

TA8445K

POWER AMPLIFIER FOR DRIVING A DEFLECTION CIRCUIT OF A COLOR TELEVISION

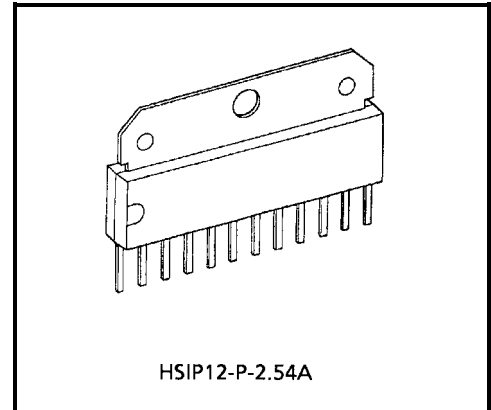
The TA8445K is a power amplifier for driving a deflection circuit of a middle and large screen size color television.

The TA8445K combines the vertical output circuit and the Ramp-generator in a 12-pin shrink DIP plastic package.

The TA8445K requires only vertical deflection positive pulse for vertical operation.

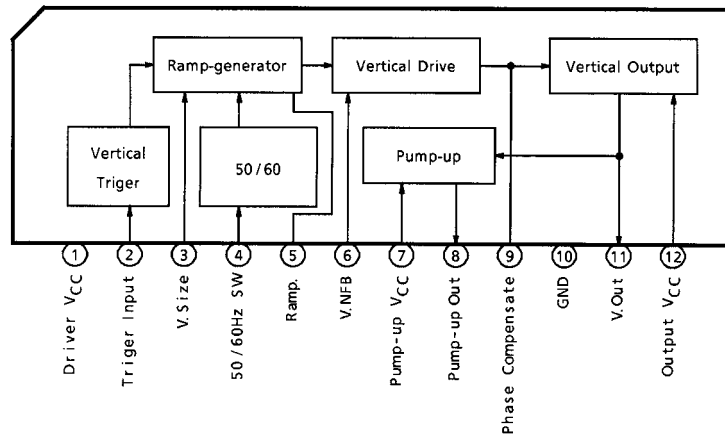
FEATURES

- Large output current : 2.2Ap-p (MAX.)
- Built-in Ramp-generator circuit
- Built-in V.Driver circuit
- 50 / 60Hz sw circuit
- Small power dissipation with a pump-up circuit
- Vertical output circuit
- Small number external parts

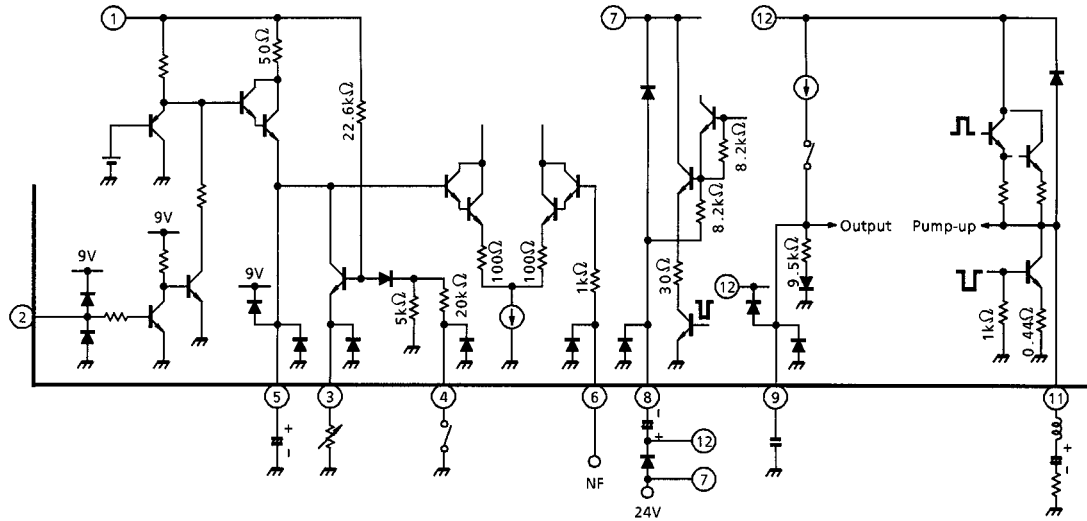


Weight: 3.2g(Typ.)

BLOCK DIAGRAM



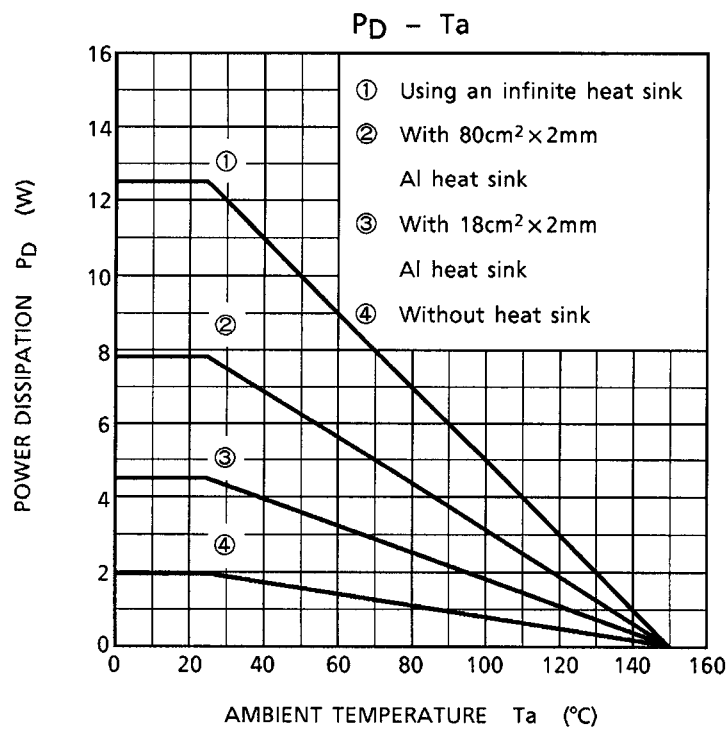
TERMINAL INTERFACE



MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|--------------------------------|--------------------|-------------|------|
| V.Driver Power Supply | V _{CC} | 15 | V |
| Pump-up Power Supply Voltage | V _{CC} | 30 | V |
| Vertical Output Supply Voltage | V _{CC} | 60 | V |
| Power Dissipation | P _{D max} | 12.5 (Note) | W |
| Operating Temperature | T _{opr} | -20 ~ 85 | °C |
| Storage Temperature | T _{stg} | -55 ~ 150 | °C |

Note: Using an infinite heat sink.



RECOMMENDED OPERATING CONDITION (Ta = 25°C)

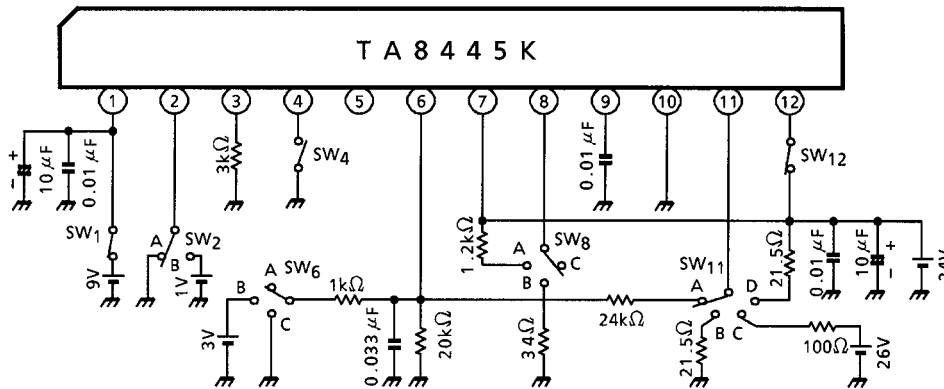
| CHARACTERISTIC | SYMBOL | MIN | TYP. | MAX | UNIT |
|---------------------------|--------------------|-----|------|-----|------------------|
| V.Driver Supply Voltage | V _{CC1} | 8.1 | 9.0 | 9.9 | V |
| Pump-up Supply Voltage | V _{CC2} | — | 24 | 29 | V |
| Deflection Output Current | I _{11p-p} | — | — | 2.2 | A _{p-p} |

ELECTRICAL CHARACTERISTICS (Ta = 25°C, V_{CC1} = 9V, V_{CC2} = 24V)

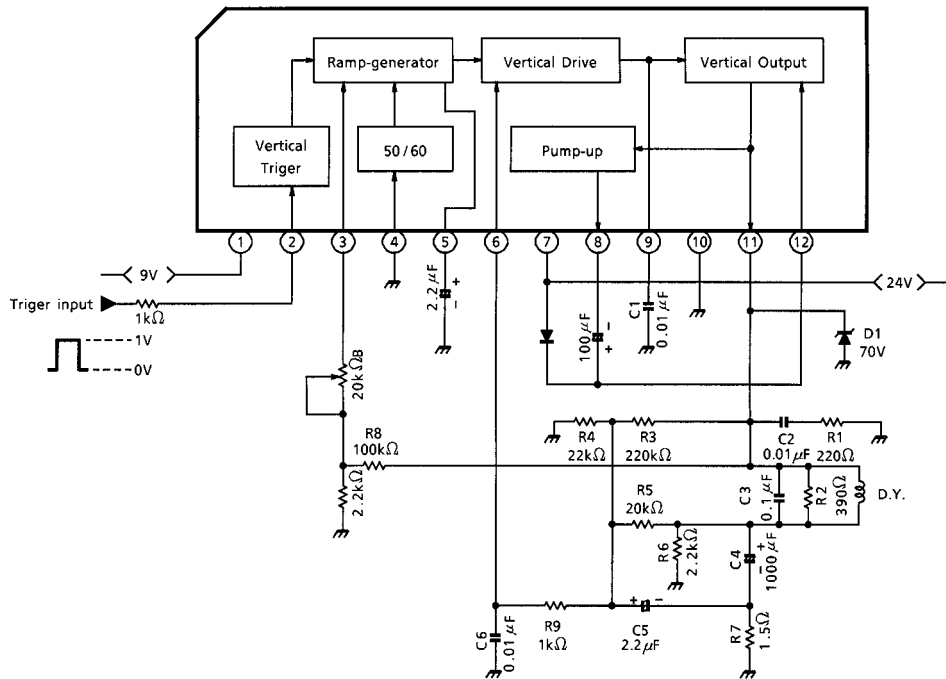
| CHARACTERISTIC | SYMBOL | TEST CIR-CUIT | TEST CONDITION | MIN | TYP. | MAX | UNIT |
|---------------------------------------|------------------------------|---------------|----------------|------|------|------|------------------|
| V.Driver Supply Current | I _{CC1} | — | (Note 1) | 2.0 | 5.0 | 12 | mA |
| Vertical Triger Threshold Voltage | V ₂ | — | (Note 2) | — | — | 1.0 | V |
| Vertical Amplitude Cont. Voltage (1) | V ₃ ⁶⁰ | — | (Note 3) | 1.0 | 1.5 | 2.0 | V |
| Vertical Amplitude Cont. Voltage (2) | V ₃ ⁵⁰ | — | (Note 11) | 0.75 | 1.25 | 1.75 | V |
| Ramp-signal Maximum Voltage | V ₅ | — | (Note 4) | 3.5 | 4.8 | 6.0 | V |
| Ramp-signal Maximum Amplitude | V _{5p-p} | — | (Note 4) | 3.5 | 4.5 | 5.5 | V _{p-p} |
| Output Triger Satulation Voltage (1) | V _{S11-10} | — | (Note 5) | 0.3 | 0.5 | 1.0 | V |
| Output Triger Satulation Voltage (2) | V _{S12-11} | — | (Note 6) | 1.0 | 1.8 | 3.6 | V |
| Pump-up Triger Satulation Voltage (1) | V _{S7-8} | — | (Note 7) | 1.0 | 2.0 | 3.0 | V |
| Pump-up Triger Satulation Voltage (2) | V _{S8-10} | — | (Note 8) | 0.2 | 0.8 | 1.6 | V |
| Idling Current | I _b | — | (Note 9) | — | 26 | — | mA |
| Vertical Output Center Voltage | V _{CENTER} | — | (Note 10) | 8.0 | 12.0 | 14.0 | V |

| NOTE | SW MODE | | | | | | | TEST TERMINAL |
|------|---------|---|-----|---|---|----|-----|---------------|
| | 1 | 2 | 4 | 6 | 8 | 11 | 12 | |
| 1 | ON | A | OFF | A | C | A | ON | 1 |
| 2 | ON | B | OFF | A | C | A | ON | 5 |
| 3 | ON | A | OFF | A | C | A | ON | 3 |
| 4 | ON | A | OFF | A | C | A | ON | 5 |
| 5 | ON | B | OFF | B | C | D | ON | 11 |
| 6 | OFF | A | OFF | C | C | B | ON | 11 - 12 |
| 7 | OFF | A | OFF | A | B | C | OFF | 7 - 8 |
| 8 | OFF | A | OFF | A | A | A | OFF | 8 |
| 9 | ON | A | OFF | A | C | A | ON | 12 |
| 10 | ON | A | OFF | A | C | A | ON | 11 |
| 11 | ON | A | ON | A | C | A | ON | 3 |

TEST CIRCUIT



APPLICATION CIRCUIT



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