

FOR	Company	
	ATTN	

保密宣告 (Classified Info.)

本文列為機密文件，受雙方 **NDA(Non-Disclose Agreement)** 所規範。
 基此，請妥善保管文件，不可外洩給與合約無關之第三者造成雙方之損失。
 The information contained herein is the exclusive property of Airwave Technologies Inc. and shall not be distributed, reproduced, or disclosed in whole or in part without prior written permission of Airwave Technologies Inc.



AWM651 TX 寬頻 FM 無線影音發射模組

承認	承認	品保	工程
Dr. T.H. Chen	Ben Huang	Sandy Chen	Shih Chuan Lin
Approve	Approve	QA	E/E



AIRWAVE TECHNOLOGIES INC.

Contents

1. Descriptions	4
2. Feature	4
3. Application	4
4. Function block	4
5. Pin configuration	5
6. Pin descriptions	5
7. Channel selection	5
8. Absolute maximum ratings	6
9. DC/AC Electrical characteristic	6
10. Test circuit	7
11. BOM of Test circuit	7
12. Mechanical dimension	8

AIRWAVE TECHNOLOGIES INC.

4F, No.9 Industry E. 9th RD., Science-Based Industrial Park, Hsinchu, Taiwan, R.O.C. TEL : 886-3-5778099 Fax 886-3-5778199

www.airwave.com.tw

Copyright © 2008 by Airwave Technologies Inc. All Specification are subject to change without notice.

1. Descriptions:

Airwave 2.4GHz Audio/Video wireless RF module contains one Transmitter and one Receiver. Using 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 100 meter in open area.

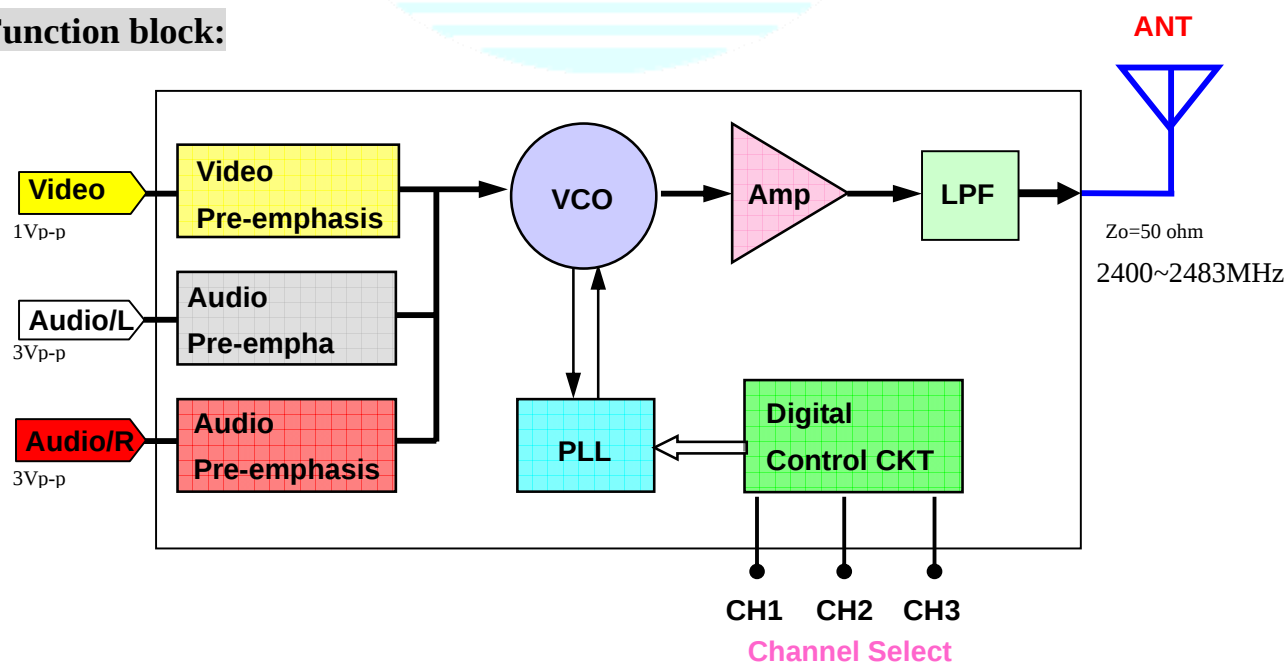
2. Feature:

- Worldwide 2.4GHz ISM band (2400MHz to 2483MHz)
- Conform with R&TTE stipulation
- Compact size and low power consumption
- Highly efficient FM-FM modulation/demodulation scheme
- Compatible with both NTSC and PAL video formats
- Channel selection is four channel and default value is ch4 (not enable). Other channel can be selected by pulling low to enable.

3. Application:

- Wireless Security Surveillance
- Wireless Audio/ Video Transmission
- Baby monitor
- Wireless Camera/CCTV

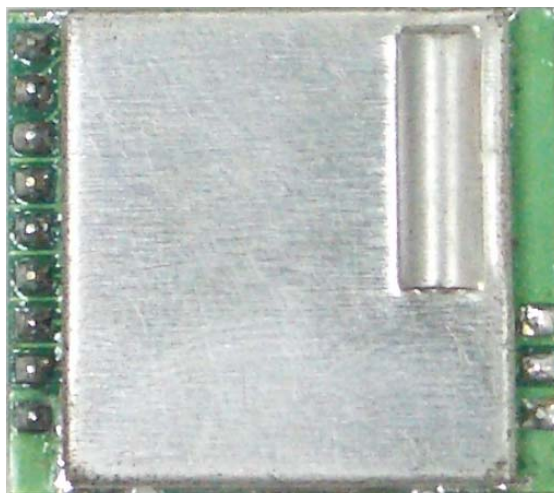
4. Function block:



AIRWAVE TECHNOLOGIES INC.

5. PIN configuration:

Pin 01 **CH3**
 Pin 02 **CH2**
 Pin 03 **CH1**
 Pin 04 **A/R**
 Pin 05 **A/L**
 Pin 06 **Video**
 Pin 07 **VCC**
 Pin 08 **Bypass**
 Pin 09 **GND**



GND Pin 12
RF OUT Pin 11
GND Pin 10

6. PIN Descriptions:

AWM651 TX

PIN	NAME	Descriptions	PIN	NAME	Descriptions
1	CH3	Channel selection pin ;input	7	VCC	VCC is supply to this pin, input
2	CH2	Channel selection pin ;input	8	Bypass	Bypass.
3	CH1	Channel selection pin ;input	9	GND	Ground.
4	A/R	Analog audio/R input	10	GND	RF_Ground.
5	A/L	Analog audio/L input	11	RF OUT	Transmitter output.
6	Video	Analog Video input	12	GND	RF_Ground.

7. Channel Selection:

Channel	Operating Frequency	Channel select pin		
		CH1 (pin3)	CH2 (pin2)	CH3 (pin1)
CH1	2414 MHz	GND	OPEN	OPEN
CH2	2432 MHz	OPEN	GND	OPEN
CH3	2450 MHz	OPEN	OPEN	GND
CH4	2468 MHz	OPEN	OPEN	OPEN

AIRWAVE TECHNOLOGIES INC.

8. Absolute Maximum Ratings:

Stresses beyond those listed under “Absolute Maximum Ratings” may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of this specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

Parameters	Symbol	Minimum	Maximum	Unit
Supply voltage	VCC		5.5	V
Storage temperature	T _{stg}	-40	+80	°C

9. DC/AC Electrical characteristic:

Parameters			Min.	Typ.	Max.	Unit
Supply voltage (VCC)				5		V
Supply current			50	55	60	mA
Output Power			9	10	11	dBm
Operating frequency range	CH1	2414	2400		2483	MHz
	CH2	2432				
	CH3	2450				
	CH4	2468				
Operating temperature			-10	-	60	°C
Weight				3.6	4	g.
Video / Audio Modulation			FM			
Video input Signal Level				1		Vp-p
Audio input Signal Level				3		
Video input Impedance			-	75	-	Ohm
Audio input Impedance			-	60K	-	
Antenna Port Impedance			-	50	-	
RF Deviation- Video			-	2	-	MHz
RF Deviation- Audio			-	70	-	kHz

AIRWAVE TECHNOLOGIES INC.

AWM651 test circuit

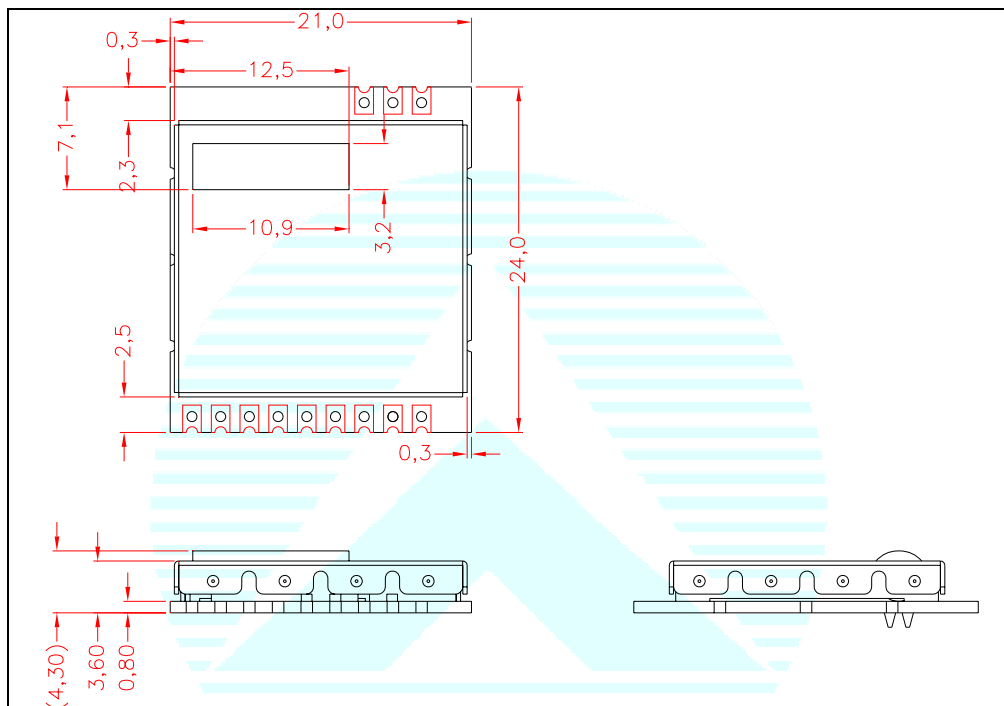
BOM of AWM2400 Test Circuit

品 名 規 格	插 件 位 置	供應商料號	供應商
DC POWER JACK	JAK1	DS210B 5.5mm	參宏電子
General purpose Diodes 1A 50V DIP	D1	1N4001	皇緯電子
SS 33uF 10V 4*7	C4, C5	SS010M0033SBT	智寶電子
SEK 470UF 10V 8*11	C2, C3	SEK010M0470CBT	智寶電子
SEK 470UF 16V 8*11	C1	SEK016M0470CBT	智寶電子
Regulator L7805CV T0-220	IC1	L7805CV	ST
SMA STRAIGHT PANEL RECEPTACLE	CN1	S-A503-900A	垠旺
RCA JACK	JAK2	RCA-316	參宏電子
DIP SW 指撥開關	SW1	DPL-04	圓達實業

4F, No.9 Industry E. 9th RD., Science-Based Industrial Park, Hsinchu, Taiwan, R.O.C. TEL : 886-3-5778099 Fax 886-3-5778199

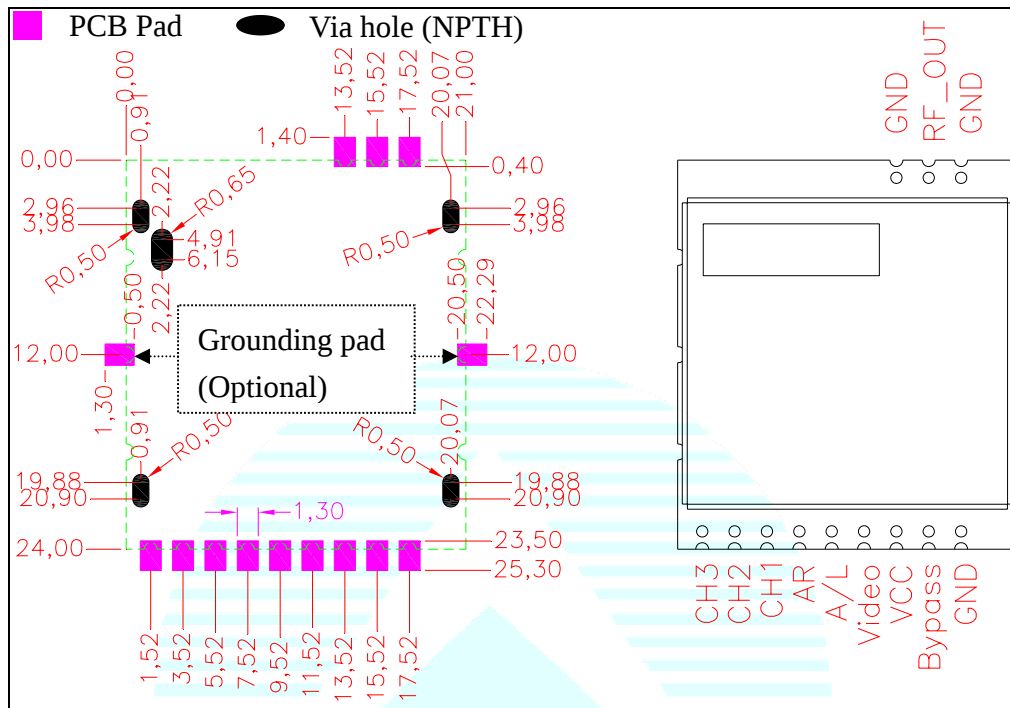
12. Mechanical Dimension:

AWM651TX Without Pin Mechanical Dimension:

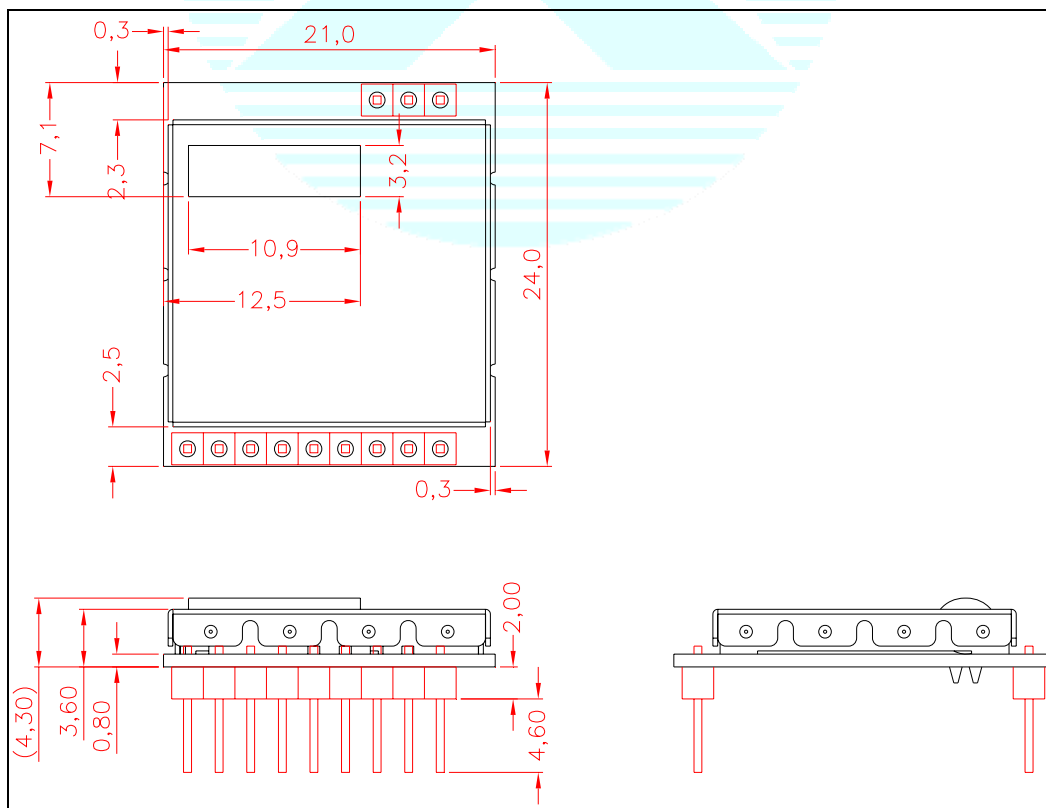


AWM651 Without Pin PCB Layout:

AIRWAVE TECHNOLOGIES INC.

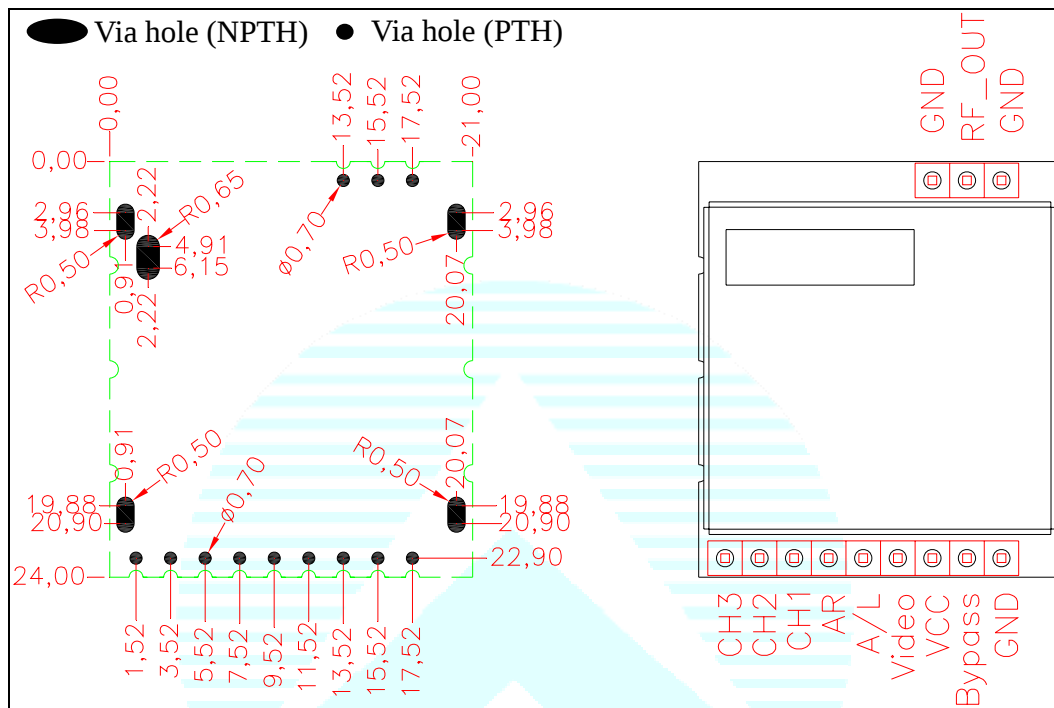


AWM651TX With Pin Mechanical Dimension:



AIRWAVE TECHNOLOGIES INC.

AWM651 With Pin PCB Layout:



AIRWAVE TECHNOLOGIES INC.

4F, No.9 Industry E. 9th RD., Science-Based Industrial Park, Hsinchu, Taiwan, R.O.C. TEL : 886-3-5778099 Fax 886-3-5778199

www.airwave.com.tw

Copyright © 2008 by Airwave Technologies Inc. All Specification are subject to change without notice.