

HA1361

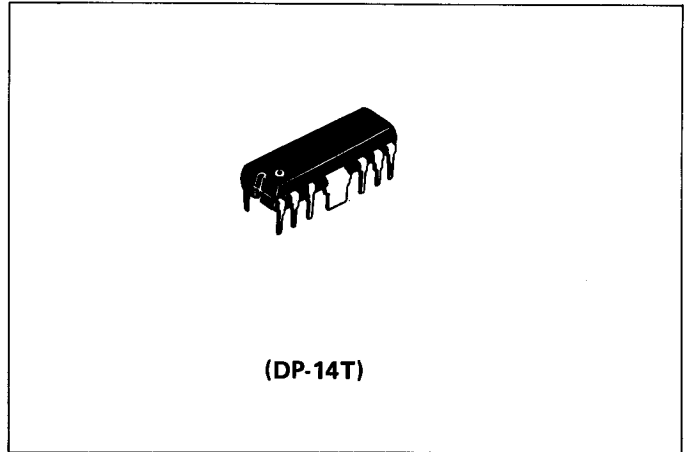
AMPLIFIER SYSTEM FOR CASSETTE TAPE RECORDER

FEATURES

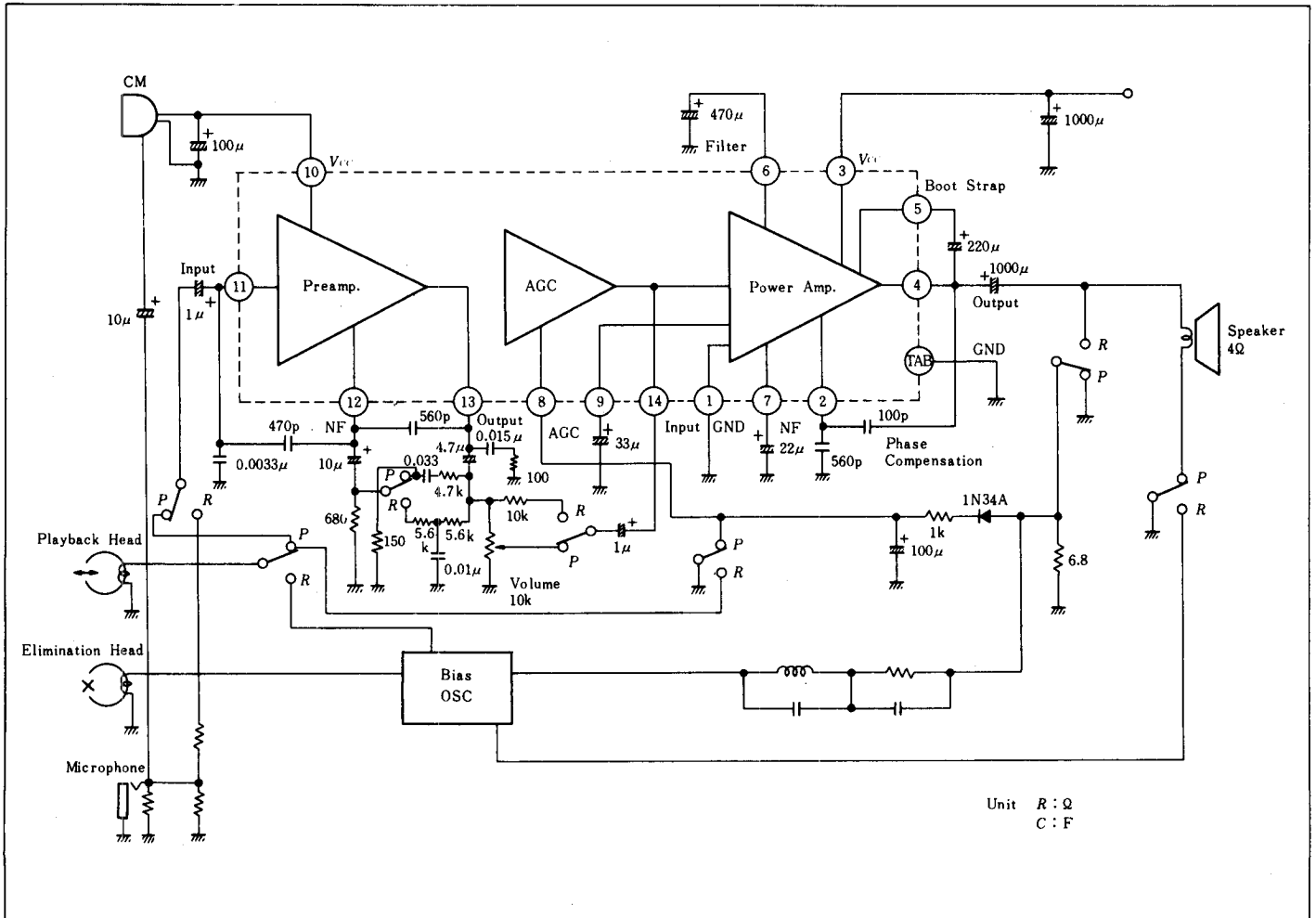
- All-in-one from first stage to output stage
- Low distortion and wide dynamic range because of AGC circuit
- Wide supply voltage range, $V_{CC} = 4$ to $9V$

FUNCTIONS

- Preampfier
- Power Amplifier
- AGC Circuit



FUNCTIONAL BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ C$)

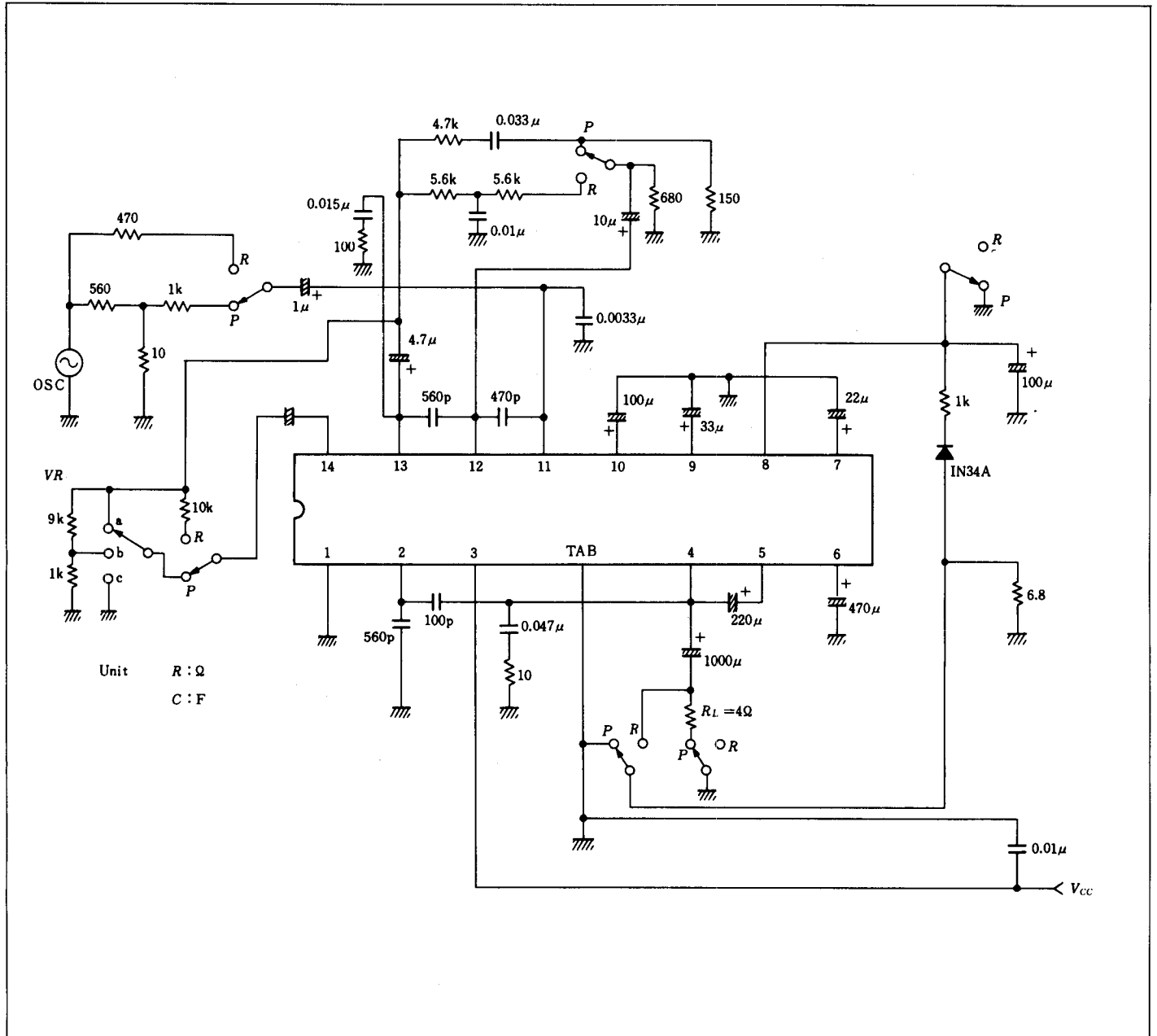
Item	Symbol	Rating	Unit
Supply Voltage	V_{CC}	9	V
Output Current	$I_{O(peak)}$	2.25	A
Power Dissipation	P_T	0.85	W
Operating Temperature	T_{opr}	-20 to +70	$^\circ C$
Storage Temperature	T_{stg}	-55 to +125	$^\circ C$

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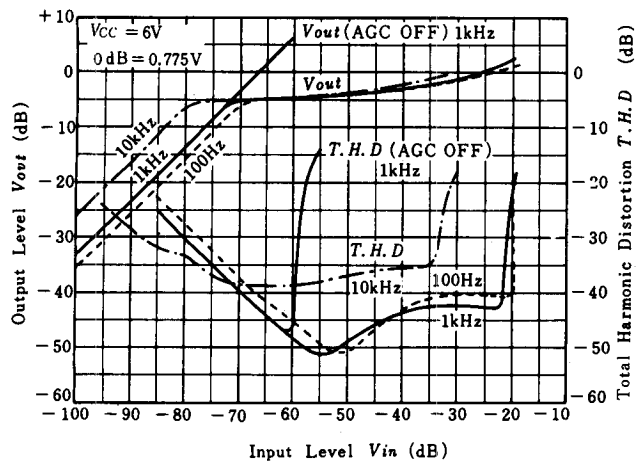
ELECTTICAL CHARACTERISTICS ($V_{cc}=6V, f=1kHz, R_L=4\Omega, T_a=25^\circ C$)

Item	Symbol	Test Condition	min	typ	max	Unit
Quiescent Current	I_o	$V_{in}=0$	10	20	40	mA
Output Power	P_{out}	T.H.D=10%(play)	0.8	1.0	—	W
Voltage Gain	G_v	(play)	—	80	—	dB
Total Harmonic Distortion	T.H.D	$P_{out}=100mW$ (play)	—	—	1.5	%
Output Noise Voltage	V_n	$R_g=1k\Omega$	—	10	20	mV
Input Resistance	Preamp.	(play)	25	50	—	k Ω
	Drive Amp.		10	22	—	
AGC Ratio		$V_{in}=-65dBm \rightarrow -25dBm$ (Rec)	—	35	—	dB
AGC Distortion		$V_{in}=-30dBm$ (Rec)	—	1.0	—	%
Min. Operating Voltage	V_{cc} min	(Play)	—	—	4.0	V

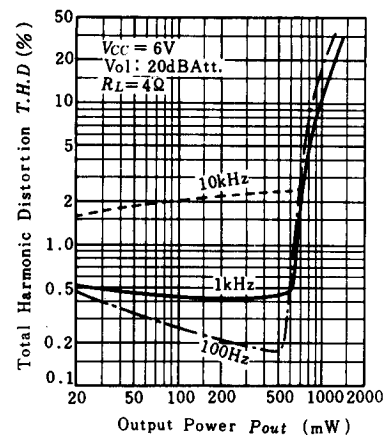
TEST CIRCUIT



OUTPUT LEVEL AND TOTAL HARMONIC DISTORTION VS. INPUT LEVEL (REC MODE)



TOTAL HARMONIC DISTORTION VS. OUTPUT POWER (PLAYBACK AMP)



FREQUENCY CHARACTERISTICS OF PLAYBACK AMP. AND RECORDING AMP.

