

# ECG<sup>®</sup>

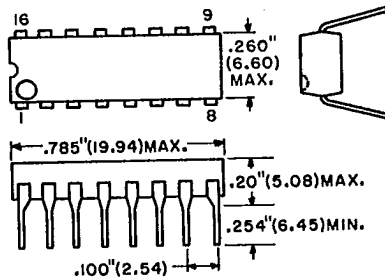
## Semiconductors

### ECG1403

TV Vertical, Horizontal Driver

**Features**

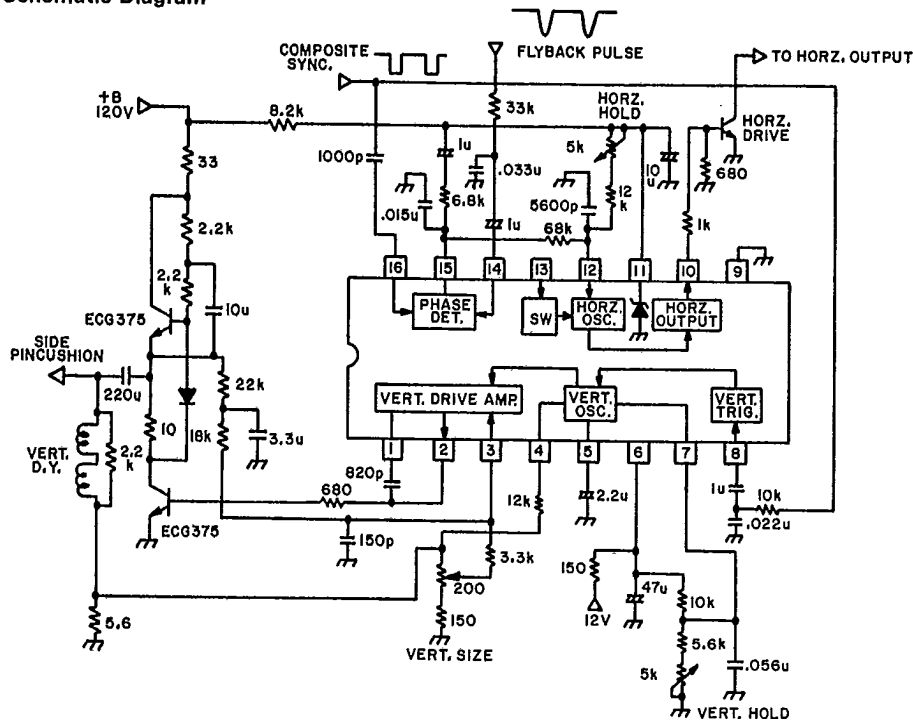
- Requires few external components
- Internal horizontal block voltage regulator
- Horizontal AFC DC loop gain: 640 Hz/μS
- Vertical oscillator utilizes monostable multivibrator to eliminate positive feedback from the output stage
- Vertical oscillator output waveform is used to drive vertical output requiring the use of only one highly stable (tantalum) capacitor for the vertical stage
- Vertical output stability is accomplished by DC feedback to pin 3



**Absolute Maximum Ratings** (T<sub>A</sub> = 25°C unless otherwise specified)

Parameters	Symbol	Rating	Unit
Supply Voltage (Pin 6)	V <sub>6</sub>	15	V
Supply Current (Pin 11)	I <sub>11</sub>	20	mA
Operating Temperature Range	T <sub>opg</sub>	-20 to +75	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +125	°C
Power Dissipation (T <sub>A</sub> = 75°C)	P <sub>D</sub>	500	mW

Schematic Diagram



Electrical Characteristics

Parameters	Symbol	Test Conditions	Min	Typ	Max	Units
<b>Horizontal Block</b>						
Regulated Voltage	V <sub>11</sub>	I <sub>11</sub> = 17 mA	--	13.0	--	V
Free-running Frequency	f <sub>oh</sub>	Horiz Hold Vol = 2 kΩ	14,734	15,734	16,734	Hz
Pull-in Range	f <sub>ph</sub>		± 450	± 650	--	Hz
DC Loop Gain	f <sub>c</sub>		512	640	853	Hz/μS
f <sub>oh</sub> Temperature Coefficient	Δf <sub>oh</sub> /ΔT		-6	-3	0	Hz/°C
Output Pulse Width	t <sub>HW</sub>	Pin 10	20	22.5	25	μS
Osc Stop Voltage	V <sub>D13</sub>	I <sub>13</sub> = 10 μA	0.665	0.715	0.765	V
<b>Vertical Block</b>						
Free-running Frequency	f <sub>ov</sub>	Vert Hold Vol = 2.9 kΩ	55	60	65	Hz
Pull-in Range	f <sub>pv</sub>		--	-10	-7.5	Hz
f <sub>ov</sub> Temperature Coefficient	Δf <sub>ov</sub> /ΔT		-0.03	0	+0.03	Hz/°C
f <sub>ov</sub> V <sub>cc</sub> Coefficient	Δf <sub>ov</sub> /ΔV <sub>cc</sub>	f <sub>ov</sub> = f <sub>ov</sub> (14.4V) - f <sub>ov</sub> (9.6V)	-2	0	+2	Hz
Voltage of Pin 4	V <sub>4</sub>		3.8	4.0	4.2	V