

AN7415/S

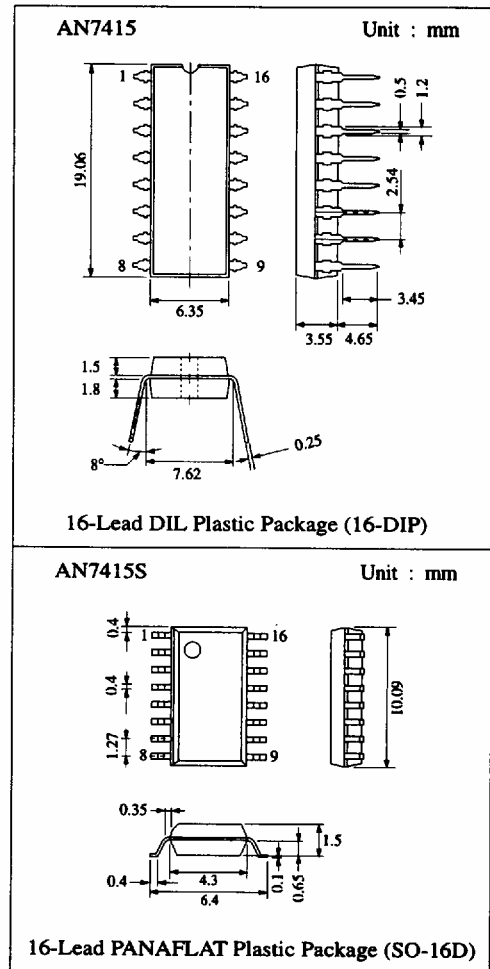
FM Stereo Multiplex Demodulator

■ Description

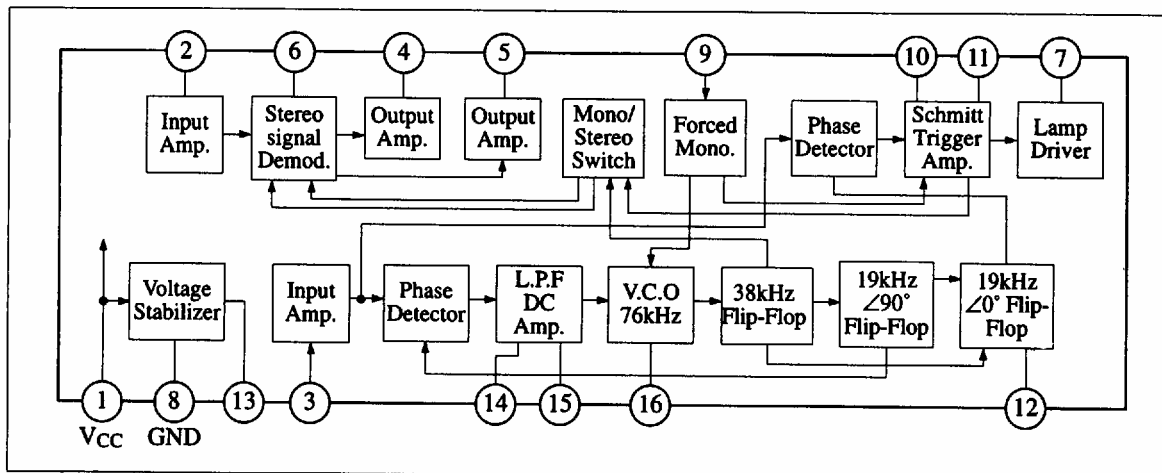
The AN7415/S are the monolithic integrated circuits designed for low voltage operating FM stereo multiplex demodulator (2 dry cells are enough for the power source).

■ Features

- Operating voltage: $V_{CC} = 1.6V \sim 7.0V$
- Low total current: $I_{tot} = 2.6mA$
- Provided with forced monaural and VCO stop circuits
- High performance (small gain loss, low distortion)



■ Block Diagram



■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Rating	Unit
Supply Voltage	V _{CC}	7	V
Load Current (LED)	I _L	40	mA
Power Dissipation	P _D	80	mW
Operating Ambient Temperature	Topr	-20 ~ +75	°C
Storage Temperature	AN7415	Tstg	°C
	AN7415S		

Operating Supply Voltage Range: V_{CC} = 1.6V ~ 7.0V

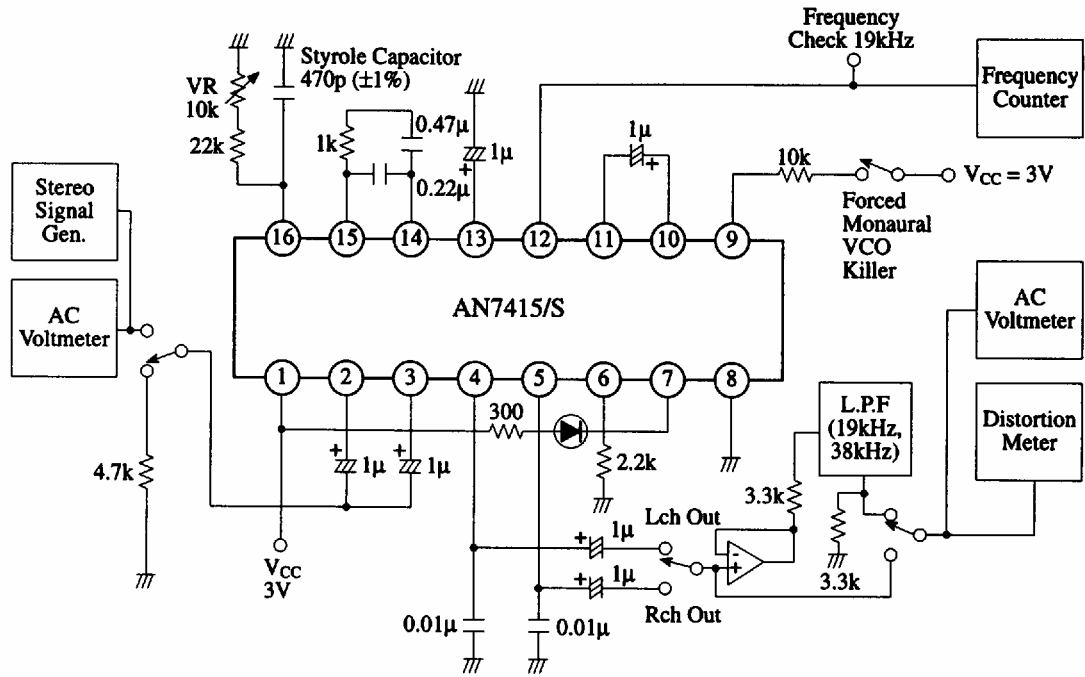
■ Electrical Characteristics (V_{CC}=3V, Ta=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Total Current	I _{tot}	Without input signal	2.1	2.6	3.2	mA
Output Voltage	V _O	V _{in} = 100mV, f _m = 1kHz	85	102	120	mV
Channel Balance	CB			0	1	dB
Total Harmonic Distortion	THD	V _(L+R) = 90mV, f _m = 1kHz, V _p = 10mV		0.05	0.3	%
Separation	Sep		35	45		dB
Stereo Lamp ON Level	V _{p(ON)}	Pilot signal 19kHz	3.5	5	7	mV

■ Pin

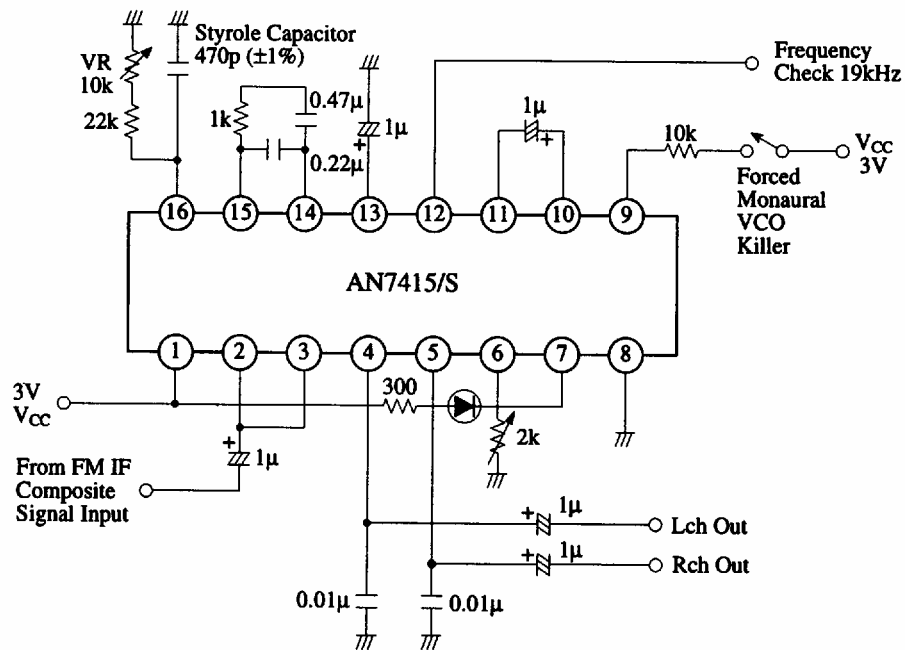
Pin No	Pin Name	Pin No	Pin Name
1	V _{CC}	9	Forced Mono, VCO Stop
2	Composite Signal Input	10	Pilot Det. Low-pass Filter
3	Pilot Signal Input	11	Pilot Det. Low-pass Filter
4	L. Ch. Signal Output	12	VCO Frequency Monitor
5	R. Ch. Signal Output	13	Stabilized Power Supply
6	Separation Adj.	14	PLL Low-pass Filter
7	Stereo Indicator	15	PLL Low-pass Filter
8	GND	16	VCO RC Time Const.

Test Circuit (De-emphasis about 50μs)

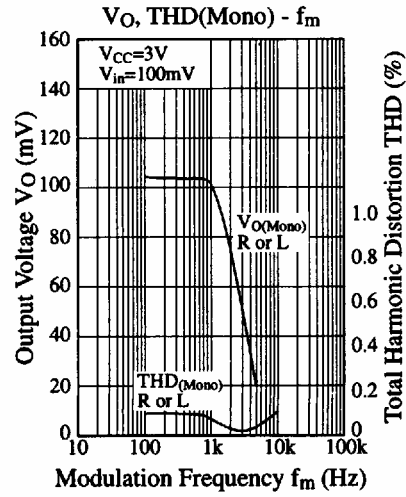
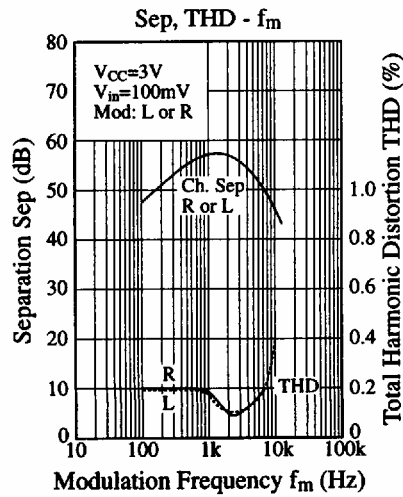
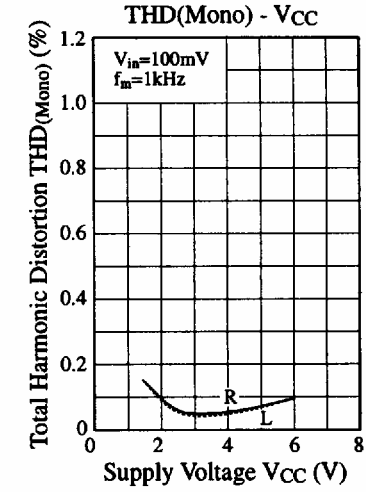
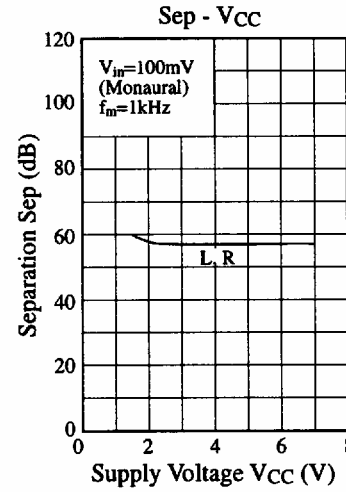
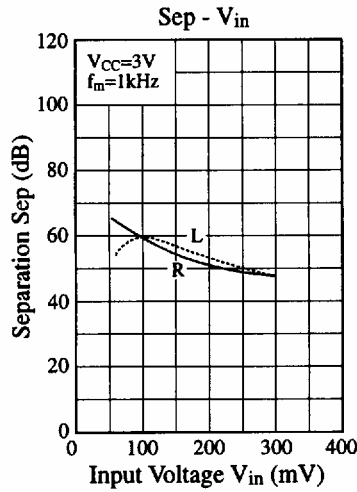
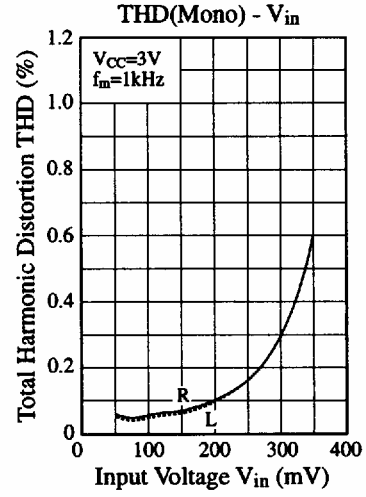
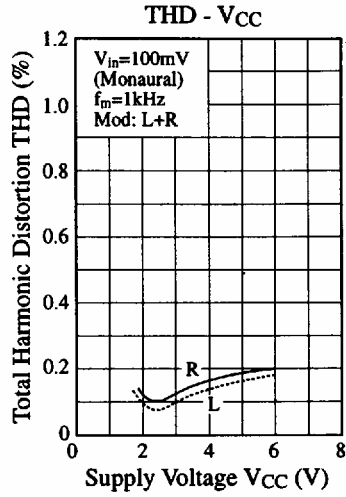
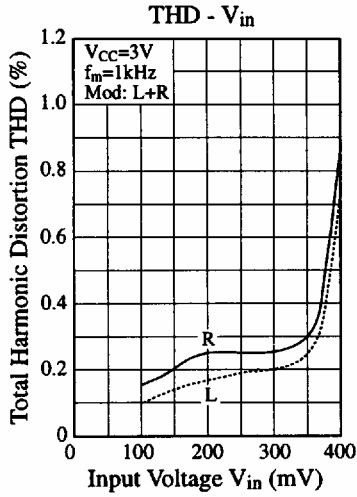


Note: VCO frequency is adjusted to 19kHz (±50Hz) by the frequency check terminal

■ Application Circuit



■ Characteristics Curve



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