

# C-N14210/s STANDARD CIRCUIT DIAGRAM

## NOTE ON USING CIRCUIT DIAGRAMS

### 1.SAFETY

The components identified by the  $\Delta$  symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

### 2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

- |  |   |
|--|---|
| (1)Input signal  | : Color bar signal  |
| (2)Setting positions of each knob/button and variable resistor | :Original setting position when shipped   |
| (3)Internal resistance of tester                               | :DC 20k $\Omega/V$  |
| (4)Oscilloscope sweeping time                                  | :H $\Rightarrow$ 20 $\mu$ S/div<br>:V $\Rightarrow$ 5mS/div<br>:Others $\Rightarrow$ Sweeping time is specified |
| (5)Voltage values  | :All DC voltage values  |

\* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

### 3.INDICATION OF PARTS SYMBOL [EXAMPLE]

- In the PW board :R1209 $\rightarrow$ R209

### 4.INDICATIONS ON THE CIRCUIT DIAGRAM

#### (1)Resistors

##### ●Resistance value

- |         |                 |
|---------|-----------------|
| No unit | : [ $\Omega$ ]  |
| K       | : [K $\Omega$ ] |
| M       | : [M $\Omega$ ] |

##### ●Rated allowable power

- |               |                |
|---------------|----------------|
| No indication | : 1/10 [W]     |
| Others        | : As specified |

##### ●Type

- |               |                             |
|---------------|-----------------------------|
| No indication | : Carbon resistor           |
| OMR           | : Oxide metal film resistor |
| MFR           | : Metal film resistor       |
| MPR           | : Metal plate resistor      |
| UNFR          | : Uninflammable resistor    |
| FR            | : Fusible resistor          |

\*Composition resistor 1/2 [W] is specified as 1/2S or Comp.

#### (2)Capacitors

##### ●Capacitance value

- |             |              |
|-------------|--------------|
| 1 or higher | : [pF]       |
| less than 1 | : [ $\mu$ F] |

##### ●Withstand voltage

- |               |                            |
|---------------|----------------------------|
| No indication | : DC50[V]                  |
| Others        | : DC withstand voltage [V] |
| AC indicated  | : AC withstand voltage [V] |

\*Electrolytic Capacitors

47/50[Example]:Capacitance value [ $\mu$ F]/withstand voltage[V]





##### ●Type

- |               |                                     |
|---------------|-------------------------------------|
| No indication | : Ceramic capacitor                 |
| MY            | : Mylar capacitor                   |
| MM            | : Metalized mylar capacitor         |
| PP            | : Polypropylene capacitor           |
| MPP           | : Metalized polypropylene capacitor |
| MF            | : Metalized film capacitor          |
| TF            | : Thin film capacitor               |
| BP            | : Bipolar electrolytic capacitor    |
| TAN           | : Tantalum capacitor                |

##### (3)Coils

- |         |                |
|---------|----------------|
| No unit | : [ $\mu$ H]   |
| Others  | : As specified |

##### (4)Power Supply




- |   |      |   |           |
|---|------|---|-----------|
|  | : B1 |  | : B2(12V) |
|  | : 9V |  | : 5V      |

\*Respective voltage values are indicated





##### (5)Test point

- |   |              |   |                           |
|---|--------------|---|---------------------------|
|  | : Test point |  | : Only test point display |
|---|--------------|---|---------------------------|

##### (6)Connecting method

- |   |              |   |                         |
|---|--------------|---|-------------------------|
|  | : Connector  |  | : Wrapping or soldering |
|  | : Receptacle |   |                         |

##### (7)Ground symbol

- |   |                                 |
|---|---------------------------------|
|    | : LIVE side ground              |
|    | : ISOLATED(NEUTRAL) side ground |
|  | : EARTH ground                  |
|  | : DIGITAL ground                |

## 5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : ( $\perp$ ) side GND and the ISOLATED(NEUTRAL) : ( $\nabla$ ) side GND. Therefore, care must be taken for the following points.

- Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.
- Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus ( oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected , a fuse or any parts will be broken.

◇ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

##### ◇ NOTE

Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.

When ordering parts, please use the numbers that appear in the Parts List.

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## SEMICONDUCTOR SHAPES

### TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
					CHIP TR 

### IC

BOTTOM VIEW	FRONT VIEW			TOP VIEW

### CHIP IC

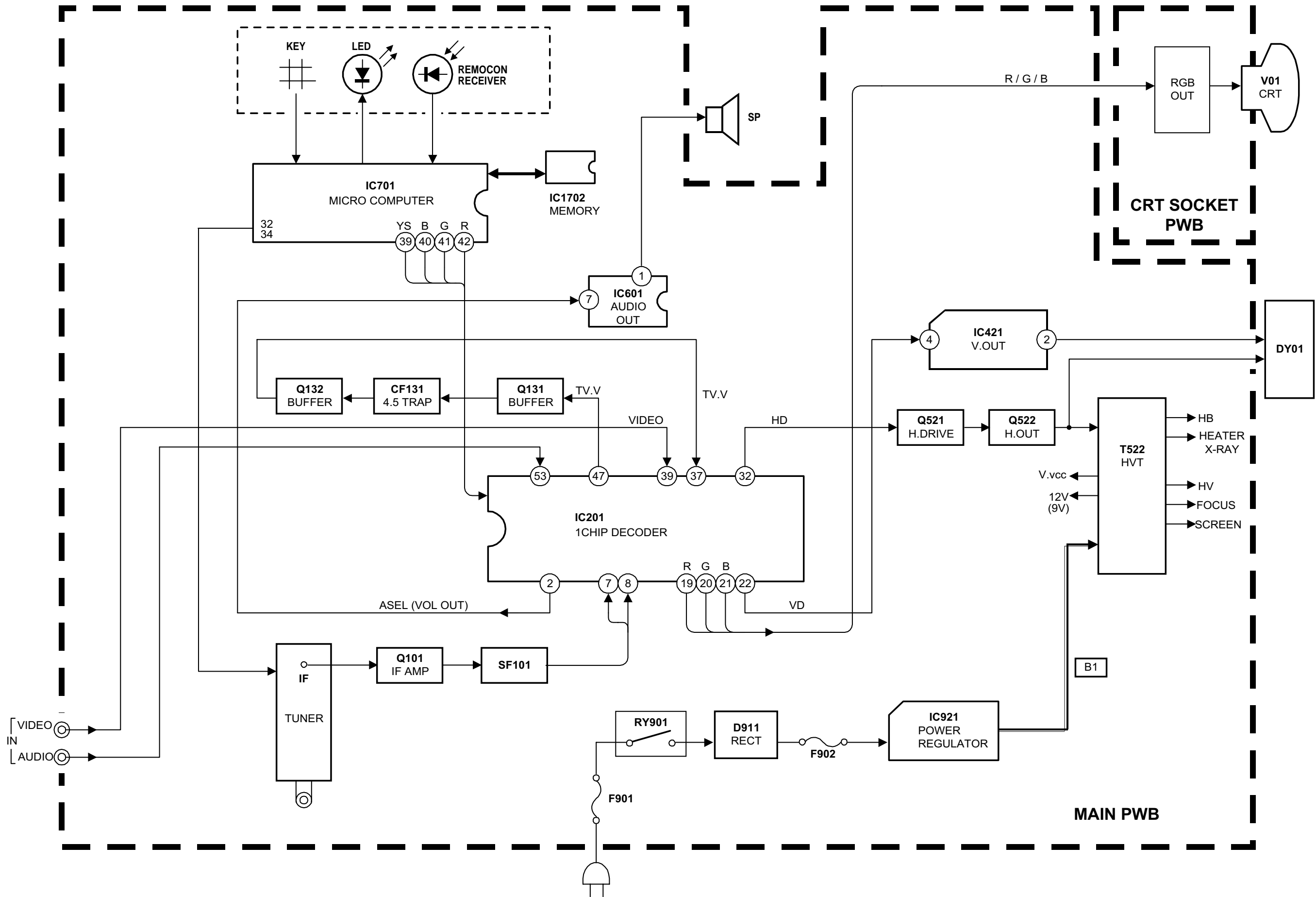
TOP VIEW	

## CHANNEL CHART

MODE		BAND	CHANNEL	TUNER				
TV	CATV		DISP.	BAND				
○	○	VL	02	I				
			03					
			04					
			05					
			06					
			07					
		VH		08	II			
				09				
				10				
				11				
				12				
				13				
				14				
x	○	MID	15	I				
			16					
			17					
			18					
			19					
			20					
			21					
			22					
			SUPER			23	II	
						24		
						25		
		26						
		27						
		28						
		29						
		30						
		31						
		32						
		x		○		HYPER		33
			34					
			35					
			36					
37								
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43								
44								
45								
46								
47								
x	○		ULTRA		48		IV	
					49			
					50			
		51						
		52						
		53						
		54						
		55						
		56						
		57						
x	○	SUB MID	58	I				
			59					
			60					
			61					
			62					
			63					
			64					
			x		○	UHF	65	IV
							66	
							67	
68								
69								
70								

MODE		BAND	CHANNEL	TUNER				
TV	CATV		DISP.	BAND				
x	○	ULTRA	71	IV				
			72					
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			124					
			125					
			○		x	UHF	14	IV
							?	
							69	
			TOTAL 180CH { VHF 124CH UHF 56CH					
			NOTE: TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES. SPECIAL ADAPTERS MAY BE REQUIRED.					

# BLOCK DIAGRAM

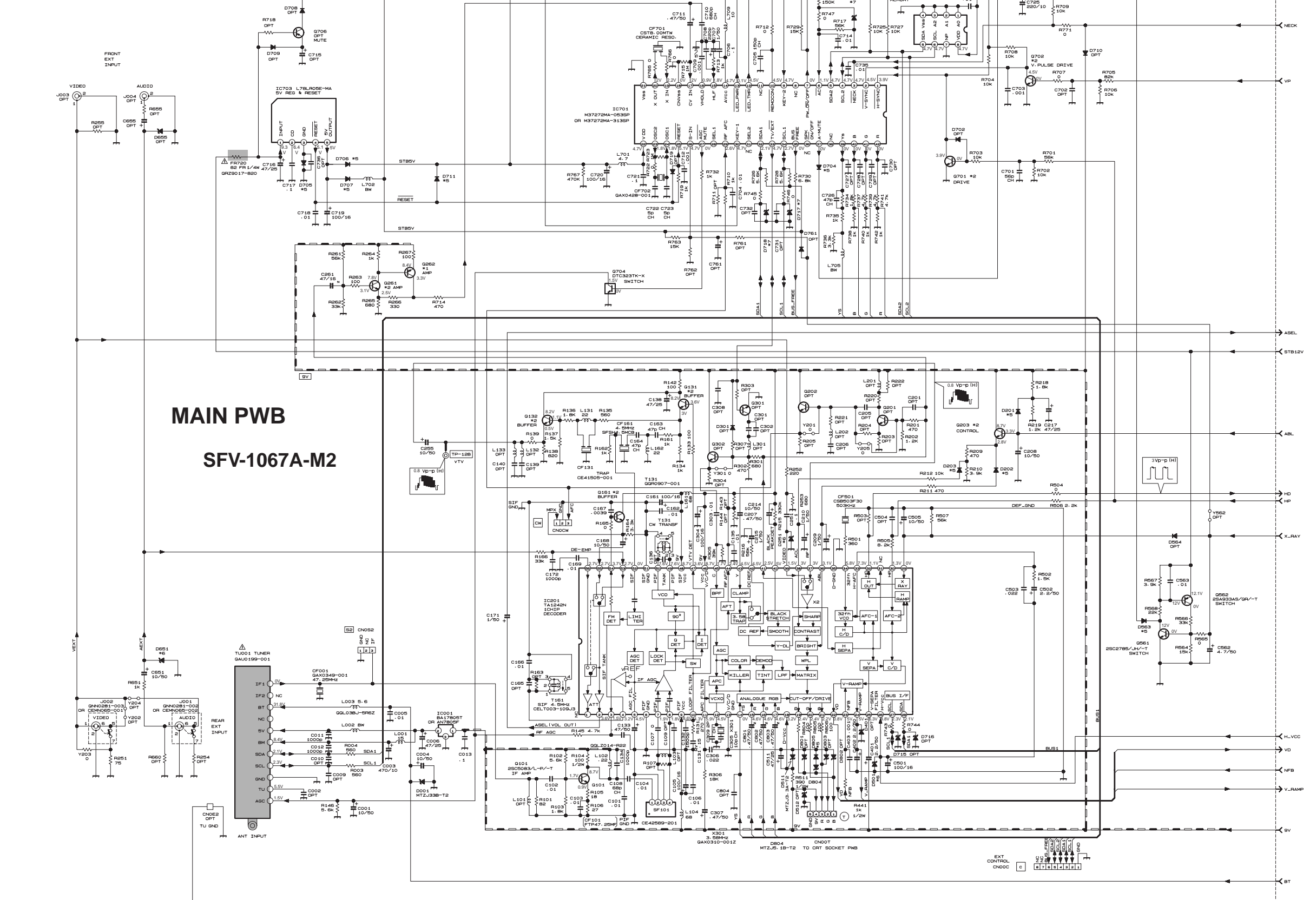


CIRCUIT DIAGRAMS

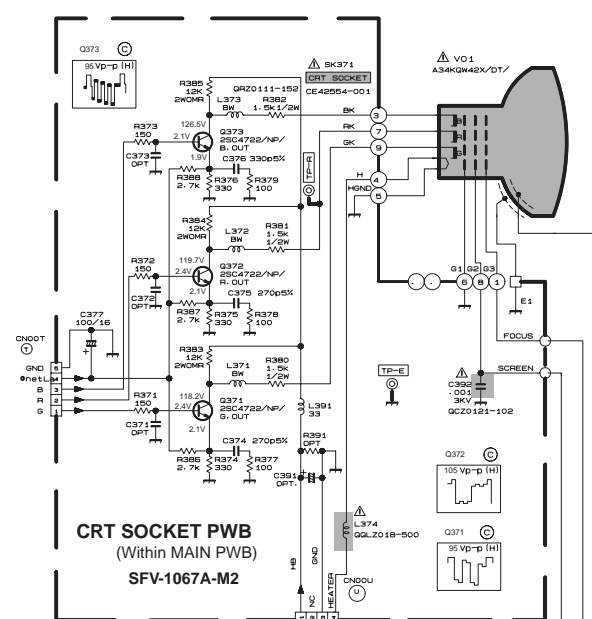
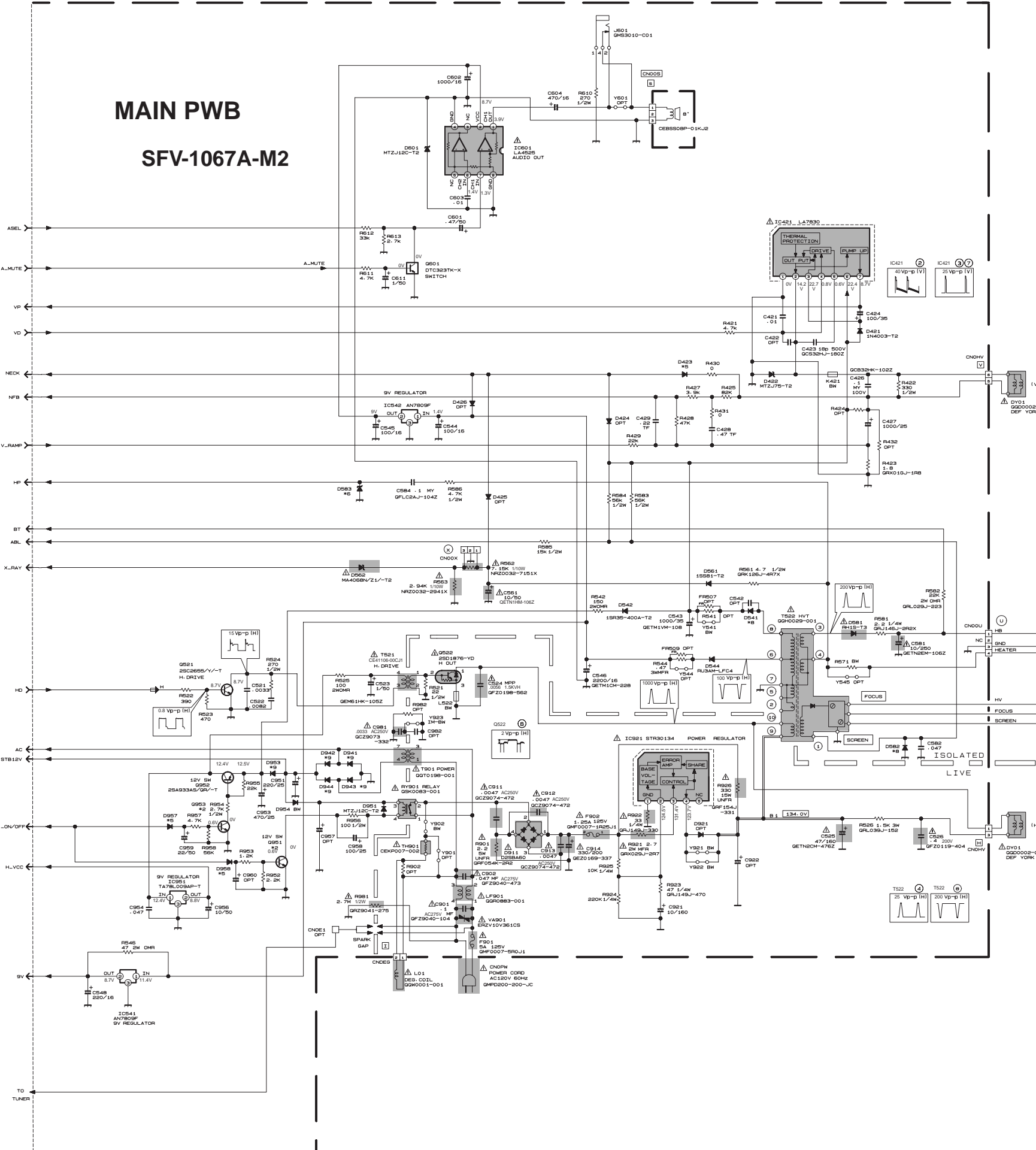
MAIN PWB,  
CRT SOCKET PWB  
CIRCUIT DIAGRAMS

NOTE

*1	CHIP PNP Tr	2SA1037AK/GR-V-X	BW	BUS WIRE
*2	CHIP NPN Tr	2SC2412K/GR-V-X	OPT	NON-MOUNT (OPEN)
*3	CHIP PNP D-Tr	D7A154EKA-X	Δ	SAFETY PARTS
*4	CHIP NPN D-Tr	D7C154EKA-X	○	RESISTOR
*5	SI DIODE	1S9133-T2	*	DIFFERENCE PARTS
*6	ZENER DIODE	MTZ.9-1C-T2		
*7	ZENER DIODE	MTZ.9-6A-T2		
*8	SI DIODE	RFP10J-5085-T3		
*9	SI DIODE	1S935-400A-T2		



# MAIN PWB SFV-1067A-M2



NOTE

#1	CHIP PNP T <sub>r</sub>	2SA1037AK/QR/XX	BW	BUS WIRE
#2	CHIP NPN T <sub>r</sub>	2SC2412K/QR/XX	OPT	NON-VOLAT (OPEN)
#3	CHIP PNP D-T <sub>r</sub>	DT1248KA-X	△	SAFETY PARTS
#4	CHIP NPN D-T <sub>r</sub>	DT1248KA-X	○	RESISTOR
#5	SI DIODE	1S8133-T2	*	DIFFERENCE PARTS
#6	ZENER DIODE	MTZJ9-1C-T2		
#7	ZENER DIODE	MTZJ5-6A-T2		
#8	SI DIODE	1S810J-5025-T3		
#9	SI DIODE	1S895-400A-T2		

