

UTC1379

LINEAR INTEGRATED CIRCUIT

1-CHIP DEFLECTION SYSTEM

DESCRIPTION

The UTC1379 consists of a vertical system including function and a horizontal system including an AFC function. It is for use in small size color TVs, B/W TV receivers and monitors.

FUNCTIONS

Horizontal Section

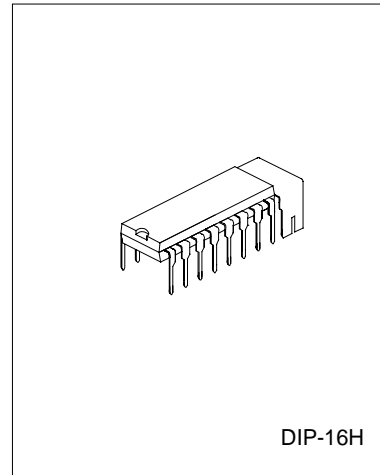
- *SYNC separation
- *Horizontal Oscillators
- *Horizontal Pre-drivers
- *Horizontal AFCs
- *Shunt Regulator(Typical 6.7V)

Vertical Section

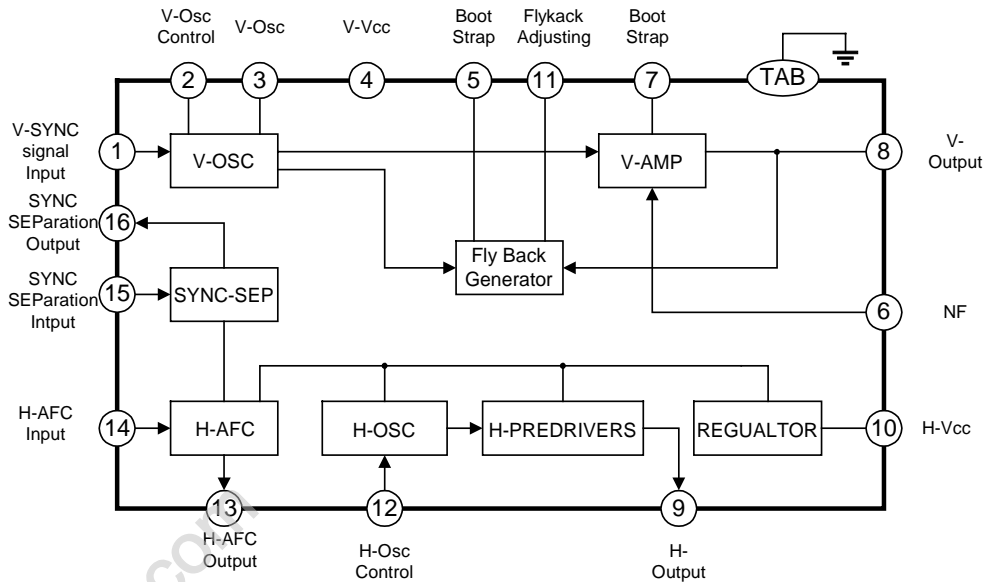
- *Vertical Oscillator
- *Vertical Pre-drivers
- *Vertical Output
- *Fly-back generators

FEATURES

- *Low Power consumption, direct deflection coil driving capability(Fly-back voltage two times as high supply voltage is supplied during fly-back period only)
- *Variable circuit of vertical retrace time on chip



BLOCK DIAGRAM



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

| Characteristic | Symbol | Value | Unit |
|-----------------------------------|------------------|------------|---------|
| Vertical Supply Voltage | Vcc | 15 | V |
| Horizontal Supply Current | I ₁₀ | 30 | mA |
| Vertical output Current | I ₈ | -500~+500 | mA peak |
| Horizontal output Current(pulse) | I ₉ | -15~+5 | mA |
| Fly-back generator Output current | I ₅ | -500~+500 | mA peak |
| Operating Temperature | T _{opr} | -20 to +75 | °C |
| Storage Temperature | T _{stg} | -55 to 155 | °C |
| Power dissipation(note) | P _d | 1.3 | W |

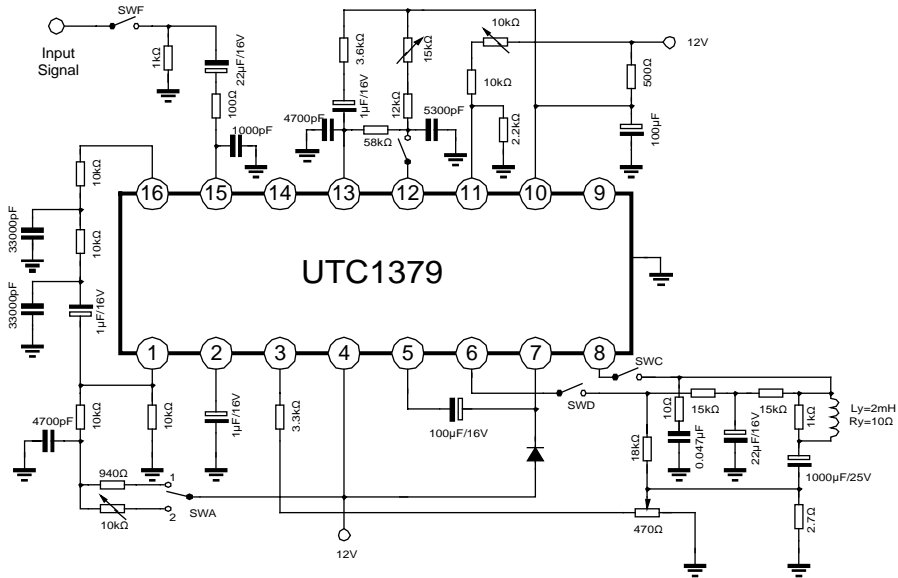
ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$, Vcc=12V, I₁₀=12mA unless otherwise specified)

| Characteristic | Symbol | Test Condition | Min | Typ. | Max | Unit |
|--|---------------------------------|---|-----|-------|------|-------------------|
| Recommended Vertical Supply Voltage | Vcc | | 9.6 | 12 | 14 | V |
| Horizontal Supply Current | I ₁₀ | | 6.5 | 12 | 18 | mA |
| Vertical Supply current | I _{CC(1)} | SW _A =2 | | 85 | 100 | mA |
| Vertical supply Current | I _{CC(2)} | No Input signal, SW _A =2 | 6 | 12 | 20 | mA |
| Vertical free Running Frequency | F _{vo} | SW _A =1 | 55 | 60 | 65 | Hz |
| Drift of Vertical Free-Running Frequency | f _{vo} /Vcc | f _{vo} =f _{vo} (14.4V)-f _{vo} (9.6V) SW _A =2 | | 0.8 | 2 | Hz |
| | f _{vo} /T _A | f _{vo} =f _{vo} (-20°C)-f _{vo} (70°C) SW _A =2 | | 1.5 | 2 | Hz |
| Vertical output Center Voltage | V _{mid} | SW _A =2 | 5.3 | 5.8 | 6.3 | V |
| Vertical Output Current | I ₈ | SW _A =2 | 450 | 500 | 550 | mA _{p-p} |
| Horizontal Supply Voltage | V ₁₀ | SW _B =2 | 6.2 | 6.7 | 7.2 | V |
| Horizontal free running frequency | f _{HO} | I ₁₀ =12mA SW _B =1 | 15 | 15.75 | 16.5 | kHz |
| Horizontal Output Pulse Width | t _{HPW} | f _{HO} =15.75kHz, SW _B =2 | 23 | 25 | 27 | us |
| Horizontal Output Current | I ₉ | SW _B =2 | 0.8 | 1.3 | 2.0 | mA |

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TEST CIRCUIT



TYPICAL APPLICATION CIRCUIT

