# BIPOLAR ANALOG INTEGRATED CIRCUIT
# μPC1498H

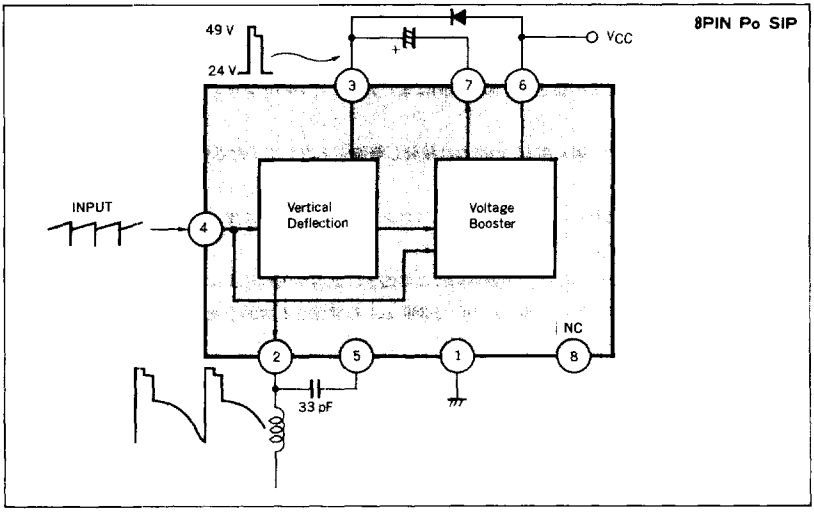
## VERTICAL DEFLECTION CIRCUIT OF COLOR TV

The μPC1498H 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 μPC1401CA or μPC1800CA. 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 μPC1800CA or μPC1401CA.

### BLOCK DIAGRAM



**ABSOLUTE MAXIMUM RATINGS ($T_a$=+25 °C)**

| | | | |
|---|---|---|---|
| Power Supply Voltage | $V_{CC}$ ($V_6$) | 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 | $A_{peak}$ |
| Booster Output Current | $I_7$ | -1.5 to +1.5 | $A_{peak}$ |
| Terminal 7 Voltage | $V_7$ | $V_6$ | V |
| Power Dissipation | $P_D$ | 8.0 | W |
| Operating Temperature | $T_{opt}$ | -20 to +75 | °C |
| Storage Temperature | $T_{stg}$ | -40 to +150 | °C |
| Junction Temperature | $T_j$ | +150 | °C |

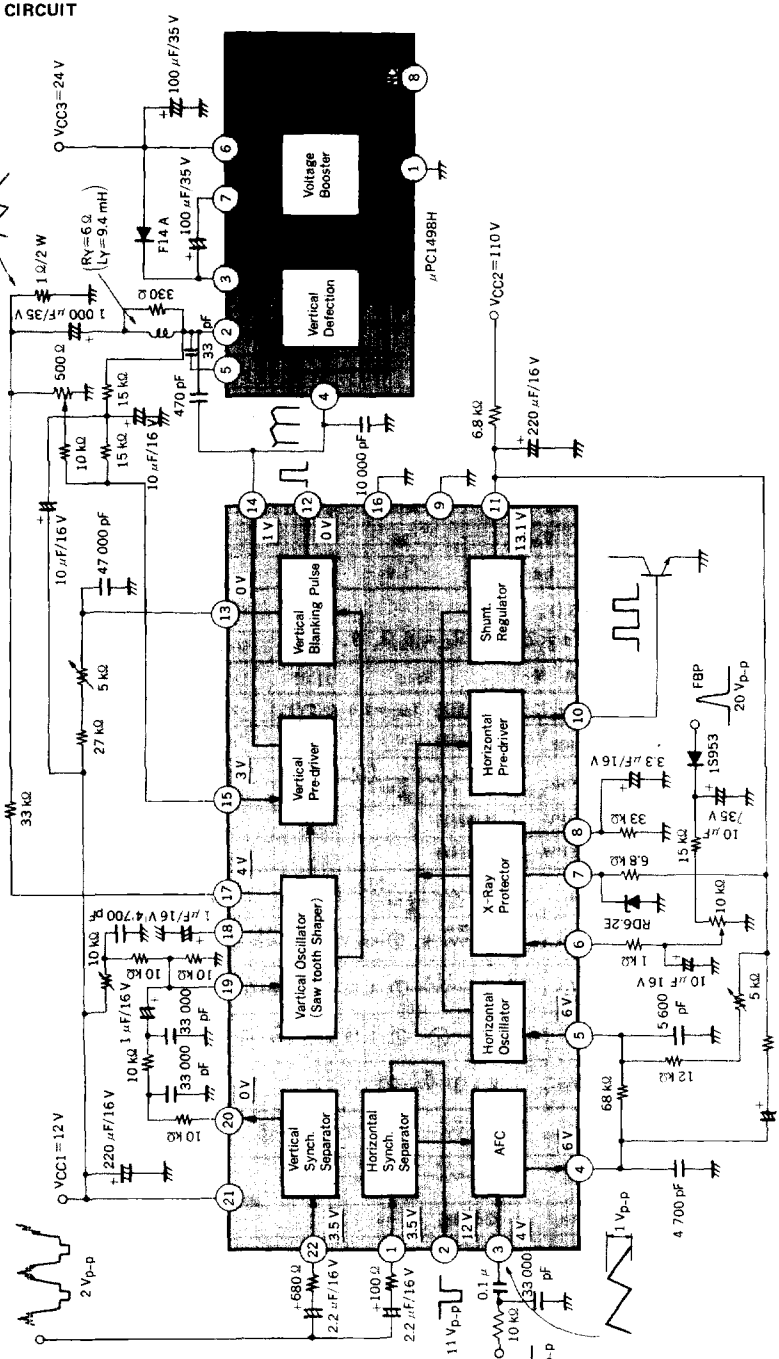
**RECOMMENDED OPERATING CONDITION ($V_{CC}$=24 V, $T_a$=25 °C, $R_L$=6 Ω, L=9.4 mH)**

| CHARACTERISTIC | SYMBOL | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|
| Power Supply Voltage | $V_{CC}$ ($V_6$) | 20 | 24 | 27 | V |
| Output Current | $I_{DEF}$ ($I_2$) | 1.0 | – | 2.1 | $A_{p-p}$ |

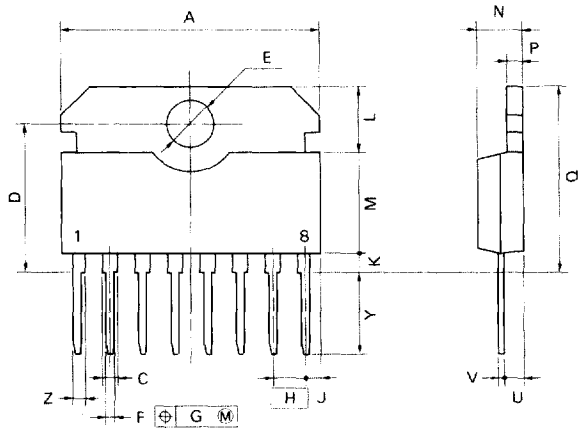
**ELECTRICAL CHARACTERISTICS ($T_a$=25 °C)**

| 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 | $A_{p-p}$ | |
| 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 | μs | |
| 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 | | kΩ | |
| Thermal Resistance | $R_{th(j-c)}$ | | | 4.0 | °C/W | |

## APPLICATION CIRCUIT



## 8 PIN PLASTIC POWER SIP




P8HP-254B

| ITEM | MILLIMETERS | INCHES |
|---|---|---|
| A | 20.32 MAX. | 0.8 MAX. |
| C | 1.1 MIN. | 0.043 MIN. |
| D | $11.9^{+0.3}$ | $0.469^{+0.012}_{-0.013}$ |
| E | $\phi 3.6^{+0.1}$ | $0.142^{+0.004}_{-0.005}$ |
| F | $0.75^{+0.1}$ | $0.03^{+0.004}_{-0.005}$ |
| 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 | $3.5^{+0.2}$ | $0.138^{+0.008}_{-0.009}$ |
| P | $1.3^{+0.1}$ | $0.051^{+0.004}_{-0.005}$ |
| Q | 15.0 MAX. | 0.591 MAX. |
| U | 1.9 MAX. | 0.075 MAX. |
| V | $0.4^{+0.1}$ | $0.016^{+0.004}_{-0.005}$ |
| Y | $6.5^{+0.2}$ | $0.256^{+0.028}$ |
| Z | 0.85 MIN. | 0.033 MIN. |

**NOTE**

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