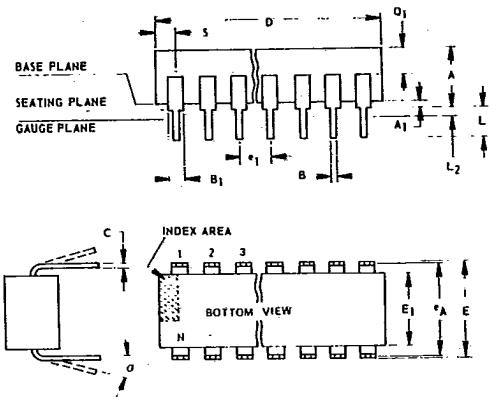
ECG798

TV CHROMA DEMODULATOR

Features:

- Luminance input
- Blanking control input
- Three separate demodulators with independent phase control
- Low output offset voltage ..... 0.4 V

ECG798 is a monolithic silicon integrated-circuit chroma demodulator having three separate demodulators with independent phase control. It is designed to function compatibly with the ECG738 IC Chroma Processor as well as other commercially available Chroma Processors in R-G-B Systems of color-TV receivers. Fig. 2 shows a functional block diagram of a 2-package TV Chroma System incorporating the ECG798 and ECG738. The ECG798 is supplied in a 14-lead dual-in-line plastic package.



JEDEC MO-001-AB

SYMBOL	INCHES		NOTE	MILLIMETERS	
	MIN.	MAX.		MIN.	MAX.
A	0.155	0.200		3.94	5.08
A_1	0.020	0.050		0.51	1.27
B	0.014	0.020		0.356	0.508
B_1	0.050	0.065		1.27	1.65
C	0.008	0.012		0.204	0.304
D	0.745	0.770		18.93	19.55
E	0.300	0.325		7.62	8.25
E_1	0.240	0.260		6.10	6.60
e_1	0.100 TP		2	2.54 TP	
e_A	0.300 TP		2, 3	7.62 TP	
L	0.125	0.150		3.18	3.81
L_2	0.000	0.030		0.000	0.76
α	0°	15°	4	0°	15°
N	14		5	14	
N_1	0		6	0	
Q_1	0.040	0.075		1.02	1.90
S	0.065	0.090		1.66	2.28

NOTES:
1. Refer to Rules for Dimensioning (JEDEC Publication No. 13) for Axial Lead Product Outlines.
2. Leads within 0.005" (0.12 mm) radius of True Position (TP) at guage plane with maximum material condition and unit installed.
3. e_A applies in zone L_2 when unit installed.
4. α applies to spread leads prior to installation.
5. N is the maximum quantity of lead positions.
6. N_1 is the quantity of allowable missing leads.

MAXIMUM RATINGS, *Absolute-Maximum Values at $T_A = 25°C$*

SUPPLY VOLTAGE	25 V
SUPPLY CURRENT	20 mA
AMBIENT-TEMPERATURE RANGE:	
Operating	−40°C to +85°C
Storage	−65°C to +150°C
LEAD TEMPERATURE (DURING SOLDERING):	
At distance 1/16" ± 1/32" (1.59 ± 0.79 mm) from case for 10 s max.	265°C

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T-77-07-09

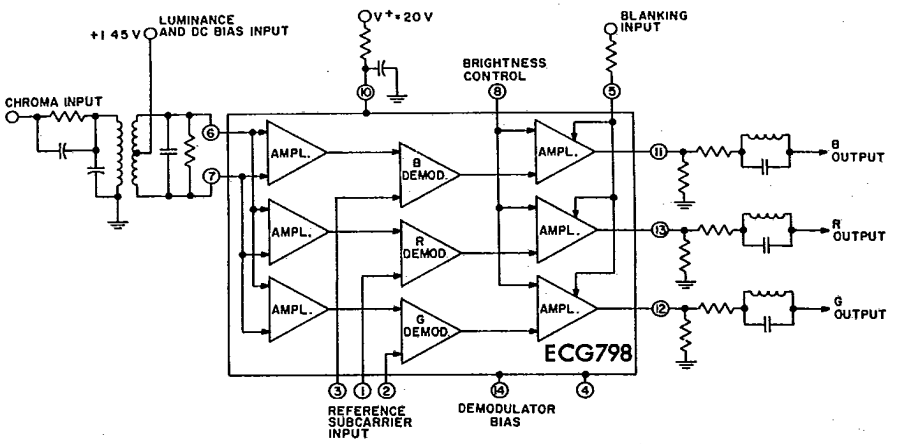
TYPICAL STATIC CHARACTERISTICS AT T_A = 25°C,

V^+ = +20 VOLTS SUPPLY CURRENT	9.6 mA
BRIGHTNESS CONTROL VOLTAGE: Measured with 8 volts at Terminals 11, 12, and 13	1.4 V
MAX. OUTPUT DIFFERENCE VOLTAGE: Measured between any two of Terminals 11, 12, and 13	±0.4 V
MAXIMUM DC DETECTOR UNBALANCE VOLTAGE: DC voltage shift on Terminals 11, 12, and 13 when Terminals 1, 2, and 3 are alternately biased 0.5 volt positive, then negative with reference to Terminal 14	+150 mV

TYPICAL DYNAMIC CHARACTERISTICS AT T_A = 25°C,

V^+ = +20 volts BLUE CHROMA GAIN: Peak-to-peak voltage at Terminal 11 with 1.0 volt peak-to-peak applied differentially between Terminals 6 and 7, and with a subcarrier injection voltage of 1 volt peak-to-peak	7.36 Vp-p
RED GAIN RATIO: $\frac{\text{Peak-to-peak voltage at Terminal 13}}{\text{Peak-to-peak voltage at Terminal 11}} \times 100$	100%
GREEN GAIN RATIO: $\frac{\text{Peak-to-peak voltage at Terminal 12}}{\text{Peak-to-peak voltage at Terminal 11}} \times 100$	30%
LUMINANCE GAIN: Peak-to-peak voltage measured at Terminals 11, 12, and 13, with a peak-to-peak voltage of 0.1 volt applied to Terminals 6 and 7 (common mode), and with no subcarrier injection	0.7 Vp-p

Fig. 1 — Functional block diagram of the ECG798



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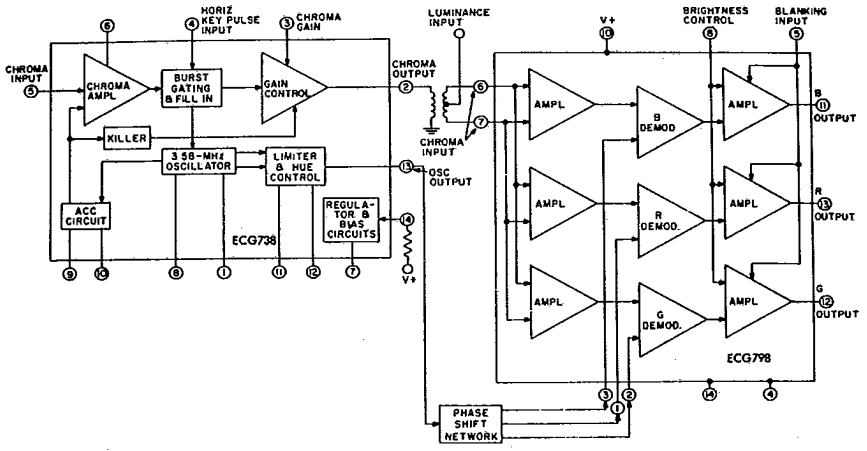

Fig. 2 – TV chroma system functional block diagram.

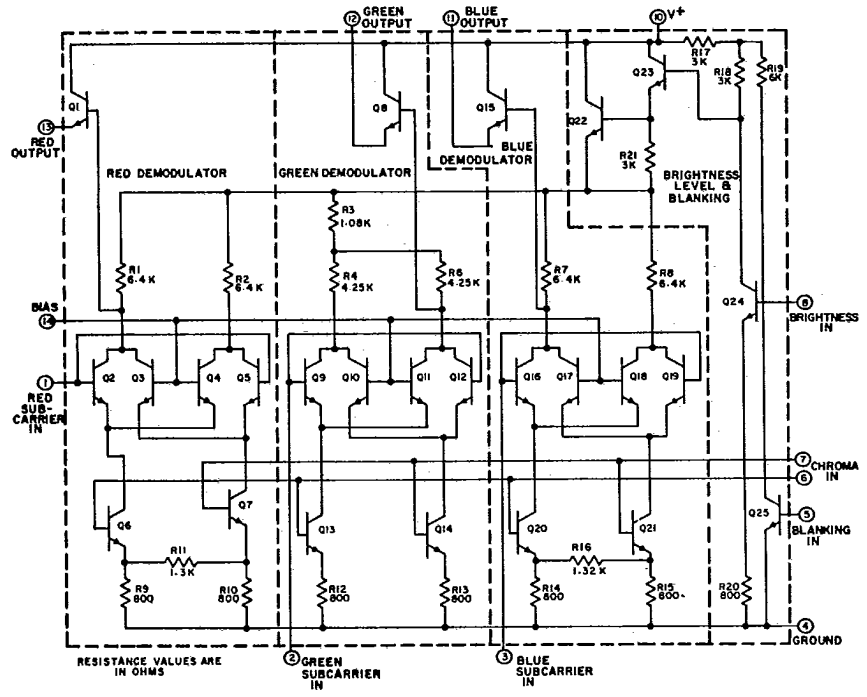

Fig. 3 – Schematic diagram of the ECG798

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