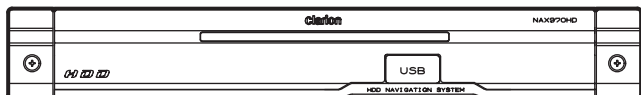


# Service Manual



## HDD Navigation System

### Model **NAX970HD** (QY-5001B-A)

## SPECIFICATIONS

### Navigation System

GPS receiving frequency:  
 1575.42 MHz, C/A Code

Sensibility: -130 dBm or better

Number of GPS channels:  
 15 channels

Voice synthesis: ADPCM,  
 Sampling frequency;11.025 kHz

Power supply voltage: DC 14V

Ground: Negative

Current consumption: less than 3.0A

Dimensions(mm): 205(W)x29.5(H)x169(D)

### GPS antenna

Mode: Microstrip flat antenna

Dimensions(mm): 30.4(W)x11.7(H)x35.5(D)

Impedance: 50 ohm

## NOTES

### About the hard disk drive

- \* Data saved to the hard disk drive may get lost in case of a breakdown, malfunction, or other trouble of this unit.

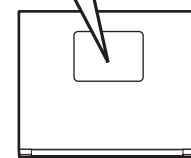
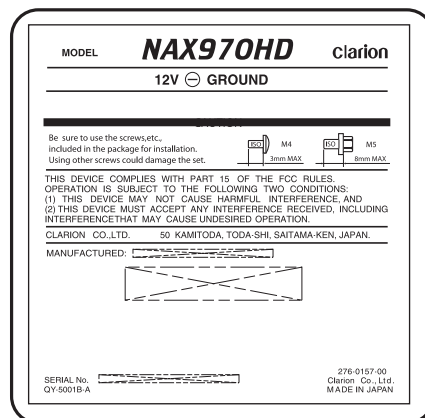
### Importing Data via USB Port

- \* Data may be broken when using USB memory device in the following situation: When disconnecting the USB memory device or turning the power off during writing or reading data. When affected by static electricity or electric noises.
- \* Music files (MP3, WMA, etc.) stored in the USB memory device cannot be played back.  
 ("Data" : Including the stored locations and their data, route data, data stored in the Favourite & Frequent List, setting data set from the Setting menu, and data imported from the USB memory device (Wallpapers, etc.)

- \* The special equipment is necessary to replace IC103 and IC400.
- \* We cannot supply PWB with component parts in principle. When a circuit on PWB has failure, please repair it by component parts base.  
 Parts which are not mentioned in service manual are not supplied.
- \* Specifications and design are subject to change without notice for further improvement.

## CAUTION

Use of controls, adjustment, or performance of procedures other than those specified herein, may result in hazardous radiation exposure.  
 The compact disc player should not be adjusted or repaired by anyone except properly qualified service personnel.

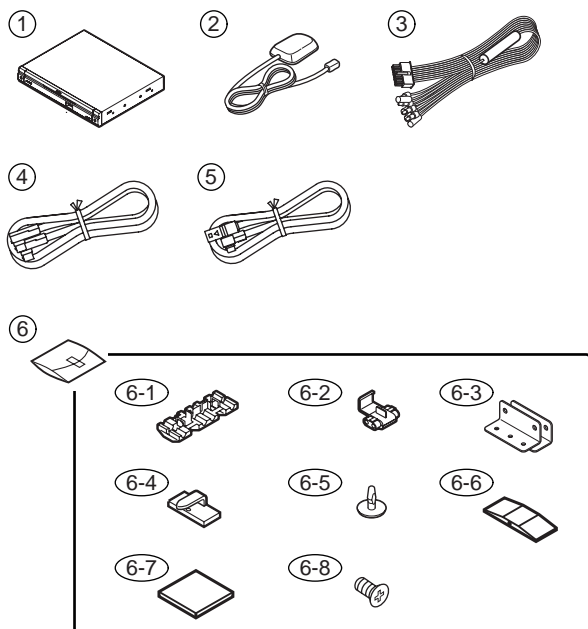


Bottom view of unit

## COMPONENTS

### QY-5001B-A

1.	Main unit	-----	1
2.	GPS antenna	096-0147-00	1
3.	Power supply lead (5A Fuse	854-6451-50 120-0050-00	1 1)
4.	RGB cable	855-2433-02	1
5.	CeNET cable(2.5m)	855-3421-01	1
6.	Accessory bag	-----	1
6-1.	Electro-tap(for speed sensor)	060-0018-00	2
6-2.	Electro-tap	060-0305-00	1
6-3.	Mounting bracket	300-7362-03	2
6-4.	Cord holder	321-1026-01	10
6-5.	Canoe clip	335-2515-00	4
6-6.	Waterproof rubber	345-7473-00	1
6-7.	Double-sided tape for fastening the antenna	347-6369-00	1
6-8.	Inatallation bolt(M4x6)	714-4006-8B	4



## To engineers in charge of repair or inspection of our products.

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

### 1. Use specified parts.

The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them.

The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.

### 2. Place the parts and wiring back in their original positions after replacement or re-wiring.

For proper circuit construction, use of insulation tubes, bonding, gaps to PWB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection.

If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.

### 3. Check for safety after repair.

Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary problems around the repaired spots.

If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

### 4. Caution in removal and making wiring connection to the parts for the automobile.

Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

### 5. Cautions in soldering

Please do not spread liquid flux in soldering.

Please do not wash the soldering point after soldering.

### 6. Cautions in soldering for chip capacitors

Please solder the chip capacitors after pre-heating for replacement because they are very weak to heat.

Please do not heat the chip capacitors with a soldering iron directly.

### 7. Cautions in handling for chip parts.

Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc).

Please make an operation test after replacement.

### 8. Cautions in handling flexible PWB

Before working with a soldering iron, make sure that the iron tip temperature is around 270°C. Take care not to apply the iron tip repeatedly (more than three times) to the same patterns. Also take care not to apply the tip with force.

### 9. Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

## TROUBLESHOOTING

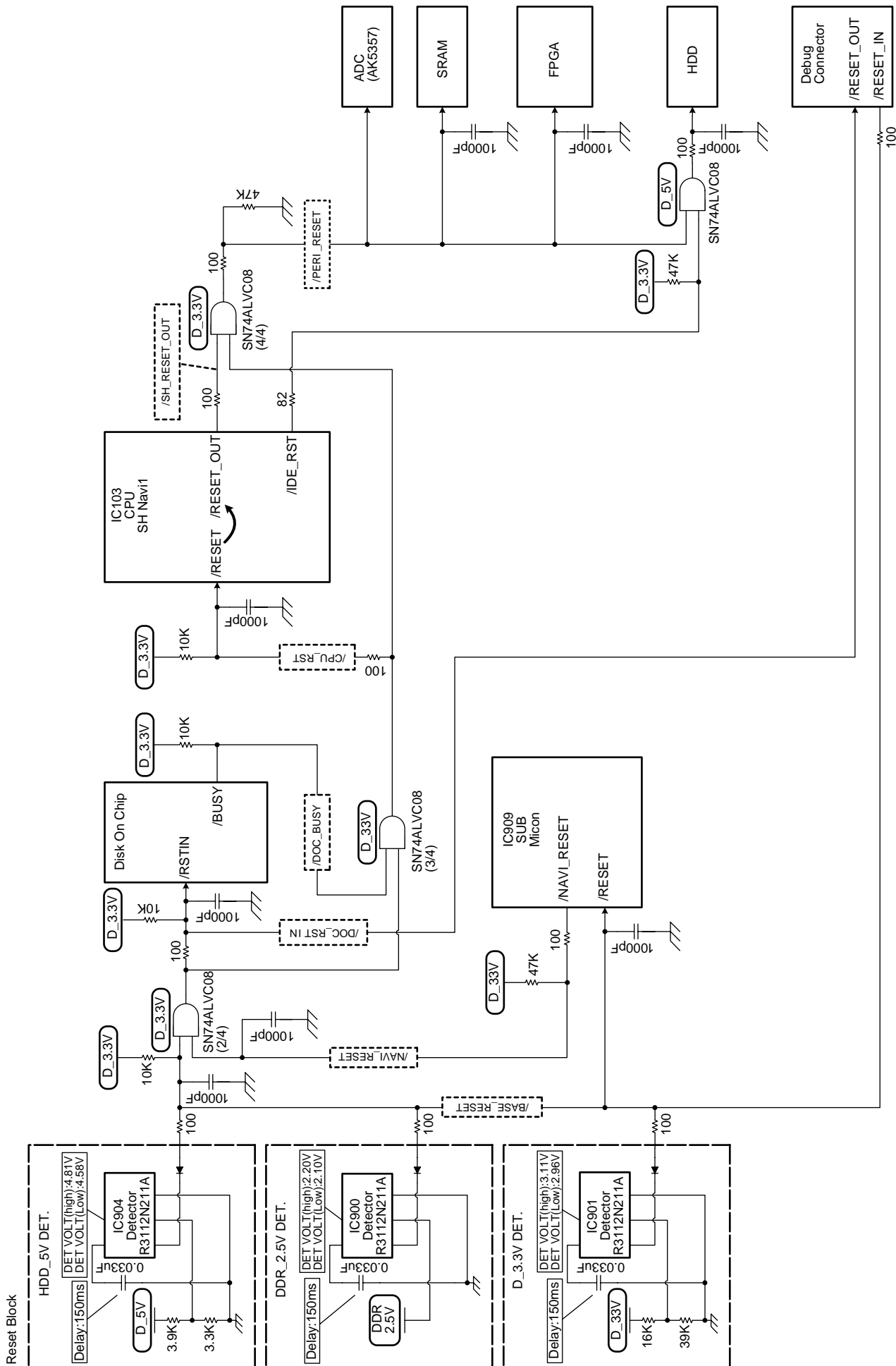
Problem	Check point	Remedy
Power indicator doesn't light. (The power supply doesn't enter).	Connection of power cable	Connect power cable properly.
	Connection of CeNET cable	Connect CeNET cable properly.
	Power supply circuit	Confirm the output voltage of the power properly. TP1000 HDD_5V TP1001 D_5V TP1003 D_3.3V TP1008 DDR_2.5V TP1004 VCC 1.22V
Screen is not displayed.	Connection of RGB cable	Connect RGB cable properly.
	Output of RGB signal	Confirm the output of RGB signal. TP1115 R TP1116 G TP1114 R
	Dot clock	Confirm the frequency of the dot clock. (TP534)
Map is not displayed.	HDD	Insert HDD, and put protecting.
The color of the screen is defective	Output level of RGB signal	Confirm the output level of RGB signal. TP1115 R TP1116 G TP1114 R
Guide voice doesn't sound.	Volume level of guide voice	Adjust the volume properly.
	Clock and data input of DAC(IC801)	Confirm IC801. pin1(LRCK):11.025KHz pin18(MCLK):8.46MHz pin19(BCLK):705KHz pin20(DIN):Data input
	Output of DAC(IC801)	Confirm an analog aoudio signal output of pin12 of IC801.
	MUTE setting	Confirm collector voltage of Q803. 0V : MUTE-ON 3.3V : MUTE-OFF  Confirm collector voltage of Q801. 0V : MUTE-ON 3.3V : MUTE-OFF
The car position doesn't move.	Connection of speed pulse	Connect speed pulse cable properly.
	Wave form of speed pulse	Confirm an output signal of TP1108(ECC).
	Gyro sensor	Measure pin1(VOUT) of Gyro(IC702) with the tester. Confirm the voltage. At geostationary: about 2.5V When sets are rotatatedand: voltage moves.
GPS reception is defective.	Connection of GPS antenna	Connect GPS antenna properly.
	Connection of internal wiring	Connect internal wiring (ANT700,ANT701) properly.

## ERROR MESSAGES

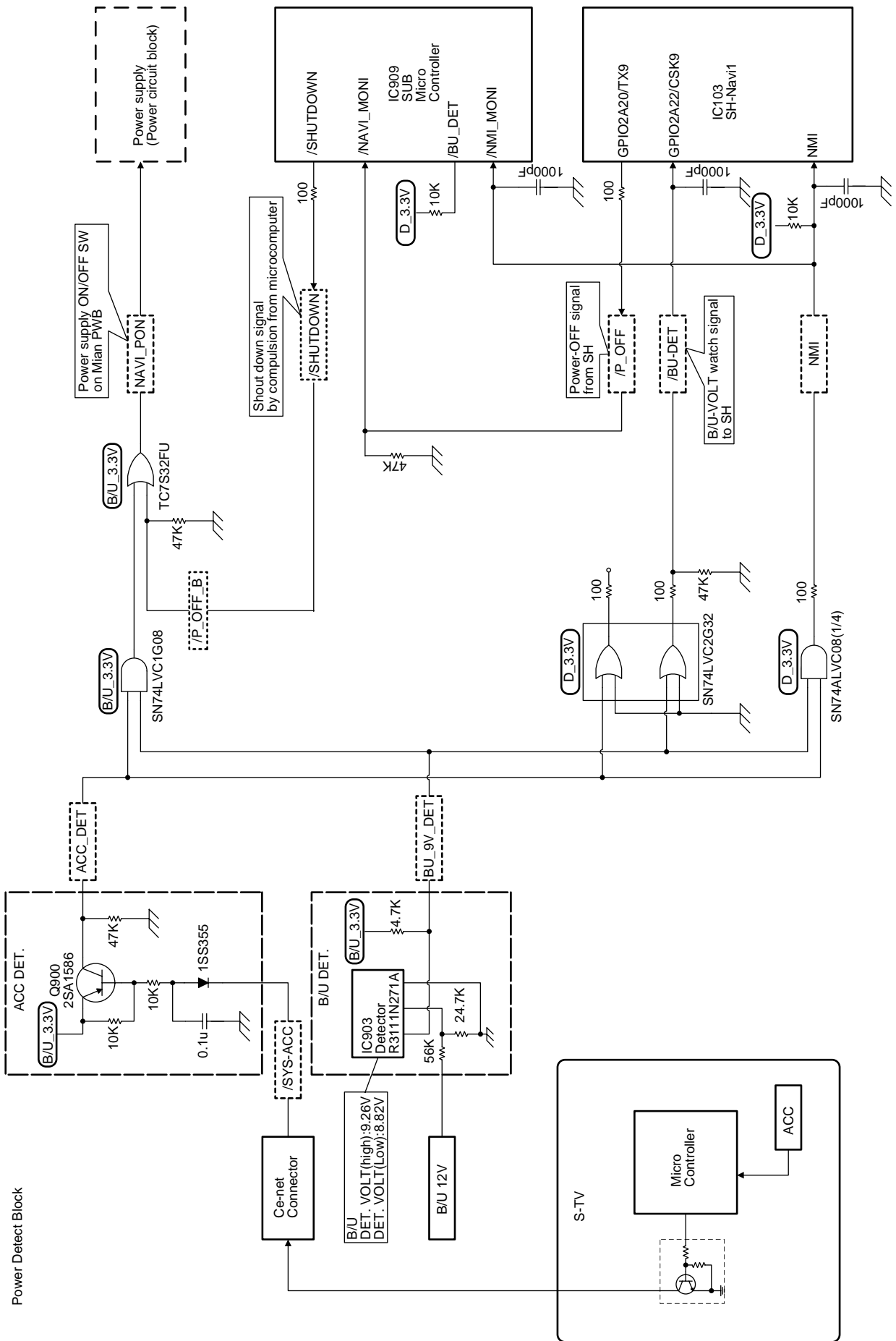
	Error Message	Cause	Remedy
USB memory device	ACCESS ERROR USB memory device access failed.	The USB memory is not connected correctly.	Connect the USB memory again.
		The USB memory is not recognised.	Connect another USB memory.
Hard Disk Drive	HIGH TEMP ERROR Please wait until temperature becomes normal again.	The HDD cannot be accessed because the temperature in the vehicle is extremely high	Please wait until the temperature becomes appropriate.
	LOW TEMP ERROR Please wait until temperature becomes normal again.	The HDD cannot be accessed because the temperature in the vehicle is extremely low	Please wait until the temperature becomes appropriate.
	ACCESS ERROR HDD access failed.	The HDD cannot be accessed. The sectors or clusters of the HDD may be damaged.	



Reset block



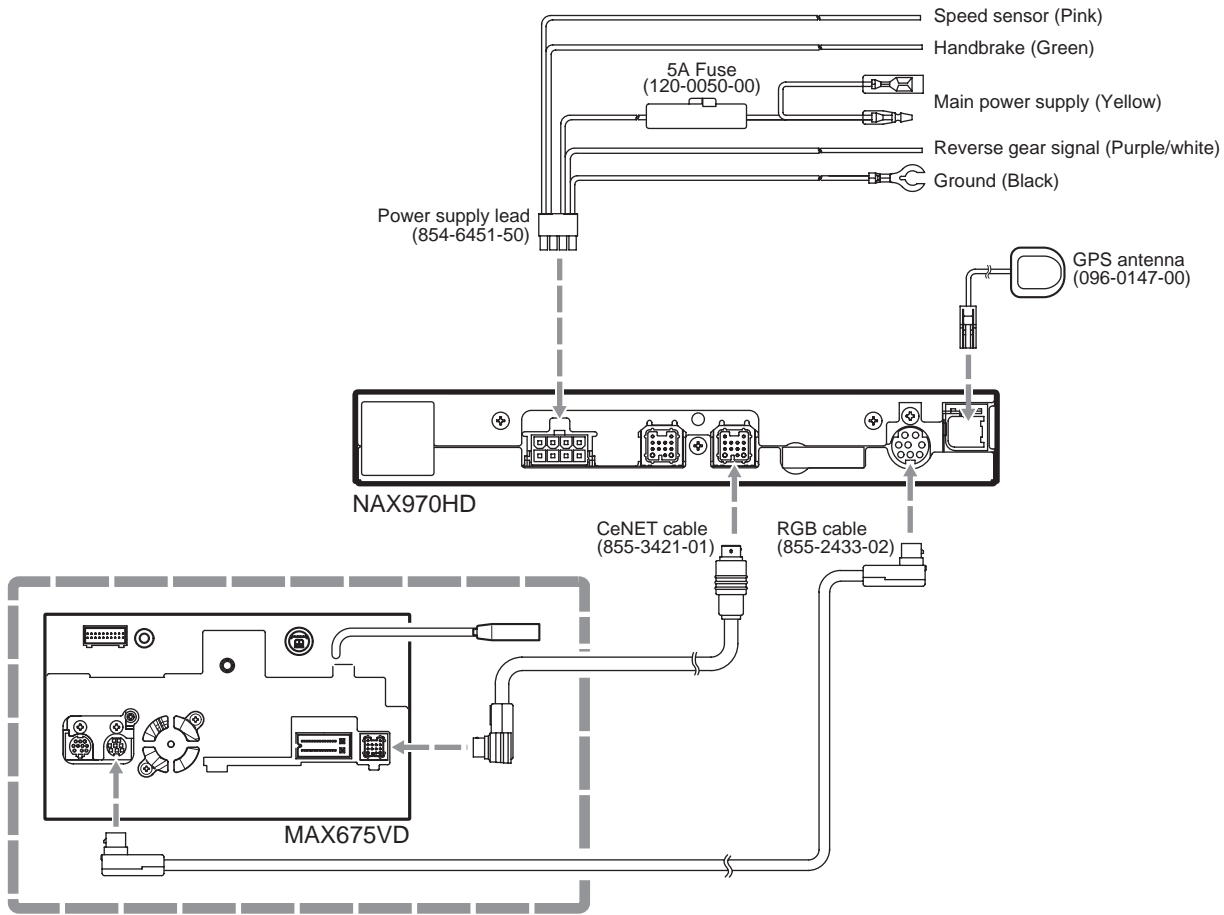
Power detect block





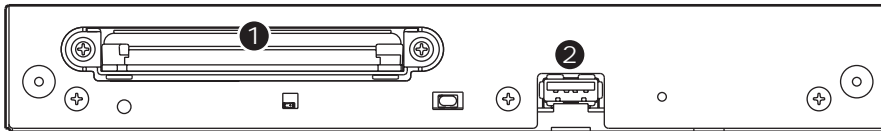
# WIRE CONNECTION

Example of connecting to the MAX675VD

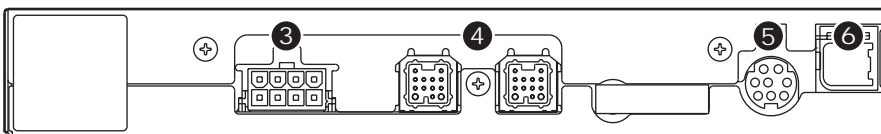


## Connectors

Front view (inside of Escutcheon)

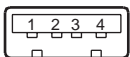


Rear view



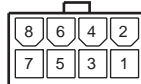
### 1 HDD

### 2 USB connector



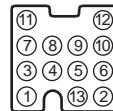
1	5V
2	D-
3	D+
4	GND

### 3 Power supply connector



1	N.C.
2	PARKING BRAKE
3	N.C.
4	SPEED SENSOR
5	GROUND
6	REVERSE SIG.
7	BATTERY (+)
8	N.C.

### 4 CeNET connector



1	GND	9	SYS ACC
2	SYS B/U	10	BUS(-)
3	L-CH(+)	11	L-CH(-)
4	EXT(+)	12	ILLUMI.
5	EXT(-)	13	N.C.
6	GUS(+)		
7	R-CH(+)		
8	R-CH(-)		

### 5 RGB connector

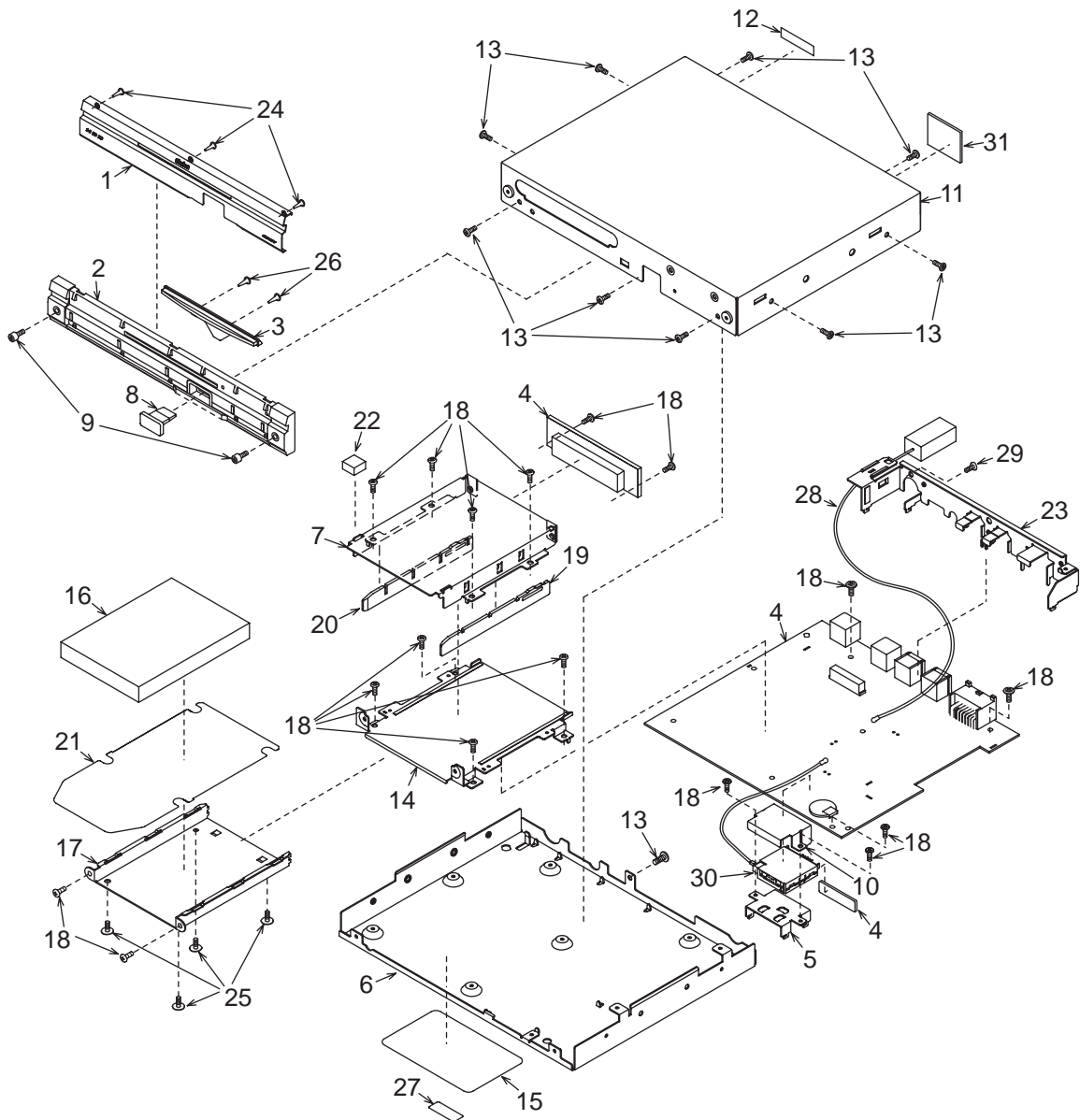


1	B
2	C-SYNC
3	R
4	N.C.
5	N.C.
6	G
7	N.C.
8	N.C.

### 6 GPS antenna recept.



# EXPLODED VIEW/PARTS LIST



NO.	PART NO.	DESCRIPTION	Q'TY	NO.	PART NO.	DESCRIPTION	QTY
1	372-3232-01	ALUMI FACE	1	17	331-3660-01	HDD BRKT	1
2	370-6928-00	ESCUTCHEON	1	18	716-0878-50	SCREW(M2.6x5)	17
3	335-7799-00	ILLUMI	1	19	335-7016-00	HDD GUIDE-R	1
4	-----	MAIN PWB	1	20	335-7017-00	HDD GUIDE-L	1
5	331-4188-00	GPS-PLATE	1	21	347-7963-00	HDD PULL SHEET	1
6	311-1922-00	LOWER CASE	1	22	345-8524-01	CUSION	1
7	331-4192-00	HDD-HOLDER	1	23	331-4186-00	C-PLATE	1
8	335-7798-00	USB-CVR	1	24	716-3490-50	SCREW(M1.7x3)	3
9	780-2607-00	SCREW(M2.6x7)	2	25	716-3503-50	SCREW(M3x4)	4
10	331-4189-00	GPS-HOLDER	1	26	716-0872-52	PAD SCREW(M1.7x5)	2
11	310-1830-01	UPPER CASE	1	27	290-0103-00	COA LABEL	1
12	347-8187-00	INSULATOR	1	28	092-2206-01	ANT-RECEPT	1
13	780-2604-03	SCREW(M2.6x4)	10	29	714-3006-8B	MACHINE SCREW(M3x6)	1
14	331-4191-00	HDD-PLATE	1	30	060-8059-00	GPS-RECEIVER	1
15	276-0157-00	SETPLATE	1	31	347-8183-00	INSULATOR	1
16	-----	HARD DISC DRIVE(30GB)	1				

# ELECTRICAL PARTS LIST

## Main PWB(B1) section

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
ANT700	075-0380-01	JACK	C167	046-1042-78	0.1uF	C248	166-1011-50	100pF CH
ANT701	075-0380-01	JACK	C168	046-1042-78	0.1uF	C249	166-1011-50	100pF CH
BAT1000	088-0034-11	CR2032-HE4	C169	046-1042-78	0.1uF	C250	046-1042-78	0.1uF
BL700	060-8059-00	GPS-RECEIVER	C170	046-1042-78	0.1uF	C251	166-1011-50	100pF CH
C100	042-0423-20	10V 10uF	C171	046-1042-78	0.1uF	C252	046-1042-78	0.1uF
C101	046-1042-78	0.1uF	C172	046-1042-78	0.1uF	C253	046-1042-78	0.1uF
C102	046-1042-78	0.1uF	C173	046-1042-78	0.1uF	C254	166-1011-50	100pF CH
C103	046-1042-78	0.1uF	C174	046-1042-78	0.1uF	C255	046-1042-78	0.1uF
C104	178-1052-78	1uF	C175	046-1042-78	0.1uF	C256	166-1011-50	100pF CH
C105	046-1042-78	0.1uF	C176	046-1042-78	0.1uF	C257	166-1011-50	100pF CH
C106	042-1726-90	6.3V 100uF	C177	046-1042-78	0.1uF	C258	046-1042-78	0.1uF
C107	178-1052-78	1uF	C178	046-1042-78	0.1uF	C259	166-1011-50	100pF CH
C108	042-1726-90	6.3V 100uF	C179	046-1042-78	0.1uF	C260	046-1042-78	0.1uF
C109	042-1726-90	6.3V 100uF	C180	046-1042-78	0.1uF	C261	046-1042-78	0.1uF
C110	178-1052-78	1uF	C181	046-1042-78	0.1uF	C262	166-1011-50	100pF CH
C111	178-1052-78	1uF	C182	046-1042-78	0.1uF	C263	046-1042-78	0.1uF
C112	042-0423-20	10V 10uF	C183	046-1042-78	0.1uF	C264	166-1011-50	100pF CH
C113	046-1042-78	0.1uF	C184	166-1011-50	100pF CH	C265	046-1042-78	0.1uF
C114	046-1042-78	0.1uF	C185	166-1011-50	100pF CH	C266	046-1042-78	0.1uF
C115	046-1042-78	0.1uF	C186	166-1011-50	100pF CH	C267	046-1042-78	0.1uF
C116	046-1042-78	0.1uF	C187	042-0423-20	10V 10uF	C268	166-1011-50	100pF CH
C117	166-1011-50	100pF CH	C188	168-1022-55	1000pF K	C269	046-1042-78	0.1uF
C118	046-1042-78	0.1uF	C189	168-1045-56	0.1uF Z	C270	166-1011-50	100pF CH
C119	046-1042-78	0.1uF	C200	178-1052-78	1uF	C271	046-1042-78	0.1uF
C120	166-1011-50	100pF CH	C201	042-0423-20	10V 10uF	C272	046-1042-78	0.1uF
C121	046-1042-78	0.1uF	C202	042-0423-20	10V 10uF	C273	046-1042-78	0.1uF
C122	042-1726-90	6.3V 100uF	C203	046-1042-78	0.1uF	C274	166-1011-50	100pF CH
C123	178-1052-78	1uF	C204	166-1011-50	100pF CH	C275	046-1042-78	0.1uF
C124	046-1042-78	0.1uF	C205	046-1042-78	0.1uF	C276	166-1011-50	100pF CH
C125	046-1042-78	0.1uF	C206	166-1011-50	100pF CH	C277	042-1726-90	6.3V 100uF
C126	046-1042-78	0.1uF	C207	046-1042-78	0.1uF	C278	046-1042-78	0.1uF
C127	046-1042-78	0.1uF	C208	166-1011-50	100pF CH	C400	042-0423-20	10V 10uF
C128	046-1042-78	0.1uF	C209	046-1042-78	0.1uF	C401	046-1042-78	0.1uF
C129	046-1042-78	0.1uF	C210	166-1011-50	100pF CH	C402	168-6832-78	0.068uF K
C130	046-1042-78	0.1uF	C211	166-1011-50	100pF CH	C403	168-6832-78	0.068uF K
C131	046-1042-78	0.1uF	C212	046-1042-78	0.1uF	C404	042-0423-20	10V 10uF
C132	046-1042-78	0.1uF	C213	166-1011-50	100pF CH	C405	168-4745-79	0.47uF Z
C133	046-1042-78	0.1uF	C214	046-1042-78	0.1uF	C406	166-1011-50	100pF CH
C134	046-1042-78	0.1uF	C215	046-1042-78	0.1uF	C407	046-1042-78	0.1uF
C135	166-1011-50	100pF CH	C216	166-1011-50	100pF CH	C408	046-1042-78	0.1uF
C136	168-1022-55	1000pF K	C217	046-1042-78	0.1uF	C409	046-1042-78	0.1uF
C137	046-1042-78	0.1uF	C218	166-1011-50	100pF CH	C410	046-1042-78	0.1uF
C138	046-1042-78	0.1uF	C219	166-1011-50	100pF CH	C411	046-1042-78	0.1uF
C139	046-1042-78	0.1uF	C220	046-1042-78	0.1uF	C412	042-0423-20	10V 10uF
C140	046-1042-78	0.1uF	C221	166-1011-50	100pF CH	C413	168-4745-79	0.47uF Z
C141	046-1042-78	0.1uF	C222	046-1042-78	0.1uF	C414	166-1011-50	100pF CH
C142	166-1011-50	100pF CH	C223	046-1042-78	0.1uF	C415	046-1042-78	0.1uF
C143	046-1042-78	0.1uF	C224	166-1011-50	100pF CH	C416	046-1042-78	0.1uF
C144	046-1042-78	0.1uF	C225	046-1042-78	0.1uF	C417	046-1042-78	0.1uF
C145	046-1042-78	0.1uF	C226	166-1011-50	100pF CH	C419	046-1042-78	0.1uF
C146	166-1011-50	100pF CH	C227	046-1042-78	0.1uF	C420	166-1011-50	100pF CH
C147	166-1011-50	100pF CH	C228	046-1042-78	0.1uF	C421	166-1011-50	100pF CH
C148	046-1042-78	0.1uF	C229	046-1042-78	0.1uF	C422	166-1011-50	100pF CH
C149	046-1042-78	0.1uF	C230	166-1011-50	100pF CH	C423	166-1011-50	100pF CH
C150	046-1042-78	0.1uF	C231	046-1042-78	0.1uF	C424	166-1011-50	100pF CH
C151	166-2201-50	22pF CH	C232	166-1011-50	100pF CH	C425	166-1011-50	100pF CH
C152	046-1042-78	0.1uF	C233	046-1042-78	0.1uF	C426	168-1022-55	1000pF K
C153	046-1042-78	0.1uF	C234	046-1042-78	0.1uF	C427	166-1011-50	100pF CH
C154	042-0423-20	10V 10uF	C235	046-1042-78	0.1uF	C428	166-1011-50	100pF CH
C155	046-1042-78	0.1uF	C236	166-1011-50	100pF CH	C429	168-1022-55	1000pF K
C156	046-1042-78	0.1uF	C237	046-1042-78	0.1uF	C502	046-1042-78	0.1uF
C157	046-1042-78	0.1uF	C238	166-1011-50	100pF CH	C503	046-1042-78	0.1uF
C158	046-1042-78	0.1uF	C239	042-0423-20	10V 10uF	C504	046-1042-78	0.1uF
C159	046-1042-78	0.1uF	C240	042-0423-20	10V 10uF	C505	046-1042-78	0.1uF
C160	166-1011-50	100pF CH	C241	046-1042-78	0.1uF	C506	046-1042-78	0.1uF
C161	046-1042-78	0.1uF	C242	166-1011-50	100pF CH	C507	046-1042-78	0.1uF
C162	046-1042-78	0.1uF	C243	046-1042-78	0.1uF	C508	046-1042-78	0.1uF
C163	046-1042-78	0.1uF	C244	166-1011-50	100pF CH	C509	046-1042-78	0.1uF
C164	046-1042-78	0.1uF	C245	046-1042-78	0.1uF	C510	046-1042-78	0.1uF
C165	046-1042-78	0.1uF	C246	166-1011-50	100pF CH	C511	046-1042-78	0.1uF
C166	166-1011-50	100pF CH	C247	046-1042-78	0.1uF	C512	046-1042-78	0.1uF

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
C513	046-1042-78	0.1uF	C715	168-1045-56	0.1uF Z	C932	168-1022-55	1000pF K
C514	046-1042-78	0.1uF	C716	168-1045-56	0.1uF Z	C1000	163-1063-35	16V 10uF
C515	046-1042-78	0.1uF	C717	046-1042-78	0.1uF	C1001	168-1045-56	0.1uF Z
C516	046-1042-78	0.1uF	C718	042-0638-50	16V 68uF	C1004	168-1022-55	1000pF K
C517	046-1042-78	0.1uF	C719	168-1032-55	0.01uF K	C1005	042-0423-20	10V 10uF
C518	046-1042-78	0.1uF	C720	166-2701-50	27pF CH	C1007	168-1045-56	0.1uF Z
C520	042-0573-50	6.3V 47uF TAN	C721	166-2701-50	27pF CH	C1008	166-1211-50	120pF CH
C521	046-1042-78	0.1uF	C722	166-1011-50	100pF CH	C1010	163-1073-35	16V 100uF
C522	042-0416-57	10V 47uF M TAN	C723	166-1011-50	100pF CH	C1013	163-1063-35	16V 10uF
C523	046-1042-78	0.1uF	C724	163-1063-35	16V 10uF	C1015	168-1045-56	0.1uF Z
C525	042-0416-57	10V 47uF M TAN	C726	168-1022-55	1000pF K	C1016	163-1063-35	16V 10uF
C526	046-1042-78	0.1uF	C727	166-1011-50	100pF CH	C1017	168-1032-55	0.01uF K
C527	166-4701-50	47pF CH	C729	042-0638-50	16V 68uF	C1018	168-1045-56	0.1uF Z
C528	046-1042-78	0.1uF	C800	043-0548-50	2.2uF	C1020	168-1022-55	1000pF K
C529	168-1022-55	1000pF K	C801	046-1042-78	0.1uF	C1021	166-1211-50	120pF CH
C531	166-1011-50	100pF CH	C802	046-1042-78	0.1uF	C1023	163-1073-35	16V 100uF
C532	166-1011-50	100pF CH	C803	042-0423-97	16V 10uF	C1024	168-3322-55	3300pF K
C533	166-1011-50	100pF CH	C805	046-1042-78	0.1uF	C1025	168-3322-55	3300pF K
C534	166-1011-50	100pF CH	C806	046-1042-78	0.1uF	C1026	168-6812-55	680pF K
C535	166-1011-50	100pF CH	C807	046-1042-78	0.1uF	C1027	168-1032-55	0.01uF K
C536	166-1011-50	100pF CH	C808	042-0423-20	10V 10uF	C1028	166-6801-50	68pF CH
C537	166-1011-50	100pF CH	C809	042-0423-97	16V 10uF	C1029	168-1045-56	0.1uF Z
C538	166-1011-50	100pF CH	C811	042-0423-97	16V 10uF	C1030	168-1045-56	0.1uF Z
C539	166-1011-50	100pF CH	C812	168-4745-79	0.47uF Z	C1031	168-1032-55	0.01uF K
C540	166-1011-50	100pF CH	C813	046-1042-78	0.1uF	C1032	168-6812-55	680pF K
C541	166-1011-50	100pF CH	C815	163-1063-35	16V 10uF	C1033	168-3922-55	3900pF K
C542	166-1011-50	100pF CH	C816	168-2222-55	2200pF K	C1034	168-2222-55	2200pF K
C543	166-1011-50	100pF CH	C817	168-1045-56	0.1uF Z	C1035	168-1222-55	1200pF K
C544	166-1011-50	100pF CH	C818	168-1032-55	0.01uF K	C1036	042-1726-90	6.3V 100uF
C545	166-1011-50	100pF CH	C819	042-0423-97	16V 10uF	C1037	043-0548-50	2.2uF
C546	166-1011-50	100pF CH	C820	168-2212-55	220pF K	C1038	046-1042-78	0.1uF
C547	166-1011-50	100pF CH	C821	043-0548-50	2.2uF	C1039	168-1045-56	0.1uF Z
C548	166-1011-50	100pF CH	C826	043-0548-50	2.2uF	C1040	046-1042-78	0.1uF
C549	166-1011-50	100pF CH	C829	166-1011-50	100pF CH	C1041	168-1045-56	0.1uF Z
C550	166-1011-50	100pF CH	C831	166-1011-50	100pF CH	C1042	168-1045-56	0.1uF Z
C551	166-1011-50	100pF CH	C832	168-1045-56	0.1uF Z	C1043	168-1045-56	0.1uF Z
C552	166-1011-50	100pF CH	C833	046-1042-78	0.1uF	C1045	166-1211-50	120pF CH
C553	166-1011-50	100pF CH	C834	163-1063-35	16V 10uF	C1048	042-1726-90	6.3V 100uF
C554	042-0423-97	16V 10uF	C835	163-1063-35	16V 10uF	C1049	042-1726-90	6.3V 100uF
C555	168-1045-56	0.1uF Z	C839	163-1063-35	16V 10uF	C1050	043-0548-50	2.2uF
C556	166-3901-50	39pF CH	C840	163-1063-35	16V 10uF	C1051	043-0548-50	2.2uF
C557	168-1042-78	16V 0.1uF	C841	168-2212-55	220pF K	C1058	189-4783-31	16V 4700uF
C558	046-1042-78	0.1uF	C842	168-2212-55	220pF K	C1059	189-4783-31	16V 4700uF
C559	046-1042-78	0.1uF	C843	168-2212-55	220pF K	C1061	043-0566-90	50V 2.2uF K
C560	046-1042-78	0.1uF	C900	168-1032-55	0.01uF K	C1062	168-1022-55	1000pF K
C561	168-2232-55	0.022uF K	C901	046-1042-78	0.1uF	C1063	043-0566-90	50V 2.2uF K
C600	168-1045-56	0.1uF Z	C902	168-3332-78	0.033uF K	C1064	043-0566-90	50V 2.2uF K
C601	168-1045-56	0.1uF Z	C903	168-1032-55	0.01uF K	C1065	178-1052-78	1uF
C602	046-1042-78	0.1uF	C904	046-1042-78	0.1uF	C1066	168-1045-56	0.1uF Z
C603	046-1042-78	0.1uF	C905	046-1042-78	0.1uF	C1067	043-0576-90	50V 10uF
C604	042-0423-20	10V 10uF	C906	168-3332-78	0.033uF K	C1068	043-0576-90	50V 10uF
C605	046-1042-78	0.1uF	C907	168-1032-55	0.01uF K	C1069	043-0576-90	50V 10uF
C606	046-1042-78	0.1uF	C908	046-1042-78	0.1uF	C1070	043-0576-90	50V 10uF
C607	042-0403-55	16V 33uF	C909	168-1032-55	0.01uF K	C1071	042-1726-90	6.3V 100uF
C608	168-1045-56	0.1uF Z	C910	046-1042-78	0.1uF	C1072	178-1052-78	1uF
C609	168-1045-56	0.1uF Z	C911	046-1042-78	0.1uF	C1073	043-0548-50	2.2uF
C610	042-0403-55	16V 33uF	C912	168-3332-78	0.033uF K	C1074	042-0423-97	16V 10uF
C611	168-1022-55	1000pF K	C914	046-1042-78	0.1uF	C1075	163-1073-35	16V 100uF
C700	168-1045-56	0.1uF Z	C915	168-1045-56	0.1uF Z	C1100	168-1045-56	0.1uF Z
C701	168-4745-79	0.47uF Z	C916	046-1042-78	0.1uF	C1101	189-1083-41	25V 1000uF
C702	042-0423-97	16V 10uF	C917	168-1045-56	0.1uF Z	C1102	043-0540-00	6.3V 10uF
C703	168-1045-56	0.1uF Z	C918	163-1073-15	6.3V 100uF	C1103	043-0540-00	6.3V 10uF
C704	168-1045-56	0.1uF Z	C919	168-1045-56	0.1uF Z	C1104	043-0540-00	6.3V 10uF
C705	168-1045-56	0.1uF Z	C920	168-1045-56	0.1uF Z	C1105	046-1042-78	0.1uF
C706	163-1063-35	16V 10uF	C921	046-1042-78	0.1uF	C1106	046-1042-78	0.1uF
C707	168-1045-56	0.1uF Z	C922	168-1022-55	1000pF K	C1107	042-1726-90	6.3V 100uF
C708	168-1045-56	0.1uF Z	C924	046-1042-78	0.1uF	C1108	046-1042-78	0.1uF
C709	168-1032-55	0.01uF K	C926	168-1032-55	0.01uF K	C1109	046-1042-78	0.1uF
C710	168-1032-55	0.01uF K	C927	168-1032-55	0.01uF K	C1110	168-1045-56	0.1uF Z
C711	163-1063-35	16V 10uF	C928	168-1022-55	1000pF K	C1111	042-3373-15	6.3V 330uF
C712	168-1032-55	0.01uF K	C929	168-1022-55	1000pF K	C1112	042-3373-15	6.3V 330uF
C713	168-1032-55	0.01uF K	C931	168-1022-55	1000pF K	C1113	042-3373-15	6.3V 330uF

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
C1114	046-1042-78	0.1uF	D1003	001-2630-90	1SS420-TPL3,F	IC901	051-5408-38	R3112N211A-TR
C1115	046-1042-78	0.1uF	D1004	001-2629-90	D1FM3-5063	IC902	051-7222-48	SN74AHC1G08
C1116	046-1042-78	0.1uF	D1005	001-2630-90	1SS420-TPL3,F			DCKR
C1117	163-1073-15	6.3V 100uF	D1006	001-2630-90	1SS420-TPL3,F	IC903	051-5418-28	R3111N271A-TR-FA
C1118	043-0540-00	6.3V 10uF	D1007	001-2629-90	D1FM3-5063	IC904	051-5408-38	R3112N211A-TR
CCT100	050-0140-57	1/32W 10k ohm x4J	D1008	001-2629-90	D1FM3-5063	IC905	051-7202-58	SN74AHC1G32
CCT101	050-0140-57	1/32W 10k ohm x4J	D1100	001-4311-00	ST70-27F-7072			DCKR
CCT102	050-0140-57	1/32W 10k ohm x4J	D1101	001-1305-90	DAN217U-T106	IC907	051-7540-90	SN74LVC2G32
CCT104	050-0140-51	1/32W 22 ohm x4J	D1102	001-1305-90	DAN217U-T106			DCTR
CCT105	050-0140-51	1/32W 22 ohm x4J	FIL1103	060-3114-52	LFA20-2A1	IC908	051-9400-29	BR93L46F-W
CCT106	050-0140-51	1/32W 22 ohm x4J	FIL1104	060-3114-52	LFA20-2A1	IC909	052-7086-00	M30620MCP-D16GP
CCT107	050-0140-51	1/32W 22 ohm x4J	FIL1105	060-3114-52	LFA20-2A1	IC910	051-7505-08	SN74LV08APWR
CCT108	050-0140-51	1/32W 22 ohm x4J	FIL1106	060-3116-53	CKD510JB1H221ST	IC911	051-7222-48	SN74AHC1G08
CCT109	050-0140-51	1/32W 22 ohm x4J	IC100	051-7222-48	SN74AHC1G08			DCKR
CCT110	050-0140-51	1/32W 22 ohm x4J			DCKR	IC912	051-6600-58	HA12187FP
CCT111	050-0140-51	1/32W 22 ohm x4J	IC101	051-7522-08	SN74LVC1G32	IC1000	051-3304-90	LP2954IMX
CCT112	050-0140-51	1/32W 22 ohm x4J			DCKR	IC1001	051-3337-90	BA09CC0WFP
CCT113	050-0140-51	1/32W 22 ohm x4J	IC102	051-7522-08	SN74LVC1G32	IC1003	051-3377-90	LM3485MM
CCT114	050-0140-57	1/32W 10k ohm x4J			DCKR	IC1004	051-3342-90	BA05CC0WFP-004EL
CCT115	050-0140-57	1/32W 10k ohm x4J	IC103	-----	R8A77700ADA01			
CCT116	050-0140-71	1/32W 82 ohm x4J			BGV	IC1005	051-3380-90	TPS5120DBTRG4
CCT117	050-0140-71	1/32W 82 ohm x4J	IC105	051-7522-08	SN74LVC1G32	IC1006	051-3356-90	BDOOKA5WFP
CCT118	050-0140-57	1/32W 10k ohm x4J			DCKR	IC1100	051-3402-90	NJM2406F
CCT119	050-0140-56	1/32W 4.7k ohm x4J	IC106	051-7272-08	TC7SZ125F	IC1101	051-7537-90	SN74LVC1G14
CCT120	050-0140-56	1/32W 4.7k ohm x4J	IC107	051-7526-08	SN74LVC1G12			DCKR
CCT121	050-0140-53	1/32W 0 ohm x4J			6DCKR	IC1102	051-5344-90	NJM2267V-TE2
CCT300	050-0140-66	1/32W 47 ohm x4J	IC200	051-9333-60	K4H561638H-UIB3	IC1103	051-5344-90	NJM2267V-TE2
CCT301	050-0140-66	1/32W 47 ohm x4J	IC201	051-9333-60	K4H561638H-UIB3	J701	074-1311-00	USB
CCT302	050-0140-66	1/32W 47 ohm x4J	IC202	051-9333-60	K4H561638H-UIB3	J702	074-0881-07	7P
CCT303	050-0140-66	1/32W 47 ohm x4J	IC203	051-9333-60	K4H561638H-UIB3	J1100	074-1194-00	13P CE-NET
CCT304	050-0140-66	1/32W 47 ohm x4J	IC400	-----	MD4832-d512- V3Q18-X-P	J1101	074-1194-00	13P CE-NET
CCT305	050-0140-66	1/32W 47 ohm x4J				J1102	074-1125-08	8P
CCT306	050-0140-66	1/32W 47 ohm x4J	IC401	051-7503-78	SN74LVCHR16245	J1103	074-1231-08	8P MIN
CCT307	050-0140-66	1/32W 47 ohm x4J			AGR	J1200	076-0713-00	50P
CCT308	050-0140-66	1/32W 47 ohm x4J	IC402	051-7520-08	SN74LVC1G04	L100	010-3105-58	120 ohm/100MHz
CCT309	050-0140-66	1/32W 47 ohm x4J			DCKR	L101	010-3104-53	220 ohm/100MHz
CCT310	050-0140-66	1/32W 47 ohm x4J	IC403	051-9125-70	R1LV0416CSB-7LI	L102	010-3104-53	220 ohm/100MHz
CCT311	050-0140-66	1/32W 47 ohm x4J	IC404	051-7534-90	SN74LVC1G97	L103	010-3104-53	220 ohm/100MHz
CCT312	050-0140-66	1/32W 47 ohm x4J			DCKR	L104	010-3104-54	600 ohm/100MHz
CCT313	050-0140-66	1/32W 47 ohm x4J	IC405	051-7505-18	SN74ALVC08PWR	L105	010-3104-54	600 ohm/100MHz
CCT314	050-0140-66	1/32W 47 ohm x4J	IC501	051-6834-00	XC3S50-4VQG100I-0985	L106	010-3104-54	600 ohm/100MHz
CCT315	050-0140-66	1/32W 47 ohm x4J				L107	010-3105-58	120 ohm/100MHz
CCT332	050-0140-51	1/32W 22 ohm x4J	IC502	051-6650-90	NB2305AT1HDR2G	L108	010-3104-54	600 ohm/100MHz
CCT333	050-0140-51	1/32W 22 ohm x4J	IC504	051-7522-08	SN74LVC1G32	L200	010-3104-53	220 ohm/100MHz
CCT334	050-0140-51	1/32W 22 ohm x4J			DCKR	L400	010-3104-54	600 ohm/100MHz
CCT335	050-0140-51	1/32W 22 ohm x4J	IC505	051-7289-90	MC74HC4046ADT	L401	010-3104-54	600 ohm/100MHz
CCT336	050-0140-51	1/32W 22 ohm x4J	IC506	051-7524-08	SN74LVC1G08	L402	010-3104-54	600 ohm/100MHz
CCT501	050-0140-71	1/32W 82 ohm x4J			DCKR	L502	010-3104-54	600 ohm/100MHz
CCT700	050-0140-69	1/32W 56 ohm x4J	IC507	051-7243-48	SN74AHCT1G08	L509	010-3104-53	220 ohm/100MHz
CCT701	050-0140-69	1/32W 56 ohm x4J			DCKR	L510	010-3104-53	220 ohm/100MHz
CCT703	050-0140-57	1/32W 10k ohm x4J	IC508	051-7243-48	SN74AHCT1G08	L511	010-3104-53	220 ohm/100MHz
CCT800	050-0140-59	1/32W 33 ohm x4J			DCKR	L512	010-3104-54	600 ohm/100MHz
CCT801	050-0140-59	1/32W 33 ohm x4J	IC600	051-7243-48	SN74AHCT1G08	L600	010-3104-54	600 ohm/100MHz
D600	001-7078-90	NSCW505T			DCKR	L601	010-3104-53	220 ohm/100MHz
D701	001-0529-32	MA8056-M	IC601	051-7539-90	SN74LVC3G34	L602	010-3104-53	220 ohm/100MHz
D702	001-9207-50	EZJZSV171AA			DCTR	L700	010-3104-54	600 ohm/100MHz
D703	001-0529-32	MA8056-M	IC602	051-7503-78	SN74LVCHR16245	L701	010-3104-54	600 ohm/100MHz
D704	001-0529-32	MA8056-M			AGR	L702	010-3104-54	600 ohm/100MHz
D705	001-0529-32	MA8056-M	IC700	051-6923-08	ADCS7476AIMF	L703	010-3104-53	220 ohm/100MHz
D706	001-0529-32	MA8056-M	IC701	051-7222-48	SN74AHC1G08	L704	010-3040-90	PLP3216S55/SLZT1
D800	001-0529-27	MA8047H			DCKR	L705	010-3104-54	600 ohm/100MHz
D801	001-1305-90	DAN217U-T106	IC702	948-0683-02	GYRO-SENSOR	L706	010-3105-58	120 ohm/100MHz
D802	001-1305-90	DAN217U-T106	IC704	051-6921-90	TPS2041BDG NR	L707	010-3105-58	120 ohm/100MHz
D900	001-0517-90	1SS355	IC705	051-7529-90	SN74LVC541APW	L708	010-3104-54	600 ohm/100MHz
D901	001-0529-46	MA8091-L	IC707	051-7539-90	SN74LVC3G34	L709	010-3105-58	120 ohm/100MHz
D903	001-7038-91	CL-221FG FRE-GRN			DCTR	L710	010-3104-54	600 ohm/100MHz
D905	001-2630-90	1SS420-TPL3,F	IC800	051-6718-90	AK5357VT-E2	L801	010-3104-54	600 ohm/100MHz
D906	001-2630-90	1SS420-TPL3,F	IC801	051-6731-90	WM8718SEDS/R	L802	010-3104-54	600 ohm/100MHz
D907	001-2630-90	1SS420-TPL3,F	IC802	051-3054-90	HA17558ATEL	L804	010-3104-54	600 ohm/100MHz
D1000	001-2629-90	D1FM3-5063	IC804	051-3054-90	HA17558ATEL	L807	010-3105-62	1k ohm/100MHz
D1001	001-2630-90	1SS420-TPL3,F	IC805	051-7255-38	TC7W66FU-TE12L	L808	010-3105-62	1k ohm/100MHz
D1002	001-2630-90	1SS420-TPL3,F	IC900	051-5408-38	R3112N211A-TR	L900	010-3104-54	600 ohm/100MHz



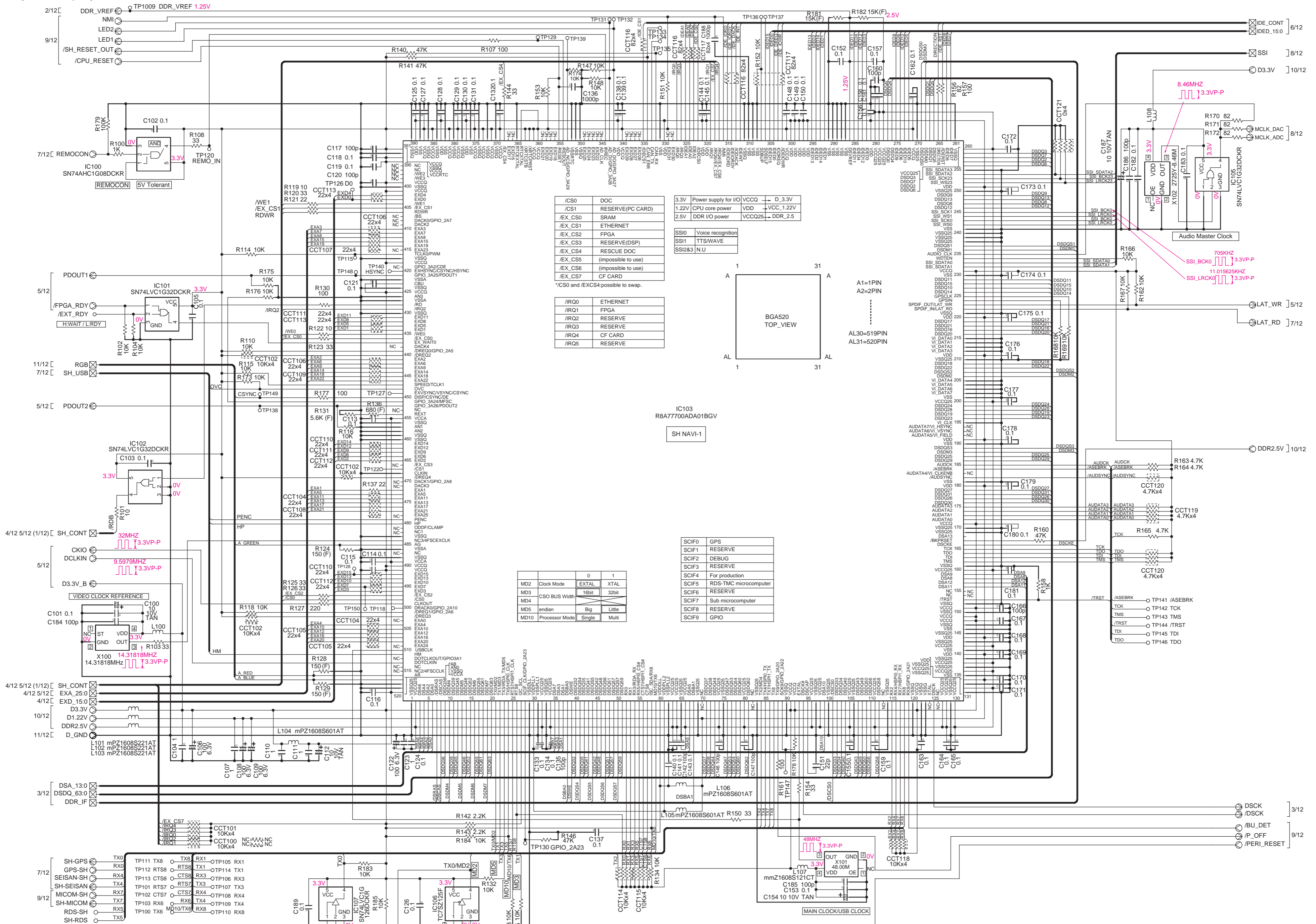
REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
L901	010-3104-54	600 ohm/100MHz	R132	119-1031-15	1/10W 10k ohm	R404	119-0000-05	1/10W 0 ohm JW
L1000	010-3104-54	600 ohm/100MHz	R133	119-1031-15	1/10W 10k ohm	R405	119-0000-05	1/10W 0 ohm JW
L1001	010-3104-50	30 ohm/100MHz	R134	119-1031-15	1/10W 10k ohm	R406	119-8201-15	1/10W 82 ohm
L1002	010-3104-50	30 ohm/100MHz	R135	119-1031-15	1/10W 10k ohm	R407	119-0000-05	1/10W 0 ohm JW
L1003	010-3500-92	10uH	R136	032-0140-68	1/10W 680 ohm F	R408	119-0000-05	1/10W 0 ohm JW
L1004	010-3104-54	600 ohm/100MHz	R137	119-2201-15	1/10W 22 ohm	R409	119-1031-15	1/10W 10k ohm
L1005	010-3500-92	10uH	R139	119-0000-05	1/10W 0 ohm JW	R410	119-0000-05	1/10W 0 ohm JW
L1006	010-3500-92	10uH	R140	119-4731-15	1/10W 47k ohm	R415	119-3301-15	1/10W 33 ohm
L1007	010-3104-54	600 ohm/100MHz	R141	119-4731-15	1/10W 47k ohm	R416	119-3301-15	1/10W 33 ohm
L1008	010-3104-53	220 ohm/100MHz	R142	119-2221-15	1/10W 2.2k ohm	R417	119-3301-15	1/10W 33 ohm
L1010	010-3105-58	120 ohm/100MHz	R143	119-2221-15	1/10W 2.2k ohm	R418	119-3301-15	1/10W 33 ohm
L1011	010-3105-58	120 ohm/100MHz	R144	119-3301-15	1/10W 33 ohm	R500	119-3311-15	1/10W 330 ohm
L1100	010-3105-58	120 ohm/100MHz	R146	119-4731-15	1/10W 47k ohm	R501	119-3301-15	1/10W 33 ohm
L1101	010-3104-54	600 ohm/100MHz	R147	119-1031-15	1/10W 10k ohm	R502	119-1011-15	1/10W 100 ohm
L1102	010-3104-54	600 ohm/100MHz	R148	119-1031-15	1/10W 10k ohm	R503	119-4721-15	1/10W 4.7k ohm
L1104	010-3105-62	1k ohm/100MHz	R150	119-3301-15	1/10W 33 ohm	R504	119-2211-15	1/10W 220 ohm
L1105	010-3105-62	1k ohm/100MHz	R151	119-1031-15	1/10W 10k ohm	R505	119-1211-15	1/10W 120 ohm
L1106	010-3105-62	1k ohm/100MHz	R152	119-1031-15	1/10W 10k ohm	R506	119-1801-15	1/10W 18 ohm
L1107	010-3105-62	1k ohm/100MHz	R153	119-1031-15	1/10W 10k ohm	R507	119-2211-15	1/10W 220 ohm
L1108	010-3104-54	600 ohm/100MHz	R154	119-3301-15	1/10W 33 ohm	R508	119-5601-15	1/10W 56 ohm
L1109	010-3104-54	600 ohm/100MHz	R156	119-8201-15	1/10W 82 ohm	R512	119-0000-05	1/10W 0 ohm JW
L1110	010-3104-54	600 ohm/100MHz	R157	119-1011-15	1/10W 100 ohm	R514	032-0140-89	1/10W 47k ohm F
P600	074-1323-00	9828S-50Y	R158	119-1021-15	1/10W 1k ohm	R515	032-0140-50	1/10W 10k ohm F
P701	076-0526-07	7P	R160	119-4731-15	1/10W 47k ohm	R516	119-1041-15	1/10W 100k ohm
P702	076-0353-07	7P	R161	119-1011-15	1/10W 100 ohm	R517	032-0140-22	1/10W 68k ohm F
P1200	074-1322-00	50P	R162	119-1031-15	1/10W 10k ohm	R518	032-0140-04	1/10W 8.2k ohm F
Q700	125-2027-91	DTC114EUA	R163	119-4721-15	1/10W 4.7k ohm	R519	119-1511-15	1/10W 150 ohm
Q800	125-0021-91	DTA114EUA	R164	119-4721-15	1/10W 4.7k ohm	R520	119-3301-15	1/10W 33 ohm
Q801	192-4116-00	2SC4116	R165	119-4721-15	1/10W 4.7k ohm	R521	119-1511-15	1/10W 150 ohm
Q802	193-1306-00	2SD1306	R166	119-1031-15	1/10W 10k ohm	R522	119-1511-15	1/10W 150 ohm
Q803	125-2027-91	DTC114EUA	R167	119-1031-15	1/10W 10k ohm	R524	119-0000-05	1/10W 0 ohm JW
Q900	190-1586-00	2SA1586 O,Y,G	R168	119-1031-15	1/10W 10k ohm	R600	119-2201-15	1/10W 22 ohm
Q902	125-2027-91	DTC114EUA	R169	119-1031-15	1/10W 10k ohm	R601	119-4731-15	1/10W 47k ohm
Q903	125-2027-91	DTC114EUA	R170	119-8201-15	1/10W 82 ohm	R602	119-2201-15	1/10W 22 ohm
Q904	125-2027-91	DTC114EUA	R171	119-8201-15	1/10W 82 ohm	R603	119-2201-15	1/10W 22 ohm
Q1000	193-1306-00	2SD1306	R172	119-8201-15	1/10W 82 ohm	R604	119-1011-15	1/10W 100 ohm
Q1001	190-2096-00	2SA2096	R173	119-1031-15	1/10W 10k ohm	R605	119-0000-05	1/10W 0 ohm JW
Q1002	125-7006-90	RSS075P03 TB	R174	119-1031-15	1/10W 10k ohm	R607	119-5621-15	1/10W 5.6k ohm
Q1003	125-0021-91	DTA114EUA	R175	119-1031-15	1/10W 10k ohm	R608	119-1021-15	1/10W 1k ohm
Q1004	125-8017-90	SP8K4-TB	R176	119-1031-15	1/10W 10k ohm	R609	119-8201-15	1/10W 82 ohm
Q1005	125-8017-90	SP8K4-TB	R177	119-1011-15	1/10W 100 ohm	R610	119-8201-15	1/10W 82 ohm
Q1009	192-4116-00	2SC4116	R178	119-1031-15	1/10W 10k ohm	R611	119-8201-15	1/10W 82 ohm
Q1010	131-1188-50	2SB1188PQR	R179	119-1041-15	1/10W 100k ohm	R612	119-1031-15	1/10W 10k ohm
Q1011	192-4116-00	2SC4116	R181	032-0140-51	1/10W 15k ohm F	R613	119-0000-05	1/10W 0 ohm JW
Q1100	125-0021-97	DTA113ZU	R182	032-0140-51	1/10W 15k ohm F	R614	119-1511-15	1/10W 150 ohm
Q1101	192-4116-00	2SC4116	R183	119-1031-15	1/10W 10k ohm	R700	119-1531-15	1/10W 15k ohm
Q1102	192-4116-00	2SC4116	R184	119-1031-15	1/10W 10k ohm	R701	119-1031-15	1/10W 10k ohm
R100	119-1021-15	1/10W 1k ohm	R185	119-1031-15	1/10W 10k ohm	R702	119-1041-15	1/10W 100k ohm
R101	119-1001-15	1/10W 10 ohm	R300	119-0000-05	1/10W 0 ohm JW	R703	119-1031-15	1/10W 10k ohm
R102	119-1031-15	1/10W 10k ohm	R301	119-0000-05	1/10W 0 ohm JW	R704	119-2201-15	1/10W 22 ohm
R103	119-3301-15	1/10W 33 ohm	R302	119-1511-15	1/10W 150 ohm	R705	119-2201-15	1/10W 22 ohm
R104	119-1031-15	1/10W 10k ohm	R303	119-2201-15	1/10W 22 ohm	R706	119-1031-15	1/10W 10k ohm
R107	119-1011-15	1/10W 100 ohm	R305	119-4701-15	1/10W 47 ohm	R711	119-0000-05	1/10W 0 ohm JW
R108	119-3301-15	1/10W 33 ohm	R306	119-4701-15	1/10W 47 ohm	R712	119-2701-15	1/10W 27 ohm
R110	119-1031-15	1/10W 10k ohm	R307	119-4701-15	1/10W 47 ohm	R713	119-2701-15	1/10W 27 ohm
R114	119-1031-15	1/10W 10k ohm	R308	119-4701-15	1/10W 47 ohm	R715	119-1021-15	1/10W 1k ohm
R115	119-1031-15	1/10W 10k ohm	R309	119-4701-15	1/10W 47 ohm	R716	119-1021-15	1/10W 1k ohm
R116	119-1031-15	1/10W 10k ohm	R310	119-4701-15	1/10W 47 ohm	R717	119-1531-15	1/10W 15k ohm
R118	119-1031-15	1/10W 10k ohm	R311	119-4701-15	1/10W 47 ohm	R718	119-1531-15	1/10W 15k ohm
R119	119-1001-15	1/10W 10 ohm	R312	119-4701-15	1/10W 47 ohm	R719	119-1031-15	1/10W 10k ohm
R120	119-3301-15	1/10W 33 ohm	R313	119-4701-15	1/10W 47 ohm	R722	119-1031-15	1/10W 10k ohm
R121	119-2201-15	1/10W 22 ohm	R314	119-4701-15	1/10W 47 ohm	R723	119-0000-05	1/10W 0 ohm JW
R122	119-1001-15	1/10W 10 ohm	R315	119-4701-15	1/10W 47 ohm	R724	119-0000-05	1/10W 0 ohm JW
R123	119-3301-15	1/10W 33 ohm	R316	119-4701-15	1/10W 47 ohm	R727	119-1041-15	1/10W 100k ohm
R124	032-0140-83	1/10W 150 ohm F	R317	119-4701-15	1/10W 47 ohm	R812	119-3311-15	1/10W 330 ohm
R125	119-3301-15	1/10W 33 ohm	R318	119-4701-15	1/10W 47 ohm	R813	119-4721-15	1/10W 4.7k ohm
R126	119-3301-15	1/10W 33 ohm	R319	119-4701-15	1/10W 47 ohm	R814	119-2221-15	1/10W 2.2k ohm
R127	119-2211-15	1/10W 220 ohm	R320	119-4701-15	1/10W 47 ohm	R815	119-1031-15	1/10W 10k ohm
R128	032-0140-83	1/10W 150 ohm F	R400	119-1031-15	1/10W 10k ohm	R816	119-1531-15	1/10W 15k ohm
R129	032-0140-83	1/10W 150 ohm F	R401	119-1031-15	1/10W 10k ohm	R817	119-0000-05	1/10W 0 ohm JW
R130	119-1011-15	1/10W 100 ohm	R402	119-1031-15	1/10W 10k ohm	R818	119-1021-15	1/10W 1k ohm
R131	032-0140-57	1/10W 5.6k ohm F	R403	119-1031-15	1/10W 10k ohm	R819	119-3311-15	1/10W 330 ohm

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
R820	119-4711-15	1/10W 470 ohm	R948	119-4731-15	1/10W 47k ohm	R1055	119-1031-15	1/10W 10k ohm
R821	119-1031-15	1/10W 10k ohm	R949	119-4731-15	1/10W 47k ohm	R1056	032-0140-94	1/10W 30k ohm F
R822	119-1031-15	1/10W 10k ohm	R950	119-0000-05	1/10W 0 ohm JW	R1057	032-0140-88	1/10W 100k ohm F
R826	119-2231-15	1/10W 22k ohm	R951	119-1021-15	1/10W 1k ohm	R1058	032-0140-93	1/10W 2k ohm F
R830	119-1031-15	1/10W 10k ohm	R952	119-1021-15	1/10W 1k ohm	R1100	117-2211-15	1/8W 220 ohm
R831	119-1031-15	1/10W 10k ohm	R953	119-1031-15	1/10W 10k ohm	R1101	117-2211-15	1/8W 220 ohm
R834	119-1031-15	1/10W 10k ohm	R955	119-1031-15	1/10W 10k ohm	R1102	119-3331-15	1/10W 33k ohm
R835	119-1031-15	1/10W 10k ohm	R1000	119-1031-15	1/10W 10k ohm	R1103	119-1031-15	1/10W 10k ohm
R836	119-3311-15	1/10W 330 ohm	R1004	119-1031-15	1/10W 10k ohm	R1104	119-1031-15	1/10W 10k ohm
R837	119-3311-15	1/10W 330 ohm	R1005	119-3921-15	1/10W 3.9k ohm	R1105	119-1021-15	1/10W 1k ohm
R838	119-1041-15	1/10W 100k ohm	R1006	032-0140-03	1/10W 220k ohm F	R1106	119-5641-15	1/10W 560k ohm
R839	119-1041-15	1/10W 100k ohm	R1007	032-0140-88	1/10W 100k ohm F	R1108	119-4721-15	1/10W 4.7k ohm
R842	119-5611-15	1/10W 560 ohm	R1008	032-0140-63	1/10W 27k ohm F	R1109	119-1011-15	1/10W 100 ohm
R843	119-5611-15	1/10W 560 ohm	R1009	119-1021-15	1/10W 1k ohm	R1110	116-3321-15	1/4W 3.3k ohm
R844	119-1041-15	1/10W 100k ohm	R1010	119-2241-15	1/10W 220k ohm	R1111	032-0106-79	1/10W 75 ohm D
R845	119-1041-15	1/10W 100k ohm	R1011	119-2201-15	1/10W 22 ohm	R1112	032-0106-79	1/10W 75 ohm D
R849	119-2231-15	1/10W 22k ohm	R1012	119-0000-05	1/10W 0 ohm JW	R1113	032-0106-79	1/10W 75 ohm D
R850	119-4721-15	1/10W 4.7k ohm	R1013	032-0140-51	1/10W 15k ohm F	R1114	119-1231-15	1/10W 12k ohm
R900	119-1031-15	1/10W 10k ohm	R1014	032-0140-05	1/10W 82k ohm F	R1115	119-2231-15	1/10W 22k ohm
R901	119-1031-15	1/10W 10k ohm	R1015	032-0140-67	1/10W 3.3k ohm F	R1116	117-2231-15	1/8W 22k ohm
R902	119-4731-15	1/10W 47k ohm	R1016	119-0000-05	1/10W 0 ohm JW	R1117	119-3321-15	1/10W 3.3k ohm
R903	032-0140-99	1/10W 39k ohm F	R1017	119-1031-15	1/10W 10k ohm	R1118	119-4731-15	1/10W 47k ohm
R904	032-0140-00	1/10W 56k ohm F	R1018	119-3321-15	1/10W 3.3k ohm	R1119	117-2231-15	1/8W 22k ohm
R905	032-0140-54	1/10W 22k ohm F	R1019	119-0000-05	1/10W 0 ohm JW	R1120	119-3321-15	1/10W 3.3k ohm
R906	032-0140-79	1/10W 2.7k ohm F	R1020	119-0000-05	1/10W 0 ohm JW	R1121	119-4731-15	1/10W 47k ohm
R907	032-0140-69	1/10W 16k ohm F	R1021	032-0140-52	1/10W 33k ohm F	R1122	119-1041-15	1/10W 100k ohm
R908	119-4721-15	1/10W 4.7k ohm	R1022	032-0140-52	1/10W 33k ohm F	R1123	119-1041-15	1/10W 100k ohm
R909	119-1011-15	1/10W 100 ohm	R1023	032-0140-05	1/10W 82k ohm F	R1124	119-1041-15	1/10W 100k ohm
R910	119-1011-15	1/10W 100 ohm	R1024	032-0140-63	1/10W 27k ohm F	R1126	119-1051-15	1/10W 1M ohm
R911	119-1011-15	1/10W 100 ohm	R1025	119-0000-05	1/10W 0 ohm JW	R1127	119-1051-15	1/10W 1M ohm
R912	119-1011-15	1/10W 100 ohm	R1026	032-0140-62	1/10W 1k ohm F	R1128	119-1051-15	1/10W 1M ohm
R913	032-0140-67	1/10W 3.3k ohm F	R1027	032-0140-79	1/10W 2.7k ohm F	R1132	032-0140-62	1/10W 1k ohm F
R914	119-4731-15	1/10W 47k ohm	R1028	032-0140-79	1/10W 2.7k ohm F	R1133	032-0140-83	1/10W 150 ohm F
R915	032-0140-81	1/10W 3.9k ohm F	R1029	032-0140-62	1/10W 1k ohm F	R1134	032-0140-83	1/10W 150 ohm F
R916	119-1031-15	1/10W 10k ohm	R1030	119-0000-05	1/10W 0 ohm JW	R1135	119-1051-15	1/10W 1M ohm
R918	119-4731-15	1/10W 47k ohm	R1031	119-0000-05	1/10W 0 ohm JW	R1136	119-1041-15	1/10W 100k ohm
R920	119-1031-15	1/10W 10k ohm	R1032	119-0000-05	1/10W 0 ohm JW	R1137	032-0106-79	1/10W 75 ohm D
R921	119-1211-15	1/10W 120 ohm	R1033	119-0000-05	1/10W 0 ohm JW	R1138	119-1531-15	1/10W 15k ohm
R922	119-1031-15	1/10W 10k ohm	R1034	119-9121-15	1/10W 9.1k ohm	S900	013-6102-00	SKHLLF
R924	119-1011-15	1/10W 100 ohm	R1035	119-7521-15	1/10W 7.5k ohm	S901	013-6312-50	SKRP-ABE-010
R926	119-4731-15	1/10W 47k ohm	R1036	119-1031-15	1/10W 10k ohm	T1100	009-0621-07	CHOKE 1.4mH
R927	119-1031-15	1/10W 10k ohm	R1040	119-0000-05	1/10W 0 ohm JW	TM1000	073-0766-90	TERMINAL
R928	119-4731-15	1/10W 47k ohm	R1044	116-1011-15	1/4W 100 ohm	TM1004	073-0766-90	TERMINAL
R929	119-1011-15	1/10W 100 ohm	R1045	116-1011-15	1/4W 100 ohm	TM1013	073-0766-90	TERMINAL
R930	119-1011-15	1/10W 100 ohm	R1046	116-1011-15	1/4W 100 ohm	TM1014	073-0766-90	TERMINAL
R931	119-3321-15	1/10W 3.3k ohm	R1047	116-1011-15	1/4W 100 ohm	X100	061-4531-90	14.31818MHz
R939	119-1011-15	1/10W 100 ohm	R1048	116-1011-15	1/4W 100 ohm	X101	061-4539-90	48MHz 2725T
R940	119-4731-15	1/10W 47k ohm	R1049	116-1011-15	1/4W 100 ohm	X102	061-4538-90	8.46MHz
R941	119-1011-15	1/10W 100 ohm	R1050	119-4721-15	1/10W 4.7k ohm	X900	060-1533-90	CSTCE10M0G52-RO
R942	119-1011-15	1/10W 100 ohm	R1051	119-1031-15	1/10W 10k ohm	PWB	039-2935-00	PWB(WITHOUT COMPONENTS)
R943	119-1011-15	1/10W 100 ohm	R1052	119-1031-15	1/10W 10k ohm			
R944	119-1011-15	1/10W 100 ohm	R1053	119-2211-15	1/10W 220 ohm			
R945	119-4731-15	1/10W 47k ohm	R1054	119-1021-15	1/10W 1k ohm			



# CIRCUIT DIAGRAM

Main PWB(B1) section 1/12  
[ Navi microcomputer ]



Pin	Function
/CS0	DOC
/CS1	RESERVE(PC CARD)
/EX_CS0	SRAM
/EX_CS1	ETHERNET
/EX_CS2	FPGA
/EX_CS3	RESERVE(DSP)
/EX_CS4	RESCUE DOC
/EX_CS5	(impossible to use)
/EX_CS6	(impossible to use)
/EX_CS7	CF CARD

\* /CS0 and /EXCS4 possible to swap.

Pin	Function
/IR00	ETHERNET
/IR01	FPGA
/IR02	RESERVE
/IR03	RESERVE
/IR04	CF CARD
/IR05	RESERVE

Pin	Function
3.3V	Power supply for I/O VCCQ
1.22V	CPU core power
2.5V	DDR I/O power
VDD	VCCQ
VCCQ25	DDR_2.5

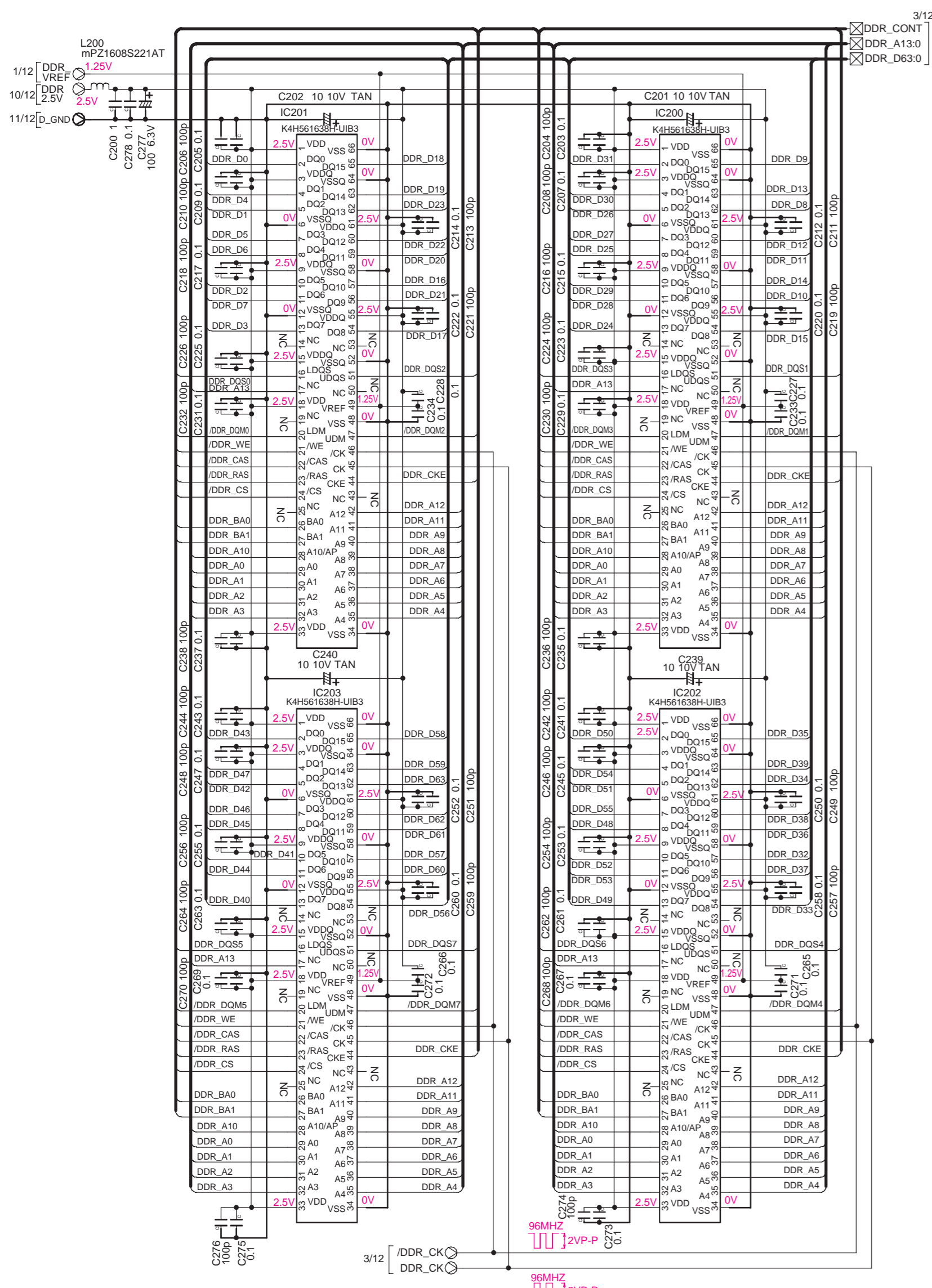
Pin	Function
SSIO	Voice recognition
SSI1	TTSWAVE
SSI2&3	N.U

Pin	Function
SCIF0	GPS
SCIF1	RESERVE
SCIF2	DEBUG
SCIF3	RESERVE
SCIF4	For production
SCIF5	RDS-TMC microcomputer
SCIF6	RESERVE
SCIF7	Sub microcomputer
SCIF8	RESERVE
SCIF9	GPIO

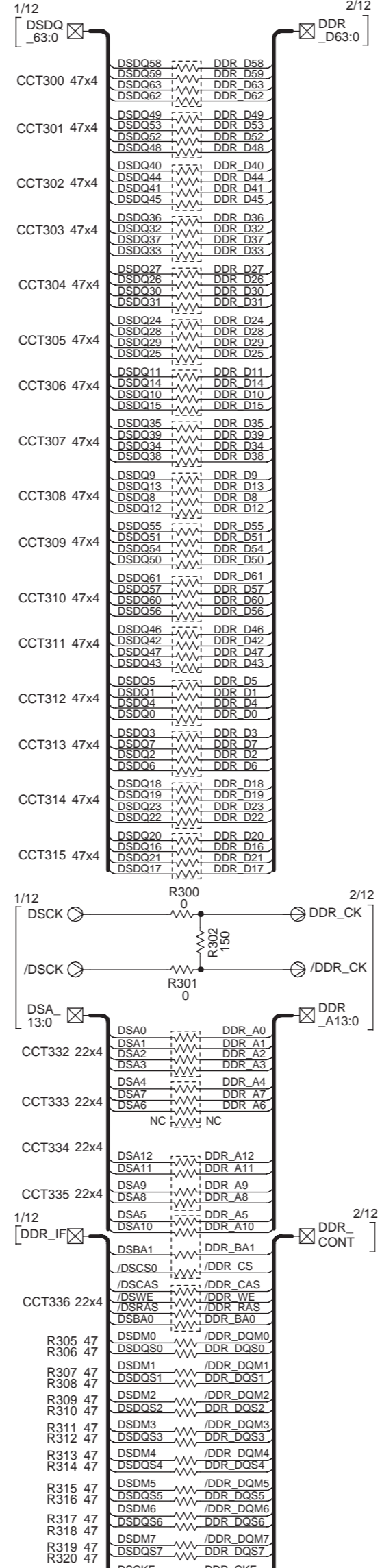
MD2	Clock Mode	0	1
MD2	Clock Mode	EXTAL	XTAL
MD3	CS0 BUS Width	16bit	32bit
MD4	endian	Big	Little
MD10	Processor Mode	Single	Multi



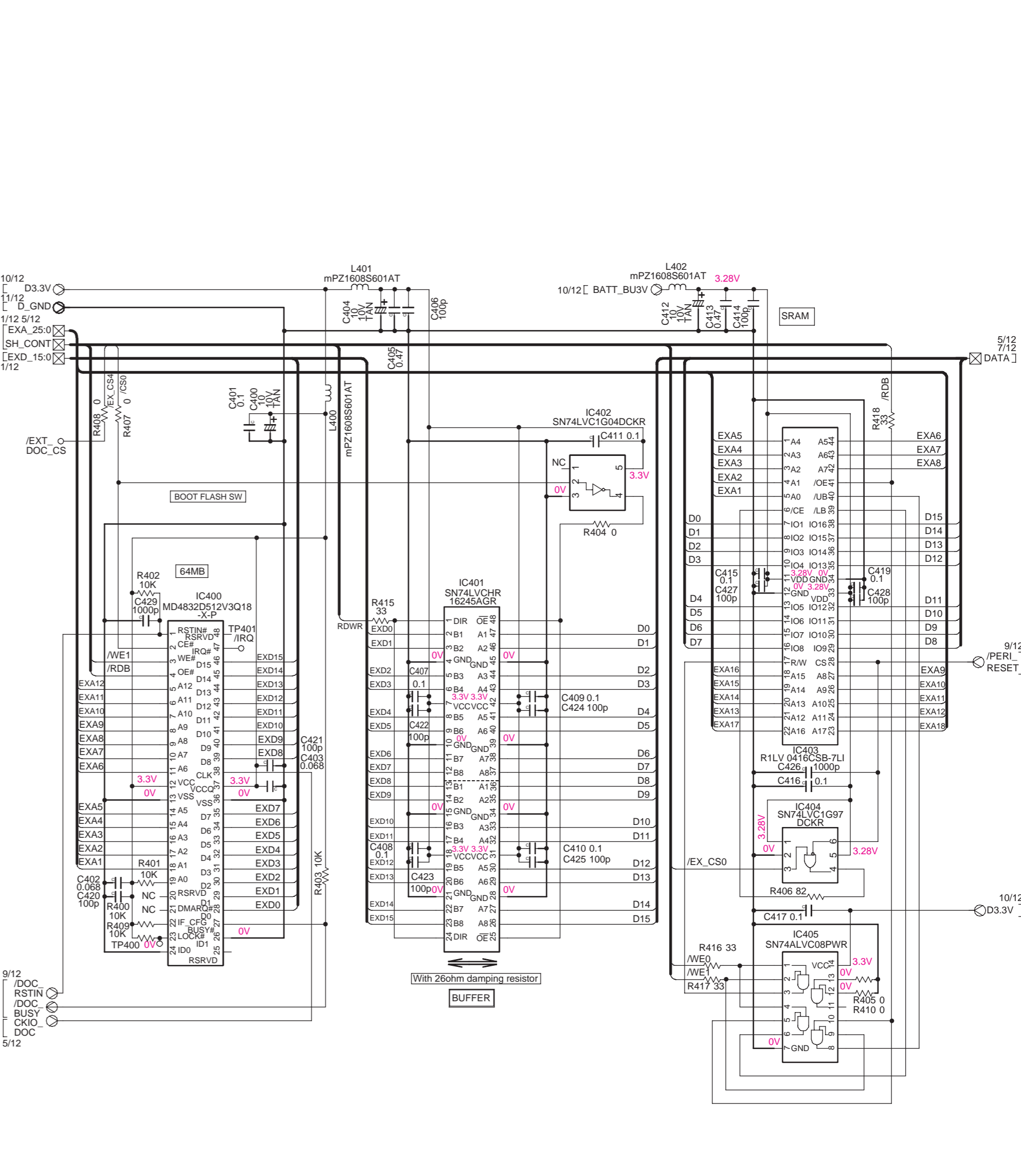
Main PWB(B1) section 2/12  
[ DDR SDRAM ]



Main PWB(B1) section 3/12  
[ RS block ]

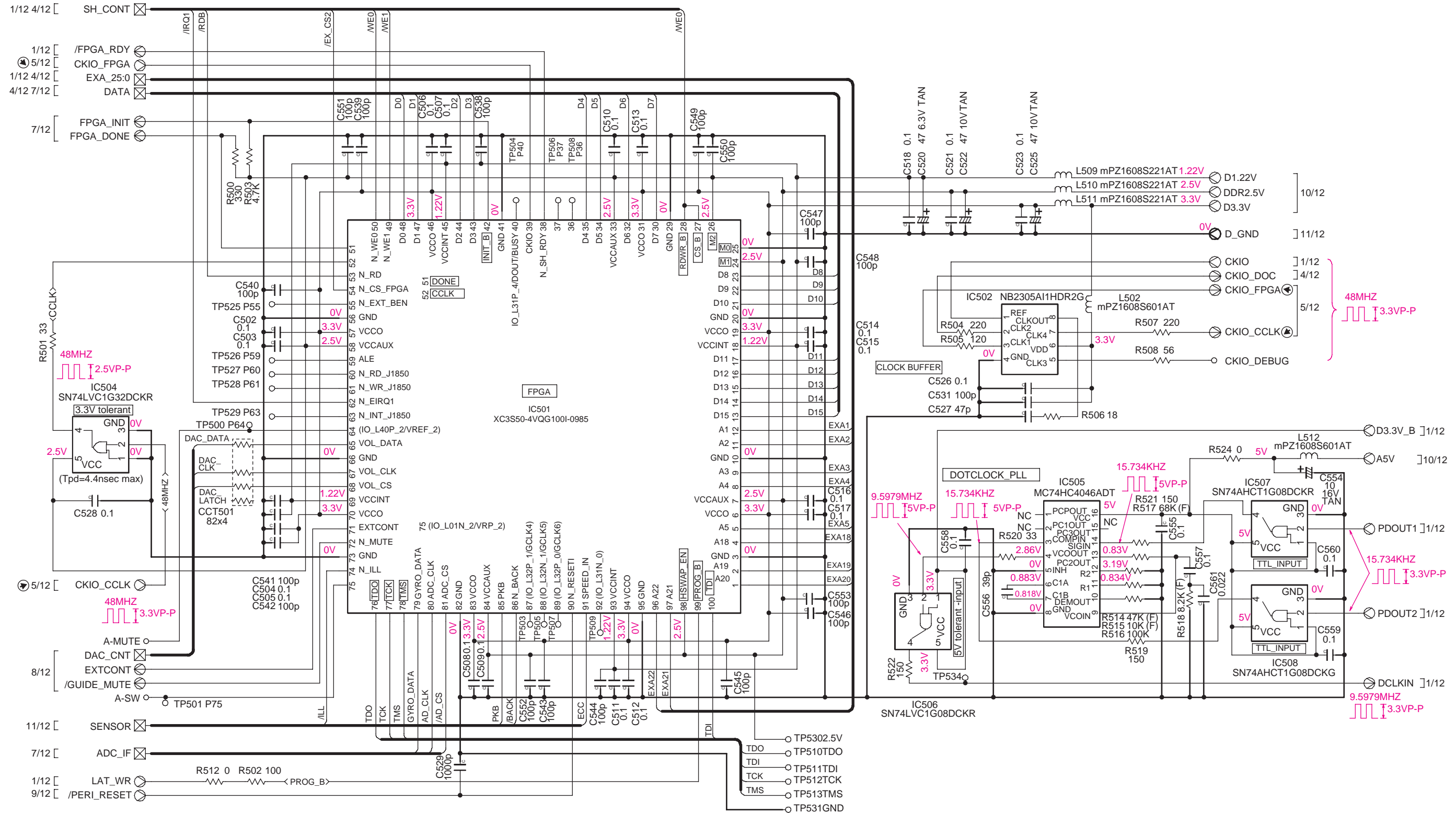


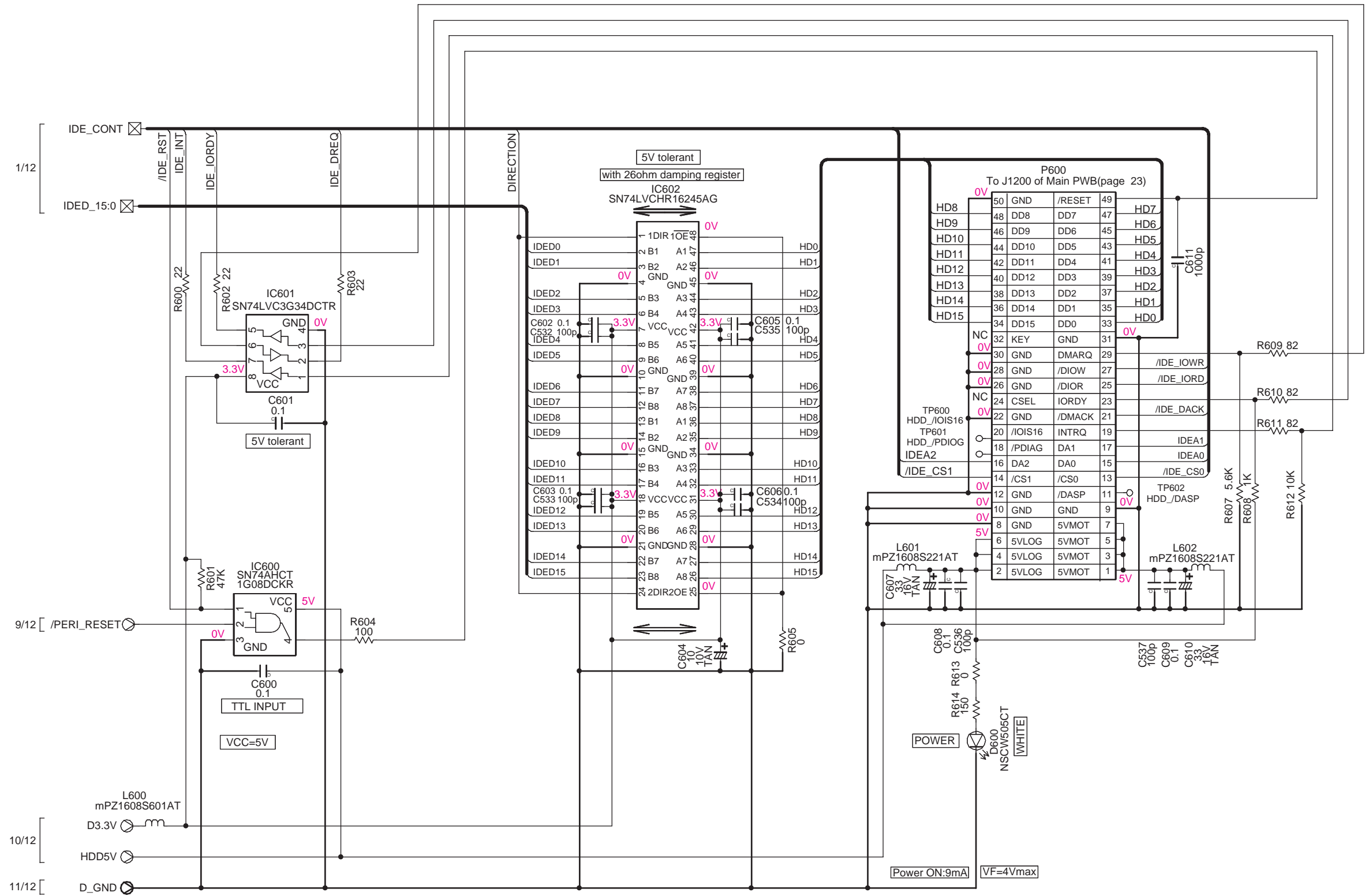
Main PWB(B1) section 4/12  
[ DOC / SRAM block ]

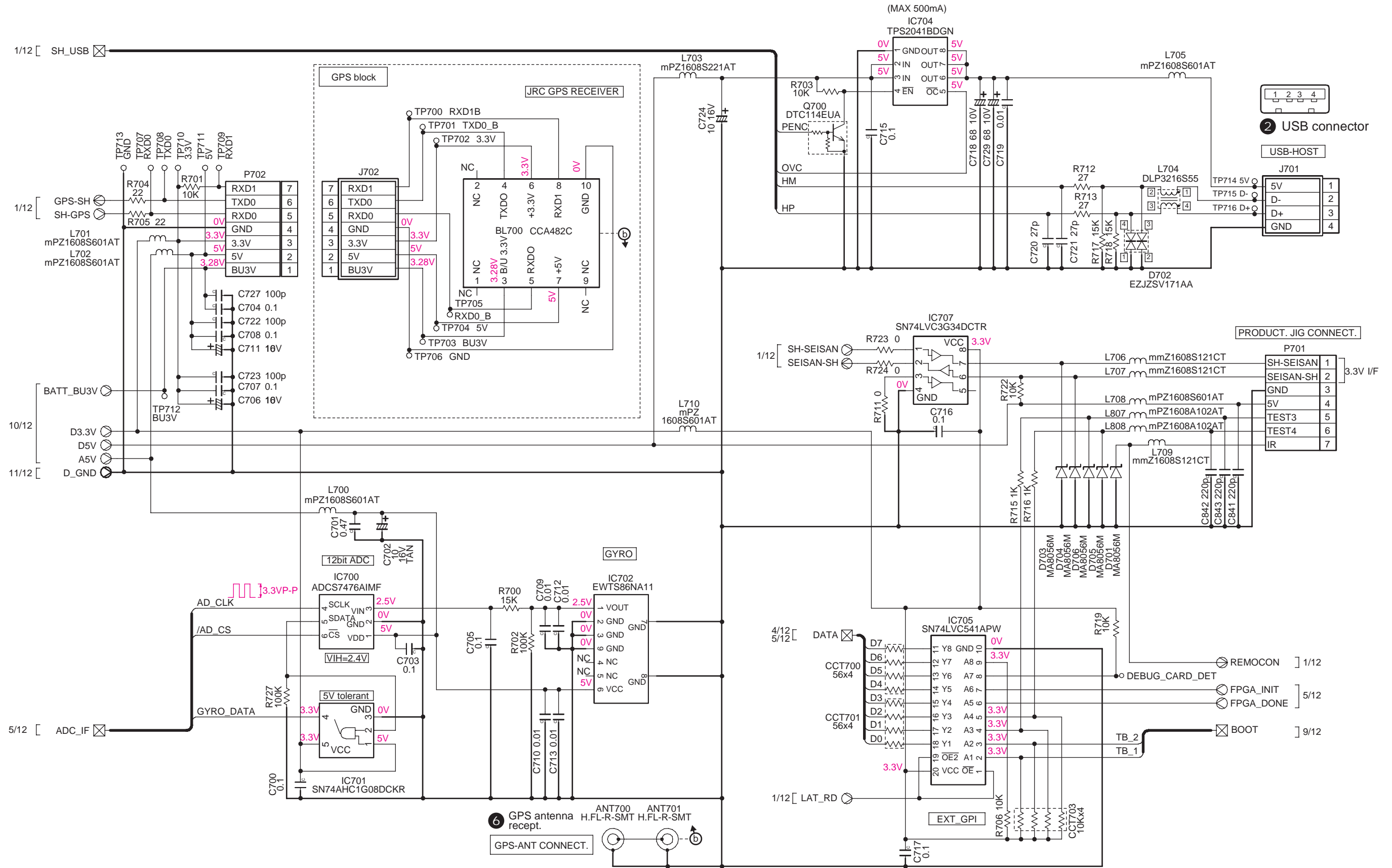


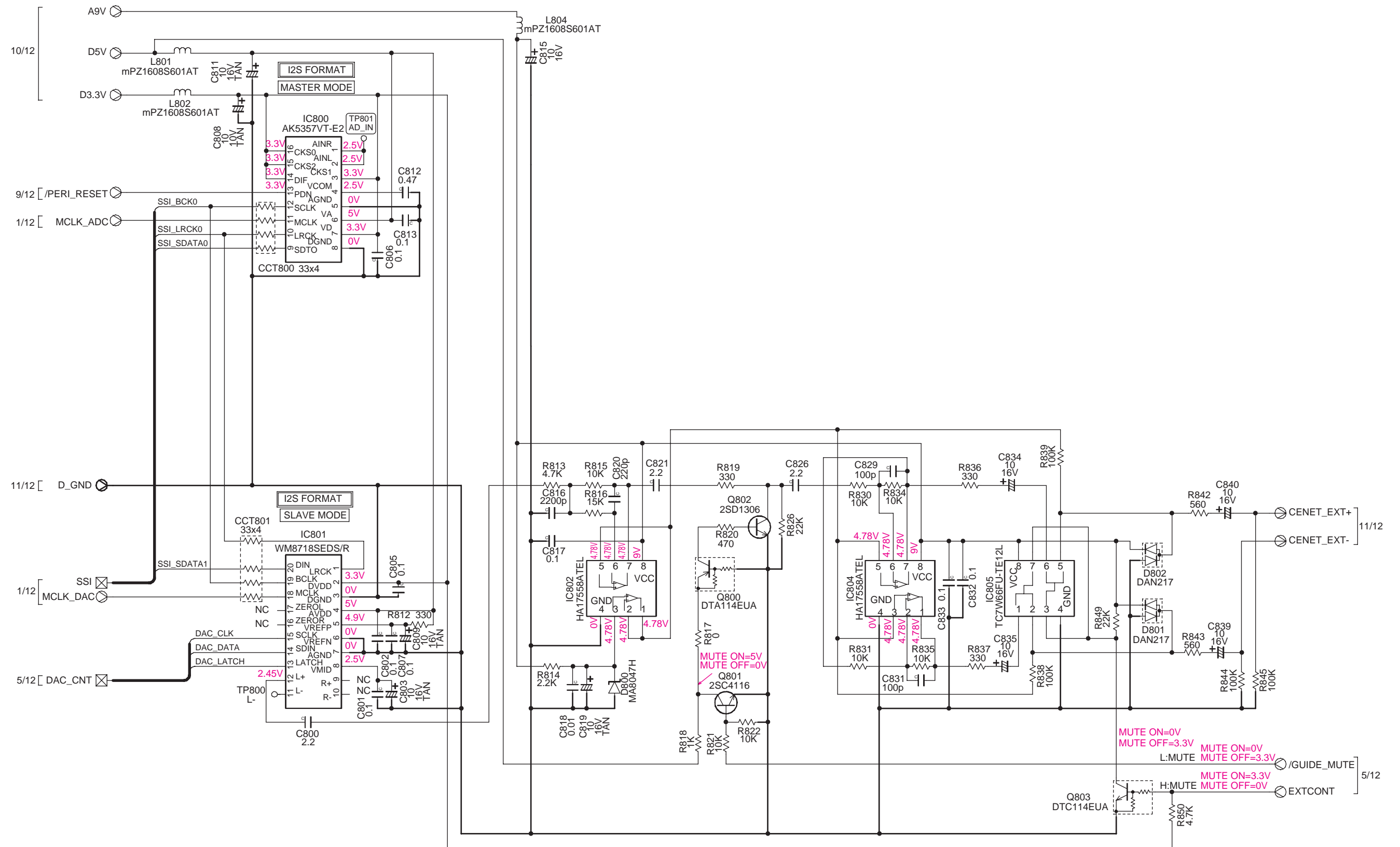


Main PWB(B1) section 5/12  
[ FPGA ]

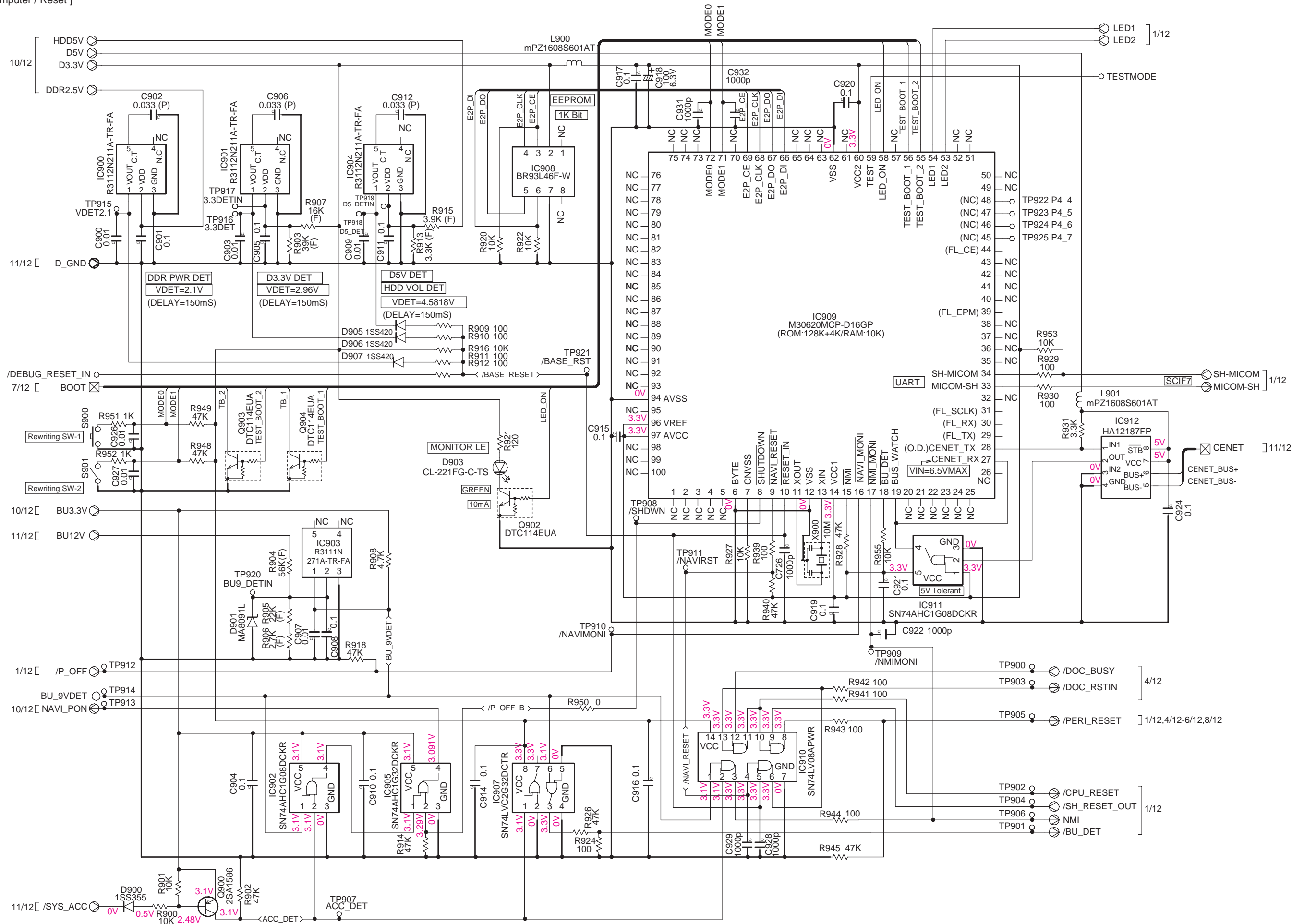






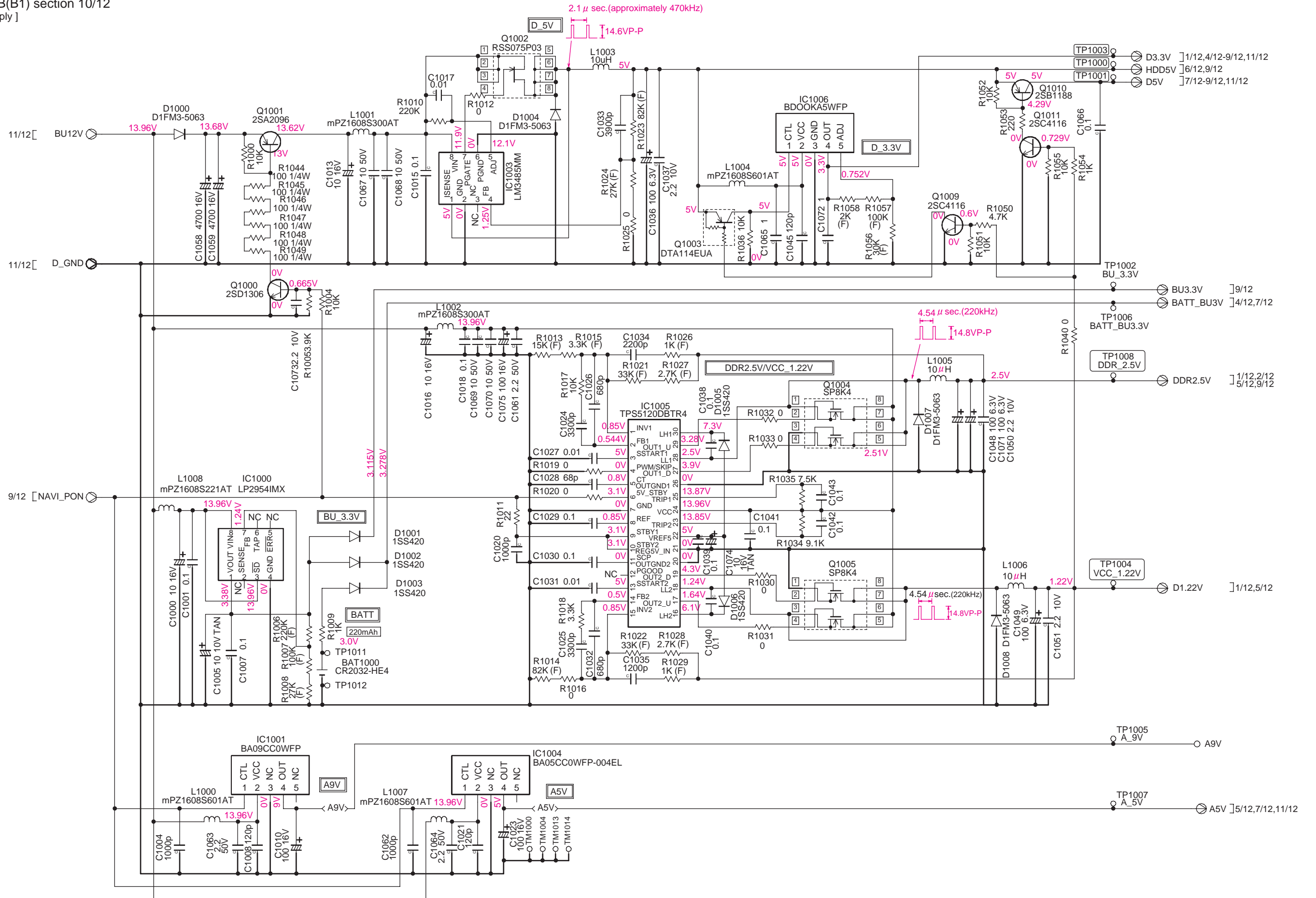


Main PWB(B1) section 9/12  
 [ Microcomputer / Reset ]

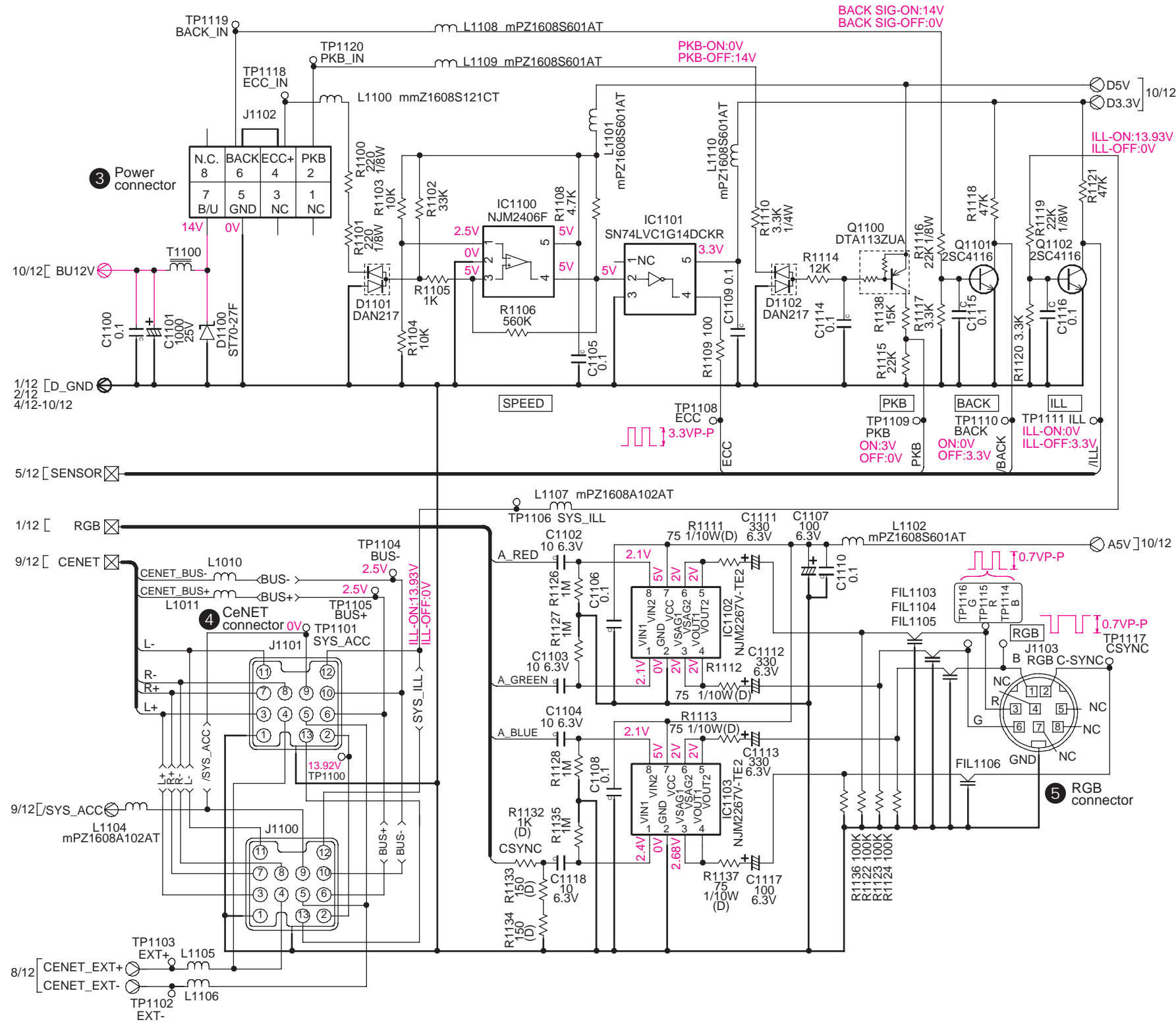




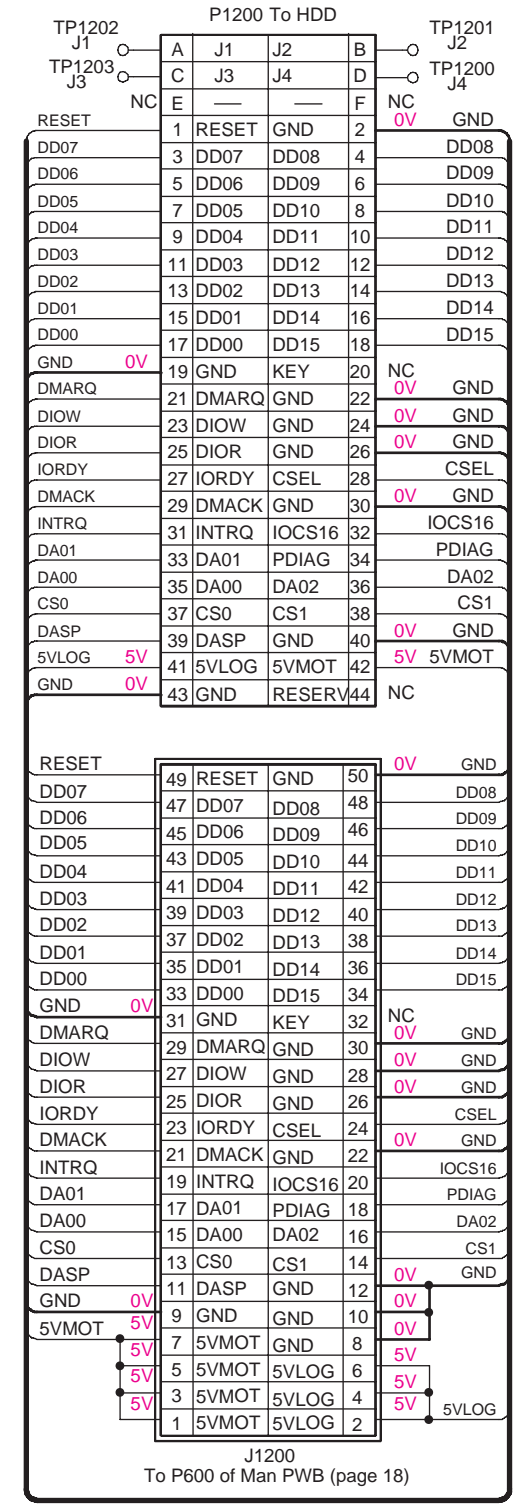
Main PWB(B1) section 10/12  
 [ Power supply ]



Main PWB(B1) section 11/12  
[ CeNET,RGB,Power connect. ]



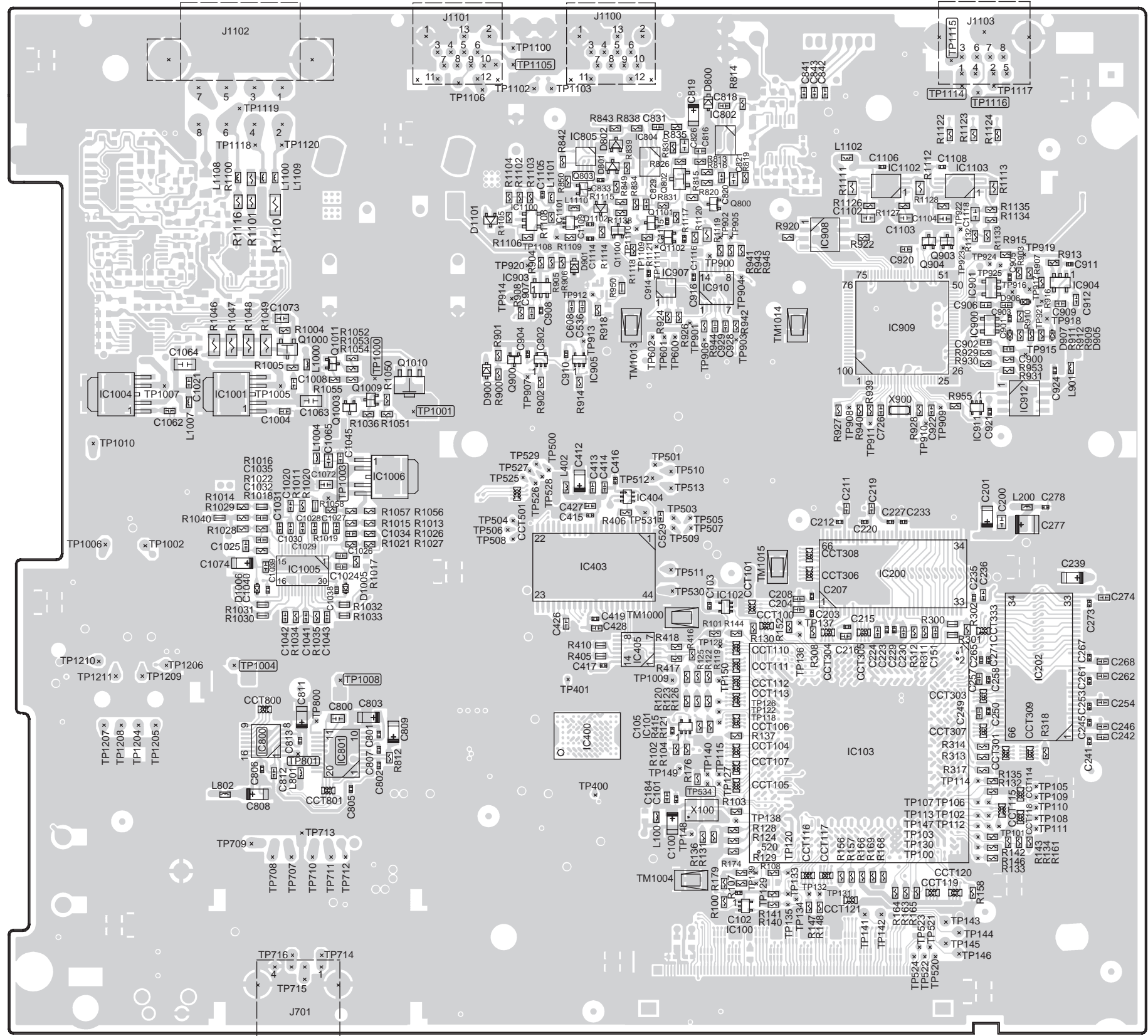
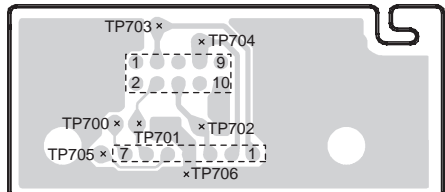
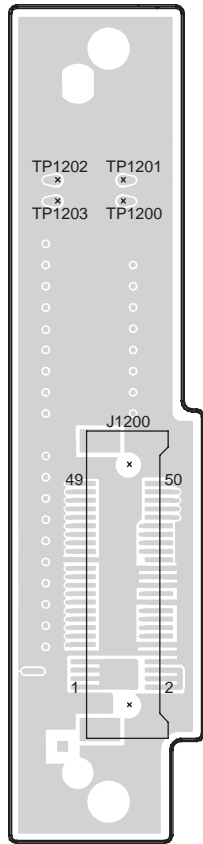
Main PWB(B1) section 12/12  
[ HDD connect. ]



# PRINTED WIRING BOARD

Main PWB(B1) section 1/2

Caution:  
 COMPONENT SIDE: Parts on the component side seen from the component side are indicated.  
 SOLDER SIDE: Parts on the solder side seen from the solder side are indicated.

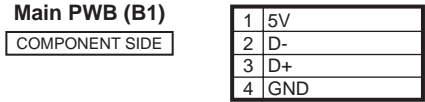
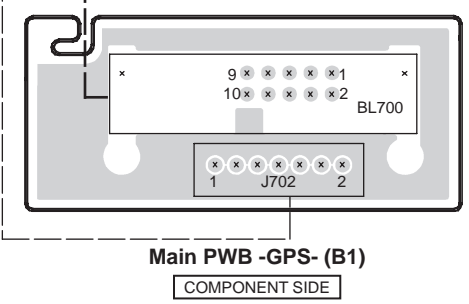
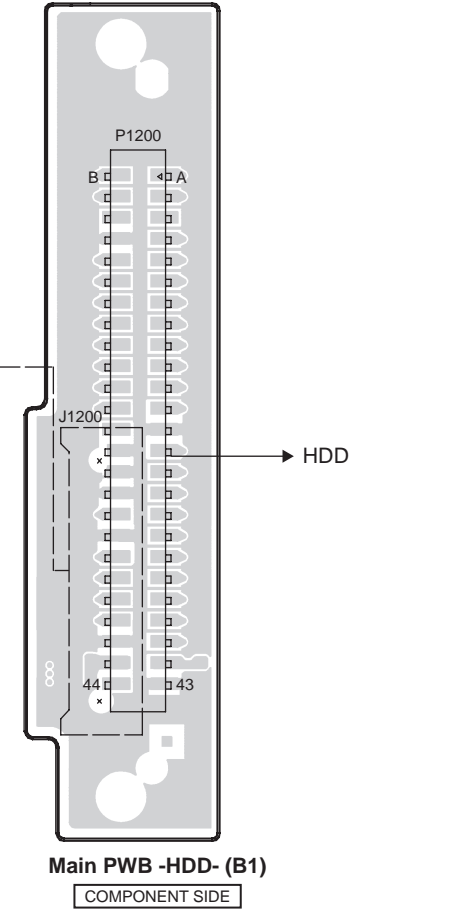
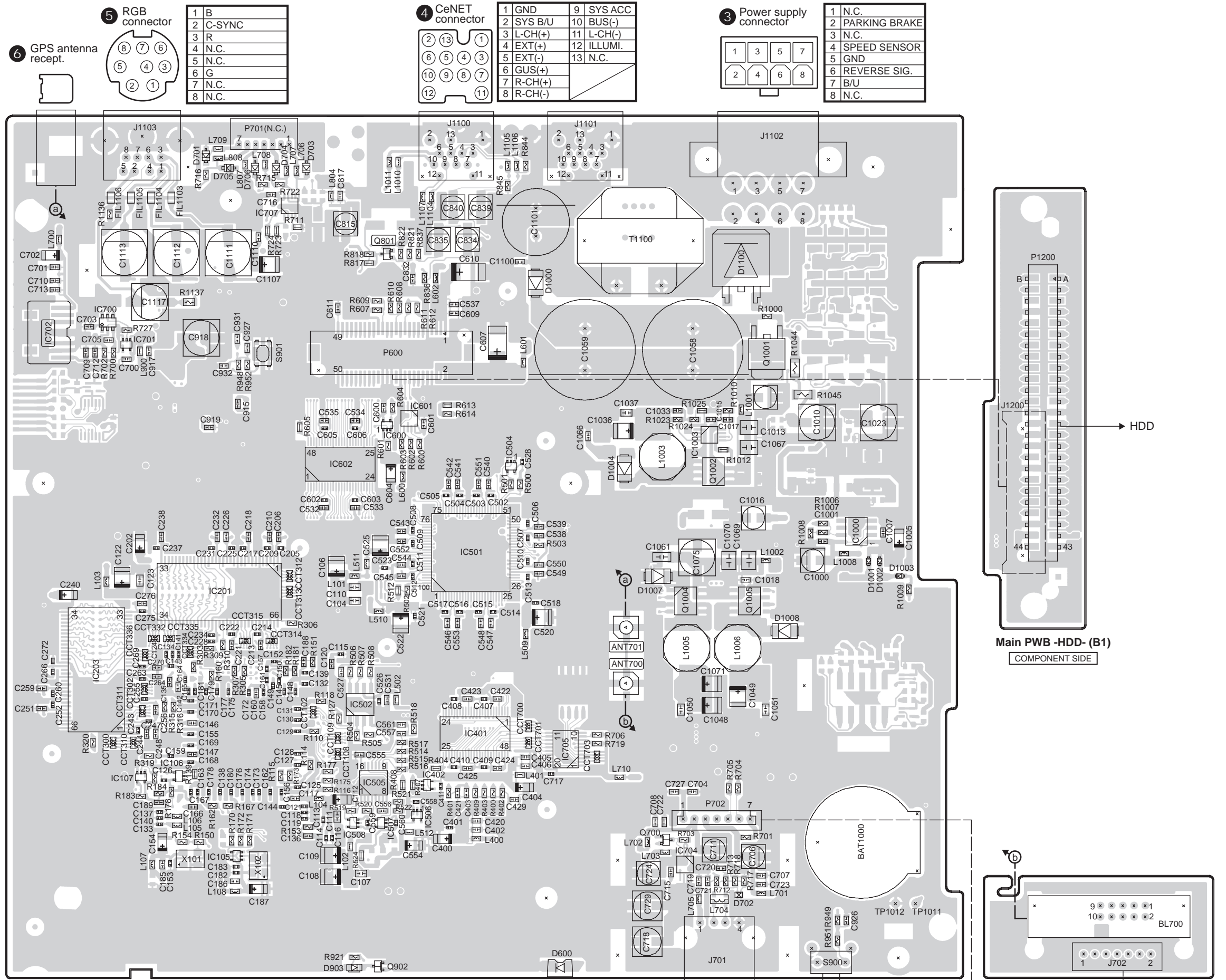


IC	Q	CHECK POINT (cf. page3)
		TP1115
		TP1105
		TP1114
		TP1116
IC802		
IC805	Q802	Q803
IC804	Q803	
IC1103	Q800	
IC1102	Q1304	
IC1100	Q1101	
IC1101	Q1100	
IC908	Q1102	
	Q903	
	Q904	
IC904		
IC901		
IC910		
IC903		
IC907		
IC900		
IC909		
IC902	Q1000	TP1000
IC905	Q900	
	Q1011	
IC1004	Q1010	
IC1001	Q1009	
IC912	Q1003	TP1001
IC911		
IC1006		TP1003
IC404		
IC403		
IC1005		
IC200		
IC102		
IC405		
IC202		TP1004
		TP1008
IC101		
IC400		
IC800		
IC103		
IC801		IC801
IC100		
		TP534



CHECK POINT  
(cf. page3)

Q IC  
 IC707  
 Q801  
 IC702  
 Q1001  
 IC601  
 IC600  
 IC1003  
 IC602  
 IC504  
 Q1002  
 IC1000  
 IC501  
 Q1004  
 Q1005  
 IC201  
 IC203  
 IC502  
 IC401  
 IC705  
 IC106  
 IC107  
 IC505  
 IC402  
 IC506  
 IC507  
 IC508  
 Q700  
 IC105  
 IC704  
 Q902



NAX970HD