

SAMSUNG

LCD-TV

Chassis :	U56A	U56B
Model :	LE32D55*K*W LE37D55*K*W LE40D55*K*W LE46D55*K*W LE32D57*K*S LE37D57*K*S LE40D57*K*S LE46D57*K*S	LE32D58*K*K LE37D58*K*K LE40D58*K*K LE46D58*K*K LE26D45*G*W LE32D45*G*W

SERVICE Manual

TFT-LCD TV



LE32D550K1W

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1. Precautions

1-1. Safety Precautions

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

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.

1-1-2. Servicing the LCD TV

1. When servicing the LCD TV, 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 LCD TV 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 LCD TV.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistorcapacitor 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).

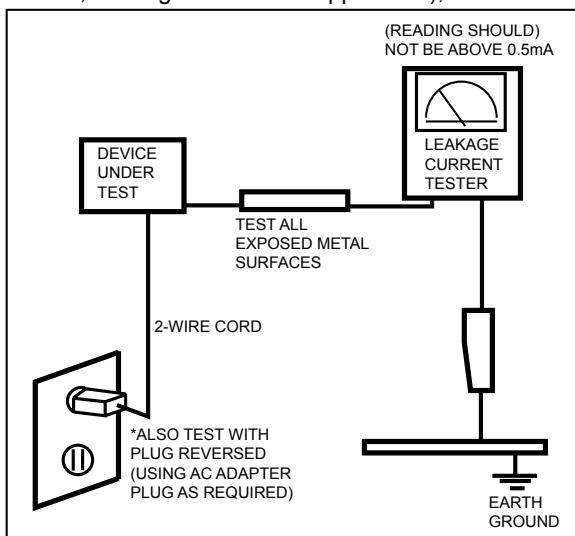


Figure 1-1. Leakage Current Test Circuit

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 safetyrelated 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

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

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 LCD TV.
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.

1-4. Installation Precautions

1. For safety reasons, more than a people are required for carrying the product.
2. Keep the power cord away from any heat emitting devices, as a melted covering may cause fire or electric shock.
3. Do not place the product in areas with poor ventilation such as a bookshelf or closet. The increased internal temperature may cause fire.
4. Bend the external antenna cable when connecting it to the product. This is a measure to protect it from being exposed to moisture. Otherwise, it may cause a fire or electric shock.
5. Make sure to turn the power off and unplug the power cord from the outlet before repositioning the product. Also check the antenna cable or the external connectors if they are fully unplugged. Damage to the cord may cause fire or electric shock.
6. Keep the antenna far away from any high-voltage cables and install it firmly. Contact with the highvoltage cable or the antenna falling over may cause fire or electric shock.
7. When installing the product, leave enough space (0.4m) between the product and the wall for ventilation purposes. A rise in temperature within the product may cause fire.

2. Product Specifications

2-1. Feature & Specifications

Model	LE32D55*K*W / LE32D57*K*S / LE32D58*K*K			
Feature				
<ul style="list-style-type: none"> ▶ DTV/ATV (570: Satellite), 4-HDMI, 1-Component, 1-A/V, D-SUB, 1-SCART, 2-USB2.0 ▶ Brightness: 480 cd/m² ▶ High Contrast Ratio: 6,000:1 ▶ Response Time: 8.5 ms 				
Specifications				
Item	Description			
LCD Panel	32 inch FHD			
Scanning Frequency	Horizontal: 50 kHz ~ 75 kHz (Automatic) Vertical: 47 Hz ~ 63 Hz (Automatic)			
Display Colors	16.7 million colors			
Maximum Resolution	Horizontal: 1920 Pixels Vertical: 1080 pixels			
Input Signal	Analog 0.7 Vp-p ± 5% positive at 75 Ω, internally terminated			
Input Sync Signal	H/V Separate, TTL, P. or N.			
Maximum Pixel Clock Rate	80 MHz			
Active Display (Horizontal / Vertical)	27.50 x 15.47 inches (698.4 (H) x 392.85 (V) mm)			
AC Power Voltage & Frequency	AC 110 V ~ 220 V, 60 Hz			
Power Consumption	Under 110 W (Under 0.3 W, Stand by)			
Set Dimensions (W x D x H)	31.7 x 9.4 x 20.0 inches (804.7 x 240.0 x 563.7 mm)_with stand EU (Press) 31.7 x 3.1 x 20.0 inches (804.7 x 77.8x507.4 mm)_without stand CIS (Plastic) 31.7 x 3.2 x 20.0 inches (804.7 x 80.3 x 507.4 mm)_without stand			
Set Weight	EU (Press)	26.5 lbs (12.0kg)_with stand		
		20.5 lbs (9.3kg)_without stand		
	CIS (Plastic)	26.0 lbs (11.8kg)_with stand		
		20.1 lbs (9.1kg)_without stand		
Stand Dimensions (W x D x H)	17.5 x 9.4 x 6.7 inches (445 x 240 x 170 mm)			
Stand Weight	6 lbs (2.7 kg)			
TV System	Tunning	Frequency Synthesize (Refer to detailed Frequency Table)		
	System	DVB-T/C (570: DVB-T/C/S, 580: DVB-T2/C), PAL, SECAM, NT4.43		
	Sound	BG, DK, L/L', NICAM, MPEG1, DD, DD+, HE-AAC		
Environmental Considerations	<ul style="list-style-type: none"> - Operating Temperature: 50°F ~ 104°F (10°C ~ 40°C) - Operating Humidity: 10% ~ 80%, non-condensing - Storage temperature: -13°F ~ 113°F (-25°C ~ 45°C) - Storage Humidity: 5% ~ 95%, non-condensing 			
Audio Specifications	<ul style="list-style-type: none"> - MAX Internal speaker Out: Right => 10 W, Left => 10 W - BASS Control Range: -8 dB ~ +8dB - TREBLE Control Range: -8 dB ~ +8 dB - Headphone Out: 10 mW MAX - Output Frequency: RF: 80 Hz ~ 15 kHz A/V: 80 Hz ~ 20 kHz 			
Note: TruSurround HD, Film Mode, Energy Saving, Anynet+, AllShare				

2. Product Specifications

Model	LE37D55*K*W / LE37D57*K*S / LE37D58*K*K	
Feature		
<ul style="list-style-type: none"> ► DTV/ATV (570: Satellite), 4-HDMI, 1-Component, 1-A/V, D-SUB, 1-SCART, 2-USB2.0 ► Brightness: 500 cd/m² ► High Contrast Ratio: 5,000:1 ► Response Time: 6.5 ms 		
Item	Specifications	
Item	Description	
LCD Panel	37 inch FHD	
Scanning Frequency	Horizontal: 60 kHz ~ 73 kHz (Automatic) Vertical: 47 Hz ~ 63 Hz (Automatic)	
Display Colors	16.7 million colors	
Maximum Resolution	Horizontal: 1920 Pixels Vertical: 1080 pixels	
Input Signal	Analog 0.7 Vp-p ± 5% positive at 75 Ω, internally terminated	
Input Sync Signal	H/V Separate, TTL, P. or N.	
Maximum Pixel Clock Rate	82 MHz (Typ 74.25 MHz)	
Active Display (Horizontal / Vertical)	32.26 x 18.15 inches (819.36 (H) x 460.89 (V) mm)	
AC Power Voltage & Frequency	AC 110 V ~ 220 V, 60 Hz	
Power Consumption	Under 140 W (Under 0.3 W, Stand by)	
Set Dimensions (W x D x H)	36.4 x 10.0 x 24.8 inches (923.5 x 255.0 x 629.2 mm)_with stand 36.4 x 3.1 x 22.6 inches (923.5 x 78.5 x 573.2 mm)_without stand	
Set Weight	34.8 lbs (15.8 kg)_with stand 27.7 lbs (12.55 kg)_without stand	
Stand Dimensions (W x D x H)	18.9 x 10.0 x 6.7 inches (480 x 255 x 170 mm)	
Stand Weight	7.2 lbs (3.25 kg)	
TV System	Tunning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	DVB-T/C (570: DVB-T/C/S, 580: DVB-T2/C), PAL, SECAM, NT4.43
	Sound	BG, DK, L/L', NICAM, MPEG1, DD, DD+, HE-AAC
Environmental Considerations	<ul style="list-style-type: none"> - Operating Temperature: 50°F ~ 104°F (10°C ~ 40°C) - Operating Humidity: 10% ~ 80%, non-condensing - Storage temperature: -13°F ~ 113°F (-25°C ~ 45°C) - Storage Humidity: 5% ~ 95%, non-condensing 	
Audio Specifications	<ul style="list-style-type: none"> - MAX Internal speaker Out: Right => 10 W, Left => 10 W - BASS Control Range: -8 dB ~ +8dB - TREBLE Control Range: -8 dB ~ +8 dB - Headphone Out: 10 mW MAX - Output Frequency: RF: 80 Hz ~ 15 kHz A/V: 80 Hz ~ 20 kHz 	
Note: TruSurround HD, Film Mode, Energy Saving, Anynet+, AllShare		

Model	LE40D55*K*W / LE40D57*K*S / LE40D58*K*K			
Feature				
<ul style="list-style-type: none"> ▶ DTV/ATV (570: Satellite), 4-HDMI, 1-Component, 1-A/V, D-SUB, 1-SCART, 2-USB2.0 ▶ Brightness: 450 cd/m² ▶ High Contrast Ratio: 5,000:1 ▶ Response Time: 8 ms 				
Specifications				
Item	Description			
LCD Panel	40 inch FHD			
Scanning Frequency	Horizontal: 48 kHz ~ 75 kHz (Automatic) Vertical: 45 Hz ~ 65 Hz (Automatic)			
Display Colors	16.7 million colors			
Maximum Resolution	Horizontal: 1920 Pixels Vertical: 1080 pixels			
Input Signal	Analog 0.7 Vp-p ± 5% positive at 75 Ω, internally terminated			
Input Sync Signal	H/V Separate, TTL, P. or N.			
Maximum Pixel Clock Rate	80 MHz (Typ 74.25 MHz)			
Active Display (Horizontal / Vertical)	34.87 x 19.61 inches (885.6 (H) x 498.15 (V) mm)			
AC Power Voltage & Frequency	AC 110 V ~ 220 V, 60 Hz			
Power Consumption	Under 150 W (Under 0.3 W, Stand by)			
Set Dimensions (W x D x H)	39.1 x 10.0 x 26.3 inches (992.1 x 255.0 x 667.2 mm)_with stand 39.1 x 3.2 x 24.1 inches (992.1 x 80.4 x 611.0 mm)_without stand			
Set Weight	36.4 lbs (16.5 kg)_with stand 29.2 lbs (13.25 kg)_without stand			
Stand Dimensions (W x D x H)	18.9 x 10.0 x 6.7 inches (480 x 255 x 170 mm)			
Stand Weight	7.2 lbs (3.25 kg)			
TV System	Tunning	Frequency Synthesize (Refer to detailed Frequency Table)		
	System	DVB-T/C (570: DVB-T/C/S, 580: DVB-T2/C), PAL, SECAM, NT4.43		
	Sound	BG, DK, L/L', NICAM, MPEG1, DD, DD+, HE-AAC		
Environmental Considerations	<ul style="list-style-type: none"> - Operating Temperature: 50°F ~ 104°F (10°C ~ 40°C) - Operating Humidity: 10% ~ 80%, non-condensing - Storage temperature: -13°F ~ 113°F (-25°C ~ 45°C) - Storage Humidity: 5% ~ 95%, non-condensing 			
Audio Specifications	<ul style="list-style-type: none"> - MAX Internal speaker Out: Right => 10W, Left => 10W - BASS Control Range: -8 dB ~ +8dB - TREBLE Control Range: -8 dB ~ +8 dB - Headphone Out: 10 mW MAX - Output Frequency: RF: 80 Hz ~ 15 kHz A/V: 80 Hz ~ 20 kHz 			
Note: TruSurround HD, Film Mode, Energy Saving, Anynet+, AllShare				

2. Product Specifications

Model	LE46D55*K*W / LE46D57*K*S / LE46D58*K*K	
Feature		
► DTV/ATV (570: Satellite), 4-HDMI, 1-Component, 1-A/V, D-SUB, 1-SCART, 2-USB2.0		
► Brightness: 450 cd/m ²		
► High Contrast Ratio: 5,000:1		
► Response Time: 8 ms		
Specifications		
Item	Description	
LCD Panel	46 inch FHD	
Scanning Frequency	Horizontal: 45 kHz ~ 75 kHz (Automatic) Vertical: 48 Hz ~ 65 Hz (Automatic)	
Display Colors	16.7 million colors	
Maximum Resolution	Horizontal: 1920 Pixels Vertical: 1080 pixels	
Input Signal	Analog 0.7 Vp-p ± 5% positive at 75 Ω, internally terminated	
Input Sync Signal	H/V Separate, TTL, P. or N.	
Maximum Pixel Clock Rate	80 MHz (Typ 74.25 MHz)	
Active Display (Horizontal / Vertical)	40.08 x 22.55 inches (1018.08 (H) x 572.67 (V) mm)	
AC Power Voltage & Frequency	AC 110 V ~ 220 V, 60 Hz	
Power Consumption	Under 210 W (Under 0.3 W, Stand by)	
Set Dimensions (W x D x H)	44.3 x 10.8 x 29.2 inches (1124.1 x 275.0 x 742.8 mm)_with stand 44.3 x 3.2 x 27.0 inches (1124.1 x 80.4 x 686.1 mm)_without stand	
Set Weight	47.8 lbs (21.7 kg)_with stand 39.9 lbs (18.1 kg)_without stand	
Stand Dimensions (W x D x H)	19.5 x 10.8 x 6.7 inches (495 x 275 x 170 mm)	
Stand Weight	7.9 lbs (3.6 kg)	
TV System	Tunning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	DVB-T/C (570: DVB-T/C/S, 580: DVB-T2/C), PAL, SECAM, NT4.43
	Sound	BG, DK, L/L', NICAM, MPEG1, DD, DD+, HE-AAC
Environmental Considerations	- Operating Temperature: 50°F ~ 104°F (10°C ~ 40°C) - Operating Humidity: 10% ~ 80%, non-condensing - Storage temperature: -13°F ~ 113°F (-25°C ~ 45°C) - Storage Humidity: 5% ~ 95%, non-condensing	
Audio Specifications	- MAX Internal speaker Out: Right => 10 W, Left => 10 W - BASS Control Range: -8 dB ~ +8dB - TREBLE Control Range: -8 dB ~ +8 dB - Headphone Out: 10 mW MAX - Output Frequency: RF: 80 Hz ~ 15 kHz A/V: 80 Hz ~ 20 kHz	
Note: TruSurround HD, Film Mode, Energy Saving, Anynet+, AllShare		

Model	LE19D45*G*W			
Feature				
<ul style="list-style-type: none"> ► DTV/ATV, 1-HDMI, 1-Component, 1-A/V, D-SUB, 1-SCART, 1-USB2.0 ► Brightness: 250 cd/m² ► High Contrast Ratio: 1,000:1 ► Response Time: 5 ms 				
Specifications				
Item	Description			
LCD Panel	19 inch HD			
Scanning Frequency	Horizontal: 37.13 kHz ~ 59.25 kHz (Automatic) Vertical: 47 Hz ~ 75 Hz (Automatic)			
Display Colors	16.7 M color			
Maximum Resolution	Horizontal: 1366 Pixels Vertical: 768 Pixels			
Input Signal	Analog 0.7 Vp-p ± 5% positive at 75 Ω, internally terminated			
Input Sync Signal	H/V Separate, TTL, P. or N.			
Maximum Pixel Clock Rate	90.42 MHz (Typ 72.33 MHz)			
Active Display (Horizontal / Vertical)	16.13 x 9.07 inches (409.8 (H) x 230.4 (V) mm)			
AC Power Voltage & Frequency	AC 110 V ~ 120 V, 60 Hz			
Power Consumption	Under 35 W (Under 0.3 W, Stand by)			
Set Dimensions (W x D x H)	18.8 x 6.3 x 14.0 inches (476.5 x 160.7 x 356.1 mm)_with stand			
	18.8 x 2.5 x 12.5 inches (476.5 x 63.3 x 315.7 mm)_without stand			
Set Weight	9.3 lbs (4.2 kg)_with stand			
	8.8 lbs (4.0 kg)_without stand			
Stand Dimensions (W x D x H)	12.0 x 6.3 x 2.9 inches (303.7 x 160.7 x 72.6 mm)			
Stand Weight	0.5 lbs (0.21 kg)			
TV System	Tunning	Frequency Synthesize (Refer to detailed Frequency Table)		
	System	DVB-T/C, PAL, SECAM, NT4.43		
	Sound	BG, DK, L/L', NICAM, MPEG1, DD, DD+, HE-AAC		
Environmental Considerations	<ul style="list-style-type: none"> - Operating Temperature: 50°F ~ 104°F (10°C ~ 40°C) - Operating Humidity: 10% ~ 80%, non-condensing - Storage temperature: -13°F ~ 113°F (-25°C ~ 45°C) - Storage Humidity: 5% ~ 95%, non-condensing 			
Audio Specifications	<ul style="list-style-type: none"> - MAX Internal speaker Out: Right => 3 W, Left => 3 W - BASS Control Range: -8 dB ~ +8dB - TREBLE Control Range: -8 dB ~ +8 dB - Headphone Out: 10 mW MAX - Output Frequency: RF: 80 Hz ~ 15 kHz A/V: 80 Hz ~ 20 kHz 			
Note: Dolby Digital+, Game Mode, Film Mode, Energy Saving, Anynet+				

2. Product Specifications

Model	LE22D45*G*W			
Feature				
<ul style="list-style-type: none"> ► DTV/ATV, 1-HDMI, 1-Component, 1-A/V, D-SUB, 1-SCART, 1-USB2.0 ► Brightness: 300 cd/m² ► High Contrast Ratio: 1,000:1 ► Response Time: 5 ms 				
Specifications				
Item	Description			
LCD Panel	22 inch FHD			
Scanning Frequency	Horizontal: 60 kHz ~ 73 kHz (Automatic) Vertical: 50 Hz ~ 75 Hz (Automatic)			
Display Colors	16.7 M color			
Maximum Resolution	Horizontal: 1920 Pixels Vertical: 1080 Pixels			
Input Signal	Analog 0.7 Vp-p ± 5% positive at 75 Ω, internally terminated			
Input Sync Signal	H/V Separate, TTL, P. or N.			
Maximum Pixel Clock Rate	90 MHz (Typ 72 MHz)			
Active Display (Horizontal / Vertical)	18.77 x 10.56 inches (476.64 (H) x 268.11 (V) mm)			
AC Power Voltage & Frequency	AC 110 V ~ 120 V, 60 Hz			
Power Consumption	Under 60 W (Under 0.3 W, Stand by)			
Set Dimensions (W x D x H)	21.4 x 6.8 x 15.6 inches (543.4 x 171.6 x 395.9 mm)_with stand			
	21.4 x 2.4 x 13.9 inches (543.4 x 61.9 x 353.5 mm)_without stand			
Set Weight	11.5 lbs (5.2 kg)_with stand			
	11.0 lbs (5.0 kg)_without stand			
Stand Dimensions (W x D x H)	13.8 x 6.8 x 3.0 inches (351.7 x 171.6 x 75.3 mm)			
Stand Weight	0.5 lbs (0.25 kg)			
TV System	Tunning	Frequency Synthesize (Refer to detailed Frequency Table)		
	System	DVB-T/C, PAL, SECAM, NT4.43		
	Sound	BG, DK, L/L', NICAM, MPEG1, DD, DD+, HE-AAC		
Environmental Considerations	<ul style="list-style-type: none"> - Operating Temperature: 50°F ~ 104°F (10°C ~ 40°C) - Operating Humidity: 10% ~ 80%, non-condensing - Storage temperature: -13°F ~ 113°F (-25°C ~ 45°C) - Storage Humidity: 5% ~ 95%, non-condensing 			
Audio Specifications	<ul style="list-style-type: none"> - MAX Internal speaker Out: Right => 3 W, Left => 3 W - BASS Control Range: -8 dB ~ +8dB - TREBLE Control Range: -8 dB ~ +8 dB - Headphone Out: 10 mW MAX - Output Frequency: RF: 80 Hz ~ 15 kHz A/V: 80 Hz ~ 20 kHz 			
Note: Dolby Digital+, Game Mode, Film Mode, Energy Saving, Anynet+				

Model	LE26D45*G*W			
Feature				
<ul style="list-style-type: none"> ► DTV/ATV, 2-HDMI, 1-Component, 1-A/V, D-SUB, 1-SCART, 1-USB2.0 ► Brightness: 450 cd/m² ► High Contrast Ratio: 3,000:1 ► Response Time: 6.5 ms 				
Specifications				
Item	Description			
LCD Panel	26inch HD			
Scanning Frequency	Horizontal: 43 kHz ~ 53 kHz (Automatic) Vertical: 47 Hz ~ 63 Hz (Automatic)			
Display Colors	16.7 M color			
Maximum Resolution	Horizontal: 1366 Pixels Vertical: 768 Pixels			
Input Signal	Analog 0.7 Vp-p ± 5% positive at 75 Ω, internally terminated			
Input Sync Signal	H/V Separate, TTL, P. or N.			
Maximum Pixel Clock Rate	86 MHz (Typ 80 MHz)			
Active Display (Horizontal / Vertical)	22.67 x 12.74 inches (575.769 (H) x 323.712 (V) mm)			
AC Power Voltage & Frequency	AC 110 V ~ 120 V, 60 Hz			
Power Consumption	Under 85 W (Under 0.3 W, Stand by)			
Set Dimensions (W x D x H)	26.0 x 8.7 x 19.0 inches (660.7 x 222.1 x 482.8 mm)_with stand 26.0 x 3.1 x 17.1 inches (660.7 x 78.6 x 435.0 mm)_without stand			
Set Weight	14.8 lbs (6.7 kg)_with stand 13.7 lbs (6.2 kg)_without stand			
Stand Dimensions (W x D x H)	17.2 x 8.7 x 3.2 inches (437.1 x 222.1 x 82.0 mm)			
Stand Weight	1.0 lbs (0.47 kg)			
TV System	Tunning	Frequency Synthesize (Refer to detailed Frequency Table)		
	System	DVB-T/C, PAL, SECAM, NT4.43		
	Sound	BG, DK, L/L', NICAM, MPEG1, DD, DD+, HE-AAC		
Environmental Considerations	<ul style="list-style-type: none"> - Operating Temperature: 50°F ~ 104°F (10°C ~ 40°C) - Operating Humidity: 10% ~ 80%, non-condensing - Storage temperature: -13°F ~ 113°F (-25°C ~ 45°C) - Storage Humidity: 5% ~ 95%, non-condensing 			
Audio Specifications	<ul style="list-style-type: none"> - MAX Internal speaker Out: Right => 5 W, Left => 5 W - BASS Control Range: -8 dB ~ +8dB - TREBLE Control Range: -8 dB ~ +8 dB - Headphone Out: 10 mW MAX - Output Frequency: RF: 80 Hz ~ 15 kHz A/V: 80 Hz ~ 20 kHz 			
Note: Dolby Digital+, Game Mode, Film Mode, Energy Saving, Anynet+				

2. Product Specifications

Model	LE32D45*G*W			
Feature				
<ul style="list-style-type: none"> ► DTV/ATV, 2-HDMI, 1-Component, 1-A/V, D-SUB, 1-SCART, 1-USB2.0 ► Brightness: 450 cd/m² ► High Contrast Ratio: 3,500:1 ► Response Time: 6.5 ms 				
Specifications				
Item	Description			
LCD Panel	32 inch HD			
Scanning Frequency	Horizontal: 43 kHz ~ 53 kHz (Automatic) Vertical: 47 Hz ~ 63 Hz (Automatic)			
Display Colors	16.7 M color			
Maximum Resolution	Horizontal: 1366 Pixels Vertical: 768 Pixels			
Input Signal	Analog 0.7 Vp-p ± 5% positive at 75 Ω, internally terminated			
Input Sync Signal	H/V Separate, TTL, P. or N.			
Maximum Pixel Clock Rate	86 MHz (Typ 80 MHz)			
Active Display (Horizontal / Vertical)	27.47 x 15.44 inches (697.685 (H) x 392.256 (V) mm)			
AC Power Voltage & Frequency	AC 110 V ~ 120 V, 60 Hz			
Power Consumption	Under 110 W (Under 0.3 W, Stand by)			
Set Dimensions (W x D x H)	31.3 x 9.9 x 22.5 inches (795.5 x 251.7 x 571.1 mm)_with stand EU (Press) 31.3 x 3.1 x 20.1 inches (795.5 x 77.8 x 510.3 mm)_without stand CIS (Plastic) 31.3 x 3.2 x 20.1 inches (795.5 x 80.4 x 510.3 mm)_without stand			
Set Weight	EU (Press)	24.4 lbs (11.05 kg)_with stand		
		19.4 lbs (8.8kg)_without stand		
	CIS (Plastic)	24.0 lbs (10.85 kg)_with stand		
		19.0 lbs (8.6kg)_without stand		
Stand Dimensions (W x D x H)	19.8 x 9.9 x 7.1 inches (503.7 x 251.7 x 181.6 mm)			
Stand Weight	5.0 lbs (2.25 kg)			
TV System	Tunning	Frequency Synthesize (Refer to detailed Frequency Table)		
	System	DVB-T/C, PAL, SECAM, NT4.43		
	Sound	BG, DK, L/L', NICAM, MPEG1, DD, DD+, HE-AAC		
Environmental Considerations	<ul style="list-style-type: none"> - Operating Temperature: 50°F ~ 104°F (10°C ~ 40°C) - Operating Humidity: 10% ~ 80%, non-condensing - Storage temperature: -13°F ~ 113°F (-25°C ~ 45°C) - Storage Humidity: 5% ~ 95%, non-condensing 			
Audio Specifications	<ul style="list-style-type: none"> - MAX Internal speaker Out: Right => 10 W, Left => 10 W - BASS Control Range: -8 dB ~ +8dB - TREBLE Control Range: -8 dB ~ +8 dB - Headphone Out: 10 mW MAX - Output Frequency: RF: 80 Hz ~ 15 kHz A/V: 80 Hz ~ 20 kHz 			
Note: Dolby Digital+, Game Mode, Film Mode, Energy Saving, Anynet+				

2-2. Detail Factory Option

If you replace the main board with new one, please change the factory option as well. The options you must change are "Type".

■ LD550

Model Name			LE32D55*K*W	LE37D55*K*W	LE40D55*K*W	LE46D55*K*W
Panel	Vendor	CMI / AML	AUO	SEC / AUO	SEC / CMI	
	CODE	BN07-00952A BN07-00979A	BN07-00971A	BN07-00980A BN07-00975A	BN07-00981A BN07-00954A	
	SPEC	V315H3-L02 LTF320HN01	T370HW03 VP	LTF400HM03 T400HW03 V7	LTF460HN01 V460H1-L11	
SMPS	Vendor	DYREL	DYREL	SEM	HANSOE	
	CODE	BN44-00438C	BN44-00439B	BN44-00440A	BN44-00441A	
	SPEC	I2632F1_BDY	I37F1_BDY	I40F1_BSM	I46F1_BHS	
Byte	Item	Adjustment Range	EUROPE			
1	Factory Reset	-				
2	Type	19A6TH0C/19I6TH0C/22D6TF0C/22I6TF0C/26A6AH0C/26D6AH0C/26L6AH0C/32A6AF0C/32A6AH0C/32D6AF0C/32L6AH0C/37L6AF0C/40A6AF0C/40D6AF0C/40L6AF0C/46A6AF0C/46D6AF0C/19A6TH0E/19L6TH0E/22D6TF0E/22L6TF0E/23A6TF0E/24L6TF0E/27A6TF0E/32A6AH0E/32A6UF0E/32P6AH0E/32P6UF0E/32L6UF0E/32L6AH0E/37P6UF0E/40A6UF0E/40P6UF0E/40H6UF0E/46A6UF0E/46P6UF0E	32D6AF0C 32A6AF0C	37L6AF0C	40A6AF0C 40L6AF0C	46A6AF0C 46D6AF0C
3	Local set	EU/EU_ITALY/EU_GER/EU_FRANCE/EU_BENELUX/EU_UK/EU_ARMENIA/NORDIG/AD_AU/AD_NZ/AD_SINGAPOL/CIS_RUSIA/CIS_UKRINA/CIS_KAZAKH/EU_TURKEY/EU_AFRICA/EU_MOROCO/EA_VIET/EA_THAI/EA_INA/EA_CHINA/EA_INDIA/EA_SRILANKA/EA_NEPAL/EA_BANGLA/EA_IRAN/EA_ISRAEL/EA_EGYPT/EA_LIBYA/EA_CIS/EA_M_ASIA/EA IRAQ/EA_ARAB/EA_SAUDI/EA_PAKISTAN/EA_E_ASIA/EA_AFRICA/EA_S_AFRICA/EA_MAL/EA_PHI/ED_IRAN/ED VIET/ED_INA/ED_ISRAEL	EU	EU	EU	EU
4	Model	LD400/LD450/LD480/LD550/LD570/LD580/UD4000/UD4010/UD5000/UD5500/UD5700	LD550	LD550	LD550	LD550
5	TUNER	SEC_TC/SI_TCS/SI_T2/SEC_ATC	SEC_TC	SEC_TC	SEC_TC	SEC_TC
6	Ch Table	PBA/SUWON/SESK/SEH/SERK/SDMA_AU/SDMA_NZ/SDMA_SG/SEIN/SAVINA/SIEL_C/SIEL_N/TTSEC/TSED/TSE/IRAN/SESK-T2/SUWON-T2/INL	-	-	-	-
7	Front Color	L-S-R-BK/L-T-C-BK/U-S-BK/U-T-R-BK/U-T-C-BK	L-T-C-BK	L-T-C-BK	L-T-C-BK	L-T-C-BK

■ LD570

Model Name			LE32D57*K*S	LE37D57*K*S	LE40D57*K*S	LE46D57*K*S
Panel	Vendor	CMI / AML	AUO	SEC / AUO	SEC / CMI	
	CODE	BN07-00952A BN07-00979A	BN07-00971A	BN07-00980A BN07-00975A	BN07-00981A BN07-00954A	
	SPEC	V315H3-L02 LTF320HN01	T370HW03 VP	LTF400HM03 T400HW03 V7	LTF460HN01 V460H1-L11	
SMPS	Vendor	DYREL	DYREL	SEM	HANSOE	
	CODE	BN44-00438C	BN44-00439B	BN44-00440A	BN44-00441A	
	SPEC	I2632F1_BDY	I37F1_BDY	I40F1_BSM	I46F1_BHS	
Byte	Item	Adjustment Range	EUROPE			
1	Factory Reset	-				
2	Type	19A6TH0C/19I6TH0C/22D6TF0C/ 22I6TF0C/26A6AH0C/26D6AH0C/ 26L6AH0C/32A6AF0C/32A6AH0C/ 32D6AF0C/32L6AH0C/37L6AF0C/ 40A6AF0C/40D6AF0C/40L6AF0C/ 46A6AF0C/46D6AF0C/19A6TH0E/ 19L6TH0E/22D6TF0E/22L6TF0E/2 3A6TF0E/24L6TF0E/27A6TF0E/32 A6AH0E/32A6UF0E/32P6AH0E/32 P6UF0E/32L6UF0E/32L6AH0E/37 P6UF0E/40A6UF0E/40P6UF0E/40 H6UF0E/46A6UF0E/46P6UF0E	32D6AFOC 32A6AFOC	37L6AFOC	40A6AFOC 40L6AFOC	46A6AFOC 46D6AFOC
3	Local set	EU/EU_ITALY/EU_GER/ EU_FRANCE/EU_BENELUX/ EU_UK/EU_ARMENIA/NORDIG/ AD_AU/AD_NZ/AD_SINGAPOL/ CIS_RUSIA/CIS_UKRINA/ CIS_KAZAKH/EU_TURKEY/ EU_AFRICA/EU_MOROCO/ EA_VIET/EA_THAI/EA_INA/EA_ CHINA/EA_INDIA/EA_SRILANKA/ EA_NEPAL/EA_BANGLA/EA_ IRAN/EA_ISRAEL/EA_EGYPT/ EA_LIBYA/EA_CIS/EA_M_ASIA/ EA_IRAQ/EA_ARAB/EA_SAUDI/ EA_PAKISTAN/EA_E_ASIA/EA_ AFRICA/EA_S_AFRICA/EA_MAL/ EA_PHI/ED_IRAN/ED_VIET/ ED_INA/ED_ISRAEL	EU	EU	EU	EU
4	Model	LD400/LD450/LD480/LD550/ LD570/LD580/UD4000/UD4010/ UD5000/UD5500/UD5700	LD570	LD570	LD570	LD570
5	TUNER	SEC_TC/SI_TCS/SI_T2/SEC_ATC	SI_TCS	SI_TCS	SI_TCS	SI_TCS
6	Ch Table	PBA/SUWON/ SESK/SEH/SERK/ SDMA_AU/SDMA_NZ/SDMA_SG/ SEIN/SAVINA/SIEL_C/SIEL_N/ TTSEC/TSED/TSE/IRAN/SESK-T2/ SUWON-T2/INL	-	-	-	-
7	Front Color	L-S-R-BK/L-T-C-BK/U-S-BK/U-T-R-BK/U-T-C-BK	L-T-C-BK	L-T-C-BK	L-T-C-BK	L-T-C-BK

■ LD580

Model Name			LE32D58*K*K	LE37D58*K*K	LE40D58*K*K	LE46D58*K*K
Panel	Vendor	CMI / AML	AUO	SEC / AUO	SEC / CMI	
	CODE	BN07-00952A BN07-00979A	BN07-00971A	BN07-00980A BN07-00975A	BN07-00981A BN07-00954A	
	SPEC	V315H3-L02 LTF320HN01	T370HW03 VP	LTF400HM03 T400HW03 V7	LTF460HN01 V460H1-L11	
SMPS	Vendor	DYREL	DYREL	SEM	HANSOE	
	CODE	BN44-00438C	BN44-00439B	BN44-00440A	BN44-00441A	
	SPEC	I2632F1_BDY	I37F1_BDY	I40F1_BSM	I46F1_BHS	
Byte	Item	Adjustment Range	EUROPE			
1	Factory Reset	-				
2	Type	19A6TH0C/19I6TH0C/22D6TF0C/ 22I6TF0C/26A6AH0C/26D6AH0C/ 26L6AH0C/32A6AF0C/32A6AH0C/ 32D6AF0C/32L6AH0C/37L6AF0C/ 40A6AF0C/40D6AF0C/40L6AF0C/ 46A6AF0C/46D6AF0C/19A6TH0E/ 19L6TH0E/22D6TF0E/22L6TF0E/2 3A6TF0E/24L6TF0E/27A6TF0E/32 A6AH0E/32A6UF0E/32P6AH0E/32 P6UF0E/32L6UF0E/32L6AH0E/37 P6UF0E/40A6UF0E/40P6UF0E/40 H6UF0E/46A6UF0E/46P6UF0E	32D6AFOC 32A6AFOC	37L6AFOC	40A6AFOC 40L6AFOC	46A6AFOC 46D6AFOC
3	Local set	EU/EU_ITALY/EU_GER/ EU_FRANCE/EU_BENELUX/ EU_UK/EU_ARMENIA/NORDIG/ AD_AU/AD_NZ/AD_SINGAPOLE/ CIS_RUSIA/CIS_UKRINA/ CIS_KAZAKH/EU_TURKEY/ EU_AFRICA/EU_MOROCO/ EA_VIET/EA_THAI/EA_INA/EA_ CHINA/EA_INDIA/EA_SRILANKA/ EA_NEPAL/EA_BANGLA/EA_ IRAN/EA_ISRAEL/EA_EGYPT/ EA_LIBYA/EA_CIS/EA_M_ASIA/ EA_IRAQ/EA_ARAB/EA_SAUDI/ EA_PAKISTAN/EA_E_ASIA/EA_ AFRICA/EA_S_AFRICA/EA_MAL/ EA_PHI/ED_IRAN/ED_VIET/ ED_INA/ED_ISRAEL	EU	EU	EU	EU
4	Model	LD400/LD450/LD480/LD550/ LD570/LD580/UD4000/UD4010/ UD5000/UD5500/UD5700	LD580	LD580	LD580	LD580
5	TUNER	SEC_TC/SI_TCS/SI_T2/SEC_ATC	SI_T2	SI_T2	SI_T2	SI_T2
6	Ch Table	PBA/SUWON/SESK/SEH/SERK/ SDMA_AU/SDMA_NZ/SDMA_SG/ SEIN/SAVINA/SIEL_C/SIEL_N/ TTSEC/TSED/TSE/IRAN/ SESK-T2/SUWON-T2/INL	-	-	-	-
7	Front Color	L-S-R-BK/L-T-C-BK/U-S-BK/U-T-R-BK/U-T-C-BK	L-T-C-BK	L-T-C-BK	L-T-C-BK	L-T-C-BK

2. Product Specifications

■ LD450

Model Name			LE19D45*G*W	LE22D45*G*W	LE26D45*G*W	LE32D45*G*W
Panel	Vendor	SEC	CPT	AUO	AUO	
	CODE	BN07-00703A	BN07-00682A BN07-01035A	BN07-00967A BN07-00985A	BN07-00968A BN07-00978A	
	SPEC	LTM185AT01-V	CLAA215FA01 CLAA215FA01-D	T260XW04 V8 LTF260AP05	T315XW03 VD LTF320AP11	
SMPS	Vendor	POWER	SEM	DYREL	SEM	
	CODE	BN44-00436A	BN44-00437A BN44-00437A	BN44-00438C	BN44-00438A	
	SPEC	I19HD_BPN	I22HD_BSM	I2632F1_BDY	I2632F1_BSM	
Byte	Item	Adjustment Range	EUROPE			
1	Factory Reset	-				
2	Type	19A6TH0C/19I6TH0C/22D6TF0C/22I6TF0C/26A6AH0C/26D6AH0C/26L6AH0C/32A6AF0C/32A6AH0C/32D6AF0C/32L6AH0C/37L6AF0C/40A6AF0C/40D6AF0C/40L6AF0C/46A6AF0C/46D6AF0C/19A6TH0E/19L6TH0E/22D6TF0E/22I6TF0E/23A6TF0E/24L6TF0E/27A6TF0E/32A6AH0E/32A6UF0E/32P6AH0E/32P6UF0E/32L6UF0E/32L6AH0E/37P6UF0E/40A6UF0E/40P6UF0E/40H6UF0E/46A6UF0E/46P6UF0E	19A6TH0C	22I6TF0C 22I6TF1C	26L6AH0C 26A6AH0C	32A6AH0C
3	Local set	EU/EU_ITALY/EU_GER/EU_FRANCE/EU_BENELUX/EU_UK/EU_ARMENIA/NORDIG/AD_AU/AD_NZ/AD_SINGAPOL/CIS_RUSIA/CIS_UKRINA/CIS_KAZAKH/EU_TURKEY/EU_AFRICA/EU_MOROCO/EA_VIET/EA_THAI/EA_INA/EA_CHINA/EA_INDIA/EA_SRILANKA/EA_NEPAL/EA_BANGLA/EA_IRAN/EA_ISRAEL/EA_EGYPT/EA_LIBYA/EA_CIS/EA_M_ASIA/EA_IRAQ/EA_ARAB/EA_SAUDI/EA_PAKISTAN/EA_E_ASIA/EA_AFRICA/EA_S_ASIA/EA_MAL/EA_PHI/ED_IRAN/ED_VIET/ED_INA/ED_ISRAEL	EU	EU	EU	EU
4	Model	LD400/LD450/LD480/LD550/LD570/LD580/UD4000/UD4010/UD5000/UD5500/UD5700	LD450	LD450	LD450	LD450
5	TUNER	SEC_TC/SI_TCS/SI_T2/SEC_ATC	SEC_TC	SEC_TC	SEC_TC	SEC_TC
6	Ch Table	PBA/SUWON/SESK/SEH/SERK/SDMA_AU/SDMA_NZ/SDMA_SG/SEINSAVINA/SIEL_C/SIEL_N/TTSEC/TSED/TSE/IRAN/SESK-T2/SUWON-T2/INL	-	-	-	-
7	Front Color	L-S-R-BK/L-T-C-BK/U-S-BK/U-T-R-BK/U-T-C-BK	L-S-R-BK	L-S-R-BK	L-S-R-BK	L-S-R-BK

2-3. Specification Comparison to Old Models

■ LD550 / LD570 / LD580

* O: application, X: non-application

Model	D550 / D570 / D580 (LE**D5**)		C550 (LE**C55***)	
Design				
Display Type	LCD TV		LCD TV	
Built-in Tuner	O		O	
Resolution	1920 x 1080		1920 x 1080	
LCD Panel	TFT LCD Panel 60 Hz		TFT LCD Panel 60 Hz	
Screen Size	32" / 37" / 40" / 46"		32" / 37" / 40" / 46"	
Picture ratio	16: 9		16: 9	
Dimensions (W x D x H)	32"	35.6 x 9.4 x 22.2 inches_with stand	32"	31.2 x 9.4 x 21.9 inches_with stand
	37"	36.4 x 10.0 x 24.8 inches_with stand	37"	35.9 x 10.0 x 25.5 inches_with stand
	40"	39.1 x 10.0 x 26.3 inches_with stand	40"	38.6 x 10.0 x 26.0 inches_with stand
	46"	44.3 x 10.8 x 29.2 inches_with stand	46"	43.8 x 10.8 x 29.0 inches_with stand
Weight	32"	EU: 26.5 lbs with stand	32"	25.35 lbs_with stand
		CIS: 26.0 lbs with stand		
	37"	34.8 lbs_with stand	37"	32.85lbs_with stand
	40"	36.4 lbs_with stand	40"	40.12lbs_with stand
	46"	47.8 lbs_with stand	46"	47.84lbs_with stand
Dynamic Contrast Ratio	High Contrast		High Contrast	
Picture Engine	HyperReal Engine		HyperReal Engine	
Equalizer	O		O	
Auto Volume Control	O		O	
Sound System	Dolby Digital+ / SRS TheaterSound HD		Dolby Digital+ / DNSe or Virtual Surroun	
Speaker Output	10 W + 10 W		10 W + 10 W	
PIP	O		O	
Double Window	X		X	
TTX	O		O	
Entertainment Mode	O (PC mode)		X	
Game Mode	O		O	
Energy Saving	O		O	
Anynet+	O		O	
AllShare	O		O	
Antenna	550/580	1 (Cable/Air)	550/580	1 (Cable/Air)
	570	1 (Cable/Air), 1 (Satellite)	570	1 (Cable/Air), 1 (Satellite)

2. Product Specifications

■ LD450

* O: application, X: non-application

Model	D450 (LE**D45*)		C450 (LE**C45*)	
Design				
Display Type	LCD TV		LCD TV	
Built-in Tuner	O		O	
Resolution	1366 X 768 (22": 1920 X 1080)		1366 X 768	
LCD Panel	TFT LCD Panel 60 Hz		TFT LCD Panel 60 Hz	
Screen Size	19" / 22" / 26" / 32"		19" / 22" / 26" / 32"	
Picture Ratio	16: 9		16: 9	
Dimensions (W x D x H)	19"	18.8 x 6.3 x 14.0 inches_with stand	19"	18.2 x 7.1 x 13.7 inches_with stand
	22"	21.4 x 6.8 x 15.6 inches_with stand	22"	21.0 x 6.8 x 15.9 inches_with stand
	26"	26.0 x 8.7 x 19.0 inches _with stand	26"	25.5 x 8.8 x 17.0 inches _with stand
	32"	31.3 x 9.9 x 22.5 inches _with stand	32"	26.0 x 9.7 x 22.8 inches _with stand
Weight	19"	9.3 lbs_with stand	19"	9.92 lbs_with stand
	22"	11.5 lbs_lbs_with stand	22"	11.99 lbs_with stand
	26"	14.8 lbs_with stand	26"	14.66 lbs_with stand
	32" EU	24.4 lbs_with stand	32"	20.30 lbs_with stand
	32" CIS	24.0 lbs_with stand		
Dynamic Contrast Ratio	High Contrast		High Contrast	
Picture Engine	HyperReal Engine		No (SETD-10)	
Equalizer	O		O	
Auto Volume Control	O		O	
Sound System	Dolby Digital+ / SRS TheaterSound HD		Dolby Digital+ / DNSe or Virtual Surround	
Speaker Output	19"/22"	3 W + 3 W	19"/22"	3 W + 3 W
	26"	5 W + 5 W	26"	5 W + 5 W
	32"	10 W + 10 W	32"	10 W + 10 W
PIP	O		O	
Double Window	X		X	
TTX	O		O	
Entertainment Mode	O (PC mode)		X	
Game Mode	O		O	
Energy Saving	O		O	
Anynet+	O		O	
Antenna	1 (Cable/Air)		1 (Cable/Air)	

2-4. New Features Explanation

2-4-1. Anynet+

■ What is Anynet+?

Anynet+ is a function that enables you to control all connected Samsung devices that support Anynet+ with your Samsung TV's remote. The Anynet+ system can be used only with Samsung devices that have the Anynet+ feature. To be sure your Samsung device has this feature, check if there is an Anynet+ logo on it.

 For the method of connecting external devices, refer to the supported user manual.

* NOTE

- Connect the Optical cable between the DIGITAL AUDIO OUT (OPTICAL) jack on your TV and the Digital Audio Input on the Home Theatre.
- When following the connection above, the Optical jack only outputs 2 channel audio. You will only hear sound from the Home Theatre's Front Left and Right speakers and the subwoofer. If you want to hear 5.1 channel audio, connect the DIGITAL AUDIO OUT (OPTICAL) jack on the DVD / Satellite Box (i.e. Anynet Device 1 or 2) directly to the Amplifier or Home Theatre, not the TV.
- You can connect only one Home Theatre.
- You can connect an Anynet+ device using the HDMI cable. Some HDMI cables may not support Anynet+ functions.
- Anynet+ works when the AV device supporting Anynet+ is in the standby or on status.
- Anynet+ supports up to 12 AV devices in total. Note that you can connect up to 3 devices of the same type.

■ Anynet+ Menu

The Anynet+ menu changes depending on the type and status of the Anynet+ devices connected to the TV.

Anynet+ Menu	Description
View TV	Changes Anynet+ mode to TV broadcast mode.
Device List	Shows the Anynet+ device list.
(device_name) MENU	Shows the connected device menus. E.g. If a DVD recorder is connected, the disc menu of the DVD recorder will appear.
(device_name) TOOLS	Shows the play menu of the connected device. E.g. If a DVD recorder is connected, the play menu of the DVD recorder will appear.
(device_name) Title Menu	Shows the title menu of the connected device. E.g. If a DVD recorder is connected, the title menu of the DVD recorder will appear.  Depending on the device, this menu may not be available.
Recording: (*recorder)	Starts recording immediately using the recorder. (This is only available for devices that support the recording function.)
Stop Recording: (*recorder)	Stops recording.
Receiver	Sound is played through the receiver.

If more than one recording device is connected, they are displayed as (*recorder) and if only one recording device is connected, it will be represented as (*device_name).

■ Setting Up Anynet+

- ▶ Anynet+ (HDMI-CEC)
- Anynet+ (HDMI-CEC) (Off / On): To use the Anynet+ Function, Anynet+ (HDMI-CEC) must be set to On.
 When the Anynet+ (HDMI-CEC) function is disabled, all the Anynet+ related operations are deactivated.
- Auto Turn Off (No / Yes): Setting an Anynet+ Device to turn off automatically when the TV is turned off.
 If Auto Turn Off is set to Yes, running external devices will turn off at the same time as the TV powers off. However, a device may not turn off if recording is in progress.
 May not be enabled depending on the device.

■ Switching Between Anynet+ Devices

1. Press the "TOOLS" button, then select Anynet+ (HDMI-CEC).
2. Anynet+ devices connected to the TV are listed in Device List.
 - If you cannot find a device you want, press the "**A**" button to refresh the list.
3. Select a device and press the "ENTER " button. You can switch to the selected device.
 - Only when you set Anynet+ (HDMI-CEC) to On in the System menu, the Device List menu appears.
 - Switching to the selected device may take up to 2 minutes. You cannot cancel the operation during the switching operation.
 - If you have selected external input mode by pressing the "SOURCE" button, you cannot use the Anynet+ function. Make sure to switch to an Anynet+ device by using the Device List.

■ Recording

You can make a recording of a TV Programme using a Samsung recorder.

1. Select Recording.
 - When there are more than two recording devices
 - When multiple recording devices are connected, the recording devices are listed. Select one recording device in the Device List.
 - When the recording device is not displayed, select Device List and press the "**A**" button to search devices.
2. Press the "EXIT" button to exit.
 - You can record the source streams by selecting Recording: (device_name).
 - Pressing the " (REC)" button will record whatever you are currently watching. If you are watching video from another device, the video from the device is recorded.
 - Before recording, check whether the antenna jack is properly connected to the recording device. To properly connect an antenna to a recording device, refer to the recording device's users manual.

■ Listening Through a Receiver

You can listen to sound through a receiver (i.e Home Theatre) instead of the TV speaker.

1. Select Receiver and set to On.
2. Press the "EXIT" button to exit.
 - If your receiver supports audio only, it may not appear in the device list.
 - The receiver will work when you have properly connected the optical in jack of the receiver to the DIGITAL AUDIO OUT (OPTICAL) jack of the TV.
 - When the receiver (i.e Home Theatre) is set to On, you can hear sound output from the TV's Optical Jack. When the TV is displaying a DTV (air) signal, the TV will send out 5.1 channel sound to the receiver. When the source is a digital component such as a DVD and is connected to the TV via HDMI, only 2 channel sound will be heard from the receiver.

* NOTE

- You can only control Anynet+ devices using the TV remote control, not the buttons on the TV.
- The TV remote control may not work under certain conditions. If this occurs, reselect the Anynet+ device.
- The Anynet+ functions do not operate with other manufacturers' products.

■ Troubleshooting for Anynet+

Problem	Possible Solution
Anynet+ does not work.	<ul style="list-style-type: none"> Check if the device is an Anynet+ device. The Anynet+ system supports Anynet+ devices only. Only one receiver (home theatre) can be connected. Check if the Anynet+ device power cord is properly connected. Check the Anynet+ device's Video/Audio/HDMI cable connections. Check whether Anynet+ (HDMI-CEC) is set to On in the System menu.
Anynet+ does not work.	<ul style="list-style-type: none"> Check whether the TV remote control is in TV mode. Check whether the remote control is Anynet+ compatible. Anynet+ does not work in certain situations. (Searching channels, operating My Downloads or Plug & Play (initial setup), etc.) When connecting or removing the HDMI cable, please make sure to search devices again or turn your TV off and on again. Check if the Anynet+ Function of Anynet+ device is set on.
I want to start Anynet+.	<ul style="list-style-type: none"> Check if the Anynet+ device is properly connected to the TV and check if the Anynet+(HDMI-CEC) is set to On in the System menu. Press the "TOOLS" button to display the Anynet+ menu and select a menu you want.
I want to exit Anynet+.	<ul style="list-style-type: none"> Select View TV in the Anynet+ menu. Press the "SOURCE" button on the TV remote control and select a device other than Anynet+ devices. Press \wedge CH \vee, CH LIST , PRE-CH, and FAV.CH to change the TV mode. (Note that the "Channel" button operates only when a tuner-embedded Anynet+ device is not connected.)
The message "Connecting to Anynet+ device..." appears on the screen.	<ul style="list-style-type: none"> You cannot use the remote control when you are configuring Anynet+ or switching to a view mode. Use the remote control when the Anynet+ setting or switching to view mode is complete.
The Anynet+ device does not play.	<ul style="list-style-type: none"> You cannot use the play function when Plug & Play (initial setup) is in progress.
The connected device is not displayed.	<ul style="list-style-type: none"> Check whether or not the device supports Anynet+ functions. Check whether or not the HDMI cable is properly connected. Check whether Anynet+ (HDMI-CEC) is set to On in the System menu. Search Anynet+ devices again. You can connect an Anynet+ device using the HDMI cable only. Some HDMI cables may not support Anynet+ functions. If it is terminated by an abnormal situation such as disconnecting the HDMI cable or power cord or a power failure, please repeat the device scan.
The TV Programme cannot be recorded.	<ul style="list-style-type: none"> Check whether the antenna jack on the recording device is properly connected.
The TV sound is not output through the receiver.	<ul style="list-style-type: none"> Connect the optical cable between TV and the receiver.

2-4-2. Using the My Downloads

■ Using the My Downloads

Enjoy photos, music and/or movie files saved on a USB Mass Storage Class (MSC) device and/or your PC.

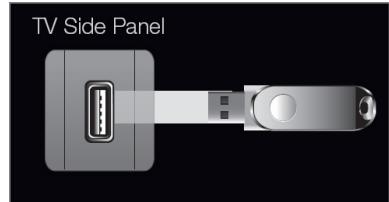
1. Press the "CONTENT" button to select My Downloads.
2. Press "**▲/▼**" button to select desired menu (Videos, Photos, Music), then press the "ENTER **▶**" button.



* It may differ depending on the model.

■ Connecting a USB Device

1. Turn on your TV.
2. Connect a USB device containing photo, music and/or movie files to the USB jack on the side of the TV.
3. When USB is connected to the TV, popup window appears. Then you can select Connected Device.



* It may differ depending on the model.

It might not work properly with unlicensed multimedia files.

Need-to-Know List before using My Downloads

- MTP (Media Transfer Protocol) is not supported.
- The file system supports FAT16, FAT32 and NTFS.
- Certain types of USB Digital camera and audio devices may not be compatible with this TV.
- My Downloads only supports USB Mass Storage Class (MSC) devices. MSC is a Mass Storage Class Bulk-Only Transport device. Examples of MSC are Thumb drives, Flash Card Readers and USB HDD (USB HUB are not supported). Devices should be connected directly to the TV's USB port.
- Before connecting your device to the TV, please back up your files to prevent them from damage or loss of data. SAMSUNG is not responsible for any data file damage or data loss.
- USB (HDD) is not supported. (for LCD 450 series)
- Connect a USB HDD to the dedicated port, USB 1 (HDD) port. (for LCD 550 series and above)
- Do not disconnect the USB device while it is loading.
- The higher the resolution of the image, the longer it takes to display on the screen.
- The maximum supported JPEG resolution is 15360 X 8640 pixels.
- For unsupported or corrupted files, the "Not Supported File Format" message is displayed.
- If the files are sorted by Folder View, up to 1000 files can be displayed in each folder.
- MP3 files with DRM that have been downloaded from a non-free site cannot be played. Digital Rights Management (DRM) is a technology that supports the creation, distribution and management of the content in an integrated and comprehensive way, including the protection of the rights and interests of the content providers, the prevention of the illegal copying of contents, as well as managing billings and settlements.
- If more than 2 PTP devices are connected, you can only use one at a time.
- If more than two MSC devices are connected, some of them may not be recognized. A USB device that requires high power (more than 500 mA or 5 V) may not be supported.
- If an over-power warning message is displayed while you are connecting or using a USB device, the device may not be recognized or may malfunction.
- If the TV has been no input during time set in Auto Protection Time, the Screensaver will run.
- The power-saving mode of some external hard disk drives may be released automatically when connected to the TV.
- If a USB extension cable is used, the USB device may not be recognized or the files on the device may not be read.
- If a USB device connected to the TV is not recognized, the list of files on the device is corrupted or a file in the list is not played, connect the USB device to the PC, format the device and check the connection.
- If a file deleted from the PC is still found when My Downloads is run, use the "Empty the Recycle Bin" function on the PC to permanently delete the file.

■ Connecting to the PC through network

You can play pictures, music and videos saved on your PC or on your TV through a network connection in the My Downloads mode.

If you want to use My Downloads to play files saved on your PC over your TV, you should download "PC Share Manager" and users manual from "www.samsung.com".

1. For more information on how to configure your network, refer to 'Network Connection'.

- You are recommended to locate both TV and PC in same subnet. The first 3 parts of the subnet address of the TV and the PC IP addresses should be the same and only the last part (the host address) should be changed. (e.g. IP Address: 123.456.789.**)

2. Using a LAN cable, connect between the external modem and the PC onto which the Samsung PC Share Manager programme will be installed.

- You can connect the TV to the PC directly without connecting it through a Sharer (Router).

Functions that are not supported when connecting to a PC through a network:

- The Background Music and Background Music Setting functions.
- The " (REW)" or " (FF)" button while a movie is playing.

The Divx DRM, Multi-audio, embedded caption does not support.

Samsung PC Share manager should be permitted by the firewall programme on your PC.

When you use My Downloads mode through a network connection, according to functions of the provided server:

- The sorting method may vary.
- The " (REW)", " (FF)" or " (Pause)" buttons may not work depending on the content information.

If you experience any file stuttering issue while playing a video over a wireless network, we recommend using a wired network.

■ Screen Display

Move to the desired file using the "///" buttons and then press the "ENTER " or " (Play)" button. The file is played.

My Downloads screen may differ depending on the way to enter the screen.



2. Product Specifications

■ Videos

▶ Playing Video

1. Press the "◀/▶/▲/▼" button to select the desired video in the file list.
2. Press "ENTER □" button or "▶ (Play)" button.
 - The selected file name is displayed on the top with its playing time.
 - If video time information is unknown, play time and progress bar are not displayed.
 - During video playback, you can search using "◀" and "▶" button.
 - You can use "◀◀ (REW)" and "▶▶ (FF)" buttons during playback.



In this mode, you can enjoy movie clips contained on a Game, but you cannot play the Game itself.

▶ Supported Subtitle Formats

Name	File extension	Format
MPEG-4 time-based text	.txt	XML
SAMI	.smi	HTML
SubRip	.srt	string-based
SubViewer	.sub	string-based
Micro DVD	.sub or .txt	string-based

▶ Supported Video Formats

File Extension	Container	Video Codec	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec
*.avi *.mkv	AVI MKV	Divx 3.11/4.x/5.1/6.0	1920 x 1080	6 ~ 30	8	MP3/AC3/LPCM /ADPCM/DTS Core
		XviD	1920 x 1080	6 ~ 30	8	
		H.264 BP/MP/HP	1920 x 1080	6 ~ 30	25	
		MPEG4 SP/ASP	1920 x 1080	6 ~ 30	8	
		Motion JPEG	640 x 480	6 ~ 30	8	
*.asf	ASF	Divx 3.11/4.x/5.1/6.0	1920 x 1080	6 ~ 30	8	MP3/AC3/LPCM/ ADPCM/WMA
		XviD	1920 x 1080	6 ~ 30	8	
		H.264 BP/MP/HP	1920 x 1080	6 ~ 30	25	
		MPEG4 SP/ASP	1920 x 1080	6 ~ 30	8	
		Motion JPEG	640 x 480	6 ~ 30	8	
*.wmv	ASF	Window Media Video v9	1920 x 1080	6 ~ 30	25	WMA
*.mp4	MP4	H.264 BP/MP/HP	1920 x 1080	6 ~ 30	25	MP3/ADPCM/AAC
		MPEG4 SP/ASP	1920 x 1080	6 ~ 30	8	
		XVID	1920 x 1080	6 ~ 30	8	
*.3gp	3GPP	H.264 BP/MP/HP	1920 x 1080	6 ~ 30	25	ADPCM/AAC/HE- AAC
		MPEG4 SP/ASP	1920 x 1080	6 ~ 30	8	
*.vro	VRO VOB	MPEG2	1920 x 1080	24/25/30	30	AC3/MPEG/LPCM
		MPEG1	1920 x 1080	24/25/30	30	
" *.mpg *.mpeg "	PS	MPEG1	1920 x 1080	24/25/30	30	AC3/MPEG/LPCM/ AAC
		MPEG2	1920 x 1080	24/25/30	30	
		H.264	1920 x 1080	6 ~ 30	25	
*.ts *.tp *.trp	TS	MPEG2	1920 x 1080	24/25/30	30	AC3/AAC/MP3/DD+/ HE-AAC
		H.264	1920 x 1080	6 ~ 30	25	
		VC1	1920 x 1080	6 ~ 30	25	

■ Other Restrictions

※ NOTE

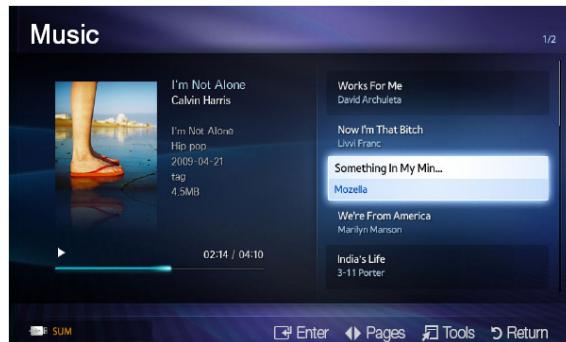
- If there are problems with the contents of a codec, the codec will not be supported.
- If the information for a Container is incorrect and the file is in error, the Container will not be able to play correctly.
- Sound or video may not work if the contents have a standard bit rate/frame rate above the compatible Frame/sec listed in the table above.
- If the Index Table is in error, the Seek (Jump) function is not supported.
- When playing the video through network, it may not work depending on the network status.(for LCD 550 series and above)
- The menu can be displayed late if the video is over 10Mbps(bit rate).
- Some USB/digital camera devices may not be compatible with the player.

Video Decoder	Audio Decoder
<ul style="list-style-type: none"> • Supports up to H.264, Level 4.1 • H.264 FMO / ASO / RS, VC1 SP / MP / AP L4 and AVCHD are not supported. • XVID, MPEG4 SP, ASP: <ul style="list-style-type: none"> - Below 1280 x 720: 60 frame max - Above 1280 x 720: 30 frame max • GMC is not support. 	<ul style="list-style-type: none"> • Supports up to WMA 7, 8, 9, STD, 9 PRO • WMA Lossless, Voice Lossless, Voice is not supported. • WMA sampling rate 22050Hz mono is not supported.

■ Music

▶ Playing Music

1. Press the "◀/▶/▲/▼" button to select the desired Music in the file list.
2. Press "ENTER □" button or "▶(Play)" button.
 - You can use "◀(REW)" and "▶(FF)" buttons during playback.



- ▣ Only displays the files with MP3 and PCM file extension. Other file extensions are not displayed, even if they are saved on the same USB device.
- ▣ If the sound is abnormal when playing MP3 files, adjust the Equalizer in the Sound menu. (An over-modulated MP3 file may cause a sound problem.)

▶ Playing selected music

1. Press the "C(Edit Mode)" button.
2. Select the desired music.
 - The check box appears to the left of the selected files.
3. Press the "TOOLS" button and select Play Selected Contents.
 - You can select or deselect all music pressing the Select All / Deselect All.

■ Photos

► Viewing a Photo (or Slide Show)

1. Press the "◀/▶/▲/▼" button to select the desired photo in the file list.
2. Press "ENTER" button or "▶(Play)" button.
 - When a selected photo is displayed, press the "ENTER" button to start the slide show.
 - If video time information is unknown, play time and progress bar are not displayed.
 - During the slide show, all files in the file list will be displayed in order.
 - When you press the "▶(Play)" button in the file list, slide show will be started immediately



Music files can be automatically played during the Slide Show if the Background Music is set to On.

■ My Downloads - Additional Functions

► Videos/Music/Photos Play Option menu

Category	Operation	Videos	Music	Photos
Title	You can move the other file directly.	✓		
Time Search	You can search the video using "◀" and "▶" button at one minute interval or entering the number directly.	✓		
Shuffle Mode	You can play the music randomly.		✓	
Repeat Mode	You can play movie and music files repeatedly.	✓	✓	
Picture Size	You can adjust the picture size to your preference.	✓		
Picture Mode	You can adjust the picture setting.	✓		✓
SRS TheaterSound	You can adjust the sound setting.	✓	✓	✓
Subtitle Language	You can enjoy video in one of supported languages as required. The function is only enabled when stream-type files which support multiple audio formats are played.	✓		
Subtitle Setting	You can play the video with Subtitles. This function only works if the subtitles are the same file name as the video.	✓		
Start Slide Show/ Pause Slide Show	You can start or pause a Slide Show.			✓
Slide Show Speed	You can select the slide show speed during the slide show.			✓
Background Music	You can on/off background music when watching a Slide Show.			✓
Background Music Setting	You can select background music when watching a Slide Show.			✓
Zoom	You can zoom into images in full screen mode.			✓
Rotate	You can rotate images in full screen mode.			✓
Information	You can see detailed information about the played file.	✓	✓	✓

2-4-3. E-Manual

■ How to View the E-Manual



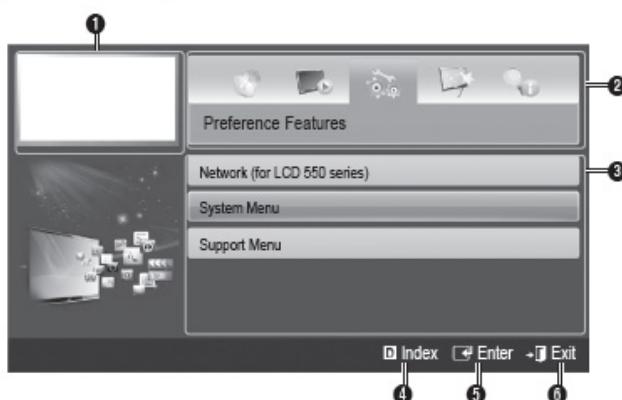
Press the **E-MANUAL** button on your remote. Move the cursor using up/down/right/left buttons to highlight a category, then a topic, and then press the **ENTER** button. The e-Manual displays page you want to see.

MENU → **Support** → **e-Manual** → **ENTER**

If you want to return to e-manual, press the **E-MANUAL** button on remote.

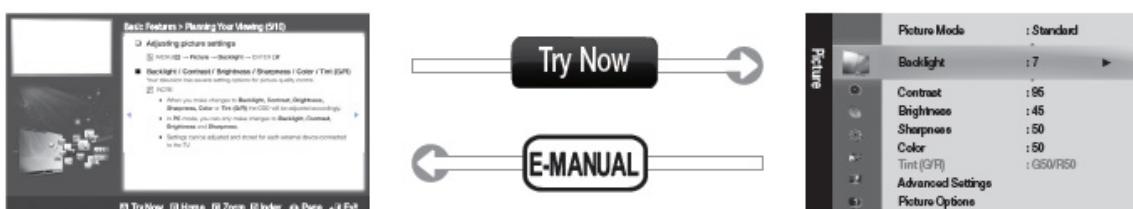
It is not available to connect Try now directly in the external input source.

Screen Display



- ① Currently displayed video, TV program, etc.
- ② The category list. Press **◀** or **▶** button to select category you want.
- ③ Displays the sub-menu list. Use the arrow buttons on your remote to move the cursor. Press **ENTER** button to select the sub-menu you want.
- ④ **Index:** Displays the index screen.
- ⑤ **Enter:** Selects a category or sub-menu.
- ⑥ **Exit:** Exit the e-Manual.

How to toggle between an e-Manual topic and the corresponding OSD menu(s).



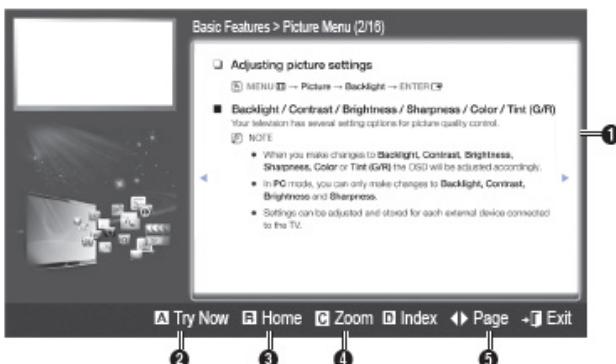
Method 1

1. If you want to use the menu that corresponds to an e-Manual topic, press the red button to select **Try Now**.
2. To return to the e-Manual screen, press the **E-MANUAL** button.

Method 2

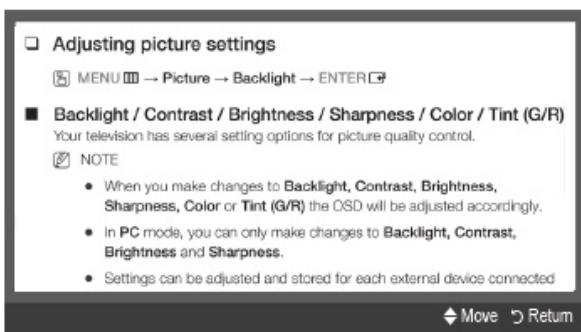
1. Press the **ENTER** button when a topic is displayed. "Are you sure?" appears. Select **Yes**, and then press the **ENTER** button. The OSD window appears.
2. To return to the e-Manual screen, press the **E-MANUAL** button.

Viewing the Contents



- ① **Contents Area:** Contains the topic contents, if you selected a sub-menu. To move previous or next page, press the **◀ / ▶** button.
- ② **Try Now:** Displays the OSD menu that corresponds to the topic. To return to the e-Manual screen, press the **e-Manual** button.
- ③ **Home:** Moves to the **e-Manual** home screen.
- ④ **Zoom:** Magnifies a screen. You can scroll through the magnified screen by using **▲ / ▼** buttons.
- ⑤ **◀ (Page):** Moves to previous or next page.

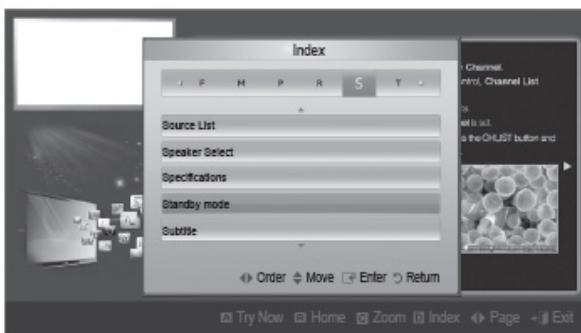
Using the Zoom mode



Select the **Zoom**, and then press **ENTER** to magnify the screen. You can scroll through the magnified screen by using the **▲** or **▼** buttons.

To return to the screen to normal size, press the **RETURN** button.

How to search for a topic on the index page



1. To search for a topic, press the left or right arrow button to select a letter, and then press **ENTER**. The Index displays a list of topics and keywords that begin with the letter you selected.
2. Press the up or down arrow button to select a topic or keyword, and then press the **ENTER** button.
3. The e-Manual page with the topic appears.

To close the **Index** screen, press the **RETURN** button.

2-4-4. AllShare

■ About AllShare™ (for LCD 550 Series and Above)

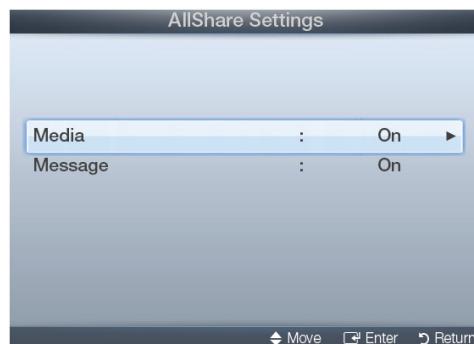
AllShare™ connects your TV and compatible Samsung mobile phones / devices through a network. On your TV, you can view call arrivals, SMS messages set on your mobile phones. In addition, you can play media contents including videos, photos and music saved on your mobile phones or the other devices (such as your PC) by controlling them on the TV via the network. Additionally, you can use your TV for browsing web pages in your mobile phones.

-  For more information, visit "www.samsung.com" or contact the Samsung call centre. Mobile devices may need additional software installation. For details, refer to each device's user's guide.

■ Setting Up AllShare™

▶ AllShare Settings

- Media (On / Off): Enables or disables the media function. When the media function is on, Media contents play can be controlled by mobile phones or other devices that support DLNA DMC.
- Message (On / Off): Enables or disables the message function (for call arrivals, SMS messages set on your mobile phones).



▶ Media / Message

Shows a list of mobile phones or connected devices which have been set up with this TV for using the Media or Message function.

-  The Media function is available in all devices which support DLNA DMC.
 - Allow / Deny: Allows/Blocks the devices.
 - **A Delete:** Deletes the devices from the list.
 - This function only deletes the name of the devices from the list. If the deleted device is turned on or tries to connect to the TV, it may appear on the list again.

■ Using the Media Function

You can play media contents including videos, photos and music saved on your mobile phones or the other devices (such as your PC) by controlling them on the TV via the network.

- To turn off the media contents transmission from the devices, set Media to Off in the AllShare Settings.
- Contents may not be played on your TV depending on their resolution and format.
- The "ENTER" and "◀ / ▶" buttons may not work depending on the type of media content.
- Using the devices, you can control the media playing. For details, refer to each device's user's guide.

■ Using the Message Function

You can view call arrivals, SMS messages set on the mobile phone through the alarm window while watching TV.

* NOTE

- To disable the alarm window, set Message to Off in the AllShare Settings.
- If OK is selected, or if OK is not selected after the message has appeared once, the message will be deleted. The message is not deleted from the mobile phone.
- When a message from an unknown mobile phone is displayed, select the mobile phone on the message menu in AllShare Settings and select Deny to block the phone.

■ Message View

If a new SMS message arrives while you are watching TV, the alarm window appears. If you click the "OK" button, the contents of the message are displayed.

- ☒ You can configure the viewing settings for SMS messages on your mobile phones. For the procedures, refer to the mobile phone manual.
- ☒ Some types of characters may be displayed as blank or broken characters.

■ Call Arrival Alarm

If a call arrives while you are watching TV, the alarm window appears.

■ Schedule Alarm

While you are watching TV, the alarm window appears to display the registered event.

■ Using the Message Function

- ☒ You can configure viewing settings for schedule contents on your mobile phones. For the procedures, refer to the mobile phone manual.
- ☒ Some special characters may be displayed as blank or broken characters.

You can view call arrivals, SMS messages set on the mobile phone through the alarm window while watching TV.

The index page of the Teletext service gives you information on how to use the service. For Teletext information to be displayed correctly, channel reception must be stable. Otherwise, information may be missing or some pages may not be displayed.

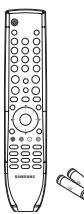
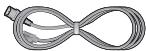
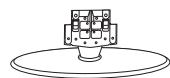
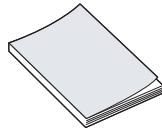
You can change Teletext pages by pressing the numeric buttons on the remote control.

- (mode): Selects the Teletext mode (LIST/FLOF). If pressed during LIST mode, switches the mode to List save mode. In List save mode, you can save a Teletext page into a list using the "8(store)" button.
- / (Teletext on/mix/off): Activates the Teletext mode for the current channel. Press the button twice to overlap the Teletext mode with the current broadcasting screen. Press it one more time to exit teletext.
- (sub-page): Displays the available sub-page.
- (store): Stores the Teletext pages.
- (index): Displays the index (contents) page at any time while you are viewing Teletext.
- (size): Displays the teletext on the upper half of the screen in double-size. To move the text to the lower half of the screen, press it again. For normal display, press it once again.
- (hold): Holds the display at the current page, in the case that there are several secondary pages that follow automatically. To undo, press it again.
- (page up): Displays the next Teletext page.
- (page down): Displays the previous Teletext page.
- (reveal): Displays the hidden text (answers to quiz games, for example). To display the normal screen, press it again.
- (cancel): Shrinks the Teletext display to overlap with the current broadcast.
- Colour buttons (red, green, yellow, blue): If the FASTEXT system is used by the broadcasting company, the different topics on a Teletext page are colour-coded and can be selected by pressing the coloured buttons. Press the colour corresponding to the topic of your choice. A new colour-coded page is displayed. Items can be selected in the same way. To display the previous or next page, press the corresponding coloured button.

■ Typical Teletext page

Part	Contents
A	Selected page number.
B	Broadcasting channel identity.
C	Current page number or search indications.
D	Date and time.
E	Text.
F	Status information. FASTEXT information.

2-5. Accessories

Product	Description	Model	Code. No	Remark
	Remote Control & Batteries (AAA x 2)	ALL	AA59-00484A 4301-000121	Samsung Electronics Service center
	Power Cord	ALL	3903-000603	
	Stand	550/570/580	32": BN90-03271C 37"/40": BN90-03276B 46": BN90-03277B	
		450	19": BN90-03252B 22": BN90-03253B 26": BN90-03267A 32": BN90-03268A	
	Screw (6002-001294: M4 x L16 6003-001782: M4 x L12)	550/570/580	6003-001782	
		450	19"/22"/26": 6002-001294	
			32": 6002-001294 (G/STAND+G/S/N) 6003-001782 (C/REAR+G/S)	
	Quick Start Guide	550	BN68-03397A	
		570	BN68-03398A	
		580	BN68-03468A	
		450	BN68-03394A	
	Cleaning Cloth	ALL	BN63-01798B	
	Warranty Card / Registration Card / Safety Guide Manual (Not available in all locations)	ALL	BN68-00514E BN68-02839D BN68-03019A	

3. Disassembly and Reassembly

This section of the service manual describes the disassembly and reassembly procedures for the LCD TV.

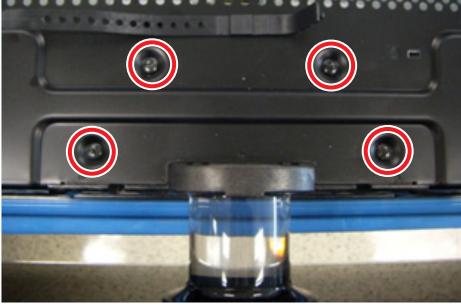
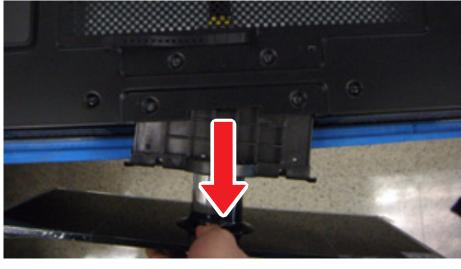
⚠ Warning

This LCD TV contains electrostatically sensitive devices. Use caution when handling these components.

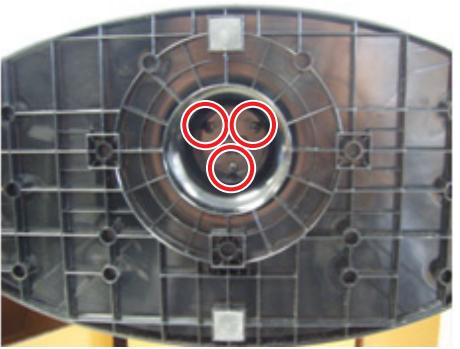
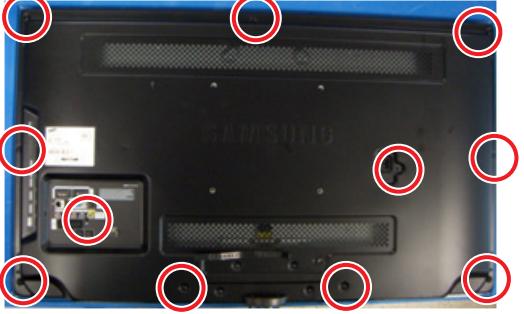
3-1. Disassembly and Reassembly

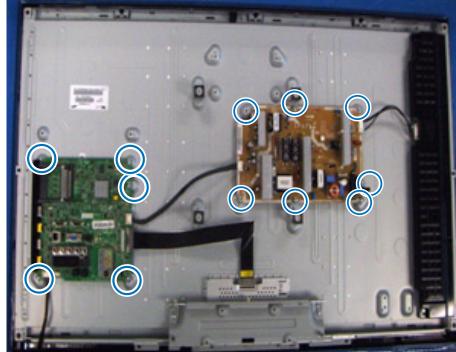
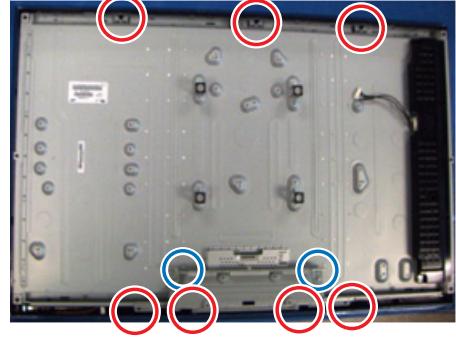
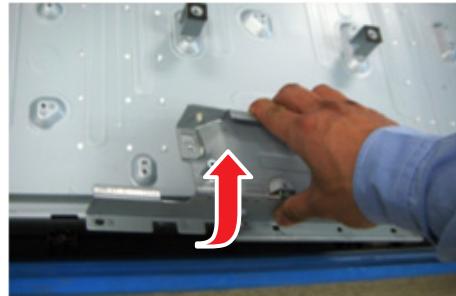
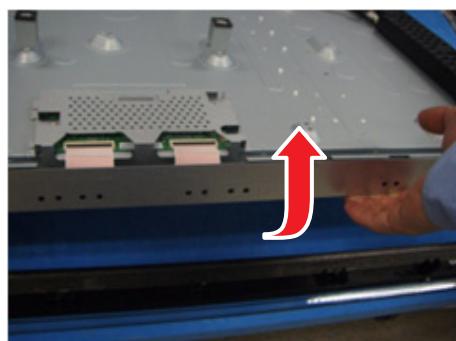
1. Disconnect the LCD TV from the power source before disassembly.
2. Follow these directions carefully; never use metal instruments to pry apart the cabinet.
3. If Rear-cover is made of metal, be careful not to scratch. These directions carefully; never use metal instruments to pry apart the cabinet.

■ LD450_LD550_LD570_LD580 - 26" / 32" / 37" / 40" / 46"

Description	Picture Description	Screws
1. Place the TV face down on cushioned table Remove 4 screws from the stand. Remove stand.		
	 6003-001782	 6002-001294 (26" 450 only)
		

3. Disassembly and Reassembly

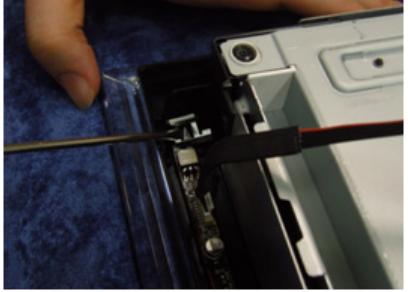
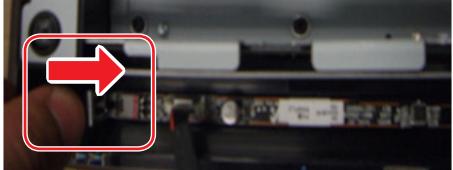
Description	Picture Description	Screws
✓ 26" 450 Only Rear Cover Mold Type	 	 6002-001294 (26" 450 only)
2. Remove the screws of rear-cover. ► D5XX 32" : Remove the 9 screws of rear-cover. 37" : Remove the 13 screws of rear-cover. 40" : Remove the 11 screws of rear-cover. 46" : Remove the 14 screws of rear-cover. ► D45X 26" : Remove the 7 screws of rear-cover. 32" : Remove the 9 screws of rear-cover.		 6003-001782  6002-001294 (26" 450 only)
3. Lift up the rear-cover.		
4. Remove the left and right speaker.		

Description	Picture Description	Screws
<p>5. Remove the screws of main board.</p> <p>► D5XX 37", 46" : Remove the 4 screws. 32", 40" : Remove the 5 screws.</p> <p>► D4XX 26" : Remove the 4 screws. 32" : Remove the 5 screws. Remove the screws of SMPS board.</p> <p>► D5XX 32", 37" : Remove the 5 screws. 40", 46" : Remove the 7 screws..</p> <p>► D4XX 26", 32" : Remove the 5 screws.</p>		 6001-002284
<p>6. Remove the screws of bracket stand link.</p> <p>► D5XX 32" : Remove the 5 screws. 37", 40", 46" : Remove the 6 screws.</p> <p>► D4XX 26" : Remove the 2 screws. 32" : Remove the 5 screws. Remove the screws of panel and front.</p> <p>► D5XX 32" : Remove the 4 screws. 37" : Remove the 2 screws. 40", 46" : Remove the 3 screws.</p> <p>► D4XX 32" : Remove the 4 screws.</p>		 6001-002284  6003-001782
7. Lift up the stand link.		
8. Lift up the panel.		

* Reassembly procedures are in the reverse order of disassembly procedures.

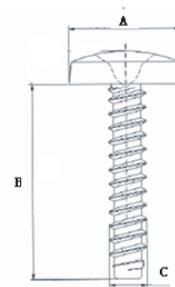
3. Disassembly and Reassembly

3-1-1. How to Replace the Function Board (Only LD550)

Description	Picture Description	Remark
1. Remove the locking clip.	 	
2. Heat the function Board and Remove the function Board.	 	
3. Place the new function Board	 	 FUNCTION Board (BN96-16729*)
4. Locking the clip.		 Bracket-Support,PCB (BN61-07248A)

► Screw Size

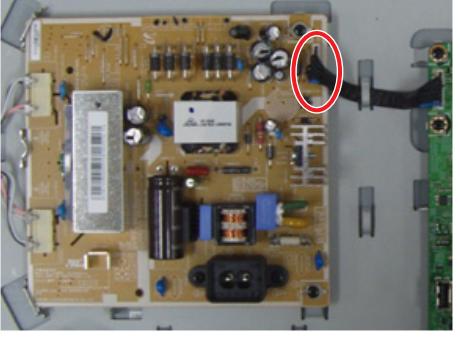
Code No.	A (mm)	B (mm)	C (mm)	
6001-002284	8.3±0.5	8.0±0.6	3.83~3.98	
6003-001782	8.2±0.4	11.7±0.3	3.81~3.91	
6002-001294	8.3-0.5	16.0-0.8	3.85~4.0	



3. Disassembly and Reassembly

■ LD450 - 19" / 22"

Description	Picture Description	Screws
1. Place the TV face down on cushioned table. Remove 3 screws from the stand. Remove stand.		
		 6002-001294
		

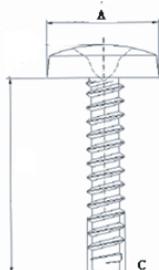
Description	Picture Description	Screws
2. Remove the 4 screws of rear-cover.		 6002-001294
3. Lift up the rear-cover.		
4. Remove the left and right speaker.		
5. Remove the 6 screws of main board. Remove the 4 screws of SMPS board.		 6003-000275
<p>✓ SMPS and power cable are combined with soldering. Don't pull the cable for separate.</p>		

3. Disassembly and Reassembly

Description	Picture Description	Screws
6. Remove the screws of bracket link.		
7. Lift up the panel.		

* Reassembly procedures are in the reverse order of disassembly procedures.

► Screw Size

Code No.	A (mm)	B (mm)	C (mm)	
6002-001294	8.3-0.5	16.0-0.8	3.85~4.0	
6003-000275	6.3-0.5	10.0-0.8	2.85~2.95	

4. Troubleshooting

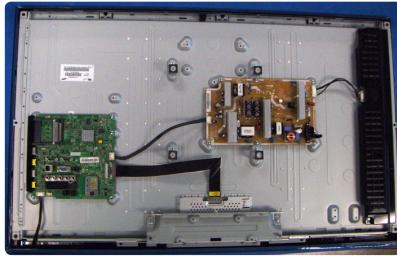
4-1. Troubleshooting

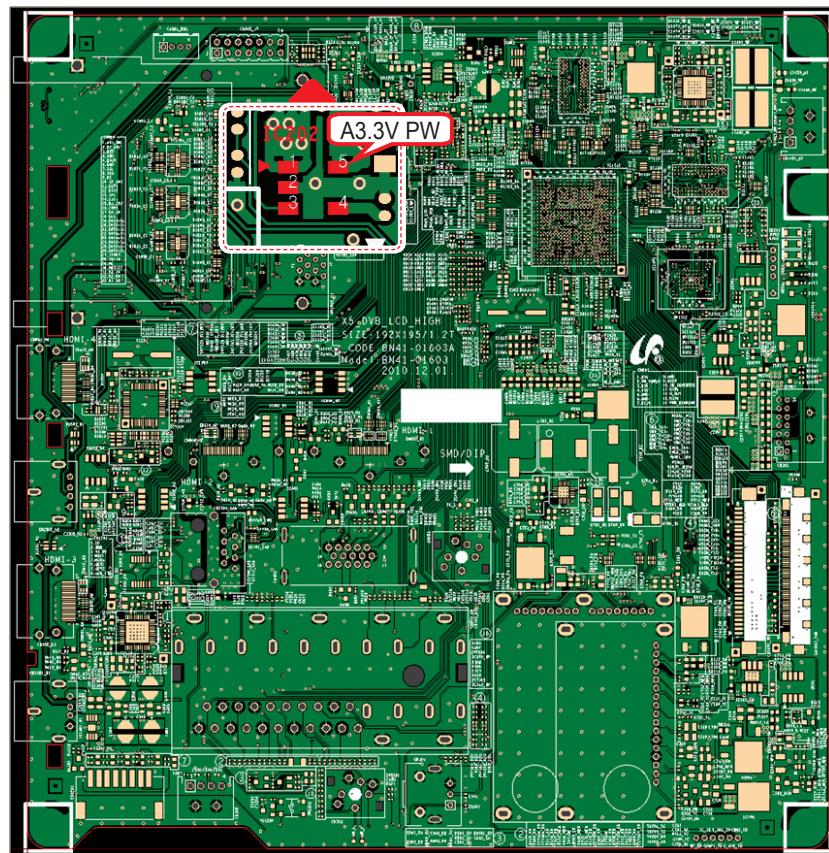
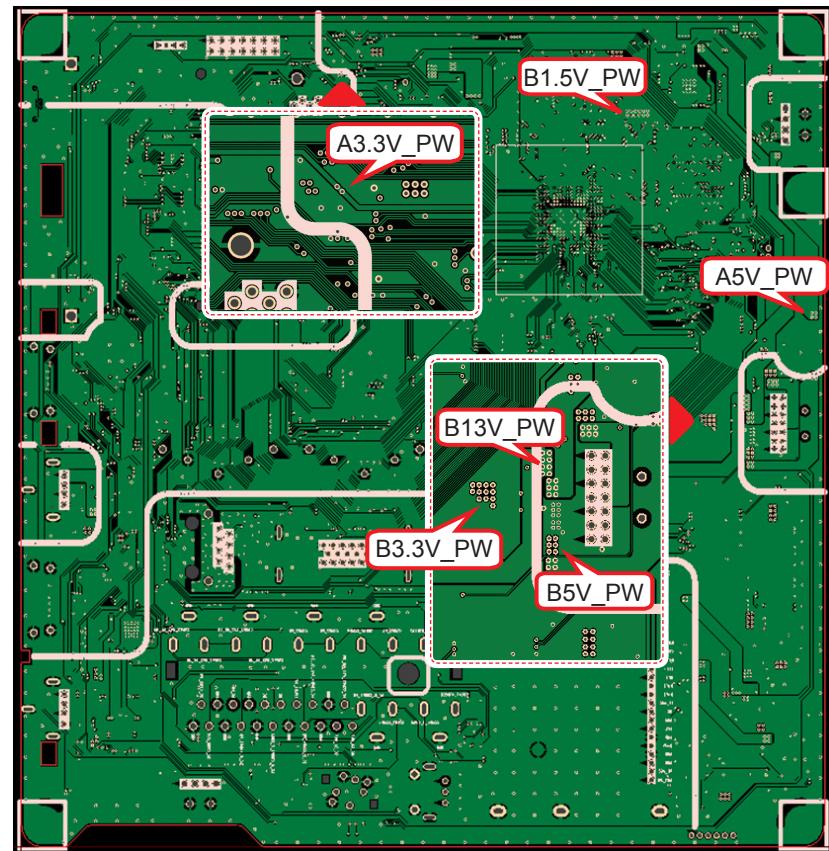
4-1-1. Previous Check

1. Check the various cable connections first.
 - Check to see if there is a burnt or damaged cable.
 - Check to see if there is a disconnected or loose cable connection.
 - Check to see if the cables are connected according to the connection diagram.
2. Check the power input to the Main Board.

4-1-2. No Power

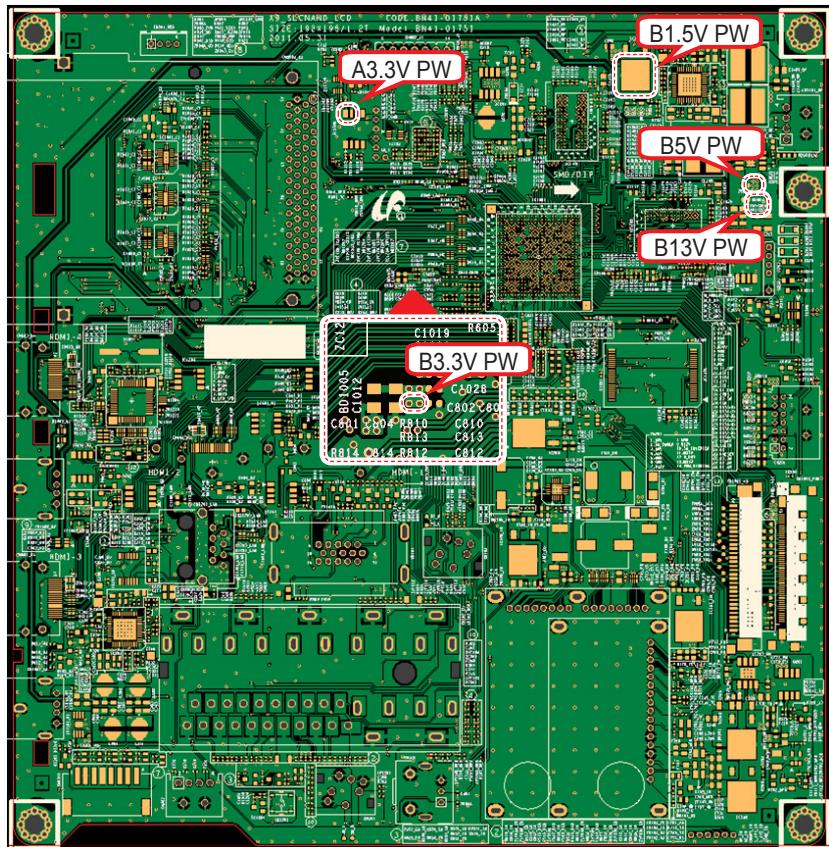
■ LD550_LD450_26" 32" 37" 40" 46"

Symptom	<ul style="list-style-type: none"> The LEDs on the front panel do not work when connecting the power cord. The SMPS relay does not work when connecting the power cord. The units appears to be dead.
Major Check points	<p>The IP relay or the LEDs on the front panel does not work when connecting the power cord if the cables are improperly connected or the Main Board or SMPS is not functioning. In this case, check the following:</p> <ul style="list-style-type: none"> Check the internal cable connection status inside the unit. Check the fuses of each part. Check the output voltage of SMPS. Replace the Main Board.
Diagnostics	 <pre> graph TD A["Lamp (Backlight) Off, power indicator LED off?"] -- No --> B["Change the 14p power cable."] A -- Yes --> C["Lamp (Backlight) Off, power indicator LED on?"] C -- No --> D["Change INVERTER / BALANCE Board."] C -- Yes --> E["Does proper Stand-By DC A5 V appear at VIA - A5 V_PW?"] E -- No --> F["Change the Main Assy."] E -- Yes --> G["Does proper Main DC B13 V, B5 V appear at VIA - B13 V_PW, B5 V_PW?"] G -- No --> H["Change the Main Assy."] G -- Yes --> I["Does proper DC A3.3 V appear at VIA - A3.3 V_PW?"] I -- No --> J["Change the Main Assy."] I -- Yes --> K["Does proper B3.3 V, B1.5 V appear at VIA - B3.3 V_PW, B1.5 V_PW?"] K -- No --> L["Change the Main Assy."] K -- Yes --> M["Does proper DC B13 V appear at LVDS connector Pin #1~5 of T-con board?"] M -- No --> N["Change the LVDS cable."] M -- Yes --> O["Does proper DC B13 V appear at F1 of T-con board?"] O -- No --> P["Change the T-con board."] O -- Yes --> Q["A power is supplied to set?"] Q -- No --> R["Check a other function (No picture part) Replace a LCD Panel."] </pre>
Caution	Make sure to disconnect the power before working on the IP board.

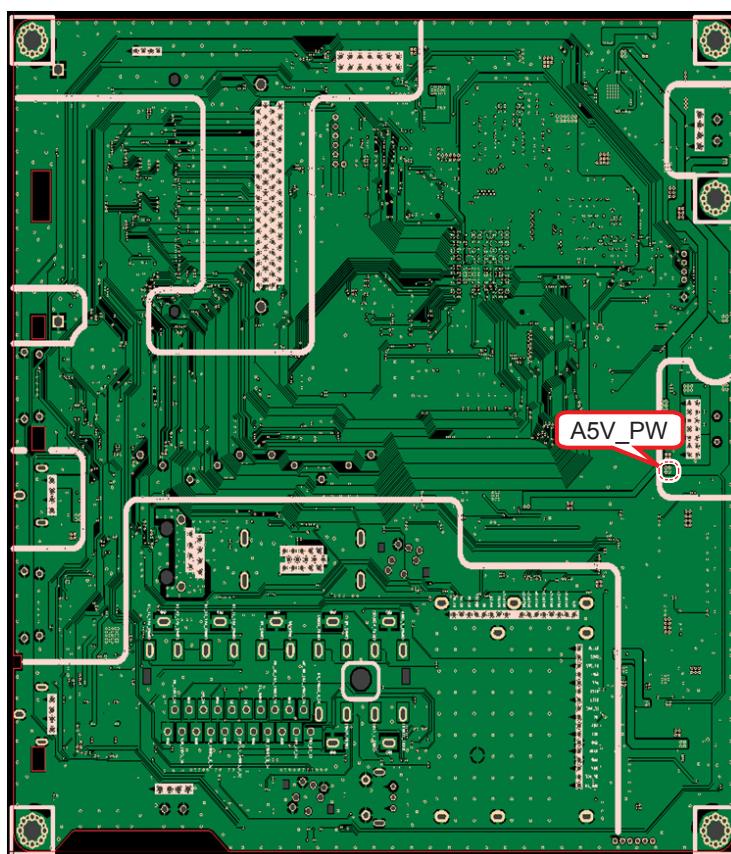
Main Board (Top)_X5**Main Board (Bottom)_X5**

4. Troubleshooting

Main Board (Top)_X9



Main Board (Bottom)_X9

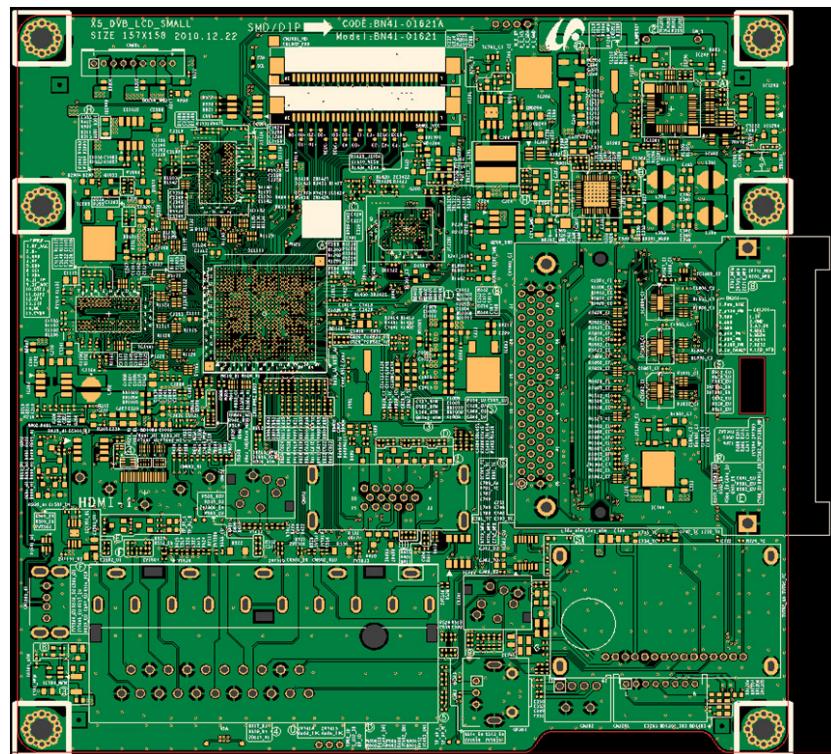
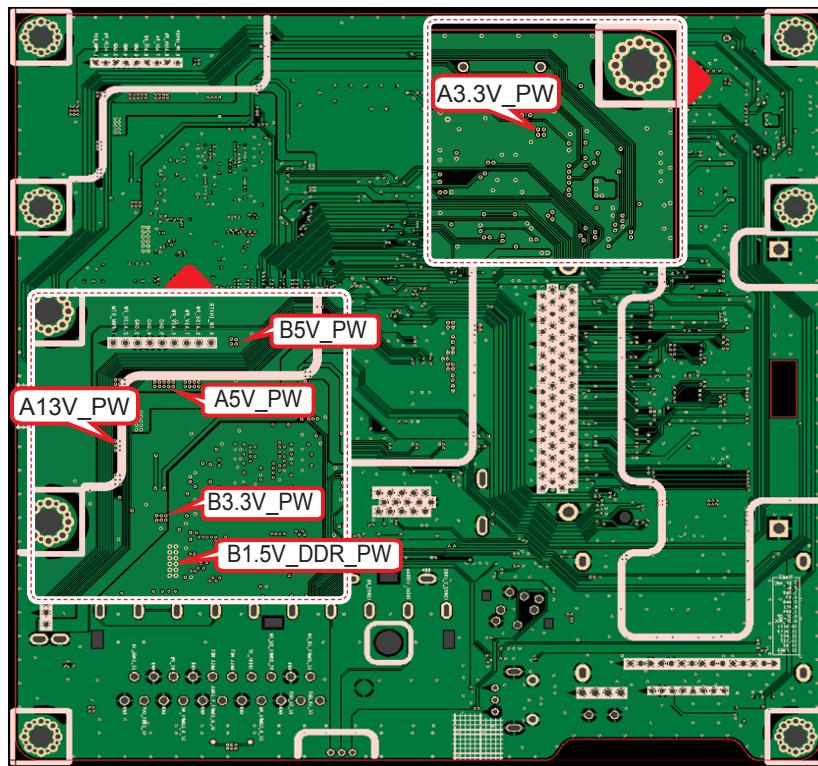


T-CON



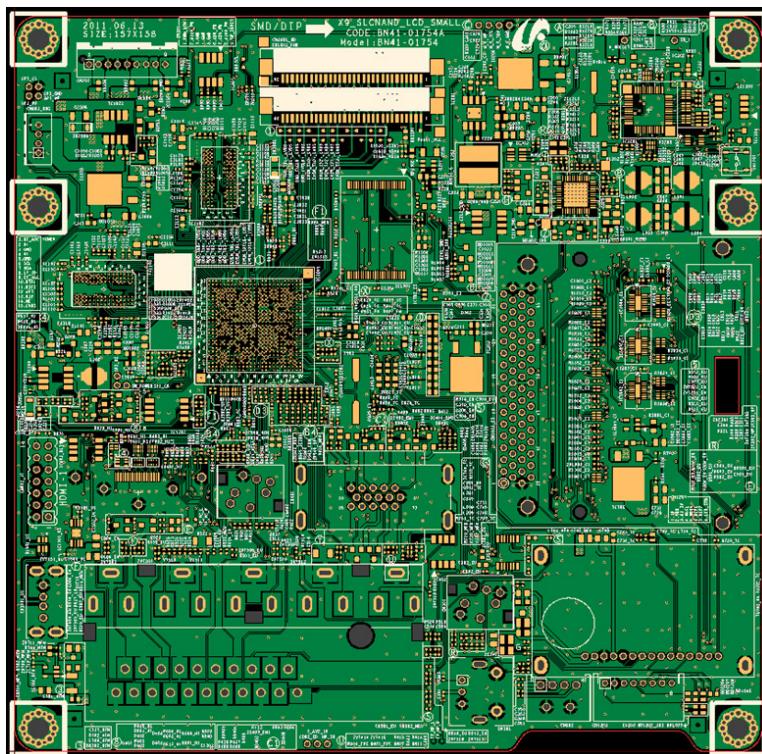
■ LD450_19" 22"

Symptom	<ul style="list-style-type: none"> - The LEDs on the front panel do not work when connecting the power cord. - The SMPS relay does not work when connecting the power cord. - The units appears to be dead.
Major Check points	<p>The IP relay or the LEDs on the front panel does not work when connecting the power cord if the cables are improperly connected or the Main Board or SMPS is not functioning. In this case, check the following:</p> <ul style="list-style-type: none"> - Check the internal cable connection status inside the unit. - Check the fuses of each part. - Check the output voltage of SMPS. - Replace the Main Board.
Diagnostics	 <pre> graph TD A["Lamp (Backlight) Off, power indicator LED off?"] -- No --> B["Change the 9p power cable."] A -- Yes --> C["Lamp (Backlight) Off, power indicator LED on?"] C -- No --> D["Change INVERTER / BALANCE Board."] C -- Yes --> E["Does proper Stand-By DC A13 V, A5 V appear at VIA - A13 V_PW, A5 V_PW?"] E -- No --> F["Change the Main Assy."] E -- Yes --> G["Does proper Main DC B13 V, B5 V appear at VIA - B13 V_PW, B5 V_PW?"] G -- No --> F G -- Yes --> H["Does proper DC A3.3 V appear at VIA - A3.3 V_PW?"] H -- No --> I["Change the LVDS cable."] H -- Yes --> J["Does proper B3.3 V, B1.5 V appear at VIA - B3.3 V_PW, B1.5 V_DDR_PW?"] J -- No --> I J -- Yes --> K["Does proper DC B13 V appear at LVDS connector Pin #1~5 of Panel?"] K -- No --> L["Check a other function (No picture part) Replace a LCD Panel."] K -- Yes --> M["A power is supplied to set?"] M -- No --> L </pre>
Caution	Make sure to disconnect the power before working on the IP board.

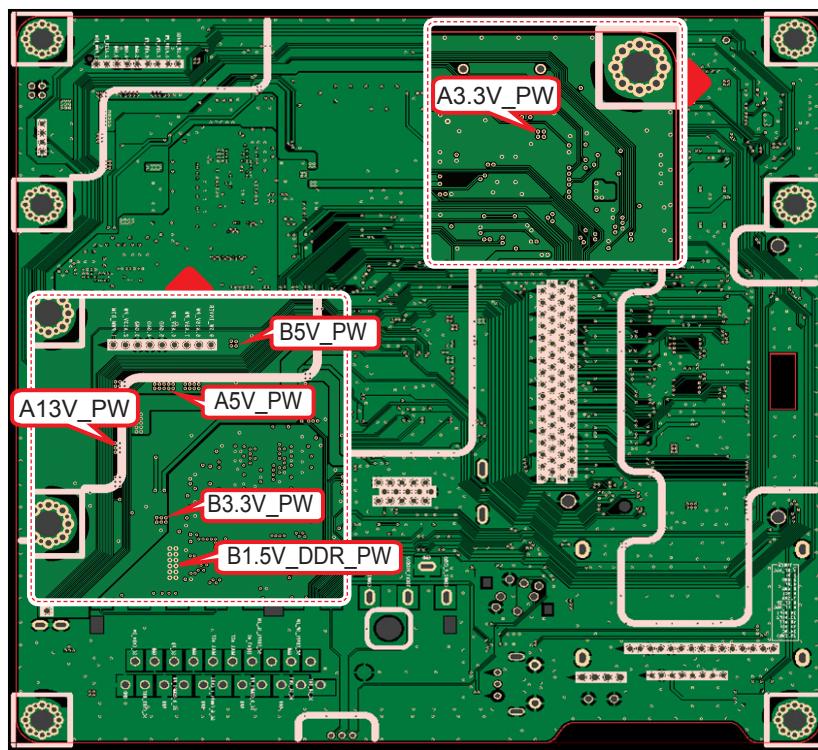
Main Board (Top)_X5**Main Board (Bottom)_X5**

4. Troubleshooting

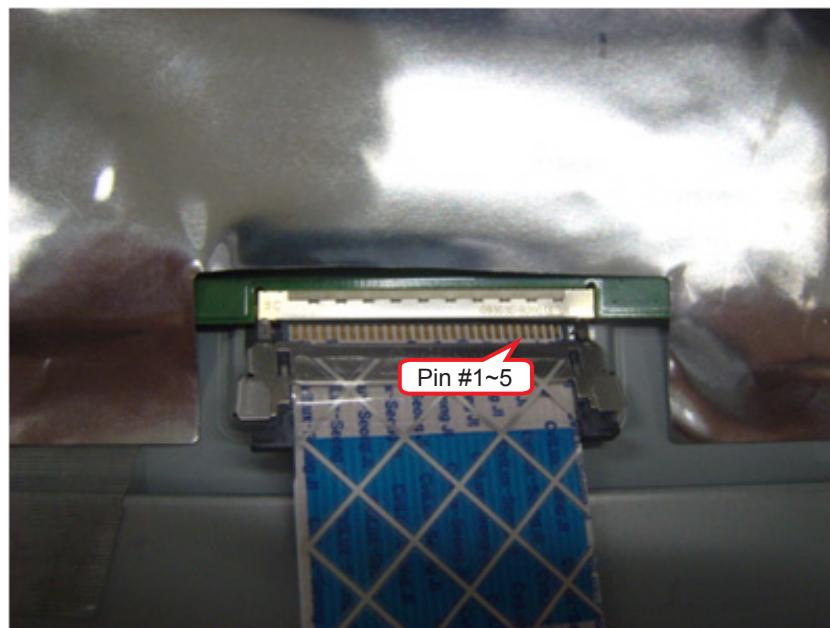
Main Board (Top)_X9



Main Board (Bottom)_X9

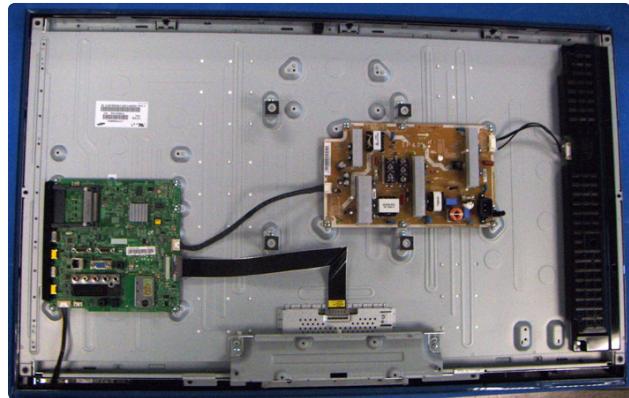


T-CON

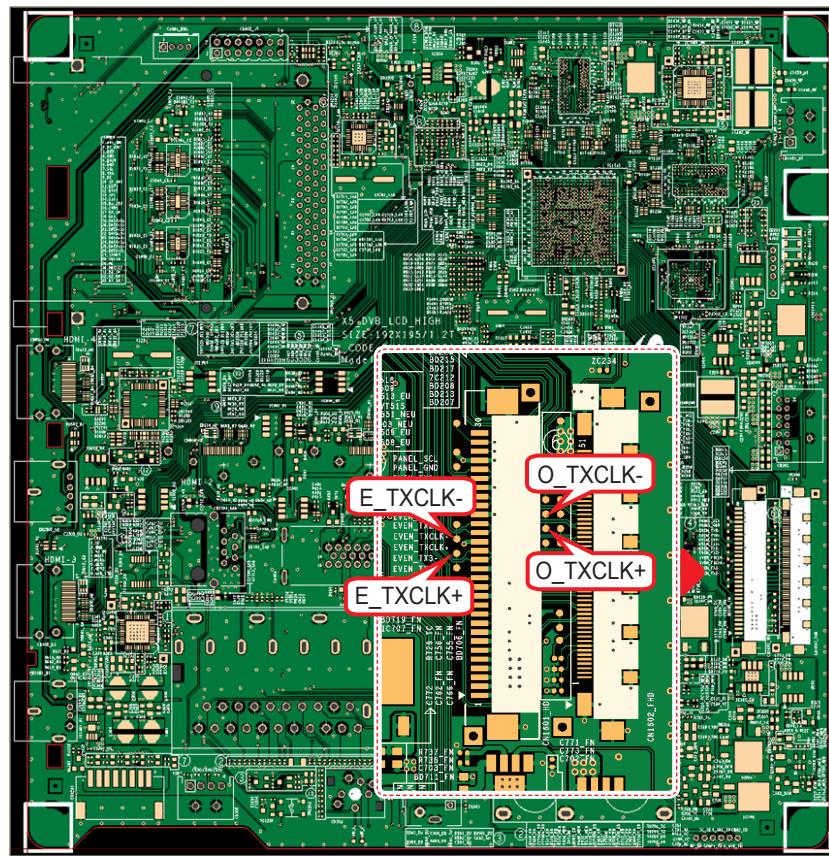


4-1-3. No Video (Analog PC Signal)

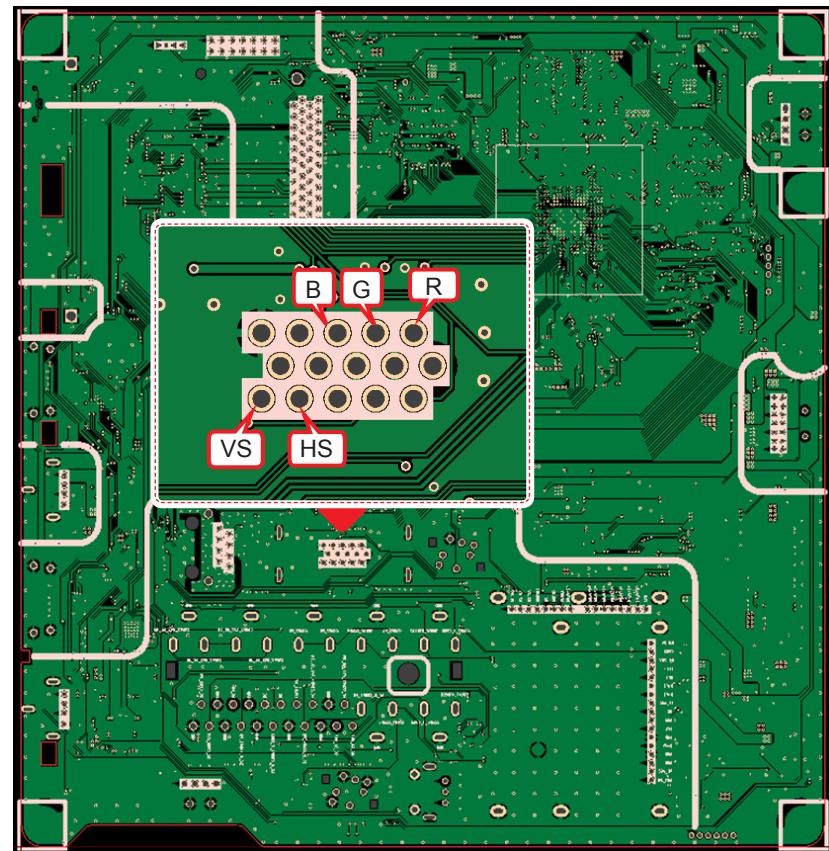
■ LD550_LD450_26" 32" 37" 40" 46"

Symptom	- Audio is normal but no picture is displayed on the screen.
Major Check points	<ul style="list-style-type: none"> - Check the PC source - Check the Arsenal, Check the Chelsea. - This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD A["Power indicator LED is off. Lamp (Backlight) on, no video?"] -- Yes --> B["Check the PC source and check the connection of D-SUB?"] A -- No --> C["Check a set in the 'Stand-by mode' or 'DPMS mode'."] B -- Yes --> D["Does the signal appear at PIN - R, G, B, HS, VS (R, G, B, H, V)?"] B -- No --> E["Input the analog PC signal properly."] D -- Yes --> F["Check CN401, PC cable. Change the Main Assy."] D -- No --> G["Check IC1111 (X5) / IC1001 (X9). Change the Main Assy."] F -- Yes --> H["Check the LVDS cable? Check the T-Con Board? Replace the LCD panel?"] F -- No --> I["Please, Contact Tech support."] G -- Yes --> H G -- No --> I </pre> <p>The flowchart starts with checking if the power indicator LED is off and the lamp is on. If yes, it checks the PC source and D-SUB connection. If no, it checks stand-by or DPMS modes. If the D-SUB check is yes, it checks for signal at PINs R, G, B, HS, VS. If no, it inputs the analog PC signal. If the signal is present at PINs, it checks CN401 and the main assembly. If not, it checks IC1111 and IC1001. Finally, it checks the LVDS cable, T-Con board, and replaces the LCD panel if needed, or contacts tech support if none of these steps resolve the issue.</p>
Caution	Make sure to disconnect the power before working on the IP board.

Main Board (Top)_X5

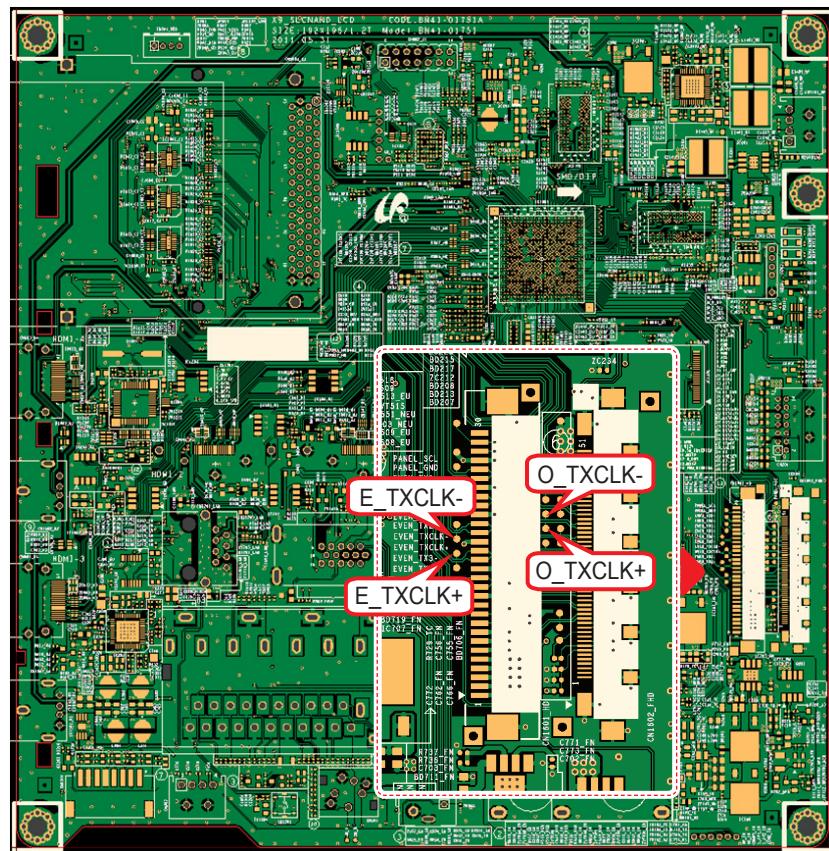


Main Board (Bottom)_X5

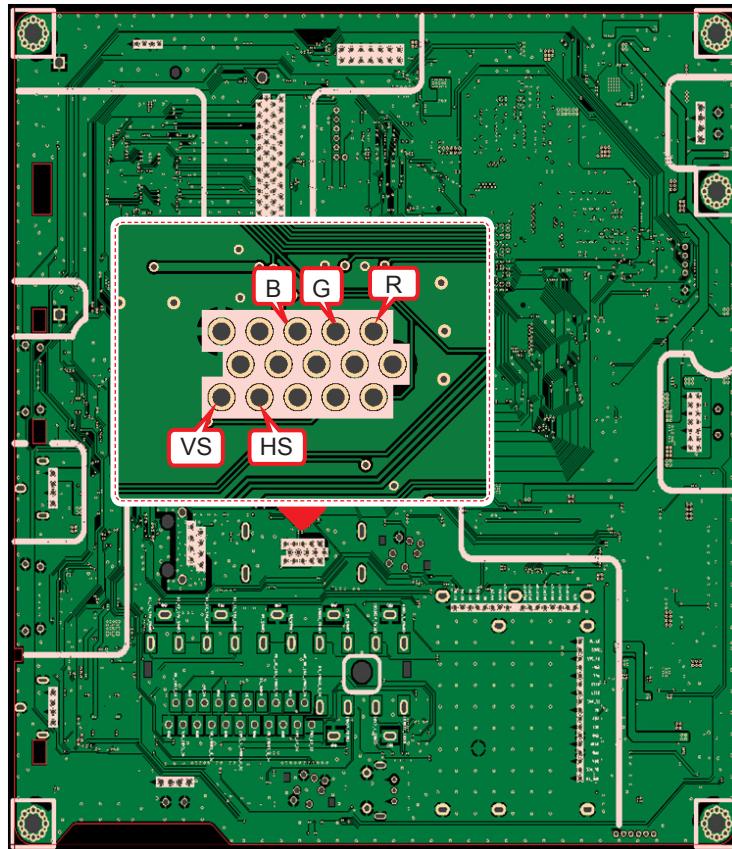


4. Troubleshooting

Main Board (Top)_X9



Main Board (Bottom)_X9

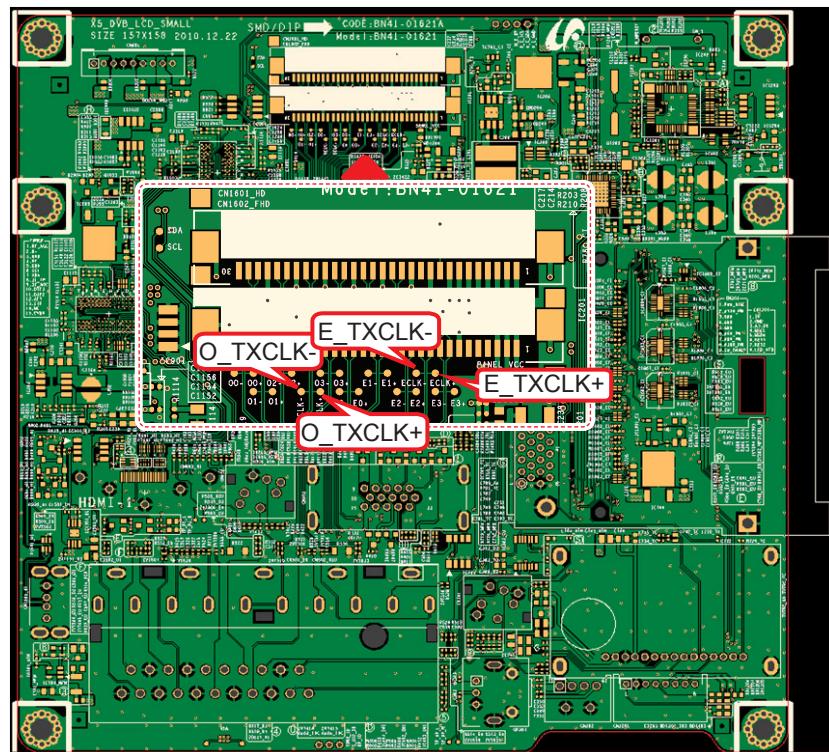


■ LD450_19" 22"

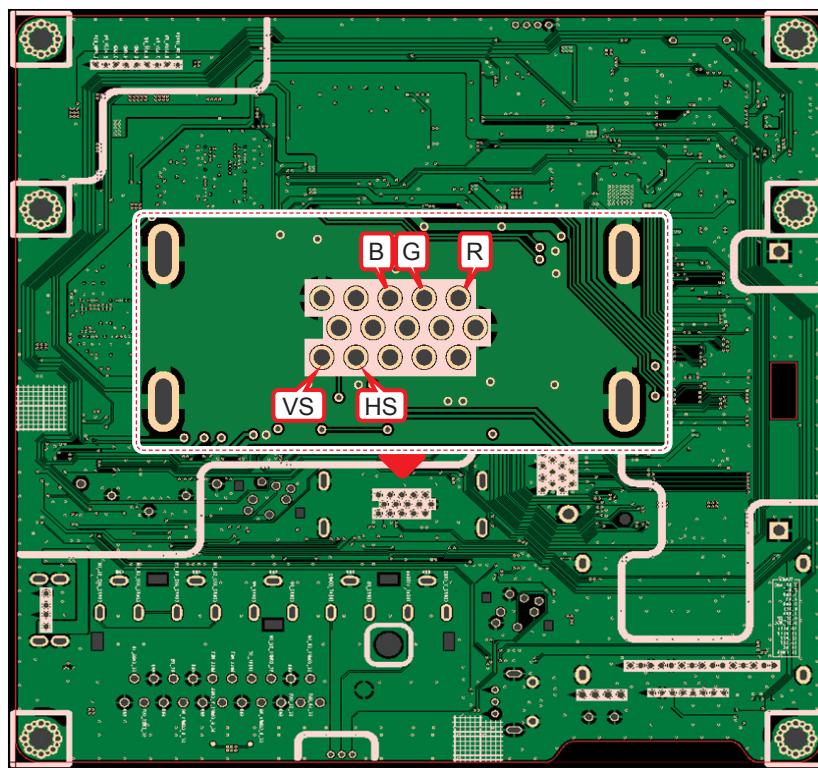
Symptom	- Audio is normal but no picture is displayed on the screen.
Major Check points	<ul style="list-style-type: none"> - Check the PC source - Check the Arsenal, Check the Chelsea. - This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD A[Power indicator LED is off. Lamp (Backlight) on, no video?] -- Yes --> B[Check the PC source and check the connection of D-SUB?] A -- No --> C[Check a set in the 'Stand-by mode' or 'DPMS mode.'] B -- Yes --> D[Does the signal appear at PIN - R, G, B, HS, VS (R, G, B, H, V)?] B -- No --> E[Input the analog PC signal properly.] D -- Yes --> F[Does the digital data appear at TP-E_TXCLK+, E_TXCLK-, O_TXCLK+, O_TXCLK-?] D -- No --> G[Check CN401, PC cable. Change the Main Assy.] F -- Yes --> H[Check the LVDS cable? Check the Connector of Panel? Replace the LCD panel?] F -- No --> I[Check IC1111 (X5) / IC1001 (X9). Change the Main Assy.] H -- Yes --> J[Please, Contact Tech support.] H -- No --> K[Please, Contact Tech support.] </pre> <p>The flowchart starts with a question about power and video output. If 'Yes', it checks the PC source and connection. If 'No', it checks for stand-by or DPMS modes. If the PC source is checked and 'Yes', it then checks for signal presence at specific pins. If 'No', it suggests inputting the analog PC signal. If signal presence is checked and 'Yes', it then checks for digital data at specific pins. If 'No', it suggests checking CN401 or the PC cable. If digital data is checked and 'Yes', it then checks the LVDS cable, connector, or panel. If 'No', it suggests checking IC1111 or IC1001. Finally, if the problem persists, it advises contacting tech support.</p>
Caution	Make sure to disconnect the power before working on the IP board.

4. Troubleshooting

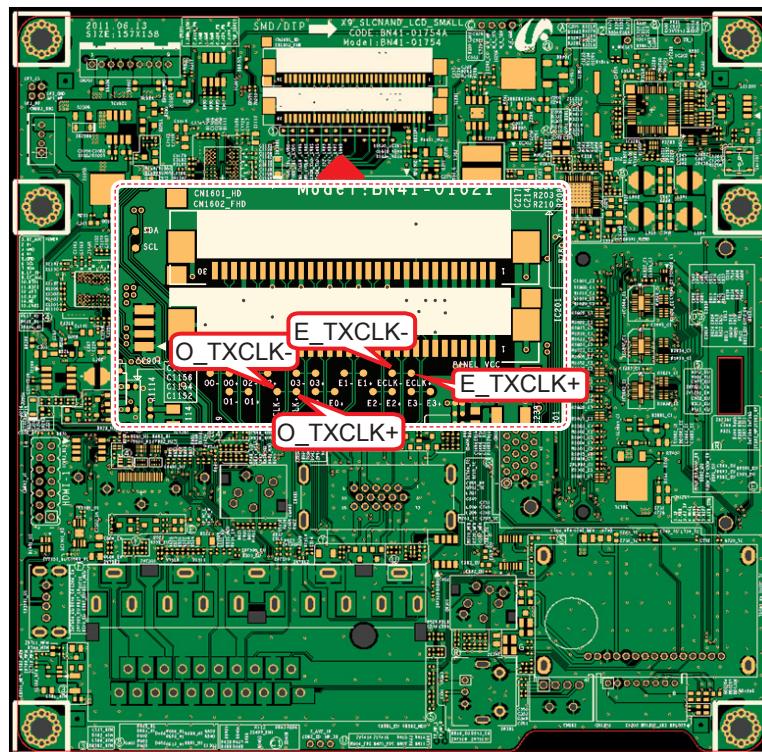
Main Board (Top)_X5



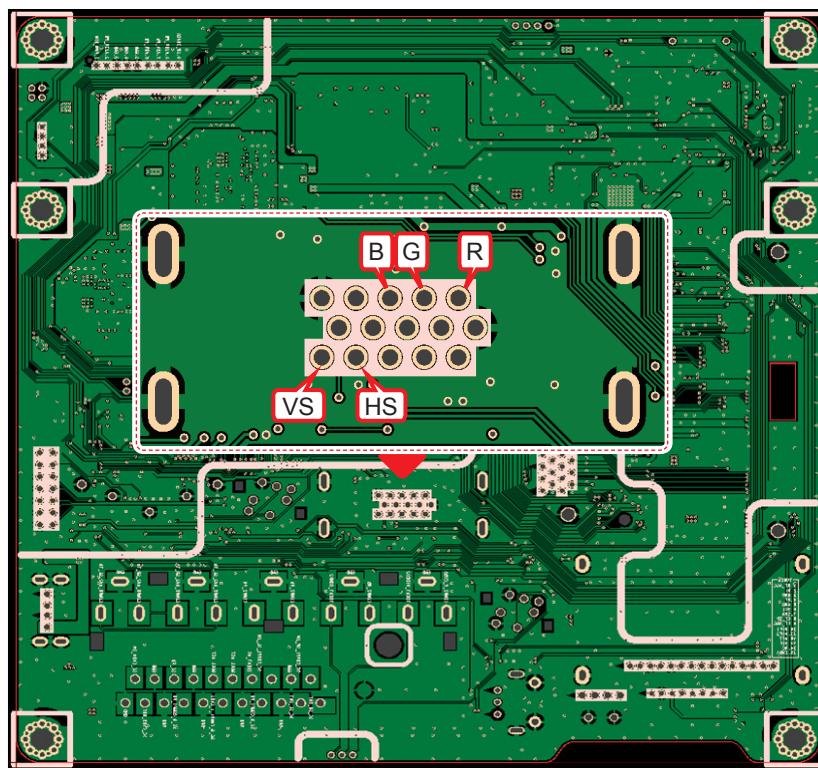
Main Board (Bottom)_X5



Main Board (Top)_X9



Main Board (Bottom)_X9



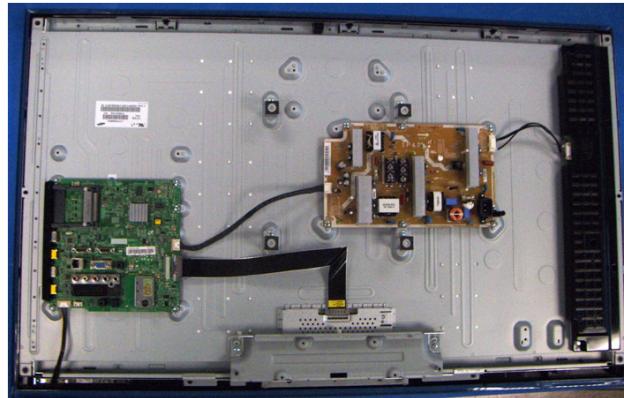
4. Troubleshooting

■ WAVEFORMS



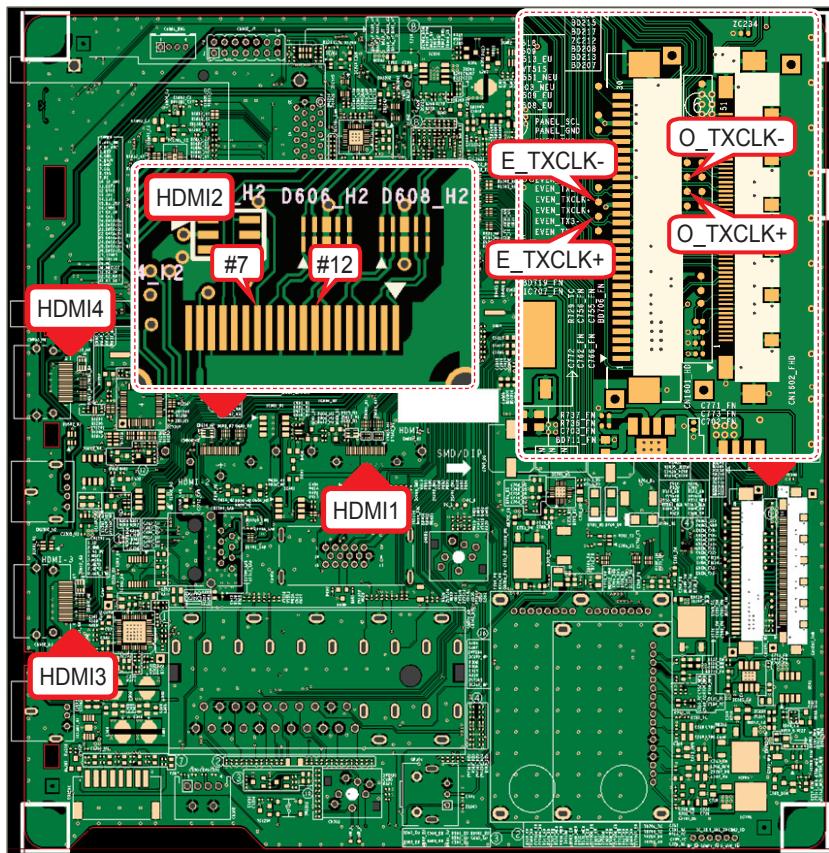
4-1-4. No Video (HDMI1, 2, 3, 4 - Digital Signal)

■ LD550_LD450_26" 32" 37" 40" 46"

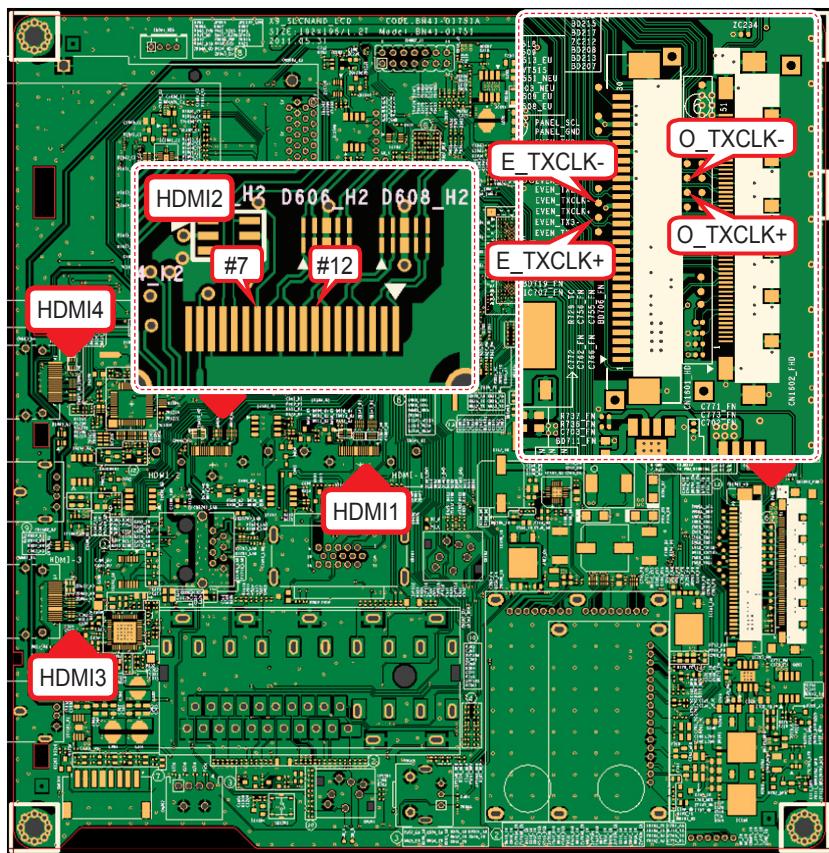
Symptom	<ul style="list-style-type: none"> - Audio is normal but no picture is displayed on the screen.
Major Check points	<ul style="list-style-type: none"> - Check the HDMI source. - Check the HDMI switch, Check the Chelsea. - This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD A[Power indicator LED is off. Lamp (Backlight) on, no video?] -- Yes --> B[Check the HDMI source and check the connection of HDMI cable?] A -- No --> C[Check a set in the 'Stand-by mode'.] B -- Yes --> D[Does the signal appear at CN601_H1 (Pin#12, #7) (HDMI1) CN604_H2 (Pin#12, #7) (HDMI2) CN602_H3 (Pin#12, #7) (HDMI3) CN603_H4 (Pin#12, #7) (HDMI4) (HDMI RX_Clk, RX_Data)?] B -- No --> E[Input the HDMI signal properly.] D -- Yes --> F[Does the digital data appear at TP-E_ TXCLK+, E_TXCLK-, O_TXCLK+, O_ TXCLK-?] D -- No --> G[Check CN601_H1,CN604_H2 CN602_H3,CN603_H4 Check HDMI cable Change the Main Assy.] F -- Yes --> H[Check the LVDS cable? Check the T-Con Board? Replace the LCD panel?] F -- No --> I[Please, Contact Tech support.] </pre> <p>③ Does the signal appear at CN601_H1 (Pin#12, #7) (HDMI1) CN604_H2 (Pin#12, #7) (HDMI2) CN602_H3 (Pin#12, #7) (HDMI3) CN603_H4 (Pin#12, #7) (HDMI4) (HDMI RX_Clk, RX_Data)?</p> <p>② Does the digital data appear at TP-E_ TXCLK+, E_TXCLK-, O_TXCLK+, O_ TXCLK-?</p>
Caution	Make sure to disconnect the power before working on the IP board.

4. Troubleshooting

Main Board (Top)_X5



Main Board (Top)_X9

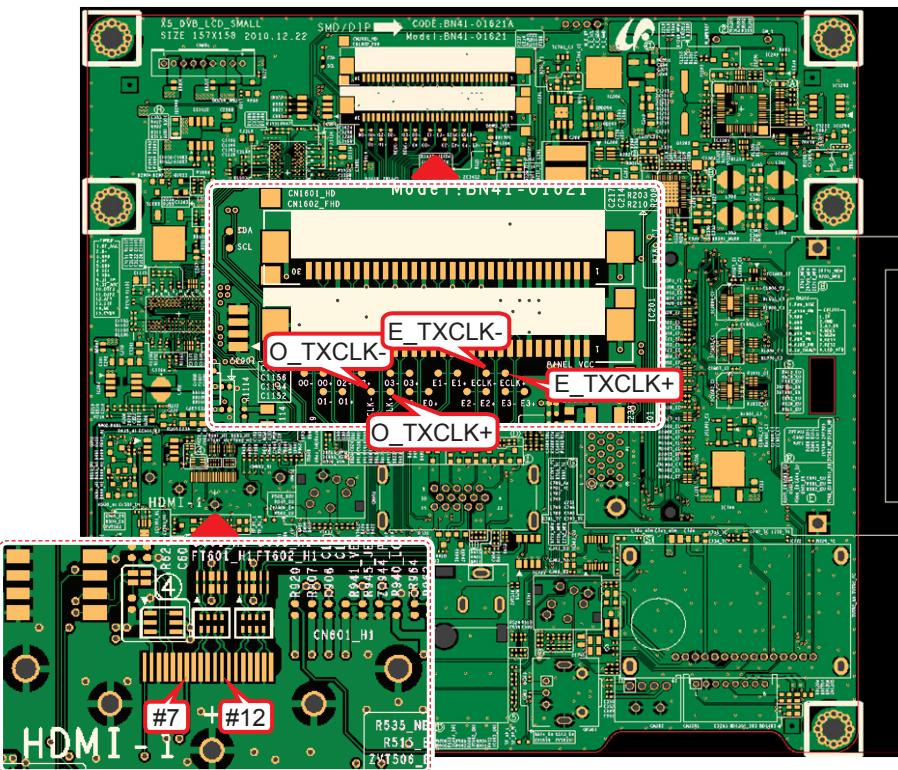


■ HDMI1 Digital Signal LD450_19" 22"

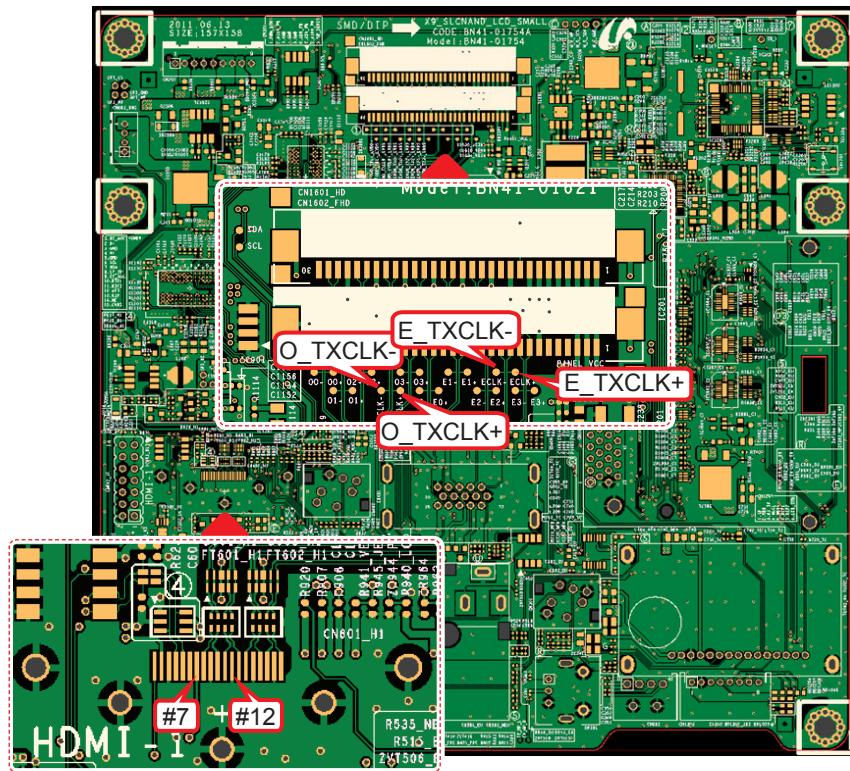
Symptom	- Audio is normal but no picture is displayed on the screen.
Major Check points	<ul style="list-style-type: none"> - Check the HDMI source. - Check the HDMI switch, Check the Chelsea. - This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD A[Power indicator LED is off. Lamp (Backlight) on, no video?] -- Yes --> B[Check the HDMI source and check the connection of HDMI cable?] A -- No --> C[Check a set in the 'Stand-by mode'.] B -- Yes --> D[Does the signal appear at CN601_H1 (Pin#12, #7) (HDMI1) (HDMI RX_Clk, RX_Data)?] B -- No --> E[Input the HDMI signal properly.] D -- Yes --> F[Does the digital data appear at TP-E_TXCLK+, E_TXCLK-, O_TXCLK+, O_TXCLK-?] D -- No --> G[Check CN601_H1 Check HDMI cable Change the Main Assy.] F -- Yes --> H[Check the LVDS cable? Check the Connector of Panel? Replace the LCD panel?] F -- No --> I[Check IC1111 (X5) / IC1001 (X9). Change the Main Assy.] H -- No --> J[Please, Contact Tech support.] </pre> <p>The flowchart starts with checking if the power indicator LED is off and the lamp is on. If yes, it checks the HDMI source and connection. If no, it checks a set in stand-by mode. Then, it checks if the signal appears at CN601_H1. If yes, it checks digital data at TP-E_TXCLK+. If no, it checks CN601_H1, HDMI cable, and Main Assy. Then, it checks if digital data appears at TP-E_TXCLK+. If yes, it checks the LVDS cable, connector, and panel. If no, it checks IC1111/IC1001 and Main Assy. Finally, if the problem persists, it advises contacting tech support.</p>
Caution	Make sure to disconnect the power before working on the IP board.

4. Troubleshooting

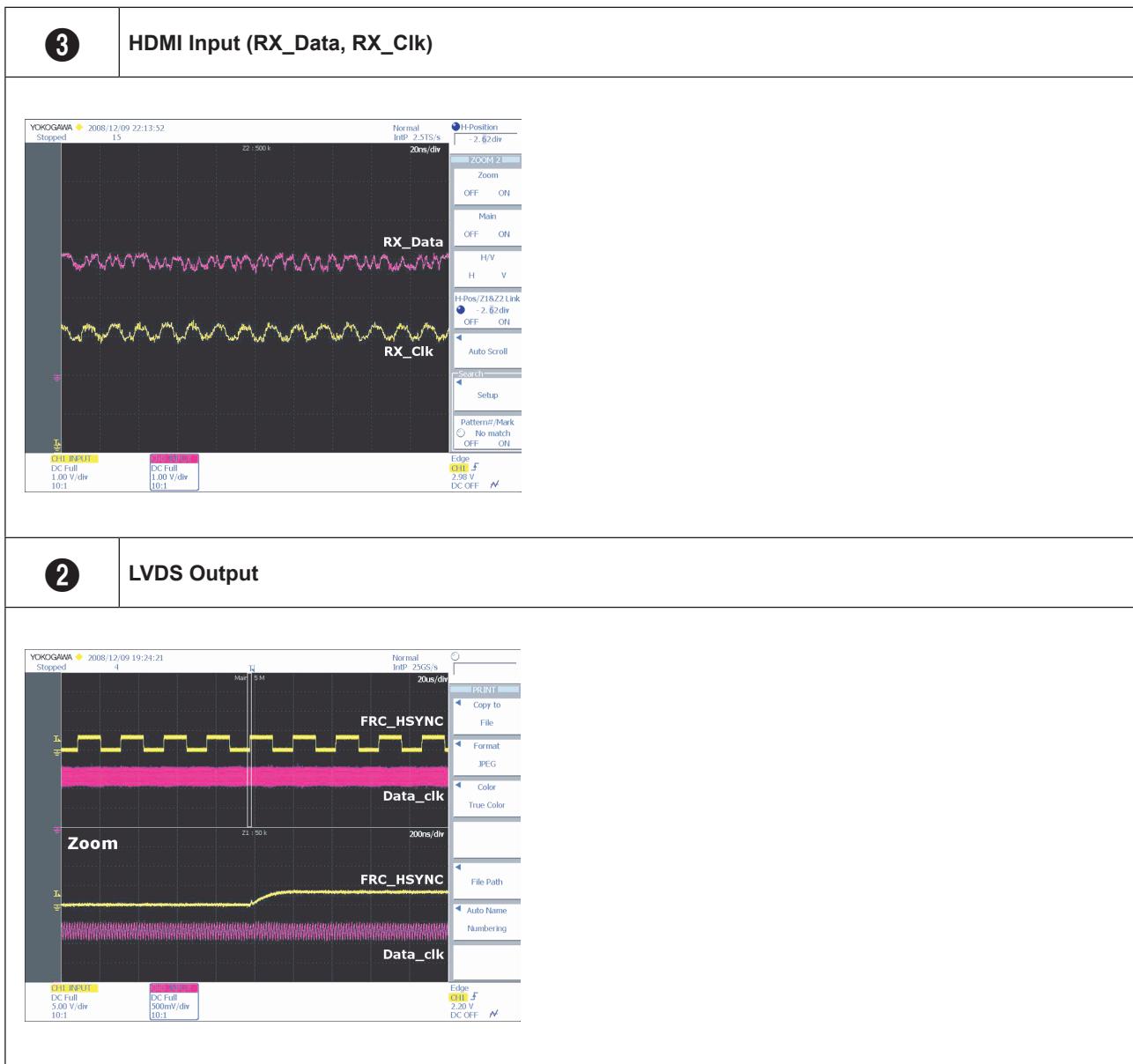
Main Board (Top)_X5



Main Board (Top)_X9

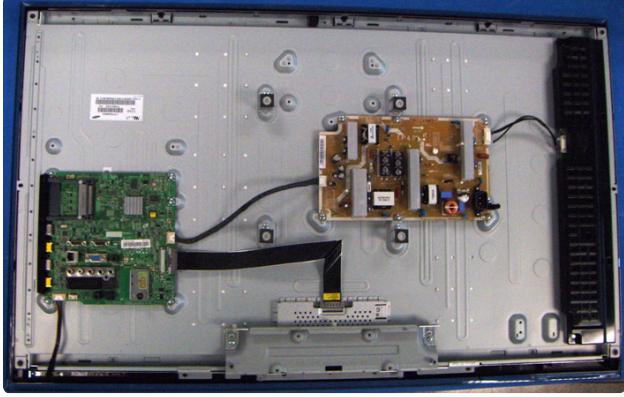


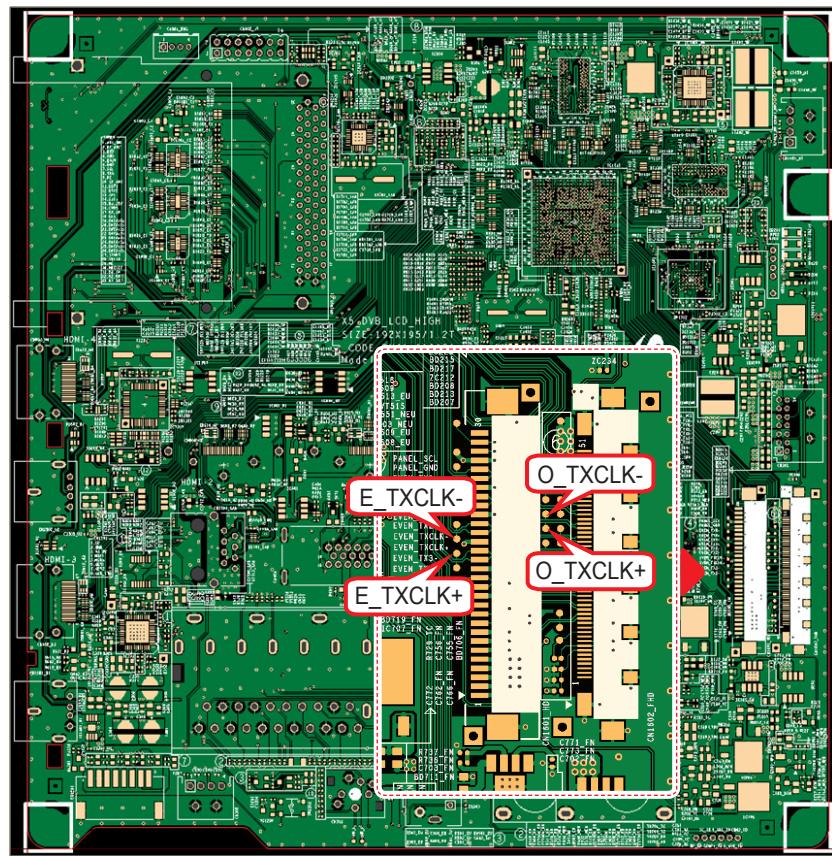
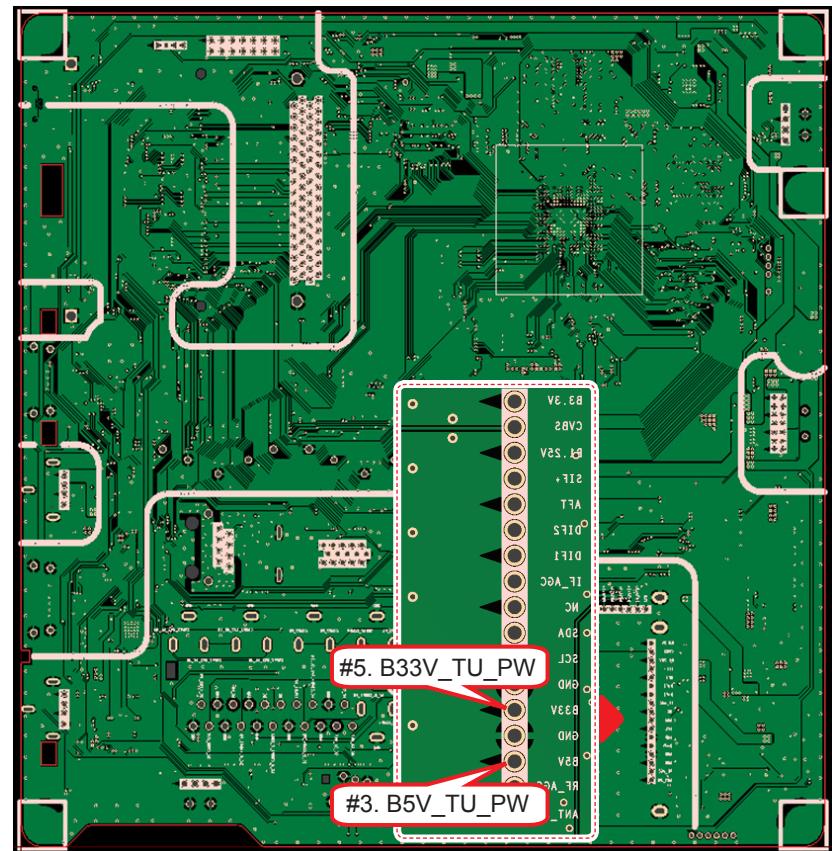
■ WAVEFORMS



4-1-5. No Video (Tuner_CVBS)

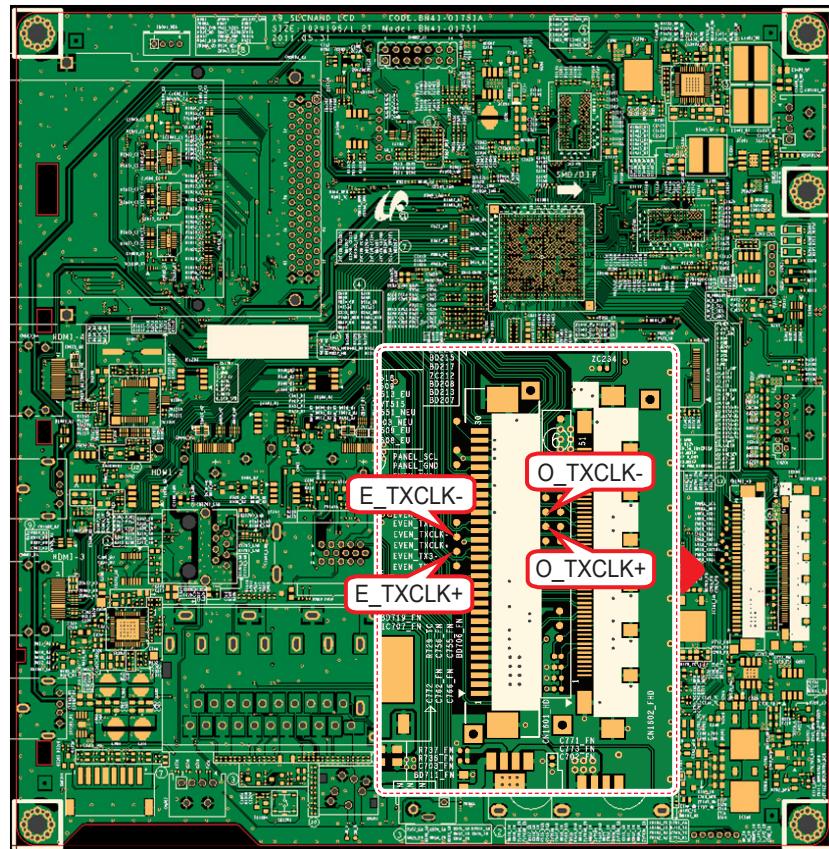
■ LD550_LD450_26" 32" 37" 40" 46"

Symptom	<ul style="list-style-type: none"> - Audio is normal but no picture is displayed on the screen.
Major Check points	<ul style="list-style-type: none"> - Check the Tuner CVBS source. - Check the Tuner, Check the Chelsea. - This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD A[Power indicator LED is off. Lamp (Backlight) on, no video?] -- Yes --> B[Check the RF source and check the connection of RF cable?] A -- No --> C[Check a set in the 'Stand-by mode'.] B -- Yes --> D[Does the DC B5V_TU_PW, B33V_TU_PW appear at #3, #5 Pin of Tuner?] B -- No --> E[Input the RF source properly.] D -- Yes --> F[② Does the digital data appear at TP-E_TXCLK+, E_TXCLK-, O_TXCLK+, O_TXCLK-?] D -- No --> G[Change the Main Assy.] F -- Yes --> H[Check the LVDS cable? Check the T-Con Board? Replace the LCD panel?] F -- No --> I[Check IC1111 (X5) / IC1001 (X9). Change the Main Assy.] H -- No --> J[Please, Contact Tech support.] </pre>
Caution	Make sure to disconnect the power before working on the IP board.

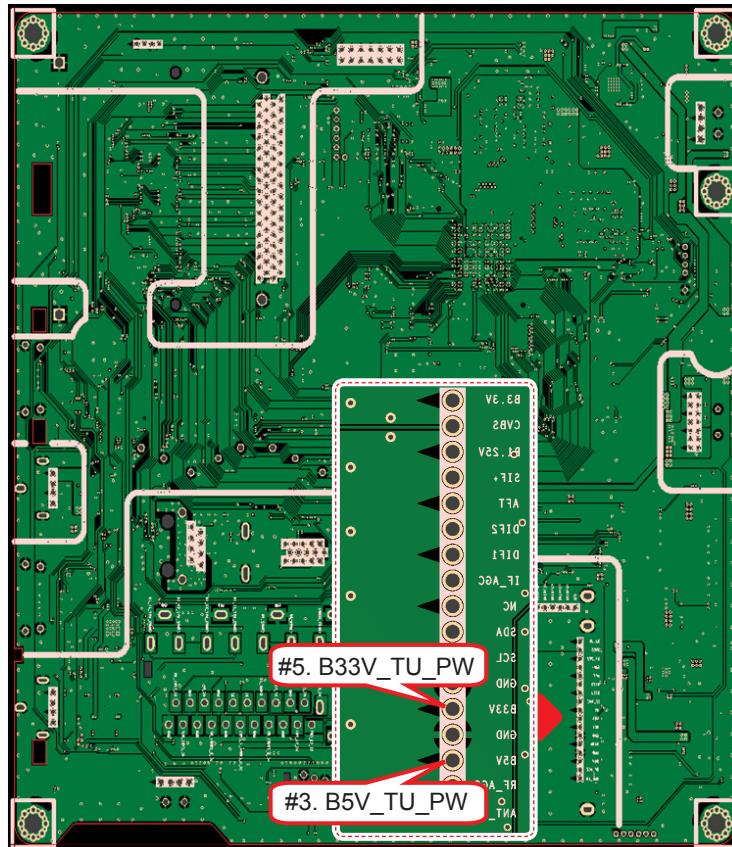
Main Board (Top)_X5**Main Board (Bottom)_X5**

4. Troubleshooting

Main Board (Top)_X9



Main Board (Bottom)_X9

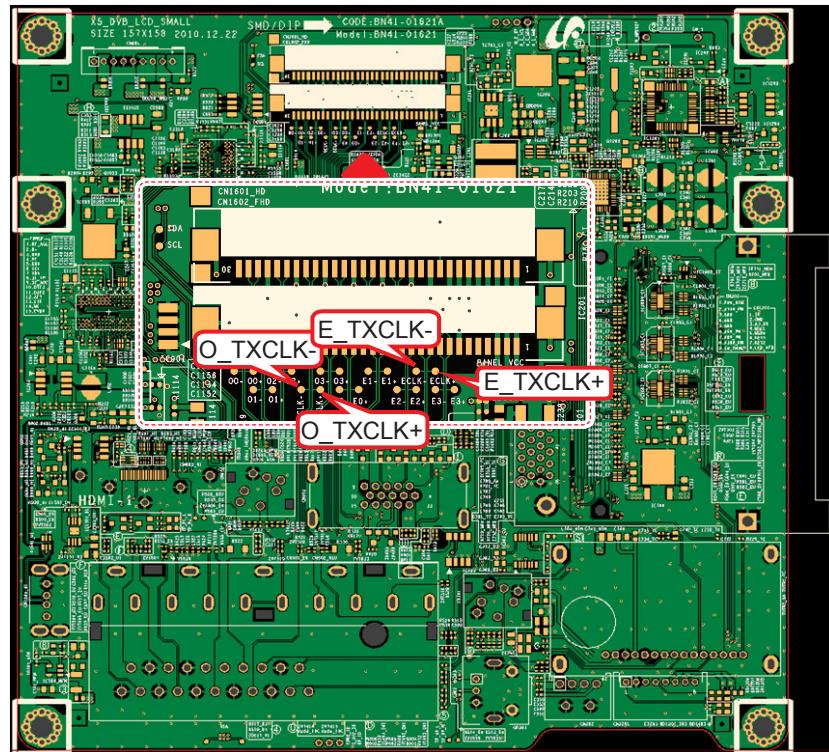


■ LD450_19" 22"

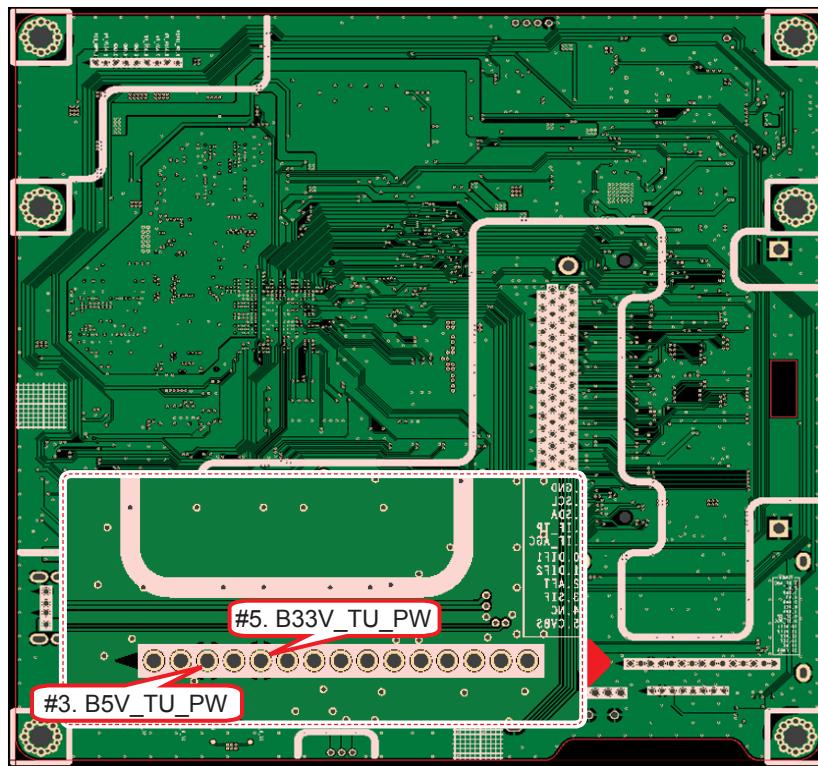
Symptom	- Audio is normal but no picture is displayed on the screen.
Major Check points	<ul style="list-style-type: none"> - Check the Tuner CVBS source. - Check the Tuner, Check the Chelsea. - This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD A[Power indicator LED is off. Lamp (Backlight) on, no video?] -- No --> B[Check a set in the 'Stand-by mode'.] A -- Yes --> C[Check the RF source and check the connection of RF cable?] C -- No --> D[Input the RF source properly.] C -- Yes --> E[Does the DC B5V_TU_PW, B33V_TU_PW appear at #3, #5 Pin of Tuner?] E -- No --> F[Change the Main Assy.] E -- Yes --> G[Does the digital data appear at TP-E_TXCLK+, E_TXCLK-, O_TXCLK+, O_TXCLK-?] G -- No --> H[Check IC1111 (X5) / IC1001 (X9). Change the Main Assy.] G -- Yes --> I[Check the LVDS cable? Check the Connector of Panel? Replace the LCD panel?] I -- No --> J[Please, Contact Tech support.] </pre> <p>②</p>
Caution	Make sure to disconnect the power before working on the IP board.

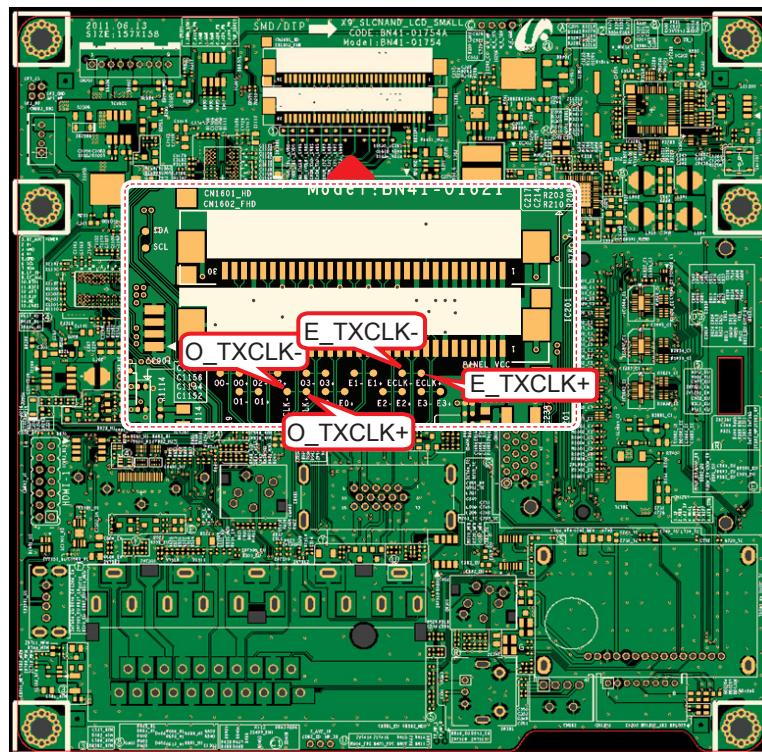
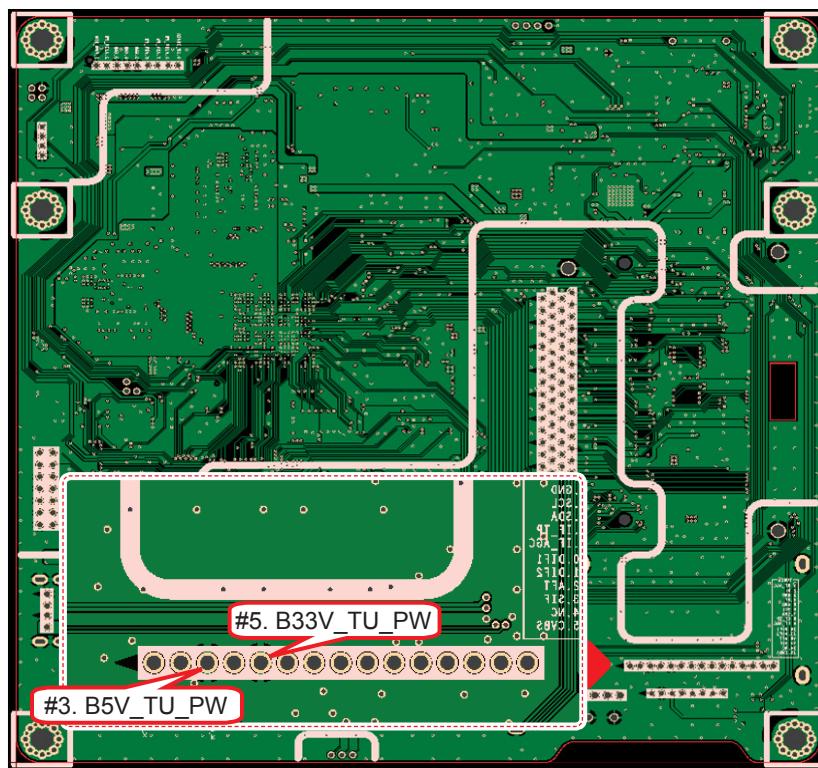
4. Troubleshooting

Main Board (Top)_X5



Main Board (Bottom)_X5



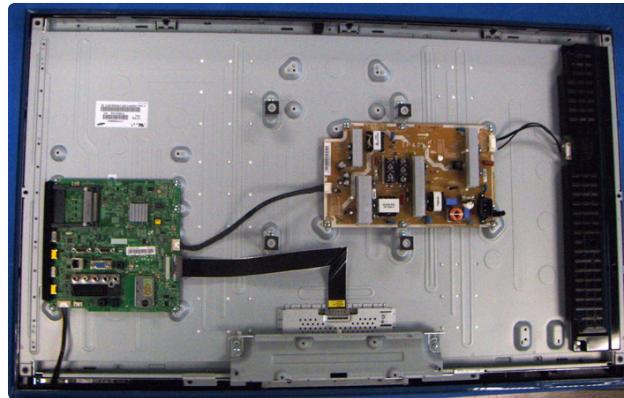
Main Board (Top)_X9**Main Board (Bottom)_X9**

■ WAVEFORMS



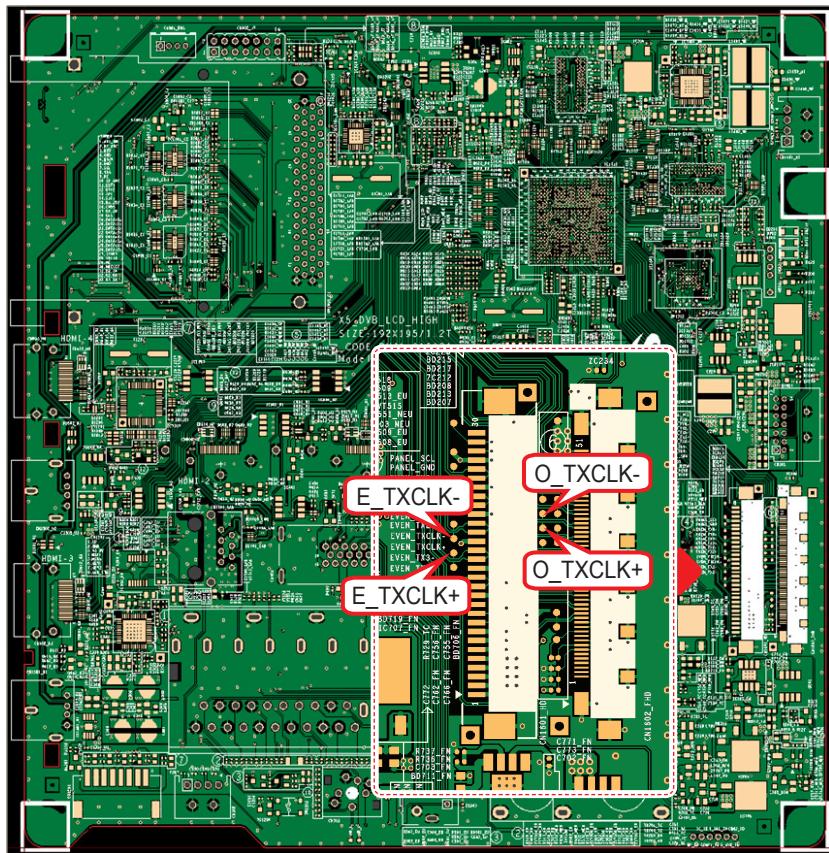
4-1-6. No Video (Tuner DTV)

■ LD550_LD450_26" 32" 37" 40"46"

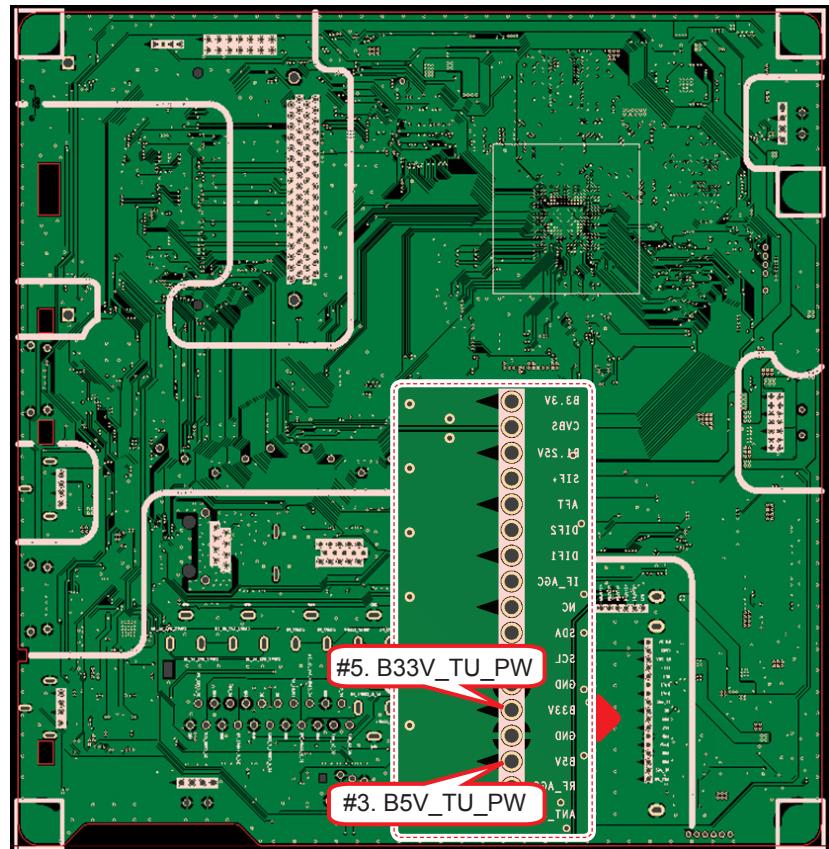
Symptom	<ul style="list-style-type: none"> - Audio is normal but no picture is displayed on the screen.
Major Check points	<ul style="list-style-type: none"> - Check the DTV source. - Check the Tuner, Check the Chelsea. - This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD A[Power indicator LED is off. Lamp (Backlight) on, no video?] -- Yes --> B[Check the connection of RF cable?] A -- No --> C[Check a set in the 'Stand-by mode'.] B -- Yes --> D[Check the 'signal strength' in Self Diagnosis menu Strength is enough?] B -- No --> E[Input the RF source properly.] D -- Yes --> F[Does the DC B5V_TU_PW, B33V_TU_PW appear at #3, #5 Pin of Tuner?] D -- No --> G[Check the D-TV source.] F -- Yes --> H[Does the digital data appear at TP-E_TXCLK+, E_TXCLK-, O_TXCLK+, O_TXCLK-?] F -- No --> I[Change the Main Assy.] H -- Yes --> J[Check the LVDS cable? Check the T-Con Board? Replace the LCD panel?] H -- No --> K[Please, Contact Tech support.] </pre> <p>②</p>
Caution	Make sure to disconnect the power before working on the IP board.

4. Troubleshooting

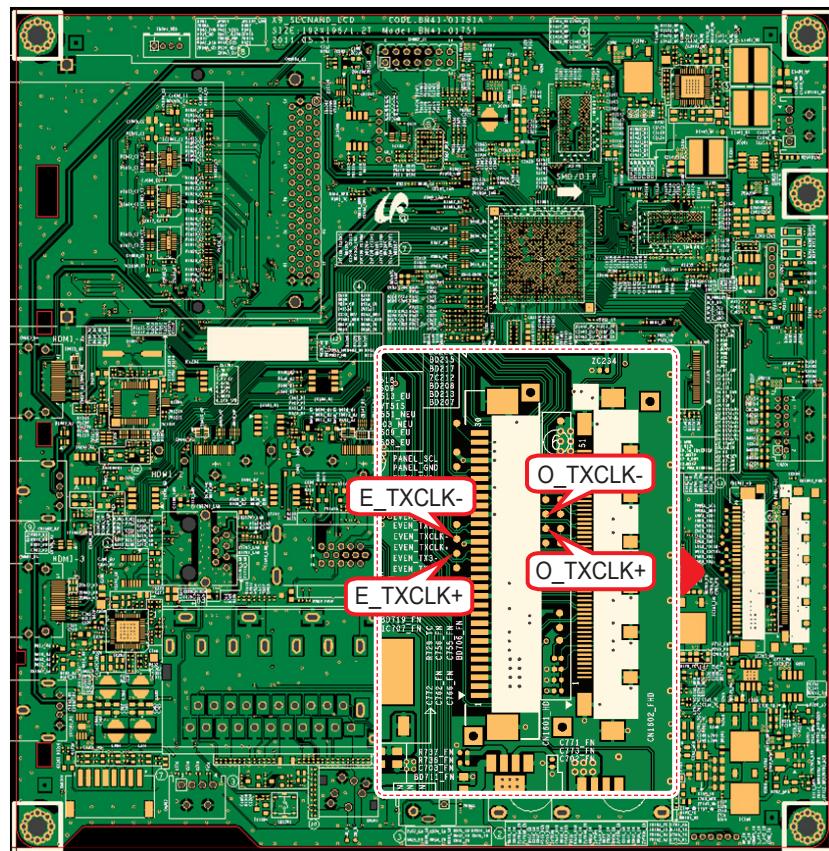
Main Board (Top)_X5



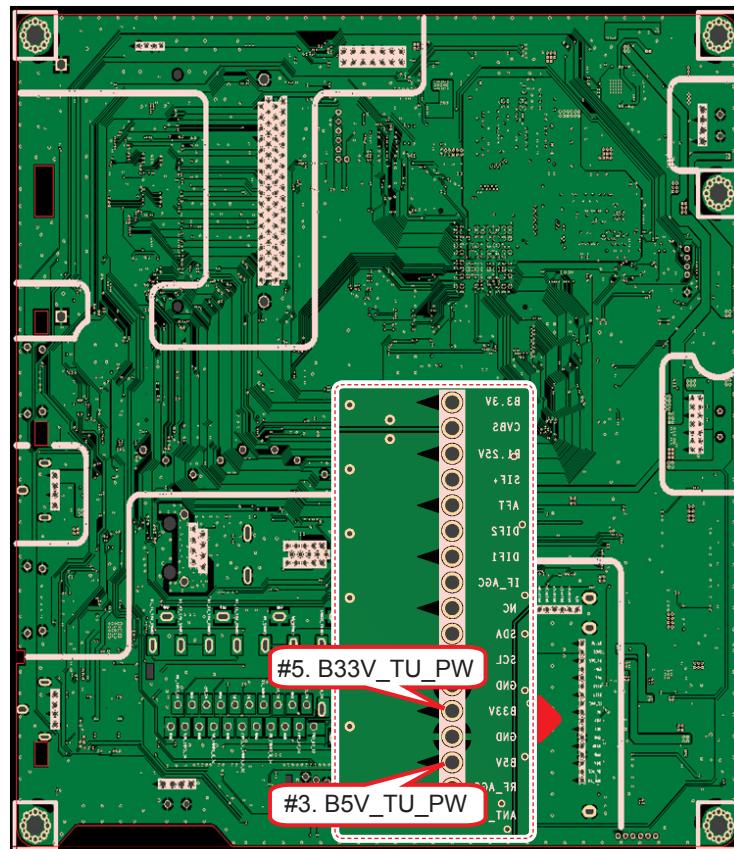
Main Board (Bottom)_X5



Main Board (Top)_X9



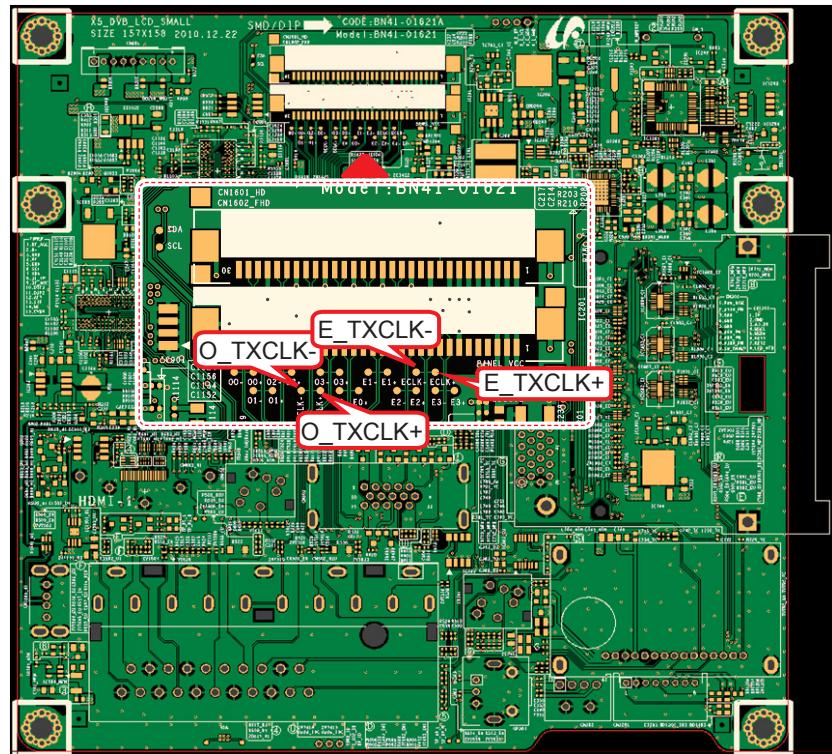
Main Board (Bottom)_X9



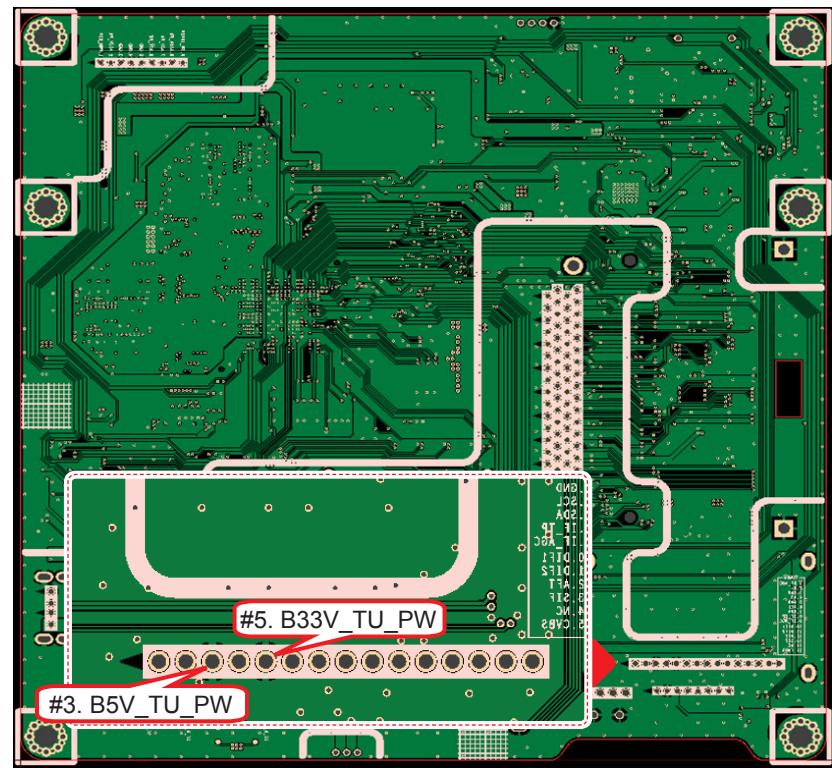
■ LD450_19" 22"

Symptom	- Audio is normal but no picture is displayed on the screen.
Major Check points	<ul style="list-style-type: none"> - Check the DTV source. - Check the Tuner, Check the Chelsea. - This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD A[Power indicator LED is off. Lamp (Backlight) on, no video?] -- Yes --> B[Check the connection of RF cable?] A -- No --> C[Check a set in the 'Stand-by mode'.] B -- Yes --> D[Check the 'signal strength' in Self Diagnosis menu Strength is enough?] B -- No --> E[Input the RF source properly.] D -- Yes --> F[Does the DC B5V_TU_PW, B33V_TU_PW appear at #3, #5 Pin of Tuner?] D -- No --> G[Check the D-TV source.] F -- Yes --> H[Does the digital data appear at TP-E_TXCLK+, E_TXCLK-, O_TXCLK+, O_TXCLK-?] F -- No --> I[Change the Main Assy.] H -- Yes --> J[Check the LVDS cable? Check the Connector of Panel? Replace the LCD panel?] H -- No --> K[Please, Contact Tech support.] </pre> <p>②</p>
Caution	Make sure to disconnect the power before working on the IP board.

Main Board (Top)_X5

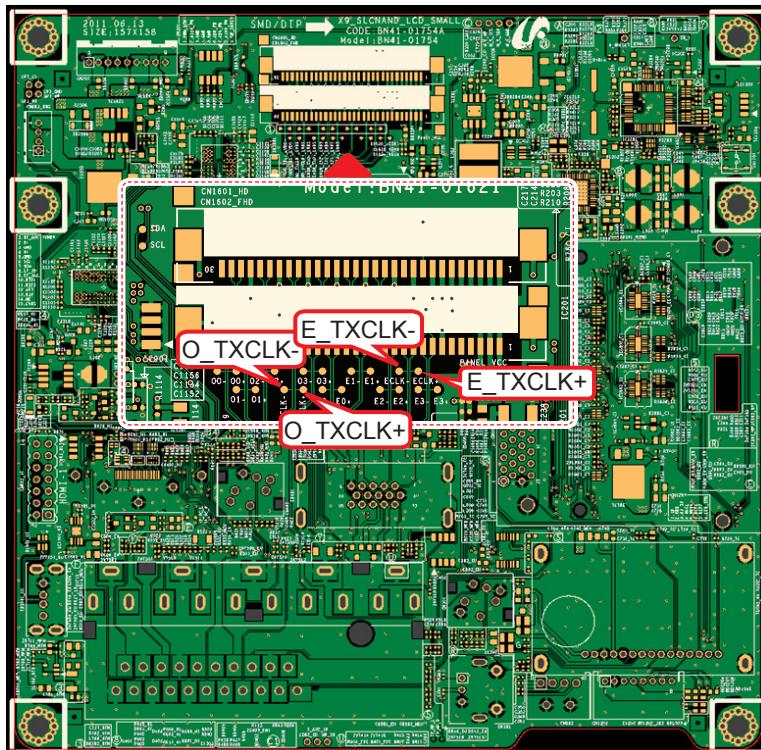


Main Board (Bottom)_X5

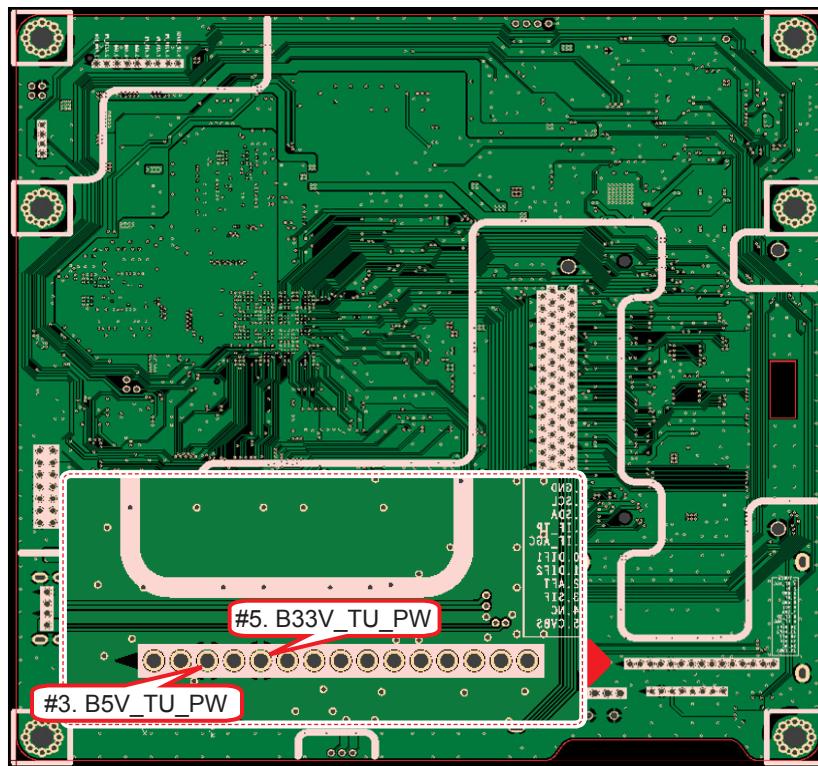


4. Troubleshooting

Main Board (Top)_X9



Main Board (Bottom)_X9

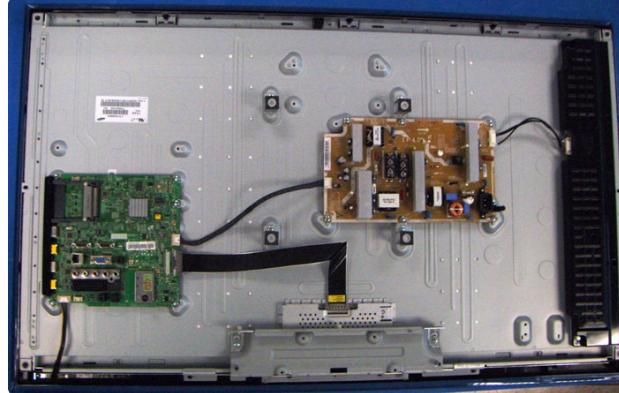


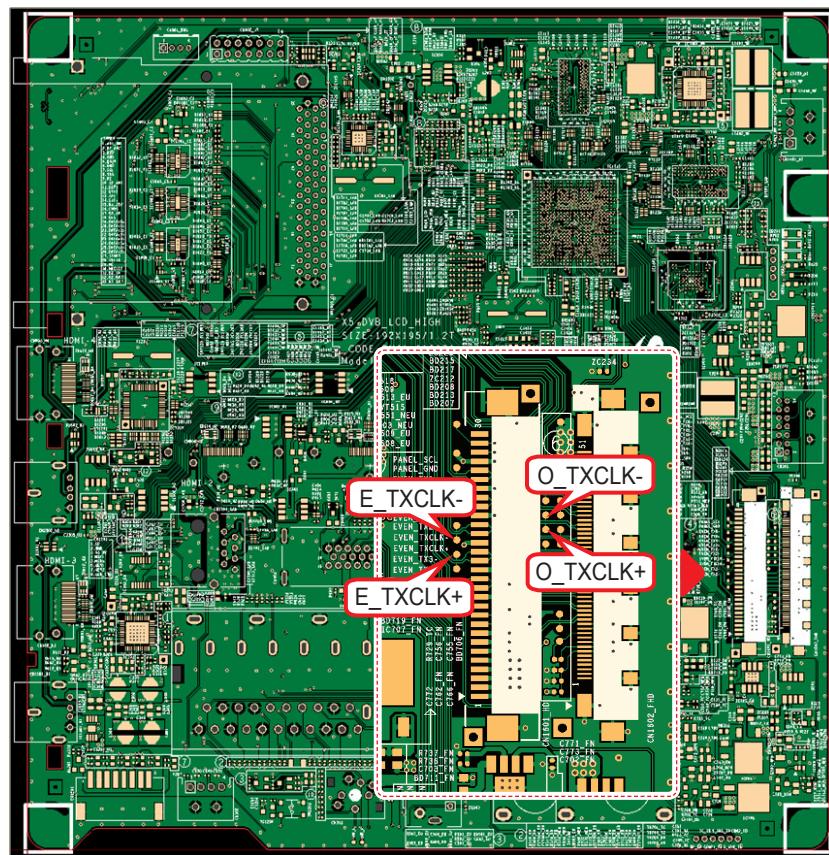
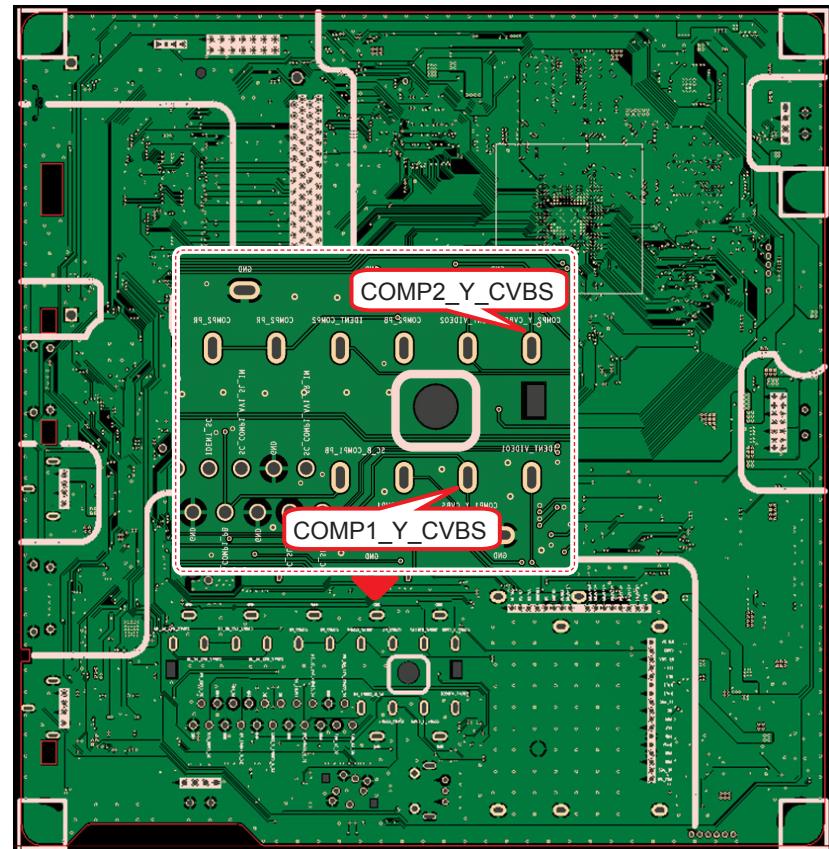
■ WAVEFORMS



4-1-7. No Video (Video CVBS)

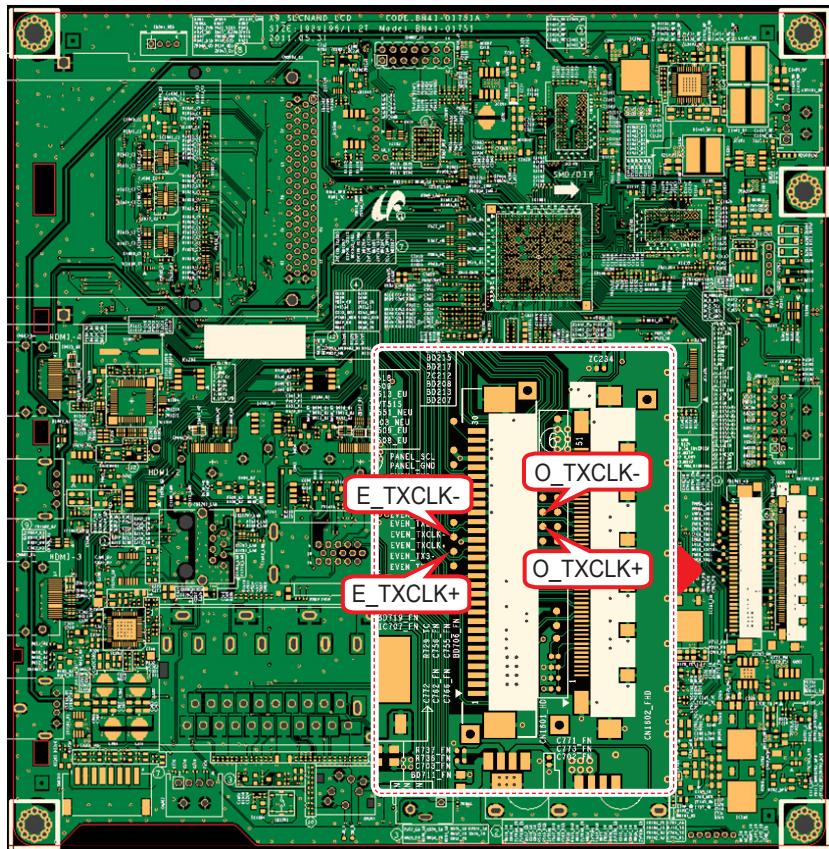
■ LD550_LD450_26" 32" 37" 40" 46"

Symptom	- Audio is normal but no picture is displayed on the screen.
Major Check points	<ul style="list-style-type: none"> - Check the Video CVBS source - Check the Chelsea. - This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD A[Power indicator LED is off. Lamp (Backlight) on, no video?] -- Yes --> B[Check the video source and check the connection of video cable?] A -- No --> C[Check a set in the 'Stand-by mode'.] B -- Yes --> D[Does the CVBS data appear at PIN - COMP1_Y_CVBS, COMP2_Y_ CVBS?] B -- No --> E[Input the video source properly.] D -- Yes --> F[Does the digital data appear at TP-E_TXCLK+, E_TXCLK-, O_TXCLK+, O_TXCLK-?] D -- No --> G[Check CN501_EU, CN502_NEU Change the Main Assy.] F -- Yes --> H[Check the LVDS cable? Check the T-Con Board? Replace the LCD panel?] F -- No --> I[Please, Contact Tech support.] G --> I E --> I </pre> <p>④ Does the CVBS data appear at PIN - COMP1_Y_CVBS, COMP2_Y_CVBS?</p> <p>② Does the digital data appear at TP-E_TXCLK+, E_TXCLK-, O_TXCLK+, O_TXCLK-?</p>
Caution	Make sure to disconnect the power before working on the IP board.

Main Board (Top)_X5**Main Board (Bottom)_X5**

4. Troubleshooting

Main Board (Top)_X9

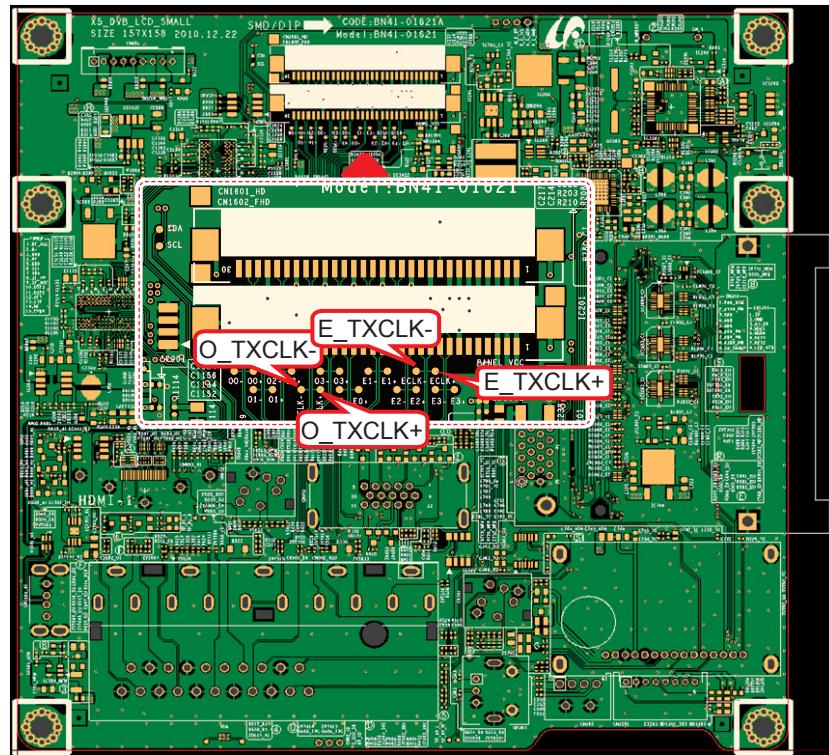


■ LD450_19" 22"

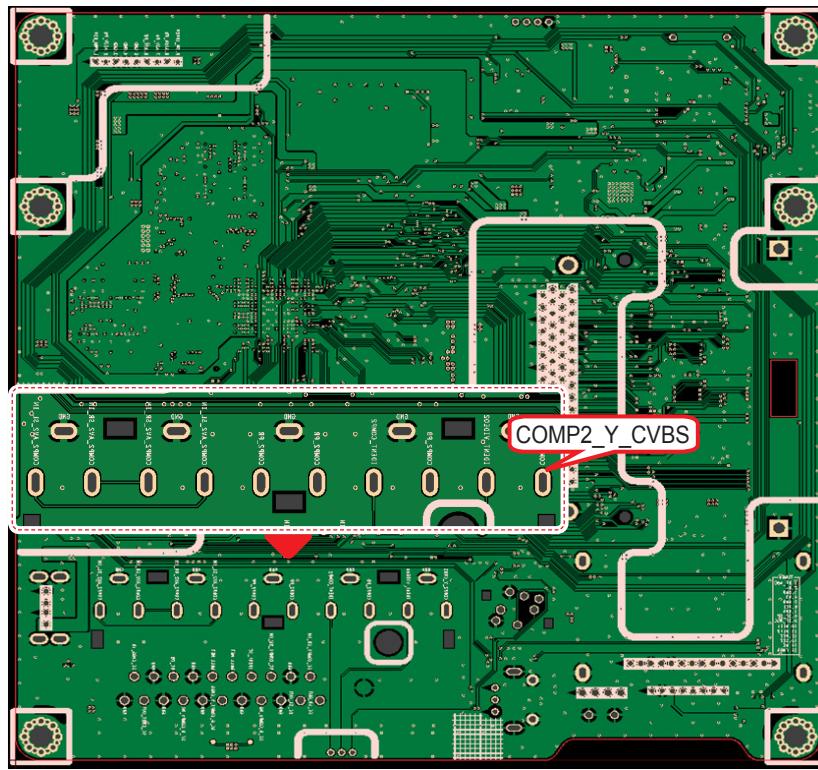
Symptom	- Audio is normal but no picture is displayed on the screen.
Major Check points	<ul style="list-style-type: none"> - Check the Video CVBS source - Check the Chelsea. - This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD A[Power indicator LED is off. Lamp (Backlight) on, no video?] -- Yes --> B[Check the video source and check the connection of video cable?] A -- No --> C[Check a set in the 'Stand-by mode'.] B -- Yes --> D[Does the CVBS data appear at PIN - COMP1_Y_CVBS, COMP2_Y_CVBS?] B -- No --> E[Input the video source properly.] D -- Yes --> F[Does the digital data appear at TP-E_TXCLK+, E_TXCLK-, O_TXCLK+, O_TXCLK-?] D -- No --> G[Check CN501_EU, CN502_NEU Change the Main Assy.] F -- Yes --> H[Check the LVDS cable? Check the Connector of Panel? Replace the LCD panel?] F -- No --> I[Please, Contact Tech support.] G --> H E --> I </pre> <p>The flowchart starts with checking if the power indicator LED is off and the lamp is on. If yes, it checks the video source and connection. If no, it checks a set in stand-by mode. Then it checks for CVBS data at specific pins. If CVBS data is present, it checks for digital data at other pins. If digital data is present, it checks the LVDS cable, connector, or panel. If none of these steps resolve the issue, it leads to contacting tech support.</p>
Caution	Make sure to disconnect the power before working on the IP board.

4. Troubleshooting

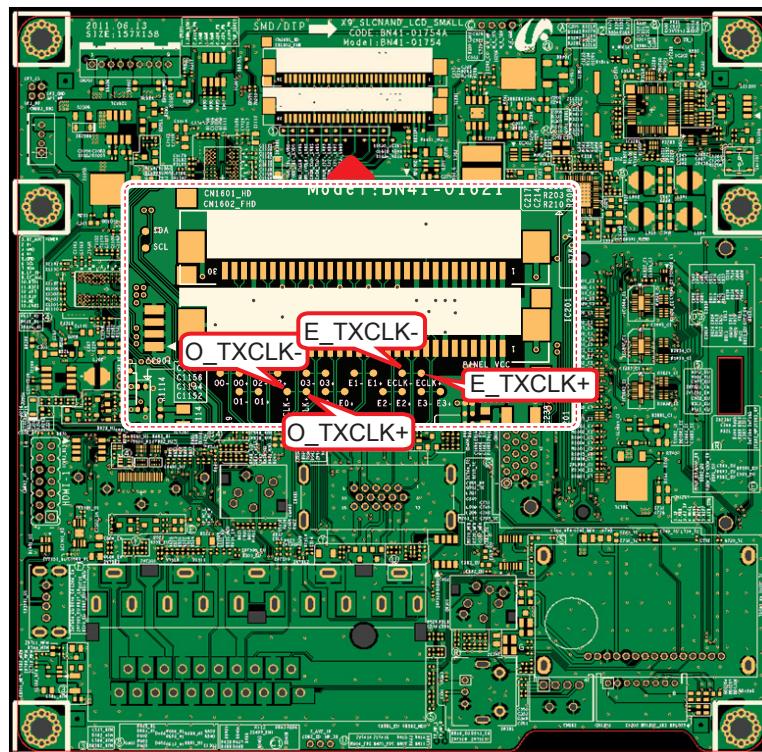
Main Board (Top)_X5



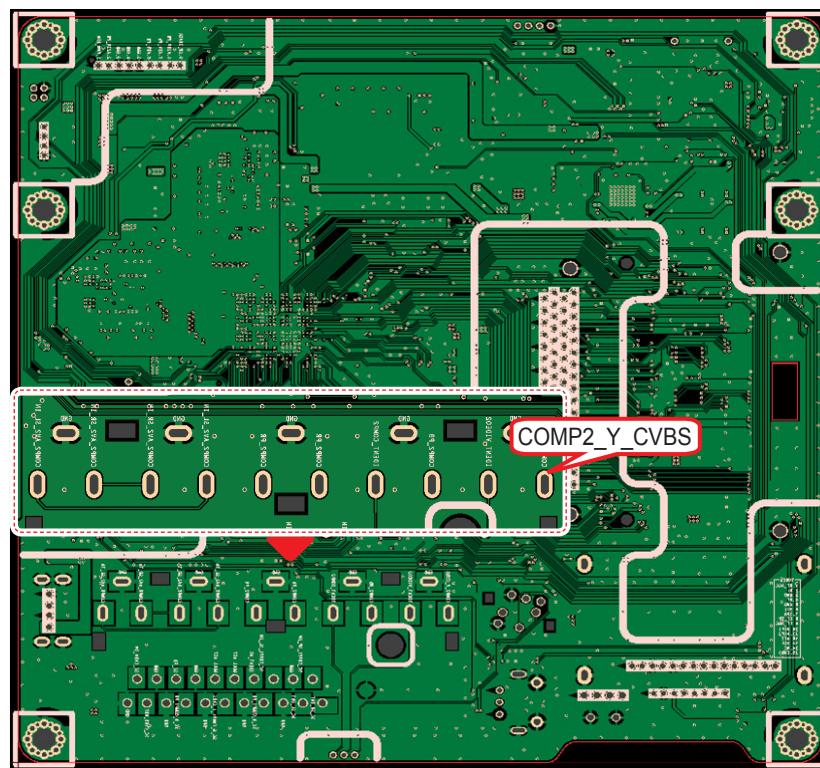
Main Board (Bottom)_X5



Main Board (Top)_X9

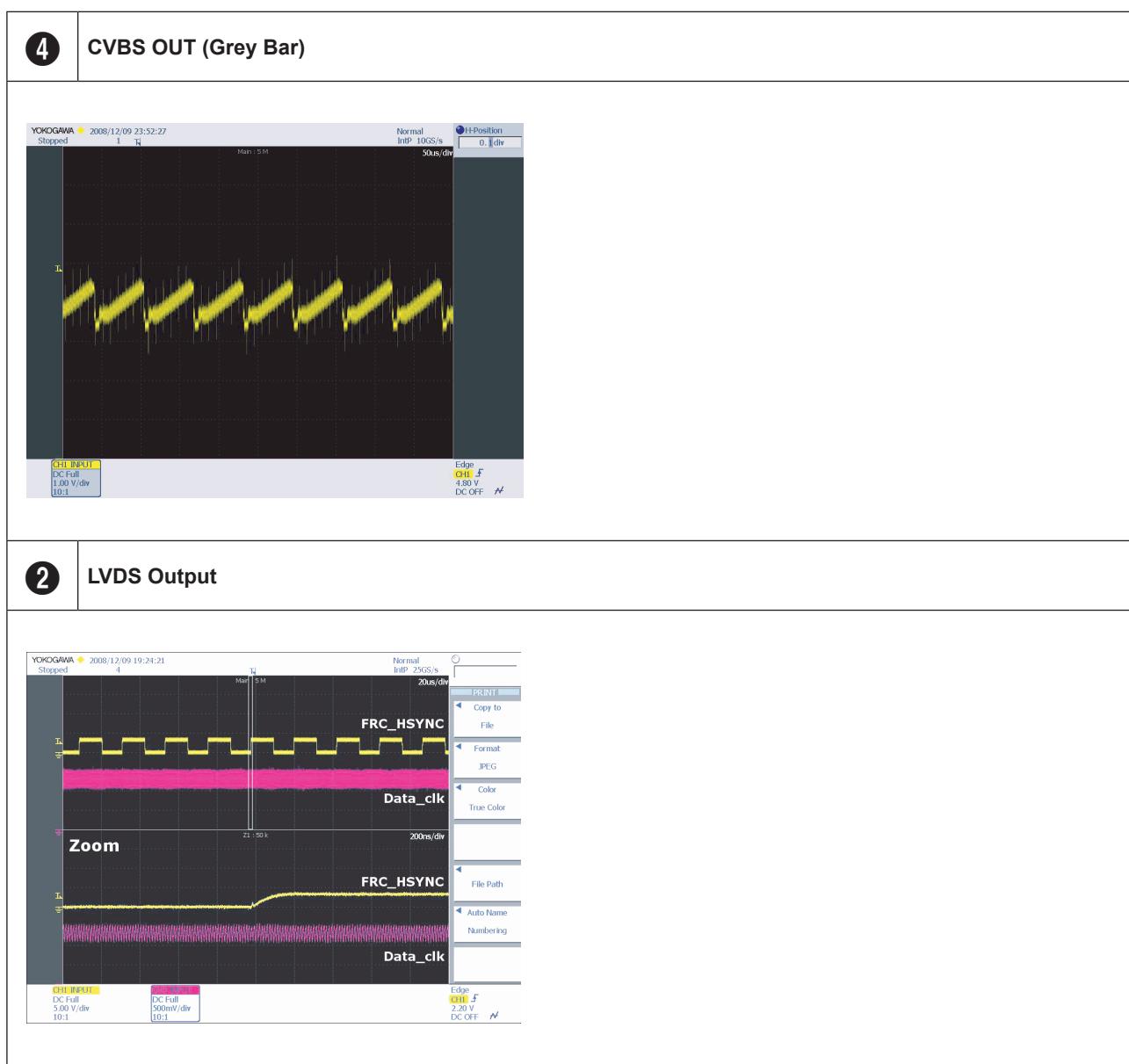


Main Board (Bottom)_X9



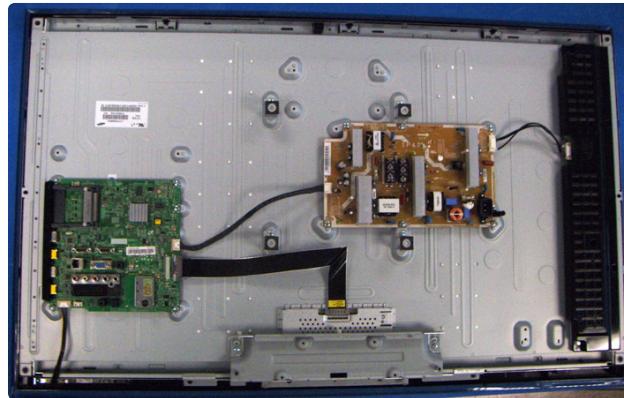
4. Troubleshooting

■ WAVEFORMS



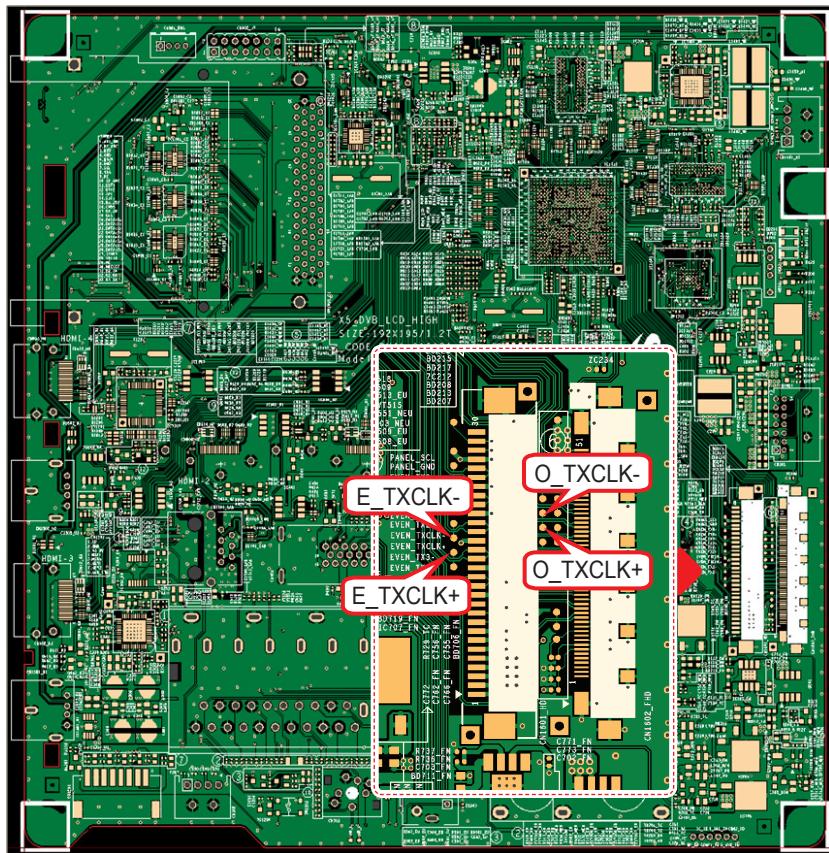
4-1-8. No Video (Component)

■ LD550_LD450_26" 32" 37" 40" 46"

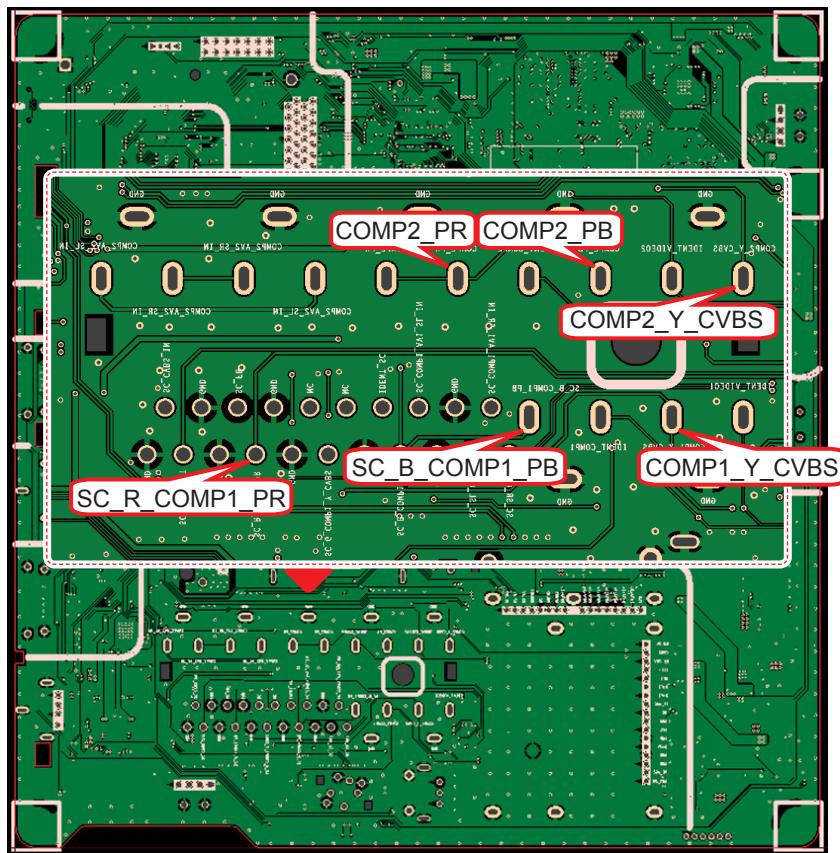
Symptom	<ul style="list-style-type: none"> - Audio is normal but no picture is displayed on the screen.
Major Check points	<ul style="list-style-type: none"> - Check the Component source - Check the chelsea. - This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD A[Power indicator LED is off. Lamp (Backlight) on, no video?] -- Yes --> B[Check the component source and check the connection of component cables (Y,Pb,Pr)?] A -- No --> C[Check a set in the 'Stand-by mode'.] B -- Yes --> D[Does the component data appear at PIN - COMP2_Y_CVBS, COMP2_PB, COMP2_PR?] B -- No --> E[Input the component source properly.] D -- Yes --> F[Does the digital data appear at TP-E_TXCLK+, E_TXCLK-, O_TXCLK+, O_TXCLK-?] D -- No --> G[Check CN501_EU, CN502_NEU Change the Main Assy.] F -- Yes --> H[Check the LVDS cable? Check the T-Con Board? Replace the LCD panel?] F -- No --> I[Check IC1111 (X5) / IC1001 (X9). Change the Main Assy.] H -- No --> J[Please, Contact Tech support.] </pre> <p>⑤ Does the component data appear at PIN - COMP2_Y_CVBS, COMP2_PB, COMP2_PR?</p> <p>② Does the digital data appear at TP-E_TXCLK+, E_TXCLK-, O_TXCLK+, O_TXCLK-?</p>
Caution	Make sure to disconnect the power before working on the IP board.

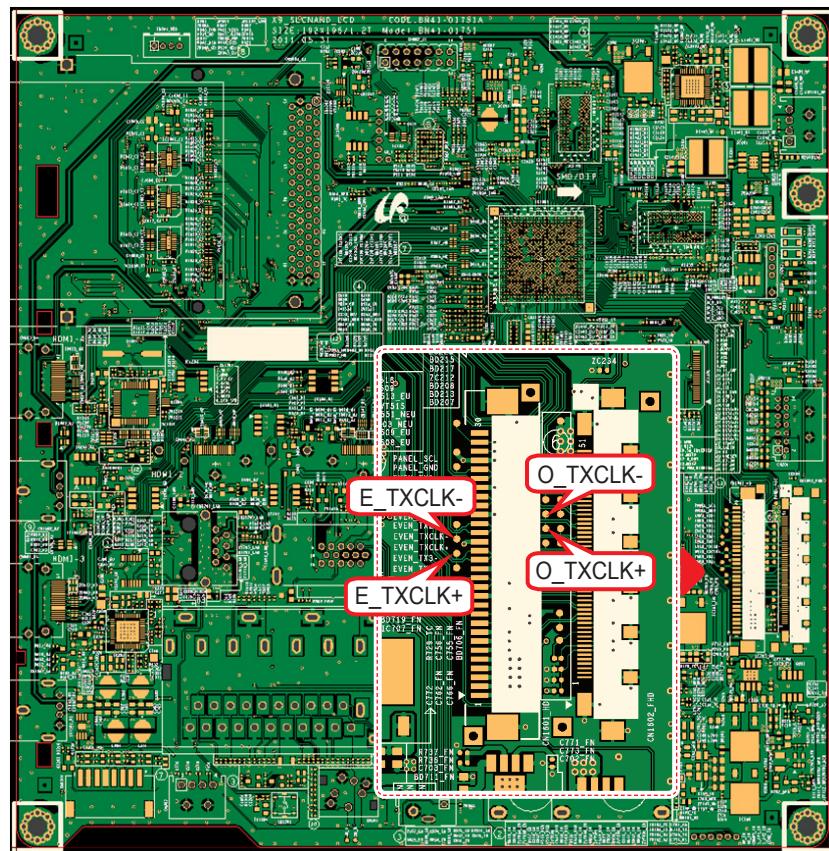
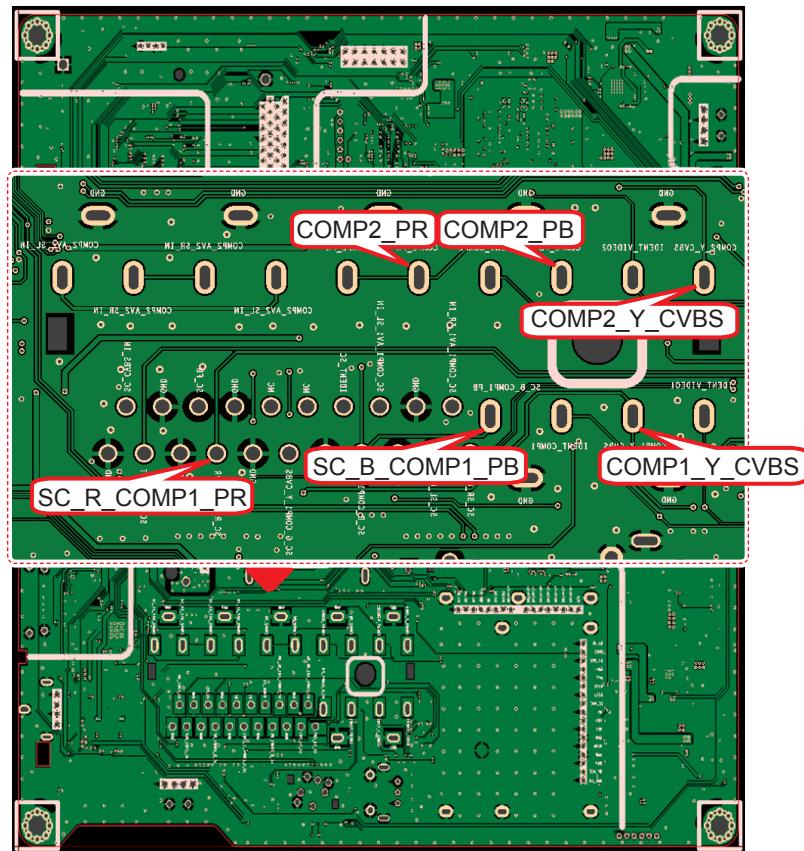
4. Troubleshooting

Main Board (Top)_X5



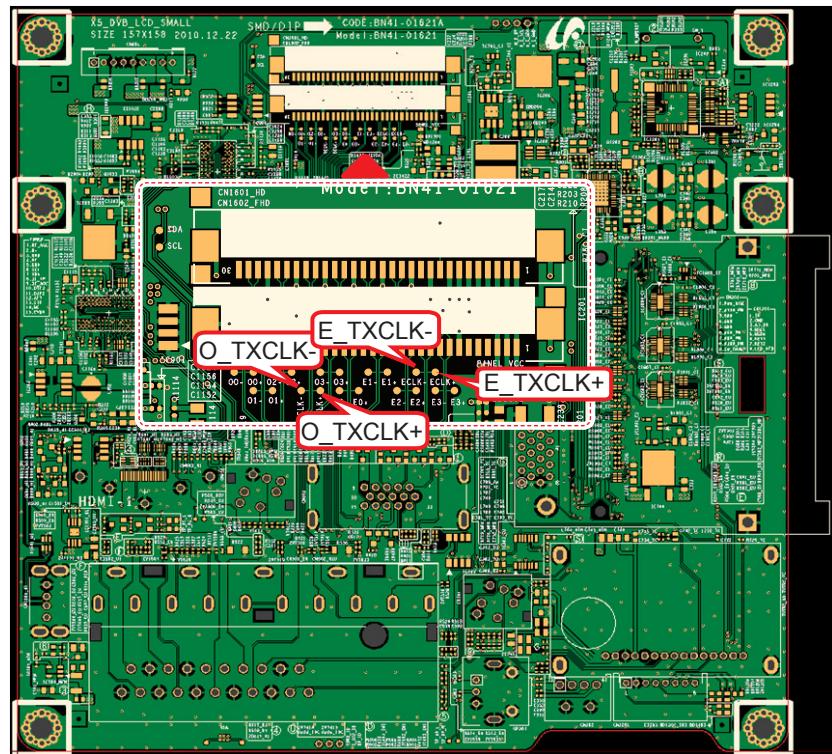
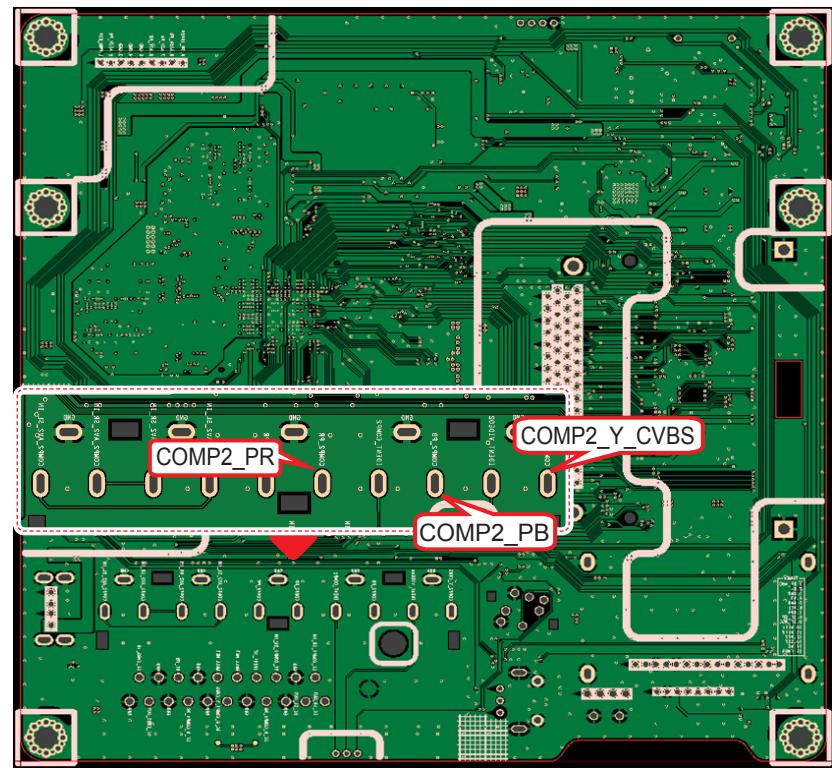
Main Board (Bottom)_X5



Main Board (Top)_X9**Main Board (Bottom)_X9**

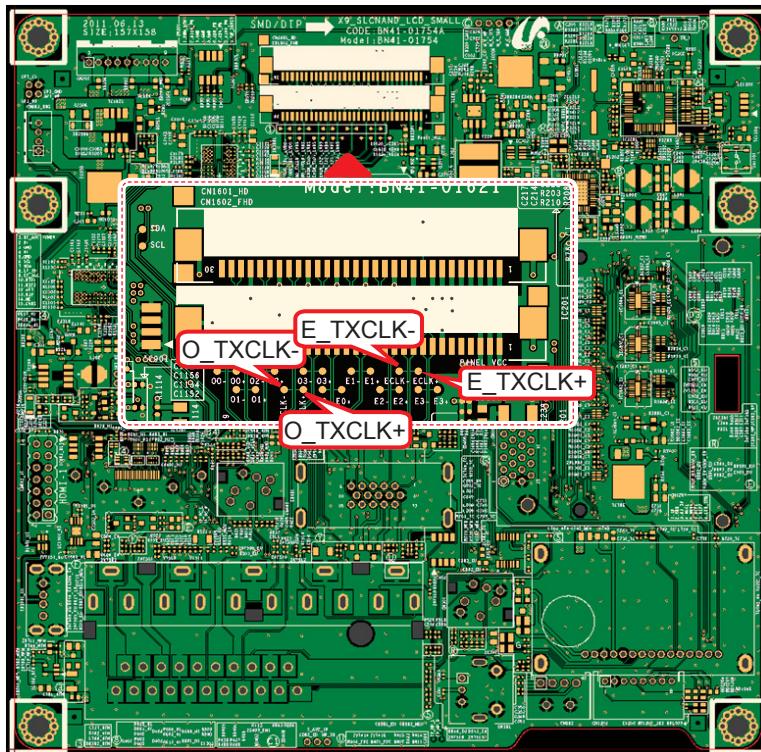
■ LD450_19" 22"

Symptom	- Audio is normal but no picture is displayed on the screen.
Major Check points	<ul style="list-style-type: none"> - Check the Component source - Check the chelsea. - This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD A["Power indicator LED is off. Lamp (Backlight) on, no video?"] -- No --> B["Check a set in the 'Stand-by mode'."] A -- Yes --> C["Check the component source and check the connection of component cables (Y,Pb,Pr)?"] C -- No --> D["Input the component source properly."] C -- Yes --> E["⑤ Does the component data appear at PIN - COMP2_Y_CVBS, COMP2_PB, COMP2_PR?"] E -- No --> F["Check CN501_EU, CN502_NEU Change the Main Assy."] E -- Yes --> G["② Does the digital data appear at TP-E_TXCLK+, E_TXCLK-, O_TXCLK+, O_TXCLK-?"] G -- No --> H["Check IC1111 (X5) / IC1001 (X9). Change the Main Assy."] G -- Yes --> I["Check the LVDS cable? Check the Connector of Panel? Replace the LCD panel?"] I -- No --> J["Please, Contact Tech support."] </pre>
Caution	Make sure to disconnect the power before working on the IP board.

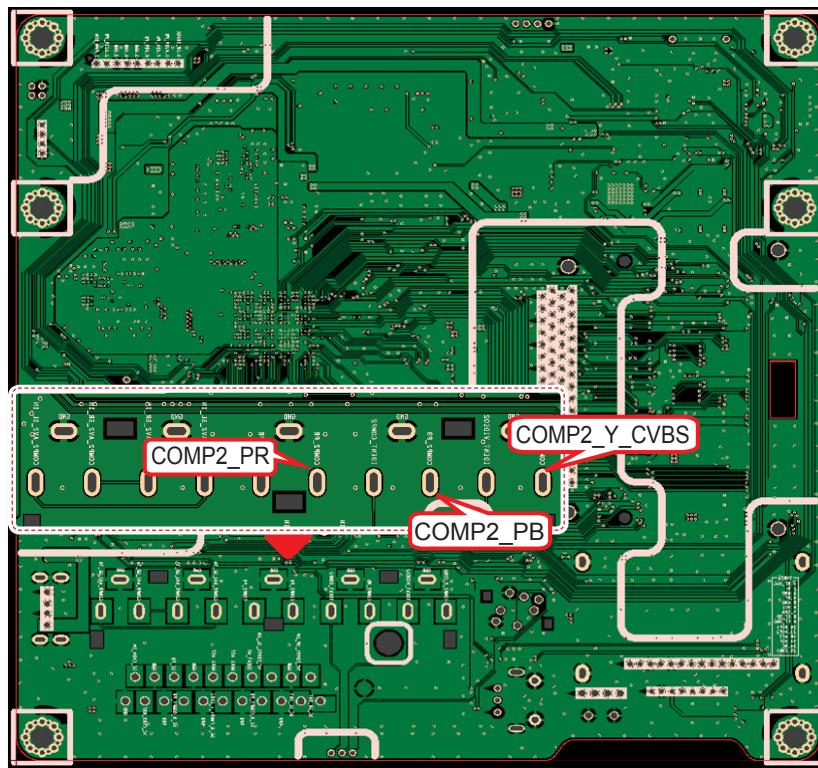
Main Board (Top)_X5**Main Board (Bottom)_X5**

4. Troubleshooting

Main Board (Top)_X9



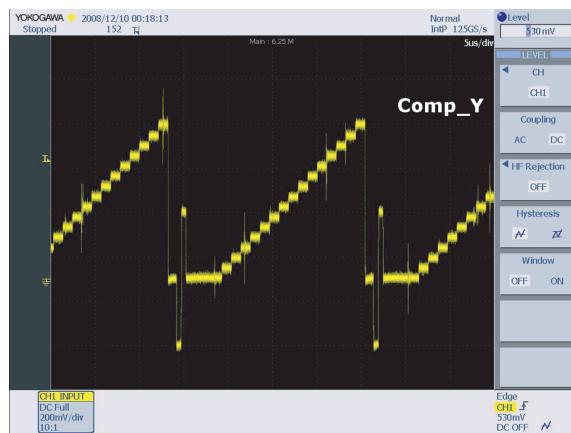
Main Board (Bottom)_X9



■ WAVEFORMS

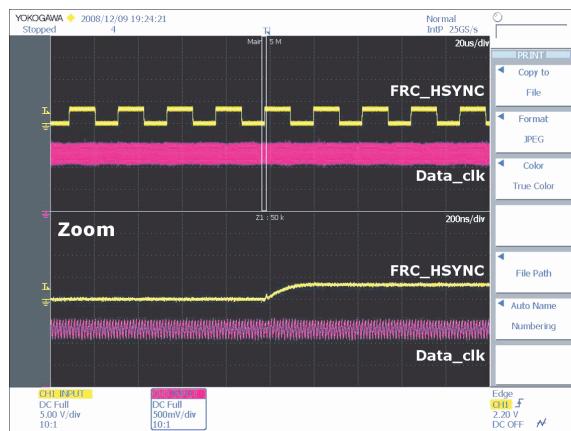
5

Component_Y (Gray scale) / Pb / Pr (Color bar)



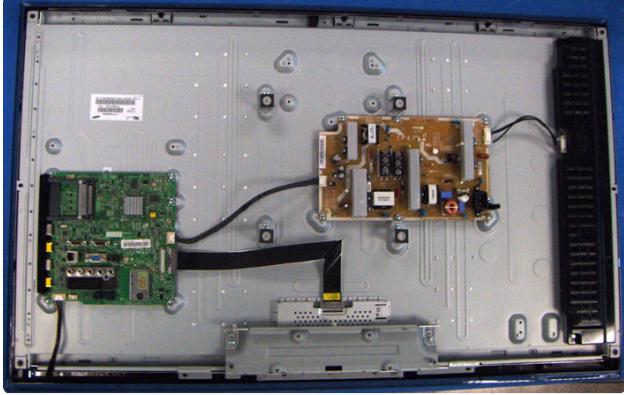
2

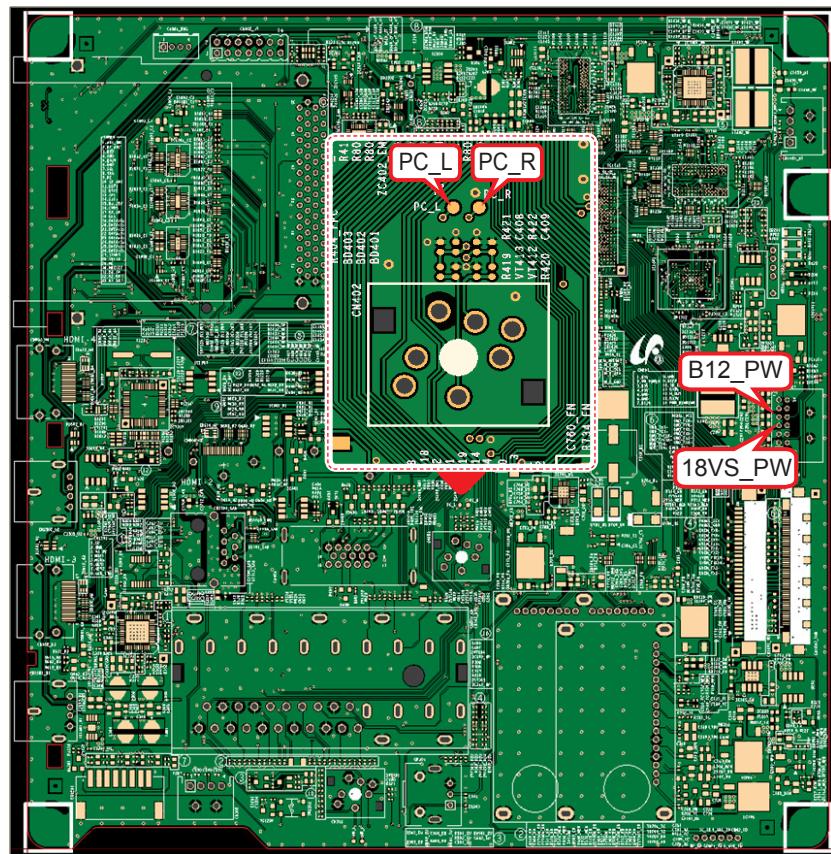
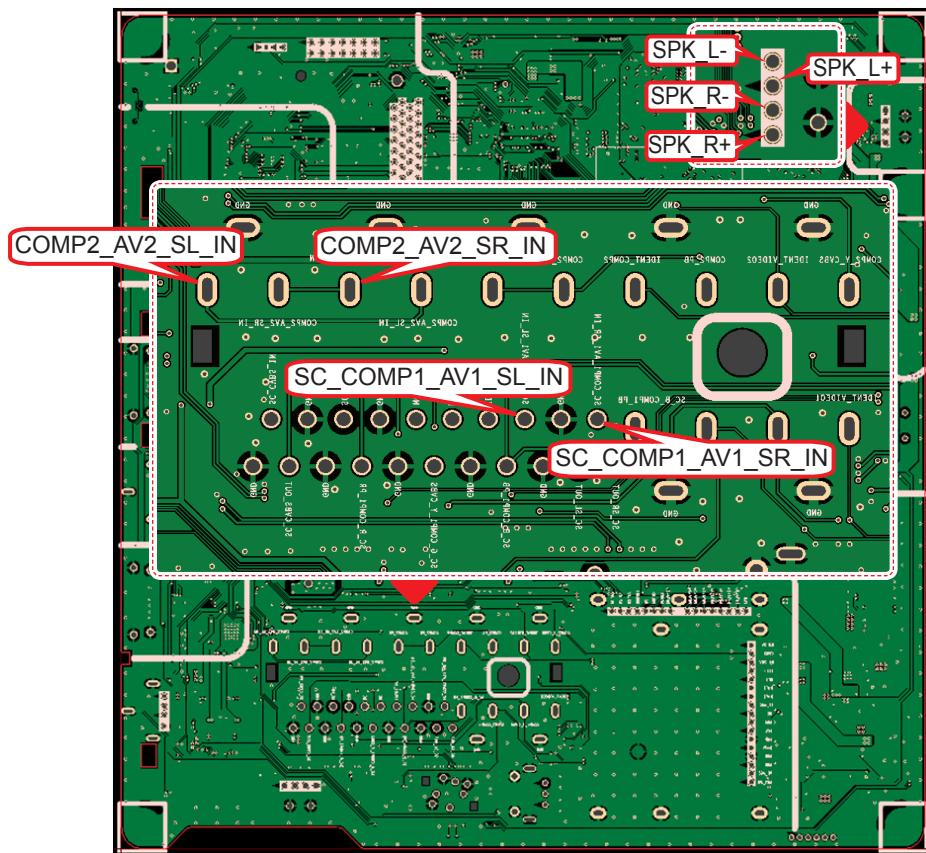
LVDS Output



4-1-9. No Sound

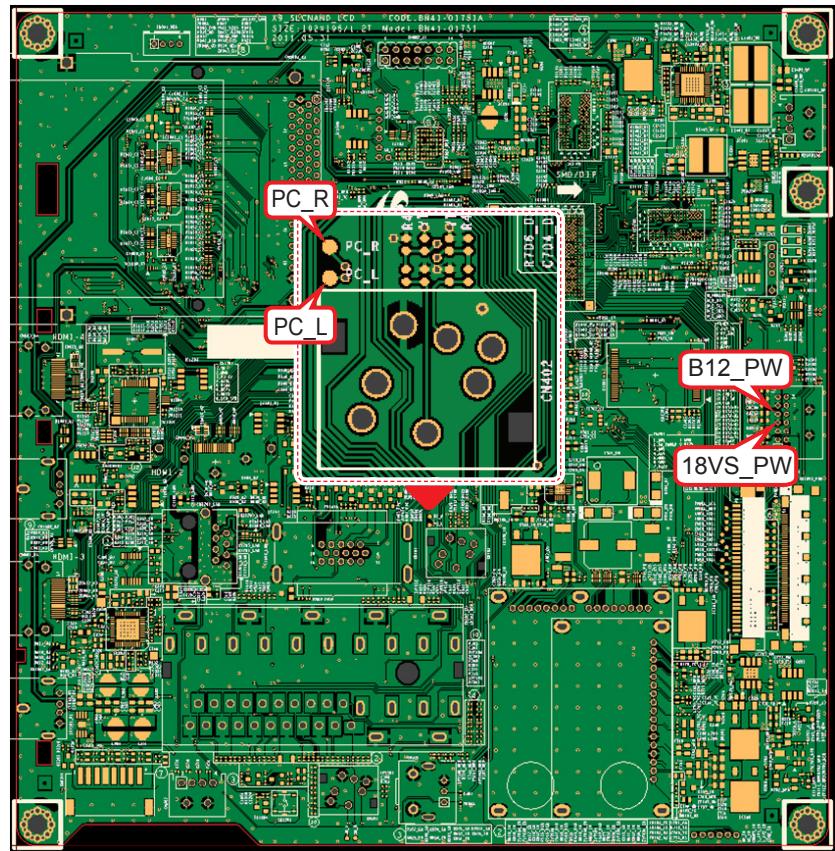
■ LD550_LD450_26" 32" 37" 40" 46"

Symptom	- Video is normal but there is no sound..
Major Check points	<ul style="list-style-type: none"> - When the speaker connectors are disconnected or damaged. - When the sound processing part of the Main Board is not functioning. - Speaker defect.
Diagnostics	 <pre> graph TD A[Check the source and check the connection of sound cable (Comp/AV/PC/DVI to HDMI)?] -- Yes --> B[Does the sound data appear at PIN - SC_COMP1_AV1_SL_IN, SC_COMP1_AV1_SR_IN, PIN - COMP2_AV2_SL_IN, COMP2_AV2_SR_IN, VIA - PC_L, PC_R (PC/DVI)?] A -- No --> C[Input the sound source properly.] B -- Yes --> D[Does the DC B12VS appear at CN201 PIN 7, 9 - B12_18VS_PW?] B -- No --> E[Check CN501_EU, CN502_NEU, CN402 Change the Main Assy.] D -- Yes --> F[Does the sound data appear at TP - SPK_L-, SPK_L+, SPK_R-, SPK_R+?] D -- No --> G[Change the Main Assy.] F -- Yes --> H[Replace speaker.] F -- No --> I[Check IC1111 (X5) / IC1001 (X9). Check IC1401_WF (Sound AMP).] H -- No --> J[Please, Contact Tech support.] </pre> <p>⑥</p>
Caution	Make sure to disconnect the power before working on the IP board.

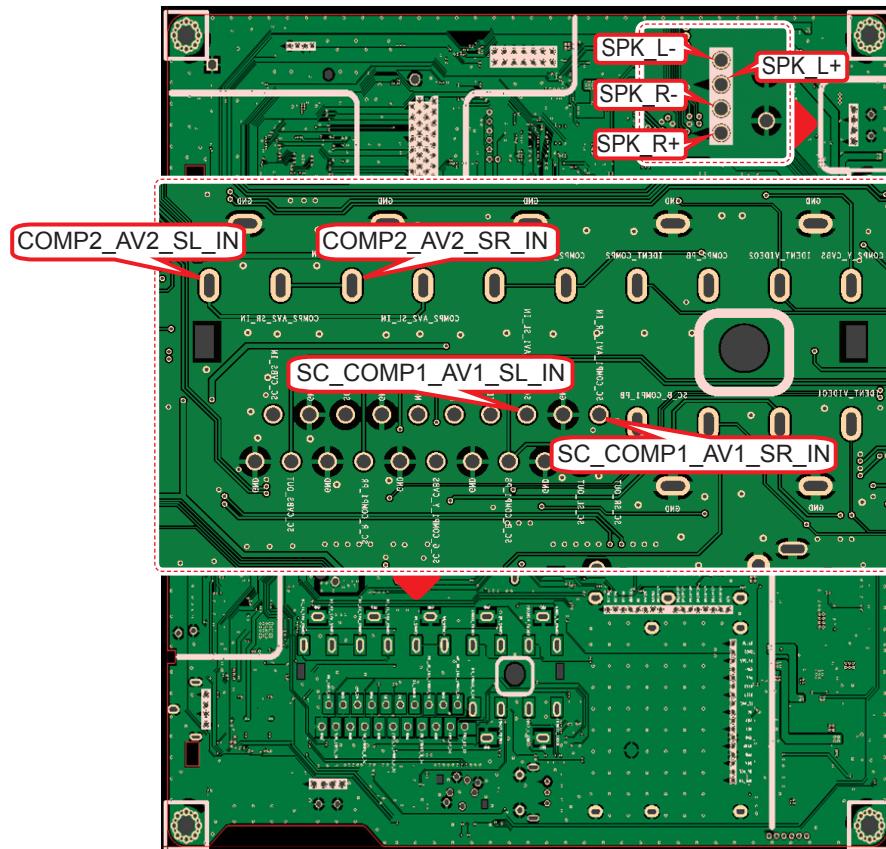
Main Board (Top)_X5**Main Board (Bottom)_X5**

4. Troubleshooting

Main Board (Top)_X9



Main Board (Bottom)_X9

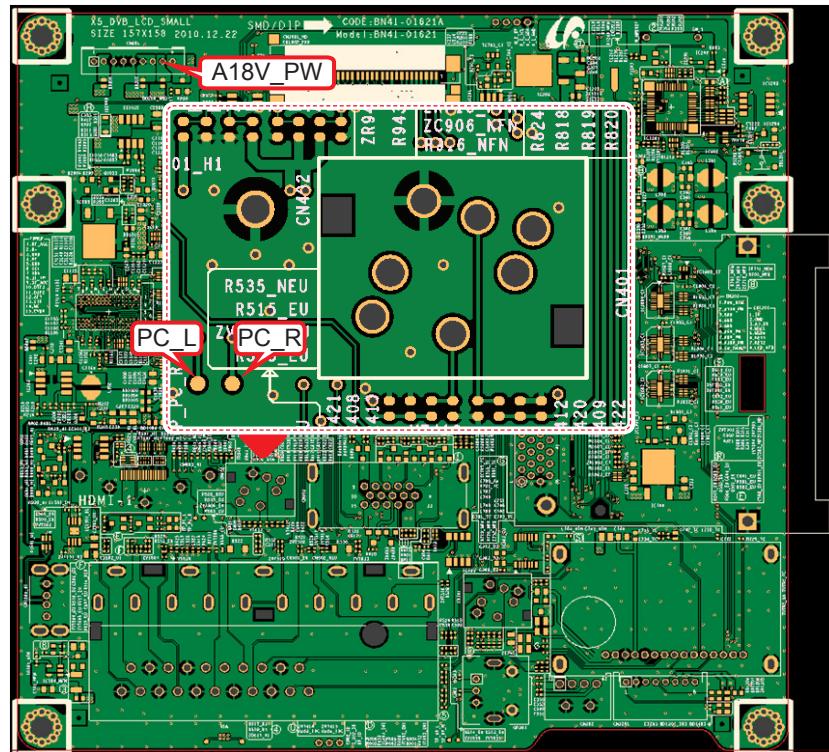


■ LD450_19" 22"

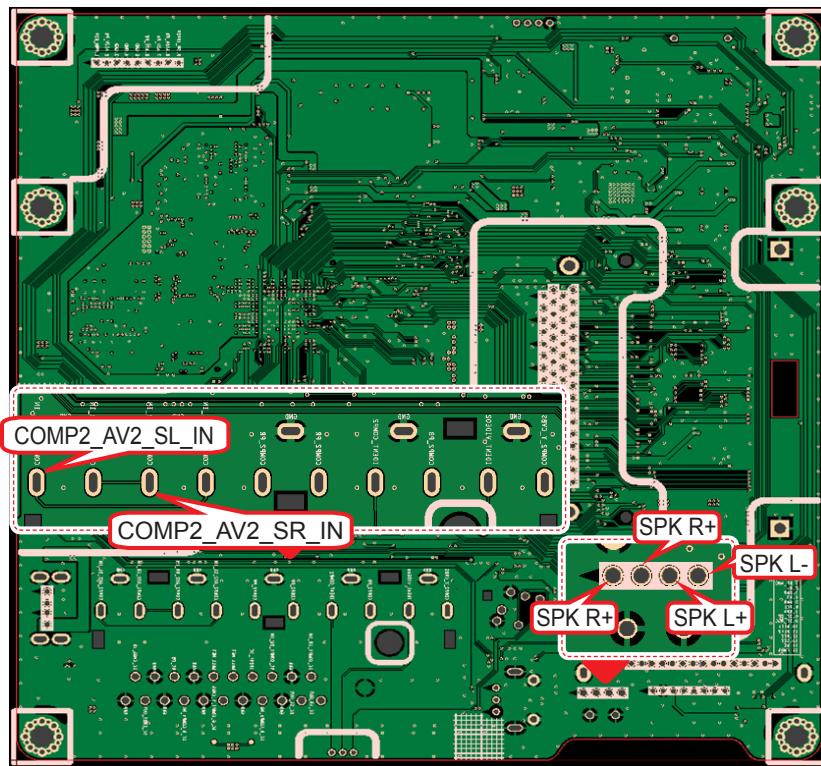
Symptom	- Video is normal but there is no sound..
Major Check points	<ul style="list-style-type: none"> - When the speaker connectors are disconnected or damaged. - When the sound processing part of the Main Board is not functioning. - Speaker defect..
	 <pre> graph TD A[Check the source and check the connection of sound cable (Comp/AV/PC/DVI to HDMI)?] -- Yes --> B[Does the sound data appear at PIN - SC_COMP1_AV1_SL_IN, SC_COMP1_ AV1_SR_IN, PIN - COMP2_AV2_SL_IN, COMP2_AV2_SR_IN, VIA - PC_L, PC_R (PC/DVI)?] A -- No --> C[Input the sound source properly.] B -- Yes --> D[Does the DC A18V appear at CN201 PIN 8 - A18V_PW?] B -- No --> E[Check CN501_EU, CN502_NEU, CN402 Change the Main Assy.] D -- Yes --> F[Replace speaker.] D -- No --> G[Change the Main Assy.] F -- Yes --> H[⑥ Does the sound data appear at TP - SPK_ L-, SPK_L+, SPK_R-, SPK_R+?] F -- No --> I[Please, Contact Tech support.] H -- Yes --> J[Check IC1111 (X5) / IC1001 (X9). Check IC1401_WF (Sound AMP).] H -- No --> K[Please, Contact Tech support.] </pre>
Diagnostics	<p>Check the source and check the connection of sound cable (Comp/AV/PC/DVI to HDMI)?</p> <p>Does the sound data appear at PIN - SC_COMP1_AV1_SL_IN, SC_COMP1_AV1_SR_IN, PIN - COMP2_AV2_SL_IN, COMP2_AV2_SR_IN, VIA - PC_L, PC_R (PC/DVI)?</p> <p>Does the DC A18V appear at CN201 PIN 8 - A18V_PW?</p> <p>⑥ Does the sound data appear at TP - SPK_L-, SPK_L+, SPK_R-, SPK_R+?</p>
Caution	Make sure to disconnect the power before working on the IP board.

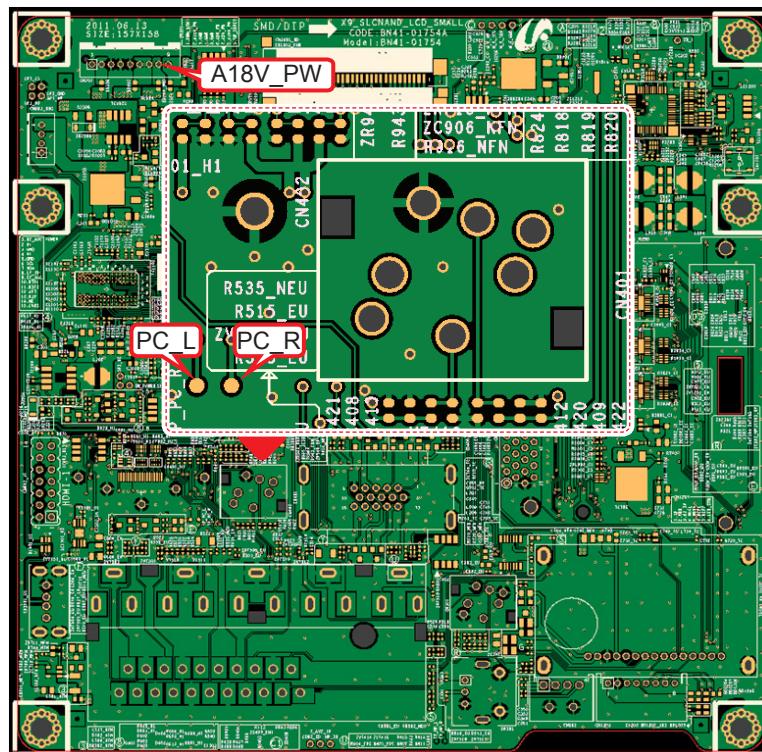
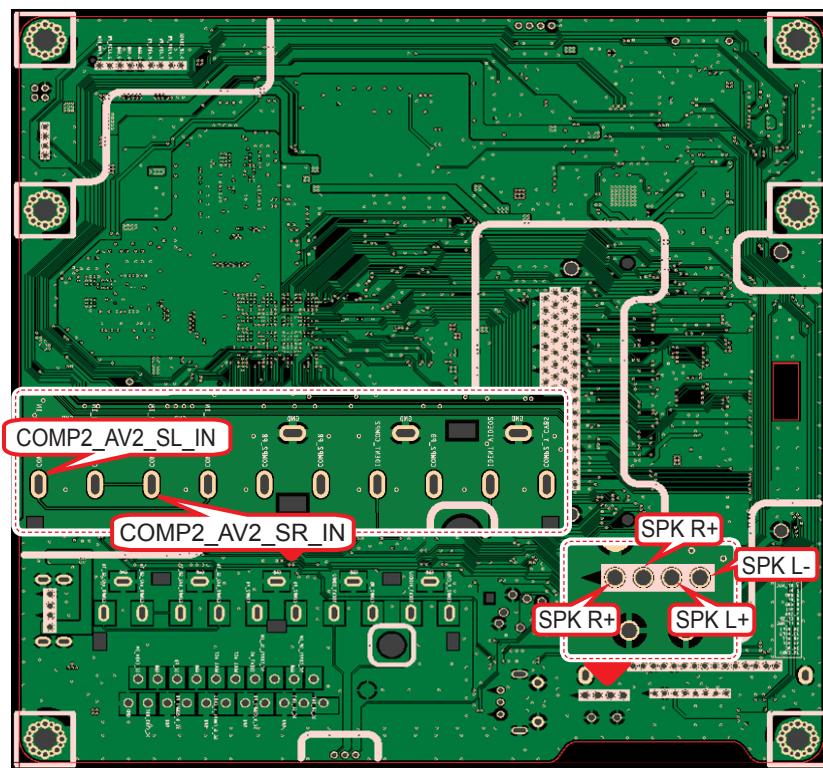
4. Troubleshooting

Main Board (Top)_X5



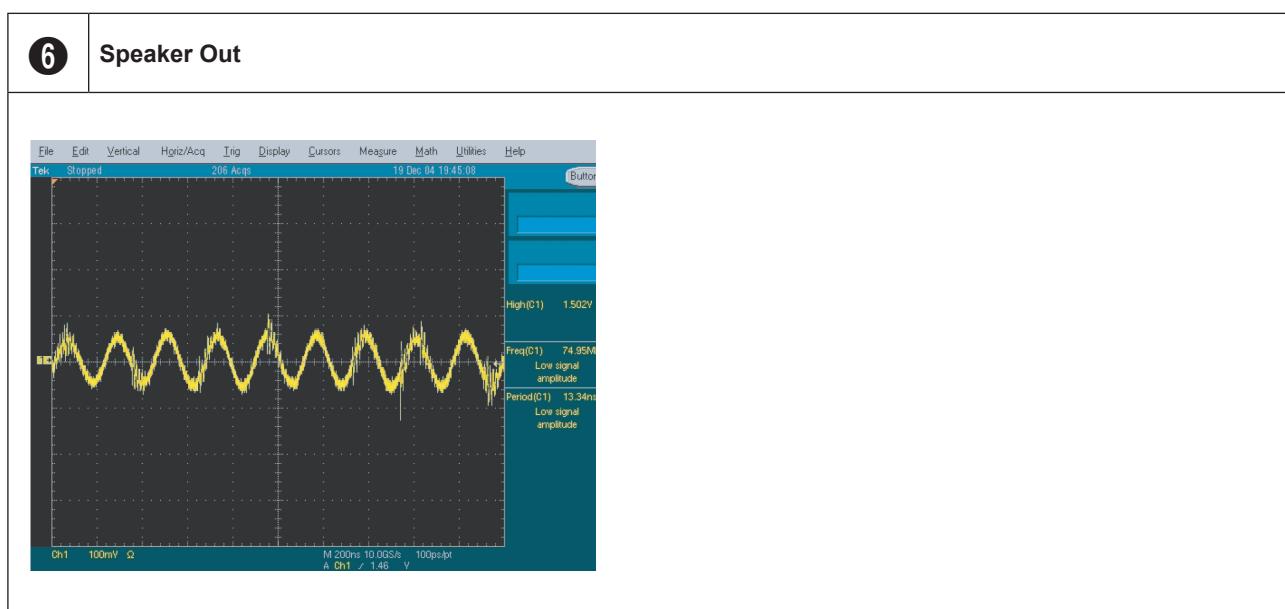
Main Board (Bottom)_X5



Main Board (Top)_X9**Main Board (Bottom)_X9**

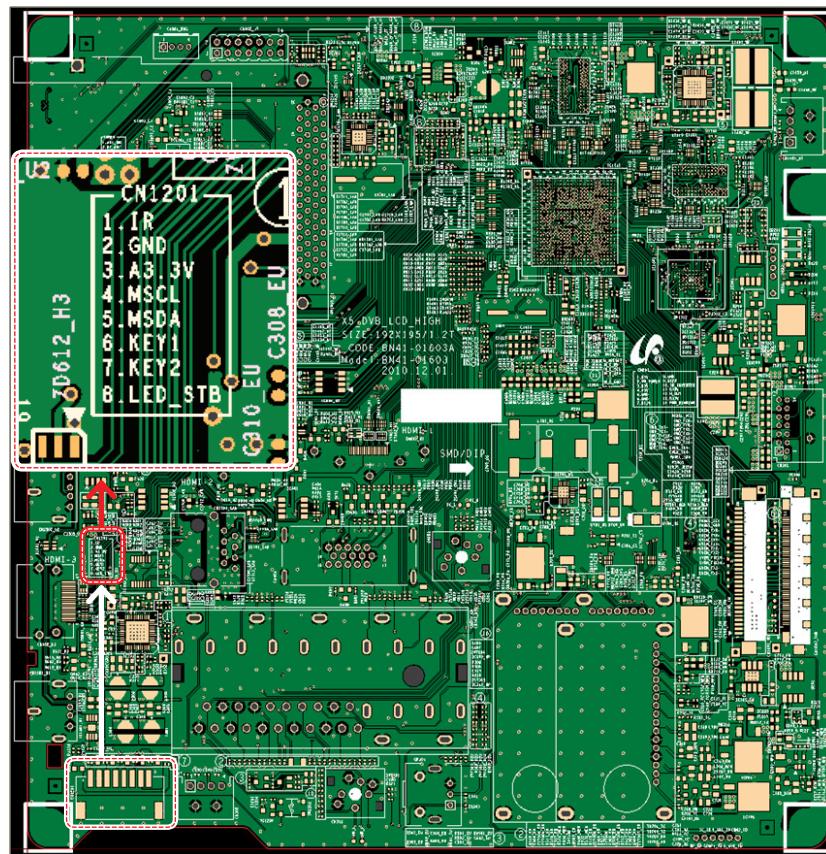
4. Troubleshooting

■ WAVEFORMS

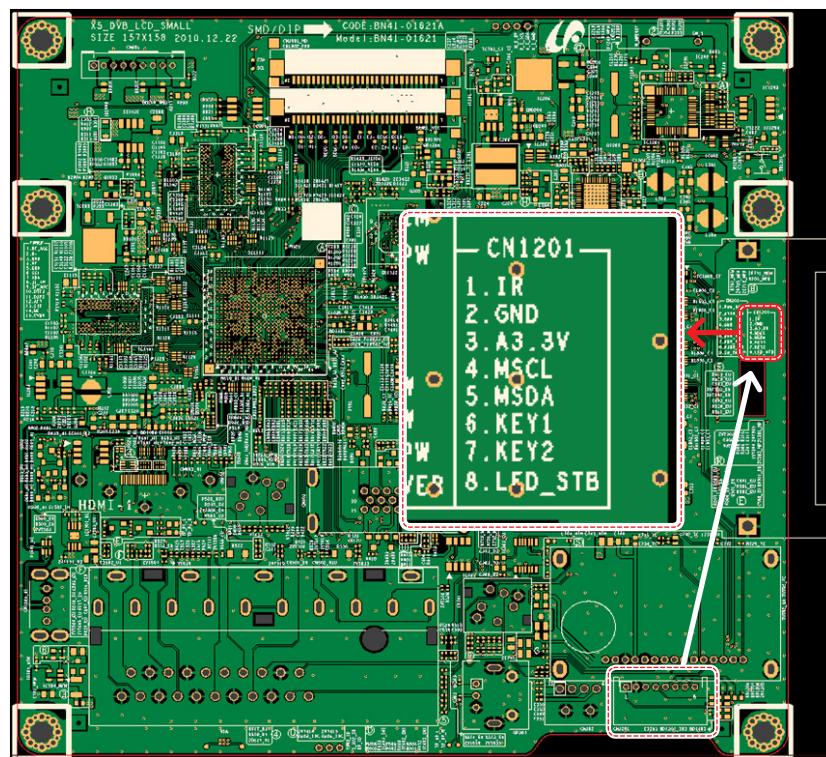


4-1-10. Position of Function Pin Assignment Silk

LD550_LD450_26" / 32" / 37" / 40" / 46"



LD450_19" / 22"



4-2. Alignments and Adjustments

4-2-1. General Alignment Instruction

1. Usually, a color LCD-TV needs only slight touch-up adjustment upon installation. Check the basic characteristics such as height, horizontal and vertical sync.
2. Use the specified test equipment or its equivalent.
3. Correct impedance matching is essential.
4. Avoid overload. Excessive signal from a sweep generator might overload the front-end of the TV. When inserting signal markers, do not allow the marker generator to distort test result.
5. Connect the TV only to an AC power source with voltage and frequency as specified on the backcover nameplate.
6. Do not attempt to connect or disconnect any wire while the TV is turned on. Make sure that the power cord is disconnected before replacing any parts.
7. To protect against shock hazard, use an isolation transformer.

4-3. Factory Mode Adjustments

4-3-1. Entering Factory Mode

To enter 'Service Mode' Press the remote -control keys in this sequence:

- If you do not have Factory remote - control



4-3-2. How to Access Service Mode

Using the Customer Remote

1. Turn the power off and set to stand-by mode.
2. Press the remote buttons in this order; POWER OFF- INFO - MENU - MUTE to turn the set on.
3. The set turns on and enters service mode. This may take approximately 20 seconds.
4. Press the "Power" button to exit and store data in memory.
 - If you fail to enter service mode, repeat steps 1 and 2 above.
5. Initial SERVICE MODE DISPLAY State

Option	T-MST ♠ D ♣♣♣ C-XXXX T-MST ♠ D ♣♣♣ S-XXXX E-Manual: XXXXXXXXXXXX-XXXX EDID SUCCESS HDCP SUCCESS CALIB: AV / COMP / PC / HDMI / Option: XXXX XXXX T-MSXDXX-XXXX SDAL-X.XX.X.X RFS: "Mstar-X5 XXXX" 20XX-XX-XX FUNC-TAG-ERR Type: XXXXXXXX Model: XXXXXXXX Wired MAC SUCCESS (or Not Available) CIP SUCCESS LOCK X Factory Data Ver: XX EERC Version: XXX DTP-AP-COMP-XXX DTP-BP-HAL-XXXX DTP-BP-XXXX-XX Date Of Purchase: XX/XX/XXXX
--------	--

♠	OPTION (Option-Model)	
5	X6-TV	UD5500 / UD5700
4	X5-TV / X9-TV	LD400/LD450/LD480/LD550/ LD570/LD580/UD4000/ UD4010/UD5000
M	X5-MFM	TA350 / TA550
♣ ♦	OPTION (Option-Local Set)	
EU	EU/EU_*/NORDIG/CIS_*/AD_*	
AA	EA_*/ED_*	

How to enter the hidden factory mode.

- into the factory mode
 - move the tap to Advanced
 - key input: 0 + 0 + 0 + 0
 - hidden menu: Advanced
6. Buttons operations within Service Mode

Menu	Full Menu Display/Move to Parent Menu
Direction Keys ▲/▼	Item Selection by Moving the Cursor
Direction Keys ◀/▶	Data Increase / Decrease for the Selected Item
Source	Cycles through the active input source that are connected to the unit

4-3-3. Factory Data

Option			
Factory Name	Data	Range	Use
Factory Reset			
Type		19A6TH0C/19I6TH0C/22D6TF0C/22I6TF0C/26A6AH0C/26D6AH0C/26L6AH0C/32A6AF0C/32A6AH0C/32D6AF0C/32L6AH0C/37L6AF0C/40A6AF0C/40D6AF0C/40L6AF0C/46A6AF0C/46D6AF0C/19A6TH0E/19L6TH0E/22D6TF0E/22L6TF0E/23A6TF0E/24L6TF0E/27A6TF0E/32A6AH0E/32A6UF0E/32P6AH0E/32P6UF0E/32L6UF0E/32L6AH0E/37P6UF0E/40A6UF0E/40P6UF0E/40H6UF0E/46A6UF0E/46P6UF0E/43DHHCd/51DFHCd/51DHHCd/51DSArD/51DSCrD/59DFHCd/59DSArD/59DSCrD/64DFHCd/64DSCrD	Select Panel Type ①②: inch ③: vendor ④: refresh ⑤: POL ⑥: resolution ⑦: multi ⑧: BLU
Local Set	EU	EU/EU_ITALY/EU_GER/EU_FRANCE/EU_BENELUX/EU_UK/EU_ARMENIA/NORDIG/AD_AU/AD_NZ/AD_SINGAPOLE/CIS_RUSIA/CIS_UKRINA/CIS_KAZAKH/EU_TURKEY/EU_AFRICA/EU_MOROCO/EA_VIET/EA_THAI/EA_INA/EA_CHINA/EA_INDIA/EA_SRILANKA/EA_NEPAL/EA_BANGLA/EA_IRAN/EA_ISRAEL/EA_EGYPT/EA_LIBYA/EA_CIS/EA_M_ASIA/EA IRAQ/EA_ARAB/EA_SAUDI/EA_PAKISTAN/EA_E_ASIA/EA_AFRICA/EA_S_AFRICA/EA_MAL/EA_PHI/ED_IRAN/ED_VIET/ED_INA/ED_ISRAEL/COLOMBIA/TAIWAN	Select Area
Model	LD550	LD400/LD450/LD480/LD550/LD570/LD580/UD4000/UD4010/UD5000/UD5500/UD5550/UD5700/PD450/PD451/PD460/PD490/PD491/PD540/PD541/PD550/PD551/PD560/PD570/PD6400/PD6500/PD6600/PD6900/PD7000/LD460H/LD463H/LD467H/LD468H/LD560H/LD568H/LD580H/UD4000H/UD5000H/UD5500H	Select Model
TUNER	SEC_TC	SEC_ATSC/SEC_TC/ALPS_TC/SI_TCS/SI_T2/SEC_ISDB/SEC_ATC/SI_ATC/SI_TW	EU/AU (DVB-TC/DVB-T): SEC_TC Satellite (DVB-TCS): SI_TCS UK T2 (DVB-T2C): SI_T2 Ready: SEC_ATC
Ch Table		PBA/SUWON/SESK/SEH/SERK/SDMA_AU/SDMA_NZ/SDMA_SG/SEIN/SAVINA/SIEL_C/SIEL_N/TTSEC/TSED/TSE/IRAN/SESK-T2/SUWON-T2/INL	
Front Color		P-S-C-BK/P-S-R-BK/P-S-BK/P-S-B-BK/P-T-R-BK/P-T-C-BK/P-T-W-Bn/P-T-W-Gy/P-T-M-Bn/P-T-C-Gy/P-T-R-Gy/P-W-Milk/P-W-M-Wt/P-W-D-Gy/P-W-Vio/L-S-C-BK/L-S-R-BK/L-S-BK/L-S-B-BK/L-T-R-BK/L-T-C-BK/L-T-W-Bn/L-T-W-Gy/L-T-M-Bn/L-T-C-Gy/L-T-R-Gy/L-W-Milk/L-W-M-Wt/L-W-D-Gy/L-W-Vio/U-S-C-BK/U-S-R-BK/U-S-BK/U-S-B-BK/U-T-R-BK/U-T-C-BK/U-T-W-Bn/U-T-W-Gy/U-T-M-Bn/U-T-C-Gy/U-T-R-Gy/U-T-BL-M/U-T-BK-M/U-TC-L-M/U-W-Milk/U-W-M-Wt/U-W-D-Gy/U-W-Vio	LD4**: L-S-R-BK LD5**: L-T-C-BK UD40**: U-S-BK UD50**: U-T-C-BK UD55**/UD57**: U-T-R-BK

Control			
Factory menu Name			
EDID			
Sub Option			
Shop Option			
Sound			
Factory Name	Data	Range	Use
EDID			
EDID ON/OFF	OFF	Download EDID data to EEPROM. 1. Set "ON" of EDID ON/OFF 2. Go EDID WRITE ALL and Push "Enter" or "▷" button. 3. If You See Success message, SET "OFF" of EDID ON/OFF	
EDID WRITE ALL	...		
EDID WRITE PC	...		
EDID WRITE HDMI	...		
EDID WRITE HDMI1	...		
EDID WRITE HDMI2	...		
EDID WRITE HDMI3	...		
EDID WRITE HDMI4	...		
EDID VER	...		
EDID PORT	...		
EDID WRITE DVI	...		
Sub Option			
RS-232 Jack	UART	Debug/Logic/UART	Select Setting of UART port. Initial value is "UART"
Watchdog	ON	ON/OFF	Select Watchdog. Initial value is "ON"
WD Count	0	255	Watchdog Count. Read Only.
Dimm Type	EXT	fixed	Select Dimming Type. Initial value is "EXT"
Lvds Format	JEIDA	JEIDA/VESA/19INCH	Select LVDS format. 19/22/27inch:"VESA" other inch:"JEIDA"
OTN Server Type	operating	operating/development	
OTN Test Server	OFF	OFF/ A/B/C/D/E Zone	
OTN Support	ON	ON/OFF	
OTN Reset		not modifyed	
OTN Duration	OFF	ON/OFF	
OTN Fail Test	OFF	ON/OFF	
View Log		not modifyed	
KEY SENSITIVITY	36	0~255	LD400: 72 LD45*/LD48*/LD5**: 36 UD40**: 38 UD50**: 41 UD55**/UD57**:36 TA350: 32 TA550: 34

4. Troubleshooting

Control				
Factory Name	Data	Range	Use	
			Local Set	WiFi
			EU	E
			EU_Italy	E
			EU_Germany	E
			EU_France	E
			EU_Benelux	E
			EU_UK	E
			EU_Armenia	A
			NORDIG	E
			AD_Au	E
			AD_NZ	H
			AD_Singapol	F
			CIS_Rusia	C
			CIS_Ukraina	B
			CIS_Kazakhstan	C
			EU_Turkey	A
			EU_Africa	H
			EU_Moroco	A
			EA_Vietnam	F
			EA_Thai	B
			EA_INA	N
			EA_China	N
			EA_India	F
			EA_Srilanka	R
			EA_Nepal	J
			EA_Bangladesh	F
			EA_Iran	M
			EA_Israel	H
			EA_Egypt	F
			EA.Libya	E
			EA_CIS	A
			EA_MidAsia	A
			EA_Iraq	A
			EA_Arab	E
			EA_Saudi	O
			EA_Pakistan	M
			EA_EastAsia	A
			EA_Africa	A
			EA_S_Africa	E
			EA_Malaysia	O
			EA_PHI	B
			ED_Iran	M
			ED_Vietnam	F
			ED_INA	N
			ED_Israel	H

Control			
Factory Name	Data	Range	Use
Hotel Option			
Hotel Hospitality	OFF		
Shop Option			
Shop Mode	OFF	ON/OFF	
Shop Mode	OFF	ON/OFF	
Exhibition Mode	OFF	ON/OFF	
Sound			
High Devi	OFF	ON/OFF	
Carrier_Mute	OFF	ON/OFF	
Speaker Delay Normal	10	0~255	Audio delay for Lipsync
Pilot Level High Thld	0x28h	0x00~0xff	Control for ATV sound of stereo /multiplex
Pilot Level Low Thld	0x10h	0x00~0xff	Control for ATV sound of stereo /multiplex
Speaker EQ	ON	ON/OFF	Control for sound precision
SVC			
Factory menu Name	Data	Range	Use
Test Pattern			
Panel Auto Setting			
Panel Display Time	0Hr		
Logic Usb D/L	off		
Tuner Status			
T-CON Usb Download			
MICOM UPGRADE	off		Set ON→Sub micom upgrade, after upgrade Main Micom (over 5 minutes)
BT ADDRESS	0		
BT UPGRADE			
SVC Reset			
Factory Name	Data	Range	Use
Test Pattern			
Pattern Sel	OFF	OFF/White/Black/Red/Green/Blue/ Cross/OneDot/ColorBar/GrayStep	"Test for Input of Scaler. If you can see pattern well, there is problem at input of Scaler."
Logic Pattern Sel	...	Not modified	
Logic Level Sel	...	Not modified	
TUNER STATUS			
DVB			
ISDB-T			
DVB			
DVB			
SNR		Not modified	

4. Troubleshooting

SVC			
Factory menu Name	Data	Range	Use
BER		Not modified	
Singal Strength		Not modified	
Bandwidth		Not modified	
Frequency		Not modified	
LNA Status		Not modified	
FFT		Not modified	
Modulation		Not modified	
Code Rate		Not modified	
GI		Not modified	
Hier Modulation		Not modified	
Frequency Offset		Not modified	
Timing Offset		Not modified	
AGC		Not modified	
UCB		Not modified	
PLL Type		Not modified	
DEMOD Type		Not modified	
TPS LOCK		Not modified	
RS Lock		Not modified	
SSI		Not modified	
SQI		Not modified	
ISDB-T			
FFT Size_1		Not modified	
Guard Interval_1		Not modified	
Freq. Offset_1		Not modified	
SNR_1		Not modified	
IF AGC_1		Not modified	
TMCC Lock_1		Not modified	
TS Packet_1		Not modified	
Master Lock_1		Not modified	
A_Modulation_1		Not modified	
A_Code Rate_1		Not modified	
A_Timer InterLeave_1		Not modified	
A_Segments Num_1		Not modified	
A_Ber_1		Not modified	
B_Modulation_!		Not modified	
B_Code Rate_1		Not modified	
B_Timer InterLeave_1		Not modified	
B_Segments Num_1		Not modified	

SVC			
Factory menu Name	Data	Range	Use
B_BER_1		Not modified	
C_Modulation_1		Not modified	
C_Code Rate_1		Not modified	
C_Timer InterLeave_1		Not modified	
C_Segments Num_1		Not modified	
C_BER_1		Not modified	

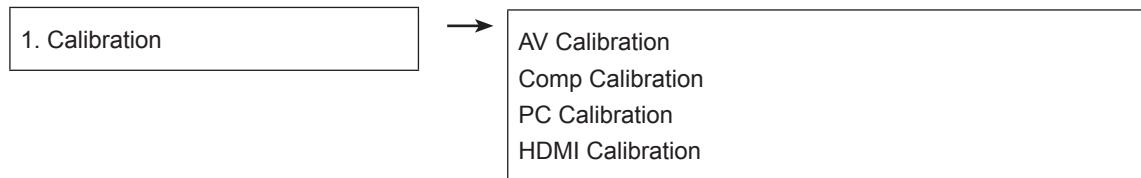
ADC WB			
Factory Menu Name			
ADC			
ADC Target			
ADC RESULT			
WB			
Factory Name	Data	Range	Use
ADC			
AV Calibration	Success	Success / Failure	
Comp Calibration	Success	Success / Failure	
PC Calibration	Success	Success / Failure	
HDMI Calibration	Success	Success / Failure	
ADC Target			
1st_AV_Low	64	0 ~1020	
1st_AV_High	880	0 ~1020	
1st_AV_Delta	2	0 ~ 7	
1st_COMP_Y_Low	64	0 ~1020	
1st_COMP_Cb_Low	512	0 ~1020	
1st_COMP_Cr_Low	512	0 ~1020	
1st_COMP_Y_High	940	0 ~1020	
1st_COMP_Cb_High	512	0 ~1020	
1st_COMP_Cr_High	512	0 ~1020	
1st_COMP_Delta	2	0 ~ 7	
1st_PC_Low	4	0 ~1020	
1st_PC_High	1004	0 ~1020	
1st_PC_Delta	2	0 ~ 7	
2nd_ACH_Low	4	0 ~124	
2nd_ACH_High	940	0 ~1020	
Factory Name	Data	Range	Use
2nd_PC_Low	4	0 ~124	
2nd_PC_High	940	0 ~1020	

4. Troubleshooting

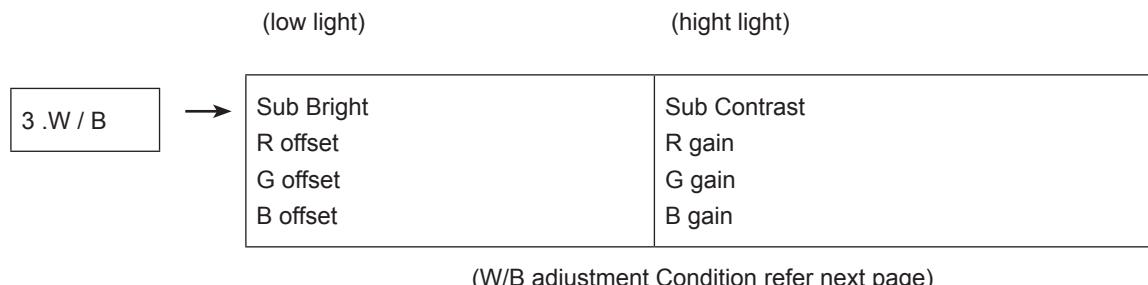
ADC WB			
Factory Menu Name			
2nd_Delta	2	0 ~ 7	
ADC RESULT			
1st_Y_GH	0	0 ~ 511	
1st_Y_GL	0	0 ~ 255	
1st_Cb_BH	0	0 ~ 511	
1st_Cb_BL	0	0 ~ 255	
1st_Cr_RH	0	0 ~ 511	
1st_Cr_RL	0	0 ~ 255	
2nd_R_L	0	0 ~ 255	
2nd_G_L	0	0 ~ 255	
2nd_B_L	0	0 ~ 255	
2nd_R_H	0	0 ~ 255	
2nd_G_H	0	0 ~ 255	
2nd_B_H	0	0 ~ 255	
WB	Mode		
Sub Brightness	128	0 ~ 255	
R_Offset	128	0 ~ 255	
G_Offset	128	0 ~ 255	
B_Offset	128	0 ~ 255	
Sub Contrast	128	0 ~ 255	
R_Gain	128	0 ~ 255	
G_Gain	128	0 ~ 255	
B_Gain	128	0 ~ 255	
Movie R Offset	512	0 ~ 1023	
Movie B Offset	512	0 ~ 1023	
Movie R Gain	512	0 ~ 1023	
Movie B Gain	512	0 ~ 1023	

4-4. White Balance - Calibration

4-4-1. White Balance -Calibration



4-4-2. White Balance - Adjustment



4-5. White Ratio (Balance) Adjustment

1. You can adjust the white ratio in factory mode (1:Calibration, 3:White-Balance).
 2. Since the adjustment value and the data value vary depending on the input source, you have to adjust these in CVBS, Component 1 and HDMI 1 modes.
 3. The optimal values for each mode are configured by default. (Refer to Table 1, 2) It varies with Panel's size and Specification.
 - Equipment: CS-210
 - Pattern: MIK K-7256 #92 "Flat W/B Pattern" as standard
 - Use other equipment only after comparing the result with that of the Master equipment.
 - Set Aging time: 60 min ↑
 - Calibration and Manual setting for WB adjustment.
- HDMI: Calibration at #24 Chessboard Pattern → Manual adjustment #92 pattern (720p)
 COMP: Calibration at #24 Chessboard Pattern → Manual adjustment at #92 pattern (720p)
 CVBS: Calibration at #24 Chessboard Pattern → Manual adjustment at #92 pattern (PAL)
- If finishing in HDMI mode, adjustment coordinate is almost same in AV/COMP mode.
 - White Balance Manual Adjustment



P-Mode	Adjustment Coordinate				T (K) + MPCD
		x	y	Y (Luminance)	
CVBS (PAL)	H/L	272	278	- (Sub_CT: 130)	12,000 (±0)
	L/L	272	278	12.6cd/m2 (3.7 Ft)	12,000 (±0)
COMP (720P)	H/L	272	278	- (Sub_CT: 130)	12,000 (±0)
	L/L	272	278	13.0cd/m2 (3.8 Ft)	12,000 (±0)
HDMI (720P)	H/L	272	278	- (Sub_CT: 130)	12,000 (±0)
	L/L	272	278	13.0cd/m2 (3.8 Ft)	12,000 (±0)

- Adjustment Specification
 - White Balance: High light (±1), Low light (±3)
 - Luminance: High light (Don't care), Low light (±0.2 Ft/L)

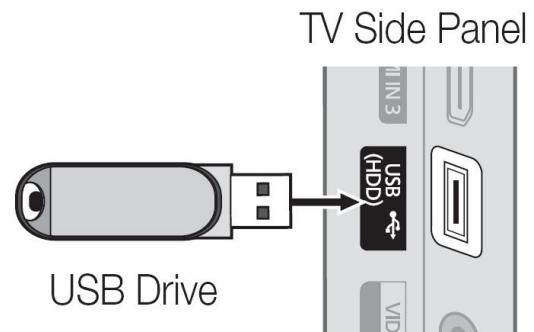
4-6. Servicing Information

4-6-1. USB Download Method (Main SW & E-Manual)

Samsung may offer upgrades for TV's firmware in the future. Upgrades will be possible by connecting a USB drive to the USB port located on your TV.

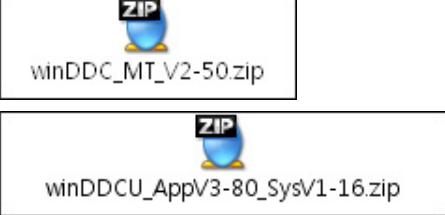
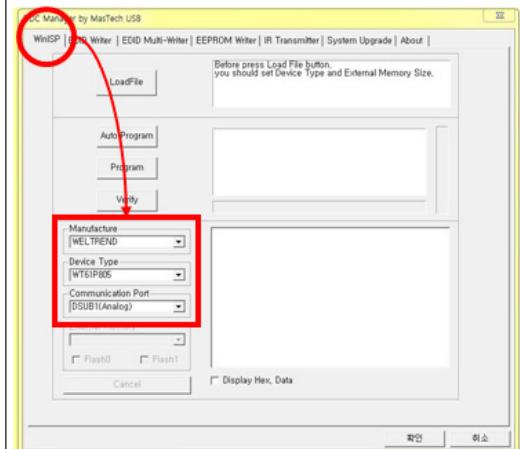
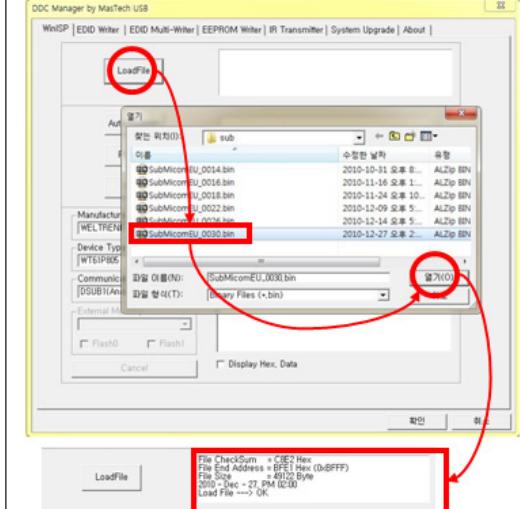
1. Insert a USB drive containing the firmware (T-MST4DEUC (X5) / T-MSV4DEUC (X9) upgrade into the USB port on the rear of the TV.
2. Press the "MENU" button to display the menu. Press the "▲" or "▼" button to select "Support", then press the ENTER button.
3. Press the "▲" or "▼" button to select "Software Upgrade", then press the "ENTER" button to select "By USB". The message "Scanning for USB. It may take up to 1 minute." is displayed.
4. The message "Upgrade version XXXX to version XXXX? The system will be reset after upgrade." is displayed. Press the "◀" or "▶" to select the "OK", then press the "ENTER" button.

Please be careful to not disconnect the power or remove the USB drive while upgrades are being applied. The TV will turn off and turn on automatically after completing the firmware upgrade. Please check the firmware version after the upgrades are complete. When software is upgraded, video and audio settings you have made will return to their default (factory) settings. We recommend you write down your settings so that you can easily reset them after the upgrade.

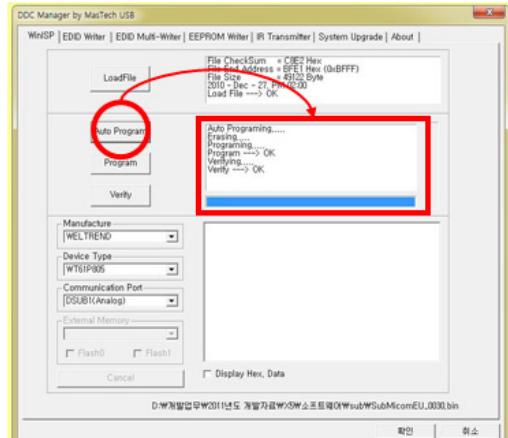


4-7. How To Upgrade Sub Micom

4-7-1. Sub S/W (with DDC Manager)

Order	Description								
1	<p>Connect DDC MANAGER to the TV Set with D-SUB cable. And Power on. (USB type: MTI-2510 / parallel type: MTI-2059)</p> 								
2	<p>Open the DDC tool. (Parallel type & USB type)</p>  <p>Check the setting.</p> <table border="1"> <tr> <td>Manufacture</td> <td>WELTREND</td> </tr> <tr> <td>Device Type</td> <td>WT61P805</td> </tr> <tr> <td>Communication Port</td> <td>DSUB1 (Analog)</td> </tr> <tr> <td>External Memory</td> <td>-</td> </tr> </table> 	Manufacture	WELTREND	Device Type	WT61P805	Communication Port	DSUB1 (Analog)	External Memory	-
Manufacture	WELTREND								
Device Type	WT61P805								
Communication Port	DSUB1 (Analog)								
External Memory	-								
3	<p>Load the sub micom program file.</p> 								

4. Troubleshooting

Order	Description
4	<p>Push the "Auto Program" Button. (It takes about 15 seconds.)</p> 
5	<p>If update completes, TV set will booting automatically. Disconnect the JIG.</p>

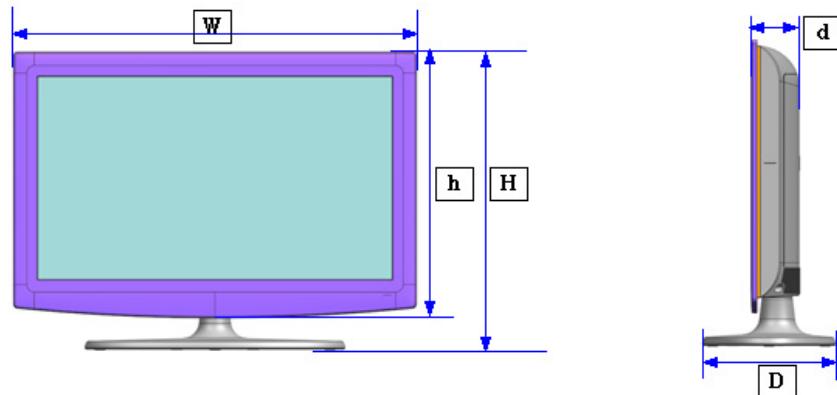
4-7-2. Sub S/W (in Factory Mode)

If you don't have DDC Manager, Use this method.

1. Into the Factory Mode.
2. Select "SVC". (use "▶" button.)
3. Select "MICOM UPGRADE off". (use "▶" button.)
4. If message change from "off" to "wait", TV is upgrading Sub S/W. (It takes about 5 min.)
5. If update completes, TV set will booting automatically.

4-8. Mechanical Diagram

■ LD450



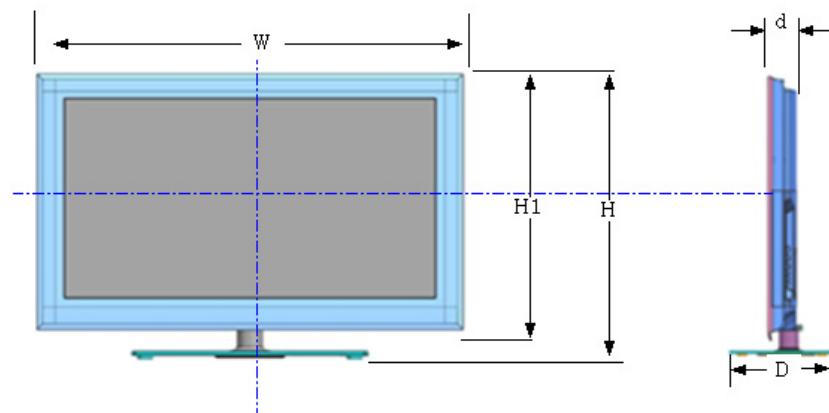
► LD450_Middle

		LE26D45*G*W	LE32D45*G*W	LE32D45*G*W
Size [mm]	Set with Stand (W x D x H)	Plastic	Plastic (CIS)	Press (EU)
	Set without Stand (W x D x H1)	660.7 x 222.1 x 482.8	795.5 x 251.7 x 571.1	795.5 x 251.7 x 571.1
Weight [Kg]	Set with Stand	6.7	10.85	11.05
	Set without Stand	6.2	8.6	8.8

► LD450_Small

		LE19D45*G*W	LE22D45*G*W
Size [mm]	Set with Stand (W x D x H)	Plastic	Plastic
	Set without Stand (W x D x H1)	476.5 x 160.7 x 356.1	543.4 x 171.6 x 395.9
Weight [Kg]	Set with Stand	4.2	5.2
	Set without Stand	4	5

■ LD550_LD570_LD580



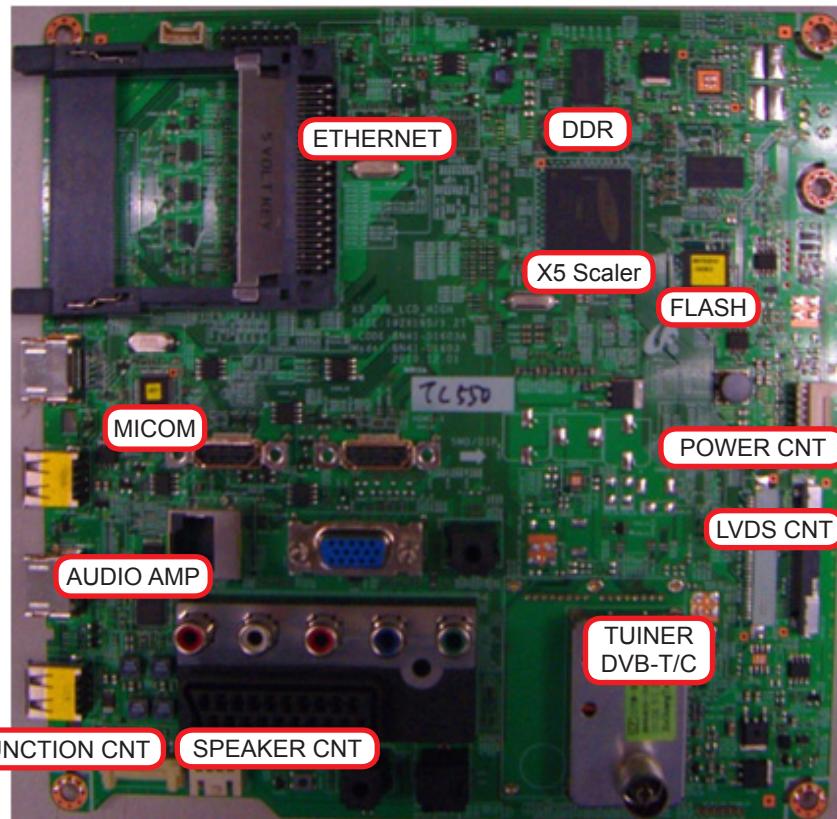
		LE32D55*K*W LE32D57*K*S LE32D58*K*K	Press (EU)
		Plastic (CIS)	
Size [mm]	Set with Stand (W x D x H)	804.7 x 240.0 x 563.7	804.7 x 240.0 x 563.7
	Set without Stand (W x D x H1)	804.7 x 80.3 x 507.4	804.7 x 77.8 x 507.4
Weight [Kg]	Set with Stand	11.8	12
	Set without Stand	9.1	9.3

		LE37D55*K*W LE37D57*K*S LE37D58*K*K	LE40D55*K*W LE40D57*K*S LE40D58*K*K	LE46D55*K*W LE46D57*K*S LE46D58*K*K
		Press	Press	Press
Size [mm]	Set with Stand (W x D x H)	923.5 x 255.0 x 629.2	992.1 x 255.0 x 667.2	1124.1 x 275.0 x 742.8
	Set without Stand (W x D x H1)	923.5 x 78.5 x 573.2	992.1 x 80.4 x 611.0	1124.1 x 80.4 x 686.1
Weight [Kg]	Set with Stand	15.8	16.5	21.7
	Set without Stand	12.55	13.25	18.1

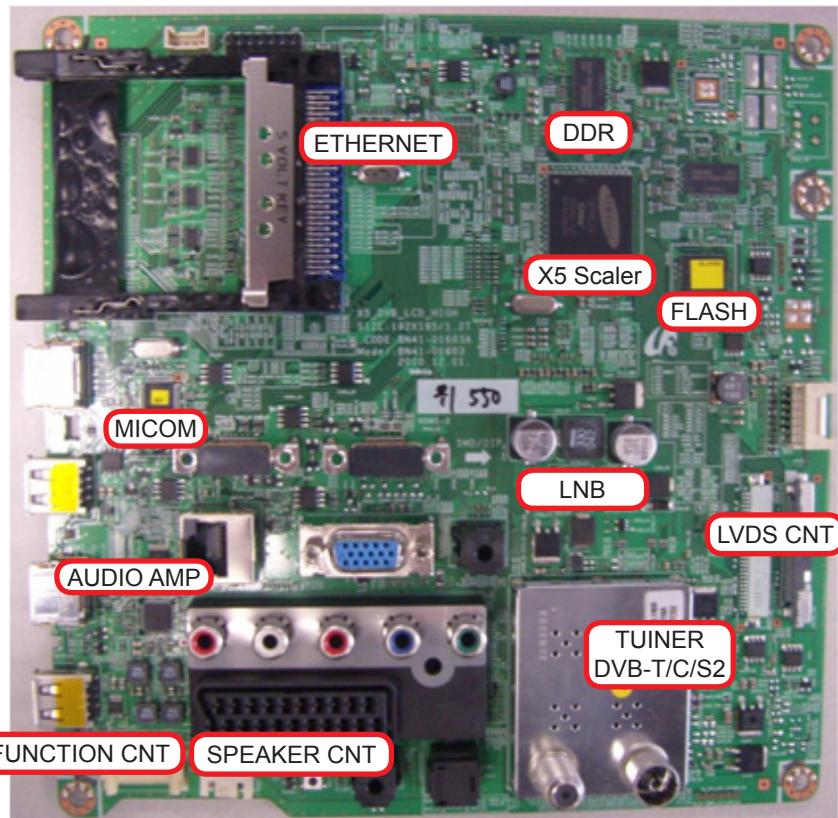
4-9. PCB Diagram

■ PCB Layout_X5

U56A - LD550 32" / 37" / 40" / 46"

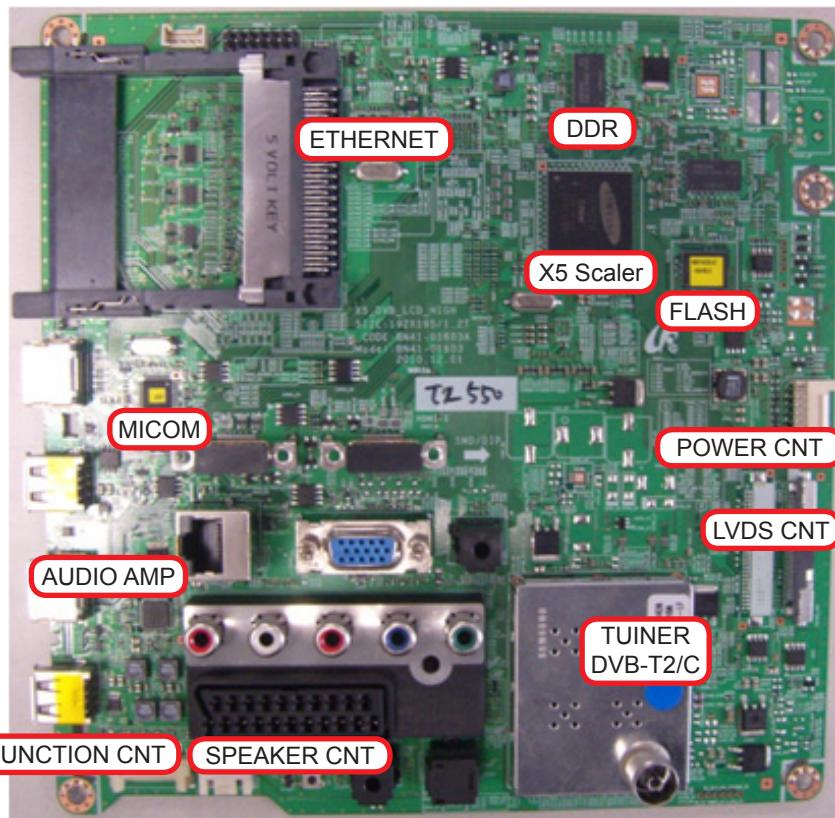


U56A - LD570 32" / 37" / 40" / 46"

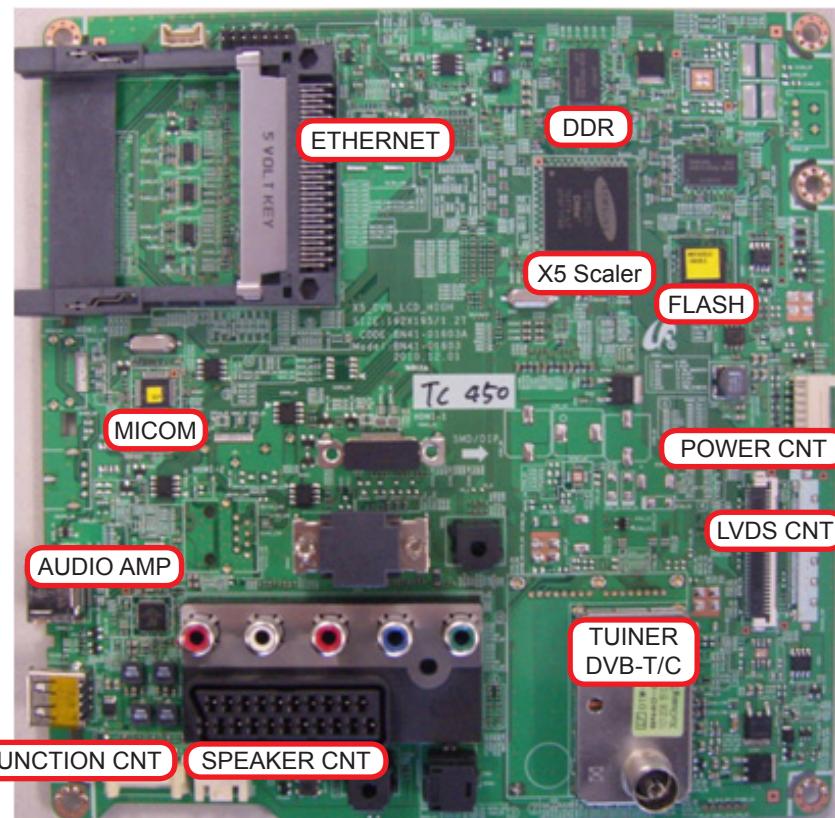


4. Troubleshooting

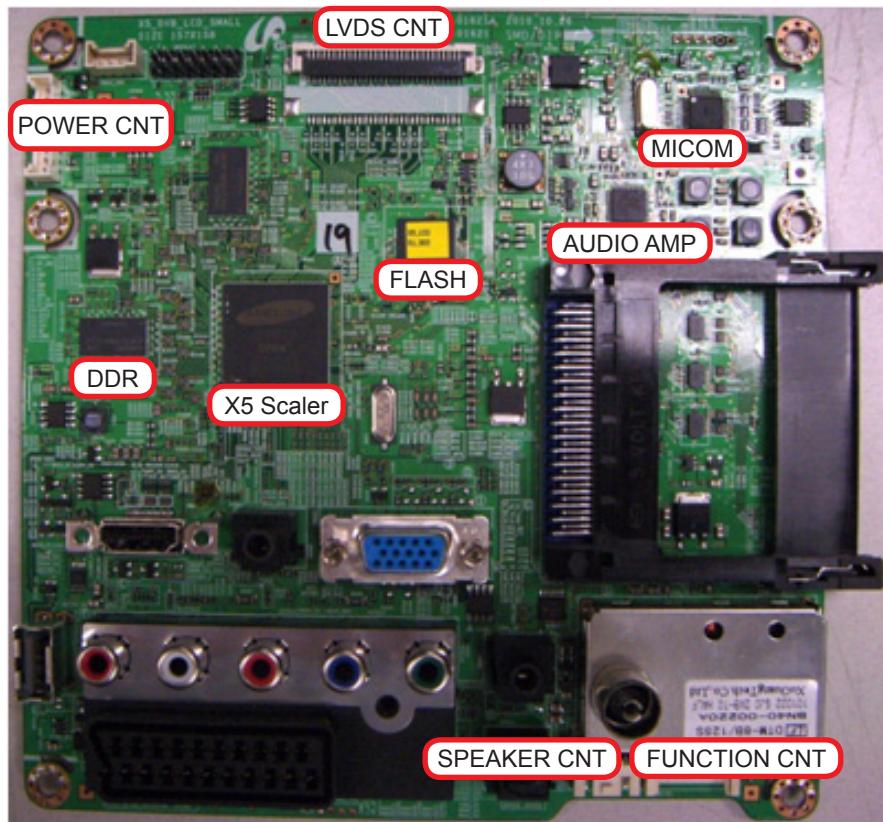
U56A - LD580 32" / 37" / 40" / 46"



U56A - LD450 26" / 32"

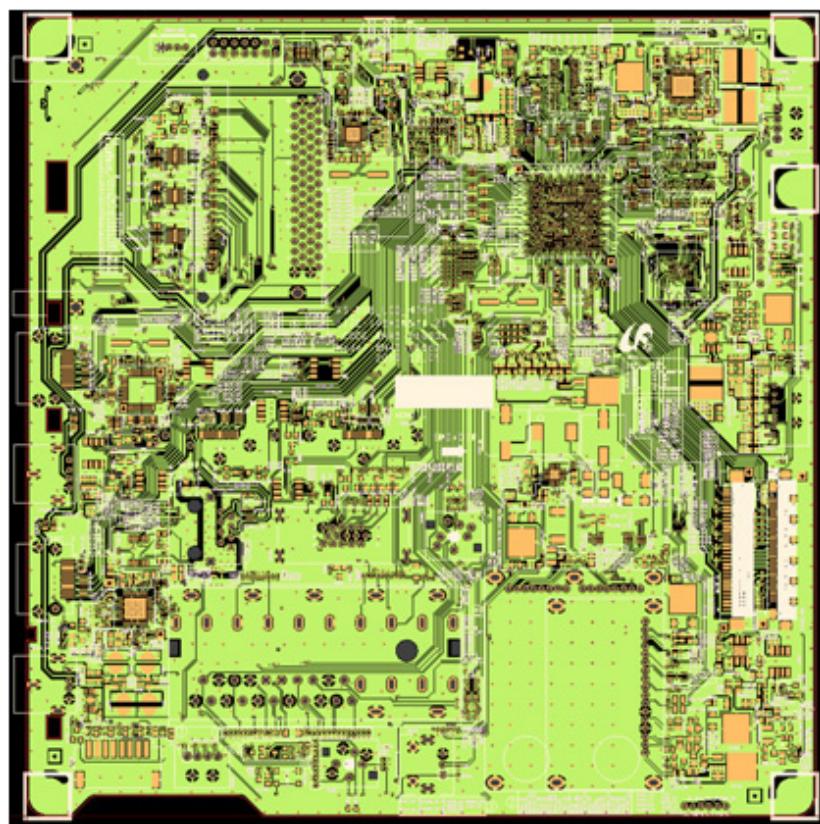


U56B - LD450 19" / 22"

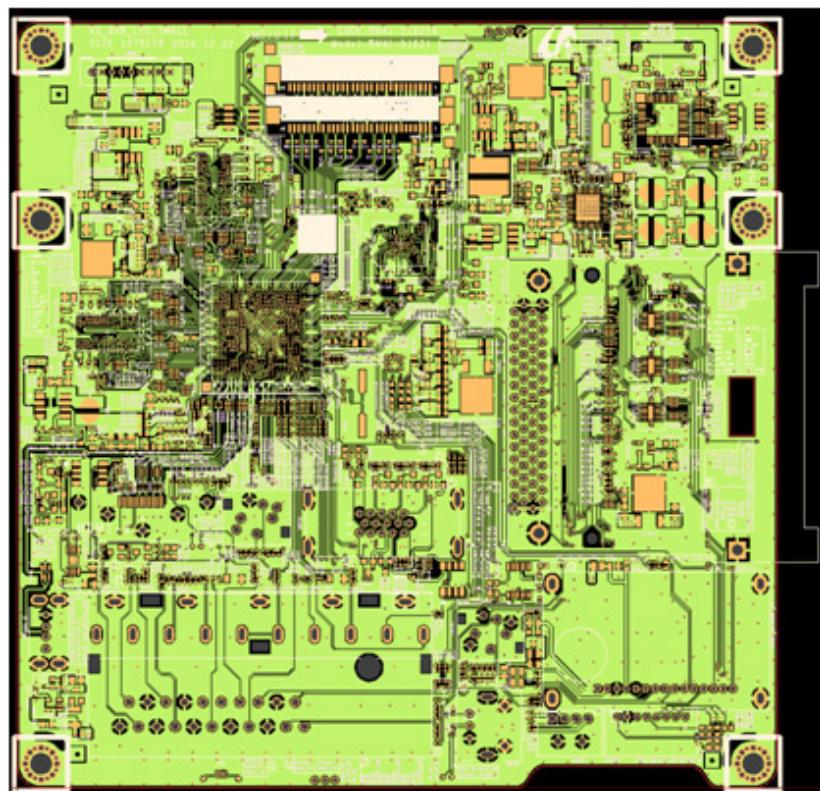


■ Main Top_X5

U56A - 26" / 32" / 37" / 40" / 46"

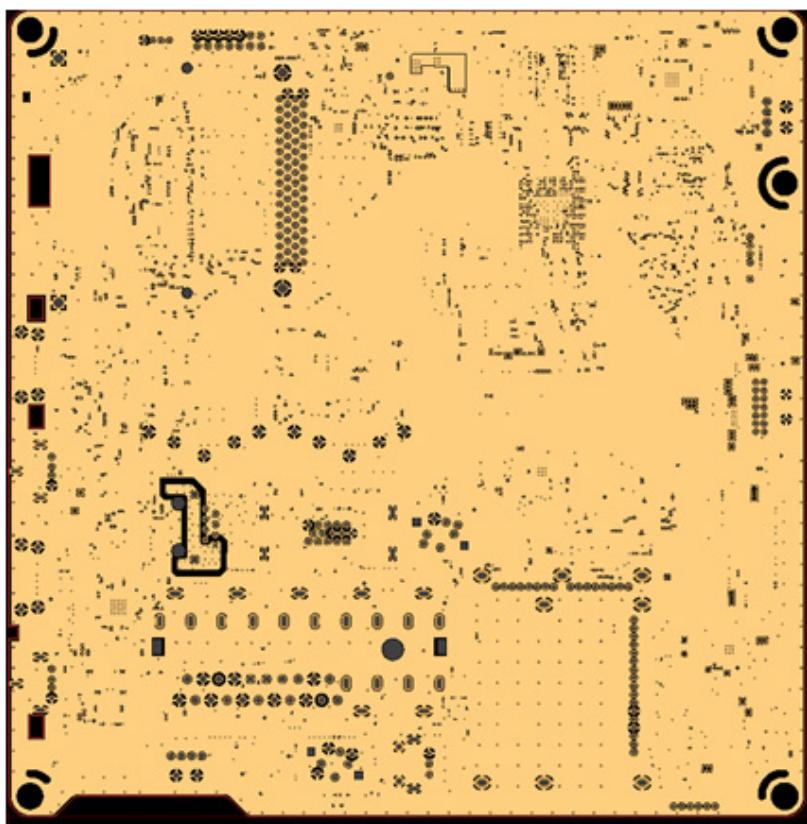


U56B - 19" / 22"

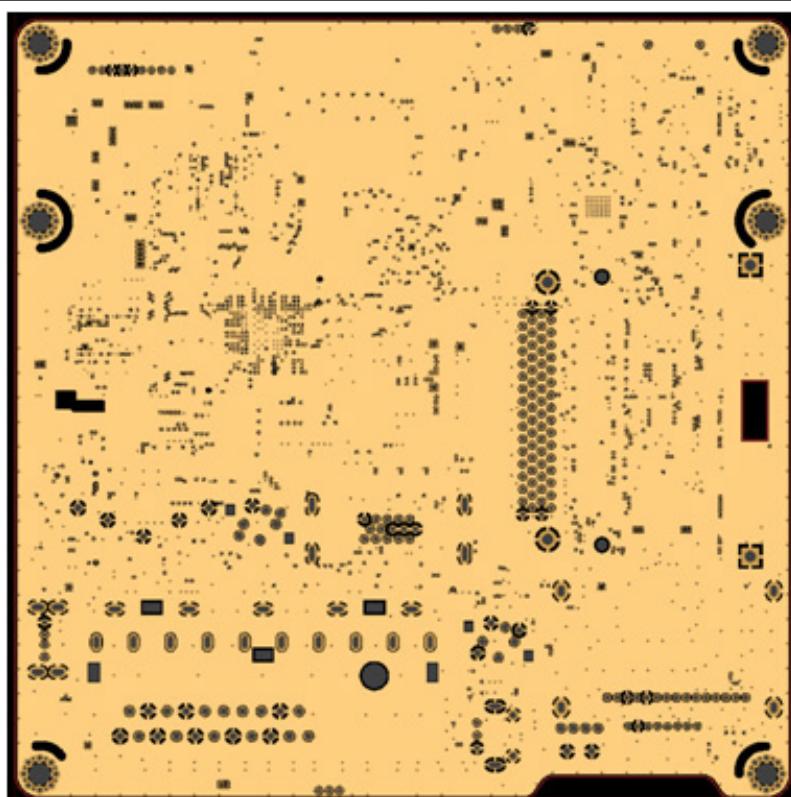


■ Main Inner (2)_X5

U56A - 26" / 32" / 37" / 40" / 46"



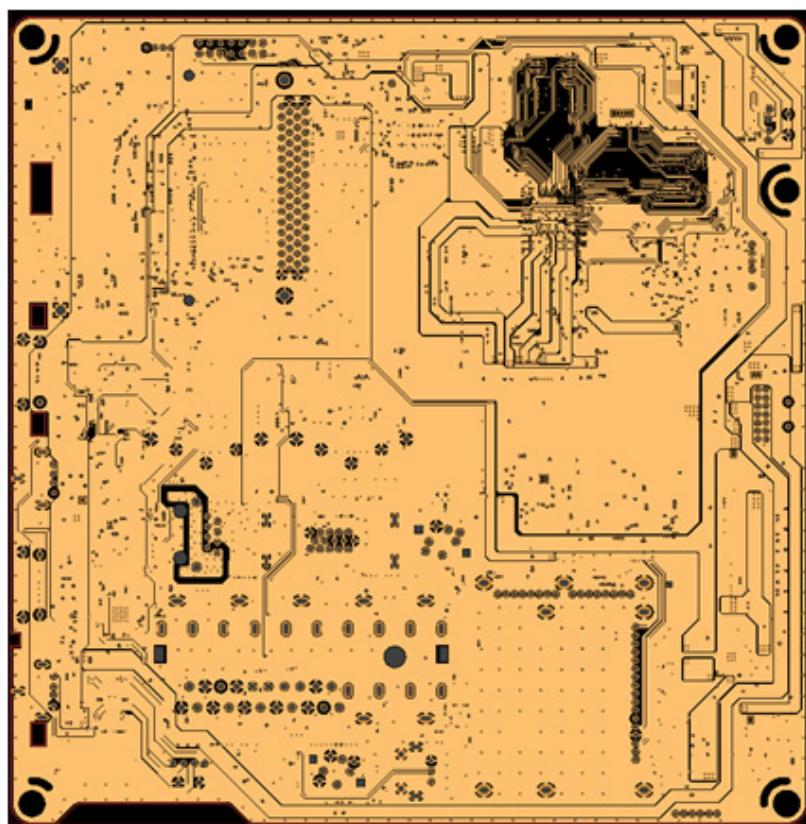
U56B - 19"/22"



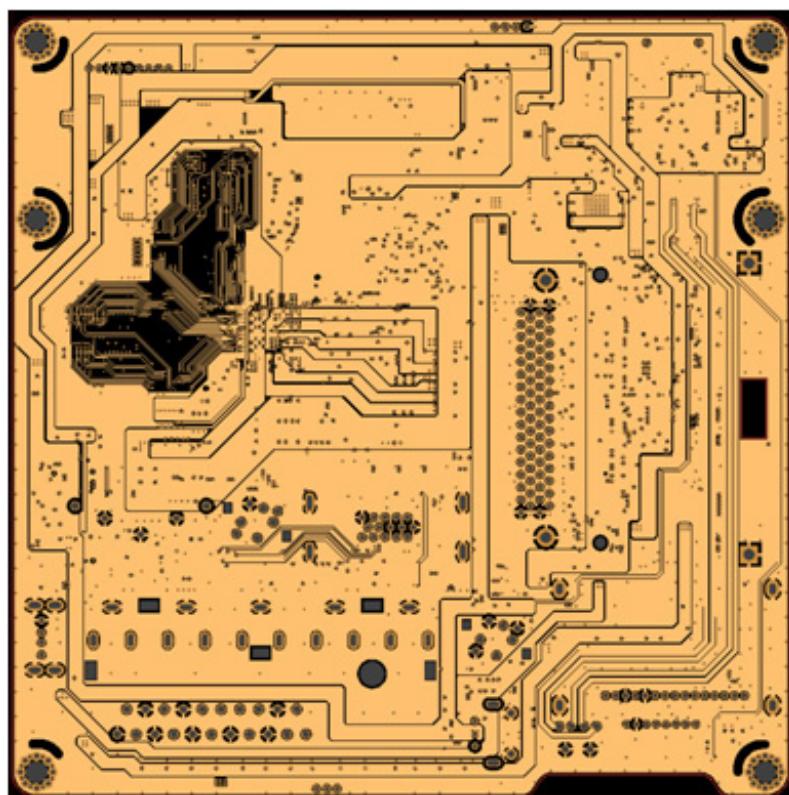
4. Troubleshooting

■ Main Inner (3)_X5

U56A - 26" / 32" / 37" / 40" / 46"

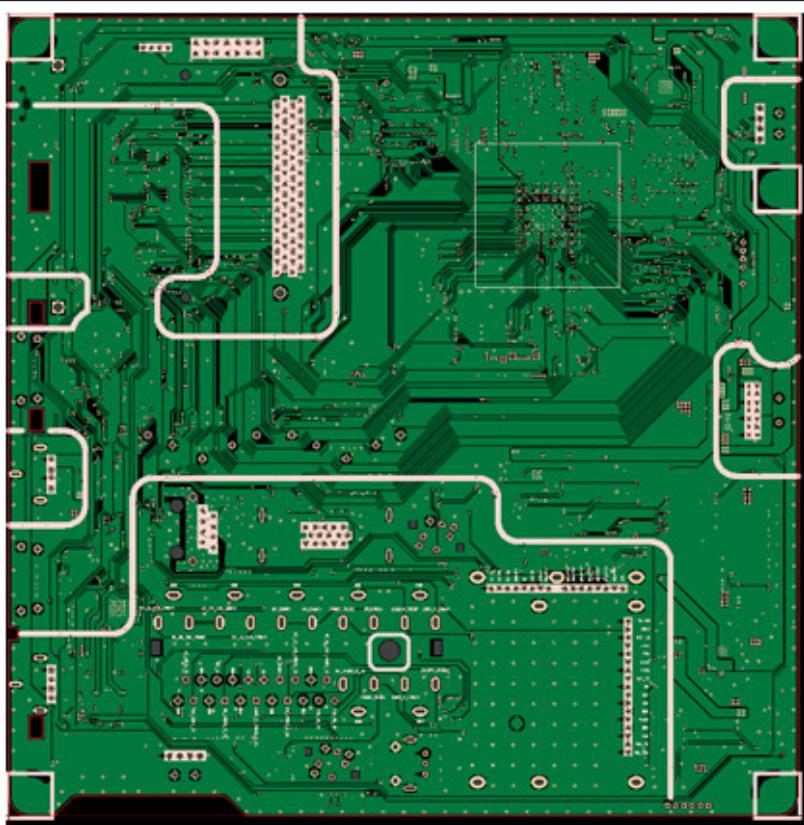


U56B - 19" / 22"

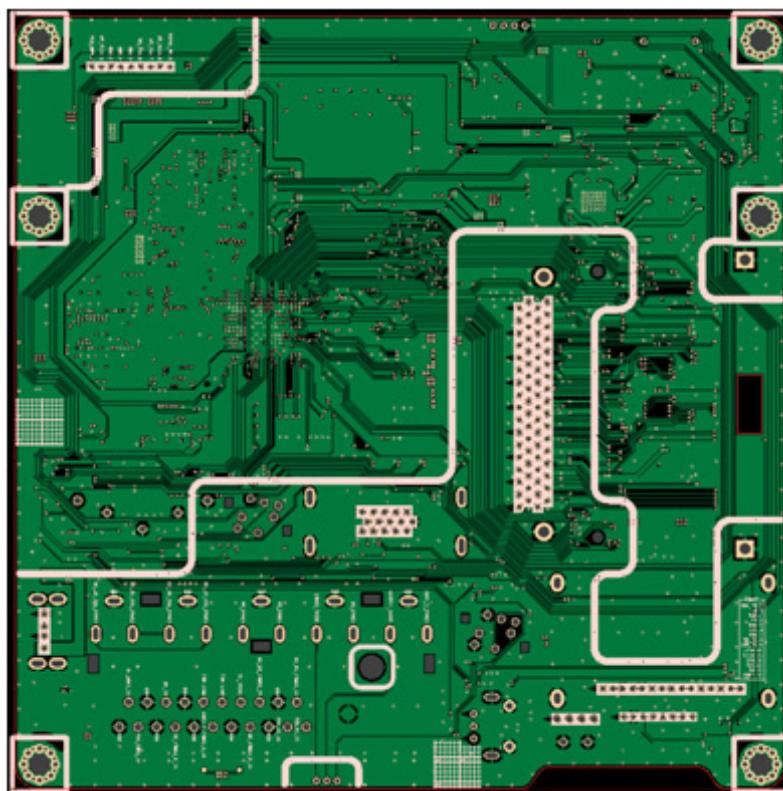


■ Main Bottom_X5

U56A - 26" / 32" / 37" / 40" / 46"

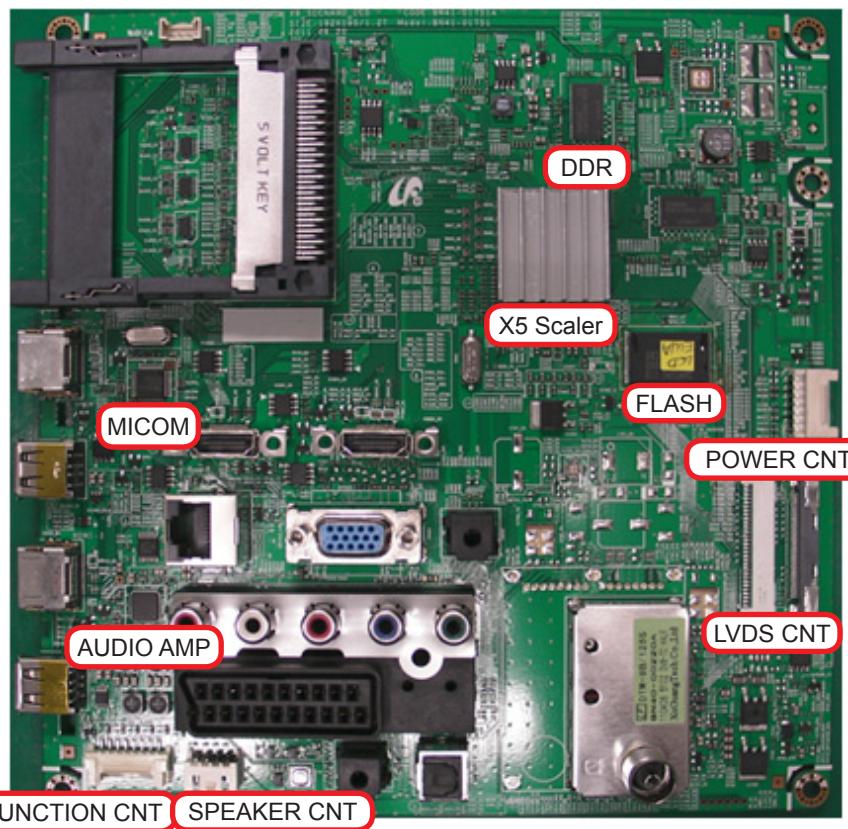


U56B - 19" / 22"

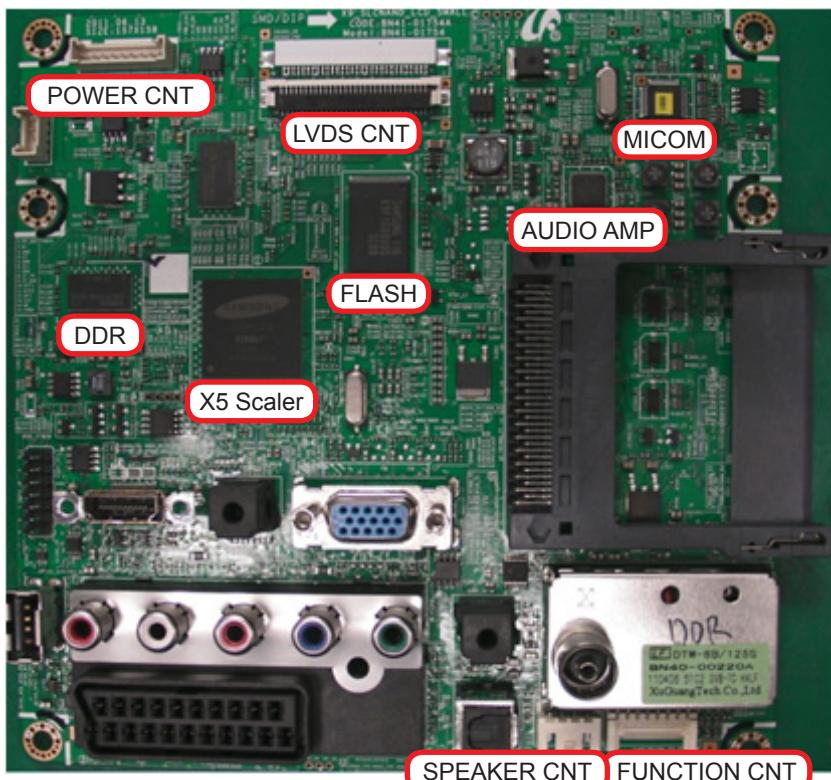


■ PCB Layout_X9

U56A -26" / 32" / 37" / 40" / 46"

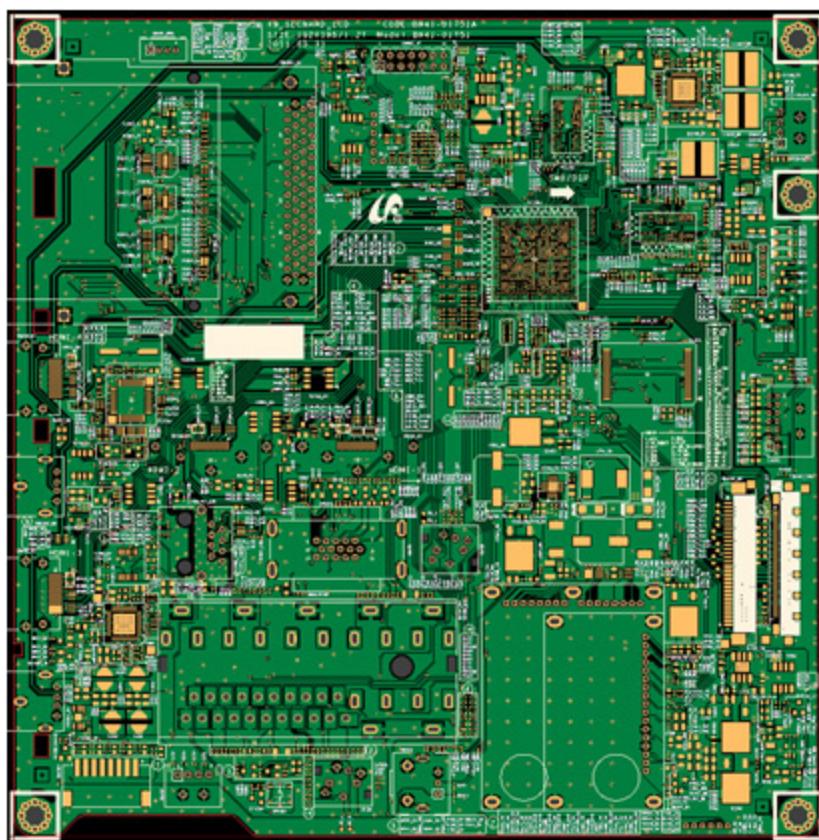


U56B - 19" / 22"

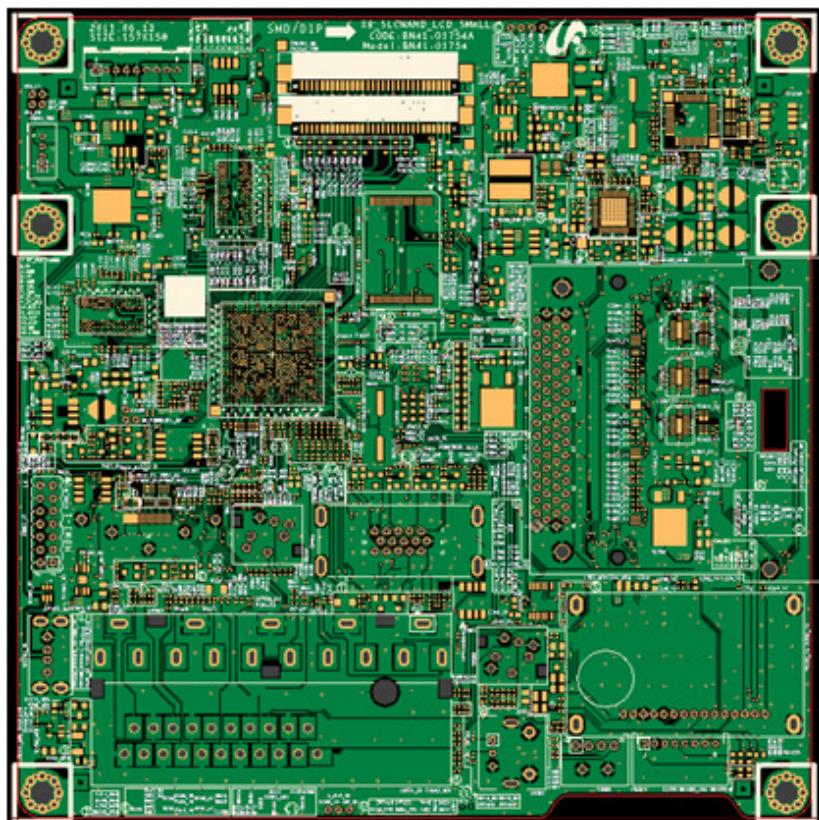


■ Main Top_X9

U56A -26" / 32" / 37" / 40" / 46"



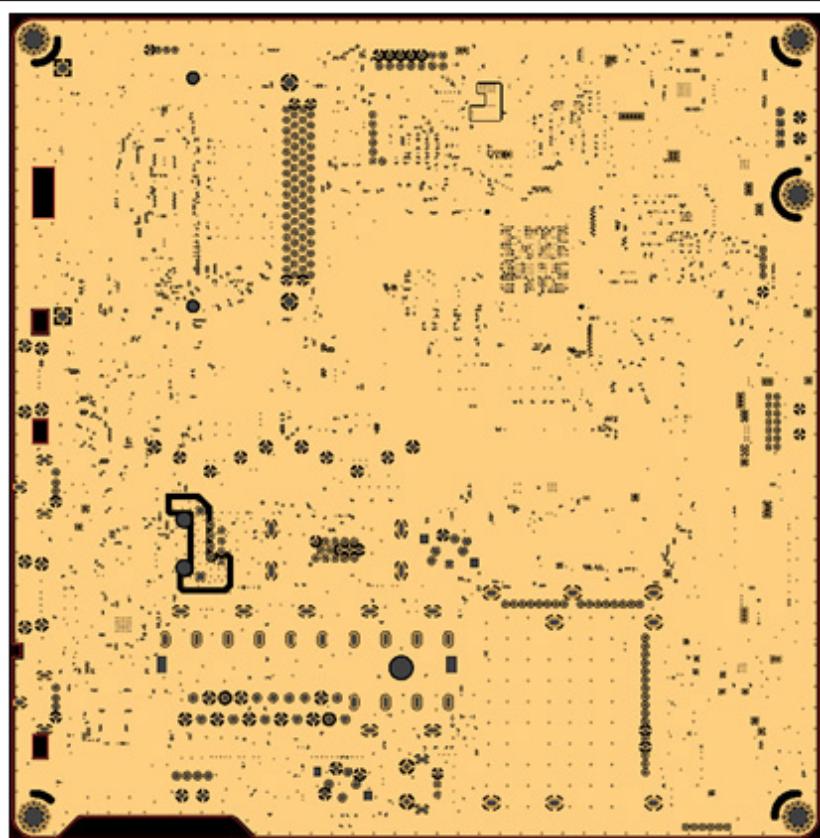
U56B - 19" / 22"



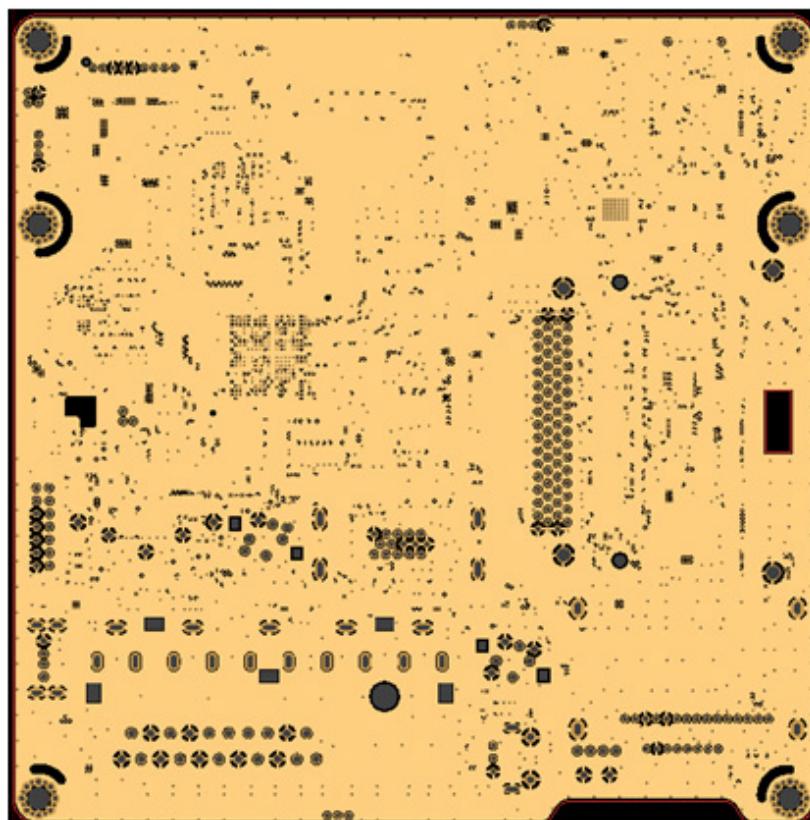
4. Troubleshooting

■ Main Inner (2)_X9

U56A -26" / 32" / 37" / 40" / 46"

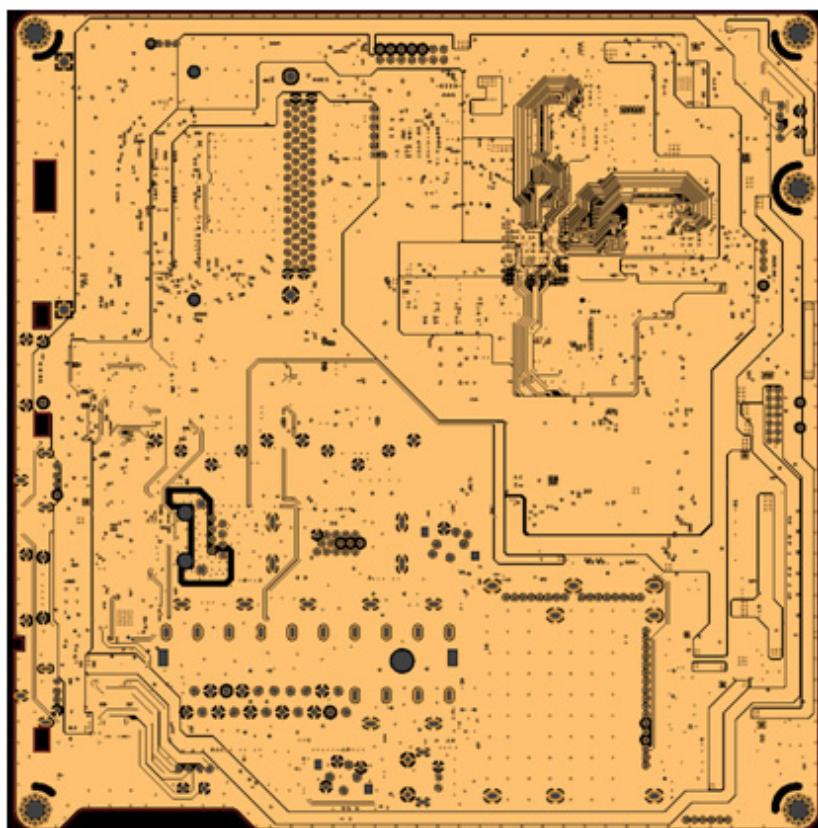


U56B - 19" / 22"

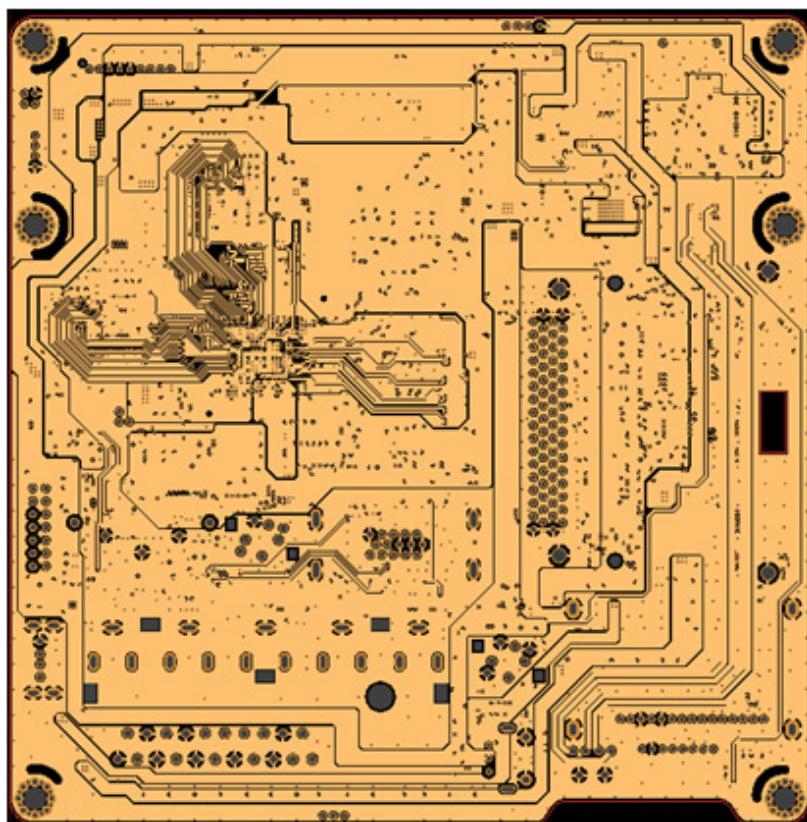


■ Main Inner (3)_X9

U56A -26" / 32" / 37" / 40" / 46"



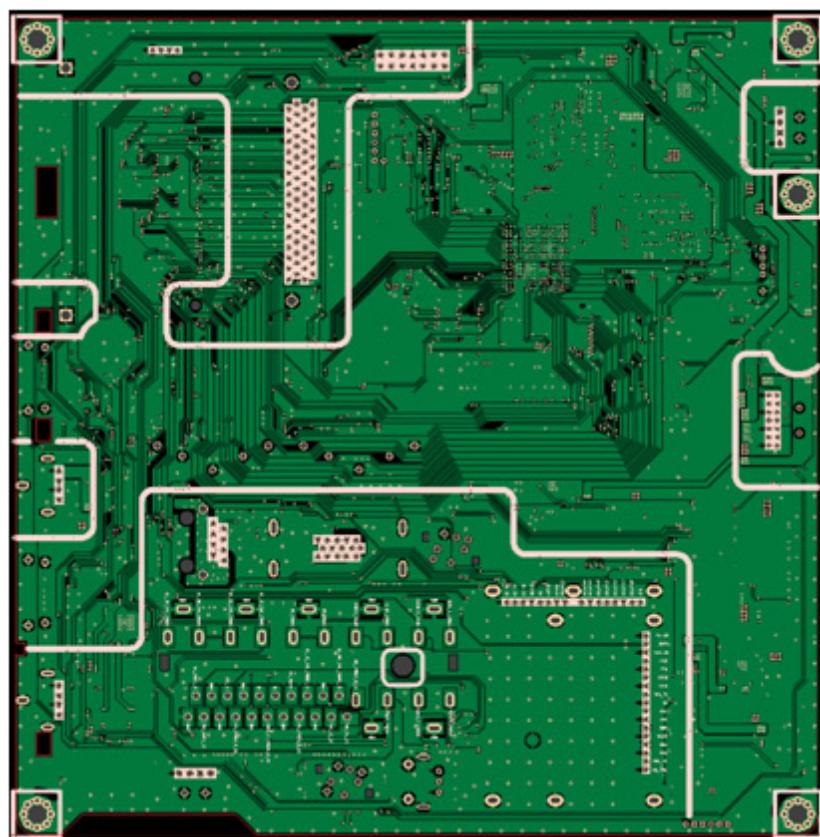
U56B - 19" / 22"



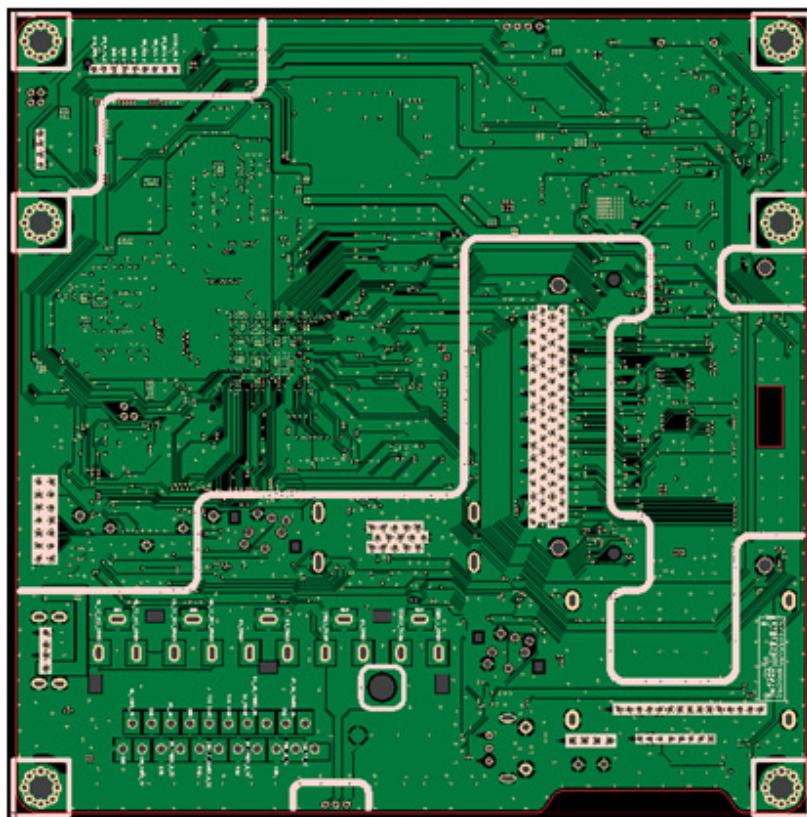
4. Troubleshooting

■ Main Bottom_X9

U56A -26" / 32" / 37" / 40" / 46"

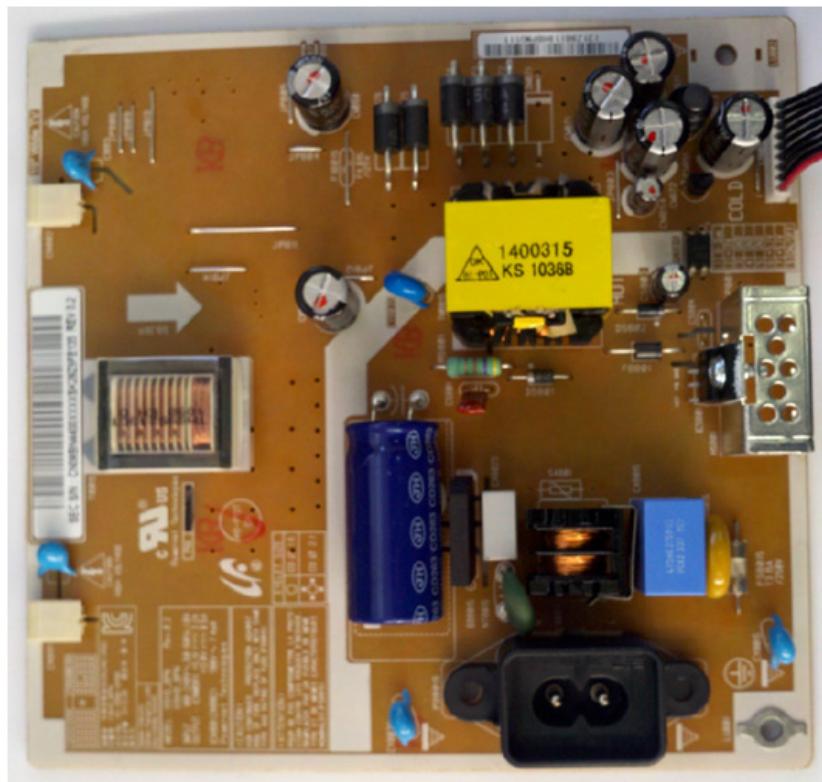


U56B - 19" / 22"



■ SMPS

Model / Inch	CODE	P/N
LD450 / 19"	BN44-00436A	I19HD_BPN

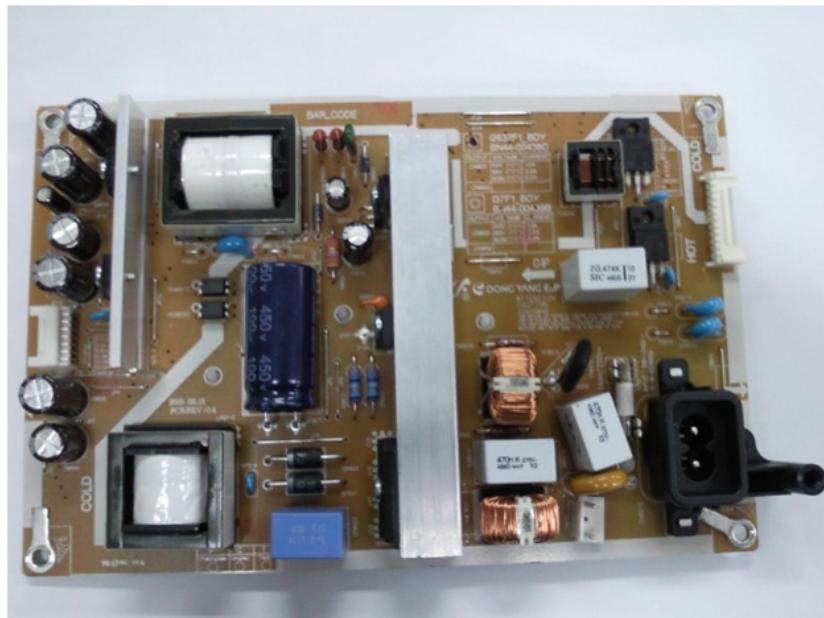


Model / Inch	CODE	P/N
LD450 / 22"	BN44-00437A	I22HD_BSM

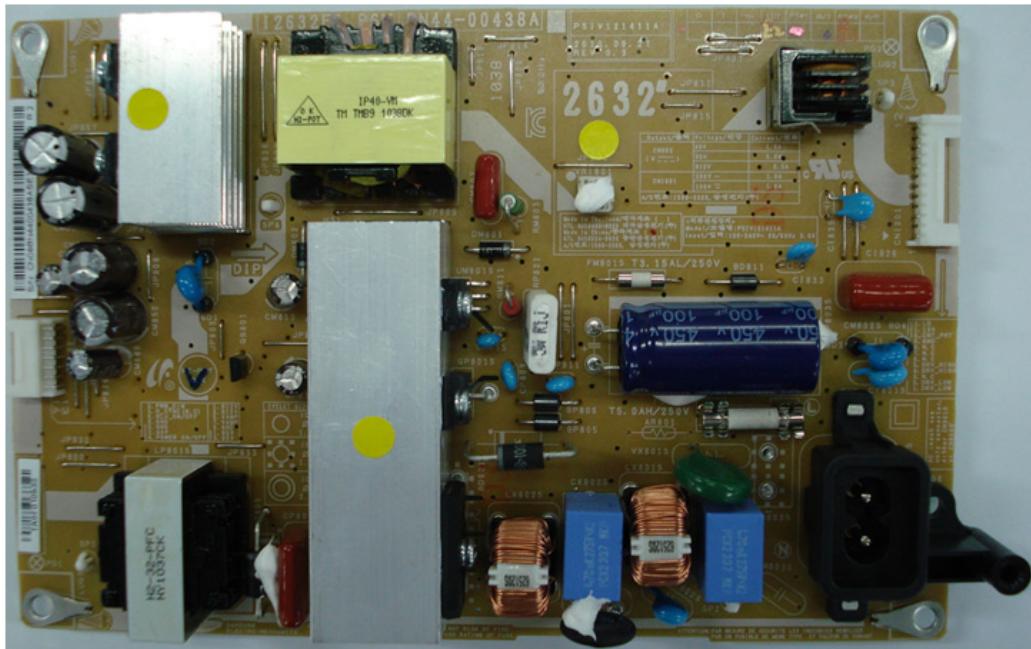


4. Troubleshooting

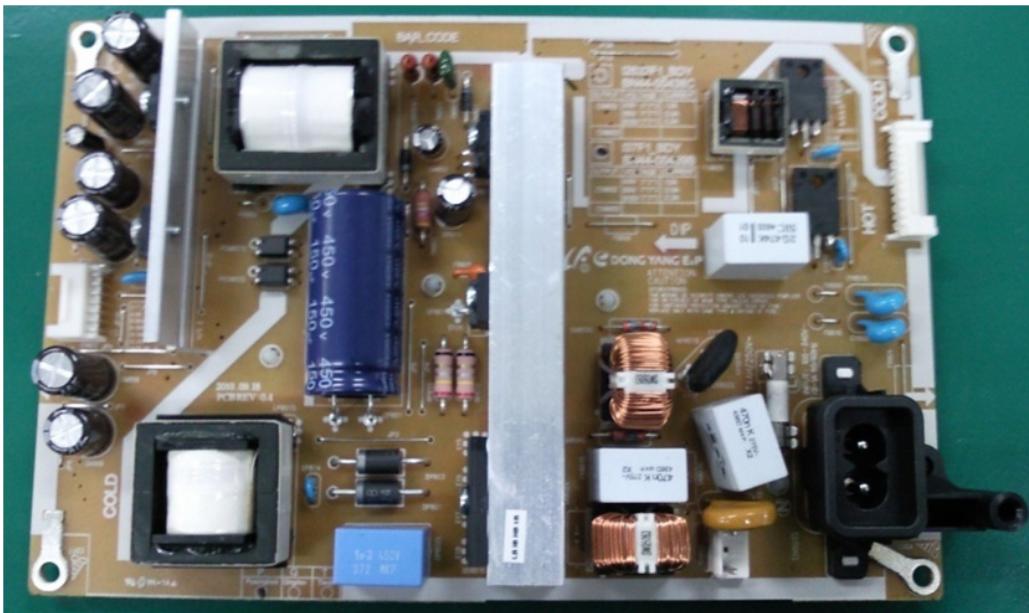
Model / Inch	CODE	P/N
LD450 / 26" LD5xx / 32"	BN44-00438C	I2632F1_BDY



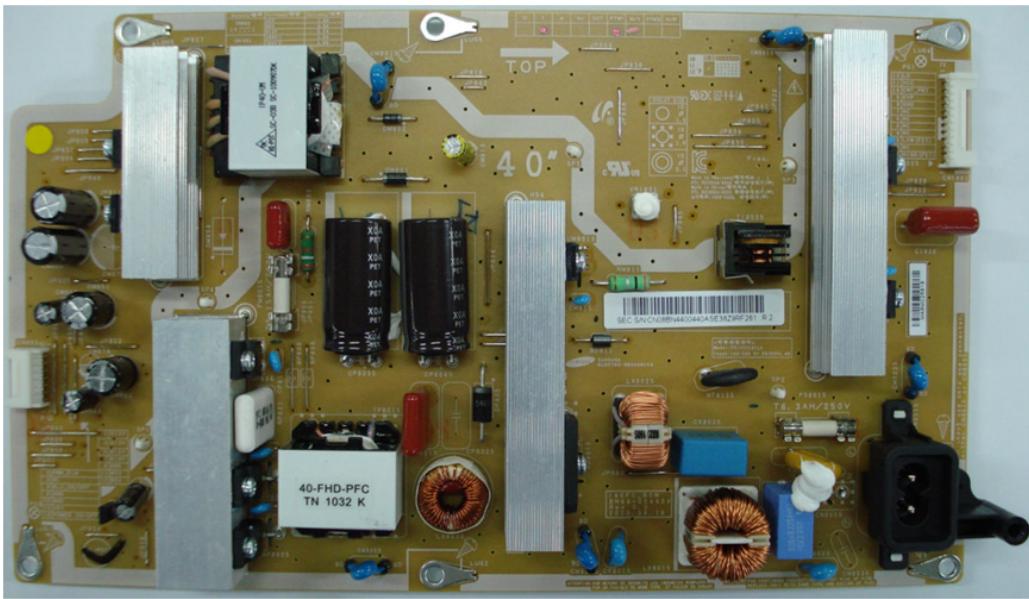
Model / Inch	CODE	P/N
LD450 / 32"	BN44-00438A	I2632F1_BSM



Model / Inch	CODE	P/N
LD5xx / 37"	BN44-00439B	I37F1_BDY

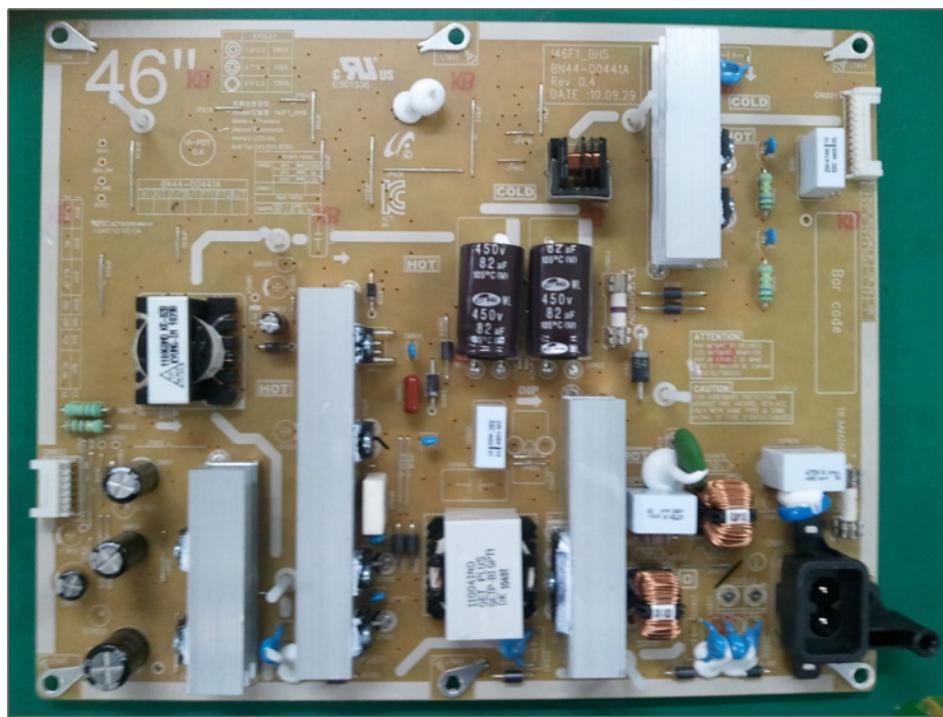


Model / Inch	CODE	P/N
LD5xx / 40"	BN44-00440A	I40F1_BSM



4. Troubleshooting

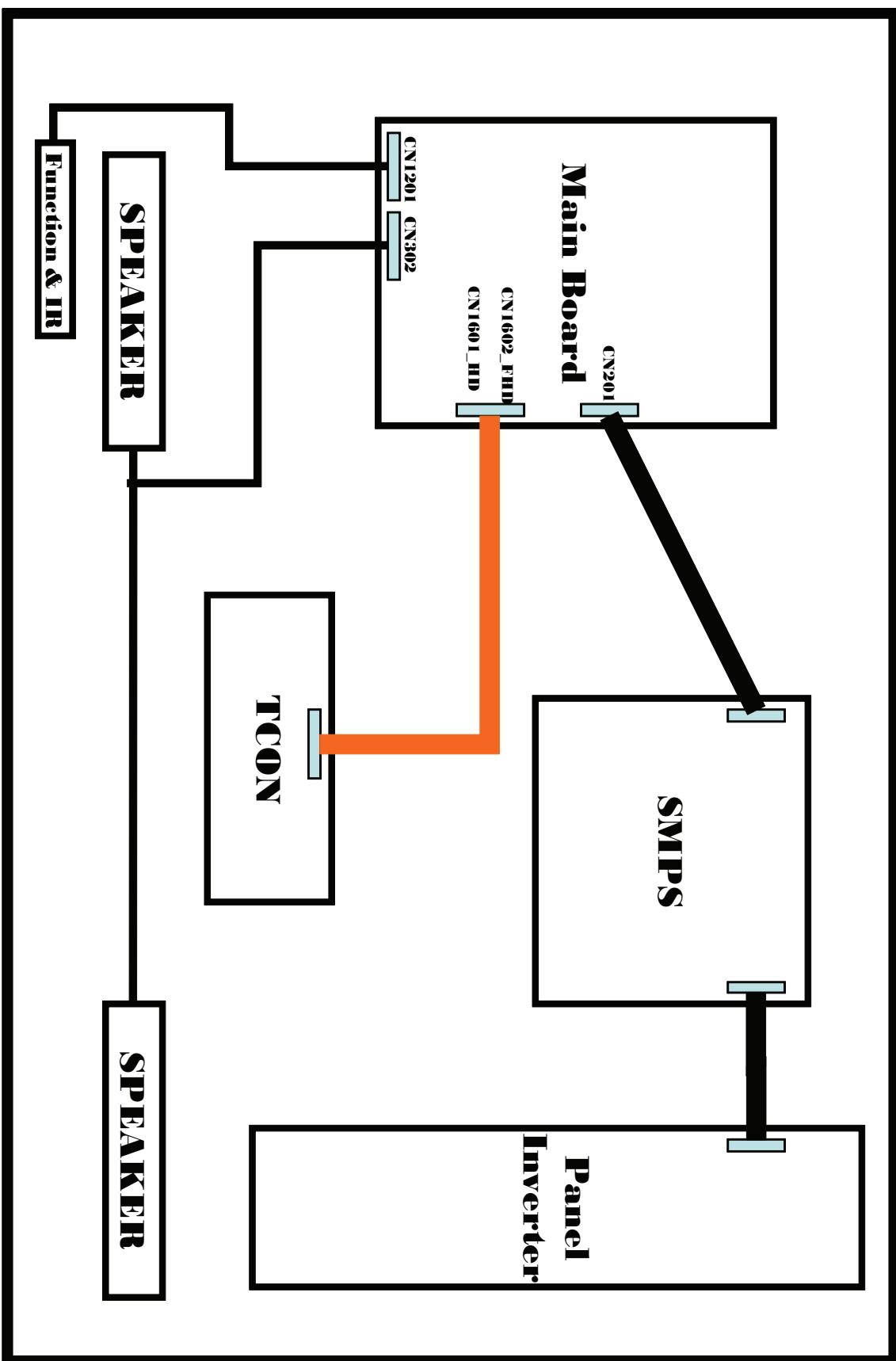
Model / Inch	CODE	P/N
LD5xx / 46"	BN44-00441A	I46F1_BHS

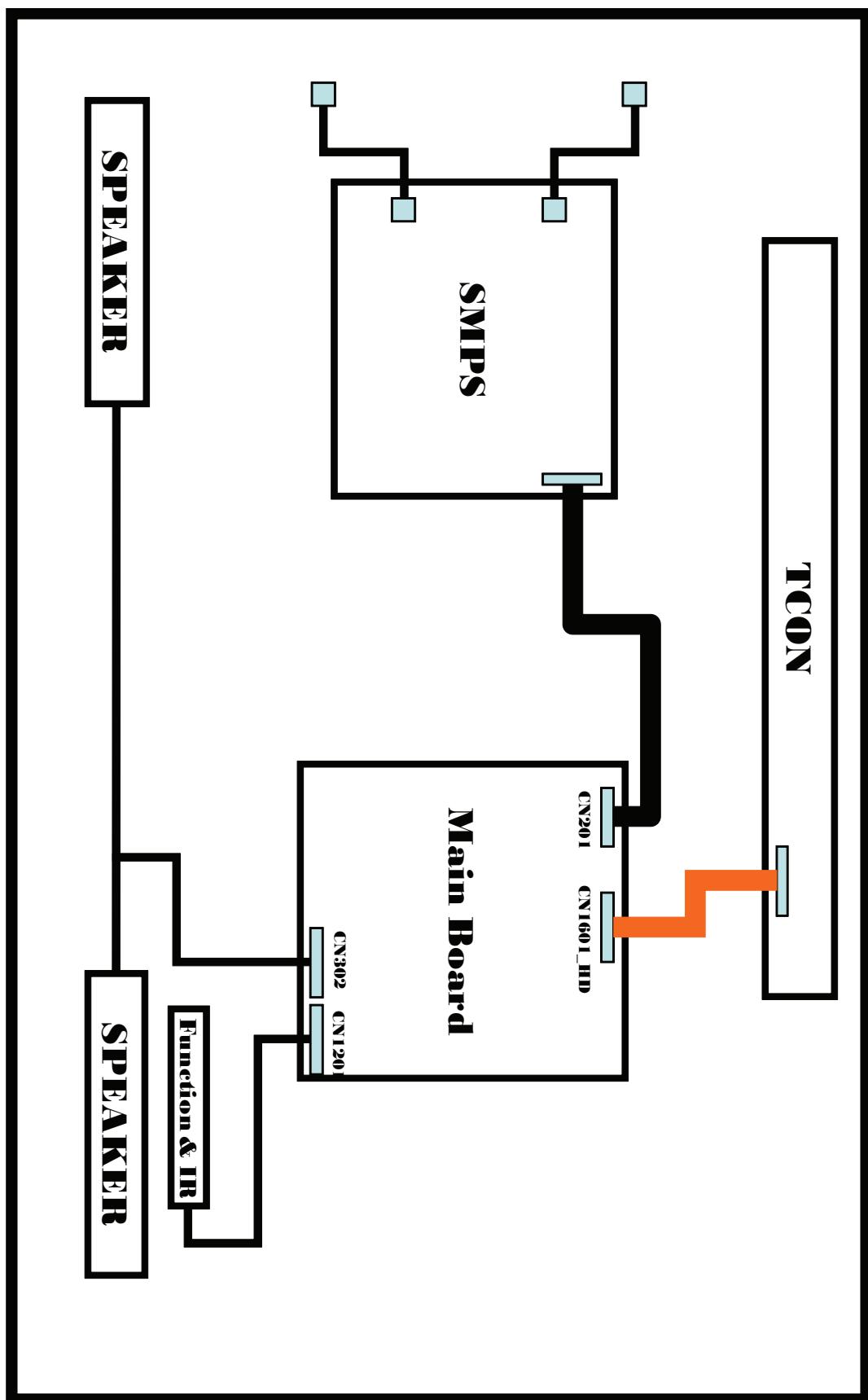


5. Wiring Diagram

5-1. Wiring Diagram

■ LD450_LD550_LD570_LD580_26" / 32" / 37" / 40" / 46"





5-2. Connector

■ LD450_LD550_LD570_LD580_26" / 32" / 37" / 40" / 46"

POWER IN (CN201)			
1	B5V	8	GND
2	SW_POWER	9	B12VS
3	B5V	10	SW_INVERTER
4	A5V	11	B13V
5	GND	12	NC
6	GND	13	B13V
7	B12VS	14	PWM_DIMMING

LVDS OUT (Option by Model) LD550 (CN1602_FHD)			
1	NC	27	EVEN[0]-
2	NC	28	GND
3	NC	29	ODD[4]+
4	NC	30	ODD[4]-
5	NC	31	ODD[3]+
6	NC	32	ODD[3]-
7	FORMAT	33	GND
8	SDA_Panel	34	ODDCLK+
9	TCON_WP	35	ODDCLK-
10	NC	36	GND
11	SDA_Panel	37	ODD[2]+
12	SCL_Panel	38	ODD[2]-
13	GND	39	ODD[1]+
14	EVEN[4]+	40	ODD[1]-
15	EVEN[4]-	41	ODD[0]+
16	EVEN[3]+	42	ODD[0]-
17	EVEN[3]-	43	GND
18	GND	44	GND
19	EVENCLK+	45	GND
20	EVENCLK-	46	NC
21	GND	47	Panel_VCC
22	EVEN[2]+	48	Panel_VCC
23	EVEN[2]-	49	Panel_VCC
24	EVEN[1]+	50	Panel_VCC
25	EVEN[1]-	51	Panel_VCC
26	EVEN[0]+		

LD450 (CN1601_HD)			
1	Panel_VCC	16	ODDCLK+
2	Panel_VCC	17	ODDCLK-
3	Panel_VCC	18	GND
4	Panel_VCC	19	ODD[2]+
5	Panel_VCC	20	ODD[2]-
6	GND	21	GND
7	GND	22	ODD[1]+
8	GND	23	ODD[1]-
9	TCON_WP	24	GND
10	FORMAT	25	ODD[0]+
11	NC	26	ODD[0]-
12	GND	27	GND
13	ODD[3]+	28	SDA_TCON
14	ODD[3]-	29	SCL_TCON
15	GND	30	NC

FUNCTION (CN1201)			
1	IR	5	MSDA
2	GND	6	FUNC_INTR
3	3.3V	7	LED_STB
4	MSCL	8	NC

SPEAKER (CN302)			
1	R+	3	L+
2	R-	4	L-

PC (CN401)			
1	PC_RED	9	PC_5V
2	PC_GREEN	10	IDENT_PC
3	PC_BLUE	11	R_FANET
4	T_FANET	12	DSDA
5	GND	13	PC_HS
6	GND	14	PC_VS
7	GND	15	DSCL
8	GND		

PC / DIV SOUND (CN402)			
1	GND	5	NC
2	PC_SR_IN	6	NC
3	PC_SL_IN	7	NC
4	NC		

USB (CN1501~1502)			
1	5V	3	USB_DP
2	USB_DM	4	GND

HEADPHONE (CN301)			
1	GND	5	NC
2	HP_R	6	GND
3	HP_L	7	IDENT_HP
4	GND		

SPDIF (OP301)			
1	SPDIF_OUT	3	GND
2	5V		

LAN (CN1701_LAN)			
1	LAN_TX+	5	2.5V
2	2.5V	6	LAN_RX-
3	LAN_TX-	7	NC
4	LAN_RX+	8	GND

HDMI (CN601~CN604)			
1	RX2+	11	GND
2	GND	12	RXCLK-
3	RX2-	13	HDMI_CEC
4	RX1+	14	NC
5	GND	15	SCL
6	RX1-	16	SDA
7	RX0+	17	GND
8	GND	18	5V / IDENT
9	RX0-	19	HPD
10	RXCLK+		

TUNER (Option by Sec Code) DVB_TC (BN40-00220A)			
1	RF_AGC	9	IF-AGC
2	5V	10	DIF 1
3	GND	11	DIF 2
4	33V	12	AFT
5	GND	13	SIF
6	SCL	14	NC
7	SDA	15	CVBS
8	IF-TP		

Universal Jack (CN501_EU) COMPONENT / AV / SCART			
1	GND	19	GND
2	SL_IN	20	GND
3	SR_IN	21	SC_SL_IN
4	GND	22	SC_B
5	SR_IN	23	IDENT_SC
6	SL_IN	24	GND
7	GND	25	NC
8	COMP_PR	26	SC_G
9	COMP_PR	27	NC
10	GND	28	GND
11	IDENT_COMP	29	GND
12	COMP_PB	30	SC_R
13	GND	31	SC_FB
14	IDENT_AV	32	GND
15	COMP_Y/AV_CVBS	33	GND
16	SC_SR_OUT	34	SC_CVBS_OUT
17	SC_SR_IN	35	SC_CVBS_IN
18	SC_SL_OUT	36	GND

DVB_TCS2 (BN40-00218A)			
1	LNA	18	TS_CLK
2	NC	19	SYNC
3	1.8V	20	VALID
4	GND	21	ERROR
5	3.3V	22	RESET
6	GND	23	TS_D0
7	SCL	24	TS_D1
8	SDA	25	TS_D2
9	IF-TP	26	TS_D3
10	NC	27	TS_D4
11	NC	28	TS_D5
12	NC	29	TS_D6
13	NC	30	TS_D7
14	SIF	31	DISEQC
15	1.2V	32	NC
16	CVBS	33	LNB
17	3.3V		

DVB_T2C (BN40-00216A)			
1	GND	19	GND
2	SL_IN	20	GND
3	SR_IN	21	SC_SL_IN
4	GND	22	SC_B
5	SR_IN	23	IDENT_SC
6	SL_IN	24	GND
7	GND	25	NC
8	COMP_PR	26	SC_G
9	COMP_PR	27	NC
10	GND	28	GND
11	IDENT_COMP	29	GND
12	COMP_PB	30	SC_R
13	GND	31	SC_FB
14	IDENT_AV	32	GND
15	COMP_Y/AV_ CVBS	33	GND
16	SC_SR_OUT	34	SC_CVBS_OUT
17	SC_SR_IN	35	SC_CVBS_IN
18	SC_SL_OUT	36	GND

5. Wiring Diagram

■ LD450_19" / 22"

POWER IN (CN201)			
1	PWM_DIMMING	6	A5V
2	A13V	7	A5V
3	GND	8	A18V or NC
4	GND	9	SW_INVERTER
5	GND		

LVDS OUT (Option by Model) 19" / 26" / 32" (CN1602_HD)			
1	Panel_VCC	16	ODDCLK+
2	Panel_VCC	17	ODDCLK-
3	Panel_VCC	18	GND
4	Panel_VCC	19	ODD[2]+
5	Panel_VCC	20	ODD[2]-
6	GND	21	GND
7	GND	22	ODD[1]+
8	GND	23	ODD[1]-
9	TCON_WP	24	GND
10	FORMAT	25	ODD[0]+
11	NC	26	ODD[0]-
12	GND	27	GND
13	ODD[3]+	28	SDA_TCON
14	ODD[3]-	29	SCL_TCON
15	GND	30	NC

22" (CN1602_FHD)			
1	Panel_VCC	16	EVEN[1]-
2	Panel_VCC	17	GND
3	Panel_VCC	18	EVEN[0]+
4	NC	19	EVEN[0]-
5	NC	20	ODD[3]+
6	NC	21	ODD[3]-
7	GND	22	ODDCLK+
8	EVEN[3]+	23	ODDCLK-
9	EVEN[3]-	24	GND
10	EVENCLK+	25	ODD[2]+
11	EVENCLK-	26	ODD[2]-
12	EVEN[2]+	27	ODD[1]+
13	EVEN[2]-	28	ODD[1]-
14	GND	29	ODD[0]+
15	EVEN[1]+	30	ODD[0]-

FUNCTION (CN1201)			
1	IR	5	MSDA
2	GND	6	FUNC_INTR
3	3.3V	7	LED_STB
4	MSCL	8	NC

SPEAKER (CN302)			
1	R+	3	L+
2	R-	4	L-

PC (CN401)			
1	PC_RED	9	PC_5V
2	PC_GREEN	10	IDENT_PC
3	PC_BLUE	11	R_FANET
4	T_FANET	12	DSDA
5	GND	13	PC_HS
6	GND	14	PC_VS
7	GND	15	DSCL
8	GND		

PC / DIV SOUND (CN402)			
1	GND	5	NC
2	PC_SR_IN	6	NC
3	PC_SL_IN	7	NC
4	NC		

USB (CN1501)			
1	5V	3	USB_DP
2	USB_DM	4	GND

HEADPHONE (CN301)			
1	GND	5	NC
2	HP_R	6	GND
3	HP_L	7	IDENT_HP
4	GND		

SPDIF (OP301)			
1	SPDIF_OUT	3	GND
2	5V		

HDMI (CN601)			
1	RX2+	11	GND
2	GND	12	RXCLK-
3	RX2-	13	HDMI_CEC
4	RX1+	14	NC
5	GND	15	SCL
6	RX1-	16	SDA
7	RX0+	17	GND
8	GND	18	5V / IDENT
9	RX0-	19	HPD
10	RXCLK+		

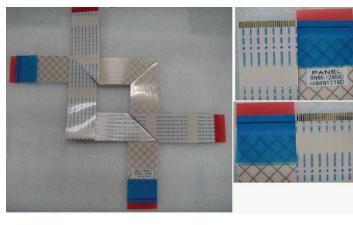
TUNER			
1	RF_AGC	9	IF-AGC
2	5V	10	DIF 1
3	GND	11	DIF 2
4	33V	12	AFT
5	GND	13	SIF
6	SCL	14	NC
7	SDA	15	CVBS
8	IF-TP		

Universal Jack (CN501_EU) COMPONENT / AV / SCART			
1	GND	19	GND
2	SL_IN	20	GND
3	SR_IN	21	SC_SL_IN
4	GND	22	SC_B
5	SR_IN	23	IDENT_SC
6	SL_IN	24	GND
7	GND	25	NC
8	COMP_PR	26	SC_G
9	COMP_PR	27	NC
10	GND	28	GND
11	IDENT_COMP	29	GND
12	COMP_PB	30	SC_R
13	GND	31	SC_FB
14	IDENT_AV	32	GND
15	COMP_Y/AV_- CVBS	33	GND
16	SC_SR_OUT	34	SC_CVBS_OUT
17	SC_SR_IN	35	SC_CVBS_IN
18	SC_SL_OUT	36	GND

5-3. Connector Functions

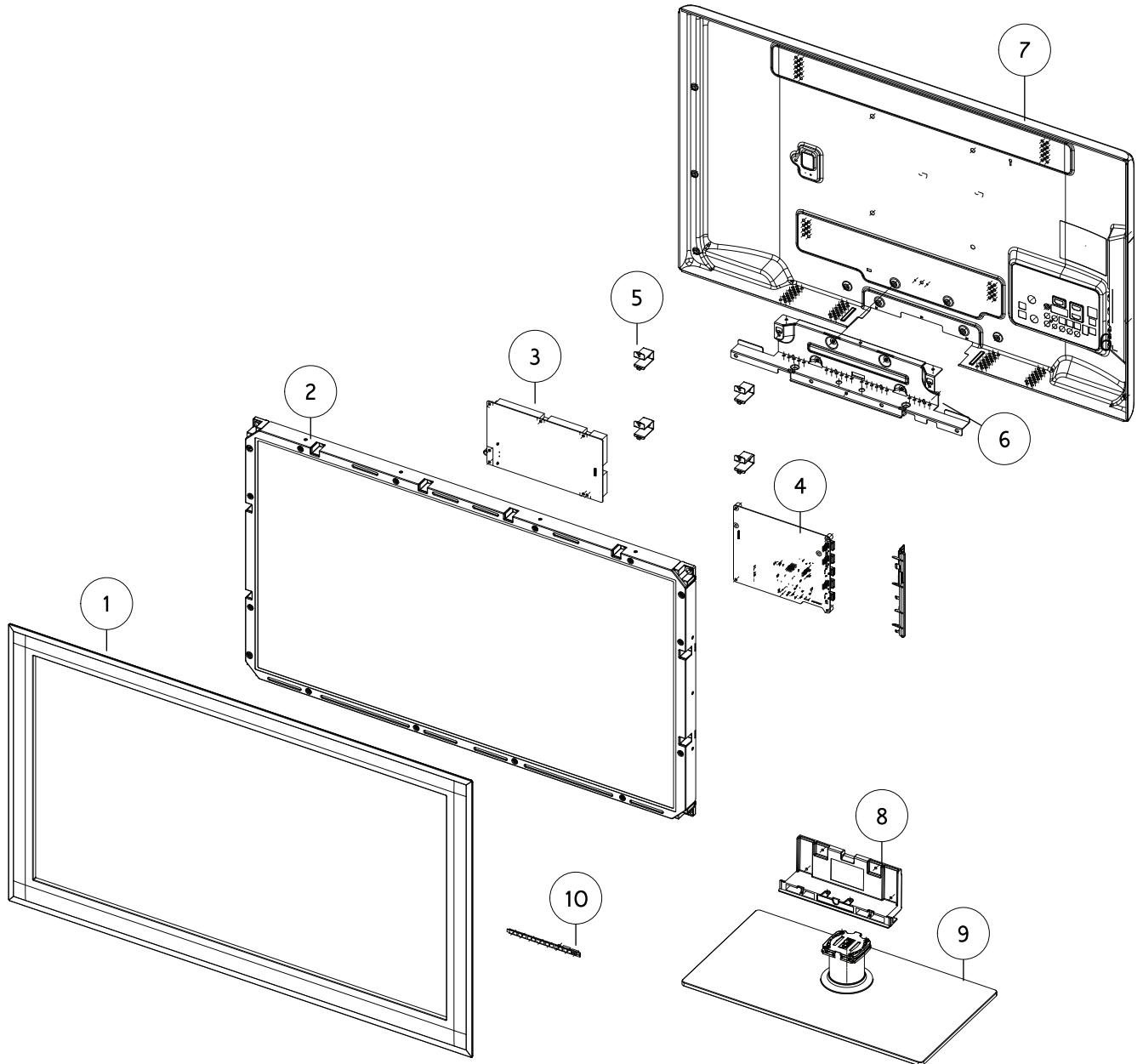
Connector	Functions
Main ↔ IP (14p)	Supply main power and dimming signal from IP board to Main Board.
Main ↔ T-CON (51p/30p LVDS)	The LVDS signal transferred from Main Board to Panel.
IP ↔ Panel (12p)	Supply power from IP board to Driver Board.

5-4. Cables

Use	LEAD (Main-IP 14P)	LVDS (IP-Driver B'D 12P)	
Code	D45X 26: BN39-01449E (125 mm) D45X 32": BN39-01449A (200 mm) D5XX 32": BN39-01449A (200 mm) D5XX 37": BM39-01449B (275 mm) D5XX 40": BN39-01449C (250 mm) D5XX 46": BN30-01449D (350 mm)	D45X 26/32": BN39-01448A (70 mm) D5XX 32": BN39-01448A (70 mm) D5XX 37": BN39-01448B (100 mm) D5XX 40": BN39-01448C (150 mm) D5XX 46": BN39-01448D (175 mm)	
Photo			
Use	LVDS (Main - TCON)		
Code	D5XX 32": BN96-17116A D5XX 37": BN96-17116B D5XX 40": BN96-17116C D5XX 46": BN96-17116D	D45X 26": BN96-12469D D45X 32": BN96-12469Q	D45X 19": BN96-13722Z D45X 22": BN96-13722W
Photo			

1. Exploded View & Part List

Exploded View



Parts List

No.	Parent	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	BN90-03255B	2	F001A	BN96-16762B	ASSY COVER P-FRONT; LD550,37,EO,PC+PC,V2,	SA	1
2	BN91-06568A	2	PANEL	BN07-00971A	LCD-PANEL; T370HW03 VP,AU37H3P,8bit,37 in	SA	1
3	BN91-06613G	2	P001A	BN44-00439B	AC VSS(I)-TV; I37F1_BDY,I37F1_BDY,63kHz,1	SA	1
4	BN91-06611G	2	M0014	BN94-04509G	ASSY PCB MAIN; LD550 37",BN97-05383A,BN46	SA	1
5	BN96-12973A	3	T0101	BN61-05996A	BRACKET-WALL; LC650 40,SECC,T1.2	SNA	4
6	BN91-06613G	2	T0910	BN96-13342A	ASSY BRACKET P-STAND LINK; LC530 37/40/46	SA	1
7	BN90-03273E	2	R001A	BN96-16766E	ASSY COVER P-REAR; LD550,37,EO,PCM,T0.45,	SA	1
8	BN90-03386B	2	SG03A	BN96-16779B	ASSY STAND P-GUIDE; LD550,37/40/46,W/W,PC	SA	1
9	BN90-03386B	2	SB04A	BN96-18868B	ASSY STAND P-BASE; LD550,37/40,PC,V1,V0,B	SA	1
10	BN96-16762B	3	FB21A	BN96-16729F	ASSY BOARD P-TOUCH FUNCTION & IR; LD550,ELE	SA	1

2. Electrical Parts List

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
			LE37D550K1WXXN (AA01)		
1		BN90-03255B	ASSY COVER FRONT;LD550,37,EO	1	SNA
.2	SP01A	BN96-12871E	ASSY SPEAKER P;6ohm,4pin,10W,11year LCD	1	SA
.2	F001A	BN96-16762B	ASSY COVER P-FRONT;LD550,37,EO,PC+PC,V2,	1	SA
.3		BN60-00162C	SPACER-FOAM;FOAM,50000mm,Dark Gray,0.5T,	1	SNA
.3		BN60-00163B	SPACER-FOAM;LC650-37",FOAM,470,0.5,20,Bo	2	SNA
.3		BN60-00163G	SPACER-FOAM;LC650-37",FOAM,830,T 0.5,18,	1	SNA
.3	CB11P	BN61-07248A	BRACKET-SUPPORT PCB;LD550,SK-5,T0.5,Plat	1	SA
.3	CCM1	BN63-05199P	COVER-SHEET;AMBER,PE,T0.08,W1000,200M,CL	0	SNA
.3	F001	BN63-07624B	COVER-FRONT;LD550,37,EO,PC+PC,V2,TP0029+	1	SNA
.3		BN81-02422A	A/S-ADHESIVE;TECNOMELT,Q9268H,WHT	0	SNA
.3	FB21A	BN96-16729F	ASSY BOARD P-TOUCH FUNCTION & IR;LD550,ELE	1	SA
1	R001A	BN90-03273E	ASSY COVER REAR;LD550,37,EO	1	SNA
.2	R001A	BN96-16766E	ASSY COVER P-REAR;LD550,37,EO,PCM,T0.45,	1	SA
.3		BN60-00162X	SPACER-FOAM;FOAM,30000mm,Dark Gray,1T,15	1	SNA
.3	AH358	BN61-06545A	HOLDER-REAR;LC650 37/40/46,PP,BLK	1	SNA
.3	R001	BN63-06336J	COVER-REAR;LD550,37,EO,PCM,T0.45,BKN-P82	1	SNA
.3		BN64-01269G	INLAY-AV;LD550,EO,PS SHEET,T0.5,BLK	1	SNA
.3	T0071	BN64-01563A	INLAY-TERMINAL;LD550 46",PS SHEET,H/GLOS	1	SNA
.3		BN65-00003B	CLAMPER BAG;LED,LDPE,BLK,METAL C/R	1	SNA
1	S001A	BN90-03386B	ASSY STAND;LD550,37/40,MOLD,EO	1	SNA
.2	SG03A	BN96-16779B	ASSY STAND P-GUIDE;LD550,37/40/46,W/W,PC	1	SA
.3	SG03	BN61-06997A	GUIDE-STAND;LD550,46,PC+G/F 20%,V2,BK000	1	SNA
.2	SB04A	BN96-18868B	ASSY STAND P-BASE;LD550,37/40,PC,V1,V0,B	1	SA
.3	SCREW	6003-001785	SCREW-TAPTYPE;FH,+,B,M4,L8,ZPC(BLK),SWRC	6	SA
.3		BN61-07453A	BRACKET-STAND BOTTOM;LD550 37" / 40",SEC	1	SNA
.3		BN61-07456A	HOLDER-SWIVEL RING-TOP;LD550 37" 40" 46"	1	SNA
.3		BN61-07458A	HOLDER-SWIVEL RING-BOTTOM;LD550 37" 40"	1	SNA
.3	SG01	BN61-07460A	GUIDE-STAND NECK;LD550 37" 40" 46",PC +	1	SNA
.3		BN61-07462A	BRACKET-SWIVEL BOTTOM;LD550 37" 40" 46",	1	SNA
.3	CCM1	BN63-02183D	COVER-SHEET;Rhcm,PE Vinyl,T0.05,680mm,20	1	SNA
.3		BN63-08297B	COVER-STAND BASE;LD550,37/40,PC,V1,V0,BK	1	SNA
.3	M0019	BN73-00052C	RUBBER-FOOT;LCD TV,CR RUBBER,T2.0 DIA19,	6	SNA
.3		BN74-00031A	GREASE;kanto-kasei FL-955,grease,wht	0	SNA
1		BN91-06568A	ASSY LCD;LN37D550K*	1	SNA
.2	PANEL	BN07-00971A	LCD-PANEL;T370HW03 VP,AU37H3P,8bit,37 in	1	SA
.3	TCON	BN81-05995A	A/S-T CON T370HW03 VP;T370HW03 VP	1	SA
.3		BN81-06013A	A/S-T-BALANCE B/D T370HW03 VP;T370HW03 V	1	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
1	M0017	BN91-06611G	ASSY CHASSIS;AAD-LE37D550K1WXXC	1	SNA
.2	M0014	BN94-04509G	ASSY PCB MAIN;LD550 37",BN97-05383A,BN46	1	SA
.3	S.N.A	0202-001338	SOLDER-BAR;LeeD-free Solder BAR,W20L350H	2	SNA
.3	CIS2	0202-001522	SOLDER-WIRE FLUX;LFA3-107,D1.2,96.5Sn/3A	0	SNA
.3		0204-002607	FLUX;DF-234U,13%,14KG,Gravity 0.82	2	SNA
.3	ET01	BN40-00220A	TUNER;DTM-8B/125S,DTM-8B/125S,DVB-T Half	1	SA
.3		BN97-00688A	ASSY HDCP;BN46-00018A,PS-42V6S,D73A,GENE	1	SNA
.4		BN46-00018A	KEY CODE-CERTIFICATE;(HDCP KEY)PPM42M5S,	1	SNA
.3		BN97-05281F	ASSY SMD;LE32D550K1WXXC,BN94-04509F	1	SNA
.4		0202-001477	SOLDER-CREAM;LST309-M,D20~45um,96.5Sn/3A	3	SNA
.4	DS01A	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	3	SA
.4		0403-001180	DIODE-ZENER;BZX84C6V2,5.8-6.6V,350mW,SOT	1	SA
.4		0403-001783	DIODE-ZENER;BZB84-C6V2,5.8/6.6V,300mW,SO	5	SNA
.4		0403-001785	DIODE-ZENER;NZH5V1B,4.94/5.2V,500mW,SOD-	1	SA
.4		0403-001797	DIODE-ZENER;NZH3V0B,2.85/3.15V,500mW,SOD	1	SNA
.4	D0254	0404-001404	DIODE-SCHOTTKY;BAT721C,40V,200mA,SOT-23,	3	SA
.4	T0139	0406-001200	DIODE-TVS;RCLAMP0504F,6/-/V,150W,SC-70	2	SA
.4	T0139	0406-001271	DIODE-TVS;RCLAMP0524P,6/-/V,150W,SLP251	3	SNA
.4	SD3	0407-000114	DIODE-SWITCHING;KDS184,80V,100mA,SOT-23,	1	SNA
.4	KQ1	0501-000279	TR-SMALL SIGNAL;KSA1182-Y,PNP,150mW,SOT-	1	SA
.4	Q101	0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	10	SA
.4	CEQ2	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	4	SA
.4	Q409	0505-002572	FET-SILICON;AO4801AL,P,-30V,-5.6A,0.075o	1	SA
.4	IC104	0801-002630	IC-CMOS LOGIC;74AHCT1G08,2-INPUT AND GAT	1	SA
.4	ND51C	0801-002780	IC-CMOS LOGIC;74LVC1G17,SCHMITT-TRIGGER	1	SA
.4	IC104	0801-003330	IC-CMOS LOGIC;Octal buffer,DQFN,20P,4.5x	2	SA
.4	IC104	0802-001012	IC-CMOS LOGIC;74LCX245,TRANSCEIVER,DQFN,	1	SNA
.4	IC112	1103-001310	IC-EEPROM;24LC02B,256X8BIT,SOIC,8P,3.91X	6	SA
.4		1103-001487	IC-EEPROM;AT24C256C-SSHL-T,256Kbit,32Kx8	1	SA
.4		1105-002194	IC-DDR3 SDRAM;K4B1G1646G-BCH9,DDR3 SDRAM	2	SA
.4		1201-003153	IC-POWER AMP;NTP-7411S,MLF,48P,7x7mm,DUA	1	SA
.4		1201-003183	IC-AUDIO AMP;DRV612,HTSSOP,14P,5x4.4mm,D	1	SA
.4	T0087	1203-001815	IC-POSI.FIXED REG.;78M09,TO-252,3P,PLAST	1	SA
.4	T0087	1203-002835	IC-POSI.FIXED REG.;7805,3P,6.6x6.1mm,PLA	1	SA
.4	T0087	1203-002898	IC-POSI.FIXED REG.;G950T45R,T0-252,3P,6.	1	SA
.4		1203-004364	IC-VOL. DETECTOR;RT9818C-42PV,SOT-23,3P,	1	SA
.4		1203-006017	IC-VOL. DETECTOR;RT9824GJ8,TSOT23,8P,2.9	1	SA
.4	IC012	1203-006138	IC-POSI.ADJUST REG.;AP1117DGZ-13-89,TO-2	1	SA
.4		1203-006142	IC-DC/DC CONVERTER;BD8924G,5P,2.9x1.6x1.	1	SA
.4		1203-006337	IC-POSI.FIXED REG.;G9091-330T11U,SOT-23-	1	SA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		1203-006619	IC-DC/DC CONVERTER;AOZ1033AI,SO-8,8P,4.9	1	SA
...4		1203-006684	IC-DC/DC CONVERTER;TPS54327DDAR,HSOP8,8P	1	SNA
...4		1204-003240	IC-DECODER;SEMS20-LF,HSBGA,572P,20x20mm,	1	SNA
...4		1205-003201	IC-BUS SWITCH;TC7WB125FK,SSOP,8P,2x2.3mm	1	SA
...4		1205-003479	IC-SWITCH;TPS2051BDBVR,SOT-23,5P,2.9x1.6	1	SA
...4		1205-003733	IC-SWITCH;AP2191MPG-13,MSOP-8L-EP,8P,2.9	1	SA
...4		1205-003735	IC-SWITCH;AP2151WG-7,SOT25,5P,2.9x1.6mm,	1	SA
...4		1205-003834	IC-ETHERNET CONTROLLER;RTL8201E-VC-GRT,Q	1	SA
...4		1405-001271	VARISTOR;20Vdc,5A,1.0x0.5x0.6mm,TP	6	SA
...4	MR604	2007-000137	R-CHIP;2Kohm,5%,1/16W,TP,1005	9	SNA
...4	R105	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	28	SA
...4	AR49	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	2	SNA
...4	MR306	2007-000141	R-CHIP;2.2Kohm,5%,1/16W,TP,1005	2	SNA
...4	AVR73	2007-000142	R-CHIP;2.7Kohm,5%,1/16W,TP,1005	1	SA
...4	R319	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	50	SNA
...4	R104	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	38	SA
...4	MR36	2007-000153	R-CHIP;22Kohm,5%,1/16W,TP,1005	6	SNA
...4	RZ07	2007-000156	R-CHIP;30Kohm,5%,1/16W,TP,1005	3	SA
...4	MR13	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	11	SNA
...4		2007-000160	R-CHIP;68Kohm,5%,1/16W,TP,1005	2	SA
...4	DR39	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	5	SNA
...4	MR16	2007-000168	R-CHIP;470Kohm,5%,1/16W,TP,1005	1	SA
...4	R509	2007-000170	R-CHIP;1Mohm,5%,1/16W,TP,1005	1	SNA
...4	R111	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	7	SNA
...4	HDR17	2007-000172	R-CHIP;10ohm,5%,1/16W,TP,1005	4	SNA
...4	R338	2007-000173	R-CHIP;22ohm,5%,1/16W,TP,1005	10	SNA
...4	UR23	2007-000174	R-CHIP;47ohm,5%,1/16W,TP,1005	2	SNA
...4	MR17	2007-000566	R-CHIP;220Kohm,5%,1/16W,TP,1005	1	SNA
...4	R726	2007-000695	R-CHIP;3.3ohm,5%,1/10W,TP,1608	4	SNA
...4	R124	2007-000775	R-CHIP;33Kohm,5%,1/16W,TP,1005	2	SNA
...4	R2007	2007-000803	R-CHIP;36Kohm,1%,1/10W,TP,1608	1	SA
...4	HR10	2007-000962	R-CHIP;5.1Kohm,1%,1/10W,TP,1608	1	SA
...4	S1G084	2007-001125	R-CHIP;68Kohm,1%,1/10W,TP,1608	1	SA
...4		2007-001168	R-CHIP;75ohm,5%,1/4W,TP,3216	2	SA
...4		2007-001285	R-CHIP;5.6ohm,5%,1/16W,TP,1005	4	SA
...4	OTR1	2007-001292	R-CHIP;33ohm,5%,1/16W,TP,1005	24	SNA
...4	DR43	2007-001298	R-CHIP;51ohm,5%,1/16W,TP,1005	2	SNA
...4	DR1	2007-001301	R-CHIP;68ohm,5%,1/16W,TP,1005	10	SA
...4	R16	2007-001313	R-CHIP;330ohm,5%,1/16W,TP,1005	2	SNA
...4	R326	2007-001325	R-CHIP;3.3Kohm,5%,1/16W,TP,1005	1	SNA

Exploded Views and Parts List

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		2007-001333	R-CHIP;18Kohm,5%,1/16W,TP,1005	6	SNA
...4	PR24	2007-002970	R-CHIP;56ohm,5%,1/16W,TP,1005	4	SA
...4	HDR8	2007-007095	R-CHIP;390ohm,5%,1/16W,TP,1005	1	SA
...4		2007-007138	R-CHIP;27Kohm,1%,1/16W,TP,1005	2	SA
...4	DR4	2007-007142	R-CHIP;10Kohm,1%,1/16W,TP,1005	13	SNA
...4		2007-007156	R-CHIP;1ohm,5%,1/16W,TP,1005	7	SNA
...4		2007-007311	R-CHIP;22Kohm,1%,1/16W,TP,1005	1	SA
...4		2007-007318	R-CHIP;1Kohm,1%,1/16W,TP,1005	24	SNA
...4		2007-007463	R-CHIP;1.1Kohm,1%,1/16W,TP,1005	1	SA
...4		2007-007517	R-CHIP;240ohm,1%,1/16W,TP,1005	2	SNA
...4		2007-007766	R-CHIP;2Kohm,1%,1/16W,TP,1005	2	SNA
...4	MR11	2007-008015	R-CHIP;75ohm,1%,1/16W,TP,1005	11	SA
...4		2007-008117	R-CHIP;2.7Kohm,1%,1/16W,TP,1005	1	SA
...4		2007-008649	R-CHIP;220ohm,1%,1/16W,TP,1005	1	SNA
...4	DRP29	2011-000515	R-NETWORK;4.7Kohm,5%,1/16W,L,CHIP,8P,TP,	1	SA
...4	ZRN10	2011-001261	R-NETWORK;33ohm,5%,1/16W,L,CHIP,8P,TP,2.	7	SA
...4	DAR09	2011-001262	R-NETWORK;22ohm,5%,1/16W,L,CHIP,8P,TP,2.	31	SA
...4		2011-001264	R-NETWORK;10ohm,5%,1/16W,L,CHIP,8P,TP,2.	8	SNA
...4	HRP2	2011-001344	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,2	2	SA
...4		2011-001449	R-NETWORK;220hm,5%,1/16W,L,4P,TP,1010	7	SA
...4		2011-001587	R-NETWORK;100ohm,5%,1/16W,L,CHIP-V,4P,TP	1	SNA
...4	PC43	2203-000233	C-CER,CHIP;0.1nF,5%,50V,C0G,TP,1005	7	SA
...4	MC9	2203-000359	C-CER,CHIP;0.15nF,5%,50V,C0G,TP,1005,0.5	1	SA
...4	DC1	2203-000386	C-CER,CHIP;0.015nF,5%,50V,C0G,TP,1005	2	SA
...4	C254	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,TP,1005	11	SA
...4	C507	2203-000489	C-CER,CHIP;2.2nF,10%,50V,X7R,TP,1005	5	SA
...4	AD480	2203-000530	C-CER,CHIP;2.7nF,10%,50V,X7R,TP,1005,-	1	SNA
...4	V1233	2203-000575	C-CER,CHIP;220nF,10%,25V,X7R,TP,2012	6	SNA
...4	AD480	2203-000714	C-CER,CHIP;3.3nF,10%,50V,X7R,TP,1005,-	6	SA
...4	DC25	2203-000812	C-CER,CHIP;0.033nF,5%,50V,C0G,TP,1005	6	SA
...4	AD480	2203-000995	C-CER,CHIP;0.047nF,5%,50V,C0G,TP,1005	2	SA
...4	AD480	2203-001412	C-CER,CHIP;0.03nF,5%,50V,NP0,TP,1005	2	SNA
...4	AD480	2203-001428	C-CER,CHIP;470nF,10%,50V,X7R,TP,2012	2	SNA
...4	AD480	2203-001851	C-CER,CHIP;0.016nF,5%,50V,NP0,TP,1608	2	SNA
...4	AD480	2203-002285	C-CER,CHIP;10nF,10%,50V,X7R,TP,1005	10	SNA
...4	AD480	2203-002525	C-CER,CHIP;0.56nF,10%,50V,X7R,TP,1005	6	SNA
...4	AC2	2203-002711	C-CER,CHIP;100nF,10%,25V,X7R,TP,1608	1	SA
...4	C151	2203-003039	C-CER,CHIP;0.008nF,0.25pF,50V,C0G,TP,100	1	SNA
...4	AAC1	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,TP,1608	6	SNA
...4	AD480	2203-005344	C-CER,CHIP;22nF,10%,25V,X7R,TP,1005,0.5T	1	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4	AD480	2203-005393	C-CER,CHIP;0.005nF,0.1pF,50V,NP0,TP,1005	1	SNA
...4	VC37	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	111	SA
...4	AD480	2203-006126	C-CER,CHIP;47nF,10%,16V,X7R,TP,1005	21	SNA
...4	JC10	2203-006324	C-CER,CHIP;2200nF,10%,10V,X5R,1608	8	SA
...4	AD480	2203-006336	C-CER,CHIP;10000nF,10%,25V,X5R,TP,3216	1	SA
...4	C802	2203-006348	C-CER,CHIP;1000nF,10%,25V,X5R,TP,1608	1	SA
...4	C125	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,TP,2012	20	SC
...4	C234	2203-006378	C-CER,CHIP;4700nF,10%,6.3V,X5R,TP,1608	1	SNA
...4	HE4	2203-006474	C-CER,CHIP;22000nF,20%,6.3V,X5R,2012	10	SA
...4	HDC11	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,TP,1005	16	SNA
...4	AD480	2203-006824	C-CER,CHIP;4700nF,10%,10V,X5R,1608	1	SNA
...4	C23	2203-006890	C-CER,CHIP;10000nF,20%,6.3V,X5R,1608	24	SA
...4	AD480	2203-006992	C-CER,CHIP;0.33nF,5%,50V,C0G,TP,1005	2	SNA
...4	AD480	2203-007176	C-CER,CHIP;10000nF,10%,16V,X5R,TP,2012	6	SNA
...4	AD480	2203-007230	C-CER,CHIP;47000nF,20%,6.3V,X5R,TP,2012,	2	SNA
...4	T0052	2703-000158	INDUCTOR-SMD;1uH,10%,2012	2	SA
...4	T0052	2703-002238	INDUCTOR-SMD;1UH,5%,2012	2	SNA
...4	T0052	2703-003149	INDUCTOR-SMD;2.2uH,20%,5050	1	SA
...4		2703-003407	INDUCTOR-SMD;120nH,5%,1608	1	SA
...4	T0052	2703-003790	INDUCTOR-SMD;4.7uH,20%,8080	1	SA
...4		2703-003890	INDUCTOR-SMD;47uH,10%,3225	1	SA
...4		2703-003930	INDUCTOR-SMD;4.7uH,20%,5050	4	SA
...4	X202	2801-003326	CRYSTAL-SMD;24MHz,30ppm,28-ABX,20pF,50oh	1	SA
...4	X202	2801-003948	CRYSTAL-SMD;12MHz,30ppm,28-AAN,12pF,60oh	1	SA
...4	X202	2801-004734	CRYSTAL-SMD;25.000000MHz,20ppm,28-AAN,12	1	SA
...4	F103	2901-001506	FILTER-EMI SMD;5V,0.13A,0pF,2x1x0.5mm,TP	2	SA
...4	DR32	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	7	SNA
...4	T0568	3301-001526	BEAD-SMD;10ohm,1.6x0.8x0.8mm,1000mA,TP,,	3	SNA
...4	T0568	3301-002039	BEAD-SMD;26ohm,1608,TP	35	SA
...4		3701-001591	CONNECTOR-HDMI;19P,2ROW,FEMALE,SMD-S,AU	2	SA
...4		3701-001693	CONNECTOR-HDMI;19P,2ROW,FEMALE,SMD-A	2	SA
...4		3701-001746	CONNECTOR-DSUB;15P,3ROW,FEMALE,STARIGHT	1	SA
...4		3707-001106	CONNECTOR-OPTICAL;STRAIGHT W/L,SPDIF	1	SA
...4		3709-001670	CONNECTOR-CARD SLOT;68P,1.27mm,stmap,AU,	1	SA
...4	HB01A	3711-005601	HEADER-BOARD TO CABLE;BOX,8P,1R,2mm,SMD-	1	SA
...4	HB01A	3711-005925	HEADER-BOARD TO CABLE;BOX,51P,1R,0.5mm,S	1	SA
...4		3711-007585	CONNECTOR-HEADER;BOX,4P,1R,2.5mm,ANGLE-D	1	SA
...4		3711-007741	CONNECTOR-HEADER;BOX,14P,2R,2.0mm,ANGLE,	1	SA
...4		3722-003191	JACK-PIN;J/B 5P + Scart 21P,NI+SN,RD/WH/	1	SA
...4		3722-003225	JACK-USB;4P/1C,Au,BLK,SMD-A(DIP),A	2	SA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		3722-003226	JACK-PHONE;7P/1C,SN,BLK	2	SA
...4		3722-003229	JACK-MODULAR;8P/8C W/L,Y,STRAIGHT,N,Au,1	1	SA
...4	ET01	BN40-00220A	TUNER;DTM-8B/125S,DTM-8B/125S,DVB-T Half	1	SA
...4		BN41-01603B	PCB MAIN;FR-4,4,1.2T,192*195	1	SNA
...4		BN97-05303A	ASSY MICOM;SubMicomEU_XXXX,U66A,61P805,0	1	SNA
....5		0903-001718	IC-MICROCONTROLLER;61P805-RG480WT,LQFP,4	1	SNA
...4		BN97-05383A	ASSY MICOM;T-MST4DEUC-XXXX,U57A,2010.11.	1	SNA
....5		1107-001990	IC-NAND FLASH;KFG1GN6W2D-HIB6,1Gbit,64Mx	1	SA
....5		BN46-00051D	S/W-E-MANUAL;COM,DVB-EU4,X5,8Langs	1	SNA
....5		BN46-00060A	S/W MICOM;T-MST4DEUC,EU,Eng/Swe/Dan/Nor/	1	SNA
..3		BN97-05365A	ASSY DRM-CI PLUS;BN46-00063A,UN4D X5,X6,	1	SNA
...4		BN46-00063A	KEY CODE-CI PLUS;X5/X6,TCTC,SERIAL CODIN	1	SNA
..3	T0066	BP62-00017A	HEAT SINK-ES;SP-50L2HX,A6063S,T2.0,26.2,	1	SNA
1		BN91-06613G	ASSY SHIELD;LE37D550K1WXXC	1	SNA
.2	T0081	6001-002284	SCREW-MACHINE;BH,+,M4,L8,ZPC(WHT),SWRCH1	16	SA
.2	SCREW	6003-001782	SCREW-TAPTYPE;BH,+,B,M4,L12,ZPC(BLK),SWR	6	SA
.2	EC13	BN39-01448B	LEAD CONNECTOR;LN37D550,Lead Connector A	1	SA
.2	EC13	BN39-01449B	LEAD CONNECTOR;LN37D550,Lead Connector A	1	SA
.2	P001A	BN44-00439B	AC VSS(I)-TV;I37F1_BDY,I37F1_BDY,63kHz,1	1	SA
.2		BN61-06999A	HOLDER-SIDE AV;LD550,46,NH HIPS,BK0020,V	1	SNA
.2	M0523	BN96-12973A	ASSY BRACKET P-WALL;32,37,40,LC650,SECC,	4	SA
..3		BN60-00188B	SPACER-FOAM;LCD,FELT,20,3.0,20,Center :	4	SNA
..3	T0101	BN61-05996A	BRACKET-WALL;LC650 40,SECC,T1.2	4	SNA
.2	T0910	BN96-13342A	ASSY BRACKET P-STAND LINK;LC530 37/40/46	1	SA
..3		BN61-02429K	STUD-PEM;PNB,M3.8,D7,L14.9,ZPC(SIL),SUM2	2	SNA
..3		BN61-05281A	HOLDER-CLAMP;LCD,NYLON 66,WHT	3	SNA
..3	M0115	BN61-05998A	BRACKET-STAND LINK;LC650 46,SECC,T1.6	1	SNA
.2	FL06	BN96-17116B	ASSY CABLE P-FFC;LN37D550,FFC,295mm,51P,	1	SA
1		BN92-07544T	ASSY LABEL;LN32D550K	1	SNA
.2	T0527	BP68-00052B	LABEL-00,RATING;CCTV,TETRON PAPER,T0.05,	1	SNA
1		BN92-07834D	ASSY BOX;LD550,37,EO	1	SNA
.2		BH68-00662A	LABEL BOX-00;ALL MODEL,MOJO 90G,60,110,W	1	SNA
.2		BN69-05937G	BOX-SET;37LD550-GS,CB,A-01,SW2,YEL,W1125	1	SNA
1		BN92-07837A	ASSY P/MATERIAL;LD550,37	1	SNA
.2		6902-001113	BAG ROLL;HDPE/HDPE/NITRON,T0.5,W700,L175	2	SNA
.2	M040	6922-000013	BAND PP;PP,W18,L2300/L2900,TRP	1	SNA
.2		BH69-40383M	PACKING INNER-00,PAD;COMM,CB,1000,800,YE	1	SNA
.2		BN63-07496A	COVER-PALLET FOIL;LB530,PE,T0.05,2000,20	1	SNA
.2		BN63-07522A	COVER-SHEET NITRON;32C550,PE,T3.0,1190,1	1	SNA
.2		BN69-03934A	WRAP STRETCH FILM;All,HDPE,0.012,500,300	4	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
.2		BN69-05501A	PAD PACKING-EDGE;CB,T5,W80x80,L2100,YEL,	1	SNA
.2		BN69-05519A	PALLET-WOODEN;BN69-01058X,WOOD-OTH,1180,	1	SNA
.2		BN69-05809A	CUSHION-01,SET;LD550 37",EPS	1	SNA
.2		BN74-00008D	TAPE-OPP MASKING;OPP,T0.05,W75,L800M,CLR	3	SNA
.2		BN81-02321A	BAG-AIR;LIGHT FLEX PLASTIK,PE WHITE,L120	1	SNA
1	ACCE1	BN92-07846J	ASSY ACCESSORY;LE32D550K1WXXN,37,40,46	1	SNA
.2	ACCE2	BN96-18097B	ASSY ACCESSORY-CABLE;LE40D550K1WXXC	1	SNA
.3	T0268	3903-000603	CBF-POWER CORD;DT,CEE,LP-21L,250V,2.5A,B	1	SA
.3	T0120	4301-000121	BATTERY-MN;1.5V,R03,10.5x44.5m,HOLDER,7.	2	SNA
.3	SCREW	6003-001782	SCREW-TAPTYPE;BH,+,B,M4,L12,ZPC(BLK),SWR	4	SA
.3	T0524	6902-000341	BAG PE;LDPE,T0.05,L90,W70,TRP,,,PE MARK	1	SNA
.3		6902-001340	BAG PE;LDPE,T0.05,W250,L350,TRP,RECYCLE	1	SNA
.3	REMO2	AA59-00484A	REMOCON;TM950,48,3V,EUROPE_iDTV,580,570,	1	SA
.3	M9889	BN63-01798B	CLOTH-CLEAN;cloth,180,200,sea blue,ToC	1	SNA
.2	ACCE4	BN96-18097H	ASSY ACCESSORY-MANUAL;LE32D550K1WXXN,37,	1	SNA
.3		6902-000476	BAG PE;LDPE,T0.03,W250,L350,TRP,Recycle,	1	SNA
.3		BN68-00514K	MANUAL FLYER-WARRANTY CARD;comm,Samsung,	1	SNA
.3		BN68-03019A	LEAFLET-SAFETY GUIDE;ALL,SAMSUNG,28LENGS	1	SNA
.3		BN68-03386A	MANUAL FLYER-01,STAND GUIDE;L550(32~46),	1	SNA
.3		BN68-03397E	MANUAL USERS;LD550,Samsung,XN/ZF,4Langs,	1	SNA