

# HA11513

T-77-07-13

## 5 Channel Video Switch

The HA11513 is a bipolar LSI for video switch. The HA11513 is designed for switching of video signals.

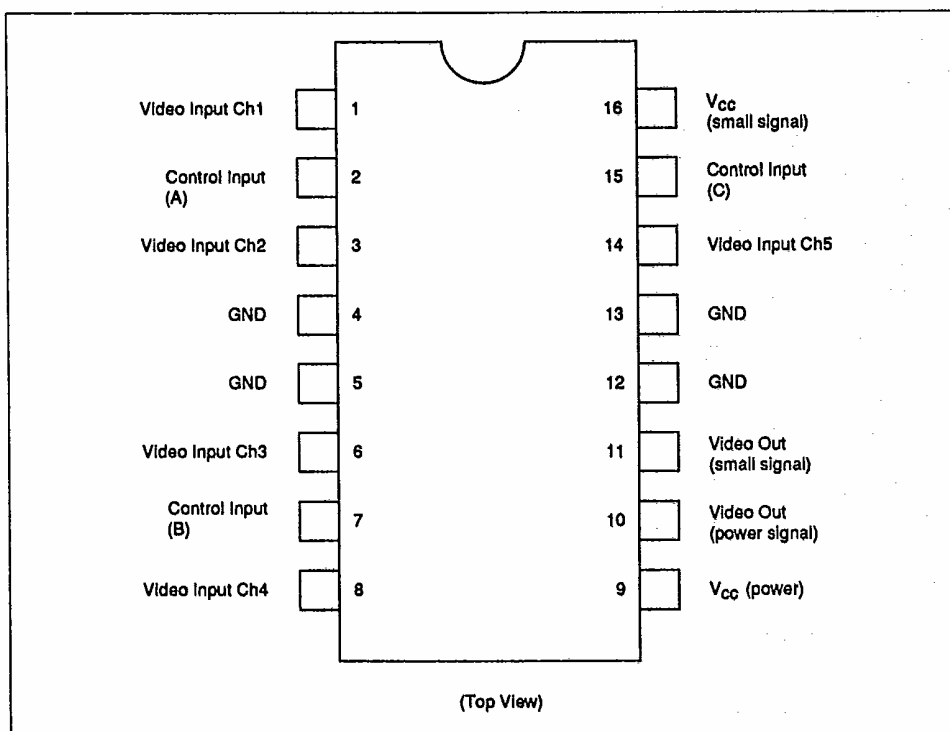
### Features

- 5ch video input
- Low impedance drive output ( $R_L = 150\Omega$ ) and high impedance drive output ( $R_L = 1k\Omega$ )
- Including 6dB amplifier
- Frequency response ( $\pm 0.5\text{dB}$ )  $f = 1\text{kHz}$  to  $5\text{MHz}$
- Low cross-talk ( $f = 4.2\text{MHz}$ ) Max  $-60\text{dB}$
- Supply voltage  $12 \pm 1\text{V}$

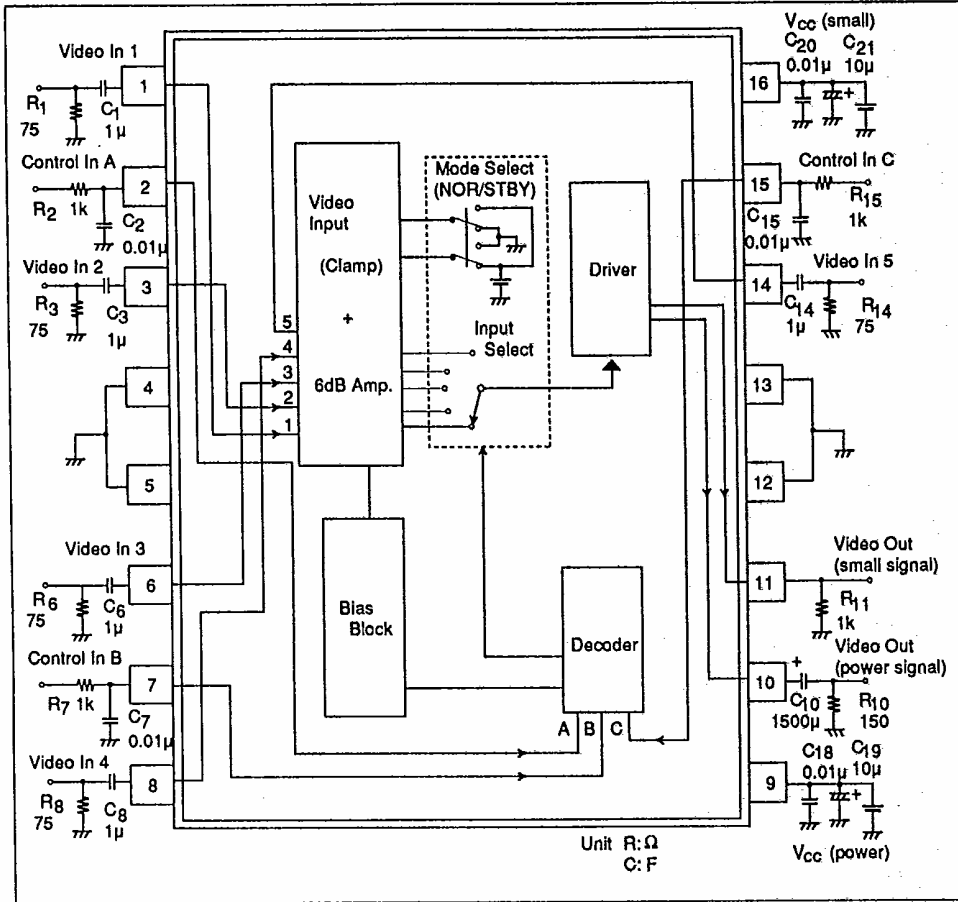
### Ordering Information

Type No.	Package
HA11513	DP-16

### Pin Arrangement



Block Diagram



Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	HA11513	Unit
Supply Voltage	V <sub>CC</sub>	15	V
Video Input Voltage	V <sub>I video</sub>	V <sub>CC</sub>	V
Output Current (Power)	I <sub>O power</sub>	80	mA
Output Current (Small Signal)	I <sub>O small</sub>	20	mA
Power Dissipation	P <sub>T</sub>	1300	mW
Operating Temperature	T <sub>opr</sub>	0 to +70	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C



## Input Condition

Video Input Ch. No.	Pin. No.	Control Input			Note
		A	B	C	
1	1	0	1	1	
2	3	1	1	1	
3	6	1	0	1	
4	8	0	1	0	
		1	0	0	
		1	1	0	
5	14	0	0	1	
Standby Mode	-	0	0	0	No Signal Output

Electrical Characteristics ( $V_{CC}=12V$ ,  $T_a=25^\circ C$ )

Item	Application Terminal	Symbol	Min	Typ	Max	Unit	Test Condition
Supply Current (Video Input Ch.1 to 5 Select)	(9)	$I_{CC1}$	15	30	50	mA	
	(16)	$I_{CC2}$	10	20	30	mA	
Supply Current (Standby Mode)	(9)	$I_{CC1S}$	4	10	20	mA	
	(16)	$I_{CC2S}$	8	16	30	mA	
Gain	(10),(11)		5.5	6.0	6.5	dB	
Frequency Response	(10),(11)		-0.5	0	0.5	dB	$f=1kHz$ to 5MHz
Cross-talk					-60	dB	$f=4.2MHz$
Linearity			-1	0	1	%	
Differential Gain		DG	-1	0	1	%	
Differential Phase		DP	-1	0	1	deg	
Output Dynamic Range	(10),(11)	DR	4.5	-	-	V	
Switch Control Voltage (High Level)	(2),(7),(15)	$V_{CH}$	3.5	-	-	V	
Switch Control Voltage (Low Level)	(2),(7),(15)	$V_{CL}$	-	-	0.5	V	
Switch Control Current (High Level)	(2),(7),(15)	$I_{CH}$	-	-	0.4	mA	$V_I \text{ cont}=4.0V$
Switch Control Current (Low Level)	(2),(7),(15)	$I_{CL}$	-	-	0.2	mA	$V_I \text{ cont}=0.5V$
Output Sync Level	(10),(11)	$V_{sync}$	2.9	3.5	4.1	V	
Output Impedance (Power Output)	(10)		-	-	10	$\Omega$	
Output Impedance (Small Signal Output)	(11)		-	-	50	$\Omega$	
Supply Voltage	(9),(16)	$V_{CC \text{ opr}}$	11	12	13	V	

