INFRARED REMOTE CONTROL RECEIVER

■ GENERAL DESCRIPTION

NJL79V000A series are small and high performance receiving devices for infrared remote control system. They can operate under low and wide supply voltage (2.4V to 5.5 V).

■ FEATURES

1. Wide and low supply voltage 2.4V to 5.5V
2. Low supply current 0.6mA max.
3. Long lead 24mm
4. Line-up for various center carrier frequencies

■ APPLICATIONS

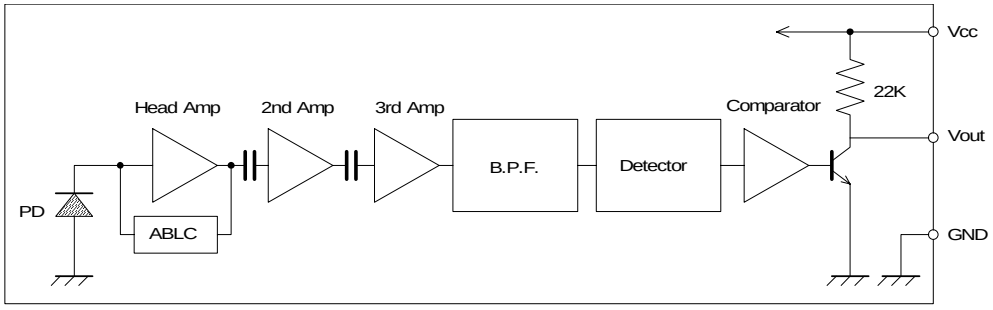
1. AV instruments such as Audio, TV, VCR, CD, MD, DVD, STB etc.
2. Home application such as Air - conditioner, Fan etc.
3. Battery operated instruments such as Toy, Camera etc.

■ LINE-UP

Carrier Frequency	
fo=36 kHz	NJL79V360A
36.7 kHz	NJL79V367A
38 kHz	NJL79V380A
40 kHz	NJL79V400A

Regarding the other frequencies or packages, please contact to New JRC individually.

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_{CC}	6.3	V
Operating Temperature Range	T_{opr}	-20 to +75	°C
Storage Temperature Range	T_{stg}	-40 to +85	°C
Soldering Temperature	T_{sol}	260 (5sec. 4.0mm from mold body)	°C

RECOMMENDED OPERATING CONDITION

Supply Voltage Range V_{CC} 2.4 V to 5.5V

ELECTRO-OPTICAL CHARACTERISTICS (Vcc=3.3V,Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Supply Current	Icc	No Signal Input	—	0.43	0.6	mA
Transmission Distance	Lc	Direction of Ray Axis *1	13	18	—	m
Directivity	θ	Angle of half Lc	—	40	—	deg
Output Voltage Low	VL	No Load	—	0.2	0.5	V
Output Voltage High	VH	No Load	2.8	—	—	V
Low Level Pulse Width	TwL	See Test Circuit	350	—	800	µs
High Level Pulse Width	TwH	See Test Circuit	400	—	850	µs
Center Frequency	fo	See Line-up	36.0	—	40.0	KHz

Note *1:Test with each center carrier frequency under the test condition shown below.

TEST METHOD

Test condition is as follows:

(1) Standard transmitter:

Transmitting waveform is shown in Fig.1
Transmitting power should be adjusted so that output voltage Vout will be 400mVp-p.(Test circuit is shown in Fig.2)
Regarding IR LED used for transmitter,
λp=940nm, Δλ=50nm.

Regarding photo diode,
Sensitivity S=26nA/Lx
in case light source temperature2856°K,
Ee=100Lx, VR=5V

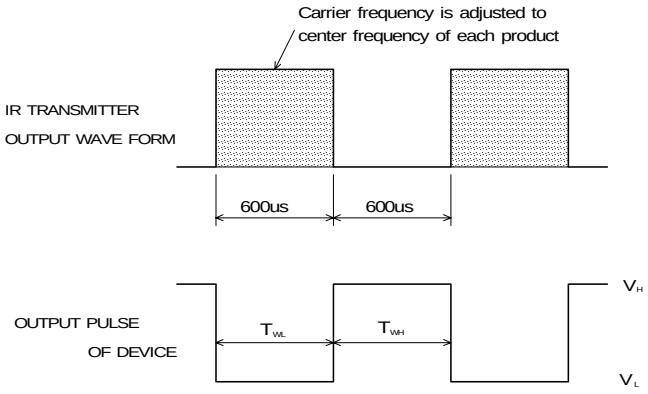


Fig.1 TRANSMITTER WAVE FORM

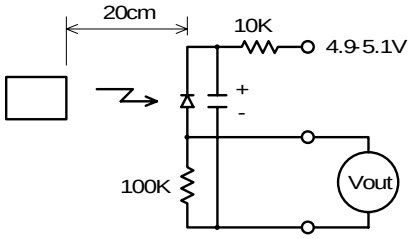


Fig.2 STD.TRANSMITTER TEST CIRCUIT

(2) Test system: Shown in Fig.3.

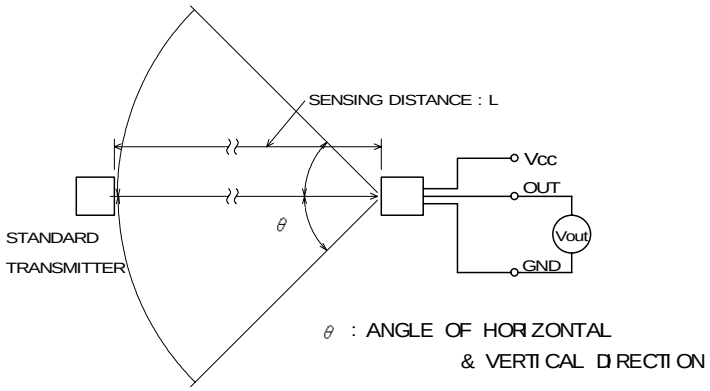
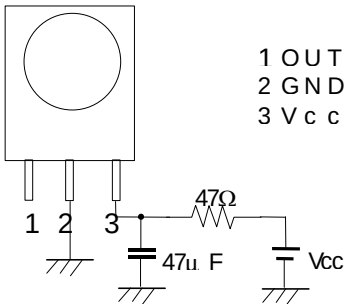


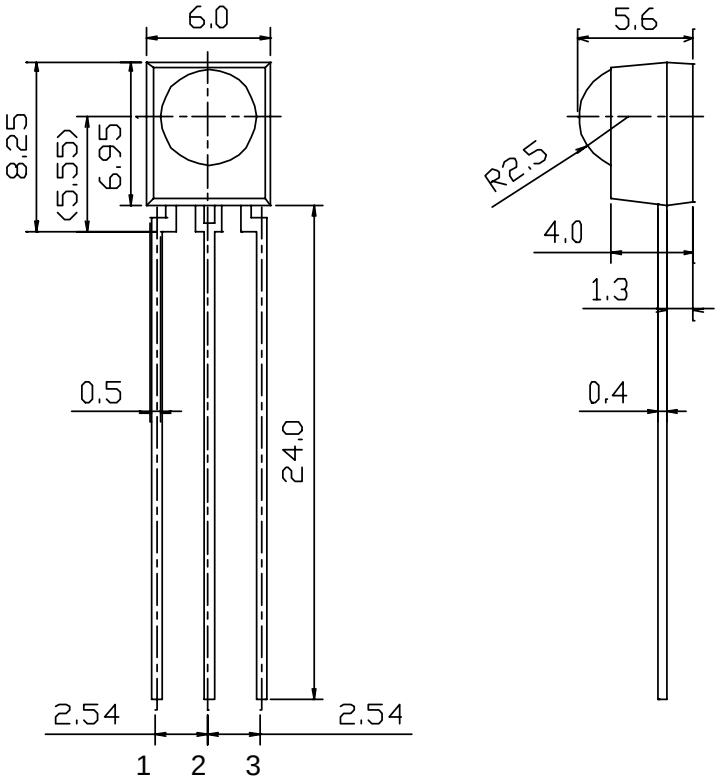
Fig.3 TEST SYSTEM

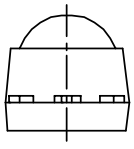
RECOMMENDED APPLICATION CIRCUIT



RC Filter should be connected closely between Vcc pin and GND pin.

OUTLINE





1. OUT
2. GND
3. Vcc

NJL79V000A
UNIT:mm