

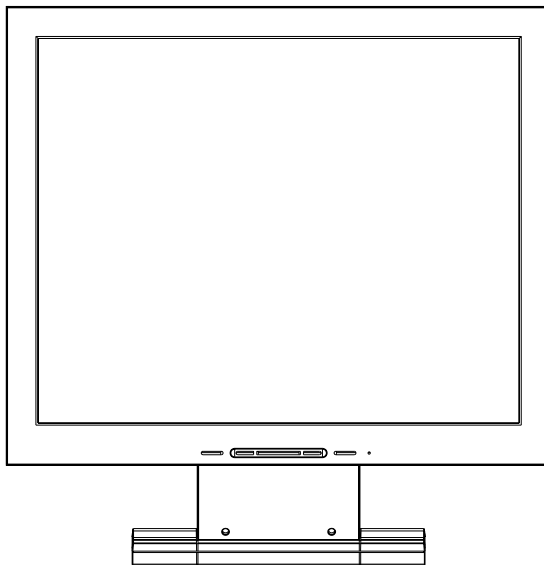
**SAMSUNG**

# TFT-LCD MONITOR

<b>Chassis</b>	<b>Model</b>
<b>MO19P*</b>	<b>192T</b>
<b>MO19E*</b>	<b>192B</b>

# **SERVICE** *Manual*

## TFT-LCD MONITOR



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# 1 Precautions

Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock.

## 1-1 Safety Precautions

### 1-1-1 Warnings

1. For continued safety, do not attempt to modify the circuit board.
2. Disconnect the AC power and DC Power Jack before servicing.
3. When the chassis is operating, semiconductor heatsinks are potential shock hazards.

### 1-1-2 Servicing the LCD Monitor

1. When servicing the LCD Monitor, remove the static charge by connecting a 10k ohm resistor in series with an insulated wire (such as a test probe) between the chassis and the anode lead. (Disconnect the AC line cord from the AC outlet.)
2. It is essential that service technicians have an accurate voltage meter available at all times. Check the calibration of this meter periodically.

### 1-1-3 Fire and Shock Hazard

Before returning the monitor to the user, perform the following safety checks:

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the monitor.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
3. Leakage Current Hot Check (Figure 1-1):

**WARNING: Do not use an isolation transformer during this test.**

Use a leakage current tester or a metering system that complies with American National Standards Institute (*ANSI C101.1, Leakage Current for Appliances*), and Underwriters Laboratories (*UL Publication UL1410, 59.7*).

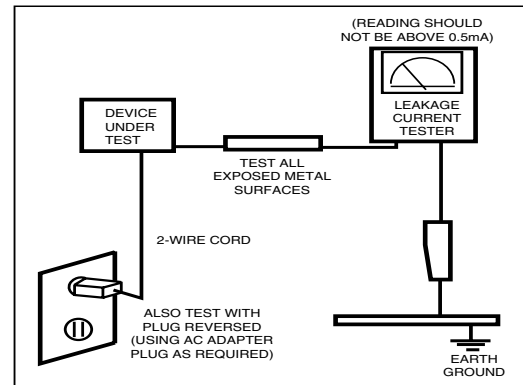



Figure 1-1. Leakage Current Test Circuit

4. With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

### 1-1-4 Product Safety Notices

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by  on schematics and parts lists. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

## 1-2 Servicing Precautions

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**WARNING:** An electrolytic capacitor installed with the wrong polarity might explode.

**Caution:** Before servicing units covered by this service manual, read and follow the Safety Precautions section of this manual.

**Note:** If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions.

### 1-2-1 General Servicing Precautions

1. Always unplug the unit's AC power cord from the AC power source and disconnect the DC Power Jack before attempting to:
  - (a) remove or reinstall any component or assembly,
  - (b) disconnect PCB plugs or connectors, (c) connect a test component in parallel with an electrolytic capacitor.
2. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
3. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the area around the serviced part has not been damaged.
4. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
5. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to the blades of the AC plug.  
The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
6. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

## 1-3 Electrostatically Sensitive Devices (ESD) Precautions

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Some semiconductor (solid state) devices can be easily damaged by static electricity. Such components are commonly called Electrostatically Sensitive Devices (ESD). Examples of typical ESD are integrated circuits and some field-effect transistors. The following techniques will reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, 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 body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.

## 2 Product Specifications

### 2-1 Specifications

Item	Description	
	Analog	Digital
LCD Panel	TFT-LCD panel, RGB vertical stripe, normally white transmissive, 19-Inch viewable, 0.264 pixel pitch	
Scanning Frequency	Horizontal : 30 kHz ~ 81 kHz (Automatic) Vertical : 56 Hz ~ 75 Hz	
Display Colors	16.2 Million colors	
Maximum Resolution	Horizontal : 1280 Pixels @ 81 kHz Vertical : 1024 Pixels @ 75 Hz	
Input Video Signal	Analog, 0.7 Vp-p $\pm$ 5% positive at 75 $\Omega$ , internally terminated	TMDS
Input Sync Signal	Type : Separate H/V sync., In case of using option cable, Composite, Automatic Synchronization without external switch Level : TTL level (V high $\geq$ 2.0 V, V low $\leq$ 0.8 V)	
Maximum Pixel Clock rate	140 MHz	
Active Display Horizontal/Vertical	376 $\pm$ 32 mm 301 $\pm$ 0.56 mm	
AC power voltage & Frequency	AC 90 ~ 264 Volts, 60/50 Hz $\pm$ 3 Hz	
Power Consumption	45 W (max)	
Dimensions (W x H x D) Set	431 x 31.5 x 324.7 mm (17.0 x 1.2 x 12.8 inches) After folding the stand 431 x 220 x 447.0 mm (17.0 x 8.7 x 17.6 inches) After installation on stand	
Package	524 x 452 x 147 mm (20.6 x 17.8 x 5.8 inches)	
Weight (Set/Package)	5.5 kg (12.1 lbs) / 7.8 kg (17.2 lbs)	
Environmental Considerations	Operating Temperature : 41°F ~ 95°F (5°C ~ 35°C) Operating Humidity : 10 % ~ 80 % Storage Temperature : -4°F ~ 113°F (-20°C ~ 45°C) Storage Humidity : 5 % ~ 95 %	
<ul style="list-style-type: none"> <li>• M019P*/M019E* complies with TCO 03 recommendations for reduced electromagnetic fields.</li> <li>• Designs and specifications are subject to change without prior notice.</li> </ul>		

## 2-2 Pin Assignments

Pin No.	Sync Type	15-Pin D-Sub Signal Cable Connector		
		Separate	Composite	Sync-on-green
1		Red video	Red video	Red
2		Green video	Green video	Green video + H/V Sync.
3		Blue video	Blue video	Blue video
4		GND	GND	GND
5		GND (DDC Return)	GND (DDC Return)	GND (DDC Return)
6		Red video GND	Red video GND	Red video GND
7		Green video GND	Green video GND	Green video GND
8		Blue video GND	Blue video GND	Blue video GND
9		No Connection	No Connection	Not Used
10		Sync.-GND/Self Test	Sync.-GND/Self Test	GND-Sync./Self Test
11		GND	GND	GND
12		DDC Data	DDC Data	DDC Data
13		H-Sync.	H/V-Sync.	Not Used
14		V-Sync.	Not Used	Not Used
15		DDC Clock	DDC Clock	DDC Clock

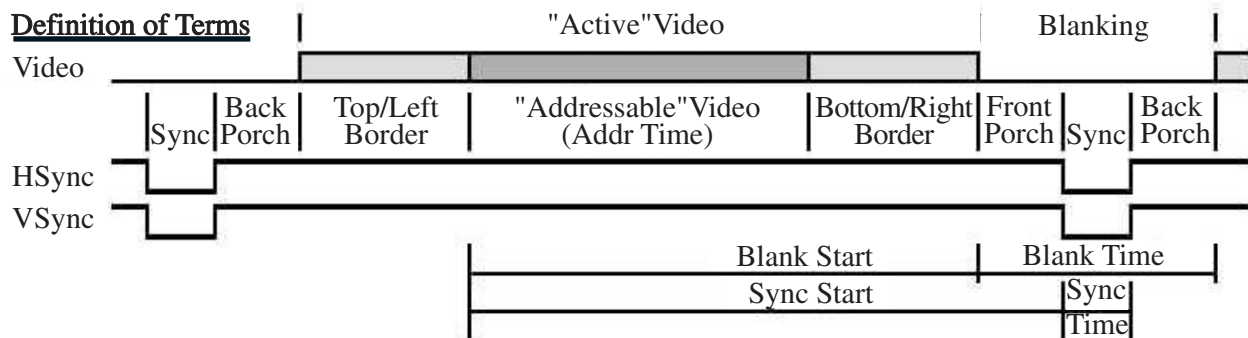
Pin No.	Sync Type	24-Pin DVI-D(TMDS)		
1		Rx2-	13	No Connection
2		Rx2+	14	DDC Power Input (+5V)
3		GND	15	Self Raster
4		No Connection	16	Connection Signal Output (+5V)
5		No Connection	17	Rx0-
6		DDC Clock (SCL)	18	Rx0+
7		DDC Data (SDA)	19	GND
8		No Connection	20	No Connection
9		Rx1-	21	No Connection
10		Rx1+	22	GND
11		GND	23	RxC+
12		No Connection	24	RxC-

## 2-3 Timing Chart

This section of the service manual describes the timing that the computer industry recognizes as standard for computer-generated video signals.

### 2-3-1 LCD Panel Mode : 1 mode

Timing No.	20
Originator	VESA
Mode Name	1280/60Hz
Resolution (HxV)	1280x1024
<b>HORIZONTAL</b>	
Frequency	63.981kHz
Total time	11.852 $\mu$ s
Active time	9.259 $\mu$ s
Blank time	3.778 $\mu$ s
Border (L / R)	0.000 $\mu$ s
Data time	9.259 $\mu$ s
Front porch	0.444 $\mu$ s
Sync. width	1.037 $\mu$ s
Back porch	2.296 $\mu$ s
Sync. polarity	Positive
<b>VERTICAL</b>	
Frequency	60.020Hz
Total time	16.005ms
Active time	15.630ms
Blank time	0.375ms
Border (T / B)	0.000ms
Data time	15.630ms
Front porch	0.016ms
Sync. width	0.047ms
Back porch	0.594ms
Sync. polarity	Positive
Dot Clock	108.00MHz
Sync. Type	Separate
Scan Type	N/I



## 2-3-2 Supported Modes (1)

Timing No. Originator Mode Name Resolution (HxV)	1 IBM VGA1 640x350	2 IBM VGA2 720x400	3 IBM VGA3 640x480	11 VESA 640/72Hz 640x480	17 VESA 640/75Hz 640x480
<b>HORIZONTAL</b> Frequency Total time Active time Blank time Border (L / R) Data time Front porch Sync. width Back porch Sync. polarity	31.469kHz 31.778 $\mu$ s 26.058 $\mu$ s 5.720 $\mu$ s 0.318 $\mu$ s 25.422 $\mu$ s 0.318 $\mu$ s 3.813 $\mu$ s 1.589 $\mu$ s Positive	31.469kHz 31.777 $\mu$ s 26.058 $\mu$ s 5.720 $\mu$ s 0.318 $\mu$ s 25.422 $\mu$ s 0.318 $\mu$ s 3.813 $\mu$ s 1.589 $\mu$ s Negative	31.469kHz 31.778 $\mu$ s 26.058 $\mu$ s 5.720 $\mu$ s 0.318 $\mu$ s 25.422 $\mu$ s 0.318 $\mu$ s 3.813 $\mu$ s 1.589 $\mu$ s Negative	37.861kHz 26.413 $\mu$ s 20.825 $\mu$ s 5.588 $\mu$ s 0.254 $\mu$ s 20.317 $\mu$ s 0.508 $\mu$ s 1.270 $\mu$ s 3.810 $\mu$ s Negative	37.500kHz 26.667 $\mu$ s 20.317 $\mu$ s 6.350 $\mu$ s 0.000 $\mu$ s 20.317 $\mu$ s 0.508 $\mu$ s 2.032 $\mu$ s 3.810 $\mu$ s Negative
<b>VERTICAL</b> Frequency Total time Active time Blank time Border (T / B) Data time Front porch Sync. width Back porch Sync. polarity	70.086Hz 14.268ms 11.504ms 2.764ms 0.191ms 11.122ms 0.985ms 0.064ms 1.716ms Negative	70.087Hz 14.268ms 13.155ms 1.113ms 0.222ms 12.711ms 0.191ms 0.064ms 0.858ms Positive	59.940Hz 16.683ms 15.761ms 0.922ms 0.254ms 15.253ms 0.064ms 0.064ms 0.794ms Negative	72.809Hz 13.735ms 13.100ms 0.635ms 0.211ms 12.678ms 0.026ms 0.079ms 0.528ms Negative	75.000Hz 13.333ms 12.800ms 0.533ms 0.000ms 12.800ms 0.027ms 0.080ms 0.427ms Negative
Dot Clock	25.175MHz	28.322MHz	25.175MHz	31.500MHz	31.500MHz
Sync. Type	Separate	Separate	Separate	Separate	Separate
Scan Type	N/I	N/I	N/I	N/I	N/I

## 2-3-2 Supported Modes (2)

Timing No.	32	33	12	13	14
Originator	MAC	MAC	VESA	VESA	VESA
Mode Name	640/67Hz	832/75Hz	800/56Hz	800/60Hz	800/72Hz
Resolution (HxV)	640x480	832x624	800x600	800x600	800x600
<b>HORIZONTAL</b>					
Frequency	35.000kHz	49.726kHz	35.156kHz	37.879kHz	48.077kHz
Total time	28.571 $\mu$ s	20.110 $\mu$ s	28.444 $\mu$ s	26.400 $\mu$ s	20.800 $\mu$ s
Active time	21.164 $\mu$ s	14.524 $\mu$ s	22.222 $\mu$ s	20.000 $\mu$ s	16.000 $\mu$ s
Blank time	7.407 $\mu$ s	5.586 $\mu$ s	6.222 $\mu$ s	6.400 $\mu$ s	4.800 $\mu$ s
Border (L / R)	0.000 $\mu$ s	0.000 $\mu$ s	0.000 $\mu$ s	0.000 $\mu$ s	0.000 $\mu$ s
Data time	21.164 $\mu$ s	14.524 $\mu$ s	22.222 $\mu$ s	20.000 $\mu$ s	16.000 $\mu$ s
Front porch	2.116 $\mu$ s	0.559 $\mu$ s	0.667 $\mu$ s	1.000 $\mu$ s	1.120 $\mu$ s
Sync. width	2.116 $\mu$ s	1.117 $\mu$ s	2.000 $\mu$ s	3.200 $\mu$ s	2.400 $\mu$ s
Back porch	3.175 $\mu$ s	3.910 $\mu$ s	3.556 $\mu$ s	2.200 $\mu$ s	1.280 $\mu$ s
Sync. polarity	Negative	Negative	Positive or Negative	Positive	Positive
<b>VERTICAL</b>					
Frequency	66.667Hz	74.551Hz	56.250Hz	60.317Hz	72.188Hz
Total time	15.000ms	13.414ms	17.778ms	16.579ms	13.853ms
Active time	13.714ms	12.549ms	17.067ms	15.840ms	12.480ms
Blank time	1.286ms	0.865ms	0.711ms	0.739ms	1.373ms
Border (T / B)	0.000ms	0.000ms	0.000ms	0.000ms	0.000ms
Data time	13.714ms	12.549ms	17.067ms	15.840ms	12.480ms
Front porch	0.086ms	0.020ms	0.028ms	0.026ms	0.770ms
Sync. width	0.086ms	0.060ms	0.057ms	0.106ms	0.125ms
Back porch	1.114ms	0.784ms	0.626ms	0.607ms	0.478ms
Sync. polarity	Negative	Negative	Positive or Negative	Positive	Positive
Dot Clock	30.240MHz	57.284MHz	36.000MHz	40.000MHz	50.000MHz
Sync. Type	Separate Composite Sync.-on-G	Separate Composite Sync.-on-G	Separate	Separate	Separate
Scan Type	N/I	N/I	N/I	N/I	N/I



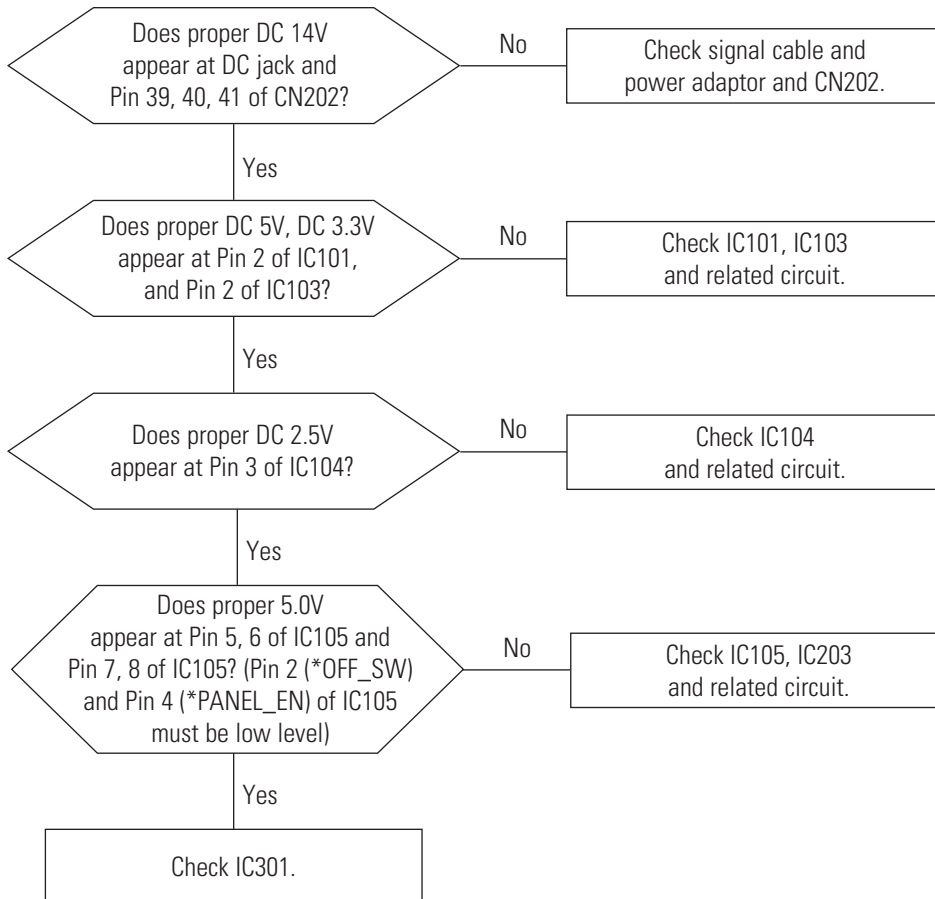
## 2-3-2 Supported Modes (3)

Timing No.	18	15	16	19	20
Originator	VESA	VESA	VESA	VESA	VESA
Mode Name	800/75Hz	1024/60Hz	1024/70Hz	1024/75Hz	1280/75Hz
Resolution (HxV)	800x600	1024x768	1024x768	1024x768	1280x1024
<b>HORIZONTAL</b>					
Frequency	46.875kHz	48.363kHz	56.476kHz	60.023kHz	79.976kHz
Total time	21.333 $\mu$ s	20.677 $\mu$ s	17.707 $\mu$ s	16.660 $\mu$ s	12.504 $\mu$ s
Active time	16.162 $\mu$ s	15.754 $\mu$ s	13.653 $\mu$ s	13.003 $\mu$ s	9.481 $\mu$ s
Blank time	5.171 $\mu$ s	4.923 $\mu$ s	4.054 $\mu$ s	3.657 $\mu$ s	3.023 $\mu$ s
Border (L / R)	0.000 $\mu$ s	0.000 $\mu$ s	0.000 $\mu$ s	0.000 $\mu$ s	0.000 $\mu$ s
Data time	16.162 $\mu$ s	15.754 $\mu$ s	13.653 $\mu$ s	13.003 $\mu$ s	9.481 $\mu$ s
Front porch	0.323 $\mu$ s	0.369 $\mu$ s	0.320 $\mu$ s	0.203 $\mu$ s	0.119 $\mu$ s
Sync. width	1.616 $\mu$ s	2.092 $\mu$ s	1.813 $\mu$ s	1.219 $\mu$ s	1.067 $\mu$ s
Back porch	3.232 $\mu$ s	2.462 $\mu$ s	1.920 $\mu$ s	2.235 $\mu$ s	1.837 $\mu$ s
Sync. polarity	Positive	Negative	Negative	Positive	Positive
<b>VERTICAL</b>					
Frequency	75.000Hz	60.004Hz	70.069Hz	75.029Hz	75.025Hz
Total time	13.333ms	16.666ms	14.272ms	13.328ms	13.329ms
Active time	12.800ms	15.880ms	13.599ms	12.795ms	12.804ms
Blank time	0.533ms	0.786ms	0.673ms	0.533ms	0.525ms
Border (T / B)	0.000ms	0.000ms	0.000ms	0.000ms	0.000ms
Data time	12.800ms	15.880ms	13.599ms	12.795ms	12.804ms
Front porch	0.021ms	0.062ms	0.053ms	0.017ms	0.013ms
Sync. width	0.064ms	0.124ms	0.106ms	0.050ms	0.038ms
Back porch	0.448ms	0.600ms	0.513ms	0.466ms	0.475ms
Sync. polarity	Positive	Negative	Negative	Positive	Positive
Dot Clock	49.500MHz	65.000MHz	75.000MHz	78.750MHz	135.00MHz
Sync. Type	Separate	Separate	Separate	Separate	Separate
Scan Type	N/I	N/I	N/I	N/I	N/I

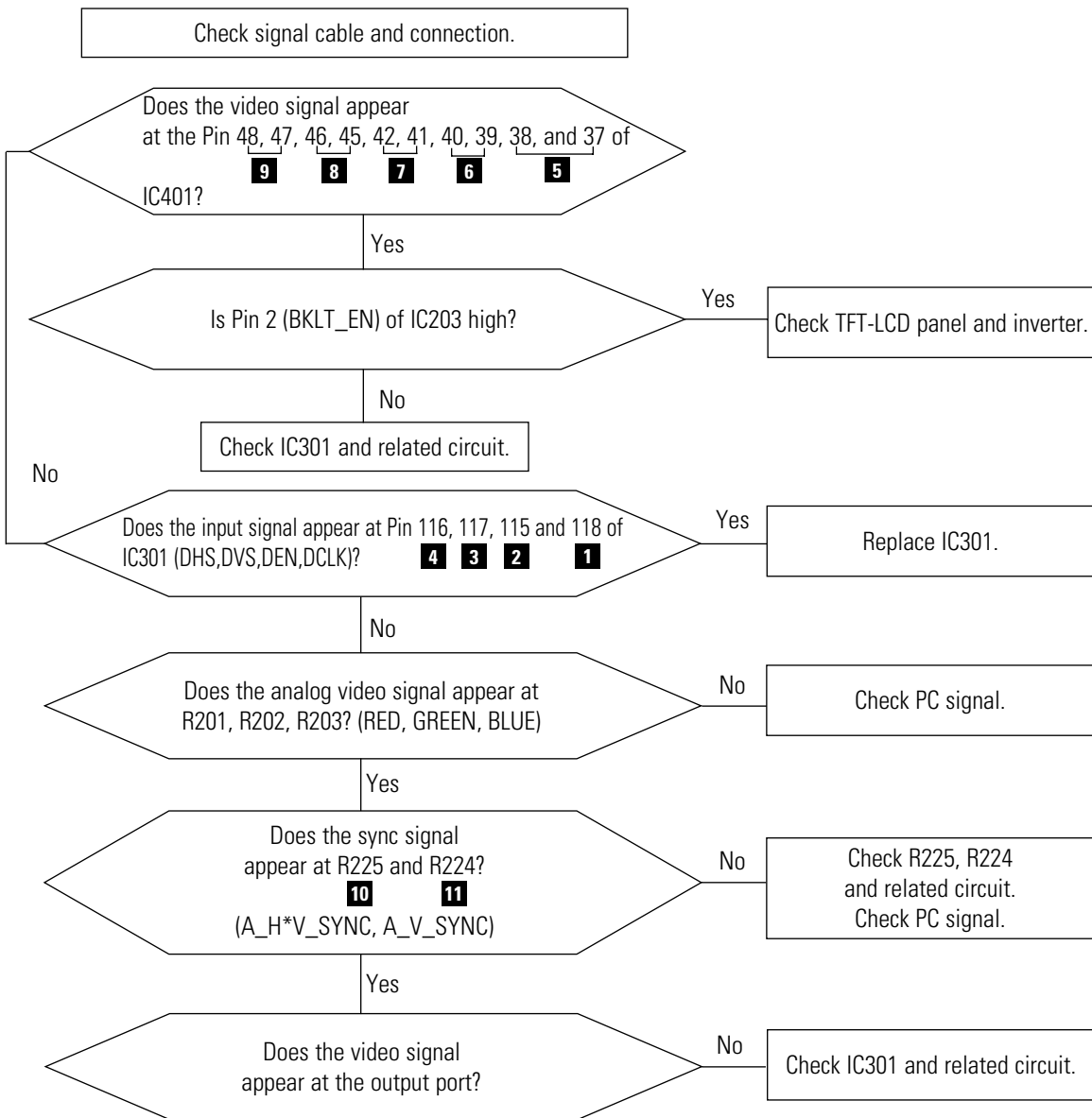
## 4 Troubleshooting

- Notes:**
- Before troubleshooting, setup the PC's display as below.
    - Resolution: 1280 x 1024
    - H-frequency: 64 kHz
    - V-frequency: 60 Hz
  - If no picture appears, make sure the power cord is correctly connected.
  - Check the following circuits.
    - No raster appears: Stand PCB, Main PCB
    - 14V develop but no screen: Main PCB
    - 14V does not develop: Main PCB
  - If you push and hold exit for more than 5 seconds, the monitor automatically returns to the factory preset.

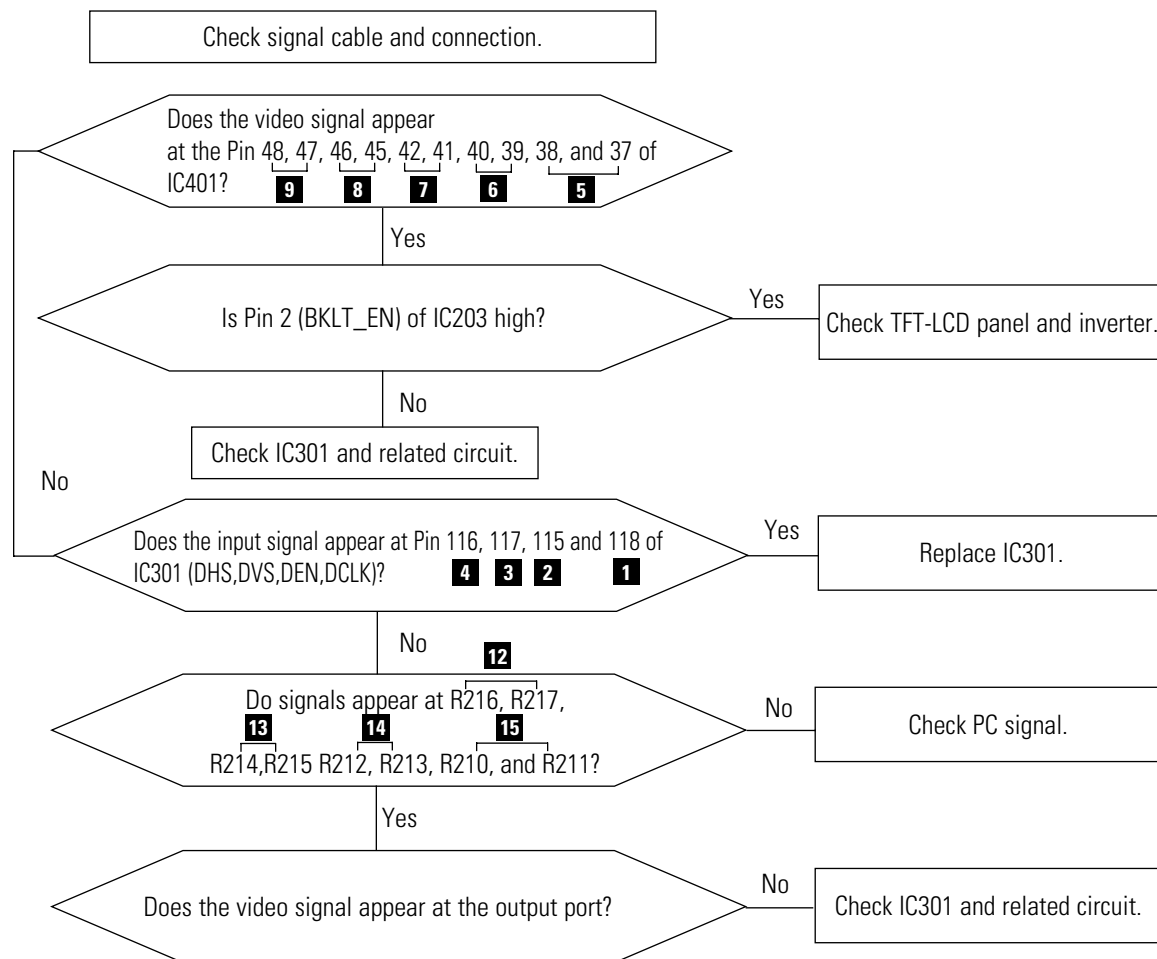
### 4-1 No Power



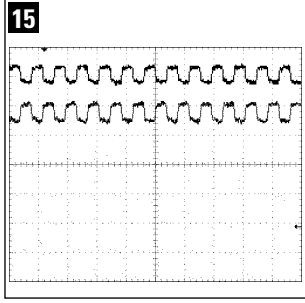
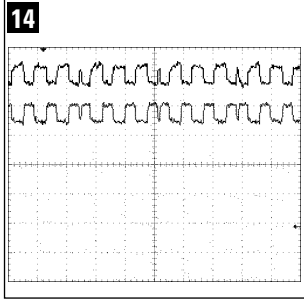
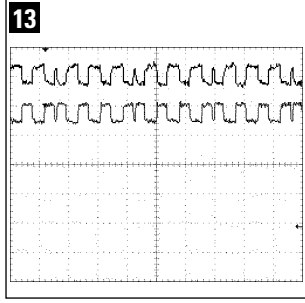
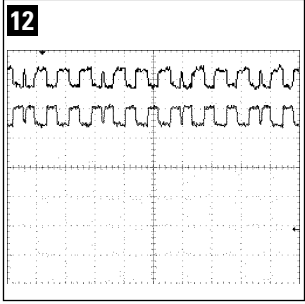
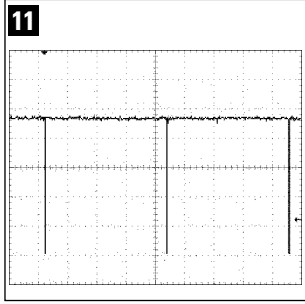
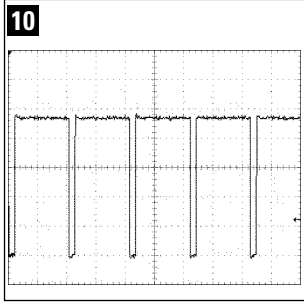
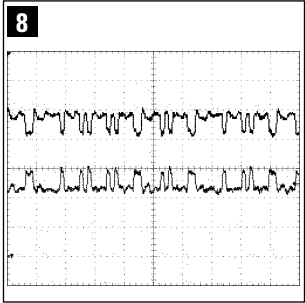
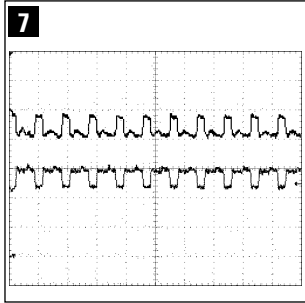
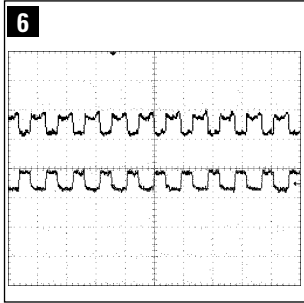
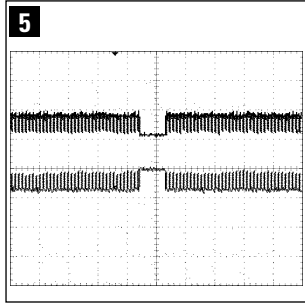
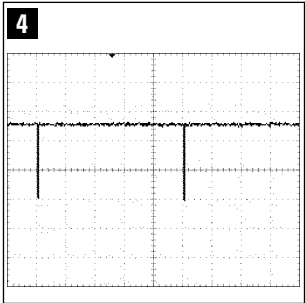
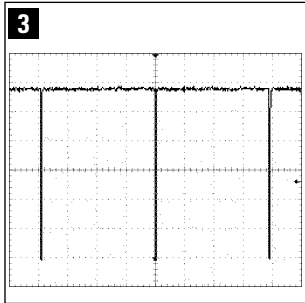
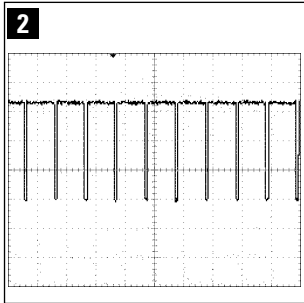
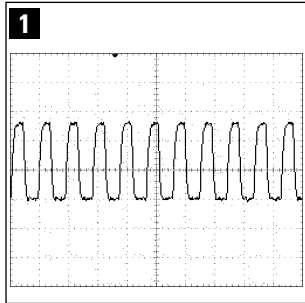
### 4-2-1 No Video [Analog]



## 4-2-2 No Video [Digital]



**WAVEFORMS**



## 6 Electrical Parts List

\* You can search for updated part codes through CMS web site.

URL : <http://ecms.samsungelectronics.com/>

### 6-1-1 M019P\* Main PCB Parts

Loc. No.	Code No.	Description	Specification	Remarks
-	BSNA94-00462A	ASS PCB MAIN	M019PS	SNA
CIS	BSNA39-00047A	CBF-HARSNAESS	100MM,100MM,BLU/WHT/GR,UL1061,AWG28,51021-1200	
CIS	BSNA63-00770A	COVER-PLATE PCB	M019ES,ABS PC	SNA
CIS10	BSNA63-00266A	GASKET	M019PS,COSNADUCTIVE FABLIC,4MM,4MM,60MM,GRA,71TSSK 4-4-60-13,71TSSK 4-4-60-13	SNA
CIS11	BSNA63-00265A	GASKET	M019PS,COSNADUCTIVE FABLIC,4MM,10MM,17MM,GRA,71TSSK 10-4-17-13,71TSSK 10-4-17-13	SNA
ISNA/BRKT+PL/PC PL/PCB+BRKT/GRD	6003-000117	SCREW-TAPTITE	BH,+ ,B,M3,L6,ZPC(EL),SWRCH18A	SNA
	6001-001340	SCREW-MACHISNAE	CH,+ ,M2.0,L4.5,ZPC(EL),SWRCH18A,FP	
-	BSNA97-00221D	ASS MICOM	M019PS	SNA
CIS	BSNA82-00093E	A/S MICOM-SUB MICOM	M019PS	SNA
IC302	1102-001097	IC-EPROM	27C010,128KX8BIT,PLCC,32P,- ,90SNAS,5V,10%,PLASTIC,0TO+70C,0.1MA,CMOS,TR	
-	BSNA97-00222A	ASS SMD	M019PS	SNA
C102	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C103	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C106	2409-001065	C-ORGASNAIC	82UF,20%,16V,WT,TP,8X6.9MM,-	
C108	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C109	2409-001051	C-ORGASNAIC	82UF,20%,6.3V,WT,TP,6.3*5.9MM,2.1	
C110	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C111	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C112	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C113	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C114	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C118	2402-000135	C-AL,SMD	22uF,20%,16V,GP,TP,5.3x5.3x5.4	
C119	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C120	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C121	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C122	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C123	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C124	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C125	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C126	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C127	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C128	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C129	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C130	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C131	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C133	2203-001607	C-CERAMIC,CHIP	0.22SNAF,5%,50V,SNAP0,TP,1608	
C134	2203-001607	C-CERAMIC,CHIP	0.22SNAF,5%,50V,SNAP0,TP,1608	
C135	2203-001607	C-CERAMIC,CHIP	0.22SNAF,5%,50V,SNAP0,TP,1608	
C136	2203-001607	C-CERAMIC,CHIP	0.22SNAF,5%,50V,SNAP0,TP,1608	
C137	2203-001607	C-CERAMIC,CHIP	0.22SNAF,5%,50V,SNAP0,TP,1608	
C138	2402-000135	C-AL,SMD	22uF,20%,16V,GP,TP,5.3x5.3x5.4	
C139	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C140	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C141	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C142	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C143	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C144	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C145	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C146	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	

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Loc. No.	Code No.	Description	Specification	Remarks
C147	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C148	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C149	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C150	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C151	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4mm	
C152	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4mm	
C153	2409-001051	C-ORGASNAIC	82UF,20%,6.3V,WT,TP,6.3*5.9MM,2.1	
C154	2409-001049	C-ORGASNAIC	47UF,20%,6.3V,FX,TP,5X5.9MM,-	
C155	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C156	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C157	2203-001607	C-CERAMIC,CHIP	0.22SNAF,5%,50V,SNAP0,TP,1608	
C158	2203-001607	C-CERAMIC,CHIP	0.22SNAF,5%,50V,SNAP0,TP,1608	
C159	2203-001607	C-CERAMIC,CHIP	0.22SNAF,5%,50V,SNAP0,TP,1608	
C160	2203-001607	C-CERAMIC,CHIP	0.22SNAF,5%,50V,SNAP0,TP,1608	
C161	2203-001607	C-CERAMIC,CHIP	0.22SNAF,5%,50V,SNAP0,TP,1608	
C162	2203-001607	C-CERAMIC,CHIP	0.22SNAF,5%,50V,SNAP0,TP,1608	
C163	2409-001049	C-ORGASNAIC	47UF,20%,6.3V,FX,TP,5X5.9MM,-	
C164	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C165	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C166	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C167	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C168	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C169	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C170	2203-001607	C-CERAMIC,CHIP	0.22SNAF,5%,50V,SNAP0,TP,1608	
C171	2203-001607	C-CERAMIC,CHIP	0.22SNAF,5%,50V,SNAP0,TP,1608	
C180	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4mm	
C181	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C182	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C183	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C189	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4mm	
C190	2203-005065	C-CERAMIC,CHIP	1000SNAF,+80-20%,10V,5V,TP,1608	
C197	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C199	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C201	2203-000257	C-CERAMIC,CHIP	10SNAF,10%,50V,X7R,TP,1608	
C202	2203-000257	C-CERAMIC,CHIP	10SNAF,10%,50V,X7R,TP,1608	
C203	2203-000257	C-CERAMIC,CHIP	10SNAF,10%,50V,X7R,TP,1608	
C204	2203-000257	C-CERAMIC,CHIP	10SNAF,10%,50V,X7R,TP,1608	
C205	2203-000257	C-CERAMIC,CHIP	10SNAF,10%,50V,X7R,TP,1608	
C206	2203-000257	C-CERAMIC,CHIP	10SNAF,10%,50V,X7R,TP,1608	
C207	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C210	2203-000384	C-CERAMIC,CHIP	0.015SNAF,5%,50V,COG,TP,1608	
C211	2203-000626	C-CERAMIC,CHIP	0.022SNAF,5%,50V,COG,TP,1608	
C212	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C213	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C218	2402-000108	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.4	
C219	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C240	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C242	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C245	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C300	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C301	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C302	2203-001086	C-CERAMIC,CHIP	0.005SNAF,0.25pF,50V,SNAP0,TP,1608	
C303	2203-001086	C-CERAMIC,CHIP	0.005SNAF,0.25pF,50V,SNAP0,TP,1608	
C304	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C350	2402-000108	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.4	

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Loc. No.	Code No.	Description	Specification	Remarks
C351	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C352	2203-000257	C-CERAMIC,CHIP	10SNAF,10%,50V,X7R,TP,1608	
C353	2402-000108	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.4	
C357	2203-000626	C-CERAMIC,CHIP	0.022SNAF,5%,50V,COG,TP,1608	
C358	2203-000626	C-CERAMIC,CHIP	0.022SNAF,5%,50V,COG,TP,1608	
C359	2203-000384	C-CERAMIC,CHIP	0.015SNAF,5%,50V,COG,TP,1608	
C410	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C411	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C412	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C413	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4mm	
C414	2402-000108	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.4	
C415	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C416	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C417	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C601	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C602	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C603	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C604	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C605	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C606	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C623	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C624	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C633	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C634	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C635	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C636	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
C637	2203-005005	C-CERAMIC,CHIP	100SNAF,10%,16V,X7R,TP,1608	
CIS	0202-001162	SOLDER-CREAM	RMA-20-21L,S63,-,SSNA63/PB36.6/AG0.4,FLUX9.5%	SNA
CSNA102	3711-000556	COSNASNAECTOR-HEADER	BOX,12P,1R,1.25mm,SMD-A,SSNA	SNA
CSNA202	3711-005076	COSNASNAECTOR-HEADER	BOX,41P,2R,0.625MM,SMD-A,AUF,BLK	
CSNA402	3711-004070	COSNASNAECTOR-HEADER	BOX,30P,1R,1.25mm,SMD-A,SSNA	
CSNA601	3711-002050	COSNASNAECTOR-HEADER	BOX,10P,1R,1.25mm,SMD-A,SSNA	SNA
D101	0402-001098	DIODE-RECTIFIER	SK34,40V,3A,SMC,TP	
D201	0401-001116	DIODE-SWITCHISNAG	BAV99DW,75V,150MA,SOT-363,TP	
D203	0401-001056	DIODE-SWITCHISNAG	MMBD4148SE,75V,200MA,SOT-23,TP	
D204	0401-001056	DIODE-SWITCHISNAG	MMBD4148SE,75V,200MA,SOT-23,TP	
D205	0401-001056	DIODE-SWITCHISNAG	MMBD4148SE,75V,200MA,SOT-23,TP	
D206	0401-001056	DIODE-SWITCHISNAG	MMBD4148SE,75V,200MA,SOT-23,TP	
D207	0401-001056	DIODE-SWITCHISNAG	MMBD4148SE,75V,200MA,SOT-23,TP	
D212	0403-000579	DIODE-ZESNAER	BZX84C5V1,5.1V,5%,200mW,SOT-23	
D213	0403-000579	DIODE-ZESNAER	BZX84C5V1,5.1V,5%,200mW,SOT-23	
D214	0403-001435	DIODE-ZESNAER	QZX363C5V6,5.32-5.88,200MW,SOT-363,TP	
D215	0403-000579	DIODE-ZESNAER	BZX84C5V1,5.1V,5%,200mW,SOT-23	
D216	0403-000579	DIODE-ZESNAER	BZX84C5V1,5.1V,5%,200mW,SOT-23	
D217	0403-000579	DIODE-ZESNAER	BZX84C5V1,5.1V,5%,200mW,SOT-23	
D218	0403-000579	DIODE-ZESNAER	BZX84C5V1,5.1V,5%,200mW,SOT-23	
D219	0403-001435	DIODE-ZESNAER	QZX363C5V6,5.32-5.88,200MW,SOT-363,TP	
D220	0401-001056	DIODE-SWITCHISNAG	MMBD4148SE,75V,200MA,SOT-23,TP	
D221	0401-001056	DIODE-SWITCHISNAG	MMBD4148SE,75V,200MA,SOT-23,TP	
D222	0401-001056	DIODE-SWITCHISNAG	MMBD4148SE,75V,200MA,SOT-23,TP	
D223	0401-001056	DIODE-SWITCHISNAG	MMBD4148SE,75V,200MA,SOT-23,TP	
D602	0403-001435	DIODE-ZESNAER	QZX363C5V6,5.32-5.88,200MW,SOT-363,TP	
D603	0403-001435	DIODE-ZESNAER	QZX363C5V6,5.32-5.88,200MW,SOT-363,TP	
FT101	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA
FT102	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA



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Loc. No.	Code No.	Description	Specification	Remarks
FT198	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA
FT199	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA
FT402	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA
FT403	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA
FT404	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA
FT405	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA
IC101	1203-001448	IC-SWITCH VOL. REG.	2596,TO-263,5P,-,PLASTIC,4,750	
IC103	1203-001293	IC-POSI.FIXED REG.	033,TO-252,3P,6.5MIL,PLASTIC,3	
IC104	1203-001890	IC-VOLTAGE REGULATOR	3961,SOT223-5,5P,-,PLASTIC,2.5V,-,-40to+125C,800mA,-,TR	
IC105	0505-001170	FET-SILICOSNA	SI9933AD-T1,P,-20V,3.4A,0.06ohm,2W,SO-8	
IC199	1203-001293	IC-POSI.FIXED REG.	033,TO-252,3P,6.5MIL,PLASTIC,3	
IC201	1103-000129	IC-EEPROM	24C02,256x8BIT,SOP,8P,150MIL,1	
IC202	1103-000129	IC-EEPROM	24C02,256x8BIT,SOP,8P,150MIL,1	
IC203	0803-000117	IC-TTL	74F14,1SNVERTER,SOP,14P,150MIL,	
IC204	1204-001551	IC-VIDEO SSTEM	GS1881,SOIC,8P,150MIL,PLASTIC,13.2V,-,OTO+70C,TP,VIDEO SSNAC SEPARATOR	
IC220	0803-000122	IC-TTL	74F125,BUFFER,SOP,14P,150MIL,Q	
IC301	1003-001497	IC-LCD COSNATROLLER	GM5120,PQFP,208P,28X28MM,-,-,TR,PLASTIC,3.6V,OTO+70C,1.5W,-,-	
IC302_SOCKET	3704-000249	SOCKET-IC	32P,PLCC,SSNA,1.27mm	
IC303	1203-001212	IC-VOL. DETECTOR	7029,SOT-89,3P,-,PLASTIC,-,500	
IC305	1103-001023	IC-EEPROM	524C08D81,1028x8BIT,SOP,8P,150MIL,10mS,5V,10%,PLASTIC,OTO+70C,110uA,CMOS,TP	
IC401	1205-002174	IC-TRANSMITTER	SNAT7181,TSSOP,56P,236MIL,PLASTIC,3.45V,-,OTO+70C,TP,SNAT7181	
IC402	1205-002174	IC-TRANSMITTER	SNAT7181,TSSOP,56P,236MIL,PLASTIC,3.45V,-,OTO+70C,TP,SNAT7181	
JP10	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
JP15	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
JP9	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
L100	2703-001778	ISNADUCTOR-SMD	3.3UH,20%,3.2X2.5X2.2MM	
L101	BSNA27-00008A	COIL CHOKE-SMD	SMD12*12*8.5,GH15/17PS,22.0UH,±20%,-,0.045OHM MAX,3.0A,DR10X7/SMD12X6.7,16.5TS	
L108	2703-001778	ISNADUCTOR-SMD	3.3UH,20%,3.2X2.5X2.2MM	
L109	2703-001778	ISNADUCTOR-SMD	3.3UH,20%,3.2X2.5X2.2MM	
L110	2703-001778	ISNADUCTOR-SMD	3.3UH,20%,3.2X2.5X2.2MM	
L111	2901-001114	FILTER-EMI SMD	25VDC,2.0ADC,-,100SNAF,3.2x1.6x1	
L112	2703-001778	ISNADUCTOR-SMD	3.3UH,20%,3.2X2.5X2.2MM	
MP1.3	BSNA41-00188A	PCB MAISNA	MO17PS,FR4,4L,120X110X1.0,MO17PS	SNA
Q101	0501-000342	TR-SMALL SIGSNAAL	KSC1623,-,SNAPSNA,200mW,SOT-23,TP,135-270	
Q102	0501-000342	TR-SMALL SIGSNAAL	KSC1623,-,SNAPSNA,200mW,SOT-23,TP,135-270	
Q201	0501-000342	TR-SMALL SIGSNAAL	KSC1623,-,SNAPSNA,200mW,SOT-23,TP,135-270	
R101	2007-000084	R-CHIP	4.7Kohm,5%,1/16W,DA,TP,1608	
R105	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R106	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R107	2007-000084	R-CHIP	4.7Kohm,5%,1/16W,DA,TP,1608	
R108	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R109	2007-000078	R-CHIP	1Kohm,5%,1/16W,DA,TP,1608	
R190	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R197	2007-000084	R-CHIP	4.7Kohm,5%,1/16W,DA,TP,1608	
R198	2007-000078	R-CHIP	1Kohm,5%,1/16W,DA,TP,1608	
R199	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R201	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R202	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R203	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R204	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R205	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R207	2007-001164	R-CHIP	75ohm,1%,1/16W,DA,TP,1608	
R208	2007-001164	R-CHIP	75ohm,1%,1/16W,DA,TP,1608	
R209	2007-001164	R-CHIP	75ohm,1%,1/16W,DA,TP,1608	
R210	2007-000071	R-CHIP	22ohm,5%,1/16W,DA,TP,1608	

6 Electrical Parts List

Loc. No.	Code No.	Description	Specification	Remarks
R211	2007-000071	R-CHIP	22ohm,5%,1/16W,DA,TP,1608	
R212	2007-000071	R-CHIP	22ohm,5%,1/16W,DA,TP,1608	
R213	2007-000071	R-CHIP	22ohm,5%,1/16W,DA,TP,1608	
R214	2007-000071	R-CHIP	22ohm,5%,1/16W,DA,TP,1608	
R215	2007-000071	R-CHIP	22ohm,5%,1/16W,DA,TP,1608	
R216	2007-000071	R-CHIP	22ohm,5%,1/16W,DA,TP,1608	
R217	2007-000071	R-CHIP	22ohm,5%,1/16W,DA,TP,1608	
R218	2007-000092	R-CHIP	15Kohm,5%,1/16W,DA,TP,1608	
R219	2007-000092	R-CHIP	15Kohm,5%,1/16W,DA,TP,1608	
R220	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R221	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R222	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R223	2007-000080	R-CHIP	2Kohm,5%,1/16W,DA,TP,1608	
R224	2007-000071	R-CHIP	22ohm,5%,1/16W,DA,TP,1608	
R225	2007-000071	R-CHIP	22ohm,5%,1/16W,DA,TP,1608	
R226	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R227	2007-000080	R-CHIP	2Kohm,5%,1/16W,DA,TP,1608	
R228	2007-001002	R-CHIP	510ohm,5%,1/16W,DA,TP,1608	
R229	2007-000097	R-CHIP	47Kohm,5%,1/16W,DA,TP,1608	
R230	2007-000097	R-CHIP	47Kohm,5%,1/16W,DA,TP,1608	
R231	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R232	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R236	2007-000078	R-CHIP	1Kohm,5%,1/16W,DA,TP,1608	
R237	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R240	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R241	2007-000070	R-CHIP	0ohm,5%,1/16W,DA,TP,1608	
R242	2007-000116	R-CHIP	120ohm,5%,1/16W,DA,TP,1608	
R243	2007-001114	R-CHIP	680Kohm,5%,1/16W,DA,TP,1608	
R252	2007-000084	R-CHIP	4.7Kohm,5%,1/16W,DA,TP,1608	
R298	2007-001002	R-CHIP	510ohm,5%,1/16W,DA,TP,1608	
R301	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R302	2007-000121	R-CHIP	820ohm,5%,1/16W,DA,TP,1608	
R321	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R322	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R324	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R329	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R330	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R331	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R334	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R350	2007-000092	R-CHIP	15Kohm,5%,1/16W,DA,TP,1608	
R351	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R352	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R353	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R354	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R357	2007-000077	R-CHIP	470ohm,5%,1/16W,DA,TP,1608	
R358	2007-000077	R-CHIP	470ohm,5%,1/16W,DA,TP,1608	
R359	2007-000077	R-CHIP	470ohm,5%,1/16W,DA,TP,1608	
R360	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R361	2007-001167	R-CHIP	75ohm,5%,1/16W,DA,TP,1608	
R362	2007-001167	R-CHIP	75ohm,5%,1/16W,DA,TP,1608	
R363	2007-001214	R-CHIP	82ohm,1%,1/16W,DA,TP,1608	
R364	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R365	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R366	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R391	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	

6 Electrical Parts List

Loc. No.	Code No.	Description	Specification	Remarks
R392	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R395	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R396	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R410	2007-000070	R-CHIP	0ohm,5%,1/16W,DA,TP,1608	
R411	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R412	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R413	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R414	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R415	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R416	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R417	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R418	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R419	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R420	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R421	2007-000070	R-CHIP	0ohm,5%,1/16W,DA,TP,1608	
R601	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R602	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R603	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R604	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R605	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R606	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R607	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R608	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R609	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R610	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R612	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R617	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R626	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R627	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R690	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R691	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R692	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R693	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R694	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R695	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R696	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R697	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R698	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R699	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R709	2007-000070	R-CHIP	0ohm,5%,1/16W,DA,TP,1608	
R710	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
RA301	2011-001193	R-SNAETWORK	68ohm,5%,1/16W,L,CHIP,8P,TP	
RA302	2011-001193	R-SNAETWORK	68ohm,5%,1/16W,L,CHIP,8P,TP	
RA303	2011-001410	R-SNAETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA304	2011-001410	R-SNAETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA305	2011-001410	R-SNAETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA306	2011-001410	R-SNAETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA307	2011-001410	R-SNAETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA308	2011-001410	R-SNAETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA309	2011-001410	R-SNAETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA310	2011-001410	R-SNAETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA311	2011-001410	R-SNAETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA312	2011-001410	R-SNAETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA313	2011-001410	R-SNAETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA314	2011-001410	R-SNAETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
X301	2801-003667	CRSTAL-SMD	14.3182MHZ,50PPM,28-AASNA,16,50OHM,TP	

## 6-1-2 M019P\* Others

Loc. No.	Code No.	Description	Specification	Remarks
- C/F+C/R	BSNA90-00514A 6003-000282	ASS COVER FROSNA T SCREW-TAPTITE	M019PS BH,+,B,M3,L8,ZPC(BLK),SWCH10	SNA SNA
C/F	BSNA96-00485B	ASS COVER P-FROSNA T SCREW-TAPTITE	M019PS,ABS HB BH,+,B,M3,L8,ZPC(EL),SWRCH18A	SNA SNA
C/F	6003-000259	WIRE HARSNAESS	M019ES,UL20276,UL2725,UL/CSA,20P,250,BLK,32,30,28 AWG,12507HS-20W,DSUB15P, DJ0651	SNA
C/F	BSNA39-00375A	COVER-FROSNA T	M019ES,ABS HB	SNA
C/F	BSNA63-00768A	KSNAOB-FUSNACTIOSNA	M015PS,ABS+PC,-,-,-,-,-,M015PS	SNA
C/F	BSNA64-00052A	LESNAS-LED	M015PS,ACRL,CLEAR,-,-,-,M015PS	SNA
C/F	BSNA67-00036A			SNA
-	BSNA90-00515A	ASS COVER REAR	M019PS	SNA
C/R	BSNA96-00486A	ASS COVER P-REAR	M019ES,ABS HB	SNA
C/R	BSNA63-00769A	COVER-REAR	M019ES,ABS HB	SNA
-	BSNA90-00516A	ASS STASNAD	M019PS	SNA
STD	BSNA96-00487B	ASS STASNAD P	M019PS,ABS HB	SNA
STD	6002-000129	SCREW-TAPPISNAG	FH,+,2S,M3,L8,ZPC(BLK),SM20C	SNA
STD	6003-000117	SCREW-TAPTITE	BH,+,B,M3,L6,ZPC(EL),SWRCH18A	SNA
STD	6003-000133	SCREW-TAPTITE	BH,+,S,M4,L8,ZPC(EL),SWRCH18A,-	SNA
STD	6003-000301	SCREW-TAPTITE	BH,+,S,M4,L6,ZPC(EL),SWRCH18A	SNA
STD	6003-001136	SCREW-TAPTITE	BH,+,B,M4,L8,ZPC(EL),SWRCH18A	SNA
STD	6003-001188	SCREW-TAPTITE	BH,+,B,M4,L10,EL,SWRCH18A	SNA
STD	6011-001445	BOLT-SOCKET	4-40 USNAC,L7,SNAI PLT,BRASS,HEX SOCKET	SNA
STD	6501-000113	CABLE TIE	DA-100,T1,W2.5,L102,WHT,SNALOSNA	SNA
STD	BSNA39-00376A	WIRE HARSNAESS	M019PS,UL20276,UL2725,UL/CSA,41P,250mm,BLK,32,30,28,FI-W41S or 1553A41,BK,250,UL	SNA
STD	BSNA61-00524B	BRACKET-BOTTOM	M019PS,SECC,T2.0	SNA
STD	BSNA61-00525A	BRACKET-LIFT/STOPPER	M019ES,SK-5,T2.0	SNA
STD	BSNA61-00526A	BRACKET-LIFT/GUIDE	M019ES,SECC,T0.5	SNA
STD	BSNA63-00458A	GASKET	17,COSNADUCTIVE FABRIC,3MM,17MM,70MM,GRA,71TSSK-17-3-70-13,71TSSK-17-3-70-13	SNA
STD	BSNA63-00771A	COVER-STASNAD BOTTOM	M019ES,ABS HB	SNA
STD	BSNA63-00772A	COVER-STASNAD TOP	M019ES,ABS HB	SNA
STD	BSNA63-00773A	COVER-STASNAD SNAECK/FROSNA T	M019ES,ABS HB	SNA
STD	BSNA63-00774A	COVER-STASNAD SNAECK/REAR	M019ES,ABS HB	SNA
STD	BSNA64-00168A	KSNAOB-LIFT/STOPPER	M019ES,ABS HB	SNA
STD	BSNA73-00049A	RUBBER-FOOT	MO 15,17,19,CR,11*11,60,T1.5,BLK	SNA
STD	BSNA96-00489A	ASS MISC P-HISNAGE	M019ES,ZSNA DC2	SNA
-	BSNA91-00493A	ASS MISC-ADAPTOR	MT17BO,MT17BO-SXV2/8384	SNA
CIS	BSNA44-00071A	ADAPTOR	AP004214-UV,LCDTM,90-264V,47 - 63 HZ,+14VDC,3.0A,AC/DC,0 TO +40 C,120*55*31	SNA
-	BSNA91-00567X	ASS LCD-RK	GH19AS	SNA
CIS	BSNA07-00098A	LCD	TM190SX-70SNA01,G118MS,6BIT FRC,403.2*321.2*22.5,16.7M,40,0.2805*0.2805,0-40,5.0,T	SNA
-	BSNA91-00644A	ASS CHASSIS	M019PS	SNA
CIS	BSNA44-00070B	ISNAVERTER	M017WS,SIC840A,48KHZ,13.0-14.5V,2.5MARMIS,6.7MARMIS,48KHZ,160*71*8.7,4LAMP,40-56KH	SNA
CIS	BSNA96-00490A	ASS MISC P-BRKT GROUSNAD	M019ES,SECC T0.8	SNA
-	BSNA91-00645A	ASS SHIELD	M019PS	SNA
BRKT/GRD+SH/COV	6003-000282	SCREW-TAPTITE	BH,+,B,M3,L8,ZPC(BLK),SWCH10	SNA
C/F+SH/COV	6003-000282	SCREW-TAPTITE	BH,+,B,M3,L8,ZPC(BLK),SWCH10	SNA
CIS	0203-001159	TAPE-FILAMESNAT	#8915,T0.15,W12,L55000,CLR	SNA
CIS	BSNA39-00244B	CBF SIGSNAAL	M015PS,15P/15P,20276-SNA,1830MM,UL20276,BLACK,D-SUB/MALE,DET. TPE	SNA
CIS	BSNA39-00293A	LEAD COSNASNAECTOR	M017PS,UL2651#28,UL/CSA,10P,100MM,#28,12505HS-10,BK,2651#28,CORE	SNA
CIS	BSNA39-00377A	WIRE HARSNAESS	M019-LVDS,UL157#30AWG,UL/CSA,30P,130mm,RED, WHITE,30AWG,12507HS-30,12507HS-30,B	SNA

6 Electrical Parts List

Loc. No.	Code No.	Description	Specification	Remarks
CIS	BSNA63-00155A	GASKET	GH17PSS,COSNADUCTIVE FABLIC,8MM,30MM,70MM,GRA,71TSSK 30-8-70-13,71TSSK 30-8-70-13	SNA
CIS	BSNA63-00351A	COVER-DOOR	MO17PS,ABS HB,BK07	
CIS	BSNA63-00353A	SHIELD-COSNASNAECTOR	MO17PS,SPT,TO.3	SNA
HISNA/TOP+SH/PCB	6003-000133	SCREW-TAPTITE	BH,+,S,M4,L8,ZPC(EL),SWRCH18A,-	
ISNA/BRKT+SH/COV	6003-000282	SCREW-TAPTITE	BH,+,B,M3,L8,ZPC(BLK),SWCH10	SNA
CIS	BSNA96-00488A	ASS MISC P-SHIELD COVER	MO19ES,SECC T2.0	SNA
-	BSNA92-00591J	ASS ACCESSOR	MO17ESDS/EDC,EDC,SNAETHERLASNADS	SNA
CIS	BSNA96-00160J	ASS ACCESSOR	MO17ESDS/EDC,EDC,SNAETHERLASNADS	
CIS	0203-000214	TAPE-OPP MASKISNAG	OPP/W50/CLR,TO.05,WV50,L400000,	SNA
CIS	6801-001073	CARD-REGISTRATIOSNA	RUS,XEV,RUS,MOJO100,-,W220,L318,2,-	SNA
CIS	6902-000110	BAG PE	LDPE,TO.05,L356,W240,TRP,28,2,PE MARK	SNA
CIS	BH39-10339H	CBF POWER CORD	DET,H05VV-F,250V/10,16A,BLK,25	
CIS	BH68-00374A	CARD WARRASNAT-01	ASC List,SamsuSNAg,ART100G,RussiaSNA,EDC,295,210	SNA
CIS	BH68-00376H	MASNAUAL-00	WISNA XP ISNASTALL GUIDE,SSNACMASTER,ESNAGLISH,W/W,MOJO100G,-,148,210,-,-,-	SNA
CIS	BH68-00489A	MASNAUAL-02	RUSSIASNA W/CARD,SER,RUSSIASNA,RUSSIA,MOJO100G	SNA
CIS	BH68-70438A	CARD-BLOC WARRASNAT-09	TFT LCD,BASIC,EU,MOJO,100G,W21	SNA
CIS	BH68-70448A	CARD-01	TFT LCD,SRC,RUSSIA,S/W,120,W210*L120,ISNASTALL CARD	SNA
CIS	BSNA59-00259A	S/W DRIVER-04	S/M152T,IB/DRIVER,WWW,E/F/S/G/P/I/SW/R/	SNA
-	BSNA92-00757A	ASS LABEL	MO19PS	SNA
LABEL	BSNA68-00422A	LABEL RATISNAG	SS,PE,TO.05,90*45,BLK,POLESTER,EDC,MO19ES	SNA
-	BSNA92-00759A	ASS P/MATERIAL	MO19PS	SNA
P/M	0203-000214	TAPE-OPP MASKISNAG	OPP/W50/CLR,TO.05,WV50,L400000,	SNA
P/M	6902-000521	BAG PE	HDPE/ISNAITROSNA/HDPE,TO.015/TO.5/TO.015,W600,L600,TRP,28 LASNAGUAGE,2-	SNA
P/M	BH69-00142A	PACKISNAG-PAD	DW4,900*1000,-,IBM15	SNA
P/M	BH69-00328F	PAD-EDGE	CSNA15,DW3,200,1430,-,-,EL,-,-	SNA
P/M	BH69-30002C	BAG-PE	LDPE,TO.05,WV2400,SNAO_PRISNAT	SNA
P/M	BH69-30360A	BAG-AIR	HDPE,TO.2,W1000*L1800,SNA,-,ALL	SNA
P/M	BH69-40379A	PACKISNAG-WRAP	LDPE,W500*TO.02,-,-	SNA
P/M	BSNA68-00129A	LABEL SHIPPISNAG	-,LABEL SHIPPISNAG,ART-PAPER,100G,-,WHT,BLACK,-,-,-	SNA
P/M	BSNA69-00139SNA	PALLET-PACKISNAG	RS21SNAS,WOODSNA,1036,916,120	SNA
P/M	BSNA69-00140P	PAD-PALLET COVER	SUSNA15,SW,1000*3780,1310,-,-,-,-,-	SNA
P/M	BSNA69-00140T	PAD-PALLET COVER	SUSNA(LSA810),SW,900,3760,-,-,-,-,-	SNA
P/M	BSNA69-00300A	CUSHIOSNA-EPE	MO15PS/ES,SHEET EPS,T5.0	SNA
P/M	BSNA69-00467A	CUSHIOSNA-L/R	MO19ES,EPS M50	SNA
P/M	BSNA96-00115A	ASS MISC P-BRKT-VESA	MO15PS,SECC T1.6	
CIS	BSNA61-00140A	BRACKET-VESA	MO15PS,SECC,T1.6	SNA
CIS	BSNA68-00174G	MASNAUAL	MO VESA BRKT CARD,SSNACMASTER,W/W,ESNAGLISH,MIMOJO80G	SNA
P/M	BSNA96-00196A	ASS MISC P-SCREW	MODIGLIASNAI ,SCREW-WOOD,SCREWTAPTITE,ASNACHOR	SNA
-	BSNA92-00814SNA	ASS BOX	MO19PSDS/EDC,EDC,SNAETHERLASNADS	SNA
CIS	BH68-00329C	LABEL BAR CODE	-,ALL,TCO99,DOMESTIC,ART-PAPER 90G,-,WHT,BLACK,-,-,-	SNA
CIS	BH75-10529C	USNAIT-HASNADLE/PACKISNAG	S/M170MP,PE-LD,PE-HD,-,WHITE,-	
CIS	BSNA72-60001A	LEVER TOP	LSD210TL,PE-LD,WHITE,TFT_LCD	SNA
CIS	BSNA72-60002C	LEVER BOTTOM	S/M170MP,PE-HD,BLUE	SNA
CIS	BSNA69-00567A	BOX	S/M192T,W/W,CB-SW4,WHT,OFFSET,A-1,L512*W440*H123	SNA
-	RM-MO19PSDS/EDC	2	TM190SX-70SNA01(ZPD)	-

## 6-2-1 M019E\* Main PCB Parts

Loc. No.	Code No.	Description	Specification	Remarks
-	BN94-00462B	ASSY PCB MAIN	PI17B0	SNA
CIS	BN39-00047A	CBF-HARNESS	100MM,100MM,BLU/WHT/GRY,UL1061,AWG28,51021-1200	
CIS	BN63-00770A	COVER-PLATE PCB	M019ES,ABS PC	SNA
CIS10	BN63-00266A	GASKET	M019PS,CONDUCTIVE FABRIC,4MM,4MM,60MM,GRAY,71TSSK 4-4-60-13,71TSSK 4-4-60-13	SNA
CIS11	BN63-00265A	GASKET	M019PS,CONDUCTIVE FABRIC,4MM,10MM,17MM,GRAY,71TSSK 10-4-17-13,71TSSK 10-4-17-13	SNA
IN/BRKT+PL/PC	6003-000117	SCREW-TAPTITE	BH,+,B,M3,L6,ZPC(YEL),SWRCH18A	SNA
PL/PCB+BRKT/GRD	6001-001340	SCREW-MACHINE	CH,+,M2.0,L4.5,ZPC(YEL),SWRCH18A,FP	
-	BN97-00221E	ASSY MICOM	M019ES	SNA
CIS	BN82-00093F	A/S MICOM-SUB MICOM	M019ES	SNA
IC302	1102-001097	IC-EPROM	27C010,128KX8BIT,PLCC,32P,-,90NS,5V,10%,PLASTIC,0T0+70C,0.1MA,CMOS,TR	
-	BN97-00222B	ASSY SMD	M019ES	SNA
C102	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C103	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C106	2409-001065	C-ORGANIC	82UF,20%,16V,WT,TP,8X6.9MM,-	
C108	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C109	2409-001051	C-ORGANIC	82UF,20%,6.3V,WT,TP,6.3*5.9MM,2.1	
C110	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C111	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C112	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C113	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C114	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C118	2402-000135	C-AL,SMD	22uf,20%,16V,GP,TP,5.3x5.3x5.4	
C119	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C120	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C121	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C122	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C123	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C124	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C125	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C126	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C127	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C128	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C129	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C130	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C131	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C133	2203-001607	C-CERAMIC,CHIP	0.22nF,5%,50V,NPO,TP,1608	
C134	2203-001607	C-CERAMIC,CHIP	0.22nF,5%,50V,NPO,TP,1608	
C135	2203-001607	C-CERAMIC,CHIP	0.22nF,5%,50V,NPO,TP,1608	
C136	2203-001607	C-CERAMIC,CHIP	0.22nF,5%,50V,NPO,TP,1608	
C137	2203-001607	C-CERAMIC,CHIP	0.22nF,5%,50V,NPO,TP,1608	
C138	2402-000135	C-AL,SMD	22uf,20%,16V,GP,TP,5.3x5.3x5.4	
C139	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C140	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C141	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C142	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C143	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C144	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C145	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C146	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C147	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C148	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	

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Loc. No.	Code No.	Description	Specification	Remarks
C149	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C150	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C151	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4mm	
C152	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4mm	
C153	2409-001051	C-ORGANIC	82UF,20%,6.3V,WT,TP,6.3*5.9MM,2.1	
C154	2409-001049	C-ORGANIC	47UF,20%,6.3V,FX,TP,5X5.9MM,-	
C155	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C156	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C157	2203-001607	C-CERAMIC,CHIP	0.22nF,5%,50V,NPO,TP,1608	
C158	2203-001607	C-CERAMIC,CHIP	0.22nF,5%,50V,NPO,TP,1608	
C159	2203-001607	C-CERAMIC,CHIP	0.22nF,5%,50V,NPO,TP,1608	
C160	2203-001607	C-CERAMIC,CHIP	0.22nF,5%,50V,NPO,TP,1608	
C161	2203-001607	C-CERAMIC,CHIP	0.22nF,5%,50V,NPO,TP,1608	
C162	2203-001607	C-CERAMIC,CHIP	0.22nF,5%,50V,NPO,TP,1608	
C163	2409-001049	C-ORGANIC	47UF,20%,6.3V,FX,TP,5X5.9MM,-	
C164	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C165	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C166	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C167	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C168	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C169	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C170	2203-001607	C-CERAMIC,CHIP	0.22nF,5%,50V,NPO,TP,1608	
C171	2203-001607	C-CERAMIC,CHIP	0.22nF,5%,50V,NPO,TP,1608	
C180	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4mm	
C181	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C182	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C183	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C189	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4mm	
C190	2203-005065	C-CERAMIC,CHIP	1000nF,+80-20%,10V,Y5V,TP,1608	
C197	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C199	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C201	2203-000257	C-CERAMIC,CHIP	10nF,10%,50V,X7R,TP,1608	
C202	2203-000257	C-CERAMIC,CHIP	10nF,10%,50V,X7R,TP,1608	
C203	2203-000257	C-CERAMIC,CHIP	10nF,10%,50V,X7R,TP,1608	
C204	2203-000257	C-CERAMIC,CHIP	10nF,10%,50V,X7R,TP,1608	
C205	2203-000257	C-CERAMIC,CHIP	10nF,10%,50V,X7R,TP,1608	
C206	2203-000257	C-CERAMIC,CHIP	10nF,10%,50V,X7R,TP,1608	
C207	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C210	2203-000384	C-CERAMIC,CHIP	0.015NF,5%,50V,COG,TP,1608	
C211	2203-000626	C-CERAMIC,CHIP	0.022NF,5%,50V,COG,TP,1608	
C213	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C218	2402-000108	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.4	
C219	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C240	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C242	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C245	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C300	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C301	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C302	2203-001086	C-CERAMIC,CHIP	0.005nF,0.25pF,50V,NPO,TP,1608	
C303	2203-001086	C-CERAMIC,CHIP	0.005nF,0.25pF,50V,NPO,TP,1608	
C304	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C350	2402-000108	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.4	
C351	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	

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Loc. No.	Code No.	Description	Specification	Remarks
C352	2203-000257	C-CERAMIC,CHIP	10nF,10%,50V,X7R,TP,1608	
C353	2402-000108	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.4	
C357	2203-000626	C-CERAMIC,CHIP	0.022NF,5%,50V,COG,TP,1608	
C358	2203-000626	C-CERAMIC,CHIP	0.022NF,5%,50V,COG,TP,1608	
C359	2203-000384	C-CERAMIC,CHIP	0.015NF,5%,50V,COG,TP,1608	
C410	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C411	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C412	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C413	2402-001042	C-AL,SMD	100uF,20%,16V,GP,TP,6.6x6.6x5.4mm	
C414	2402-000108	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.4	
C415	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C416	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C417	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C601	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C602	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C603	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C604	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C605	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C606	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C623	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C624	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C633	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C634	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C635	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C636	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
C637	2203-005005	C-CERAMIC,CHIP	100nF,10%,16V,X7R,TP,1608	
CIS	0202-001162	SOLDER-CREAM	RMA-20-21L,S63,-,SN63/PB36.6/AG0.4,FLUX9.5%	SNA
CN102	3711-000556	CONNECTOR-HEADER	BOX,12P,1R,1.25mm,SMD-A,SN	SNA
CN202	3711-003161	CONNECTOR-HEADER	BOX,20P,1R,1.25MM,SMD-A,SN,BEG	
CN402	3711-004070	CONNECTOR-HEADER	BOX,30P,1R,1.25mm,SMD-A,SN	
CN601	3711-002050	CONNECTOR-HEADER	BOX,10P,1R,1.25mm,SMD-A,SN	SNA
D101	0402-001098	DIODE-RECTIFIER	SK34,40V,3A,SMC,TP	
D201	0401-001116	DIODE-SWITCHING	BAV99DW,75V,150MA,SOT-363,TP	
D203	0401-001056	DIODE-SWITCHING	MIMBD4148SE,75V,200MA,SOT-23,TP	
D212	0403-000579	DIODE-ZENER	BZX84C5V1,5.1V,5%,200mW,SOT-23	
D213	0403-000579	DIODE-ZENER	BZX84C5V1,5.1V,5%,200mW,SOT-23	
D214	0403-001435	DIODE-ZENER	QZX363C5V6,5.32-5.88,200MW,SOT-363,TP	
D215	0403-000579	DIODE-ZENER	BZX84C5V1,5.1V,5%,200mW,SOT-23	
D216	0403-000579	DIODE-ZENER	BZX84C5V1,5.1V,5%,200mW,SOT-23	
D602	0403-001435	DIODE-ZENER	QZX363C5V6,5.32-5.88,200MW,SOT-363,TP	
D603	0403-001435	DIODE-ZENER	QZX363C5V6,5.32-5.88,200MW,SOT-363,TP	
FT101	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA
FT102	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA
FT198	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA
FT199	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA
FT402	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA
FT403	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA
FT404	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA
FT405	3301-001145	CORE-FERRITE BEAD	AB,4.5x1.6x1.6mm,-,-	SNA
IC101	1203-001448	IC-SWITCH VOL. REG.	2596,TO-263,5P,-,PLASTIC,4.750	
IC103	1203-001293	IC-POSI.FIXED REG.	033,TO-252,3P,6.5MIL,PLASTIC,3	
IC104	1203-001890	IC-VOLTAGE REGULATOR	3961,SOT223-5,5P,-,PLASTIC,2.5V,-,-40to+125C,800mA,-,TR	
IC105	0505-001170	FET-SILICON	SI9933ADY-T1,P,-,20V,3.4A,0.06ohm,2W,SO-8	



Loc. No.	Code No.	Description	Specification	Remarks
IC199	1203-001293	IC-POSI.FIXED REG.	033,T0-252,3P,6.5MIL,PLASTIC,3	
IC201	1103-000129	IC-EEPROM	24C02,256x8BIT,SOP,8P,150MIL,1	
IC203	0803-000117	IC-TTL	74F14,INVERTER,SOP,14P,150MIL,	
IC204	1204-001551	IC-VIDEO SYSTEM	GS1881,SOIC,8P,150MIL,PLASTIC,13.2V,-,0TO+70C,TP,VIDEO SYNC SEPARATOR	
IC220	0803-000122	IC-TTL	74F125,BUFFER,SOP,14P,150MIL,Q	
IC301	1003-001506	IC-LCD CONTROLLER	GM2120,PDFP,208P,28X28MM,-,-,TR,PLASTIC,3.45V,0TO+70CC,1.6W,2.4V,5XGA LCD CONTR	
IC302 SOCK	3704-000249	SOCKET-IC	32P,PLCC,SN,1.27mm	
IC303	1203-001212	IC-VOL. DETECTOR	7029,SOT-89,3P,-,PLASTIC,-,500	
IC305	1103-001023	IC-EEPROM	524C08D81,1028x8Bit,SOP,8P,150MIL,10mS,5V,10%,PLASTIC,0to+70C,110uA,CMOS,TP	
IC401	1205-002174	IC-TRANSMITTER	NT7181,TSSOP,56P,236MIL,PLASTIC,3.45V,-,0TO+70C,TP,NT7181	
IC402	1205-002174	IC-TRANSMITTER	NT7181,TSSOP,56P,236MIL,PLASTIC,3.45V,-,0TO+70C,TP,NT7181	
JP10	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
JP15	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
JP9	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
L100	2703-001778	INDUCTOR-SMD	3.3UH,20%,3.2X2.5X2.2MM	
L101	BN27-00008A	COIL CHOKE-SMD	SMD12*12*8.5,6H15/17PS,22.0UH,±20%,-,0.045OHM MAX.,3.0A,DR10X7/SMD12X6.7,16.5TS	
L108	2703-001778	INDUCTOR-SMD	3.3UH,20%,3.2X2.5X2.2MM	
L109	2703-001778	INDUCTOR-SMD	3.3UH,20%,3.2X2.5X2.2MM	
L110	2703-001778	INDUCTOR-SMD	3.3UH,20%,3.2X2.5X2.2MM	
L111	2901-001114	FILTER-EMI SMD	25VDC,2.0ADC,-,100nF,3.2x1.6x1	
L112	2703-001778	INDUCTOR-SMD	3.3UH,20%,3.2X2.5X2.2MM	
MP1.2	BN41-00190A	PCB MAIN	M017ES,FR4,4L,120X110X1.0,M017ES	SNA
Q101	0501-000342	TR-SMALL SIGNAL	KSC1623-Y,NPN,200mW,SOT-23,TP,135-270	
Q102	0501-000342	TR-SMALL SIGNAL	KSC1623-Y,NPN,200mW,SOT-23,TP,135-270	
Q201	0501-000342	TR-SMALL SIGNAL	KSC1623-Y,NPN,200mW,SOT-23,TP,135-270	
R101	2007-000084	R-CHIP	4.7Kohm,5%,1/16W,DA,TP,1608	
R105	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R106	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R107	2007-000084	R-CHIP	4.7Kohm,5%,1/16W,DA,TP,1608	
R108	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R109	2007-000078	R-CHIP	1Kohm,5%,1/16W,DA,TP,1608	
R190	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R197	2007-000084	R-CHIP	4.7Kohm,5%,1/16W,DA,TP,1608	
R198	2007-000078	R-CHIP	1Kohm,5%,1/16W,DA,TP,1608	
R199	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R201	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R202	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R203	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R204	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R205	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R206	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R207	2007-001164	R-CHIP	75ohm,1%,1/16W,DA,TP,1608	
R208	2007-001164	R-CHIP	75ohm,1%,1/16W,DA,TP,1608	
R209	2007-001164	R-CHIP	75ohm,1%,1/16W,DA,TP,1608	
R218	2007-000092	R-CHIP	15Kohm,5%,1/16W,DA,TP,1608	
R219	2007-000092	R-CHIP	15Kohm,5%,1/16W,DA,TP,1608	
R220	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R221	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R222	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R223	2007-000080	R-CHIP	2Kohm,5%,1/16W,DA,TP,1608	
R224	2007-000071	R-CHIP	22ohm,5%,1/16W,DA,TP,1608	
R225	2007-000071	R-CHIP	22ohm,5%,1/16W,DA,TP,1608	
R236	2007-000078	R-CHIP	1Kohm,5%,1/16W,DA,TP,1608	

6 Electrical Parts List

Loc. No.	Code No.	Description	Specification	Remarks
R237	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R240	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R241	2007-000070	R-CHIP	0ohm,5%,1/16W,DA,TP,1608	
R242	2007-000116	R-CHIP	120ohm,5%,1/16W,DA,TP,1608	
R243	2007-001114	R-CHIP	680Kohm,5%,1/16W,DA,TP,1608	
R252	2007-000084	R-CHIP	4.7Kohm,5%,1/16W,DA,TP,1608	
R298	2007-001002	R-CHIP	510ohm,5%,1/16W,DA,TP,1608	
R301	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R302	2007-000121	R-CHIP	820ohm,5%,1/16W,DA,TP,1608	
R321	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R322	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R324	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R329	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R330	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R331	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R334	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R350	2007-000092	R-CHIP	15Kohm,5%,1/16W,DA,TP,1608	
R351	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R352	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R353	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R354	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R357	2007-000077	R-CHIP	470ohm,5%,1/16W,DA,TP,1608	
R358	2007-000077	R-CHIP	470ohm,5%,1/16W,DA,TP,1608	
R359	2007-000077	R-CHIP	470ohm,5%,1/16W,DA,TP,1608	
R360	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R361	2007-001167	R-CHIP	75ohm,5%,1/16W,DA,TP,1608	
R362	2007-001167	R-CHIP	75ohm,5%,1/16W,DA,TP,1608	
R363	2007-001214	R-CHIP	82ohm,1%,1/16W,DA,TP,1608	
R364	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R365	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R366	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R391	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R392	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R395	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R396	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R410	2007-000070	R-CHIP	0ohm,5%,1/16W,DA,TP,1608	
R411	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R412	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R413	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R414	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R415	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R416	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R417	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R418	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R419	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R420	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R421	2007-000070	R-CHIP	0ohm,5%,1/16W,DA,TP,1608	
R601	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R602	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R603	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R604	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R605	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
R606	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	

## 6 Electrical Parts List

Loc. No.	Code No.	Description	Specification	Remarks
R607	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R608	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R609	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R610	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R612	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R617	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R626	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R627	2007-000074	R-CHIP	100ohm,5%,1/16W,DA,TP,1608	
R690	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R691	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R692	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R693	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R694	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R695	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R696	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R697	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R698	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R699	2007-000072	R-CHIP	47ohm,5%,1/16W,DA,TP,1608	
R709	2007-000070	R-CHIP	0ohm,5%,1/16W,DA,TP,1608	
R710	2007-000090	R-CHIP	10KOHM,5%,1/16W,DA,TP,1608	
RA301	2011-001193	R-NETWORK	68ohm,5%,1/16W,L,CHIP,8P,TP	
RA302	2011-001193	R-NETWORK	68ohm,5%,1/16W,L,CHIP,8P,TP	
RA303	2011-001410	R-NETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA304	2011-001410	R-NETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA305	2011-001410	R-NETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA306	2011-001410	R-NETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA307	2011-001410	R-NETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA308	2011-001410	R-NETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA309	2011-001410	R-NETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA310	2011-001410	R-NETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA311	2011-001410	R-NETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA312	2011-001410	R-NETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA313	2011-001410	R-NETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
RA314	2011-001410	R-NETWORK	120OHM,5%,1/16W,L,CHIP,8P,TP	
X301	2801-003667	CRYSTAL-SMD	14.3182MHZ,50PPM,28-AAN,16,50OHM,TP	

## 6-2-2 M019E\* Others

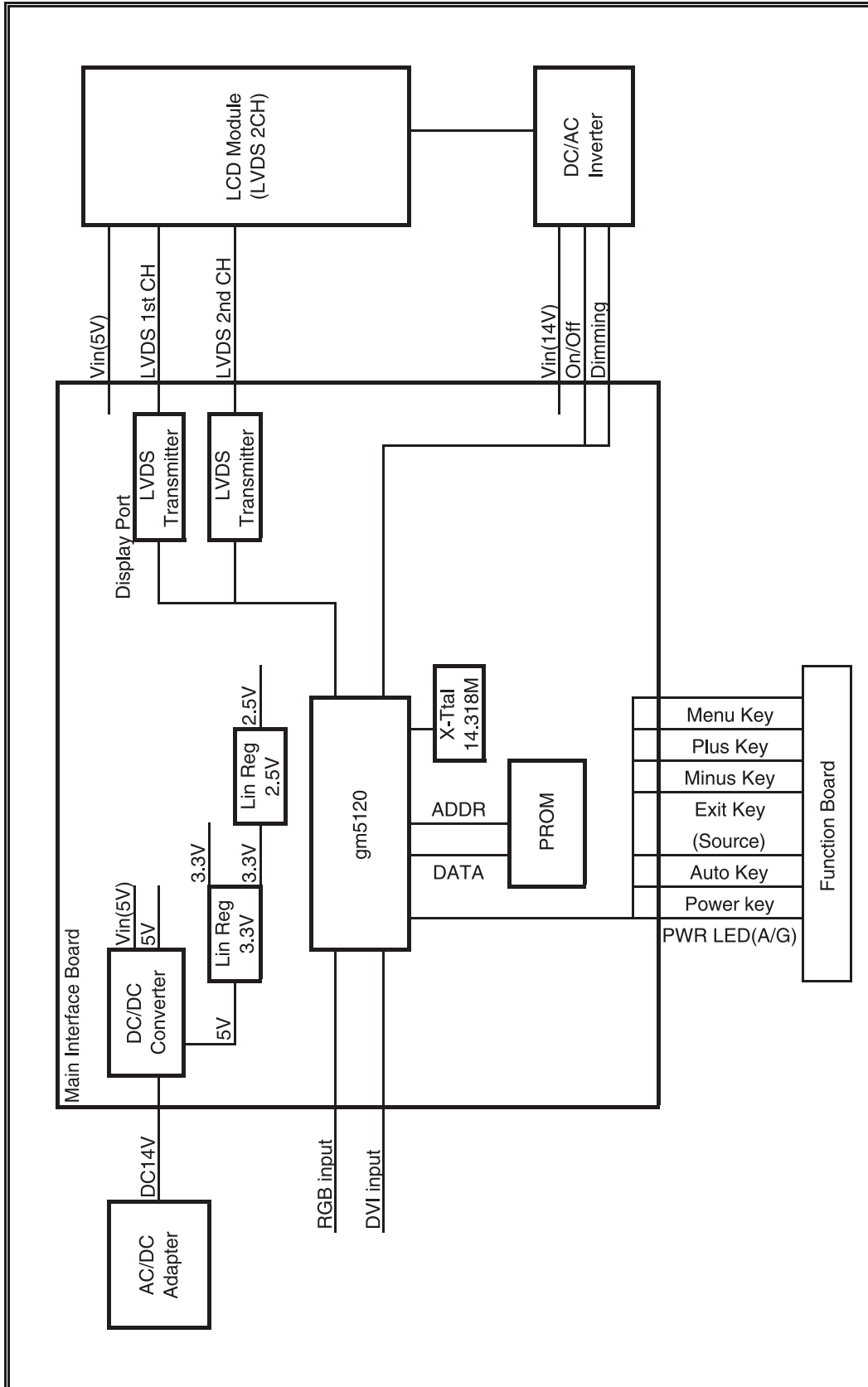
Loc. No.	Code No.	Description	Specification	Remarks
- C/F+C/R	BN90-00514B 6003-000282	ASSY COVER FRONT SCREW-TAPTITE	M019ES BH,+,B,M3,L8,ZPC(BLK),SWCH10	SNA SNA
C/F	BN96-00485A	ASSY COVER P-FRONT	M019ES,ABS HB	SNA
C/F	6003-000259	SCREW-TAPTITE	BH,+,B,M3,L8,ZPC(YEL),SWRCH18A	SNA
C/F	BN39-00375A	WIRE HARNESS	M019ES,UL20276,UL2725,UL/CSA,20P,250,BLK,32,30,28 AWG,12507HS-20W,DSUB15P, DJ651	SNA
C/F	BN63-00768A	COVER-FRONT	M019ES,ABS HB	SNA
C/F	BN64-00052A	KNOB-FUNCTION	M015PS,ABS+PC,,-,-,-,-,-,M015PS	SNA
C/F	BN67-00036A	LENS-LED	M015PS,ACRYL,CLEAR,-,-,-,M015PS	SNA
-	BN90-00515B	ASSY COVER REAR	M019ES	SNA
C/R	BN96-00486A	ASSY COVER P-REAR	M019ES,ABS HB	SNA
C/R	BN63-00769A	COVER-REAR	M019ES,ABS HB	SNA
-	BN90-00516B	ASSY STAND	M019ES	SNA
STD	BN96-00487A	ASSY STAND P	M019ES,ABS HB	SNA
STD	6002-000129	SCREW-TAPPING	FH,+,2S,M3,L8,ZPC(BLK),SM20C	SNA
STD	6003-000117	SCREW-TAPTITE	BH,+,B,M3,L6,ZPC(YEL),SWRCH18A	SNA
STD	6003-000133	SCREW-TAPTITE	BH,+,S,M4,L8,ZPC(YEL),SWRCH18A,-	
STD	6003-000301	SCREW-TAPTITE	BH,+,S,M4,L6,ZPC(YEL),SWRCH18A	SNA
STD	6003-001136	SCREW-TAPTITE	BH,+,B,M4,L8,ZPC(YEL),SWRCH18A	SNA
STD	6003-001188	SCREW-TAPTITE	BH,+,B,M4,L10,YEL,SWRCH18A	SNA
STD	6011-001445	BOLT-SOCKET	4-40 UNC,L7,Ni PLT,BRASS,HEX SOCKET	SNA
STD	6501-000113	CABLE TIE	DA-100,T1,W2.5,L102,WHT,NYLON	
STD	BN39-00375A	WIRE HARNESS	M019ES,UL20276,UL2725,UL/CSA,20P,250,BLK,32,30,28 AWG,12507HS-20W,DSUB15P, DJ651	SNA
STD	BN61-00524A	BRACKET-BOTTOM	M019ES,SECC,T2.0	SNA
STD	BN61-00525A	BRACKET-LIFT/STOPPER	M019ES,SK-5,T2.0	SNA
STD	BN61-00526A	BRACKET-LIFT/GUIDE	M019ES,SECC,T0.5	SNA
STD	BN63-00458A	GASKET	17,CONDUCTIVE FABRIC,3MM,17MM,70MM,GRAY,71TSSK-17-3-70-13,71TSSK-17-3-70-13	SNA
STD	BN63-00771A	COVER-STAND BOTTOM	M019ES,ABS HB	SNA
STD	BN63-00772A	COVER-STAND TOP	M019ES,ABS HB	SNA
STD	BN63-00773A	COVER-STAND NECK/FRONT	M019ES,ABS HB	SNA
STD	BN63-00774A	COVER-STAND NECK/REAR	M019ES,ABS HB	SNA
STD	BN64-00168A	KNOB-LIFT/STOPPER	M019ES,ABS HB	SNA
STD	BN73-00049A	RUBBER-FOOT	MO 15,17,19,CR,11*11,60,T1.5,BLK	SNA
STD	BN96-00489A	ASSY MISC P-HINGE	M019ES,ZN DC2	SNA
- CIS	BN91-00493A BN44-00071A	ASSY MISC-ADAPTOR ADAPTOR	MT17BO,MT17BO-SXV2/8384 AP004214-UV,LCOTM,90-264V,47 - 63 HZ,+14VDC,3.0A,AC/DC,0 TO +40 C,120*55*31	SNA
- CIS	BN91-00567X BN07-00098A	ASSY LCD-RK LCD	GH19AS TM190SX-70N01,GT18MS,6BIT FRC,403.2*321.2*22.5,16.7M,40,0.2805*0.2805,0-40,5.0,T	SNA
- CIS	BN91-00644B BN44-00070B	ASSY CHASSIS INVERTER	M019ES M017WS,SIC840A,48KHZ,13.0-14.5V,2.5MARMS,6.7MARMS,48KHZ,160*71*8.7,4LAMP,40-56KH	SNA
CIS	BN96-00490A	ASSY MISC P-BRKT GROUND	M019ES,SECC T0.8	SNA
- BRKT/GRD+SH/COV C/F+SH/COV CIS	BN91-00645B 6003-000282 6003-000282 0203-001159	ASSY SHIELD SCREW-TAPTITE SCREW-TAPTITE TAPE-FILAMENT	M019ES BH,+,B,M3,L8,ZPC(BLK),SWCH10 BH,+,B,M3,L8,ZPC(BLK),SWCH10 #8915,T0.15,W12,L55000,CLR	SNA SNA SNA SNA

6 Electrical Parts List

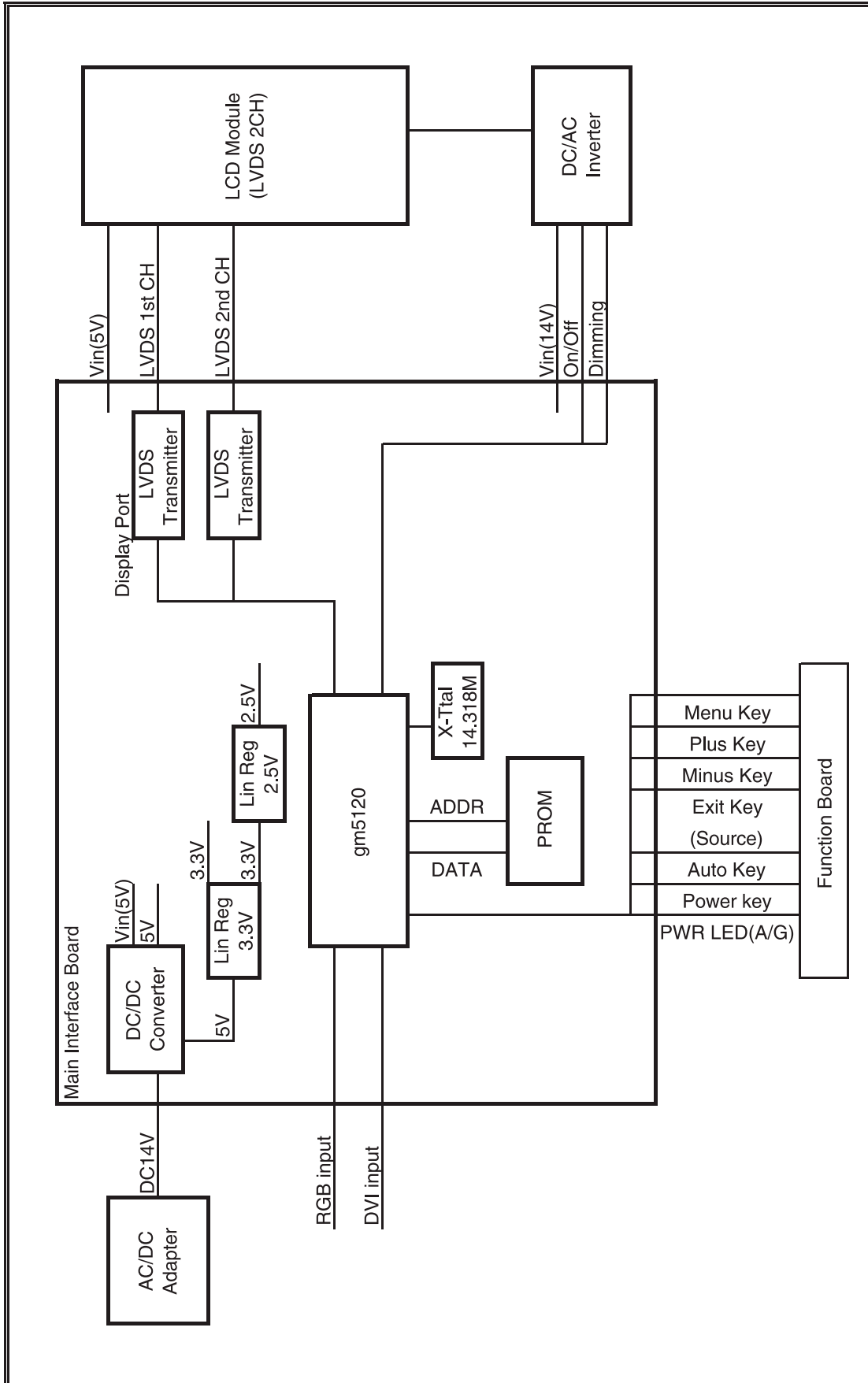
Loc. No.	Code No.	Description	Specification	Remarks
CIS	BN39-00244B	CBF SIGNAL	MO15PS,15P/15P,20276-N,1830MM,UJL20276,BLACK,D-SUB/MALE,DET. TYPE	
CIS	BN39-00293A	LEAD CONNECTOR	MO17PS,UJL2651#28,UJL/CSA,10P,100MM,#28,12505HS-10,12505HS-10,BK,2651#28,CORE	
CIS	BN39-00377A	WIRE HARNESS	MO19-LVDS,UJL1571#30AWG,UJL/CSA,30P,130mm,RED,WHITE,30AWG,12507HS-30,12507HS-30,B	SNA
CIS	BN63-00155A	GASKET	GH17PSS,CONDUCTIVE FABRIC,8MM,30MM,70MM,GRAY,71TSSK 30-8-70-13,71TSSK 30-8-70-13	SNA
CIS	BN63-00351A	COVER-DOOR	MO17PS,ABS HB,BK07	
CIS	BN63-00353A	SHIELD-CONNECTOR	MO17PS,SPT,TO.3	SNA
HIN/TOP+SH/PCB	6003-000133	SCREW-TAPTITE	BH,+,S,M4,L8,ZPC(YEL),SWRCH18A,-	
IN/BRKT+SH/COV	6003-000282	SCREW-TAPTITE	BH,+,B,M3,L8,ZPC(BLK),SWCH10	SNA
CIS	BN96-00488A	ASSY MISC P-SHIELD COVER	MO19ES,SECC T2.0	SNA
-	BN92-00591J	ASSY ACCESSORY	MO17ESDS/EDC,EDC,NETHERLANDS	SNA
CIS	BN96-00160J	ASSY ACCESSORY	MO17ESDS/EDC,EDC,NETHERLANDS	
CIS	0203-000214	TAPE-OPP MASKING	OPP/W50/CLR,TO.05,W50,L400000,	SNA
CIS	6801-001073	CARD-REGISTRATION	RUS,XEV,RUS,MOJO100,-,W220,L318,2,-	SNA
CIS	6902-000110	BAG PE	LDPE,TO.05,L356,W240,TRP,28,2,PE MARK	SNA
CIS	BH39-10339H	CBF POWER CORD	DET,H05VV-F,250V/10,16A,BLK,25	
CIS	BH68-00374A	CARD WARRANTY-01	ASC List,Samsung,ART100G,Russian,EDC,295,210	SNA
CIS	BH68-00376H	MANUAL-00	WIN XP INSTALL GUIDE,SYNCMaster,ENGLISH,W/W,MOJO100G,-,148,210,-,-,-,-	SNA
CIS	BH68-00489A	MANUAL-02	RUSSIAN W/CARD,SER,RUSSIAN,RUSSIA,MOJO100G	SNA
CIS	BH68-70438A	CARD-BLOC WARRANTY-09	TFT LCD,BASIC,EU,MOJO,100G,W21	SNA
CIS	BH68-70448A	CARD-01	TFT LCD,SRC,RUSSIA,S/W,120,W210*L120,INSTALL CARD	SNA
CIS	BN59-00259A	S/W DRIVER-04	S/M152T,IB/DRIVER,W/W,E/F/S/G/P/I/SW/R/	SNA
-	BN92-00757B	ASSY LABEL	MO19ES	SNA
LABEL	BN68-00422A	LABEL RATING	SS,PE,TO.05,90*45,BLK,POLYESTER,EDC,MO19ES	SNA
-	BN92-00759A	ASSY P/MATERIAL	MO19PS	SNA
P/M	0203-000214	TAPE-OPP MASKING	OPP/W50/CLR,TO.05,W50,L400000,	SNA
P/M	6902-000521	BAG PE	HDPE/NITRON/HDPE,TO.015/TO.5/TO.015,W600,L600,TRP,28 LANGUAGE,2-	SNA
P/M	BH69-00142A	PACKING-PAD	DW4,900*1000,-,IBM15	SNA
P/M	BH69-00328F	PAD-EDGE	CN15,DW3,200,1430,-,-,YEL,-,-	SNA
P/M	BH69-30002C	BAG-PE	LDPE,TO.05,W2400,NO_PRINT	SNA
P/M	BH69-30360A	BAG-AIR	HDPE,TO.2,W1000*L1800,N,-,ALL	SNA
P/M	BH69-40379A	PACKING-WRAP	LDPE,W500*TO.02,-,-	SNA
P/M	BN68-00129A	LABEL SHIPPING	-,LABEL SHIPPING,ART-PAPER,100G,-,WHT,BLACK,-,-,-	SNA
P/M	BN69-00139N	PALLET-PACKING	RS21NS,WOODEN,1036,916,120	SNA
P/M	BN69-00140P	PAD-PALLET COVER	SUN15,SW,1000*3780,1310,-,-,-,-,-	SNA
P/M	BN69-00140T	PAD-PALLET COVER	SUN(LSA810),SW,900,3760,-,-,-,-,-	SNA
P/M	BN69-00300A	CUSHION-EPE	MO15PS/ES,SHEET EPS,T5.0	SNA
P/M	BN69-00467A	CUSHION-L/R	MO19ES,EPS M50	SNA
P/M	BN96-00115A	ASSY MISC P-BRKT-VESA	MO15PS,SECC T1.6	
CIS	BN61-00140A	BRACKET-VESA	MO15PS,SECC,T1.6	SNA
CIS	BN68-00174G	MANUAL	MO VESA BRKT CARD,SYNCMaster,W/W,ENGLISH,MIMOJO80G	SNA
P/M	BN96-00196A	ASSY MISC P-SCREW	MODIGLIANI ,SCREW-WOOD,SCREWTAPTITE,ANCHOR	SNA
-	BN92-00814M	ASSY BOX	MO19ESDS/EDC,EDC,NETHERLANDS	SNA
CIS	BH68-00329C	LABEL BAR CODE	-,ALL,TCO99,DOMESTIC,ART-PAPER 90G,-,WHT,BLACK,-,-,-	SNA
CIS	BH75-10529C	UNIT-HANDLE/PACKING	S/M170MP,PE-LD,PE-HD,-,WHITE,-	
CIS	BN72-60001A	LEVER TOP	LSD210TL,PE-LD,WHITE,TFT_LCD	SNA
CIS	BN72-60002C	LEVER BOTTOM	S/M170MP,PE-HD,BLUE	SNA
CIS	BN69-00566A	BOX	S/M192B,W/W,CB-SW4,WHT,OFFSET,A-1,L512*W440*H123	SNA
-	RM-MO19ESDS/EDC	2	TM190SX-70N01(ZPD)	-

# 7 Block Diagram

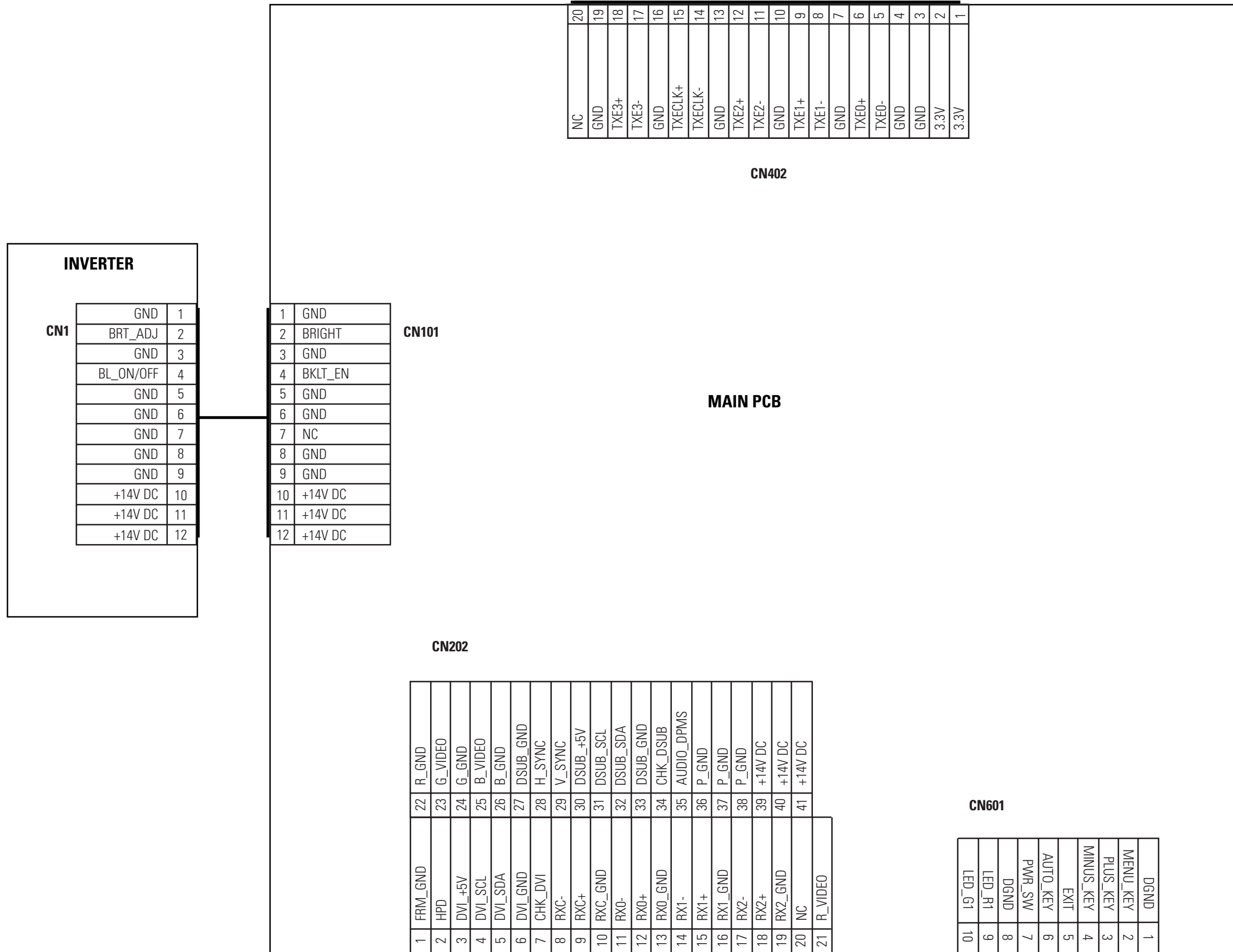
## 7-1 M019P\*



**7-2 M019E\***



# 8 Wiring Diagram

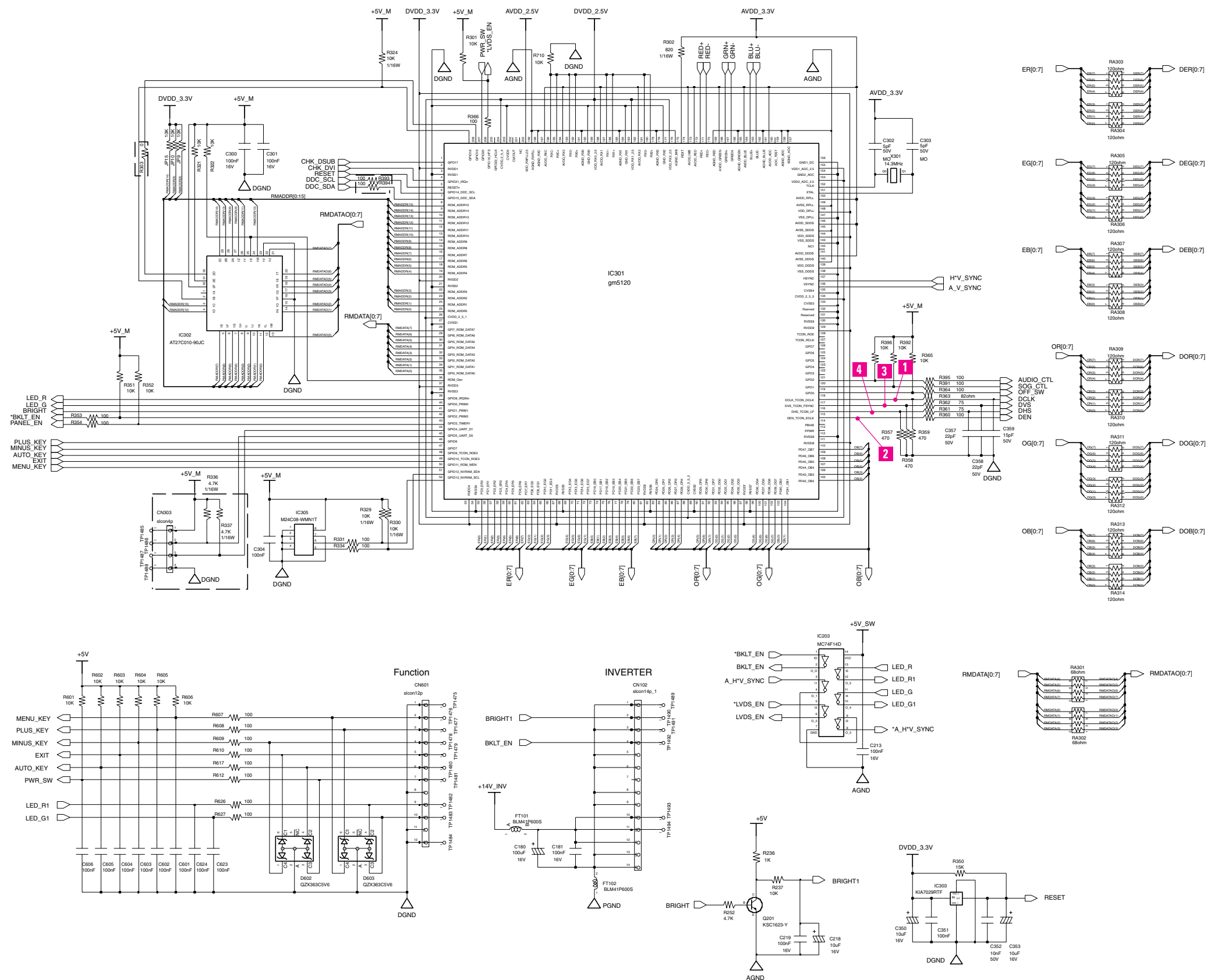




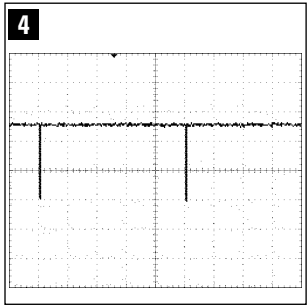
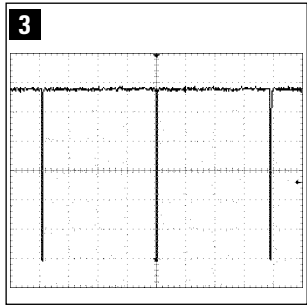
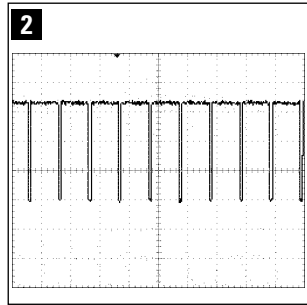
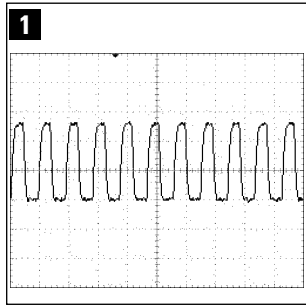
**Memo**

# 10 Schematic Diagrams

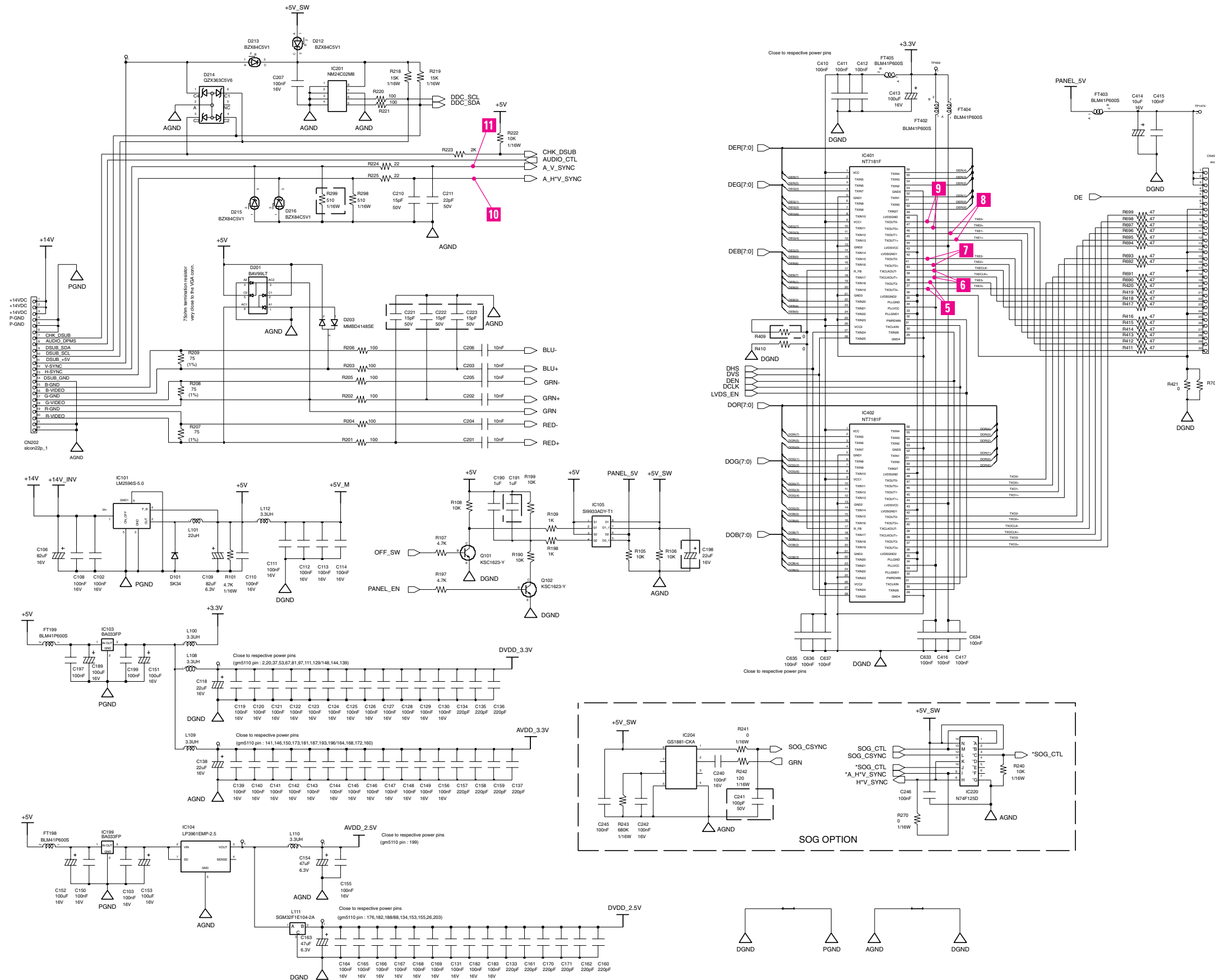
## 10-1-1 M019E\* Schematic Diagram



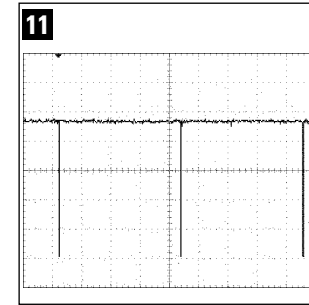
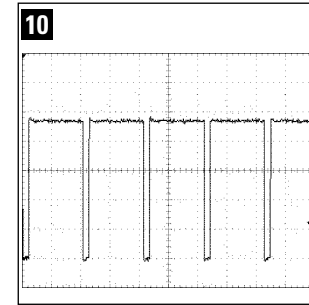
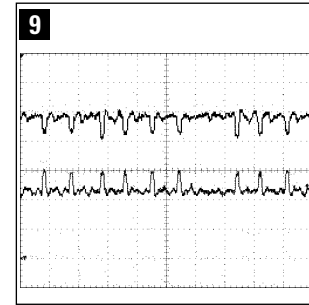
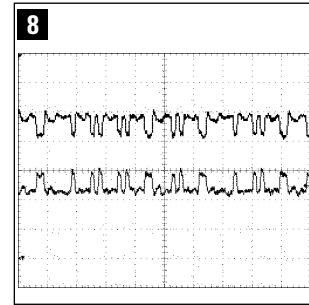
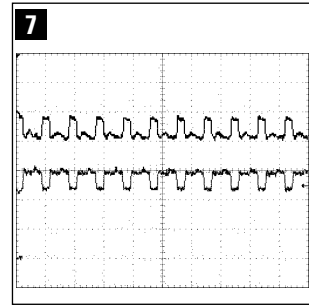
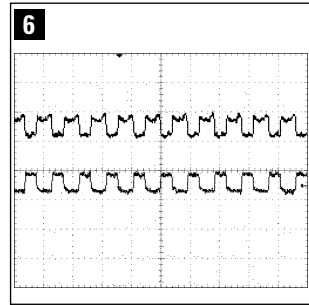
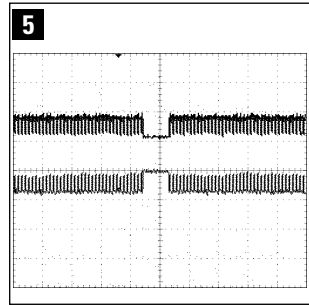
10 Schematic Diagrams



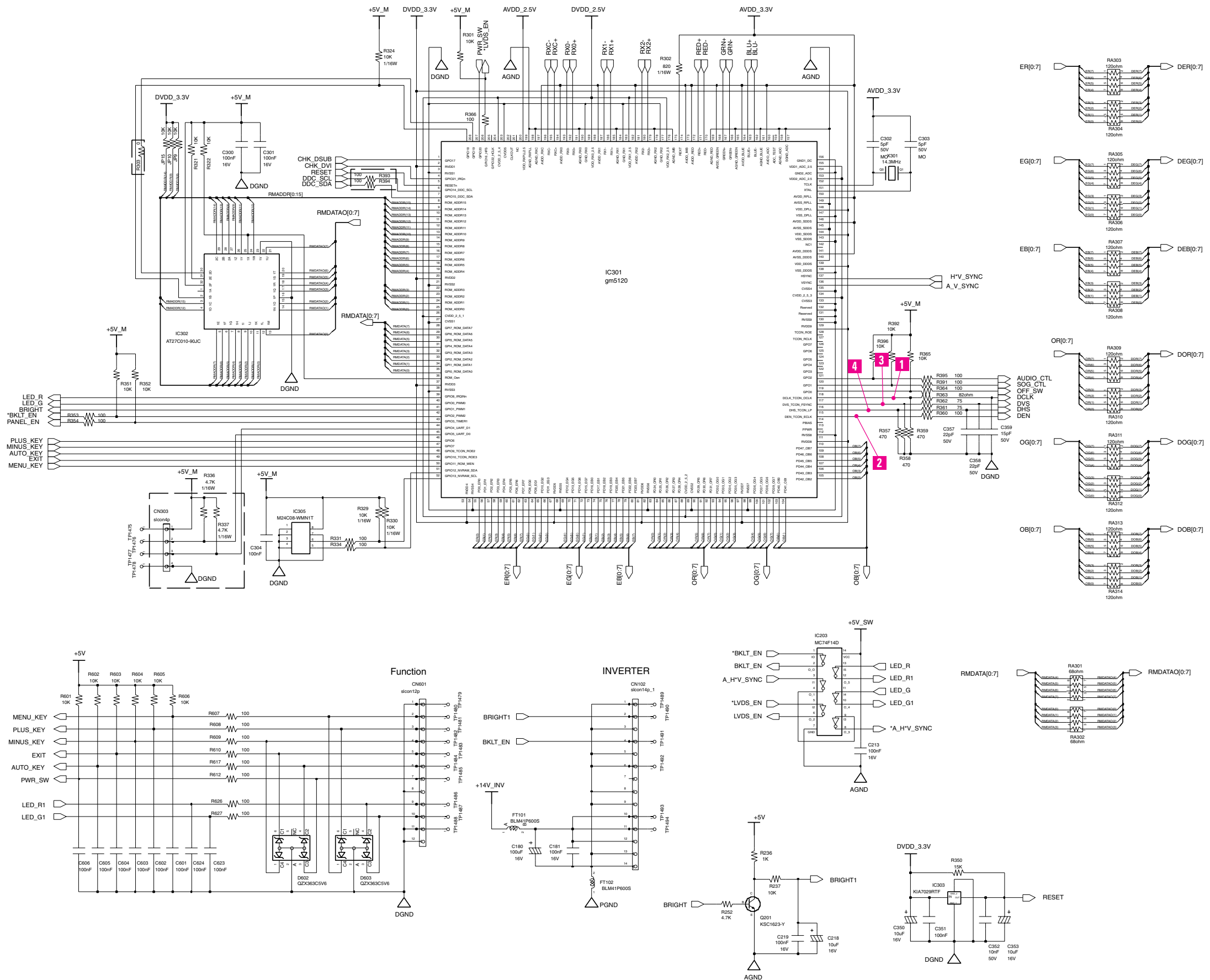
10-1-2 M019E\* Schematic Diagram

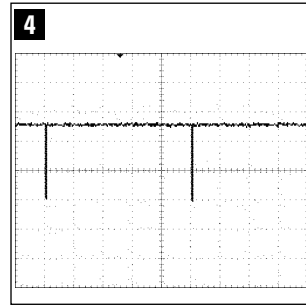
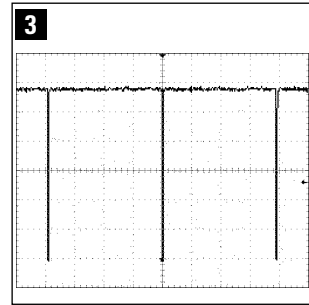
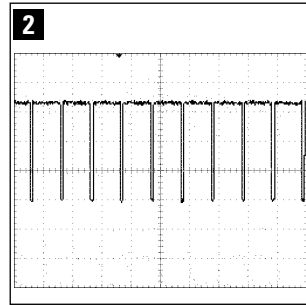
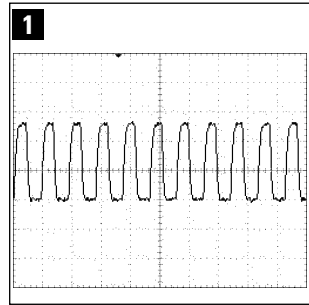


10 Schematic Diagrams



10-2-1 M019P\* Schematic Diagram

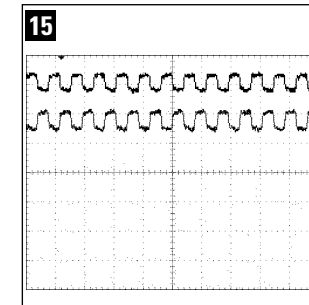
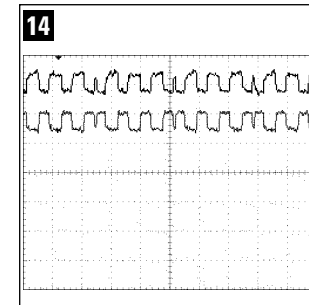
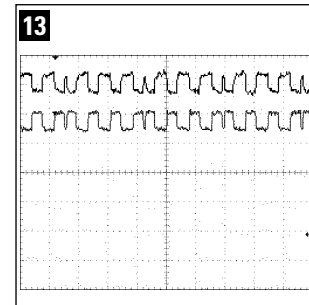
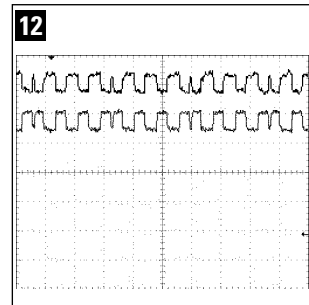
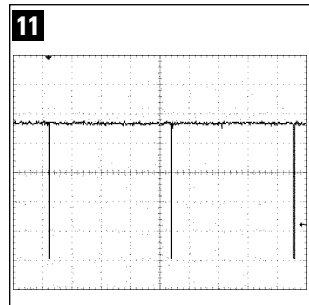
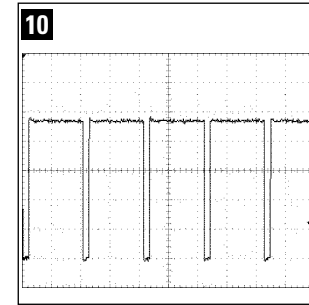
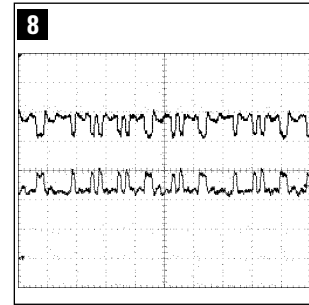
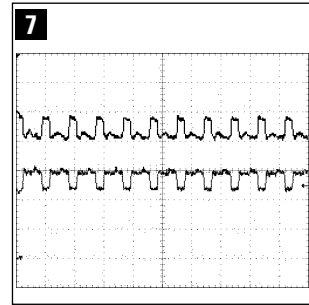
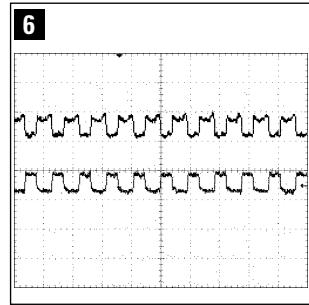
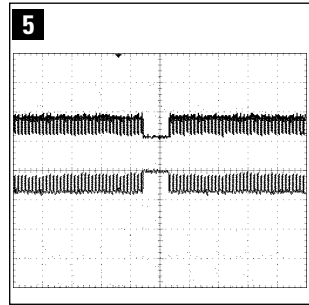




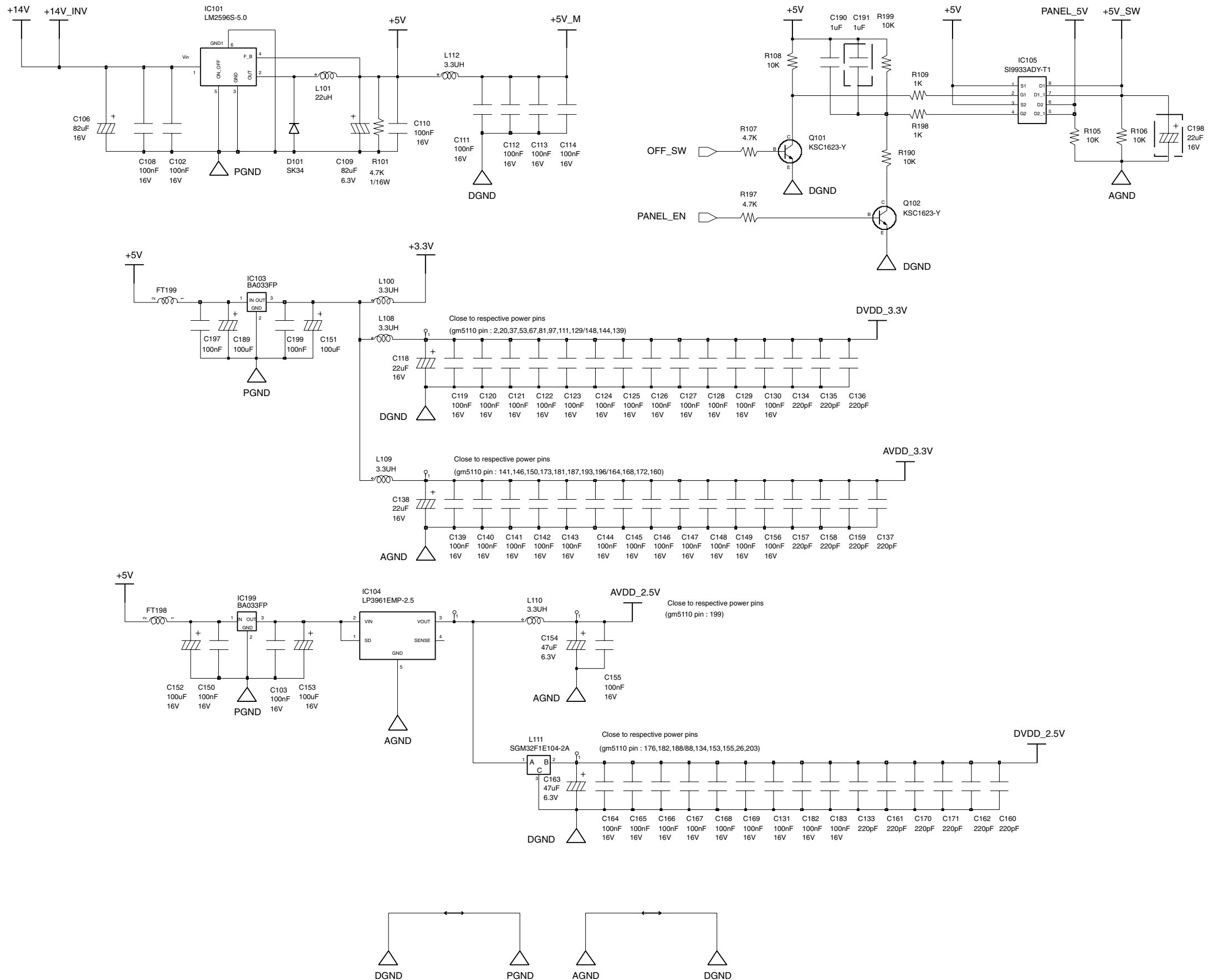




10 Schematic Diagrams



10-2-3 M019P\* Schematic Diagram



**Memo**



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