

Data Sheet



AWM682 RX

5.8 GHz Wideband FM Receiver

AIRWAVE TECHNOLOGIES INC.



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1. Descriptions:

The Airwave AWM682RX 5.8GHz Audio/Video wireless RF receiver module uses the popular 5.8GHz ISM band. Designed with high reliability, the Airwave RF receiver module is compliant with the criteria of FCC and R&TTE.

The AWM682 RX module uses down conversion concept to convert the 5.8GHz FM RF signal to 480 MHz IF signal, and then obtain base band via PLL FM demodulation IC.

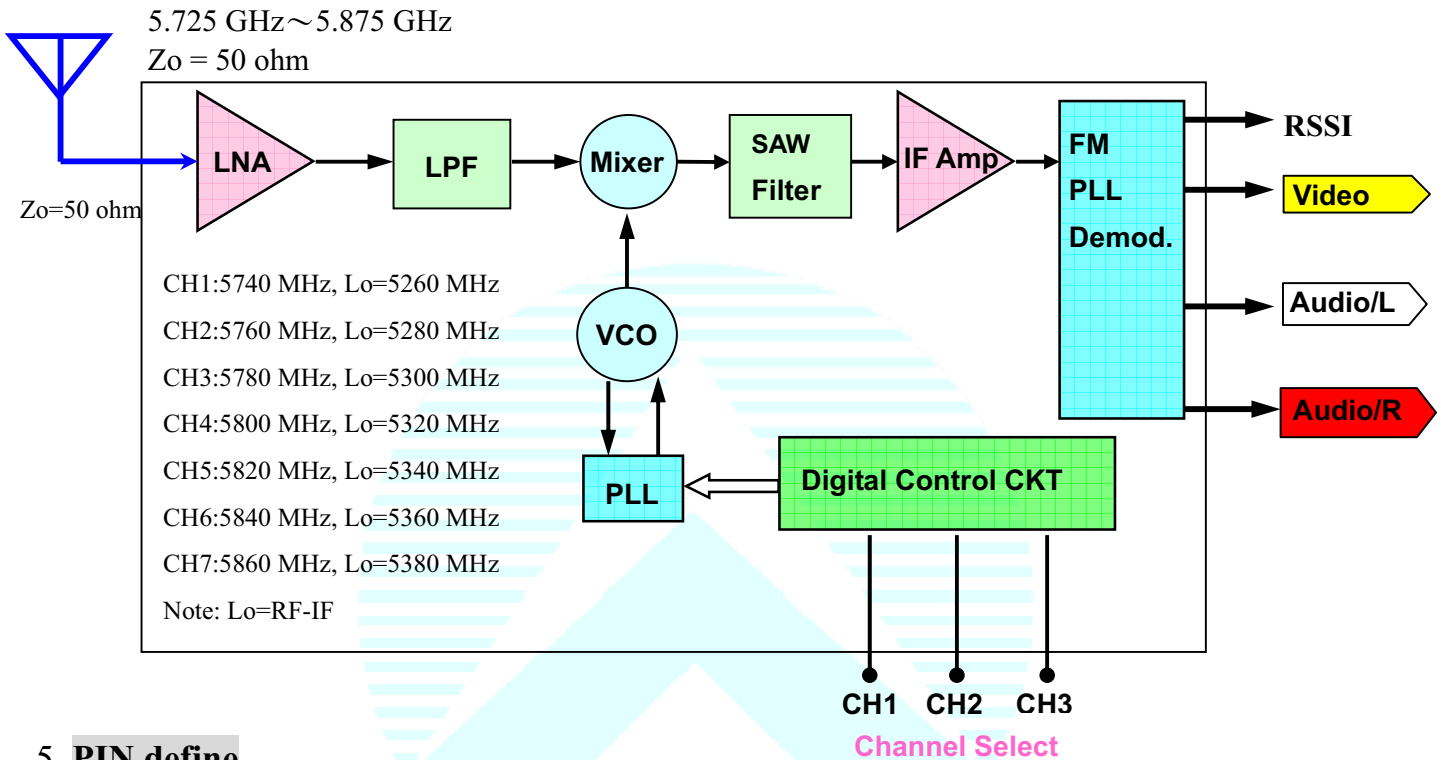
2. Feature:

- Worldwide 5.8GHz ISM band (5725 MHz~5875 MHz).
- Conform to R&TTE & FCC stipulation.
- Compatible with both NTSC and PAL video formats.
- Compact size and low power consumption.
- Highly efficient FM-FM modulation/demodulation scheme.
- Integrating Audio/Video input and output into one module base band PCB.
- Provide with 7 selectable channels.
- Received signal strength indicator (RSSI).

3. Application:

- **AV Sender**
- **Baby Monitor**
- **Surveillance**
- **Wireless Camera**

4. Function block:



5. PIN define

- Pin 01 GND
- Pin 02 RSSI
- Pin 03 A/R
- Pin 04 A/L
- Pin 05 Video
- Pin 06 VCC
- Pin 07 Bypass
- Pin 08 N/A
- Pin 09 Bit2
- Pin 10 Bit1
- Pin 11 Bit0
- Pin 12 GND

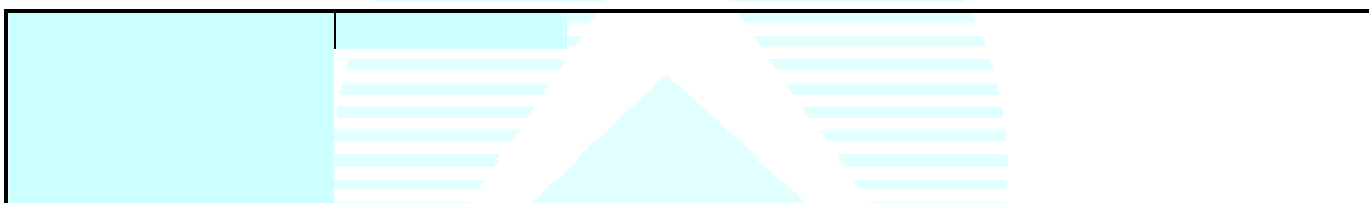


- GND Pin 13
- RFIN Pin 14

6. PIN descriptions:

AWM682 RX

PIN	NAME	Descriptions	PIN	NAME	Descriptions
01	GND	Ground	08	N/A	Not Used
02	RSSI	Received signal strength indicator	09	Bit2	Ch select. (See table below)
03	A/R	Right sound signal output	10	Bit1	Ch select. (See table below)
04	A/L	Left sound signal output	11	Bit0	Ch select. (See table below)
05	Video	Video signal output	12	GND	Ground
06	VCC	DC +5V supply in	13	GND	RF Ground Pad
07	Bypass	DC Bypass	14	RF IN	RF received signal input Pad ⁽¹⁾



Channel selection are seven channels by Pin20, Pin19 and Pin 18 for dip sw mode As shown below :

Pin09	Pin10	Pin11	Descriptions	Receiver Frequency
Bit2	Bit1	Bit0		
0	0	0	Pin09, Pin10, Pin11 connect to GND.	5740MHz (CH1)
0	0	1	Pin 09 and Pin 10 connect to GND, Pin 11 OPEN.	5760MHz (CH2)
0	1	0	Pin 09 and Pin 11 connect to GND, Pin 10 OPEN.	5780MHz (CH3)
0	1	1	Pin 09 connect to GND, Pin 10 and Pin 11 OPEN.	5800MHz (CH4)
1	0	0	Pin 10 and Pin 11 connect to GND, Pin 09 OPEN.	5820MHz (CH5)
1	0	1	Pin 10 connect to GND, Pin 09 and Pin 11 OPEN.	5840MHz (CH6)
1	1	0	Pin 11 connect to GND, Pin 09 and Pin 10 OPEN.	5860MHz (CH7)

Note 1: Forced Pin 02 (RSSI) to OPEN if RSSI function is unnecessary.

7. Absolute maximum ratings:

RF/ DC Parameters		Min.	Typ.	Max.	Unit
Storage Temperature Range	AWM682 RX (RSSI)	-25	-	85	°C
Supply voltage	AWM682 RX(RSSI)	-0.5	-	5.5	V

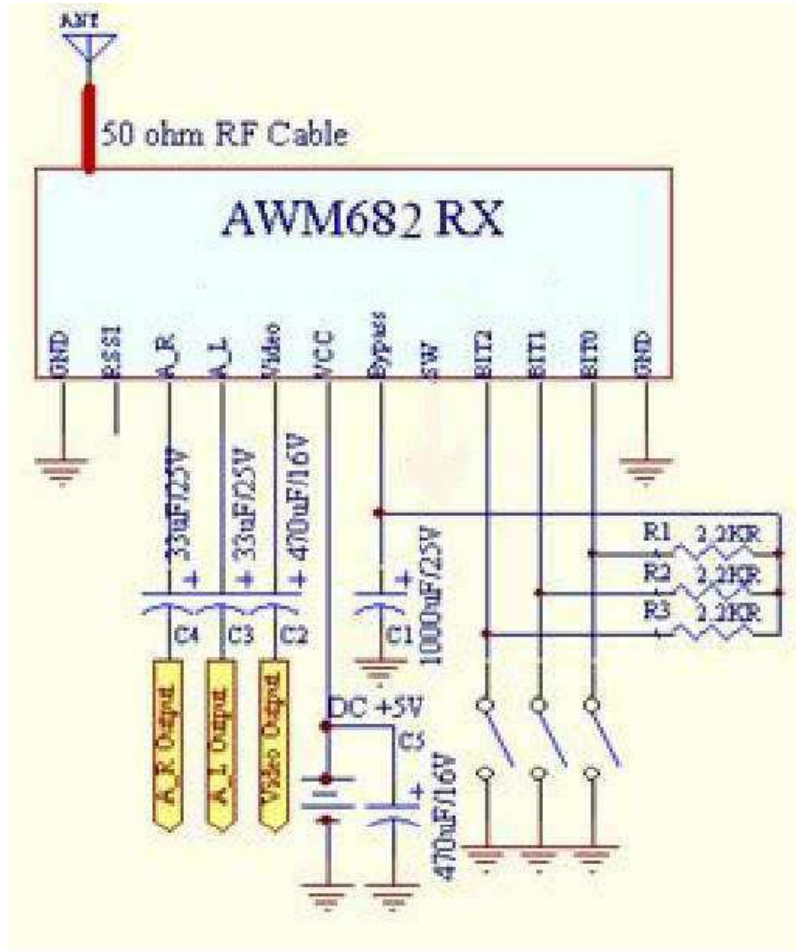
The maximum rating must not be exceeded at any time. Do not operate the device under conditions outside the above.

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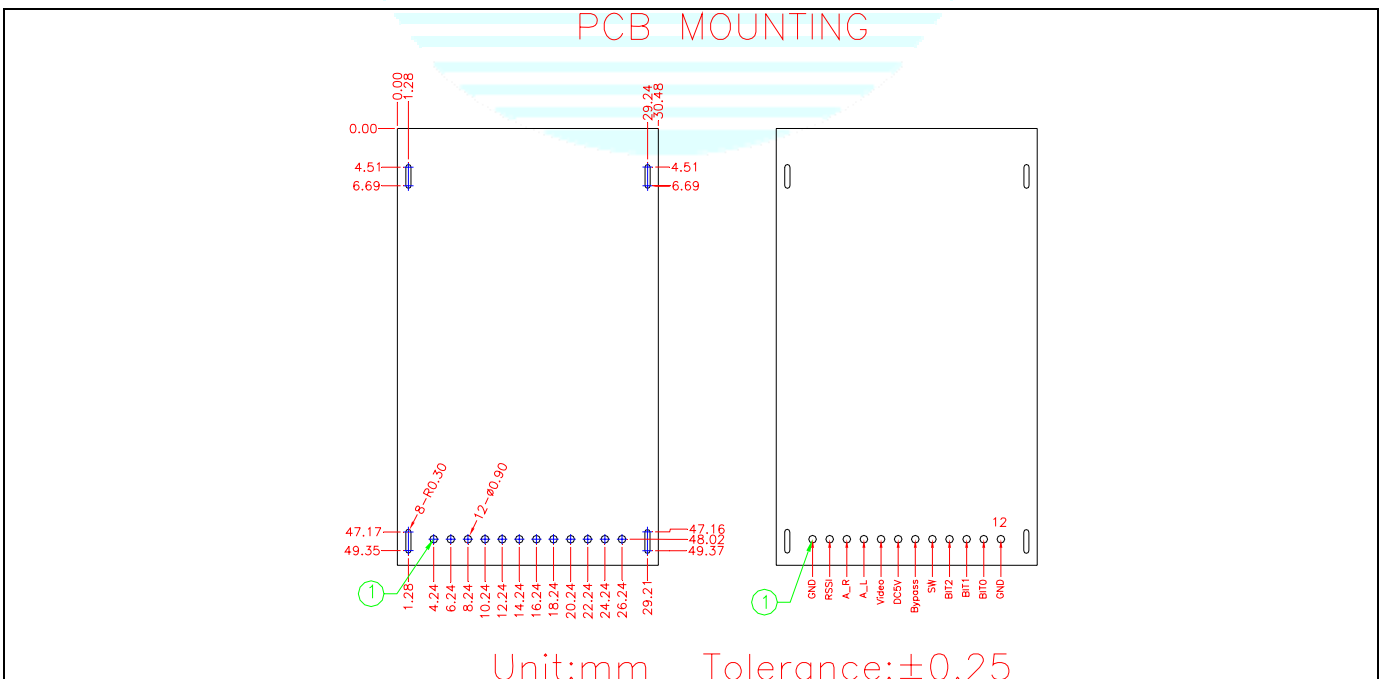
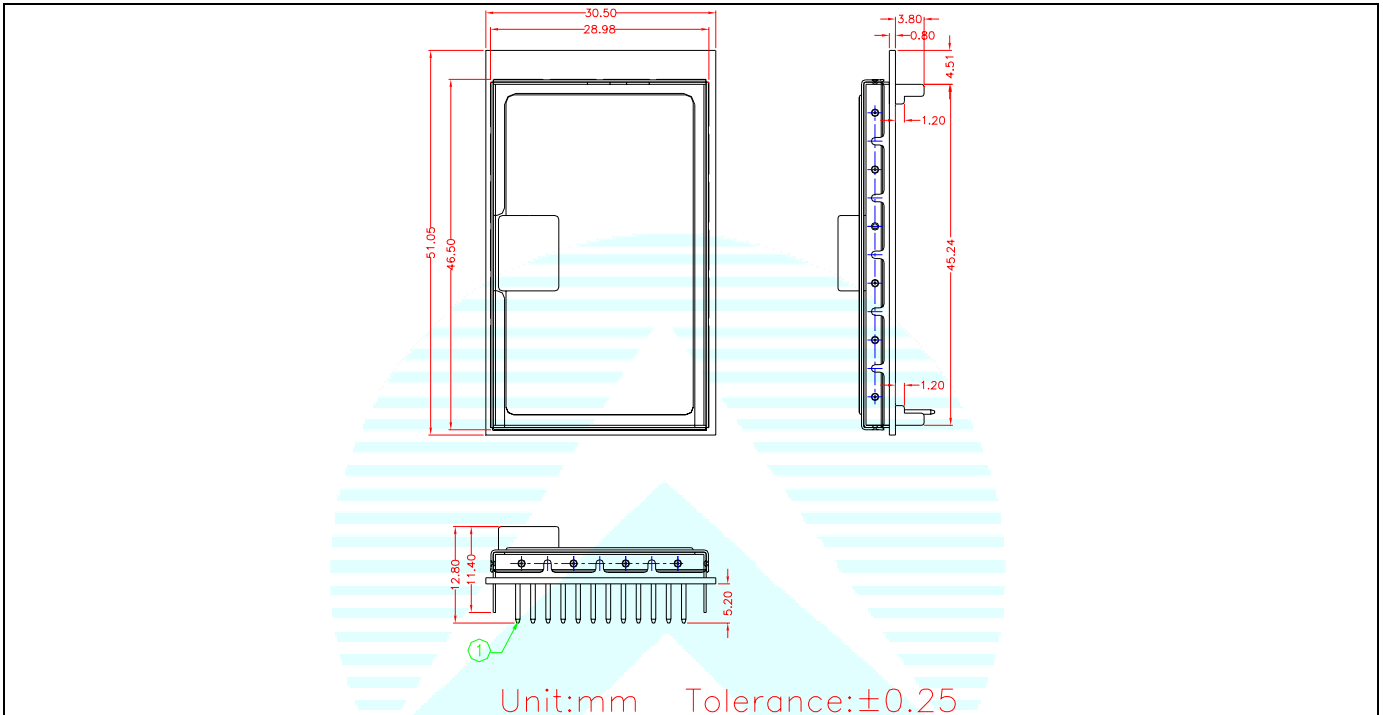
8. DC/AC Electrical characteristic:**(VCC=DC +5V, 25°C)**

RF/ DC Parameters	Min.	Typ.	Max.	Unit
Supply voltage	4.9	5	5.1	V
Supply current	190	210	240	mA
RF Input Level	-85		-10	dBm
Operating temperature	-10	-	60	°C
Operation Frequency Range	5725		5875	MHz
Channel Selection	PLL Synthesizer, 7CH (See Tab11)			
Channel Frequency	CH1 : 5740 MHz, CH2 : 5760 MHz CH3 : 5780 MHz, CH4 : 5800 MHz CH5 : 5820 MHz, CH6 : 5840 MHz CH7 : 5820 MHz.			
Video-Audio Modulation/Demodulation Type	FM-FM			
Video				
Output Signal Level	1V _{p-p} , typ. (+/-0.2V)			
Frequency Response	+/-5 dB, max. 50Hz~5.5MHz			
S/N Ratio (100KHz, 1V _{p-p} Sine Wave)	40dB, min.			
Audio				
Output Frequency Range	50Hz ~ 20KHz			
Output Signal Level (Modulation Signal : 1kHz Sine Wave)	1.4~1.9Vp-p			
RSSI				
RSSI output voltage (RF input -10dBm~-85dBm)	0.2~1.5V			

9. Test circuit:



10. Dimension:



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