

REMOTE CONTROL PREAMPLIFIER

The KA2182/KA2183 are silicon monolithic integrated circuit designed for a remote control preamplifier of infrared signals. These devices have features of low power, high sensitivity and wide supply voltage.

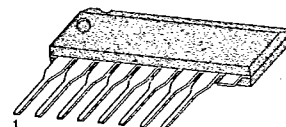
FUNCTIONS

- AMP
- ABLC
- Limiter & Level Shift
- Shaping
- Peak Det

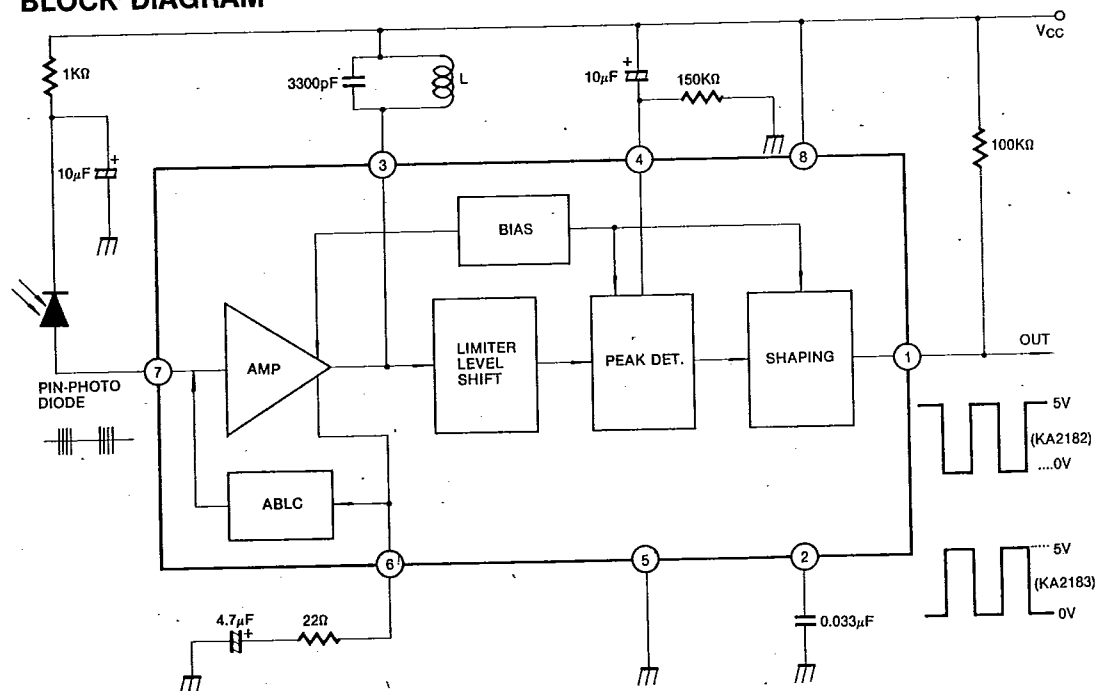
FEATURES

- Wide Operation Voltage: $V_{CC} = 4$ to $8V$
- Low Power Consumption: $I_{CC} = 2.2mA$ Typ. (KA2182)
- High Input Sensitivity: $50\mu V_{PP}$ 2.3mA Typ. (KA2183)
- Peak Detector
- Small Size Package: 8 SIP
- Minimum Number of External Parts Required
- Output: Active Low (KA2182)
Active High (KA2183)

8 SIP



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Characteristics	Symbol	Value	Unit
Supply Voltage	V_{CC}	8	V
Operating Temperature	T_{opr}	$-20 \sim +75$	$^\circ\text{C}$
Storage Temperature	T_{stg}	$-40 \sim +125$	$^\circ\text{C}$

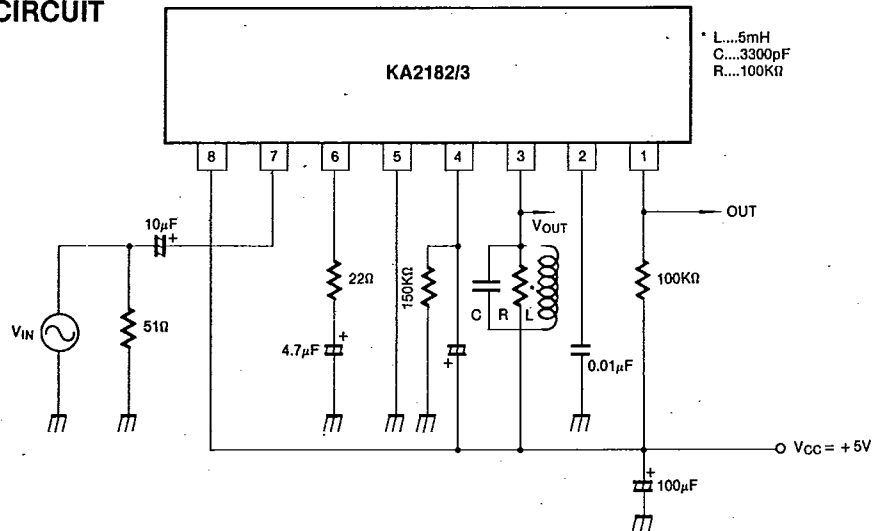
RECOMMENDED OPERATING CONDITIONS

Characteristics	Symbol	Min	Typ	Max	Unit
Power Supply	V_{CC}	4.0	5.0	8.0	V
Input Frequency	F_{IN}	30		50	KHz

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$, $V_{CC} = 5\text{V}$, $f_{IN} = 40\text{KHz}$)

Characteristics	Symbol	Test Condition	Min	Typ	Max	Unit
Supply Current	I_{CC}	KA2182	1.2	2.2	3.2	mA
		KA2183	1.3	2.3	3.3	mA
Input Terminal Voltage	V_{IN1}		1.0	1.2	1.5	V
Input Terminal Voltage	V_{IN2}	$I_{IN} = 70\mu\text{A}$	1.7	2.3	3.0	V
1st Stage Voltage Gain	A_{VL}	$V_{OUT} = 500\text{mV}_{P-P}$		60		dB
Detection Input Voltage	V_{IN}			50	100	μV
Output Voltage	KA2182	$I_{OL} = 0.1\text{mA}$, $V_{IN} = 1\text{mV}_{P-P}$			0.5	V
	KA2183	$I_{OL} = 0.1\text{mA}$, No Input				
Output Leak Current	I_{OH}	$V_{OH} = 14.4\text{V}$			2	μA

TEST CIRCUIT



APPLICATION CIRCUIT

