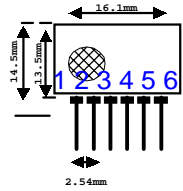


# TWS-434 TRANSMITTER

**NEW !!**



- pin 1 : Vcc
- pin 2 : Vcc
- pin 3 : Gnd
- pin 4 : Gnd
- pin 5 : RF Output
- pin 6 : Code Input

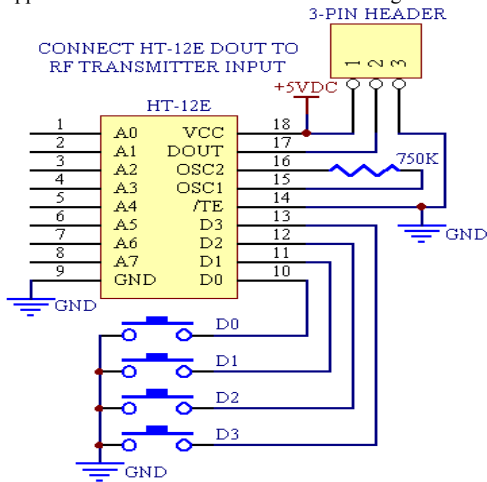
Frequency 300 - 433MHz

**Modulation : AM ( Code )**  
**Supply Voltage : 1.5v - 12 v dc**  
**RF Output Power : 8mW**

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Vcc	Operating supply voltage		1.5	-	12	V
Icc	Peak Current		-	5	9	mA
Vin	Input High Voltage	IData=100Ua (High)	Vcc-0.5	-	Vcc	V
Vii	Input Low Voltage	IData=0Ua (Low)	-	-	0.3	V
Fo	Absolute Frequency		314.8	315	433.9	MHz
Po	RF Out Power Into 50Ω		-3	0	+2	dBm
Tr	Modulation Rise Time	External Encoding	-	5	-	KHz
Tf	Modulation Fall Time		-	-	100	uS
			-	-	100	uS

Notes : ( Case Temperature = +25C+/-2C Test Load Impedance = 50 Ω )

Application Circuit: 4-bit RF transmitter using the Holtek HT-12E encoder



Connections:

1. TWS Gnd to header-pin #3.
2. TWS Vcc to header-pin #1.
3. TWS Code-Input to header-pin #2.

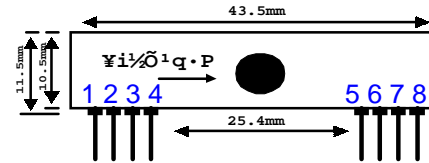
NOTE: /TE can be switched to ground to provide transmit on button-press.

More detailed information is available from <http://www.rentron.com>

For 8-bit RF remote control substitute the HT-12E with HT-640 encoder.

Maximum range obtained with 50-ohm antenna, 35cm in length on TWS & RWS.

# RWS-434 RECEIVER



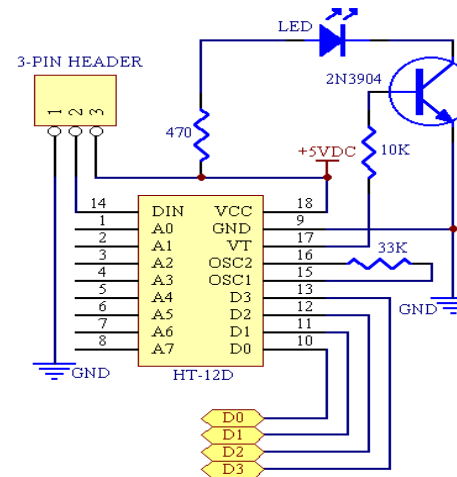
- pin 1 : Gnd
- pin 2 : Digital Output
- pin 3 : Linear Output
- pin 4 : Vcc
- pin 5 : Vcc
- pin 6 : Gnd
- pin 7 : Gnd
- pin 8 : Ant ( About 30 - 35 cm )

Frequency 300 - 433MHz

**Modulation : AM**  
**Supply Voltage : 4.5v - 5.5 v dc**  
**Sensitivity : 3uVrms**  
**Output : Digital & Linear**  
**Application : Radio Remote Control**

ITot	Operating supply voltage		-	4.5	-	
V Data	Data Out	Data = +200 uA ( High )I	Vcc-0.5	-	Vcc	V
		I Data = -10 uA ( Low )	-	-	0.3	V
Electrical Characteristics						
Characteristics	SYM	Min	Typ	Max	Unit	
Operation Radio Frequency	FC	300 - 434			MHz	
Sensitivity	Pref			-106	dBm	
Channel Width		+-500			KHz	
Noise equivalent BW	NEB		5	4	KHz	
Baseboard data rate				3	Kb/s	

Application Circuit: 4-bit RF Receiver using the Holtek HT-12D decoder



Connections:

1. RWS Gnd to header-pin #1
2. RWS Vcc to header-pin #3
3. RWS Digital-Output to header-pin #2

HT-12E encoder data transfers to HT-12D data-pins via RF transmission.

VT-pin transitions from low to high on valid reception & address.

More detailed information is available from <http://www.rentron.com>

For 8-bit RF remote control, substitute the HT-12D with HT-648L decoder.

## Reynolds Electronics

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