

SAMSUNG

GSM TELEPHONE

SGH-P738

SERVICE *Manual*

GSM TELEPHONE



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1. SGH-P738 Specification

1. GSM General Specification

	GSM900 Phase 1	EGSM 900 Phase 2	DCS 1800 Phase 1
Freq. Band [MHz] Uplink/Downlink	890~915 935~960	880~915 925~960	1710~1785 1805~1880
ARFCN range	1~124	0~124 & 975~1023	512~885
Tx/Rx spacing	45MHz	45MHz	95MHz
Mod. Bit rate / Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us
Time Slot Period / Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK
MS Power	33dBm~13dBm	33dBm~5dBm	30dBm~0dBm
Power Class	5pcl ~ 15pcl	5pcl ~ 19pcl	0pcl ~ 15pcl
Sensitivity	-102dBm	-102dBm	-100dBm
TDMA Mux	8	8	8
Cell Radius	35Km	35Km	2Km

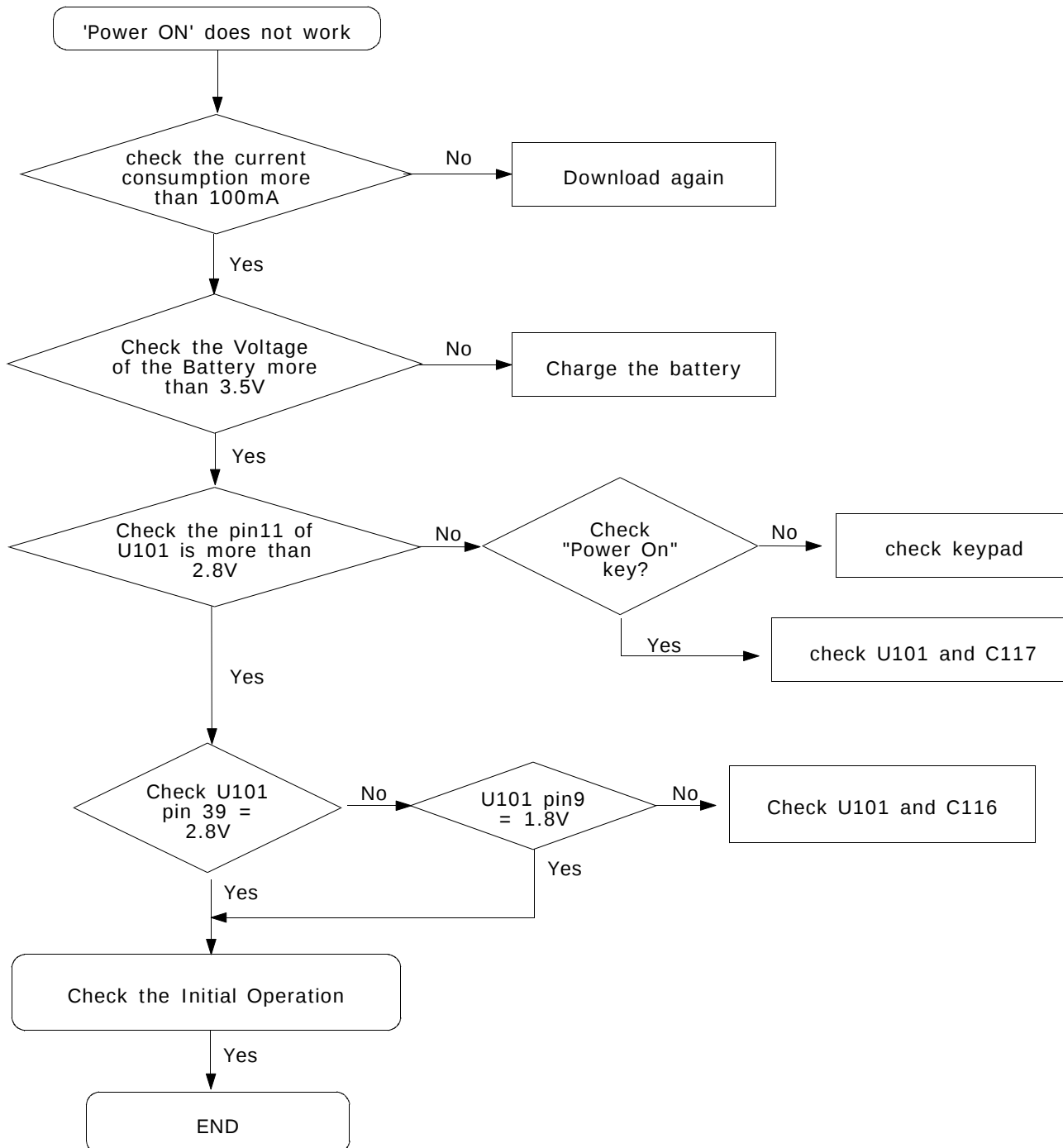
2. GSM Tx Power Class

Tx Power control level	GSM900
5	33±3 dBm
6	31±3 dBm
7	29±3 dBm
8	27±3 dBm
9	25±3 dBm
10	23±3 dBm
11	21±3 dBm
12	19±3 dBm
13	17±3 dBm
14	15±3 dBm
15	13±3 dBm
16	11±3 dBm
17	9±3 dBm
18	7±3 dBm
19	5±3 dBm

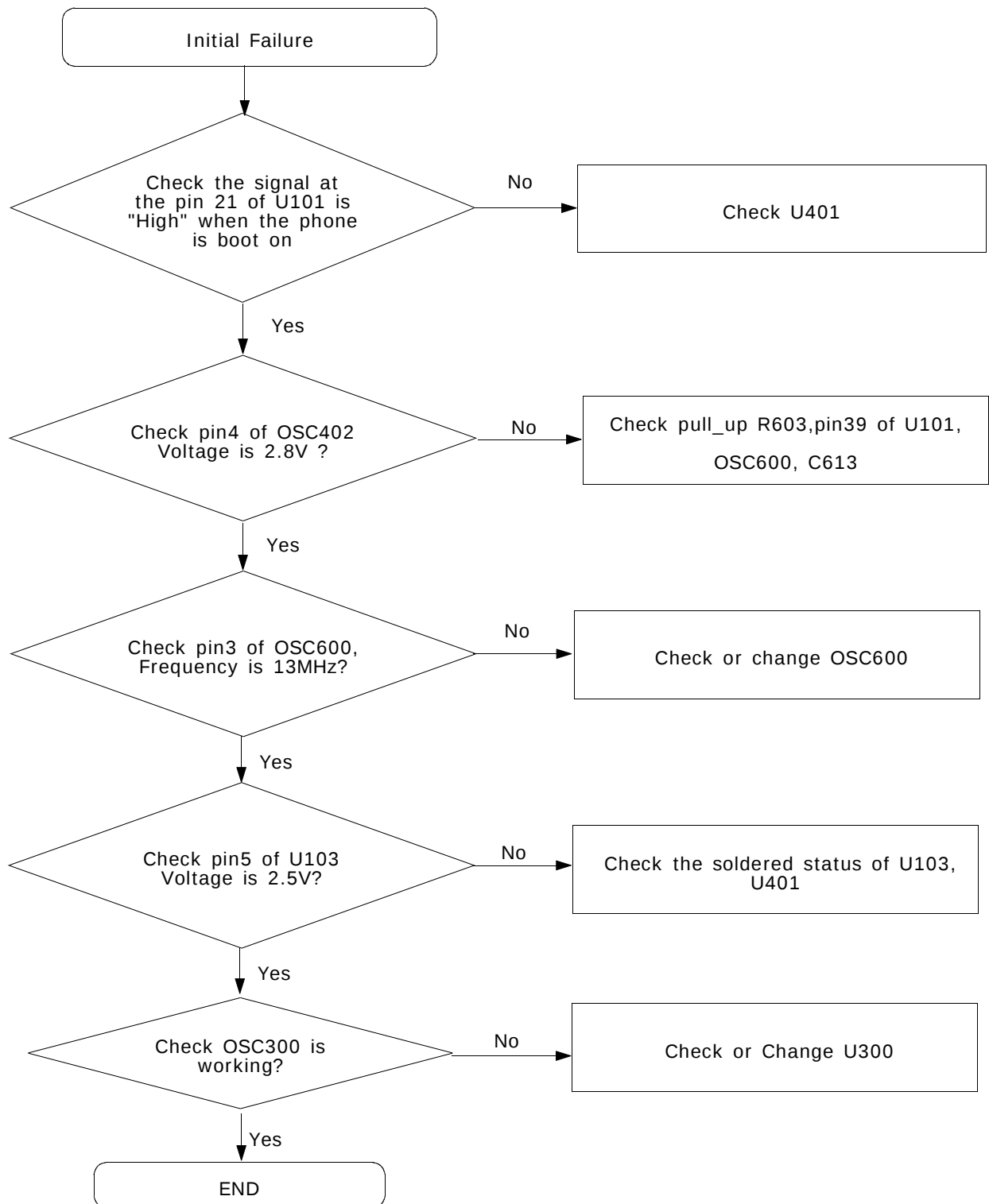
Tx Power control level	DCS1800
0	30±3 dBm
1	28±3 dBm
2	26±3 dBm
3	24±3 dBm
4	22±3 dBm
5	20±3 dBm
6	18±3 dBm
7	16±3 dBm
8	14±3 dBm
9	12±4 dBm
10	10±4 dBm
11	8±4 dBm
12	6±4 dBm
13	4±4 dBm
14	2±5 dBm
15	0±5 dBm

2. SGH-P738 Flow Chart of Troubleshooting and Circuit Diagrams

1. Power On

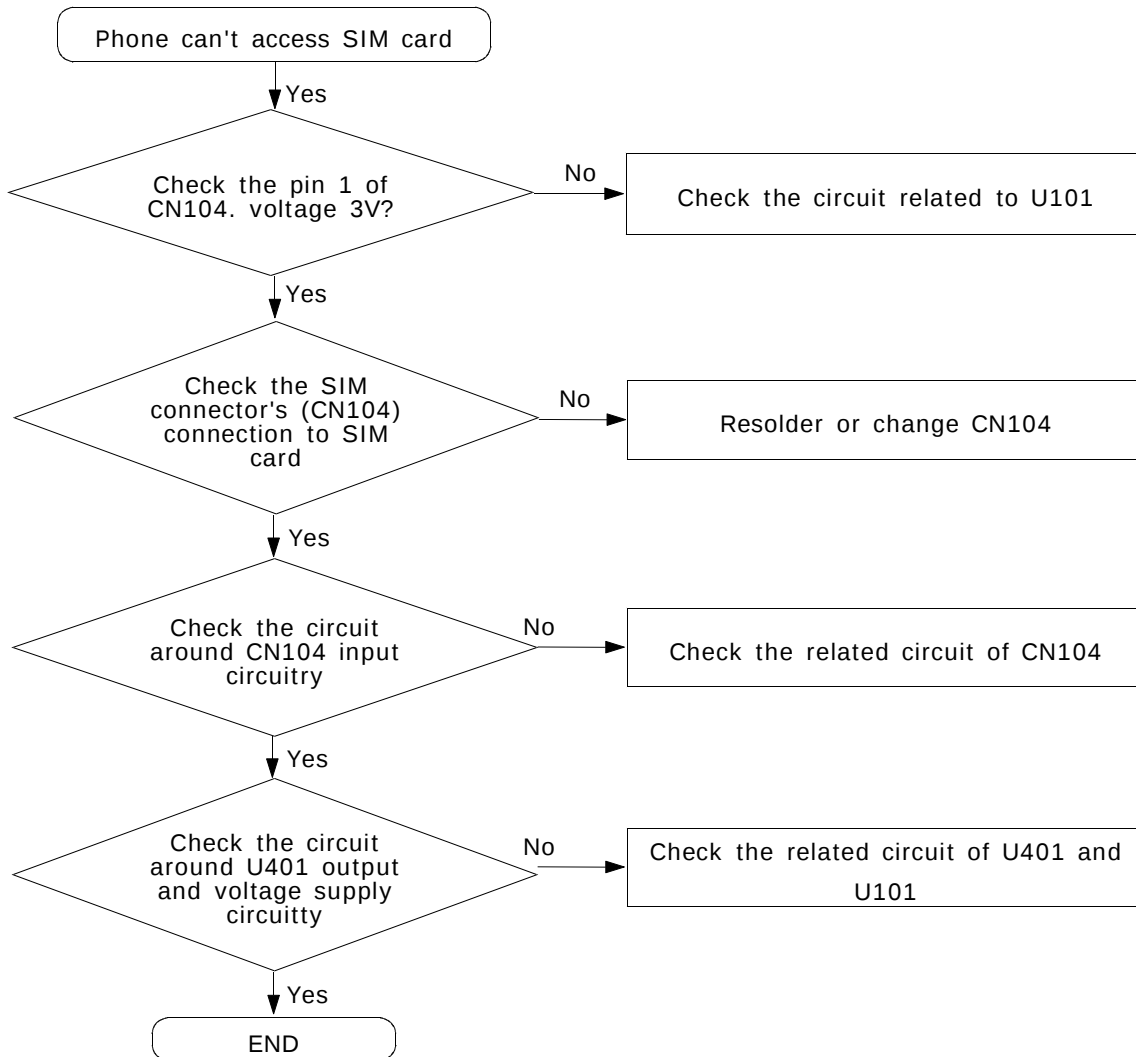


2. Initial



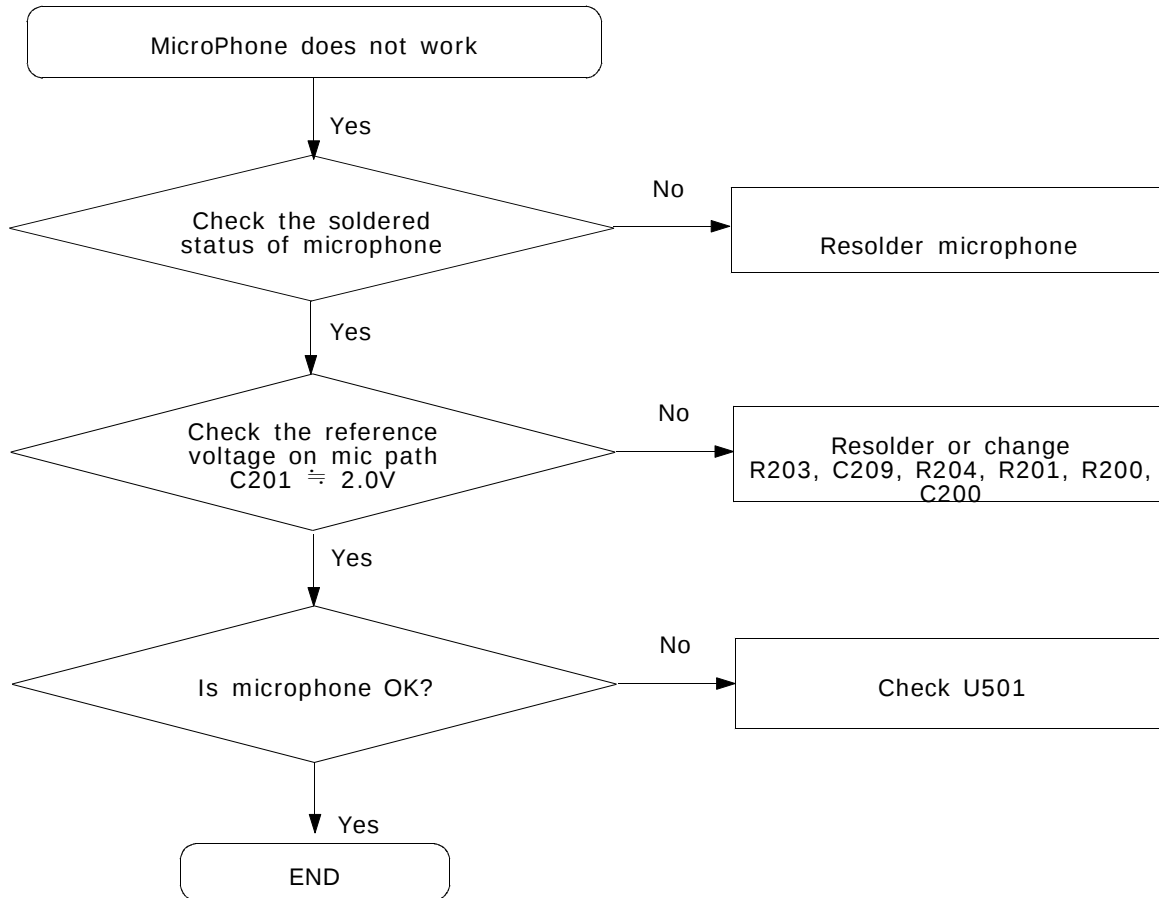
3. Sim Part

* Test with Sim



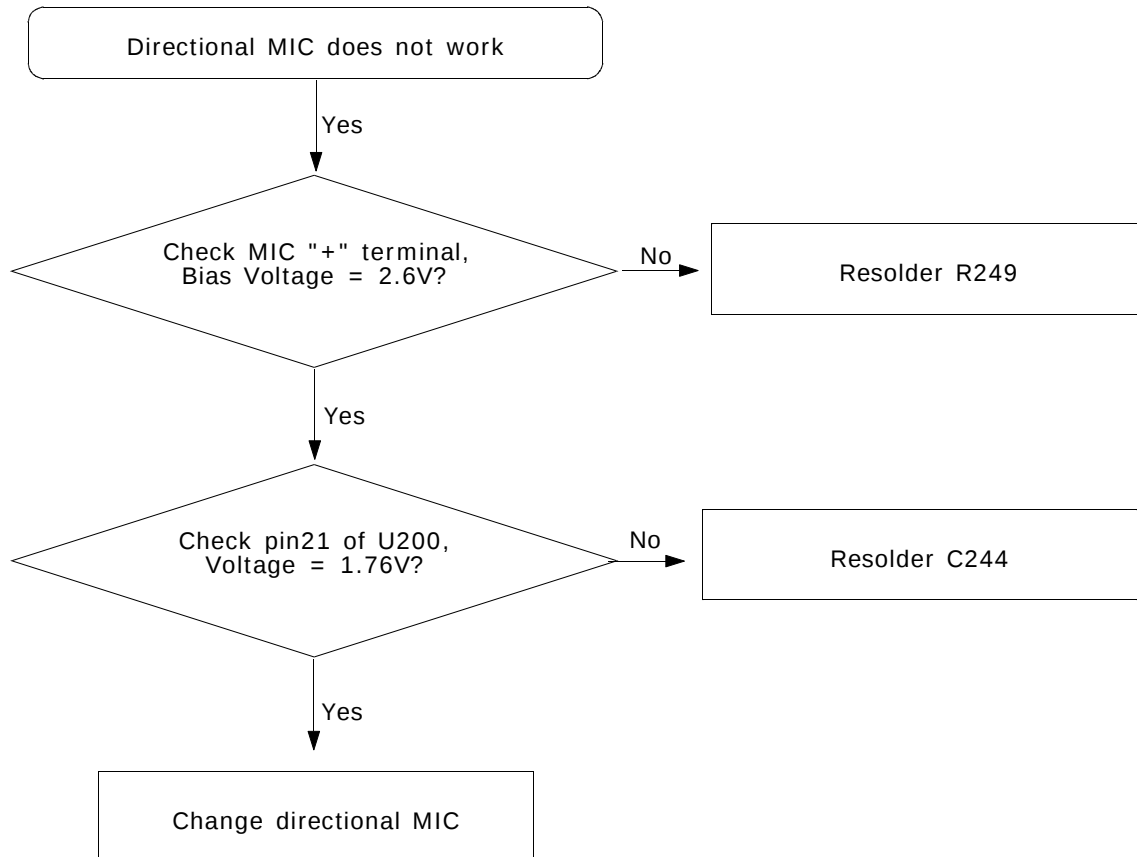
4. Microphone Part

* Call with Sim before testing.



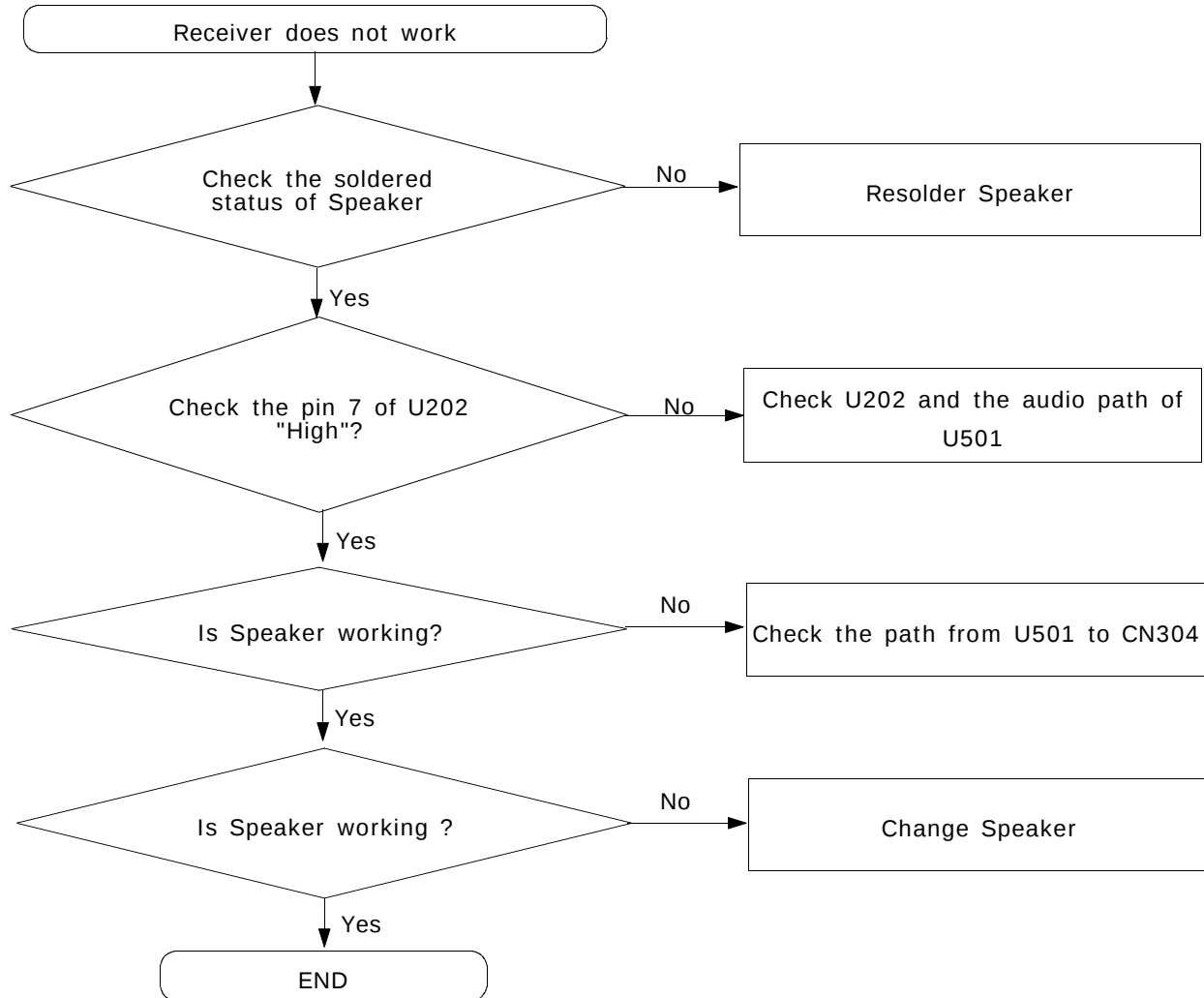
5. Directional MIC Part

* When you play MPEG file, if Audio is not active

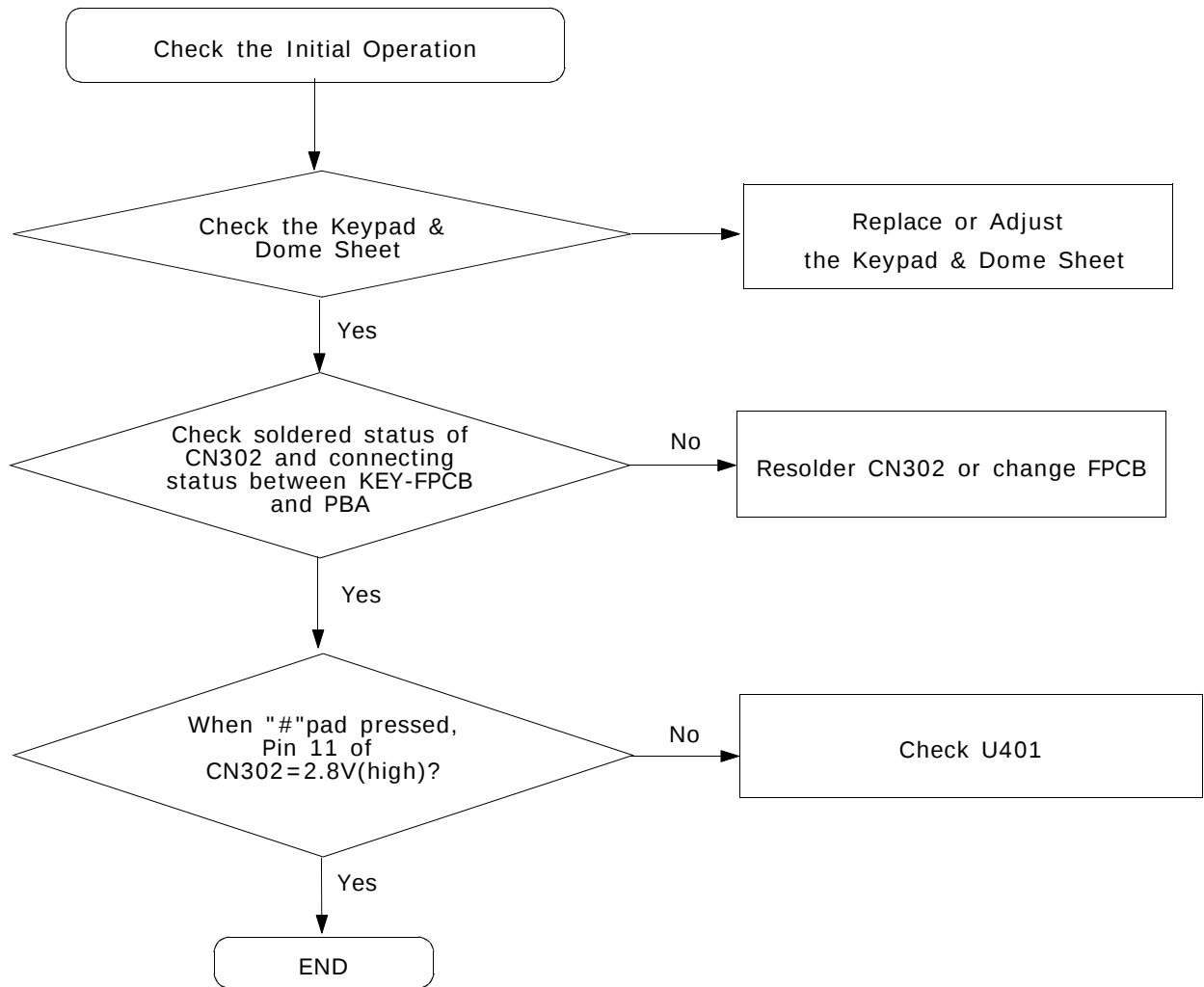


6. Speaker Part

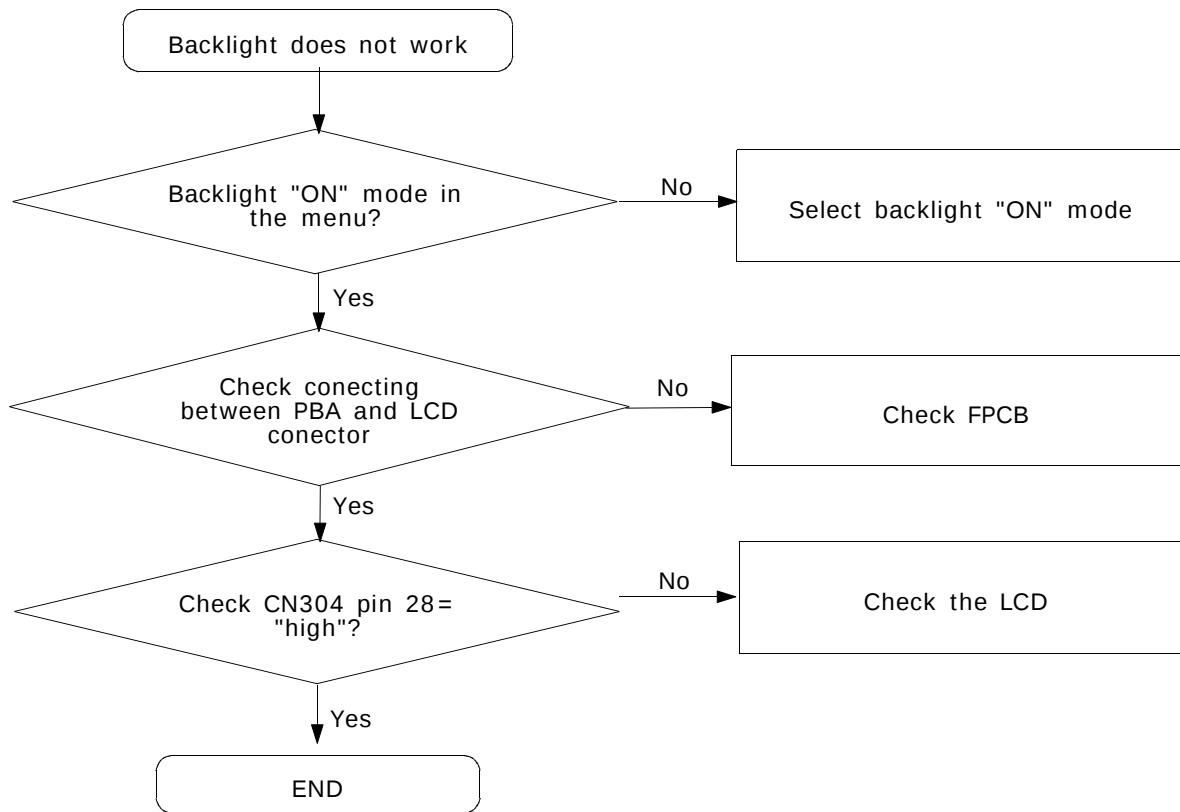
* Call before testing.



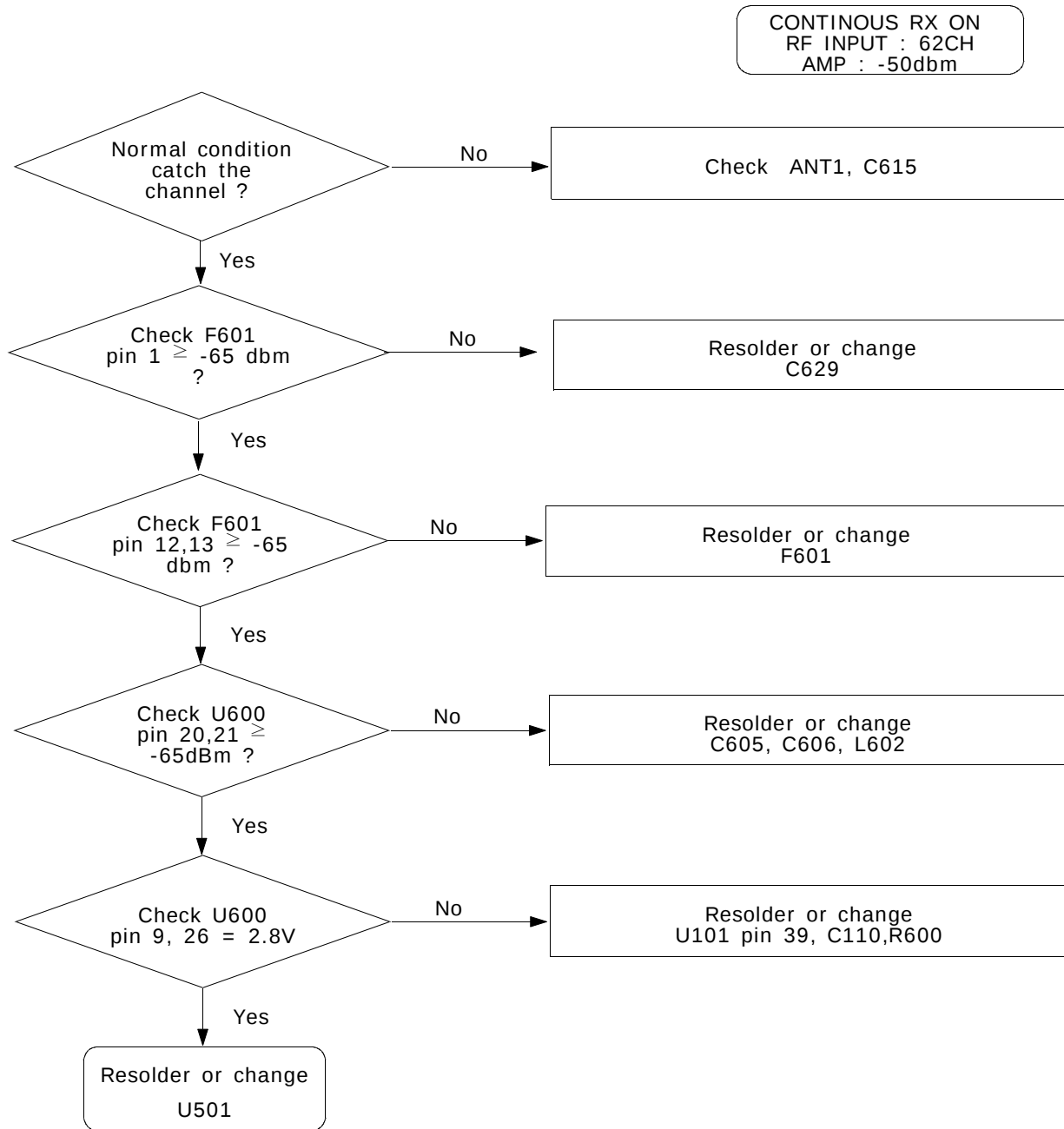
7. Key Data Input



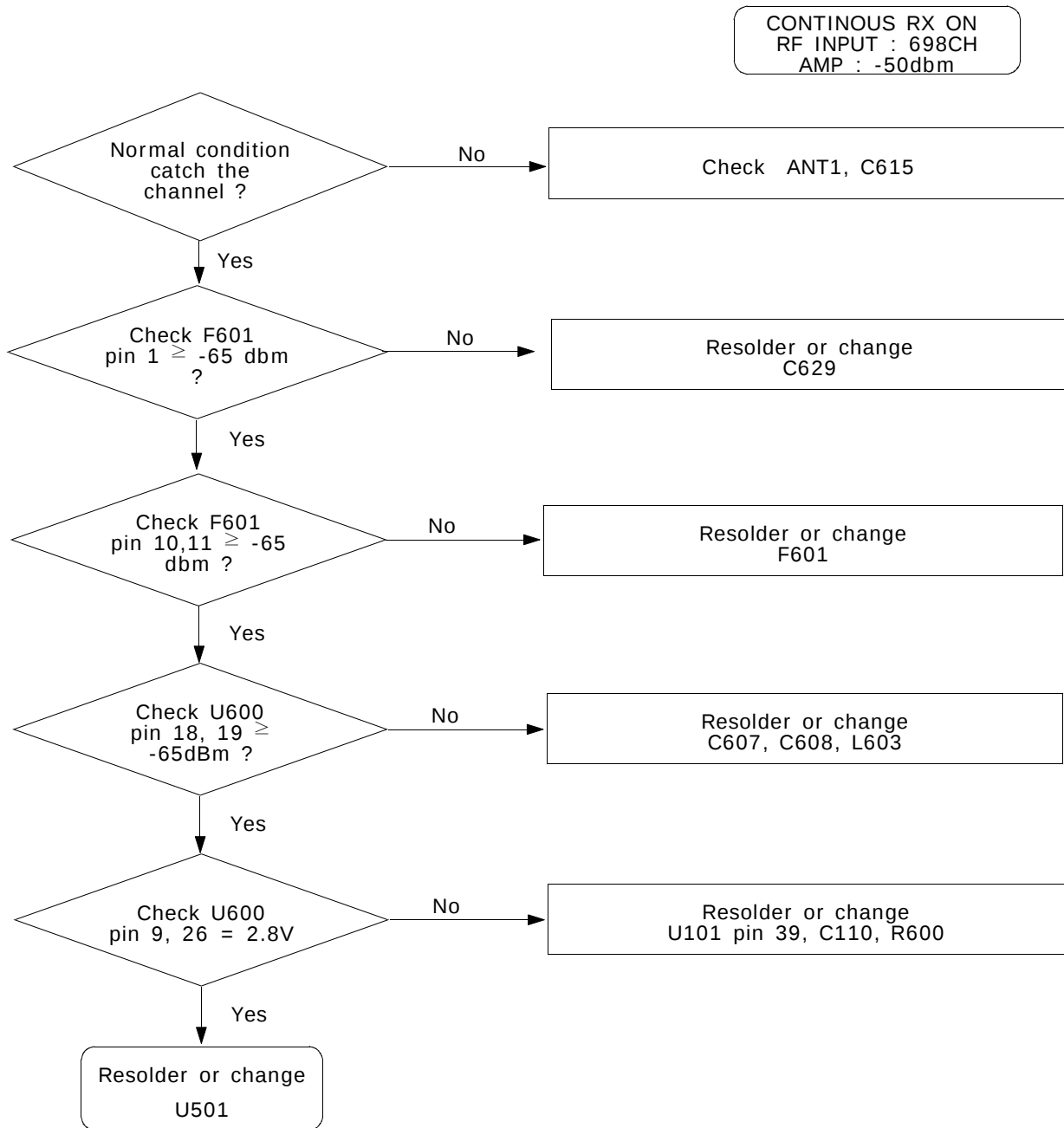
8. LCD backlight



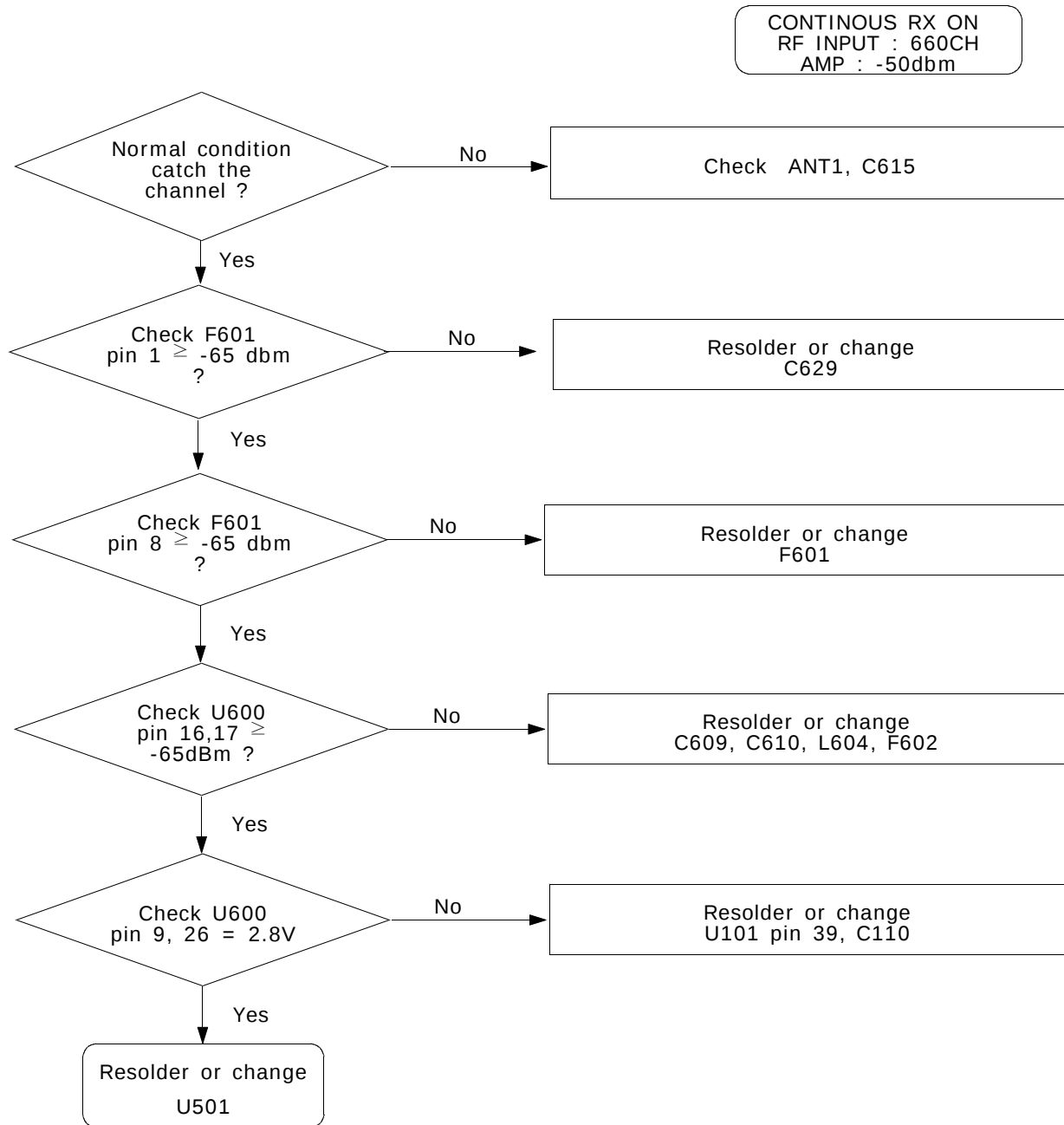
9. GSM Receiver



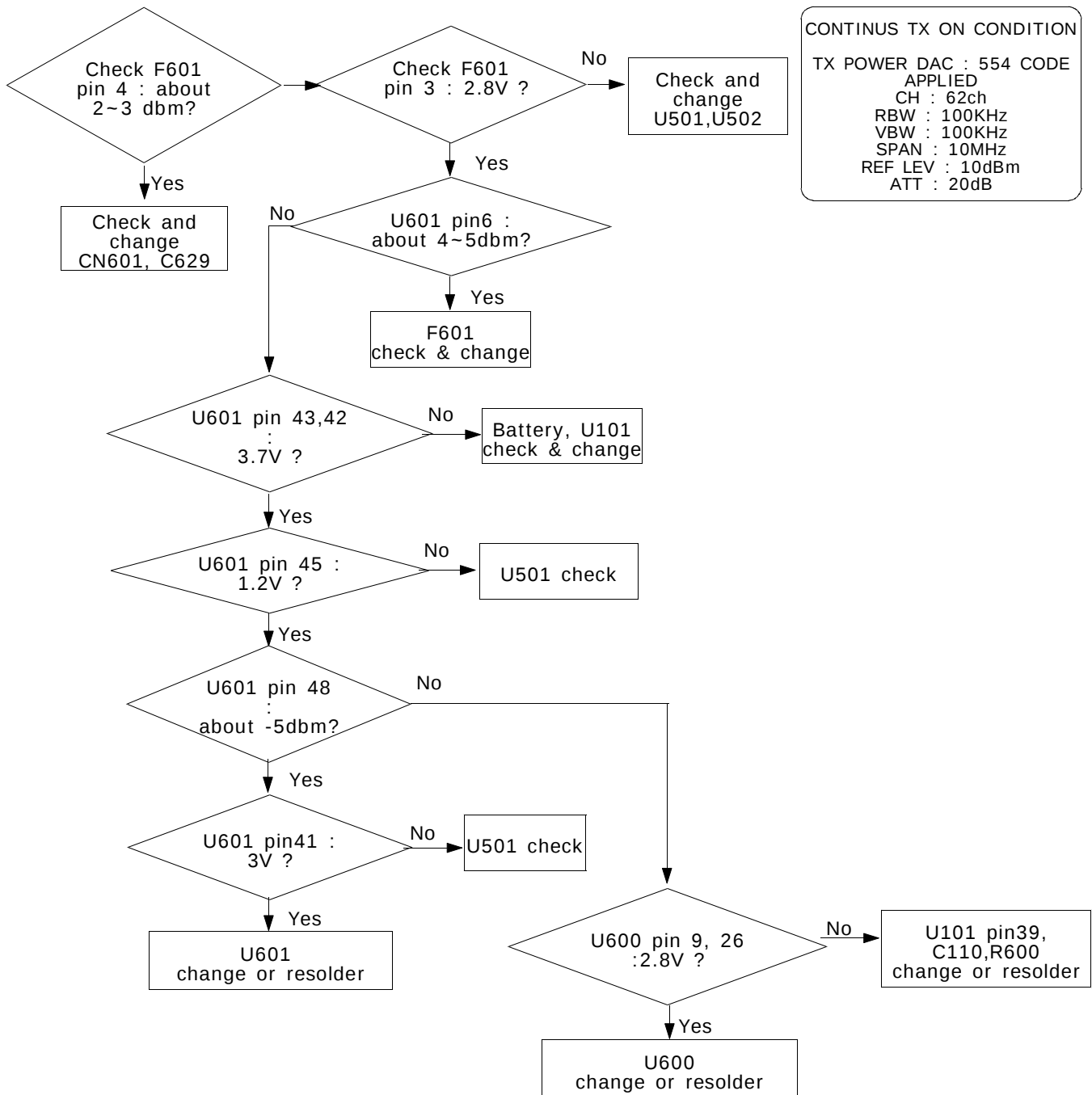
10. DCS Receiver



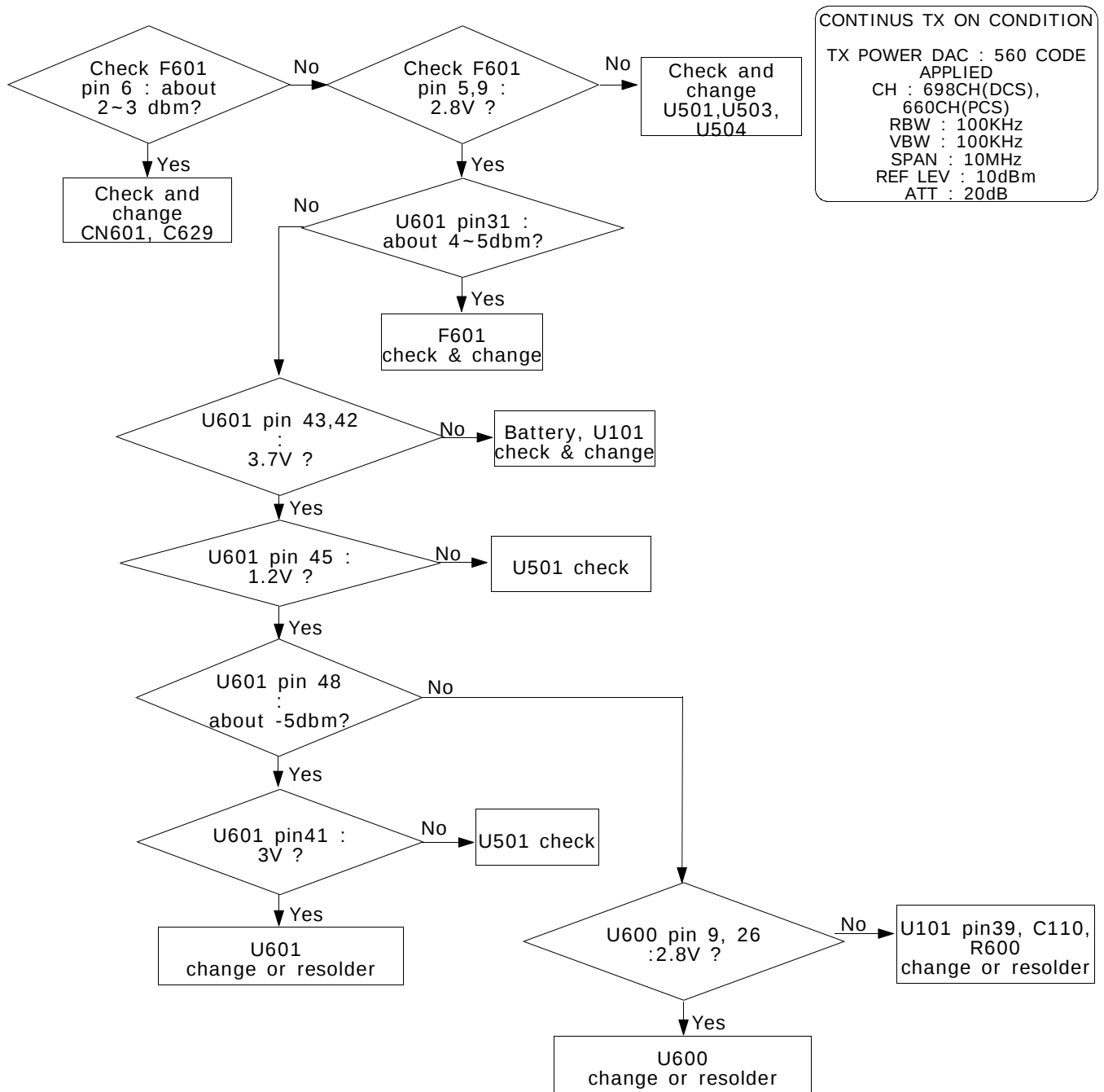
11. PCS Receiver

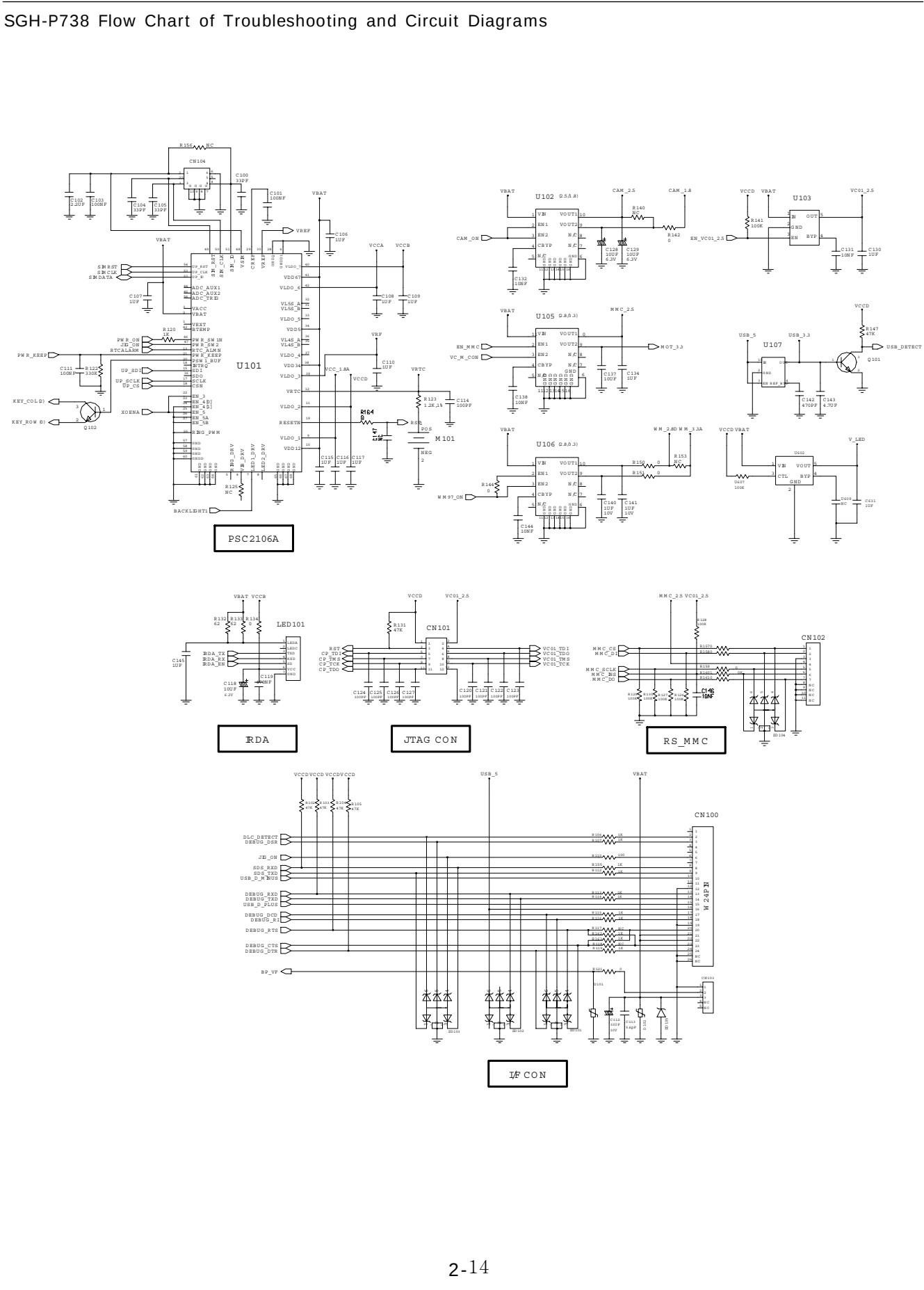


12. GSM Transmitter

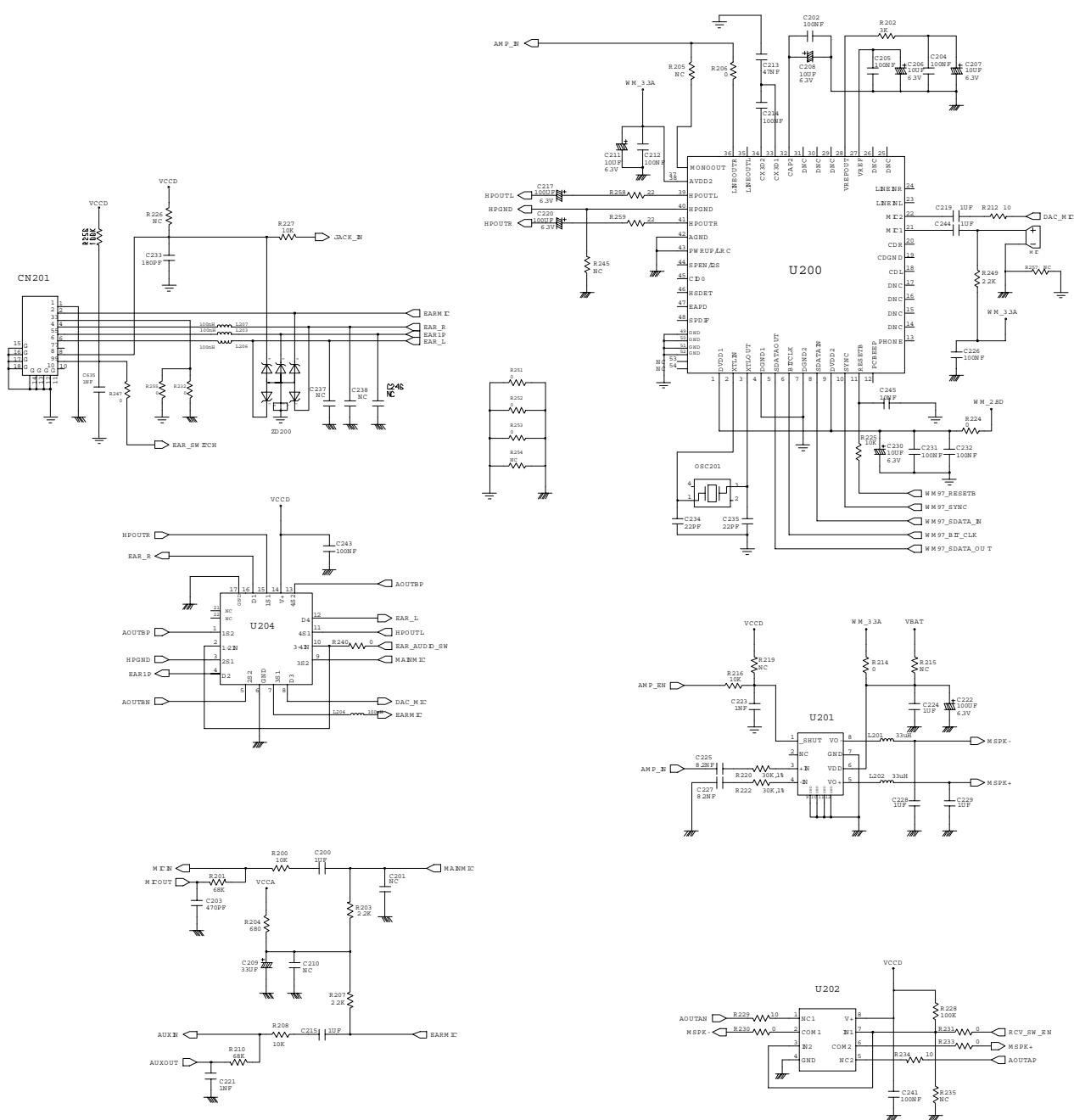


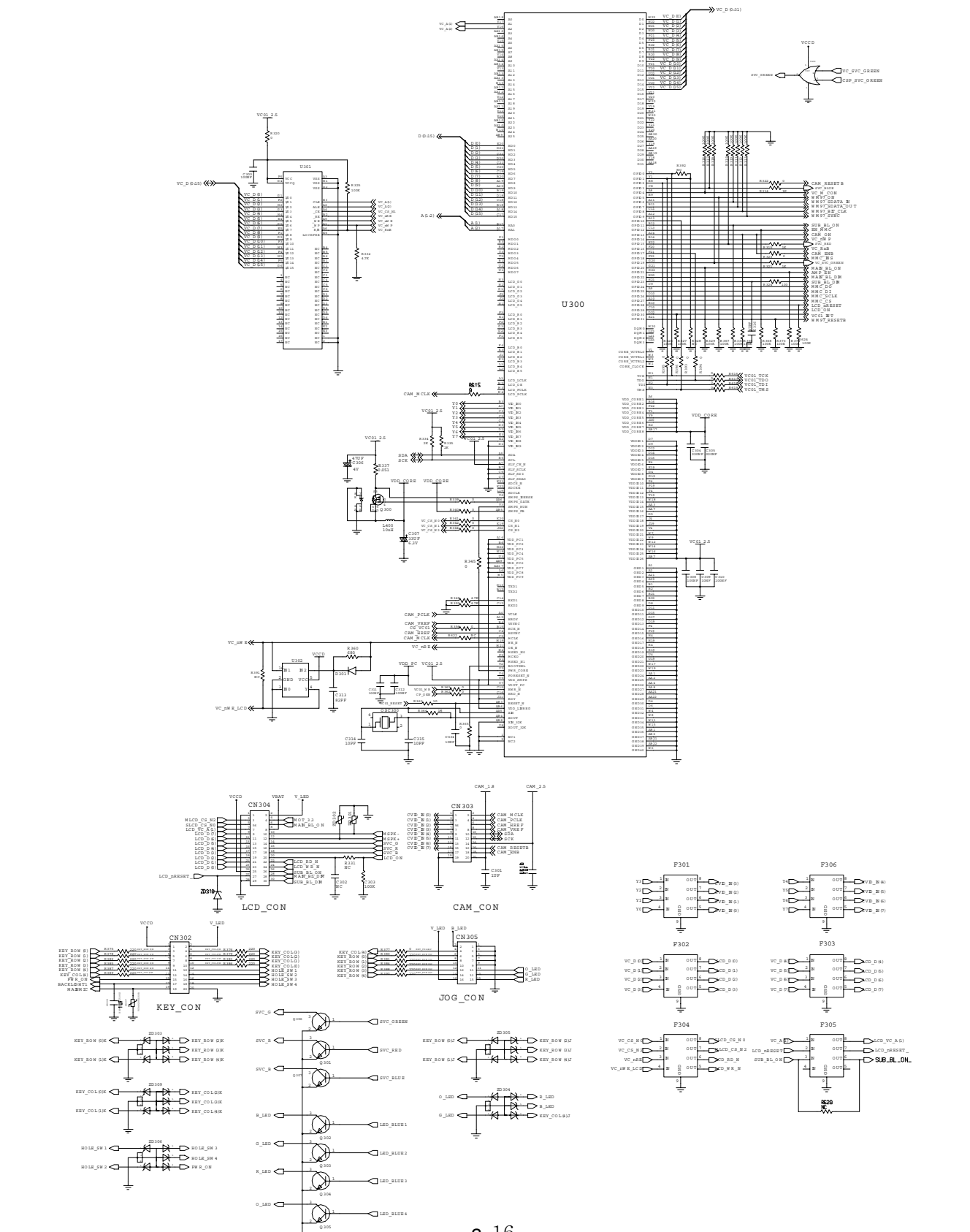
13. DCS/PCS Transmitter



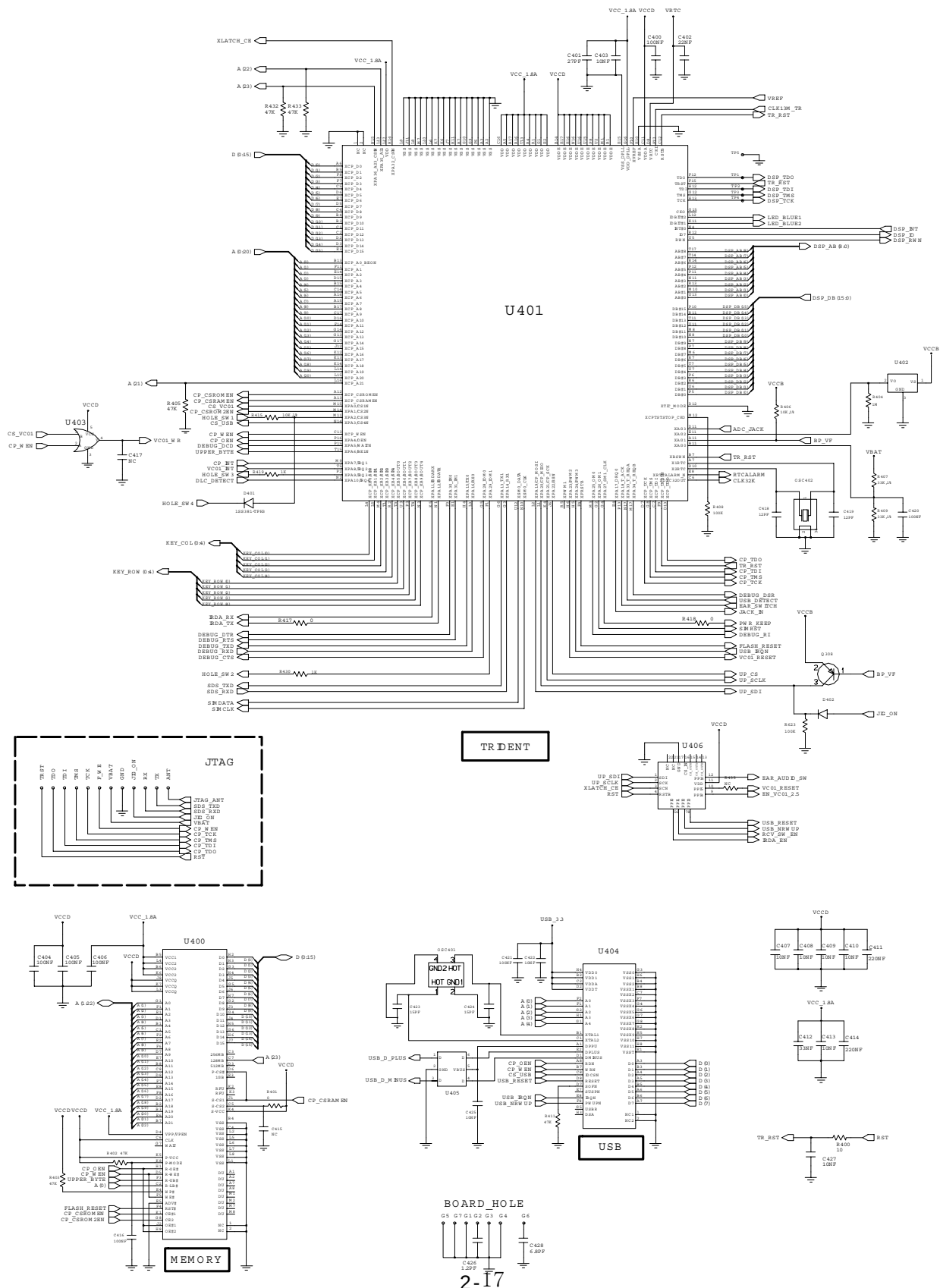


SGH-P738 Flow Chart of Troubleshooting and Circuit Diagrams

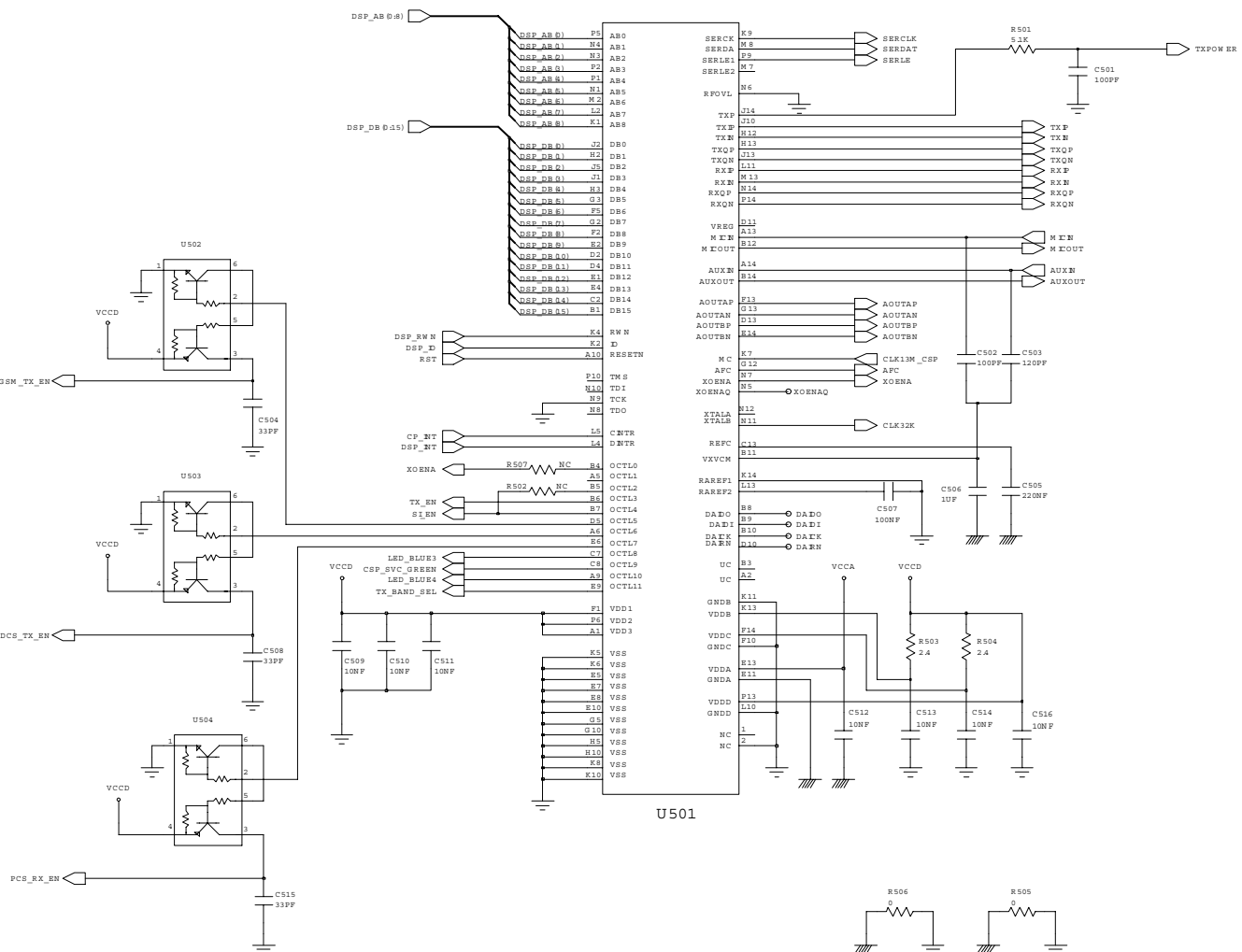


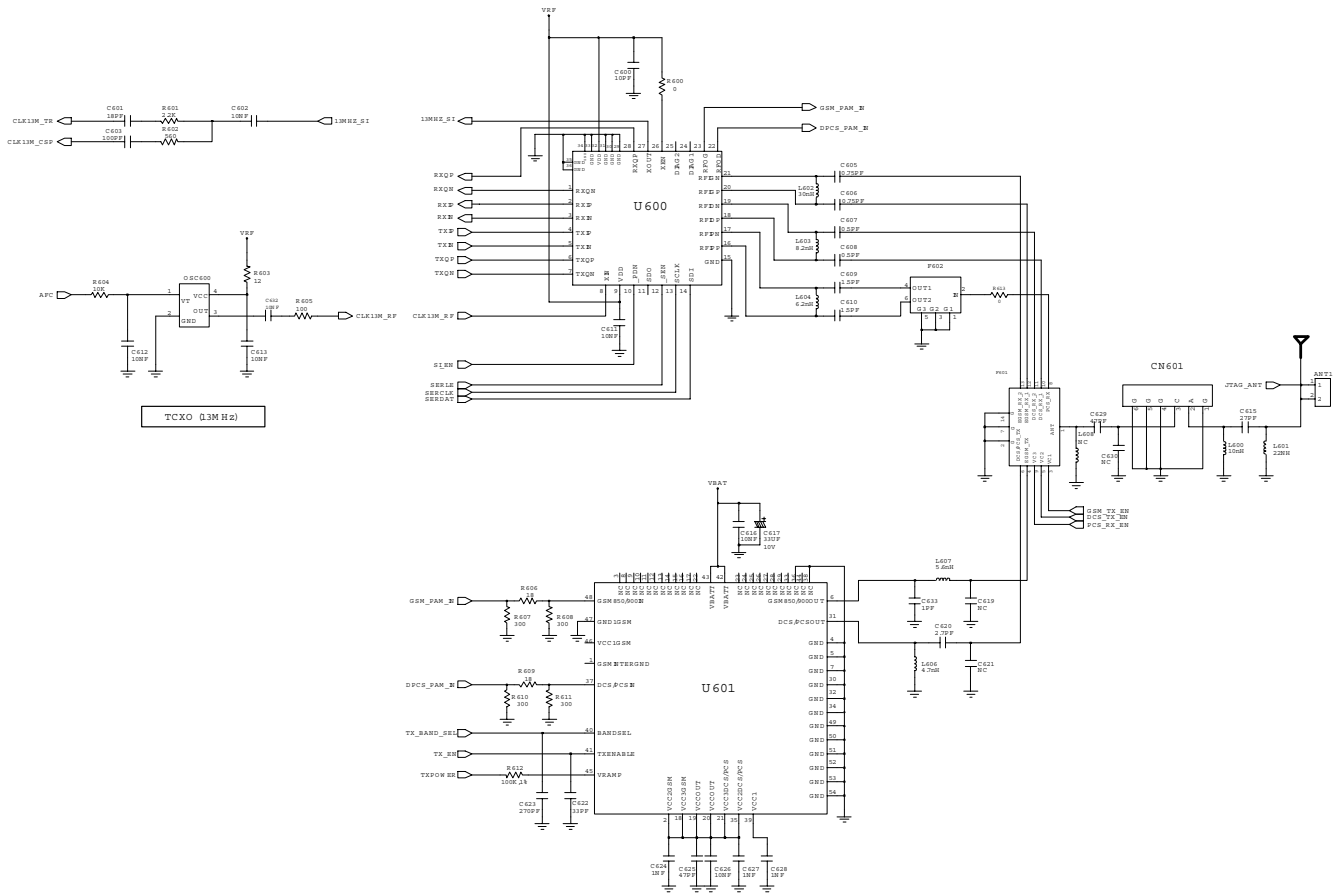


SGH-P738 Flow Chart of Troubleshooting and Circuit Diagrams



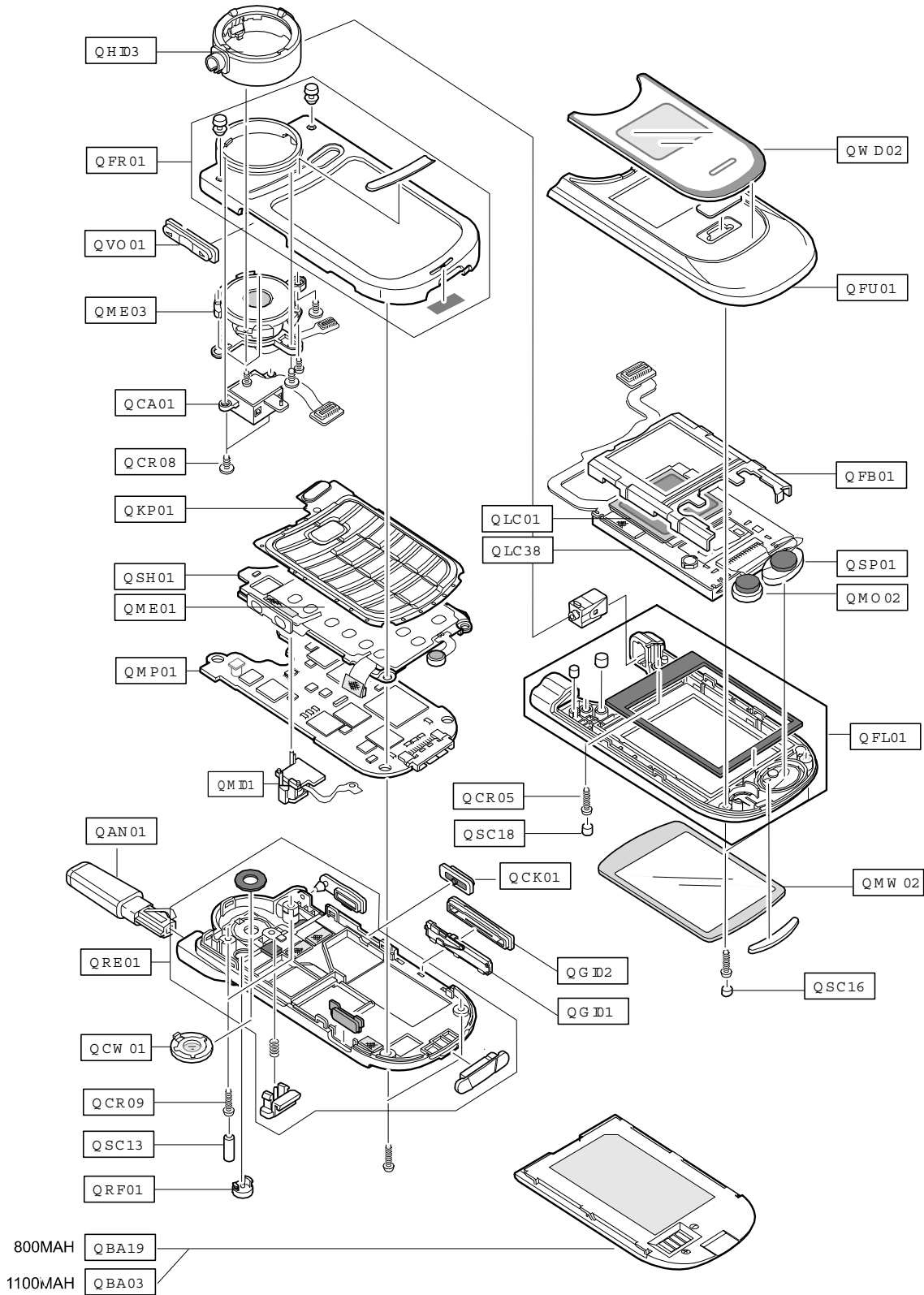
SGH-P738 Flow Chart of Troubleshooting and Circuit Diagrams





3. SGH-P738 Exploded Views and Parts List

1. Cellular phone Exploded View



2. Cellular phone Parts list

Location NO.		Description	SEC CODE	Remark
QWD02		SUB WINDOW	GH72-15887A	
QFU01		F/UPPER ASSY	GH75-05347A	
QFB01		SUB LCD BRACKET	GH75-05019A	
QSP01		SPEAKER	3001-001627	
QMO02		MOTOR	3101-001371	
QFL01		SUB F/LOWER	GH75-05018A	
QMW02		MAIN WINDOW	GH72-13691A	
QSC16		FOLDER CAP TOP	GH73-03273A	
QLC01		LCD SUB	GH07-00544A	
QLC38		LCD	GH07-00360A	
QMI01		MICROPHONE	GH30-00114A	
QCR05		SCREW	6001-001478	
QSC18		FOLDER CAP BUTTOM	GH73-03274A	
QCK01		CAMERA KEY	GH75-03009A	
QHI03		HINGE HOUSING	GH75-04213A	
QFR01		SUB FRONT COVER ASSY	GH75-04668A	
QVO01		VOLUME KEY	GH75-03008A	
QME03		UNIT NAVI KEY	GH59-01354A	
QCA01		UNIT CAMERA	GH59-01362A	
QCR08		SCREW	6001-001456	
QKP01		KEYPAD	GH75-05349A	
QSH01		REAR SHIELD	GH71-03329A	
QME01		UNIT KEYPAD	GH59-01355A	
QMP01		MAIN PBA	GH92-01907A	
QAN01		ANTENNA	GH42-00402A	
QRE01		SUB REAR COVER ASSY	GH75-05348A	
QCR09		SCREW	6001-001670	
QSC13		REAR HOLE CAP	GH73-02914A	
QRF01		RF COVER	GH72-15183A	
QBA03		BATTERY 1100MAH	GH43-01481A	
QBA19		BATTERY 800MAH	GH43-01480A	
QGI01		MMC DOOR	GH75-05194A	
QGI02		MMC COVER	GH75-05908A	
QCW01		SUB CAMERA WINDOW	GH75-04333B	

3. Test Jig (GH80-00865A)



**3-1. RF Test Cable
(GH39-00090A)**



**3-2. Test Cable
(GH39-00324A)**



3-3. Serial Cable



**3-4. Power Supply
Cable**



**3-5. DATA CABLE
(GH39-00279A)**



**3-6. TC
(GH44-00701A)**



4. SGH-P738 MAIN Electrical Parts List

Design LOC	SEC Code
ZD105	0403-001387
D301	0404-001172
ZD310	0406-001150
ZD101,ZD102,ZD103	0406-001190
ZD104,ZD200,ZD303	0406-001190
ZD304,ZD305,ZD306	0406-001190
ZD309	0406-001190
D401,D402	0409-001020
Q101,Q102,Q301,Q302	0504-000168
Q303,Q304,Q305,Q306	0504-000168
Q307	0504-000168
U502,U503,U504	0504-001042
Q308	0504-001140
Q300	0505-001770
LED101	0604-001261
U403,U603	0801-000796
U302	0801-002866
U202	1001-001161
U204	1001-001253
U601	1201-002075
U201	1201-002103
U107	1203-001256
U602	1203-001518
U103	1203-002113
U101	1203-002902
U105,U106	1203-003169
U102	1203-003322
U405	1204-001915
U501	1204-001984
U300	1204-002169
U200	1205-002364
U600	1205-002433
U402	1209-001219
D101,D102	1405-001018
ZD301,ZD302,ZD307	1405-001082

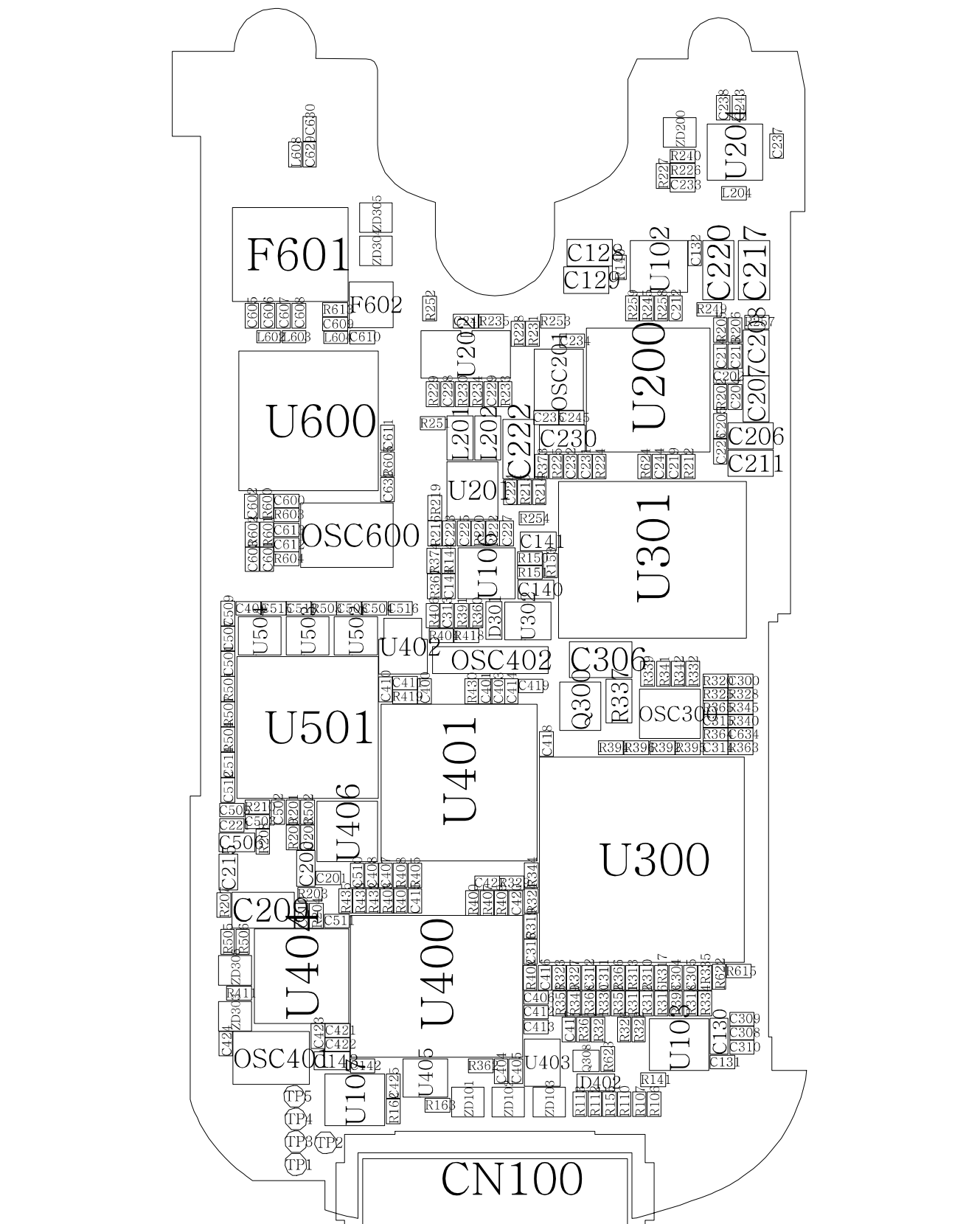
Design LOC	SEC Code
C131,C132,C138,C144	2203-000254
C146,C245,C309,C403	2203-000254
C407,C408,C409,C410	2203-000254
C413,C422,C425,C427	2203-000254
C509,C510,C511,C512	2203-000254
C513,C514,C516,C602	2203-000254
C611,C612,C613,C616	2203-000254
C626,C632,C634	2203-000254
C314,C315,C600	2203-000278
C503	2203-000311
C418,C419	2203-000330
C423,C424	2203-000386
C601	2203-000425
C221,C223,C624,C627	2203-000438
C628,C635	2203-000438
C633	2203-000466
C234,C235	2203-000628
C623	2203-000654
C401,C615	2203-000679
C100,C104,C105,C504	2203-000812
C508,C515,C622	2203-000812
C142,C203	2203-000940
C316,C625,C629	2203-000995
C225,C227	2203-001210
C313	2203-001239
C607,C608	2203-001383
C609,C610	2203-001385
C402	2203-001405
C102	2203-001598
C119	2203-001652
C605,C606	2203-002677
C428	2203-005056
C103,C202,C204,C205	2203-005061
C212,C214,C226,C231	2203-005061
C232,C241,C243,C300	2203-005061

Design LOC	SEC Code
R334,R335	2007-000137
R324,R605,R110	2007-000138
R375,R376,R378,R379	2007-000139
R380,R381,R382,R383	2007-000139
R384,R385,R386,R387	2007-000139
R388,R389,R390	2007-000139
R106,R107,R112	2007-000140
R113,R114,R115,R116	2007-000140
R119,R120,R155,R162	2007-000140
R163,R314,R315,R321	2007-000140
R419,R430	2007-000140
R203,R207,R249,R601	2007-000141
R332,R349,R352	2007-000143
R501	2007-000144
R160,R200,R208,R216	2007-000148
R225,R227,R604	2007-000148
R102,R103,R104,R105	2007-000157
R131,R147,R402,R403	2007-000157
R405,R411,R432,R433	2007-000157
R201,R210	2007-000160
C303,R126,R127,R128	2007-000162
R129,R130,R141,R228	2007-000162
R256,R310,R311,R312	2007-000162
R313,R316,R317,R318	2007-000162
R319,R325,R326,R327	2007-000162
R329,R330,R366,R367	2007-000162
R368,R373,R374,R408	2007-000162
R623,R624,U607	2007-000162
R364,R404	2007-000170
R121,R134,R142,R144	2007-000171
R150,R151,R157,R158	2007-000171
R159,R161,R164,R206	2007-000171
R214,R224,R230,R231	2007-000171
R232,R233,R240,R247	2007-000171
R251,R252,R253,R255	2007-000171

Design LOC	SEC Code
C308,C310,C311,C312	2203-005061
C400,C404,C405,C406	2203-005061
C420,C507	2203-005061
C130,C134,C140,C141	2203-005065
C145,C200,C215,C506	2203-005065
C631	2203-005065
C111	2203-005148
C426	2203-005234
C620	2203-005446
C113	2203-005450
C412	2203-005480
C213	2203-005481
C101,C416,C421	2203-005482
C304,C305,C411,C414	2203-005496
C505	2203-005496
C233	2203-005503
C137	2203-005571
C106,C107,C108,C109	2203-006053
C110,C115,C116,C117	2203-006053
C219,C224,C228,C229	2203-006093
C244,C301,U610,ZD308	2203-006093
C143	2203-006208
C118,C128,C129,C206	2404-001105
C207,C208,C211,C230	2404-001105
C209,C307	2404-001151
C306	2404-001162
C112,C617	2404-001274
C217,C220,C222	2404-001348
L201,L202	2703-000275
L606	2703-001747
L607	2703-001748
L601	2703-001990
L600	2703-002198
L203,L204,L206,L207	2703-002320
L400	2703-002524

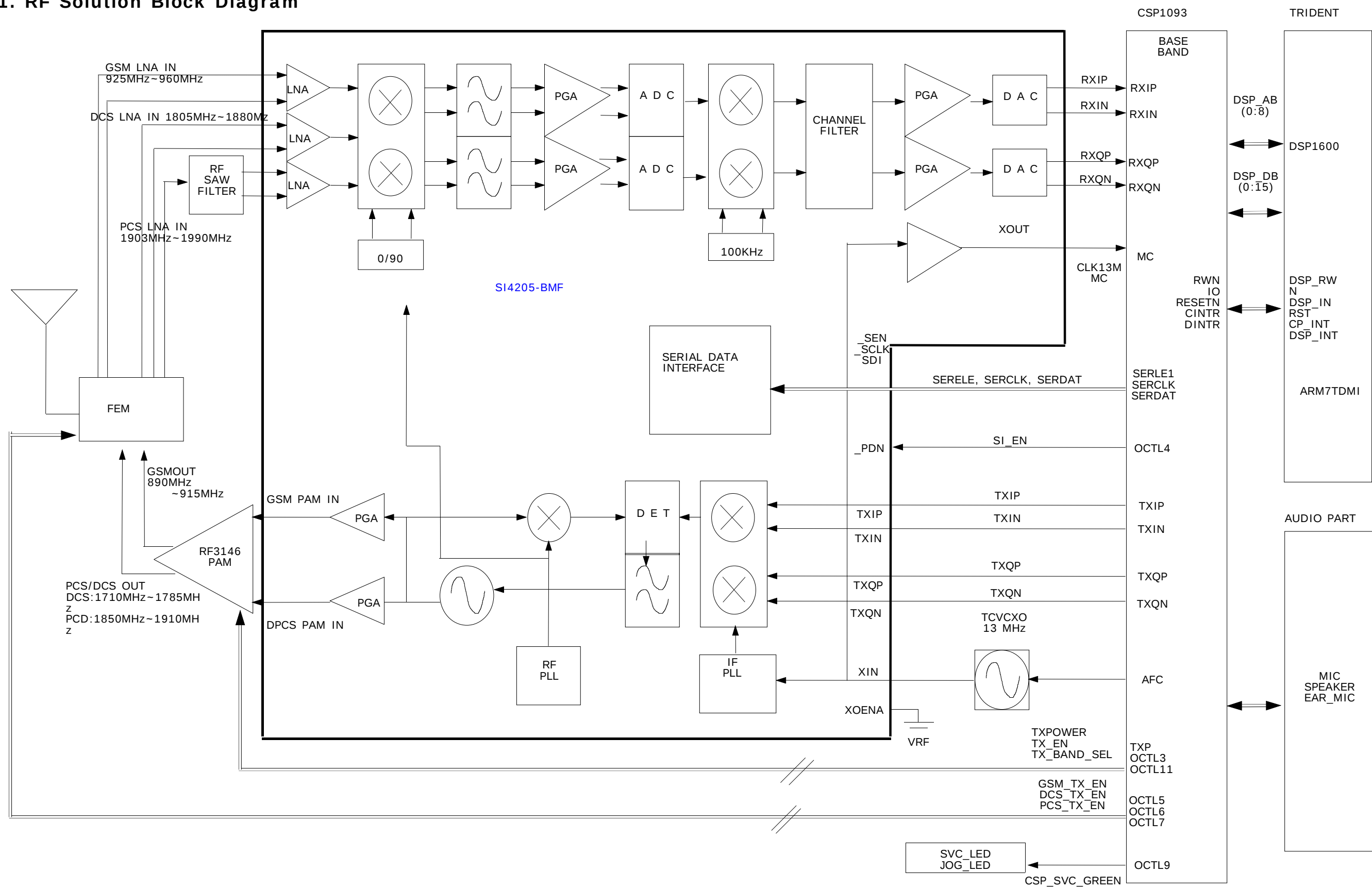
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R365,R377,R393,R394	2007-000171
R395,R396,R401,R417	2007-000171
R418,R505,R506,R600	2007-000171
R613,R615,R616,R617	2007-000171
R618,R619	2007-000171
R212,R229,R234,R363	2007-000172
R400	2007-000172
R258,R259	2007-000173
R122	2007-000758
R204,R360	2007-001119
R606,R609	2007-001288
R202	2007-001323
R602	2007-002797
R603	2007-003001
R132,R133	2007-003022
R607,R608,R610,R611	2007-007008
R612	2007-007107
R123	2007-007137
R406,R415	2007-007142
R503,R504	2007-007200
R407,R409	2007-007308
R220,R222	2007-008275
R337	2007-008748
C114,C120,C121,C122	2203-000233
C123,C124,C125,C126	2203-000233
C127,C501,C502,C603	2203-000233

Design LOC	SEC Code
L602	2703-002602
L603	2703-002603
L604	2703-002636
OSC402	2801-003856
OSC201,OSC300	2801-004225
OSC401	2801-004318
OSC600	2809-001260
F301,F302,F303,F304	2901-001260
F305,F306	2901-001260
F602	2904-001410
F601	2909-001208
CN601	3705-001255
CN104	3709-001298
CN102	3709-001316
CN305	3710-001950
CN100	3710-002120
CN101	3711-004230
CN304	3711-005229
CN303	3711-005285
CN302	3711-005345
CN103	3711-005732
CN201	3722-002082
M101	4302-001130
U406	GH09-00022A
U401	GH09-00025A
U404	GH13-00022A
ANT1	GH71-03941A
U301	1107-001455
U400	1109-001281

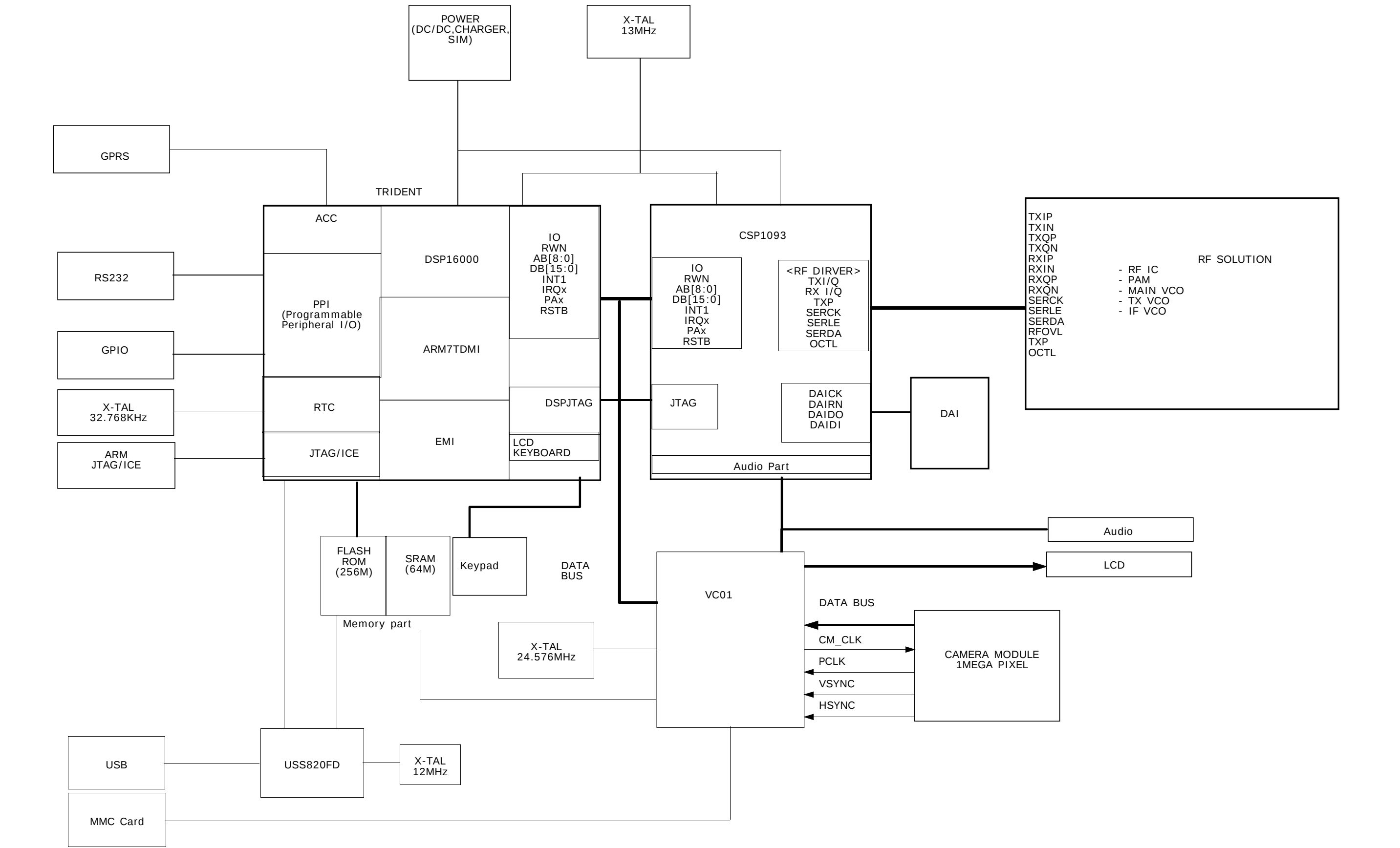


6. SGH-P738 Block Diagrams

1. RF Solution Block Diagram



2. Base Band Solution Block Diagram



3. AUDIO PART

