CERAMIC RESONATOR SURFACE MOUNT

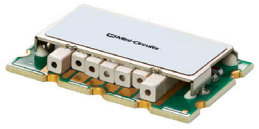
Band Pass Filter

CBP2-2900BN+

50Ω 2600 to 3200 MHz

THE BIG DEAL

- Good Insertion Loss, 1.6 dB Typ.
- Excellent Rejection, 70 dB Typ.
- Good Return Loss, 15 dB Typ.
- Miniature Shielded Package

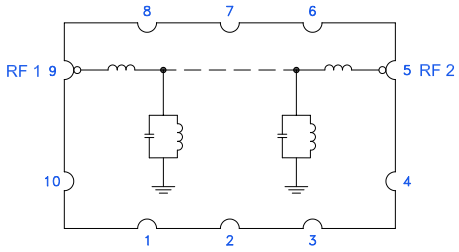


Generic photo used for illustration purposes only

APPLICATIONS

- Aerospace
- Defense and Government
- Test and Measurement
- S Band Radar

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	Fc	—	—	2900	—	MHz
	Insertion Loss	F1-F2	2600 - 3200	—	1.6	2.2	dB
	Return Loss	F1-F2	2600 - 3200	10	15	—	dB
Stopband, Lower	Rejection	DC-F3	DC - 1500	60	70	—	dB
		F3-F4	1500 - 2280	20	30	—	
Stopband, Upper	Rejection	F5-F6	3500 - 3900	20	30	—	dB
		F6-F7	3900 - 4200	55	65	—	

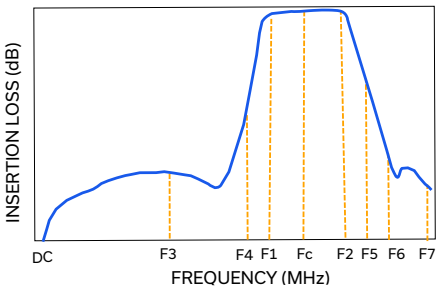
1. Tested in Evaluation Board P/N TB-CBP2-2900BN+.
2. This component should not be used as a DC-block. In applications where DC voltage and/or current is present at either the input or output ports, external DC blocking capacitors are required.

ABSOLUTE MAXIMUM RATINGS[3]

Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
Input Power[4]	8 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



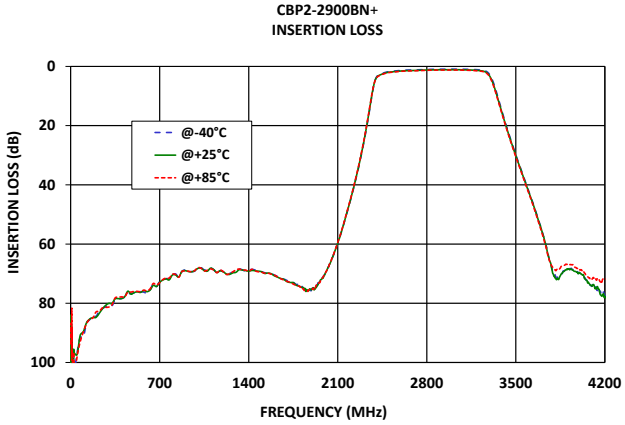
REV. OR
ECO-031277
EDU5465
CBP2-2900BN+
MCINU
260921

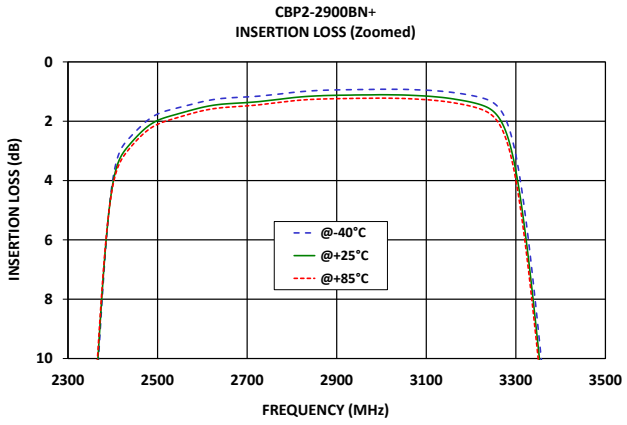
Band Pass Filter

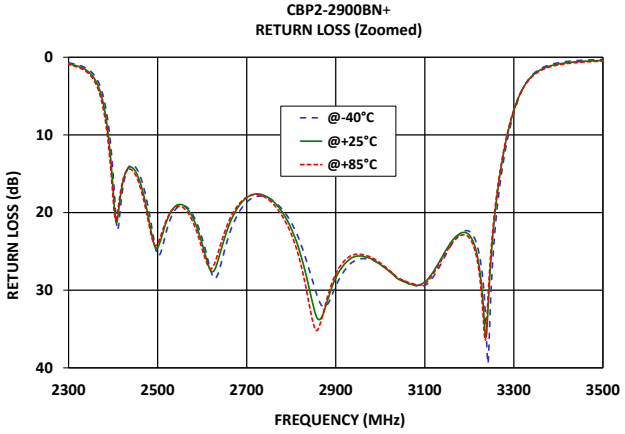
CBP2-2900BN+

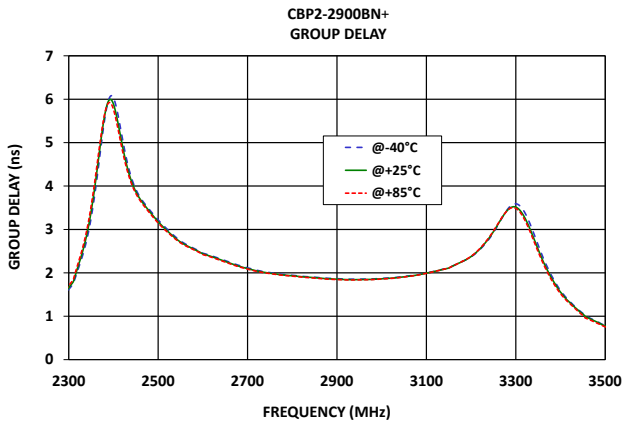
50Ω 2600 to 3200 MHz

TYPICAL PERFORMANCE GRAPHS









Band Pass Filter

CBP2-2900BN+

50Ω 2600 to 3200 MHz

FUNCTIONAL DIAGRAM

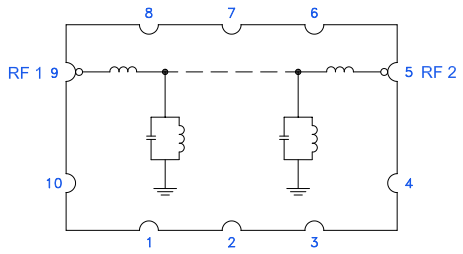


Figure 1. CBP2-2900BN+ Functional Diagram

PAD DESCRIPTION

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

5. This filter is bi-directional RF1 and RF2 ports may be interchanged, see S parameter for actual performance.

SUGGESTED PCB LAYOUT

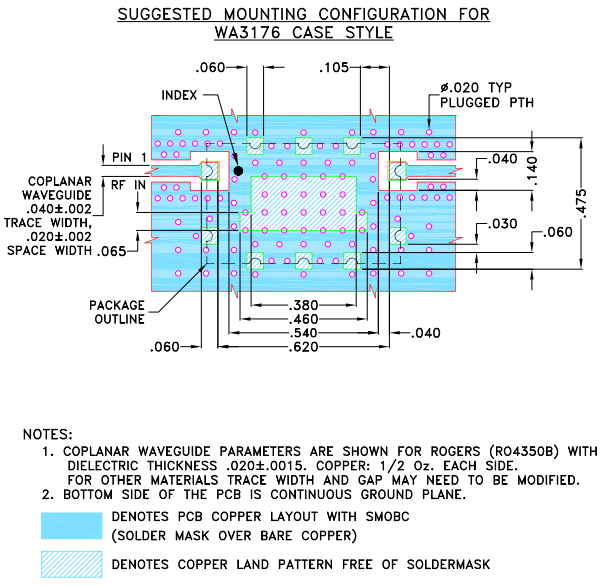
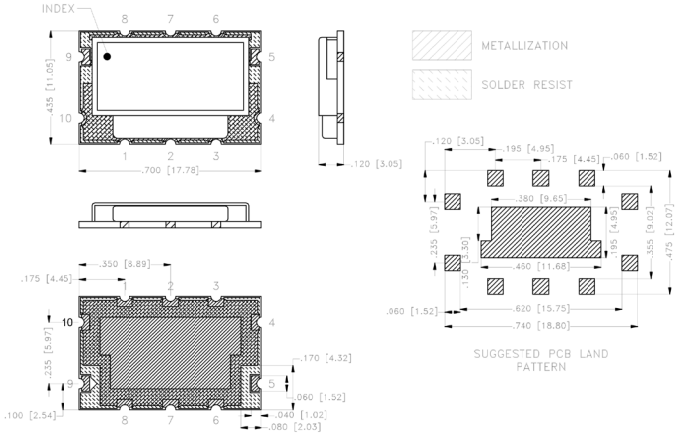


Figure 2. Suggested PCB Layout

CASE STYLE DRAWING



Weight: 1.1 gram
Dimensions are in inches (mm). Tolerances: 2Pl. ± .03; 3Pl. ± .015

PRODUCT MARKING*: CBP2-2900BN

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

Band Pass Filter

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50Ω 2600 to 3200 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	WA3176 Lead Finish: Gold over Nickel Plate
RoHS/REACH Status	Compliant
Tape and Reel	F122
Suggested Layout for PCB Design	PL-721
Evaluation Board	TB-CBP2-2900BN+ 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