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DATA SHEET



AWM655 TX 寬頻 FM 無線影音發射模組

承認	承認	品保	工程
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Approve	Approve	QA	E/E



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Revision History

Version	Item	Change	Reason	Date
0.1	Preliminary.			2009/03/23
0.2				2010/12/15

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1. Descriptions:

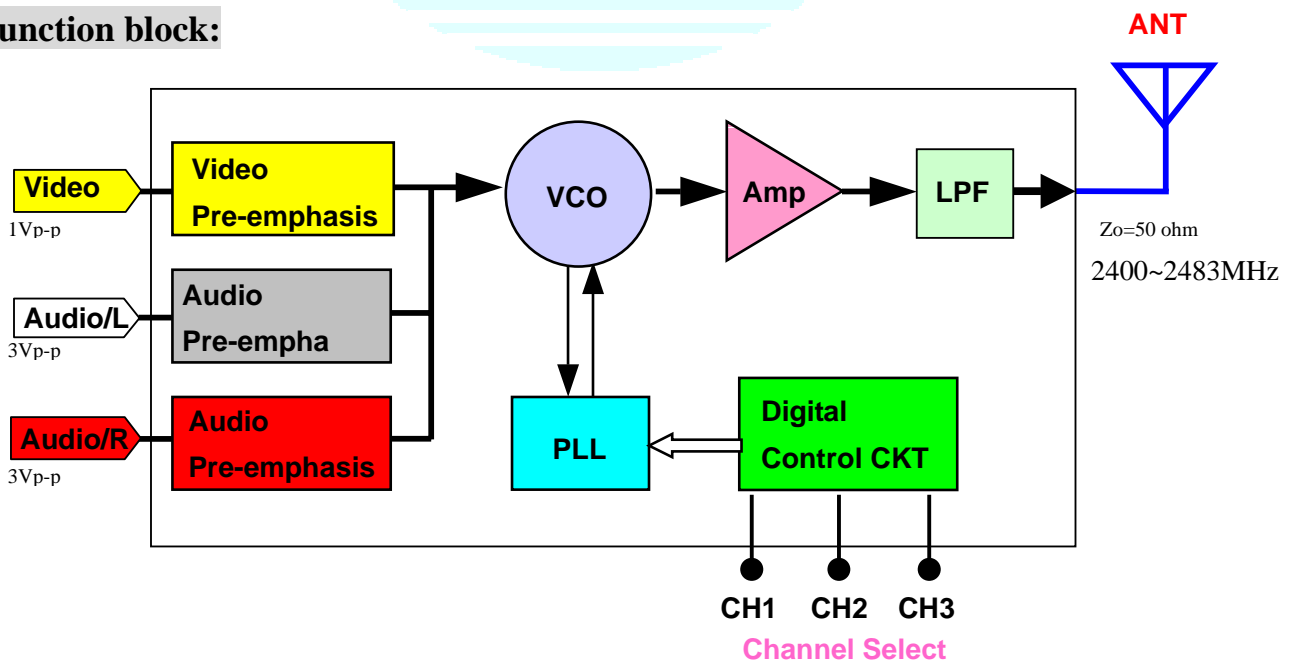
Airwave 2.4GHz Audio/Video wireless RF module contains one Transmitter and on Receiver. Using of the most popular 2.4GHz ISM band and designed with high reliability. Airwave RF module is compliance with the criteria of FCC and R&TTE which can transmit/receive a wide band audio & video signals up to 100 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:

AWM655 TX

PIN	NAME	Descriptions	PIN	NAME	Descriptions
1	CH3	Channel selection pin ;input see note1	7	VCC	VCC is supply to this pin, input
2	CH2		8	Bypass	Bypass.
3	CH1		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.

Note 1:

Channel Setting:

	MIN.	TYP.	MAX.
High Voltage	2.5V	3V	3.3
Low Voltage	-0.3V	0V	1V

Minimum settling time: < 100ms

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

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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

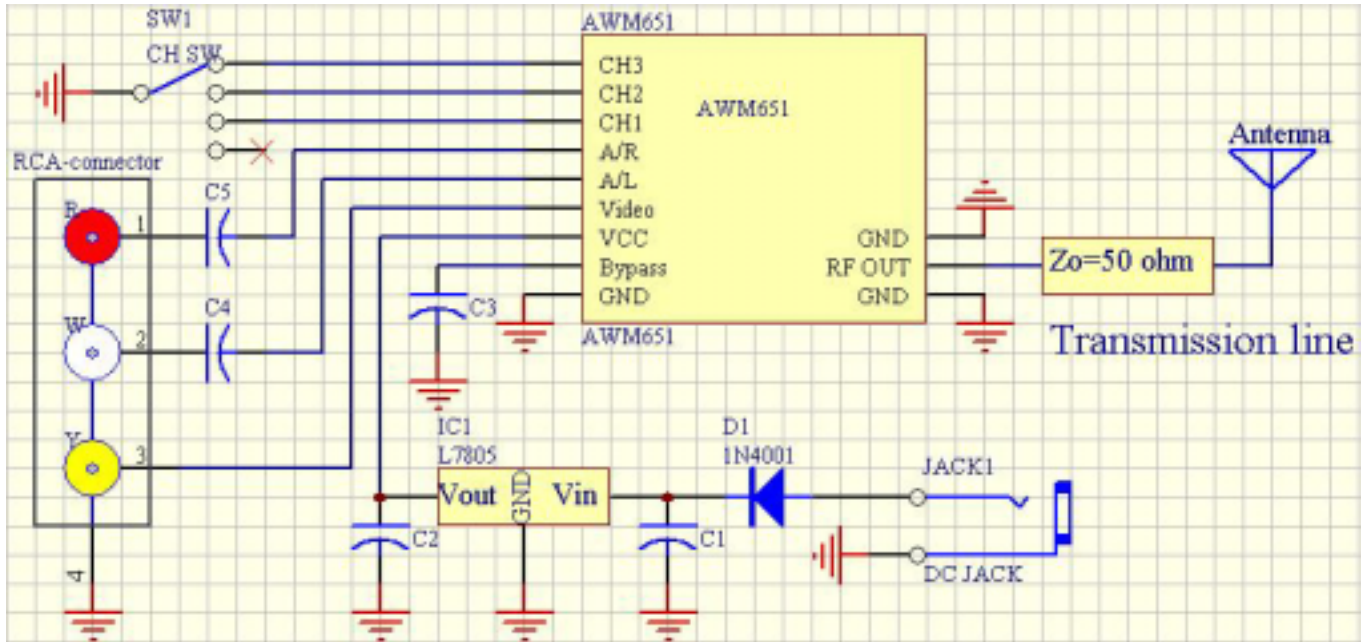
9. DC/AC Electrical characteristic:

Parameters		Min.	Typ.	Max.	Unit
Supply voltage (VCC)			5		V
Supply current		110	125	140	mA
Output Power		19	20	22	dBm
Operating frequency range	CH1	2400	2414	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		-	1.6	-	MHz
RF Deviation- Audio		-	70	-	kHz

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10. Test circuit :

AWM655test circuit (same as AWM651 TX)



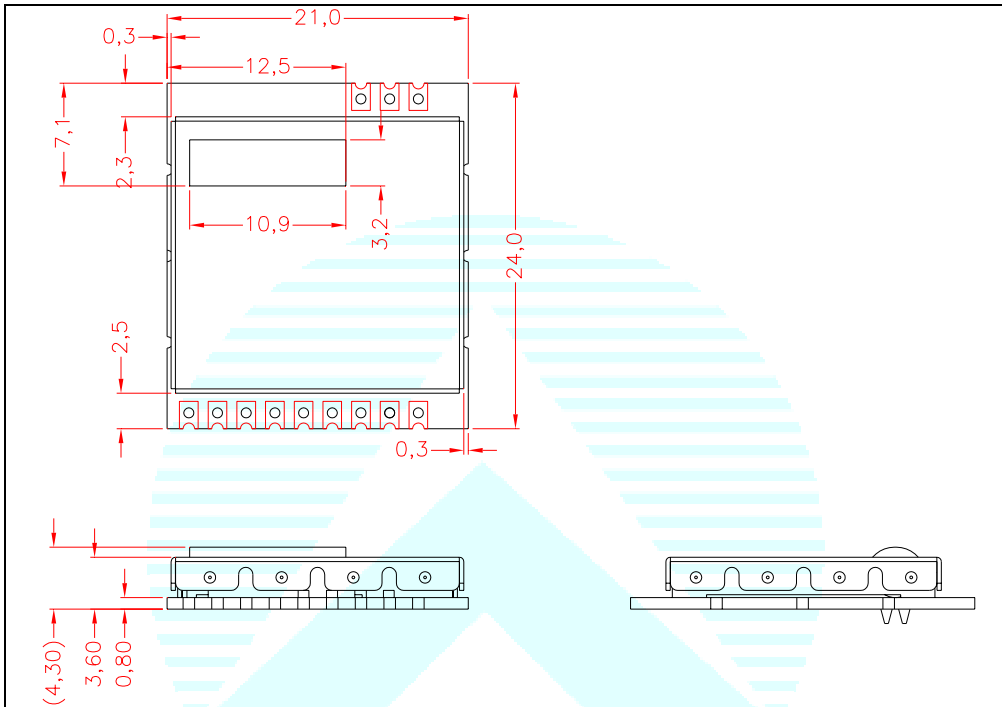
11. BOM of Test circuit:

BOM of AWM651 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	圖達實業

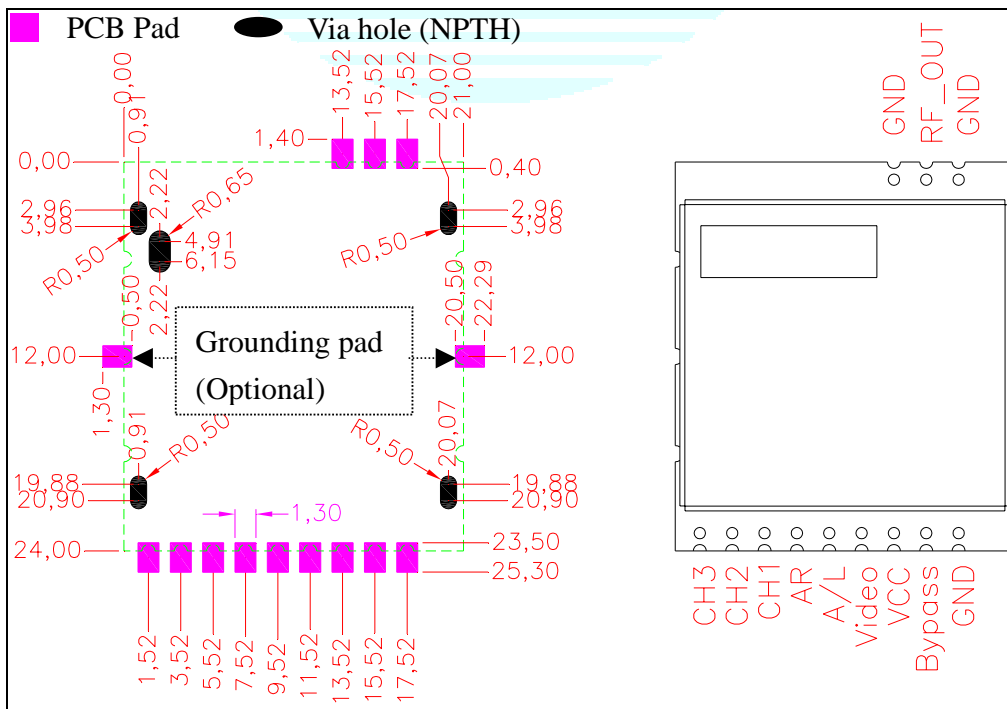
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12. Mechanical Dimension:

AWM655TX Without Pin Mechanical Dimension: (same as AWM651TX)

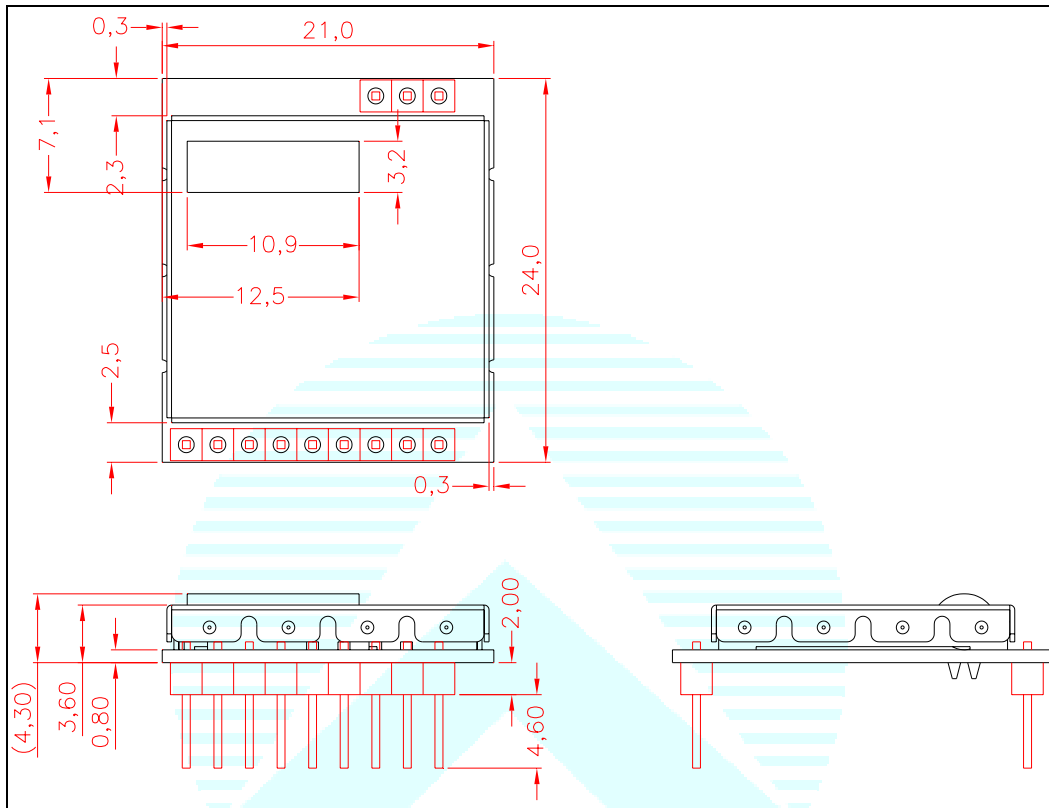


AWM655 Without Pin PCB Layout: (same as AWM651TX)

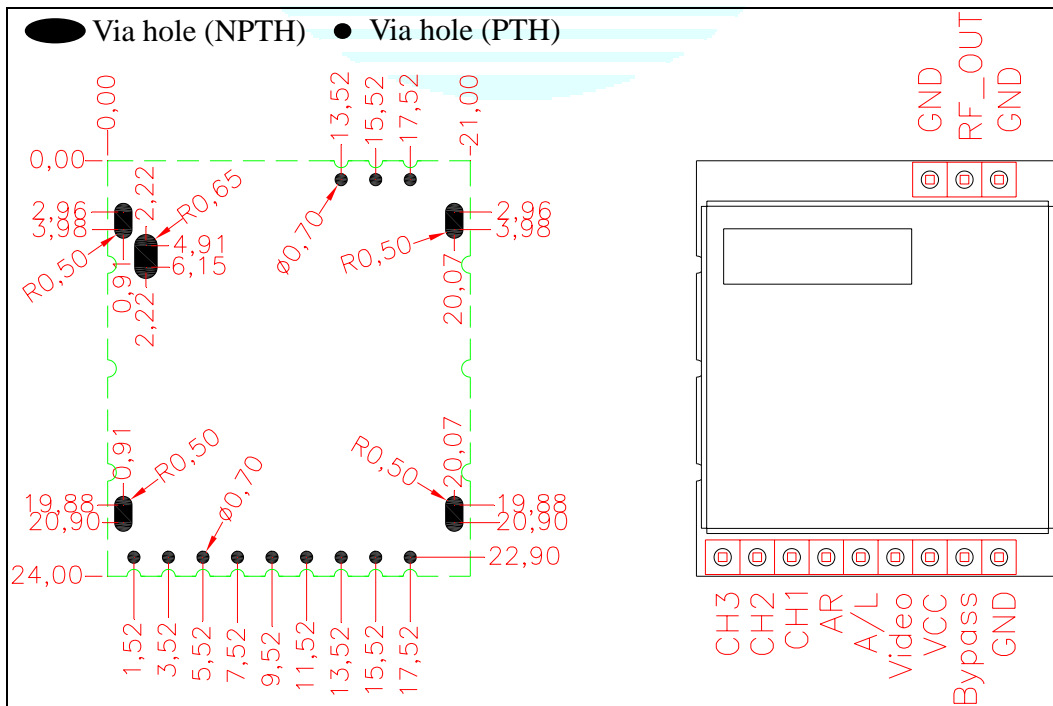


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AWM655TX With Pin Mechanical Dimension: (same as AWM651TX)



AWM655 With Pin PCB Layout: (same as AWM651TX)



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