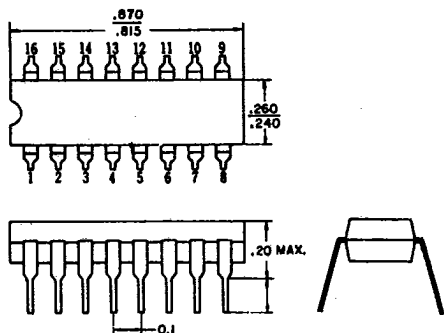




ECG1134
VIDEO PROCESSOR

T-77-07-05

- PIF Amplifier
- Video Detector
- Video Amplifier
- Keyed AGC (with Noise Immunity Circuit)
- Delayed AGC for Tuner
- AFT Amplifier
- Sound IF Amplifier
- Sound Carrier Detector
- 4.5 MHz Sound Carrier Amplifier
- A Reverse AGC Control Voltage for MOS FET Tuner
- Excellent Linearity and Phase Characteristic at Video Detector
- Adjustable White Level
- Connecting A Proper Capacitance between AFT Output Terminal and Ground, Gains a Simple Limiter Characteristic in AFT System



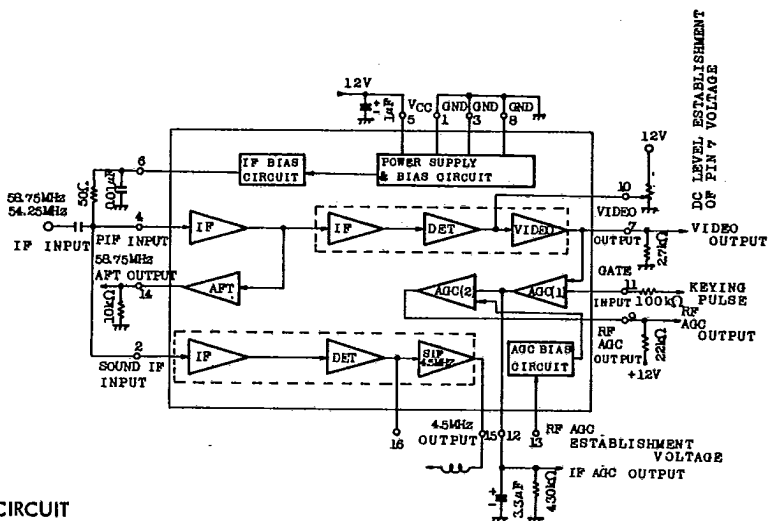
MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Rating	Unit
Supply Voltage	$V_{cc}(V_5)$	15	V
Terminal Voltage (Pin 9)	V_9	15	V
Terminal Voltage (Pin 10)	V_{10}	$0 - V_{cc}$	V
Power Dissipation (note)	P_D	750	mW
Operating Temperature	T_{opr}	-20 - 65	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 - 150	$^\circ\text{C}$

(Note) Derated above $T_a = 25^\circ\text{C}$ in the proportion of $6.0 \text{ mW}/^\circ\text{C}$.

BLOCK DIAGRAM (INTERNAL FUNCTIONAL CONSTRUCTION)

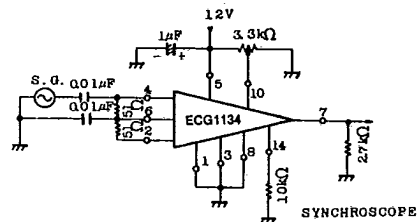
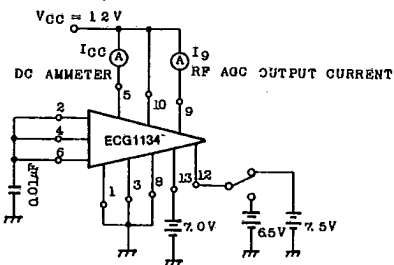
T-77-07-05



TEST CIRCUIT

1. $I_{CC}(I_5)$, $I_9(ON)$, $I_9(OFF)$, P_D

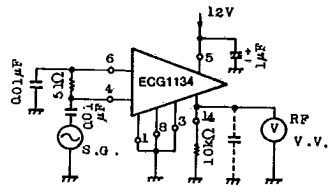
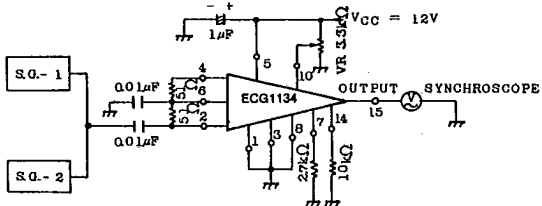
2. V_7 , e_1



S.G. $f = 58.75\text{MHz}$

3. 4.5 MHz SIF OUTPUT VOLTAGE

4. A F T OUTPUT VOLTAGE



S.G.-1; $f = 58.75\text{MHz}$
S.G.-2; $f = 54.25\text{MHz}$

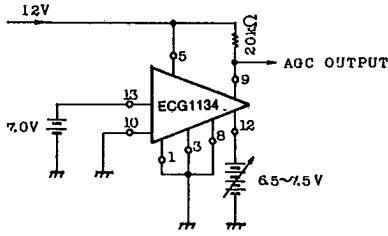
S.G. $f = 58\text{MHz}$

ELECTRICAL CHARACTERISTICS ($V_{cc} = 12\text{ V}$, $f = 58\text{ MHz}$, $T_a = 25^\circ\text{C}$, unless otherwise specified)

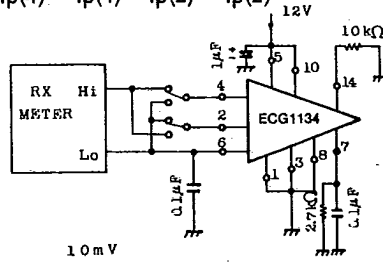
T-77-07-05

Characteristic	Symbol	Test Circuit	Test Condition	Min.	Typ.	Max.	Unit	
Operating Supply Voltage	$V_{cc}(V_5)$	--	--	10.8	12.0	13.2	V	
RF AGC Establishment Voltage	V_{13}	--	--	5.8	--	$V_{cc}-2$	V	
Supply Current	$I_{cc}(I_5)$	1	$V_{cc} = 12\text{ V}$	20	30	40	mA	
Bias Voltage (Pin 6)	V_6	--	--	--	1.5	--	V	
Video Output Terminal Voltage (No Signal Level)	V_7	2	$V_{10} = 12\text{ V}$	6.0	8.0	10.0	V	
Video Output Terminal Voltage (Sync. Tip Level)	V_7	2	$V_{10} = 12\text{ V}$	0.4	0.8	1.6	V	
Sound Output Terminal Voltage	V_{15}	--	--	--	11	--	V	
Video Sensitivity Input Voltage	e_i	2	$f = 58\text{ MHz}$, $AM = 85\%$ $f_M = 1\text{ kHz}$, $3V_{rms}$ Output	--	30	--	mV_{rms}	
AFT Output Voltage	--	4	$f = 58\text{ MHz}$ $e_i (CW) = 40\text{ mV}_{rms}$	--	120	--	mV_{rms}	
4.5 MHz SIF Output Voltage	--	3	$f_1 = 58.75\text{ MHz}$, 50 mV_{rms} $f_2 = 54.25\text{ MHz}$, 5 mV_{rms}	40	120	200	mV_{rms}	
RF AGC DC Voltage Gain	$\frac{\Delta V_9}{-\Delta V_{12}}$	5	$V_{13} = 7.0\text{ V}$	47	51	55	dB	
AGC Control Current	$I_9(ON)$	1	$V_{13} = 7.0\text{ V}$, $V_{12} = 7.5\text{ V}$	1.7	2.2	2.7	mA	
	$I_9(OFF)$	1	$V_{13} = 7.0\text{ V}$, $V_{12} = 6.5\text{ V}$	--	--	5	μA	
Total Power Dissipation	P_D	1	--	--	360	--	mW	
Input Impedance	Parallel Input Resistance (Pin 4)	$r_{ip}^{(4)}$	6	--	--	2.5	--	k Ohms
	Parallel Input Capacitance (Pin 4)	$c_{ip}^{(4)}$			--	5.0	--	pF
	Parallel Input Resistance (Pin 2)	$r_{ip}^{(2)}$	6	--	--	2.5	--	k Ohms
	Parallel Input Capacitance (Pin 2)	$c_{ip}^{(2)}$			--	5.0	--	pF

5. $\Delta V_9 / -\Delta V_{12}$



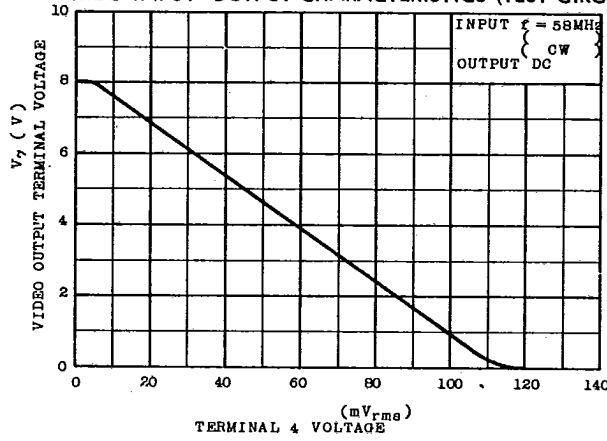
6. $r_{ip(4)}, C_{ip(4)}, r_{ip(2)}, C_{ip(2)}$



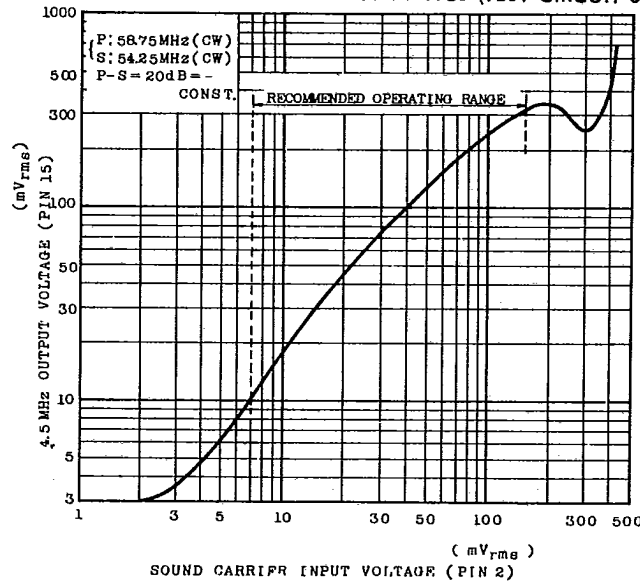
10 mV
Test Signal Level is Below 10mV.

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VIDEO INPUT-OUTPUT CHARACTERISTICS (TEST CIRCUIT 2)

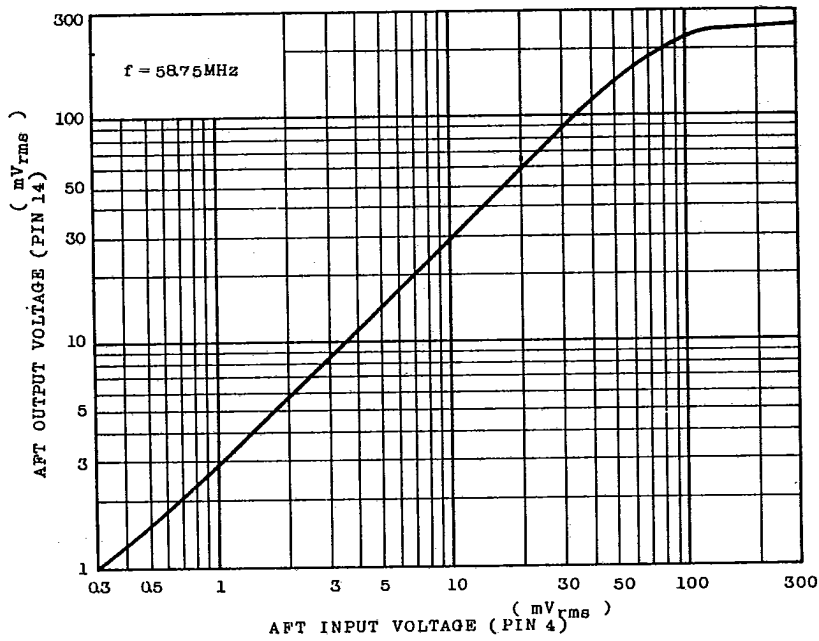


SIF INPUT-OUTPUT CHARACTERISTICS (TEST CIRCUIT 3)

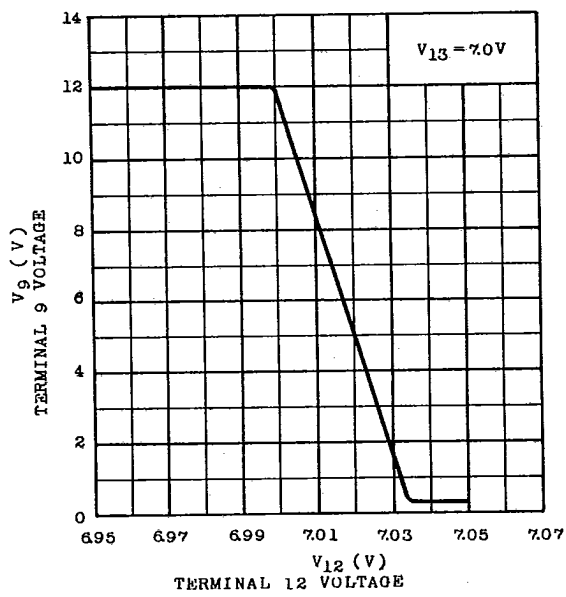


A F T INPUT-OUTPUT CHARACTERISTICS (TEST CIRCUIT 4)

T-77-07-05



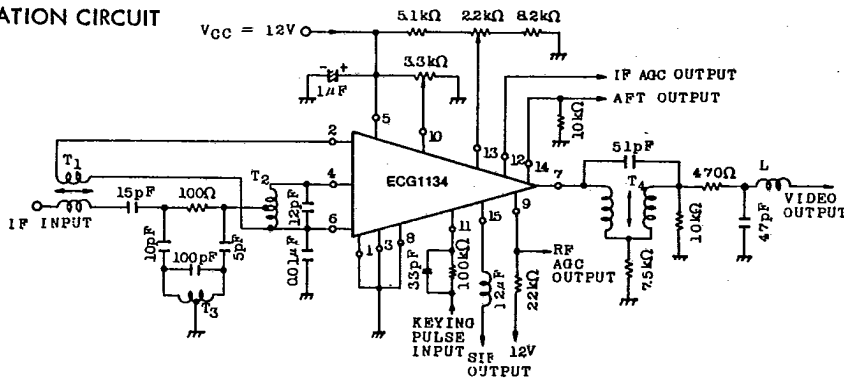
RF AGC OUTPUT V_9 VOLTAGE CHARACTERISTICS (TEST CIRCUIT 5)



ECG1134

930

APPLICATION CIRCUIT



T ₁ : 1 (PRIMARY)	0.18 mmϕ 3T-3T (BIFILAR WOUND)	0.37 μH
2 (SECONDARY)	0.18 mmϕ 4T (CENTER OVERLAPPING WOUND)	0.25 μH
T ₂ :	0.18 mmϕ 3T (BIFILAR WOUND)	0.4 μH
T ₃ :	0.6 mmϕ 2-3/4T (CENTER TAPPED)	0.11 μH
T ₄ :	0.1 mmϕ 27-7/8T (BIFILAR WOUND)	22 μH
L :	0.1 mmϕ 21T	1.2 μH