



DUAL BAND Mobile Cellular Phone SGH-R220

SERVICE Manual

DUAL BAND MOBILE CELLULAR PHONE



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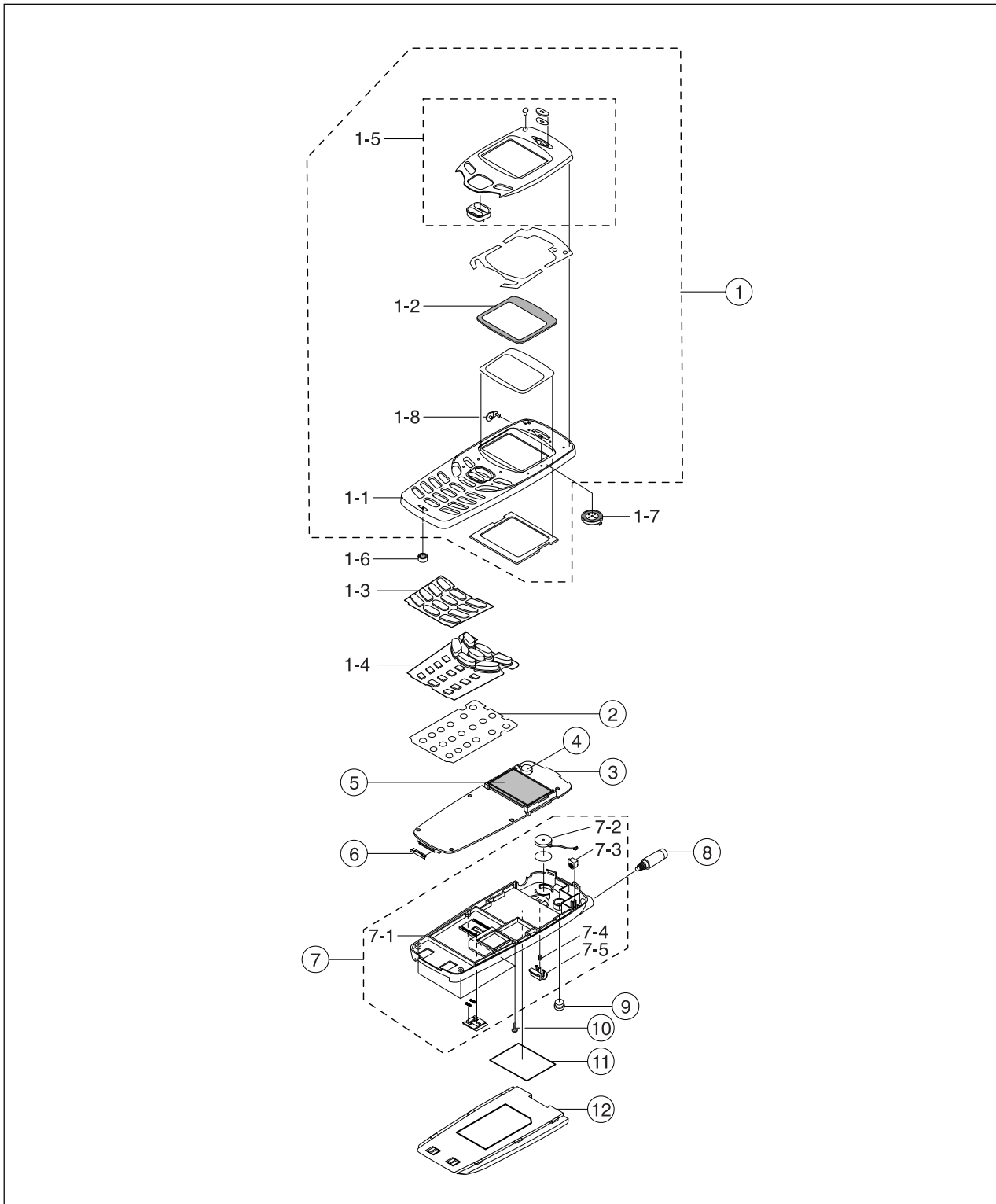
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1. Exploded Views and Parts List

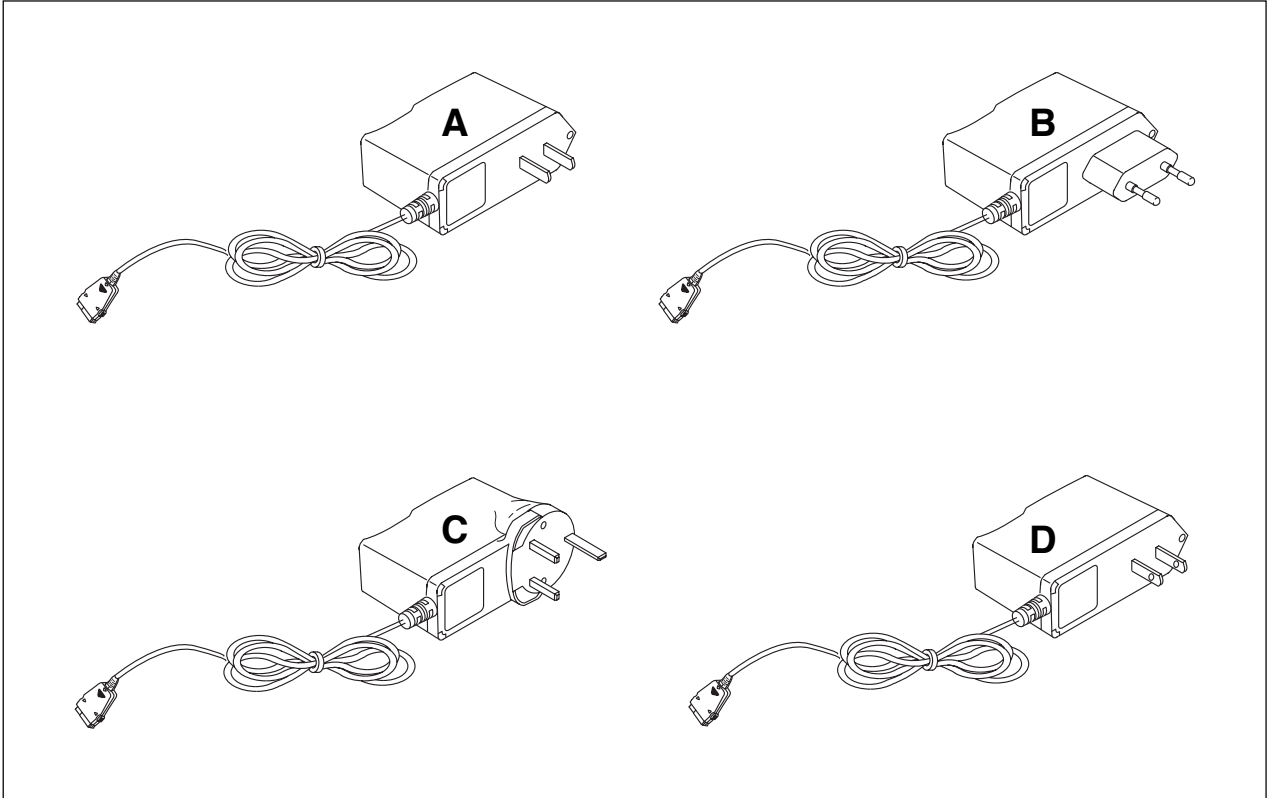
1-1 Main



1-2 Main Parts List

Location No.		Description	SEC CODE			Remark
			Navy Blue	Green	Dark Gray	
1		MEC-FRONT COVER	GH75-01162A	GH75-01162B	GH75-01162C	SA
	1-1	FRONT COVER	GH72-02670A	GH72-02670B	GH72-02670C	SNA
	1-2	WINDOW LCD	GH72-02672A	GH72-02672A	GH72-02672A	SNA
	1-3	FI KEY	GH72-02782A	GH72-02782A	GH72-02782A	SA
	1-4	MEC-KEYPAD	GH75-01164A	GH75-01164A	GH75-01164A	SA
	1-5	MEC-DUMMY COVER	GH75-01163A	GH75-01163A	GH75-01163A	SNA
	1-6	MIC	GH59-00240B	GH59-00240B	GH59-00240B	SA
	1-7	SPEAKER	3001-001233	3001-001233	3001-001233	SA
	1-8	EARPHONE COVER	GH73-00757A	GH73-00757B	GH73-00757C	SNA
2		DOME SHEET	GH72-02984A	GH72-02984A	GH72-02984A	SA
3		MAIN PBA	GH92-01202A	GH92-01202A	GH92-01202A	SA
4		BUZZER	3002-001098	3002-001098	3002-001098	SA
5		DISPLAY LCD	GH07-00075B	GH07-00075B	GH07-00075B	SA
6		I/F COVER	GH73-00758A	GH73-00758B	GH73-00758C	SA
7		MEC-REAR COVER	GH75-01165A	GH75-01165B	GH75-01165C	SA
	7-1	REAR COVER	GH72-02674A	GH72-02674B	GH72-02674C	SNA
	7-2	VIBRATOR	GH31-00019A	GH31-00019A	GH31-00019A	SA
	7-3	BRACKET-ANT	GH71-00505A	GH71-00505A	GH71-00505A	SNA
	7-4	SPRING LOCKER	GH70-10633A	GH70-10633A	GH70-10633A	SNA
	7-5	LOCKER MAIN	GH72-02676A	GH72-02676B	GH72-02676C	SNA
8		ANTENNA	GH42-00120C	GH42-00120B	GH42-00120A	SA
9		R/F COVER	GH73-00759A	GH73-00759A	GH73-00759A	SA
10		SCREW-MACHINE	6001-001346	6001-001346	6001-001346	SA
11		LABEL	GH68-02110A	GH68-02110A	GH68-02110A	SA
12		BATTERY	GH43-00369A	GH43-00369B	GH43-00369C	SA

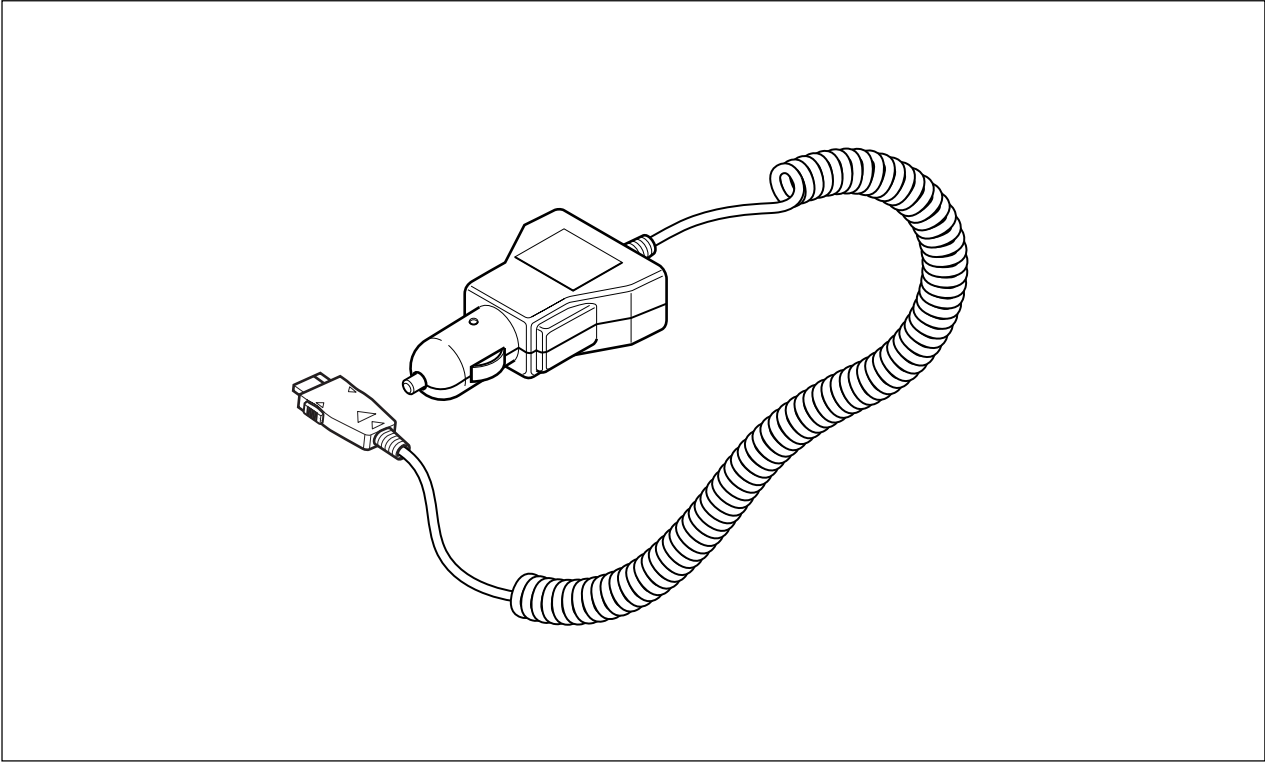
1-3 Travel Adapter



1-4 Travel Adapter Parts List

TYPE	SEC CODE	REMARK
A	GH44-00171A	CHINA
B	GH44-00184A	EUROPE
C	GH44-00171C	UNITED KINGDOM
D	Gh44-00171E	TAIWAN

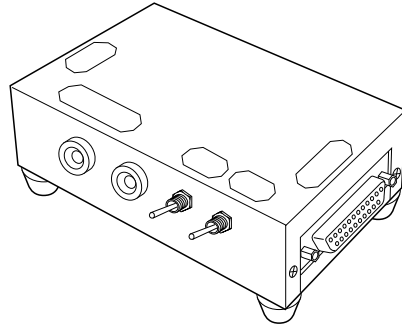
1-5 Ciger Light Adapter



1-6 Ciger Light Adapter Parts List

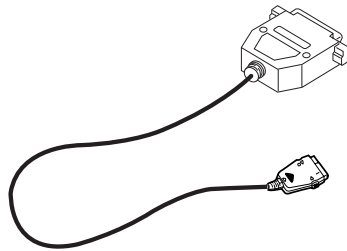
DESCRIPTION	SEC CODE	REMARK
Ciger Light Adapter Code	GH44-00170A	BLACK

1-7 Test Jig



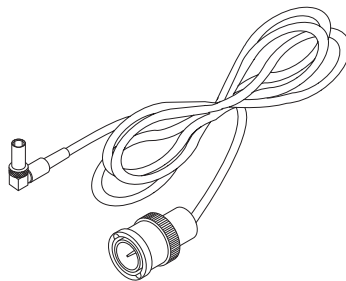
TEST JIG

GH80-10508A



TEST JIG CABLE

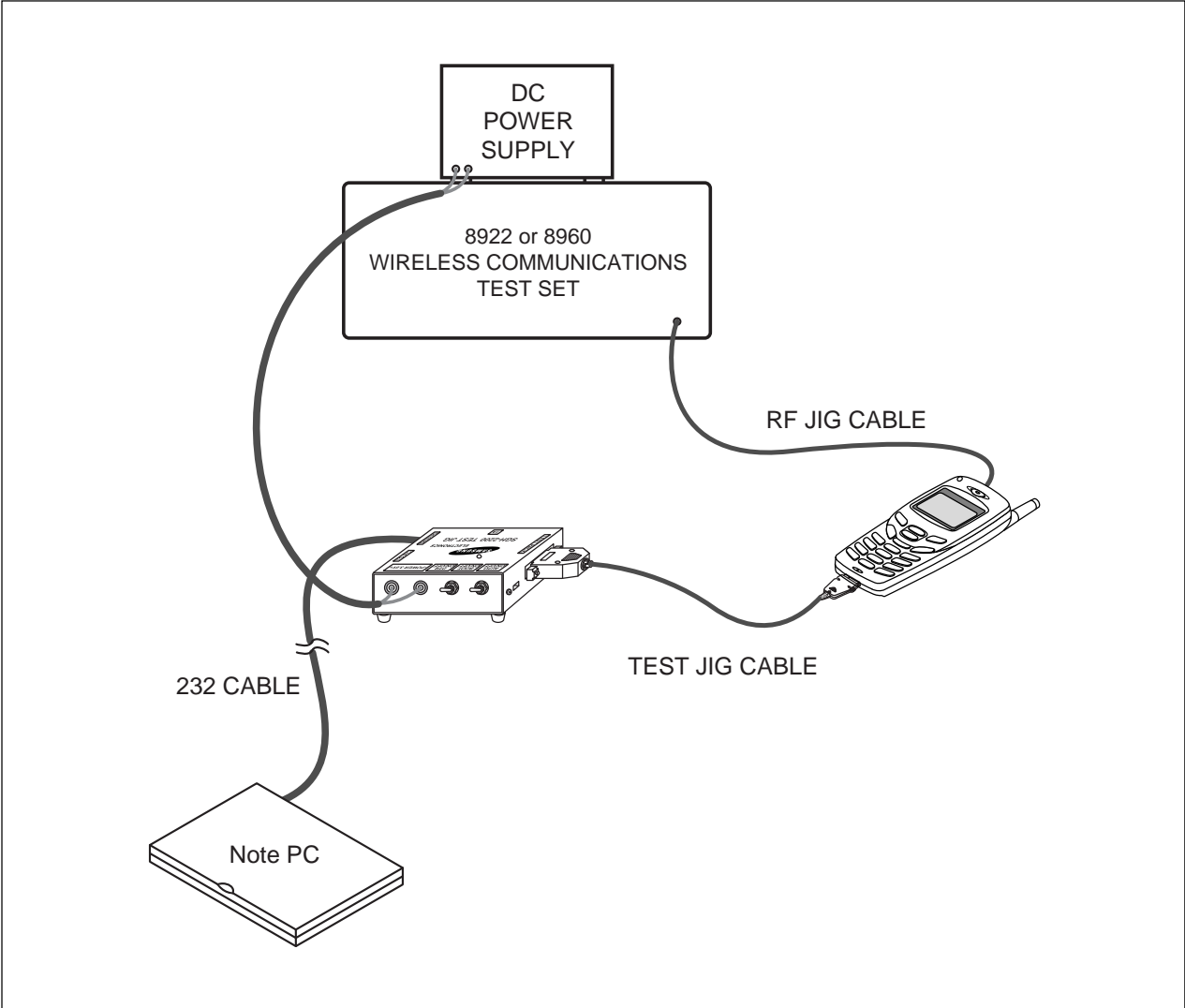
GH39-00079A



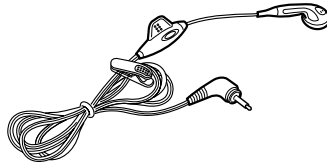
RF CABLE

GH39-00090A

1-7-1 Test Jig



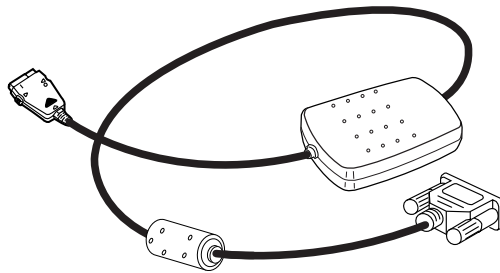
1-8 EAR Microphone



EAR MICROPHONE

GH59-00225B

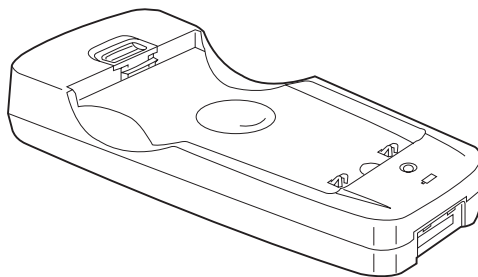
1-9 Data Kit



DATA KIT

GH39-00078A

1-10 Battery Charger

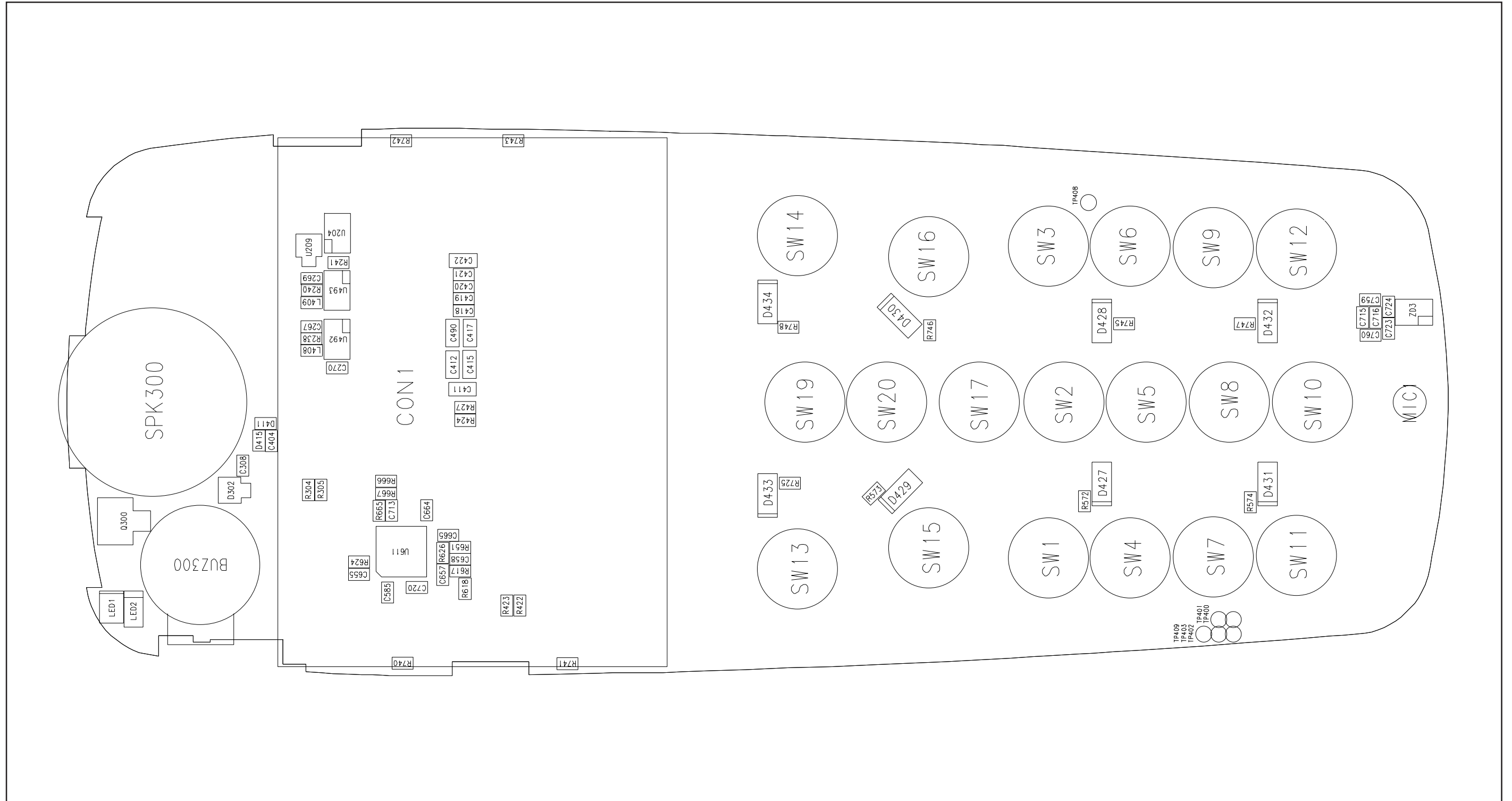


BATTERY CHARGER

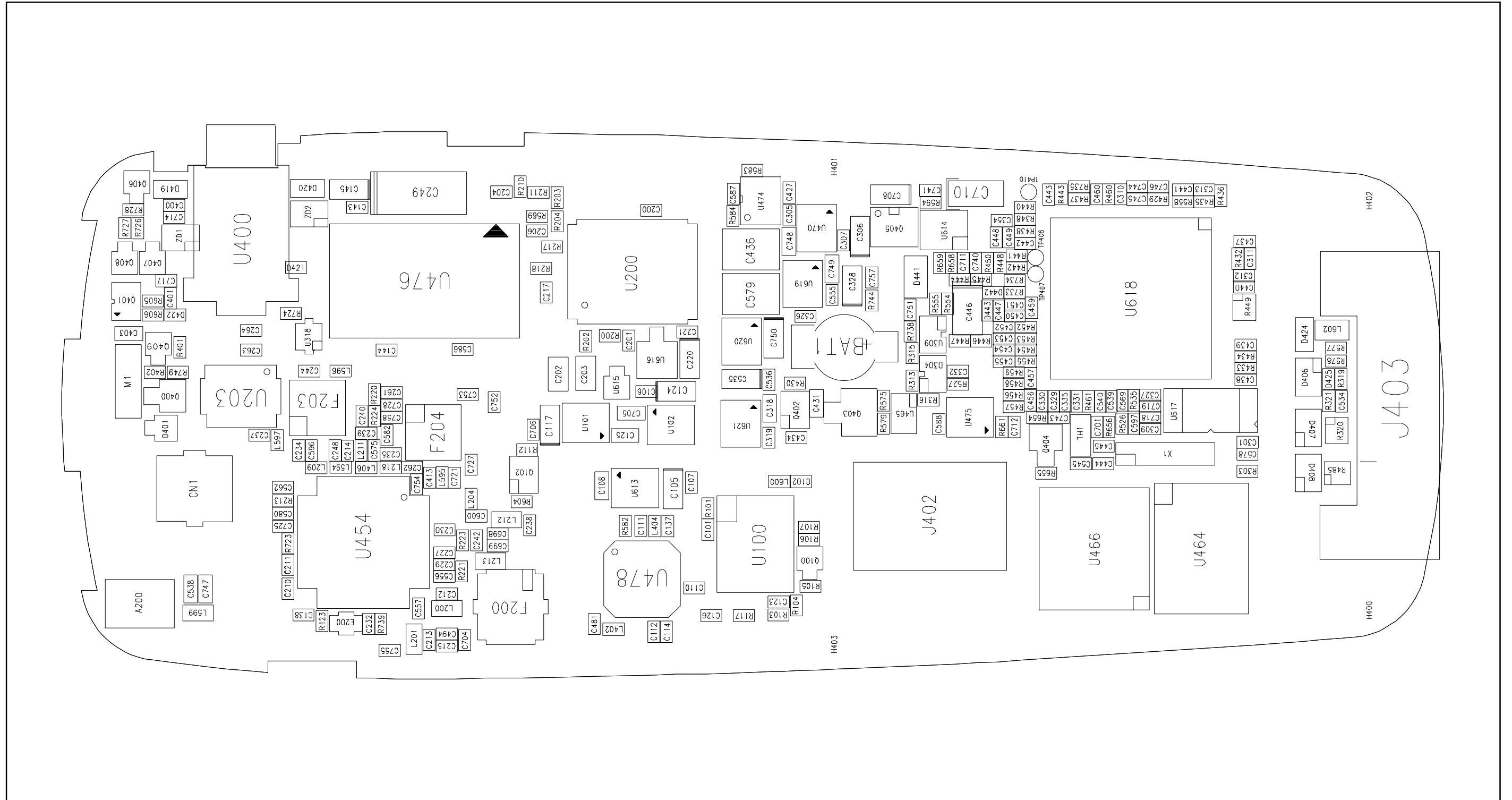
GH44-00221A

2. PCB Diagrams

2-1 Main Top



2-2 Main Bottom



3. Electrical Parts List

3-1 Main Parts List Top

SEC CODE	Reference	the name of an article	Part Description
0401-001033	D441	DIODE-SWITCHING	"MCL4154,25V,200mA,M-MELF,TP"
0406-001083	D406	DIODE-TVS	"-,6.1/-7.2V,150W,SOT-323-5L"
0406-001083	D407	DIODE-TVS	"-,6.1/-7.2V,150W,SOT-323-5L"
0406-001083	D408	DIODE-TVS	"-,6.1/-7.2V,150W,SOT-323-5L"
0406-001083	ZD1	DIODE-TVS	"-,6.1/-7.2V,150W,SOT-323-5L"
0406-001083	ZD2	DIODE-TVS	"-,6.1/-7.2V,150W,SOT-323-5L"
0406-001083	ZD3	DIODE-TVS	"-,6.1/-7.2V,150W,SOT-323-5L"
0406-001083	ZD2	DIODE-TVS	"-,6.1/-7.2V,150W,SOT-323-5L"
0406-001083	ZD3	DIODE-TVS	"-,6.1/-7.2V,150W,SOT-323-5L"
0407-001002	D302	DIODE-ARRAY	"DAN222,80V,300mA,CA2-3,EM3"
0407-001002	D401	DIODE-ARRAY	"DAN222,80V,300mA,CA2-3,EM3"
0407-001007	D304	DIODE-ARRAY	"UMN1,80V,25mA,CA4-2,UM5,TR"
0501-000162	Q400	TR-SMALL SIGNAL	"2SA1576,PNP,200MW,SOT-323,TP"
0501-000162	Q404	TR-SMALL SIGNAL	"2SA1576,PNP,200MW,SOT-323,TP"
0501-000225	Q100	TR-SMALL SIGNAL	"2SC4617,NPN,200mW,EM3,TP,120-5"
0501-002011	Q300	TR-SMALL SIGNAL	"2SD2114K,NPN,200mW,SOT-23,TP,8"
0501-002011	Q403	TR-SMALL SIGNAL	"2SD2114K,NPN,200mW,SOT-23,TP,8"
0502-001201	Q405	TR-POWER	"ZXT13P20DE6,PNP,1100MW,SOT-23-6"
0504-000167	Q409	TR-DIGITAL	"RN1102,NPN,100MW,10K/10K,SSM,TP"
0504-000167	U615	TR-DIGITAL	"RN1102,NPN,100MW,10K/10K,SSM,TP"
0504-001012	Q406	TR-DIGITAL	"DTC114YE,NPN,150MW,10K/47K,EMT3,TP"
0504-001012	Q407	TR-DIGITAL	"DTC114YE,NPN,150MW,10K/47K,EMT3,TP"
0504-001012	Q408	TR-DIGITAL	"DTC114YE,NPN,150MW,10K/47K,EMT3,TP"
0504-001012	U209	TR-DIGITAL	"DTC114YE,NPN,150MW,10K/47K,EMT3,TP"
0504-001021	U616	TR-DIGITAL	"DTB113ZK,PNP,200MW,10K,SC-59,TP"
0504-001058	U204	TR-DIGITAL	"RN4985,NPN/PNP,200mW,2.2Kohm"
0504-001058	U465	TR-DIGITAL	"RN4985,NPN/PNP,200mW,2.2Kohm"
0504-001058	U492	TR-DIGITAL	"RN4985,NPN/PNP,200mW,2.2Kohm"
0504-001058	U493	TR-DIGITAL	"RN4985,NPN/PNP,200mW,2.2Kohm"
0505-001332	Q401	FET-SILICON	"FDG6301,N,25V,0.22A,4OHM,.3W"
0505-001376	U474	FET-SILICON	"FDC6329L,N/P,8V,2.5A,-,0.7W,SC-74"
0505-001570	Q102	FET-SILICON	"-,N/P,-,-,0.4W,SC70-6"
0505-001570	Q402	FET-SILICON	"-,N/P,-,-,0.4W,SC70-6"
0506-001004	U309	TR-ARRAY	"UMC5N,NPN/PNP,2,50V,-,-100mA,3"
0601-001402	LED1	LED	"CHIP,RED/Y-GRN,1.2x1.5mm"
0601-001547	D427	LED	"CHIP,BLUE,1.1X0.8MM,468NM"
0601-001547	D428	LED	"CHIP,BLUE,1.1X0.8MM,468NM"
0601-001547	D429	LED	"CHIP,BLUE,1.1X0.8MM,468NM"

SEC CODE	Reference	the name of an article	Part Description
0601-001547	D430	LED	"CHIP,BLUE,1.1X0.8MM,468NM"
0601-001547	D431	LED	"CHIP,BLUE,1.1X0.8MM,468NM"
0601-001547	D432	LED	"CHIP,BLUE,1.1X0.8MM,468NM"
0601-001547	D433	LED	"CHIP,BLUE,1.1X0.8MM,468NM"
0601-001547	D434	LED	"CHIP,BLUE,1.1X0.8MM,468NM"
0601-001547	LED2	LED	"CHIP,BLUE,1.1X0.8MM,468NM"
1103-001185	U617	IC-EEPROM	"24A2561,32Kx8Bit,TSSOP,8P,-,1.8V"
1106-001326	U464	IC-SRAM	"616FU4110,256Kx16Bit,uBGA,48P,322MIL"
1107-001304	U466	IC-FLASH MEMORY	"AM29DL162,2MX8BIT,FBGA,48P,-,90NS"
1201-001785	U476	IC-POWER AMP	"08122,-,8P,-,DUAL,34DB,-,7V"
1203-001204	U470	IC-VOLTAGE REGULATOR	"2981,SOT-23,5P,59MIL,PLASTIC,3"
1203-001204	U621	IC-VOLTAGE REGULATOR	"2981,SOT-23,5P,59MIL,PLASTIC,3"
1203-001454	U101	IC-VOLTAGE REGULATOR	"2981,SOT-23,5P,59MIL,PLASTIC,3"
1203-001454	U102	IC-VOLTAGE REGULATOR	"2981,SOT-23,5P,59MIL,PLASTIC,3"
1203-001454	U613	IC-VOLTAGE REGULATOR	"2981,SOT-23,5P,59MIL,PLASTIC,3"
1203-001454	U619	IC-VOLTAGE REGULATOR	"2981,SOT-23,5P,59MIL,PLASTIC,3"
1203-001454	U620	IC-VOLTAGE REGULATOR	"2981,SOT-23,5P,59MIL,PLASTIC,3"
1203-002127	U614	IC-BATTERY	"1734,SOT-23,6P,150MIL,PLASTIC"
1203-002247	U475	IC-VOL. DETECTOR	"S-809,SOT-23-5,5P,-,-,150MW"
1205-001881	U618	IC-COMM. CONTROLLER	"VP40575,BGA,180P,472MIL,PLASTIC"
1205-001935	U454	IC-TRANSCEIVER	"HD155128TF,TP,56P,-,-,3V,400mW"
1209-001337	U478	IC-PLL/SYNTHESISER	"SI4133G-XM2R,LCC,28P"
1209-001379	U611	"IC-ETC, LINEAR"	"HD155173ANPEL,-,16P,-,-,3.4V"
1404-001005	TH1	THERMISTOR-NTC	"47Kohm,5%,4050K,2.0mW/C,TP"
1405-001018	D419	VARISTOR	"14V,-,1.6x0.8mm,TP"
1405-001018	D420	VARISTOR	"14V,-,1.6x0.8mm,TP"
1405-001018	D424	VARISTOR	"14V,-,1.6x0.8mm,TP"
1405-001093	D411	VARISTOR	"14V,20A,1x0.5x0.6mm,TP"
1405-001093	D415	VARISTOR	"14V,20A,1x0.5x0.6mm,TP"
1405-001093	D421	VARISTOR	"14V,20A,1x0.5x0.6mm,TP"
1405-001093	D422	VARISTOR	"14V,20A,1x0.5x0.6mm,TP"
1405-001093	D425	VARISTOR	"14V,20A,1x0.5x0.6mm,TP"
1405-001093	D442	VARISTOR	"14V,20A,1x0.5x0.6mm,TP"
1405-001093	D443	VARISTOR	"14V,20A,1x0.5x0.6mm,TP"
2007-000138	R200	R-CHIP	"100ohm,5%,1/16W,DA,TP,1005"
2007-000138	R321	R-CHIP	"100ohm,5%,1/16W,DA,TP,1005"
2007-000139	R203	R-CHIP	"220ohm,5%,1/16W,DA,TP,1005"
2007-000139	R204	R-CHIP	"220ohm,5%,1/16W,DA,TP,1005"
2007-000139	R444	R-CHIP	"220ohm,5%,1/16W,DA,TP,1005"
2007-000139	R447	R-CHIP	"220ohm,5%,1/16W,DA,TP,1005"
2007-000139	R745	R-CHIP	"220ohm,5%,1/16W,DA,TP,1005"
2007-000139	R572	R-CHIP	"220ohm,5%,1/16W,DA,TP,1005"

SEC CODE	Reference	the name of an article	Part Description
2007-000139	R746	R-CHIP	"220ohm,5%,1/16W,DA,TP,1005"
2007-000139	R573	R-CHIP	"220ohm,5%,1/16W,DA,TP,1005"
2007-000139	R747	R-CHIP	"220ohm,5%,1/16W,DA,TP,1005"
2007-000139	R574	R-CHIP	"220ohm,5%,1/16W,DA,TP,1005"
2007-000139	R748	R-CHIP	"220ohm,5%,1/16W,DA,TP,1005"
2007-000139	R725	R-CHIP	"220ohm,5%,1/16W,DA,TP,1005"
2007-000140	R106	R-CHIP	"1Kohm,5%,1/16W,DA,TP,1005"
2007-000140	R575	R-CHIP	"1Kohm,5%,1/16W,DA,TP,1005"
2007-000140	R584	R-CHIP	"1Kohm,5%,1/16W,DA,TP,1005"
2007-000140	R738	R-CHIP	"1Kohm,5%,1/16W,DA,TP,1005"
2007-000141	R103	R-CHIP	"2.2Kohm,5%,1/16W,DA,TP,1005"
2007-000141	R223	R-CHIP	"2.2Kohm,5%,1/16W,DA,TP,1005"
2007-000141	R433	R-CHIP	"2.2Kohm,5%,1/16W,DA,TP,1005"
2007-000141	R434	R-CHIP	"2.2Kohm,5%,1/16W,DA,TP,1005"
2007-000142	R402	R-CHIP	"2.7Kohm,5%,1/16W,DA,TP,1005"
2007-000143	R305	R-CHIP	"4.7Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R101	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R112	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R238	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R240	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R241	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R303	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R313	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R315	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R348	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R424	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R427	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R430	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R435	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R438	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R450	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R461	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R526	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R527	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R535	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R554	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R558	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R604	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R651	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R654	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R655	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000148	R661	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"

SEC CODE	Reference	the name of an article	Part Description
2007-000148	R723	R-CHIP	"10Kohm,5%,1/16W,DA,TP,1005"
2007-000152	R429	R-CHIP	"20Kohm,5%,1/16W,DA,TP,1005"
2007-000153	R213	R-CHIP	"22Kohm,5%,1/16W,DA,TP,1005"
2007-000155	R104	R-CHIP	"27Kohm,5%,1/16W,DA,TP,1005"
2007-000157	R441	R-CHIP	"47Kohm,5%,1/16W,DA,TP,1005"
2007-000157	R442	R-CHIP	"47Kohm,5%,1/16W,DA,TP,1005"
2007-000157	R443	R-CHIP	"47Kohm,5%,1/16W,DA,TP,1005"
2007-000159	R656	R-CHIP	"56Kohm,5%,1/16W,DA,TP,1005"
2007-000162	R304	R-CHIP	"100Kohm,5%,1/16W,DA,TP,1005"
2007-000162	R316	R-CHIP	"100Kohm,5%,1/16W,DA,TP,1005"
2007-000162	R422	R-CHIP	"100Kohm,5%,1/16W,DA,TP,1005"
2007-000162	R423	R-CHIP	"100Kohm,5%,1/16W,DA,TP,1005"
2007-000162	R432	R-CHIP	"100Kohm,5%,1/16W,DA,TP,1005"
2007-000162	R437	R-CHIP	"100Kohm,5%,1/16W,DA,TP,1005"
2007-000162	R460	R-CHIP	"100Kohm,5%,1/16W,DA,TP,1005"
2007-000162	R555	R-CHIP	"100Kohm,5%,1/16W,DA,TP,1005"
2007-000162	R579	R-CHIP	"100Kohm,5%,1/16W,DA,TP,1005"
2007-000162	R583	R-CHIP	"100Kohm,5%,1/16W,DA,TP,1005"
2007-000162	R605	R-CHIP	"100Kohm,5%,1/16W,DA,TP,1005"
2007-000162	R606	R-CHIP	"100Kohm,5%,1/16W,DA,TP,1005"
2007-000168	R440	R-CHIP	"470Kohm,5%,1/16W,DA,TP,1005"
2007-000168	R735	R-CHIP	"470Kohm,5%,1/16W,DA,TP,1005"
2007-000172	R220	R-CHIP	"10ohm,5%,1/16W,DA,TP,1005"
2007-000172	R224	R-CHIP	"10ohm,5%,1/16W,DA,TP,1005"
2007-000172	R577	R-CHIP	"10ohm,5%,1/16W,DA,TP,1005"
2007-000172	R578	R-CHIP	"10ohm,5%,1/16W,DA,TP,1005"
2007-000172	R740	R-CHIP	"10ohm,5%,1/16W,DA,TP,1005"
2007-000172	R741	R-CHIP	"10ohm,5%,1/16W,DA,TP,1005"
2007-000172	R742	R-CHIP	"10ohm,5%,1/16W,DA,TP,1005"
2007-000172	R743	R-CHIP	"10ohm,5%,1/16W,DA,TP,1005"
2007-000174	R123	R-CHIP	"47ohm,5%,1/16W,DA,TP,1005"
2007-000174	R569	R-CHIP	"47ohm,5%,1/16W,DA,TP,1005"
2007-000242	R582	R-CHIP	"1.5Kohm,5%,1/16W,DA,TP,1005"
2007-000982	R624	R-CHIP	"5.6Kohm,5%,1/16W,DA,TP,1005"
2007-001244	R105	R-CHIP	"91Kohm,5%,1/16W,DA,TP,1005"
2007-001292	R202	R-CHIP	"33ohm,5%,1/16W,DA,TP,1005"
2007-001298	R221	R-CHIP	"51ohm,5%,1/16W,DA,TP,1005"
2007-001298	R724	R-CHIP	"51ohm,5%,1/16W,DA,TP,1005"
2007-001301	R210	R-CHIP	"68ohm,5%,1/16W,DA,TP,1005"
2007-001301	R665	R-CHIP	"68ohm,5%,1/16W,DA,TP,1005"
2007-001301	R666	R-CHIP	"68ohm,5%,1/16W,DA,TP,1005"
2007-001305	R211	R-CHIP	"120ohm,5%,1/16W,DA,TP,1005"

SEC CODE	Reference	the name of an article	Part Description
2007-001306	R667	R-CHIP	"150ohm,5%,1/16W,DA,TP,1005"
2007-001311	R218	R-CHIP	"270ohm,5%,1/16W,DA,TP,1005"
2007-002796	R445	R-CHIP	"510ohm,5%,1/16W,DA,TP,1005"
2007-002796	R446	R-CHIP	"510ohm,5%,1/16W,DA,TP,1005"
2007-002797	R107	R-CHIP	"560ohm,5%,1/16W,DA,TP,1005"
2007-002797	R117	R-CHIP	"560ohm,5%,1/16W,DA,TP,1005"
2007-002965	R217	R-CHIP	"15OHM,5%,1/16W,DA,TP,1005"
2007-002970	R728	R-CHIP	"56OHM,5%,1/16W,DA,TP,1005"
2007-007009	R727	R-CHIP	"75OHM,5%,1/16W,DA,TP,1005"
2007-007015	R749	R-CHIP	"13KOHM,5%,1/16W,DA,TP,1005"
2007-007095	R726	R-CHIP	"390OHM,5%,1/16W,DA,TP,1005"
2007-007107	R658	R-CHIP	"100Kohm,1%,1/16W,DA,TP,1005"
2007-007142	R617	R-CHIP	"10Kohm,1%,1/16W,DA,TP,1005"
2007-007142	R618	R-CHIP	"10Kohm,1%,1/16W,DA,TP,1005"
2007-007311	R626	R-CHIP	"22Kohm,1%,1/16W,DA,TP,1005"
2007-007317	R452	R-CHIP	"2.2Kohm,1%,1/16W,DA,TP,1005"
2007-007317	R453	R-CHIP	"2.2Kohm,1%,1/16W,DA,TP,1005"
2007-007317	R454	R-CHIP	"2.2Kohm,1%,1/16W,DA,TP,1005"
2007-007317	R455	R-CHIP	"2.2Kohm,1%,1/16W,DA,TP,1005"
2007-007318	R456	R-CHIP	"1Kohm,1%,1/16W,DA,TP,1005"
2007-007318	R457	R-CHIP	"1Kohm,1%,1/16W,DA,TP,1005"
2007-007318	R458	R-CHIP	"1Kohm,1%,1/16W,DA,TP,1005"
2007-007318	R459	R-CHIP	"1Kohm,1%,1/16W,DA,TP,1005"
2007-007590	R659	R-CHIP	"82Kohm,1%,1/16W,DA,TP,1005"
2007-007771	R319	R-CHIP	"0OHM,5%,1/16W,DA,TP,1005"
2007-007771	R401	R-CHIP	"0OHM,5%,1/16W,DA,TP,1005"
2007-007771	R733	R-CHIP	"0OHM,5%,1/16W,DA,TP,1005"
2007-007771	R734	R-CHIP	"0OHM,5%,1/16W,DA,TP,1005"
2007-007771	R739	R-CHIP	"0OHM,5%,1/16W,DA,TP,1005"
2007-007771	R744	R-CHIP	"0OHM,5%,1/16W,DA,TP,1005"
2007-008117	R594	R-CHIP	"2.7Kohm,1%,1/16W,DA,TP,1005"
2011-001344	R320	R-NETWORK	"100ohm,5%,1/16W,L,CHIP,8P,TP"
2011-001344	R485	R-NETWORK	"100ohm,5%,1/16W,L,CHIP,8P,TP"
2011-001345	R449	R-NETWORK	"10Kohm,5%,1/16W,L,CHIP,8P,TP"
2203-000233	C144	"C-CERAMIC,CHIP"	"0.1nF,5%,50V,NP0,TP,1005"
2203-000233	C305	"C-CERAMIC,CHIP"	"0.1nF,5%,50V,NP0,TP,1005"
2203-000233	C452	"C-CERAMIC,CHIP"	"0.1nF,5%,50V,NP0,TP,1005"
2203-000233	C453	"C-CERAMIC,CHIP"	"0.1nF,5%,50V,NP0,TP,1005"
2203-000233	C454	"C-CERAMIC,CHIP"	"0.1nF,5%,50V,NP0,TP,1005"
2203-000233	C455	"C-CERAMIC,CHIP"	"0.1nF,5%,50V,NP0,TP,1005"
2203-000233	C658	"C-CERAMIC,CHIP"	"0.1nF,5%,50V,NP0,TP,1005"
2203-000233	C718	"C-CERAMIC,CHIP"	"0.1nF,5%,50V,NP0,TP,1005"

SEC CODE	Reference	the name of an article	Part Description
2203-000233	C719	"C-CERAMIC,CHIP"	"0.1nF,5%,50V,NP0,TP,1005"
2203-000254	C101	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C102	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C123	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C210	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C238	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C307	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C309	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C313	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C319	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C326	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C331	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C335	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C354	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C434	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C440	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C449	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C536	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C587	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C712	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C725	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C744	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000254	C745	"C-CERAMIC,CHIP"	"10nF,10%,16V,X7R,TP,1005,-"
2203-000278	C206	"C-CERAMIC,CHIP"	"0.01nF,0.5pF,50V,NP0,TP,1005"
2203-000278	C239	"C-CERAMIC,CHIP"	"0.01nF,0.5pF,50V,NP0,TP,1005"
2203-000311	C657	"C-CERAMIC,CHIP"	"0.12nF,5%,50V,NP0,TP,1005"
2203-000359	C212	"C-CERAMIC,CHIP"	"0.15nF,5%,50V,NP0,TP,1005"
2203-000386	C235	"C-CERAMIC,CHIP"	"0.015nF,5%,50V,NP0,TP,1005"
2203-000438	C138	"C-CERAMIC,CHIP"	"1nF,10%,50V,X7R,TP,1005,-"
2203-000438	C211	"C-CERAMIC,CHIP"	"1nF,10%,50V,X7R,TP,1005,-"
2203-000438	C221	"C-CERAMIC,CHIP"	"1nF,10%,50V,X7R,TP,1005,-"
2203-000438	C227	"C-CERAMIC,CHIP"	"1nF,10%,50V,X7R,TP,1005,-"
2203-000438	C229	"C-CERAMIC,CHIP"	"1nF,10%,50V,X7R,TP,1005,-"
2203-000438	C230	"C-CERAMIC,CHIP"	"1nF,10%,50V,X7R,TP,1005,-"
2203-000438	C240	"C-CERAMIC,CHIP"	"1nF,10%,50V,X7R,TP,1005,-"
2203-000438	C261	"C-CERAMIC,CHIP"	"1nF,10%,50V,X7R,TP,1005,-"
2203-000438	C270	"C-CERAMIC,CHIP"	"1nF,10%,50V,X7R,TP,1005,-"
2203-000438	C556	"C-CERAMIC,CHIP"	"1nF,10%,50V,X7R,TP,1005,-"
2203-000438	C557	"C-CERAMIC,CHIP"	"1nF,10%,50V,X7R,TP,1005,-"
2203-000438	C562	"C-CERAMIC,CHIP"	"1nF,10%,50V,X7R,TP,1005,-"
2203-000438	C580	"C-CERAMIC,CHIP"	"1nF,10%,50V,X7R,TP,1005,-"
2203-000438	C720	"C-CERAMIC,CHIP"	"1nF,10%,50V,X7R,TP,1005,-"

SEC CODE	Reference	the name of an article	Part Description
2203-000466	C575	"C-CERAMIC,CHIP"	"0.001nF,0.25pF,50V,NP0,TP,1005"
2203-000468	C747	"C-CERAMIC,CHIP"	"0.001nF,0.25pF,50V,NP0,TP,1608"
2203-000585	C110	"C-CERAMIC,CHIP"	"220pF,10%,50V,X7R,TP,1005,-"
2203-000585	C111	"C-CERAMIC,CHIP"	"220pF,10%,50V,X7R,TP,1005,-"
2203-000585	C112	"C-CERAMIC,CHIP"	"220pF,10%,50V,X7R,TP,1005,-"
2203-000585	C114	"C-CERAMIC,CHIP"	"220pF,10%,50V,X7R,TP,1005,-"
2203-000609	C203	"C-CERAMIC,CHIP"	"22nF,10%,50V,X7R,TP,2012"
2203-000628	C237	"C-CERAMIC,CHIP"	"0.022nF,5%,50V,NP0,TP,1005"
2203-000654	C585	"C-CERAMIC,CHIP"	"270pF,10%,50V,X7R,TP,1005,-"
2203-000654	C655	"C-CERAMIC,CHIP"	"270pF,10%,50V,X7R,TP,1005,-"
2203-000679	C200	"C-CERAMIC,CHIP"	"0.027nF,5%,50V,NP0,TP,1005"
2203-000679	C232	"C-CERAMIC,CHIP"	"0.027nF,5%,50V,NP0,TP,1005"
2203-000679	C262	"C-CERAMIC,CHIP"	"0.027nF,5%,50V,NP0,TP,1005"
2203-000679	C267	"C-CERAMIC,CHIP"	"0.027nF,5%,50V,NP0,TP,1005"
2203-000679	C269	"C-CERAMIC,CHIP"	"0.027nF,5%,50V,NP0,TP,1005"
2203-000679	C540	"C-CERAMIC,CHIP"	"0.027nF,5%,50V,NP0,TP,1005"
2203-000679	C555	"C-CERAMIC,CHIP"	"0.027nF,5%,50V,NP0,TP,1005"
2203-000679	C569	"C-CERAMIC,CHIP"	"0.027nF,5%,50V,NP0,TP,1005"
2203-000679	C586	"C-CERAMIC,CHIP"	"0.027nF,5%,50V,NP0,TP,1005"
2203-000679	C665	"C-CERAMIC,CHIP"	"0.027nF,5%,50V,NP0,TP,1005"
2203-000679	C713	"C-CERAMIC,CHIP"	"0.027nF,5%,50V,NP0,TP,1005"
2203-000679	C740	"C-CERAMIC,CHIP"	"0.027nF,5%,50V,NP0,TP,1005"
2203-000679	C741	"C-CERAMIC,CHIP"	"0.027nF,5%,50V,NP0,TP,1005"
2203-000679	C752	"C-CERAMIC,CHIP"	"0.027nF,5%,50V,NP0,TP,1005"
2203-000696	C582	"C-CERAMIC,CHIP"	"0.002nF,0.25pF,50V,NP0,TP,1005"
2203-000812	C143	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C204	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C217	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C234	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C263	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C264	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C310	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C311	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C312	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C327	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C330	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C437	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C438	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C439	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C441	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C442	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C443	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"

SEC CODE	Reference	the name of an article	Part Description
2203-000812	C448	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C460	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C664	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000812	C758	"C-CERAMIC,CHIP"	"0.033nF,5%,50V,NP0,TP,1005"
2203-000854	C244	"C-CERAMIC,CHIP"	"0.039nF,5%,50V,NP0,TP,1005"
2203-000854	C400	"C-CERAMIC,CHIP"	"0.039nF,5%,50V,NP0,TP,1005"
2203-000854	C401	"C-CERAMIC,CHIP"	"0.039nF,5%,50V,NP0,TP,1005"
2203-000854	C723	"C-CERAMIC,CHIP"	"0.039nF,5%,50V,NP0,TP,1005"
2203-000854	C724	"C-CERAMIC,CHIP"	"0.039nF,5%,50V,NP0,TP,1005"
2203-000854	C698	"C-CERAMIC,CHIP"	"0.039nF,5%,50V,NP0,TP,1005"
2203-000854	C699	"C-CERAMIC,CHIP"	"0.039nF,5%,50V,NP0,TP,1005"
2203-000995	C447	"C-CERAMIC,CHIP"	"0.047nF,5%,50V,NP0,TP,1005"
2203-001017	C716	"C-CERAMIC,CHIP"	"0.004nF,0.25pF,50V,NP0,TP,1005"
2203-001017	C759	"C-CERAMIC,CHIP"	"0.004nF,0.25pF,50V,NP0,TP,1005"
2203-001017	C760	"C-CERAMIC,CHIP"	"0.004nF,0.25pF,50V,NP0,TP,1005"
2203-001020	C538	"C-CERAMIC,CHIP"	"0.004nF,0.25pF,50V,NP0,TP,1608"
2203-001153	C215	"C-CERAMIC,CHIP"	"0.068nF,5%,50V,NP0,TP,1005"
2203-001153	C494	"C-CERAMIC,CHIP"	"0.068nF,5%,50V,NP0,TP,1005"
2203-002525	C126	"C-CERAMIC,CHIP"	"0.56nF,10%,50V,X7R,TP,1005"
2203-002525	C137	"C-CERAMIC,CHIP"	"0.56nF,10%,50V,X7R,TP,1005"
2203-002525	C481	"C-CERAMIC,CHIP"	"0.56nF,10%,50V,X7R,TP,1005"
2203-002668	C214	"C-CERAMIC,CHIP"	"0.0005nF,0.1pF,50V,NP0,TP,1005"
2203-002668	C242	"C-CERAMIC,CHIP"	"0.0005nF,0.1pF,50V,NP0,TP,1005"
2203-003054	C329	"C-CERAMIC,CHIP"	"0.009nF,0.25pF,50V,NP0,TP,1005"
2203-003054	C444	"C-CERAMIC,CHIP"	"0.009nF,0.25pF,50V,NP0,TP,1005"
2203-003054	C445	"C-CERAMIC,CHIP"	"0.009nF,0.25pF,50V,NP0,TP,1005"
2203-003054	C539	"C-CERAMIC,CHIP"	"0.009nF,0.25pF,50V,NP0,TP,1005"
2203-003054	C757	"C-CERAMIC,CHIP"	"0.009nF,0.25pF,50V,NP0,TP,1005"
2203-005050	C600	"C-CERAMIC,CHIP"	"0.0018nF,0.25pF,50V,NP0,TP,1005"
2203-005052	C213	"C-CERAMIC,CHIP"	"0.0033nF,0.25pF,50V,NP0,TP,1005"
2203-005061	C106	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C107	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C301	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C308	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C332	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C418	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C419	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C420	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C421	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C427	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C534	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C545	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"

SEC CODE	Reference	the name of an article	Part Description
2203-005061	C578	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C588	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C597	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C701	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C706	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005061	C711	"C-CERAMIC,CHIP"	"100nF,+80-20%,16V,Y5V,TP,1005"
2203-005065	C108	"C-CERAMIC,CHIP"	"1000nF,+80-20%,10V,Y5V,TP,1608"
2203-005065	C125	"C-CERAMIC,CHIP"	"1000nF,+80-20%,10V,Y5V,TP,1608"
2203-005065	C318	"C-CERAMIC,CHIP"	"1000nF,+80-20%,10V,Y5V,TP,1608"
2203-005065	C403	"C-CERAMIC,CHIP"	"1000nF,+80-20%,10V,Y5V,TP,1608"
2203-005065	C411	"C-CERAMIC,CHIP"	"1000nF,+80-20%,10V,Y5V,TP,1608"
2203-005065	C412	"C-CERAMIC,CHIP"	"1000nF,+80-20%,10V,Y5V,TP,1608"
2203-005065	C415	"C-CERAMIC,CHIP"	"1000nF,+80-20%,10V,Y5V,TP,1608"
2203-005065	C417	"C-CERAMIC,CHIP"	"1000nF,+80-20%,10V,Y5V,TP,1608"
2203-005065	C422	"C-CERAMIC,CHIP"	"1000nF,+80-20%,10V,Y5V,TP,1608"
2203-005065	C431	"C-CERAMIC,CHIP"	"1000nF,+80-20%,10V,Y5V,TP,1608"
2203-005065	C490	"C-CERAMIC,CHIP"	"1000nF,+80-20%,10V,Y5V,TP,1608"
2203-005065	C705	"C-CERAMIC,CHIP"	"1000nF,+80-20%,10V,Y5V,TP,1608"
2203-005065	C748	"C-CERAMIC,CHIP"	"1000nF,+80-20%,10V,Y5V,TP,1608"
2203-005065	C749	"C-CERAMIC,CHIP"	"1000nF,+80-20%,10V,Y5V,TP,1608"
2203-005234	C596	"C-CERAMIC,CHIP"	"0.0012nF,0.25pF,50V,NP0,TP,1005"
2203-005382	C248	"C-CERAMIC,CHIP"	"0.006nF,0.1pF,50V,NP0,TP,1005"
2203-005383	C753	"C-CERAMIC,CHIP"	"7pF,0.1pF,50V,NPO,TP,1005,-"
2203-005383	C754	"C-CERAMIC,CHIP"	"7pF,0.1pF,50V,NPO,TP,1005,-"
2203-005383	C755	"C-CERAMIC,CHIP"	"7pF,0.1pF,50V,NPO,TP,1005,-"
2203-005444	C404	"C-CERAMIC,CHIP"	"0.003nF,0.1pF,50V,NP0,TP,1005"
2203-005446	C721	"C-CERAMIC,CHIP"	"0.0027nF,0.1pF,50V,NP0,TP,1005"
2203-005480	C450	"C-CERAMIC,CHIP"	"33nF,10%,10V,X7R,TP,1005,-"
2203-005480	C451	"C-CERAMIC,CHIP"	"33nF,10%,10V,X7R,TP,1005,-"
2203-005481	C459	"C-CERAMIC,CHIP"	"47nF,10%,10V,X7R,TP,1005,-"
2203-005482	C746	"C-CERAMIC,CHIP"	"100nF,10%,10V,X5R,TP,1005,-"
2203-005482	C751	"C-CERAMIC,CHIP"	"100nF,10%,10V,X5R,TP,1005,-"
2203-005503	C456	"C-CERAMIC,CHIP"	"0.18nF,5%,25V,NP0,TP,1005"
2203-005503	C457	"C-CERAMIC,CHIP"	"0.18nF,5%,25V,NP0,TP,1005"
2203-005552	C727	"C-CERAMIC,CHIP"	"0.0022nF,0.1pF,50V,NP0,TP,1005"
2301-001232	C202	"C-FILM,CHIP"	"470pF,5%,50V,TP,2012,-"
2404-001020	C710	"C-TA,CHIP"	"10uF,20%,10V,GP,TP,3216,3.2"
2404-001101	C220	"C-TA,CHIP"	"1uF,20%,16V,GP,TP,2012,-"
2404-001105	C105	"C-TA,CHIP"	"10UF,20%,6.3V,GP,TP,2012"
2404-001105	C117	"C-TA,CHIP"	"10UF,20%,6.3V,GP,TP,2012"
2404-001105	C124	"C-TA,CHIP"	"10UF,20%,6.3V,GP,TP,2012"
2404-001105	C145	"C-TA,CHIP"	"10UF,20%,6.3V,GP,TP,2012"

SEC CODE	Reference	the name of an article	Part Description
2404-001105	C306	"C-TA,CHIP"	"10UF,20%,6.3V,GP,TP,2012"
2404-001105	C328	"C-TA,CHIP"	"10UF,20%,6.3V,GP,TP,2012"
2404-001105	C535	"C-TA,CHIP"	"10UF,20%,6.3V,GP,TP,2012"
2404-001105	C708	"C-TA,CHIP"	"10UF,20%,6.3V,GP,TP,2012"
2404-001105	C750	"C-TA,CHIP"	"10UF,20%,6.3V,GP,TP,2012"
2404-001134	C436	"C-TA,CHIP"	"100UF,20%,6.3V,LZ,TP,4028"
2404-001134	C579	"C-TA,CHIP"	"100UF,20%,6.3V,LZ,TP,4028"
2404-001162	C446	"C-TA,CHIP"	"47uF,20%,4V,LZ,TP,3216"
2404-001267	C249	"C-TA,CHIP"	"220UF,20%,6.3V,-,TP,6032"
2703-001178	L594	INDUCTOR-SMD	"3.3nH,0.3nH,1x0.5x0.5mm"
2703-001180	L211	INDUCTOR-SMD	"15nH,5%,1x0.5x0.5mm"
2703-001257	L599	INDUCTOR-SMD	"3.9nH,0.3nH,1.6x0.8X0.8mm"
2703-001293	L200	INDUCTOR-SMD	"82nH,5%,1.6x0.8x0.8mm"
2703-001708	L406	INDUCTOR-SMD	"5.6nH,10%,1.0x0.5x0.5mm"
2703-001723	L408	INDUCTOR-SMD	"33nH,5%,1.0x0.5x0.5mm"
2703-001723	L409	INDUCTOR-SMD	"33nH,5%,1.0x0.5x0.5mm"
2703-001750	L402	INDUCTOR-SMD	"2.2NH,0.3NH,1.0X0.5X0.5MM"
2703-001751	L596	INDUCTOR-SMD	"3.9nH,0.3nH,1.0x0.5x0.5mm"
2703-001786	L404	INDUCTOR-SMD	"10NH,5%,1.0X0.5X0.5MM"
2703-001943	L600	INDUCTOR-SMD	"10nH,5%,1.0x0.5x0.5mm"
2703-001949	L595	INDUCTOR-SMD	"4.7nH,10%,1.0x0.5x0.5mm"
2703-001950	L204	INDUCTOR-SMD	"12nH,10%,1.0x0.5x0.5mm"
2703-001952	L209	INDUCTOR-SMD	"8.2nH,5%,1.0x0.5x0.5mm"
2703-001952	L218	INDUCTOR-SMD	"8.2nH,5%,1.0x0.5x0.5mm"
2703-001952	L597	INDUCTOR-SMD	"8.2nH,5%,1.0x0.5x0.5mm"
2703-002209	L212	INDUCTOR-SMD	"47NH,5%,1.6X0.8X0.8MM"
2703-002209	L213	INDUCTOR-SMD	"47NH,5%,1.6X0.8X0.8MM"
2703-002231	L201	INDUCTOR-SMD	"68NH,5%,1.6X0.8X0.8 MM"
2801-003856	X1	CRYSTAL-SMD	"0.032786MHz,20ppm,28-ACP,7pF"
2806-001239	U200	OSCILLATOR-VCO	"1748MHz,-,50ohm,TP,2.8V,-"
2809-001255	U100	VCTCX0	TCO-9133S
2901-001116	E200	FILTER-EMI SMD	"50V,0.3A,-,470pF,2x1.25x0.5mm,TP"
2904-001320	F200	FILTER-SAW	"225MHZ,60MHZ,-,TP,-,-"
2904-001325	F203	FILTER-SAW	"942.5MHZ,50MHZ,1.7DB(G),2.0DB(P)"
2904-001325	F204	FILTER-SAW	"942.5MHZ,50MHZ,1.7DB(G),2.0DB(P)"
2909-001146	U203	FILTER-DUPLEXER	"942.5MHZ,897.5MHZ,1.4/1.5DB,TP"
3002-001098	BUZ300	BUZZER-MAGNETIC	"94dB,3V,150mA,2700Hz,TP"
3301-001120	L602	CORE-FERRITE BEAD	"AB,30ohm,2x1.25x0.85mm,3000mA,TP"
3705-001226	CN1	CONNECTOR-COAXIAL	"-,JACK,75mohm,50ohm,0.45dB"
3709-001088	J402	CONNECTOR-CARD EDGE	"6P,2.54mm,SMD-S,AU"
3710-001105	M1	CONNECTOR-SOCKET	"2P,1R,1.27mm,SMD-S,AU"
3710-001595	J403	CONNECTOR-SOCKET	"18P,1R,0.5mm,SMD-A,AUF"

SEC CODE	Reference	the name of an article	Part Description
3722-001587	U400	JACK-PHONE	"6P,2.6PI,AG,BLK,-"
4302-001119	BAT1	BATTERY-LI(2ND)	"3V,0.1MAH,-,-,3.1V,-"
4709-001144	U318	COUPLER-DIRECTION	"897.5/1747.5MHZ,19DB/14DB,24DB"
GH07-00075B	LCD	LCD-SGHR220 LCD	"UG-12B98-FLHTX-A,128X64"
GH41-00181A	PCB	PCB-SGHR210 MAIN	"MR500,6L,-,0.8T,118X155MM"
GH61-00019A	A200	SPRING-ANT.CONTACT	"SGH-N105,BE-CU,-,-,-,-,-,GLD"

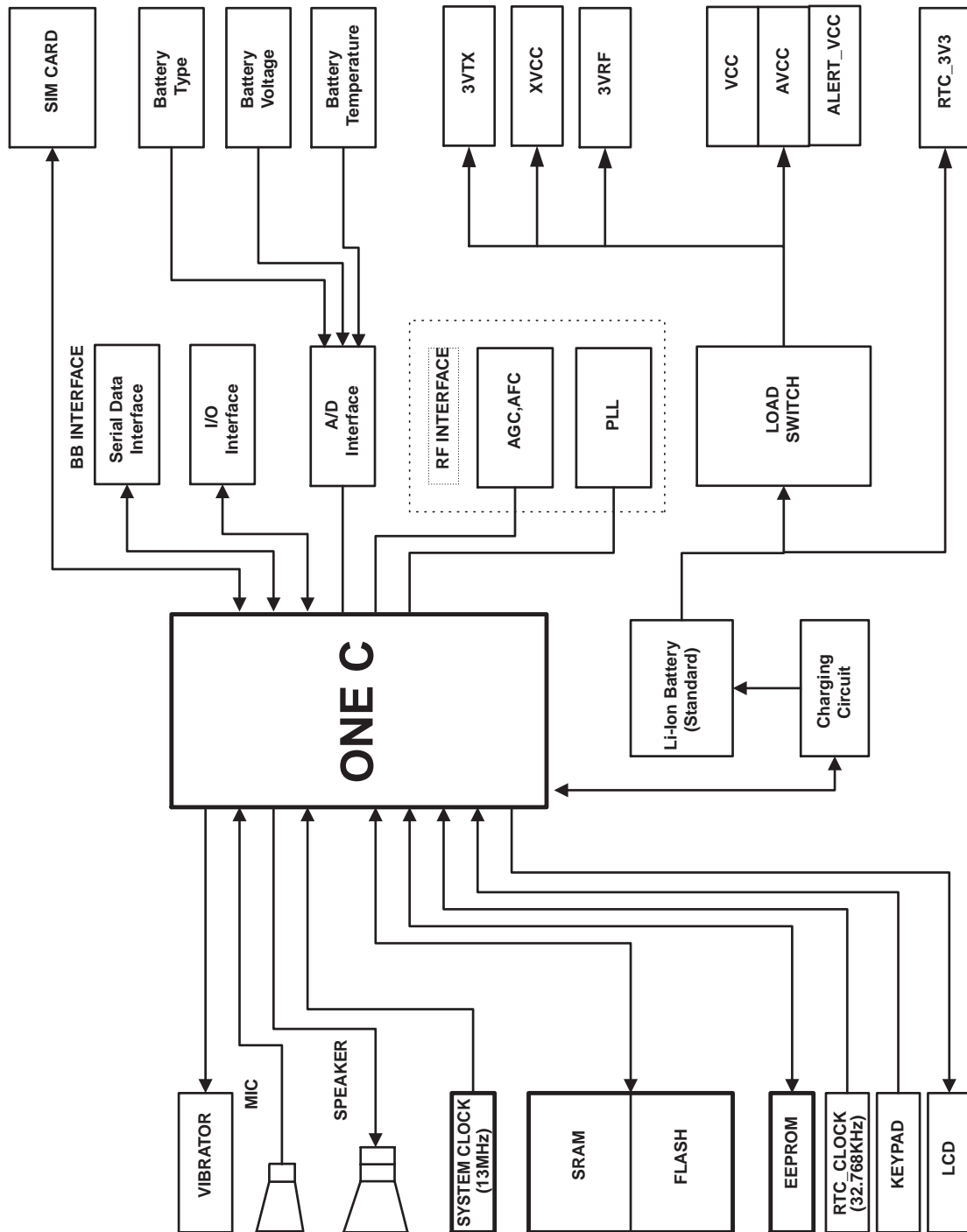
3-2 Main Parts List Bottom

NO	SEC CODE	Reference	Part Description	Vendor Part No.
1	0407-001002	D302	"DIODE-ARRAY,DAN222,80V,300mA,CA2-3,EM3"	DAN222
2	0501-002011	Q300	"TR-SMALL SIGNAL,2SD2114K,NPN,200mW,SOT-23"	2SD2114KT146V
3	0504-001012	U209	"TR-DIGITAL,DTC114YE,NPN,150MW,10K/47K"	DTC114YE
4	0504-001058	U204	"TR-DIGITAL,RN4985,NPN/PNP,200mW,2.2Kohm"	RN4985
5	0504-001058	U492	"TR-DIGITAL,RN4985,NPN/PNP,200mW,2.2Kohm"	RN4985
6	0504-001058	U493	"TR-DIGITAL,RN4985,NPN/PNP,200mW,2.2Kohm"	RN4985
7	0601-001402	LED1	"LED,CHIP,RED/Y-GRN,1.2x1.5mm,660/570nm"	CL165HR/YG-D-T
8	0601-001547	LED2	"LED,CHIP,BLUE,1.1X0.8MM,485NM"	SLSNNBL102TS
9	0601-001547	D433	"LED,CHIP,BLUE,1.2X0.8MM,480NM"	SLS-NNBL102TS
10	0601-001547	D434	"LED,CHIP,BLUE,1.2X0.8MM,480NM"	SLS-NNBL102TS
11	0601-001547	D427	"LED,CHIP,BLUE,1.2X0.8MM,480NM"	SLS-NNBL102TS
12	0601-001547	D428	"LED,CHIP,BLUE,1.2X0.8MM,480NM"	SLS-NNBL102TS
13	0601-001547	D429	"LED,CHIP,BLUE,1.2X0.8MM,480NM"	SLS-NNBL102TS
14	0601-001547	D430	"LED,CHIP,BLUE,1.2X0.8MM,480NM"	SLS-NNBL102TS
15	0601-001547	D431	"LED,CHIP,BLUE,1.2X0.8MM,480NM"	SLS-NNBL102TS
16	0601-001547	D432	"LED,CHIP,BLUE,1.2X0.8MM,480NM"	SLS-NNBL102TS
17	1209-001379	U611	"IC-ETC, LINEAR,16P,3.4V,240MW"	HD155173ANPEL
18	1405-001093	D411	"VARISTOR,14V,20A,1x0.5x0.6mm"	VC040214X500R
19	1405-001093	D415	"VARISTOR,14V,20A,1x0.5x0.6mm"	VC040214X500R
20	2007-000139	R725	"R-CHIP,220ohm,5%,1/16W,DA,TP,1005"	RK73K1ETP221J
21	2007-000139	R573	"R-CHIP,220ohm,5%,1/16W,DA,TP,1005"	RK73K1ETP221J
22	2007-000139	R572	"R-CHIP,220ohm,5%,1/16W,DA,TP,1005"	RK73K1ETP221J
23	2007-000139	R574	"R-CHIP,220ohm,5%,1/16W,DA,TP,1005"	RK73K1ETP221J
24	2007-000143	R305	"R-CHIP,4.7Kohm,5%,1/16W,DA,TP,1005"	RK73K1ETP472J
25	2007-000148	R238	"R-CHIP,10Kohm,5%,1/16W,DA,TP,1005"	RK73K1ETP103J
26	2007-000148	R240	"R-CHIP,10Kohm,5%,1/16W,DA,TP,1005"	RK73K1ETP103J
27	2007-000148	R241	"R-CHIP,10Kohm,5%,1/16W,DA,TP,1005"	RK73K1ETP103J
28	2007-000148	R424	"R-CHIP,10Kohm,5%,1/16W,DA,TP,1005"	RK73K1ETP103J
29	2007-000148	R427	"R-CHIP,10Kohm,5%,1/16W,DA,TP,1005"	RK73K1ETP103J
30	2007-000148	R651	"R-CHIP,10Kohm,5%,1/16W,DA,TP,1005"	RK73K1ETP103J
31	2007-000162	R304	"R-CHIP,100Kohm,5%,1/16W,DA,TP,1005"	RK73K1ETP104J
32	2007-000162	R422	"R-CHIP,100Kohm,5%,1/16W,DA,TP,1005"	RK73K1ETP104J
33	2007-000162	R423	"R-CHIP,100Kohm,5%,1/16W,DA,TP,1005"	RK73K1ETP104J
34	2007-000982	R624	"R-CHIP,5.6Kohm,5%,1/16W,DA,TP,1005"	RK73K1ETP562J
35	2007-001301	R665	"R-CHIP,68ohm,5%,1/16W,DA,TP,1005"	ERJ2GEJ680X
36	2007-001301	R666	"R-CHIP,68ohm,5%,1/16W,DA,TP,1005"	ERJ2GEJ680X
37	2007-001306	R667	"R-CHIP,150ohm,5%,1/16W,DA,TP,1005"	RK73K1ETP151J
38	2007-007142	R617	"R-CHIP,10Kohm,1%,1/16W,DA,TP,1005"	RK73H1ETP1002F
39	2007-007142	R618	"R-CHIP,10Kohm,1%,1/16W,DA,TP,1005"	RK73H1ETP1002F
40	2007-007311	R626	"R-CHIP,22Kohm,1%,1/16W,DA,TP,1005"	RK73H1ETP2202F
41	2007-007771	R729	"R-CHIP,0OHM,5%,1/16W,DA,TP,1005"	ERJ2GE0R00L
42	2203-000654	C655	"C-CERAMIC,CHIP,270pF,10%,50V,X7R,TP,1005"	C1005X7R1H271KT

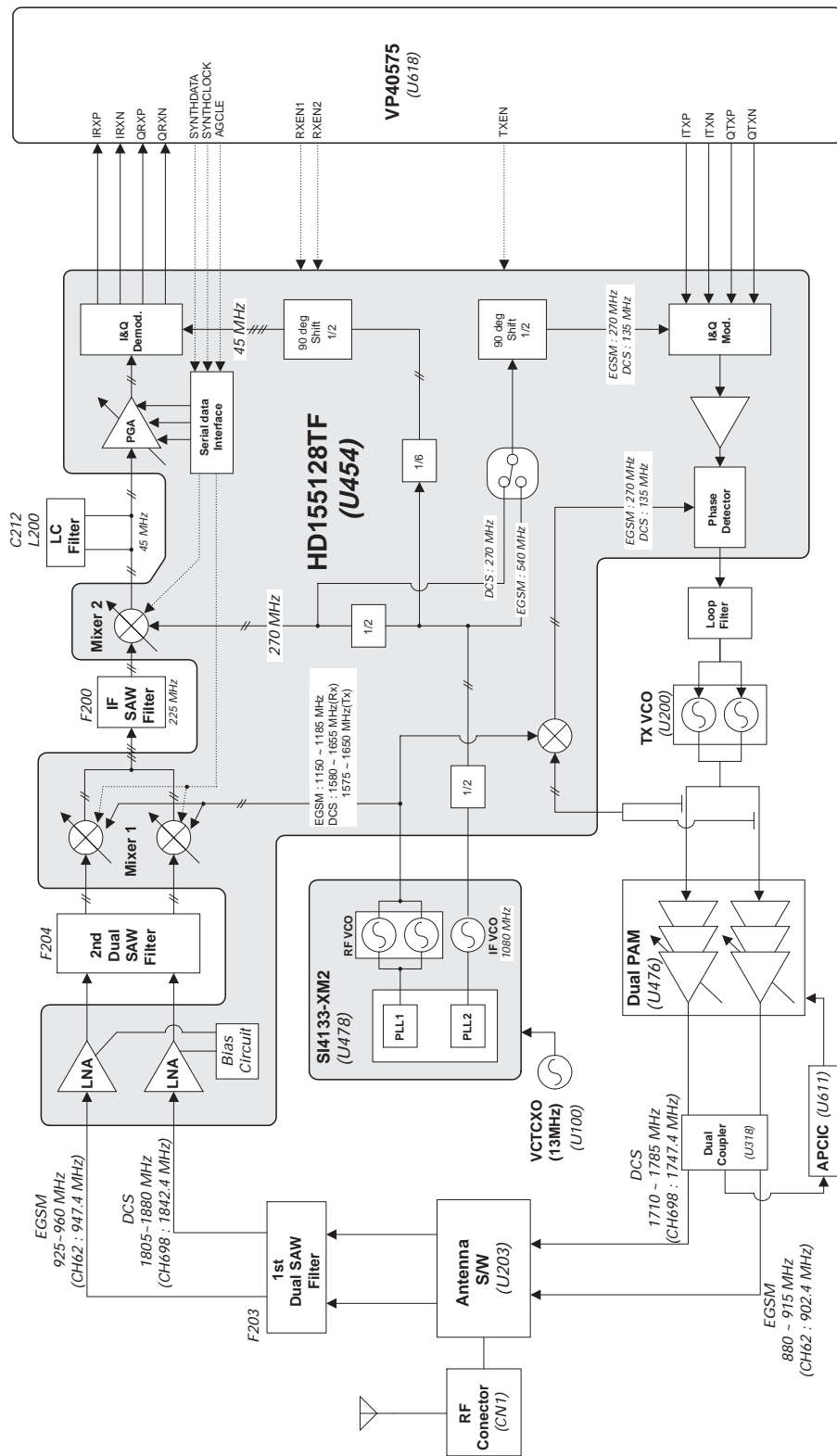
NO	SEC CODE	Reference	Part Description	Vendor Part No.
43	2203-000654	C585	"C-CERAMIC,CHIP,270pF,10%,50V,X7R,TP,1005"	C1005X7R1H271KT
44	2203-000438	C720	"C-CERAMIC,CHIP,1nF,10%,50V,X7R,TP,1005"	CL05B102KBNC
45	2203-000995	C713	"C-CERAMIC,CHIP,0.047nF,5%,50V,NP0,TP,1005"	CL05C470JBNC
46	2203-000812	C664	"C-CERAMIC,CHIP,0.033nF,5%,50V,NP0,TP,1005"	CL05C330JBNC
47	2203-000311	C657	"C-CERAMIC,CHIP,0.12nF,5%,50V,NP0,TP,1005"	CL05C121JANC
48	2203-000233	C658	"C-CERAMIC,CHIP,0.1nF,5%,50V,NP0,TP,1005"	CL05C101JBNC
49	2203-000679	C665	"C-CERAMIC,CHIP,0.027nF,5%,50V,NP0,TP,1005"	CL05C270JBNC
50	2203-000438	C270	"C-CERAMIC,CHIP,1nF,10%,50V,X7R,TP,1005"	CL05B102KBNC
51	2203-000679	C267	"C-CERAMIC,CHIP,0.027nF,5%,50V,NP0,TP,1005"	CL05C270JBNC
52	2203-000679	C269	"C-CERAMIC,CHIP,0.027nF,5%,50V,NP0,TP,1005"	CL05C270JBNC
53	2203-005061	C308	"C-CERAMIC,CHIP,100nF,+80-20%,16V,1005"	C1005Y5V1C104ZT
54	2203-005061	C418	"C-CERAMIC,CHIP,100nF,+80-20%,16V,1005"	C1005Y5V1C104ZT
55	2203-005061	C419	"C-CERAMIC,CHIP,100nF,+80-20%,16V,1005"	C1005Y5V1C104ZT
56	2203-005061	C420	"C-CERAMIC,CHIP,100nF,+80-20%,16V,1005"	C1005Y5V1C104ZT
57	2203-005061	C421	"C-CERAMIC,CHIP,100nF,+80-20%,16V,1005"	C1005Y5V1C104ZT
58	2203-005065	C411	"C-CERAMIC,CHIP,1000nF,+80-20%,10V,1608"	GRM39Y5V105Z10PT
59	2203-005065	C412	"C-CERAMIC,CHIP,1000nF,+80-20%,10V,1608"	GRM39Y5V105Z10PT
60	2203-005065	C415	"C-CERAMIC,CHIP,1000nF,+80-20%,10V,1608"	GRM39Y5V105Z10PT
61	2203-005065	C417	"C-CERAMIC,CHIP,1000nF,+80-20%,10V,1608"	GRM39Y5V105Z10PT
62	2203-005065	C422	"C-CERAMIC,CHIP,1000nF,+80-20%,10V,1608"	GRM39Y5V105Z10PT
63	2203-005065	C490	"C-CERAMIC,CHIP,1000nF,+80-20%,10V,1608"	GRM39Y5V105Z10PT
64	2203-005444	C404	"C-CERAMIC,CHIP,0.003nF,0.1pF,50V,NP0,1005"	C1005C0G1H030BT
65	2703-001723	L408	"INDUCTOR-SMD,33nH,5%,1.0x0.5x0.5mm"	HK1005-33NJ-T
66	2703-001723	L409	"INDUCTOR-SMD,33nH,5%,1.0x0.5x0.5mm"	HK1005-33NJ-T
67	3002-001098	BUZ300	"BUZZER-MAGNETIC,94dB,3V,150mA,2700Hz"	BRT-03S
68	N.C	R730	N.C POINT	
69	N.C	C715	N.C POINT	

4. Block Diagrams

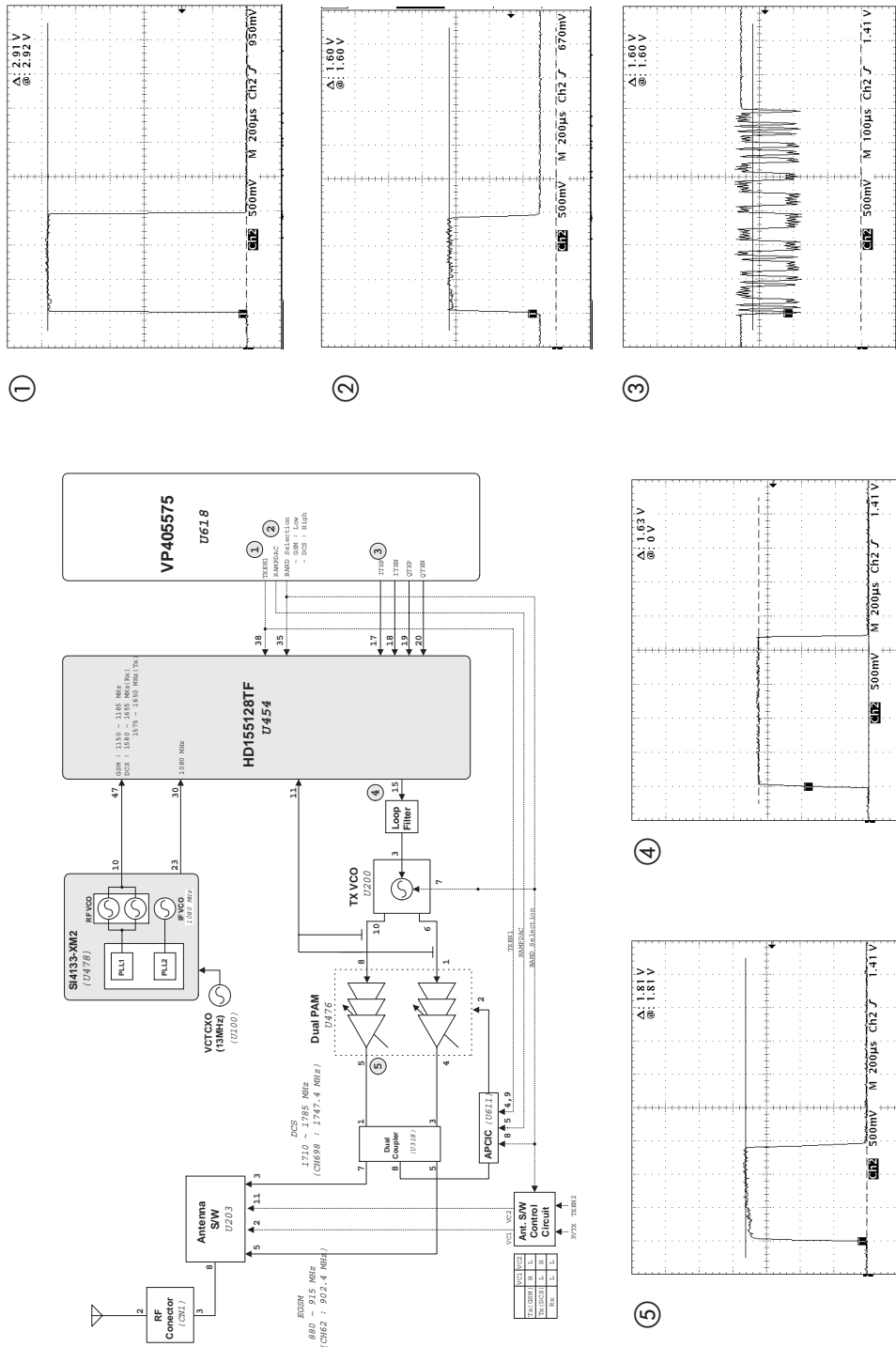
4-1 Main Baseband



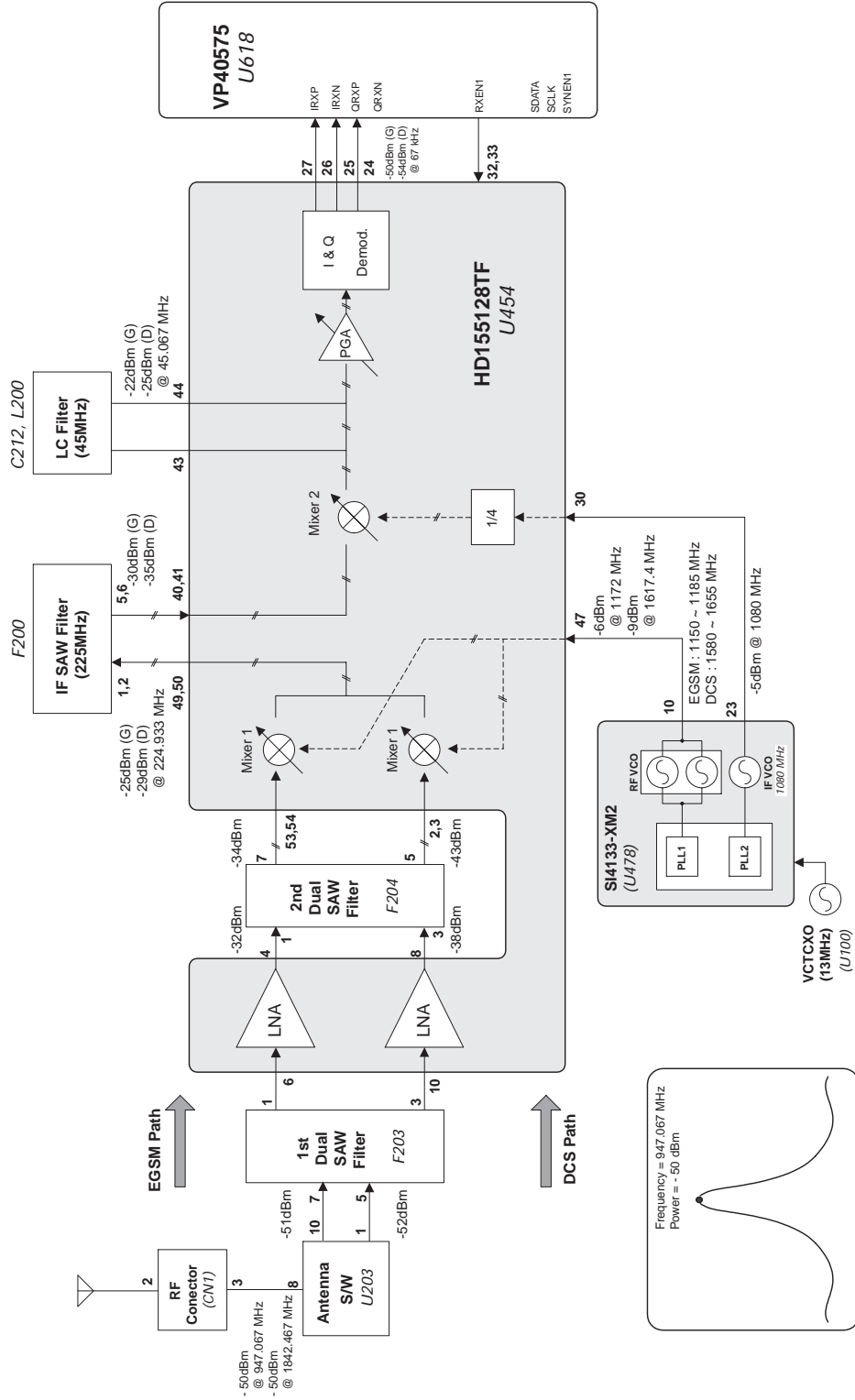
4-2 Main RF



4-2-1 RF Transmit Part

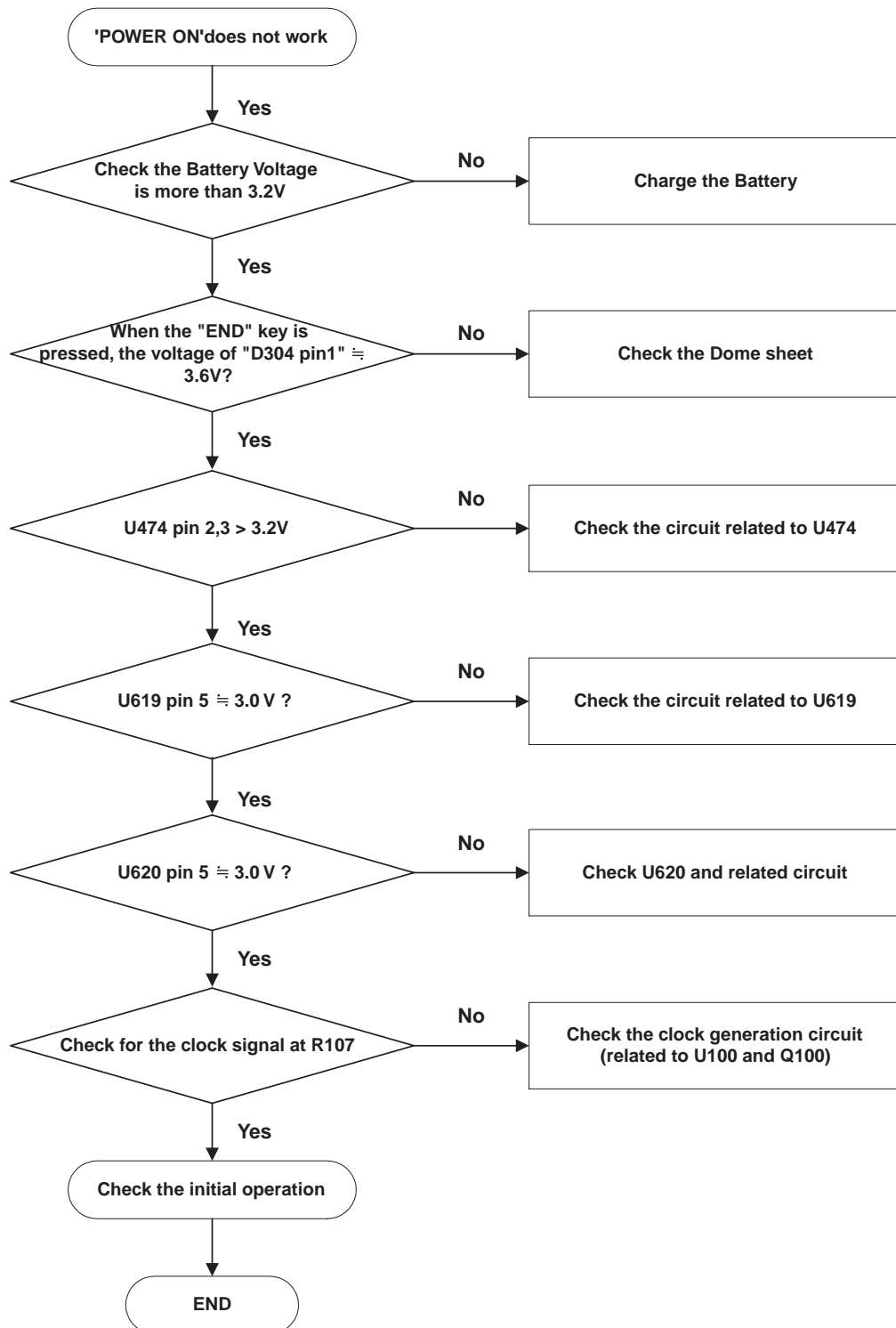


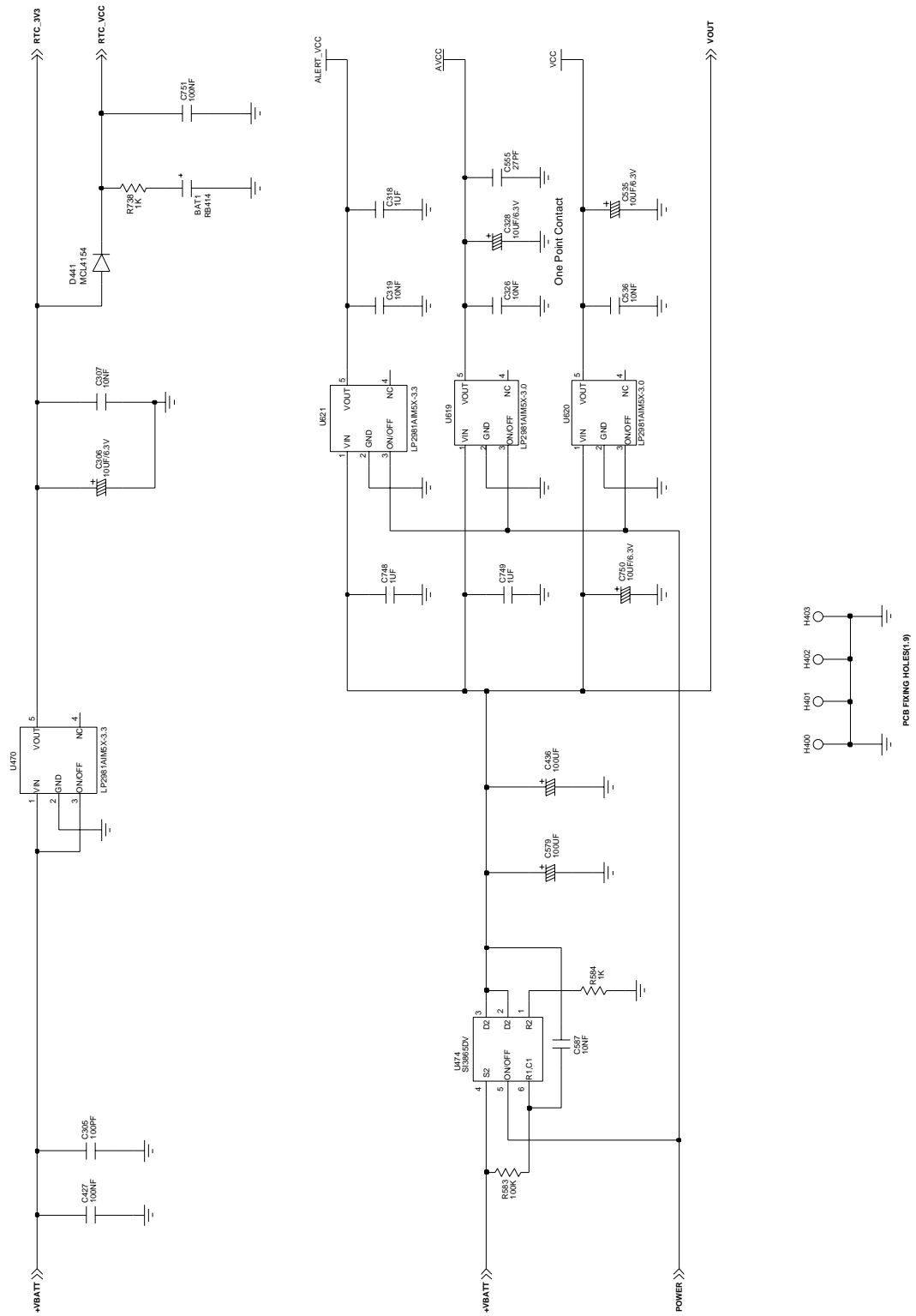
4-2-2 RF Receive Part



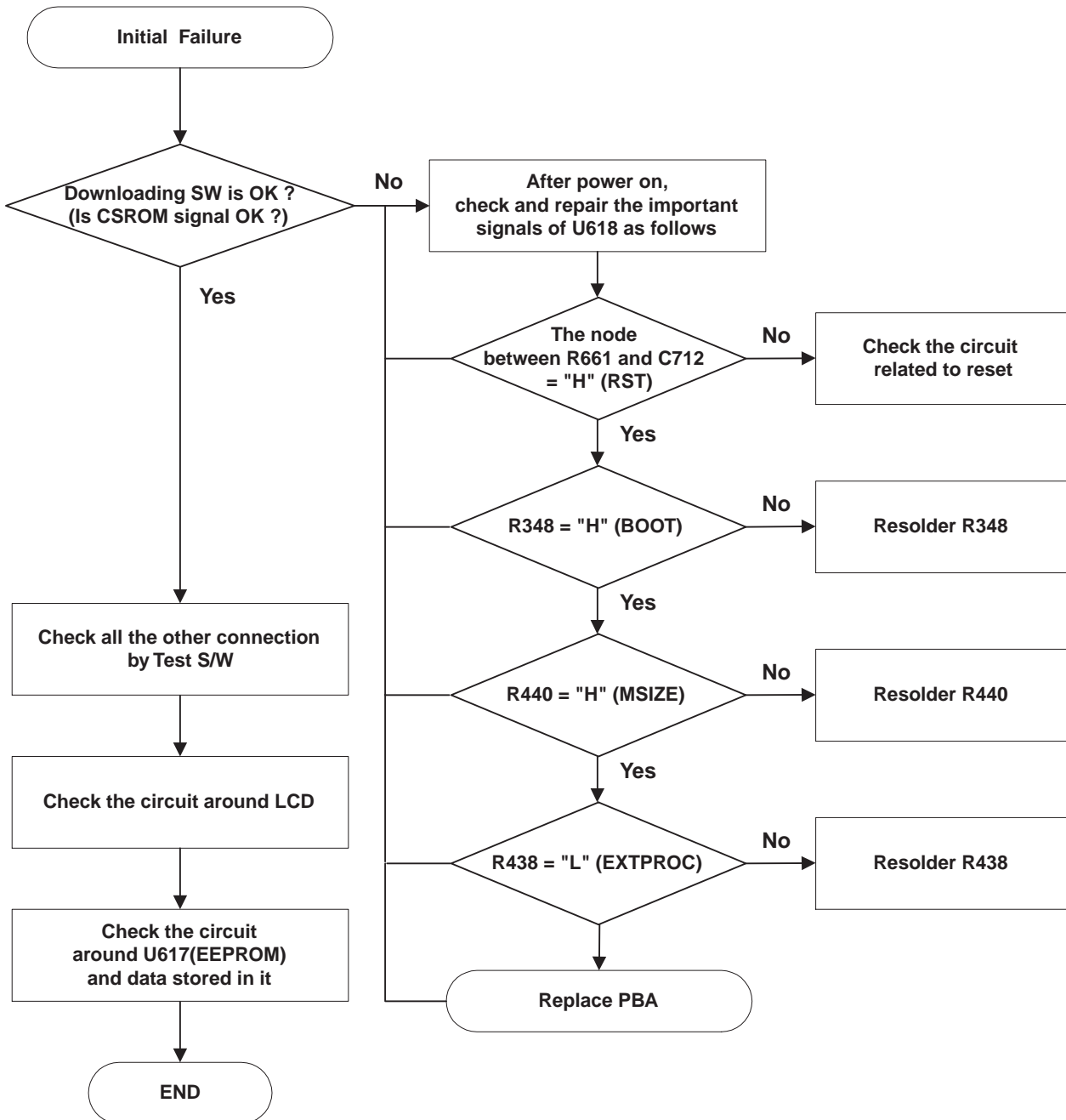
5. Flow Chart of Troubleshooting and Circuit Diagrams

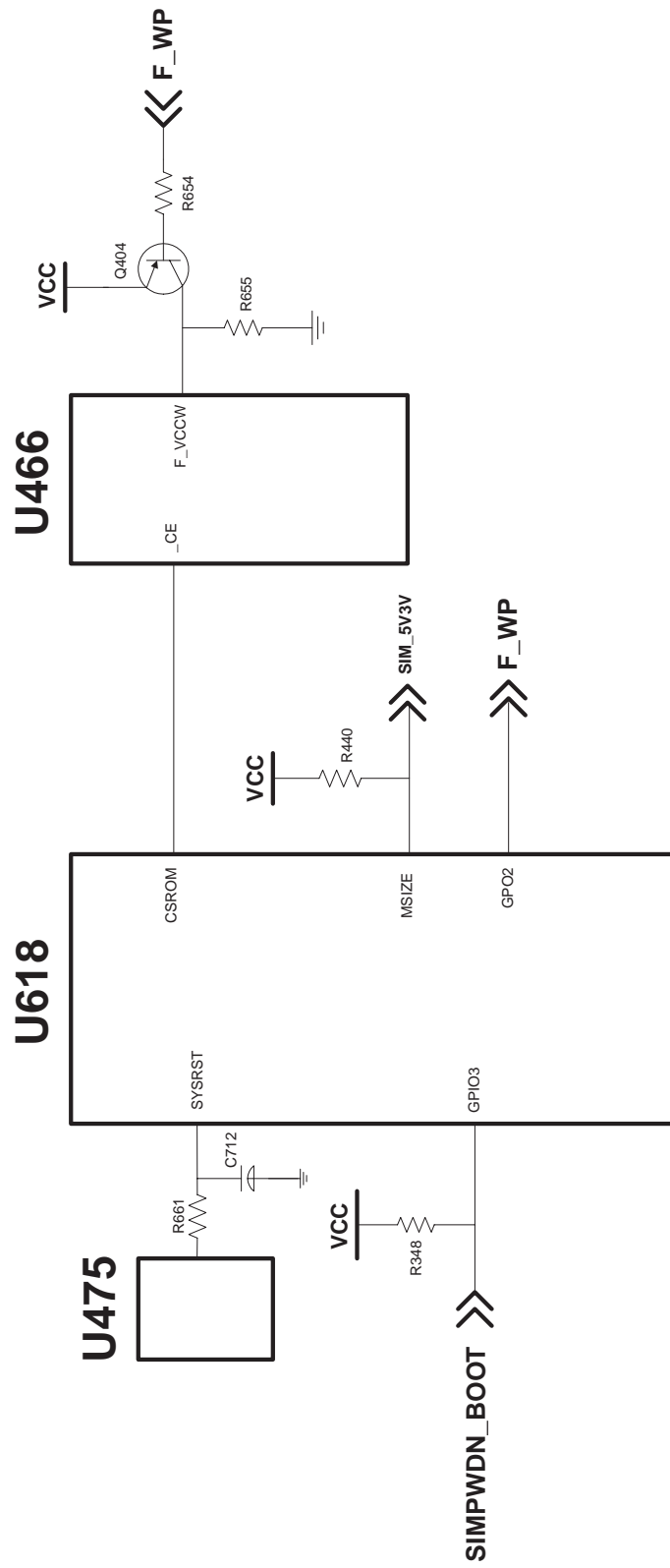
5-1 Power ON



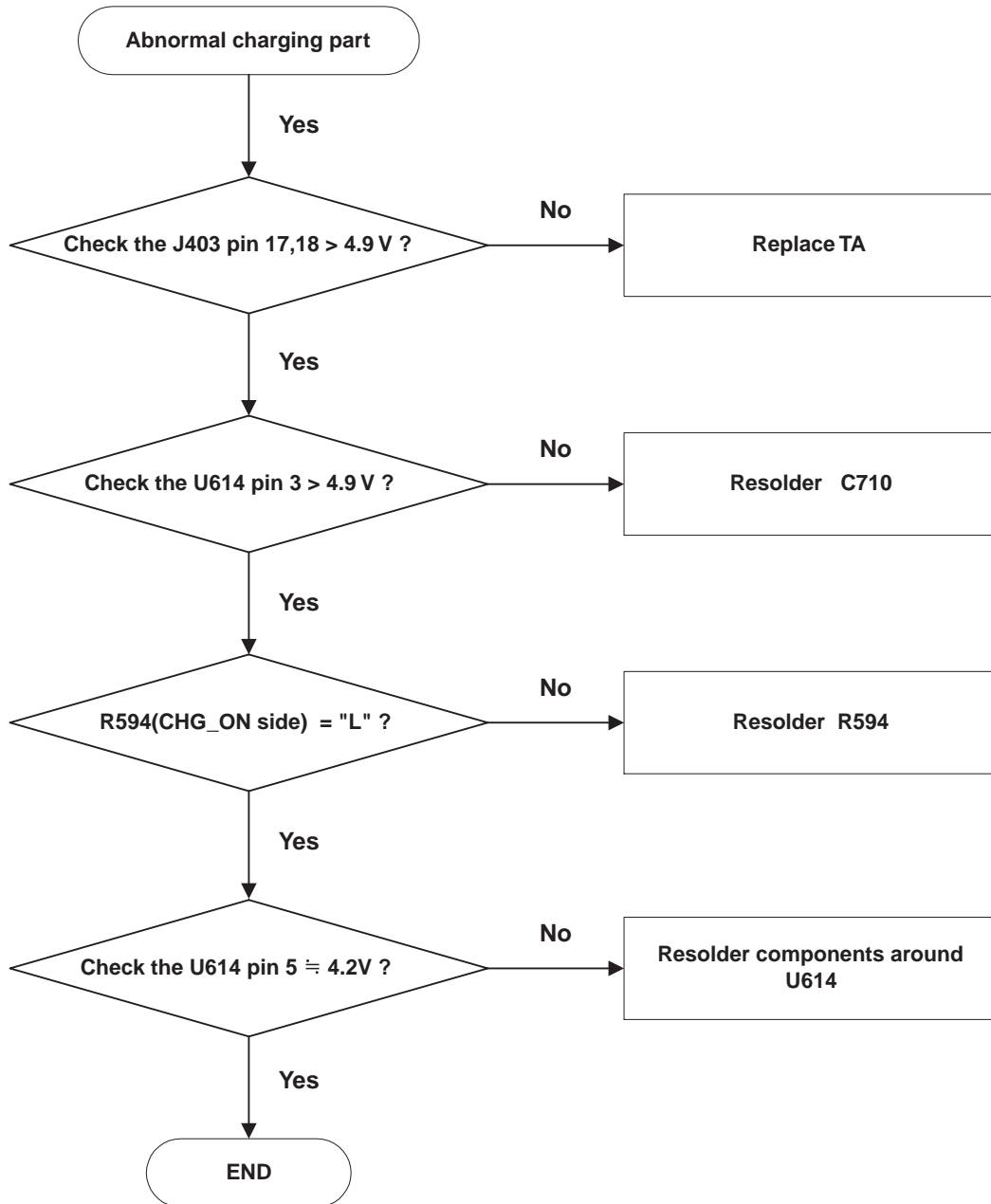


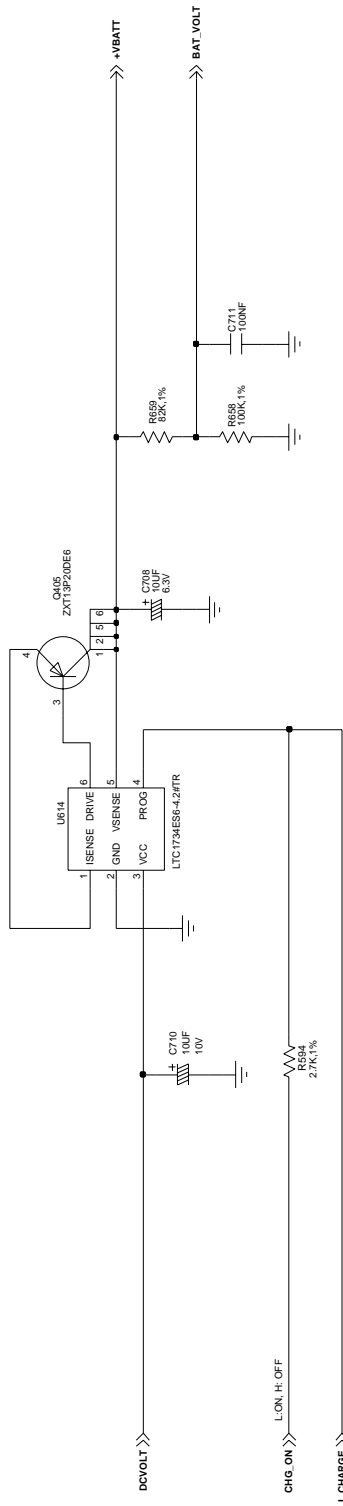
5-2 Initial



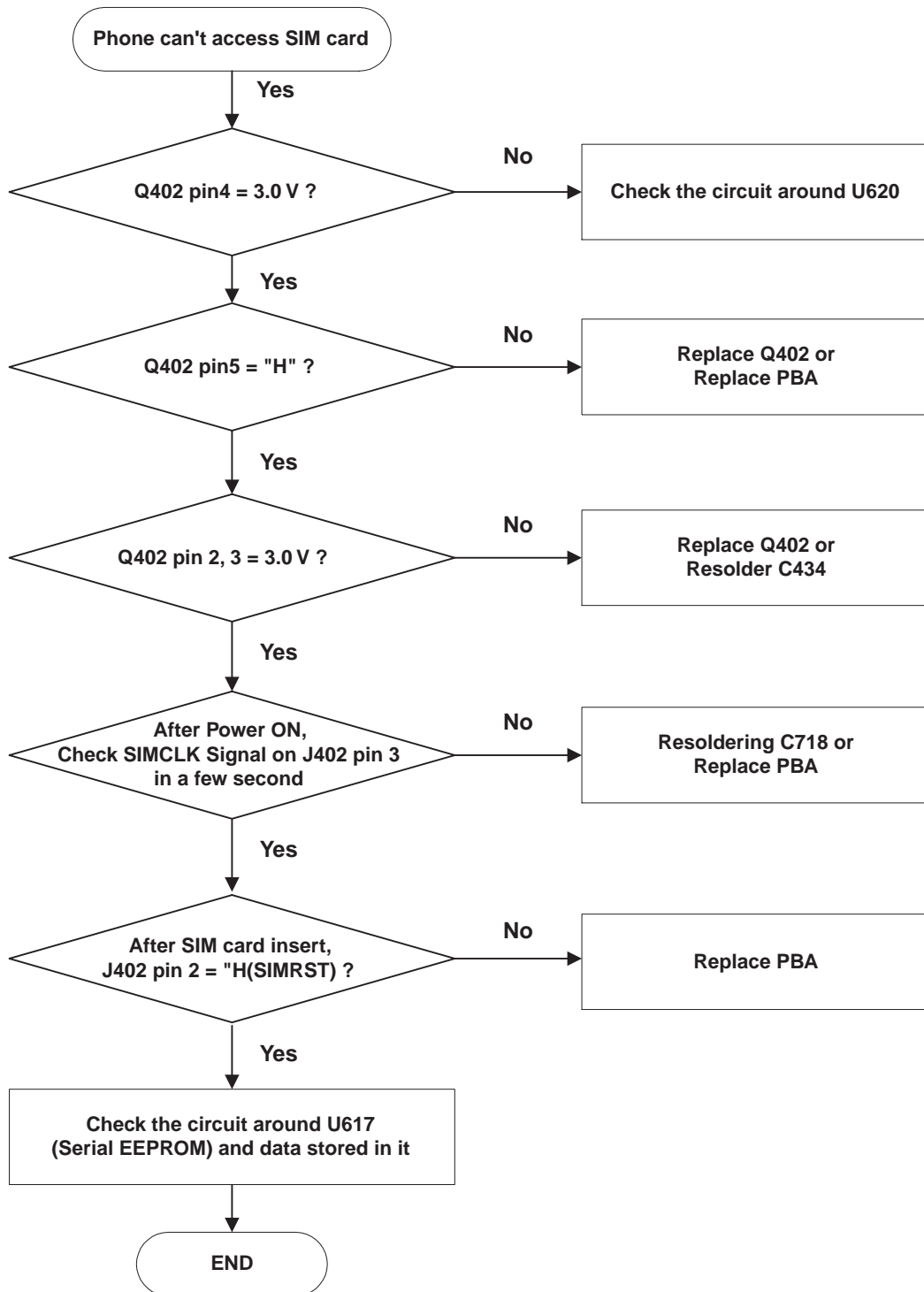


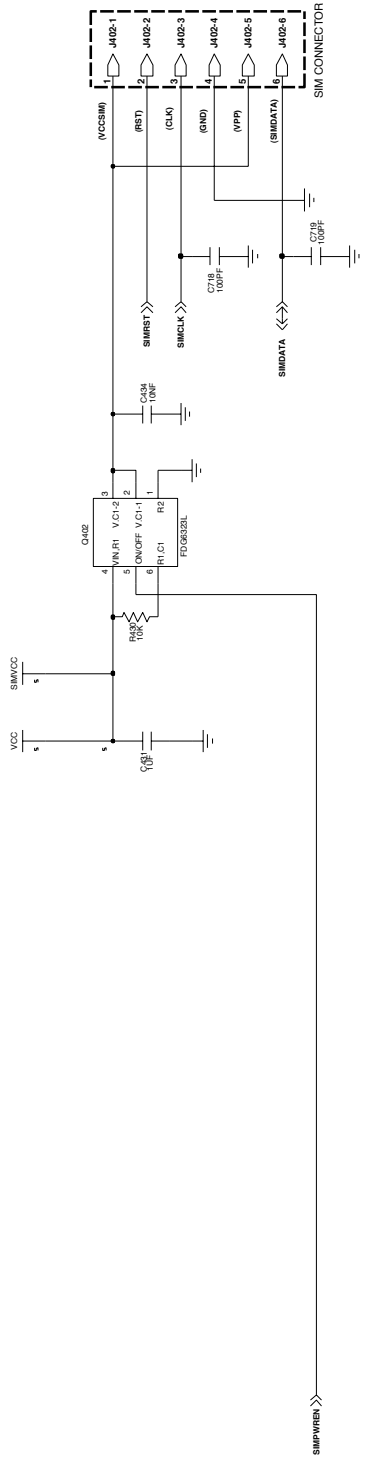
5-3 Charging Part



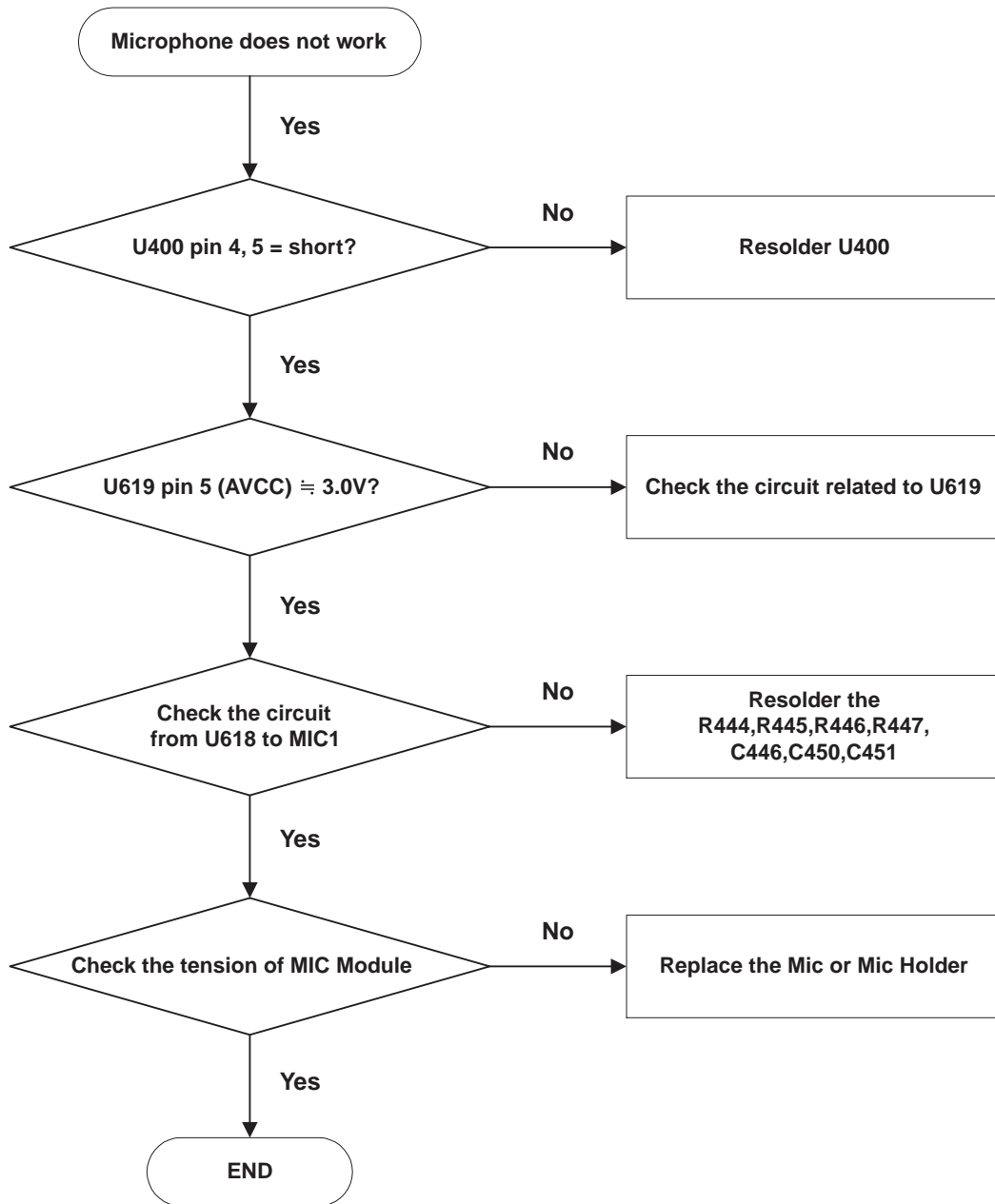


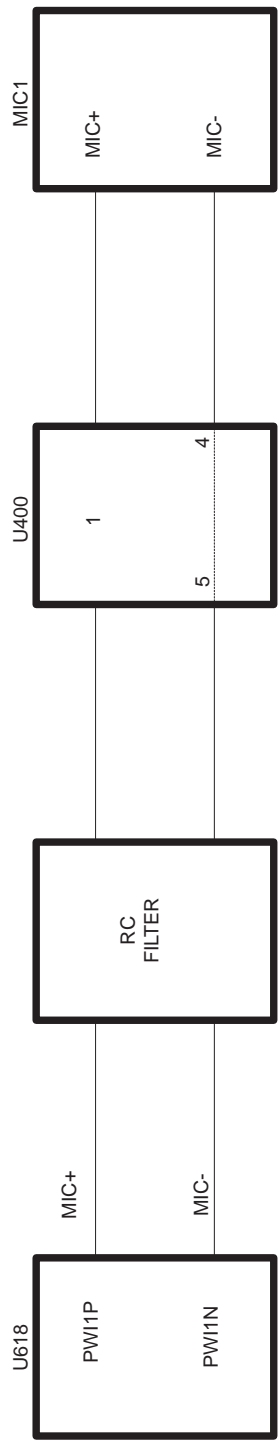
5-4 Sim Part



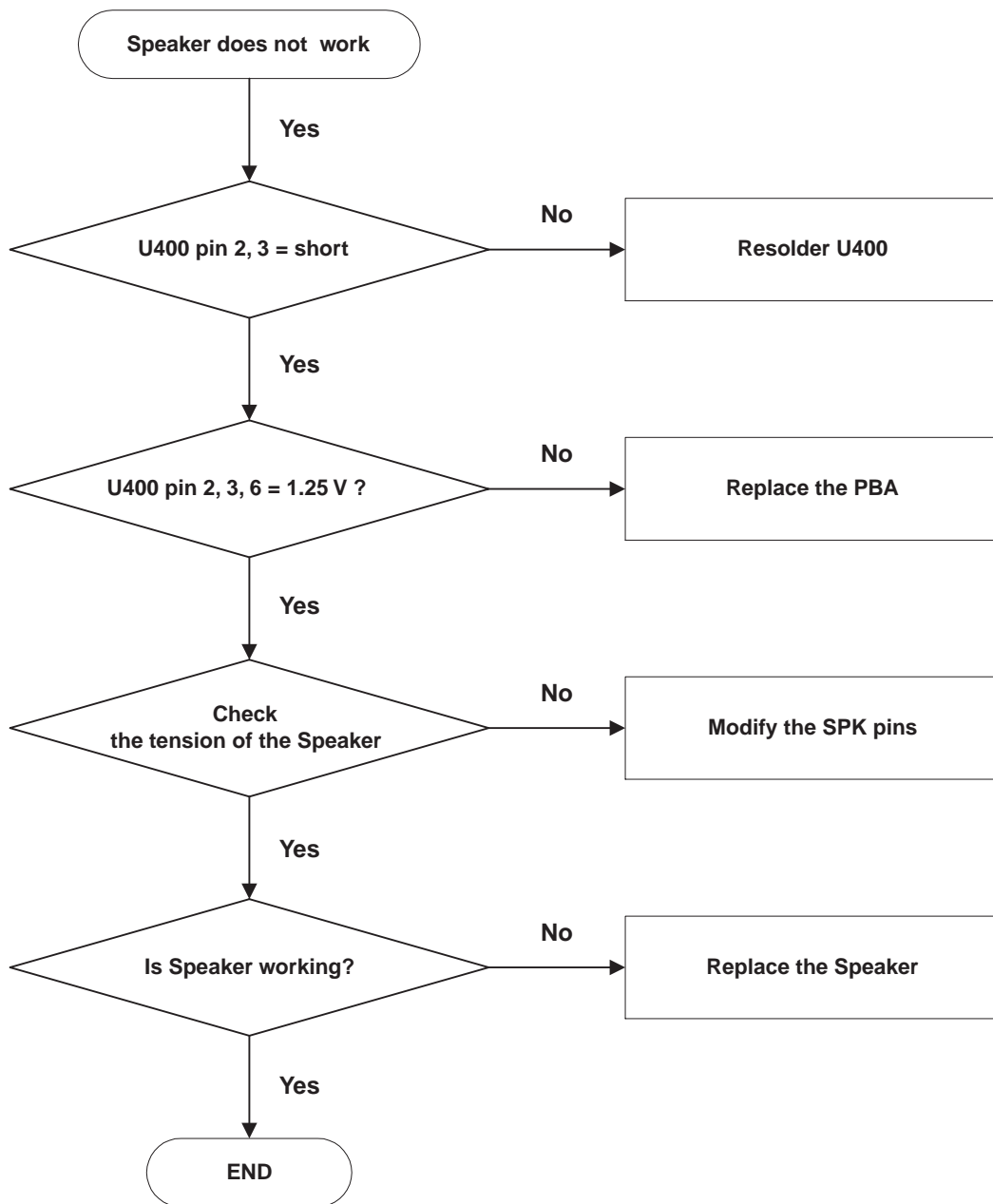


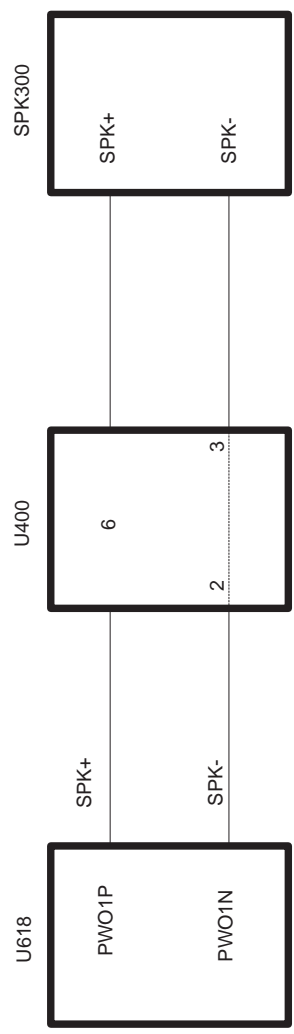
5-5 Microphone Part



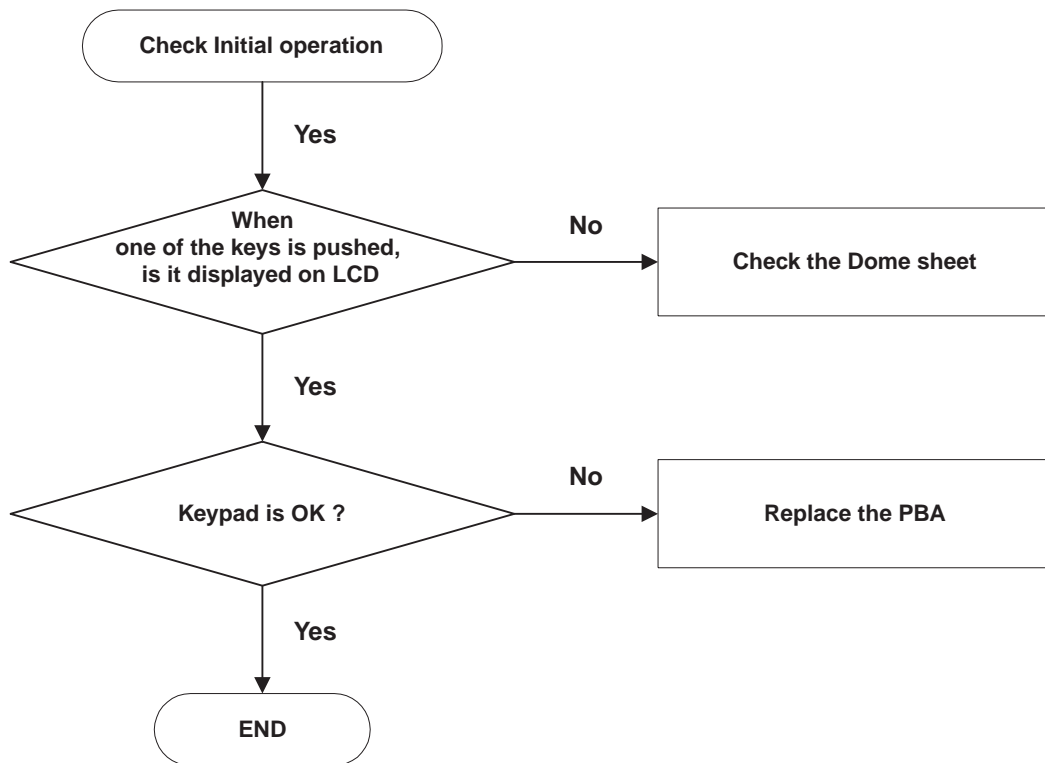


5-6 Speaker Part

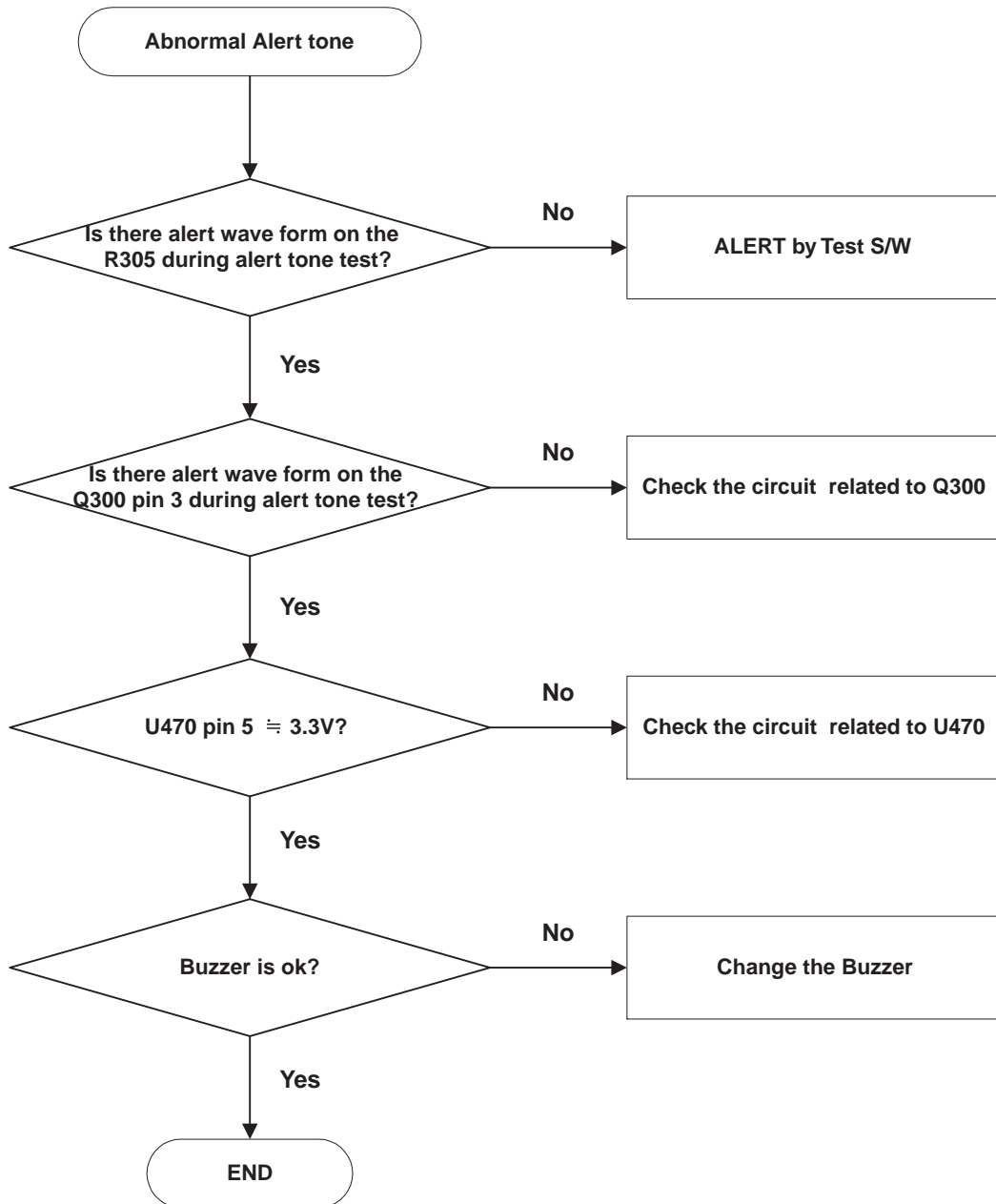


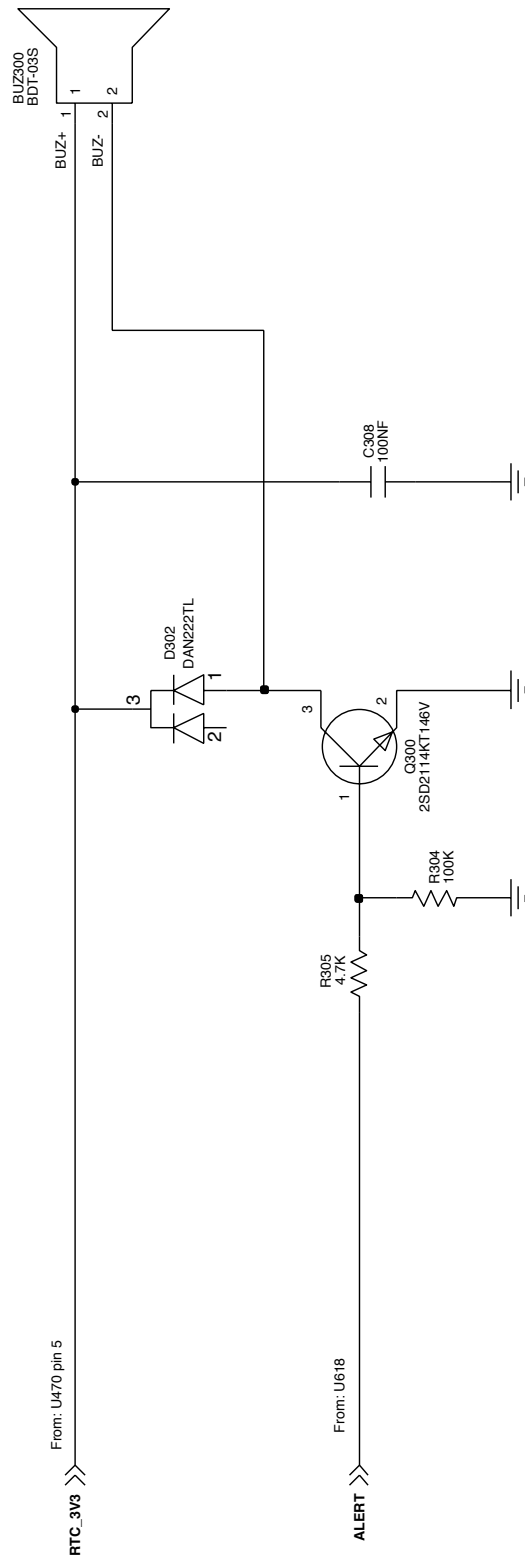


5-7 Key Data Input

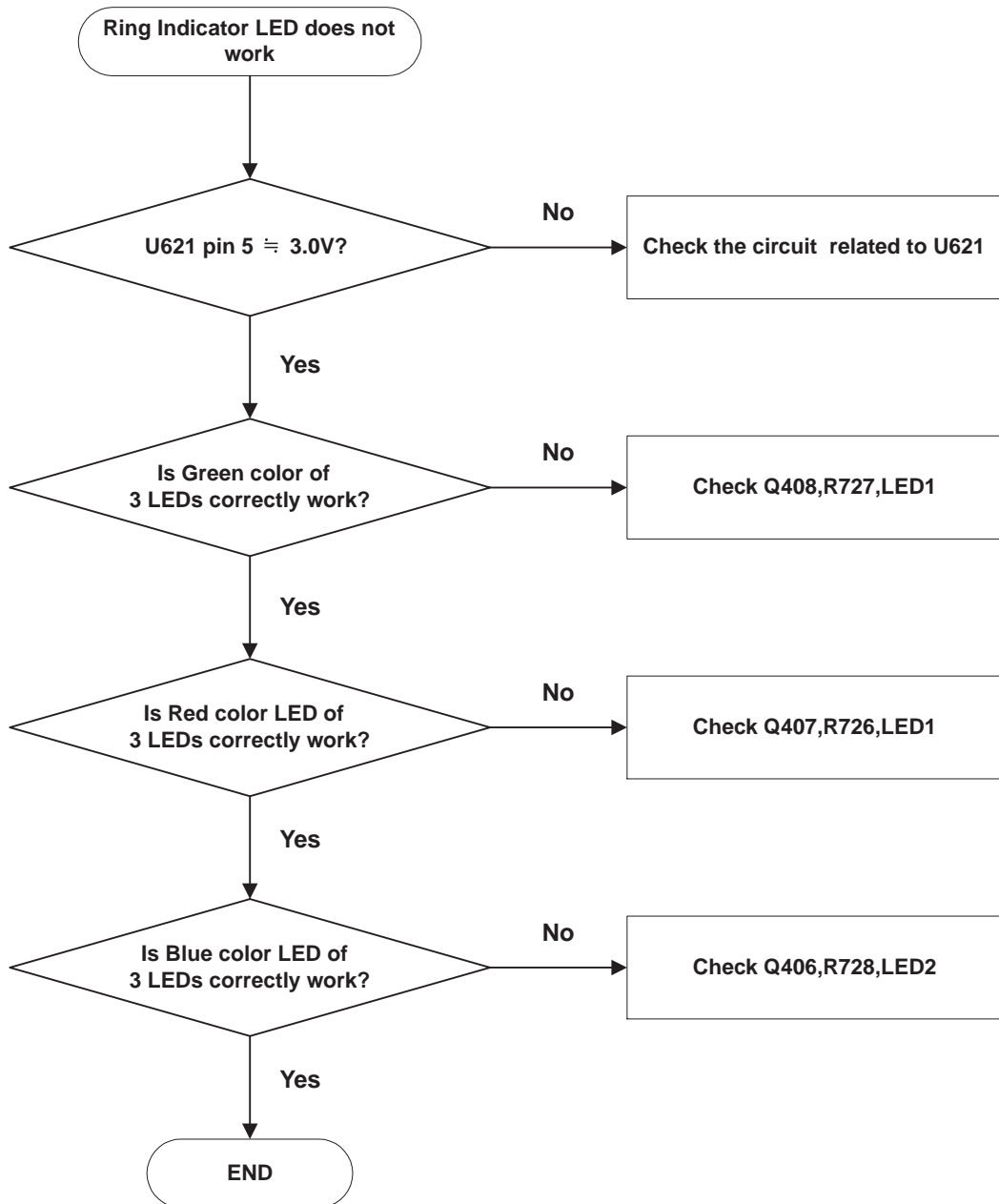


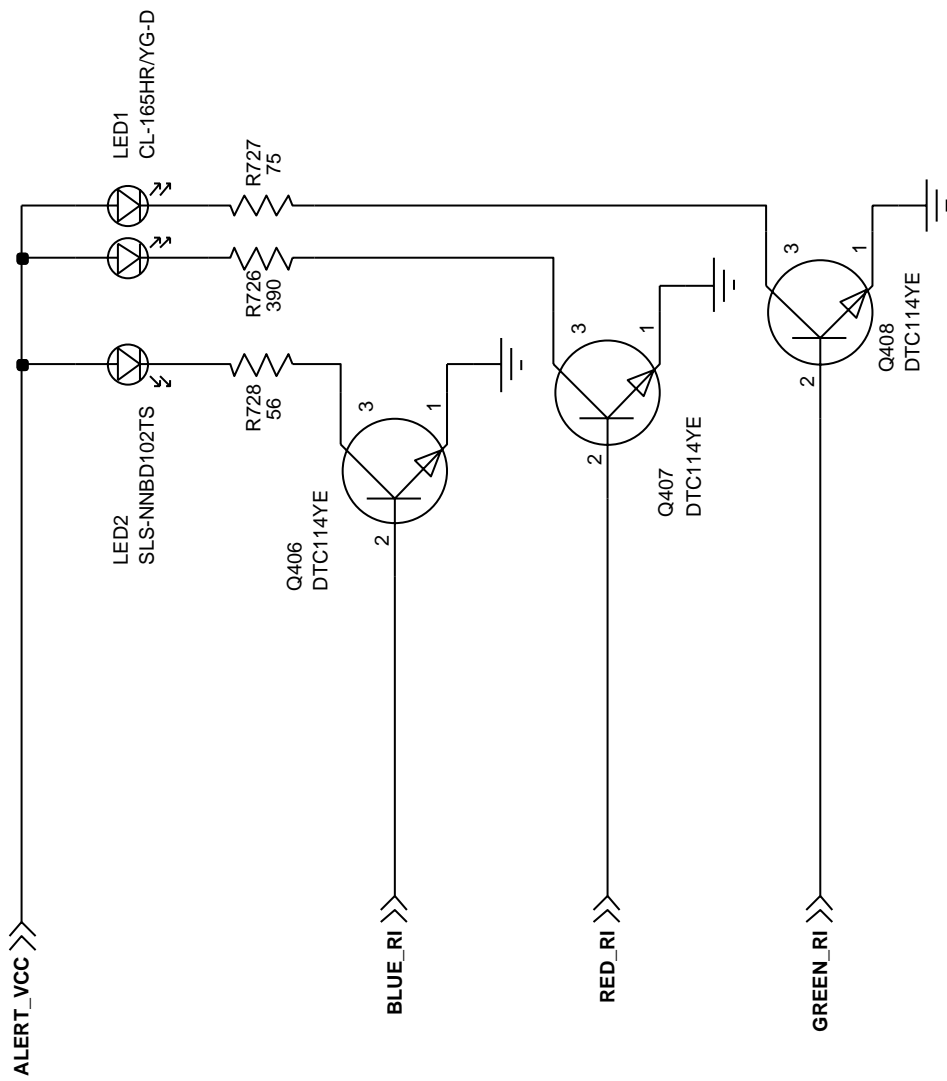
5-8 Alert Tone



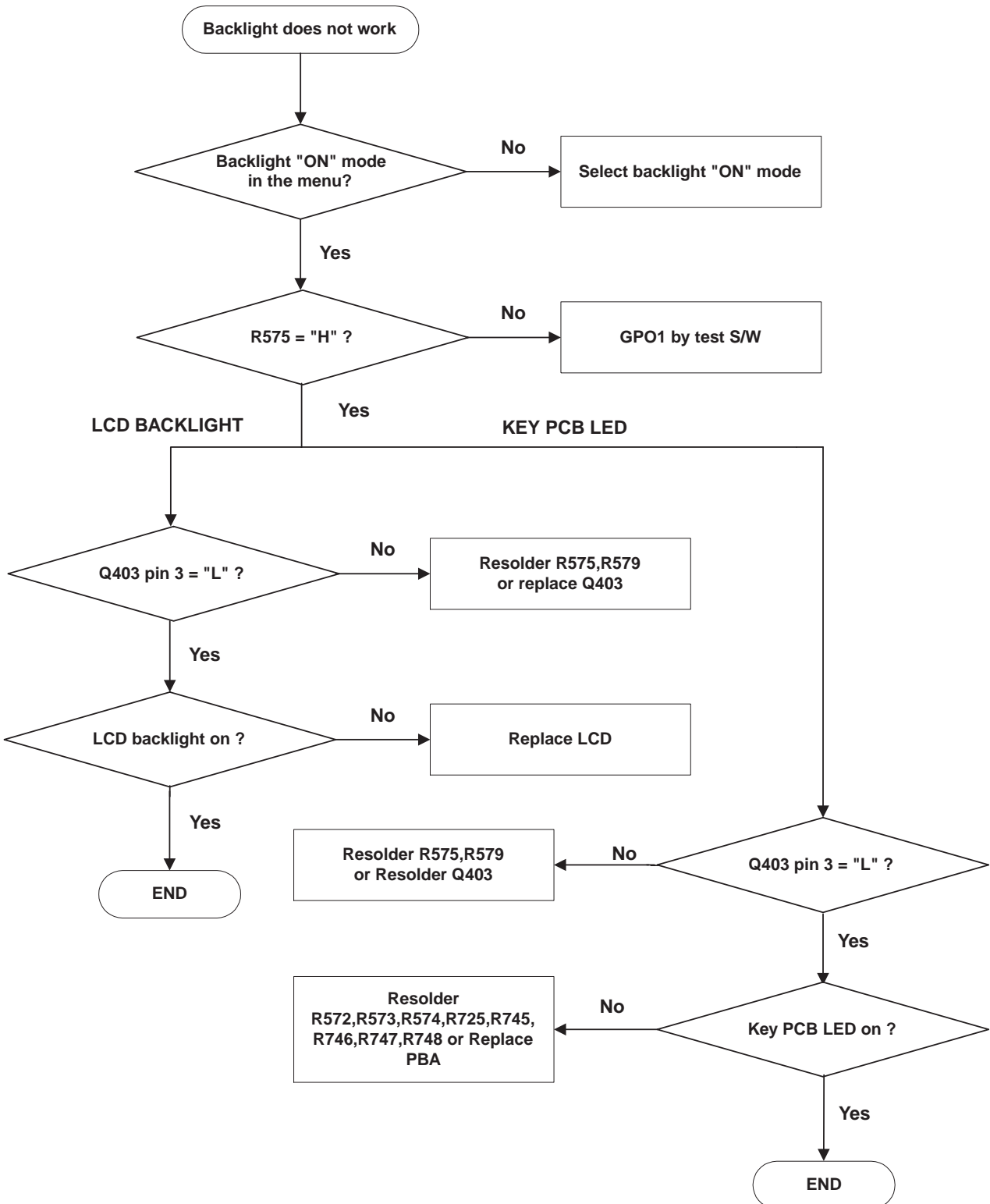


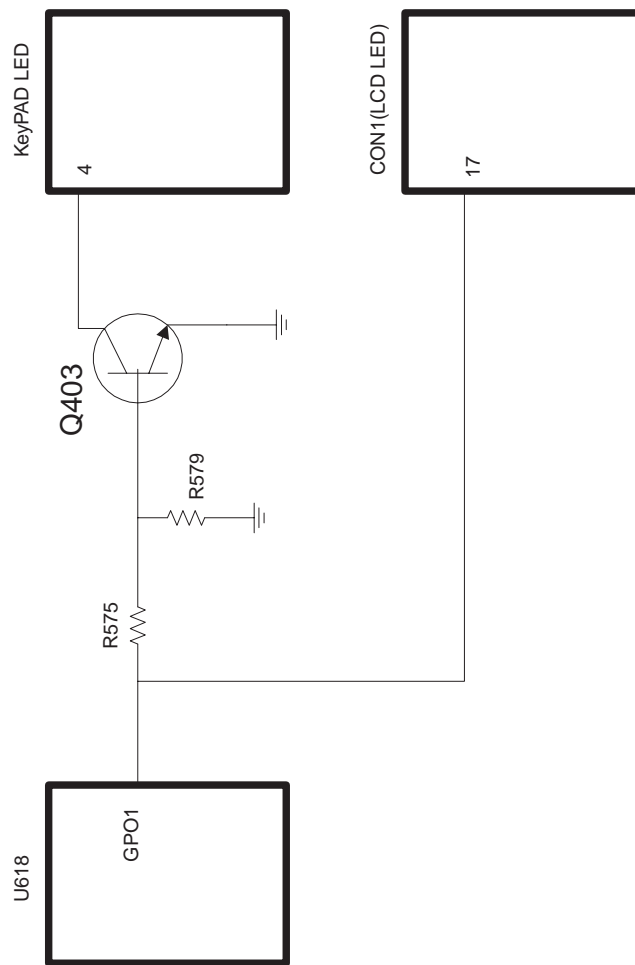
5-9 Ring Indicator



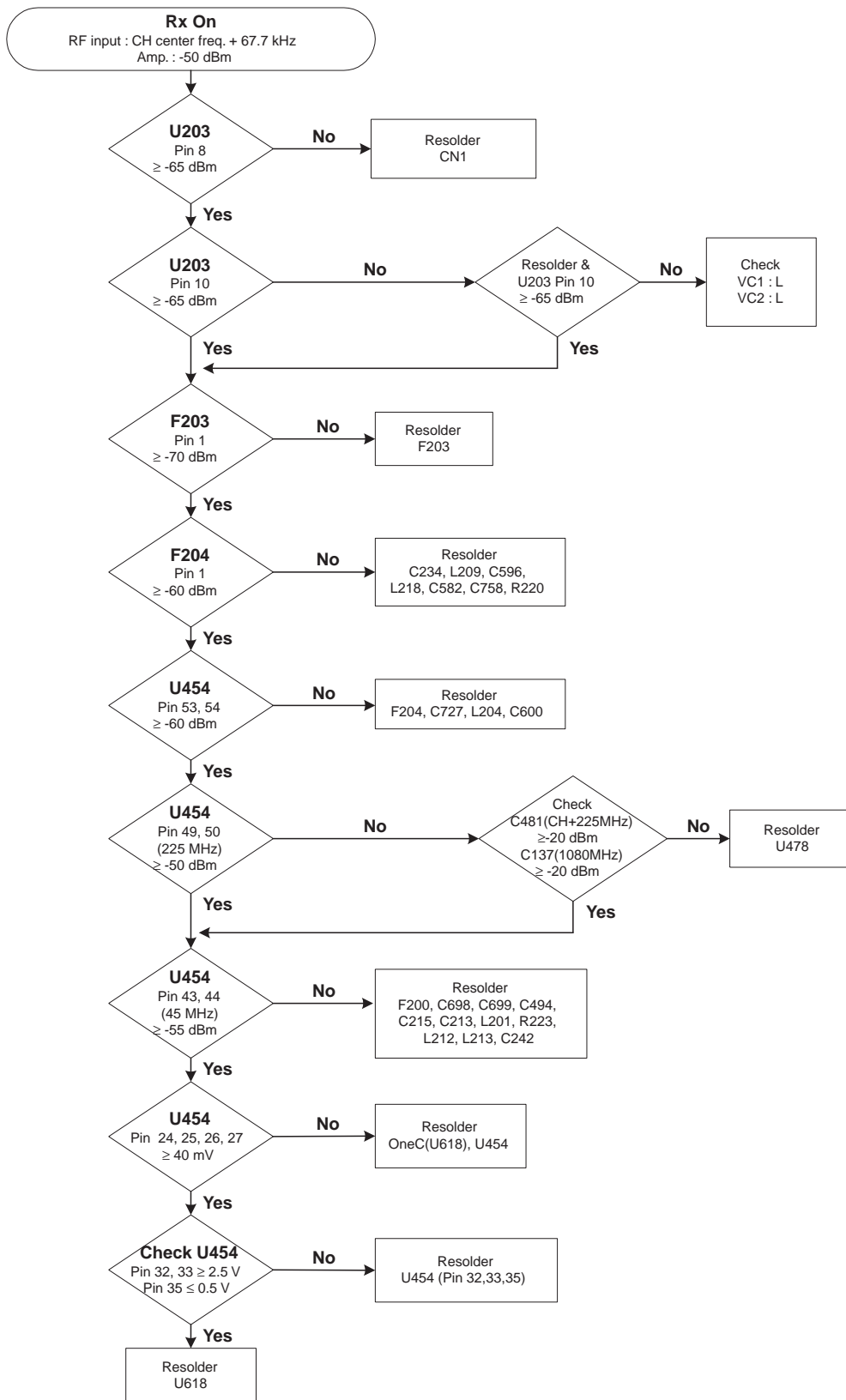


5-10 Back Light

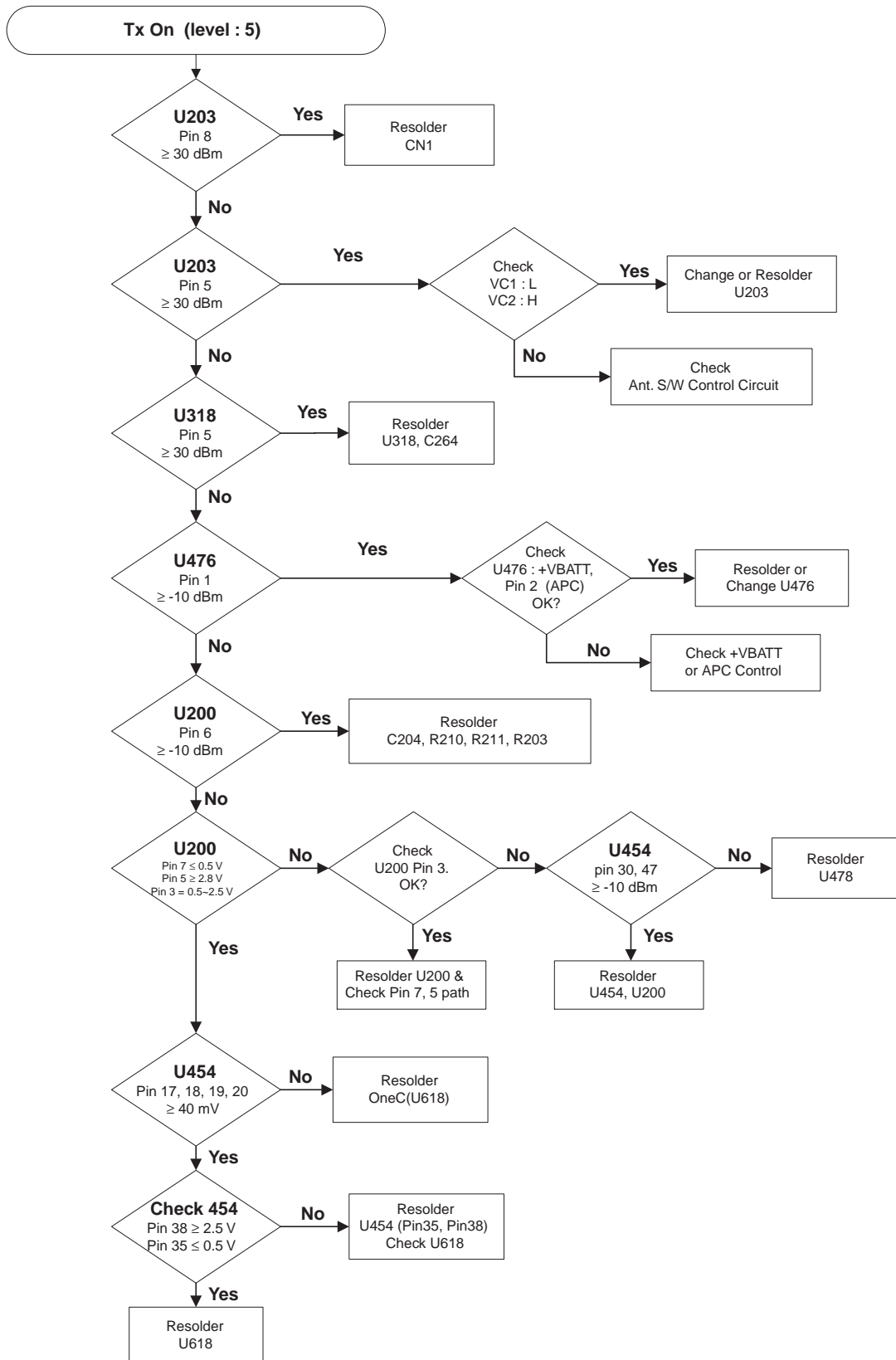




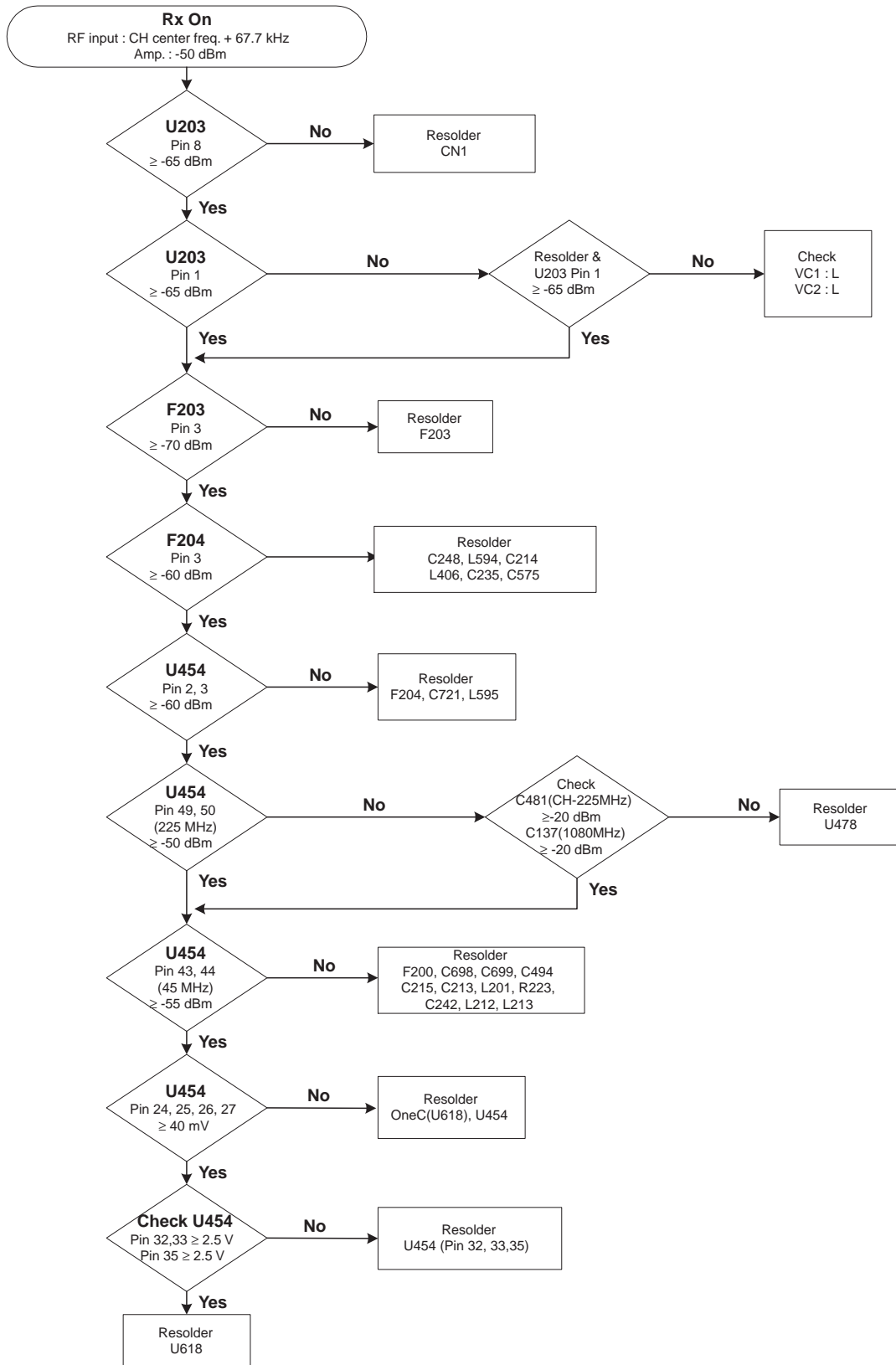
5-11 GSM Receiver



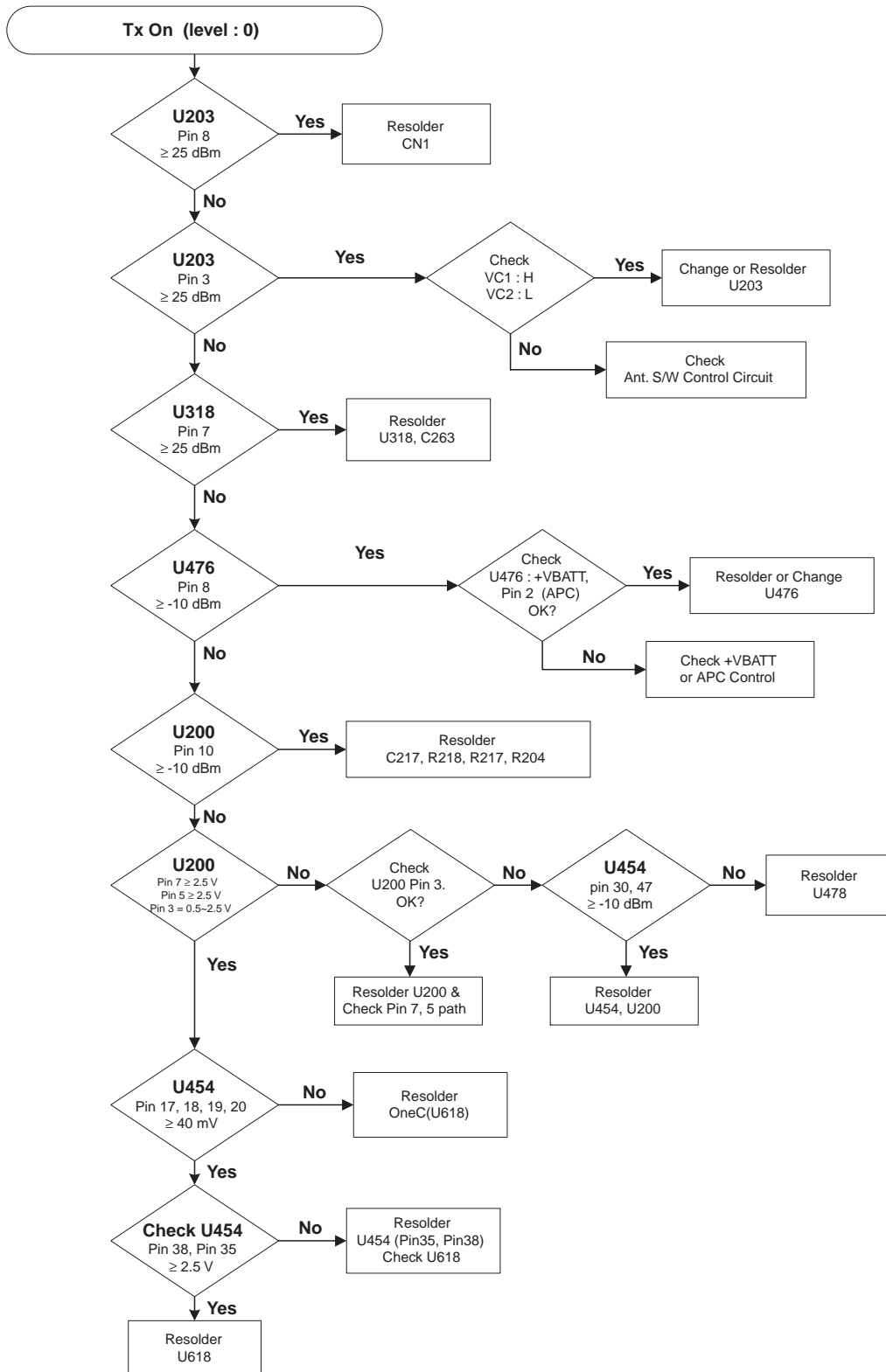
5-12 GSM Transmitter

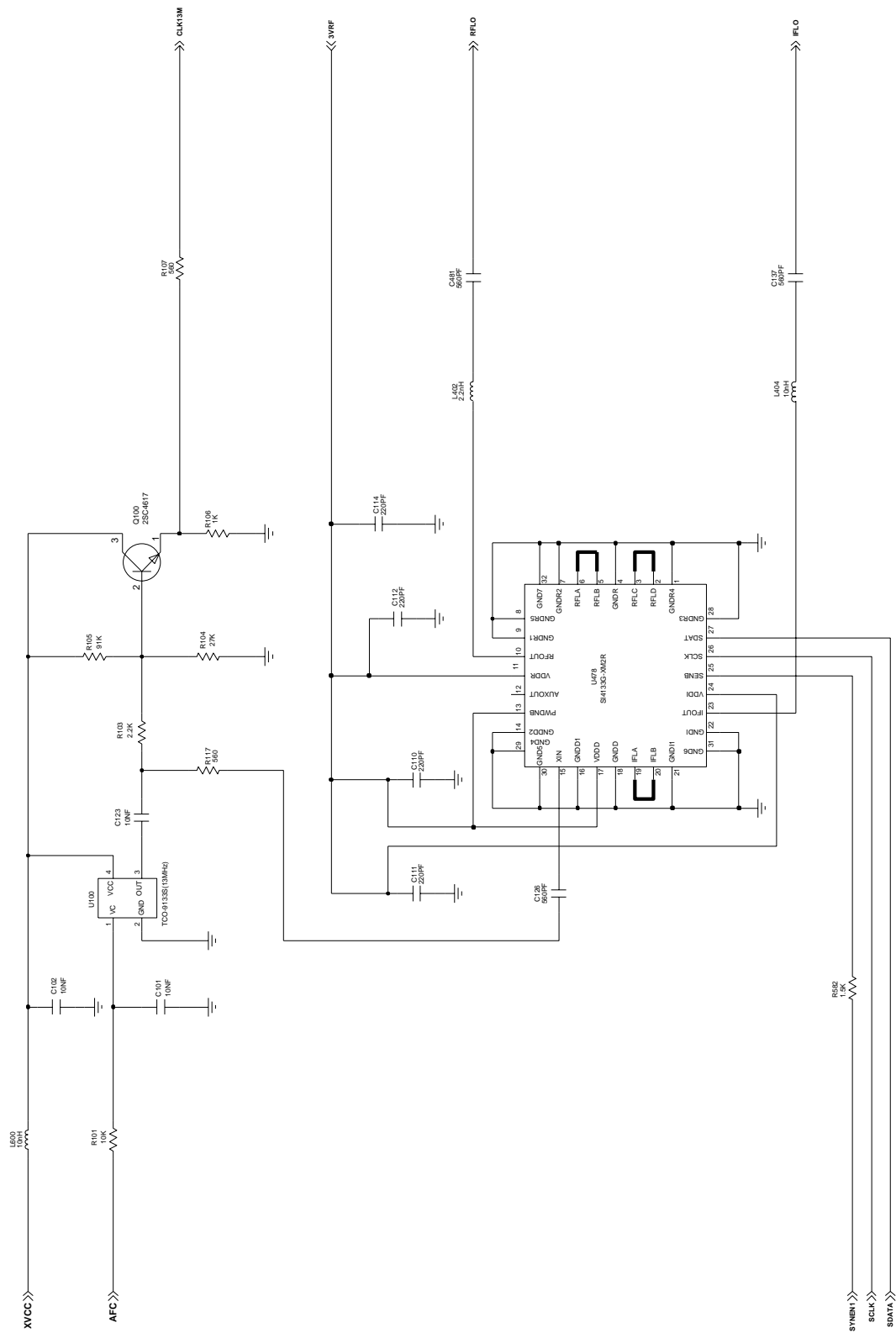


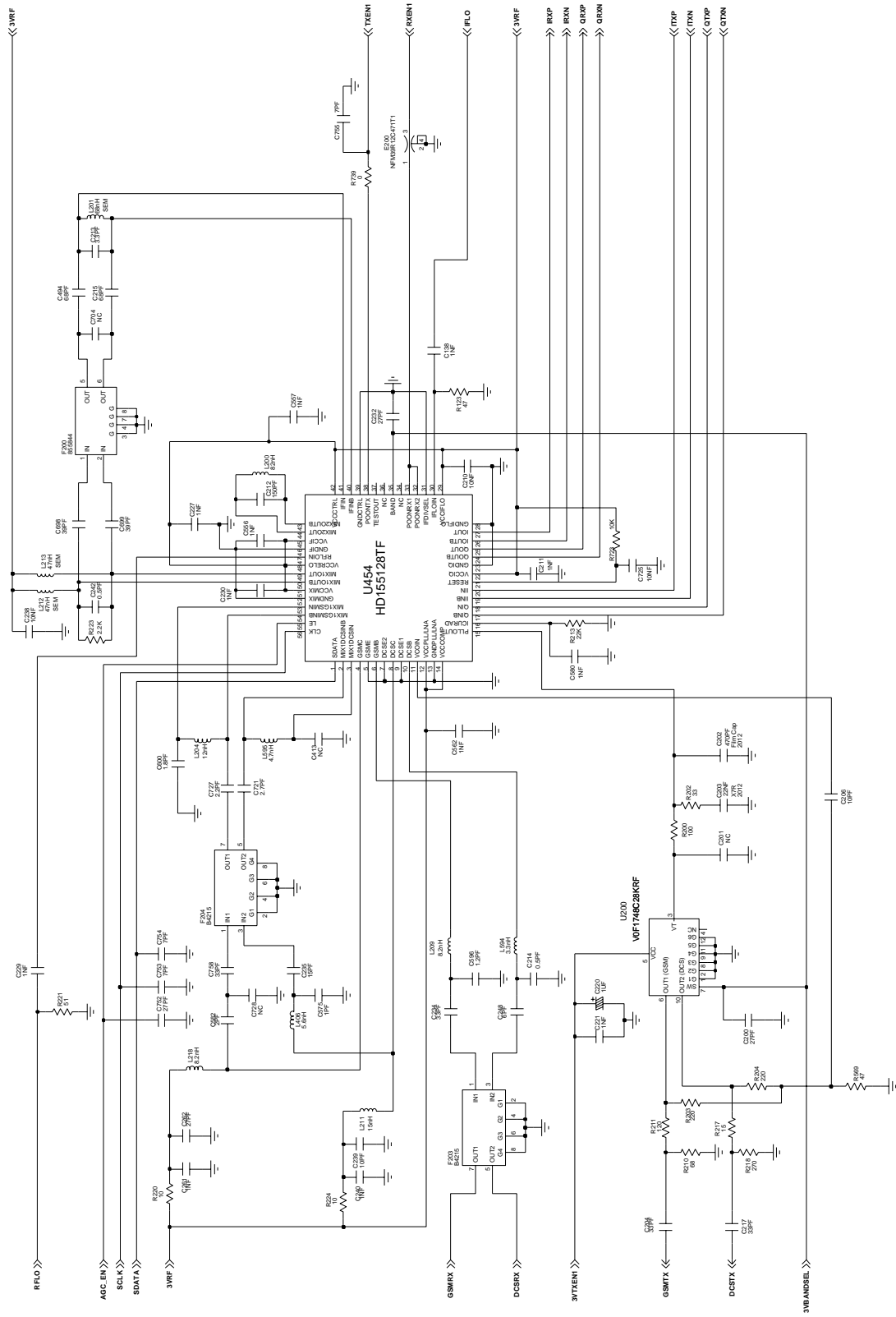
5-13 DCS Receiver

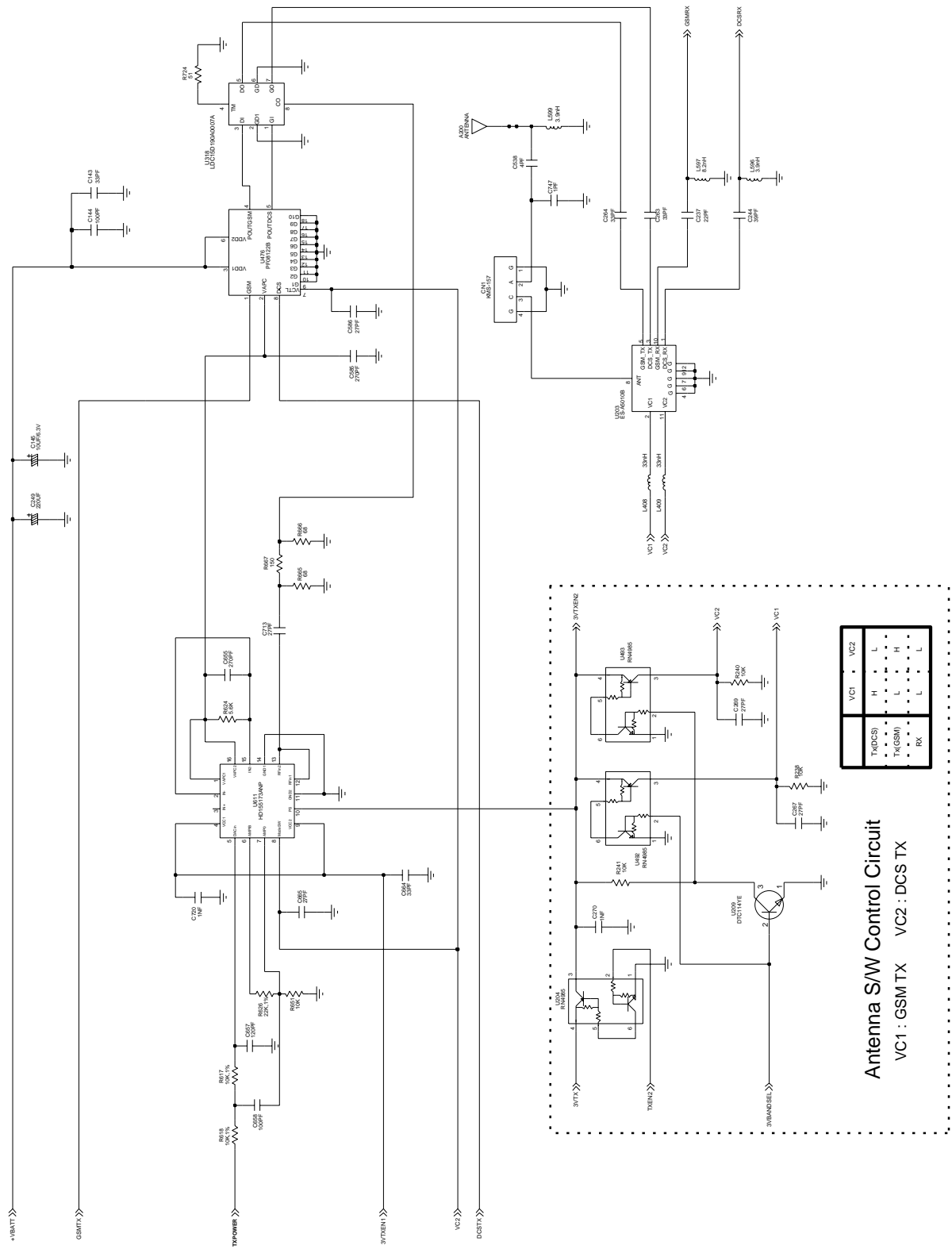


5-14 DCS Transmitter









	VC1	VC2
TX(DCS)	H	L
TX(GSM)	L	H
RX	L	L

Antenna SW Control Circuit
 VC1 : GSMTX VC2 : DCS TX