



ECG1122

TV COLOR DEMODULATOR

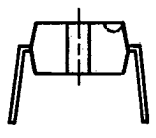
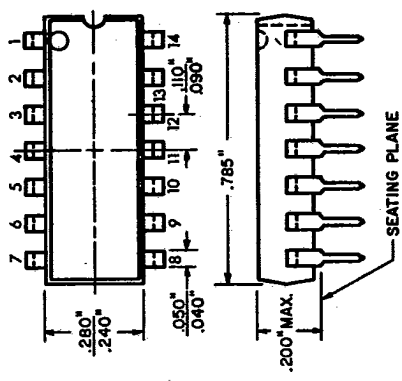
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FUNCTIONS

- Color Reference Amplifier
- Chroma Demodulator
- Matrix

PIN ARRANGEMENT

Pin No	Function
1	Power Supply
2	R-Y Output
3	G-Y Output
4	B-Y Output
5	Color Demo. Input (B-Y) Ref
6	—
7	Ground
8	—
9	Color Demo. Input
10	Color Demo. Bypass
11	Color Demo. Input (R-Y) Ref
12	Color Demo. Input (R-Y) Ref.
13	—
14	—



ABSOLUTE MAXIMUM RATINGS

Symbol	Rating	Unit
V_{CC}	28	V
P_T^*	325	mW
T_{vj}	-20 ~ +85	°C
T_{stg}	-55 ~ +125	°C

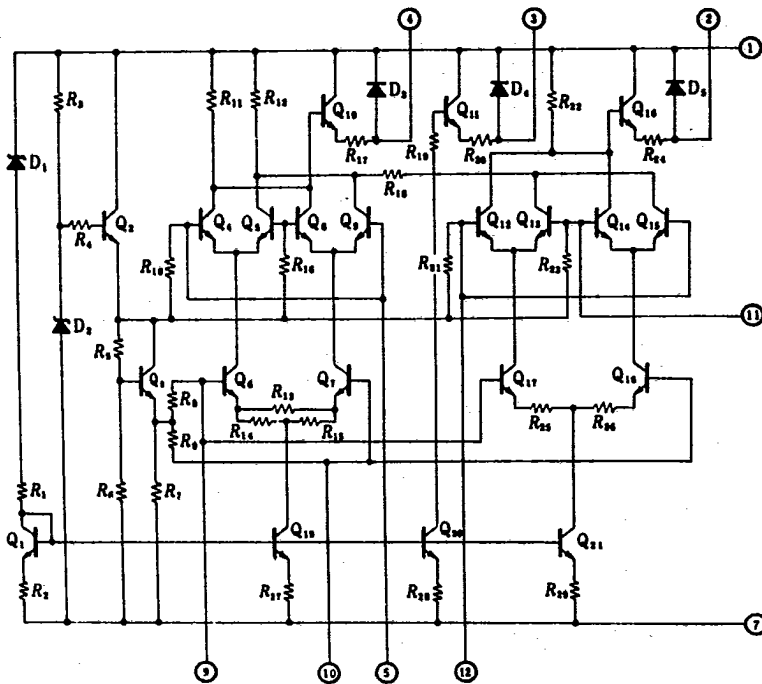
*Value at $T_a=85^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($V_{CC} = 18V$, $T_a = 25^\circ C$)

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Symbol	Test Circuit	Test Conditions	min	typ	max	Unit
I_{RU}	1	$e_c = 0V$, $R_L = 1M\Omega$	3.0	5.9	9.5	mA
I_{RL}	1	$e_c = 0V$, $R_L = 3.9k\Omega$	10.0	13.4	19.0	mA
V_s, V_3, V_4	1	$e_c = 0V$, $R_L = 3.9k\Omega$	9.8	11.3	12.4	V
$\Delta V_s, V_3, V_4$	1	$e_c = 0V$, $R_L = 3.9k\Omega$	-0.5	0	0.5	V
V_8, V_{10}	1	$e_c = 0V$, $R_L = 3.9k\Omega$	—	3.8	—	V
V_5, V_{11}, V_{12}	1	$e_c = 0V$, $R_L = 3.9k\Omega$	—	6.5	—	V
e_c	1	$e_B \gamma = 3V_{P-P}$	0.15	0.25	0.40	V_{P-P}
$e_B \gamma$	1	$e_B \gamma = 3V_{P-P}$	2.01	2.30	2.59	V_{P-P}
$e_G \gamma$	1	$e_B \gamma = 3V_{P-P}$	0.60	0.76	0.91	V_{P-P}
$e_B \gamma_{max}$	1	$e_c = 1.2V_{P-P}$	5.5	6.8	—	V_{P-P}
$\theta_{G-\gamma} - \theta_{B-\gamma}$	1	$e_B \gamma = 3V_{P-P}$	-91	-99	-107	deg.
$\theta_{R-\gamma} - \theta_{B-\gamma}$	1	$e_B \gamma = 3V_{P-P}$	—	102	—	deg.
c_{ext}	2	$e_c = 0V$, $e_{ext} = 1V_{P-P}$	—	—	0.21	V_{P-P}

CIRCUIT SCHEMATIC



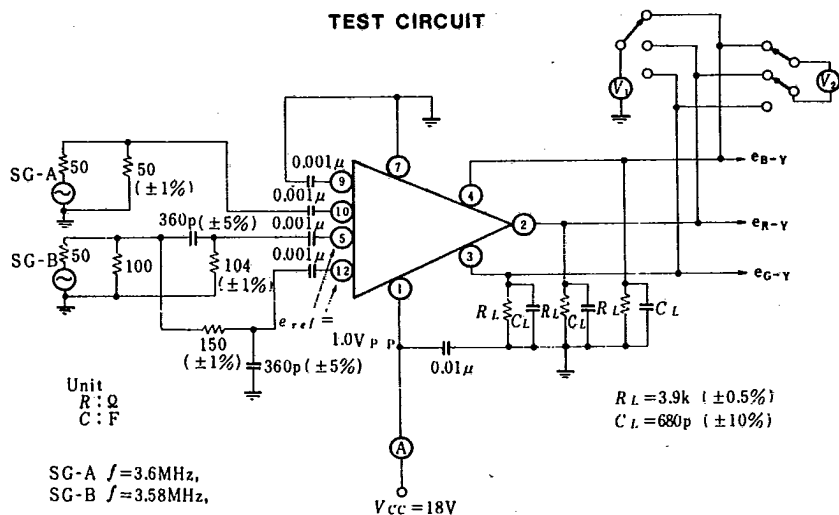
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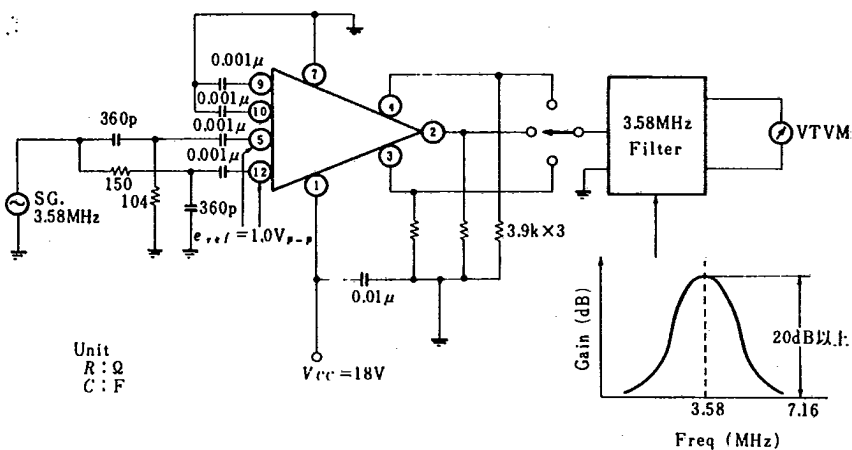
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1.

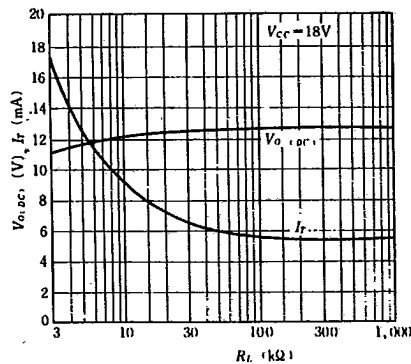
TEST CIRCUIT



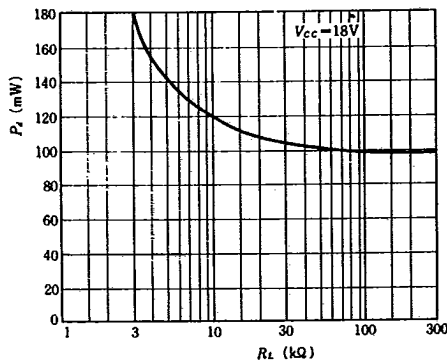
2.



DC OUTPUT VOLTAGE & SUPPLY CURRENT VS. LOAD RESISTANCE



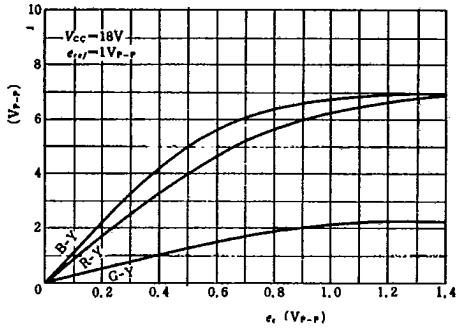
INTERNAL POWER DISSIPATION VS. LOAD RESISTANCE



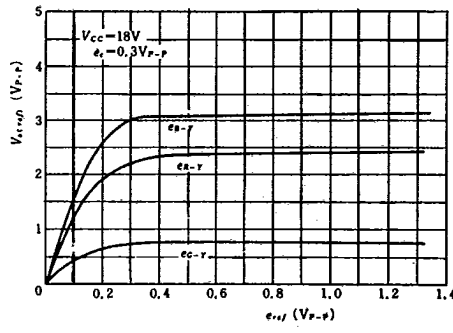
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COLOR REFERENCE OUTPUT VOLTAGE VS. CHROMA INPUT VOLTAGE



COLOR REFERENCE OUTPUT VOLTAGE VS. REFERENCE VOLTAGE



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