RF SWITCH · DATASHEET

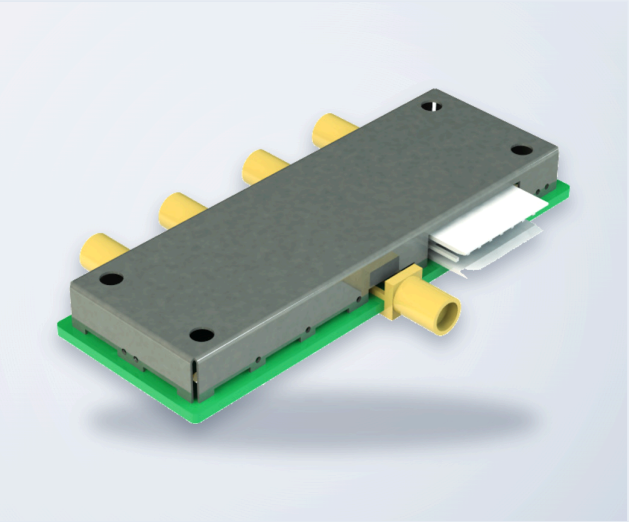
# 6 GHz SP4T RF Switch

**RFS-777** | I²C CONTROLLED

**Bluelec RFS-777** 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 integrated I²C control interface enables simple digital control and easy integration into automated RF test systems. With solid-state switching, the RFS-777 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-777 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 | **4 – 6 V** |
| Supply current (max, +5 V) | **10 mA** |
| Switching time | **<50 µs** |

| Frequency | Ins. loss | Ret. loss | Isolation |
|---|---|---|---|
| **1 GHz** | 1.0 dB | 20 dB | 60 dB |
| **3 GHz** | 1.7 dB | 19 dB | 50 dB |
| **6 GHz** | 2.1 dB | 16 dB | 35 dB |

Insertion & return loss, and isolation are typical values.

## CONTROL INTERFACE

HE14 8-pin

| Pin | Signal |
|---|---|
| 1 | +5 VDC |
| 2 | A0 |
| 3 | SDA |
| 4 | SCL |
| 5 | A1 |
| 6 | GND |
| 7 | A2 |
| 8 | GND |

## CONTROL TABLE

COM to · I²C data

| I²C data | RF1 | RF2 | RF3 | RF4 |
|---|---|---|---|---|
| `××××××00` | **ON** | OFF | OFF | OFF |
| `××××××10` | OFF | **ON** | OFF | OFF |
| `××××××11` | OFF | OFF | **ON** | OFF |
| `××××××01` | OFF | OFF | OFF | **ON** |

## MECHANICAL

| | |
|---|---|
| Dimensions | **49.05 × 82 × 10.3 mm (1.93 × 3.23 × 0.41 in)** |
| Weight | **25 g (0.88 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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Datasheet Rev. A3 · November 2026

Specifications subject to change without notice.