



50Ω

4707 to 4847 MHz

### THE BIG DEAL

- Good Insertion Loss, 2.3 dB Typ.
- Excellent Rejection, 57 dB Typ.
- Good Return Loss, 18 dB Typ.
- Miniature Shielded Package

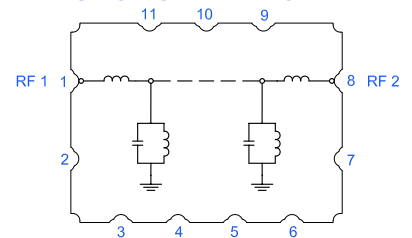


Generic photo used for illustration purposes only

### APPLICATIONS

- 5G Deployment
- Telemetry Applications
- Wireless Local Area Networks

### 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<sup>1,2,3</sup> AT +25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Units	
Passband	Center Frequency	—	—	4777	—	MHz	
Passband	Insertion Loss	F1-F2	4707 - 4847	—	2.3	2.9	dB
	Return Loss	F1-F2	4707 - 4847	10	18	—	dB
Stopband, Lower	Rejection	DC-F3	DC - 4000	50	57	—	dB
		F3-F4	4000 - 4565	20	28	—	dB
Stopband, Upper	Rejection	F5-F6	5000 - 5500	20	28	—	dB
		F6-F7	5500 - 7000	33	45	—	dB

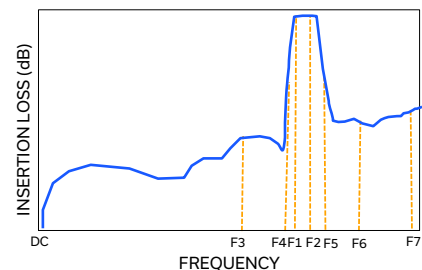
1. Tested in Evaluation Board P/N TB-CBP4-4777AG+.
2. This filter is bi-directional RF1 and RF2 ports may be interchanged, see S-Parameters for actual performance.
3. This component should not be used as a DC-block. In applications where DC voltage and/or current is present at either the input or output ports, external DC blocking capacitors are required.

### ABSOLUTE MAXIMUM RATINGS<sup>4</sup>

Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
Input Power <sup>5</sup>	5 W at +25°C

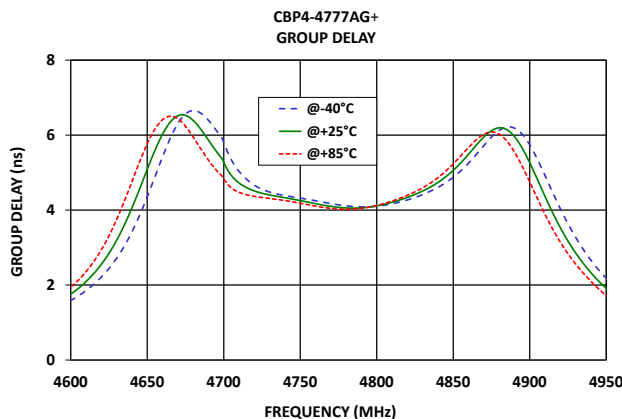
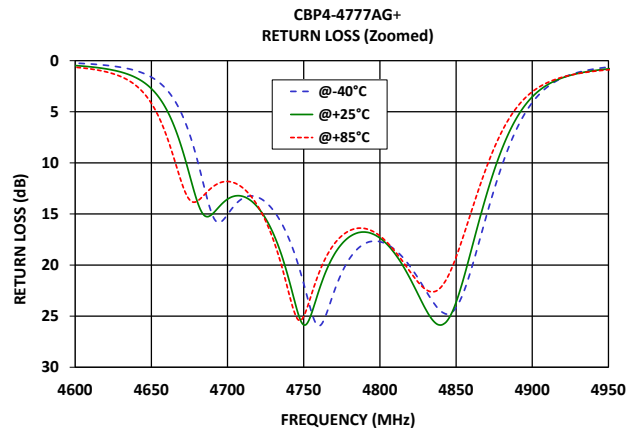
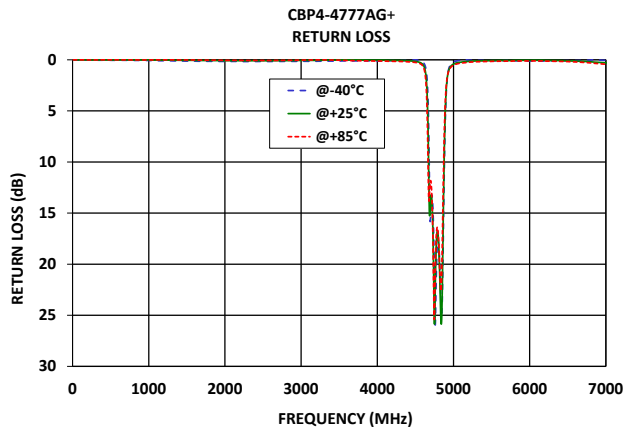
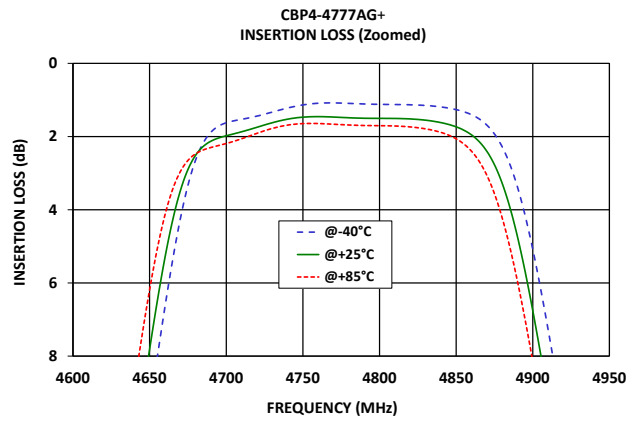
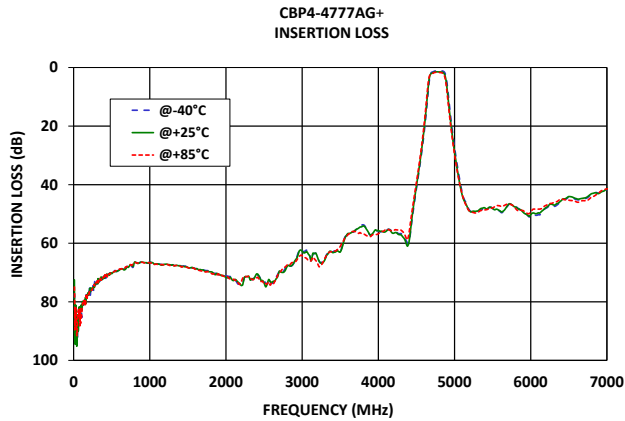
4. Permanent damage may occur if any of these limits are exceeded.
5. Power rating applies only to signals within the passband. Power rating above +25°C operating temperature decreases linearly to 1 W at +85°C.

### TYPICAL FREQUENCY RESPONSE





### TYPICAL PERFORMANCE GRAPHS





### FUNCTIONAL DIAGRAM

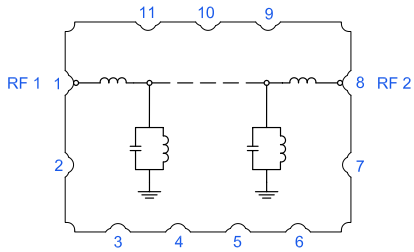
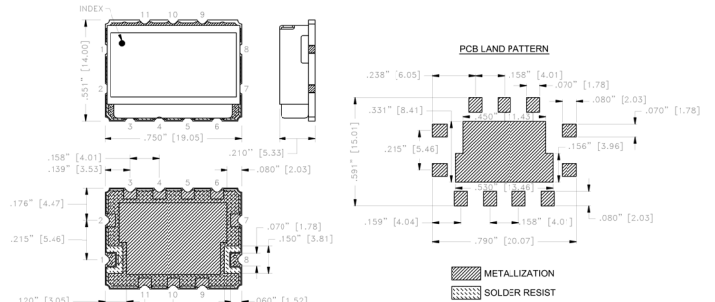


Figure 1. CBP4-4777AG+ Functional Diagram

### PAD DESCRIPTION

Function	Pad Number	Description
RF1 <sup>2</sup>	1	Connects to RF Input Port
RF2 <sup>2</sup>	8	Connects to RF Output Port
GROUND	2-7,9,10,11	Connects to Ground on PCB, (See drawing PL-761)

### CASE STYLE DRAWING

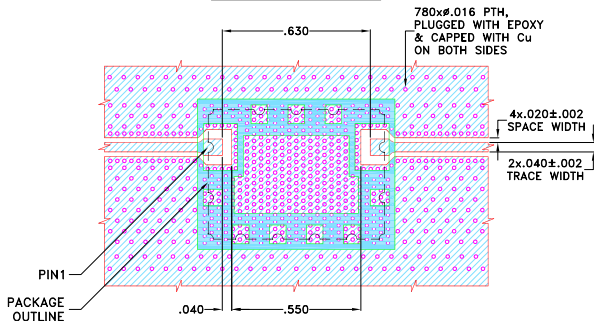


Weight: 2.4 gram

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

### SUGGESTED PCB LAYOUT

SUGGESTED MOUNTING CONFIGURATION FOR RZ2511-1 CASE STYLE



NOTES:

- TRACE WIDTH IS SHOWN FOR ROGERS (RO4350B) WITH DIELECTRIC THICKNESS .020±.0015. 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 LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Figure 2. Suggested PCB Layout

### PRODUCT MARKING\*: CBP4-4777AG

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



CERAMIC RESONATOR SURFACE MOUNT

# Band Pass Filter

## CBP4-4777AG+

Mini-Circuits

50Ω

4707 to 4847 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	RZ2511-1 Lead Finish: Gold over Nickel Plate
RoHS/REACH Status	Compliant
Tape and Reel	F122
Suggested Layout for PCB Design	PL-761
Evaluation Board	TB-CBP4-4777AG+ 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](http://www.minicircuits.com/terms/viewterm.html)

