IMST

TENTATIVE

Thick Film Hybrid IC

STK392-120

Convergence Correction Amplifier

3 Channel / 1 Package

Output Current 4A

■ Overview

The STK392-120 is a convergence correction amplifier one package hybrid IC for video projector.
This IC has three output amplifiers in the hybrid IC.
Consequently, total six circuits of vertical and horizontal amplifieres in each CRT (R, G, B) corresponds to two hybrid ICs (STK392-120 ×2).

■ Application

◆Video Projector
(Genneral Projection TV)

■ Feature

◆3 channel/1 package(18pins).
◆Higher maximum supply voltage(Vcc max=±44V)
◆Lower thermal resistance(θ j-c=2.7℃/W)
◆Excellent thermal stability(Tc max=125℃)
◆Power supplies of pre driver and output driver amplifier block are independent.
◆Capable of designing of high efficiency by substituting power supply of output brock.
◆Lower rush current at power switch ON.
◆B class amplifier using pure complimentary circuit.

Specifications and information herein are subject to change without notice.

■ Electrical Characteristics

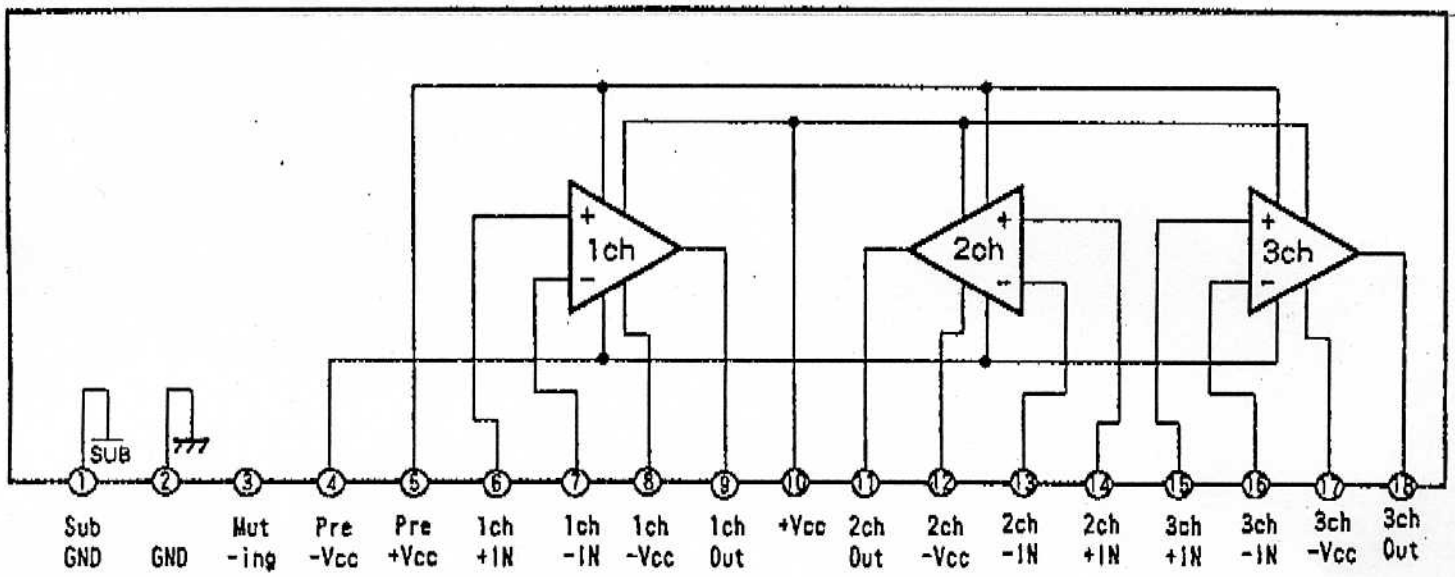
Absolut Maximum Ratings (Ta=25℃)

Item	Symbol	Conditions	Ratings	Units
Supply Voltage	Vcc		±44	V
Maximum Collector Current	Ic	Tr6, 7, 13, 14, 20, 21	±4.0	A
Thermal Resistance	θj-c	Tr6, 7, 13, 14, 20, 21 (Per a Tr)	2.7	℃/W
Junction Temperature	Tj		150	℃
Operating Case Temperature	Tc		125	℃
Storage Temperature	Tstg		-30 to +125	℃

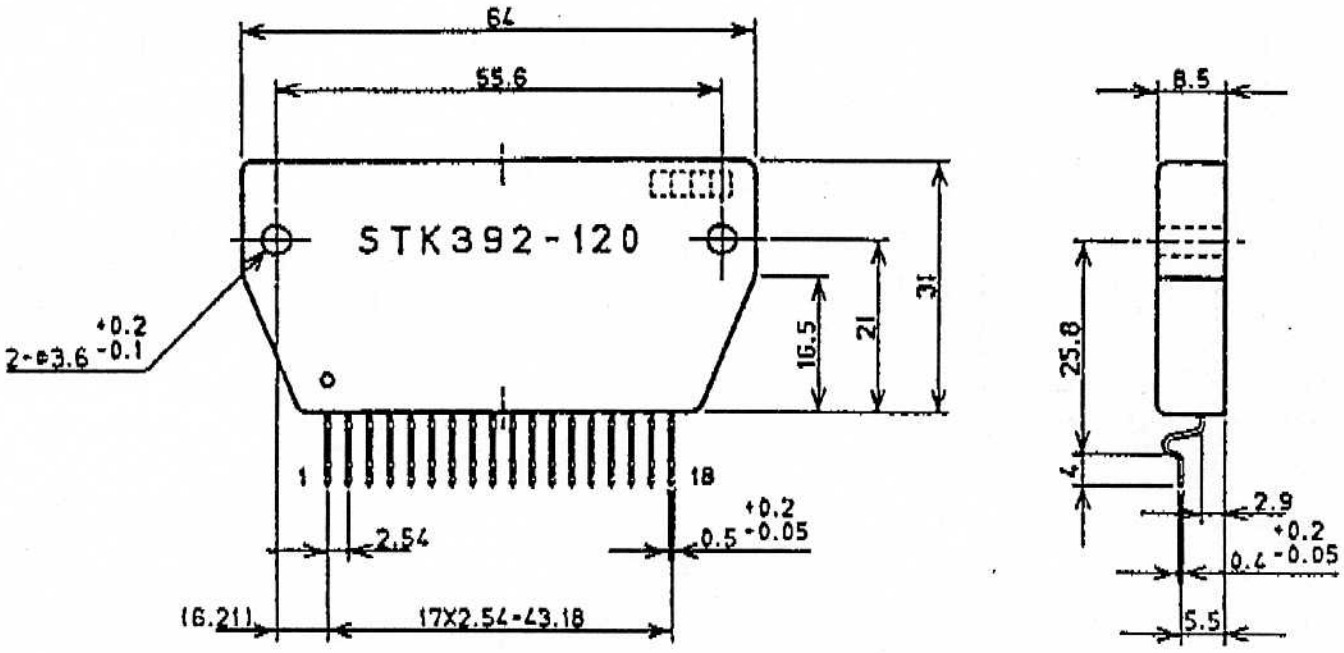
Operating Characteristics (Ta=25℃, Rg=50Ω)

Item	Symbol	Conditions			Ratings			Units
		Vcc(V)	f(Hz)		min.	typ.	max.	
Output Noise Voltage	V_{no}	±35					0.2	mVrms
Quiesence Current	Icco	±35			16	23	31	mA
Neutral Voltage	V_N	±35			-50	0	+50	mV
Output Delay Time	t_D	±35	15.75k	Triangual wave Input V_{OUT}=1.5V_{P-P}			1	μs

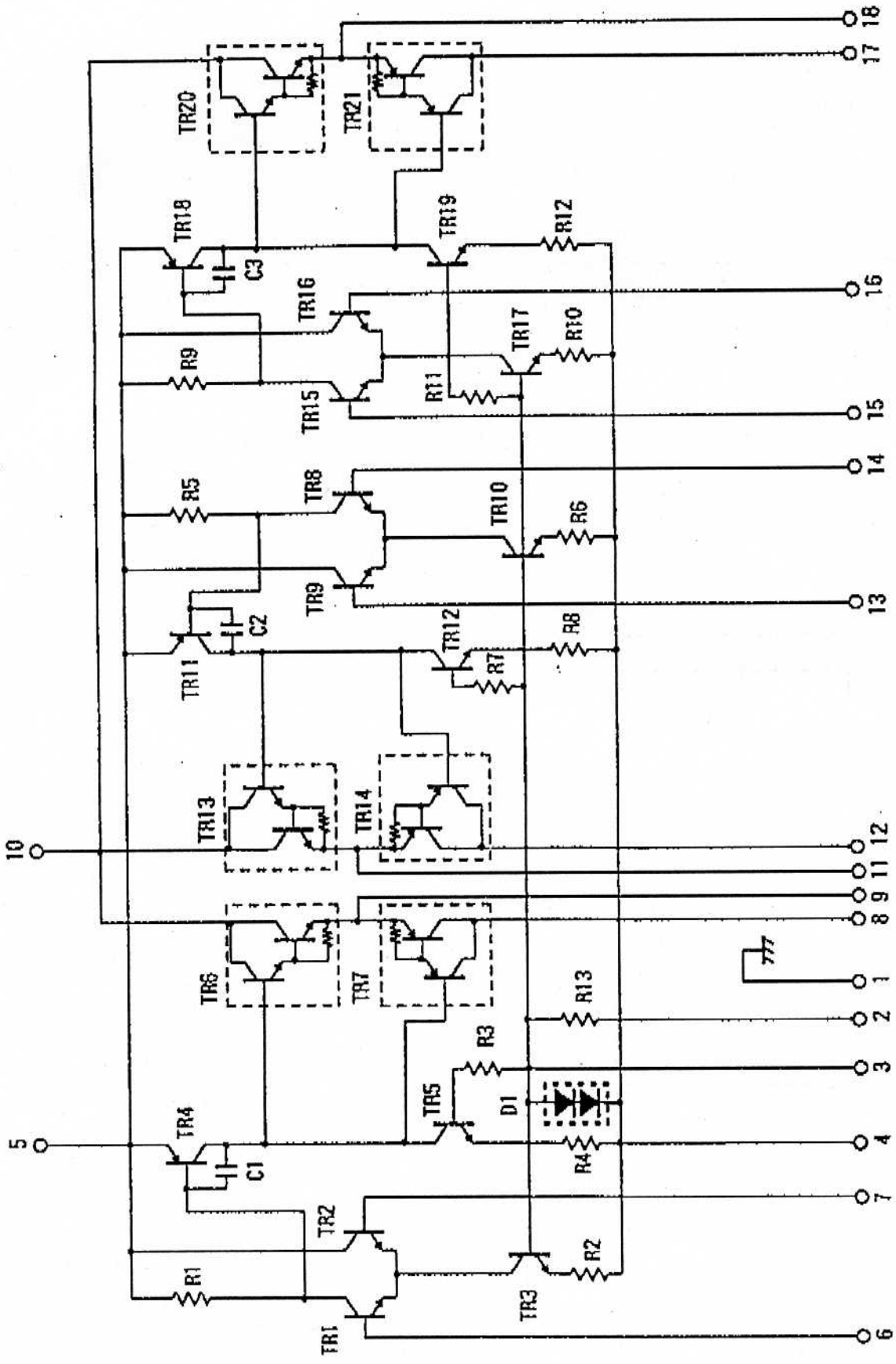
■ Block Diagram



■ Case Outline

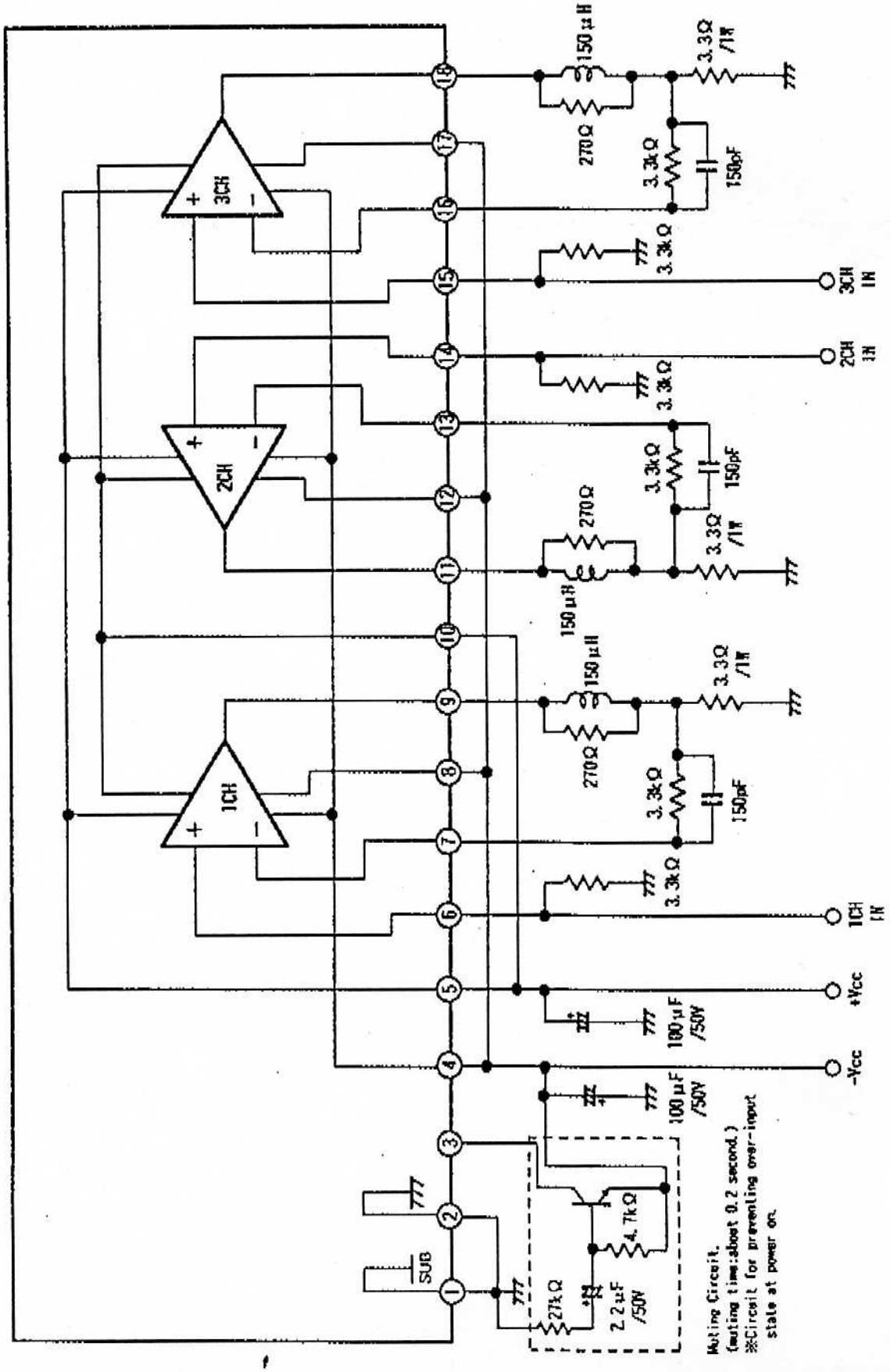


■ Equivalent Circuit

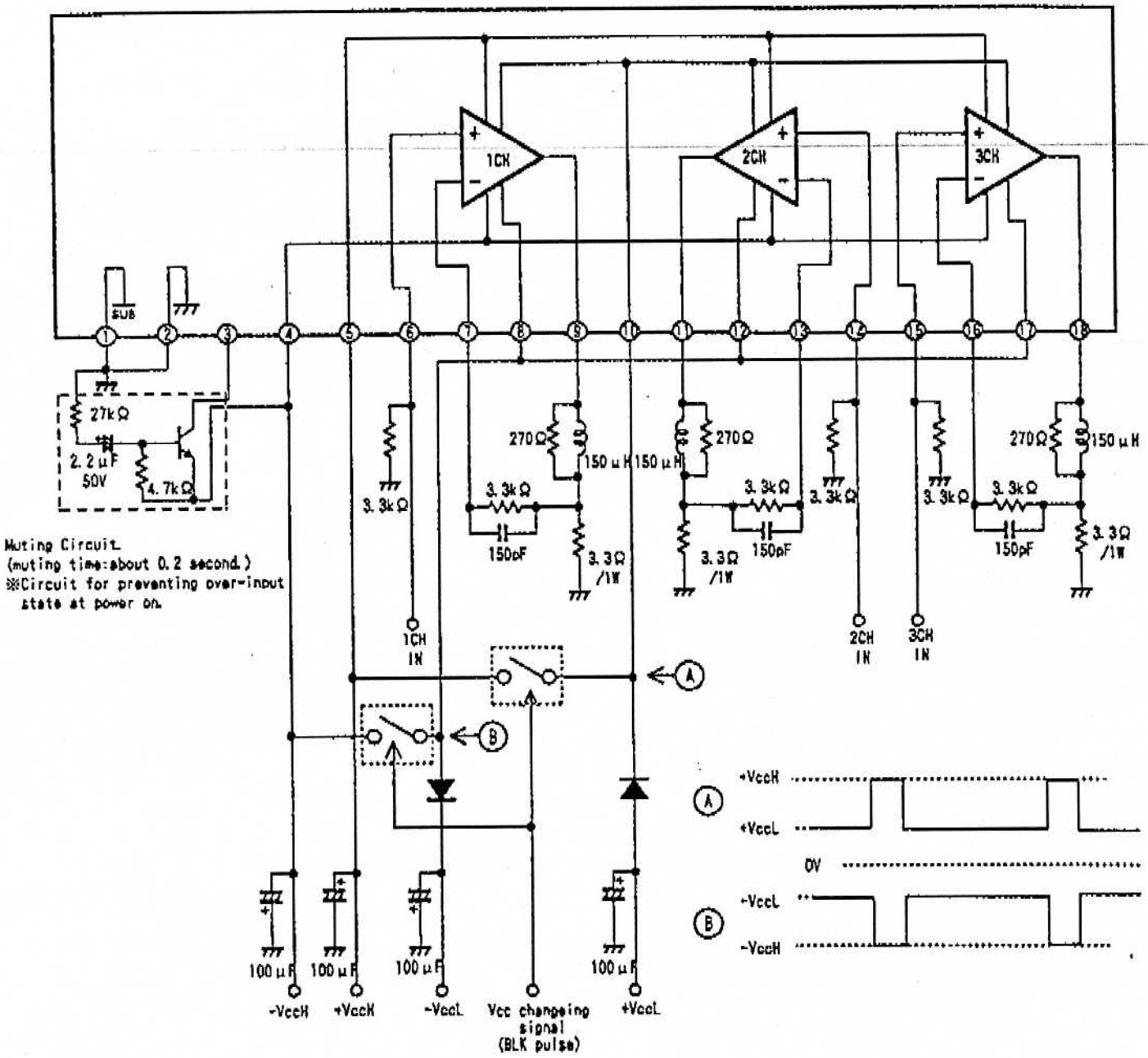


■ Sample Application Circuit·····

Fixed Power Supply Method



Changing Power Supply Method



〈Explanation of changing power supply method.〉

In convergence correction amplifier circuit, circuit method changing power supply voltage for output stage is occasionally applied in order to reduce power consumption.

Timing of changing power supply voltage is a changing point from trace priod to retrace priod.

Each power supply of the STK392－110 is shown below.

Front stage power supply. Pin⑤ Pre＋Vcc (＋VccH)

Pin④ Pre－Vcc (－VccH)

Output stage power supply (Changing power supply)

Pin⑩ ＋Vcc (trace priod : ＋VccL／retrace priod : ＋VccH)

Pin⑧.⑫.⑰ －Vcc (trace priod : －VccL／retrace priod : －VccH)

Circuit for changing power supply adopts generally a method of changing ± VccL by a transistor.

VccH is limited by absolute maxmum rating Vcc max. but, VccL can be reduced in the range of non clipping output voltage at trace priod.