

## Technical Description

### TRANSMITTER UNIT

#### C. CIRCUIT OPERATION :

1. 2.4GHz RF TRANSMITTER MODULE
2. DC VOLTAGE REGULATOR
3. CMOS IMAGE SENSOR
4. MIC AMPLIFIER
5. LIGHTING CONTROL UNIT

#### D. COMPONENT DESCRIPTION

| CATEGORY              | NUMBER   | NAME                         | DESCRIPTION                                                               |
|-----------------------|----------|------------------------------|---------------------------------------------------------------------------|
| 2.4G RF MODULE        | AWM610TX | 2.4GHz TRANSMITTER<br>MODULE | MODULATE THE AUDIO AND VIDEO SIGNAL INTO<br>THE 2.4GHz CARRIER FREQUENCY. |
| INTEGRATED<br>CIRCUIT | 7805     | VOLTAGE<br>REGULATOR         | REGULATED THE DC OUTPUT VOLTAGE                                           |
| INTEGRATED<br>CIRCUIT | OV7910   | CMOS SENSOR                  | CMOS IMAGE SENSOR UNIT                                                    |
| INTEGRATED<br>CIRCUIT | LM386    | AUDIO AMPLIFIER              | MIC AMPLIFIER                                                             |
| TRANSISOR             | 3906     | LIGHTING CONTROL             | AUTOMATIC LIGHTING CONTROL CIRCUIT                                        |
| CDS                   | GL5637-2 | LIGHT SENSOR                 | LIGHT SENSOR                                                              |



# AWM610/611/612 TX-LVD

## 2.4GHz Video RF Module

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### General:

|                     |                            |
|---------------------|----------------------------|
| Operation Frequency | 2400~2483MHz               |
| Channel Selection   | PLL Synthesizer, 4 Channel |
| Supply Voltage      | 5V                         |

CH1.:2414MHz CH2.:2432MHz CH3.:2450MHz CH4.:2468MHz

### RF:

| Output Power      | 610 TX       | 611 TX | 612 TX |
|-------------------|--------------|--------|--------|
|                   | 0dBm / 10dBm | 20dBm  | 27dBm  |
| Supply current    | 26 / 40 mA   | 120mA  | 450mA  |
| RF Port Impedance | 50Ω          |        |        |

### Video:

|                                 |                         |
|---------------------------------|-------------------------|
| Input Impedance                 | 75Ω , typ               |
| Input Signal Level              | 1V <sub>P-P</sub> , typ |
| Modulation (1V <sub>P-P</sub> ) | ±900KHz                 |
| Differential Gain               | ±5% max                 |
| Differential Phase              | ±5% Deg. max            |

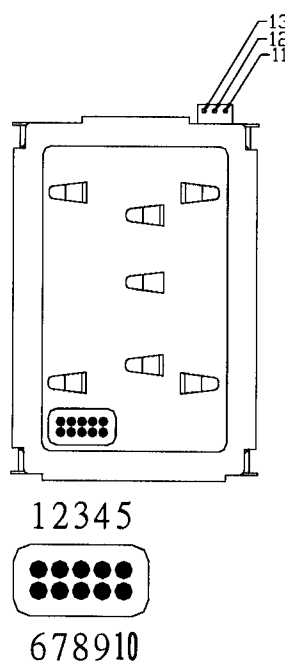
### Audio:

|                                |                         |
|--------------------------------|-------------------------|
| Input Impedance                | 10KΩ , typ              |
| Input Frequency Range          | 50Hz-20KHz              |
| Input Signal Level             | 3V <sub>P-P</sub> , max |
| Modulation(3V <sub>P-P</sub> ) | ±40KHz                  |
| Harmonic Distortion            | 1.5% max                |
| S/N                            | 50 dB min               |
| Subcarrier Frequency           | 6.5MHz                  |
| Subcarrier Power Level         | 22 dBc ,typ             |

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### Pin Description

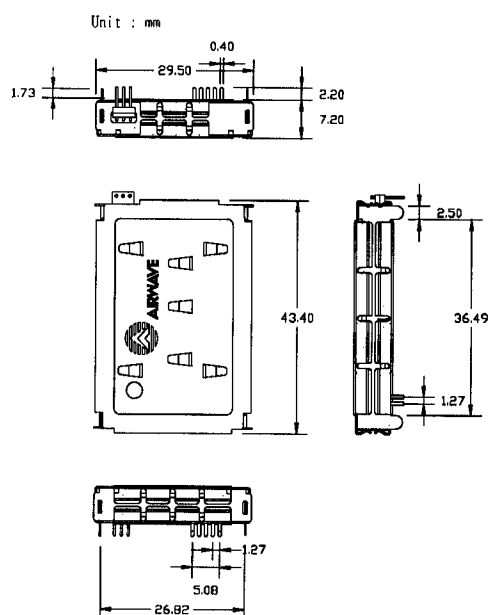
|    |            |
|----|------------|
| 1  | Video      |
| 2  | 5V         |
| 3  | GND        |
| 4  | Audio      |
| 5  | N/A        |
| 6  | N/A        |
| 7  | CH1        |
| 8  | CH2        |
| 9  | CH3        |
| 10 | CH4        |
| 11 | GND        |
| 12 | To Antenna |
| 13 | GND        |





## PHYSICAL DIMENSIONS

Unit: mm



## PCB Layout

PCB Layout :AWM61X TX-LVD

單位:mm



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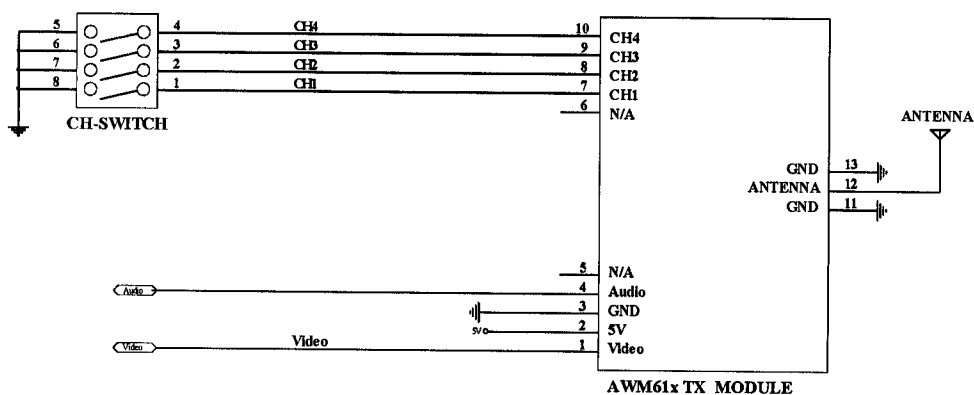
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2.4GHz Video RF Module

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## AWM61x TX Module Application Circuit



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All Specification are subject to change without notice.