

Low Pass Filter

BLP-450+

50Ω DC to 400 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



Generic photo used for illustration purposes only

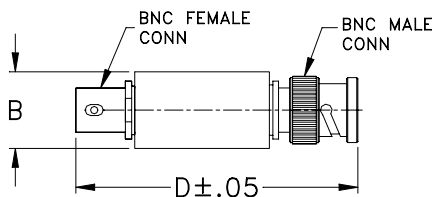
CASE STYLE: FF55

Connectors	Model
BNC	BLP-450+

+RoHS Compliant

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

Outline Drawing



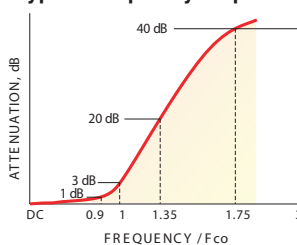
Outline Dimensions (inch/mm)

B	D	wt
.54	2.59	grams
13.72	65.79	40.0

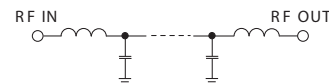
Low Pass Filter Electrical Specifications

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-400	440	580-750	750-1800	1.7	18

typical frequency response

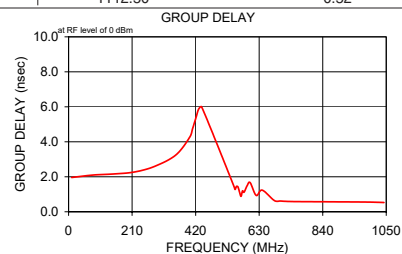
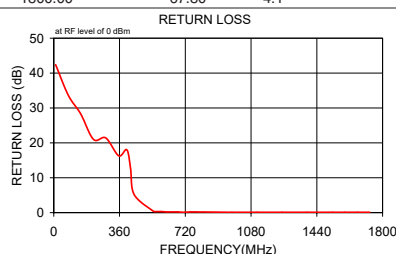


electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$	σ		
10.00	0.02	0.1	10.00	1.96
80.00	0.06	0.1	80.00	2.10
147.50	0.10	0.1	147.50	2.16
217.50	0.19	0.1	217.50	2.27
285.00	0.25	0.1	285.00	2.60
355.00	0.46	0.1	355.00	3.25
400.00	0.63	0.1	400.00	4.26
420.00	1.01	0.1	410.00	4.76
440.00	2.84	0.2	420.00	5.32
545.00	26.52	0.9	430.00	5.87
555.00	28.57	0.9	440.00	5.99
565.00	30.55	1.0	545.00	1.52
570.00	31.51	1.0	550.00	1.28
575.00	32.52	1.0	555.00	1.45
580.00	33.47	1.0	560.00	1.42
590.00	35.44	1.0	565.00	1.12
620.00	40.86	1.1	570.00	0.88
680.00	51.19	1.6	575.00	1.20
700.00	54.79	1.8	580.00	1.11
720.06	57.91	1.2	590.00	1.48
750.00	62.99	2.7	600.00	1.67
975.00	69.53	2.1	620.00	0.93
1112.50	78.46	9.9	640.00	1.24
1250.00	68.87	2.9	680.00	0.64
1387.50	69.76	8.2	700.00	0.62
1525.00	70.50	5.6	720.00	0.59
1592.50	68.09	0.9	750.00	0.58
1662.50	71.23	4.9	975.00	0.56
1730.00	72.22	6.0	1042.50	0.53
1800.00	67.80	4.1	1112.50	0.52



Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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-450+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
10.0	0.00	42.40	10.0	2.000
80.0	0.10	33.60	80.0	2.100
147.5	0.10	28.30	147.5	2.200
217.5	0.20	21.00	217.5	2.300
285.0	0.30	21.40	285.0	2.600
355.0	0.50	16.30	355.0	3.300
400.0	0.60	18.00	400.0	4.300
420.0	1.00	12.80	410.0	4.800
440.0	2.80	5.20	420.0	5.300
545.0	26.50	0.40	430.0	5.900
555.0	28.60	0.30	440.0	6.000
565.0	30.60	0.30	545.0	1.500
570.0	31.50	0.30	550.0	1.300
575.0	32.50	0.30	555.0	1.500
580.0	33.50	0.30	560.0	1.400
590.0	35.40	0.30	565.0	1.100
620.0	40.90	0.20	570.0	0.900
680.0	51.20	0.20	575.0	1.200
700.0	54.80	0.10	580.0	1.100
720.1	57.90	0.10	590.0	1.500
750.0	63.00	0.20	600.0	1.700
975.0	69.50	0.10	620.0	0.900
1112.5	78.50	0.10	640.0	1.200
1250.0	68.90	0.10	680.0	0.600
1387.5	69.80	0.10	700.0	0.600
1525.0	70.50	0.10	720.0	0.600
1592.5	68.10	0.10	750.0	0.600
1662.5	71.20	0.10	975.0	0.600
1730.0	72.20	0.10	1042.5	0.500

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BLP-450+
060724
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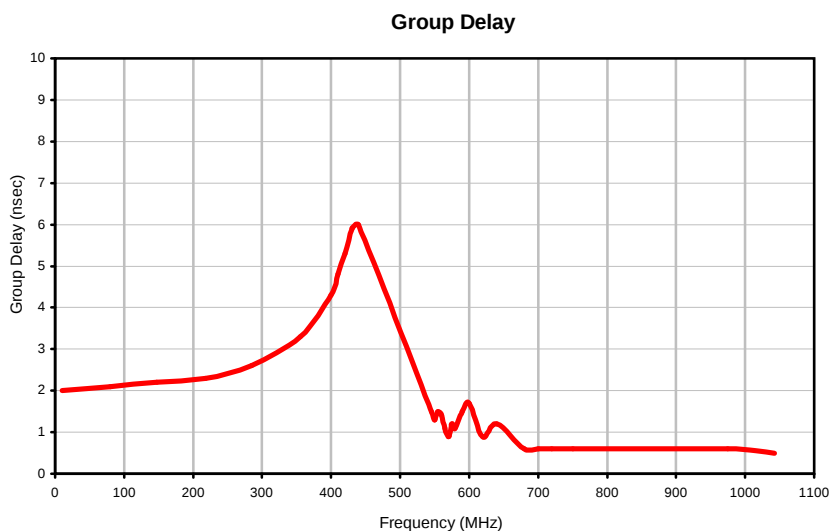
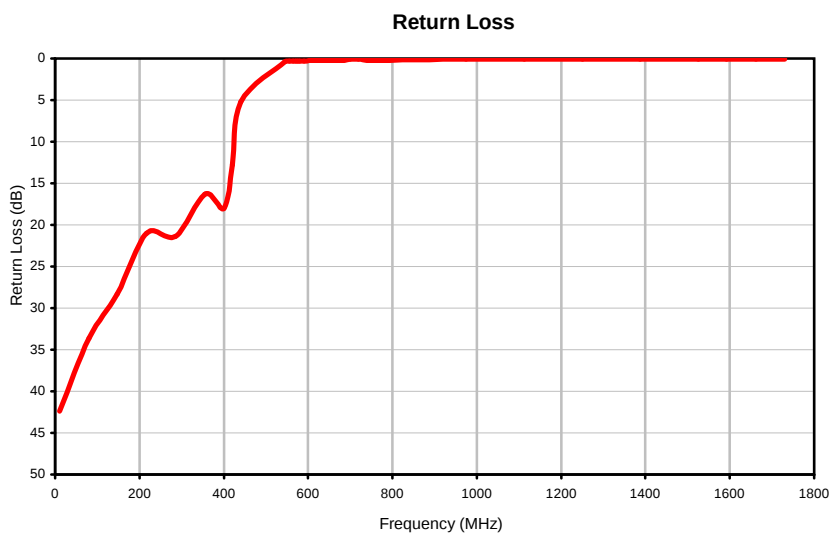
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Coaxial Low Pass Filter

Typical Performance Curves

BLP-450+



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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:

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