



大紘科技

AWM6W3V TX

5.8 GHz AHD Wideband FM Transmitter

Date :2017/02/13

Version: 0.1

Doc. no :AHD003

# DATA SHEET



## AWM6W3V TX

### 5.8GHz AHD Transmitter Module

承認	品保	工程
Approve	QA	E/E



大紘科技股份有限公司

新竹科學工業園區工業東九路 9 號 4 樓 電話: 03-577-8099 傳真:035778199

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



---

---

## Contents

<b>1. Descriptions</b>	<b>3</b>
<b>2. Feature</b>	<b>3</b>
<b>3. Application</b>	<b>3</b>
<b>4. Function block</b>	<b>3</b>
<b>5. Pin define</b>	<b>4</b>
<b>6. Pin descriptions</b>	<b>4</b>
<b>7. Absolute maximum ratings</b>	<b>5</b>
<b>8. DC/AC Electrical characteristic</b>	<b>5</b>
<b>9. Test circuit</b>	<b>6</b>
<b>10. BOM of test circuit</b>	<b>7</b>
<b>11. Dimension</b>	<b>8</b>



### 1. Descriptions:

Airwave 5.8GHz AHD wideband video wireless RF modules contain one Transmitter and one Receiver. Using of the most popular 5.8GHz ISM band and being designed with high reliability, Airwave RF modules, AWM6W3V\_TX and AWM6W2V\_RX, can transmit/receive a wide band video signals up to 140M in open area.

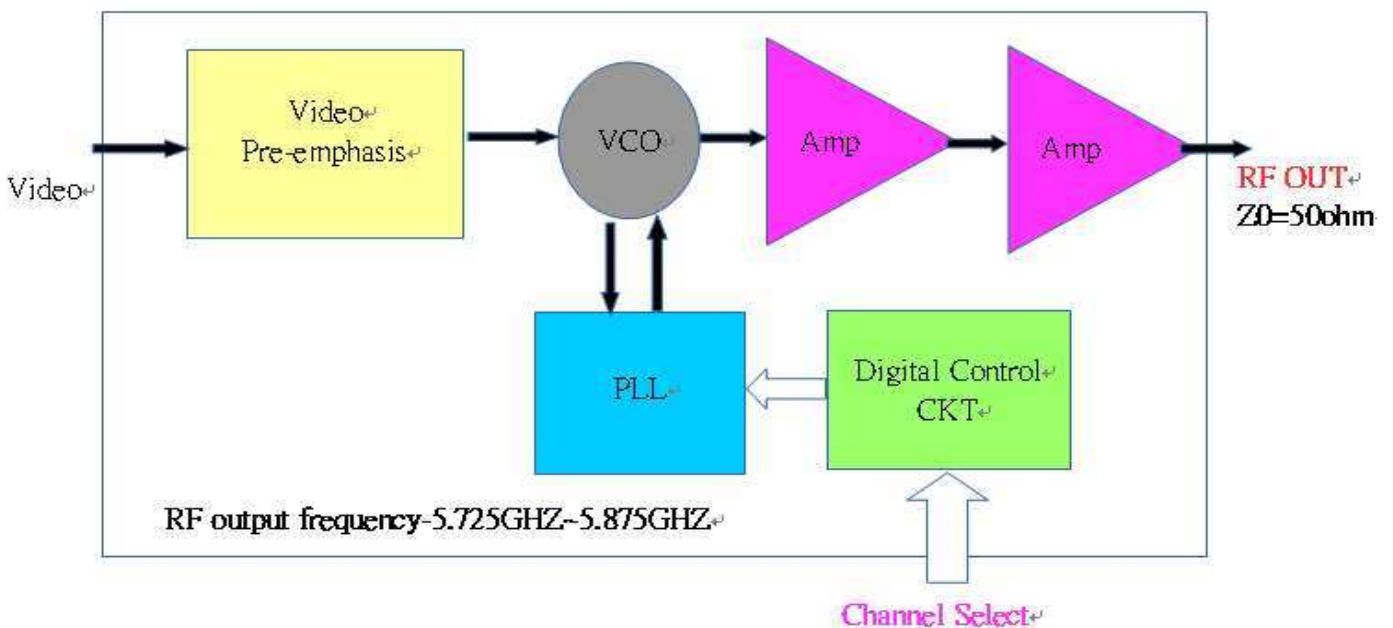
### 2. Feature:

- Use worldwide 5.8GHz ISM band
- Design in compact size and low power consumption
- Reach highly efficient FM modulation/demodulation scheme
- Be compatible with AHD1.0 video formats
- Integrated high power PA and video pre-emphasis in a single module
- Provide with 7 selectable channels
- DIP or slide switch for channel selection

### 3. Application:

- Wireless AHD Sender
- Surveillance
- Wireless Camera

### 4. Function block





## 5. PIN Define

Pin01	BIT2
Pin02	BIT1
Pin03	BIT0
Pin04	N/C
Pin05	N/C
Pin06	Video
Pin07	Vcc
Pin08	Bypass
Pin09	GND



## 6. PIN Descriptions

### AWM6W3V TX

PIN	NAME	Descriptions	PIN	NAME	Descriptions
01	BIT2	see note1 & 2	06	Video	Video Input
02	BIT1		07	VCC	DC +5V power supply in
03	BIT0		08	BYPASS	Bypass capacitor
04	N/C		09	GND	Ground
05	N/C		10	RFout	RF output

### Note1:

Pin1	Pin2	Pin3	Descriptions	Frequency
BIT2	BIT1	BIT0		
0	0	0	Pin 1, Pin 2, Pin 3 connect to GND.	5740MHz (CH1)
0	0	1	Pin 1 and Pin 2 connect to GND, Pin 3 OPEN.	5760MHz (CH2)
0	1	0	Pin 1 and Pin 3 connect to GND, Pin 2 OPEN.	5780MHz (CH3)
0	1	1	Pin 1 connect to GND, Pin 2 and Pin 3 OPEN.	5800MHz (CH4)
1	0	0	Pin 2 and Pin 3 connect to GND, Pin 1 OPEN.	5820MHz (CH5)
1	0	1	Pin 2 connect to GND, Pin 1 and Pin 3 OPEN.	5840MHz (CH6)
1	1	0	Pin 3 connect to GND, Pin 1 and Pin 2 OPEN.	5860MHz (CH7)
1	1	1	Pin 1, Pin 2, Pin 3 OPEN.	5860MHz (CH7)

### Note 2:

#### Channel Setting:

	MIN.	TYP.	MAX.
High Voltage	2.5V	3V	3.6
Low Voltage	-0.3V	0V	1V

Minimum settling time: < 100ms



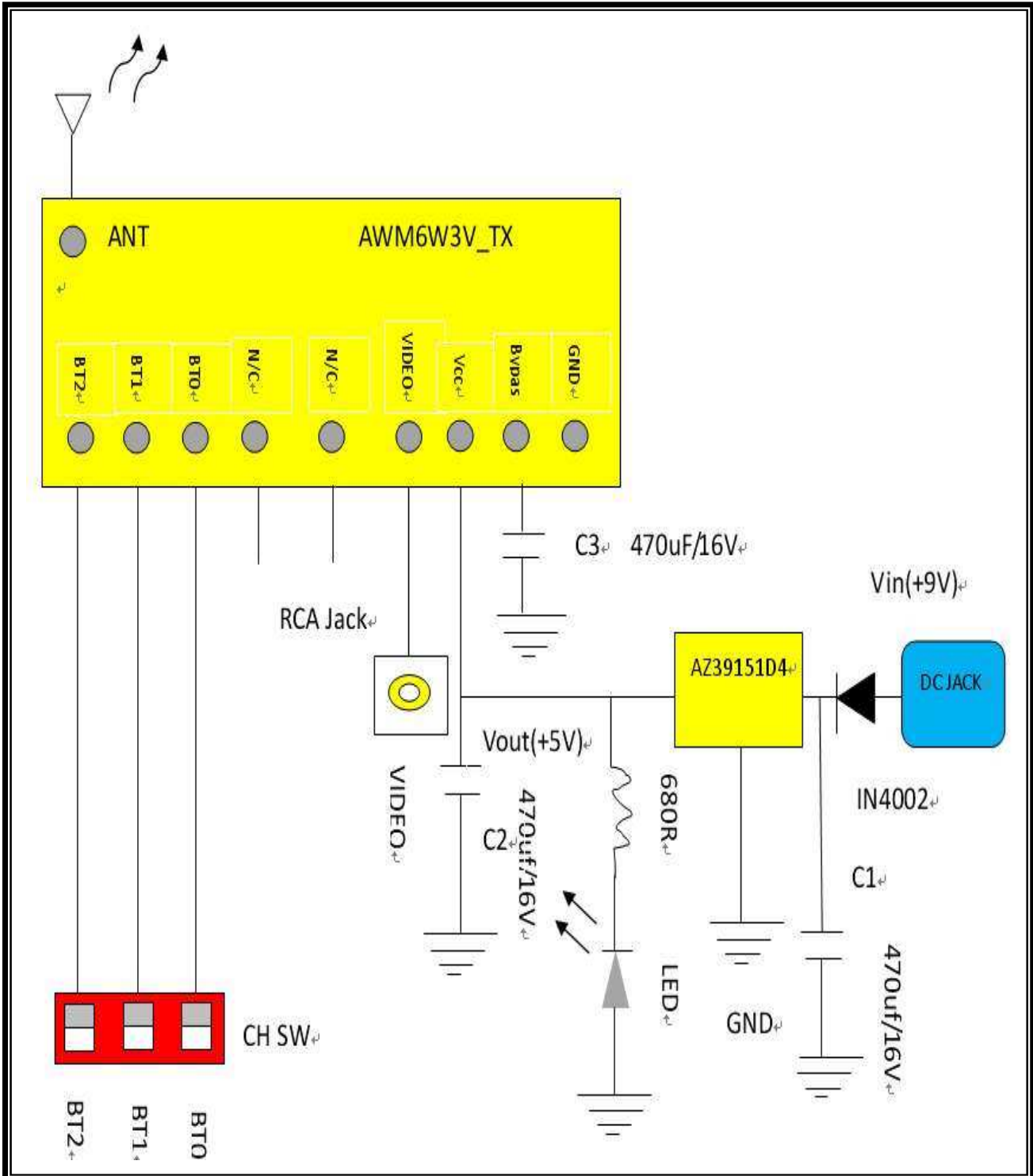
### 7. Absolute Maximum Ratings

Parameters	Model.	Min.	Typ.	Max.	Unit
Storage Temperature Range	AWM6W3V TX	-40	-	85	℃
Supply voltage	AWM6W3V TX	-0.5	-	5.5	V

### 8. DC/AC Electrical characteristic:

RF/ DC Parameters		Min.	Typ.	Max.	Unit
Supply voltage (DC)	AWM6W3V TX	+4.8		+5.2	V
Supply current	AWM6W3V TX	280	300	320	mA
RF output power	AWM6W3V TX	19	20	23	dBm
Operating temperature		-10		60	℃
RF Deviation- Video (Input 10KHz, 1Vpp)	AWM6W3V TX		3.9		MHz
Antenna Port Impedance			50		Ohm
5.8GHz Carrier Frequency Accuracy			±300		kHz
Operation Frequency Range		5725		5875	MHz
Channel Selection		PLL Synthesizer, 7CH (See Tab11)			
Channel Frequency		Ch1=5740, CH2=5760, CH3=5780 Ch4=5800, CH5=5820, CH6=5840 Ch7=5860			
Video-Audio Modulation/Demodulation Type		FM-FM			

### 9. Test circuit:



AWM6W3V TX Demo Board DIP SW



#### 10. 參考電路用料清單

品名規格	使用量	插件位置
E/CAP 33UF, 4*7 10V,SS010M0033SBT(LF)	2	C2,C3
E/CAP 470uF, 8*9 16V	3	C1,C4,C5
DIODES 1N4001, 1A/100V	1	D1
LED MO34PD, SH-031-RR-L	1	D2
AZ39151D4-5.0E1 Regulator	1	IC2
RCA PIN JACK , RCA-316	1	JACK2
DC POWER JACK(低錫), DS-210B 5.5mm	1	JACK1
0603 RESISTOR 680R, +-5% 1/16W RM06JTN683(LF)	1	R5
DIP SWITCH , DPL-03	1	SW1



### 11. Dimension:

