

AN5026K

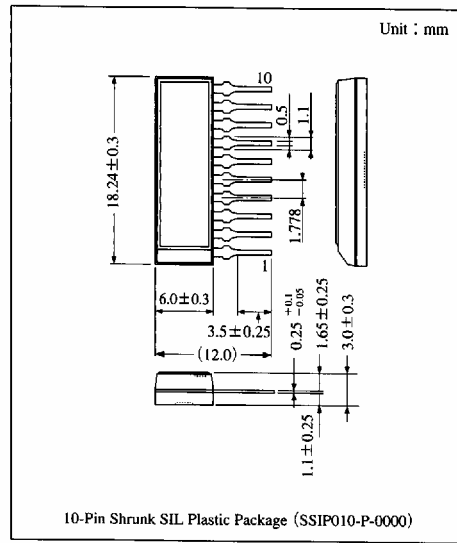
Remote Control Receiving IC

Overview

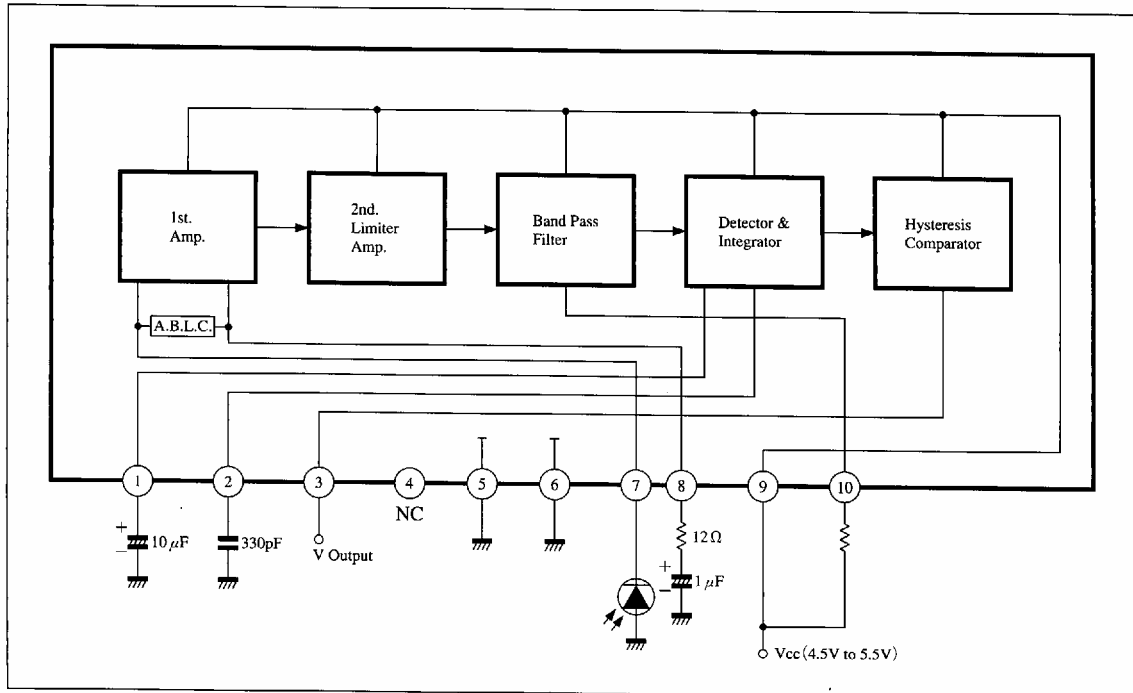
The AN5026K is an integrated circuit for preamplifier of infrared remote control system. It consists of a first amplifier, a limiter amplifier, BPF, a signal waveform detector, a wave shaping circuit, and etc.

Features

- Incorporating band-pass filter (possible of resonant frequency-adjustment, 30 to 60kHz, by external resistor)
- Possible of direct connection of LED to input.
- Possible of direct connection of TTL or CMOS to output.
- Output logic is active "Low"



Block Diagram



Pin Descriptions

Pin No.	Pin name	Pin No.	Pin name
1	Detector cap.	6	Input GND
2	Integrator cap.	7	Input
3	Output	8	1st amp. gain control
4	NC	9	Supply voltage
5	Output GND	10	Freq. control

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V _{CC}	6.0	V
Circuit voltage	V ₁₋₆	0 to V ₉₋₆	V
	V ₂₋₆	0.5 to V ₉₋₆	V
	V ₇₋₆	0 to V ₉₋₆	V
	V ₈₋₆	0 to V ₉₋₆	V
Supply current	I _{CC}	10	mA
Circuit current	I ₃	-0.05 to +2.0	mA
	I ₁₀	0 to 0.1	mA
Power dissipation	P _D	60	mW
Operating ambient temperature	T _{opr}	-20 to +70	°C
Storage temperature	T _{stg}	-55 to +150	°C

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	min	typ	max	Unit
Circuit current	I ₉ *	V ₉₋₆ =5.0V	1.2	1.6	2.2	mA
Pin② terminal voltage	V ₂₋₆ *	V ₁₋₆ =2.6V	0.6	0.9	1.2	V
Pin⑦ terminal voltage	V ₇₋₆ *	V ₉₋₆ =5.5V	2.2	2.5	2.8	V
Output voltage low level	V ₃₋₆₍₁₎ *	V ₉₋₆ =5.5V, V ₂₋₆ =3.4V	—	50	400	mV
Output voltage high level	V ₃₋₆₍₂₎ *	V ₉₋₆ =5.5V, V ₂₋₆ =1.4V	5.3	5.5	—	V
Voltage gain	A _v	v _{in} =20 μV _{p-p} , f _{in} =f ₀ : 56.9kHz	81	86	91	dB
Selectivity	A _{pQ}	v _{in} =20 μV _{p-p} , f _{in} =f ₀ ±4kHz	-8.0	-5.0	-2.0	dB

* Test Conditions

Parameter	Symbol	Test pin No.	Pin No.									
			1	2	3	4	5	6	7	8	9	10
Circuit current	I ₉	9	to ⑨	—	—	0V	0V	0V	2.3V	2.0V	5V	150kΩ to ⑨
Pin② terminal voltage	V ₂₋₆	2	2.6V	—	—	0V	0V	0V	2.3V	2.0V	5.5V	150kΩ to ⑨
Pin⑦ terminal voltage	V ₇₋₆	7	to ⑨	3.5V	—	0V	0V	0V	—	2.0V	5.5V	0V
Output voltage low level	V ₃₋₆₍₁₎	3	to ⑨	3.4V	—	0V	0V	0V	2.3V	2.0V	5.5V	0V
Output voltage high level	V ₃₋₆₍₂₎	3	to ⑨	1.4V	—	0V	0V	0V	2.3V	2.0V	5.5V	0V