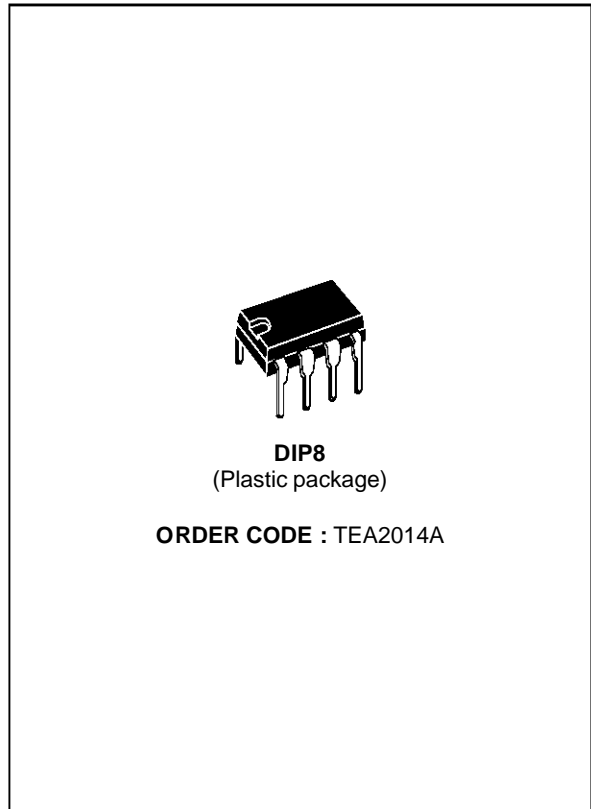


VIDEO SWITCH

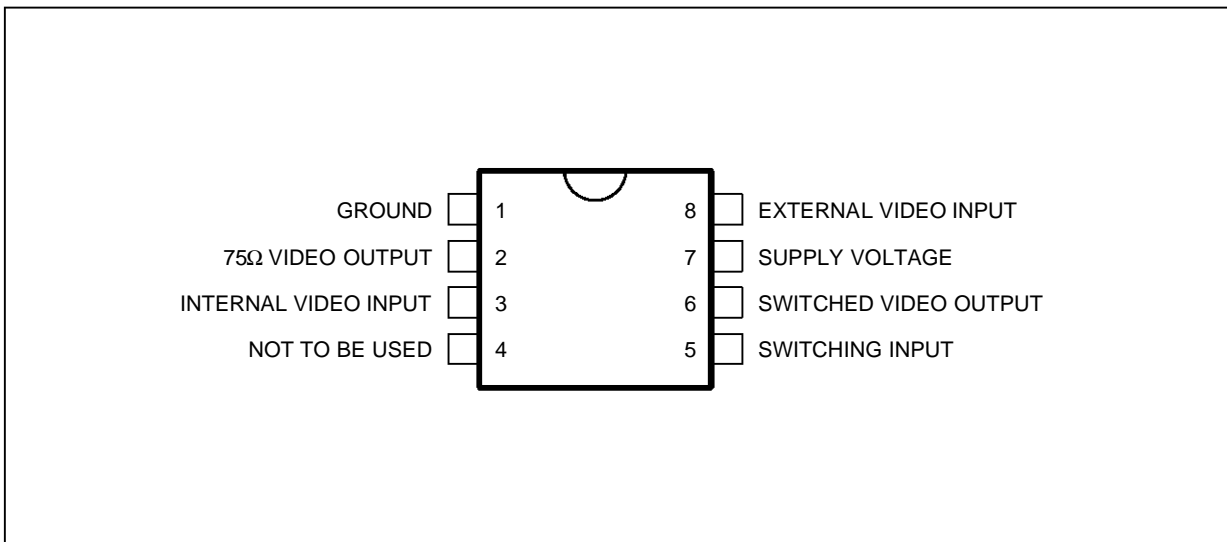
- 1 VIDEO OUTPUT 75Ω- 1V_{PP} NOT SWITCHED
- 1 SWITCHED VIDEO OUTPUT 2V_{PP}
- VIDEO CROSSTALK : 50dB TYPICAL
- SHORT CIRCUIT PROTECTION OF INPUTS AND OUTPUTS
- CLAMPED VIDEO INPUTS



DESCRIPTION

This integrated circuit provides all video switching allowing connections between the peri TV plug and video sections in the TV set. The TEA2014A is supplied in a DIP8.

PIN CONNECTIONS



2014A-01.EPS

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CC}	Supply Voltage	18	V
T _{oper}	Operating Temperature with Load > 150 Ω on PIN 2 with Load = 75 Ω on PIN 2	0, + 100 0, + 70	°C
T _j	Junction Temperature	- 40, + 150	°C
T _{stg}	Storage Temperature	- 40, + 150	°C
-	Minimum DC Load Resistor PIN 6 Minimum DC Load Resistor PIN 2	600 75	Ω

2014A-01.TBL

THERMAL DATA

Symbol	Parameter	Value	Unit
R _{th (j-a)}	Junction-ambient Thermal Resistance	Typ. 90	°C/W

2014A-02.TBL

ELECTRICAL CHARACTERISTICS

T_{amb} = + 25 °C, V_{CC} = 9 V (unless otherwise specified)

Symbol	Parameter	Min.	Typ.	Max.	Unit
V _{CC}	Supply Voltage Range	8	-	14	V
I _{CC}	Supply Current (no load on Pin 2 and Pin 6)	-	-	20	mA
I _{CC}	Supply Current (with 75 Ω Pin 2.1, with 600 Ω between Pin 6.1)	-	45	-	mA
P _{tot}	Total Power Dissipation with Load	-	400	-	mW

INPUTS (pin 8 and pin 3)

-	Internal Video Input Swing from Picture IF (positive Video)	-	-	4.5	V _{pp}
-	Internal Video Input Impedance (positive video)	50	-	-	kΩ
-	Internal Video Input Bias Current (positive video)	6	25	40	μA
-	External Video Input Swing (positive video)	-	-	2	V _{pp}
-	External Video Input Impedance (positive video)	50	-	-	kΩ

SWITCHED OUTPUT (pin 6) - R_{LOAD} = 600 Ω

-	Video Output Swing	4	-	-	V _{pp}
-	Video Output Dynamic Impedance	-	-	25	Ω
-	Video DC Output Voltage (sync. pulse level note 1)	1.7	2	2.4	V
-	Video Bandwith Pin 6 – from Internal Input Pin 3 (- 1 dB)	6	-	-	MHz
-	Video Bandwith Pin 6 – from External Input Pin 8 (- 3 dB)	6	-	-	MHz
-	Output Gain Pin 6 – Pin 8	+ 5	+ 6	+ 7	dB
-	Output Gain Pin 6 – Pin 3	- 1	- 0.5	0	dB

EXTERNAL OUTPUT (pin 2) - R_{LOAD} = 75 Ω

-	Video Output Swing	2.2	-	-	V _{pp}
-	Video Output Dynamic Impedance	-	10	-	Ω
-	Video DC Output Voltage (sync. pulse level , note)	1.7	2	2.4	V
-	Video Bandwidth (- 1dB)	6	-	-	MHz
-	Video Output Gain (pin 2 – pin 3)	- 1.8	- 1	- 0.4	dB

SWITCHING INPUT (pin 5)

-	Switching Input Unactive Low Level or Unconnected Pin (TV receiving)	0	-	3	V
-	Switching Input Active Level (ext. receiving)	7	-	V _{CC}	V
-	Switching Input Impedance	10	-	-	kΩ

2014A-03.TBL

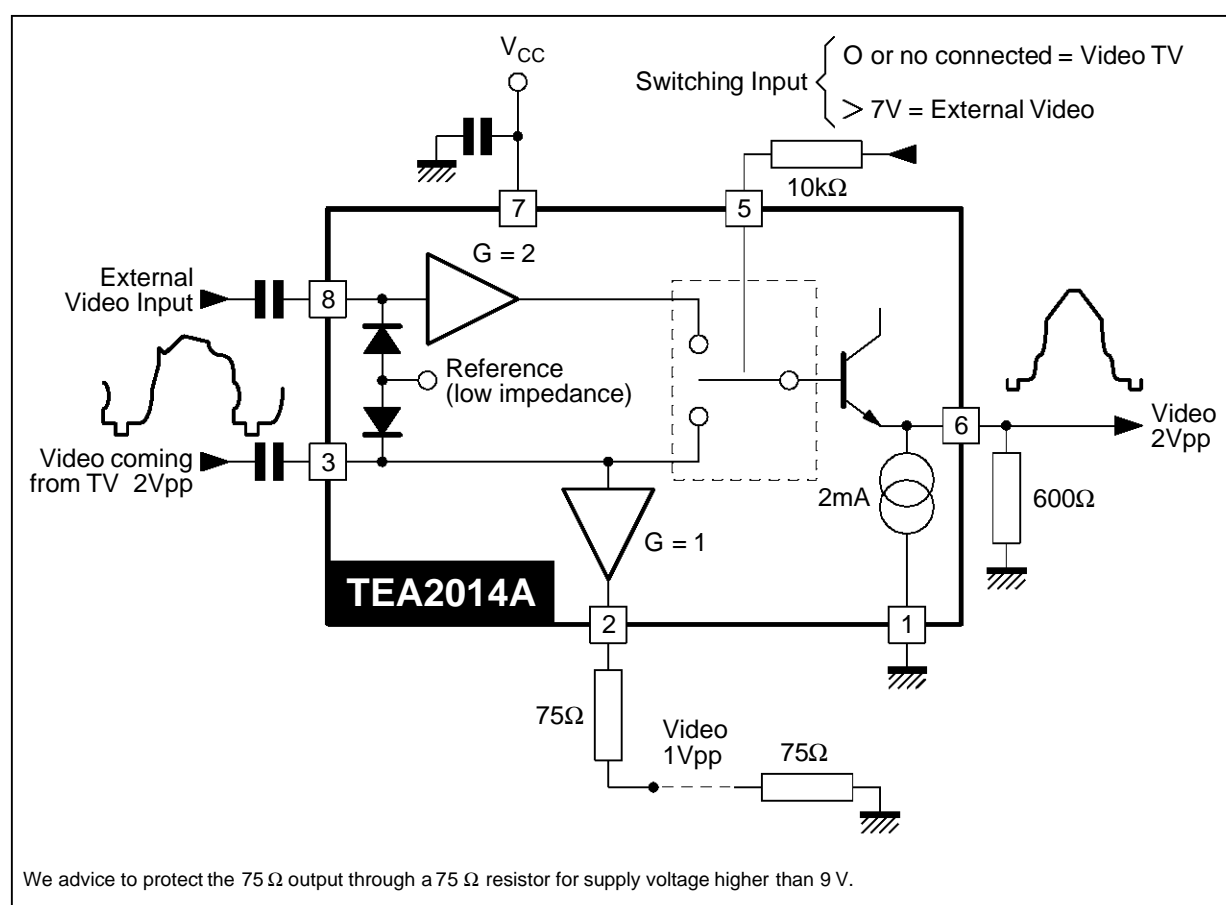
Note : Use a video signal with a synchro pulse in order to make the clamp work in a correct way. (75Ω to the ground and 10μF in series).

ELECTRICAL CHARACTERISTICS (continued)

$T_{amb} = +25\text{ }^{\circ}\text{C}$, $V_{CC} = 9\text{ V}$ (unless otherwise specified)

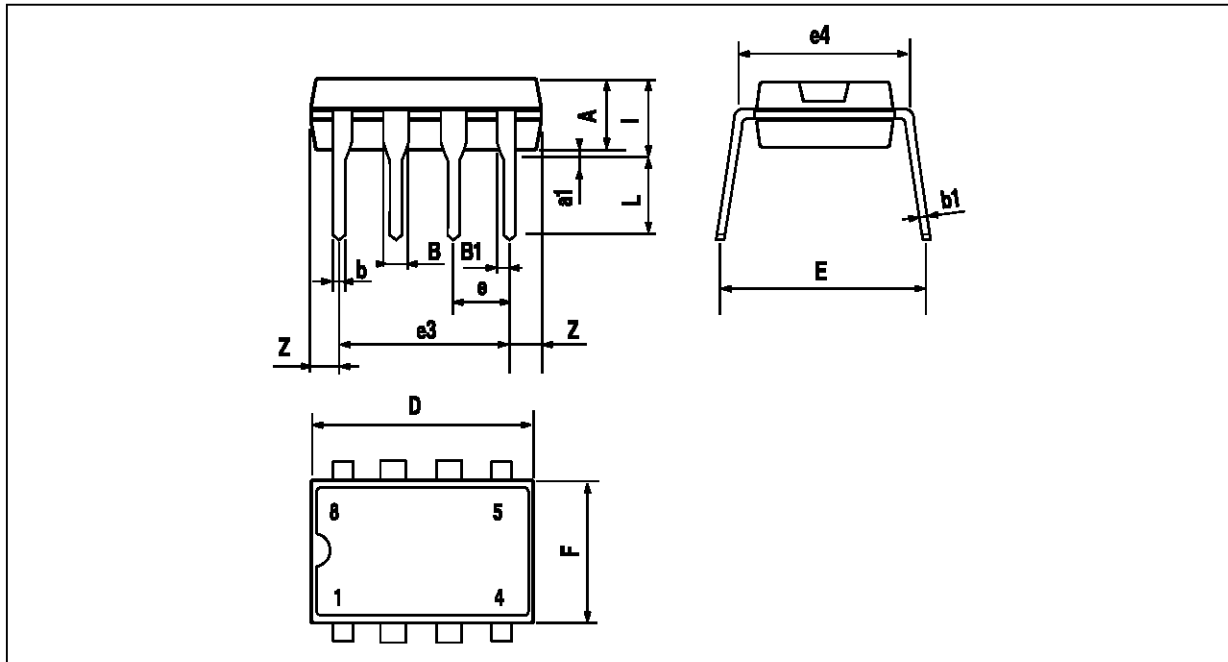
Symbol	Parameter	Min.	Typ.	Max.	Unit	
OTHER DYNAMIC FEATURES						
-	Video rejection Between Two Inputs	1MHz	-	-50	-	dB
		1kHz	-50	-	-	dB
-	Linearity Distortion	Luma (test line 17)	-	2	-	%
		Chroma (test line 331)	-	2	-	%
		Intermodulation Luma – Chroma (test line 331)	-	5	-	%
-	Supply Voltage Rejection (1 kHz)	40	50	-	dB	

2014A-04.TBL

TYPICAL APPLICATION

2014A-02.EPS

PACKAGE MECHANICAL DATA
8 PINS – PLASTIC DIP



PM-DIP8.EPS

Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A		3.32			0.131	
a1	0.51			0.020		
B	1.15		1.65	0.045		0.065
b	0.356		0.55	0.014		0.022
b1	0.204		0.304	0.008		0.012
D			10.92			0.430
E	7.95		9.75	0.313		0.384
e		2.54			0.100	
e3		7.62			0.300	
e4		7.62			0.300	
F			6.6			0.260
l			5.08			0.200
L	3.18		3.81	0.125		0.150
Z			1.52			0.060

DIP8.TBL

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