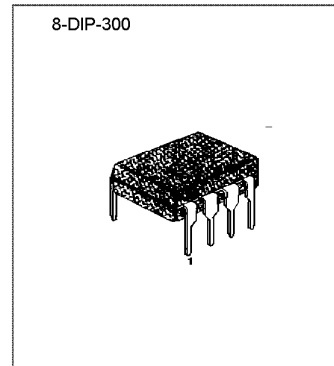


VIDEO SWITCHING CIRCUIT FOR TV

This integrated circuit provides video switching between the peri TV plug and video section in the TV sets.

FEATURE

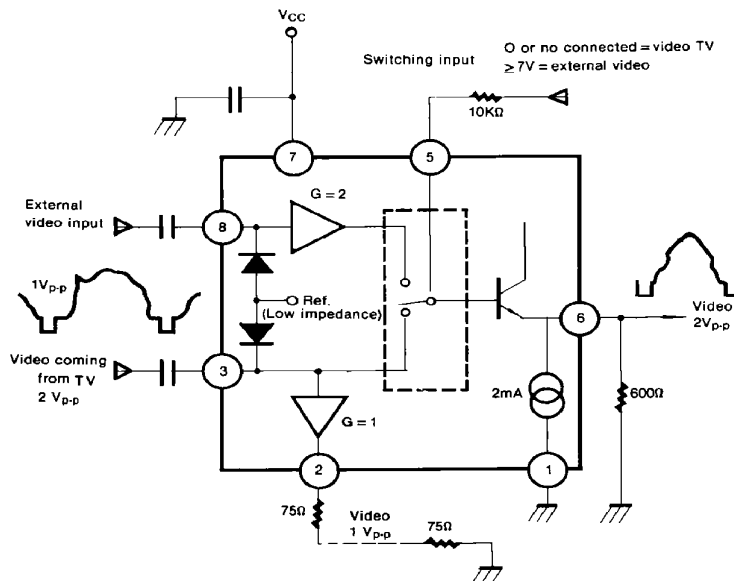
- 1 Video output 75Ω - $1V_{p,p}$ no switched.
- 1 switched video output $2V_{p,p}$.
- Video cross talk: 50dB typical
- Short circuit protection of inputs and outputs
- Clamped video input



ORDERING INFORMATION

| Device | Package | Operating Temperature |
|--------|-----------|--|
| KA2186 | 8-DIP-300 | $-10^{\circ}\text{C} \sim +70^{\circ}\text{C}$ |

TYPICAL APPLICATION AND TEST CIRCUIT



We advice to protect the 75Ω output through a 75Ω resistor for supply voltage upper than 9V.

MAXIMUM RATINGS

| Rating | Symbol | Value | Unit |
|-----------------------------|-----------|----------|----------|
| Supply Voltage | V_{CC} | 18 | V |
| Operating Temperature | T_{OPR} | -10~+100 | °C |
| With Load $\geq 150\Omega$ | | -10~+70 | |
| With Load=75 Ω | | | |
| Junction Temperature | T_J | -40~+150 | °C |
| Storage Temperature | T_{STG} | -40~+150 | °C |
| Minimum DC Load Resistor P6 | | 600 | Ω |
| Minimum DC Load Resistor P2 | | 75 | Ω |

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, $V_{CC}=9\text{V}$)

| Characteristic | Symbol | Min | Typ | Max | Unit |
|--|-----------|------|------|----------|---------------|
| Supply Voltage Range | V_{CC} | 8 | — | 14 | V |
| Supply Current (no load on Pin 2 and Pin 6) | I_{CC} | — | 13 | 20 | mA |
| Supply Current (with 75 Ω between Pins2-1, with 600 Ω between Pins6-1) | I_{CCL} | — | 43 | 75 | mA |
| Internal Video Input Swing from Picture F1 (Positive video) | — | — | — | 4.5 | V_{P-P} |
| Internal Video Input Impedance (Positive video) | — | 50 | — | — | k Ω |
| Internal Video Input Bias Current (Positive video) | — | 10 | 25 | 40 | μA |
| External Video Input Swing (Positive video) | — | — | — | 2 | V_{P-P} |
| External Video Input Impedance (Positive video) | — | 50 | — | — | k Ω |
| Switched Video Output Swing | — | — | — | 4.5 | V_{P-P} |
| Switched Video DC Output Voltage (Sync. pulse level, note 1) (600 Ω) | — | 1.7 | 2 | 2.4 | V |
| Switched Video Band Width (-1dB) | — | 6 | — | — | MHz |
| Switched Video Output Gain | — | — | — | — | dB |
| Pin 6-Pin 8 (gain with 600 Ω load) | — | +4 | +5 | +6 | |
| Pin 6-Pin 3 (gain with 600 Ω load) | — | -1 | -0.5 | 0 | |
| External Video Output Swing (with 75 Ω load) | — | — | 2 | 2.2 | V |
| External Video DC Output Voltage (Sync. pulse level, note 1) (75 Ω) | — | 1.7 | 2 | 2.4 | V |
| External Video Output Gain (Pin 2-Pin 3 gain with 75 Ω load) | — | -1.8 | -1 | -0.4 | dB |
| Switching input Unactive Low Level or Unconnected Pin (TV receiving) | — | 0 | — | 3 | V |
| Switching Input Active Level (ext. receiving) | — | 7 | — | V_{CC} | V |
| Video Rejection Between Two Inputs | — | — | -50 | — | dB |
| 0 to 5MHz | — | — | — | — | |
| 1KHz | — | -50 | — | — | |
| Differential Group Delay | — | — | 15 | — | ns |
| Linearity Distortion | — | — | — | — | % |
| Luma (test line 17) | — | — | 2 | — | |
| Chroma (test line 331) | — | — | 2 | — | |
| Intermodulation Luma-Chroma (test line 331) | — | — | 5 | — | |
| Supply Voltage Rejection (1KHz) | — | 40 | 50 | — | dB |

Note 1 : Use a video signal with a synchro pulse in order to make the clamp work in a correct way (75 Ω to the ground and 10 μF in serie).

Dimensions in Millimeters

