Coaxial

Low Pass Filter

SLP-30+

50Ω DC to 32 MHz

Generic photo used for illustration purposes only

CASE STYLE: FF99

Connectors	Model
SMA	SLP-30+

+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

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

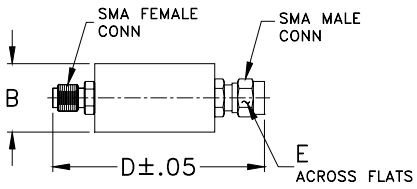
Applications

- lab use
- test equipment
- video equipment

Low Pass Filter Electrical Specifications

PASSBAND (MHz)	fco (MHz) Nom.	STOPBAND (MHz)		VSWR (:1)	
				Passband Typ.	Stopband Typ.
(loss < 1 dB)	(loss 3 dB)	(loss > 20 dB)	(loss > 40 dB)		
DC-32	35	47-61	61-200	1.7	18

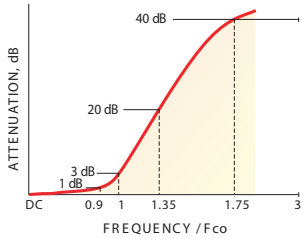
Outline Drawing



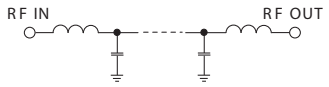
Outline Dimensions (inch / mm)

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

typical frequency response



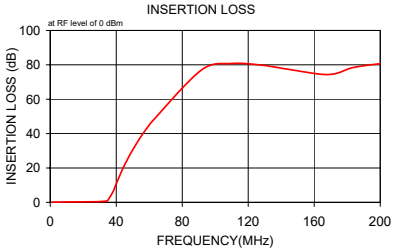
electrical schematic



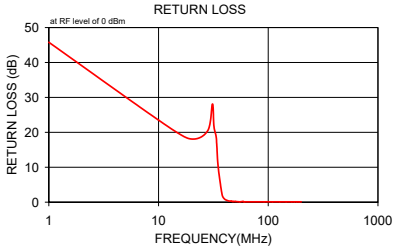
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) x̄	Insertion Loss (dB) σ	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
1.00	0.07	0.1	45.8	1.00	23.20
10.00	0.21	0.1	23.5	10.00	23.47
19.00	0.29	0.1	18.2	19.00	26.06
28.00	0.37	0.1	20.4	28.00	32.45
31.00	0.48	0.1	28.1	31.00	41.59
32.00	0.55	0.1	21.8	32.00	45.56
33.50	0.62	0.1	18.8	33.50	48.79
34.00	0.76	0.1	16.1	34.00	51.33
35.00	1.30	0.3	9.9	35.00	56.96
38.00	6.09	0.9	2.1	38.00	47.73
40.00	10.78	0.9	0.9	39.00	39.87
43.00	17.56	0.8	0.4	40.00	32.35
45.00	21.65	0.7	0.3	42.00	23.79
46.00	23.56	0.7	0.3	43.00	19.72
47.00	25.39	0.7	0.2	44.00	17.97
48.00	27.19	0.7	0.2	45.00	15.87
50.00	30.58	0.6	0.2	46.00	14.29
55.00	38.32	0.6	0.1	47.00	12.98
59.00	43.69	0.7	0.2	48.00	12.68
60.00	45.01	0.7	0.1	49.00	10.48
61.00	46.27	0.5	0.1	50.00	11.50
91.50	76.88	4.1	0.1	52.00	7.62
109.50	80.77	5.3	0.1	55.00	4.41
127.50	79.89	2.8	0.1	58.00	4.04
145.50	77.20	3.0	0.1	59.00	7.93
164.00	74.52	3.4	0.1	60.00	1.04
173.00	74.92	3.8	0.1	61.00	0.99
182.00	78.05	5.9	0.1	91.50	0.88
191.00	79.62	6.8	0.1	100.50	0.79
200.00	80.65	6.9	0.1	109.50	0.75

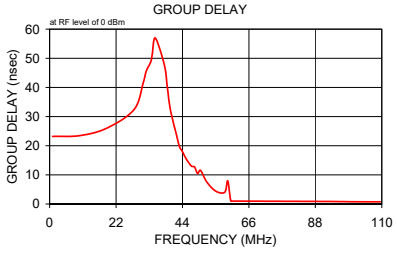
INSERTION LOSS



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 Low Pass Filter SLP-30+

Typical Performance Data

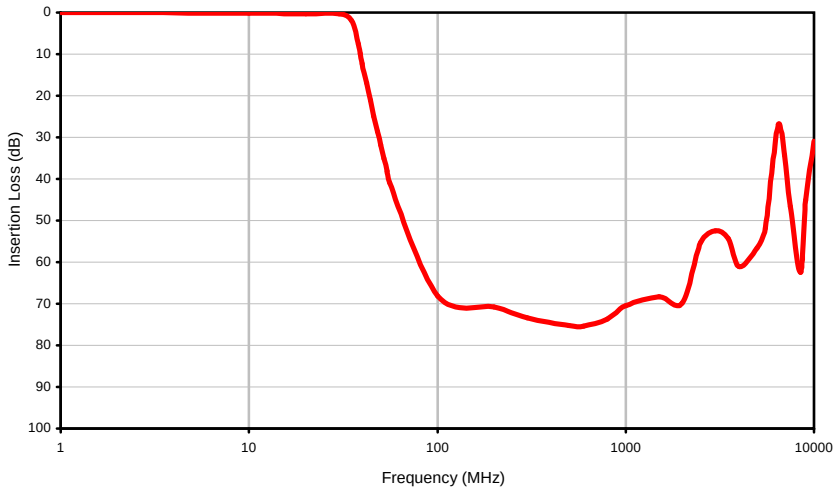
FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)
1.00	0.03	42.88
10.00	0.09	31.40
20.00	0.28	15.70
30.00	0.28	32.34
35.00	1.85	6.06
38.00	7.53	1.31
39.00	9.92	0.84
40.00	12.32	0.58
42.00	16.90	0.34
44.00	21.11	0.25
46.00	24.98	0.21
48.00	28.57	0.19
50.00	31.92	0.18
52.00	35.09	0.17
54.00	38.09	0.16
56.00	40.98	0.16
100.00	68.22	0.13
200.00	70.79	0.13
300.00	73.35	0.12
500.00	75.27	0.10
600.00	75.36	0.09
800.00	73.74	0.06
1000.00	70.49	0.04
1500.00	68.26	0.01
2000.00	69.92	0.08
2500.00	55.26	0.52
3000.00	52.42	2.19
3500.00	54.33	6.22
4000.00	61.14	2.01
5000.00	56.54	1.40
5500.00	51.79	2.25
6000.00	36.99	6.61
6500.00	26.72	6.31
7000.00	34.31	2.83
7500.00	46.63	1.80
8500.00	62.52	2.57
9000.00	45.10	3.31
10000.00	30.99	3.42

FREQUENCY (MHz)	GROUP DELAY (nsec)
1.00	24.540
10.00	25.250
20.00	27.670
30.00	38.230
35.00	58.610
38.00	45.880
39.00	38.090
40.00	31.540
42.00	22.430
44.00	16.990
46.00	13.510
48.00	11.180
50.00	9.520
52.00	8.220
54.00	7.290
56.00	6.390
100.00	1.180
200.00	2.030
300.00	2.610
500.00	0.690
600.00	2.460
800.00	3.900
1000.00	4.560
1500.00	0.720
2000.00	0.700
2500.00	0.490
3000.00	0.410
3500.00	0.490
4000.00	0.010
5000.00	0.190
5500.00	0.050
6000.00	1.100
6500.00	0.960
7000.00	1.070
7500.00	0.810
8500.00	2.640
9000.00	0.550
10000.00	0.400

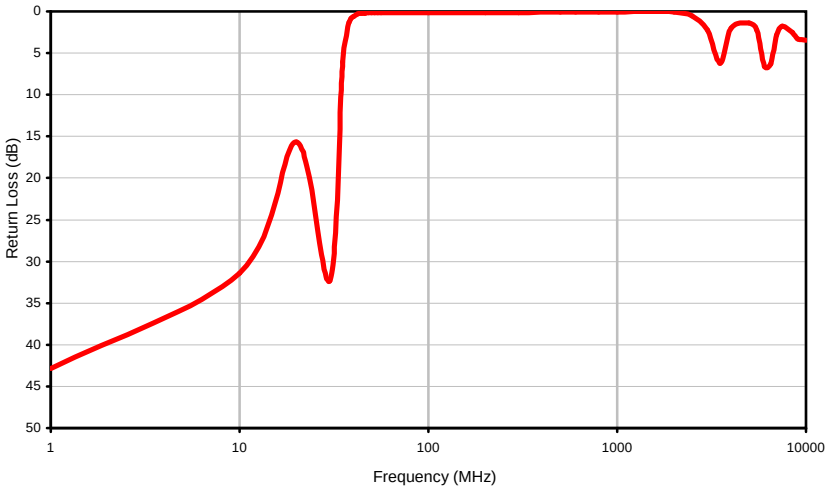
Coaxial Low Pass Filter SLP-30+

Typical Performance Curves

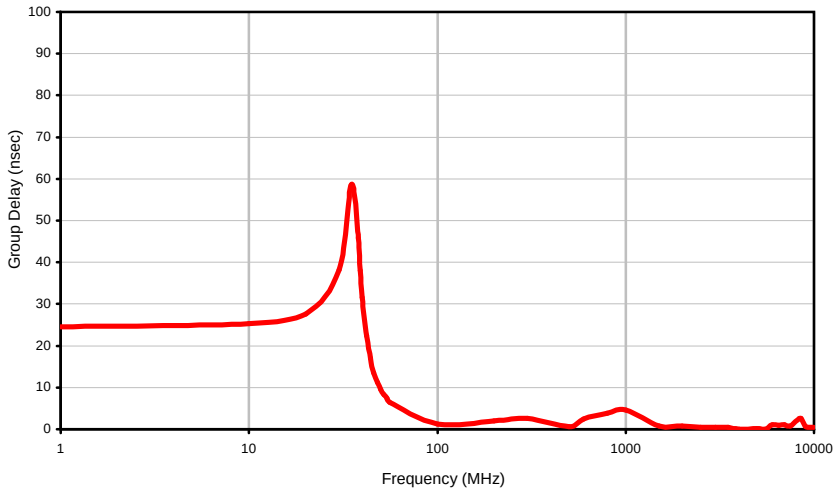
Insertion Loss



Return Loss

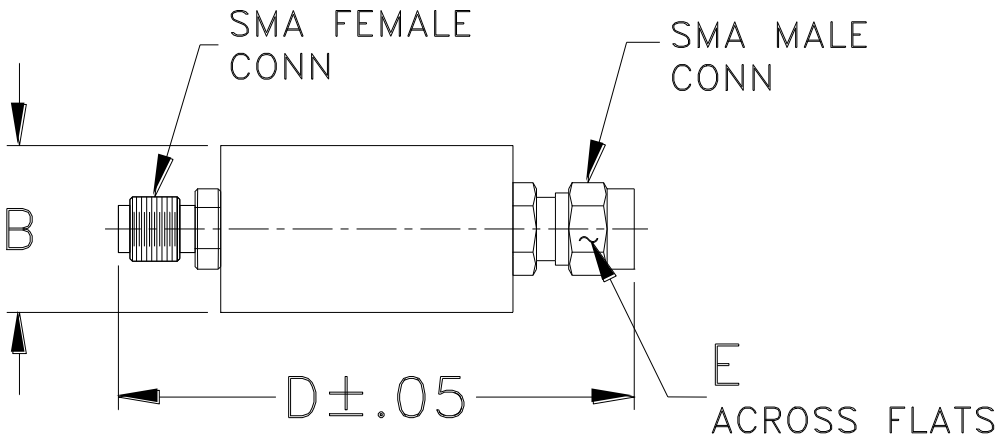


Group Delay



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.

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