Surface Mount

Bandpass Filter

BPF-BC300A+

50Ω 260 to 340 MHz

Generic photo used for illustration purposes only

CASE STYLE: TS2825

The Big Deal

- Broader bandwidth
- High Rejection
- Miniature shielded package

Product Overview

BPF-BC300A+ is a 50Ω bandpass filter in a shielded package fabricated using SMT technology. This bandpass filter covers from 260 to 340 MHz. This filter build with high Q capacitors and wire welded inductors for high reliability. This filter offers sharp rejection and low insertion loss for use in Test and measurement system applications.

Key Features

Feature	Advantages
Low insertion loss	Can be used in Transmitters/Receivers application
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-BC300A+ to used in compact design

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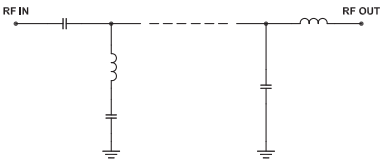
Features

- Broader bandwidth
- High rejection
- Miniature shielded package

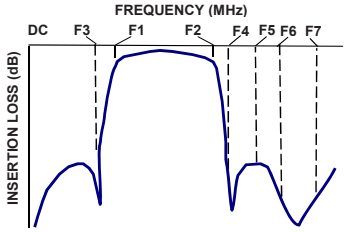
Applications

- Test and measurement
- Harmonic rejection
- Transmitters / Receivers

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

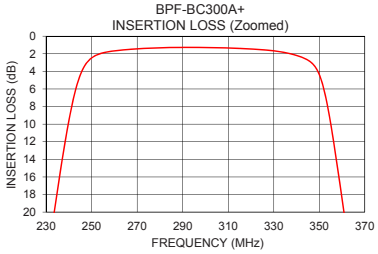
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	300	—	MHz
	Insertion Loss	F1-F2	260 - 340	—	2.5	3.0	dB
	VSWR	F1-F2	260 - 340	—	1.4	1.57	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC - 220	40	—	—	dB
	VSWR	DC-F3	DC - 220	—	20	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	380 - 1000	40	44	—	dB
		F5-F6	1000 - 3000	30	35	—	dB
		F6-F7	3000 - 4000	20	25	—	dB
	VSWR	F4-F7	380 - 4000	—	20	—	:1

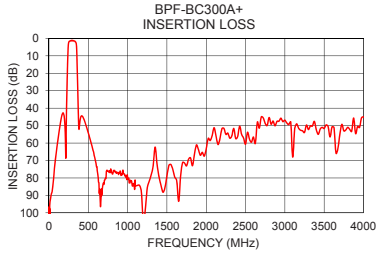
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5 W

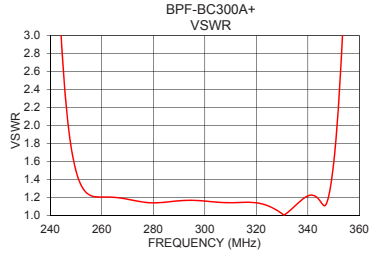
Permanent damage may occur if any of these limits are exceeded.

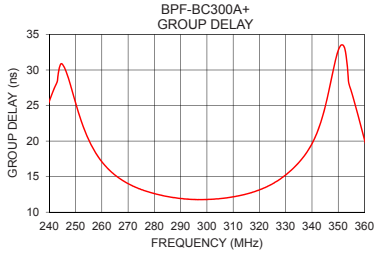
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	107.46	289.32	260	17.09
100	62.79	266.52	265	15.22
150	47.29	107.98	270	14.01
220	49.91	25.51	275	13.18
228	30.48	18.99	280	12.60
233	20.98	14.22	285	12.19
240	9.59	6.26	290	11.92
246	3.81	2.28	295	11.78
260	1.67	1.20	300	11.78
300	1.29	1.16	305	11.91
340	2.19	1.22	310	12.16
348	3.41	1.20	315	12.55
355	9.93	3.99	318	12.87
361	20.30	8.10	320	13.14
366	29.48	10.41	322	13.43
380	51.78	13.32	325	13.98
500	54.18	35.87	328	14.68
1000	79.91	49.75	330	15.24
3000	46.87	28.86	335	16.98
4000	45.03	49.27	340	19.63









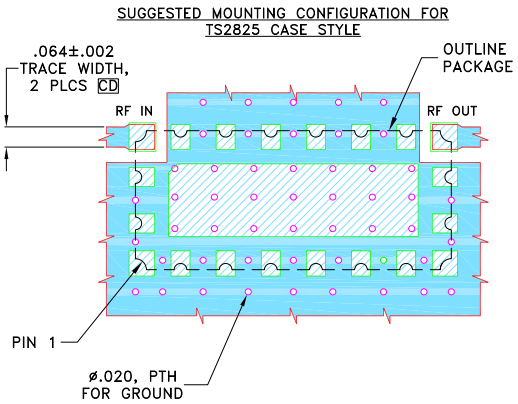
Notes

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

Pad Connections

INPUT	18
OUTPUT	11
GROUND	1-10, 12-17,19,20

Demo Board MCL P/N: TB-1097+
Suggested PCB Layout (PL-639)



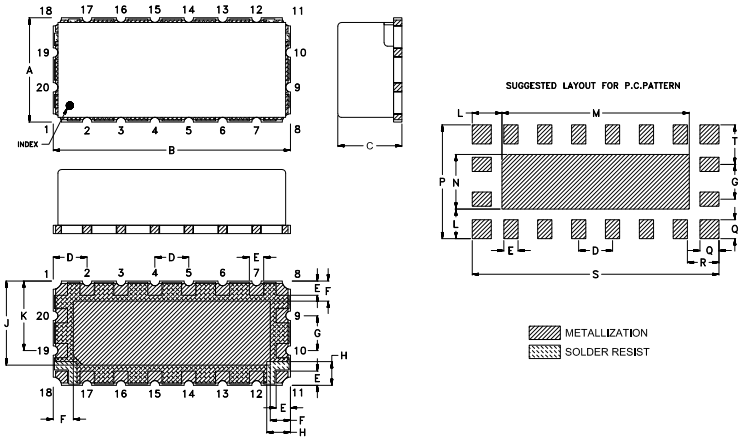
NOTES:

1. TRACE WIDTH IS SHOWN FOR ROGERS (RO4350B) WITH DIELECTRIC THICKNESS .030"±.002". 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	K
.440	**1.000**	**.270**	**.143**	**.060**	**.085**	**.147**	**.100**	**.355**	**.293**
11.18	25.40	6.86	3.63	1.52	2.16	3.73	2.54	9.02	7.45

L	M	N	P	Q	R	S	T	Wt.
.125	**.790**	**.230**	**.480**	**.080**	**0.133**	**1.040**	**.167**	grams
3.18	20.07	5.84	12.19	2.03	3.37	26.42	4.23	2

Note: Please refer to case style drawing for details