RF SWITCH · DATASHEET

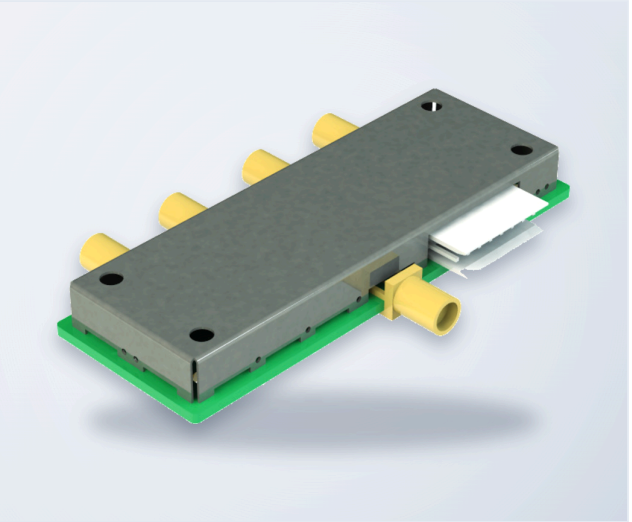
6 GHz SP4T RF Switch

RFS-1684 | I/O CONTROLLED

Bluelec RFS-1684 is a solid-state SP4T RF switch module covering 10 Hz to 6 GHz. It routes one common RF port to any of four selectable RF paths and terminates unused paths internally to 50 Ω for stable, predictable RF performance.

The two-line I/O control interface enables simple digital control and easy integration into automated RF test systems. With solid-state switching, the RFS-1684 eliminates mechanical contact wear and provides high repeatability over large numbers of switching cycles.

Designed for RF test and measurement environments ranging from laboratory use to automated production testing, the RFS-1684 combines low insertion loss, high isolation, long operating life, and reliable electronic control in a compact switch module.



RF & DC SPECIFICATIONS

typical @ 25 °C

Operating frequency	**10 Hz – 6 GHz**
Impedance	**50 Ω**
RF connectors	**SMA (f)**
Input power (RF)	**1 W (CW)**
Supply voltage	**12 V**
Supply current (max, +12 V)	**10 mA**
Switching time	**<25 µs**

Frequency	Ins. loss	Ret. loss	Isolation
1 GHz	1.0 dB	20 dB	60 dB
3 GHz	1.7 dB	18 dB	50 dB
6 GHz	2.1 dB	15 dB	35 dB

Insertion & return loss, and isolation are typical values.

CONTROL INTERFACE

HE14 8-pin

Pin	Signal
1	+12 VDC
2	GND
3	NC
4	NC
5	CTRL1
6	GND
7	CTRL2
8	GND

CONTROL TABLE

COM to

CTRL1	CTRL2	RF1	RF2	RF3	RF4
0 V	**0 V**	**ON**	OFF	OFF	OFF
0 V	**12 V**	OFF	**ON**	OFF	OFF
12 V	**12 V**	OFF	OFF	**ON**	OFF
12 V	**0 V**	OFF	OFF	OFF	**ON**

MECHANICAL

Dimensions	**49.05 × 82 × 10.3 mm (1.93 × 3.23 × 0.41 in)**
Weight	**34 g (1.20 oz)**
Compliance	**RoHS**

ENVIRONMENTAL

Operating temperature	**0 – 50 °C**
Storage temperature	**−20 … +70 °C**
Relative humidity	**95 % at +40 °C**

3D CAD models available on request via **sales@bluelec.com**

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Specifications subject to change without notice.