



### Product Description

The MEMtronics PSP01 miniature band-select filter is designed to be a surface-mountable, high-performance fixed-frequency bandpass filter that supports band selection and interference mitigation in the upper 5G bands.

The design utilizes dielectrically-loaded propagating waveguide cavities built with unibody construction for the ultimate in low loss with a small form factor. The filter is constructed from fused silica for ultra-stable operation over temperature.

This filter provides an 11-pole filter function centered at 24.745 GHz with 1010 MHz (4% bandwidth), exhibiting a nominal 2.1 dB insertion loss and a minimum 16 dB return loss over the passband. Rejection is > 60 dB below 24 GHz and > 55 dB above 25.5 GHz, with an ultimate rejection of > 60 dB from 1 GHz thru 36 GHz.

***This filter performance is provided as a demonstration of capabilities. Custom filters to meet specific user requirements are possible from 2 GHz-50 GHz, with passband bandwidths ranging from 0.5%-20%, with 2-12+ poles of filtering.***

### Primary Applications

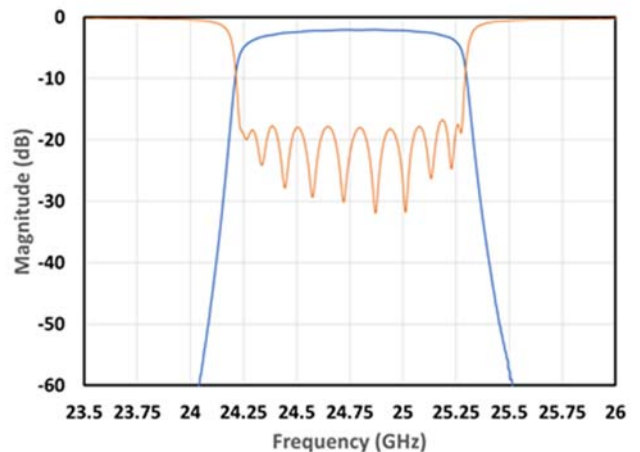
- 5G band selection
- Interference mitigation

### Key Features and Performance

- Passband: 24.24-25.25 GHz
- Nom. mid-band loss: 2.1 dB
- Rejection: > 60 dB below 24 GHz
- > 55 dB above 25.5 GHz
- Temp Range: -55°C to +105°C
- Chip dimensions: (< 0.022 in<sup>3</sup>)  
1.965 x 0.175 x 0.060 inches
- Weight: 0.75 grams
- Surface mount, CPW interconnect

### PSP01 Filter Performance

Measured Narrowband Performance



Measured Broadband Performance

