Surface Mount

Bandpass Filter

CBP-1630F+

50Ω 1500 to 1760 MHz

Generic photo used for illustration purposes only
CASE STYLE: KV1710

The Big Deal

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

Product Overview

CBP-1630F+ is a coaxial-ceramic-resonator based bandpass filter in a shielded package fabricated using SMT technology. This filter has low insertion loss with high rejection and low VSWR for use in L-band application, Aviation / Aeronautical, Maritime, Mobile satellite and radio astronomy.

Key Features

Feature	Advantages
High Q	The CBP-1630F+ 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 typical VSWR over a passband frequency range.
Rugged construction	The CBP-1630F+ 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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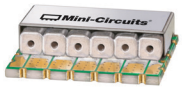


Generic photo used for illustration purposes only

CASE STYLE: KV1710

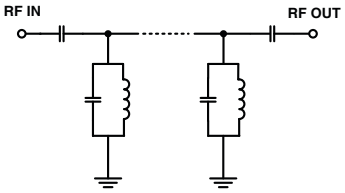
Features

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

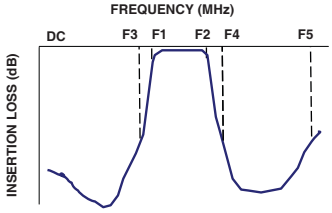
Applications

- L-band application
- Aviation/Aeronautical
- Maritime
- Radio astronomy
- Mobile satellite

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	-	-	-	1630	-	MHz
	Insertion Loss	F1-F2	1500-1760	-	1.0	2.2	dB
	VSWR	F1-F2	1500-1760	-	1.5	2.1	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-1320	20	30	-	dB
	VSWR	DC-F3	DC-1320	-	20	-	:1
Stop Band, Upper	Insertion Loss	F4-F5	1960-2600	20	30	-	dB
	VSWR	F4-F5	1960-2600	-	20	-	:1

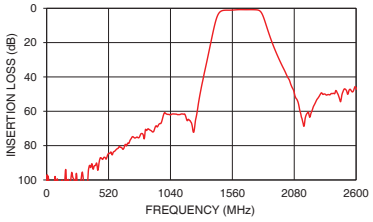
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	1 W max.

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

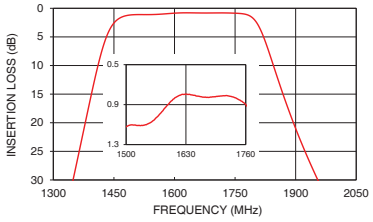
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	106.98	351.51	1500	5.08
100	106.33	347.45	1514	4.69
500	87.87	181.11	1528	4.38
1000	61.30	75.35	1542	4.14
1320	39.21	31.83	1556	3.97
1350	29.58	25.93	1570	3.87
1380	19.67	18.49	1584	3.80
1400	13.16	12.50	1598	3.74
1420	7.46	6.71	1612	3.69
1440	3.65	3.26	1626	3.64
1500	1.12	1.27	1630	3.63
1630	0.79	1.06	1654	3.54
1760	0.90	1.08	1668	3.53
1808	3.05	3.30	1682	3.55
1850	11.10	17.62	1696	3.58
1895	20.12	42.83	1710	3.66
1955	30.04	62.13	1724	3.77
1960	30.79	63.34	1738	3.91
2300	50.01	90.14	1752	4.12
2600	46.38	93.19	1760	4.31

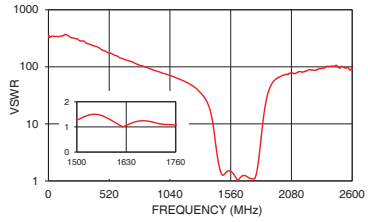
CBP-1630F+
INSERTION LOSS (Full band)



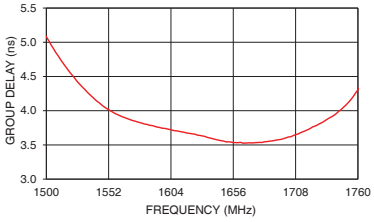
CBP-1630F+
INSERTION LOSS (Pass band)



CBP-1630F+
VSWR



CBP-1630F+
GROUP DELAY



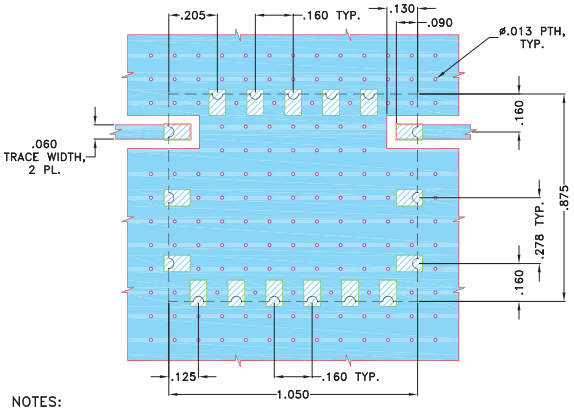
Notes

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)



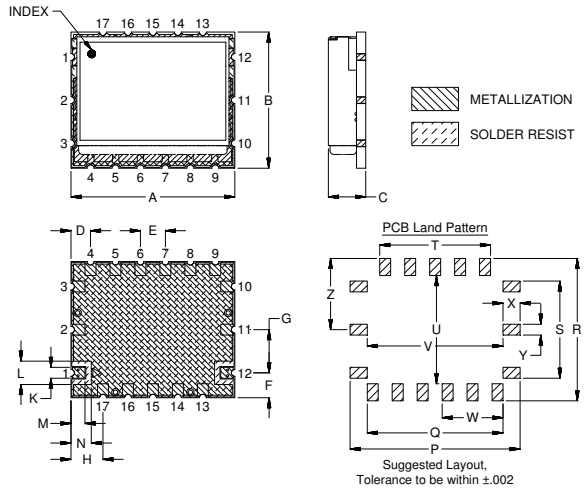
NOTES:

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.