AN5730

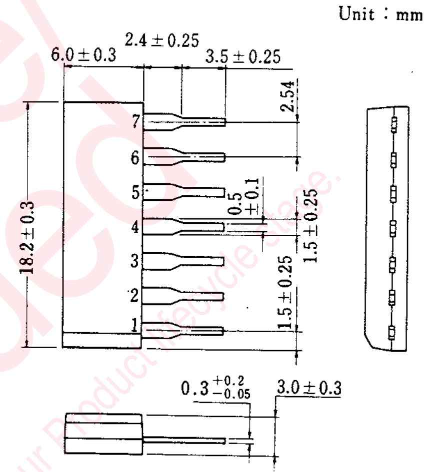
B/W TV Sound IF Amplifier, Detector Circuit

■ Outline

The AN5730 is one of IC's for the AN5700 series low voltage operation (6V) and small Black/White TV. It is an integrated circuit for B/W TV video sound IF amplifier and detector circuit.

■ Features

- Highly stable operation over a wide range of supply voltage
- Good ripple rejection : RR=−30dB max.

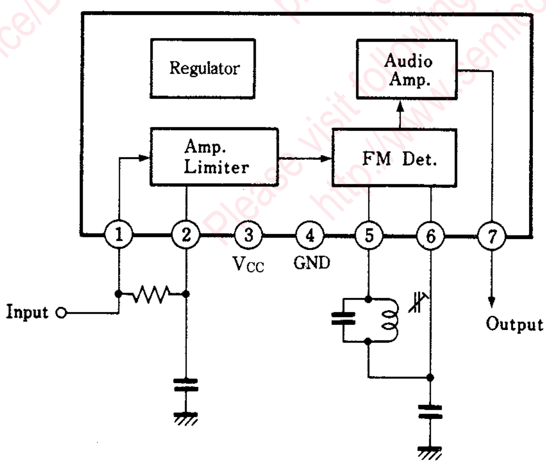


7-Lead SIL Plastic Package

■ Pin

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

■ Block Diagram



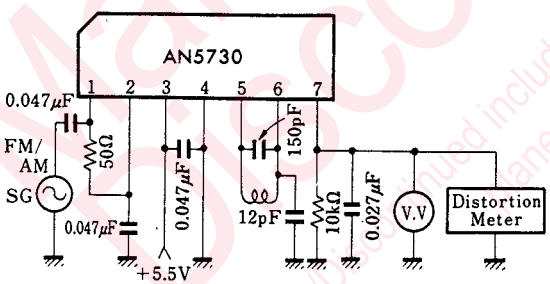
■ Absolute Maximum Ratings (Ta=25℃)

Item		Symbol	Rating	Unit
Supply voltage		V_{CC}	7.2	V
Power Dissipation		P_D	98	mW
Temperature	Operating Ambient Temperature	T_{opr}	−20～+70	℃
	Storage Temperature	T_{stg}	−40～+150	℃

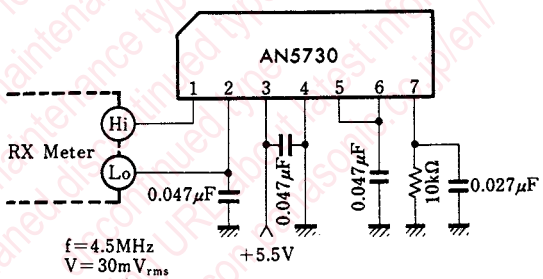
■ Electrical Characteristics (Ta=25℃)

Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
Total Circuit Current	I_{tot}		V_{CC}=5.5V	6.0	9.0	12.0	mA
Input Limiting Voltage	$V_{i(lim)}$	1	f_O=4.5MHz, f_m=1kHz, Δf=±25kHz		300	500	μV
Output Voltage (Det.)	V_O	1	f_O=4.5MHz, f_m=1kHz, Δf=±25kHz	70	100	130	mV_{rms}
Total Harmonic Distortion(Det.)	THD	1	V_i=100mV_{rms}		1	2	%
AM Rejection	AMR	1	f_O=4.5MHz, f_m=1kHz AM=30%, V_i=100mV_{rms}	34	40		dB
Ripple Rejection Ratio	RR		V_{7-4} change when V_{CC} is 4.5V and 5.5V			−30	dB
Input Resistance	R_i	2	f=4.5MHz, V_i=30mV_{rms}		15		kΩ
Input Capacitance	C_i	2			6		pF

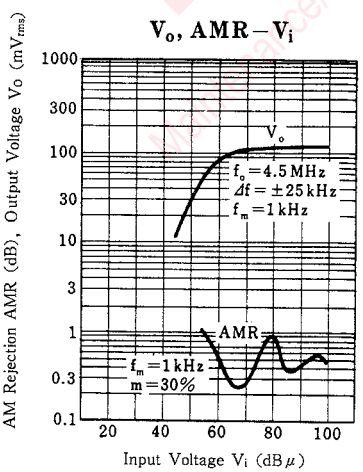
Test Circuit 1 ($V_{i(lim)}$, V_O, THD, AMR)



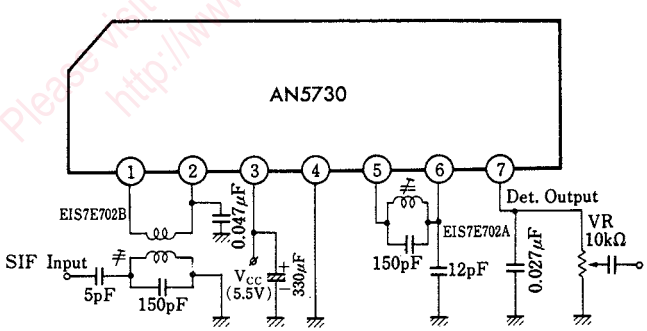
Test Circuit 2 (R_i, C_i)



V_O, AMR−V_i



■ Application Circuit



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