



# TEA2114

## VIDEO SWITCH

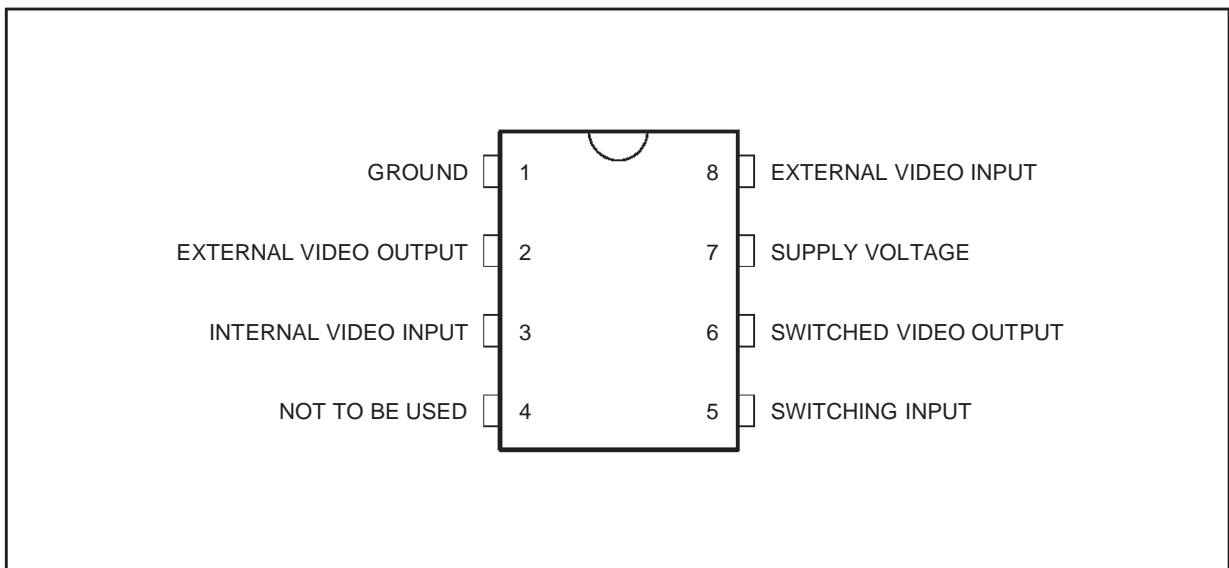
- 2 VIDEO OUTPUTS WITH 150Ω LOAD DRIVE CAPABILITY
- DYNAMIC OUTPUT AMPLITUDE 4 V<sub>PP</sub> ON EACH OUTPUT
- BANDWIDTH 18MHz TYP
- CLAMPED VIDEO INPUTS
- FULL PROTECTION AGAINST ESD



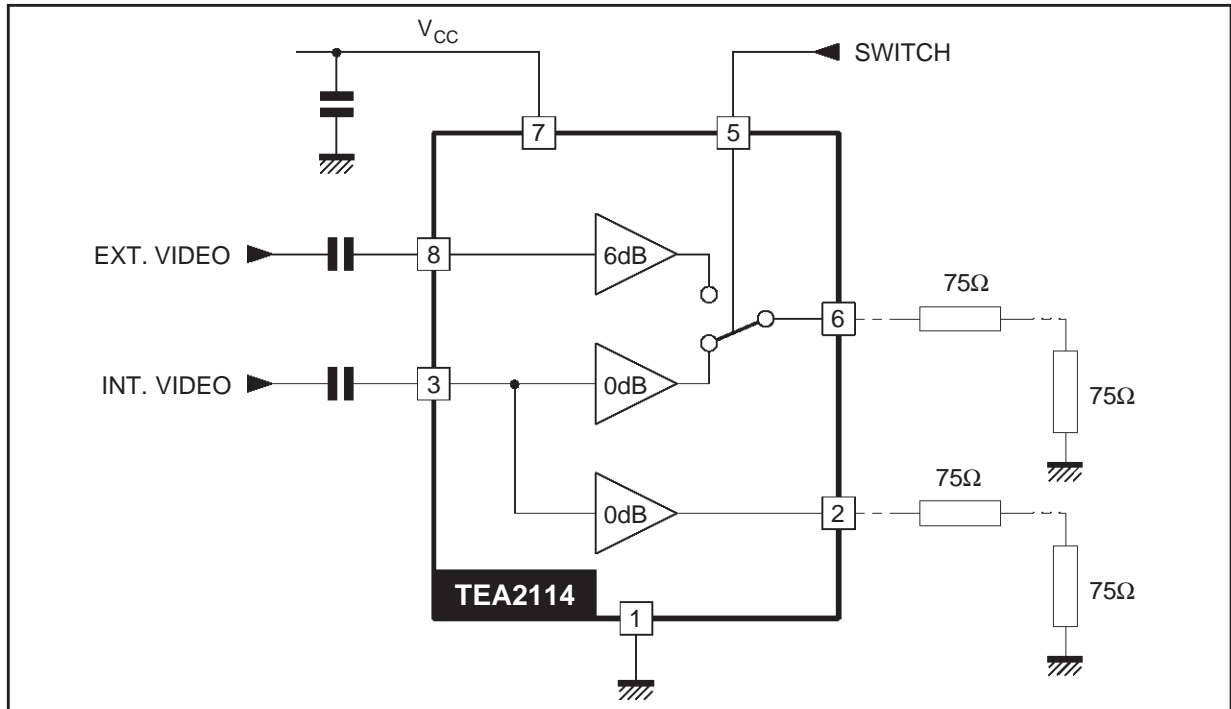
### DESCRIPTION

This integrated circuit provides general video switches. It is particularly intended for switching between the peri TV plug and video section of the sets. Its electrical performances make it suitable for wide bandwidth applications (Teletext, D2MAC).

### PIN CONNECTIONS



**BLOCK DIAGRAM**



2114-02.EPS

**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Value	Unit
$V_{CC}$	Supply Voltage	14	V
$T_j$	Junction Temperature	- 40, + 150	°C
$T_{stg}$	Storage Temperature	- 40, + 150	°C

2114-01.TBL

**ELECTRICAL CHARACTERISTICS**

$T_A = 25^\circ\text{C}$ ,  $V_{CC} = 8\text{V}$  (unless otherwise specified)

Symbol	Parameter	Min.	Typ.	Max.	Unit
$V_{CC}$	Supply Voltage	6.5		13.2	V
$I_{CC}$	Supply Current (no load Pin 2 and Pin 6)		10	15	mA
$I_{CC}$	Supply Current (with load $150\Omega$ on Pin 2 and Pin 6, no video on inputs)		25		mA

**INPUTS (Pin 3 and Pin 8)**

Symbol	Parameter	Min.	Typ.	Max.	Unit
	Video Input Swing		4 2		$V_{PP}$ $V_{PP}$
$V_{DCIN}$	DC Level Input	1.6	1.9	2.2	V
$I_{IN}$	Input Bias Current ( $V_{DC} = V_{DCIN} + 1.5 V_{DC}$ )		2	5	$\mu\text{A}$

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**ELECTRICAL CHARACTERISTICS** (continued)T<sub>A</sub> = 25°C, V<sub>CC</sub> = 8V (unless otherwise specified)

Symbol	Parameter	Min.	Typ.	Max.	Unit
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SWITCHED OUTPUT (Pin 6) (R<sub>LOAD</sub> = 150Ω)

	Video Output Swing	3	4		V <sub>PP</sub>
	DC Level Output	0.7	1.1	1.4	V
	Video Gain				
	Pin 6 versus Pin 3, measured at 100kHz, 1 V <sub>PP</sub> input signal	-0.8	-0.3	0.2	dB
	Pin 6 versus Pin 8, measured at 100kHz, 1 V <sub>PP</sub> input signal	5.5	6	6.5	dB
	Video Bandwidth				
	Pin 6 versus Pin 3, 1V <sub>PP</sub> input signal	18	27		MHz
	Pin 6 versus Pin 8, 1V <sub>PP</sub> input signal	12	18		MHz
	Output Impedance (measured Pin 6)		1		Ω

EXTERNAL OUTPUT (Pin 2) (R<sub>LOAD</sub> = 150Ω)

	Video Output Swing	3	4		V <sub>PP</sub>
	DC Level Output	0.7	1.1	1.4	V
	Video Gain (Pin 2 versus Pin 3, measured at 100kHz, 1 V <sub>PP</sub> input signal)	-0.8	-0.3	0.2	dB
	Video Bandwidth (Pin 2 versus Pin 3, 1V <sub>PP</sub> input signal)	18	27		MHz
	Output Impedance (measured Pin 2)		1		Ω

## SWITCHING INPUT (Pin 5)

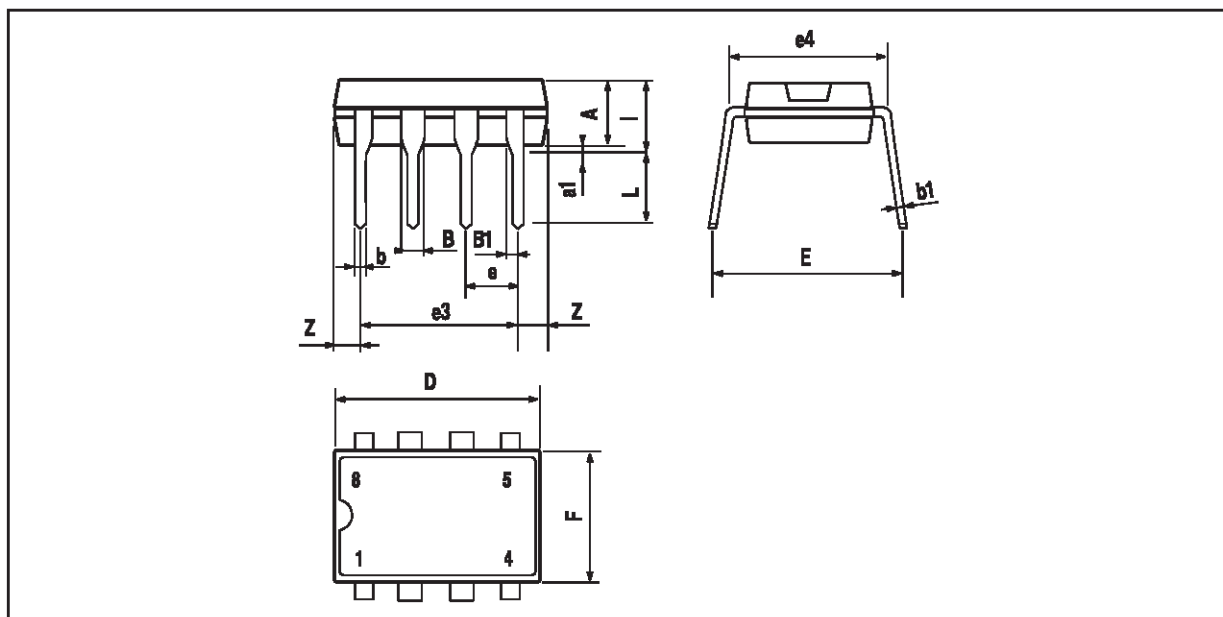
	Output Current Selection Pin (V <sub>5</sub> = 0V)			10	μA
	Threshold Voltage	2.5	3.7	5	V
	Max DC Level			V <sub>CC</sub>	V

OTHER DYNAMIC FEATURES (R<sub>LOAD</sub> = 150Ω on Pin 2 and Pin 6)

	Crosstalk (between any input, measured at 5MHz)		- 50		dB
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**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

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