

AN7236

FM-AM IF Amplifier Circuit

■ Description

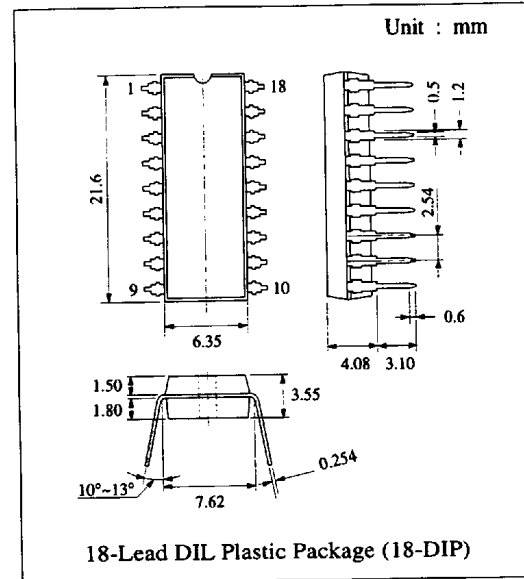
The AN7236 is a monolithic integrated circuit designed for AM tuner, FM-AM IF amplifier in low voltage radio set.

■ Features

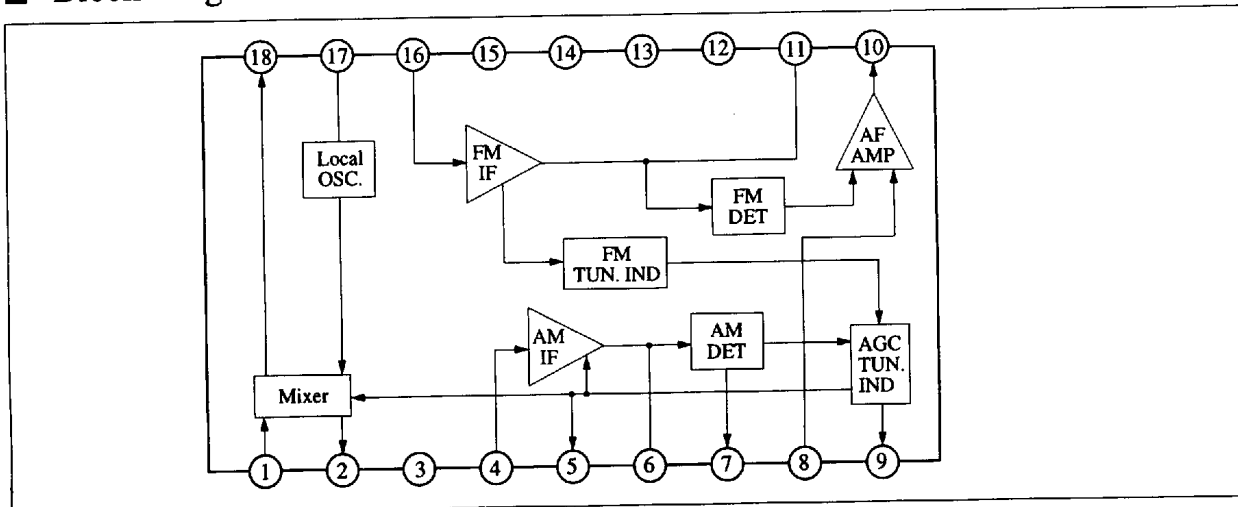
- Built-in detectors for both FM and AM
- Operating supply voltage : $V_{CC} = 1.8V \sim 6.6V$

■ Pin

Pin No.	Pin Name	Pin No.	Pin Name
1	AM Mixer Input	10	Sound Signal Output
2	AM Mixer Output	11	FM Quad Coil
3	AM Supply Voltage	12	GND
4	AM IF Input	13	Supply Voltage
5	AGC Voltage	14	IF By-pass
6	AM IF Filter	15	IF By-pass
7	AM Detector Output	16	FM IF Input
8	AM Sound Input	17	AM Local Oscillator
9	Indicator	18	AM Mixer By-pass



■ Block Diagram



■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Rating	Unit
Supply Voltage	V _{CC}	6.6	V
Supply Current	I _{CC}	3.2	mA
Power Dissipation (Ta ≤ 75°C)	P _D	50	mW
Operating Ambient Temperature	Topr	-20 ~ +75	°C
Storage Temperature	Tstg	-55 ~ +150	°C

Operating Supply Voltage Range: V_{CC} = 1.8V ~ 6.6V

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

Item	Symbol	Condition	min.	typ.	max.	Unit
FM						
Quiescent Current*	I _{CQ(FM)}	No input	1.3	1.6	2.0	mA
Detector Output Level	V _{O(FM)}	V _{in} = 60dBμ, f = 10.7MHz, f _m = 400Hz	45	60	78	mV
Limiting Sensitivity*	V _{in(lim)(FM)}	V _O = -3dB	25	28	31	dBμ
Indicator Current	I _{IND(FM)}	No input			3	μA
Signal to Noise Ratio*	S/N (FM)	V _{in} = 60dBμ		60		dB
AM						
Quiescent Current*	I _{CQ(AM)}	No input	1.9	2.4	3.1	mA
Detector Output Level	V _{O(AM)}	V _{in} = 60dBμ, f = 1MHz, f _m = 400Hz, Mod = 30%	34.5	48	58.5	mV
Sensitivity	S _{max}	V _O = 20mV	15.5	20	25	dBμ
Indicator Current	I _{IND(AM)}	No input			3	μA
Signal to Noise Ratio*	S/N (AM)	V _{in} = 60dBμ		40		dB
Local Oscillator Level*	V _{OSC(AM)}	f _{osc} = 1.455MHz		135		mV _{rms}

* The above characteristics are for design reference only and are not guaranteed.

Test Circuit

