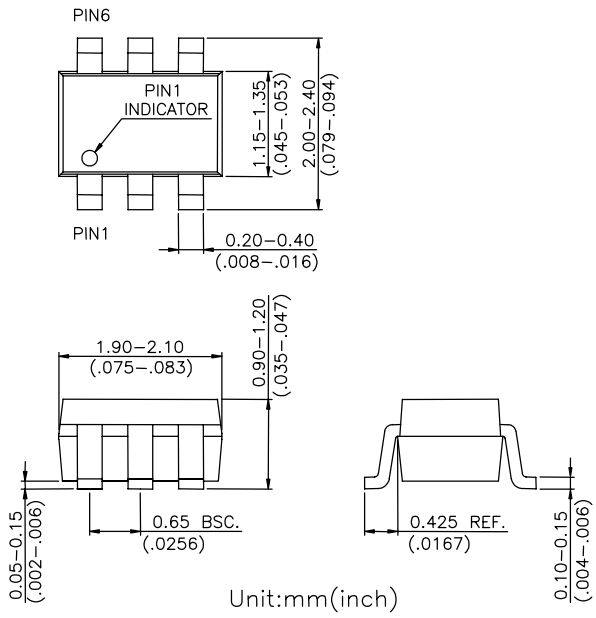
SOT-363

Features

- **Low Insertion Loss:** 0.45dB @ 2GHz
- **P1dB:** +30dBm Typical @ +3V
- **IP3:** 45dBm
- **Low DC Power Consumption**
- **Low Cost SOT-363 Plastic Package**



Description

The HWS314 is a GaAs MMIC SPDT switch in a low cost SOT-363 plastic package. The HWS314 features low insertion loss with very low DC power consumption. This general purpose switch can be used in analog and digital wireless communication systems.

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

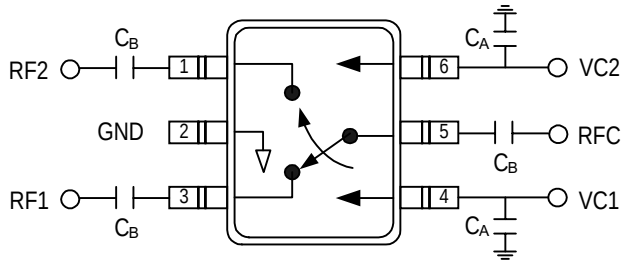
Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Insertion Loss	DC-1.0GHz DC-2.0GHz DC-2.5GHz		0.40 0.45 0.50	0.60 0.65 0.70	dB dB dB
Isolation	DC-2.0GHz DC-2.5GHz	22 21	25 23		dB dB
VSWR	DC-2.0GHz DC-2.5GHz		1.20:1 1.25:1		
Input Power for One dB Compression	0.5-2.5GHz 0/+3V 0/+5V		 30 34		dBm
3rd Order Intermodulation Intercept Point (IP3)	0.5-2.5GHz (for two-tone input power up to +5dBm) 0/+3V 0/+5V		 45 50		dBm
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 Temperatur	-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.
$C_B = C_A = 51pF$ for operating frequency > 500MHz.

Truth Table

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

V_{High} = +3V to +5V

Typical Performance at +25°C