



LCD-TV

Chassis : GCR22HE*

Model : LE22A45*C**

SERVICEManual

TFT-LCD TV



LE22A45*C**

Contents

1. Precautions
2. Product specifications
3. Disassembly and Reassembly
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5. Exploded View & Part List
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Printed in Korea
P/N: BN82-00384A-00

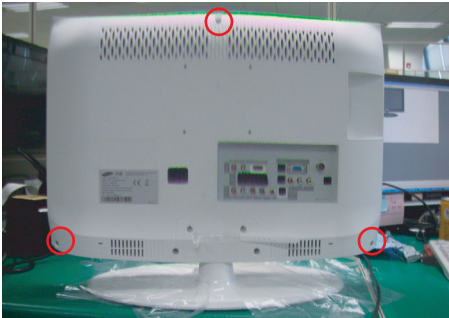


3. Disassembly and Reassemble

This section of the service manual describes the disassembly and reassembly procedures for the LE22A455C1D LCD TV.

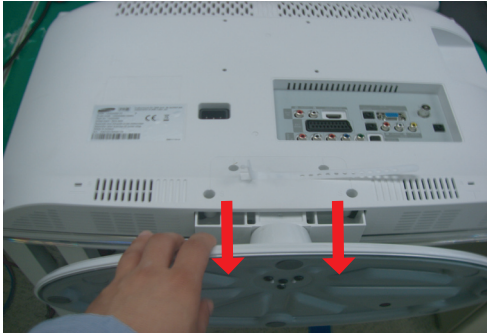
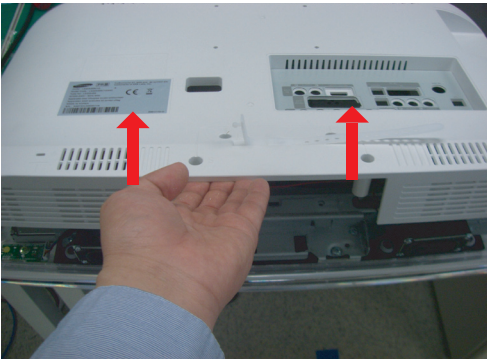
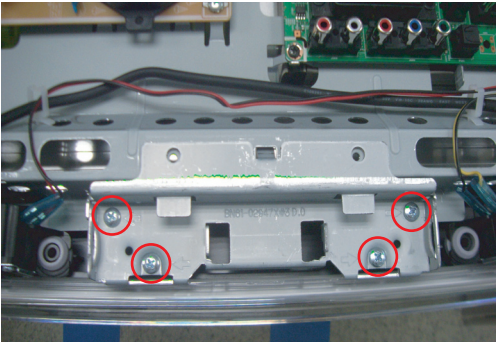

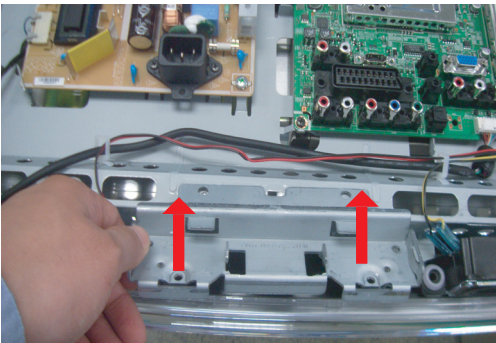
⚠ WARNING: This monitor contains electrostatically sensitive devices. Use caution when handling these components.

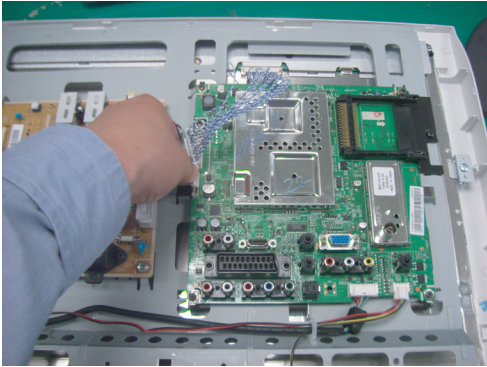
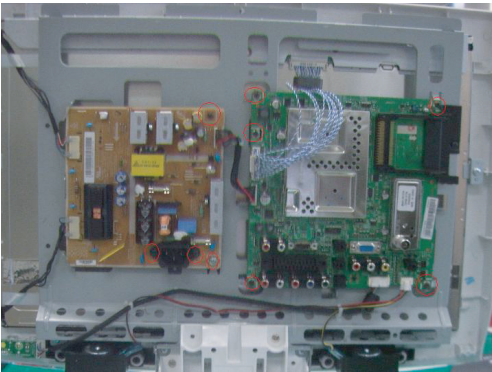


3-1. Disassembly

- ⚠ Cautions:**
- 1. Disconnect the monitor from the power source before disassembly.
 - 2. Follow these directions carefully; never use metal instruments to pry apart the cabinet.

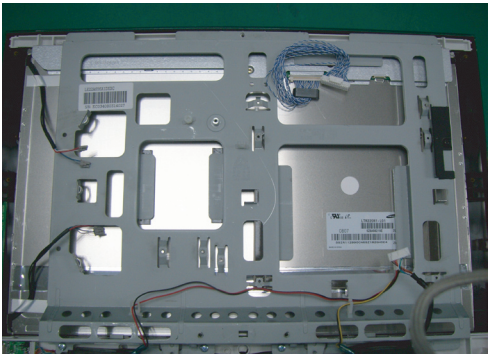

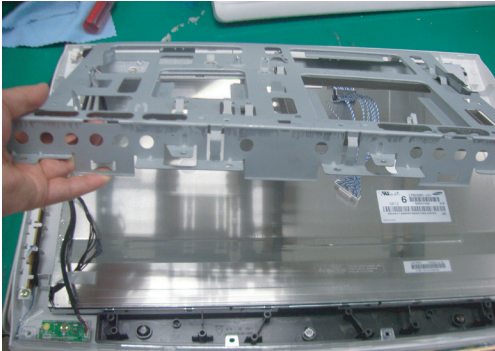

Description	Picture Description	Screws
1. Place monitor face down on cushioned table. Remove the screws from the Stand. Remove stand.		 ○ x 3
		
		 ○ x 4

3. Disassembly and Reassemble

Description	Picture Description	Screws
2. Lift up rear cover and remove the stand.	 A photograph showing the back of a white electronic device. A hand is lifting the rear cover, which is hinged at the bottom. Two red arrows point downwards from the hinge area, indicating the direction of movement.	
	 A photograph showing the back of the same device. A hand is pulling the stand away from the device. Two red arrows point upwards from the stand, indicating the direction of removal.	
3. Remove Screw from the stand BRKT and lift up the stand BRKT.	 A photograph of the stand bracket (BRKT) with four screws circled in red. The screws are located at the corners of the bracket.	 ○ x 4
	 A photograph showing the stand bracket being lifted from the device. Two red arrows point upwards from the bracket, indicating the direction of movement.	

Description	Picture Description	Screws
4. Disonnect cable from the boards.		
5. Remove the screws of Scaler board's shield case and boards.		 ○ x 8  ○ x 1

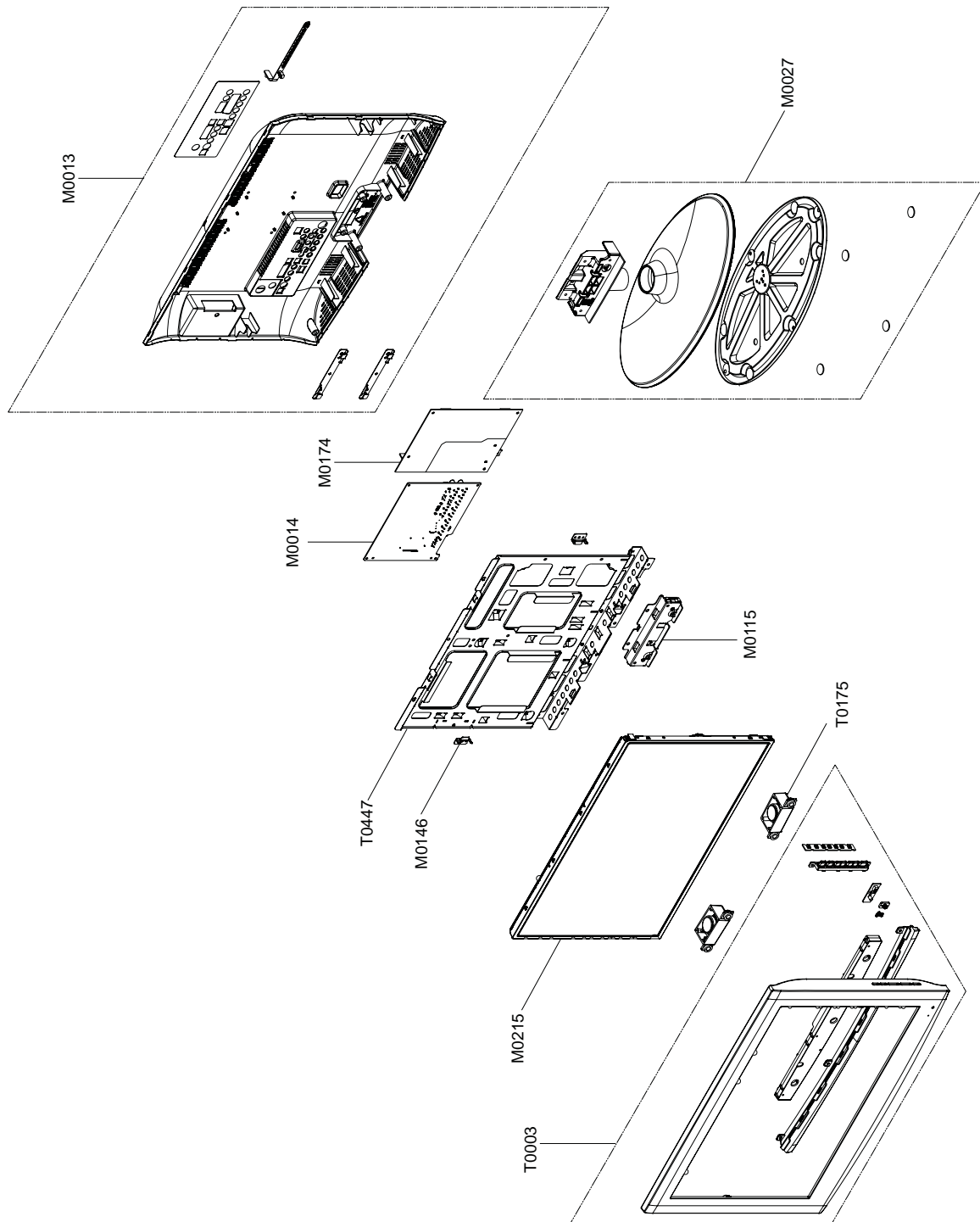
3. Disassembly and Reassemble

Description	Picture Description	Screws
6. Remove screws and Lift up the Lod pa		 ○ x 6
		
		

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

5. Exploded View & Part List

5-1. LE22A45*C** Exploded View



5-1-2. LE22A45*C Parts List**

Location No.	Code No.	Description & Specification	Q'ty	S.A/S.N.A	Remark
T0003	BN96-06782B	ASSY COVER P-FRONT;22L454,EO,ABS+PMMA,HB	1	S.A	
M0215	BN07-00487A	LCD-PANEL;LTM220M1-L01-2	1	S.A	
T0175	BN96-06823A	ASSY SPEAKER P;16ohm,CORAL,LCD 22"/19",3	1	S.A	
M0115	BN61-02947A	BRACKET-STAND LINK;JASMINE 32",SECC,T1.6	1	S.N.A	
M0014	BN94-02014C	ASSY PCB MAIN-AMLCD;LE22A454C1XXC,AMLCD_	1	S.A	
M0174	BN44-00232A	IP BOARD;IP-54135T,L650,1.4~2.8mA,6.8~8.	1	S.A	
M0013	BN96-07359A	ASSY COVER P-REAR;22L450,EO,HIPS,HB,WHT	1	S.A	
M0027	BN96-06463B	ASSY STAND P-BASE;22L450,ABS+PMMA,HB,WH1	1	S.A	

5-2. LE22A45*C** Parts List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
		LE22A454C1XBT	LE22A454C1,N49A/22AC1-GCR,22,LCD-TV,LATV			
0.1	M0001	BN90-01499B	ASSY COVER FRONT;22L454,EO(READY),,,WHIT	1	S.N.A	
..2	T0003	BN96-06782B	ASSY COVER P-FRONT;22L454,EO,ABS+PMMA,HB	1	S.A	
...3	M0081	6003-001188	SCREW-TAPTITE;BH,+, -,B,M4,L10,ZPC(WHT),S	1	S.N.A	
...3	M0081	6003-001188	SCREW-TAPTITE;BH,+, -,B,M4,L10,ZPC(WHT),S	2	S.N.A	
...3	M0279	AA63-01637A	FELT;50P9,FELT,0.5,10,80	1	S.N.A	
...3		BN61-03261B	BOSS-TAPE;Tulip,ACRYL,T1.1,W20mm,GRAY,TA	0.39	S.N.A	
...3		BN61-03752C	HOLDER-BOSS BOTTOM;22L450,HIPS,HB,BLK	1	S.N.A	
...3		BN63-01151C	FELT-NON WOVEN;SP20UO,FELT,T0.5,5,450	1	S.N.A	
...3	CCM1	BN63-02183D	COVER-SHEET;Rhcm,PE Vinyl,T0.05,680mm,20	0.47	S.N.A	
...3	M0112	BN63-04233D	COVER-FRONT;22L454,EO,ABS+PMMA,-,-,-,HB,	1	S.N.A	
...3	T0059	BN64-00379A	INDICATOR LED;ROME-II,23,PC,CLEAR	1	S.N.A	
...3	T0238	BN64-00453B	WINDOW REMOCON;32R71,PC,CLEAR	1	S.N.A	
...3	T0022	BN64-00755B	KNOB-CONTROL;32L450,ABS,V0(NT),WHT	1	S.N.A	
...3	M0145	BN96-07269A	ASSY BOARD P-FUNCTION;LN40A450C1D,CT5000	1	S.A	
...3	M0146	BN96-07270B	ASSY BOARD P-POWER & IR;LN22A450C1D,CT50	1	S.A	
...3		BN64-00791A	DECORATION-BOTTOM;L450 22INCH,PC,-,-,-,-	1	S.N.A	
..2	T0175	BN96-06823A	ASSY SPEAKER P;16ohm,CORAL,LCD 22"/19",3	1	S.A	
0.1	M0216	BN90-01510B	ASSY STAND;22L450,WHITE	1	S.N.A	
..2	M0027	BN96-06463B	ASSY STAND P-BASE;22L450,ABS+PMMA,HB,WH1	1	S.A	
...3	T0081	6002-001294	SCREW-TAPPING;BH,+, -,M4,L16,ZPC(BLK)	4	S.N.A	
...3	M0081	6003-001239	SCREW-TAPTITE;FH,+, -,B,M4,L10,ZPC(WHT),S	4	S.N.A	
...3		BN61-02954A	BRACKET-STAND BOTTOM;23,26 BORDEAUX PLUS	1	S.N.A	
...3	T0920	BN61-03680B	GUIDE-STAND;22,26L450,ABS,V0(NT),-,-,-,W	1	S.N.A	
...3	CCM1	BN63-02183D	COVER-SHEET;Rhcm,PE Vinyl,T0.05,680mm,20	0.4	S.N.A	
...3	T0004	BN63-03122B	COVER-STAND BASE;23,26R81,ABS+PMMA,-,-,-	1	S.N.A	
...3	M0126	BN73-00052C	RUBBER-FOOT;LCD TV,CR RUBBER,T2.0 DIA19,	4	S.N.A	
0.1	M0002	BN90-01597A	ASSY COVER REAR;22L450,EO	1	S.N.A	
..2	M0081	6003-001324	SCREW-TAPTITE;BH,+,B,M4,L16,NI PLT,SWRCH	3	S.N.A	
..2	M0013	BN96-07359A	ASSY COVER P-REAR;22L450,EO,HIPS,HB,WHT	1	S.A	
...3	T0069	AA60-00091M	SPACER-FELT;-,FELT,35X10,-,-,BLK,T0.5,-,	4	S.N.A	
...3	M0006	BN63-04455B	COVER-REAR;22L450,EO,HIPS,-,-,-,HB,-,WH1	1	S.N.A	
...3	T0071	BN64-00840D	INLAY-TERMINAL;22L450,EO(READY),PS SHEET	1	S.N.A	
...3	T0064	BN65-00002B	CLAMPER CORE;BORDEAUX,PP,V0,WHITE	1	S.N.A	
...3	T0069	BN60-00027C	SPACER-FELT;19R7,FELT,90,T0.35,10	2	S.N.A	
...3	M0113	BN61-02621A	BRACKET-VESA;19R7,SECC,T1.0	2	S.N.A	
0.1		BN91-02202A	ASSY LCD-AMLCD;BN07-00487A	1	S.N.A	
..2	M0215	BN07-00487A	LCD-PANEL;LTM220M1-L01-2	1	S.A	
0.1	M0017	BN91-02501A	ASSY CHASSIS;LE22A454C1XXC,AMLCD	1	S.N.A	
..2	M0014	BN94-02014C	ASSY PCB MAIN-AMLCD;LE22A454C1XXC,AMLCD_	1	S.N.A	
...3	T0245	0202-001608	SOLDER-WIRE FLUX;LFC7-107,D0.8,99.3Sn/0.	0.25	S.N.A	
...3	JA3004	3701-001480	CONNECTOR-DSUB;15P,3R,FEMAIL,STAMPED PIN	1	S.A	
...3	CN330	3711-000058	HEADER-BOARD TO CABLE;BOX,4P,1R,2.5MM,AN	1	S.N.A	

5. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
...3	CN330	3711-004531	HEADER-BOARD TO CABLE;BOX,10P,1R,2mm,ANG	1	S.A	
...3	CN330	3711-004712	HEADER-BOARD TO CABLE;BOX,9P,1R,2mm,STRA	1	S.N.A	
...3	CN330	3711-006767	HEADER-BOARD TO CABLE;BOX,30P,2R,2mm,STR	1	S.N.A	
...3	JA3201	3722-000498	JACK-SCART;21P,-,SN,BLK,NO	1	S.A	
...3	JA330	3722-001061	JACK-PHONE;1P,3.6PI,AG,BLK,N	1	S.A	
...3	JA330	3722-001061	JACK-PHONE;1P,3.6PI,AG,BLK,N	1	S.A	
...3	JA330	3722-001061	JACK-PHONE;1P,3.6PI,AG,BLK,N	1	S.A	
...3	JA333	3722-002691	JACK-PIN;2P,Ni,WHT/RED,STRAIGHT	1	S.A	
...3	JA333	3722-002691	JACK-PIN;2P,Ni,WHT/RED,STRAIGHT	1	S.A	
...3	JA333	3722-002699	JACK-PIN;3P,Ni,YEL/WHT/RED,STRAIGHT	1	S.A	
...3	JA333	3722-002703	JACK-PIN;3P,Ni,GRN/BLU/RED,STRAIGHT	1	S.A	
...3	CIS3	BN40-00099A	TUNER;HTM-6C/235S,HTM-6C/235S,PAL BG,DK,	1	S.A	
...3	M0107	BN63-01847A	SHIELD-COVER;ROME,SPT,TO.3,49.5,79.5,HE	1	S.N.A	
...3	HDCP	BN97-00688A	ASSY HDCP;BN46-00018A,PS-42V6S,D73A,GENE	1	S.N.A	
...4		BN46-00018A	KEY CODE-CERTIFICATE;(HDCP KEY)PPM42M5S,	1	S.N.A	
...3	T0603	BN97-02404C	ASSY SMD-AMLCD;LE22A454C1XXC,AMLCD_07	1	S.N.A	
...4	SUB05	0202-001477	SOLDER-CREAM;LST309-M,-,D20~45um,96.5Sn/	1.574	S.N.A	
...4	D2012	0401-000133	DIODE-SWITCHING;RLS4148,75V,150mA,LL-34,	1	S.A	
...4	D2019	0401-000133	DIODE-SWITCHING;RLS4148,75V,150mA,LL-34,	1	S.A	
...4	D3244	0401-000133	DIODE-SWITCHING;RLS4148,75V,150mA,LL-34,	1	S.A	
...4	D1004	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3016	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3017	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3045	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3046	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3047	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3061	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3062	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3064	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3066	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3202	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3203	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3204	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3205	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3206	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3207	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3217	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3218	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3219	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3230	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D3236	0401-001056	DIODE-SWITCHING;MMBD4148SE,100V,200mA,SO	1	S.A	
...4	D2001	0401-001099	DIODE-SWITCHING;1N4148WS,75V,150mA,SOD-3	1	S.N.A	
...4	D3063	0401-001099	DIODE-SWITCHING;1N4148WS,75V,150mA,SOD-3	1	S.N.A	
...4	D3065	0401-001099	DIODE-SWITCHING;1N4148WS,75V,150mA,SOD-3	1	S.N.A	
...4	D3067	0401-001099	DIODE-SWITCHING;1N4148WS,75V,150mA,SOD-3	1	S.N.A	
...4	D0254	0402-000553	DIODE-SCHOTTKY;SS24/B240,40V,2000mA,DO-2	1	S.A	
...4	D3048	0403-000002	DIODE-ZENER;VLZ5V6B,5.45/5.73V,500mW,SOD	1	S.A	
...4	D3049	0403-000002	DIODE-ZENER;VLZ5V6B,5.45/5.73V,500mW,SOD	1	S.A	
...4	D3050	0403-000002	DIODE-ZENER;VLZ5V6B,5.45/5.73V,500mW,SOD	1	S.A	
...4	D3051	0403-000002	DIODE-ZENER;VLZ5V6B,5.45/5.73V,500mW,SOD	1	S.A	
...4	D3052	0403-000002	DIODE-ZENER;VLZ5V6B,5.45/5.73V,500mW,SOD	1	S.A	

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4	D5001	0403-000002	DIODE-ZENER;VLZ5V6B,5.45/5.73V,500mW,SOD	1	S.A	
....4	D3070	0403-000258	DIODE-ZENER;BZX84C5V6,5.2-6V,225mW,SOT-2	1	S.A	
....4	D3216	0403-000607	DIODE-ZENER;VLZ16C,15.69/16.51V,500mW,SO	1	S.A	
....4	D3015	0403-000771	DIODE-ZENER;VLZ6V2B,5.96-6.27V,500mW,SOD	1	S.A	
....4	D5002	0403-000771	DIODE-ZENER;VLZ6V2B,5.96-6.27V,500mW,SOD	1	S.A	
....4	D3014	0403-001052	DIODE-ZENER;RD8.2MB,7.7-8.7V,200mW,SOT-2	1	S.A	
....4	D1005	0403-001425	DIODE-ZENER;BZX84C33,31-35V,350mW,SOT-23	1	S.A	
....4	D0254	0404-001271	DIODE-SCHOTTKY;SSA34,40V,3000mA,SMA,TP	1	S.A	
....4	D3053	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3054	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3055	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3056	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3057	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3058	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3068	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3069	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3212_EU	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3213	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3214_EU	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3215	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3220	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3221	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3222_EU	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3231	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3232	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3233	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3237	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3238	0406-001172	DIODE-TVS;CDS3C30GTH,48/-/50V,SMD	1	S.A	
....4	D3019	0406-001271	DIODE-TVS;RCLAMP0524P,6/-/V,150W,SLP251	1	S.A	
....4	D3021	0406-001271	DIODE-TVS;RCLAMP0524P,6/-/V,150W,SLP251	1	S.A	
....4	D2013	0407-000123	DIODE-ARRAY;DAN202K,80V,100mA,CA2-3,SOT-	1	S.N.A	
....4	D3071	0407-000123	DIODE-ARRAY;DAN202K,80V,100mA,CA2-3,SOT-	1	S.N.A	
....4	Q1001	0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	1	S.A	
....4	Q2001	0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	1	S.A	
....4	Q2002	0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	1	S.A	
....4	Q2003	0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	1	S.A	
....4	Q2004	0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	1	S.A	
....4	Q2007	0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	1	S.A	
....4	Q2008	0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	1	S.A	
....4	Q2009	0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	1	S.A	
....4	Q3006	0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	1	S.A	
....4	Q3208	0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	1	S.A	
....4	Q5002	0501-000445	TR-SMALL SIGNAL;KTC3875S-Y,NPN,150mW,SOT	1	S.A	
....4	Q2005	0501-000669	TR-SMALL SIGNAL;KTA1505Y,PNP,150mW,SOT-2	1	S.A	
....4	Q2006	0501-000669	TR-SMALL SIGNAL;KTA1505Y,PNP,150mW,SOT-2	1	S.A	
....4	Q3205	0501-000669	TR-SMALL SIGNAL;KTA1505Y,PNP,150mW,SOT-2	1	S.A	
....4	Q1004	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A	
....4	Q1010	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A	
....4	Q1011	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A	
....4	Q1012	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A	
....4	Q1013	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A	

5. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4	Q3204	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A	
....4	Q3206	0501-002080	TR-SMALL SIGNAL;2SC2412K,NPN,200mW,SC-59	1	S.A	
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A	
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A	
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A	
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A	
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A	
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A	
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A	
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A	
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A	
....4	Q409	0505-000110	FET-SILICON;2N7002,N,60V,115mA,7.5ohm,0.	1	S.A	
....4	Q409	0505-001170	FET-SILICON;SI9933ADY-T1,P,-20V,3.4A,0.0	1	S.A	
....4	Q409	0505-001170	FET-SILICON;SI9933ADY-T1,P,-20V,3.4A,0.0	1	S.A	
....4	IC104	0801-002633	IC-CMOS LOGIC;7WBD3125,2bit BUS SWITCH,S	1	S.A	
....4	IC104	0801-002633	IC-CMOS LOGIC;7WBD3125,2bit BUS SWITCH,S	1	S.A	
....4	IC2002	1001-000164	IC-ANALOG MULTIPLEX;74HC4052,CMOS,SOP,16	1	S.A	
....4	IC112	1103-000129	IC-EEPROM;24C02,2Kbit,256x8Bit,SOP,8P,5x	1	S.A	
....4	IC112	1103-000129	IC-EEPROM;24C02,2Kbit,256x8Bit,SOP,8P,5x	1	S.A	
....4	IC112	1103-001385	IC-EEPROM;AT24C256,256Kbit,32Kx8,SOP,8P,	1	S.A	
....4	IC5201	1105-001749	IC-GDDR;K4D261638I,GDDR,128Mbit,4x2Mx16,	1	S.N.A	
....4	DU410	1201-000166	IC-OP AMP;LM358,SOP,ST,8P,150MIL,DUAL,10	1	S.A	
....4	DU410	1201-000541	IC-OP AMP;062,SOP,8P,153MIL,DUAL,6V/mV,P	1	S.A	
....4	T0085	1201-002487	IC-AUDIO AMP;MAX9728A,QFN,12P,3x3mm,DUAL	1	S.A	
....4	T0124	1201-002677	IC-POWER AMP;NTP3100,QFN56,56P,8x8mm,DUA	1	S.A	
....4	T0087	1203-001815	IC-POS.FIXED REG.;78M09,TO-252,3P,-,PLA	1	S.A	
....4	T0087	1203-002974	IC-POS.FIXED REG.;AP1117D-25A,TO-252,3P	1	S.A	
....4	IC012	1203-002995	IC-POS.ADJUST REG.;AP1117D-A,TO-252,3P,	1	S.A	
....4	IC012	1203-002995	IC-POS.ADJUST REG.;AP1117D-A,TO-252,3P,	1	S.A	
....4	IC012	1203-002995	IC-POS.ADJUST REG.;AP1117D-A,TO-252,3P,	1	S.A	
....4	IC012	1203-002995	IC-POS.ADJUST REG.;AP1117D-A,TO-252,3P,	1	S.A	
....4	T0087	1203-003696	IC-POS.FIXED REG.;NCP1117DT18T5G,DPAK,3	1	S.A	
....4	IC5002	1203-004363	IC-VOL. DETECTOR;RT9818C-29PV,SOT-23,3P,	1	S.A	
....4	IC2005	1203-004364	IC-VOL. DETECTOR;RT9818C-42PV,SOT-23,3P,	1	S.A	
....4	IC150	1203-005113	IC-SWITCH REG.;SPN030039Y,MSOP,10P,3x3mm	1	S.A	
....4	IC109	1205-003432	IC-LCD CONTROLLER;SEMS01,LQFP,256P,30x30	1	S.A	
....4	R3157	2007-000043	R-CHIP;1Kohm,1%,1/10W,TP,1608	1	S.A	
....4	R1072	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A	
....4	R1073	2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	1	S.A	
....4	R1011	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A	
....4	R1012	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A	
....4	R1014	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A	
....4	R1055	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A	
....4	R1063	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A	
....4	R1085	2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	S.A	
....4	R1081	2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	S.A	
....4	R1021	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1053	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1054	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2003	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2005	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2006	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2007	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4	R2034	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2035	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2074	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3033	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3034	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3037	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3080	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3084	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3097	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3098	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3099	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3123	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3124	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3136	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3153	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3171	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3200	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3246_EU	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3248_EU	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3261	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3263_EU	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3264	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3283	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3292	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5008	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5009	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5010	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5024	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5036	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5037	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5038	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5039	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5043	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5044	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5080	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5082	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5083	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5087	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5088	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5089	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5091	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5092	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5101	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5102	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5202	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5204	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R6012_L	2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1029	2007-000139	R-CHIP;220ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1032	2007-000139	R-CHIP;220ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2009	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2036	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	1	S.N.A	

5. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4	R2037	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3025	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3217	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3226	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3293	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3294	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5019	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5053	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5205	2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2073	2007-000141	R-CHIP;2.2Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3109	2007-000141	R-CHIP;2.2Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3111	2007-000141	R-CHIP;2.2Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3223	2007-000141	R-CHIP;2.2Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3224	2007-000141	R-CHIP;2.2Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3225	2007-000141	R-CHIP;2.2Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5014	2007-000141	R-CHIP;2.2Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5015	2007-000141	R-CHIP;2.2Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1057	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1084	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1086	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2014	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2015	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2016	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2017	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2038	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2039	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3027	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3031	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3032	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3090	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3169	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3170	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3215	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5103	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R6015_L	2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2059	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2060	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2067	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2077	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2078	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2079	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2083	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2085	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3040	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3041	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3042	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3081	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3089	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3104	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3105	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3118	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4	R3119	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3128	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3129	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3130	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3131	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3144	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3216	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3218	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3247	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3249	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3284	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3285	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5003	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5016	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5017	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5018	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5028	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5041	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5054	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5106	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5200	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5207	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5236	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5240	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R6013_L	2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3120	2007-000151	R-CHIP;15Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3121	2007-000151	R-CHIP;15Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3132	2007-000151	R-CHIP;15Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3133	2007-000151	R-CHIP;15Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3192	2007-000151	R-CHIP;15Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3193	2007-000151	R-CHIP;15Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3250	2007-000151	R-CHIP;15Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3251	2007-000151	R-CHIP;15Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3288	2007-000151	R-CHIP;15Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3289	2007-000151	R-CHIP;15Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1041	2007-000153	R-CHIP;22Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1051	2007-000153	R-CHIP;22Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1052	2007-000153	R-CHIP;22Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1056	2007-000153	R-CHIP;22Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1061	2007-000153	R-CHIP;22Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3214	2007-000153	R-CHIP;22Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5046	2007-000153	R-CHIP;22Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5047	2007-000153	R-CHIP;22Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5048	2007-000153	R-CHIP;22Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5049	2007-000153	R-CHIP;22Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5050	2007-000153	R-CHIP;22Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5051	2007-000153	R-CHIP;22Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1010	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1064	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2061	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2062	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	1	S.N.A	

5. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4	R2081	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2082	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2089	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2090	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3244_EU	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3245_EU	2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1031	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2018	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2019	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2020	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2021	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2022	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2023	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2026	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2027	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2028	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2029	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2031	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2098	2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5002	2007-000170	R-CHIP;1Mohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1074_22	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2002	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2066	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2075	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3024	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3108	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3110	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3138	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3152	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3208	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3253_EU	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3268	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3307	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5021	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5023	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5025	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5026	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5027_OP	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5031	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5032	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5033	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5034	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5035	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5045	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5052	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5063	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5078	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5079	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5084	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5085	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5086	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4	R5094	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5095	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5096	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5237	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5238	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5239	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5241	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5242	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5243	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5244	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5247	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R6010_ANA	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R6022	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R6023	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R6024	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R6025	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R6026	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R6027	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R6029	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R6030	2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3026	2007-000172	R-CHIP;10ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5066	2007-000172	R-CHIP;10ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5067	2007-000172	R-CHIP;10ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5068	2007-000172	R-CHIP;10ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5069	2007-000172	R-CHIP;10ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5070	2007-000172	R-CHIP;10ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5071	2007-000172	R-CHIP;10ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5072	2007-000172	R-CHIP;10ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5073	2007-000172	R-CHIP;10ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3038	2007-000173	R-CHIP;22ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3039	2007-000173	R-CHIP;22ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3096	2007-000173	R-CHIP;22ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3100	2007-000173	R-CHIP;22ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3227	2007-000173	R-CHIP;22ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3228	2007-000173	R-CHIP;22ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R6011_OP	2007-000173	R-CHIP;22ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3043	2007-000174	R-CHIP;47ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3044	2007-000174	R-CHIP;47ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3106	2007-000174	R-CHIP;47ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3107	2007-000174	R-CHIP;47ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3149	2007-000174	R-CHIP;47ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3150	2007-000174	R-CHIP;47ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3290	2007-000174	R-CHIP;47ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3291	2007-000174	R-CHIP;47ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5074	2007-000174	R-CHIP;47ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5075	2007-000174	R-CHIP;47ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5076	2007-000174	R-CHIP;47ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3073	2007-000539	R-CHIP;200ohm,5%,1/10W,TP,1608	1	S.A	
....4	R3151	2007-000566	R-CHIP;220Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3155	2007-000566	R-CHIP;220Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3156	2007-000566	R-CHIP;220Kohm,5%,1/16W,TP,1005	1	S.N.A	

5. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4	R1083	2007-000695	R-CHIP;3.3ohm,5%,1/10W,TP,1608	1	S.A	
....4	R2087	2007-000775	R-CHIP;33Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2088	2007-000775	R-CHIP;33Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3210	2007-000775	R-CHIP;33Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2084	2007-000831	R-CHIP;39Kohm,5%,1/16W,TP,1005	1	S.A	
....4	R2086	2007-000831	R-CHIP;39Kohm,5%,1/16W,TP,1005	1	S.A	
....4	R1013	2007-000869	R-CHIP;4.7Kohm,1%,1/10W,TP,1608	1	S.N.A	
....4	R2091	2007-000932	R-CHIP;470ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2093	2007-000932	R-CHIP;470ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3212	2007-000932	R-CHIP;470ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5081	2007-000932	R-CHIP;470ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5090	2007-000932	R-CHIP;470ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R6016_L	2007-000932	R-CHIP;470ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3134	2007-000950	R-CHIP;47ohm,5%,1/4W,TP,3216	1	S.A	
....4	R3135	2007-000950	R-CHIP;47ohm,5%,1/4W,TP,3216	1	S.A	
....4	R3137	2007-000950	R-CHIP;47ohm,5%,1/4W,TP,3216	1	S.A	
....4	R3265	2007-000950	R-CHIP;47ohm,5%,1/4W,TP,3216	1	S.A	
....4	R3266	2007-000950	R-CHIP;47ohm,5%,1/4W,TP,3216	1	S.A	
....4	R3267	2007-000950	R-CHIP;47ohm,5%,1/4W,TP,3216	1	S.A	
....4	R3286	2007-000950	R-CHIP;47ohm,5%,1/4W,TP,3216	1	S.A	
....4	R3173	2007-001042	R-CHIP;56ohm,1%,1/10W,TP,1608	1	S.N.A	
....4	R3101	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R3102	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R3103	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R3139	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R3140	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R3141	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R3254	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R3256	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R3257	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R3258	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R3260_EU	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R3262	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R3287	2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R3209	2007-001217	R-CHIP;82ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2010	2007-001285	R-CHIP;5.6ohm,5%,1/16W,TP,1005	1	S.A	
....4	R2011	2007-001285	R-CHIP;5.6ohm,5%,1/16W,TP,1005	1	S.A	
....4	R2012	2007-001285	R-CHIP;5.6ohm,5%,1/16W,TP,1005	1	S.A	
....4	R2013	2007-001285	R-CHIP;5.6ohm,5%,1/16W,TP,1005	1	S.A	
....4	R2008	2007-001292	R-CHIP;33ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5201	2007-001292	R-CHIP;33ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5203	2007-001292	R-CHIP;33ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3213	2007-001298	R-CHIP;51ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3211	2007-001307	R-CHIP;180ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1030	2007-001313	R-CHIP;330ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3303	2007-001313	R-CHIP;330ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2004	2007-001325	R-CHIP;3.3Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2040	2007-001325	R-CHIP;3.3Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2041	2007-001325	R-CHIP;3.3Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2042	2007-001325	R-CHIP;3.3Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R2043	2007-001325	R-CHIP;3.3Kohm,5%,1/16W,TP,1005	1	S.N.A	

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4	R3167	2007-001325	R-CHIP;3.3Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3168	2007-001325	R-CHIP;3.3Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3259	2007-001325	R-CHIP;3.3Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5104	2007-001325	R-CHIP;3.3Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5105	2007-001325	R-CHIP;3.3Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R3252	2007-001333	R-CHIP;18Kohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R1019	2007-002425	R-CHIP;1ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R1020	2007-002425	R-CHIP;1ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R1022	2007-002425	R-CHIP;1ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R1028	2007-002425	R-CHIP;1ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R1033	2007-002425	R-CHIP;1ohm,5%,1/10W,TP,1608	1	S.N.A	
....4	R1015	2007-002899	R-CHIP;10ohm,1%,1/10W,TP,1608	1	S.A	
....4	R1082	2007-002900	R-CHIP;11Kohm,1%,1/10W,TP,1608	1	S.A	
....4	R3172	2007-007107	R-CHIP;100Kohm,1%,1/16W,TP,1005	1	S.N.A	
....4	R2076	2007-007136	R-CHIP;4.7Kohm,1%,1/16W,TP,1005	1	S.N.A	
....4	R1024	2007-007141	R-CHIP;240ohm,5%,1/16W,TP,1005	1	S.N.A	
....4	R5097	2007-007319	R-CHIP;390ohm,1%,1/16W,TP,1005	1	S.N.A	
....4	R3077	2007-007334	R-CHIP;200Kohm,1%,1/16W,TP,1005	1	S.N.A	
....4	R3302	2007-007469	R-CHIP;110ohm,1%,1/16W,TP,1005	1	S.N.A	
....4	R3154	2007-007735	R-CHIP;91ohm,1%,1/10W,TP,1608	1	S.A	
....4	R5040	2007-007791	R-CHIP;9.1Kohm,1%,1/16W,TP,1005	1	S.N.A	
....4	R5206_A25	2007-007791	R-CHIP;9.1Kohm,1%,1/16W,TP,1005	1	S.N.A	
....4	RA5009	2011-000585	R-NETWORK;47ohm,5%,1/16W,L,CHIP,8P,TP,3.	1	S.N.A	
....4	RA5010	2011-000585	R-NETWORK;47ohm,5%,1/16W,L,CHIP,8P,TP,3.	1	S.N.A	
....4	RA5011	2011-000585	R-NETWORK;47ohm,5%,1/16W,L,CHIP,8P,TP,3.	1	S.N.A	
....4	RA5012	2011-000585	R-NETWORK;47ohm,5%,1/16W,L,CHIP,8P,TP,3.	1	S.N.A	
....4	RA5013	2011-000585	R-NETWORK;47ohm,5%,1/16W,L,CHIP,8P,TP,3.	1	S.N.A	
....4	RA5014	2011-000585	R-NETWORK;47ohm,5%,1/16W,L,CHIP,8P,TP,3.	1	S.N.A	
....4	RA5021	2011-000881	R-NETWORK;33ohm,5%,1/16W,L,CHIP,8P,TP,3.	1	S.N.A	
....4	RA5022	2011-000881	R-NETWORK;33ohm,5%,1/16W,L,CHIP,8P,TP,3.	1	S.N.A	
....4	RA5023	2011-000881	R-NETWORK;33ohm,5%,1/16W,L,CHIP,8P,TP,3.	1	S.N.A	
....4	RA5201	2011-000881	R-NETWORK;33ohm,5%,1/16W,L,CHIP,8P,TP,3.	1	S.N.A	
....4	RA5202	2011-000881	R-NETWORK;33ohm,5%,1/16W,L,CHIP,8P,TP,3.	1	S.N.A	
....4	RA5203	2011-000881	R-NETWORK;33ohm,5%,1/16W,L,CHIP,8P,TP,3.	1	S.N.A	
....4	RA5204	2011-000881	R-NETWORK;33ohm,5%,1/16W,L,CHIP,8P,TP,3.	1	S.N.A	
....4	RA5205	2011-000881	R-NETWORK;33ohm,5%,1/16W,L,CHIP,8P,TP,3.	1	S.N.A	
....4	RA5006	2011-001001	R-NETWORK;0ohm,5%,1/16W,L,CHIP,8P,TP,3.2	1	S.A	
....4	RA6001	2011-001001	R-NETWORK;0ohm,5%,1/16W,L,CHIP,8P,TP,3.2	1	S.A	
....4	RA6002	2011-001001	R-NETWORK;0ohm,5%,1/16W,L,CHIP,8P,TP,3.2	1	S.A	
....4	RA6003	2011-001001	R-NETWORK;0ohm,5%,1/16W,L,CHIP,8P,TP,3.2	1	S.A	
....4	RA5001	2011-001011	R-NETWORK;10Kohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5002	2011-001011	R-NETWORK;10Kohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5003	2011-001011	R-NETWORK;10Kohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5004	2011-001011	R-NETWORK;10Kohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5015	2011-001011	R-NETWORK;10Kohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5024	2011-001011	R-NETWORK;10Kohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5030	2011-001011	R-NETWORK;10Kohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5031	2011-001011	R-NETWORK;10Kohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5034	2011-001011	R-NETWORK;10Kohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5005	2011-001093	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5007	2011-001093	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	

5. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4	RA5008	2011-001093	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5016	2011-001093	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5017	2011-001093	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5018	2011-001093	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5019	2011-001093	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5020	2011-001093	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5026	2011-001093	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5027	2011-001093	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5028	2011-001093	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5029	2011-001093	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5032	2011-001093	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	RA5033	2011-001093	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,3	1	S.A	
....4	C2007	2203-000233	C-CER,CHIP;0.1nF,5%,50V,C0G,1005	1	S.A	
....4	C2093	2203-000233	C-CER,CHIP;0.1nF,5%,50V,C0G,1005	1	S.A	
....4	C2094	2203-000233	C-CER,CHIP;0.1nF,5%,50V,C0G,1005	1	S.A	
....4	C3030	2203-000233	C-CER,CHIP;0.1nF,5%,50V,C0G,1005	1	S.A	
....4	C3031	2203-000233	C-CER,CHIP;0.1nF,5%,50V,C0G,1005	1	S.A	
....4	C3057	2203-000233	C-CER,CHIP;0.1nF,5%,50V,C0G,1005	1	S.A	
....4	C3058	2203-000233	C-CER,CHIP;0.1nF,5%,50V,C0G,1005	1	S.A	
....4	C3227_EU	2203-000233	C-CER,CHIP;0.1nF,5%,50V,C0G,1005	1	S.A	
....4	C3236	2203-000233	C-CER,CHIP;0.1nF,5%,50V,C0G,1005	1	S.A	
....4	C3213	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,TP,1608	1	S.A	
....4	C3214	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,TP,1608	1	S.A	
....4	C3215	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,TP,1608	1	S.A	
....4	C3216	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,TP,1608	1	S.A	
....4	C3217	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,TP,1608	1	S.A	
....4	C2006	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,1005	1	S.A	
....4	C2028	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,1005	1	S.A	
....4	C2029	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,1005	1	S.A	
....4	C2030	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,1005	1	S.A	
....4	C2031	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,1005	1	S.A	
....4	C5013	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,1005	1	S.A	
....4	C5048	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,1005	1	S.A	
....4	C5057	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,1005	1	S.A	
....4	C5085	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,1005	1	S.A	
....4	C5214	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,1005	1	S.A	
....4	C5087	2203-000489	C-CER,CHIP;2.2nF,10%,50V,X7R,1005	1	S.A	
....4	C5088	2203-000489	C-CER,CHIP;2.2nF,10%,50V,X7R,1005	1	S.A	
....4	C5089	2203-000489	C-CER,CHIP;2.2nF,10%,50V,X7R,1005	1	S.A	
....4	C5090	2203-000489	C-CER,CHIP;2.2nF,10%,50V,X7R,1005	1	S.A	
....4	C5091	2203-000489	C-CER,CHIP;2.2nF,10%,50V,X7R,1005	1	S.A	
....4	C5092	2203-000489	C-CER,CHIP;2.2nF,10%,50V,X7R,1005	1	S.A	
....4	C1019	2203-000491	C-CER,CHIP;2.2nF,10%,50V,X7R,1608	1	S.A	
....4	C5094	2203-000585	C-CER,CHIP;0.22nF,10%,50V,X7R,1005	1	S.A	
....4	C3034	2203-000627	C-CER,CHIP;0.022nF,5%,50V,C0G,1005	1	S.N.A	
....4	C3035	2203-000627	C-CER,CHIP;0.022nF,5%,50V,C0G,1005	1	S.N.A	
....4	C5042	2203-000627	C-CER,CHIP;0.022nF,5%,50V,C0G,1005	1	S.N.A	
....4	C5043	2203-000627	C-CER,CHIP;0.022nF,5%,50V,C0G,1005	1	S.N.A	
....4	C2051	2203-000815	C-CER,CHIP;0.033nF,5%,50V,C0G,1608	1	S.A	
....4	C2052	2203-000815	C-CER,CHIP;0.033nF,5%,50V,C0G,1608	1	S.A	
....4	C3206	2203-000815	C-CER,CHIP;0.033nF,5%,50V,C0G,1608	1	S.A	

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4	C2032	2203-000925	C-CER,CHIP;470nF,+80-20%,50V,Y5V,2012	1	S.A	
....4	C2037	2203-000925	C-CER,CHIP;470nF,+80-20%,50V,Y5V,2012	1	S.A	
....4	C1021	2203-000972	C-CER,CHIP;47nF,10%,16V,X7R,1608	1	S.A	
....4	C1015	2203-001126	C-CER,CHIP;0.68nF,10%,50V,X7R,1608	1	S.N.A	
....4	C1036	2203-001242	C-CER,CHIP;0.082nF,5%,50V,NP0,1608	1	S.A	
....4	C5039	2203-001630	C-CER,CHIP;330nF,+80-20%,16V,Y5V,1608	1	S.N.A	
....4	C1017	2203-002285	C-CER,CHIP;10nF,10%,50V,X7R,1005	1	S.N.A	
....4	C1023	2203-002285	C-CER,CHIP;10nF,10%,50V,X7R,1005	1	S.N.A	
....4	C1024	2203-002285	C-CER,CHIP;10nF,10%,50V,X7R,1005	1	S.N.A	
....4	C2017	2203-002398	C-CER,CHIP;22nF,10%,50V,X7R,1608	1	S.N.A	
....4	C2018	2203-002398	C-CER,CHIP;22nF,10%,50V,X7R,1608	1	S.N.A	
....4	C2022	2203-002398	C-CER,CHIP;22nF,10%,50V,X7R,1608	1	S.N.A	
....4	C2023	2203-002398	C-CER,CHIP;22nF,10%,50V,X7R,1608	1	S.N.A	
....4	C3038	2203-002525	C-CER,CHIP;0.56nF,10%,50V,X7R,TP,1005	1	S.N.A	
....4	C3039	2203-002525	C-CER,CHIP;0.56nF,10%,50V,X7R,TP,1005	1	S.N.A	
....4	C3042	2203-002525	C-CER,CHIP;0.56nF,10%,50V,X7R,TP,1005	1	S.N.A	
....4	C3043	2203-002525	C-CER,CHIP;0.56nF,10%,50V,X7R,TP,1005	1	S.N.A	
....4	C3049	2203-002525	C-CER,CHIP;0.56nF,10%,50V,X7R,TP,1005	1	S.N.A	
....4	C3050	2203-002525	C-CER,CHIP;0.56nF,10%,50V,X7R,TP,1005	1	S.N.A	
....4	C3224	2203-002525	C-CER,CHIP;0.56nF,10%,50V,X7R,TP,1005	1	S.N.A	
....4	C3225	2203-002525	C-CER,CHIP;0.56nF,10%,50V,X7R,TP,1005	1	S.N.A	
....4	C3239	2203-002525	C-CER,CHIP;0.56nF,10%,50V,X7R,TP,1005	1	S.N.A	
....4	C3240	2203-002525	C-CER,CHIP;0.56nF,10%,50V,X7R,TP,1005	1	S.N.A	
....4	C2042	2203-002687	C-CER,CHIP;1.2nF,10%,50V,X7R,TP,1005	1	S.A	
....4	C2043	2203-002687	C-CER,CHIP;1.2nF,10%,50V,X7R,TP,1005	1	S.A	
....4	C2044	2203-002687	C-CER,CHIP;1.2nF,10%,50V,X7R,TP,1005	1	S.A	
....4	C2045	2203-002687	C-CER,CHIP;1.2nF,10%,50V,X7R,TP,1005	1	S.A	
....4	C5231	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.N.A	
....4	C5232	2203-005065	C-CER,CHIP;1000nF,+80-20%,10V,Y5V,1608	1	S.N.A	
....4	C2015	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,1608	1	S.N.A	
....4	C2016	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,1608	1	S.N.A	
....4	C2025	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,1608	1	S.N.A	
....4	C2026	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,1608	1	S.N.A	
....4	C2033	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,1608	1	S.N.A	
....4	C2034	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,1608	1	S.N.A	
....4	C2035	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,1608	1	S.N.A	
....4	C2036	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,1608	1	S.N.A	
....4	C2038	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,1608	1	S.N.A	
....4	C2039	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,1608	1	S.N.A	
....4	C2040	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,1608	1	S.N.A	
....4	C2041	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,1608	1	S.N.A	
....4	C1016	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C1030	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C1031	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C1032	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C1033	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C1046	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C1047	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C1051	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C1063	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C3301	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	

5. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4	C5072	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C5076	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C5077	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C5078	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C5079	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C5083	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C5084	2203-005384	C-CER,CHIP;4700nF,+80-20%,10V,Y5V,TP,201	1	S.N.A	
....4	C1020	2203-005642	C-CER,CHIP;0.22nF,5%,50V,NP0,1005	1	S.N.A	
....4	C1026	2203-005809	C-CER,CHIP;1000nF,10%,16V,X7R,-,2012	1	S.A	
....4	C1058	2203-005809	C-CER,CHIP;1000nF,10%,16V,X7R,-,2012	1	S.A	
....4	C1065	2203-005809	C-CER,CHIP;1000nF,10%,16V,X7R,-,2012	1	S.A	
....4	C1071	2203-005809	C-CER,CHIP;1000nF,10%,16V,X7R,-,2012	1	S.A	
....4	C1083	2203-005809	C-CER,CHIP;1000nF,10%,16V,X7R,-,2012	1	S.A	
....4	C5025	2203-005809	C-CER,CHIP;1000nF,10%,16V,X7R,-,2012	1	S.A	
....4	C5032	2203-005809	C-CER,CHIP;1000nF,10%,16V,X7R,-,2012	1	S.A	
....4	C6038_L	2203-005809	C-CER,CHIP;1000nF,10%,16V,X7R,-,2012	1	S.A	
....4	C1022	2203-005968	C-CER,CHIP;4.7NF,10%,50V,X7R,TP,1005	1	S.N.A	
....4	C5047	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5049	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5050	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5053	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5054	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5055	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5056	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5058	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5059	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5060	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5061	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5062	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5063	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5064	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5066	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5067	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5068	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C5069	2203-006126	C-CER,CHIP;47NF,10%,16V,X7R,TP,1005	1	S.N.A	
....4	C2081	2203-006141	C-CER,CHIP;1000nF,10%,16V,X5R,1608	1	S.N.A	
....4	C2082	2203-006141	C-CER,CHIP;1000nF,10%,16V,X5R,1608	1	S.N.A	
....4	C3241	2203-006141	C-CER,CHIP;1000nF,10%,16V,X5R,1608	1	S.N.A	
....4	C2001	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	
....4	C2003	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	
....4	C2005	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	
....4	C2009	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	
....4	C2011	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	
....4	C2012	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	
....4	C2027	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	
....4	C2066	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	
....4	C2085	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	
....4	C3053	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	
....4	C3218	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	
....4	C3244	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	
....4	C3300	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4	C5093	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	
....4	C5213	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	
....4	C6037_L	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,1005	1	S.N.A	
....4	C1013	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C1082	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C1129	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C2002	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C2004	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C2008	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C2010	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C2086	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C2091	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C2092	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C3003	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C3032	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C3052	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C3209	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C3245	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C5040	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C5074	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,2012	1	S.A	
....4	C3212	2203-006513	C-CER,CHIP;0.047NF,5%,50V,C0G,TP,1005	1	S.N.A	
....4	C3226	2203-006513	C-CER,CHIP;0.047NF,5%,50V,C0G,TP,1005	1	S.N.A	
....4	C2019	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,1005	1	S.N.A	
....4	C2020	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,1005	1	S.N.A	
....4	C2021	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,1005	1	S.N.A	
....4	C2024	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,1005	1	S.N.A	
....4	C2058	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,1005	1	S.N.A	
....4	C2059	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,1005	1	S.N.A	
....4	C2060	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,1005	1	S.N.A	
....4	C2062	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,1005	1	S.N.A	
....4	C2063	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,1005	1	S.N.A	
....4	C2064	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,1005	1	S.N.A	
....4	C2083	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,1005	1	S.N.A	
....4	C2084	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,1005	1	S.N.A	
....4	C2090	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,1005	1	S.N.A	
....4	C2097	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,1005	1	S.N.A	
....4	C5073	2203-006562	C-CER,CHIP;1000nF,10%,10V,X5R,1005	1	S.N.A	
....4	C1014	2203-006681	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1005	1	S.N.A	
....4	C2088	2203-006681	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1005	1	S.N.A	
....4	C2098	2203-006681	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1005	1	S.N.A	
....4	C3004	2203-006681	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1005	1	S.N.A	
....4	C3033	2203-006681	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1005	1	S.N.A	
....4	C3056	2203-006681	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1005	1	S.N.A	
....4	C3204	2203-006681	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1005	1	S.N.A	
....4	C3210	2203-006681	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1005	1	S.N.A	
....4	C3242	2203-006681	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1005	1	S.N.A	
....4	C3243	2203-006681	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1005	1	S.N.A	
....4	C5001	2203-006681	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1005	1	S.N.A	
....4	C5002	2203-006681	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1005	1	S.N.A	
....4	C5003	2203-006681	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1005	1	S.N.A	
....4	C5004	2203-006681	C-CER,CHIP;100nF,+80-20%,25V,Y5V,1005	1	S.N.A	

5. Exploded View & Part List

[illegible]

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4	C3036	2203-006992	C-CER,CHIP;0.33nF,5%,50V,C0G,1005	1	S.N.A	
....4	C3037	2203-006992	C-CER,CHIP;0.33nF,5%,50V,C0G,1005	1	S.N.A	
....4	C3220_EU	2203-006992	C-CER,CHIP;0.33nF,5%,50V,C0G,1005	1	S.N.A	
....4	C3222_EU	2203-006992	C-CER,CHIP;0.33nF,5%,50V,C0G,1005	1	S.N.A	
....4	C1003	2203-007176	C-CER,CHIP;10000nF,10%,16V,X5R,TP,2012 (	1	S.N.A	
....4	C1008	2203-007176	C-CER,CHIP;10000nF,10%,16V,X5R,TP,2012 (	1	S.N.A	
....4	C1012	2203-007176	C-CER,CHIP;10000nF,10%,16V,X5R,TP,2012 (	1	S.N.A	
....4	C1066	2203-007176	C-CER,CHIP;10000nF,10%,16V,X5R,TP,2012 (	1	S.N.A	
....4	C1113	2203-007176	C-CER,CHIP;10000nF,10%,16V,X5R,TP,2012 (	1	S.N.A	
....4	C2095	2203-007176	C-CER,CHIP;10000nF,10%,16V,X5R,TP,2012 (	1	S.N.A	
....4	C2099	2203-007176	C-CER,CHIP;10000nF,10%,16V,X5R,TP,2012 (	1	S.N.A	
....4	C3205	2203-007176	C-CER,CHIP;10000nF,10%,16V,X5R,TP,2012 (	1	S.N.A	
....4	C5201	2203-007176	C-CER,CHIP;10000nF,10%,16V,X5R,TP,2012 (	1	S.N.A	
....4	C5206	2203-007176	C-CER,CHIP;10000nF,10%,16V,X5R,TP,2012 (	1	S.N.A	
....4	C1081	2402-001086	C-AL,SMD;100UF,20%,16V,WT,TP,6.6X6.6X5.3	1	S.A	
....4	C3059	2402-001129	C-AL,SMD;47UF,20%,16V,WT,TP,6.3X5.2MM	1	S.A	
....4	C1049	2402-001210	C-POLYMER AL CHIP;100uF,20%,10V,WT,TP,7.	1	S.A	
....4	C1025	2402-001238	C-AL,SMD;1uF,20%,50V,HR,TP,4.3x4.3x5.2mm	1	S.N.A	
....4	C1084	2402-001257	C-AL,SMD;470uF,20%,16V,-,TP,8.3*10	1	S.A	
....4	C2014	2402-001330	C-AL,SMD;330uF,20%,25V,TP,10x10mm	1	S.N.A	
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A	
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A	
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A	
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A	
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A	
....4	T0052	2703-000398	INDUCTOR-SMD;10uH,10%,3225	1	S.A	
....4	T0052	2703-000417	INDUCTOR-SMD;220uH,5%,3225	1	S.A	
....4	T0052	2703-001426	INDUCTOR-SMD;680uH,20%,7070	1	S.A	
....4	T0052	2703-001778	INDUCTOR-SMD;3.3uH,20%,3225	1	S.A	
....4	T0052	2703-002809	INDUCTOR-SMD;1.2uH,20%,7070	1	S.A	
....4	L2001	2704-000018	INDUCTOR-SMD-ARRAY;15uH,2000mA,2,0.124oh	1	S.N.A	
....4	L2002	2704-000018	INDUCTOR-SMD-ARRAY;15uH,2000mA,2,0.124oh	1	S.N.A	
....4	X202	2801-003667	CRYSTAL-SMD;14.31818MHz,30ppm,28-AAN,16p	1	S.A	
....4	F103	2901-001114	FILTER-EMI SMD;25VDC,2.0ADC,-,100nF,3.2x	1	S.A	
....4	F103	2901-001506	FILTER-EMI SMD;5V,0.13A,0pF,2x1x0.5mm,TP	1	S.A	
....4	F103	2901-001506	FILTER-EMI SMD;5V,0.13A,0pF,2x1x0.5mm,TP	1	S.A	
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A	
....4	T0568	3301-000314	BEAD-SMD;120ohm,1.6x0.8x0.8mm,-,-,-	1	S.N.A	
....4	G101	3301-000316	CORE-FERRITE BEAD;120ohm,2012,TP,-,-	1	S.N.A	
....4	G101	3301-000316	CORE-FERRITE BEAD;120ohm,2012,TP,-,-	1	S.N.A	
....4	G101	3301-000316	CORE-FERRITE BEAD;120ohm,2012,TP,-,-	1	S.N.A	
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A	
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A	
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A	
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A	
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A	
....4	T0568	3301-001145	BEAD-SMD;60ohm,4516,TP,70ohm/45MHz,82ohm	1	S.N.A	
....4	T0568	3301-001163	BEAD-SMD;80ohm,2012,TP,-,192ohm/867MHz	1	S.N.A	
....4	T0568	3301-001163	BEAD-SMD;80ohm,2012,TP,-,192ohm/867MHz	1	S.N.A	
....4	T0568	3301-001163	BEAD-SMD;80ohm,2012,TP,-,192ohm/867MHz	1	S.N.A	
....4	T0568	3301-001163	BEAD-SMD;80ohm,2012,TP,-,192ohm/867MHz	1	S.N.A	

5. Exploded View & Part List

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
....4	T0568	3301-001163	BEAD-SMD;80ohm,2012,TP,-,192ohm/867MHz	1	S.N.A	
....4	T0568	3301-001163	BEAD-SMD;80ohm,2012,TP,-,192ohm/867MHz	1	S.N.A	
....4	T0568	3301-001163	BEAD-SMD;80ohm,2012,TP,-,192ohm/867MHz	1	S.N.A	
....4	T0568	3301-001163	BEAD-SMD;80ohm,2012,TP,-,192ohm/867MHz	1	S.N.A	
....4	T0568	3301-001163	BEAD-SMD;80ohm,2012,TP,-,192ohm/867MHz	1	S.N.A	
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A	
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A	
....4	T0568	3301-001236	BEAD-SMD;60ohm,1608,-,-,-	1	S.N.A	
....4	T0568	3301-001324	BEAD-SMD;15ohm,2012,600mA,TP,,,0.1ohm	1	S.A	
....4	T0568	3301-001324	BEAD-SMD;15ohm,2012,600mA,TP,,,0.1ohm	1	S.A	
....4	T0568	3301-001324	BEAD-SMD;15ohm,2012,600mA,TP,,,0.1ohm	1	S.A	
....4	T0568	3301-001324	BEAD-SMD;15ohm,2012,600mA,TP,,,0.1ohm	1	S.A	
....4	T0568	3301-001324	BEAD-SMD;15ohm,2012,600mA,TP,,,0.1ohm	1	S.A	
....4	T0568	3301-001404	BEAD-SMD;30ohm,2012,TP,15.9OHM/30MHz	1	S.A	
....4	T0568	3301-001404	BEAD-SMD;30ohm,2012,TP,15.9OHM/30MHz	1	S.A	
....4	T0568	3301-001404	BEAD-SMD;30ohm,2012,TP,15.9OHM/30MHz	1	S.A	
....4	T0568	3301-001404	BEAD-SMD;30ohm,2012,TP,15.9OHM/30MHz	1	S.A	
....4	T0568	3301-001404	BEAD-SMD;30ohm,2012,TP,15.9OHM/30MHz	1	S.A	
....4	T0568	3301-001412	BEAD-SMD;60ohm,2012,800mA,TP,65ohm/110MH	1	S.N.A	
....4	T0568	3301-001569	BEAD-SMD;600ohm,2012,1000mA,TP,520ohm/90	1	S.N.A	
....4	T0568	3301-001569	BEAD-SMD;600ohm,2012,1000mA,TP,520ohm/90	1	S.N.A	
....4	F1001	3601-001374	FUSE-SURFACE MOUNT;32V,5A,FAST-ACTING,Hi	1	S.N.A	
....4	F1002	3601-001374	FUSE-SURFACE MOUNT;32V,5A,FAST-ACTING,Hi	1	S.N.A	
....4	F1003	3601-001374	FUSE-SURFACE MOUNT;32V,5A,FAST-ACTING,Hi	1	S.N.A	
....4	JA3002	3701-001367	CONNECTOR-HDMI;19P,2R,FEMALE,SMD,AU	1	S.A	
....4	T0077	BN41-01028C	PCB MAIN;Amber Ready,FR-4,4,1.2T,192*158	1	S.N.A	
....4	M0107	BN61-03858A	BRACKET-PCB;L450,BRASS(H62Y),T0.4,5mm,7m	1	S.N.A	
....4	M0107	BN61-03858A	BRACKET-PCB;L450,BRASS(H62Y),T0.4,5mm,7m	1	S.N.A	
....4	M0107	BN61-03858A	BRACKET-PCB;L450,BRASS(H62Y),T0.4,5mm,7m	1	S.N.A	
....4	M0107	BN61-03858A	BRACKET-PCB;L450,BRASS(H62Y),T0.4,5mm,7m	1	S.N.A	
....4	M0018	BN97-02406A	ASSY MICOM;T-AMB22PEUMD-0101.0,N48A,2008	1	S.A	
....5	IC115	1107-001709	IC-FLASH MEMORY;MX25L1605A,16Mbit,2Mx8,S	1	S.N.A	
....4	C1048	2203-002793	C-CER,CHIP;1000nF,+80-20%,25V,Y5V,2012	1	S.N.A	
....4	C3203	2203-005692	C-CER,CHIP;4700nF,+80-20%,16V,Y5V,TP,201	1	S.A	
0.1	M0112	BN91-02504A	ASSY SHIELD;LE22A454C1XXC	1	S.N.A	
..2	M0081	6003-000115	SCREW-TAPTITE;BH,+,B,M3,L6,ZPC(BLK),SWRC	1	S.N.A	
..2	M0081	6003-000115	SCREW-TAPTITE;BH,+,B,M3,L6,ZPC(BLK),SWRC	4	S.N.A	
..2	M0081	6003-000275	SCREW-TAPTITE;BH,+,B,M3,L10,ZPC(BLK),S	2	S.N.A	
..2	M0081	6003-001188	SCREW-TAPTITE;BH,+,B,M4,L10,ZPC(WHT),S	2	S.N.A	
..2	M0081	6003-001188	SCREW-TAPTITE;BH,+,B,M4,L10,ZPC(WHT),S	4	S.N.A	
..2	M0081	6003-001188	SCREW-TAPTITE;BH,+,B,M4,L10,ZPC(WHT),S	2	S.N.A	
..2	M0081	6003-001439	SCREW-TAPTITE;BH,+,S,M4,L8,ZPC(WHT),SW	1	S.N.A	
..2	T0297	BN39-00953D	CABLE FORM CONN.COAX;LE22S86BD,UL1571#30	1	S.A	
..2	M0174	BN44-00232A	IP BOARD;IP-54135T,L650,1.4~2.8mA,6.8~8.	1	S.A	
..2	M0115	BN61-02947A	BRACKET-STAND LINK;JASMINE 32",SECC,T1.6	1	S.N.A	
..2	M0146	BN61-03425A	BRACKET-PANEL SIDE;JASMINE 22,SECC,T1.2	2	S.N.A	
..2	M0412	BN96-08042A	ASSY BRACKET P-PCB;22AA1,EO,SECC,T0.8	1	S.N.A	
...3	M0131	AA63-00997A	GASKET;RE 32,40,Conductive Fabric,16mm,1	4	S.N.A	
...3	T0530	BH61-00006A	SUPPORT-PCB;DP17LS,NYLON66,-,-,-,-	1	S.N.A	

Level	Location No.	Code No.	Description & Specification	Q'ty	SA/SNA	Remark
...3	M0114	BN61-02500A	HOLDER-WIRE;NYLON6.6,NATURAL	4	S.N.A	
...3	T0212	BN61-04229A	BRACKET-PANEL;22L650,SECC,T0.8,EO	1	S.N.A	
...3	M0131	BN63-03442A	GASKET;Pininfarina,FABRIC,3,12,80,GRAY,7	4	S.N.A	
...3		BN61-02429B	STUD-PEM;PNB,M2.8,D7,L8,ZPC(SIL),SUM24L	1	S.N.A	
0.1	M0003	BN92-03166D	ASSY BOX;22L450,EO(READY,iDTV),,	1	S.N.A	
..2		BN69-02608E	BOX-01,SET;22L450,CB,A-01,SW-50,YEL,-,-,	1	S.N.A	
0.1	M0113	BN92-03172B	ASSY P/MATERIAL;22L450,W/W	1	S.N.A	
..2	T0524	6902-000520	BAG PE;HDPE/NITRON,T0.015/T0.5(DOUBLE),W	1	S.N.A	
..2	T0214	BN74-00008A	TAPE-OPP MASKING;OPP-2,T0.05,W100,L800M,	1.55	S.N.A	
0.1	M0045	BN92-03599B	ASSY ACCESSORY;LE22A454C1XBT	1	S.N.A	
..2	M0045	BN96-08195B	ASSY ACCESSORY-CABEL;LE22A454C1XXC	1	S.A	
...3	T0268	3903-000145	CBF-POWER CORD;DT,EU,FP3/YES,U(IEC C13-R	1	S.A	
...3	M0081	6003-001324	SCREW-TAPTITE;BH,+,B,M4,L16,NI PLT,SWRCH	4	S.N.A	
...3	T0074	BN59-00676B	REMOCON;TM-95,39,TTX,EUROPE-READY,WHITE	1	S.A	
...3	T0531	BN63-04269C	COVER-BOTTOM;22,26,32L450,HIPS,-,-,-,HB,	1	S.N.A	
...3		BN63-01798B	CLOTH-CLEAN;cloth,180,200,sea blue,ToC	1	S.A	
..2	M0045	BN96-08195C	ASSY ACCESSORY-MANUAL;LE22A454C1XBT	1	S.A	
...3	T0238	AA68-03724C	MANUAL FLYER-WARRANTY CARD;comm,Samsung,	1	S.N.A	
...3	T0511	AA68-03242Q	MANUAL FLYER-SAFETY GUIDE;comm,Samsung,1	1	S.N.A	
...3	T0511	BN68-01425T	MANUAL USERS;COMM,SAMSUNG,Eng/Lat/Lit/Es	1	S.N.A	
0.1	M0019	BN92-03601E	ASSY LABEL;LE22A454C1XBT	1	S.N.A	
...3		BP68-00597A	MANUAL FLYER-02,W/C;COMM,SAMSUNG,RUS,RUS	1	S.N.A	

Memo

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 resistor/capacitor networks, mechanical insulators, etc.
3. Leakage Current Hot Check (Figure 1-1):

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

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

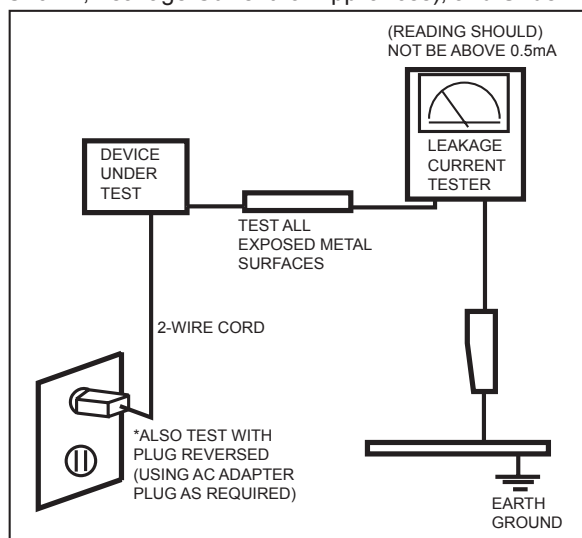



Figure 1-1. Leakage Current Test Circuit

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

1-1-4. Product Safety Notices

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

1-2. Servicing Precautions

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 two 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 (10cm) between the product and the wall for ventilation purposes. A rise in temperature within the product may cause fire.

Memo

Model	LE22A45*C*	
Feature		
<ul style="list-style-type: none">▶ Digital TV, RF, 1-HDMI, 1-Component, 1-AV, D-SUB▶ Brightness : 300cd/m²▶ Contrast Ratio : 1000:1▶ Response time : 8ms▶ Dynamic contrast		
Specifications		
Item	Description	
LCD Panel	TFT-LCD panel, RGB vertical stripe, TN mode, normally white, 22-inch viewable, 0.282(H) x 0.282(W) x 3 mm pixel pitch	
Scanning Frequency	Horizontal : 30 kHz ~ 80 kHz (Automatic) Vertical : 56 Hz ~ 75 Hz (Automatic)	
Display Colors	16.7 million colors	
Maximum resolution	Horizontal : 1680 Pixels Vertical : 1050 Pixels	
Input Signal	Analog 0.7 Vp-p ± 5% positive at 75Ω , internally terminated	
Input Sync Signal	H/V Separate, TTL, P. or N.	
Maximum Pixel Clock rate	80MHz	
Active Display Horizontal/Vertical	473.76(H) x 296.1(V) mm	
AC power voltage & Frequency	AC 110V ~ 240V, 50/60Hz	
Power Consumption	<60 W (< 1W, stand by)	
Dimensions Set (W x D x H)	21.96 x 8.50 x 17.83 inches (557.8 x 216.0 x 452.9 mm) with stand 21.96 x 2.95 x 16.01 inches (557.8 x 75.0 x 406.9 mm) without stand	
Weight (Set)	15.21lbs (6.9Kg)	
TV System	Tuning	Frequency Synthesize (Refer to detailed Frequency Table)
	System	DVB-T, PAL, SECAM
	Sound	BG, DK, NICAM, MPEG1
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	
Environmental Considerations	- 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	

CHANNEL FREQUENCY TABLE



1. OUTPUT FREQUENCY : ANALOG fv:45.75MHz, fs:41.25MHz DIGITAL Fc:44MHz

2. TUNING STEP SIZE : FIRST PLL 250KHz SECOND PLL 62.5KHz

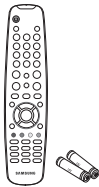
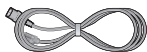

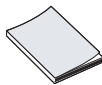

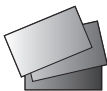

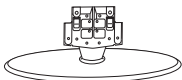
OSD	CH NO	AIR		BAND	CH NO	Cable STD		BAND	CH NO	Cable HRC		CH NO	Cable IRC	
		Air-DTV	Air-NTSC											
1	1								A-8	72.00		A-8	73.25	
2	2	57	55.25	V-L	2	55.25		V-L	2	54.00		2	55.25	
3	3	63	61.25	V-L	3	61.25		V-L	3	60.00		3	61.25	
4	4	69	67.25	V-L	4	67.25		V-L	4	66.00		4	67.25	
5	5	79	77.25	V-L	5	77.25		V-L	A-7	78.00		A-7	79.25	
6	6	85	83.25	V-L	6	83.25		V-L	A-6	84.00		A-6	85.25	
7	7	177	175.25	V-H	7	175.25		V-H	7	174.00		7	175.25	
8	8	183	181.25	V-H	8	181.25		V-H	8	180.00		8	181.25	
9	9	189	187.25	V-H	9	187.25		V-H	9	186.00		9	187.25	
10	10	195	193.25	V-H	10	193.25		V-H	10	192.00		10	193.25	
11	11	201	199.25	V-H	11	199.25		V-H	11	198.00		11	199.25	
12	12	207	205.25	V-H	12	205.25		V-H	12	204.00		12	205.25	
13	13	213	211.25	V-H	13	211.25		V-H	13	210.00		13	211.25	
14	14	473	471.25	UHF	A	121.25		MID	A	120.00		A	121.25	
15	15	479	477.25	UHF	B	127.25		MID	B	126.00		B	127.25	
16	16	485	483.25	UHF	C	133.25		MID	C	132.00		C	133.25	
17	17	491	489.25	UHF	D	139.25		MID	D	138.00		D	139.25	
18	18	497	495.25	UHF	E	145.25		MID	E	144.00		E	145.25	
19	19	503	501.25	UHF	F	151.25		MID	F	150.00		F	151.25	
20	20	509	507.25	UHF	G	157.25		MID	G	156.00		G	157.25	
21	21	515	513.25	UHF	H	163.25		MID	H	162.00		H	163.25	
22	22	521	519.25	UHF	I	169.25		MID	I	168.00		I	169.25	
23	23	527	525.25	UHF	J	217.25		SUPER	J	216.00		J	217.25	
24	24	533	531.25	UHF	K	223.25		SUPER	K	222.00		K	223.25	
25	25	539	537.25	UHF	L	229.25		SUPER	L	228.00		L	229.25	
26	26	545	543.25	UHF	M	235.25		SUPER	M	234.00		M	235.25	
27	27	551	549.25	UHF	N	241.25		SUPER	N	240.00		N	241.25	
28	28	557	555.25	UHF	O	247.25		SUPER	O	246.00		O	247.25	
29	29	563	561.25	UHF	P	253.25		SUPER	P	252.00		P	253.25	
30	30	569	567.25	UHF	Q	259.25		SUPER	Q	258.00		Q	259.25	
31	31	575	573.25	UHF	R	265.25		SUPER	R	264.00		R	265.25	
32	32	581	579.25	UHF	S	271.25		SUPER	S	270.00		S	271.25	
33	33	587	585.25	UHF	T	277.25		SUPER	T	276.00		T	277.25	
34	34	593	591.25	UHF	U	283.25		SUPER	U	282.00		U	283.25	
35	35	599	597.25	UHF	V	289.25		SUPER	V	288.00		V	289.25	
36	36	605	603.25	UHF	W	295.25		SUPER	W	294.00		W	295.25	
37	37	611	609.25	UHF	AA	301.25		HYPER	AA	300.00		AA	301.25	
38	38	617	615.25	UHF	BB	307.25		HYPER	BB	306.00		BB	307.25	
39	39	623	621.25	UHF	CC	313.25		HYPER	CC	312.00		CC	313.25	
40	40	629	627.25	UHF	DD	319.25		HYPER	DD	318.00		DD	319.25	
41	41	635	633.25	UHF	EE	325.25		HYPER	EE	324.00		EE	325.25	
42	42	641	639.25	UHF	FF	331.25		HYPER	FF	330.00		FF	331.25	
43	43	647	645.25	UHF	GG	337.25		HYPER	GG	336.00		GG	337.25	
44	44	653	651.25	UHF	HH	343.25		HYPER	HH	342.00		HH	343.25	
45	45	659	657.25	UHF	II	349.25		HYPER	II	348.00		II	349.25	
46	46	665	663.25	UHF	JJ	355.25		HYPER	JJ	354.00		JJ	355.25	
47	47	671	669.25	UHF	KK	361.25		HYPER	KK	360.00		KK	361.25	
48	48	677	675.25	UHF	LL	367.25		HYPER	LL	366.00		LL	367.25	
49	49	683	681.25	UHF	MM	373.25		HYPER	MM	372.00		MM	373.25	
50	50	689	687.25	UHF	NN	379.25		HYPER	NN	378.00		NN	379.25	
51	51	695	693.25	UHF	OO	385.25		HYPER	OO	384.00		OO	385.25	
52	52	701	699.25	UHF	PP	391.25		HYPER	PP	390.00		PP	391.25	
53	53	707	705.25	UHF	QQ	397.25		HYPER	QQ	396.00		QQ	397.25	
54	54	713	711.25	UHF	RR	403.25		HYPER	RR	402.00		RR	403.25	
55	55	719	717.25	UHF	SS	409.25		HYPER	SS	408.00		SS	409.25	
56	56	725	723.25	UHF	TT	415.25		HYPER	TT	414.00		TT	415.25	
57	57	731	729.25	UHF	UU	421.25		HYPER	UU	420.00		UU	421.25	
58	58	737	735.25	UHF	VV	427.25		HYPER	VV	426.00		VV	427.25	
59	59	743	741.25	UHF	WW	433.25		HYPER	WW	432.00		WW	433.25	
60	60	749	747.25	UHF	XX	439.25		HYPER	XX	438.00		XX	439.25	
61	61	755	753.25	UHF	YY	445.25		HYPER	YY	444.00		YY	445.25	
62	62	761	759.25	UHF	ZZ	451.25		HYPER	ZZ	450.00		ZZ	451.25	
63	63	767	765.25	UHF	AAA	457.25		HYPER	AAA	456.00		AAA	457.25	
64	64	773	771.25	UHF	BBB	463.25		HYPER	BBB	462.00		BBB	463.25	
65	65	779	777.25	UHF	CCC	469.25		ULTRA	CCC	468.00		CCC	469.25	
66	66	785	783.25	UHF	DDD	475.25		ULTRA	DDD	474.00		DDD	475.25	
67	67	791	789.25	UHF	EEE	481.25		ULTRA	EEE	480.00		EEE	481.25	
68	68	797	795.25	UHF	FFF	487.25		ULTRA	FFF	486.00		FFF	487.25	
69	69	803	801.25	UHF	GGG	493.25		ULTRA	GGG	492.00		GGG	493.25	

OSD	CH NO	AIR		BAND	CH NO	Cable STD	BAND	CH NO	Cable HRC	CH NO	Cable IRC
		Air-DTV	Air-NTSC								
70	70				HHH	499.25	ULTRA	HHH	498.00	HHH	499.25
71	71				III	505.25	ULTRA	III	504.00	III	505.25
72	72				JJJ	511.25	ULTRA	JJJ	510.00	JJJ	511.25
73	73				KKK	517.25	ULTRA	KKK	516.00	KKK	517.25
74	74				LLL	523.25	ULTRA	LLL	522.00	LLL	523.25
75	75				MMM	529.25	ULTRA	MMM	528.00	MMM	529.25
76	76				NNN	535.25	ULTRA	NNN	534.00	NNN	535.25
77	77				000	541.25	ULTRA	000	540.00	000	541.25
78	78				PPP	547.25	ULTRA	PPP	546.00	PPP	547.25
79	79				79	553.25	ULTRA	79	552.00	79	553.25
80	80				80	559.25	ULTRA	80	558.00	80	559.25
81	81				81	565.25	ULTRA	81	564.00	81	565.25
82	82				82	571.25	ULTRA	82	570.00	82	571.25
83	83				83	577.25	ULTRA	83	576.00	83	577.25
84	84				84	583.25	ULTRA	84	582.00	84	583.25
85	85				85	589.25	ULTRA	85	588.00	85	589.25
86	86				86	595.25	ULTRA	86	594.00	86	595.25
87	87				87	601.25	ULTRA	87	600.00	87	601.25
88	88				88	607.25	ULTRA	88	606.00	88	607.25
89	89				89	613.25	ULTRA	89	612.00	89	613.25
90	90				90	619.25	ULTRA	90	618.00	90	619.25
91	91				91	625.25	ULTRA	91	624.00	91	625.25
92	92				92	631.25	ULTRA	92	630.00	92	631.25
93	93				93	637.25	ULTRA	93	636.00	93	637.25
94	94				94	643.25	ULTRA	94	642.00	94	643.25
95	95				A-5	91.25	FM	A-5	90.00	A-5	91.25
96	96				A-4	97.25	FM	A-4	96.00	A-4	97.25
97	97				A-3	103.25	FM	A-3	102.00	A-3	103.25
98	98				A-2	109.25	MID	A-2	108.00	A-2	109.25
99	99				A-1	115.25	MID	A-1	114.00	A-1	115.25
100	100				100	649.25	ULTRA	100	648.00	100	649.25
101	101				101	655.25	ULTRA	101	654.00	101	655.25
102	102				102	661.25	ULTRA	102	660.00	102	661.25
103	103				103	667.25	ULTRA	103	666.00	103	667.25
104	104				104	673.25	ULTRA	104	672.00	104	673.25
105	105				105	679.25	ULTRA	105	678.00	105	679.25
106	106				106	685.25	ULTRA	106	684.00	106	685.25
107	107				107	691.25	ULTRA	107	690.00	107	691.25
108	108				108	697.25	ULTRA	108	696.00	108	697.25
109	109				109	703.25	ULTRA	109	702.00	109	703.25
110	110				110	709.25	ULTRA	110	708.00	110	709.25
111	111				111	715.25	ULTRA	111	714.00	111	715.25
112	112				112	721.25	ULTRA	112	720.00	112	721.25
113	113				113	727.25	ULTRA	113	726.00	113	727.25
114	114				114	733.25	ULTRA	114	732.00	114	733.25
115	115				115	739.25	ULTRA	115	738.00	115	739.25
116	116				116	745.25	ULTRA	116	744.00	116	745.25
.
.
125	125				125	799.25	ULTRA	125	798.00	125	799.25
.
.

2-2. Spec Comparison to the Old Models

Model	CORAL (LE22A455C1DXXC)	JASMINE(LE22S86BD)
Design		
Display Type	LCD TV	LCD TV
Built-in Tuner	O	O
Resolution	1680 x 1050	1680 x 1050
LCD Panel	TFT LCD Panel 50Hz	TFT LCD Panel 50Hz
Screen Size	22"	22"
Picture ratio	16:10	16:10
Dimensions (W x H x D)	22.14 x 8.50 x 17.80 inches (with stand) 22.14 x 2.70 x 15.85 inches (without stand)	24.23 x 9.12 x 17.43 inches (with stand) 24.23 x 3.20 x 15.88 inches (without stand)
Weight	15.87 lbs (set)	16.53 lbs (set)
Brightness	300 nit	300 nit
Contrast Ratio	1000 : 1	1000:1
Picture Enhacer	-	DNle (FBE2)
Equalizer	O	O
Surround Sound	SRS TruSurround Dolby Digital	SRS TruSurround Dolby Digital
Speaker Output	3W + 3W	3W + 3W
Antenna	1	1

2-3. Accessories

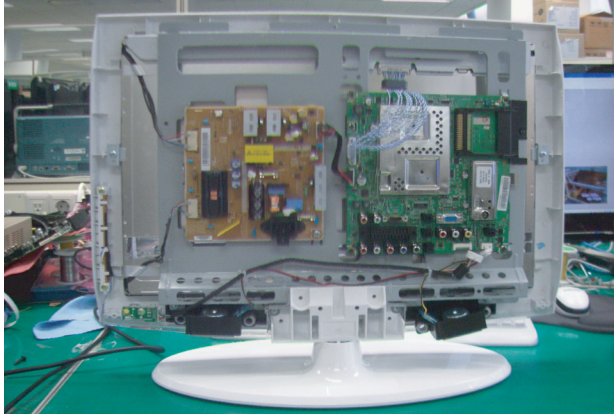
Product	Description	Code. No	Remark
	Remote Control & Batteries (AAA x 2)	iDTV: BN59-00705B READY: BN59-00676A	Samsung Electronics Service center
	Power Cord	3903-000145	
	Cover-Bottom	BN63-04269C	
	Owner's Instructions	BN68-01424H	
	Cleaning Cloth	BN63-01798A	
	Warranty Card / Registration Card / Safety Guide Manual (Not available in all locations)	-	
	Stand Screw x 4	6003-001324	
	Stand	BN90-01510B	

4. Troubleshooting

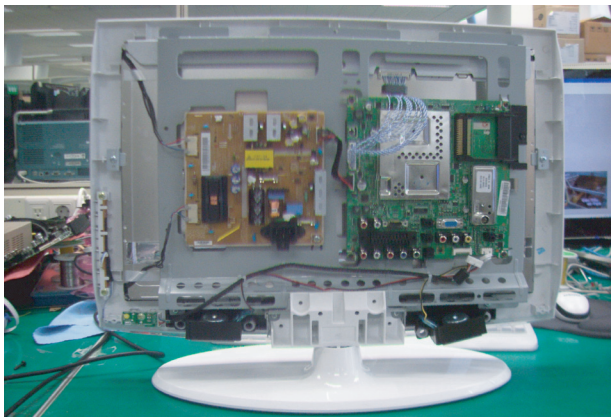
4-1. Troubleshooting

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.

4-1-1. No Power

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 checkpoints	<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 Q1[LAMP off, power indicator LED red color?] -- No --> A1[Check a connection a power cable.] Q1 -- Yes --> Q2[1 Does proper DC 13V appear at pin2 of CN1001?] Q2 -- No --> A2[Change a Assy PCB Power.] Q2 -- Yes --> Q3[2 Does proper DC 3.3V appear at C1013?] Q3 -- No --> A3[Check a IC1011 Change a main PCB ass'y] Q3 -- Yes --> Q4[3 Does proper DC 5V, 2.5V, 1.2V appear at C1051, C1057, C1066?] Q4 -- No --> A4[Check a IC1022, IC1021, IC1006. Change a main PCB ass'y.] Q4 -- Yes --> A5[A power is supplied to set?] </pre>
Caution	Make sure to disconnect the power before working on the SMPS/IP.

4-1-2. No Video (Analog PC signal)

Symptom	<ul style="list-style-type: none"> Audio is normal but no picture is displayed on the screen.
Major checkpoints	<ul style="list-style-type: none"> Check the PC source Check the SEMS01 This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD Start[Power Indicator is off. Lamp on, no video.] -- Yes --> Q1{Check a PC source and check the connection of DSUB cable?} Q1 -- No --> A1[Input a analog PC signal and connected cable(DPMS).] Q1 -- Yes --> Q2{1 Does the signal appear at BD3014, 3015, 3016 (R, G, B)?} Q2 -- No --> A2[PC cable. Change a PC cable.] Q2 -- Yes --> Q3{2 Does the digital data appear at the output of LVDS (RA5012~13)?} Q3 -- No --> A3[Check a IC5001. Change a main PCB ass'y] Q3 -- Yes --> Q4{Check a LVDS cable? Replace a lcd panel?} Q4 -- No --> A4[Please, Call to Samsung Co. LTD.] </pre>
Caution	Make sure to disconnect the power before working on the SMPS/IP.

WAVEFORMS

1

R,G,B Output Signal

2002/01/08 10:45:29
Stopped 204

Normal
200MS/s 10ns/div

CH1 10:1
0.500 0.410
DC Full

Edge CH F
Auto
1.770 0

Thumbnail

Format
JPEG

Color
ON

Comment

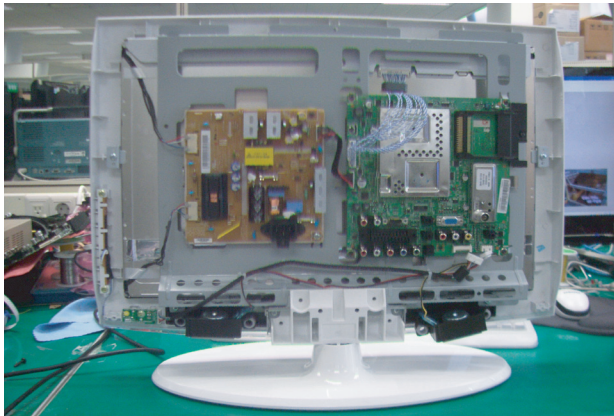
File List
FB

File Name
0000

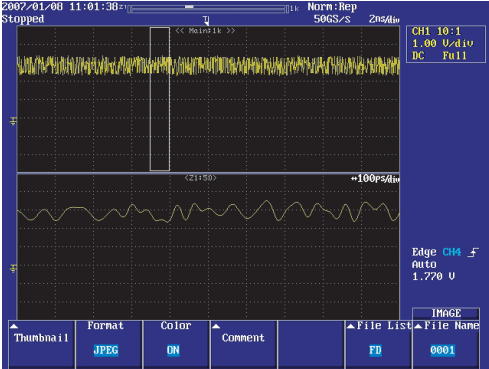
20ns/div

20ns/div

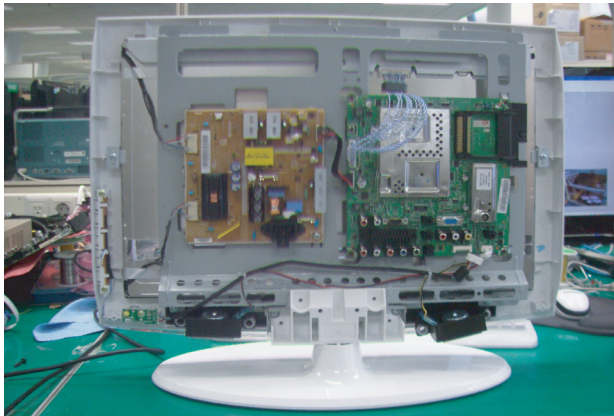
4-1-3. No Video (HDMI - Digital Signal)

Symptom	<ul style="list-style-type: none"> Audio is normal but no picture is displayed on the screen.
Major checkpoints	<ul style="list-style-type: none"> Check the HDMI source Check the SEMS01 This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD Start[Power Indicator is off. Lamp on, no video.] -- Yes --> Q1{1 Check the connection of HDMI cable?} Q1 -- No --> A1[Input a HDMI cable.] Q1 -- Yes --> Q2{3 Does the digital data appear at the No output of LVDS (RA5012~14)?} Q2 -- No --> A2[Check a IC5001. Change a main PCB ass'y.] Q2 -- Yes --> Q3[Check the LVDS cable? Replace the LCD panel?] Q3 -- No --> A3[Please, Contact Tech support] </pre>
Caution	Make sure to disconnect the power before working on the SMPS/IP.

WAVEFORMS

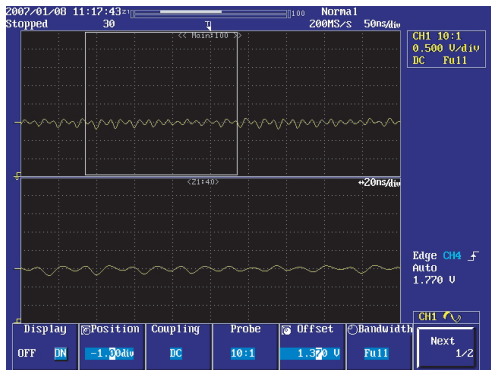
2	Digital Output Data
	
3	Signal of HDMI(Data)
	

4-1-4. No Video (Tuner_CVBS)

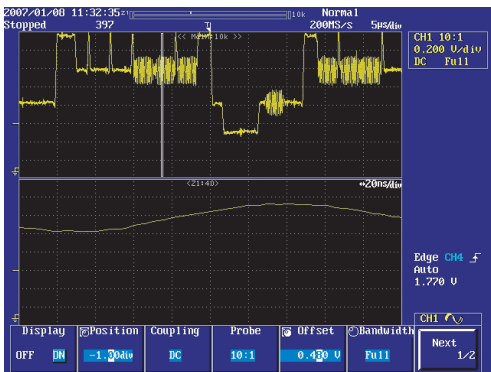
Symptom	<ul style="list-style-type: none"> Audio is normal but no picture is displayed on the screen.
Major checkpoints	<ul style="list-style-type: none"> Check the Tuner CVBS source Check the SEMS01 This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD Start[Power Indicator is off. Lamp on, no picture.] -- No --> RF[Connect the RF cable and check RF signal.] Start -- Yes --> Q1{1 Does the signal appear at L3001?} Q1 -- No --> Bplus[Check a B+ voltage (#3 of Tuner) 5V, change a main PCB ass'y.] Q1 -- Yes --> Q2{2 Does the signal appear at R3169?} Q2 -- No --> PCB[Change a main PCB ass'y.] Q2 -- Yes --> Q3[Check the LVDS cable? Replace the LCD panel?] Q3 -- No --> Samsung[Please, Call to Samsung Co. LTD.] </pre>
Caution	Make sure to disconnect the power before working on the SMPS/IP.

WAVEFORMS

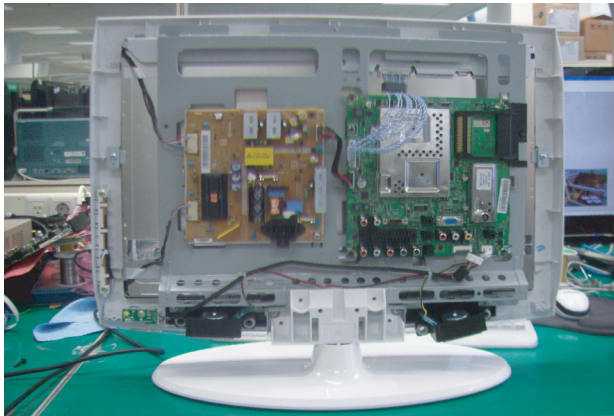
3 CVBS Output Signal



4 Tuner_CVBS Output Signal

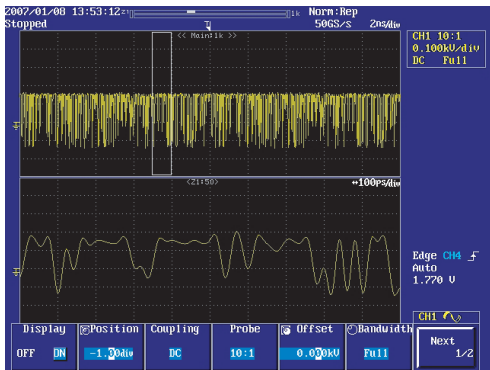


4-1-5. No Sound

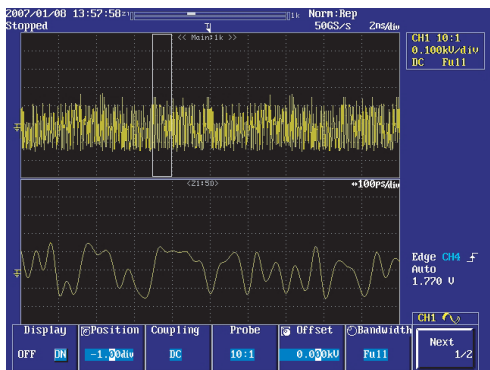
Symptom	<ul style="list-style-type: none"> Audio is normal but no picture is displayed on the screen.
Major checkpoints	<ul style="list-style-type: none"> Check the RF Source Check the SEMS01 This may happen when the LVDS cable connecting the Main Board and the Panel is disconnected.
Diagnostics	 <pre> graph TD Start[Picture is display, no sound.] -- No --> Step1[Connect a sound cable. control a volume.] Start -- Yes --> Q1{1 Does the signal appear at C2058~65?} Q1 -- No --> Step2[Check sound cables of each source, and a connection harness.] Q1 -- Yes --> Q2{2 Does the signal appear at #3,#13 of IC2002?} Q2 -- No --> Step3[Check IC2002. Change a main PCB ass'y.] Q2 -- Yes --> Q3{3 Does the signal appear at BD2006~9?} Q3 -- No --> Step4[Change a main PCB ass'y.] Q3 -- Yes --> Step5[Replace the speaker ass'y?] </pre>
Caution	Make sure to disconnect the power before working on the SMPS/IP.

WAVEFORMS

6 The Signal are Inputed to IC2002



7 The Signal are Inputed to IC2001



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



- If you have Factory remote - control



- The buttons are active in the service mode.

1. Remote - Control Key : Power, Arrow Up, Arrow Down, Arrow Left

Arrow Right, Menu, Enter, Number Key(0~9)

2. Function - Control Key : Power, CH +, CH -, VOL +, VOL -,
Menu, TV/VIDEO(Enter)

4-3-2 Panel Check

You have to check Panel Maker Because of different adjustments as follows.

First of all, Check the label rating!

1) Label Rating File

- LCD PANEL MARK

A:ACER(AUO), S : SEC, C : CMO

* If not printed you could consider S(sec) panel mark.

4-3-3 Factory Data

1. Option Table(Service)
2. WB Adjust
3. Information

Checksum

T-AMB22PEUMD-XXXX (Main Micom Ver.)

T-PERLDEUC-XXXX(DTV MICOM Ver.)

EDID: L12_1680_1050 Success (IF 19" 1440 x 900)

HDCP Success

Month/Day/Year

Hour/Min./Sec.

4. Advanced Menu

4. Troubleshooting

1. Option Table(Service)

Factory Reset	Default
Country(0x55)	Others-0~3/Russia-4~5/Nordic-6~9
Ready	Off
Panel Inch	19"/22"/23"/26"/27"/32"/37"/40"/42"/46"/50"/52"/57"
Dimm Type	INT/INT_NEG/EXT_POS/EXT_NEG/EXT
Panel Type	19A T/22A T/22D T/26A AG/26L AG/26D T/32L AG/32L NG/32D NG/32D AG/37L AG/37I NG/40L AG/40A AG/32A AG 7/32A AG 8/37L NG/26 D T NF/32D AG NF/32A AG NF/37L NG NF/37I NG NF/40L AG NF/40A AG NF/32A PB/26A PB/37L PB/40A PB
Model Option	Amber/Coral/Jade/Tanzanite/Hanaro/Jade_FBE/Pyrope/Pyrope_3D/Carnelian/Carnelian_3D
Anynet+	On/Off
Light Effect	On/Off
TTX	On/Off
TTX List	FLOF/List
TTX Group	Lang OSD/W Europe/E Europe/Russia/Greek/Turkey/Arab/Farsi/ArabHbrw
Carrier Mute	On/Off
Volume Curve	EU/EA
HotPlug	On/Off
HotPlugCtrl	On/Off
HotPlugDelay	0~63
Auto Power	On/Off
LNA Menu	On/Off
Hotel Option	On/Off
D.Gamma	On/Off
PC Ident	On/Off
Language	English/Germany/French/Italia/Spain/Netherland/Portuguese/Greek/Czech/Serbian/Croatian/Romanian/Hungarian/Polish/Russian/Bulgarian/Turkish/Slovakia
Ch Table	SUWON/SESK/SHE/TTSEC/SEIN/SDMA/TSED/SAVINA/SIEL/TSE
DDR	Etron
Shop Mode	On/Off
Nordic	On/Off
Arabic	On/Off
NT Conversion	On/Off
Control	
PDP Filter	
PDP Group	
Spread Spectrum	

2. WB Adjust

Calibration
White Balance
EPA Standard
Movie WB

3. Information

Checksum

T-AMB22PEUMD-XXXX (Main Micom Ver.)

T-PERLDEUC-XXXX(DTV MICOM Ver.)

EDID: L12_1680_1050 Success (IF 19" 1440 x 900)

HDCP Success

Month/Day/Year

Hour/Min./Sec.

4. Advanced Menu

I. MST68981

1) ADC Calibration

ADC Calibration	AV/COMP/PC/HDMI/DTV	
	CVBS Y Offs	0~255
	CVBS Y Gain	0~255
	Ana Y/G Offs	0~255
	Ana U/B Offs	0~255
	Ana V/R Offs	0~255
	Ana Y/G Gain	0~255
	Ana U/B Gain	0~255
	Ana V/R Gain	0~255
	RGB R Offs	0~255
	RGB G Offs	0~255
	RGB B Offs	0~255
	RGB R Gain	0~255
	RGB G Gain	0~255
	RGB B Gain	0~255

4. Troubleshooting

2) Calibration Target

AV ADC Target	Low	17
	High	234
	Delta	3

Comp ADC Target	Low	17
	High	234
	Delta	3

PC ADC Target	Low	1
	High	254
	Delta	3

ALL RGB Target	Low	2
	High	235
	Delta	1

3) IPC/MJC

4) Picture Enhance

Sharpness	H1 Gain	0~63
	H2 Gain	0~63
	H3 Gain	0~63
	H4 Gain	0~63
	V1 Gain	0~63
	V2 Gain	0~63
	D1 Gain	0~63
	D2 Gain	0~63
	Over Shoot2	0~255
	Over Shoot3	0~255
	Under Shoot2	0~255
	Under Shoot3	0~255
	Sub Color	0~100

II. Option Block

1) FBE

Pattern Select	0
B-Slope Gain	45
B-Tilt Min	40
B-Tilt Max	120
Lfunc-Basis	80
Hfunc-Basis	85
Mean-Offset1	30
Mean-Offset2	235
Mean Slope	112
ACR Offset	15
ACR Th1	10
ACR Th2	110
Skin Enable	1
Skin Uv	138
Mskin Uv	140
Sub Color	128
Msub Color	112

2) FRCS

3) FRCM

4) LD

5) PDP LOGIC

III. Sound

Saturation Mute	Off
FM Prescale	26
AM Prescale	24
Nicam Prescale	21
FM M Prescale	20
SC1 Vol	16
SC2 Vol	16
Audio Delay	On
Audio Delay Time	8
Ch1BW	2
Ch2BW	1
Num of Check	1
Num of Double Check	5
Mono Weight	1
Stereo Weight	1
Dual Weight	1
BG M2S Threshold	144
DK M2S Threshold	80
BG S2M Threshold	176
DK S2M Threshold	0
FINE Vol	20
Detection Threshold	
Ext Volume Scale	2
Ext Prescale Speaker	0
R2E Scart2 Offset	2
NTP3000	
NTP Master Volume	30
NTP PWM Modulation	239
NTP DRC Thresh	18
NTP Speaker EQ	On

IV. YC Delay

PAL BG	4
PAL DK	4
PAL I	4
SECAM BG	5
SECAM DK	5
SECAM L	4
NTSC 358	17
NTSC 443	1
AV PAL	1
AV SECAM	2
AV NT358	17
AV NT443	1
AV PAL60	17

V. Adjust

Video Mute time	8
Dynamic Dimming	Off
Dynamic CE	On
LNA Plus	
Megazine LNA	Off
DTV WatchDog	On
Main WatchDog	Off
UART Select	Off
Debug Mode	Normal
BackEndMute	Off
Tuner Select	ALPS_Slim
Tuner TOP Semco	10
Tuner TOP Alps	13
PixelShift Test	Off
FBE Select	FBE3
Hp Detextct	High
D WatchDog Count	0
Visual Test	Off

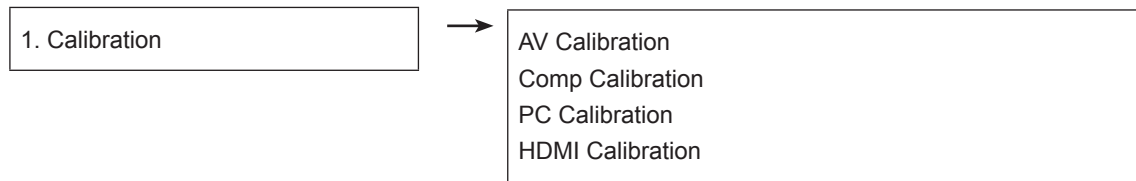
VI. Bus Stop

VII. Defect Log

- 1) LogList1
- 2) LogList2
- 3) LogList3

4-4. White Balance - Calibration

4-4-1 White Balance -Calibration

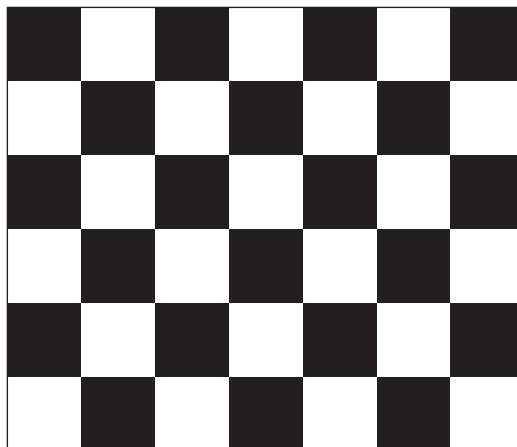


4-4-2 Service Adjustment - You must perform Calibration in the Lattice Pattern before adjusting the White Balance.

■ Color Calibration

Adjust spec.

1. Source : HDMI
2. Setting Mode : 1280*720@60Hz
3. Pattern : Pattern #24 (Chess Pattern)



(Chess Pattern)

4. Use Equipment : CA210 & Master MSPG925 Generator

- Use other equipment only after comparing the result with that of the Master equipment.

Input mode	Calibration	Pattern
CVBS IN (Model_#2)	Perform in PAL B&W Pattern #24	Lattice
Component IN (Model_#6)	Perform in 720p B&W Pattern #24	Lattice
PC Analog IN (Model_#21)	Perform in VESA XGA (1024x768) B&W Pattern #24	Lattice
HDMI IN (Model_#6)	Perform in 720p B&W Pattern #24	Lattice

<Table 1>

■ Method of Color Calibration (AV)

- 1) Apply the NTSC Lattice (N0. 3) pattern signal to the AV IN 1 port
- 2) Press the Source key to switch to "AV1" mode
- 3) Enter Service mode
- 4) Select the "Calibration" menu
- 5) Select the "AV Calibration" menu.
- 6) In "AV Calibration Off" status, press the "►" key to perform Calibration.
- 7) When Calibration is complete, it returns to the high-level menu.
- 8) You can see the change of the "AV Calibration" status from Failure to Success.

■ Method of Color Calibration (Component)

- 1) Apply the 720p Lattice (N0. 6) pattern signal to the Component IN 1 port
- 2) Press the Source key to switch to "Component1" mode
- 3) Enter Service mode
- 4) Select the "Calibration" menu
- 5) Select the "Comp Calibration" menu.
- 6) In "Comp Calibration Off" status, press the "►" key to perform Calibration.
- 7) When Calibration is complete, it returns to the high-level menu.
- 8) You can see the change of the "Comp Calibration" status from Failure to Success.

■ Method of Color Calibration (PC)

- 1) Apply the VESA XGA Lattice (N0. 21) pattern signal to the PC IN port
- 2) Press the Source key to switch to "PC" mode
- 3) Enter Service mode
- 4) Select the "Calibration" menu
- 5) Select the "PC Calibration" menu.
- 6) In "PC Calibration Off" status, press the "►" key to perform Calibration.
- 7) When Calibration is complete, it returns to the high-level menu.
- 8) You can see the change of the "PC Calibration" status from Failure to Success.

■ Method of Color Calibration (HDMI)

- 1) Apply the 720p Lattice (N0. 6) pattern signal to the HDMI1/DVI IN port
- 2) Press the Source key to switch to "HDMI1" mode
- 3) Enter Service mode
- 4) Select the "Calibration" menu
- 5) Select the "HDMI Calibration" menu.
- 6) In "HDMI Calibration Off" status, press the "►" key to perform Calibration.
- 7) When Calibration is complete, it returns to the high-level menu.
- 8) You can see the change of the "HDMI Calibration" status from Failure to Success.

4-4-3 White Balance - Adjustment

	(low light)	(hight light)
3. W/B	Sub Bright R offset G offset B offset	Sub Contrast R gain G gain B gain

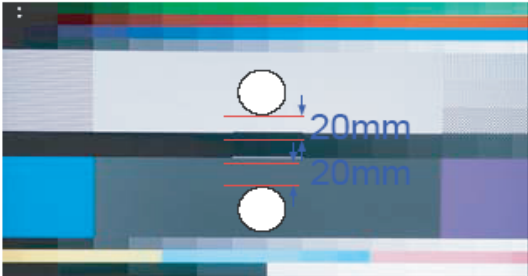
(W/B adjustment Condition refer next page)

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 : 60min ↑

- Calibration and Manual setting for WB adjustment.



- HDMI : Time #6 720P, Pattern #24 Chessboard Calibration → Manual adjustment #92 pattern (720p)
- COMP: Time #6 720P, Pattern #24 Chessboard Calibration → Manual adjustment at #92 pattern (720p)
- CVBS: Time #2 PAL, Pattern #24 Chessboard Calibration → Manual adjustment at #92 pattern (NTSC)
- PC: Time #21 1024*768, Pattern #24 Chessboard Calibration → Manual adjustment at #92 pattern (NTSC)
- If finishing in HDMI mode, adjustment coordinate is almost same in AV/COMP mode.
- White Balance Manual Adjustment

	CA-210				
		x	y	Y(L)	T(K) + MPCD
CVBS (NTSC)	H/L	272	278	- (Sub_CT:140)	12,000 (±0)
	L/L	272	278	17.0 cd/m ² (5.0 Ft - Sub_BR:128)	12,000 (±0)
COMP (720P)	H/L	272	278	- (Sub_CT:140)	12,000 (±0)
	L/L	272	278	17.0 cd/m ² (3.5 Ft - Sub_BR:128)	12,000 (±0)
HDMI (720P)	H/L	272	278	- (Sub_CT:140)	12,000 (±0)
	L/L	272	278	17.0 cd/m ² (5.0 Ft - Sub_BR:128)	12,000 (±0)

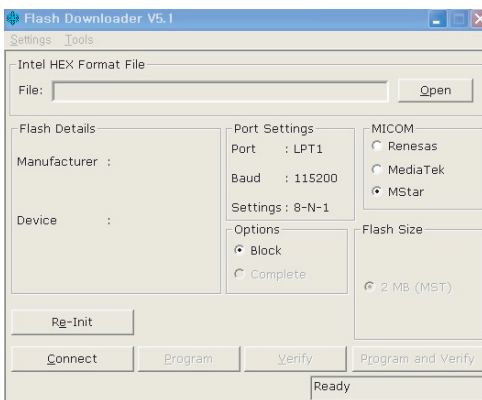

- Adjustment Specification

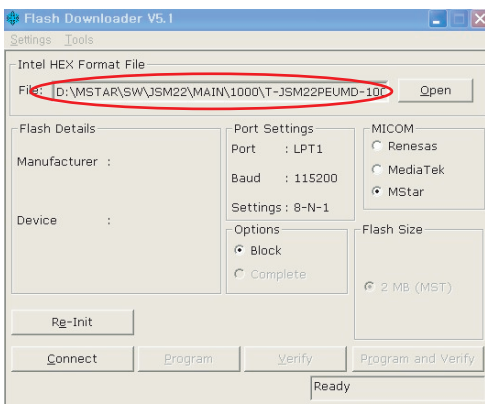
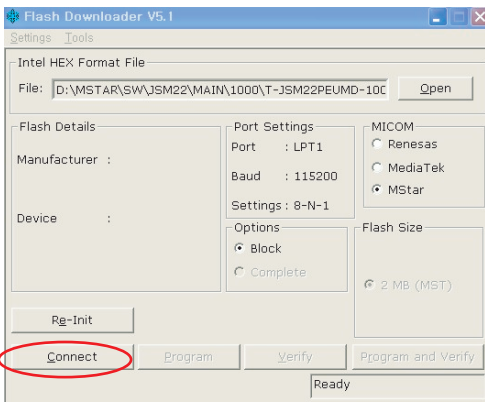
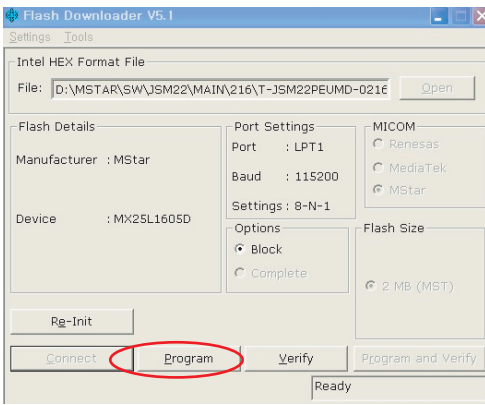
White Balance : High light (±3), Low light (±5)

Luminance : High light (±0.1Ft/L), Low light (±0.1Ft/L)


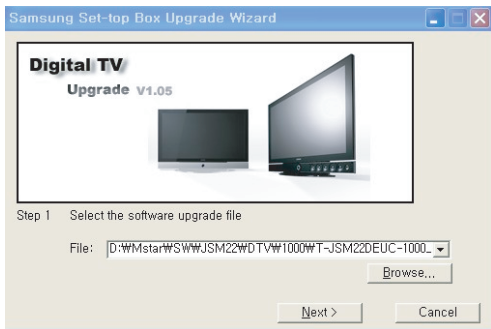
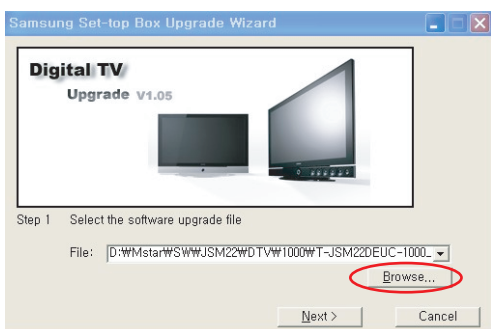
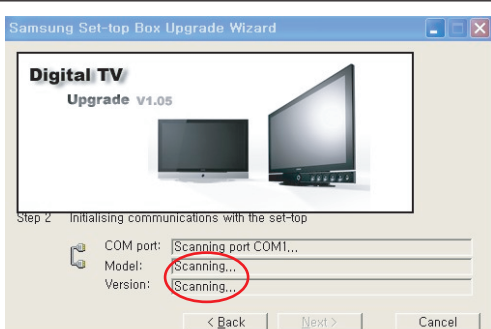
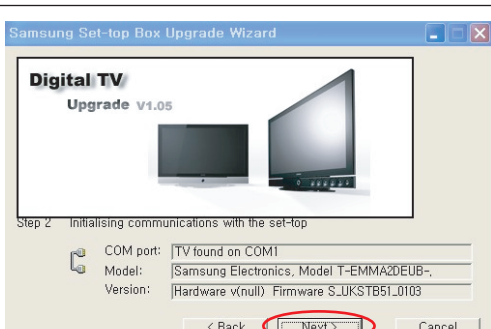
4-6. HOW TO UPGRADE

4-6-1 ATV S/W

Order	Description	ETC.
1	Open the Flash Downloader.	
2	Connect DDC Manager to the TV Set with D-SUB Cable.	

Order		Description	ETC.
3	Open the Flash Downloader.		
4	Click "Connect"		Before clicking the icon, TV should be turned on.
5	Click "Program"		

4-6-2 DTV S/W

Order		Description		ETC.
1		Connect PC and TV Set with Serial cable. TV should be turned on.		
2		Open the Samsung Set-top Box upgrade Wizard.		
3		1) Choose the DTV S/W by clicking "Browse" 2) After choosing the S/W, click the "Next" icon.		
4		1) Choose the DTV S/W by clicking "Browse" 2) After choosing the S/W, click the "Next" icon.		It doesn't matter soft or hard power off and on.
5		After scanning COM port, Model, and Version, click "Next"		

4-6-3 After S/W Upgrade

■ How to Access Service Mode

■ Entering Factory Mode

<Power OFF> → <INFO> → <MENU> → <MUTE> → <Power ON>

■ Factory Data

1. Option Table(Service)
2. WB Adjust
3. Information
4. Advanced Menu

If you want to enter here, press "0000".

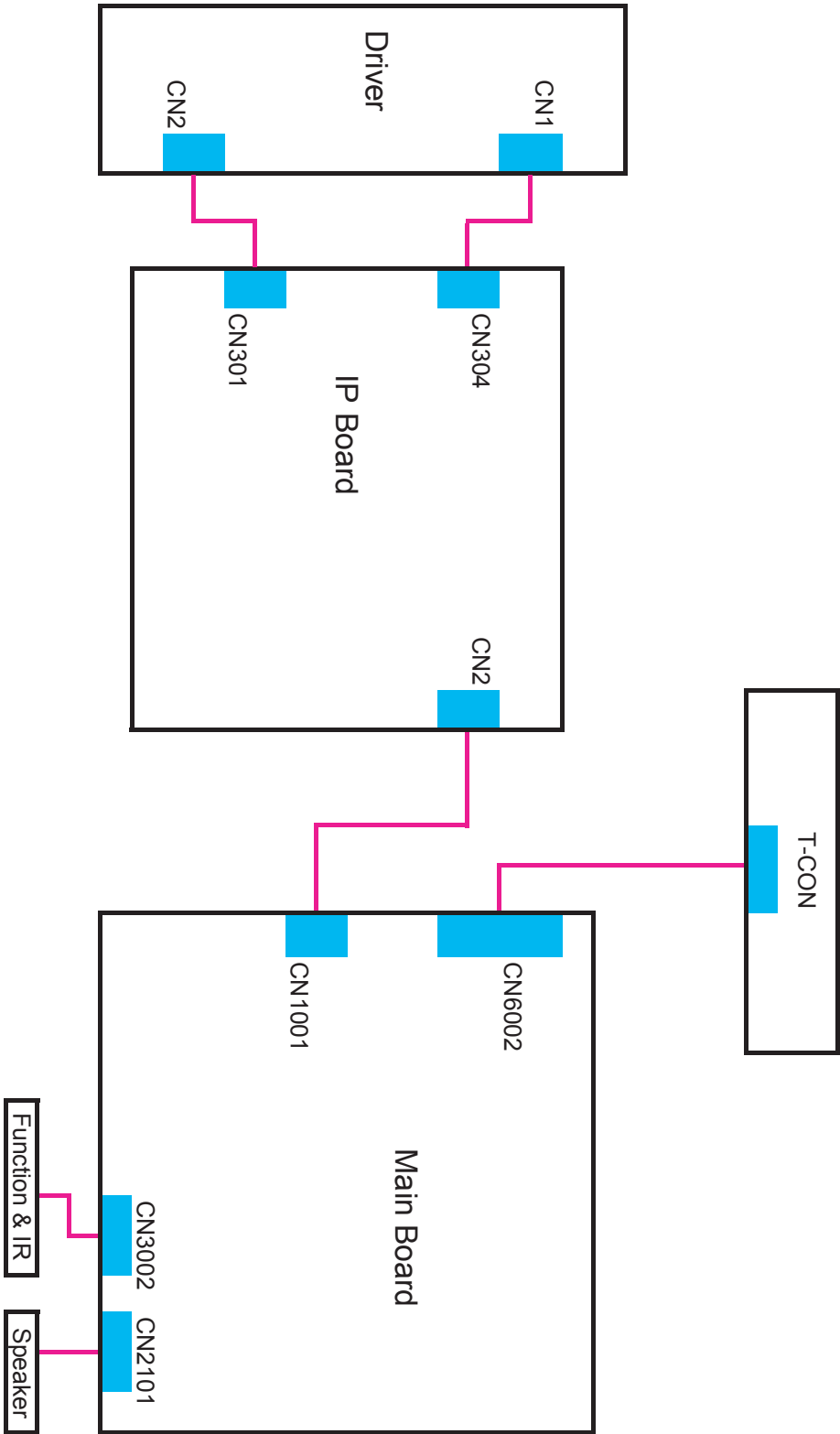
■ How to Initialize.

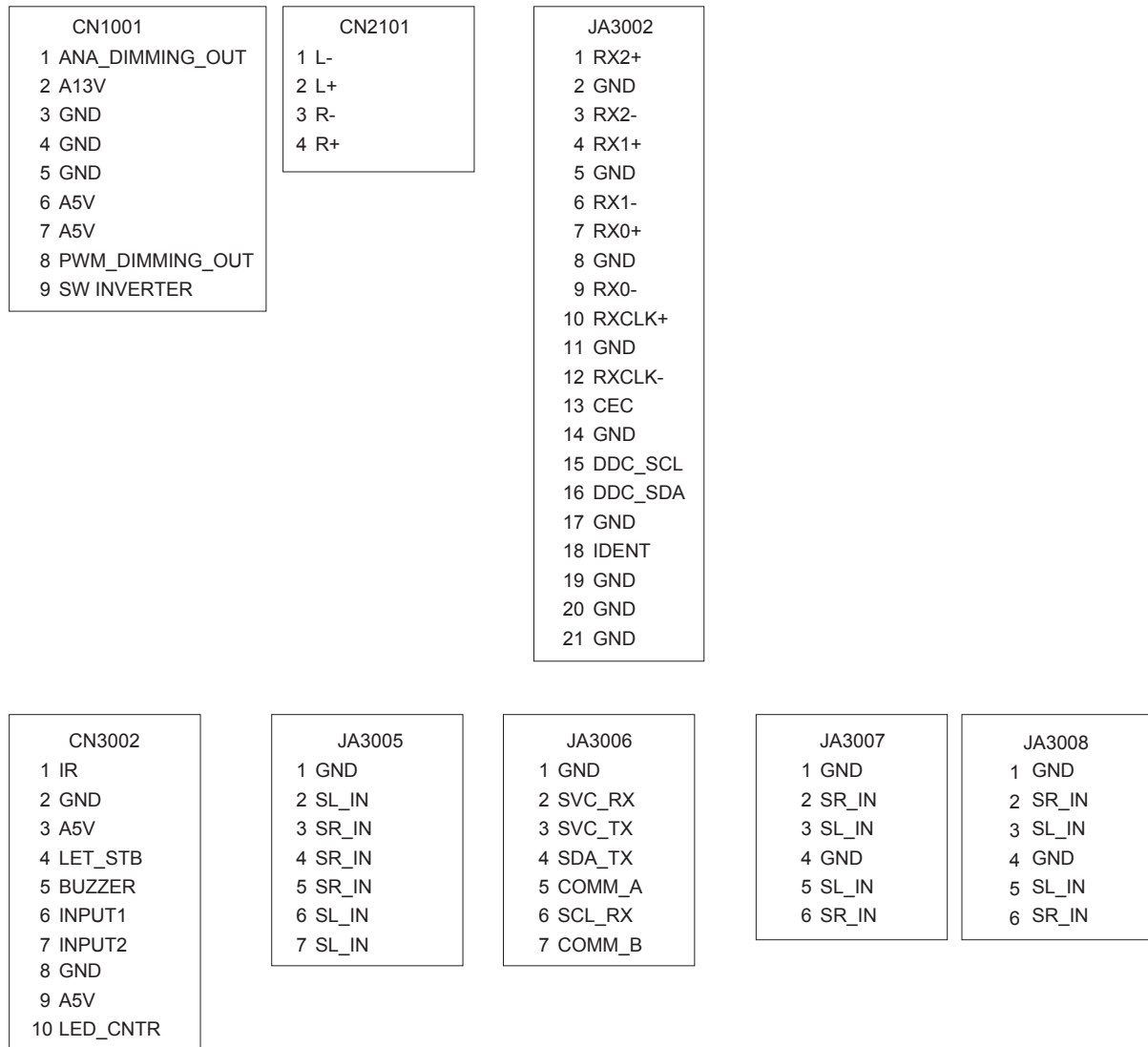
Click "1. Option Table(Service)" → "Factory Reset" in Factory Menu.

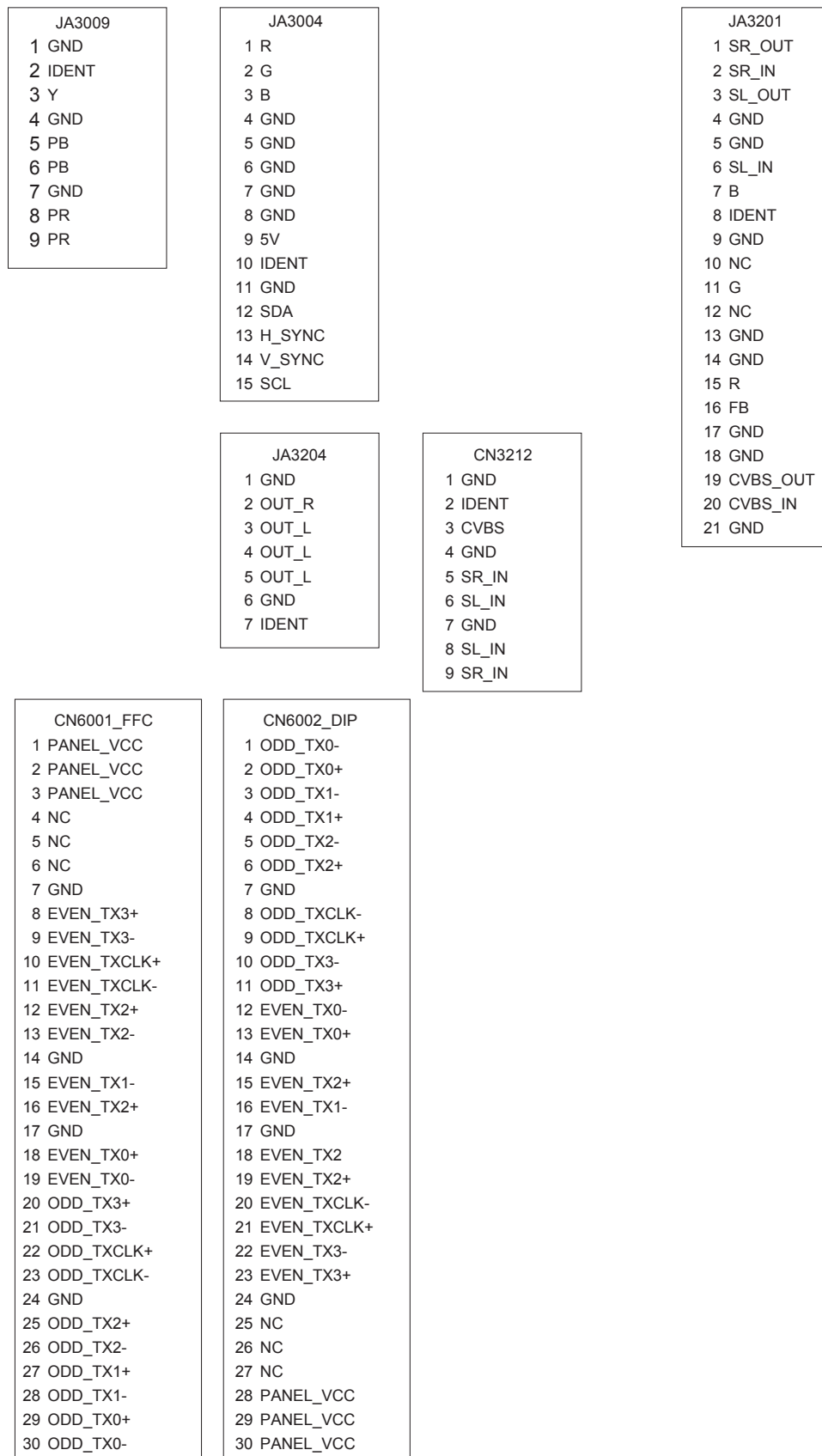
You can make every setting in Factory Initial Status.

6. Wiring Diagram

6-1. Wiring Diagram

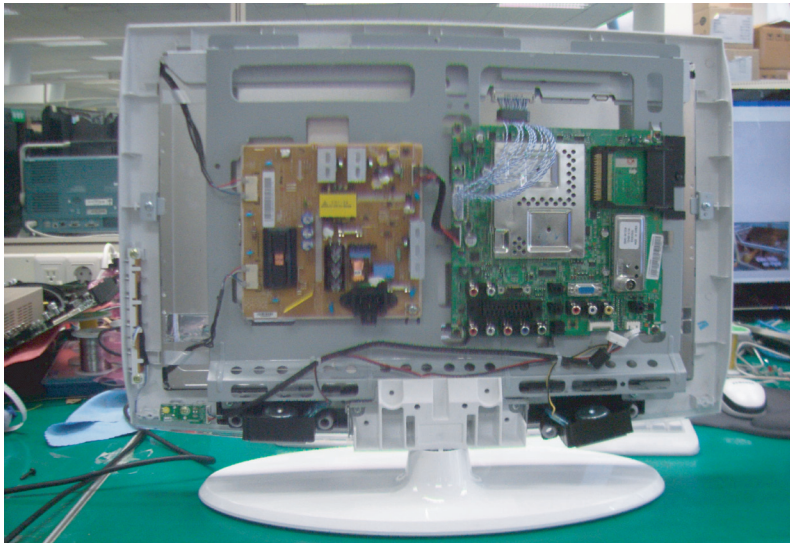




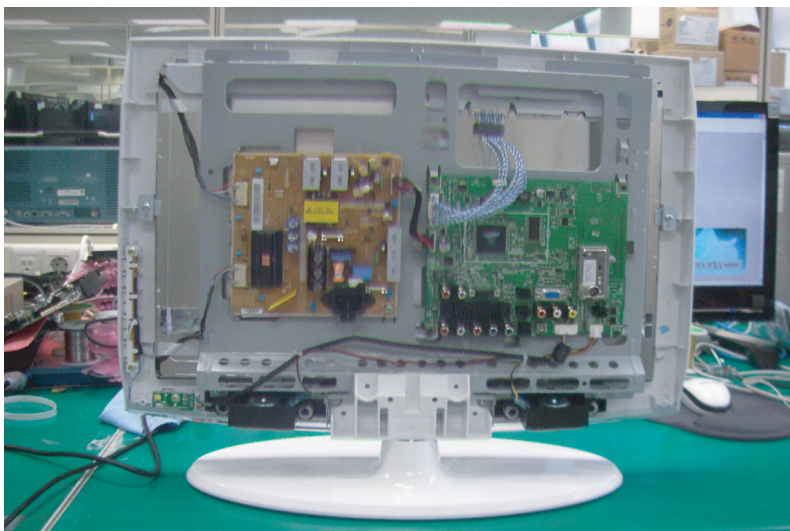


6-2. Wiring Picture

6-2-1. LE22A455A*



6-2-2. LE22A454A*



6-3. Connector Functions

Connector	Functions
CN2101 <-> SPEAKER	Connection Main Board and Speaker. * defective symptom : No sound but normal picture
CN3002 <-> Function & IR	Connection Main Board and Function & IR Assy. * defective symptom : Control panel & remocon doesn't work
CN6002_DIP<-> T-CON	The LVDS signal transferred from Main Board to Panel. * defective symptom : No picture but panel on
CN1, CN2(Panel) <-> CN304(3), CN301(2)(IP Board)	Supply power and signal from SMPS to Inverter. * defective symptom : No picture but normal sound

Code	BN39-00953D (30P, 200mm)
Photo	