

Surface Mount Band Stop Filter

BSF-C140+

50Ω 127.25 to 152.75 MHz

The Big Deal

- High rejection, 49 dB typical
- Good VSWR, 1.2:1 typical in passband
- Stopband (127.25 to 152.75 MHz)
- Miniature shielded package



CASE STYLE: HU1186

Product Overview

The BSF-C140+ is stopband filter fabricated using SMT Technology. Covering 127.25 to 152.75 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, 49 dB typical	BSF-C140+ enables the filter to attenuate spurious signals and reject harmonics for broadband of frequencies.
Good VSWR 1.2:1 typical in the passband	This filter maintains typical VSWR over a passband frequency range which provided good interface when used with other devices.
Shielded package	Shielded package (Size of .087" x 0.80" x 0.25") reduced interface with and from the surrounding components.

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



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BSF-C140+

50Ω 127.25 to 152.75 MHz



CASE STYLE: HU1186

Features

- High rejection, 49 dB typical
- Good VSWR 1.2:1 typical in passband
- Aqueous washable
- Miniature shielded package

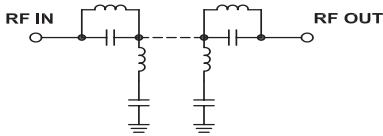
Applications

- FM radio
- Receivers / Transmitters
- Lab use

Electrical Specifications at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band, Lower	Insertion Loss	DC-F1	DC - 96	-	0.6	1.5	dB
	VSWR	DC-F1	DC - 96	-	1.2	1.5	:1
Stop Band	Rejection	F4-F5	127.25-152.75	30	49	-	dB
	VSWR	F4-F5	127.25-152.75	-	6	-	:1
Pass Band, Upper	Insertion Loss	F2-F3	210-1000	-	0.6	1.5	dB
	VSWR	F2-F3	210-1000	-	1.2	1.5	:1

Functional Schematic



Maximum Ratings

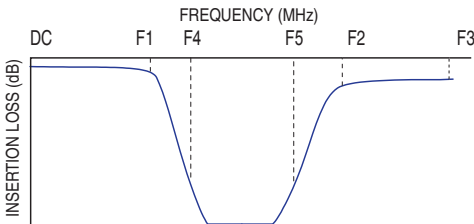
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	250 mW max.

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

Typical Performance Data at 25°C

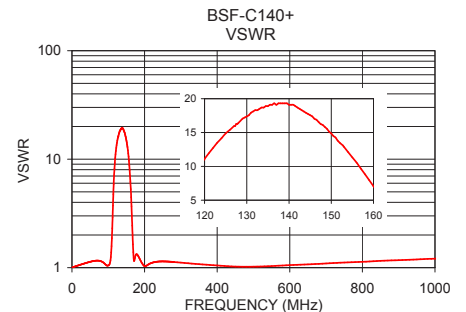
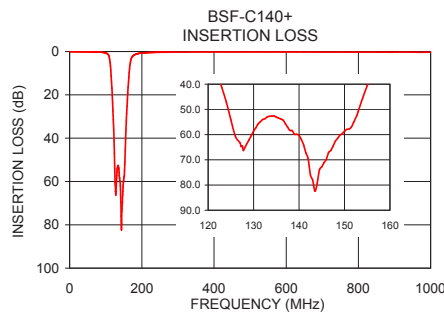
Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1.00	0.02	1.01
25.00	0.07	1.07
60.00	0.14	1.15
84.00	0.28	1.13
96.00	0.50	1.05
105.00	1.07	1.11
111.00	3.70	2.31
113.00	6.67	3.73
116.00	13.94	7.05
120.00	27.38	11.09
122.00	36.05	12.71
127.25	64.73	15.96
140.00	60.33	19.11
152.75	52.23	13.09
157.00	32.20	9.69
160.00	22.15	7.05
170.00	3.68	1.23
210.00	0.55	1.07
500.00	0.21	1.02
1000.00	0.31	1.21

Typical Frequency Response



+RoHS Compliant

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



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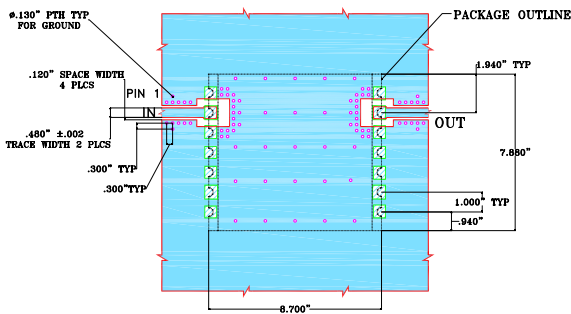
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REV. A
M160153
BSF-C140+
EDU1288
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161230
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Pin Connections

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)

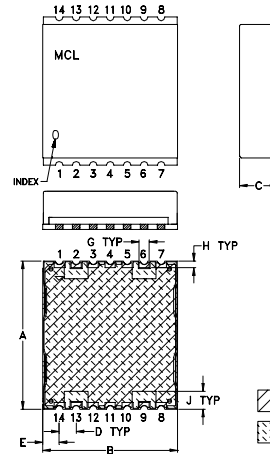


NOTES:

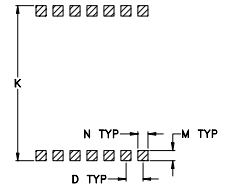
- TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS .030" ± .003". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
- BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- 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	

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