Surface Mount

Bandpass Filter

BPF-F100+

50Ω 95 to 105 MHz



CASE STYLE: HP1156

The Big Deal

- Narrow bandwidth
- High Rejection
- Good VSWR
- Shielded package

Product Overview

BPF-F100+ is a 50Ω bandpass filter in a shielded package fabricated using SMT technology. This bandpass filter covers from 95 to 105 MHz. This unit uses a miniature high Q capacitors and wire welded inductors for high reliability, It has repeatable performance across production lots and consistent performance across temperature.

Key Features

Feature	Advantages
Narrow bandwidth filter	Narrow bandwidth with fast roll-off, this will attenuate frequencies closer to the passband with good rejection value of > 40 dB which increases selectivity on the adjacent channel
Good rejection	This enables the filter attenuate spurious signals and reject harmonics for broad frequency band.
Shielded package	The small surface mount package enables the BPF-F100+ to used in compact design

Notes
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50Ω 95 to 105 MHz

BPF-F100+



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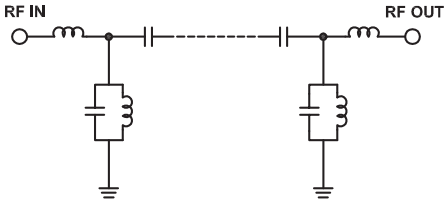
Features

- Narrow bandwidth
- Sharper cut-off
- Shielded package

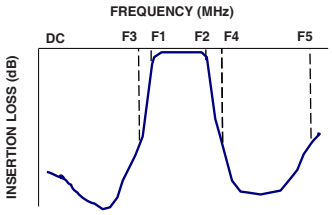
Applications

- Radio test equipment
- Receiver \ Transmitter
- Harmonic rejection

Functional Schematic



Typical Frequency Response



+RoHS Compliant

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

Electrical Specifications at 25°C

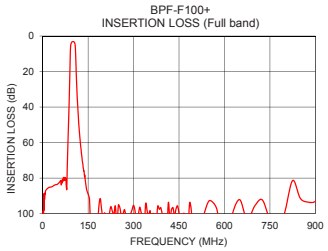
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	100	—	MHz
	Insertion Loss	F1-F2	95-105	—	5	6	dB
	VSWR	F1-F2	95-105	—	1.58	1.92	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-85	40	45	—	dB
	VSWR	DC-F3	DC-85	—	20	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	120-900	40	44	—	dB
	VSWR	F4-F5	120-900	—	20	—	:1

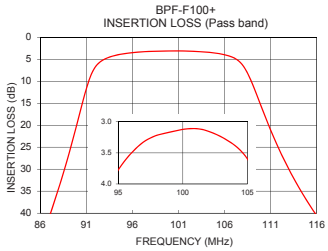
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	1 W

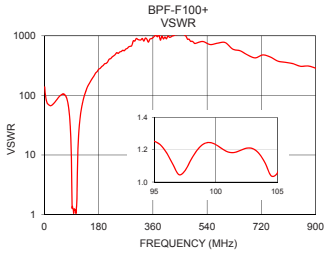
Permanent damage may occur if any of these limits are exceeded.

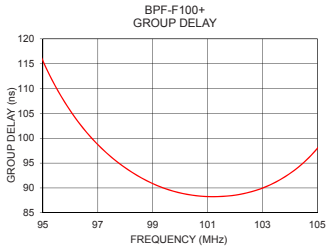
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1.0	104.96	138.75	95.0	115.55
50.0	83.35	96.51	95.5	110.00
85.0	52.26	35.19	96.0	105.51
88.5	30.98	14.40	96.5	101.78
89.5	23.60	9.11	97.0	98.71
90.0	19.64	6.69	97.5	96.16
92.0	6.69	1.26	98.0	94.05
95.0	3.78	1.25	98.5	92.29
100.0	3.12	1.23	99.0	90.87
105.0	3.60	1.06	99.5	89.78
108.0	6.46	1.98	100.0	88.99
110.5	18.56	9.15	100.5	88.50
111.0	21.13	11.14	101.0	88.26
112.0	25.88	15.20	101.5	88.29
113.0	30.12	19.30	102.0	88.54
116.0	40.59	31.70	102.5	89.10
120.0	51.10	48.50	103.0	89.96
300.0	95.33	817.79	103.5	91.23
500.0	103.03	744.47	104.0	92.91
900.0	93.09	286.61	105.0	97.97









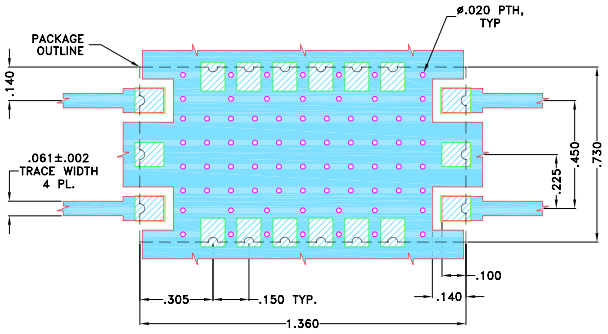
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Pad Connections

INPUT	18
OUTPUT	9
GROUND	1,3,4,5,6,7,8,10,12,13,14,15,16,17
NO CONNECTION	2,11

Demo Board MCL P/N: TB-695+
Suggested PCB Layout (PL-418)

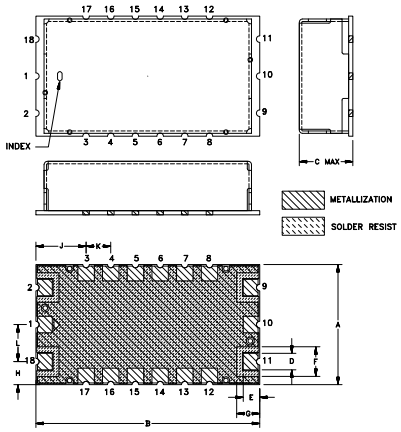


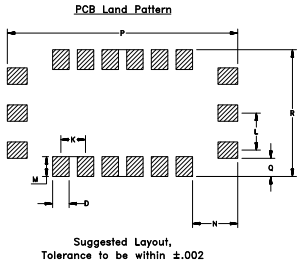
NOTES:
1. TRACE WIDTH IS SHOWN FOR OAK-602, WITH DIELECTRIC THICKNESS .022"±.0015". COPPER: 1/2 Oz. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Outline Drawing





Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H	J
.730	**1.360**	**.350**	**.100**	**.100**	**.180**	**.140**	**.140**	**.305**
18.54	34.54	8.89	2.54	2.54	4.57	3.56	3.56	7.75

K	L	M	N	P	Q	R	Wt.
.150	**.225**	**.120**	**.275**	**1.400**	**.110**	**.770**	grams
3.81	5.72	3.05	6.99	35.56	2.79	19.56	6.0

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