

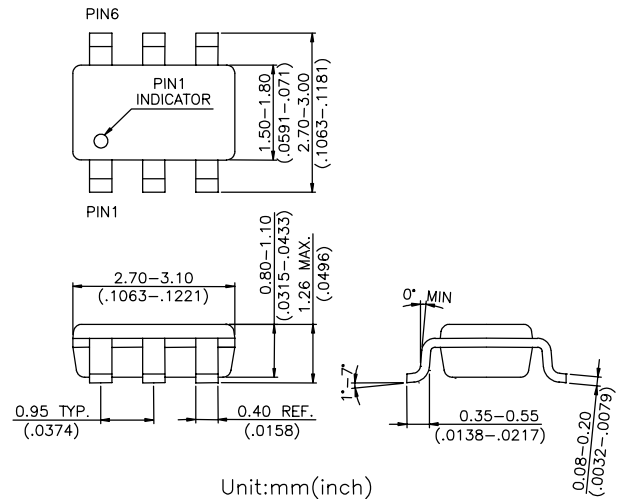
Features

- **Low Insertion Loss:** 0.35dB @ 2GHz
- **Isolation:** 26dB @ 2GHz
- **P1dB:** +25dBm Typical @ +3V
- **IP3:** 43dBm
- **Low DC Power Consumption**
- **Low Cost SOT-26 Plastic Package**

Description

The HWS305 is a GaAs MMIC SPDT switch in a low cost SOT-26 plastic package. The HWS305 features low insertion loss with very low DC power consumption. This general purpose switch can be used in analog and digital wireless communication systems.

SOT-26



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

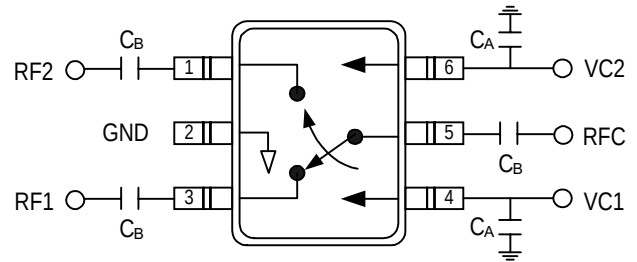
Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Insertion Loss	DC-1.0GHz		0.30	0.50	dB
	DC-2.5GHz		0.40	0.60	dB
Isolation	DC-1.0GHz	25	28		dB
	DC-2.0GHz	23	26		dB
	DC-2.5GHz	20	22		dB
VSWR	DC-2.5GHz		1.20:1		
Input Power for One dB Compression	0.5-2.5GHz				
	0/+3V		25		dBm
	0/+5V		30		
3rd Order Intermodulation Intercept Point (IP3)	0.5-2.5GHz				
	(for two-tone input power up to +5dBm)				
	0/+3V		43		dBm
	0/+5V		48		
Switching Time			50		ns
Control Current			5	50	μA

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

Absolute Maximum Ratings

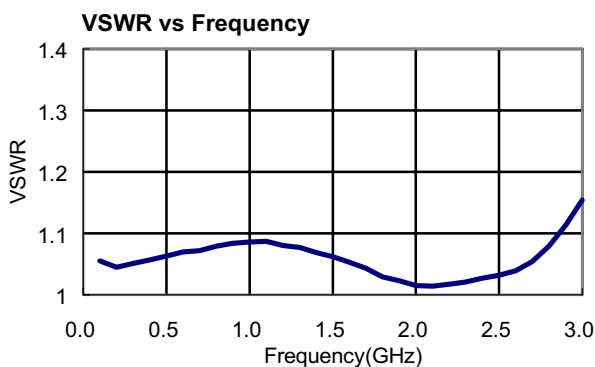
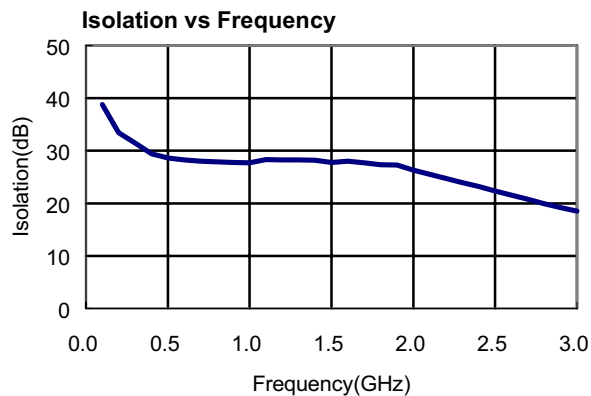
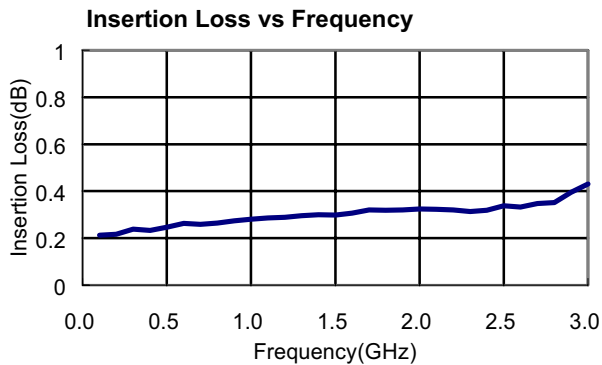
Parameter	Absolute Maximum
RF Input Power 0.05GHz 0.5-2.5GHz	+24dBm +30dBm
Control Voltage	+8V
Operating Temperature	-40°C to +85°C
Storage Temperature	-65°C to +150°C

Pin Out



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

Typical Performance at +25°C



Truth Table

VC1	VC2	RFC-RF1	RFC-RF2
V_{High}	0	Insertion Loss	Isolation
0	V_{High}	Isolation	Insertion Loss

$V_{\text{High}} = +3\text{V to } +5\text{V}$