Coaxial

Bandpass Filter

SBP-10.7+

50Ω Elliptic Response 9.5 to 11.5 MHz



Generic photo used for illustration purposes only

CASE STYLE: FF99

Connectors	Model
SMA	SBP-10.7+

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

- low insertion loss, 1.5 dB max.
- good selectivity, 1.76 typ. 20 dB / 3dB BW ratio
- rugged shielded case

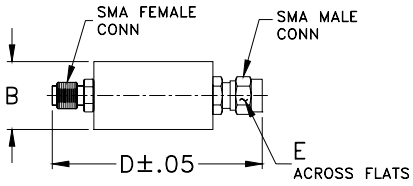
Applications

- high rejection applications
- image rejection
- IF signal processing

+RoHS Compliant

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

Outline Drawing



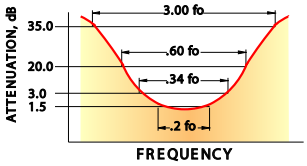
Outline Dimensions (inch / mm)

B	D	E	WT GRAMS
.70	1.98	.312	42.0
(17.78)	(50.29)	(7.92)	

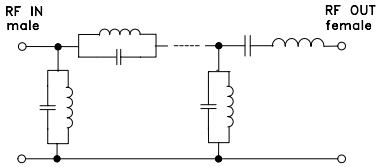
Bandpass Filter Electrical Specifications

CENTER FREQ. (MHz)	PASSBAND (MHz)	3dB BANDWIDTH (MHz)	STOPBANDS		VSWR (:1)	
	I.L. 1.5 dB Max.	Typ.	(I. loss > 20 dB) at MHz	(I. loss > 35 dB) at MHz	Passband Max.	Stopband Typ.
10.7	9.5-11.5	8.9-12.7	7.5 & 15	0.6 & 50-1000	1.7	16

typical frequency response



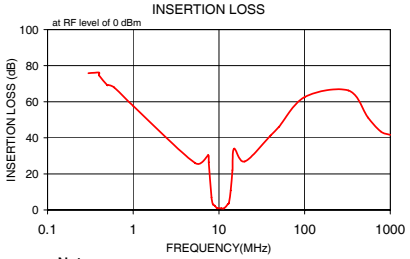
electrical schematic



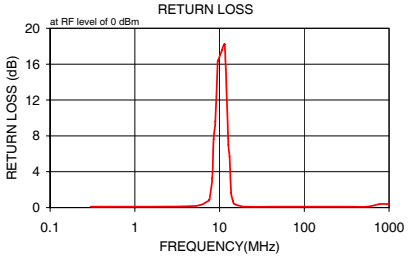
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) x̄	σ	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
0.3	75.80	2.6	0.1	0.7	32.371
0.4	76.10	4.5	0.1	3.0	12.114
0.4	74.62	4.4	0.1	5.2	24.403
0.5	69.06	2.7	0.1	7.5	215.923
0.5	69.33	1.0	0.1	7.9	159.468
0.6	67.91	1.5	0.1	8.0	91.912
1.0	57.74	0.3	0.1	8.5	212.732
5.3	25.94	0.6	0.2	8.9	237.192
7.5	30.37	2.8	0.8	9.1	235.123
7.6	26.43	4.9	0.9	9.4	213.803
8.2	7.00	1.5	3.3	9.6	197.449
8.5	3.15	0.8	7.6	9.8	180.177
8.9	2.45	0.7	9.6	10.2	153.153
9.5	0.99	0.1	16.3	10.4	145.221
9.6	0.97	0.1	16.4	10.6	140.803
10.7	0.86	0.1	17.6	10.9	138.559
11.5	0.92	0.1	18.2	11.3	141.337
12.7	3.16	0.8	7.0	11.5	145.896
13.1	3.82	1.0	5.7	12.5	165.780
13.7	10.81	2.5	1.6	12.8	163.590
14.4	22.10	4.6	0.7	13.3	145.784
15.0	33.97	4.4	0.4	13.6	127.403
20.0	26.84	0.5	0.1	14.1	36.953
40.0	41.22	0.5	0.1	15.0	85.658
50.0	46.00	0.7	0.1	16.0	118.360
100.0	62.57	1.7	0.1	27.1	4.513
325.0	66.25	3.8	0.1	39.0	2.558
550.0	51.22	1.1	0.1	48.7	2.259
775.0	43.48	1.5	0.4	49.7	2.045
1000.0	41.66	1.9	0.4	50.7	2.283

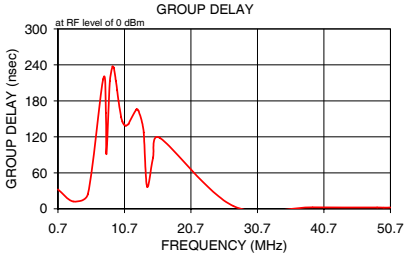
INSERTION LOSS



RETURN LOSS



GROUP DELAY



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 Band Pass Filter (Elliptic Response) SBP-10.7+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)
0.30	79.47	0.00
0.35	76.45	0.00
0.40	77.27	0.00
0.45	71.07	0.00
0.50	71.09	0.00
0.55	69.97	0.00
0.60	67.98	0.00
0.65	66.53	0.00
0.70	64.92	0.00
0.75	63.67	0.00
0.80	62.68	0.00
0.90	60.89	0.00
1.00	59.06	0.00
1.10	57.10	0.00
1.20	55.32	0.00
1.30	54.59	0.01
1.40	52.89	0.00
1.50	51.50	0.00
1.60	50.38	0.00
1.70	49.30	0.00
1.80	48.42	0.00
1.90	47.32	0.00
2.00	46.34	0.00
5.30	26.80	0.06
7.50	30.23	0.43
7.60	24.14	0.51
8.20	6.70	2.42
8.50	3.00	5.64
8.90	1.25	11.71
9.50	0.71	18.82
9.60	0.68	19.63
10.70	0.57	23.17
11.50	0.69	17.12
12.70	1.14	19.89
13.10	2.68	7.15
13.70	9.69	1.53
15.00	39.95	0.32
20.00	27.97	0.10
30.00	36.60	0.04
40.00	42.60	0.03
50.00	47.27	0.03
100.00	65.39	0.04
200.00	61.12	0.06
300.00	84.23	0.08
400.00	88.88	0.11
500.00	75.82	0.26
550.00	56.71	1.07
600.00	50.06	1.06
700.00	49.88	0.34
775.00	46.43	0.51
800.00	44.92	0.69
900.00	41.84	2.44
1000.00	54.41	0.54

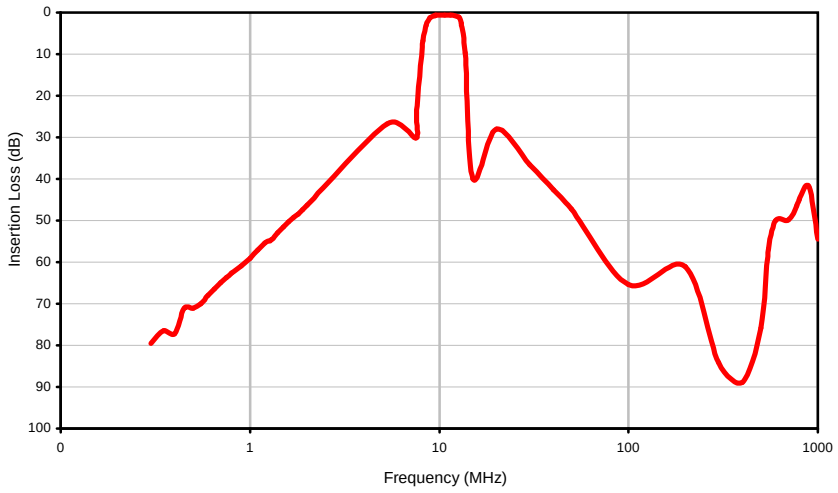
FREQUENCY (MHz)	GROUP DELAY (nsec)
9.00	235.90
9.10	219.74
9.20	205.75
9.25	199.60
9.30	193.89
9.40	183.84
9.50	175.36
9.55	171.58
9.60	168.15
9.65	164.96
9.70	162.05
9.75	159.36
9.80	156.83
9.85	154.57
9.90	152.45
9.95	150.51
10.00	148.72
10.05	147.04
10.10	145.57
10.15	144.16
10.20	142.89
10.25	141.77
10.30	140.66
10.35	139.71
10.40	138.83
10.45	138.06
10.50	137.37
10.55	136.71
10.60	136.16
10.65	135.65
10.70	135.22
10.75	134.89
10.80	134.56
10.85	134.32
10.90	134.11
10.95	133.99
11.00	133.91
11.05	133.89
11.10	133.92
11.15	134.01
11.20	134.17
11.25	134.39
11.30	134.66
11.35	135.03
11.40	135.49
11.45	136.01
11.50	136.62
11.55	137.36
11.60	138.19
11.70	140.27
11.80	142.97
11.90	146.39
12.00	150.80

Mini-Circuits®
IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS9100 CERTIFIED RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see minicircuits.com

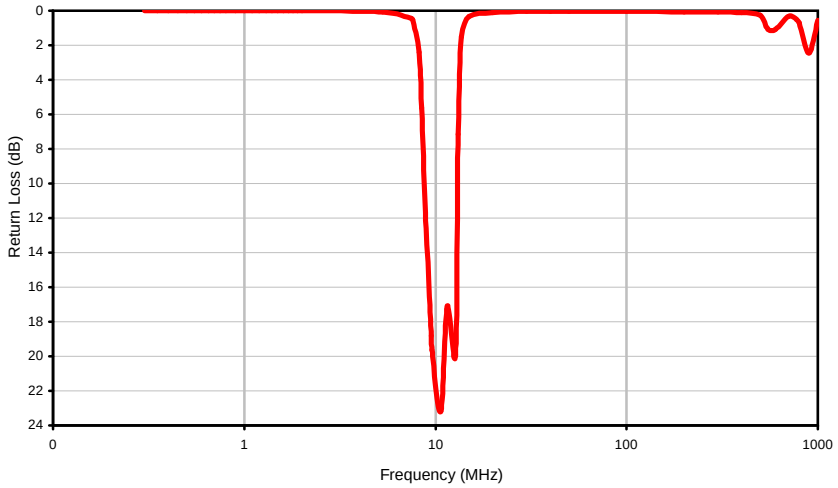
Coaxial Band Pass Filter (Elliptic Response) SBP-10.7+

Typical Performance Curves

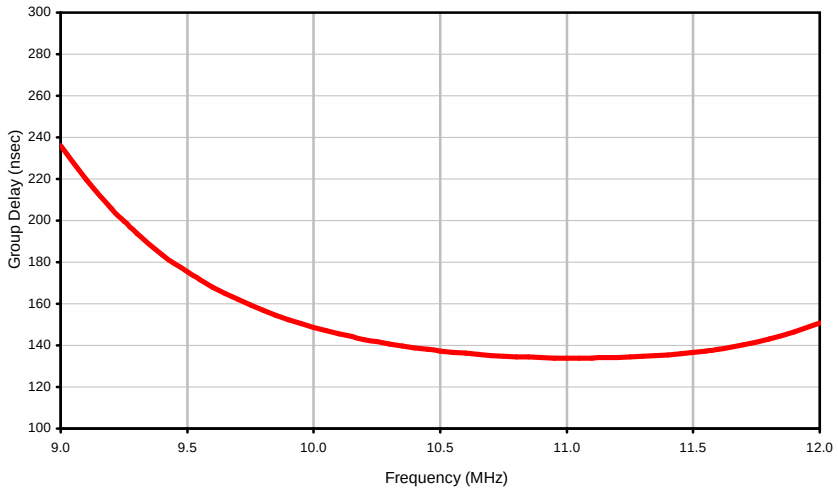
Insertion Loss



Return Loss



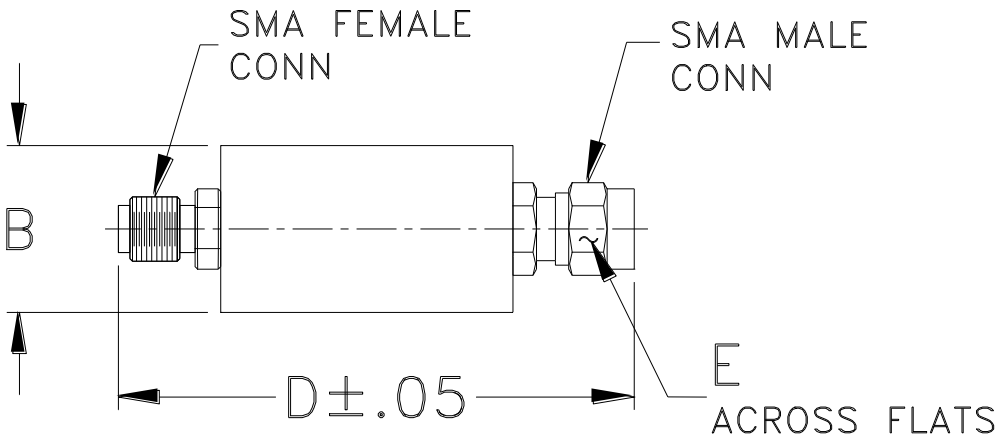
Group Delay



Mini-Circuits®
IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS9100 CERTIFIED RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see minicircuits.com

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.

This document and its contents are the property of Mini-Circuits.

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

This document and its contents are the property of Mini-Circuits.