



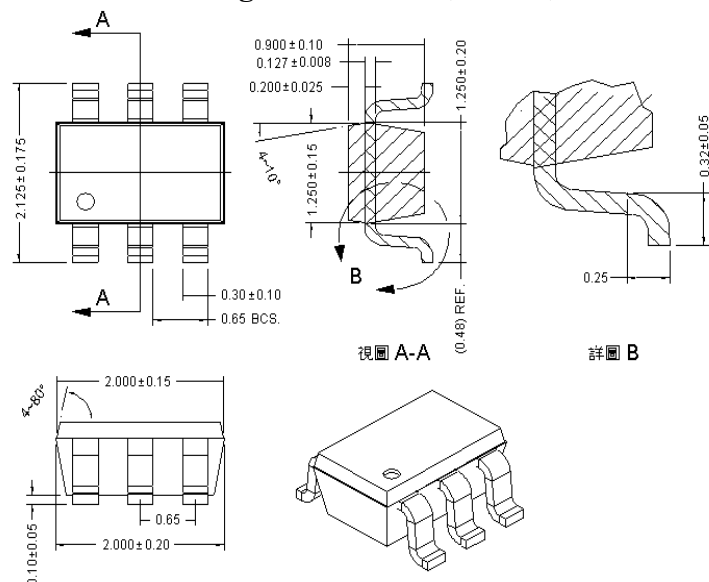
■ Features

- Low Insertion Loss: 0.4dB @ 2.5GHz
- High Isolation: 30dB @ 2.5GHz
- P_{-1dB}: +31dBm Typical @ +3V
- IIP3: 55dBm @ Input Power up to 20dBm
- ESD Capability: 1KV (HBM)
- T/R Switches in 802.11b/g/n/ac WLAN Systems
- T/R Switches in ISMB and LoRa Systems

■ General Description

The GW1179A is a CMOS SOI SPDT switch in a SOT-363 6 lead plastic package. The GW1179A features low insertion loss and positive voltage operation with low DC power consumption. Typical applications are for the variety of analog and digital wireless communication systems.

■ SOT-363 Package Dimensions (Unit: mm)



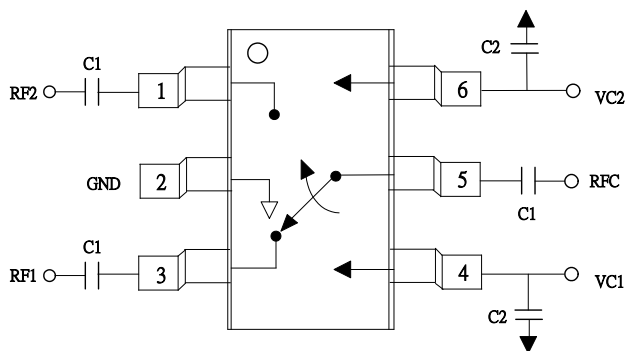
■ Electrical Specifications at 25°C with 0, +3V Control Voltages

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Insertion Loss	Input Power +25dBm 0.05-1.0GHz	-	0.3	0.5	dB
	1.0-2.5GHz	-	0.4	0.6	
Isolation	Input Power +25dBm 0.05-1.0GHz	26	32	-	dB
	1.0-2.5GHz	24	30	-	
VSWR	Insertion Loss state DC-2.5GHz	-	1.2	-	-
Input Power for 1 dB compression	0.1-2.5GHz, 2.3V ≤ V _{cont1} -V _{cont2} < 3.3V	-	32	-	dBm
	0.1-2.5GHz, 1.8V ≤ V _{cont1} -V _{cont2} < 2.3V	-	26	-	
Second Harmonics	f=2.5GHz, P _{in} =25dBm	-	-75	-	dBc
Third Harmonics	f=2.5GHz, P _{in} =25dBm	-	-75	-	dBc
Intermodulation Intercept Point (IIP3)	For two tones (f=2.5GHz, 2.501GHz) @ Input power +20dBm	-	55	-	dBm
Switch Time	Rise, Fall (10/90% or 90/10% RF) On, Off (50% CTL to 90/10% RF)	-	200	-	ns
Control Current	Input Power +25dBm	-	8	15	μA

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



Pin Connections and Internal Block



DC blocking capacitors C1 are required on all RF ports.
C1=56pF, C2=1000pF for operation >500MHz

Pin Assignment

Pin No.	Pin Name
1	RF2
2	GND
3	RF1
4	VC1
5	RFC
6	VC2

Absolute Maximum Ratings

Parameter	Value	Unit
Switch Control VC1, VC2	3.5	V
Max. input Power, $2.3V \leq V_{cont1} - V_{cont2} \leq 3.3V$	33	dBm
Max. input Power, $1.8V \leq V_{cont1} - V_{cont2} \leq 2.3V$	27	dBm
Operating Temperature	-40 to +85	°C
Storage Temperature	-65 to +150	°C

SW Truth Table

VC1	VC2	RFC-RF1	RFC-RF2
High	Low	Isolation	Insertion Loss
Low	High	Insertion Loss	Isolation

High: 1.6V to 3.5V
Low: 0V to 0.4V

Recommended Operating Conditions

Parameter	MIN.	MAX.	Unit
Control Voltage (High)	+1.6	+3.5	V
Control Voltage (Low)	0	+0.4	V
Operating frequency	0.1	6.0	GHz