

Thick Film Hybrid IC

SANYO	No. 5081	STK392-040
		3-Channel Convergence Correction Circuit (I_C 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)

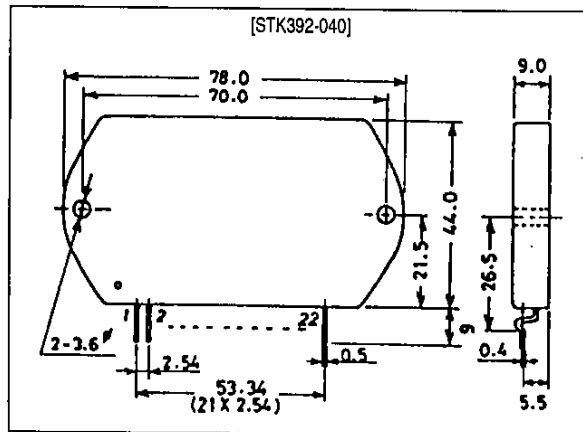
Features

- 3 output amplifier circuits in a single package (22-pin)
- High absolute maximum supply voltage (V_{CC} max = $\pm 50V$)
- Low thermal resistance (θ_{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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STK392-040

Specifications

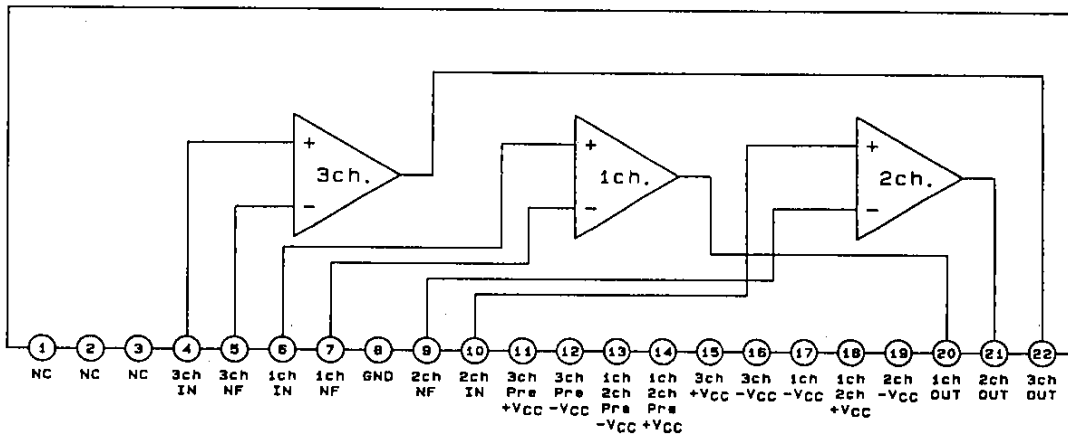
Maximum Ratings at Ta = 25°C

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 substrate temperature	T _c		125	°C
Storage temperature	T _{stg}		-30 to +125	°C

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

Parameter	Symbol	Conditions	min	typ	max	Unit
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 lime	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	-	3.6	-	MHz

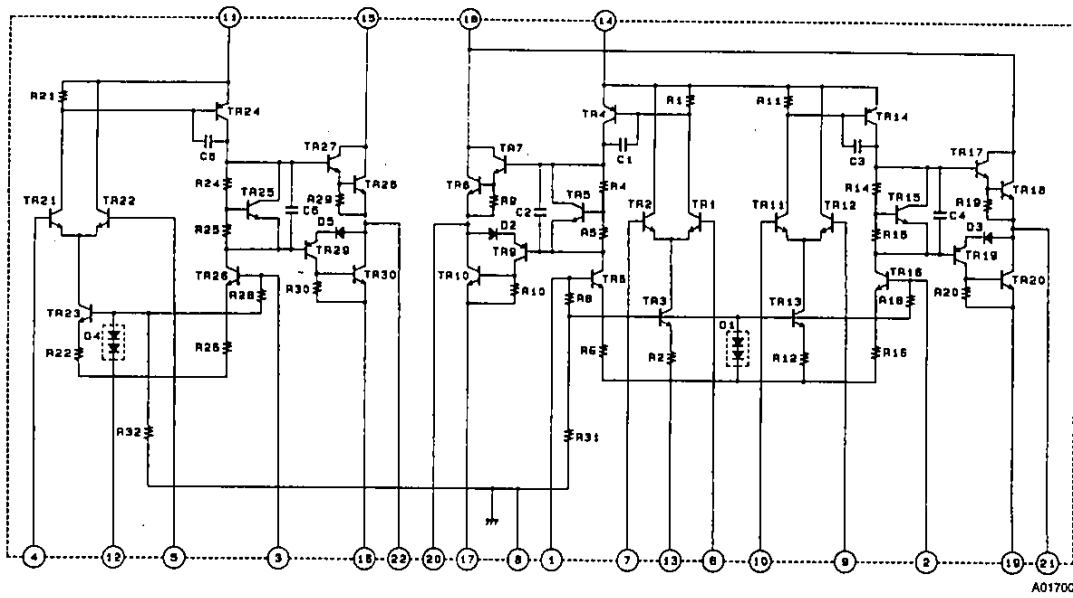
Block Diagram



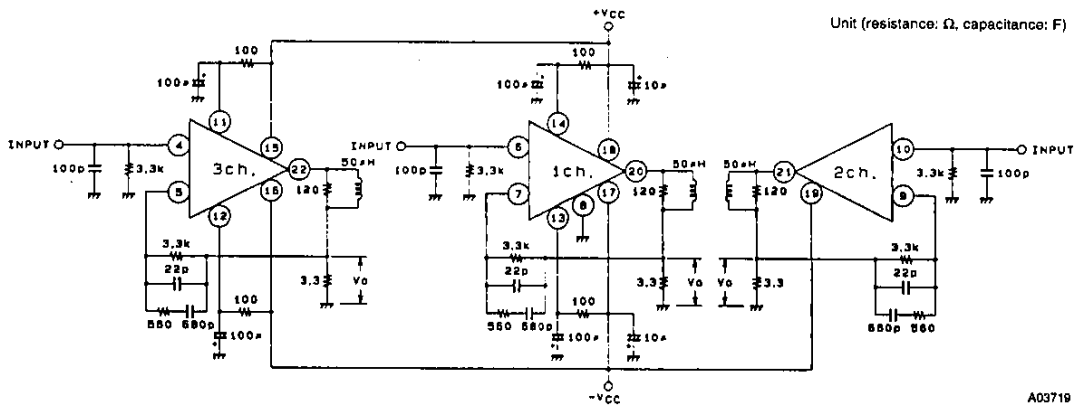
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Equivalent Circuit

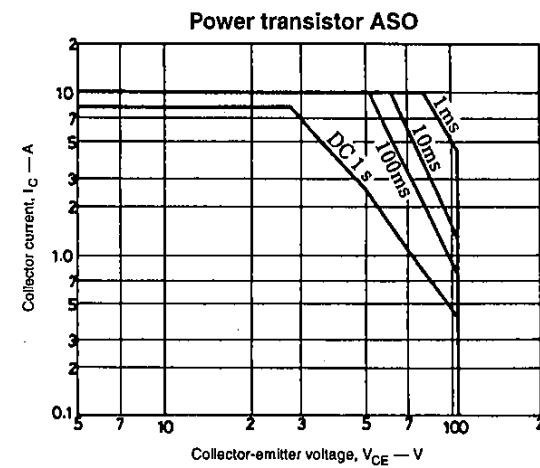
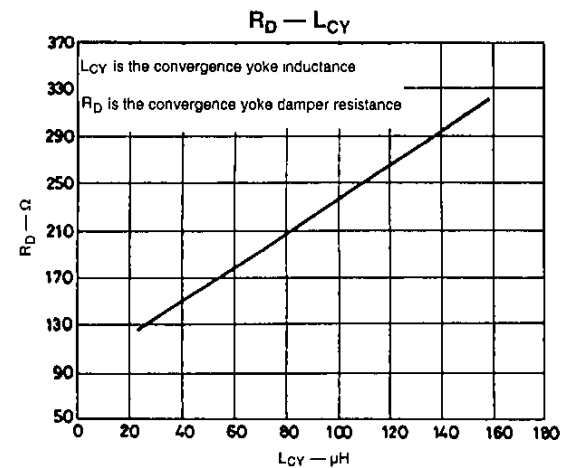
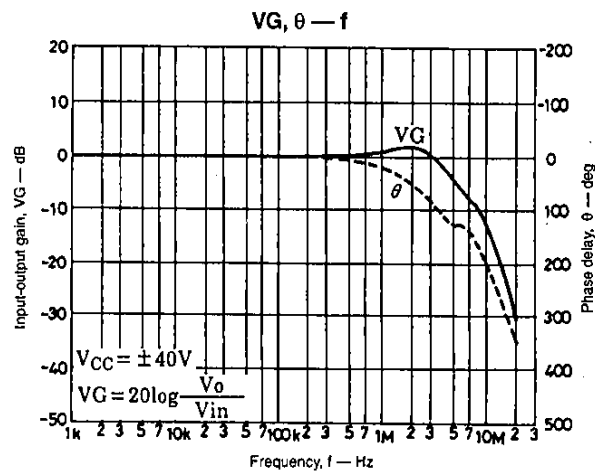
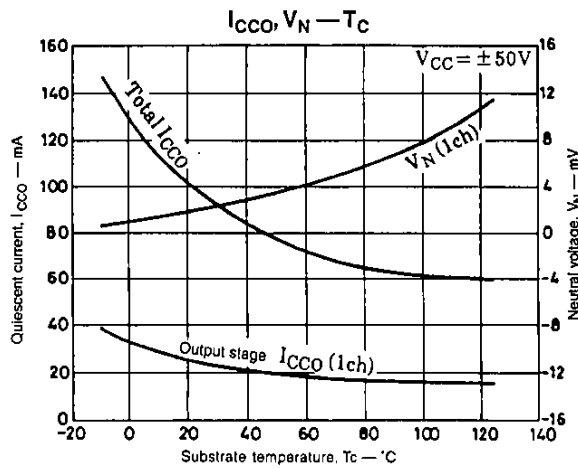
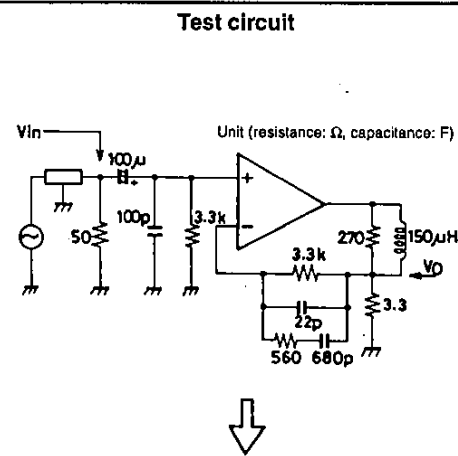
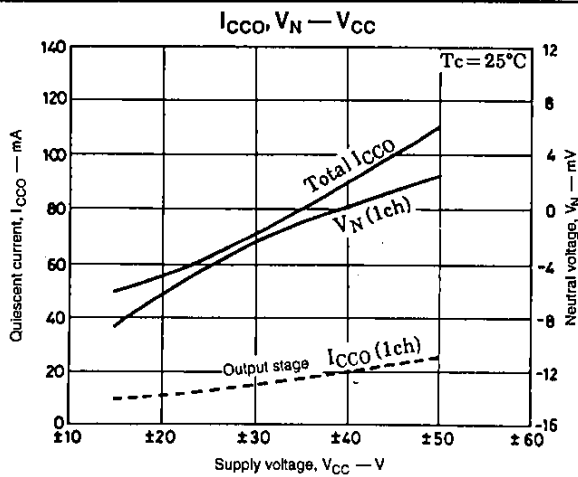


Test Circuit



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

STK392-040



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