

# Surface Mount Bandpass Filter

## BPF-V300+

50Ω      230 to 370 MHz



Generic photo used for illustration purposes only  
CASE STYLE: KV1974

### The Big Deal

- Wide bandwidth
- Very low insertion loss, 1.1 dB typical
- Excellent rejection, 50 dB until 10<sup>th</sup> Harmonic
- Shielded package

### Product Overview

The BPF-V300+ is a 50Ω bandpass filter fabricated using SMT technology. This bandpass filter covers from 230-370 MHz. This filter is built with high Q capacitors and wire welded inductors for high reliability. This filter has fast roll-off and developed for surveillance receiver in aircraft systems. It has repeatable performance across lots and consistent performance across temperature.

### Key Features

Feature	Advantages
Low insertion loss	Very low insertion loss enables the filter to be used in high performance applications.
Excellent rejection out to 10 <sup>th</sup> harmonic	This enables the filter to attenuate spurious signals and reject harmonics for broad frequency band.
Shielded case	Reduced interference with and from the surrounding components.

#### 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.  
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### Features

- Wide bandwidth
- Very low insertion loss
- Excellent rejection
- Miniature shielded package

### Applications

- Civil aircraft communication radio
- Defence Applications
- Surveillance receiver
- Emergency Locator Transponders (ELT)

### Electrical Specifications at 25°C

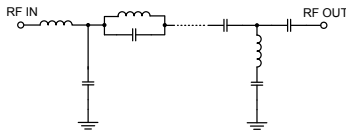
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
<b>Pass Band</b>	Center Frequency	—	—	300	—	MHz	
	Insertion Loss	F1-F2	230-370	—	1.1	2.0	dB
	VSWR	F1-F2	230-370	—	1.2	1.5	:1
<b>Stop Band, Lower</b>	Insertion Loss	DC-F3	DC-170	25	37	—	dB
	VSWR	DC-F3	DC-170	—	20	—	:1
<b>Stop Band, Upper</b>	Insertion Loss	F4-F5	440-3000	25	38	—	dB
	VSWR	F4-F5	440-3000	—	20	—	:1

### Maximum Ratings

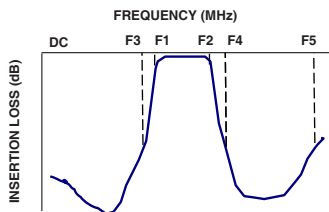
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5 W

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

### Functional Schematic



### Typical Frequency Response

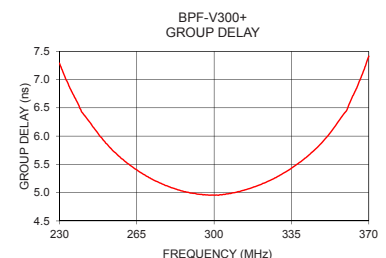
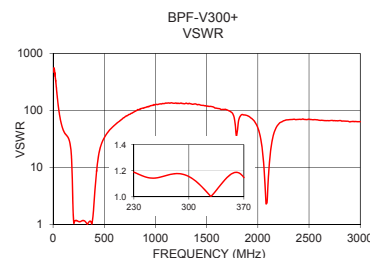
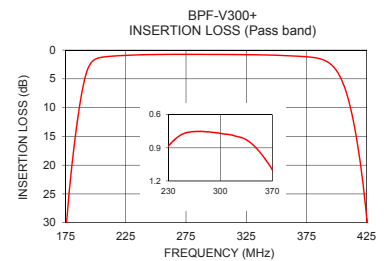
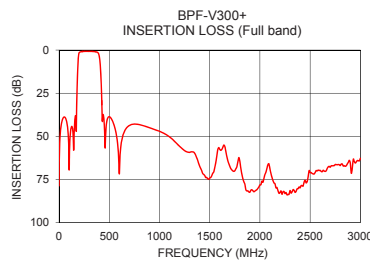


### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	68.59	476.18	230	7.29
10	49.51	550.36	240	6.43
100	69.41	44.87	250	5.92
170	44.78	23.43	260	5.54
176	29.58	18.88	270	5.28
180	20.58	14.92	280	5.10
186	10.62	7.85	290	4.99
194	3.01	2.14	295	4.96
230	0.88	1.16	300	4.96
300	0.77	1.17	305	4.97
370	1.10	1.11	310	5.01
395	2.44	1.78	315	5.06
400	3.60	2.34	320	5.13
412	10.51	4.68	330	5.31
420	20.14	6.85	335	5.43
426	31.66	8.90	340	5.57
440	37.47	14.49	345	5.74
1000	47.06	126.08	350	5.94
2000	78.14	49.43	360	6.45
3000	62.75	63.48	370	7.41

### +RoHS Compliant

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



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