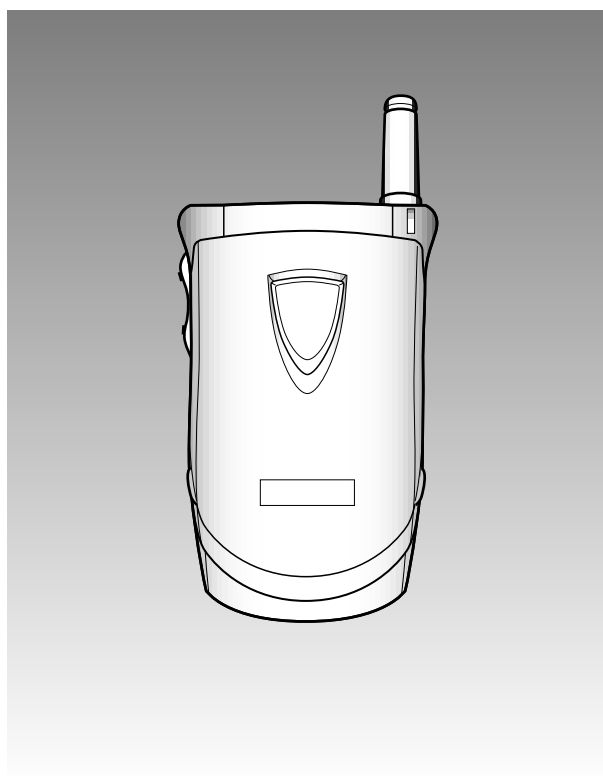




GSM Mobile Cellular Phone SGH-800C

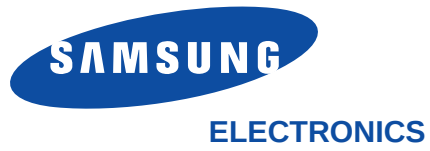
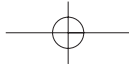
SERVICE *Manual*

GSM Mobile Cellular Phone

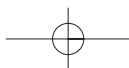


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Samsung Electronics Co.,Ltd.
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05/1999 Rev 1.0
GH68-00684A





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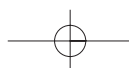
1-10 Boost Kit

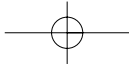
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1-11-1 Hands Free Car Kit Ass'y

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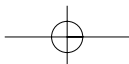
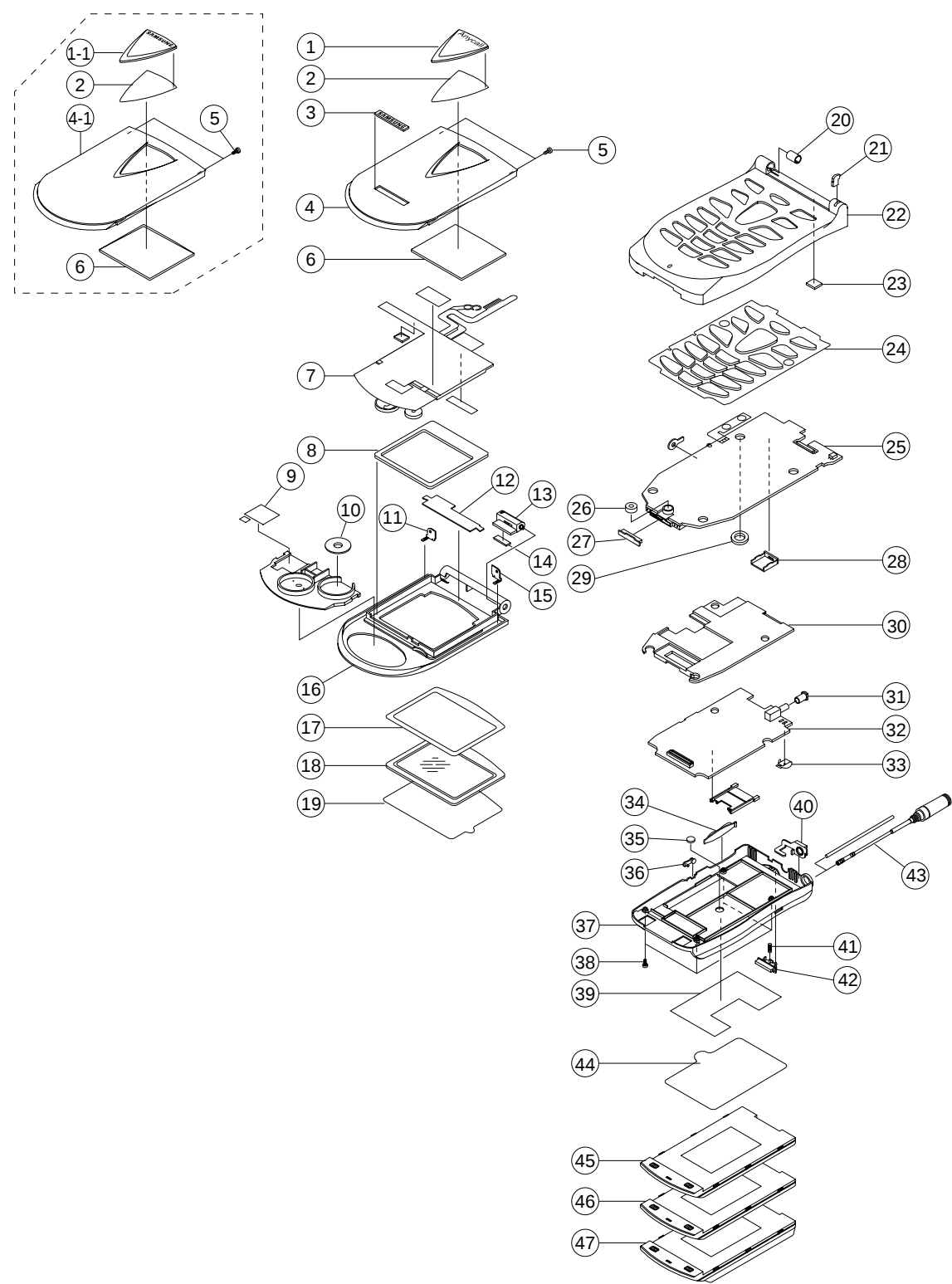
1-11-3 Cradle Mechanism Part List





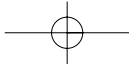
Exploded View and its Parts List

1-1 Main Exploded View



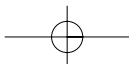
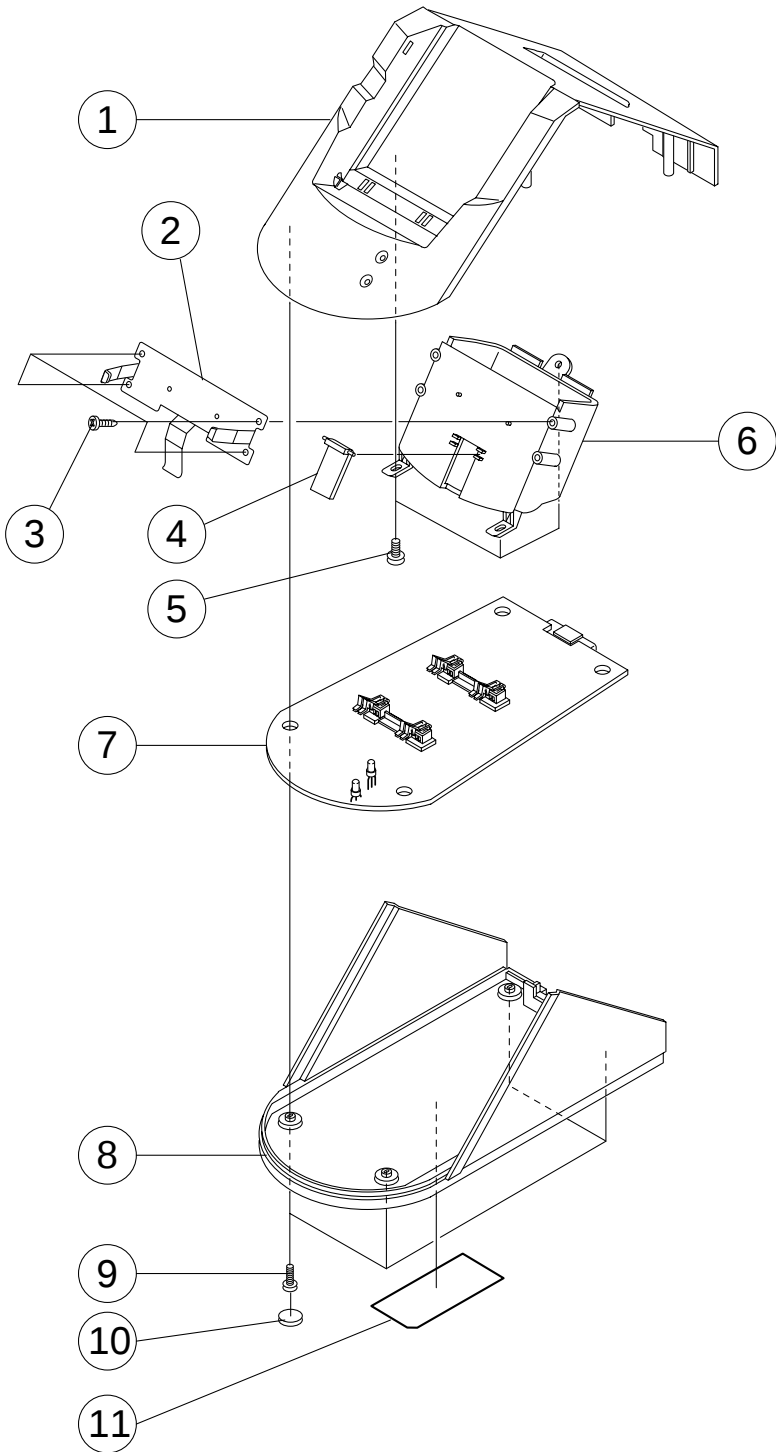
1-2 Main Parts List

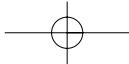
NO	DESCRIPTION	SEC. CODE	Q'TY	REMARK
1	PMO-DECORATION(ANYCALL)	CH72-00264A	1	
1-1	PMO-DECORATION(SAMSUNG)	GH-00263A	1	
2	MPR-TAPE DOCORATION	GH-74-10772A	1	
3	LABEL(M)-BADGE	GH-68-20008E	1	
4	PMO-FOLDER UPPER(C)	GH-72-00126A	1	
4-1	PMO-FOLDER UPPER(EU)		1	
5	SCREW-MACHINE	6001-000876	2	
6	MCT-SHIELD GASKET	GH74-00011A	1	
7	LCD A'SSY		1	
8	MPR-SPONGE-LCD	GH74-10774A	1	
9	MPR-TAPE EARPIECE	CH74-00005A	1	
10	MPR-TAPE VIBRATOR	CH74-10776A	1	
11	NPR-BRACKET FOLDER R	GH71-10726A	1	
12	MEX-LCD SHEET	GH74-00124A	1	
13	MEC-HINGE	CH75-11337A	1	
14	ICT-MAGNET	GH70-40005A	1	
15	NPR-BRACKET FOLDER	GH71-10722A	1	
16	PMO-FOLDER LOWER	GH72-00125A	1	
17	MEX-WINDOW TAPE	GH74-00127A	1	
18	PCT-WINDOW LCD	GH72-00265A	1	
19	PPR-TAPE WINDOW BOHO	GH72-00498A	1	
20	PMO-HINGE DUMMY	GH72-00067A	1	
21	PMO-REFLECTOR LED	GH72-41801A	1	
22	PMO-FRONT COVER	GH72-00123A	1	
23	MPR-DUPLEXER	GH74-00106A	1	
24	RMO-KEY PAD	GH73-00074A	1	
25	LOGIC BOARD		1	
26	RMO-HOLDER MIC	GH73-00121A	1	
27	RMO-CONNECTOR COVER	GH73-40704A	1	
28	RMO HOLDER BUZZER	GH73-00075A	1	
29	RPR GROUND GASKET	GH73-00005A	1	
30	PMO-SHIELD COVER	GH72-00262A	1	
31	RMO-MOBILE CAP	GH73-00079A	1	
32	RF GOARD		1	
33	NPR CONTACT PLATE-ANT	GH71-00047A	1	
34	PMO-KEY VOLULME	GH72-41787A	1	
35	MCT-SPONG BATT	GH74-00159A	1	
36	RMO-COVER EAR/J	GH73-00087A	1	
37	PMO-REAR COVER	GH72-00124A	4	
38	SCREW-MACHINE	6001-001140	1	
39	LABEL(R)-MAIN	GH68-00339A	1	
40	NPR-BRACKET ANT	GH71-10720A	1	
41	IPR-SPRING LOCKER MA	GH70-10516A	1	
42	PMO-BATT LOCKER	GH72-00127A	1	
43	ANTENNA		1	
44	PPR-SIM BOHO	GH72-00449A	1	
45	BATTERY SLIM		1	
46	BATTERY STD		1	
47	BATTERY LONG		1	



Exploded View and its Parts List

1-3 Charger Exploded View

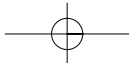


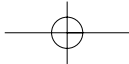


Exploded View and its Parts List

1-4 DTC Parts List

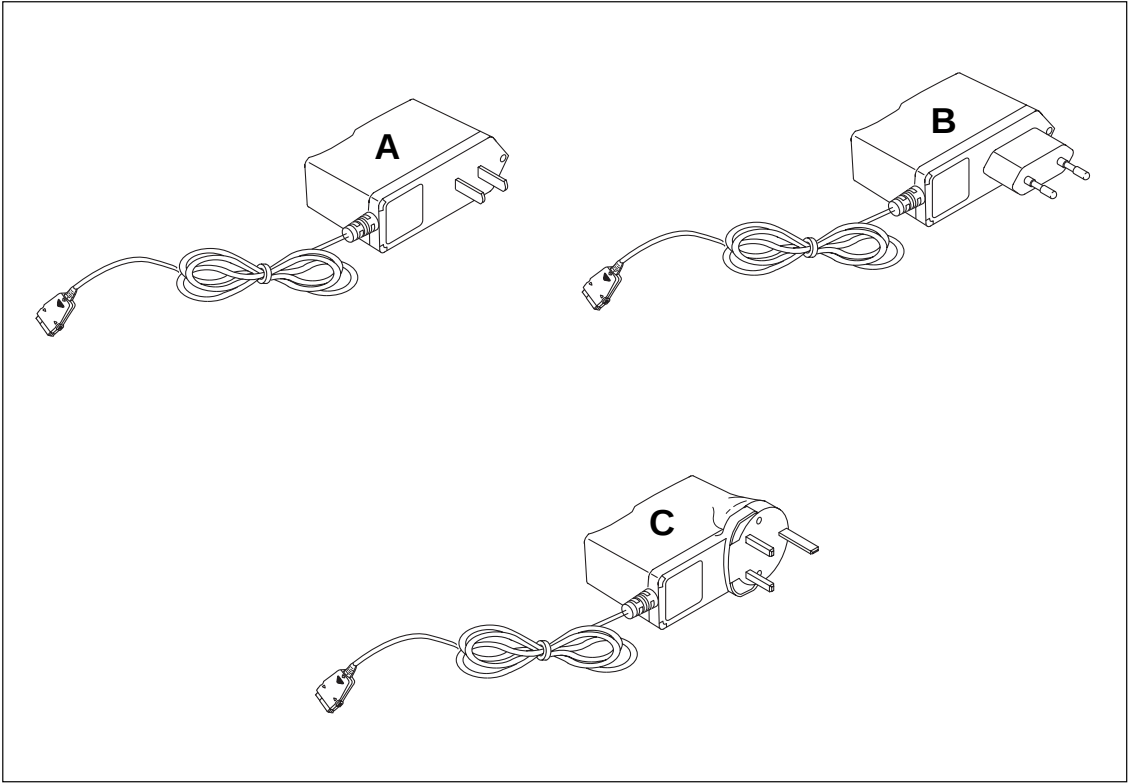
NO	DESCRIPTION	SEC. CODE	Q'TY	REMARK
1	DTC UPPER		1	
2	HANDY LOCKER		1	
3	SCREW		4	
4	SUPPORT		1	
5	SCREW		3	
6	BATTERY HOUSING		1	
7	PCB		1	
8	DTC LOWER		1	
9	SCREW		4	
10	BUMPON		4	
11	LABEL		1	





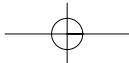
Exploded View and its Parts List

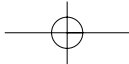
1-5 Travel Adaptor



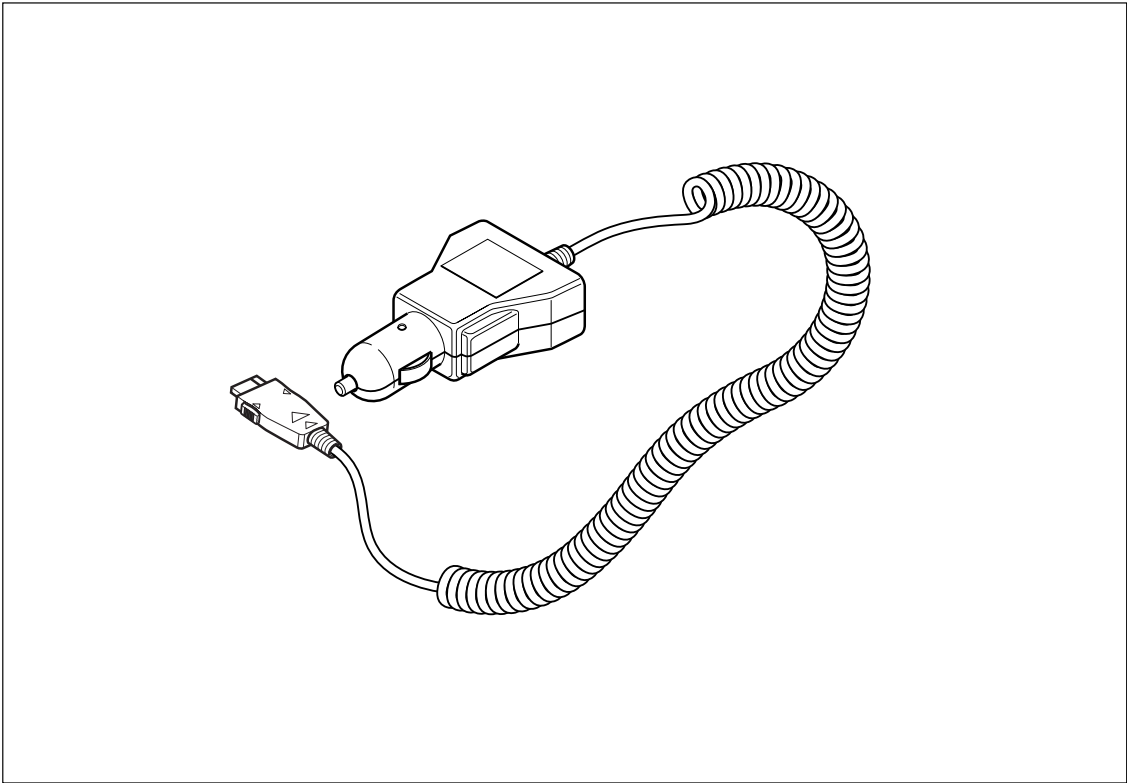
1-6 Travel Adaptor Parts List

Type	SEC Code	Remark
A	GH44-30548A	CHINA
B	GH44-30549A	EUROPE
C	GH44-30547A	UNITED KINGDOM



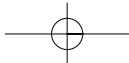


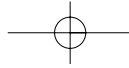
1-7 Ciger Light Adaptor



1-8 Ciger Light Adaptor Part List

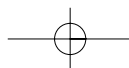
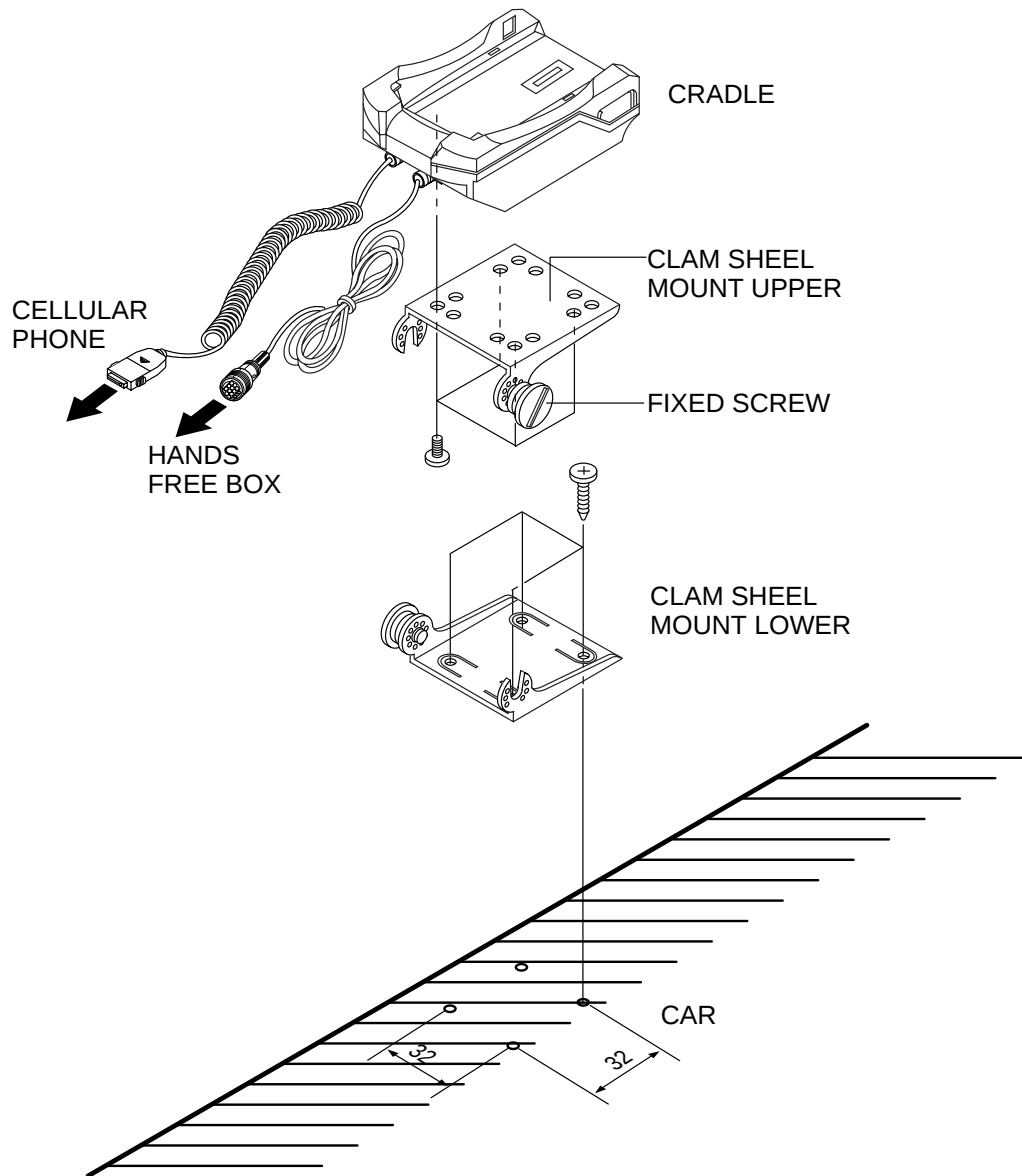
Description	SEC Code	Remark
Ciger Light Adaptor Code	GH44-30546A	BLACK

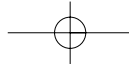




Exploded View and its Parts List

1-9 Hands Free Kit Diagram

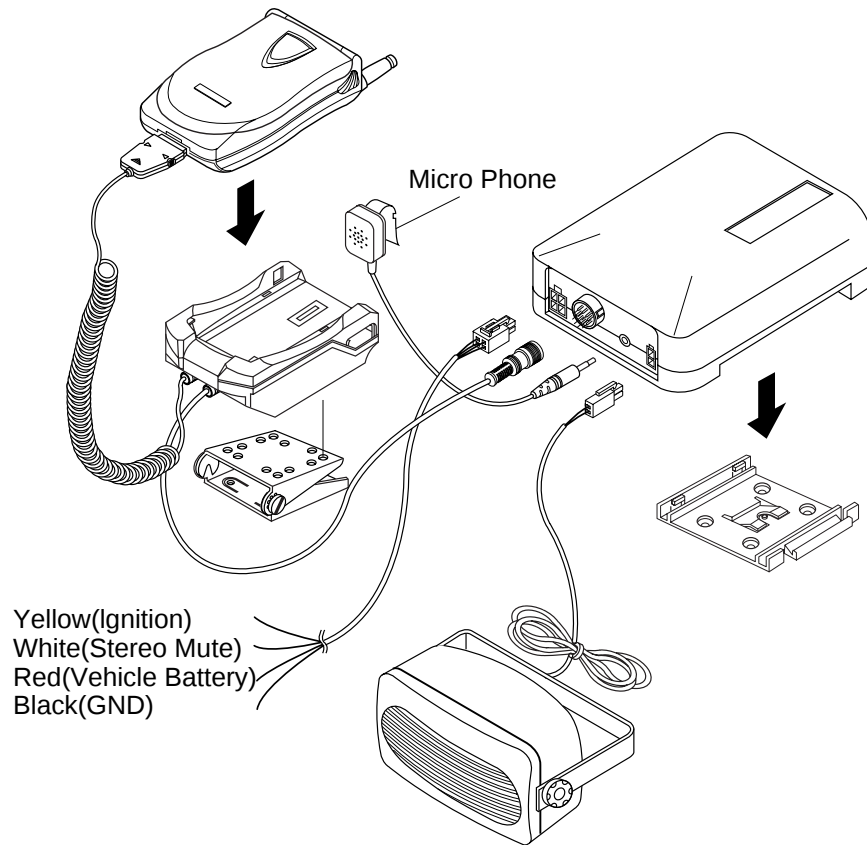




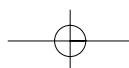
Exploded View and its Parts List

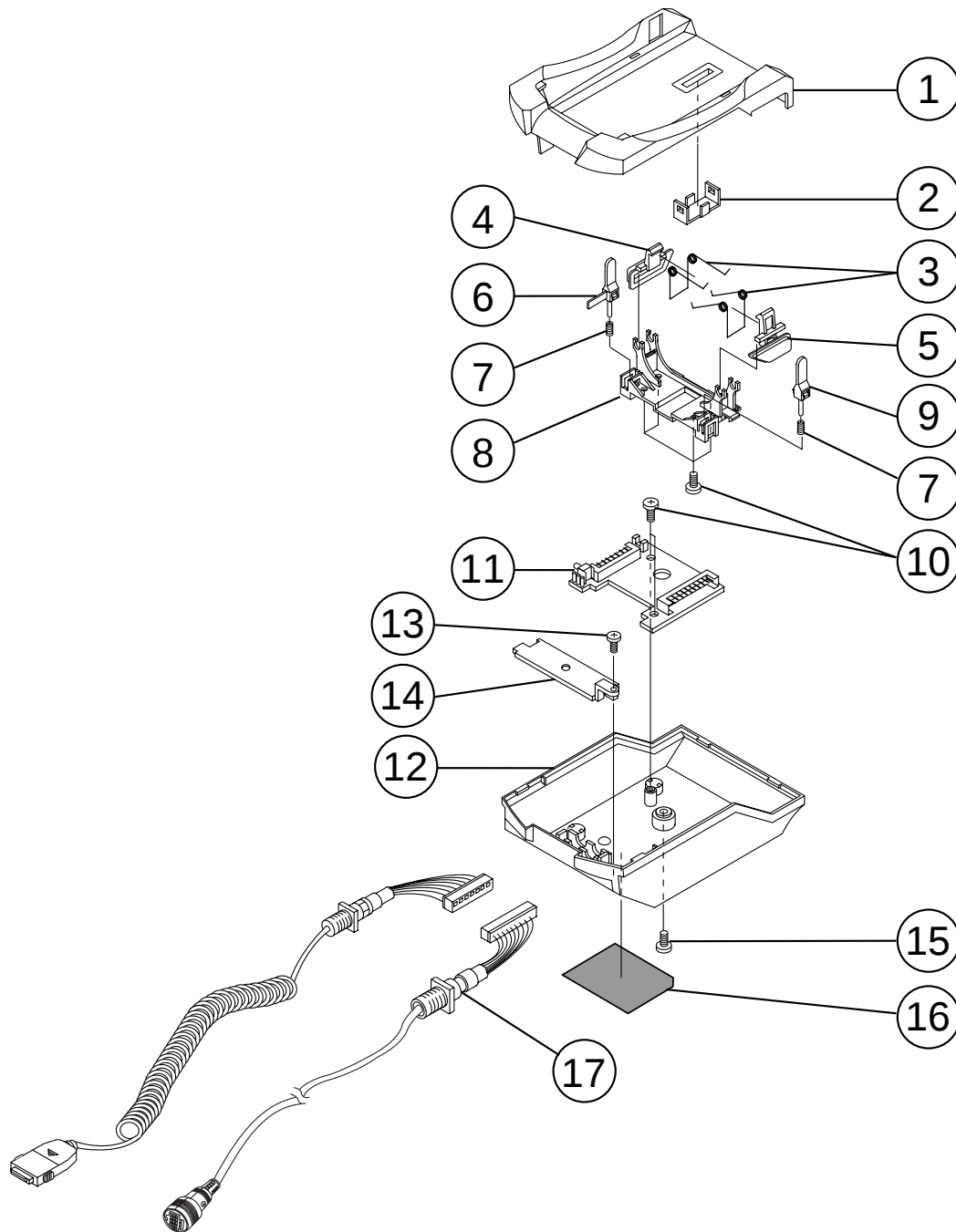
1-11 Hands Free Car Kit Option

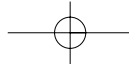
1-11-1 Hands Free Car Kit Ass'y



Option Code: GH96-01150A



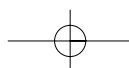
1-11-2 Hands Free Cradle Exploded View



Exploded View and its Parts List

1-11-3 HFK PART LIST

NO	DESCRIPTION	SEC. CODE	Q'TY	REMARK
1	CRADLE UPPER		1	
2	SOCKET PLATE		1	
3	TORSION SPRING		2	
4	LOCKER(R)		1	
5	LOCKER(L)		1	
6	EJECTOR PIN(R)		2	
7	EJECTOR SPRING		1	
8	CLAMP		1	
9	EJECTOR PIN(L)		1	
10	SCREW M2 x 6, +, BH		6	
11	PCB		1	
12	CRADLE LOWER		1	
13	SCREW M2 x 6, +, BH		1	
14	CABLE CAP		1	
15	SCREW M3 x 8, +, BH		1	
16	CRADLE LABEL		1	
17	CRADLE DATA CABLE		1	



2. Electrical Parts List

Main B'd (COMP)

NO	SEC CODE	Location No	Description	Etc
1	0404-001005	D400	DIODE-SCHOTTY, 40V, 1A, SOD-87	
2	0407-001007	D401	DIODE-ARRAY, 80V, 25mA, CA4-2, UM5	
3	0501-002096	Q200	TR-SMALL SIGNAL, NPN, 160mW, SOT343	
4	0504-000167	U106, U874	TR-DIGITAL, NPN, 100mW, 10K-10Kohm, SSM	
5	0504-000168	U401, U407	TR-DIGITAL, NPN, 100mW, 47K-47Kohm, SSM	
6	1205-001643	U861	IC-KERNEL-5, BGA, 144P, 472MIL, 3V, TR	
7	0504-001021	U105, U848	TR-DIGITAL, 3P, SC-59, TP	
8	0506-001004	U309	TR-ARRAY, NPN/PNP, 2.50V, 300mW, UM5	
9	1103-001090	U412	IC-EEPROM, 24C128, 16Kx8BIT, SOP, 8P, 150MIL	
10	1107-001164	U870	IC-FLASH MEMORY, 512Kx16BIT, BGA, 48P,	
11	1109-001129	U867	IC-MEMORY, 1048KX16+524KX8BIT, CSP, 72P, 2.7V	
12	1201-001326	U839	IC-BUFFER AMP, SOP, 6P, SINGLE	
13	1203-001285	U103	IC-SWITCH VOL. REG. SOT-23, 5P, 150MIL	
14	1203-001402	U402	IC-DC/DC CONVERTER, SO8, 8P, 150MIL	
15	1203-001548	U846	IC-RESET, SOT-23, 5P, 150mW	
16	1203-001717	U868	IC-SWITCH VOLT. REG. 3.0V, DUAL	
17	1204-001405	U102	IC-BRIGHT, QFP, 48P, 4.0V, 400mW	
18	1206-001009	U312	IC-RTC, SOP, 8P, 173MIL	
19	1209-001161	U101	IC-Synthesizer, MTC20, 20P	
20	1404-001005	TH400	THERMISTOR, 47Kohm, 5%, 4050K, 2.0mW/C, TP	
21	1405-001019	VA1	VARISTOR, 5.6V,-,1.6x0.8mm,TP	
22	2007-000138	R134, R135	R-CHIP, 100ohm, 5%, 1/16W, DA, TP, 1005	
23	2007-000140	R112, R522	R-CHIP, 1Kohm, 5%, 1/16W, DA, TP, 1005	
24	2007-000141	R124, R125, R127, R130, R137, R438, R439,	R-CHIP, 2.2Kohm, 5%, 1/16W, DA, TP, 1005	
25	2007-000142	R102	R-CHIP, 2.7Kohm, 5%, 1/16W, DA, TP, 1005	
26	2007-000143	R500	R-CHIP, 4.7Kohm, 5%, 1/16W, DA, TP, 1005	
27	2007-000147	R128, R114	R-CHIP, 8.2Kohm, 5%, 1/16W, DA, TP, 1005	
28	2007-000148	R101, R219, R422, R423, R427, R433, R970, R972, R988	R-CHIP, 10Kohm, 5%, 1/16W, DA, TP, 1005	
29	2007-000149	R113	R-CHIP, 12Kohm, 5%, 1/16W, DA, TP, 1005	
30	2007-000157	R440, R442, R474	R-CHIP, 47Kohm, 5%, 1/16W, DA, TP, 1005	
31	2007-000159	R424	R-CHIP, 56Kohm, 5%, 1/16W, DA, TP, 1005	
32	2007-000161	R123, R126	R-CHIP, 82Kohm, 5%, 1/16W, DA, TP, 1005	
33	2007-000162	R402, R421, R428, R434, R436, R441, R964, R965, R976, R979, R987, R993	R-CHIP, 100Kohm, 5%, 1/16W, DA, TP, 1005	
34	2007-000171	R136	R-CHIP, 0 ohm, 5%, 1/16W, DA, TP, 1005	
35	2007-000172	R100, R103, R105, R116, R206, R503, R129	R-CHIP, 10ohm, 5%, 1/16W, DA, TP, 1005	
36	2007-000932	R220	R-CHIP, 470ohm, 5%, 1/16W, DA, TP, 1005	
37	2007-001288	R107, R108, R109, R117, R120, R121	R-CHIP, 18ohm, 5%, 1/16W, DA, TP, 1005	
38	2007-001292	R221, R222	R-CHIP, 33ohm, 5%, 1/16W, DA, TP, 1005	
39	2007-001298	R504	R-CHIP, 51ohm, 5%, 1/16W, DA, TP, 1005	
40	2007-001301	R131, R132, R133	R-CHIP, 68ohm, 5%, 1/16W, DA, TP, 1005	
41	2007-001307	R209	R-CHIP, 180 ohm, 5%, 1/16W, DA, TP, 1005	
42	2007-000242	R992	R-CHIP, 1.5Kohm, 5%, 1/16W, DA, TP, 1005	

43	2007-001319	R467	R-CHIP, 1.2Kohm, 5%, 1/16W, DA, TP, 1005	
44	2007-001320	R464	R-CHIP, 1.8Kohm, 5%, 1/16W, DA, TP, 1005	
45	2007-007137	R469, R470, R471	R-CHIP, 1.2Kohm, 1%, 1/16W, DA, TP, 1005	
46	2007-007142	R435	R-CHIP, 10Kohm, 1%, 1/16W, DA, TP, 1005	
47	2007-007517	R473	R-CHIP, 240Kohm, 1%, 1/16W, DA, TP, 1005	
48	2007-007528	R472	R-CHIP, 1.5Kohm, 1%, 1/16W, DA, TP, 1005	
49	2203-000233	C103, C105, C110, C112, C113, C116, C130, C139, C165, C468, C469, C470, C471, C123	C-CHIP, 100pF, 5%, 50V, TP, 1005	
50	2203-000254	C107, C143, C144, C148, C149, C153, C155, C206, C207, C422, C440, C441, C442, C462, C966, C968, C969, C971, C982, C125	C-CHIP, 10nF, 10%, 16V, TP, 1005	
51	2203-000311	C104	C-CHIP, 120pF, 5%, 50V, TP, 1005	
52	2203-000359	C124	C-CHIP, 150pF, 5%, 50V, TP, 1005	
53	2203-000438	C119, C122, C135, C163, C203, C220, C924, C169	C-CHIP, 1nF, 10%, 50V, TP, 1005	
54	2203-000466	C146, C101	C-CHIP, 1pF, 0.25pF, 50V, TP, 1005	
55	2203-000489	C109	C-CHIP, 2.2nF, 10%, 50V, TP, 1005	
56	2203-000628	C114, C118, C926	C-CHIP, 22pF, 5%, 50V, TP, 1005	
57	2203-000679	C216, C221	C-CHIP, 27pF, 5%, 50V, TP, 1005	
58	2203-000812	C136, C140, C141, C147, C159, C161, C167, C168, C170, C219, C152	C-CHIP, 33pF, 5%, 50V, TP, 1005	
59	2203-000870	C171, C101	C-CHIP, 3pF, 0.25pF, 50V, TP, 1005	
60	2203-001017	C172	C-CHIP, 4pF, 0.25pF, 50V, TP, 1005	
61	2203-000888	C120	C-CHIP, 4.7nF, 10%, 50V, TP, 1608	
62	2203-000940	C138, C931	C-CHIP, 47pF, 10%, 50V, TP, 1005	
63	2203-000995	C131, C134	C-CHIP, 47pF, 5%, 50V, TP, 1005	
64	2203-001103	C142	C-CHIP, 6.8nF, 10%, 50V, TP, 1608	
65	2203-001221	C453	C-CHIP, 820pF, 10%, 50V, TP, 1005	
66	2203-001259	C205	C-CHIP, 8pF, 5%, 50V, TP, 1005	
67	2203-001385	C162, C160	C-CHIP, 1.5pF, 0.25pF, 50V,NPO, TP, 1005	
68	2203-001389	C108	C-CHIP, 12nF, 10%, 50V, TP, 1608	
69	2203-001441	C204	C-CHIP, 75pF, 5%, 50V, TP, 1005	
70	2203-001598	C145, C150, C157	C-CHIP, 2.2uF, +80-20%, 16V, TP, 2012	
71	2203-002443	C117	C-CHIP, 330pF, 10%, 50V, TP, 1005	
72	2203-002525	C460	C-CHIP, 560pF, 10%, 50V, TP, 1005	
73	2203-005052	C218	C-CHIP, 3.3pF, 0.25pF, 50V, TP, 1005	
74	2203-005061	C102, C106, C111, C115, C402, C435, C439, C461, C465, C466, C467, C919	C-CHIP, 100nF, +80-20%, 16V, TP, 1005	
75	2203-005065	C436	C-CHIP, 1uF, +80-20%, 10V, TP, 1608	
76	2203-005234	C164	C-CHIP, 1.2pF, 0.25pF, 50V, TP, 1005	
77	2203-005496	C941	C-CHIP, 220nF, +80-20%, 16V, TP, 1005	
78	2404-001083	C400, C404	CAP-TANTAL, 220uF, 20%, 6.3V, 7125	
79	2404-001105	C151, C970	CAP-TANTAL, 10uF, 20%, 6.3V	
80	2404-001113	C154	C-TA, CHIP, 22uF, 20%, 6.3V,-,TP, 3528	
81	2703-001040	L206, L104, L205	Inductor, 10nH, 5%, 1608	
82	2703-001513	L204	Inductor, 100nH, 5%, 1.8x1.12x1.02mm	
83	2703-001189	L200, L203	Inductor, 18nH, 5%, 1608	
84	2703-001748	L100	Inductor, 6.8nH, 5%, 1005	
85	2703-001293	L101, L201, L202	Inductor, 82nH, 5%, 1608	
86	2703-001165	L207	Inductor, 4.7nH, 5%, 1608	

87	2703-001259	L106, L108	Inductor, 47nH, 5%, 1608	
88	2703-001514	L105	Inductor, 68nH, 5%, 1608	
89	2703-001784	L400	INDUCTOR-SMD, 22UH, 20%, 6.6X7.5X2.5MM	
90	2801-003747	X300	Crystal, 32.768KHz, 30ppm, 9pF	
91	2806-001161	U104	VCO, 880-915MHz, TP, 5V, 50mA	
92	2806-001162	U100	VCO, 1150-1185MHz, TP, 5V	
93	2806-001210	U849	Oscillator-VCO, 545MHZ, TP, 2.85V, 5MA	
94	2904-001092	F100	FILTER-SAW, 225.01MHz	
95	2904-001094	F200	FILTER-SAW, 947.5MHz, 12.5MHz, +/-12.5MHz/1dB	
96	2904-001124	F101	FILTER-SAW, 947.5MHz, 25MHz, TP	
97	3705-001163	J1004	CONNECTOR-COAXIAL, SMC, JACK, 100mohm	
98	3710-001277	J1003	B'd Connector, 60P, 2R, 0.5mm, SOCKET	

2. Electrical Parts List

Main B'd (SOLD)

NO	SEC CODE	Location No.	Description	Etc
1	0401-001033	D304	DIODE-SWITCHING, MCL4154,25V,200mA,M-MELF,TP	
2	0404-001044	D302,D303	DIODE-SCHOTTY, 20V, 1A, SMD	
3	0404-001054	U206	DIODE-SCHOTTY, 70V, 15mA. SOT-143	
4	0407-001002	D301	DIODE-ARRAY, 80V, 300mA, CA2-3, EM3	
5	0501-000162	Q401	TR-SMALL SIGNAL, PNP, 200mW, SC-70	
6	0506-000107	Q402	TR-ARRAY, NPN, 50V, 40V, 30mA, 300mW	
7	0506-001004	U109, U410	TR-ARRAY, NPN/PNP, 2.50V, 300mW, UM5	
8	0506-001024	U200	TR-ARRAY, PNP/NPN, 200mW, UM6	
9	0506-001030	Q403	TR-ARRAY, NPN, 150MW, SC-88A, TP	
10	0801-000796	U842	IC-CMOS LOGIC, GATE, SOP, 5P, 64MIL	
11	0801-0002345	U852	IC-CMOS LOGIC, INVERTER, 200mW, SOP, 5P	
12	1201-001456	U203	IC-OP AMP, SOT-23, 5P, SINGLE, 70dB	
13	1201-001007	U411	IC-OP AMP, SOP, 14P, DUAL	
14	1201-001299	U202	IC-POWER AMP, RF-K, 8P, SINGLE, 8V	
15	1203-001256	U311	IC-VOLTAGE REGULATOR, SOT-23, 5P, 59MIL	
16	1203-001454	U307, U406	IC-VOLTAGE REGULATOR, SOT-23, 5P, 59MIL	
17	1203-001515	U304	IC-CHARGE, SSOP, 16P, 150MIL	
18	1203-001740	U400	IC-voltage translator, SOP, 16P, 150MIL	
19	1205-001697	U405	IC-CODE, TQFP, 80P, 472MIL, 3V, T R, VLSI	
20	2007-000070	R201	R-CHIP, 0ohm, 5%, 1/16W, DA, TP, 1005	
21	2007-000137	R205	R-CHIP, 2Kohm, 5%, 1/16W, DA, TP, 1005	
22	2007-000138	R204	R-CHIP, 100ohm, 5%, 1/16W, DA, TP, 1005	
23	2007-000139	R413, R417	R-CHIP, 220ohm, 5%, 1/16W, DA, TP, 1005	
24	2007-000140	R218, R223, R305, R419, R420, R991	R-CHIP, 1Kohm, 5%, 1/16W, DA, TP, 1005	
25	2007-000142	R200,	R-CHIP, 2.7Kohm, 5%, 1/16W, DA, TP, 1005	
26	2007-000143	R139, R213	R-CHIP, 4.7Kohm, 5%, 1/16W, DA, TP, 1005	
27	2007-000147	R224	R-CHIP, 8.2Kohm, 5%, 1/16W, DA, TP, 1005	
28	2007-000148	R403, R410, R411, R418, R429, R526, R527, R982, R983, R971, R989	R-CHIP, 10Kohm, 5%, 1/16W, DA, TP, 1005	
29	2007-000149	R214	R-CHIP, 12Kohm, 5%, 1/16W, DA, TP, 1005	
30	2007-000151	R216	R-CHIP, 15Kohm, 5%, 1/16W, DA, TP, 1005	
31	2007-000153	R215	R-CHIP, 22Kohm, 5%, 1/16W, DA, TP, 1005	
32	2007-000157	R217	R-CHIP, 47Kohm, 5%, 1/16W, DA, TP, 1005	
33	2007-000162	R400, R401, R430, R437, R966, R990, R993, R989	R-CHIP, 100Kohm, 5%, 1/16W, DA, TP, 1005	
34	2007-000758	R455, R457	R-CHIP, 330Kohm, 5%, 1/16W, DA, TP, 1005	
35	2007-000831	R203	R-CHIP, 39Kohm, 5%, 1/16W, DA, TP, 1005	
36	2007-001119	R211	R-CHIP, 680ohm, 5%, 1/16W, DA, TP, 1005	
37	2007-001306	R210	R-CHIP, 150ohm, 5%, 1/16W, DA, TP, 1005	
38	2007-001307	R208	R-CHIP, 180ohm, 5%, 1/16W, DA, TP, 1005	
39	2007-001325	R212	R-CHIP, 3.3Kohm, 5%, 1/16W, DA, TP, 1005	
40	2007-002797	R225, R521	R-CHIP, 560ohm, 5%, 1/16W, DA, TP, 1005	
41	2007-007008	R306	R-CHIP, 300ohm, 5%, 1/16W, DA, TP, 1005	
42	2007-007107	R311	R-CHIP, 100Kohm, 1%, 1/16W, DA, TP, 1005	

43	2007-007137	R302	R-CHIP, 18Kohm, 1%, 1/16W, DA, TP, 1005	
44	2007-007136	R446, R463	R-CHIP, 4.7Kohm, 1%, 1/16W, DA, TP, 1005	
45	2007-007142	R445, R448, R461, R451, R453, R456, R458, R462	R-CHIP, 10Kohm, 1%, 1/16W, DA, TP, 1005	
46	2007-007309	R304, R307	R-CHIP, 12Kohm, 1%, 1/16W, DA, TP, 1005	
47	2007-007311	R449, R450, R454, R460,	R-CHIP, 22Kohm, 1%, 1/16W, DA, TP, 1005	
48	2007-007312	R502	R-CHIP, 20Kohm, 1%, 1/16W, DA, TP, 1005	
49	2007-007318	R443, R452, R459, R468	R-CHIP, 1Kohm, 1%, 1/16W, DA, TP, 1005	
50	2007-007586	R444, R447, R465, R466	R-CHIP, 470ohm, 1%, 1/16W, DA, TP, 1005	
51	2007-007586	R310	R-CHIP, 82Kohm, 1%, 1/16W, DA, TP, 1005	
52	2007-007592	R303	R-CHIP, 270Kohm, 1%, 1/16W, DA, TP, 1005	
53	2203-000233	C209, C214, C223, C226, C227, C229, C233, C208	C-CHIP, 100pF, 5%, 50V, TP, 1005	
54	2203-000254	C200, C201, C315, C317, C405, C419, C421, C423, C427, C428, C438, C458, C967	C-CHIP, 10nF, 10%, 16V, TP, 1005	
55	2203-000438	C407, C451, C455, C935, C936	C-CHIP, 1nF, 10%, 50V, TP, 1005	
56	2203-000489	C446, C459	C-CHIP, 2.2nF, 10%, 50V, TP, 1005	
57	2203-000585	C210	C-CHIP, 220pF, 10%, 50V, TP, 1005	
58	2203-000628	C213	C-CHIP, 22pF, 5%, 50V, TP, 1005	
59	2203-000714	C445, C464	C-CHIP, 3.3nF, 10%, 50V, TP, 1005	
60	2203-000725	C447, C457	C-CHIP, 3.9nF, 10%, 50V, TP, 1005	
61	2203-000812	C224	C-CHIP, 33pF, 5%, 50V, TP, 1005	
62	2203-000854	C920	C-CHIP, 39pF, 5%, 50V, NPO, TP, 1005	
63	2203-000940	C963, C972	C-CHIP, 470pF, 10%, 50V, TP, 1005	
64	2203-001033	C444, C463	C-CHIP, 5.6nF, 10%, 25V, TP, 1005	
65	2203-001153	C983	C-CHIP, 68nF, 5%, 50V, TP, 1005	
66	2203-001221	C212	C-CHIP, 820pF, 10%, 50V, TP, 1005	
67	2203-001239	C922, C979, C980, C981, C974, C975	C-CHIP, 82pF, 5%, 50V, TP, 1005	
68	2203-001259	C174	C-CHIP, 8pF, 5%, 50V, TP, 1005	
69	2203-001405	C406, C429	C-CHIP, 22nF, 10%, 50V, X7R, TP, 1005	
70	2203-001432	C424, C450, C452	C-CHIP, 47nF, 10%, 16V, TP, 1005	
71	2203-002443	C448, C449, C454, C456	C-CHIP, 330pF, 10%, 50V, TP, 1005	
72	2203-005061	C302, C304, C408, C985	C-CHIP, 100nF, +80-20%, 16V, TP, 1005	
73	2203-005065	C230, C303, C311	C-CHIP, 1uF, +80-20, 10V, TP, 1608	
74	2203-005367	C305	C-CHIP, 6.8uF, 20%, 25V, 3225	
75	2404-001039	C430	CAP-TANTAL, 47uF, 20%, 6.3V, 3528	
76	2404-001083	C228,	CAP-TANTAL, 220uF, 20%, 6.3V, 7125	
77	2404-001105	C202, C316, C409, C410, C437, C961	CAP-TANTAL, 10uF, 20%, 6.3V	
78	2404-001086	C942	Capacitor, 4.7uF, 20%, 6.3V, 2012	
79	2404-001113	C314	C-TA, CHIP, 22uF, 20%, 6.3V, -, 3528	
80	2703-000153	L402, L404	Inductor, 1000uH, 20%, 1210-ac13225	
81	2703-001174	L208	Inductor, 33nH, 5%, 1608	
82	2703-001417	L401, L403	Inductor, 680uH, 20%, 3225	
83	2703-001781	L300	INDUCTOR-SMD, 10UH, 20%, 4.45X6.6X2.5MM	
84	2809-001220	U201	VCTCXO, 13MHz, 2.5pm, TP, 3V	

Electrical Parts List

85	2909-001072	U204	IC-SWITCH, 942.5MHz, 897.5MHz, TP	
86	3301-001177	FB100	CORE-FERRITE BEAD, AB, 3.2x1.6x1.1mm	
87	3301-001208	B1, B2	CORE-FERRITE BEAD, AB, 1.6x0.8x0.8mm	
88	3709-001074	J400	SIM CONNECTOR, 6P, SMD-S	
89	4709-001124	U205	COUPLER, 800+-1000MHz, 14dB, 3.2x1.6x0.7mm	

2. Electrical Parts List

Key B'd (COMP)

NO	SEC CODE	Location No	Description	Etc
1	0406-001005	D404, D415, D416, D417 D421, D422, D423, D424, D426, D427	ESD DIODE, 6V/1mA, SOT-23	
2	0601-000273	D405, D406, D407, D408 D409, D410, D411, D412	LED-CHIP, Y/GRN, 0.8X1.2mm, 570nm	
3	0601-000276	D428	LED-CHIP, Y/GRN, 1.6X2.0mm, 570nm	
4	1405-001019	VA1	VARISTOR, 5.6V, -, 1.6X0.8mm, TP	
5	2007-000138	R477	R-CHIP, 100ohm, 5%, 1/16W, DA, TP, 1005	
6	2203-000254	C1006, C1007	C-CHIP, 10nF, 10%, 16V, TP, 1005	
7	2203-001239	C923, C1028, C1029	C-CHIP, 82pF, 5%, 50V, TP, 1005	

Key B'd (SOLD)

NO	SEC CODE	Location No	Description	Etc
1	0406-001005	D420, D429, D430	ESD DIODE, 6V/1mA, SOT-23	
2	0406-001012	D402, D414	ESD DIODE, 13.3V/1mA, 300W, SOT-23	
3	0407-001002	D431	DIODE-ARRAY, 80V, 300mA, CA2-3, EM3	
4	0407-001030	D305, D306, D403, D418 D419	DIODE-ARRAY, 5V, CK5-2, SOT-23	
5	0501-000218	Q300	TR-SMALL SIGNAL, NPN, 200mW, UMT	
6	0501-002011	Q500, Q502	TR-SMALL SIGNAL, NPN, 200mW, SOT-23	
7	0504-001012	U878	TR-DIGITAL, NPN, 150mW, 10K-47Kohm, EMT	
8	0505-001332	Q501	FET-SILICON, N, 25V, 0.22A, 4OHM, 3W, SC70-6	
9	1001-001088	U887, U888	IC-ANALOG SWITCH, SOT-23, 6P, 13V, 571MW	
10	1202-001022	U886	IC-VOLFAGECOMP, 8P, DUAL, 36V, CMOS	
11	0504-001012	U861	TR-DIGITAL, NPN, 150mW, 10K-47Kohm, EMT	
12	2007-000138	R478, R479, R482, R483 R484, R485, R1002, R1003	R-CHIP, 100ohm, 5%, 1/16W, DA, TP, 1005	
13	2007-000139	R967, R969, R970, R988, R1027	R-CHIP, 220ohm, 5%, 1/16W, DA, TP, 1005	
14	2007-000143	R301, R502	R-CHIP, 4.7Kohm, 5%, 1/16W, DA, TP, 1005	
15	2007-000148	R971, R980	R-CHIP, 10Kohm, 5%, 1/16W, DA, TP, 1005	
16	2007-000162	R300, R975, R1032, R1036, R1037, R1038, R1039	R-CHIP, 100Kohm, 5%, 1/16W, DA, TP, 1005	
17	2007-000171	R498, R1033	R-CHIP, 0ohm, 5%, 1/16W, DA, TP, 1005	
18	2007-000172	R480, R481	R-CHIP, 10ohm, 5%, 1/16W, DA, TP, 1005	
19	2007-000242	R501	R-CHIP, 1.5Kohm, 5%, 1/16W, DA, TP, 1005	
20	2007-001308	R524	R-CHIP, 200ohm, 5%, 1/16W, DA, TP, 1005	
21	2007-007142	R1035	R-CHIP, 10Kohm, 1%, 1/16W, DA, TP, 1005	
22	2007-007138	R1034	R-CHIP, 27Kohm, 1%, 1/16W, DA, TP, 1005	
23	2203-000254	C950	C-CHIP, 10nF, 10%, 16V, TP, 1005	
24	2203-001239	C1021, C1022, C1030 C1031	C-CHIP, 82pF, 5%, 50V, TP, 1005	
25	2203-005061	C300	C-CHIP, 100nF, +8-20%, 16V, TP, 1005	
26	2203-005065	C940	C-CHIP, 1μF, +80-20%, 10V, Y5V, TP, 1608	
27	3002-001078	J1005	BUZZER-MAGNETIC, 88DB, 3.6V, 120MA, 2300-2600HZ	
28	3402-001039	SW22	SWITCH-REED, 100VDC, 9.5A, 1000US	
29	3710-001429	J401	CONNECTOR-SOCKET 18P	
30	3711-003780	J1002	B'd Connector, 60P, 2R, 0.5mm, HEADER	
31	3708-001295	J1003(Keypad B'd)	LCE_FPC connector, 22pins	
32	3722-001380	J1008	JACK-PHONE, 6P, 2.6PI, AG, BLK	

Else parts

NO	SEC CODE	Location No	Description	Etc
1	GH96-00839A	J1004 (Keypad B'd)	MIC Ass'y	
2	GH59-00004A	SW23	Side Key Ass'y (CDMA-800)	
3	GH96-00805A		LCD MODULE	
4	GH42-00009A	A1	ANTENNA-BLACK	
5	GH42-00017A		ANTENNA-GRAY	
6	GH42-00034A		MAIN PCB	
7	GH42-00035A		KEY PCB	
8	GH42-00018A		ANTENNA-CHAMPAGNE GOLD	
9	4302-001081	BAT300	250uAH, back-up battery	
10	GH39-00015A		ANTENNA WIRE	

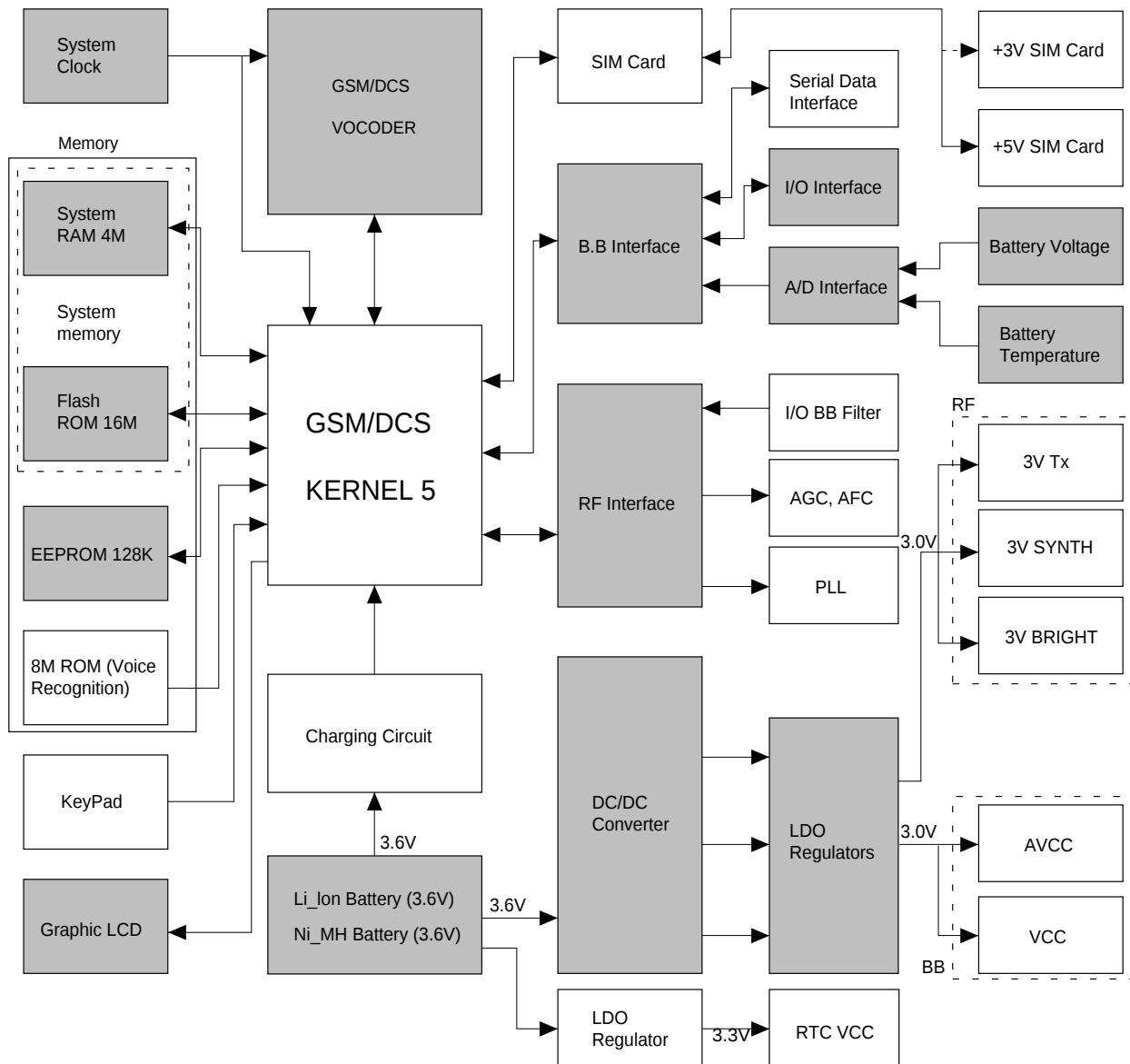
Options

1	GH80-10508A	JIG	SGH-600 TEST JIG	
2	GH39-30532A	CABLE	SGH-600 TEST JIG CABLE	
3	GH44-30549A	TA	SGH-600 TRAVEL ADAPTOR (EUROPE)	
4	GH44-30547A	TA	SGH-600 TRAVEL ADAPTOR (U.K)	
5	GH44-30548A	TA	SGH-600 TRAVEL ADAPTOR (U. S. A)	
6	GH44-30550A	TA	SGH-600 TRAVEL ADAPTOR (AUSTRALIA)	
7	GH44-30553A	TA	SGH-600 TRAVEL ADAPTOR (CHINA)	
8	GH39-10504A	TA CABLE	SGH-600 TA CABLE (DC CODE)	
9		CLA	CLA (SGH-600)	
10	GH43-00034A	Battery	3.6V, 570mAh (Slim battery, NCB)	
11	GH43-00079A	Battery	3.6V, 1000mAh (Standard battery)	
12	GH43-00080A	Battery	3.6V, 1600mAh (Extended battery)	
13		Data Kit	Data Kit (SGH-600)	
14	GH69-00200A	Car Bolder	New Design	
15	GH44-00037A	Desk Top Charger	New Design	
16	GH44-00038A	Desk Top Charger (CHINA)	New Design	
17	GH96-00788A	Handsfree Kit	New Design, Circuit SGH-600	
18		Simple Handsfree Kit	CLA+Car holder+PHK	
20		Carry Case	New Design	
21	GH96-00830A	EARPHONE (BASIC)		
22	GH96-01121A	EARPHONE (option)	EAR PHONE	

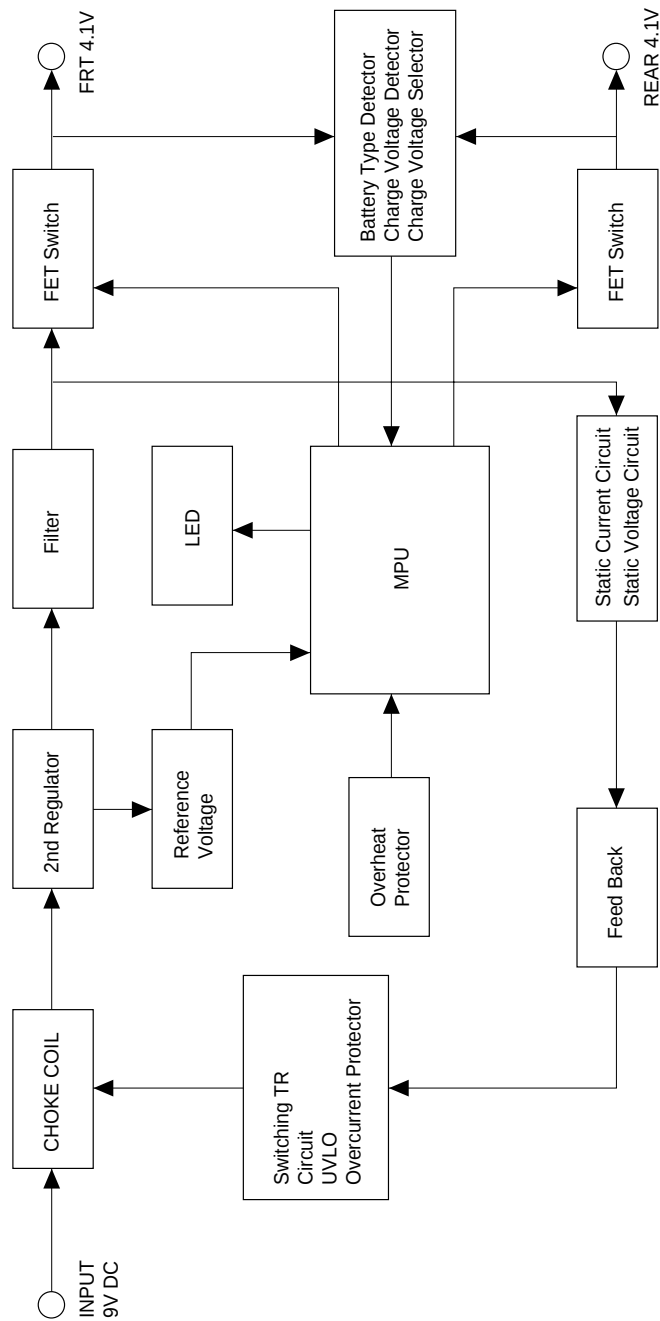
3-1 RF Block Diagram

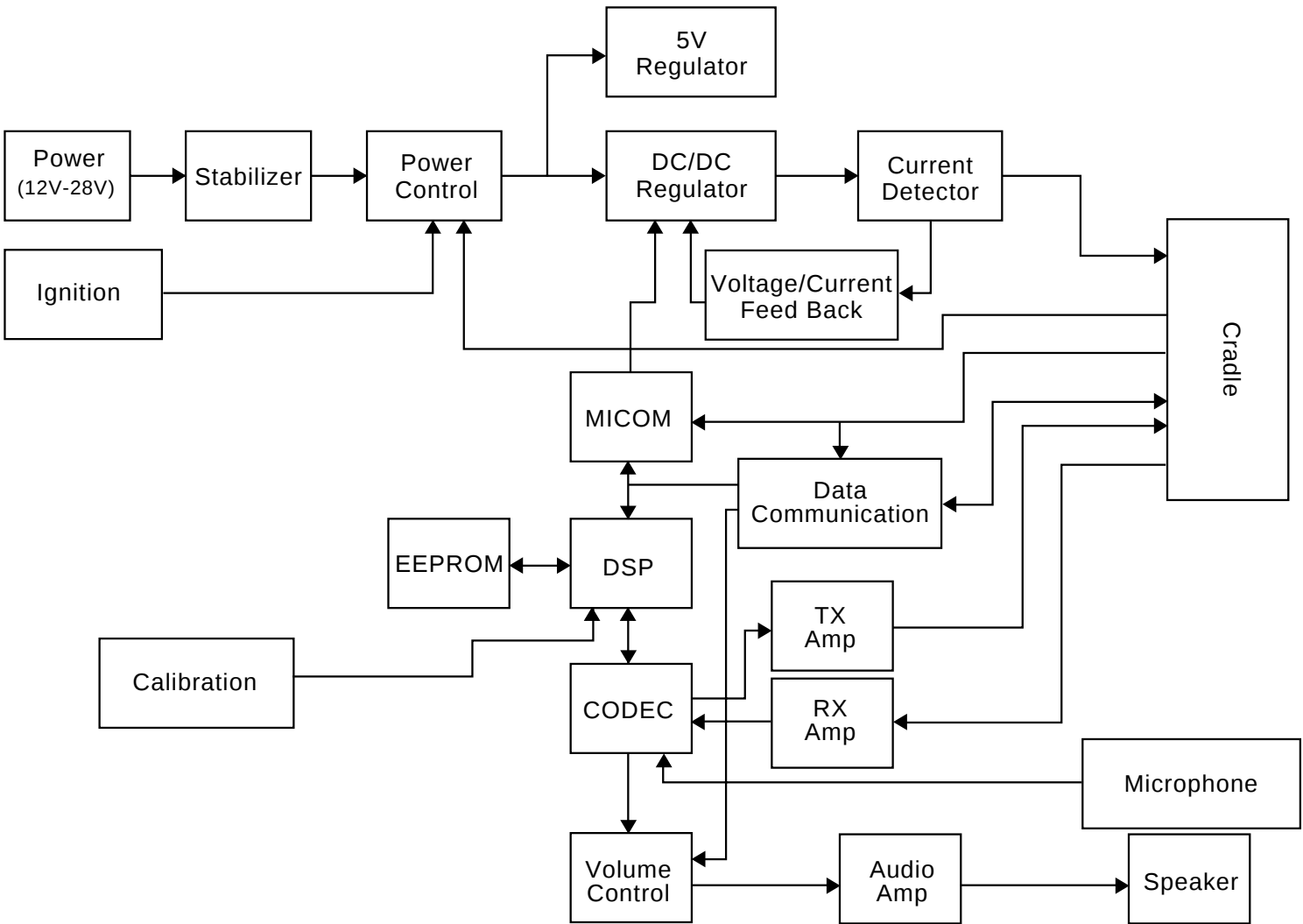


3-2 Baseband Block Diagram



3-3 DTC Block Diagram



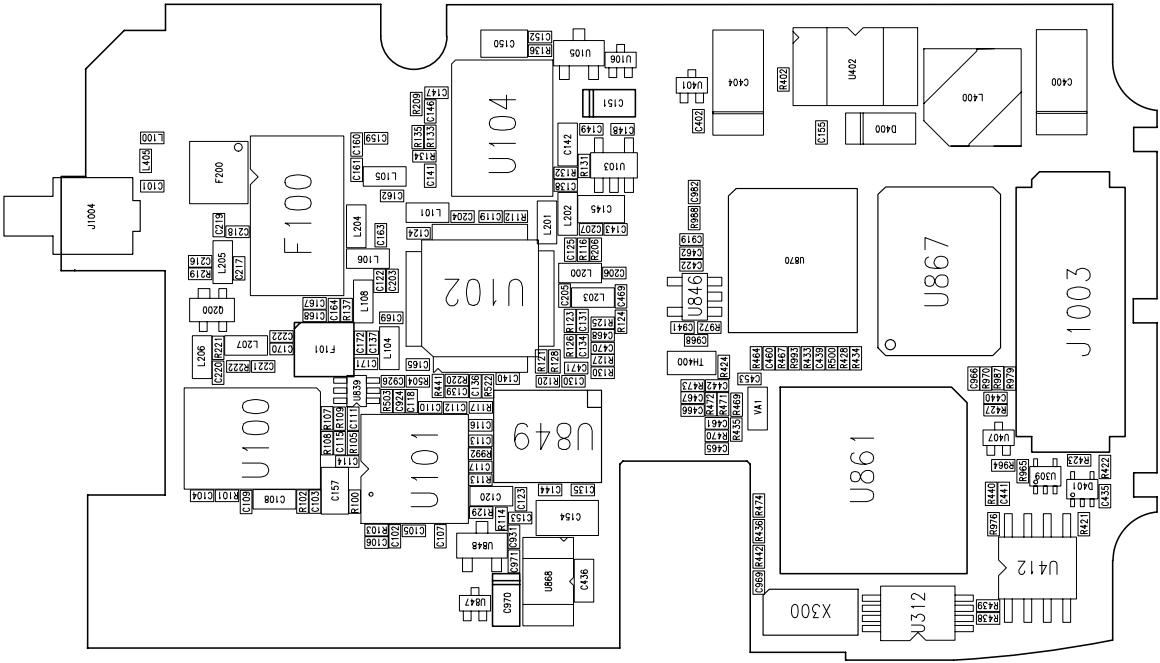


3-4 HFK Block Diagram

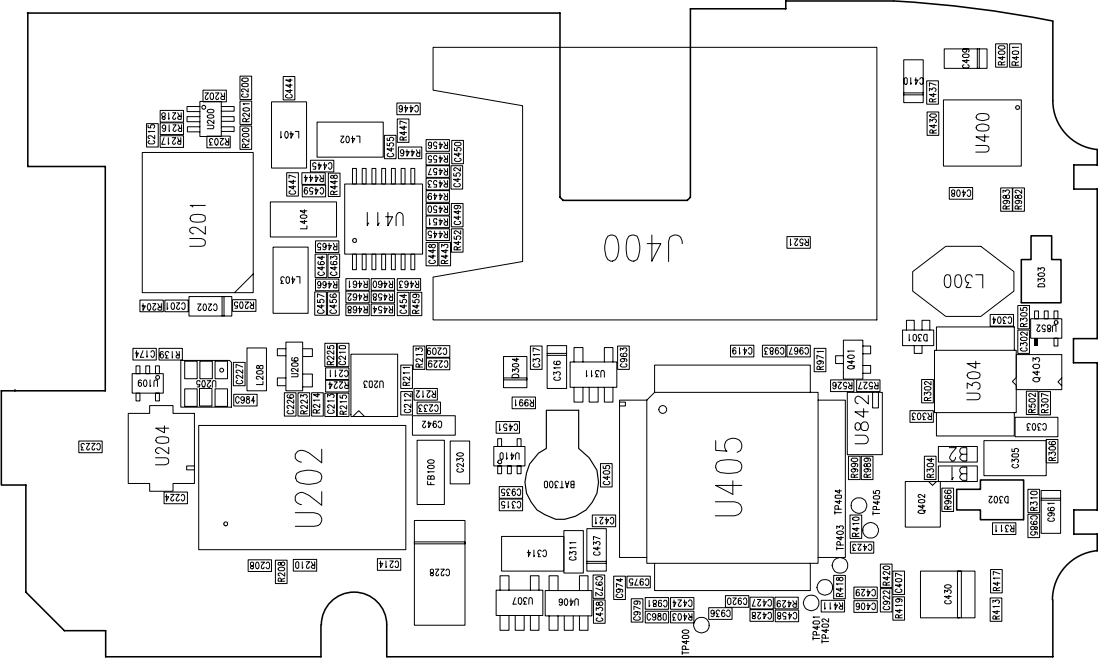
4. PCB Diagrams

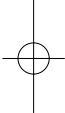
4-1 Main PCB

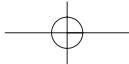
Top View



Bottom View



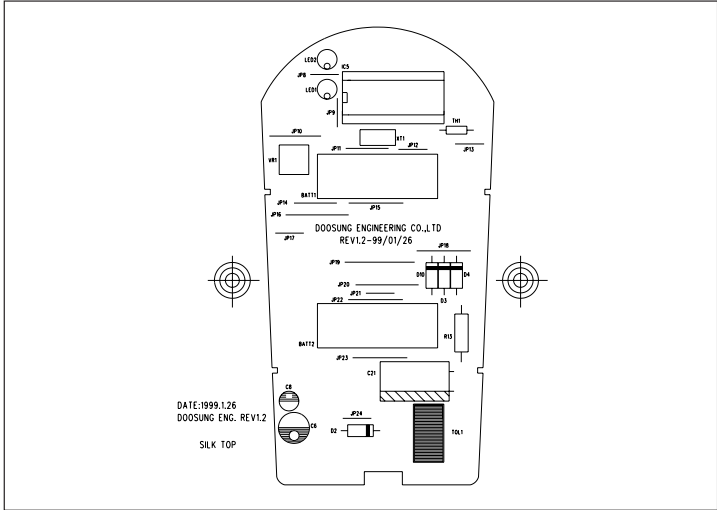




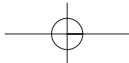
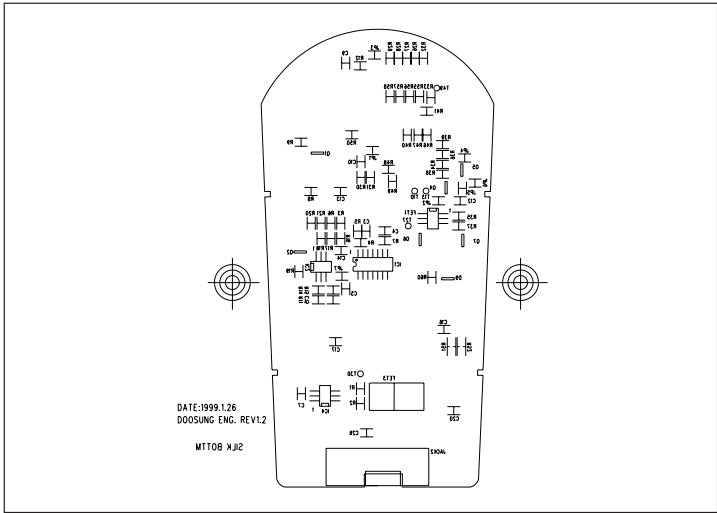
PCB Diagrams

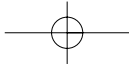
4-3 Desk top Charger PCB

Top View



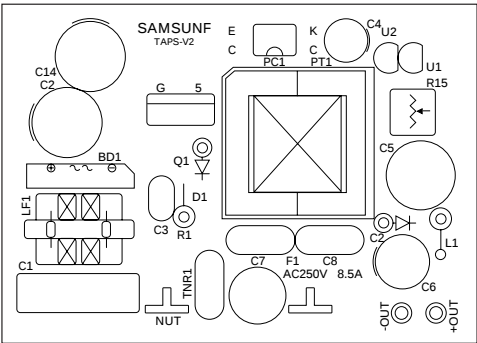
Bottom View



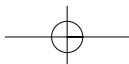
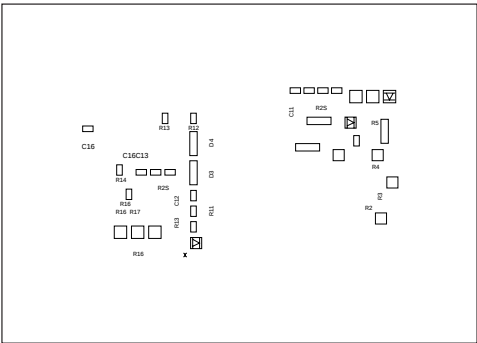


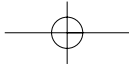
4-4 Travel Adaptor PCB

Top View



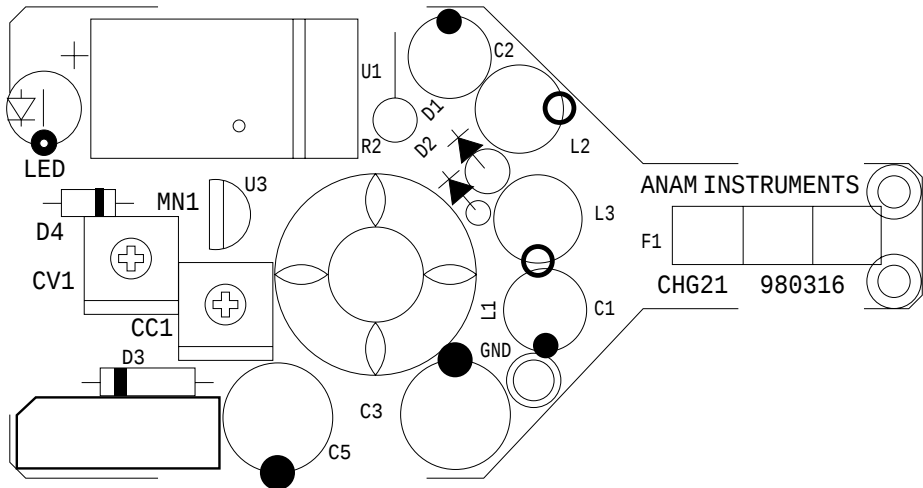
Bottom View



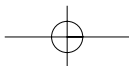
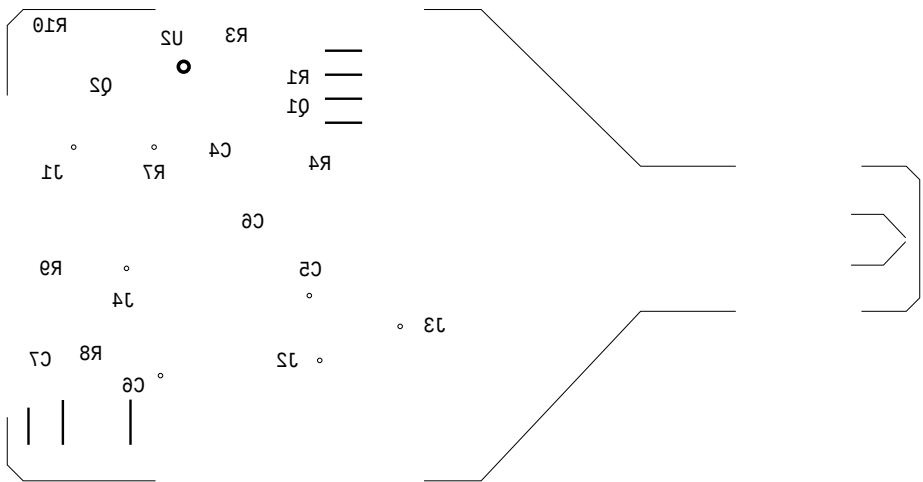


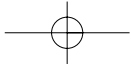
4-5 Cigar Light Adaptor PCB

Top View



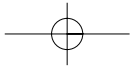
Bottom View

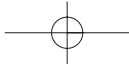




PCB Diagrams

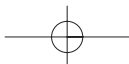
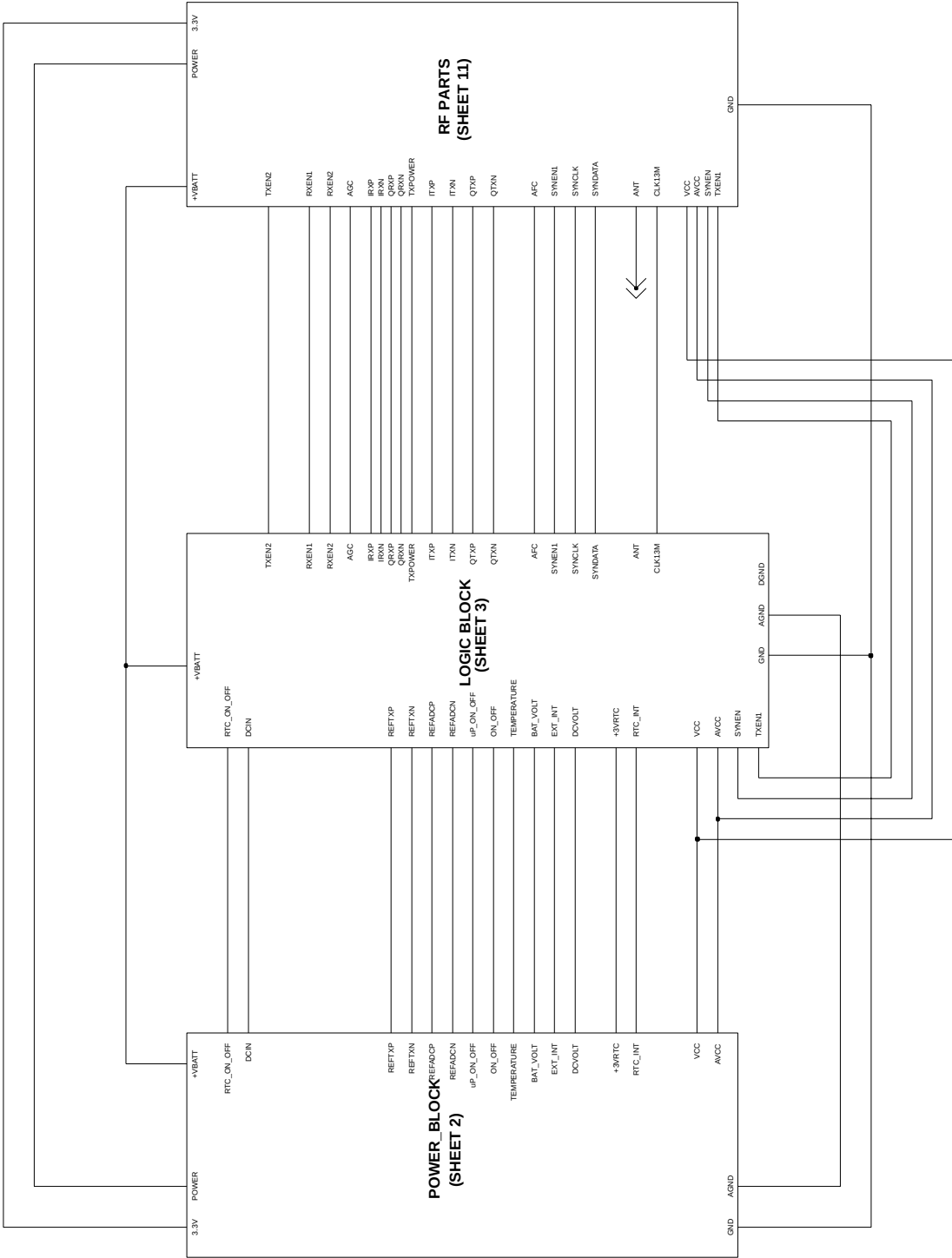
MEMO



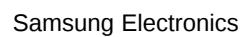


5. Schematic Diagrams

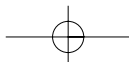
5-1 GSM Handset Schematic (Top Level) Circuit Diagram

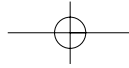


5-2

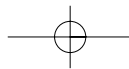
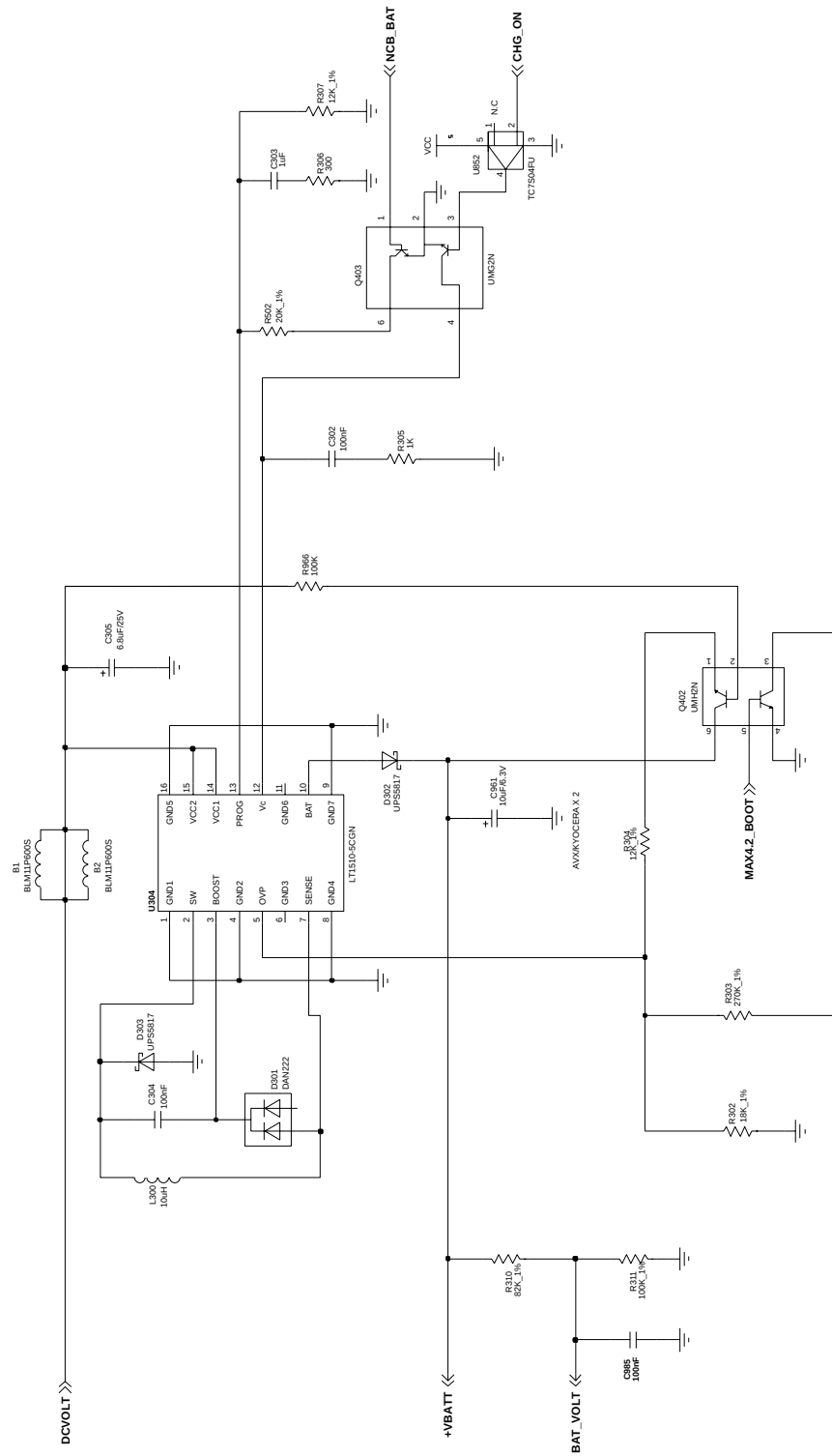


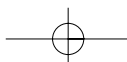
Samsung Electronics



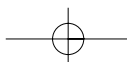


5-4 Charger Schematic Circuit Diagram

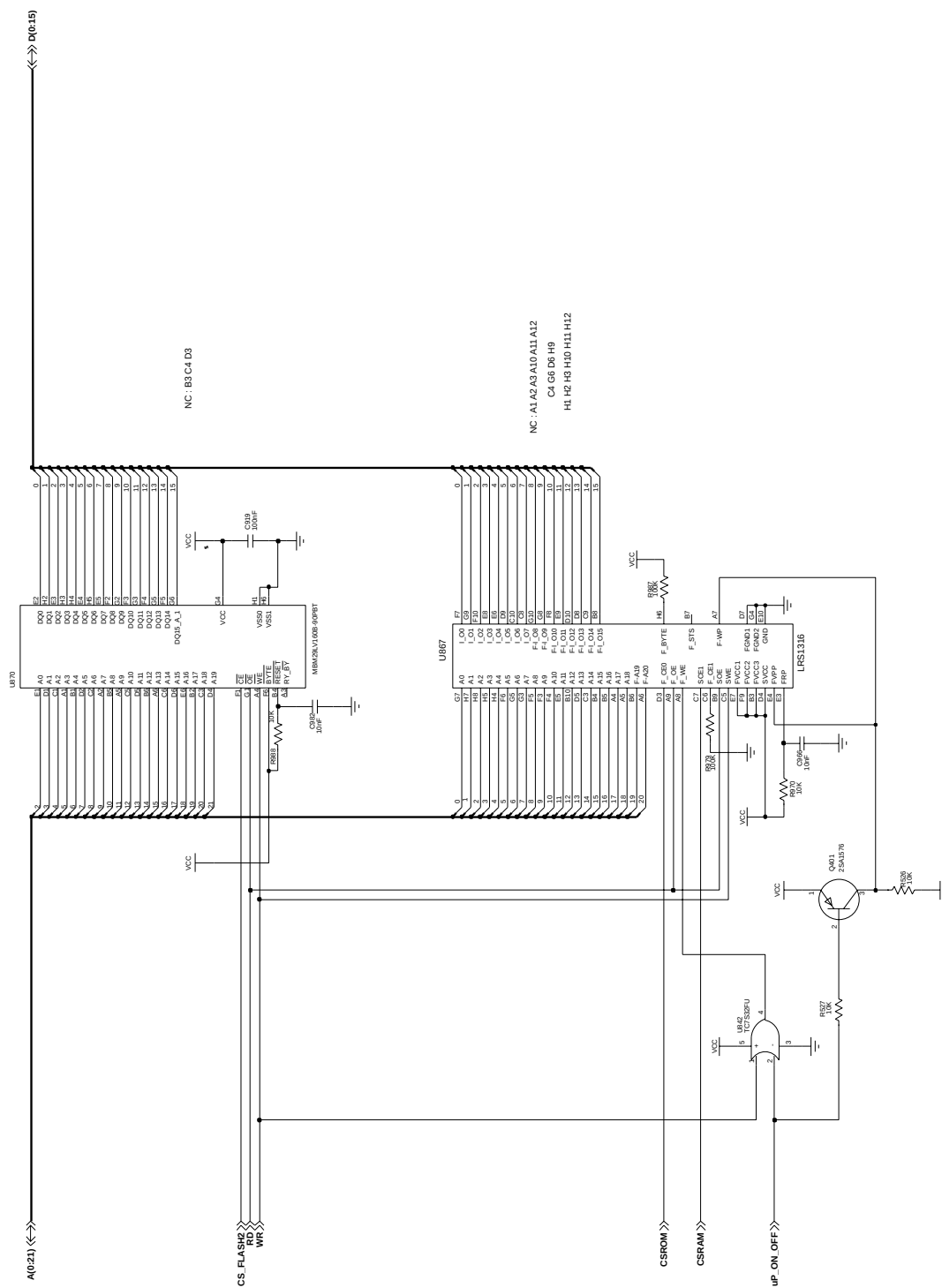




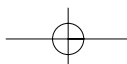
5-6



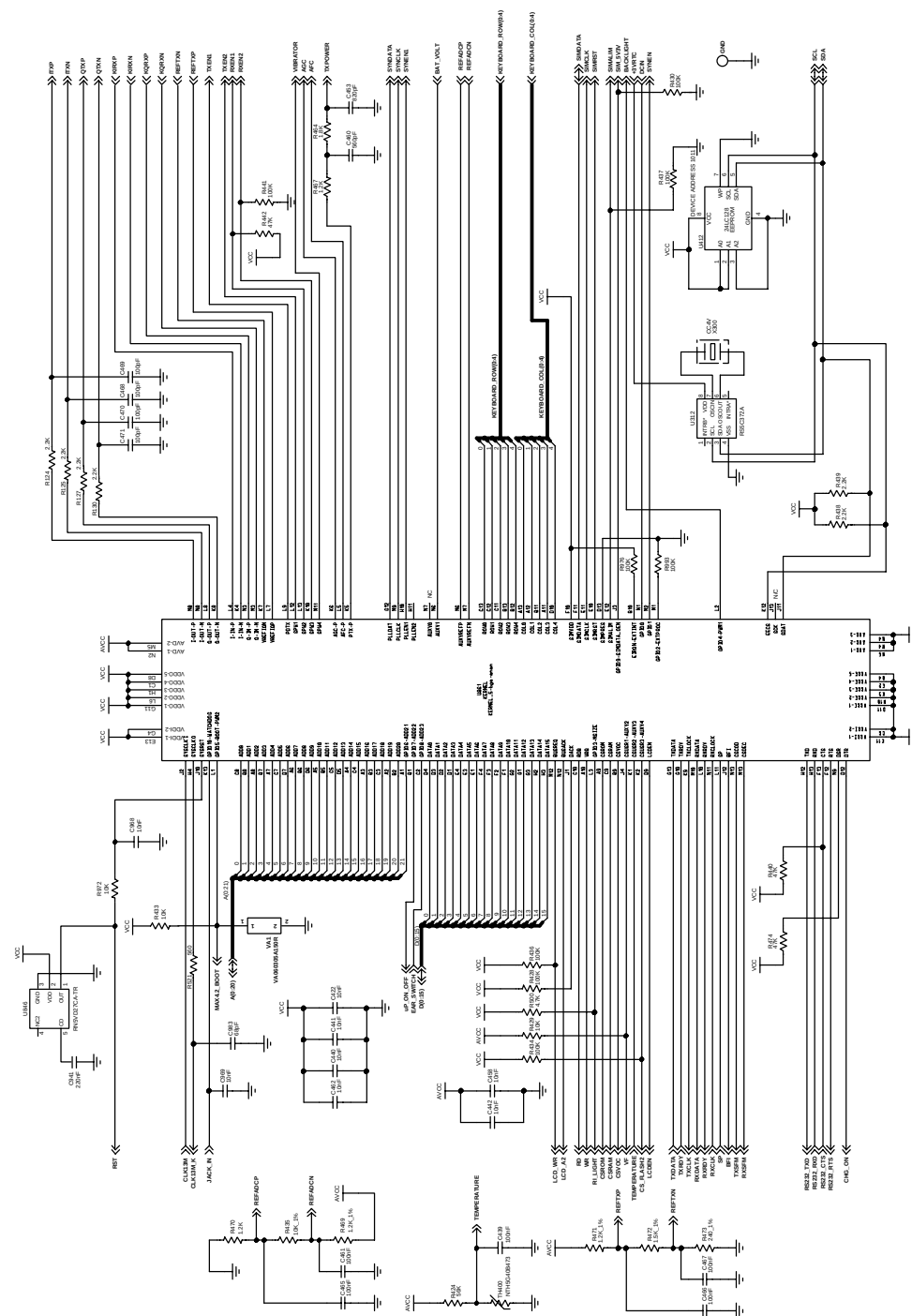
Samsung Electronics

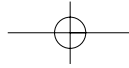


5-8

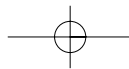
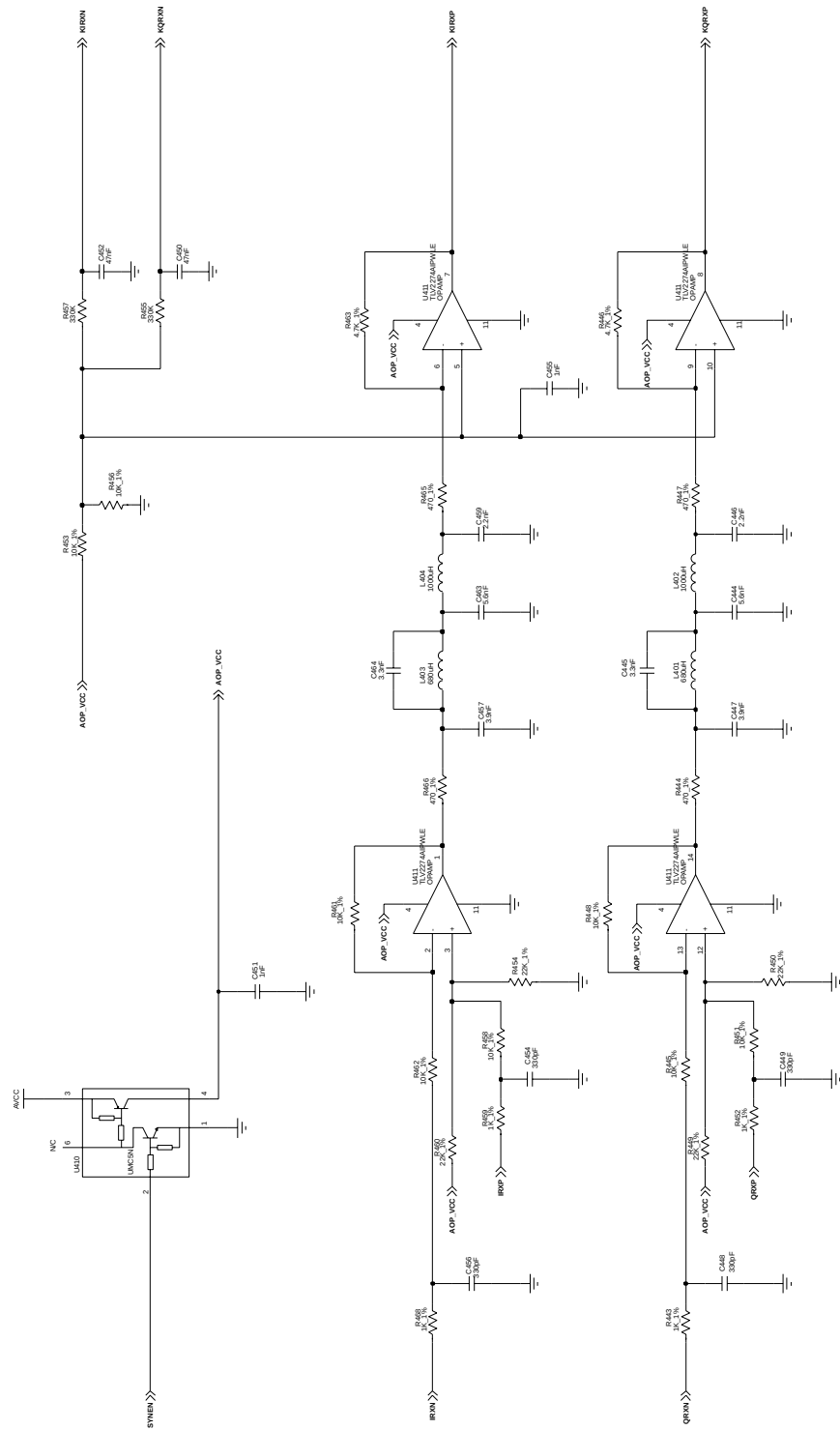


Samsung Electronics

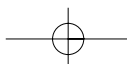


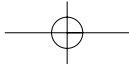


5-10 Baseband Filters Schematic Circuit Diagram

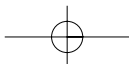
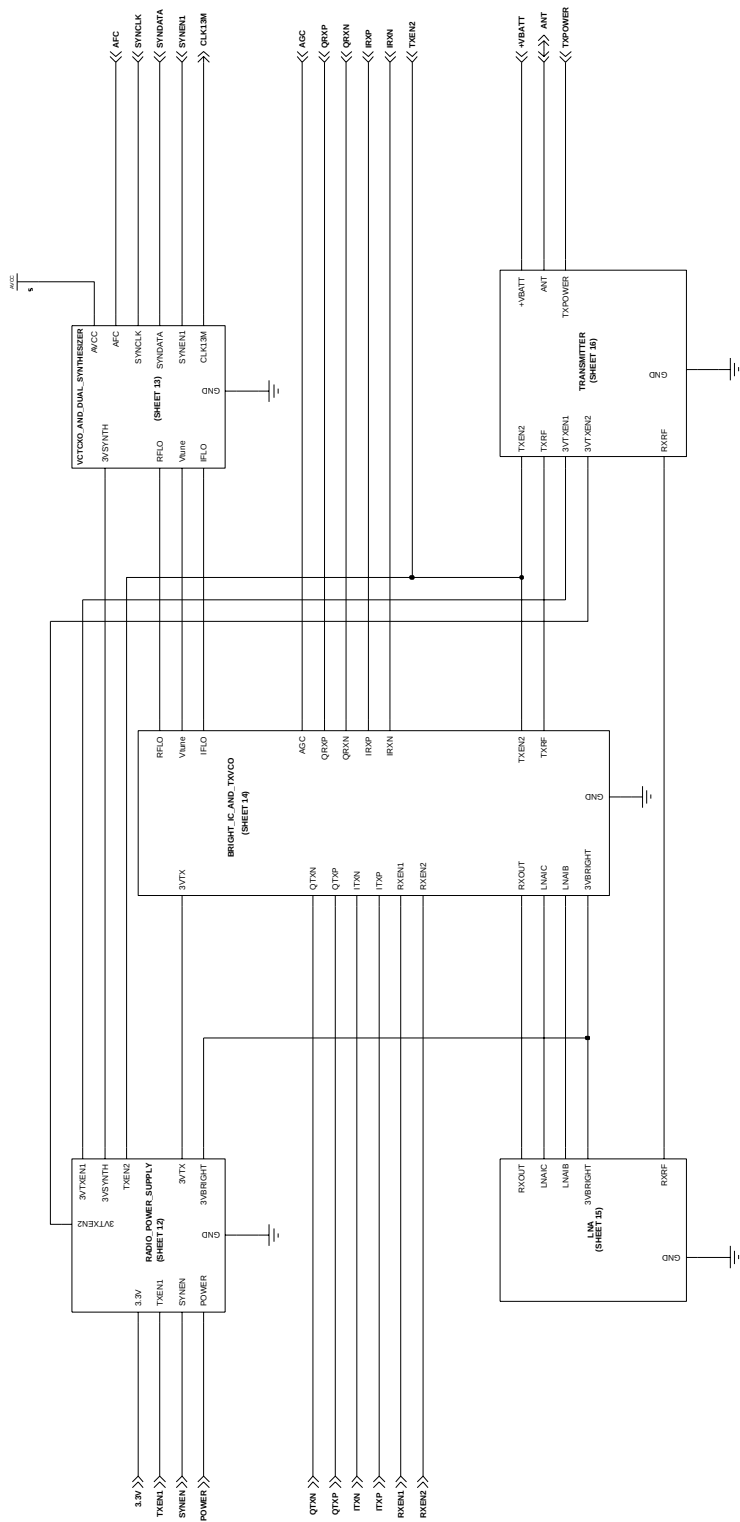


Samsung Electronics

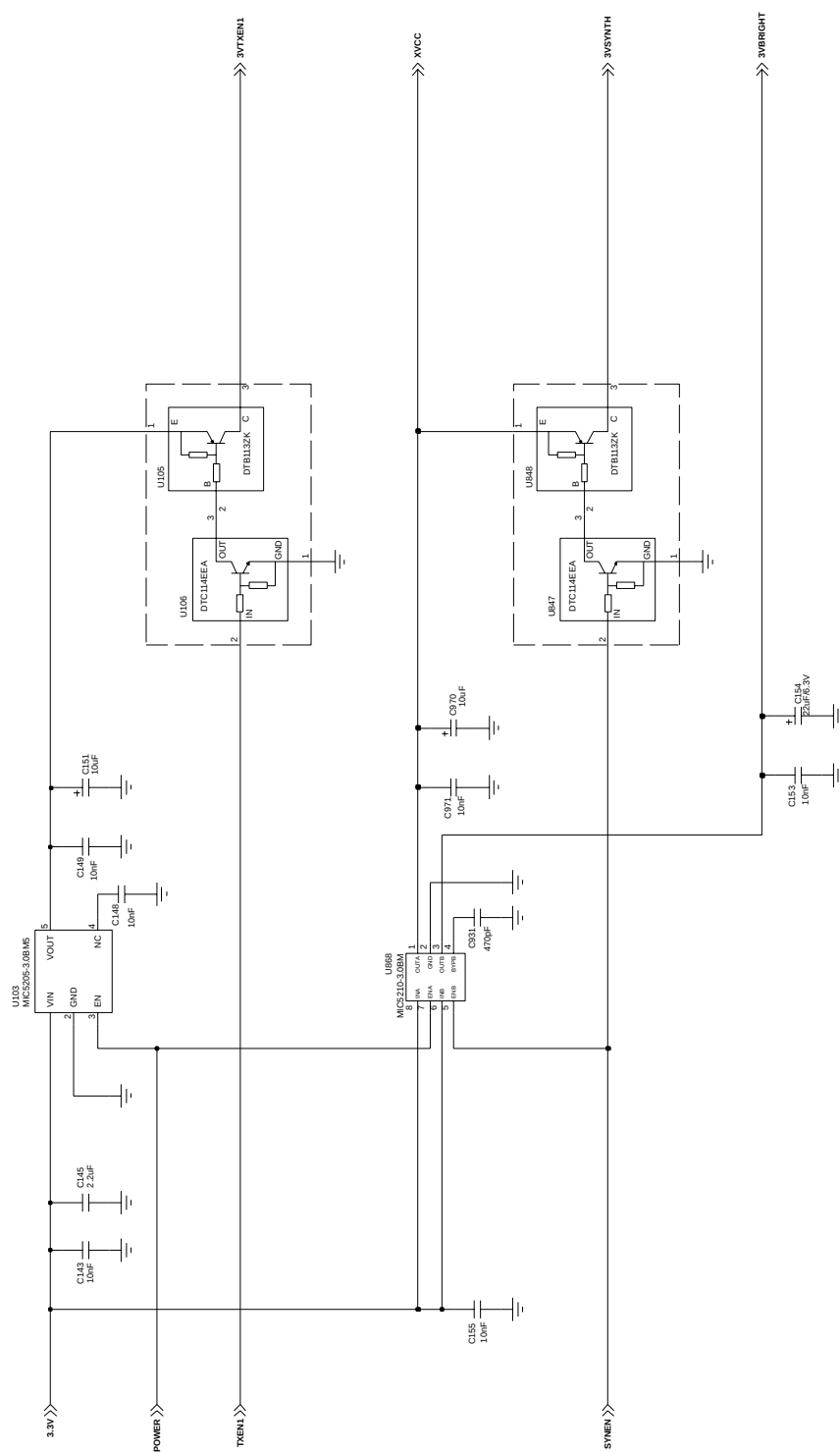




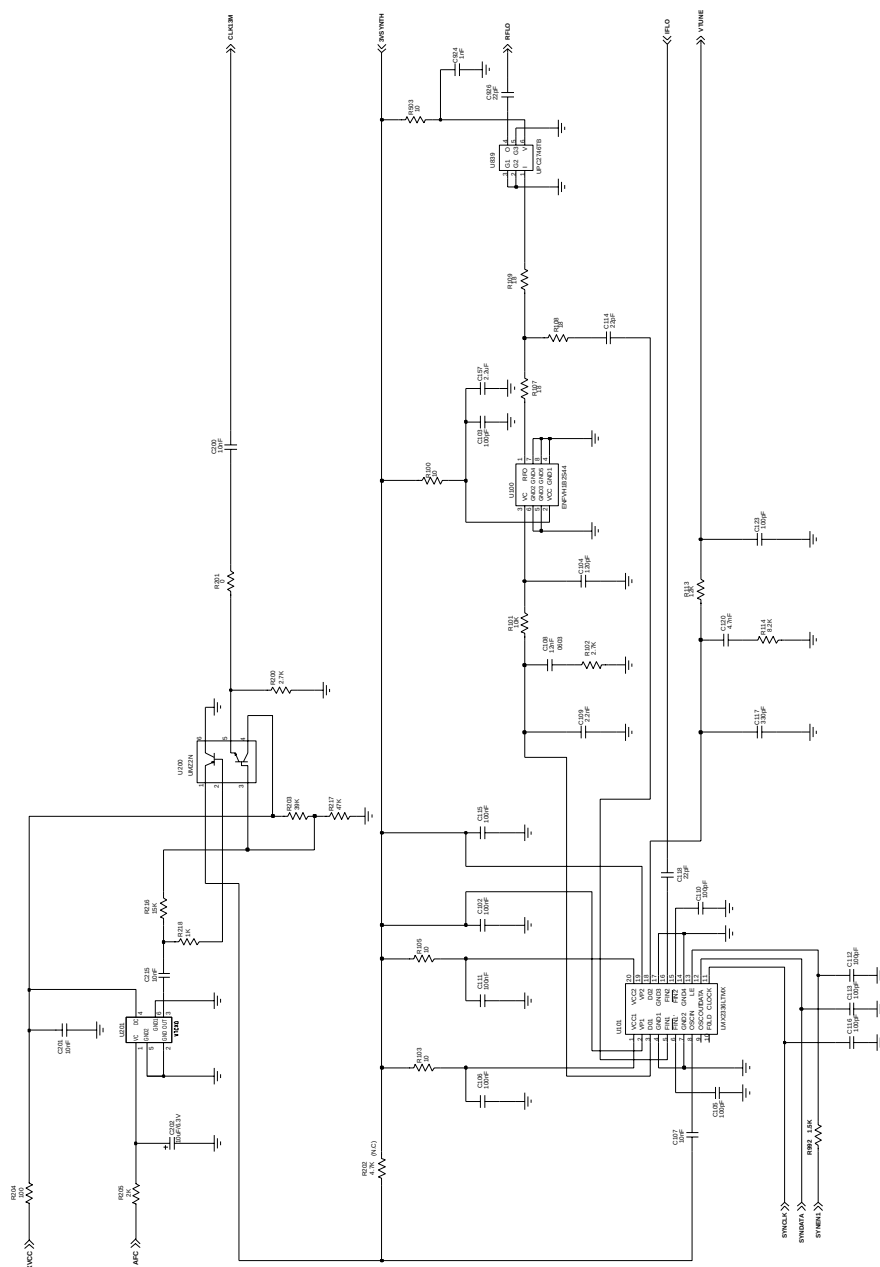
5-12 RF TOP Block Circuit Diagram



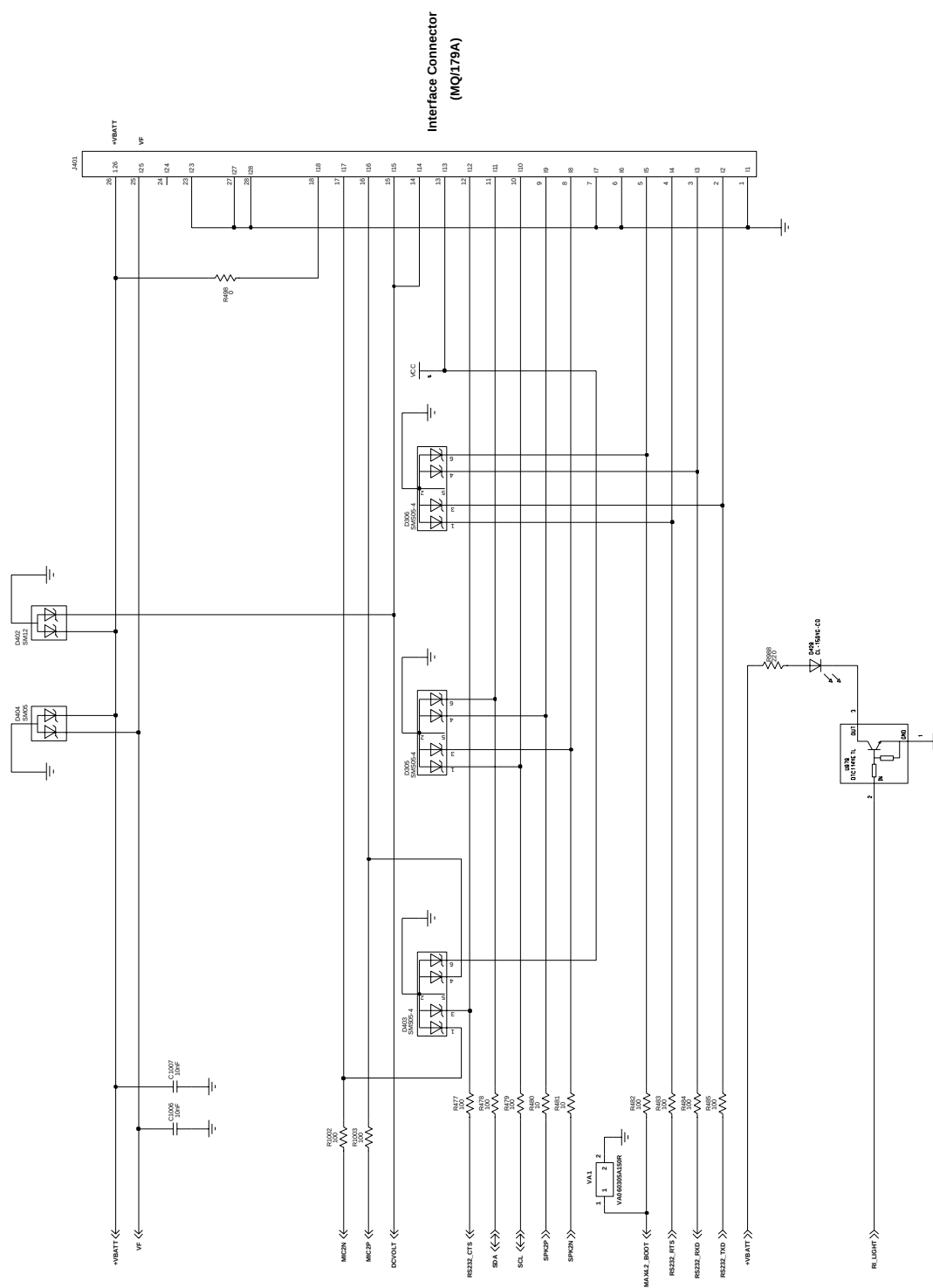
Samsung Electronics



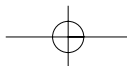
5-14

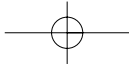


Samsung Electronics

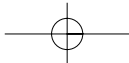
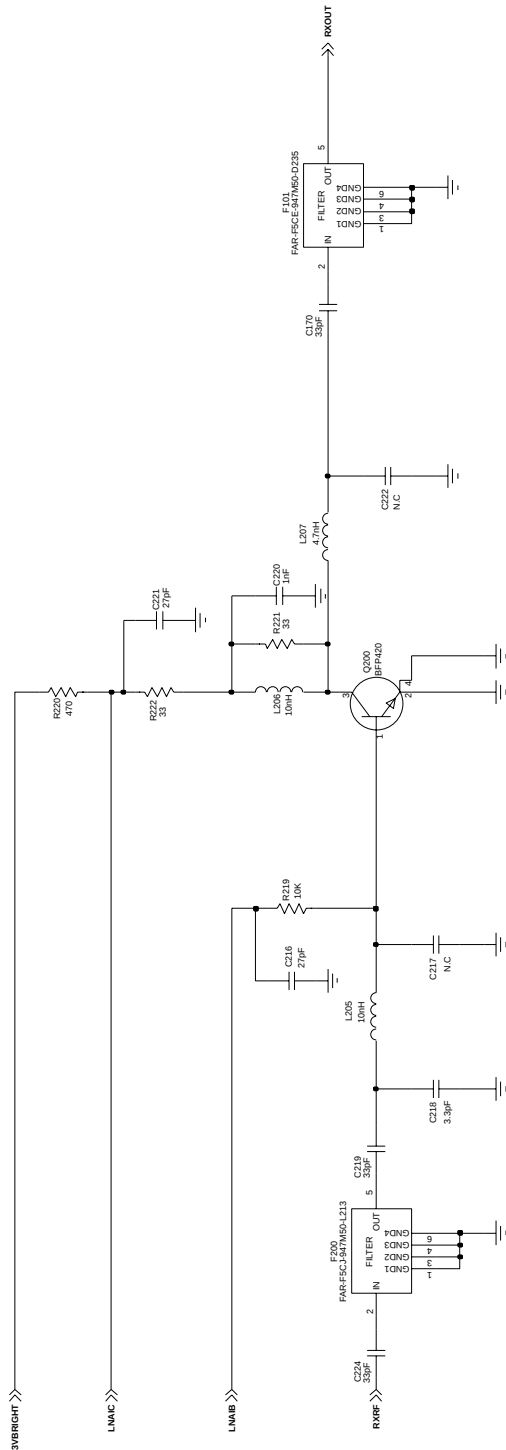


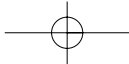
5-16



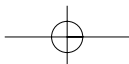
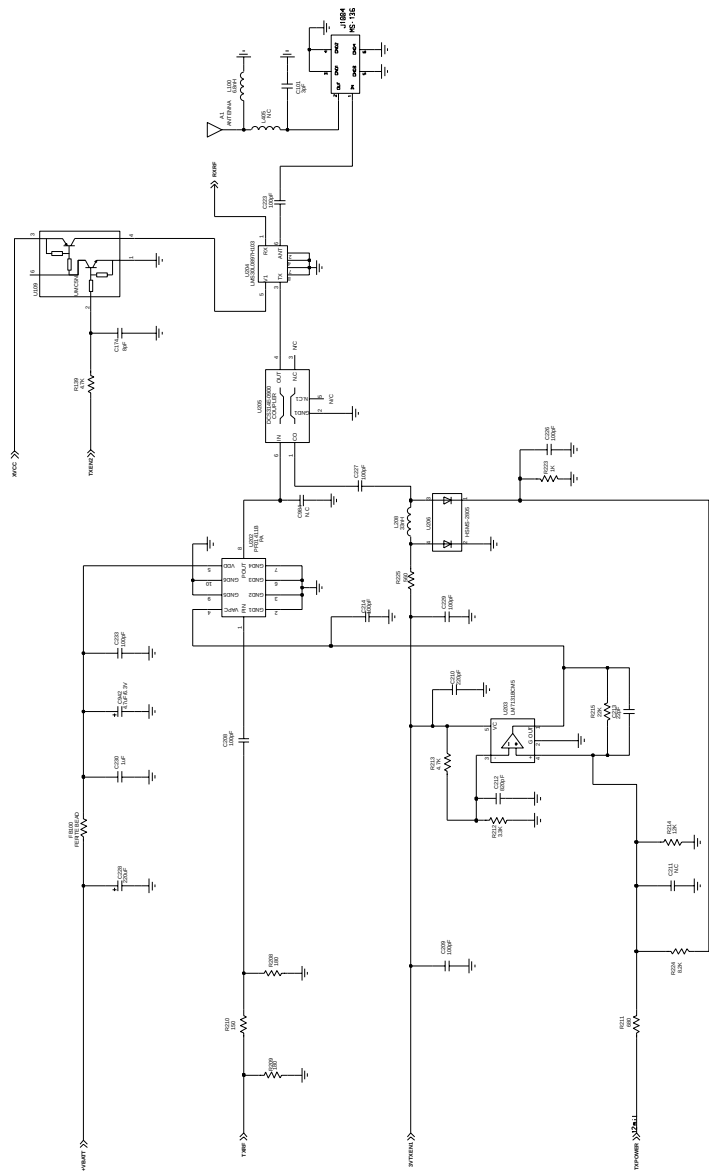


5-17 LNA Schematic Circuit Diagram



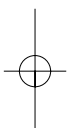
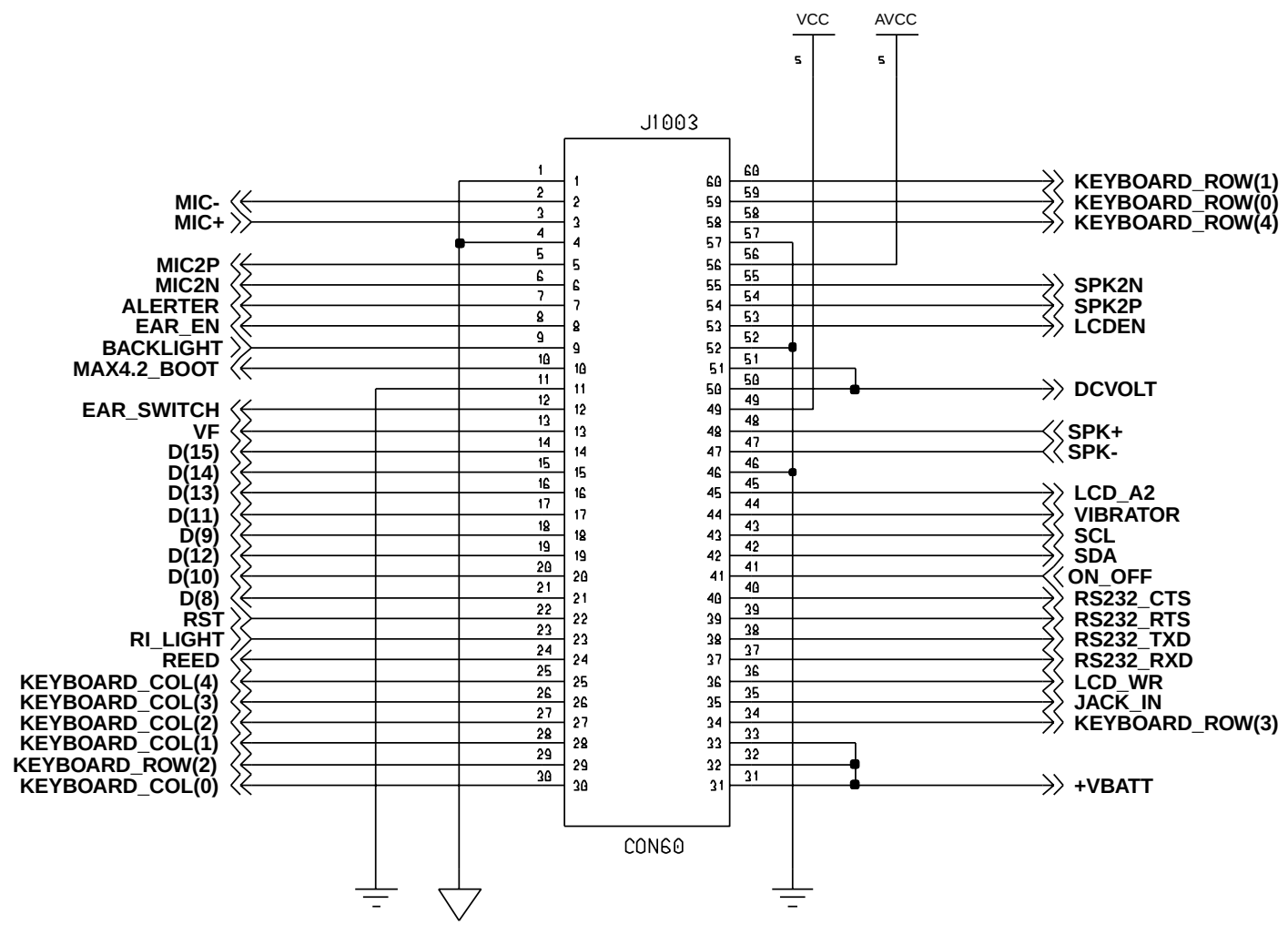


5-18 Transmitter Circuit Diagram





5-19 B'd to Connector Circuit Diagram

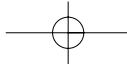


RF Frequency Plan.

TX Channel List

Channel NO.	Freq. Range(MHz)	Center Freq. (MHz)	VCO Freq. (MHz)	IF Freq. (MHz)	Channel NO.	Freq. Range(MHz)	Center Freq. (MHz)	VCO Freq. (MHz)	IF Freq. (MHz)
1	890.1~890.3	890.2	1160.2	270	32	896.3~896.5	896.4	1166.4	270
2	890.3~890.5	890.4	1160.4	270	33	896.5~896.7	896.6	1166.6	270
3	890.5~890.7	890.6	1160.6	270	34	896.7~896.9	896.8	1166.8	270
4	890.7~890.9	890.8	1160.8	270	35	896.9~897.1	897.0	1167.0	270
5	890.9~891.1	891.0	1161.0	270	36	897.1~897.3	897.2	1167.2	270
6	891.1~891.3	891.2	1161.2	270	37	897.3~897.5	897.4	1167.4	270
7	891.3~891.5	891.4	1161.4	270	38	897.5~897.7	897.6	1167.6	270
8	891.5~891.7	891.6	1161.6	270	39	897.7~897.9	897.8	1167.8	270
9	891.7~891.9	891.8	1161.8	270	40	897.9~898.1	898.0	1168.0	270
10	891.9~892.1	892.0	1162.0	270	41	898.1~898.3	898.2	1168.2	270
11	892.1~892.3	892.2	1162.2	270	42	898.3~898.5	898.4	1168.4	270
12	892.3~892.5	892.4	1162.4	270	43	898.5~898.7	898.6	1168.6	270
13	892.5~892.7	892.6	1162.6	270	44	898.7~898.9	898.8	1168.8	270
14	892.7~892.9	892.8	1162.8	270	45	898.9~899.1	899.0	1169.0	270
15	892.9~893.1	893.0	1163.0	270	46	899.1~899.3	899.2	1169.2	270
16	893.1~893.3	893.2	1163.2	270	47	899.3~899.5	899.4	1169.4	270
17	893.3~893.5	893.4	1163.4	270	48	899.5~899.7	899.6	1169.6	270
18	893.5~893.7	893.6	1163.6	270	49	899.7~899.9	899.8	1169.8	270
19	893.7~893.9	893.8	1163.8	270	50	899.9~900.1	900.0	1170.0	270
20	893.9~894.1	894.0	1164.0	270	51	900.1~900.3	900.2	1170.2	270
21	894.1~894.3	894.2	1164.2	270	52	900.3~900.5	900.4	1170.4	270
22	894.3~894.5	894.4	1164.4	270	53	900.5~900.7	900.6	1170.6	270
23	894.5~894.7	894.6	1164.6	270	54	900.7~900.9	900.8	1170.8	270
24	894.7~894.9	894.8	1164.8	270	55	900.9~901.1	901.0	1171.0	270
25	894.9~895.1	895.0	1165.0	270	56	901.1~901.3	901.2	1171.2	270
26	895.1~895.3	895.2	1165.2	270	57	901.3~901.5	901.4	1171.4	270
27	895.3~895.5	895.4	1165.4	270	58	901.5~901.7	901.6	1171.6	270
28	895.5~895.7	895.6	1165.6	270	59	901.7~901.9	901.8	1171.8	270
29	895.7~895.9	895.8	1165.8	270	60	901.9~902.1	902.0	1172.0	270
30	895.9~896.1	896.0	1166.0	270	61	902.1~902.3	902.2	1172.2	270
31	896.1~896.3	896.2	1166.2	270	62	902.3~902.5	902.4	1172.4	270

Channel NO.	Freq. Range(MHz)	Center Freq. (MHz)	VCO Freq. (MHz)	IF Freq. (MHz)	Channel NO.	Freq. Range(MHz)	Center Freq. (MHz)	VCO Freq. (MHz)	IF Freq. (MHz)
63	902.5~902.7	902.6	1172.6	270	94	908.7~908.9	941.4	1166.4	270
64	902.7~902.9	902.8	1172.8	270	95	908.9~909.1	909.0	1179.0	270
65	902.9~903.1	903.0	1173.0	270	96	909.1~909.3	909.2	1179.2	270
66	903.1~903.3	903.2	1173.2	270	97	909.3~909.5	909.4	1179.4	270
67	903.3~903.5	903.4	1173.4	270	98	909.5~909.7	909.6	1179.6	270
68	903.5~903.7	903.6	1173.6	270	99	909.7~909.9	909.8	1179.8	270
69	903.7~903.9	903.8	1173.8	270	100	909.9~910.1	910.0	1180.0	270
70	903.9~904.1	904.0	1174.0	270	101	910.1~910.3	910.2	1180.2	270
71	904.1~904.3	904.2	1174.2	270	102	910.3~910.5	910.4	1180.4	270
72	904.3~904.5	904.4	1174.4	270	103	910.5~910.7	910.6	1180.6	270
73	904.5~904.7	904.6	1174.6	270	104	910.7~910.9	910.8	1180.8	270
74	904.7~904.9	904.8	1174.8	270	105	910.9~911.1	911.0	1181.0	270
75	904.9~905.1	905.0	1175.0	270	106	911.1~911.3	911.2	1181.2	270
76	905.1~905.3	905.2	1175.2	270	107	911.3~911.5	911.4	1181.4	270
77	905.3~905.5	905.4	1175.4	270	108	911.5~911.7	911.6	1181.6	270
78	905.5~905.7	905.6	1175.6	270	109	911.7~911.9	911.8	1181.8	270
79	905.7~905.9	905.8	1175.8	270	110	911.9~912.1	912.0	1182.0	270
80	905.9~906.1	906.0	1176.0	270	111	912.1~912.3	912.2	1182.2	270
81	906.1~906.3	906.2	1176.2	270	112	912.3~912.5	912.4	1182.4	270
82	906.3~906.5	906.4	1176.4	270	113	912.5~912.7	912.6	1182.6	270
83	906.5~906.7	906.6	1176.6	270	114	912.7~912.9	912.8	1182.8	270
84	906.7~906.9	906.8	1176.8	270	115	912.9~913.1	913.0	1183.0	270
85	906.9~907.1	907.0	1177.0	270	116	913.1~913.3	913.2	1183.2	270
86	907.1~907.3	907.2	1177.2	270	117	913.3~913.5	913.4	1183.4	270
87	907.3~907.5	907.4	1177.4	270	118	913.5~913.7	913.6	1183.6	270
88	907.5~907.7	907.6	1177.6	270	119	913.7~913.9	913.8	1183.8	270
89	907.7~907.9	907.8	1177.8	270	120	913.9~914.1	914.0	1184.0	270
90	907.9~908.1	908.0	1178.0	270	121	914.1~914.3	914.2	1184.2	270
91	908.1~908.3	908.2	1178.2	270	122	914.3~914.5	914.4	1184.4	270
92	908.3~908.5	908.4	1178.4	270	123	914.5~914.7	914.6	1184.6	270
93	908.5~908.7	908.6	1178.6	270	124	914.7~914.9	914.8	1184.8	270



RX Channel List

Channel NO.	Freq. Range(MHz)	Center Freq. (MHz)	VCO Freq. (MHz)	IF Freq. (MHz)	Channel NO.	Freq. Range(MHz)	Center Freq. (MHz)	VCO Freq. (MHz)	IF Freq. (MHz)
1	935.1~935.3	935.2	1160.2	225	32	941.3~941.5	941.4	1166.4	225
2	935.3~935.5	935.4	1160.4	225	33	941.5~941.7	941.6	1166.6	225
3	935.5~935.7	935.6	1160.6	225	34	941.7~941.9	941.8	1166.8	225
4	935.7~935.9	935.8	1160.8	225	35	941.9~942.1	942.0	1167.0	225
5	935.9~936.1	936.0	1161.0	225	36	942.1~942.3	942.2	1167.2	225
6	936.1~936.3	936.2	1161.2	225	37	942.3~942.5	942.4	1167.4	225
7	936.3~936.5	936.4	1161.4	225	38	942.5~942.7	942.6	1167.6	225
8	936.5~936.7	936.6	1161.6	225	39	942.7~942.9	942.8	1167.8	225
9	936.7~936.9	936.8	1161.8	225	40	942.9~943.1	943.0	1168.0	225
10	936.9~937.1	937.0	1162.0	225	41	943.1~943.3	943.2	1168.2	225
11	937.1~937.3	937.2	1162.2	225	42	943.3~943.5	943.4	1168.4	225
12	937.3~937.5	937.4	1162.4	225	43	943.5~943.7	943.6	1168.6	225
13	937.5~937.7	937.6	1162.6	225	44	943.7~943.9	943.8	1168.8	225
14	937.7~937.9	937.8	1162.8	225	45	943.9~944.1	944.0	1169.0	225
15	937.9~938.1	938.0	1163.0	225	46	944.1~944.3	944.2	1169.2	225
16	938.1~938.3	938.2	1163.2	225	47	944.3~944.5	944.4	1169.4	225
17	938.3~938.5	938.4	1163.4	225	48	944.5~944.7	944.6	1169.6	225
18	938.5~938.7	938.6	1163.6	225	49	944.7~944.9	944.8	1169.8	225
19	938.7~938.9	938.8	1163.8	225	50	944.9~945.1	945.0	1170.0	225
20	938.9~939.1	939.0	1164.0	225	51	945.1~945.3	945.2	1170.2	225
21	939.1~939.3	939.2	1164.2	225	52	945.3~945.5	945.4	1170.4	225
22	939.3~939.5	939.4	1164.4	225	53	945.5~945.7	945.6	1170.6	225
23	939.5~939.7	939.6	1164.6	225	54	945.7~945.9	945.8	1170.8	225
24	939.7~939.9	939.8	1164.8	225	55	945.9~946.1	946.0	1171.0	225
25	939.9~940.1	940.0	1165.0	225	56	946.1~946.3	946.2	1171.2	225
26	940.1~940.3	940.2	1165.2	225	57	946.3~946.5	946.4	1171.4	225
27	940.3~940.5	940.4	1165.4	225	58	946.5~946.7	946.6	1171.6	225
28	940.5~940.7	940.6	1165.6	225	59	946.7~946.9	946.8	1171.8	225
29	940.7~940.9	940.8	1165.8	225	60	946.9~947.1	947.0	1172.0	225
30	940.9~941.1	941.0	1166.0	225	61	947.1~947.3	947.2	1172.2	225
31	941.1~941.3	941.2	1166.2	225	62	947.3~947.5	947.4	1172.4	225

Channel NO.	Freq. Range(MHz)	Center Freq. (MHz)	VCO Freq. (MHz)	IF Freq. (MHz)	Channel NO.	Freq. Range(MHz)	Center Freq. (MHz)	VCO Freq. (MHz)	IF Freq. (MHz)
63	947.4~947.7	947.6	1172.6	225	94	953.7~953.9	941.4	1166.4	225
64	947.7~947.9	947.8	1172.8	225	95	953.9~954.1	954.0	1179.0	225
65	947.9~948.1	948.0	1173.0	225	96	954.1~954.3	954.2	1179.2	225
66	948.1~948.3	948.2	1173.2	225	97	954.3~954.5	954.4	1179.4	225
67	948.3~948.5	948.4	1173.4	225	98	954.5~954.7	954.6	1179.6	225
68	948.5~948.7	948.6	1173.6	225	99	954.7~954.9	954.8	1179.8	225
69	948.7~948.9	948.8	1173.8	225	100	954.9~955.1	955.0	1180.0	225
70	948.9~949.1	949.0	1174.0	225	101	955.1~955.3	955.2	1180.2	225
71	949.1~949.3	949.2	1174.2	225	102	955.3~955.5	955.4	1180.4	225
72	949.3~949.5	949.4	1174.4	225	103	955.5~955.7	955.6	1180.6	225
73	949.5~949.7	949.6	1174.6	225	104	955.7~955.9	955.8	1180.8	225
74	949.7~949.9	949.8	1174.8	225	105	955.9~956.1	956.0	1181.0	225
75	949.9~950.1	950.0	1175.0	225	106	956.1~956.3	956.2	1181.2	225
76	950.1~950.3	950.2	1175.2	225	107	956.3~956.5	956.4	1181.4	225
77	950.3~950.5	950.4	1175.4	225	108	956.5~956.7	956.6	1181.6	225
78	950.5~950.7	950.6	1175.6	225	109	956.7~956.9	956.8	1181.8	225
79	950.7~950.9	950.8	1175.8	225	110	956.9~957.1	957.0	1182.0	225
80	950.9~951.1	951.0	1176.0	225	111	957.1~957.3	957.2	1182.2	225
81	951.1~951.3	951.2	1176.2	225	112	957.3~957.5	957.4	1182.4	225
82	951.3~951.5	951.4	1176.4	225	113	957.5~957.7	957.6	1182.6	225
83	951.5~951.7	951.6	1176.6	225	114	957.7~957.9	957.8	1182.8	225
84	951.7~951.9	951.8	1176.8	225	115	957.9~958.1	958.0	1183.0	225
85	951.9~952.1	952.0	1177.0	225	116	958.1~958.3	958.2	1183.2	225
86	952.1~952.3	952.2	1177.2	225	117	958.3~958.5	958.4	1183.4	225
87	952.3~952.5	952.4	1177.4	225	118	958.5~958.7	958.6	1183.6	225
88	952.5~952.7	952.6	1177.6	225	119	958.7~958.9	958.8	1183.8	225
89	952.7~952.9	952.8	1177.8	225	120	958.9~959.1	959.0	1184.0	225
90	952.9~953.1	953.0	1178.0	225	121	959.1~959.3	959.2	1184.2	225
91	953.1~953.3	953.2	1178.2	225	122	959.3~959.5	959.4	1184.4	225
92	953.3~953.5	953.4	1178.4	225	123	959.5~959.7	959.6	1184.6	225
93	953.5~953.7	953.6	1178.6	225	124	959.7~959.9	959.8	1184.8	225

