

AN5732

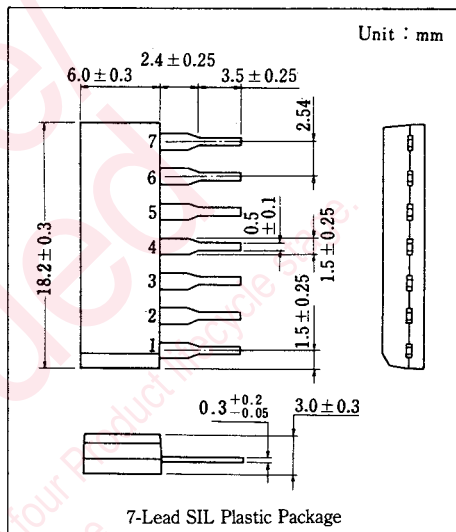
TV Sound IF Amplifier, FM Detector Circuit

■ Outline

The AN5732 is an integrated circuit designed for sound IF amplifier and FM detector circuit of 12V operating TV receiver. It can be also used for sound multiplex circuitry by partially changing constant values.

■ Features

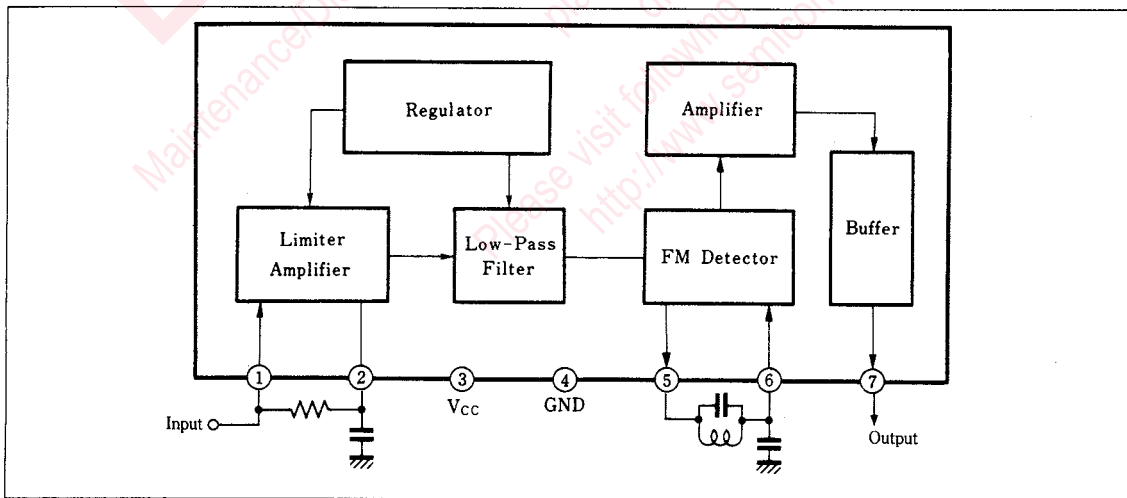
- Usable as a sound multiplex circuitry by changing L_1 , C_1 and C_2 values : $L_1=28 \mu H$, $C_1=39pF$, $C_2=10 pF$
- High input sensitivity : $V_{(lim)}=100 \mu V_{rms}$ typ.
- Good ripple rejection : $RR=30 dB$ min.



■ Pin

Pin No.	Pin Name
1	SIF Input
2	Decoupling
3	V _{cc}
4	GND
5	SIF Output
6	Detector
7	Det. Output

■ Block Diagram



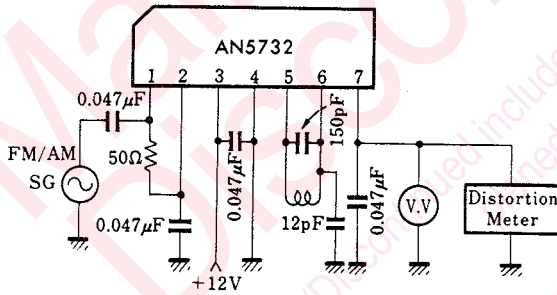
■ Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Rating	Unit
Supply voltage	V _{CC}	14.4	V
Power Dissipation	P _D	216	mW
Temperature	Operating Ambient Temperature	-20 ~ +70	°C
	Storage Temperature	-40 ~ +150	°C

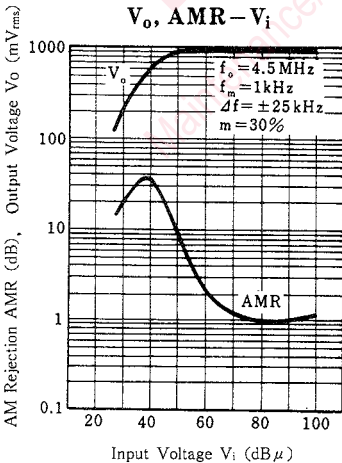
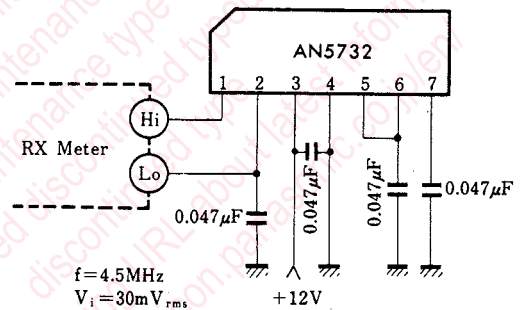
■ Electrical Characteristics (Ta=25°C)

Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
Total Circuit Current	I _{tot}		V _{CC} = 12 V	9	12	15	mA
Input Limiting Voltage	V _{i(lim)}	1	f ₀ = 4.5 MHz, f _m = 1 kHz Δf = ± 25 kHz		100	200	μV _{rms}
Output Voltage (Det.)	V _O	1	f ₀ = 4.5 MHz, f _m = 1 kHz	600	900	1200	mV _{rms}
Total Harmonic Distortion(Det.)	THD	1	Δf = ± 25 kHz, V _i = 100 mV _{rms}		1	2	%
AM Rejection	AMR	1	f ₀ = 4.5 MHz, AM = 30% V _i = 100 mV _{rms}	40	50		dB
Ripple Rejection Ratio	RR		V _{i-1} change when V _{CC} is 9.6V and 14.4V	30			dB
Input Resistance	R _i	2	f = 4.5 MHz, V _i = 30 mV _{rms}		13		kΩ
Input Capacitance	C _i	2			8		pF

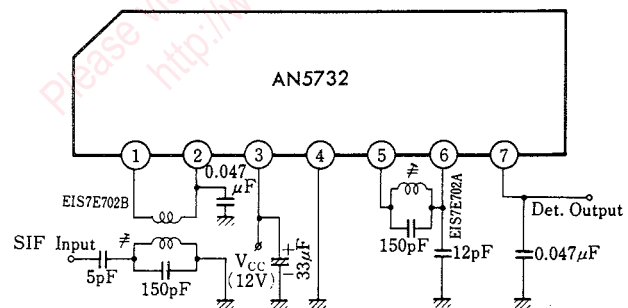
Test Circuit 1 (V_{i(lim)}, V_O, THD, AMR)



Test Circuit 2 (R_i, C_i)



■ Application Circuit



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