

## Specification

Part No. : **BPF.24.01**

Product Name : Airvu 2.4GHz Band Pass Filter  
for UAV/Drone Antennas

Features : RP SMA(M) Plug to RP SMA(F) Jack  
Frequency Range: 2400-2500 MHz  
Pass band Width: 100 MHz  
Insertion Loss: <1.3 dB  
Material : Brass  
Finish: Black Nickel Plated  
Total Length: 35 mm



## 1. Introduction

The Airvu BPF.24 2.4GHz Band Pass Filter is placed on the end of the antenna port to help eliminate or reduce radio interference problems on UAVs and thus optimize radio system performance. It does this in two ways

1. It reduces out of band noise entering the receiver causing effects such as reduction of control range
2. It reduces the antenna transmissions of out of band noise affecting other circuitry on your UAV (such as disrupting the GPS receiver leading to loss of fix, or a live video stream at 2.4 GHz)

The ceramic filter technology inside the BPF.24 has superior insertion loss and stop band performance than competing LTCC or lumped element filters, while also having good rejection at band edges. It uses a standard RP SMA(M) Plug to RP SMA(F) Jack interface, as most antennas at 2.4GHz have a RP SMA(M) connector. This filter is designed to be easily screwed onto this standard antenna SMA connector.

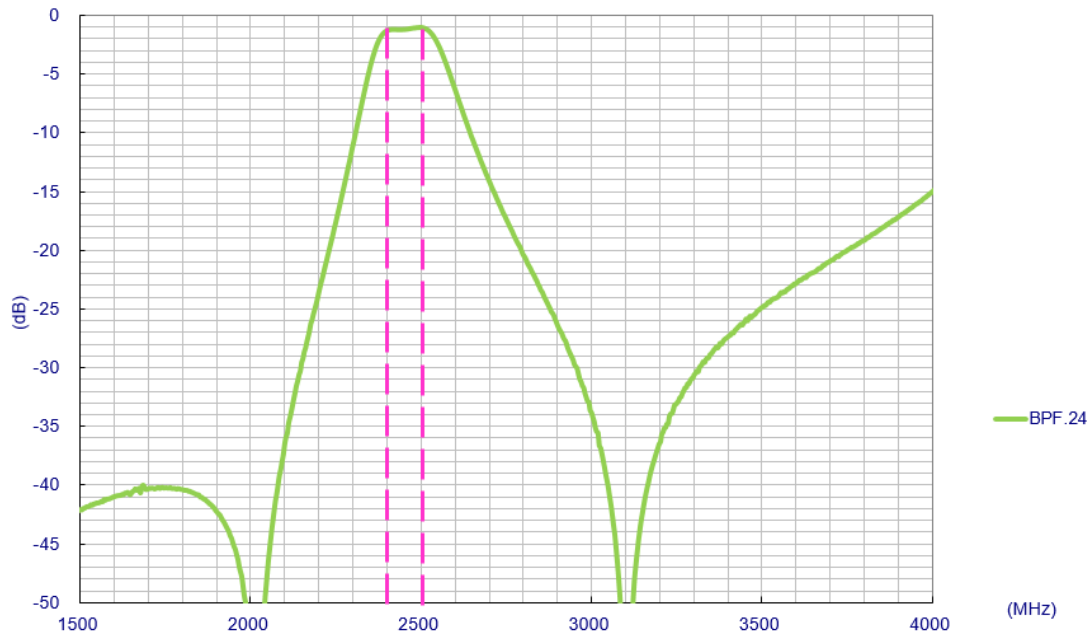
## 2. Specification Table

| Electrical               |                  |                        |
|--------------------------|------------------|------------------------|
| Pass Band Frequency      |                  | 2400 MHz - 2500 MHz    |
| Pass band Width          |                  | 100 MHz                |
| Input / Output Impedance |                  | 50 Ohm                 |
| Max. Input Power         |                  | 10W                    |
| Pass Band Insertion Loss |                  | 1.3 dB max             |
| Pass Band Ripple         |                  | 0.8 dB max             |
| Pass Band Return Loss    |                  | 9.6 dB min             |
| Stop-Band<br>Attenuation | at 2033~2098 MHz | 30 dB min              |
|                          | at 2100 MHz      | 25 dB min              |
|                          | at 2786 MHz      | 15 dB min              |
|                          | at 4900~6000 MHz | 15 dB min              |
| Mechanical               |                  |                        |
| Connector type           |                  | RP-SMA(M) to RP-SMA(F) |
| Weight                   |                  | 8.815g                 |
| Dimensions               |                  | 35*10mm                |
| Environmental            |                  |                        |
| Operating Temperature    |                  | -40°C to 85°C          |

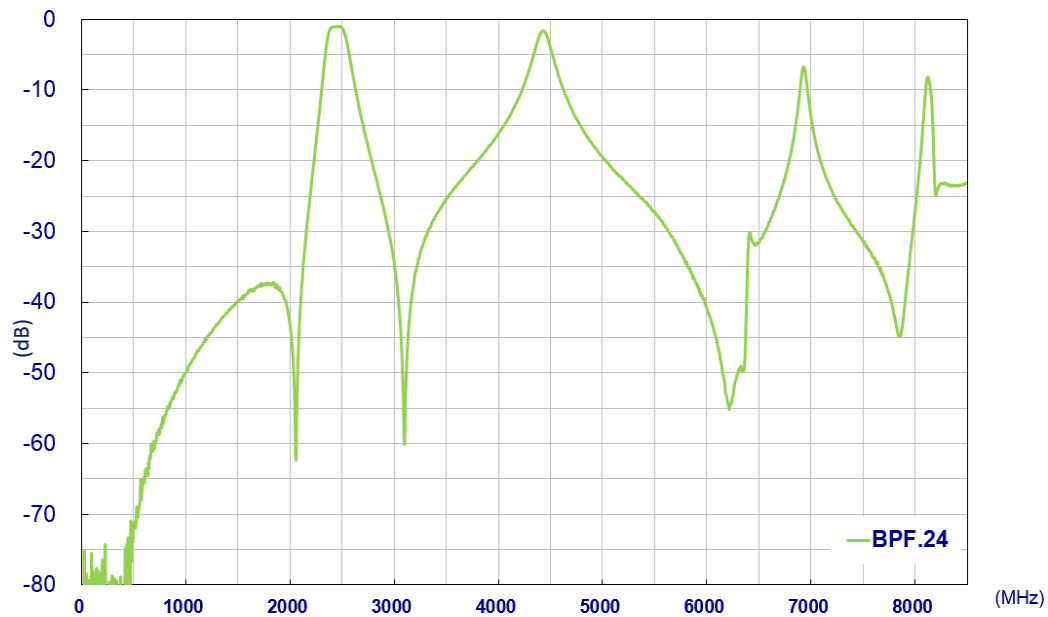
## 3. Electrical Specifications

### 3.1 S21

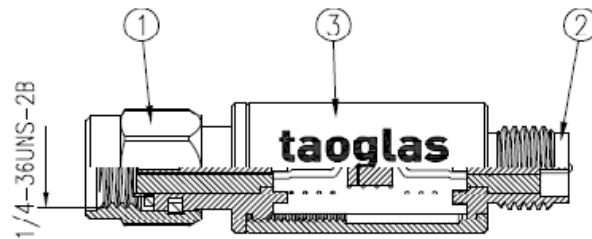
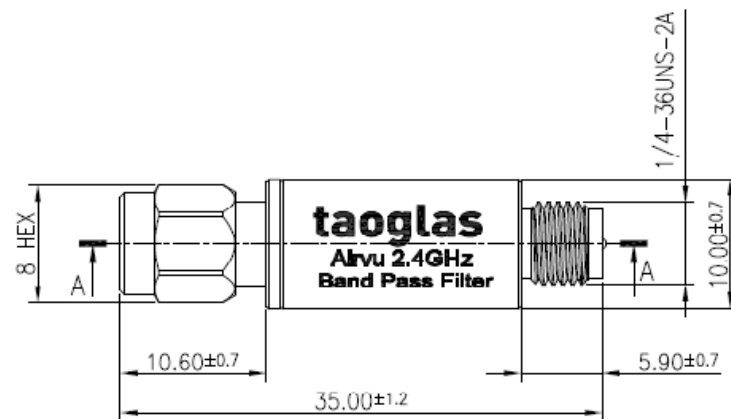
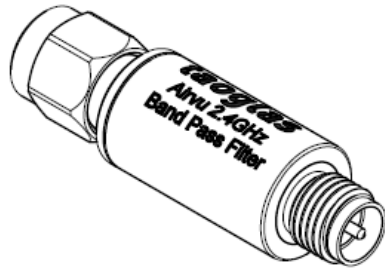
#### In Band View



#### Wide Band View



## 4. Mechanical Drawing (unit: mm)



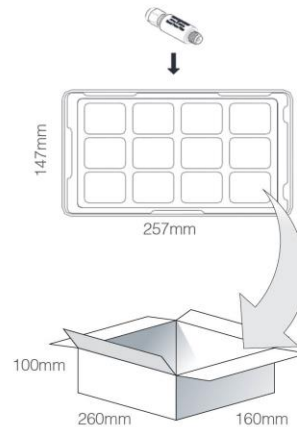
|   | Name      | Material | Finish          | QTY |
|---|-----------|----------|-----------------|-----|
| 1 | RP-SMA(M) | Brass    | Ni Plated       | 1   |
| 2 | RP-SMA(F) | Brass    | Ni Plated       | 1   |
| 3 | Shell     | Brass    | Black-Ni Plated | 1   |

## 5. Packaging

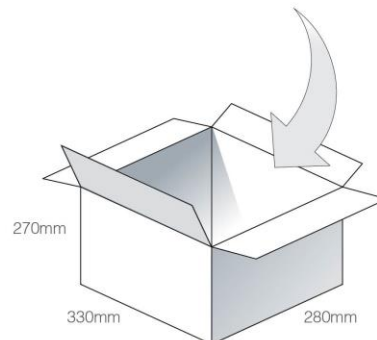
### BPF.24.01

#### Packaging Specifications

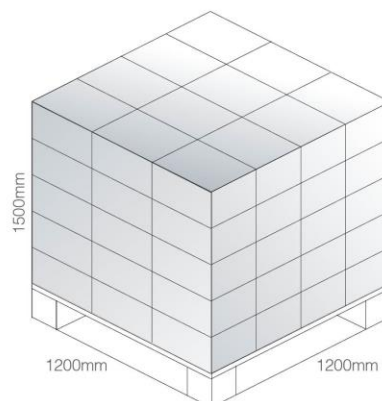
36 pcs BPF.24.01 per tray  
(3 pcs per section)  
Tray Dimensions - 257\*147\*17mm  
Total Weight - 375g



9 trays / 324 pcs per box  
Box Dimensions - 260\*160\*100mm  
Weight - 3.4Kg



4 boxes / 1296 pcs per carton  
Carton Dimensions - 330\*280\*270mm  
Weight - 14Kg



Pallet Dimensions 1100\*1100\*1530mm  
60 Cartons per pallet  
12 Cartons per layer  
5 Layers

## 6. Installation Instructions



**Torque Wrench 0.56N.m**

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