Microwave Components

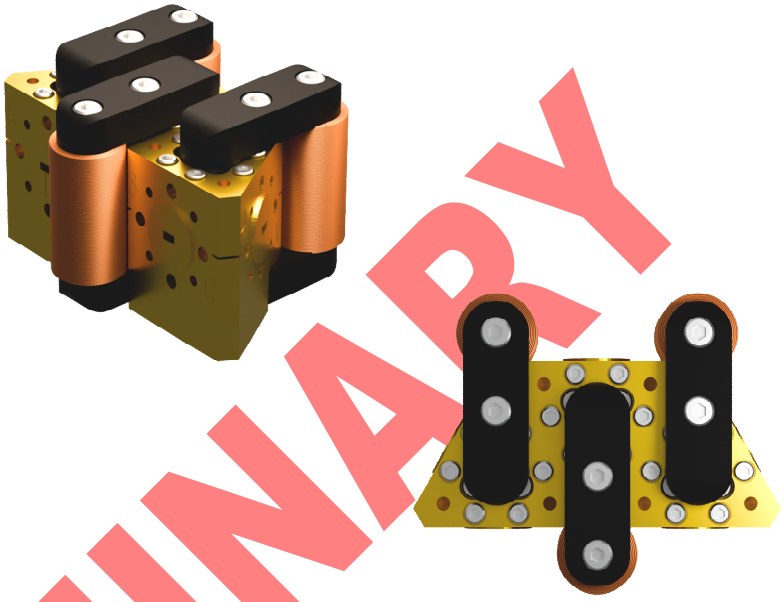
W-band SP3T/4T Switch for Space & Terrestrial Use

Features

- Low loss
- Medium power
- Waveguide interface
- Customizable
- ITAR-free, fully European

Typical applications

- Space
- Radar
- Radiometer
- Telecom
- Research & Science



Description

This 5-port switch assembly consists of three waveguide switch cells in an integrated design. Each cell unit is an external latching ferrite (ELF) switch. The ELF switch design exhibits very low losses and tolerates medium peak and average power, also in space. It is an excellent choice for many waveguide systems, operating in space or terrestrial conditions.

The switch assembly has been designed to comply with the demanding electrical, mechanical, and thermal requirements of space flight. The switch assembly can be customized to meet special needs, such as cryogenic operation, non-standard interfaces or geometries, wide operating temperature ranges or wider bandwidths.

The 5-port switch assembly can operate in various use cases, for example as an SP4T switch or as an SP3T switch when terminating one port with a matched load. An example of an SP3T configuration is shown in the following page with 3 input ports and 1 output port.

Specifications*	
Switch type	ELF
Frequency band, GHz	86 – 91
Insertion loss, dB	< 1
Peak power, W	10
Average power, W	10
Port return loss, dB	> 27
Port isolation, dB	> 23 (1 cell) > 50 (2 cells)
Switching speed	< 1 ms
Interface	WR10 / WR12
Dimensions, mm	55 x 45 x 32
Mass, g	180

* Simulated values

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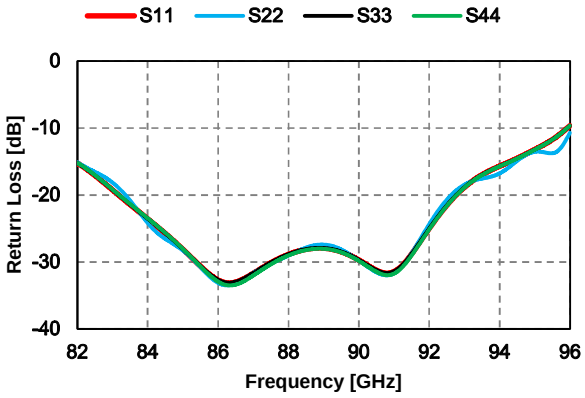
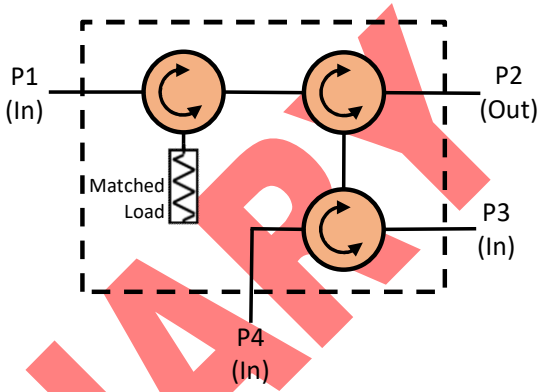
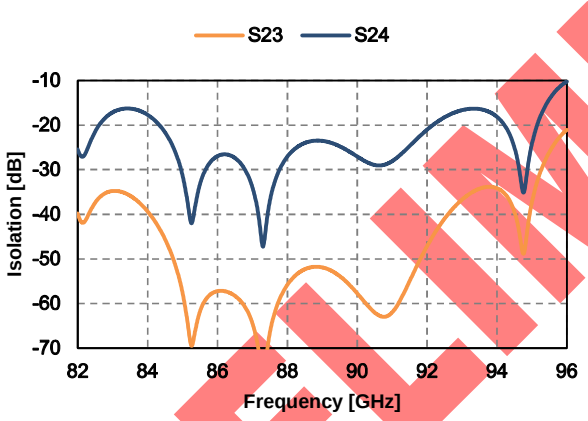
SP3T switch configuration and performance.

Simulated performance, Return loss

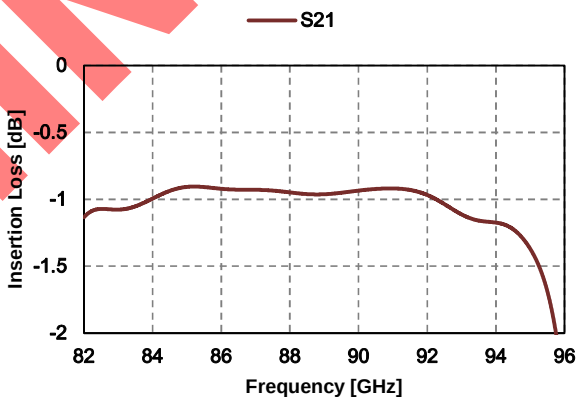




Simulated performance, Isolation



Simulated performance, Insertion loss



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