

# SYTFB121MB4S

### 12.1GHz Surface Mount Bandpass Filter

### **Description**

Yantel's surface mount catalog bandpass filters utilize Yantel's low loss temperature stable materials which offer small size and minimal performance variation over temperature. The catalog BPF's are offered in a variety of frequency bands, which offers a drop in solution with highly repeatable performance.

#### **Features**

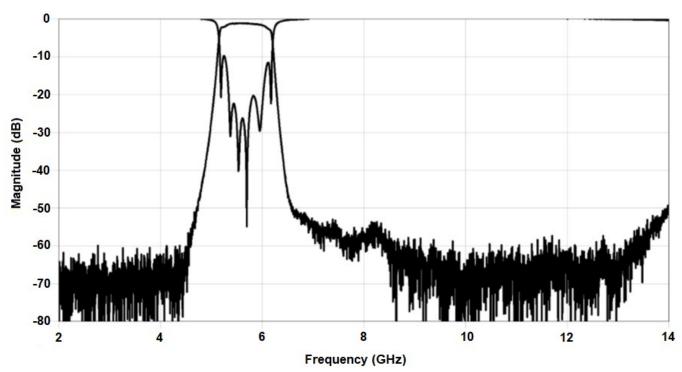
- Small Size
- Fully Shielded Component
- Solder Surface Mount Package
- Moisture Sensitivity Level: MSL1
- Frequency Stable over Temperature
- Operating & Storage Temp: -55°C to +125°C
- Characteristic Impedance: 50Ω

#### Specifications\*

Parameter	Frequency Range (GHz)	Min	Тур.	Max
Insertion Loss (dB)	11.25 - 12.75		1.75	2.5
Return Loss (dB)		10.0	14.0	
Low Side Rejection (dB)	DC - 9.5	40.0	45.0	
High Side Rejection (dB)	14.5 - 24.0	40.0	45.0	
CW Input Power** (W)				10
$\theta_{JC} \left( \frac{^{\circ}C}{W} \right)$	7.5			
Size (L x W x H)	0.400 x 0.150 x 0.103 in 10.16 x 3.81 x 2.62 mm			

<sup>\*</sup>Electrical specifications based on typical probed performance at room temperature. Insertion loss shall vary ±0.5dB over temperature.

### **Typical Measured Performance**



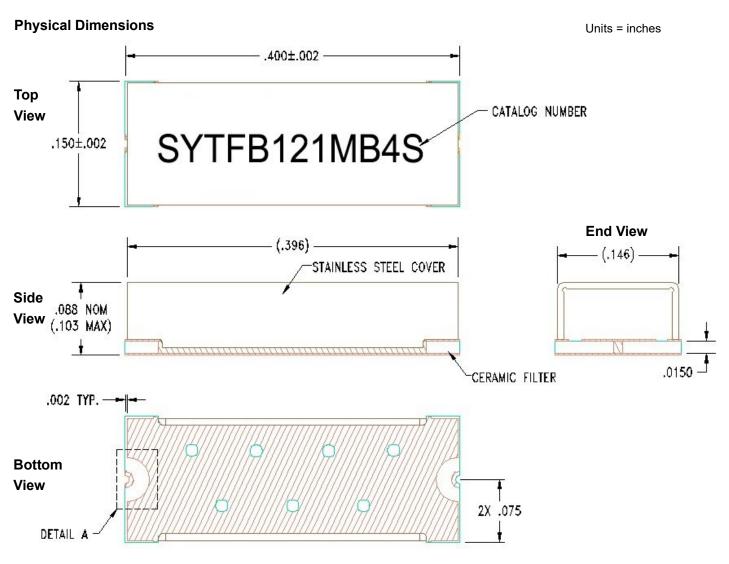
<sup>\*</sup>Typical de-embedded measured performance mounted on a connectorized test fixture. DEB is 0.254mm RO4350B with 50.00hm CPW ground traces going into the ports at room temperature.

<sup>\*\*</sup>Power rating assumes the component will be mounted to a PCB with good thermally conducting ground vias as outlined in the recommended PCB layout that are connected to an adequate heat sink. Max power is based on 125°C base temperature.



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#### Notes:

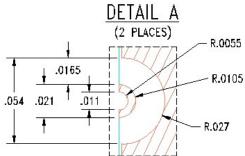
1. Termination Finish:

ENIG: 3 - 6 µinch Au over 50 µinch Ni

2. Maximum Assembly Process Temperature: 250°C

### **Tolerances:**

For values with 3 decimal places ±0.001 For values with 4 decimal places ±0.0005



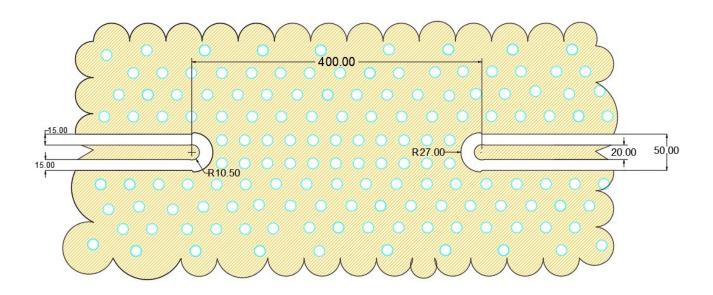


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### **Recommended PCB Layout**

Unit = mils



### PCB RECOMMENDED STACKUP

Filter is matched to RF layer stackup seen below

Dimensions are specified below in inches (not to scale)

Board material : RO4350b Board material design dk : 3.66

CPWG : 20mil trace width, 15mil gaps

