

KA2181

REMOTE CONTROL PREAMPLIFIER

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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.

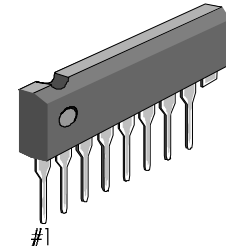
FUNCTIONS

- 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 $50\mu V_{P-P}$ 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.

8-SIP



ORDERING INFORMATION

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

BLOCK DIAGRAM

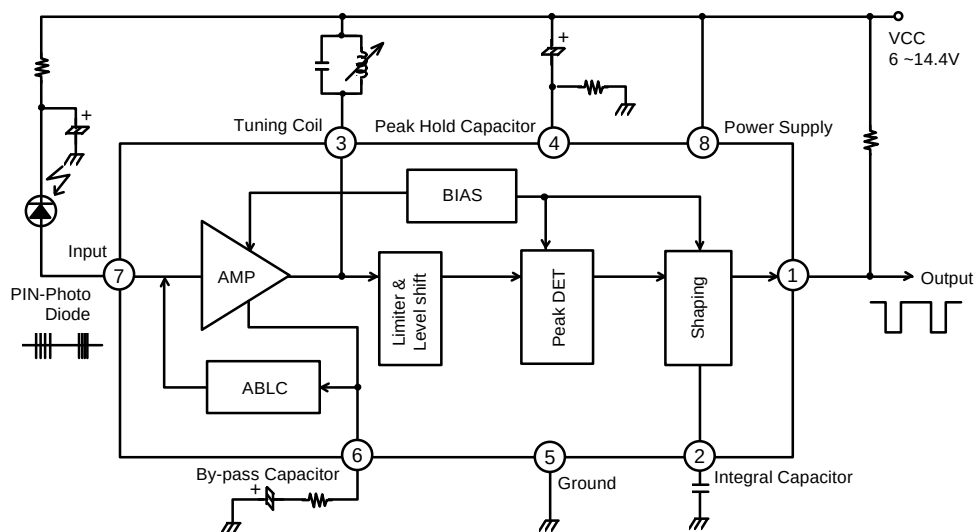


Fig. 1

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage	V _{CC}	15	V
Power Dissipation	P _D	270	mW
Operating Temperature	T _{OPR}	-20~+75	°C
Storage Temperature	T _{STG}	-45~+125	°C

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°C, 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} =70μA	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	v _{IN}		-	50	100	μV _{P-P}
Input Impedance	γ _{IN}		40	60	80	KΩ
Output Voltage	V _{OL}	I _{OL} =0.1mA, v _{IN} =7mV _{P-P}	-	-	0.5	V
Output Leakage Current	I _{OH}	V _{OH} =14.4V	-	-	2	μA
Noise		Input Open	Output Terminal is not fall			

TYPICAL APPLICATION CIRCUITS

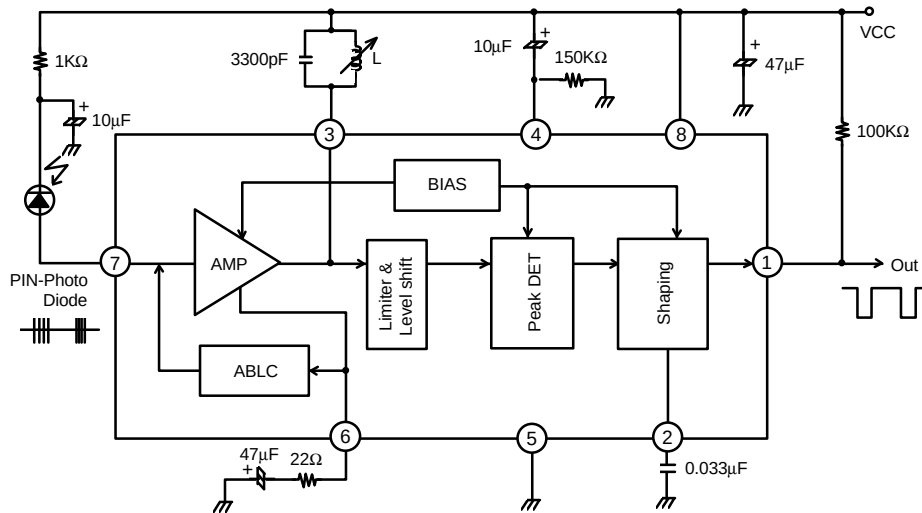


Fig. 2

TEST CIRCUITS

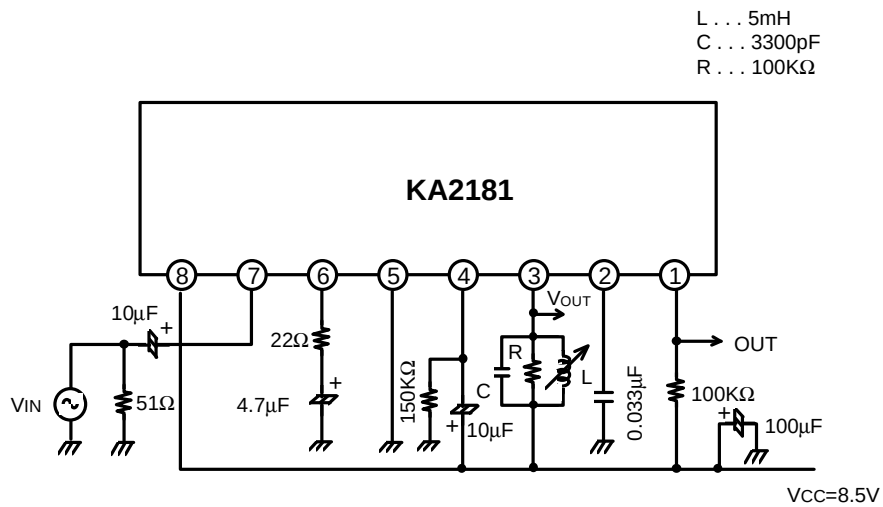


Fig. 3