

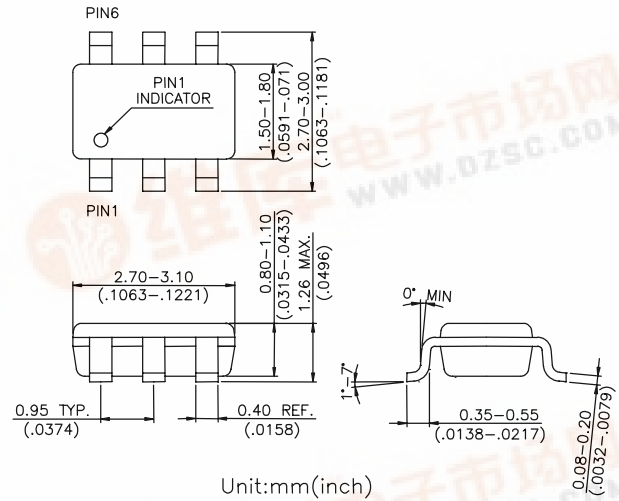
Features

- **Low Insertion Loss:** 0.45dB @ 2GHz
- **P1dB:** +30dBm Typical @ +3V
- **IP3:** 45dBm
- **Low DC Power Consumption**
- **Low Cost SOT-26 Plastic Package**

Description

The HWS311 is a GaAs MMIC SPDT switch in a low cost SOT-26 plastic package. The HWS311 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		0.40	0.60	dB
	DC-2.0GHz		0.45	0.65	dB
	DC-2.5GHz		0.50	0.70	dB
Isolation	DC-2.0GHz	23	26		dB
	DC-2.5GHz	21	23		dB
VSWR	DC-2.5GHz		1.2:1		
Input Power for One dB Compression	0/+3V		30		dBm
	0/+5V		34		
3rd Order Intermodulation Intercept Point (IP3)	0.5-2.5GHz (for two-tone input power up to +5dBm)				
	0/+3V		45		dBm
	0/+5V		50		
Switching Time			50		ns
Control Current			5	100	µA

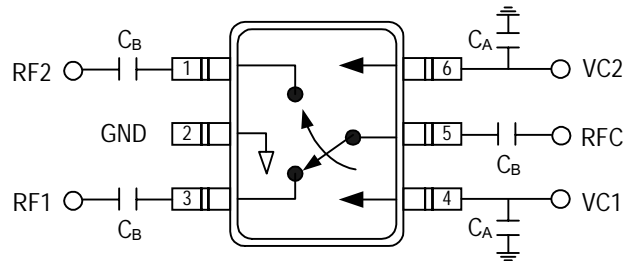
Note: All measurements made in a 50Ω system with 0/+3V control voltages, unless otherwise specified.



Absolute Maximum Ratings

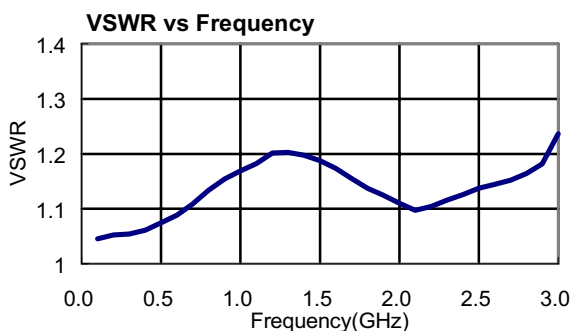
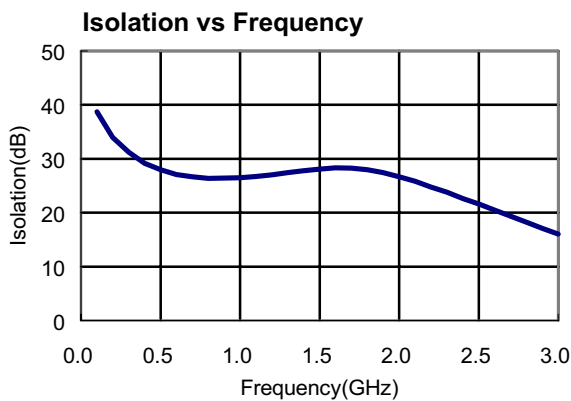
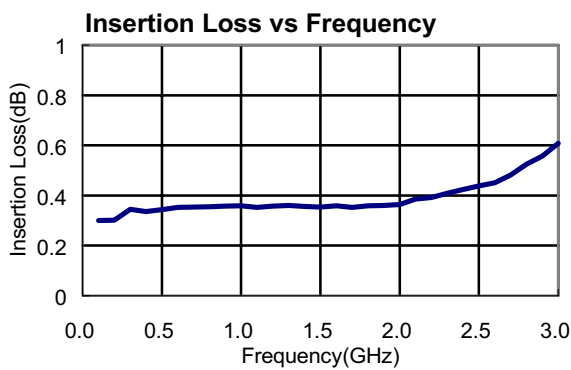
Parameter	Absolute Maximum
RF Input Power 0.05GHz 0.5-2.5GHz	+27dBm +34dBm
Control Voltage	+8V
Operating Temperature	-40°C to +85°C
Storage Temperature	-65°C to +150°C

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	Isolation	Insertion Loss
0	V_{High}	Insertion Loss	Isolation

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