

## **PRODUCT SPECIFICATION FOR INFORMATION**

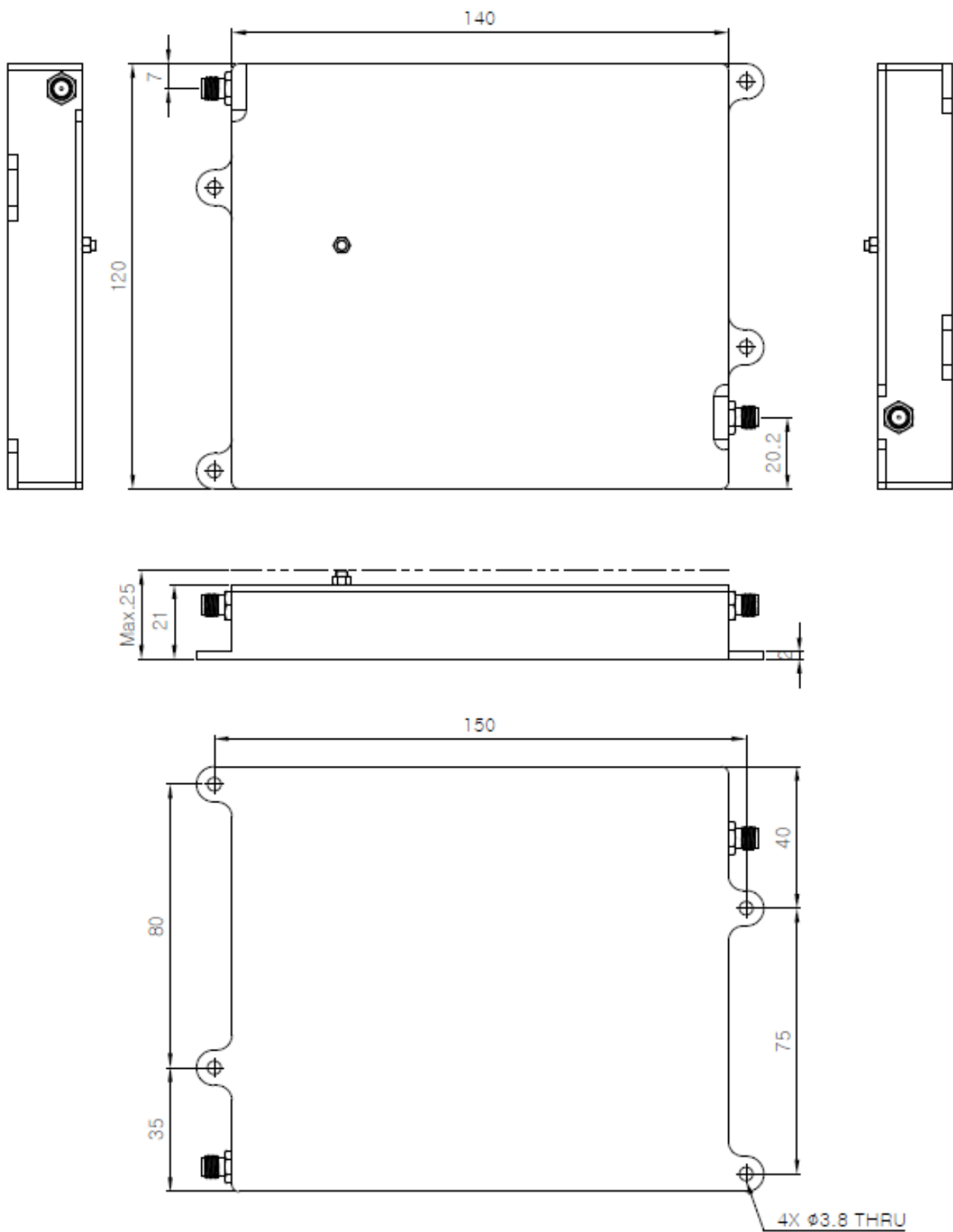
PRELIMINARY SPECIFICATION

**Product Name : Cavity Band Pass Filter(G)**

**Part No : MBP-C2810\_240MS-B-R1**

|   | Rev. No. | Description           | Date       | Author        | Final Approver |
|---|----------|-----------------------|------------|---------------|----------------|
| 1 | R0       | Draft                 | 2025.03.07 | Jeffrey Chung | Michael Jeon   |
| 2 | R1       | Modify mounting holes | 2025.04.02 | Jeffrey Chung | Michael Jeon   |
| 3 |          |                       |            |               |                |
|   |          |                       |            |               |                |

## ■ Mechanical Drawing



## ■ Electrical Specification

| Parameter                      | Specification                     | Remark   |
|--------------------------------|-----------------------------------|----------|
| 1. Center Frequency            | 2810MHz                           | OK       |
| 2. Bandwidth [BW]              | Fc ±120MHz[2690~2930MHz]          | OK       |
| 3. Insertion Loss in BW        | 1.5dB Max. @ Full temp.           | Proposal |
| 4. Ripple in BW                | 1.1dB Max. @ Full temp.           | Proposal |
| 5. Return Loss                 | 15.6dB min. (VSWR1.4:1 min.)      | OK       |
| 6. Rejections                  | 60dB Min @ DC~902MHz              | OK       |
|                                | 70dB Min @ 902~2665MHz            | OK       |
|                                | 55dB Min @ 2665~2675MHz           | OK       |
|                                | 55dB Min @ 2945~3045MHz           | OK       |
|                                | 70dB Min @ 3045~6000MHz           | OK       |
|                                | 50dB Min @ 6~12GHz                | OK       |
|                                | 25dB Min @ 12~30GHz               | OK       |
| 7. Group Delay Variation       | 30ns @ Full temp                  | Proposal |
| 8. Impedance                   | 50Ohm                             | OK       |
| 9. Operating Temperature       | -40°C ~ +85°C                     | OK       |
| 10. Storage Temperature        | -50°C ~ +90°C                     | OK       |
| 11. Power Handling             | 50W(47dBm) Max.                   | OK       |
| 12. Size (W × D × H)           | 140.0 x 120.0 x 21.0 mm(Max.25mm) | OK       |
| 13. Weight                     | 650g Max.                         | OK       |
| 14. Connector                  | SMA (F)                           | OK       |
| 15. Finish                     | Black epoxy                       | OK       |
| 16. Humidity                   | 95% Max.                          | OK       |
| 17. Vibration & Shock          | Vibration 6.06g RMS               | OK       |
| 18. Altitude-Temp. (operation) | 20,000 Feet @25°C                 | OK       |

Remarks: This is a preliminary datasheet for reference.

## Simulation Data

Insertion loss & Ripple [dB]

| IL_max | IL_Ripple |
|--------|-----------|
| -1.31  | -0.89     |

Insertion loss  
[dB]

I1  
freq=2.6900GHz  
dB(S(2,1))=-1.3127

I2  
freq=2.8081GHz  
dB(S(2,1))=-0.4273  
Max

I3  
freq=2.9300GHz  
dB(S(2,1))=-1.2960

Rejection [dB]

A1  
freq=2.6275GHz  
dB(S(2,1))=-76.9899

A2  
freq=2.6650GHz  
dB(S(2,1))=-85.5733

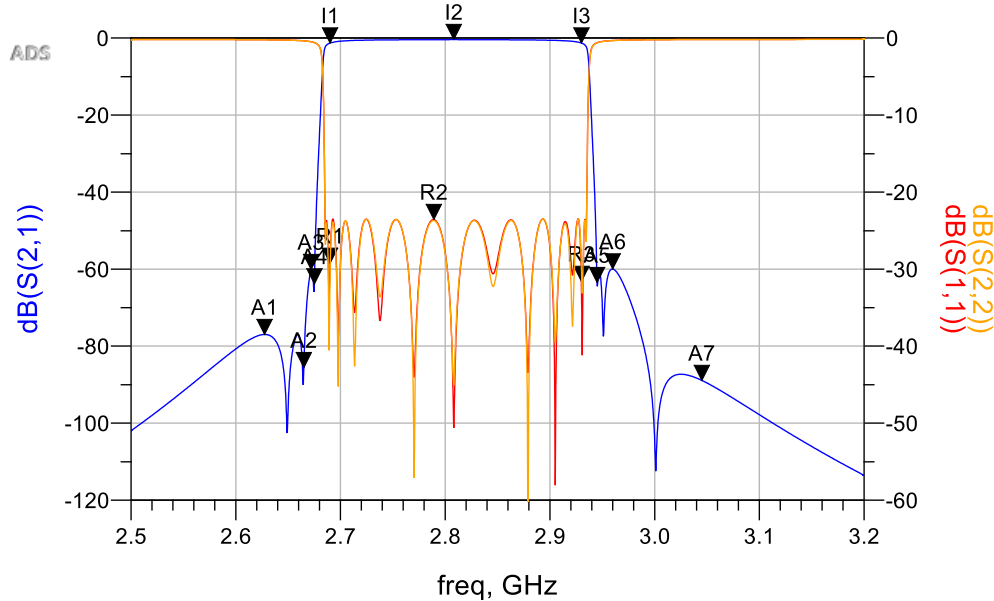
A3  
freq=2.6720GHz  
dB(S(2,1))=-60.1237

A4  
freq=2.6750GHz  
dB(S(2,1))=-63.8579

A5  
freq=2.9450GHz  
dB(S(2,1))=-63.5266

A6  
freq=2.9600GHz  
dB(S(2,1))=-59.9963

A7  
freq=3.0450GHz  
dB(S(2,1))=-88.9062



Return loss  
[dB]

R1  
freq=2.6900GHz  
dB(S(1,1))=-29.2647

R2  
freq=2.7891GHz  
dB(S(1,1))=-23.5750

R3  
freq=2.9300GHz  
dB(S(1,1))=-31.6091

Group delay  
[ns]

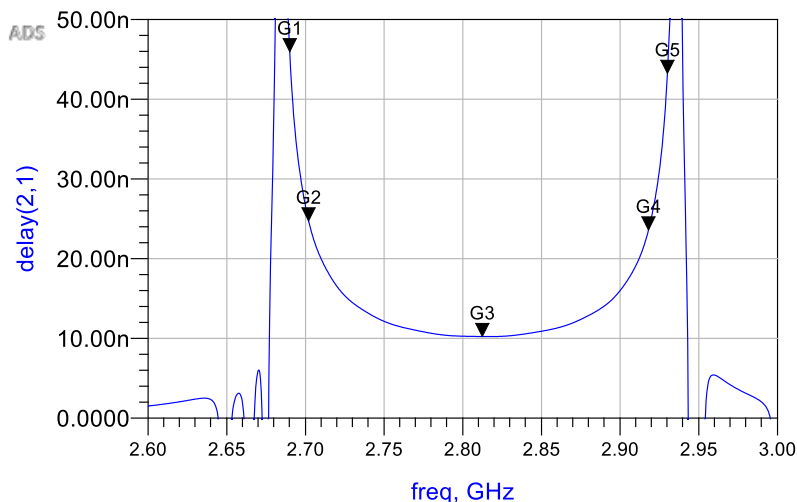
G1  
freq=2.6900GHz  
delay(2,1)=45.964n

G2  
freq=2.7020GHz  
delay(2,1)=24.739n

G3  
freq=2.8124GHz  
delay(2,1)=10.231n

G4  
freq=2.9180GHz  
delay(2,1)=23.592n

G5  
freq=2.9300GHz  
delay(2,1)=43.236n



Group delay & Variation [ns]

| GD_max | GD_Variation_12MHz |
|--------|--------------------|
| 46.0 n | 21.2 n             |

[ Group delay ]