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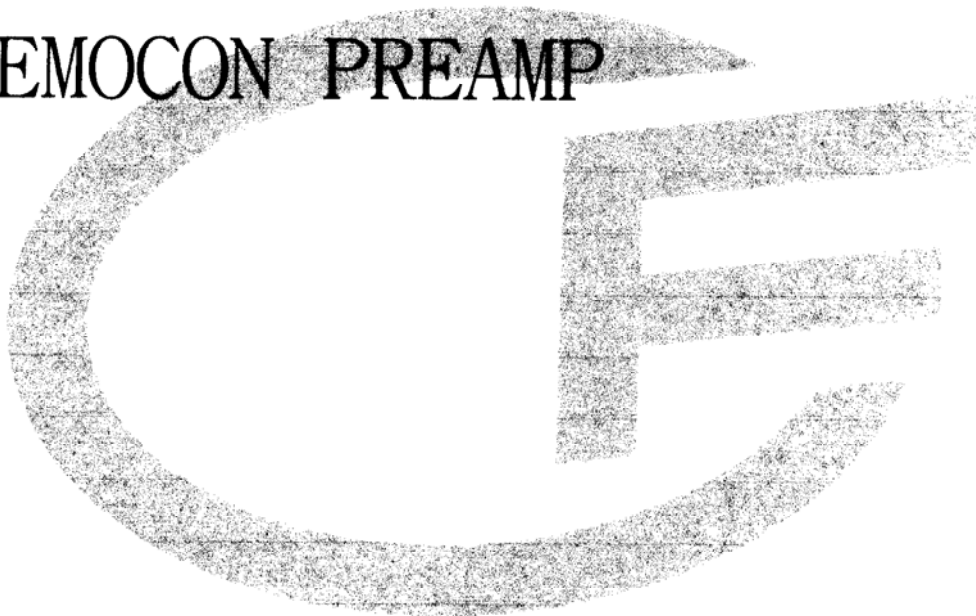
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# SPECIFICATION

FRP- N3052HB

REMOCON PREAMP



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 FOCUS CO., LTD.

# Remocon Preamp

# FRP-N3052HB

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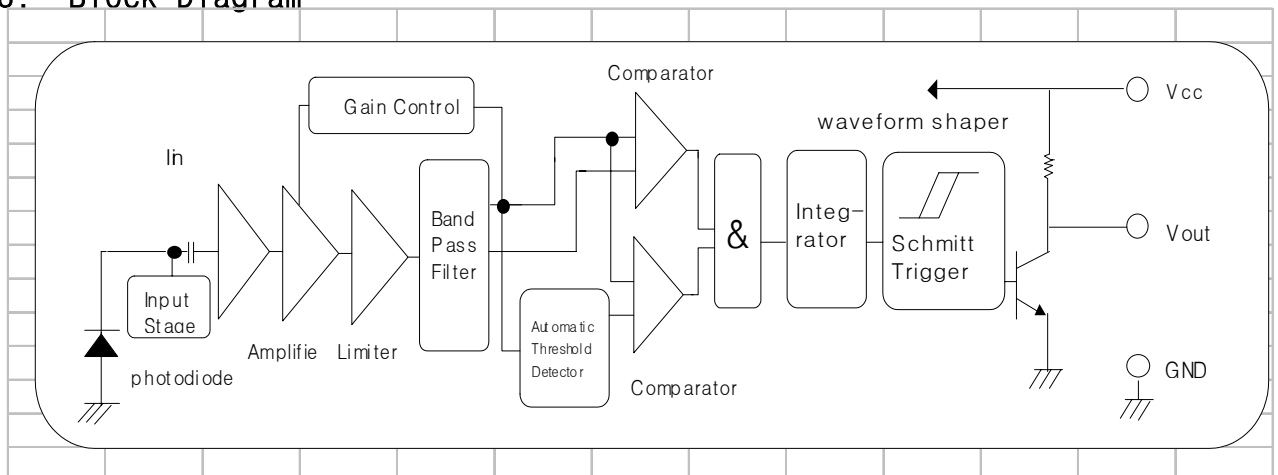
## 1. Description

The FRP-N3052HB is a miniaturized receiver for infrared remote control systems. PIN diode and preamplifier are assembled in the epoxy package as IR filter.

## 2. Features

- Wide operating supply voltage 2.7~5.5V
- Photo diode and preamplifier in one package
- Improved shielding against electric field disturbance
- Internal filter for a high frequents lighting fluorescent lamp
- Low consumption of electric power and easy use
- TTL and CMOS compatibility

## 3. Block Diagram



## 4. Ratings and Characteristics

### 4-1. Absolute maximum ratings

(Ta=25℃)

| Charact                     | Symbol | Value      | Unit |
|-----------------------------|--------|------------|------|
| Power supply voltage        | Vcc    | 6          | V    |
| Allowable power dissipation | Pd     | 0.12       | W    |
| Operating temperature       | Topr   | -20 to +70 | °C   |
| Storage temperature         | Tstg   | -30 to +80 | °C   |
| Soldering temperature       | Tsol   | 260, 5 sec | °C   |

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## 4-2. Electro - optical characteristics

(Ta=25℃)

| Characteristic         | Symbol     | Condtion |       | Min     | Typ | Max | Unit |
|------------------------|------------|----------|-------|---------|-----|-----|------|
| Supply v               | Vcc        |          |       | 2.7     |     | 5.5 | V    |
| Current consumption    | Icc        | *1       |       |         | 1.2 | 2.0 | mA   |
| Resonance frequenc     | fo         |          |       |         | 38  |     | kHz  |
| Peak wave length       | λp         |          |       |         | 980 |     | nm   |
| H level output voltage | Voh        | *2       |       | Vcc-0.2 | Vcc |     | V    |
| L level output voltage | Vol        |          |       |         | 0.2 | 0.4 | V    |
| H level pulse wid      | Twh        | *2       |       | 400     |     | 800 | us   |
| L level pulse wid      | Twl        |          |       | 400     |     | 800 | us   |
| Arrival distance       | L          | *2,3,4   | ± 0 ° | 15      |     |     | m    |
|                        |            |          | ± 30° | 10      |     |     |      |
|                        |            |          | ± 45° | 8       |     |     |      |
| Outout form            | Active low |          |       |         |     |     |      |

※ 1.No input signal

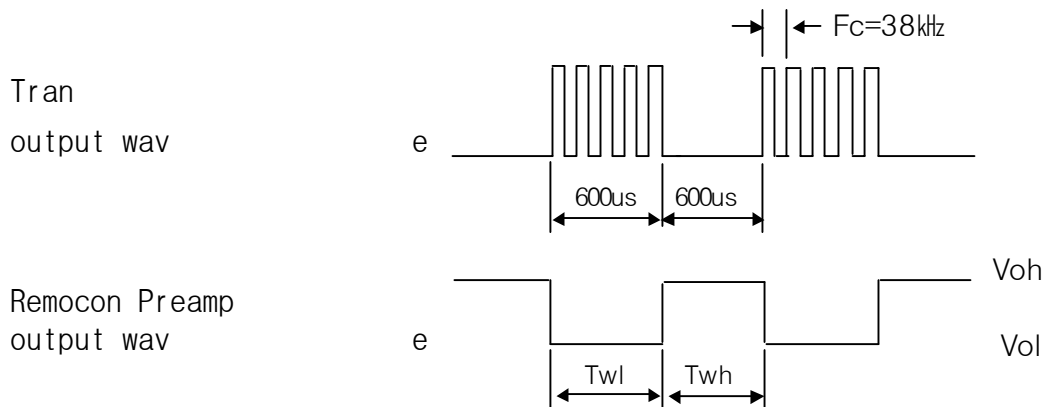
※ 2.The specifications 4-2 shall be satisfied under the following conditions

2-1.The burst wave forms shown bellow

by standard transmitter.

The standard transmitter shall be specified of the burst wave form in the Fig 1 adjusted to Vout 200mVp-

Fig 1.

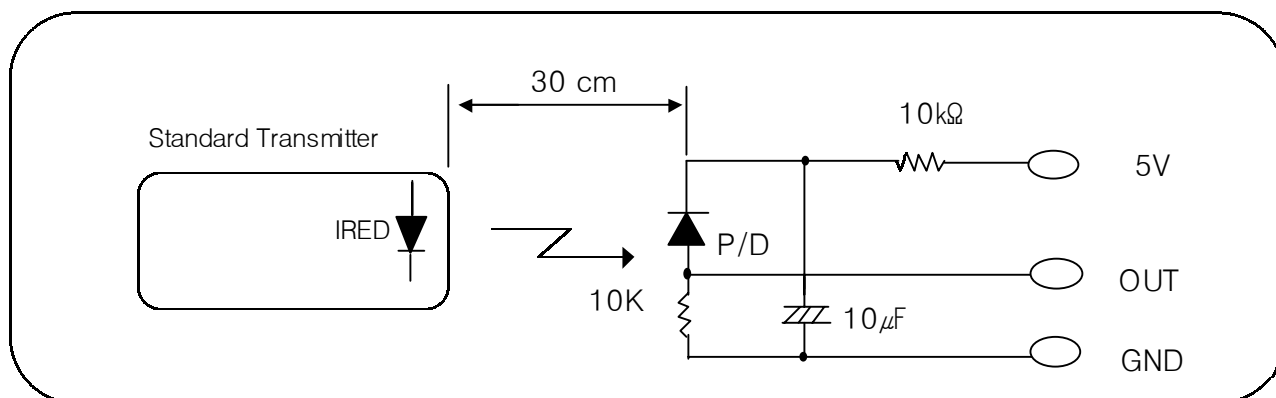


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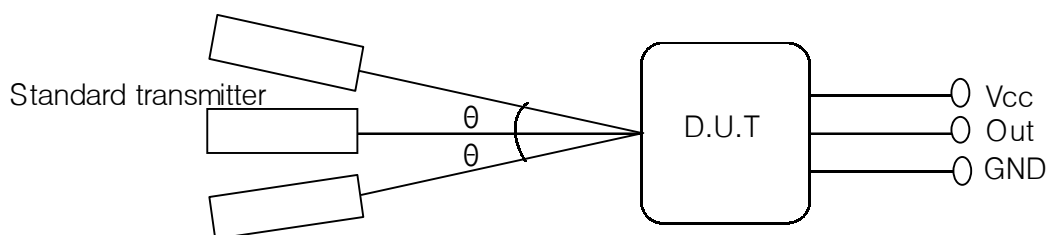
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Fig 2. Po Measuring circuit



※ 3. Arrival distance test condition



Where  $\theta$  : Horizontal and vertical directions

D.U.T : Device under test

※ 4.The arrival distncne is measured in the darkness without disturbing noises.

## 5. Reliabilit

| Test items           | Test conditions     | Remarks |
|----------------------|---------------------|---------|
| High temp high humid | Ta=40°C 90%RH t=96H | ※ 1,2   |
| Heat cycle           | ※ 2,3               |         |
| Fall test            | ※ 4                 |         |

※ 1. Supply voltage 5V in the load test.

※ 2. Electro-optical charc.(4-2) shall satisfy the figure they be left 2H at normal conditions.

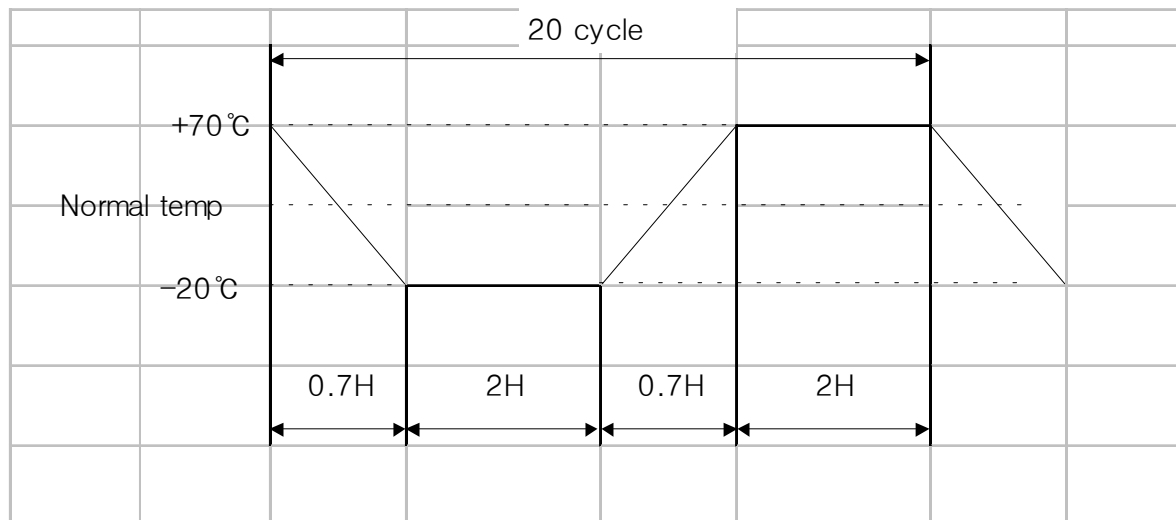
※ 3. Heat cycle test as below Fig 5 for 20 cycles under no load.

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Fig 5. Heat cycle

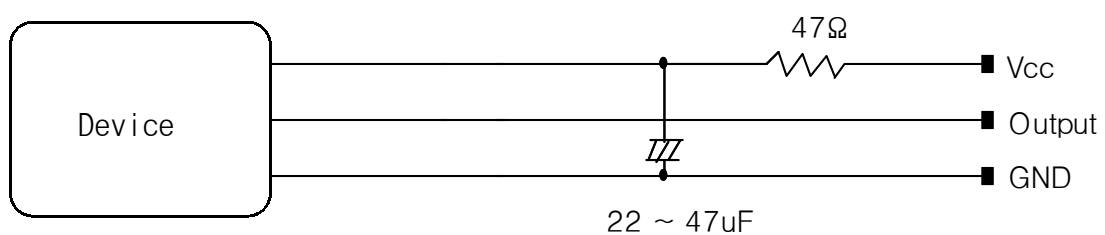


## ※ 4. Fall test

The test devices to fall three time onto hard wooden board from a level 75Cm

## 6. The Others

In case of noisy supply, please serially insert about 47ohm resistance and about 22~47uF Electrolytic capacitance in Vcc line as follows



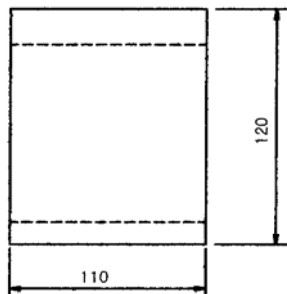
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### 7. Packing Specification

#### 7-1 . PVC Bag



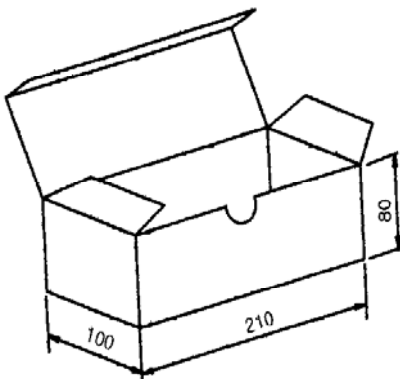
Unit : mm

t : 0.1

Packing quantity : Max.200pcs/Bag

Material : Antistatic PVC

#### 7-1 .In Box



Unit : mm

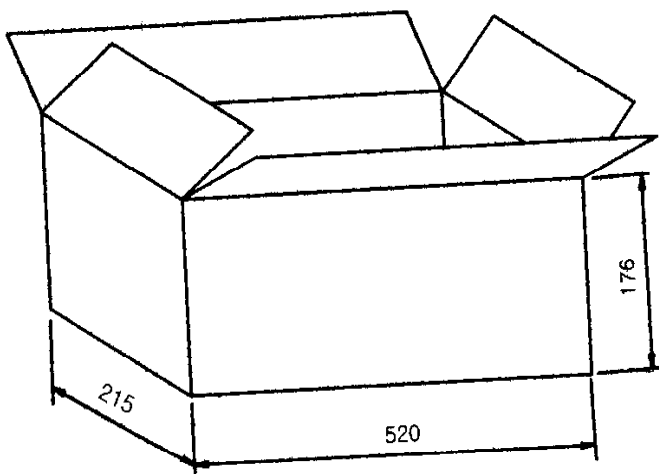
t : 1.5

Packing quantity : Max.2,000pcs/In Box

Max.10Bag/In Box

Material : Paper

#### 7-3 . Out



Unit : mm

t : 7.0

Packing quantity : Max.20,000pcs/Out Box

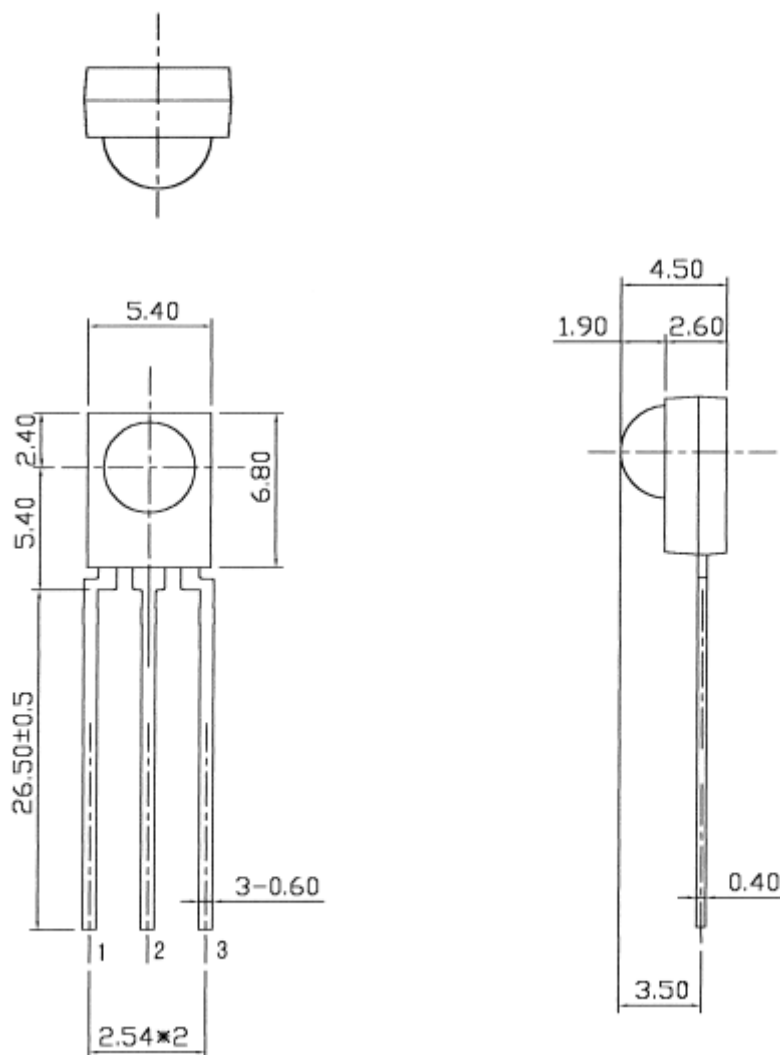
Max.10In Box/Out Box

Material : Paper

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NOTE

- 1 : Vout
- 2 : GND
- 3 : Vcc(+5V)
- 4 : TOLERANCE : ± 0.5