

Low Pass Filter

50Ω DC to 400 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-450+



CASE STYLE: FF99

Connectors Model
SMA SLP-450+

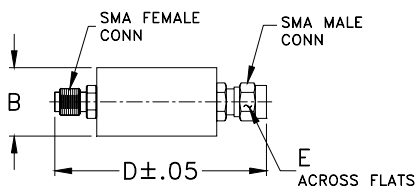
+RoHS Compliant

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-400	440	580-750 750-1800	1.7 18

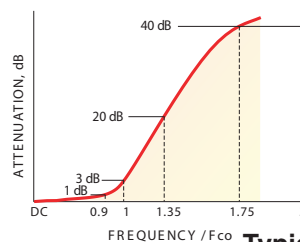
Outline Drawing



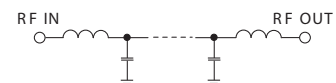
Outline Dimensions (inch/mm)

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

typical frequency response

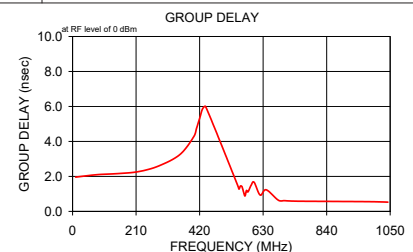
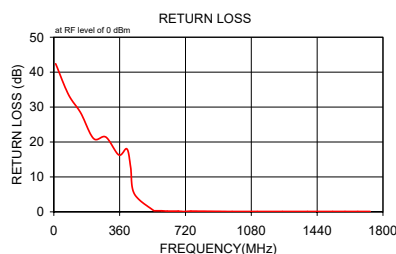


electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
$\bar{x}$	σ			
10.00	0.02	0.1	10.00	1.96
80.00	0.06	0.1	80.00	2.10
147.50	0.10	0.1	147.50	2.16
217.50	0.19	0.1	217.50	2.27
285.00	0.25	0.1	285.00	2.60
355.00	0.46	0.1	355.00	3.25
400.00	0.63	0.1	400.00	4.26
420.00	1.01	0.1	410.00	4.76
440.00	2.84	0.2	420.00	5.32
545.00	26.52	0.9	430.00	5.87
555.00	28.57	0.9	440.00	5.99
565.00	30.55	1.0	545.00	1.52
570.00	31.51	1.0	550.00	1.28
575.00	32.52	1.0	555.00	1.45
580.00	33.47	1.0	560.00	1.42
590.00	35.44	1.0	565.00	1.12
620.00	40.86	1.1	570.00	0.88
680.00	51.19	1.6	575.00	1.20
700.00	54.79	1.8	580.00	1.11
720.06	57.91	1.2	590.00	1.48
750.00	62.99	2.7	600.00	1.67
975.00	69.53	2.1	620.00	0.93
1112.50	78.46	9.9	640.00	1.24
1250.00	68.87	2.9	680.00	0.64
1387.50	69.76	8.2	700.00	0.62
1525.00	70.50	5.6	720.00	0.59
1592.50	68.09	0.9	750.00	0.58
1662.50	71.23	4.9	975.00	0.56
1730.00	72.22	6.0	1042.50	0.53
1800.00	67.80	4.1	1112.50	0.52



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-450+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
10.0	0.13	40.83	10.0	2.360
50.0	0.14	27.08	50.0	2.110
100.0	0.15	25.01	100.0	2.160
150.0	0.18	34.08	150.0	2.240
200.0	0.24	24.19	200.0	2.330
250.0	0.32	19.30	250.0	2.470
300.0	0.36	19.79	300.0	2.720
350.0	0.44	21.77	350.0	3.140
400.0	0.64	18.07	400.0	4.280
420.0	1.28	9.50	420.0	4.990
430.0	2.04	6.51	430.0	5.170
440.0	3.18	4.35	440.0	5.040
450.0	4.74	2.92	450.0	4.620
460.0	6.56	1.97	460.0	4.100
470.0	8.55	1.38	470.0	3.550
480.0	10.59	1.03	480.0	3.070
490.0	12.64	0.81	490.0	2.660
500.0	14.63	0.68	500.0	2.320
510.0	16.57	0.60	510.0	2.070
520.0	18.44	0.54	520.0	1.860
530.0	20.24	0.49	530.0	1.690
535.0	21.12	0.46	535.0	1.620
540.0	21.98	0.44	540.0	1.560
550.0	23.65	0.40	550.0	1.440
600.0	31.39	0.34	600.0	1.040
650.0	38.10	0.28	650.0	0.830
665.0	39.97	0.28	665.0	0.810
670.0	40.59	0.28	666.0	0.790
1000.0	71.12	0.19	669.0	0.780
1500.0	84.02	0.24	670.0	0.750
2000.0	83.85	0.34	1000.0	0.510
2500.0	99.38	0.35	1500.0	0.390
3000.0	75.40	0.37	2000.0	0.250
3500.0	66.93	0.36	3000.0	0.160
4000.0	59.94	0.34	3500.0	0.200
4500.0	53.88	0.33	4000.0	0.210
5000.0	40.50	0.37	4500.0	0.090
5500.0	44.68	0.31	5500.0	0.110
6000.0	54.60	0.30	6000.0	0.040
6500.0	46.51	0.37	6500.0	0.520
7000.0	42.93	0.37	7000.0	0.260
7500.0	31.06	0.66	7500.0	0.500
8000.0	23.24	7.68	8000.0	1.860
9000.0	26.73	0.59	9000.0	0.300
10000.0	19.18	0.82	10000.0	0.840

REV. X1
SLP-450+
060921
Page 1 of 1



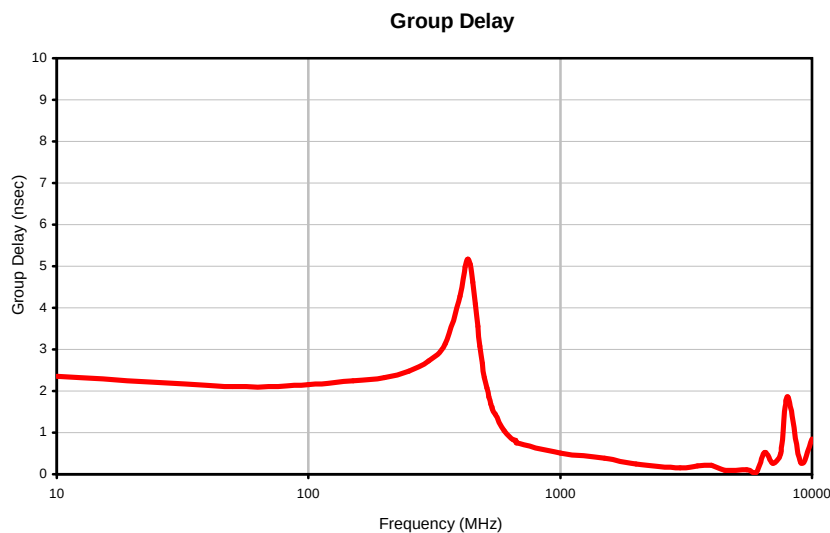
IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS9100 CERTIFIED • RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see



Typical Performance Curves



IF/RF MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS 9100 CERTIFIED RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661



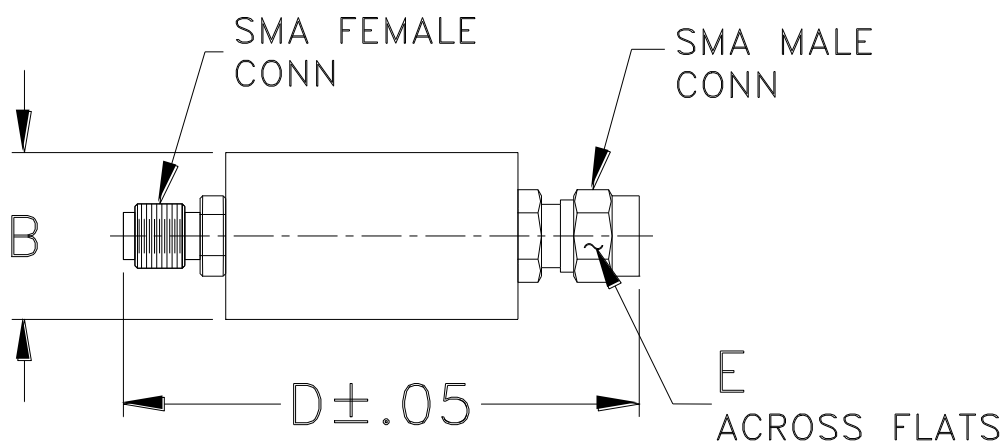
The Design Engineers Search Engine finds the model you need, Instantly • For detailed performance specs & shopping online see



REV. X1
SLP-450+
060921
Page 1 of 1

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