

# Coaxial High Pass Filter

## SHP-1000+

50Ω 1000 to 3000 MHz



Generic photo used for illustration purposes only

CASE STYLE: FF99

Connectors Model  
SMA SHP-1000+

**+RoHS Compliant**

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.

Permanent damage may occur if any of these limits are exceeded.

### Features

- rugged shielded case
- other standard and custom SHP models available with wide selection of fco

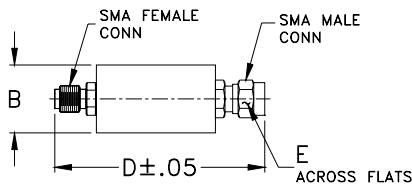
### Applications

- lab use
- transmitters/receivers
- radio communications

### High Pass Filter Electrical Specifications

STOPBAND (MHz)		fco (MHz) Nom.	PASSBAND (MHz)	VSWR (:1)	
(loss > 40 dB)	(loss > 20 dB)	(loss 3 dB)	(loss < 1 dB)	Stopband Typ.	Passband Typ.
DC-550	550-720	900	1000-3000	17	1.9

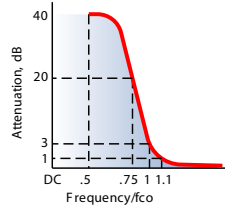
### Outline Drawing



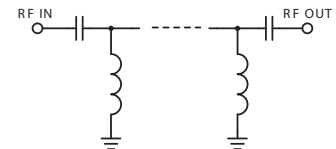
### Outline Dimensions (inch/mm)

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

### typical frequency response

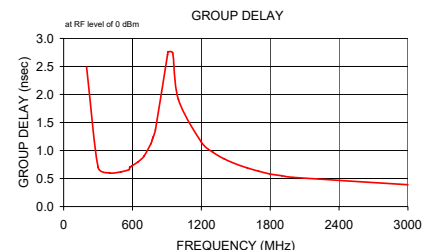
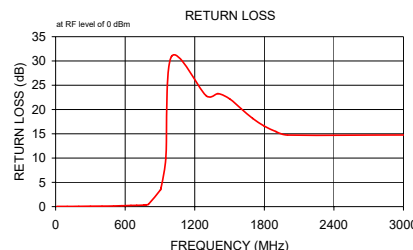
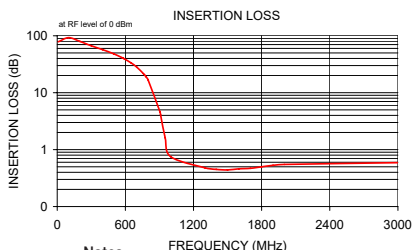


### electrical schematic



### Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) $\bar{x}$	Insertion Loss (dB) $\sigma$	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
10.00	78.36	9.58	0.04	200.00	2.49
100.00	92.78	5.61	0.04	300.00	0.70
200.00	79.46	0.24	0.06	400.00	0.60
300.00	66.75	0.59	0.08	500.00	0.62
400.00	57.09	0.36	0.10	570.00	0.66
500.00	47.95	0.34	0.13	575.00	0.70
570.00	41.39	0.36	0.18	580.00	0.71
575.00	40.90	0.36	0.18	585.00	0.71
580.00	40.42	0.36	0.18	590.00	0.72
590.00	39.42	0.35	0.18	650.00	0.80
650.00	33.45	0.38	0.24	700.00	0.90
700.00	28.16	0.40	0.26	760.00	1.12
760.00	21.52	0.44	0.32	770.00	1.18
770.00	20.37	0.44	0.35	775.00	1.21
775.00	19.78	0.45	0.37	780.00	1.24
780.00	19.20	0.45	0.39	800.00	1.37
800.00	16.84	0.47	0.48	905.00	2.71
905.00	4.61	0.38	3.48	910.00	2.76
910.00	4.15	0.35	3.92	950.00	2.74
950.00	1.62	0.14	9.92	1000.00	1.91
1000.00	0.75	0.01	30.95	1200.00	1.15
1300.00	0.48	0.01	22.80	1300.00	0.97
1400.00	0.45	0.01	23.28	1400.00	0.85
1500.00	0.44	0.01	22.21	1500.00	0.76
1600.00	0.46	0.02	20.17	1600.00	0.69
1700.00	0.47	0.02	18.16	1700.00	0.63
1800.00	0.50	0.02	16.58	1800.00	0.58
1900.00	0.53	0.02	15.46	1900.00	0.55
2000.00	0.55	0.03	14.74	2000.00	0.52
3000.00	0.59	0.03	14.76	3000.00	0.39



#### 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.
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# Coaxial High Pass Filter

# SHP-1000+

## Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
10.0	78.36	0.04	200.0	2.49
100.0	92.78	0.04	300.0	0.70
200.0	79.46	0.06	400.0	0.60
300.0	66.75	0.08	500.0	0.62
400.0	57.09	0.10	570.0	0.66
500.0	47.95	0.13	590.0	0.72
570.0	41.39	0.18	650.0	0.80
590.0	39.42	0.18	700.0	0.90
650.0	33.45	0.24	760.0	1.12
700.0	28.16	0.26	770.0	1.18
760.0	21.52	0.32	780.0	1.24
770.0	20.37	0.35	800.0	1.37
780.0	19.20	0.39	845.0	1.82
800.0	16.84	0.48	850.0	1.88
850.0	10.77	1.03	860.0	2.03
860.0	9.56	1.25	905.0	2.71
910.0	4.15	3.92	910.0	2.76
920.0	3.32	4.99	920.0	2.84
930.0	2.63	6.32	930.0	2.86
940.0	2.06	7.94	940.0	2.82
950.0	1.62	9.92	950.0	2.74
960.0	1.30	12.33	960.0	2.63
970.0	1.07	15.30	970.0	2.51
980.0	0.91	19.14	980.0	2.37
1000.0	0.75	30.95	1000.0	1.91
1100.0	0.66	16.92	1100.0	1.43
1150.0	0.60	17.93	1150.0	1.27
1200.0	0.55	19.75	1200.0	1.15
1250.0	0.51	21.66	1250.0	1.05
1300.0	0.48	22.80	1300.0	0.97
1350.0	0.46	23.43	1350.0	0.91
1400.0	0.45	23.28	1400.0	0.85
1450.0	0.44	22.98	1450.0	0.80
1500.0	0.44	22.21	1500.0	0.76
1550.0	0.45	21.26	1550.0	0.72
1600.0	0.46	20.17	1600.0	0.69
1650.0	0.46	19.12	1650.0	0.66
1700.0	0.47	18.16	1700.0	0.63
1750.0	0.49	17.31	1750.0	0.61
1800.0	0.50	16.58	1800.0	0.58
1850.0	0.52	15.96	1850.0	0.57
1900.0	0.53	15.46	1900.0	0.55
1950.0	0.55	15.04	1950.0	0.53
2000.0	0.55	14.74	2000.0	0.52
2050.0	0.56	14.49	2050.0	0.50
2100.0	0.56	14.30	2100.0	0.49
2150.0	0.57	14.21	2150.0	0.48
2200.0	0.57	14.08	2200.0	0.47
3000.0	0.59	14.76	3000.0	0.39
4160.0	0.91	11.81	4160.0	0.33
5330.0	1.24	8.95	5330.0	0.33
6500.0	1.18	14.23	6500.0	0.27
7660.0	1.09	16.19	7660.0	0.34
8830.0	2.8	14.29	8830.0	0.41
10000.0	2.53	21.56	10000	0.59

REV. X1  
SHP-1000+  
070628

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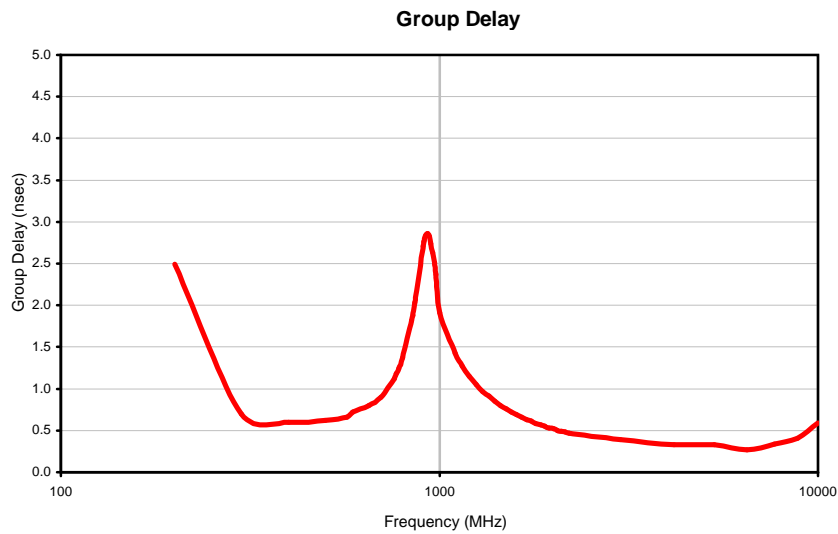
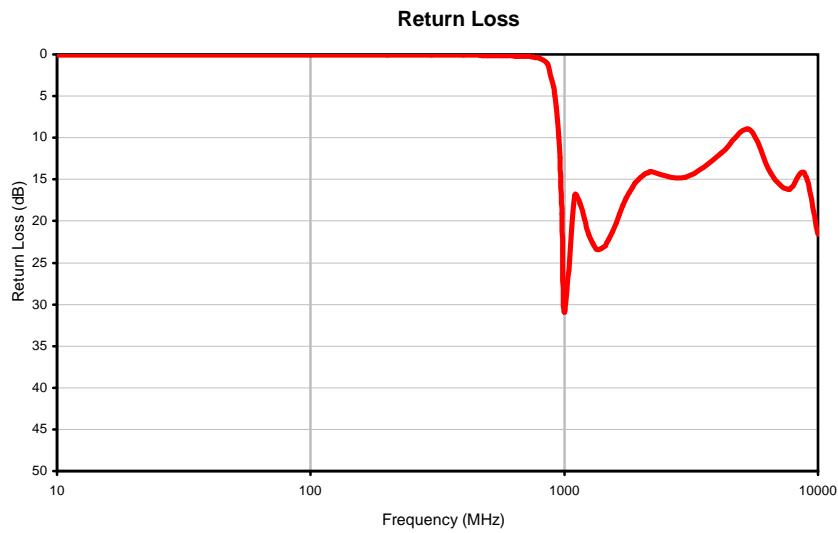
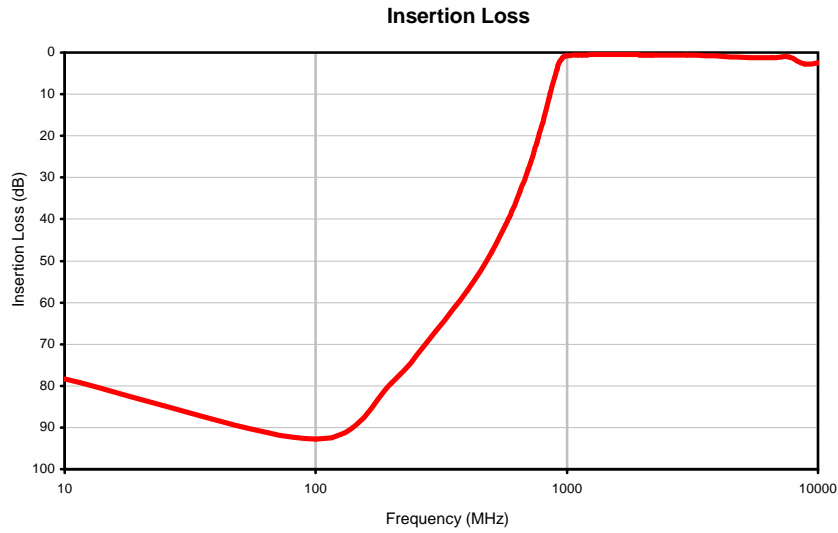
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# Coaxial High Pass Filter

# SHP-1000+

## Typical Performance Curves



REV. X1  
SHP-1000+  
070628  
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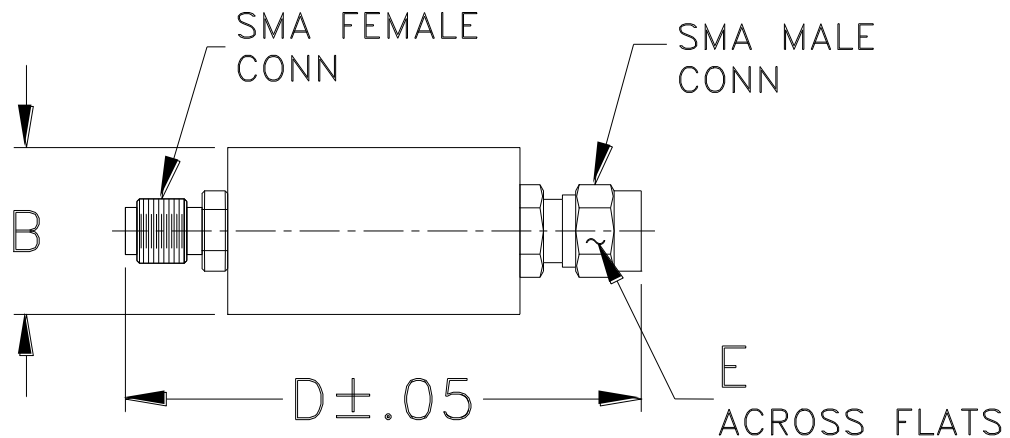


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**FF56**  
**FF99**

## 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.

<b>Specification</b>	<b>Test/Inspection Condition</b>	<b>Reference/Spec</b>
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