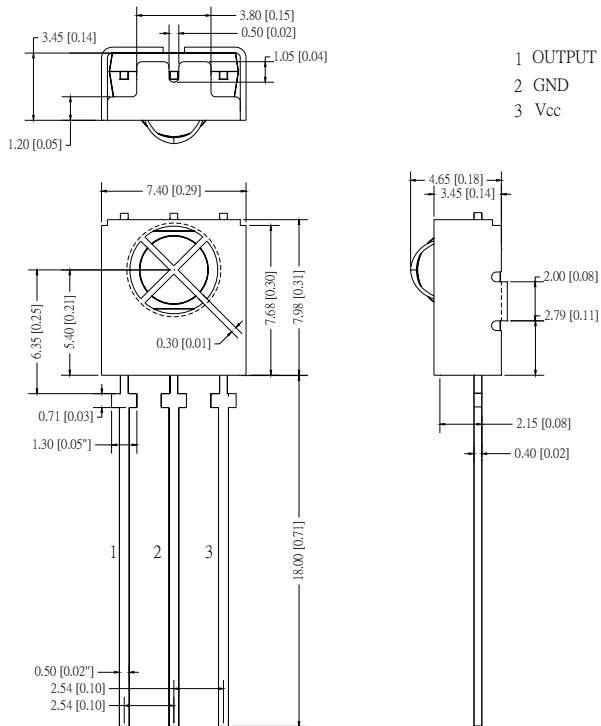


INFRARED RECEIVER MODULE

紅外線接收模組

Part Number: K3800M

Package outlines



1 . Features :

- 1) Miniature size
- 2) Built-in exclusive IC
- 3) Wide half angle long reception distance
- 4) High immunity against ambient light
- 5) High protection ability to EMI
- 6) Wide voltage

2 . Applications :

- 1) AV instruments (Audio, TV, VCR, CD)
- 2) Home appliances (Air-conditioner, Fan, Light.)
- 3) Remote control for wireless devices

ITEM	MATERIALS
Resin	Epoxy
Bonding Wire	1.0mil Au
Lens color	Black
Lead frame	Ag plating iron alloy
PD	Silicon

NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are $\pm 0.25\text{mm}$ (0.01inch) unless otherwise noted.

Rev :	Date	Drawn by :	Checked by :	Approved by :
A				

INFRARED RECEIVER MODULE

紅外線接收模組

Part Number: K3800M

Absolute maximum ratings

($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Power voltage	Vcc	6.0	V
Operating Temperature	Topr	-10~+60	$^{\circ}\text{C}$
Storage Temperature range	Tstg	-20 ~+80	$^{\circ}\text{C}$
Soldering Temperature	Tsol	260 $^{\circ}\text{C}$ for 5 SEC (5mm [0.20"] from body)	

Electro-optical characteristics

($T_A=25^{\circ}\text{C}$)

Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Supply voltage		Vcc	2.7	-	5.5	V
Supply Current	Input Signal=0	Icc	-	-	1.0	mA
Reception Distance	IV=7.0mW Vcc=5.0V	D	6	-	-	m
Half Angle		$\Delta\theta$	-	90	-	deg
B.P.F.Center Frequency		Fo	-	37.9	-	KHZ
Peak Wavelength		λ_p	-	940	-	nm
High Level Output Voltage		Voh	VDD-0.3	-	-	V
Low Level Output Voltage		Vol	-	-	GND+0.3	V
High Level Pulse Width	Burst Wave =600 μs	Twh	500	600	700	μs
Low Level Pulse Width		Twl	500	600	700	μs

INFRARED RECEIVER MODULE

紅外線接收模組

Part Number: K3800M

Reliability Test Items

Test Items	Test Conditions	Note	Ratings
Temperature Cycle	-40°C 30min ↑↓ 85°C 30min	100 cycle	0/22
Thermal Shock	-40°C 30min ↑↓ 100°C 30min	100 cycle	0/22
High Temperature High Humid Storage	T _a =85±5°C RH=85±10%	1000 hrs	0/22

Testing Method

Distance between emitter and detector specifies maximum distance that output waveform satisfies the standard under the conditions below against the standard transmitter

1) Measuring place

Indoor without extreme reflection of light

2) Ambient light source

Detecting surface illumination is 200±5Lux under ordinary white fluorescence lamp of no high frequency lightning

3) Standard transmitter

Transmitter wave indicated in FIG-2 of standard transmitter is arranged to satisfy 7mW under the measuring circuit specified frequency lightning .

FIG-1

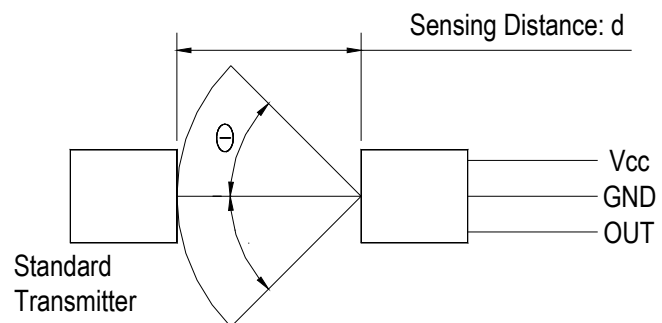
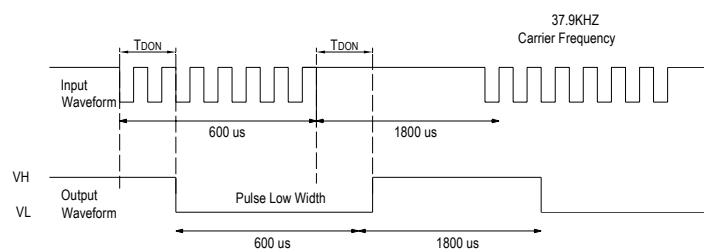


FIG-2



INFRARED RECEIVER MODULE

紅外線接收模組

Part Number: K3800M

Typical Electrical Curves at Tamp=25°C

FIG-1

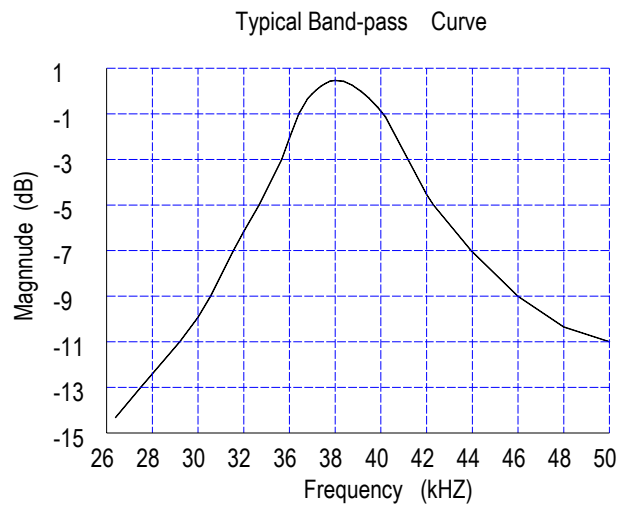


FIG-2

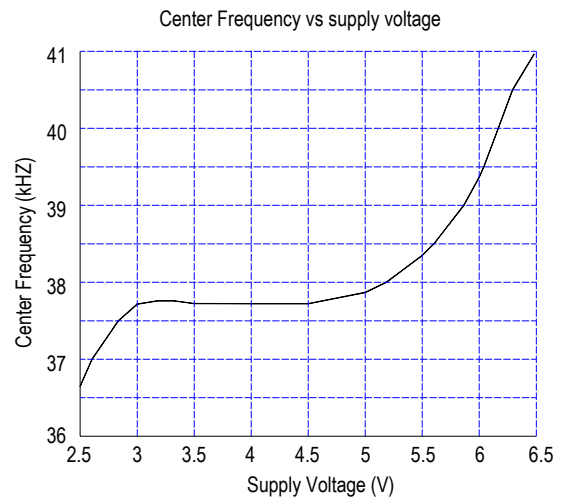


FIG-3

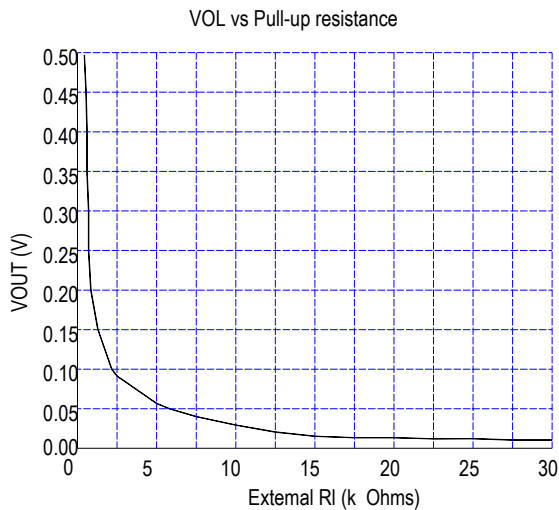
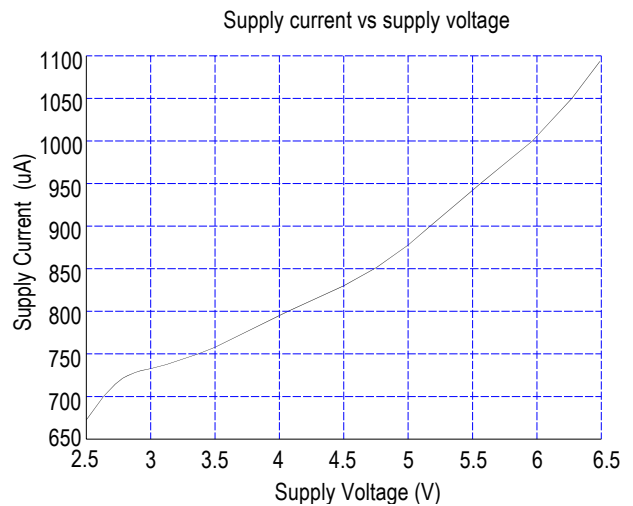


FIG-4



ESD

VDD,GND,OUT pins :4000V HBM;375V MM,MIL-STD-883C,Method 3015.7

Reliability

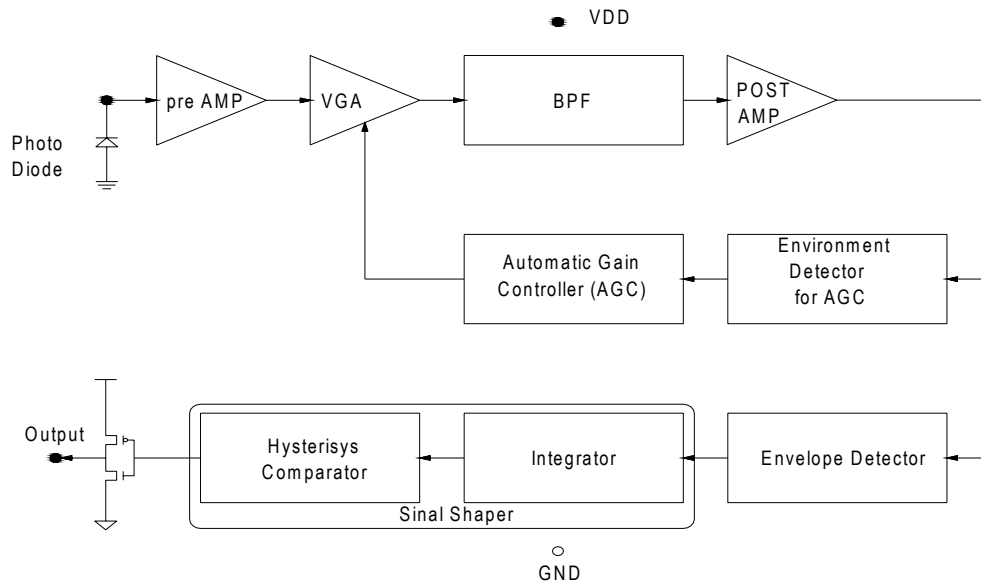
Electrical qualification (1000h) in molded 24DIP package

INFRARED RECEIVER MODULE

紅外線接收模組

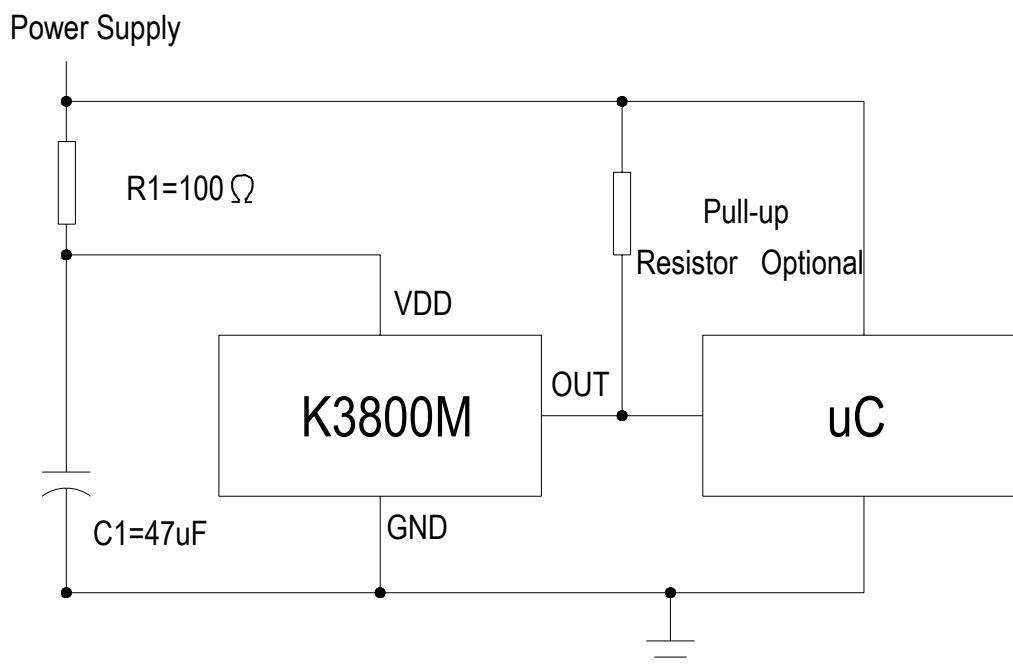
Part Number: K3800M

Block Diagram



Application Circuit (optional)

Note: Recommended in home appliances. For the better performance, power noise reduction circuit composed of R1 and C1 is recommended.

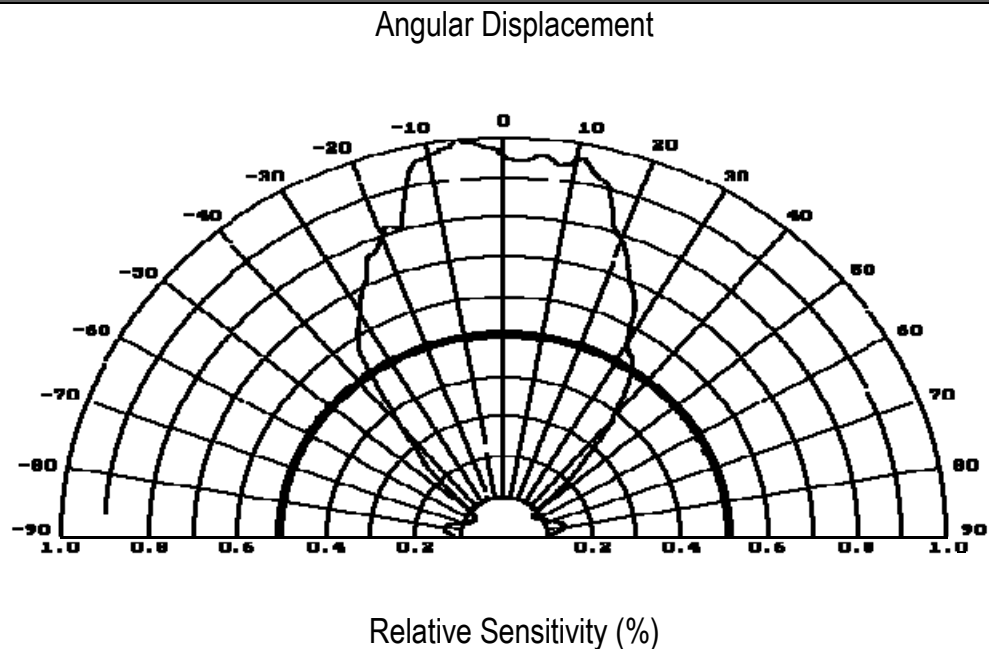


INFRARED RECEIVER MODULE

紅外線接收模組

Part Number: K3800M

Sensitivity Diagram



Precautions for Use

Note:

- 1) Store and use where there is no force causing transformation or change in quality.
- 2) Store and use where there is no corrosive gas or sea (salt) breeze.
- 3) Store and use where there is no extreme humidity.
- 4) Solder the lead pin within the condition of ratings. After soldering do not add exterior force.
- 5) Do not wash this device. Wipe the stains of diode side with a soft cloth. You can use the solvent ethyl alcohol or methyl only.
- 6) To prevent static electricity damage to the pre-amp, make sure that the human body, the soldering iron are connected to ground before using.

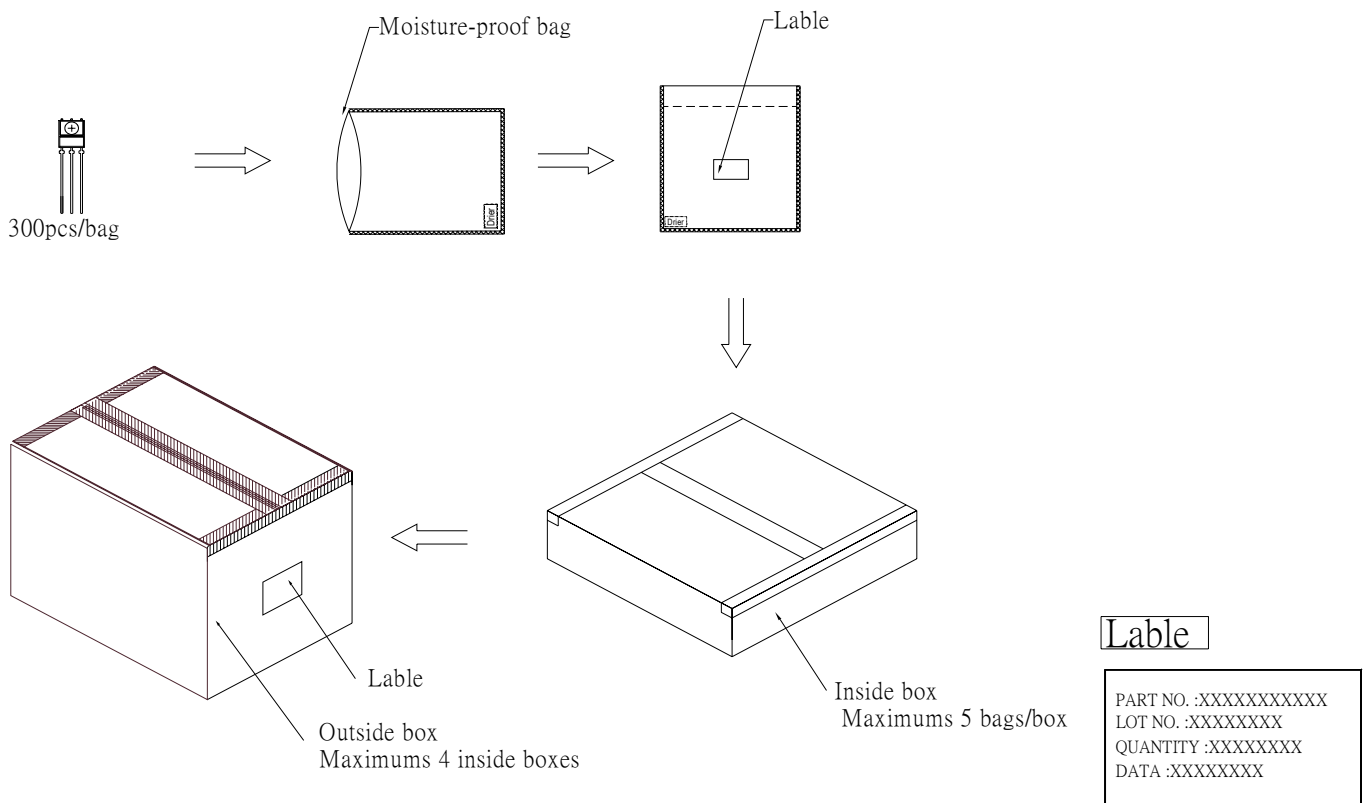
INFRARED RECEIVER MODULE

紅外線接收模組

Part Number: K3800M

IRM Packaging Specifications

● Packaging specifications



NOTES:

Products (numbers of products are 300pcs) packed in a seal off moisture-proof bag along with a desiccant one by one, 5 moisture-proof bag of maximums (number of products are 1500pcs) packed in an inside box (size: about 238mm x about 194mm x about 102mm) and four inside boxes of maximums (number of products are 6000pcs) are put in the outside box (size: about 410mm x about 254mm x about 229mm) Together with buffer material, and it is packed. (Part No., Lot No., quantity should appear on the label on the moisture-proof bag, part No. And quantity should appear on the label on the cardboard box.) The number of the loading steps of outside box (cardboard box) has it to three steps.