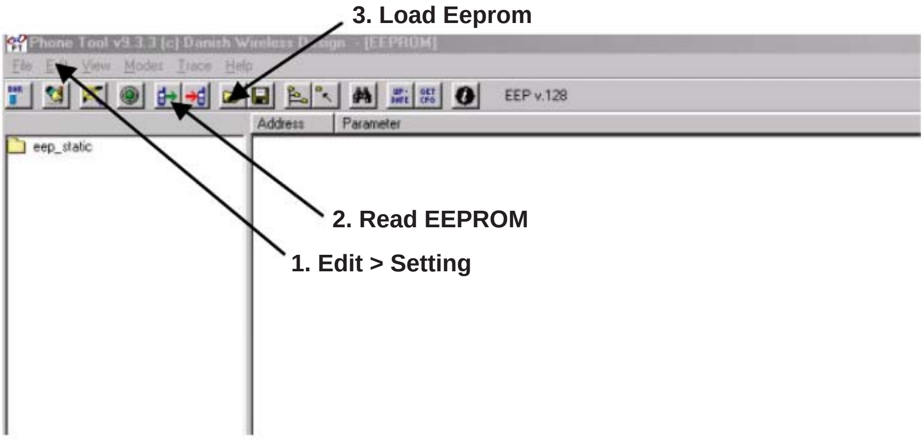
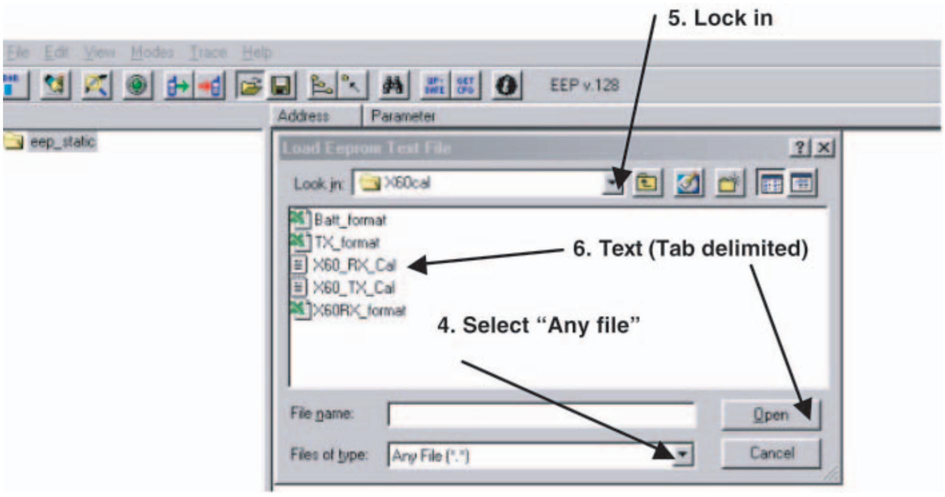
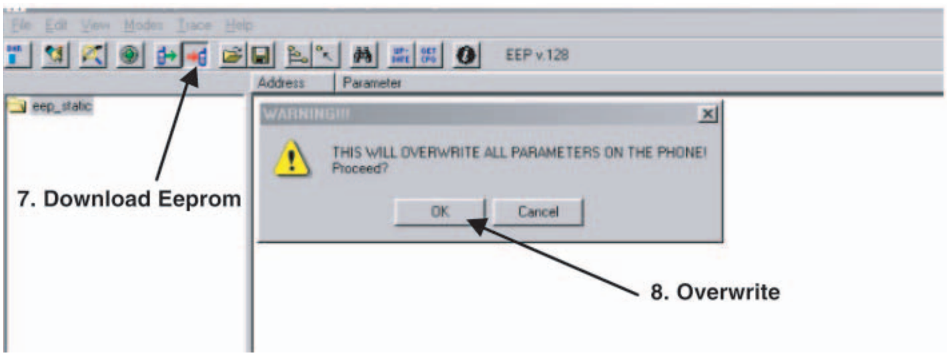


1. Click "**Edit > Setting**" , and check "**Read static EEPROM value only from phone**".
2. Click "**Read EEPROM value from phone**".
   The "**eep-static**" folder is opened.
3. Click "**Load Eeprom Text File**".



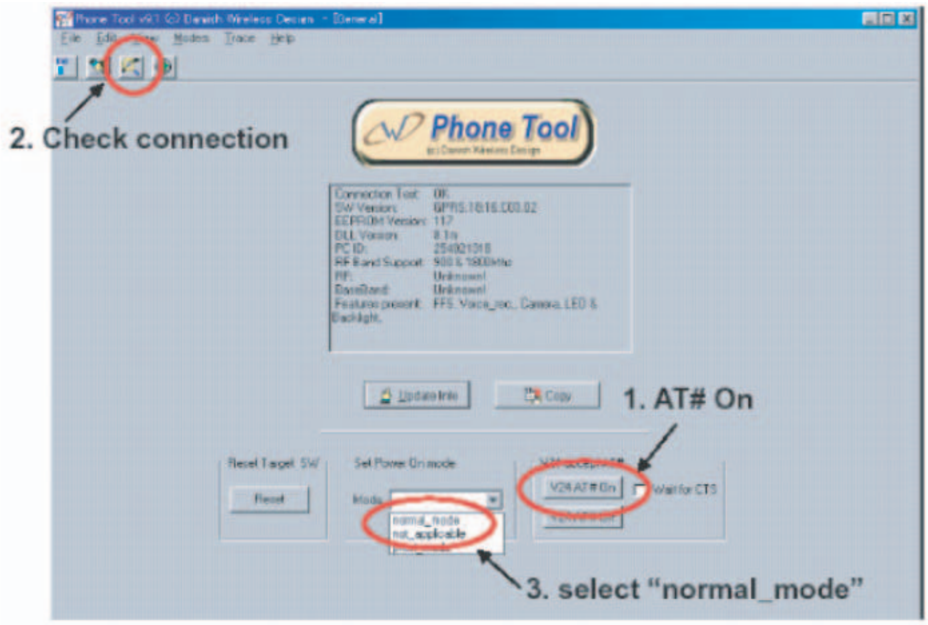
4. Select "**Any File**" of the Files of type
5. Click "**Lock in**" and then select which is saved each RX, TX and Battery text (Tab.delimted) file from PC.
6. Select Text file and then click "**Open**".



7. Click "**Download current Eeprom values to phone**".
8. Click "**OVERWRITE**" button.
   The TX, RX and Battery calibration values in the phone will be overwritten by the new values from the PC.

8.4.9. Normal Mode

NOTE: *When calibration has been completed, the mobile should be set to normal_mode.*
Press the power key to turn on the mobile phone.
Start the PhoneTool program.
The following screen will be displayed:



1. Click the"**V24 AT# On**", and check the log window. >>> "**AT#OK**".
2. Click the Check Connection button, and check the log window.>>> "**Connection OK**".

NOTE: *If the message "**ERROR! No Connection**" is displayed, check the cable connections, power supply and that the phone is switched on. Repeat steps 1 and 2.*

3. Select "**normal_mode**", and check the log window displays the message "**Sending to mobile ÅcOK.**"
4. Click the "**Reset**" button. The phone will power down automatically.

5. The phone is now in normal_mode.

ORDER NO. OMTD040702C8

Service Manual

Personal Cellular Telephone

GSM EB-X200 VOL. 5

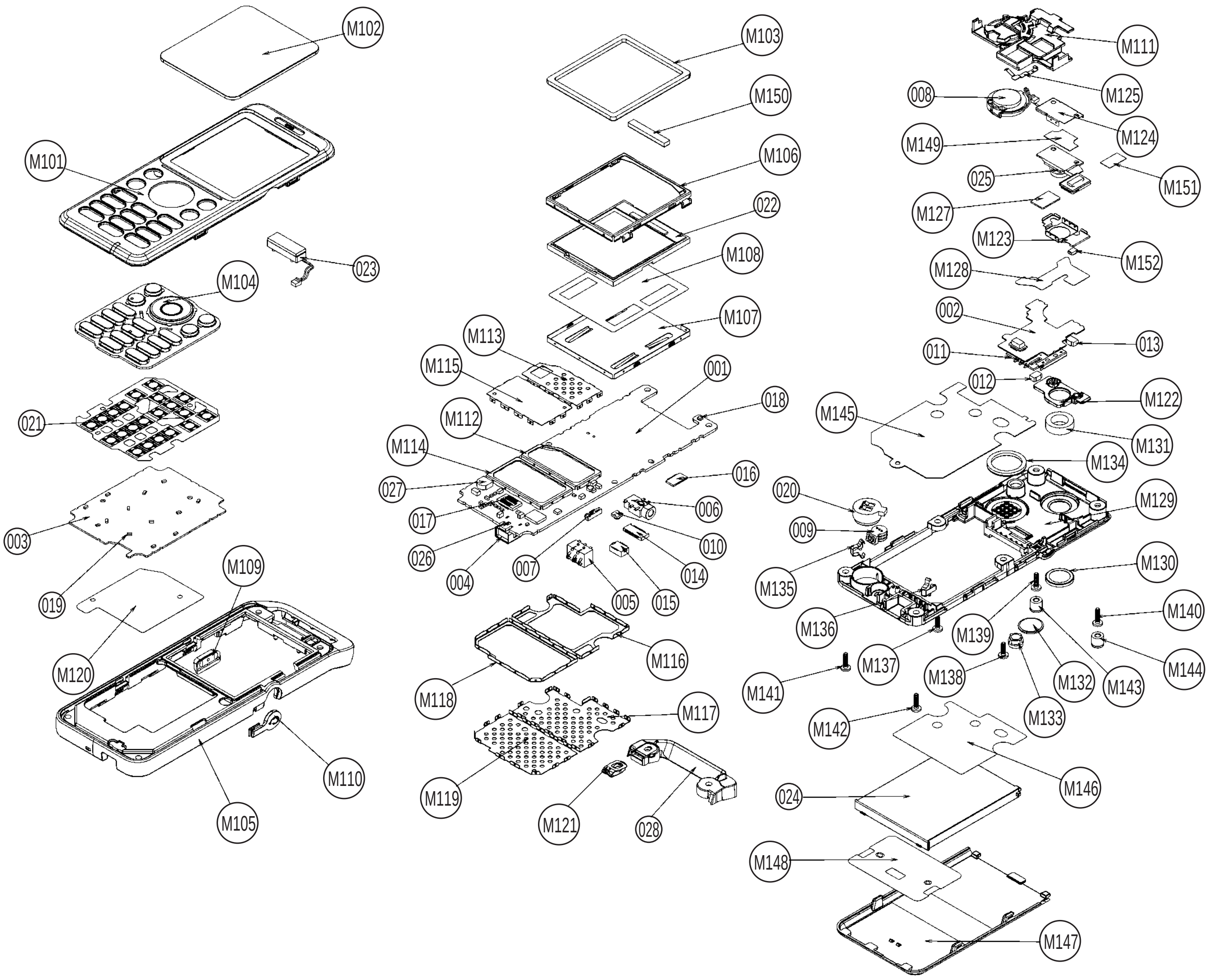
⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

9. REPLACEMENT PARTS LIST

9.1. Exploded View



9.2. Mechanical Parts List

REF. NO.	PART NO.	DESCRIPTION
M101	3VA001812AAA	FRONT COVER ASSY
M102	3CF002486AAA	LCD PANEL
M103	3CV001574AAA	LCD CUSHION
M104	3MB001173AAA	KEY SHEET
M105	3CD001548AAA	FRAME
M106	3CH001286AAA	LCD HOLDER FRONT
M107	3CH001287AAA	LCD HOLDER BACK
M108	3CJ001222BAA	LCD SHEET
M109	3HP001075AAA	IrDA LENS
M110	3DB001088AAA	HSJ CAP
M111	3CH001289AAA	SIM PCB HOLDER
M112	3DH001473AAA	CAN SHIELD RF1 FRAME
M113	3DH001474AAA	CAN SHIELD RF1 COVER
M114	3DH001475AAA	CAN SHIELD RF2 FRAME
M115	3DH001476AAA	CAN SHIELD RF2 COVER
M116	3DH001477AAA	CAN SHIELD BB1 FRAME
M117	3DH001478AAA	CAN SHIELD BB1 COVER
M118	3DH001479AAA	CAN SHIELD BB2 FRAME
M119	3DH001480AAA	CAN SHIELD BB2 COVER
M120	3CJ001220AAA	RF SHEET
M121	3DJ001196AAA	ANTENNA TERMINAL
M122	3CH001308AAA	CAMERA HOLDER
M123	3DJ001237AAA	CAMERA GND PLATE UPPER
M124	3DJ001238AAA	CAMERA GND PLATE LOWER
M125	3DJ001239AAA	SIM HOLDER SPRING
M127	3CJ001237BAA	CAMERA FPC SPACER
M128	3DH001517AAA	CAMERA SHIELD
M129	3CE001684AAA	BACK CASE
M130	3CF002494AAA	CAMERA LENS
M131	3CV001576AAA	CAMERA CUSHION
M132	3CF002487AAA	MIRROR PANEL
M133	3DB001084AAA	RF CAP
M134	3CV001473AAA	SPEAKER CUSHION
M135	3DJ001198AAA	BACK SAR SPRING
M136	3DJ001198AAA	BACK SAR SPRING
M137	3AB001157AAA	SCREW 5mm
M138	3AB001157AAA	SCREW 5mm
M140	3AB001158AAA	SCREW 6mm
M141	3AB001158AAA	SCREW 6mm
M142	3AB001158AAA	SCREW 6mm
M143	3DB001089AAA	SCREW CAP
M144	3DB001089AAA	SCREW CAP
M145	3CJ001221AAA	NAME PLATE SHEET
M146	3PA002798AAA	NAME PLATE
M147	3CE001685AAA	BATTERY COVER
M148	3DH001481AAA	BACK SAR PLATE
M149	3CJ001248BAA	CAMERA INSULATOR
M150	3CV001695AAA	LCD DRIVER CUSHION
M151	3CJ001253AAA	CAMERA FPC SPACER
M152	3CV001691AAA	CAMERA CONDUCTIVE CUSHION

REF. NO.	PART NO.	DESCRIPTION
001	EG80609F	MAIN PCB
002	EG80626D	SIM PCB
003	EG80642D	KEY PCB
004	K1FB102E0002	DC CONNECTOR
005	K1MZ05A00003	BATTERY CONNECTOR
006	K2HD105E0007	HEADSET JACK
007	B3RBC0000031	IrDA
008	L0AZ01A00005	SPEAKER
009	L0FZBA000003	MICROPHONE
010	K1QZA1AD0012	RF CONNECTOR
011	K1NA06E00008	SIM CONNECTOR
012	K1KB02B00014	SPEAKER CONNECTOR
013	K1KB02B00014	RECEIVER CONNECTOR
014	K1MN21B00052	LCD CONNECTOR
015	K1KB14A00068	B TO B CONNECTOR 14PIN
016	K1KB24A00043	B TO B CONNECTOR 24PIN
017	K1KB20A00158	B TO B CONNECTOR 24PIN
018	B3AZB0000028	3 COLOUR LED
019	B3ADB0000056	KEY BACKLIGHT LED
020	L6GCAAPC0001	VIBRATE MOTOR UNIT
021	3DJ001236AAA	PANEL SWITCH
022	L5EDDXC00001	LCD MODULE
023	EAS1D108E	RECEIVER (SPEAKER) MODULE
024	BT80084AAA	BATTERY PACK
025	UZ80060A	CAMERA MODULE
026	B3AAB0000161	CHARGING LED
027	N4EZA14A0001	MICRO CAPACITOR
028	AN80048AAA	ANTENNA

9.3. Main PCB Assembly

Ref. No.	Part No.	Part Name & Description		Grid
BT2001	N4EZA14A0001	BATTERY		
C101	F1G1H270A409	CERAMIC CAPACITOR	27PF 50V	
C103	F1G1H5R0A404	CERAMIC CAPACITOR	5PF 50V	
C104	F1G1H2R0A391	CERAMIC CAPACITOR	2PF 50V	
C105	F1G1H3R0A442	CERAMIC CAPACITOR	3PF 50V	
C106	F1G1H3R0A442	CERAMIC CAPACITOR	3PF 50V	
C107	F1G1H470A409	CERAMIC CAPACITOR	47PF 50V	
C108	F1G1H5R0A404	CERAMIC CAPACITOR	5PF 50V	
C110	F1G1H270A409	CERAMIC CAPACITOR	27PF 50V	
C111	F1G1H5R0A404	CERAMIC CAPACITOR	5PF 50V	
C112	F1G1H1R0A391	CERAMIC CAPACITOR	1PF 50V	
C113	F1G1H5R0A404	CERAMIC CAPACITOR	5PF 50V	
C114	F1G1H5R0A404	CERAMIC CAPACITOR	5PF 50V	
C115	F1G1H1R0A391	CERAMIC CAPACITOR	1PF 50V	
C116	F1G1H270A409	CERAMIC CAPACITOR	27PF 50V	
C117	F1G1H5R0A404	CERAMIC CAPACITOR	5PF 50V	
C118	F1G1H5R0A404	CERAMIC CAPACITOR	5PF 50V	
C119	F1J0J1060009	CERAMIC CAPACITOR	10UF 6.3V	
C121	F1G1H270A409	CERAMIC CAPACITOR	27PF 50V	
C124	F1G1H5R0A404	CERAMIC CAPACITOR	5PF 50V	
C125	F1G1H5R0A404	CERAMIC CAPACITOR	5PF 50V	
C126	F1G1H270A409	CERAMIC CAPACITOR	27PF 50V	
C127	F1G1HR50A391	CERAMIC CAPACITOR	0.5PF 50V	
C128	F1G1H2R0A391	CERAMIC CAPACITOR	2PF 50V	
C129	F1G1H5R0A404	CERAMIC CAPACITOR	5PF 50V	
C130	F1G1H5R0A404	CERAMIC CAPACITOR	5PF 50V	
C131	F1G1H2R0A391	CERAMIC CAPACITOR	2PF 50V	
C132	F1G1HR50A391	CERAMIC CAPACITOR	0.5PF 50V	
C201	F1G1E271A043	CERAMIC CAPACITOR	270PF 25V	
C202	F1G1E271A043	CERAMIC CAPACITOR	270PF 25V	
C203	F1G1H270A409	CERAMIC CAPACITOR	27PF 50V	
C207	F1G1H7R0A404	CERAMIC CAPACITOR	7PF 50V	
C210	F1G1H1R5A391	CERAMIC CAPACITOR	1.5PF 50V	
C211	F1G1H470A409	CERAMIC CAPACITOR	47PF 50V	
C301	F1G1H5R0A404	CERAMIC CAPACITOR	5PF 50V	
C302	F1H0J2250006	CERAMIC CAPACITOR	2.2UF 6.3V	
C303	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C304	F1G1H270A409	CERAMIC CAPACITOR	27PF 50V	
C305	F1H1H3910006	CERAMIC CAPACITOR	390PF 50V	
C306	ECHU1H102V41	CERAMIC CAPACITOR	0.001UF 50V	
C307	ECHU1C103V41	CERAMIC CAPACITOR	0.001UF 50V	
C309	F1G1H5R0A404	CERAMIC CAPACITOR	5PF 50V	
C310	F1H0J2250006	CERAMIC CAPACITOR	2.2UF 6.3V	
C351	F1G1H101A016	CERAMIC CAPACITOR	100PF 50V	
C352	F1G1H270A409	CERAMIC CAPACITOR	27PF 50V	
C353	F1G1H270A409	CERAMIC CAPACITOR	27PF 50V	
C354	F1G1H270A409	CERAMIC CAPACITOR	27PF 50V	
C355	F1G1C1030005	CERAMIC CAPACITOR	0.01UF 16V	
C356	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C357	F1H0J2250006	CERAMIC CAPACITOR	2.2UF 6.3V	
C358	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C359	F1G1H270A409	CERAMIC CAPACITOR	27PF 50V	
C360	F1G1C1030005	CERAMIC CAPACITOR	0.01UF 16V	
C362	F1G1C1030005	CERAMIC CAPACITOR	0.01UF 16V	
C402	F1G1H270A409	CERAMIC CAPACITOR	27PF 50V	
C2003	F1H1C1050003	CERAMIC CAPACITOR	1UF 16V	
C2015	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2016	F1H0J2250006	CERAMIC CAPACITOR	2.2UF 6.3V	
C2017	F1G0J1050005	CERAMIC CAPACITOR	1UF 6.3V	
C2024	F1G1H221A402	CERAMIC CAPACITOR	220PF 50V	

Ref. No.	Part No.	Part Name & Description		Grid
C2039	F1H0J2250006	CERAMIC CAPACITOR	2.2UF 6.3V	
C2042	F1G1H100A406	CERAMIC CAPACITOR	10PF 50V	
C2043	F1G1H330A409	CERAMIC CAPACITOR	33PF 50V	
C2044	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2045	ECJ1VB0J105K	CERAMIC CAPACITOR	1UF 6.3V	
C2046	ECJ1VB0J105K	CERAMIC CAPACITOR	1UF 6.3V	
C2047	ECJ0EB1A473K	CERAMIC CAPACITOR	1UF 6.3V	
C2048	F1G1H101A016	CERAMIC CAPACITOR	100PF 50V	
C2049	F1G1H101A016	CERAMIC CAPACITOR	100PF 50V	
C2050	ECJ1VB0J105K	CERAMIC CAPACITOR	1UF 6.3V	
C2051	F1H0J2250006	CERAMIC CAPACITOR	2.2UF 6.3V	
C2052	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2053	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2054	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2055	F1K1A2260001	CERAMIC CAPACITOR	22UF 10V	
C2056	F1J1A106A023	CERAMIC CAPACITOR	10UF 10V	
C2057	F1H0J2250006	CERAMIC CAPACITOR	2.2UF 6.3V	
C2058	F1H1E104A068	CERAMIC CAPACITOR	0.1UF 25V	
C2059	F1H0J2250006	CERAMIC CAPACITOR	2.2UF 6.3V	
C2060	F1H0J2250006	CERAMIC CAPACITOR	2.2UF 6.3V	
C2061	F1H0J2250006	CERAMIC CAPACITOR	2.2UF 6.3V	
C2062	F1H0J2250006	CERAMIC CAPACITOR	2.2UF 6.3V	
C2063	F1J1A106A023	CERAMIC CAPACITOR	10UF 10V	
C2064	F1J0J1060009	CERAMIC CAPACITOR	10UF 6.3V	
C2065	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2066	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2067	F1G1A104A012	CERAMIC CAPACITOR	1UF 6.3V	
C2068	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2069	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2070	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2071	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2072	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2074	F1G1C1030005	CERAMIC CAPACITOR	0.01UF 16V	
C2078	F1G1H9R0A008	CERAMIC CAPACITOR	9PF 50V	
C2081	F1G1H9R0A008	CERAMIC CAPACITOR	9PF 50V	
C2082	ECJ2FB0J106M	CERAMIC CAPACITOR	10UF 6.3V	
C2083	F1G1H270A006	CERAMIC CAPACITOR	27PF 50V	
C2084	ECJ1VB0J105K	CERAMIC CAPACITOR	1UF 6.3V	
C2085	ECJ1VB0J105K	CERAMIC CAPACITOR	1UF 6.3V	
C2089	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2091	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2092	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2093	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2095	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2096	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2098	ECJ0EB1A473K	CERAMIC CAPACITOR	0.047UF 10V	
C2100	F1G1H271A483	CERAMIC CAPACITOR	270PF 50V	
C2101	F1G1H472A498	CERAMIC CAPACITOR	4700PF 50V	
C2104	F1J0J1060009	CERAMIC CAPACITOR	10UF 6.3V	
C2106	F1J1A106A023	CERAMIC CAPACITOR	10UF 10V	
C2107	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2120	F1G1H470A006	CERAMIC CAPACITOR	47PF 50V	
C2129	F1G1H102A498	CERAMIC CAPACITOR	0.001UF 50V	
C2130	F1G0J1050005	CERAMIC CAPACITOR	1UF 6.3V	
C2137	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2138	F1G1A104A012	CERAMIC CAPACITOR	0.1UF 10V	
C2153	F1G1H472A498	CERAMIC CAPACITOR	4700PF 50V	
C2154	F1G1H471A402	CERAMIC CAPCAITOR	470PF 50V	
C2155	F1G1C223A004	CERAMIC CAPACITOR	0.022UF 16V	
C2157	F1J0J1060009	CERAMIC CAPACITOR	10UF 6.3V	

Ref. No.	Part No.	Part Name & Description	Grid
C2158	F1G1H270A409	CERAMIC CAPACITOR 27PF 50V	
C2163	F1G1H330A409	CERAMIC CAPACITOR 33PF 50V	
C2164	F1G1H330A409	CERAMIC CAPACITOR 33PF 50V	
C2165	F1G1H221A402	CERAMIC CAPACITOR 220PF 50V	
C2167	F1G1H471A402	CERAMIC CAPACITOR 470PF 50V	
C2168	F1G1H221A402	CERAMIC CAPACITOR 220PF 50V	
C3005	F1G1A104A012	CERAMIC CAPACITOR 0.1UF 10V	
C3006	F1G1A104A012	CERAMIC CAPACITOR 0.1UF 10V	
C3007	F1G1A104A012	CERAMIC CAPACITOR 0.1UF 10V	
C3008	F1G1H470A409	CERAMIC CAPACITOR 47PF 50V	
C3009	F1G1H470A409	CERAMIC CAPACITOR 47PF 50V	
C3010	F1G1H470A409	CERAMIC CAPACITOR 47PF 50V	
C3011	F1G1H470A409	CERAMIC CAPACITOR 47PF 50V	
C3012	F1G1H470A409	CERAMIC CAPACITOR 47PF 50V	
C3013	F1G1H470A409	CERAMIC CAPACITOR 47PF 50V	
C3014	F1G1H470A409	CERAMIC CAPACITOR 47PF 50V	
C3015	F1G1H470A409	CERAMIC CAPACITOR 47PF 50V	
C3016	F1G1H470A409	CERAMIC CAPACITOR 47PF 50V	
C3017	F1G1H470A409	CERAMIC CAPACITOR 47PF 50V	
C3018	F1G1H470A409	CERAMIC CAPACITOR 47PF 50V	
C3019	F1G1H470A409	CERAMIC CAPACITOR 47PF 50V	
C3021	ECJ1VB0J105K	CERAMIC CAPACITOR 1UF 6.3V	
C3022	F3E0J1060012	ELECTROLYTIC CAPACITOR 10UF 6.3V	
C3023	F1G1A104A012	CERAMIC CAPACITOR 0.1UF 10V	
C3025	ECJ1VB0J105K	CERAMIC CAPACITOR 1UF 6.3V	
C3026	F1G0J1050005	CERAMIC CAPACITOR 1UF 6.3V	
C3027	F1G0J1050005	CERAMIC CAPACITOR 1UF 6.3V	
C3035	F1G1A104A012	CERAMIC CAPACITOR 0.1UF 10V	
C3038	F1J1A475A034	CERAMIC CAPACITOR 4.7UF 10V	
C3039	F1G1A104A012	CERAMIC CAPACITOR 0.1UF 10V	
C3045	F1G1H102A498	CERAMIC CAPACITOR 0.001UF 50V	
C3047	F1G1A104A012	CERAMIC CAPACITOR 0.1UF 10V	
C3049	F1G1A104A012	CERAMIC CAPACITOR 0.1UF 10V	
C3054	F1G1H470A409	CERAMIC CAPACITOR 47PF 50V	
C3055	F1G1A104A012	CERAMIC CAPACITOR 0.1UF 10V	
C3056	F1G1A104A012	CERAMIC CAPACITOR 0.1UF 10V	
C3057	F1J1C1050006	CERAMIC CAPACITOR 1UF 16V	
C3058	ECJ1VB0J105K	CERAMIC CAPACITOR 1UF 6.3V	
C3060	F1G1H470A409	CERAMIC CAPACITOR 47PF 50V	
C3063	F1G1H470A409	CERAMIC CAPACITOR 47PF 50V	
C3064	F1G1A104A012	CERAMIC CAPACITOR 0.1UF 10V	
C3067	F1G1H220A409	CERAMIC CAPACITOR 22PF 50V	
C5000	F1G1A104A012	CERAMIC CAPACITOR 0.1UF 10V	
C5001	F1G1A104A012	CERAMIC CAPACITOR 0.1UF 10V	
C5003	F1G1H100A406	CERAMIC CAPACITOR 10PF 50V	
C5004	F1G1H100A406	CERAMIC CAPACITOR 10PF 50V	
C5005	F1G1H270A409	CERAMIC CAPACITOR 27PF 50V	
C5006	F1G1C2230001	CERAMIC CAPACITOR 0.022UF 16V	
CN101	K1QZA1AD0012	CONNECTOR	
CN2001	K1FB102E0002	CONNECTOR	
CN2005	K2HD105E0007	HEADSETJACK	
CN2006	K1KB20A00158	CONNECTOR	
CN2007	K1MZ05A00003	CONNECTOR	
CN3001	K1KB24A00043	CONNECTOR 24PIN	
CN3002	K1MN21B00052	CONNECTOR	
CN3005	K1KB14A00068	CONNECTOR 14PIN	
CN5000	K1KA14A00255	CONNECTOR 14PIN	
CN5001	K1KB02B00014	CONNECTOR	
CN5002	K1KB02B00014	CONNECTOR	
CN5003	K1NA06E00008	CONNECTOR 6PIN	

Ref. No.	Part No.	Part Name & Description	Grid
D2002	B0JCPB000001	DIODE	
D2003	B0JCPB000001	DIODE	
D2004	MA2SD1900L	SCHOTTKY DIODE	
D2005	MA2SD1900L	SCHOTTKY DIODE	
D2006	MA2SD1900L	SCHOTTKY DIODE	
D2007	MA2SD1900L	SCHOTTKY DIODE	
D2008	MA2SD1900L	SCHOTTKY DIODE	
D2009	MA2SD1900L	SCHOTTKY DIODE	
D2010	MAZS0750ML	VOLTAGE REGULATER 7.5V 5MA	
D2015	B0KB00000038	DIODE	
D2017	MAZS0750ML	VOLTAGE REGULATER 7.5V 5MA	
D2018	MAZS0750ML	VOLTAGE REGULATER 7.5V 5MA	
D2019	MAZS0750ML	VOLTAGE REGULATER 7.5V 5MA	
D2020	MAZS0750ML	VOLTAGE REGULATER 7.5V 5MA	
D2021	MAZS0750ML	VOLTAGE REGULATER 7.5V 5MA	
D2022	MAZS0750ML	VOLTAGE REGULATER 7.5V 5MA	
D2023	MAZW068H0L	VOLTAGE REGULATION DIODE	
D2024	MAZW068H0L	VOLTAGE REGULATION DIODE	
D2025	MAZW068H0L	VOLTAGE REGULATION DIODE	
D2026	MAZW068H0L	VOLTAGE REGULATION DIODE	
D2027	MAZW068H0L	VOLTAGE REGULATION DIODE	
D3002	MAZS0470GL	VOLTAGE REGULATION DIODE 4.7V 5MA	
D3006	MAZS0470GL	VOLTAGE REGULATION DIODE 4.7V 5MA	
D3009	B0JCPB000001	DIODE	
D3010	MAZS15000L	VOLTAGE REGULATER DIODE 15V	
D4001	MA2S11100L	DIODE 80V 100MA	
DS2001	B3ADB0000056	PHOTO TRANFER ELEMENT (ORANGE)	
DS2002	B3ADB0000056	PHOTO TRANFER ELEMENT (ORANGE)	
DS2003	B3ADB0000056	PHOTO TRANFER ELEMENT (ORANGE)	
DS2004	B3ADB0000056	PHOTO TRANFER ELEMENT (ORANGE)	
DS2005	B3ADB0000056	PHOTO TRANFER ELEMENT (ORANGE)	
DS2006	B3ADB0000056	PHOTO TRANFER ELEMENT (ORANGE)	
DS2007	B3ADB0000056	PHOTO TRANFER ELEMENT (ORANGE)	
DS2008	B3ADB0000056	PHOTO TRANFER ELEMENT (ORANGE)	
DS2009	B3ADB0000056	PHOTO TRANFER ELEMENT (ORANGE)	
DS2010	B3ADB0000056	PHOTO TRANFER ELEMENT (ORANGE)	
DS2011	B3ADB0000056	PHOTO TRANFER ELEMENT (ORANGE)	
DS2012	B3ADB0000056	PHOTO TRANFER ELEMENT (ORANGE)	
DS3001	B3RBC0000031	PHOTO TRANFER	
DS3002	B3AAB0000161	DIODE	
DS5000	B3AZB0000028	PHOTO TRANFER	
FL101	EXCML16A270U	FILTER	
FL102	J0C8976B0002	FILTER	
FL201	J0C1847B0007	FILTER	
FL202	J0C9426B0005	FILTER	
FL2001	J0HAAA000016	FILTER FOR EMI / EMC DC 5V 50MA	
FL2002	J0HAAA000016	FILTER FOR EMI / EMC DC 5V 50MA	
FL2003	J0HAAA000016	FILTER FOR EMI / EMC DC 5V 50MA	
FL2007	J0JHC0000034	FILTER FOR EMI / EMC 220 0 2000MA	
FL2008	J0JAC000001	FILTER 50MA 1K	
FL2010	J0MZB0000005	OTHER FILTERS FOR EMI / EMC	
FL3002	J0JCC0000249	FILTER FOR EMI / EMC 300MA 10	
FL3004	J0HAAA000016	FILTER FOR EMI / EMC DC 5V 50MA	
FL3005	J0HAAA000016	FILTER FOR EMI / EMC DC 5V 50MA	
FL5000	EXC24CP221U	FILTER	
FL5001	EXC24CP221U	FILTER	
L101	ELJRF33NJF2	COIL	
L102	ELJRF33NJF2	COIL	
L103	ELJRF3N3DF2	COIL	
L104	ELJRF3N3DF2	COIL	

Ref. No.	Part No.	Part Name & Description		Grid
L105	ELJRF82NJF2	COIL		
L106	ELJRF82NJF2	COIL		
L107	ELJRF10NJF2	COIL		
L108	ELJRF10NJF2	COIL		
L110	ELJRF18NJF2	COIL		
L111	ELJRF22NJF2	COIL		
L112	ELJRF3N3DF2	COIL		
L113	ELJRF5N6JF2	COIL		
L201	ELJRF5N6JF2	COIL		
L202	ELJRF5N6JF2	COIL		
L203	ELJRF18NJF2	COIL		
L204	ELJRF18NJF2	COIL		
L205	ELJRF3N3DF2	COIL		
L208	ELJRF8N2JF2	COIL		
L301	ELJRF27NJF2	COIL		
L351	G1C1R0K00005	INDUCTOR	1.0UH	
L2010	ELL3GM220M	COIL		
L2011	G1C82NJ00009	INDUCTOR 600MHZ 82NH 300MA		
L3005	ELL3GM220M	COIL		
L3006	G1C4R7MA0104	INDUCTOR	4.7UH	
Q2002	UNR9210J0L	TRANSISTOR		
Q2006	B1DHCC000036	TRANSISTOR		
Q2008	2SD19790VL	NPN AF TRANSISTOR		
Q3001	UNR321N00L	TRANSISTOR		
Q4001	B1ABGC000004	TRANSISTOR		
Q5000	UNR321N00L	TRANSISTOR		
Q5001	XP0421600L	TRANSISTOR		
R102	EXB28V102JX	FIXED RESISTOR	1 KΩ 0.031 W	
R104	ERJ2RKF123X	FIXED RESISTOR	12 KΩ 1/16W	
R105	ERJ2GEJ221X	FIXED RESISTOR	220 Ω 1/16W	
R106	ERJ2GEJ561X	FIXED RESISTOR	560 Ω 1/16W	
R107	ERJ2GEJ182X	FIXED RESISTOR	1.8 KΩ 1/16W	
R108	ERJ2GEJ122X	FIXED RESISTOR	1.2 KΩ 1/16W	
R110	EXB24AT3AR3X	FIXED RESISTANCE ATTENUATOR		
R111	ERJ2GEJ181X	FIXED RESISTOR	180 Ω 1/16W	
R112	ERJ2GEJ100X	FIXED RESISTOR	10 Ω 1/16W	
R113	EXB24AT3AR3X	FIXED RESISTANCE ATTENUATOR		
R114	ERJ2GEJ102X	FIXED ESISTOR	1 KΩ 1/16W	
R117	ERJ2GEJ102X	FIXED RESISTOR	1 KΩ 1/16W	
R301	ERJ2GEJ182X	FIXED ESISTOR	1.8 KΩ 1/16W	
R302	ERJ2GEJ222X	FIXED RESISTOR	2.2 KΩ 1/16W	
R303	ERJ2GEJ472X	FIXED RESISTOR	4.7 KΩ 1/16W	
R352	ERJ2GEJ103X	FIXED RESISTOR	10 KΩ 1/16W	
R353	ERJ2GEJ391X	FIXED RESISTOR	390 Ω 62.5W	
R2003	ERJ2GEJ682X	FIXED RESISTOR	6.8 KΩ 1/16W	
R2004	ERJ2GEJ333X	FIXED RESISTOR	33 KΩ 1/16W	
R2005	ERJ2GEJ333X	FIXED RESISTOR	33 KΩ 1/16W	
R2006	D0GA104JA010	FIXED RESISTOR	100KΩ 1/16W	
R2007	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R2008	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R2009	ERJ2GEJ333X	FIXED RESISTOR	33 KΩ 1/16W	
R2010	ERJ2GEJ333X	FIXED RESISTOR	33 KΩ 1/16W	
R2011	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R2012	ERJ2GEJ563X	FIXED RESISTOR	56 KΩ 1/16W	
R2014	ERJ2GEJ331X	FIXED RESISTOR	330 Ω 1/16W	
R2015	EXB24V104JX	FIXED RESISTOR	100 KΩ 1/16W	
R2016	EXB24V104JX	FIXED RESISTOR	100 KΩ 1/16W	
R2017	ERJ2GEJ473X	FIXED RESISTOR	47 KΩ 1/16W	
R2018	ERJ2GEJ472X	FIXED RESISTOR	4.7 KΩ 1/16W	
R2019	D0GA104JA010	FIXED RESISTOR	100KΩ 1/16W	

Ref. No.	Part No.	Part Name & Description		Grid
R2020	ERJ2GEJ102X	FIXED RESISTOR	1 KΩ 1/16W	
R2021	ERJ2GEJ102X	FIXED RESISTOR	1 KΩ 1/16W	
R2026	ERJ2GEJ223X	FIXED RESISTOR	22 KΩ 1/16W	
R2027	ERJ2GEJ473X	FIXED RESISTOR	47 KΩ 1/16W	
R2028	ERJ2RKF1543X	FIXED RESISTOR	154 KΩ 1/16W	
R2029	ERJ2GEJ223X	FIXED RESISTOR	22 KΩ 1/16W	
R2031	ERJ6RSJR10V	FIXED RESISTOR	0.1 Ω 125MW	
R2033	ERJ2GEJ334X	FIXED RESISTOR	330 KΩ 1/16W	
R2034	ERJ2GEJ154X	FIXED RESISTOR	150 KΩ 1/16W	
R2035	D0GA104JA010	FIXED RESISTOR	100KΩ 1/16W	
R2036	D0GA104JA010	FIXED RESISTOR	100KΩ 1/16W	
R2037	ERJ2GEJ2R2X	FIXED RESISTOR	2.2 Ω 1/16W	
R2038	ERJ2RKF3002X	FIXED RESISTOR	30 KΩ 1/16W	
R2039	ERJ2GEJ104X	FIXED RESISTOR	100 KΩ 1/16W	
R2041	EXB24V221JX	BLOCK RESISTOR		
R2042	ERJ2GEJ221X	FIXED RESISTOR	220 Ω 1/16W	
R2043	ERJ2GEJ221X	FIXED RESISTOR	220 Ω 1/16W	
R2043	ERJ2GEJ473X	FIXED RESISTOR	47 KΩ 1/16W	
R2044	ERJ2GEJ221X	FIXED RESISTOR	220 Ω 1/16W	
R2044	ERJ2GEJ182X	FIXED RESISTOR	1.8 KΩ 1/16W	
R2045	ERJ2GEJ221X	FIXED RESISTOR	220 Ω 1/16W	
R2045	ERJ2GEJ182X	FIXED RESISTOR	1.8 KΩ 1/16W	
R2046	ERJ2GEJ221X	FIXED RESISTOR	220 Ω 1/16W	
R2046	ERJ2GEJ331X	FIXED RESISTOR	330 Ω 1/16W	
R2047	ERJ2GEJ221X	FIXED RESISTOR	220 Ω 1/16W	
R2048	ERJ2GEJ221X	FIXED RESISTOR	220 Ω 1/16W	
R2048	ERJ2GEJ472X	FIXED RESISTOR	4.7 KΩ 1/16W	
R2049	ERJ2GEJ221X	FIXED RESISTOR	220 Ω 1/16W	
R2060	ERJ2GEJ102X	FIXED RESISTOR	1 KΩ 1/16W	
R2070	ERJ2GEJ333X	FIXED RESISTOR	33 KΩ 1/16W	
R2073	ERJ2GEJ333X	FIXED RESISTOR	33 KΩ 1/16W	
R2074	ERJ2GEJ563X	FIXED RESISTOR	56 KΩ 1/16W	
R2078	ERJ2GEJ333X	FIXED RESISTOR	33 KΩ 1/16W	
R2079	ERJ2GEJ154X	FIXED RESISTOR	150 KΩ 1/16W	
R2080	ERJ2GEJ333X	FIXED RESISTOR	33 KΩ 1/16W	
R2081	ERJ2GEJ222X	FIXED RESISTOR	2.2 KΩ 1/16W	
R2082	ERJ2GEJ472X	FIXED RESISTOR	4.7 KΩ 1/16W	
R2085	D0GA104JA010	FIXED RESISTOR	100KΩ 1/16W	
R2086	D0GA104JA010	FIXED RESISTOR	100KΩ 1/16W	
R2088	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R2089	D0GA104JA010	FIXED RESISTOR	100KΩ 1/16W	
R2090	EXB24V221JX	BLOCK RESISTOR		
R2095	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R2098	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R2099	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R2141	ERJ2RHD203X	FIXED RESISTOR	20 KΩ 1/16W	
R2142	ERJ2RHD203X	FIXED RESISTOR	20 KΩ 1/16W	
R2143	ERJ2RHD203X	FIXED RESISTOR	20 KΩ 1/16W	
R2144	ERJ2GEJ472X	FIXED RESISTOR	4.7 KΩ 1/16W	
R2145	ERJ2GEJ182X	FIXED RESISTOR	1.8 KΩ 1/16W	
R2146	ERJ2GEJ331X	FIXED RESISTOR	330 Ω 1/16W	
R2147	ERJ2GEJ182X	FIXED RESISTOR	1.8 KΩ 1/16W	
R2148	ERJ2GEJ331X	FIXED RESISTOR	330 Ω 1/16W	
R2149	ERJ2GEJ104X	FIXED RESISTOR	100 KΩ 1/16W	
R2151	ERJ2GEJ393X	FIXED RESISTOR	39 KΩ 1/16W	
R3005	ERJ2GEJ104X	FIXED RESISTOR	100 KΩ 1/16W	
R3006	EXB24V100JX	FIXED RESISTOR	10 Ω 1/16W	
R3007	EXB24V100JX	FIXED RESISTOR	10 Ω 1/16W	
R3008	EXB24V100JX	FIXED RESISTOR	10 Ω 1/16W	
R3009	EXB24V100JX	FIXED RESISTOR	10 Ω 1/16W	

Ref. No.	Part No.	Part Name & Description		Grid
R3010	EXB24V100JX	FIXED RESISTOR	10 Ω 1/16W	
R3011	EXB24V100JX	FIXED RESISTOR	10 Ω 1/16W	
R3026	ERJ2GEJ682X	FIXED RESISTOR	6.8 KΩ 1/16W	
R3027	ERJ2GEJ682X	FIXED RESISTOR	6.8 KΩ 1/16W	
R3028	ERJ2GEJ104X	FIXED RESISTOR	100 KΩ 1/16W	
R3029	ERJ2GEJ100X	FIXED RESISTOR	10 Ω 1/16W	
R3038	ERJ2GEJ104X	FIXED RESISTOR	100 KΩ 1/16W	
R3039	ERJ2GEJ104X	FIXED RESISTOR	100 KΩ 1/16W	
R3040	ERJ2GEJ104X	FIXED RESISTOR	100 KΩ 1/16W	
R3043	ERJ2GEJ102X	FIXED RESISTOR	1 KΩ 1/16W	
R3044	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R3046	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R3047	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R3048	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R3049	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R3050	ERJ2GEJ471X	FIXED RESISTOR	470 Ω 1/16W	
R3051	ERJ2GEJ123X	FIXED RESISTOR	12 KΩ 1/16W	
R3052	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R3064	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R3065	ERJ2GEJ102X	FIXED RESISTOR	1 KΩ 1/16W	
R3067	ERJ2GEJ180X	FIXED RESISTOR	18 Ω 1/16W	
R3068	ERJ2GEJ150X	FIXED RESISTOR	15 Ω 1/16W	
R3069	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R3073	ERJ2GEJ472X	FIXED RESISTOR	4.7 KΩ 1/16W	
R3074	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R3076	ERJ2GEJ102X	FIXED RESISTOR	1 KΩ 1/16W	
R3077	ERJ2GEJ101X	FIXED RESISTOR	100 Ω 1/16W	
R3078	ERJ2GEJ101X	FIXED RESISTOR	100 Ω 1/16W	
R4001	ERJ2GEJ272X	FIXED RESISTOR	2.7 KΩ 1/16W	
R4002	ERJ2GEJ273X	FIXED RESISTOR	27 KΩ 1/16W	
R5000	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R5001	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R5002	ERJ2GEJ104X	FIXED RESISTOR	100 KΩ 1/16W	
R5002	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R5003	ERJ2GEJ181X	FIXED RESISTOR	180 Ω 1/16W	
R5003	ERJ2GE0R00X	FIXED RESISTOR	0 Ω 1/16W	
R5004	ERJ2GEJ181X	FIXED RESISTOR	180 Ω 1/16W	
R5005	ERJ2GEJ101X	FIXED RESISTOR	100 Ω 1/16W	
R5006	ERJ2GEJ104X	FIXED RESISTOR	100 KΩ 1/16W	
RT101	D4CC16830006	NTC THERMISTER		
RV2002	D4ED18R00002	VARISTOR		
RV2006	D4ED12700002	VARISTOR		
RV2015	D4ED12700002	VARISTOR		
RV2016	D4ED11200005	VARISTOR		
RV2017	D4ED11200005	VARISTOR		
RV2018	D4ED11200005	VARISTOR		
RV2019	D4ED18R00002	VARISTOR		
RV2020	D4ED18R00002	VARISTOR		
RV2021	D4ED18R00002	VARISTOR		
RV2024	D4ED18R00002	VARISTOR		
RV2025	D4ED12700002	VARISTOR		
RV2028	D4ED12700002	VARISTOR		
RV2029	D4ED12700002	VARISTOR		
RV2030	D4ED12700002	VARISTOR		
RV3001	D4ED18R00002	VARISTOR		
RV3002	D4ED12700002	VARISTOR		
RV5000	D4ED18R00002	VARISTOR		
RV5001	D4ED18R00002	VARISTOR		
RV5002	D4ED18R00002	VARISTOR		
RV5003	D4ED18R00002	VARISTOR		

Ref. No.	Part No.	Part Name & Description	Grid
S101	K0ZZ00000604	SWITCH	
U101	C1CB00001525	IC	
U102	C1CB00001476	IC	
U103	C5CB00000052	RF MICRO DEVICES	
U301	H1D2605B0002	CRYSTAL OSCILLATER	
U2001	C1CB00001610	IC	
U2002	C0JBAZ002043	LOGIC IC	
U2003	C0CBAAA00016	REGULATOR IC	
U2004	C0CBCAC00264	IC	
U2005	C0CBAAA00016	REGULATOR IC	
U2011	C1BB00000908	AUDIO IC	
U2012	C1BB00000885	AUDIO IC	
U2013	C0JBAZ002218	LOGIC ICS	
U3001	C1AB00001876	CAMERA I/F IC	
U3002	C0CBAAC00144	IC	
U3003	C0JBAE000279	LOGIC IC	
U3004	C0CBCAA00004	IC	
U3005	C0HBZ0000051	ICS FOR DISPLAY DRIVER	
Y2001	H0J327200022	CRYSTAL OSCILLATER	

ORDER NO. OMTD040702C8

Service Manual

Personal Cellular Telephone

GSM EB-X200 VOL. 6

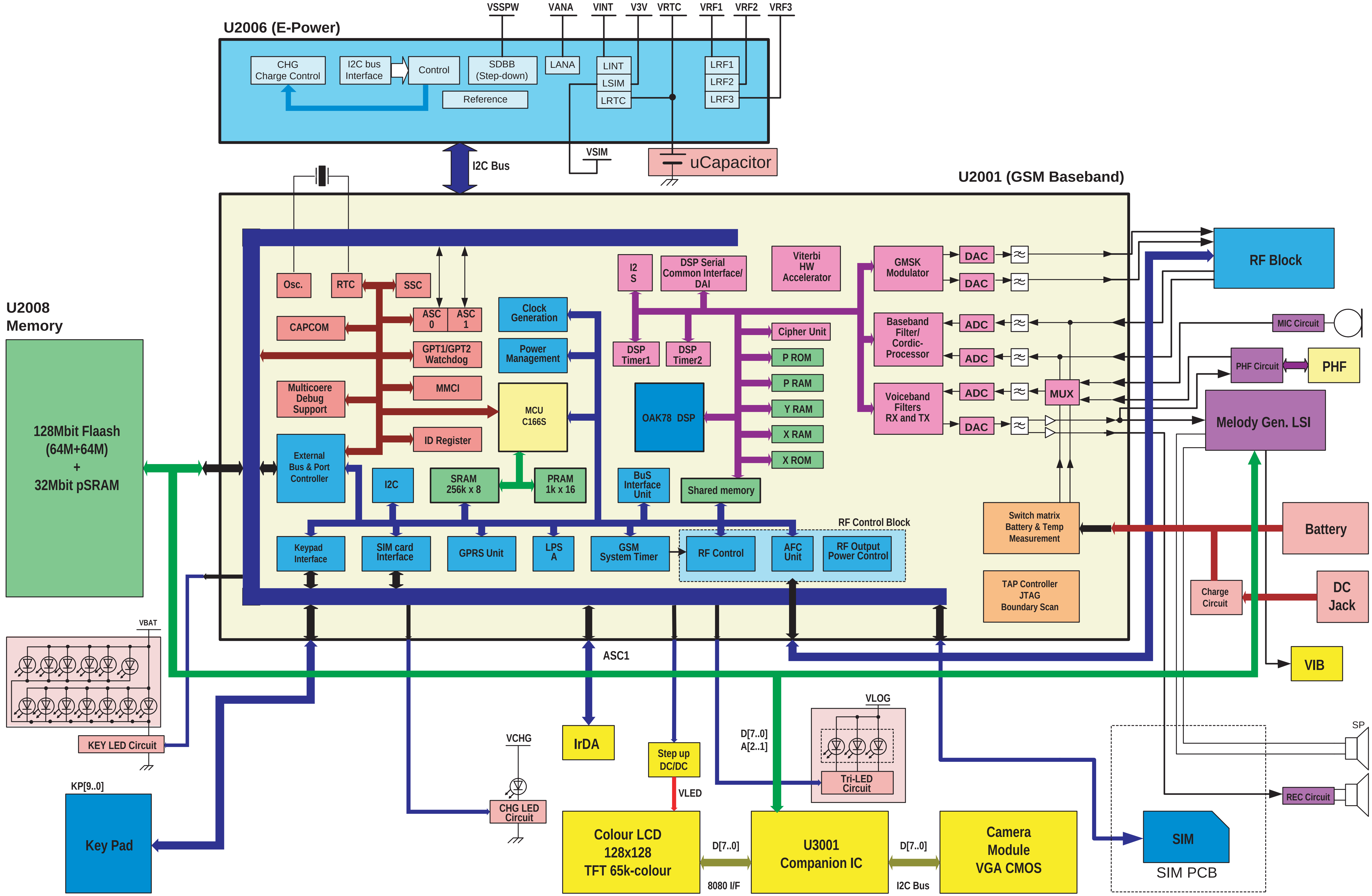
⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

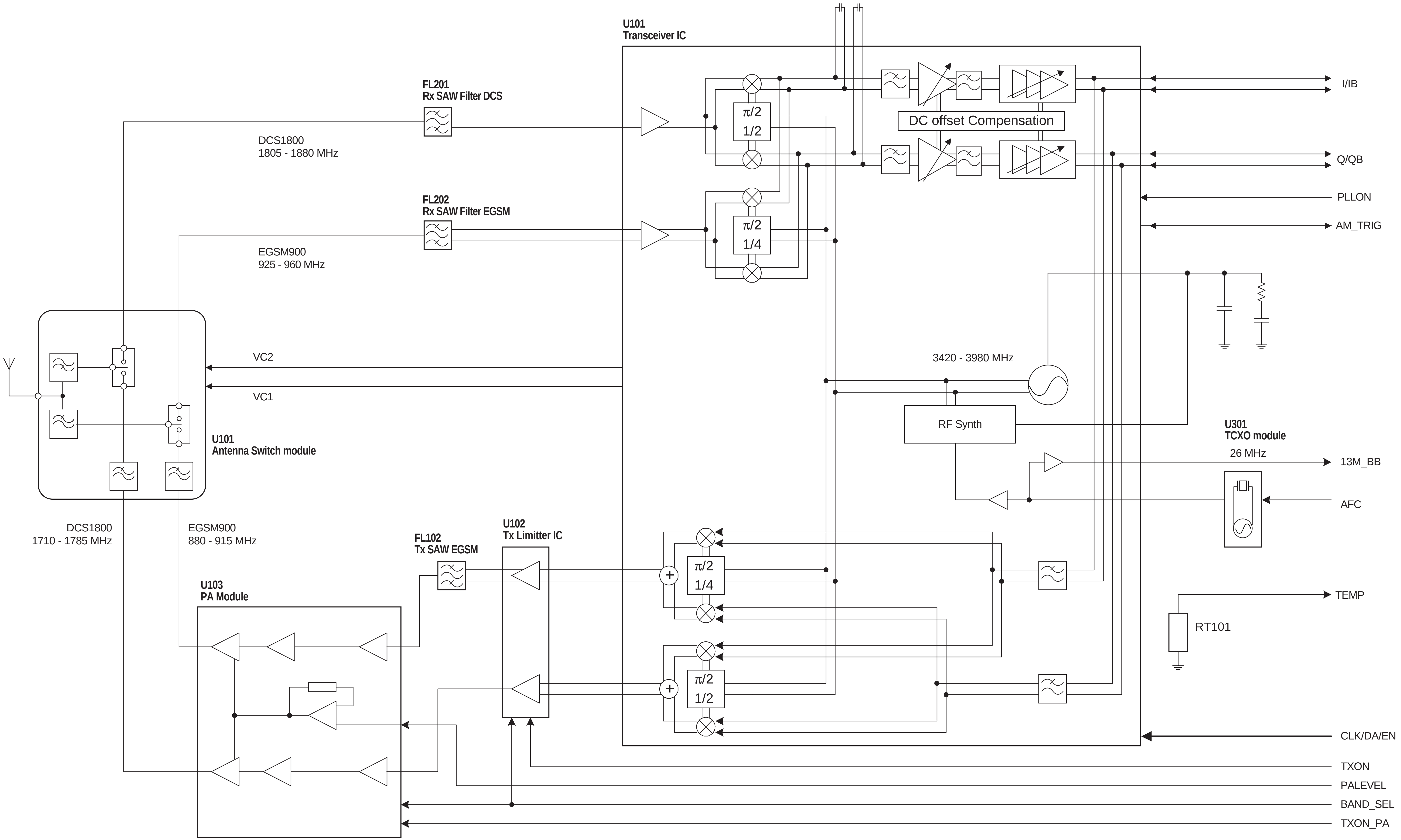
Panasonic®

10. BLOCK DIAGRAM

10.1. Baseband

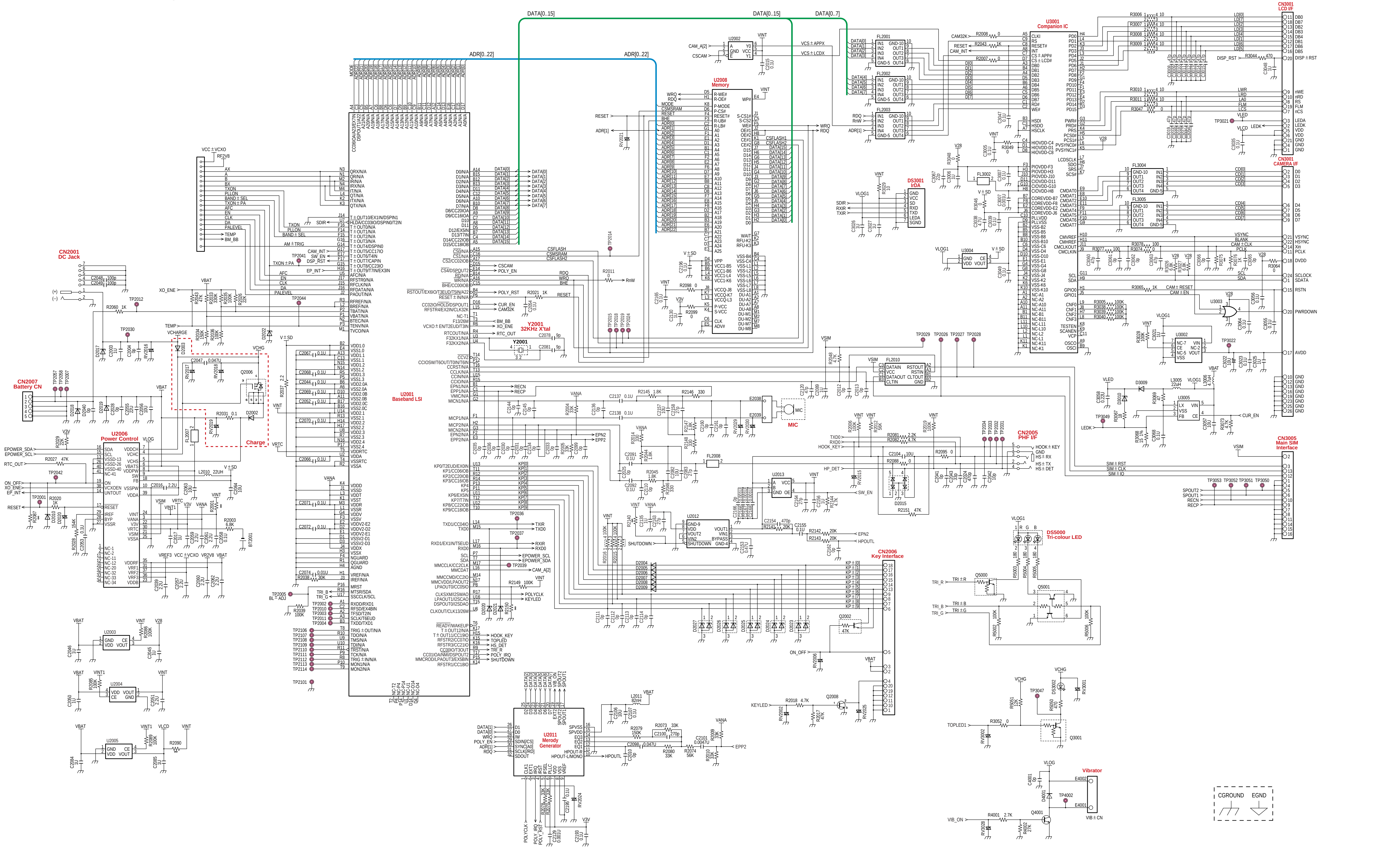


10.2. RF Band

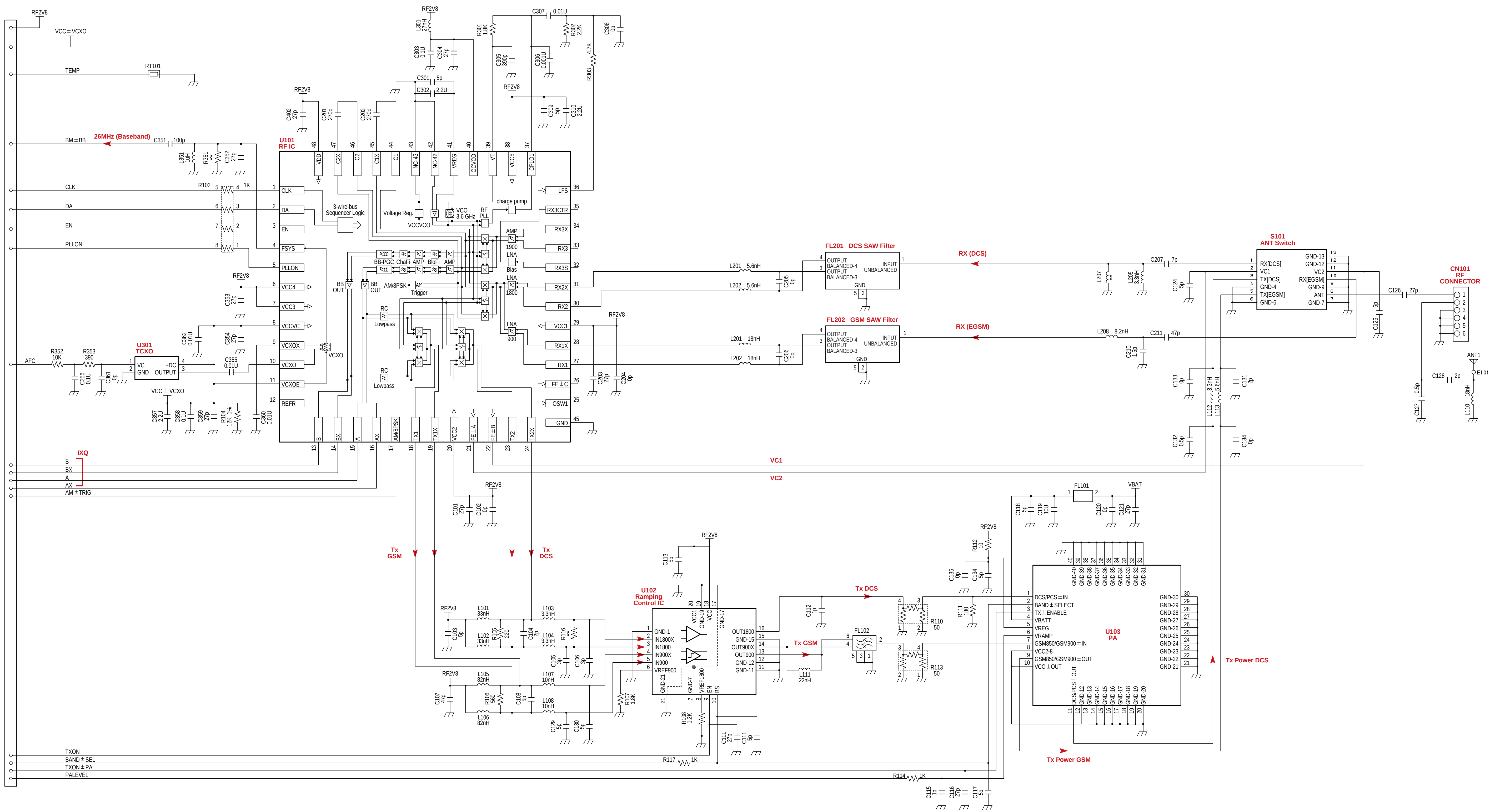

U101
Transceiver IC
FL201
Rx SAW Filter DCS
DCS1800
1805 - 1880 MHz
FL202
Rx SAW Filter EGSM
EGSM900
925 - 960 MHz
π/2
1/2
π/2
1/4
DC offset Compensation
I/IB
Q/QB
PLLON
AM_TRIG
VC2
VC1
3420 - 3980 MHz
RF Synth
U101
Antenna Switch module
U301
TCXO module
26 MHz
13M_BB
AFC
DCS1800
1710 - 1785 MHz
EGSM900
880 - 915 MHz
FL102
Tx SAW EGSM
U102
Tx Limitter IC
U103
PA Module
π/2
1/4
π/2
1/2
TEMP
RT101
CLK/DA/EN
TXON
PALEVEL
BAND_SEL
TXON_PA

11. CIRCUIT DIAGRAM

11.1. Main PCB (Logic)



11.2. Main PCB (RF Band)

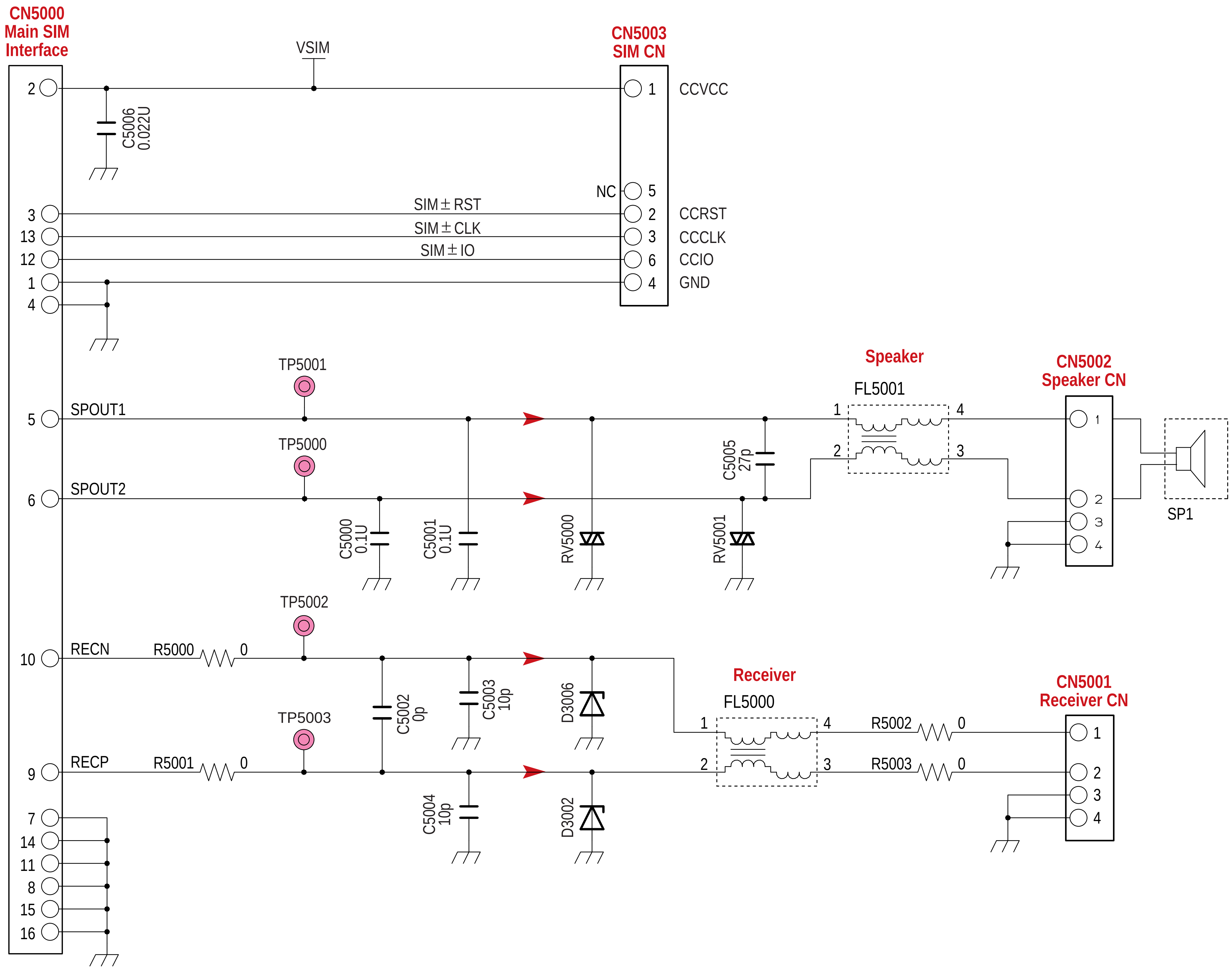


PARTS	NO.
TX	101 —
RX	201 —
SYN	301 —
TCXO	351 —
POWER SUPPLY	401 —

Ant – Sw

Mode	Vc1	Vc2
GSM Tx	L	H
DCS TX	H	L
GSM/DCS Rx	L	L

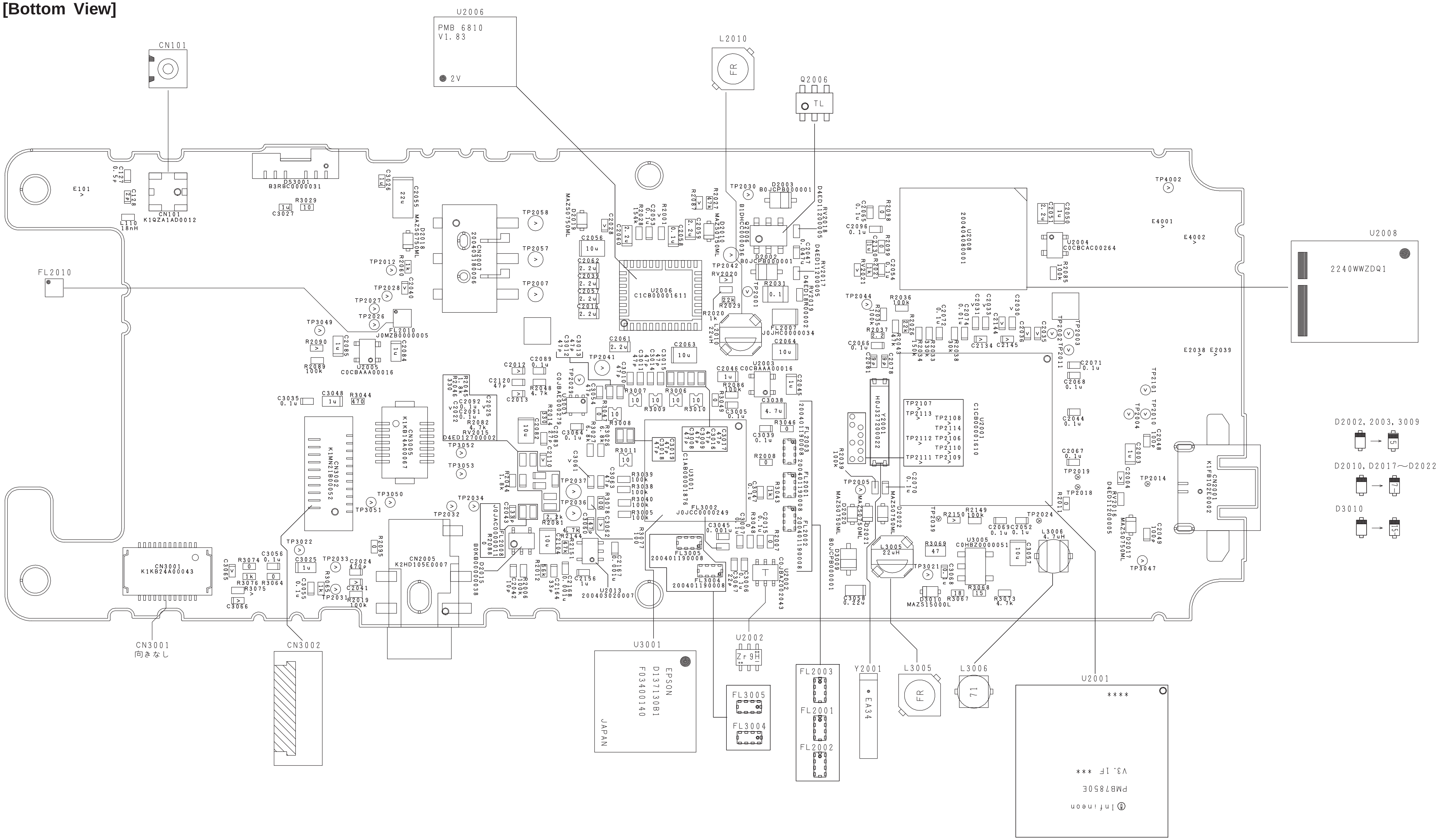
11.3. SIM PCB


CN5000
Main SIM
Interface
VSIM
CN5003
SIM CN
CCVCC
C5006
0.022U
NC
SIM±RST
SIM±CLK
SIM±IO
CCRST
CCCLK
CCIO
GND
TP5001
TP5000
SPOUT1
SPOUT2
Speaker
FL5001
CN5002
Speaker CN
C5005
27p
C5000
0.1U
C5001
0.1U
RV5000
RV5001
SP1
TP5002
TP5003
RECN
RECP
R5000
R5001
C5002
0p
C5003
10p
C5004
10p
D3006
D3002
Receiver
FL5000
R5002
R5003
CN5001
Receiver CN

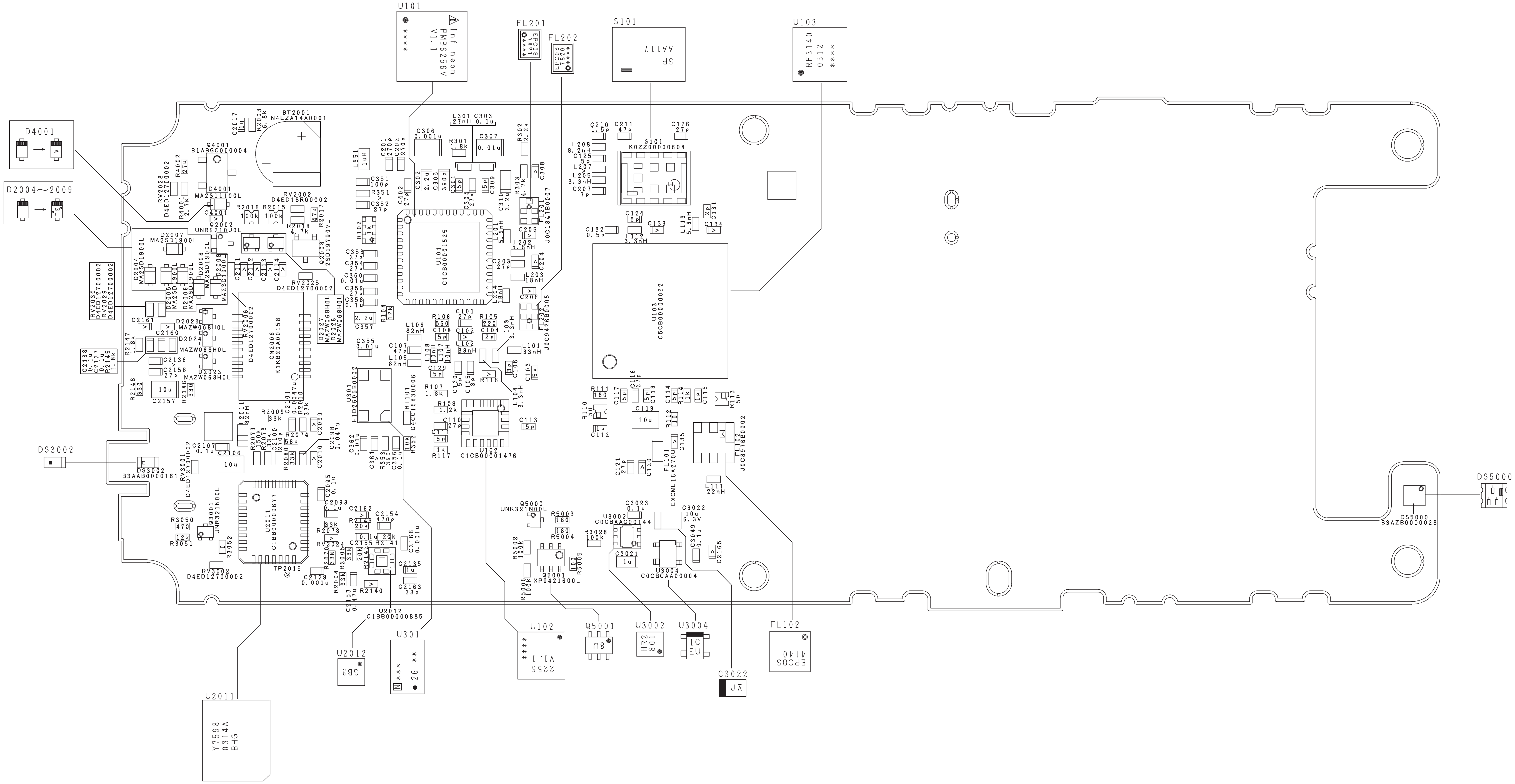
12. LAYOUT DIAGRAM

12.1. Main PCB

[Bottom View]

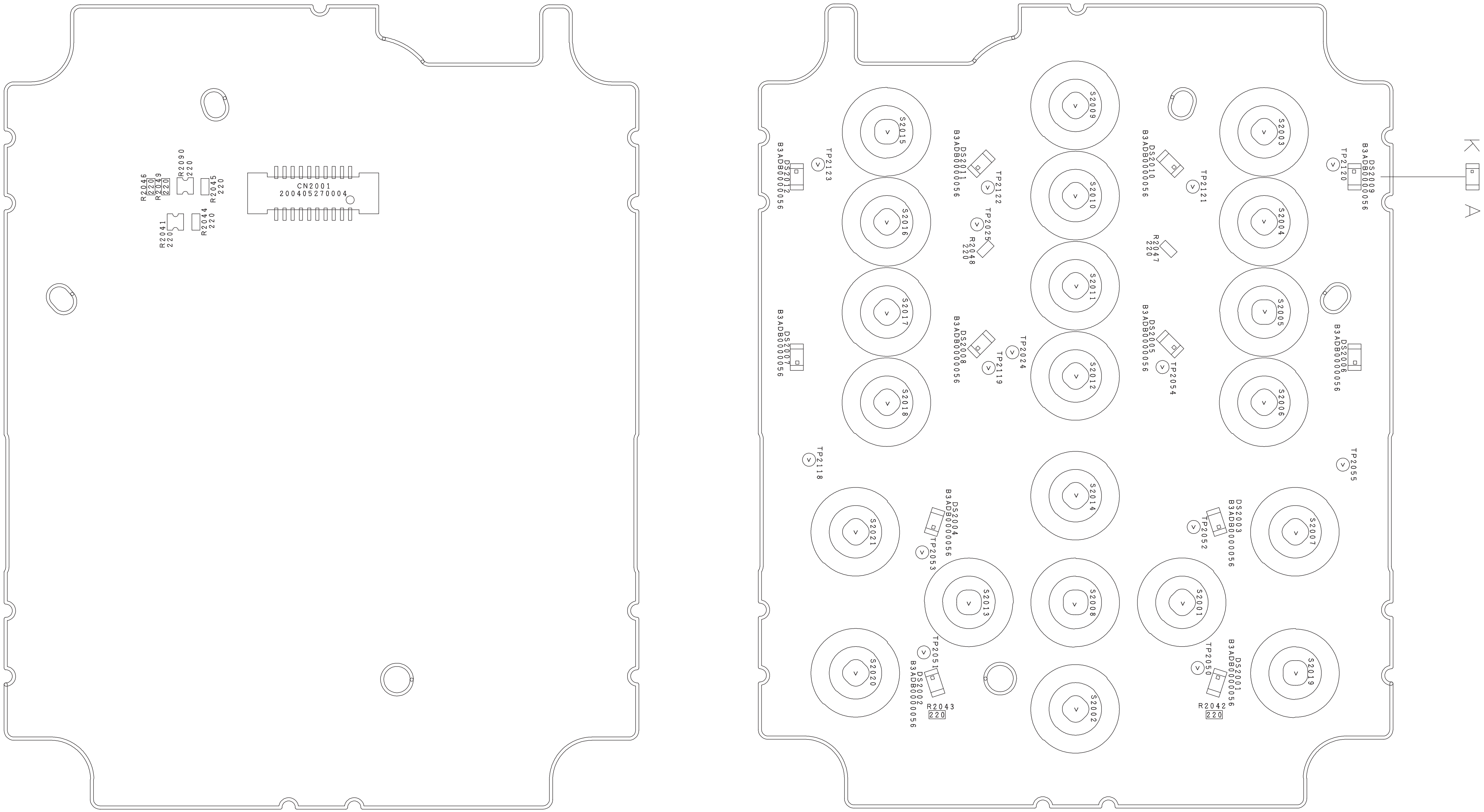


[Top View]

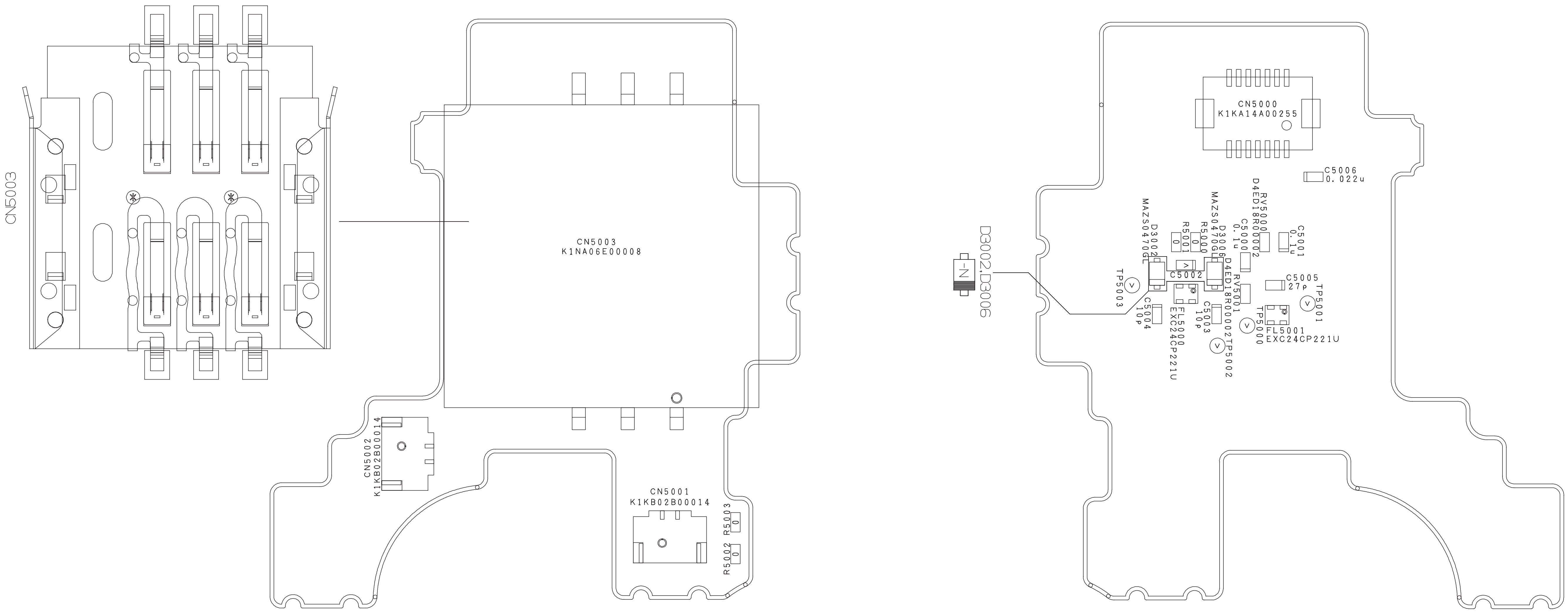


U101
FL201
FL202
S101
U103
D4001
D2004～2009
DS3002
DS5000
U2011
U2012
U301
U102
Q5001
U3002
U3004
FL102
C3022

12.2. Key PCB



12.3. SIM PCB


CN5003
CN5003
K1NA06E00008
CN5002
K1KB02B00014
CN5001
K1KB02B00014
R5003
R5002
CN5000
K1KA14A00255
C5006
0.022u
D3002,D3006
C5005
27p
FL5000
EXC24CP221U
FL5001
EXC24CP221U
TP5000
TP5001
TP5002
TP5003
RV5000
RV5001
D4ED18R00002
MAZS0470GL
C5001
C5002
C5003
C5004
R5000
R5001