

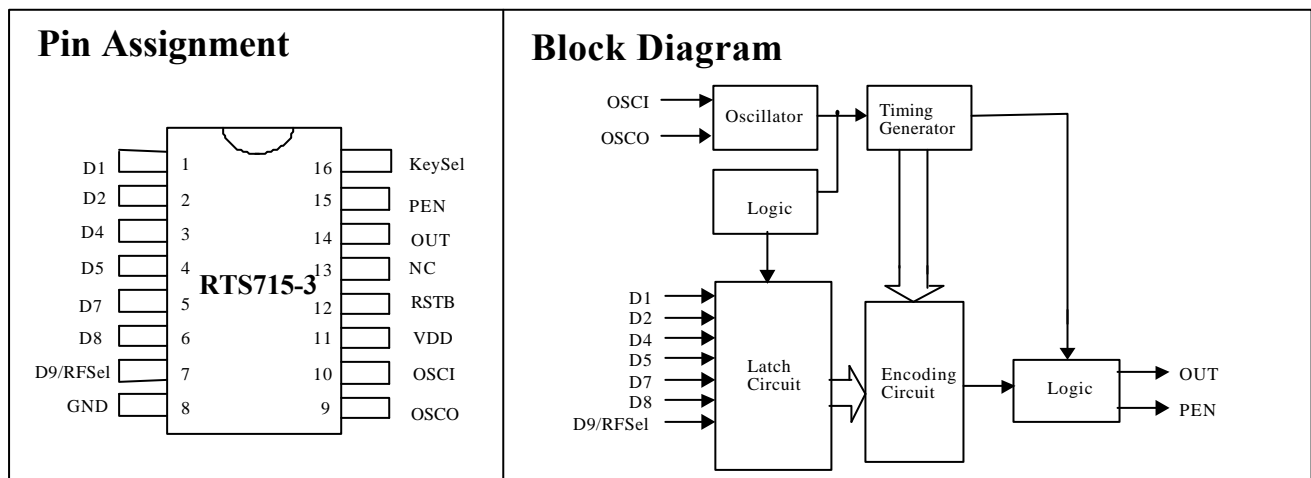
## INFRARED/R.F. TRANSMITTER

### Features

- Wide operating voltage range: 2.4V to 5.0V
- Low Stand-by current(except RF mode)
- Operating frequency 1.2 MHz,crystal/RC oscillation for system operation (by change of application circuit)
- RTS715-3 can combine with RTS510B and RTS511B to become a three-wind mode, three-wind grade and two-timing function infrared remote controller for fans
- Suitable for infrared or radio frequency remote controller system
- Two choices of input function (Eight or one channel)
- Auto Power-OFF after a all keys released
- Provide two transmissive interface(RF and IR)for different application.
- Support 38KHz narrow band IR receiver .

### General Description

The RTS715-3 is a CMOS LSI designed to function as transmitters. The RTS715-3 provides seven functions and can combine with RTS510B and RTS511B. As a infrared remote controller, each data input has a corresponding output signal code, and for the convenience, users can define a decoder to decode the signal to meet different applications.



## Absolute Maximum Ratings

DC Supply Voltage.....	2V to 5V
Input/Output Voltag.....	VDD $\pm$ 0.2V to GND $\pm$ 0.2V
Operating temperature.....	-10 C to 60 C
Storage Temperature.....	-25 C to 125 C

## Comments\*

Never allow a stress to exceed the values listed under "Absolute Maximun Ratings", otherwise the device would suffer from a permanent damage. Nor is a stress at the listed value be allowed to persist over a period, since an extended exposure to the absolute maximum rating condition may also affect the reliability of the device, if not causing a damage thereof.

## DC Electrical Characteristics

(VDD=3.0V, Temp.=25 C, OSC frequency = 1.2MHz)

Parameter	Symbol	Min.	Typ.	Max.	Condition
DC Supply Voltage	VDD	2.4V	3.0V	5.0V	
Operating Current	I <sub>dd</sub>	-	1mA	-	Unload
Stand-by Current	I <sub>stb</sub>	-	1uA	-	Full load
Output Driving Current	I <sub>deiving</sub>	-	12mA	-	V <sub>oh</sub> = 0.7V
		-	6mA	-	V <sub>oh</sub> = 2.4V
	I <sub>sinking</sub>		5mA		V <sub>ol</sub> =0.4V
Input Pull High Resistor	I <sub>in</sub>	-	400KOhm	-	When input pin is connected to 1/2 VDD
Input Pull High Resistor	I <sub>in</sub>	-	4.5MOhm	-	When input pin is connected to GND
Oscillator Frequency Variation (process)	F/F	-	-	$\pm$ 10%	VDD=3.0V
Oscillator Frequency Stability	F/F	-	-	5%	F(3.2V)-F(2.4V)  / F(3.2V) or  F(4.8V)-F(3.6V)  / F(4.8V)

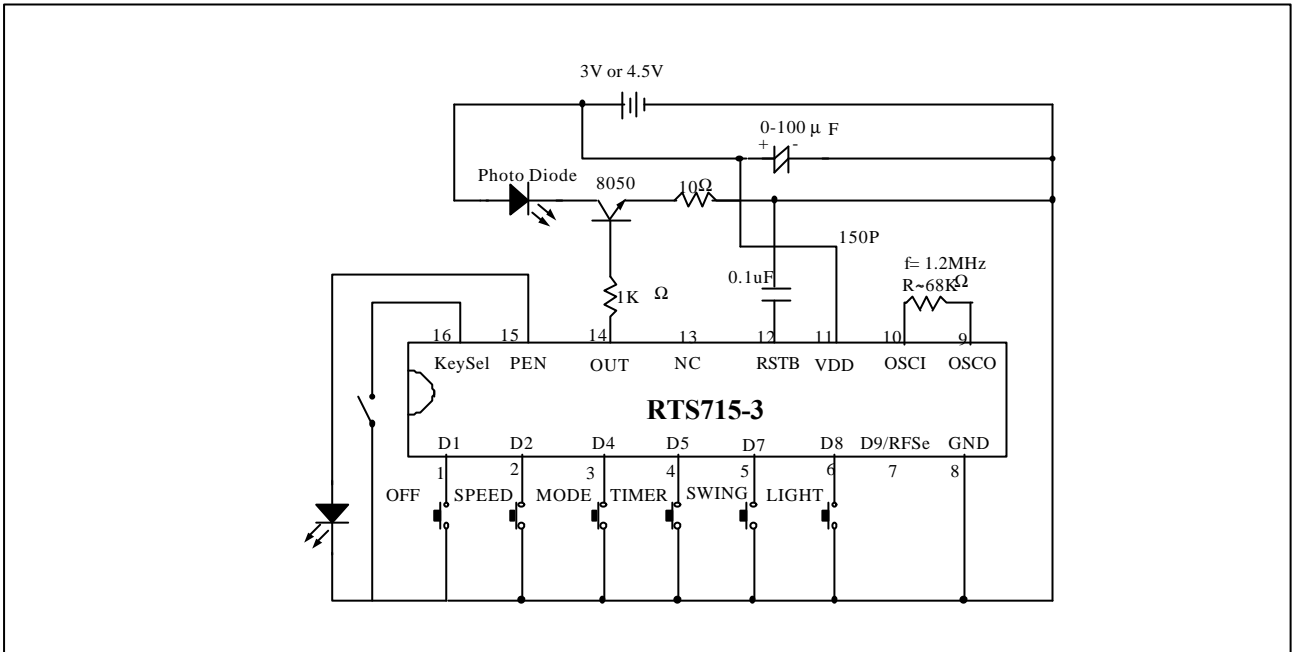
## Pin Description

Pin No.	Designation	Description
1	D1	Data input; when floating, it is pulled up to VDD internally
2	D2	Data input; when floating, it is pulled up to VDD internally
3	D4	Data input; when floating, it is pulled up to VDD internally
4	D5	Data input; when floating, it is pulled up to VDD internally
5	D7	Data input; when floating, it is pulled up to VDD internally
6	D8	Data input; when floating, it is pulled up to VDD internally
7	D9/RFSel	Data input; when floating, it is pulled up to VDD internally, When pin is pull low in power on ,the IC Into RF mode.
8	GND	Negative power supply
9	OSCO	Oscillator output pin
10	OSCI	Oscillator input pin
11	VDD	Positive power supply
12	RSTB	For reset IC
13	NC	No Connection
14	OUT	Data output pin
15	PEN	Trigger enable output pin
16	KeySel	Key trigger mode Select.(pull high is one shot,pull low is level hold)

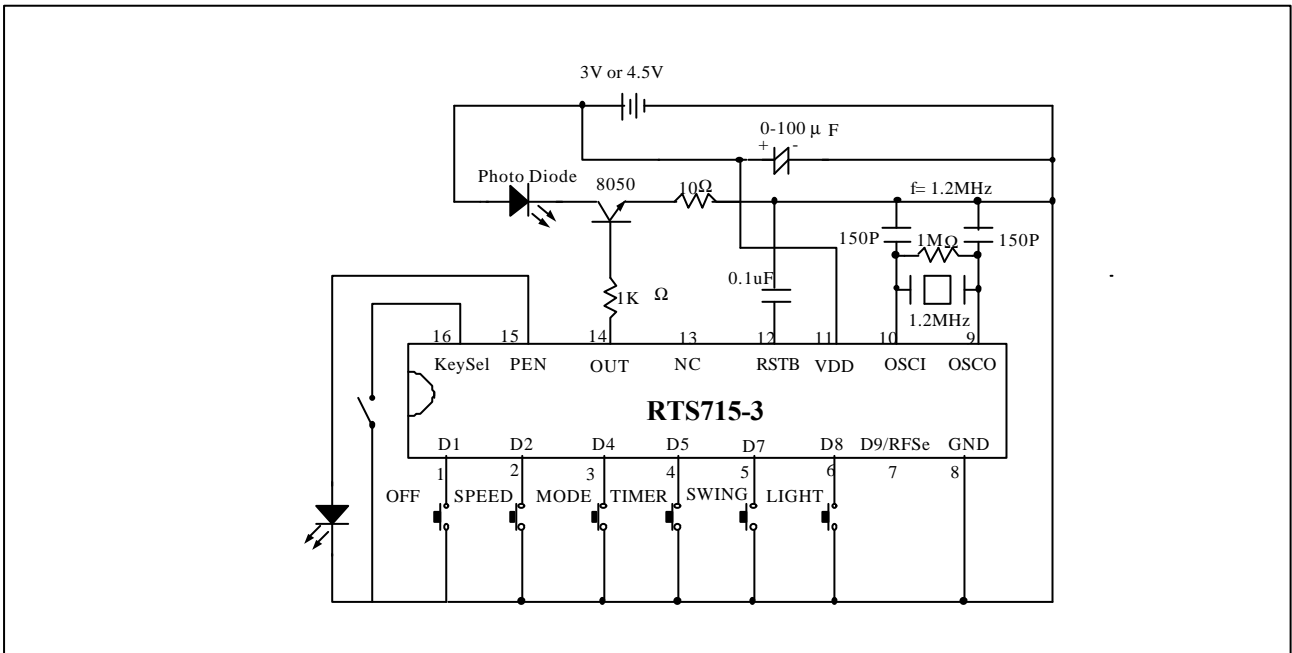
### APPLICATION CIRCUIT

This application circuit can combine with RTS510B and RTS511B and become three-wind mode, three-wind grade, and four-timing function infrared remote controllers for fans.

(1) RC oscillation(for reference only)



(2) X' stal oscillation(for reference only)



## **M-Square Technologies Corporation**

*A Subsidiary of Realtek Group*

### **HEAD QUARTER**

Floor 4, No. 2, Industry E. RD. IX, Science-Based  
Industrial Park, Hsinchu, 300 Taiwan, R.O.C.  
Tel: 886-3-6661028 Fax: 886-3-6661928

### **HONGKONG OFFICE**

Room 1403, Charm Centre 700 Castle Peak  
Rd., Lai Chi Kok Kowloon, Hong Kong  
Tel: 852-29593235  
Fax:852-27425267

### **SHENZHEN OFFICE**

Room 1508, Block A, Union Square, No.-  
5022 Caitian Rd..Futian,Shenzhen  
Tel:6-755-2900672  
Fax:86-755-2900681