

Coaxial

Bandpass Filter

50Ω Constant Impedance 35 to 49 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

- low VSWR in pass- and stopbands, 1.3:1 typ
- rugged shielded case
- custom to models available

Applications

- harmonic rejection
- lab use

SIF-40+


Generic photo used for illustration purposes only

CASE STYLE: FF99

Connectors	Model
SMA	SIF-40+

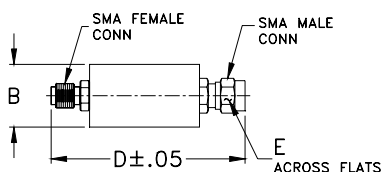
+RoHS Compliant

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

Bandpass Filter Electrical Specifications

CENTER FREQ. (MHz)	PASSBAND (MHz)	STOPBANDS		VSWR, 1.3:1 Typ. TOTAL BAND (MHz)
		(loss > 10 dB) at MHz	(loss > 20 dB) at MHz	
42	35-49	10 & 168	2.6 & 300	DC-400

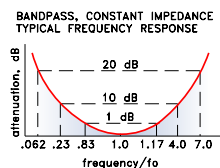
Outline Drawing



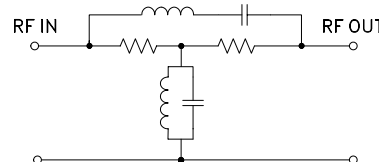
Outline Dimensions (inch/mm)

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

typical frequency response

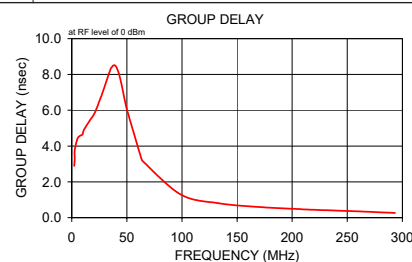
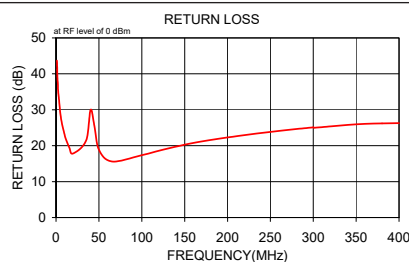


electrical schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$	σ			
1.0	31.97	0.1	43.7	2.3	2.895
1.3	29.62	0.1	41.1	2.6	3.319
1.6	27.72	0.1	39.1	2.7	3.755
2.0	26.20	0.1	37.6	5.2	4.422
2.3	24.90	0.1	36.1	7.5	4.574
2.6	23.77	0.1	34.9	9.9	4.649
3.0	22.54	0.1	33.7	11.0	4.904
5.3	17.56	0.1	28.5	16.1	5.402
7.7	14.41	0.1	25.3	20.9	5.852
10.0	12.05	0.1	23.0	26.2	6.700
11.0	11.21	0.1	22.2	27.1	6.840
15.3	8.20	0.1	19.5	35.1	8.288
19.7	5.92	0.1	17.8	36.3	8.399
35.0	0.86	0.1	21.4	37.6	8.498
40.3	0.23	0.1	30.0	39.6	8.488
44.7	0.31	0.1	25.5	41.7	8.249
50.0	0.88	0.1	18.9	43.2	7.937
65.0	3.17	0.1	15.6	45.4	7.393
99.3	7.37	0.2	17.3	47.0	6.910
133.7	10.43	0.2	19.4	48.7	6.395
168.0	12.93	0.3	21.1	50.4	5.956
212.0	15.76	0.3	22.7	63.1	3.323
256.0	18.46	0.4	24.0	64.2	3.167
300.0	21.25	0.5	25.1	98.9	1.296
301.0	21.32	0.5	25.0	132.6	0.812
320.8	22.67	0.6	25.4	168.9	0.599
340.60	24.13	0.7	25.8	207.7	0.474
360.40	25.67	0.9	26.1	211.3	0.462
380.20	27.40	1.1	26.2	255.6	0.363
400.00	29.24	1.4	26.3	293.4	0.264



Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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


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 REV. C
M151107
SIF-40+
200522

Coaxial Band Pass Filter(Constant Impedance) SIF-40+

Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	RETURN LOSS (dB)	FREQUENCY (MHz)	GROUP DELAY (nsec)
1.00	31.97	43.70	2.30	2.895
1.30	29.62	41.10	2.60	3.319
1.60	27.72	39.10	2.70	3.755
2.00	26.20	37.60	5.20	4.422
2.30	24.90	36.10	7.50	4.574
2.60	23.77	34.90	9.90	4.649
3.00	22.54	33.70	11.00	4.904
5.30	17.56	28.50	16.10	5.402
7.70	14.41	25.30	20.90	5.852
10.00	12.05	23.00	26.20	6.700
11.00	11.21	22.20	27.10	6.840
15.30	8.20	19.50	35.10	8.288
19.70	5.92	17.80	36.30	8.399
35.00	0.86	21.40	37.60	8.498
40.30	0.23	30.00	39.60	8.488
44.70	0.31	25.50	41.70	8.249
50.00	0.88	18.90	43.20	7.937
65.00	3.17	15.60	45.40	7.393
99.30	7.37	17.30	47.00	6.910
133.70	10.43	19.40	48.70	6.395
168.00	12.93	21.10	50.40	5.956
212.00	15.76	22.70	63.10	3.323
256.00	18.46	24.00	64.20	3.167
300.00	21.25	25.10	98.90	1.296
301.00	21.32	25.00	132.60	0.812
320.80	22.67	25.40	168.90	0.599
340.60	24.13	25.80	207.70	0.474
360.40	25.67	26.10	211.30	0.462
380.20	27.40	26.20	255.60	0.363
400.00	29.24	26.30	293.40	0.264

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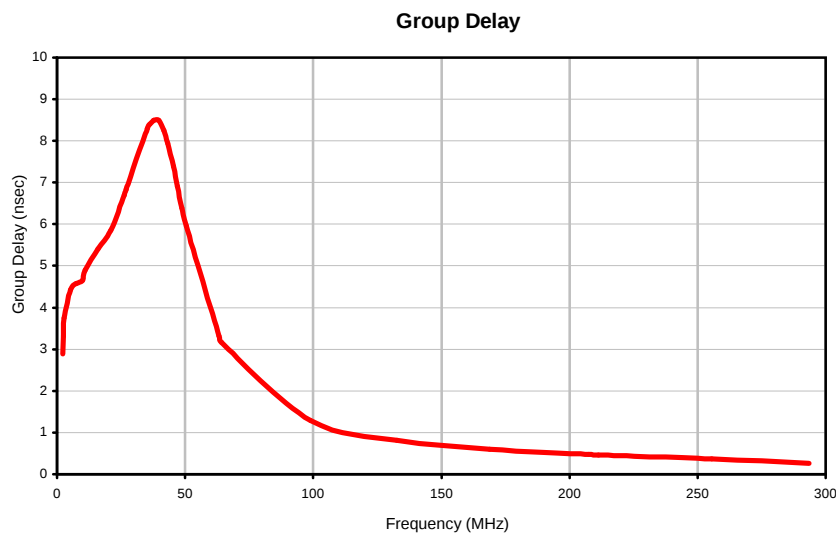
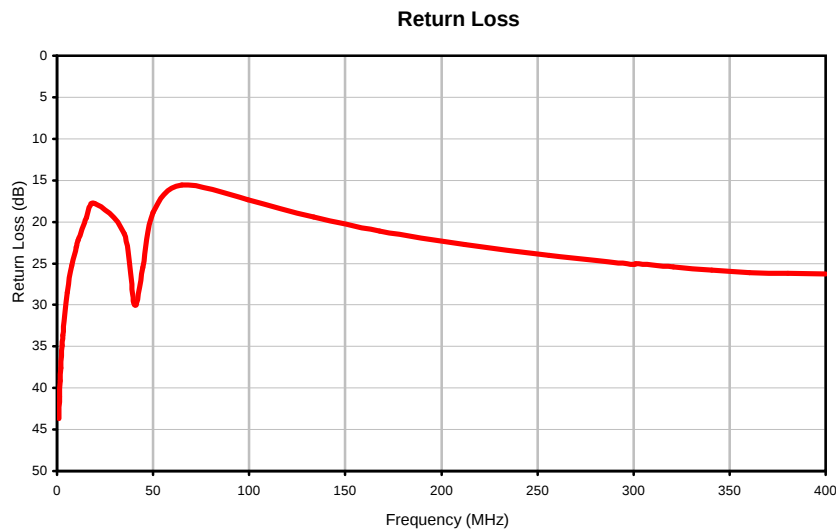
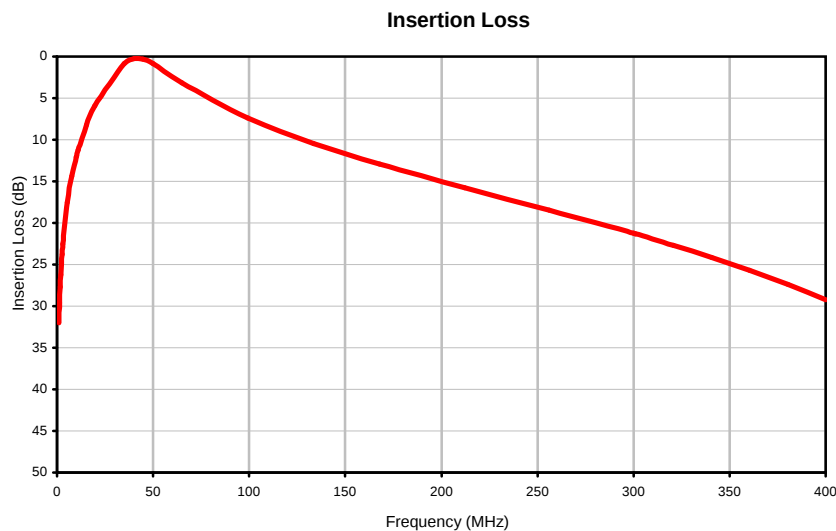


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Coaxial Band Pass Filter(Constant Impedance) SIF-40+

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