Surface Mount

Bandpass Filter

BPF-A535+

50Ω 460 to 610 MHz



CASE STYLE: HQ1157

The Big Deal

- Sharp roll-off
- Low passband IL
- Miniature shielded package

Product Overview

The BPF-A535+ is a 50Ω bandpass filter in a shielded package (size of 0.365" x 1.360" x 0.35") fabricated using SMT technology. Covering 535 MHz ± 75 MHz band width, these units offer good matching within the passband and low IL in the passband. This unit uses a miniature high Q capacitors and wire welded inductors for high reliability. In addition It has consistent performance across temperature.

Key Features

Feature	Advantages
Good VSWR, 1.25:1 typical over passband	Good return loss over the passband which provides better impedance matching when cascaded with other devices.
Sharp roll-off	Sharp roll-off helps in adjacent channel rejection and hence increased selectivity.
Shielded case	Reduced interference with the surrounding components.

Notes
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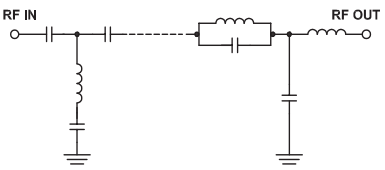
Features

- Sharp roll-off
- Low passband IL
- Shielded case

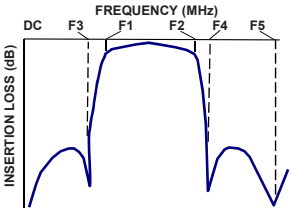
Applications

- Biomedical telemetry devices
- Wireless microphones
- Television broadcasting

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

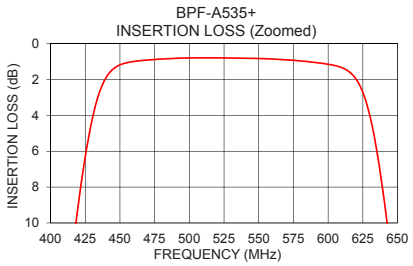
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	535	—	MHz
	Insertion Loss	F1-F2	460 - 610	—	1.3	2.0	dB
	VSWR	F1-F2	460 - 610	—	1.25	1.5	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC - 380	30	40	—	dB
	VSWR	DC-F3	DC - 380	—	20	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	700 - 1600	20	30	—	dB
	VSWR	F4-F5	700 - 1600	—	20	—	:1

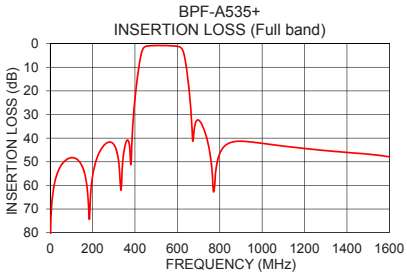
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5 W Max.

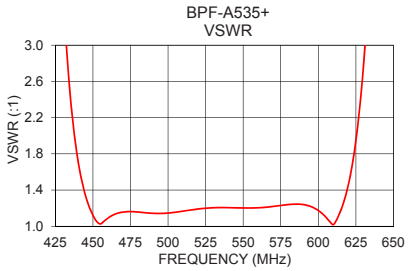
Permanent damage may occur if any of these limits are exceeded.

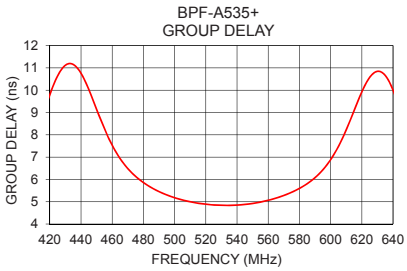
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1.0	84.13	566.36	460	7.53
50.0	51.74	1151.52	470	6.49
100.0	48.26	933.46	480	5.86
380.0	51.11	41.88	490	5.45
392.5	30.98	32.72	500	5.18
395.0	28.19	30.71	510	5.00
402.5	21.26	24.46	520	4.89
432.5	3.41	2.95	525	4.86
437.5	2.27	2.03	530	4.84
460.0	0.99	1.09	535	4.84
535.0	0.80	1.21	540	4.85
610.0	1.34	1.02	550	4.92
625.0	2.71	1.94	560	5.07
630.0	3.99	2.76	570	5.28
655.0	19.19	10.96	580	5.60
665.0	29.64	12.86	590	6.08
700.0	32.35	15.96	595	6.43
1000.0	42.19	32.63	600	6.88
1300.0	45.28	27.29	605	7.48
1600.0	47.92	28.53	610	8.22









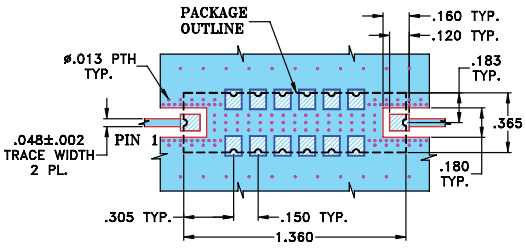
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Pad Connections

INPUT	1
OUTPUT	8
GROUND	2,3,4,5,6,7,9,10,11,12,13,14

Demo Board MCL P/N: TB-363+
Suggested PCB Layout (PL-227)



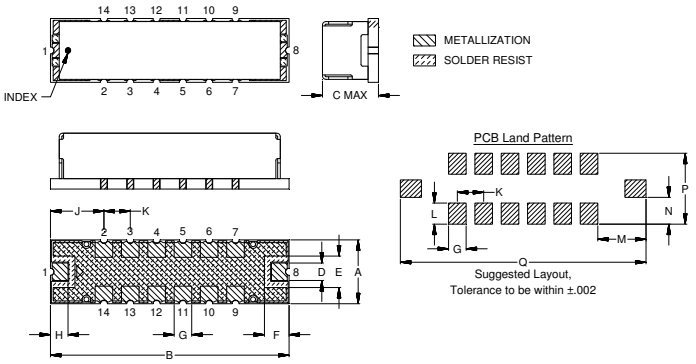
NOTE:

1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025"±.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
.365	**1.360**	**.35**	**.100**	**.180**	**.140**	**.100**	**.100**
9.27	34.54	8.89	2.54	4.57	3.56	2.54	2.54

J	K	L	M	N	P	Q	Wt.
.305	**.150**	**.120**	**.275**	**.152**	**.405**	**1.400**	grams
7.75	3.81	3.05	6.99	3.86	10.29	35.56	4.0

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