Surface Mount

Bandpass Filter

CBP-1120F+

50Ω 1020 to 1220 MHz

Generic photo used for illustration purposes only
CASE STYLE: KV1710

The Big Deal

- High Q
- Good selectivity
- Low VSWR, 1.4:1 typical
- Miniature shielded package

Product Overview

CBP-1120F+ is a coaxial-ceramic-resonator based bandpass filter in a shielded package fabricated using SMT technology. This filter has wider bandwidth and offers low insertion loss with high rejection, low VSWR and high power handling for use in L-band application.

Key Features

Feature	Advantages
High Q	The CBP-1120F+ filter incorporates High-Q ceramic resonators that enables low insertion loss.
Good selectivity	This filter designed with six pole. So this providing good selectivity in the stopband performance.
Low VSWR	This filter maintains 1.4:1 typical VSWR over a passband frequency range.
Rugged construction	The CBP-1120F+ has been qualified over wide range of thermal, mechanical and environmental conditions including withstanding the stress of extensive solder reflow cycles.

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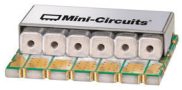

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CASE STYLE: KV1710

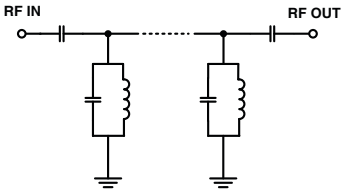
Features

- High Q
- Good selectivity
- Low VSWR
- Miniature shielded package

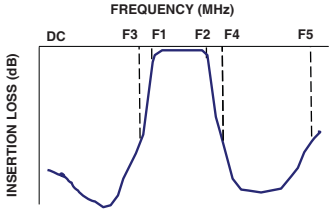
Applications

- L-band application
- Aviation/Aeronautical
- Cellular & Distance measurement equipment (DCE)

Functional Schematic



Typical Frequency Response



+RoHS Compliant

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

Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	-	-	-	1120	-	MHz
	Insertion Loss	F1-F2	1020-1220	-	0.8	1.6	dB
	VSWR	F1-F2	1020-1220	-	1.4	1.8	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-880	26	36.3	-	dB
	VSWR	DC-F3	DC-880	-	20	-	:1
Stop Band, Upper	Insertion Loss	F4-F5	1420-2000	28	35.8	-	dB
	VSWR	F4-F5	1420-2000	-	20	-	:1

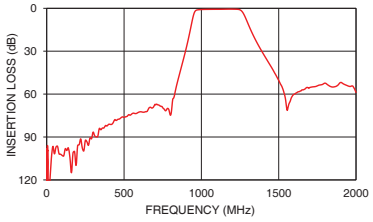
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	10 W max.

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

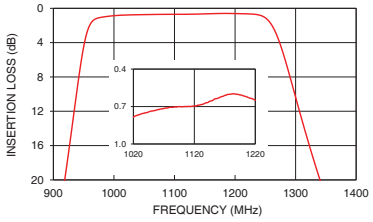
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	120.69	349.30	1020	5.97
100	102.91	341.20	1030	5.65
250	92.32	234.33	1040	5.39
750	69.50	60.42	1050	5.18
880	37.24	43.36	1060	5.00
896	30.52	38.25	1070	4.84
918	20.36	27.42	1080	4.71
952	3.79	3.35	1090	4.60
956	2.70	2.39	1100	4.50
1020	0.78	1.11	1110	4.42
1120	0.70	1.34	1120	4.36
1220	0.65	1.08	1130	4.32
1266	2.67	3.35	1140	4.30
1272	3.69	4.63	1150	4.30
1342	20.38	50.35	1160	4.32
1392	30.30	64.52	1170	4.36
1420	35.36	67.94	1180	4.42
1500	50.46	73.62	1190	4.49
1800	52.35	92.32	1200	4.59
2000	58.85	96.88	1220	4.96

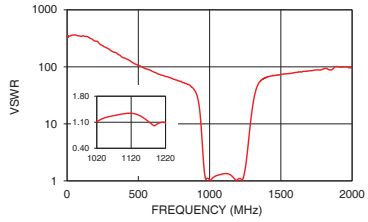
CBP-1120F+
INSERTION LOSS (Full band)



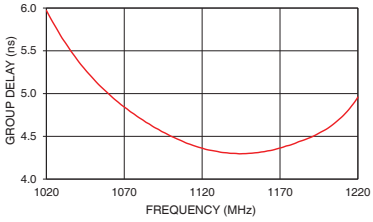
CBP-1120F+
INSERTION LOSS (Pass band)



CBP-1120F+
VSWR



CBP-1120F+
GROUP DELAY



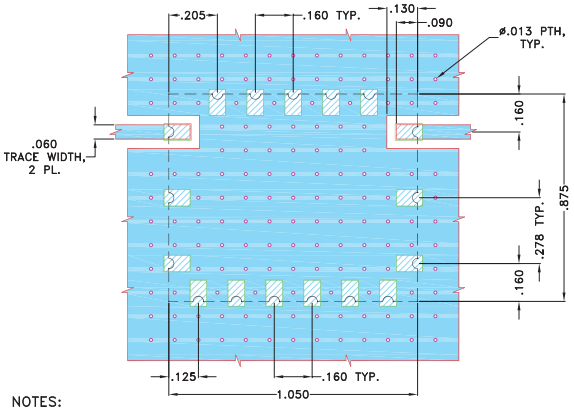
Notes

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

INPUT	1
OUTPUT	12
GROUND	2,3,4,5,6,7,8,9,10,11,13,14,15,16,17

Demo Board MCL P/N: TB-693+
Suggested PCB Layout (PL-378)



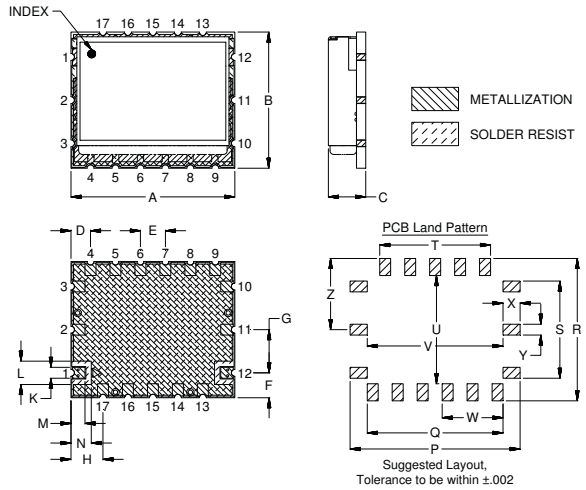
NOTES:

1. TRACE WIDTH IS SHOWN FOR OAK (OAK-602) WITH DIELECTRIC THICKNESS .022"±.0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE 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	G	H	J	K	L	M	N
1.050	**.875**	**.239**	**.125**	**.160**	**.160**	**.278**	**.205**	**.160**	**.070**	**.150**	**.090**	**.130**
26.67	22.23	6.07	3.18	4.06	4.06	7.06	5.21	4.06	1.78	3.81	2.29	3.30

P	Q	R	S	T	U	V	W	X	Y	Z		Wt.
1.090	**.870**	**.915**	**.625**	**.710**	**.695**	**.870**	**.390**	**.110**	**.070**	**.458**		grams
27.69	22.10	23.24	15.88	18.03	17.65	22.10	9.91	2.79	1.78	11.63		8.5

Note: Please refer to case style drawing for details