

PRODUCT SPECIFICATION FOR INFORMATION

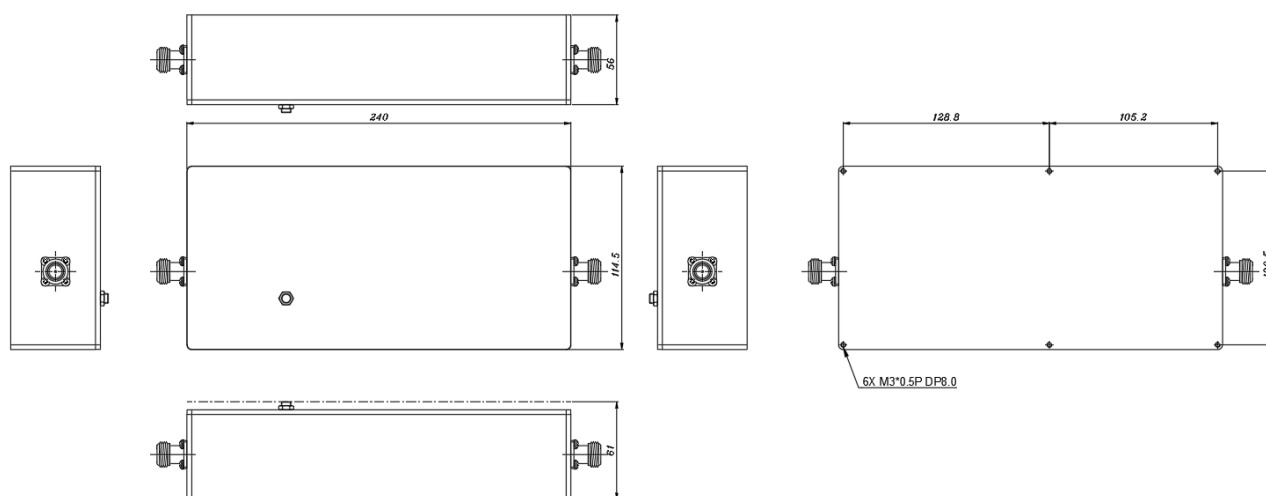
PRELIMINARY SPECIFICATION

Product Name : Cavity Band Pass Filter

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

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

■ Mechanical Drawing



■ Electrical Specification

Parameter	Specification	Remark
1. Center Frequency	402.5 MHz	OK
2. Bandwidth [BW]	$F_c \pm 1\text{MHz}$ [401.5~403.5MHz]	OK
3. Insertion Loss in BW	1.0dB(Typ.) 1.15dB(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°C	OK
9. Power Handling	75W Max.	OK
10. Size (W × D × H)	240 x 114.5 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.

Simulation Curve

[TX] Insertion loss

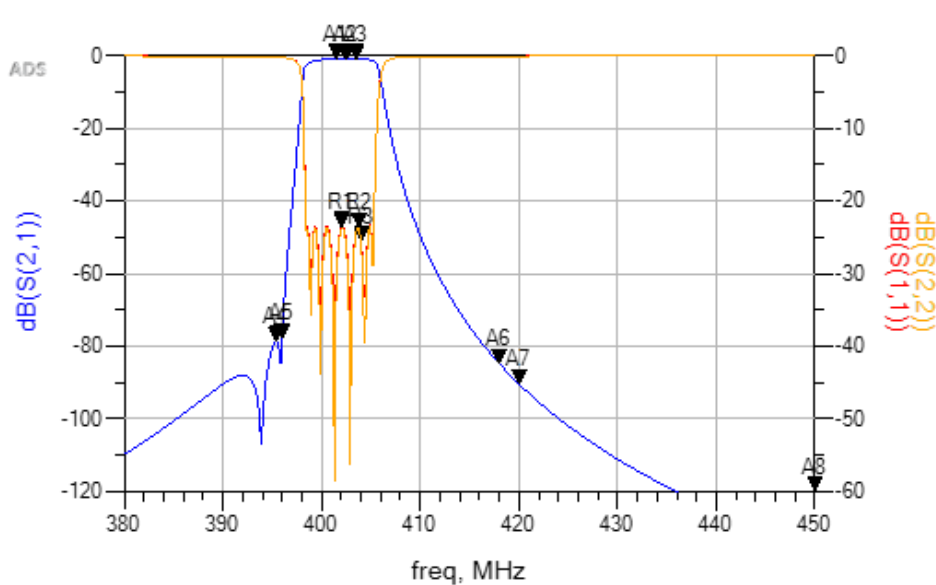
Insertion loss

A1
freq=401.50MHz
dB(S(2,1))=-0.9730

A2
freq=402.50MHz
dB(S(2,1))=-0.9433

A3
freq=403.50MHz
dB(S(2,1))=-0.9744

IL_TX	Ripple_TX
-0.97	-0.04



Rejection

A4
freq=395.40MHz
dB(S(2,1))=-78.5154

A5
freq=396.00MHz
dB(S(2,1))=-77.8345

A6
freq=418.00MHz
dB(S(2,1))=-84.7531

A7
freq=420.00MHz
dB(S(2,1))=-90.4132

A8
freq=450.00MHz
dB(S(2,1))=-135.6415

Return loss

R1
freq=402.00MHz
dB(S(1,1))=-23.5141

R2
freq=403.80MHz
dB(S(1,1))=-23.6832

R3
freq=404.00MHz
dB(S(1,1))=-25.5543

[TX] Insertion loss

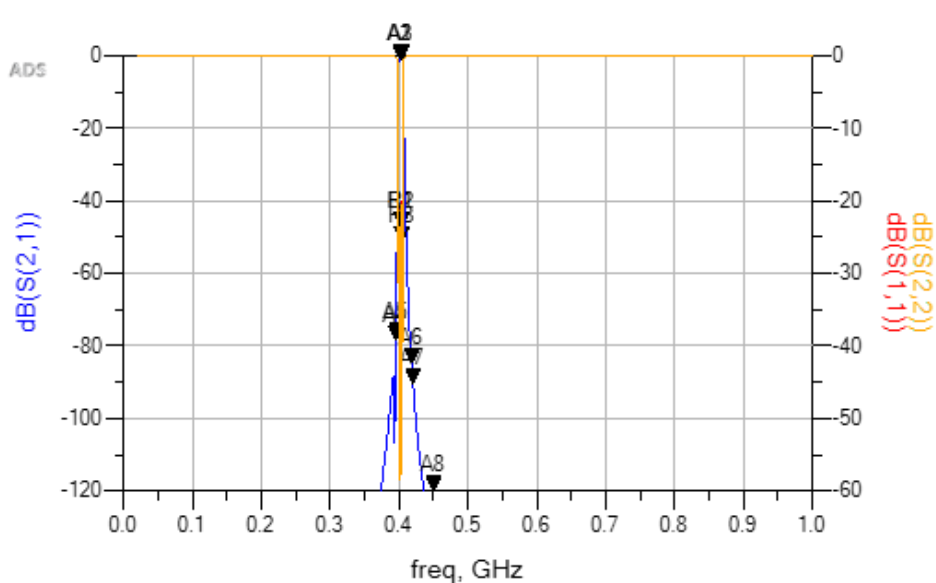
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