

SERVICE MANUAL



C 446
Digital Media Tuner

C 446

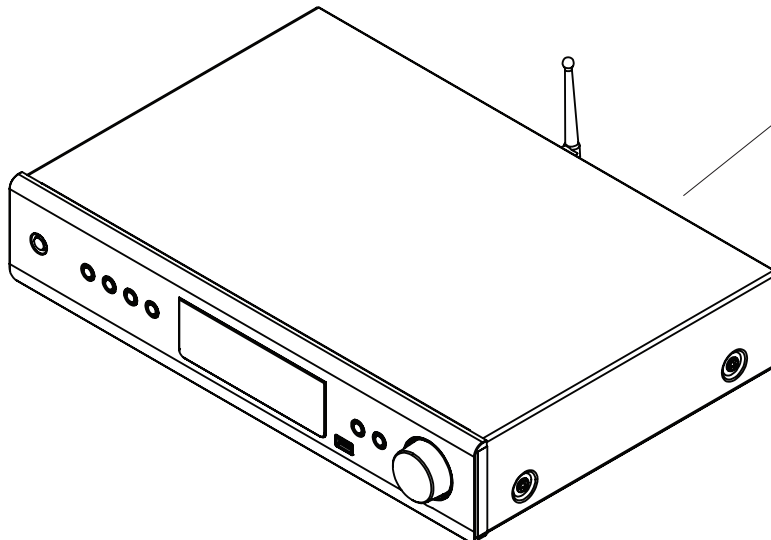
Digital Media Tuner

SAFETY INFORMATION

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NAD ELECTRONICS INTERNATIONAL
MODEL C 446 Digital Media Tuner
POWER RATING 100-240V ~ 50/60Hz 25W
CUSTOM MANUFACTURED TO NAD SPECIFICATIONS
IN THE PEOPLE'S REPUBLIC OF CHINA

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		



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REFERENCE

SPECIFICATIONS

FM SECTION

Usable Sensitivity (98 MHz)	10 dB μ
Signal/Noise Ratio	65 dB (60 dB μ IHF-WTD Mono) 60 dB (60 dB μ IHF-WTD Stereo)
Frequency Response	± 1.5 dB (20 Hz - 15 kHz, 60 dB μ)
Channel Separation (60 dB μ) - 30 Hz	33 dB
1 kHz	40 dB
10 kHz	32 dB
Capture Ratio (40 dB μ)	3 dB
AM Suppression	50 dB (60 dB μ , 100% Mod. FM, 30% Mod. AM)
Image Rejection (119.4 MHz)	70 dB
I.F. Rejection (10.7 MHz)	70 dB
Pilot Suppression (60 dB μ)	60 dB
Total Harmonic Distortion* - Mono	0.4%
Stereo	0.8%
Auto Search Sensitivity	24 dB μ
RDS Decode Sensitivity	26 dB μ

AM SECTION

Usable Sensitivity (999/1000 Hz)	55 dB μ
Signal/Noise Ratio (5 mV in)	42 dB
Total Harmonic Distortion (5 mV in)	1.5%
IF Rejection (450 kHz)	40 dB
Image Rejection (F+2xF)	28 dB
Selectivity	20 dB
Loop Sensitivity (20dB S/N) - 999/1000 Hz	66 dB
603/600 Hz	66 dB
1404/1400 Hz	66 dB
Frequency response (100 - 2.3 kHz, 5 mV)	± 6 dB

DAB SECTION

BAND 3

Tuning range	175.280 – 240.000 MHz
Large signal handling capacity	0 dBm
Sensitivity	-97 dBm
Far off selectivity	40 dB
Adjacent channel rejection	40 dB

PLAYABLE MEDIA FORMAT

WAV	up to 1.536 mbit/s
FLAC	up to 1.5 mbit/s
AAC	up to 320 kbit/s
MP3	up to 320 kbit/s
WMA	up to 320 kbit/s

INTERFACE

Wired	10/100 Ethernet
Wireless (Wi-Fi)	802.11/b/g

GENERAL SPECIFICATIONS

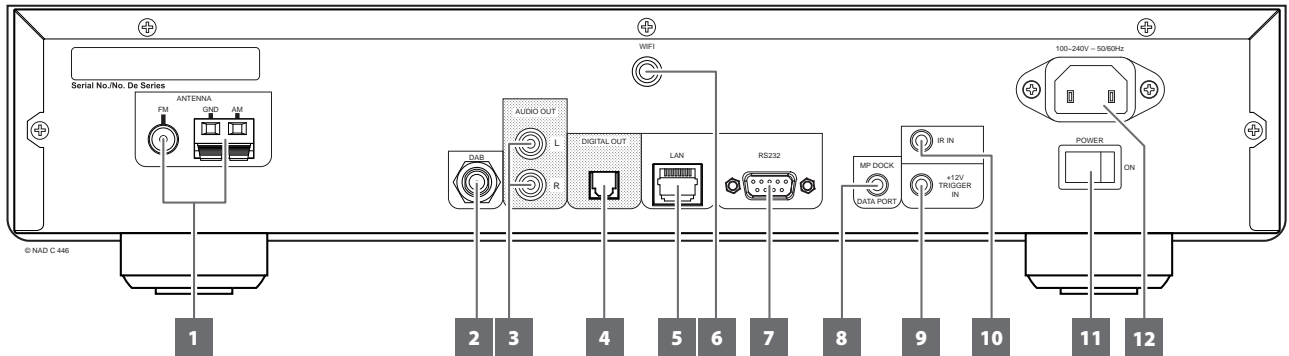
Standby power	<0.5W
Analog audio output	2 Vrms
S/PDIF audio output	3.3 V
Unit Dimension (W x H x D) - Gross	435 x 99 x 341 mm 17 ¹ / ₈ x 3 ¹⁵ / ₁₆ x 13 ⁷ / ₁₆ inches
Net weight	4.8 kg (10.6 lbs)
Shipping weight	6.5 kg (14.3 lbs)

* 60 dB μ , L=R 75 kHz for 120V version; 40 kHz Dev for 230V version)

Specifications are subject to change without notice. For updated documentation and features, please log onto www.NADelectronics.com for the latest information about C 446.

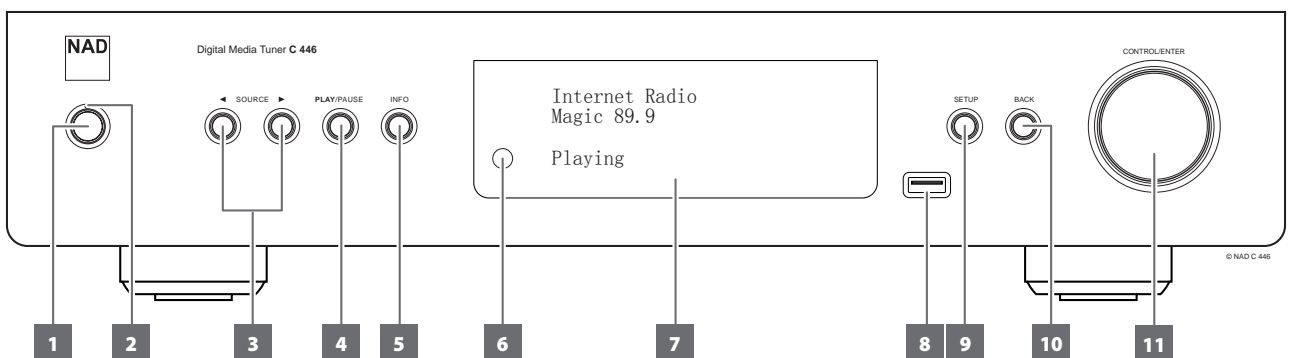
REAR PANEL / FRONT PANEL VIEW

REAR PANEL



- | | |
|--|---|
| <ul style="list-style-type: none"> 1 FM ANTENNA TERMINAL
AM ANTENNA TERMINAL 2 DAB ANTENNA TERMINAL (230V version model only) 3 AUDIO OUT 4 DIGITAL OUT 5 LOCAL AREA NETWORK (LAN) PORT 6 WIRELESS (WIFI) ANTENNA TERMINAL | <ul style="list-style-type: none"> 7 RS 232 8 MP DOCK 9 +12V TRIGGER IN 10 IR IN 11 POWER 12 AC MAINS INPUT |
|--|---|

FRONT PANEL



- | | |
|---|--|
| <ul style="list-style-type: none"> 1 STANDBY BUTTON 2 STANDBY LED 3 ◀ SOURCE ▶ 4 PLAY/PAUSE 5 INFO | <ul style="list-style-type: none"> 6 REMOTE SENSOR 7 VACUUM FLUORESCENT DISPLAY (VFD) 8 USB 9 SETUP 10 BACK 11 CONTROL/ENTER |
|---|--|

DISASSEMBLY INSTRUCTIONS

1. Remove machine screws M6.0 x 8.0 (x 7pcs) from the side panels
Refer to Figure No.1

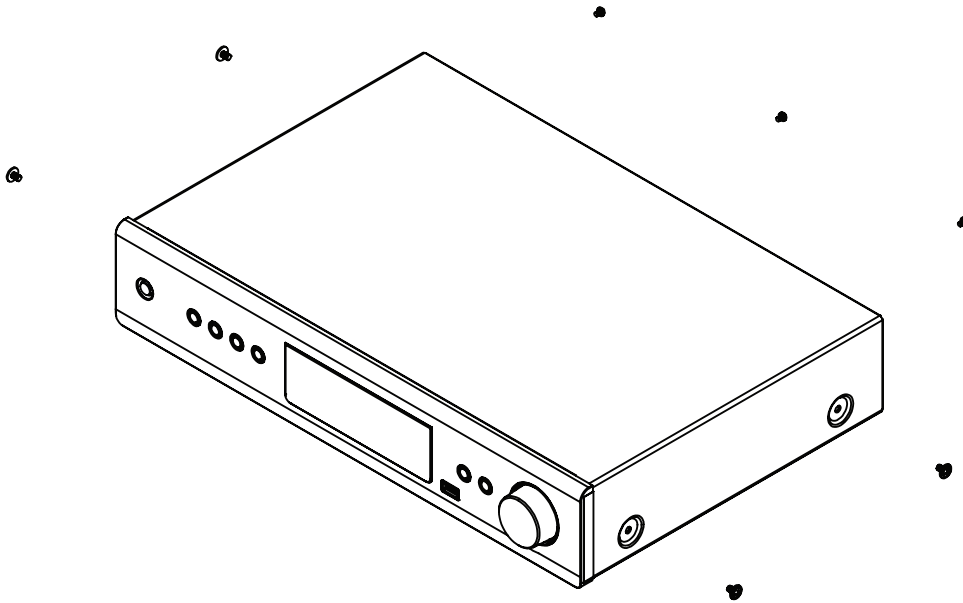


Figure No.1

2. Pull both sides of the TOP COVER slightly outwards and tilt approx. 35° and then remove in the direction as indicated.
Refer to Figure No.2

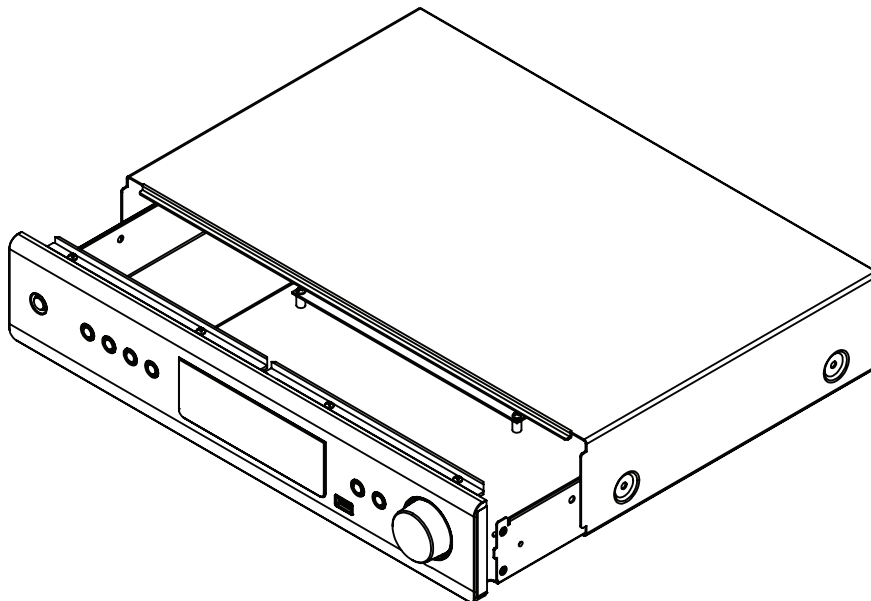
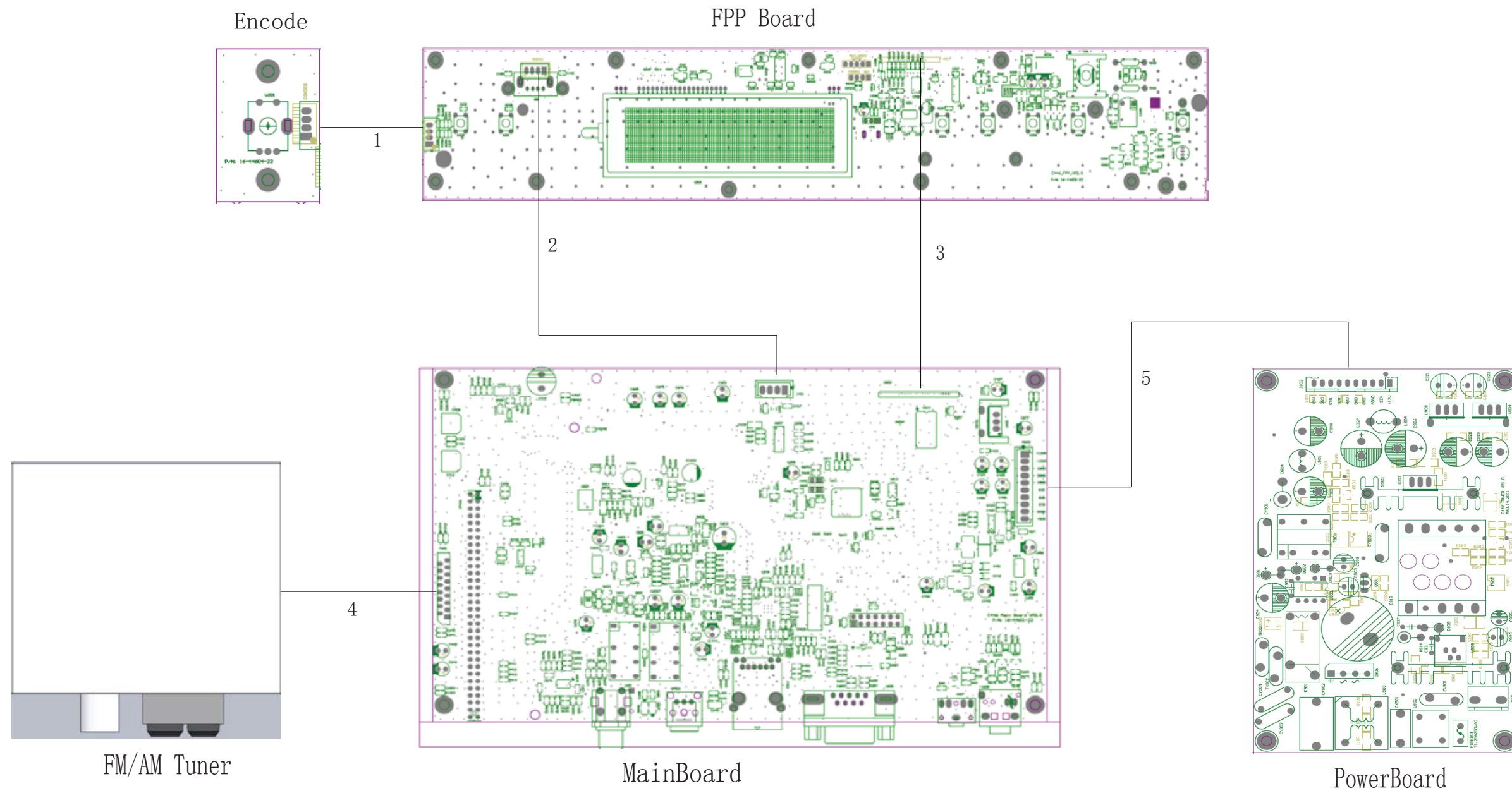


Figure No.2

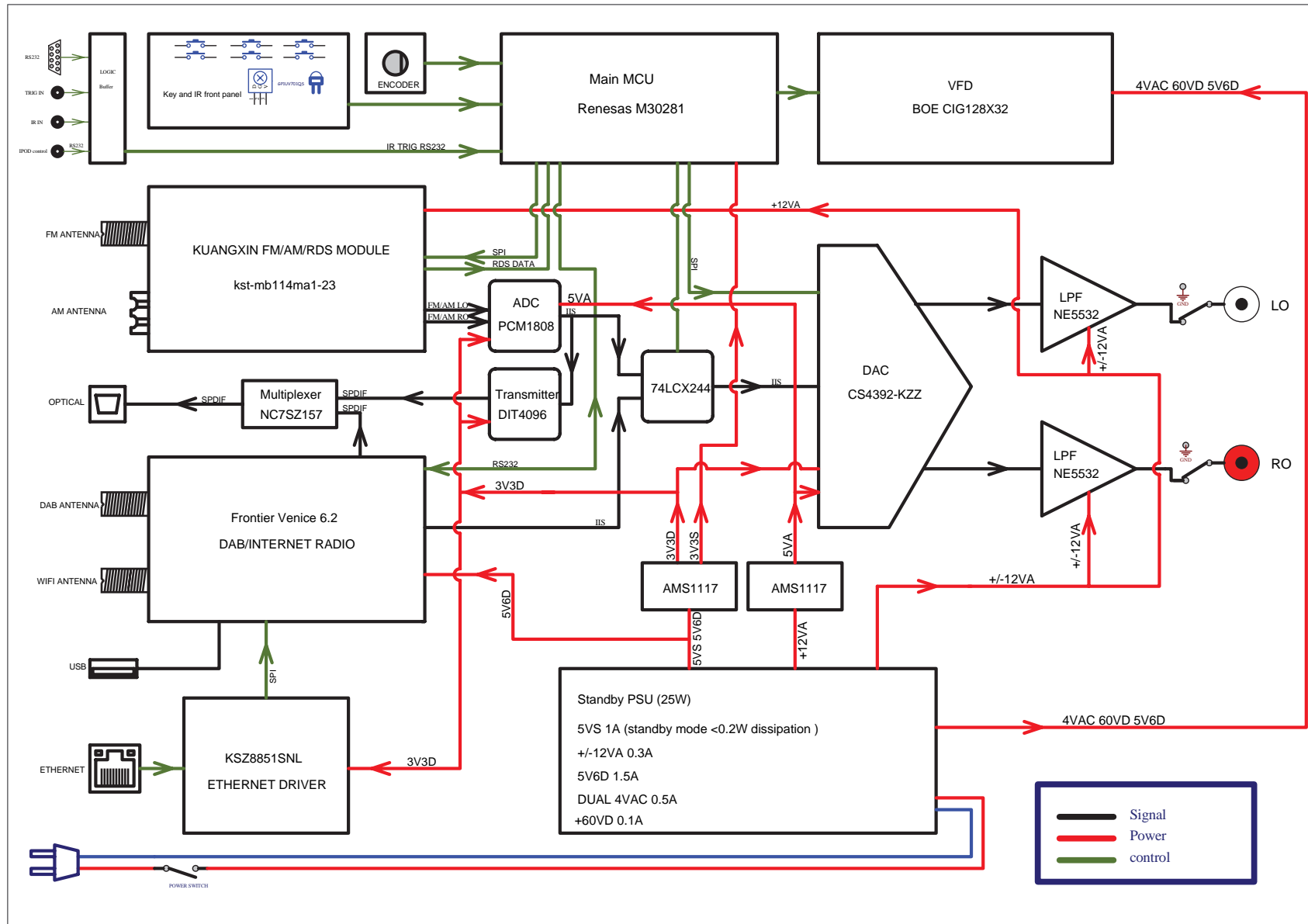
WIRING DIAGRAM



WIRING DIAGRAM PARTS LIST

ITEM	Part Number	Description	Remark
1	14-44604 -01	Cable L=80 mm	Encode to FPP Board
2	14-44604 -00	Cable L=205mm	MainBoard USB to FPPBoard USB
3	14-44624 -00	Cable L=175mm	MainBoard to FPPBoard
4	14-98017 -10	Cable L=50mm	FM/AM Tuner to MainBoard
5	14-44610-00	Cable L=200mm	PowerBoard to MainBoard

BLOCK DIAGRAM

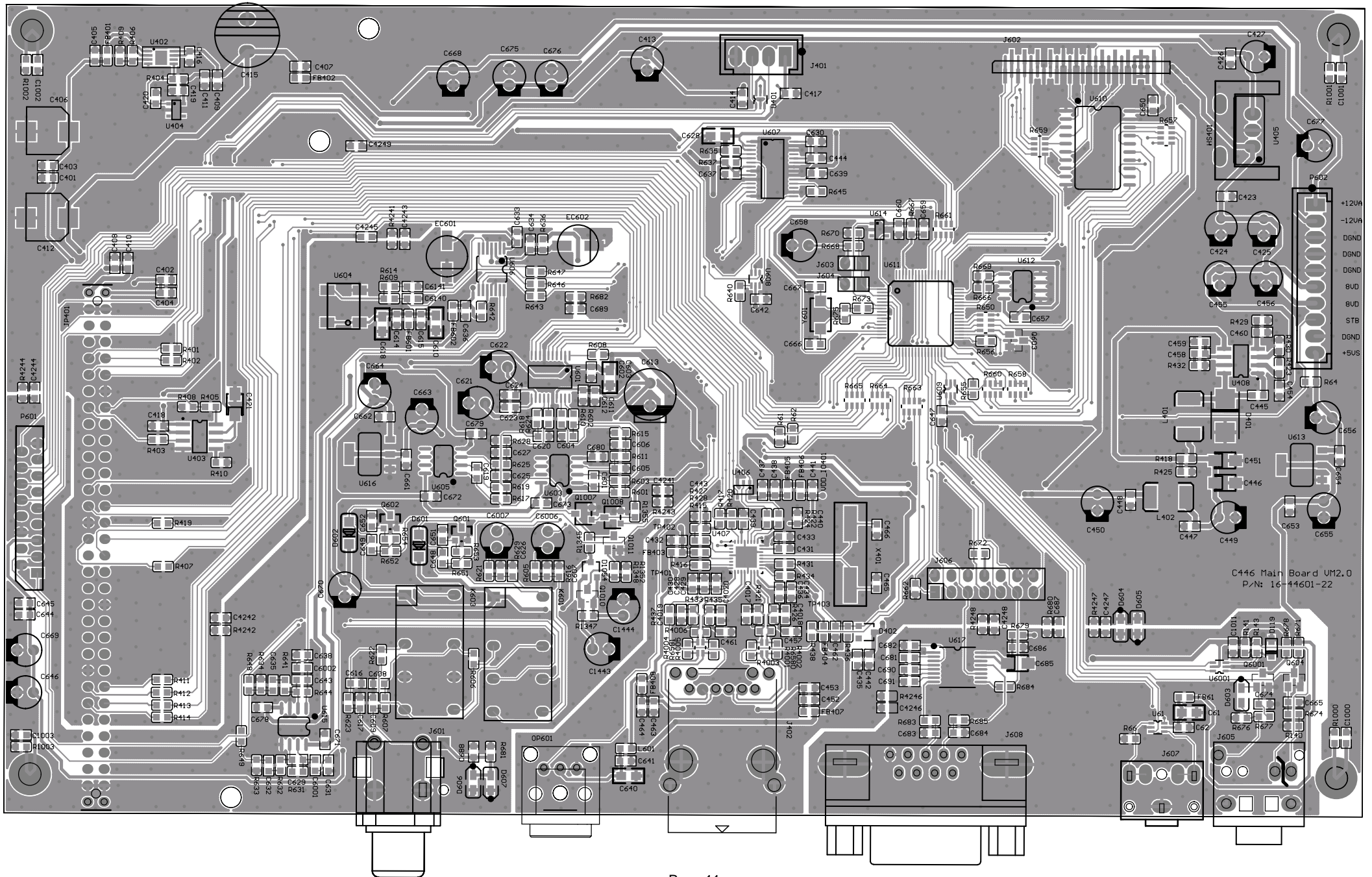


SPECIAL KEYS

Function	Keys	Notes
Reset AH	Source left + BACK	
Reset C	Source right + SETUP	
VFD Test	INFO + SETUP	

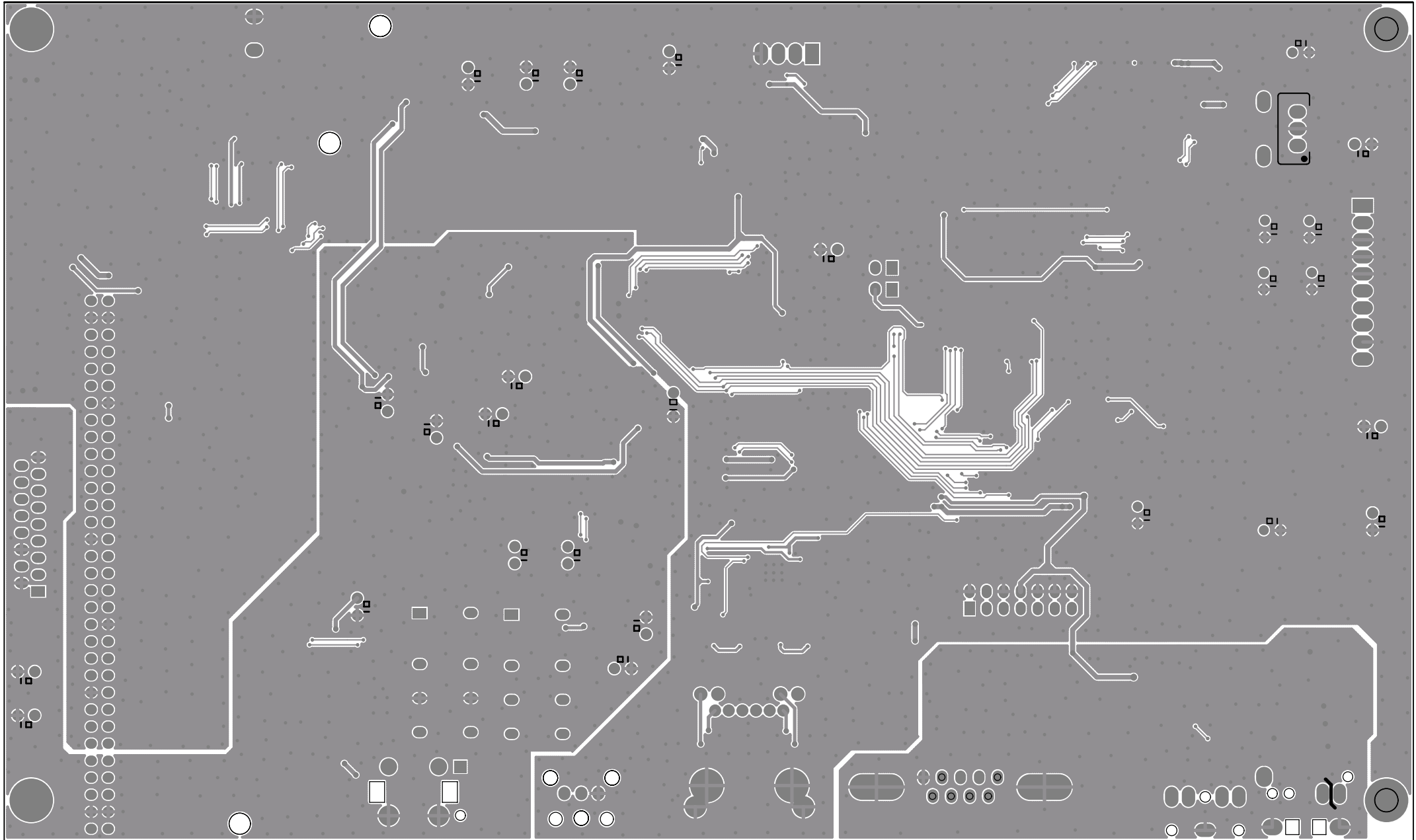
PCB LAYOUT

MAIN BOARD - TOP SIDE

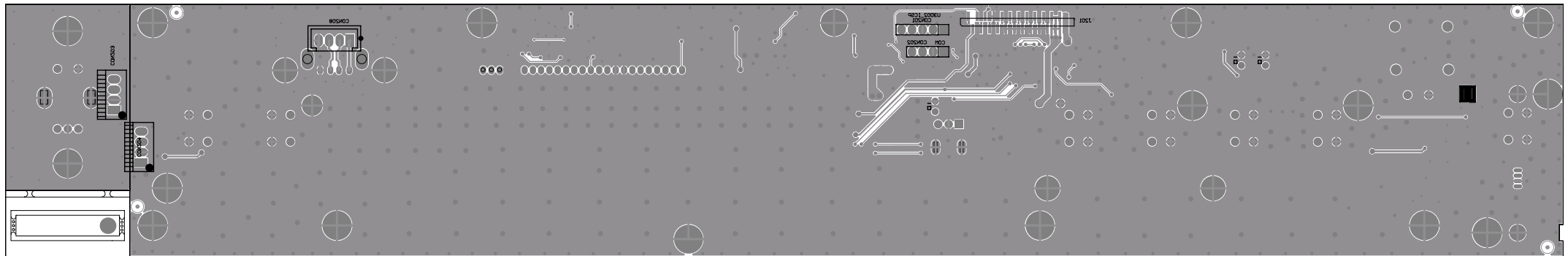


C446 Main Board UM2.0
P/N: 16-44601-22

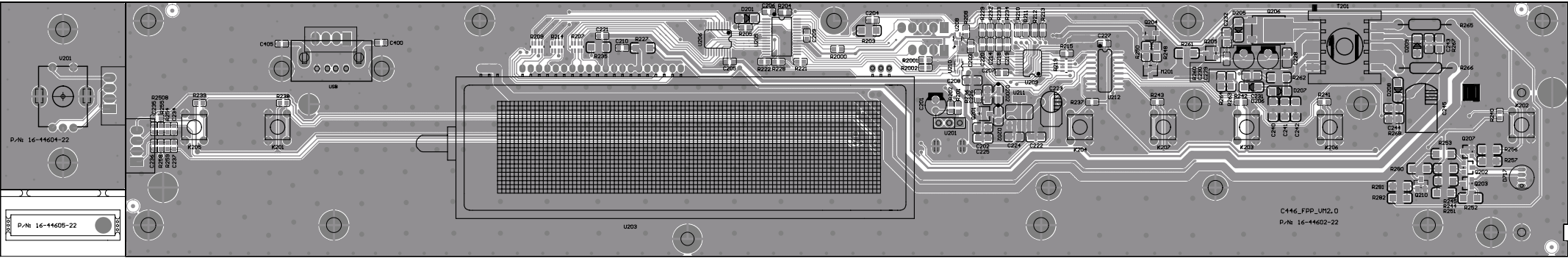
MAIN BOARD BOTTOM - SIDE



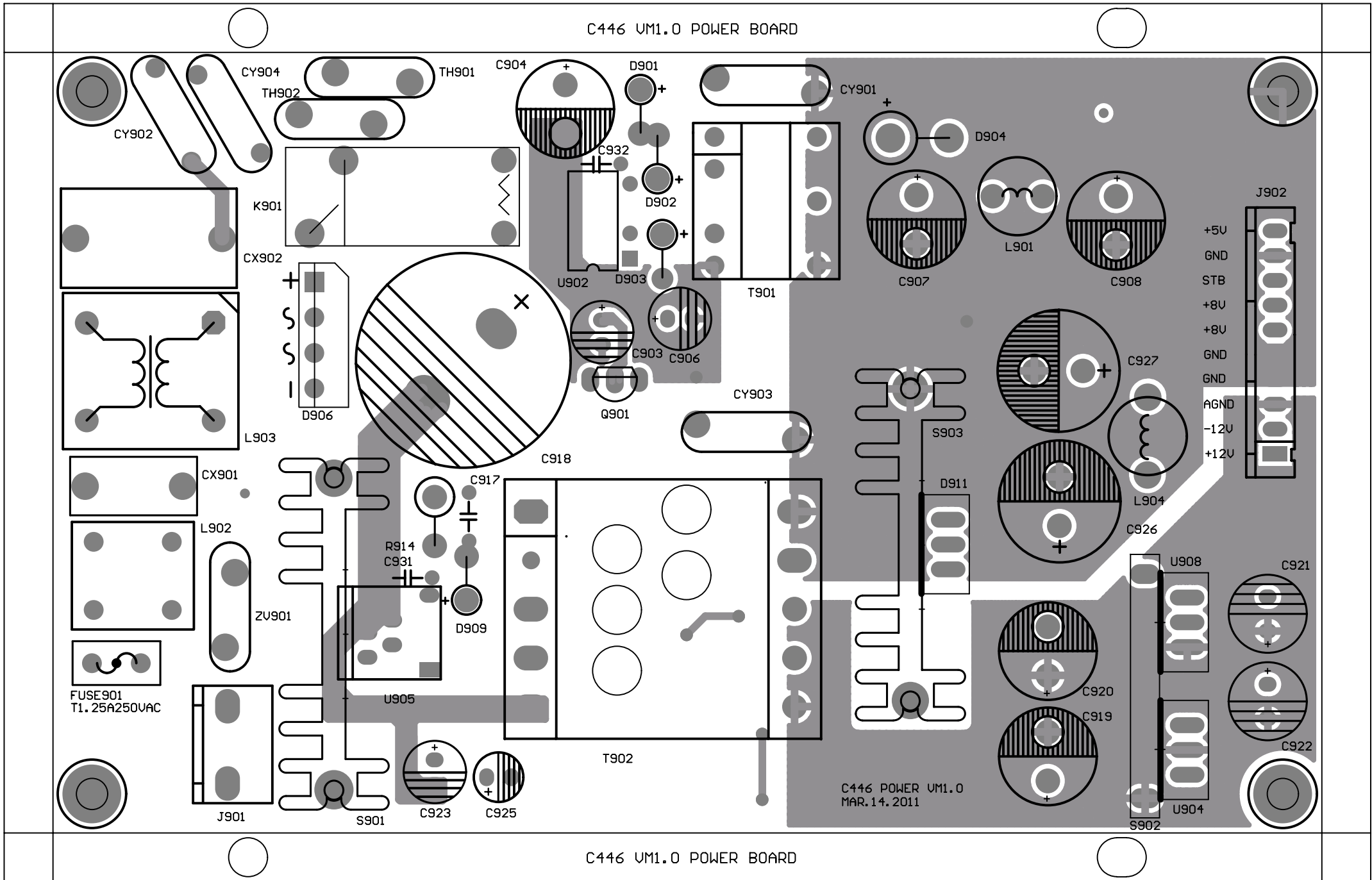
FPP BOARD - BOTTOM SIDE



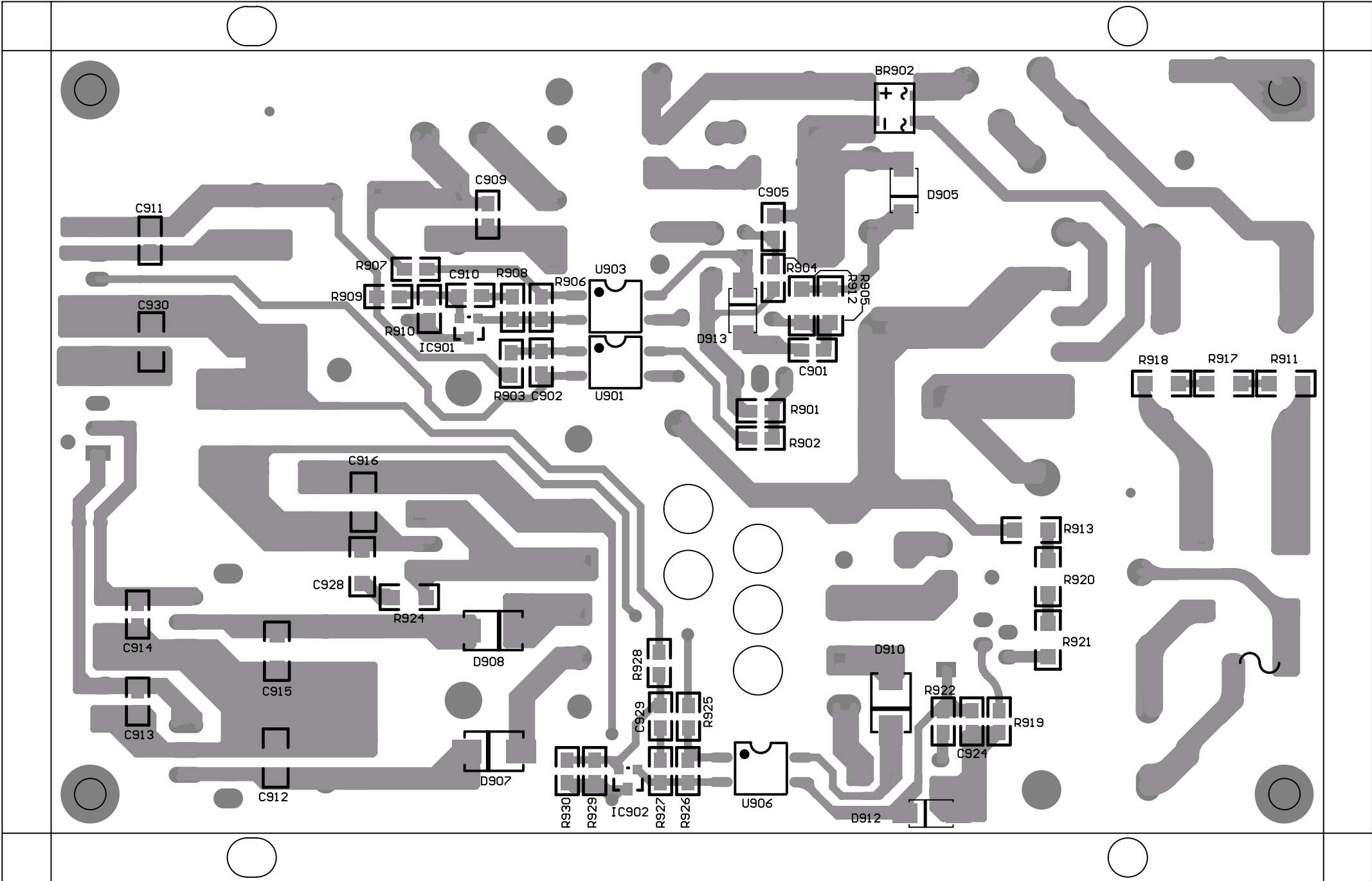
FPP BOARD – TOP SIDE



POWER BOARD - TOP SIDE

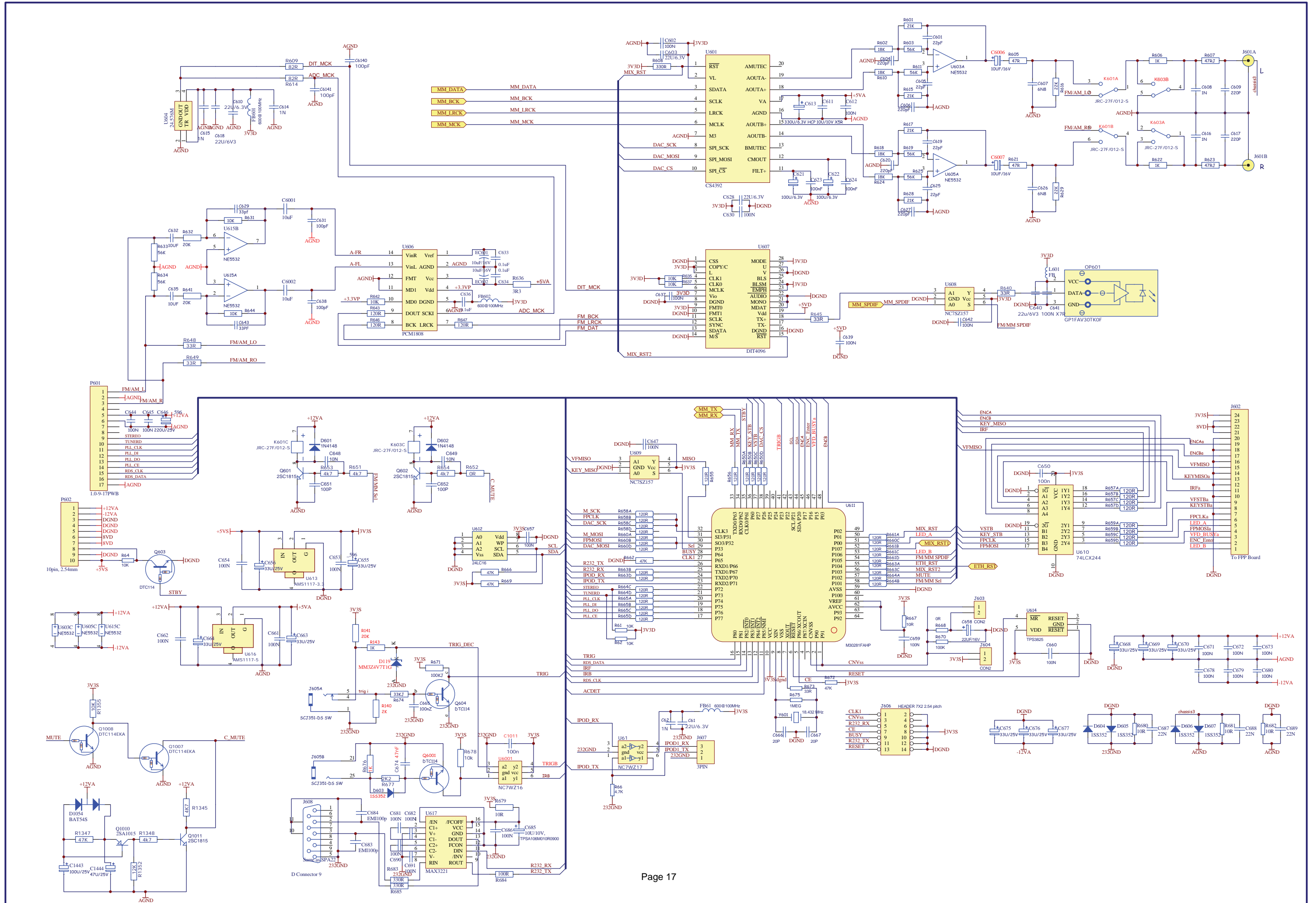


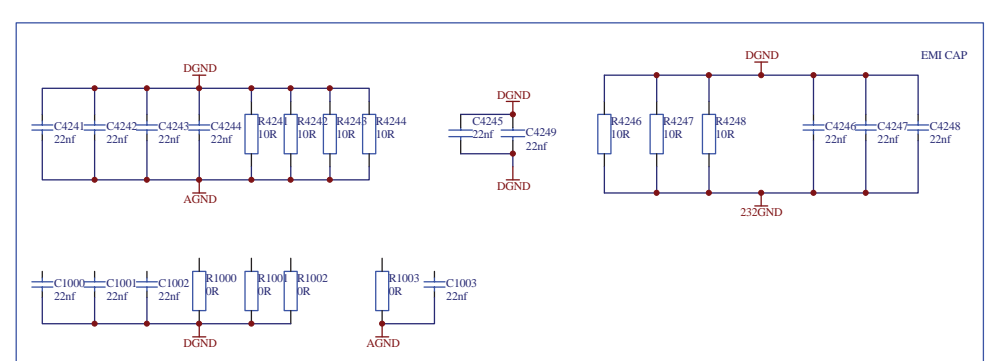
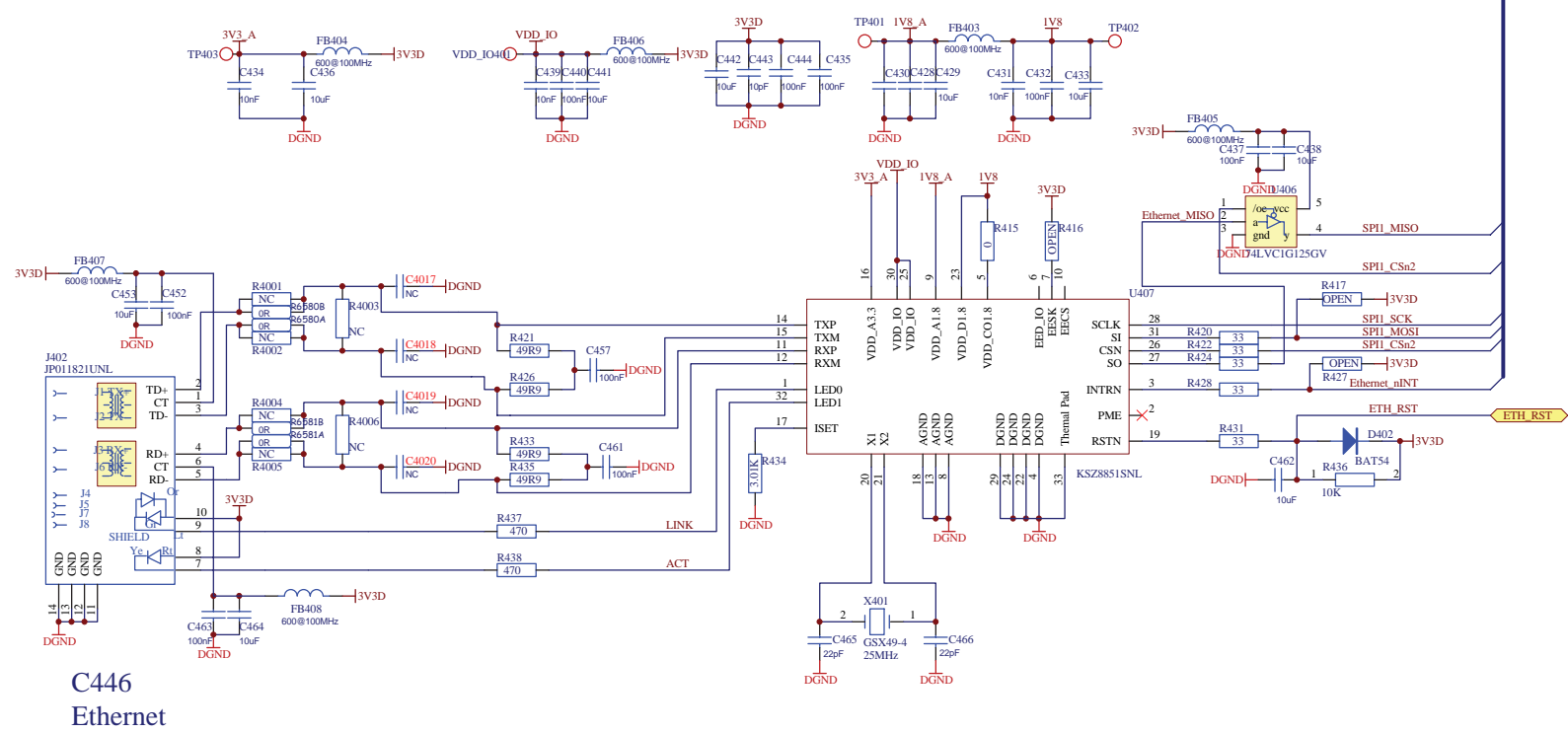
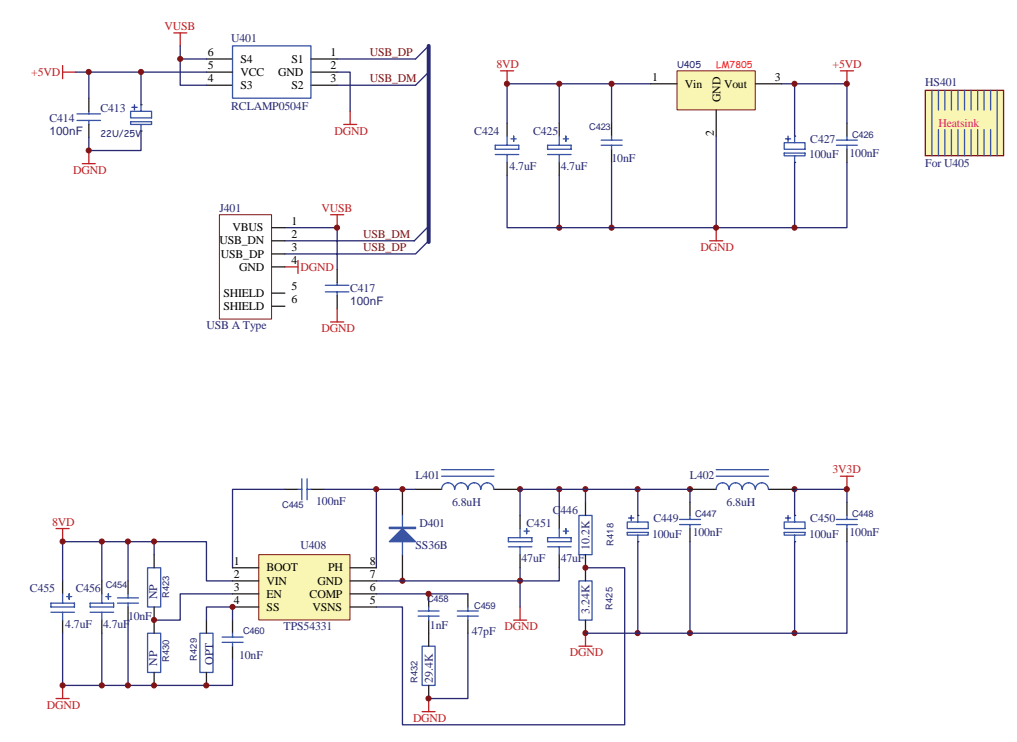
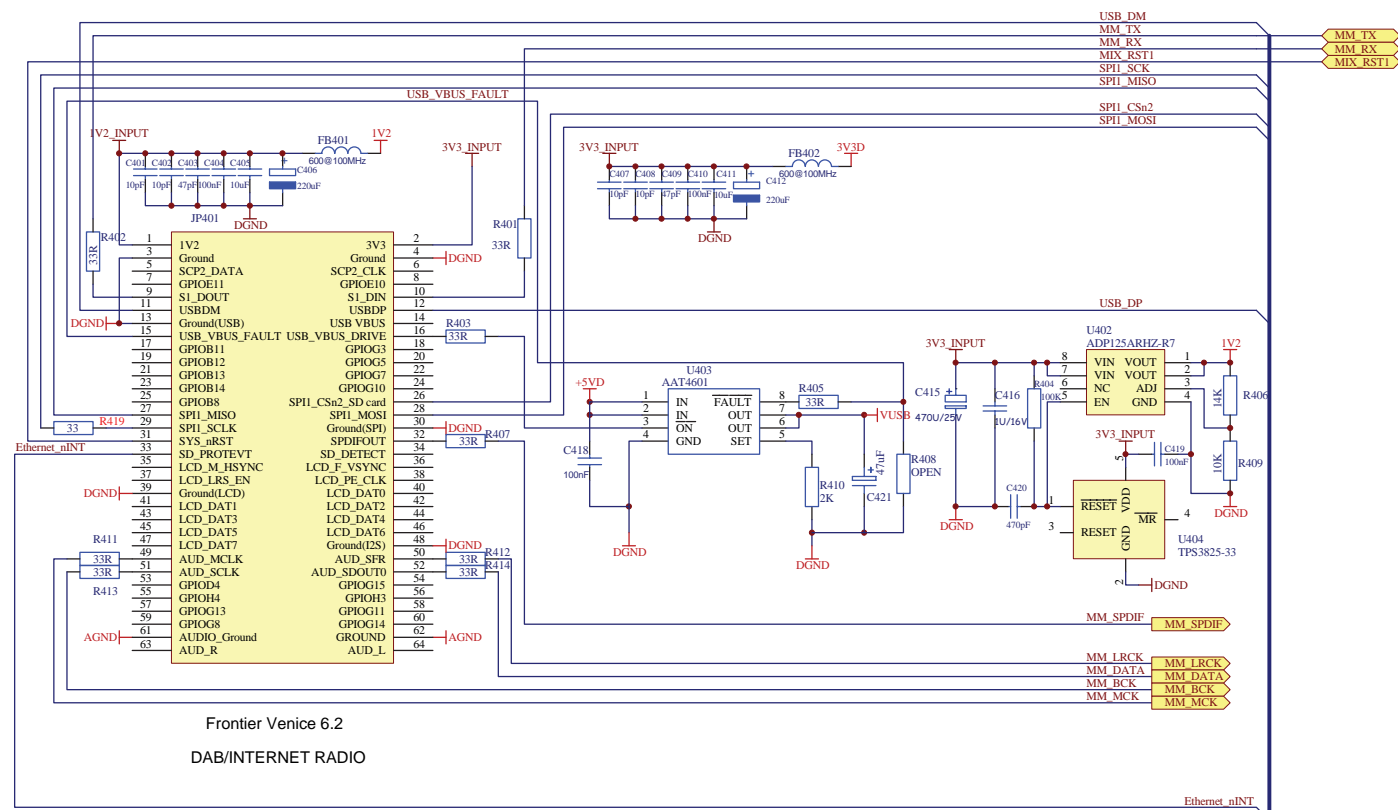
POWER BOARD - BOTTOM SIDE



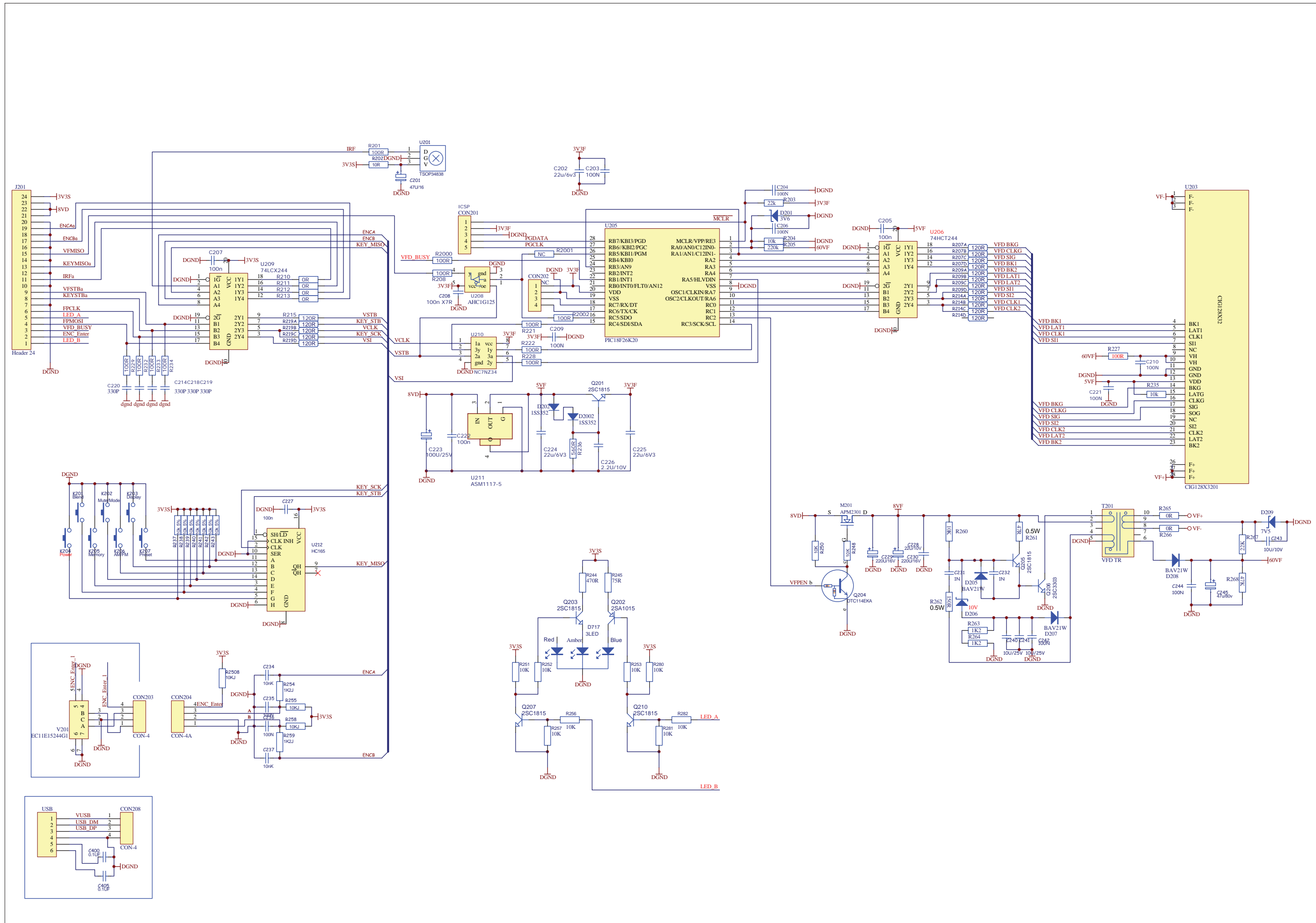
SCHEMATIC DIAGRAM

MAIN BOARD - 1

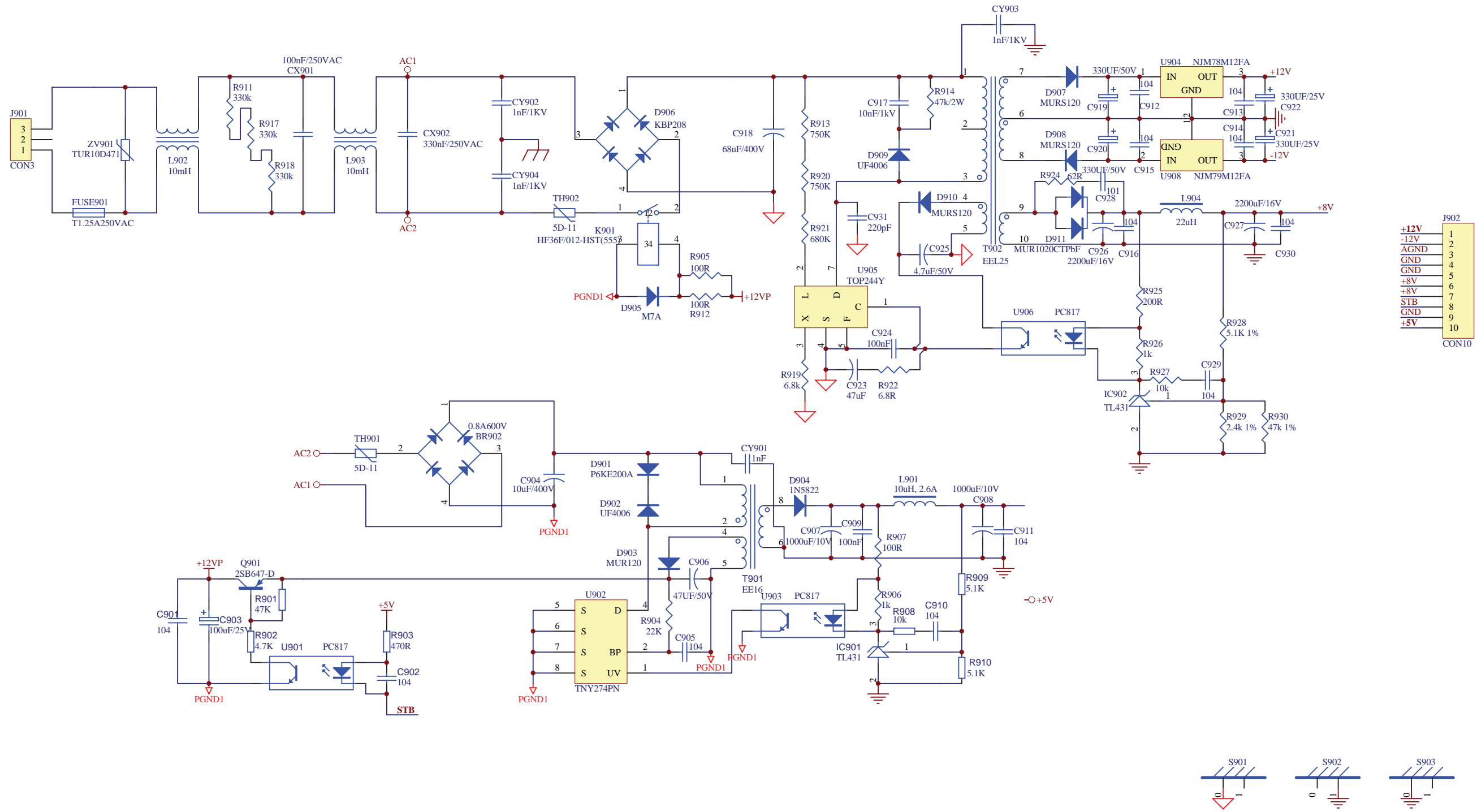




C446 Ethernet



POWER BOARD



ELECTRICAL PARTS LIST

MAIN BOARD ASSY. (AH-Version 01-44601-98) (C-Version 01-44601-99) w/o Media Module

PCB ASSEMBLY	A16-44601-22	C446 MAIN PCB w/o parts
RESISTOR		
R415, R652, R668, R1000, R1001, R1002, R1003	07-90000-00	0Ω, 0603, ±5%, RC0603JR-070RL
R636	07-90339-00	3.3Ω, 0603, 1/10W, ±5%, RC0603JR-073R3L
R667, R679, R680, R681, R682	07-91009-00	10Ω, 0603, 1/10W, ±1%, RC0603FR-0710RL
R401, R402, R403, R405, R407, R411, R412, R413, R414, R640, R645, R648, R649, R673, R419, R420, R422, R424, R428, R431	07-90330-00	33Ω, 0603, 1/10W, ±5%, RC0603JR-0733RL
R605, R621, R607, R623	07-90470-00	47Ω, 0603, 1/10W, ±5%, RC0603JR-0747RL
R421, R426, R433, R435	07-94999-00	49.9Ω, 0603, 1/10W, ±1%, RC0603FR-0749R9L
R609, R614	07-90820-00	82Ω, 0603, 1/10W, ±5%, RC0603JR-0782RL
R684	07-90101-00	100Ω, 0603, 1/10W, ±5%, RC0603JR-07100RL
R643, R646, R647, R655, R656	07-90121-00	120Ω, 0603, 1/10W, ±5%, RC0603JR-07120RL
R608, R683, R685	07-90331-00	330Ω, 0603, 1/10W, ±5%, RC0603JR-07330RL
R437, R438	07-90471-00	470Ω, 0603, 1/10W, ±5%, RC0603JR-07470RL
R143, R606, R622, R676	07-91001-00	1KΩ, 0603, 1/10W, ±1%, RC0603FR-071KL
R140	07-90202-00	2KΩ, 0603, 1/10W, ±5%, RC0603JR-072KL
R677	07-90222-00	2.2KΩ, 0603, 1/10W, ±5%, RC0603JR-072K2L
R434	07-93011-00	3.01KΩ, 0603, 1/10W, ±1%, RC0603FR-073K01L
R425	07-93241-00	3.24KΩ, 1/10W, ±1%, 0603, RC0603FR-073K24L
R651, R653, R654, R66, R1345, R1348	07-90472-00	4.7KΩ, 0603, 1/10W, ±5%, RC0603JR-074K7L
R436, R631, R635, R637, R642, R644, R678, R409, R61, R62, R64, R1355	07-90103-00	10KΩ, 0603, 1/10W, ±5%, RC0603JR-0710KL
R418	07-91022-00	10.2KΩ, 0603, 1/10W, ±1%, RC0603FR-0710K2L
R1352	07-90123-00	12KΩ, 0603, 1/10W, ±5%, RC0603JR-0712KL
R406	07-91402-00	14KΩ, 0603, 1/10W, ±1%, RC0603FR-0714KL
R602, R610, R618, R624,	07-90183-00	18KΩ, 0603, 1/10W, ±5%, RC0603JR-0718KL
R632, R641, R141	07-90203-00	20KΩ, 0603, 1/10W, ±5%, RC0603JR-0720KL
R601, R615, R617, R628	07-92102-00	21KΩ, 0603, 1/10W, ±1%, RC0603FR-0721KL
R616, R629	07-90223-00	22KΩ, 0603, 1/10W, ±5%, RC0603JR-0722KL

R432	07-92942-00	29.4K Ω ,0603,1/10W, \pm 1%,RC0603FR-0729K4L
R674,R410	07-90333-00	33K Ω ,0603,1/10W, \pm 5%,RC0603JR-0733KL
R662, R666, R669,R672, R1347	07-90473-00	47K Ω ,0603,1/10W, \pm 5%,RC0603JR-0747KL
R603, R611, R619, R625, R633, R634	07-90563-00	56K Ω ,0603,1/10W, \pm 5%,RC0603JR-0756KL
R404, R670,R671	07-90104-00	100K Ω ,0603,1/10W, \pm 5%,RC0603JR-07100KL
R675	07-90105-00	1M Ω ,0603,1/10W, \pm 5%,RC0603JR-071ML
R650, R657, R658, R659, R660, R661, R663, R664, R665	07-90121-10	120 Ω , \pm 5% R0603X4
R6580,R6581	07-90000-20	YC162-JR-070RL
Capacitor		
C401, C407, C443, C402, C408	26-10051-00	10pJ,50V,0603,NPO,C1608C0G1H100JT
C666, C667	26-20051-00	20pJ,50V,0603,NPO
C601, C605, C619, C625	26-22051-00	22pJ,50V,0603,NPO
C465, C466	26-22051-10	22pF, 50V, C0G, \pm 1%,0603
C629, C643	26-33051-00	33pJ,50V,0603,NPO
C403, C409	26-47051-00	47PJ,50V,0603,NPO
C683, C684, C631,C638, C651, C652, C6140, C6141	26-10112-00	100pF,100V 0603, X7R
C604, C620, C606, C627	26-22151-00	220PJ,50V,0603,NPO
C609, C617	26-22112-00	220pJ, 100V, 5%, NPO,0603,
C420	26-47151-00	470pJ,50V,0603,NPO
C608, C614, C615, C616,C62	26-10251-10	1nJ,50V,0603,NPO
C607, C626	26-68251-00	6.8nK,X7R,50V,0603
C423, C426, C430, C431, C434, C439,C445, C447, C448, C454, C458, C459, C460,C648, C649	26-10351-00	10nK,50V,0603,X7R,C2012X7R1H103KT
C687, C688, C689	26-22351-00	22nK,50V,0603,X7R
C674	26-47351-00	47nJ,50V,X7R,0603
C602, C612, C630, C637, C639, C642, C644, C645, C647, C653, C654, C657, C659, C660, C661, C662, C671, C672, C673, C678, C679, C680, C681, C682, C686, C690, C691, C641, C404, C410, C414, C417, C418, C419, C428, C432, C435, C437, C440, C444, C452, C457,	26-10411-00	100nF,16V 0603, X7R
C461, C463, C623,C624, C650, C665		
C633, C634, C636, C1011	26-10421-10	100nK,25V 0603,X7R
C416	26-10511-10	1uF, 16V, X5R, \pm 10%,0603,
C405, C411, C429,C433, C436, C438,C441, C442, C453,C462, C464, C632, C635, C611, C6001, C6002	26-10660-00	10uF,0603,6.3V,X5R, \pm 5%,JMK107BJ106MAT
C603, C610, C628, C618, C640, C61	26-22660-11	22uF,6.3V,X5R,0805
C421, C685	27-10011-03	10uF,10V, \pm 10%,T491A106K010AT
C446, C451	27-47060-01	47uF,6.3V, \pm 20%,T491A476M006AT
EC601, EC602	06-10011-09	VSS or CS Series,10uF,16V, \pm 20%,85 $^{\circ}$ C
C406, C412	06-22111-24	220uF,16V, \pm 20%,105 $^{\circ}$ C,VZH221M1C0607-TR0
C406, C412	or 27-22111-00	220uF,10V, \pm 10%,T491D227K010AT
Inductor		

FB401, FB402, FB403, FB404, FB405, FB406,FB407, FB408, FB601,FB602, L601, FB61	08-04601-15	742792651, 600ohm@100MHz,1A
FB401, FB402, FB403, FB404, FB405, FB406,FB407, FB408, FB601,FB602, L601, FB61	or 08-04601-04	MPZ1608S601A, 600ohm@100MHz,1A
L401, L402	08-04689-00	6.8uH,74451068,SMD
R4244,R4241,R4243	08-04121-00	PBY160808T-121Y-N, ±25% 120Ω @100MHZ
Diode		
D401	33-20036-00	SS36B
D601, D602	33-44148-17	1N4148W-NR,SOD123
D603, D604, D605,D606, D607	33-40352-01	1SS352(TPH3,F),1SS355TE-17
D402, D1054	33-40054-00	BAT54S, SOT23
D119	33-14709-07	MM3Z4V7T1G, 4.7V 0.2W ±5%
Transistor		
Q603, Q604, Q6001, Q1008, Q1007	31-00114-05	DTC114EKA
Q601, Q602, Q1011	31-01815-03	2SC1815
Q1010	31-01015-03	A1015, SOT23
CRYSTAL		
U604	04-22452-02	24.576MHz 10ppm,CL=15pF HLX-O-3-6- 24.576M-1020-1060-1,
Y601	04-11842-01	18.432 MHz
X401	04-12502-00	25.00 MHZ, +/- 50 PPM, FOXSDLF/250F- 20/TR/ CSM25.0000M50F2030-20-70CTR
IC		
U614,U404	03-03825-33	TPS3825-33DBVT,SOT23-5
U408	03-54331-01	TPS54331
U407	03-08851-02	KSZ8851SNL
U611	03-30281-03	M30281FAHP
U617	03-03221-02	MAX3221CAE+/MAX3221CDBR/MAX3221E EAE
U608, U609	03-07157-01	NC7SZ157P6X
U61, U6001	03-00717-01	NC7WZ17P6X
U607	03-04096-01	DIT4096
U613	03-01117-33	LM1117MPX-3.3/NOPB/ AMS1117-3.3
U616	03-01117-01	LM1117MPX-5.0/NOPB/ AMS1117-5.0
U601	03-04392-02	CS4392-KZZ
U610	03-00244-01	74LCX244
U406	03-00125-12	74LVC1G125GV
U402	03-00125-15	ADP125ARHZ-R7
U612	03-02416-02	24LC16A / 24LC16BT-I/SN, SO8
U606	03-01808-01	PCM1808
U403	03-04601-01	AAT4601AIAS-T1
U401	03-00504-03	RCLAMP0504F.TCT
U401	or 33-00504-01	TPD4S009DCKR
U603, U605, U615	03-05532-03	NE5532DR SOIC8
U405	03-07805-00	LM7805CT/ MC7805CT/ KA7805/ L7805CV
Capacitor		
C424, C425, C455, C456	06-47951-08	CD263(X),4.7uF,50V,±20%,F2.5
C6006, C6007	06-10011-05	CD110,10uF,16V,±20%,85°C,F2.5
C413	06-22011-00	CD110,22uF,16V,±20%,F5.0

C658	06-22011-01	CD110,22uF,16V,±20%,F2.5
C655, C656, C663, C664, C668, C669, C670, C675, C676,C677	06-33021-03	33uF,25V,±20%,85°C,ECEA1EKS330i
C1444	06-47021-00	CD110,47uF,25V,±20%, F5.0
C427, C449, C450, C621, C622	06-10111-04	CD110,100uF,16V,±20%,85°C,F2.5
C1443	06-10121-00	CD110,100uF,25V,±20%,F5.0
C646	06-22111-09	CD110,220uF,16V,±20%,F2.5
C613	06-33111-03	CD263(X),330uF,16V,±20%,F3.5
C415	06-47121-00	CD110,470uF,25V,±20%,F5.0
CONNECTOR		
J401	13-22504-00	XHB 2.5A-4A
J605	17-02002-07	SJ-3541-5P
J605	or17-02002-02	SCJ351P00YS0B00
J601	17-01002-03	RJ-21V01A
J607	17-02001-61	CKX*3.5-02C
J402	17-08001-25	MIC2411C-6131T-LF3
J608	17-08009-00	RS232/F,7906-09FHA
J603, J604	13-12502-18	CNT-M254-1*2-GS-5/3-N
P602	13-22510-00	XHB 2.5A-10A
OP601	03-13000-01	GP1FAV30TK0F
P601	13-21217-00	1.25-2-17P
JP401	13-22564-02	CNT-F254-2*32-GS-500/3.0-L
K603,K601	12-02101-02	HFD31/12V 12VDC
HS401	70-004001-0	HS4-C350-B009V1-M008
DAB Connector	17-05001-09	HRF-0812 (sold separate from J37-20262-01)
Gold WiFi connector & cable for WiFi module	29-44600-00	
Media Module not sold with 01-44601-98/99		
	J37-20262-00	FS2026-2W AH w/o DAB support
	J37-20262-01	FS2026-2WB C DAB support w/o 17-05001-09
FPP BOARD		
FPP PCB	A16-44602-22	FPP PCB w/o PARTS
Transistor		
M201	31-02301-01	APM2301CAC, SOT23,
Q201, Q205, Q203,Q207, Q210	31-01815-03	2SC1815 SOT23
Q202	31-01015-03	2SA1015 SOT23
Q204	31-00114-05	DTC114EKA
Q206	31-03303-01	2SC3303-Y
Diode		
D201	33-13609-10	3.6V, 0.5W LL34
D202, D2002	33-40352-01	1SS352
D205, D207	33-44148-17	1N4148W-NR,SOD123

D208	33-40021-11	BAV21W
D206	33-11000-05	BZT52C10,10V,350mW
D209	33-17509-04	BZT52C7V5,7.5V,500mW
IC		
U205	03-01826-01	PIC18F26K20
U206	03-00244-08	SN74HCT244PWR
U208	03-00125-06	SN74AHC1G125DCKR
U209	03-00244-06	SN74LVC244APWR
U210	03-00734-01	NC7NZ34K8X
U211	03-01117-01	LM1117MPX-5.0/NOPB/ AMS1117-5.0
U212	03-00165-01	SN74HC165D/MM74HC165M/74HC165D
Resistor		
R210, R211, R212, R213	07-90000-00	0Ω,0603,1/10W,±5% RC0603JR-070RL
R202	07-91009-00	10Ω,0603,1/10W,±1%,RC0603FR-0710RL
R201, R208, R221,R222, R228, R229, R232, R233, R234, R2000, R2002	07-90101-00	100Ω,0603,1/10W,±5%,RC0603JR-07100RL
R215	07-90121-00	120Ω,0603,1/10W,±5%,RC0603JR-07120RL
R236	07-90561-00	560Ω,0603,1/10W,±5%,RC0603JR-07560RL
R254, R259	07-90122-00	1.2KΩ,0603,1/10W,±5%,RC0603JR-071K2L
R237, R238, R239, R240, R241, R242, R243, R204, R260, R255, R258,R2508	07-90103-00	10KΩ,0603,1/10W,±5%,RC0603JR-0710KL
R205	07-90224-00	220KΩ,0603,1/10W,±5%,RC0603JR-07220KL
R263, R264	07-90122-01	1.2KΩ,0805,1/8W,±5%,RC0805JR-071K2L
R248, R250	07-90103-01	10KΩ,0805,1/8W,±5%,RC0805JR-0710KL
R267	07-90223-01	22KΩ,0805,1/8W,±5%,RC0805JR-0722KL
R268	07-90473-01	47KΩ,0805,1/8W,±5%,RC0805JR-0747KL
R261	07-90470-02	47Ω,1206,1/4W,±5%,RC1206JR-0747RL
R245	07-90750-02	75Ω,1206,1/4W,±5%,RC1206JR-0775RL
R262	07-90151-02	150Ω,1206,1/4W,±5%,RC1206JR-07150RL

R227	07-90101-02	100Ω,1206,1/4W,±5%,RC1206JR-07100RL
R244	07-90471-02	470Ω,1206,1/4W,±5%,RC1206JR-07470RL
R235, R251, R252, R253, R256, R257, R280, R281, R282	07-90103-02	10KΩ,1206,1/4W,±5%,RC1206JR-0710KL
R203	07-90223-02	22KΩ,1206,1/4W,±5%,RC1206JR-0722KL
R207, R209, R214, R219	07-90121-10	120Ω, ±5% R0603X4
R265, R266	07-20000-51	0Ω,1/4W,±5%
Capacitor		
C214, C218, C219, C220	26-33151-20	330pF, 50V, C0G, ±1%,0603,
C234, C237	26-10351-00	10nK,50V,0603,X7R,C2012X7R1H103KT
C203, C204, C205, C206, C207, C209, C210, C221, C227, C235, C236	26-10411-00	100nF,16V 0603, X7R
C400, C405	26-10421-10	0.1UF ,25V 0603,X7R
C231, C232	26-10251-01	1nK,50V,0805,X7R
C208,C222, C244	26-10411-01	100nK,16V,0805,X7R
C226	26-22521-01	2.2uF,±10%,25V,X5R,0805
C243	26-10611-01	10uF,0805,10V,C0805C106M8PACTU
C202, C224, C225,C228	26-22660-11	22uF, 6.3V, X5R, 0805
C242	26-10422-02	100nK,200V,1206,X7R,
C240, C241	26-10611-02	10uF, 16V, X5R, ±10%,1206,
ALU Electrolytic CAP		
C201	06-47011-03	CD263(X),47uF,16V,±20%,F2.5
C223	06-10111-00	CD110(X),100uF,16V,±20%,85°C,F5.0
C229, C230	06-22111-04	CD263(X),220uF,10V,±20%,F2.5
C245	06-47012-00	47uF,100V,±20%,CD110,F5.0
FFC Connector		
J201	13-21024-07	1.0-9-24PB
Regulator		
T201	22-00145-01	C446TR V2
IR		
U201	03-34838-00	TSOP34838
LED		
D717	33-50565-12	BL-BB3JCUB2C4V-1-10F
Connector		
CON204,CON208	13-22504-00	XHB 2.5A-4A
CON201	13-12505-14	CNT-M254-1*5-GS-5.9/3-N
K201,K202,K203,K204,K205, K206,K207	11-04101-05	IT-1102D-1160-RS
USB	17-08001-14	GL56S04-04A
VFD DISPLAY		
U203	23-00128-01	CIG128X3201

FPP ENCODE BOARD		
	A16-44604-22	FPP ENCODE PCB w/o PARTS
Connector		
CON203	13-22504-00	XHB 2.5A-4A
V201	37-15244-00	EC11E15244G1
Power BOARD		
	A16-44603-21	SMPS PCB w/o PARTS
Diode		
D907, D908, D910	33-20120-01	MURS120/MURS120T3G
D905	33-20007-00	M7A, 1A 1000V
BR902	33-30062-00	0.8A600V B6S
Regulator		
IC901, IC902	03-00431-11	TL431BCDBZTG4
U901, U903, U906	A03-00817-03	PC817X2NIP
Resistor		
R922	07-90689-01	6.8R, 0805, ±5% RC0805JR-076R8L
R907	07-90101-01	100R, 0805, ±5% RC0805JR-07100RL
R925	07-90201-01	200R, 0805, ±5% RC0805JR-07200RL
R903	07-90471-01	470R, 0805, ±5% RC0805JR-07470RL
R906, R926	07-90102-01	R906, R926 RC0805JR-071KL
R929	07-90242-01	2.4K, 0805, ±5% RC0805JR-072K4L
R902	07-90472-01	4.7K, 0805, ±5% RC0805JR-074K7L
R909, R910, R928	07-95101-01	5.1KΩ,0805,±1% RC0805JR-075K1L
R919	07-90682-01	6.8KΩ,0805,±5% RC0805JR-076K8L
R908, R927	07-90103-01	10KΩ,0805,±5% RC0805JR-0710KL
R904	07-90223-01	22KΩ,0805,±5% RC0805JR-0722KL
R901, R930	07-90473-01	47KΩ,0805,±5% RC0805JR-0747KL
R924	07-90620-02	62R,1206, ±5% RC1206JR-0762RL
R905, R912	07-90101-02	100R,1206, ±5% RC1206JR-07100RL
R911, R917, R918	07-90334-02	330K,1206, ±5% RC1206JR-07330KL
R921	07-90684-02	680K,1206, ±5% RC1206JR-07680KL
R913, R920	07-90754-02	750K,1206, ±5% RC1206JR-07750KL
CAPACITORS		
C901, C902, C905, C909, C910, C911, C913, C914, C924, C929	26-10451-11	100nK,50V,0805,X7R,±10%
C928	26-10122-02	100pF 200V NP0 1206
C912, C915, C916, C930	26-10412-02	100nK,100V,1206,X7R
RESISTOR		
R914	07-30473-02	47KΩ, 2W, ±5%, Pitch=5mm
ZV901	07-70471-03	TUR10D471
TH901, TH902	07-70050-00	5D-11
CAPACITORS		

CX902	A25-33422-00	MKP62, 330nF,275VAC, ±10%
CX901	A25-10422-07	0.1uF/275V,13mm*6mm
CY901, CY902, CY903, CY904	A05-10242-00	1nF, 400V(X1), 250V(Y1), ±5%
C917	05-10313-01	10nF,1KV,±20%,Pitch=5mm
C931	05-22113-02	220pF,1KV,10%
C918	06-68042-01	CD294,68uF, 400V, ±20%, Pitch=10mm, D=22
C904	06-10042-00	CD11H, 10uF,400V, ±20%
C926, C927	06-22211-07	CD286, 2200uF, 16V, ±20%, 105°C, F5.0
C919, C920	06-33151-02	CD287,330uF,50V, ±20%
C921, C922	06-33121-01	CD263(X),330uF,25V, ±20%
C907, C908	06-10211-05	CD263X,1000uF,10V,±20%
C903	06-10121-04	CD263(X),100uF,25V,±20%,
C925	06-47951-08	CD263(X),4.7uF,50V,±20%,F5.0
C906, C923	06-47051-06	CD263,47uF,50V,±20%
TRANSFORMER		
T902	A22-00025-13	EEL25C446
T901	22-01615-00	HJEE16STB0
ICS		
U905	03-00244-00	TOP244Y
U902	03-00274-00	TNY274
U904	03-07812-20	NJM78M12FA
U908	03-07912-20	NJM79M12FA
DIODE		
D906	33-30282-00	KBP208G,2A/800V
D904	33-25822-00	1N5822
D911	33-21020-00	MUR1020CTPbF
D903	33-20120-00	MUR120
D902, D909	33-24006-00	UF4006
D901	33-26200-00	P6KE-200A
TRANSISTORS		
Q901	31-00647-01	2SB647-D
INDUCTOR		
L903	22-00025-02	10mH,HJ-UF10.5-04
L902	22-00098-00	HJ-10mH UU9.8
L901	08-02100-07	10uH, 2.6A,744772100
L904	08-05220-01	R0603-22uH, 22Uh
Fuse		
FUSE901	A20-12122-04	5ET-013H, T1.25A 250V
RELAY		
K901	12-01101-19	HF36F/012-HST(555), TV-5
METAL PARTS		

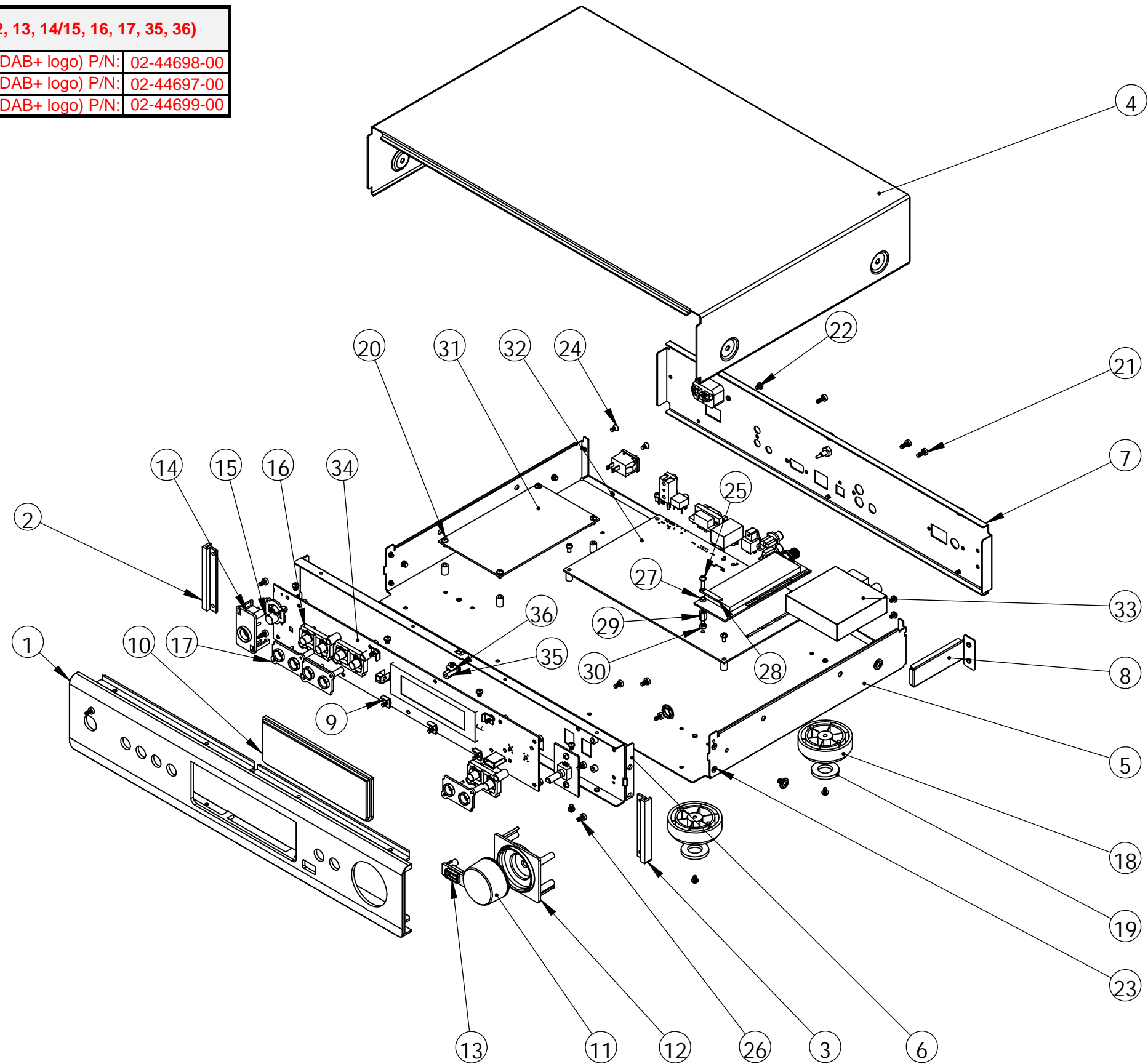
J901	13-23903-01	VH 3.96A-3A
J902	13-22510-00	XHB 2.5A-10A
S902	70-223002-0	AL1050 T5,T=3.0mm
S901, S903	70-019005-1	6063 T5, BLACK
MISC		
Rocker Switch	A11-01101-03	RF-1003-BB2, 10A 250V, TV-5

MAJOR ASSEMBLIES AND COSMETICS

Description	P/N
C446 Titanium tuning knob.	J71-223011-0
C446 Graphite tuning knob.	J71-223001-0
C446 AH Rear panel.	67-223004-2C
C446 C rear panel.	67-223005-4C
C446 CT rear panel.	67-223005-4C
C446 Titanium top panel.	67-223013-1
C446 Graphite top panel.	67-223003-1
C446 Bottom chassis.	67-223001-3
C446 Subfacia.	67-223002-3
Cables	
FFC from front PCB to main PCB 24 pins same side.	14-44624-00
FFC from main PCB to Tuner module 17 pins opposite side.	14-98017-10
Ribbon cable 10 pins SMPS to the main board.	14-44610-00
Ribbon cable 4 pins encoder PCB to front panel PCB.	14-44604-01
Ribbon cable 4 pins from main PCB to USB connector.	14-44604-00
Gold WiFi connector and cable for WiFi antenna.	29-44600-00
PCB Assemblies	
C446 C/CT main assembly programmed for C/CT-units includes media module	01-44601-20
C446 AH main assembly programmed for AH-units includes media module	01-44601-10
C446 AH/C SMPS power supply assembly	01-44603-00
C446 Front Panel Keyboard with VFD attached.	01-44602-00
C446 Encoder assembly (pcb # 16-44604-21).	01-44604-00
C446 C/CT media module	J37-20262-01
C446 C/CT DAB connector.	17-05001-09
C446 AH media module without DAB connector.	J37-20262-00
Accessories	
TNR 2 remote control	J30-14460-00
DAB antenna "telescoping"	29-80106-00
WiFi antenna	30-34702-00
C446 Carton C Graphite	88-223001-0A
EPE End Cap RIGHT C446	89-223002-0
EPE End Cap LEFT C446	89-223001-0

EXPLODED VIEW

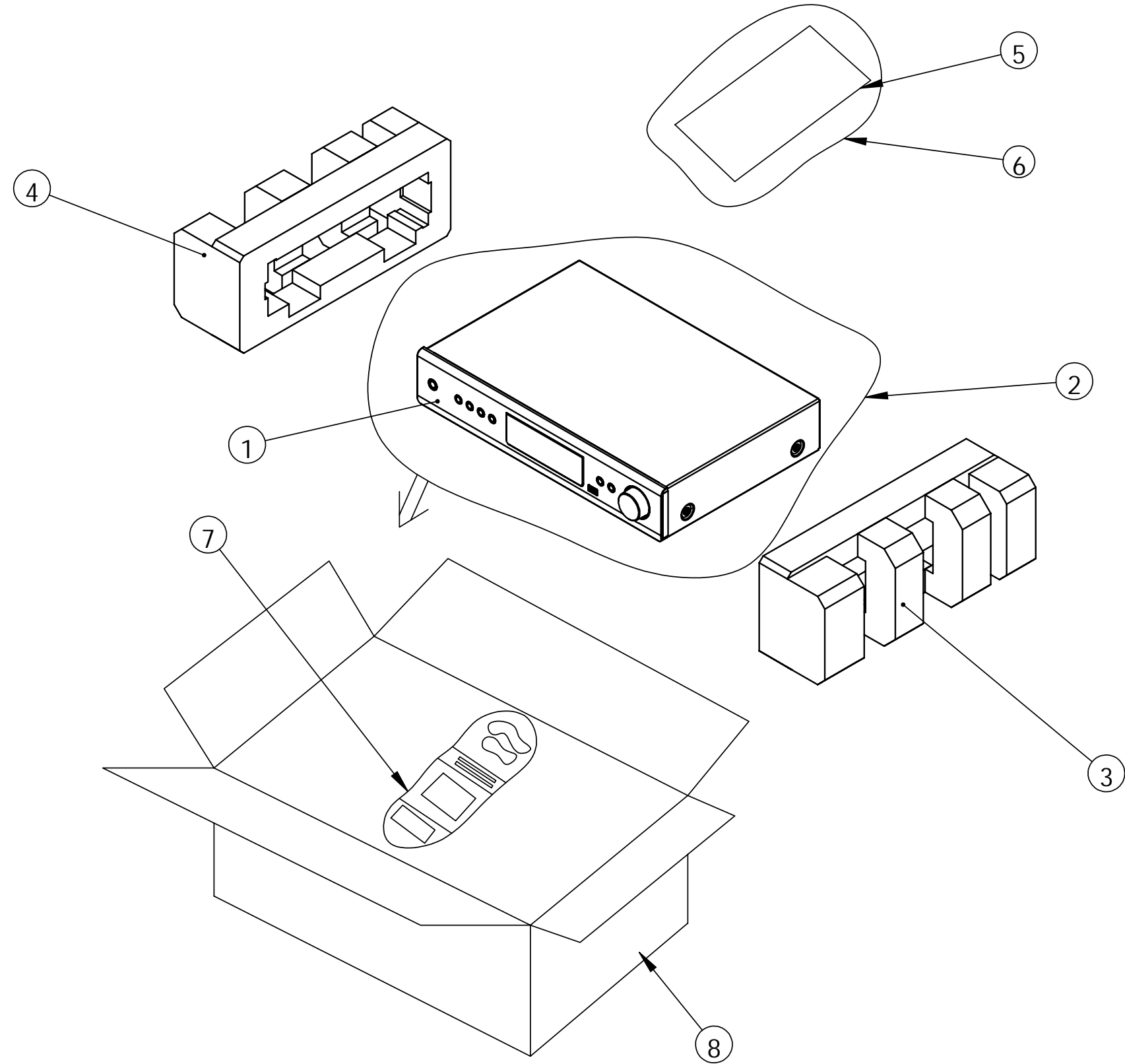
Complete Fascia Assemblies Contain (1, 2, 3, 9, 10, 12, 13, 14/15, 16, 17, 35, 36)	
Graphite for C-version fascia assembly (with the DAB+ logo) P/N:	02-44698-00
Graphite for AH-version fascia assembly (without the DAB+ logo) P/N:	02-44697-00
Titanium fascia assembly (with the DAB+ logo) P/N:	02-44699-00



EXPLODED VIEW PARTS LIST

ITEM	PART NO.	DESC.		QTY
1	70-223011-4A	FASCIA	(ROHS)	1
2	70-223003-1	LEFT End CAP	(ROHS)	1
3	70-223004-1	RIGHT END CAP	(ROHS)	1
4	65-223003-1	TOP COVER	(ROHS)	1
5	67-223001-3	CHASSIS	(ROHS)	1
6	67-223002-3	SUBFASCIA	(ROHS)	1
7	67-223005-4C	REAR PANNEL	(ROHS)	1
8	66-047004-0	TUNER BRACKET	(ROHS)	1
9	66-223001-0	BRACKET	(ROHS)	5
10	76-223001-0	DISPLAY LENS	(ROHS)	1
11	71-223001-0	VOLUME KNOB	(ROHS)	1
12	77-223003-0	VOLUME KNOB BEZEL	(ROHS)	1
13	77-223002-0	USB BEZEL	(ROHS)	1
14	77-124004-0	POWER BUTTON BEZEL	(ROHS)	1
15	74-123003-1	POWER BUTTON	(ROHS)	1
16	74-132001-0	DUO BUTTON	(ROHS)	3
17	77-223001-0	2P INPUT BUTTON BEZEL	(ROHS)	3
18	75-124001-0	FOOT	(ROHS)	4
19	78-001002-0	FOOT PAD	(ROHS)	4
20	61-023506-0	MACHINE SCREW MB3×6	(ROHS)	13
21	61-023208-0	SELF TAPING SCREW BTB3×8	(ROHS)	3
22	61-023106-0	SELF TAPING SCREW STB3×6	(ROHS)	22
23	61-063105-0	SELF TAPING SCREW STF3×5	(ROHS)	4
24	61-063106-0	SELF TAPING SCREW STF3×6	(ROHS)	3
25	61-023510-0	MACHINE SCREW MB3×10	(ROHS)	1
26	61-023206-0	SELF TAPING SCREW BTB3×6	(ROHS)	31
27	85-223002-0	ROUND SPACER 3-2.5	(ROHS)	1
28	84-001001-1	Wire Holder KL-2 (3M)	(ROHS)	1
29	85-233001-0	PLASTIC SPACER TP-8	(ROHS)	2
30	62-110302-0	PLASTIC NUT	(ROHS)	2
31	A16-44603-21	SMPS PCB unpopulated	(ROHS)	1
32	A16-44601-22	MAIN PCB unpopulated	(ROHS)	1
33	J37-01140-23	TUNER(C VERSION /AH VERSION)	(ROHS)	1
34	A16-44620-22	FPP PCB unpopulated	(ROHS)	1
35	85-223003-0	PLASTIC SPACER HP-12	(ROHS)	1
36	66-223002-0	BRACKET	(ROHS)	1

PACKING DIAGRAM



PACKING PARTS LIST

ITEM	PART NO.	DESC.		QTY
1	90-009002-1	Non-woven Cloth BAG		1
2	90-001001-0	Polybag	(ROSH)	1
3	89-223002-0	EPE End Cap right	(ROSH)	1
4	89-223001-0	EPE End Cap left	(ROSH)	1
5	30-44460-00	INSTRUCTION	(ROSH)	1
6	90-001002-0	Polybag	(ROSH)	1
7	90-223001-0	Polybag	(ROSH)	1
7	J30-14460-00	Remote Control	(ROSH)	1
7	30-22100-10	AA Batteries	(ROSH)	2
7	30-34702-00	WiFi Antenna	(ROSH)	1
7	30-87200-00	TV Matcher	(ROSH)	1
7	30-37300-00	TUNER ANTENNA (FM)	(ROSH)	1
7	J30-37300-10	TUNER ANTENNA (AM)	(ROSH)	1
7	A17-07002-07	AC Inlet	(ROSH)	1
7	30-34702-00	Antenna	(ROSH)	1
7	29-80106-00	DAB Antenna (C version)	(ROSH)	1
7	A15-10250-00	AC Cord(C Version)	(ROSH)	1
7	or JA15-10250-20	AC Cord(C Version)	(ROSH)	1
7	JA15-10125-01	AC Cord(AH Version)	(ROSH)	1
7	or A15-10125-00	AC Cord(AH Version)	(ROSH)	1
8	88-223001-0A	MASTER CARTON	(ROSH)	1