



GW2176

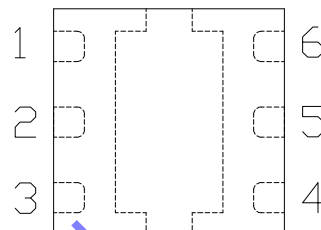
Non-Reflective High Power SPDT Switch for WiMAX

Ver. 1.3

■ Features

- WiMAX and WLAN 802.11a/b/g/n Applications
- Low Insertion Loss: 0.4dB@2.3 ~ 2.7GHz
0.5dB@3.3 ~ 3.8GHz
0.6dB@4.9 ~ 6.0GHz
- High Isolation: 34dB@2.3 ~ 2.7GHz
30dB@3.3 ~ 3.8GHz
25dB@4.9 ~ 6.0GHz
- DFN 1.5mm×1.5mm 6 Lead Green Package
- Low Cost and Good Reliability Performance

■ Pin Functional Schematic and Assignment (Top View)



■ General Description

The GW2176 is a GaAs MMIC SPDT switch in a DFN 1.5mm×1.5mm 6 lead plastic package. The GW2176 features low insertion loss, high isolation and positive voltage operation with 2 controls. Typical applications are for WiMAX and IEEE WLAN 802.11 a/b/g/n system or systems operating frequency DC to 6GHz that employs antenna for transmit and receive diversity.

Pin No.	Pin Name	Description
1	Vcont1	Voltage Control 1
2	RFC(Input)	Input Port
3	Vcont2	Voltage Control 2
4	RF2(Output2)	Output2 Port
5	GND	Ground
6	RF1(Output1)	Output1 Port

■ Electrical Specifications at 25°C with (0, +3V) Control Voltages, 8pF Capacitor

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Insertion Loss	2.3 - 2.7 GHz	-	0.40	0.65	dB
	3.3 - 3.9 GHz	-	0.50	0.75	
	4.9 - 6.0 GHz	-	0.60	0.85	
Isolation (Input to Output1, Input to Output2)	2.3 - 2.7 GHz	31	34	-	dB
	3.3 - 3.8 GHz	27	30	-	
	4.9 - 6.0 GHz	22	25	-	
Isolation (Output1 to Output2)	2.3 - 2.7 GHz	24	27	-	dB
	3.3 - 3.8 GHz	21	24	-	
	4.9 - 6.0 GHz	17	20	-	
Input/Output Return Loss	2.3 - 2.7 GHz	10	20	-	dB
	3.3 - 3.8 GHz	10	18	-	
	4.9 - 6.0 GHz	10	20	-	
Unused Port Return Loss	2.3 - 2.7 GHz	10	20	-	dB
	3.3 - 3.8 GHz	10	18	-	
	4.9 - 6.0 GHz	10	15	-	
Input Power for 1 dB compression	2.3 - 2.7 GHz	-	37	-	dBm
	3.3 - 3.8 GHz	-	37	-	
	4.9 - 6.0 GHz	-	37	-	
Switch Time	50% CTL to 90/10%	-	100	-	ns
Control Current	Input Power +20dBm	-	2	30	μA

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