

SANYO

No. 5080

STK392-010**3-Channel Convergence Correction Circuit**
(I_C max = 5A)**Overview**

The STK392-010 is a convergence correction circuit IC for video projectors. It incorporates three output amplifiers in a single package, making possible the construction of CRT horizontal and vertical convergence correction output circuits for each of the RGB colors using just two hybrid ICs.

Applications

- General video projectors

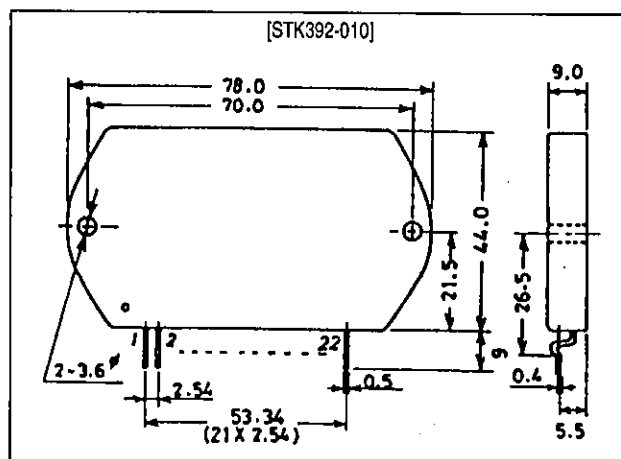
Features

- 3 output amplifier circuits in a single package (22-pin)
- High absolute maximum supply voltage (V_{CC} max = $\pm 38V$)
- Low thermal resistance (θ_{j-c} = $2.6^{\circ}C/W$)
- High temperature stability (T_C max = $125^{\circ}C$)
- Separate predriver and output stage supplies
- Output stage supply switching for high-performance designs
- Pins are arranged in separate groups of inputs, supply, and outputs to reduce the adverse effects of pattern layout on characteristics and to make design easier.
- Constant-current circuit in the predriver for stable supply switching operation
- Large lineup of family devices (STK392-000 series) to cover the range from general applications to high-class applications using a single PCB

Package Dimensions

unit: mm

4086A



Specifications

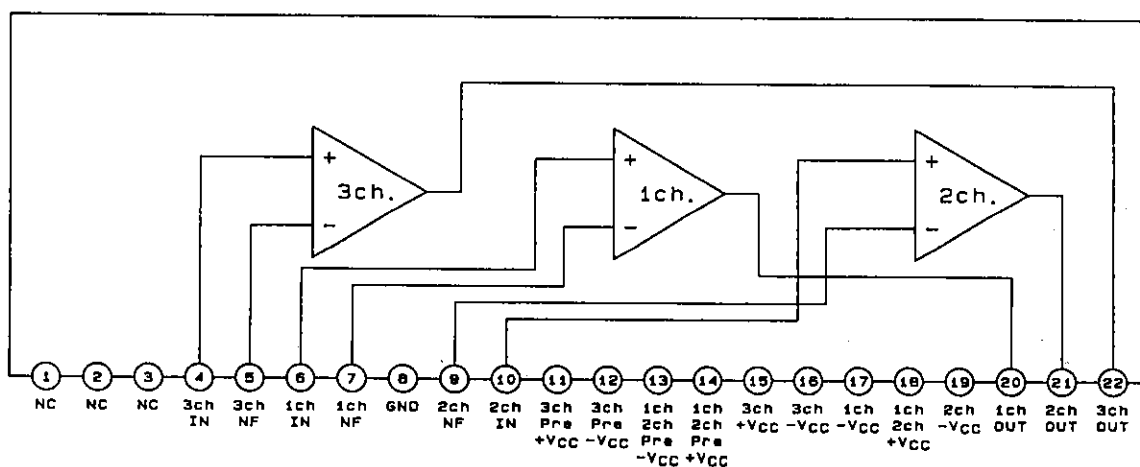
Maximum Ratings at $T_a = 25^{\circ}\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC \text{ max}}$		± 38	V
Maximum collector current	I_C	Tr8, 10, 18, 20, 28, 30	5.0	A
Thermal resistance	θ_{j-c}	Tr8, 10, 18, 20, 28, 30 (per transistor)	2.6	$^{\circ}\text{C/W}$
Junction temperature	T_j		150	$^{\circ}\text{C}$
Operating substrate temperature	T_c		125	$^{\circ}\text{C}$
Storage temperature	T_{stg}		-30 to +125	$^{\circ}\text{C}$

Operating Characteristics at $T_a = 25^{\circ}\text{C}$, $R_g = 50\Omega$

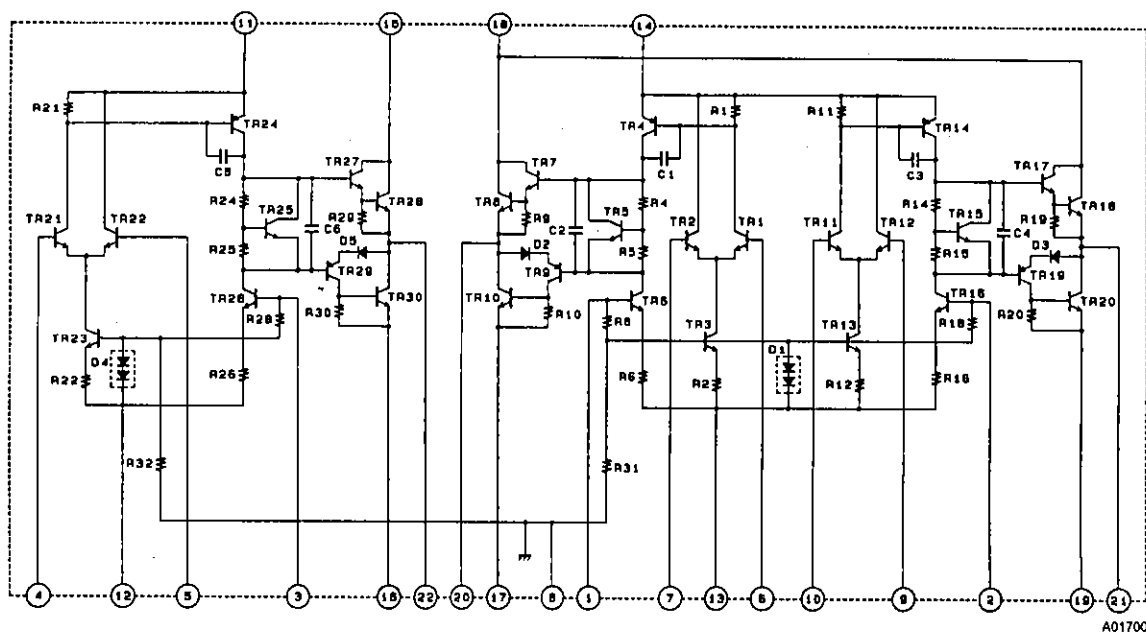
Parameter	Symbol	Conditions	min	typ	max	Unit
Output noise voltage	V_{NO}	$V_{CC} = \pm 30\text{V}$	-	-	0.2	mVrms
Quiescent current	I_{CCO}	$V_{CC} = \pm 30\text{V}$	30	90	150	mA
Neutral voltage	V_N	$V_{CC} = \pm 30\text{V}$	-50	0	+50	mV
Output delay time	t_D	$V_{CC} = \pm 30\text{V}$, $f = 15.75\text{kHz}$, triangular wave input, $V_{OUT} = 1.5\text{Vp-p}$	-	-	1.0	μs
Frequency response	f_H	$V_{CC} = \pm 30\text{V}$, -3dB, (0dB at 1kHz), sine wave input, $V_{in} = 50\text{mVp-p}$	-	1.8	-	MHz

Block Diagram



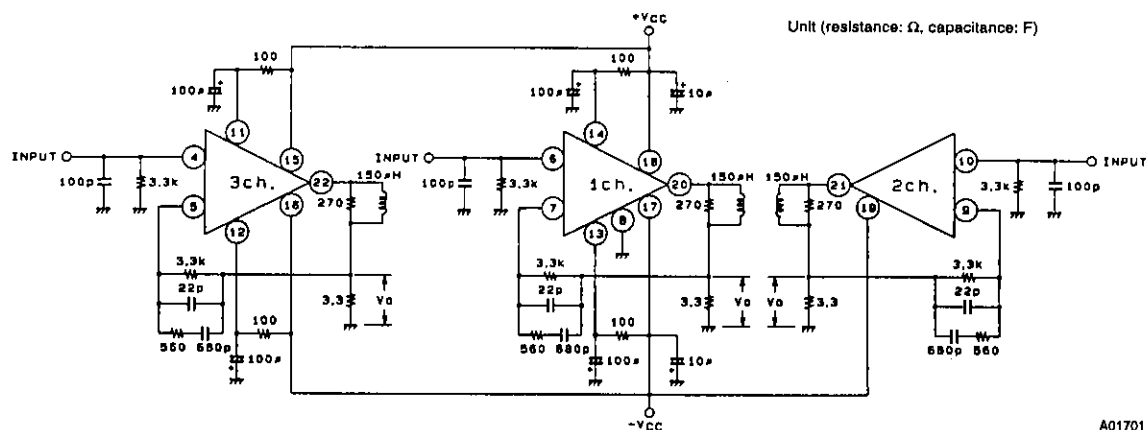
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Equivalent Circuit



A01700

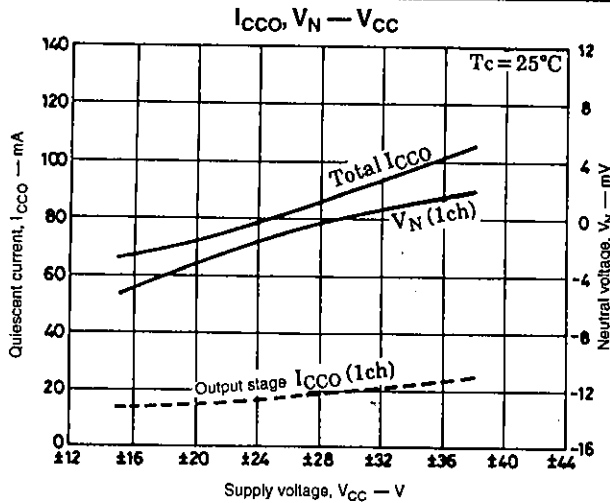
Test Circuit



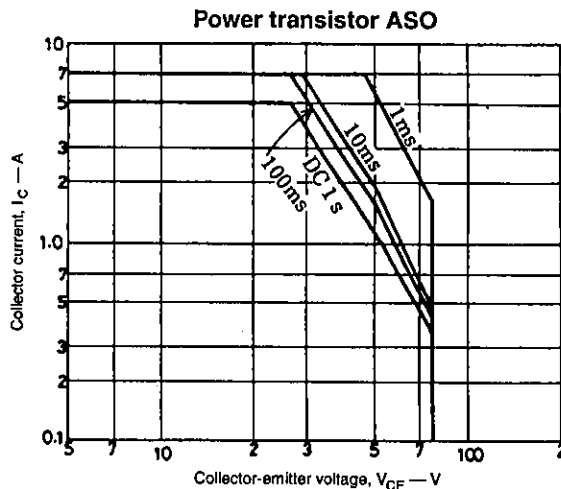
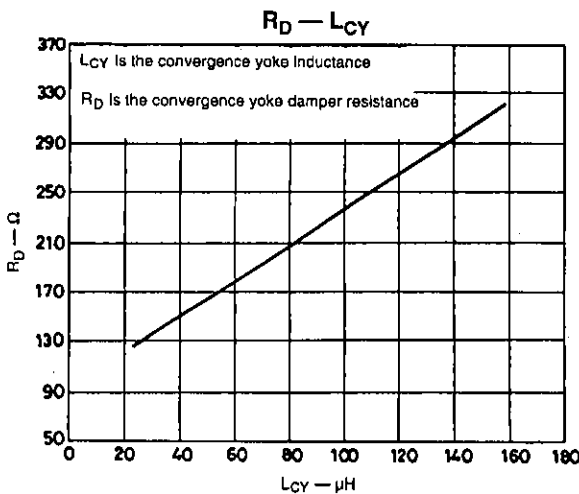
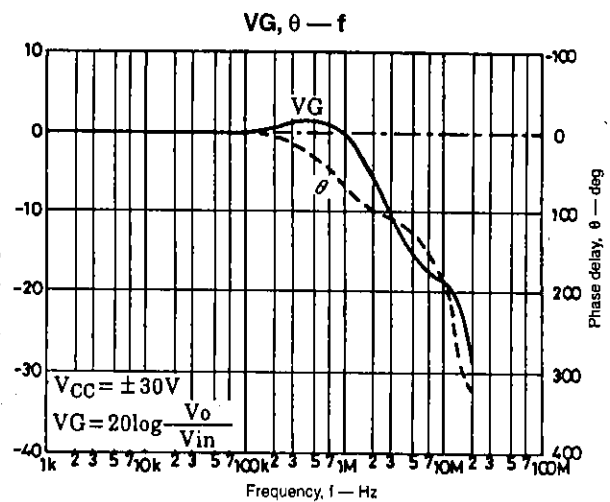
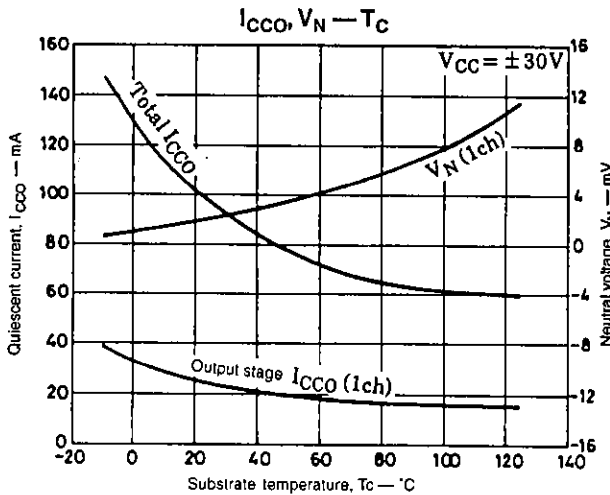
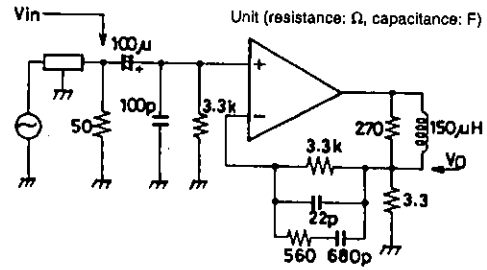
Unit (resistance: Ω , capacitance: F)

A01701

Vo: V_{NO} is measured by connecting a VTVM.
 V_N is measured by connecting a DC voltmeter.
 t_D is measured by connecting an oscilloscope.



Test circuit



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