

AN5215

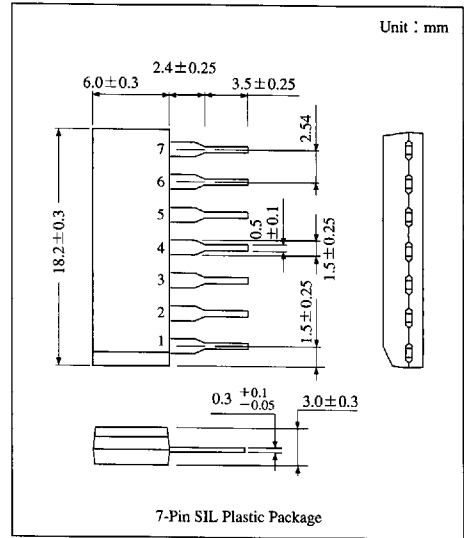
TV Sound-IF Amplifier, FM Detector IC

Overview

The AN5215 is an integrated circuit designed for TV receiver sound-IF amplifier and FM detector, and also is usable for TV sound multiplex broadcasting.

Features

- High input sensitivity : $V_{i(lim)} = 50 \mu V_{rms}$ typ.
- Usable as sound multiplex circuitry
- Good FM Detector characteristics
- 7-pin single-in-line plastic package for flexible PCB design

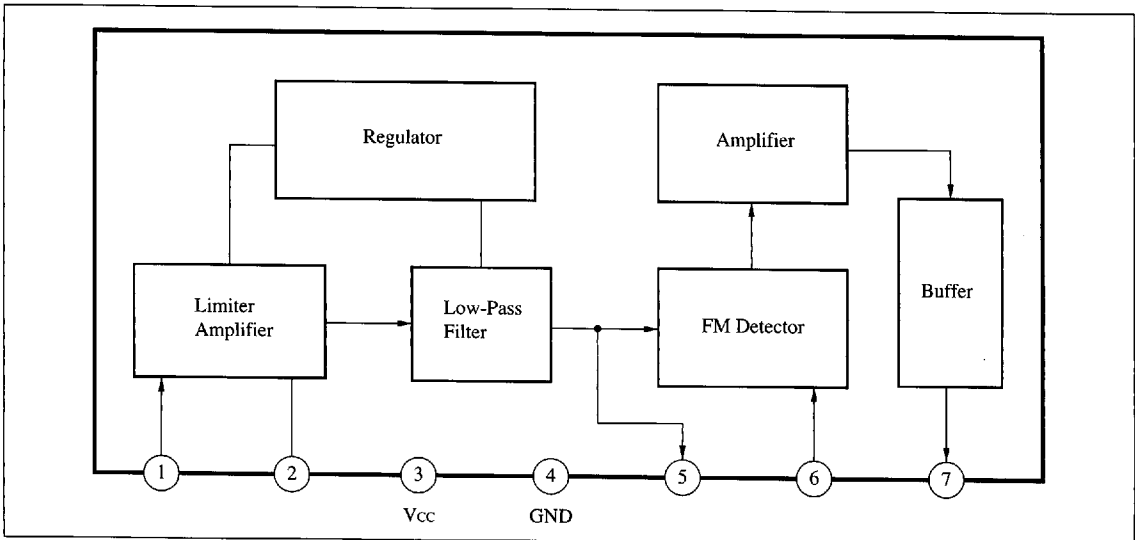


ICs for TV

Pin Descriptions

Pin No.	Pin name
1	SIF input
2	Decoupling
3	V _{CC}
4	GND
5	SIF output
6	Detector
7	Detector output

Block Diagram



Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Parameter		Symbol	Rating	Unit
Supply voltage		V_{CC}	14.4	V
Circuit current		I_{CC}	36	mA
Power dissipation		P_D	520	mW
Temperature	Operating ambient temperature	T_{opr}	-20 to +70	$^\circ\text{C}$
	Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Condition	min	typ	max	Unit
Total circuit current	I_{tot}	$V_{CC}=12\text{V}$	17	23	29	mA
Input limiting voltage	$V_{i(lim)}$	$f_0=4.5\text{MHz}, f_m=400\text{Hz}, \Delta f=\pm 25\text{kHz}$	—	50	100	μV_{rms}
AM rejection (1)	AMR1	$f_0=4.5\text{MHz}, f_m=400\text{Hz}, m=30\% \text{ (AM)}, V_i=100\mu\text{V}_{rms}$	43	53	—	dB
AM rejection (2)	AMR2	$f_0=4.5\text{MHz}, f_m=400\text{Hz}, m=30\% \text{ (AM)}, V_i=100\mu\text{V}_{rms}$	27	37	—	dB
Total detector output	V_o	$f_0=4.5\text{MHz}, f_m=400\text{Hz}, \Delta f=\pm 25\text{kHz}, V_i=100\mu\text{V}_{rms}$	385	550	715	mV_{rms}
Total harmonics distortion	THD	$f_0=4.5\text{MHz}, f_m=400\text{Hz}, \Delta f=\pm 25\text{kHz}, V_i=100\mu\text{V}_{rms}$	—	0.3	1.0	%
Input resistance	$R_{i(IF)}$	$f=4.5\text{MHz}, V_i=30\text{mV}$	6	15	100	$\text{k}\Omega$
Input capacitance	$C_{i(IF)}$	$f=4.5\text{MHz}, V_i=30\text{mV}$	3	6	9	pF

Application Circuit

