Coaxial

Bandpass Filter

VBF-7331+

50Ω 6850 to 7850 MHz



Generic photo used for illustration purposes only
CASE STYLE: FF704

The Big Deal

- Good rejection
- Good VSWR
- Connectorized package

Product Overview

The VBF-7331+ Band Pass Filter is constructed using internal LTCC Band Pass Filter structure to achieve repeatable performance. This offers low insertion loss and good rejection at the band reject edges. Built using Mini-Circuits proven unibody construction which integrates the RF connectors with the case body, the VBF-7331+ takes very little space and meets rugged test lab system environment.

Key Features

Feature	Advantages
Good Rejection close to pass band	Provides good rejection of signals close to the pass band, for improved system performance.
Compact Versatile Case (1.43"x0.41")	Enables use in a variety of applications including space constrained connectorized systems. Connectors: SMA Female (1), SMA Male (1)
Rugged Unibody Construction	Mini-Circuits Unibody construction allows survivability in critical applications including militarized or industrial systems.

Notes
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Connectors	Model
SMA	VBF-7331+

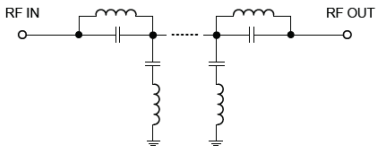
Features

- Small size
- Temperature stable
- Rugged unibody construction

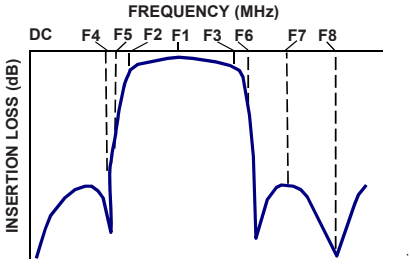
Applications

- Harmonic rejection
- Transmitters / Receivers
- UWB impulse radar
- Emission masking

Functional Schematic



Typical Frequency Response



+RoHS Compliant

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

Electrical Specifications[(1)] at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	F1	7331	-	-	2	dB
	Insertion Loss	F2-F3	6850 - 7850	-	1.4	-	dB
	VSWR	F2-F3	6850 - 7850	-	1.45	-	:1
Stop Band, Lower	Insertion Loss	DC-F4	10-5600	10	23	-	dB
		F4-F5	5600-5800	-	10	-	dB
	VSWR	DC-F5	10-5800	-	20	-	:1
Stop Band, Upper	Insertion Loss	F6-F7	9300 - 10500	10	20	-	dB
		F7-F8	10500-13300	-	10	-	dB
	VSWR	F6-F8	9300-13300	-	20	-	:1

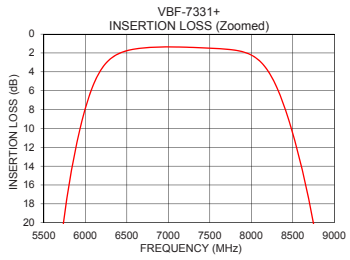
(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required.

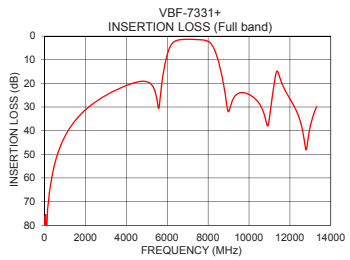
Maximum Ratings	
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input	2.5 W max.

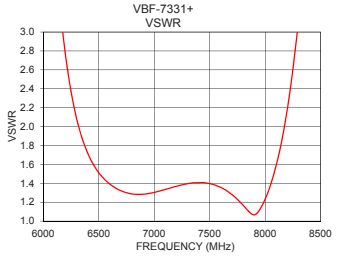
*Passband rating, derate linearly to 0.7 W at 100°C ambient
Permanent damage may occur if any of these limits are exceeded.

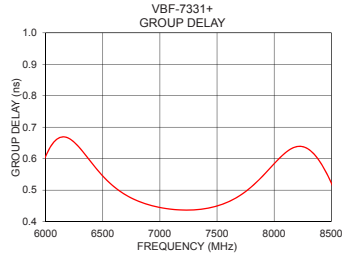
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (ns)
10	76.27	7226.80	6850	0.46
200	69.65	262.08	6900	0.45
900	44.13	118.17	6950	0.45
2150	30.09	84.25	7000	0.44
3000	25.06	77.66	7050	0.44
3700	22.00	67.17	7100	0.44
4250	20.12	55.05	7150	0.44
5600	30.34	20.53	7200	0.44
5800	16.15	12.98	7250	0.44
6250	3.07	2.37	7331	0.44
6850	1.38	1.28	7350	0.44
7331	1.43	1.40	7400	0.44
7850	1.78	1.10	7450	0.44
8600	13.90	8.34	7500	0.45
9300	25.50	18.83	7550	0.46
10000	24.67	23.10	7600	0.46
10500	28.52	24.93	7650	0.47
11400	14.97	12.91	7700	0.48
12100	28.03	25.93	7750	0.50
13300	29.93	23.48	7850	0.53









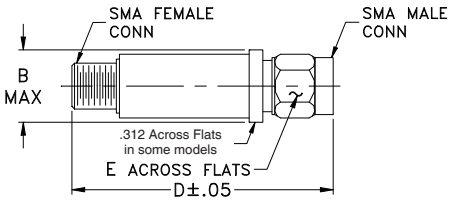
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Coaxial Connections

PORT - 1	SMA-MALE
PORT - 2	SMA-FEMALE

Outline Drawing



Outline Dimensions (inch / mm)

B	D	E	wt.
.410	**1.43**	**.312**	grams
10.41	36.32	7.92	10

Note: Please refer to case style drawing for details

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