

# Surface Mount Band Stop Filter

## BSF-C70+

50Ω 56.75 to 83.25 MHz



CASE STYLE: HU1186

### The Big Deal

- High rejection, 51 dB typical
- Stopband (56.75 to 83.25 MHz)
- Miniature shielded package

### Product Overview

The BSF-C70+ is stopband filter fabricated using SMT Technology. Covering 56.75 to 83.25 MHz stopband, this units offer good rejection. This unit uses a miniature high Q capacitors and wire welded inductors for high reliability. It has repeatable performance across production lots and consistent performance across temperature.

### Key Features

Feature	Advantages
High rejection, 51 dB typical	BSF-C70+ enables the filter to attenuate spurious signals and reject harmonics for broadband of frequencies.
Shielded package	Shielded package (Size of .087" x 0.80" x 0.25") reduced interface with and from the surrounding components.
Application	Useful in broadcast systems and SATCOM transceiver



For detailed performance specs  
& shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine  Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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](http://www.minicircuits.com/MCLStore/terms.jsp).

# Surface Mount Band Stop Filter

## BSF-C70+

50Ω 56.75 to 83.25 MHz



CASE STYLE: HU1186  
PRICE: \$39.95ea. QTY (1-9)

### Features

- High rejection, 51 dB typical
- Aqueous washable
- Miniature shielded package

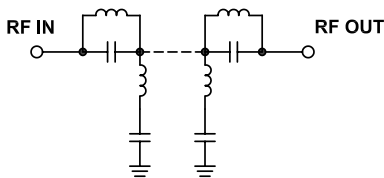
### Electrical Specifications at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band, Lower	Insertion Loss	DC-F1	DC - 37	-	0.4	1.2	dB
	VSWR	DC-F1	DC - 37	-	1.3	1.7	:1
Stop Band	Rejection	F4-F5	56.75 - 83.25	30	51	-	dB
	VSWR	F4-F5	56.75 - 83.25	-	22	-	:1
Pass Band, Upper	Insertion Loss	F2-F3	120-1200	-	0.7	1.5	dB
	VSWR	F2-F3	120-1200	-	1.3	1.7	:1

### Applications

- FM radio
- Broadcast system
- SATCOM transceiver
- Lab use

### Functional Schematic

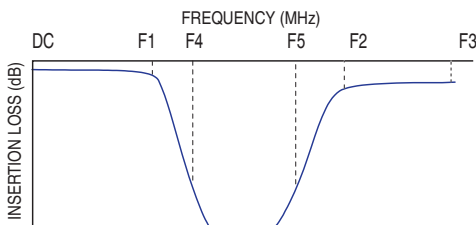


### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	250 mW max.

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

### Typical Frequency Response

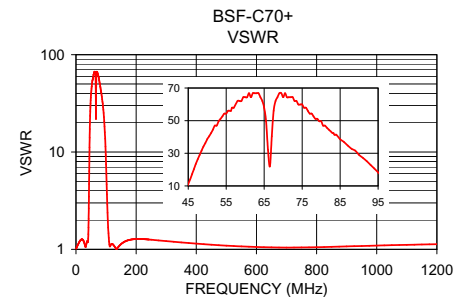
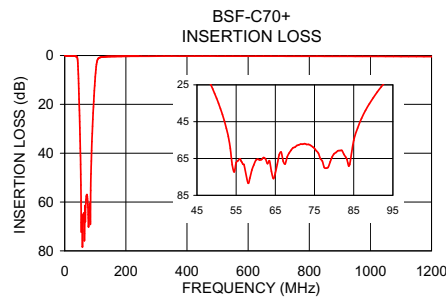


### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1.00	0.05	1.02
5.00	0.07	1.09
15.00	0.15	1.24
37.00	0.38	1.21
42.00	1.55	2.06
44.00	5.86	6.37
47.00	17.86	23.49
50.00	32.28	38.61
56.75	68.13	57.91
66.50	61.56	22.00
70.00	58.82	64.35
83.25	65.40	42.38
87.00	43.21	34.75
90.00	31.96	28.96
95.00	18.75	18.30
100.00	8.78	7.47
104.00	3.63	2.92
120.00	0.67	1.14
750.00	0.29	1.05
1200.00	0.44	1.13

**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.



**Mini-Circuits®**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED

For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

IFIRF MICROWAVE COMPONENTS

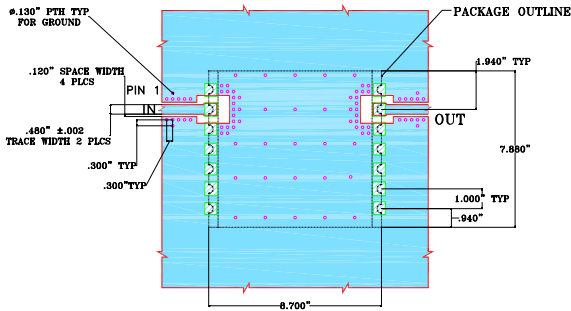
Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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](http://www.minicircuits.com/MCLStore/terms.jsp).

REV. OR  
M131685  
BSF-C70+  
EDU1283  
URJ  
110728  
Page 2 of 3

## Pin Connections

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

## Demo Board MCL P/N: TB-378 Suggested PCB Layout (PL-347)

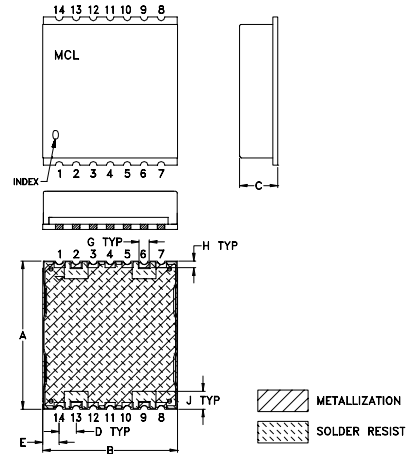


### NOTES:

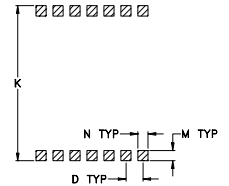
- TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS .030" ±.003". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
- BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

## Outline Drawing



## 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	