Coaxial

Bandpass Filter

VBF-2275+

50Ω 2170 to 2380 MHz

CASE STYLE: FF704

The Big Deal

- Low Insertion Loss (2.0 dB typical)
- Good close-in rejection
- Versatile small size, coaxial, 1.43" length

Product Overview

The VBF-2275+ Band Pass Filter is constructed using internal LTCC Band Pass Filter structure to achieve repeatable performance. Covering 2275 MHz ± 105 MHz, these units offer 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-2275+ 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.

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Connectors	Model
SMA	VBF-2275+

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	1.5W max. at 25°C

*Passband rating, derate linearly to 0.25W at 100°C ambient
Permanent damage may occur if any of these limits are exceeded.

Features

- Small size
- Temperature stable
- Rugged unibody construction

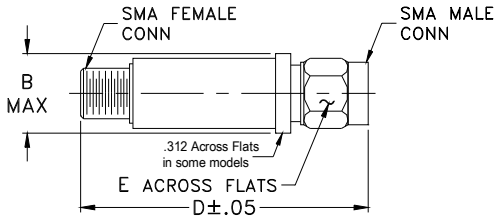
Applications

- Harmonic Rejection
- Transmitters / Receivers

+RoHS Compliant

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

Outline Drawing



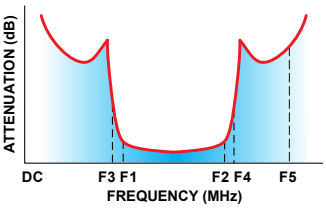
Outline Dimensions (inch / mm)

B	D	E	
.410	1.43	.312	gra
10.41	36.32	7.92	1

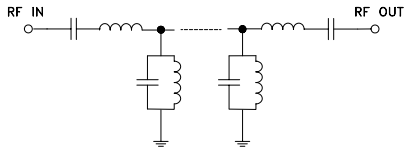
Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	2275	—	MHz
	Insertion Loss	F1-F2	2170-2380	—	—	3.0	dB
	VSWR	F1-F2	2170-2380	—	—	2.5	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-1720	—	20	—	dB
	VSWR	DC-F3	DC-1720	—	25	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	4200-6000	—	25	—	dB
	VSWR	F4-F5	4200-6000	—	20	—	:1

Typical Frequency Response

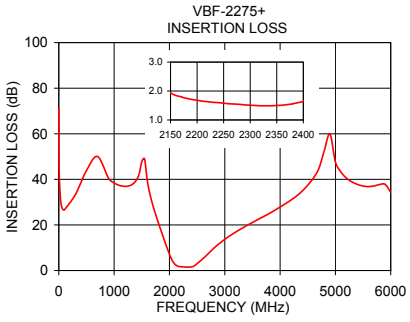


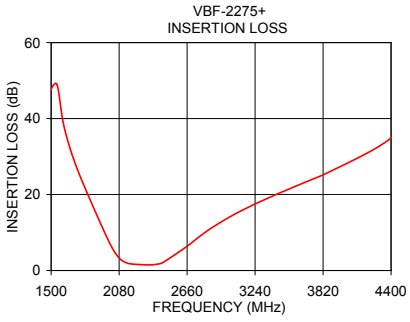
Functional Schematic

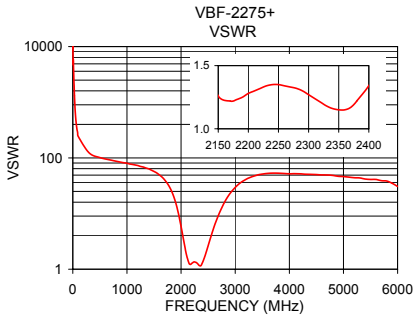


Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
0.30	71.30	14895.30
300.00	33.32	123.47
1100.00	37.31	76.49
1500.00	47.76	56.97
1800.00	20.92	28.33
2000.00	7.18	5.88
2170.00	1.80	1.22
2300.00	1.51	1.27
2380.00	1.56	1.22
2450.00	2.06	1.84
3020.00	14.05	30.84
3500.00	21.07	51.13
4000.00	27.86	51.75
5000.00	47.67	46.21
6000.00	34.26	30.71







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