CERAMIC RESONATOR SURFACE MOUNT

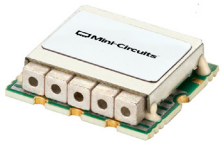
Band Pass Filter

CBP2-2400CC+

50Ω 2200 to 2600 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

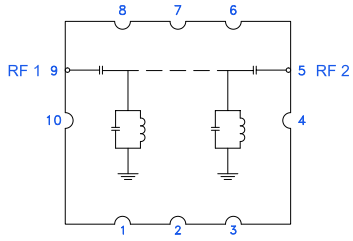


Generic photo used for illustration purposes only

APPLICATIONS

- Test and Measurement
- Bluetooth
- WLAN

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	—	—	—	2400	—	MHz
	Insertion Loss	F1-F2	2200 - 2600	—	1.2	1.7	dB
	Return Loss	F1-F2	2200 - 2600	10	16	—	dB
Stopband, Lower	Rejection	DC-F3	DC - 1100	60	70	—	dB
		F3-F4	1100 - 1990	20	30	—	
Stopband, Upper	Rejection	F5-F6	3000 - 3400	20	30	—	dB
		F6-F7	3400 - 4100	34	42	—	

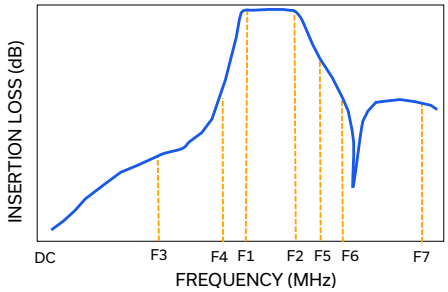
1. Tested in Evaluation Board P/N TB-CBP2-2400CC+.
2. This component should not be used as a DC-block. In applications where DC voltage and/or current is present at either the input or output ports, external DC blocking capacitors are required.

ABSOLUTE MAXIMUM RATINGS[3]

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 2 W at +85°C.

TYPICAL FREQUENCY RESPONSE



REV. OR
ECO-030813
EDU5242
CBP2-2400CC+
MCINU
260825

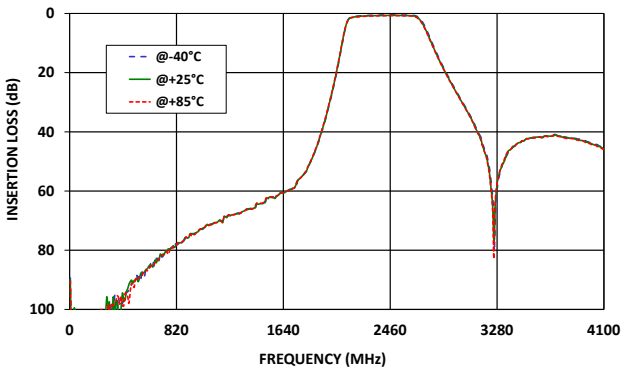
Band Pass Filter

CBP2-2400CC+

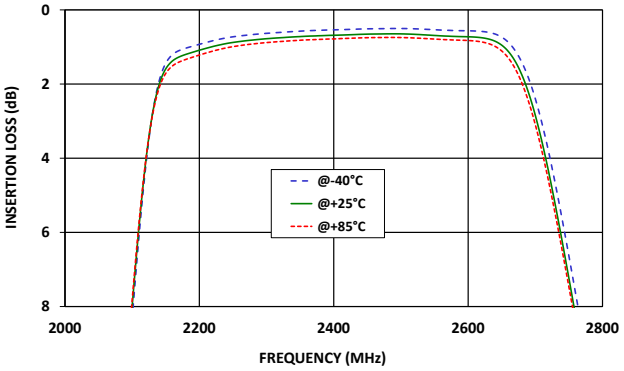
50Ω 2200 to 2600 MHz

TYPICAL PERFORMANCE GRAPHS

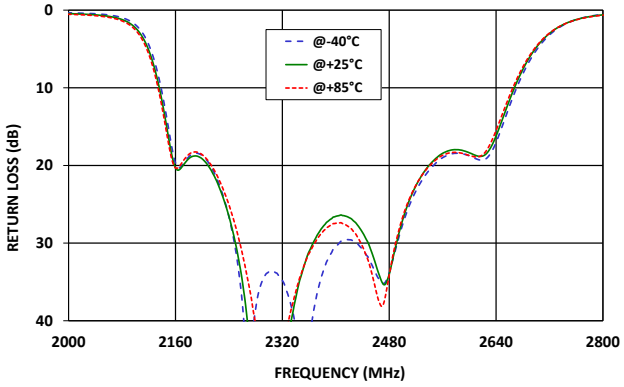
CBP2-2400CC+
INSERTION LOSS



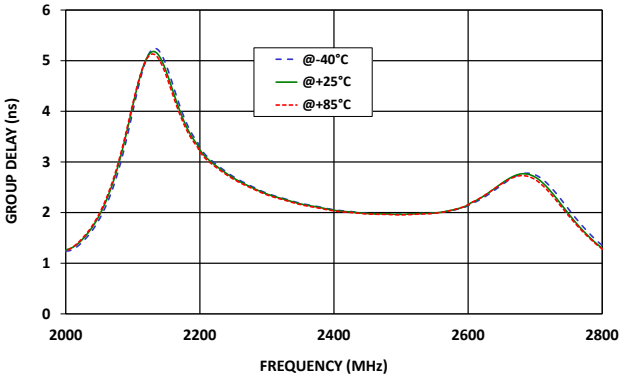
CBP2-2400CC+
INSERTION LOSS (Zoomed)



CBP2-2400CC+
RETURN LOSS (Zoomed)



CBP2-2400CC+
GROUP DELAY



CERAMIC RESONATOR SURFACE MOUNT

Band Pass Filter

CBP2-2400CC+

50Ω 2200 to 2600 MHz

FUNCTIONAL DIAGRAM

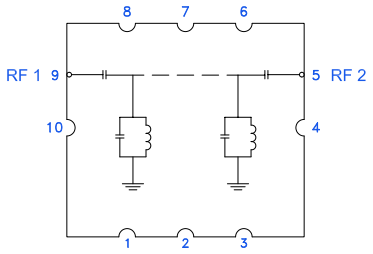
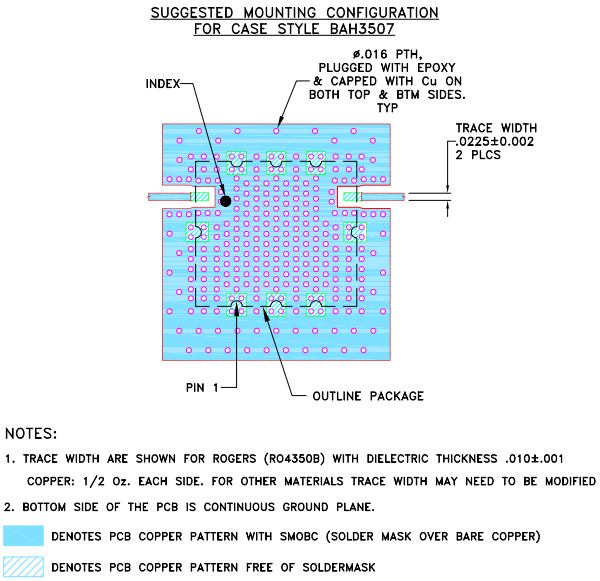


Figure 1. CBP2-2400CC+ Functional Diagram

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



NOTES:

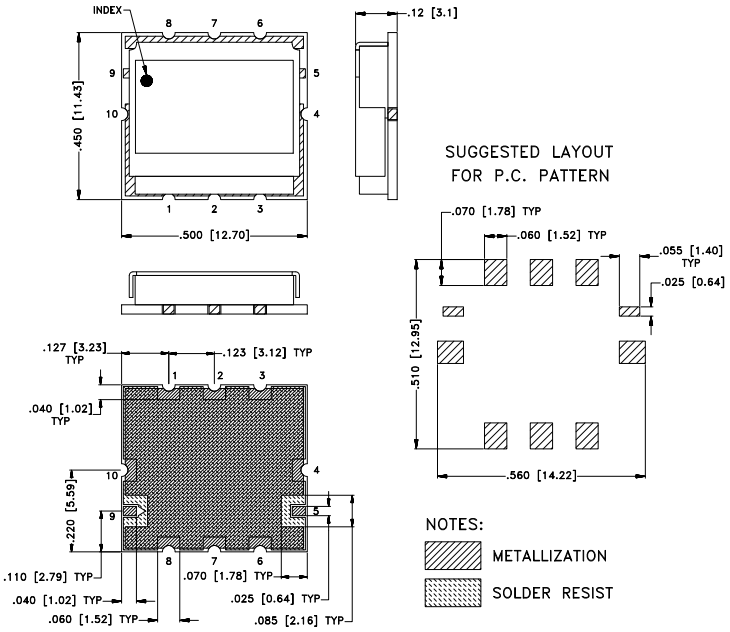
1. TRACE WIDTH ARE SHOWN FOR ROGERS (RO4350B) WITH DIELECTRIC THICKNESS .010±.001 COPPER: 1/2 Oz. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER 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: 2Pl. ± .03; 3Pl. ± .015

PRODUCT MARKING*: CBP2-2400CC

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

Band Pass Filter

CBP2-2400CC+

50Ω 2200 to 2600 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-CBP2-2400CC+ 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