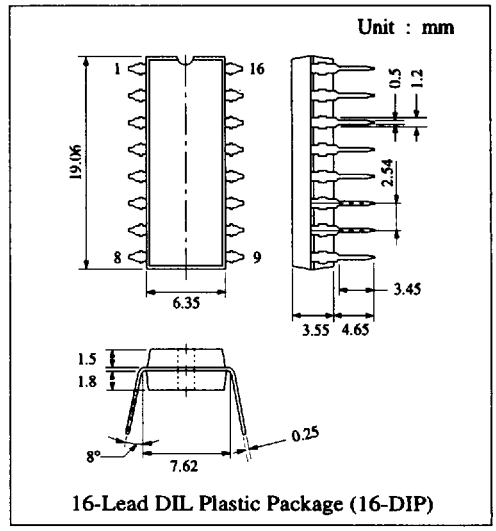
AN7470

FM Stereo Multiplex Demodulator



16-Lead DIL Plastic Package (16-DIP)

■ Description

The AN7470 is a monolithic integrated circuit designd for FM multiplex demodulator circuit for high-class stereo FM tuners.

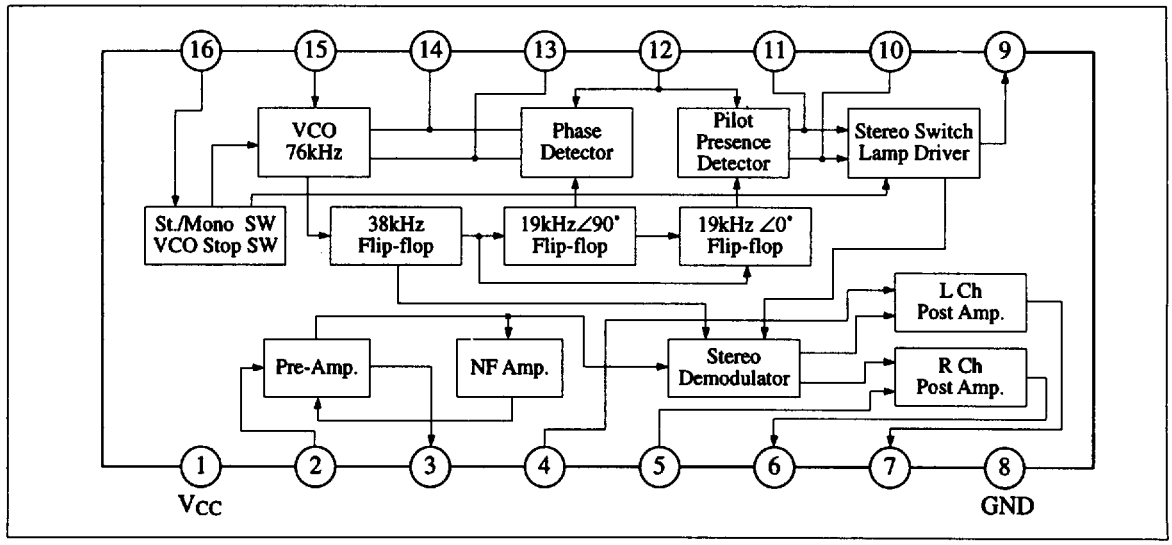
■ Features

- Small shock noise from switching operation (ON/OFF)
- Perfect synchronization for stereo/monaural switching operation and stereo lamp
- Built-in post amplifier

■ Pin

Pin No	Pin Name	Pin No	Pin Name
1	V_{CC}	9	Stereo Indicator and VCO freq. Monitor
2	Composite Signal Input	10	Pilot Det. Low-pass Filter
3	Buffer Amp. Output	11	Pilot Det. Low-pass Filter
4	L Ch. Amp. Feedback	12	Pilot Signal Input
5	R Ch. Amp. Feedback	13	PLL Low-pass Filter
6	R Ch. Amp. Output	14	PLL Low-pass Filter
7	L Ch. Amp. Output	15	VCO RC Time Const.
8	GND	16	Forced Mono. VCO Killer

■ Block Diagram



■ Absolute Maximum Ratings (Ta=25°C)

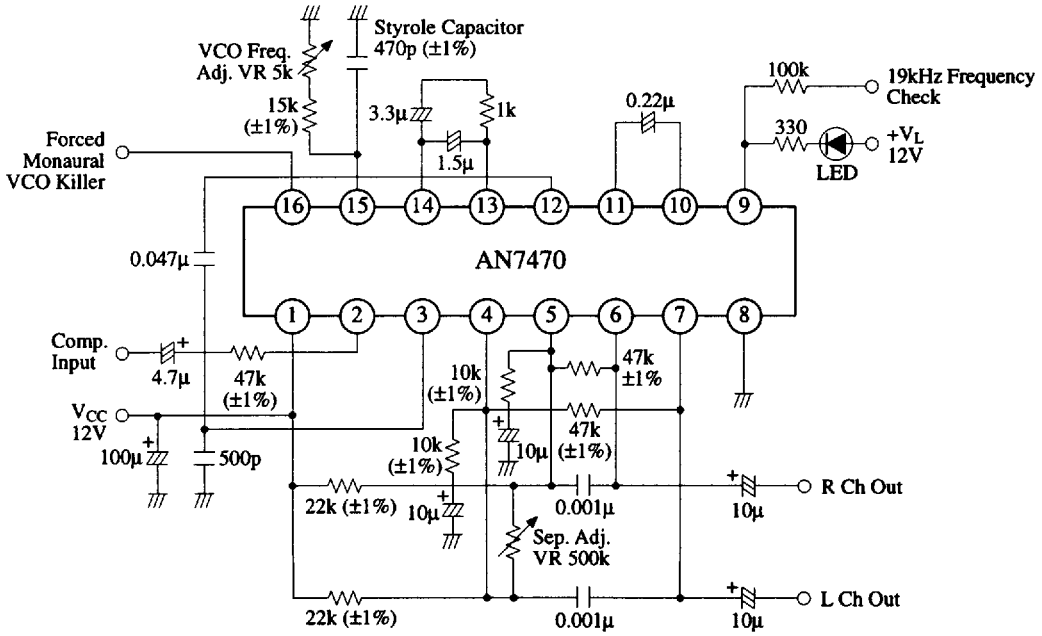
Item	Symbol	Rating	Unit
Supply Voltage	V_{CC}	14.4	V
Power Dissipation (Ta=75°C)	P_D	430	mW
Operating Ambient Temperature	Topr	-20 ~ +75	°C
Storage Temperature	Tstg	-55 ~ +150	°C

Operating Supply Voltage Range: V_{CC} = 9.0V ~ 14.0V

■ Electrical Characteristics (V_{CC}=12V, Ta=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Circuit Current (Lamp OFF)	I_I	Without input signal (Lamp OFF)	10	18	28	mA
Circuit Current (Lamp ON)	I_I	Pilot signal, V_p = 30mV (Lamp ON)		20		mA
Channel Separation	Sep	f_m = 1kHz, L + R = 90%, Pilot = 10%, $V_{(L+R)}$ = 270mV, V_p = 30mV	45	55		dB
Voltage Gain	Gv		10	12	14	dB
Channel Balance	CB		-1	0	1	dB
Total Harmonic Distortion (Stereo)	THD			0.04	0.1	%
Total Harmonic Distortion (Mono)	THD	f_m = 1kHz, V_{in} = 300mV		0.02	0.1	%
Carrier Leak	CL	f_m = 1kHz, L + R = 90%, Pilot = 10%, $V_{(L+R)}$ = 270mV	20	26		dB
Pilot Signal ON Voltage	$V_{p(ON)}$	Pilot signal 19kHz	6	12	20	mV
Capture Range	CR	Pilot signal 19kHz, V_p = 30mV	±1.5	±3		%
Signal to Noise Ratio	S/N	f_m = 1kHz, V_{in} = 300mV, R_g = 0Ω	76	85		dB

■ Application Circuit



■ Characteristics Curve

