



CERAMIC RESONATOR SURFACE MOUNT

Band Pass Filter

CBP2-2250CC+

50Ω

2000 to 2500 MHz

THE BIG DEAL

- Good Insertion Loss, 1.2 dB Typ.
- Excellent Rejection, 70 dB Typ.
- Good Return Loss, 16 dB Typ.
- Miniature Shielded Package

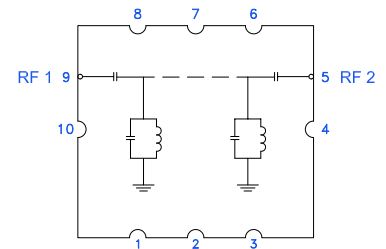


Generic photo used for illustration purposes only

APPLICATIONS

- Aerospace
- Defense and Government
- Test and Measurement

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	—	—	2250	—	MHz	
	Insertion Loss	F1-F2	2000 - 2500	—	1.2	1.7	dB
	Return Loss	F1-F2	2000 - 2500	10	16	—	dB
Stopband, Lower	Rejection	DC-F3	DC - 1000	60	70	—	dB
		F3-F4	1000 - 1800	20	25	—	dB
Stopband, Upper	Rejection	F5-F6	3000 - 3300	20	25	—	dB
		F6-F7	3300 - 4200	30	40	—	dB

1. Tested in Evaluation Board P/N TB-CBP2-2250CC+.

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.

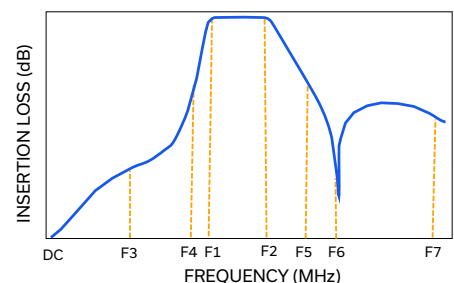
ABSOLUTE MAXIMUM RATINGS³

Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
Input Power ⁴	10 W at +25°C

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

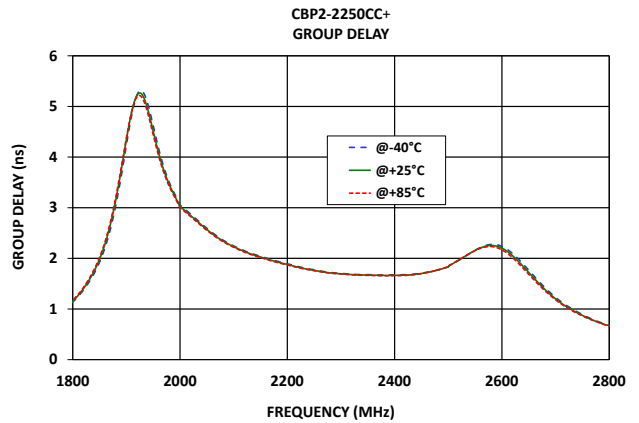
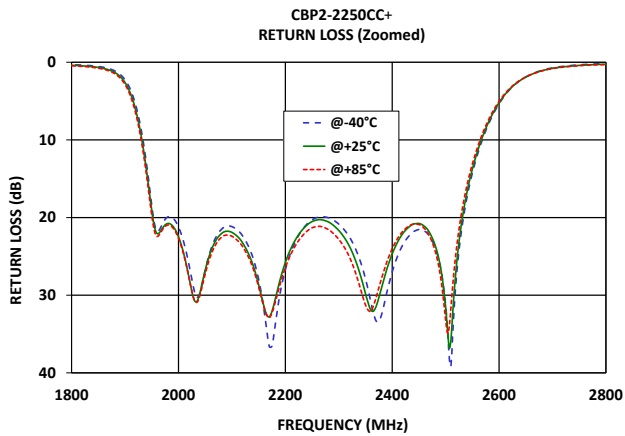
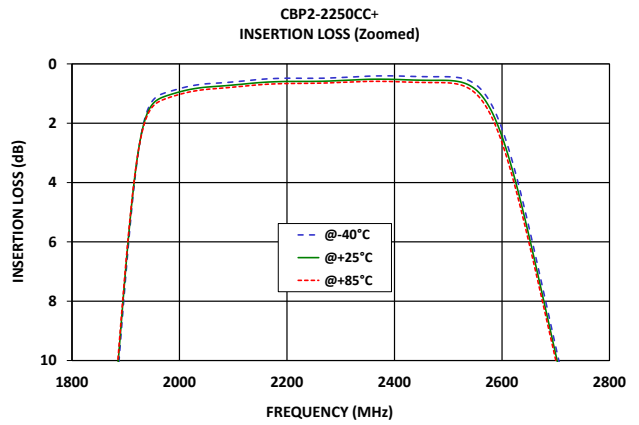
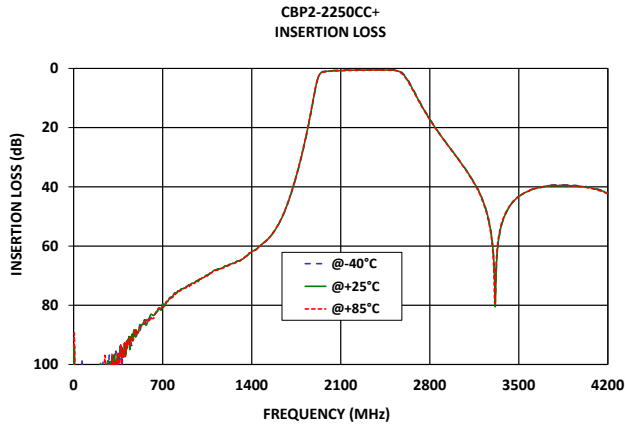
4. Power rating applies only to signals within the passband. Power rating above +25°C operating temperature decreases linearly to 1 W at +85°C.

TYPICAL FREQUENCY RESPONSE





TYPICAL PERFORMANCE GRAPHS





FUNCTIONAL DIAGRAM

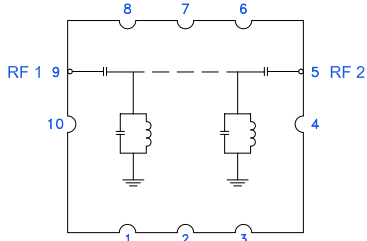


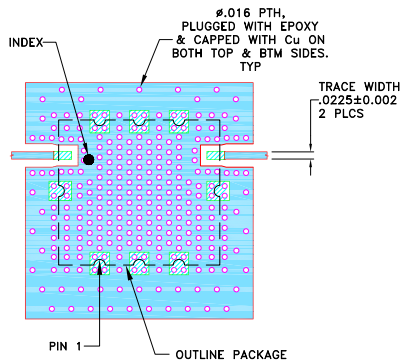
Figure 1. CBP2-2250CC+ Functional Diagram

PAD DESCRIPTION

Function	Pad Number	Description
RF1	9	Connects to RF Input Port
RF2	5	Connects to RF Output Port
GROUND	1-4, 6-8,10	Connects to Ground on PCB, (See drawing PL-794)

SUGGESTED PCB LAYOUT

SUGGESTED MOUNTING CONFIGURATION FOR CASE STYLE BAH350Z

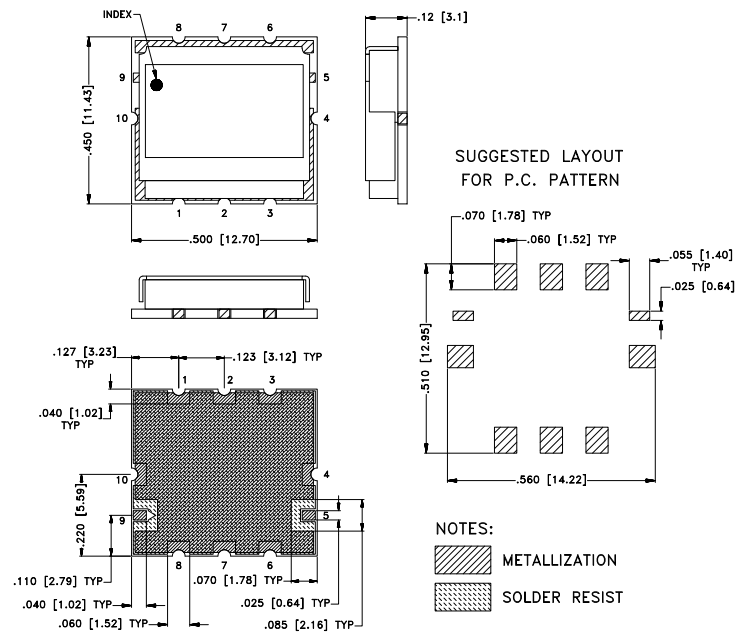


NOTES:

- TRACE WIDTH ARE SHOWN FOR ROGERS (R04350B) WITH DIELECTRIC THICKNESS .010±.001
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 PATTERN WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 - DENOTES PCB COPPER PATTERN FREE OF SOLDERMASK

Figure 2. Suggested PCB Layout

CASE STYLE DRAWING



Weight: 1 gram

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

PRODUCT MARKING*: CBP2-2250CC

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



CERAMIC RESONATOR SURFACE MOUNT

Band Pass Filter

CBP2-2250CC+

Mini-Circuits

50Ω

2000 to 2500 MHz

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	BAH3507 Lead Finish: Gold over Nickel Plate
RoHS/REACH Status	Compliant
Tape and Reel	F014
Suggested Layout for PCB Design	PL-794
Evaluation Board	TB-CBP2-2250CC+ Gerber File
Environmental Rating	ENV54
MSL Level	MSL1

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-Circuits' 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/terms/viewterm.html

