

Low Pass Filter

50Ω DC to 81 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

- good attenuation rate, 1.35 typ. 20dB/ 3dB BW ratio
- rugged shielded case
- other SLP models available with wide selection of cut-off frequencies

Applications

- lab use
- test equipment
- video equipment

SLP-90+



Generic photo used for illustration purposes only

CASE STYLE: FF99

Connectors Model
SMA SLP-90+

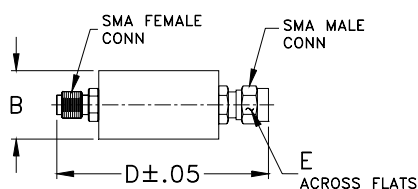
+RoHS Compliant

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

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-81	90	121-157 157-400	1.7 18

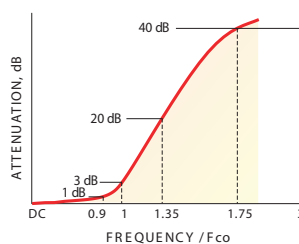
Outline Drawing



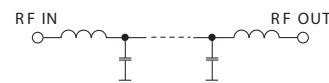
Outline Dimensions (inch/mm)

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

typical frequency response

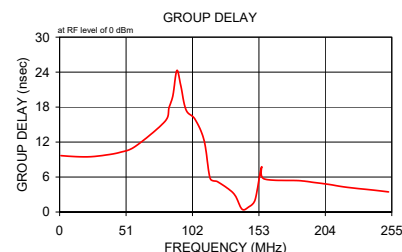
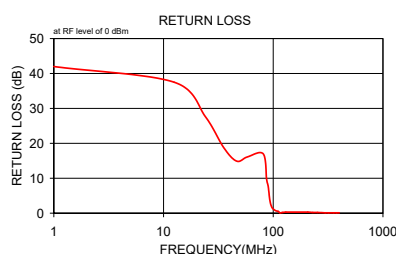


electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
$\bar{x}$	σ			
1.00	0.05	0.1	1.00	9.672
12.50	0.14	0.1	12.50	9.503
24.00	0.18	0.1	24.00	9.491
35.50	0.31	0.1	35.50	9.776
46.50	0.42	0.1	46.50	10.240
58.00	0.43	0.1	58.00	11.244
81.00	0.69	0.1	81.00	15.573
87.00	1.28	0.4	84.00	17.894
90.00	2.01	0.5	87.00	19.997
93.00	6.43	0.9	90.00	24.263
97.00	8.74	1.0	93.00	21.734
104.01	12.94	1.1	97.00	17.532
111.00	16.72	1.2	104.00	15.893
115.52	21.91	1.2	111.00	12.218
121.03	26.16	1.2	115.50	5.804
130.03	32.40	1.3	121.00	5.229
140.04	38.50	1.4	130.00	3.892
145.04	41.31	1.4	135.00	2.740
150.04	43.98	1.5	140.00	0.487
155.05	46.76	1.7	145.00	0.841
157.05	47.69	1.8	150.00	2.060
184.06	60.11	2.9	155.00	7.687
206.57	66.87	1.4	157.00	5.680
229.58	75.03	5.6	184.00	5.380
252.57	74.83	7.6	195.50	5.060
298.08	76.96	7.1	206.50	4.740
321.08	75.07	4.9	218.00	4.320
355.57	73.10	4.4	229.50	4.010
378.08	75.50	4.8	241.00	3.760
400.07	74.56	6.3	252.50	3.450



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-Circuits' 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/MCStore/terms.jsp



Coaxial Low Pass Filter

SLP-90+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
1.00	0.05	41.63	1.00	9.330
10.00	0.12	27.03	10.00	8.690
20.00	0.17	26.10	20.00	9.280
30.00	0.20	33.35	30.00	9.530
40.00	0.27	23.21	40.00	9.820
50.00	0.36	18.48	50.00	10.170
60.00	0.39	20.16	60.00	10.900
70.00	0.43	28.96	70.00	12.160
80.00	0.69	14.96	80.00	13.440
90.00	0.79	20.56	90.00	17.780
100.00	3.76	4.40	100.00	23.530
101.00	4.58	3.54	101.00	22.330
105.00	8.39	1.64	105.00	16.330
108.00	11.40	1.06	108.00	12.600
115.00	17.96	0.57	115.00	7.630
116.00	18.83	0.54	116.00	7.180
117.00	19.68	0.51	117.00	6.790
118.00	20.52	0.49	118.00	6.450
120.00	22.15	0.45	120.00	5.830
125.00	25.97	0.38	125.00	4.690
130.00	29.52	0.34	130.00	3.960
135.00	32.83	0.31	135.00	3.440
140.00	35.96	0.29	140.00	2.890
145.00	38.94	0.27	145.00	2.630
146.00	39.52	0.27	146.00	2.440
147.00	40.09	0.26	147.00	2.580
148.00	40.66	0.26	148.00	2.350
149.00	41.23	0.26	149.00	2.430
200.00	70.34	0.18	200.00	4.400
250.00	73.84	0.14	250.00	1.980
2000.00	43.77	0.15	2000.00	0.570
2500.00	37.71	0.06	2500.00	1.330
3000.00	43.80	1.16	3000.00	1.440
3500.00	40.13	1.52	3500.00	0.620
4000.00	44.16	0.59	4000.00	1.230
4500.00	38.97	0.56	4500.00	2.160
5000.00	34.86	0.64	5000.00	1.900
5500.00	33.52	0.63	5500.00	1.530
6000.00	22.50	0.65	6000.00	1.560
6500.00	34.28	0.33	6500.00	1.730
7000.00	27.64	2.67	7000.00	2.580
7500.00	31.32	8.56	7500.00	1.100
8000.00	45.73	2.09	8000.00	0.900
8500.00	35.78	0.85	8500.00	1.030
9500.00	27.16	0.97	9500.00	1.150
10000.00	32.67	2.52	10000.00	0.840

REV. X1

SLP-90+

060921

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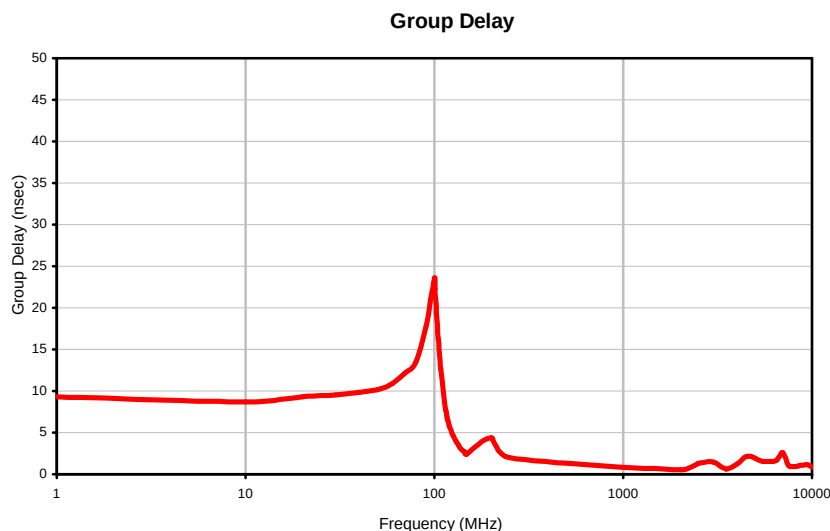
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Typical Performance Curves



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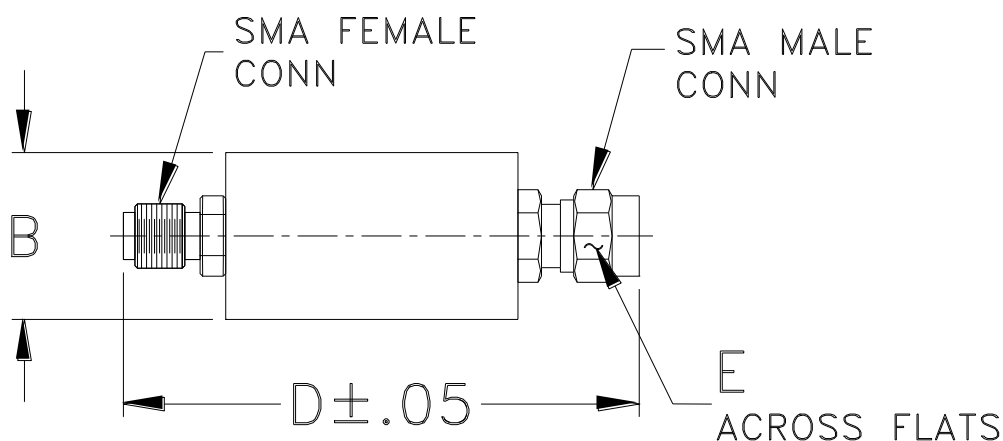
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FF56
FF99

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.

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