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DATA SHEET

AWM650G RX

2.4 GHz Wideband FM Receiver Module

承認	承認	品保	工程
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Approve	Approve	QA	E/E

Pb Lead Free

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Revision History

Version	Item	Change	Reason	Date
0.1	Initial version.			3/2/2009
1.0		Add without pin drawing		3/13/2009
2.0		Modify Ch Selection pins No..		3/23/2009
3.0		Without pin dimension		3/24/2009

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1. Descriptions:

Airwave 2.4GHz Audio/Video wireless RF module contains one Transmitter and on Receiver. Using of the most popular 2.4GHz ISM band and designed with high reliability. Airwave RF module is compliance with the criteria of FCC and R&TTE which can transmit/receive a wide band audio & video signals up to 300 feet in open area.

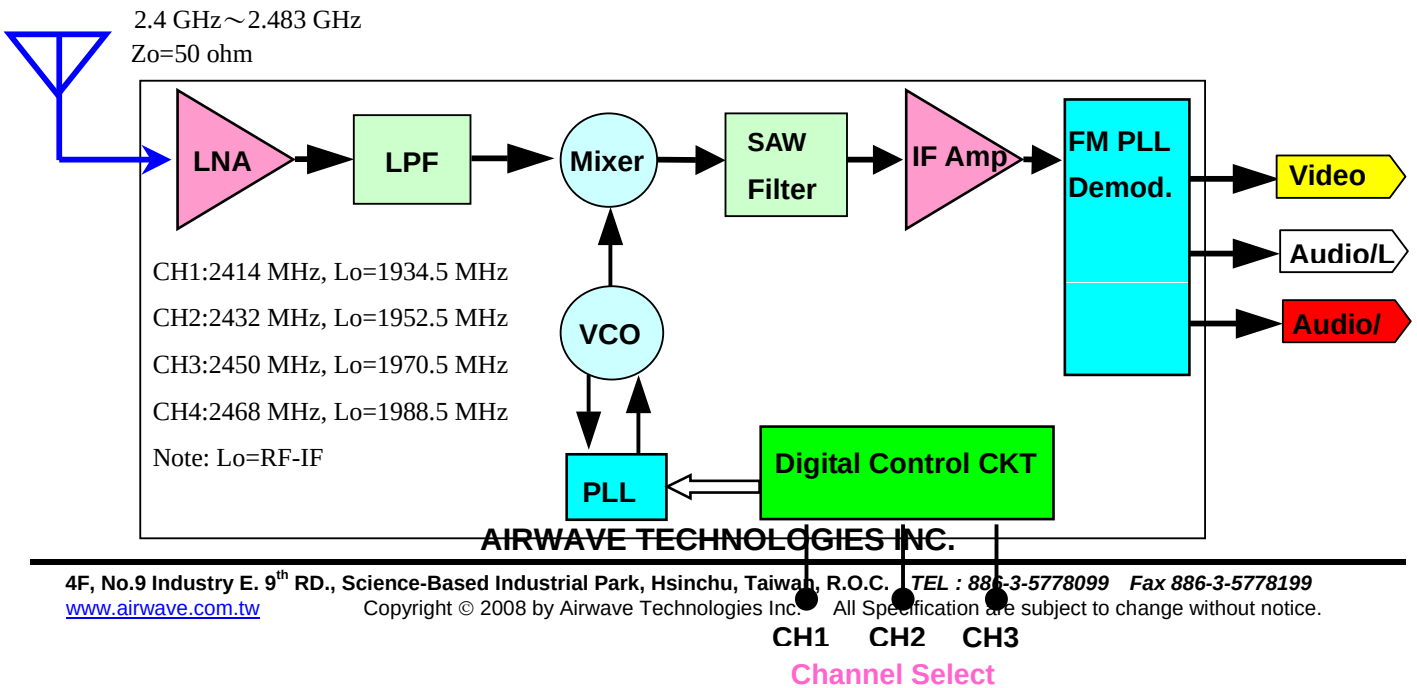
2. Feature:

- Worldwide 2.4GHz ISM band (2400MHz～2483MHz).
- Conform to R&TTE & FCC stipulation.
- Compatible with both PAL and NTSC 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

3. Application:

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

4. Function block:



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5. PIN Define (Top View)

Pin 01	**VCC**
Pin 02	**Bypass**
Pin 03	**GND**
Pin 04	**Audio_R**
Pin 05	**Audio_L**
Pin 06	**Video**
Pin 07	**CH3**
Pin 08	**CH2**
Pin 09	**CH1**

GND	Pin 10
RF IN	Pin 11
GND	Pin 12

6. PIN Descriptions:

PIN	NAME	Descriptions
01	VCC	DC +5V power supply in).
02	BYPASS	Bypass capacitor.
03	GND	Ground.
04	Audio_R	Right sound signal output.
05	Audio_L	Left sound signal output.
06	Video	Video signal output.
07	CH3	Channel select. (See table 1).
08	CH2	Channel select. (See table 1).
09	CH1	Channel select. (See table 1).
10	GND	Ground.
11	RF IN	RF received signal input

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12	GND	Ground

Channel selection is four channels and default value is ch4. Other channel can be selected by pulling low to enable.

Pin9 CH1	Pin8 CH2	Pin7 CH3	Descriptions	Received Frequency (Channel)
0	0	0	Pin 9, Pin8, Pin7 connect to GND.	2414MHz (CH1)
0	0	1	Pin 9 and Pin 8 connect to GND, Pin 7 OPEN.	2414MHz (CH1)
0	1	0	Pin 9 and Pin 7 connect to GND, Pin 8 OPEN.	2414MHz (CH1)
0	1	1	Pin 9 connect to GND, Pin 8 and Pin 7 OPEN.	2414MHz (CH1)
1	0	0	Pin 8 and Pin 7 connect to GND, Pin 9 OPEN.	2432MHz (CH2)
1	0	1	Pin 8 connect to GND, Pin 9 and Pin 7 OPEN.	2432MHz (CH2)
1	1	0	Pin 7 connect to GND, Pin 9 and Pin 8 OPEN.	2450MHz (CH3)
1	1	1	Pin 9, Pin 8 and Pin 7 are OPEN.	2468MHz (CH4)

7. Absolute Maximum Ratings:

Parameters	Min.	Typ.	Max.	Unit
Storage Temperature Range	-25	-	85	°C
Supply voltage	-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.

8. DC/AC Electrical characteristic:

(1) DC Electrical Characteristic:

RF/ DC Parameters	Min.	Typ.	Max.	Unit
Supply voltage	4.9	5	5.1	V
Supply current	150	160	175	mA
RF Input Level	-90		-10	dBm
Operating temperature	-10	-	60	°C
Operation Frequency Range	2400		2483	MHz
Channel Selection	PLL Synthesizer, 4CH (See Tabl1)			
Channel Frequency	CH1： 2414 MHz, CH2： 2432 MHz CH3： 2450 MHz, CH4： 2468 MHz			

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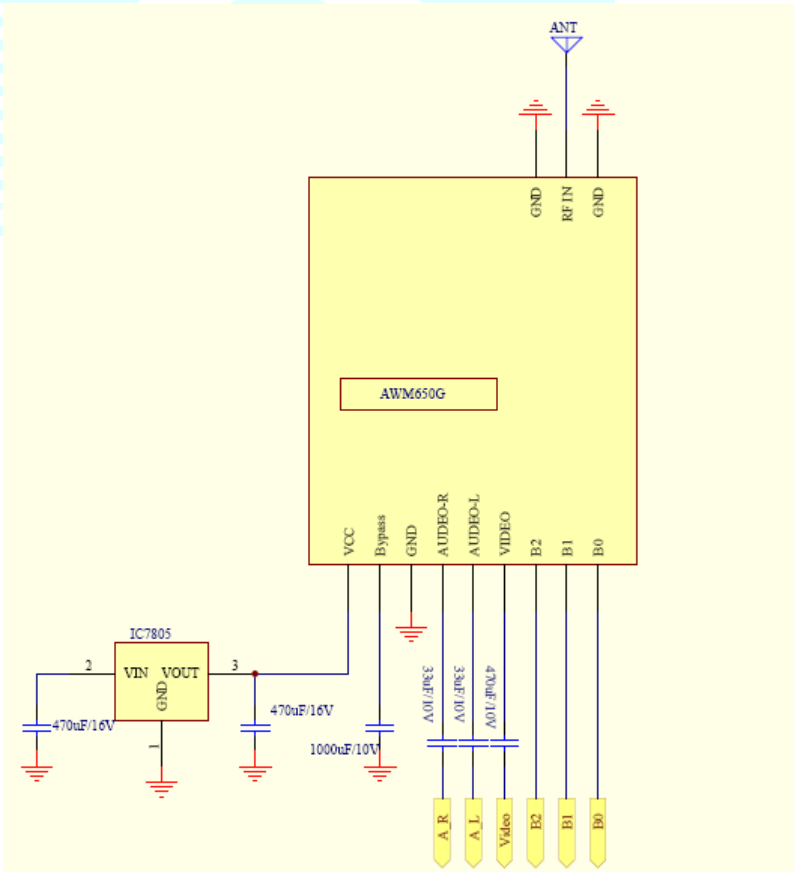
Video	
Output Signal Level	1V $_{P-P}$, typ. (+/-0.2Volt)
Frequency Response	+/-5 dB, max. 50Hz~5.5MHz
S/N Ratio(100KHz, 1V$_{P-P}$ Sine Wave)	40dB, min.
Audio	
Output Frequency Range	50Hz ~ 20KHz
Output Signal Level (Modulation Signal: 50Hz~15KHz Sine Wave)	2V$_{P-P}$, typ. (+/-0.3Volt)
S/N Ratio (50Hz ~ 15KHz)	50dB, typ. (+/-3dB)

9. Reference circuit:



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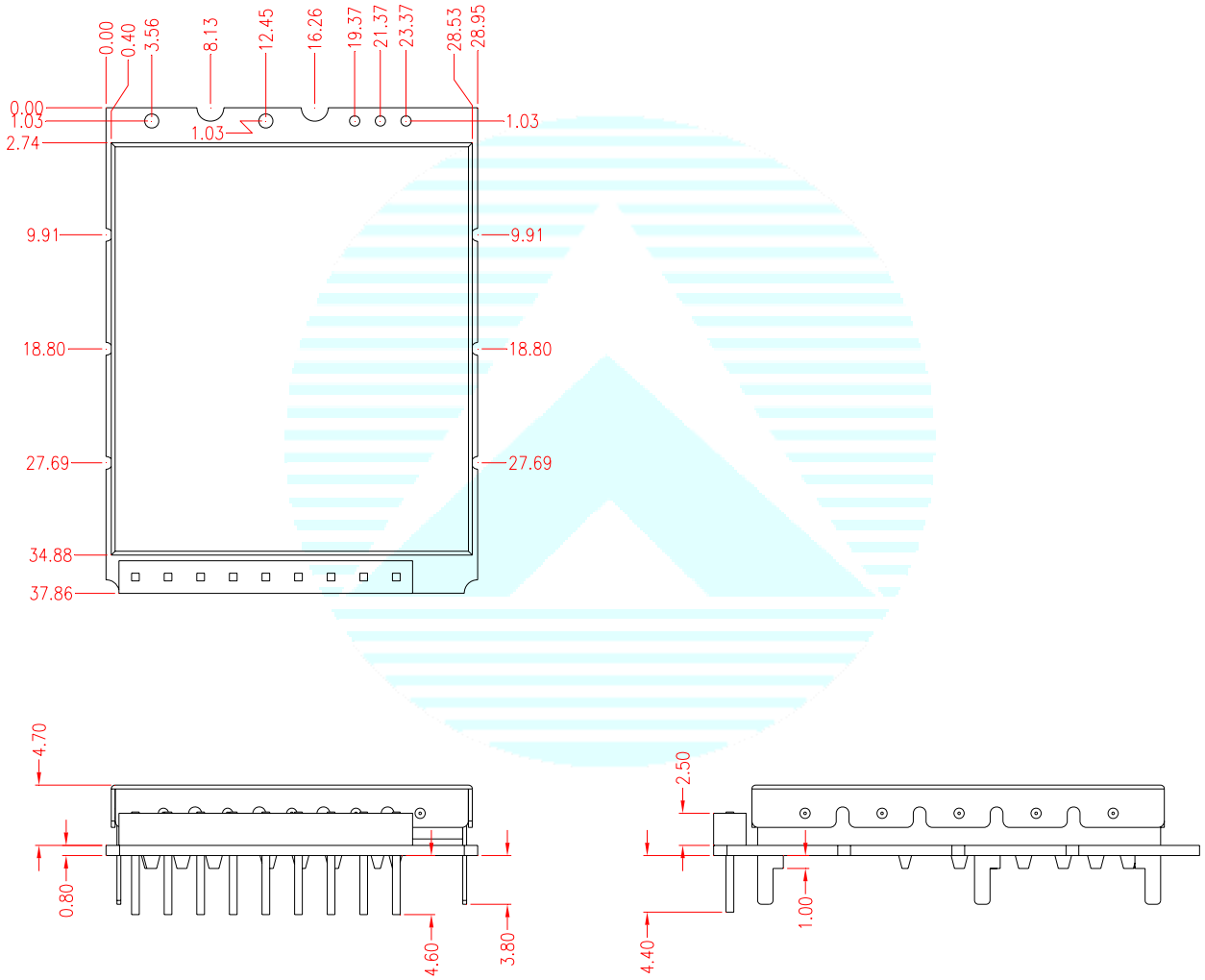
10. Dimension:

With PIN



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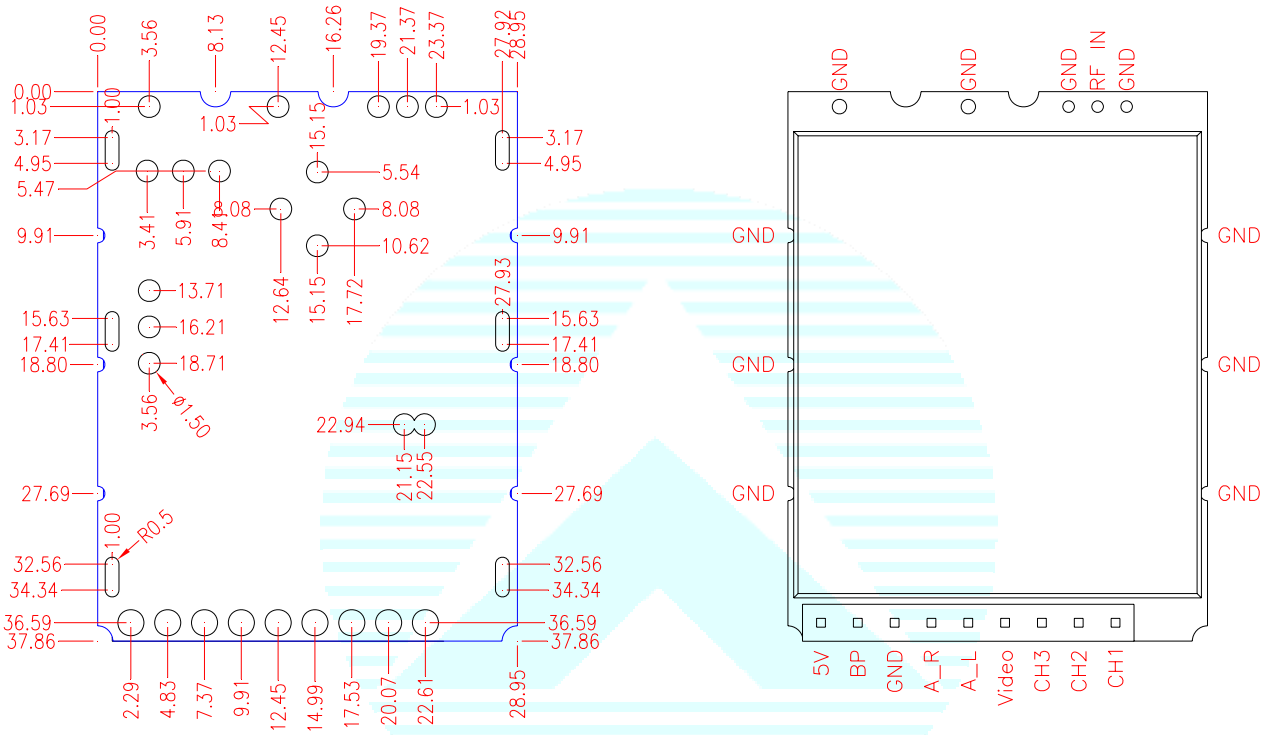

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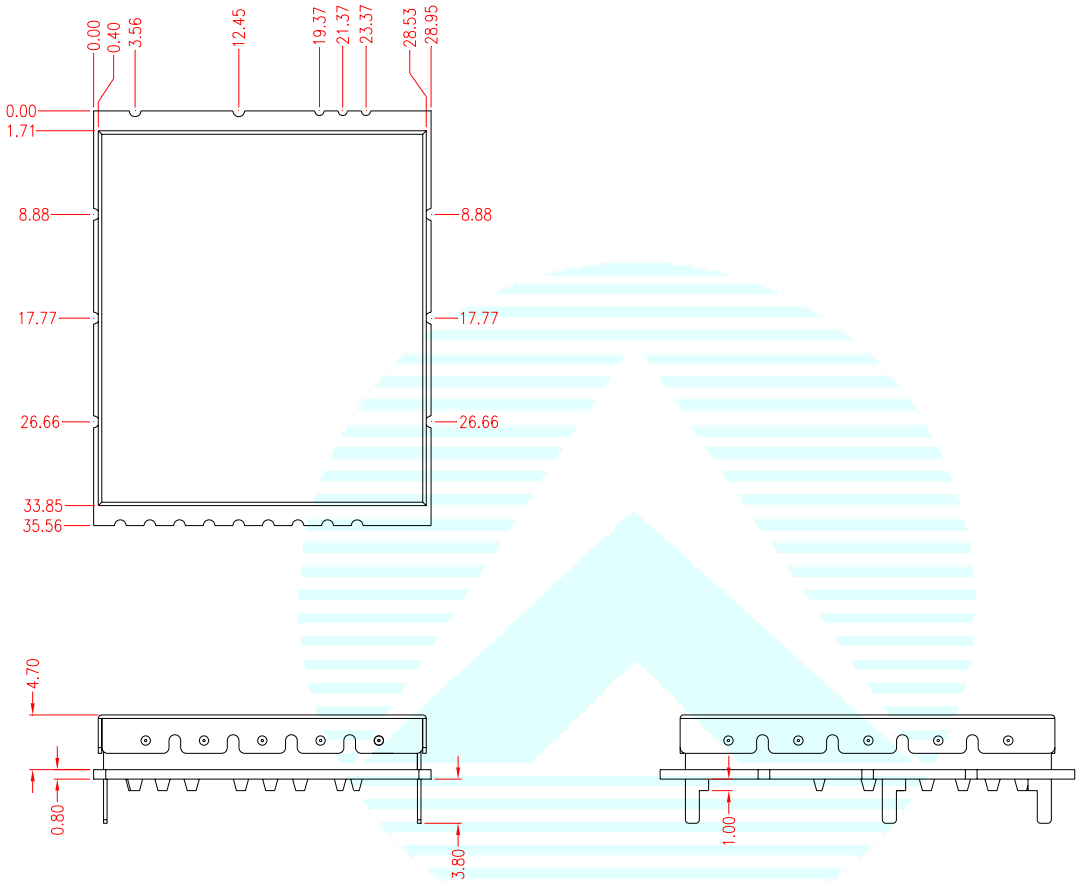
Without PIN



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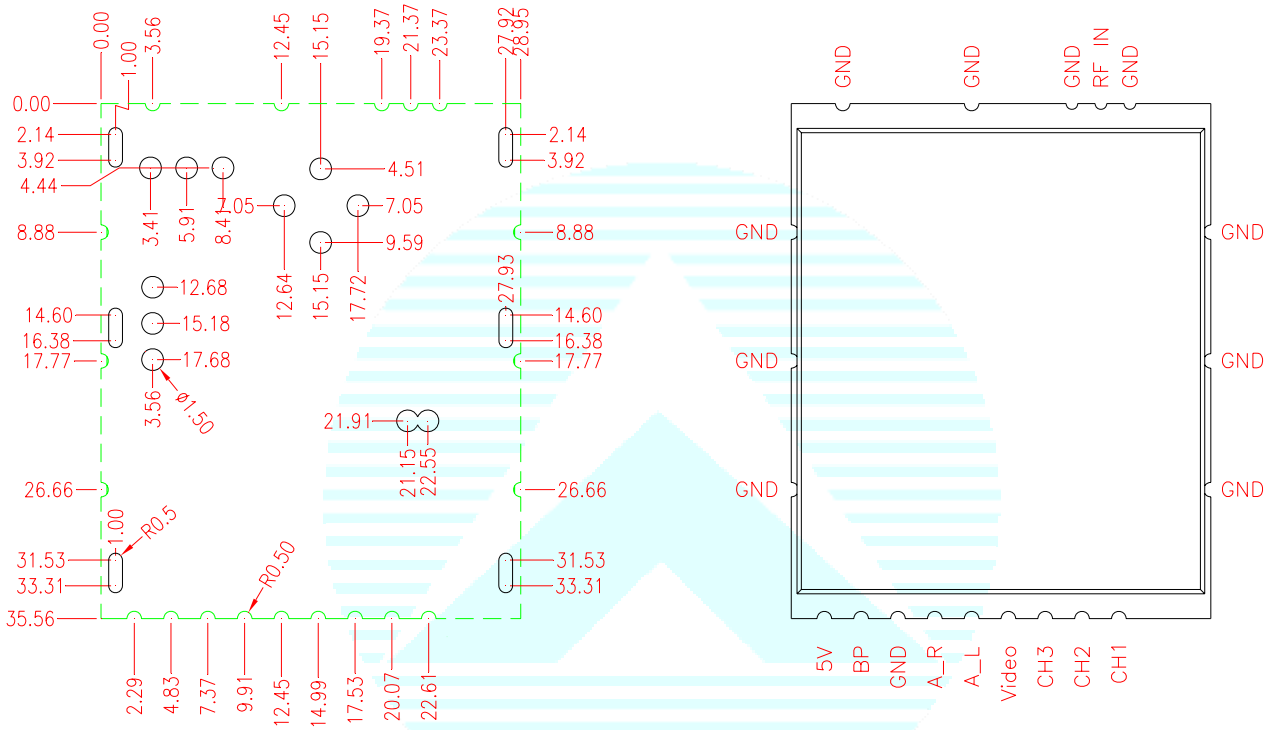

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