



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

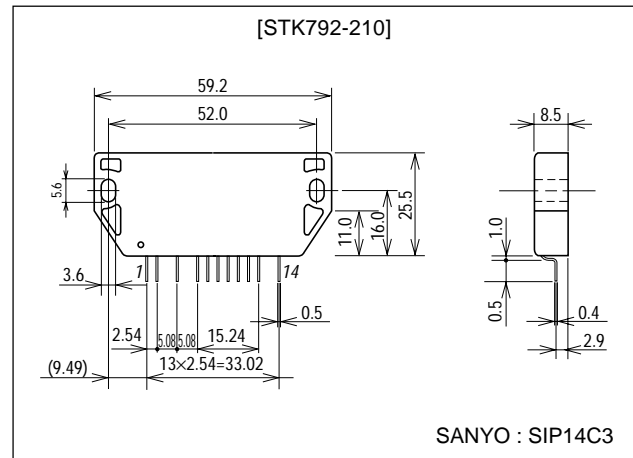
Features

- 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)	± 2.0	A
Maximum output current	I_O	Pin 2 (Tr13, Tr14)	± 0.7	A
Thermal resistance	θ_j-c1	Vertical output stage (Tr6, Tr7)	6.0	$^\circ C/W$
	θ_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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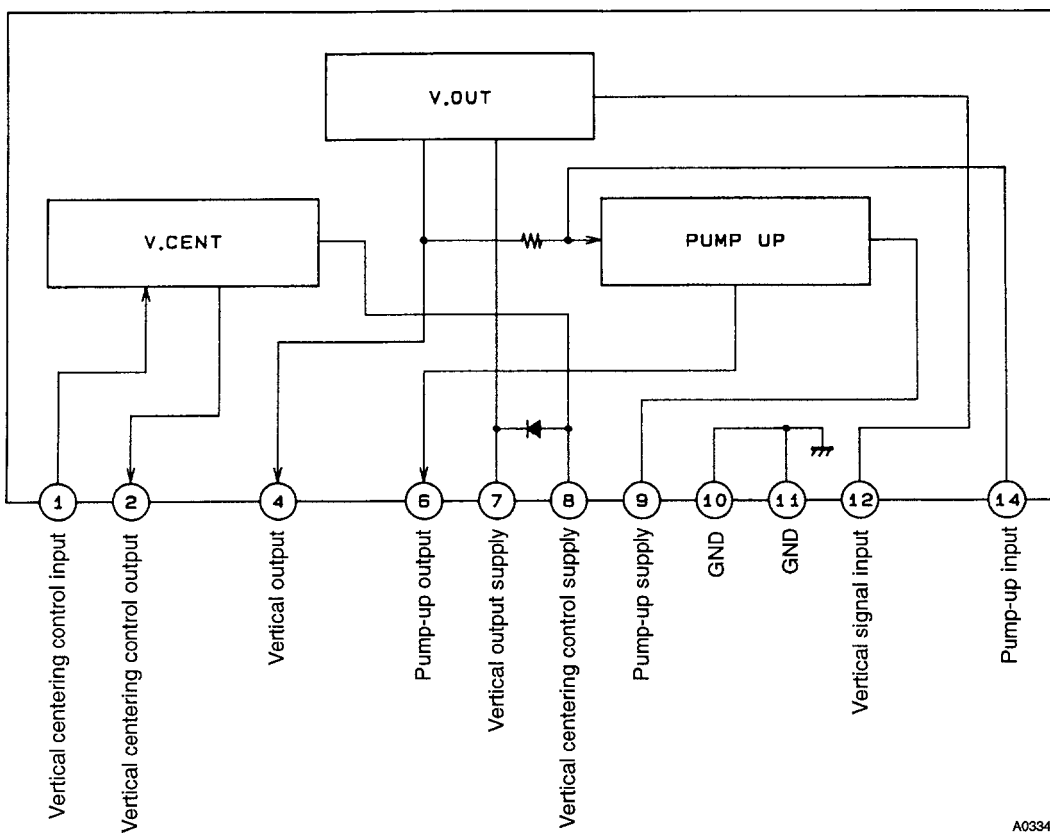
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Operating Characteristics at $T_c = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Idling current	I_{CCO7}	$V_7=V_8=35\text{V}$		30		mA
Neutral voltage	V_{N4}	$V_7=V_8=35\text{V}$		21		V
Deflection output saturation voltage (lower)	$V_{sat4-11}$	Between pins 4 and 11, $V_7=V_8=35\text{V}$, $I_4=+1.3\text{A}$			2.0	V
Deflection output saturation voltage (upper)	V_{sat7-4}	Between pins 7 and 4, $V_7=V_8=35\text{V}$, $I_4=-1.3\text{A}$			3.2	V
Pump-up charge saturation voltage (1)	$V_{sat6-11}$	Between pins 6 and 11, $V_9=35\text{V}$, $I_6=+30\text{mA}$			2.0	V
Pump-up charge saturation voltage (2)	V_{sat9-6}	Between pins 9 and 6, $V_9=35\text{V}$, $I_6=-1.3\text{A}$			3.0	V
Center correction saturation voltage (lower)	$V_{sat2-11}$	Between pins 2 and 11, $V_8=35\text{V}$, $I=-0.7\text{A}$			2.0	V
Center correction saturation voltage (upper)	V_{sat8-2}	Between pins 8 and 2, $V_8=35\text{V}$, $I=-0.7\text{A}$			2.0	V

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

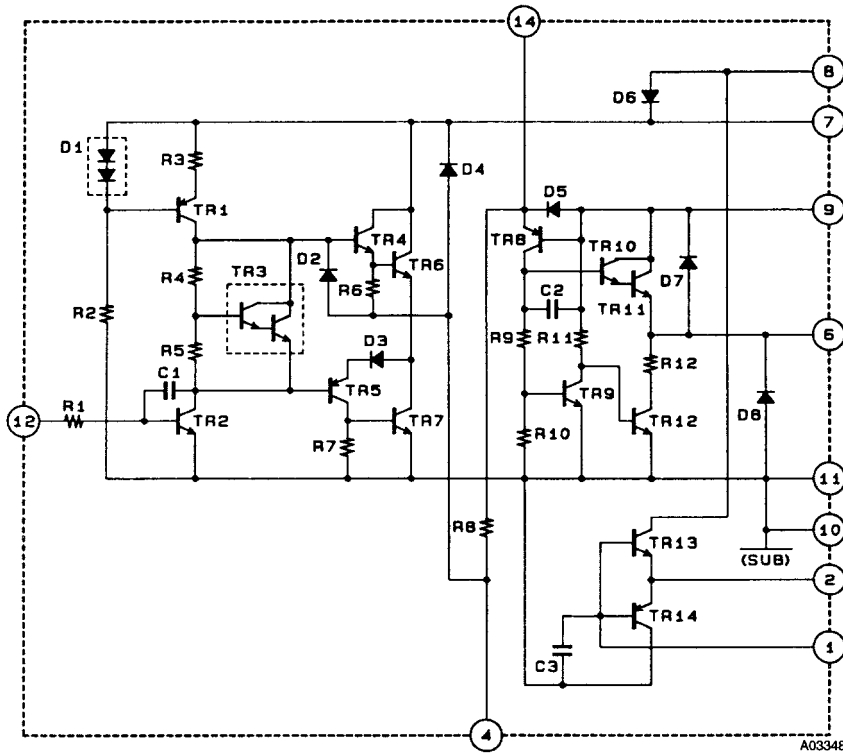
Block Diagram



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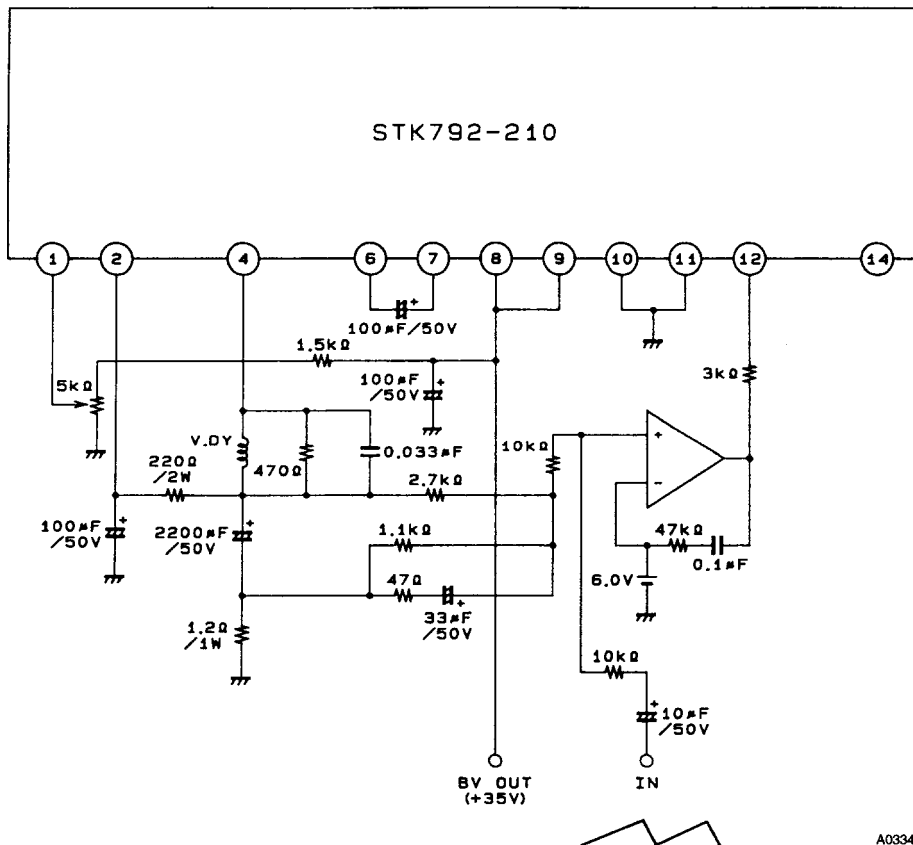
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Equivalent Circuit



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

Sample Application Circuit



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