

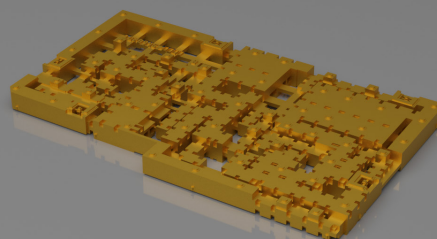
## Features and Benefits

- **Small Size and Lightweight**  
-Weight: 1.8g
- **Near Ideal Performance**  
-Low insertion loss and high rejection
- **Precision**  
-Low part-to-part variation
- **Ease of Assembly**  
-Standard SMT processes

## Applications

- **Satellite Communications**
- **Defense**
- **Test & Measurement**
- **Telecom**

Part Number PSM0640B4S



## 4-Channel Multiplexer

### 4-Channel Multiplexer in a SMT package and miniature size.

#### Description

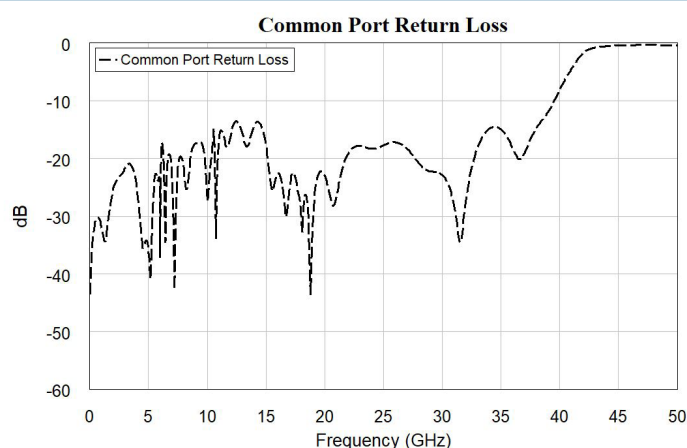
μMUX is a product family of multiplexers, low-pass filters and diplexers which can be deployed individually or cascaded together to address multiple-channel filter requirements for ultra-broadband receivers and transmitters. The μMUX family utilizes Polystрата® micro-miniature coax technology to offer superior filter performance in a small package footprint which is surface-mountable.

The PSM0640B4S is a Quadplexer covering DC-6 GHz, 10-18 and 18-40 GHz all in a surface mount package at a size of 14.7 x 24.7mm.

Please contact Nuvotronics for a complete summary of capabilities and options.

## Typical Electrical Performance\*

| Common Port (Port 1) |                       |     |     |     |
|----------------------|-----------------------|-----|-----|-----|
| Parameter            | Frequency Range (GHz) | Min | Typ | Max |
| Return Loss (dB)     | DC - 38               | 13  | 15  | -   |



Typical Electrical Performance\*

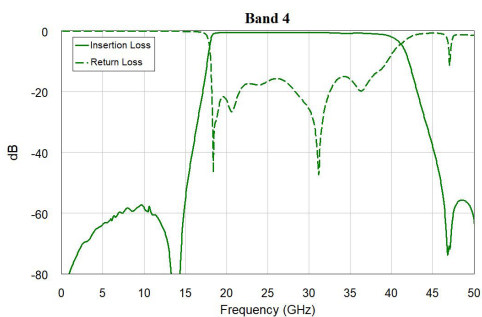
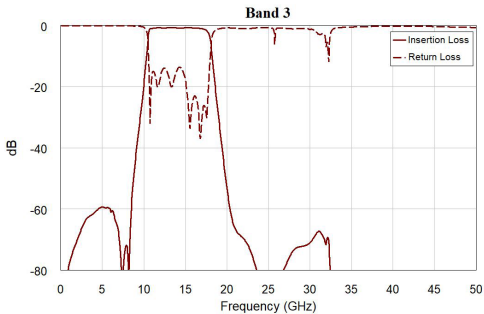
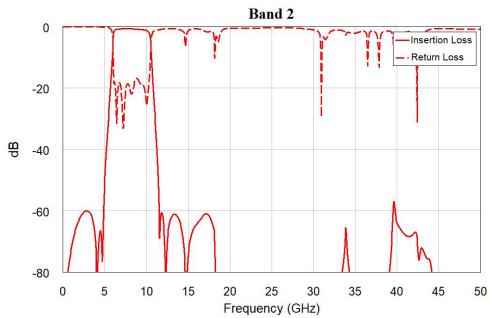
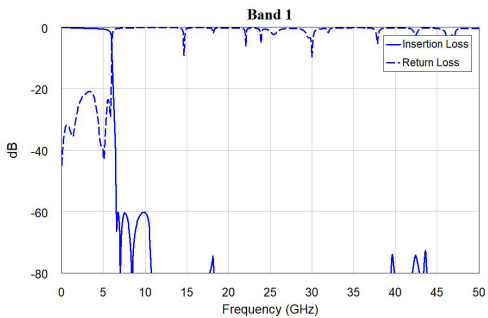
| Band 1 (Port 2)              |                       |     |      |      |
|------------------------------|-----------------------|-----|------|------|
| Parameter                    | Frequency Range (GHz) | Min | Typ  | Max  |
| Passband Insertion Loss (dB) | DC - 5.7              | -   | 1.15 | 1.25 |
| Passband Return Loss (dB)    | DC - 5.7              | 13  | 15   | -    |
| Stopband (dB)                | 6.8 - 12              | 55  | 57   | -    |

| Band 2 (Port 3)              |                       |     |     |     |
|------------------------------|-----------------------|-----|-----|-----|
| Parameter                    | Frequency Range (GHz) | Min | Typ | Max |
| Passband Insertion Loss (dB) | 6.3 - 9.98            | -   | 1.2 | 1.3 |
| Passband Return Loss (dB)    | 6.3 - 9.98            | 13  | 15  | -   |
| Stopband (dB)                | DC - 5.25             | 35  | 37  | -   |
| Stopband (dB)                | 12 - 20               | 55  | 57  | -   |

| Band 3 (Port 4)              |                       |     |      |      |
|------------------------------|-----------------------|-----|------|------|
| Parameter                    | Frequency Range (GHz) | Min | Typ  | Max  |
| Passband Insertion Loss (dB) | 11.03 - 17.1          | -   | 1.05 | 1.15 |
| Passband Return Loss (dB)    | 11.03 - 17.1          | 13  | 15   | -    |
| Stopband (dB)                | DC - 9.0              | 35  | 37   | -    |
| Stopband (dB)                | 21 - 40               | 55  | 57   | -    |

| Band 4 (Port 5)              |                       |     |     |      |
|------------------------------|-----------------------|-----|-----|------|
| Parameter                    | Frequency Range (GHz) | Min | Typ | Max  |
| Passband Insertion Loss (dB) | 18.9 - 38             | -   | 1   | 1.15 |
| Passband Return Loss (dB)    | 18.9 - 38             | 13  | 15  | -    |
| Stopband (dB)                | DC - 15.75            | 35  | 37  | -    |
| Stopband (dB)                | 46 - 50               | 45  | 47  | -    |

Typical Performance



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

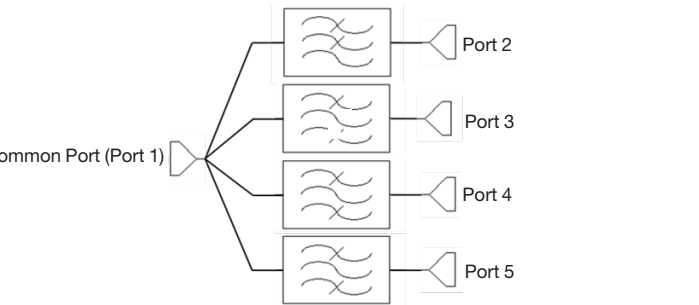
Additional Details

| Special Handling / Storage Instructions |                |
|-----------------------------------------|----------------|
| Storage                                 | IAW IPC-4553A  |
| ESD Sensitivity                         | None           |
| Ordering Information                    | PSM0640B4S     |
| Standard Packaging                      | Gel Pak        |
| Alternative Packaging Available         | Tape and Reel  |
| Component Termination Finish            | Immersion Gold |
| Export Certifications                   | TBD            |

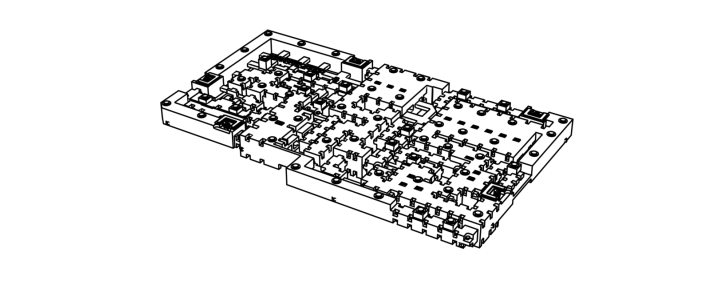
Absolute Maximum Ratings

|                |                                     |
|----------------|-------------------------------------|
| Power          | 5W                                  |
| 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           |

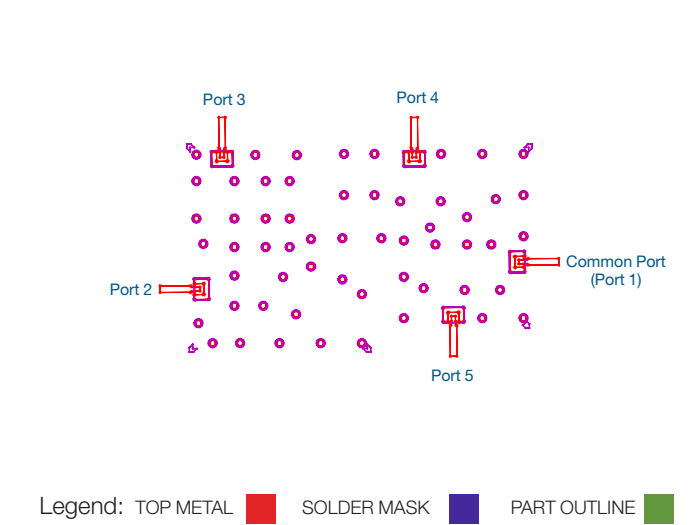
Simplified Block Diagram



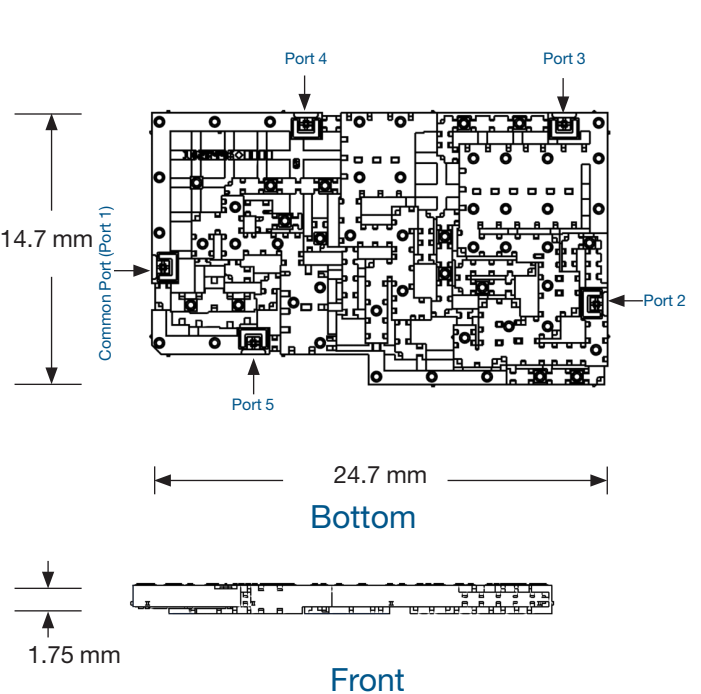
Component View



PCB Layout



Mechanical Drawing



Drawings available upon request