

VISO THREE
CD Receiver

SERVICE MANUAL



VISO THREE
CD Receiver

SECTION 1

SUMMARY

CONTENTS

PRODUCT SAFETY SERVICING GUIDELINES	1-4
SERVICING PRECAUTIONS	1-5
* General Servicing Precautions	
* Insulation checking prodedure	
* Electrostatically Sensitive Devices	
SPECIFICATIONS	1-6
DISASSEMBLY	1-7
PRINCIPAL PART LOCATION	1-8
EXPLODED VIEW	1-9

PRODUCT SAFETY SERVICING GUIDELINES

CAUTION : DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY. NEVER PERFORM CUSTOMIZED INSTALLATIONS WITHOUT MANUFACTURER'S APPROVAL. UNAUTHORIZED MODIFICATIONS WILL NOT ONLY VOID THE WARRANTY, BUT MAY LEAD TO YOUR BEING LIABLE FOR ANY RESULTING PROPERTY DAMAGE OR USER INJURY.

SERVICE WORK SHOULD BE PERFORMED ONLY AFTER YOU ARE THOROUGHLY FAMILIAR WITH ALL OF THE FOLLOWING SAFETY CHECKS AND SERVICING GUIDELINES. TO DO OTHERWISE, INCREASES THE RISK OF POTENTIAL HAZARDS AND INJURY TO THE USER.

WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM AC LINE SHOCK.

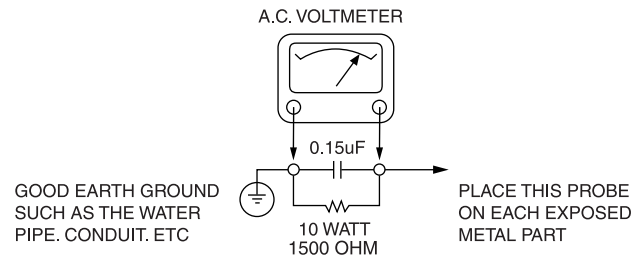
SAFETY CHECKS

AFTER THE ORIGINAL SERVICE PROBLEM HAS BEEN CORRECTED. A CHECK SHOULD BE MADE OF THE FOLLOWING.

SUBJECT : FIRE & SHOCK HAZARD

1. BE SURE THAT ALL COMPONENTS ARE POSITIONED IN SUCH A WAY AS TO AVOID POSSIBILITY OF ADJACENT COMPONENT SHORTS. THIS IS ESPECIALLY IMPORTANT ON THOSE MODULES WHICH ARE TRANSPORTED TO AND FROM THE REPAIR SHOP.
2. NEVER RELEASE A REPAIR UNLESS ALL PROTECTIVE DEVICES SUCH AS INSULATORS, BARRIERS, COVERS, SHIELDS, STRAIN RELIEFS, POWER SUPPLY CORDS, AND OTHER HARDWARE HAVE BEEN REINSTALLED PER ORIGINAL DESIGN. BE SURE THAT THE SAFETY PURPOSE OF THE POLARIZED LINE PLUG HAS NOT BEEN DEFEATED.
3. SOLDERING MUST BE INSPECTED TO DISCOVER POSSIBLE COLD SOLDER JOINTS, SOLDER SPLASHES OR SHARP SOLDER POINTS. BE CERTAIN TO REMOVE ALL LOOSE FOREIGN PARTICLES.
4. CHECK FOR PHYSICAL EVIDENCE OF DAMAGE OR DETERIORATION TO PARTS AND COMPONENTS. FOR FRAYED LEADS, DAMAGED INSULATION (INCLUDING AC CORD). AND REPLACE IF NECESSARY FOLLOW ORIGINAL LAYOUT, LEAD LENGTH AND DRESS.
5. NO LEAD OR COMPONENT SHOULD TOUCH A RECEIVING TUBE OR A RESISTOR RATED AT 1 WATT OR MORE. LEAD TENSION AROUND PROTRUDING METAL SURFACES MUST BE AVOIDED.
6. ALL CRITICAL COMPONENTS SUCH AS FUSES, FLAMEPROOF RESISTORS, CAPACITORS, ETC. MUST BE REPLACED WITH EXACT FACTORY TYPES, DO NOT USE REPLACEMENT COMPONENTS OTHER THAN THOSE SPECIFIED OR MAKE UNRECOMMENDED CIRCUIT MODIFICATIONS.
7. AFTER RE-ASSEMBLY OF THE SET ALWAYS PERFORM AN AC LEAKAGE TEST ON ALL EXPOSED METALLIC PARTS OF THE CABINET, (THE CHANNEL SELECTOR KNOB, ANTENNA TERMINALS. HANDLE AND SCREWS) TO BE SURE THE SET IS SAFET TO OPERATE WITHOUT DANGER OF ELECTRICAL SHOCK. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST USE AN AC VOLTMETER, HAVING 5000 OHMS PER VOLT OR MORE SENSITIVITY, IN THE FOLLOWING MANNER; CONNECT A 1500 OHM 10 WATT RESISTOR, PARALLELED BY A .15 MFD, 150V AC TYPE CAPACITOR BETWEEN A KNOWN GOOD EARTH GROUND (WATER PIPE, CONDUIT, ETC.) AND THE EXPOSED METALLIC PARTS, ONE AT A TIME.
MEASURE THE AC VOLTAGE ACROSS THE COMBINATION OF 1500 OHM RESISTOR AND .15 MFD CAPACITOR.
REVERSE THE AC PLUG AND REPEAT AC VOLTAGE MEASUREMENTS FOR EACH EXPOSED METALLIC PART.

VOLTAGE MEASURE MUST NOT EXCEED 75 VOLTS R.M.S. THIS CORRESPONDS TO 0.5 MILLIAMPS AC ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.



SUBJECT : GRAPHIC SYMBOLS



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

SUBJECT : TIPS ON PROPER INSTALLATION

1. NEVER INSTALL ANY PRODUCT IN A CLOSED-IN RECESS, CUBBYHOLE OR CLOSELY FITTING SHELF SPACE. OVER OR CLOSE TO HEAT DUCT, OR IN THE PATH OF HEATED AIR FLOW.
2. AVOID CONDITIONS OF HIGH HUMIDITY SUCH AS: OUTDOOR PATIO INSTALLATIONS WHERE DEW IS A FACTOR, NEAR STEAM RADIATORS WHERE STEAM LEAKAGE IS A FACTOR, ETC.
3. AVOID PLACEMENT WHERE DRAPERIES MAY OBSTRUCT REAR VENTING. THE CUSTOMER SHOULD ALSO AVOID THE USE OF DECORATIVE SCARVES OR OTHER COVERINGS WHICH MIGHT OBSTRUCT VENTILATION.
4. WALL AND SHELF MOUNTED INSTALLATIONS USING A COMMERCIAL MOUNTING KIT MUST FOLLOW THE FACTORY APPROVED MOUNTING INSTRUCTIONS A PRODUCT MOUNTED TO A SHELF OR PLATFORM MUST RETAIN ITS ORIGINAL FEET (OR THE EQUIVALENT THICKNESS IN SPACERS) TO PROVIDE ADEQUATE AIR FLOW ACROSS THE BOTTOM, BOLTS OR SCREWS USED FOR FASTENERS MUST NOT TOUCH ANY PARTS OR WIRING. PERFORM LEAKAGE TEST ON CUSTOMIZED INSTALLATIONS.
5. CAUTION CUSTOMERS AGAINST THE MOUNTING OF A PRODUCT ON SLOPING SHELF OR A TILTED POSITION, UNLESS THE PRODUCT IS PROPERLY SECURED.
6. A PRODUCT ON A ROLL-ABOUT CART SHOULD BE STABLE ON ITS MOUNTING TO THE CART. CAUTION THE CUSTOMER ON THE HAZARDS OF TRYING TO ROLL A CART WITH SMALL CASTERS ACROSS THRESHOLDS OR DEEP PILE CARPETS.
7. CAUTION CUSTOMERS AGAINST THE USE OF A CART OR STAND WHICH HAS NOT BEEN LISTED BY UNDERWRITERS LABORATORIES, INC. FOR USE WITH THEIR SPECIFIC MODEL OF TELEVISION RECEIVER OR GENERICALLY APPROVED FOR USE WITH T.V.'S OF THE SAME OR LARGER SCREEN SIZE.
8. CAUTION CUSTOMERS AGAINST THE USE OF EXTENSION CORDS, EXPLAIN THAT A FOREST OF EXTENSIONS SPROUTING FROM A SINGLE OUTLET CAN LEAD TO DISASTROUS CONSEQUENCES TO HOME AND FAMILY.

SERVICING PRECAUTIONS

CAUTION : Before servicing the A/V Receiver covered by this service data and its supplements and addends, read and follow the **SAFETY PRECAUTIONS**. **NOTE :** if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publication, always follow the safety precautions.

Remember Safety First:

General Servicing Precautions

1. Always unplug the A/V Receiver AC power cord from the AC power source before:
 - (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
 - (2) Disconnecting or reconnecting any internal electrical plug or other electrical connection.
 - (3) Connecting a test substitute in parallel with an electrolytic capacitor.**Caution :** A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
2. Do not spray chemicals on or near this A/V Receiver or any of its assemblies.
3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cottontipped swab, or comparable soft applicator.
Unless specified otherwise in this service data, lubrication of contacts is not required.
4. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.
5. Do not apply AC power to this A/V Receiver and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
6. Always connect test instrument ground lead to the appropriate ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter(500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1M-ohm.

Note 1 : Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical Es devices are integrated circuits and some field effect transistors and semiconductor chip components.

The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an antistatic solder removal device. Some solder removal devices not classified a "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freonpropelled chemicals. These can generate electrical charge sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Normally harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

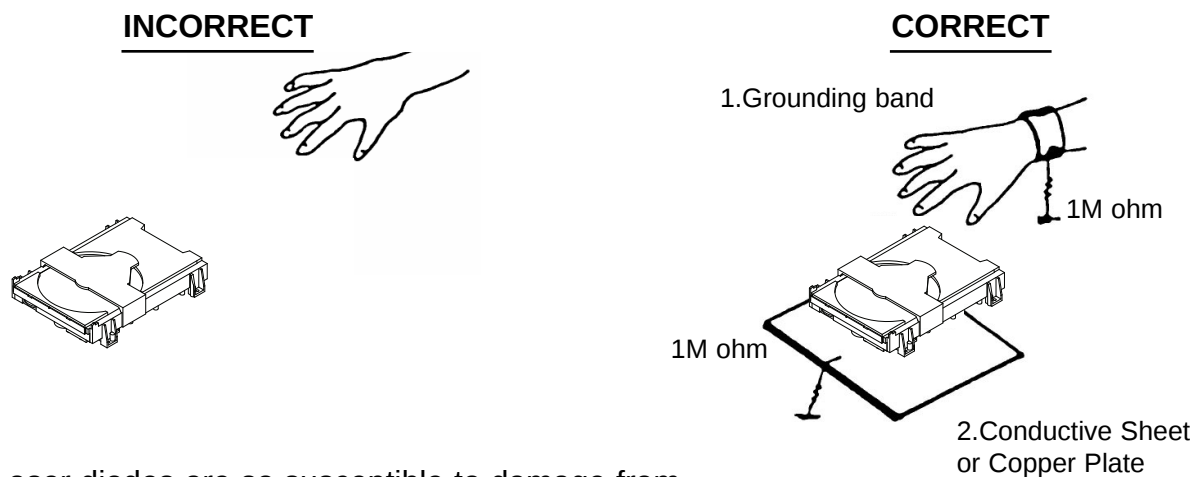
IMPORTANT VISO THREE MECHANISM INSTALLATION NOTES

INSTRUCTION FOR HANDLING CADVISOTHREEZA AS WELL AS THE OPTICAL BLOCK

Removal and installation of the CADVISOTHREEZA mechanism must be performed with the laser diode shorting pad shorted. Do not remove the FFC without firstly shorting the laser diode shorting pad. The laser diode must always be under load.

Electrostatic breakdown of the laser diode in the optical system block may occur due to a potential difference caused by electrostatic charge accumulated on clothing, human body, etc. A ground must be provided as follows to prevent any electrostatic charge during unpacking or repair work.

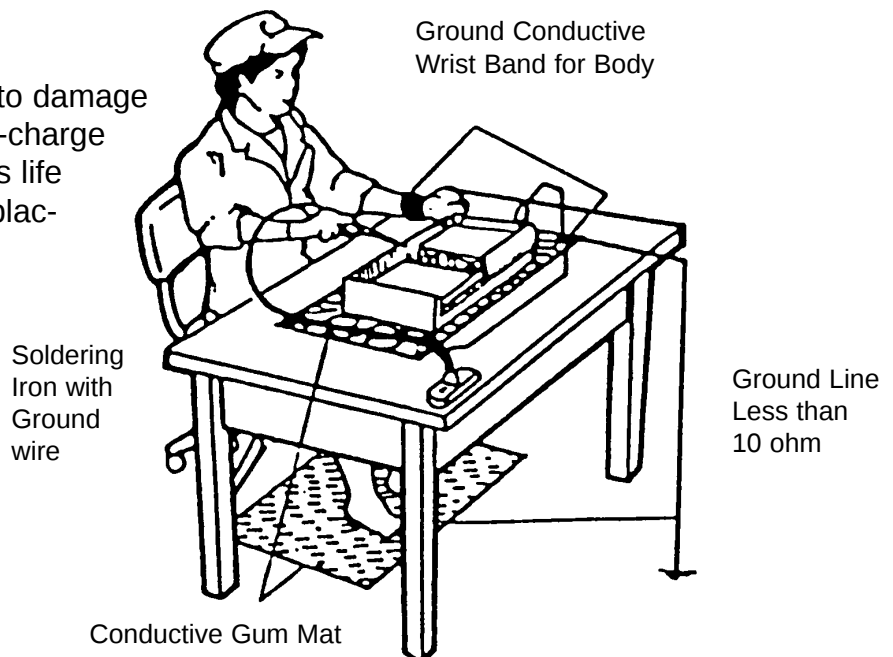
1. Ground for Human Body:
Be sure to wear a ground band (1M ohm) that is properly to remove any static electricity that may be charged on the body.
2. Ground for Work Bench:
Be sure to place a conductive sheet (1M ohm) or copper plate with proper grounding on the work bench or other surface on which the pick-up is to be placed.
3. Because the static electricity charge on the clothing does not discharge through the body grounding band, do not let clothing to get in contact with the mechanism or laser pick-up.



NOTE: Laser diodes are so susceptible to damage from static electricity that even if a static discharge does not ruin the diode, it can shorten its life or cause it to work improperly.

Caution:

Laser diodes are extremely susceptible to damage from static electricity. Even if a static discharge does not ruin the diode, it can shorten its life or cause it to work improperly. When replacing the pick-up, use a conductive mat, a grounded soldering iron, and so on, to protect the laser diode from static damage.



SPECIFICATIONS

AMPLIFIER SECTION

Continuous output power into 8ohms
: >50W(ref.rated THD, both channels driven)

Rated THD
: <0.01%(ref. 20Hz - 20kHz)

Signal/noise ratio
: >82dB(A-weighted, ref. 1W)
: >92dB(A-weighted, ref. 50W)

Frequency response
: 10Hz - 60kHz(ref.-3dB,1kHz=0dB)

Input sensitivity
: 280mV(ref.rated power)

Channel separation(1kHz) : >60dB
(10kHz) : >50dB

Headphone output
: 1.8V(ref. 1kHz 33 ohms termination)

Subwoofer output
: 2V(ref. 30Hz)

Tone Controls
Treble : ± 10 dB at 10 kHz
Bass : ± 10 dB at 100 Hz

AM SECTION

Usable Sensitivity : 35dBu

Signal/Noise Ratio : 30dB

Total Harmonic Distortion : 1%

IF Rejection(450kHz) : 40dB

Image Rejection : 25dB

Selectivity : 25dB

Frequency response
: 60Hz - 2.2kHz(400Hz=0dB, -6dB point)

Auto stop level : 55dBu

FM SECTION

Usable sensitivity(100.10MHz) : 15dBu

Signal/Noise ratio
: 60dB(60dBu IHF-WTD Mono)
: 55dB(60dBu IHF-WTD Stereo)

Frequency response
: ± 1 dB(20Hz - 15kHz, 60dBu)

Channel separation
: 30dB(ref. 1kHz)

Image rejection : 60dB

I.F.rejection(10.7MHz) : 70dB

AM suppression : 45dB

Total Harmonic Distortion - Mono : 0.3%
Stereo : 0.5%

Auto stop level : 25dBu

RDS sensitivity : 1.2%

CD SECTION

Output level : 2.8 ± 0.3 V

Frequency response
: ± 0.3 dB(ref. 0dB 17Hz - 1kHz)
: ± 0.5 dB(ref. 0dB 1kHz - 20kHz)

Total harmonic distortion
: <0.2% (ref. 1kHz)

Signal/Noise ratio
: 60dB(A-weighted, ref. 1kHz)

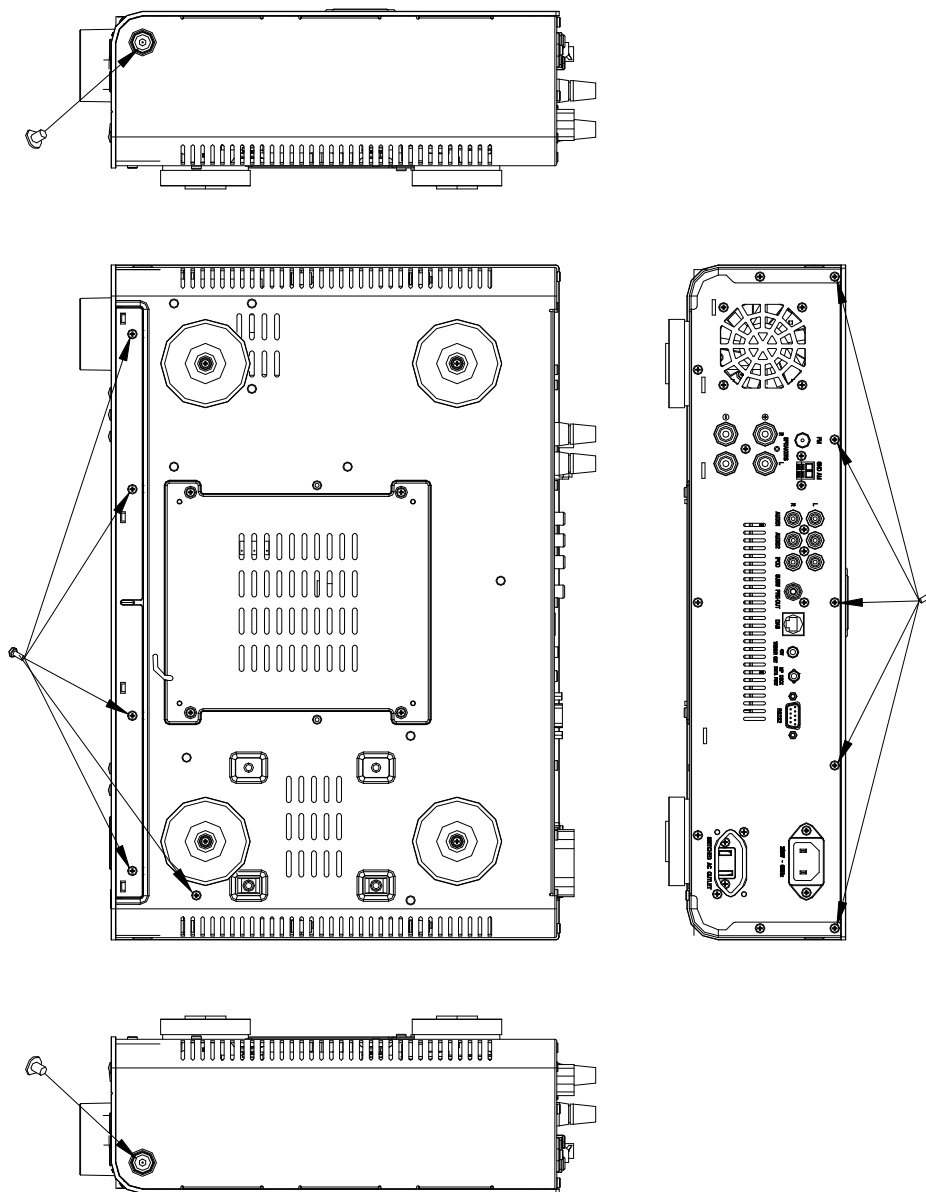
Channel balance
: ± 0.5 dB(ref. 0dB, 1kHz)

Dynamic range : >70dB

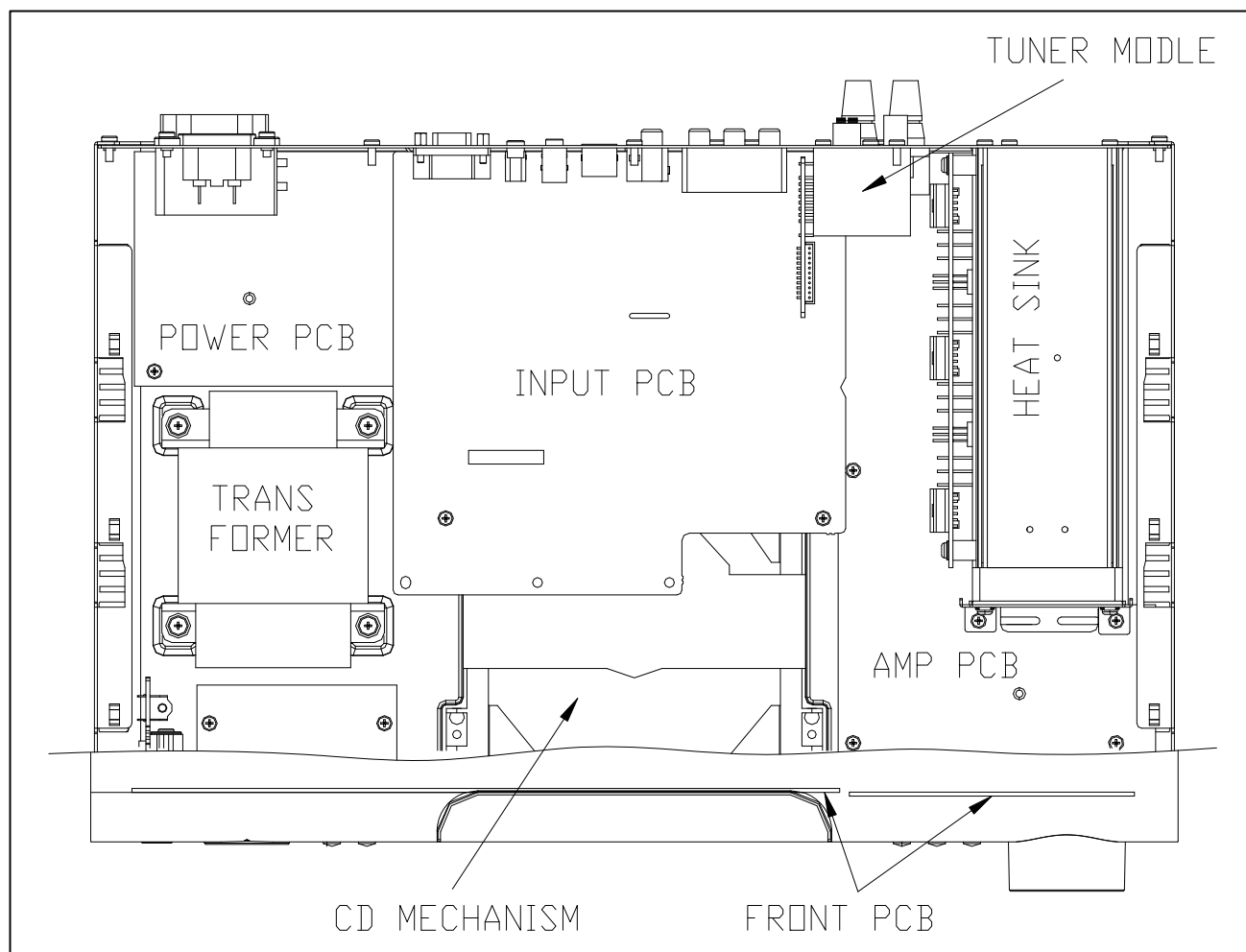
Channel separation : >55dB

De-emphasis
: -20 ± 0.3 dB(ref. 0dB 4kHz)

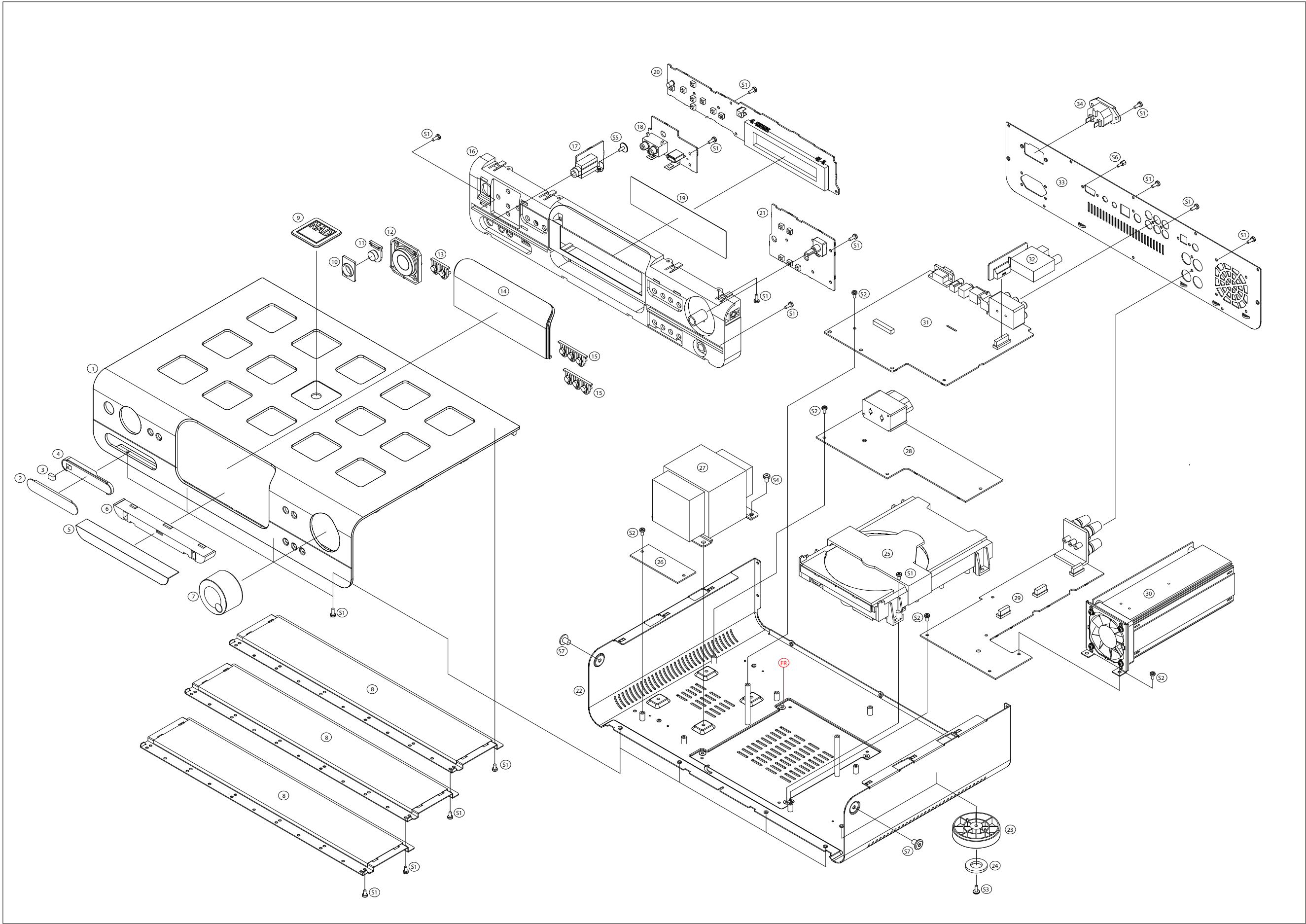
DISASSEMBLY



PRINCIPAL PARTS LOCATION



VISOTHREE C-VERSION (EURO) EXPLODED VIEW



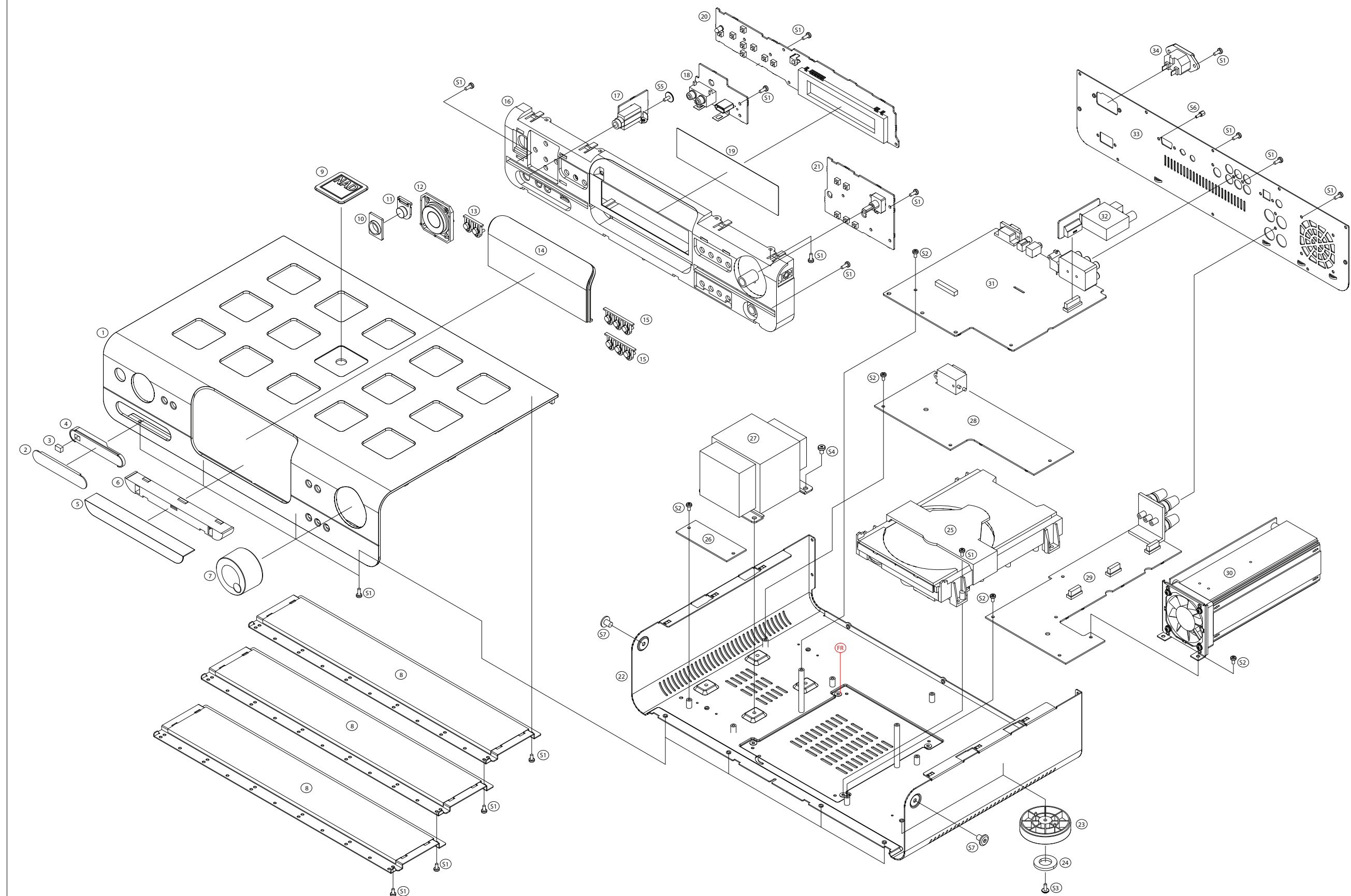
VISOTHREE C-VERSION (EURO) EXPLODED VIEW PARTS LIST

NO.	PARTS NO.	DESCRIPTION	QTY	A/S PART
1	CKM1A239ZC63	PANEL , AL	1	O.K
2	CGX1A397ZC64	ORNAMENT , COVER	1	O.K
3	CJC1A008	MAGNET , BASE	1	O.K
4	CGR2A439B29	COVER , JACK	1	O.K
5	CGX1A396C69	ORNAMENT , DOOR	1	O.K
6	CGR1A438B29	DOOR	1	O.K
7	CGK1A127ZA	VOLUME KNOB ASS'Y	1	O.K
8	CGG2A024ZA	GRILL ASS'Y	3	O.K
9	CGB1A204Z	BADGE , NAD	1	O.K
10	CGL1A267Z	INDICATOR , RING	1	O.K
11	CBT1A1058ZA	POWER KNOB ASS'Y	1	O.K
12	CGK1A126ZA	FUNCTION KNOB ASS'Y	1	O.K
13	CBT2A1086B34	KNOB , MENU	1	O.K
14	CGU1A411A28	WINDOW	1	O.K
15	CBT2A1087B34	KNOB , MODE	2	O.K
16	CGW3A449B34	PANEL , SUB	1	O.K
17	COP12349B-1	PHONE PCB ASS'Y	1	N.A
18	COP12349B-2	USB PCB ASS'Y	1	N.A
19	CMZ1A131Z	FILTER , FIP	1	O.K
20	COP12349B-4	FRONT PCB ASS'Y	1	O.K
21	COP12349B-3	VOLUME PCB ASS'Y	1	N.A
22	CUA1A326B36	CHASSIS , BOTTOM	1	O.K
23	CKL1A095H61	FOOT	4	O.K
24	CHG1A297	RUBBER , FOOT	4	O.K
25	CADVISOTHREEZA	MECHA ASS'Y	1	O.K
26	COP12351B-3	WAFER PCB ASS'Y	1	N.A
27		TRANS , POWER	1	O.K
28	COP12351B-1	POWER PCB ASS'Y	1	N.A
29	COP12351B-2	AMP PCB ASS'Y	1	O.K
30	CMYVISOTHREE	HEAT SINK ASS'Y	1	O.K
31	COP12350B-1	INPUT PCB ASS'Y	1	O.K
32	COP12350B-2	TUNER PCB ASS'Y	1	N.A
33	CKF1A422ZK1	PANEL , REAR	1	O.K
34		INNET , AC	1	O.K
35	CHG1A113	RUBBER	2	O.K

NO.	PARTS NO.	DESCRIPTION	QTY	A/S PART
S1	CTB3+8JFZR	SCREW	79	O.K
S2	CTB3+8FFZR	SCREW	11	O.K
S3	CTW3+8JFZR	SCREW	4	O.K
S4	CHD1A023R	SCREW	4	O.K
S5	CTWS3+10GR	SCREW	1	O.K
S6	CHD1A025R	SCREW , RS232C	2	O.K
S7	CHD1A062GFC	SCREW , SPECIAL	2	O.K

(FR) Use as many Fibre Washers as needed to align the mechanism to the fascia and align the keyboards to the sub-fascia. Part number CNW4A028.

VISOTHREE AH-VERSION (NORTH AMERICAN) EXPLODED VIEW



VISOTHREE AH-VERSION (NORTH AMERICAN) EXPLODED VIEW PARTS LIST

NO.	PARTS NO.	DESCRIPTION	QTY	A/S PART
1	CKM1A239ZC63	PANEL , AL	1	O.K
2	CGX1A397ZC64	ORNAMENT , COVER	1	O.K
3	CJC1A008	MAGNET , BASE	1	O.K
4	CGR2A439B29	COVER , JACK	1	O.K
5	CGX1A396C69	ORNAMENT , DOOR	1	O.K
6	CGR1A438B29	DOOR	1	O.K
7	CGK1A127ZA	VOLUME KNOB ASS'Y	1	O.K
8	CGG2A024ZA	GRILL ASS'Y	3	O.K
9	CGB1A204Z	BADGE , NAD	1	O.K
10	CGL1A267Z	INDICATOR , RING	1	O.K
11	CBT1A1058ZA	POWER KNOB ASS'Y	1	O.K
12	CGK1A126ZA	FUNCTION KNOB ASS'Y	1	O.K
13	CBT2A1086B34	KNOB , MENU	1	O.K
14	CGU1A411A28	WINDOW	1	O.K
15	CBT2A1087B34	KNOB , MODE	2	O.K
16	CGW3A449B34	PANEL , SUB	1	O.K
17	COP12349C-1	PHONE PCB ASS'Y	1	N.A
18	COP12349C-2	USB PCB ASS'Y	1	N.A
19	CMZ1A131Z	FILTER , FIP	1	O.K
20	COP12349C-4	FRONT PCB ASS'Y	1	O.K
21	COP12349C-3	VOLUME PCB ASS'Y	1	N.A
22	CUA1A326B36	CHASSIS , BOTTOM	1	O.K
23	CKL1A095H61	FOOT	4	O.K
24	CHG1A297	RUBBER , FOOT	4	O.K
25	CADVISOTHREEZA	MECHA ASS'Y	1	O.K
26	COP12351C-3	WAFER PCB ASS'Y	1	N.A
27		TRANS , POWER	1	O.K
28	COP12351C-1	POWER PCB ASS'Y	1	N.A
29	COP12351C-2	AMP PCB ASS'Y	1	O.K
30	CMYVISOTHREE	HEAT SINK ASS'Y	1	O.K
31	COP12350C-1	INPUT PCB ASS'Y	1	O.K
32	COP12350C-2	TUNER PCB ASS'Y	1	N.A
33	CKF2A422YK1	PANEL , REAR	1	O.K
34		INNET , AC	1	O.K
35	CHG1A113	RUBBER	2	O.K

NO.	PARTS NO.	DESCRIPTION	QTY	A/S PART
S1	CTB3+8JFZR	SCREW	79	O.K
S2	CTB3+8FFZR	SCREW	11	O.K
S3	CTW3+8JFZR	SCREW	4	O.K
S4	CHD1A023R	SCREW	4	O.K
S5	CTWS3+10GR	SCREW	1	O.K
S6	CHD1A025R	SCREW , RS232C	2	O.K
S7	CHD1A062GFC	SCREW , SPECIAL	2	O.K

(FR) Use as many Fibre Washers as needed to align the mechanism to the fascia and align the keyboards to the sub-fascia. Part number CNW4A028.

SECTION 2
ELECTRICAL CONTENTS

CONTENTS

IC BLOCK DIAGRAMS & PIN DESCRIPTION2-2

SPECIAL FUNTION KEY..... 2-36

TROUBLESHOOTING..... 2-37

DIAGRAM..... 2-53

1. BLOCK DIAGRAM 2-53

2. WIRING DIAGRAM..... 2-55

3. SCHEMATIC DIAGRAM..... 2-57

 • FRONT PART 2-57

 • CD & MCU PART..... 2-59

 • INPUT PART..... 2-61

 • POWER PART..... 2-63

 • AMP PART..... 2-65

4. PRINTED CIRCUIT BOARDS 2-67

 • FRONT BOARD..... 2-67

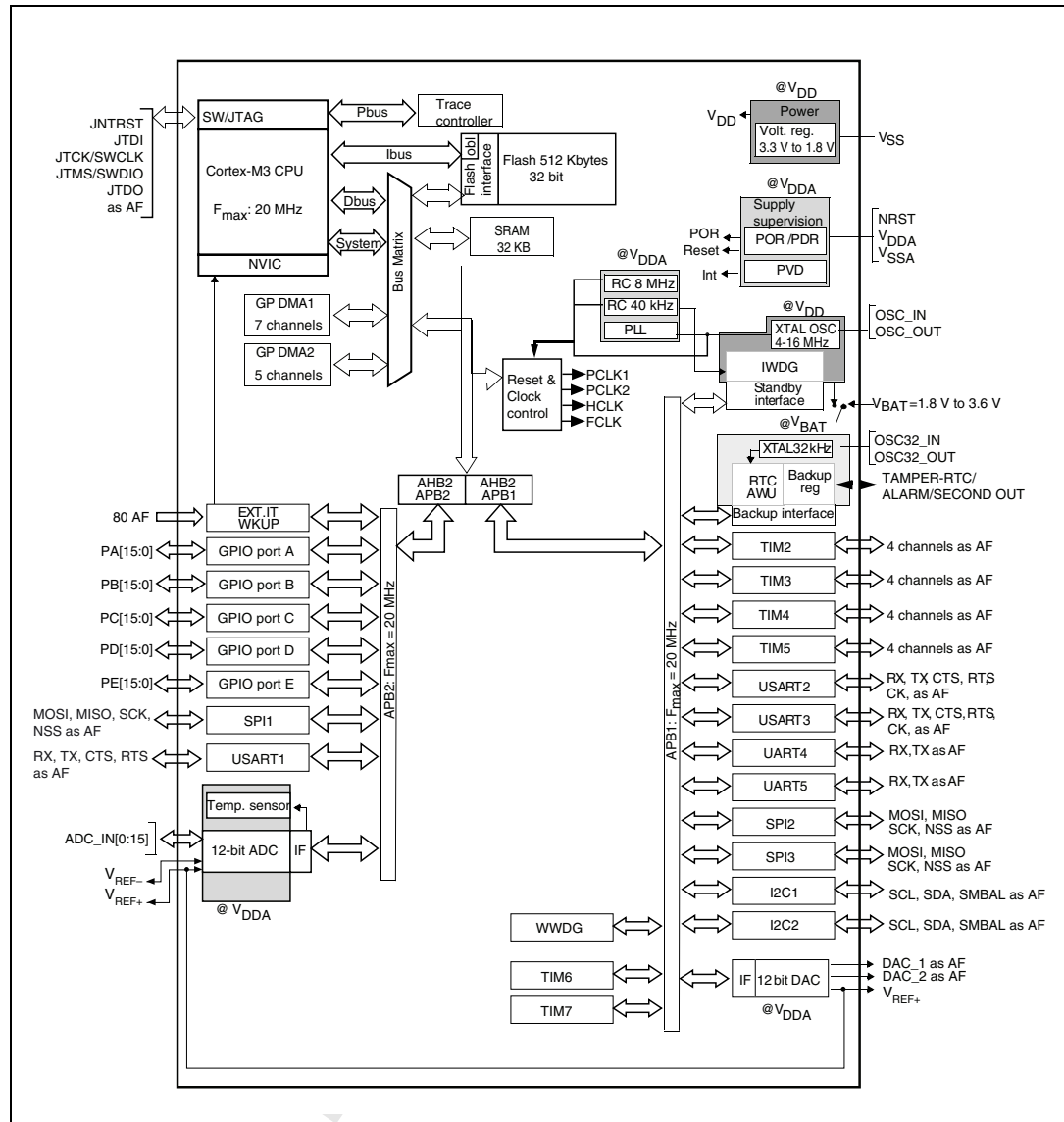
 • INPUT BOARD..... 2-69

 • AMP & POWER BOARD..... 2-73

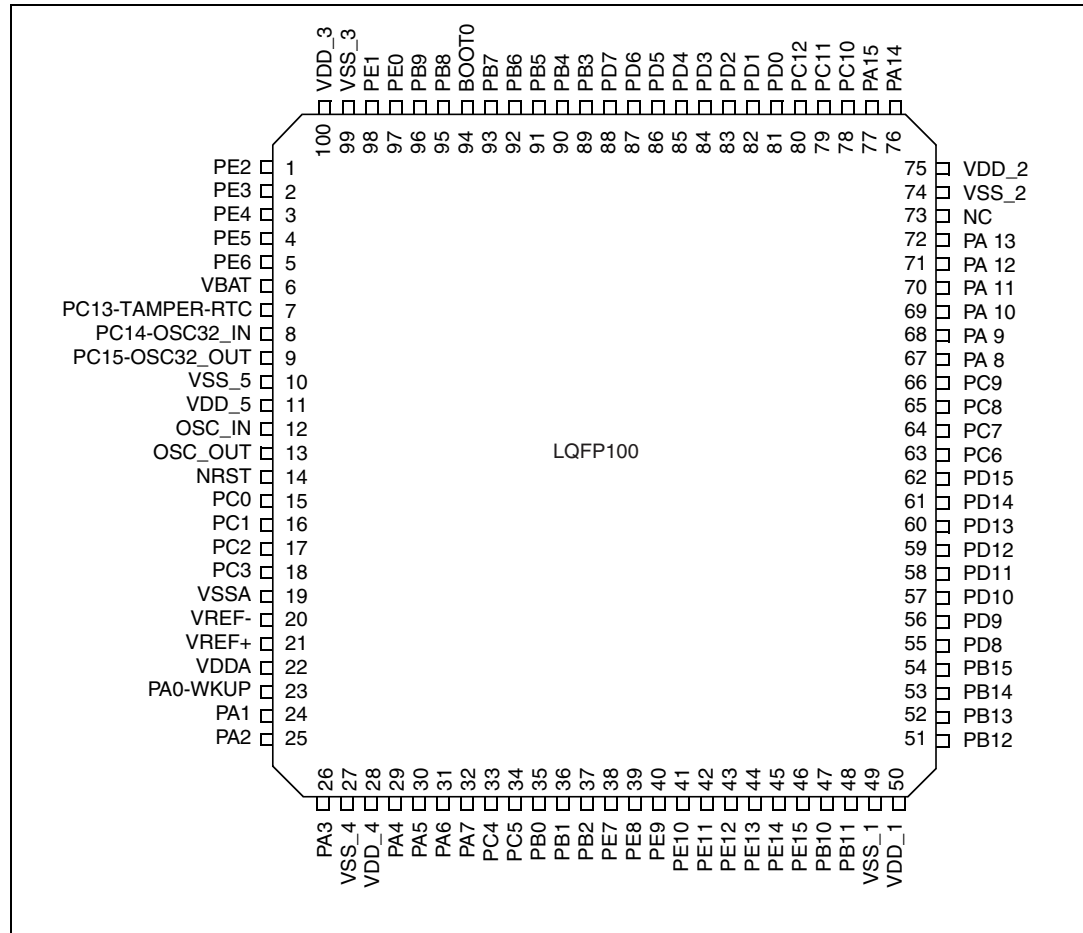
IC BLOCK DIAGRAMS & PIN DESCRIPTION

MCU(STM32F100VCT6) : IC81

BLOCK DIAGRAM



PIN ASSIGNMENT



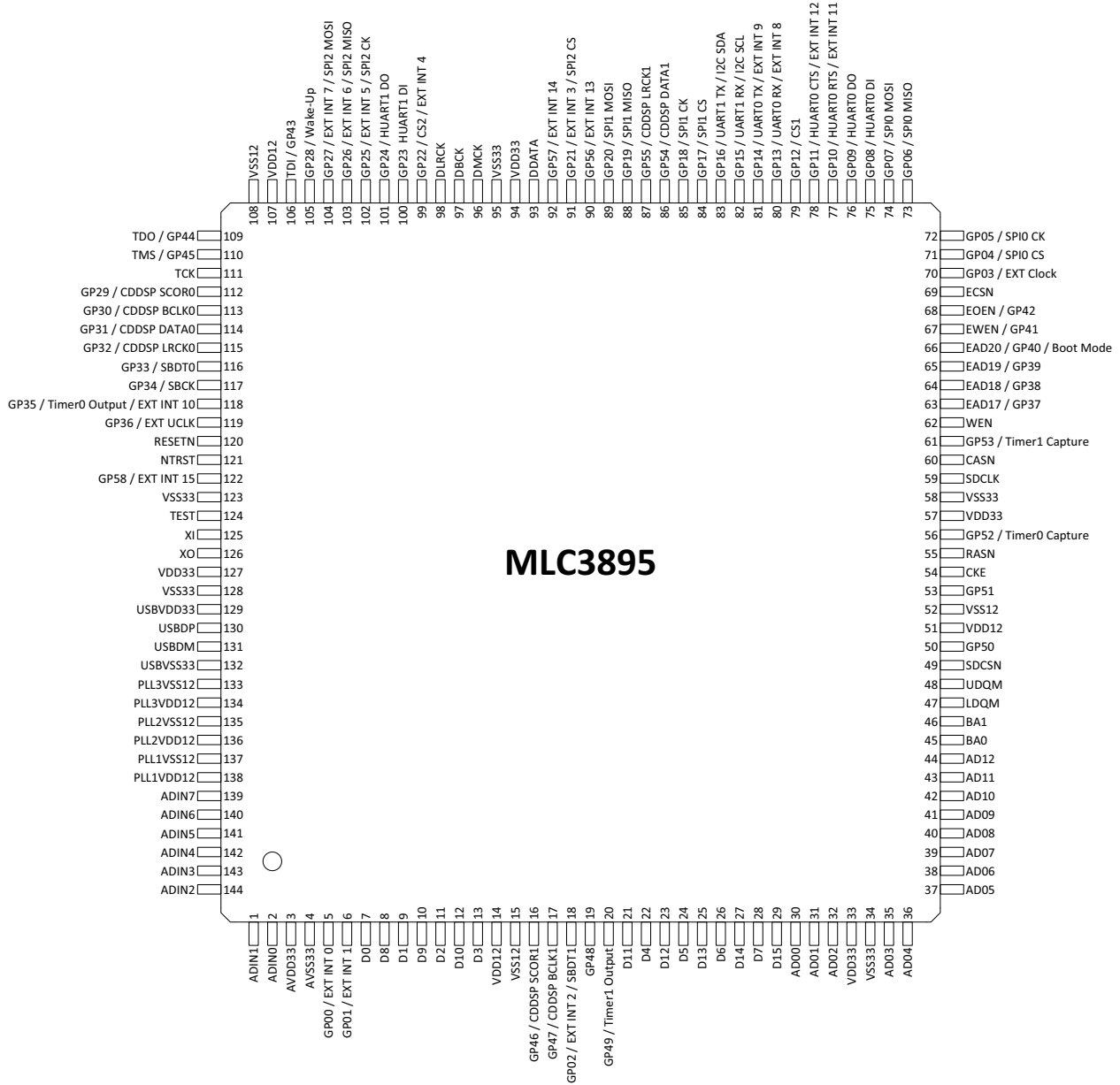
I.C PIN DESCRIPTION (IC, FLASH-u COM : STM32F100VCT6)			
PIN NO	PIN NAME	I/O	FUNCTION
1	PE2	I	JOG A1 (UP)
2	PE3	I	JOG A1 (DOWN)
3	PE4	–	TRACED1
4	PE5	–	TRACED2
5	PE6	–	TRACED3
6	VBAT	–	–
7	PC13	–	TAMPER-RTC
8	PC14	–	OSC32_IN
9	PC15	–	OSC32_OUT
10	VSS_5	–	GND
11	VDD_5	–	3.3V
12	OSC_IN	I	OSC IN
13	OSC_OUT	O	OSC OUT
14	NRST	–	RESET #
15	PC0	I	Key1
16	PC1	I	key2
17	PC2	I	key3
18	PC3	I	Mec_AD
19	VSSA	–	GND
20	VREF–	–	VREF–
21	VREF+	–	VREF+
22	VDDA	–	3.3V
23	PA0	I	POWER_SW/WAKEUP
24	PA1	–	–
25	PA2	O	MCS_TX
26	PA3	I	MCS_RX
27	VSS_4	–	GND
28	VDD_4	–	3.3V
29	PA4	O	CODEC_CS
30	PA5	O	CODEC_CLK
31	PA6	I	CODEC_DIN
32	PA7	O	CODEC_DOUT
33	PC4	I	Option 1
34	PC5	I	Option 2
35	PB0	–	–
36	PB1	O	CODEC_RESET
37	PB2/BOOT1	–	BOOT1 #
38	PE7	–	–
39	PE8	O	FUNC_MUTE2
40	PE9	O	FUNC_MUTE

41	PE10	O	Sub_Mute
42	PE11	I	DAB_Detect
43	PE12	–	–
44	PE13	O	SPK_ON
45	PE14	O	Tuner Mute
46	PE15	I	USB_OC
47	PB10	O	DAB_TX
48	PB11	I	DAB_RX
49	VSS_1	–	GND
50	VDD_1	–	3.3V
51	PB12	O	VFD_CE
52	PB13	O	VFD_CLK
53	PB14	O	USB_PDN(Power DN)
54	PB15	O	VFD_DATA
55	PD8	O	VFD_BLK
56	PD9	–	–
57	PD10	I	Short_Protect
58	PD11	I	BACK_UP
59	PD12	I	DC&THER_Protect
60	PD13	I	HP_IN
61	PD14	–	–
62	PD15	–	–
63	PC6	–	–
64	PC7	O	EVOL_LATCH
65	PC8	O	EVOL_CLK
66	PC9	O	EVOL_DATA
67	PA8	–	–
68	PA9	O	RS232_TX
69	PA10	I	RS232_RX
70	PA11	–	–
71	PA12	–	–
72	PA13/JTMS	–	JTAG
73	Not Connect	–	–
74	VSS_2	–	GND
75	VDD_2	–	3.3V
76	PA14/JTCK	–	JTAG
77	PA15/JTDI	–	JTAG
78	PC10	–	Power ON
79	PC11	–	Clk_sel
80	PC12	–	–
81	PD0	O	MCS RESET
82	PD1	–	–
83	PD2	–	–
84	PD3	O	DC-TRIGGER ON/OFF

85	PD4	–	–
86	PD5	–	–
87	PD6	–	–
88	PD7	–	–
89	PB3/JTDO	–	JTAG
90	PB4/JNTRST	–	JTAG
91	PB5	I	Power Protect
92	PB6	O	EEPROM_CLK
93	PB7	I/O	EEPROM_DATA
94	BOOT0	–	BOOT0 #
95	PB8	I	REMOTE_IN
96	PB9	–	–
97	PE0	O	ST-BY Orange
98	PE1	O	ST-BY Blue
99	VSS_3	–	GND
100	VDD_3	–	3.3V

SYSTEM CONTROLLOR(MLC3895144LQFP) : IC82

PIN CONFIGURATION



PIN DESCRIPTION

Pin	Name	Type	Description	Alternative Function
1	ADIN1	I	ADC analog input[1]	
2	ADIN0	I	ADC analog input[0]	
3	AVDD33	P	ADC Analog Power supply (3.3V)	
4	AVSS33	P	ADC Analog Ground	
5	GP00	BD	General Purpose IO 00	External Interrupt 0
6	GP01	BD	General Purpose IO 01	External Interrupt 1
7	D0	B	External SDRAM data bus [0]	External program data bus [0]
8	D8	B	External SDRAM data bus [8]	External program data bus [8]
9	D1	B	External SDRAM data bus [1]	External program data bus [1]
10	D9	B	External SDRAM data bus [9]	External program data bus [9]
11	D2	B	External SDRAM data bus [2]	External program data bus [2]
12	D10	B	External SDRAM data bus [10]	External program data bus [10]
13	D3	B	External SDRAM data bus [3]	External program data bus [3]
14	VDD12	P	Digital power supply (1.2V)	
15	VSS12	P	Digital Ground	
16	GP46	B	General Purpose IO 46	CDDSP SCOR1
17	GP47	B	General Purpose IO 47	CDDSP BCLK1
18	GP02	B	General Purpose IO 02	External Interrupt 2
				SBDT1
19	GP48	B	General Purpose IO 48	
20	GP49	B	General Purpose IO 49	Timer1 Output
21	D11	B	External SDRAM data bus [11]	External program data bus [11]
22	D4	B	External SDRAM data bus [4]	External program data bus [4]
23	D12	B	External SDRAM data bus [12]	External program data bus [12]
24	D5	B	External SDRAM data bus [5]	External program data bus [5]
25	D13	B	External SDRAM data bus [13]	External program data bus [13]
26	D6	B	External SDRAM data bus [6]	External program data bus [6]
27	D14	B	External SDRAM data bus [14]	External program data bus [14]
28	D7	B	External SDRAM data bus [7]	External program data bus [7]
29	D15	B	External SDRAM data bus [15]	External program data bus [15]
30	AD0	O	External SDRAM address bus [0]	External program address bus [0]
31	AD1	O	External SDRAM address bus [1]	External program address bus [1]
32	AD2	O	External SDRAM address bus [2]	External program address bus [2]
33	IOVDD33	P	I/O Power supply (3.3V)	
34	IOVSS33	P	I/O Ground	
35	AD3	O	External SDRAM address bus [3]	External program address bus [3]
36	AD4	O	External SDRAM address bus [4]	External program address bus [4]
37	AD5	O	External SDRAM address bus [5]	External program address bus [5]
38	AD6	O	External SDRAM address bus [6]	External program address bus [6]

39	AD7	O	External SDRAM address bus [7]	External program address bus [7]
40	AD8	O	External SDRAM address bus [8]	External program address bus [8]
41	AD9	O	External SDRAM address bus [9]	External program address bus [9]
42	AD10	O	External SDRAM address bus [10]	External program address bus [10]
43	AD11	O	External SDRAM address bus [11]	External program address bus [11]
44	AD12	O	External SDRAM address bus [12]	External program address bus [12]
45	BA0	O	External SDRAM Bank selector 0	External program address bus [13]
46	BA1	O	External SDRAM Bank selector 1	External program address bus [14]
47	LDQM	O	SDRAM Lower byte data mask	External program address bus [15]
48	UDQM	O	SDRAM Upper byte data mask	External program address bus [16]
49	SDCSN	O	SDRAM Chip select	
50	GP50	B	General Purpose IO 50	
51	VDD12	P	Digital power supply (1.2V)	
52	VSS12	P	Digital Ground	
53	GP51	B	General Purpose IO 51	
54	CKE	O	SDRAM clock enable	
55	RASN	O	SDRAM RAS	
56	GP52	B	General Purpose IO 52	Timer0 Capture
57	IOVDD33	P	I/O Power supply (3.3V)	
58	IOVSS33	P	I/O Ground	
59	SDCLK	O	SDRAM clock	
60	CASN	O	SDRAM CAS	
61	GP53	B	General Purpose IO 53	Timer1 Capture
62	WEN	O	SDRAM WEN	
63	EAD17	B	External program memory address[17]	General Purpose IO 37
64	EAD18	B	External program memory address[18]	General Purpose IO 38
65	EAD19	B	External program memory address[19]	General Purpose IO 39
66	EAD20	B	External program memory address[20]	General Purpose IO 40 Booting Mode
67	EWEN	B	External program memory WEN	General Purpose IO 41
68	EOEN	B	External program memory OEN	General Purpose IO 42
69	ECSN	O	External program memory CSN	
70	GP03	B	General Purpose IO 03	External Clock (16.9344MHz)
71	GP04	B	General Purpose IO 04	SPI0 CS
72	GP05	B	General Purpose IO 05	SPI0 CK
73	GP06	B	General Purpose IO 06	SPI0 MISO
74	GP07	B	General Purpose IO 07	SPI0 MOSI
75	GP08	B	General Purpose IO 08	HUART0 DI
76	GP09	B	General Purpose IO 09	HUART0 DO
77	GP10	B	General Purpose IO 10	HUART0 RTS External Interrupt 11
78	GP11	B	General Purpose IO 11	HUART0 CTS External Interrupt 12

79	GP12	B	General Purpose IO 12	Chip Select 1 When GP12 is used for CS1, the external pull-up resistor (48 kΩ) has to be connected with this pin
80	GP13	B	General Purpose IO 13	UART0 RX Data External Interrupt 8
81	GP14	B	General Purpose IO 14	UART0 TX Data External Interrupt 9
82	GP15	B	General Purpose IO 15	UART1 RX Data I2C SCL
83	GP16	B	General Purpose IO 16	UART1 TX Data I2C SDA
84	GP17	B	General Purpose IO 17	SPI1 CS
85	GP18	B	General Purpose IO 18	SPI1 CK
86	GP54	B	General Purpose IO 54	CDDSP DATA1
87	GP55	B	General Purpose IO 55	CDDSP LRCK1
88	GP19	B	General Purpose IO 19	SPI1 MISO
89	GP20	B	General Purpose IO 20	SPI1 MOSI
90	GP56	BD	General Purpose IO 56	External Interrupt 13
91	GP21	B	General Purpose IO 21	External Interrupt 3 SPI2 CS
92	GP57	BD	General Purpose IO 57	External Interrupt 14
93	DDATA	O	Audio serial data for external DAC	
94	IOVDD	P	I/O Power supply (3.3V)	
95	IOVSS	P	I/O Ground	
96	DMCK	O	Master clock for external DAC	
97	DBCK	O	Audio serial data Bit clock	
98	DLRCK	O	Audio serial data frame clock	
99	GP22	B	General Purpose IO 22	Chip Select 2 When GP22 is used for CS2, the external pull-up resistor (48 kΩ) has to be connected with this pin External Interrupt 4
100	GP23	B	General Purpose IO 23	HUART1 DI
101	GP24	B	General Purpose IO 24	HUART1 DO
102	GP25	B	General Purpose IO 25	External Interrupt 5 SPI2 CK
103	GP26	B	General Purpose IO 26	External Interrupt 6 SPI2MISO
104	GP27	B	General Purpose IO 27	External Interrupt 7 SPI2MOSI
105	GP28	B	General Purpose IO 28	Wake-UP When GP28 is used for WAKE-UP signal input pin, the external pull-down resistor (48kΩ) has to be connected with this pin.
106	TDI	B	JTAG TDI input	General Purpose IO 43

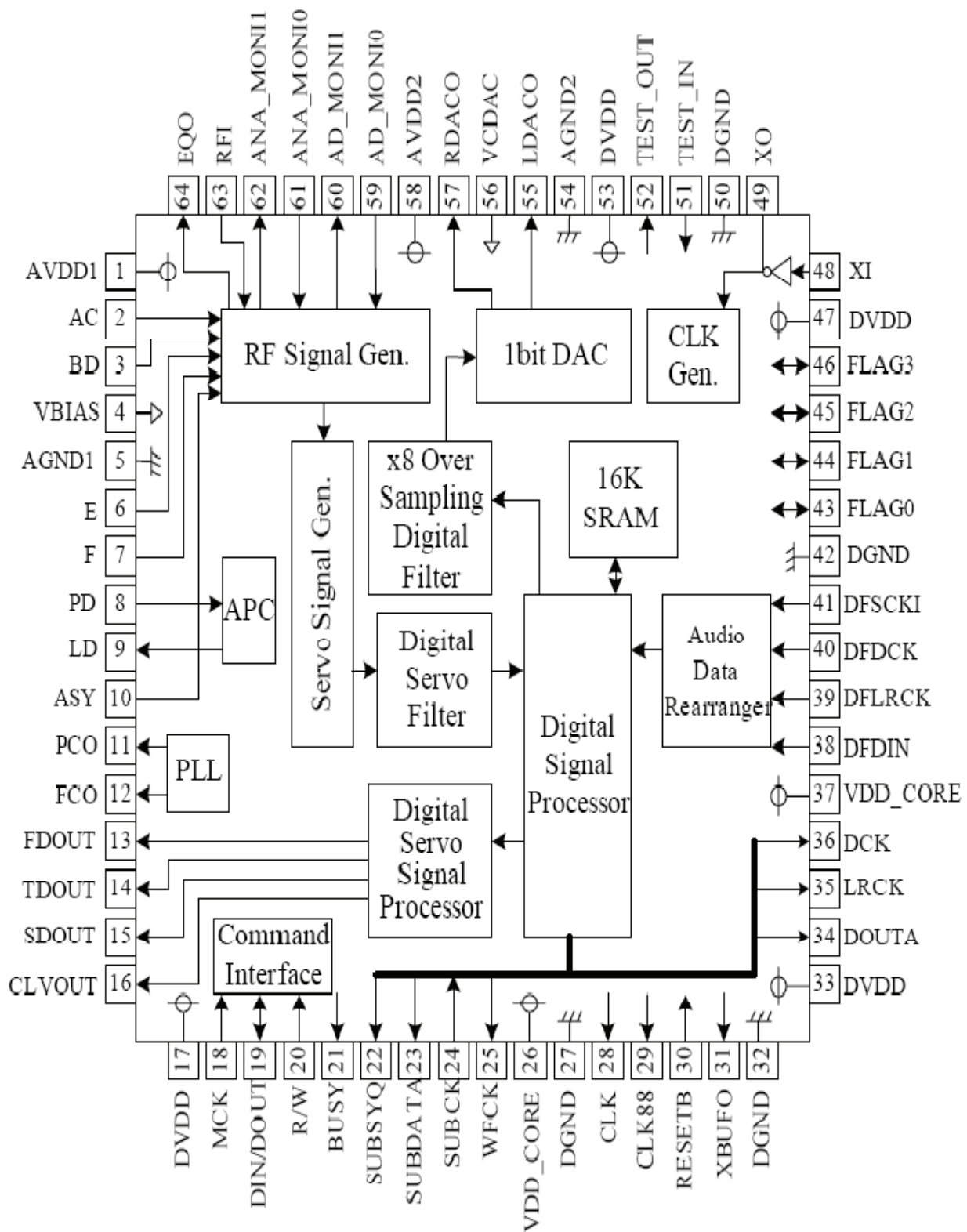
			When GP43 is used for TDI of JTAG, the external pull-up resistor (48k Ω) has to be connected with this pin.	
107	VDD12	P	Digital power supply (1.2V)	
108	VSS12	P	Digital Ground	
109	TDO	B	JTAG TDO Output When GP44 is used for TDO of JTAG, the external pull-up resistor (48k Ω) has to be connected with this pin.	General Purpose IO 44
110	TMS	B	JTAG TMS input When GP45 is used for TMS of JTAG, the external pull-up resistor (48k Ω) has to be connected with this pin.	General Purpose IO 45
111	TCK	I	JTAG Clock Input	
112	GP29	B	General Purpose IO 29	CDDSP SCOR0
113	GP30	B	General Purpose IO 30	CDDSP BCLK0
114	GP31	B	General Purpose IO 31	CDDSP DATA0
115	GP32	B	General Purpose IO 32	CDDSP LRCK0
116	GP33	B	General Purpose IO 33	SBDT0
117	GP34	B	General Purpose IO 34	SBCK
118	GP35	B	General Purpose IO 35	Timer0 Output External Interrupt 10
119	GP36	B	General Purpose IO 36	External UCLK
120	RESETN	I	System Reset	
121	NTRST	I	JTAG NRST Input When NTRSR is used for Reset of JTAG, the external pull-up resistor (48k Ω) has to be connected with this pin. If not necessary this pin has to be stuck at ground.	
122	GP58	BD	General Purpose IO 58	External Interrupt 15
123	IOVSS33	P	I/O Ground	
124	TEST	I	Test	
125	XI	I	System clock input	
126	XO	O	System clock output	
127	IOVDD33	P	I/O Power supply (3.3V)	
128	IOVSS33	P	I/O Ground	
129	USBVDD33	P	USB Power supply (3.3V)	
130	USB D+	B	USB D+	
131	USB D-	B	USB D-	
132	USBVSS33	P	USB Ground (3.3V)	
133	PLL3VSS12	P	PLL3 Ground	
134	PLL3VDD12	P	PLL3 Power supply (1.2V)	

135	PLL2VSS12	P	PLL2 Ground	
136	PLL2VDD12	P	PLL2 Power supply (1.2V)	
137	PLL1VSS12	P	PLL1 Ground	
138	PLL1VDD12	P	PLL1 Power supply (1.2V)	
139	ADIN7	I	ADC analog input[7]	
140	ADIN6	I	ADC analog input[6]	
141	ADIN5	I	ADC analog input[5]	
142	ADIN4	I	ADC analog input[4]	
143	ADIN3	I	ADC analog input[3]	
144	ADIN2	I	ADC analog input[2]	

Note: Pin type 'D' means open drain output

SERVO PROCESSOR(BU9543KV) : IC85

BLOCK DIAGRAM



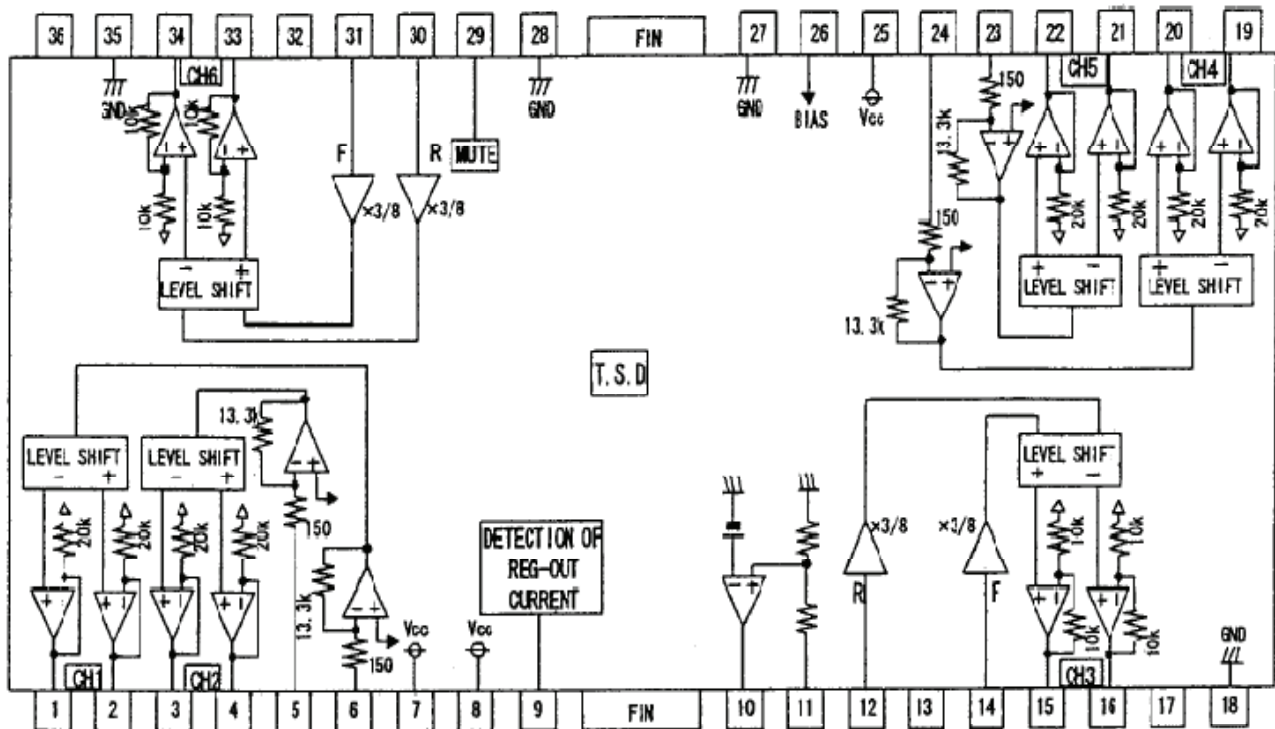
Pin Description

Terminal No.	Terminal name	Analog / Digital	I/O	Description of terminals	Equivalent circuit
1	AVDD1	Analog	-	Analog power terminal	-
2	AC	Analog	I	A + C voltage input terminal from pickup	1
3	BD	Analog	I	B + D voltage input terminal from pickup	1
4	VBIAS	Analog	O	Bias level (VDD/2) output terminal	2
5	AGND1	Analog	-	Analog GND terminal	-
6	E	Analog	I	E voltage input terminal from pickup	3
7	F	Analog	I	F voltage input terminal from pickup	3
8	PD	Analog	I	APC photo detector input terminal	4
9	LD	Analog	O	APC laser drive output terminal	4
10	ASY	Analog	I	C-fitted terminal for comparator slice for asymmetric correction	5
11	PCO	Analog	O	PLL PCO output terminal	6
12	FCO	Analog	O	PLL FCO-DAC output terminal	6
13	FDOUT	Analog	I/O	Focus drive output terminal	7
14	TDOUT	Analog	I/O	Tracking drive output terminal	7
15	SDOUT	Analog	I/O	Sled drive output terminal	7
16	CLVOUT	Analog	I/O	CLV drive output terminal	7
17	RCLK	Digital	I/O	Reference clock output terminal for SDRAM	8
18	MCK	Digital	I	Sub Q and command transfer clock input terminal	11
19	DIN/DOUT	Digital	I/O	Command input and status and sub Q output terminal	8
20	R/W	Digital	I	Command read/write signal input terminal	11
21	BUSY	Digital	O	Busy signal output terminal	9
22	SUBSYQ	Digital	I/O	Sub code synchronous signal output terminal	8
23	SUBDATA	Digital	I/O	Sub code data signal output terminal	8
24	SUBCK	Digital	I/O	Sub code bit clock input terminal	10
25	WFCK	Digital	I/O	Disc frame synchronous signal output terminal	8
26	VDD_CORE	Digital	-	Internal digital power terminal	-
27	DGND	Digital	-	Digital GND terminal	-
28	CLK	Digital	I/O	Output terminal for various clocks	8
29	CLK88	Digital	O	Clock output terminal for driver IC	9
30	RESETB	Digital	I	System reset terminal ("L" → reset condition)	12
31	XBUFO	Digital	O	X'tal 16.9344MHz buffer output terminal	8
32	DGND	Digital	-	Digital GND terminal	-
33	DVDD	Digital	-	I/O Digital power terminal	-
34	DOUTA	Digital	I/O	Audio serial data output terminal	8
35	LRCK	Digital	I/O	Audio LR signal output terminal	8
36	DCK	Digital	I/O	Audio serial bit clock output terminal	8
37	VDD_CORE	Digital	-	Internal digital power terminal	-
38	DFDIN	Digital	I/O	Audio serial data input terminal	10
39	DFLRCK	Digital	I/O	Audio LR signal input terminal	10
40	DFDCK	Digital	I/O	Audio serial bit clock input terminal	10
41	DFSCKI	Digital	I/O	Audio system clock(384fs) input terminal	10
42	DGND	Digital	-	Digital GND terminal	-
43	FLAG0	Digital	O	Various flag output terminal	9
44	FLAG1	Digital	O	Various flag output terminal	9
45	FLAG2	Digital	O	Various flag output terminal	9
46	FLAG3	Digital	O	Various flag output terminal	9
47	DVDD	Digital	-	I/O Digital power terminal	-
48	XI	Digital	I	X'tal 16.9344MHz connecting (input) terminal	14
49	XO	Digital	O	X'tal 16.9344MHz connecting terminal	14
50	DGND	Digital	-	Digital GND terminal	-

Terminal No.	Terminal name	Analog / Digital	I/O	Description of terminals	Equivalent circuit
51	TEST_IN	Digital	I	Test signal input terminal	13
52	TEST_OUT	Digital	O	Test signal output terminal	9
53	DVDD2	Digital	-	I/O Digital power terminal	-
54	AGND2	Analog	-	Audio system analog GND terminal	-
55	LDACO	Analog	O	Audio Lch output terminal	16
56	VCDAC	Analog	O	Audio system reference voltage output terminal	16
57	RDACO	Analog	O	Audio Rch output terminal	16
58	AVDD2	Analog	-	Audio system analog power terminal	-
59	AD_MONI0	Digital	I/O	Test signal input/monitor signal output terminal	15
60	AD_MONI1	Digital	I/O	Test signal input/monitor signal output terminal	15
61	ANA_MONI0	Analog	I/O	Analog test signal input/monitor signal output terminal	15
62	ANA_MONI1	Analog	I/O	Analog test signal input/monitor signal output terminal	15
63	RFI	Analog	I	RF output capacity combined data re-input terminal	17
64	EQO	Analog	O	After-RF-equalizer output terminal	18

MOTOR DRIVE(BA5927FM) : IC86

BLOCK DIAGRAM



T. S. D : Thermal shut down circuit

D : Drive buffer

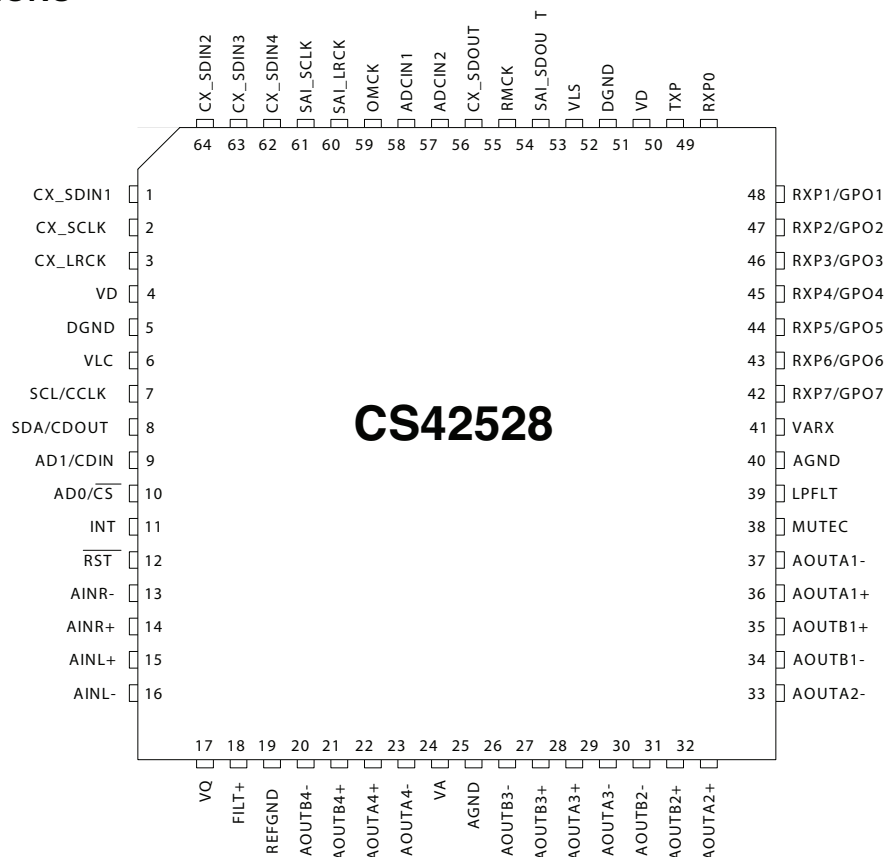
Unit of resistor: (Ω)

Pin Description

No.	Pin Name	Function
1	OUT1-	Driver CH1 negative output
2	OUT1+	Driver CH1 positive output
3	OUT2-	Driver CH2 negative output
4	OUT2+	Driver CH2 positive output
5	IN2	Driver CH2 input
6	IN1	Driver CH1 input
7	VCC	Power supply
8	VCC	Power supply
9	REG-I	Connect to external TR. EMIT
10	REG-B	Connect to external TR. BASE
11	REG OUT	Constant voltage output(5V)
12	IN3-R	Driver CH3 reverse input
13	N.C	
14	IN3-F	Driver CH3 forward input
15	OUT3+	Driver CH3 positive output
16	OUT3-	Driver CH3 negative output
17	N.C	
18	GND	ground
19	OUT4-	Driver CH4 negative output
20	OUT4+	Driver CH4 positive output
21	OUT5-	Driver CH5 negative output
22	OUT5+	Driver CH5 positive output
23	IN5	Driver CH5 input
24	IN4	Driver CH4 input
25	VCC	Power supply
26	BIAS IN	Bias input
27	GND	Substrate ground
28	GND	Substrate ground
29	MUTE IN	Mute control pin
30	IN6-R	Driver CH6 reverse input
31	IN6-F	Driver CH6 forward input
32	N.C	
33	OUT6+	Driver CH6 positive output
34	OUT6-	Driver CH6 negative output
35	GND	ground
36	N.C	

CODEC+DIR (CS42528-CQ) : IC62

PIN DESCRIPTIONS

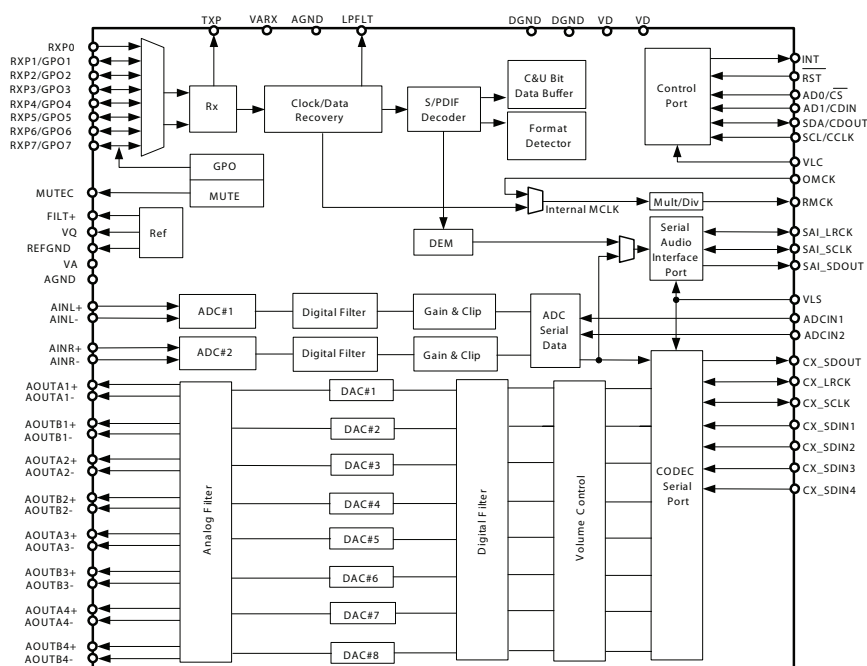


Pin Name	#	Pin Description
CX_SDIN1	1	Codec Serial Audio Data Input (Input) - Input for two's complement serial audio data.
CX_SDIN2	64	
CX_SDIN3	63	
CX_SDIN4	62	
CX_SCLK	2	CODEC Serial Clock (Input/Output) - Serial clock for the CODEC serial audio interface.
CX_LRCK	3	CODEC Left Right Clock (Input/Output) - Determines which channel, Left or Right, is currently active on the CODEC serial audio data line.
VD	4 51	Digital Power (Input) - Positive power supply for the digital section.
DGND	5 52	Digital Ground (Input) - Ground reference. Should be connected to digital ground.
VLC	6	Control Port Power (Input) - Determines the required signal level for the control port.
SCL/CCLK	7	Serial Control Port Clock (Input) - Serial clock for the serial control port. Requires an external pull-up resistor to the logic interface voltage in I ² C mode as shown in the Typical Connection Diagram.
SDA/CDOUT	8	Serial Control Data (Input/Output) - SDA is a data I/O line in I ² C mode and requires an external pull-up resistor to the logic interface voltage, as shown in the Typical Connection Diagram. CDOUT is the output data line for the control port interface in SPI mode.
AD1/CDIN	9	Address Bit 1 (I²C)/Serial Control Data (SPI) (Input) - AD1 is a chip address pin in I ² C mode; CDIN is the input data line for the control port interface in SPI mode.

AD0/$\overline{\text{CS}}$	10	Address Bit 0 (I²C)/Control Port Chip Select (SPI) (Input) - AD0 is a chip address pin in I ² C mode; $\overline{\text{CS}}$ is the chip select signal in SPI mode.
INT	11	Interrupt (Output) - The CS42528 will generate an interrupt condition as per the Interrupt Mask register. See "Interrupts" on page 40 for more details.
$\overline{\text{RST}}$	12	Reset (Input) - The device enters a low power mode and all internal registers are reset to their default settings when low.
AINR- AINR+	13 14	Differential Right Channel Analog Input (Input) - Signals are presented differentially to the delta-sigma modulators via the AINR+/- pins.
AINL+ AINL-	15 16	Differential Left Channel Analog Input (Input) - Signals are presented differentially to the delta-sigma modulators via the AINL+/- pins.
VQ	17	Quiescent Voltage (Output) - Filter connection for internal quiescent reference voltage.
FILT+	18	Positive Voltage Reference (Output) - Positive reference voltage for the internal sampling circuits.
REFGND	19	Reference Ground (Input) - Ground reference for the internal sampling circuits.
AOUTA1 +,- AOUTB1 +,- AOUTA2 +,- AOUTB2 +,- AOUTA3 +,- AOUTB3 +,- AOUTA4 +,- AOUTB4 +,-	36,37 35,34 32,33 31,30 28,29 27,26 22,23 21,20	Differential Analog Output (Output) - The full-scale differential analog output level is specified in the Analog Characteristics specification table.
VA VARX	24 41	Analog Power (Input) - Positive power supply for the analog section.
AGND	25 40	Analog Ground (Input) - Ground reference. Should be connected to analog ground.
MUTEC	38	Mute Control (Output) - The Mute Control pin outputs high impedance following an initial power-on condition or whenever the PDN bit is set to a '1', forcing the codec into power-down mode. The signal will remain in a high impedance state as long as the part is in power-down mode. The Mute Control pin goes to the selected "active" state during reset, muting, or if the master clock to left/right clock frequency ratio is incorrect. This pin is intended to be used as a control for external mute circuits to prevent the clicks and pops that can occur in any single supply system. The use of external mute circuits are not mandatory but may be desired for designs requiring the absolute minimum in extraneous clicks and pops.
LPFLT	39	PLL Loop Filter (Output) - An RC network should be connected between this pin and ground.
RXP7/GPO7 RXP6/GPO6 RXP5/GPO5 RXP4/GPO4 RXP3/GPO3 RXP2/GPO2 RXP1/GPO1	42 43 44 45 46 47 48	S/PDIF Receiver Input/ General Purpose Output (Input/Output) - Receiver inputs for S/PDIF encoded data. The CS42528 has an internal 8:2 multiplexer to select the active receiver port, according to the Receiver Mode Control 2 register. These pins can also be configured as general purpose output pins, ADC Overflow indicators or Mute Control outputs according to the RXP/General Purpose Pin Control registers.
RXP0	49	S/PDIF Receiver Input (Input) - Dedicated receiver input for S/PDIF encoded data.
TXP	50	S/PDIF Transmitter Output (Output) - S/PDIF encoded data output, mapped directly from one of the receiver inputs as indicated by the Receiver Mode Control 2 register.
VLS	53	Serial Port Interface Power (Input) - Determines the required signal level for the serial port interfaces.
SAI_SDOOUT	54	Serial Audio Interface Serial Data Output (Output) - Output for two's complement serial audio PCM data from the S/PDIF incoming stream. This pin can also be configured to transmit the output of the internal and external ADCs.
RMCK	55	Recovered Master Clock (Output) - Recovered master clock output from the External Clock Reference (OMCK, pin 59) or the PLL which is locked to the incoming S/PDIF stream or CX_LRCK.

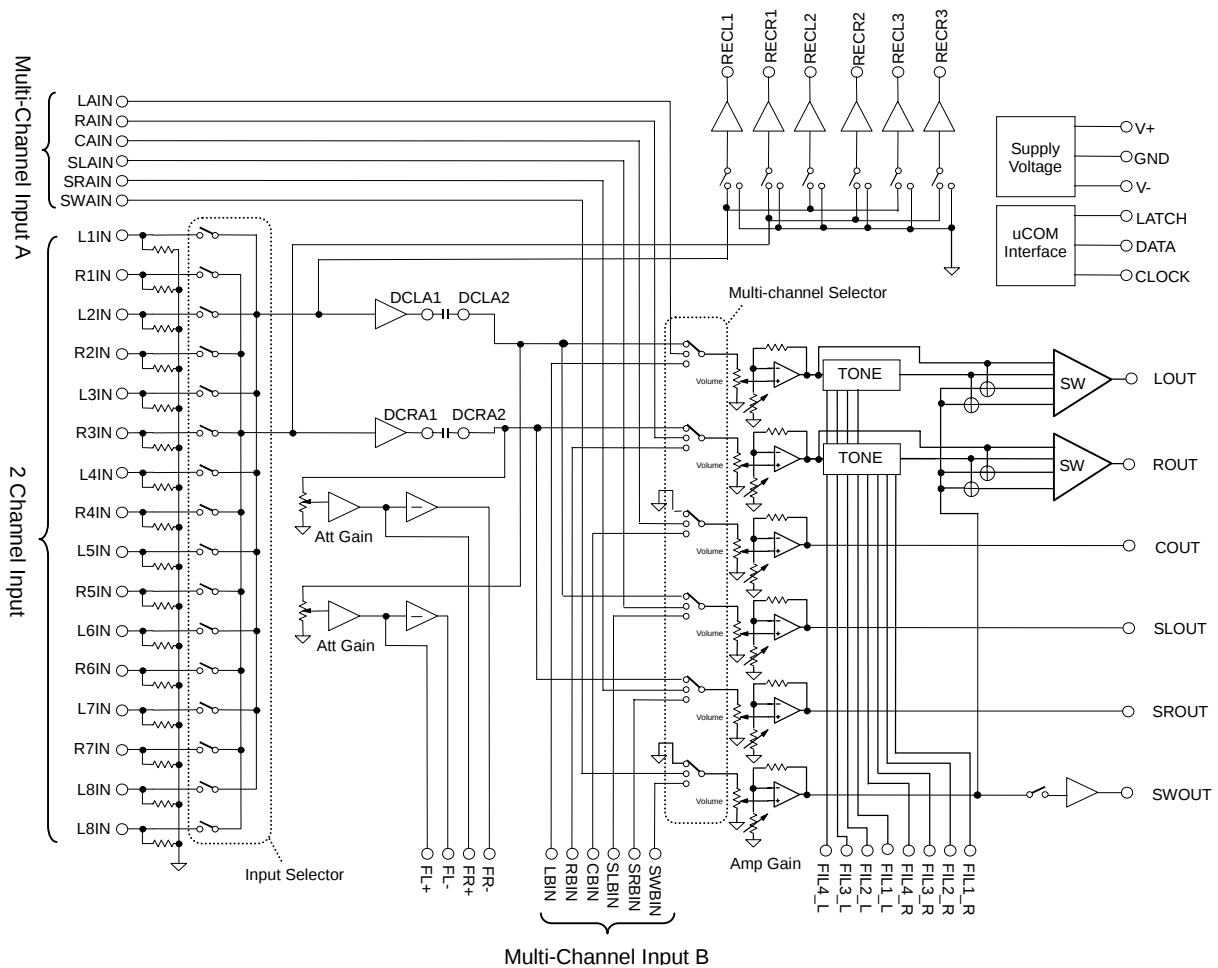
CX_SDOUT	56	CODEC Serial Data Output (Output) - Output for two's complement serial audio data from the internal and external ADCs.
ADCIN1	58	External ADC Serial Input (Input) - The CS42528 provides for up to two external stereo analog to digital converter inputs to provide a maximum of six channels on one serial data output line when the CS42528 is placed in One Line mode.
ADCIN2	57	
OMCK	59	External Reference Clock (Input) - External clock reference that must be within the ranges specified in the register "OMCK Frequency (OMCK Freqx)" on page 54.
SAI_LRCK	60	Serial Audio Interface Left/Right Clock (Input/Output) - Determines which channel, Left or Right, is currently active on the serial audio data line.
SAI_SCLK	61	Serial Audio Interface Serial Clock (Input/Output) - Serial clock for the Serial Audio Interface.

BLOCK DIAGRAM

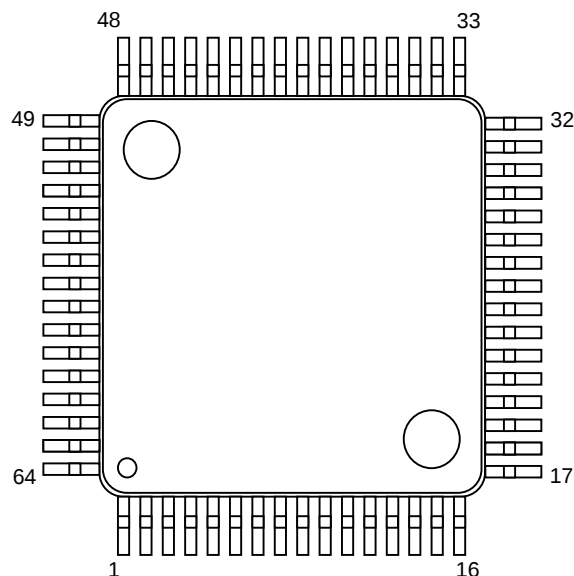


VOL + FUNCTION IC (NJW1153FG1) : IC61

BLOCK DIAGRAM



■ PIN FUNCTION



No.	SYMBOL	FUNCTION	No.	SYMBOL	FUNCTION
1	FIL2_R	Rch Bass filter terminal	33	RAIN	Multi-channel Rch input A
2	FIL3_R	Rch Bass filter DC cut capacitor output terminal	34	CAIN	Multi-channel Cch input A
3	FIL4_R	Rch Bass filter DC cut capacitor input terminal	35	SLAIN	Multi-channel SLch input A
4	GND	Ground	36	SRAIN	Multi-channel SRch input A
5	FL+	"Input selector gain control" Lch no-inverted output	37	SWAIN	Multi-channel SWch input A
6	FL-	"Input selector gain control" Lch inverted output	38	LBIN	Multi-channel Lch input B
7	FR+	"Input selector gain control" Rch no-inverted output	39	RBIN	Multi-channel Rch input B
8	FR-	"Input selector gain control" Rch inverted output	40	CBIN	Multi-channel Cch input B
9	DCLA1	"Input selector" Lch output	41	SLBIN	Multi-channel SLch input B
10	DCLA2	"Multi-channel selector" Lch input	42	SRBIN	Multi-channel SRch input B
11	DCRA1	"Input selector" Rch output	43	SWBIN	Multi-channel SWch input B
12	DCRA2	"Multi-channel selector" Rch input	44	SurTC	Switching noise rejection capacitor
13	L1IN	"Input selector" Lch input 1	45	FIL4_L	Lch Bass filter DC cut capacitor input terminal
14	R1IN	"Input selector" Rch input 1	46	FIL3_L	Lch Bass filter DC cut capacitor output terminal
15	L2IN	"Input selector" Lch input 2	47	FIL2_L	Lch Bass filter terminal
16	R2IN	"Input selector" Rch input 2	48	FIL1_L	Lch Treble filter terminal
17	L3IN	"Input selector" Lch input 3	49	LOUT	Lch output
18	R3IN	"Input selector" Rch input 3	50	ROUT	Rch output
19	L4IN	"Input selector" Lch input 4	51	COUT	Cch output
20	R4IN	"Input selector" Rch input 4	52	SLOUT	SLch output
21	L5IN	"Input selector" Lch input 5	53	SROUT	SRch output
22	R5IN	"Input selector" Rch input 5	54	SWOUT	SWch output
23	L6IN	"Input selector" Lch input 6	55	V+	+ Power supply voltage input
24	R6IN	"Input selector" Rch input 6	56	GND	Ground
25	L7IN	"Input selector" Lch input 7	57	V-	- Power supply voltage input
26	R7IN	"Input selector" Rch input 7	58	RECL1	"Input selector" Lch REC output 1
27	L8IN	"Input selector" Lch input 8	59	RECR1	"Input selector" Rch REC output 1
28	R8IN	"Input selector" Rch input 8	60	RECL2	"Input selector" Lch REC output 2
29	DATA	Control data signal input	61	RECR2	"Input selector" Rch REC output 2
30	CLOCK	Clock signal input	62	RECL3	"Input selector" Lch REC output 3
31	LATCH	Latch signal input	63	RECR3	"Input selector" Rch REC output 3
32	LAIN	Multi-channel Lch input A	64	FIL1_R	Rch Treble filter terminal

SDRAM(A3V64S40ETP-G6) : IC83

Pin Configuration

54-pin Plastic TSOP (II)

VDD	1	○	54	VSS
DQ0	2		53	DQ15
VDDQ	3		52	VSSQ
DQ1	4		51	DQ14
DQ2	5		50	DQ13
VSSQ	6		49	VDDQ
DQ3	7		48	DQ12
DQ4	8		47	DQ11
VDDQ	9		46	VSSQ
DQ5	10		45	DQ10
DQ6	11		44	DQ9
VSSQ	12		43	VDDQ
DQ7	13		42	DQ8
VDD	14		41	VSS
DQML	15		40	NC
/WE	16		39	DQMU
/CAS	17		38	CLK
/RAS	18		37	CKE
/CS	19		36	NC
BA0	20		35	A11
BA1	21		34	A9
A10	22		33	A8
A0	23		32	A7
A1	24		31	A6
A2	25		30	A5
A3	26		29	A4
VDD	27		28	VSS

(Top view)

CLK : Master Clock
 CKE : Clock Enable
 /CS : Chip Select
 /RAS : Row Address Strobe
 /CAS : Column Address Strobe
 /WE : Write Enable
 DQ0-15 : Data I/O

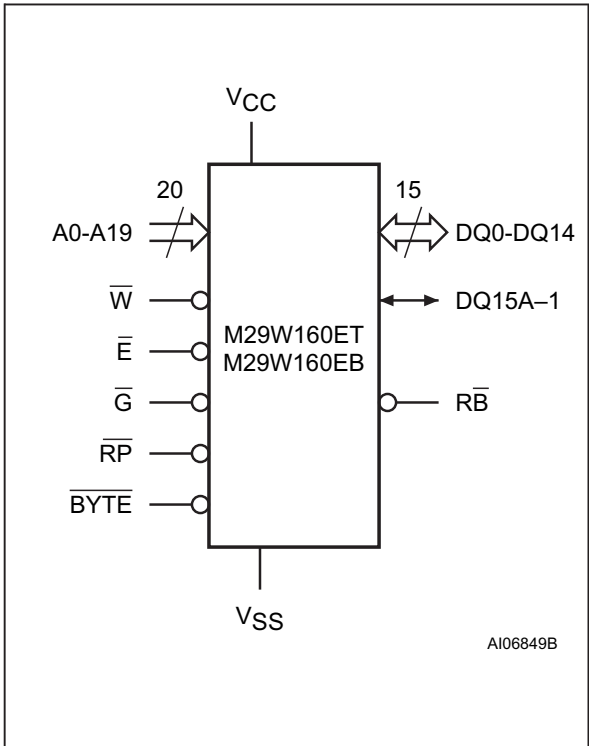
DQMU,L : Output Disable / Write Mask
 A0-11 : Address Inpu
 BA0,1 : Bank Address
 Vdd : Power Supply
 VddQ : Power Supply for Output
 Vss : Ground
 VssQ : Ground for Output

Pin Descriptions

SYMBOL	TYPE	DESCRIPTION
CLK	Input	Clock: CLK is driven by the system clock. All SDRAM input signals are sampled on the positive edge of CLK. CLK also increments the internal burst counter and controls the output registers.
CKE	Input	Clock Enable: CKE activates (HIGH) and deactivates (LOW) the CLK signal. Deactivating the clock provides PRECHARGE POWER-DOWN and SELF REFRESH operation (all banks idle), ACTIVE POWER-DOWN (row active in any bank), DEEP POWER DOWN (all banks idle), or CLOCK SUSPEND operation (burst/access in progress). CKE is synchronous except after the device enters power-down and self refresh modes, where CKE becomes asynchronous until after exiting the same mode. The input buffers, including CLK, are disabled during power-down and self refresh modes, providing low standby power. CKE may be tied HIGH.
/CS	Input	Chip Select: /CS enables (registered LOW) and disables (registered HIGH) the command decoder. All commands are masked when /CS is registered HIGH. /CS provides for external bank selection on systems with multiple banks. /CS is considered part of the command code.
/CAS, /RAS, /WE	Input	Command Inputs: /CAS, /RAS, and /WE (along with /CS) define the command being entered.
DQML, DQMU	Input	Input/Output Mask: DQM is sampled HIGH and is an input mask signal for write accesses and an output enable signal for read accesses. Input data is masked during a WRITE cycle. The output buffers are placed in a High-Z state (two-clock latency) when during a READ cycle. DQML corresponds to DQ0–DQ7, DQMU corresponds to DQ8–DQ15.
BA0, BA1	Input	Bank Address Input(s): BA0 and BA1 define to which bank the ACTIVE, READ, WRITE or PRECHARGE command is being applied. These pins also select between the mode register and the extended mode register.
A0–A11	Input	A0–11 specify the Row / Column Address in conjunction with BA0,1. The Row Address is specified by A0–11. The Column Address is specified by A0–7. A10 is also used to indicate precharge option. When A10 is high at a read / write command, an auto precharge is performed. When A10 is high at a precharge command, all banks are precharged.
DQ0–DQ15	I/O	Data Input/Output: Data bus.
NC	–	Internally Not Connected: These could be left unconnected, but it is recommended they be connected or Vss.
VDDQ	Supply	DQ Power: Provide isolated power to DQs for improved noise immunity.
VssQ	Supply	DQ Ground: Provide isolated ground to DQs for improved noise immunity.
VDD	Supply	Core Power Supply.
Vss	Supply	Ground.

Flash Memory (M29W160ET70N) : IC84

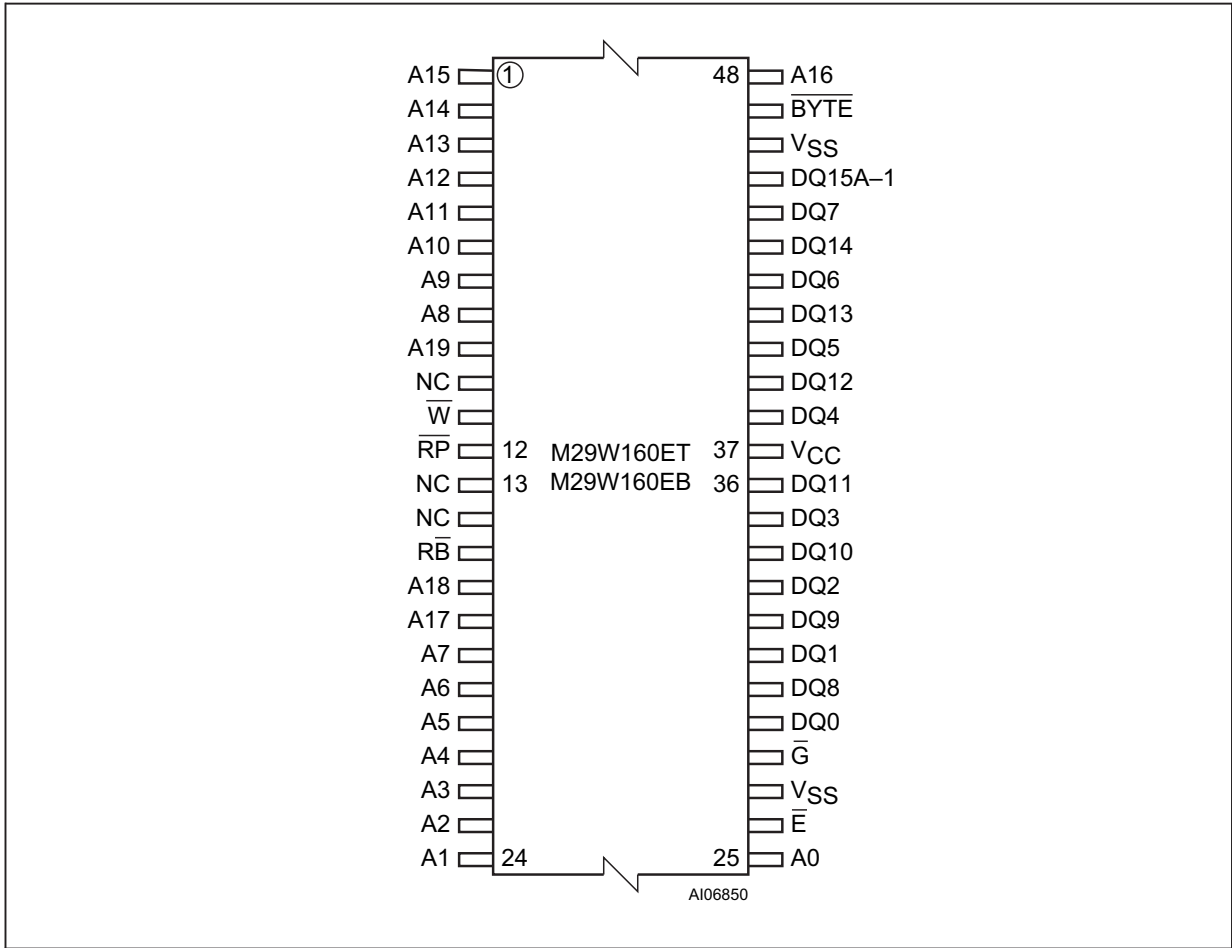
Logic Diagram



Signal Names

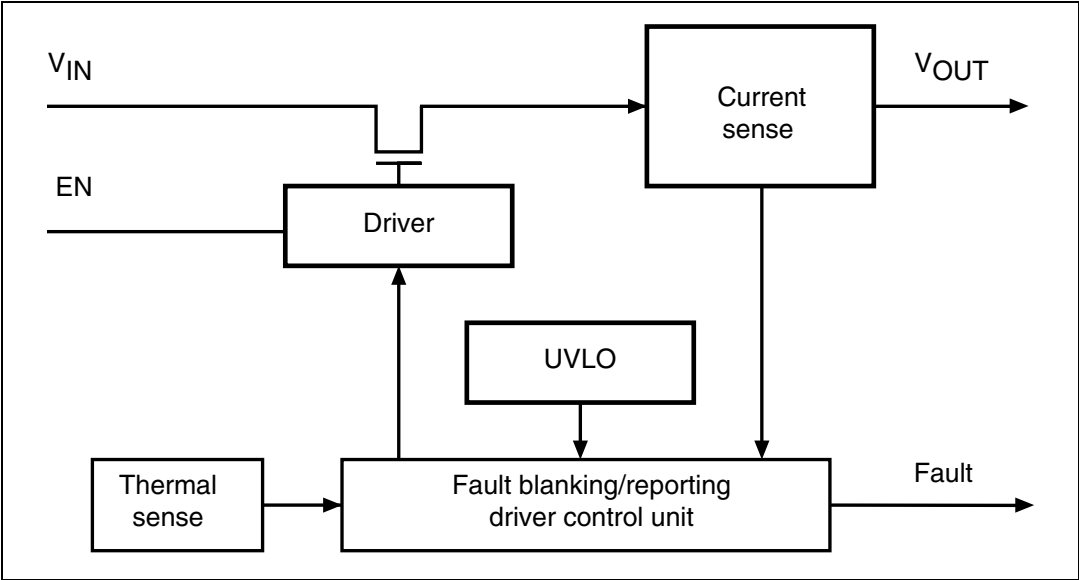
A0-A19	Address Inputs
DQ0-DQ7	Data Inputs/Outputs
DQ8-DQ14	Data Inputs/Outputs
DQ15A-1	Data Input/Output or Address Input
$\overline{E}$	Chip Enable
$\overline{G}$	Output Enable
$\overline{W}$	Write Enable
$\overline{RP}$	Reset/Block Temporary Unprotect
$\overline{RB}$	Ready/Busy Output
$\overline{BYTE}$	Byte/Word Organization Select
VCC	Supply Voltage
VSS	Ground
NC	Not Connected Internally

TSOP Connections

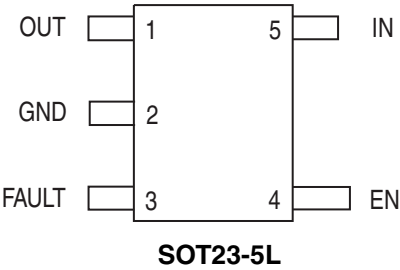


CURRENT LIMITER(STMPS2151STR) : IC70

BLOCK DIAGRAM



PIN CONNECTIONS

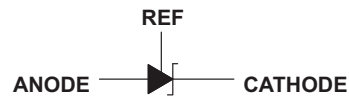


PIN DESCRIPTION

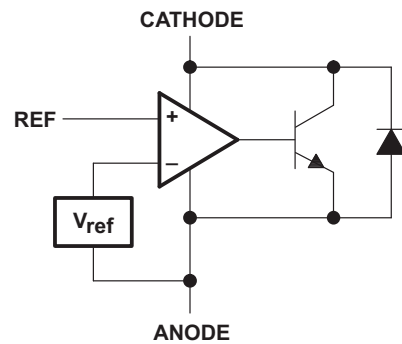
Pin number			Name	Function
SO8	MSOP8	SOT23-5L		
1	1	2	GND	Ground
2	2	5	IN	2.7 V - 5.5 V input
3	3	-	IN	2.7 V - 5.5 V input
4	4	4	EN	Enable for power switch
5	5	3	FAULT	Open drain FAULT indicator, active low
6	6	1	OUT	Output of power switch
7	7	-	OUT	Output of power switch
8	8	-	OUT	Output of power switch

TL431IPK(SHUNT REGULATORS) : IC65, IC66

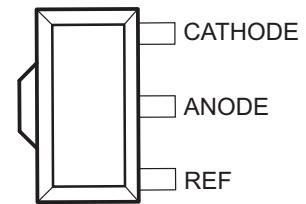
symbol



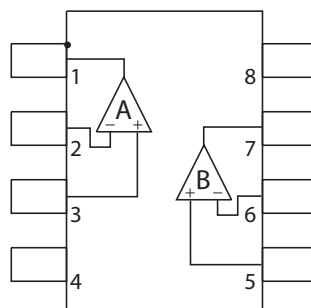
functional block diagram



TL431, TL431A, TL431B . . . PK (SOT-89) PACKAGE
(TOP VIEW)



NJM2068MDTE1 (OP AM P) : IC63, IC69, IC71, IC72

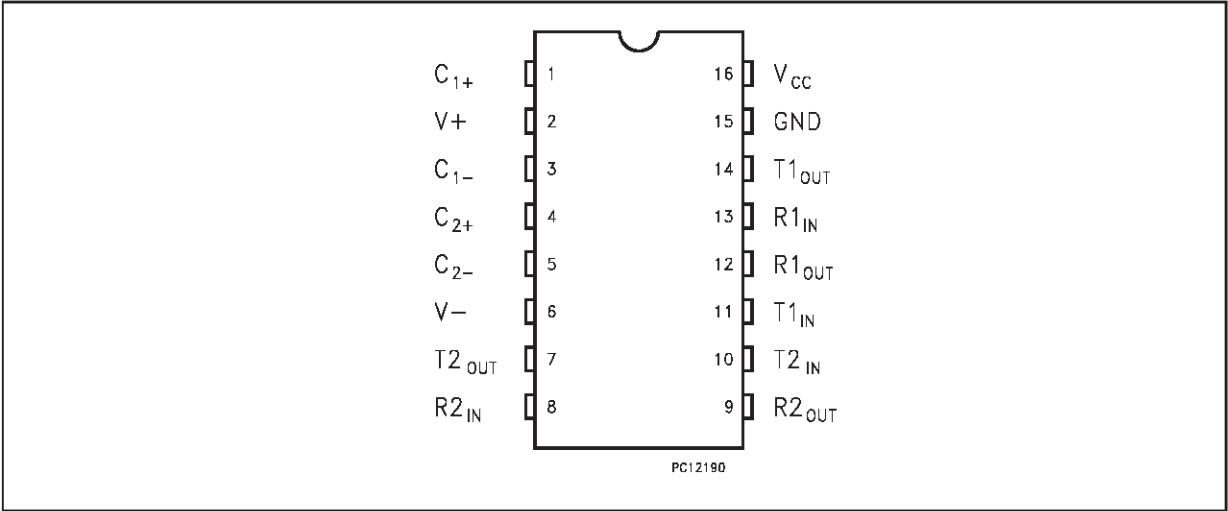


PIN FUNCITON

- 1. A OUTPUT
- 2. A-INPUT
- 3. A+INPUT
- 4. V^-
- 5. B+INPUT
- 6. B-INPUT
- 7. B OUTPUT
- 8. V^+

RS232 TRANSCEIVER(ST202EBW) : IC64

PIN CONFIGURATION



PIN DESCRIPTION

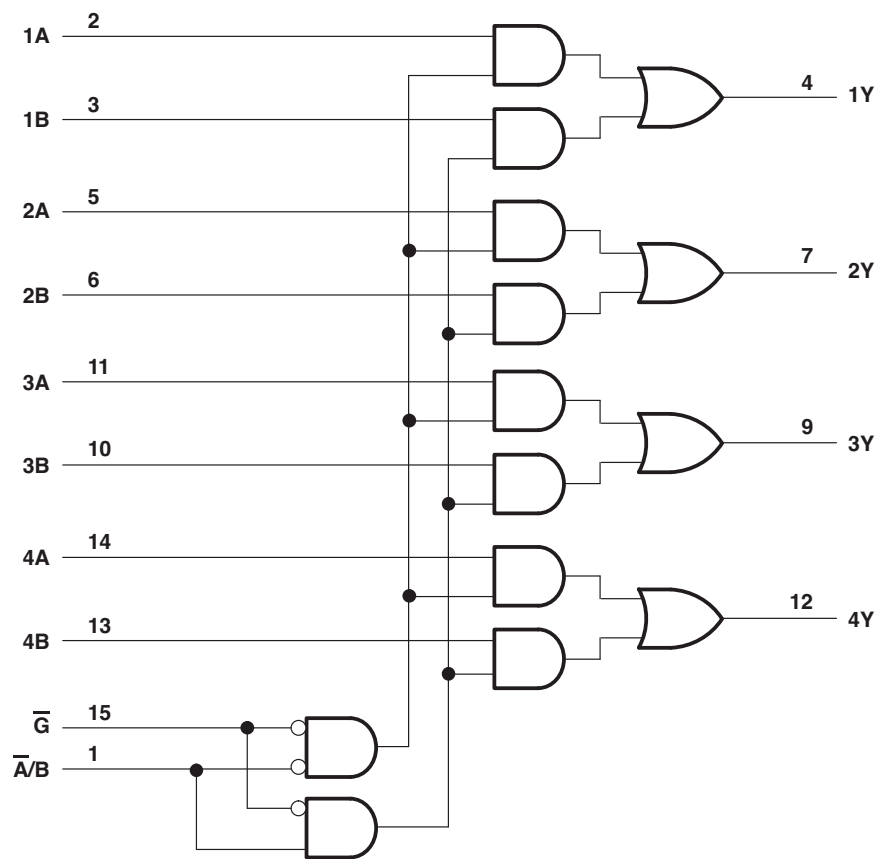
PIN No	SYMBOL	NAME AND FUNCTION
1	C ₁ +	Positive Terminal for the first Charge Pump Capacitor
2	V+	Doubled Voltage Terminal
3	C ₁ -	Negative Terminal for the first Charge Pump Capacitor
4	C ₂ +	Positive Terminal for the second Charge Pump Capacitor
5	C ₂ -	Negative Terminal for the second Charge Pump Capacitor
6	V-	Inverted Voltage Terminal
7	T2 _{OUT}	Second Transmitter Output Voltage
8	R2 _{IN}	Second Receiver Input Voltage
9	R2 _{OUT}	Second Receiver Output Voltage
10	T2 _{IN}	Second Transmitter Input Voltage
11	T1 _{IN}	First Transmitter Input Voltage
12	R1 _{OUT}	First Receiver Output Voltage
13	R1 _{IN}	First Receiver Input Voltage
14	T1 _{OUT}	First Transmitter Output Voltage
15	GND	Ground
16	V _{CC}	Supply Voltage

MULTIPLEXERS(TC74VHC157FT) : IC73

Inputs can be driven from either 3.3-V or 5-V devices. This feature allows the use of these devices as translators in a mixed 3.3-V/5-V system environment.

FUNCTION TABLE				
INPUTS				OUTPUT Y
$\overline{G}$	$\overline{A/B}$	A	B	
H	X	X	X	L
L	L	L	X	L
L	L	H	X	H
L	H	X	L	L
L	H	X	H	H

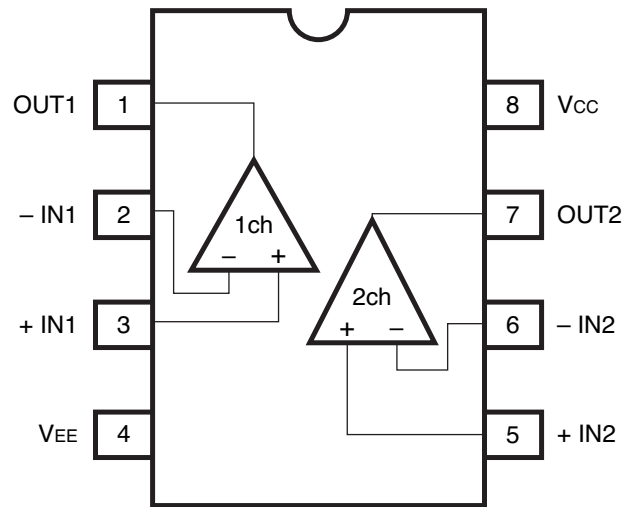
logic diagram (positive logic)



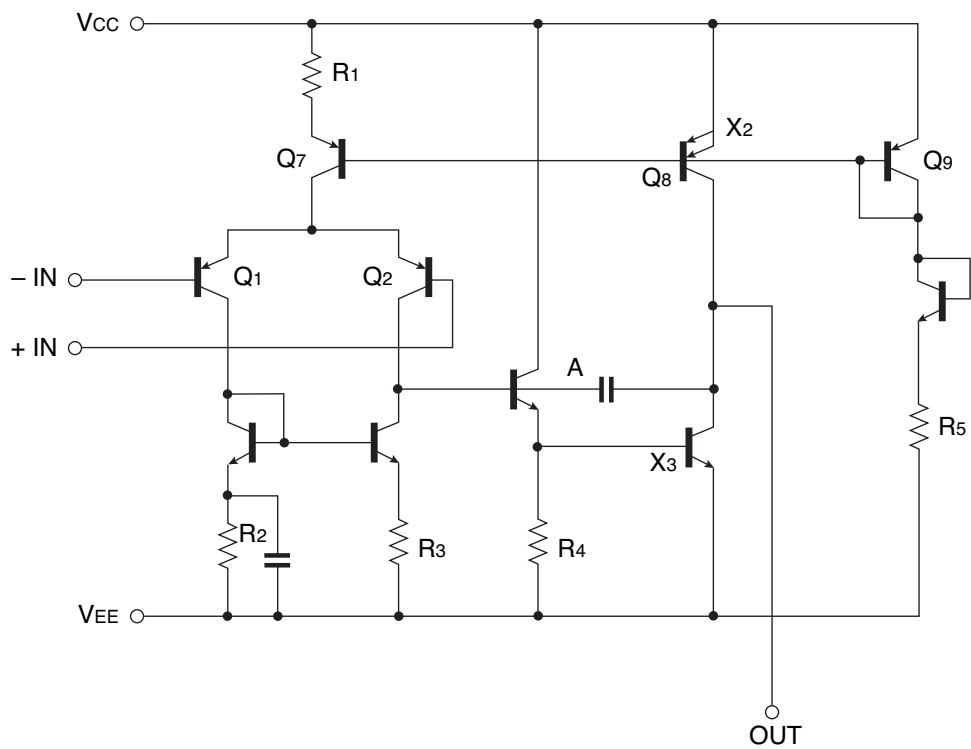
Pin numbers shown are for the D, DB, J, NS, PW, RGY, and W packages.

BA4510F(OP AMP) : IC74

BLOCK DIAGRAM

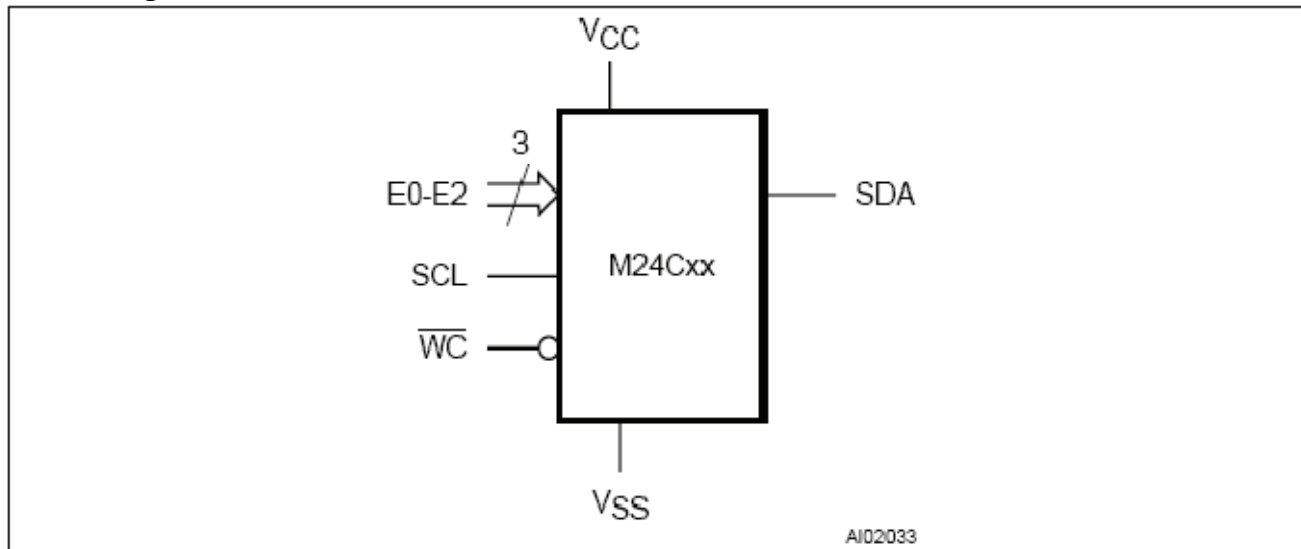


INTERNAL CIRCUIT CONFIGURATION



EEPROM(M24C08WMN6TP) : IC87

Block Diagram

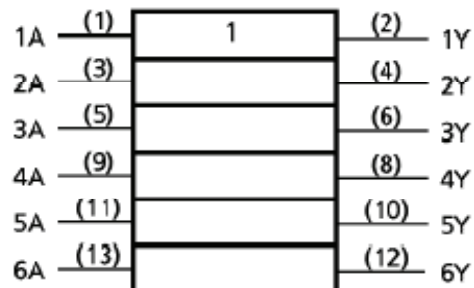


Pin Description

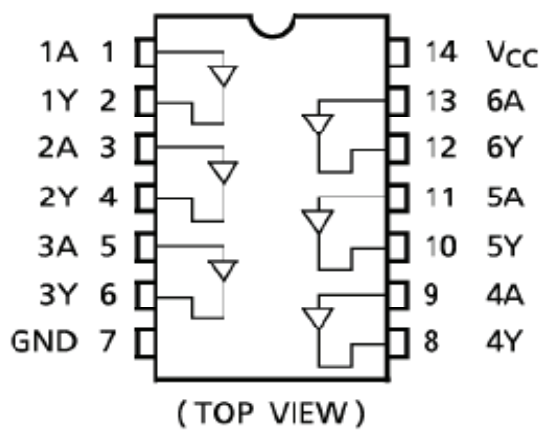
Signal name	Function	Direction
E0, E1, E2	Chip Enable	Input
SDA	Serial Data	Input/output
SCL	Serial Clock	Input
$\overline{WC}$	Write Control	Input
V_{CC}	Supply voltage	
V_{SS}	Ground	

BUFFER(TC74HCT7007F) : IC88

Block Diagram



PIN ASSIGNMENT



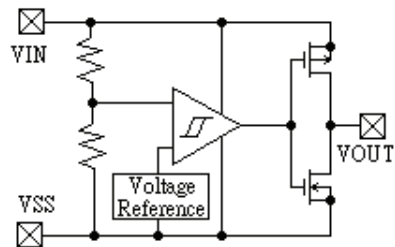
PIN ASSIGNMENT

A	Y
L	L
H	H

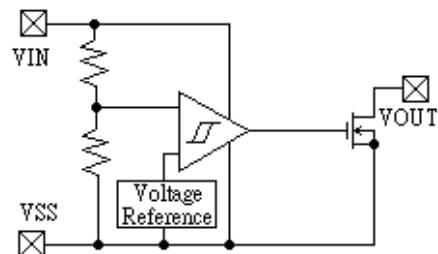
RESET(ML61C232PR) : IC89

Block Diagram

Block Diagram
(1) CMOS Output

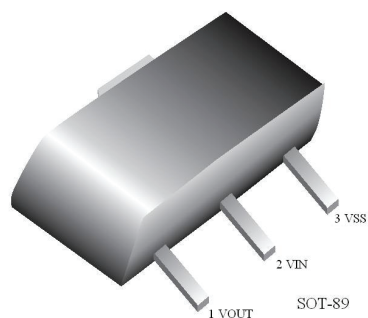


(2) N-Channel Open Drain Output



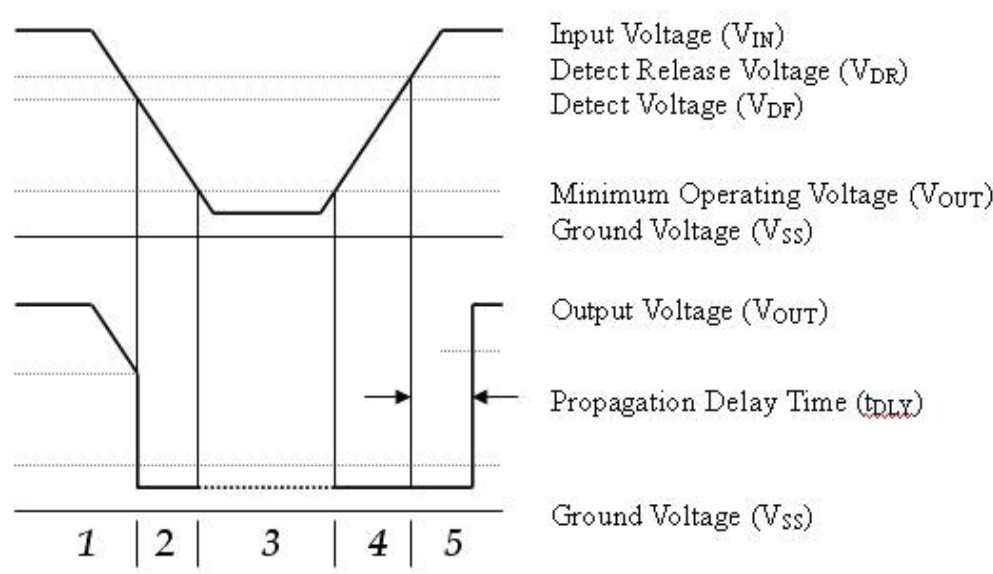
Pin Configuration

SOT-89-3

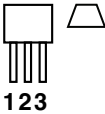
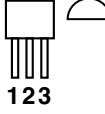
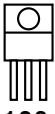
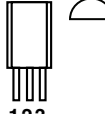
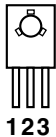
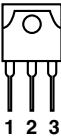
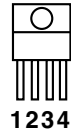
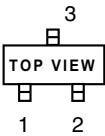


Package Pin Number	Pin Name	Function
SOT-89-3		
1	VOUT	Supply Voltage Output
2	VIN	Supply Voltage Input
3	VSS	Ground

Timing Diagram



■ TRANSISTOR, REGULATOR IC BLOCK DIAGRAM

TO-92S  1. Emitter 2. Collector 3. Base 123 KRA102M KRC102M KSC2785Y KSA1175Y	TO-92  1. Emitter 2. Collector 3. Base 123 KTC3200GR KSB811Y KTA1271Y KTA1268GR	TO-220  1. INPUT 2. OUTPUT 3. GND 123	TO-92L  1. Emitter 2. Collector 3. Base 123 KSC2316Y
TO-126  1. Emitter 2. Collector 3. Base 123 KTC3114A KTA1360Y KTC3423Y	TO-220  1. INPUT 2. GND 3. OUTPUT 123 KIA7806	TO-3P  1. Base 2. Collector 3. Emitter 1 2 3 2SB1559 2SD2389	TO-220  1. INPUT 2. OUTPUT 3. GND 4. CONTROL 1234 KIA78R05 KIA278R05 KIA278R12 KIA278R08
TO-220  1. Base 2. Collector 3. Emitter 123 KTB1369Y KTD2061Y	SOT-23  1. Base 2. Emitter 3. Collector 1 2 3 KRA102S KRC102S KTD1304		

* SPECIAL FUNCTION KEY

VISO THREE		
FEATURE	REMOTE KEY OPERATING	FRONT KEY OPERATING
Micom Reset	-	AM FUNCTION STATE MENU + ENTER (Long key)
Micom & DSP Soft version Display	AUDIO 1 FUNCTION STATE - DISP key	-
Station/preset naming Method	-	FM/AM FUNCTION STATE - DISPLAY (LONG) KEY - UP/DOWN KEY(character change) - LEFT/RIGHT(cursor move) - MEMORY KEY (save)
Auto-preset Method	-	FM/AM FUNCTION STATE - MEMORY (LONG) KEY
Preset Delete	-	(Preset Mode) 1.Display key + Memory SHORT key -->1 Preset Delete 2.Display key + Memory LONG key --> ALL Preset Delete
CD LD Current & TOC Reading total time Display	-	CD FUNCTION STATE(PLAY) - PLAY + MENU (long key) - PLAY KEY(short key) --> reset

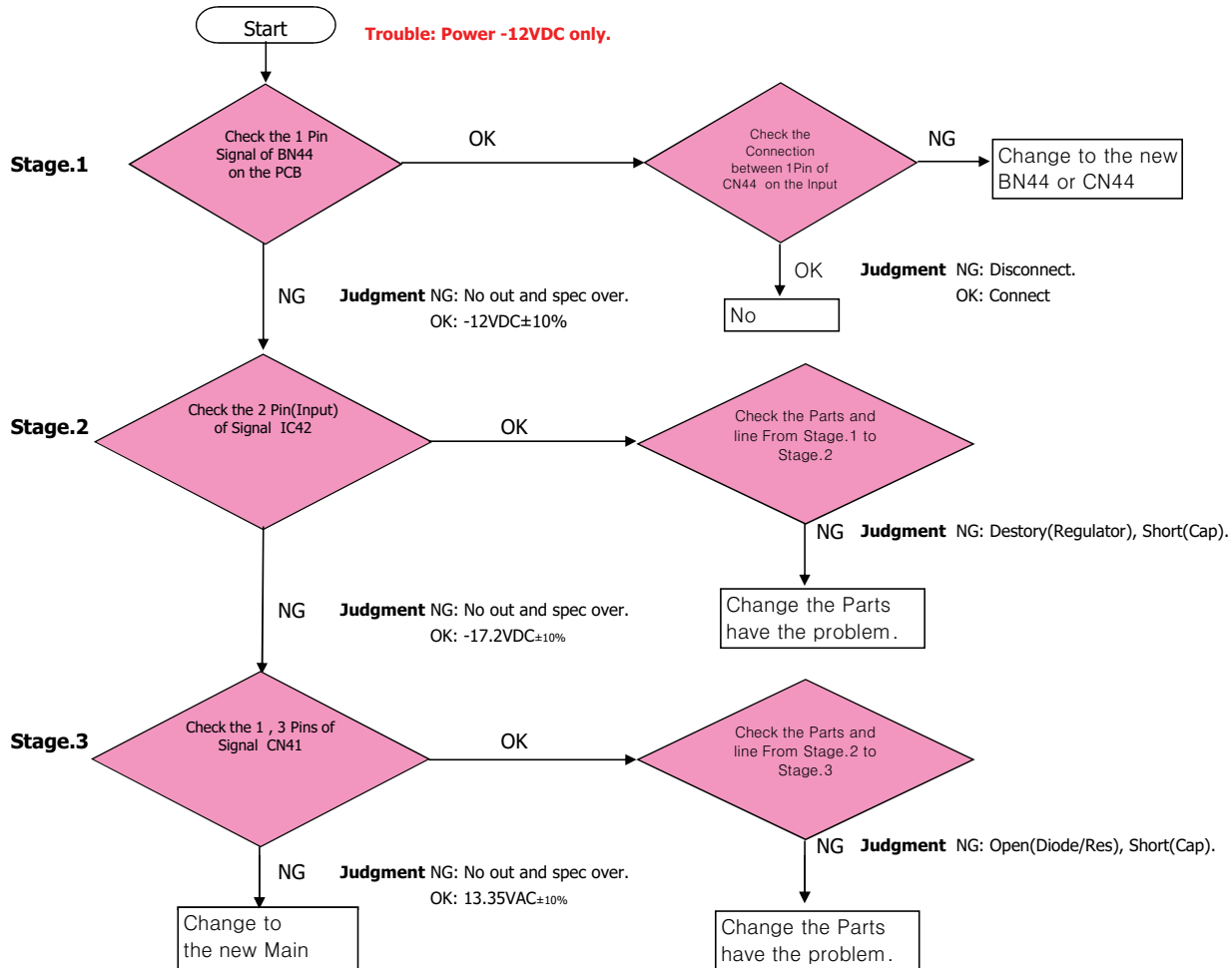
ELECTRICAL TROUBLESHOOTING GUIDE

Power PCB(CUP12351Z) Trouble Check flow Chart.

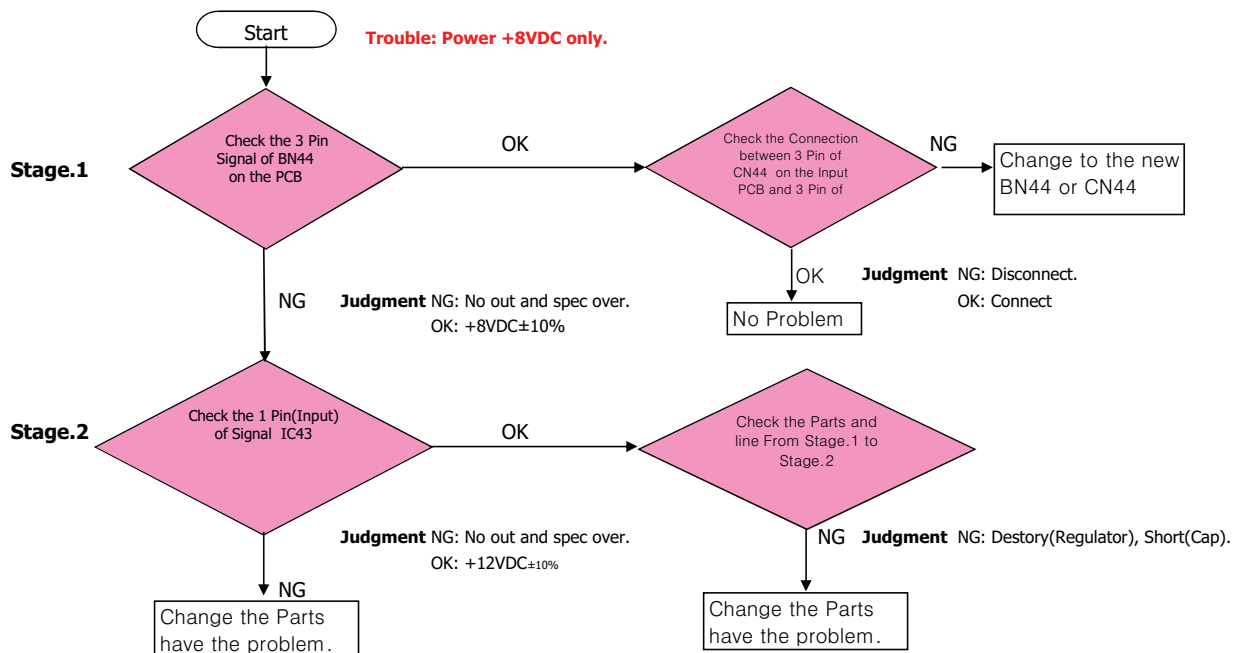
* For all power is "On", Relay RY42 must be "On"

(At first, Please check RY42 & Fuse F401, F402.

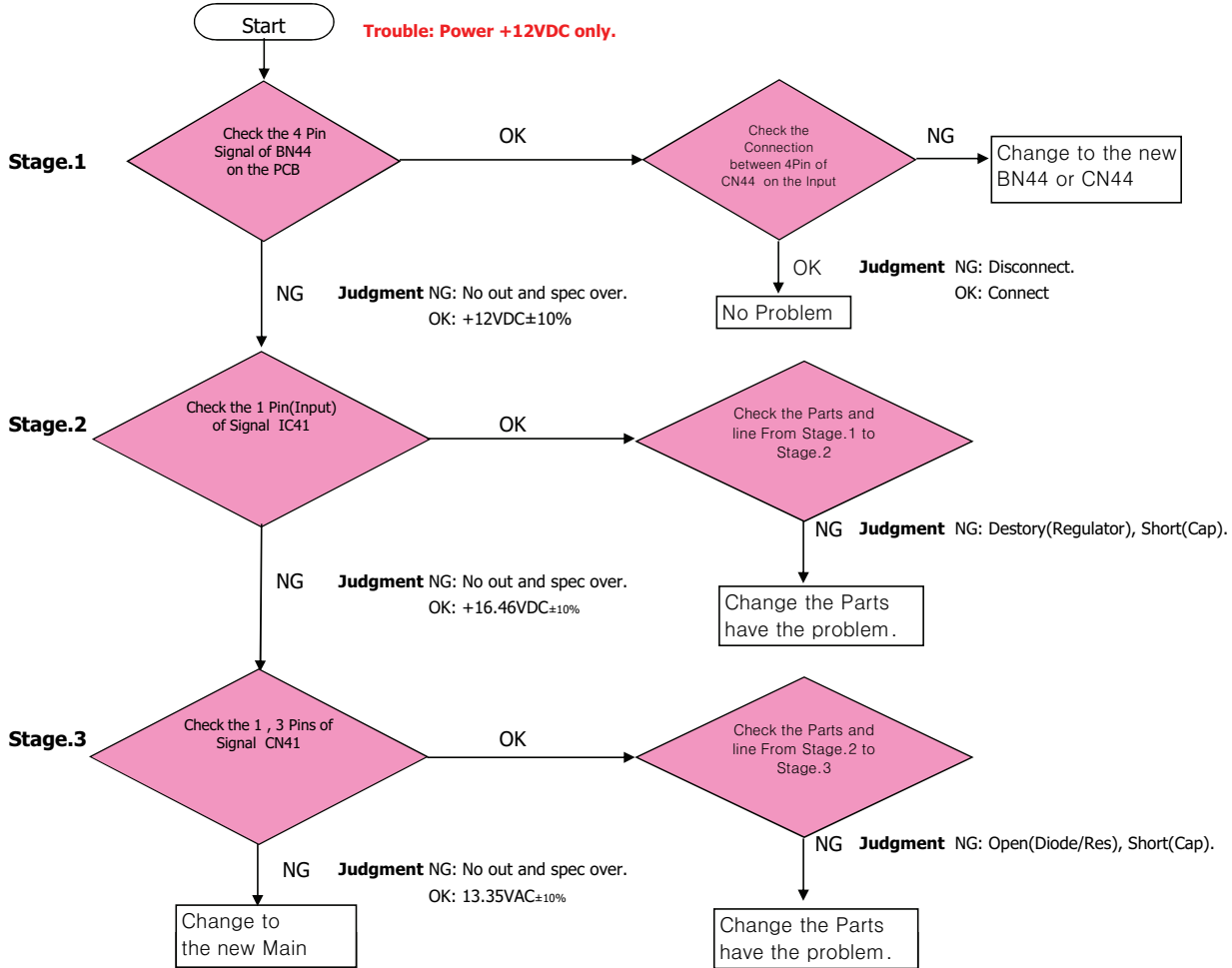
1. 1Pin(-12Vdc) of BN44 trouble check flow Chart.



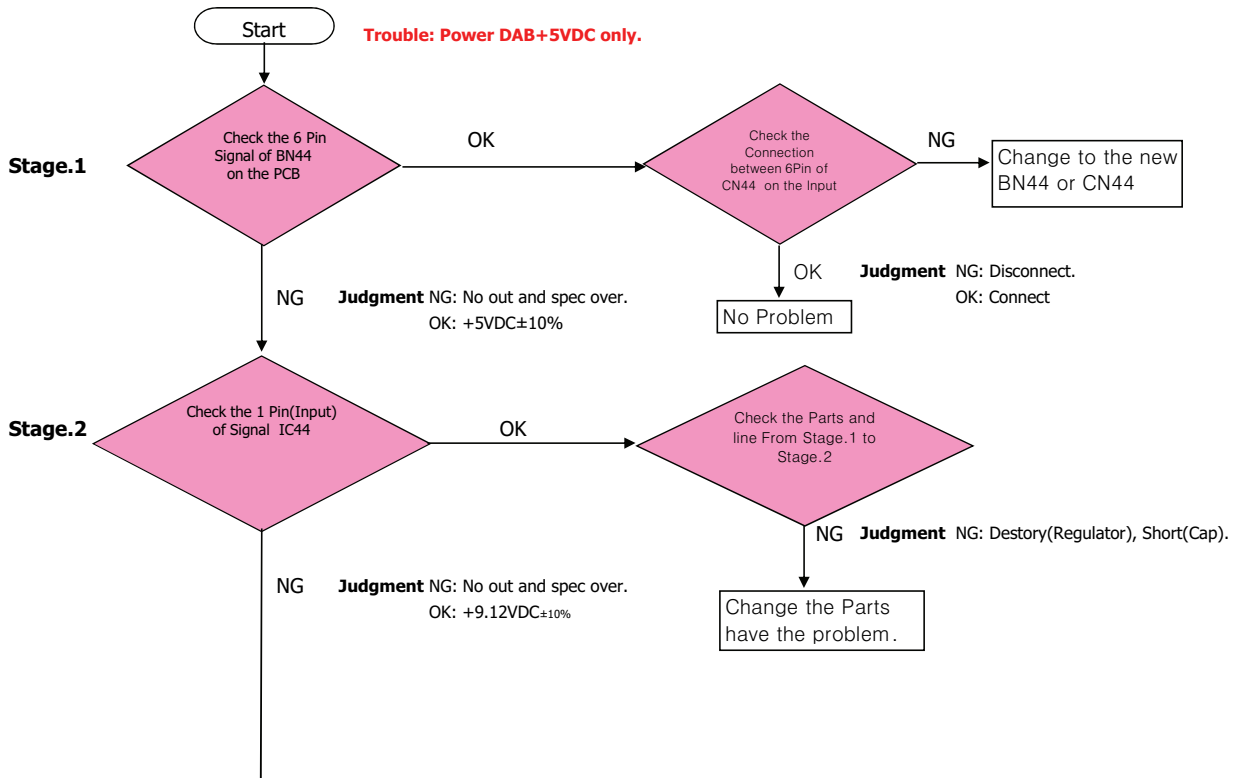
2. 3Pin(+8Vdc) of BN44 trouble check flow Chart.

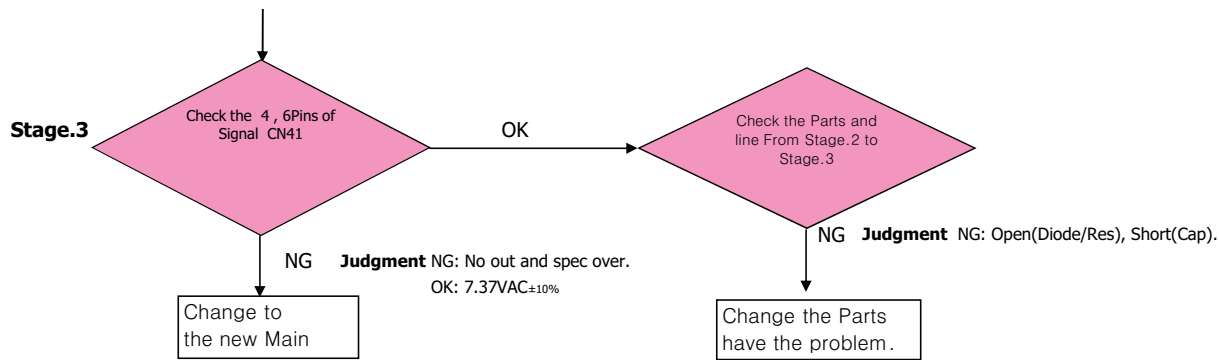


3. 4Pin(+12Vdc) of BN44 trouble check flow Chart.

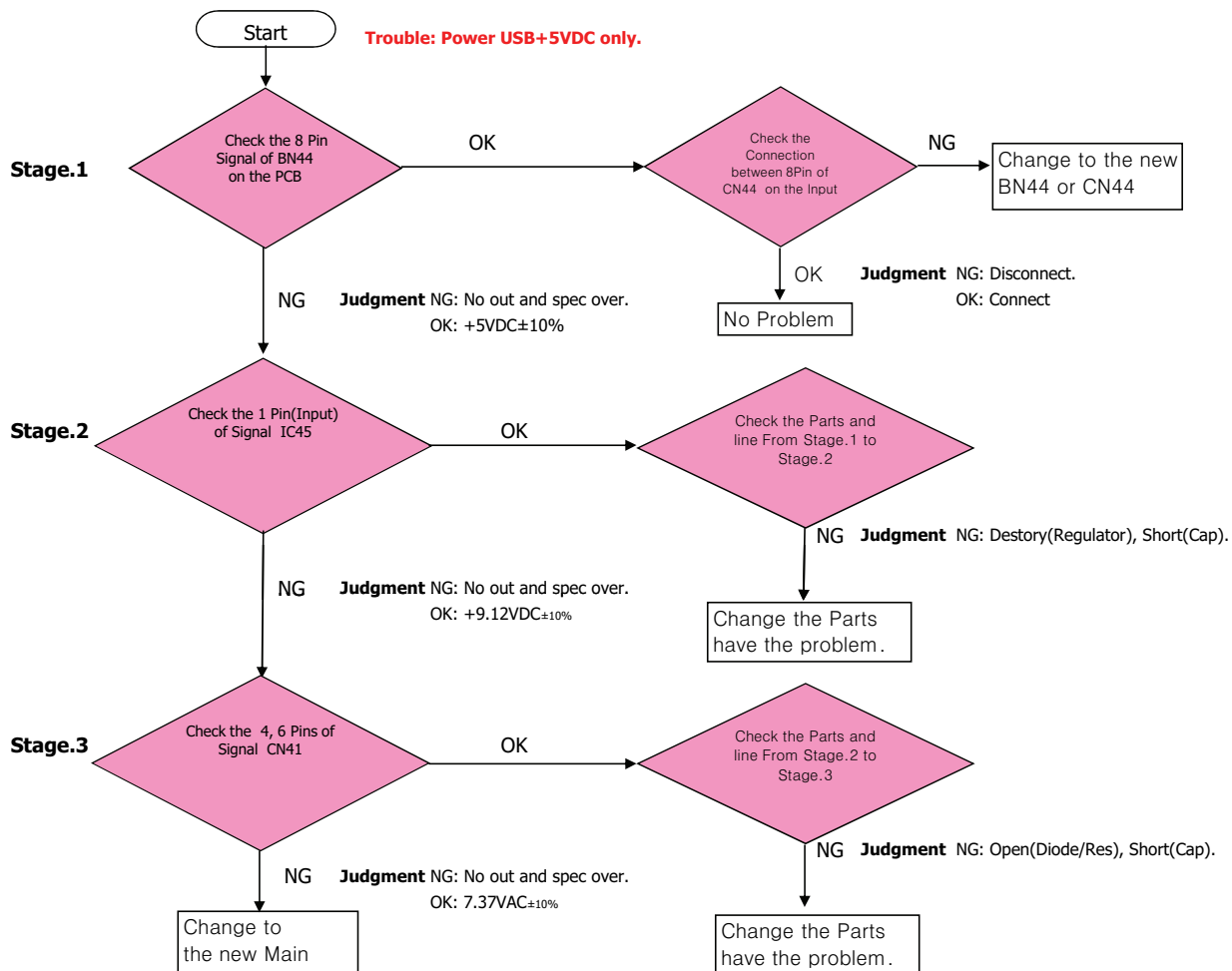


4. 6Pin(DAB+5Vdc) of BN44 trouble check flow Chart.

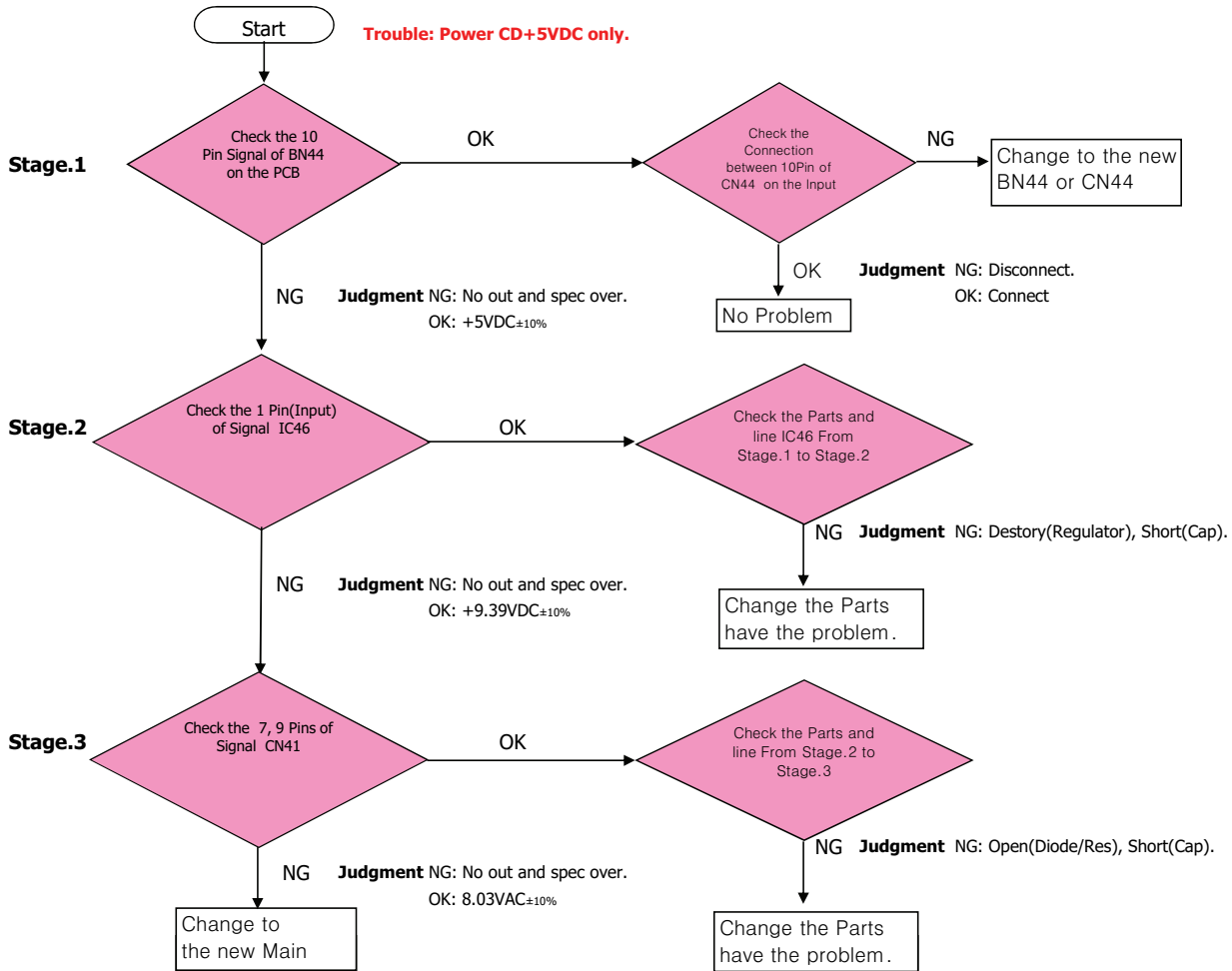




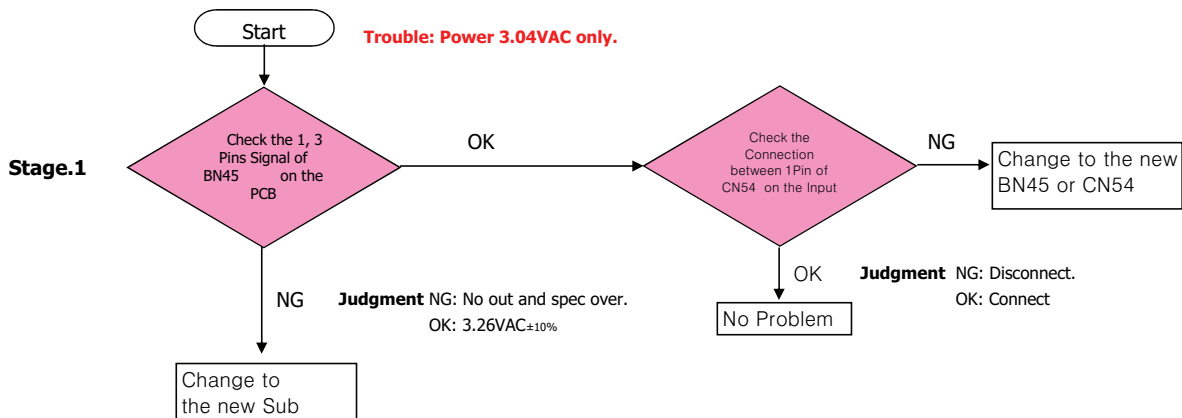
5. 8Pin(USB+5V_{DC}) of BN44 trouble check flow Chart.



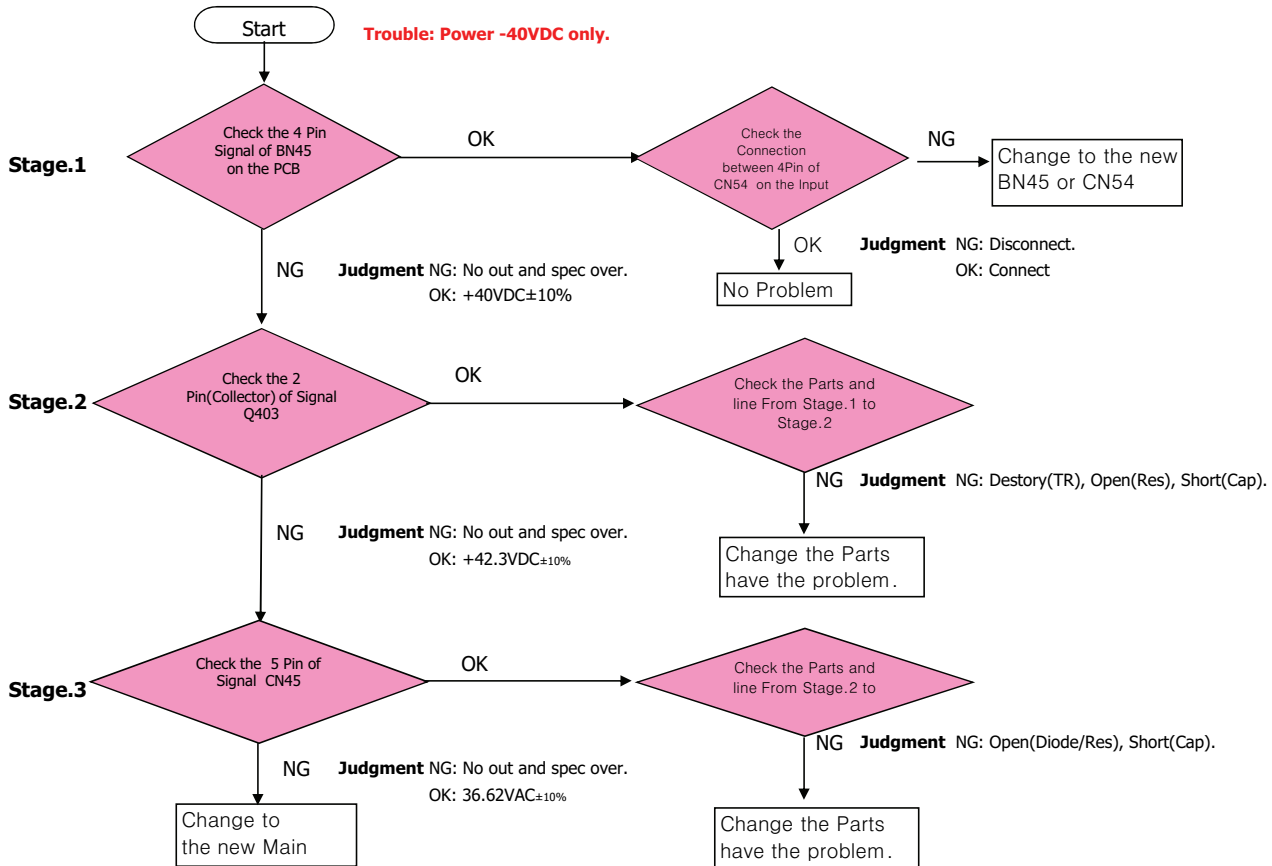
6. 10Pin(CD+5Vdc) of BN44 trouble check flow Chart.



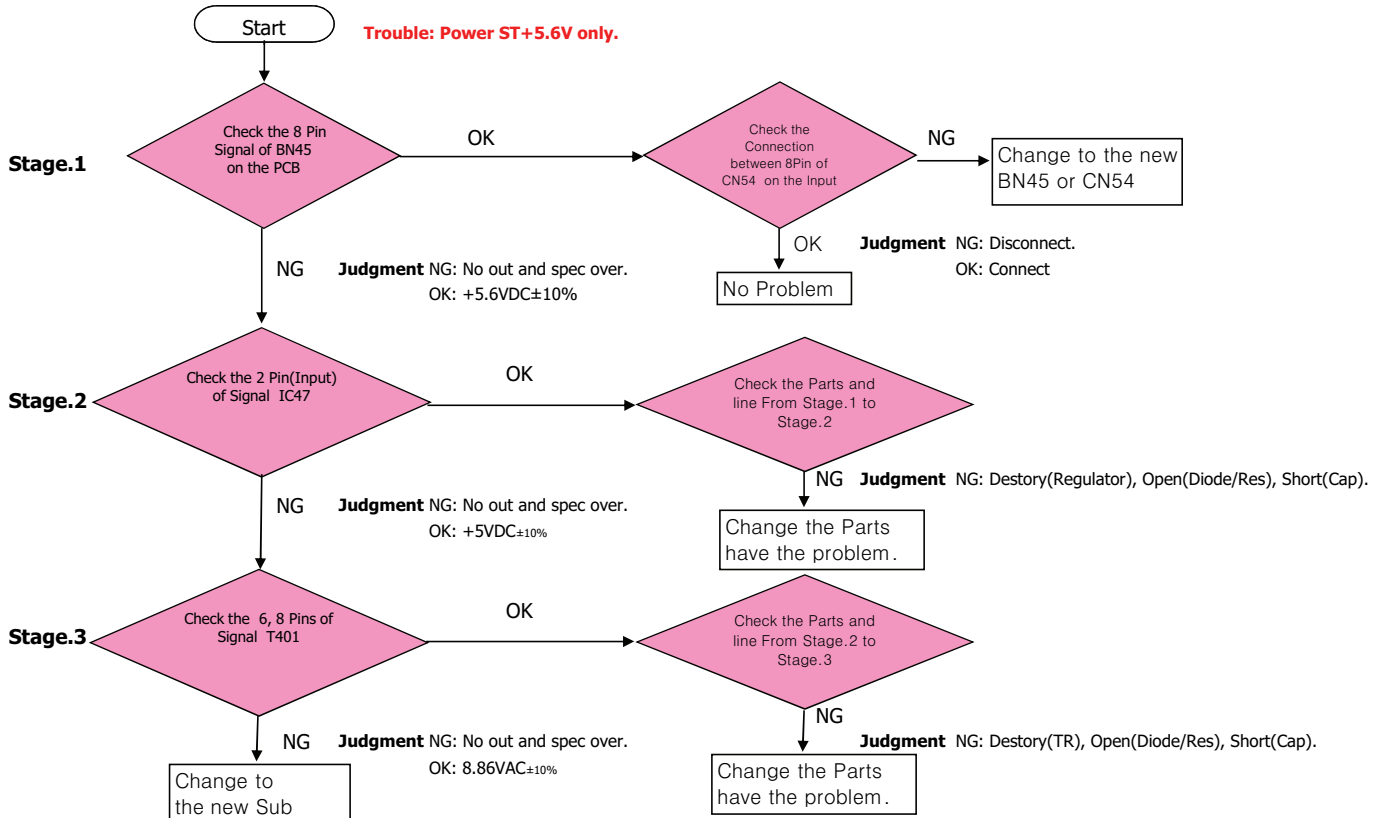
7. 1, 3Pin(3.04VAc) of BN45 trouble check flow Chart.



8. 4Pin(+40V) of BN45 trouble check flow Chart.

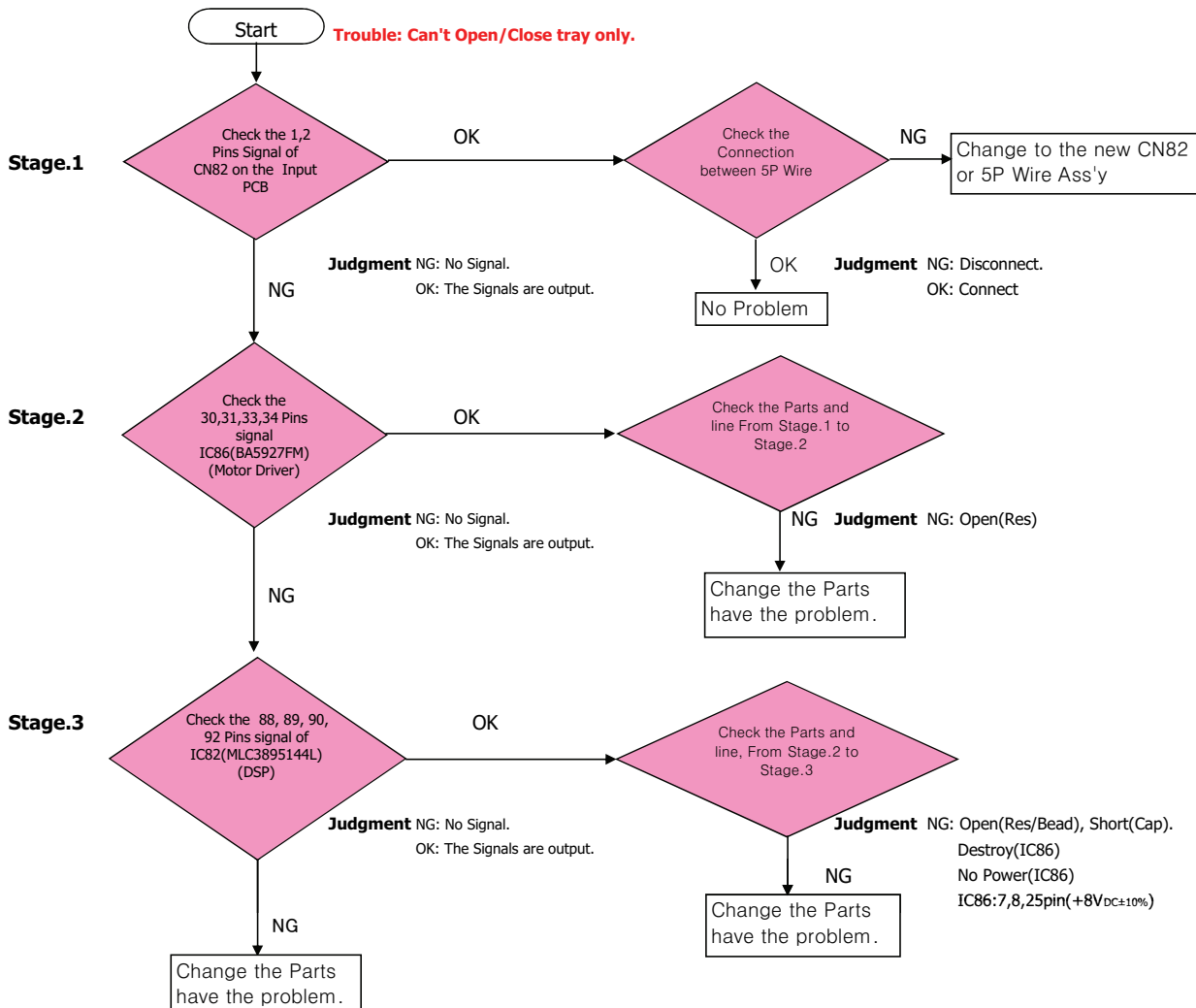


9. 8Pin(ST+5.6V) of BN45 trouble check flow Chart.

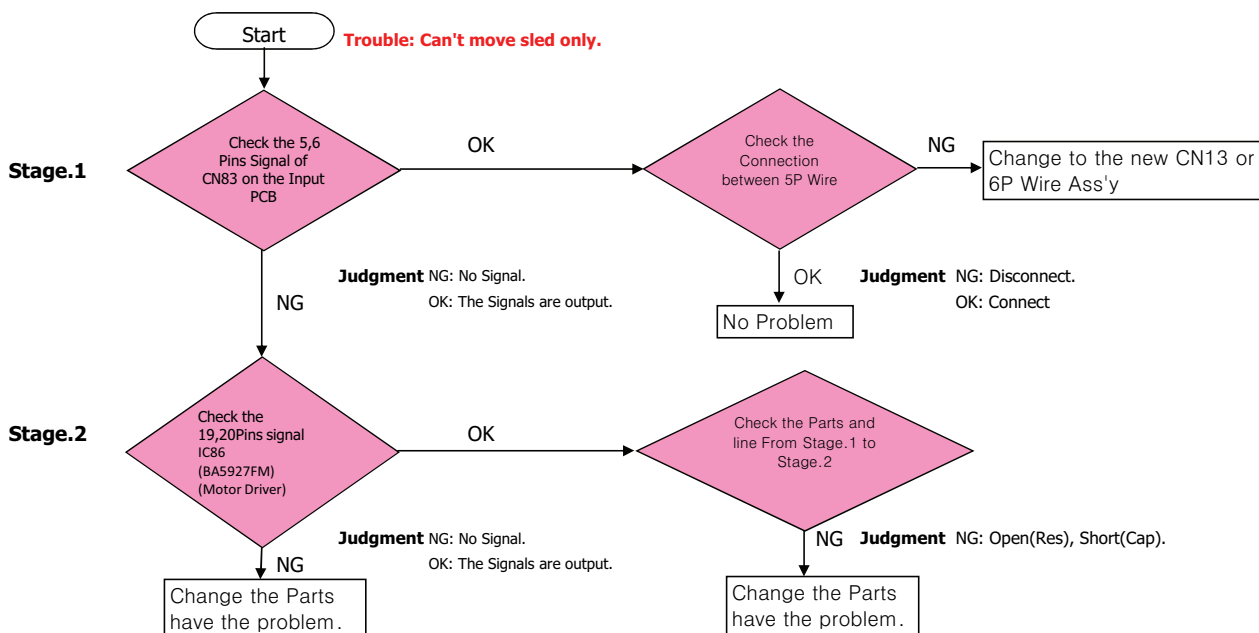


CD Loader (INPUT PCB: CUP12350Z) Trouble Check flow Chart.

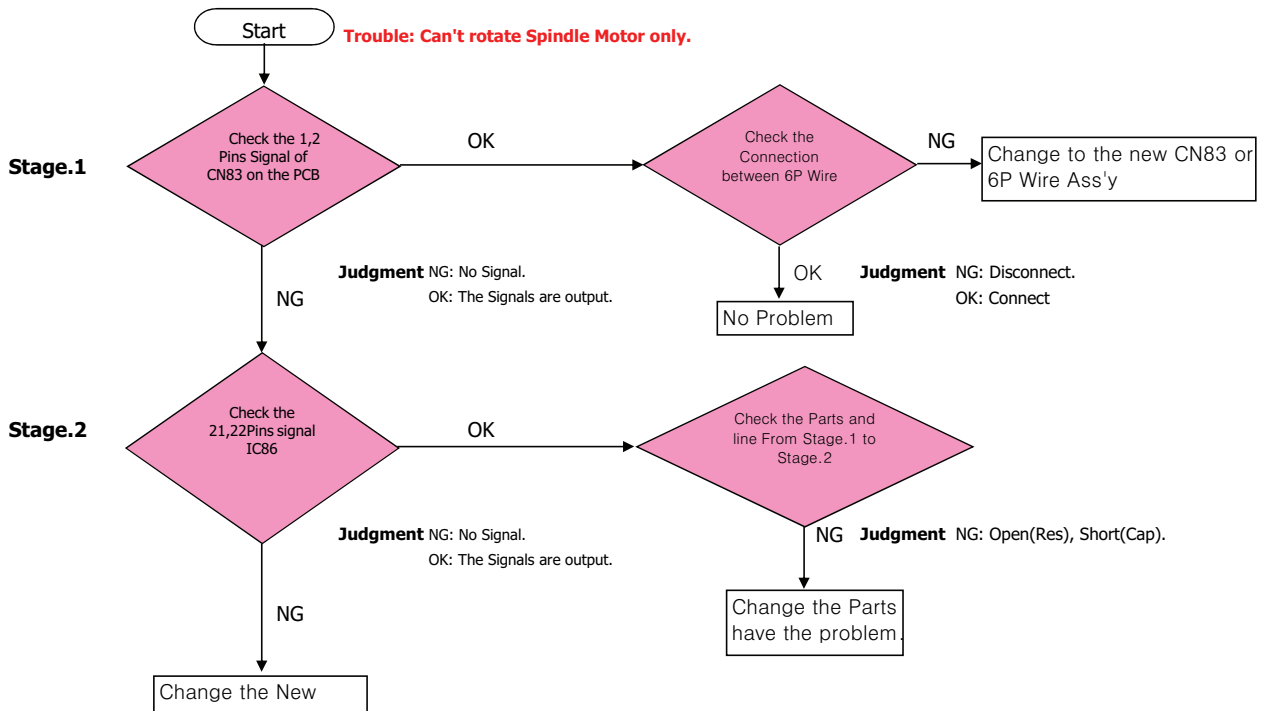
1. Can't open/close tray trouble flow chart.



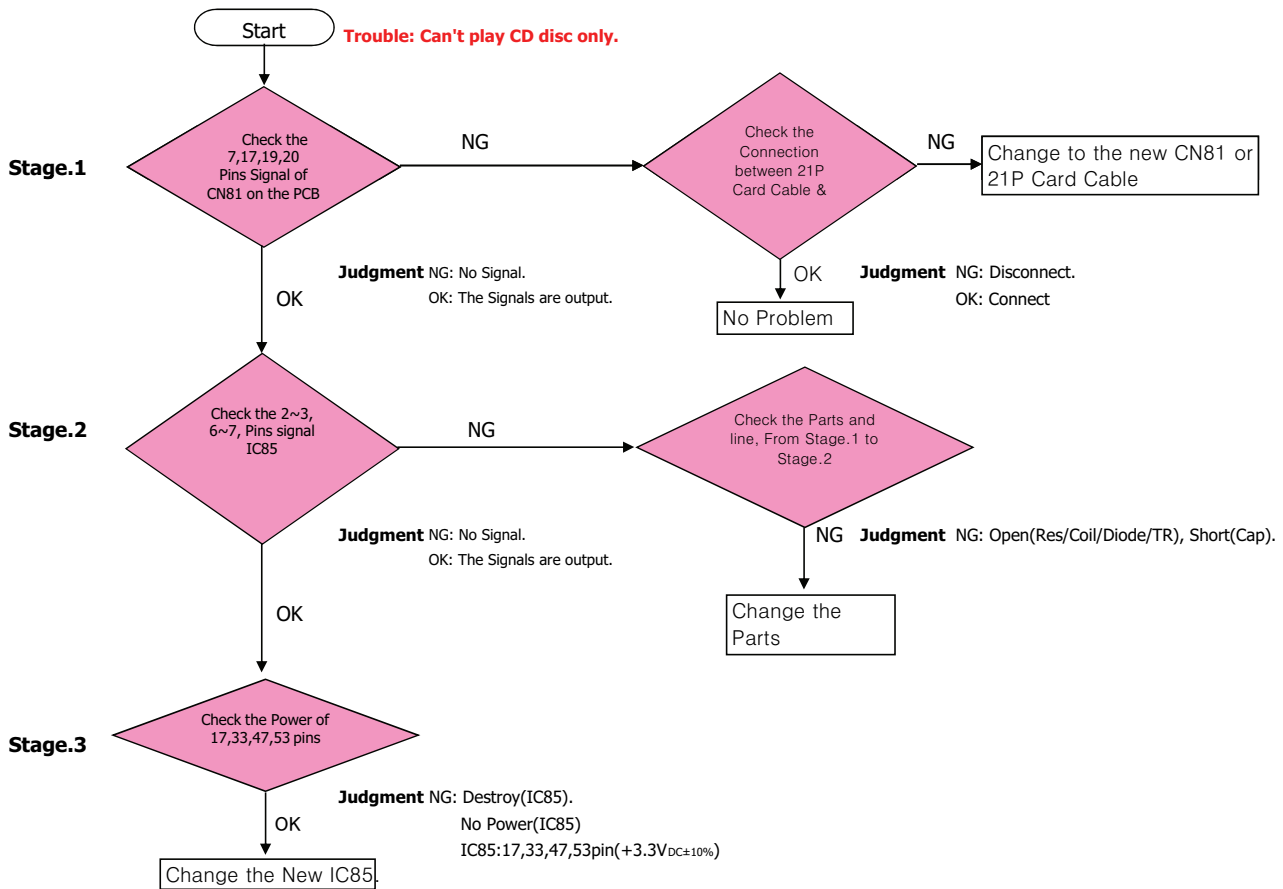
2. Can't move sled trouble flow chart.



3. Can't rotate Spindle Motor trouble flow chart.

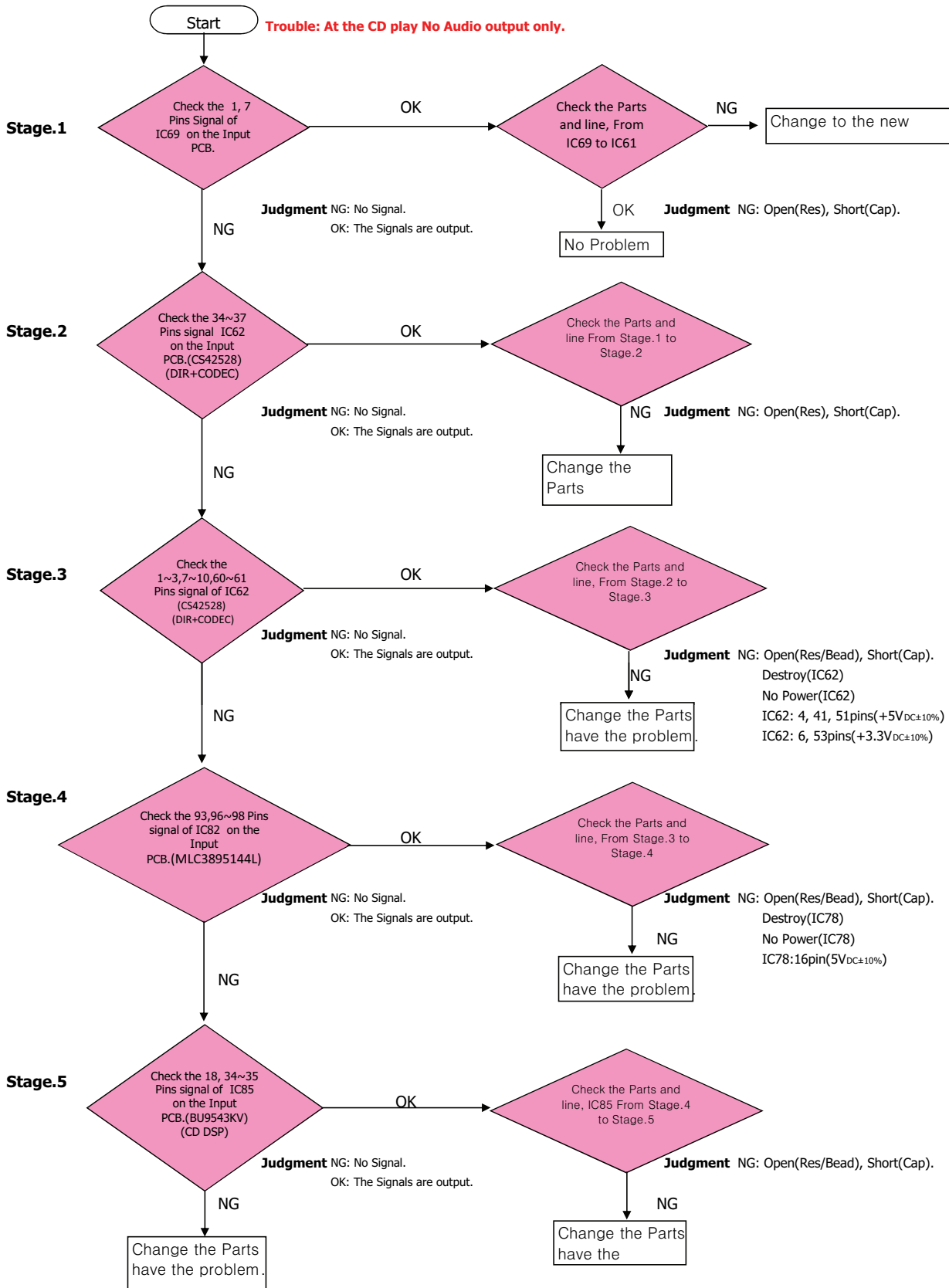


4. Can't play CD disc trouble flow chart.

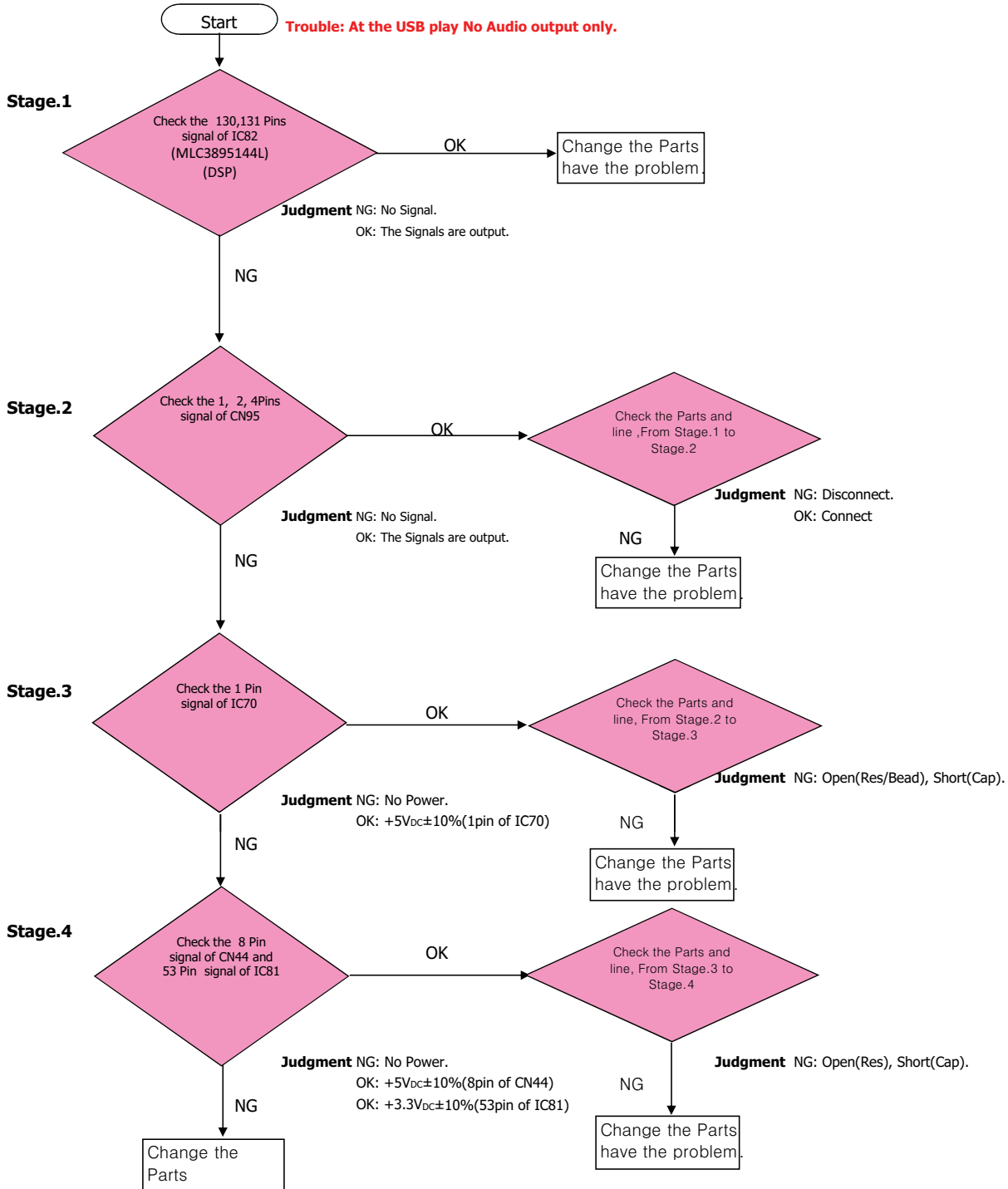


Analog & Digital Audio Output Trouble Check flow Chart. (INPUT PCB: CUP12350Z & POWER/AMP PCB: CUP12351Z)

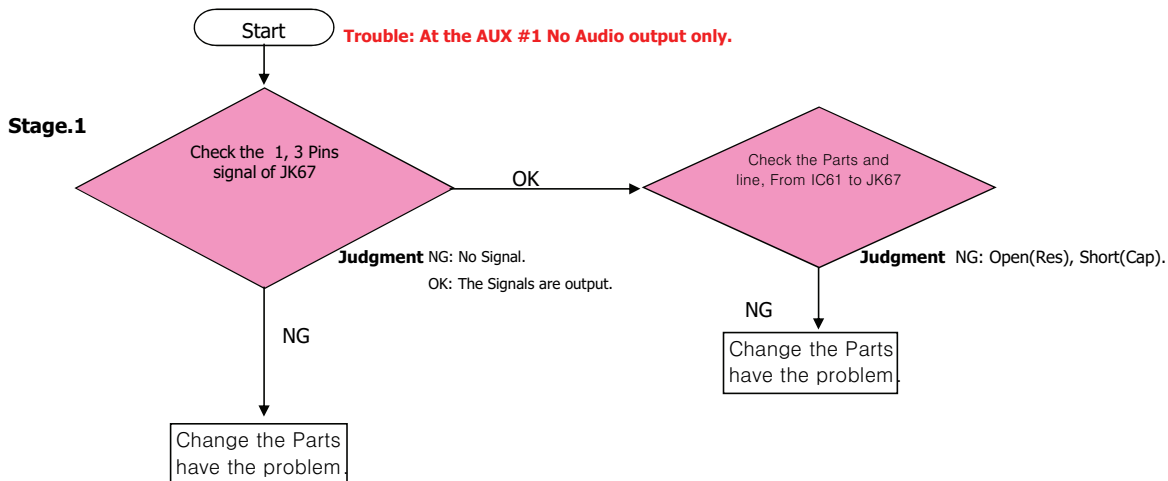
1. CD Analog 2CH Trouble Disc



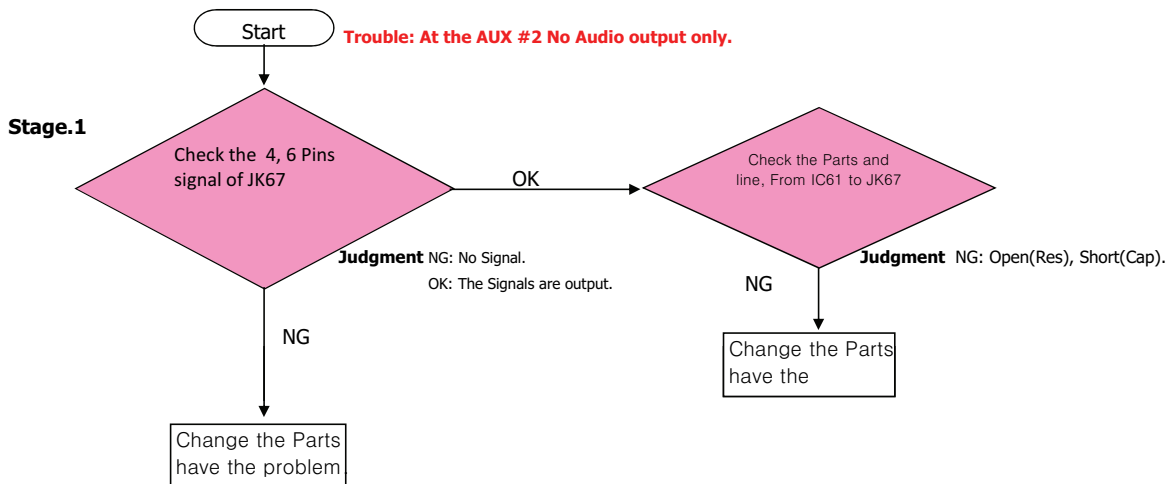
2. USB Analog 2CH Trouble



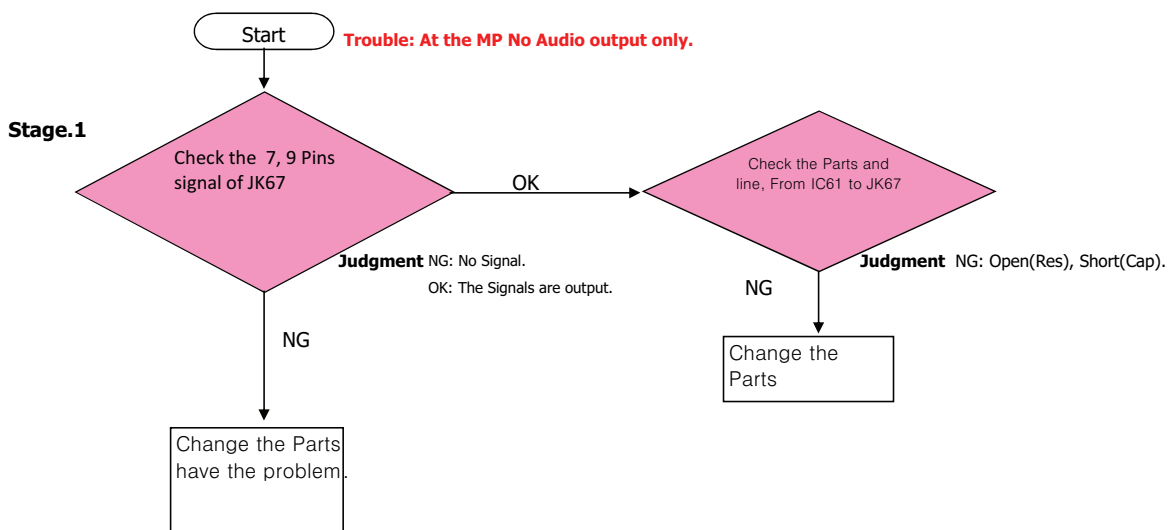
3. AUX #1 Analog 2CH Trouble AUX #1



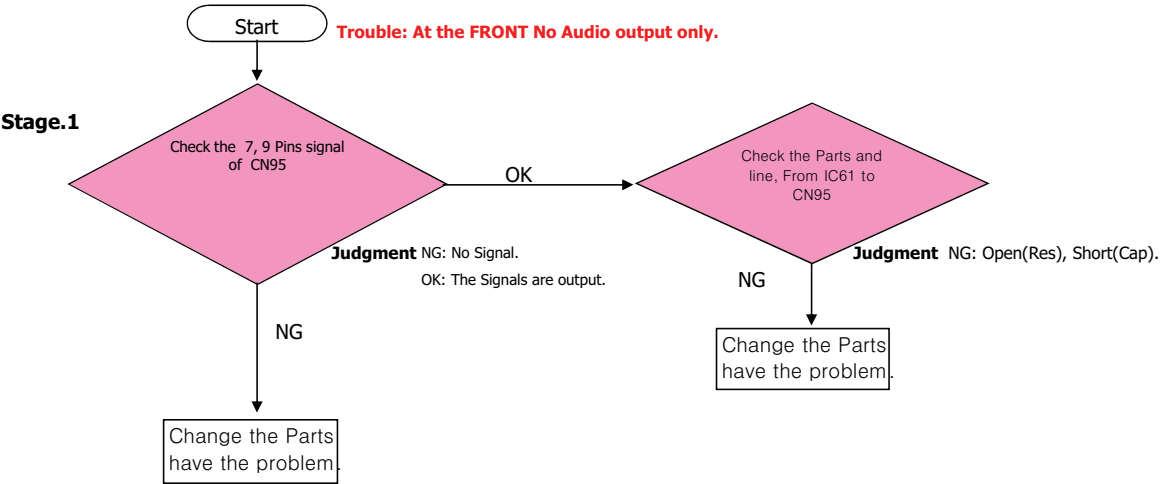
4. AUX #2 Analog 2CH Trouble AUX #2



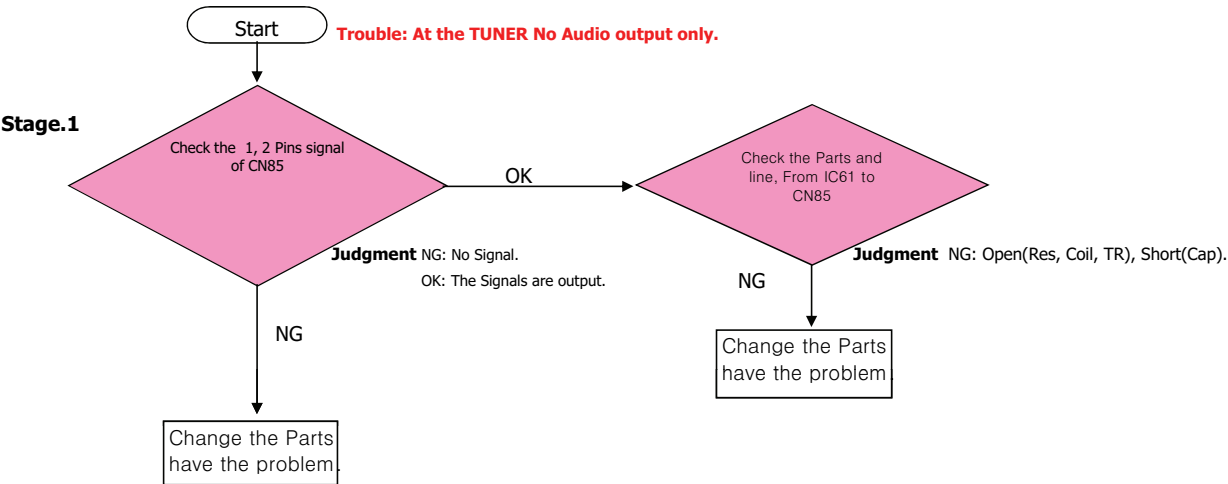
5. MP Analog 2CH Trouble MP



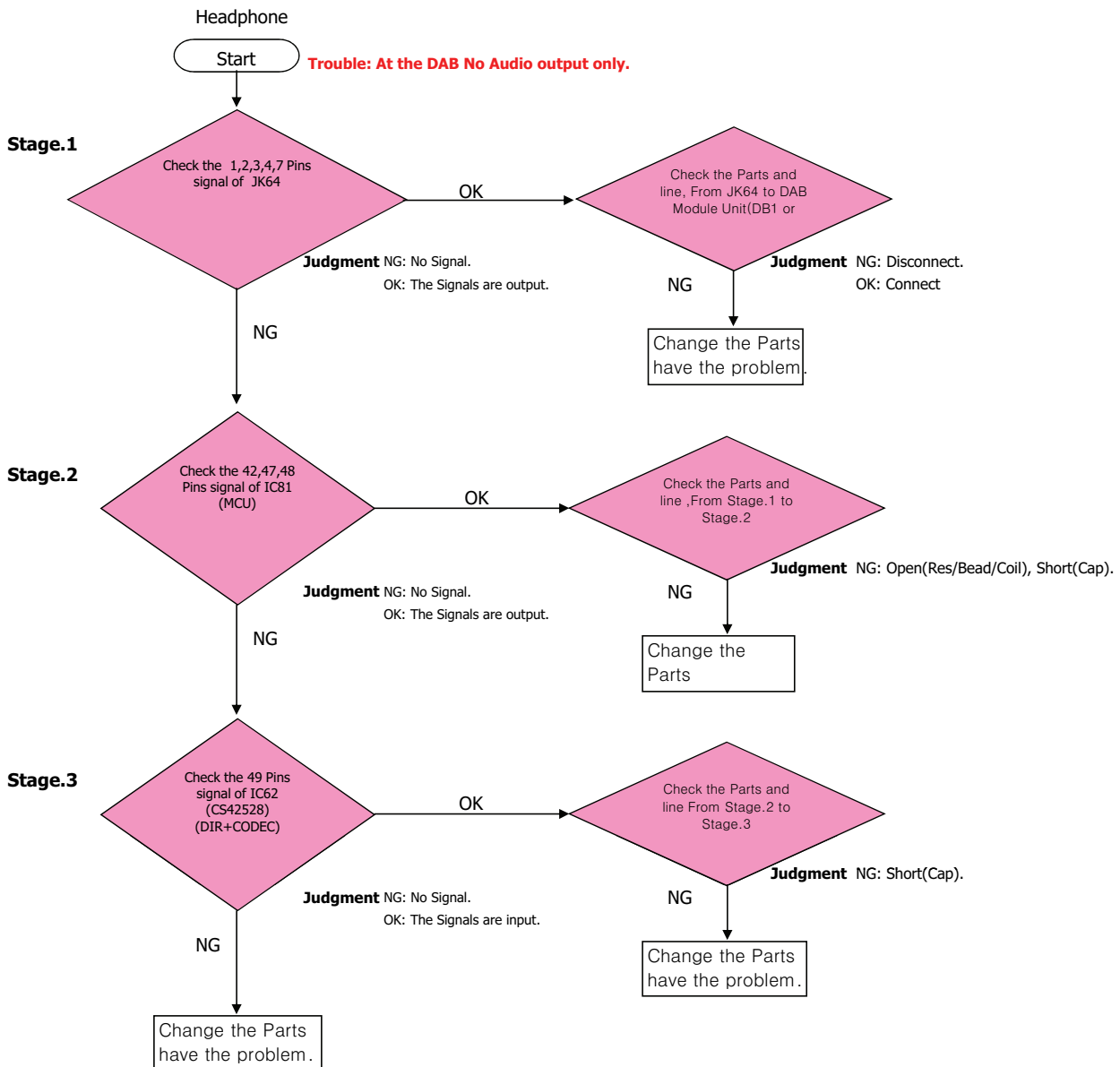
6. FRONT Input Mode Analog 2CH Trouble
FRONT Input



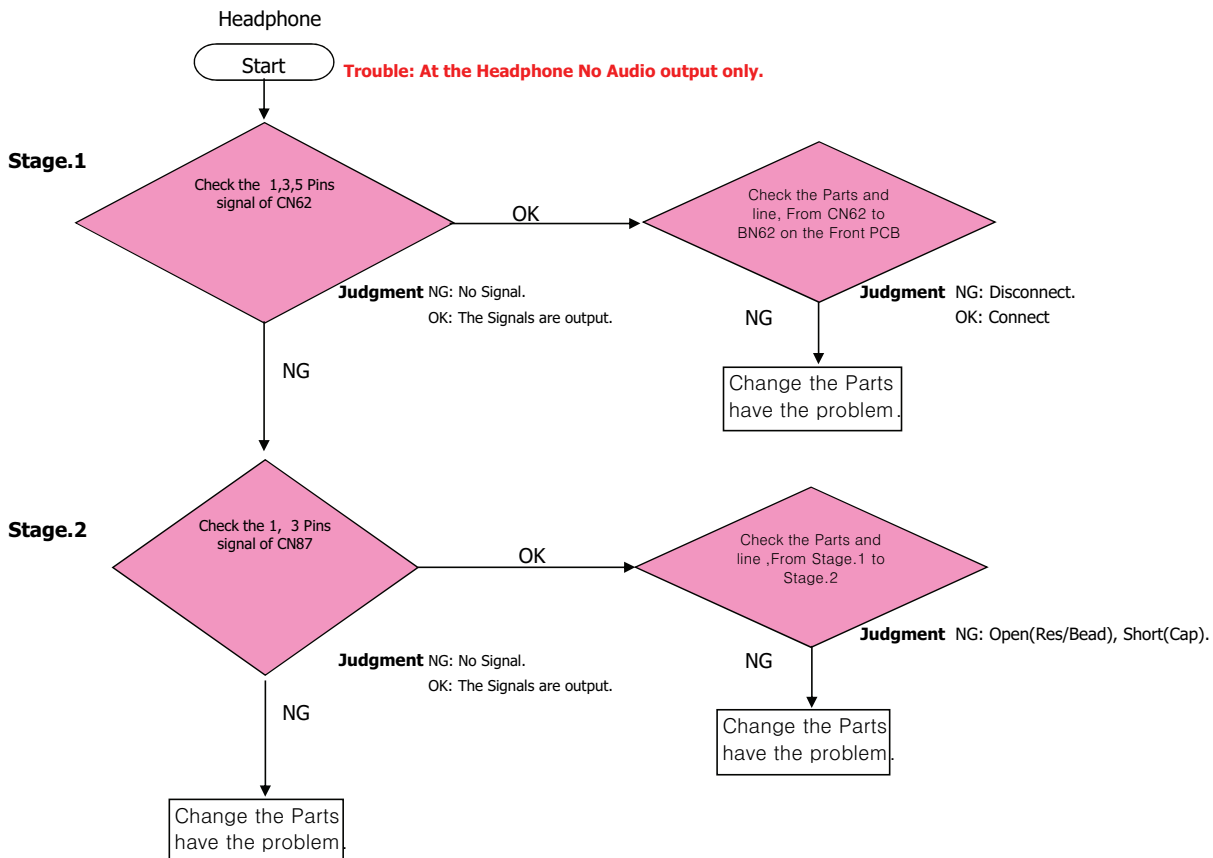
7. TUNER Mode Analog 2CH Trouble
TUNER



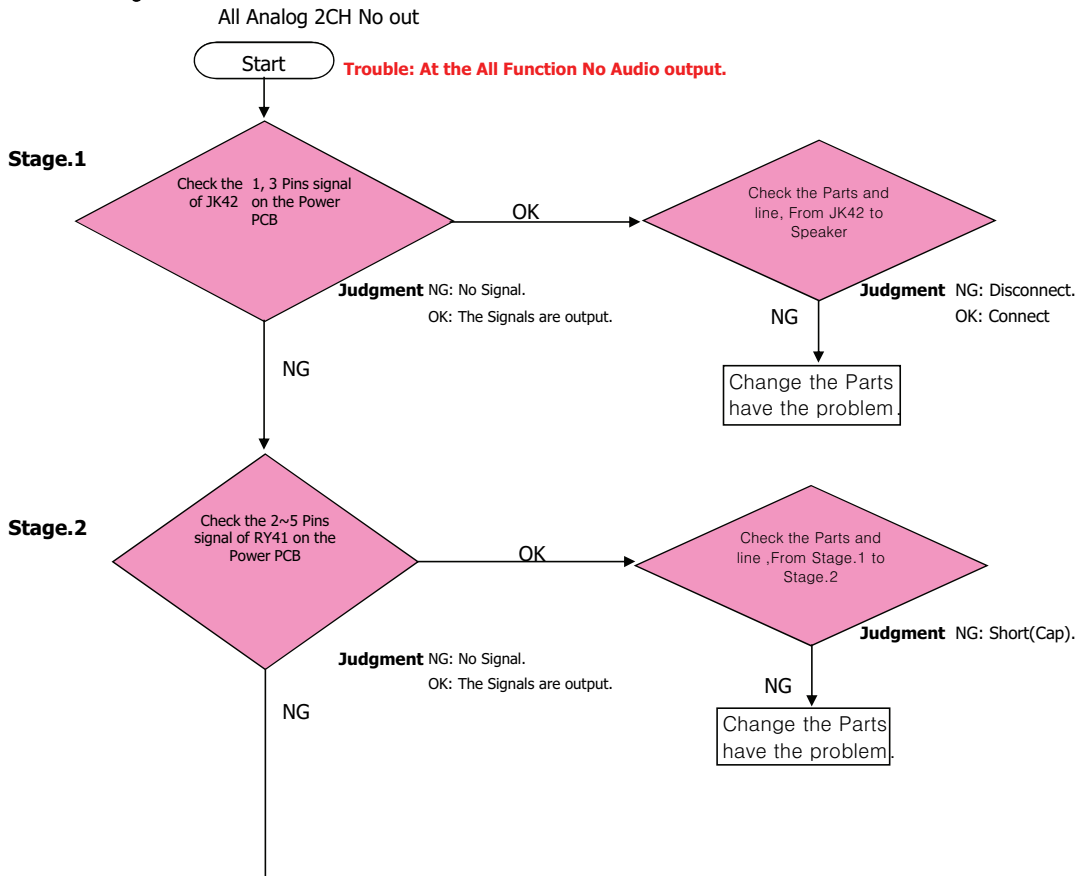
8. DAB Analog 2CH Trouble

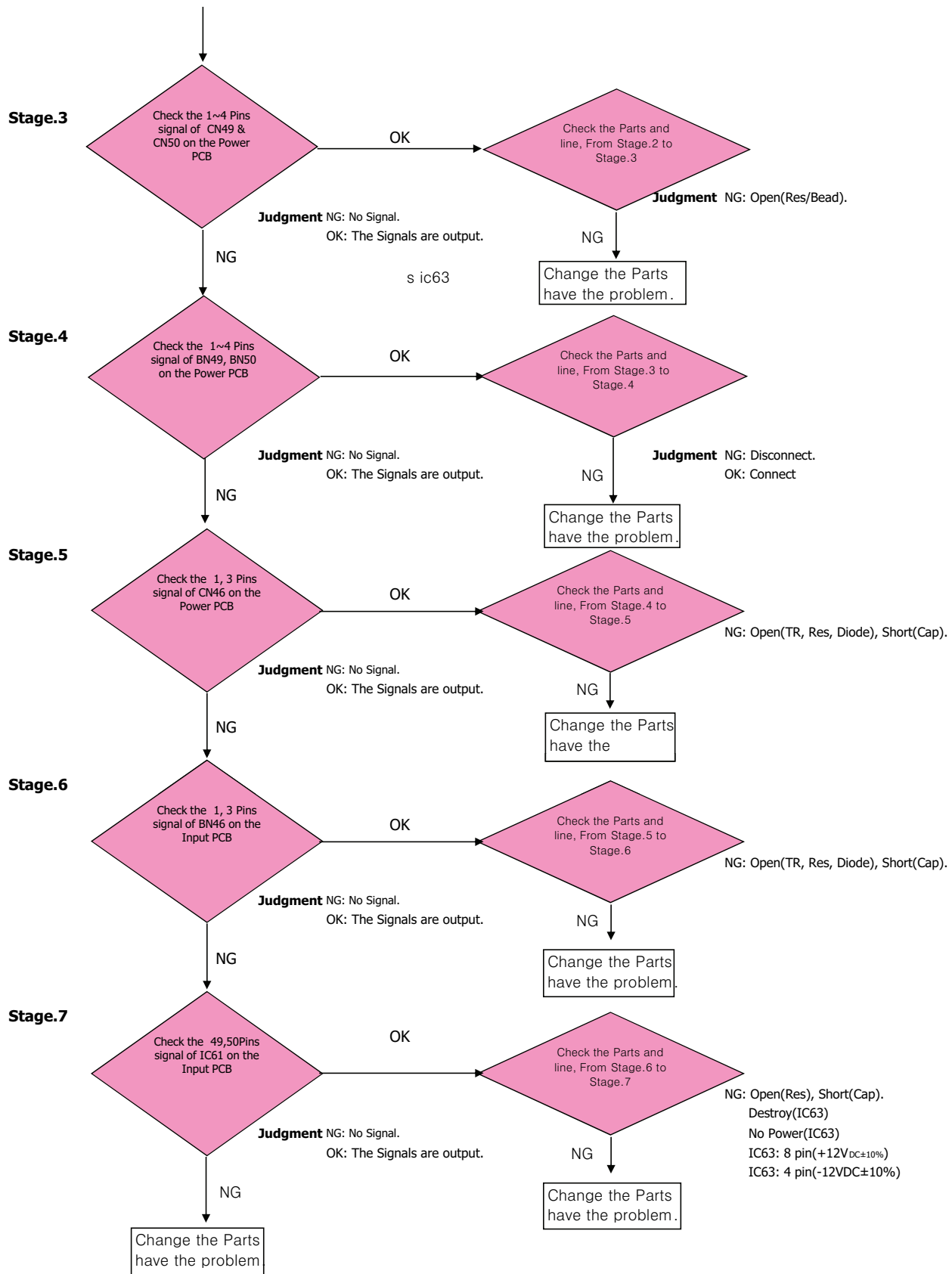


9. Headphone Analog 2CH Trouble



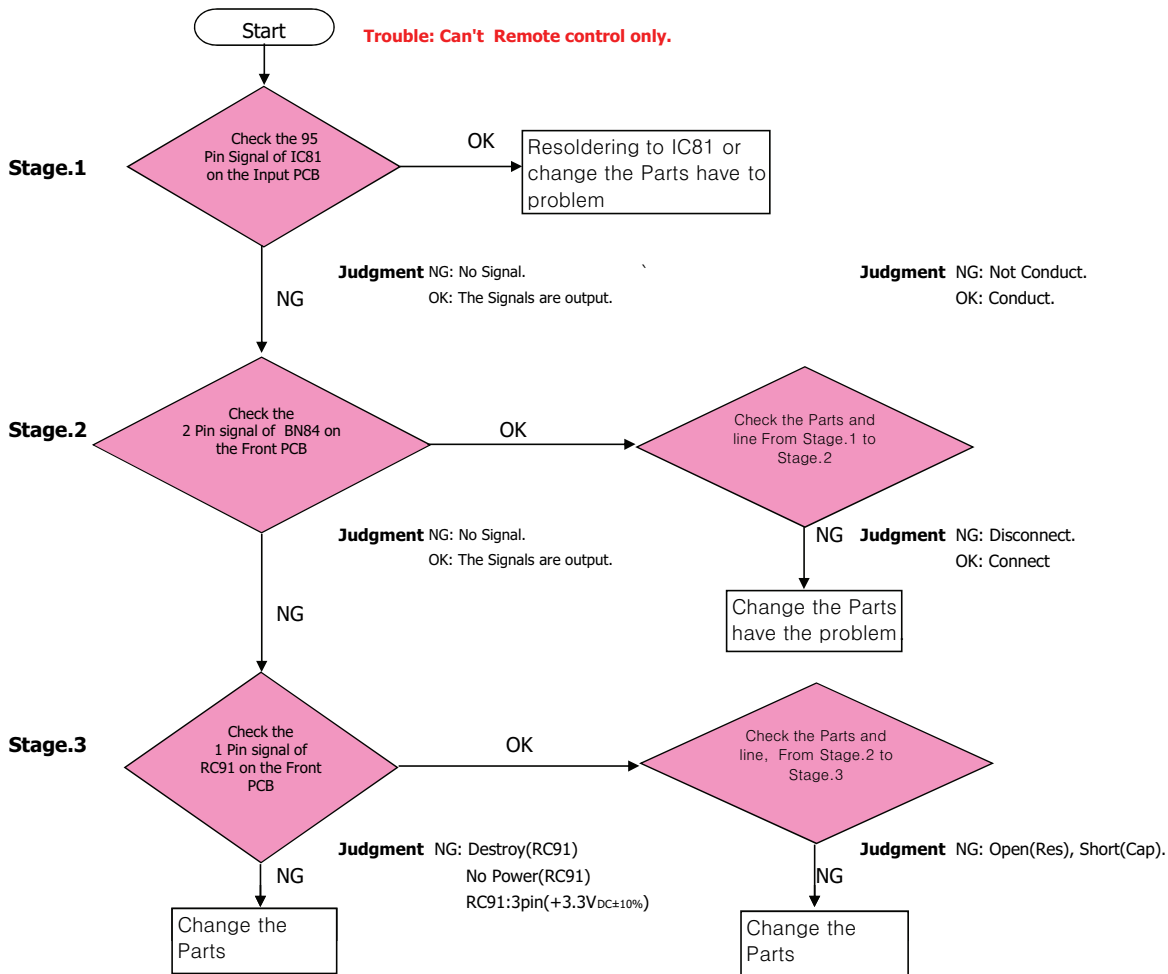
10. All Analog 2CH Trouble





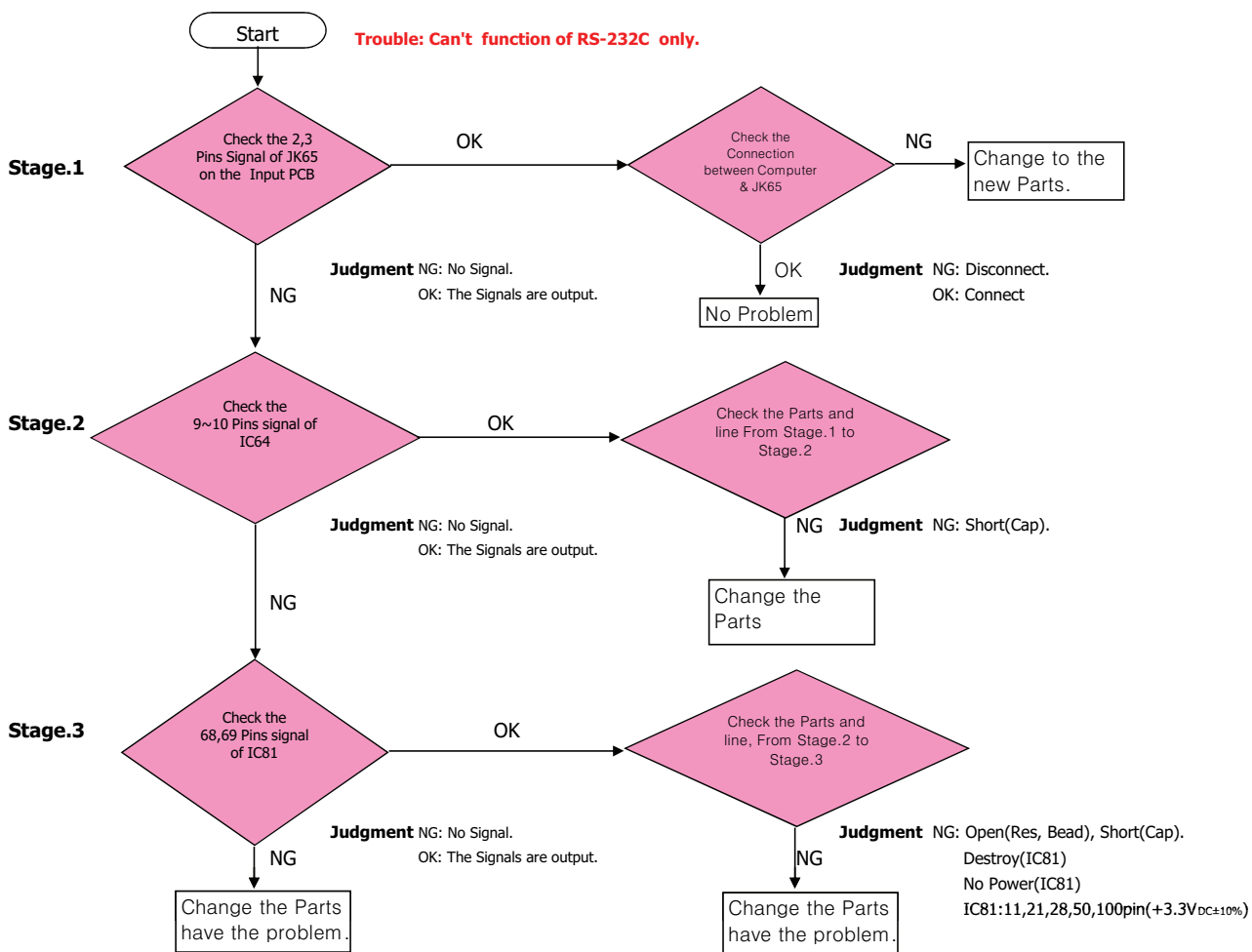
RC Sensor Trouble Check flow Chart. (FRONT PCB: CUP12349Z, INPUT PCB: CUP12350Z)

1. RC Sensor trouble check flow Chart.

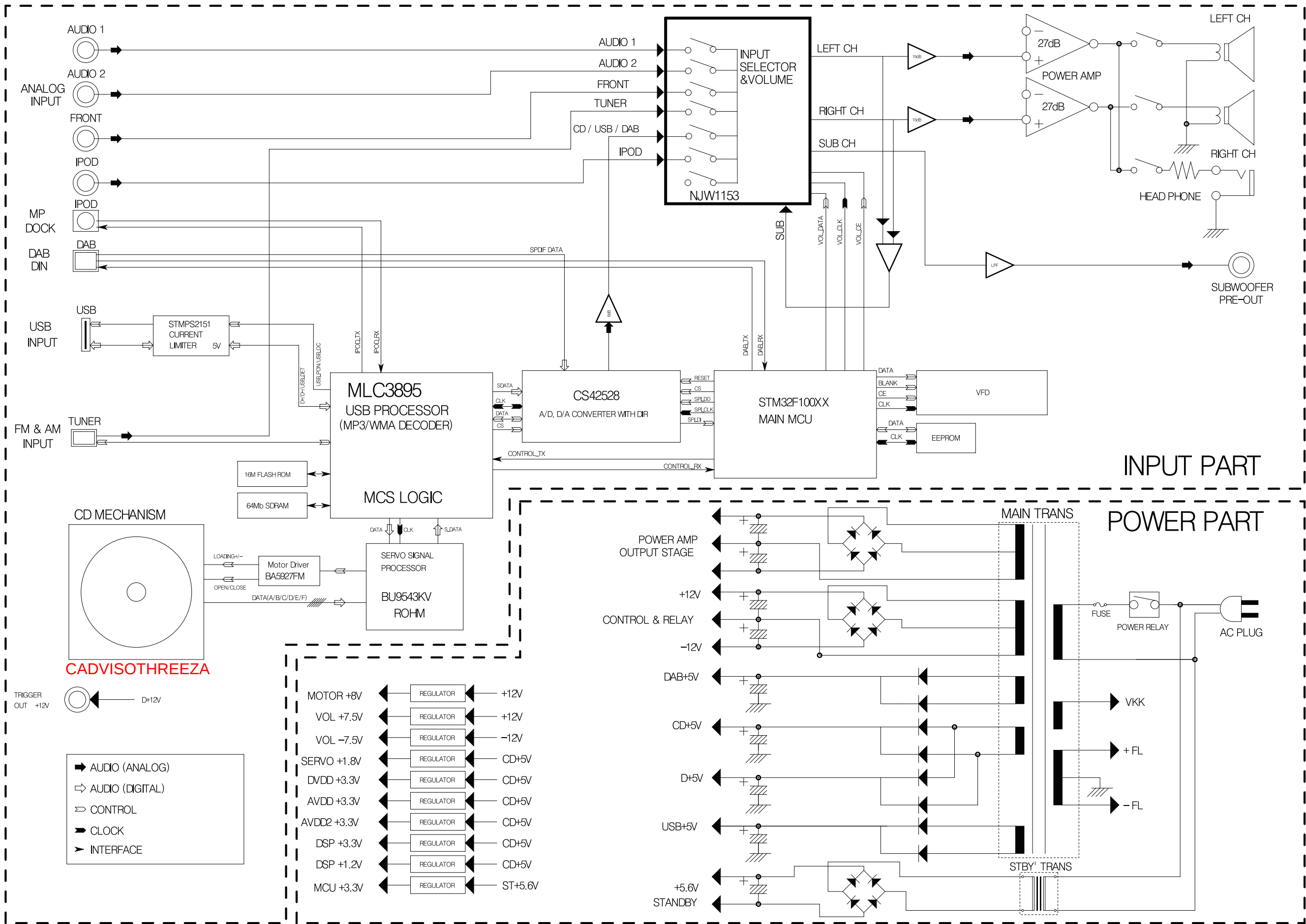


RS-232C Trouble Check flow Chart. (INPUT PCB:CUP12350Z)

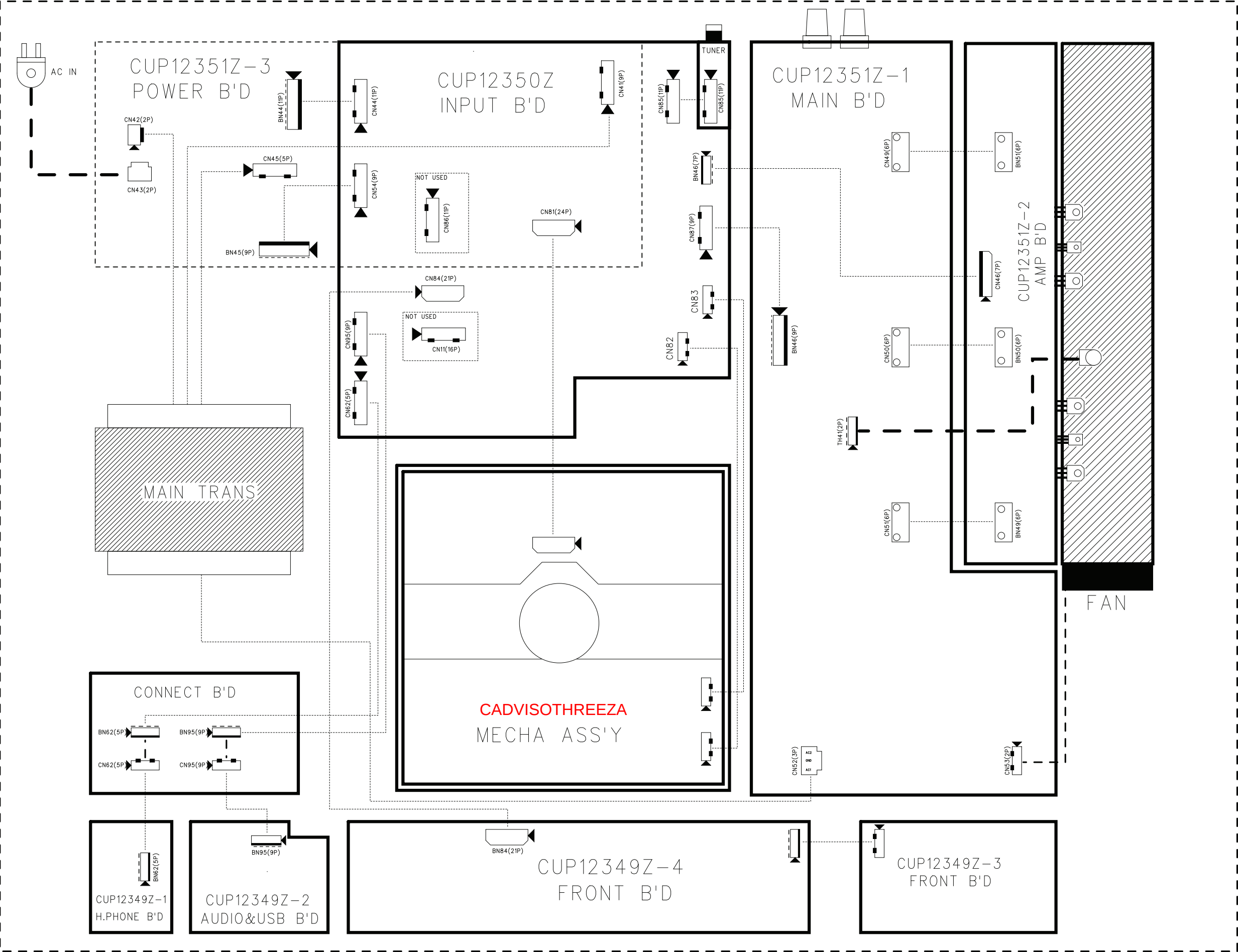
1. RS-232C trouble check flow Chart.



1. BLOCK DIAGRAM

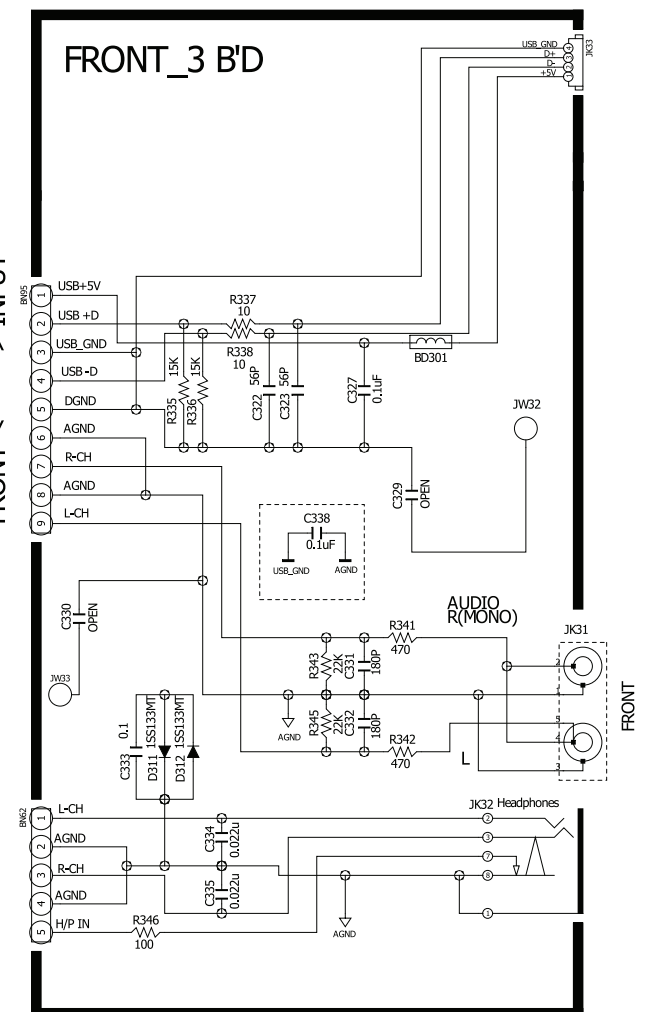
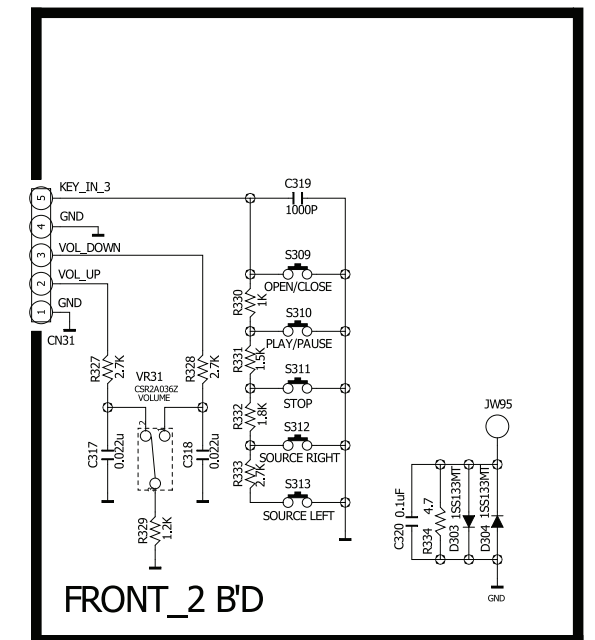


2. WIRING DIAGRAM

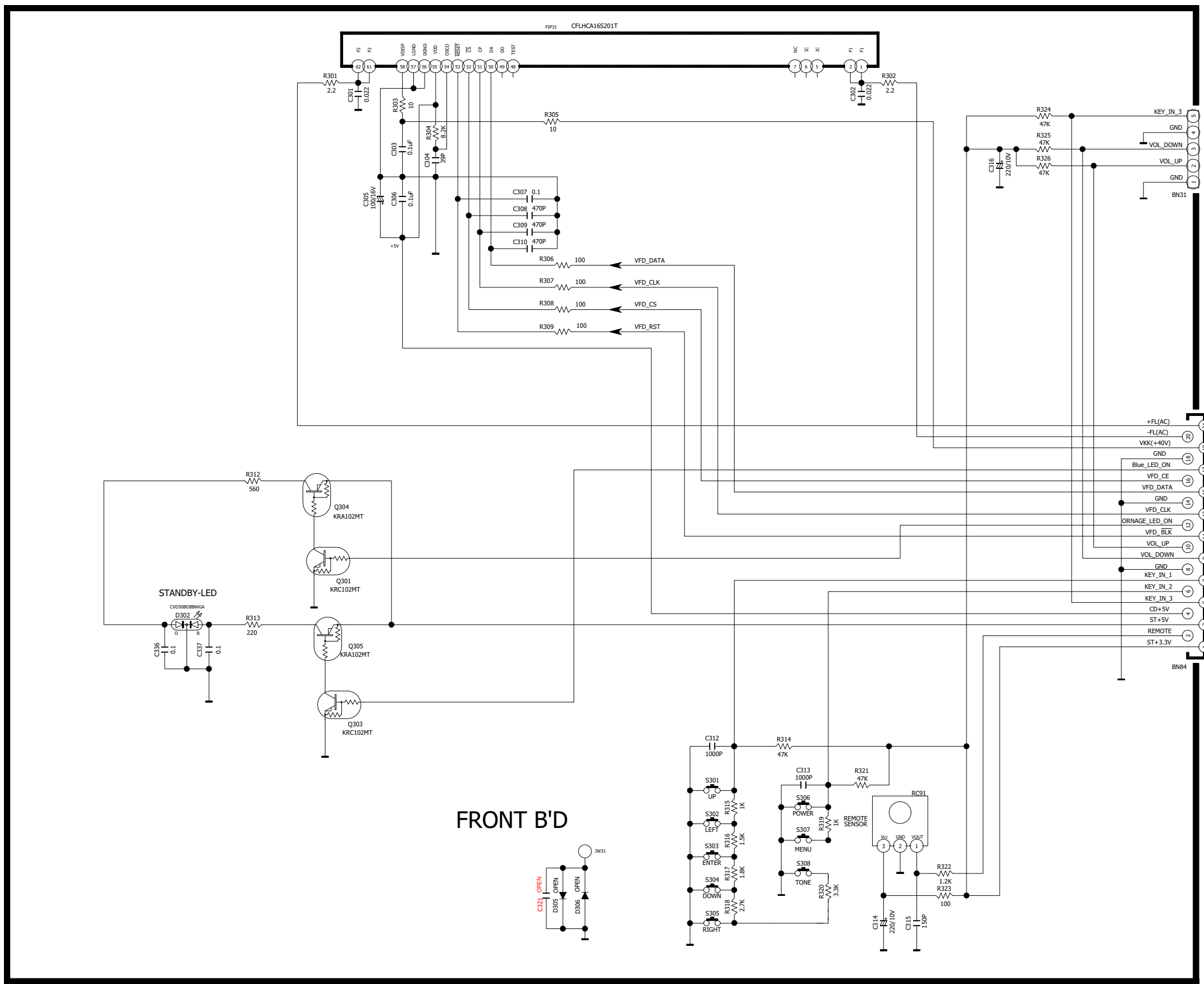


**** IMPORTANT SAFETY NOTICE:**
COMPONENT IDENTIFIED BY Δ MARK HAVE SPECIAL CHARACTERISTICS.
IMPORTANT FOR SAFETY, WHEN REPLACING ANY OF THESE COMPONENTS
USE ONLY MANUFACTURERS SPECIFIED PARTS.

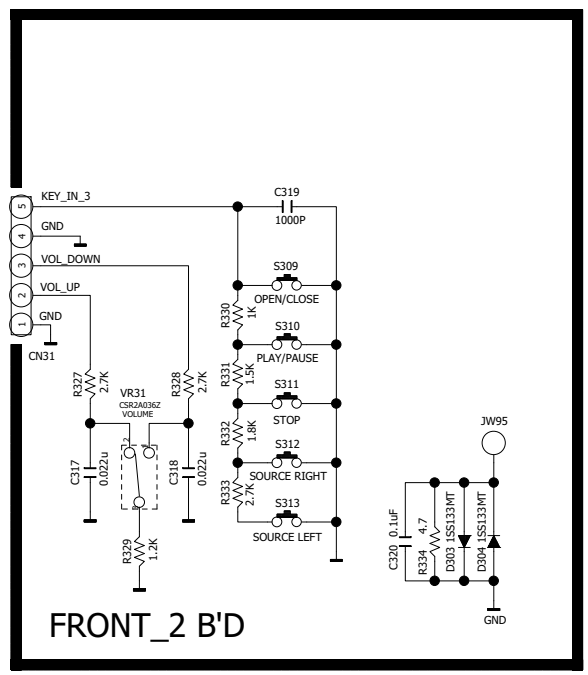
- ** THE UNIT OF RESISTANCE IS OHM.
K = 1000 OHM, M = 10000OHM.
- ** THE UNIT OF CAPACITANCE IS MICROFARAD(μ F)
1pF = 10^{-6} μ F
- ** THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANY TIME WITH THE
IMPROVEMENT OF PERFORMANCE.



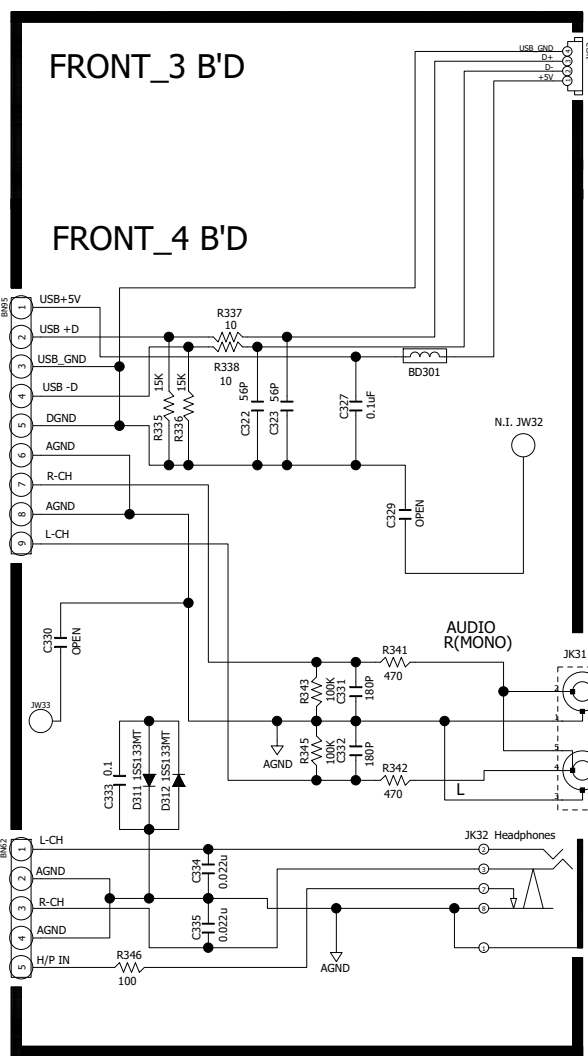
* FRONT PART(CUP12349Z)



FRONT B'D



FRONT_2 B'D



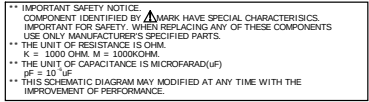
FRONT_3 B'D

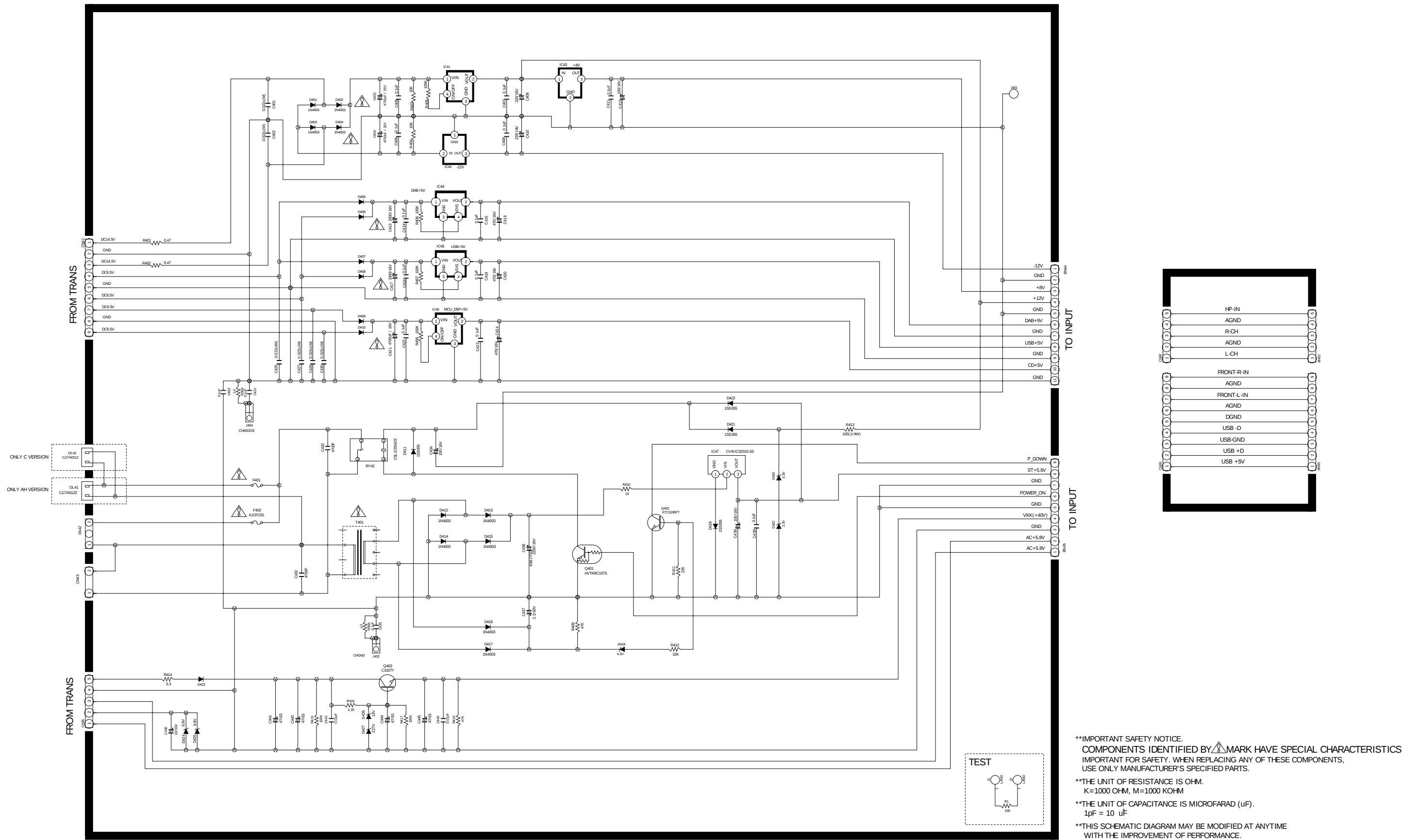
FRONT_4 B'D

** IMPORTANT SAFETY NOTICE.
COMPONENT IDENTIFIED BY  MARK HAVE SPECIAL CHARACTERISTICS.
IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS
USE ONLY MANUFACTURER'S SPECIFIED PARTS.
** THE UNIT OF RESISTANCE IS OHM.
K = 1000 OHM, M = 1000KOHM.
** THE UNIT OF CAPACITANCE IS MICROFARAD(uF)
pF = 10 uF
** THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANY TIME WITH THE
IMPROVEMENT OF PERFORMANCE.

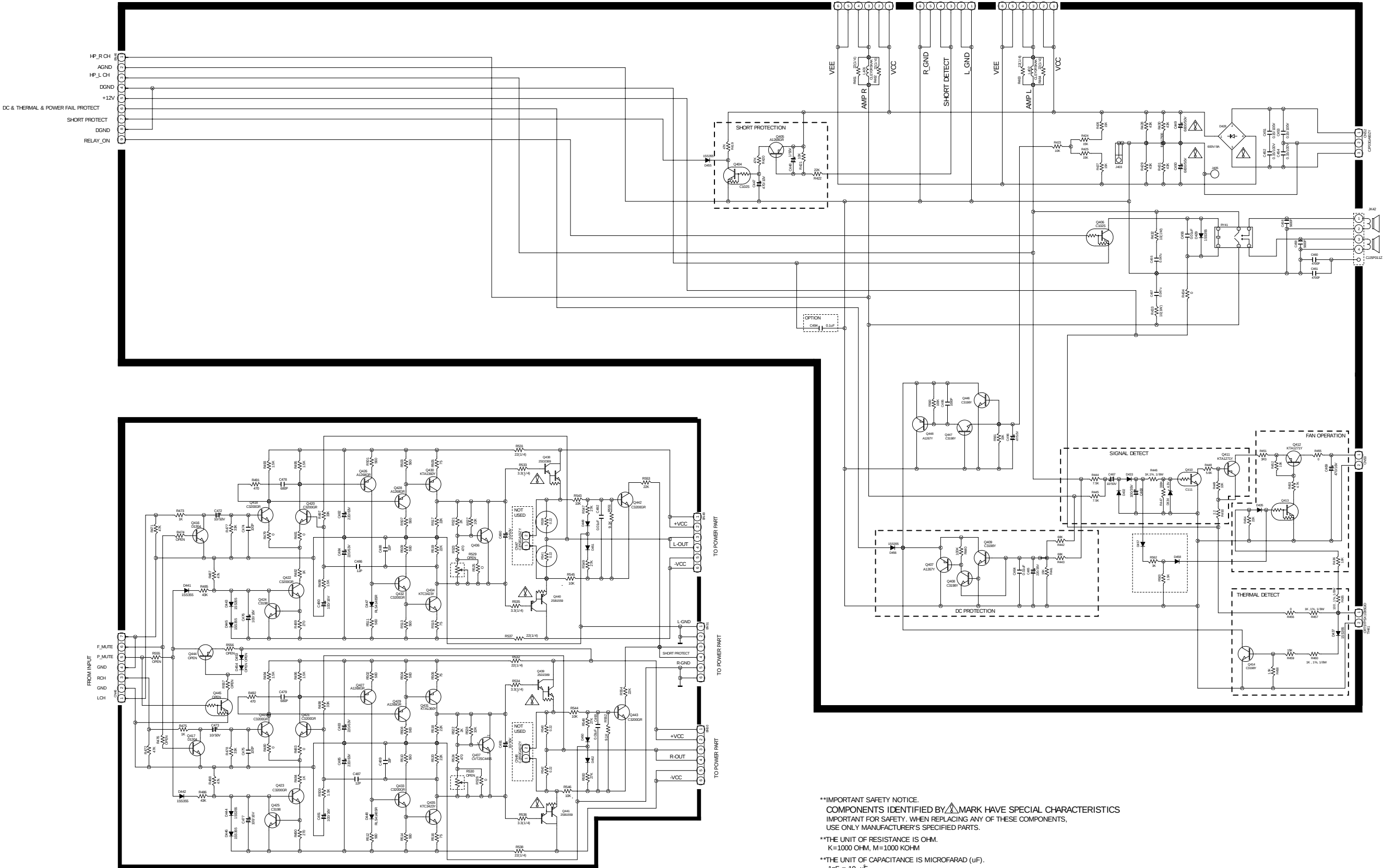
MP 2 LOT Software & Firmware
**NAD_VISO3_20110317_V3_00_02.BIN
FRM_VISO3_20110217.MCS

- * CD-R Playability Improvement
 - * R806, R807, R809, R810: 27K oh m(MP 1 LOT)
 - * R806, R807, R809, R810: 24K oh m(MP 2 LOT)





* AMP PART (CUP12351Z)



**IMPORTANT SAFETY NOTICE.
COMPONENTS IDENTIFIED BY  MARK HAVE SPECIAL CHARACTERISTICS
IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY MANUFACTURER'S SPECIFIED PARTS.

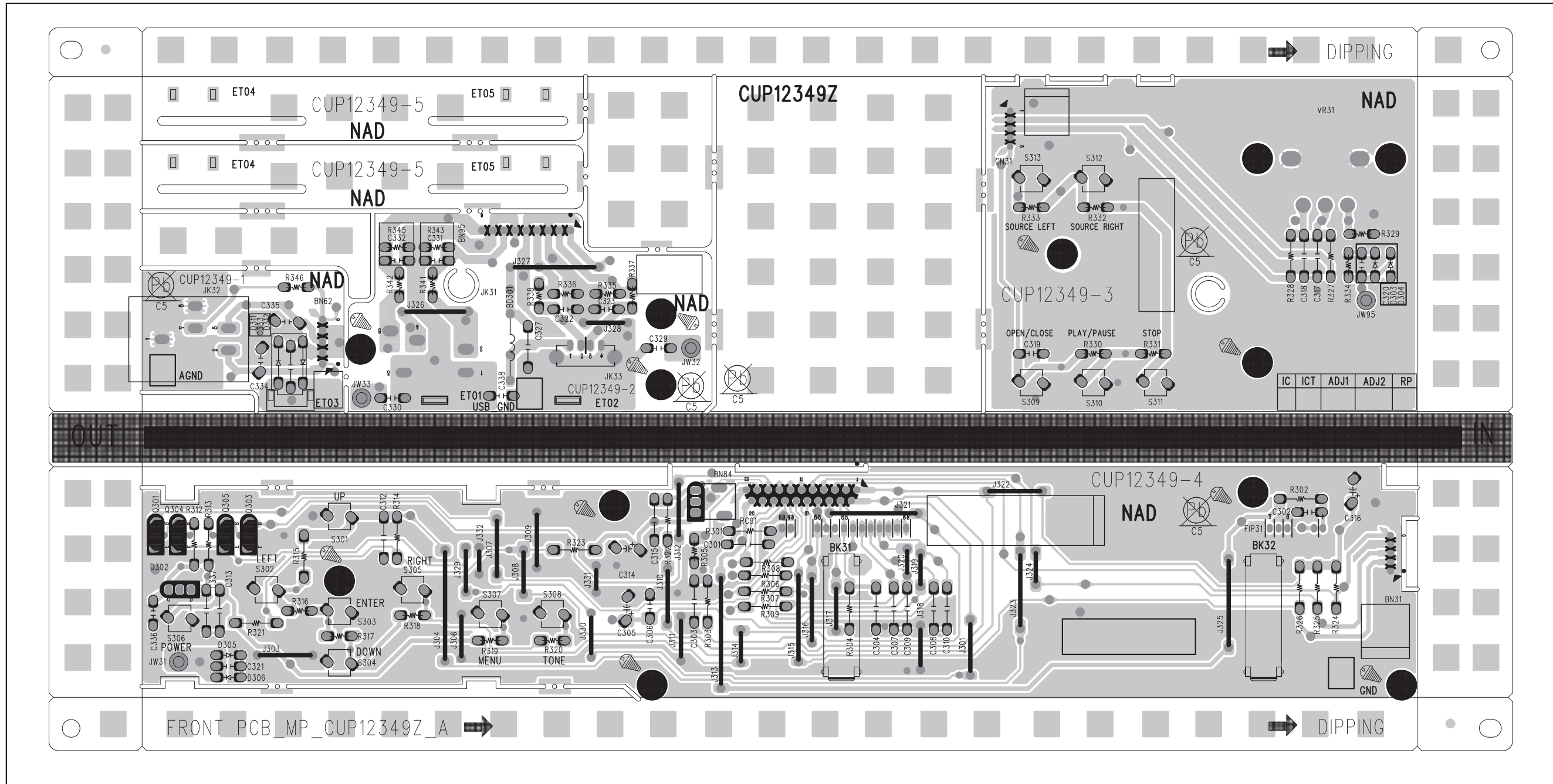
**THE UNIT OF RESISTANCE IS OHM.
K=1000 OHM, M=1000 KOHM

**THE UNIT OF CAPACITANCE IS MICROFARAD (uF).
1pF = 10 uF

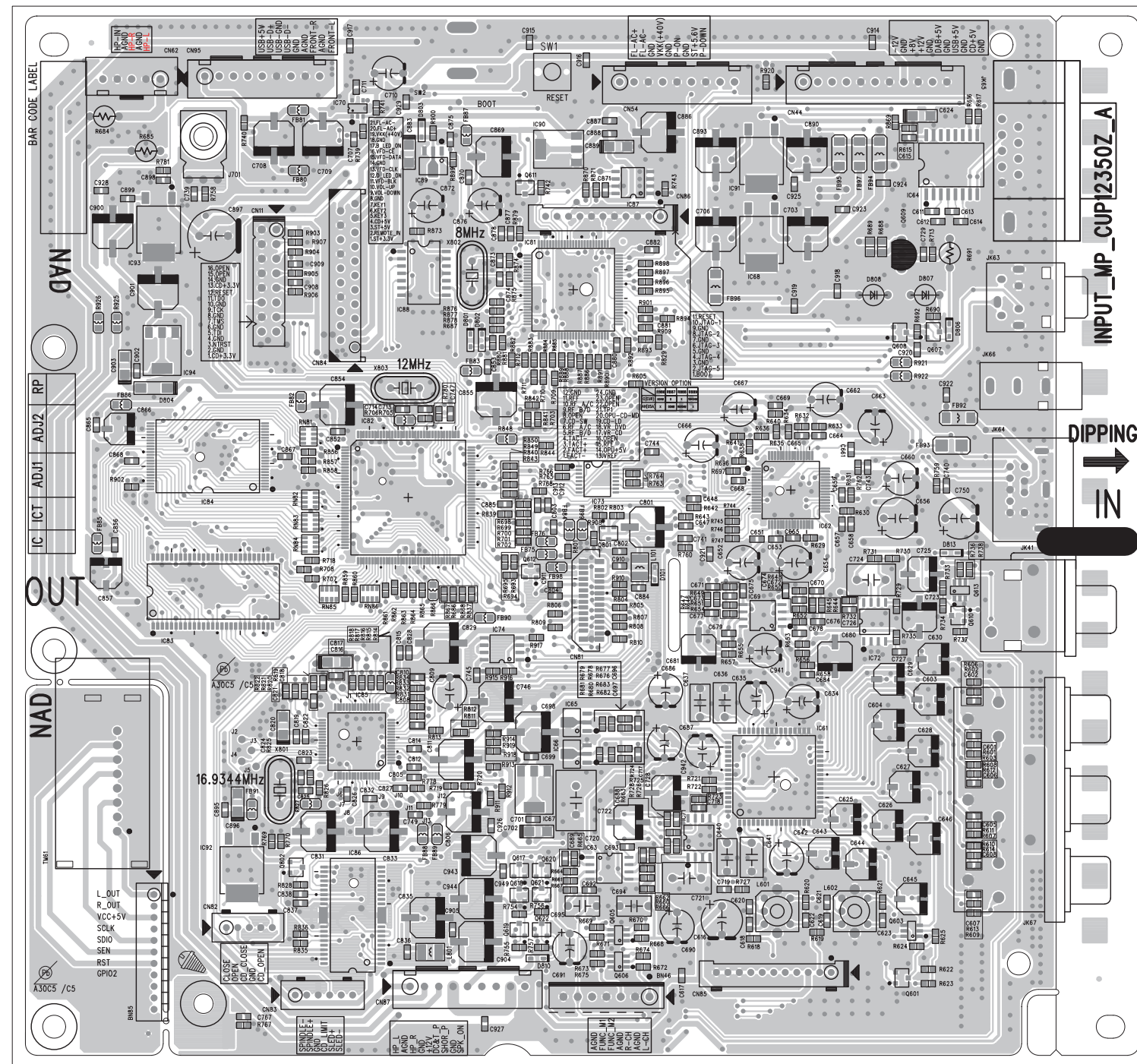
**THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANYTIME
WITH THE IMPROVEMENT OF PERFORMANCE.

4. PRINTED CIRCUIT BOARDS

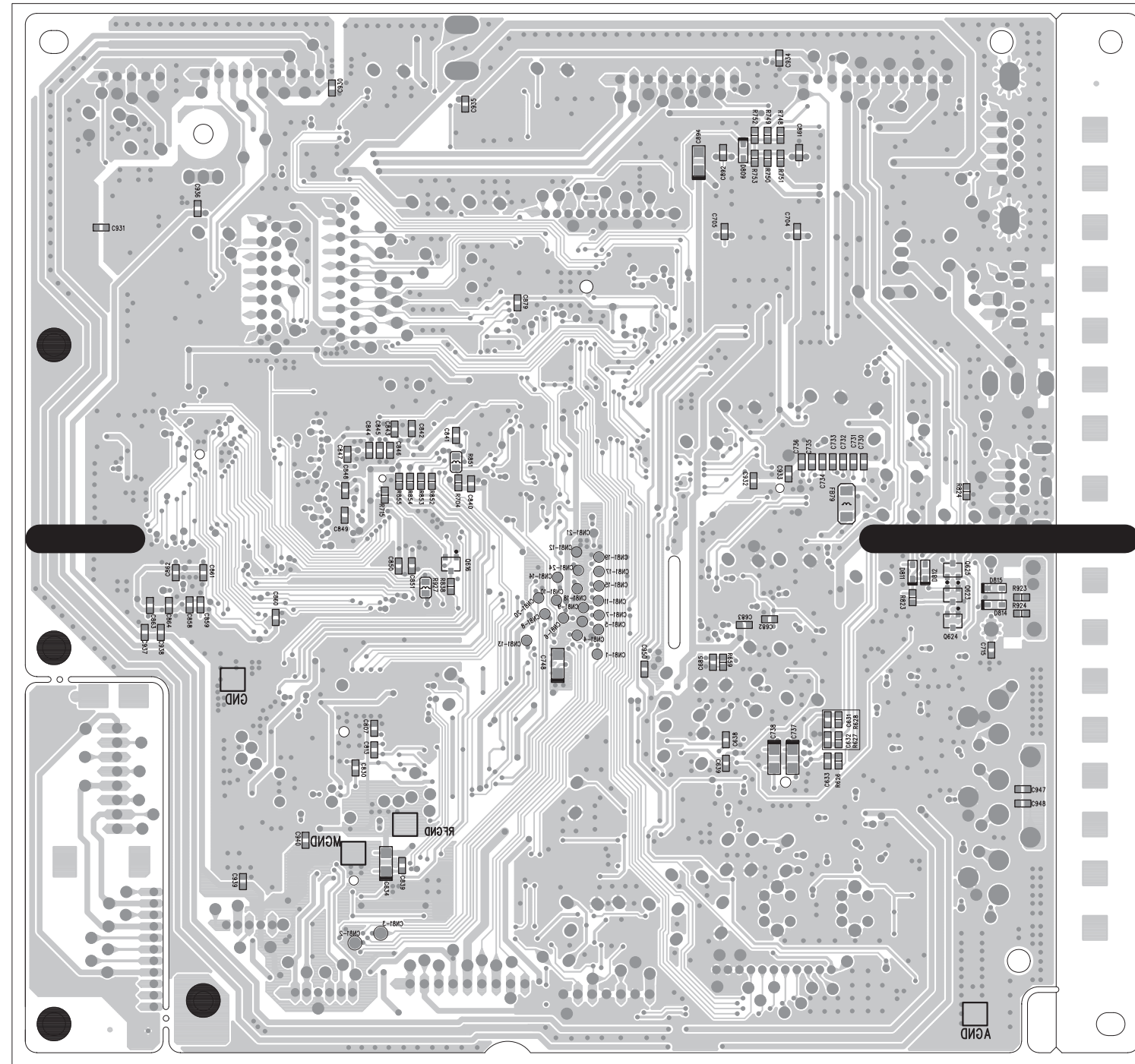
FRONT BOARD



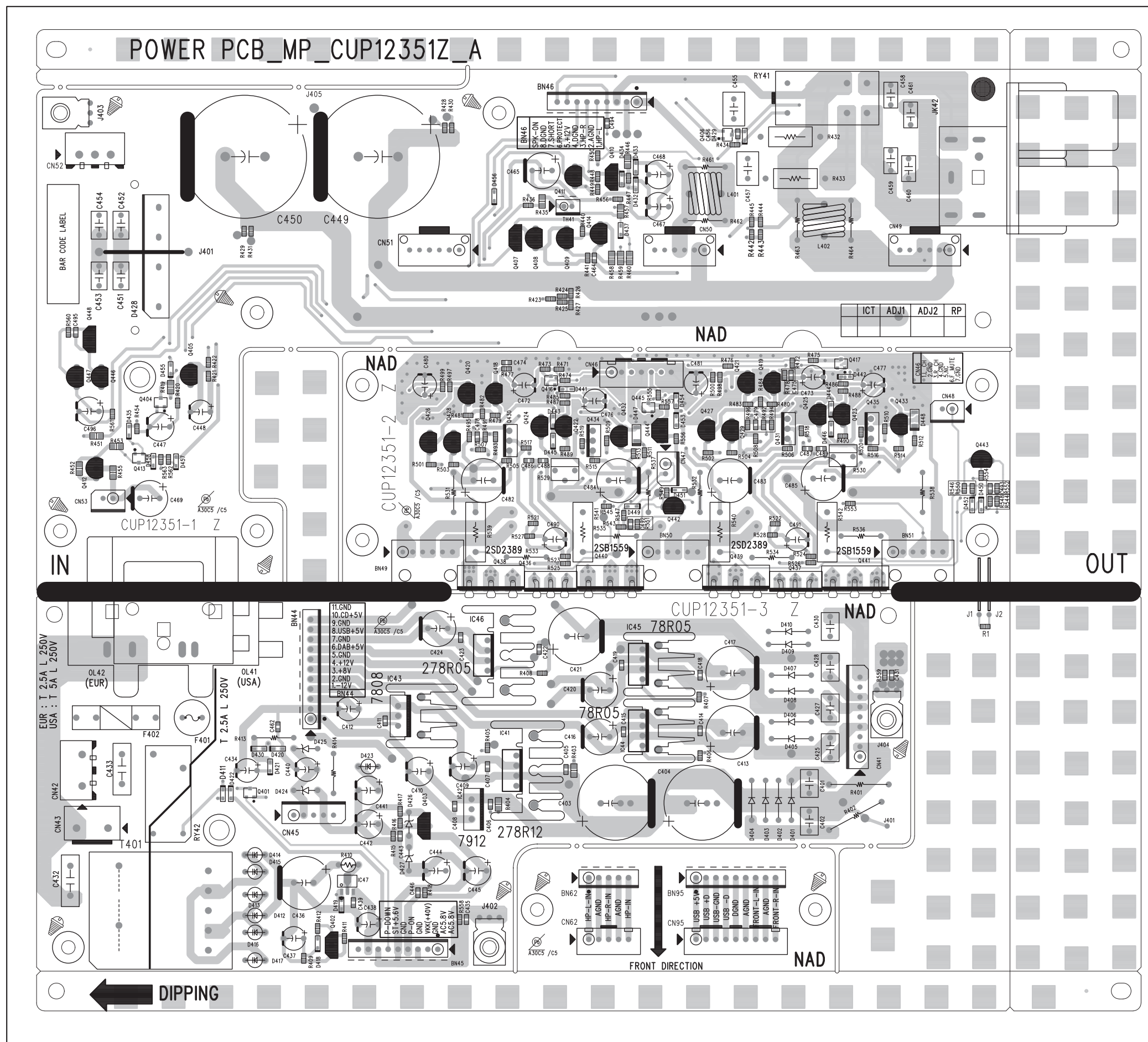
INPUT BOARD (TOP VIEW)



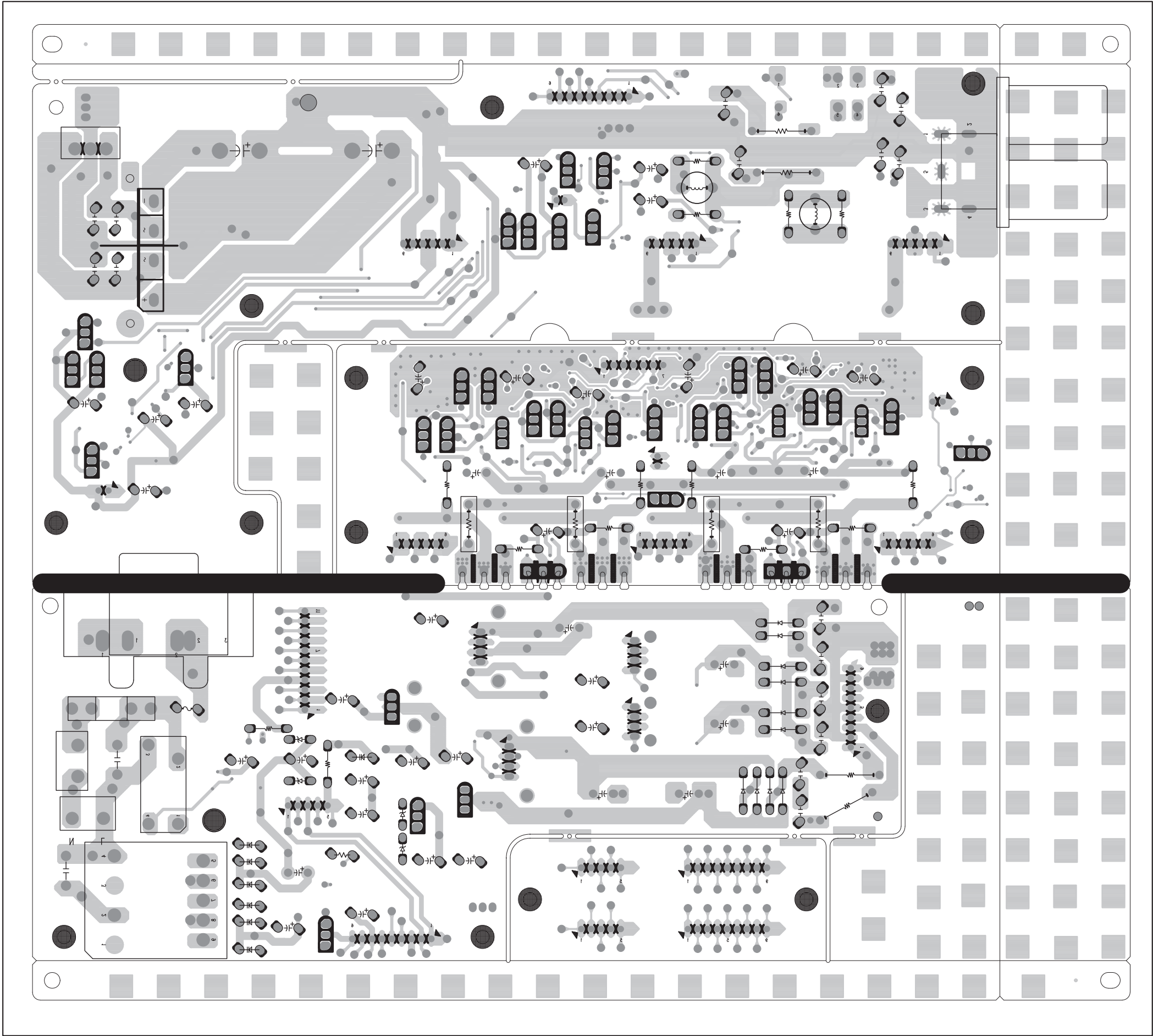
INPUT BOARD (BOTTOM VIEW)



AMP & POWER BOARD (TOP VIEW)



AMP & POWER BOARD (BOTTOM VIEW)



SECTION 3

ELECTRICAL PARTS LIST

Notes : • Part numbers are indicated for most mechanical parts.

Please use this part number for parts order.

• **IMPORTANT SAFETY NOTICE.**

Components identified by  mark have special characteristics important for safety.
When replacing any of these components, use only manufacture's specified parts.

• The unit of resistance is OHM (Ω)

K=1000 (Ω), M=1000 (K Ω)

• The unit of capacitance is MICROFARAD (μ F)

P=10 -6 μ F

*** Numbering System of Resistor**

Type	Wattage	Tolerance
C (H) RD Carbon	20 : 1/5W 25 : 1/4W	F : $\pm$ 1% J : $\pm$ 5% K : $\pm$ 10%
CRG Metal Oxide	1 : 1W	
KRQ Fuse	2 : 2W	
CRF Cement	5 : 5W	
CRJ Carbon , Chip	10 : 1/10W 14 : 1/4W	

CRD	20	T	J	101	T
Type	Wattage	Shape	Tolerance	Value	

*** Numbering System of Capacitor**

Type		Voltage		Tolerance
CCUS	Ceramic , Chip	0J : 6.3V	1H : 50V	F : ± 1% J : ± 5% K : ± 10%
CCKT	Ceramic , Radial type	1A : 10V	1J : 63V	
HCQI	Polyester	1C : 16V	2A : 100V	
CCEA	Elect	1E : 25V		
HCBS	Ceramic , Axial type	1V : 35V		

CCUS	1H	104	K	C
Type	Voltage	Value	Tolerance	Peculiarity

REF NO.	PART NO.	DESCRIPTION	REMARKS
	COP12349B	VISO THREE FRONT PCB ASS'Y	AH: COP12349C
	CUP12349Z	PCB, FRONT VISO THREE	
C301	CCBS1H223ZFT	CAP , CERAMIC(22000PF/50V)	
C302	CCBS1H223ZFT	CAP , CERAMIC(22000PF/50V)	
C303	CCBS1H104ZFT	CAP , CERAMIC	
C304	CCBS1H390JT	CAP , CERAMIC(39PF/50V)	
C305	CCEA1CKS101T	CAP , ELECT(16V/100uF)-S	
C306	CCBS1H104ZFT	CAP , CERAMIC	
C307	CCBS1H104ZFT	CAP , CERAMIC	
C308	CCBS1H471KBT	CAP , CERAMIC(470PF/50V)	
C309	CCBS1H471KBT	CAP , CERAMIC(470PF/50V)	
C310	CCBS1H471KBT	CAP , CERAMIC(470PF/50V)	
C312	CCBS1H102KBT	CAP , CERAMIC(1000PF/50V)	
C313	CCBS1H102KBT	CAP , CERAMIC(1000PF/50V)	
C314	CCEA1AKS221T	CAP , ELECT(10V/220uF)-S	
C315	CCBS1H151KBT	CAP , CERAMIC(150PF/50V)	
C316	CCEA1AKS221T	CAP , ELECT(10V/220uF)-S	
C317	CCBS1H223ZFT	CAP , CERAMIC(22000PF/50V)	
C318	CCBS1H223ZFT	CAP , CERAMIC(22000PF/50V)	
C319	CCBS1H102KBT	CAP , CERAMIC(1000PF/50V)	
C320	CCBS1H104ZFT	CAP , CERAMIC	
C322	CCBS1H560JT	CAP , CERAMIC(56PF/50V)	
C323	CCBS1H560JT	CAP , CERAMIC(56PF/50V)	
C327	CCBS1H104ZFT	CAP , CERAMIC	
C331	CCBS1H181KBT	CAP , CERAMIC(180PF/50V)	
C332	CCBS1H181KBT	CAP , CERAMIC(180PF/50V)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
C333	CCBS1H104ZFT	CAP , CERAMIC	
C334	HCQI1H223JZT	CAP , MYLAR	
C335	HCQI1H223JZT	CAP , MYLAR	
C336	CCBS1H104ZFT	CAP , CERAMIC	
C337	CCBS1H104ZFT	CAP , CERAMIC	
C338	CCBS1H104ZFT	CAP , CERAMIC	
D303	CVD1SS133MT	DIODE , SWITCHING	
D304	CVD1SS133MT	DIODE , SWITCHING	
D311	CVD1SS133MT	DIODE , SWITCHING	
D312	CVD1SS133MT	DIODE , SWITCHING	
J301	C3A206	WIRE , COPPER	
J303	C3A206	WIRE , COPPER	
J304	C3A206	WIRE , COPPER	
J306	C3A206	WIRE , COPPER	
J307	C3A206	WIRE , COPPER	
J308	C3A206	WIRE , COPPER	
J309	C3A206	WIRE , COPPER	
J310	C3A206	WIRE , COPPER	
J311	C3A206	WIRE , COPPER	
J312	C3A206	WIRE , COPPER	
J313	C3A206	WIRE , COPPER	
J314	C3A206	WIRE , COPPER	
J315	C3A206	WIRE , COPPER	
J316	C3A206	WIRE , COPPER	
J317	CRD20TJ1R0T	RES, CARBON(1/5W,1ohm,J)	
J318	C3A206	WIRE , COPPER	
J319	C3A206	WIRE , COPPER	
J320	C3A206	WIRE , COPPER	
J321	C3A206	WIRE , COPPER	
J322	C3A206	WIRE , COPPER	
J323	C3A206	WIRE , COPPER	
J324	C3A206	WIRE , COPPER	
J325	C3A206	WIRE , COPPER	
J326	C3A206	WIRE , COPPER	
J327	C3A206	WIRE , COPPER	
J328	C3A206	WIRE , COPPER	
J329	C3A206	WIRE , COPPER	
J330	C3A206	WIRE , COPPER	
J331	C3A206	WIRE , COPPER	
J332	C3A206	WIRE , COPPER	
Q301	HVTKRC102MT	T.R , TO-92M	
Q303	HVTKRC102MT	T.R , TO-92M	
Q304	HVTKRA102MT	T.R , TO-92M	
Q305	HVTKRA102MT	T.R , TO-92M	
R301	CRD25FJ2R2T	RES , CARBON	
R302	CRD25FJ2R2T	RES , CARBON	
R303	CRD20TJ100T	RES, CARBON(1/5W,10ohm,J)	
R304	CRD20TJ822T	RES, CARBON(1/5W,8.2Kohm,J)	
R305	CRD20TJ100T	RES, CARBON(1/5W,10ohm,J)	
R306	CRD20TJ101T	RES, CARBON(1/5W,100ohm,J)	
R307	CRD20TJ101T	RES, CARBON(1/5W,100ohm,J)	
R308	CRD20TJ101T	RES, CARBON(1/5W,100ohm,J)	
R309	CRD20TJ101T	RES, CARBON(1/5W,100ohm,J)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
R312	CRD20TJ561T	RES, CARBON(1/5W,560ohm,J)	
R313	CRD20TJ221T	RES, CARBON(1/5W,220ohm,J)	
R314	CRD20TJ473T	RES, CARBON(1/5W,47Kohm,J)	
R315	CRD20TF1001T	RES , CARBON	
R316	CRD20TF1501T	RES , CARBON	
R317	CRD20TF1801T	RES , CARBON	
R318	CRD20TF2701T	RES , CARBON	
R319	CRD20TF1001T	RES , CARBON	
R320	CRD20TF3301T	RES , CARBON	
R321	CRD20TJ473T	RES, CARBON(1/5W,47Kohm,J)	
R322	CRD20TJ122T	RES, CARBON(1/5W,1.2Kohm,J)	
R323	CRD20TJ101T	RES, CARBON(1/5W,100ohm,J)	
R324	CRD20TJ473T	RES, CARBON(1/5W,47Kohm,J)	
R325	CRD20TJ473T	RES, CARBON(1/5W,47Kohm,J)	
R326	CRD20TJ473T	RES, CARBON(1/5W,47Kohm,J)	
R327	CRD20TJ272T	RES, CARBON(1/5W,2.7Kohm,J)	
R328	CRD20TJ272T	RES, CARBON(1/5W,2.7Kohm,J)	
R329	CRD20TJ122T	RES, CARBON(1/5W,1.2Kohm,J)	
R330	CRD20TF1001T	RES , CARBON	
R331	CRD20TF1501T	RES , CARBON	
R332	CRD20TF1801T	RES , CARBON	
R333	CRD20TF2701T	RES , CARBON	
R334	CRD20TJ4R7T	RES, CARBON(1/5W,4.7ohm,J)	
R335	CRD20TJ153T	RES, CARBON(1/5W,15Kohm,J)	
R336	CRD20TJ153T	RES, CARBON(1/5W,15Kohm,J)	
R337	CRD20TJ100T	RES, CARBON(1/5W,10ohm,J)	
R338	CRD20TJ100T	RES, CARBON(1/5W,10ohm,J)	
R341	CRD20TJ471T	RES, CARBON(1/5W,470ohm,J)	
R342	CRD20TJ471T	RES, CARBON(1/5W,470ohm,J)	
R343	CRD20TJ223T	RES, CARBON(1/5W,22Kohm,J)	
R345	CRD20TJ223T	RES, CARBON(1/5W,22Kohm,J)	
R346	CRD20TJ101T	RES, CARBON(1/5W,100ohm,J)	
S301	CST1A023ZT	SW , TACT	
S302	CST1A023ZT	SW , TACT	
S303	CST1A023ZT	SW , TACT	
S304	CST1A023ZT	SW , TACT	
S305	CST1A023ZT	SW , TACT	
S306	CST1A023ZT	SW , TACT	
S307	CST1A023ZT	SW , TACT	
S308	CST1A023ZT	SW , TACT	
S309	CST1A023ZT	SW , TACT	
S310	CST1A023ZT	SW , TACT	
S311	CST1A023ZT	SW , TACT	
S312	CST1A023ZT	SW , TACT	
S313	CST1A023ZT	SW , TACT	
BD301	KLZ9H001Z	BEAD , CORE	
BK31	CMD1A691	BRACKET , FLT	
BK32	CMD1A691	BRACKET , FLT	
BN31	CWB1B005050EW	WIRE ASS'Y(5P,2MM,50MM)	
BN62	CWB1C00510058001	WIRE ASS'Y(5P,2.5MM,100MM)	
BN84	CJP21GB116ZY	WAFER	
BN95	CWBVISOTHREEBN95	WIRE ASS'Y(9P,2.5MM,120MM)	
CN31	CJP05GB46ZY	WAFER,20017WR(2mm,ANGLE)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
D302	CVD50BOBBWGA	L.E.D , 2 COLOR (ORG , BLUE)	
ET01	CMC1A347	PLATE , GND	
ET02	CMC1A347	PLATE , GND	
ET03	CMD1A569	BRACKET , PCB	
FIP31	CFLHCA16S202T	V.F.D	
JK31	CJJ4N093Z	JACK , 2P(W/R) STRAIGHT (GOLD PLATE)	
JK32	CJJ2E020Z	JACK, PHONES(6.35mm,GOLD)	
JK33	CJJ9X006Z	JACK , USB STRAIGHT(BLACK)	
JW95	CWE8202120RV	WIRE ASS'Y	
RC91	CRVKSM603TH5B	SENSOR , REMOTE	
VR31	CSR2A036Z	ENCODER VR	
BN84	CWC4F4A21B250B08	CABLE , CARD(21P,1,25MM,250MM FFC)	
BN95	CLZ9Z070Z	FERRITE , CORE	
	COP12350B	VISO THREE INPUT-MCU PCB ASS'Y	AH: COP12350C
	CUP12350Z	PCB, INPUT-MCU VISO THREE	
CN81	CJP24GA195ZM	SMT FFC/FPC WAFER(0.5MM PITCH)	
C601	CCUS1H181JA	CAP, CHIP(1608, 50V/180pF)	
C602	CCUS1H181JA	CAP, CHIP(1608, 50V/180pF)	
C603	HCEC1CRV2100T	CAP, CHIP ELECT(16V/10uF)	
C604	HCEC1CRV2100T	CAP, CHIP ELECT(16V/10uF)	
C605	CCUS1H181JA	CAP, CHIP(1608, 50V/180pF)	
C606	CCUS1H181JA	CAP, CHIP(1608, 50V/180pF)	
C607	CCUS1H181JA	CAP, CHIP(1608, 50V/180pF)	
C608	CCUS1H181JA	CAP, CHIP(1608, 50V/180pF)	
C611	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C612	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C613	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C614	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C615	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C617	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C618	CCUS1H472KC	CAP, CHIP(1608, 50V/4700pF)	
C619	CCUS1H472KC	CAP, CHIP(1608, 50V/4700pF)	
C620	CCUS1H822KC	CAP, CHIP(1608, 50V/8200pF)	
C621	CCUS1H822KC	CAP, CHIP(1608, 50V/8200pF)	
C622	CCUS1H392KC	CAP, CHIP(1608, 50V/3900pF)	
C623	CCUS1H392KC	CAP, CHIP(1608, 50V/3900pF)	
C624	CCSNA1C100B	CAP , CHIP TANTAL(10uF/16V)	
C625	HCEC1CRV2100T	CAP, CHIP ELECT(16V/10uF)	
C626	HCEC1CRV2100T	CAP, CHIP ELECT(16V/10uF)	
C627	HCEC1CRV2100T	CAP, CHIP ELECT(16V/10uF)	
C628	HCEC1CRV2100T	CAP, CHIP ELECT(16V/10uF)	
C629	HCEC1CRV2100T	CAP, CHIP ELECT(16V/10uF)	
C630	HCEC1CRV2100T	CAP, CHIP ELECT(16V/10uF)	
C631	CCUS1H181JA	CAP, CHIP(1608, 50V/180pF)	
C632	CCUS1H181JA	CAP, CHIP(1608, 50V/180pF)	
C633	CCUS1H181JA	CAP, CHIP(1608, 50V/180pF)	
C638	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C639	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C643	HCEC1CRV2100T	CAP, CHIP ELECT(16V/10uF)	
C644	HCEC1CRV2100T	CAP, CHIP ELECT(16V/10uF)	
C645	HCEC1CRV2100T	CAP, CHIP ELECT(16V/10uF)	
C646	HCEC1CRV2100T	CAP, CHIP ELECT(16V/10uF)	
C647	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
C648	CCUS1H102KC	CAP, CHIP(1608, 50V/1000pF)	
C651	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C653	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C655	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C657	CCUS1H102KC	CAP, CHIP(1608, 50V/1000pF)	
C658	CCUS1H223KC	CAP, CHIP(1608, 50V/0.022uF)	
C659	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C661	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C664	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C665	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C668	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C669	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C670	CCUS1H152KC	CAP, CHIP(1608, 50V/1500pF)	
C671	CCUS1H152KC	CAP, CHIP(1608, 50V/1500pF)	
C672	CCUS1H182KC	CAP, CHIP(1608, 50V/1800pF)	
C673	CCUS1H182KC	CAP, CHIP(1608, 50V/1800pF)	
C674	CCUS1H391JA	CAP, CHIP(1608, 50V/390pF)	
C675	CCUS1H391JA	CAP, CHIP(1608, 50V/390pF)	
C676	CCUS1H182KC	CAP, CHIP(1608, 50V/1800pF)	
C677	CCUS1H182KC	CAP, CHIP(1608, 50V/1800pF)	
C678	CCUS1H391JA	CAP, CHIP(1608, 50V/390pF)	
C679	CCUS1H391JA	CAP, CHIP(1608, 50V/390pF)	
C680	HCEC1VRV2100T	CAP, CHIP ELECT(35V/10uF)	
C681	HCEC1VRV2100T	CAP, CHIP ELECT(35V/10uF)	
C682	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C683	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C684	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C685	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C688	CCUS1H151JA	CAP, CHIP(1608, 50V/150pF)	
C689	CCUS1H151JA	CAP, CHIP(1608, 50V/150pF)	
C692	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C693	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C696	CCUS1H330JA	CAP, CHIP(1608, 50V/33pF)	
C697	CCUS1H330JA	CAP, CHIP(1608, 50V/33pF)	
C698	HCEC1CRV2101T	CAP, CHIP ELECT(16V/100uF)	
C699	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C701	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C702	CCSNA1C100B	CAP, CHIP TANTAL(10uF/16V)	
C703	HCEC1CRV2101T	CAP, CHIP ELECT(16V/100uF)	
C704	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C705	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C706	HCEC0JRV2101T	CAP, CHIP ELECT	
C707	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C708	HCEC1CRV2101T	CAP, CHIP ELECT(16V/100uF)	
C709	HCEC1CRV2101T	CAP, CHIP ELECT(16V/100uF)	
C711	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C713	CCUS1H180JA	CAP, CHIP(1608, 50V/18pF)	
C714	CCUS1H200JA	CAP, CHIP(1608, 50V/20pF)	
C715	CCUS1H102KC	CAP, CHIP(1608, 50V/1000pF)	
C717	CCUS1H223KC	CAP, CHIP(1608, 50V/0.022uF)	
C718	CCUS1H101JA	CAP, CHIP(1608, 50V/100pF)	
C719	CCUS1H223KC	CAP, CHIP(1608, 50V/0.022uF)	
C722	HCEC1VRV2100T	CAP, CHIP ELECT(35V/10uF)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
C723	HCEC1VRV2100T	CAP, CHIP ELECT(35V/10uF)	
C725	HCEC1VRV2100T	CAP, CHIP ELECT(35V/10uF)	
C726	CCUS1H223KC	CAP, CHIP(1608, 50V/0.022uF)	
C727	CCUS1H223KC	CAP, CHIP(1608, 50V/0.022uF)	
C728	HCEC1VRV2100T	CAP, CHIP ELECT(35V/10uF)	
C729	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C730	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C731	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C732	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C733	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C734	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C735	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C736	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C737	CCSNA1C100B	CAP , CHIP TANTAL(10uF/16V)	
C738	CCSNA1C100B	CAP , CHIP TANTAL(10uF/16V)	
C739	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C740	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C741	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C743	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C744	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C745	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C746	HCEC0JRV2101T	CAP , CHIP ELECT	
C747	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C748	CCSNA0J220B	CAP , CHIP TANTAL(22uF/6.3V)	
C749	CCUS1H152KC	CAP, CHIP(1608, 50V/1500pF)	
C767	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C801	HCEC1CRV2101T	CAP, CHIP ELECT(16V/100uF)	
C802	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C803	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C804	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C805	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C806	HCEC0JRV2101T	CAP , CHIP ELECT	
C807	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C808	CCUS1C224KC	CAP, CHIP(1608, 16V/0.22uF)	
C810	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C811	HCEC0JRV2101T	CAP , CHIP ELECT	
C812	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C813	CCUS1H682KC	CAP, CHIP(1608, 50V/6800pF)	
C814	CCUS1H182KC	CAP, CHIP(1608, 50V/1800pF)	
C815	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C816	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C817	CCSNA0J220B	CAP , CHIP TANTAL(22uF/6.3V)	
C818	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C819	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C820	CCSNA0J220B	CAP , CHIP TANTAL(22uF/6.3V)	
C821	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C822	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C823	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C824	CCUS1H120JA	CAP, CHIP(1608, 50V/12pF)	
C825	CCUS1H120JA	CAP, CHIP(1608, 50V/12pF)	
C826	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C827	CCUS1H681JA	CAP, CHIP(1608, 50V/680pF)	
C828	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
C829	HCEC0JRV2101T	CAP , CHIP ELECT	
C830	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C831	HCEC0JRV2101T	CAP , CHIP ELECT	
C832	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C833	HCEC0JRV2101T	CAP , CHIP ELECT	
C834	CCSNA0J220B	CAP , CHIP TANTAL(22uF/6.3V)	
C835	HCEC1CRV2101T	CAP, CHIP ELECT(16V/100uF)	
C836	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C837	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C838	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C839	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C840	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C841	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C842	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C843	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C844	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C845	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C846	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C847	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C848	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C849	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C850	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C851	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C852	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C853	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C854	HCEC0JRV2101T	CAP , CHIP ELECT	
C855	HCEC0JRV2101T	CAP , CHIP ELECT	
C856	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C857	HCEC1CRV2100T	CAP, CHIP ELECT(16V/10uF)	
C858	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C859	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C860	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C861	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C862	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C863	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C864	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C865	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C866	HCEC1CRV2100T	CAP, CHIP ELECT(16V/10uF)	
C867	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C868	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C869	HCEC0JRV2101T	CAP , CHIP ELECT	
C870	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C871	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C873	CCUS1H220JA	CAP, CHIP(1608, 50V/22pF)	
C874	CCUS1H220JA	CAP, CHIP(1608, 50V/22pF)	
C875	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C877	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C878	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C879	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C880	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C881	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C882	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C883	CCSNA1C100B	CAP , CHIP TANTAL(10uF/16V)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
C884	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C885	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C886	HCEC1CRV2101T	CAP, CHIP ELECT(16V/100uF)	
C887	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C888	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C889	CCSNA0J220B	CAP , CHIP TANTAL(22uF/6.3V)	
C890	HCEC1CRV2101T	CAP, CHIP ELECT(16V/100uF)	
C891	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C892	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C893	HCEC0JRV2101T	CAP , CHIP ELECT	
C894	CCSNA0J220B	CAP , CHIP TANTAL(22uF/6.3V)	
C895	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C896	CCSNA1C100B	CAP , CHIP TANTAL(10uF/16V)	
C898	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C899	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C900	HCEC1CRV2101T	CAP, CHIP ELECT(16V/100uF)	
C901	HCEC1CRV2101T	CAP, CHIP ELECT(16V/100uF)	
C902	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C903	CCSNA0J220B	CAP , CHIP TANTAL(22uF/6.3V)	
C904	HCEC1CRV2101T	CAP, CHIP ELECT(16V/100uF)	
C905	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C909	CCUS1H101JA	CAP, CHIP(1608, 50V/100pF)	
C910	CCUS1H102KC	CAP, CHIP(1608, 50V/1000pF)	
C911	CCUS1H102KC	CAP, CHIP(1608, 50V/1000pF)	
C912	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C913	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C926	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C927	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C928	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C929	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C930	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C931	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C933	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C939	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C940	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C943	HCEC1CRV2101T	CAP, CHIP ELECT(16V/100uF)	
C944	HCEC1CRV2101T	CAP, CHIP ELECT(16V/100uF)	
C947	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C948	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C949	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C950	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
D101	CVD1SS355T	DIODE, SMD, SWITCHING	
D801	CVD1SS355T	DIODE, SMD, SWITCHING	
D802	CVD1SS355T	DIODE, SMD, SWITCHING	
D803	CVD1SS355T	DIODE, SMD, SWITCHING	
D804	HVDRB160L60TE25	DIODE , SCHOTTKY BARRIER HK	
D806	CVD1SS355T	DIODE, SMD, SWITCHING	
D809	HVDUDZS3.3BSR	DIODE , ZENER (CHIP,3.3V)	
D810	CVD1SS355T	DIODE, SMD, SWITCHING	
D811	CVD1SS355T	DIODE, SMD, SWITCHING	
D812	CVD1SS355T	DIODE, SMD, SWITCHING	
D813	CVD1SS355T	DIODE, SMD, SWITCHING	
D814	HVDUDZS12BSR	DIODE , ZENER(CHIP,12V)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
D815	HVDUDZS12BSR	DIODE , ZENER(CHIP,12V)	
FB76	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	
FB79	CLZ9Z014Z	FERRITE , CHIP BEAD(60ohm, 4516)	
FB80	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	
FB81	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	
FB82	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	
FB83	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	
FB84	CLZ9R006Z	FERRITE CHIP BEAD(2012/220ohm)	
FB85	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	
FB86	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	
FB87	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	
FB88	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	
FB89	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	
FB90	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	
FB91	CLZ9R001Z	FERRITE , CHIP BEAD(60ohm, 2012)	
FB92	CLZ9Z014Z	FERRITE , CHIP BEAD(60ohm, 4516)	
FB93	CLQ06E2R7KRZ	INDUCTOR , CHIP	
FB94	CLZ9Z014Z	FERRITE , CHIP BEAD(60ohm, 4516)	
FB95	CLZ9Z014Z	FERRITE , CHIP BEAD(60ohm, 4516)	
FB96	CLZ9Z014Z	FERRITE , CHIP BEAD(60ohm, 4516)	
FB97	CLZ9Z014Z	FERRITE , CHIP BEAD(60ohm, 4516)	
FB98	CLZ9R006Z	FERRITE CHIP BEAD(2012/220ohm)	
FB99	CLZ9R006Z	FERRITE CHIP BEAD(2012/220ohm)	
IC61	HVINJW1153FG1	I.C	
IC62	HVICS42528-CQ	I.C , CODEC + DIR (CIRRUS LOGIC)	
IC63	HVINJM2068MDTE1	I.C , OP AMP (JRC)	
IC64	HVIST202EBW	IC , RS232C	
IC65	CVITL431IPK	IC,SHUNT REGULATOR(SOT-89)	
IC66	CVITL431IPK	IC,SHUNT REGULATOR(SOT-89)	
IC67	CVI KIA1117S50 & BS50	I.C , REGULATOR(SOT-223)	
IC68	CVINJM2845DL133	I.C, REGULATOR(3.3V/TO-252)	
IC69	HVINJM2068MDTE1	I.C , OP AMP (JRC)	
IC70	CVISTMPS2151STR	I.C , CURRENT LIMITER(500MA,SOT23-5L)	
IC71	HVINJM2068MDTE1	I.C , OP AMP (JRC)	
IC72	HVINJM2068MDTE1	I.C , OP AMP (JRC)	
IC73	HVITC74VHC157FT	I.C , 2-CHANNEL MUX (TOSHIBA)	
IC74	HVIBA4510F	IC BA4510F	
IC81	CVIANAM1533CR	I.C , MCU VISO THREE	
IC81	CVISTM32F100VCT6	I.C , FLASH MCU (32 BIT, 256KB, LQFP 100)	
IC82	CVIMLC3895144LQFP	I.C , SYSTEM CONTROLLOR (LQFP-144P)	
IC83	CVIA3V64S40ETP-G6	SDRAM , IC	
IC84	CVIANAM1551CR	I.C,U-COM(VISO3,CVIMLC3895144LQFP,MCS LOGIC)	
IC84	HVIM29W160ET70N	IC,16M FLASH (ST)	
IC85	CVIBU9543KV	I.C , SERVO PROCESSOR(VQFP-64P)	
IC86	CVIBA5927FM	I.C , MOTOR DRIVE (6CH,FOR CD,36P)	
IC87	CVIM24C08WMN6TP	I.C , EEPROM (8KBits, 400MHz, 2.5~5.5V, SOP-8)	
IC88	HVITC74HCT7007F	I.C , TC74HCT7007AFEL	
IC89	CVIML61C232PR	I.C , RESET(2.3V, CMOS SOT-89)	
IC90	CVI KIA1117S33 & BS33	I.C , REGULATOR(SOT-223)	
IC91	CVINJM2845DL133	I.C, REGULATOR(3.3V/TO-252)	
IC92	CVINJM2845DL118	I.C, REGULATOR(1.8V/TO-252)	
IC93	CVINJM2845DL133	I.C, REGULATOR(3.3V/TO-252)	
IC94	CVI KIA1117S15 & BS15	I.C, REGULATOR(SOT-223)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
L101	CLQ10E100KRY	INDUCTOR , CHIP	
L801	CLQ10E100KRY	INDUCTOR , CHIP	
Q601	HVTKRA107S	T.R , CHIP , SOT-23	
Q603	HVTKTC812TB	T.R , CHIP(TS6)	
Q605	HVTKTC812TB	T.R , CHIP(TS6)	
Q606	HVTKTC812TB	T.R , CHIP(TS6)	
Q607	HVTKRC102S	T.R , CHIP , SOT-23	
Q608	HVTKRC102S	T.R , CHIP , SOT-23	
Q611	HVTKRA102S	T.R , CHIP , SOT-23	
Q612	HVTKRC102S	T.R , CHIP , SOT-23	
Q613	HVTKTC812TB	T.R , CHIP(TS6)	
Q617	HVTKRC107S	T.R , CHIP , SOT-23	
Q618	HVTKRC107S	T.R , CHIP , SOT-23	
Q619	HVTKRA107S	T.R , CHIP , SOT-23	
Q620	HVTKRC107S	T.R , CHIP , SOT-23	
Q621	HVTKRC107S	T.R , CHIP , SOT-23	
Q622	HVTKRA107S	T.R , CHIP , SOT-23	
Q623	HVTKRC107S	T.R , CHIP , SOT-23	
Q624	HVTKRC107S	T.R , CHIP , SOT-23	
Q625	HVTKRA107S	T.R , CHIP , SOT-23	
Q801	HVTKTA1504SYRTK	T.R , CHIP	
Q802	HVTKRC102S	T.R , CHIP , SOT-23	
RN81	CRJ104DJ100T	RES , CHIP , 10 OHM, 5% , 1608 X 4	
RN82	CRJ104DJ100T	RES , CHIP , 10 OHM, 5% , 1608 X 4	
RN83	CRJ104DJ100T	RES , CHIP , 10 OHM, 5% , 1608 X 4	
RN84	CRJ104DJ100T	RES , CHIP , 10 OHM, 5% , 1608 X 4	
RN85	CRJ104DJ100T	RES , CHIP , 10 OHM, 5% , 1608 X 4	
RN86	CRJ104DJ100T	RES , CHIP , 10 OHM, 5% , 1608 X 4	
R601	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R602	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R603	CRJ10DJ471T	RES, CHIP(1608/5%/470ohm)	
R605	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R606	CRJ10DJ471T	RES, CHIP(1608/5%/470ohm)	
R607	CRJ10DJ471T	RES, CHIP(1608/5%/470ohm)	
R608	CRJ10DJ471T	RES, CHIP(1608/5%/470ohm)	
R609	CRJ10DJ471T	RES, CHIP(1608/5%/470ohm)	
R610	CRJ10DJ471T	RES, CHIP(1608/5%/470ohm)	
R611	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R612	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R613	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R614	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R615	CRJ10DJ4R7T	RES, CHIP(1608/5%/4.7ohm)	
R616	CRJ10DJ1R0T	RES, CHIP(1608/5%/1ohm)	
R617	CRJ10DJ1R0T	RES, CHIP(1608/5%/1ohm)	
R618	CRJ10DJ301T	RES, CHIP(1608/5%/300ohm)	
R619	CRJ10DJ301T	RES, CHIP(1608/5%/300ohm)	
R620	CRJ10DJ273T	RES, CHIP(1608/5%/27Kohm)	
R621	CRJ10DJ273T	RES, CHIP(1608/5%/27Kohm)	
R622	CRJ10DJ154T	RES, CHIP(1608/5%/150Kohm)	
R623	CRJ10DJ154T	RES, CHIP(1608/5%/150Kohm)	
R624	CRJ10DJ472T	RES, CHIP(1608/5%/4.7Kohm)	
R625	CRJ10DJ472T	RES, CHIP(1608/5%/4.7Kohm)	
R626	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
R627	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R628	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R629	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R630	CRJ10DJ332T	RES, CHIP(1608/5%/3.3Kohm)	
R631	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R632	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R633	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R634	CRJ10DJ102T	RES, CHIP(1608/5%/1Kohm)	
R635	CRJ10DJ102T	RES, CHIP(1608/5%/1Kohm)	
R636	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R638	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R640	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R641	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R642	CRJ10DJ102T	RES, CHIP(1608/5%/1Kohm)	
R643	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R644	CRJ10DJ362T	RES, CHIP(1608/5%/3.6Kohm)	
R645	CRJ10DJ362T	RES, CHIP(1608/5%/3.6Kohm)	
R646	CRJ10DJ362T	RES, CHIP(1608/5%/3.6Kohm)	
R647	CRJ10DJ362T	RES, CHIP(1608/5%/3.6Kohm)	
R648	CRJ10DJ392T	RES, CHIP(1608/5%/3.9Kohm)	
R649	CRJ10DJ392T	RES, CHIP(1608/5%/3.9Kohm)	
R650	CRJ10DJ272T	RES, CHIP(1608/5%/2.7Kohm)	
R651	CRJ10DJ272T	RES, CHIP(1608/5%/2.7Kohm)	
R652	CRJ10DJ272T	RES, CHIP(1608/5%/2.7Kohm)	
R653	CRJ10DJ392T	RES, CHIP(1608/5%/3.9Kohm)	
R654	CRJ10DJ272T	RES, CHIP(1608/5%/2.7Kohm)	
R655	CRJ10DJ392T	RES, CHIP(1608/5%/3.9Kohm)	
R656	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R657	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R658	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R659	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R660	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R661	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R662	CRJ10DJ122T	RES, CHIP(1608/5%/1.2Kohm)	
R663	CRJ10DJ302T	RES, CHIP(1608/5%/3Kohm)	
R664	CRJ10DJ122T	RES, CHIP(1608/5%/1.2Kohm)	
R665	CRJ10DJ302T	RES, CHIP(1608/5%/3Kohm)	
R666	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R667	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R668	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R669	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R670	CRJ10DJ392T	RES, CHIP(1608/5%/3.9Kohm)	
R671	CRJ10DJ392T	RES, CHIP(1608/5%/3.9Kohm)	
R672	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R673	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R674	CRJ10DJ392T	RES, CHIP(1608/5%/3.9Kohm)	
R675	CRJ10DJ392T	RES, CHIP(1608/5%/3.9Kohm)	
R676	CRJ10DJ1R5T	RES, CHIP(1608/5%/1.5ohm)	
R677	CRJ10DJ121T	RES, CHIP(1608/5%/120ohm)	
R678	CRJ10DJ153T	RES, CHIP(1608/5%/15Kohm)	
R679	CRJ10DJ822T	RES, CHIP(1608/5%/8.2Kohm)	
R680	CRJ10DJ153T	RES, CHIP(1608/5%/15Kohm)	
R681	CRJ10DJ822T	RES, CHIP(1608/5%/8.2Kohm)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
R682	CRJ10DJ1R5T	RES, CHIP(1608/5%/1.5ohm)	
R683	CRJ10DJ121T	RES, CHIP(1608/5%/120ohm)	
R686	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R687	CRJ10DJ2R2T	RES, CHIP(1608/5%/2.2ohm)	
R688	CRJ18AF3R30T	RES, CHIP, 3.3 OHM, 1%, 1/8W, 2012	
R689	CRJ18AF3R30T	RES, CHIP, 3.3 OHM, 1%, 1/8W, 2012	
R690	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R692	CRJ10DJ102T	RES, CHIP(1608/5%/1Kohm)	
R693	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R694	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R695	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R696	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R697	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R698	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R699	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R700	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R701	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R702	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R703	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R704	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R705	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R706	CLZ9R006Z	FERRITE CHIP BEAD(2012/220ohm)	
R707	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R708	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R709	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R710	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R711	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R712	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R713	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R718	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R721	CRJ10DJ273T	RES, CHIP(1608/5%/27Kohm)	
R722	CRJ10DJ273T	RES, CHIP(1608/5%/27Kohm)	
R723	CRJ10DJ333T	RES, CHIP(1608/5%/33Kohm)	
R724	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R725	CRJ10DJ153T	RES, CHIP(1608/5%/15Kohm)	
R726	CRJ10DJ153T	RES, CHIP(1608/5%/15Kohm)	
R727	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R728	CRJ10DJ153T	RES, CHIP(1608/5%/15Kohm)	
R729	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R730	CRJ10DJ112T	RES, CHIP(1608/5%/1.1Kohm)	
R731	CRJ10DJ272T	RES, CHIP(1608/5%/2.7Kohm)	
R732	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R733	CRJ10DJ471T	RES, CHIP(1608/5%/470ohm)	
R734	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R735	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R736	CRJ10DJ392T	RES, CHIP(1608/5%/3.9Kohm)	
R738	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R739	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R740	CRJ10DJ471T	RES, CHIP(1608/5%/470ohm)	
R741	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R742	CRJ10DJ102T	RES, CHIP(1608/5%/1Kohm)	
R743	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R744	CRJ10DJ473T	RES, CHIP(1608/5%/47Kohm)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
R745	CRJ10DJ473T	RES, CHIP(1608/5%/47Kohm)	
R746	CRJ10DJ473T	RES, CHIP(1608/5%/47Kohm)	
R747	CRJ10DJ473T	RES, CHIP(1608/5%/47Kohm)	
R748	CRJ10DJ682T	RES, CHIP(1608/5%/6.8Kohm)	
R749	CRJ10DJ123T	RES, CHIP(1608/5%/12Kohm)	
R750	CRJ10DJ153T	RES, CHIP(1608/5%/15Kohm)	
R751	CRJ10DJ273T	RES, CHIP(1608/5%/27Kohm)	
R752	CRJ10DJ333T	RES, CHIP(1608/5%/33Kohm)	
R753	CRJ10DJ152T	RES, CHIP(1608/5%/1.5Kohm)	
R754	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R755	CRJ10DJ105T	RES, CHIP(1608/5%/1Mohm)	
R756	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R757	CRJ10DJ105T	RES, CHIP(1608/5%/1Mohm)	
R759	CRJ10DJ4R7T	RES, CHIP(1608/5%/4.7ohm)	
R760	CRJ10DJ4R7T	RES, CHIP(1608/5%/4.7ohm)	
R762	CRJ10DJ4R7T	RES, CHIP(1608/5%/4.7ohm)	
R763	CRJ10DJ473T	RES, CHIP(1608/5%/47Kohm)	
R764	CRJ10DJ473T	RES, CHIP(1608/5%/47Kohm)	
R765	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R766	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R768	CRJ10DJ102T	RES, CHIP(1608/5%/1Kohm)	
R769	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R770	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R779	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R780	CRJ10DJ472T	RES, CHIP(1608/5%/4.7Kohm)	
R781	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R801	CRJ10DJ4R7T	RES, CHIP(1608/5%/4.7ohm)	
R802	CRJ10DJ4R7T	RES, CHIP(1608/5%/4.7ohm)	
R803	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R804	CRJ10DJ203T	RES, CHIP(1608/5%/20Kohm)	
R805	CRJ10DJ203T	RES, CHIP(1608/5%/20Kohm)	
R806	CRJ10DJ243T	RES, CHIP(1608/5%/24Kohm)	
R807	CRJ10DJ243T	RES, CHIP(1608/5%/24Kohm)	
R808	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R809	CRJ10DJ243T	RES, CHIP(1608/5%/24Kohm)	
R810	CRJ10DJ243T	RES, CHIP(1608/5%/24Kohm)	
R811	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R812	CRJ10DJ102T	RES, CHIP(1608/5%/1Kohm)	
R813	CRJ10DJ471T	RES, CHIP(1608/5%/470ohm)	
R814	CLZ9R006Z	FERRITE CHIP BEAD(2012/220ohm)	
R815	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R816	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R817	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R818	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R819	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R820	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R821	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R822	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R823	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R824	CRJ10DJ105T	RES, CHIP(1608/5%/1Mohm)	
R825	CRJ10DJ105T	RES, CHIP(1608/5%/1Mohm)	
R826	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R827	CLZ9R006Z	FERRITE CHIP BEAD(2012/220ohm)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
R828	CRJ10DJ473T	RES, CHIP(1608/5%/47Kohm)	
R829	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R831	CRJ10DF8201T	RES, CHIP(1608/1%/8.2Kohm)	
R832	CRJ10DJ243T	RES, CHIP(1608/5%/24Kohm)	
R833	CRJ10DF8201T	RES, CHIP(1608/1%/8.2Kohm)	
R834	CRJ10DF3301T	RES, CHIP(1608/1%/3.3Kohm)	
R837	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R839	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R840	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R841	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R842	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R843	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R844	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R848	CLZ9R006Z	FERRITE CHIP BEAD(2012/220ohm)	
R849	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R850	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R851	CLZ9R006Z	FERRITE CHIP BEAD(2012/220ohm)	
R852	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R853	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R854	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R855	CRJ10DJ330T	RES, CHIP(1608/5%/33ohm)	
R856	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R857	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R858	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R859	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R860	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R861	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R862	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R863	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R864	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R865	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R866	CLZ9R006Z	FERRITE CHIP BEAD(2012/220ohm)	
R867	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R868	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R869	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R870	CRJ10DJ472T	RES, CHIP(1608/5%/4.7Kohm)	
R871	CRJ10DJ472T	RES, CHIP(1608/5%/4.7Kohm)	
R873	CRJ10DJ477T	RES, CHIP(1608/5%/4.7ohm)	
R874	CRJ10DJ105T	RES, CHIP(1608/5%/1Mohm)	
R875	CRJ10DJ471T	RES, CHIP(1608/5%/470ohm)	
R876	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R877	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R878	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R879	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R880	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R881	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R882	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R883	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R884	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R885	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R886	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	C VERSION
R887	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	AH VERSION
R888	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	AH VERSION

REF NO.	PART NO.	DESCRIPTION	REMARKS
R889	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	C VERSION
R890	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R891	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R892	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R893	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R894	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R895	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R896	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R897	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R898	CRJ10DJ100T	RES, CHIP(1608/5%/10ohm)	
R899	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R900	CRJ10DJ332T	RES, CHIP(1608/5%/3.3Kohm)	
R901	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R902	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R904	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R905	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R906	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R907	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R908	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R909	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R910	CRJ10DJ101T	RES, CHIP(1608/5%/100ohm)	
R911	CRJ10DJ513T	RES, CHIP(1608/5%/51Kohm)	
R912	CRJ10DJ513T	RES, CHIP(1608/5%/51Kohm)	
R913	CRJ10DJ223T	RES, CHIP(1608/5%/22Kohm)	
R914	CRJ10DJ223T	RES, CHIP(1608/5%/22Kohm)	
R915	CRJ10DJ153T	RES, CHIP(1608/5%/15Kohm)	
R916	CRJ10DJ102T	RES, CHIP(1608/5%/1Kohm)	
R917	CRJ10DJ273T	RES, CHIP(1608/5%/27Kohm)	
R918	CRJ10DJ333T	RES, CHIP(1608/5%/33Kohm)	
R919	CRJ10DJ333T	RES, CHIP(1608/5%/33Kohm)	
R920	CRJ10DJ4R7T	RES, CHIP(1608/5%/4.7ohm)	
R921	CLZ9R006Z	FERRITE CHIP BEAD(2012/220ohm)	
R922	CLZ9R006Z	FERRITE CHIP BEAD(2012/220ohm)	
R923	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R924	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R925	CLZ9R006Z	FERRITE CHIP BEAD(2012/220ohm)	
R926	CLZ9R006Z	FERRITE CHIP BEAD(2012/220ohm)	
R927	CLZ9R006Z	FERRITE CHIP BEAD(2012/220ohm)	
C616	CCEA1AH471T	CAP , ELECT(10V/470uF)	
C634	CCEA1HH1R0T	CAP , ELECT(50V/1uF)	
C635	CCEA1HH4R7T	CAP , ELECT(50V/4.7uF)	
C636	CCME2A224JXT	CAP,METAL-FILM(100V/0.22uF)	
C637	HCQI1H472JZT	CAP , MYLAR	
C640	HCQI1H472JZT	CAP , MYLAR	
C641	CCME2A224JXT	CAP,METAL-FILM(100V/0.22uF)	
C642	CCEA1HH4R7T	CAP , ELECT(50V/4.7uF)	
C652	CCEA1HH4R7T	CAP , ELECT(50V/4.7uF)	
C654	CCEA1CH101T	CAP , ELECT(16V/100uF)	
C656	CCEA1AH471T	CAP , ELECT(10V/470uF)	
C660	CCEA1CH101T	CAP , ELECT(16V/100uF)	
C662	CCEA1CH101T	CAP , ELECT(16V/100uF)	
C663	CCEA1CH101T	CAP , ELECT(16V/100uF)	
C666	CCEA1CH101T	CAP , ELECT(16V/100uF)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
C667	CCEA1CH101T	CAP , ELECT(16V/100uF)	
C686	CCEA1HH220T	CAP , ELECT(50V/22uF)	
C687	CCEA1HH220T	CAP , ELECT(50V/22uF)	
C690	CCEA1CH101T	CAP , ELECT(16V/100uF)	
C691	CCEA1CH101T	CAP , ELECT(16V/100uF)	
C694	HCQI1H152JZT	CAP , MYLAR	
C695	HCQI1H152JZT	CAP , MYLAR	
C710	CCEA1HH100T	CAP , ELECT(50V/10uF)	
C720	CCME2A224JXT	CAP,METAL-FILM(100V/0.22uF)	
C721	HCQI1H473JZT	CAP , MYLAR	
C724	HCQI1H473JZT	CAP , MYLAR	
C750	CCEA1CH221T	CAP , ELECT(16V/220uF)	
C809	CCEA1HH3R3T	CAP , ELECT(50V/3.3uF)	
C872	CCEA1CH101T	CAP , ELECT(16V/100uF)	
C876	CCEA1HH100T	CAP , ELECT(50V/10uF)	
C897	CCEA1CH471T	CAP , ELECT(16V/470uF)	
C941	CCEA1AH221T	CAP , ELECT(10V/220uF)	
C942	CCEA1AH221T	CAP , ELECT(10V/220uF)	
D807	CVD1N4003SRT	DIODE , RECT	
D808	CVD1N4003SRT	DIODE , RECT	
J701	HJT1A025	PALTE , EARTH	
Q609	HVTKTA1266YT	T.R	
R684	CRG1SANJ331RT	RES, M-OXIDE FILM(1W/330ohm)	
R685	CRG1SANJ331RT	RES, M-OXIDE FILM(1W/330ohm)	
R691	CRG1SANJ100RT	RES, M-OXIDE FILM(1W/10ohm)	
SW1	CST1A023ZT	SW , TACT	
BN46	CWB1D00708058001	TWIST WIRE ASS'Y(LOCKING TYPE, 2.5MM,7P,80MM)	
BN85	CJP11GB99ZY	WAFER	
CN44	CJP11GI237ZW	LOCK-WAFER/STRAIGHT/2.5mm	
CN54	CJP09GI237ZW	LOCK-WAFER/STRAIGHT/2.5mm	
CN62	CJP05GI237ZW	LOCK-WAFER/STRAIGHT/2.5mm	
CN82	CJP05GA19ZY	WAFER,20017WS(2mm,STRAIGHT)	
CN83	CJP06GA19ZY	WAFER,20017WS(2mm,STRAIGHT)	
CN84	CJP21GA115ZY	WAFER , CARD CABLE	
CN85	CJP11GA98ZY	WAFER	
CN87	CJP09GI237ZW	LOCK-WAFER/STRAIGHT/2.5mm	
CN95	CJP09GI237ZW	LOCK-WAFER/STRAIGHT/2.5mm	
JK41	CJJ4M056W	JACK , BOARD	
JK63	CJJ2D012Z	JACK , PHONE(3.5mm/GREEN)	
JK64	CJS6V001Z	JACK , DIN 9P	C VERSION
JK65	CJJ9W001Z	JACK, 9P D-SUB FEMALE(RS-232C)	
JK66	CJJ2D008Z	JACK, STEREO (BLK MOLD)	
JK67	CJJ4R020W	JACK , BOARD	
L601	CLM4B001Z	COIL , MPX(FM 19KHz FILTER)	
L602	CLM4B001Z	COIL , MPX(FM 19KHz FILTER)	
TM61	CNVMW104MV1S63N	TUNER(EUR) FM, AM, RDS(S/LAB) DIN-TYPE	C VERSION
TM61	CNVMW104MV1S63SN	TUNER(USA) FM, AM, RDS(S/LAB) F-TYPE	AH VERSION
X801	HOX16934E120C	CRYSTAL, 16.934MHz, HC-49/S, 12pF, 30PPM	
X802	HOX08000E160C	CRYSTAL 8MHz	
X803	HOX12000E200C	CRYSTAL, 12.000MHz, HC-49/S, 20pF, 30PPM	
	COP12351B	VISO THREE POWER-AMP PCB ASS'Y	AH: COP12351C
	CUP12351Z	PCB, POWER-AMP VISO THREE	
C405	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
C406	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C407	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C408	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C411	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C414	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C415	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C418	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C419	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C422	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C423	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C431	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C435	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C439	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C443	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C446	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C456	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C462	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C464	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C474	CCUS1H101JA	CAP, CHIP(1608, 50V/100pF)	
C475	CCUS1H101JA	CAP, CHIP(1608, 50V/100pF)	
C478	CCUS1H681JA	CAP, CHIP(1608, 50V/680pF)	
C479	CCUS1H681JA	CAP, CHIP(1608, 50V/680pF)	
C486	CCUS1H120JA	CAP, CHIP(1608, 50V/12pF)	
C487	CCUS1H120JA	CAP, CHIP(1608, 50V/12pF)	
C488	CCUS1H330JA	CAP, CHIP(1608, 50V/33pF)	
C489	CCUS1H330JA	CAP, CHIP(1608, 50V/33pF)	
C492	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C493	CCUS1H103KC	CAP, CHIP(1608, 50V/0.01uF)	
C494	CCUS1H104KC	CAP, CHIP(1608, 50V/0.1uF)	
C495	CCUS1H102KC	CAP, CHIP(1608, 50V/1000pF)	
D411	CVD1SS355T	DIODE, SMD, SWITCHING	
D418	HVDUDZS4.3BSR	DIODE , ZENER (CHIP,4.3V)	
D419	CVD1SS355T	DIODE, SMD, SWITCHING	
D420	HVDUDZS3.3BSR	DIODE , ZENER (CHIP,3.3V)	
D421	CVD1SS355T	DIODE, SMD, SWITCHING	
D422	CVD1SS355T	DIODE, SMD, SWITCHING	
D429	CVD1SS355T	DIODE, SMD, SWITCHING	
D430	HVDUDZS3.3BSR	DIODE , ZENER (CHIP,3.3V)	
D432	CVD1SS355T	DIODE, SMD, SWITCHING	
D433	CVD1SS355T	DIODE, SMD, SWITCHING	
D434	HVDUDZS4.3BSR	DIODE , ZENER (CHIP,4.3V)	
D435	CVD1SS355T	DIODE, SMD, SWITCHING	
D437	CVD1SS355T	DIODE, SMD, SWITCHING	
D441	CVD1SS355T	DIODE, SMD, SWITCHING	
D442	CVD1SS355T	DIODE, SMD, SWITCHING	
D443	CVD1SS355T	DIODE, SMD, SWITCHING	
D444	CVD1SS355T	DIODE, SMD, SWITCHING	
D445	CVD1SS355T	DIODE, SMD, SWITCHING	
D446	CVD1SS355T	DIODE, SMD, SWITCHING	
D447	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	
D448	HVDRLS4148SR	DIODE, SWITCHING, SMD TYPE	
D449	CVD1SS355T	DIODE, SMD, SWITCHING	
D450	CVD1SS355T	DIODE, SMD, SWITCHING	

REF NO.	PART NO.	DESCRIPTION	REMARKS
D451	CVD1SS355T	DIODE, SMD, SWITCHING	
D452	CVD1SS355T	DIODE, SMD, SWITCHING	
D455	CVD1SS355T	DIODE, SMD, SWITCHING	
D456	CVD1SS355T	DIODE, SMD, SWITCHING	
D457	CVD1SS355T	DIODE, SMD, SWITCHING	
D458	CVD1SS355T	DIODE, SMD, SWITCHING	
IC47	CVIKIC3201S-50	IC , REGULATOR (5V0)	
Q401	HVTKRC107S	T.R , CHIP , SOT-23	
Q404	HVTKRC102S	T.R , CHIP , SOT-23	
Q406	HVTKRC102S	T.R , CHIP , SOT-23	
Q413	HVTKRC107S	T.R , CHIP , SOT-23	
Q416	HVTKTD1304T	T.R , CHIP (MUTE)	
Q417	HVTKTD1304T	T.R , CHIP (MUTE)	
R403	CRJ18AJ103T	RES, CHIP(2012/5%/10Kohm)	
R404	CRJ18AJ103T	RES, CHIP(2012/5%/10Kohm)	
R405	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R406	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R407	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R408	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R409	CRJ10DJ473T	RES, CHIP(1608/5%/47Kohm)	
R411	CRJ10DJ223T	RES, CHIP(1608/5%/22Kohm)	
R412	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R415	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R416	CRJ10DJ122T	RES, CHIP(1608/5%/1.2Kohm)	
R417	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R418	CRJ10DJ473T	RES, CHIP(1608/5%/47Kohm)	
R419	CRJ18AJ473T	RES, CHIP(2012/5%/47Kohm)	
R420	CRJ10DJ473T	RES, CHIP(1608/5%/47Kohm)	
R421	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R422	CRJ10DJ223T	RES, CHIP(1608/5%/22Kohm)	
R423	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R424	CRJ10DJ153T	RES, CHIP(1608/5%/15Kohm)	
R425	CRJ10DJ153T	RES, CHIP(1608/5%/15Kohm)	
R426	CRJ10DJ153T	RES, CHIP(1608/5%/15Kohm)	
R427	CRJ10DJ153T	RES, CHIP(1608/5%/15Kohm)	
R428	CRJ10DJ433T	RES, CHIP(1608/5%/43Kohm)	
R429	CRJ10DJ433T	RES, CHIP(1608/5%/43Kohm)	
R430	CRJ10DJ433T	RES, CHIP(1608/5%/43Kohm)	
R431	CRJ10DJ433T	RES, CHIP(1608/5%/43Kohm)	
R434	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R435	CRJ18AF1000T	RES , CHIP, 100 OHM 1%, 1/8W	
R436	CRJ10DJ182T	RES, CHIP(1608/5%/1.8Kohm)	
R440	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R441	CRJ10DJ153T	RES, CHIP(1608/5%/15Kohm)	
R442	CRJ10DJ683T	RES, CHIP(1608/5%/68Kohm)	
R443	CRJ10DJ683T	RES, CHIP(1608/5%/68Kohm)	
R444	CRJ10DJ752T	RES, CHIP(1608/5%/7.5Kohm)	
R445	CRJ10DJ752T	RES, CHIP(1608/5%/7.5Kohm)	
R446	CRJ18AF1001T	RES , CHIP, 1K OHM 1%, 1/8W	
R447	CRJ10DJ334T	RES, CHIP(1608/5%/330Kohm)	
R448	CRJ10DJ562T	RES, CHIP(1608/5%/5.6Kohm)	
R449	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
R450	CRJ10DJ2R2T	RES, CHIP(1608/5%/2.2ohm)	
R451	CRJ18AF3R30T	RES , CHIP , 3.3 OHM, 1% , 1/8W , 2012	
R452	CRJ18AJ103T	RES, CHIP(2012/5%/10Kohm)	
R453	CRJ18AJ472T	RES, CHIP(2012/5%/4.7Kohm)	
R454	CRJ10DJ223T	RES, CHIP(1608/5%/22Kohm)	
R455	CRJ18AJ0R0T	RES, CHIP(2012/5%/0ohm)	
R456	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R457	CRJ18AF1001T	RES , CHIP, 1K OHM 1%, 1/8W	
R458	CRJ18AJ152T	RES, CHIP(2012/5%/1.5Kohm)	
R459	CRJ18AJ153T	RES, CHIP(2012/5%/15Kohm)	
R460	CRJ18AF1001T	RES , CHIP, 1K OHM 1%, 1/8W	
R471	CRJ10DJ473T	RES, CHIP(1608/5%/47Kohm)	
R472	CRJ10DJ473T	RES, CHIP(1608/5%/47Kohm)	
R473	CRJ10DJ102T	RES, CHIP(1608/5%/1Kohm)	
R475	CRJ10DJ102T	RES, CHIP(1608/5%/1Kohm)	
R477	CRJ10DJ333T	RES, CHIP(1608/5%/33Kohm)	
R478	CRJ10DJ333T	RES, CHIP(1608/5%/33Kohm)	
R479	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R480	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R481	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R482	CRJ10DJ102T	RES, CHIP(1608/5%/1Kohm)	
R483	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R484	CRJ10DJ102T	RES, CHIP(1608/5%/1Kohm)	
R485	CRJ10DJ433T	RES, CHIP(1608/5%/43Kohm)	
R486	CRJ10DJ433T	RES, CHIP(1608/5%/43Kohm)	
R487	CRJ10DJ473T	RES, CHIP(1608/5%/47Kohm)	
R488	CRJ10DJ473T	RES, CHIP(1608/5%/47Kohm)	
R489	CRJ10DJ271T	RES, CHIP(1608/5%/270ohm)	
R490	CRJ10DJ271T	RES, CHIP(1608/5%/270ohm)	
R491	CRJ10DJ471T	RES, CHIP(1608/5%/470ohm)	
R492	CRJ10DJ471T	RES, CHIP(1608/5%/470ohm)	
R493	CRJ10DJ152T	RES, CHIP(1608/5%/1.5Kohm)	
R494	CRJ10DJ152T	RES, CHIP(1608/5%/1.5Kohm)	
R495	CRJ10DJ152T	RES, CHIP(1608/5%/1.5Kohm)	
R496	CRJ10DJ152T	RES, CHIP(1608/5%/1.5Kohm)	
R497	CRJ10DJ333T	RES, CHIP(1608/5%/33Kohm)	
R498	CRJ10DJ333T	RES, CHIP(1608/5%/33Kohm)	
R499	CRJ10DJ152T	RES, CHIP(1608/5%/1.5Kohm)	
R500	CRJ10DJ152T	RES, CHIP(1608/5%/1.5Kohm)	
R501	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R502	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R503	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R504	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R505	CRJ10DJ750T	RES, CHIP(1608/5%/75ohm)	
R506	CRJ10DJ750T	RES, CHIP(1608/5%/75ohm)	
R507	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R508	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R509	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R510	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R511	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R512	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R513	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	
R514	CRJ10DJ561T	RES, CHIP(1608/5%/560ohm)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
R515	CRJ10DJ750T	RES, CHIP(1608/5%/75ohm)	
R516	CRJ10DJ750T	RES, CHIP(1608/5%/75ohm)	
R517	CRJ10DJ223T	RES, CHIP(1608/5%/22Kohm)	
R518	CRJ10DJ223T	RES, CHIP(1608/5%/22Kohm)	
R519	CRJ10DJ223T	RES, CHIP(1608/5%/22Kohm)	
R520	CRJ10DJ223T	RES, CHIP(1608/5%/22Kohm)	
R521	CRJ10DJ202T	RES, CHIP(1608/5%/2Kohm)	
R522	CRJ10DJ202T	RES, CHIP(1608/5%/2Kohm)	
R523	CRJ10DJ471T	RES, CHIP(1608/5%/470ohm)	
R524	CRJ10DJ471T	RES, CHIP(1608/5%/470ohm)	
R525	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R526	CRJ10DJ0R0T	RES, CHIP(1608/5%/0ohm)	
R527	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R528	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R543	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R544	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R545	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R546	CRJ10DJ103T	RES, CHIP(1608/5%/10Kohm)	
R547	CRJ10DJ273T	RES, CHIP(1608/5%/27Kohm)	
R548	CRJ10DJ273T	RES, CHIP(1608/5%/27Kohm)	
R549	CRJ10DJ273T	RES, CHIP(1608/5%/27Kohm)	
R550	CRJ10DJ273T	RES, CHIP(1608/5%/27Kohm)	
R551	CRJ10DJ912T	RES, CHIP(1608/5%/9.1Kohm)	
R552	CRJ10DJ912T	RES, CHIP(1608/5%/9.1Kohm)	
R553	CRJ10DJ223T	RES, CHIP(1608/5%/22Kohm)	
R554	CRJ10DJ223T	RES, CHIP(1608/5%/22Kohm)	
R558	CRJ10DJ1R0T	RES, CHIP(1608/5%/1ohm)	
R559	CRJ10DJ1R0T	RES, CHIP(1608/5%/1ohm)	
R560	CRJ10DJ104T	RES, CHIP(1608/5%/100Kohm)	
R561	CRJ10DJ333T	RES, CHIP(1608/5%/33Kohm)	
R562	CRJ10DJ302T	RES, CHIP(1608/5%/3Kohm)	
R563	CRJ10DJ152T	RES, CHIP(1608/5%/1.5Kohm)	
C401	HCQI1H223JZT	CAP , MYLAR	
C402	HCQI1H223JZT	CAP , MYLAR	
C409	CCEA1CH221T	CAP , ELECT(16V/220uF)	
C410	CCEA1CH221T	CAP , ELECT(16V/220uF)	
C412	CCEA1CH101T	CAP , ELECT(16V/100uF)	
C416	CCEA1CH471T	CAP , ELECT(16V/470uF)	
C420	CCEA1CH471T	CAP , ELECT(16V/470uF)	
C424	CCEA1CH471T	CAP , ELECT(16V/470uF)	
C425	HCQI1H223JZT	CAP , MYLAR	
C427	HCQI1H223JZT	CAP , MYLAR	
C428	HCQI1H223JZT	CAP , MYLAR	
C430	HCQI1H223JZT	CAP , MYLAR	
C434	CCEA1CH101T	CAP , ELECT(16V/100uF)	
C437	CCEA1HH2R2T	CAP , ELECT(50V/2.2uF)	
C438	CCEA1CH101T	CAP , ELECT(16V/100uF)	
C440	CCEA1HH100T	CAP , ELECT(50V/10uF)	
C441	CCEA1JH470TS	CAP , ELECT	
C442	CCEA1JH470TS	CAP , ELECT	
C444	CCEA1JH470TS	CAP , ELECT	
C445	CCEA1JH470TS	CAP , ELECT	
C447	CCEA1AH471T	CAP , ELECT(10V/470uF)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
C448	CCEA1HH1R0T	CAP , ELECT(50V/1uF)	
C451	CCME2A154JXT	CAP,METAL-FILM(100V/0.15uF)	
C452	CCME2A154JXT	CAP,METAL-FILM(100V/0.15uF)	
C453	CCME2A154JXT	CAP,METAL-FILM(100V/0.15uF)	
C454	CCME2A154JXT	CAP,METAL-FILM(100V/0.15uF)	
C455	HCQI1H473JZT	CAP , MYLAR	
C457	HCQI1H473JZT	CAP , MYLAR	
C458	HCQI1H562JZT	CAP , MYLAR	
C459	HCQI1H562JZT	CAP , MYLAR	
C460	HCQI1H472JZT	CAP , MYLAR	
C461	HCQI1H472JZT	CAP , MYLAR	
C465	CCEA1VH221T	CAP , ELECT(35V/220uF)	
C467	CCEA1HKS100T	CAP , ELECT(50V/10uF)-S	
C468	CCEA1VH101T	CAP , ELECT(35V/100uF)	
C469	CCEA1CH471T	CAP , ELECT(16V/470uF)	
C472	CCEA1HH100T	CAP , ELECT(50V/10uF)	
C473	CCEA1HH100T	CAP , ELECT(50V/10uF)	
C476	CCEA1CH101T	CAP , ELECT(16V/100uF)	
C477	CCEA1CH101T	CAP , ELECT(16V/100uF)	
C480	CCEA1CH101T	CAP , ELECT(16V/100uF)	
C481	CCEA1CH101T	CAP , ELECT(16V/100uF)	
C490	CCEA1HH100T	CAP , ELECT(50V/10uF)	
C491	CCEA1HH100T	CAP , ELECT(50V/10uF)	
C496	CCEA1HH470T	CAP , ELECT(50V/47uF)	
D401	CVD1N4003ST	DIODE , RECT	
D402	CVD1N4003ST	DIODE , RECT	
D403	CVD1N4003ST	DIODE , RECT	
D404	CVD1N4003ST	DIODE , RECT	
D405	CVD1N4003ST	DIODE , RECT	
D406	CVD1N4003ST	DIODE , RECT	
D407	CVD1N4003ST	DIODE , RECT	
D408	CVD1N4003ST	DIODE , RECT	
D409	CVD1N4003ST	DIODE , RECT	
D410	CVD1N4003ST	DIODE , RECT	
D412	CVD1N4003SRT	DIODE , RECT	
D413	CVD1N4003SRT	DIODE , RECT	
D414	CVD1N4003SRT	DIODE , RECT	
D415	CVD1N4003SRT	DIODE , RECT	
D416	CVD1N4003SRT	DIODE , RECT	
D417	CVD1N4003SRT	DIODE , RECT	
D423	CVD1N4003SRT	DIODE , RECT	
D424	CVDZJ6.8BT	DIODE , ZENER 6.8V	
D425	CVDZJ6.8BT	DIODE , ZENER 6.8V	
D426	CVDZJ13BT	DIODE , ZENER 13V	
D427	HVDMTZJ27BT	DIODE , ZENER	
F401	KBA2D2500TLET	FUSE (2.5A)	
F402	KJCF5S	HOLDER , FUSE	
J402	HJT1A025	PALTE , EARTH	
J404	HJT1A025	PALTE , EARTH	
Q402	HVTKTC3199YT	T.R , KTC3199Y	
Q403	CVTKTC1027YT	T.R , KTC1027Y	
Q405	CVTKTA1268BLATPA	T.R , Hfe 450-700	
Q407	HVTKTA1267YT	T.R	

REF NO.	PART NO.	DESCRIPTION	REMARKS
Q408	HVTKTC3198YT	T.R	
Q409	HVTKTC3198YT	T.R	
Q410	HVTKRC111MT	T.R , TO-92M	
Q411	HVTKTA1271YT	T.R	
Q412	HVTKTA1271YT	T.R	
Q414	HVTKTC3198YT	T.R	
Q418	HVTKTC3200GRT	T.R	
Q419	HVTKTC3200GRT	T.R	
Q420	HVTKTC3200GRT	T.R	
Q421	HVTKTC3200GRT	T.R	
Q422	HVTKTC3200GRT	T.R	
Q423	HVTKTC3200GRT	T.R	
Q424	HVTKTC3198YT	T.R	
Q425	HVTKTC3198YT	T.R	
Q426	CVTKTA1268BLATPA	T.R , Hfe 450-700	
Q427	CVTKTA1268BLATPA	T.R , Hfe 450-700	
Q428	CVTKTA1268BLATPA	T.R , Hfe 450-700	
Q429	CVTKTA1268BLATPA	T.R , Hfe 450-700	
Q432	HVTKTC3200GRT	T.R	
Q433	HVTKTC3200GRT	T.R	
Q442	HVTKTC3200GRT	T.R	
Q443	HVTKTC3200GRT	T.R	
Q446	HVTKTC3198YT	T.R	
Q447	HVTKTC3198YT	T.R	
Q448	HVTKTA1267YT	T.R	
R413	CRD25TJ101T	RES, CARBON(1/4W,100ohm,J)	
R414	CRD25FJ3R3T	RES , CARBON	
R461	CRD25FJ220T	RES , CARBON	
R462	CRD25FJ220T	RES , CARBON	
R463	CRD25FJ220T	RES , CARBON	
R464	CRD25FJ220T	RES , CARBON	
R531	CRD25FJ220T	RES , CARBON	
R532	CRD25FJ220T	RES , CARBON	
R533	CRD25FJ3R3T	RES , CARBON	
R534	CRD25FJ3R3T	RES , CARBON	
R535	CRD25FJ3R3T	RES , CARBON	
R536	CRD25FJ3R3T	RES , CARBON	
R537	CRD25FJ220T	RES , CARBON	
R538	CRD25FJ220T	RES , CARBON	
FAN1	CFNRDL6015S1	MOTOR , FAN(60X60X15MM,12V 3000RPM 110MM)	
Q436	CVT2SC4495	T.R(FM20-TO220F)	
Q437	CVT2SC4495	T.R(FM20-TO220F)	
Q438	CVT2SD2389P	T.R , POWER	
Q439	CVT2SD2389P	T.R , POWER	
Q440	CVT2SB1559P	T.R , POWER	
Q441	CVT2SB1559P	T.R , POWER	
BN44	CWB1D01110058	WIRE ASS'Y	
BN45	CWB1C00910058	WIRE ASS'Y(9P,2.5MM,100MM)	
BN46	CWB1D00910058	WIRE ASS'Y (9PIN, 2.5mm,100mm,STRAIGHT,#22)	
BN49	HJP06GB131ZK	CONNECTOR(PLUG)	
BN50	HJP06GB131ZK	CONNECTOR(PLUG)	
BN51	HJP06GB131ZK	CONNECTOR(PLUG)	
BN62	CWB1C00515058001	WIRE ASS'Y(5P,2.5MM,150MM)	

REF NO.	PART NO.	DESCRIPTION	REMARKS
BN95	CWB1D00915058001	WIRE ASS'Y(9P,2.5MM,150MM)	
CN41	CJP09GA01ZY	WAFER,YMW025(2.5mm,STRAIGHT)	
CN42	△ CJP02GA89ZY	WAFER, YW396-NNAB(7.92mm)	
CN43	CJP02KA060ZY	WAFER	
CN45	CJP05GA01ZY	WAFER,YMW025(2.5mm,STRAIGHT)	
CN46	CJP07GI237ZW	LOCK-WAFER/STRAIGHT/2.5mm	
CN49	HJP06GA130ZK	CONNECTOR(SOCKET)	
CN50	HJP06GA130ZK	CONNECTOR(SOCKET)	
CN51	HJP06GA130ZK	CONNECTOR(SOCKET)	
CN52	△ CJP03GA90ZY	WAFER, YW396-NNB(3.96mm)	
CN53	△ CJP02GA01ZY	WAFER,YMW025(2.5mm,STRAIGHT)	
CN62	CJP05GI237ZW	LOCK-WAFER/STRAIGHT/2.5mm	
CN95	CJP09GI237ZW	LOCK-WAFER/STRAIGHT/2.5mm	
C403	CCEA1EH472E	CAP , ELECT(25V/4700uF)	
C404	CCEA1EH472E	CAP , ELECT(25V/4700uF)	
C413	CCEA1CH332E	CAP , ELECT(16V/3300uF)	
C417	CCEA1CH332E	CAP , ELECT(16V/3300uF)	
C421	CCEA1CH472EZ	CAP , ELECT(KR3, 16V/4700, 13X25)	
C432	△ KCKDKS472ME	CAP , CERAMIC(X1/Y2/SC)	
C433	△ KCKDKS472ME	CAP , CERAMIC(X1/Y2/SC)	
C436	CCEA1CH222E	CAP , ELECT(16V/2200uF)	
C449	CCET50VKL4682NK	CAP , ELECT	
C450	CCET50VKL4682NK	CAP , ELECT	
C482	CCEA1JH221E	CAP , ELECT	
C483	CCEA1JH221E	CAP , ELECT	
C484	CCEA1JH221E	CAP , ELECT	
C485	CCEA1JH221E	CAP , ELECT	
D428	△ CVDGBJ806BHA	HEATSINK DIODE ASS'Y (CMY1A138)	
IC41	CVIKIA278R12PIBA	I.C HEAT SINK ASS'Y(CMY3A222)	
IC42	HVIKIA7912PI	I.C,REGULATOR(-12V,T0220IS)	
IC43	CVIKIA7808APICA	I.C HEAT SINK ASS'Y (CMY4A025)	
IC44	CVIKIA78R05PICA	I.C HEAT SINK ASS'Y (CMY4A025)	
IC45	CVIKIA78R05PICA	I.C HEAT SINK ASS'Y (CMY4A025)	
IC46	CVIKIA278R05PIBA	I.C HEAT SINK ASS'Y (CMY3A222)	
JK42	CJJ5P011Z	TERMINAL , SPEAKER	
L401	CLEY0R5KAK	COIL , SPEAKER(0.5uH)	
L402	CLEY0R5KAK	COIL , SPEAKER(0.5uH)	
OL41	△ CJJ7A012Z	JACK , AC OUTLET	AH VERSION
OL42	△ CJJ7A021Z	JACK , AC OUTLET	C VERSION
Q430	HVTKTA1360Y	T.R , PRE DRIVE	
Q431	HVTKTA1360Y	T.R , PRE DRIVE	
Q434	HVTKTC3423Y	T.R , PRE DRIVE	
Q435	HVTKTC3423Y	T.R , PRE DRIVE	
RY41	△ CSL3A018ZE	RELAY,G5PA-28-MC,DC12V,2C1P	
RY42	△ CSL1C005ZE	RELAY (DC 5V, 1C1P)	
R401	CRQ1AJR47H	RES , FUSE	
R402	CRQ1AJR47H	RES , FUSE	
R410	CRG1SANJ100RT	RES, M-OXIDE FILM(1W/10ohm)	
R432	CRG1ANJ100H	RES , METAL OXIDE FILM	
R433	CRG1ANJ100H	RES , METAL OXIDE FILM	
R539	CRF5EKR22	RES , CEMENT	
R540	CRF5EKR22	RES , CEMENT	
R541	CRF5EKR22	RES , CEMENT	

REF NO.	PART NO.	DESCRIPTION	REMARKS
R542	CRF5EKR22	RESISTOR, CEMENT	
TH41	⚠ CRTDHTS100180W	POSISTOR ASS'Y, (100°)	
T401	⚠ CLT5I020ZE	TRANS , SUB MRX500, MRX700 EUR	C VERSION
T401	⚠ CLT5I020ZU	TRANS , SUB MRX500, MRX700 USA	AH VERSION
	OTHER		
	⚠ CWZPM5003TW91A	AC INLET WIRE ASSY	
F402	⚠ KBA2C2500TLEY	FUSE(218 Series, 250V, 2.5A)	C VERSION
F402	⚠ KBA2C5000TLEY	FUSE(218 Series, 250V, 5A)	AH VERSION
TNS1	⚠ CLT5R042ZE	VISO THREE, MAIN TRANSFORMER	C VERSION
TNS1	⚠ CLT5R042ZU	VISO THREE, MAIN TRANSFORMER	AH VERSION
	CJDVISOTHREEZA	DVD MECHANISM ASSEMBLY (CADVISOTHREEZA)	
	CWC4G2A24G200B	CABLE, CARD DVD FFC (0.5mm PITCH, A-B,200mm)	
	⚠ CJA2B054Z	CORD , POWER (DETACHABLE/EUR)	C VERSION
	⚠ CJA2A070Z	CORD , POWER (PLUG+SOCKET) UL	AH VERSION