

Haier

GB980W

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Service Manual

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WARNING

To prevent from fire or shock hazard,do not expose monitor to any rain or any form of water.High voltage is inside the monitor so please do not remove the back cover of the cabinet if you are not a qualified monitor engineer.Contact the local dealer or the nearest **Proview** branch office if you need help.

A. IMPORTANT SAFETY INSTRUCTION

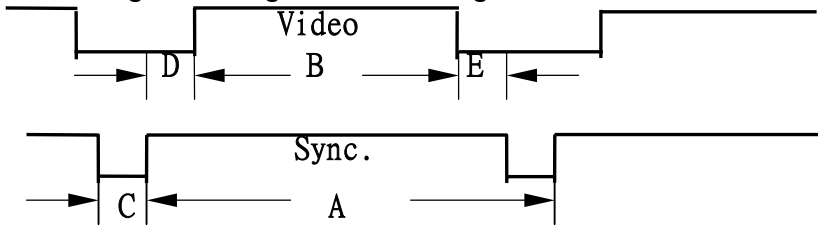
Prior to using this service manual,please ensure that you have carefully followed all the procedures outlined in the user's manual for this product.

1. Read all of these instructions.
2. Save these instructions.
3. Follow all warnings and instructions marked on the product.
4. Unplug this product from the wall outlet before cleaning.Do not use liquid cleaner or aerosol cleaner, use a damp cloth for cleaning.
5. Do not use this product near water.
6. Do not place this product on an unstable cart,stand or table.The product may fall,causing serious damage to the product.
7. Slots and openings in the cabinet and the back or bottom are provided for ventilation,to ensure reliable operation of the product and to protect it from overheating.Those openings must not be blocked or covered.The openings should never be blocked by placing the product on a bed,sofa, rug, or other similar surface.This product should not be placed in a built-in installation,since proper ventilation is provided.
8. This products should be operated with the type of power source indicated on the marked label. If you are not sure of the type of power is available, consult with your dealer or local power company.
9. This product is equipped with a 3-wire grounding type plug,a plug having a third (grounding) pin.This plug will only fit into a grounding-type power outlet.This is a safety feature.If you are unable to insert the plug into the outlet,contact your electrician to replace your obsolete outlet.Do not damage the purpose of the grounding-type plug.
10. Do not allow anything to rest on the power cord.Do not locate this product where persons will walk on the cord.
11. Never push any kinds of objects into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock.Never spill any kinds of liquid on the product.
12. Do not attempt to service this product yourself,as opening or removing covers may expose you to dangerous voltage points or other risk.Refer all servicing to service personnel.
13. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions.
 - a. When the power cord or plug is damaged or frayed.
 - b. If liquid has been spilled into the product.
 - c. If the product has been exposed to rain or water.
 - d. If the product does not operate normally,when the operating instructions are followed.Adjust only those controls involved in the operating instructions ,since improper adjustment of other controls may result in damage and will often require extra work by a qualified technician to restore the product to normal operation.
 - e. If the product has been dropped or the cabinet has been damaged.
 - f. If the product exhibits a distinct change in performance,indicating a need for service.

Panel General Specification																
Panel Model	CMO M190A1-P02															
Screen Diagonal	19" TFT															
Active Display Area	410.4mm (H) x 256.5mm (V)															
Pixel Pitch	0.285(H) x 0.285(V) mm															
Number of Colors	16.2M colors															
View Angle																
Horizontal	+/-75 degree															
Vertical	+70/-60 degree Typical															
Luminance of White	300m ² (Typical)															
Contrast Ratio (Typical)	850:1															
Maximum Resolution	1440 x 900 @ 75Hz															
Recommend Resolution	1440 x 900 @ 75Hz															
Synchronization Range																
Horizontal	31 – 91 KHz															
Vertical	56– 75 Hz															
Pixel Rate	135 MHz															
User Control	5 Key Switch															
OSD Function	Auto, Brightness, Contrast, H-position, V-position, H-size, Phase, Reset, Color selection (R, G, B, cool, warm), OSD , Language, Exit.															
Power Source	90 – 264 Vac 47 / 63 Hz															
Power Consumption	50W															
Connection Type	15 Pin D-Sub Type;															
Input Signal																
Video	D-Sub: Analog R.G.B. , 0.7Vp-p / 75 Ohms															
Sync.	TTL level, positive or negative polarity															
Color Temperature	Cool, Warm / user mode															
Dimension (WxHxD)	332.0 x 500.0 x 140(mm)															
Monitor Weight	6.3 kg															
Base Operation																
Tilt	-5 / + 25 degree															
Power Saving																
ON	< 50W															
Sleep mode	< 2W															
OFF	< 2W															
Signal Connector Pin Assignment																
D-SUB Pin No.	<table border="0"> <tr> <td>1. Red Video</td> <td>6. Red Ground</td> <td>11. GND</td> </tr> <tr> <td>2. Green Video</td> <td>7. Green Ground</td> <td>12. SDA For DDC2B</td> </tr> <tr> <td>3. Blue Video</td> <td>8. Blue Ground</td> <td>13. H-sync.</td> </tr> <tr> <td>4. GND</td> <td>9. +5V from PC</td> <td>14. V-sync-DDC1</td> </tr> <tr> <td>5. Self Test</td> <td>10. Sync. GND</td> <td>15. SCL For DDC2B</td> </tr> </table>	1. Red Video	6. Red Ground	11. GND	2. Green Video	7. Green Ground	12. SDA For DDC2B	3. Blue Video	8. Blue Ground	13. H-sync.	4. GND	9. +5V from PC	14. V-sync-DDC1	5. Self Test	10. Sync. GND	15. SCL For DDC2B
1. Red Video	6. Red Ground	11. GND														
2. Green Video	7. Green Ground	12. SDA For DDC2B														
3. Blue Video	8. Blue Ground	13. H-sync.														
4. GND	9. +5V from PC	14. V-sync-DDC1														
5. Self Test	10. Sync. GND	15. SCL For DDC2B														
Sound Output	No Speaker															

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The video signal timing is as following :



- A: Period
- B: Active
- C: Sync Width
- D: Back Porch
- E: Front porch

Preset Modes	VGA 720X400	VGA 640X480	VESA 640X480	VESA 640X480	VESA 800X600	VESA 800X600	VESA 800X600	VESA 800X600
Dot Rate	28.322MHz	25.175MHz	31.500MHz	31.500MHz	36.000MHz	40.000MHz	50.000MHz	49.500MHz
F.H	31.469KHz	31.469KHz	37.861KHz	37.500KHz	35.156KHz	37.879KHz	48.077KHz	46.875KHz
A-period	31.777us	31.778us	26.413us	26.667us	28.444us	26.400us	20.800us	21.333us
B-Active	25.422us	25.422us	20.317us	20.317us	22.222us	20.000us	16.000us	16.162us
C-Sync. width	3.813us	3.813us	1.270us	2.032us	2.000us	3.200us	2.400us	1.616us
D-Back Porch	1.907us	1.589us	3.810us	3.810us	3.556us	2.200us	1.280us	3.232us
E-Front Porch	0.635us	0.954us	1.016us	0.508us	0.666us	1us	1.12us	0.323us
F . V	70.087Hz	59.941Hz	72.810Hz	75.000Hz	56.250Hz	60.317Hz	72.188Hz	75.000Hz
A-Period	14.268ms	16.683ms	13.734ms	13.333ms	17.778ms	16.579ms	13.853ms	13.333ms
B-Active	12.711ms	15.253ms	12.678ms	12.800ms	17.067ms	15.840ms	12.480ms	12.800ms
C-Sync. width	0.064ms	0.064ms	0.079ms	0.080ms	0.057ms	0.106ms	0.125ms	0.064ms
D-Back Porch	1.112ms	0.794ms	0.528ms	0.427ms	0.626ms	0.607ms	0.478ms	0.448ms
E-Front Porch	0.381ms	0.572ms	0.449ms	0.026ms	0.028ms	0.026ms	0.77ms	0.021ms
H/V SYNC	- +	- -	- -	- -	+ +	+ +	+ +	+ +
Interlace d	NON	NON	NON	NON	NON	NON	NON	NON

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Preset Modes	VESA 1024X768	VESA 1024X768	VESA 1024X768	VESA 1280X1024	VESA 1280X1024	VESA 1152 X864	VESA 1440X900	VESA 1440X900	VESA 1440X900
Dot Rate	65.000MHz	75.000MHz	78.750MHz	108.00MHz	135.00MHz	108.00MHz	88.750MHz	106.50MHz	136.75MHz
F.H	48.363KHz	56.476KHz	60.023KHz	63.98KHz	79.976KHz	67.5 us KHz	55.469KHz	55.935KHz	70.635KHz
A-period	20.677us	17.707us	16.660us	15.630us	12.504us	14.815 us	18.028us	17.878us	14.157us
B-Active	15.754us	13.653us	13.003us	11.852us	9.481us	10.667 us	16.225us	13.521us	10.530us
C-Sync. width	2.092us	1.813us	1.219us	1.037us	1.067us	1.185 us	0.361us	1.427us	1.112us
D-Back Porch	2.462us	1.920us	2.235us	2.296us	1.837us	2.370 us	0.901us	2.178us	1.814us
E-Front Porch	0.369us	0.321us	0.203us	0.444us	0.119us	0.593 us	0.541us	0.751us	0.702us
F . V	60.004Hz	70.069Hz	75.029Hz	60.020Hz	75.025Hz	75.00 0HZ	59.901Hz	59.887Hz	74.984Hz
A-Period	16.666ms	14.272ms	13.328ms	16.661ms	13.329ms	13.333ms	16.694ms	16.698ms	13.336ms
B-Active	15.880ms	13.599ms	12.795ms	16.005ms	12.804ms	12.8ms	16.225ms	16.090ms	12.741ms
C-Sync. width	0.124ms	0.106ms	0.050ms	0.047ms	0.038ms	0.044ms	0.108ms	0.107ms	0.085ms
D-Back Porch	0.600ms	0.513ms	0.466ms	0.594ms	0.475ms	0.474ms	0.306ms	0.447ms	0.467ms
E-Front Porch	0.062ms	0.054ms	0.017ms	0.016ms	0.013ms	0.015ms	0.054ms	0.054ms	0.042ms
H/V SYNC	--	--	++	++	++	++	-+	-+	-+
Interlaced	NON	NON	NON	NON	NON	NON	NON	NON	NON

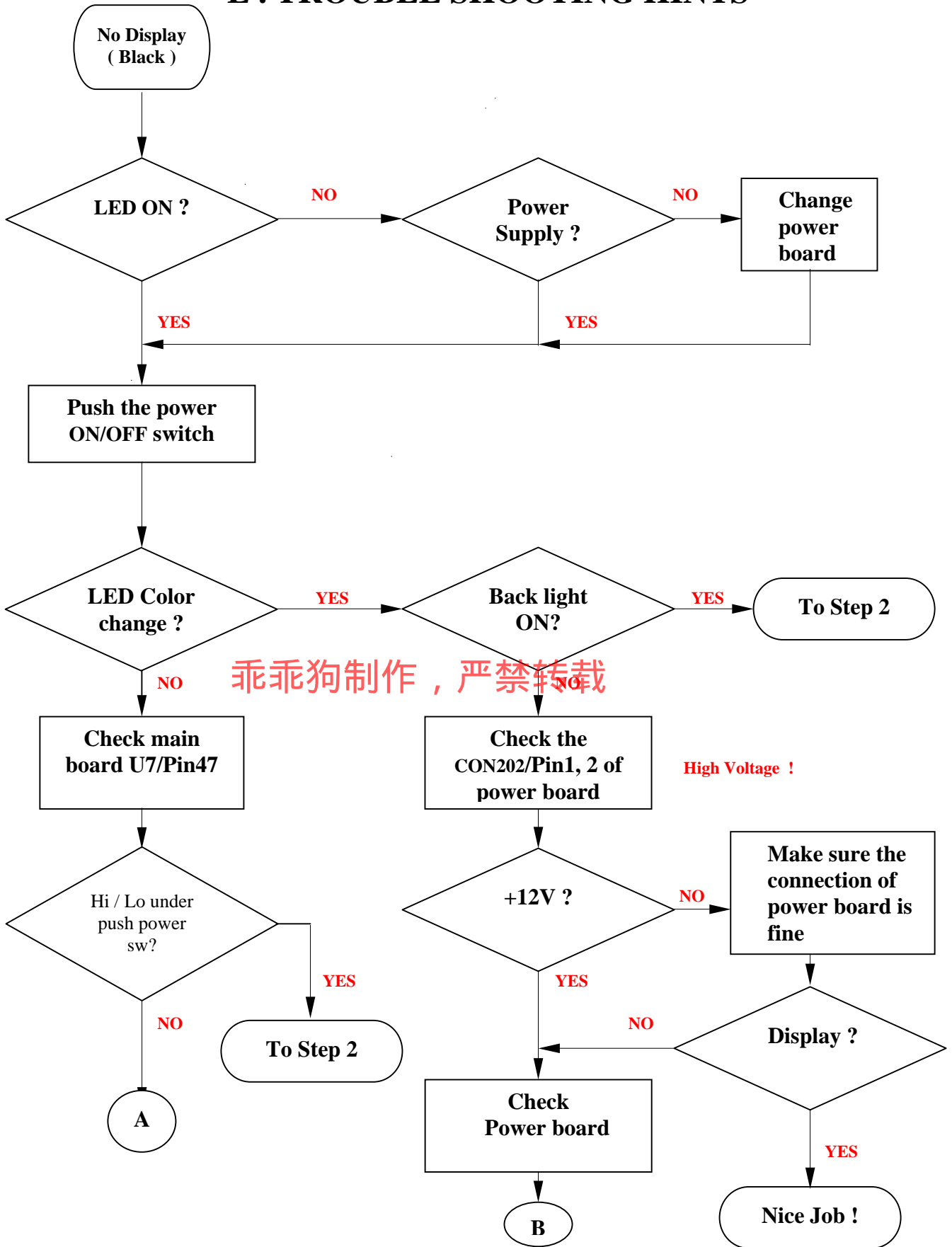
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D. ADJUSTMENT PROCEDURE

ITEM Program Menu.		# Test Meter * Test Point @ Pattern	Operation	Check Value
A	Power supply Check	# Digital Voltmeter * CON 201 @ Crosshatch Pattern (1440x900, 75Hz)	1. Plug power cable into the LCD monitor directly. 2. Make sure the voltage of the power plug (CON201) on the Power Board to the value shown at right.	220Vac ±0.2V
B	Power Saving Check	# Wattmeter # PC or Pattern generator @ Crosshatch Pattern (1440x900, 75Hz)	1. Unplug the signal cable into the monitor. 2. Turn the power switch of the monitor ON. 3. Check monitor power indicator light up blue flashing every other second. 4. Make sure the wattmeter value shown at right. 5. OSD will be display "NO SIGNAL" Picture.	<2W
C	Into Factory mode	# PC or Pattern generator @ Crosshatch Pattern (1440x900, 75Hz)	1. Hold Down key, then turn the power switch of the monitor off. 2. Hold Up key, then turn the power switch of the monitor on. 3. You can enter factory adjustment mode.	
D	Auto mode Check	# PC or Pattern generator @ Crosshatch Pattern (1440x900, 75Hz)	1. Press and release the Auto key to adjust display mode to its utmost performance according to VGA setting.	
E	White Balance Adjust	# PC or Pattern generator @ White Pattern (1440x900, 75Hz)	1. Move the OSD to the COLOR mode (AUTO COLOR). 2. set color is Cool using the OSD, Check the value shown at right. $Y = 230 \pm 15 \text{cd/m}^2$ $x = 0.283 \pm 0.015$ $y = 0.298 \pm 0.015$ 3. set color is Warm using the OSD, Check the value shown at right. $Y = 230 \pm 15 \text{cd/m}^2$ $x = 0.313 \pm 0.015$ $y = 0.329 \pm 0.015$	
F	OSD Language Setting	# PC or Pattern generator	1. Move the OSD to the OSD setting mode 2. Move the OSD to the LANGUAGE mode. 3. You can choose one of the language you need.	

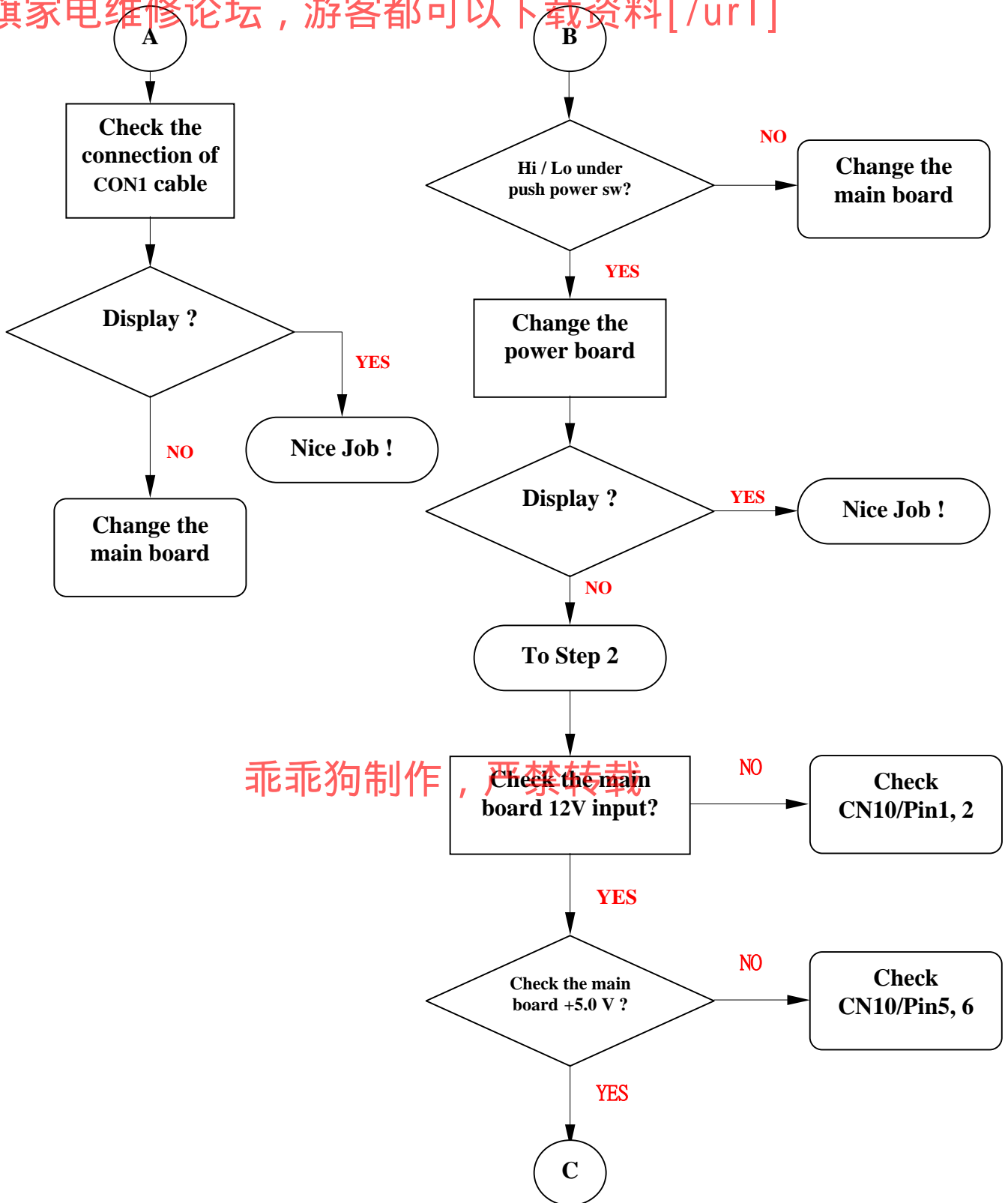
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E. TROUBLE SHOOTING HINTS

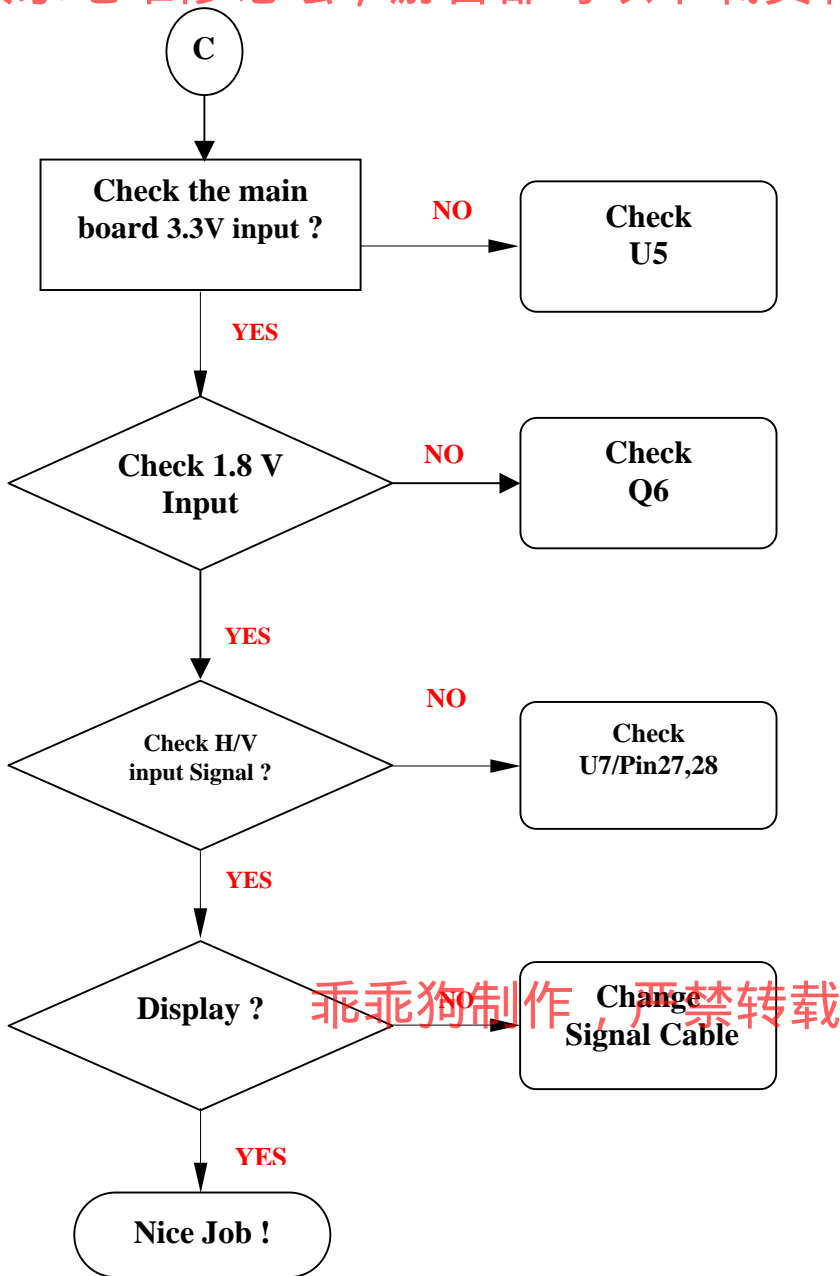


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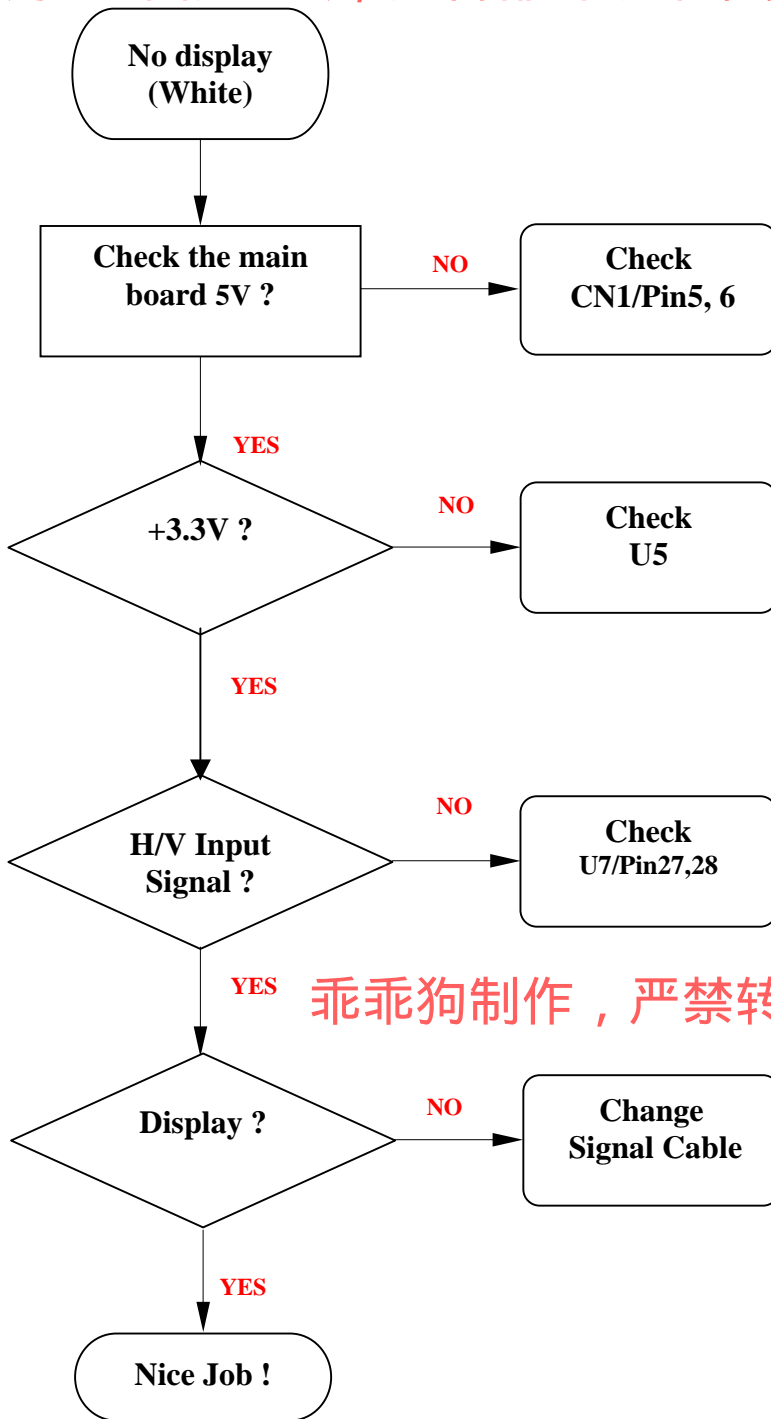
High Voltage !



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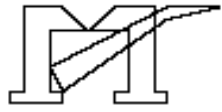


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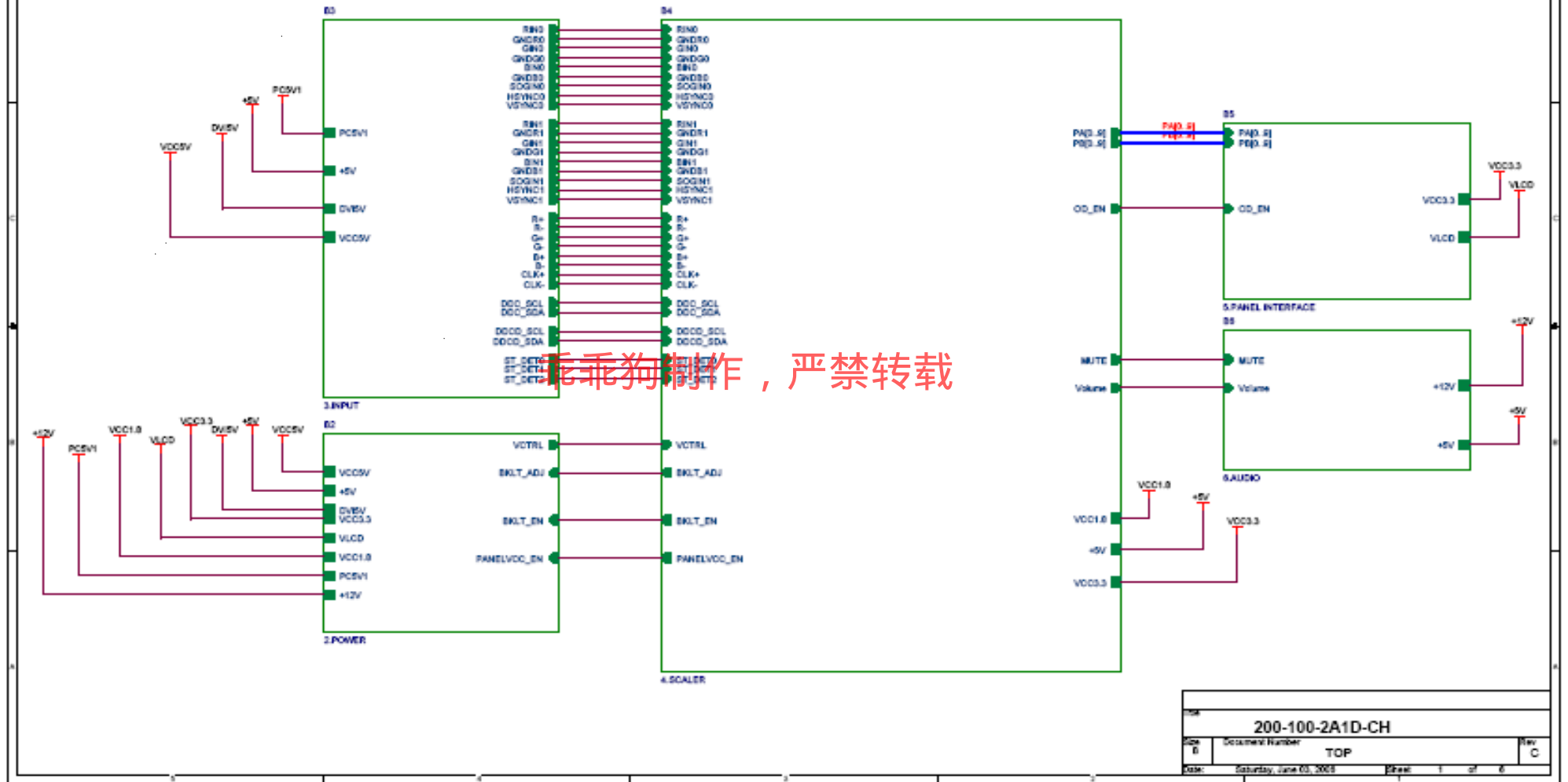


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G. BLOCK DIAGRAM

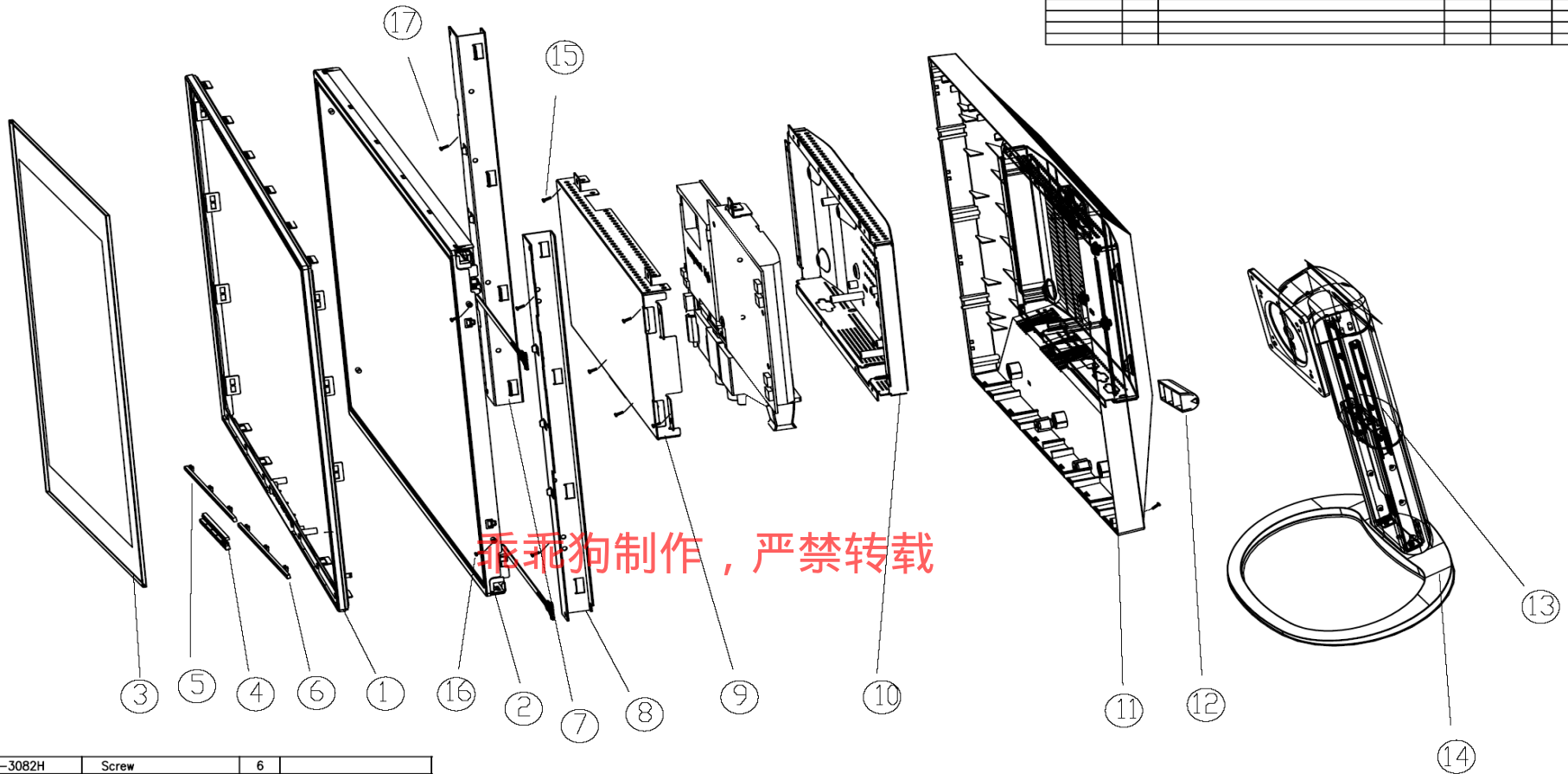


TSUM66AJ SCHEMATIC



G. EXPLODED DIAGRAM

PART NO	REV	DESCRIPTION	DATE	DRAWING BY	APPROVED BY



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17	107-005-3082H	Screw	6	
16	101-005-3033H	SCREW	4	
15	107-010-3073H	Screw	6	
14	123-000-XH1701H	BASE	1	
13	820-06A-GA980KH	STAND ASSY	1	
12	154-H01-FV926W6A-AH	HINGE COVER	1	
11	151-001-KFPS6A-12H	REAR COVER	1	
10	123-B0D-LP917WH	METAL CASE	1	
9	123-002-CA787DGH	METAL COVER	1	
8	121-000-GB980WRH	BKT HOLD_ R	1	
7	121-000-GB980WLH	BKT HOLD_ L	1	
6	154-501-GB980WH	DECORATION_R	1	
5	154-500-GB980WH	DECORATION_ L	1	
4	154-002-GB980WH	BUTTON FUNC	1	
3	928-400-GB980WH	GLASS	1	
2	705-570-601H	Panel	1	
1	151-A00-KFPS6AH	MIDDLE FRAME	1	
ITEM	PART NO.	DESCRIPTION	QTY	REMARK

GB980W Exploded Diagram

USED	NEXT ASSY	UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN TOLERANCES	PART NAME	Explode	MODEL NAME	GB980W	
		METRIC	PART NO				
		0.X ±0.15	SCALE				
		0.XX ±0.10	DATE	26-APRIL-06	DRAWING BY	KEN	
		ANGLES		APPROVED BY		APPROVED FILE NO.	
		±0.5°				DRAWING FILE NO.	
		MATERIAL:	Preview				NOTE : A3
		FINISH:					
		DO NOT SCALE DRAWING					

H. SCHEMATIC DIAGRA

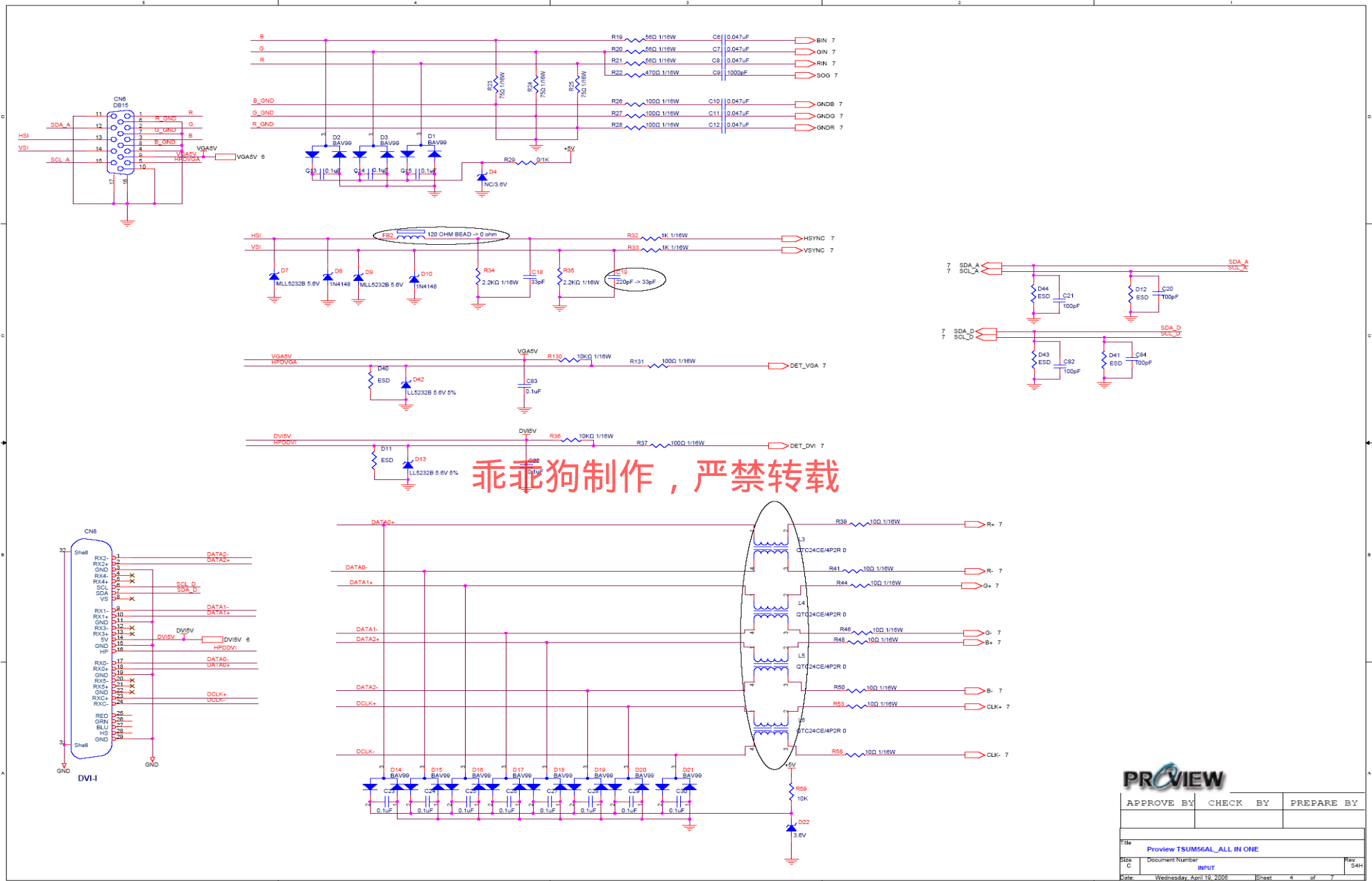
TOP VERSION

- 1.The first version 20050926
- 2.The second version 20051019
- 3.The third version 20051123
- 4.The forth version 20051130
- 5.The A version 20051208

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PROVIEW

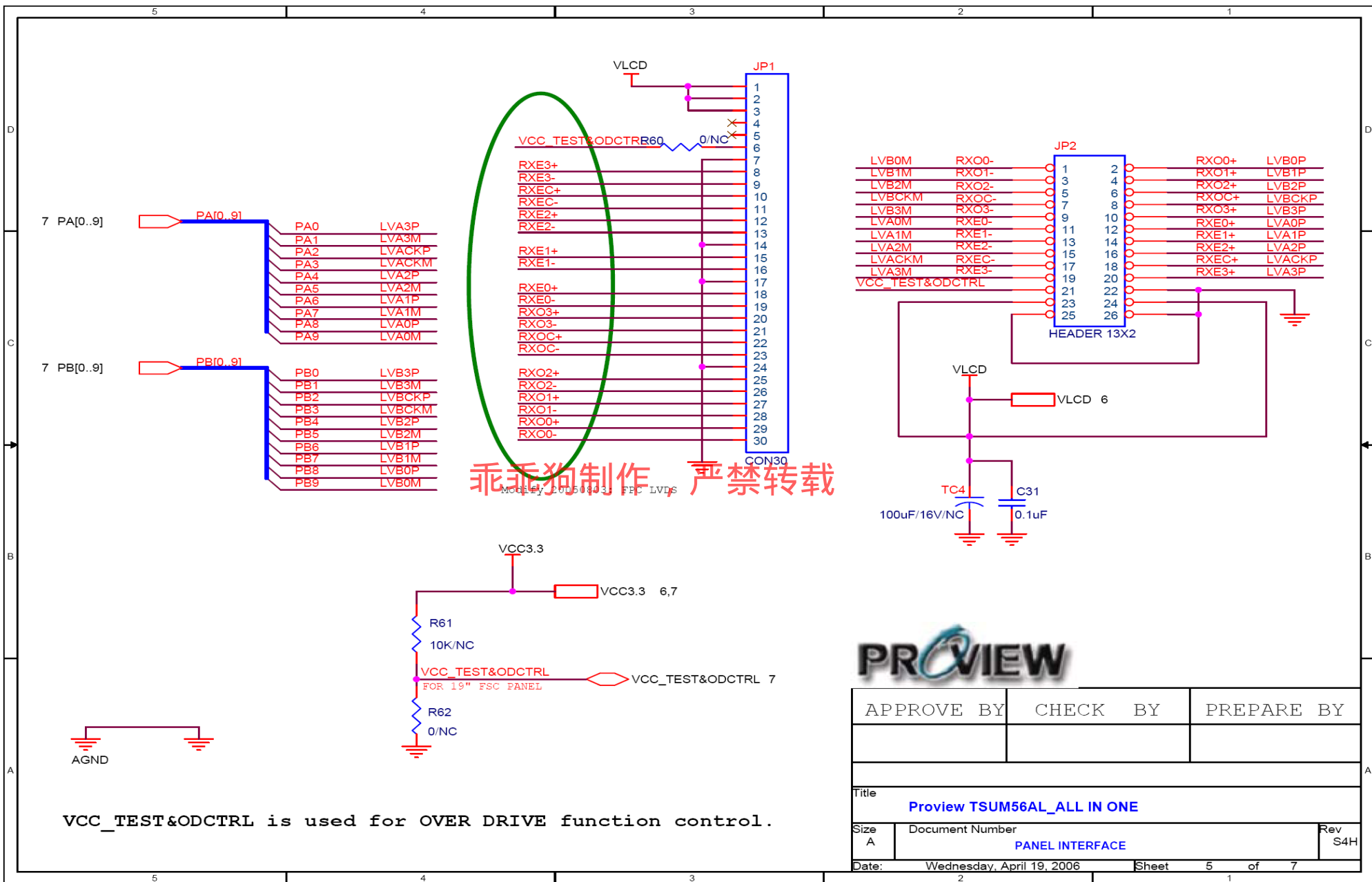
APPROVE BY	CHECK BY	PREPARE BY
Title Proview TSUM56AL_DG Series		
Size A	Document Number Changing List	Rev S4H
Date: Wednesday, April 19, 2006	Sheet 2	of 7



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PROVIEW

APPROVE BY	CHECK BY	PREPARE BY
Title: Proview TSUM56GAL_ALL IN ONE		
Size: C	Document Number: INPUT	Rev: S4H
Date: Wednesday, April 19, 2006	Sheet: 4 of 7	

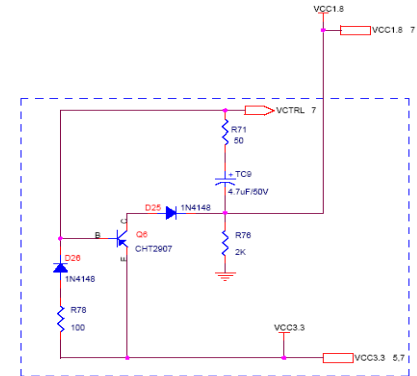
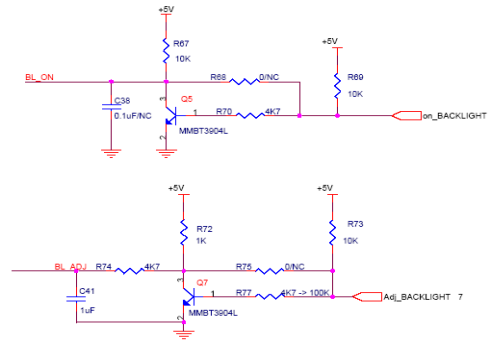
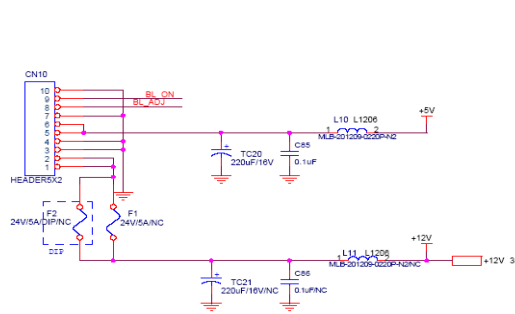


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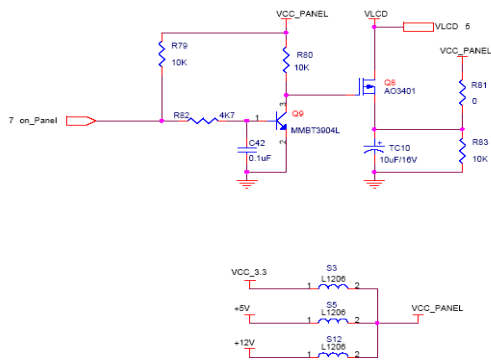
VCC_TEST&ODCTRL is used for OVER DRIVE function control.



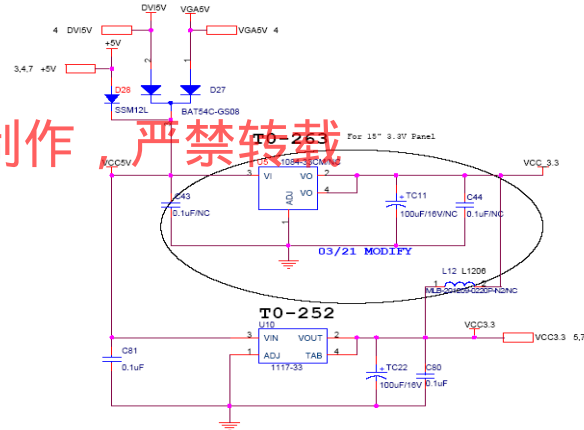
APPROVE BY	CHECK BY	PREPARE BY
Title		
Proview TSUM56AL_ALL IN ONE		
Size	Document Number	Rev
A	PANEL INTERFACE	S4H
Date:	Wednesday, April 19, 2006	Sheet 5 of 7



Recommend to use "Blue" parts circuit for VCC1.8V if you want to support DDC function when system power off

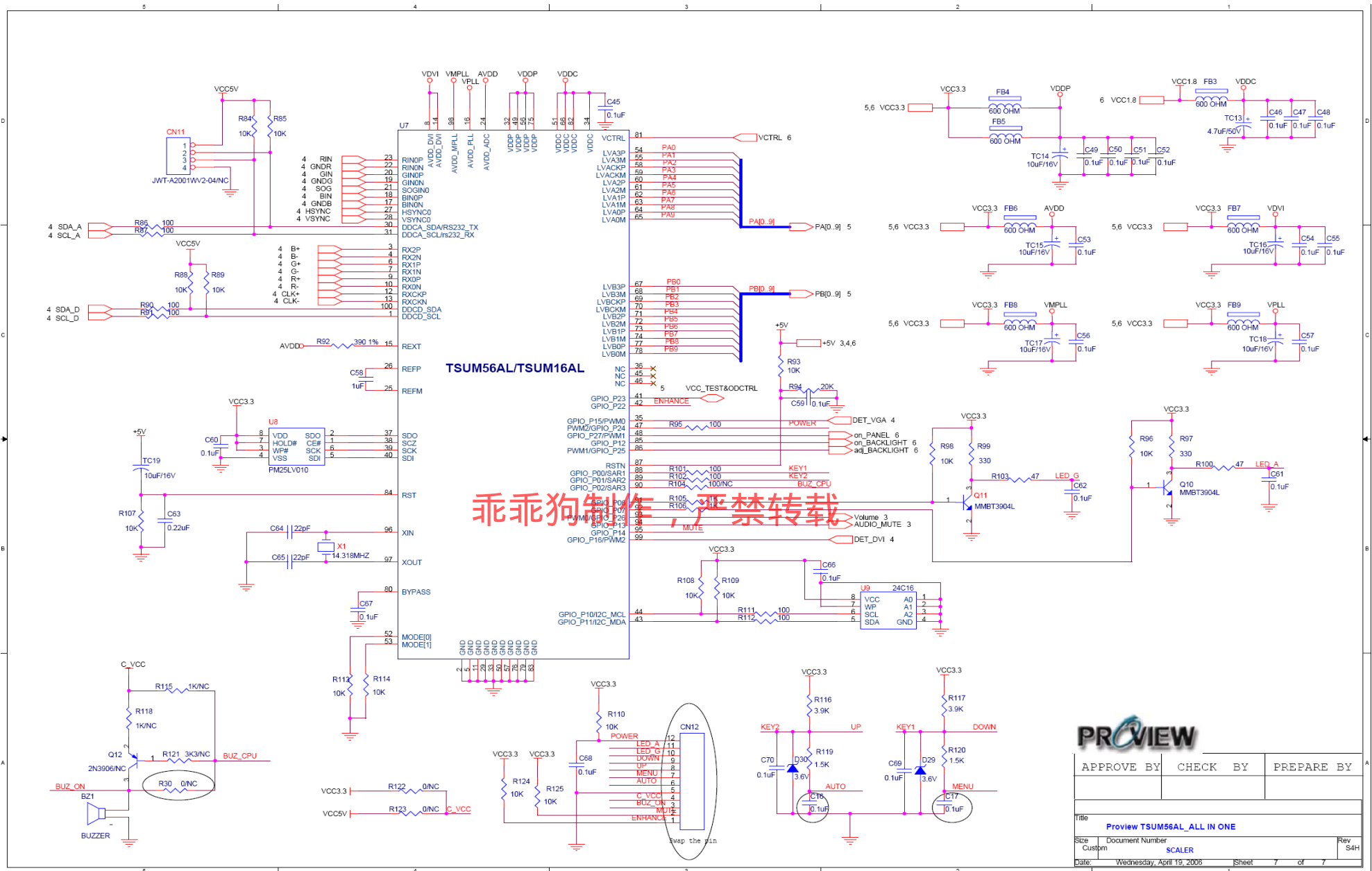


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PROVIEW

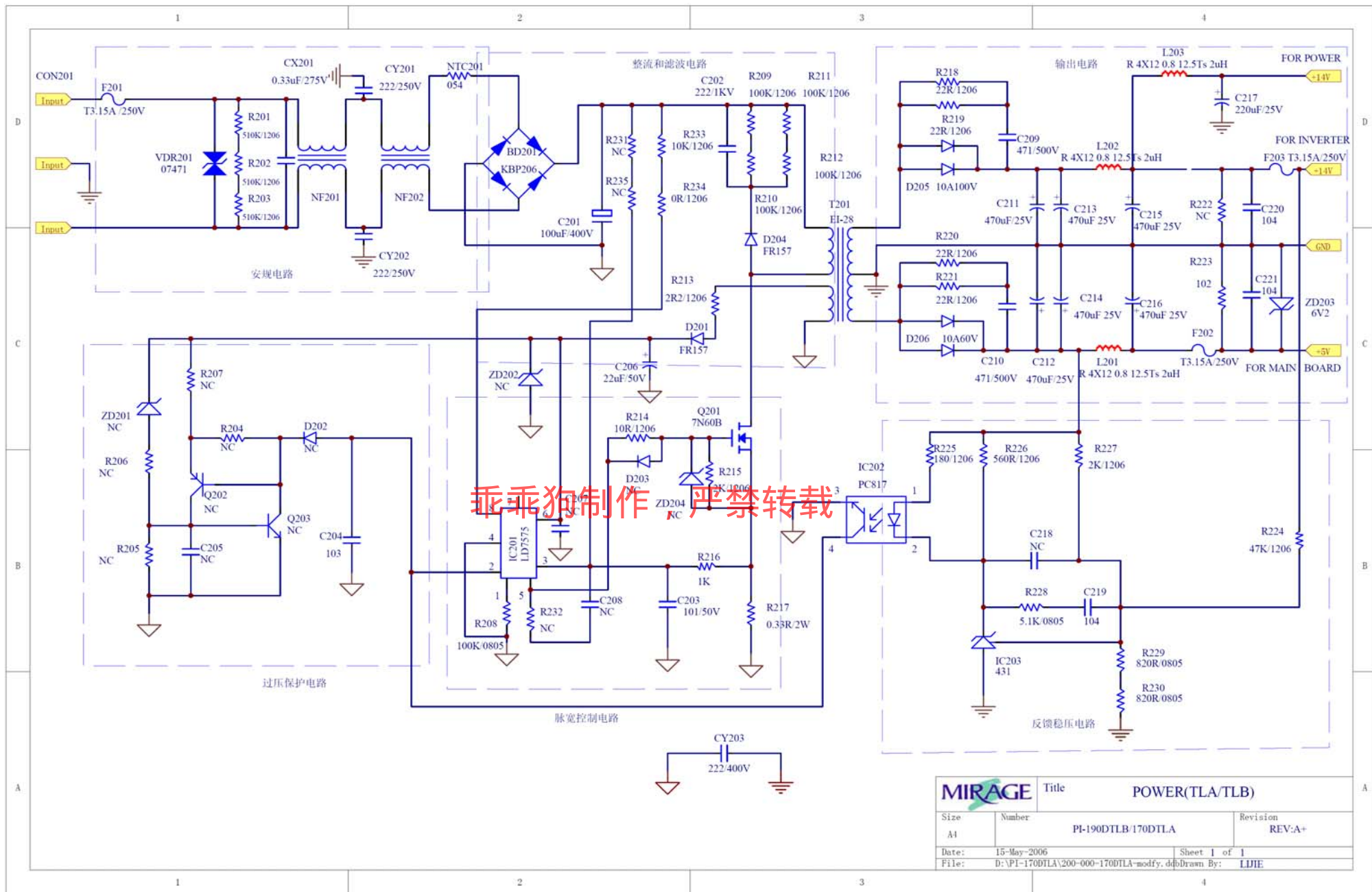
APPROVE BY	CHECK BY	PREPARE BY
Title		
Proview TSUM56AL_ALL IN ONE		
Size	Document Number	Rev
C	POWER (DC TO DC)	54H
Date	Wednesday, April 19, 2006	Sheet 6 of 7



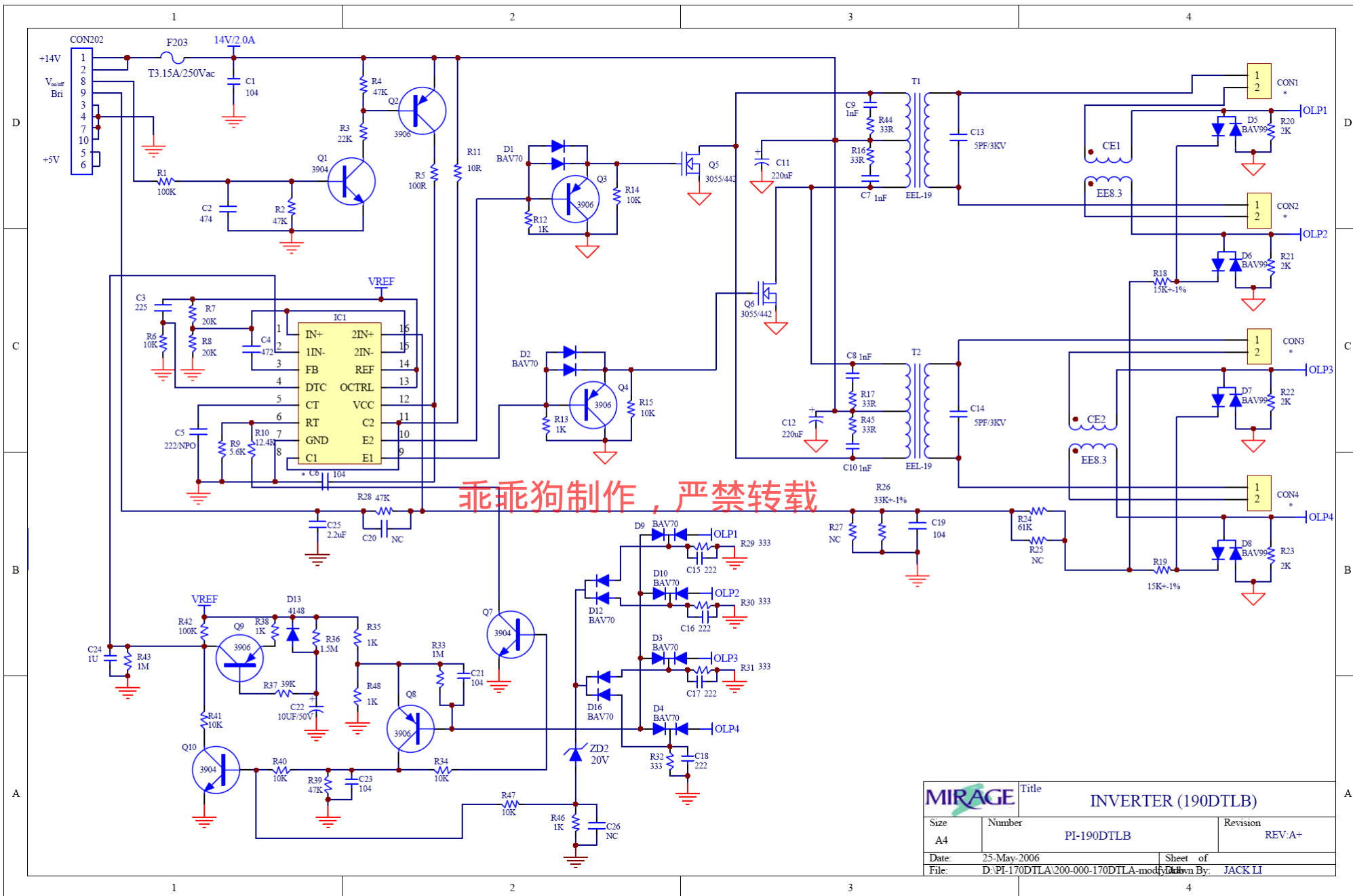
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PROVIEW

APPROVE BY	CHECK BY	PREPARE BY
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Size Custom	Document Number SCALAR	Rev S4H
Date Wednesday, April 19, 2005	Sheet 7	of 7

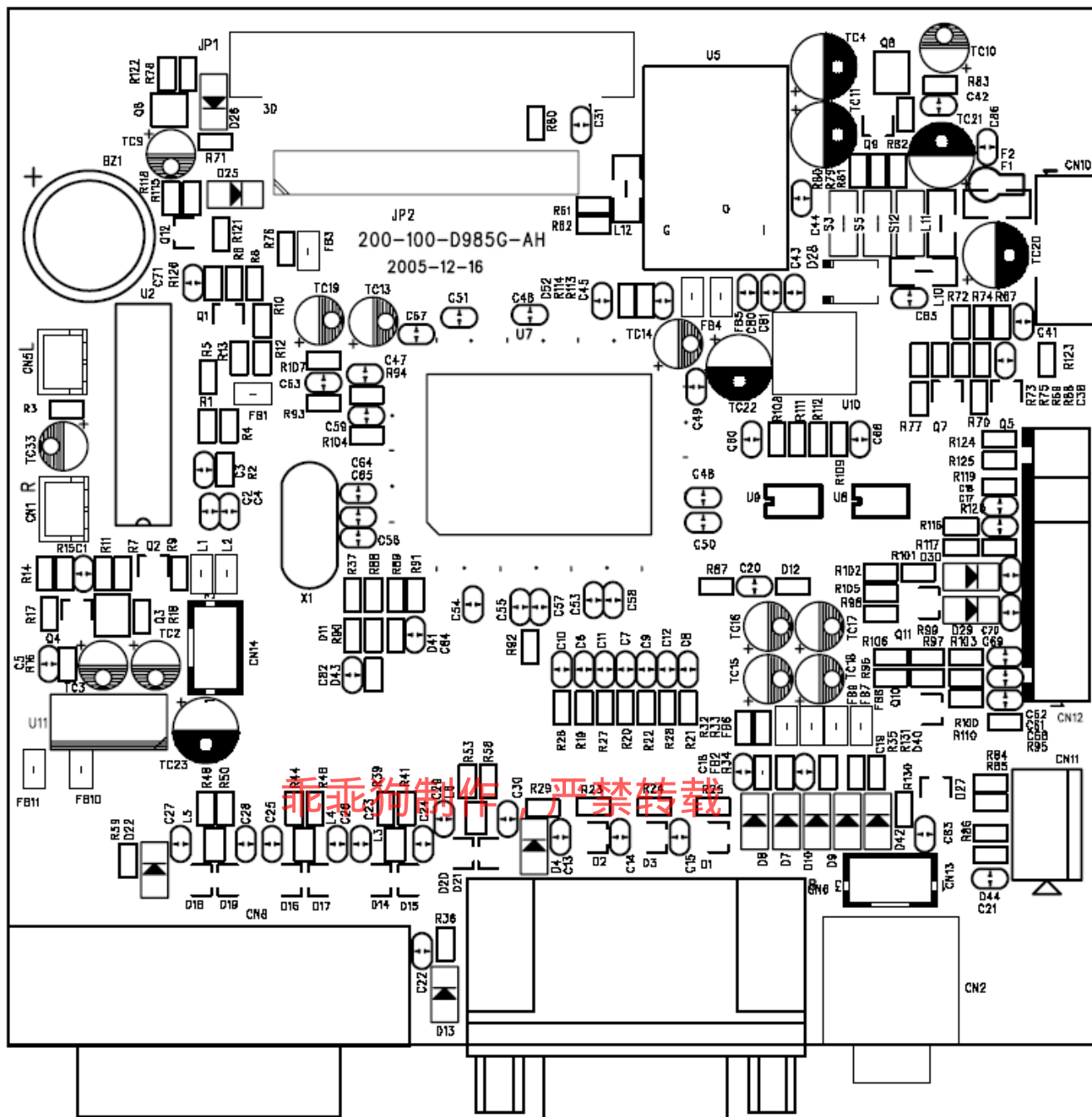


MIRAGE		Title	
		POWER(TLA/TLB)	
Size	Number	Revision	
A1	PI-190DTLB/170DTLA	REV:A+	
Date:	15-May-2006	Sheet 1 of 1	
File:	D:\PI-170DTLA\200-000-170DTLA-modfy.dtb	Drawn By: LJIE	

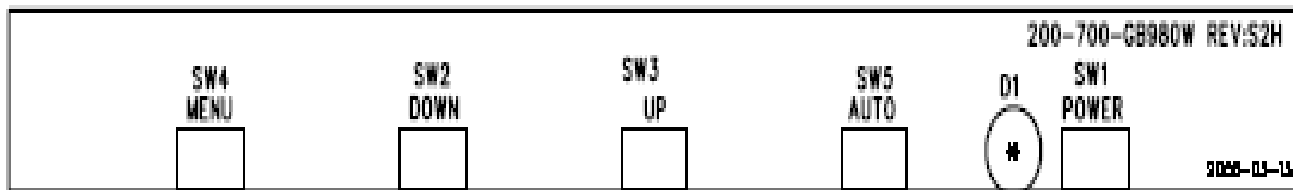


MIRAGE		Title	
INVERTER (190DTLB)			
Size	Number	Revision	
A4	PI-190DTLB	REV:A+	
Date: 25-May-2006		Sheet of	
File: D:\PI-170DTLA\200-000-170DTLA-mod		Drawn By: JACK LI	

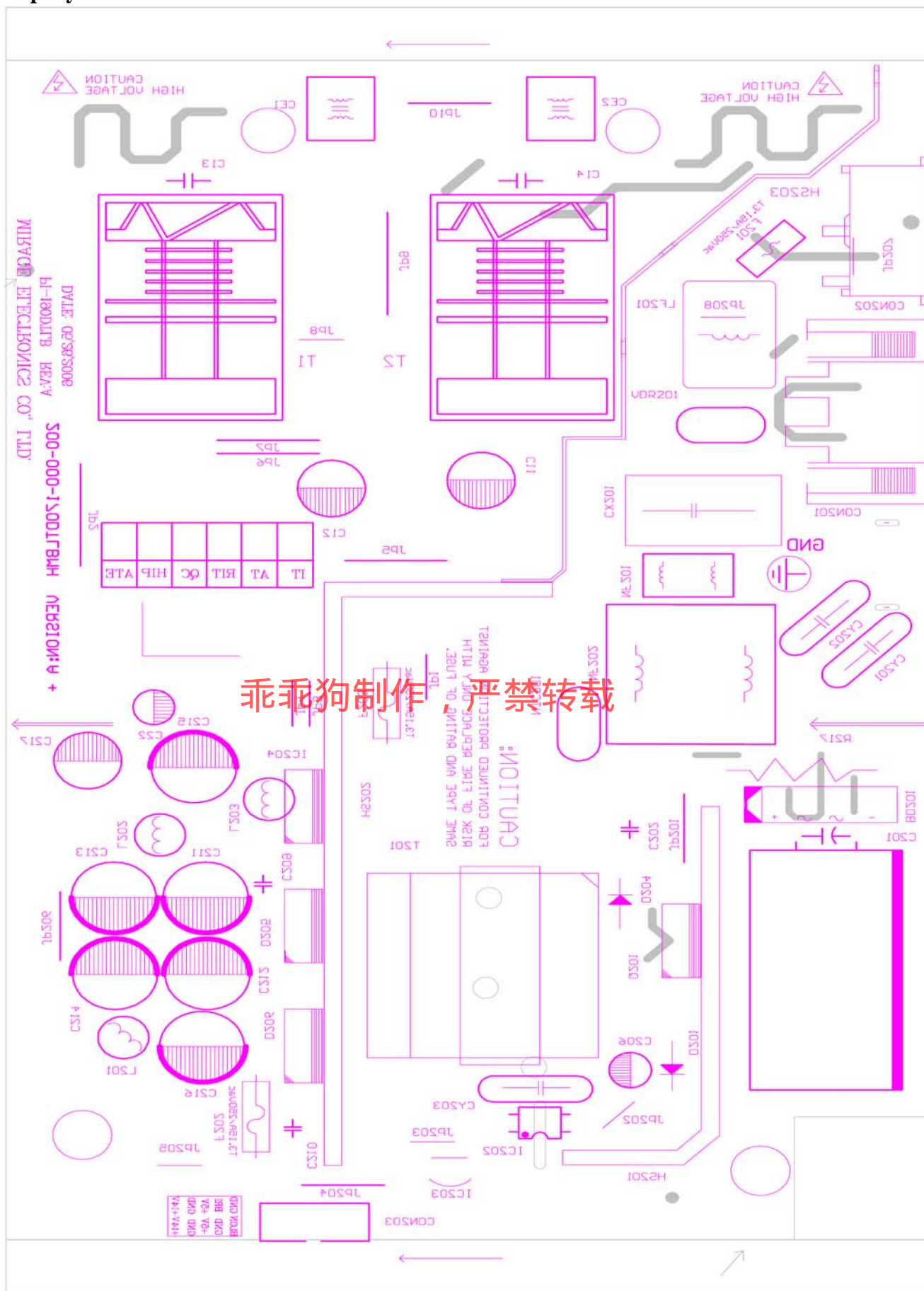
Main Board

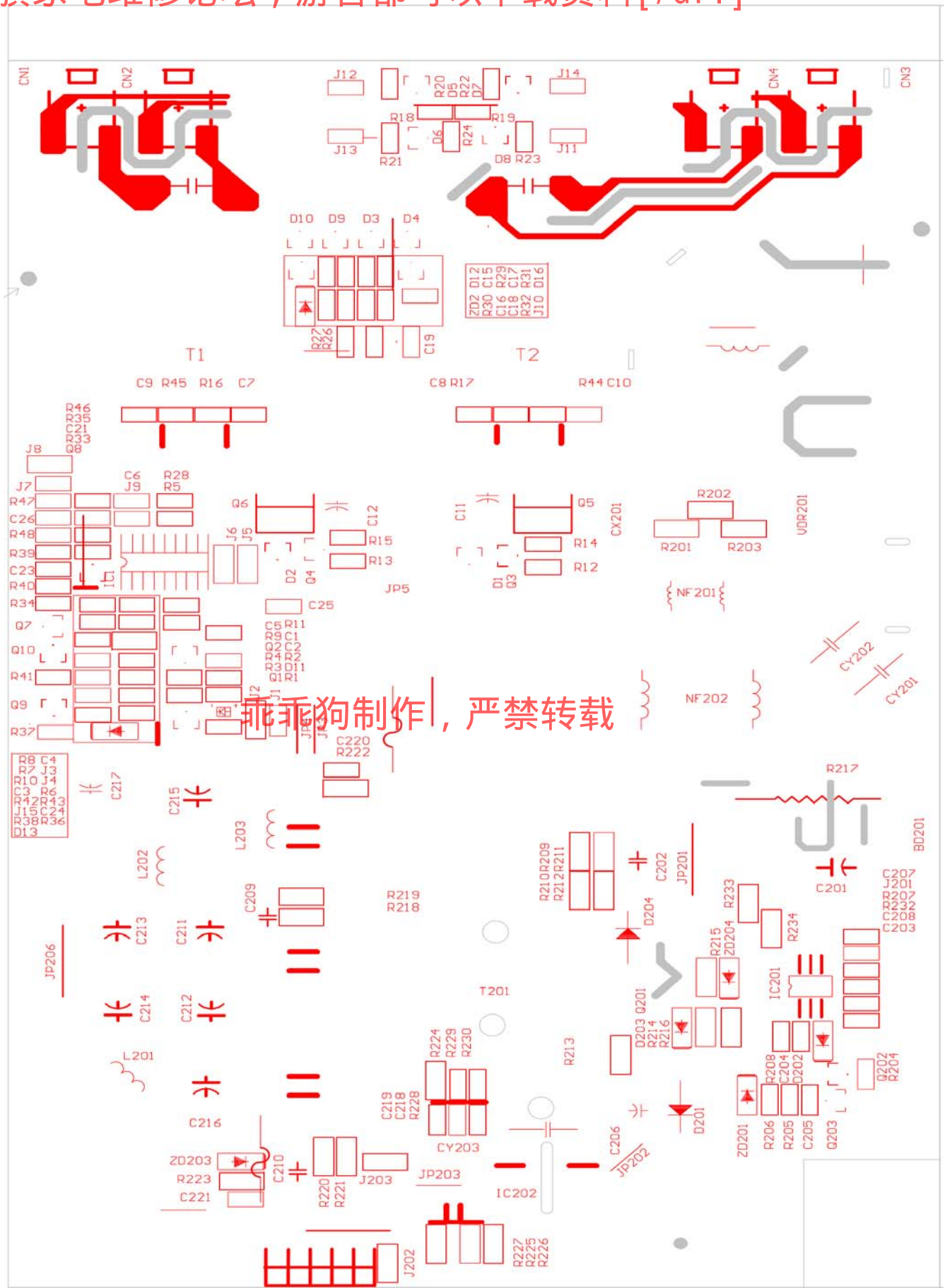


Control Board



Top layer





[url=http://www.hqjdw.com/register.php?fromuser=乖乖狗]
红旗家电维修论坛，游客都可以下载资料[/url]

MEMO

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