

Low Pass Filter

50Ω DC to 48 MHz
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 standard and custom BLP models available with wide selection of fco

Applications

- test equipment
- lab use
- video equipment

BLP-50+


Generic photo used for illustration purposes only

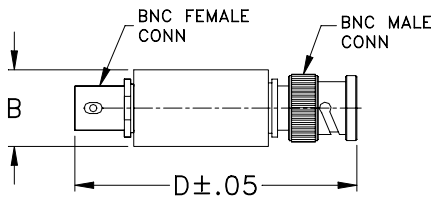
CASE STYLE: FF55

Connectors Model

BNC BLP-50+

+RoHS Compliant

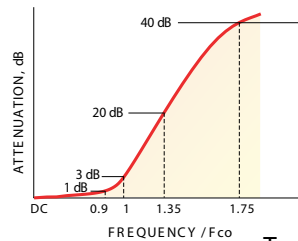
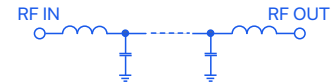
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Outline Drawing

Outline Dimensions (inch/mm)

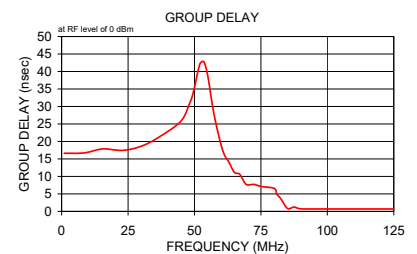
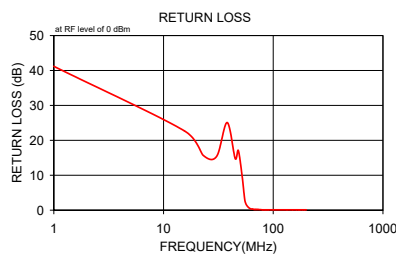
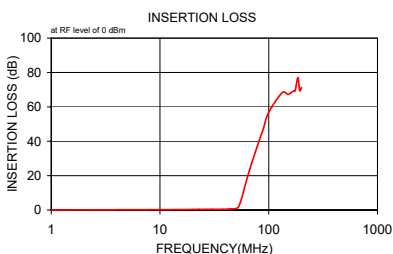
B	D	wt
.57	2.59	grams
14.47	65.79	40.0

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-48	55	70-90 90-200	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	0.05 0.00	41.20	1.00	16.62
15.50	0.23 0.10	22.70	8.50	16.73
23.00	0.37 0.10	15.70	15.50	17.87
30.50	0.43 0.10	15.40	23.00	17.45
38.00	0.40 0.10	25.10	30.50	18.79
45.00	0.65 0.10	14.80	38.00	21.89
48.00	0.70 0.10	17.10	45.00	25.87
52.00	1.46 0.20	9.90	48.00	30.56
55.00	4.65 0.30	3.00	49.50	33.92
57.00	7.96 0.40	1.50	52.00	42.09
61.00	14.84 0.50	0.50	53.50	42.83
65.00	20.96 6.00	0.30	55.00	38.77
67.00	23.73 0.60	0.20	57.00	29.20
69.00	26.33 0.70	0.20	59.00	22.03
70.00	27.59 0.70	0.20	61.00	16.66
72.50	30.55 0.80	0.20	63.00	14.04
80.00	38.67 1.20	0.10	65.00	11.17
82.50	41.07 1.40	0.10	67.00	10.62
85.00	43.54 1.60	0.10	69.00	8.06
87.50	45.78 1.80	0.10	70.00	7.57
90.00	47.97 2.20	0.10	72.50	7.70
100.00	56.91 4.10	0.10	75.00	7.14
133.50	68.38 5.20	0.10	80.00	6.57
150.00	67.23 4.20	0.10	81.00	4.93
163.00	68.62 4.60	0.10	82.50	3.61
170.50	69.35 3.30	0.10	85.00	0.84
175.00	69.36 5.80	0.10	87.50	1.23
185.50	77.07 8.80	0.10	90.00	0.73
192.50	69.51 5.20	0.10	100.00	0.70
200.00	71.27 9.70	0.10	125.00	0.69


Notes

- A. 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.
 B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
 C. The parts covered by this specification document 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



Coaxial Low Pass Filter

BLP-50+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
1.0	0.05	41.20	1.0	16.620
15.5	0.23	22.70	8.5	16.730
23.0	0.37	15.70	15.5	17.870
30.5	0.43	15.40	23.0	17.450
38.0	0.40	25.10	30.5	18.790
45.0	0.65	14.80	38.0	21.890
48.0	0.70	17.10	45.0	25.870
52.0	1.46	9.90	48.0	30.560
55.0	4.65	3.00	49.5	33.920
57.0	7.96	1.50	52.0	42.090
61.0	14.84	0.50	53.5	42.830
65.0	20.96	0.30	55.0	38.770
67.0	23.73	0.20	57.0	29.200
69.0	26.33	0.20	59.0	22.030
70.0	27.59	0.20	61.0	16.660
72.5	30.55	0.20	63.0	14.040
80.0	38.67	0.10	65.0	11.170
82.5	41.07	0.10	67.0	10.620
85.0	43.54	0.10	69.0	8.060
87.5	45.78	0.10	70.0	7.570
90.0	47.97	0.10	72.5	7.700
100.0	56.91	0.10	75.0	7.140
133.5	68.38	0.10	80.0	6.570
150.0	67.23	0.10	81.0	4.930
163.0	68.62	0.10	82.5	3.610
170.5	69.35	0.10	85.0	0.840
175.0	69.36	0.10	87.5	1.230
185.5	77.07	0.10	90.0	0.730
192.5	69.51	0.10	100.0	0.700
200.0	71.27	0.10	125.0	0.690

REV. X1

BLP-50+

060724

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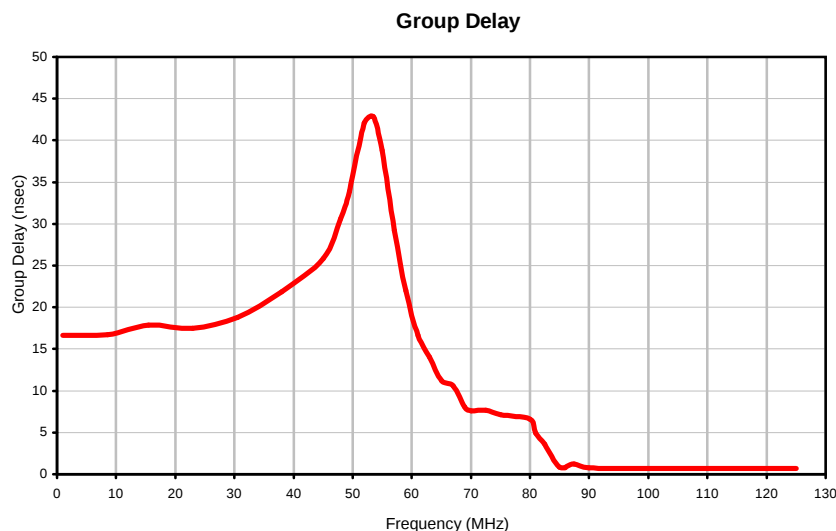
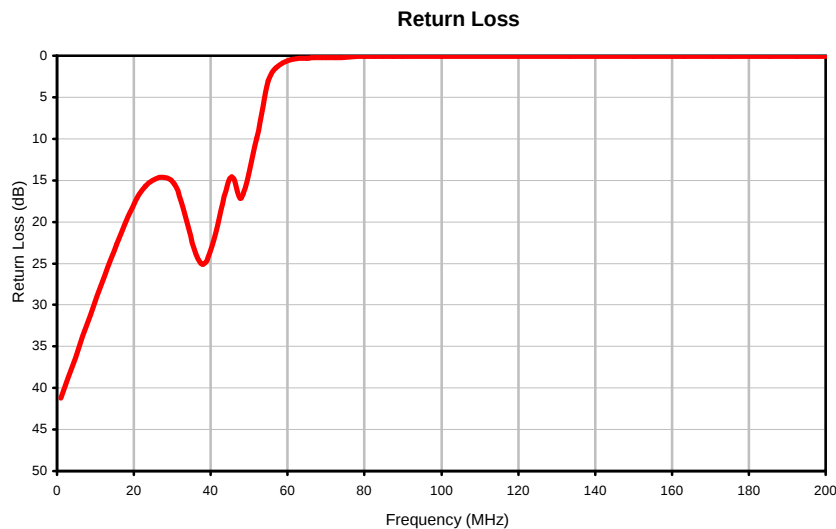
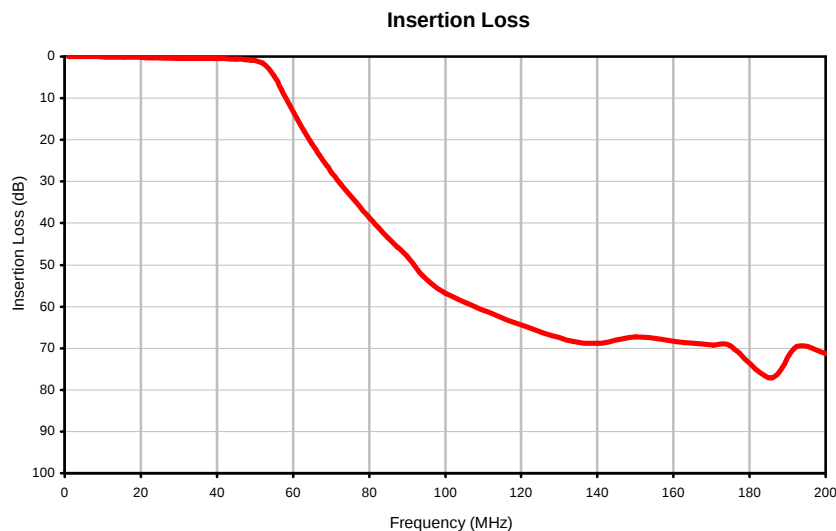
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Coaxial Low Pass Filter

BLP-50+

Typical Performance Curves



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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:

- 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