

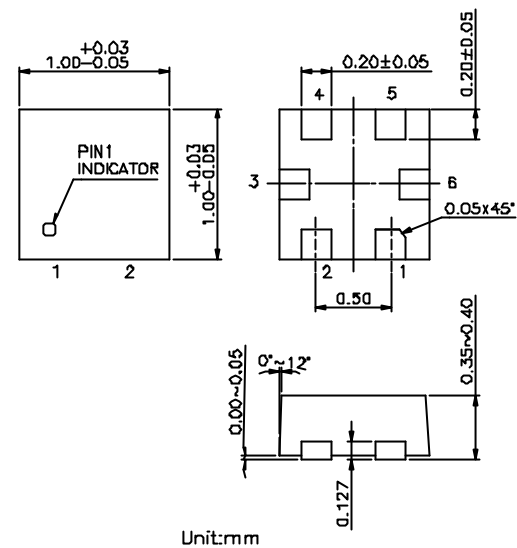
## Features

- **Low Insertion Loss:** 0.6 dB @ 2.5 GHz
- **Isolation:** 20 dB @ 2.5 GHz
- **Low DC Power Consumption**
- **Miniature UQFN6L (1.0x1.0x0.4 mm)**  
Using Lead (Pb) free materials with RoHS compliant
- **PHEMT process**

## Description

The HWS511 is a GaAs SPDT switch operating at 0.5-3.0 GHz in a low cost UQFN6L (1x1x0.4 mm) plastic lead (Pb) free package. The HWS511 features low insertion loss with very low DC power consumption. This switch can be used in IEEE 802.11b/g WLAN systems for transmit/receive or antenna diversity functions.

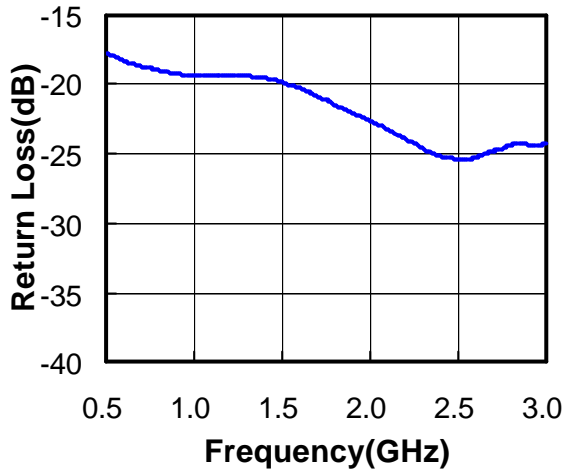
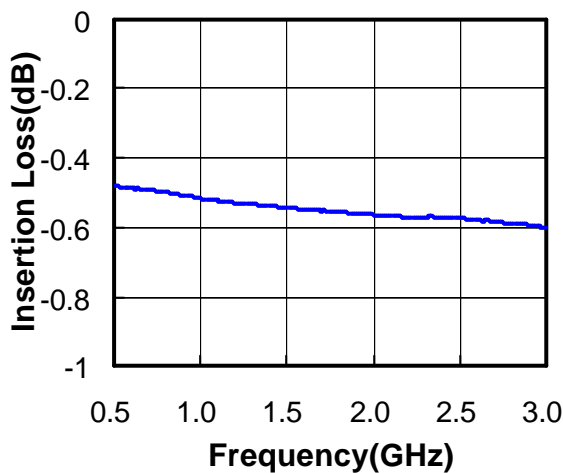
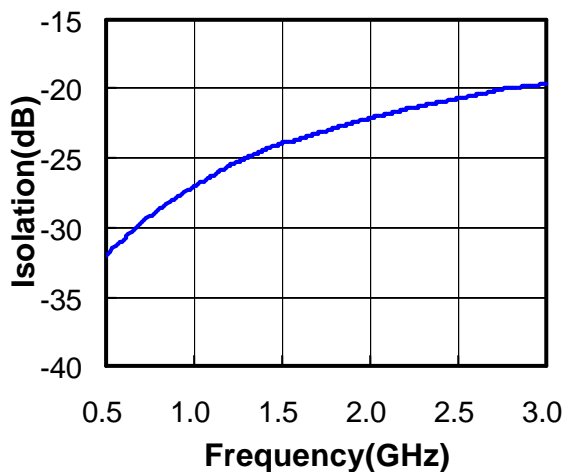
## UQFN6L (1.0X1.0X0.4mm)



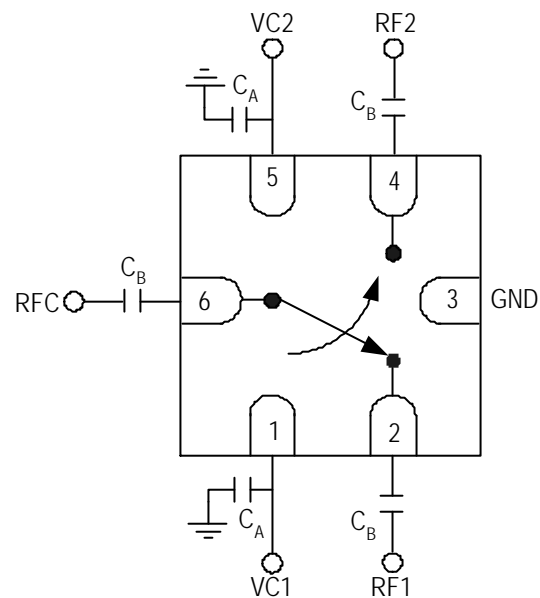
## Electrical Specifications at 25°C with 0, +3V Control Voltages

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Insertion Loss	0.5-1.0 GHz		0.50		dB
	0.5-2.0 GHz		0.55		dB
	0.5-3.0 GHz		0.60	0.70	dB
Isolation	0.5-1.0 GHz		27		dB
	0.5-2.0 GHz		22		dB
	0.5-3.0 GHz	18	20		dB
Return Loss	0.5-3.0 GHz		20		dB
Input Power for One dB Compression	0.5-3.0 GHz @ 0/+3V @ 0/+5V		30		dBm
			34		dBm
Switching Time			100		ns
Control Current			5	20	uA

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

**Typical Performance Data with 47 pF Capacitors @ +25°C**
**Return Loss vs. Frequency**

**Insertion Loss vs. Frequency**

**Isolation vs. Frequency**

**Absolute Maximum Ratings**

Parameter	Absolute Maximum
RF Input Power 0.5-3.0 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.  $C_B=C_A=47\text{pF}$  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