Surface Mount

Bandpass Filter

CBP-1280C+

50Ω 1170 to 1390 MHz

Generic photo used for illustration purposes only

CASE STYLE: MP1766

The Big Deal

- Excellent Rejection
- Low passband Insertion Loss
- Miniature shielded package

Product Overview

CBP-1280C+ is a ceramic-coaxial-resonator based bandpass filter in a shielded package fabricated using SMT technology. This filter offers outstanding close in rejection, low insertion loss and high power handling for use in aviation, mobile radio, broadband and fixed wireless.

Key Features

Feature	Advantages
High Selectivity	The CBP-1280C+ filter incorporates High-Q ceramic resonators that enables sharp rejection near passband.
Low Passband VSWR	This filter maintains typical VSWR over a wide passband frequency range making this filter easier to integrate into receiver and transmitter RF chains with less concerns for in band frequency ripple.
Rugged construction	The CBP-1280C+ 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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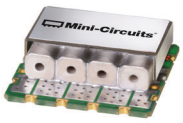


Generic photo used for illustration purposes only

CASE STYLE: MP1766

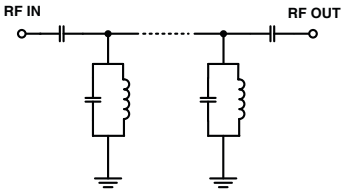
Features

- Low Insertion loss
- High selectivity
- Miniature shielded package

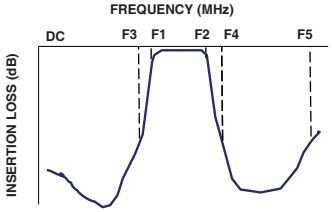
Applications

- Aviation
- Mobile radio
- Broadband
- Fixed wireless transmitters and receivers

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

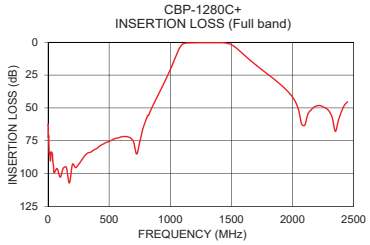
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	1280	—	MHz
	Insertion Loss	F1-F2	1170-1390	—	0.7	2	dB
	VSWR	F1-F2	1170-1390	—	1.1	—	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-950	20	29	—	dB
	VSWR	DC-F3	DC-950	—	20	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	1850-2450	20	27	—	dB
	VSWR	F4-F5	1850-2450	—	20	—	:1

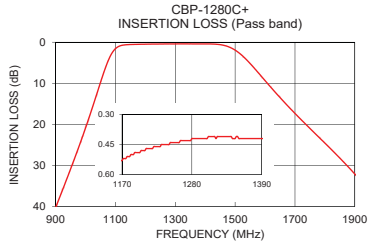
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	5W

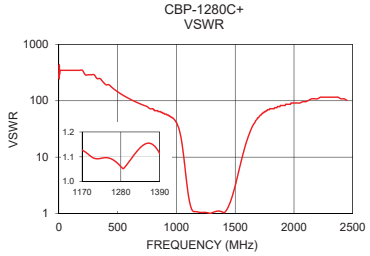
Permanent damage may occur if any of these limits are exceeded.

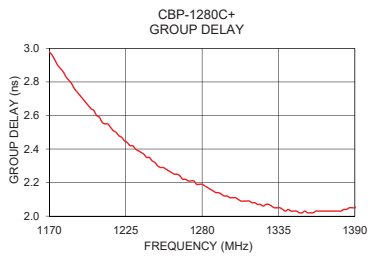
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	62.59	289.53	1170	2.98
100	102.63	347.44	1176	2.90
500	75.45	144.77	1182	2.83
810	57.03	69.49	1190	2.74
950	30.88	52.65	1200	2.64
1025	15.45	29.96	1204	2.60
1054	8.91	13.92	1214	2.53
1078	4.13	5.23	1222	2.47
1094	2.06	2.75	1234	2.39
1110	1.06	1.68	1248	2.30
1170	0.53	1.08	1262	2.25
1280	0.42	1.01	1280	2.19
1390	0.42	1.06	1292	2.14
1474	1.01	2.00	1314	2.09
1510	2.43	3.78	1332	2.05
1550	5.18	8.35	1342	2.04
1650	13.46	36.20	1354	2.03
1850	28.20	75.53	1370	2.03
2075	62.36	96.51	1380	2.03
2450	45.39	102.19	1390	2.05









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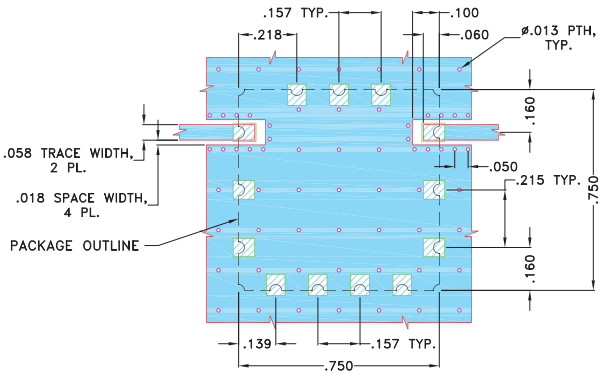
Pad Connections

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

Demo Board MCL P/N: TB-684+
Suggested PCB Layout (PL-373)



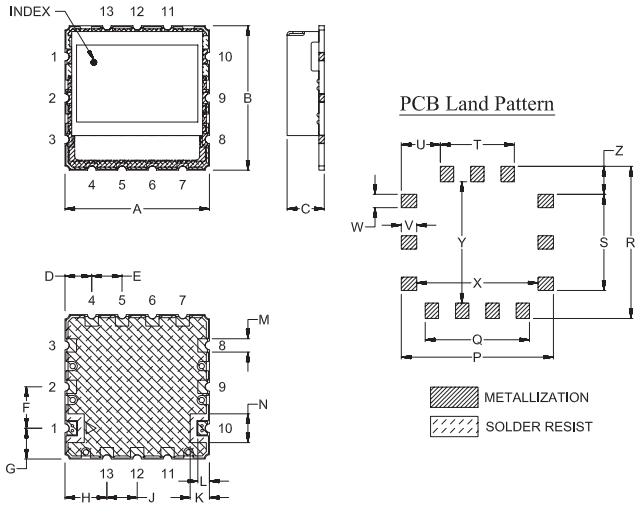
NOTES:

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
.750	**.750**	**.210**	**.139**	**.157**	**.215**	**.160**	**.218**	**.157**	**.100**	**.060**	**.069**	**.149**
19.05	19.05	5.33	3.53	3.99	5.46	4.06	5.54	3.99	2.54	1.52	1.75	3.78

P	Q	R	S	T	U	V	W	X	Y	Z		wt,
.790	**.541**	**.790**	**.499**	**.384**	**.203**	**.080**	**.069**	**.630**	**.630**	**.145**		grams
20.07	13.74	20.07	12.67	9.75	5.16	2.03	1.75	16.00	16.00	3.68		4.6

Note: Please refer to case style drawing for details

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