

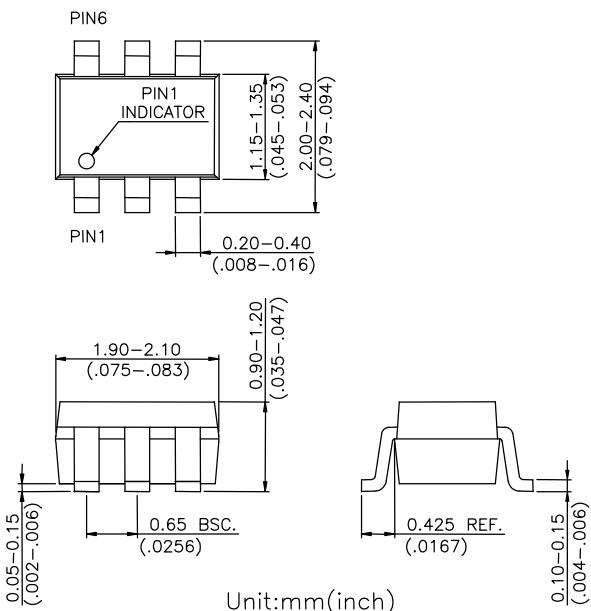
Features

- **Low Insertion Loss:** 0.4 dB @ 2.5 GHz
- **Isolation:** 25 dB @ 2.5 GHz
- **Low DC Power Consumption**
- **Low Cost SOT-363 Plastic Package**

Description

The HWS314 is a GaAs SPDT switch operating at DC-2.5 GHz in a low cost SOT-363 plastic package. The HWS314 features low insertion loss with very low DC power consumption. This switch can be used in IEEE 802.11b/g WLAN systems for combination of transmit/receive and antenna diversity functions.

SOT-363



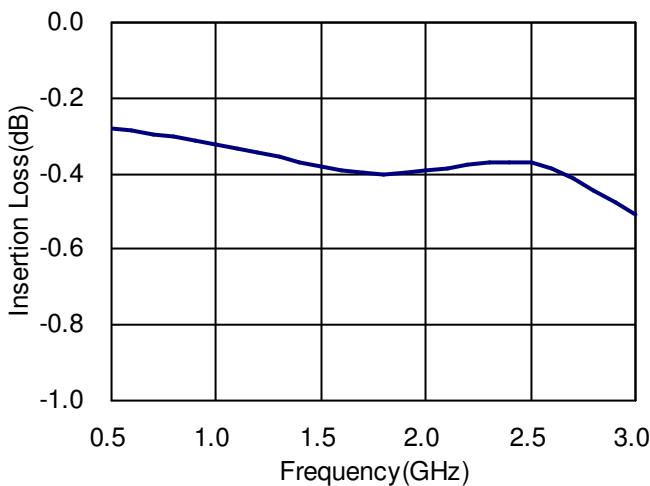
Electrical Specifications at 25°C with 0, +3V Control Voltages

| Parameter | Test Conditions | Min. | Typ. | Max. | Unit |
|------------------------------------|-----------------------------------|------|----------|------|------------|
| Insertion Loss | DC-2.5 GHz | | 0.4 | 0.6 | dB |
| Isolation | DC-2.5 GHz | 21 | 25 | | dB |
| Return Loss | DC-2.5 GHz | | 20 | | dB |
| Input Power for One dB Compression | 0.5-2.5 GHz @ 0/+3V @ 0/+5V | | 30 34 | | dBm dBm |
| Switching Time | | | 20 | | ns |
| Control Current | | | 5 | 100 | uA |

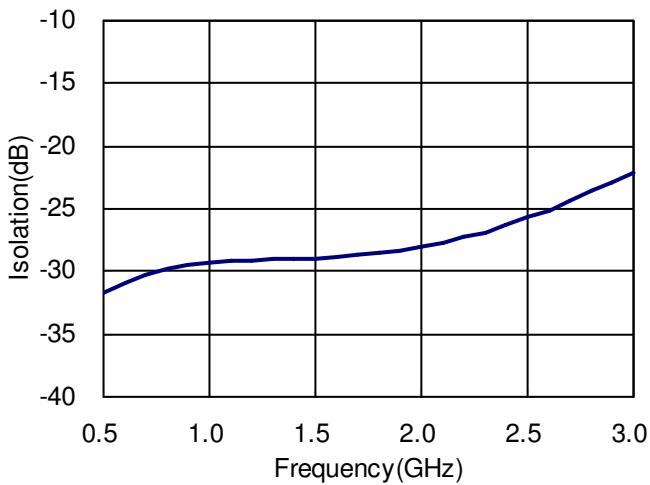
Note: All measurements made in a 50 ohm system with 0/+3V control voltages, unless otherwise specified.

Typical Performance Data @ +25°C

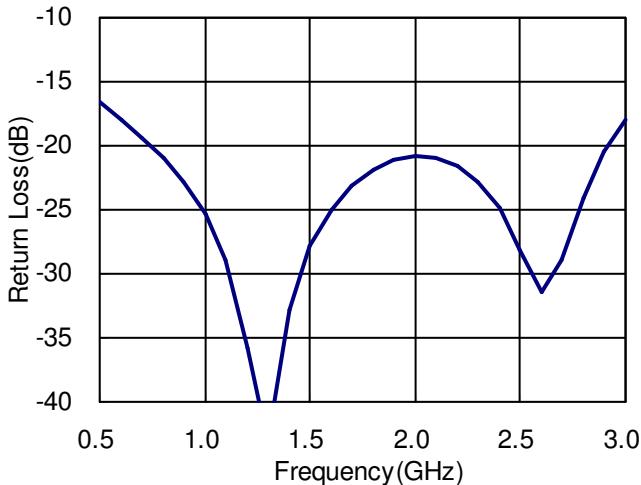
Insertion Loss vs Frequency



Isolation vs Frequency



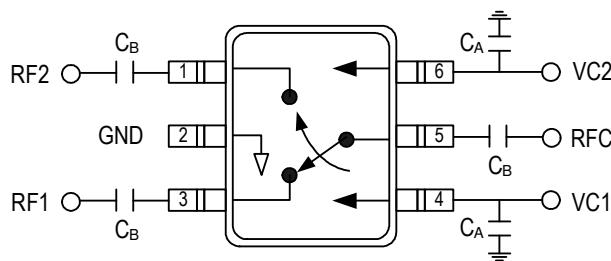
Return Loss vs Frequency



Absolute Maximum Ratings

| Parameter | Absolute Maximum |
|-------------------------------|------------------|
| RF Input Power 0.5-2.5 GHz | +34 dBm |
| Control Voltage | +6V |
| Operating Temperature | -40°C to +85°C |
| Storage Temperature | -65°C to +150°C |

Pin Out (Top View)



DC blocking capacitors C_B are required on all RF ports.
 $C_B=C_A=51\text{pF}$ for operating frequency > 500MHz.

Logic Table for Switch On-Path

| VC1 | VC2 | RFC-RF1 | RFC-RF2 |
|-----|-----|----------------|----------------|
| 1 | 0 | Isolation | Insertion Loss |
| 0 | 1 | Insertion Loss | Isolation |

'1' = +3V to +5V

'0' = 0V to +0.2V