

## PRODUCT SPECIFICATION FOR INFORMATION

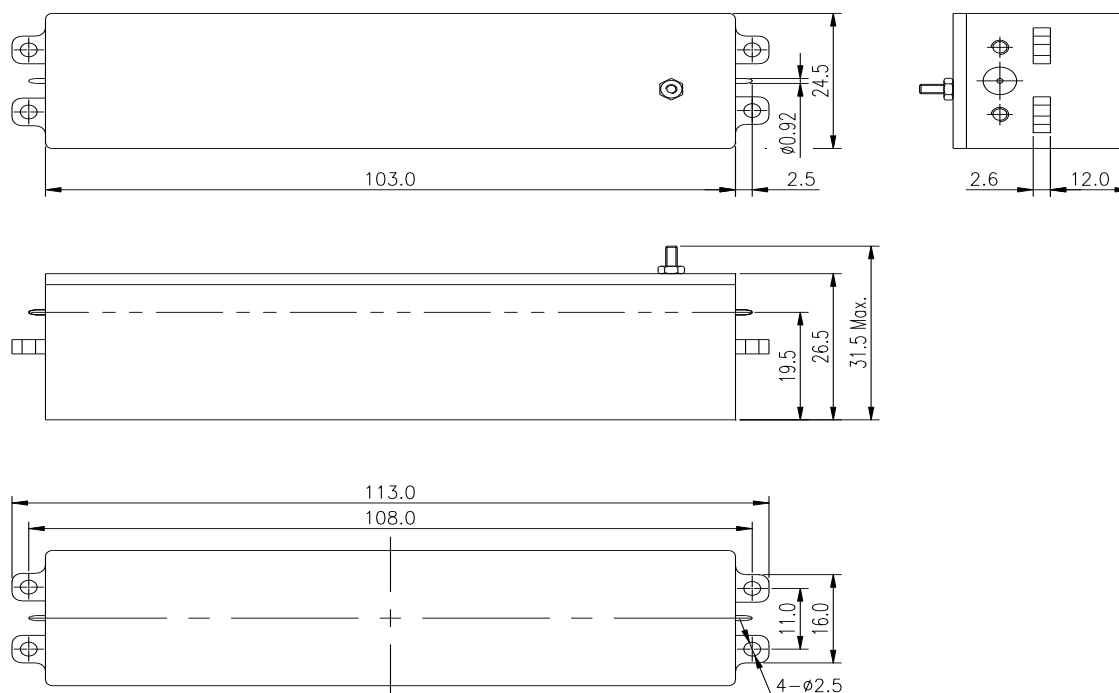
PRELIMINARY SPECIFICATION

**Product Name : Band Pass Filter**

**Part No : MBP-C1065\_70MH-A-R0**

|   | Rev. No. | Description | Date       | Author        | Final Approver |
|---|----------|-------------|------------|---------------|----------------|
| 1 | R0       | Draft       | 2024.03.15 | Jeffrey Chung | Michael Jeon   |
|   |          |             |            |               |                |
|   |          |             |            |               |                |
|   |          |             |            |               |                |

## ■ Mechanical Drawing



## ■ Electrical Specification

| Parameter               | Specification                         | Remark   |
|-------------------------|---------------------------------------|----------|
| 1. Center Frequency     | 1065 MHz                              | OK       |
| 2. Bandwidth [BW]       | $F_c \pm 35\text{MHz}$ [1030~1100MHz] | OK       |
| 3. Insertion Loss in BW | 1.1dB Max. (at 25 °c).                | OK       |
| 4. Ripple (pass band)   | $\pm 0.2\text{dB}$                    | OK       |
| 5. Return Loss          | 14dBr Min.                            | OK       |
| 6. Rejections           | 55dBc Min.@ 820 & 1240MHz             | OK       |
|                         | 70dBc Min.@ 650 & 1410MHz             | OK       |
|                         | 70dBc Min.@ DC-650MHz                 | OK       |
|                         | 70dBc Min.@ 1500~5000 MHz             | OK       |
| 7. In/Out Impedance     | 50 Ohm                                | OK       |
| 8. Power Handling       | 300Watt peak Max                      | OK       |
| 9. Dimension [WxDxH]    | 24.5 x 103.0 x 31.5 mm                | PROPOSAL |
| 10. Weight              | 300gr max.                            | PROPOSAL |
| 11. Interface           | PIN Type                              | OK       |
| 12. Finish              | White Chromate                        | TBD      |

Remarks: This is a preliminary datasheet for reference.

## ■ Environmental Specification

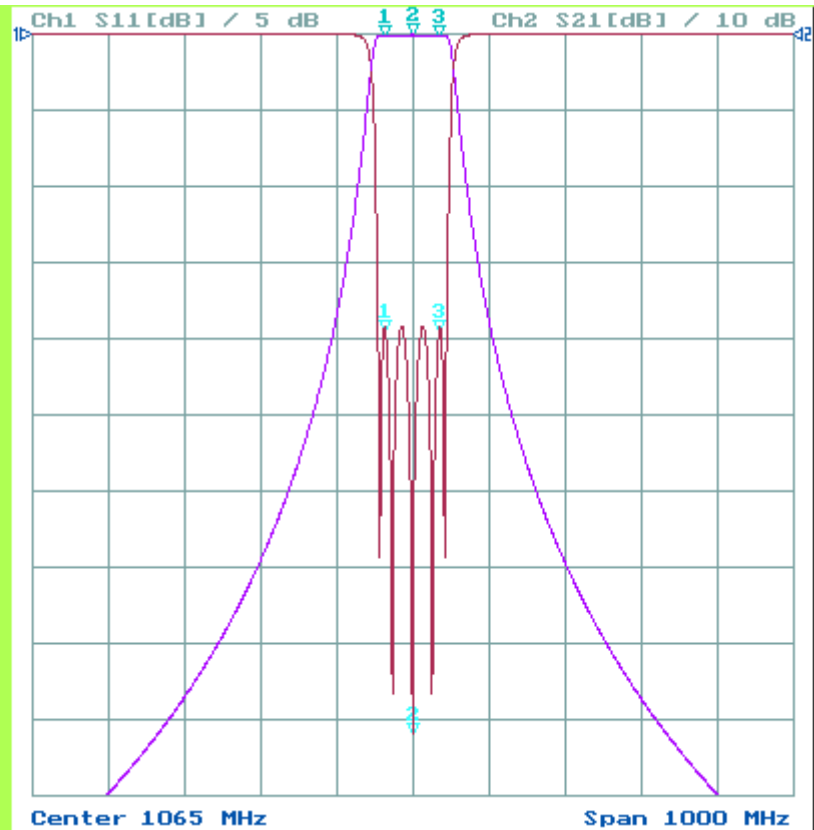
| Parameter                           | Specification                                                                                                                                                                                                                                                                                               | Remark |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| 1. Operation Temperature Range      | -20 ~ +71°C                                                                                                                                                                                                                                                                                                 | OK     |
| 2. Storage Temperature range        | -55 ~ +100°C                                                                                                                                                                                                                                                                                                | OK     |
| 3. Altitude                         | 45000 feet max.                                                                                                                                                                                                                                                                                             | OK     |
| 4. Rapid Decompression<br>(for SOF) | The Filter will be able to withstand the effect of sudden decompression from sea level to 45,000 feet within 15 seconds. The equipment shall not suffer any physical damage when and after being exposed to rapid decompression test IAW RTCA/DO160C paragraph 4.6.2                                        | OK     |
| 5. Humidity                         | The Filter will not suffer any physical damage, will continue to operate, and will achieve full performance when and after being exposed to relative humidity (RH) of at least 95% at 65 °C, including inside and outside condensation, at operating and non-operating temperatures.                        | OK     |
| 6. Vibration                        | The Filter shall not suffer any physical damage or any degradation of its performance criteria when and after being exposed to random vibration conditions of operational environment as defined in Table 1.                                                                                                | OK     |
| 7. Operational Shock                | The Filter will not suffer any physical damage nor any degradation in performance when and after being subjected to 6 shocks, 1 in each opposite direction along each of three orthogonal axes. Each shock impulse shall have time duration of 11 msec, half sine pulse, and acceleration peak value of 6g. | OK     |
| 8. Crash Safety Shock (Impulse)     | The Filter shall be tested when subjected to 6 shocks, 1 in each opposite direction along each of three orthogonal axes. Each shock impulse shall have time duration of 11 msec, half sine pulse, and acceleration peak value of 20g.                                                                       | OK     |

**Table 1: Vibration versus Location**

| Equipment | RTCA/DO-160C Categories | Random Vibration [grams] |               | Remarks |
|-----------|-------------------------|--------------------------|---------------|---------|
|           |                         | Operating                | Non-Operating |         |
| Filter    | C'                      | 6.08                     | 6.08          |         |

## ■ Simulation Curve

Marker1 1030 [MHz]  
 -19.589 -0.378  
 Marker2 1065 [MHz]  
 -46.041 -0.262  
 Marker3 1100 [MHz]  
 -19.589 -0.378



Marker1 650 [MHz]  
 -0.002 -101.495  
 Marker2 820 [MHz]  
 -0.005 -78.367  
 Marker3 1065 [MHz]  
 -46.041 -0.262  
 Marker4 1240 [MHz]  
 -0.011 -63.395  
 Marker5 1410 [MHz]  
 -0.003 -93.415  
 Marker6 1500 [MHz]  
 -0.002 -103.550

