

PRODUCT SPECIFICATION FOR INFORMATION

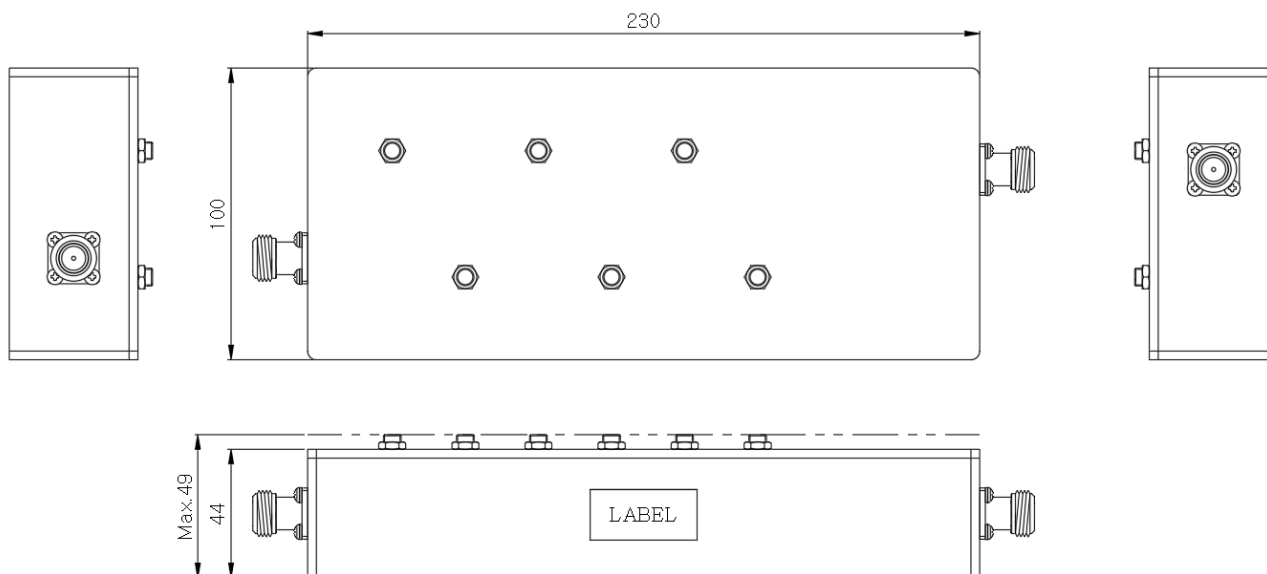
PRELIMINARY SPECIFICATION

Product Name : Cavity _Band Pass Filter

Part No : MBP-C1102.5_15MN-A-R0

	Rev. No.	Description	Date	Author	Final Approver
1	R0	Draft	2025.02.25	Jeffrey Chung	Michael Jeon

■ Mechanical Drawing



■ Electrical Specification

Parameter	Specification	Remark
1. Center Frequency	1102.5MHz	OK
2. 1.0dB Bandwidth	$F_c \pm 7.5\text{MHz}$ [1095~1110MHz]	OK
3. Insertion Loss	0.8dB Max. @1096~1109MHz	OK
4. Ripple (per 2MHz BW)	$\pm 0.25\text{dB}$ max.	OK
5. VSWR (Return Loss)	1.4:1 Max. (15.6dB Min.)	OK
6. Rejections	60dB Min @ DC~1050MHz	OK
	17dB Min @ 1090MHz	OK
	17dB Min @ 1115MHz	OK
	40dB Min @ 1075 & 1130MHz	OK
	60dB Min @ 1200~5000MHz	OK
7. Group Delay Variation	12 nsec max. @ Any 2MHz BW	PROPOSAL
8. Impedance	50Ohm	OK
9. Operating Temperature	0°C ~ +60°C	OK
10. Power Handling	400W Max.	OK
11. Size (W × D × H)	230 x 100 x 44 mm	Proposal
12. Humidity	95%	OK
13. Vibration	9g rms 20Hz~2KHz	OK
14. Connector	N (F)	OK
15. Finish	Black epoxy	TBD

Simulation Data

Insertion loss
[dB]

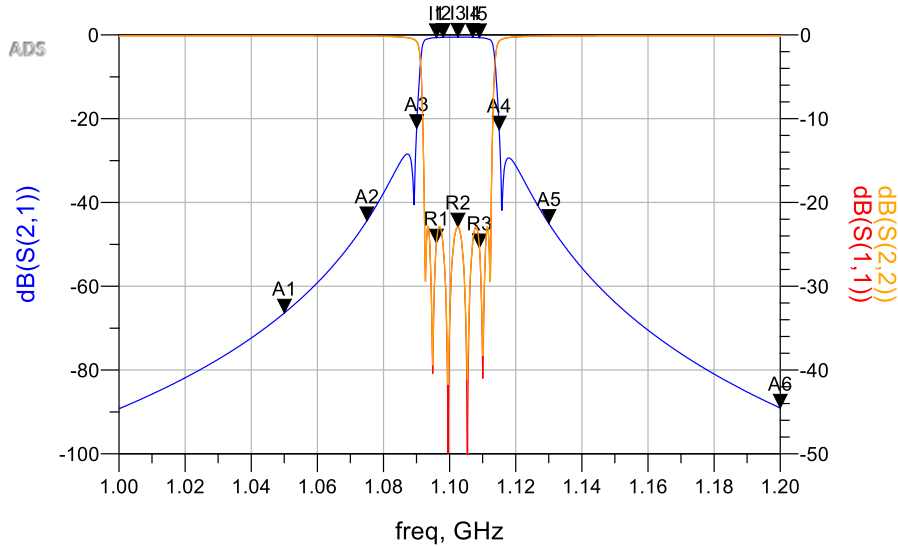
I1
freq=1.09600GHz
dB(S(2,1))=-0.65775

I2
freq=1.0980GHz
dB(S(2,1))=-0.5862

I3
freq=1.1025GHz
dB(S(2,1))=-0.5504

I4
freq=1.1070GHz
dB(S(2,1))=-0.5926

I5
freq=1.1090GHz
dB(S(2,1))=-0.6658



Rejection [dB]

A3
freq=1.0900GHz
dB(S(2,1))=-22.3548

A4
freq=1.1150GHz
dB(S(2,1))=-22.7135

A2
freq=1.0750GHz
dB(S(2,1))=-44.3630

A5
freq=1.1300GHz
dB(S(2,1))=-45.0251

A1
freq=1.0500GHz
dB(S(2,1))=-66.3954

A6
freq=1.2000GHz
dB(S(2,1))=-89.0760

Return loss
[dB]

R1
freq=1.0960GHz
dB(S(1,1))=-24.8420

R2
freq=1.1025GHz
dB(S(1,1))=-22.9232

R3
freq=1.1090GHz
dB(S(1,1))=-25.4157

Group delay
[ns]

G1
freq=1.0960GHz
delay(2,1)=66.150n

G2
freq=1.0980GHz
delay(2,1)=57.686n

G3
freq=1.1025GHz
delay(2,1)=52.093n

G4
freq=1.1070GHz
delay(2,1)=58.098n

G5
freq=1.1090GHz
delay(2,1)=67.007n

