



**THE DATASHEET OF
BFCQ-2602+**





CERAMIC

Bandpass Filter

BFCQ-2602+

Mini-Circuits

50Ω 25 to 27.5 GHz

THE BIG DEAL

- Innovative and industry leading
- 5G n258 bandpass filter
- Low Insertion Loss – Mid band 2.0dB typical
- Surface mountable pick and place standard case style
- Small size 2.5mm x 2.0mm
- High quality distributed filter topology
- Wide rejection band



Generic photo used for illustration purposes only

CASE STYLE: NL1008C-6

+RoHS Compliant

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

APPLICATIONS

- 5G Telecommunications

PRODUCT OVERVIEW

The BFCQ-2602+ LTCC Bandpass Filter covers the 5G n258 band. This corresponds to a passband of 25 to 27.5 GHz, with as low as 2dB passband loss, and up to 40dB stopband rejection. This model handles up to 1W RF input power and provides a wide operating temperature range from -55 to +125°C. Utilizing a proprietary LTCC material system and a distributed filter topology, this filter is able to achieve repeatable performance on a lot-to-lot basis, up to mmWave frequencies.

KEY FEATURES

Feature	Advantages
5G n258 band compatible	Designed for 5G Telecommunications, n258 band, 25 – 27.5 GHz
Proprietary mmWave compatible LTCC material system	Low loss and repeatable performance on a lot-to-lot basis up to mmWave frequencies.
Cost effective	LTCC is scalable technology that allows for cost reduction at volume.
Small size (2.5mm x 2.0mm)	Allows for high layout density of circuit boards, while minimizing effects of parasitics.
Surface Mountable	Suitable for very high volume automated assembly process.





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ELECTRICAL SPECIFICATIONS¹ AT 25°C

Parameter	F#	Frequency (GHz)	Min.	Typ.	Max.	Units
Center Frequency	—	—	—	26.2	—	GHz
Passband	Insertion Loss	25 - 25.5	—	2.4	—	dB
		25.5 - 27.1	—	2.0	2.8	
	Return Loss (In)	27.1 - 27.5	—	2.4	—	dB
		25 - 27.5	—	13	—	
Return Loss (Out)	F1-F2	25 - 27.5	—	13	—	dB
Stop Band, Lower	Insertion Loss	0.1 - 18	33	50	—	dB
		18 - 21.7	25	37	—	
Stop Band, Upper	Insertion Loss	31 - 37	25	36	—	dB
		37 - 45	33	40	—	
		45 - 50	26	40	—	

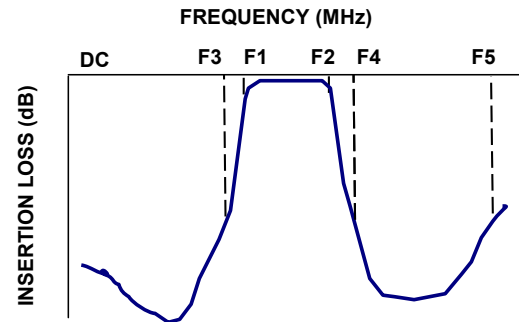
1. Measured on Mini-Circuits Test Board TB-BFCQ-2602C+ with feedline losses removed by normalization of S12 and S21 traces to measurement of TB thru-line.

MAXIMUM RATINGS

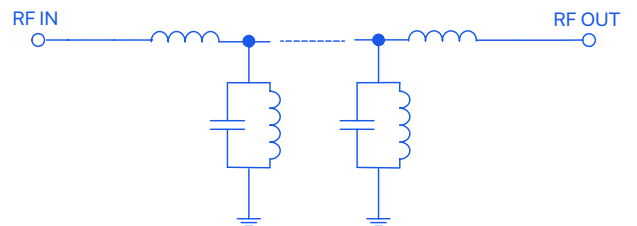
Parameter	Ratings
Operating Temperature	-55°C to +125°C
Storage Temperature	-55°C to +125°C
RF Power Input	1W

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

TYPICAL FREQUENCY RESPONSE



FUNCTIONAL SCHEMATIC





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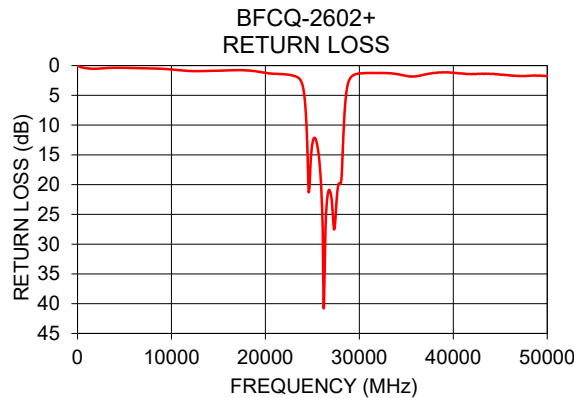
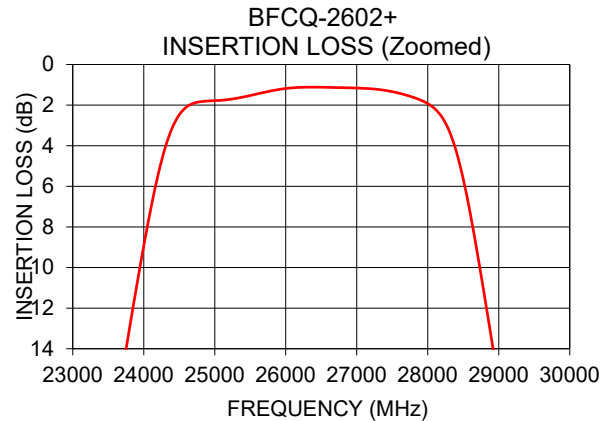
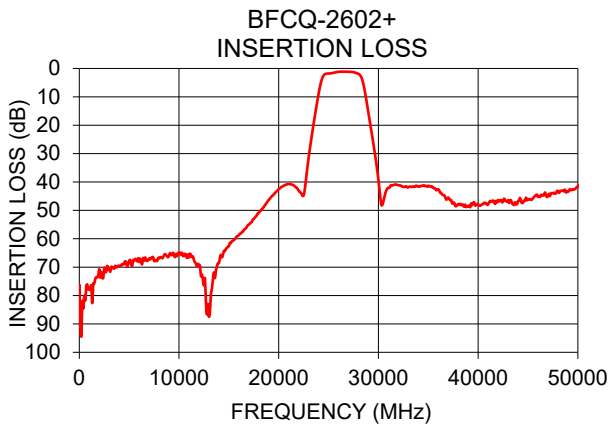
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TYPICAL PERFORMANCE DATA AT 25°C

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)
10	82.48	0.05
3000	70.39	0.42
6000	68.18	0.41
9000	65.89	0.54
15000	62.64	0.86
22200	43.79	1.49
23300	24.02	1.87
25000	1.78	13.12
26200	1.13	40.62
27500	1.34	24.51
29300	22.23	1.67
30500	46.78	1.26
40000	47.89	1.20
45000	46.28	1.52
50000	41.69	1.75



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/terms/viewterm.html



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