

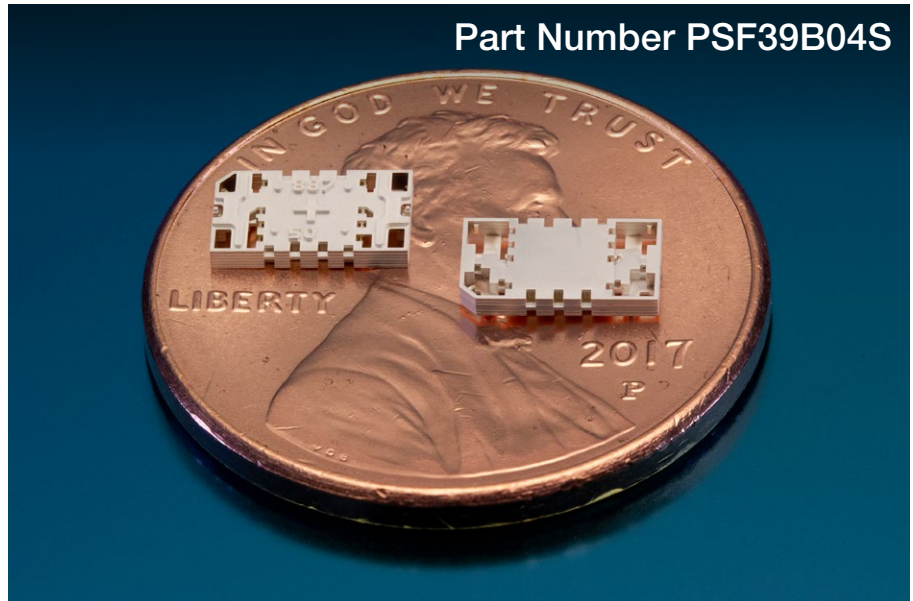


### Features and Benefits

- **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**



## K Band Bandpass Filter

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

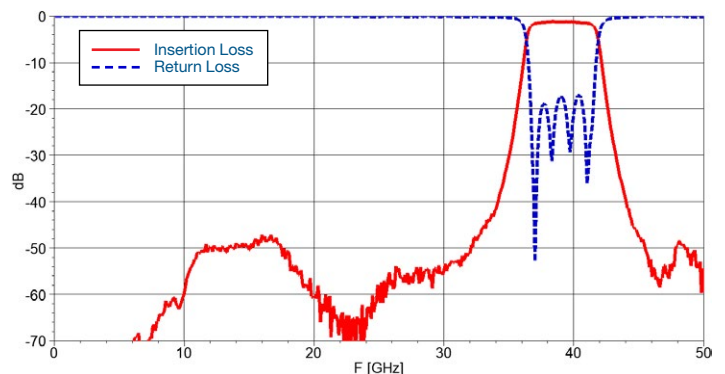
### Description

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 PSF39B04S part has a passband of 37 GHz – 41 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, 37 GHz to 41 GHz | 2.2 dB |
| Return Loss, 37 GHz to 41 GHz    | 12 dB  |
| Rejection at 35.5 GHz            | 16 dB  |
| Rejection at 42.7 GHz            | 16 dB  |
| Rejection at 33 GHz              | 31 dB  |
| Rejection at 45 GHz              | 31 dB  |



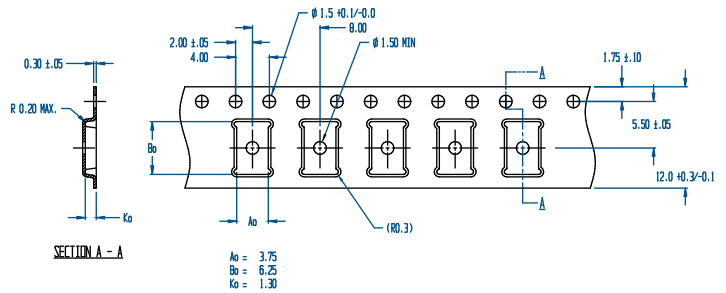
### Absolute Maximum Ratings

|                |                                     |
|----------------|-------------------------------------|
| 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           |

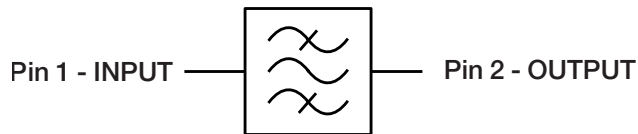
### Additional Details

| Special Handling / Storage Instructions |   |
|---|---|
| Storage                                 | IAW IPC-4553A                               |
| EDS Sensitivity                         | None  |
| Moisture Sensitivity                    | MSL3  |
| Ordering Information                    | 1012890                                     |
| Standard Packaging                      | Tape and Reel<br>Conforms to EIA-481-E      |
| Alternative Packaging Available         | Gel-coated Substrate Carrier<br>Waffle pack |
| Component Termination Finish            | Immersion Silver                            |
| Certifications                          | RoHS Compliant                              |

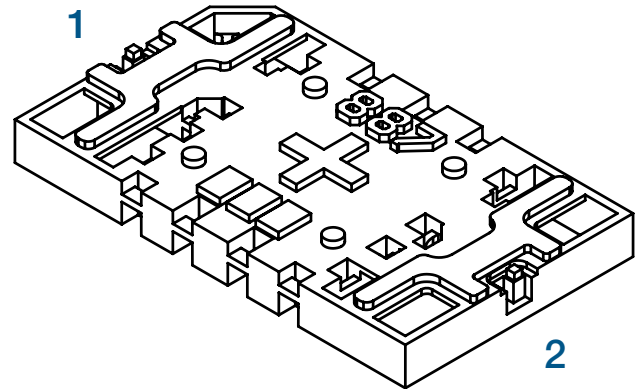
### Tape and Reel



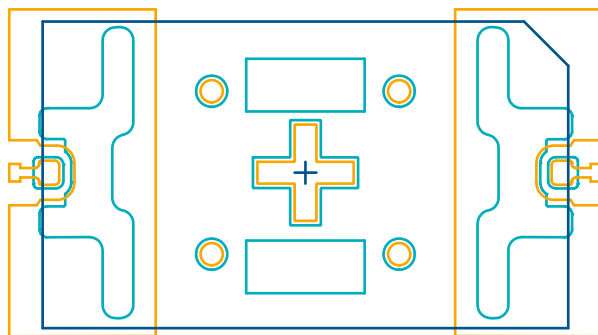
### Simplified Block Diagram



### Component View



### PCB Layout



Legend: TOP METAL ■ SOLDER MASK ■ PART OUTLINE ■

Drawings available upon request

### Mechanical Drawing

