

SANYO

No. 5017

STK792-110**Vertical Deflection Output Circuit
for CTV and CRT Displays****Overview**

The STK792-110 is a vertical output amplifier and supply switching circuit hybrid IC for high withstand voltage, vertical deflection output circuits in CTV and CRT displays.

Applications

- Large screen, ultrahigh definition CRT displays
- Large screen CTV, HDTV and video projectors

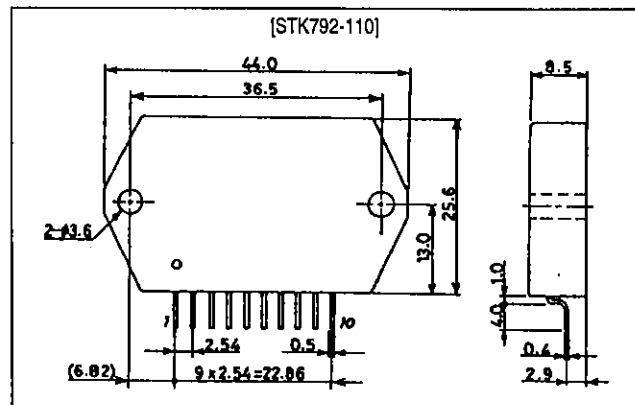
Features

- Vertical deflection basic functions (output amplifier and supply switching circuit) in a compact package
- Split dual supply DC amplifier, output amplifier structure
- Supply switching circuit built-in, making low power dissipation operation possible
- High-current (4Ap-p), high withstand voltage (160V max) output amplifier design
- Increasing the supply switching circuit supply voltage enables the retrace time to be reduced ($\leq 0.2\text{ms}$)
- High-power design ideal for large-screen CTV and CRT displays, and video projectors
- DC amplifiers for good DC component characteristics in the sawtooth waveform for vertical centering correction

Package Dimensions

unit: mm

4154



Specifications

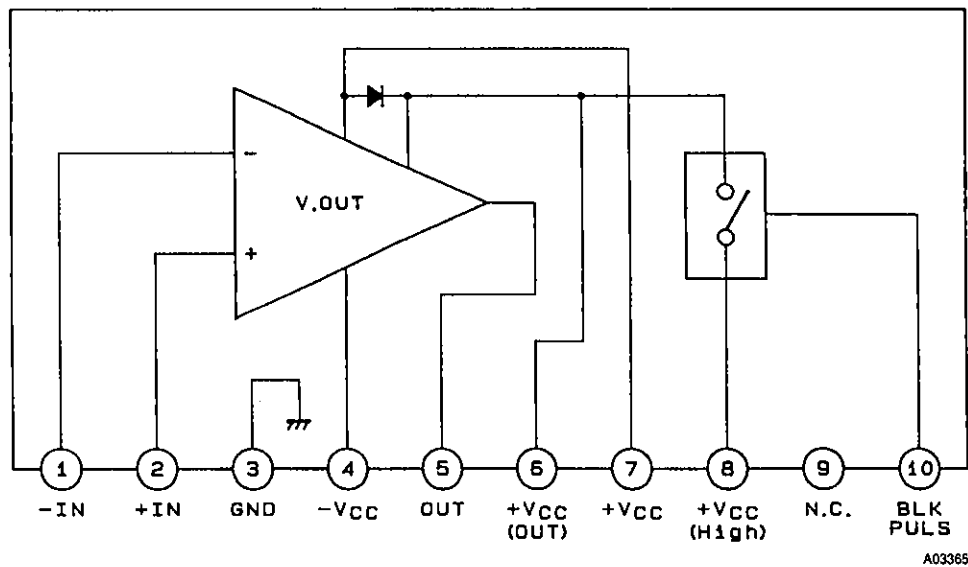
Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC8-4}	Between pins 8 and 4	160	V
	$\pm V_{CC}$		± 30	V
Maximum deflection current	I_{p-o}	Pin 5	± 2.0	A
Maximum collector current	I_c	TR11	2.0	A
Thermal resistance	$\theta_j\text{-c1}$	Vertical output transistors Tr8 and Tr9	6.0	$^\circ\text{C/W}$
	$\theta_j\text{-c2}$	Supply switching transistor Tr11	15	$^\circ\text{C/W}$
Junction temperature	T_j		150	$^\circ\text{C}$
Operating substrate temperature	T_c		105	$^\circ\text{C}$
Storage temperature	T_{stg}		-30 to +125	$^\circ\text{C}$

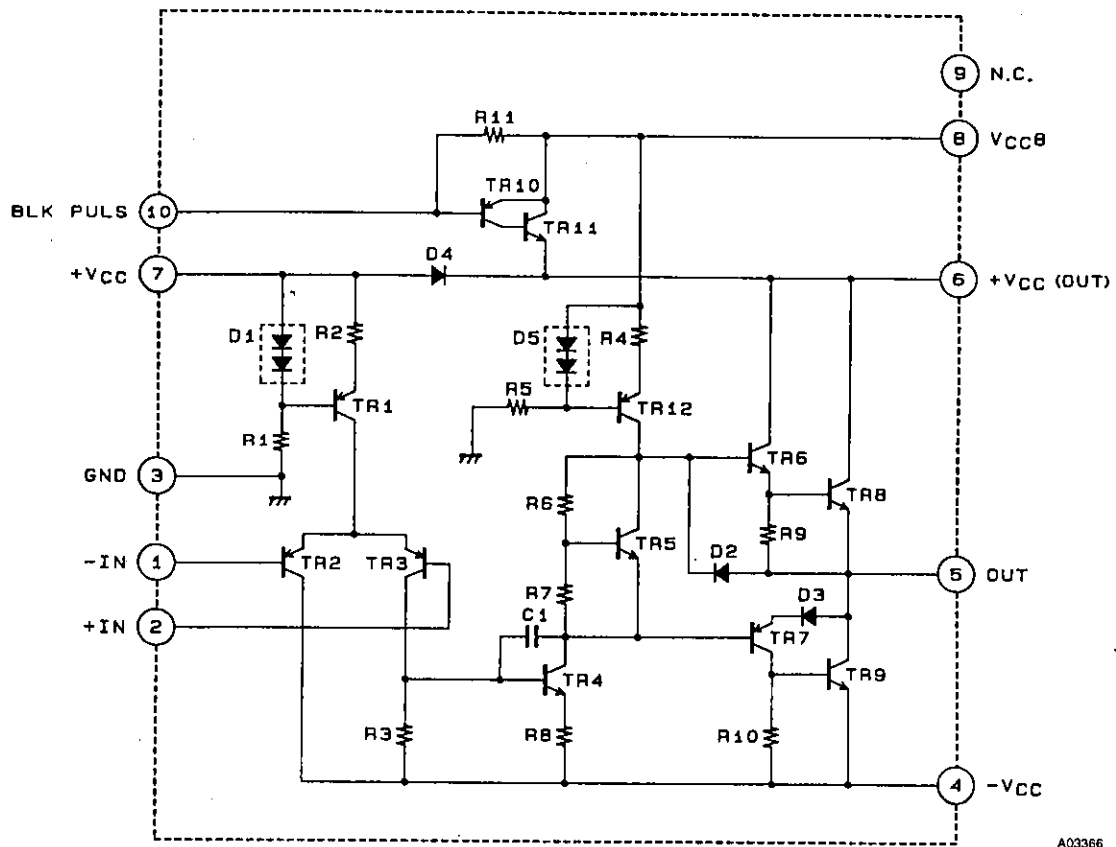
Electrical Characteristics at $T_c = 25^\circ\text{C}$, $\pm V_{CC} = 20\text{V}$, $V_{CC8} = 120\text{V}$

Parameter	Symbol	Conditions	min	typ	max	Unit
Idling current	I_{CCO7}		-	15	30	mA
Neutral voltage	V_{N5}		-50	-	+50	mV
Deflection output saturation voltage (lower)	V_{sat5-4}	Between pins 5 and 4, $I_5 = +1.1\text{A}$	-	2.2	3.0	V
Deflection output saturation voltage (upper)	V_{sat6-5}	Between pins 6 and 5, $I_5 = +1.1\text{A}$	-	1.0	2.0	V
Supply switching circuit saturation voltage	V_{sat8-6}	Between pins 8 and 6, $I_8 = +1.1\text{A}$	-	1.0	2.0	V

Block Diagram

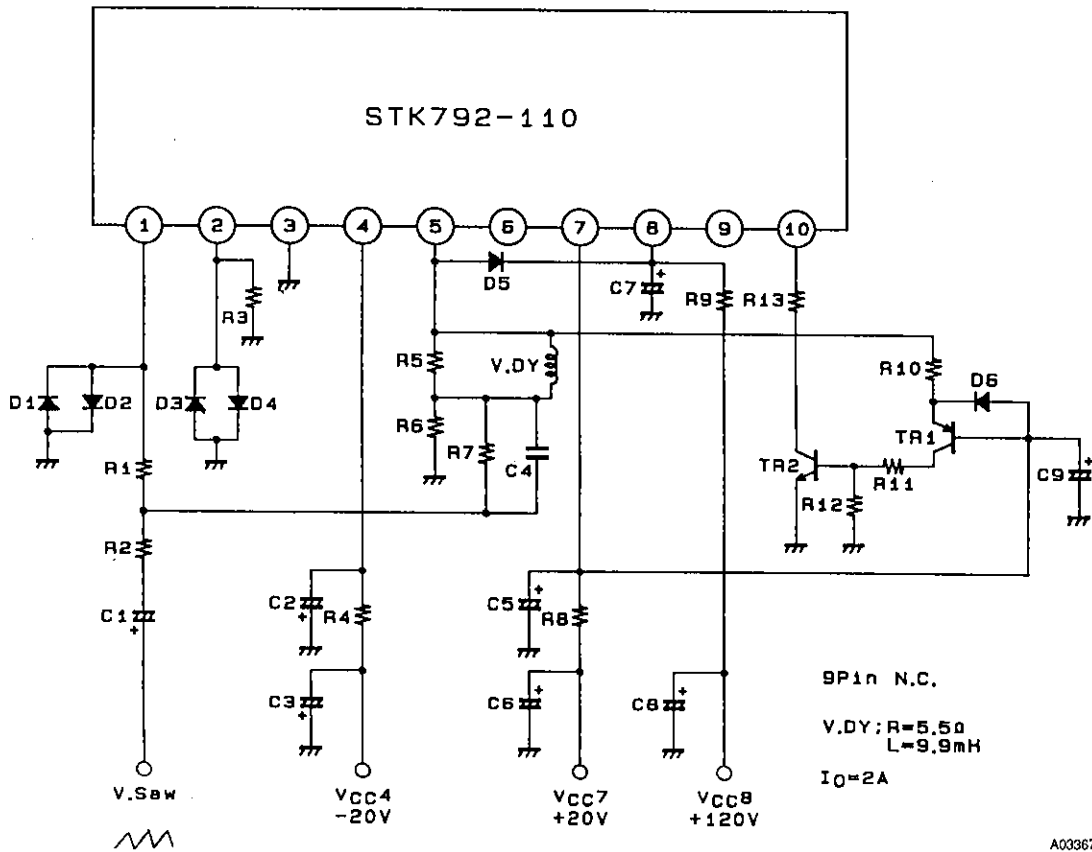


Equivalent Circuit



A03366

Sample Application Circuit (1)



A00367

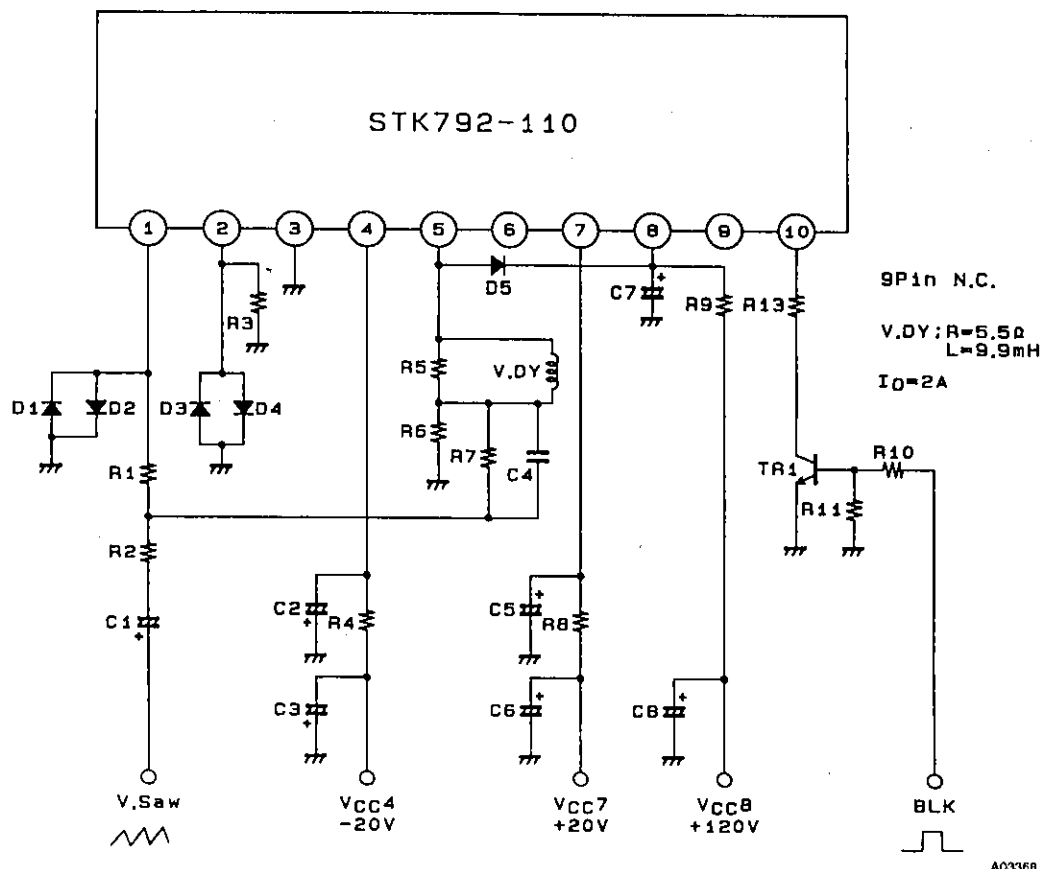
TR1 2SA1209
TR2 2SC2911

D1 DS442
D2 DS442
D3 DS442
D4 DS442
D5 DFC15
D6 DS442

R1 2.7kΩ
R2 4.7kΩ
R3 4.7kΩ
R4 1.8Ω/1W
R5 680Ω/12W
R6 1.1Ω/1W
R7 2.2kΩ
R8 1.8Ω/1W
R9 470Ω/2W
R10 10kΩ
R11 10kΩ
R12 3.3kΩ
R13 10kΩ

C1 22μF/16V
C2 1000μF/35V
C3 100μF/50V
C4 0.0022μF
C5 1000μF/35V
C6 100μF/50V
C7 22μF/160V
C8 1μF/160V
C9 22μF/50V

Sample Application Circuit (2)



A03368

TR1	2SC2911	R1	2.7kΩ	C1	22μF/16V
D1	DS442	R2	4.7kΩ	C2	1000μF/35V
D2	DS442	R3	4.7kΩ	C3	100μF/50V
D3	DS442	R4	1.8Ω/1W	C4	0.0022μF
D4	DS442	R5	680Ω/12W	C5	1000μF/35V
D5	DFC15	R6	1.1Ω/1W	C6	100μF/50V
		R7	2.2kΩ	C7	22μF/160V
		R8	1.8Ω/1W	C8	1μF/160V
		R9	470Ω/2W		
		R10	4.7kΩ		
		R11	4.7kΩ		
		R12	10kΩ		

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