

Semiconductor Switch HLS4-6G/UHI-TTL

MTS-No.: 27824

Description

The Semiconductor Switches of this series are designed to work between 100 MHz and 6000 MHz. They cover for example GSM, DECT, UMTS, Bluetooth, WiMAX, Wi-Fi (2.4G / 5G) and all LTE frequency bands.

These units are ultra-high isolation absorptive RF switches. They can easily be controlled by TTL interface.



Technical data:

1 RF-specifications:

| | | | | |
|-----|--------------------------------|--------------------------|-------------|-------------|
| 1.1 | Switch type | HLS4, 4-way absorptive | | |
| 1.2 | Impedance | 50 Ω | | |
| 1.3 | Input power @ common port | 30 dBm max. | | |
| | @ output ports | 26 dBm max. (terminated) | | |
| 1.4 | Frequency range | 100 - 6000 MHz | | |
| 1.5 | Switching time | <10 μs typ. | | |
| 1.6 | VSWR in / out @ 400 - 3000 MHz | min. | typ. | max. |
| | | | 1.3 | 1.6 |
| | @ 100 - 6000 MHz | 1.4 | 2.0 | |
| | VSWR out terminated | 1.2 | 1.6 | |
| 1.7 | Insertion loss @ 100 MHz | 2.4 dB | 3.0 dB | |
| | @ 3000 MHz | 3.9 dB | 4.5 dB | |
| | @ 6000 MHz | 4.4 dB | 5.0 dB | |
| | IL derating / 200 MHz | 0.09 dB | 0.12 dB | |
| 1.9 | Isolation @ RFC/RFX-RFX | | | |
| | @ 100 - 2000 MHz | 120 dB | 130 dB | |
| | @ 2000 - 4000 MHz | 110 dB | 120 dB | |
| | @ 4000 - 6000 MHz | 100 dB | 110 dB | |

2 Connections:

| | | |
|-----|--------------------|---|
| 2.1 | RF-in- and outputs | 5x SMA female |
| 2.2 | Control connectors | 2x 12 pole male (parallel), type SMC Erni |

3 General specifications:

| | | |
|------|---|---|
| 3.1 | Internal voltage (TTL) | 5 VDC ±5 % |
| 3.2 | Power consumption | 20 mW max. |
| 3.3 | Control interface | 2 bit for data (a1, a2) + 3 bit for address (b1, b2, b3) + 1 bit for enable (b4) + 1 bit for blocking (a4), TTL |
| | Operating temperature | -40 °C - +85 °C |
| | Storage temperature | -55 °C - +150 °C |
| | Reference temperature of specifications | +25 °C |
| 3.7 | Dimensions (without connections) | 94.5 mm x 83 mm x 12.4 mm (LxWxH) |
| 3.8 | Case style | Milled aluminium enclosure |
| 3.9 | Colour | SurTec650 (Chrome alloy) |
| 3.10 | Weight | 215 grams |

4 Delivered parts:

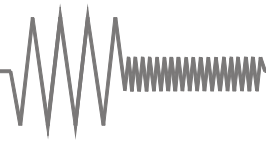
HLS4-6G/UHI-TTL
Datasheet

5 Comments:

| | |
|----------------|-----------|
| Warranty | 12 months |
| RoHS-compliant | Yes |

6 Recommended accessories:

RF-cables
Controller card for HLS4



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Typical measurements:

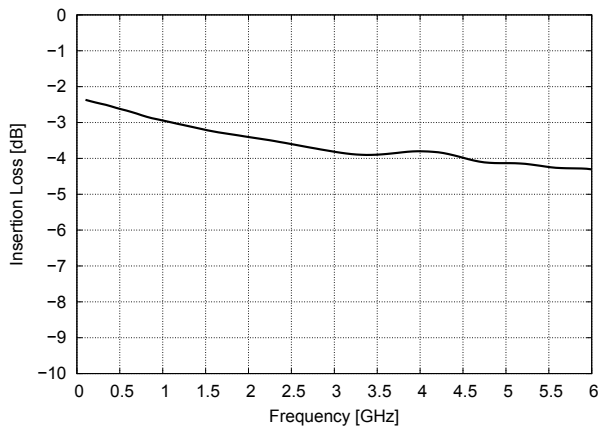


Fig. 1: Input port to output port insertion loss

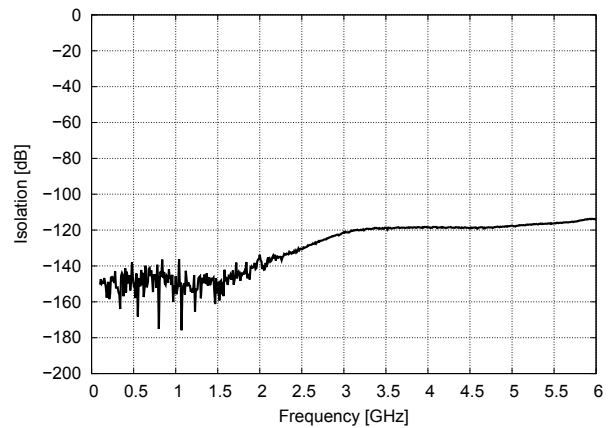


Fig. 2: Isolation between in- and output ports (RFC-RFX)

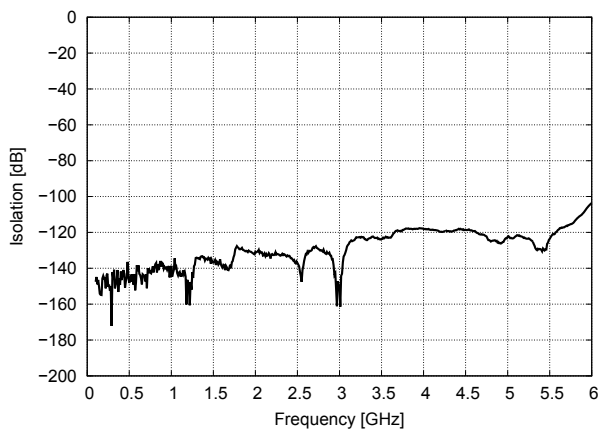


Fig. 3: Isolation between output ports (RFX-RFX)

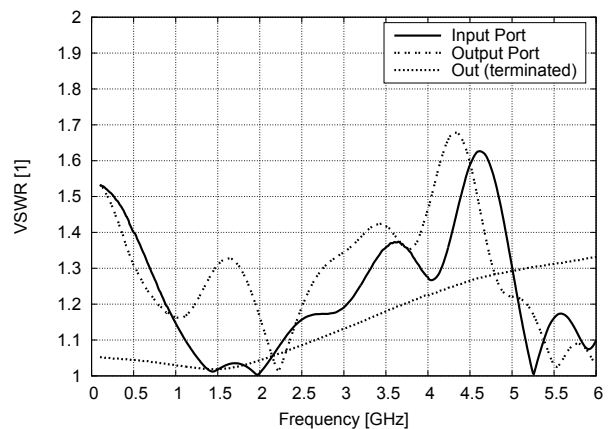


Fig. 4: VSWR for input and output ports

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Views:

