

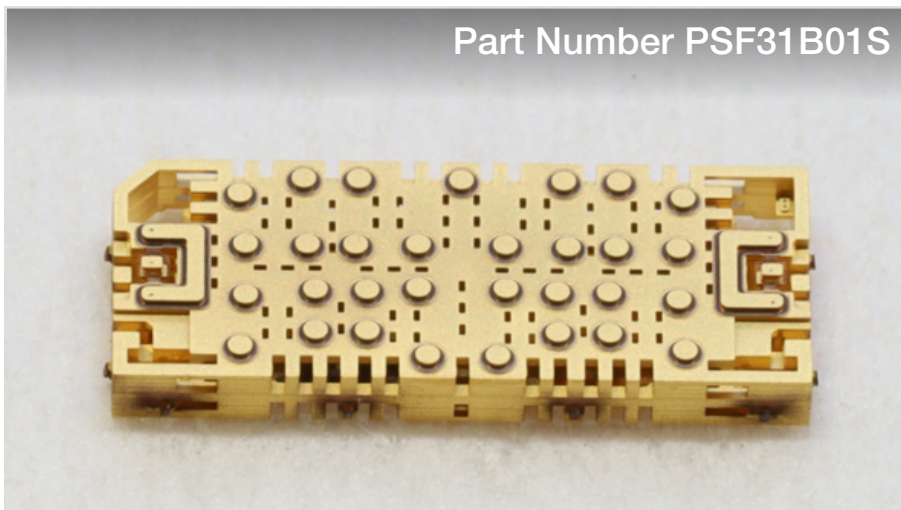
## Features and Benefits

- 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

Part Number PSF31B01S



## 30 - 31 GHz Bandpass Filter

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

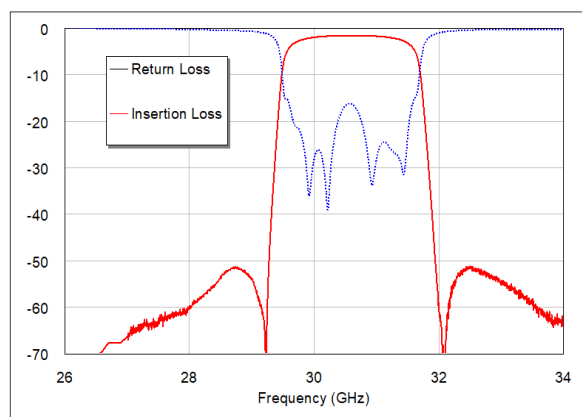
### Description

Nuvotronics PolyStrata® Technology provides high performance filtering in a small form factor (10.14mm x 4.0mm x 1.1mm). The PSF31B01S 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)	30 - 31	-	2.5	3
Passband Return Loss (dB)		13	15	-
Rejection (dB)	DC - 29.05	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

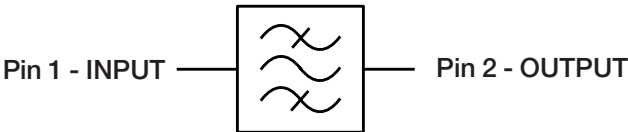
Special Handling / Storage Instructions	
Storage	IAW IPC-4553A
ESD Sensitivity	None
Ordering Information	PSF31B01S
Standard Packaging	Tape and Reel
Alternative Packaging Available	Waffle Pack
Component Termination Finish	Immersion Gold

Environmental/Mechanical Ratings

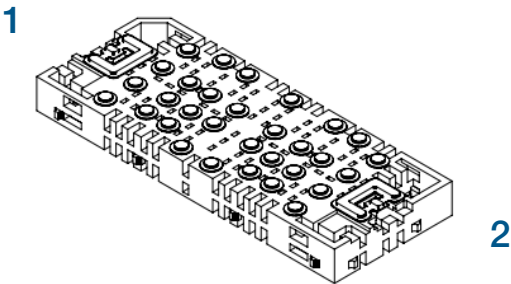
Power	5W <sup>1</sup>
Operating Temp	-55°C to 125°C
Solder Reflow	260°C max. for 10 seconds, 3 cycles
Epoxy Attach	150°C max. for 90 minutes
Mechanical Vibration MIL-STD-883 M2026.4 (Cond. 1F)	20Grms
Mechanical Shock MIL-STD-883 M2002.4 (Cond. A)	500G

1. Rated at 1atm

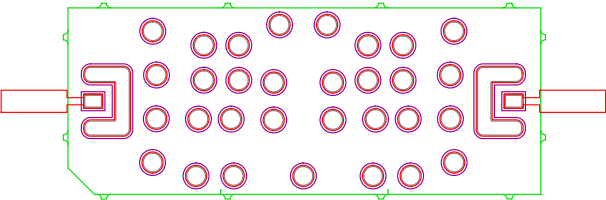
Simplified Block Diagram



Component View

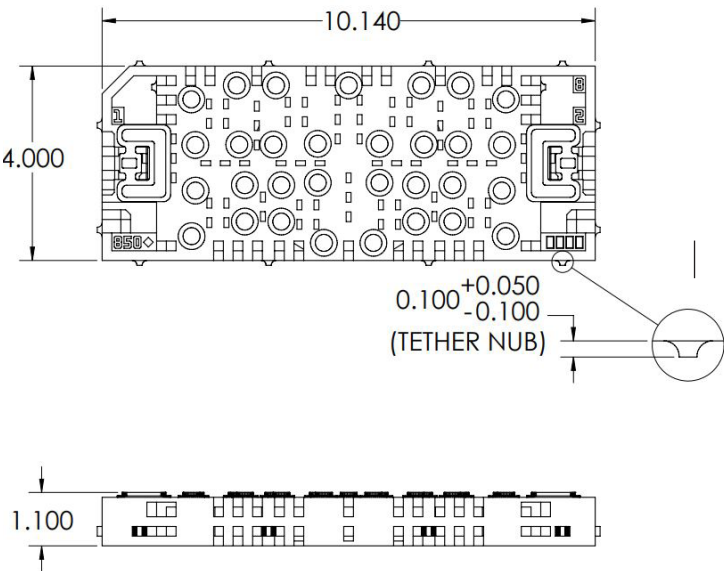


PCB Layout



Legend: TOP METAL  SOLDER MASK  PART OUTLINE 

Mechanical Drawing



Drawings available upon request