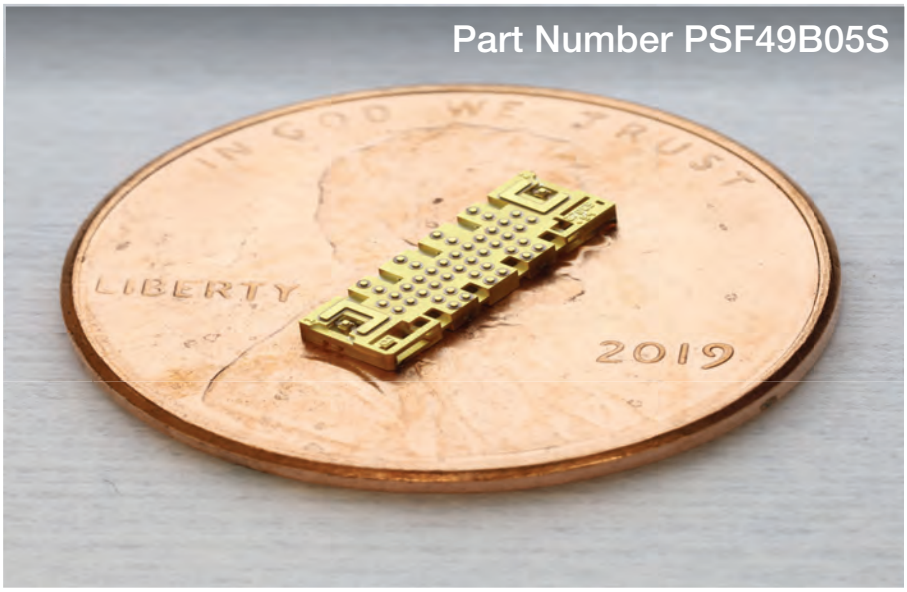
Features and Benefits

- **Small Size and Lightweight**
- **Near Ideal Performance**
  -Low insertion loss and good rejection
- **Precision**
  -Low part-to-part variation
- **Ease of Assembly**
  -Standard SMT processes
- **Characteristic Impedance**
  -50Ω

Applications

- **Satellite Communications**



47.2-52.4 GHz Bandpass Filter

Surface mount V band filter in a miniature form factor.

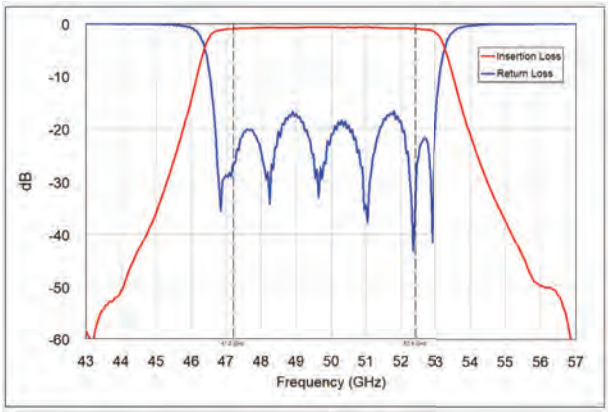
Description

Nuvotronics PolyStrata® Technology provides high performance filtering in a small form factor (8.95mm x 2.80mm x 1.1mm). The PSF49B05S surface-mount interdigital filter provides low insertion loss and high rejection. Typical insertion loss performance is 1.2 dB across the 47.2 - 52.4 GHz band. This part is ideal for space or ground 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
Insertion Loss (dB)	47.2 - 52.4	-	1.2	1.6
Return Loss (dB)		12	15	-
Rejection (dB)	< 45	30	34	-
	> 55	30	34	-

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



Part Name PSF49B05S

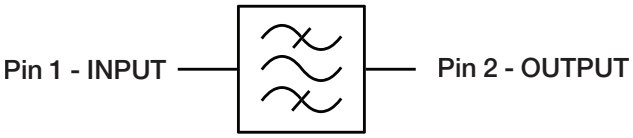
Additional Details

Special Handling / Storage Instructions	
Storage	IAW IPC-4553A
ESD Sensitivity	None
Ordering Information	PSF49B05S
Standard Packaging	Tape and Reel
Alternative Packaging Available	Waffle Pack
Component Termination Finish	Immersion Silver, Immersion Gold
Export Certifications	5A991.a

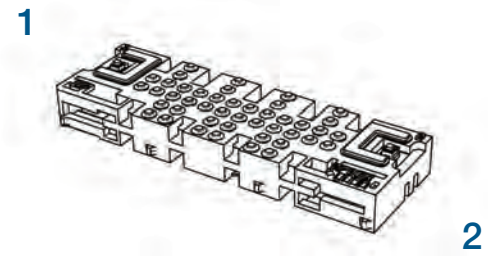
Absolute Maximum Ratings

Power	10W (Ground based applications)
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

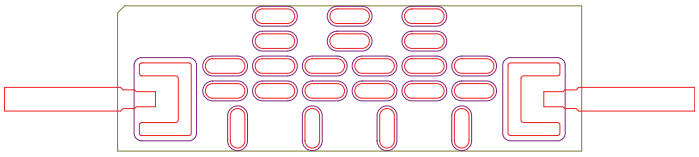
Simplified Block Diagram



Component View



PCB Layout



Drawings available upon request

Mechanical Drawing