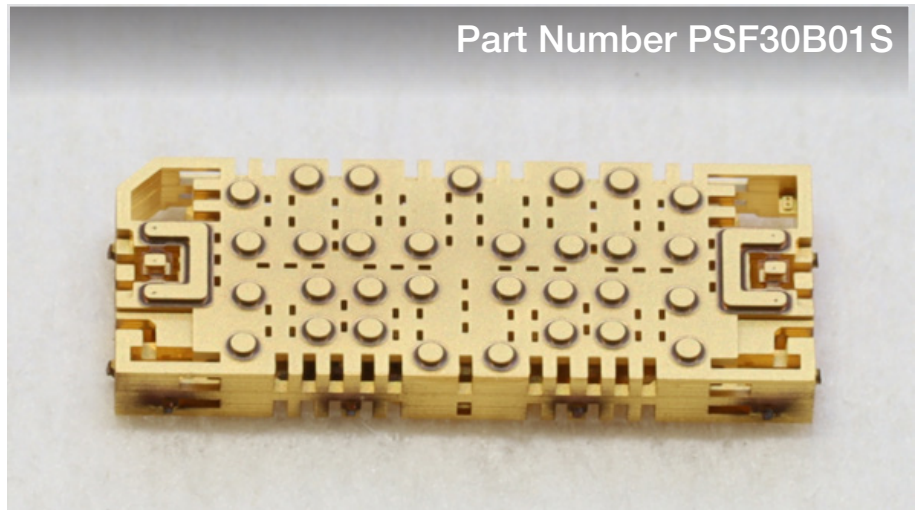


## Features and Benefits

- **Small size and self-shielded**  
-Weight: 0.2g
- **Flat passband with low loss**
- **Rejection of LO and image frequencies**
- **Repeatable performance**  
- Low part-to-part variation
- **Ease of assembly**  
- Standard SMT processes

## Applications

- **Satellite Communications**
- **Upconverters**
- **Downconverters**



## 29 - 30 GHz Bandpass Filter

### High Q surface mount filter for satellite up and down converters.

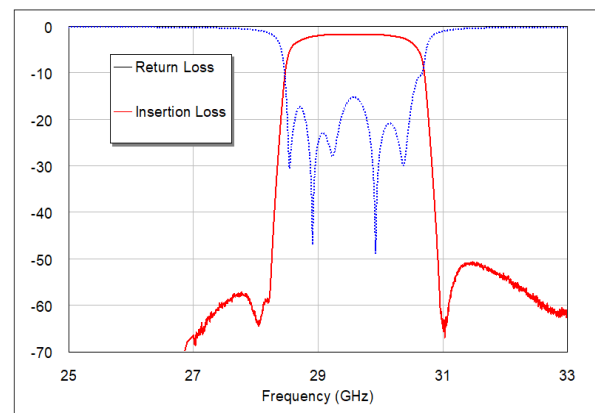
#### Description

Nuvotronics PolyStrata® Technology provides high performance filtering in a small form factor (10.14mm x 4.0mm x 1.1mm). The PSF30B01S surface-mount filter provides low insertion loss, a flat passband, and high rejection. Typical rejection is 55 dB at 950 MHz below the pass band. This part is ideal for satellite up and down converter applications. The filter is compliant with standard SMT assembly processes. Tape and reel packaging is available for bulk orders.

## Typical Electrical Performance\*

| Parameter                    | Frequency Range (GHz) | Min | Typ | Max |
|------------------------------|-----------------------|-----|-----|-----|
| Passband Insertion Loss (dB) | 29 - 30               | -   | 2.5 | 3   |
| Passband Return Loss (dB)    | 27.5 - 28.5           | 13  | 15  | -   |
| Rejection (dB)               | DC - 28.05            | 50  | 55  | -   |

\*The specifications above are valid at ambient temperature. Insertion loss performance over -40°C to 85°C may vary by +/- 0.2 dB.



### Additional Details

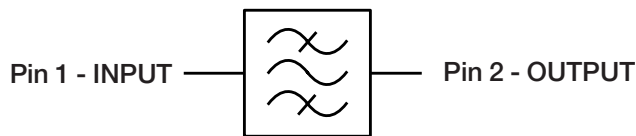
| Special Handling / Storage Instructions |                |
|---|----------------|
| Storage                                 | IAW IPC-4553A  |
| ESD Sensitivity                         | None           |
| Ordering Information                    | PSF30B01S      |
| Standard Packaging                      | Tape and Reel  |
| Alternative Packaging Available         | Waffle Pack    |
| Component Termination Finish            | Immersion Gold |

### Environmental/Mechanical Ratings

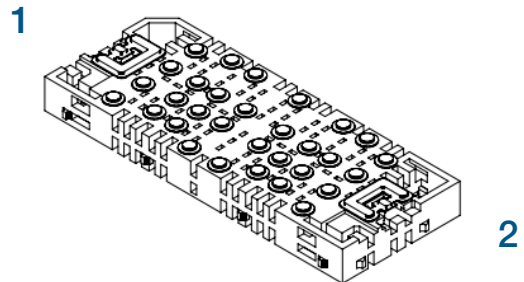
|   |                                     |
|---|-------------------------------------|
| Power   | 5W <sup>1</sup>                     |
| Operating Temp                                      | -55°C to 125°C                      |
| Solder Reflow                                       | 260°C max. for 10 seconds, 3 cycles |
| Epoxy Attach  | 150°C max. for 90 minutes           |
| Mechanical Vibration MIL-STD-883 M2026.4 (Cond. 1F) | 20Grms                              |
| Mechanical Shock MIL-STD-883 M2002.4 (Cond. A)      | 500G                                |

1. Rated at 1atm

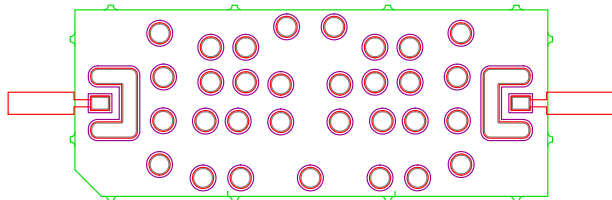
### Simplified Block Diagram



### Component View

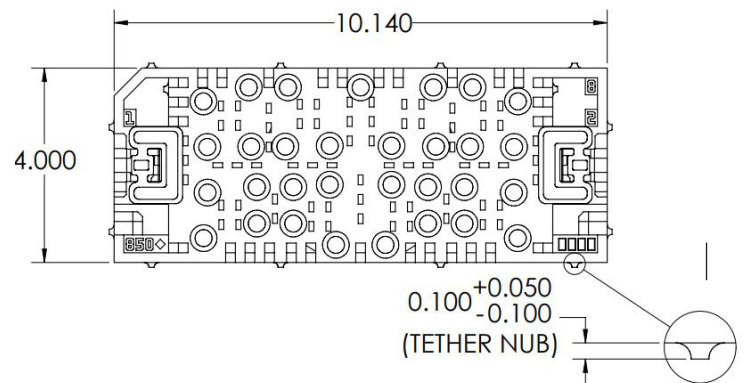


### PCB Layout



Legend: TOP METAL ■ SOLDER MASK ■ PART OUTLINE ■

### Mechanical Drawing



Drawings available upon request

