

# AN7415/S

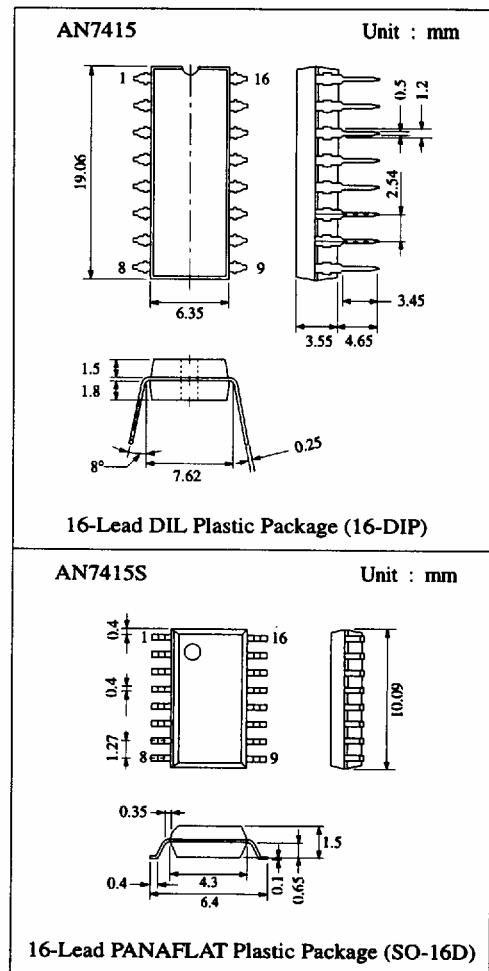
## FM Stereo Multiplex Demodulator

### ■ Description

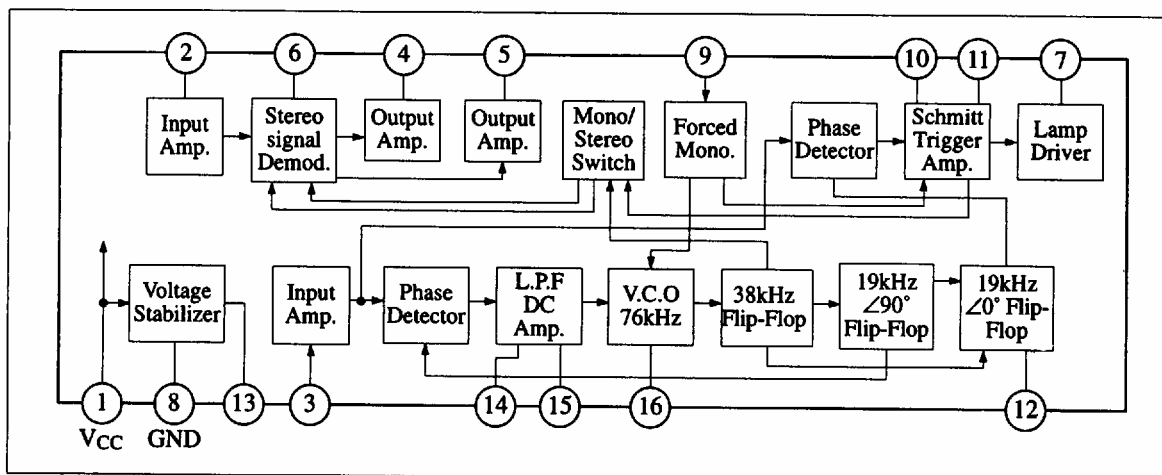
The AN7415/S are the monolithic integrated circuits designed for low voltage operating FM stereo multiplex demodulator (2 dry cells are enough for the power source).

### ■ 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 <sub>CC</sub>	7	V
Load Current (LED)	I <sub>L</sub>	40	mA
Power Dissipation	P <sub>D</sub>	80	mW
Operating Ambient Temperature	Topr	-20 ~ +75	°C
Storage Temperature	AN7415	Tstg	°C
	AN7415S		

Operating Supply Voltage Range: V<sub>CC</sub> = 1.6V ~ 7.0V

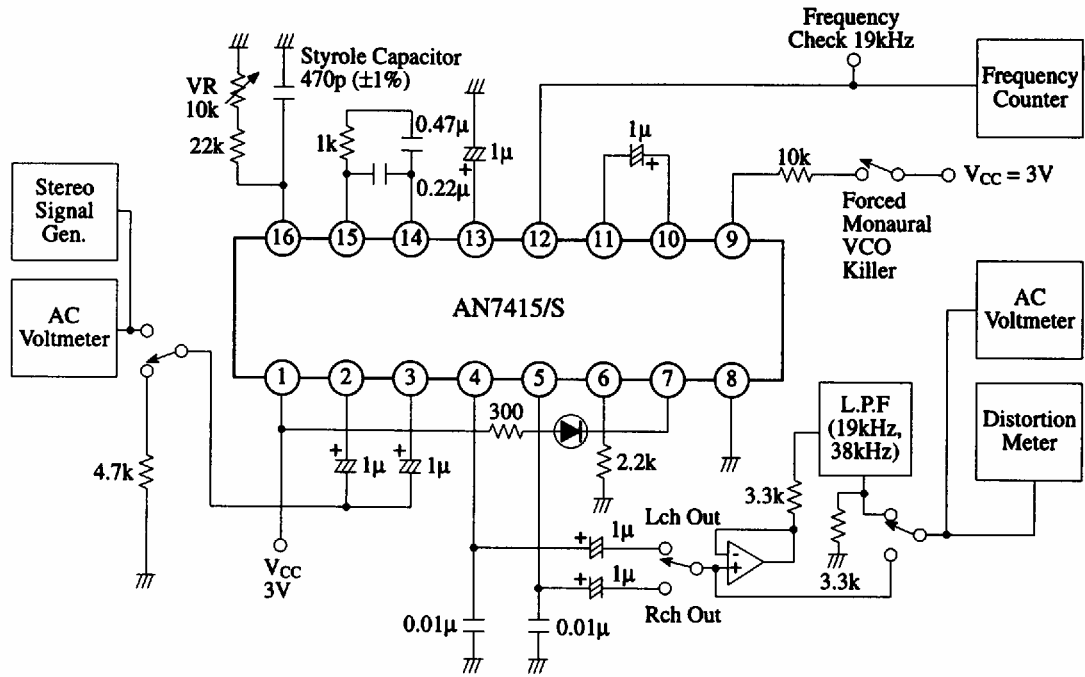
### ■ Electrical Characteristics (V<sub>CC</sub>=3V, Ta=25°C)

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

### ■ Pin

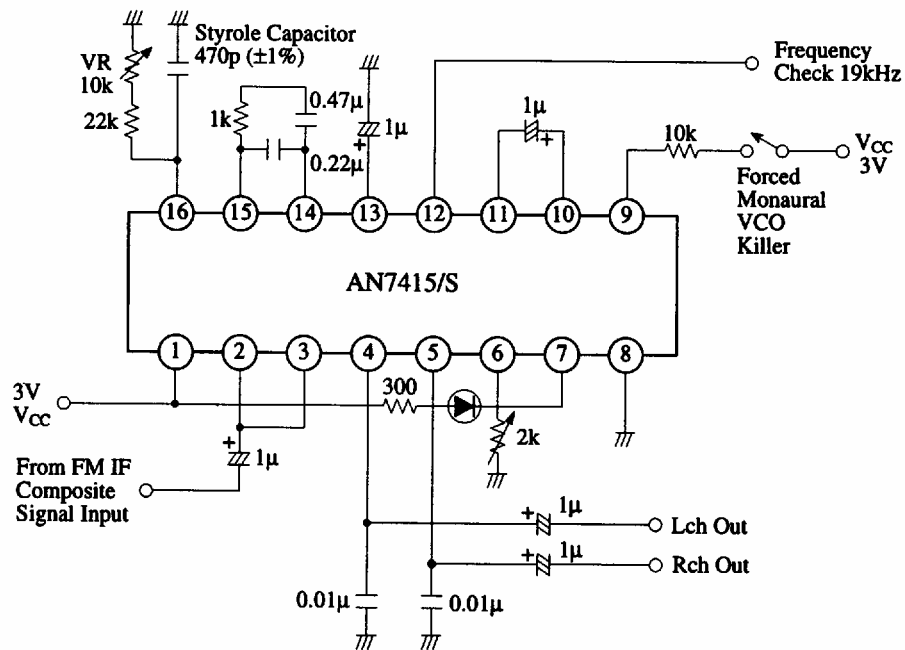
Pin No	Pin Name	Pin No	Pin Name
1	V <sub>CC</sub>	9	Forced Mono, VCO Stop
2	Composite Signal Input	10	Pilot Det. Low-pass Filter
3	Pilot Signal Input	11	Pilot Det. Low-pass Filter
4	L. Ch. Signal Output	12	VCO Frequency Monitor
5	R. Ch. Signal Output	13	Stabilized Power Supply
6	Separation Adj.	14	PLL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

Test Circuit (De-emphasis about 50 $\mu$ s)

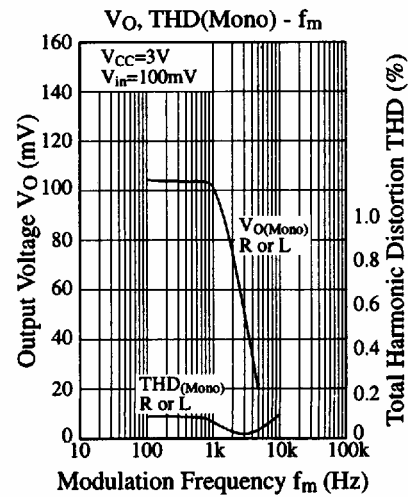
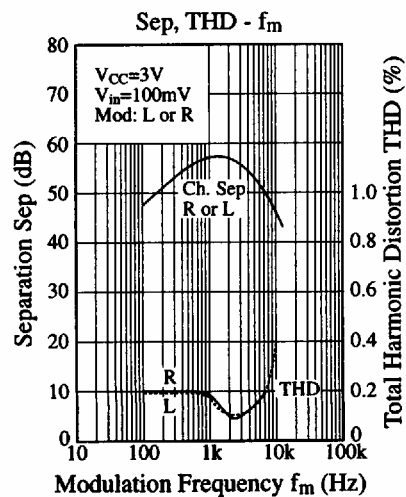
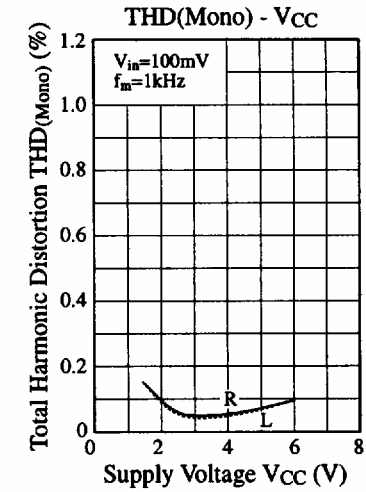
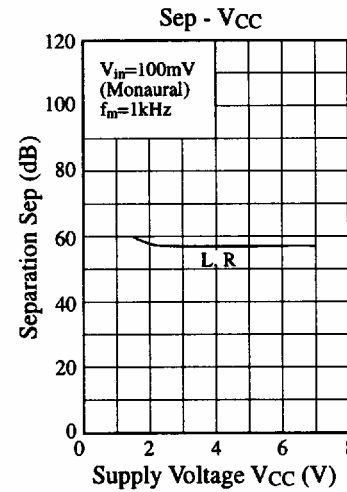
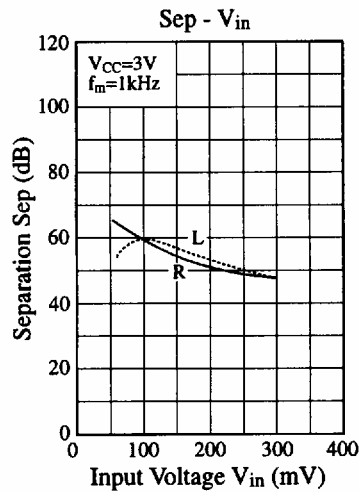
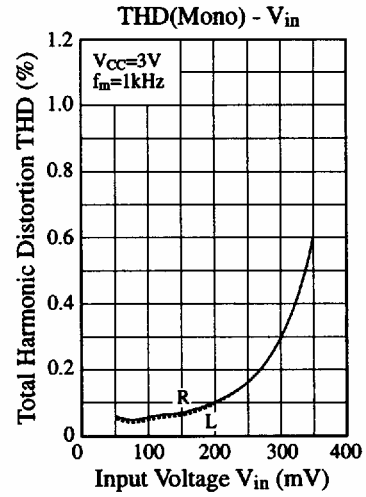
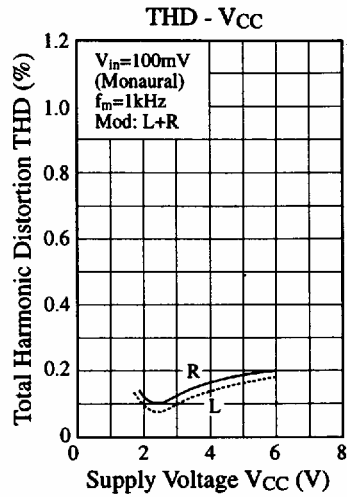
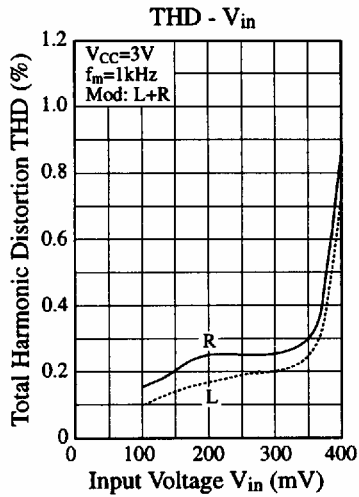


Note: VCO frequency is adjusted to 19kHz ( $\pm$ 50Hz) by the frequency check terminal

■ Application Circuit



## ■ Characteristics Curve



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