Ceramic

Bandpass Filter

BFCN-2700+

50Ω 2600 to 2800 MHz



CASE STYLE: FV1206

Maximum Ratings

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

Pin Connections

RF IN	1
RF OUT	3
GROUND	2,4

Features

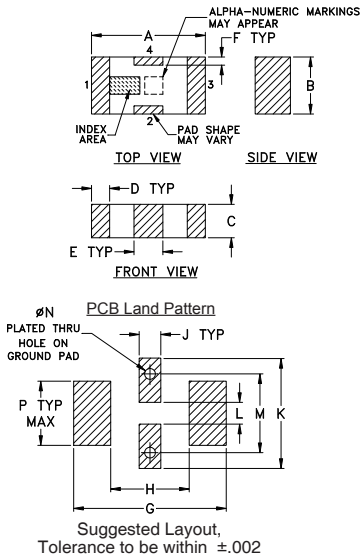
- Good VSWR, 1.6:1 typ @ passband
- Small size
- Temperature stable
- LTCC construction

Applications

- Harmonic Rejection
- Transmitters / Receivers
- WiMAX

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

Outline Drawing



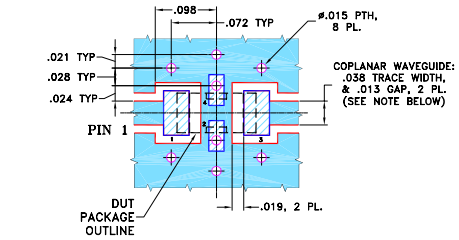
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.126	.063	.037	.020	.032	.009	.169
3.20	1.60	0.94	0.51	0.81	0.23	4.29

H	J	K	L	M	N	P	wt
.087	.024	.122	.024	.087	.012	.071	grams
2.21	0.61	3.10	0.61	2.21	0.30	1.80	.020

Demo Board MCL P/N: TB-270
Suggested PCB Layout (PL-137)



NOTES: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP 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)

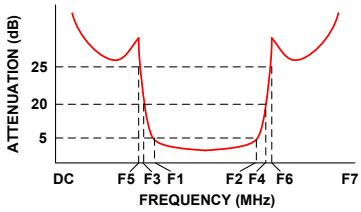
DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Electrical Specifications[1,2] at 25°C

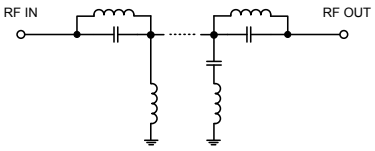
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	2700	—	MHz
	Insertion Loss	F1-F2	2600-2800	—	—	5	dB
	VSWR	F1-F2	2600-2800	—	1.6	2.8	:1
Stop Band, Lower	Insertion Loss	DC-F5	DC-1400	—	25	—	dB
		DC-F3	DC-1500	20	—	—	dB
	VSWR	DC-F3	DC-1500	—	20	—	:1
Stop Band, Upper	Insertion Loss	F4-F6	4150-4200	20	—	—	dB
		F6-F7	4200-5600	—	25	—	dB
	VSWR	F4-F7	4150-5600	—	20	—	:1

1. Measured on Mini-Circuits Characterization Test Board TB-270.
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.

Typical Frequency Response



Functional Schematic



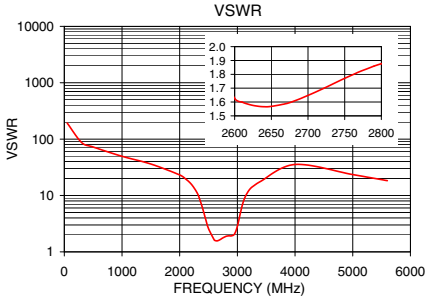
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50	84.75	193.02
500	44.49	72.39
1400	25.76	38.61
1500	24.40	36.20
2380	13.09	6.84
2450	6.90	3.82
2500	4.35	2.58
2600	2.30	1.63
2650	2.03	1.57
2700	2.00	1.65
2750	2.10	1.77
2800	2.21	1.88
3000	4.57	2.85
3070	9.56	5.83
3150	18.90	10.25
4150	29.69	38.61
4200	29.22	36.97
5600	20.47	18.30

BFCN-2700+
INSERTION LOSS



BFCN-2700+
VSWR



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