

# BIPOLAR ANALOG INTEGRATED CIRCUIT

## $\mu$ PC1498H

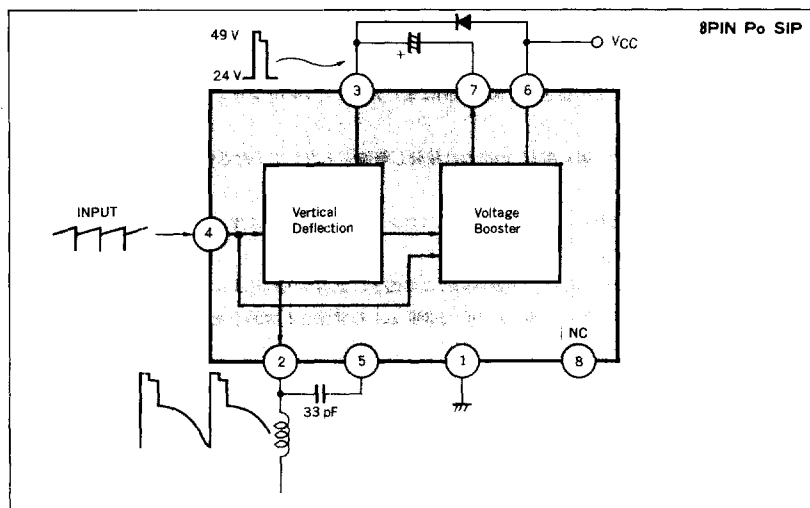
### VERTICAL DEFLECTION CIRCUIT OF COLOR TV

The  $\mu$ PC1498H is a vertical deflection output IC for large size color TV application more than 22 inches tube. As a boost pulse is generated internally, this IC is systematically connected with  $\mu$ PC1401CA or  $\mu$ PC1800CA. The package of 8 pin power SIP, attached to heat-sink by one screw, decreases work-loading for assembling.

#### FEATURES

- Saves power dissipation for the voltage booster circuit.
- One screw attachment type package.
- This IC is systematically connected with  $\mu$ PC1800CA or  $\mu$ PC1401CA.

#### BLOCK DIAGRAM



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

|                        |                            |              |                   |
|------------------------|----------------------------|--------------|-------------------|
| Power Supply Voltage   | $V_{CC}$ (V <sub>6</sub> ) | 30           | V                 |
| Power Supply Current   | $I_{CC}$                   | 350          | mA                |
| Booster Voltage        | $V_3$                      | 65           | V                 |
| Input Voltage          | $V_4$                      | 2.5          | V                 |
| Output Current         | $I_{DEF}$                  | -1.5 to +1.5 | A <sub>peak</sub> |
| Booster Output Current | $I_7$                      | -1.5 to +1.5 | A <sub>peak</sub> |
| Terminal 7 Voltage     | $V_7$                      | $V_6$        | V                 |
| Power Dissipation      | $P_D$                      | 8.0          | W                 |
| Operating Temperature  | $T_{opt}$                  | -20 to +75   | $^\circ\text{C}$  |
| Storage Temperature    | $T_{stg}$                  | -40 to +150  | $^\circ\text{C}$  |
| Junction Temperature   | $T_j$                      | +150         | $^\circ\text{C}$  |

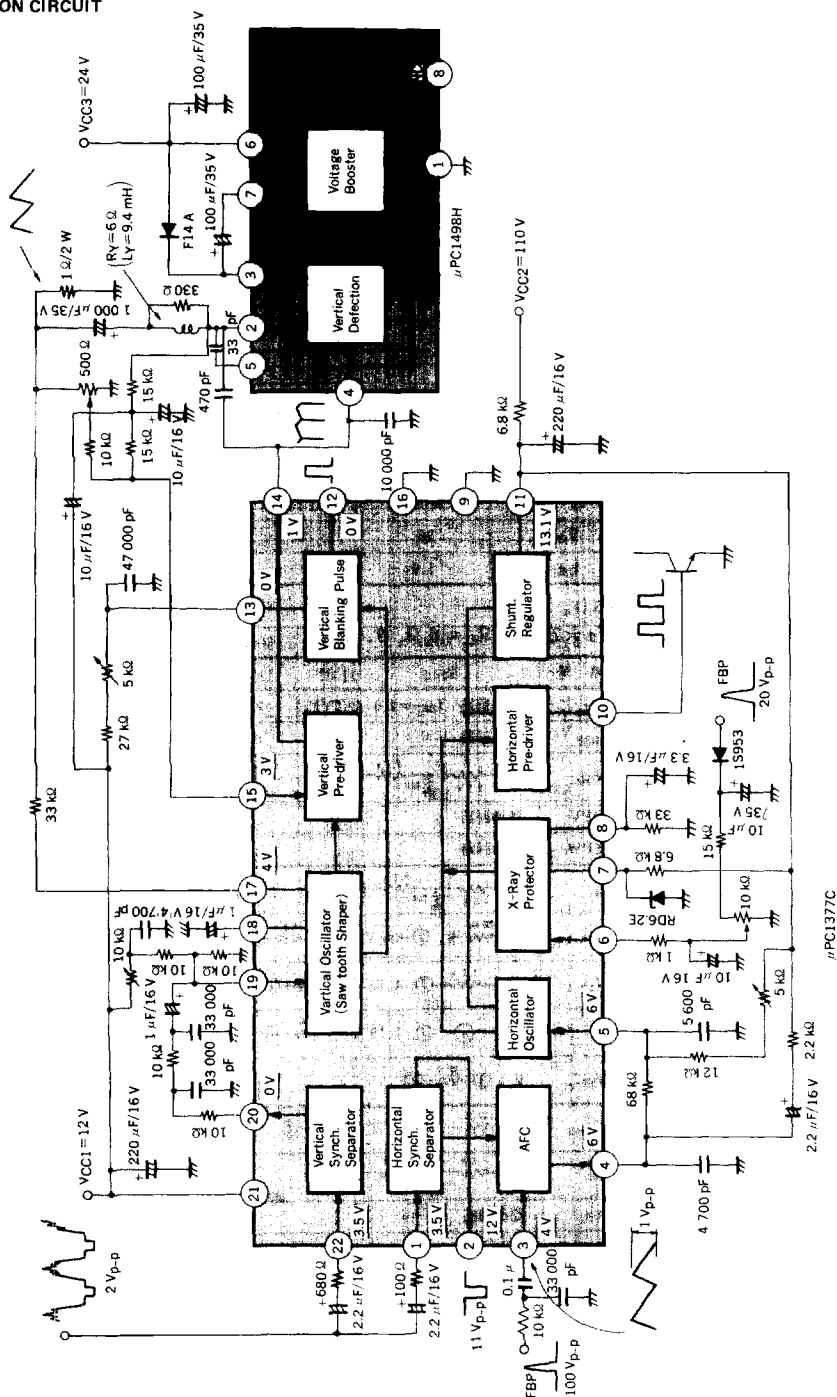
**RECOMMENDED OPERATING CONDITION ( $V_{CC}=24\text{ V}$ ,  $T_a=25^\circ\text{C}$ ,  $R_L=6\ \Omega$ ,  $L=9.4\text{ mH}$ )**

| CHARACTERISTIC       | SYMBOL                      | MIN. | TYP. | MAX. | UNIT             |
|----------------------|-----------------------------|------|------|------|------------------|
| Power Supply Voltage | $V_{CC}$ (V <sub>6</sub> )  | 20   | 24   | 27   | V                |
| Output Current       | $I_{DEF}$ (I <sub>2</sub> ) | 1.0  | —    | 2.1  | A <sub>p-p</sub> |

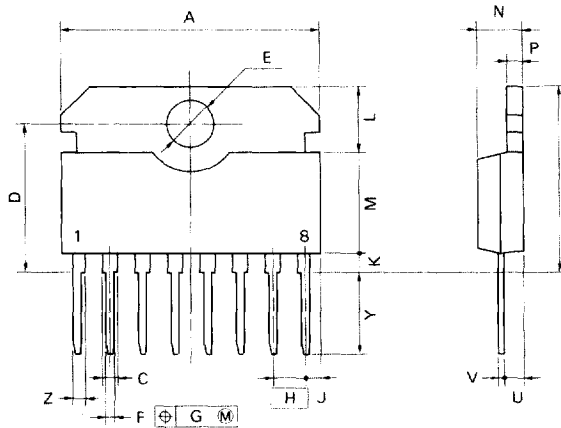
**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )**

| CHARACTERISTIC           | SYMBOL        | MIN. | TYP. | MAX. | UNIT               | CONDITIONS  |
|--------------------------|---------------|------|------|------|--------------------|-------------|
| Power Supply Current     | $I_{CC}$      | 240  | 270  | 300  | mA                 |             |
| Output Current           | $I_{DEF}$     | 1.9  | 2.0  | 2.1  | A <sub>p-p</sub>   |             |
| Output DC Voltage        | $V_{ODC}$     | 10.0 | 12.0 | 14.0 | V                  |             |
| Retrace Pulse Voltage    | RPV           | 46   | 49   | 54   | V                  |             |
| Retrace Pulse Width      | RPW           | 550  | 650  | 750  | $\mu\text{s}$      |             |
| Idling Current           | $I_Q$         | 8    | 15   | 24   | mA                 |             |
| Booster Saturation 1     | $V_{S6-7}$    |      | 1.8  | 2.4  | V                  | Discharging |
| Booster Saturation 2     | $V_{S7-1}$    |      | 1.0  | 1.5  | V                  | Charging    |
| Booster Charging Current | $I_7$         | 55   | 85   | 120  | mA                 |             |
| Output Saturation 1      | $V_{S2-1}$    |      | 1.0  | 1.6  | V                  |             |
| Output Saturation 2      | $V_{S3-2}$    |      | 2.4  | 3.0  | V                  |             |
| Input Voltage            | $V_4$         | 0.85 | 1.0  | 1.15 | V                  |             |
| Voltage Gain             | $A_{VO}$      |      | 55   |      | dB                 |             |
| Input Resistance         | $R_{in}$      |      | 22   |      | k $\Omega$         |             |
| Thermal Resistance       | $R_{th(j-c)}$ |      |      | 4.0  | $^\circ\text{C/W}$ |             |

### APPLICATION CIRCUIT



8 PIN PLASTIC POWER SIP



NOTE

Each lead centerline is located within 0.25 mm (0.01 inch) of its true position (T.P.) at maximum material condition.

PBHP-254B

| ITEM | MILLIMETERS          | INCHES                  |
|------|----------------------|-------------------------|
| A    | 20.32 MAX.           | 0.8 MAX.                |
| C    | 1.1 MIN.             | 0.043 MIN.              |
| D    | 11.9 <sup>+0.3</sup> | 0.469 <sup>+0.012</sup> |
| E    | 3.6 <sup>+0.1</sup>  | 0.142 <sup>+0.004</sup> |
| F    | 0.75 <sup>+0.1</sup> | 0.03 <sup>+0.004</sup>  |
| G    | 0.25                 | 0.01                    |
| H    | 2.54                 | 0.1                     |
| J    | 1.27 MAX.            | 0.05 MAX.               |
| K    | 1.2 MIN.             | 0.047 MIN.              |
| L    | 5.1                  | 0.201                   |
| M    | 8.1                  | 0.319                   |
| N    | 3.5 <sup>+0.2</sup>  | 0.138 <sup>+0.008</sup> |
| P    | 1.3 <sup>+0.1</sup>  | 0.051 <sup>+0.004</sup> |
| Q    | 15.0 MAX.            | 0.591 MAX.              |
| U    | 1.9 MAX.             | 0.075 MAX.              |
| V    | 0.4 <sup>+0.1</sup>  | 0.016 <sup>+0.004</sup> |
| Y    | 6.5 <sup>+0.7</sup>  | 0.256 <sup>+0.028</sup> |
| Z    | 0.85 MIN.            | 0.033 MIN.              |