

Surface Mount Bandpass Filter

CBP-1000F+

50Ω 900 to 1100 MHz



Generic photo used for illustration purposes only
CASE STYLE: KV1710

The Big Deal

- High Q
- Good selectivity
- Low VSWR, 1.3:1 typical
- Miniature shielded package

Product Overview

CBP-1000F+ 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-1000F+ 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 1.3:1 typical VSWR over a passband frequency range.
Rugged construction	The CBP-1000F+ has been qualified over wide range of thermal, mechanical and environmental conditions including withstanding the stress of extensive solder reflow cycles.

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.
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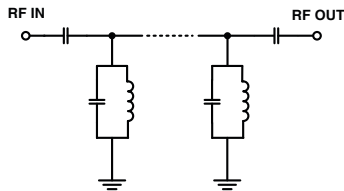
Features

- High Q
- Good selectivity
- Low VSWR, 1.3:1 typical
- Miniature shielded package

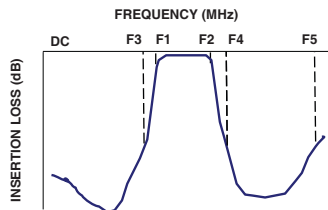
Applications

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

Functional Schematic



Typical Frequency Response



Electrical Specifications at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	-	-	1000	-	MHz
	Insertion Loss	F1-F2	-	0.9	1.6	dB
	VSWR	F1-F2	-	1.3	1.8	:1
Stop Band, Lower	Insertion Loss	DC-F3	26	35	-	dB
	VSWR	DC-F3	-	20	-	:1
Stop Band, Upper	Insertion Loss	F4-F5	28	36	-	dB
	VSWR	F4-F5	-	20	-	:1

Maximum Ratings

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

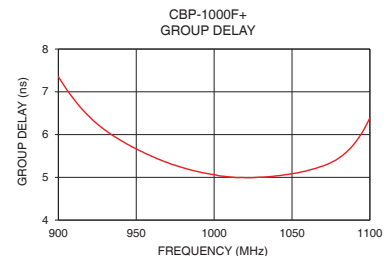
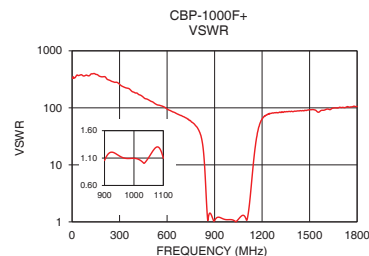
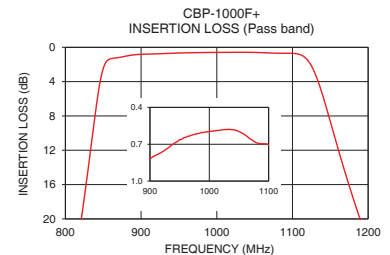
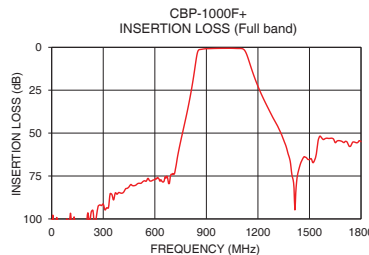
Permanent damage may occur if any of these limits are exceeded.

Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	108.05	331.62	900	7.35
100	106.29	365.83	910	6.82
250	104.95	291.42	920	6.42
400	84.91	181.76	930	6.10
750	54.96	58.47	940	5.86
790	36.76	45.36	950	5.67
802	30.73	39.50	960	5.49
820	20.61	27.12	970	5.35
848	3.12	2.48	980	5.22
850	2.47	1.95	1000	5.06
900	0.82	1.06	1010	5.01
1000	0.60	1.10	1020	4.99
1100	0.71	1.10	1030	5.00
1124	2.01	2.58	1040	5.03
1130	3.08	3.84	1050	5.09
1190	20.19	56.06	1060	5.16
1236	30.76	77.14	1070	5.27
1260	35.61	80.25	1080	5.45
1320	47.09	82.41	1090	5.79
1800	54.99	105.78	1100	6.39

+RoHS Compliant

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



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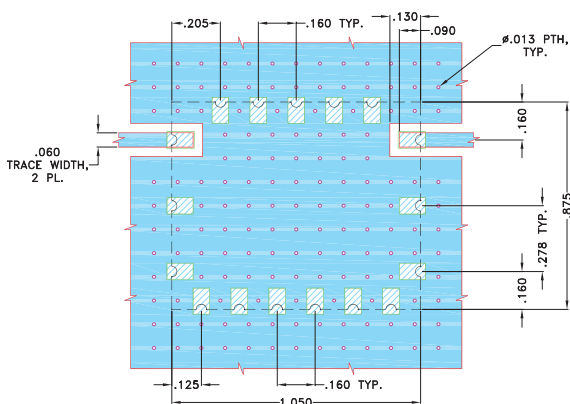
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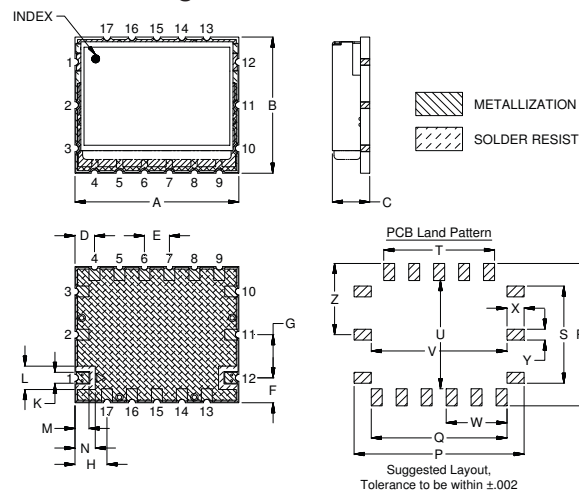
Pad Connections

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)



Outline Drawing



Outline Dimensions ($\frac{\text{inch}}{\text{mm}}$)

A	B	C	D	E	F	G	H	J	K	L	M	N
1.050	.875	.239	.125	.160	.160	.278	.205	.160	.070	.180	.090	.130
26.67	22.73	6.07	3.18	4.06	4.06	7.06	5.21	4.06	1.78	3.51	2.29	3.30
P	Q	R	S	T	U	V	W	X	Y	Z		Wt.
1.090	.870	.915	.625	.710	.695	.870	.990	1.10	.070	.458		grams
27.69	22.61	23.24	15.88	18.03	17.65	22.12	9.91	2.79	1.78	11.63		8.5

Note: Please refer to case style drawing for details

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