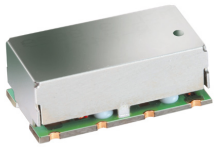
Band Stop Filter

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



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

Surface Mount

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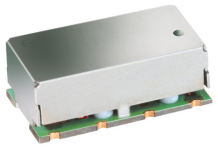


CASE STYLE: HF1139

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

Features

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

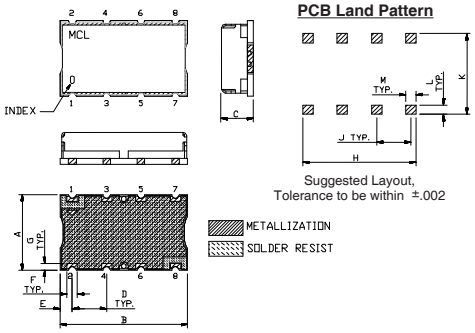
Applications

- FM radio rejection
- receivers / transmitters

+RoHS Compliant

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

Outline Drawing

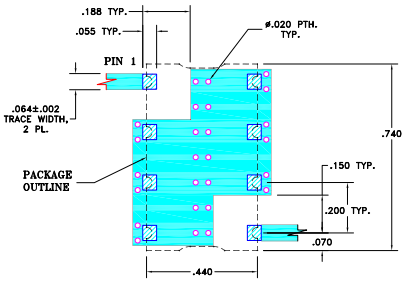


Outline Dimensions (inch / mm)

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	wt.
.040	.660	.200	.470	.055	.060	grams
1.02	16.76	5.08	11.94	1.40	1.52	3.0

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.

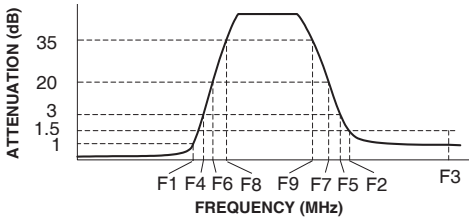
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

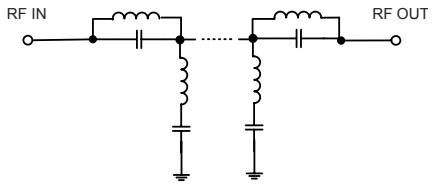
Band Stop Filter Electrical Specifications

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

Typical Frequency Response



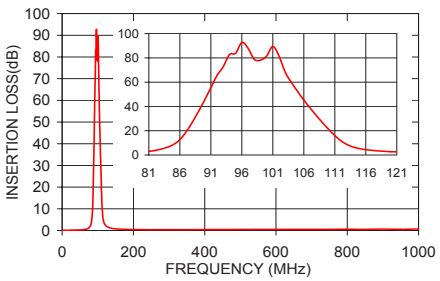
Functional Schematic



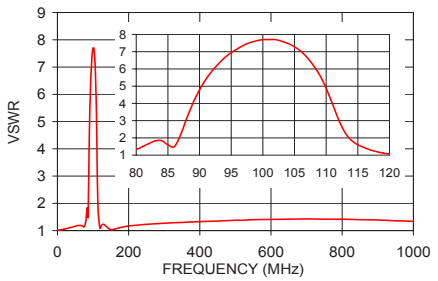
Typical Performance Data at 25°C

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

BSF-108+
INSERTION LOSS



BSF-108+
VSWR



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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