



# STK792-210

## Vertical Deflection Output Circuit for CTV and CRT Displays

### Overview

The STK792-210 is a vertical deflection output IC for color television and CRT displays. It incorporates a vertical deflection output amplifier, centering correction and pump-up circuits into single package .

### Applications

- Color television, wide-angle vision, HDTV and CRT displays

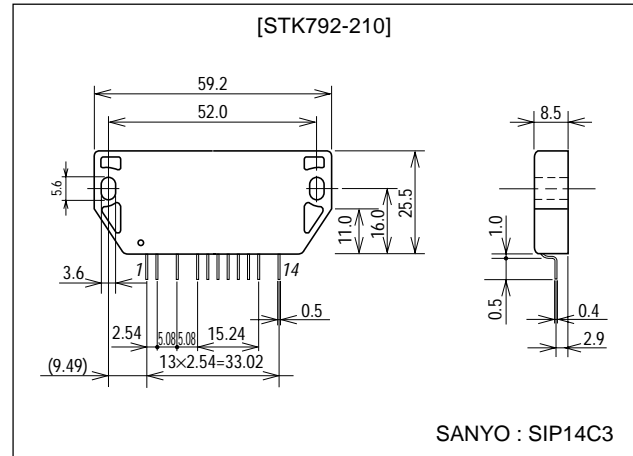
### Features

- Vertical centering correction circuit built-in, variable over a wide range, DC controllable
- Pump-up circuit built-in for low power dissipation
- Supply-independent pump-up circuit to cover different trace times
- High-current, high withstand voltage output amplifier ( $I_{OP-pmax}=4A$  at  $V_{CCmax}=160V$ )
- DC controllable vertical amplitude
- Quiescent current adjustment for zero crossover distortion in the output amplifier
- Wide supply range for all loads
- Compatible with displays from color television to wide-angle vision and HDTV

### Package Dimensions

unit:mm

4152



### Specifications

Maximum Ratings at  $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC7}$	Pin 7, during pump-up	160	V
	$V_{CC8, 9}$	Pins 8 and 9	80	V
Maximum deflection current	$I_{p-o}$	Pin 4 (Tr6, Tr7)	$\pm 2.0$	A
Maximum output current	$I_O$	Pin 2 (Tr13, Tr14)	$\pm 0.7$	A
Thermal resistance	$\theta_j-c1$	Vertical output stage (Tr6, Tr7)	6.0	$^\circ C/W$
	$\theta_j-c2$	Vertical centering correction (Tr13, Tr14)	20	$^\circ C/W$
Junction temperature	$T_j$		150	$^\circ C$
Operating substrate temperature	$T_c$		105	$^\circ C$
Storage temperature	$T_{stg}$		-30 to +125	$^\circ C$

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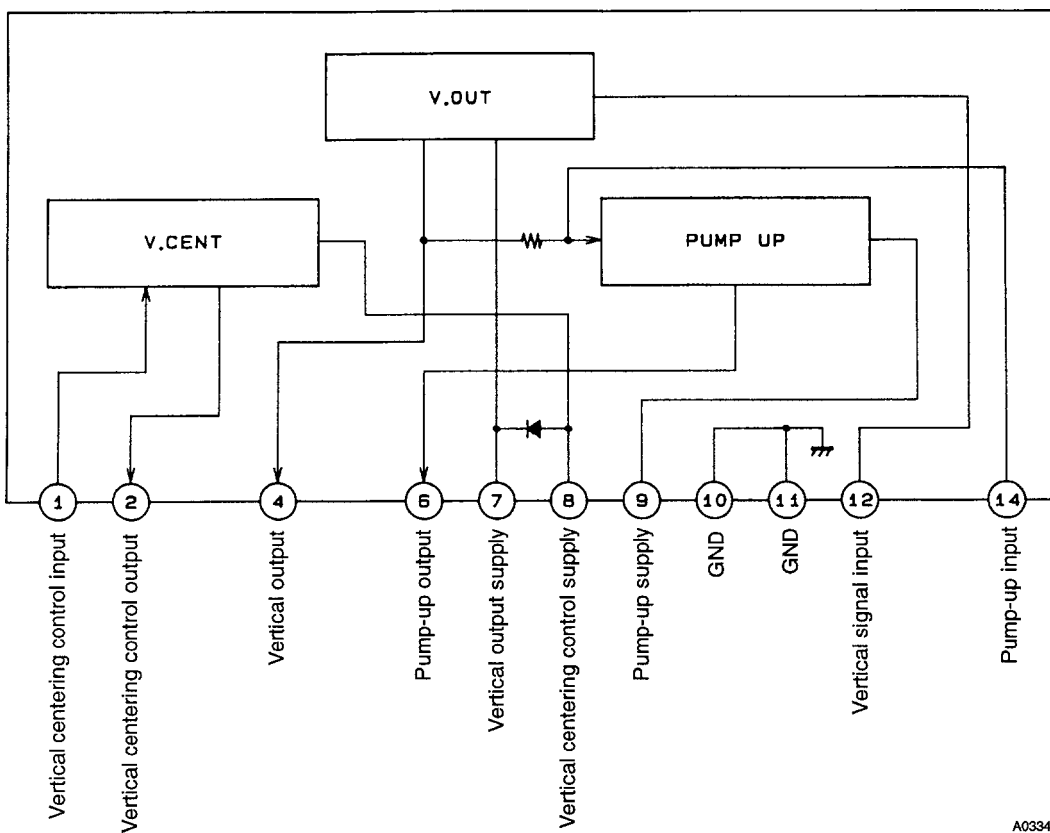
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Operating Characteristics at  $T_c = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Idling current	$I_{CCO7}$	$V7=V8=35\text{V}$		30		mA
Neutral voltage	$V_{N4}$	$V7=V8=35\text{V}$		21		V
Deflection output saturation voltage (lower)	$V_{sat4-11}$	Between pins 4 and 11, $V7=V8=35\text{V}$ , $I4=+1.3\text{A}$			2.0	V
Deflection output saturation voltage (upper)	$V_{sat7-4}$	Between pins 7 and 4, $V7=V8=35\text{V}$ , $I4=-1.3\text{A}$			3.2	V
Pump-up charge saturation voltage (1)	$V_{sat6-11}$	Between pins 6 and 11, $V9=35\text{V}$ , $I6=+30\text{mA}$			2.0	V
Pump-up charge saturation voltage (2)	$V_{sat9-6}$	Between pins 9 and 6, $V9=35\text{V}$ , $I6=-1.3\text{A}$			3.0	V
Center correction saturation voltage (lower)	$V_{sat2-11}$	Between pins 2 and 11, $V8=35\text{V}$ , $I=-0.7\text{A}$			2.0	V
Center correction saturation voltage (upper)	$V_{sat8-2}$	Between pins 8 and 2, $V8=35\text{V}$ , $I=-0.7\text{A}$			2.0	V

Note. Measurement are made using a constant-voltage supply.

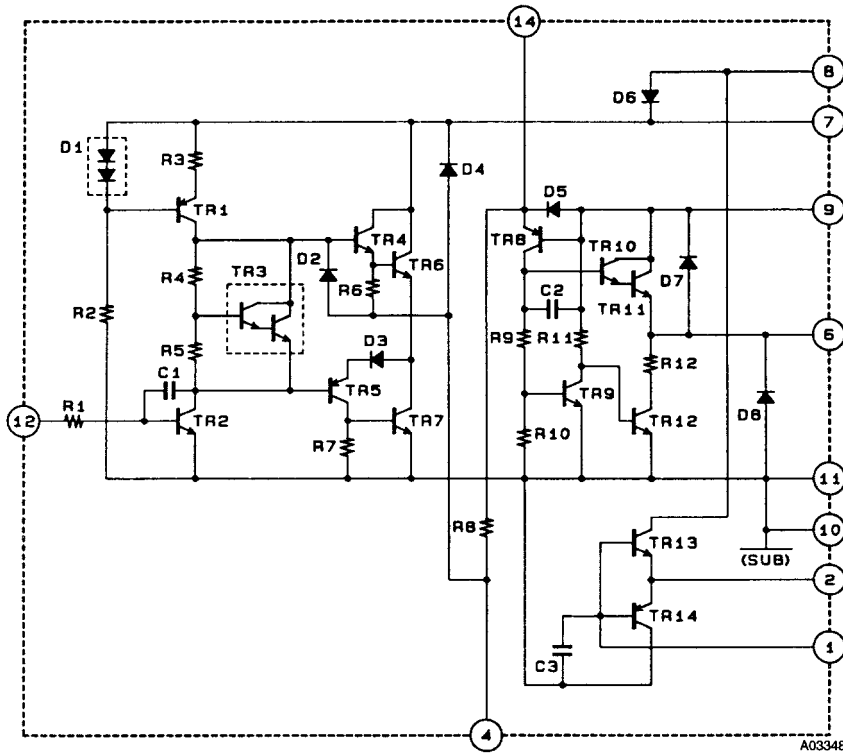
Block Diagram



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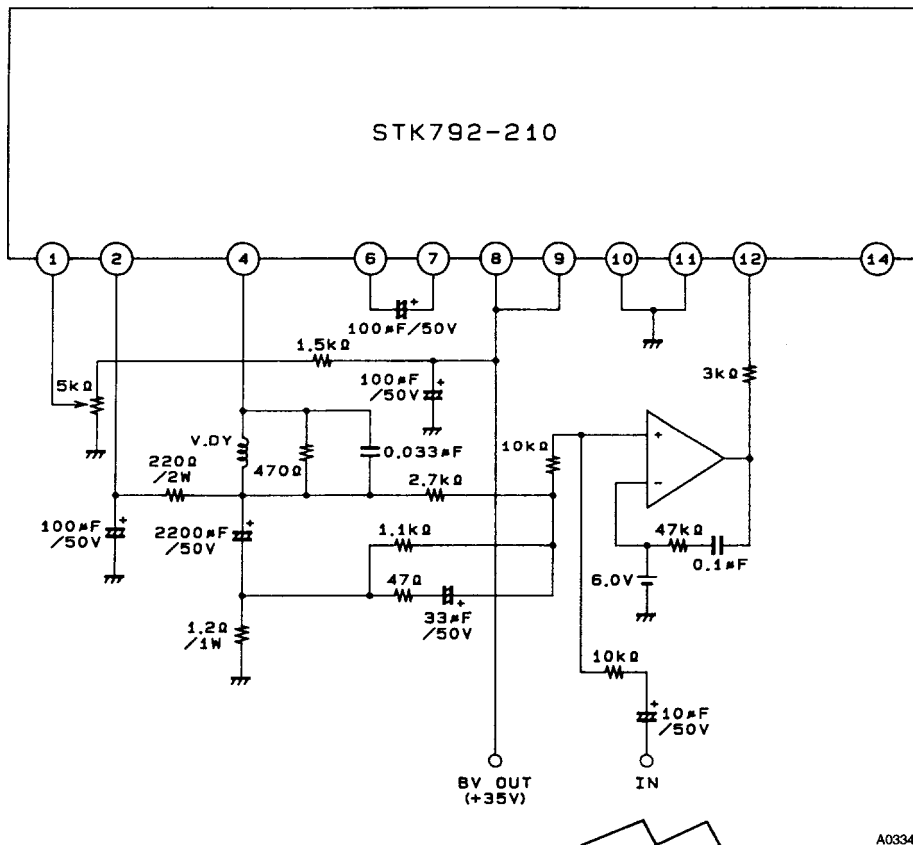
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## Equivalent Circuit



Pins 3, 5, and 13 have no external terminal.

## Sample Application Circuit



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