Coaxial

Low Pass Filter

SLP-50+

50Ω DC to 48 MHz

Generic photo used for illustration purposes only

CASE STYLE: FF99

Connectors	Model
SMA	SLP-50+

Maximum Ratings

Operating Temperature	-55°C to +100°C
Storage Temperature	-55°C to +100°C
RF Power Input	0.5 W max.

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

Features

- Good Attenuation Rate, 1.35 Typ. 20 dB / 3 dB BW Ratio
- Rugged Shielded Case
- Other SLP Models Available with Wide Selection of Cut-Off Frequencies

Applications

- Lab Use
- Test Equipment
- Video Equipment

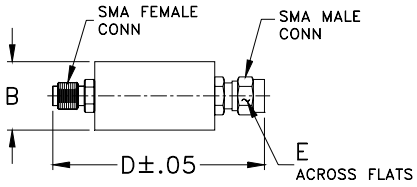
+RoHS Compliant

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

Low Pass Filter Electrical Specifications

PASSBAND (MHz) (loss < 1 dB)	fco (MHz) Nom. (loss 3 dB)	STOPBAND (MHz) (loss > 20 dB)	STOPBAND (MHz) (loss > 40 dB)	VSWR (:1) Passband Typ.	VSWR (:1) Stopband Typ.
DC-48	55	70-90	90-200	1.7	18

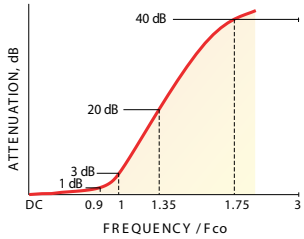
Outline Drawing



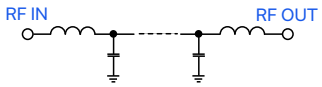
Outline Dimensions (inch/mm)

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

typical frequency response

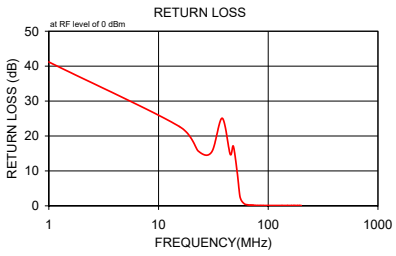


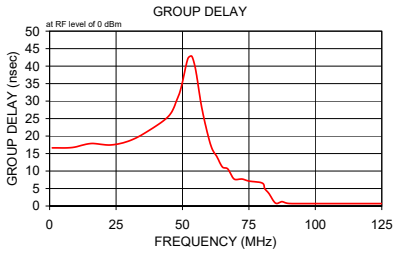
electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) x̄	Insertion Loss (dB) σ	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
1.00	0.05	0.0	41.2	1.00	16.62
15.50	0.23	0.1	22.7	8.50	16.73
23.00	0.37	0.1	15.7	15.50	17.87
30.50	0.43	0.1	15.4	23.00	17.45
38.00	0.40	0.1	25.1	30.50	18.79
45.00	0.65	0.1	14.8	38.00	21.89
48.00	0.70	0.1	17.1	45.00	25.87
52.00	1.46	0.2	9.9	48.00	30.56
55.00	4.65	0.3	3.0	49.50	33.92
57.00	7.96	0.4	1.5	52.00	42.09
61.00	14.84	0.5	0.5	53.50	42.83
65.00	20.96	6.0	0.3	55.00	38.77
67.00	23.73	0.6	0.2	57.00	29.20
69.00	26.33	0.7	0.2	59.00	22.03
70.00	27.59	0.7	0.2	61.00	16.66
72.50	30.55	0.8	0.2	63.00	14.04
80.00	38.67	1.2	0.1	65.00	11.17
82.50	41.07	1.4	0.1	67.00	10.62
85.00	43.54	1.6	0.1	69.00	8.06
87.50	45.78	1.8	0.1	70.00	7.57
90.00	47.97	2.2	0.1	72.50	7.70
100.00	56.91	4.1	0.1	75.00	7.14
133.50	68.38	5.2	0.1	80.00	6.57
150.00	67.23	4.2	0.1	81.00	4.93
163.00	68.62	4.6	0.1	82.50	3.61
170.50	69.35	3.3	0.1	85.00	0.84
175.00	69.36	5.8	0.1	87.50	1.23
185.50	77.07	8.8	0.1	90.00	0.73
192.50	69.51	5.2	0.1	100.00	0.70
200.00	71.27	9.7	0.1	125.00	0.69





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-50+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)
1.00	0.03	35.75
2.00	0.04	30.06
4.00	0.07	24.58
10.00	0.13	19.48
14.00	0.14	20.07
20.00	0.13	28.88
24.00	0.14	33.51
31.00	0.20	22.69
35.00	0.22	25.17
41.00	0.32	20.99
45.00	0.40	21.97
50.00	1.23	9.38
54.00	5.88	2.10
58.00	12.84	0.66
60.00	16.20	0.46
62.00	19.35	0.36
68.00	27.74	0.25
70.00	30.25	0.24
72.00	32.66	0.23
74.00	34.97	0.22
78.00	39.39	0.20
79.00	40.45	0.20
80.00	41.50	0.20
81.00	42.55	0.19
100.00	63.39	0.18
300.00	71.06	0.14
400.00	72.99	0.13
1500.00	66.94	0.03
2000.00	75.42	0.04
2500.00	66.79	0.10
3000.00	55.66	0.49
3500.00	52.29	0.62
4000.00	48.09	1.19
4500.00	42.33	3.48
5000.00	25.60	5.34
5500.00	28.36	2.53
6500.00	46.64	0.96
7000.00	54.34	0.88
7500.00	52.30	1.43
8000.00	42.33	3.81
8500.00	41.90	5.22
9500.00	36.14	1.74
10000.00	24.92	2.02

FREQUENCY (MHz)	GROUP DELAY (nsec)
1.00	17.320
2.00	17.460
4.00	17.170
10.00	17.020
14.00	17.450
20.00	18.220
24.00	18.800
31.00	20.160
35.00	21.570
41.00	24.630
45.00	28.540
50.00	41.380
54.00	36.670
58.00	21.030
60.00	16.340
62.00	13.170
68.00	8.020
70.00	7.070
72.00	6.330
74.00	5.650
78.00	4.630
79.00	4.530
80.00	4.250
81.00	3.900
100.00	0.610
300.00	4.070
400.00	2.830
1500.00	0.550
2000.00	0.850
2500.00	0.540
3000.00	0.500
3500.00	0.340
4000.00	0.490
4500.00	1.640
5000.00	1.200
5500.00	0.920
6500.00	0.720
7000.00	0.730
7500.00	0.340
8000.00	0.690
8500.00	0.500
9500.00	0.290
10000.00	0.680

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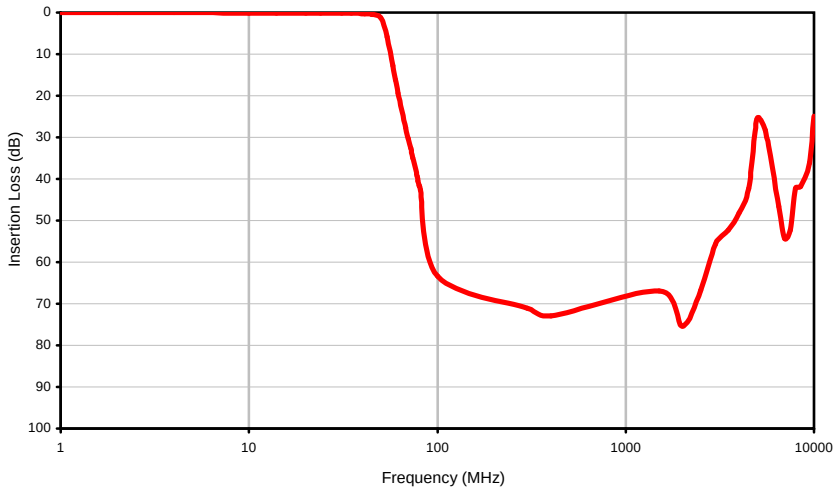
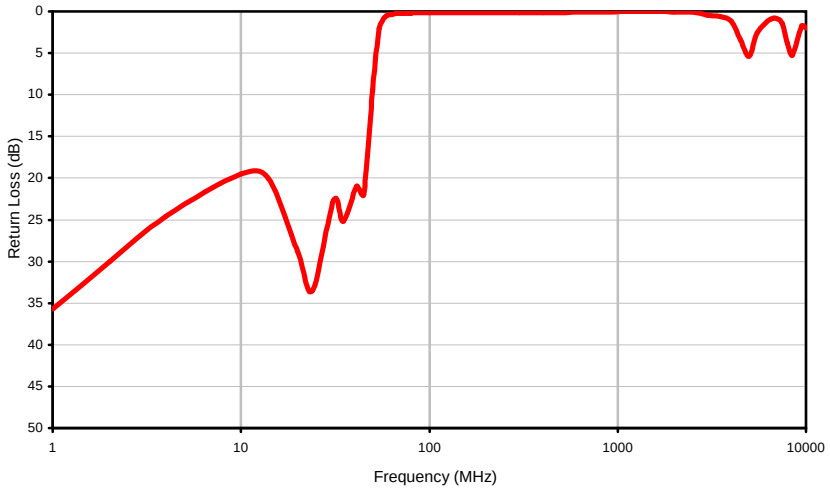
Typical Performance Curves

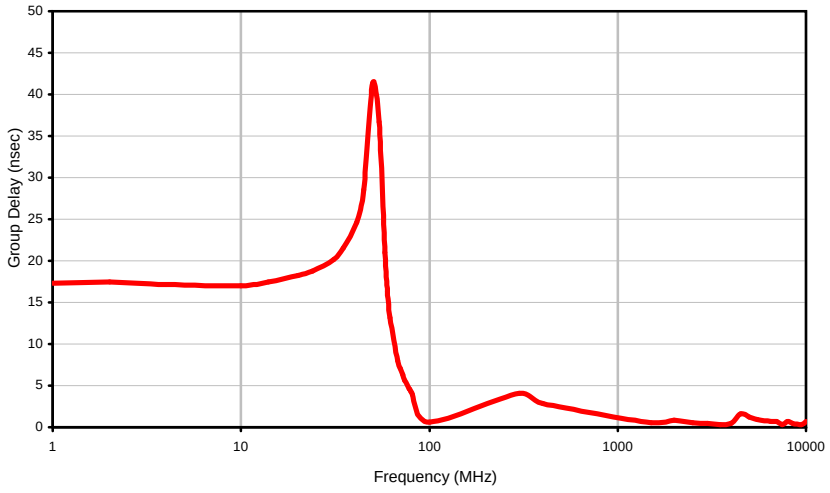
Insertion Loss



Return Loss

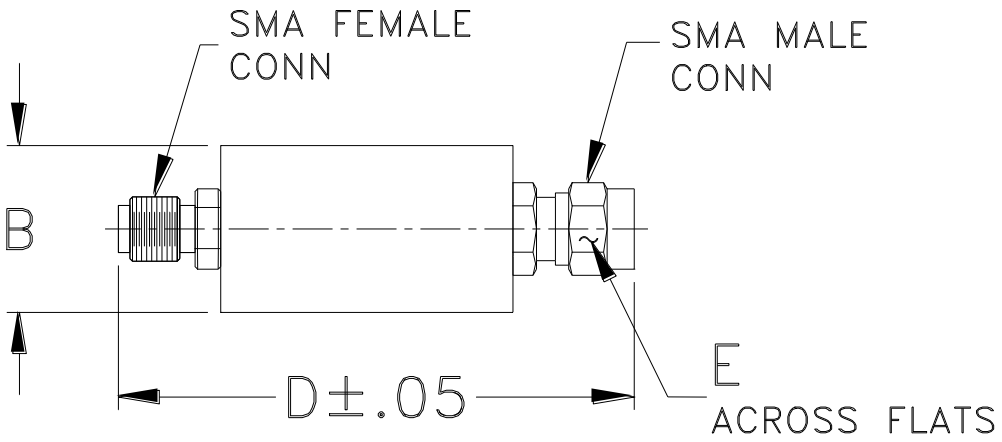


Group Delay



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