

# ECG<sup>®</sup> Semiconductors

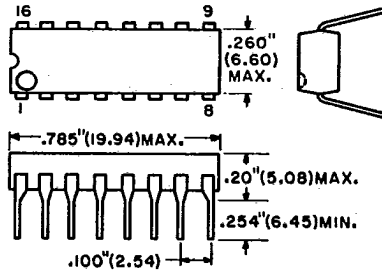
## ECG820 TV Horizontal Oscillator and AGC

T-77-07-09

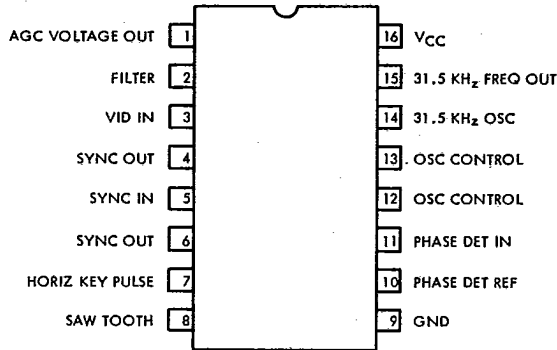
**Features**

- AGC voltage
- Separated sync
- 31.5 kHz oscillator
- Gates AGC and sync for noise immunity

The ECG820 is a monolithic integrated circuit designed for use as a horizontal oscillator and AGC detector in color or black and white TV. It performs the functions of AGC, sync separation, and noise immunity, and a 31.5 kHz oscillator is provided for use with vertical-countdown circuits.



**Pin Connections**

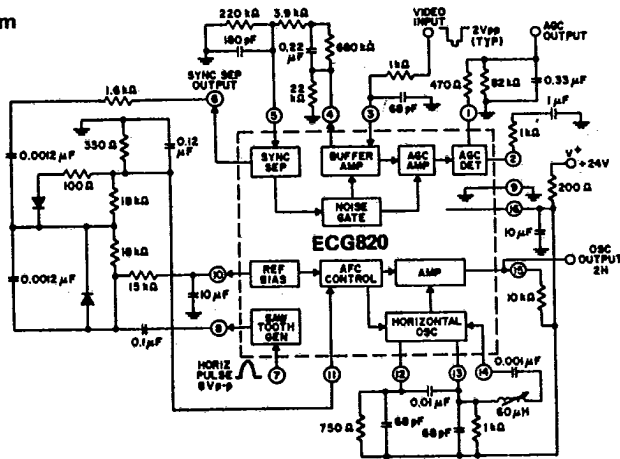


**Absolute Maximum Ratings**

Characteristic	Symbol	Rating	Unit
Supply Voltage	V <sub>cc</sub>	30	V
Supply Current	I <sub>cc</sub>	30	mA
Power Dissipation	P <sub>D</sub> @ T <sub>A</sub> = 55°C Above T <sub>A</sub> = 55°C	750 Derate linearly at 7.9	mW mW/°C
Operating Ambient Temperature	T <sub>opg</sub>	-40 to +85	°C
Storage Temperature	T <sub>stg</sub>	-65 to +150	°C

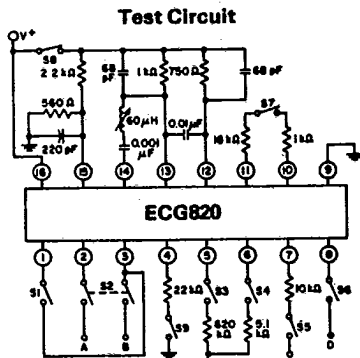
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Block Diagram



Electrical Characteristics (TA = +25°C, Vcc = 28 V) All switches open unless specified

Characteristic	Test Condition.	Typ	Unit
AGC Voltage (Pin 1)	S1, S9 Closed	1.85	V
Noise Inverter (Pin 1)	S2, S9 Closed (Note 1)	0.7	V
Shift Threshold (Pin 1)	S2, S3 Closed (Note 1)	20	V
Sync Level (Pin 4)	S1, S9 Closed	18	V
Positive Pulse (Pin 7)	S5 Closed (Note 2)	25	V
Positive Sawtooth (Pin 8)	S5, S6 Closed (Note 3)	3	V
Sync Low (Pin 6)	S3, S4 Closed	1.5	V
Supply Current (Pin 16)		20	mA
Free Running Frequency (Pin 15)	S7, S8, S9 Closed (Note 4)	31.5	kHz
Duty Cycle (Pin 15)	S7, S8, S9 Closed	48	%



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Schematic Diagram

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