Surface Mount

Bandpass Filter

CBP-897G+

50Ω 887 to 907 MHz

Generic photo used for illustration purposes only
CASE STYLE: NC1916

The Big Deal

- Good Rejection
- Low passband Insertion Loss
- Miniature shielded package
- Narrow band 2.2% BW

Product Overview

CBP-897G+ is a ceramic-coaxial-resonator based bandpass filter in a shielded package fabricated using SMT technology. This filter offers outstanding close in rejection and low insertion loss for use in aviation, private and public land mobile.

Key Features

Feature	Advantages
High Selectivity	The CBP-897G+ filter incorporates High-Q ceramic resonators that enables sharp rejection near passband.
Low Passband VSWR	This filter maintains typical VSWR over passband frequency range making this filter easier to integrate into receiver and transmitter RF chains with less concerns for in band frequency ripple.
Rugged construction	The CBP-897G+ has been qualified over wide range of thermal, mechanical and environmental conditions including withstanding the stress of extensive solder reflow cycles.

Surface Mount

Bandpass Filter

CBP-897G+

50Ω 887 to 907 MHz

Generic photo used for illustration purposes only
CASE STYLE: NC1916

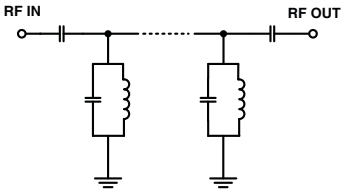
Features

- Good rejection
- Low Passband Insertion loss
- Miniature shielded package
- Narrow band

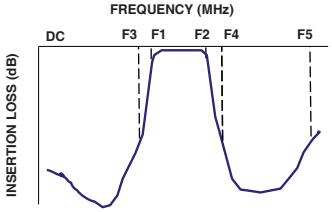
Applications

- Aviation/Aeronautical
- Specialized Mobile Radio service
- Private and Public Land Mobile
- Public Safety Communication

Functional Schematic



Typical Frequency Response



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

Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	897	—	MHz
	Insertion Loss	F1-F2	887-907	—	1.8	2.8	dB
	VSWR	F1-F2	887-907	—	1.4	2.3	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-850	20	25.9	—	dB
	VSWR	DC-F3	DC-850	—	20	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	945-2000	20	24.9	—	dB
	VSWR	F4-F5	945-2000	—	20	—	:1

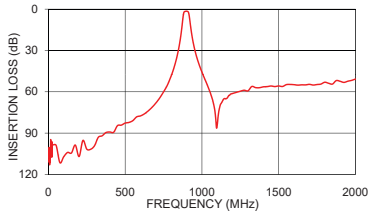
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	10W

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

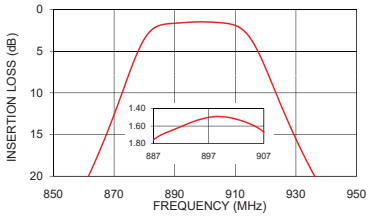
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	105.04	337.26	887	21.35
50	98.84	492.53	888	20.54
250	101.61	672.38	889	19.82
550	80.95	477.03	890	19.22
840	33.26	82.99	891	18.74
845	30.68	72.35	892	18.37
850	27.84	60.52	893	18.10
861	20.42	34.68	894	17.91
880	3.53	2.42	895	17.78
887	1.76	1.21	896	17.71
897	1.50	1.12	897	17.66
907	1.67	1.10	898	17.66
915	3.47	2.51	899	17.66
937	20.54	44.96	900	17.70
945	25.30	68.48	901	17.77
955	30.23	96.95	902	17.88
960	32.39	110.55	903	18.04
1250	59.59	163.77	904	18.26
1700	54.60	99.73	905	18.54
2000	50.75	81.17	907	19.39

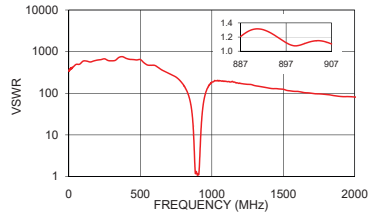
CBP-897G+
INSERTION LOSS (Full band)



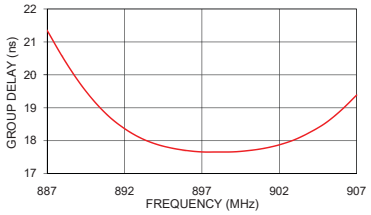
CBP-897G+
INSERTION LOSS (Pass band)



CBP-897G+
VSWR



CBP-897G+
GROUP DELAY

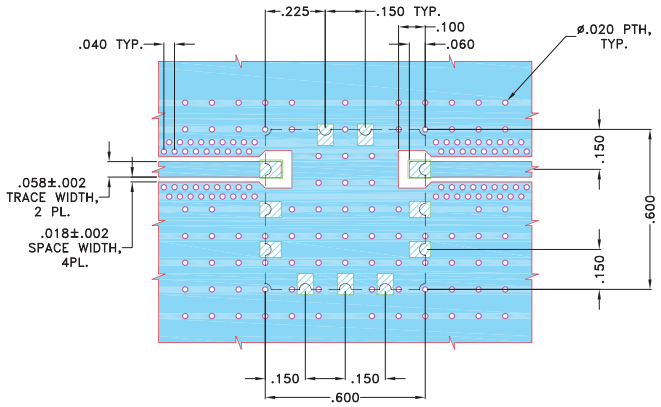


Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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

Pad Connections

INPUT	1
OUTPUT	9
GROUND	2,3,4,5,6,7,8,10,11

Demo Board MCL P/N: TB-764+
Suggested PCB Layout (PL-403)



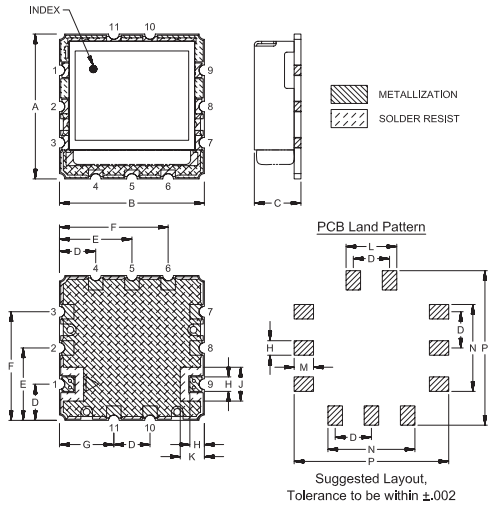
NOTES:

1. TRACE WIDTH IS SHOWN FOR OAK (OAK-602) WITH DIELECTRIC THICKNESS .022"±.0015". 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 SOLDERMASK

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H
.600	**.600**	**.210**	**.150**	**.300**	**.450**	**.225**	**.060**
15.24	15.24	5.33	3.81	7.62	11.43	5.72	1.52

J	K	L	M	N	P	WT.GRAMS
.140	**.100**	**.210**	**.080**	**.360**	**.640**	2.6
3.56	2.54	5.33	2.03	9.14	16.26	

Note: Please refer to case style drawing for details