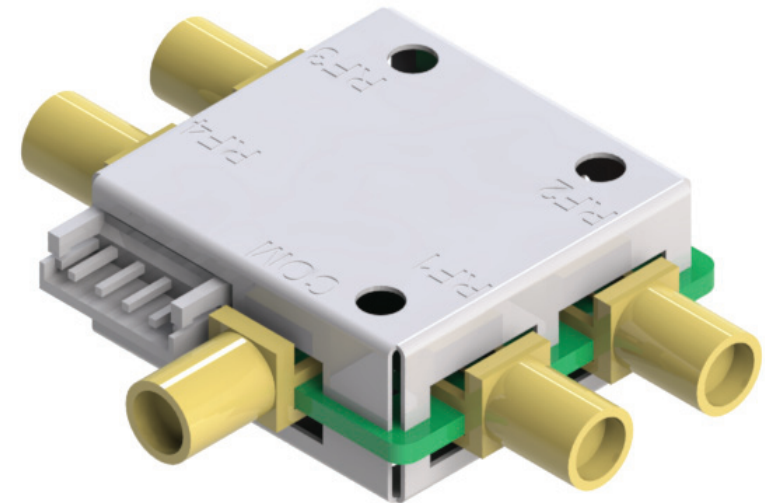


# 6GHz SP4T RF Switch I/O Controlled

TB1309

- Small size - minimal space required
- Broad frequency range (10 Hz to 6 GHz) - great performance over whole frequency range
- Low insertion loss - critical for systems that require low overall noise figure
- High isolation - reduces system measurement uncertainties
- High repeatability - Improved measurement accuracy: no random errors
- Operating life - no mechanical stress; long operating life reduces cost per cycle
- Internal terminations - no resonance in unused lines; 50 ohm load termination



## APPLICATIONS

High performance RF switch for applications which require long operating life without risking RF performance, such as high volume testing.

## RF CONNECTORS

SMA (f)

## CONTROL INTERFACE

Supply and I/O  
JST EH 4PIN (2.5 mm pitch)

| Pin | Signal |
|-----|--------|
| 1   | +12VDC |
| 2   | CTRL1  |
| 3   | CTRL2  |
| 4   | GND    |

## CONTACT INFO

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## RF AND DC SPECIFICATIONS

|                           |               |        |
|---------------------------|---------------|--------|
| Operating frequency       | 10 Hz - 6 GHz |        |
| Impedance                 | 50 ohm        |        |
| Insertion loss (typ.)     | 1 GHz         | 1.0 dB |
|                           | 3 GHz         | 1.5 dB |
|                           | 6 GHz         | 1.8 dB |
| Return loss (typ.)        | 1 GHz         | 20 dB  |
|                           | 3 GHz         | 19 dB  |
|                           | 6 GHz         | 16 dB  |
| Isolation (typ.)          | 1 GHz         | 60 dB  |
|                           | 3 GHz         | 50 dB  |
|                           | 6 GHz         | 35 dB  |
| Input power (RF)          | 1             | W (CW) |
| Supply voltage            | 12            | V      |
| Supply current max (+12V) | 10            | mA     |
| Switching time            | <25           | µs     |

## CONTROL TABLE

| I/O   |       | COM to |     |     |     |
|-------|-------|--------|-----|-----|-----|
| CTRL1 | CTRL2 | RF1    | RF2 | RF3 | RF4 |
| 0V    | 0V    | ON     | OFF | OFF | OFF |
| 0V    | 12V   | OFF    | ON  | OFF | OFF |
| 12V   | 12V   | OFF    | OFF | ON  | OFF |
| 12V   | 0V    | OFF    | OFF | OFF | ON  |

## MECHANICAL SPECIFICATIONS

|            |                                           |
|------------|-------------------------------------------|
| Dimensions | 39.5 x 51.1 x 12.7 mm (1.56"*2.01"*0.50") |
| Weight     | 15 g (0.53 oz)                            |

## ENVIRONMENTAL SPECIFICATIONS

|                       |                |
|-----------------------|----------------|
| Operating temperature | 0-50 °C        |
| Storage temperature   | -20 ... +70 °C |
| Relative humidity     | 95 % at +40 °C |

