

KA2261

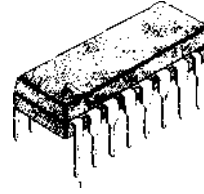
LINEAR INTEGRATED CIRCUIT

FM стерео MULTIPLEX декодер

KA2261 является монолитной интегральной схемой, состоящей из фазы автоподстройки частоты FM стерео демодулятор. Она была разработана для использования в автомобильных стереосистемах, кассетных магнитофонах и другой техники.

FEATURES

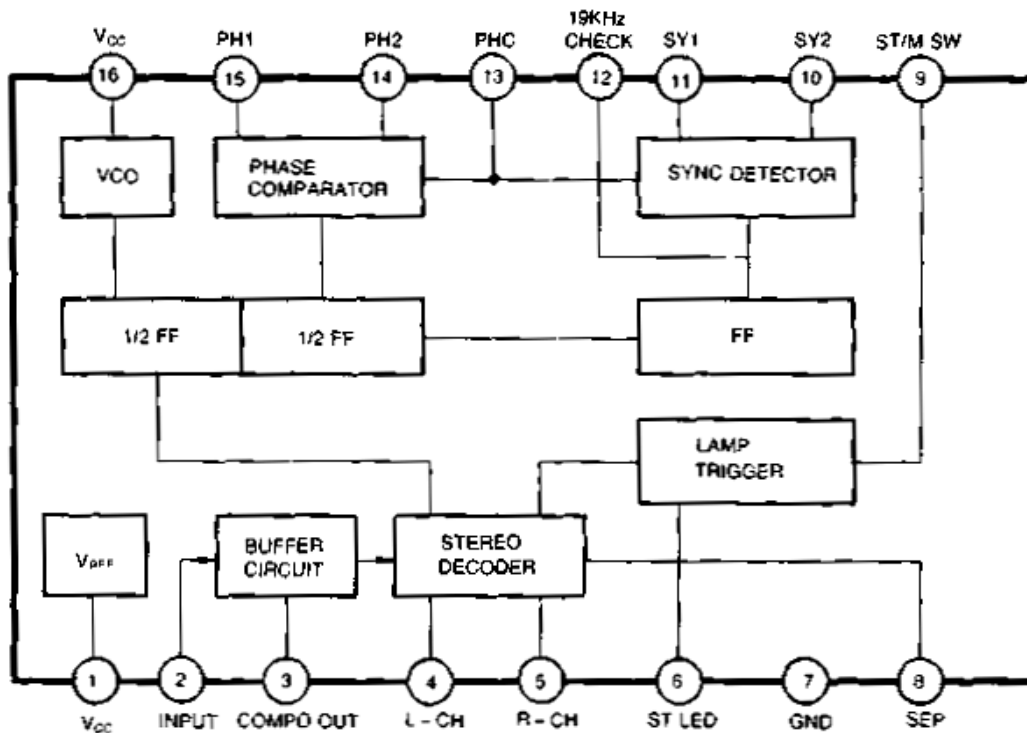
- PLL используется для мультиплексирования.
- Широкий диапазон напряжения питания: $V_{CC} = 3V \sim 14V$
- Низкий ток покоя цепи ($I_{CC0} = 8.5mA$, Тур).
- Высокая SCA отказ отношения.
- Высокая разделение каналов (45 дБ, Тур) и может управляться внешним резистором.
- Встроенный VCO отключить и монофонический отключения костюмы CIR.
- Встроенные стерео цепи индикации.



ORDERING INFORMATION

Device	Package	Operating Temperature
KA2261	16 DIP	20°C~+70°C

BLOCK DIAGRAM



KA2261**LINEAR INTEGRATED CIRCUIT****ABSOLUTE MAXIMUM RATINGS (T_a=25°C)**

Characteristic	Symbol	Value	Unit
Supply Voltage	V _{CC}	16	V
Lamp Current	I _{LAMP}	40	mA
Power Dissipation	P _D	400	mW
Operating Temperature	T _{opr}	-20-+70	°C
Storage Temperature	T _{sTG}	-40-+125	°C

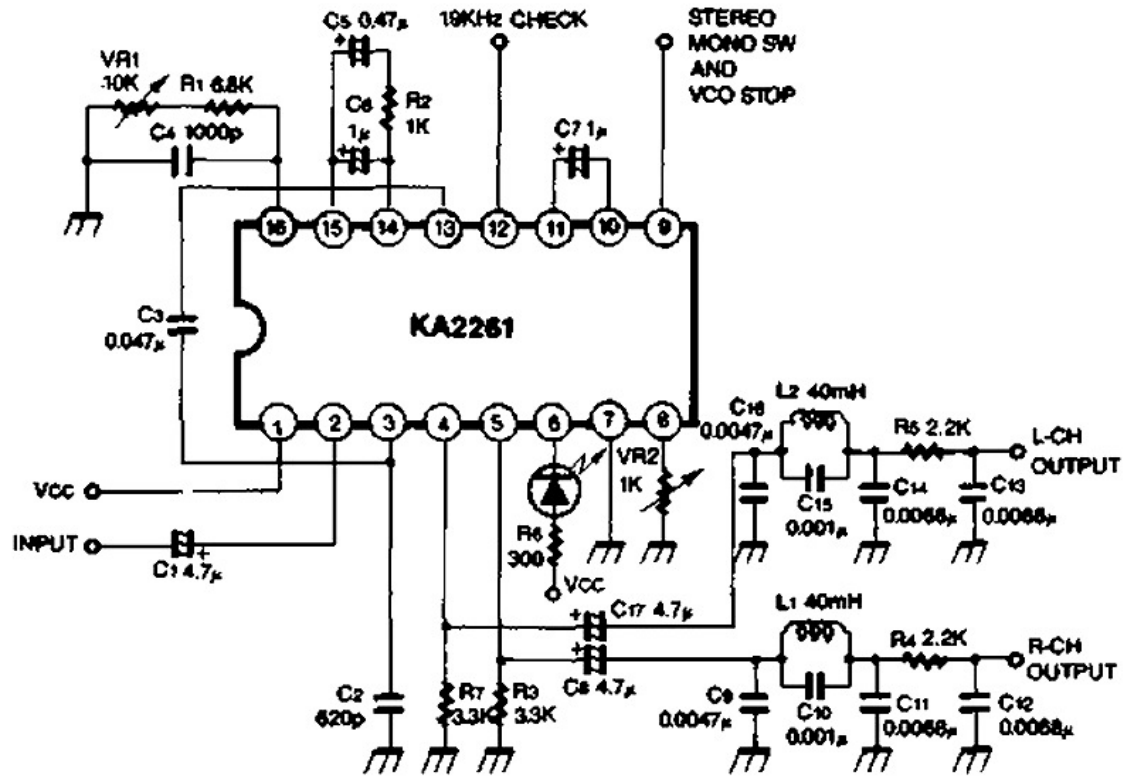
ELECTRICAL CHARACTERISTICS(T_a=25°C, V_{CC}=6V, f=1KHz, R_L=3.3KΩ, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Circuit Current	I _{CCQ}	V _i = 0		8.5	12	mA
Channel Separation	CS	V _i = 100mV, L + R = 90% P=10%, f=1KHz	35	45		dB
Total Harmonic Distortion	Mono THD1 Stereo THD2	V _i = 100mV L+R-90mV, P-10mV		0.2 0.7		% %
Output Voltage	V _o	V _i = 100mV, f=1KHz	66	85	115	mV
Channel Balance	CB	V _i = 100mV, f = 1KHz		0.5	1.5	dB
Lamp on Level	V _{L,ON}	L+R=90%, P=10%		65		mV
Lamp Hysteresis	HY			3.5	6.0	dB
Maximum Input Level	V _{I(MAX)}	THD=2%		450		mV
SCA Rejection Ratio	SCA _{REJ}	L+R=90%, P-10%		70		dB
Signal to Noise Ratio	S/N	V _i = 100mV, f=1KHz		75		dB
Carrier Leakage	V _{LKG}	V _i = 100mV, L + R = 90% P=10%		32		dB
Capture Range	CR	V _i = 100mV, L + R = 90% P=10%		±3		%
Input Impedance	Z _i		15	20		KΩ

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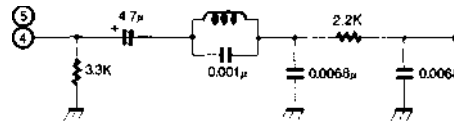
TEST CIRCUIT



SAMSUNG
Electronics

APPLICATION INFORMATION**External Components (Refer to Test Circuit)**

1. Input coupling capacitor (Pin 2)
The recommended value is 4.7mF. If smaller values than 4.7mF are used, low frequency separation will worsen, and if larger values are used, the DC operating point will require time for stabilization.
2. Demodulator output (Pin 4, 5)
These components provide R and L channel output load circuits. The recommended circuits are follows:



3. Separation control (Pin 8)
This component is a variable resistor used to adjust the out signal separation.
4. Low pass filter (Pins 10, 11)
This capacitor is used to filter the 19KHz signal detected by the phase comparator. The recommended value is 1mF. If made too small, the lamp may light improvely when a large mono input signal or external noise is received, too large a capacitance value will take more time to switch between mono and stereo modes.
5. Preamplifier output capacitor (Pins 3, 13)
This capacitor coupled preamplified with phase comparator. The recommended value is 0.047mF.
6. Phase compensation capacitor (Pin 3, GND)
This capacitor is prepared in order to compensate the phase advanced.
7. Loop filter (Pins 14, 15)
This is the low pass filter for the PLL, which is determined the capture range. The recommended value as follows:
 $V < 250\text{mV}$ $C_{14-15} = 0.47\text{mF}$ $V > 250\text{mV}$ $C_{14-15} = 1\text{mF}$
8. Control of Pin 9
Function of Pin 9 is a change-over of stereo/mono and VCO stopping.

SCHEMATIC DIAGRAM OF PIN 9 CONTROL

VCO network (Pin 16)

Since the VCO has a negative temperature coefficient, the RC network compensates by using a polyester film capacitor and a resistor.