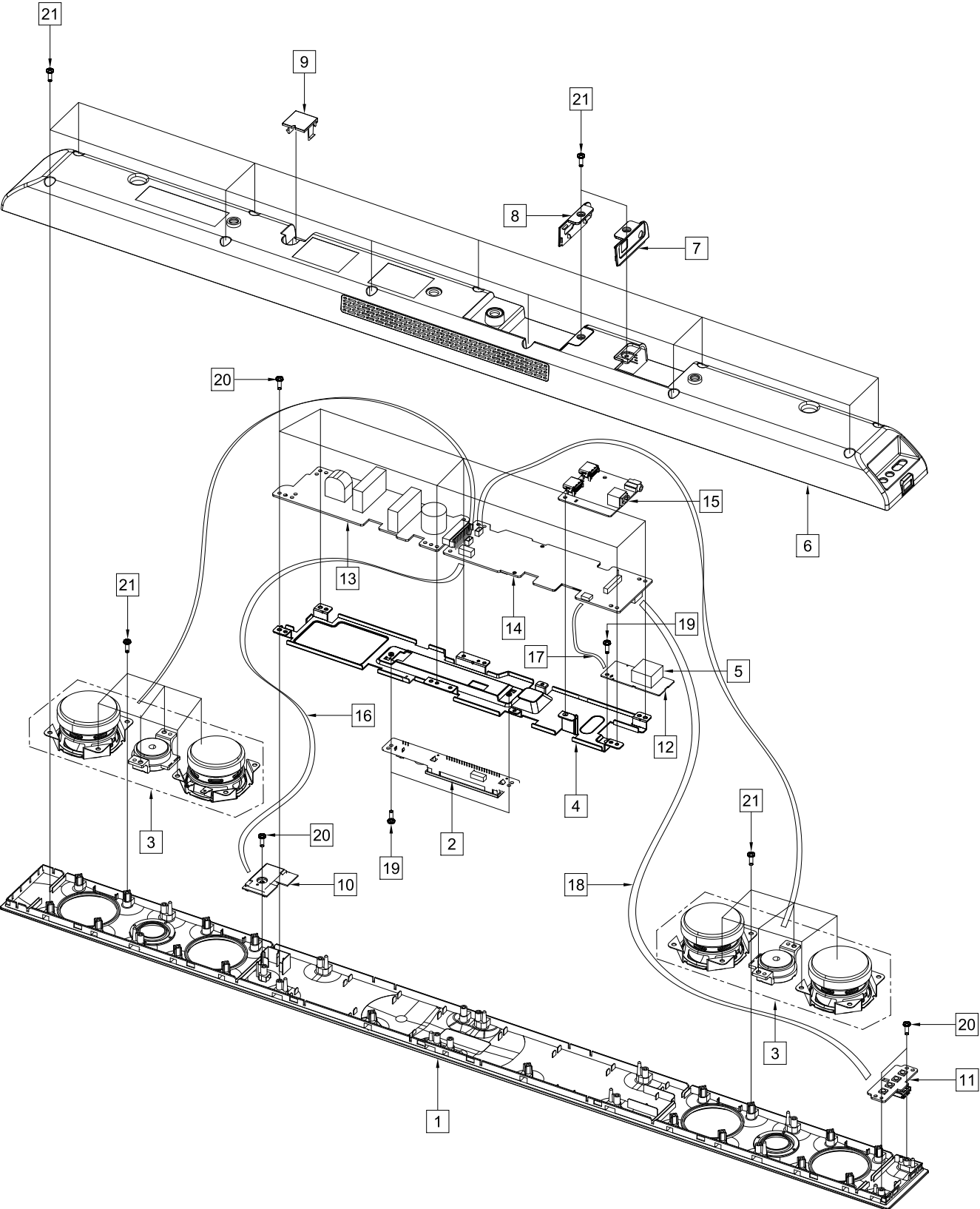


# 1. HW-F450/TK (ZZ01)

## Exploded View



## Parts List

No.	Lvl.	Loc.	Material Code	Description & Specification	SNA	Qty.
1	3	F001A	AH96-02529A	ASSY COVER P-FRONT_SVC; HW-F450,SERVICE	SA	1
2	3	MV01A	AH94-03160A	ASSY PCB FRONT-VFD; HW-F450,SBF4,VFD	SA	1
3	3	SP01A	AH96-02471A	ASSY SPEAKER P; AV SPK, 4ohm,HW-F450,2WAY	SA	1
4	3		AH62-00262B	HEAT SINK-PS; HW-F450,A5052,SILVER,354.4*	SNA	1
5	2		AH63-02750C	SHEET-WIRESS-EVA; HW-E350,EVA,10.5,20,20,	SNA	1
6	2	R001A	AH96-02528A	ASSY COVER P-REAR; HW-F450,PC+ABS,BLACK	SA	1
7	2	FC05	AH63-02537A	COVER-JACK; HW-E450,ABS+PC,BLACK	SA	1
8	2	FC06	AH63-02536A	COVER-HDMI; HW-E450,ABS+PC,BLACK	SA	1
9	2	AC169	AH63-02538A	COVER-AC-CORD; HW-E450,ABS+PC,BLACK	SA	1
10	2	BT	AH96-02298A	ASSY BOARD P-RF-MODULE; Bluetooth Module,	SA	1
11	2	MU01A	AH94-02923B	ASSY PCB TACT S/W-USB; HW-F450,SOUND BAR,	SA	1
12	3	RF2	AH40-00167B	RF MODULATOR; SWA11-TX,DSSS,8,10mW,5V,0~5	SA	1
13	3	P001A	AH44-00275A	DC VSS-HP; HW-E450,SSAV-A5BEBOT,AC/DC,120	SA	1
14	3	M0014	AH94-03067A	ASSY PCB MAIN; HW-F450,SBF4	SA	1
15	2	MH01A	AH94-03068A	ASSY PCB HDMI; HW-F450,SBF4,HDMI	SA	1
16	2		AH39-01238A	LEAD CONNECTOR-BT; HW-F550,Lead Connector	SA	1
17	3	FL06	AH96-01477H	ASSY CABLE P-FFC; HW-E450,FFC,75mm,24P,0.	SA	1
18	2	EC13	AH39-01170A	LEAD CONNECTOR; HW-E450,Lead Connector,UL	SA	1
19	3	SCREW	6003-001561	SCREW-TAPTTYPE; BH,+,-,B,M3,L6,ZPC(WHT),SW	SA	4
20	2	SCREW	6003-001375	SCREW-TAPTTYPE; BH,+,-,B,M3,L8,ZPC(WHT),SW	SA	10
21	2	SCREW	6003-000275	SCREW-TAPTTYPE; BH,+,-,B,M3,L10,ZPC(BLK),SWR	SA	13

## 2. Electrical Parts List

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
			<b>HW-F450/TK (ZZ01)</b>		
1	SW01A	AH90-00974H	ASSY COVER FRONT;HW-F450	1	SNA
.2	SCREW	6003-001375	SCREW-TAPTYPE;BH,+,-,B,M3,L8,ZPC(WHT),SW	10	SA
.2		AH63-02727A	SHEET-FRONT EVA;HW-E350,EVA,0.2,7,20,BLA	1	SNA
.2		AH63-02750C	SHEET-WIRESS-EVA;HW-E350,EVA,10.5,20,20,	1	SNA
.2	MU01A	AH94-02923B	ASSY PCB TACT S/W-USB;HW-F450,SOUND BAR,	1	SA
..3	AS111	AH63-02908A	SHEET-REAR;HW-E350,EVA,1.0,15,BLACK	1	SNA
..3		AH63-02925A	SHEET-PIEZO;HW-E350,SHEET SPONE,0.2,27,B	2	SNA
..3		AH97-08895A	ASSY SMD-USB;HW-E450,USB SMD,AH94-02923A	1	SNA
...4		0202-001459	SOLDER-CREAM;S3X58-M405,D20~38um,96.5Sn/	1	SNA
...4		0406-001200	DIODE-TVS;RCLAMP0504F,6/-/-V,150W,SC-70	1	SA
...4		1405-001253	VARISTOR;12Vdc,1.6x0.8x0.4mm,TP,100V,0.2	1	SA
...4		2007-000079	R-CHIP;1.8Kohm,5%,1/10W,TP,1608	1	SA
...4		2007-000123	R-CHIP;1.5Kohm,5%,1/10W,TP,1608	1	SA
...4		2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	2	SNA
...4		2007-000219	R-CHIP;1.2Kohm,1%,1/10W,TP,1608	1	SA
...4	AD480	2203-000254	C-CER,CHIP;10nF,10%,16V,X7R,TP,1005	1	SA
...4	AD480	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,TP,1005,0.5	1	SA
...4	AD480	2203-007513	C-CER,CHIP;10000nF,10%,10V,X5R,TP,1608,0	1	SA
...4		3404-001379	SWITCH-TACT;12V,50mA,250gf,4.9x4.9x1.5mm	4	SA
...4	EH01	3711-007838	HEADER-BOARD TO CABLE;BOX,6P,1R,1.25mm,S	1	SA
...4		3722-003457	JACK-USB;4P/1C,NI,BLK,A	1	SA
...4		AH41-01490A	PCB-BUTTON;HW-E450,FR-4,2,1.6T,130X168,1	1	SNA
.2	MH01A	AH94-03068A	ASSY PCB HDMI;HW-F450,SBF4,HDMI	1	SA
..3		0202-001608	SOLDER-WIRE FLUX;LFC7-107,D0.8,99.3Sn/0.	0	SNA
..3		0202-001768	SOLDER-BAR;HSE-16,S60S-20,D3,SN/0.5CU/0.	1	SNA
..3		0204-002514	THINNER;TS4500,OXIGEN,NO,13.15KG,14KG/BO	1	SNA
..3		0204-002606	FLUX;LF-715K,OXIGEN,NO,16000L,14%,16kg,G	0	SNA
..3		AH62-00243A	HEAT SINK-ES;HT-D550,A6063,1,NTR,23*23*5	1	SNA
..3		AH63-02725B	SHEET-VIB-VFD;hw-e350,tape,0.2,13,70,WHI	2	SNA
..3		AH97-10436A	ASSY SMD-HDMI;HW-F450	1	SNA
...4		0202-001626	SOLDER-CREAM;PF305-118EO,D15-35,96.5SN/3	1	SNA
...4	DS01A	0401-001099	DIODE-SWITCHING;1N4148WS,75V,150mA,SOD-3	2	SA
...4		0404-001006	DIODE-SCHOTTKY;RB751V,40V,30mA,SOD-323,T	1	SA
...4		0404-001084	DIODE-SCHOTTKY;BAT54A,30V,200mA,SOT-23,T	1	SA
...4		0404-001089	DIODE-SCHOTTKY;RB551V-30,20V,500MA,SOD-3	1	SA
...4		0404-001314	DIODE-SCHOTTKY;B260A,60V,2000mA,SMA,TP	1	SNA
...4		0406-001253	DIODE-TVS;VESD05A1-02V,6.0/6.8/7.5V,SOD-	1	SNA

Exploded Views and Parts List

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		0406-001271	DIODE-TVS;RCLAMP0524P,6/-V,150W,SLP251	4	SNA
...4		0501-000279	TR-SMALL SIGNAL;KSA1182-Y,PNP,150mW,SOT-	1	SA
...4		0504-000128	TR-DIGITAL;FJV3103R,NPN,200mW,22K/22Kohm	2	SA
...4		0505-001377	FET-SILICON;BSN20,N,50V,100mA,15ohm,0.83	1	SA
...4		1203-006067	IC-POWER SUPERVISOR;TPS2553DBVR,SOT-23,6	1	SNA
...4		1203-007137	IC-POSLADJUST REG.;AP7361-Y,SOT89,5P,4.	1	SA
...4		1405-001306	VARISTOR;11Vdc,45A,0603,TP,50V	2	SA
...4		2007-000108	R-CHIP;510Kohm,5%,1/10W,TP,1608	1	SA
...4		2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	SA
...4		2007-000137	R-CHIP;2Kohm,5%,1/16W,TP,1005	4	SA
...4		2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	3	SNA
...4		2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	2	SNA
...4		2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	8	SA
...4		2007-000155	R-CHIP;27Kohm,5%,1/16W,TP,1005	1	SNA
...4		2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	2	SNA
...4		2007-000159	R-CHIP;56Kohm,5%,1/16W,TP,1005	2	SA
...4		2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	1	SNA
...4		2007-000163	R-CHIP;120Kohm,5%,1/16W,TP,1005	1	SA
...4		2007-000165	R-CHIP;200Kohm,5%,1/16W,TP,1005	2	SNA
...4		2007-000173	R-CHIP;22ohm,5%,1/16W,TP,1005	1	SNA
...4		2007-000566	R-CHIP;220Kohm,5%,1/16W,TP,1005	2	SNA
...4		2007-000932	R-CHIP;470ohm,5%,1/16W,TP,1005	2	SA
...4		2007-001038	R-CHIP;56Kohm,1%,1/10W,TP,1608	1	SA
...4		2007-001284	R-CHIP;4.7ohm,5%,1/16W,TP,1005	1	SNA
...4		2007-001298	R-CHIP;51ohm,5%,1/16W,TP,1005	2	SA
...4		2007-001301	R-CHIP;68ohm,5%,1/16W,TP,1005	1	SA
...4		2007-001311	R-CHIP;270ohm,5%,1/16W,TP,1005	1	SA
...4		2007-001313	R-CHIP;330ohm,5%,1/16W,TP,1005	2	SNA
...4		2007-002796	R-CHIP;510ohm,5%,1/16W,TP,1005	6	SNA
...4		2007-007100	R-CHIP;10Mohm,5%,1/16W,TP,1005	1	SA
...4		2007-007136	R-CHIP;4.7Kohm,1%,1/16W,TP,1005	1	SA
...4		2007-007317	R-CHIP;2.2Kohm,1%,1/16W,TP,1005	1	SA
...4		2007-007517	R-CHIP;240ohm,1%,1/16W,TP,1005	1	SNA
...4		2007-007766	R-CHIP;2Kohm,1%,1/16W,TP,1005	2	SNA
...4		2007-008015	R-CHIP;75ohm,1%,1/16W,TP,1005	1	SNA
...4	AD480	2203-000233	C-CER,CHIP;0.1nF,5%,50V,C0G,TP,1005	1	SNA
...4	AD480	2203-001412	C-CER,CHIP;0.03nF,5%,50V,NP0,TP,1005	2	SNA
...4	AD480	2203-002443	C-CER,CHIP;0.33nF,10%,50V,X7R,TP,1005	4	SNA
...4	AD480	2203-005968	C-CER,CHIP;4.7nF,10%,50V,X7R,TP,1005,0.5	1	SNA
...4	AD480	2203-006048	C-CER,CHIP;100nF,10%,10V,X7R,TP,1005	33	SA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4	AD480	2203-006170	C-CER,CHIP;220nF,10%,16V,X7R,TP,1608	1	SNA
...4	AD480	2203-006257	C-CER,CHIP;470nF,10%,6.3V,X5R,TP,1005,0.	1	SNA
...4	AD480	2203-006361	C-CER,CHIP;10000nF,10%,10V,X5R,TP,2012	2	SC
...4	AD480	2203-006399	C-CER,CHIP;1000nF,10%,6.3V,X5R,TP,1005	7	SA
...4	AD480	2203-006838	C-CER,CHIP;2200nF,10%,6.3V,X5R,TP,1005	1	SA
...4	AD480	2203-007230	C-CER,CHIP;47000nF,20%,6.3V,X5R,TP,2012,	5	SNA
...4		2801-005258	CRYSTAL-SMD;18.432MHz,30ppm,SMD,20pF,370	1	SA
...4		3301-001404	BEAD-SMD;30ohm,2012,TP,15.9OHM/30MHz,-	11	SA
...4		3701-001293	CONNECTOR-HDMI;19P,2R,FEMALE,SMD-A,AU	2	SA
...4		3707-001105	CONNECTOR-OPTICAL;ANGLE-RX	1	SA
...4		3711-008048	HEADER-BOARD TO BOARD;NOWALL,23P,2R,2mm,	1	SA
...4		3722-003159	JACK-PHONE;1/7P,NI,YEL,ANGLE	1	SA
...4		AH41-01625B	PCB-HDMI;HW-F450,FR-4,4,1.6T,108*142,4,H	1	SNA
...4		AH97-10437A	ASSY MICOM;SBF4,AH94-03068A	1	SNA
....5		1205-004717	IC-REPEATER;EP92A2S4,LQFP,128Z30,14x14mm	1	SNA
.2		AH96-02072H	ASSY MISC P-KIT( M+F);HW-F450	1	SNA
..3		0203-000007	TAPE-FILAMENT;T0.15,L55M,TRP,FILAMENT	0	SNA
..3	SCREW	6003-001561	SCREW-TAPTYPE;BH,+,-,B,M3,L6,ZPC(WHT),SW	4	SA
..3	RF2	AH40-00167B	RF MODULATOR;SWA11-TX,DSSS,8,10mW,5V,0~5	1	SA
..3	P001A	AH44-00275A	DC VSS-HP;HW-E450,SSAV-A5BEBOT,AC/DC,120	1	SA
..3		AH62-00262B	HEAT SINK-PS;HW-F450,A5052,SILVER,354.4*	1	SNA
..3	SHT3	AH63-02160D	SHEET-GASKET MAIN;HT-C5500,GASKET,10,15,	2	SNA
..3		AH63-02958A	SHEET-VFD TAPE-NEW;HW-E350,SHEET 3M,0.6,	1	SNA
..3	M0014	AH94-03067A	ASSY PCB MAIN;HW-F450,SBF4	1	SA
...4	EH01	3711-008142	HEADER-BOARD TO CABLE;12P,1R,2.5mm,ANGLE	1	SA
...4		AH62-00243A	HEAT SINK-ES;HT-D550,A6063,1,NTR,23*23*5	1	SNA
...4	AS504	AH63-02750D	SHEET-MAIN;hw-e350,EVA,8.5,20,20,BLACK	1	SNA
...4		AH97-10433A	ASSY SMD-MAIN;HW-F450	1	SNA
....5	DS01A	0401-001099	DIODE-SWITCHING;1N4148WS,75V,150mA,SOD-3	2	SA
....5		0403-001172	DIODE-ZENER;UDZ6.8B,6.65-6.93V,200MW,SOD	1	SNA
....5		0403-001446	DIODE-ZENER;UDZS 16B,15.85/16.51V,200mW,	1	SA
....5		0404-001006	DIODE-SCHOTTKY;RB751V,40V,30mA,SOD-323,T	1	SA
....5		0404-001089	DIODE-SCHOTTKY;RB551V-30,20V,500MA,SOD-3	1	SA
....5		0404-001787	DIODE-SCHOTTKY;SS3P4,40V,3000mA,DO-220AA	1	SA
....5		0406-001200	DIODE-TVS;RCLAMP0504F,6/-V,150W,SC-70	1	SA
....5		0501-000002	TR-SMALL SIGNAL;KSA812,PNP,150mW,SOT-23,	5	SNA
....5		0501-000479	TR-SMALL SIGNAL;KST42,NPN,350mW,SOT-23,T	3	SA
....5		0504-000110	TR-DIGITAL;DTC114EU,NPN,200MW,10K/10K,SC	2	SA
....5		0504-000128	TR-DIGITAL;FJV3103R,NPN,200mW,22K/22Kohm	1	SA
....5		0505-002790	FET-SILICON;ZXMP6A17G,P,-60V,-4.3A,0.190	1	SA

Exploded Views and Parts List

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
....5		0801-000796	IC-CMOS LOGIC;7S32,OR GATE,SOT-353,5P,51	1	SA
....5		0904-002707	IC-DSP;LQFP,128P,16X16,128.5MHZ,1.35V,0t	1	SNA
....5		1001-001680	IC-ANALOG MULTIPLEX;TC7SB3157CFU,CMOS,US	2	SA
....5		1103-001310	IC-EEPROM;2Kbit,256x8,SOIC,8Z30,5x4mm,2.	1	SNA
....5		1105-001573	IC-DRAM;K4S281632,SDR,128Mbit,8Mx16bit,T	1	SA
....5		1201-003514	IC-AUDIO AMP;TAS5614LADDVR,HTSSOP,44Z30,	1	SNA
....5		1203-004363	IC-VOL. DETECTOR;SOT-23,3Z30,2.9x1.6mm,P	1	SA
....5		1203-006266	IC-POSIFIXED REG.;AP1117E33GZ-13-89,SOT	1	SA
....5		1203-006684	IC-DC/DC CONVERTER;TPS54327DDAR,HSOP8,8P	3	SNA
....5		1203-007137	IC-POSIAJUST REG.;AP7361-Y,SOT89,5P,4.	1	SA
....5		1203-007144	IC-DC/DC CONVERTER;TPS54331D,SOIC8,8P,4.	1	SA
....5		1205-004692	IC-SWITCH;TPS2069CDBVR,SOT-23,5P,5.0x3.1	1	SNA
....5		2007-000029	R-CHIP;0ohm,5%,1/8W,TP,2012	4	SNA
....5		2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	2	SA
....5		2007-000077	R-CHIP;470ohm,5%,1/10W,TP,1608	1	SA
....5		2007-000091	R-CHIP;12Kohm,5%,1/10W,TP,1608	2	SNA
....5		2007-000096	R-CHIP;30Kohm,5%,1/10W,TP,1608	1	SNA
....5		2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	1	SA
....5		2007-000098	R-CHIP;56Kohm,5%,1/10W,TP,1608	1	SA
....5		2007-000109	R-CHIP;1Mohm,5%,1/10W,TP,1608	1	SA
....5		2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	1	SA
....5		2007-000138	R-CHIP;100ohm,5%,1/16W,TP,1005	21	SA
....5		2007-000140	R-CHIP;1Kohm,5%,1/16W,TP,1005	4	SNA
....5		2007-000143	R-CHIP;4.7Kohm,5%,1/16W,TP,1005	25	SNA
....5		2007-000148	R-CHIP;10Kohm,5%,1/16W,TP,1005	15	SA
....5		2007-000149	R-CHIP;12Kohm,5%,1/16W,TP,1005	1	SA
....5		2007-000153	R-CHIP;22Kohm,5%,1/16W,TP,1005	7	SA
....5		2007-000157	R-CHIP;47Kohm,5%,1/16W,TP,1005	8	SNA
....5		2007-000159	R-CHIP;56Kohm,5%,1/16W,TP,1005	2	SA
....5		2007-000162	R-CHIP;100Kohm,5%,1/16W,TP,1005	4	SNA
....5		2007-000168	R-CHIP;470Kohm,5%,1/16W,TP,1005	1	SNA
....5		2007-000171	R-CHIP;0ohm,5%,1/16W,TP,1005	3	SNA
....5		2007-000174	R-CHIP;47ohm,5%,1/16W,TP,1005	2	SNA
....5		2007-000253	R-CHIP;1.5ohm,5%,1/4W,TP,3216	2	SA
....5		2007-000256	R-CHIP;1.6Kohm,1%,1/10W,TP,1608	1	SA
....5		2007-000312	R-CHIP;10ohm,5%,1/4W,TP,3216	3	SA
....5		2007-000336	R-CHIP;120Kohm,1%,1/10W,TP,1608	1	SA
....5		2007-000491	R-CHIP;2.2Kohm,1%,1/10W,TP,1608	1	SA
....5		2007-000633	R-CHIP;270Kohm,1%,1/10W,TP,1608	1	SNA
....5		2007-000695	R-CHIP;3.3ohm,5%,1/10W,TP,1608	7	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
....5		2007-000775	R-CHIP;33Kohm,5%,1/16W,TP,1005	4	SA
....5		2007-001116	R-CHIP;680ohm,1%,1/10W,TP,1608	1	SA
....5		2007-001167	R-CHIP;75ohm,5%,1/10W,TP,1608	1	SNA
....5		2007-001288	R-CHIP;18ohm,5%,1/16W,TP,1005	4	SA
....5		2007-001292	R-CHIP;33ohm,5%,1/16W,TP,1005	46	SNA
....5		2007-001306	R-CHIP;150ohm,5%,1/16W,TP,1005	1	SA
....5		2007-002425	R-CHIP;1ohm,5%,1/10W,TP,1608	1	SNA
....5		2007-007132	R-CHIP;15Kohm,1%,1/16W,TP,1005	1	SNA
....5		2007-007136	R-CHIP;4.7Kohm,1%,1/16W,TP,1005	2	SA
....5		2007-007277	R-CHIP;392ohm,1%,1/10W,TP,1608	1	SA
....5		2007-007306	R-CHIP;100ohm,1%,1/16W,TP,1005	2	SNA
....5		2007-007311	R-CHIP;22Kohm,1%,1/16W,TP,1005	5	SA
....5		2007-007316	R-CHIP;3.3Kohm,1%,1/16W,TP,1005	1	SNA
....5		2007-007317	R-CHIP;2.2Kohm,1%,1/16W,TP,1005	3	SA
....5		2007-007318	R-CHIP;1Kohm,1%,1/16W,TP,1005	3	SNA
....5		2007-007520	R-CHIP;20ohm,1%,1/10W,TP,1608	1	SA
....5		2007-007766	R-CHIP;2Kohm,1%,1/16W,TP,1005	1	SNA
....5		2007-008275	R-CHIP;30Kohm,1%,1/16W,TP,1005	1	SNA
....5		2007-008563	R-CHIP;270ohm,1%,1/16W,TP,1005	1	SA
....5		2007-008649	R-CHIP;220ohm,1%,1/16W,TP,1005	2	SNA
....5		2007-008672	R-CHIP;47ohm,1%,1/16W,TP,1005	1	SNA
....5		2011-001344	R-NETWORK;100ohm,5%,1/16W,L,CHIP,8P,TP,2	4	SA
....5		2011-001474	R-NETWORK;47ohm,5%,1/16W,L,CHIP,8P,TP,2.	7	SA
....5	AD480	2203-000233	C-CER,CHIP;0.1nF,5%,50V,C0G,TP,1005	2	SNA
....5	AD480	2203-000254	C-CER,CHIP;10nF,10%,16V,X7R,TP,1005	6	SA
....5	AD480	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,TP,1608	4	SA
....5	AD480	2203-000278	C-CER,CHIP;0.01nF,0.5pF,50V,C0G,TP,1005	6	SA
....5	AD480	2203-000330	C-CER,CHIP;0.012nF,5%,50V,C0G,TP,1005	1	SA
....5	AD480	2203-000489	C-CER,CHIP;2.2nF,10%,50V,X7R,TP,1005	4	SNA
....5	AD480	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,TP,1608	1	SNA
....5	AD480	2203-000679	C-CER,CHIP;0.027nF,5%,50V,C0G,TP,1005	2	SA
....5	AD480	2203-000812	C-CER,CHIP;0.033nF,5%,50V,C0G,TP,1005	10	SNA
....5	AD480	2203-000838	C-CER,CHIP;0.39nF,5%,50V,C0G,TP,1608	1	SNA
....5	AD480	2203-000888	C-CER,CHIP;4.7nF,10%,50V,X7R,TP,1608	3	SNA
....5	AD480	2203-000995	C-CER,CHIP;0.047nF,5%,50V,C0G,TP,1005	3	SNA
....5	AD480	2203-001634	C-CER,CHIP;33nF,10%,50V,X7R,TP,1608	4	SNA
....5	AD480	2203-002720	C-CER,CHIP;10nF,10%,25V,X7R,TP,1005,0.5T	1	SNA
....5	AD480	2203-006141	C-CER,CHIP;1000nF,10%,16V,X5R,TP,1608,0.	5	SNA
....5	AD480	2203-006399	C-CER,CHIP;1000nF,10%,6.3V,X5R,TP,1005	1	SA
....5	AD480	2203-006698	C-CER,CHIP;1000nF,10%,25V,X7R,TP,1608,0.	1	SA

Exploded Views and Parts List

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
....5	AD480	2203-006890	C-CER,CHIP;10000nF,20%,6.3V,X5R,TP,1608	1	SNA
....5	AD480	2203-006960	C-CER,CHIP;1000nF,10%,50V,X7R,TP,2012	4	SNA
....5	AD480	2203-006992	C-CER,CHIP;0.33nF,5%,50V,C0G,TP,1005	4	SNA
....5	AD480	2203-007240	C-CER,CHIP;22000nF,20%,6.3V,X5R,TP,1608,	2	SA
....5	AD480	2203-007270	C-CER,CHIP;10000nF,10%,10V,X5R,TP,1608,0	4	SNA
....5		2402-001088	C-AL,SMD;220uF,20%,35V,LZ,TP,8.3x8.3x10.	4	SA
....5		2402-001237	C-AL,SMD;330uF,20%,6.3V,-,TP,6.3x7.7mm	2	SA
....5		2703-004199	INDUCTOR-SMD;10uH,20%,7066,2.2mm,0.101Oh	1	SNA
....5		2703-004226	INDUCTOR-SMD;8.2uH,20%,11X10x3.8mm,0.028	4	SA
....5		2703-004589	INDUCTOR-SMD;2.2uH,20%,5050,2T,0.048Ohm,	3	SA
....5		2801-005287	CRYSTAL-SMD;27.000MHz,30ppm,SMD,18pF,400	1	SA
....5		3708-001765	CONNECTOR-FPC/FFC/PIC;24P,0.5mm,SMD-S,SN	1	SA
....5		3710-003380	SOCKET-BOARD TO BOARD;10P,2R,2mm,AU,BLK	1	SA
....5		3710-003381	SOCKET-BOARD TO BOARD;24P,2R,2mm,AU,BLK	1	SA
....5	EH01	3711-005939	HEADER-BOARD TO CABLE;BOX,3P,1R,2mm,SMD-	1	SA
....5		3711-007799	CONNECTOR-HEADER;BOX,8P,1R,1.25mm,SMD-S,	1	SA
....5	EH01	3711-007838	HEADER-BOARD TO CABLE;BOX,6P,1R,1.25mm,S	1	SA
....5	EH01	3711-008110	HEADER-BOARD TO CABLE;BOX,2P,1R,2mm,SMD-	1	SA
....5		AH41-01624B	PCB MAIN;HW-F450,FR-4,4,1.6T,200*192,3,M	1	SNA
....5		AH97-10434A	ASSY MICOM;HW-F450,SBF4,AH94-03067A	1	SNA
....6		0903-001781	IC-MICROCONTROLLER;LQFP,64P,10x10mm,32MH	1	SNA
....5		AH97-10435A	ASSY MICOM;HW-F450 DSP,SOUND BAR	1	SNA
....6		1107-001916	IC-NOR FLASH;W25Q16BVSSIG,16Mbit,2Mbitx8	1	SNA
...3	MV01A	AH94-03160A	ASSY PCB FRONT-VFD;HW-F450,SBF4,VFD	1	SA
...4		0202-001608	SOLDER-WIRE FLUX;LFC7-107,D0.8,99.3Sn/0.	0	SNA
...4		0609-001204	MODULE REMOCON;HORIZONTAL,6.5mm,TRAY	1	SA
...4	EV01	AH07-00280A	VFD DISPLAY;HW-E450,6-BD-02INK,Green/Red	1	SA
...4	AH410	AH61-03335A	HOLDER-VFD;HW-E450,ABS,BLACK	1	SNA
...4	AF020	AH63-02539A	FILTER-VFD;HW-E450,PC,WINE	1	SNA
...4		AH63-02725A	SHEET-VFD TAPE;HW-E350,TAPE,0.1,14,14,WH	1	SNA
...4		AH63-02726A	SHEET-SPK EVA;HW-E350,EVA,5,5,19,WHITE	1	SNA
...4		AH97-11235A	ASSY SMD-VFD;HW-F450,AH94-03160A	1	SNA
....5		0202-001626	SOLDER-CREAM;PF305-118EO,D15-35,96.5SN/3	0	SNA
....5	DR01A	0402-000309	DIODE-RECTIFIER;1SR154-400,400V,1A,SOD-1	2	SC
....5		0403-000596	DIODE-ZENER;Z02W2.4V,2.5,200mW,SOT-23,TP	1	SA
....5		0403-001499	DIODE-ZENER;MMSZ5252B,22.8/25.2V,500mW,S	1	SA
....5		0404-001314	DIODE-SCHOTTKY;B260A,60V,2000mA,SMA,TP	4	SNA
....5		0501-002651	TR-SMALL SIGNAL;KTC4378,NPN,500mW,SOT-89	2	SA
....5		1405-001306	VARISTOR;11Vdc,45A,0603,TP,50V	3	SA
....5		2007-000034	R-CHIP;1ohm,5%,1/4W,TP,3216	1	SNA



Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
....5		2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	1	SA
....5		2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	1	SNA
....5		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	4	SNA
....5		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	1	SA
....5		2007-000123	R-CHIP;1.5Kohm,5%,1/10W,TP,1608	2	SA
....5		2007-000125	R-CHIP;3.9Kohm,5%,1/10W,TP,1608	1	SA
....5		2007-000134	R-CHIP;33Kohm,5%,1/10W,TP,1608	2	SNA
....5		2007-000308	R-CHIP;10ohm,5%,1/8W,TP,2012	1	SA
....5		2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	3	SNA
....5		2007-000468	R-CHIP;1Kohm,5%,1/8W,TP,2012	1	SA
....5		2007-000483	R-CHIP;1ohm,5%,1/8W,TP,2012	1	SNA
....5		2007-000783	R-CHIP;33ohm,5%,1/4W,TP,3216	2	SNA
....5		2007-000950	R-CHIP;47ohm,5%,1/4W,TP,3216	1	SA
....5	AD480	2203-000438	C-CER,CHIP;1nF,10%,50V,X7R,TP,1005	2	SNA
....5	AD480	2203-001153	C-CER,CHIP;0.068nF,5%,50V,NP0,TP,1005	3	SNA
....5	AD480	2203-006158	C-CER,CHIP;100nF,10%,16V,X7R,TP,1005,0.5	5	SA
....5	AD480	2203-007230	C-CER,CHIP;47000nF,20%,6.3V,X5R,TP,2012,	2	SNA
....5	AD480	2203-007306	C-CER,CHIP;10000nF,10%,25V,X5R,TP,2012,1	5	SNA
....5	AD480	2203-007486	C-CER,CHIP;1000nF,10%,50V,X5R,TP,1608	1	SNA
....5	AD480	2203-007513	C-CER,CHIP;10000nF,10%,10V,X5R,TP,1608,0	2	SA
....5	AD480	2203-007544	C-CER,CHIP;100nF,10%,50V,X7R,TP,1005	1	SA
....5		3711-007773	HEADER-BOARD TO BOARD;BOX,10P,2,2mm,SMD-	1	SA
....5		AH26-00389B	TRANS SWITCHING;DR1265,HT-E4500,DC12V,DR	1	SA
....5		AH41-01671B	PCB-VFD;HW-F450,FR-4,2,1.6T,143*142,5,VF	1	SNA
..3	FL06	AH96-01477H	ASSY CABLE P-FFC;HW-E450,FFC,75mm,24P,0.	1	SA
..2	SNA	AH96-02499A	ASSY COVER P-FRONT;HW-F450,SBF4	1	SNA
..3	SCREW	6003-000275	SCREW-TAPTYPE;BH,+,B,M3,L10,ZPC(BLK),SWR	12	SA
..3	SP01A	AH96-02471A	ASSY SPEAKER P;AV SPK, 4ohm,HW-F450,2WAY	1	SA
..4		AH59-02437A	UNIT-WOOFER;AV SPK,8ohm,Z-Type,59X59mm,G	4	SNA
..4		AH59-02566A	UNIT-LEFT TWEETER;AV SPK, HW-F450,13mm B	1	SNA
..4		AH59-02567A	UNIT-RIGHT TWEETER;AV SPK, HW-F450,13mm	1	SNA
..3	F001A	AH96-02529A	ASSY COVER P-FRONT_SVC;HW-F450,SERVICE	1	SA
..4	F001	AH63-02528B	COVER-FRONT;HW-E450,PC	1	SNA
..4		AH63-02529A	SHEET-VIBRATION-FRONT;HW-E450,FELT,0.2,B	4	SNA
..4		AH63-02529B	SHEET-VIBRATION-FRONT;HW-E450,PORON,0.2,	2	SNA
..4		AH63-02530A	SHEET-PROTECTION-FRONT;HW-E450,PET,0.08,	1	SNA
..4		AH63-02727A	SHEET-FRONT EVA;HW-E350,EVA,0.2,7,20,BLA	4	SNA
..4		AH63-02750A	SHEET-EVA;HW-E350,EVA,5,8,11,BLACK	1	SNA
..4		AH63-03269B	SHEET-SHIELD BOT;HW-F550,EVA,1.0,14,14,B	1	SNA
..4		AH63-03309A	SHEET-UNIT-EVA;HW-F450,EVA,0.5,10,50,BLA	5	SNA

Exploded Views and Parts List

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		AH63-03309B	SHEET-FRONT-EVA-M;HW-F450,EVA,0.5,10,20,	2	SNA
...4		AH64-05267B	DECORATION-SPK;HW-D450,ABS,2.0,BLACK	2	SNA
1	R001A	AH90-01090A	ASSY COVER REAR;HW-F450,SBF4	1	SNA
.2	SCREW	6003-000275	SCREW-TAPTYPE;BH,+ ,B,M3,L10,ZPC(BLK),SWR	13	SA
.2	FC06	AH63-02536A	COVER-HDMI;HW-E450,ABS+PC,BLACK	1	SA
.2	FC05	AH63-02537A	COVER-JACK;HW-E450,ABS+PC,BLACK	1	SA
.2	AC169	AH63-02538A	COVER-AC-CORD;HW-E450,ABS+PC,BLACK	1	SA
.2	R001A	AH96-02528A	ASSY COVER P-REAR;HW-F450,PC+ABS,BLACK	1	SA
...3	AF501	AH61-02935A	FOOT-HANGER;HW-F450,RUBBER,BLACK,1	2	SNA
...3	AH506	AH61-02951A	HOLDER-INSERT;HT-WS1,SWCH18A,10.4,14,14,	2	SNA
...3		AH63-02529C	SHEET-VIB-POWER KEY;HW-E350,PORON,0.2,15	1	SNA
...3	R001	AH63-02533E	COVER-REAR;HW-F450,ABS+PC,BLACK	1	SNA
...3		AH63-02535A	SHEET-SEALING-PARTITION;HW-E450,FELT,0.5	4	SNA
...3		AH63-03308A	SHEET-KNOB-EVA;HW-F450,EVA,1.0,5,45,BLAC	1	SNA
...3	FK04	AH64-05528A	KNOB-FUNCTION;HW-E450,ABS,BLACK	1	SNA
...3	M0126	AH73-00154A	RUBBER-FOOT;HW-C450,RUBBER,CLEAR	2	SNA
1		AH91-00615B	ASSY SHIELD;HW-F450,SBF4	1	SNA
.2		0203-000007	TAPE-FILAMENT;T0.15,L55M,TRP,FILAMENT	0	SNA
.2	T0268	3903-000716	CBF-POWER CORD;AT,EUROPE,LP-21,2P,250V,2	1	SA
.2	EC13	AH39-01170A	LEAD CONNECTOR;HW-E450,Lead Connector,UL	1	SA
.2		AH39-01238A	LEAD CONNECTOR-BT;HW-F550,Lead Connector	1	SA
.2	BT	AH96-02298A	ASSY BOARD P-RF-MODULE;Bluetooth Module,	1	SA
1		AH91-00667C	ASSY SPEAKER;HW-F450	1	SNA
.2		AH68-02444C	LABEL-POP STICKER;HW-E450/ZA,SEA,PET,W11	1	SNA
.2	SW01A	AH96-02475C	ASSY SPEAKER P-SUBWOOFER;AV SPK,for HW-F	1	SA
...3		AH69-03229A	CUSHION EPS-SUBWOOFER DW4;PS-DW4,EPS,230	2	SNA
...3		AH82-00360B	A/S ASSY-SUBWOOFER;AV SPK,FOR WORLD WIDE	1	SNA
...4		6002-001294	SCREW-TAPPING;BH,+ ,M4,L16,ZPC(BLK)	8	SA
...4	SCREW	6003-000283	SCREW-TAPTYPE;BH,+ ,-,B,M3,L8,ZPC(WHT),SW	6	SNA
...4		AH59-02395A	UNIT-WOOFER;AV SPK, HW-E450,169mm, 6.5in	1	SNA
...4		AH61-03039A	FRAME-NET;AV SPK,HIPS,HW-D450/550/E450,Y	1	SNA
...4	ST026	AH61-03080A	FOOT-MOLD;PS-WC450/WD450/WD550,HIPS,Dia	4	SNA
...4		AH61-03285A	HOLDER-WIRELESS PCB;PS-DW4,HIPS,1.5t,30m	1	SNA
...4		AH64-05498B	PANEL-SIDE;AV SPK, HW-E450,ABS+PMMA,3mm,	1	SNA
...4	CC02	AH64-05499A	CHASSIS-BOTTOM;PS-DW4,EGI-SECC,1mm,230mm	1	SNA
...4		AH64-05571A	CHASSIS-INSULATION SHEET;AV SPK, HT-E820	1	SNA
...4		AH67-00563A	DUCT-FRAME;ABS,3mm,95mm,21mm,BLACK,60mm	1	SNA
...4	AL093	AH67-00579A	LENS-LED;PS-WC450,ABS+PMMA,BLACK-TRANSPA	1	SNA
...4		AH81-04797A	SPEAKER-FOOT RUBBER;AV SPK,RUBBER FOOT,D	4	SNA
...4		AH81-07437B	SPEAKER-WOOD CABINET;AV SPK,for HW-E450/	1	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		AH81-07438A	SPEAKER-WIRE;AV SPK,for HW-E450,SPK WIRE	1	SNA
...4		AH81-07452A	SPEAKER-EVA LED;AV SPK,FOR PS-WD450/550,	1	SNA
.2		AH96-02476B	ASSY MISC P-KITTING AMP;HW-F450,EUROPE,S	1	SNA
..3		0201-001059	ADHESIVE-SIL;#9590,WHT,CARTRIGE	0	SNA
..3	FL06	3809-002512	FFC CABLE-FLAT;30V,80C,110mm,24P,0.5mm,U	1	SC
..3	T0268	AC39-10019A	CBF-POWER CORD;AT,CP2,HOUIING(2P),250V,2.	1	SA
..3	EC13	AH39-01113B	LEAD CONNECTOR;HW-E450,Cable Connector,U	1	SA
..3	SNA	AH40-00168B	RF MODULATOR;SWA11-RX,DSSS,8,10mW,5V,0~5	1	SA
..3	ML01A	AH94-02478C	ASSY PCB LED-LED;HW-E450 SUB LED,SBE4	1	SA
..4	EL02	0601-001432	LED;ROUND,BLUE,3.0mm,455nm,4.05x5.08mm	1	SA
..4	EL02	0601-002711	LED;ROUND,RED,3.1mm,639nm,3.5x5.2mm	1	SA
...4	EH01	3711-004067	HEADER-BOARD TO CABLE;BOX,4P,1R,2mm,ANGL	1	SA
...4		AH97-09010A	ASSY SMD-LED;HW-E450,SBE4,SUB LED SMD,AH	1	SNA
....5		0201-002248	ADHESIVE-A.C.F;SMT-GLUE,HT-130D	0	SNA
....5		2007-000763	R-CHIP;330ohm,1%,1/10W,TP,1608	2	SA
....5	AD480	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,TP,1608	3	SNA
....5		3301-001404	BEAD-SMD;30ohm,2012,TP,15.9OHM/30MHz,-	3	SA
....5		AH41-01341A	PCB-LED;HW-C450,PHENOL,1,00,1.6T,158*144	1	SNA
..3	MA01A	AH94-03055A	ASSY PCB AMP-SUBWOOFER;HW-F450,SBF4,SUBW	1	SA
..4		0201-001059	ADHESIVE-SIL;#9590,WHT,CARTRIGE	0	SNA
..4		0201-001082	ADHESIVE-TS;1603HFR-HS,YEL,1800 - 2200CP	11	SNA
..4		0202-001492	SOLDER-WIRE FLUX;HSE-02 LFM48 SR-34 S,-,	0	SNA
..4		0202-001768	SOLDER-BAR;HSE-16,S60S-20,D3,SN/0.5CU/0.	5	SNA
..4		0204-002514	THINNER;TS4500,OXIGEN,NO,13.15KG,14KG/BO	3	SNA
..4		0204-002606	FLUX;LF-715K,OXIGEN,NO,16000L,14%,16kg,G	1	SNA
..4		0205-001278	GREASE;T4110	0	SNA
..4		0402-001258	DIODE-BRIDGE;GBU606,600V,6A,SIP-4,BK	1	SA
..4	DR01A	0402-001889	DIODE-RECTIFIER;SFAF804G,200V,8A,ITO-220	2	SNA
..4		0502-001176	TR-POWER;KTC2026,NPN,2000mW,TO-220IS,ST,	1	SA
..4		0505-001815	FET-SILICON;SPA11N60C3,N,600V,11A,0.38,3	1	SNA
..4		0604-001466	PHOTO-COUPLER;TR,130~260,250mW,DIP-4,ST	3	SA
..4		1203-000242	IC-POSI.FIXED REG.;7812,TO-220,3P,-,PLAS	1	SNA
..4		1203-001006	IC-POSI.FIXED REG.;78R05,TO-220F,4P,-,PL	1	SNA
..4		1203-003282	IC-NEGA.FIXED REG.;KIA7905,TO220IS,3P,PL	1	SA
..4		1203-005211	IC-PWM CONTROLLER;ICE3BR4765J,DIP,8P,9.4	1	SA
..4		1203-006090	IC-PWM CONTROLLER;ICE2QS03,DIP,8P,9.52x6	1	SA
..4		1404-001195	THERMISTOR-NTC;5.1ohm,3.84A,3000K,21mW/C	1	SA
..4		1405-000152	VARISTOR;560V,455Vdc,2500A,14x8.5mm,TP,9	1	SA
..4		2201-000963	C-CERAMIC,DISC;1nF,20%,400V,Y5U,9.5x6mm,	2	SNA
..4		2201-000987	C-CERAMIC,DISC;2.2nF,20%,400V,Y5U,TP,12.	1	SA

Exploded Views and Parts List

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
...4		2301-001730	C-FILM,MPEF;470nF,10%,275V,BK,11x18x18.5	1	SNA
...4		2301-001788	C-FILM,MPEF;220nF,10%,275V,BK,18x7.5x13.	1	SA
...4		2301-002070	C-FILM,LEAD-PPF;470nF,5%,100V,TP,4.0x10.	1	SA
...4		2401-003069	C-AL;470uF,20%,50V,WT,TP,10x20mm,5	2	SA
...4		2401-003785	C-AL;1000UF,20%,16V,WT,TP,10X20MM,5	2	SNA
...4		2401-003850	C-AL;1000UF,20%,50V,WT,TP,12.5 X 25,5	2	SNA
...4		2401-004447	C-AL;680uF,20%,50V,LZ,TP,12.5x25mm,5mm	2	SNA
...4		2401-004723	C-AL;220uF,20%,450V,BK,30*25,10mm	1	SNA
...4		3404-001278	SWITCH-TACT;12V DC,50mA,160gf,7.5x10.6x7	1	SNA
...4	EH01	3711-000028	HEADER-BOARD TO CABLE;BOX,4P,1R,2MM,STRA	1	SA
...4	EH01	3711-000178	HEADER-BOARD TO CABLE;1WALL,2P,1R,3.96mm	1	SA
...4	EH01	3711-000203	HEADER-BOARD TO CABLE;1WALL,2P/3P,1R,7.9	1	SA
...4	SCREW	6003-000276	SCREW-TAPTYPE;BH,+,-,B,M3,L10,ZPC(WHT),S	6	SA
...4		AH26-00372A	TRANS SWITCHING;ER3541,SWA-5000,PS-WC450	1	SA
...4		AH26-00373A	TRANS SWITCHING;EE1614,SWA-5000,PS-WC450	1	SA
...4		AH27-00080A	COIL FILTER;1016P-02-180L,18uH,30mohm,19	1	SNA
...4	LF2_1	AH29-00016B	FILTER LINE;HT-Z320,TR16 4.0mH,0.08,-,4.	2	SA
...4	LF2_2	AH29-00023A	FILTER LINE;LF-0705VB,LF-0705VB,5.2mohm,	1	SA
...4	AH260	AH61-02854A	HOLDER-HEATSINK;HT-BD1250,HIPS V0,2.0mm,	2	SNA
...4	AH020	AH62-00204A	HEAT SINK;HT-Z320,A6063S-T5,-,15,11,SILV	3	SNA
...4		AH62-00233A	HEAT SINK-PART;HW-C450,A6063,4.3,13,50.8	1	SNA
...4	AH020	AH62-30122G	HEAT SINK;SWA-5000,A6063,NTR,SMPS	1	SNA
...4		AH68-50254B	LABEL-SERIAL;-,-,TETRON,T0.1,W42,L10,-,-	1	SNA
...4	AP028	AH69-02916A	PAD-THERMAL;SWA-5000,RUBBER,1.0,5.8,28,B	1	SNA
...4		AH97-10392A	ASSY AUTO-SUB AMP;HW-F450 ZF,220V,AH94-0	1	SNA
....5	DS01A	0401-000005	DIODE-SWITCHING;1N4148,75V,150mA,DO-35,T	1	SA
....5	DR01A	0402-000012	DIODE-RECTIFIER;UF4007,1000V,1A,DO-41,TP	2	SA
....5	DR01A	0402-000351	DIODE-RECTIFIER;1N4937,600V,1A,DO-41,TP	1	SA
....5		0404-001409	DIODE-SCHOTTKY;SR2A0,100V,2000mA,DO-15,T	4	SA
....5		2002-001115	R-COMPOSITION;1.5Mohm,5%,1/2W,AA,TP,4x12	1	SA
....5		2003-000994	R-METAL OXIDE(S);33Kohm,5%,2W,AF,TP,3.9x	2	SA
....5		2003-001042	R-METAL OXIDE(S);5.6Kohm,5%,2W,AF,TP,3.9	6	SA
....5		2003-002239	R-METAL OXIDE(S);100Kohm,5%,2W,AF,TP,3.9	1	SA
....5		2003-002454	R-METAL OXIDE;0.22ohm,5%,1W,AF,TP,3.8x10	2	SA
....5		2201-000012	C-CERAMIC,DISC;22nF,10%,1000V,Y5P,TP,6.	1	SA
....5		2201-000129	C-CERAMIC,DISC;1nF,10%,1000V,Y5P,TP,7x4	1	SNA
....5		2201-002065	C-CERAMIC,DISC;.047nF,10%,1000V,SL,TP,6.	1	SNA
....5		2305-001016	C-FILM,LEAD-PEF;10nF,10%,630V,TP,12.5x6.	3	SNA
....5		2401-000287	C-AL;100uF,20%,16V,WT,TP,6.3x11,5	2	SA
....5		2401-000480	C-AL;10uF,20%,50V,GPTP,5x11,5	1	SNA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
....5		2401-000970	C-AL;22uF,20%,50V,WT,TP,5x11,5	1	SNA
....5		2401-001358	C-AL;470uF,20%,10V,WT,TP,8x11.5mm,5	2	SA
....5		3601-001496	FUSE-RADIAL LEAD;250V,5A,TIME DELAY,RESI	1	SNA
....5	PBS01	AC27-92001M	COIL-INDUCTOR;RH3.5x6.5RS,BEAD(RADIAL),T	8	SA
....5		AH97-10393A	ASSY SMD-SUBWOOFER;SBF4,AH94-03055A	1	SNA
....6		0202-001459	SOLDER-CREAM;S3X58-M405,D20~38um,96.5Sn/	1	SNA
....6	DS01A	0401-001099	DIODE-SWITCHING;1N4148WS,75V,150mA,SOD-3	7	SA
....6	DS01A	0401-001166	DIODE-SWITCHING;BAV20WS-V,150V,250mA,SOD	1	SA
....6	DR01A	0402-000309	DIODE-RECTIFIER;1SR154-400,400V,1A,SOD-1	7	SC
....6	DR01A	0402-001427	DIODE-RECTIFIER;ES1D,200V,1A,DO-214AC,TP	1	SA
....6		0403-001062	DIODE-ZENER;UDZSNP4.7B,4.55/4.75V,200mW,	2	SA
....6		0403-001083	DIODE-ZENER;UDZSNP9.1B,8.85/9.23V,200mW,	1	SNA
....6		0403-001483	DIODE-ZENER;UDZS18B,17.56-18.35V,200mW,S	5	SA
....6		0403-001785	DIODE-ZENER;NZH5V1B,4.94/5.2V,500mW,SOD-	2	SA
....6		0501-000002	TR-SMALL SIGNAL;KSA812,PNP,150mW,SOT-23,	4	SNA
....6		0501-000341	TR-SMALL SIGNAL;KSC1623-L,NPN,200mW,SOT-	4	SA
....6		0501-000457	TR-SMALL SIGNAL;MMBT2222A/KST2222A,NPN,3	3	SA
....6		0501-000462	TR-SMALL SIGNAL;MMBT2907A,PNP,350mW,SOT-	1	SNA
....6		0501-000479	TR-SMALL SIGNAL;KST42,NPN,350mW,SOT-23,T	3	SA
....6		0501-000481	TR-SMALL SIGNAL;KST92,PNP,350mW,SOT-23,T	1	SA
....6		0504-000128	TR-DIGITAL;FJV3103R,NPN,200mW,22K/22Kohm	3	SA
....6		0504-000156	TR-DIGITAL;KSR2103,PNP,200MW,22K/22K,SOT	1	SA
....6		0505-002365	FET-SILICON;IRF6645,N,100V,5.7A,0.035ohm	2	SNA
....6	EL02	0601-001226	LED;SMD(TOP VIEW),RED,1.2x0.8mm,660nm,1.	1	SA
....6		1003-002143	IC-GATE DRIVER;IRS2092STRPBF,SOP,16P,9.9	1	SA
....6		1201-000163	IC-OP AMP;4560,SOP,8P,173MIL,DUAL,100V/m	1	SA
....6		1203-004363	IC-VOL. DETECTOR;SOT-23,3Z30,2.9x1.6mm,P	1	SA
....6		1203-004364	IC-VOL. DETECTOR;RT9818C-42PV,SOT-23,3P,	1	SA
....6		1203-006266	IC-POSIFIXED REG.;AP1117E33GZ-13-89,SOT	1	SA
....6		1203-007693	IC-POSILADJUST REG.;TL432BSA,SOT23,3Z30,	2	SA
....6		1204-003425	IC-MODULATOR;UB2130,TQFP,64Z30,7x7x1mm,P	1	SA
....6		1404-001483	THERMISTOR-PTC;470ohm,50%,32V,TP	1	SA
....6		1405-001192	VARISTOR;12Vdc,30A,1.6x0.8x0.55mm,TP,50V	2	SA
....6		2007-000033	R-CHIP;0ohm,5%,1/4W,TP,3216	1	SA
....6		2007-000052	R-CHIP;10Kohm,1%,1/10W,TP,1608	6	SA
....6		2007-000070	R-CHIP;0ohm,5%,1/10W,TP,1608	5	SA
....6		2007-000071	R-CHIP;22ohm,5%,1/10W,TP,1608	2	SA
....6		2007-000072	R-CHIP;47ohm,5%,1/10W,TP,1608	12	SNA
....6		2007-000074	R-CHIP;100ohm,5%,1/10W,TP,1608	4	SNA
....6		2007-000075	R-CHIP;220ohm,5%,1/10W,TP,1608	3	SA

## Exploded Views and Parts List

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
.....6		2007-000076	R-CHIP;330ohm,5%,1/10W,TP,1608	1	SNA
.....6		2007-000077	R-CHIP;470ohm,5%,1/10W,TP,1608	1	SA
.....6		2007-000078	R-CHIP;1Kohm,5%,1/10W,TP,1608	3	SA
.....6		2007-000079	R-CHIP;1.8Kohm,5%,1/10W,TP,1608	5	SA
.....6		2007-000082	R-CHIP;3.3Kohm,5%,1/10W,TP,1608	2	SA
.....6		2007-000083	R-CHIP;3Kohm,5%,1/10W,TP,1608	4	SNA
.....6		2007-000084	R-CHIP;4.7Kohm,5%,1/10W,TP,1608	12	SA
.....6		2007-000086	R-CHIP;5.6Kohm,5%,1/10W,TP,1608	1	SNA
.....6		2007-000087	R-CHIP;6.8Kohm,5%,1/10W,TP,1608	3	SA
.....6		2007-000090	R-CHIP;10Kohm,5%,1/10W,TP,1608	10	SA
.....6		2007-000094	R-CHIP;22Kohm,5%,1/10W,TP,1608	5	SNA
.....6		2007-000097	R-CHIP;47Kohm,5%,1/10W,TP,1608	10	SA
.....6		2007-000100	R-CHIP;68Kohm,5%,1/10W,TP,1608	2	SNA
.....6		2007-000102	R-CHIP;100Kohm,5%,1/10W,TP,1608	5	SA
.....6		2007-000109	R-CHIP;1Mohm,5%,1/10W,TP,1608	2	SA
.....6		2007-000113	R-CHIP;33ohm,5%,1/10W,TP,1608	2	SA
.....6		2007-000116	R-CHIP;120ohm,5%,1/10W,TP,1608	1	SNA
.....6		2007-000118	R-CHIP;390ohm,5%,1/10W,TP,1608	4	SA
.....6		2007-000121	R-CHIP;820ohm,5%,1/10W,TP,1608	1	SA
.....6		2007-000123	R-CHIP;1.5Kohm,5%,1/10W,TP,1608	5	SA
.....6		2007-000124	R-CHIP;2.2Kohm,5%,1/10W,TP,1608	1	SNA
.....6		2007-000129	R-CHIP;27Kohm,5%,1/10W,TP,1608	1	SA
.....6		2007-000131	R-CHIP;91Kohm,5%,1/10W,TP,1608	1	SNA
.....6		2007-000134	R-CHIP;33Kohm,5%,1/10W,TP,1608	2	SNA
.....6		2007-000253	R-CHIP;1.5ohm,5%,1/4W,TP,3216	2	SA
.....6		2007-000303	R-CHIP;10Kohm,5%,1/4W,TP,3216	1	SNA
.....6		2007-000309	R-CHIP;10ohm,5%,1/10W,TP,1608	1	SNA
.....6		2007-000312	R-CHIP;10ohm,5%,1/4W,TP,3216	2	SA
.....6		2007-000336	R-CHIP;120Kohm,1%,1/10W,TP,1608	1	SA
.....6		2007-000483	R-CHIP;1ohm,5%,1/8W,TP,2012	1	SNA
.....6		2007-000491	R-CHIP;2.2Kohm,1%,1/10W,TP,1608	2	SA
.....6		2007-000496	R-CHIP;2.2Kohm,5%,1/4W,TP,3216	1	SA
.....6		2007-000503	R-CHIP;2.2ohm,5%,1/10W,TP,1608	1	SA
.....6		2007-000504	R-CHIP;2.2ohm,5%,1/4W,TP,3216	2	SA
.....6		2007-000512	R-CHIP;2.4Kohm,5%,1/10W,TP,1608	2	SNA
.....6		2007-000552	R-CHIP;20ohm,5%,1/10W,TP,1608	2	SA
.....6		2007-000598	R-CHIP;22ohm,5%,1/4W,TP,3216	1	SNA
.....6		2007-000683	R-CHIP;3.3Kohm,1%,1/10W,TP,1608	1	SA
.....6		2007-000821	R-CHIP;390ohm,1%,1/10W,TP,1608	1	SNA
.....6		2007-000882	R-CHIP;4.7ohm,5%,1/10W,TP,1608	3	SA

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
....6		2007-000939	R-CHIP;47Kohm,1%,1/10W,TP,1608	1	SNA
....6		2007-000940	R-CHIP;47Kohm,1%,1/4W,TP,3216	1	SNA
....6		2007-001068	R-CHIP;6.8Kohm,1%,1/10W,TP,1608	2	SA
....6		2007-001179	R-CHIP;8.2Kohm,5%,1/10W,TP,1608	2	SNA
....6		2007-001318	R-CHIP;1Kohm,5%,1/4W,TP,3216	1	SA
....6		2007-001333	R-CHIP;18Kohm,5%,1/16W,TP,1005	1	SA
....6		2007-002425	R-CHIP;1ohm,5%,1/10W,TP,1608	2	SNA
....6		2007-002899	R-CHIP;10ohm,1%,1/10W,TP,1608	2	SA
....6		2007-007065	R-CHIP;10ohm,5%,1W,TP,6432	1	SA
....6		2007-007790	R-CHIP;20ohm,1%,1W,TP,6432	4	SNA
....6	AD480	2203-000236	C-CER,CHIP;0.1nF,5%,50V,C0G,TP,1608	3	SNA
....6	AD480	2203-000257	C-CER,CHIP;10nF,10%,50V,X7R,TP,1608	2	SA
....6	AD480	2203-000440	C-CER,CHIP;1nF,10%,50V,X7R,TP,1608	5	SNA
....6	AD480	2203-000626	C-CER,CHIP;0.022nF,5%,50V,C0G,TP,1608	2	SNA
....6	AD480	2203-000888	C-CER,CHIP;4.7nF,10%,50V,X7R,TP,1608	11	SNA
....6	AD480	2203-000975	C-CER,CHIP;47nF,10%,25V,X7R,TP,1608	1	SNA
....6	AD480	2203-000979	C-CER,CHIP;47nF,10%,50V,X7R,TP,2012	1	SA
....6	AD480	2203-001386	C-CER,CHIP;100nF,10%,100V,X7R,TP,3216	2	SNA
....6	AD480	2203-001428	C-CER,CHIP;470nF,10%,50V,X7R,TP,2012	2	SNA
....6	AD480	2203-001554	C-CER,CHIP;1.8nF,10%,50V,X7R,TP,1608	1	SA
....6	AD480	2203-001607	C-CER,CHIP;0.22nF,5%,50V,NP0,TP,1608	1	SNA
....6	AD480	2203-002398	C-CER,CHIP;22nF,10%,50V,X7R,TP,1608	1	SNA
....6	AD480	2203-005249	C-CER,CHIP;100nF,10%,50V,X7R,TP,1608	43	SNA
....6	AD480	2203-005565	C-CER,CHIP;1nF,5%,50V,C0G,TP,1608	3	SA
....6	AD480	2203-006361	C-CER,CHIP;1000nF,10%,10V,X5R,TP,2012	7	SC
....6	AD480	2203-006698	C-CER,CHIP;1000nF,10%,25V,X7R,TP,1608,0.	4	SA
....6	AD480	2203-007269	C-CER,CHIP;22000nF,20%,10V,X5R,TP,2012,0	1	SNA
....6	AD480	2203-007306	C-CER,CHIP;10000nF,10%,25V,X5R,TP,2012,1	6	SNA
....6	AD480	2203-007370	C-CER,CHIP;10000nF,10%,10V,X7R,TP,2012	7	SA
....6	AD480	2203-007486	C-CER,CHIP;1000nF,10%,50V,X5R,TP,1608	2	SNA
....6		2402-001081	C-AL,SMD;100uF,20%,25V,WT,TP,8.3x8.3x10	1	SA
....6		2402-001166	C-AL,SMD;22UF,20%,50V,GP,TP,6.3MMX5.4MM	1	SNA
....6		2801-004371	CRYSTAL-SMD;12.288MHz,50ppm,SX-1,18pF,50	1	SNA
....6		3301-001404	BEAD-SMD;30ohm,2012,TP,15.9OHM/30MHz,-	8	SA
....6		3708-001765	CONNECTOR-FPC/FFC/PIC;24P,0.5mm,SMD-S,SN	1	SA
....6		AH41-01594A	PCB-AMP;SWA-6000 AMP PCB,FR-4,2,0,1.2T,1	1	SNA
1		AH92-04258J	ASSY LABEL;HW-F450,SBF4	1	SNA
.2		AH68-02601K	LABEL-POP STICKER;HW-F450,ZS,PET,W120,L3	1	SNA
.2		AK68-02233C	LABEL RATING;BD-E,XS,KR,RU,ZW,ART PAPER,	1	SNA
1	ACCE1	AH92-04304N	ASSY ACCESSORY;HW-F450,SBF4	1	SNA

Exploded Views and Parts List

Level	Loc.	Part Code	Description & Specification	Qty.	SA/SNA
.2	REMO2	AH59-02547B	REMOCON;32,3.0V,F450,ENG	1	SA
.2	CB20	AH61-03768A	BRACKET-WALL;HW-F450,EGI-SECC,2.0,160,BL	1	SNA
.2		AH96-02460N	ASSY ACCESSORY-MANUAL/CABLE;HW-F350,SBF4	1	SNA
..3		3301-000144	CORE-FERRITE;34.5x12.5x32.5mm,1500,2800G	1	SNA
..3		4301-000116	BATTERY-ALKALINE;1.5V,R03,10.5x44.5mm,AA	2	SNA
..3		AH39-01178A	USB CABLE;HW-E450,4P,100mm,BLK,YES,Y	1	SA
..3		AH63-02236D	SHEET-PEBAG;ALL MODEL,PE*,0.2,CLEAR	1	SNA
..3		AH68-02644C	MANUAL USERS-01;HW-F450,TK,ENG/TUR,W/P80	1	SNA
..3		AH68-50254B	LABEL-SERIAL;-,-,TETRON,T0.1,W42,L10,-,-	1	SNA
..3	EC08	BN39-01286A	CBF SIGNAL-STEREO;3p,UL2547, Audio Stand	1	SC
..3		BN68-02839E	LEAFLET-02,WARRANTY CARD;comm,Samsung,Tu	1	SNA
1		AH92-04312A	ASSY P/MATERIAL;HW-F450,SBF4	1	SNA
.2		0203-001100	TAPE-OPP MASKING;OPP/W75/CLR,T0.075,W75,	2	SNA
.2		AH63-01971D	SHEET-SET;HW-F550,SHEET,0.5,450,1100,NTR	1	SNA
.2		AH69-03522A	CUSHION-SET;HW-E450,EPS,16.7g/l	1	SNA
.2		AH69-03528A	PAD-TYPE;HW-E450,CB,W1861,D465,C1,DW1,AB	1	SNA
1		AH92-04395A	ASSY BOX;HW-F450	1	SNA
.2		AH68-01981M	LABEL-BOX;ALL MODEL,ALL BUYER,heat sensi	1	SNA
.2		AH69-03529Q	BOX-01,SET;HW-F450/XY,CB,A-01,DW2,WHT,W9	2	SNA