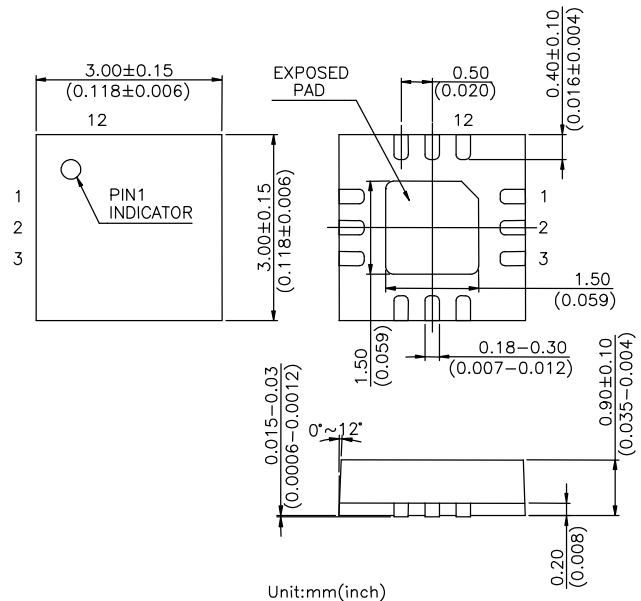


Features
QFN12L (3 x 3 mm)

- **Low Insertion Loss** : 0.4 dB @ 2.5 GHz
0.5 dB @ 5.8 GHz
- **Isolation**: 24 dB @ 2.5 GHz
27 dB @ 5.8 GHz
- **Low DC Power Consumption**
- **Miniature QFN12L (3x3 mm) Plastic Lead(Pb) Free Package**
- **PHEMT process**
- **Lead Free and RoHS (Restrict of Hazardous Substances) Compliant Version of HWS382**


Description

The HWS432 is a GaAs PHEMT MMIC SPDT switch operating at DC-6 GHz in a low cost miniature QFN12L (3 x 3 mm) plastic lead (Pb) free package. The HWS432 features low insertion loss and high isolation with very low DC power consumption. This switch can be used in IEEE 802.11a/b/g WLAN PC card and access point applications as transmit/receive switch, antenna diversity switch, or band-selection switch.

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

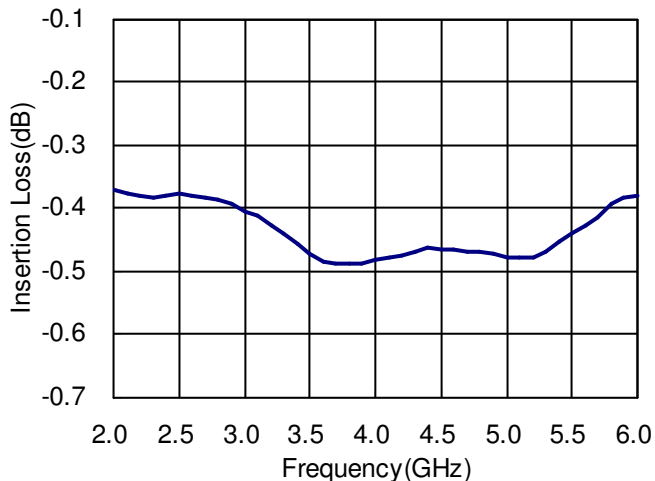
Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Insertion Loss	0.10-6.00 GHz		0.5		dB
	2.40-2.50 GHz		0.4	0.6	dB
	4.90-6.00 GHz		0.5	0.8	dB
Isolation	0.10-6.00 GHz		24		dB
	2.40-2.50 GHz	22	24		dB
	4.90-6.00 GHz	22	27		dB
Return Loss	0.10-6.00 GHz		15		dB
	2.40-2.50 GHz	12	20		dB
	4.90-6.00 GHz	10	18		dB
Input Power for One dB Compression	5.00 GHz @+3V		30		dBm
	5.00 GHz @+5V		34		dBm
Switching Time			30		nsec
Control Current			5	100	uA

Note: All measurements made in a 50 ohm system with 0/+3.0V control voltages, unless otherwise specified.

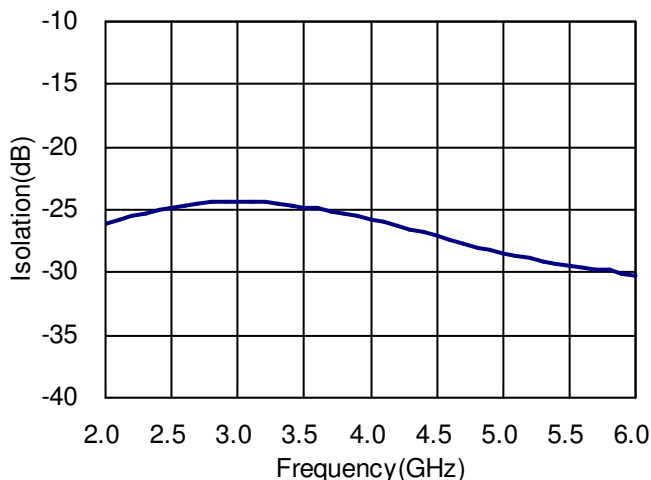


Typical Performance Data with 8pF Capacitors @ +25 °C

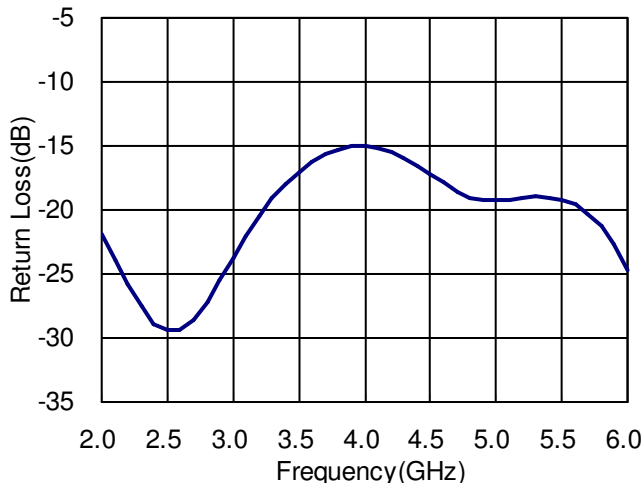
Insertion Loss vs Frequency



Isolation vs Frequency



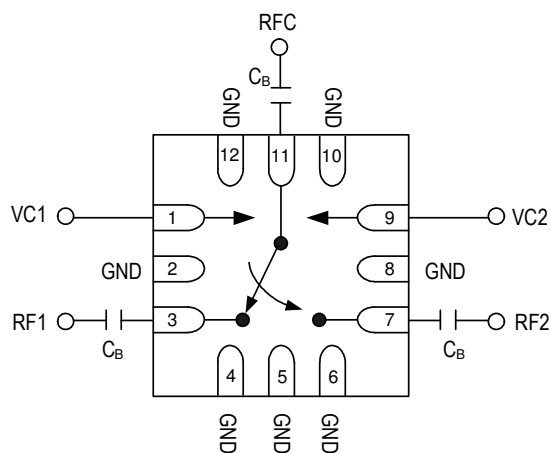
Return Loss vs Frequency



Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	+32 dBm @ +3V
Control Voltage	+6V
Operating Temperature	-40°C to +85°C
Storage Temperature	-65°C to +150°C

Pin Out (Top View)



Note:

1. DC blocking capacitors $C_B=8\text{pF}$ are required on all RF ports.
2. Exposed pad in the bottom must be connected to ground by via holes.

Logic Table for Switch On-Path

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

'1' = +3V to +5V

'0' = 0V to +0.2V