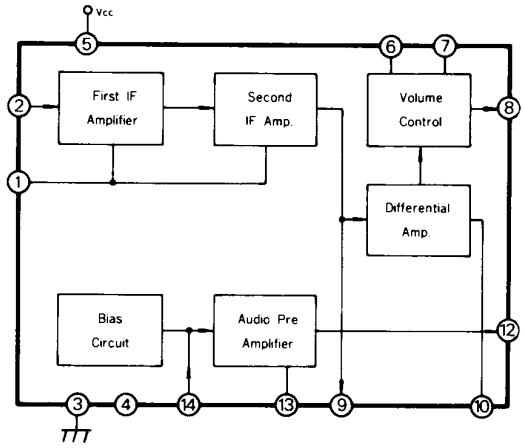
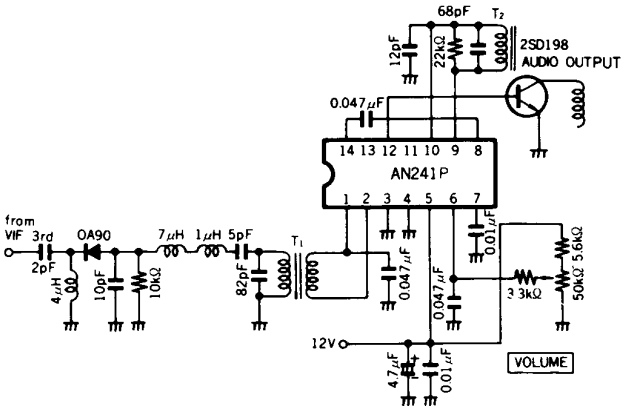
IC's For TV

Type No.	Function	Maximum Ratings (Ta=25°C)	Item	Symbol	Condition	min.	typ.	max.	Unit
AN241P AN241PD	Sound IF Amplifier Detector Circuit	V_{CC}=* I_{CC}(Is)=50mA P_D=445mA Topr=−20~+70℃ Tstg=−40~+150℃ *Terminal ⑤ can be connected to any positive voltage by using a resistor R_S Ex. V_{CC}=24V R_S=390Ω V_{CC}=140V R_S=3.9kΩ In both cases, I_S=33mA	(V_{CC}=24V, R_S=390Ω)						
			Total Circuit Current	Itot	V_{CC}=9V, Pin①−②, ⑨−⑩ shorted	10	16	24	mA
			Zener Voltage	V_{5-3}	Pin①−②, ⑨−⑩ shorted	10.3	11.2	12.2	V
			Input Limiting Voltage (−3dB)	$V_{i(lim.)}$	f_o=4.5MHz, fm=400Hz, Δf=±25kHz, Vi=100mVrms		250	400	μVrms
			AM Rejection Ratio	AMR	AM=400Hz 30%	40	50		dB
			Output Impedance	$R_{O(IF)}$	f_o=4.5MHz, Pin ⑨−③ shorted		3.25		kΩ
			Output Impedance	$C_{O(IF)}$			10		pF
			Demodulation Output (1)	$V_{O(AF1)}$	f_o=4.5MHz, fm=400Hz, Δf=±25kHz, Vi=100mVrms, R_6=0	0.5	0.75	1.1	Vrms
			Demodulation Output (2)	$V_{O(AF2)}$ (241PD)	R_6=10kΩ			0.2	Vrms
			Demodulation Signal Distortion	THD(1)			0.9	2	%
			Output Resistance	$R_{O(7)}$	f=400Hz, Vi=100mVrms		7.5		kΩ
				$R_{O(8)}$			300		Ω
			Attenuation Circuit, Max. Attenuation	Att	R_6=∞	60	80		dB
			Sound Amp. Distortion	THD(2)	f=400Hz, V_O=2Vrms		1.5		%
			Sound Amp. Non-distortional Max. Output	$V_{O(max.)}$	f=400Hz, THD=5%	2	2.5		Vrms
			Sound Amp. Voltage Gain	$G_{V(AF)}$	f=400Hz, Vi=100mVrms	17.5	20	23	dB
AN340P	Sound Amplifier Detector (DC control)	V_{CC}=14.4V I_{CC}=34mA P_D=490mW Topr=−20~+70℃ Tstg=−40~+150℃	Total Circuit Current	Itot	V_{5-3}=12V	16	22	28	mA
			IF Amp. Input Limiting Voltage (−3dB)	$V_{i(lim.)}$	f_o=4.5MHz, fm=400Hz, Δf=±25kHz		200	400	μV
			IF Amp. AM Rejection Ratio	AMR	f_o=4.5MHz, fm=400Hz, m=30%(AM), Vi=100mVrms	40	58		dB
			IF Amp. Parallel Input Resistance	$R_{i(IF)}$	f=4.5MHz		15		kΩ
			IF Amp. Parallel Input Capacitance	$C_{i(IF)}$	f=4.5MHz		4.7		pF
			IF Amp. Parallel Output Resistance	$R_{O(IF)}$	f=4.5MHz		3.9		kΩ
			IF Amp. Parallel Output Capacitance	$C_{O(IF)}$	f=4.5MHz		11		pF
			IF Amp. Voltage Gain	$G_{V(IF)}$	f=4.5MHz		65		dB
			Detect. Total Detection Output	$V_{O8,11}$	f_o=4.5MHz, fm=400Hz, Δf=±25kHz, Vi=100mV, V_{14-3}=0V	0.55	0.8	1.1	Vrms
			Detect. Detection Signal Distortion	THD			0.7	2	%
			Sound Attenuation, Max. Attenuation	G_R		80			dB
			Sound Pre-Amp. Voltage Gain	G_V	f=400Hz, V_O=1Vrms	18	20	22	dB
			Sound Pre-Amp. Total Harmonic Distortion	THD			0.9		%
			Sound Pre-Amp. Non-distortional Max. Output	$V_{O(max.)}$	f=400Hz, THD=10%	2	3.3		Vrms
			Sound Pre-Amp. Output Noise Voltage	Vno	Vi=0, Pin ④−⑥ shorted			1	mVrms
			Sound Pre-Amp. Output Resistance	R_{O12}	f=400Hz		90		Ω
AN355	Sound IF Amp., Detector, Output Circuit	V_{CC}=20V P_D=1.6W*1 P_D=1.8W*2 Topr=−20~+70℃ Tstg=−55~+150℃ *1 Ta=70℃ *2 Ta=60℃	Circuit Current	I_{11}		16	21	26	mA
			Circuit Current	I_{16}		17	24	31	mA
			IF Amp. Detect. Input Limiting Voltage (−3dB)	$V_{i(lim.)}$	f_o=4.5MHz, Δf=±25kHz, fm=400Hz		200	400	μV
			IF Amp. Detect. AM Rejection Ratio	AMR	m=30%(AM), Vi=100mV, fm=400Hz	40	50		dB
			IF Amp. Detect. Input Impedance	$R_{i(IF)}$	f=4.5MHz		15		kΩ
			IF Amp. Detect. Input Impedance	$C_{i(IF)}$	f=4.5MHz		7.5		pF
			IF Amp. Detect. Total Detection Output	Vo	f_o=4.5MHz, fm=400Hz, Δf=±25kHz, Vi=100mV	700	1000	1400	mVrms
			Attenuation Circuit Half Detection Output	Vo/2		300	500	700	mVrms
			Attenuation Circuit Max. Attenuation (Residual Sound)	Att				5	mVrms
			Output Circuit Maximum Output Power	$P_{O\,max.}$	f=400Hz, THD=10%	1.4	1.6		W
			Output Circuit Output Current	Io			180		mA
			Output Circuit Voltage Gain	Gv	f=400Hz	29	31	33	dB
			Output Circuit Distortion	THD	Input (Pin ⑮) =30mV		0.8	2	%
			Output Circuit Output Noise Voltage	Vno				5	mVrms
			Output Circuit Input Resistance	R_{i15}	f=400Hz	3.3	4.5		kΩ

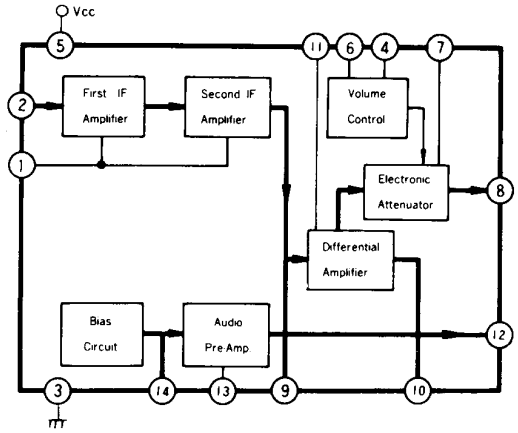
Block Diagram	Application Circuit

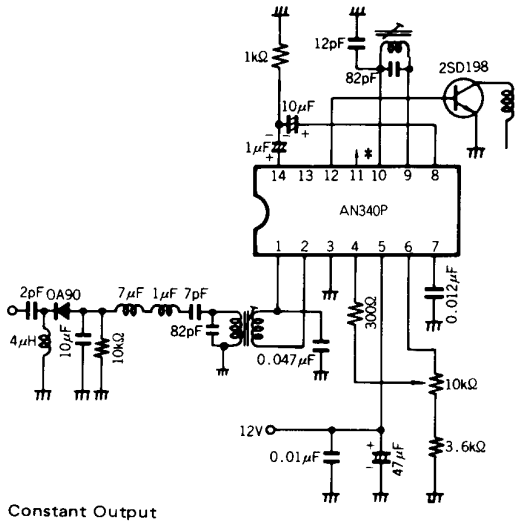
AN241P/AN241PD (Package I—16,14—Lead Plastic DIL)





AN340P (Package I—16,14—Lead Plastic DIL)





* Constant Output

AN355 (Package I—19,16—Lead Plastic DIL with Fin)