

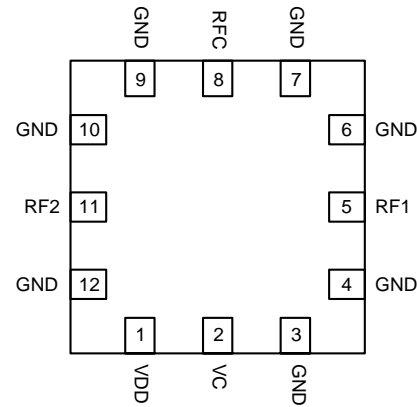
Features

- **Low Insertion Loss:** 0.35 dB @ 2.5 GHz
- **High Isolation:** 33 dB @ 2.5 GHz
- **Single low control voltage:** 1.3 to 3.3 V
- **No external DC blocking capacitors required**
- **Small UQFN12L (2x2x0.4mm) package**
Using Lead (Pb) free materials with RoHS compliant

Description

The HWS537 is a GaAs SPDT switch operating at 0.5-6.0 GHz in a UQFN12L (2x2x0.4mm) package. The HWS537 features low insertion loss with very low DC power consumption. This switch can be used in WLAN systems for transmit/receive or antenna diversity functions.

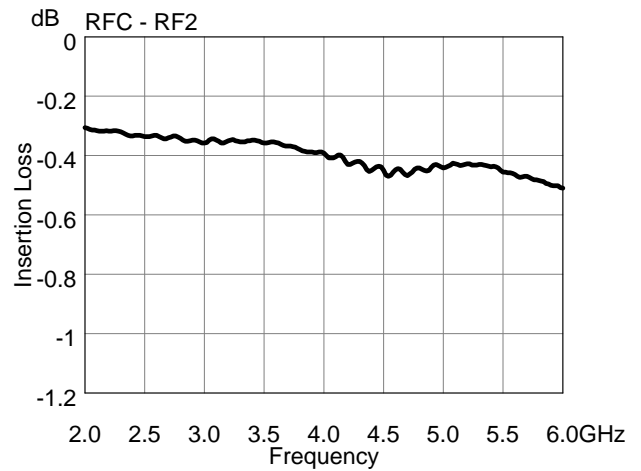
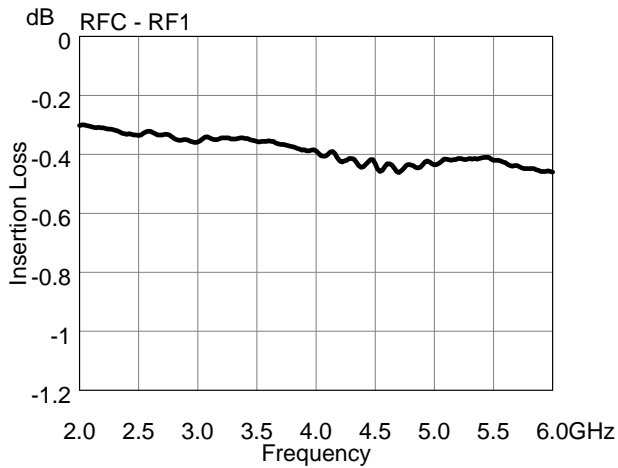
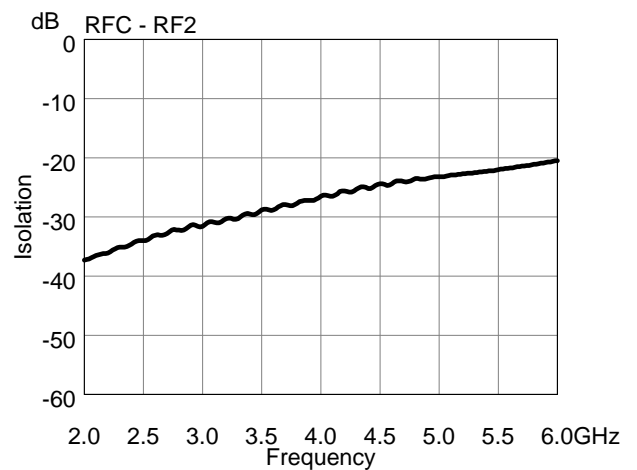
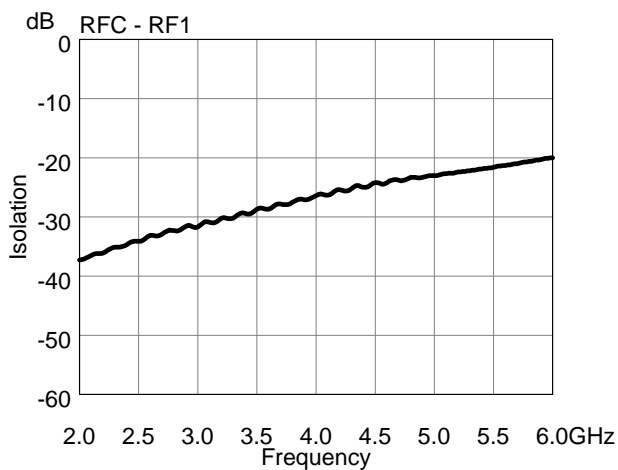
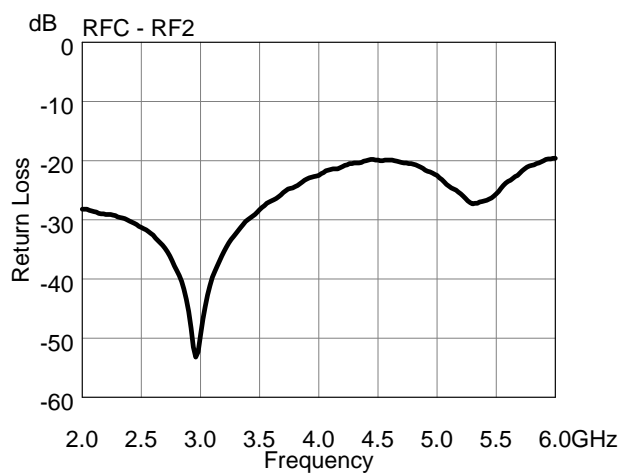
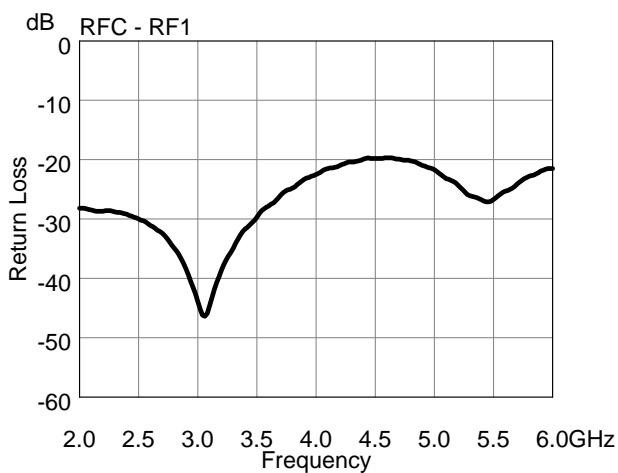
Top View



Electrical Specifications at 25°C with 0, VDD=+2.8V

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
RF Specification						
Insertion Loss	IL	0.5-6.0 GHz 2.4-2.5 GHz 4.9-6.0 GHz		0.5 0.35 0.5	0.45 0.6	dB dB
Isolation	ISO	2.4-2.5 GHz 4.9-6.0 GHz	30 17	33 20		dB dB
Return Loss	RL	2.4-2.5 GHz 4.9-6.0 GHz		25 20		dB dB
Input Power for 1dB Compression	P1dB	2.5 GHz 5.8 GHz		31 30		dBm
2 nd and 3 rd Harmonics		Pin=+20dBm		-70		dBc
DC Specification						
Supply Voltage	V _{DD}		1.8	2.8	3.3	V
Supply Current	I _{DD}	V _{DD} =2.8V		90		uA
Control Voltage High Low	V _c		1.3 0		V _{DD} 0.3	V
Control Current	I _c			0.5	2	uA
Switching Specification						
Switching Time		50% V _c to 90%/10% RF 10% RF to 90% RF		500 100		ns
Startup Time		Shutdown to RF State			100	us

Note: All measurements made in a 50 ohm system with VDD=0/+2.8V, unless otherwise specified.

Typical Performance Data @+25°C with 0, VDD=+2.8V**Insertion Loss vs. Frequency****Isolation vs. Frequency****Return Loss vs. Frequency**

Logic Table for Switch On-Path

V _c	RFC-RF1	RFC-RF2
1	off	on
0	on	off

'1' = +1.3V to V_{DD}

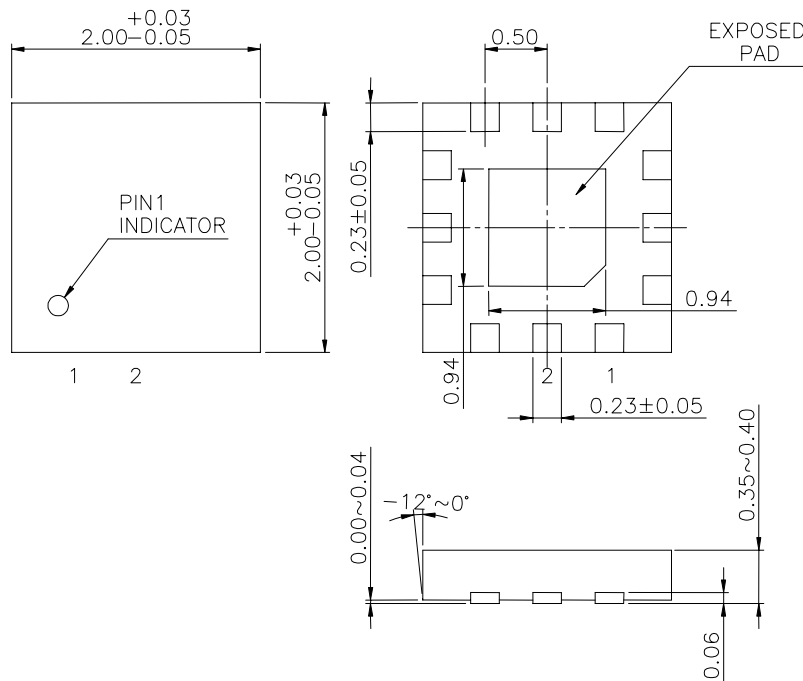
'0' = 0V to +0.3V

Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power 0.5-6.0 GHz	+31 dBm
Supply Voltage	+4V
Operating Temperature	-40°C to +85°C
Storage Temperature	-65°C to +150°C

Package Outline

Unit: mm



Unit:mm