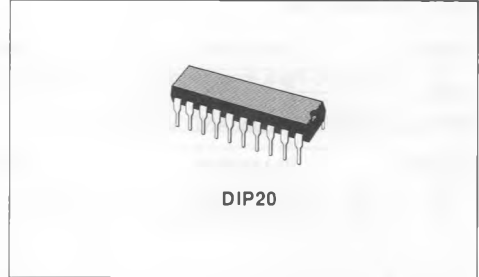


## HORIZONTAL AND VERTICAL DEFLECTION

ADVANCE DATA

- 503KHz REFERENCE OSCILLATOR
- 5.5 SUPPLY VOLTAGE INTERNALLY REGULATED
- COUNTDOWN TIMING LOGIC
- ADAPTS AUTOMATICALLY TO 625 LINE 50Hz AND 525 LINE/60Hz STANDARDS
- 50/60Hz IDENTIFICATION OUTPUT
- PHASE-CORRECTED HORIZONTAL OUTPUT WITH CONSTANT DUTY-CYCLE
- SUPER-SANDCASTLE DIGITALLY PERFORMED
- CRT PROTECTION



### DESCRIPTION

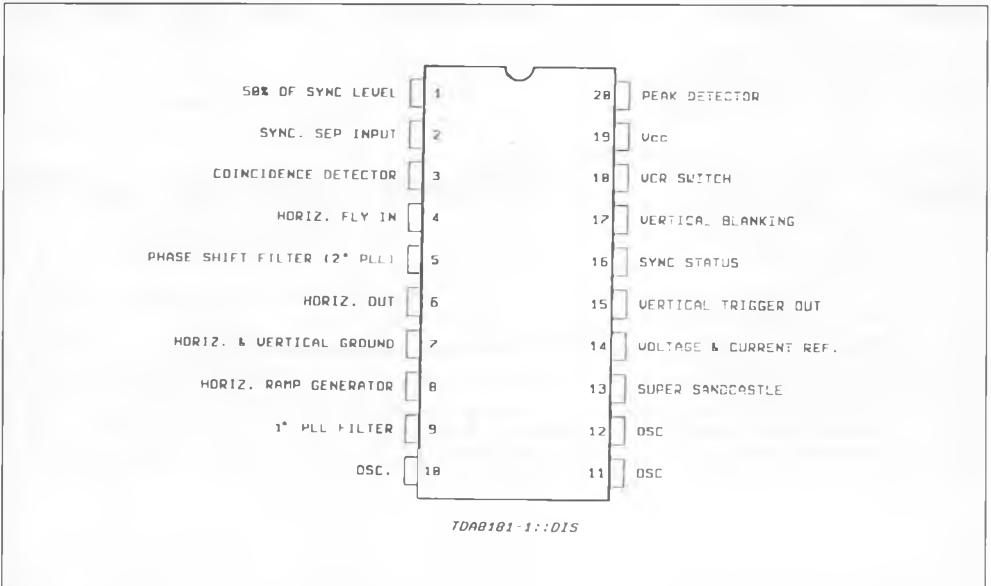
The TDA8181 deflection processor integrates the signal processing functions for horizontal and vertical deflection in TVs and monitors.

It generates drive waveforms for external deflection power stages plus super-sandcastle and separated vertical blanking signal for the chroma processor.

A 5V supply is used and only a series resistor is needed for higher voltage.

A high sensitivity sync separator with 50% sync. Threshold level, PLL and countdown circuitry guarantee high precision and eliminate all frequency adjustments.

### PIN CONNECTIONS



**ELECTRICAL CHARACTERISTICS**(V<sub>S</sub> = 5V, V<sub>CC</sub> = 12V ; T<sub>amb</sub> = 25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V <sub>S</sub>	Supply Voltage (pin 19)		4.75	5	5.25	V
I <sub>S</sub>	Supply Current (pin 19)		45	60	75	mA
V <sub>19</sub>	Stabilized Volt. (pin 19)	With Series Resistor 82Ω	5.3	5.7	6.2	V

**SYNC SEPARATOR**

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V <sub>2</sub>	Peak to Peak Input Signal	Negative Video Signal	0.3	1	4	V

**VIDEO IDENTIFICATION AND VCR SWITCH**

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V <sub>18</sub>	VCR Switch Voltage		1.6	2.1	2.4	V
V <sub>3</sub>	Threshold Vol. for PLL Gain Switch			2.3		V
I <sub>3</sub>	Peak Output Current	Lock Condition		1		mA
-I <sub>3</sub>	Sink Current			20		μA

**OSCILLATOR**

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
F <sub>O</sub>	Free Running Frequency			500		Kz
S <sub>O</sub>	Freq. Control Sens.			1		KHz/V
V <sub>9</sub>	Control Voltage Range			2.6 to 4		V

**SYNC OSCILLATOR PHASE COMPARATOR**

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I <sub>9</sub>	Control Peak Current			± 0.3		mA
I <sub>9</sub>	VCR Control Peak Current			± 0.6		mA
Δf	Catching & Holding Range			± 400		Hz

**FLYBACK - OSCILLATOR PHASE COMPARATOR**

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V <sub>4</sub>	Flyback Thresh. Volt.			1.4		V
V <sub>4</sub>	Clamp Voltage			5		V
I <sub>4</sub>	Input Current				1	mA
V <sub>5</sub>	Control Voltage Range			2.8 to 3.7		V
I <sub>5</sub>	Peak Control Current			± 0.5		mA
	Static Control Error			1		%
td	Permiss. Delay between Out Pulse and Flyback	t Flyback 12μsec t out Pulse 29μsec			17	μs

## ELECTRICAL CHARACTERISTICS (continued)

## SUPER SAND CASTLE

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_K$	Key Pulse Peak Volt.	Res. to $V_{CC}$ 4.7K		10		V
$V_L$	Line Blanking Voltage		4.25	4.5	4.75	V
$V_F$	Frame Blanking Volt.		2.38	2.5	2.63	V
$t_{Ks}$	Phase Relationship between Leading Edge of Key Pulse and the Middle of Video Sync Pulse			2.5		$\mu$ sec
$t_K$	Key Pulse Duration			4		$\mu$ sec
$t_F$	Vertical Blanking Duration			1.4		msec

## FRAME

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V15	Saturation Voltage	Pull-up Resistor = 10K $\Omega$		0.3		V
V15	High Level			12		V
tV	Vertical Trigger Output Duration			64		$\mu$ sec

## LINE

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
- I6				50		mA
V6	Saturation Voltage	- I6 = 50mA		0.4		V
tL	Output Pulse Duration	(see test circuit)		29		$\mu$ sec

## SYNC STATUS VOLTAGE

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V16	Output Voltage	50Hz		12		V
		60Hz	6.25	7	7.45	V
		UNLOCK			0.3	V

## OVERALL PHASE RELATIONSHIP

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$t_o$	Phase Differences between Middle of Flayback and the Middle of Sync. Pulse			2		$\mu$ sec

## VERTICAL BLANKING OUT AND FLY INPUT

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V17	Blanking Out Voltage			4		V
tF	Vertical Blank. Duration			1.4		$\mu$ sec
V17	Flayback Threshold IN			5.7		V
I17	Flayback Curr. IN		0.1			mA

