GW2164

GaAs DPDT Diversity Switch DC~6.0GHz for WLAN

Ver. 2.2

■ Features

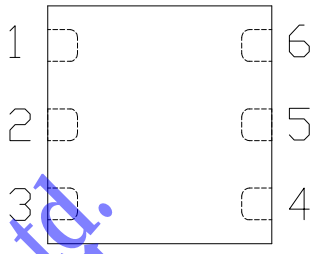
- WLAN 802.11a/b/g/n Applications
- Low Insertion Loss: 0.5dB@ 2.4~2.5GHz
  0.7dB@ 4.9~6.0GHz
- High Isolation: 26dB@2.4~2.5GHz
  17dB@4.9~6.0GHz
- DFN 1.5mmx1.5mm 6 Lead Green Package
- 0.5 μm GaAs pHEMT Process
- Low Cost and Good Reliability Performance

■ General Description

The GW 2164 is a GaAs MMIC DPDT switch in a DFN 1.5mmx1.5mm 6 lead plastic package. The GW2164 features low insertion loss, high isolation and positive voltage operation with 2 controls. Typical applications are for IEEE WLAN 802.11 a/b/g/n system or systems operating up to 6.0GHz that employs two antennas for transmit and receive diversity.

■ Pin Functional Schematic and Assignment

(Top View)



Pin No.	Pin Name	Description
1	ANT2	Antenna Port 2
2	VC2	Voltage Control 2
3	OUT2(Rx)	Receive Port
4	OUT1(Tx)	Transmit Port
5	VC1	Voltage Control 1
6	ANT1	Antenna Port 1

■ Electrical Specifications at 25°C with (0, +2.8V) Control Voltages, 4pF Capacitor

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Insertion Loss	2.4 - 2.5 GHz	-	0.5	0.75	dB
	4.9 - 6.0 GHz	-	0.7	1.0	dB
Isolation (ANT to OUT)	2.4 - 2.5 GHz	22	26	-	dB
	4.9 - 6.0 GHz	15	17	-	dB
Isolation (ANT1 to ANT2, Tx to Rx)	2.4 - 2.5 GHz	23	26	-	dB
	4.9 - 6.0 GHz	15	17	-	dB
Input/Output Return Loss	2.4 - 2.5 GHz	-	21	-	dB
	4.9 - 6.0 GHz	-	20	-	dB
Input Power for 1 dB compression	0.1 - 2.5 GHz 2.5V ≤ | Vcont(H) - Vcont(L)| ≤ 5.3V	-	+30	-	dBm
	4.9 - 6.0 GHz 2.5V ≤ | Vcont(H) - Vcont(L)| ≤ 5.3V	-	+29	-	dBm
	0.1 - 2.5GHz 1.8V ≤ | Vcont(H) - Vcont(L)| ≤ 2.5V	-	25	-	dBm
	4.9 - 6.0GHz 1.8V ≤ | Vcont(H) - Vcont(L)| ≤ 2.5V	-	25	-	dBm
Second Harmonics	2.5 GHz, P_{IN} = 20dBm	-	-70	-	dBc
Third Harmonics	2.5 GHz, P_{IN} = 20dBm	-	-70	-	dBc
Switch Time	50% CTL to 90/10%	-	50	-	ns
Control Current	Input Power +20dBm	-	0.1	10	μA

Notes: All measurements made in 50Ω system, unless otherwise specified.
DC=500MHz

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