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CERAMIC RESONATOR SURFACE MOUNT

Band Pass Filter

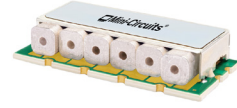
CBP4-4R3GBP+

50Ω

4230 to 4370 MHz

THE BIG DEAL

- Good Insertion Loss, 4.1 dB Typ.
- Excellent Rejection, 70 dB Typ.
- Good Return Loss, 12 dB Typ.
- Miniature Shielded Package

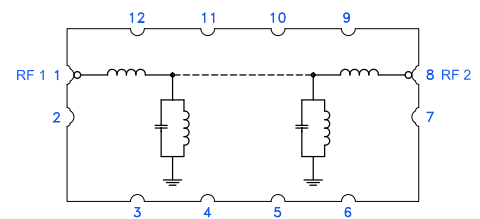


Generic photo used for illustration purposes only

APPLICATIONS

- Aerospace
- Defense and Government
- Telecom

FUNCTIONAL DIAGRAM



PRODUCT OVERVIEW

All our coaxial-ceramic resonator filters are built with rugged construction, qualified to withstand multiple demanding reflow cycles. Excellent repeatability across units is achieved through precise tuning and process control.

ELECTRICAL SPECIFICATIONS^{1,2} AT +25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Units
Passband	Center Frequency	—	—	—	4300	—	MHz
	Insertion Loss	F1-F2	4230 - 4370	—	4.1	4.8	dB
	Return Loss	F1-F2	4230 - 4370	10	12	—	dB
Stopband, Lower	Rejection	DC-F3	DC - 3000	60	70	—	dB
		F3-F4	3000 - 4000	40	50	—	
		F4-F5	4000 - 4160	30	40	—	
Stopband, Upper	Rejection	F6-F7	4460 - 4550	20	28	—	dB
		F7-F8	4550 - 5600	40	50	—	
		F8-F9	5600 - 8000	30	40	—	

1. Tested in Evaluation Board P/N TB-CBP4-4R3GBP+.

2. This component should not be used as a DC-block. In applications where DC voltage and/or current is present at either the input or output ports, external DC blocking capacitors are required.

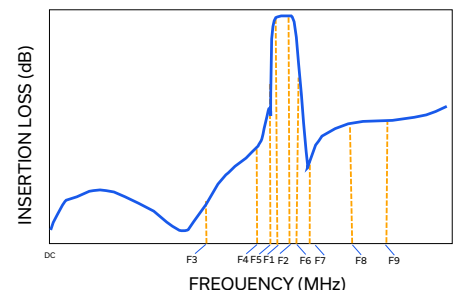
ABSOLUTE MAXIMUM RATINGS³

Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
Input Power ⁴	5 W at +25°C

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

4. Power rating applies only to signals within the passband. Power rating above +25°C operating temperature decreases linearly to 1 W at +85°C.

TYPICAL FREQUENCY RESPONSE



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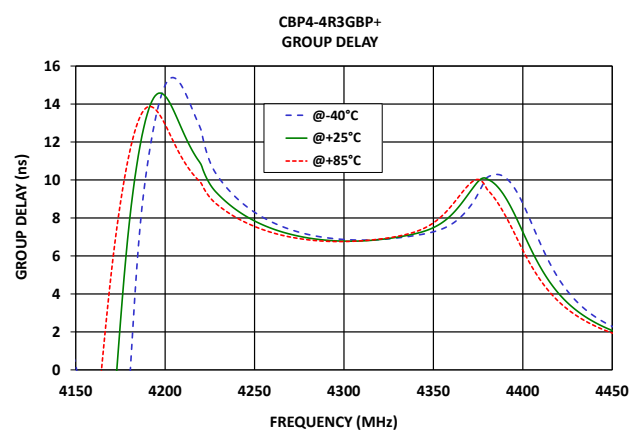
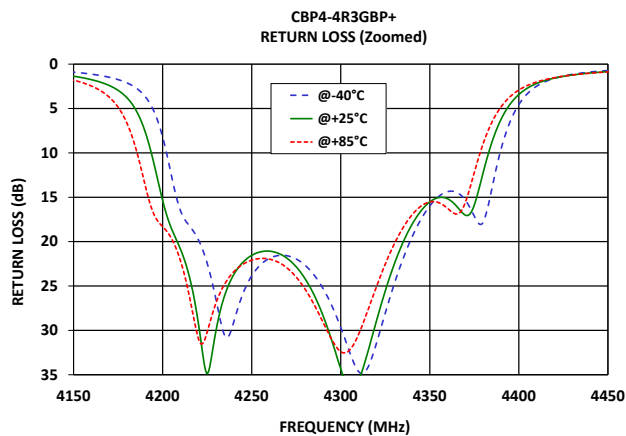
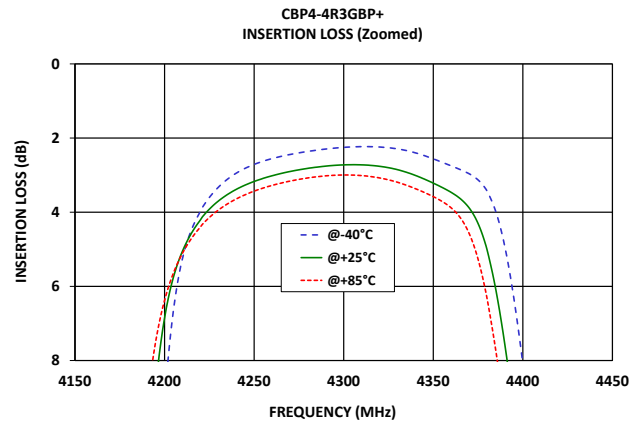
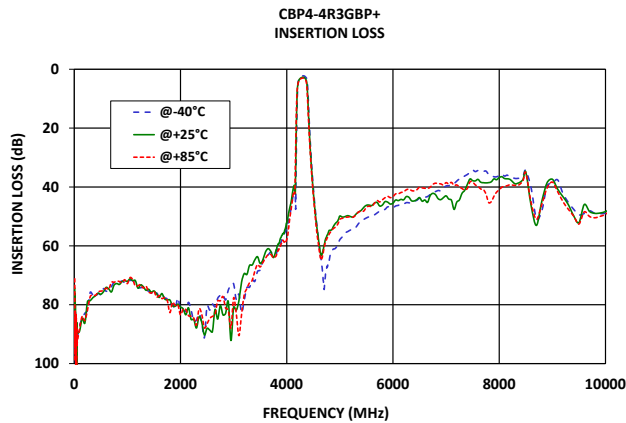
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REV. OR
ECO-030215
EDU5426
CBP4-4R3GBP+
MCINU
260626

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TYPICAL PERFORMANCE GRAPHS





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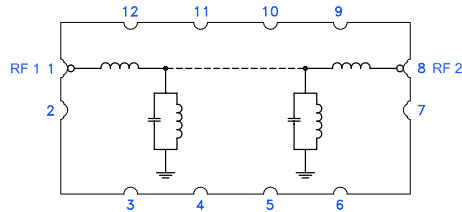


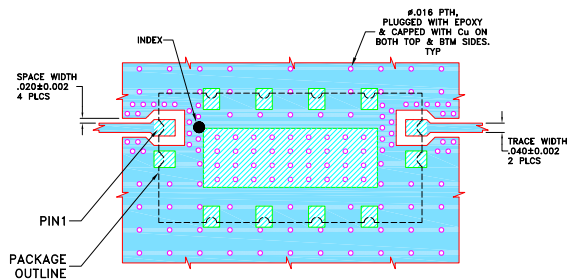
Figure 1. CBP4-4R3GBP+ Functional Diagram

PAD DESCRIPTION

Function	Pad Number	Description
RF1	1	Connects to RF Input Port
RF2	8	Connects to RF Output Port
GROUND	2-7,9-12	Connects to Ground on PCB, (See drawing PL-761)

SUGGESTED PCB LAYOUT

SUGGESTED MOUNTING CONFIGURATION FOR
BBZ3203-3 CASE STYLE



NOTES:

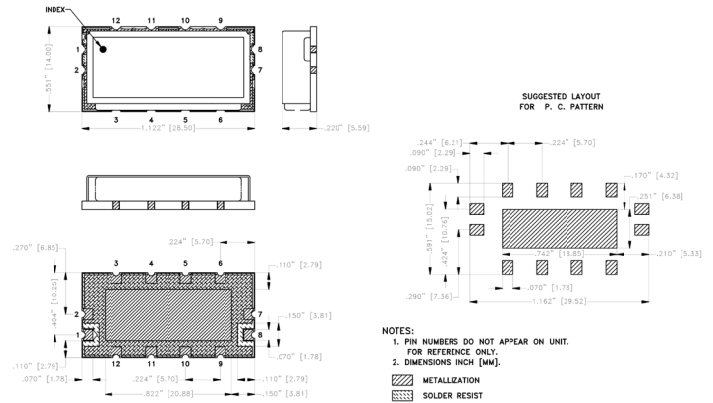
1. TRACE WIDTH IS SHOWN FOR ROGERS (R04350B) WITH DIELECTRIC THICKNESS .020±.0015. COPPER: 1/2 Oz. EACH SIDE.
FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

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

 DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Figure 2. Suggested PCB Layout

CASE STYLE DRAWING



Weight: 3.5g

Dimensions are in inches (mm). Tolerances: 2Pl. ± .03; 3Pl. ± .015

PRODUCT MARKING*: CBP4-4R3GBP

*Marking may contain other features or characters for internal lot control.



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ADDITIONAL DETAILED INFORMATION IS AVAILABLE ON OUR DASHBOARD

[CLICK HERE](#)

Performance Data & Graphs	Data Graphs S-Parameter (S2P Files) Data Set (.zip file) De-embedded to device pads
Case Style	BBZ3203-3 Lead Finish: Gold over Nickel Plate
RoHS/REACH Status	Compliant
Tape and Reel	F027
Suggested Layout for PCB Design	PL-865
Evaluation Board	TB-CBP4-4R3GBP+ Gerber File
Environmental Rating	ENV54
MSL Level	MSL1

NOTES

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
- 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/terms/viewterm.html

