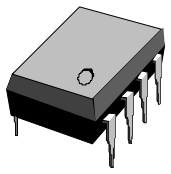
VIDEO SWITCHING CIRCUIT FOR TV

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

8-DIP-300



#1

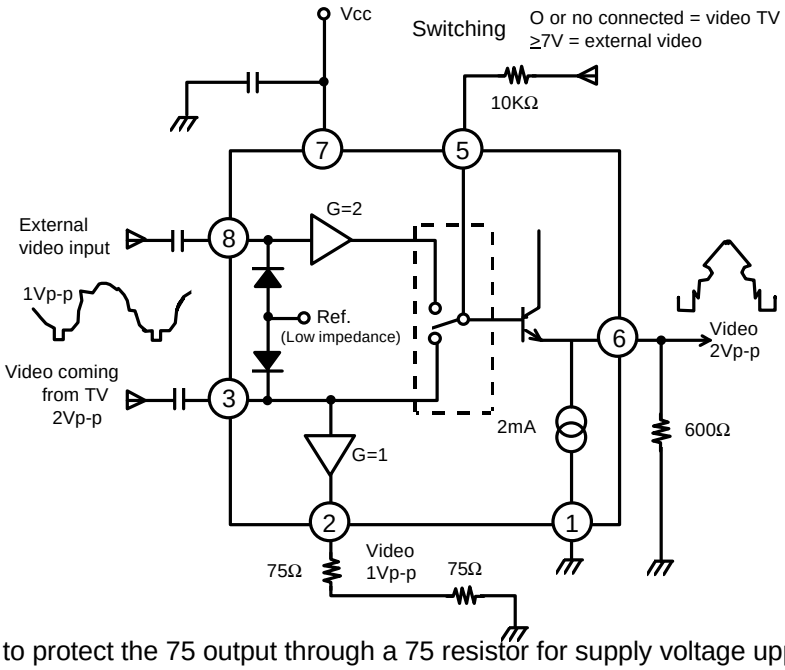
FEATURE

- 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°C ~+70°C

TYPICAL APPLICATION AND TEST CIRCUIT



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

MAXIMUM RATINGS (TA = 25°C)

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

ELECTRICAL CHARACTERISTICS (T_A=25°C,V_{CC}=9V)

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 75Ωbetween Pins2-1, with 600Ωbeteen 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	-	-	KΩ
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	-	-	KΩ
Switched Video Output Swing	-	-	-	4.5	V_{P-P}
Switched Video DC Output Voltage (Sync. pulse level, note 1) (600Ω)	-	1.7	2	2.4	V
Switched Video Band Width (-1dB)	-	6	-	-	MHz
Switched Video Output Gain Pin 6-Pin 8 (gain with 600Ωload) Pin 6-Pin 3 (gain with 600Ωload)	-	 +4 -1	 +5 -0.5	 +6 0	dB
External Video Output Swing (with 75Ω loade)	-	-	2	2.2	V
External Video DC Output Voltage (Sync. pulse level, note 1) (75Ω)	-	1.7	2	2.4	V
External Video Output Gain (Pin 2-Pin 3 gain with 75Ωload)	-	-1.8	-1	-0.4	dB
Switching input Unactive Low Level or Unconnectec Pin (TV receiving)	-	0	-	3	V
Switching Input Active Level (ext. receiving)	-	7	-	V_{CC}	V
Video Rejection Between Two Inputs 0 to 5Mhz 1KHz	 - -	 - -50	 -50 -	 - -	dB
Differential Group Delay	-	-	15	-	ns
Linearity Distortion Luma (test line 17) Chroma (test line 331) Intermodulation Luma-Chroma (test line 331)		 - - -	 2 2 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 (75Ωto the ground and 10µF in serial).