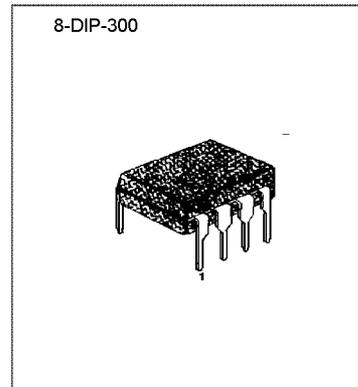


VIDEO SWITCHING CIRCUIT FOR TV

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

FEATURE

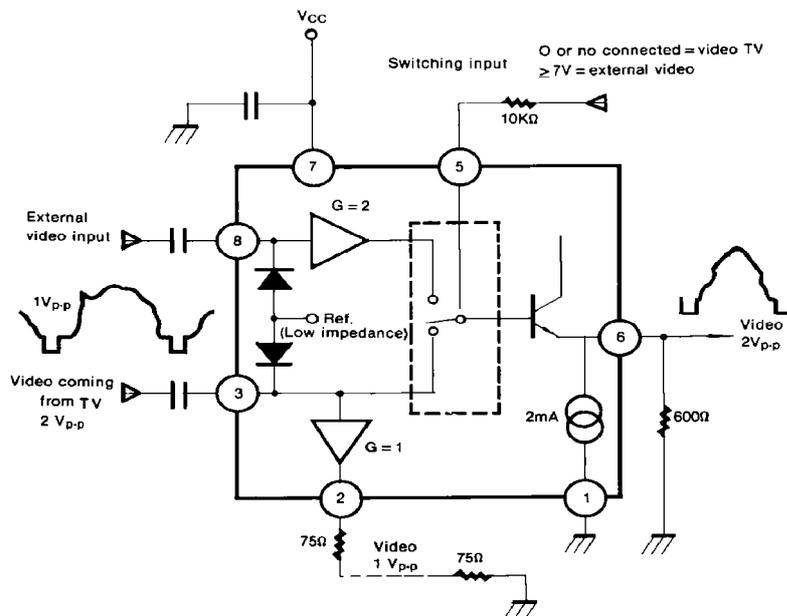
- 1 Video output 75Ω - $1V_{p-p}$ no switched.
- 1 switched video output $2V_{p-p}$.
- Video cross talk: 50dB typical
- Short circuit protection of inputs and outputs
- Clamped video input



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 75 Ω output through a 75 Ω 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	—	—	—	—	dB
0 to 5MHz	—	—	-50	—	
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

