



DATA SHEET



AWM680TX / AWM681TX 5.8GHz Transmitter Module

承認	品保	工程
Approve	QA	E/E



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1. Descriptions:

Airwave 5.8GHz Audio/Video wireless RF module contains one Transmitter and one Receiver. Using of the most popular 5.8GHz ISM band and being designed with high reliability, Airwave RF module can transmit/receive a wide band audio & video signals up to 500 feet in open area.

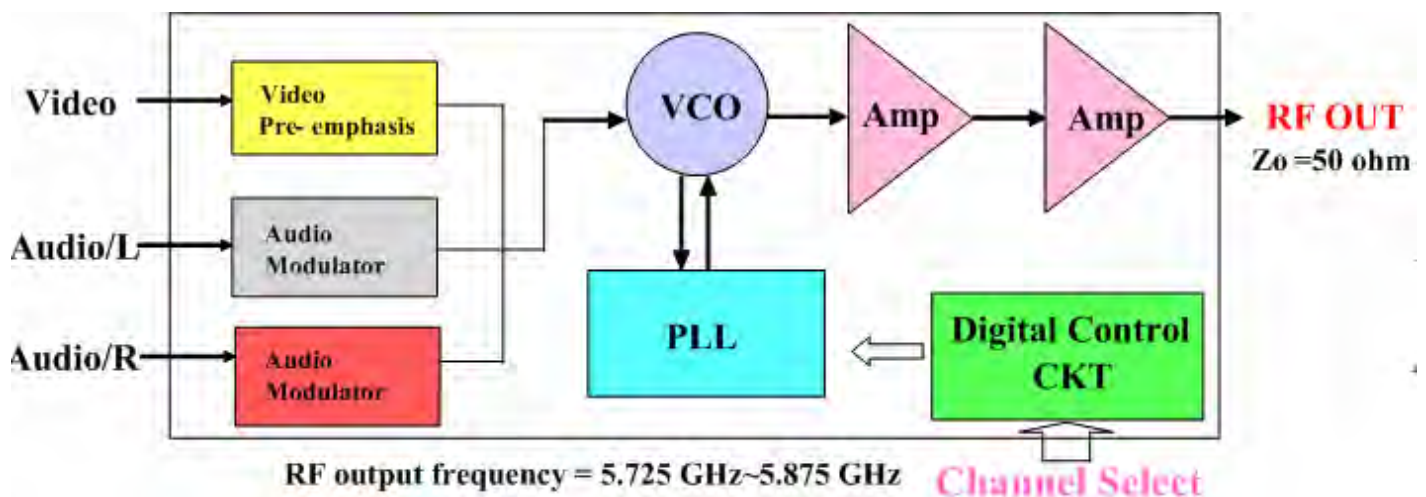
2. Feature:

- Use worldwide 5.8GHz ISM band
- Design in compact size and low power consumption
- Reach highly efficient FM-FM modulation/demodulation scheme
- Be compatible with both NTSC and PAL video formats
- Integrate Audio/Video input and output onto one module base-band PCB
- Don't need external Audio circuit
- Provide with 7 selectable channels
- Set tack switch for channel selection

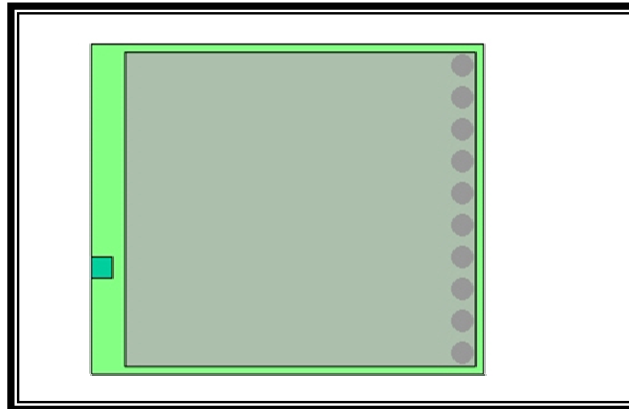
3. Application:

- AV Sender
- Baby monitor
- Surveillance
- Wireless Camera

4. Function block



5. PIN Define



6. PIN Descriptions

AWM680/681TX

PIN	NAME	Descriptions	PIN	NAME	Descriptions	
01	GND	Ground	06	Audio-R	Audio Right CH Input	
02	SW	Connect to external tack switch for CH selection (see note1)	07	Audio-L	Audio Left CH Input	
03	BIT2		see note2	08	Video	Video Input
04	BIT1			09	VCC	DC +5V power supply in
05	BIT0			10	BYPASS	Bypass capacitor

Note1:

SW	Descriptions	Frequency
	Tack switch	5740→5760→5780→5800→5820→5840→5860(MHz) CH1 CH2 CH3 CH4 CH5 CH6 CH7

Note2:

Pin3 BIT2	Pin4 BIT1	Pin5 BIT0	Descriptions	Frequency
0	0	0	Pin 3, Pin 4, Pin 5 connect to GND.	5740MHz (CH1)
0	0	1	Pin 3 and Pin 4 connect to GND, Pin 5 OPEN.	5760MHz (CH2)
0	1	0	Pin 3 and Pin 5 connect to GND, Pin 4 OPEN.	5780MHz (CH3)
0	1	1	Pin 3 connect to GND, Pin 4 and Pin 5 OPEN.	5800MHz (CH4)
1	0	0	Pin 4 and Pin 5 connect to GND, Pin 3 OPEN.	5820MHz (CH5)
1	0	1	Pin 4 connect to GND, Pin 3 and Pin 5 OPEN.	5840MHz (CH6)
1	1	0	Pin 5 connect to GND, Pin 3 and Pin 4 OPEN.	5860MHz (CH7)



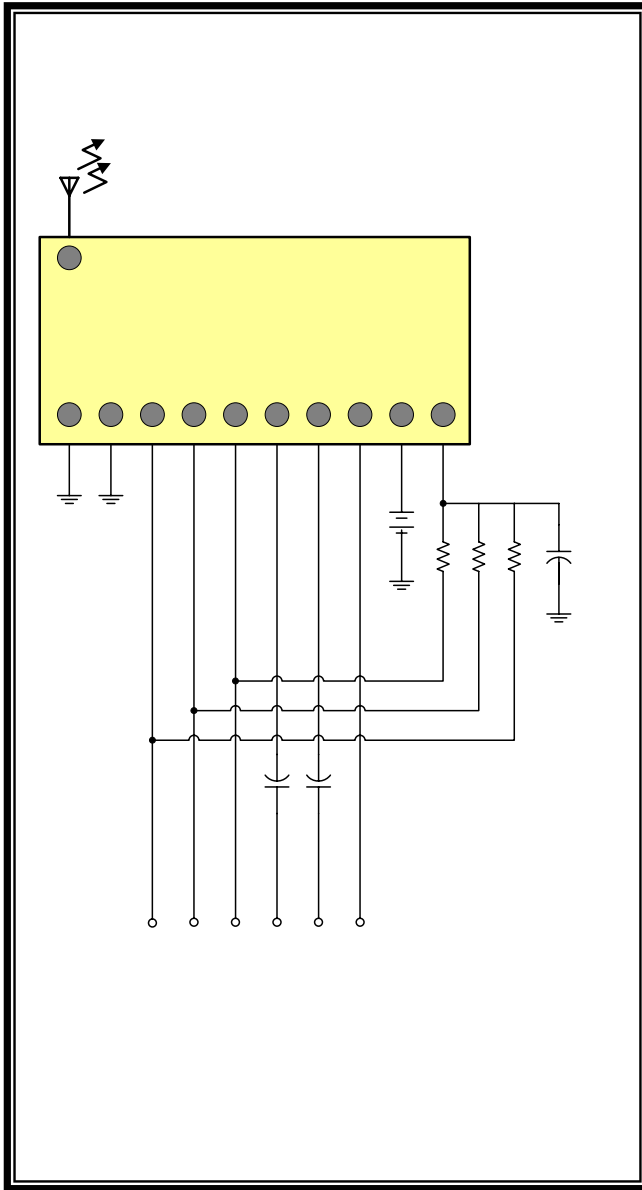
7. Absolute Maximum Ratings

Parameters	Model.	Min.	Typ.	Max.	Unit
Storage Temperature Range	AWM680RX	-40	-	85	°C
	AWM681RX	-40	-	85	
Supply voltage	AWM680RX	-0.5	-	5.5	V
	AWM681RX	-0.5	-	5.5	

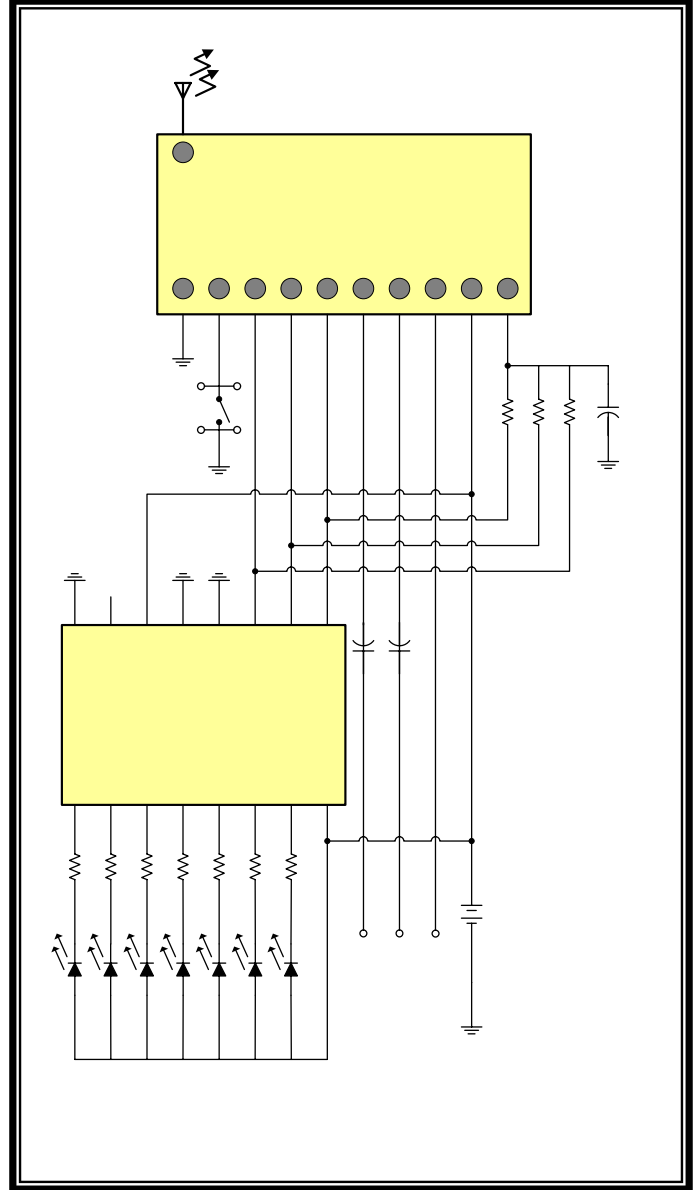
8. DC/AC Electrical characteristic:

RF/ DC Parameters		Min.	Typ.	Max.	Unit
Supply voltage (DC)	AWM680TX	+3.6		+5	V
	AWM681TX	+4		+5	
Supply current	AWM680TX	80	90	100	mA
	AWM681TX	230	270	310	
RF output power	AWM680TX	10	11		dBm
	AWM681TX	19	20		
Operating temperature		-10		60	°C
Carrier to Subcarrier Ratio	AWM680TX AWM681TX	24		29	dBc
RF Deviation- Video (Input 100KHz, 1Vpp)	AWM680TX		4.3		MHz
RF Deviation- Audio (Input 1KHz, 1.5Vpp)	AWM680TX	R	80		kHz
		L	72		
RF Deviation- Video (Input 100KHz, 1Vpp)	AWM681TX		4.3		MHz
RF Deviation- Audio (Input 1KHz, 1.5Vpp)	AWM681TX	R	80		kHz
		L	72		
Antenna Port Impedance			50		Ohm
Audio subcarrier frequency	left	6MHz			
	right	6.5MHz			
Operation Frequency Range		5725		5875	MHz
Channel Selection		PLL Synthesizer, 7CH (See Tab11)			
Channel Frequency		Ch1=5740, CH2=5760, CH3=5780 Ch4=5800, CH5=5820, CH6=5940 Ch7=5860			
Video-Audio Modulation/Demodulation Type		FM-FM			

9. Test circuit:



TX-DIP Switch Module



TX-Tact Switch Module



10. 參考電路用料清單

AWM680/681TX Demo Board DIP SW

品名規格	使用量	插件位置
E/CAP 33UF, 4*7 10V,SS010M0033SBT(LF)	2	C1,C2
E/CAP 470uF, 8*9 16V	3	C3,C4,C5
DIODES 1N4001, 1A/100V	1	D1
LED 紅色圓 MO34PD, SH-031-RR-L	1	D2
7805 Regulator	1	IC2
RCA PIN JACK 紅白黃, RCA-316	1	JACK3
DC POWER JACK(低錫), DS-210B 5.5mm	1	JACK1
0603 RESISTOR 0R, ±5% 1/16W RM06JTN0(LF)	1	R1
0603 RESISTOR 2.2KR, +5% 1/16W RM06JT222(LF)	3	R2,R3,R4
0603 RESISTOR 680R, +5% 1/16W RM06JTN681(LF)	1	R5
DIP SWITCH 指撥開關, DPL-03	1	SW1

AWM680/681TX Demo Board Tact

品名規格	使用量	插件位置
E/CAP 33UF, 4*7 10V,SS010M0033SBT(LF)	2	C1,C2
E/CAP 470uF, 8*9 16V	3	C3,C4,C5
DIODES 1N4001, 1A/100V	1	D1
LED 紅色圓 MO34PD, SH-031-RR-L	8	D2,D3,D4,D5,D6,D7,D8,D9
7805 Regulator	1	IC2
74HCT138D, 3-to-8 line decoder	1	IC1
RCA PIN JACK 紅白黃, RCA-316	1	JACK3
DC POWER JACK(低錫), DS-210B 5.5mm	1	JACK1
0603 RESISTOR 0R, ±5% 1/16W RM06JTN0(LF)	1	R1
0603 RESISTOR 220R, ±5% 1/16W RM06JT221	7	R6,R7,R8,R9,R10,R11,R12
0603 RESISTOR 680R, +5% 1/16W RM06JTN681(LF)	1	R5
TACTING SWITCH, TS-27-B L=3.85mm	1	SW2

11. Dimension:

