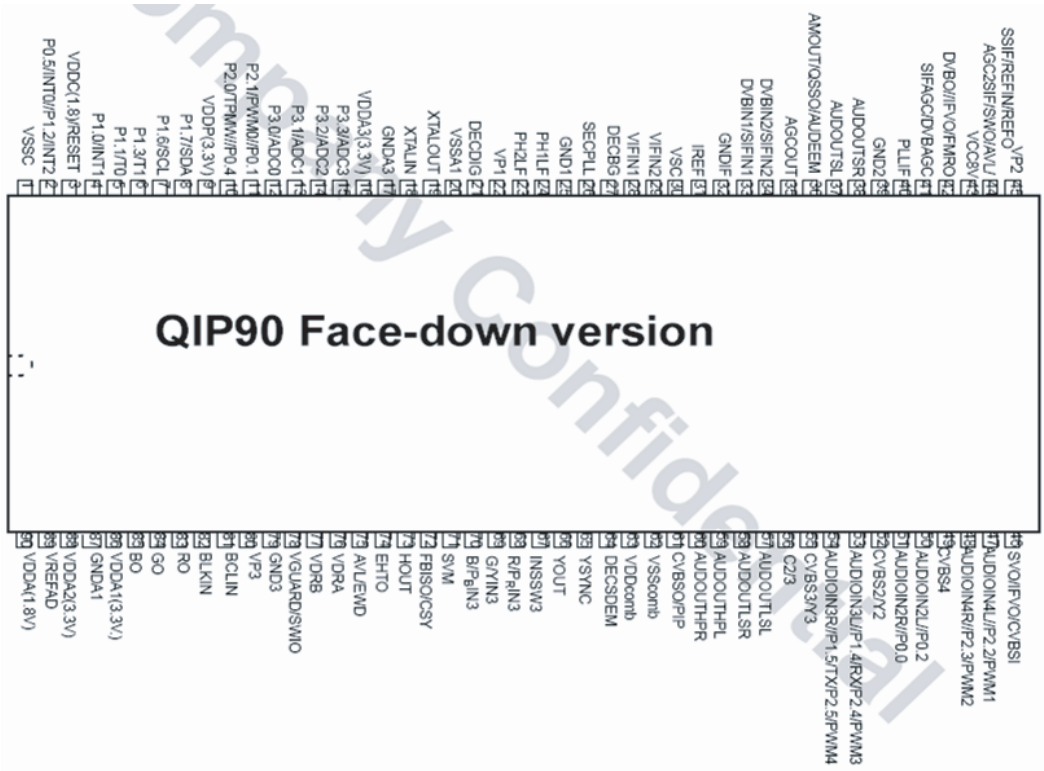
13. Circuit Description

13-1 Circuit Key Point

13-1-1 Pin configuration of "Face-down" QIP versions



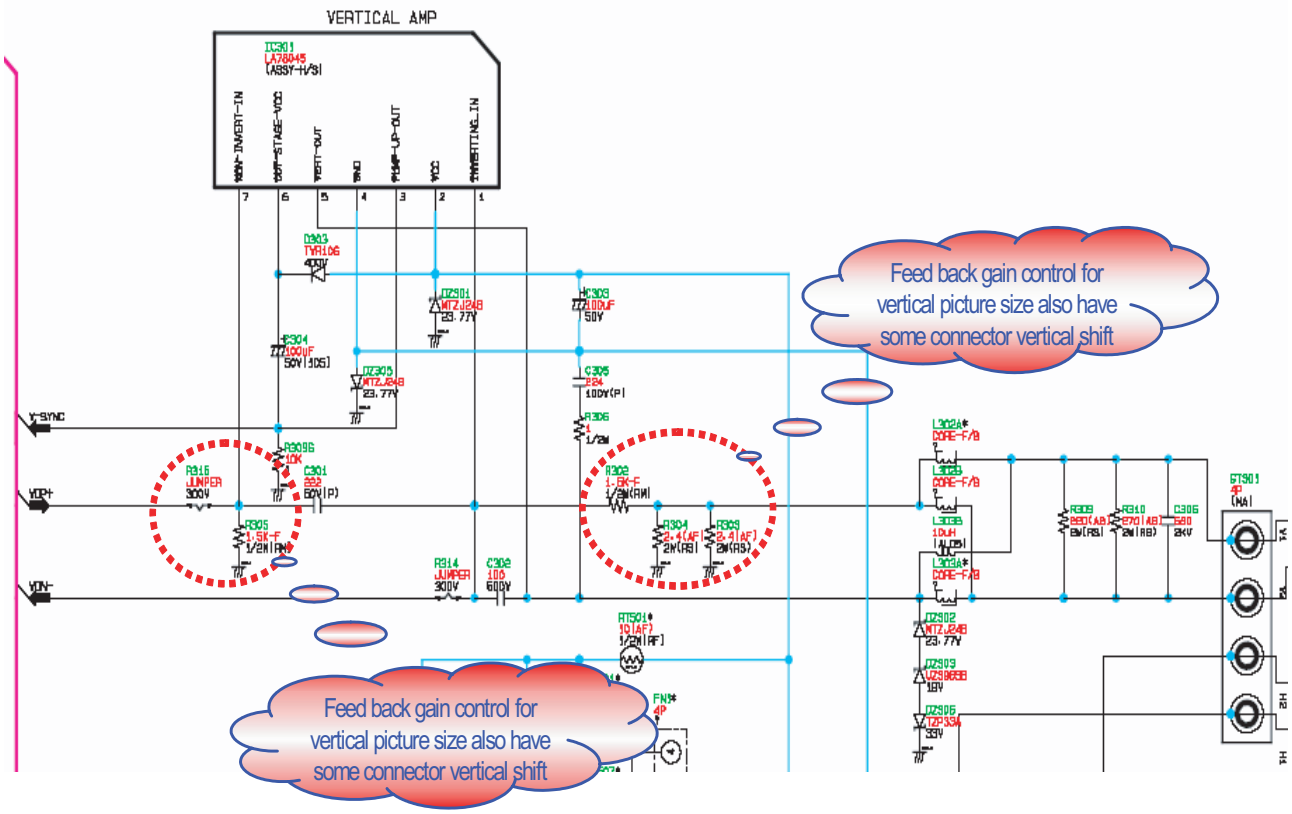
13-1-2 UOC3(TDA120XX) Pin Description

Pin No	Name	Register	Port Type	Initial	Description (Micom Pin 1 ~ 11, 54 ~ 64)
51	pTilt	P0.0	Push Pull		- Tilt
2	pIR	P0.5	Open Drain		- Remocon IR
4	pDcoil	P1.0	Push Pull		- Degaussing Coil
5	pSawFilter	P1.1	Push Pull	1	-NTSC/PAL S/W(PAL : High, NTSC3.58 : Low) -Europe CW L/L' Sound Saw S/W (L' : High, L : Low)
6	pPower	P1.3	Push Pull	0	- High : Power On - Low : Power Off
7	pSCL	P1.6	Push Pull	0	- I2C Bus Clock
8	pSDA	P1.7	Push Pull	0	- I2C Bus Data
10	pLED	P2.0	Push Pull	1	- Led(StandBy Mode, Remocon)
11	pSoundMute	P2.1	Push Pull	1	- High : Sound Mute On - Low : Sound Mute Off
12	pScart1	P3.0	Open Drain		- Scart1 ID - China : Sound Saw Filter S/W(RCA Option Sound M : Low, High)
13	pScart2	P3.1	Open Drain		- Scart2 ID - RCA Jack X-Ray
14	pBusStop	P3.2	Open Drain	1	- Bus Stop Port
15	pPanelKey1	P3.3	Open Drain		- Panel Key 1(Channel up, Channel Down, Volume Up, Volume Down, Menu)

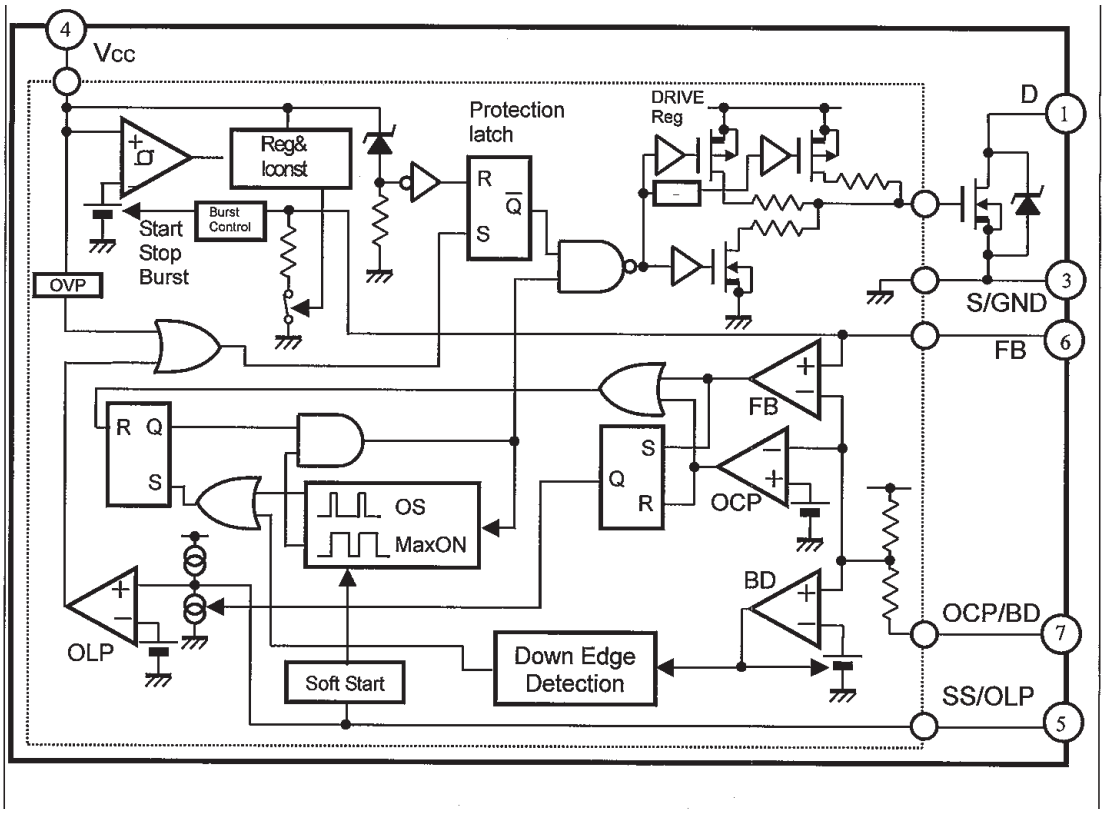
13-1-3 Control System Features

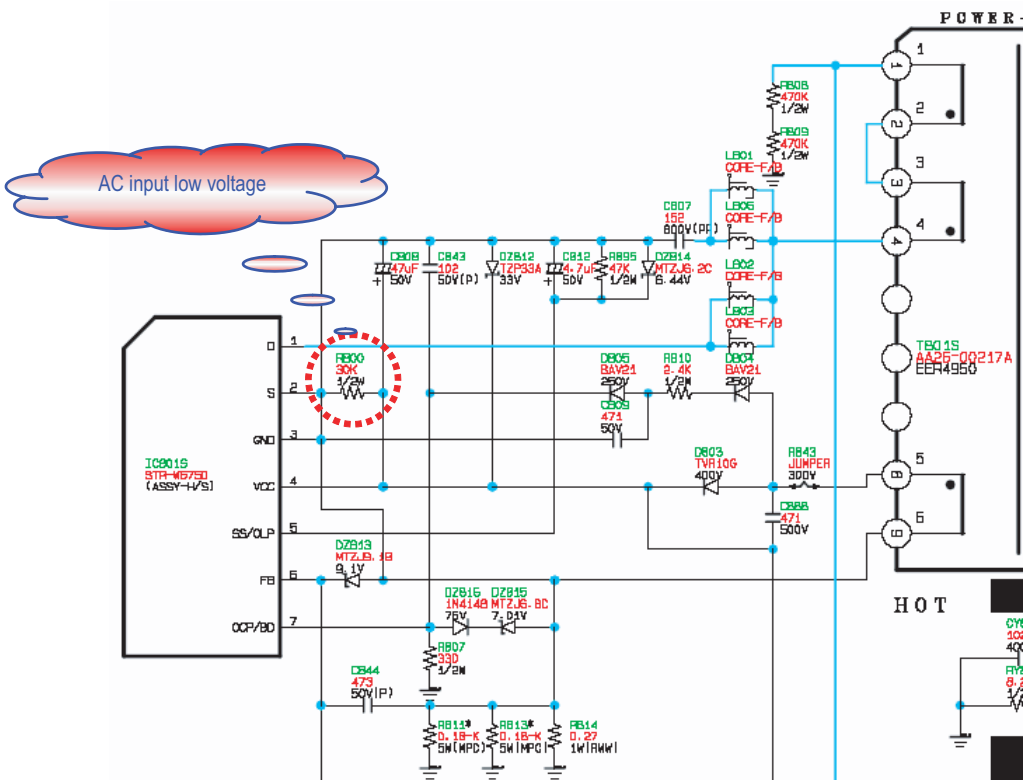
* 80C51 micro-controller core standard instruction set and timing
* 0.4883 ms machine cycle (6 clock cycles with 12.288 MHz derived from an xtal frequency of 24.576MHz)
* maximum 256k x 8-bit program ROM
* maximum of 8k x 8-bit auxiliary RAM
* auxiliary RAM page pointer
* 12-level interrupt controller for individual enable/disable with two level priority
* stand-by, idle and power-down modes
* watchdog timer
* two 16-bit timer/counters
* additional 24-bit timer (16-bit timer with 8-bit Pre-scaler)
* 16-bit data pointer
* five 6-bit pulse width modulator (PWM) outputs for control of TV analogue signals.
* one 14-bit PWM for voltage synthesis tuning control.
* 8-bit ADC with 4 multiplexed inputs.
* remote control pre-processor (RCP).
* I2C byte level bus interface.
* universal asynchronous receiver transmitter (UART)
* 24 General I/O.

13-1-4 Vertical Circuit (LA78045)

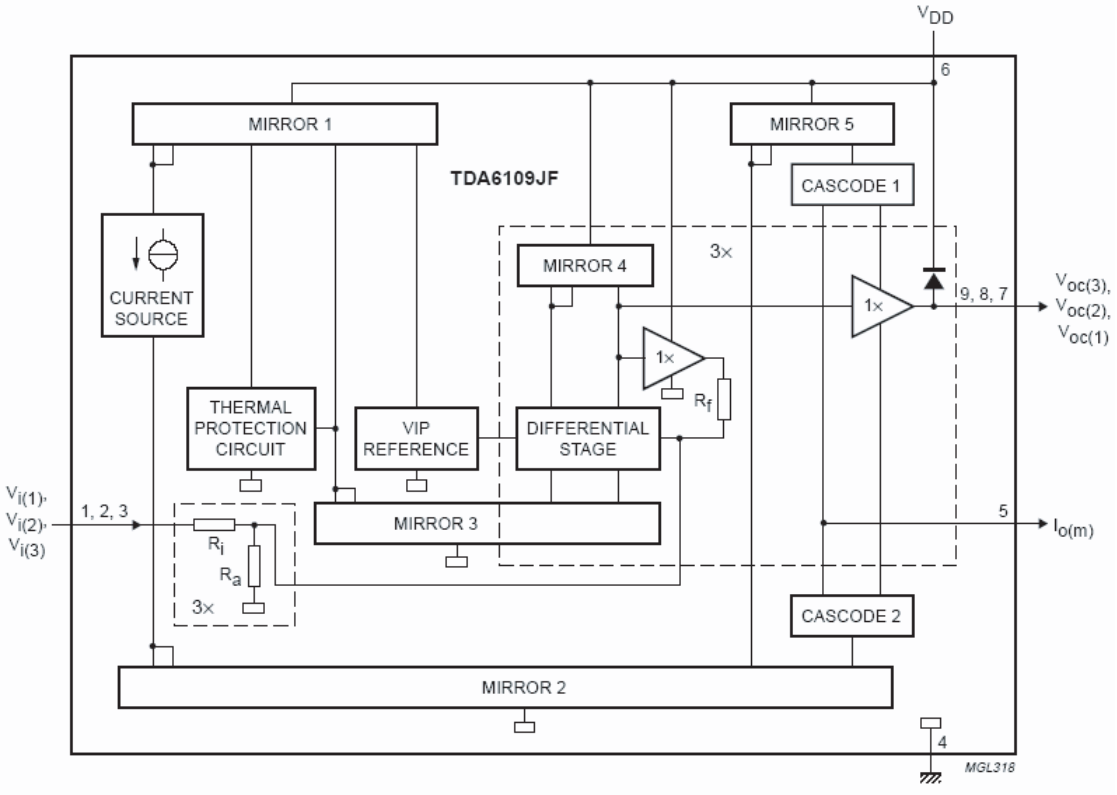


13-1-5 Power IC (STR-W6750F)





13-1-6 TDA6109JF



PINNING

SYMBOL	PIN	DESCRIPTION
$V_{i(1)}$	1	inverting input 1
$V_{i(2)}$	2	inverting input 2
$V_{i(3)}$	3	inverting input 3
GND	4	ground (fin)
I_{om}	5	black current measurement output
V_{DD}	6	supply voltage
$V_{oc(3)}$	7	cathode output 3
$V_{oc(2)}$	8	cathode output 2
$V_{oc(1)}$	9	cathode output 1

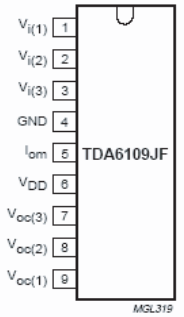


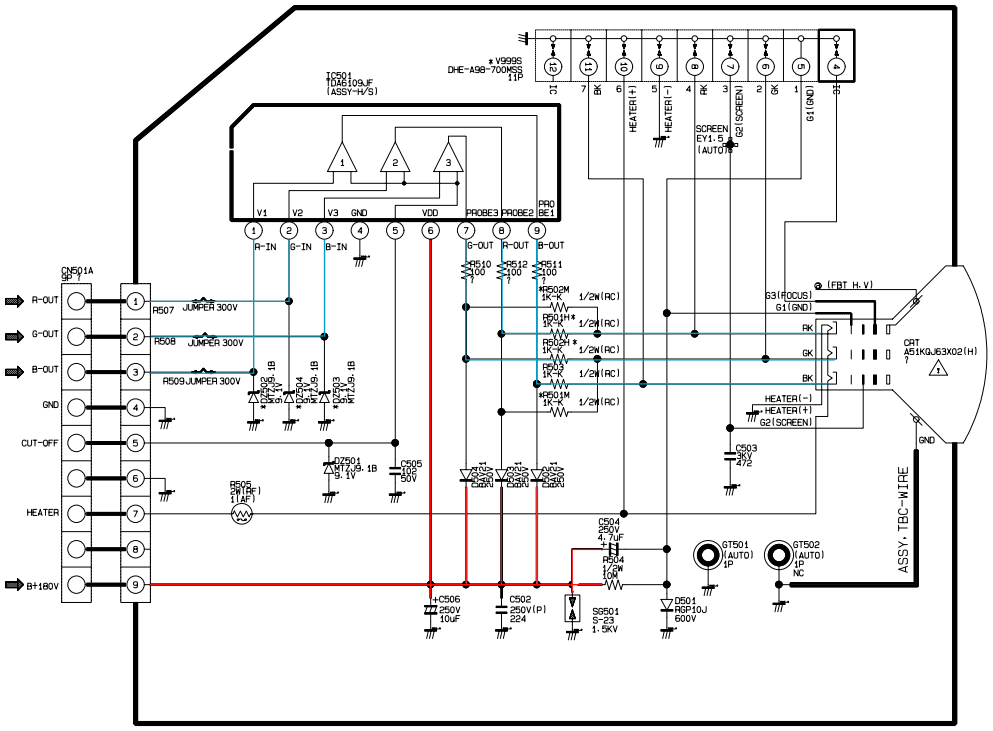
Fig.2 Pin configuration.

LIMITING VALUES

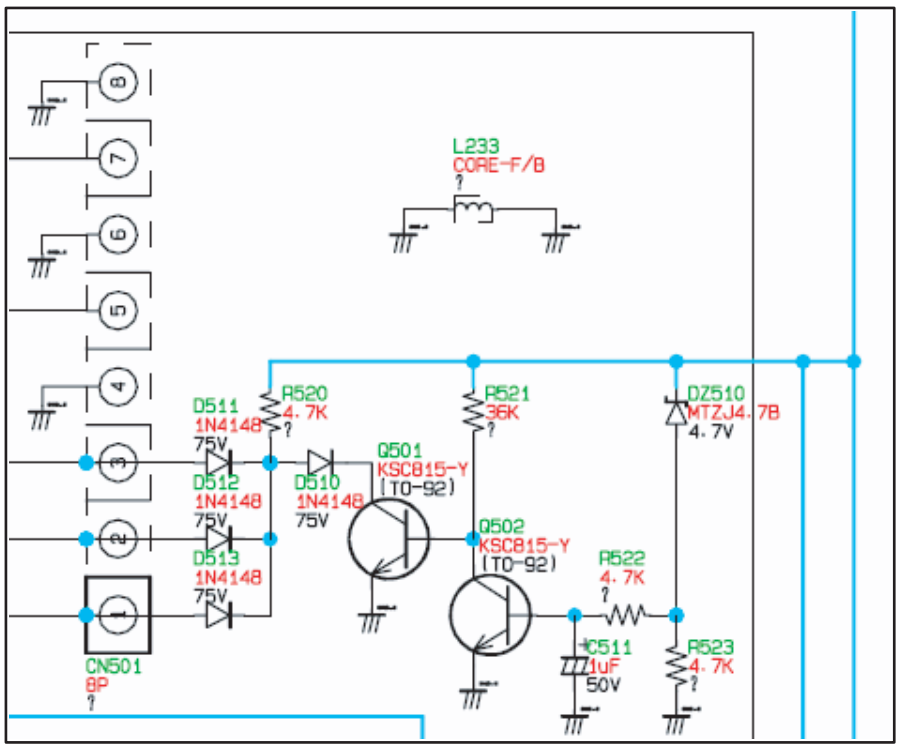
In accordance with the Absolute Maximum Rating System (IEC 134); voltages measured with respect to pin 4 (ground); currents as specified in Fig.1; unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{DD}	supply voltage		0	250	V
V_i	input voltage		0	12	V
V_{om}	measurement output voltage		0	6	V
V_{oc}	cathode output voltage		0	V_{DD}	V
T_{stg}	storage temperature		–55	+150	°C
T_j	junction temperature		–20	+150	°C
V_{es}	electrostatic handling				
	human body model (HBM)		–	2000	V
	machine model (MM)		–	300	V

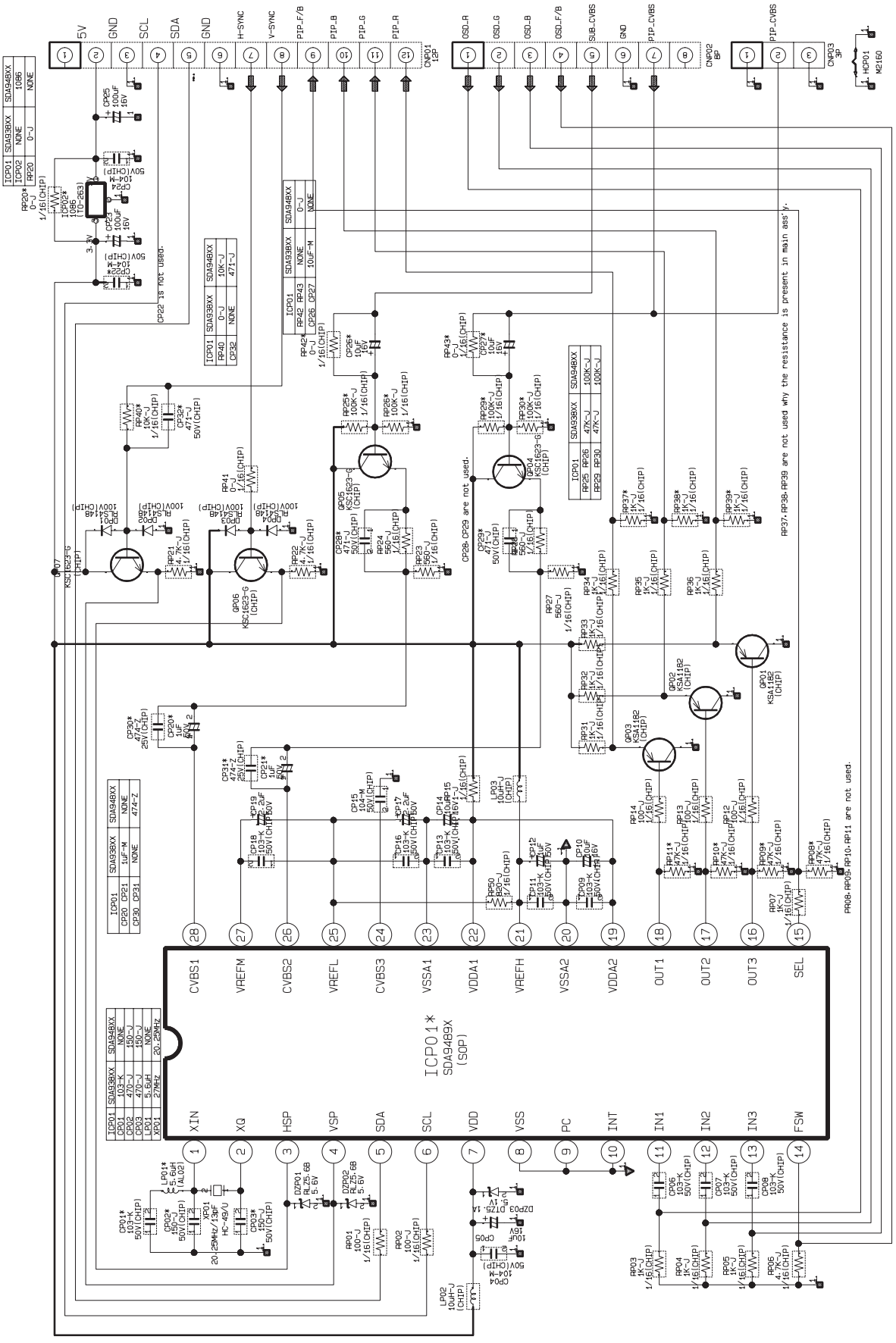
13-1-7 CRT Drive



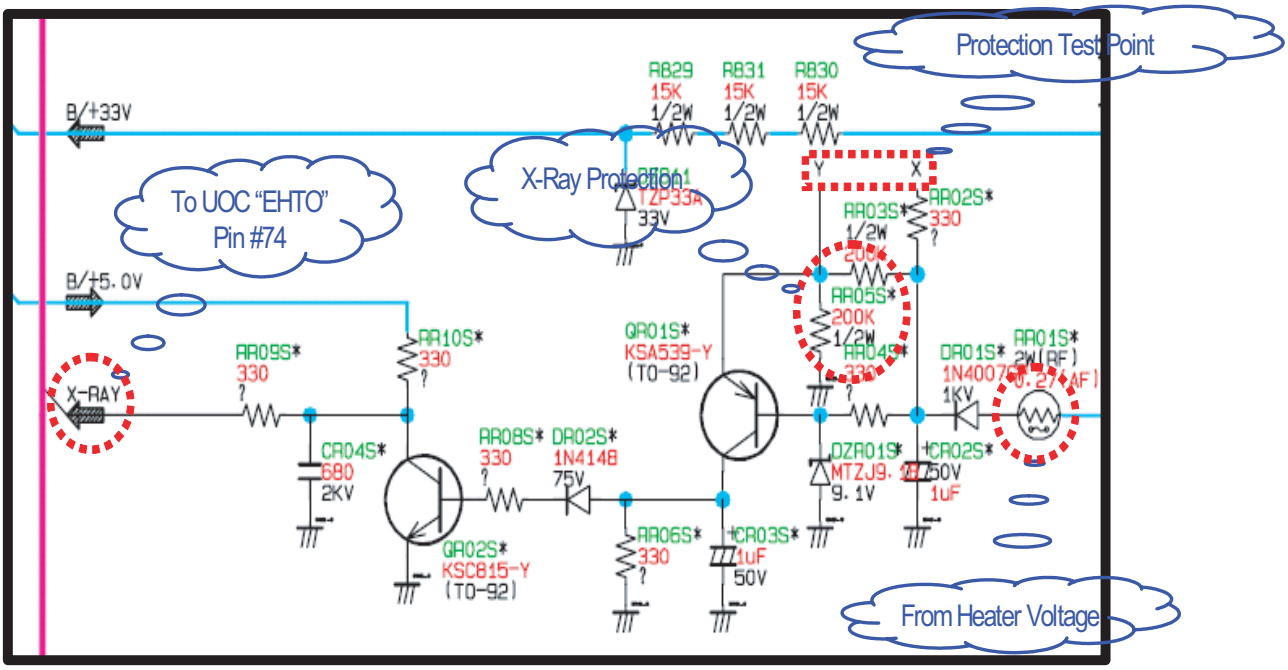
13-1-8 Spot Killer



13-1-9 Picture In Picture



13-1-10 X-Ray Protection



MEMO