

Bandpass Filter



+RoHS Compliant

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

50Ω 63 to 85 MHz

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max.

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

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

A	B	C	D	E	G	H	J	K	M	N	wt.
.870	.800	.25	.100	.097	.060	.040	.105	.910	.060	.060	grams
22.10	20.32	6.35	2.54	2.46	1.52	1.02	2.67	23.11	1.52	1.52	2.85

Note: Please refer to case style drawing for details

1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B,
DIELECTRIC THICKNESS: .030"±.002"; 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 SOLDER MASK

- High rejection
- Good VSWR, 1.2:1 typ @ passband
- Flat group delay
- Shielded case
- Aqueous washable

- Industrial microwave and RF
- Receivers / transmitters
- Harmonic rejection

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 2dB) Fc	STOPBANDS (MHz)				VSWR (:1)		
		Loss > 20dB		Loss > 40dB		Passband		Stopband
		F3	F4	F5	F6	Typ.	Max.	Typ.
73	63 - 85	45	105	40	110 - 550	1.2	1.6	18

The diagram shows a common-mode choke with two parallel LC branches. The input is labeled 'RF IN' and the output is labeled 'RF OUT'. Each branch consists of a series inductor followed by a shunt capacitor connected to ground. A dashed line connects the nodes between the two series inductors, representing the common-mode choke.

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nSec)
	$\bar{x}$	σ			
1.0	72.16	0.34	0.01	60.0	48.69
40.0	62.23	5.02	0.13	61.0	45.08
45.0	39.35	4.53	0.24	62.0	41.06
50.0	18.88	3.18	0.49	63.0	38.21
53.0	9.99	2.53	1.12	64.0	36.00
55.0	5.38	1.66	2.61	66.0	33.01
57.0	2.48	0.69	6.51	70.0	29.66
63.0	0.84	0.05	21.21	72.0	28.69
70.0	0.77	0.02	22.12	73.0	28.29
73.0	0.82	0.02	18.54	74.0	27.98
80.0	1.00	0.03	16.98	75.0	27.81
85.0	1.16	0.02	19.23	76.0	27.71
94.0	2.44	0.05	18.08	80.0	28.33
97.0	6.11	0.31	5.16	82.0	29.28
100.0	14.51	0.29	2.20	84.0	30.65
105.0	30.91	0.28	1.32	85.0	31.49
110.0	52.83	1.53	1.04	87.0	33.60
550.0	55.83	0.26	0.94	90.0	38.60

**BPF-C73+
INSERTION LOSS**

The graph shows the insertion loss in dB versus frequency in MHz for the BPF-C73+ filter. The main plot has a frequency range from 0 to 550 MHz and an insertion loss range from 0 to 80 dB. An inset plot provides a detailed view of the passband region, with a frequency range from 61 to 85 MHz and an insertion loss range from 0.7 to 1.2 dB. The filter exhibits a sharp rejection of signals outside the passband, with insertion loss exceeding 70 dB for frequencies below 50 MHz and above 450 MHz. The passband is centered around 70 MHz, where the insertion loss is approximately 0.8 dB.

Frequency (MHz)	Insertion Loss (dB)
0	> 80
20	~75
40	~60
60	~0.9
70	~0.8
80	~0.8
90	~0.9
110	~55
150	~50
200	~50
300	~55
400	~58
500	~55
550	~50

BPF-C73+ RETURN LOSS

This graph shows the return loss of the BPF-C73+ filter. The main plot shows a sharp resonance peak at approximately 100 MHz, where the return loss reaches about 28 dB. An inset graph provides a detailed view of the passband region from 61 MHz to 85 MHz, showing a broad resonance peak centered around 70 MHz with a maximum return loss of approximately 23 dB.

BPF-C73+ GROUP DELAY

This graph shows the group delay in nanoseconds (nSec) as a function of frequency in MHz for the BPF-C73+ filter. The y-axis ranges from 20 to 55 nSec, and the x-axis ranges from 60 to 90 MHz. The curve starts at approximately 48 nSec at 60 MHz, decreases to a minimum of about 28 nSec at 78 MHz, and then increases to about 39 nSec at 90 MHz.

FREQUENCY (MHz)	GROUP DELAY (nSec)
60	48
65	35
70	30
75	28
80	28
85	31
90	39

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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