Ordering number: EN 5007

Thick Film Hybrid IC

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

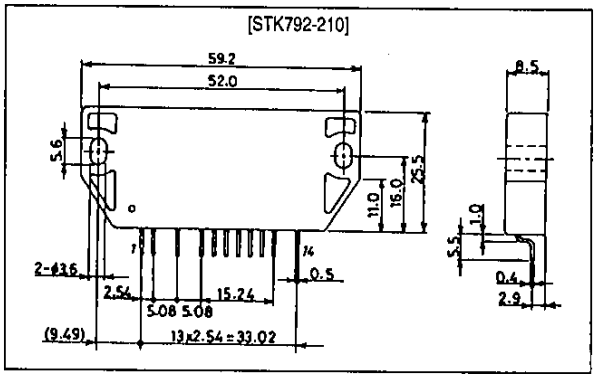
Features

- 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 ($I_{Op\text{-}p}$ 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



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Specifications

Maximum Ratings at Ta = 25°C

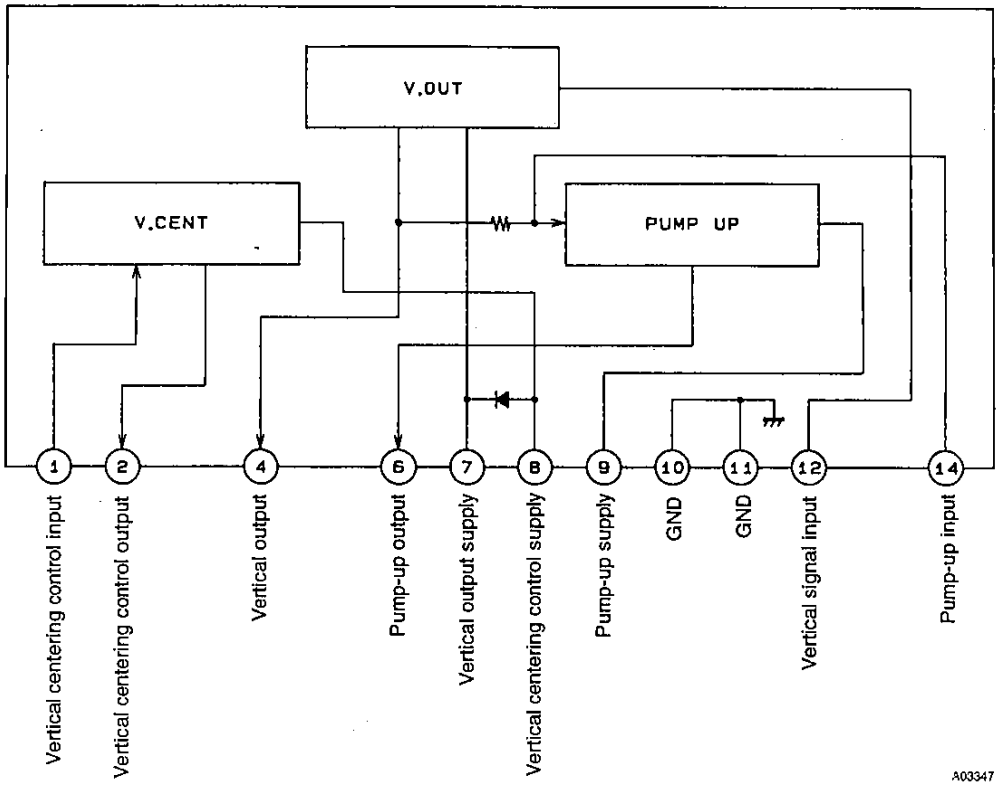
Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC}7$	Pin 7, during pump-up	160	V
	$V_{CC}8,9$	Pins 8 and 9	80	V
Maximum deflection current	$I_{p\text{-}o}$	Pin 4 (Tr6, Tr7)	±2.0	A
Maximum output current	I_O	Pin 2 (Tr13, Tr14)	±0.7	A
Thermal resistance	θj-c1	Vertical output stage (Tr6, Tr7)	6.0	°C/W
	θj-c2	Vertical centering correction (Tr13, Tr14)	20	°C/W
Junction temperature	Tj		150	°C
Operating substrate temperature	Tc		105	°C
Storage temperature	Tstg		–30 to +125	°C

Operating Characteristics at Tc = 25°C

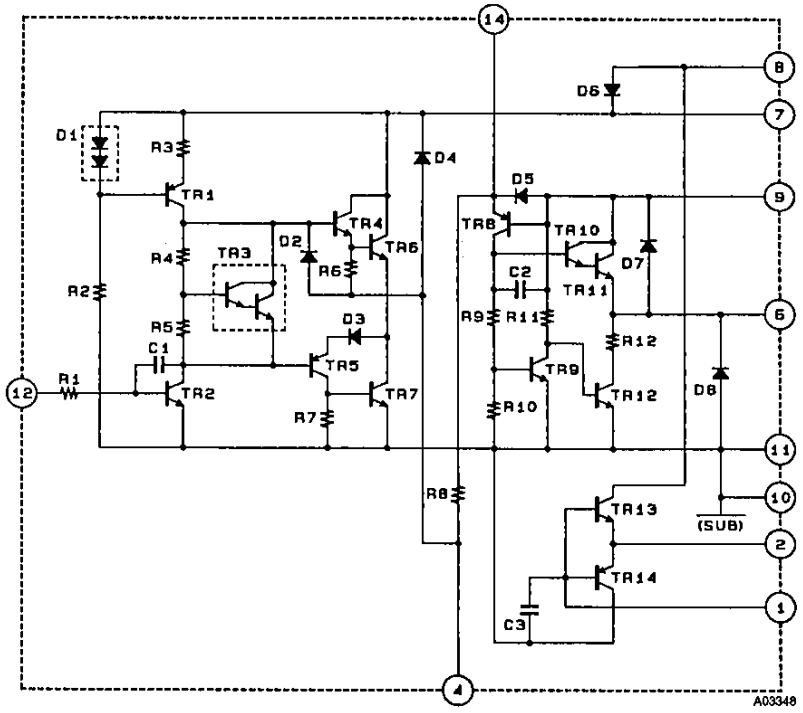
Parameter	Symbol	Conditions	min	typ	max	Unit
Idling current	$I_{CCO}7$	V7 = V8 = 35V	–	30	–	mA
Neutral voltage	V_N4	V7 = V8 = 35V	–	21	–	V
Deflection output saturation voltage (lower)	$V_{sat}4\text{-}11$	Between pins 4 and 11, V7 = V8 = 35V, I4 = +1.3A	–	–	2.0	V
Deflection output saturation voltage (upper)	$V_{sat}7\text{-}4$	Between pins 7 and 4, V7 = V8 = 35V, I4 = –1.3A	–	–	3.2	V
Pump-up charge saturation voltage (1)	$V_{sat}6\text{-}11$	Between pins 6 and 11, V9 = 35V, I6 = +30mA	–	–	2.0	V
Pump-up charge saturation voltage (2)	$V_{sat}9\text{-}6$	Between pins 9 and 6, V9 = 35V, I6 = –1.3A	–	–	3.0	V
Center correction saturation voltage (lower)	$V_{sat}2\text{-}11$	Between pins 2 and 11, V8 = 35V, I = +0.7A	–	–	2.0	V
Center correction saturation voltage (upper)	$V_{sat}8\text{-}2$	Between pins 8 and 2, V8 = 35V, I = –0.7A	–	–	2.0	V

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

Block Diagram



Equivalent Circuit



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

Sample Application Circuit