Ceramic

LTCC Bandpass Filter

BFCV-2895+

50Ω 2220 to 3570 MHz

Generic photo used for illustration purposes only

CASE STYLE: JV1210C

The Big Deal

- Small size 3.2mm x 2.5mm
- Wide passband (2220-3570 MHz)
- Low Insertion Loss (1.8 dB typical)
- Wide stopband rejection up to 7 GHz

Product Overview

The BFCV-2895+ LTCC Band Pass Filter is constructed with multiple layers in order to achieve a miniature size and high repeatability of performance. Wrap-around terminations minimize variations in performance due to parasitics. These units offer low insertion loss and very good wide band rejection.

Key Features

Feature	Advantages
Small Size (3.20mm x2.5 mm)	Allows for high layout density of circuit boards, while minimizing the effects of parasitics.
Wrap around termination	Provides excellent solderability and easy visual inspection capability.
Wide bandwidth	Enables high data rate in communication systems.
LTCC construction	Provides a rugged package that is well suited for tough environments including high humidity and high temperature extremes.

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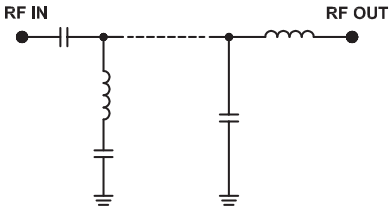
Features

- Small size
- Temperature stable
- Hermetically sealed
- LTCC construction

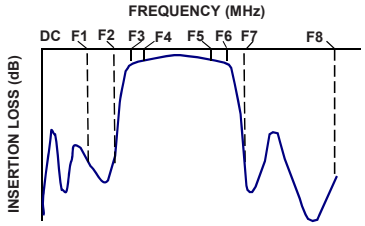
Applications

- Software defined radio
- WLAN
- Cellular network
- Satellite television broadcast

Functional Schematic



Typical Frequency Response



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

Electrical Specifications[1,2] at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	2895	—	MHz
	Insertion Loss	F3-F5	2220-3570	—	1.8	—	dB
		F4-F5	2450-3570	—	1.8	4.0	dB
	VSWR	F3-F5	2220-3570	—	2.3	—	:1
Stop Band, Lower	Insertion Loss	DC-F1	DC-1680	15	17	—	dB
		F2	1785	—	17	—	dB
	VSWR	DC-F1	DC-1680	—	20	—	:1
Stop Band, Upper	Insertion Loss	F6	4440	—	16	—	dB
		F7-F8	5000-7000	14	20	—	dB
	VSWR	F7-F8	5000-7000	—	20	—	:1

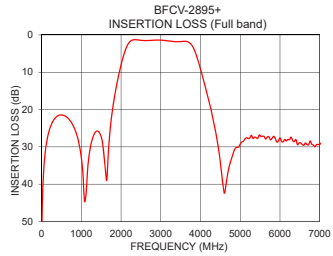
1. Measured on Mini-Circuits Characterization Test Board TB-946+
2. This filter is not intended for use as a DC Blocking circuit element. In Application where DC voltage is present at either input or output ports, blocking capacitors are required at the corresponding RF port.

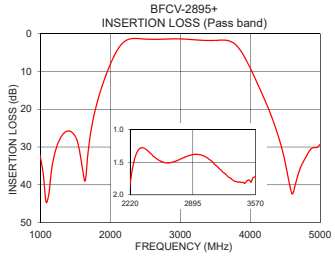
Maximum Ratings	
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	5 W max @ +25°C

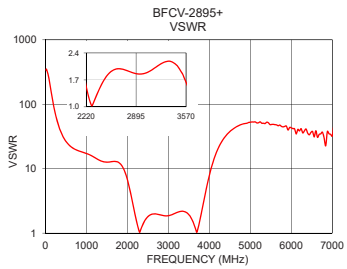
*Passband rating, derate linearly to 0.25W at 100°C ambient
Permanent damage may occur if any of these limits are exceeded.

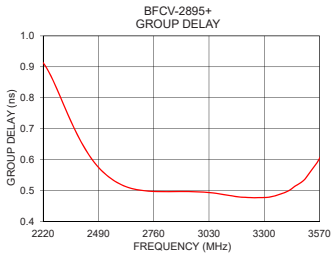
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
10	50.41	339.97	2220	0.91
1680	31.42	12.98	2240	0.89
1785	20.03	12.48	2300	0.81
1850	15.66	11.40	2400	0.66
2000	8.04	6.68	2500	0.57
2150	2.98	2.48	2600	0.52
2220	1.83	1.54	2700	0.50
2450	1.38	1.66	2800	0.50
2895	1.38	1.86	2895	0.50
3570	1.72	1.64	2900	0.50
3600	1.71	1.49	3000	0.50
3800	3.08	1.98	3050	0.49
4000	9.16	7.93	3100	0.49
4100	13.19	13.36	3150	0.48
4280	20.80	24.88	3200	0.48
4440	29.62	34.62	3250	0.48
4600	42.43	42.30	3300	0.48
5000	29.26	52.61	3400	0.49
6000	27.59	43.06	3500	0.54
7000	29.35	32.15	3570	0.60









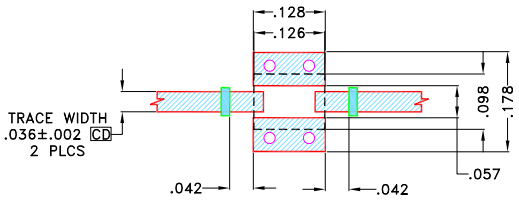
Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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

Pad Connections

RF IN	1
RF OUT	3
GROUND	2,4

Product Marking: HL

Demo Board MCL P/N: TB-946+
Suggested PCB Layout (PL-502)



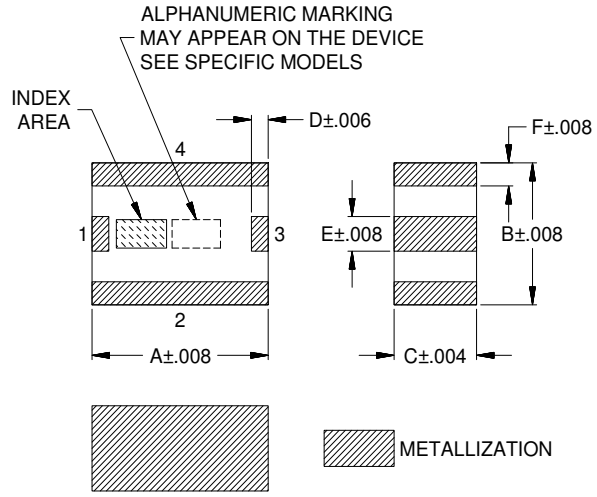
NOTES:

1. TRACE WIDTH & SPACE WIDTH IS SHOWN FOR ROGERS (RO4350B) WITH DIELECTRIC THICKNESS .0166"±.0015". COPPER 1/2 Oz. EACH SIDE
   FOR OTHER MATERIALS TRACE WIDTH & SPACE 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	Wt.
.126	**.098**	**.059**	**.012**	**.024**	**.016**	grams
3.2	2.5	1.5	.3	.6	.4	.03

Note: Please refer to case style drawing for details

Mouser Electronics

Authorized Distributor

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BFCV-2895+