FPVspeed™

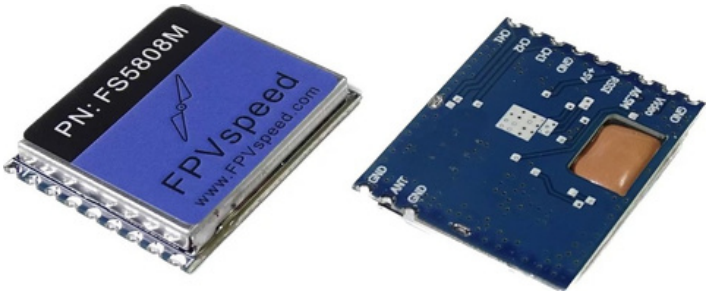
DIY Module Series

FPV Video Receiver FS5808M

5.8G 8CH

KEY FEATURES

- Channels: 8 CH
- 5.8G Wideband FM Audio and Video Synchronous
- Reception Small Size SMD Package: 28×23×3 mm
- Low Power Consumption: 5 V 170mA
- High Reception Sensitivity: -90dBm
- Built-In Frequency Phase-Locked Loop with High Stability
- Low Spurious Leakage: Complies With CE, FCC Requirements
- Direct Output Of Analog Audio And Video Signals



APPLICATIONS

- DVD/DVB Audio And Video Wireless Transmission
- Baby Monitor
- Image Monitoring for Construction Sites
- Wireless Surveillance Camera System
- Wireless Imaging Medical Devices
- Wireless Rearview Camera Transmission
- Wireless Video Toys Wireless Doorbell

PRODUCT OVERVIEW

- **The RX5808** is an FM audio and video reception and demodulation module operating in the **5725-5865MHz** ISM frequency band. The module adopts a single-chip design, which integrates **VCO, PLL**, wideband FM video demodulation, and **FM** audio demodulation, offering characteristics such as small size, low power consumption, and high sensitivity. The module uses a surface-mount package, occupying a very small space in the overall device.
- This module can be easily applied by simply connecting the power supply, audio line, video line, and attaching the antenna to receive audio and video signals.

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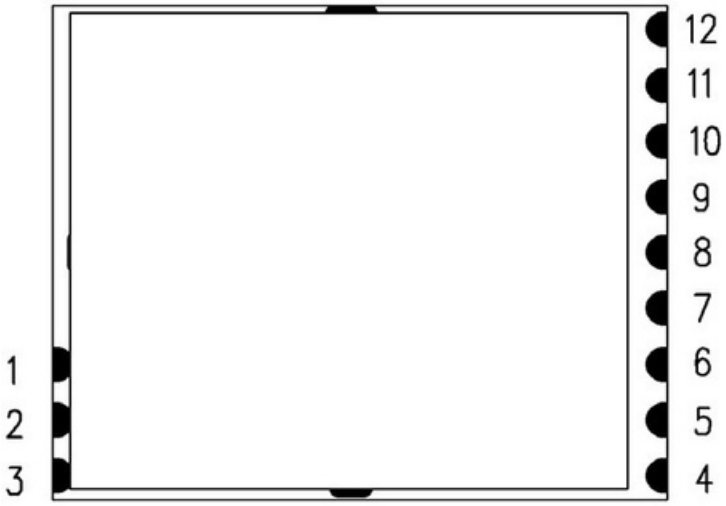
PIN FUNCTION DIAGRAM



Pin No.	Function	I/O	
1	GND		Antenna Ground
2	ANT	I	Antenna Input, Impedance 50Ω
3	GND		Antenna Ground
4	CH1	I	Channel 1 Switch Input
5	CH2	I	Channel 2 Switch Input
6	CH3	I	Channel 3 Switch Input
7	GND	I	Power Ground
8	+5V	I	5V Power Input
9	RSSI	I	Received Signal Strength Indication Voltage Output
10	A6.5M	O	Audio Output R6.5M
11	VIDEO	O	Video Output
12	GND	1	Power Ground

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Recommended operating conditions (If the recommended operating conditions are not met, the specified electrical performance may not be achieved).						
Parameter	Symbol	Operating Conditions	Min.	Typ.	Max.	Unit
Supply Voltage	VCC		3.5	5	5.5	V
Power Supply Voltage	VIp			10	25	mVpp
Input Voltage	Vi		GND	-	VCC	V
Operating Temperature	Ta		-20	27	70	°C
Electrical Characteristics(VCC=5.0V, Ta=25°C)						
Parameter	Symbol	Operating Conditions	Min.	Typ.	Max.	Unit
Supply Current	Icc	Vcc=5.0V	---	170	180	mA
RF (Radio Frequency)						
Receiving Sensitivity	RFin	50Ω System	---	-90	---	dBm
Received Frequency	CH1-8		5645	---	5945	MHz
Frequency Stability	Fstb		-100		+100	ppm
Input Impedance	RFin	50Ω System		50		Ω
Input VSWR	VSWR	50Ω System		2: 1		

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Video	Symbol	Operating Conditions	Min.	Typ.	Max.	Unit
Video Output Impedance	Rvo			75Ω		Ω
Video Output Voltage	Vvo		0.9	1	1.25	Vpp
Frequency Response	FbdV	50Hz ~ 6MHz	-5		+5	dB
Signal-to-Noise Ratio	S/N			38		dB
Audio	**Symbol**	**Operating Conditions**	**Min.**	**Typ.**	**Max.**	**Unit**
Subcarrier Demodulation Frequency	Far		---	6.5	---	MHz
Audio Output Impedance	Rao	1kHz sine wave		600	1K	Ω
Audio Output Voltage	Vao	1kHz sine wave, dual channel		0.8*		Vpp
Frequency Response	Fbda	100-10kHz, 1.0Vpp sine wave	100		10k	Hz
Harmonic Distortion	THD	1kHz, 1.0Vpp sine wave		0.6	1.5	%
Received Signal Strength Indication (RSSI)	VRSSI	RFin : -91dBm ~ 5dBm	0.5		1.1	V
Signal-to-Noise Ratio	S/N	1kHz, 1.0Vpp sine wave		45		dB

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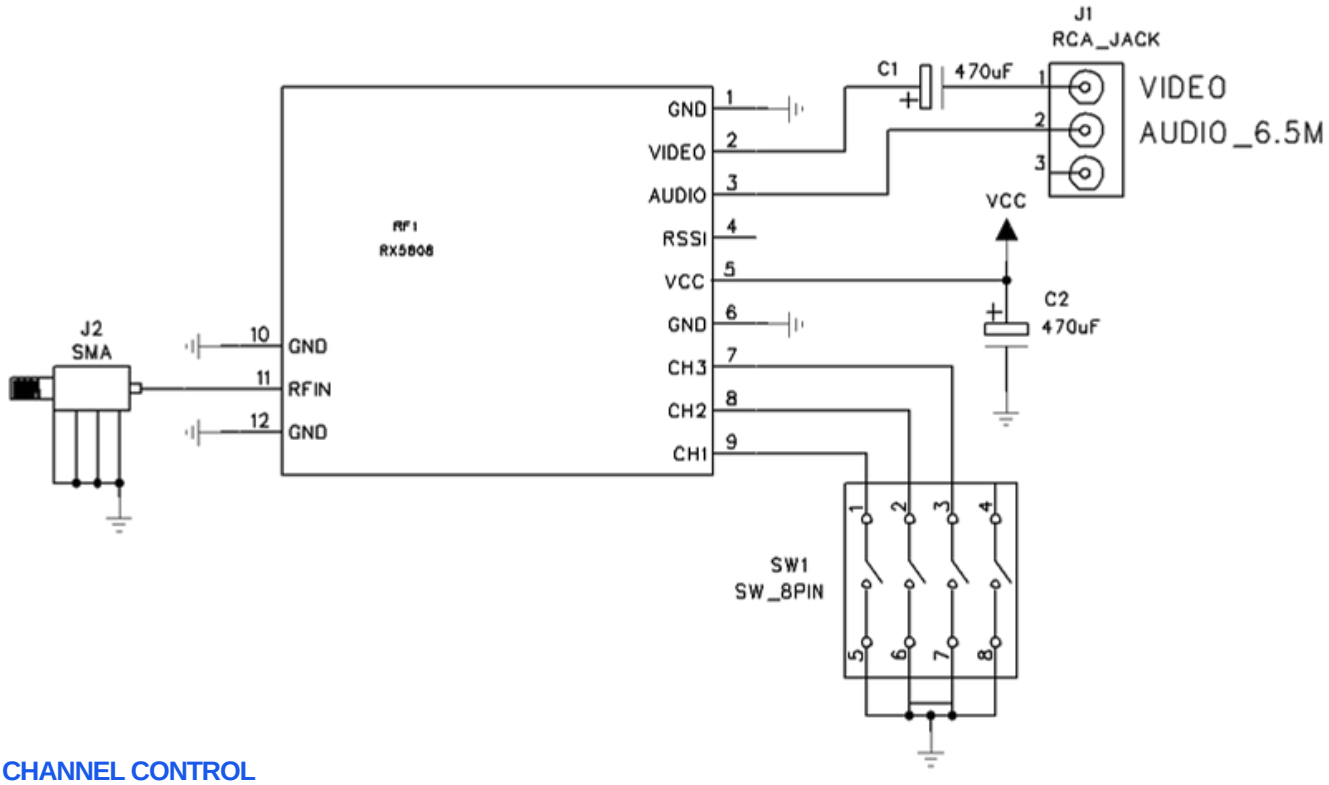
APPLICATION CIRCUIT



CHANNEL CONTROL

Channel		CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8
Receiving Frequency (MHz)		5705	5685	5665	5645	5885	5905	5925	5945
Pin Level	CH1	0	1	0	1	0	1	0	1
	CH2	0	0	1	1	0	0	1	1
	CH3	0	0	0	0	1	1	1	1

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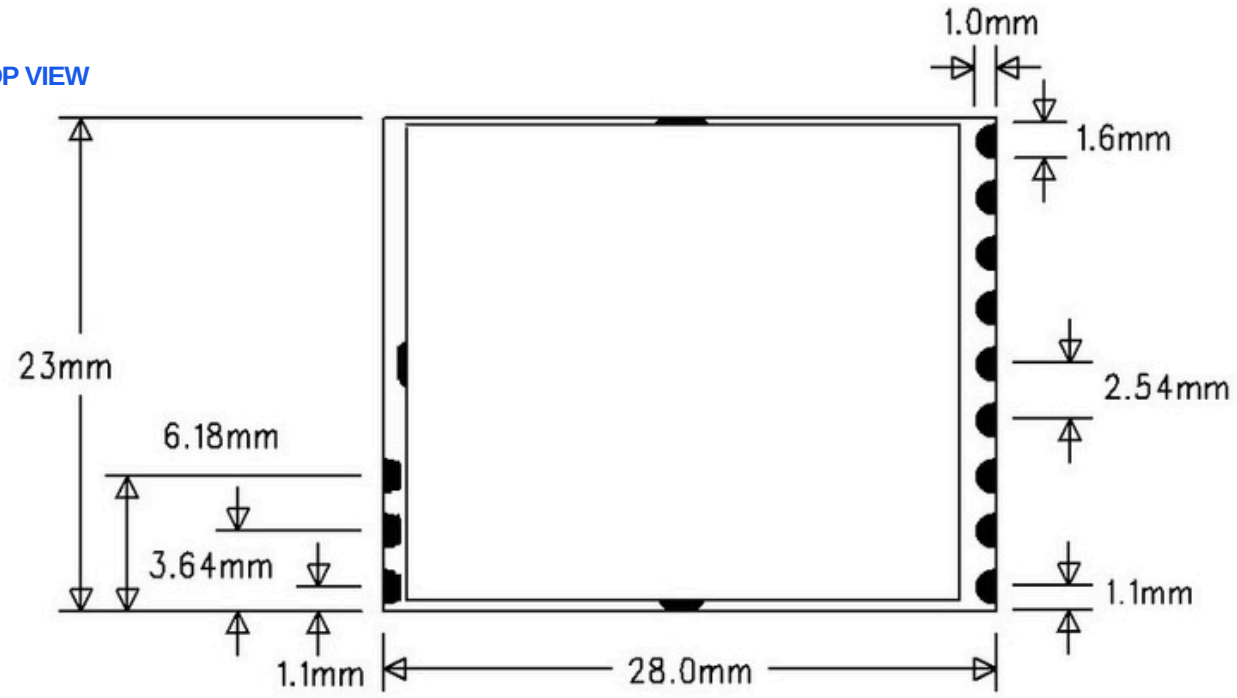
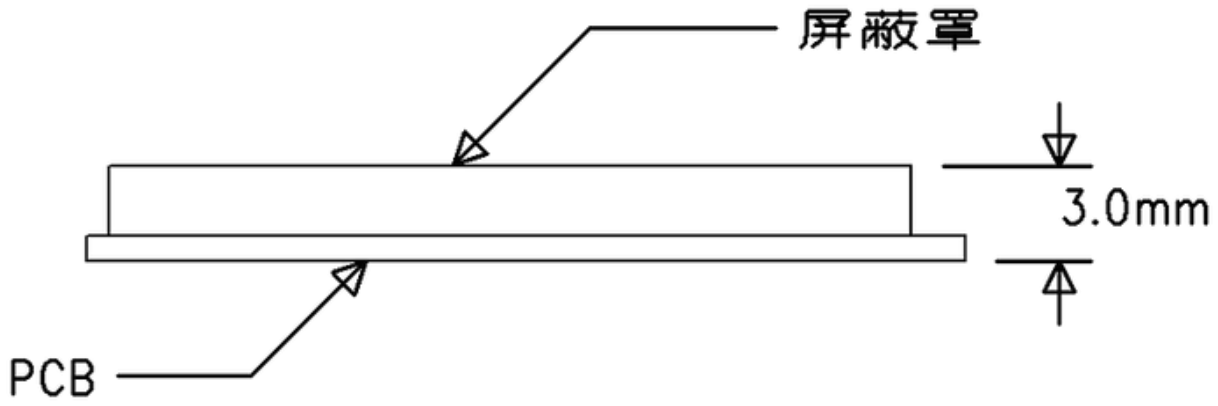
TOP VIEW



SIDE VIEW



DISCLAIMER

⚠ **This product is intended for civilian and commercial use only. It is strictly prohibited from being used for any military purposes or activities.**