DESCRIPTION

The SW1179 is a MMIC single-pole two-throw (SP2T) high power switch in a low-cost miniature SOT363-6 package. The SW1179 is ideally suited for applications where high power, low insertion loss, small size and low cost are required. Typical applications are for handset systems that connect separate transmit and receive functions to a common antenna, as well as other related handset and general-purpose applications. This part can be used in all systems operating up to 6 GHz requiring high power at low control voltage.

The SW1179 is available in a small lead-free,

RoHS-Compliant, SOT363 6-pin package。

FEATURES

- **Low Insertion Loss 0.35dB@1.0GHz;**
- **Low Harmonics;**
- **P0.1dB +32dBm typical;**
- **No DC power consumption;**
- Operating frequencies: 100~3000MHz;
- Slim SOT363-6L package;

APPLICATIONS

- Smart phones, Tablet PCs;
- Low power wireless system such as LORA and NB-IOT
- IEE802.11b/g/n WLAN Network
- Bluetooth

PIN CONFIGURATION

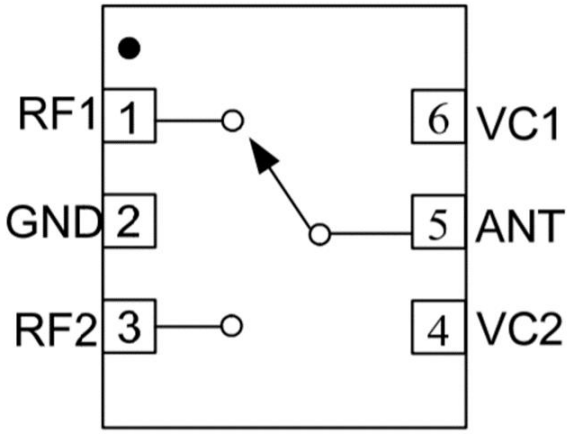
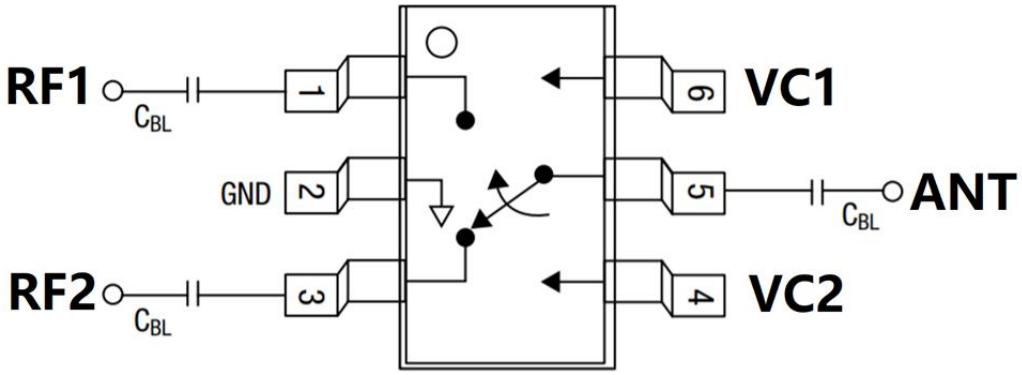


Figure 1. SW1179 Pin Configuration

TYPICAL APPLICATION



DC blocking capacitors (C_{BL}) must be supplied externally for positive voltage operation.
C_{BL} = 100 pF for operation >500 MHz.

Figure 2. Application Schematic SW1179

ORDER INFORMATION

Table 1. Order Information

Part Number	Temperature	Package	RoHS	Mark	SPQ
SW1179	-40℃ ~ 85℃	SOT363-6/SC-70	Yes	79	Tape and Reel 3000 pcs/Reel

ABSOLUTE MAXIMUM RATINGS

Table 2. Limiting Values

Parameter	Symbol	Values			Unit
		Min.	Typ.	Max.	
RF input power	Pin	-	-	+37	dBm
Voltage at pin EN	V_{EN}	1.5	3.3	6.0	V
Package thermal resistance	θ_{JA}	-	148.2		℃/W
Junction temperature	T_J	-	-	150	℃
Storage temperature range	T_{STG}	-65	-	150	℃
Ambient temperature range	T_{amb}	-40	-	85	℃

Solder temperature(10s)		-	260	-	℃

ELECTRICAL CHARACTERISTICS

(SW1179 EVB[1)]; V_{CC}=3.0V, T_A=-40~+85℃, f=100MHz to 3000MHz; unless otherwise noted.)

Table 3. Electrical Characteristics

PARAMETER		CONDITIONS	MIN	TYP	MAX	UNITS
DC ELECTRICAL CHARACTERISTICS						
V_{EN}	Digital Input-Logic High		1.5	3.3	3.6	V
V_{EN}	Digital Input-Logic Low				0.45	V
AC ELECTRICAL CHARACTERISTICS						
IL	Insertion Loss	F<1000MHz		0.35		dB
IL	Insertion Loss	1000MHz<F<3000MHz		0.45		dB
RL	Return Loss	F<1000MHz		20.0		dB
ISL	Reverse Isolation	F<1000MHz		30.0		dB
IP0.1dB	In-Band input 0.1dB-compression point	f=1000MHz;		+32		dBm
HD2	Second Harmonics	f=400MHz;		+78		dBc
HD3	Third Harmonics	f=400MHz;		+70		dBc
t_{on}	Turn-on time[2)]			20		ns
t_{off}	Turn-off time[3)]			20		ns

***Note1**: 0.08dB PCB losses are subtracted.*

***Note2&3:** Within 10% of the final gain.*

APPLICATION INFORMATION

Table 4: list of RF control path

State	VC1	VC2	RF1	RF2
1	0	1	**ON**	OFF
2	1	0	OFF	**ON**

PACKAGE INFORMATION

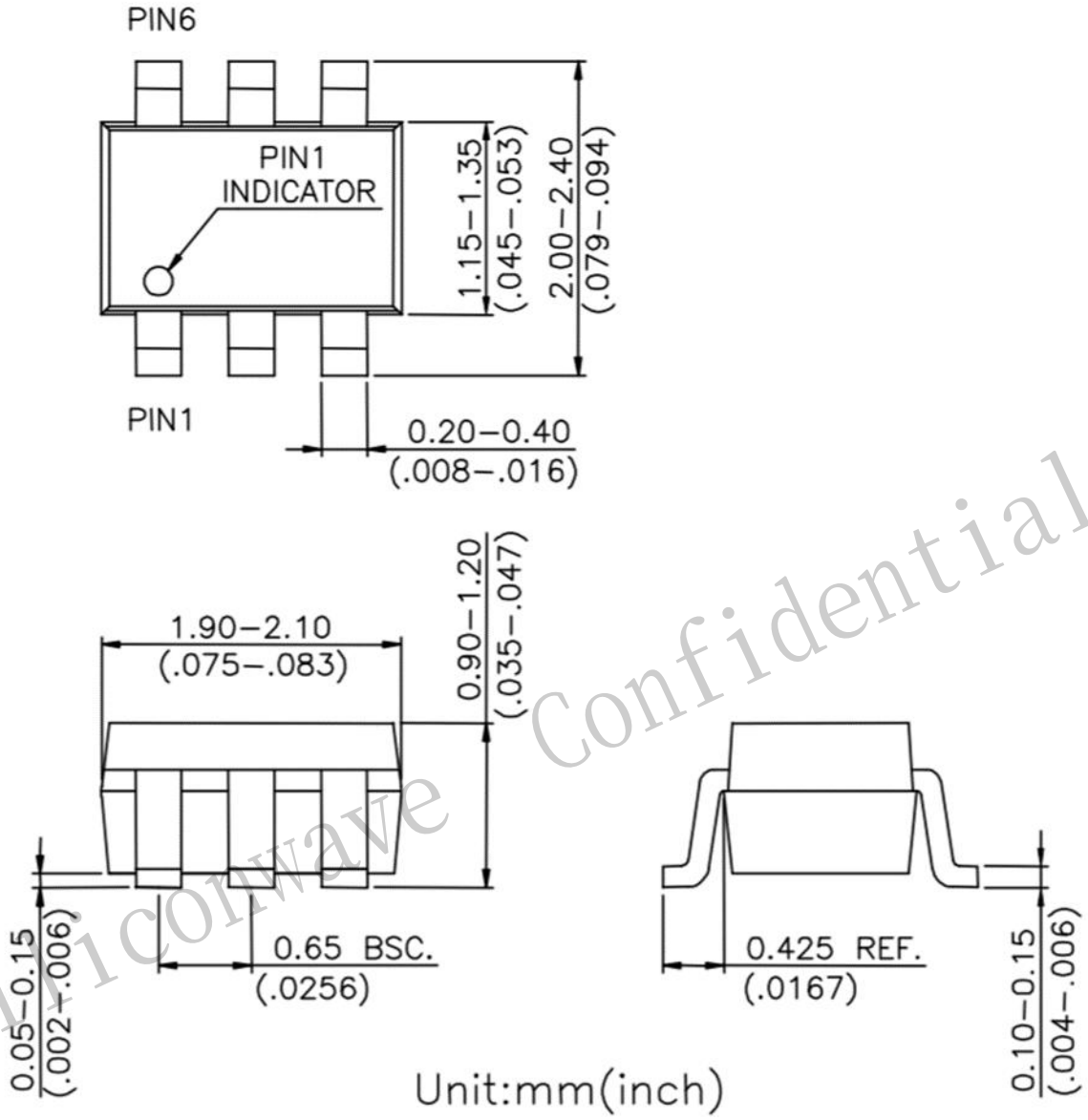
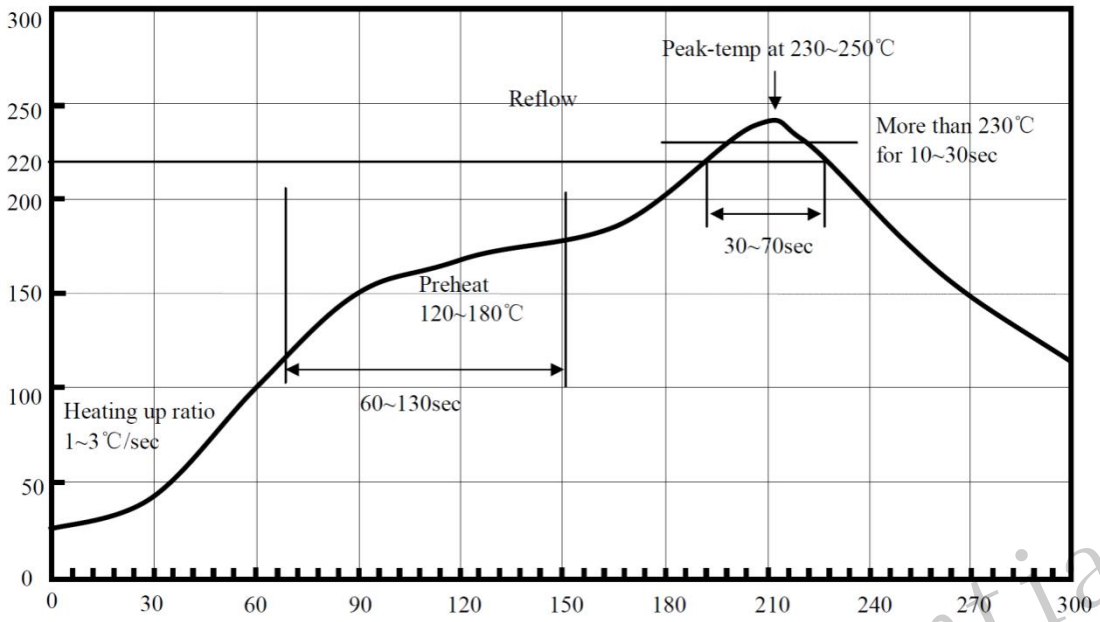


Figure 3. Package Outline

RECOMMENDED SOLDER TEMPERATURE



Recommended Temperature Sn95.5Ag4.0Cu0.5

ROHS COMPLIANT

The product does not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE), and are therefore considered RoHS compliant.