

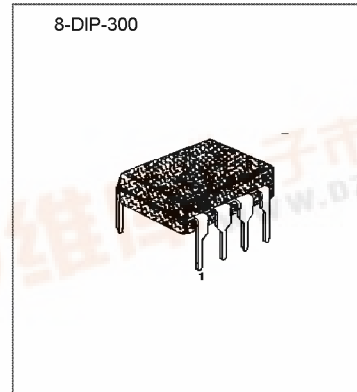


### VIDEO SWITCHING CIRCUIT FOR TV

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

### FEATURE

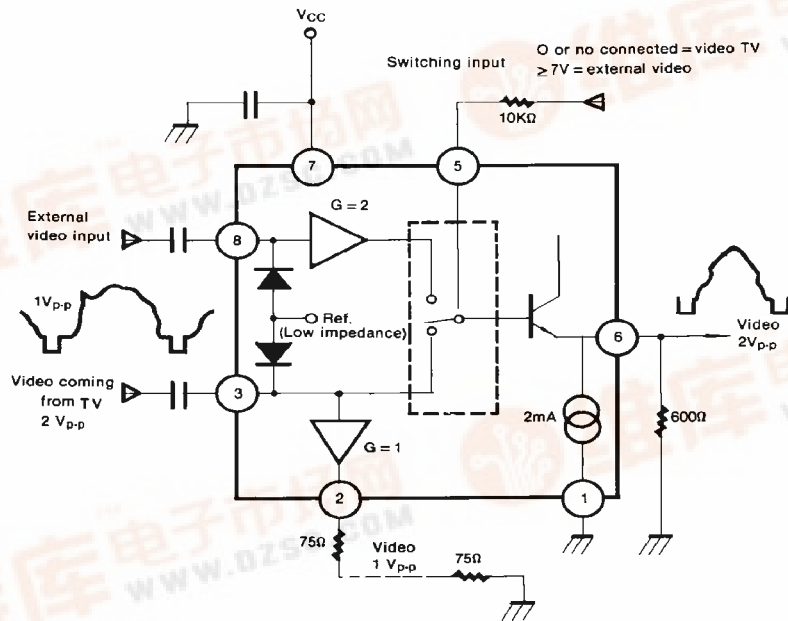
- 1 Video output  $75\Omega$  -  $1V_{p-p}$  no switched.
- 1 switched video output  $2V_{p-p}$ .
- Video cross talk: 50dB typical
- Short circuit protection of inputs and outputs
- Clamped video input



### 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  $75\Omega$  output through a  $75\Omega$  resistor for supply voltage upper than 9V.



**MAXIMUM RATINGS**

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

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

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 75 $\Omega$ between Pins2-1, with 600 $\Omega$ 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 $\Omega$
Internal Video Input Bias Current (Positive video)	—	10	25	40	$\mu A$
External Video Input Swing (Positive video)	—	—	—	2	$V_{P-P}$
External Video Input Impedance (Positive video)	—	50	—	—	k $\Omega$
Switched Video Output Swing	—	—	—	4.5	$V_{P-P}$
Switched Video DC Output Voltage (Sync. pulse level, note 1) (600 $\Omega$ )	—	1.7	2	2.4	V
Switched Video Band Width (-1dB)	—	6	—	—	MHz
Switched Video Output Gain Pin 6-Pin 8 (gain with 600 $\Omega$ load) Pin 6-Pin 3 (gain with 600 $\Omega$ load)	—	+4 -1	+5 -0.5	+6 0	dB
External Video Output Swing (with 75 $\Omega$ load)	—	—	2	2.2	V
External Video DC Output Voltage (Sync. pulse level, note 1) (75 $\Omega$ )	—	1.7	2	2.4	V
External Video Output Gain (Pin 2-Pin 3 gain with 75 $\Omega$ load)	—	-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 ( 75 $\Omega$  to the ground and 10 $\mu F$  in serie ).

Dimensions in Millimeters

