



# SCHEMATIC DIAGRAM

**MODEL : 21CZ3R/21CZ5R**

**WARNING:** BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY radiation precaution", "SAFETY PRECAUTION" and "PRODUCT SAFETY NOTICE" ON THE MANUAL FOR THIS MODEL.

**CAUTION:** The international hazard symbols " $\triangle$ " in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on the MANUAL for this model. Do not degrade the safety of the receiver through improper servicing.

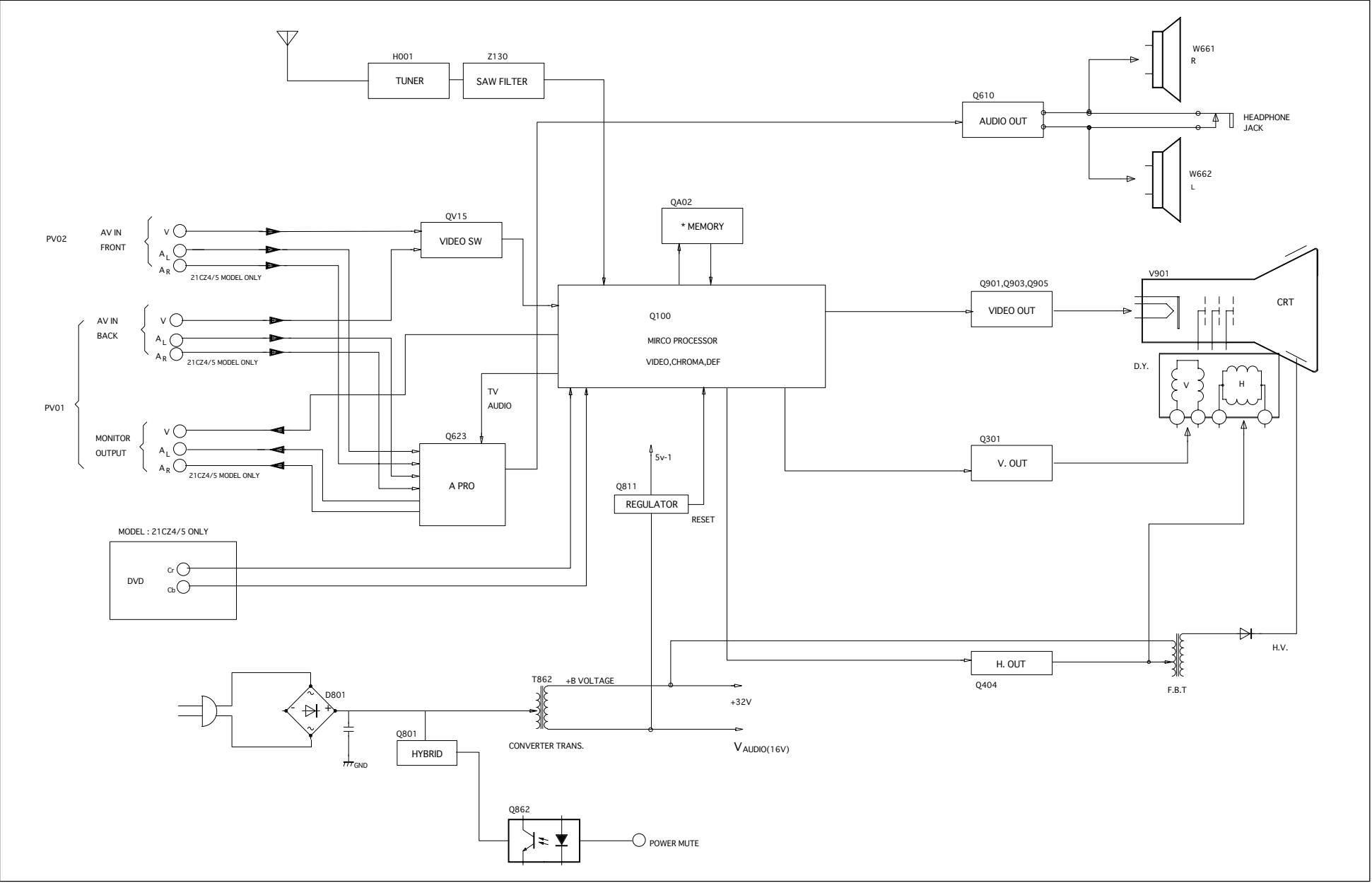
## NOTE:

1. RESISTOR Resistance is shown in ohm [K = 1.000, M = 1.000.000]. All resistors are 1/6W and 5% tolerance carbon resistor, unless otherwise noted as the following marks.  
 1/2R = Metal or Metal oxide of 1/2 watt      1/2S = Carbon composition of 1/2 watt  
 1RF = Fuse resistor of 1 watt      10W = Cement of 10 watt  
 K =  $\pm 10\%$     G =  $\pm 2\%$     F =  $\pm 1\%$
2. CAPACITOR Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in  $\mu\text{F}$ , and the values more than 1 in pF.  
 All capacitors are ceramic 50V, unless otherwise noted as the following marks.  
 Electrolytic capacitor       Mylar capacitor
3. The parts indicated with " $\triangle$ " have special characteristics, and should be replaced with identical parts only.
4. Voltages read with DIGITAL MULTI-METER from point indicated to chassing ground, using a color bar signal with all controls at normal, line voltage at 220 volts.
5. Waveforms are taken receiving color bar signal with enough sensitivity.
6. Voltage reading shown are nominal values and may vary  $\pm 20\%$  except H.V.

## ■ SCHEMATIC DIAGRAM STRUCTURE:

SIGNAL Circuit .....	1/3
POWER Circuit .....	2/3
CRT DRIVE Circuit .....	3/3

# CIRCUIT BLOCK DIAGRAM





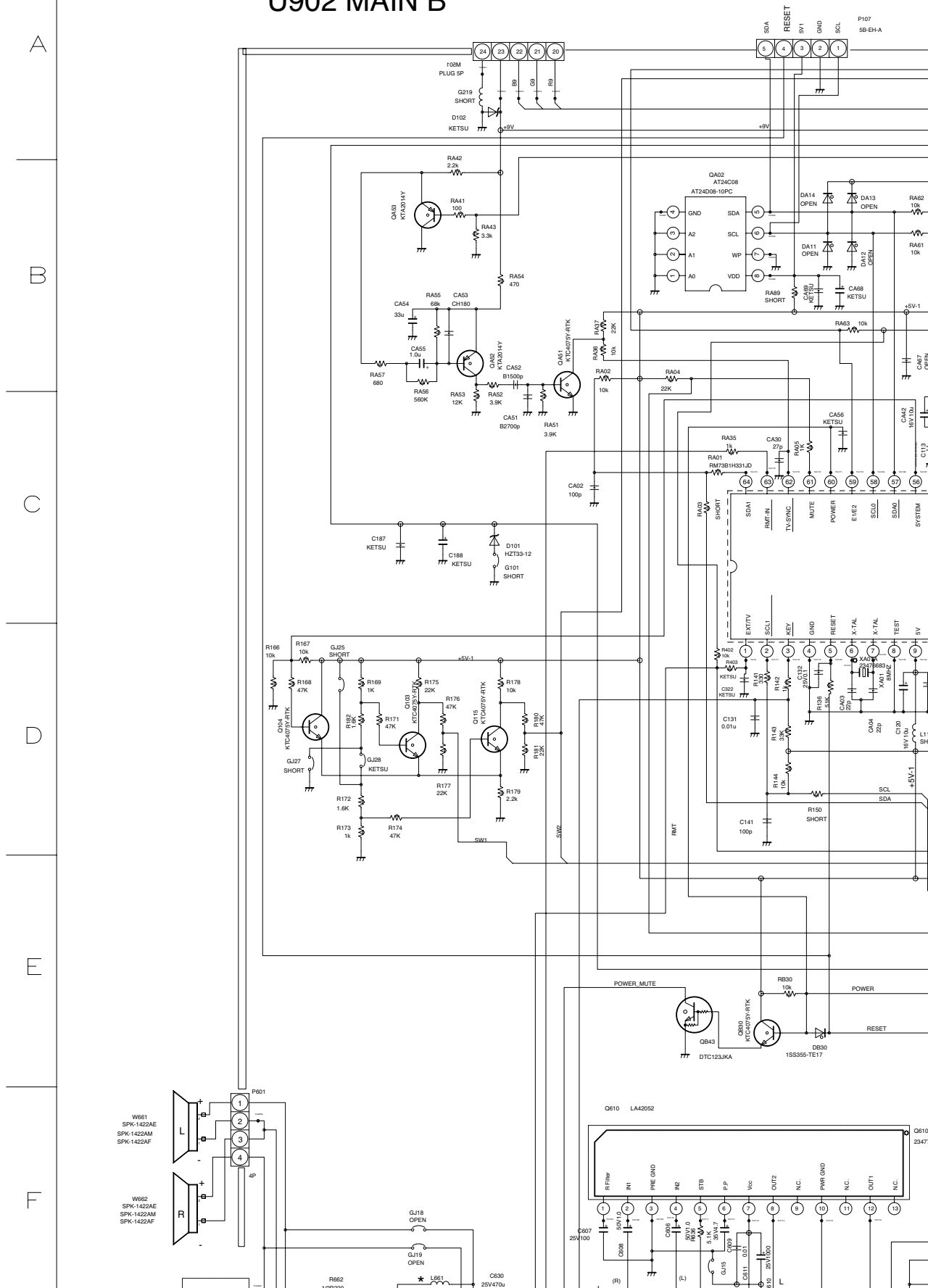
**MODEL : 21CZ3R/21CZ5R**

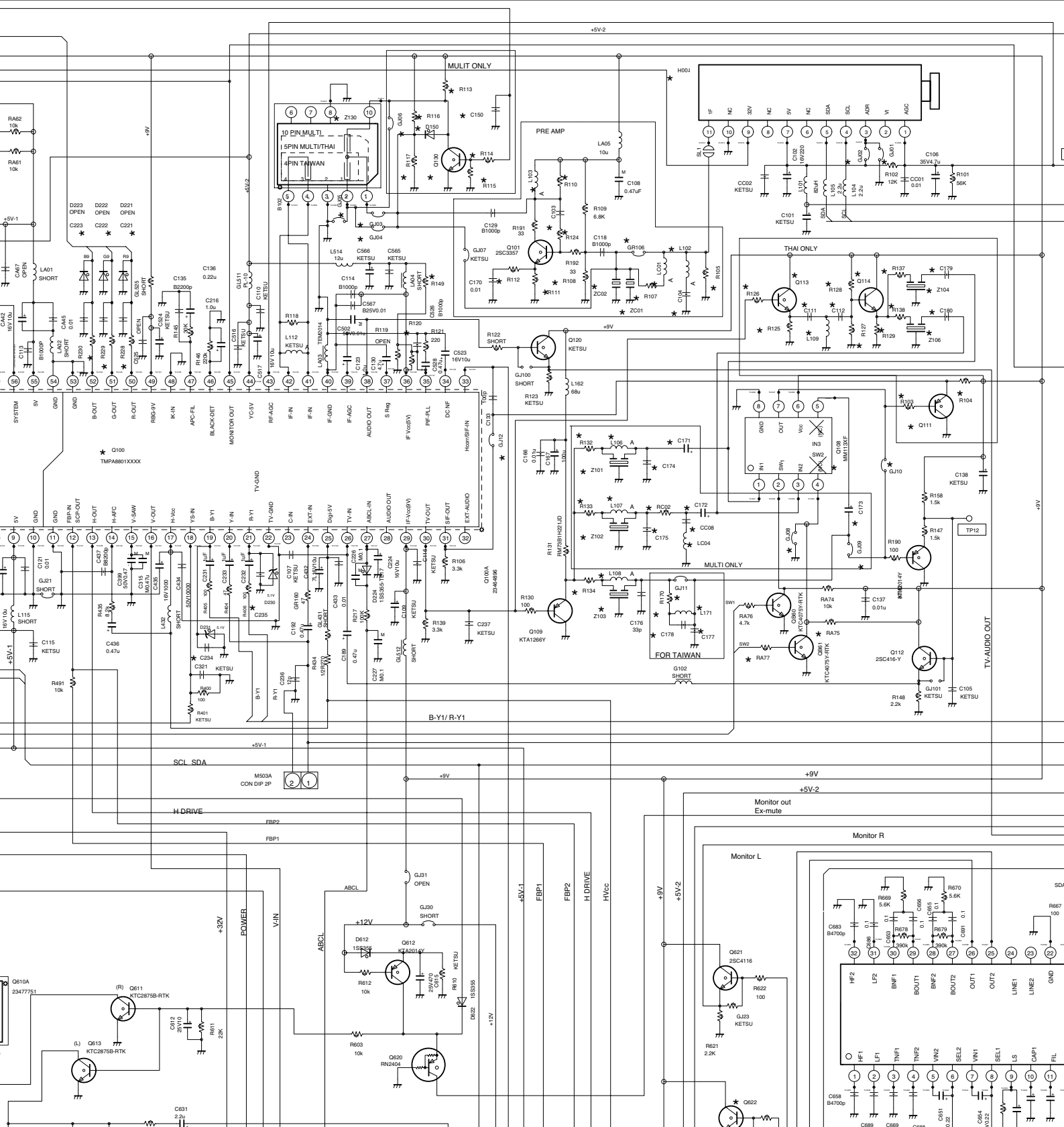
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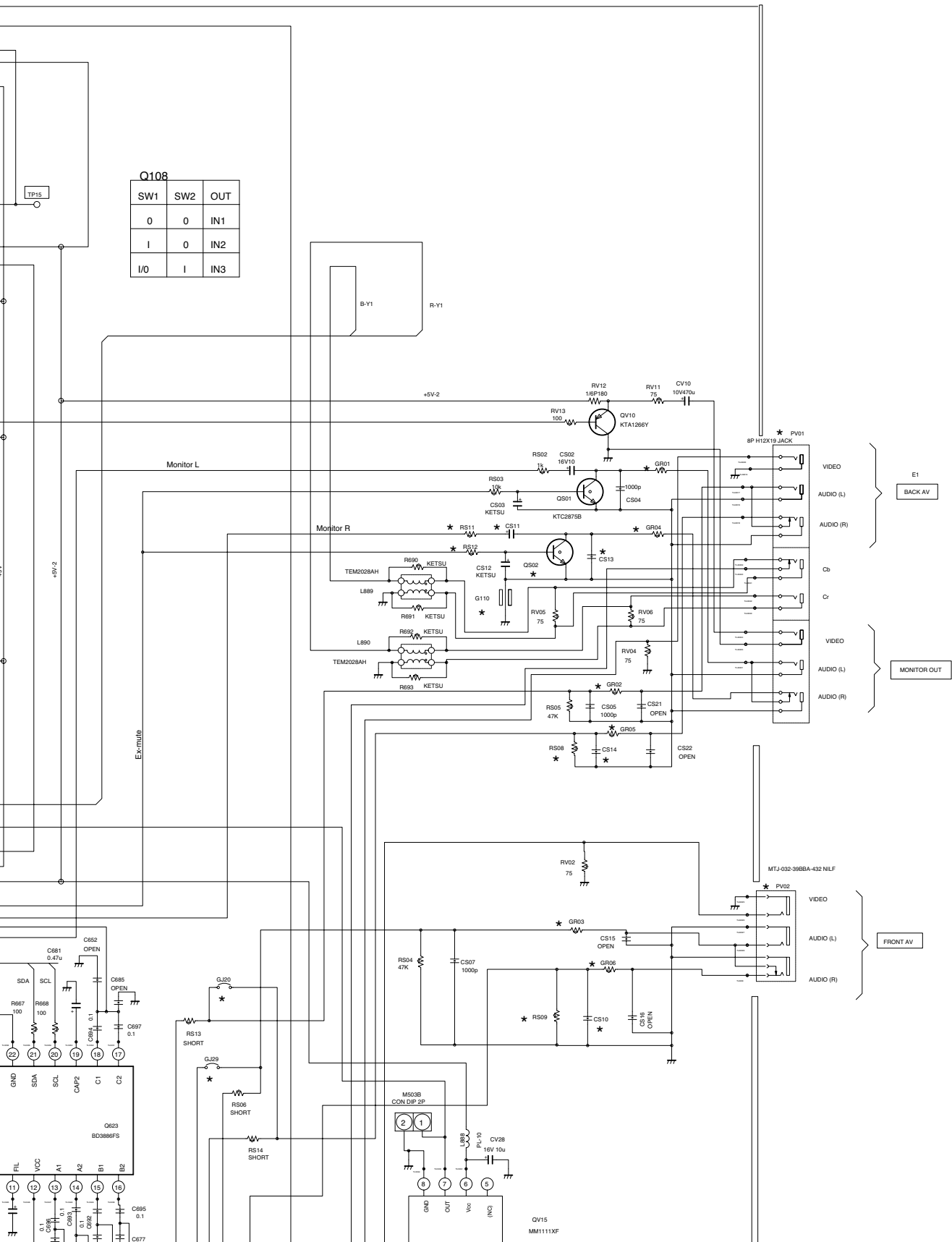
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## U902 MAIN B







1 3	1 4	1 5	1 6
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A

B

C

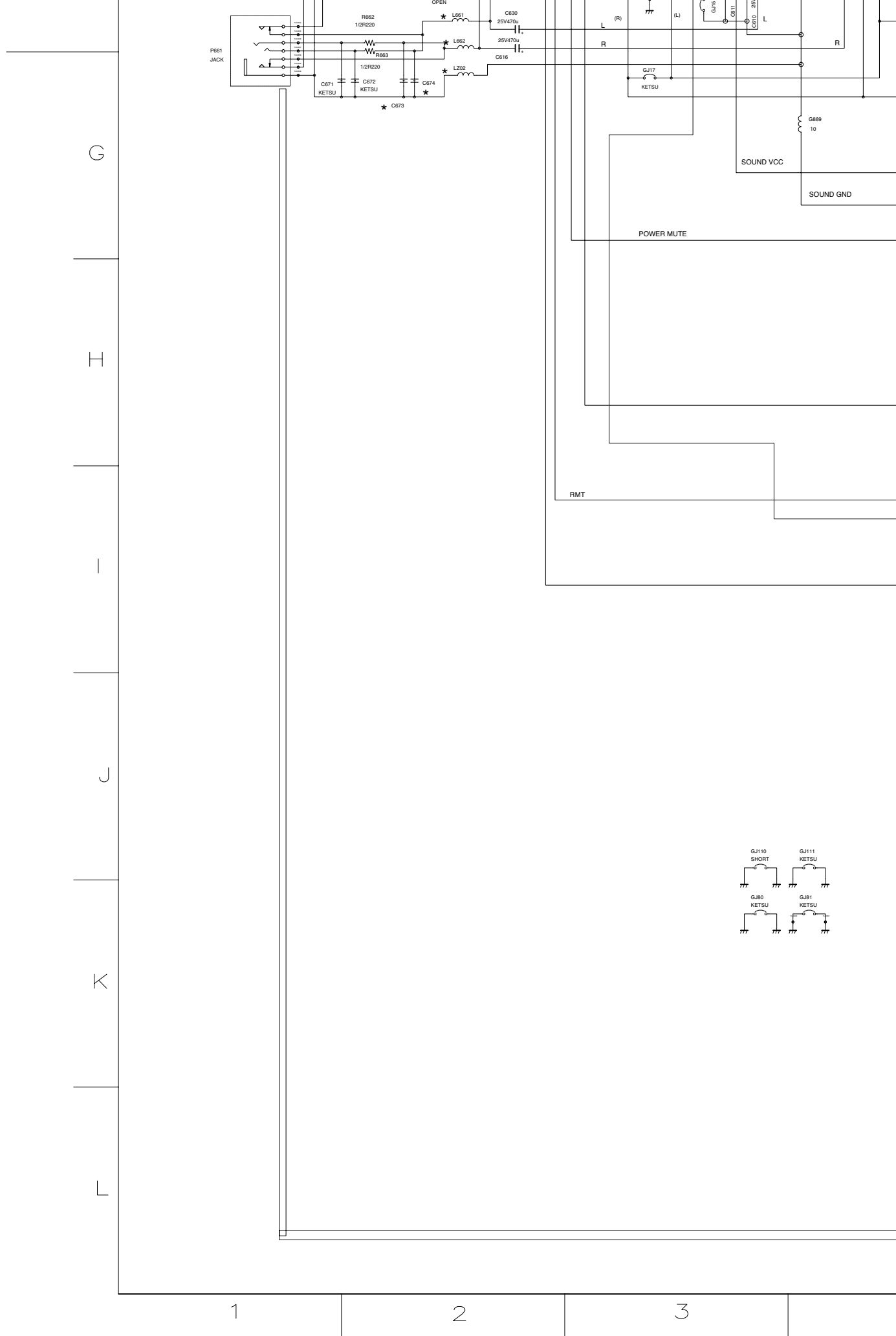
D

AV-Mono / AV-Stereo Model  
& Component Video / Non Component Video Model

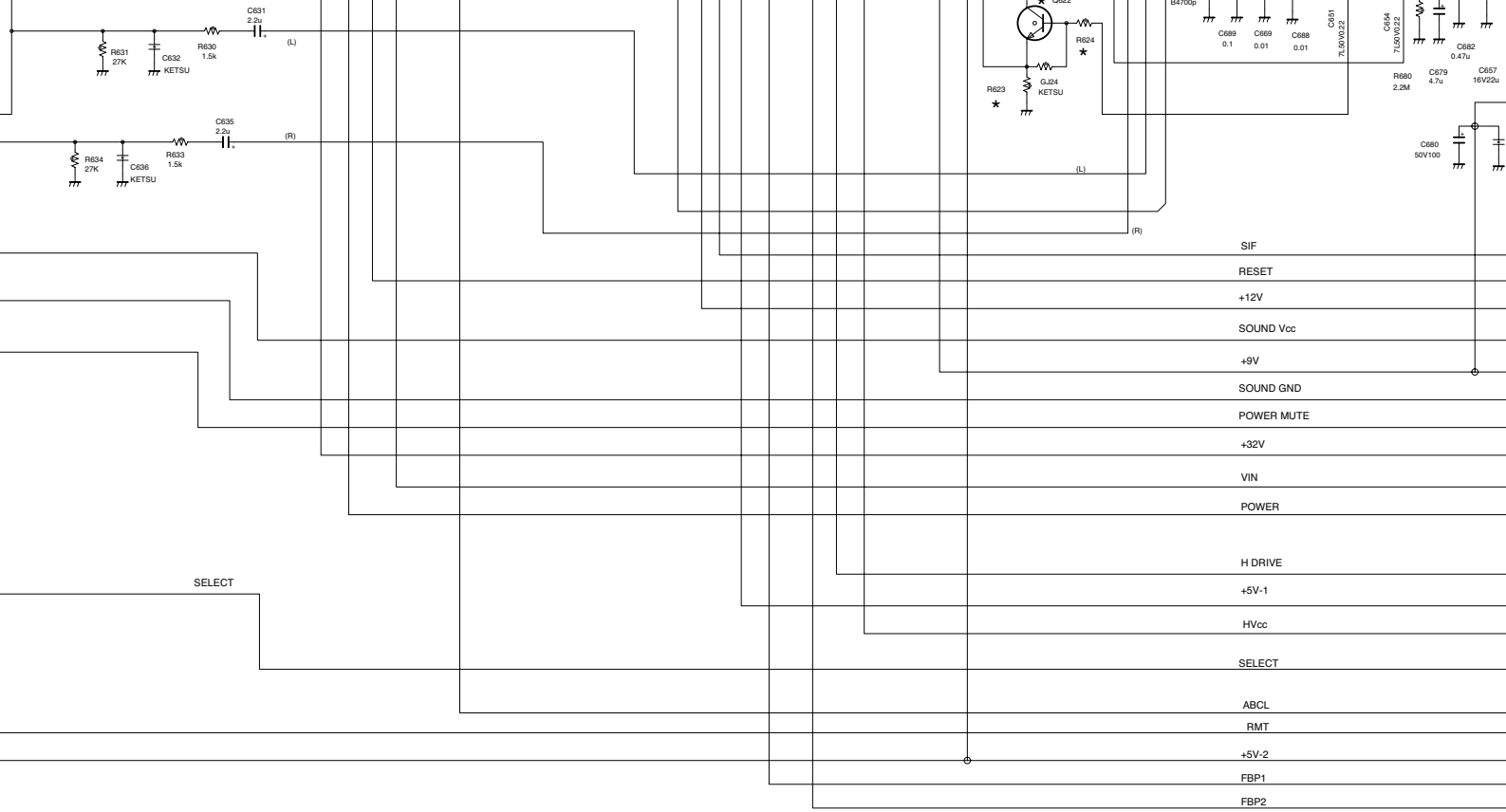
Location	CZ3 Model	CZ4 / CZ5 Model
R402	KETSU	10K
R403	KETSU	1K
R404	KETSU	47
R623	KETSU	2.2K
R624	KETSU	100
RS08	KETSU	47K
RS09	KETSU	47K
RS11	KETSU	1K
RS12	KETSU	10K
RV05	KETSU	75
RV06	KETSU	75
C322	KETSU	0.1UF
CS10	KETSU	1000pf
CS11	KETSU	10uI/16V
CS13	KETSU	1000pf
CS14	KETSU	1000pf
L889	KETSU	TEM2028AC
L890	KETSU	TEM2028AC
Q622	KETSU	2SC4116
QS02	KETSU	KTC2875B

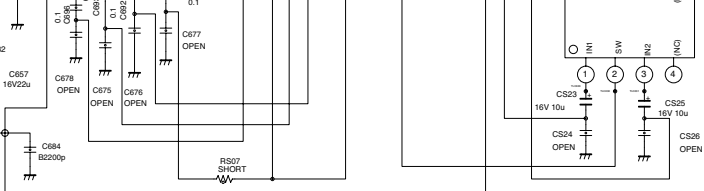
E

F









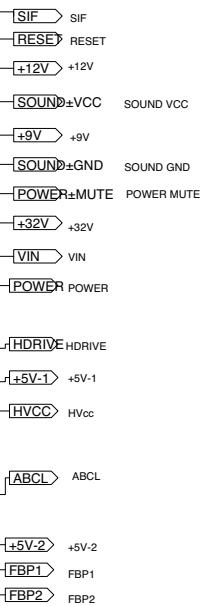
QV15  
MM1111XF

# ★ Z130

	SAW FILTER
MULTI	(R1) TSF6380Y (5 PINS)
	(R2) OFWK6269 (10 PINS)
	(R3) F816KPL (5 PINS)
TAIWAN	TSF1248P (4 PINS)
THAI	OFWK2964M (5 PINS)

# ★ H001

ASIA MODELS	ECA33LXD
	TAEM-G107DF
	ECA33LXE
VIETNAM MODELS	ENV59DA7G3 (23321514)
TAIWAN MODELS	ELA51LX7 (23321520)
RUSSIAN MODELS	ENV59DA7G3 (23321514)

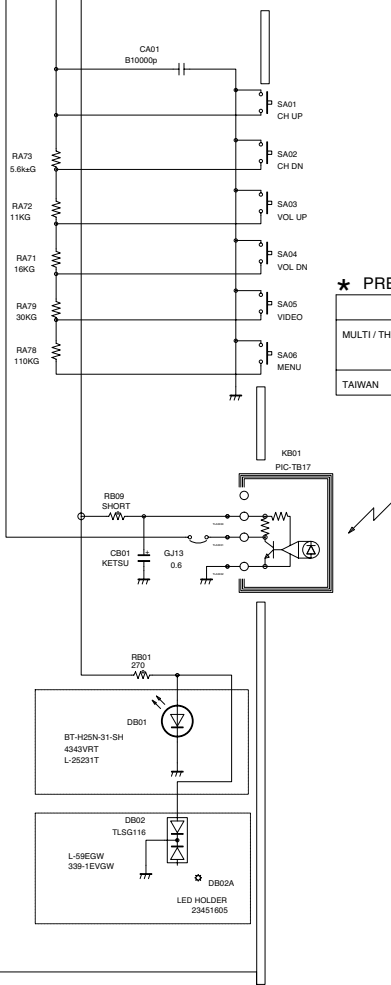


# ★ SIF FILTER

	Q108	Z103
MULTI	MM1113XF	TCF1138AM (RA) TCF1109 (RB)
TAIWAN	KETSU	TCF1138AM (RA) TCF1109 (RB)
THAI	MM1113XF	TCF1113

# ★ PRE AMP

		R105	L102	C104	GR106
MULTI / THAI	EMC+E MODEL	330	1u	47pF	KETSU
	NO EMC	120	KETSU	KETSU	SHORT
TAIWAN	---	120	1.2u	SHORT	KETSU



	GJ03	GJ04	GJ05	GJ06
)	O	X	X	O
(S)	O	X	O	X
	O	X	X	O
	X	O	X	X
	O	X	O	X

	GJ01	GJ02	REMARKS
D	4.7K	4.7K	SAMSUNG
07DF	4.7K	4.7K	LG
E	4.7K	4.7K	SANYO
7G3 (4)	OPEN	OPEN	PANASONIC
7 (0)	OPEN	OPEN	PANASONIC
7G3 (4)	OPEN	OPEN	PANASONIC

						CIRCUIT AREA		
	GJ08	GJ09	GJ10	GJ11	GJ12	MULTI	THAI	TAIWAN
M (RA) (RB)	X	X	O	O	O	O	X	X
M (RA) (RB)	X	O	X	X	O			
	O	O	X	O	X			

R106	LC01	ZC01	ZC02	R108	C103	R124	R110	L103	R191	R111	R112	C170	R118	L112	R107
KETSU	0.22u	39.5M(TCF1107)	30.0M(TCF1120)	2.7K	0.01u	1K	1K	1.2u	33	36	SHORT	0.01u	KETSU	KETSU	33
SHORT	KETSU	KETSU	KETSU	1.2K	KETSU	KETSU	680	0.47u	33	33	220	0.01u	820	KETSU	KETSU
KETSU	0.22u	47.3M(TCF1121AM)	KETSU	4.7K	KETSU	KETSU	680	1.2u	SHORT	150	39	2200p	2.2K	0.82	27

Q02	KETSU	KTC2875B
Q02	KETSU	KTC2875B
GJ20	SHORT	KETSU
GJ29	SHORT	KETSU
PV01	S/N: 23023416	S/N: 23023415
PV02	S/N: 23023397	S/N: 23023258

### Audio filter for AV-Mono & AV-Stereo Model

Location	CZ3 Model		CZ4/ CZ5 Model	
	Russia	Non Russia	Russia	Non Russia
GR01	1K	SHORT	1K	SHORT
GR02	1K	SHORT	1K	SHORT
GR03	1K	SHORT	1K	SHORT
GR04	KETSU	KETSU	1K	SHORT
GR05	KETSU	KETSU	1K	SHORT
GR06	KETSU	KETSU	1K	SHORT
G110	FILTEM2011AO	SHORT	FILTEM2011AO	SHORT
C673	10000pf	KETSU	10000pf	KETSU
C674	10000pf	KETSU	10000pf	KETSU
L661	TRF9240AC	SHORT	TRF9240AC	SHORT
L662	TRF9240AC	SHORT	TRF9240AC	SHORT
L202	TRF9240AC	SHORT	TRF9240AC	SHORT

## Component Video Coupling Cap.

Location	CZ3	CZ4 / CZ5
C231	KETSU	1uF/50V
C232	KETSU	1uF/50V
C233	KETSU	1uF/50V
C234	0.01uF	KETSU
C235	0.01uF	KETSU

# SIGNAL

U902 MAIN - SEL04011

\*P801 - POWER CORD

ASIA / EAST EUROPE	250V 2.5A
HONG KONG	250V 13A
MIDDLE EAST	250V 6A / 127V 7.5A
AUSTRALIA	250V 7.5A
TAIWAN	125V 7A

R1	R2
D404	CX4409
PH12	56 Ohm

R441	1W1K
L441	TLN2510AC (23333999) (RA)
L441	TLN2510AY (23333989) (RB)
C442	2500V.30u (70082954B)
D404A	(29477898)
C443	1500V 1500P (70032910B)
C444	1500V 1800P (76022745)
D444	RL440F-M05FLAAM LE-1
C447	630V 0.030uF (76603030B)

POWER

**MODEL : 21CZ3R/21CZ5R**

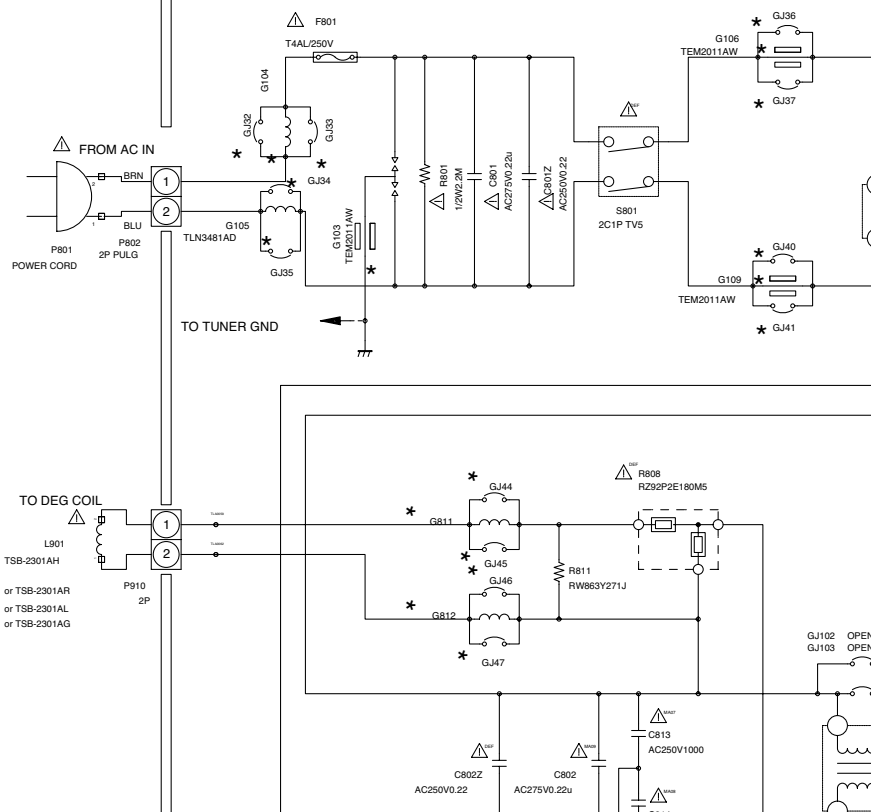
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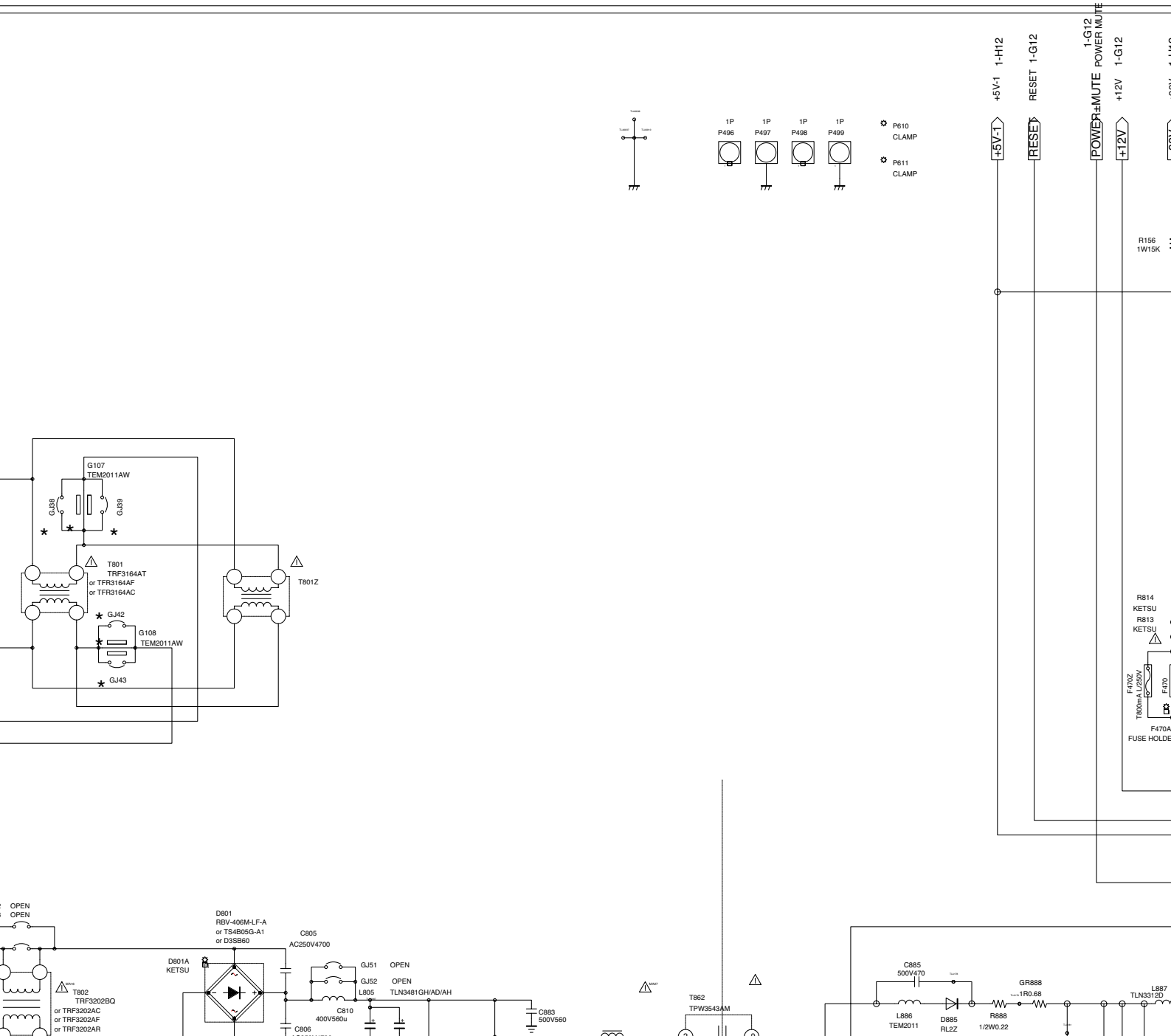
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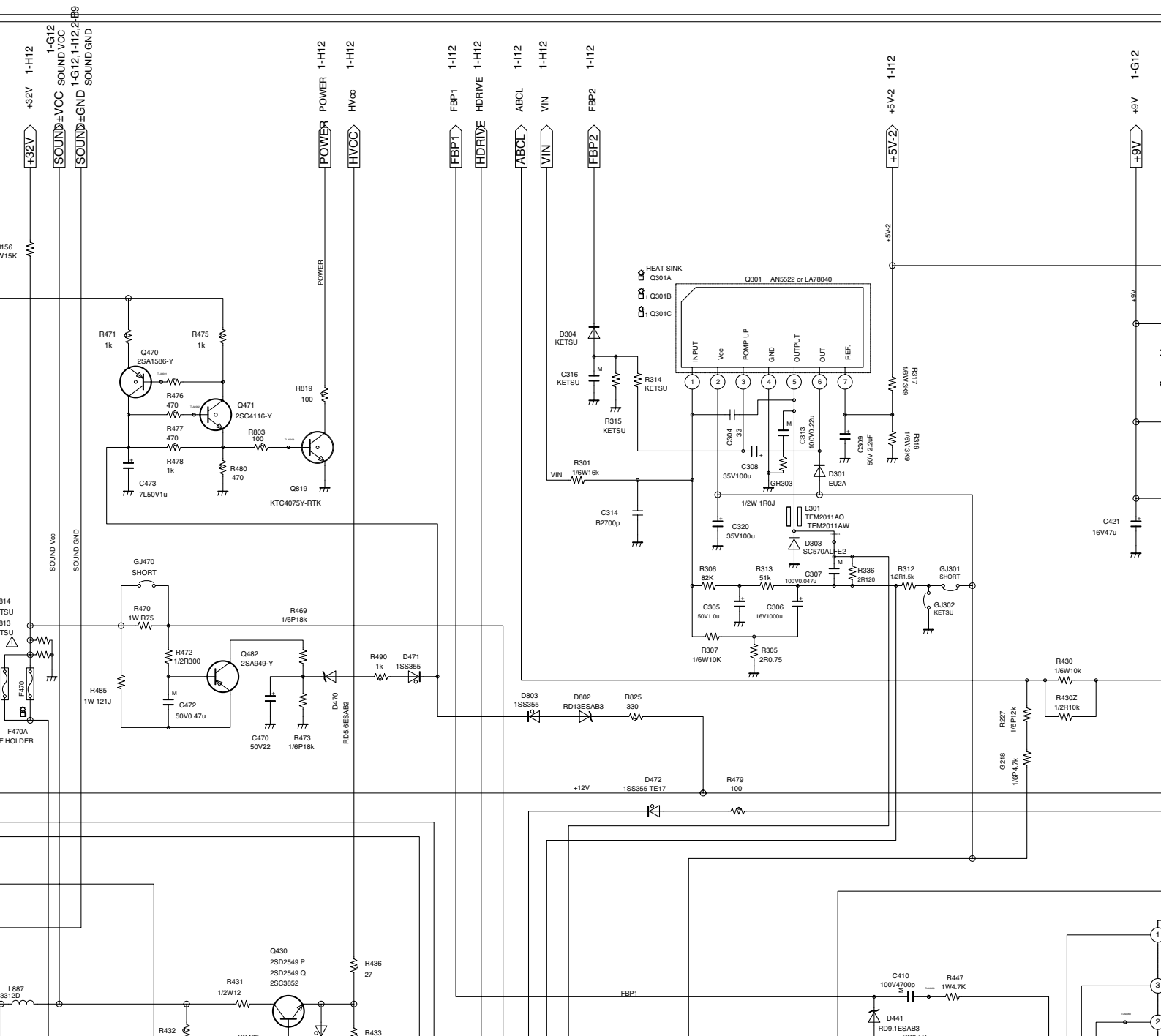
## U902 MAIN - SEL04011

\*P801 - POWER CORD

ASIA / EAST EUROPE	250V 2.5A
HONG KONG	250V 13A
MIDDEL EAST	250V 6A / 127V 7.5A
AUSTRALIA	250V 7.5A
TAIWAN	125V 7A





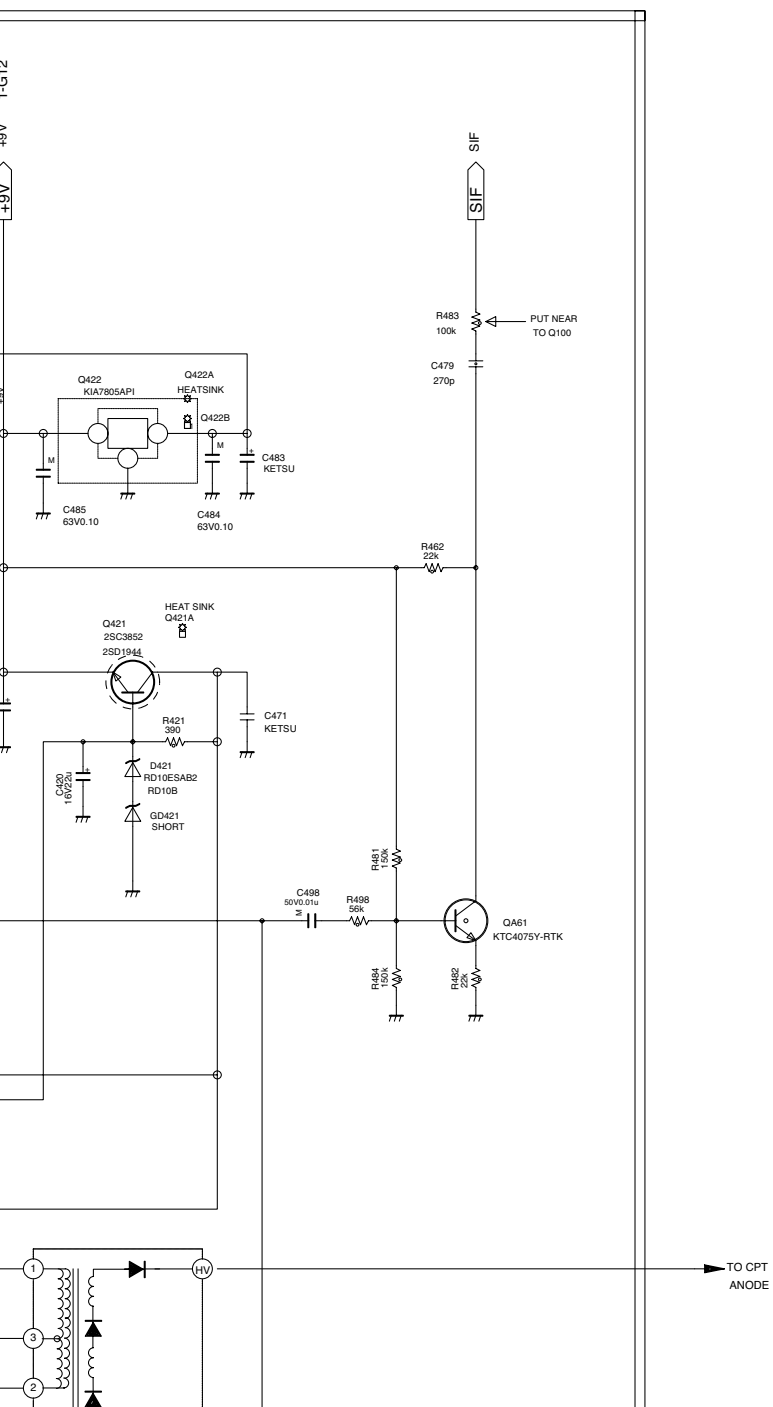


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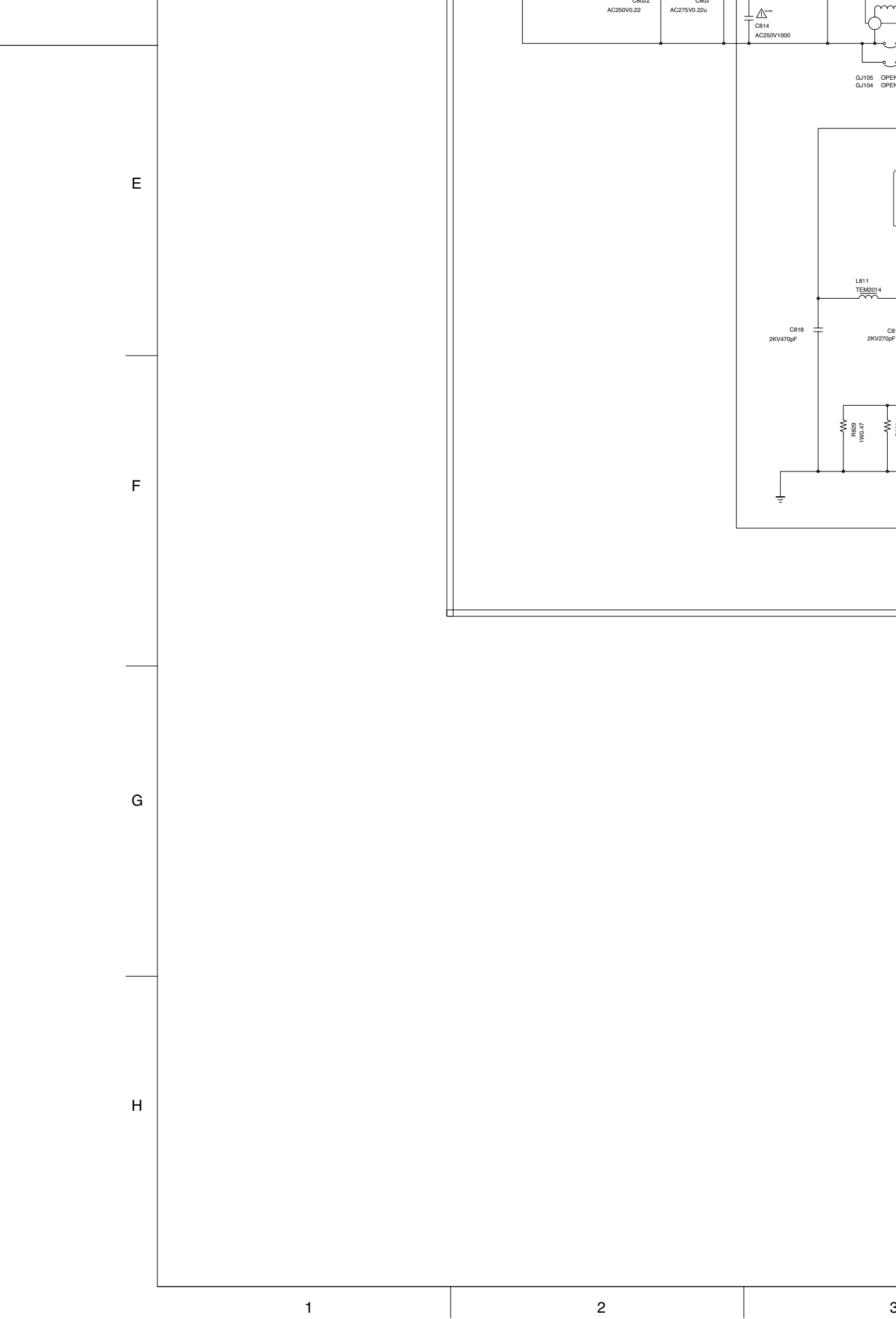
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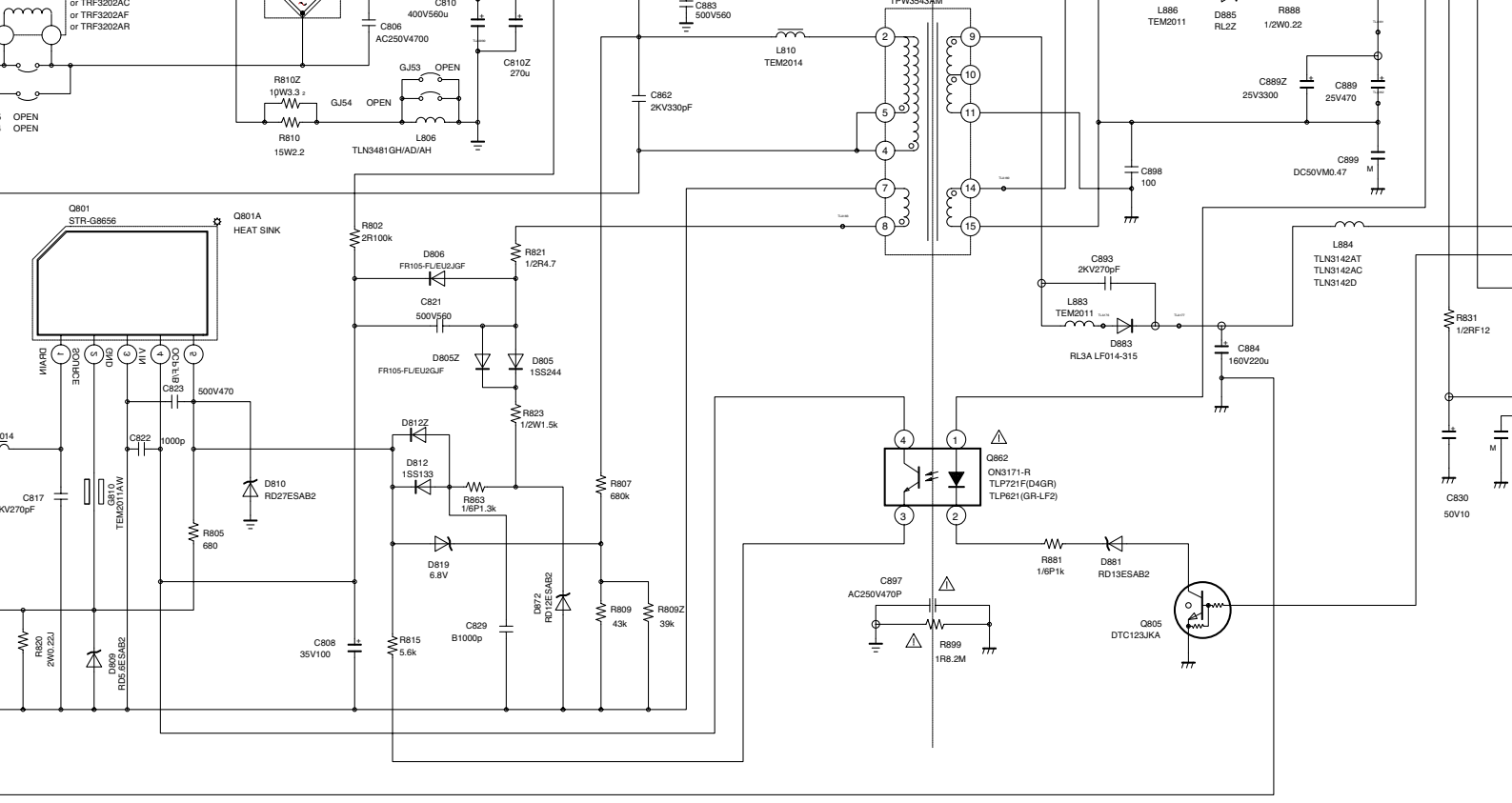
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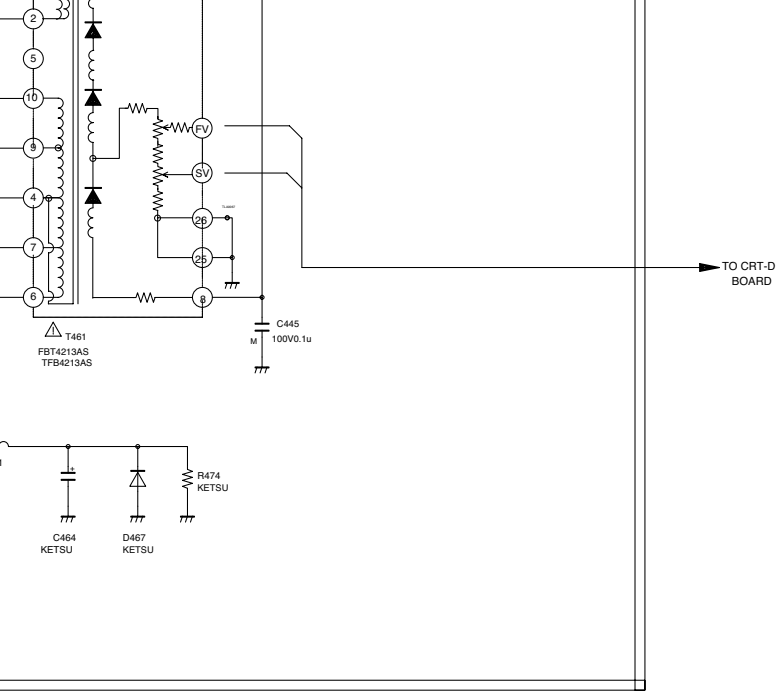












R2
ON4409 (23314375)
56 Ohm

33999) (RA)
33989) (RB)
2994B)
503213B)
503274B)
4AM LF-1
820303B)

POWER

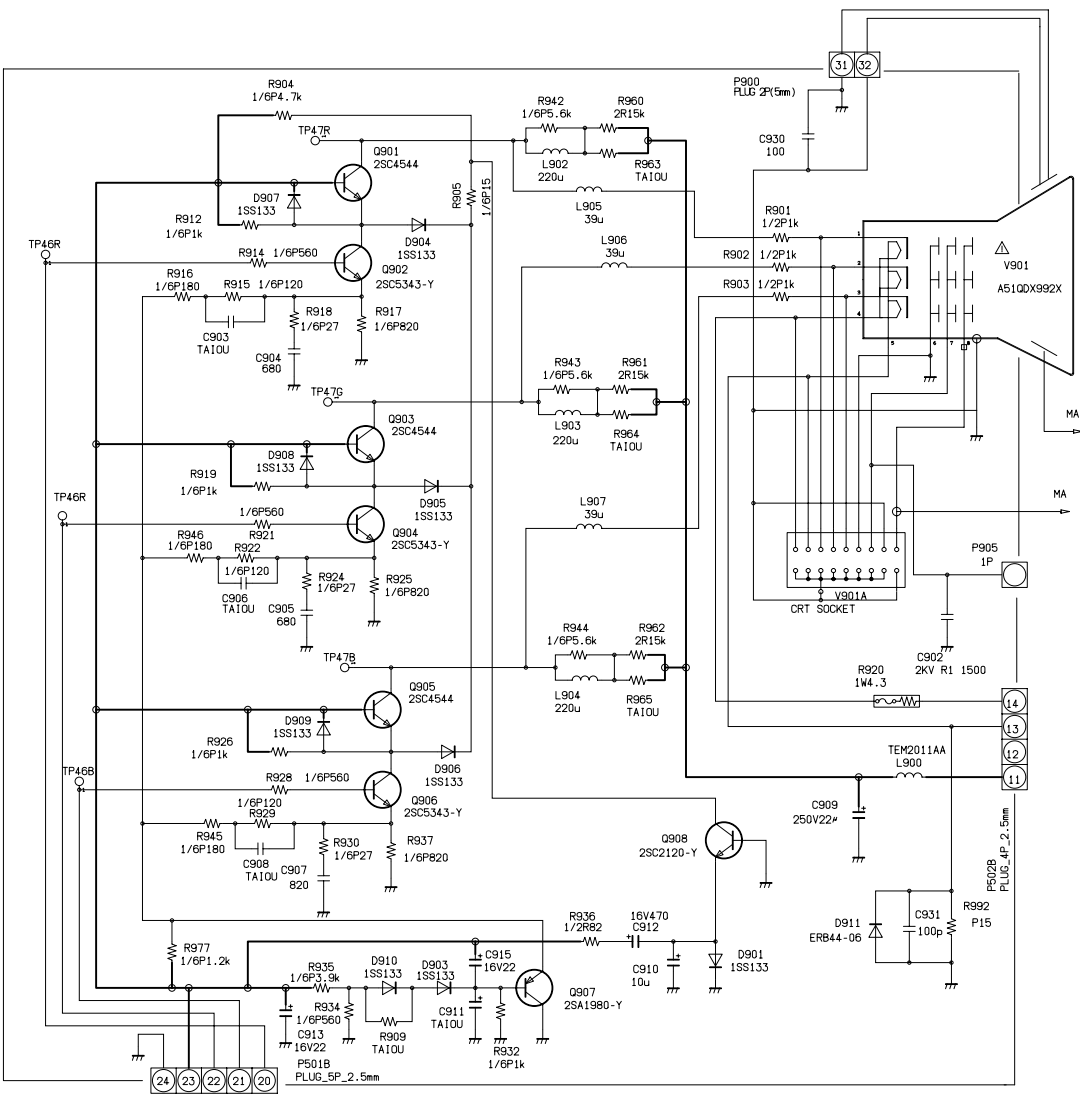
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SCHEMATIC DIAGRAM      MODEL : 21CZ3R/21CZ5R



CRT DRIVE