Surface Mount

Bandpass Filter

BPF-C70+

50Ω 69.5 to 70.5 MHz



CASE STYLE: HU1186

The Big Deal

- Narrow bandwidth of 1.43% fractional BW
- High rejection of 50 dB min. from 80-1000 MHz
- Good VSWR 1.3:1 typical in passband
- Miniature shielded package

Product Overview

The BPF-C70+ is a narrow band bandpass filter is a shield package (size of 0.87" x 0.80" x 0.25") fabricated using SMT technology. It has more than 50 dB rejection up to 1000 MHz. This unit uses a miniature high Q capacitors and wire welded induction for high reliability.

Key Features

Feature	Advantages
Narrow bandwidth of (1.43 % fractional BW)	Narrow bandwidth helps in adjacent channel rejection and in created selectivity.
High rejection, 50dB Min. from 80-1000MHz	Achieving 50 dB Rejection over 80-1000 MHz. This design provides good performance in rejecting has monks and sub-has mounts
Shielded case	Reduced interference with the surrounding components.

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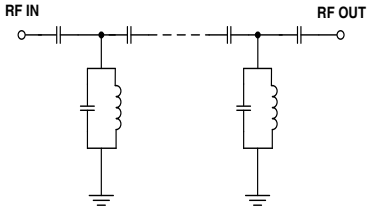
Features

- Good VSWR, 1.3:1 typical in passband
- Sharp insertion roll-off
- Aqueous washable
- Miniature shield package

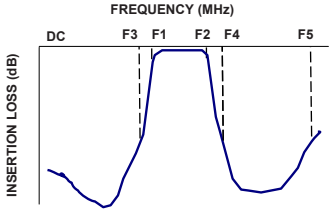
Applications

- Military hi-rel systems
- High rejection application
- Image rejection
- IF signal processing

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

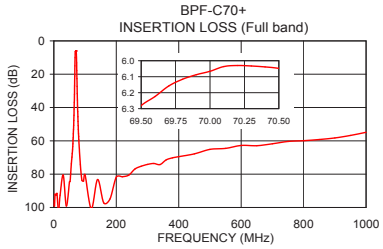
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	-	70	-	MHz
	Insertion Loss	F1-F2	69.5-70.5	-	6.4	8	dB
	VSWR	F1-F2	69.5-70.5	-	1.3	1.7	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-66	20	28	-	dB
	VSWR	DC-F3	DC-66	-	9	-	:1
Stop Band, Upper	Insertion Loss	F4-F5	75-1000	20	31	-	dB
	VSWR	F4-F5	75-1000	-	8	-	:1

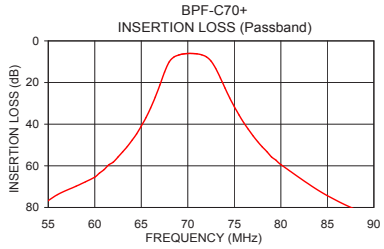
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	80 mW max.

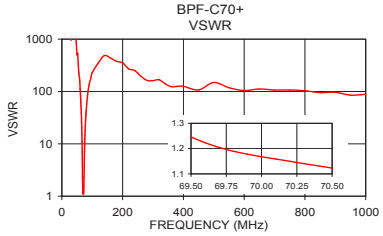
Permanent damage may occur if any of these limits are exceeded.

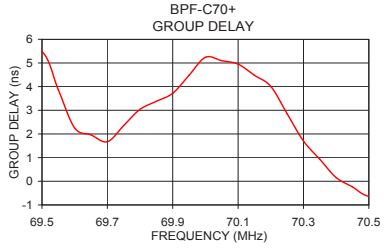
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1.0	95.83	2471.84	69.5	5.48
10.0	91.61	1844.81	69.6	3.87
50.0	84.69	500.90	69.6	2.25
60.0	65.44	114.85	69.7	1.96
66.0	32.23	15.29	69.7	1.67
67.5	14.99	3.91	69.8	2.36
69.5	6.28	1.25	69.8	3.04
70.0	6.07	1.17	69.9	3.38
70.5	6.05	1.12	69.9	3.72
73.0	13.22	2.33	70.0	4.48
75.0	31.62	9.45	70.0	5.24
80.0	59.41	42.67	70.1	5.10
100.0	80.41	229.35	70.1	4.95
260.0	76.89	195.95	70.2	4.01
400.0	69.51	125.98	70.3	2.86
500.0	65.13	148.72	70.3	1.70
750.0	60.37	106.87	70.4	0.93
800.0	59.92	103.36	70.4	0.16
900.0	58.25	96.53	70.5	-0.24
1000.0	54.88	88.22	70.5	-0.64









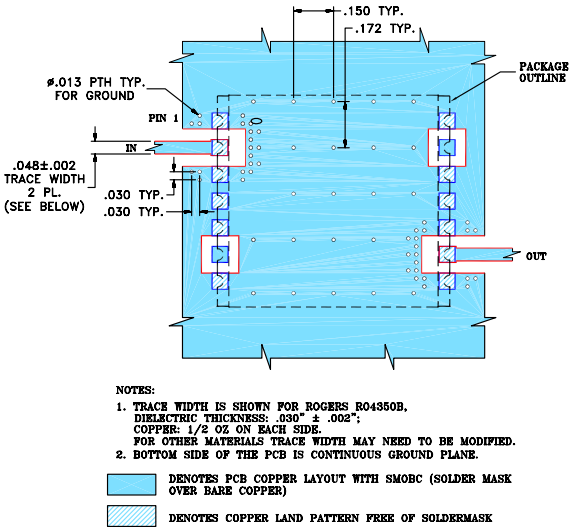
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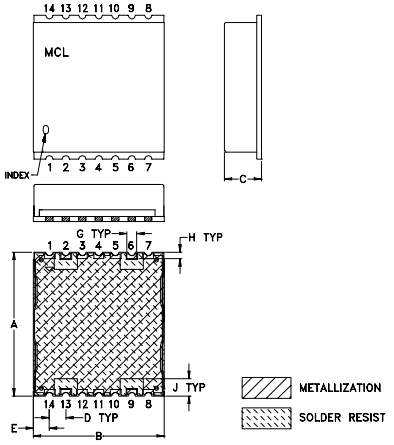
Pad Connections

INPUT	2
OUTPUT	9
NOT CONNECTED	6 &13
GROUND	1,3,4,5,7,8,10,11,12,14

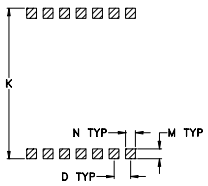
Demo Board MCL P/N: TB-500+
Suggested PCB Layout (PL-294)



Outline Drawing



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H
.870	.800	.25	.100	.097	--	.060	.040
22.10	20.32	6.35	2.54	2.46	--	1.52	1.02

J	K	L	M	N	P		wt
.105	.910	--	.060	.060	--		grams
2.67	23.11	--	1.52	1.52	--		2.85

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