

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

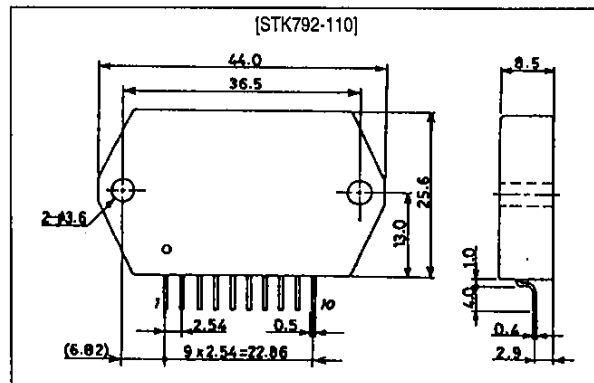
Features

- 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

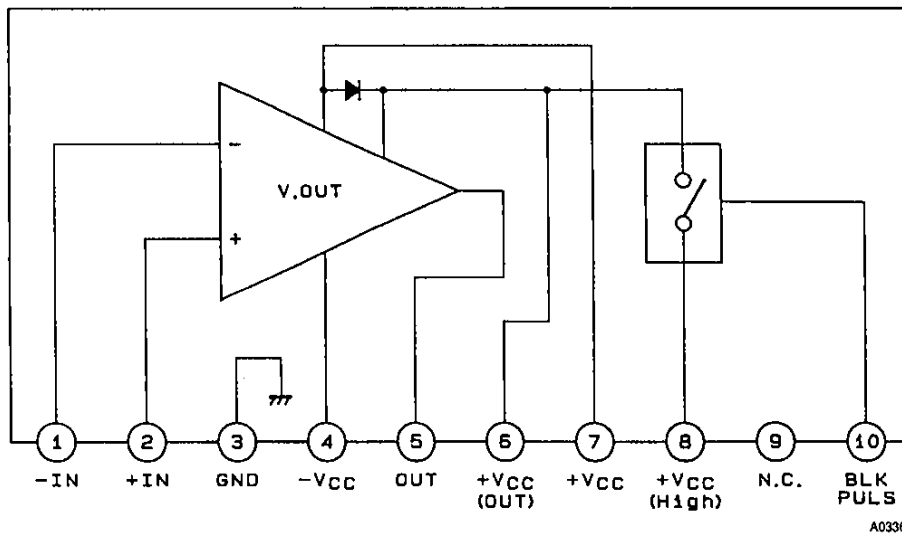
Maximum Ratings at $T_a = 25^\circ\text{C}$

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	θ_{j-c1}	Vertical output transistors Tr8 and Tr9	6.0	$^\circ\text{C/W}$
	θ_{j-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	$^\circ\text{C}$

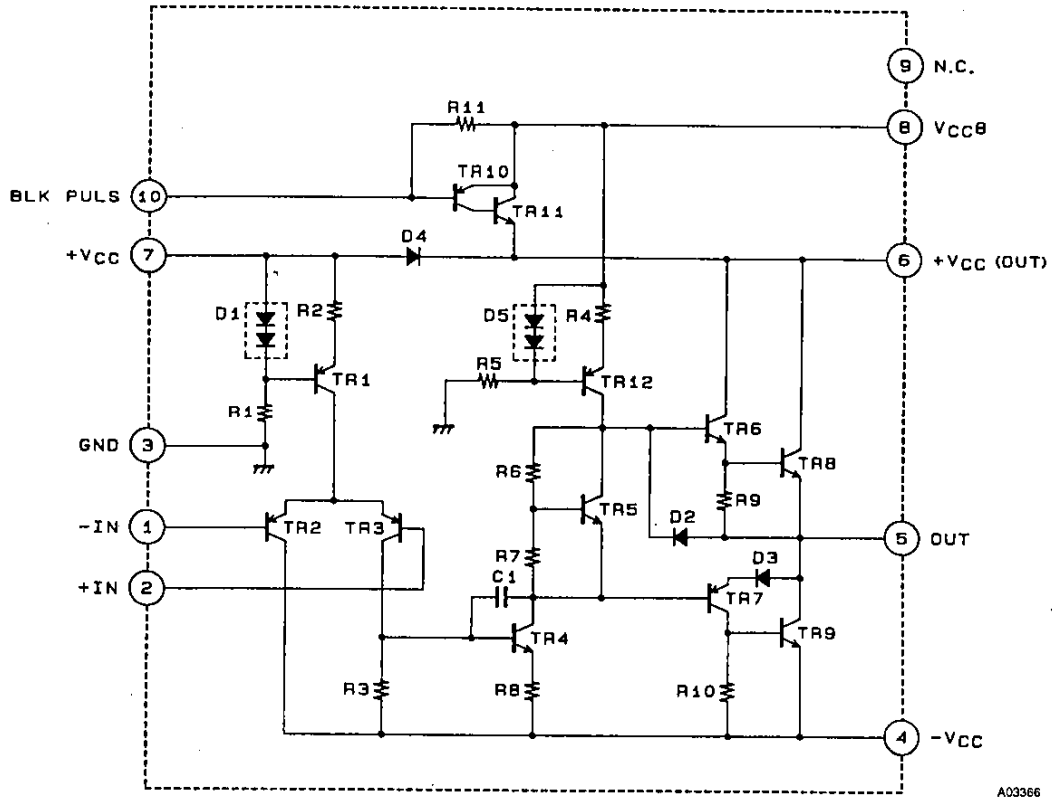
Electrical Characteristics at $T_c = 25^\circ\text{C}$, $\pm V_{CC} = 20\text{V}$, $V_{CC8} = 120\text{V}$

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

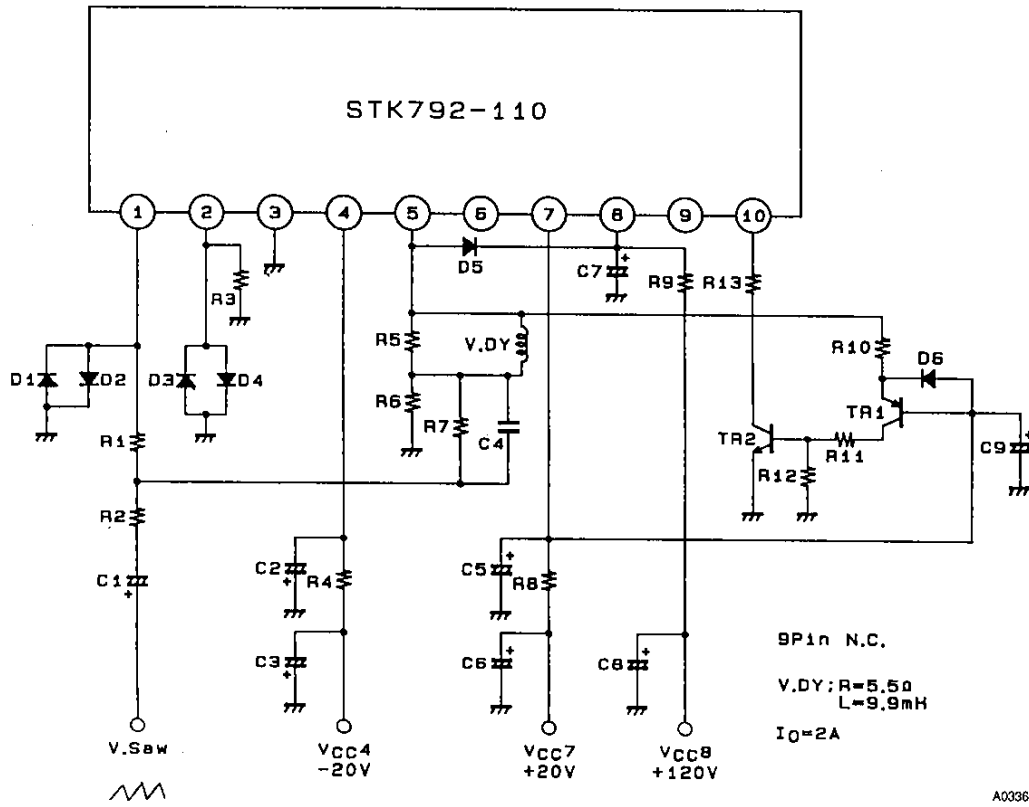


Equivalent Circuit



A03366

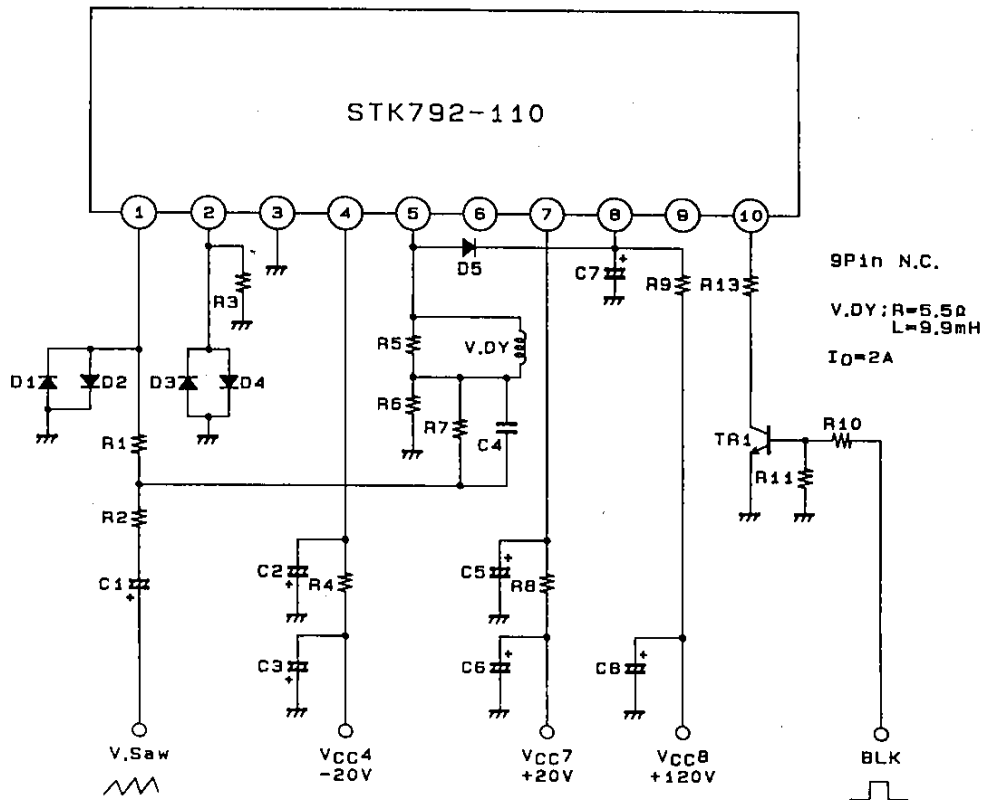
Sample Application Circuit (1)



A00367

TR1	2SA1209	R1	2.7kΩ	C1	22μF/16V
TR2	2SC2911	R2	4.7kΩ	C2	1000μF/35V
		R3	4.7kΩ	C3	100μF/50V
D1	DS442	R4	1.8Ω/1W	C4	0.0022μF
D2	DS442	R5	680Ω/12W	C5	1000μF/35V
D3	DS442	R6	1.1Ω/1W	C6	100μF/50V
D4	DS442	R7	2.2kΩ	C7	22μF/160V
D5	DFC15	R8	1.8Ω/1W	C8	1μF/160V
D6	DS442	R9	470Ω/2W	C9	22μF/50V
		R10	10kΩ		
		R11	10kΩ		
		R12	3.3kΩ		
		R13	10kΩ		

Sample Application Circuit (2)



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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