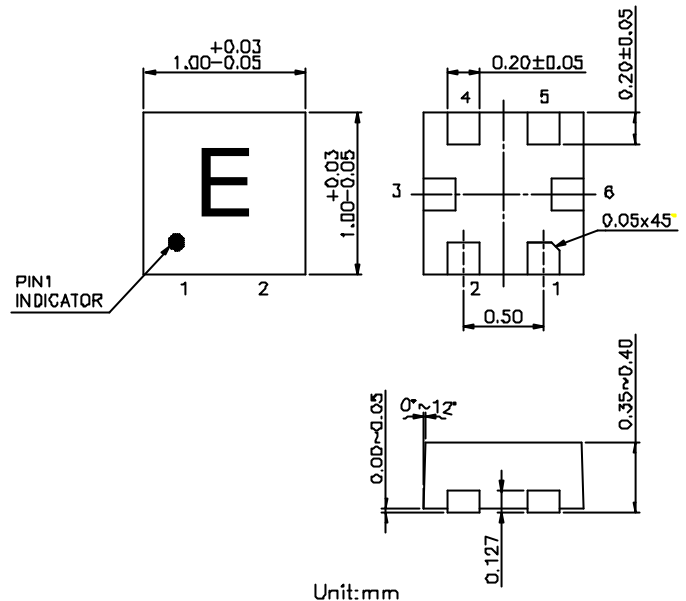


Features

- **Low Insertion Loss:** 0.4 dB @ 2.5 GHz
- **Isolation:** 22 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**

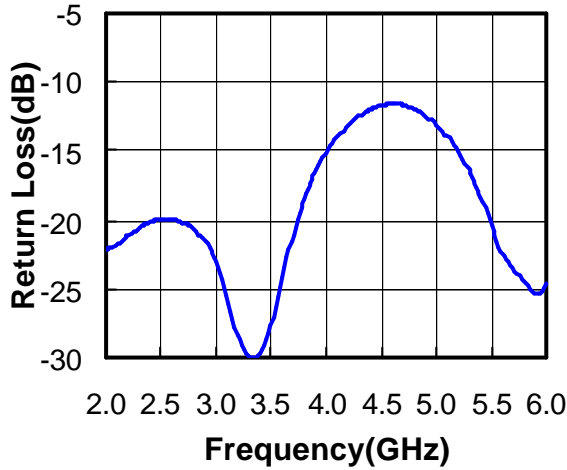
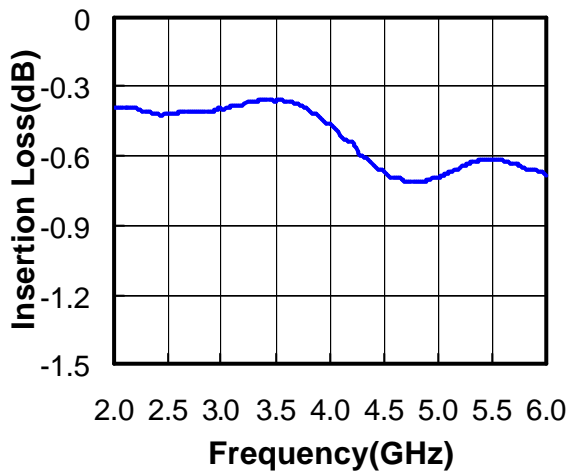
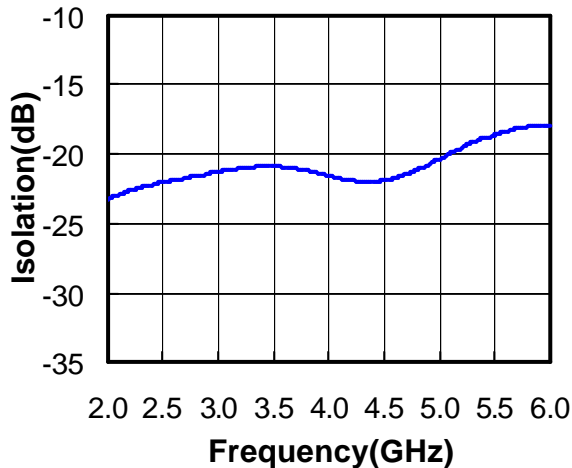
UQFN6L (1.0X1.0X0.4mm)

Description

The HWS522 is a GaAs SPDT switch operating at 0.5-6.0 GHz in a low cost UQFN6L (1x1x0.4 mm) plastic lead (Pb) free package. The HWS522 features low insertion loss with very low DC power consumption. This switch can be used in IEEE 802.11a/b/g WLAN systems for transmit/receive or antenna diversity functions.

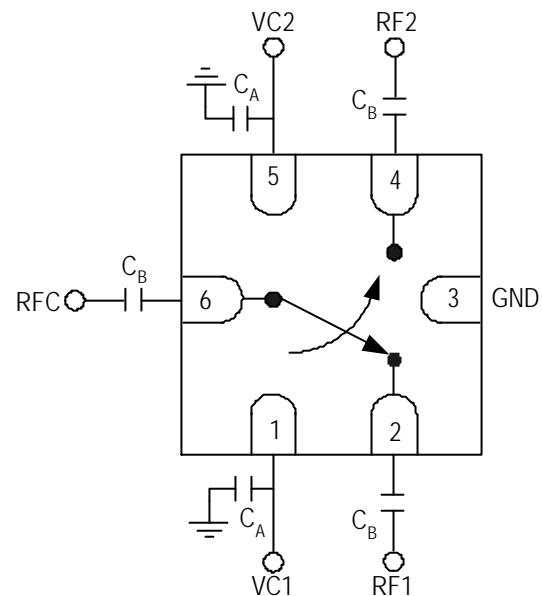
Electrical Specifications at 25°C with 0, +1.8 5V Control Voltages

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Insertion Loss	0.5-3.0 GHz		0.40	0.60	dB
	3.0-6.0 GHz		0.70	0.90	dB
Isolation	0.5-3.0 GHz		22		dB
	3.0-6.0 GHz	16	18		dB
Return Loss	0.5-3.0 GHz		20		dB
	3.0-6.0 GHz		12		dB
Input Power for One dB Compression	0.5-3.0 GHz @ 0/+1.8V @ 0/+3V		24		dBm
			32		dBm
Switching Time			60		ns
Control Current			5	20	uA

Note: All measurements made in a 50 ohm system with 0/+1.8 5V control voltages, unless otherwise specified.

Typical Performance Data with 8 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)

Note:

- DC blocking capacitors C_B are required on all RF ports $C_B=C_A=8\text{pF}$ for operating frequency $> 2\text{GHz}$.
- $C_B=C_A=47\text{pF}$ for operating frequency $< 2\text{GHz}$.

Logic Table for Switch On-Path

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

'1' = +1.8V to +5V

'0' = 0V to +0.2V