



STK392-040

3-Channel Convergence Correction Circuit (Ic max = 7A)

Overview

The STK392-040 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

- Video projectors (high-definition television, high-definition graphic projectors)

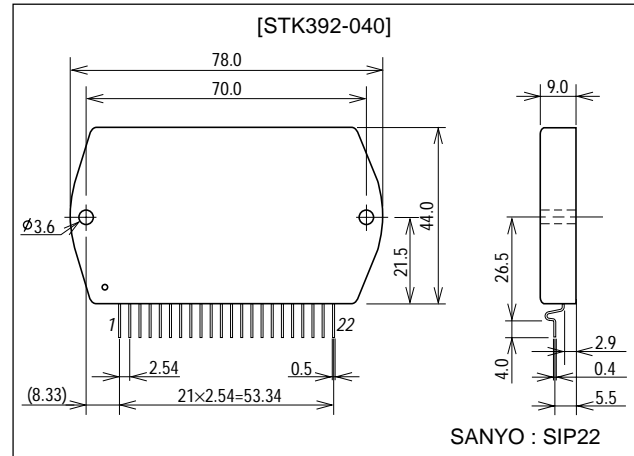
Features

- 3 output amplifier circuits in a single package (22-pin)
- High absolute maximum supply voltage (V_{CC} max = $\pm 50V$)
- Low thermal resistance ($\theta_{j-c}=1.8^{\circ}C/W$)
- 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



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Specifications

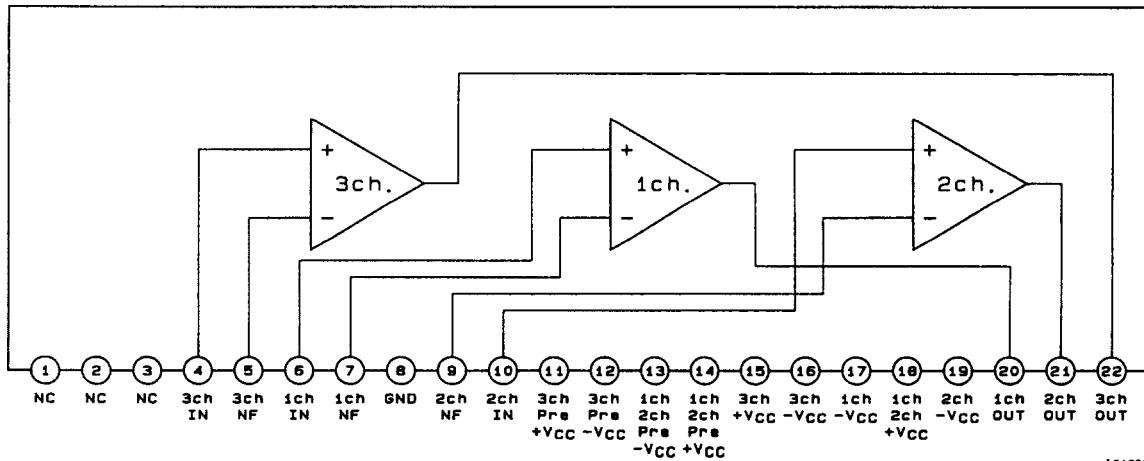
Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V _{CC} max		±50	V
Maximum collector current	I _C	Tr8, 10, 18, 20, 28, 30	7.0	A
Thermal resistance	θ j-c	Tr8, 10, 18, 20, 28, 30 (per transistor)	1.8	°C/W
Junction temperature	T _J		150	°C
Operating temperature	T _c		125	°C
Storage temperature	T _{stg}		-30 to +125	°C

Operating Characteristics at Ta = 25°C, Rg=50Ω

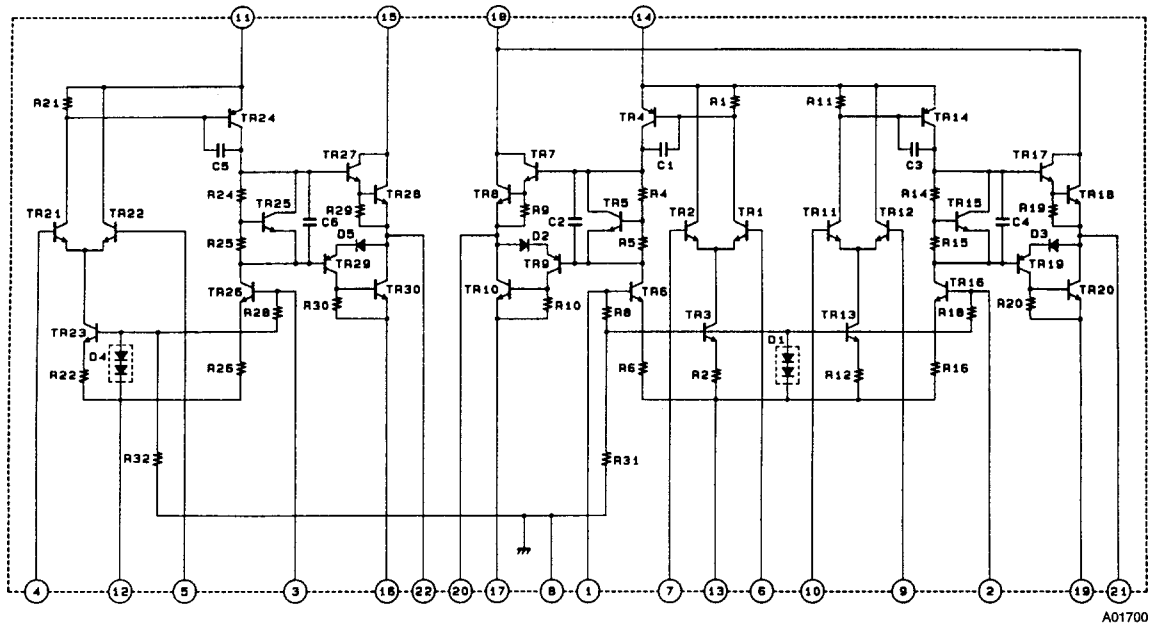
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output noise voltage	V _{NO}	V _{CC} =±40V			0.2	mVrms
Quiescent current	I _{CCO}	V _{CC} =±40V	30	90	150	mA
Neutral voltage	V _N	V _{CC} =±40V	-50	0	+50	mV
Output delay time	t _D	V _{CC} =±40V, f=64kHz, triangular wave input, V _{OUT} =1.5Vp-p			0.2	μs
Frequency response	f _H	V _{CC} =±35V, -3dB, (0dB at 1kHz), sine wave input, V _{in} =50mVp-p		3.8		MHz

Block Diagram

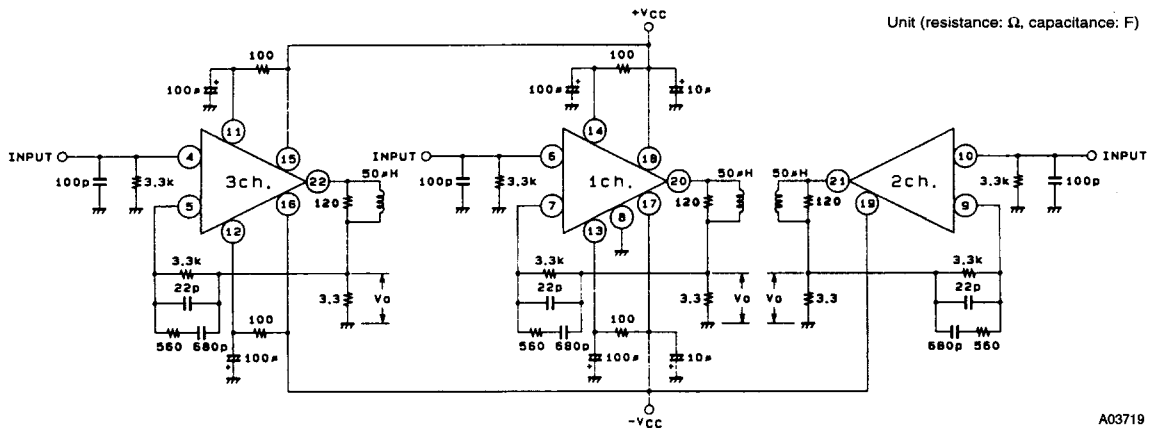


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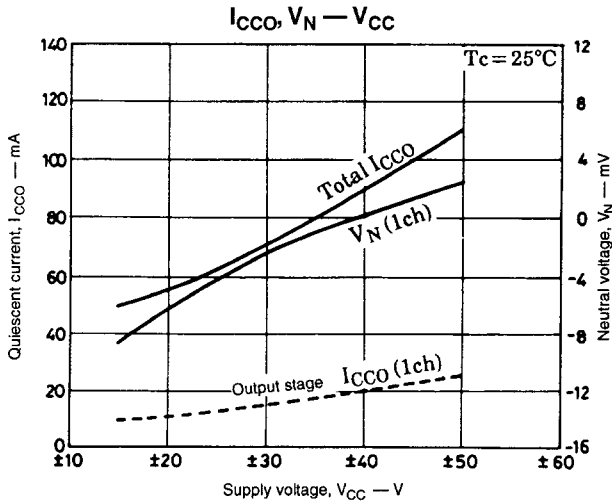
Equivalent Circuit



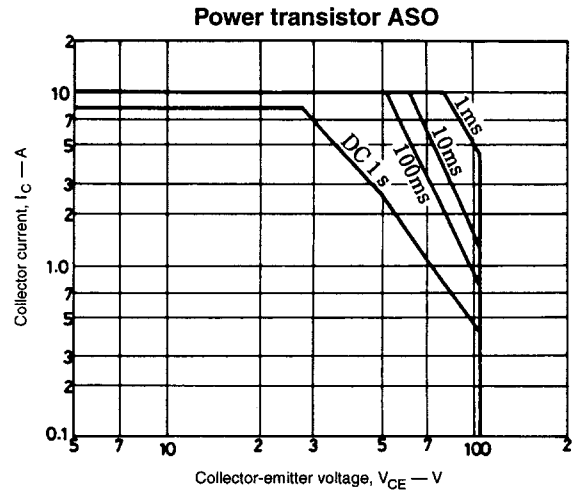
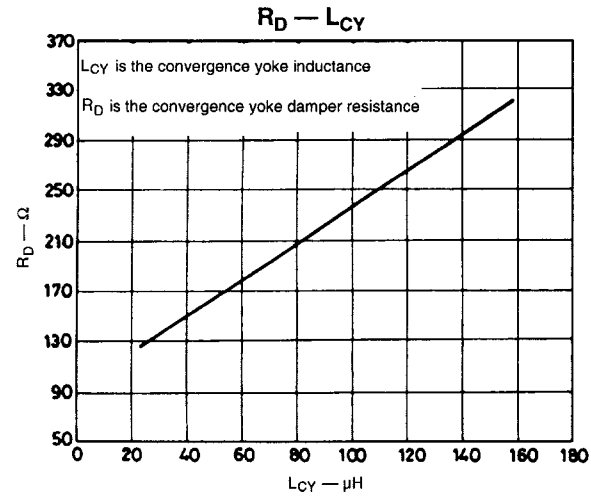
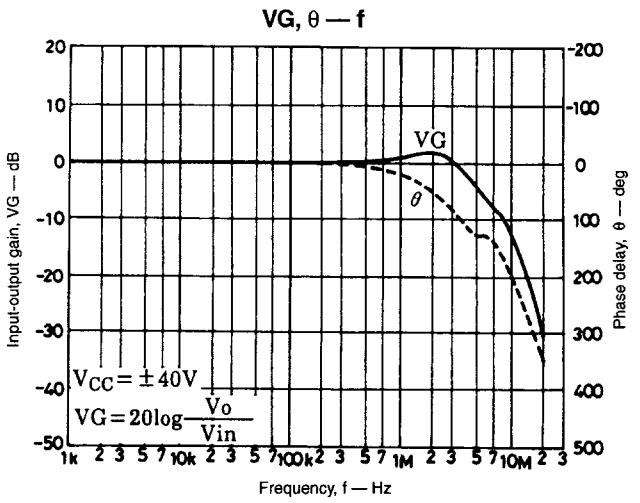
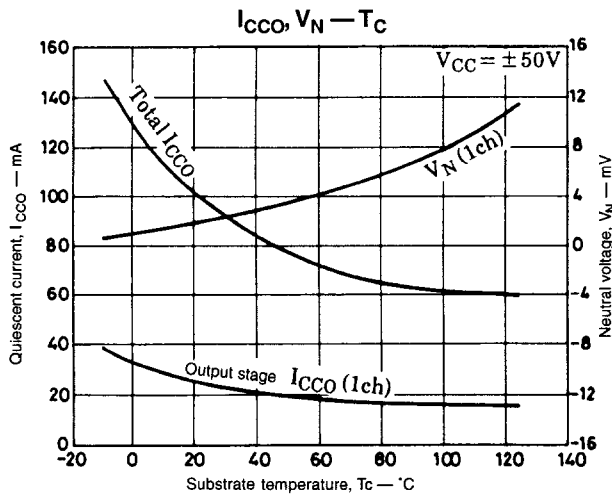
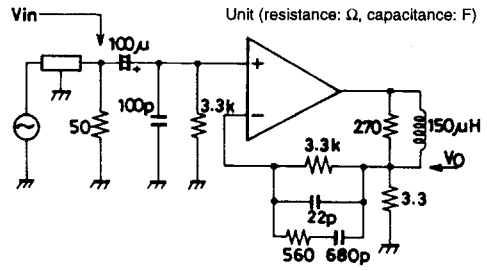
Test Circuit



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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