PRODUCT SPECIFICATION FOR INFORMATION

PRELIMINARY SPECIFICATION

Product Name : Cavity Band Pass Filter

Part No : MBP-C402.5_2MN-A-R0

	Rev. No.	Description	Date	Author	Final Approver
1	R0	Draft	2024.04.25	Jeffrey Chung	Michael Jeon

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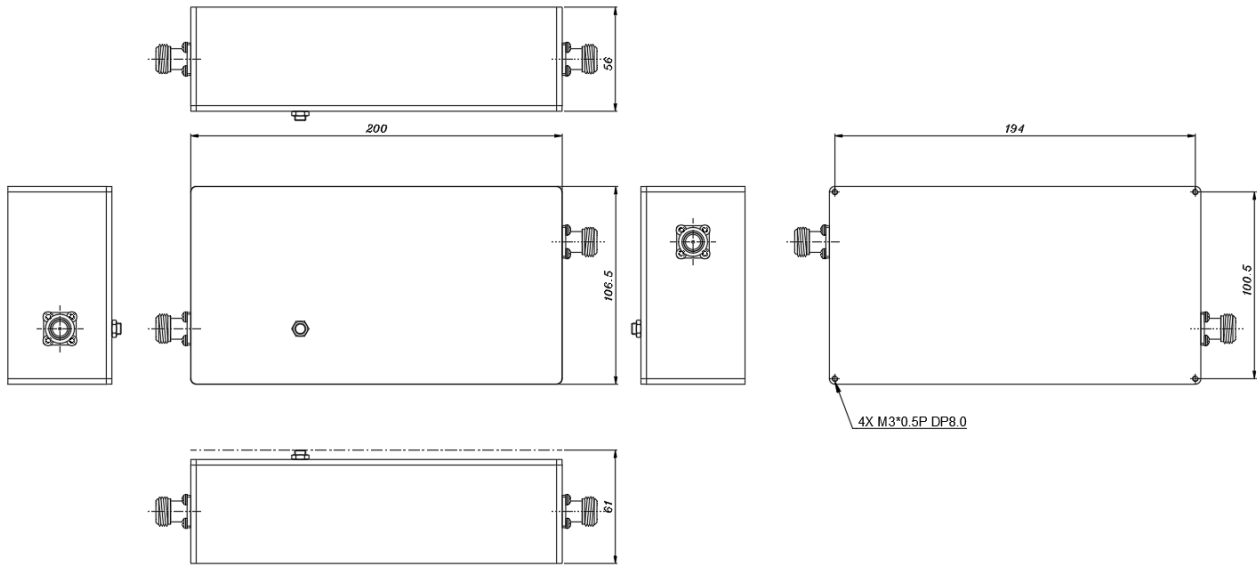
■ Mechanical Drawing



■ Electrical Specification

Parameter	Specification	Remark
1. Center Frequency	402.5 MHz	OK
2. Bandwidth [BW]	Fc ±1MHz[401.5~403.5MHz]	OK
3. Insertion Loss in BW	1.3dB Max.	OK
4. Ripple	0.2dB Max.	OK
5. Return Loss	17dB Min.	OK
6. Rejections	55dB(min.) @ 20-88MHz	OK
	55dB(min.) @ 150-204MHz	OK
	70dB(min.) @ 220-396MHz	OK
	80dB(min.) @ 418-420MHz	OK
	85dB(min.) @ 420-450MHz	OK
	85dB(min.) @ 450-1000MHz	OK
7. In/Out Impedance	50 Ohm	OK
8. Operating Temperature	-10 ~ +85℃	OK
9. Power Handling	75W Max.	OK
10. Size (W × D × H)	200 x 106.5 x 56(61) [mm]	Proposed
11.Random Vibration	MIL-STD-810F method 541.5 Procedure C1. 3axes, 20min.per each axis.	OK
12. Dust	MIL-STD-810F method 514.4 Procedure 3 settling dust	OK
13.Interface	N-Type(F)	OK
14. Finish	Black Epoxy	TBD

Remarks: This is a preliminary datasheet for reference.

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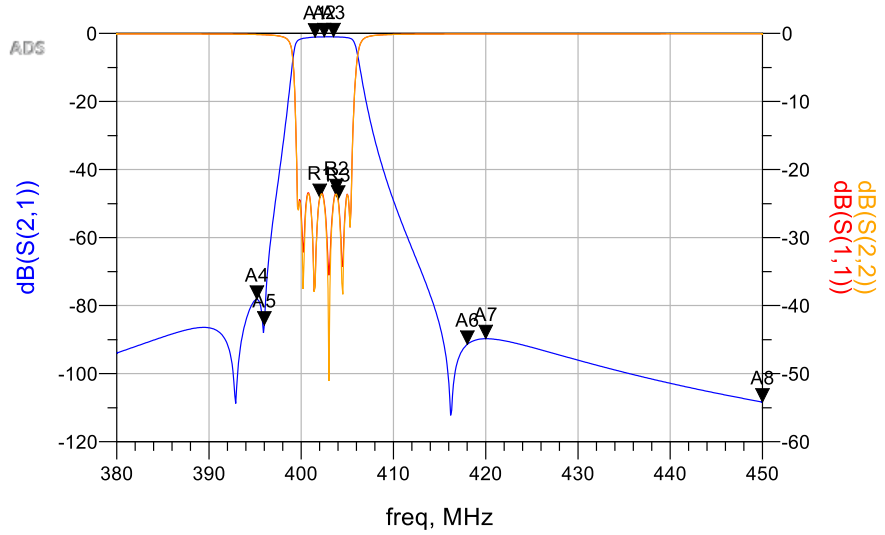
■ Simulation Curve

[TX] Insertion loss

Insertion loss

A1	A2	A3
freq=401.50MHz dB(S(2,1))=-1.1034	freq=402.50MHz dB(S(2,1))=-1.0304	freq=403.50MHz dB(S(2,1))=-1.0326

IL_TX	Ripple_TX
-1.10	-0.09



Rejection

A4	A5	A6	A7	A8
freq=395.20MHz dB(S(2,1))=-78.1875	freq=396.00MHz dB(S(2,1))=-85.7547	freq=418.00MHz dB(S(2,1))=-91.4225	freq=420.00MHz dB(S(2,1))=-89.7450	freq=450.00MHz dB(S(2,1))=-108.3596

Return loss

R1	R2	R3
freq=402.00MHz dB(S(1,1))=-24.1162	freq=403.80MHz dB(S(1,1))=-23.4162	freq=404.00MHz dB(S(1,1))=-24.3813

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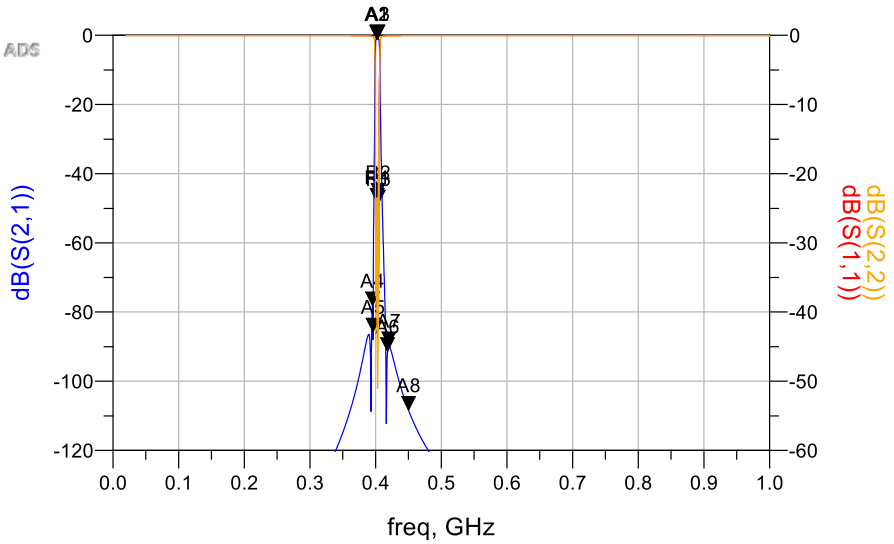

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