

# SYTFB040MB5S

# 4.0GHz 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**

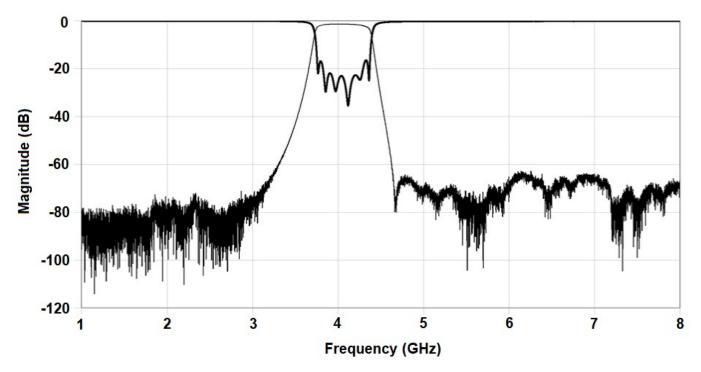
- Small Size
- Fully Shielded Component
- Solder Surface Mount Package
- Moisture Sensitivity Level: MSL1
- Frequency Stable over Temperature
- Operating & Storage Temp: -55°C to +125°C
- Characteristic Impedance: 50Ω

#### Specifications\*

Parameter	Frequency Range (GHz)	Min	Тур.	Max
Insertion Loss (dB)	3.78 - 4.22		2.5	2.75
Return Loss (dB)			12.0	15.0
Low Side Rejection (dB)	DC - 3.4		40.0	50.0
High Side Rejection (dB)	4.6 - 10.0		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)	0.500 x 0.250 x 0.103 in 12.7 x 6.35 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.



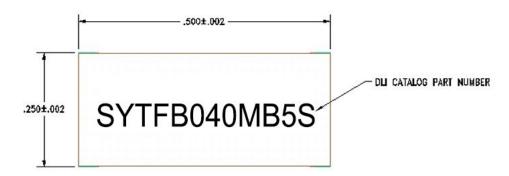
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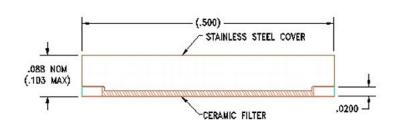
# **Physical Dimensions**

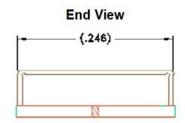
Units = inches

# **Top View**

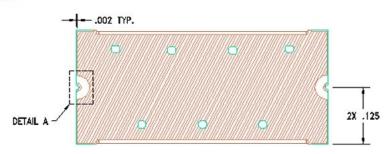


#### Side View





#### **Bottom View**



### Notes:

1. Termination Finish:

ENIG: 3 - 6 µinch Au over 50 µinch Ni

2. Maximum Assembly Process Temperature: 250°C

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#### **Tolerances:**

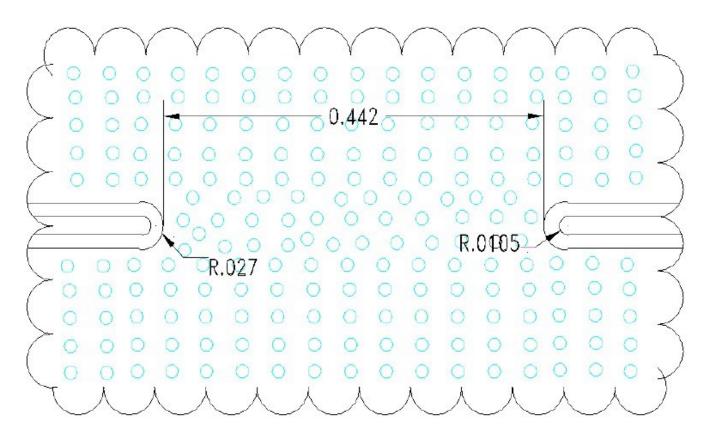
For values with 3 decimal places ±0.001 For values with 4 decimal places ±0.0005



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# **Recommended PCB Layout**



Units = inches

#### Note:

- $50\Omega$  trace dimensions are application specific.
- Ensure adequate grounding beneath the part.