

2.4GHz Wireless Audio&Video Module -VMT15R10-

APPROVAL SHEET

Customer 客戶: _____

Model 機種名稱: VMT15 Transmitter 模組

_____ VMR10 Receiver 模組

Approval Signature 客戶承認簽名

Approved By: _____ Date: _____

Yuanfann International Co., Ltd. 遠方國際有限公司

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VMT15 TRANSMITTER

TECHNICAL SPECIFICATION

PARAMETER	SPECIFICATION	REMARK
Transmit Frequency	2.4GHz(2400MHz) ISM band 2.4000 to 2.4835GHz No license required	
Transmit Power	+10dBm	+3/-0dBm
No. of simultaneous transmit frequency Channel 1 Channel 2 Channel 3 Channel 4	Up to 4 units in same area 2410MHz 2430MHz 2450MHz 2470MHz	
Channel Selection	Slide/DIP/TACT switch	
Video Modulation Audio Modulation	FM modulation FM modulation Left/Right subcarriers	
Frequency Stability	±100KHz	Typical
Video Interface Video Input Level Video Input Impedance	1Vp-p (baseband video) 75 Ohm	
Number of Audio Channel	Stereo (left and right)	
Audio Interface Audio Input Level Audio Input Impedance	4Vp-p@1KHz >10K Ohm	Typical 1KHz
Power consumption Supply Voltage Current Consumption	3.3VDC 50mA	± 0.05V Typical
Antenna Port	Half Pitch Pin Header	1.27mm Pitch
Baseband Interface	Half Pitch Pin Header	1.27mm Pitch
Operating Temperature	0 ~ +60 °C (internal programming)	

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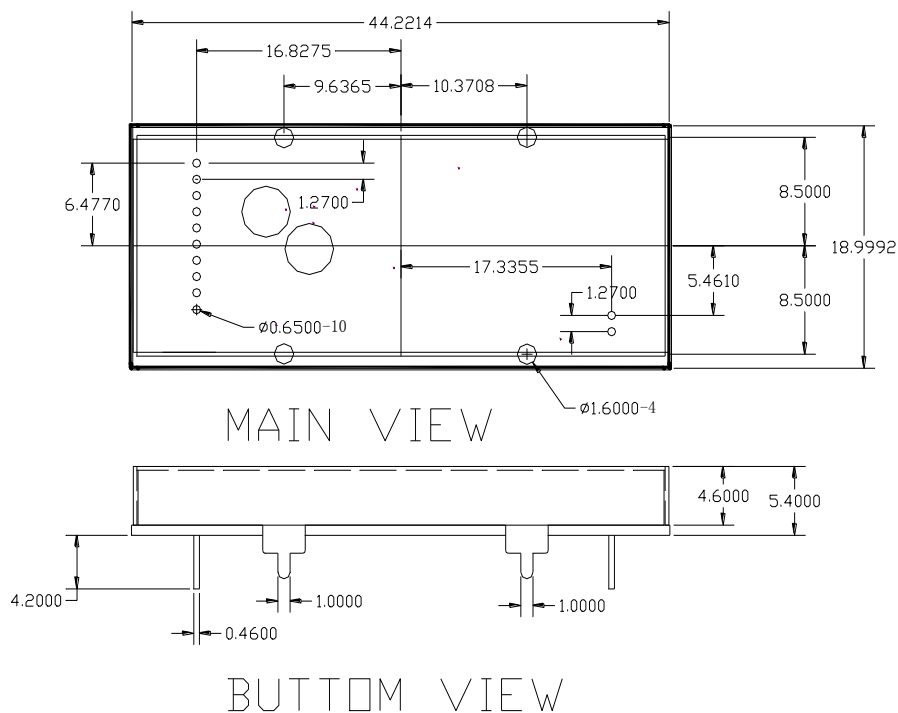
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VMT15 PIN Assignment and definition

PIN NO.	PIN NAME	PIN TYPE	DESCRIPTION
1	LED_CH1	I/O	I/O port of LED control of channel 1
2	LED_CH2	I/O	I/O port of LED control of channel 2
3	LED_CH3	I/O	I/O port of LED control of channel 3
4	SW	I	Channel selected input
5	LED_CH4	I/O	I/O port of LED control of channel 4
6	3V3	I	RF Driver 3V3 Voltage supply
7	VIDEO	I	Video signal input
8	GND	I	General ground connection
9	AUDIO (R)	I	Audio signal input (Right)
10	AUDIO (L)	I	Audio signal input (Left)
11	ANT		RF output of the transmitter
12	GND		Antenna ground connection

VMT15 FOOTPRINT & DIMENSIONS (TOP VIEW)



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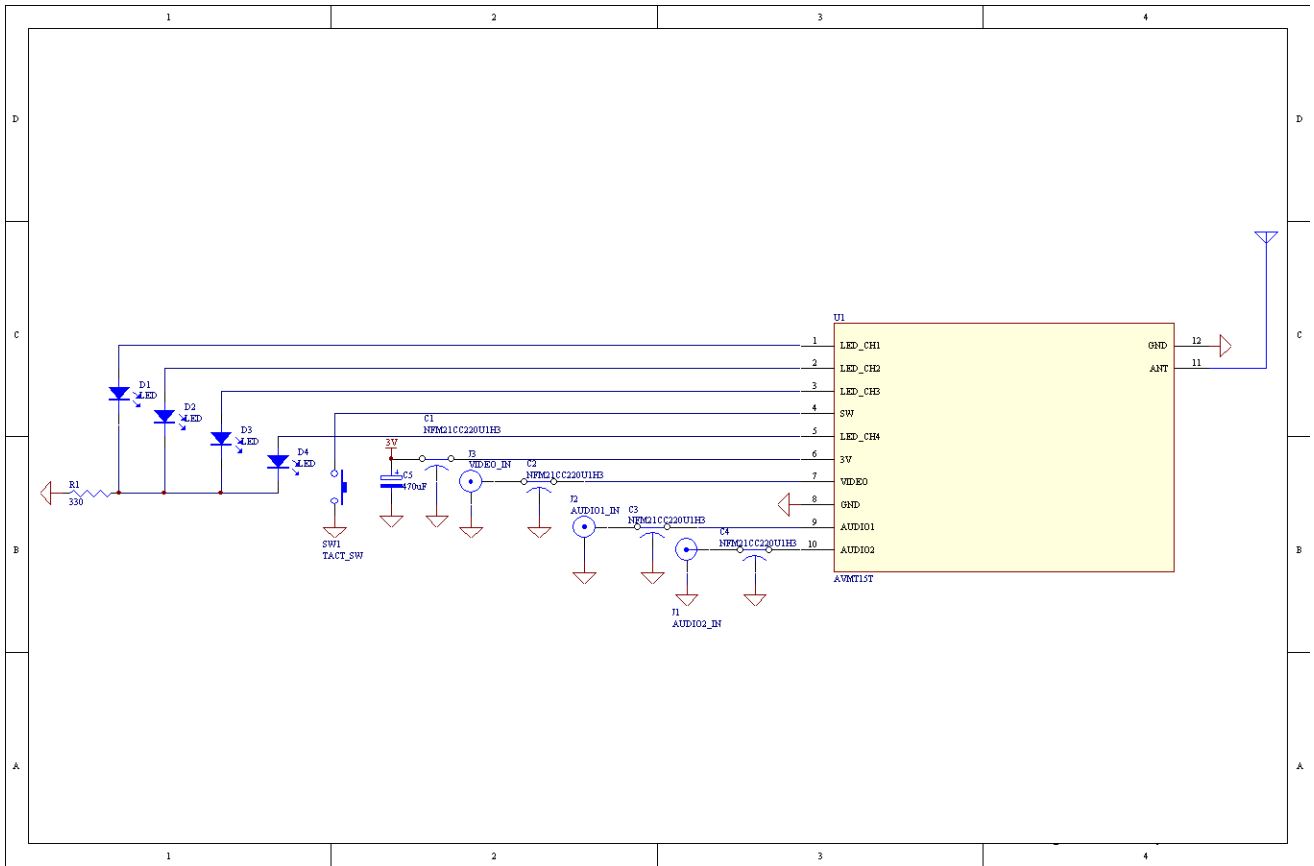
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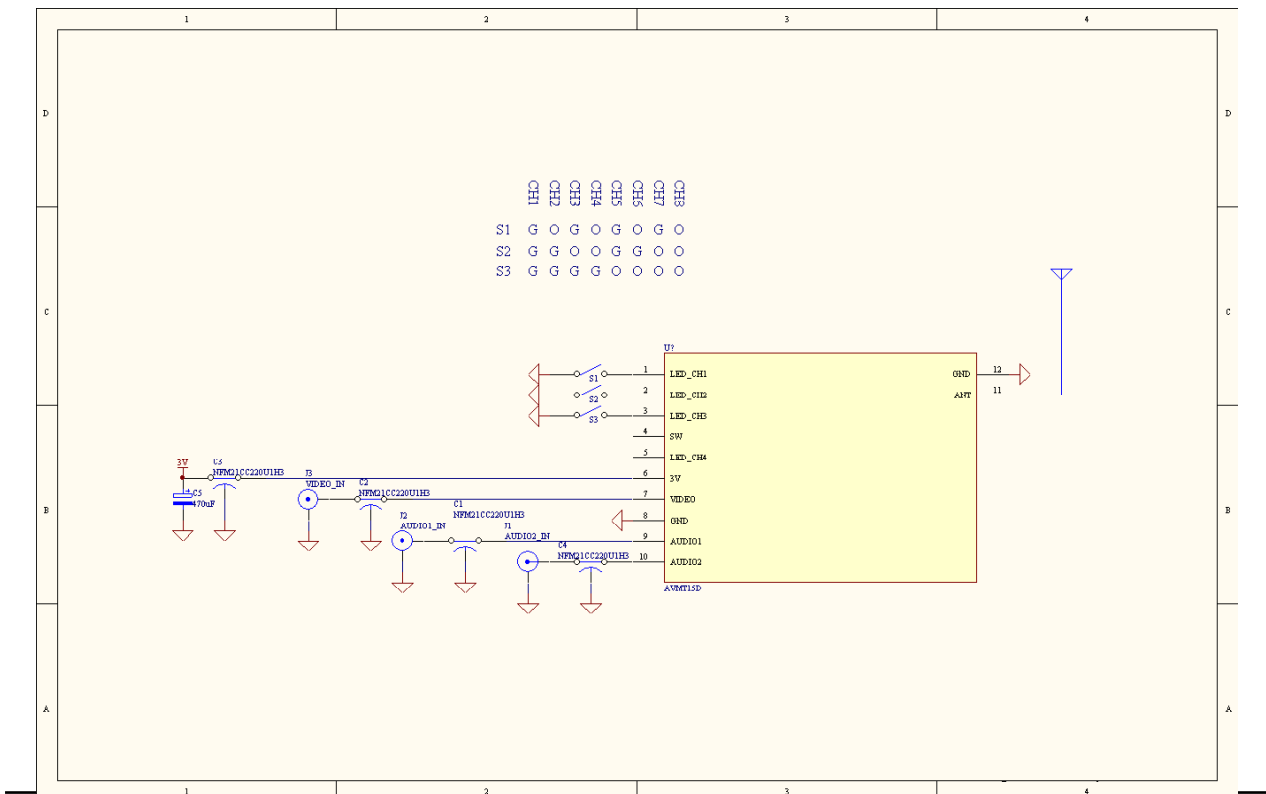
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REFERENCE DESIGN

VMT15-T – TACT switch APPLICATION CIRCUITS



VMT15-D – DIP Switch APPLICATION CIRCUITS



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VMR10 RECEIVER

TECHNICAL SPECIFICATION

PARAMETER	SPECIFICATION	REMARK
Receive Sensitivity	-90dBm	+3/-0dBm
No. of simultaneous transmit frequency Channel 1 Channel 2 Channel 3 Channel 4	Up to 4 units in same area 2410MHz 2430MHz 2450MHz 2470MHz	
Channel Selection	Slide/DIP/TACT switch/IR Remote Control	
Video Modulation Audio Modulation	FM modulation FM modulation	
Number of Channel	4 channels	2.400~2.483GHz
Lo Stability	±100KHz	Typical
Video Output Level	1Vp-p@ 75 Ohm load	± 0.1V
Video Output Impedance	75 Ohm	Typical
Video Differential Phase	10 °	Typical
Video Differential Gain	5%	Typical
Audio Output Level	4Vp-p@1KHz	Typical
Audio Output Impedance	1K Ohm	Typical
Audio SNR	45dB@1KHz 4Vp-p	± 3dB
Power Consumption Supply Voltage Current Consumption	5VDC 150mA	± 0.1V Typical
Antenna Port	Half Pitch Pin Header	1.27mm Pitch
Baseband Interface	Half Pitch Pin Header	1.27mm Pitch
Operating Temperature	0 ~ +50°C ambient temperature	

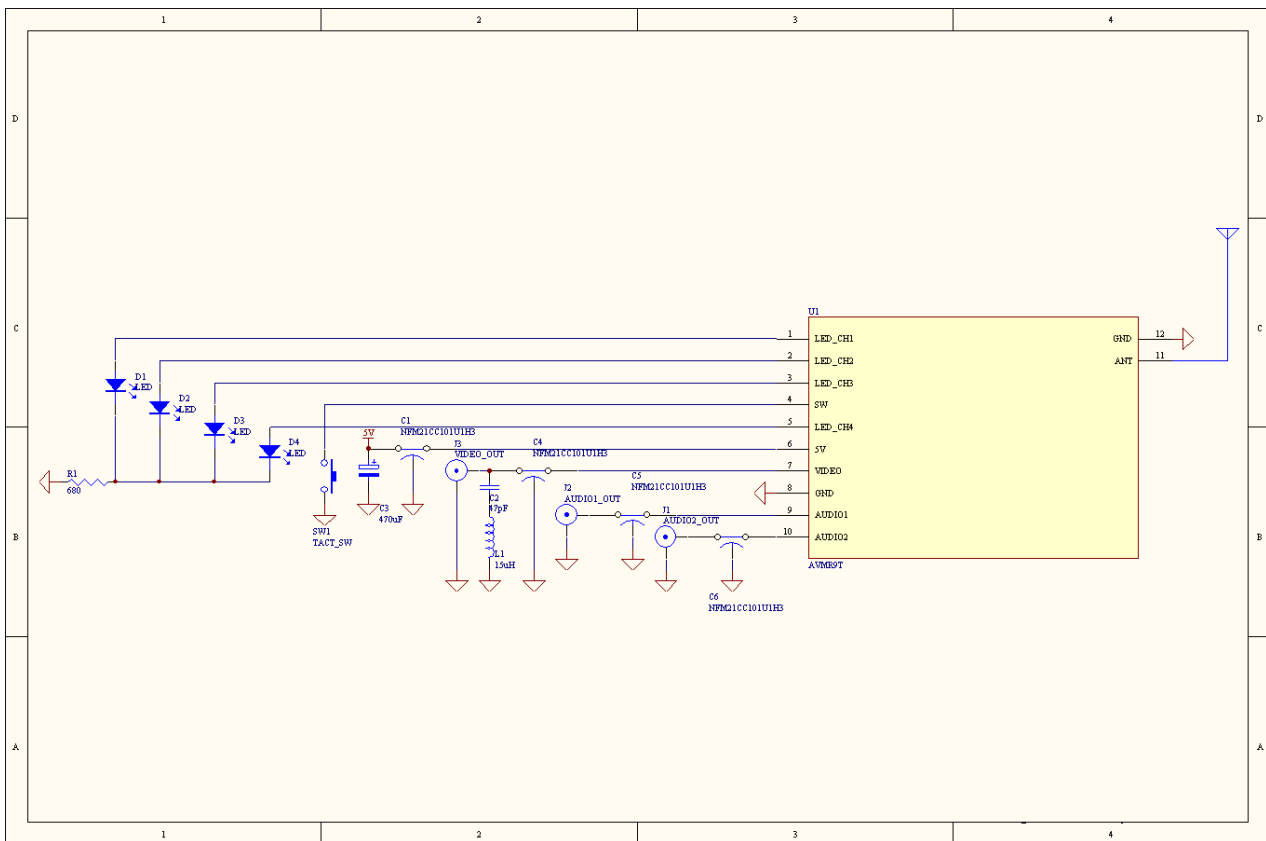
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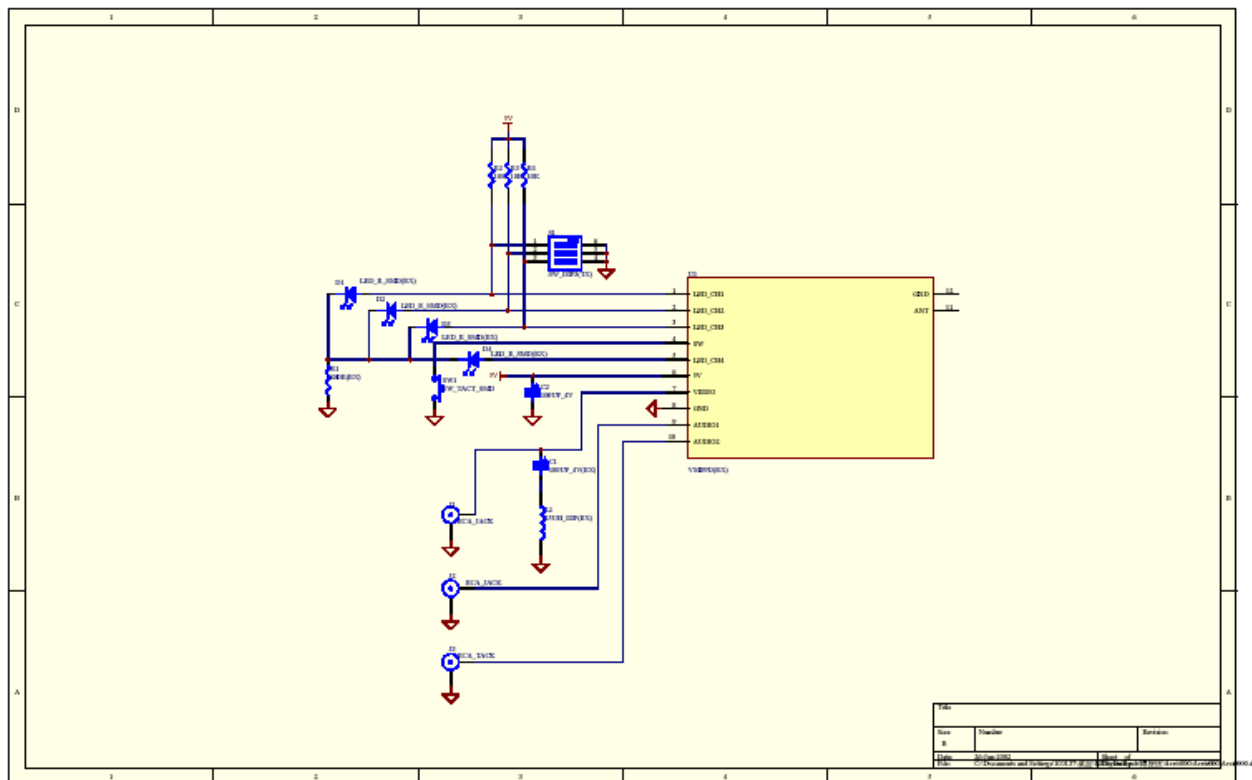
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VMR10-T APPLICATION CIRCUIT (TACT switch)



VMR10-D APPLICATION CIRCUIT (DIP Switch)



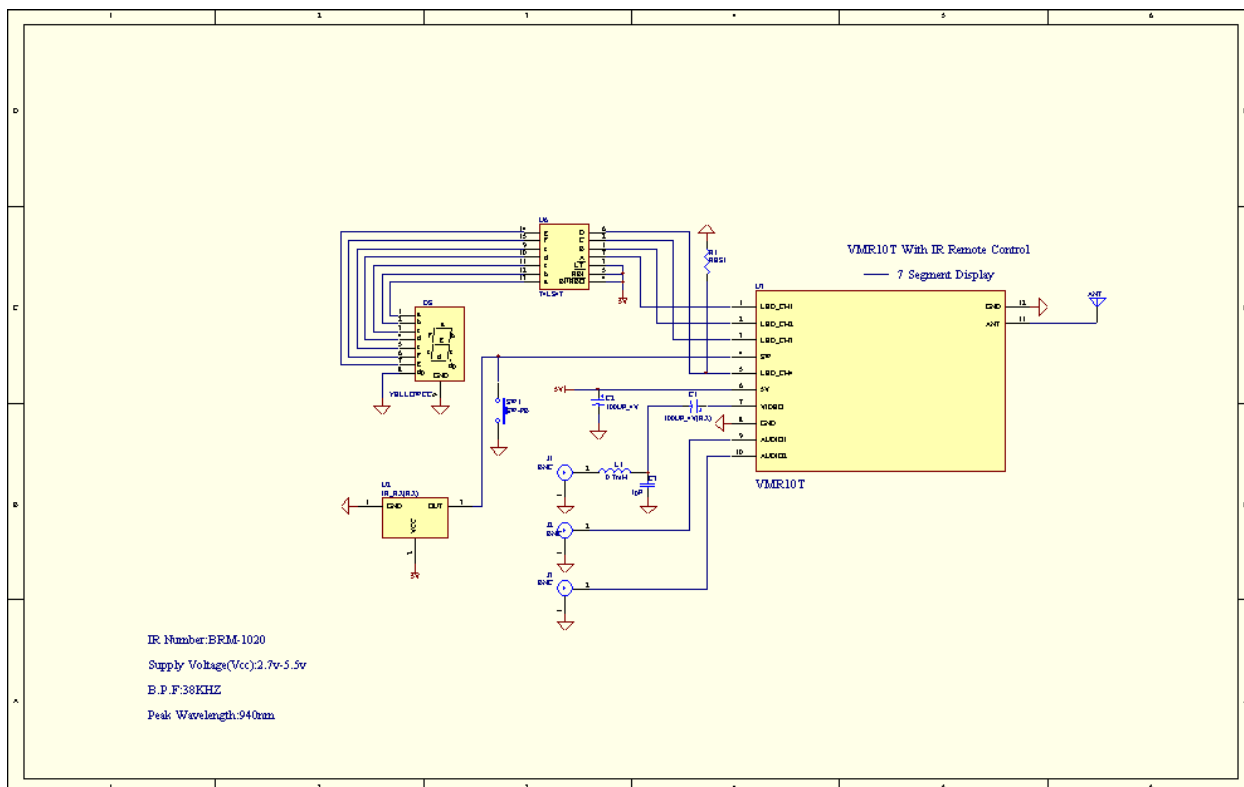
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VMR10-T IR Remote Control



RF LAYOUT APPLICATION NOTES

- (1) The antenna port impedance is 50 ohm, e.g.
 - 1.25mm-wide micro strip line, impedance 50 ohm - under 0.8mm FR4 PCB;
 - 3mm-wide micro strip line, impedance 50 ohm - under 1.6mm FR4 PCB.
- (2) Micro strip line is a transmission line on PCB with grounded backside.
- (3) The thicker the PCB is, the higher the insertion loss will be.

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