

Low Pass Filter

SLP-1.9+

50Ω DC to 1.9 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



Generic photo used for illustration purposes only

CASE STYLE: FF99

Connectors	Model
SMA	SLP-1.9+

+RoHS Compliant

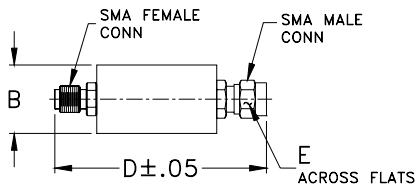
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Low Pass Filter Electrical Specifications

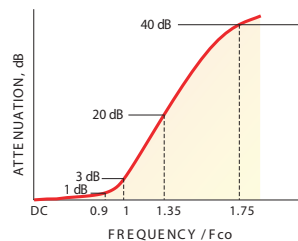
PASSBAND (MHz)	fco (MHz) Nom.	STOPBAND (MHz)		VSWR (:1)	
		(loss > 20 dB)	(loss > 40 dB)	Passband Typ.	Stopband Typ.
DC-1.9	2.5	3.4-4.7	4.7-200	1.7	18

1 dB compression at +13 dBm input power

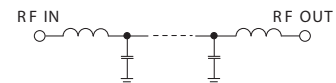
Outline Drawing



typical frequency response



electrical schematic

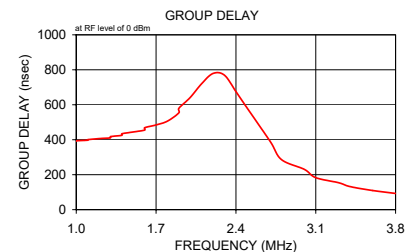
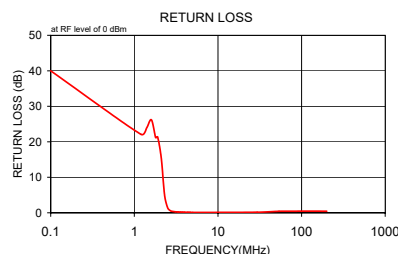
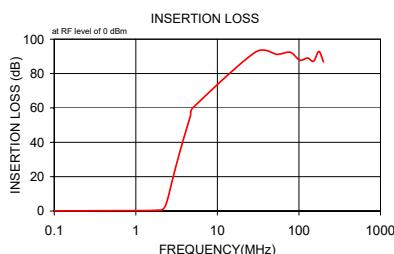


Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$	σ			
0.10	0.09	0.01	40.00	1.00	390.94
1.20	0.24	0.02	22.11	1.00	393.92
1.40	0.26	0.01	23.88	1.10	397.21
1.60	0.31	0.01	26.19	1.10	400.27
1.80	0.40	0.02	21.19	1.20	406.34
1.90	0.45	0.02	21.37	1.30	410.76
2.10	0.75	0.12	15.39	1.30	417.77
2.30	2.93	0.75	5.05	1.40	425.39
2.50	8.32	1.21	1.43	1.40	434.33
2.70	14.69	1.17	0.59	1.50	444.37
2.80	17.71	1.12	0.45	1.60	455.27
3.00	23.30	1.01	0.32	1.60	468.79
3.10	25.89	0.96	0.29	1.70	484.50
3.30	30.68	0.90	0.24	1.80	506.65
3.40	32.92	0.87	0.22	1.90	554.15
3.60	37.12	0.84	0.20	1.90	579.78
3.80	41.00	0.81	0.18	2.00	642.41
4.00	44.61	0.79	0.17	2.10	720.76
4.30	49.67	0.81	0.15	2.20	779.41
4.50	52.78	0.80	0.14	2.30	768.87
4.70	55.74	0.88	0.13	2.40	675.19
5.00	60.00	0.86	0.11	2.50	579.64
29.40	92.50	4.17	0.17	2.70	390.84
53.80	91.19	3.63	0.42	2.80	286.22
78.10	92.39	2.10	0.45	3.00	230.56
102.50	87.80	2.75	0.46	3.10	182.81
126.90	89.05	3.87	0.47	3.30	153.96
151.30	87.17	2.60	0.46	3.40	132.22
175.60	92.87	7.14	0.44	3.60	109.19
200.00	86.82	4.04	0.44	3.80	92.80

Outline Dimensions (inch)

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



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-1.9+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
0.30	0.08	28.87	0.30	344.640
0.40	0.09	26.02	0.40	344.640
0.50	0.11	23.65	0.50	345.930
1.00	0.26	16.66	1.00	357.940
1.50	0.34	18.62	1.50	394.620
2.00	0.50	23.42	2.00	487.760
2.50	3.44	4.72	2.50	771.800
3.00	18.13	0.57	2.80	451.460
3.50	30.68	0.35	2.90	357.210
4.00	40.85	0.29	3.20	204.790
10.00	72.35	0.18	3.30	178.270
100.00	86.81	0.17	3.40	156.070
500.00	66.03	0.31	3.50	140.150
1000.00	52.40	5.78	3.60	124.630
1500.00	107.38	0.56	3.70	110.340
2000.00	63.57	1.17	3.90	97.210
2500.00	49.50	6.01	4.00	89.080
3000.00	60.61	3.14	500.00	3.960
3500.00	34.58	2.23	1000.00	1.970
4000.00	25.54	5.32	1500.00	3.590
4500.00	39.59	4.13	2000.00	0.390
5000.00	43.05	3.37	2500.00	3.360
5500.00	41.17	3.01	3500.00	1.010
6000.00	43.26	4.27	4000.00	1.210
6500.00	40.46	4.55	4500.00	0.280
7000.00	46.47	3.45	5000.00	0.320
8000.00	52.18	4.01	6000.00	0.310
8500.00	46.28	3.54	6500.00	0.490
9000.00	40.57	2.66	7000.00	0.540
9500.00	31.98	2.79	8000.00	0.170
10000.00	22.06	3.46	8500.00	0.140

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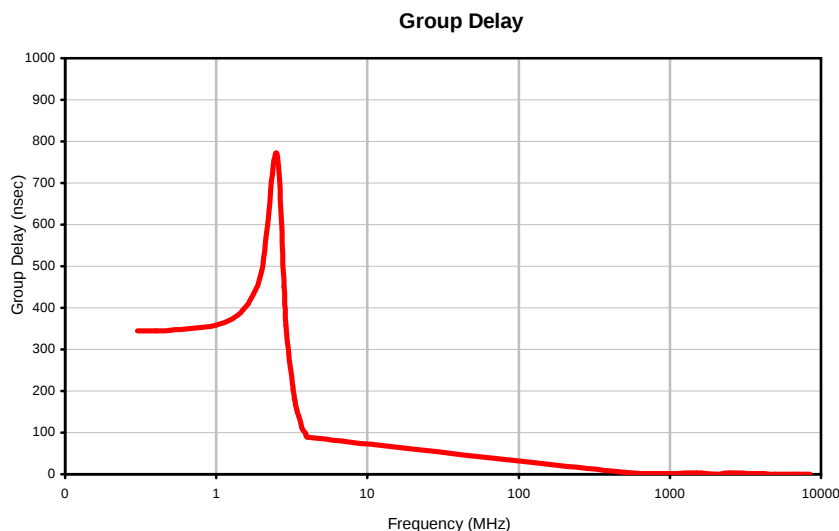
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Typical Performance Curves



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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