

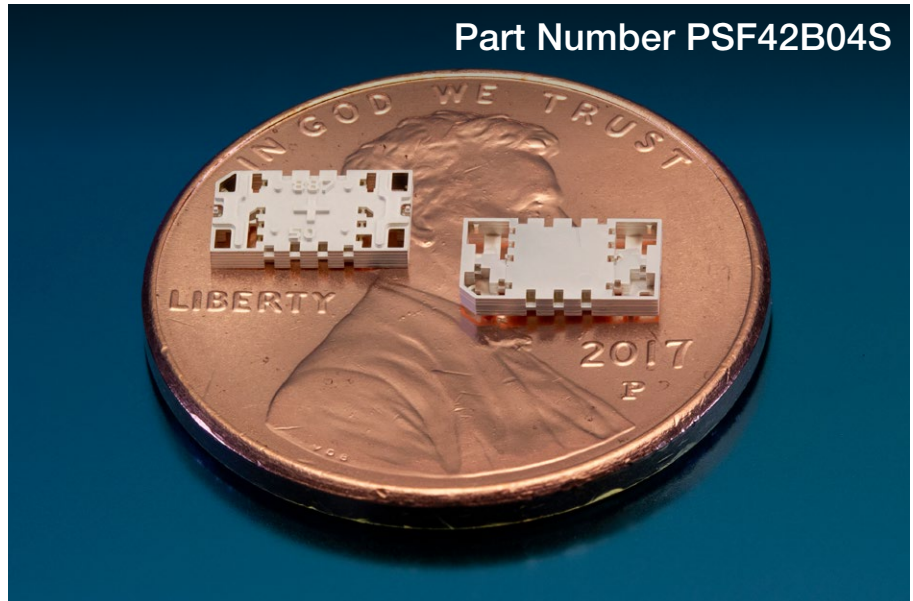


### Features and Benefits

- **Compact Size and Weight**  
-Greater than 10X reduction over traditional technologies
- **Near Ideal Performance**  
-Higher rejection and flatter passbands
- **Precision**  
-Low part-to-part variation
- **Ease of Assembly**  
-Standard SMT processes
- **Lower System BOM Cost**  
-Eliminate extra gain stages and signal cleanup

### Applications

- **Metrology**
- **RF Telemetry**
- **Meterology**
- **Instrumentation**
- **5G Backhaul**
- **Satellite Communications**



Part Number PSF42B04S

## V Band Bandpass Filter

**Surface mount millimeter-wave bandpass filter with unrivaled rejection, and flatness – in a miniature form factor.**

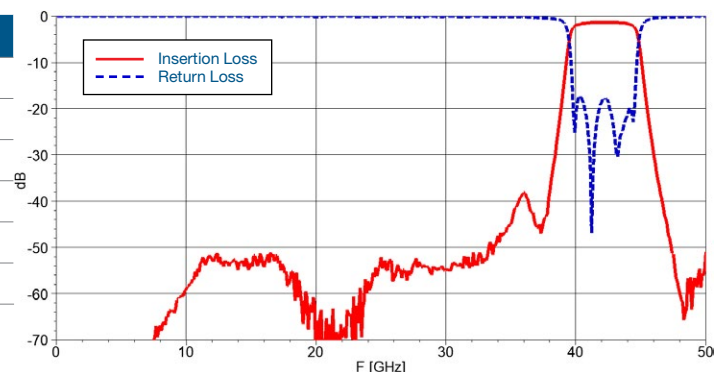
### Description

Nuvotronics PolyStrata® Technology delivers performance and precision for your front-end systems. This bandpass filter is a surface-mount interdigital filter with unparalleled flatness and high frequency performance.

This PSF42B04S part has a passband of 40 GHz – 44 GHz with a characteristic impedance of 50 Ω. The low loss performance of this part is ideal for space or ground applications. This part is compliant with RoHS standards. Tape and reel packaging is available for bulk orders.

### Typical Electrical Performance

Parameter	Value
Insertion Loss, 40 GHz to 44 GHz	2.2 dB
Return Loss, 40 GHz to 44 GHz	12 dB
Rejection at 38.5 GHz	16 dB
Rejection at 45.7 GHz	16 dB
Rejection at 36 GHz	31 dB
Rejection at 48 GHz	31 dB



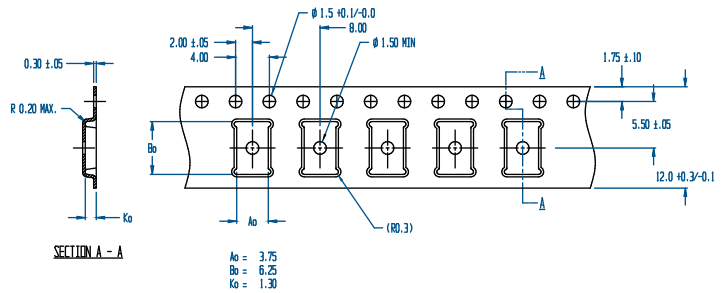
### Absolute Maximum Ratings

Power	2W CW
Operating Temp	-55°C to 125°C
Solder Reflow	260°C max. for 10 seconds, 3 cycles
Epoxy Attach	150°C max. for 90 minutes

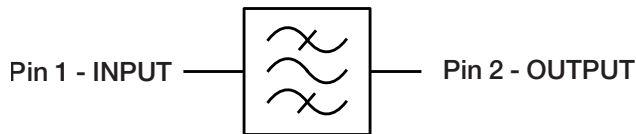
### Additional Details

Special Handling / Storage Instructions	
Storage	IAW IPC-4553A
EDS Sensitivity	None
Moisture Sensitivity	MSL3
Ordering Information	1013497
Standard Packaging	Tape and Reel Conforms to EIA-481-E
Alternative Packaging Available	Gel-coated Substrate Carrier Waffle pack
Component Termination Finish	Immersion Silver
Certifications	RoHS Compliant

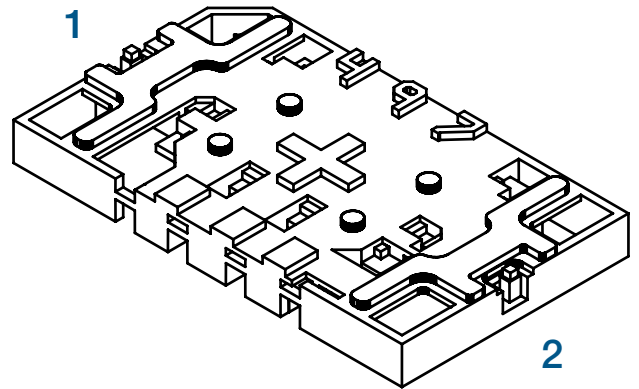
### Tape and Reel



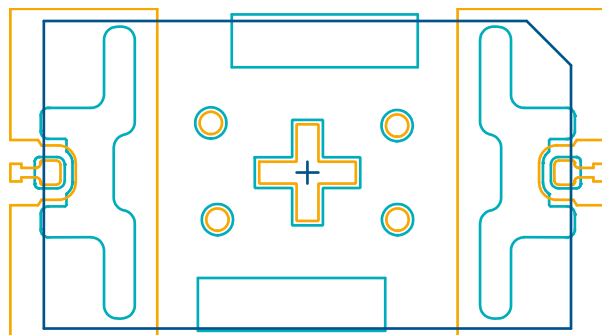
### Simplified Block Diagram



### Component View



### PCB Layout



Legend: TOP METAL ■ SOLDER MASK ■ PART OUTLINE ■

Drawings available upon request

### Mechanical Drawing

