

AN5215

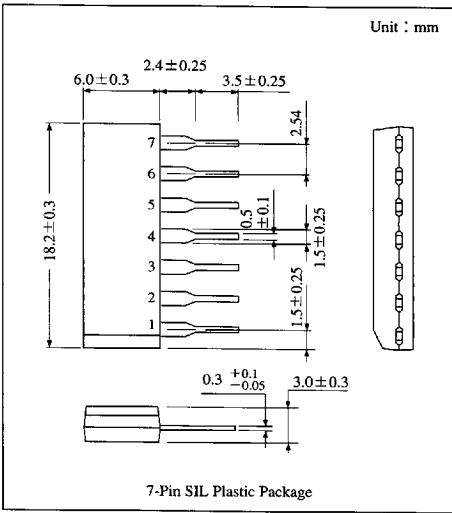
TV Sound-IF Amplifier, FM Detector IC

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

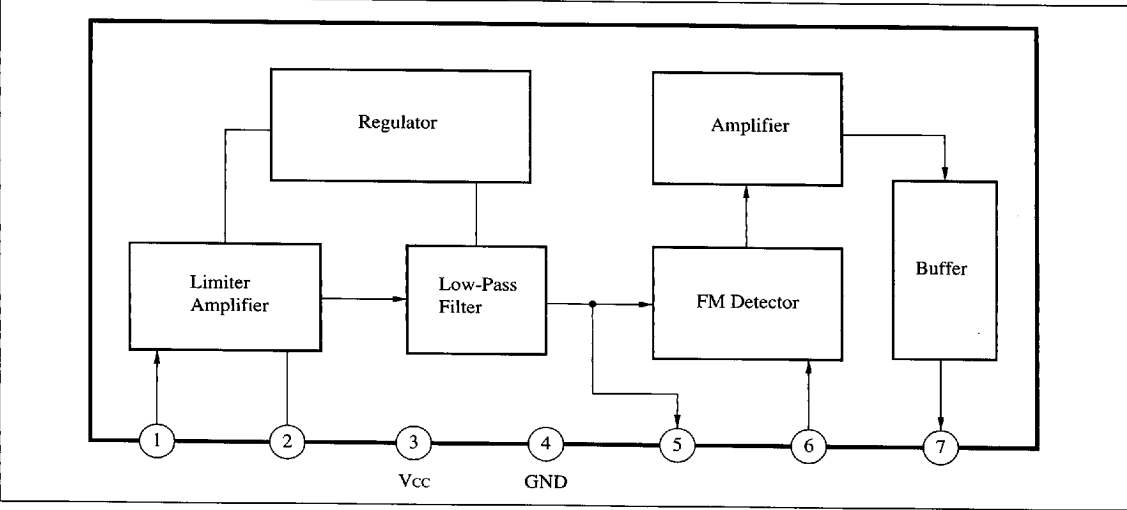
- High input sensitivity : $V_{i (lim)} = 50 \mu V_{rms}$ typ.
- Usable as sound multiplex circuitry
- Good FM Detector characteristics
- 7-pin single-in-line plastic package for flexible PCB design



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



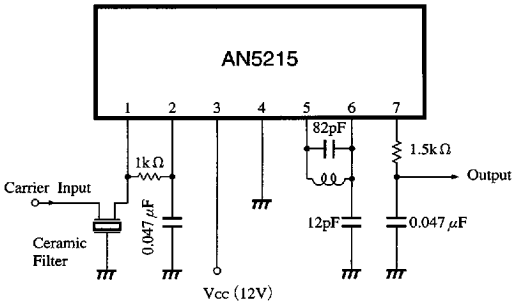
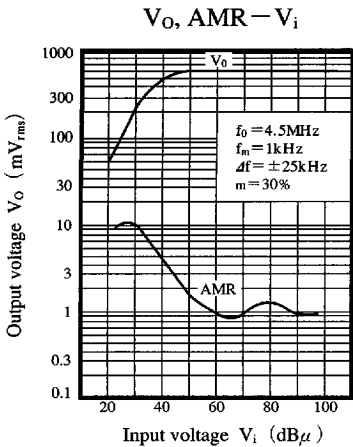
■ Absolute Maximum Ratings (Ta=25℃)

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	℃
	Storage temperature	T _{stg}	-55 to +150	℃

■ Electrical Characteristics (Ta=25℃)

Parameter	Symbol	Condition	min	typ	max	Unit
Total circuit current	I _{tot}	V _{CC} =12V	17	23	29	mA
Input limiting voltage	V _{i(lim)}	f ₀ =4.5MHz, f _m =400Hz, Δf=±25kHz	—	50	100	μV _{rms}
AM rejection (1)	AMR1	f ₀ =4.5MHz, f _m =400Hz, m=30% (AM), V _i =100mV _{rms}	43	53	—	dB
AM rejection (2)	AMR2	f ₀ =4.5MHz, f _m =400Hz, m=30% (AM), V _i =100 μV _{rms}	27	37	—	dB
Total detector output	V _O	f ₀ =4.5MHz, f _m =400Hz, Δf=±25kHz, V _i =100mV _{rms}	385	550	715	mV _{rms}
Total harmonics distortion	THD	f ₀ =4.5MHz, f _m =400Hz, Δf=±25kHz, V _i =100mV _{rms}	—	0.3	1.0	%
Input resistance	R _{i(IF)}	f=4.5MHz, V _i =30mV	6	15	100	kΩ
Input capacitance	C _{i(IF)}	f=4.5MHz, V _i =30mV	3	6	9	pF

■ Application Circuit



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Panasonic