

Low Pass Filter

SBLP-200+

50Ω Flat Time Delay DC to 120 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

- flat group delay for low pulse distortion
- rugged shielded case
- other SBLP models available with wide selection of cut-off frequencies

Applications

- linear modulation techniques
- voice transmission applications
- digital communications



Generic photo used for illustration purposes only

CASE STYLE: FF99

Connectors	Model
SMA	SBLP-200+

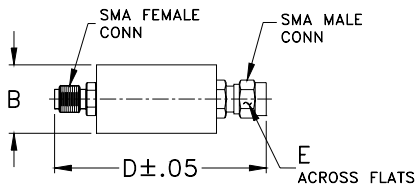
+RoHS Compliant

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

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-120	200	400-534	534	1.6:1	1.9:1	0.4	1.3	1.6

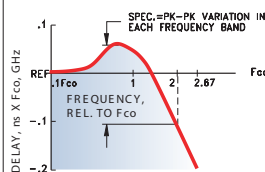
Outline Drawing



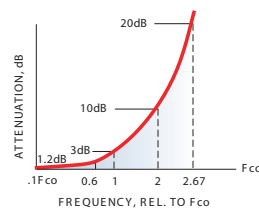
Outline Dimensions (inch)

B	D	E	wt
.67	1.98	.312	grams
17.02	50.29	7.92	42.0

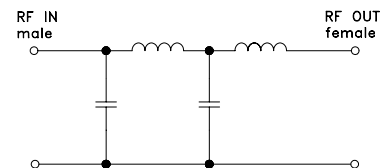
TYPICAL GROUP DELAY



TYPICAL FREQUENCY RESPONSE

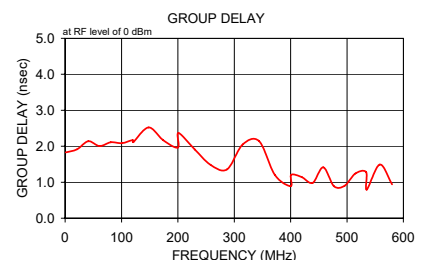
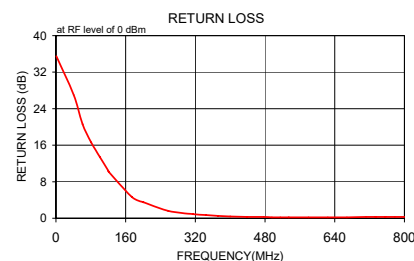
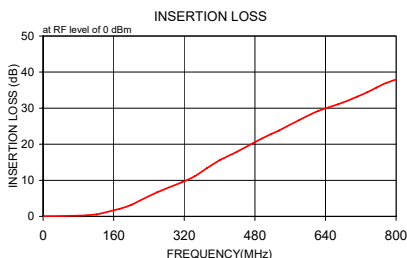


electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{X}$	σ			
1.0	0.04	0.1	35.5	1.0	1.829
41.0	0.10	0.1	27.0	21.0	1.915
61.0	0.16	0.1	20.6	41.0	2.140
81.0	0.22	0.1	16.6	61.0	2.006
101.0	0.33	0.1	13.4	81.0	2.109
120.0	0.52	0.1	10.4	101.0	2.087
121.0	0.53	0.1	10.2	120.0	2.170
174.0	2.10	0.1	4.7	121.0	2.113
200.0	3.22	0.1	3.5	148.0	2.521
201.0	3.26	0.1	3.5	174.0	2.169
258.0	6.65	0.2	1.6	200.0	1.964
315.0	9.45	0.2	0.9	201.0	2.367
344.0	11.17	0.3	0.7	230.0	1.912
372.0	13.45	0.4	0.5	258.0	1.485
400.0	15.58	0.5	0.4	287.0	1.356
401.0	15.65	0.5	0.4	315.0	2.048
439.0	17.90	0.7	0.3	344.0	2.142
477.0	20.36	0.8	0.3	372.0	1.206
496.0	21.60	0.8	0.2	400.0	0.894
515.0	22.72	0.9	0.2	401.0	1.205
534.0	23.75	0.9	0.2	420.0	1.143
535.0	23.81	0.9	0.2	439.0	0.984
580.0	26.67	1.0	0.2	458.0	1.412
624.0	29.26	1.0	0.2	477.0	0.888
668.0	31.05	1.1	0.2	496.0	0.903
712.0	33.19	1.2	0.3	515.0	1.244
734.0	34.36	1.2	0.3	534.0	1.282
756.0	35.72	1.2	0.3	535.0	0.796
778.0	37.00	1.2	0.3	558.0	1.491
800.0	37.94	1.1	0.3	580.0	0.941



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.
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Coaxial Low Pass Filter (Flat Time Delay)

SBLP-200+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
1.0	0.04	35.50	1.0	1.829
41.0	0.10	27.00	21.0	1.915
61.0	0.16	20.60	41.0	2.140
81.0	0.22	16.60	61.0	2.006
101.0	0.33	13.40	81.0	2.109
120.0	0.52	10.40	101.0	2.087
121.0	0.53	10.20	120.0	2.170
174.0	2.10	4.70	121.0	2.113
200.0	3.22	3.50	148.0	2.521
201.0	3.26	3.50	174.0	2.169
258.0	6.65	1.60	200.0	1.964
315.0	9.45	0.90	201.0	2.367
344.0	11.17	0.70	230.0	1.912
372.0	13.45	0.50	258.0	1.485
400.0	15.58	0.40	287.0	1.356
401.0	15.65	0.40	315.0	2.048
439.0	17.90	0.30	344.0	2.142
477.0	20.36	0.30	372.0	1.206
496.0	21.60	0.20	400.0	0.894
515.0	22.72	0.20	401.0	1.205
534.0	23.75	0.20	420.0	1.143
535.0	23.81	0.20	439.0	0.984
580.0	26.67	0.20	458.0	1.412
624.0	29.26	0.20	477.0	0.888
668.0	31.05	0.20	496.0	0.903
712.0	33.19	0.30	515.0	1.244
734.0	34.36	0.30	534.0	1.282
756.0	35.72	0.30	535.0	0.796
778.0	37.00	0.30	558.0	1.491
800.0	37.94	0.30	580.0	0.941

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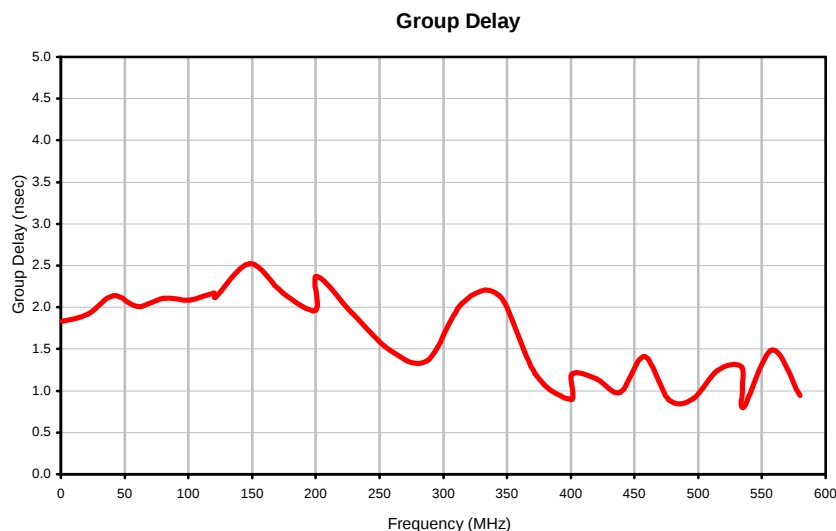
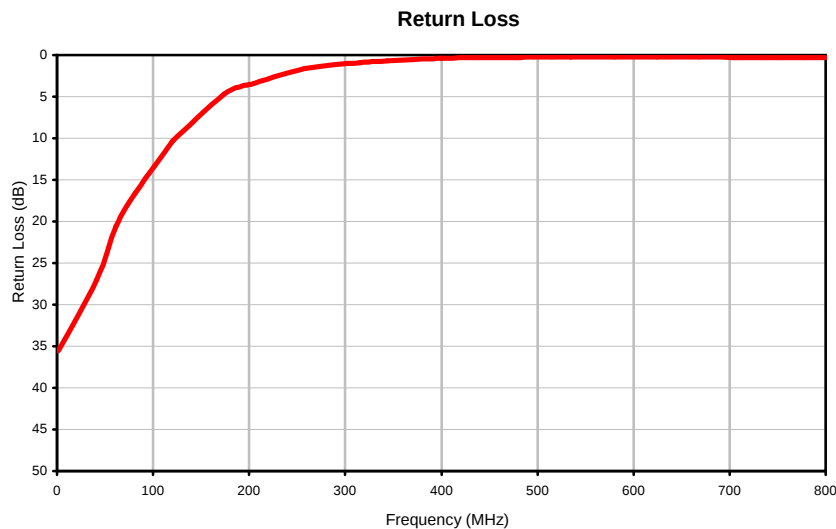
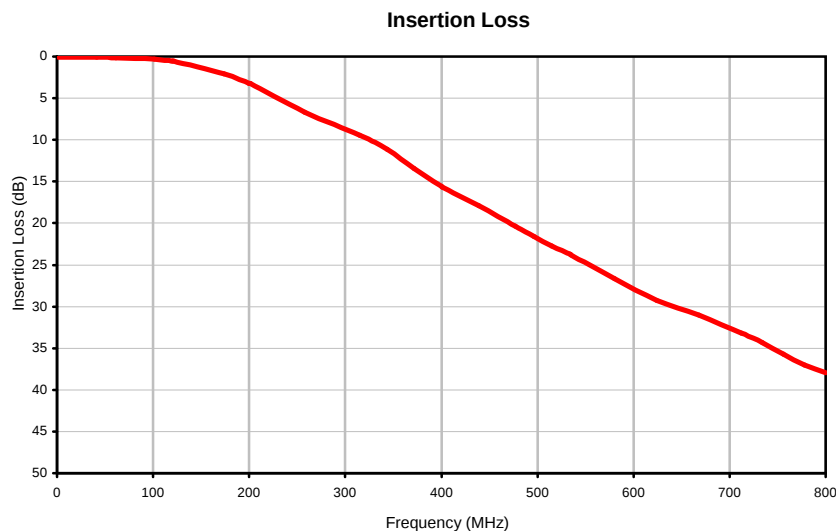
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Coaxial Low Pass Filter (Flat Time Delay)

SBLP-200+

Typical Performance Curves



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SBLP-200+
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The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see



FF56
FF99

Outline Dimensions



CASE #.	A	B	C	D	E	WT GRAMS
FF56	--	.46 (11.68)	--	1.70 (43.18)	.312 (7.92)	18.0
FF99	--	.70 (17.78)	--	1.98 (50.29)		42.0

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

Notes:

1. Case material: Brass.
2. Case finish: Nickel plate.



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