



WEN SHING

DATA SHEET

Transmitter Module : TWS-CS(433.92 MHZ)

*Frequency Range: 433.92 MHZ *Modulate Mode: ASK *Circuit Shape: SAW *Data Rate: 8kbps *Supply Voltage: 2.5~ 12 V *Power Supply and All Input / Output Pins: -0.3 to +12.0 V *Non-Operating Case Temperature: -20 to +85 ℃ *Soldering Temperature (10 Seconds) : 230 ℃ (10 Seconds)	
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Absolute Maximum Ratings

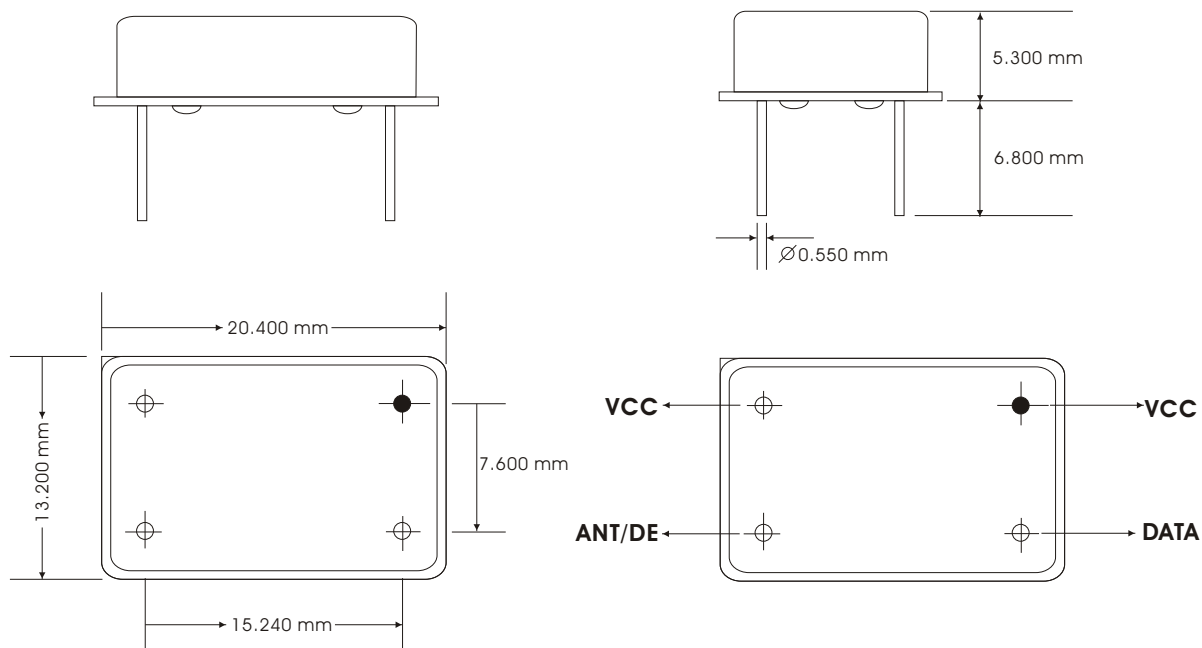
Rating	Value	Unit
Power Supply and All Input/Output Pins	-0.3 to +12.0	V
Non-Operating Case Temperature	-20 to +85	℃
Soldering Temperature(10 seconds)	230	℃

Electrical Characteristics, T=25℃, Vcc=3.6v, Freq=433.92MHZ

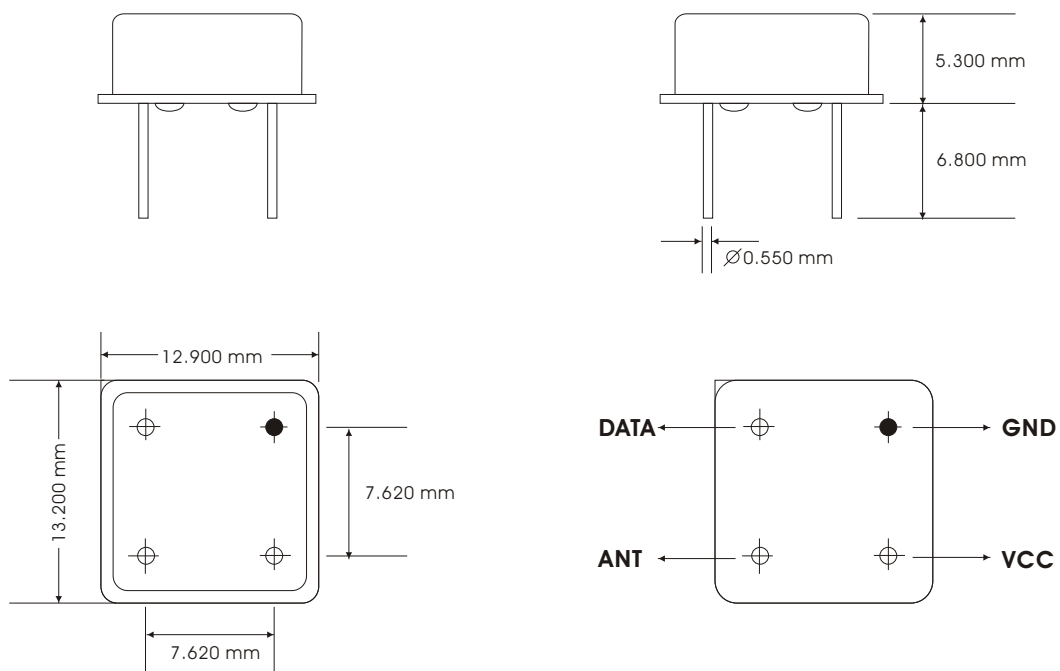
Characteristic	Sym	Min.	Typ.	Max.	Unit
Operating Frequency (200KHZ)	Vcc		433.92		MHZ
Data Rate	ASK			8	Kbps
Transmitter Performance(OOK@2.4kbps)					
Peak Input Current,12 Vdc Supply	ITP			35	mA
Peak Output Power	PO		10		mW
Tum On/ Tum Off Time	T ON/T OFF			1	US
Power Supply Voltage Range	Vcc	3		12	VDC
Operating Ambient Temperature	TA	-20		+85	℃
Tx Antenna Out 3V ~12V	dB	-1.7		17	dB

Application Note:

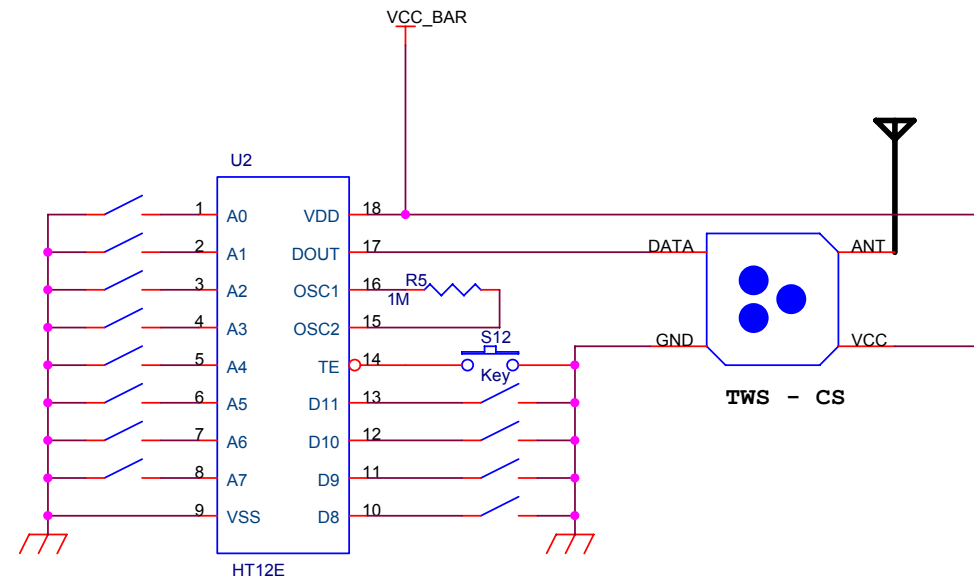
TWS-530



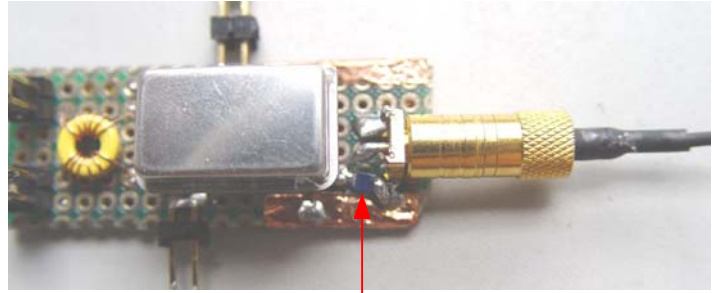
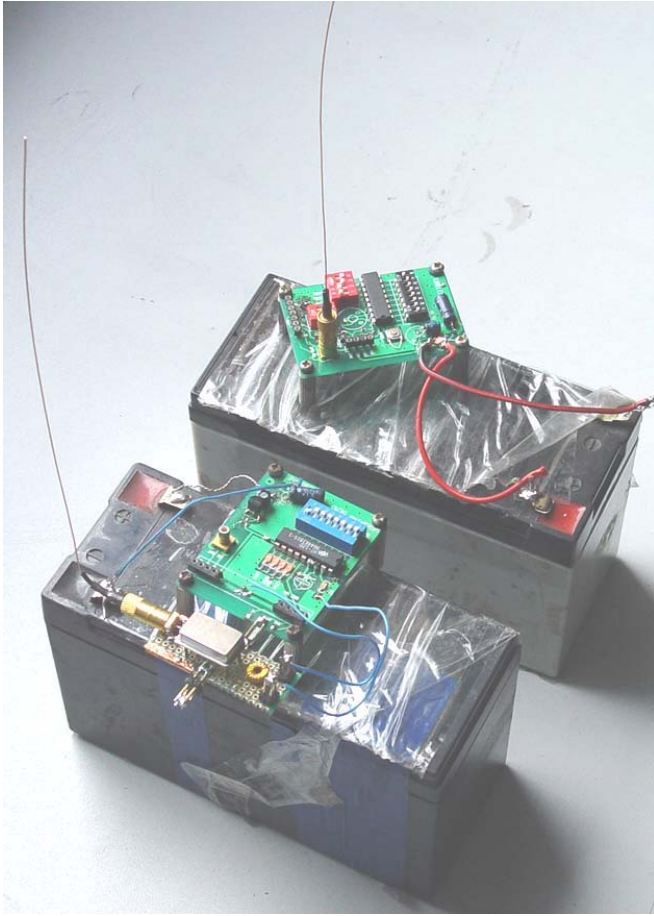
TWS-CS



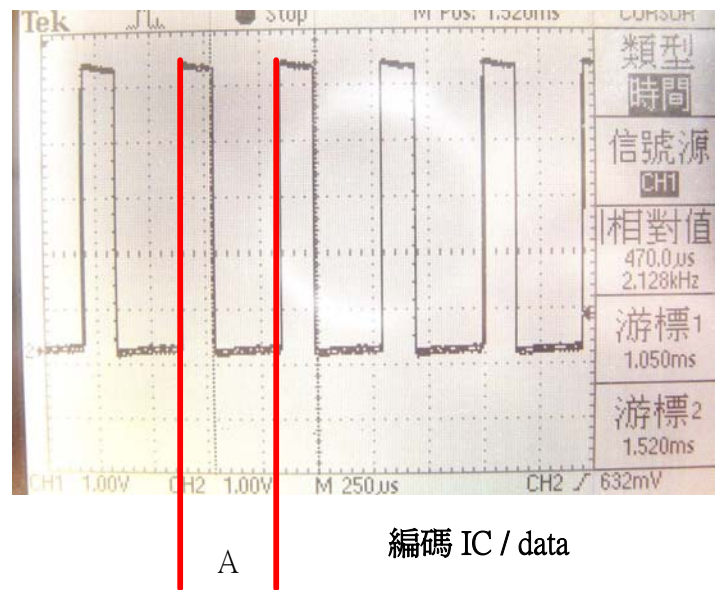
TWS - CS 示範電路



TWS - CS 與 RWS - 530配對測試



接收模組天線輸入端接 56NH電感接地



1. 接收與發射天線長度為 20CM (銅線)
2. 發射電源 DC/5V
3. 接收電源 DC/5V 接收模組電源串220R電阻
使電壓降為 DC/3V

實測有效距離

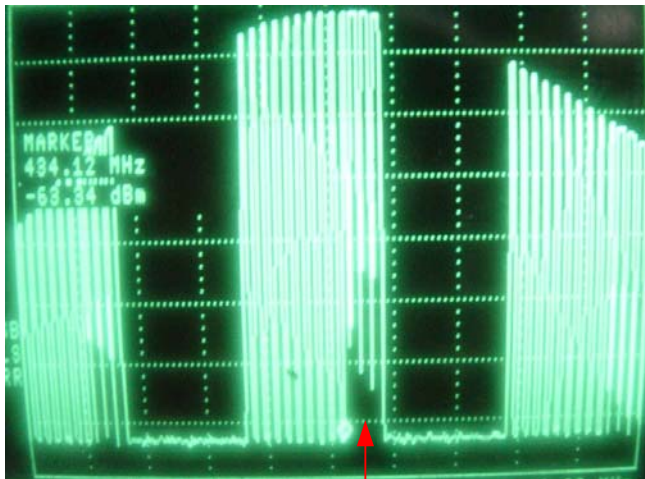
皮尺量出 40公尺距離 = 53步 (腳步)

1. A為 1.25K 距離為 170步 = 128 公尺
2. A為 2.5K 距離為 160步 = 120 公尺

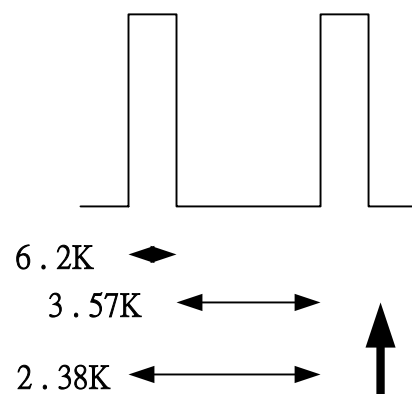
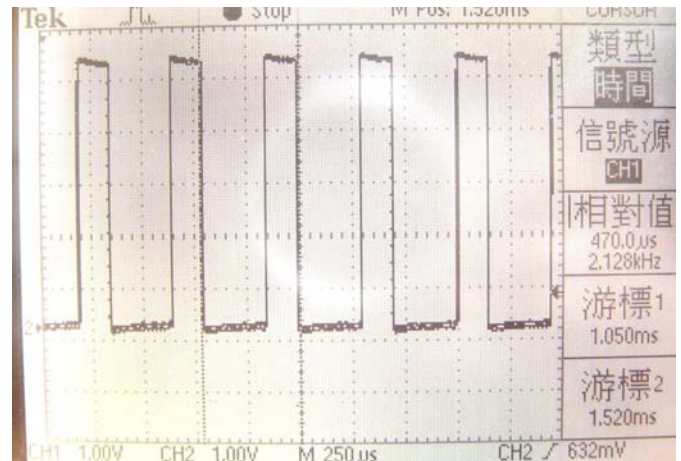
發射與接收部份測試參數

發射參數 - DC / 5V 3.8dB

接收參數 - DC / 3V
外部調制 3K
-105dB



波形沒有拉到底



TWS - CS用KIT制具來做發射調變
當調變資料超過上圖所示
在頻譜可看到此波形
這時接收端收到的資料是不正確的