

**902 to 928 MHz
3-Channel
FM Video / 3MBPS FSK Data Module
Transmitter Module**

Designed for long-range wireless video or FSK data applications. Available in two versions; the T900V-3A (up to 500 ft*) conforms to FCC Part 15 requirements for unlicensed use. T900V-3B (up to 2600 ft†) has higher power output and may only be used for police or military applications.

This module generates very high quality FM video modulation for exceptional color fidelity and image resolution. It may also be used for data applications up to 3MBPS. An internal filter attenuates harmonics to levels ensuring compliance with FCC spurious emissions requirements and is crystal controlled for excellent stability. For video applications, no tuning or external components are required. The channels are spaced to allow multiple channel operation in an area. The module is packaged in an RFI/EMI shielded enclosure. Use with R900V-3 receiver module.

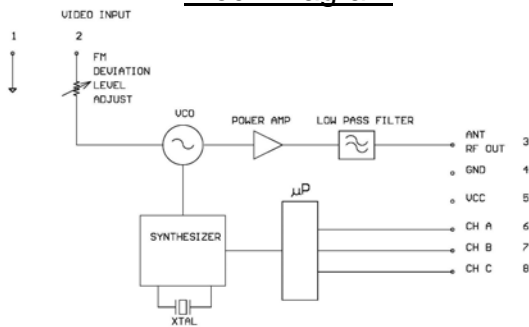
Features

- 3-Channel Selection
- 0 dBm or 19 dBm Output
- 75 Ohm NTSC Input
- Crystal Reference
- No RF Design Required

Typical Applications

- Wireless Video Transmission
- Security – Home/Industrial/Auto
- Portable Wireless Camera/Monitor Systems
- Wireless Data Transmission

Block Diagram



Model	Output Power	Frequency (MHz) CH A/CH B/CH C	Matching Receiver Module	Transmitter Evaluation Board	Matching Receiver Evaluation Board
T900V-3A	0 dBm	907/915/923	R900V-3	T900V-3A-EV	R900V-3-EV
T900V-3B	19 dBm	907/915/923	R900V-3	T900V-3B-EV	R900V-3-EV

* Line of sight, low power option (0 dBm), when used with R900V-3 and quarterwave antenna with groundplane.

† Line of sight, high power option (+19 dBm), when used with R900V-3 and quarterwave antenna with groundplane.

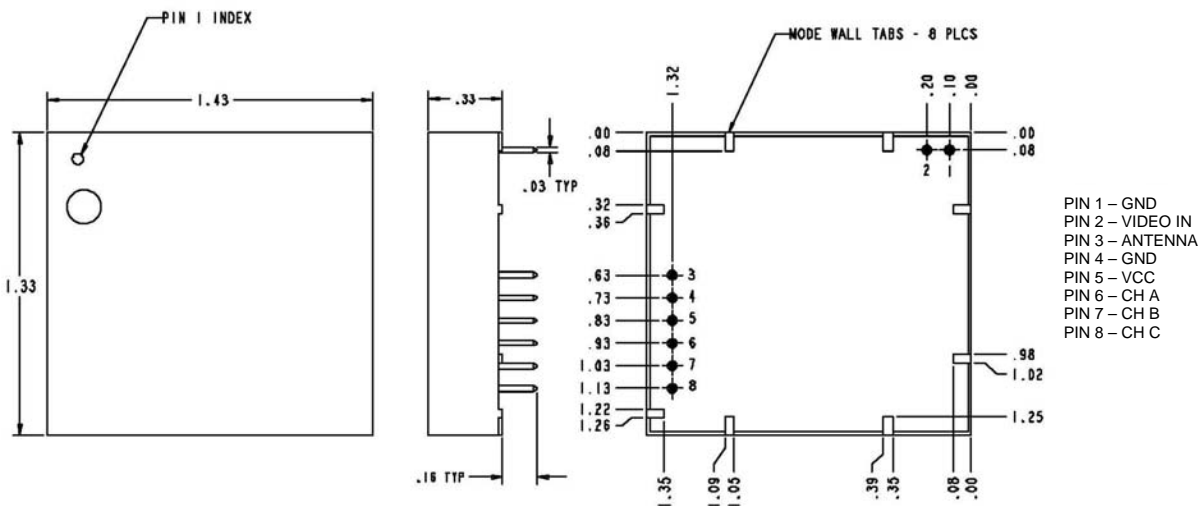
Electrical Characteristics

Sym	Parameter	Min	Typ	Max	Unit
VCC	Operating Voltage Range	4.75		5.25	Volts
I _{cc}	Operating Current (at VCC=3V & Din=3V)		110		mA
	Video Frequency Response	.5 Hz		5 MHz	
SNR	Signal to Noise Ratio		60		dB
	FM Deviation @ 1V P-P Input		+/-3		MHz
DG	Differential gain Error			3% p-p	
DP	Differential Phase Error			3% p-p	
Z _{out}	Antenna Output Impedance		50		Ohms
	Harmonic Suppression		-45		dBc
T _{op}	Operating Temperature	-20		+70	C

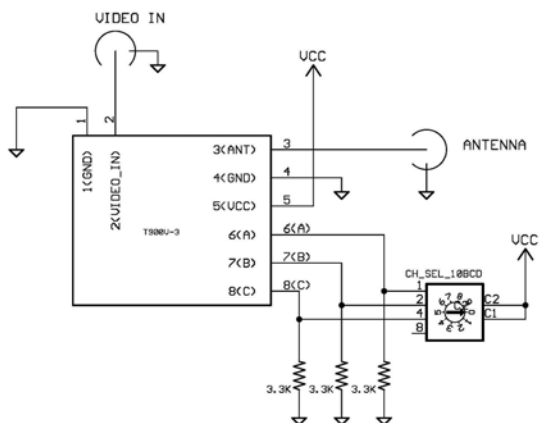
Maximum Ratings

Sym	Parameter	Value	Unit
VCC	DC Supply Voltage	-0.5 to +7.0	Volts
	Channel Select	-0.5 to VCC	Volts
T _{stg}	Storage Temperature	-50 to +150	C

Package Dimensions



Application Circuit



Channel Select Table

Ch Select / MHz (pinout)	A (6)	B (7)	C (8)
Channel 1 / 907	Vcc	0	0
Channel 2 / 915	0	Vcc	0
Channel 3 / 923	Vcc	Vcc	0

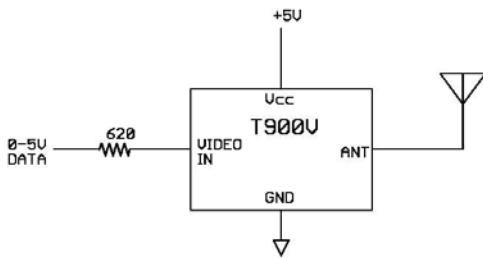
Any conditions other than the above for A, B, and C will set the transmitter for 907 MHz operation.

FSK Data Applications

Transmission data input to T900V should be 0-5 Volts TTL. Different input voltages will require a different input resistor to set the appropriate deviation.

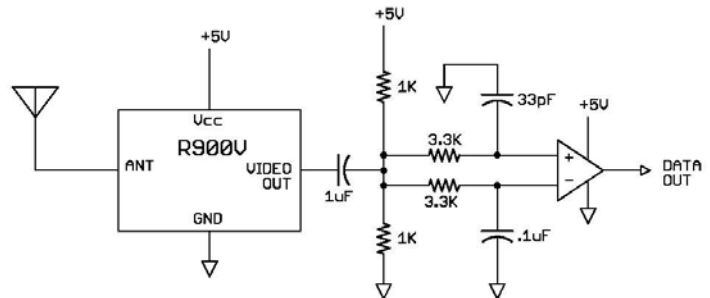
Additional receiver circuitry is necessary as the output of the video module is AC coupled and of inappropriate voltage levels for a digital interface. See Figure 2.

FSK Data Application Circuit- Figure 1



Resistor sets Deviation for +/- 1.5 MHz (based on TTL input levels)

Figure 2



Comparator is MAX941 or equivalent.