

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

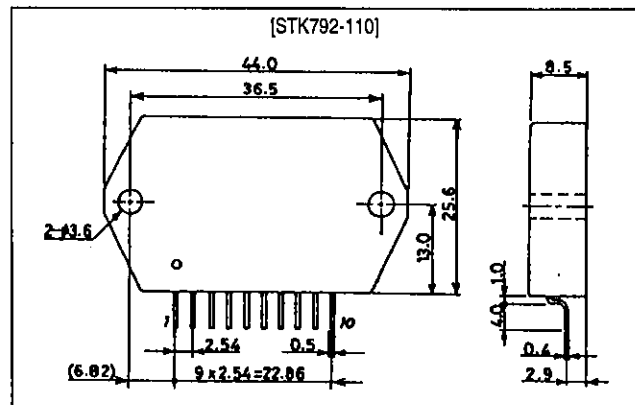
Features

- 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

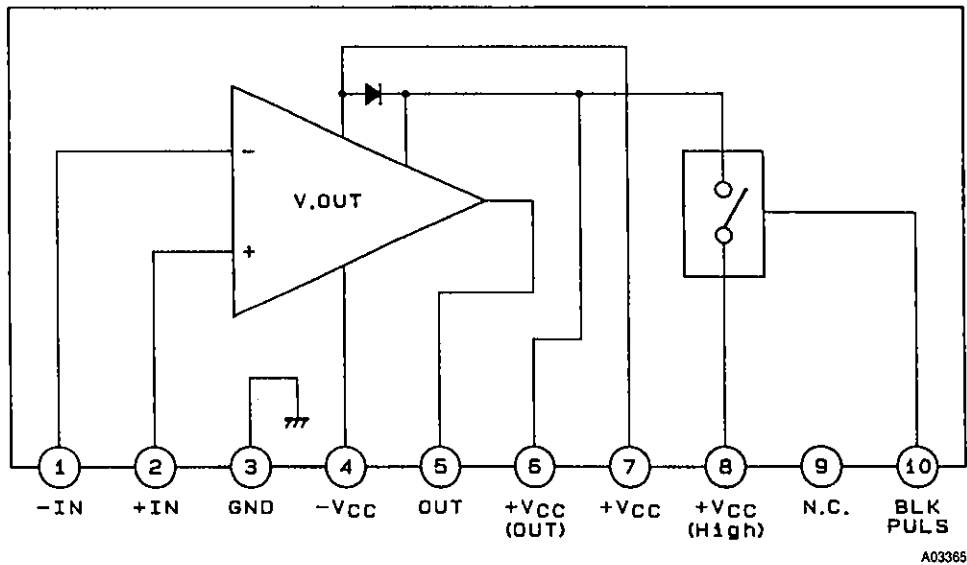
Maximum Ratings at $T_a = 25^\circ\text{C}$

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	$^\circ\text{C}$

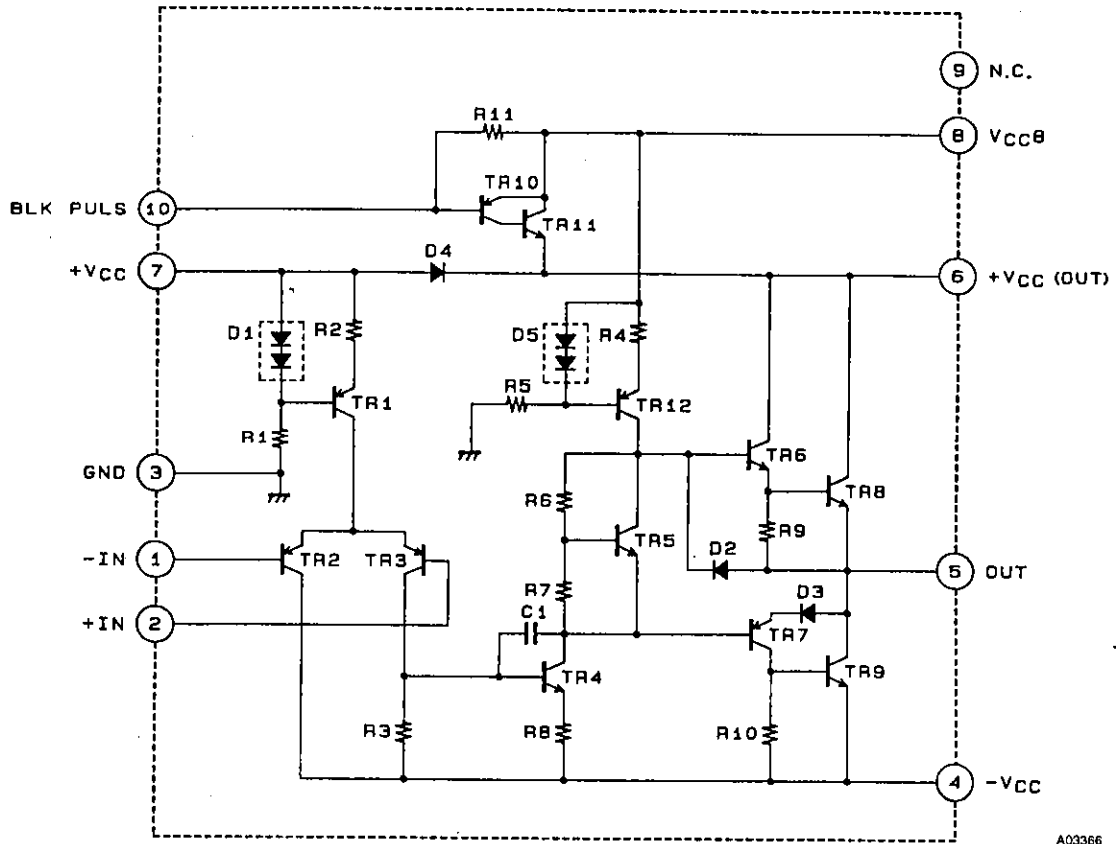
Electrical Characteristics at $T_c = 25^\circ\text{C}$, $\pm V_{CC} = 20\text{V}$, $V_{CC8} = 120\text{V}$

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

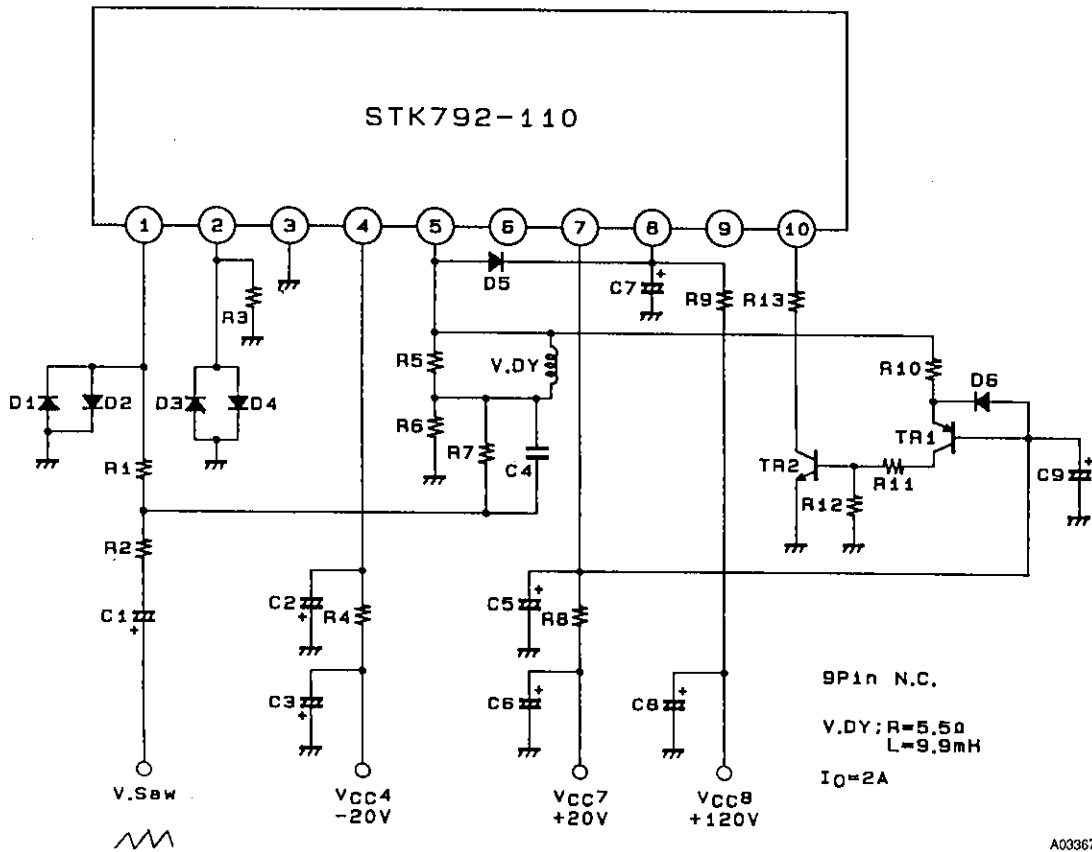


Equivalent Circuit



A03366

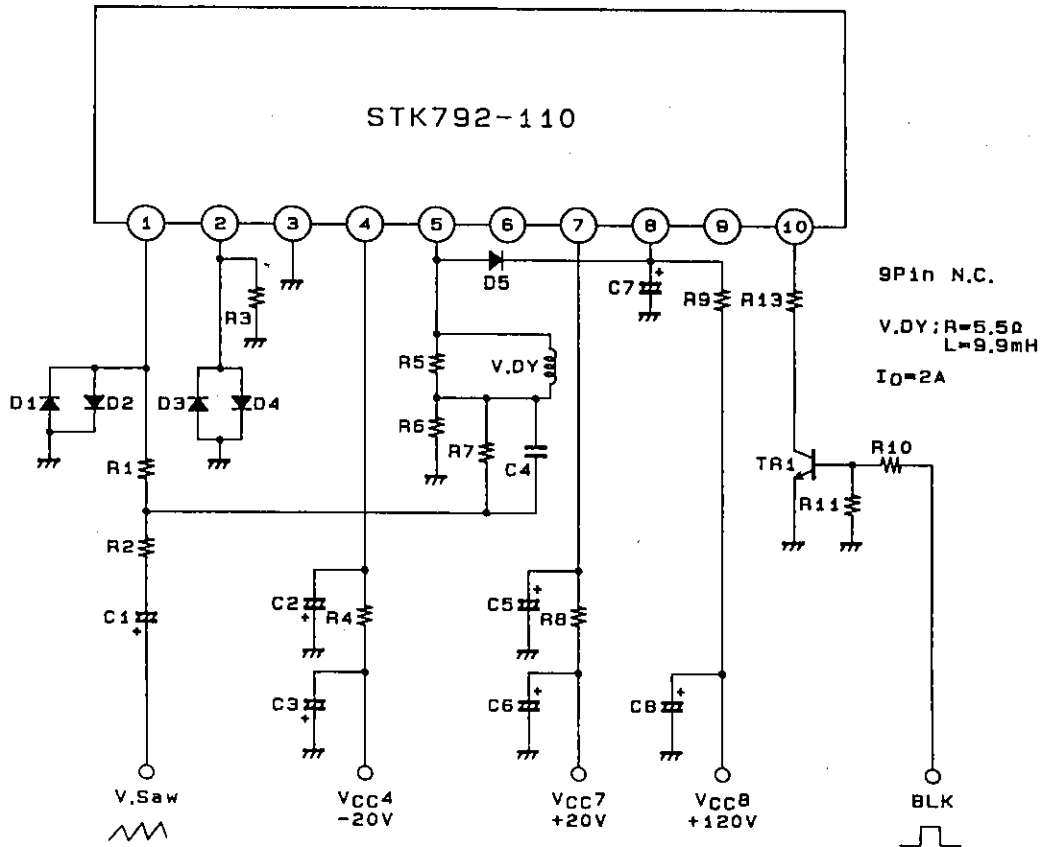
Sample Application Circuit (1)



A00367

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

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		

■ No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.

■ Anyone purchasing any products described or contained herein for an above-mentioned use shall:

- ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use;
- ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees, jointly or severally.

■ Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of June, 1995. Specifications and information herein are subject to change without notice.