

2.4GHz Audio/Video Modules

VMT10R10(T/D)

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APPLICATIONS & FEATURES

2.4GHz A/V modules use FM modulation technology to provide ISM band wireless audio and video transmission. Multi-channels are specially designed to enhance the function of channel auto-switching and digital PLL as well as μ P Technology.

- **Major applications:**

Wireless Audio/ Video Transmission

Wireless Security Surveillance

- **Features:**

Compact size & low cost (module includes RF & Baseband all-in-one)

Provides quality video and mono audio transmission

Multi-channel (extra 4 backup channels for preventing interference)

Low power consumption (50mA/ 3.3V DC)

Auto-scan function (dwell time is adjustable by a IR remote controller)

Easy to design-in (Baseband interface and antenna port are drawn out from pitch pins on modules)

Built-in IR Remote Control Function for channel selecting, deleting and dwell time adjusting

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[Functions of IR Remote Control]

- a. Channel switch: selecting channels in sequence
 - b. Auto-scan: automatically displaying channels in use
 - c. Adjustable Dwell Time
 - [Scan Slower]: makes dwell time longer. Maximum is 10 seconds.
 - [Scan Faster]: makes dwell time shorter. Minimum is 0.1 seconds.
 - d. [Channel Cancel]: skipping channels not in use
 - e. 4 – 8 Switch: entering 8-channel mode
 - f. Reset (to factory default):
 1. only original Ch1 ~ Ch4 available
 2. manual channel-switching
 3. all cancelled channels recovered
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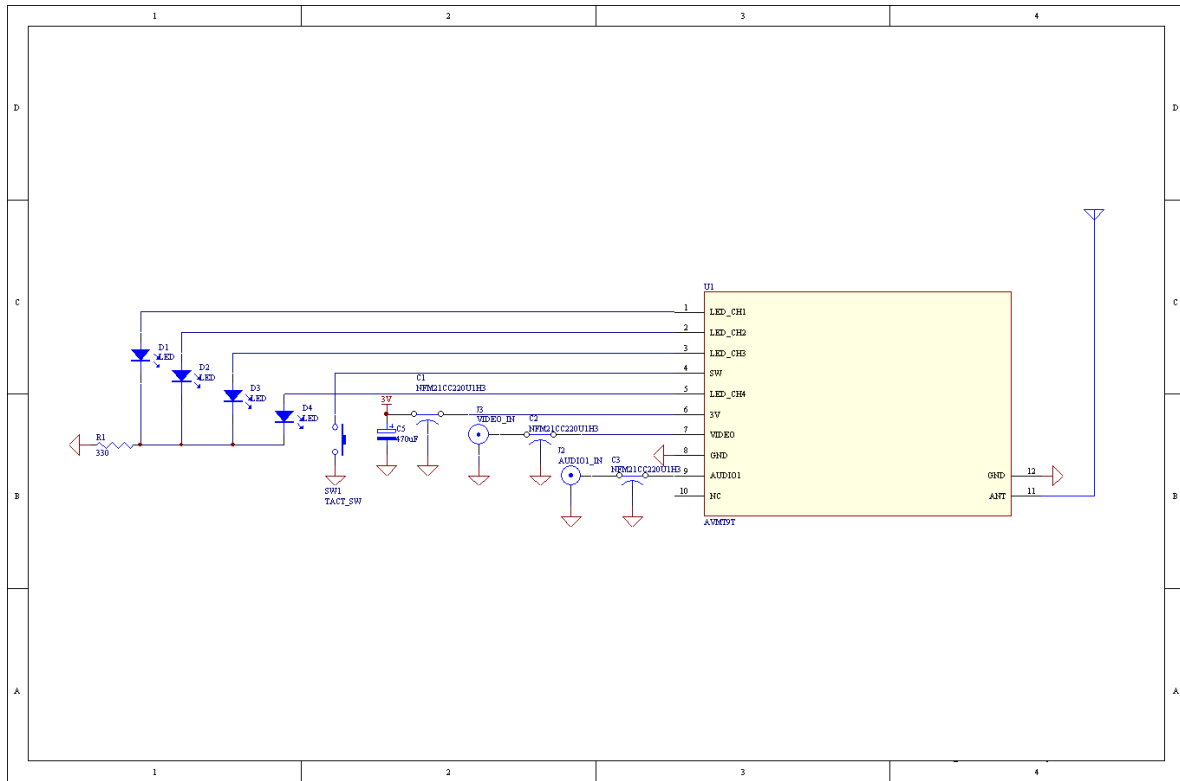
TX MODULE - VMT10T/ D

ITEM	SPECIFICATION	REMARK
Tx Power	10dBm	+3/-0dBm
Channel Number	4 (2410, 2430, 2450, 2470)	2400~2483MHz
Frequency Stability	±100KHz	Typical
Video Input Level	1Vp-p	Typical
Video Input Impedance	75 Ohm	Typical
Audio Input Level	4Vp-p@1KHz	Typical
Audio Input Impedance	>10K Ohm	1KHz
Supply Voltage	3.3V	+/- 0.05V
Current Consumption	50mA	Typical
Antenna Port	Half Pitch Pin Header	1.27mm Pitch
Baseband Interface	Half Pitch Pin Header	1.27mm Pitch
Dimension (mm)	23W x 27D x 6H	
Operating Temperature	0 ~ 60 ° C	

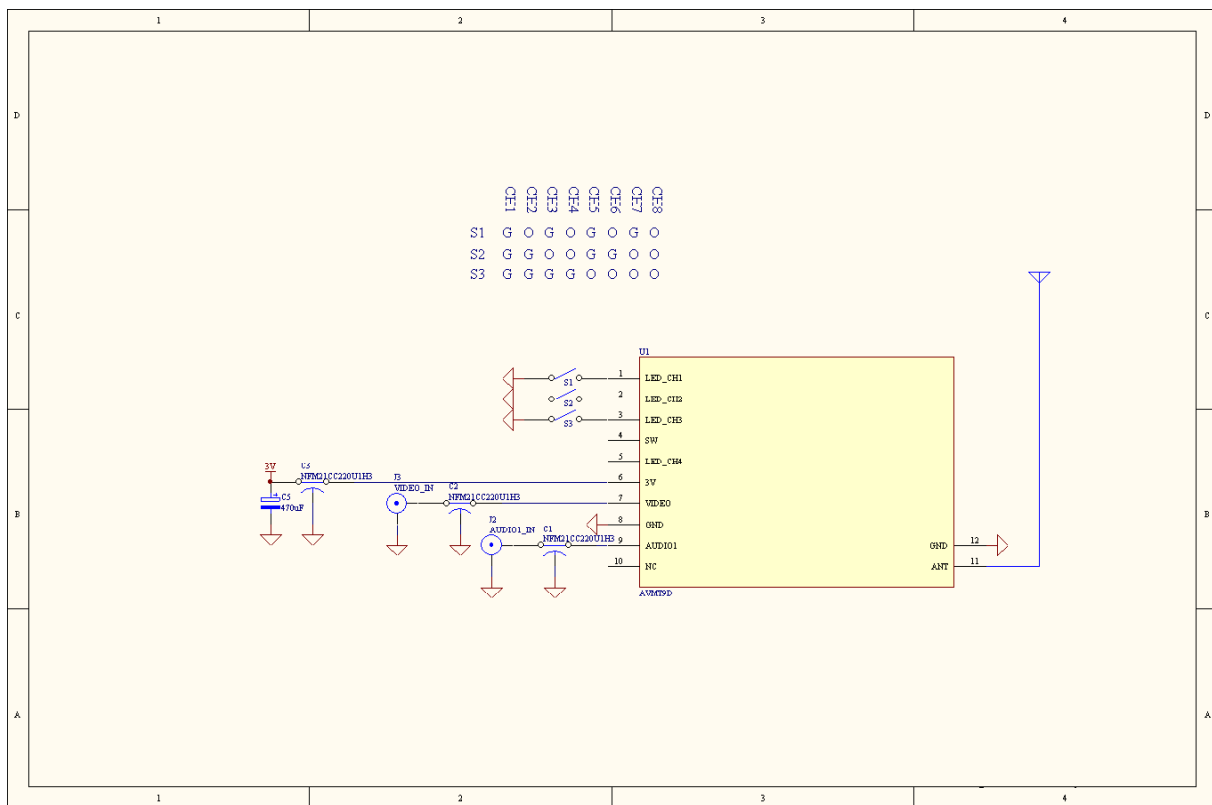
RX MODULE - VMR10T/ D

ITEM	SPEC	REMARK
Rx Sensitivity	-90dBm	+3/-0dBm
Channel Number	4 (2410, 2430, 2450, 2470)	2400~2483MHz
Lo Stability	±100KHz	Typical
Video Output Level	1Vp-p@75 Ohm load	+/-0.15V
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
Supply Voltage	5V	+/- 0.1V
Current Consumption	150mA	Typical
Antenna Port	Half Pitch Pin Header	1.27mm Pitch
Baseband Interface	Half Pitch Pin Header	1.27mm Pitch
Dimension (mm)	42.5W x 35D x 10.3H	
Operating Temperature	0 ~ 60 ° C	

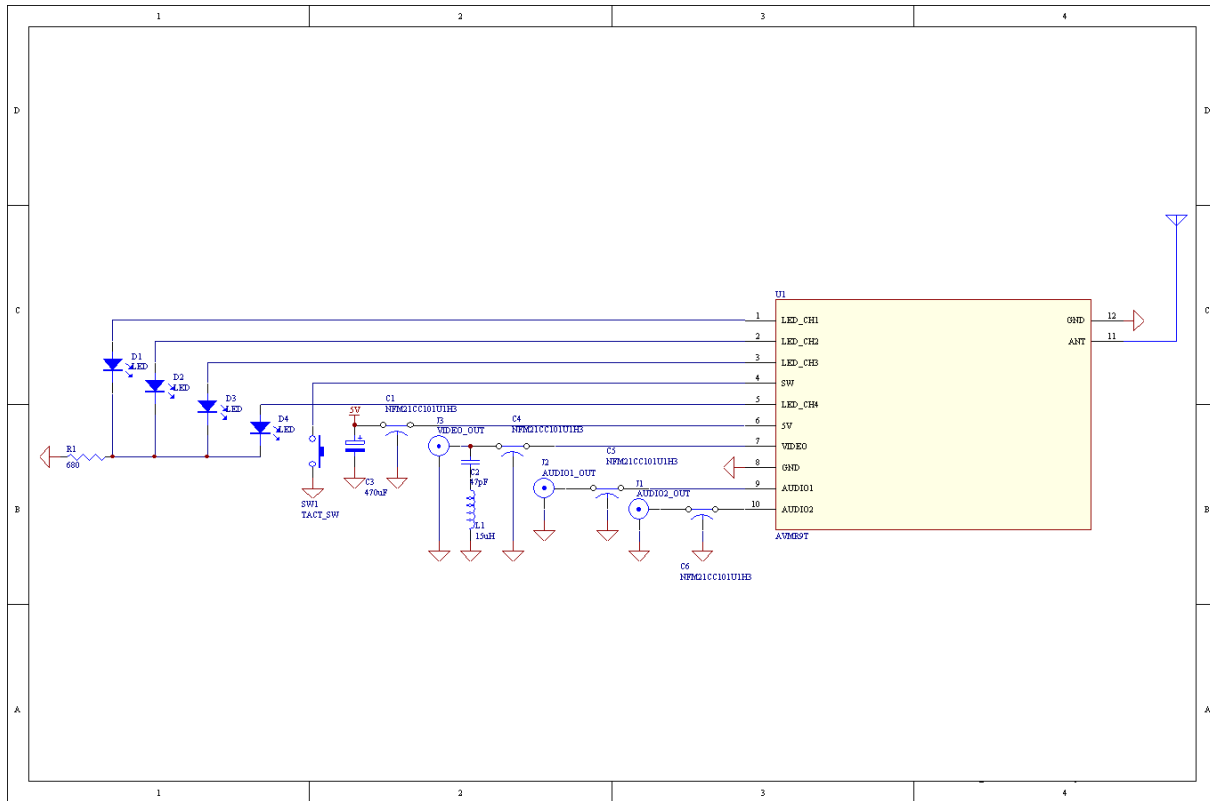
VMT10T APPLICATION CIRCUITS (TACT)



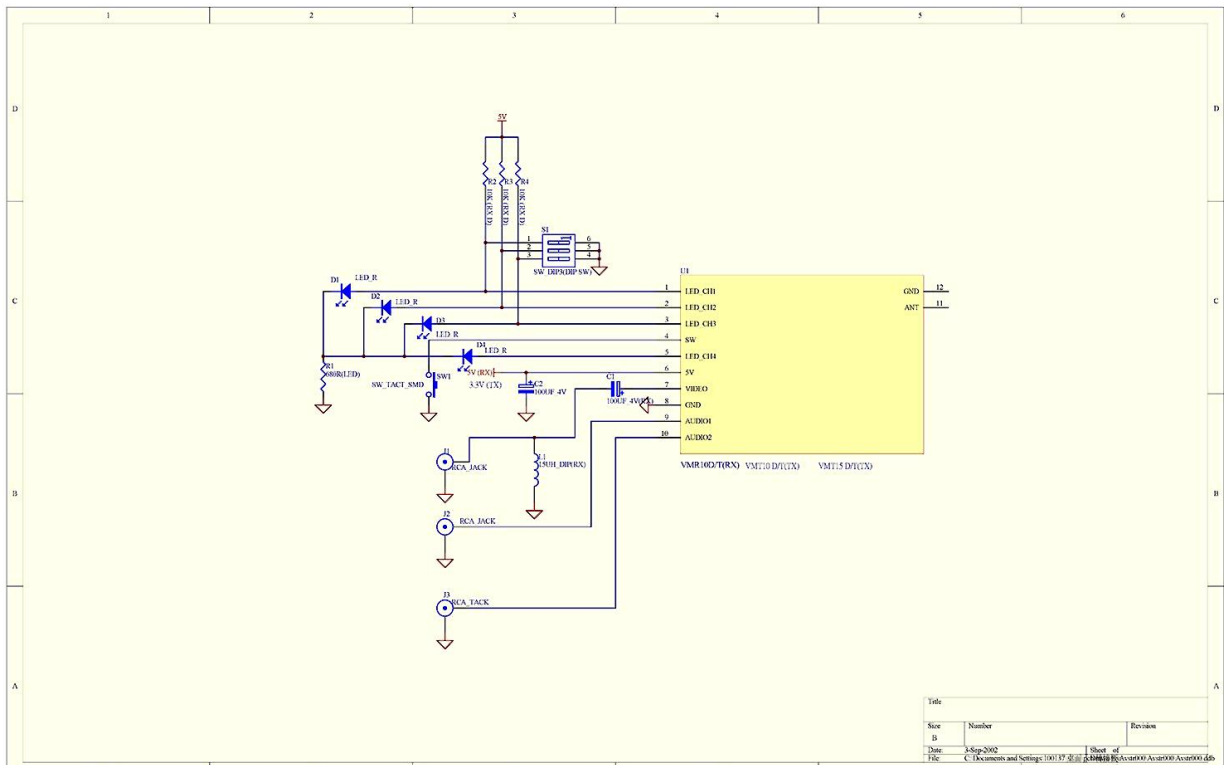
VMT10D APPLICATION CIRCUITS (DIPSWITCH)



VMR10T APPLICATION CIRCUITS (TACT)

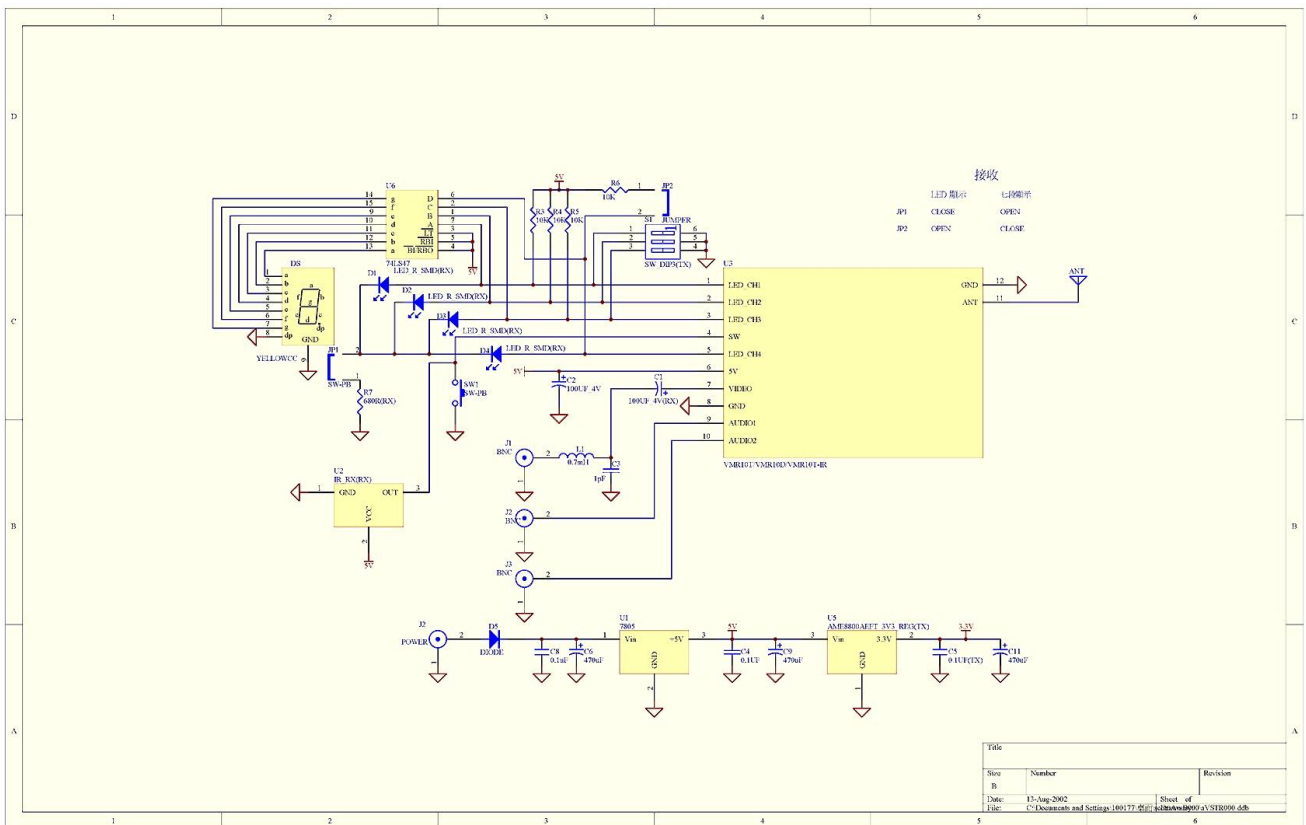


VMR10D APPLICATION CIRCUITS (DIPSWITCH)



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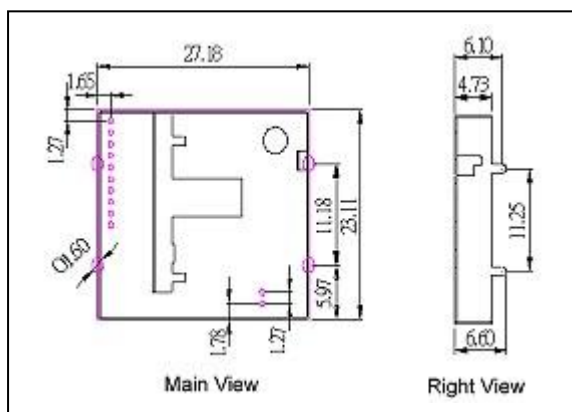
VMR10T with IR Remote Control Function



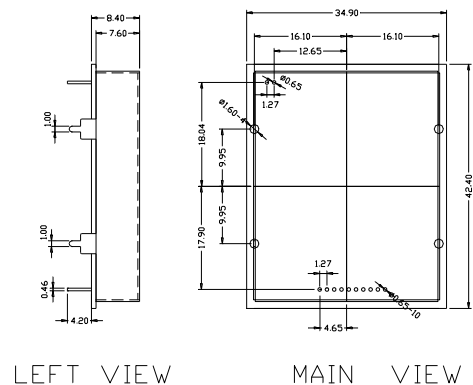
RF LAYOUT APPLICATION NOTES

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

FOOTPRINT & DIMENSIONS (TOP VIEW)



[VMT10T/ D]



[VMR10T/ D]