

Service Manual

VS3002 /E1B

Video Selector

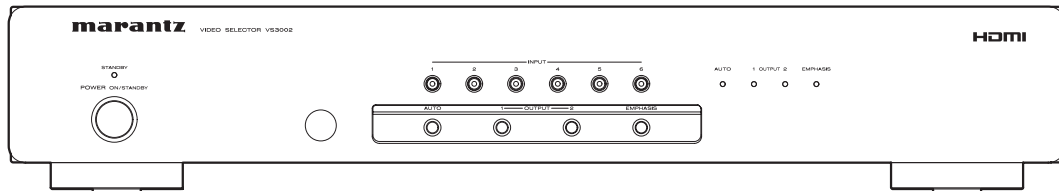


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Please use this service manual with referring to the user guide (D.F.U.) without fail.
修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行ってください。

marantz®

VS3002

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, **MARANTZ** company has created the ultimate in stereo sound. Only original **MARANTZ** parts can insure that your **MARANTZ** product will continue to perform to the specifications for which it is famous.

Parts for your **MARANTZ** equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS :

Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

The following information must be supplied to eliminate delays in processing your order :

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature : any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

USA

MARANTZ AMERICA, INC
100 CORPORATE DRIVE
MAHWAH, NEW JERSEY 07430
USA

EUROPE / TRADING

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CANADA

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MARKHAM, ONTARIO L3R 5B1
CANADA

JAPAN

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D&M BUILDING, 2-1 NISSHIN-CHO,
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KANAGAWA, 210-8569 JAPAN

株式会社 ディーアンドエムホールディングス

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KOREA

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CHINA

MARANTZ SHANGHAI TRADING LTD.
ROOM.506 SHANGHAI LIGHT INDUSTRY MANSION
1578 NANJING (WEST) ROAD SHANGHAI
CHINA
TEL : 021 - 6248 - 1064
FAX : 021 - 6248 - 3565

NOTE ON SAFETY :

Symbol  Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol  . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

安全上の注意 :

 がついている部品は、安全上重要な部品です。必ず指定されている部品番号のものを使用して下さい。

SHOCK, FIRE HAZARD SERVICE TEST :

CAUTION : After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard No. 1492.

In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

1. TECHNICAL SPECIFICATIONS

Electrical System

Input and output signals

HDMI INPUT	6 jacks (Ver. 1.3b, single link only)
HDMI OUTPUT	2 jacks (Ver. 1.3b, single link only)
REMOTE CONTROL IN.....	1 jack (RCA)
REMOTE CONTROL OUT.....	1 jack (RCA)
FLASHER IN	1 jack (3.5 Ø mini jack)
Power requirement (U.S.A.)	AC 120V 60Hz
(Europe).....	AC 230V 50/60Hz
(Japan).....	AC 100V 50/60Hz
Power consumption.....	5 W / 0.8 W (during standby)

Others

Operating temperature and humidity	5 to 35°C / 30 to 85% (no condensation allowed)
Storage temperature and humidity	20 to 60°C / 30 to 85% (no condensation allowed)

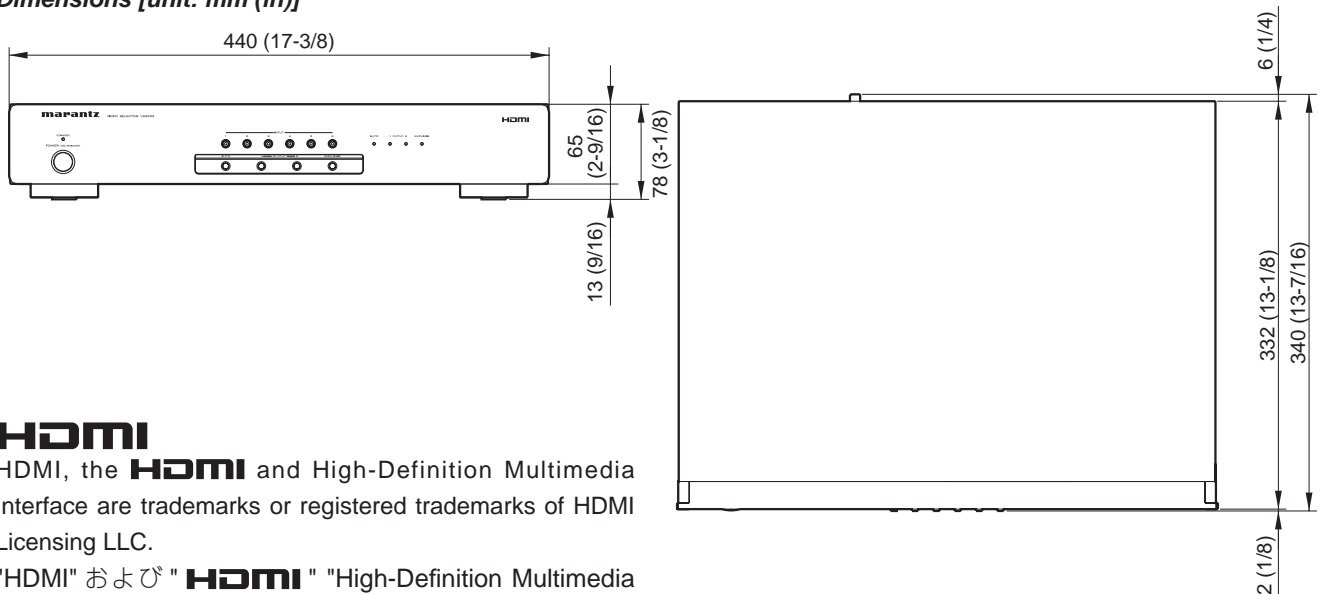
Maximum External Dimensions (Unit)

Width	440 mm (17-3/8 in)
Height.....	78 mm (3-1/8 in)
Depth.....	340 mm (13-7/16 in)
Mass (unit).....	3.2 kg (7.1 lbs)

Supplied Items

- AC power cord
 - For the U.S. 1
 - For Europe..... 1
 - For Japan 1
- Remote controller (battery included) 1
- Instruction manual 1
- Warranty card (for the U.S.)
 - U.S.A. 1
 - Canada..... 1
- Warranty (for Japan) 1

Dimensions [unit: mm (in)]



HDMI

HDMI, the **HDMI** and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

"HDMI" および " **HDMI** " "High-Definition Multimedia Interface" は HDMI Licensing LLC の商標または登録商標です。

2. SERVICE MODE

Microprocessor (U12) version check

The firmware version is displayed on the front LED.
(Display time is only for 2 seconds.)

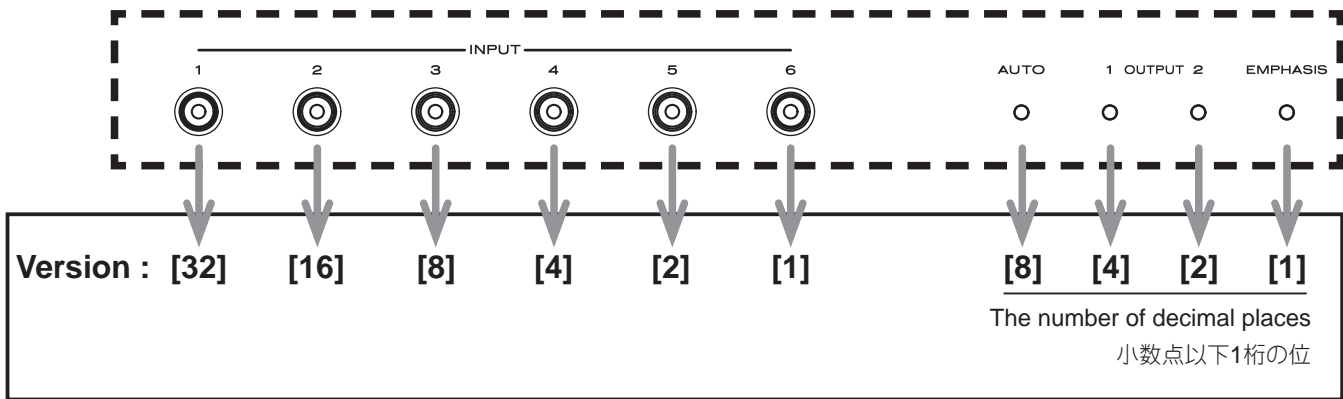
1. Connect the mains cord into the unit.
2. Press the **POWER ON/STANDBY** button for turn on the unit.
3. Press the **EMPHASIS** and **INPUT 1** buttons simultaneously about 3 seconds.
4. LED light up in following order and version is displayed.
Lighting order : All LED light up → All LED turn off → Version is displayed → Lighting of LED return to the normal display (to quit Service Mode).

2. SERVICE MODE

Microprocessor (U12) VERSION確認

FIRMWAREのバージョンはフロントパネルのLEDにて表示されます。(表示は約2秒間のみです)

1. 本機に電源コードを接続します。
2. **POWER ON/STANDBY**ボタンを押し、本機の電源をいれます。
3. **EMPHASIS**と**INPUT 1**のボタンを同時に約3秒押しします。
4. LEDが下記の順序で点灯しバージョンを表示します。
点灯順序：全点灯 → 全消灯 → バージョン表示 → 通常表示に戻ります。(SERVICICE モードは解除されます)



The firmware version is displayed in the lighting position (Display time is only for 2 seconds) of LED.

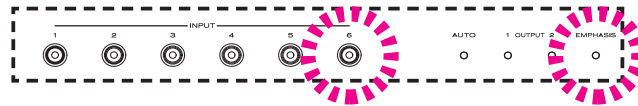
LEDが点灯した箇所（点灯は約2秒間）がバージョン表示です。

Ex. :

Light up INPUT 6 [1] and EMPHASIS [1], **Version: 1.1**

表示例 :

点灯INPUT 6 [1]と EMPHASIS [1]で**Version: 1.1**



Light up INPUT 6 [1] and OUT PUT 2 [2], **Version: 1.2**

点灯INPUT 6 [1]と OUT PUT 2 [2]で**Version: 1.2**

Light up INPUT 6 [1] and EMPHASIS [1] / OUT PUT 2 [2], **Version: 1.3**

点灯INPUT 6 [1]と EMPHASIS [1] / OUT PUT 2 [2]で
Version: 1.3

3. UPDATE MICROPROCESSOR FIRMWARE PROCEDURE

When microprocessor firmware of U12 (μ -PRO PWB) was updated, update the firmware in the following procedure. The updating of firmware takes about 5 seconds.

Necessary Equipment

- Windows PC (OS: Windows2000 or WindowsXP) with Serial port.
- RS-232C Dsub-9 pin cable (female to female/straight type).
- Update tool (Launch AND_PROGRAMMER.exe or AND_Programmer_Setup.exe).
- Update data (ex.: vs3002_s_v1_20_0110.hex)

NOTE : AND_Programmer_Setup.exe is installer for Launch AND_PROGRAMMER.exe.

The v1_20_0110 is version number. It will be changed by version up.

Install Procedure

When the AND FIRMWARE UPGRADE PROGRAMMER (Launch AND_PROGRAMMER.exe) is already installed, please advance to the **Update Procedure**.

1. Put the "main" folder into anywhere on your PC's hard disc.
2. Double click the "main" folder.

3. UPDATE MICROPROCESSOR FIRMWARE PROCEDURE

U12 (μ -PRO PWB)マイコンのアップデートを行う際は、下記の手順に従ってアップデートして下さい。アップデートにかかる時間はおよそ5秒です。

必要機器

- Windows PC (OS: Windows2000またはWindowsXP) で Serialポートのあるもの
- RS-232Cストレートケーブル (9pinメス-9pinメス)
- アップデート用書き込みソフトウェア (Launch AND_PROGRAMMER.exeまたはAND_Programmer_Setup.exe)
- アップデート用データ (ex.: vs3002_s_v1_20_0110.hex)

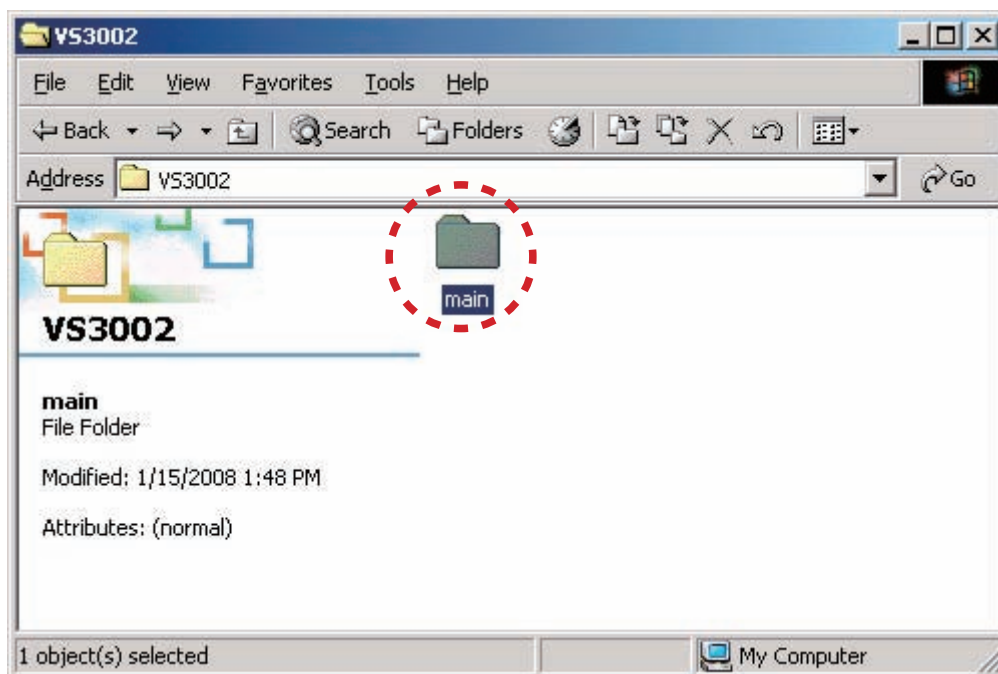
注意 : AND_Programmer_Setup.exeはLaunch AND_PROGRAMMER.exeをインストールするためのソフトウェアです。

アップデート用データのファイル名にあるv1_20_0110はバージョンを示します。これはバージョンアップにより変更されます。

Install Procedure

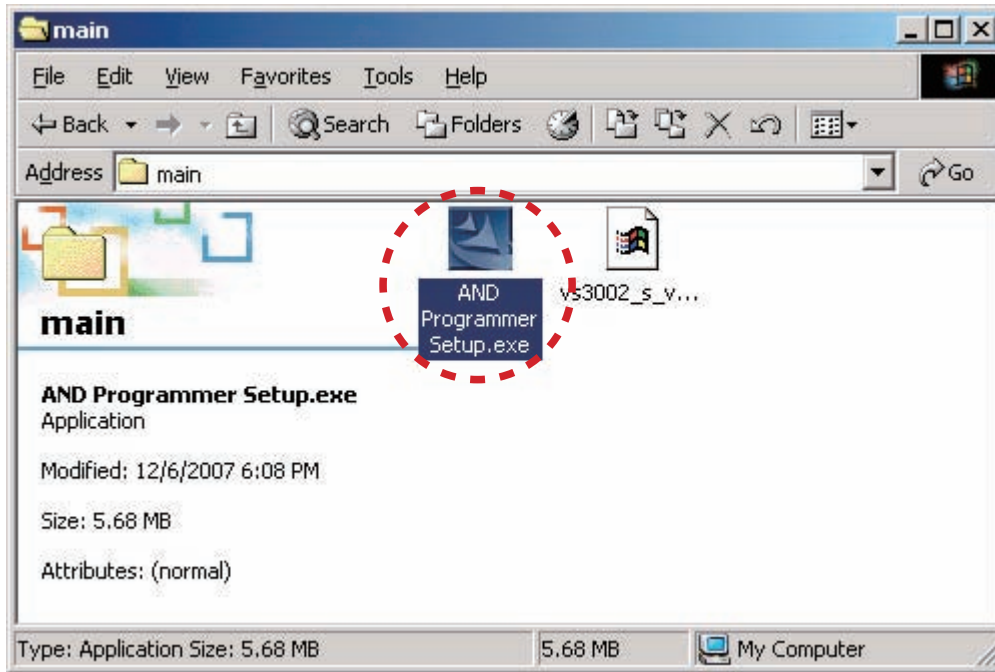
既にAND FIRMWARE UPGRADE PROGRAMMER (Launch AND_PROGRAMMER.exe)がインストールされている場合は、**Update Procedure**に進んでください。

1. "main"フォルダをPCの任意のフォルダにコピーします。
2. "main"フォルダをダブルクリックします。



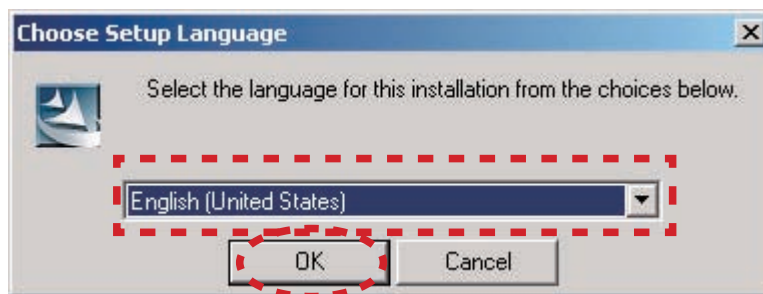
3. Double click the AND Programmer Setup.exe.

3. AND Programmer Setup.exeをダブルクリックします。



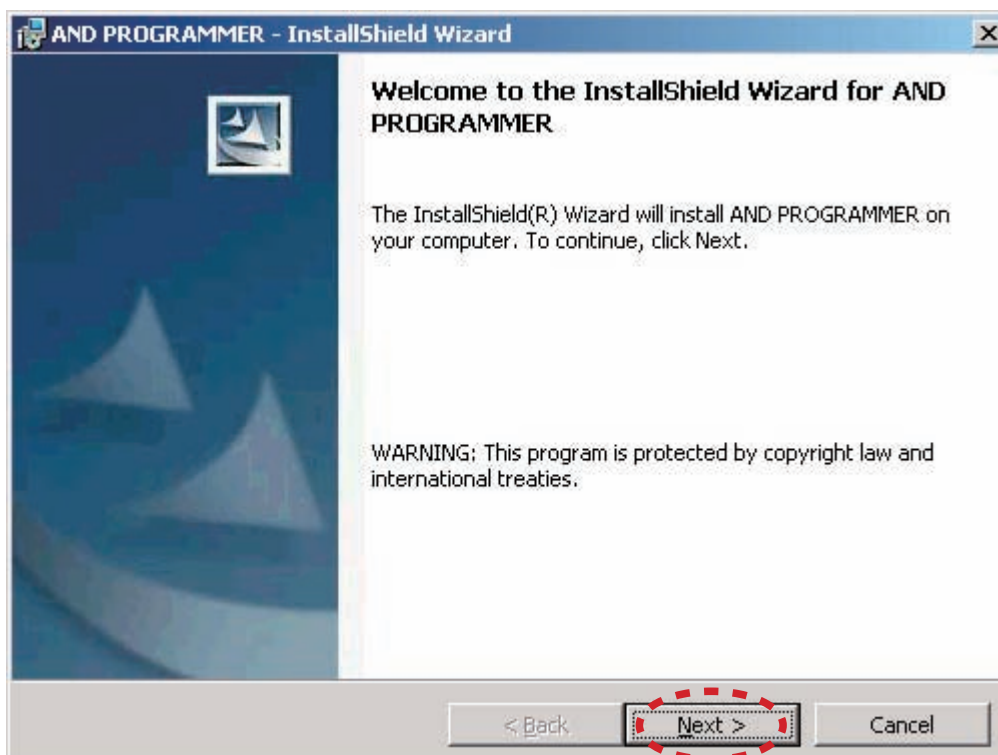
4. Choose the English (United States), and Click the **OK**.

4. 言語をEnglish (United States)にし、**OK**をクリックします。



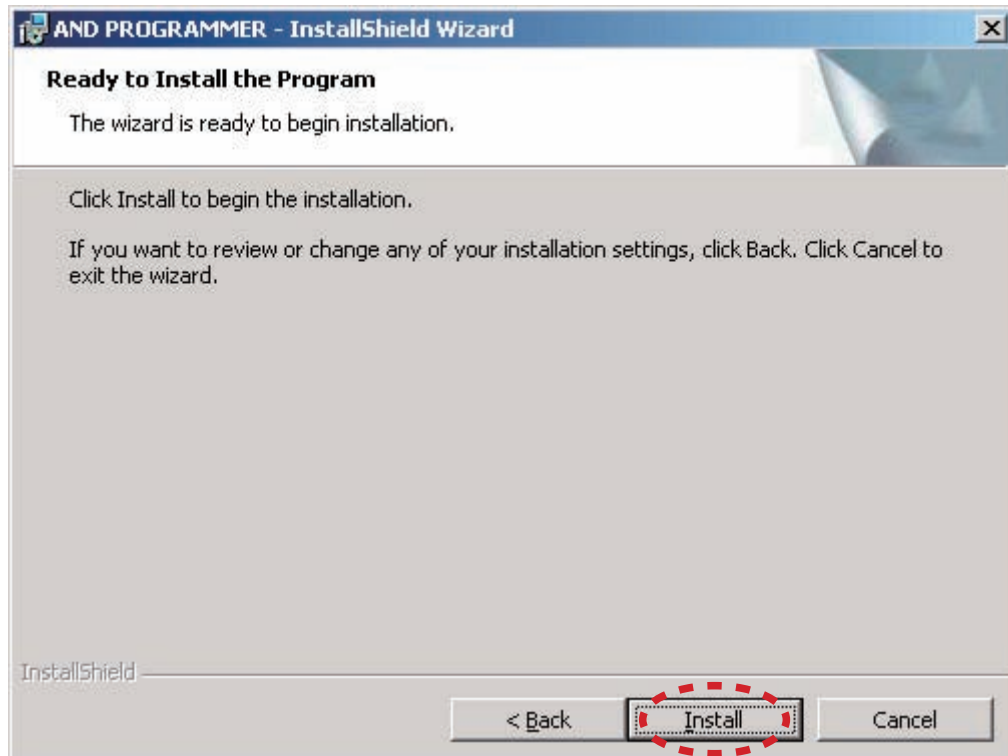
5. Click the **Next**.

5. **Next**をクリックします。



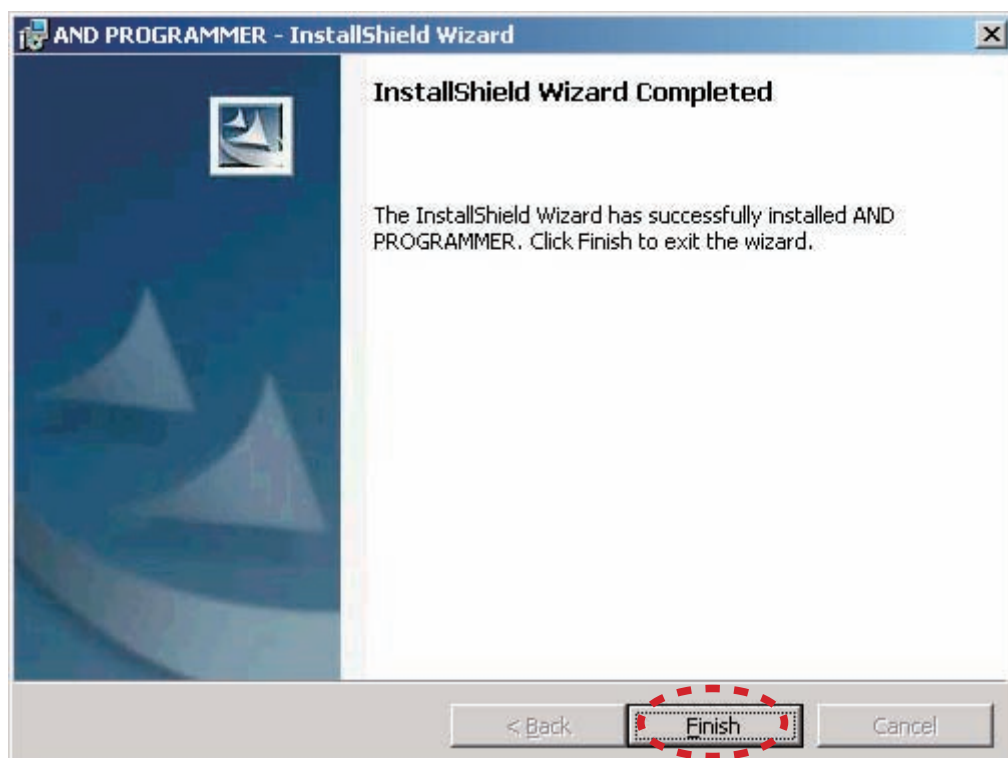
6. Click the **Install**.

6. **Install**をクリックします。



7. Click the **Finish**.

7. **Finish**をクリックします。



Update Procedure

1. Disconnect the mains cord from the unit.
2. Connect RS-232C on rear panel of the unit and the Serial Port of Windows PC with RS-232C cable.
3. Launch the AND FIRMWARE UPGRADE PROGRAMMER from two ways of following.
 - Double click the Launch AND_PROGRAMMER.exe on the desktop.

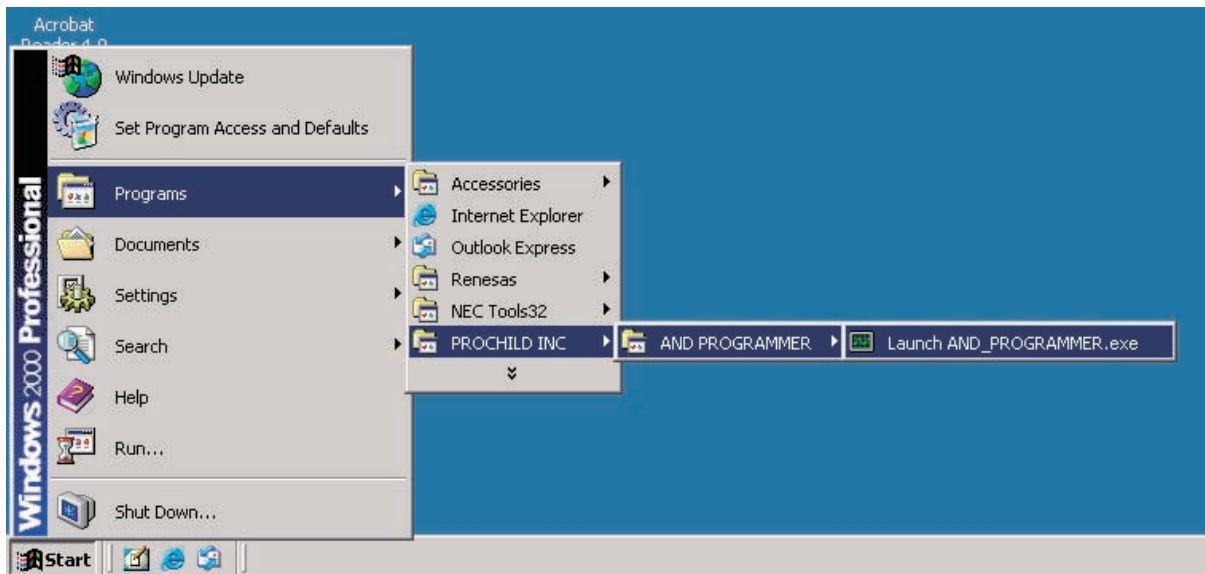


Update Procedure

1. 本機から電源ケーブルを外します。
2. 本機のリアパネルにあるRS-232C端子とPCのSerialポートをRS-232Cケーブルで接続します。
3. AND FIRMWARE UPGRADE PROGRAMMERを下記の方法で起動します。
 - デスクトップにあるLaunch AND_PROGRAMMER.exeアイコンをダブルクリックします。

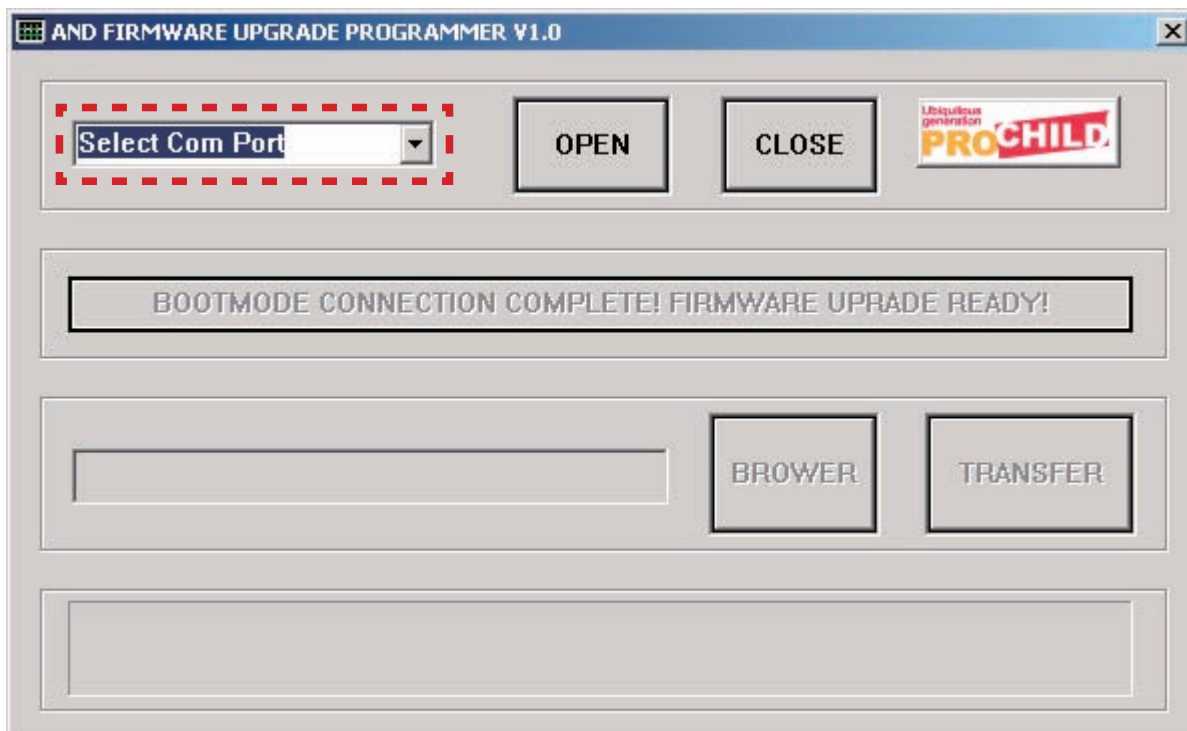
- Click the **Start, Programs, PROCHILD INC, AND PROGRAMMER** and **Launch AND_PROGRAMMER.exe**.

- スタート、プログラム、PROCHILD INC、AND PROGRAMMER、Launch AND_PROGRAMMER.exeをクリックします。



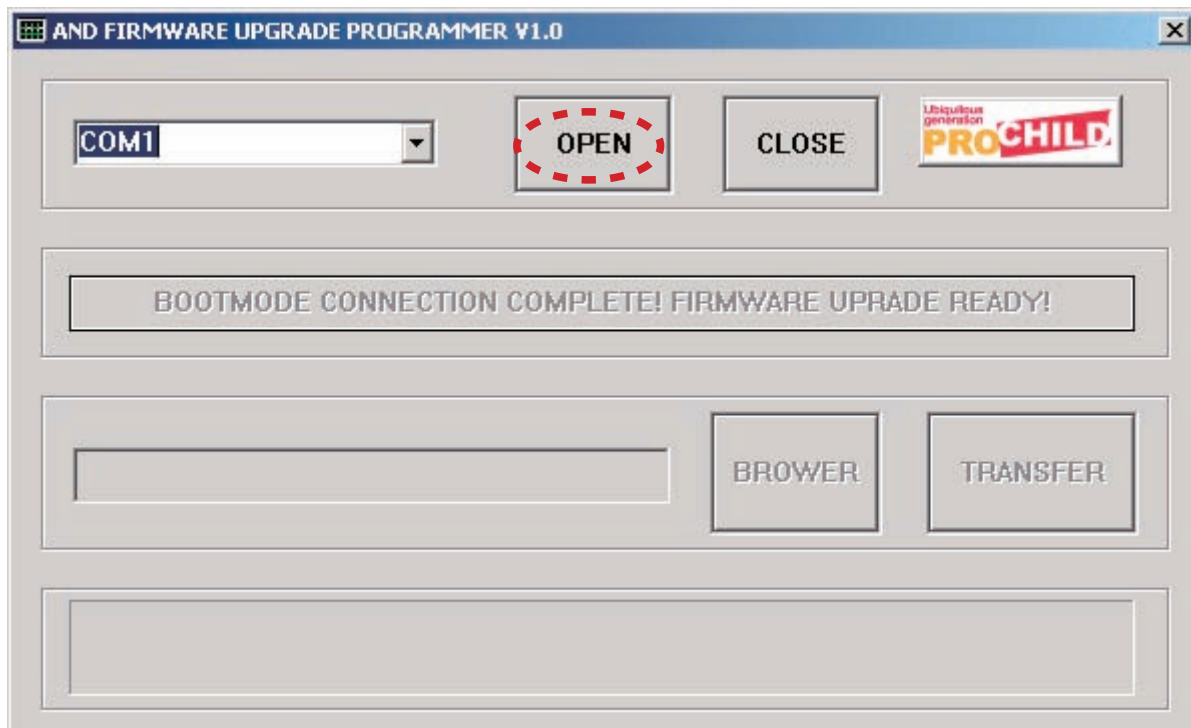
4. Choose the **COM port number**.

4. 使用する**ポート番号**を選択します。



5. Click the **OPEN**.

5. **OPEN**をクリックします。



6. Connect the mains cord into the unit.

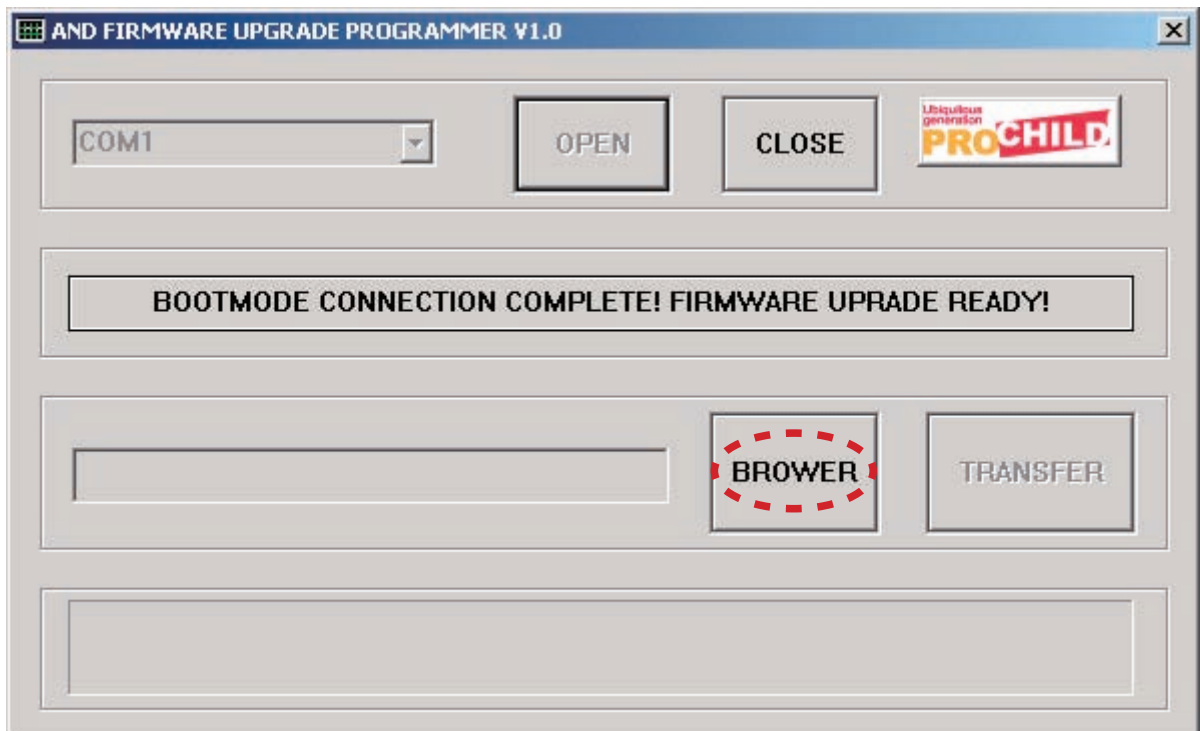
6. 本機に電源ケーブルを接続します。

NOTE : When the unit is into boot mode, STANDBY LED is not lights up.

注意 : このとき本機はブートモードになり、STANDBY LEDは点灯しません。

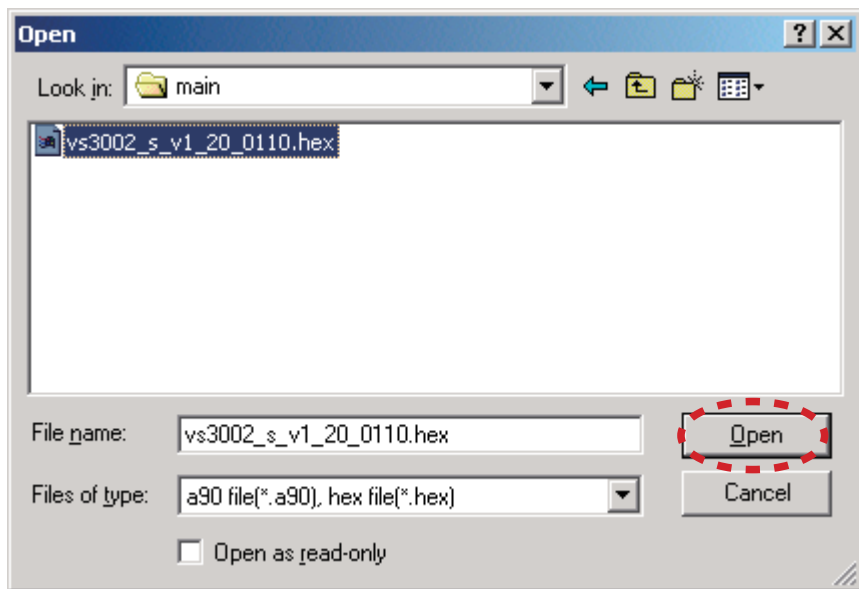
7. Check the message "BOOTMODE CONNECTION COMPLETE! FIRMWARE UPGRADE READY!" was displayed. And click the **BROWER**.

7. "BOOTMODE CONNECTION COMPLETE! FIRMWARE UPGRADE READY!"が表示されたことを確認し、**BROWER**をクリックします。



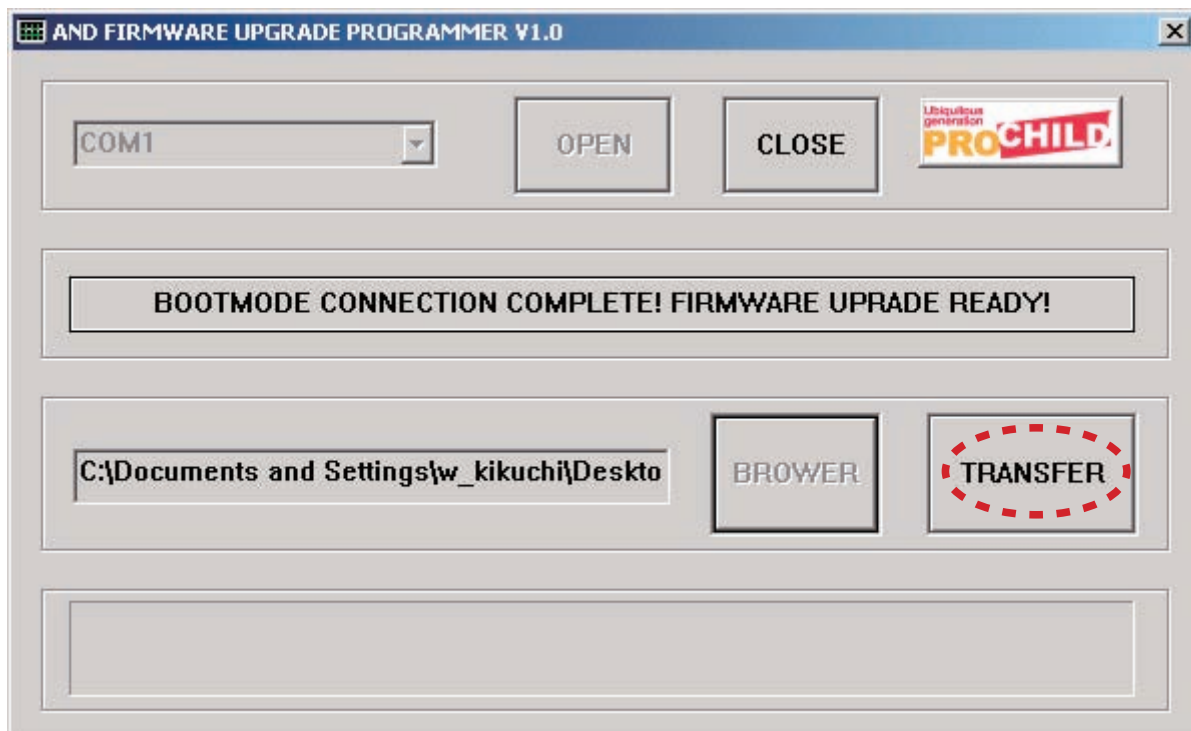
8. Choose the **firmware** (Ex.: vs3002_s_v1_20_0110.hex). And Click the **Open**.

8. アップデートする**firmware** (例：vs3002_s_v1_20_0110.hex) を選択し、**Open**をクリックします。



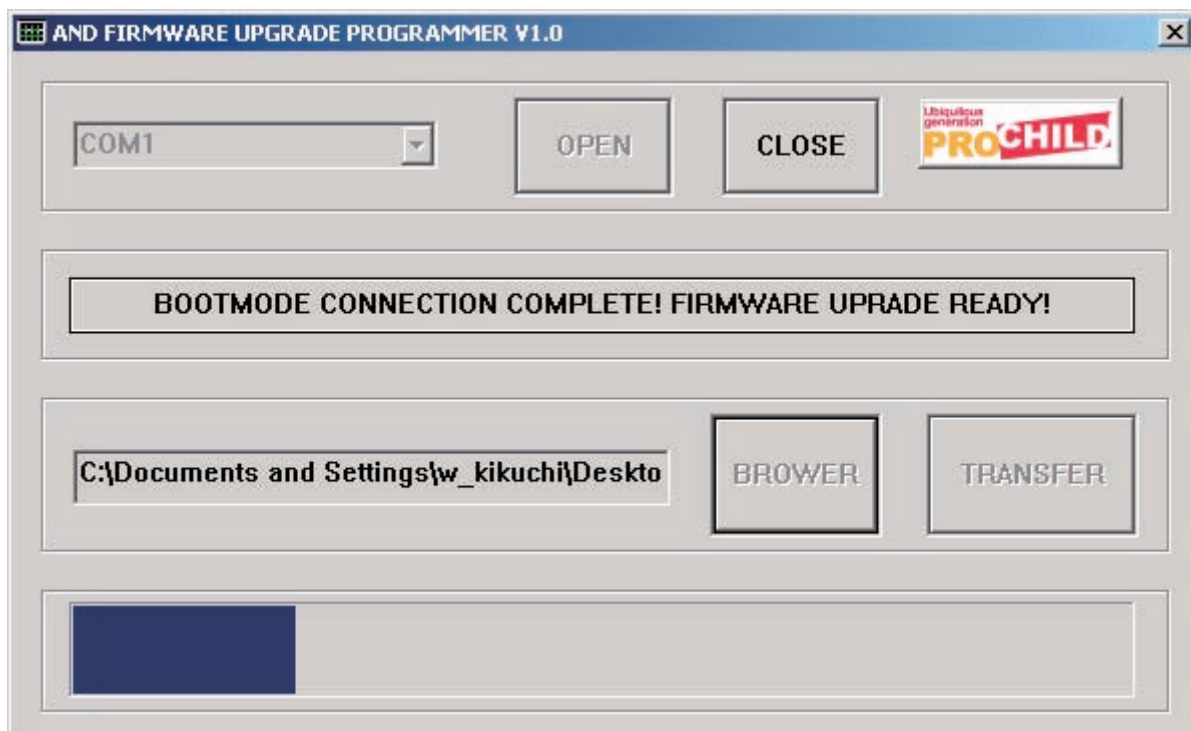
9. Click the **TRANSFER**.

9. **TRANSFER**をクリックします。



10. Firmware is written into the microprocessor.
The updating of firmware takes about 5 seconds.

10. Firmwareがマイコンに書き込まれます。
アップデートにかかる時間はおよそ5秒です。



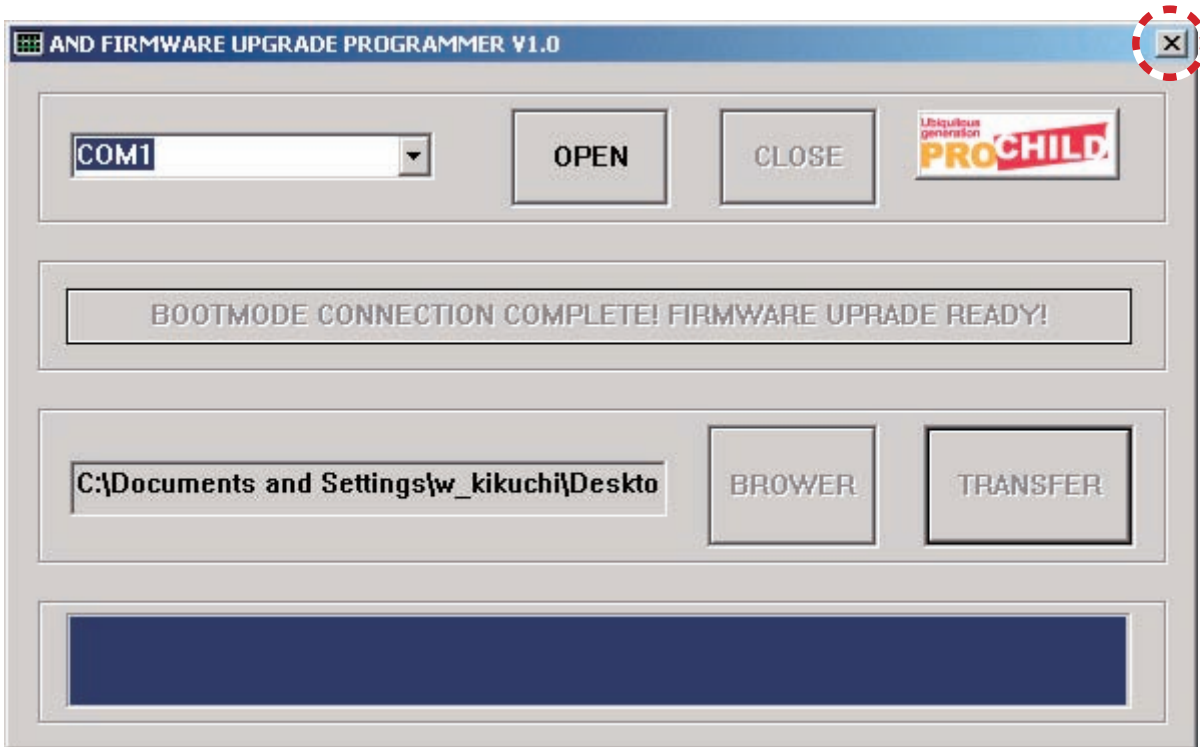
11. Click the **OK**.

11. **OK**をクリックします。



12. Click the **X** icon, and close the AND FIRMWARE UPGRADE PROGRAMMER.

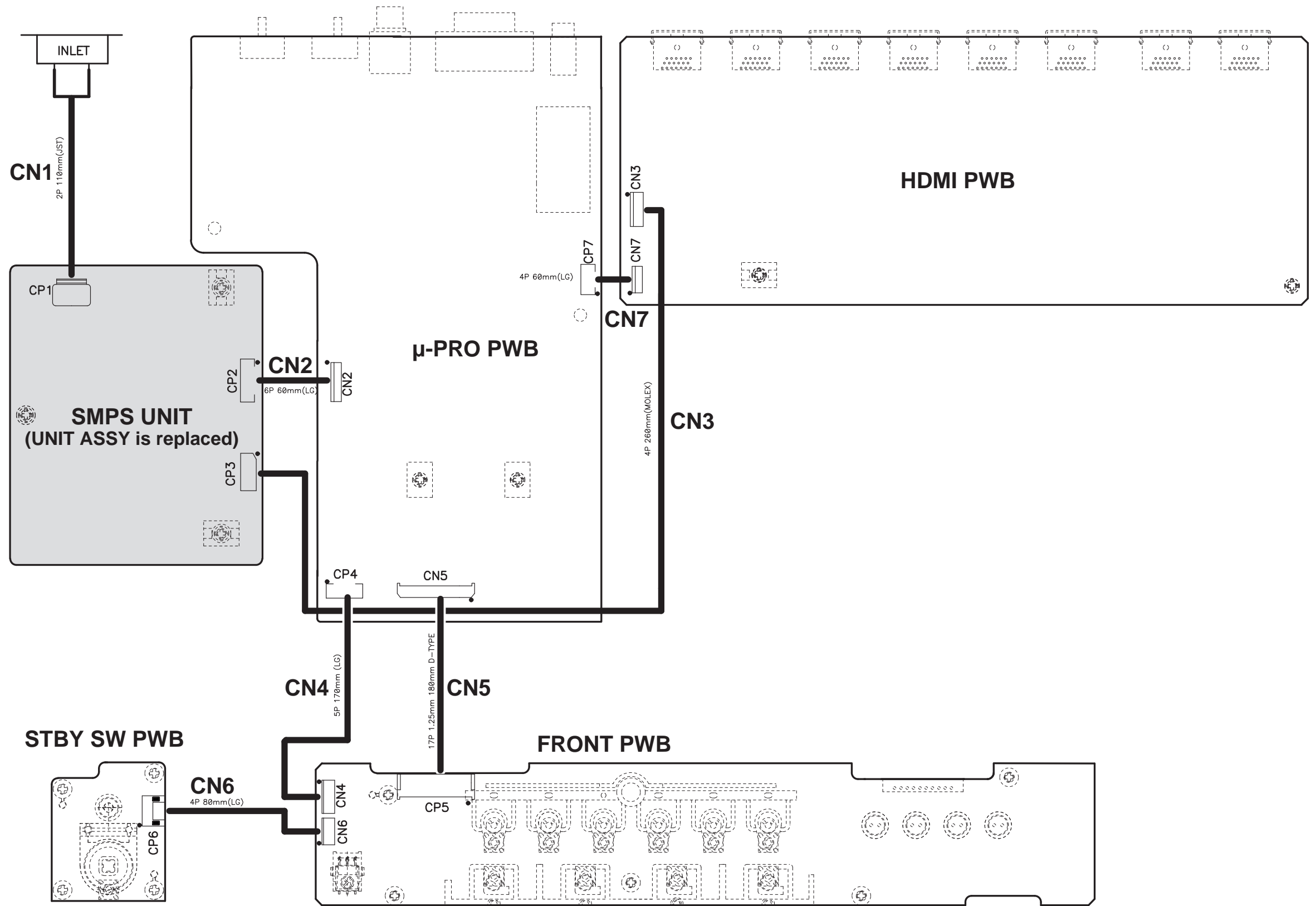
12. **X**アイコンをクリックし、AND FIRMWARE UPGRADE PROGRAMMERを終了します。



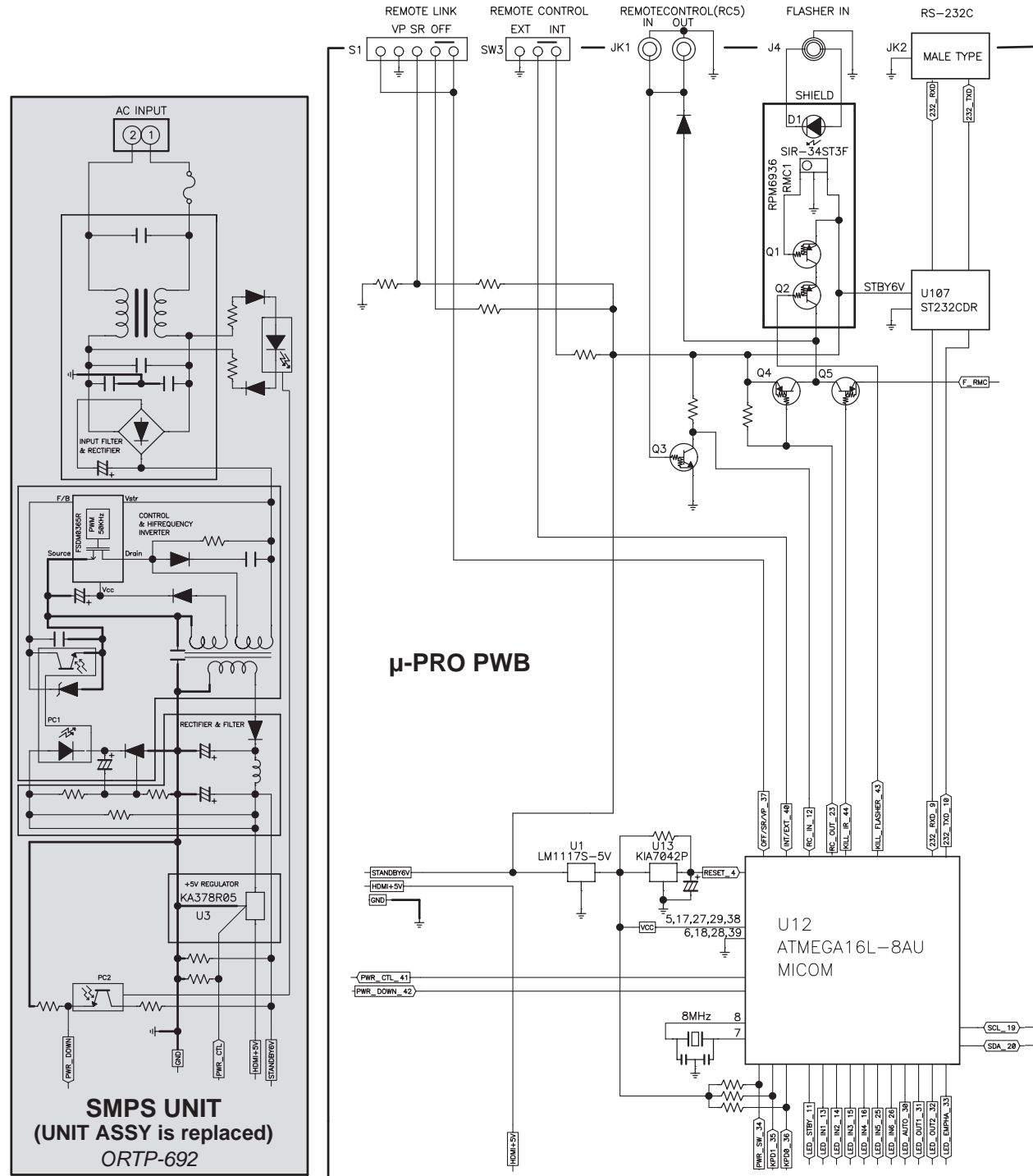
13. Disconnect the mains cord and RS-232C cable from the unit.

13. 電源コードとRS-232Cケーブルを本機から外します。

4. WIRING DIAGRAM

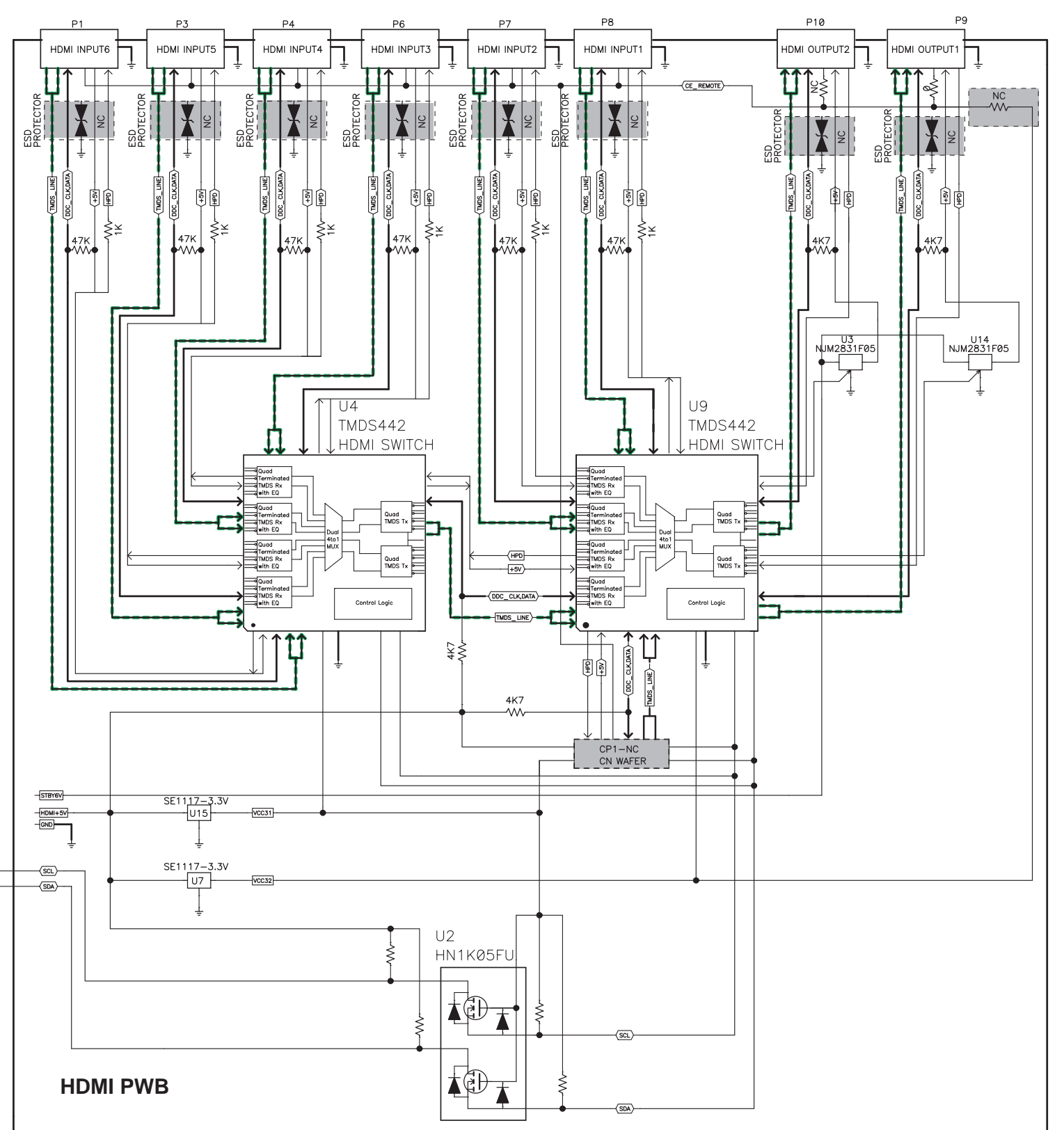
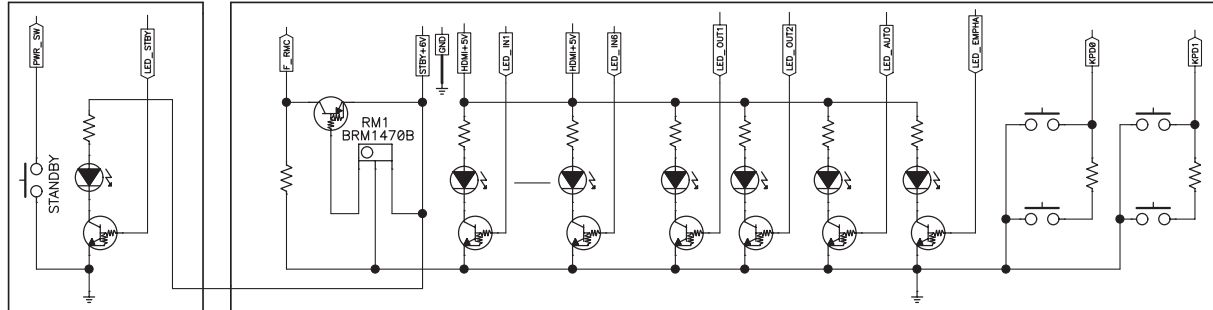


5. BLOCK DIAGRAM



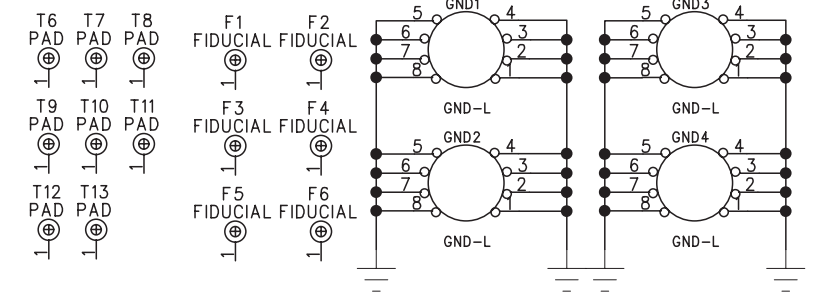
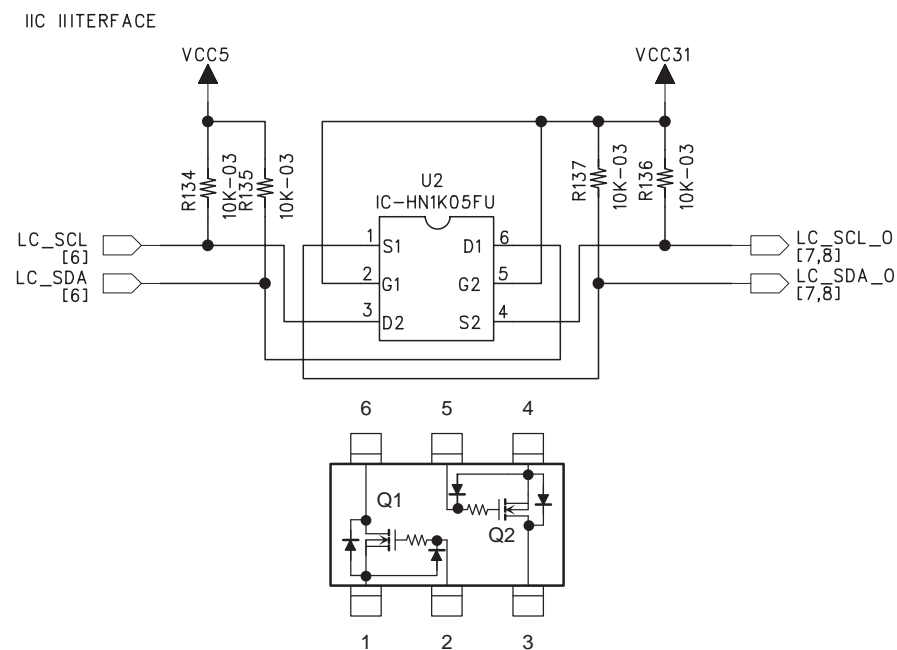
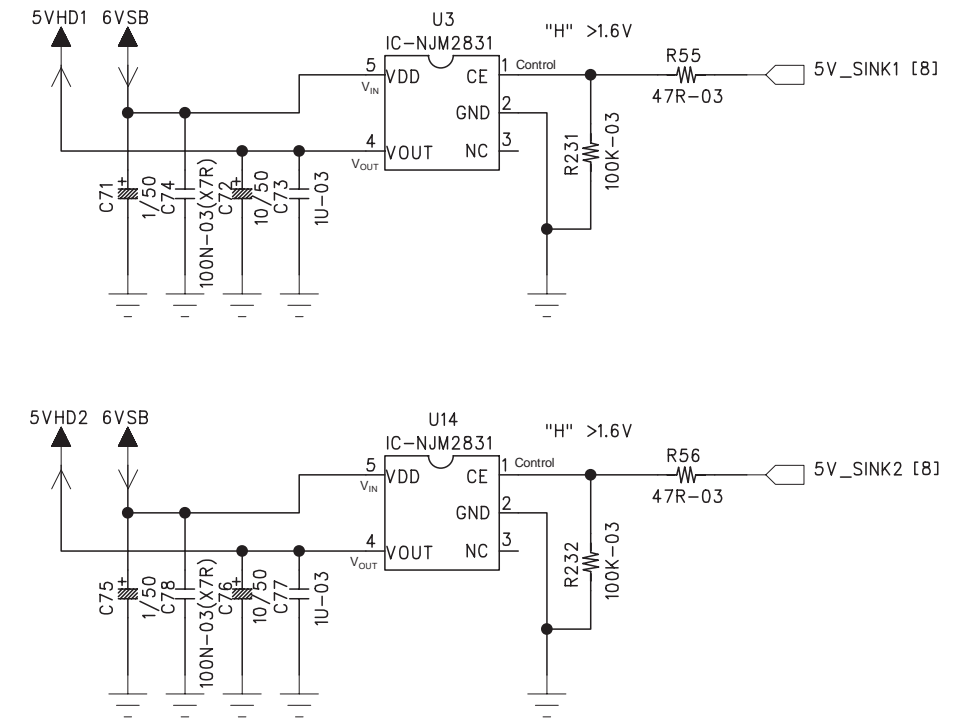
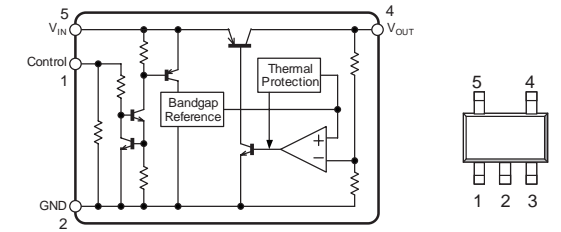
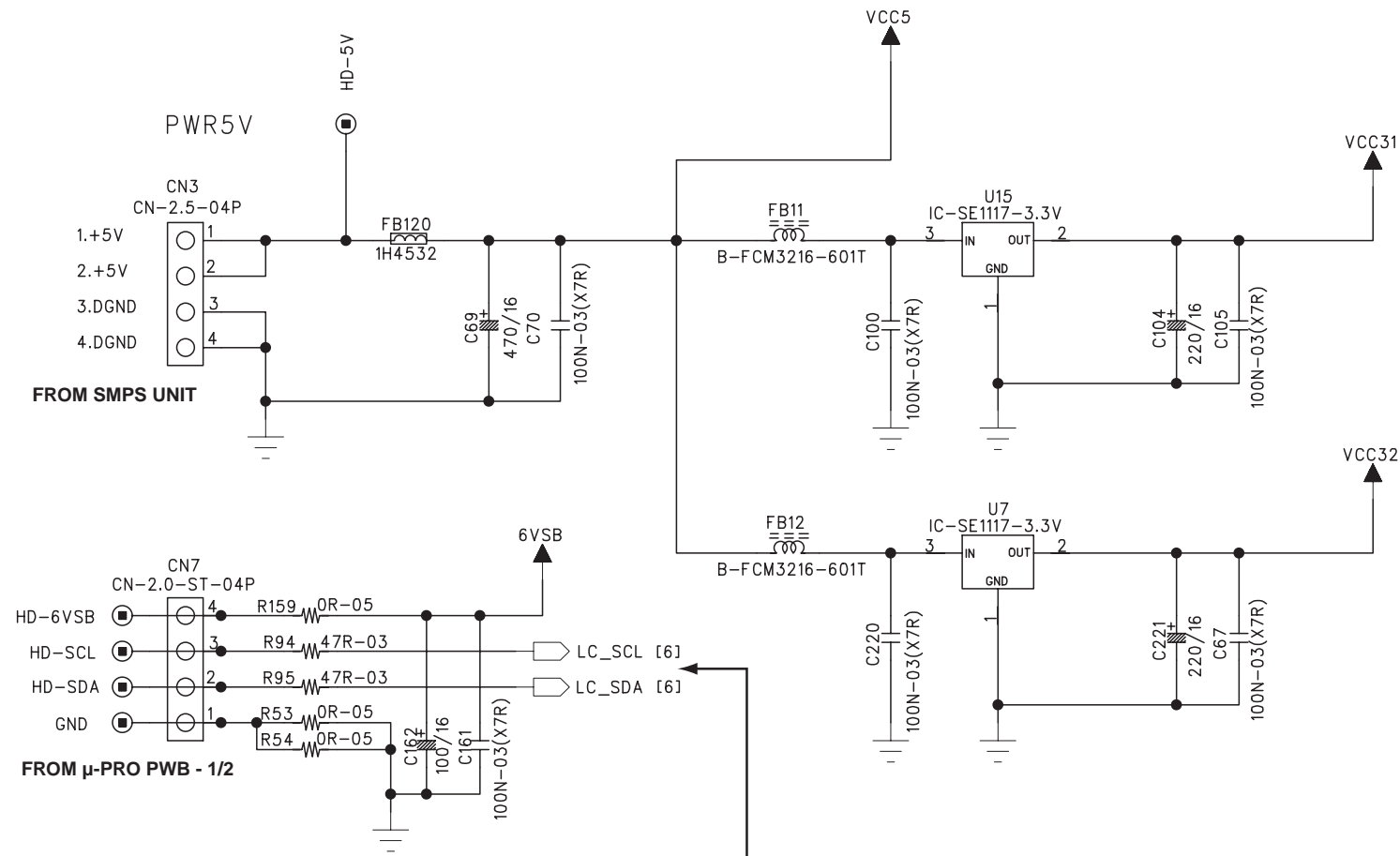
STBY SW PWB

FRONT PWB

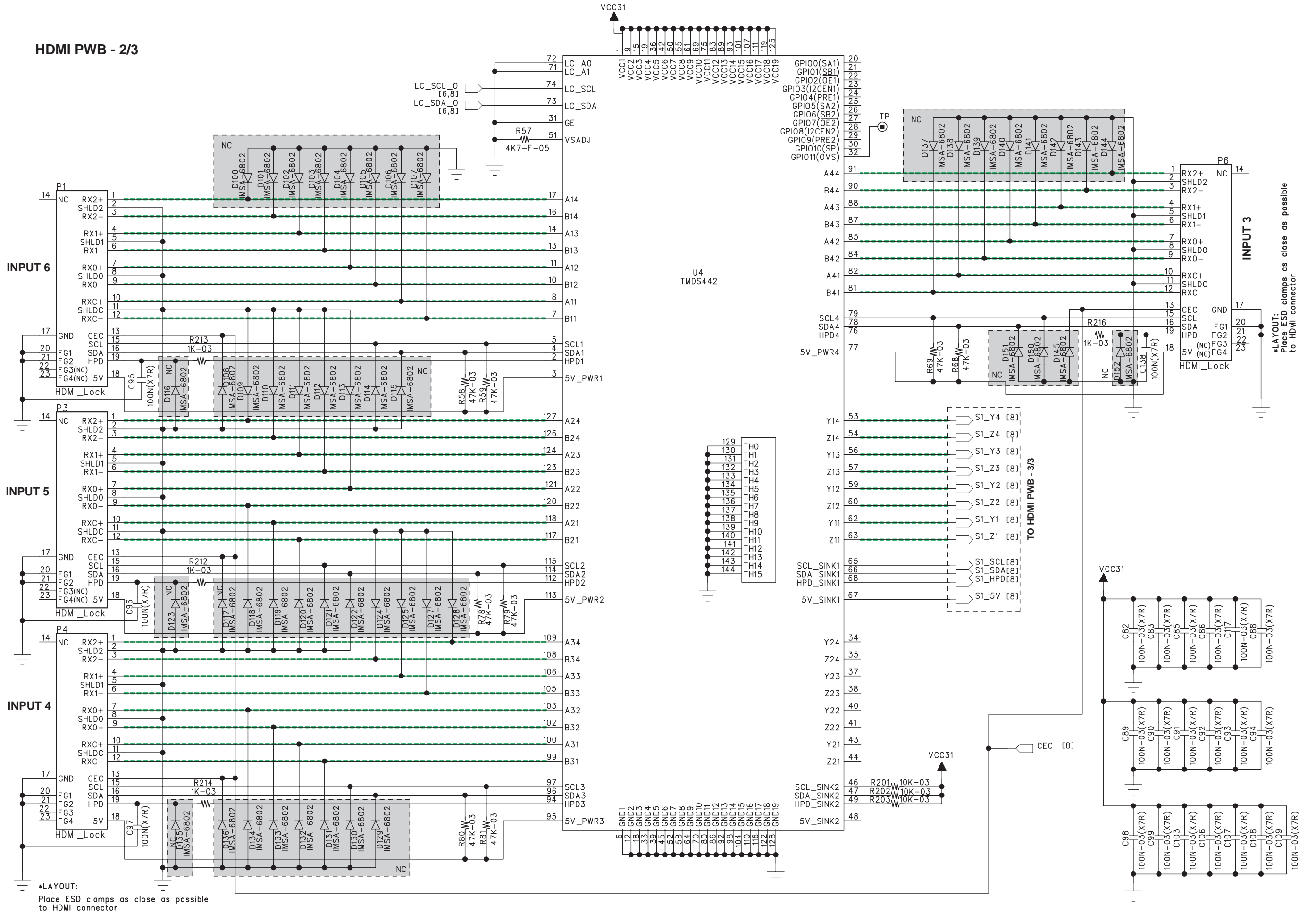


6. SCHEMATIC DIAGRAM

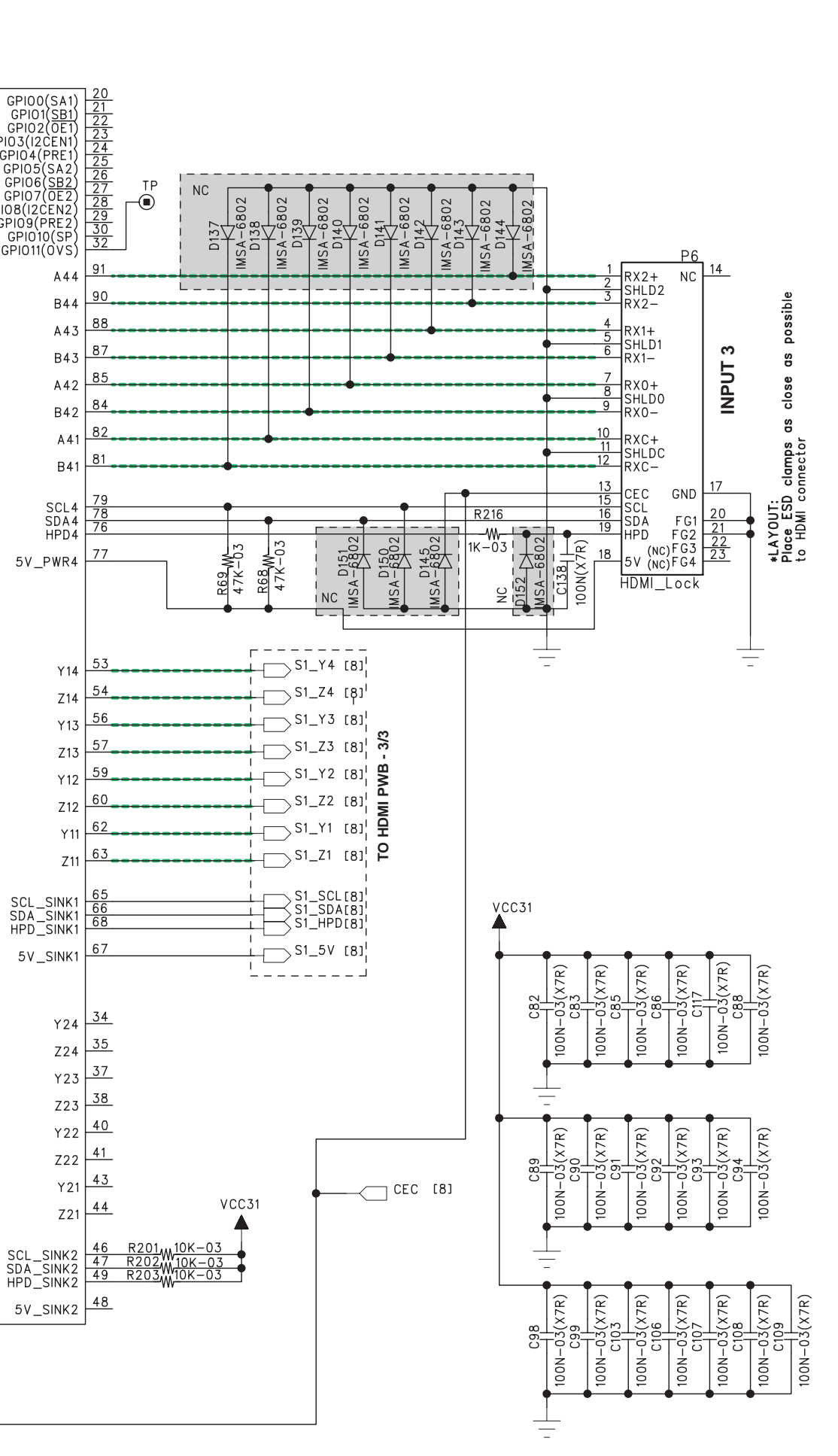
HDMI PWB - 1/3



HDMI PWB - 2/3

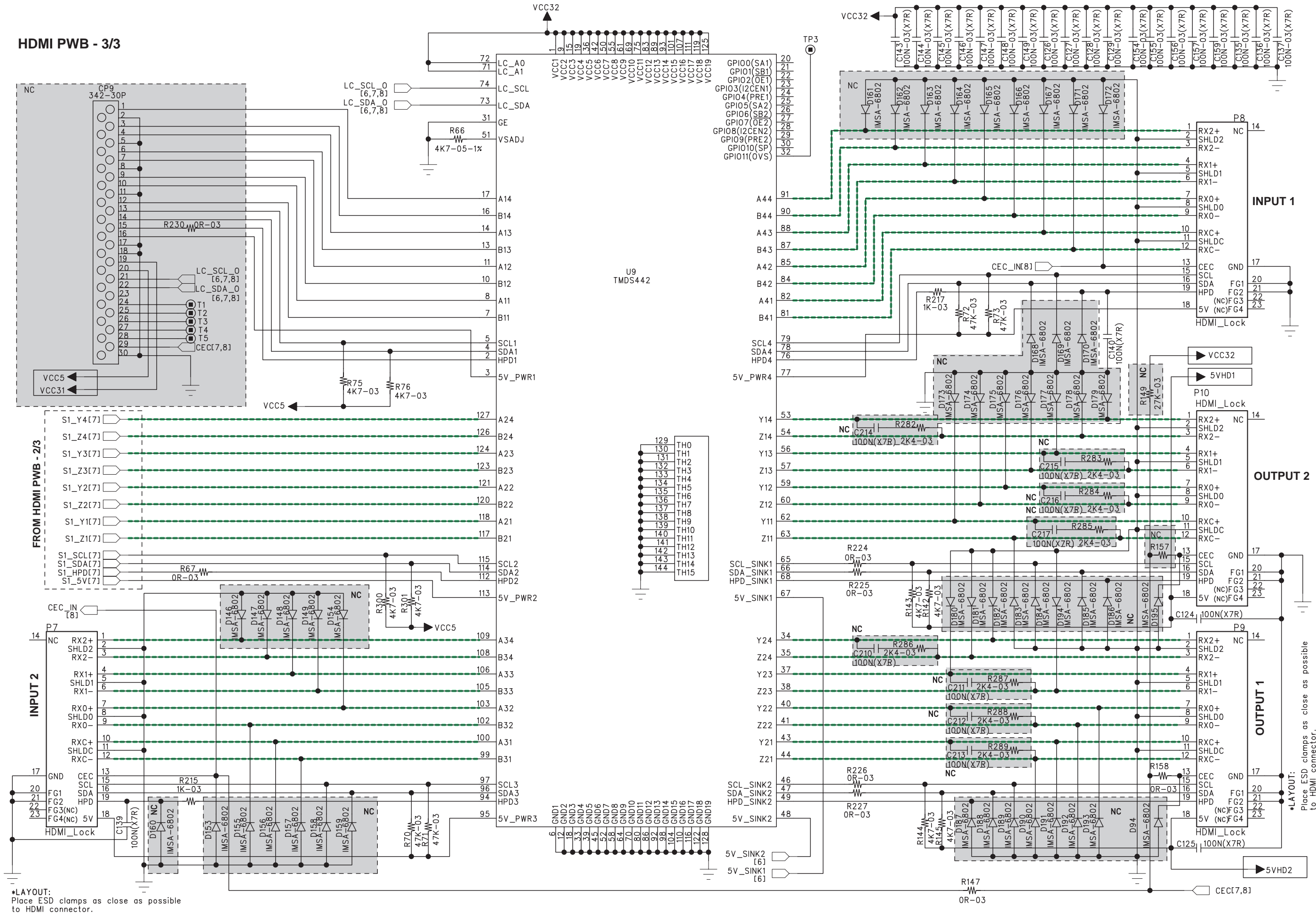


*LAYOUT:
Place ESD clamps as close as possible to HDMI connector

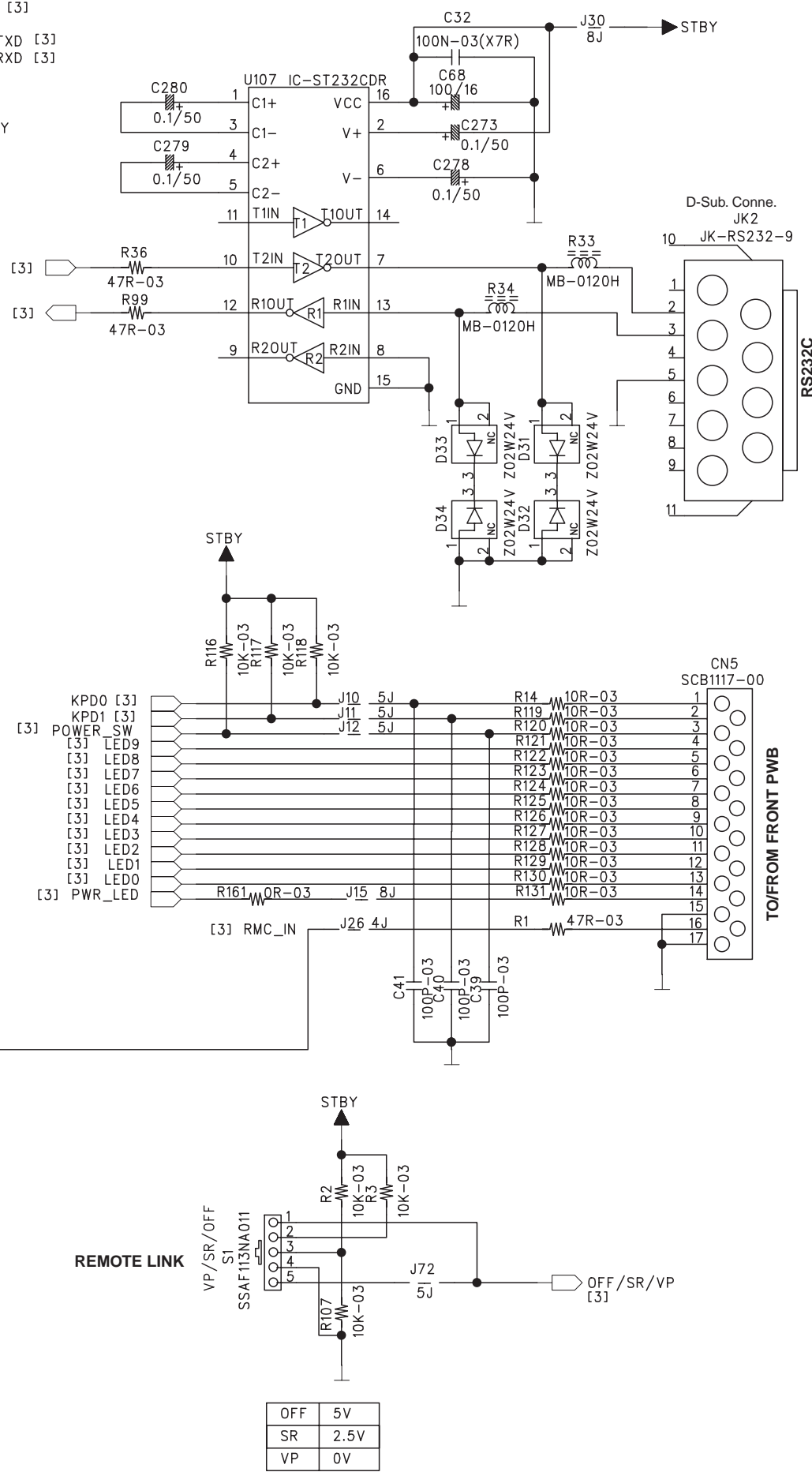
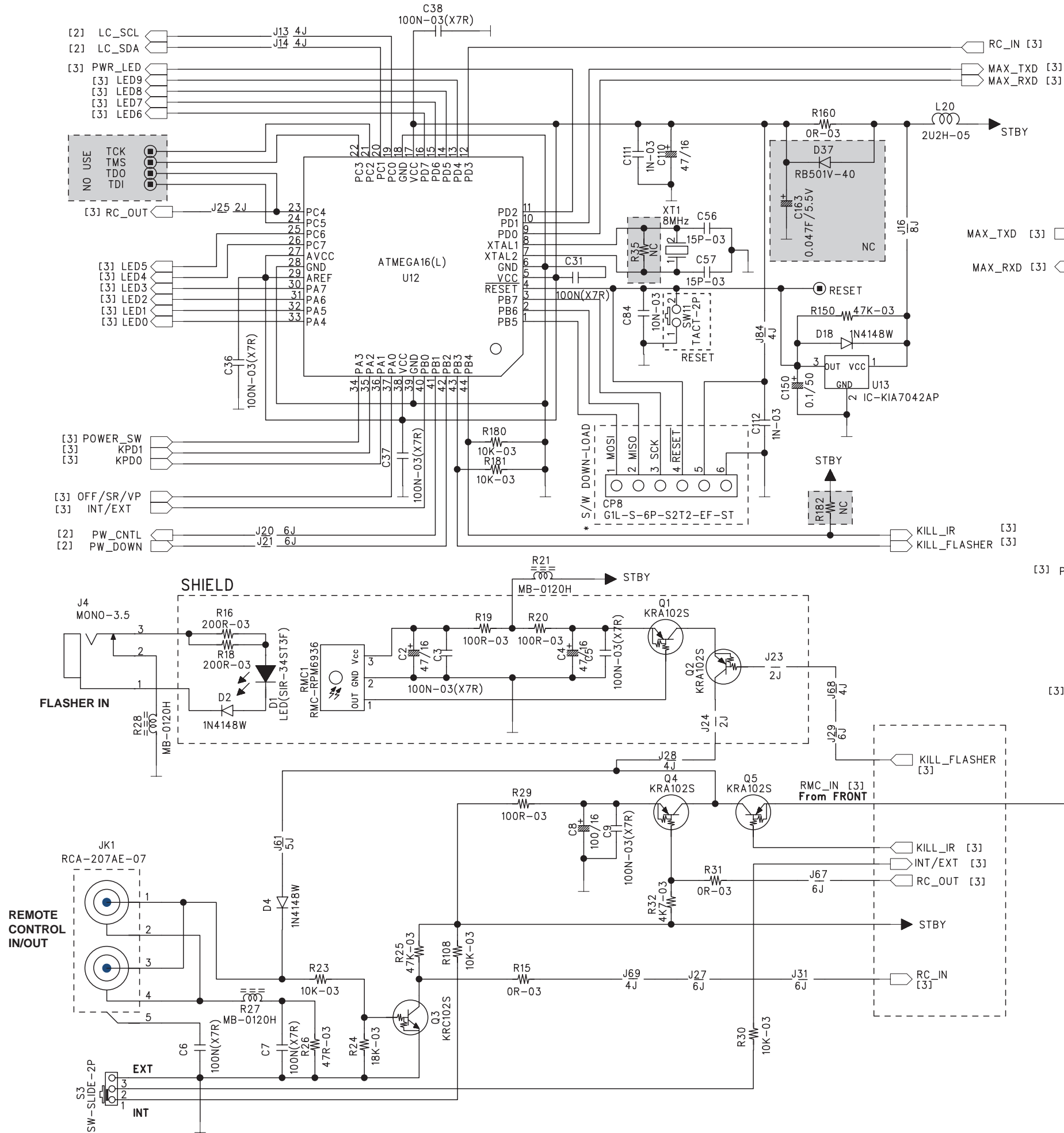


*LAYOUT:
Place ESD clamps as close as possible to HDMI connector

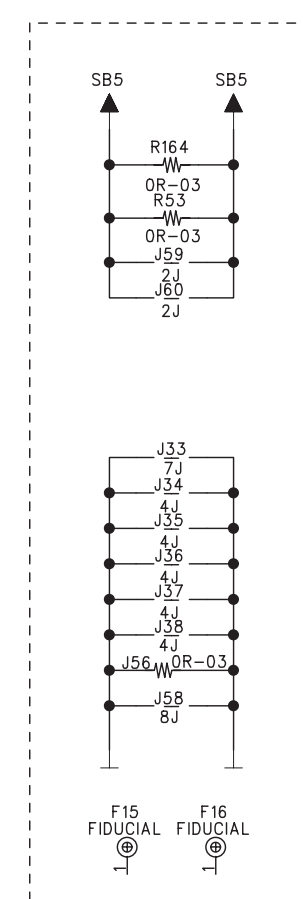
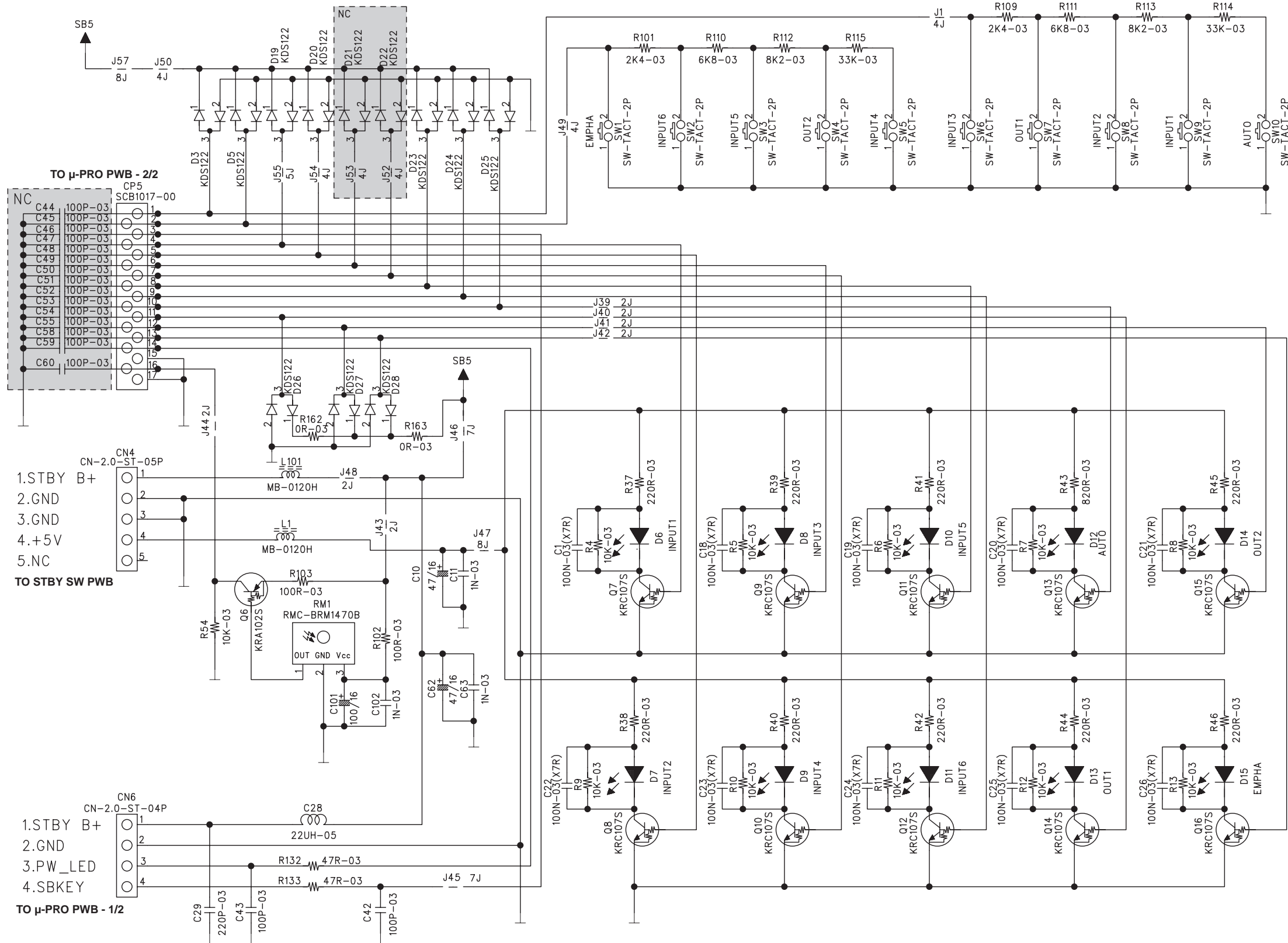
HDMI PWB - 3/3

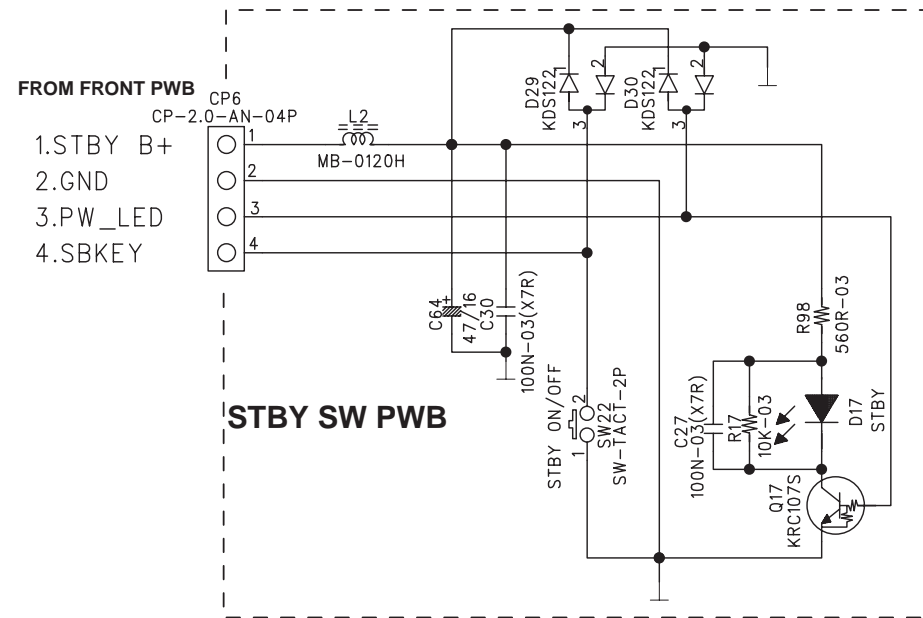


μ-PRO PWB - 2/2

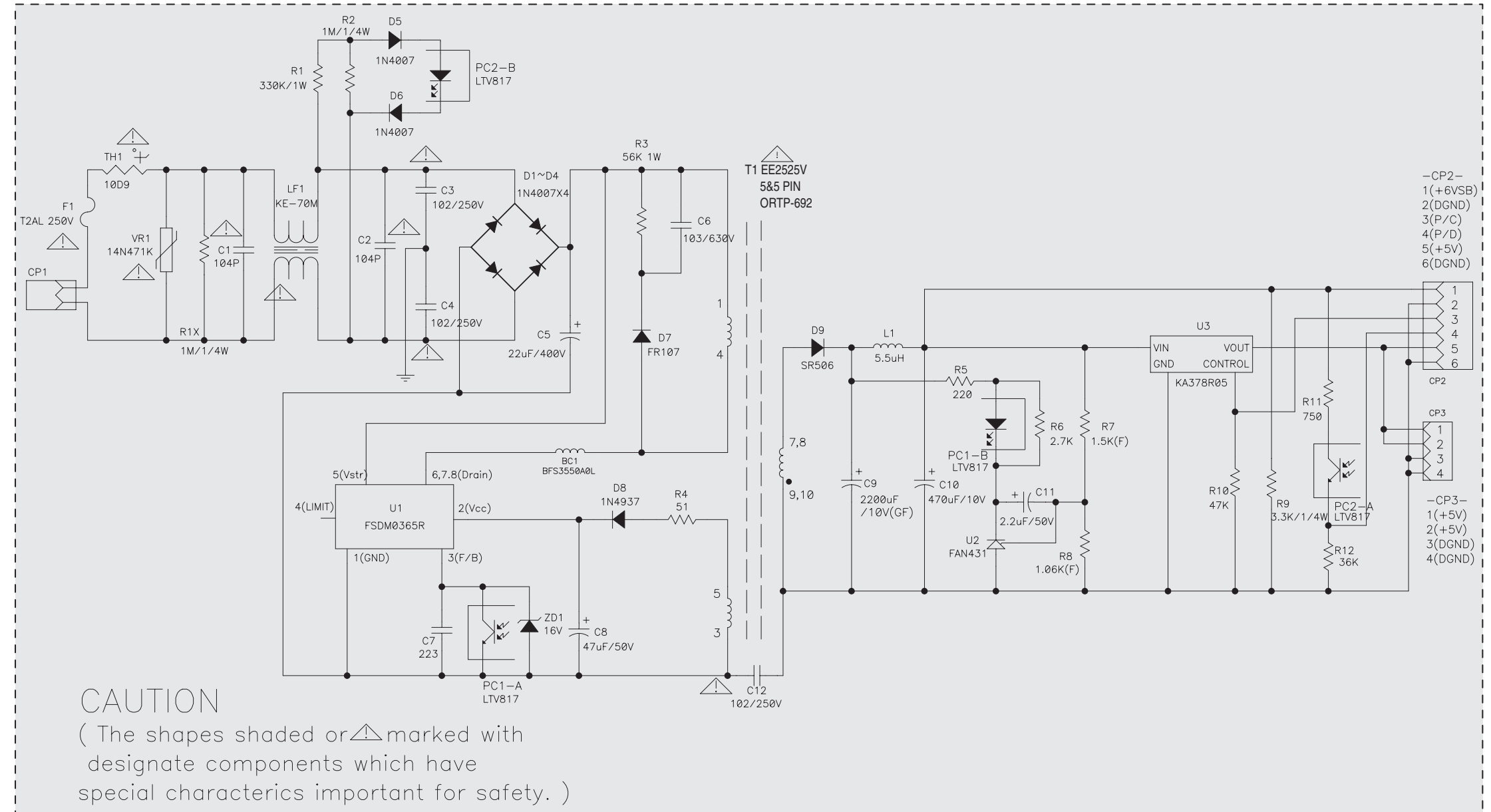


FRONT PWB



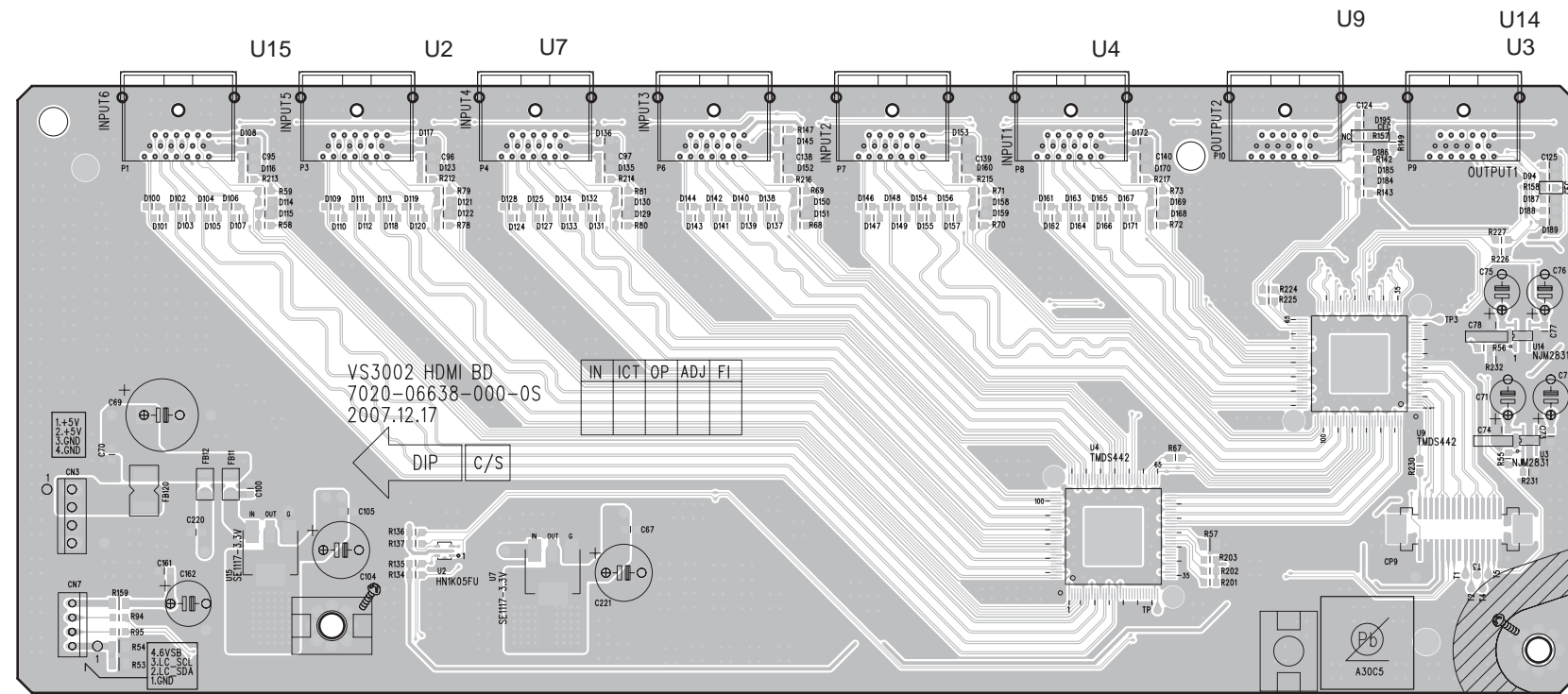


SMPS UNIT (UNIT ASSY is replaced)

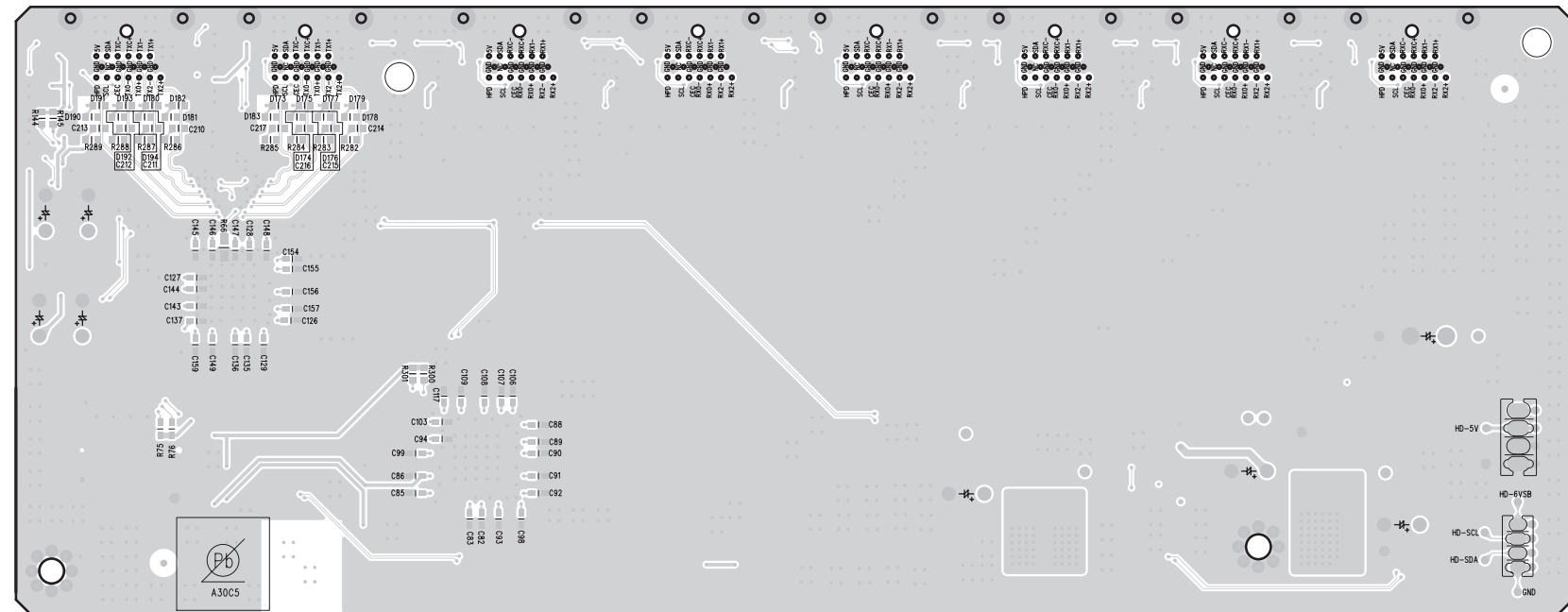


7. PARTS LOCATION

HDMI PWB A



HDMI PWB B



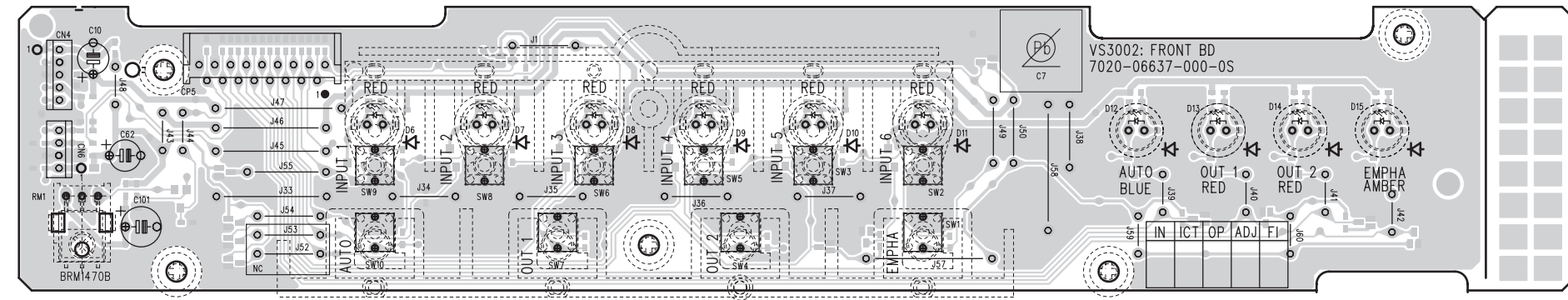
鉛フリー半田

半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

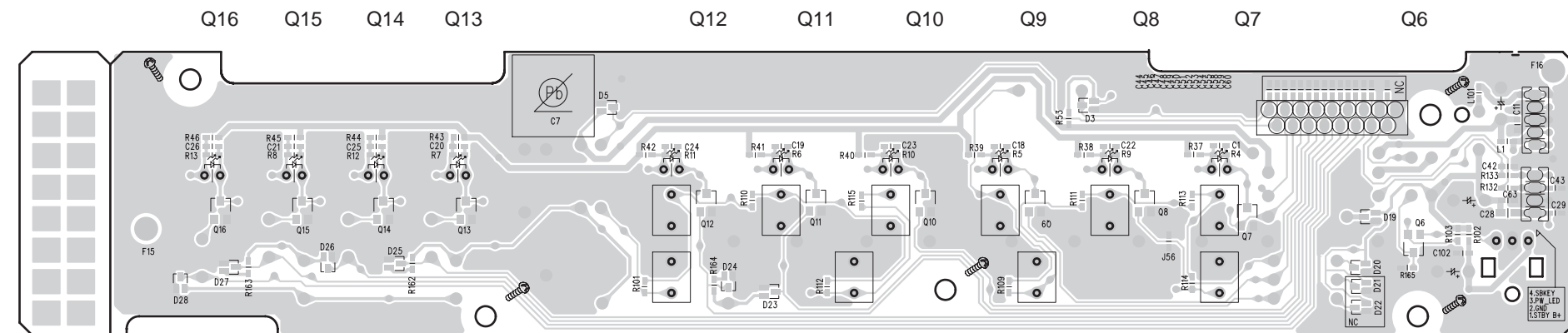
Lead-free Solder

When soldering, use the Lead-free Solder (Sn-Ag-Cu).

FRONT PWB A



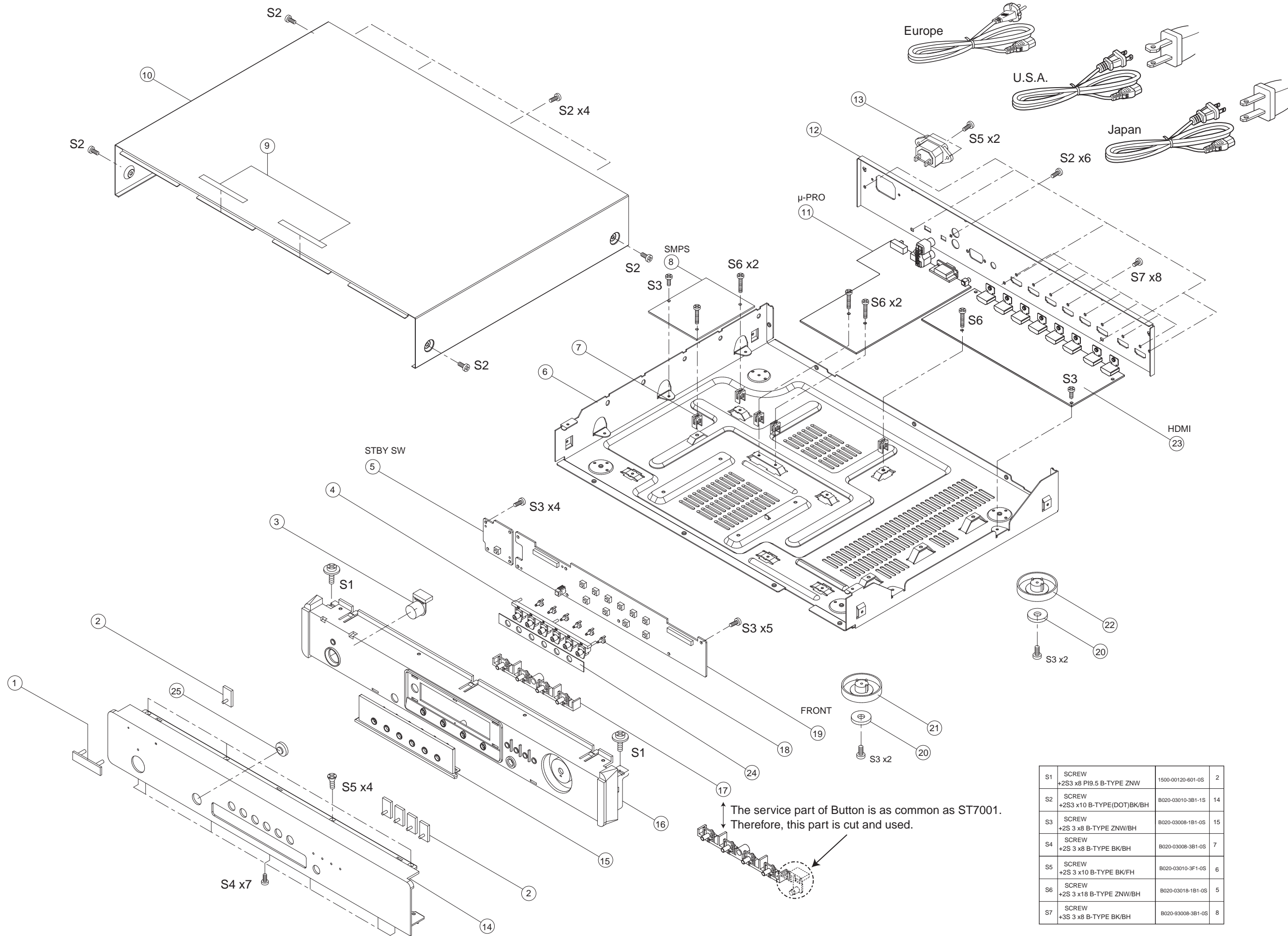
FRONT PWB B



鉛フリー半田
半田付けには、鉛フリー半田 (Sn-Ag-Cu) を使用してください。

Lead-free Solder
When soldering, use the Lead-free Solder (Sn-Ag-Cu).

8. EXPLODED VIEW AND PARTS LIST



S1	SCREW +2S3 x8 PI9.5 B-TYPE ZNW	1500-00120-601-0S	2
S2	SCREW +2S3 x10 B-TYPE(DOT)BK/BH	B020-03010-3B1-1S	14
S3	SCREW +2S 3 x8 B-TYPE ZNW/BH	B020-03008-1B1-0S	15
S4	SCREW +2S 3 x8 B-TYPE BK/BH	B020-03008-3B1-0S	7
S5	SCREW +2S 3 x10 B-TYPE BK/FH	B020-03010-3F1-0S	6
S6	SCREW +2S 3 x18 B-TYPE ZNW/BH	B020-03018-1B1-0S	5
S7	SCREW +3S 3 x8 B-TYPE BK/BH	B020-93008-3B1-0S	8

P.W.B. NAME	POS. NO.	VERS. COLOR	PART NO. (FOR EUR)	PART NO. (MZ)	PART NAME	DESCRIPTION	
	1		00M24AW251010	00M24AW251010	BADGE	NEW MARANTZ BADGE GOLD	5630210438100S
	2		90M322W355010	90M322W355010	LENS	INDICATOR POWER STANDBY	5160210063000S
	3		00M46BW270010	00M46BW270010	BUTTON	BUTTON POWER BLACK	5097211271000S
	4		00M30AV270010	00M30AV270010	BUTTON	BUTTON 6-KEY (INPUT)	5097213501000S
	5		nsp	nsp	PWB ASSY	STBY SW PWB ASSY	7028066373010
	6		nsp	nsp	CHASSIS	MAIN CHASSIS SECC 1.0T (A1)	3200211386100S
	7		nsp	nsp	SUPPORT	UPAF07 ABS BK/PCB	4070001601010S
	8	⚠	90M-ZZ004870R	90M-ZZ004870R	PWB ASSY	! ORTP-692(100V-230V) SMPS PWB ASSY	8208000760010S
	9		nsp	nsp	BUFFER	60X14X1.5T FELT	4050211385000S
	11		nsp	nsp	PWB ASSY	μ-PRO PWB ASSY	7028066371010
	12		nsp	nsp	PANEL	REAR PANEL VS3002	3207211696300S
	13	⚠	90M-YT005490R	90M-YT005490R	TERMINAL	! INLET (M-1909-H)	G430019090011S
	14		00M30AV248010	00M30AV248010	PANEL	PANEL FRONT BLACK	3067212398100S
	15		00M30AV158010	00M30AV158010	ESCUTCHEON	PLATE PANEL	5127210733000S
	16		00M46BW105010	00M46BW105010	CHASSIS	PANEL FRAME BLACK	3217211122000S
	17		00M46BW270020	00M46BW270020	BUTTON	BUTTON FUNCTION BLACK (NEED CUT)	5097212781100S
	18		00M30AV355010	00M30AV355010	LENS	INDICATOR LED	5160210203000S
	19		nsp	nsp	PWB ASSY	FRONT PWB ASSY	7028066372010
	20		90M46BW056010	90M46BW056010	BUFFER	RUBBER CUSHION	4050211175000S
	21		00M46BW057110	00M46BW057110	LEG	FOOT GOLD FRONT	4007210321010S
	22		00M46BW057310	00M46BW057310	LEG	FOOT GOLD REAR	4007000600010SZ
	23		90M-ZZ004880R	90M-ZZ004880R	PWB ASSY	HDMI PWB ASSY	7025HJ0701011
	24		nsp	nsp	BUFFER	BUFFER FOR 6 BUTTON	2690210169000S
	25		00M14AJ355030	00M14AJ355030	WINDOW	IR ACRY BLUE	5070212463000S
	CN1		nsp	nsp	CORD	110MM/2P CKM3962H-03(110X0.8T)	L000111020010S
	CN5		nsp	90M-YU003170R	FPC	1.25X17X180(TL)XD(5/5/10/10)X(0.05X0.8)	N712171843810S
PACKING							
		⚠	nsp	90M-ZC000470R	MAINS CORD	! SJT 16AWGX2C 1.8M 13A/125V USA	L068125130010S
		⚠	nsp	90M-ZC000460R	MAINS CORD	! 12A/125V VCTF 1.25MMSQX2C JPN	L068125120030S
		⚠	90M-ZC000600R	90M-ZC000600R	MAINS CORD	! 16A/250V H05VV-F2CX1.0MM 1.8M EUR	L068250160020S
			00M30AV851010	00M30AV851010	USER GUIDE	USER GUIDE VS3002	5707047250200S
			307010016000M	307010016000M	UNIT KIT	REMOTE CONTROLLER RC001VS	8300281000010S
NOT STANDARD SPARE PART							
			nsp	00M46BW809020	CUSHION	CUSHION R FOR UNIT	6230211314000S
			nsp	00M46BW809010	CUSHION	CUSHION L FOR UNIT	6230211304000S
			nsp	00M30AV801010	PACKING CASE	PACKING CASE VS3002	6007210770010S
	10		nsp	00M46BW257010	LID	TOP COVER BLACK	3007210456110S

NOTE : *nsp* PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

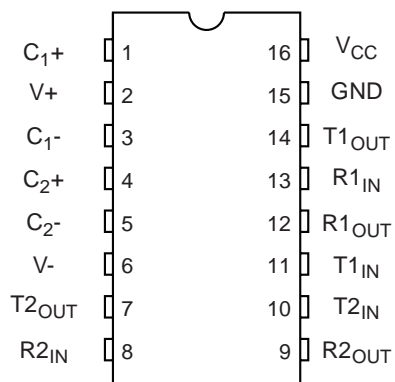
9. MICROPROCESSOR AND IC DATA

U12 : ATMEGA16L-8AU

PIN No.	PIN	PIN NAME	I/O	STBY	ACTIVE	FUNCTION
1	(MOSI)PB5	MOSI	I			UP GRADE PIN
2	(MISO)PB6	MISO	O			UP GRADE PIN
3	(SCK)PB7	SCK	O			UP GRADE PIN
4	RESET	RESET	I		Lv	μ-PRO RESET SIGNAL INPUT
5	VCC	VCC	5V			POWER 5V
6	GND	GND	GND			GND
7	XTAL2	XTAL2	O			XTAL CONNECTION
8	XTAL1	XTAL1	I			XTAL CONNECTION
9	(RXD)PD0	232_RXD	I		UART	RS232C COMMUNICATION DATA INPUT
10	(TXD)PD1	232_TXD	O		UART	RS232C COMMUNICATION DATA OUTPUT
11	(INT0)PD2	PWR_LED	O		H:ACTIVE	STANDBY LED ON/OFF CONTROL
12	(INT1)PD3	RC_IN	I			Ir & RC5 DATA INPUT
13	(OC1B)PD4	IN_1_LED	O		H:ACTIVE	INPUT 1 LED ON/OFF CONTROL
14	(OC1A)PD5	IN_2_LED	O		H:ACTIVE	INPUT 2 LED ON/OFF CONTROL
15	(ICP1)PD6	IN_3_LED	O		H:ACTIVE	INPUT 3 LED ON/OFF CONTROL
16	(OC2)PD7	IN_4_LED	O		H:ACTIVE	INPUT 4 LED ON/OFF CONTROL
17	VCC	VCC	5V			POWER 5V
18	GND	GND	GND			GND
19	(SCL)PC0	LC_SCL	I/O			TMDS442 SERIAL CLOCK PIN
20	(SDA)PC1	LC_SDA	I/O			TMDS442 SERIAL DATA PIN
21	(TCK)PC2	NC	O			OPEN
22	(TMS)PC3	NC	O			OPEN
23	(TDO)PC4	RC_OUT	O			RC5 DATA OUTPUT
24	(TDI)PC5	NC	O			OPEN
25	(TOSC1)PC6	IN_5_LED	O		H:ACTIVE	INPUT 5 LED ON/OFF CONTROL
26	(TOSC2)PC7	IN_6_LED	O		H:ACTIVE	INPUT 6 LED ON/OFF CONTROL
27	AVCC	AVCC	5V			POWER 5V
28	GND	GND	GND			GND
29	AREF	AREF	5V			AREF
30	(ADC7)PA7	AUTO_LED	O		H:ACTIVE	AUTO LED ON/OFF CONTROL
31	(ADC6)PA6	OUT_1_LED	O		H:ACTIVE	OUTPUT 1 LED ON/OFF CONTROL
32	(ADC5)PA5	OUT_2_LED	O		H:ACTIVE	OUTPUT 2 LED ON/OFF CONTROL
33	(ADC4)PA4	EMPHA_LED	O		H:ACTIVE	EMPHASIS LED ON/OFF CONTROL
34	(ADC3)PA3	PWR_SW	I			STANDBY SWITCH SIGNAL INPUT
35	(ADC2)PA2	KPD1	I			INPUT4~6/OUT2/EMPHASIS SWITCH SIGNAL INPUT
36	(ADC1)PA1	KPD0	I			INPUT1~3/OUT1/AUTO SWITCH SIGNAL INPUT
37	(ADC0)PA0	OFF/SR/VP	I			REMOTE LINK SELECTOR SWITCH SIGNAL INPUT
38	VCC	VCC	5V			POWER 5V
39	GND	GND	GND			GND
40	(TCK/T0)PB0	INT/EXT	I			Ir SELECTOR SWITCH SIGNAL INPUT
41	(T1)PB1	PW_CTRL	O		H:ACTIVE	HDMI POWER +5V ON/OFF CONTROL
42	(AIN0/ INT2)PB2	PW_DOWN	I			AC POWER DOWN SIGNAL INPUT
43	(AIN1/ OC0)PB3	KILL_FLASHER	O		L:ACTIVE	Ir FLASHER SIGNAL ON/OFF CONTROL
44	(SS)PB4	KILL_IR	O		L:ACTIVE	FRONT Ir SIGNAL ON/OFF CONTROL

U107 : ST232CDR

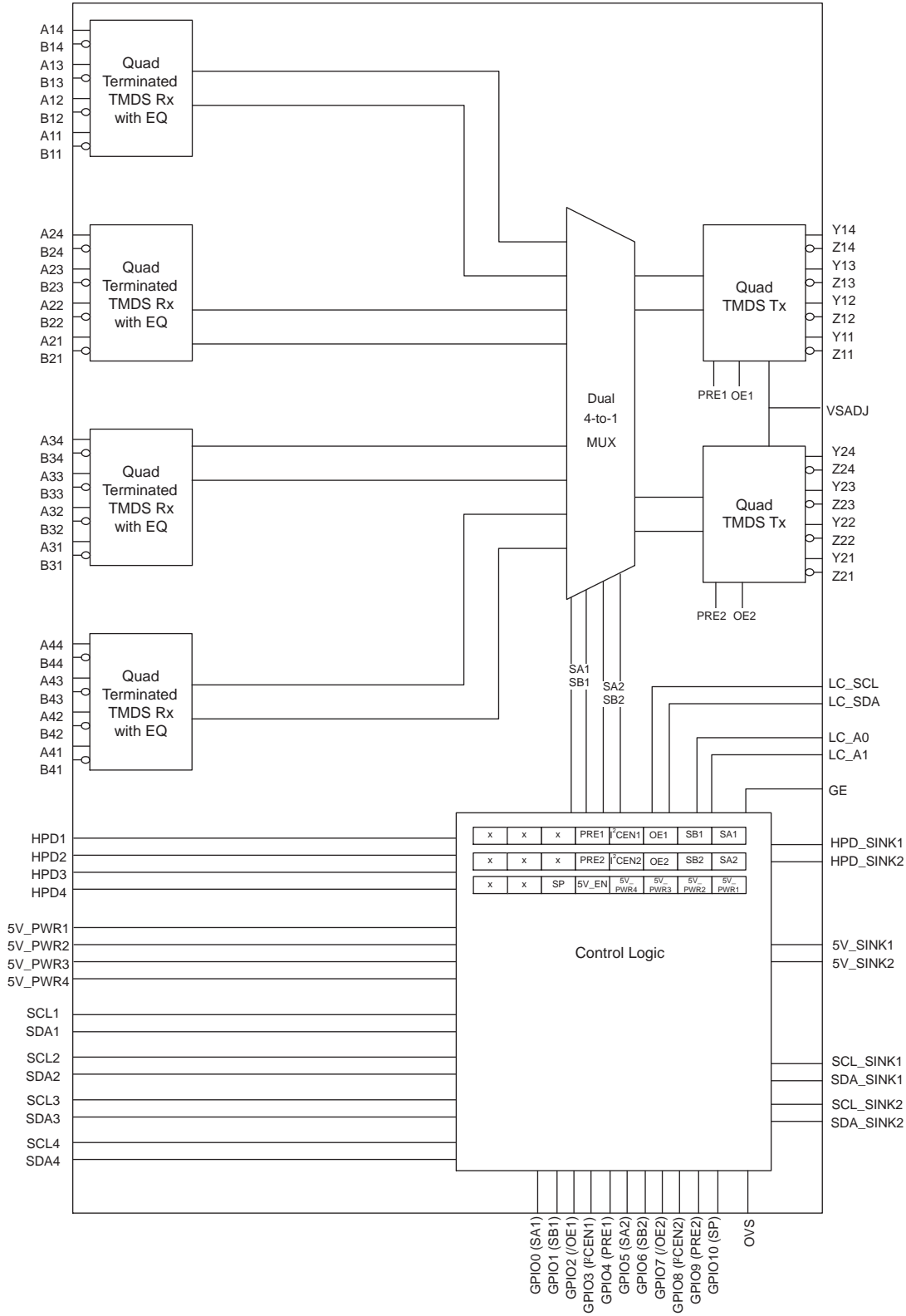
PIN CONFIGURATION



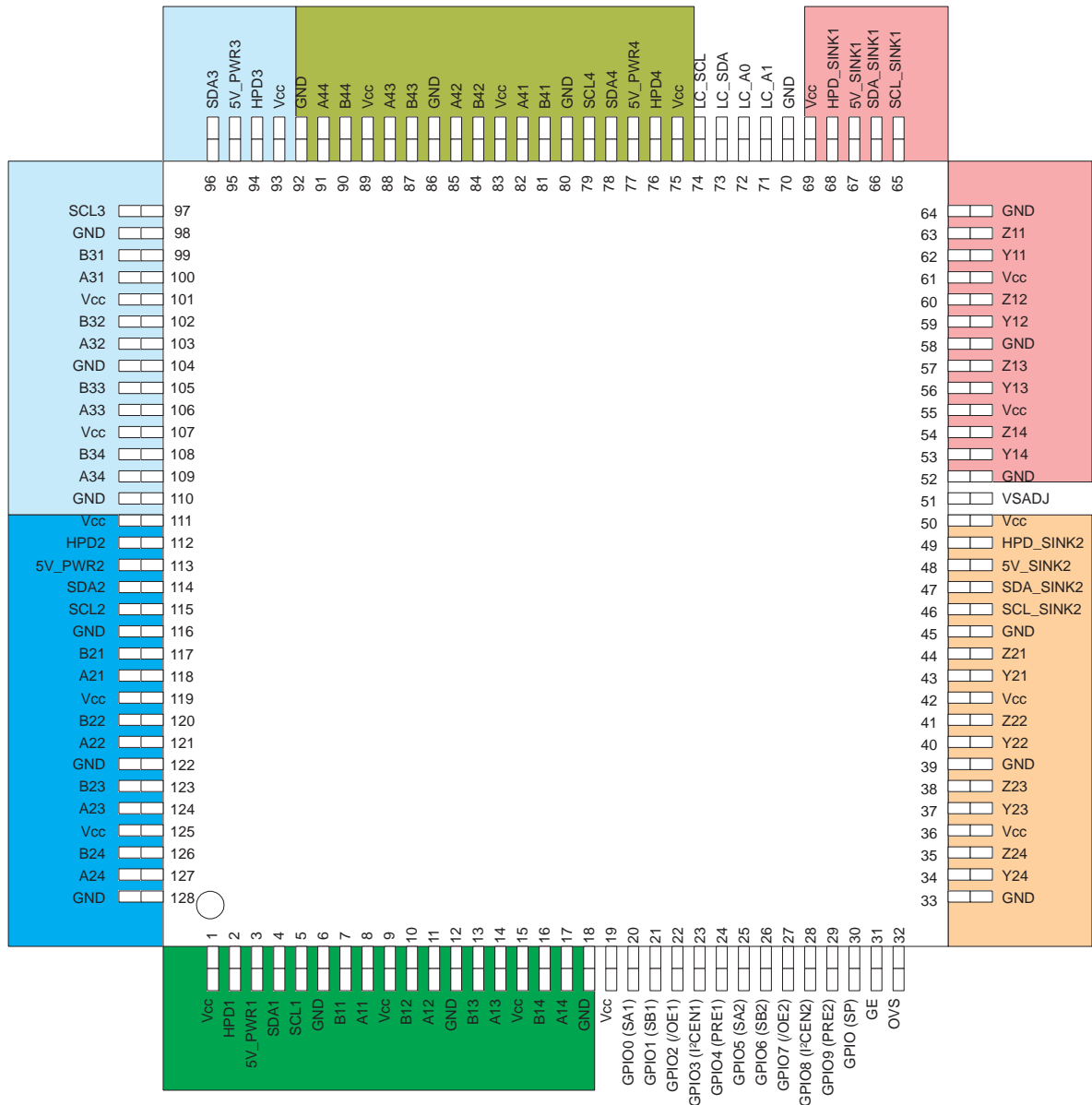
PIN DESCRIPTION

PIN N°	SYMBOL	NAME AND FUNCTION
1	C ₁₊	Positive Terminal for the first Charge Pump Capacitor
2	V+	Doubled Voltage Terminal
3	C ₁₋	Negative Terminal for the first Charge Pump Capacitor
4	C ₂₊	Positive Terminal for the second Charge Pump Capacitor
5	C ₂₋	Negative Terminal for the second Charge Pump Capacitor
6	V-	Inverted Voltage Terminal
7	T _{2OUT}	Second Transmitter Output Voltage
8	R _{2IN}	Second Receiver Input Voltage
9	R _{2OUT}	Second Receiver Output Voltage
10	T _{2IN}	Second Transmitter Input Voltage
11	T _{1IN}	First Transmitter Input Voltage
12	R _{1OUT}	First Receiver Output Voltage
13	R _{1IN}	First Receiver Input Voltage
14	T _{1OUT}	First Transmitter Output Voltage
15	GND	Ground
16	V _{CC}	Supply Voltage

U4 / U9 : TMDS442



U4 / U9 : TMS442



TERMINAL FUNCTIONS

TERMINAL		I/O	DESCRIPTION
NAME	NO.		
A11, A12, A13, A14 A21, A22, A23, A24 A31, A32, A33, A34 A41, A42, A43, A44	8, 11, 14, 17 118, 121, 124, 127 100, 103, 106, 109 82, 85, 88, 91	I	Source port 1 TMDs positive inputs Source port 2 TMDs positive inputs Source port 3 TMDs positive inputs Source port 4 TMDs positive inputs
B11, B12, B13, B14 B21, B22, B23, B24 B31, B32, B33, B34 B41, B42, B43, B44	7, 10, 13, 16 117, 120, 123, 126 99, 102, 105, 108 81, 84, 87, 90	I	Source port 1 TMDs negative inputs Source port 2 TMDs negative inputs Source port 3 TMDs negative inputs Source port 4 TMDs negative inputs

U4 / U9 : TMD5442

TERMINAL		I/O	DESCRIPTION
NAME	NO.		
Y11, Y12, Y13, Y14 Y21, Y22, Y23, Y24	62, 59, 56, 53 43, 40, 37, 34	O	Sink port 1 TMD5 positive outputs Sink port 2 TMD5 positive outputs
Z11, Z12, Z13, Z14 Z21, Z22, Z23, Z24	63, 60, 57, 54 44, 41, 38, 35	O	Sink port 1 TMD5 negative outputs Sink port 2 TMD5 negative outputs
SCL1 SDA1	54	IO	Source Port 1 DDC I ² C clock line Source Port 1 DDC I ² C data line
SCL2 SDA2	115 114	IO	Source Port 2 DDC I ² C clock line Source Port 2 DDC I ² C data line
SCL3 SDA3	97 96	IO	Source Port 3 DDC I ² C clock line Source Port 3 DDC I ² C data line
SCL4 SDA4	79 78	IO	Source Port 4 DDC I ² C clock line Source Port 4 DDC I ² C data line
SCL_SINK1 SDA_SINK1	65 66	IO	Sink port 1 DDC I ² C clock line Sink port 1 DDC I ² C data line
SCL_SINK2 SDA_SINK2	46 47	IO	Sink port 2 DDC I ² C clock line Sink port 2 DDC I ² C data line
HPD1 HPD2 HPD3 HPD4	2 112 94 76	O	Source Port 1 hot plug detector output Source Port 2 hot plug detector output Source Port 3 hot plug detector output Source Port 4 hot plug detector output
HPD_SINK1 HPD_SINK2	68 49	I	Sink port 1 hot plug detector input Sink port 2 hot plug detector input
5V_PWR1 5V_PWR 2 5V_PWR 3 5V_PWR 4	3 113 95 77	I	Source Port 1 5-V power signal input Source Port 2 5-V power signal input Source Port 3 5-V power signal input Source Port 4 5-V power signal input
5V_SINK1 5V_SINK 2	67 48	O	Sink Port 1 5-V power indicator output Sink Port 2 5-V power indicator output
LC_SCL LC_SDA	74 73	IO	Local I ² C clock line Local I ² C data line
LC_A0 LC_A1	7 2 7 1	I	Local I ² C address bit 0 Local I ² C address bit 1
GE	31	I	GPIO Enable L: Local I ² C pins are active, GPIO pins are high impedance H: GPIO pins are active, local I ² C pins are high impedance
GPIO0 GPIO1 GPIO2 GPIO3 GPIO4	20 21 22 23 24	I	SA1 – Sink port 1 source selector SB1 – Sink port 1 source selector OE1 – Sink port 1 TMD5 output enable I2CEN1 – Sink port 1 DDC I ² C output enable PRE1 – Sink port 1 TMD5 AC de-emphasis mode selector
GPIO5 GPIO6 GPIO7 GPIO8 GPIO9 GPIO10 GPIO11	25 26 27 28 29 3 0 3 2	I	SA2 – Sink port 2 source selector SB2 – Sink port 2 source selector OE2 – Sink port 2 TMD5 output enable I2CEN2 – Sink port 2 DDC I ² C output enable PRE2 – Sink port 2 TMD5 AC de-emphasis mode selector SP – Sink priority selector OVS – SCL_SINK/SDA_SINK output voltage select
VSADJ	5 1	I	TMD5 compliant voltage swing control
Vcc	1, 9, 15, 19 36, 42, 50, 55, 61 69, 75, 83, 89, 93 101, 107, 111, 119, 125		Power supply
GND	6, 12, 18, 33, 39, 45, 52, 58, 64 70, 80, 86, 92 98, 104, 110, 116, 122, 128		Ground

10. ELECTRICAL PARTS LIST

PARTS INFORMATION

RESISTORS

- 1) 00MGD05 x x x 140, Carbon film fixed resistor, ±5% 1/4W
- 2) 00MGD05 x x x 160, Carbon film fixed resistor, ±5% 1/6W

Examples ;

- ① Resistance value

0.1Ω 001	10Ω 100	1kΩ 102	100kΩ 104
0.5Ω 005	18Ω 180	2.7kΩ 272	680kΩ 684
1Ω 010	100Ω 101	10kΩ 103	1MΩ 105
6.8Ω 068	390Ω 391	22kΩ 223	4.7MΩ 475

Note : Please distinguish 1/4W from 1/6W by the shape of parts used actually.

CAPACITORS

CERAMIC CAP.

- 3) 00MDD1 x x x x 370, Ceramic capacitor
Disc type
Temp.coeff.P350 ~ N1000, 50V

Examples ;

- ② Tolerance (Capacity deviation)
 - ±0.25pF.....0
 - ±0.5pF.....1
 - ±5%.....5

* Tolerance of COMMON PARTS handled here are as follows :

- 0.5pF ~ 5pF ±0.25pF
- 6pF ~ 10pF ±0.5pF
- 12pF ~ 560pF ±5%

③ Capacity value

- | | | |
|----------------|---------------|----------------|
| 0.5pF 005 | 3pF 030 | 100pF 101 |
| 1pF 010 | 10pF 100 | 220pF 221 |
| 1.5pF 015 | 47pF 470 | 560pF 561 |

CERAMIC CAP.

- 4) 00MDK16 x x x 300, High dielectric constant ceramic capacitor
Disc type
Temp.chara. 2B4, 50V

Examples ;

- ④ Capacity value

100pF 101	1000pF 102	10000pF 103
470pF 471	2200pF 222	

ELECTROLY CAP. (⏏)

- 5) 00MEA x x x x x 10, Electrolytic capacitor
One-way lead type, Tolerance ±20%

Examples ;

- ⑤ Capacity value

0.1μF.....104	4.7μF475	100μF ... 107
0.33μF.....334	10μF 106	330μF ... 337
1μF.....105	22μF226	1100μF ... 118
		2200μF ... 228
- ⑥ Working voltage

6.3V.....006	25V025
10V.....010	35V035
16V.....016	50V050

FILM CAP. (⏏)

- 6) 00MDF15 x x x 350 Plastic film capacitor
One-way type, Mylar ±5% 50V
- 00MDF15 x x x 310 Plastic film capacitor
One-way type, Mylar ±10% 50V

Examples ;

- ⑦ Capacity value

0.001μF (1000pF) 102	0.1μF 104
0.0018μF.....182	0.56μF 564
0.01μF.....103	1μF 105
0.015μF.....153	

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows;

1. KOA Corporation

- | Part No. (MJI) | Type No. (KOA) | Description |
|-------------------|----------------------|-------------|
| 00MNH05 x x x 140 | → RF25S x x x x ΩJ | (±5% 1/4W) |
| 00MNH05 x x x 120 | → RF50S x x x x ΩJ | (±5% 1/2W) |
| 00MNH85 x x x 110 | → RF73B2A x x x x ΩJ | (±5% 1/10W) |
| 00MNH95 x x x 140 | → RF73B2E x x x x ΩJ | (±5% 1/4W) |
- * Resistance value (0.1 – 10kΩ)

2. Matsushita Electronic Components Co., Ltd

- | Part No. (MJI) | Type No. (MEC) | Description |
|-------------------|------------------|-------------|
| 00MNF05 x x x 140 | → ERD-2FCJ x x x | (±5% 1/4W) |
| 00MRF05 x x x 140 | | |
| 00MNF02 x x x 140 | → ERD-2FCG x x x | (±2% 1/4W) |
| 00MRF02 x x x 140 | | |
- * Resistance value

Examples ;

- * Resistance value

0.1Ω 001	10Ω 100	1kΩ 102	100kΩ 104
0.5Ω 005	18Ω 180	2.7kΩ 272	680kΩ 684
1Ω 010	100Ω 101	10kΩ 103	1MΩ 105
6.8Ω 068	390Ω 391	22kΩ 223	4.7MΩ 475

ABBREVIATION AND MARKS	
ANT. : ANTENNA	BATT. : BATTERY
CAP. : CAPACITOR	CER. : CERAMIC
CONN. : CONNECTING	DIG. : DIGITAL
HP : HEADPHONE	MIC. : MICROPHONE
μ-PRO : MICROPROCESSOR	REC. : RECORDING
RES. : RESISTOR	SPK : SPEAKER
SW : SWITCH	TRANSF. : TRANSFORMER
TRIM. : TRIMMING	TRS. : TRANSISTOR
VAR. : VARIABLE	X'TAL : CRYSTAL

NOTE ON FUSE :

Regarding to all parts of parts code **00MFS20xxx2xx**, replace only with Wickmann-Werke GmbH, Type 372 non glass type fuse.

NOTE ON SAFETY :

Symbol **⚠** Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol **⚠**. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

安全上の注意 :

⚠がついている部品は、安全上重要な部品です。必ず指定されている部品番号の部品を使用して下さい。

P.W.B. NAME	POS. NO.	VERS. COLOR	PART NO. (FOR EUR)	PART NO. (MZ)	PART NAME	DESCRIPTION	
					FRONT PWB		
FRONT	C1		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
FRONT	C10		nsp	00MEJ47601610	ELECT. CAP.	47UF-M/16V 5X7-5RE SY	D040470083060S
FRONT	C11		nsp	00D9630224105	CER. CAP.	X7R1000PF-K/50V-1608	D011102777160S
FRONT	C18		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
FRONT	C19		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
FRONT	C20		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
FRONT	C21		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
FRONT	C22		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
FRONT	C23		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
FRONT	C24		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
FRONT	C25		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
FRONT	C26		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
FRONT	C28		90M-LU000300R	90M-LU000300R	CHIP INDUCTANCE	CM1201209J220KT 22UH SMD(2012)	D311201202230S
FRONT	C29		nsp	00MDK96221300	CER. CAP.	COG220PF-J/50V-1608	D010221167160S
FRONT	C42		nsp	00D9630223601	CER. CAP.	COG100PF-J/50V-1608	D010101167160S
FRONT	C43		nsp	00D9630223601	CER. CAP.	COG100PF-J/50V-1608	D010101167160S
FRONT	C62		nsp	00MEJ47601610	ELECT. CAP.	47UF-M/16V 5X7-5RE SY	D040470083060S
FRONT	C63		nsp	00D9630224105	CER. CAP.	X7R1000PF-K/50V-1608	D011102777160S
FRONT	C101		nsp	00MOA10701620	ELECT. CAP.	100UF-M/16V 6.3X7-5RE SY	D040101083060S
FRONT	C102		nsp	00D9630224105	CER. CAP.	X7R1000PF-K/50V-1608	D011102777160S
FRONT	CN4		nsp	nsp	CORD	170MM/5P GIL-S-05	L000171050030S
FRONT	CN6		nsp	nsp	CORD	80MM/4P GIL-S-04	L000800040110S
FRONT	CP5		nsp	nsp	CONN.	SCB 1017-00 17P FPC 1.25MM AN	L131101700010S
FRONT	D3		90M-HZ200230R	90M-HZ200230R	CHIP DIODE	KDS122S(C3)	K005012200010S
FRONT	D5		90M-HZ200230R	90M-HZ200230R	CHIP DIODE	KDS122S(C3)	K005012200010S
FRONT	D6		00D9630227209	00D9630227209	L.E.D.	HL-50RDR RED 5PI P=2.54MM	K500052008010S
FRONT	D7		00D9630227209	00D9630227209	L.E.D.	HL-50RDR RED 5PI P=2.54MM	K500052008010S
FRONT	D8		00D9630227209	00D9630227209	L.E.D.	HL-50RDR RED 5PI P=2.54MM	K500052008010S
FRONT	D9		00D9630227209	00D9630227209	L.E.D.	HL-50RDR RED 5PI P=2.54MM	K500052008010S
FRONT	D10		00D9630227209	00D9630227209	L.E.D.	HL-50RDR RED 5PI P=2.54MM	K500052008010S
FRONT	D11		00D9630227209	00D9630227209	L.E.D.	HL-50RDR RED 5PI P=2.54MM	K500052008010S
FRONT	D12		90M-HI101210R	90M-HI101210R	L.E.D.	HL-50CNBLU 5PI BLUE 2.54MM	K500056000060S
FRONT	D13		00D9630227209	00D9630227209	L.E.D.	HL-50RDR RED 5PI P=2.54MM	K500052008010S
FRONT	D14		00D9630227209	00D9630227209	L.E.D.	HL-50RDR RED 5PI P=2.54MM	K500052008010S
FRONT	D15		90M-HI101220R	90M-HI101220R	L.E.D.	HL-50YNY 5PI AMBER 2.54MM	K500054000020S
FRONT	D19		90M-HZ200230R	90M-HZ200230R	CHIP DIODE	KDS122S(C3)	K005012200010S
FRONT	D20		90M-HZ200230R	90M-HZ200230R	CHIP DIODE	KDS122S(C3)	K005012200010S
FRONT	D23		90M-HZ200230R	90M-HZ200230R	CHIP DIODE	KDS122S(C3)	K005012200010S
FRONT	D24		90M-HZ200230R	90M-HZ200230R	CHIP DIODE	KDS122S(C3)	K005012200010S
FRONT	D25		90M-HZ200230R	90M-HZ200230R	CHIP DIODE	KDS122S(C3)	K005012200010S
FRONT	D26		90M-HZ200230R	90M-HZ200230R	CHIP DIODE	KDS122S(C3)	K005012200010S
FRONT	D27		90M-HZ200230R	90M-HZ200230R	CHIP DIODE	KDS122S(C3)	K005012200010S
FRONT	D28		90M-HZ200230R	90M-HZ200230R	CHIP DIODE	KDS122S(C3)	K005012200010S
FRONT	J1		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J33		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J34		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J35		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J36		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J37		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J38		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J39		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J40		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J41		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J42		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J43		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J44		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J45		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J46		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J47		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J48		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J49		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J50		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J54		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J55		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J56		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C20000006M160S
FRONT	J57		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

P.W.B. NAME	POS. NO.	VERS. COLOR	PART NO. (FOR EUR)	PART NO. (MZ)	PART NAME	DESCRIPTION	
FRONT	J58		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J59		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	J60		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
FRONT	L1		90M-FN000270R	90M-FN000270R	EMI FILTER	MB-160808-0120H SMD1608	D340160800060S
FRONT	L101		90M-FN000270R	90M-FN000270R	EMI FILTER	MB-160808-0120H SMD1608	D340160800060S
FRONT	Q6		90M-BA001230R	90M-BA001230R	CHIP TRS.	KRA102S(PB) 0.2W/SOT-23	J522107S00210S
FRONT	Q7		00D2730485906	00D2730485906	CHIP TRS.	KRC107S (NH)/SOT-23	J522107S00210S
FRONT	Q8		00D2730485906	00D2730485906	CHIP TRS.	KRC107S (NH)/SOT-23	J522107S00210S
FRONT	Q9		00D2730485906	00D2730485906	CHIP TRS.	KRC107S (NH)/SOT-23	J522107S00210S
FRONT	Q10		00D2730485906	00D2730485906	CHIP TRS.	KRC107S (NH)/SOT-23	J522107S00210S
FRONT	Q11		00D2730485906	00D2730485906	CHIP TRS.	KRC107S (NH)/SOT-23	J522107S00210S
FRONT	Q12		00D2730485906	00D2730485906	CHIP TRS.	KRC107S (NH)/SOT-23	J522107S00210S
FRONT	Q13		00D2730485906	00D2730485906	CHIP TRS.	KRC107S (NH)/SOT-23	J522107S00210S
FRONT	Q14		00D2730485906	00D2730485906	CHIP TRS.	KRC107S (NH)/SOT-23	J522107S00210S
FRONT	Q15		00D2730485906	00D2730485906	CHIP TRS.	KRC107S (NH)/SOT-23	J522107S00210S
FRONT	Q16		00D2730485906	00D2730485906	CHIP TRS.	KRC107S (NH)/SOT-23	J522107S00210S
FRONT	R4		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
FRONT	R5		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
FRONT	R6		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
FRONT	R7		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
FRONT	R8		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
FRONT	R9		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
FRONT	R10		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
FRONT	R11		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
FRONT	R12		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
FRONT	R13		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
FRONT	R37		nsp	00MNN05221610	CHIP RES.	220-J 1/16W-1608	C20002216M160S
FRONT	R38		nsp	00MNN05221610	CHIP RES.	220-J 1/16W-1608	C20002216M160S
FRONT	R39		nsp	00MNN05221610	CHIP RES.	220-J 1/16W-1608	C20002216M160S
FRONT	R40		nsp	00MNN05221610	CHIP RES.	220-J 1/16W-1608	C20002216M160S
FRONT	R41		nsp	00MNN05221610	CHIP RES.	220-J 1/16W-1608	C20002216M160S
FRONT	R42		nsp	00MNN05221610	CHIP RES.	220-J 1/16W-1608	C20002216M160S
FRONT	R43		nsp	00MNN05821610	CHIP RES.	820-J 1/16W-1608	C20008216M160S
FRONT	R44		nsp	00MNN05221610	CHIP RES.	220-J 1/16W-1608	C20002216M160S
FRONT	R45		nsp	00MNN05221610	CHIP RES.	220-J 1/16W-1608	C20002216M160S
FRONT	R46		nsp	00MNN05221610	CHIP RES.	220-J 1/16W-1608	C20002216M160S
FRONT	R53		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C20000006M160S
FRONT	R101		nsp	90M-NN000470R	CHIP RES.	2.4K-J 1/16W-1608	C20002426M160S
FRONT	R102		nsp	00MNN05101610	CHIP RES.	100-J 1/16W-1608	C20001016M160S
FRONT	R103		nsp	00MNN05101610	CHIP RES.	100-J 1/16W-1608	C20001016M160S
FRONT	R109		nsp	90M-NN000470R	CHIP RES.	2.4K-J 1/16W-1608	C20002426M160S
FRONT	R110		nsp	00MNN05682610	CHIP RES.	6.8K-J 1/16W-1608	C20006826M160S
FRONT	R111		nsp	00MNN05682610	CHIP RES.	6.8K-J 1/16W-1608	C20006826M160S
FRONT	R112		nsp	00MNN05822610	CHIP RES.	8.2K-J 1/16W-1608	C20008226M160S
FRONT	R113		nsp	00MNN05822610	CHIP RES.	8.2K-J 1/16W-1608	C20008226M160S
FRONT	R114		nsp	00MNN05333610	CHIP RES.	33K-J 1/16W-1608	C20003336M160S
FRONT	R115		nsp	00MNN05333610	CHIP RES.	33K-J 1/16W-1608	C20003336M160S
FRONT	R132		nsp	00MNN05470610	CHIP RES.	47-J 1/16W-1608	C20004706M160S
FRONT	R133		nsp	00MNN05470610	CHIP RES.	47-J 1/16W-1608	C20004706M160S
FRONT	R162		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C20000006M160S
FRONT	R163		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C20000006M160S
FRONT	R164		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C20000006M160S
FRONT	R165		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
FRONT	RM1		90M-HW100760R	90M-HW100760R	PHOTO UNIT	BRM-1470B-NS-FB2.2 36KHZ 7.5X6.5	E94014700010S
FRONT	RM1(1)		nsp	nsp	HOLDER	BLOCK A3/SENSOR	4350210001000S
FRONT	SW1		00D9630045708	00D9630045708	PUSH SW	SKHV10920A 5MM/260G	G180000270010S
FRONT	SW2		00D9630045708	00D9630045708	PUSH SW	SKHV10920A 5MM/260G	G180000270010S
FRONT	SW3		00D9630045708	00D9630045708	PUSH SW	SKHV10920A 5MM/260G	G180000270010S
FRONT	SW4		00D9630045708	00D9630045708	PUSH SW	SKHV10920A 5MM/260G	G180000270010S
FRONT	SW5		00D9630045708	00D9630045708	PUSH SW	SKHV10920A 5MM/260G	G180000270010S
FRONT	SW6		00D9630045708	00D9630045708	PUSH SW	SKHV10920A 5MM/260G	G180000270010S
FRONT	SW7		00D9630045708	00D9630045708	PUSH SW	SKHV10920A 5MM/260G	G180000270010S
FRONT	SW8		00D9630045708	00D9630045708	PUSH SW	SKHV10920A 5MM/260G	G180000270010S
FRONT	SW9		00D9630045708	00D9630045708	PUSH SW	SKHV10920A 5MM/260G	G180000270010S
FRONT	SW10		00D9630045708	00D9630045708	PUSH SW	SKHV10920A 5MM/260G	G180000270010S
					HDMI PWB		
HDMI	C67		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S

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P.W.B. NAME	POS. NO.	VERS. COLOR	PART NO. (FOR EUR)	PART NO. (MZ)	PART NAME	DESCRIPTION	
HDMI	C69		nsp	00MOA47701620	ELECT. CAP.	470UF-M/16V 8X11.5-5RE SHL-SY	D040471083080S
HDMI	C70		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C71		nsp	00MOA10505020	ELECT. CAP.	1UF-M/50V 5X11-5RE.SY	D040010087150S
HDMI	C72		nsp	00MOA10605020	ELECT. CAP.	10UF-M/50V 5X11-5RE.SY	D040100087070S
HDMI	C73		nsp	90M-DK100970R	CER. CAP.	Y5V1UF-Z/50V-1608	D011105597160S
HDMI	C74		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C75		nsp	00MOA10505020	ELECT. CAP.	1UF-M/50V 5X11-5RE.SY	D040010087150S
HDMI	C76		nsp	00MOA10605020	ELECT. CAP.	10UF-M/50V 5X11-5RE.SY	D040100087070S
HDMI	C77		nsp	90M-DK100970R	CER. CAP.	Y5V1UF-Z/50V-1608	D011105597160S
HDMI	C78		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C82		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C83		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C85		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C86		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C88		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C89		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C90		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C91		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C92		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C93		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C94		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C95		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C96		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C97		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C98		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C99		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C100		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C103		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C104		nsp	00MOA22701620	ELECT. CAP.	220UF-M/16V 6.3X11-5RE SHL-SY	D040221083110S
HDMI	C105		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C106		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C107		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C108		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C109		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C117		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C124		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C125		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C126		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C127		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C128		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C129		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C135		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C136		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C137		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C138		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C139		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C140		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C143		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C144		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C145		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C146		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C147		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C148		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C149		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C154		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C155		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C156		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C157		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C159		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C161		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C162		nsp	00MOA10701620	ELECT. CAP.	100UF-M/16V 6.3X11-5RE SMS SY	D040101083070S
HDMI	C220		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
HDMI	C221		nsp	00MOA22701620	ELECT. CAP.	220UF-M/16V 6.3X11-5RE SHL-SY	D040221083110S
HDMI	CN3		nsp	nsp	CORD	260MM/4P 5264-04	L000261040040S
HDMI	CN7		nsp	nsp	CORD	60MM/4P GIL-S-04	L000600040070S
HDMI	FB11		90M-FC900470R	90M-FC900470R	FERRITE BEAD	FCM3216K-601T04 600OHM SMD3216	D340321600010S
HDMI	FB12		90M-FC900470R	90M-FC900470R	FERRITE BEAD	FCM3216K-601T04 600OHM SMD3216	D340321600010S

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

P.W.B. NAME	POS. NO.	VERS. COLOR	PART NO. (FOR EUR)	PART NO. (MZ)	PART NAME	DESCRIPTION	
HDMI	FB120		90M-FC900490R	90M-FC900490R	FERRITE BEAD	HH-1H4532-121	D340453200010S
HDMI	P1		00D9630388504	00D9630388504	CONN.	AD3PBI19GO 3ROW 19P DIP HDMI	L109100190020S
HDMI	P3		00D9630388504	00D9630388504	CONN.	AD3PBI19GO 3ROW 19P DIP HDMI	L109100190020S
HDMI	P4		00D9630388504	00D9630388504	CONN.	AD3PBI19GO 3ROW 19P DIP HDMI	L109100190020S
HDMI	P6		00D9630388504	00D9630388504	CONN.	AD3PBI19GO 3ROW 19P DIP HDMI	L109100190020S
HDMI	P7		00D9630388504	00D9630388504	CONN.	AD3PBI19GO 3ROW 19P DIP HDMI	L109100190020S
HDMI	P8		00D9630388504	00D9630388504	CONN.	AD3PBI19GO 3ROW 19P DIP HDMI	L109100190020S
HDMI	P9		00D9630388504	00D9630388504	CONN.	AD3PBI19GO 3ROW 19P DIP HDMI	L109100190020S
HDMI	P10		00D9630388504	00D9630388504	CONN.	AD3PBI19GO 3ROW 19P DIP HDMI	L109100190020S
HDMI	R53		00MNI05000110	00MNI05000110	CHIP RES.	0-J 1/10W-2012	C20000060200S
HDMI	R54		00MNI05000110	00MNI05000110	CHIP RES.	0-J 1/10W-2012	C20000060200S
HDMI	R55		nsp	00MNN05470610	CHIP RES.	47-J 1/16W-1608	C20004706M160S
HDMI	R56		nsp	00MNN05470610	CHIP RES.	47-J 1/16W-1608	C20004706M160S
HDMI	R57		00MNI05472110	00MNI05472110	CHIP RES.	4.7K-F 1/10W-2012	C200047240200S
HDMI	R58		nsp	00MNN05473610	CHIP RES.	47K-J 1/16W-1608	C20004736M160S
HDMI	R59		nsp	00MNN05473610	CHIP RES.	47K-J 1/16W-1608	C20004736M160S
HDMI	R66		00MNI05472110	00MNI05472110	CHIP RES.	4.7K-F 1/10W-2012	C200047240200S
HDMI	R67		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C2000006M160S
HDMI	R68		nsp	00MNN05473610	CHIP RES.	47K-J 1/16W-1608	C20004736M160S
HDMI	R69		nsp	00MNN05473610	CHIP RES.	47K-J 1/16W-1608	C20004736M160S
HDMI	R70		nsp	00MNN05473610	CHIP RES.	47K-J 1/16W-1608	C20004736M160S
HDMI	R71		nsp	00MNN05473610	CHIP RES.	47K-J 1/16W-1608	C20004736M160S
HDMI	R72		nsp	00MNN05473610	CHIP RES.	47K-J 1/16W-1608	C20004736M160S
HDMI	R73		nsp	00MNN05473610	CHIP RES.	47K-J 1/16W-1608	C20004736M160S
HDMI	R75		nsp	00MNN05473610	CHIP RES.	4.7K-J 1/16W-1608	C20004726M160S
HDMI	R75		nsp	00MNN05472610	CHIP RES.	4.7K-J 1/16W-1608	C20004726M160S
HDMI	R76		nsp	00MNN05473610	CHIP RES.	4.7K-J 1/16W-1608	C20004726M160S
HDMI	R76		nsp	00MNN05472610	CHIP RES.	4.7K-J 1/16W-1608	C20004726M160S
HDMI	R78		nsp	00MNN05473610	CHIP RES.	47K-J 1/16W-1608	C20004736M160S
HDMI	R79		nsp	00MNN05473610	CHIP RES.	47K-J 1/16W-1608	C20004736M160S
HDMI	R80		nsp	00MNN05473610	CHIP RES.	47K-J 1/16W-1608	C20004736M160S
HDMI	R81		nsp	00MNN05473610	CHIP RES.	47K-J 1/16W-1608	C20004736M160S
HDMI	R94		nsp	00MNN05470610	CHIP RES.	47-J 1/16W-1608	C20004706M160S
HDMI	R95		nsp	00MNN05470610	CHIP RES.	47-J 1/16W-1608	C20004706M160S
HDMI	R134		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
HDMI	R135		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
HDMI	R136		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
HDMI	R137		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
HDMI	R142		nsp	00MNN05472610	CHIP RES.	4.7K-J 1/16W-1608	C20004726M160S
HDMI	R143		nsp	00MNN05472610	CHIP RES.	4.7K-J 1/16W-1608	C20004726M160S
HDMI	R144		nsp	00MNN05472610	CHIP RES.	4.7K-J 1/16W-1608	C20004726M160S
HDMI	R145		nsp	00MNN05472610	CHIP RES.	4.7K-J 1/16W-1608	C20004726M160S
HDMI	R147		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C2000006M160S
HDMI	R158		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C2000006M160S
HDMI	R159		00MNI05000110	00MNI05000110	CHIP RES.	0-J 1/10W-2012	C20000060200S
HDMI	R201		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
HDMI	R202		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
HDMI	R203		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
HDMI	R212		nsp	00MNN05102610	CHIP RES.	1K-J 1/16W-1608	C20001026M160S
HDMI	R213		nsp	00MNN05102610	CHIP RES.	1K-J 1/16W-1608	C20001026M160S
HDMI	R214		nsp	00MNN05102610	CHIP RES.	1K-J 1/16W-1608	C20001026M160S
HDMI	R215		nsp	00MNN05102610	CHIP RES.	1K-J 1/16W-1608	C20001026M160S
HDMI	R216		nsp	00MNN05102610	CHIP RES.	1K-J 1/16W-1608	C20001026M160S
HDMI	R217		nsp	00MNN05102610	CHIP RES.	1K-J 1/16W-1608	C20001026M160S
HDMI	R224		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C2000006M160S
HDMI	R225		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C2000006M160S
HDMI	R226		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C2000006M160S
HDMI	R227		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C2000006M160S
HDMI	R230		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C2000006M160S
HDMI	R231		nsp	00MNN05104610	CHIP RES.	100K-J 1/16W-1608	C20001046M160S
HDMI	R232		nsp	00MNN05104610	CHIP RES.	100K-J 1/16W-1608	C20001046M160S
HDMI	R300		nsp	00MNN05472610	CHIP RES.	4.7K-J 1/16W-1608	C20004726M160S
HDMI	R301		nsp	00MNN05472610	CHIP RES.	4.7K-J 1/16W-1608	C20004726M160S
HDMI	U2		00MHY22010050	00MHY22010050	CHIP TRS.	HN1K05FU US6(SMD)	J543105000010S
HDMI	U3		90M-HC900200R	90M-HC900200R	IC	NJM2831F05 5V 0.13A SOT-23-5P	J126283105010S
HDMI	U4		nsp	nsp	IC	TMDS442PNPR 4TO2 TQFP128P	J046442000010S
HDMI	U7		90M-HC900100R	90M-HC900100R	IC	RC1117-33-PF SOT223 3.3V 1AMP	J126111733020S

NOTE : *nsp* PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

P.W.B. NAME	POS. NO.	VERS. COLOR	PART NO. (FOR EUR)	PART NO. (MZ)	PART NAME	DESCRIPTION	
HDMI	U9		nsp	nsp	IC	TMDS442PNPR 4TO2 TQFP128P	J04644200010S
HDMI	U14		90M-HC900200R	90M-HC900200R	IC	NJM2831F05 5V 0.13A SOT-23-5P	J126283105010S
HDMI	U15		90M-HC900100R	90M-HC900100R	IC	RC1117-33-PF SOT223 3.3V 1AMP	J126111733020S
					STBY SW PWB		
STBY SW	C27		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
STBY SW	C30		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
STBY SW	C64		nsp	00MEJ47601610	ELECT. CAP.	47UF-M/16V 5X7-5RE SY	D040470083060S
STBY SW	CP6		nsp	nsp	CONN.	GIL-S-04P-S2L2-EF WAFER 2.0MM	L101220040010S
STBY SW	D17		00D9630227209	00D9630227209	L.E.D.	HL-50RDR RED 5PI P=2.54MM	K500052008010S
STBY SW	D29		90M-HZ200230R	90M-HZ200230R	CHIP DIODE	KDS122S(C3)	K005012200010S
STBY SW	D30		90M-HZ200230R	90M-HZ200230R	CHIP DIODE	KDS122S(C3)	K005012200010S
STBY SW	J22		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
STBY SW	L2		90M-FN000270R	90M-FN000270R	EMI FILTER	MB-160808-0120H SMD1608	D340160800060S
STBY SW	Q17		00D2730485906	00D2730485906	CHIP TRS.	KRC107S (NH)/SOT-23	J522107S00210S
STBY SW	R17		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
STBY SW	R98		nsp	00MNN05561610	CHIP RES.	560-J 1/16W-1608	C20005616M160S
STBY SW	SW22		00D9630045708	00D9630045708	SW	SKHV10920A 5MM/260G	G180000270010S
					μ-PRO PWB		
μ-PRO	C2		nsp	00MOA47601640	ELECT. CAP.	47UF-M/16V 5X11-5RE.SY	D040470083080S
μ-PRO	C3		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
μ-PRO	C4		nsp	00MOA47601640	ELECT. CAP.	47UF-M/16V 5X11-5RE.SY	D040470083080S
μ-PRO	C5		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
μ-PRO	C6		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
μ-PRO	C7		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
μ-PRO	C8		nsp	00MOA10701620	ELECT. CAP.	100UF-M/16V 6.3X11-5RE SMS SY	D040101083070S
μ-PRO	C9		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
μ-PRO	C14		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
μ-PRO	C15		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
μ-PRO	C16		nsp	00MOA10701620	ELECT. CAP.	100UF-M/16V 6.3X11-5RE SMS SY	D040101083070S
μ-PRO	C17		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
μ-PRO	C31		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
μ-PRO	C32		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
μ-PRO	C33		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
μ-PRO	C34		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
μ-PRO	C35		nsp	00MOA22701620	ELECT. CAP.	220UF-M/16V 6.3X11-5RE SHL-SY	D040221083110S
μ-PRO	C36		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
μ-PRO	C37		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
μ-PRO	C38		nsp	00MDK96104300	CER. CAP.	X7R0.1UF-K/50V-1608 KYOCERA	D011104577162S
μ-PRO	C39		nsp	00D9630223601	CER. CAP.	COG100PF-J/50V-1608	D010101167160S
μ-PRO	C40		nsp	00D9630223601	CER. CAP.	COG100PF-J/50V-1608	D010101167160S
μ-PRO	C41		nsp	00D9630223601	CER. CAP.	COG100PF-J/50V-1608	D010101167160S
μ-PRO	C56		nsp	00MDD95150300	CER. CAP.	COG15PF-J/50V-1608	D010150167160S
μ-PRO	C57		nsp	00MDD95150300	CER. CAP.	COG15PF-J/50V-1608	D010150167160S
μ-PRO	C61		nsp	00MOA10701620	ELECT. CAP.	100UF-M/16V 6.3X11-5RE SMS SY	D040101083070S
μ-PRO	C65		nsp	00MOA10701620	ELECT. CAP.	100UF-M/16V 6.3X11-5RE SMS SY	D040101083070S
μ-PRO	C66		nsp	00MOA10701620	ELECT. CAP.	100UF-M/16V 6.3X11-5RE SMS SY	D040101083070S
μ-PRO	C68		nsp	00MOA10701620	ELECT. CAP.	100UF-M/16V 6.3X11-5RE SMS SY	D040101083070S
μ-PRO	C84		nsp	00D9639004698	CER. CAP.	X7R0.01UF-K/50V-1608	D011103777160S
μ-PRO	C110		nsp	00MOA47601640	ELECT. CAP.	47UF-M/16V 5X11-5RE.SY	D040470083080S
μ-PRO	C111		nsp	00D9630224105	CER. CAP.	X7R1000PF-K/50V-1608	D011102777160S
μ-PRO	C112		nsp	00D9630224105	CER. CAP.	X7R1000PF-K/50V-1608	D011102777160S
μ-PRO	C150		nsp	90M-OA000670R	ELECT. CAP.	0.1UF-M/100V 5X11-5RE	D0400R108C000S
μ-PRO	C273		nsp	90M-OA000670R	ELECT. CAP.	0.1UF-M/100V 5X11-5RE	D0400R108C000S
μ-PRO	C278		nsp	90M-OA000670R	ELECT. CAP.	0.1UF-M/100V 5X11-5RE	D0400R108C000S
μ-PRO	C279		nsp	90M-OA000670R	ELECT. CAP.	0.1UF-M/100V 5X11-5RE	D0400R108C000S
μ-PRO	C280		nsp	90M-OA000670R	ELECT. CAP.	0.1UF-M/100V 5X11-5RE	D0400R108C000S
μ-PRO	CN2		nsp	nsp	CORD	60MM/6P GIL-S-06	L00600060020S
μ-PRO	CN5		nsp	nsp	CONN.	SCB 1117-00 17P FPC 1.25MM ST	L131111700010S
μ-PRO	CP4		nsp	nsp	CONN.	G1L-S-5P-S2T2-EF WAFER 2.0MM	L101220050000S
μ-PRO	CP7		nsp	nsp	CONN.	G1L-S-4P-S2T2-EF WAFER 2.0MM	L101220040000S
μ-PRO	CP8		nsp	nsp	CONN.	G1L-S-6P-S2T2-EF WAFER 2.0MM	L101220060000S
μ-PRO	D1		90M-HI200030R	90M-HI200030R	L.E.D.	SIR-34ST3F 3PI INFLARED L.E.D.	K505343000010S
μ-PRO	D2		90M-HZ200220R	90M-HZ200220R	CHIP DIODE	KDS4148U SOD-323	K005041480030S
μ-PRO	D4		90M-HZ200220R	90M-HZ200220R	CHIP DIODE	KDS4148U SOD-323	K005041480030S
μ-PRO	D18		90M-HZ200220R	90M-HZ200220R	CHIP DIODE	KDS4148U SOD-323	K005041480030S
μ-PRO	D31		90M-HZ300100R	90M-HZ300100R	ZENER DIODE	Z02W24V 24V 0.2W SOT-23	K06624R01P400S
μ-PRO	D32		90M-HZ300100R	90M-HZ300100R	ZENER DIODE	Z02W24V 24V 0.2W SOT-23	K06624R01P400S

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

P.W.B. NAME	POS. NO.	VERS. COLOR	PART NO. (FOR EUR)	PART NO. (MZ)	PART NAME	DESCRIPTION	
μ-PRO	D33		90M-HZ300100R	90M-HZ300100R	ZENER DIODE	Z02W24V 24V 0.2W SOT-23	K06624R01P400S
μ-PRO	D34		90M-HZ300100R	90M-HZ300100R	ZENER DIODE	Z02W24V 24V 0.2W SOT-23	K06624R01P400S
μ-PRO	D35		90M-HZ200220R	90M-HZ200220R	CHIP DIODE	KDS4148U SOD-323	K005041480030S
μ-PRO	D36		90M-HZ200220R	90M-HZ200220R	CHIP DIODE	KDS4148U SOD-323	K005041480030S
μ-PRO	GND2		nsp	nsp	TERMINAL	MET37-0002/EARTH FITTING	3790040886000S
μ-PRO	GND6		nsp	nsp	TERMINAL	MET37-0002/EARTH FITTING	3790040886000S
μ-PRO	J4		90M-YT005500R	90M-YT005500R	TERMINAL	EARPHONE JACK D3.5	G401PJ3080100S
μ-PRO	J10		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J11		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J12		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J13		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J14		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J15		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J16		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J17		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J18		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J19		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J20		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J21		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J23		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J24		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J25		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J26		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J27		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J28		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J29		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J30		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J31		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J32		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J61		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J62		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J63		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J64		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J65		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J66		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J67		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J68		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J69		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J70		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J71		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J72		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J73		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J74		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J75		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J76		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J78		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J79		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J80		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J81		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J82		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J83		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J84		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	J85		nsp	nsp	CORD	JUMPER (0.6/52MM)	L045084006040S
μ-PRO	JK1		90M-YT004540R	90M-YT004540R	TERMINAL	RCA-207AE-07 CINCH 2P	G601207AE070YS
μ-PRO	JK2		90M-YT004610R	90M-YT004610R	TERMINAL	9P D-SUB 9P MAIL ANGLE 12.5X30.8	L103090090040S
μ-PRO	L20		90M-FC900480R	90M-FC900480R	FERRITE BEAD	FI B2012-222KJT 2.2UH 10% SMD2012	D340201222220S
μ-PRO	LUG1		nsp	nsp	CLAMPER	W=2.6 L=50/WIRE	4330000120000S
μ-PRO	LUG2		nsp	nsp	CLAMPER	W=2.6 L=50/WIRE	4330000120000S
μ-PRO	PT1		nsp	nsp	BRACKET	SN-P 0.5T/TUNER	4010212646000S
μ-PRO	Q1		90M-BA001230R	90M-BA001230R	CHIP TRS.	KRA102S(PB) 0.2W/SOT-23	J520010200210S
μ-PRO	Q2		90M-BA001230R	90M-BA001230R	CHIP TRS.	KRA102S(PB) 0.2W/SOT-23	J520010200210S
μ-PRO	Q3		90M-BA001560R	90M-BA001560R	CHIP TRS.	KRC102S (NB) 0.2W/SOT-23	J522010200210S
μ-PRO	Q4		90M-BA001230R	90M-BA001230R	CHIP TRS.	KRA102S(PB) 0.2W/SOT-23	J520010200210S
μ-PRO	Q5		90M-BA001230R	90M-BA001230R	CHIP TRS.	KRA102S(PB) 0.2W/SOT-23	J520010200210S
μ-PRO	R1		nsp	00MNN05470610	CHIP RES.	47-J 1/16W-1608	C20004706M160S
μ-PRO	R2		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
μ-PRO	R3		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S

NOTE : *nsp* PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

P.W.B. NAME	POS. NO.	VERS. COLOR	PART NO. (FOR EUR)	PART NO. (MZ)	PART NAME	DESCRIPTION	
μ-PRO	R14		nsp	00MNN05100610	CHIP RES.	10-J 1/16W-1608	C20001006M160S
μ-PRO	R15		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C20000006M160S
μ-PRO	R16		nsp	00MNN05201610	CHIP RES.	200-J 1/16W-1608	C20002016M160S
μ-PRO	R18		nsp	00MNN05201610	CHIP RES.	200-J 1/16W-1608	C20002016M160S
μ-PRO	R19		nsp	00MNN05101610	CHIP RES.	100-J 1/16W-1608	C20001016M160S
μ-PRO	R20		nsp	00MNN05101610	CHIP RES.	100-J 1/16W-1608	C20001016M160S
μ-PRO	R21		90M-FN000270R	90M-FN000270R	EMI FILTER	MB-160808-0120H SMD1608	D340160800060S
μ-PRO	R23		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
μ-PRO	R24		nsp	00MNN05183610	CHIP RES.	18K-J 1/16W-1608	C20001836M160S
μ-PRO	R25		nsp	00MNN05473610	CHIP RES.	47K-J 1/16W-1608	C20004736M160S
μ-PRO	R26		nsp	00MNN05470610	CHIP RES.	47-J 1/16W-1608	C20004706M160S
μ-PRO	R27		90M-FN000270R	90M-FN000270R	EMI FILTER	MB-160808-0120H SMD1608	D340160800060S
μ-PRO	R28		90M-FN000270R	90M-FN000270R	EMI FILTER	MB-160808-0120H SMD1608	D340160800060S
μ-PRO	R29		nsp	00MNN05101610	CHIP RES.	100-J 1/16W-1608	C20001016M160S
μ-PRO	R30		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
μ-PRO	R31		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C20000006M160S
μ-PRO	R32		nsp	00MNN05472610	CHIP RES.	4.7K-J 1/16W-1608	C20004726M160S
μ-PRO	R33		90M-FN000270R	90M-FN000270R	EMI FILTER	MB-160808-0120H SMD1608	D340160800060S
μ-PRO	R34		90M-FN000270R	90M-FN000270R	EMI FILTER	MB-160808-0120H SMD1608	D340160800060S
μ-PRO	R36		nsp	00MNN05470610	CHIP RES.	47-J 1/16W-1608	C20004706M160S
μ-PRO	R47		90M-FN000270R	90M-FN000270R	EMI FILTER	MB-160808-0120H SMD1608	D340160800060S
μ-PRO	R48		90M-FN000270R	90M-FN000270R	EMI FILTER	MB-160808-0120H SMD1608	D340160800060S
μ-PRO	R49		90M-FC900470R	90M-FC900470R	FERRITE BEAD	FCM3216K-601T04 600OHM SMD3216	D340321600010S
μ-PRO	R50		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C20000006M160S
μ-PRO	R51		nsp	00MNN05470610	CHIP RES.	47-J 1/16W-1608	C20004706M160S
μ-PRO	R52		nsp	00MNN05473610	CHIP RES.	47K-J 1/16W-1608	C20004736M160S
μ-PRO	R96		nsp	00MNN05470610	CHIP RES.	47-J 1/16W-1608	C20004706M160S
μ-PRO	R97		nsp	00MNN05470610	CHIP RES.	47-J 1/16W-1608	C20004706M160S
μ-PRO	R99		nsp	00MNN05470610	CHIP RES.	47-J 1/16W-1608	C20004706M160S
μ-PRO	R100		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C20000006M160S
μ-PRO	R107		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
μ-PRO	R108		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
μ-PRO	R116		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
μ-PRO	R117		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
μ-PRO	R118		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
μ-PRO	R119		nsp	00MNN05100610	CHIP RES.	10-J 1/16W-1608	C20001006M160S
μ-PRO	R120		nsp	00MNN05100610	CHIP RES.	10-J 1/16W-1608	C20001006M160S
μ-PRO	R121		nsp	00MNN05100610	CHIP RES.	10-J 1/16W-1608	C20001006M160S
μ-PRO	R122		nsp	00MNN05100610	CHIP RES.	10-J 1/16W-1608	C20001006M160S
μ-PRO	R123		nsp	00MNN05100610	CHIP RES.	10-J 1/16W-1608	C20001006M160S
μ-PRO	R124		nsp	00MNN05100610	CHIP RES.	10-J 1/16W-1608	C20001006M160S
μ-PRO	R125		nsp	00MNN05100610	CHIP RES.	10-J 1/16W-1608	C20001006M160S
μ-PRO	R126		nsp	00MNN05100610	CHIP RES.	10-J 1/16W-1608	C20001006M160S
μ-PRO	R127		nsp	00MNN05100610	CHIP RES.	10-J 1/16W-1608	C20001006M160S
μ-PRO	R128		nsp	00MNN05100610	CHIP RES.	10-J 1/16W-1608	C20001006M160S
μ-PRO	R129		nsp	00MNN05100610	CHIP RES.	10-J 1/16W-1608	C20001006M160S
μ-PRO	R130		nsp	00MNN05100610	CHIP RES.	10-J 1/16W-1608	C20001006M160S
μ-PRO	R131		nsp	00MNN05100610	CHIP RES.	10-J 1/16W-1608	C20001006M160S
μ-PRO	R150		nsp	00MNN05473610	CHIP RES.	47K-J 1/16W-1608	C20004736M160S
μ-PRO	R160		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C20000006M160S
μ-PRO	R161		nsp	00MNN05000610	CHIP RES.	0-J 1/16W-1608	C20000006M160S
μ-PRO	R180		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
μ-PRO	R181		nsp	00MNN05103610	CHIP RES.	10K-J 1/16W-1608	C20001036M160S
μ-PRO	RMC1		90M-HW100750R	90M-HW100750R	PHOTO UNIT	RPM6936 36KHZ PHOTO-LINK	E940693600020S
μ-PRO	S1		90M-SS000790R	90M-SS000790R	SLIDE SW	SSAF113NA011 (S-070242)	G060113011010S
μ-PRO	S3		90M-SS000700R	90M-SS000700R	SLIDE SW	SSAF112NA011	G060112011010S
μ-PRO	SW11		00D9630045708	00D9630045708	PUSH SW	SKHV10920A 5MM/260G	G180000270010S
μ-PRO	U1		90M-HC900140R	90M-HC900140R	IC	LM1117S-5.0V SOT223 5.0V 1AMP	J126111750030S
μ-PRO	U12		90M-HS30AVX0R	90M-HS30AVX0R	U-PRO	ATMEGA16L-8AU 8BIT 16K FLASH TQFP44P	J020160008010S
μ-PRO	U13		90M-HC109570R	90M-HC109570R	IC	KIA7042P 4.2V/TO92	J125704200010S
μ-PRO	U107		00D9630226404	00D9630226404	IC	ST232CDR 5V SOP16	J046232000030S
μ-PRO	XT1		90M-JX001440R	90M-JX001440R	X'TAL	8.000MHZ HC-49/S CL=16PF (P=4.88)	E80008R000010S

NOTE : *nsp* PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

11. ABOUT REPLACE THE MICROPROCESSOR WITH A NEW ONE

When replaced of the μ -PRO (Microprocessor) or the Flash ROM, confirm contents of the following.

PWB Name	Pos. No.	Description	After replaced	Remark
μ -PRO	U12	ATMEGA16L-8AU 8BIT 16K FLASH TQFP44P	B	

After replaced

A : Mask ROM (With software).

No need write-in of software to the microprocessor.

B : Flash ROM (With software).

Usually, no need write-in of software. But, when the software was updated, you should be write-in of the new software to the microprocessor or flash ROM. Please check the software version.

C : Empty Flash ROM (Without software).

You should be write-in of the software to the microprocessor or flash ROM. Refer to "Update procedure" or "writing procedure", when you should be write-in the software.

マイコン等を交換した場合の対応について

μ -PRO(マイコン)およびFlash ROM等を交換した場合の対応方法を下記の記載します。

PWB Name	Pos. No.	Description	交換時の対応	備考
μ -PRO	U12	ATMEGA16L-8AU 8BIT 16K FLASH TQFP44P	B	

交換時の対応

A : Mask ROM (ソフトウェア書き込み済み)

交換時にソフトウェアの書き込みは必要ありません。

B : Flash ROM (ソフトウェア書き込み済み)

バージョンアップにより交換時にソフトウェアの書き換えが必要な場合があります。バージョンの確認をしてください。

C : 空ROM (Flash ROM)

交換時必ずソフトウェアの書き込みが必要になります。Update、書き込み方法を参照してください。