

SANYO

No. 5007

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 a single package.

Applications

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

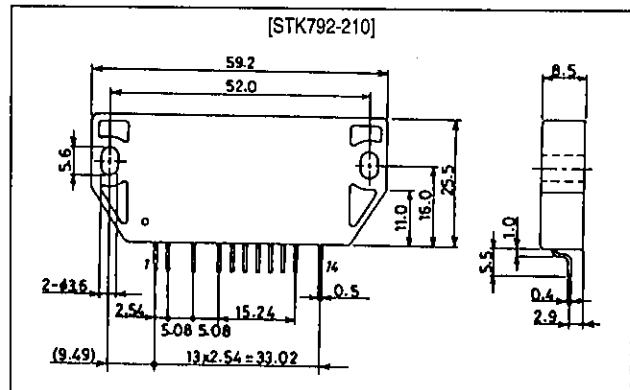
Features

- 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-p} max = 4A at V_{CC} max = 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 $T_a = 25^\circ\text{C}$

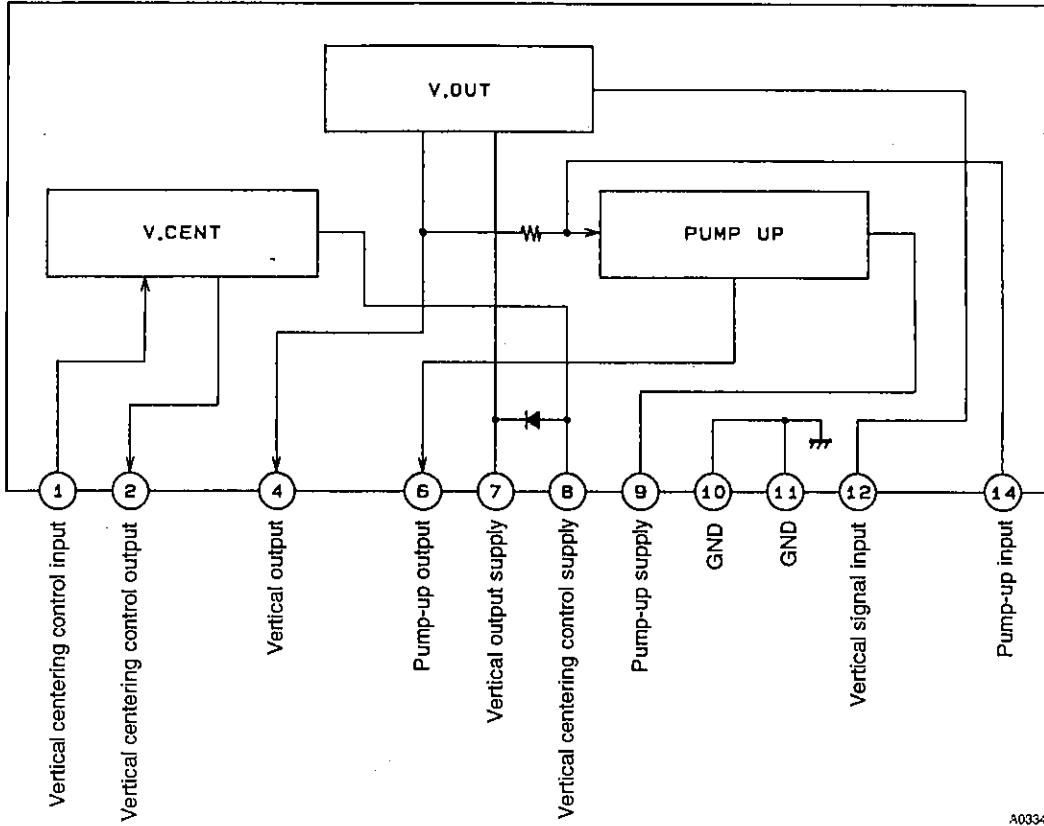
Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC7}	Pin 7, during pump-up	160	V
	$V_{CC8,9}$	Pins 8 and 9	80	V
Maximum deflection current	I_{p-o}	Pin 4 (Tr6, Tr7)	± 2.0	A
Maximum output current	I_o	Pin 2 (Tr13, Tr14)	± 0.7	A
Thermal resistance	θ_{j-c1}	Vertical output stage (Tr6,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

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

Parameter	Symbol	Conditions	min	typ	max	Unit
Idling current	I_{CC07}	$V7 = V8 = 35\text{V}$	-	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, $V7 = V8 = 35\text{V}$, $I_4 = +1.3\text{A}$	-	-	2.0	V
Deflection output saturation voltage (upper)	V_{sat7-4}	Between pins 7 and 4, $V7 = V8 = 35\text{V}$, $I_4 = -1.3\text{A}$	-	-	3.2	V
Pump-up charge saturation voltage (1)	$V_{sat6-11}$	Between pins 6 and 11, $V9 = 35\text{V}$, $I_6 = +30\text{mA}$	-	-	2.0	V
Pump-up charge saturation voltage (2)	V_{sat9-6}	Between pins 9 and 6, $V9 = 35\text{V}$, $I_6 = -1.3\text{A}$	-	-	3.0	V
Center correction saturation voltage (lower)	$V_{sat2-11}$	Between pins 2 and 11, $V8 = 35\text{V}$, $I = +0.7\text{A}$	-	-	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

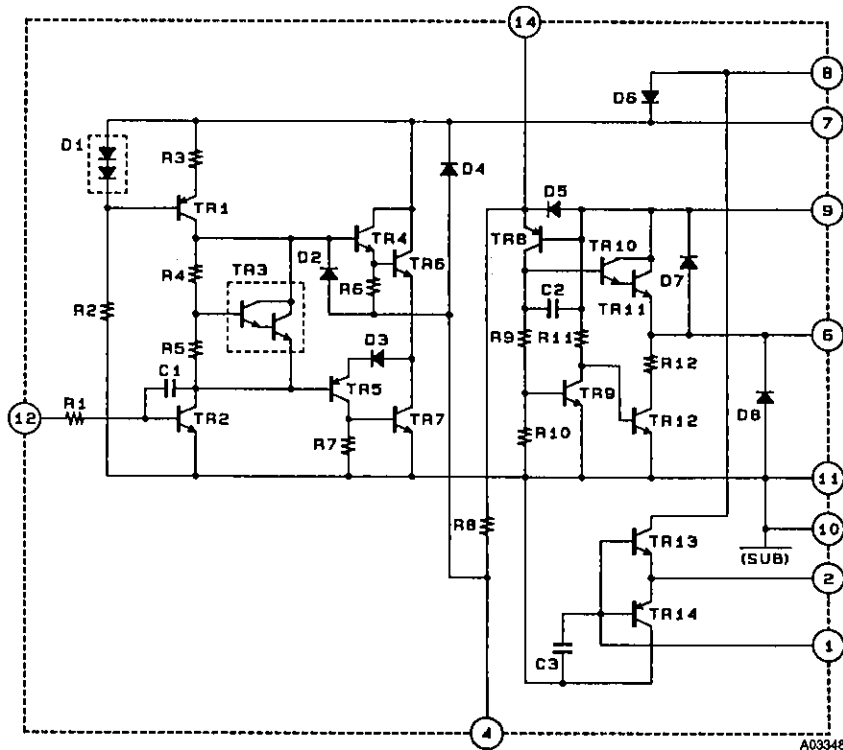
Note. Measurements are made using a constant-voltage supply.

Block Diagram



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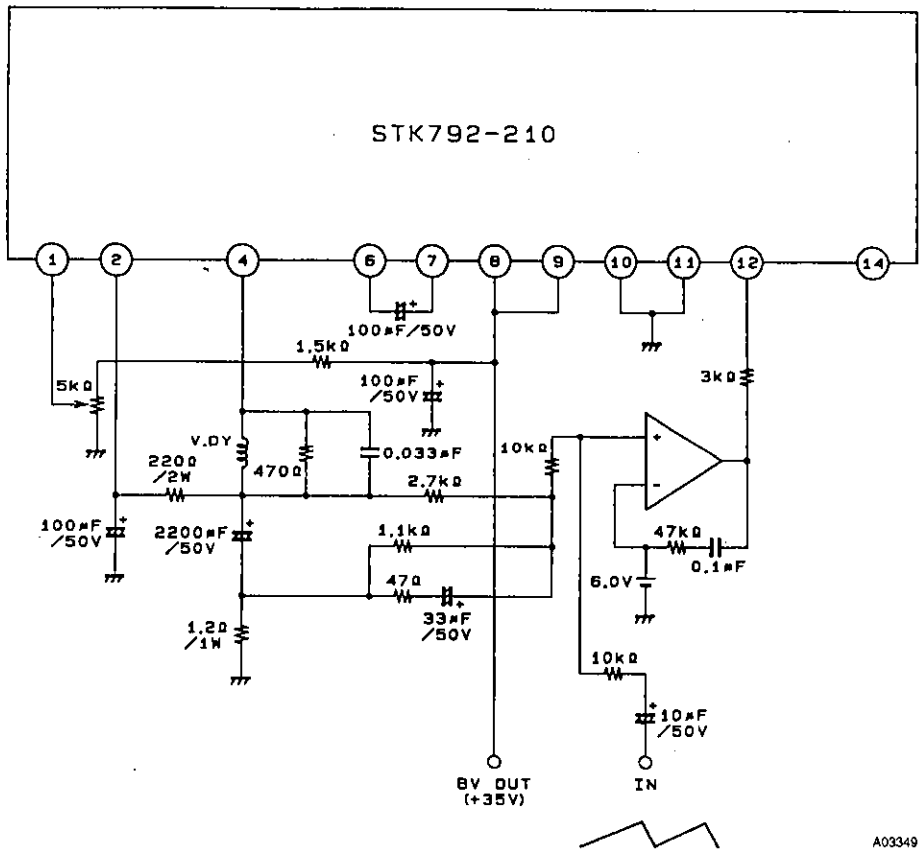
Equivalent Circuit



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

Sample Application Circuit



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