Ortho-modal transducers/Polarizers/Filter

*Ka – Band feed system, two port solutions*

The feed system comes in two different versions for different operational bands. The system includes high-pass (HP) filter in TX port as well as a band stop (BS) filter in the RX port. The system is comprised of Ortho-mode Transducer (OMT), HP filter, BS filter, and Polarizer.

<table>
<thead>
<tr>
<th>Application</th>
<th>Ka-band reflector systems</th>
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</table>
| TX Frequency | Version 1: 29-30 GHz  
Version 2: 29.5-31 GHz |
| RX Frequency | Version 1: 19.2-20.2 GHz  
Version 2: 19.7-21.2 GHz |
| Polarity     | Circular, RHCP/LHCP Mechanical pol. change |

<table>
<thead>
<tr>
<th>Axial ratio</th>
<th>Rx: 1.5, Tx: 1.2</th>
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<tbody>
<tr>
<td>Return loss</td>
<td>20 dB</td>
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**Isolation TX-RX:**

- **S21**  
  < -80 dB at Tx frequencies

- **S13 (transmission TX side port 3 to common circular port 1)**  
  < -80 dB at Rx frequencies

- **S23 (transmission TX port 3 H01-mode to RX port 2 H10-mode)**  
  < -80 dB at Rx frequencies

**Insertion loss:**  
0.3-0.5 dB

**Port flanges:**

- **TX:** WR28  
  - **RX:** WR42  
  - Circular common port

**Mechanical**  
Fully flexible interface

Contact information: Servsat Communications, Inc.  
E-mail sales@servsat.com