

**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

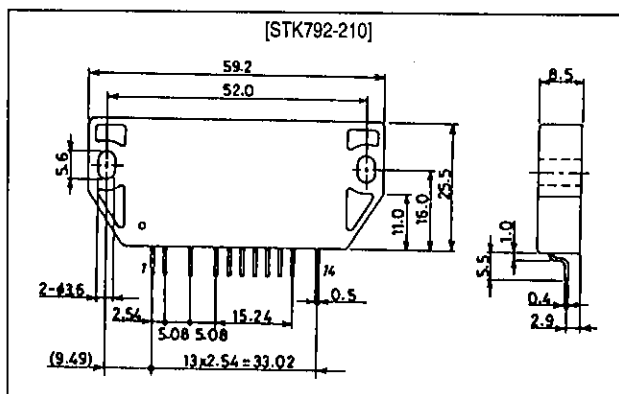
**Features**

- 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  $T_a = 25^\circ\text{C}$

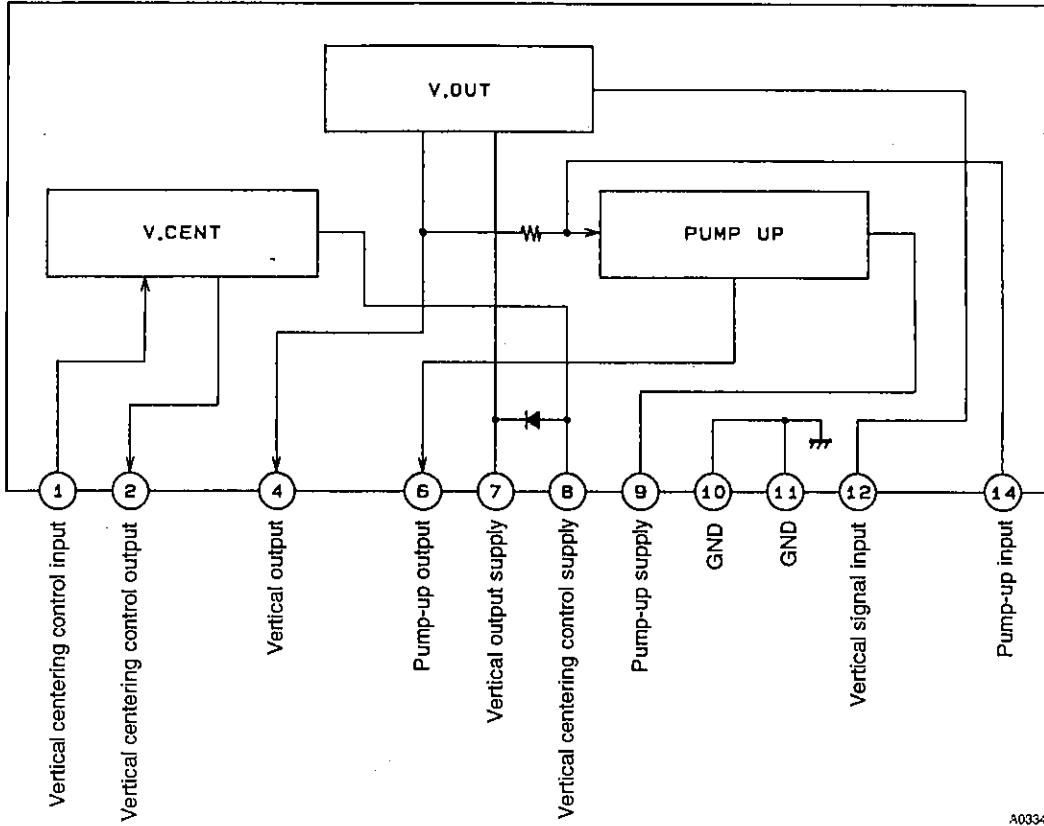
Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC7}$	Pin 7, during pump-up	160	V
	$V_{CC8,9}$	Pins 8 and 9	80	V
Maximum deflection current	$I_{p-o}$	Pin 4 (Tr6, Tr7)	$\pm 2.0$	A
Maximum output current	$I_o$	Pin 2 (Tr13, Tr14)	$\pm 0.7$	A
Thermal resistance	$\theta_{j-c1}$	Vertical output stage (Tr6, Tr7)	6.0	$^\circ\text{C/W}$
	$\theta_{j-c2}$	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

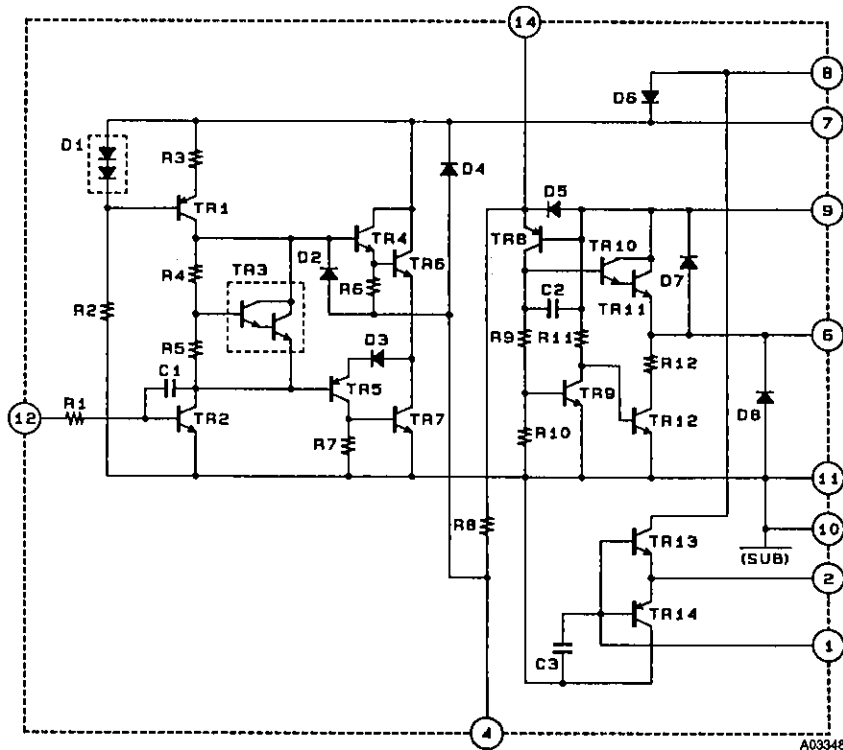
Note. Measurements are made using a constant-voltage supply.

Block Diagram



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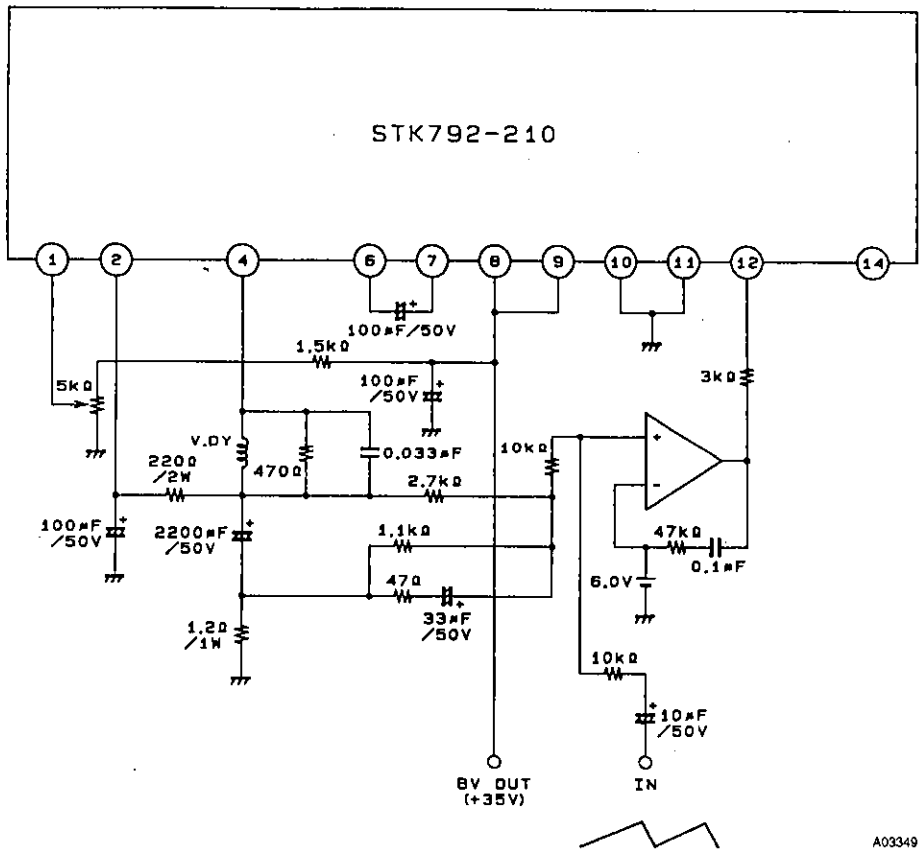
Equivalent Circuit



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

Sample Application Circuit



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