INFRARED RECEIVER MODULE

● Description

1. The BRM-2508 is miniaturized infrared Receivers for remote control and other applications requiring improved ambient light rejection.
2. The separate PIN diode and preamplifier IC are assembled on a single lead frame.
3. The epoxy package contains a special IR filter.
4. This module has excellent performance even in disturbed ambient light applications and provides protection against uncontrolled output pulses.

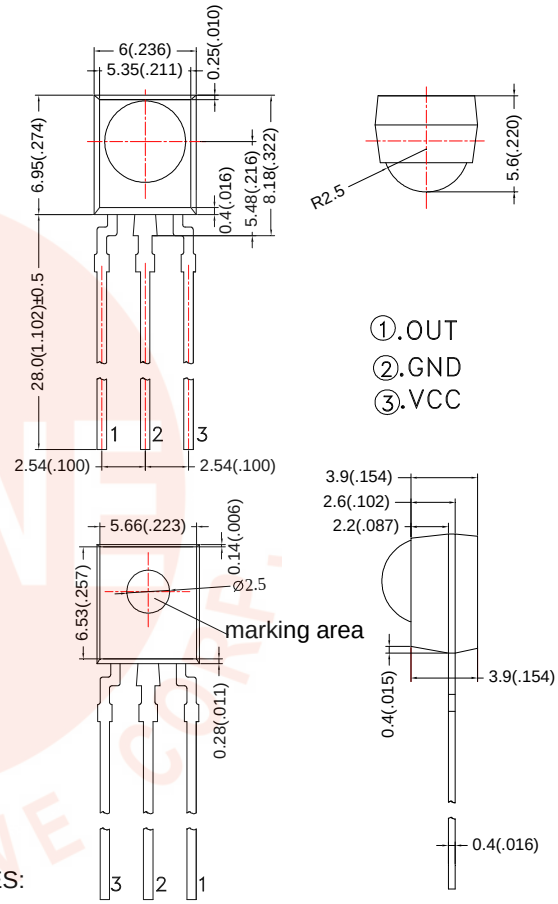
● Features

1. Photo detector and preamplifier in one package .
2. Internal filter for PCM frequency.
3. High immunity against ambient light.
4. Improved shielding against electric field disturbance.
5. 2.7V or 5.5V supply voltage; low power consumption.
6. TTL and CMOS compatibility.
7. Suitable transmission code:NEC code,RC5 code.
8. This product doesn't contain restriction substance, comply ROHS standard

● Applications:

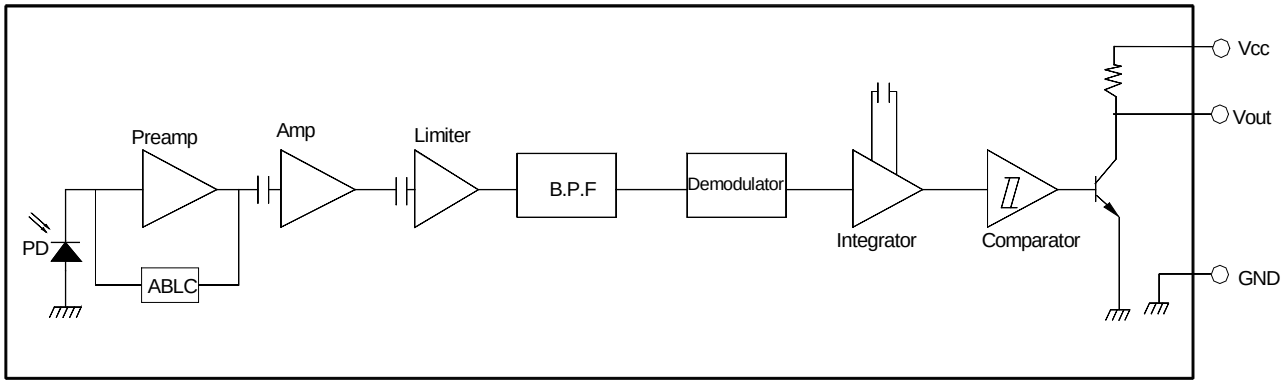
1. It can be used for TVs、VTRs、audio equipment air conditioners、 car stereo radio、toys、 home computers and all other equipment requiring remote control.

●Package Dimensions:



NOTES:
1.All dimensions are in millimeters (inches).
2.Tolerance is ±0.25mm (0.01") unless otherwise specified.
3.Specifications are subject to change without notice.

● BLOCK DIAGRAM



2 Absolute Maximum Ratings(Ta=25℃)

Parameter	Symbol	Ratings	Unit	Notice
Supply Voltage	Vcc	2.7~5.5	V	—
Operating Temperature	Topr	-40~+85	℃	—
Storage Temperature	Tstg	-40~+85	℃	—
Soldering Temperature	Tsol	260	℃	4mm from mold body less than 5 sec

2 Electrical And Optical Characteristics(Ta=25℃)

Parameter	Symbol	Condition	Ratings			Unit
			Min.	Typ.	Max.	
Supply Voltage	Vcc	DC voltage	2.7	—	5.5	V
Supply Current	Icc	No signal input(Vcc=3V)	—	0.9	1.5	mA
		No signal input(Vcc=5V)	—	1.0	1.5	
Reception Distance	L	Set-top box	12	20	—	m
		Electricity meter	3	6	—	
B.P.F Center Frequency	fo	—	—	38	—	KHz
Peak Wavelength	l p	—	—	940	—	nm
Half Angle	q	—	—	45	—	deg
High Level Pulse Width	TH	Specified by the output TH period within a range from 10cm to the arrival distance (average value of 50 pulses)	400	—	800	μS
Low Level Pulse Width	TL	Specified by the output TL period within a range from 10cm to the arrival distance (average value of 50 pulses)	400	—	800	μS
High Level Output Voltage	VH	10cm over the ray axis(Vcc=3V)	2.7	3.0	—	V
		10cm over the ray axis(Vcc=5V)	4.7	5.0	—	
Low Level Output Voltage	VL	10cm over the ray axis	—	—	0.5	V

2 Application Circuit

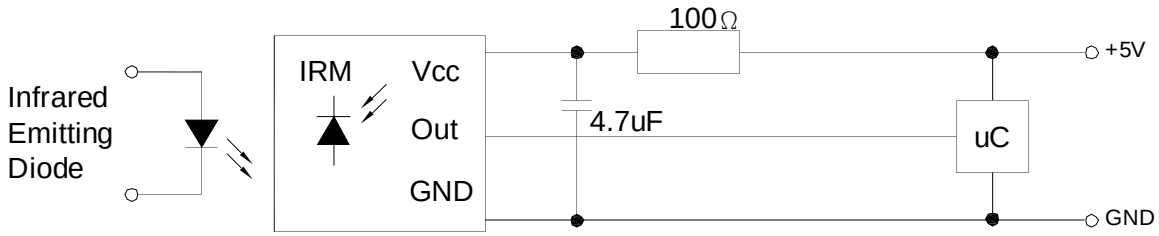


Fig.1 Transmitter Wave Form

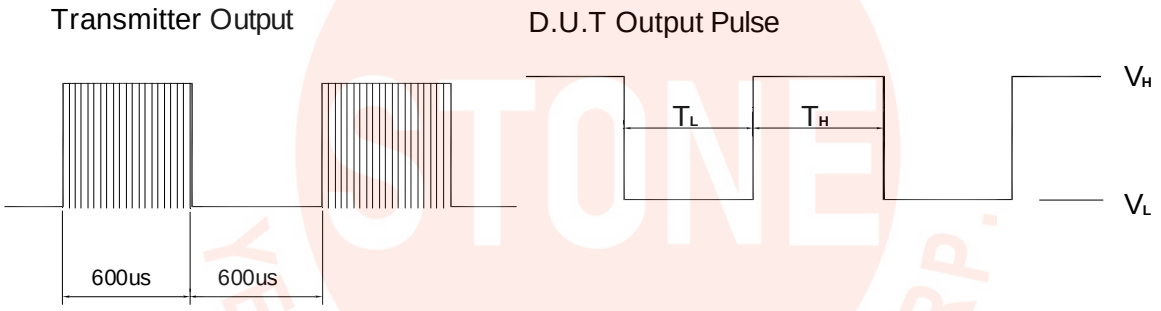


Fig.2 Measuring Method

Measuring Method

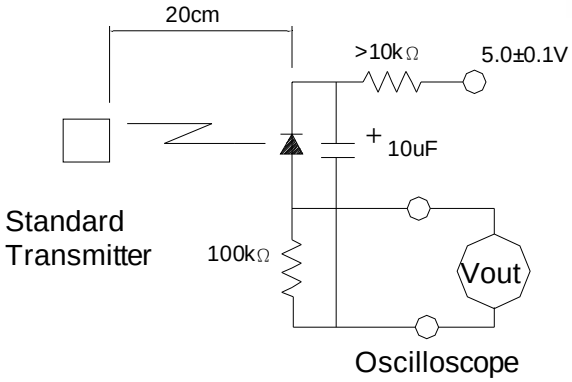
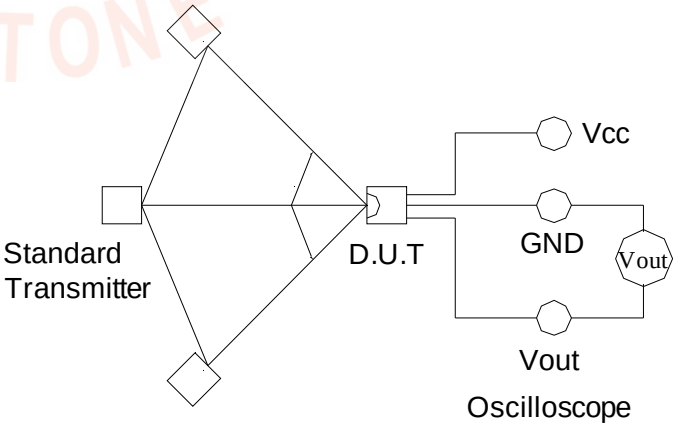


Fig.3 Measuring System



2 **Electrical And Optical Curves**(Ta=25℃)

Fig.4 Relative Spectral Sensitivity vs. Wavelength

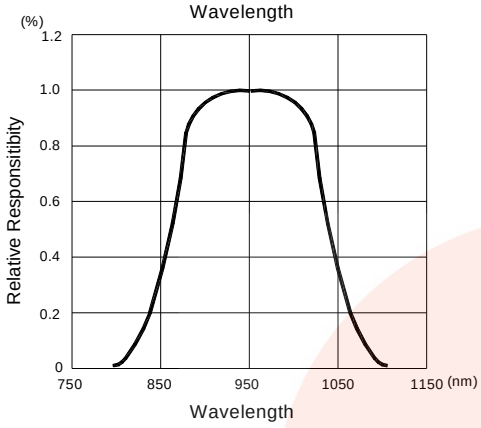


Fig.5 Relative Transmission Distance vs. Direction

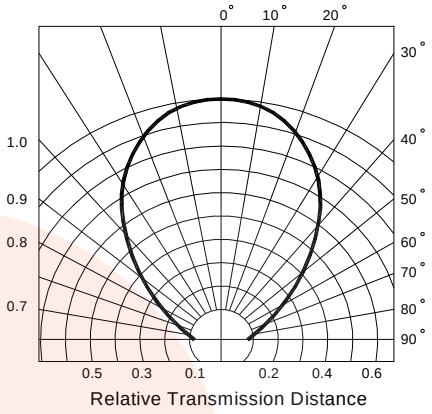


Fig.6 Output Pulse Diagram

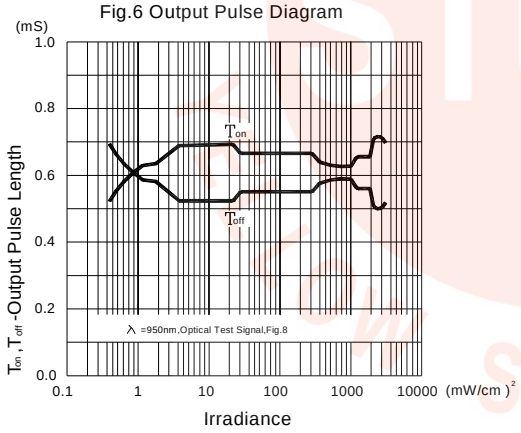


Fig.7 Supply Current vs. Ambient Temperature

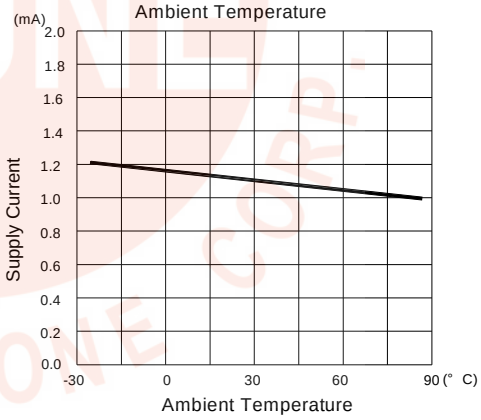


Fig.8 Frequency Dependence of Responsivity

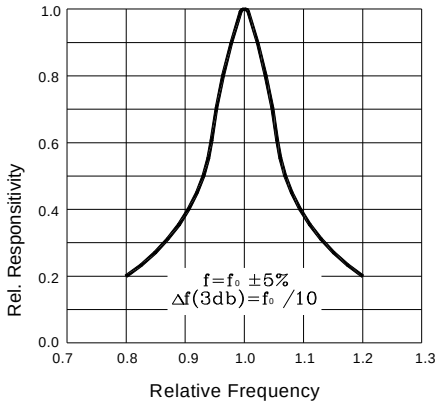
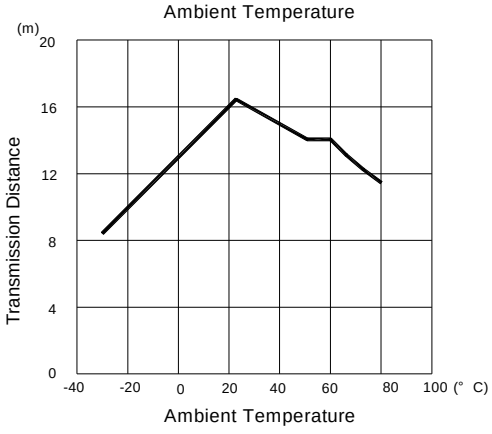
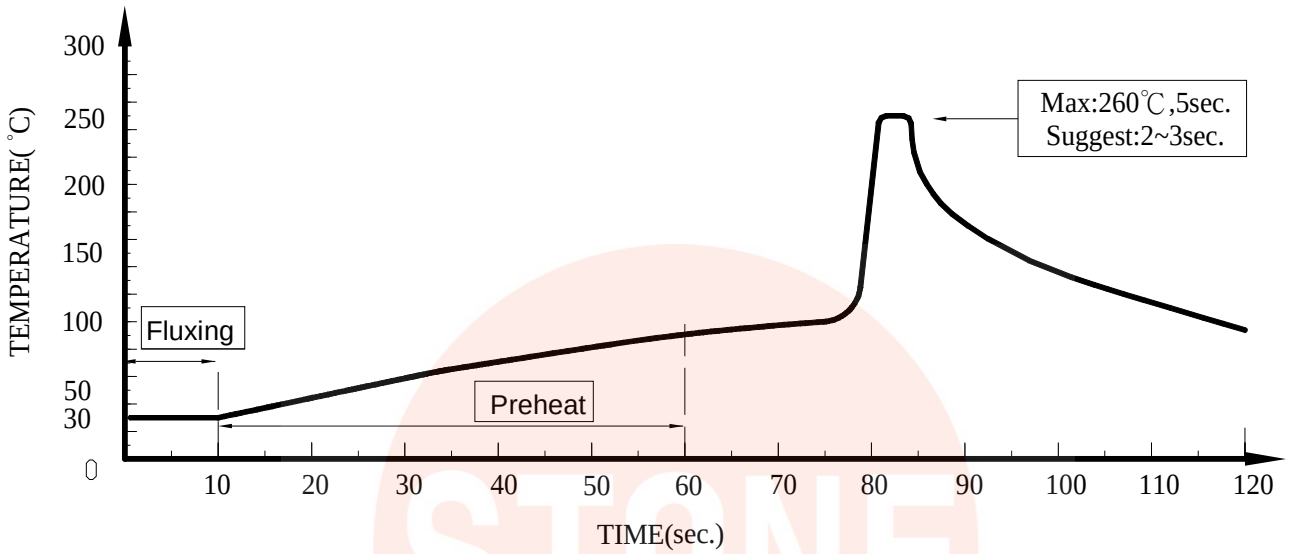


Fig.9 Arrival Distance Vs. Ambient Temperature



● Dip Soldering

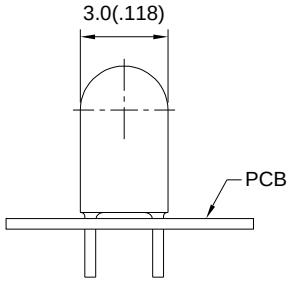


1. Please avoid any external stress applied to the lead-frames and epoxy while the LEDs are at high temperature, especially during soldering
2. DIP soldering and hand soldering should not be done more than one time.
3. After soldering, avoid the epoxy lens from mechanical shock or vibration until the LEDs are back to room temperature.
4. Avoid rapid cooling during temperature ramp-down process
5. Although the soldering condition is recommended above, soldering at the lowest possible temperature is feasible for the LEDs

● IRON Soldering

A：Max：350℃ Within 3 sec. One time only.

B：The products of 3mm without flange, welding condition of flat plate PCB Max：350℃ Within 2 sec. One time only



Ⅰ Precautions for use：

1. Since the device is static sensitive ,it is requested that anti-static measures should be taken on human body, all devices (including soldering iron) and equipment, machinery, desk and ground；
2. Do not supply unnecessary stress to lead；
3. Please pay careful attention to the lens of receivers, It might has a chace to miss-function when the lens get dust or dirty. And also please do not touch the lens.