

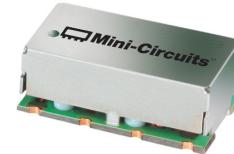
# Band Stop Filter

BSF-108+

50Ω      88 to 108 MHz

## The Big Deal

- High rejection, 60 dB typ.
- FM radio rejection (88 to 108 MHz)
- Miniature shielded package



Generic photo used for illustration purposes only  
CASE STYLE: HF1139

## Product Overview

The BSF-108+ is an SMT stopband filter, designed to reject FM radio broadcasts from 88 to 108 MHz. With over 20 dB rejection at stop band, low insertion loss at passband and good input and output return loss. The BSF-108+ has good repeatability across production lots, consistent performance over temperature and is cased in a metal case (size of 0.44" x 0.74" x 0.27").

## Key Features

Feature	Advantages
High rejection, 60 dB typical	Reduces the effect of harmonics and unwanted signals
FM radio rejection	The BSF-108+ is highly suited for applications where interference from FM radio transmissions is a concern.
Shielded case	Reduced interference with the surrounding components.
Small size, 0.44" x 0.74" x 0.27"	The small surface mount package enables the BSF-108+ to be used in compact designs

### 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.  
C. The parts covered by this specification document 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)



# Band Stop Filter

BSF-108+

50Ω 88 to 108 MHz

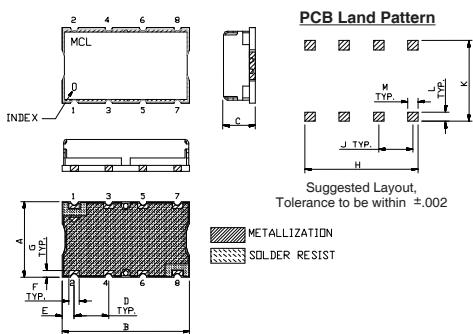
**Maximum Ratings**

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.

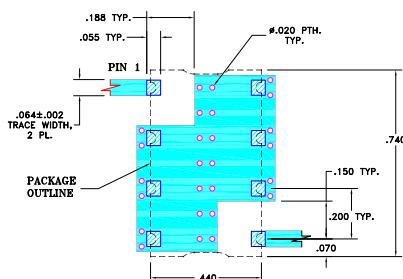
**Pin Connections**

INPUT	1
OUTPUT	8
GROUND	2, 3, 4, 5, 6, 7

**Outline Drawing****Outline Dimensions (inch/mm)**

A	B	C	D	E	F
.44	.74	.27	.200	.07	.060
11.18	18.80	6.86	5.08	1.78	1.52
G	H	J	K	L	M
.040	.660	.200	.470	.055	.060
1.02	16.76	5.08	11.94	1.40	1.52
wt.					grams
					3.0

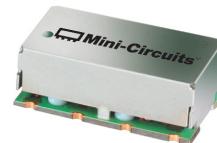
Note: Please refer to case style drawing for details

**Demo Board MCL P/N: TB-368**  
**Suggested PCB Layout (PL-230)**


**NOTE:**  
 1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS: .025"-.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

**Features**

- high FM frequency rejection
- good VSWR, 1.3:1 typ. @ passband

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CASE STYLE: HF1139**Applications**

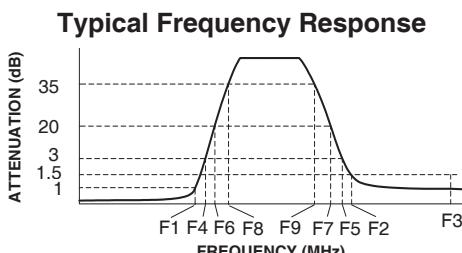
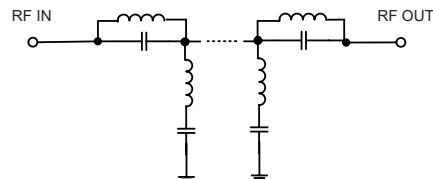
- FM radio rejection
- receivers / transmitters

**+RoHS Compliant**

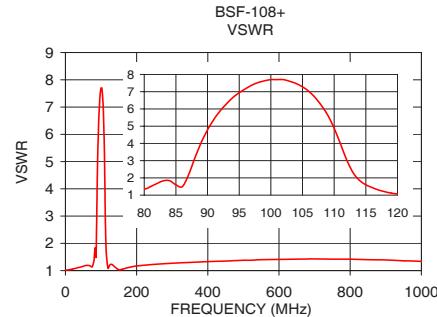
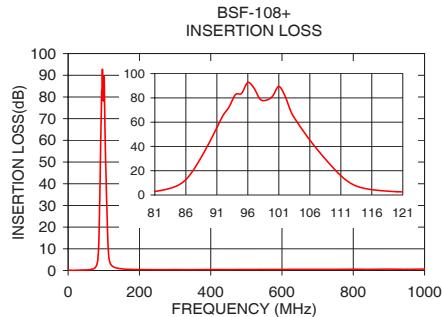
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

**Band Stop Filter Electrical Specifications**

STOPBANDS (MHz) (Loss > 20dB) F6 - F7	LOSS 3dB (Loss > 35dB) F8 - F9	PASSBANDS (MHz)		VSWR (:1)	
		TYP. F4, F5	LOSS < 1dB F1	LOSS < 1.5dB F2 - F3	Stopband TYP.
88 - 108	90 - 105	81 & 120	65	140-1000	6.0 1.3

**Functional Schematic****Typical Performance Data at 25°C**

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1	0.05	1.01
50	0.25	1.16
65	0.51	1.19
75	1.16	1.14
81	2.94	1.50
83	4.86	1.83
85	8.73	1.60
87	18.96	2.18
88	26.90	3.16
90	45.21	4.79
105	52.30	7.28
108	32.63	6.19
111	15.97	3.97
113	8.50	2.30
116	4.43	1.44
120	2.72	1.08
140	1.00	1.12
500	0.49	1.38
1000	0.66	1.34

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