delay DC to 280 MHz

CASE STYLE: FF55

Connectors	Model	Price	Qty.
BNC	BBLP-467(+)	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.

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 BBLP models available with wide selection of cut-off frequencies

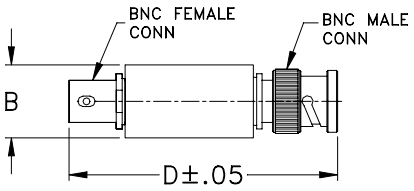
Applications

- linear modulation techniques
- voice transmission applications
- digital communications

Low Pass Filter Electrical Specifications

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

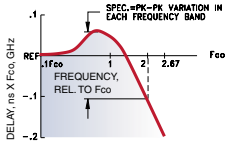
Outline Drawing



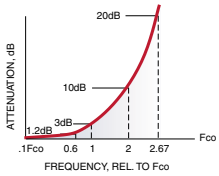
Outline Dimensions (inch / mm)

B	D	wt
.54	2.59	grams
13.72	65.79	40.0

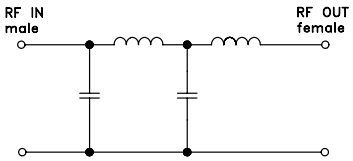
TYPICAL GROUP DELAY



TYPICAL FREQUENCY RESPONSE INSERTION LOSS



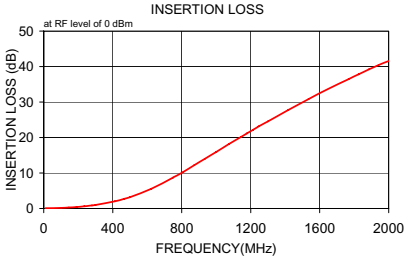
Electrical Schematic



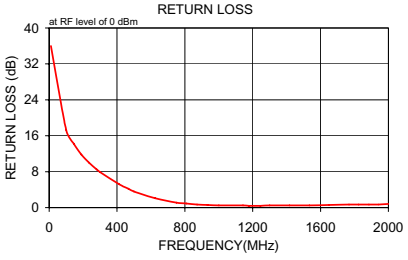
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) x̄	Insertion Loss (dB) σ	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
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

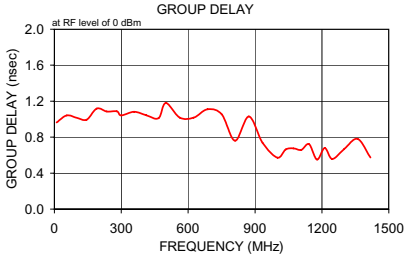
INSERTION LOSS



RETURN LOSS



GROUP DELAY



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RF/IF MICROWAVE COMPONENTS

REV. A
M98898
BBLP-467
070509

Coaxial Low Pass Filter (Flat Time Delay) BBLP-467+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)
10.0	0.07	36.00
100.0	0.18	17.30
145.0	0.28	14.20
190.0	0.42	11.80
235.0	0.61	10.00
280.0	0.85	8.50
300.0	0.98	7.90
412.0	2.01	5.20
467.0	2.72	4.20
500.0	3.19	3.60
625.0	5.57	2.10
750.0	8.71	1.10
810.0	10.34	0.90
872.0	12.19	0.70
934.0	14.02	0.60
1000.0	15.94	0.50
1072.5	18.12	0.50
1142.5	20.11	0.50
1177.5	21.14	0.40
1212.5	22.15	0.40
1246.0	23.12	0.40
1300.0	24.56	0.50
1417.5	27.75	0.50
1535.0	30.82	0.50
1650.0	33.70	0.60
1767.5	36.46	0.70
1825.0	37.83	0.70
1885.0	39.23	0.70
1942.5	40.45	0.70
2000.0	41.59	0.80

FREQUENCY (MHz)	GROUP DELAY (nsec)
10.0	0.963
55.0	1.041
100.0	1.016
145.0	0.994
190.0	1.118
235.0	1.085
280.0	1.088
300.0	1.042
357.5	1.083
412.5	1.043
467.0	1.010
500.0	1.180
562.5	1.017
625.0	1.017
687.5	1.110
750.0	1.055
810.0	0.762
872.5	1.030
934.0	0.736
1000.0	0.572
1037.5	0.663
1072.5	0.675
1107.5	0.659
1142.5	0.722
1177.5	0.551
1212.5	0.679
1246.0	0.558
1300.0	0.668
1360.0	0.781
1417.5	0.573

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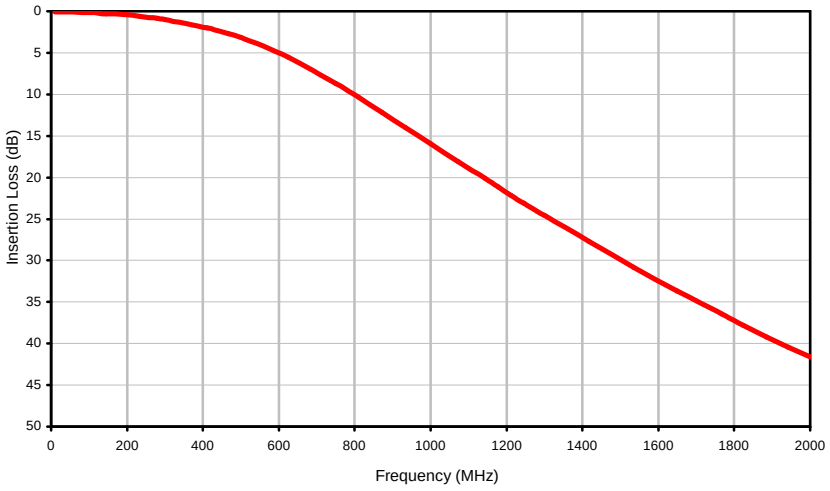
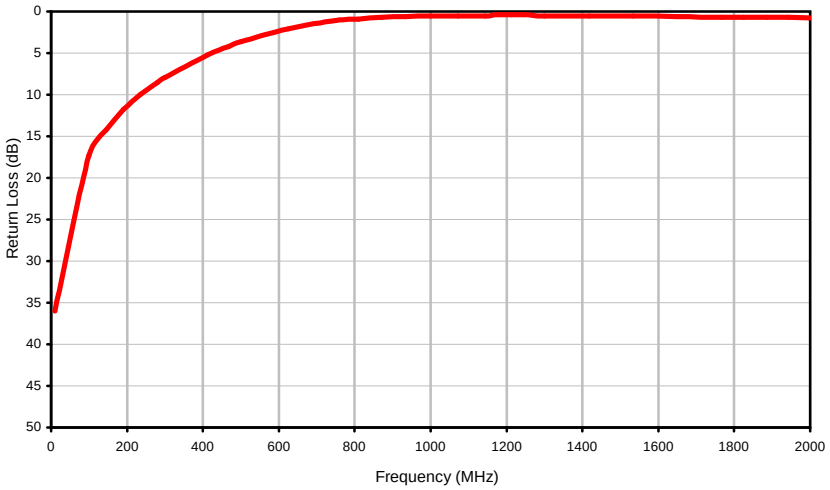
Coaxial Low Pass Filter (Flat Time Delay) BBLP-467+

Typical Performance Curves

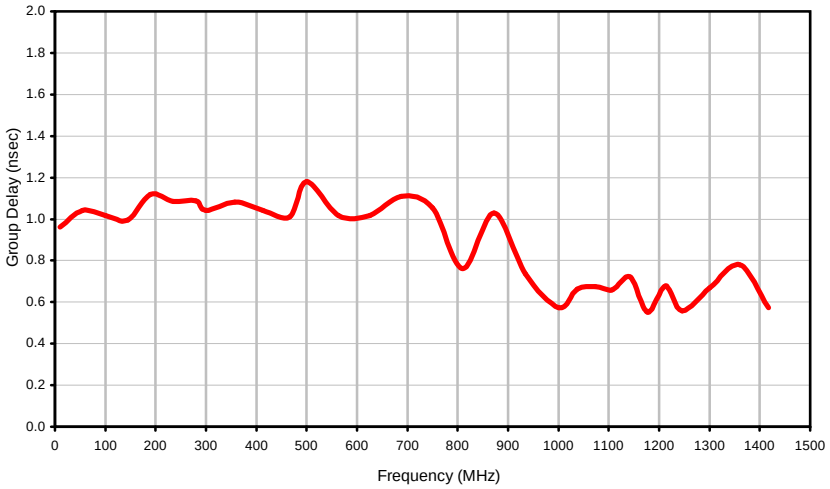
Insertion Loss



Return Loss



Group Delay



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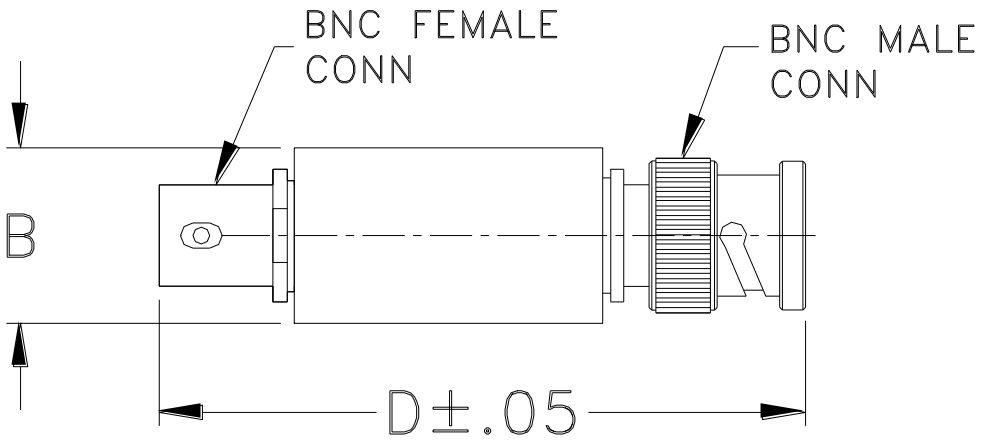
Case Style FF

FF55

Outline Dimensions



CASE #.	A	B	C	D	E	WT GRAMS
FF55	-- --	.57 (14.47)	-- --	2.59 (65.79)	-- --	40.0

Dimensions are in inches (mm). Tolerances: 2Pl. +.03/-.04; 3Pl. ± .015

Note:

1. Case material: Stainless steel.

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Mini-Circuits

Environmental Specifications ENV28

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

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