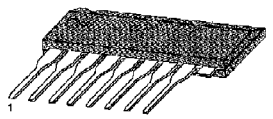
REMOTE CONTROL PREAMPLIFIER

The KA2181 is a silicon monolithic integrated circuit designed for a remote control preamplifier of infrared signals.
This device has features of low power, high sensitivity and wide supply voltage.

8-SIP



FUNCTIONS

- AMP • ABLC • LIMITER & LEVEL SHIFT
- PEAK DET • SHAPING

FEATURES

- Wide operation voltage V_{CC}=6 to 14.4V
- Low power consumption I_{CC}=2.5mA Typ.
- High input sensitivity 50μV_{P-P} Typ.
- Peak detector
- Small size package 8-SIP
- A minimum number of parts are required
- Designed for use with the KS5803 remote control transmitter IC.

ORDERING INFORMATION

Device	Package	Operating Temperature
KA2181	8-SIP	-20℃~+75℃

BLOCK DIAGRAM

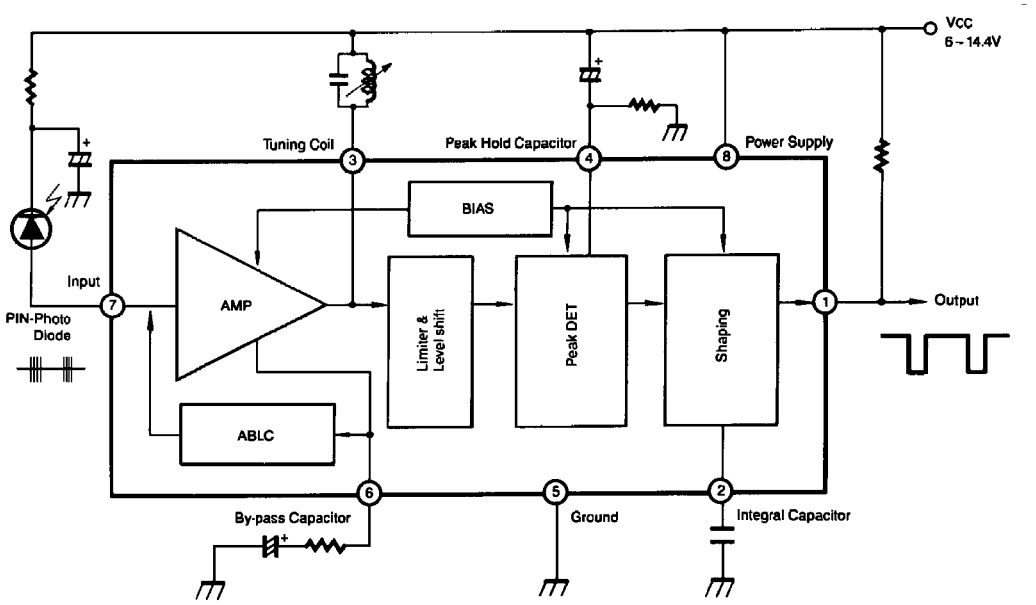


Fig. 1

ABSOLUTE MAXIMUM RATINGS (T_A=25℃)

Characteristic	Symbol	Value	Unit
Supply Voltage	V_{CC}	15	V
Power Dissipation	P_D	270	mW
Operating Temperature	T_{OPR}	-20~+75	℃
Storage Temperature	T_{STG}	-45~+125	℃

RECOMMENDED OPERATING CONDITIONS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Power Supply	V_{CC}	6.0	8.5	14.4	V
Input Frequency	f_{IN}	30	—	50	KHz

ELECTERICAL CHARACTERISTICS
(T_A=25℃, V_{CC}=8.5V, f_{IN}=40KHz)

Characteristic	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Supply Current	I_{CC}		1.5	2.5	3.5	mA
Input Terminal Voltage	V_{IN}1		2.1	2.6	3.1	V
Input Terminal Voltage	V_{IN}2	I_{IN}=70㎂	3.4	4.1	4.9	V
1st Stage Voltage Gain	A_{VL}	#7—#3, V_{OUT}=500mV_{P-P}	—	60	—	dB
Detection Input Voltage	υ_{IN}		—	50	100	μV_{P-P}
Input Impedance	γ_{IN}		40	60	80	kΩ
Output Voltage	V_{OL}	I_{OL}=0.1mA, υ_{IN}=7mV_{P-P}	—	—	0.5	V
Output Leakage Current	I_{OH}	V_{OH}=14.4V	—	—	2	㎂
Noise		Input Open	Output Terminal is not fall			

TYPICAL APPLICATION CIRCUITS

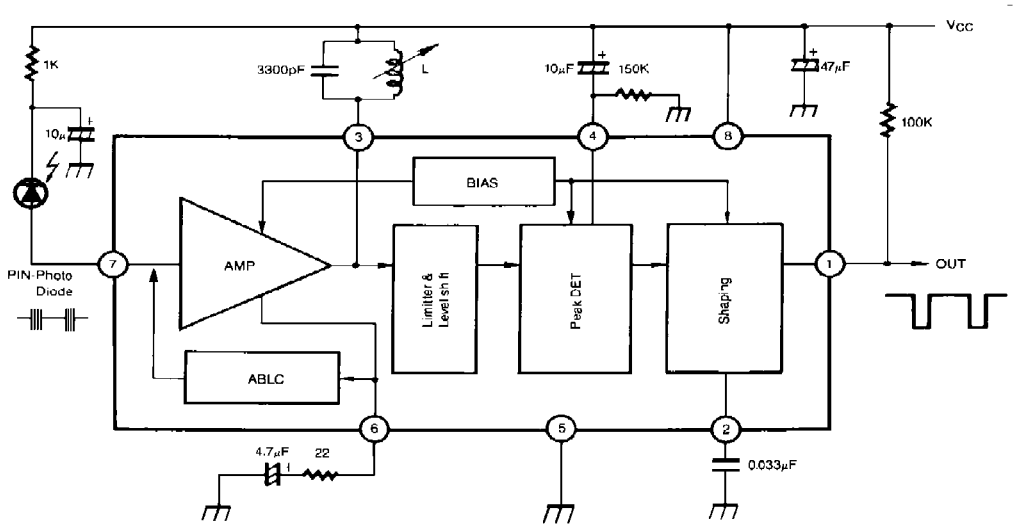


Fig. 2

TEST CIRCUITS

L ···5mH
C . . . 3300pF
R . . . 100K

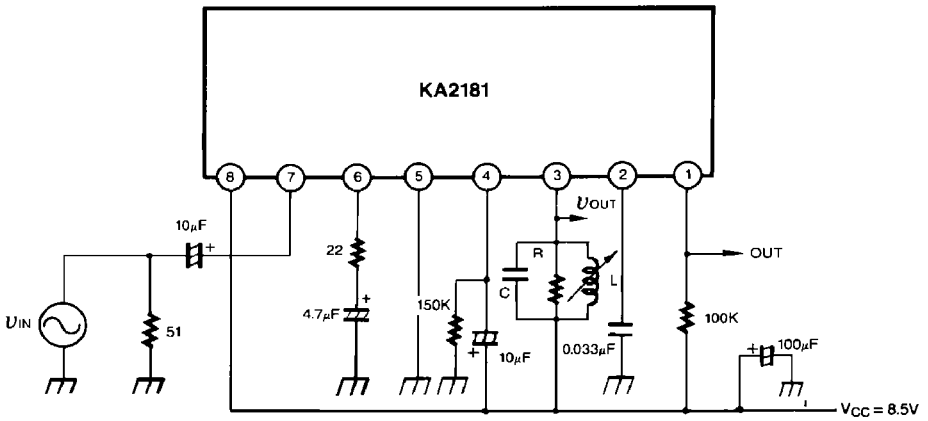
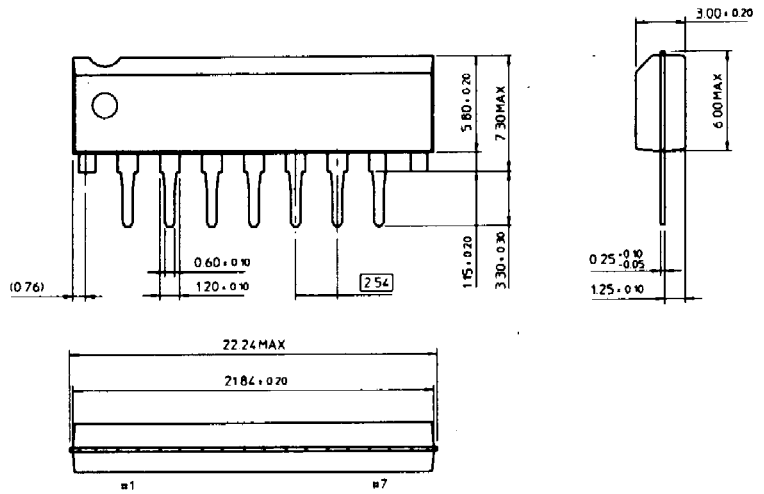


Fig. 3

Dimensions in Milimeters

7-SIP



8-SIP