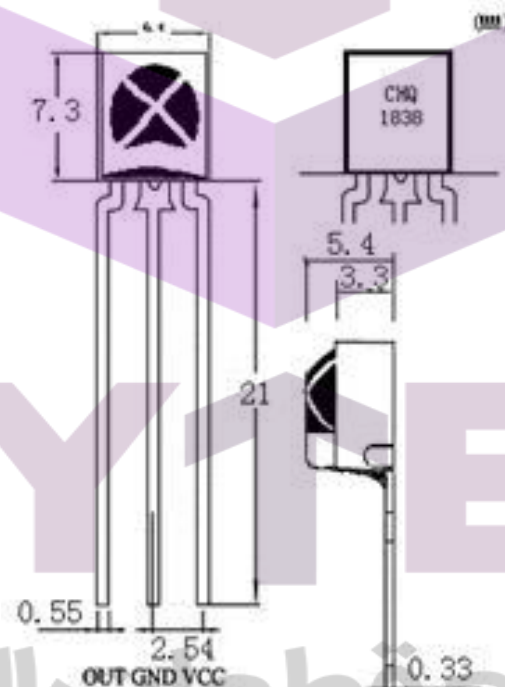


TL1838 Infrared Receiver Datasheet

1. Features

- * Compact design;
- * Built-in dedicated IC;
- * wide-angle and long distance reception;
- * anti-stem worries ability;
- * can more than offset the impact of ambient light;
- * Low voltage operation;

2. Dimensions and Pin Assignment

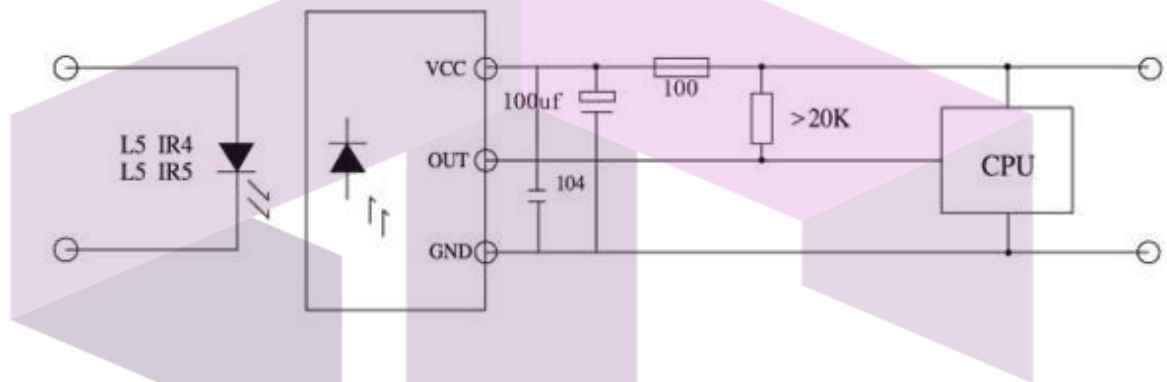




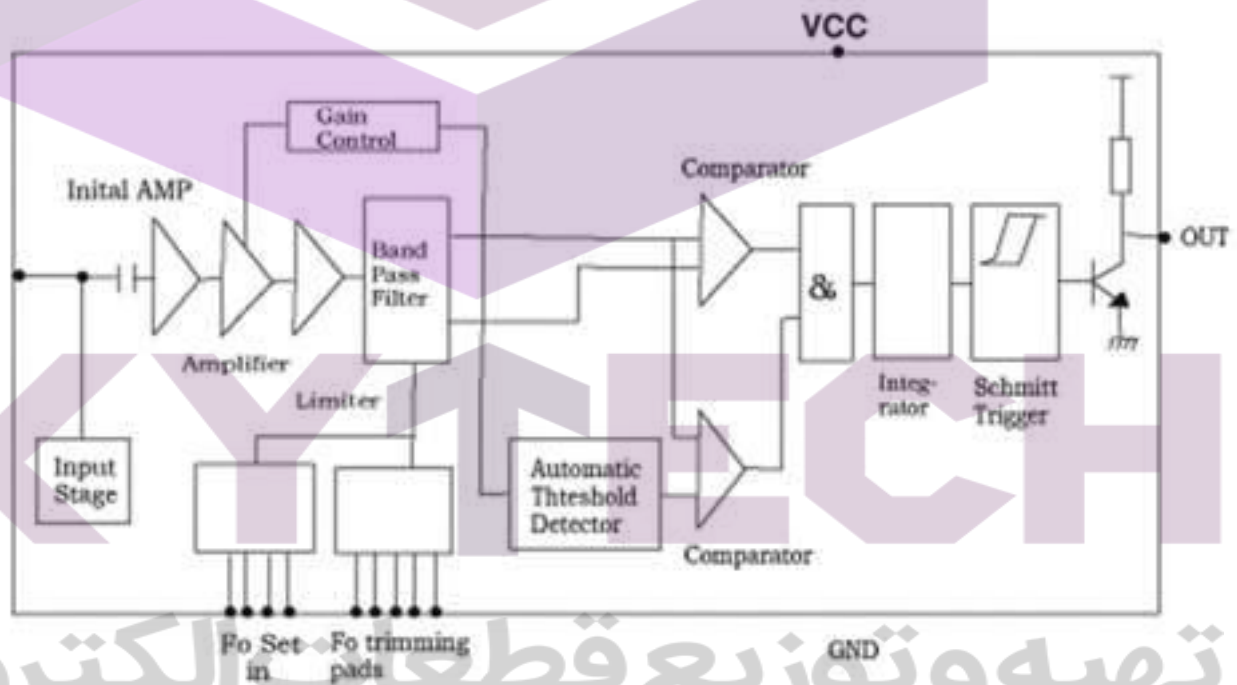
Open Impulse

<http://www.openimpulse.com>

3. Application Circuit



4. Schematic Diagram



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Open Impulse

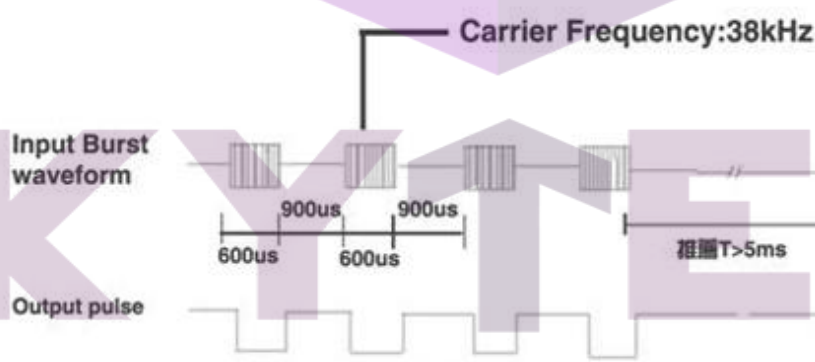
<http://www.openimpulse.com>

5. Optical Parameters (T = 25 °C Vcc = 5v f0 = 38KHZ)

Parameter	Symbol	Test Conditions	Min	Typ	Mnx	Unit
Operating Voltage	Vcc		2.7		5.5	V
Receiving distance	L	L5IR = 300MA (test signal)	10	15		M
Carrier Frequency	f0		38K			HZ
Acceptance angle	01/2	Distance attenuation 1/2		+ / -35		Deg
BMP width	FBW	-3Db andwidth	2	3.3	5	kHz
Quiescent Current	Icc	When there is no signal input	----	0.8	1.5	mA
Low output	VOL	Vin = 0V Vcc = 5V		0.2	0.4	V
High-level output	VOH	Vcc = 5V	4.5			V
The output pulse width	TPWL	Vin = 500μVp-p ※	500	600	700	μs
	TPWH	Vin = 50mVp-p ※	500	600	700	μs

※ testing on the optical axis to the transmit pulse width 600/900μs, 5CM within receiving range, the average value of the received pulse 50

6. Test Wave



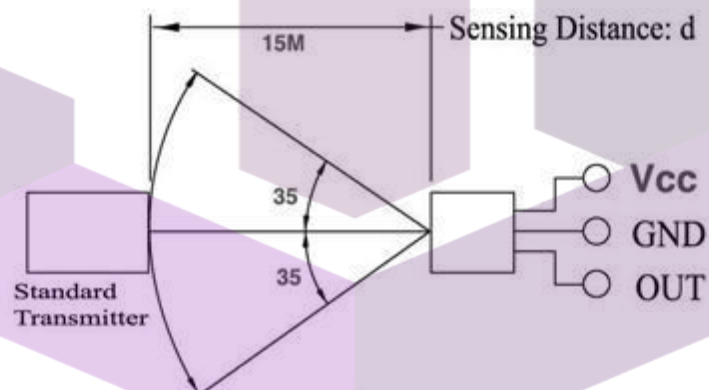
SKYTECH

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7. Limit Parameters

Project	Symbol	Specification	Unit
Supply Voltage	Vcc	6.0	v
Operating Temperature	Topr	-25-85	°C
Storage Temperature	Tstg	-40-125	°C
Soldering Temperature	Tsol	240	°C

8. Receiving Angle Diagram



9. Recommended Conditions of Use

Project	Symbol	Min	Typ	Mnx	Unit
Operating Voltage	Vcc	2.7	-----	5.5	V
Input Frequency	FM		38		kHz
Operating Temperature	Topr	-20			