DJ-C5

CARD SIZE DUAL BAND TRANSCEIVER

Service Manual

CONTENTS

ALINCO, INC.

SPECIFICATIONS

DJ-C5

	VHF band	UHF band
Frequency range (version -T)	118.000 ~ 173.995MHz *Rx 144.000 ~ 147.995MHz Tx	420.000 ~ 449.995MHz
Frequency range (version -E)	144.000 ~ 145.995MHz	430.000 ~ 439.995MHz
Modulation	F3E(FM)	
Transmitter Output	350mW	300mW
Modulation system	Reactance Modulation	
Spurious ratio	max - 60dB	
Receiver system	Double-conversion superheterodyne	
Sensitivity	max - 16dBμ	max - 15dBμ**
AF Output	max 60mW(8Ω)	
Mic Impedance	2kΩ	
Current Dissipation	Tx 240mA / Rx(BS) 30mA	Tx 300mA / Rx(BS) 40mA
Grounding	Negative	
Rated voltage	3.8VDC	
Operating Temperature	- 10 to + 50 deg.C	
Intermediate Frequency	1st T = 21.7MHz / E = 20.8MHz 2nd 450kHz	
Dimensions	56W × 94H × 10.6D mm without projections	
Weight	85gr.	

* 118.000 ~ 135.995MHz : AM reception

** T : 440.000 ~ 449.995MHz

E : 430.000 ~ 439.995MHz

CIRCUIT DESCRIPTION

Receiver

Configuration: Double conversion super heterodyne

First I.F. : 21.7MHz (T-version)/20.8MHz(E-version)

Second I.F. : 450kHz

1. Front End

[VHF]

The signal received by the antenna goes thru low pass and high pass filters, and is amplified by an RF amplifier (Q205). The signal further goes thru a low pass filter and thru a band switch (D208) is fed to a mixer (IC206).

[UHF]

the signal received by the antenna goes thru high pass and low pass filters, and is amplified by an RF amplifier (Q206). The signal further goes thru a bandpass filter (FL201), and thru a band swtich (D213) is fed to a mixer (IC206).

2. Mixer

The input signal and the first local signal make the sum and difference by the mixer IC206, which is filtered by the crystal filter XF201 selecting 21.7MHz (20.8MHz) and removing adjacent signals, and is amplified by the first IF amp Q207. The first local signal from the VCO output goes thru a buffer amp (Q203) and is fed to the local input of the mixer IC206. For VHF the upper side local is used and for UHF the lower side local is used.

3. I.F.

The signal amplified by the first IF amp Q207 is fed to pin No.16 of the IC207 which is for demodulating. The fed signal and the 21.25MHz signal input to pin No.1 of the IC207 out of reference buffer output of the IC202 are mixed by the mixer inside the IC207 converting to 450kHz second I.F. signal. The second I.F. signal is output from pin No.3 of the IC207, and filtering out adjacent signals with the ceramic filter FL202, is input to pin No.5 of the IC207. }

[FM]: The second I.F. signal input to pin No.5 of the IC207 is demodulated with a limitter-amp and quadrature detector circuit inside the IC, and is output from pin No.10 of the IC207 as audio signal.

[AM]: For AM, the output from pin No.8 of the IC207 for S-meter is amplified by the AM audio amp Q218. In order to obtain normal audio output independent of varying input signal, a forward AGC is applied on the first IF amp Q207 by the AGC amp Q208, controlling the gain of the first IF amp Q207.

4. Squelch

The AF signal coming from pin No.10 of the IC207 is fed to pin No.11 of the IC207. The input signal goes thru a noise filter amp and rectifier circuit and is output from pin No.13 of the IC207. The signal rectified is fed to the A/D port of the CPU IC101, and by logical determination by the IC101 an audio output On/Off is controlled.

5. Audio

The switching of audio output between FM and AM is done by the IC212. The volume control is done by the Q219, Q220, and Q223 then fed to pin No.2 of the IC221, and the output from the pin No.6 drives a speaker or earphone.

6. VCO

[VHF]: The VHF VCO is of Colpitts oscillator configuration. The D209, D212, and L228 determine the frequency, oscillated with a transistor (Q204). The signal oscillated by a buffer amplifier (Q203) is fed to pin No.11 of the PLL IC, IC202.

[UHF]: The UHF VCO is of Colpitts oscillator configuration. The D203, D207, and L213 determine the frequency, oscillated with a transistor (Q202). The signal oscillated by a buffer amplifier (Q203) is fed to pin No.6 of the PLL IC, IC202.

7. PLL

The IC202 has dividers for the input signal, reference signal, a phase comparator, and loop filter amp. The IC202 is driven by the serial control signal coming from the IC101. The reference frequency of 21.25MHz for the IC202 is created by oscillating the X201 with IC's internal oscillation circuit.

[VHF]: The signal fed to pin No.11 of the IC202 is divided inside the IC202 according to frequency division information sent by the IC101. The reference frequency 21.25Mhz is also divided inside the IC202 and the phase is compared with the above signal. The output from pin No.9 of the IC202 gives pulses according to the phase difference, which is converted to DC with the loop filter amp. The resulting voltage is fed to the D209 and D212 controlling stabilization of the VCO output frequency.

[UHF]: The signal fed to pin No.6 of the IC202 is divided inside the IC202 according to frequency division information sent by the IC101. The reference frequency 21.25Mhz is also divided inside the IC202 and the phase is compared with the above signal. The output from pin No.8 of the IC202 gives pulses according to the phase difference, which is converted to DC with the loop filter amp. The resulting voltage is fed to the D203 and D207 controlling stabilization of the VCO output frequency.

Transmitter

1. Mic Amp

   The Mic Amp IC208 has two op-amps. The audio from the microphone is fed to the IC208. The input signal is amplified and output with pre-emphasis.

   [VHF]: The output signal is limited for the maximum deviation with the VR202, and is fed to the cathode of the modulation varicap D210, varying the capacitance of the oscillator circuit making frequency modulation.

   [UHF]: The output signal is limited for the maximum deviation with the VR201, and is fed to the cathode of the modulation varicap D206, varying the capacitance of the oscillator circuit making frequency modulation.

2. Power Amplifier

   The signal oscillated by the VCO goes thru buffer amps Q203 and IC201, and is fed to the power amp Q201. The signal amplified goes thru a low pass filter attenuating harmonics, and is fed to the antenna which includes a matching circuit.

ALIGNMENT

Note: Fcu= 435.05MHz for the version-E and 445.05MHz for the version-T

Unless otherwise mentioned, supply a regulated power at 4.0VDC.

1. Reference voltage

   Receive on 144.95MHz. Measure P/D and adjust L228 to obtain 1.7V +/-0.1V.

2. Reference frequency

   Transmit on Fcu. Measuring with a frequency counter adjust TC201 to obtain Fcu +/-100Hz,.

3. Transmitter Output

   Transmit on Fcu. Measuring with a power meter, adjust VR203 to obtain 300mW +/-20mW.

4. Deviation

   Transmit on the below mentioned frequency with a signal of 1kHz 50mV AF input to mic terminals and adjust the corresponding VR to obtain 4.5kHz +/-0.1kHz.

   On 145.05MHz adjust VR202

   On Fcu adjust VR201.

5. Squelch

   Set at squelch-level 1. Input a signal to antenna terminal on 145.03MHz at –12dBu with the standard modulation (1kHz +/-3.5kHz/dev), and adjust VR204 so that the squelch just opens at threashold.

PARTS LIST

REF	PART CODE	DESCRIPTION	UNIT
C101	CU3047	C1608JB1H103KT-N	CPU
C102	CS0398	TMCP0J225MTR	CPU
C103	CU3017	C1608CH1H330JT-AS	CPU
C104	CU3017	C1608CH1H330JT-AS	CPU
CN101	UE0319	DF12A-30DS-0.5V(81)	CPU
D101	XD0315	MA2S728-TX	CPU
EL101	EL0040	LCD DJC1	CPU
IC101	XA0578	M38223M4-436HP	CPU
IC102	XA0548	24LC04BT-I/SN	CPU
IC103	XA0356	S-80730SL-AT-T1	CPU
R101	RK3042	ERJ3GSYJ222V	CPU
R102	RK3058	ERJ3GSYJ473V	CPU
R103	RK3062	ERJ3GSYJ104V	CPU
R104	RK3056	ERJ3GSYJ333V	CPU
R105	RK3056	ERJ3GSYJ333V	CPU
R106	RK3058	ERJ3GSYJ473V	CPU
R107	RK3058	ERJ3GSYJ473V	CPU
R108	RK3052	ERJ3GSYJ153V	CPU
R108	RK3056	ERJ3GSYJ333V	CPU
R109	RK3052	ERJ3GSYJ153V	CPU
R109	RK3056	ERJ3GSYJ333V	CPU
R110	RK3046	ERJ3GSYJ472V	CPU
R111	RK3038	ERJ3GSYJ102V	CPU
R112	RK3062	ERJ3GSYJ104V	CPU
R113	RK3062	ERJ3GSYJ104V	CPU
R114	RK3062	ERJ3GSYJ104V	CPU
R115	RK3062	ERJ3GSYJ104V	CPU
R116	RK3074	ERJ3GSYJ105V	CPU
R117	RK3026	ERJ3GSYJ101V	CPU
R118	RA0009	EXBV8V102JV	CPU
R119	RA0009	EXBV8V102JV	CPU
R120	RA0009	EXBV8V102JV	CPU
R121	RA0009	EXBV8V102JV	CPU
R122	RA0009	EXBV8V102JV	CPU
R123	RA0011	EXBV8V103JV	CPU
R124	RA0010	EXBV8V472JV	CPU
R125	RA0009	EXBV8V102JV	CPU
R126	RA0009	EXBV8V102JV	CPU
X101	XQ0077	38C 3.686400MHZ	CPU
	YX0004	TAPE	CPU
C201	CS0367	TMCMA0J106MTR	MAIN

REF	PART CODE	DESCRIPTION	UNIT
C202	CU3035	C1608JB1H102KT-AS	MAIN
C203	CU3031	C1608JB1H471KT-AS	MAIN
C204	CU3035	C1608JB1H102KT-AS	MAIN
C205	CU3035	C1608JB1H102KT-AS	MAIN
C206	CU3022	C1608CH1H820JT-AS	MAIN
C207	CS0367	TMCMA0J106MTR	MAIN
C208	CU3035	C1608JB1H102KT-AS	MAIN
C209	CU3031	C1608JB1H471KT-AS	MAIN
C210	CU3035	C1608JB1H102KT-AS	MAIN
C211	CU3031	C1608JB1H471KT-AS	MAIN
C212	CU3005	C1608CH1H040CT-AS	MAIN
C213	CU3017	C1608CH1H330JT-AS	MAIN
C214	CU3005	C1608CH1H040CT-AS	MAIN
C215	CU3011	C1608CH1H100DT-AS	MAIN
C215	CU3009	C1608CH1H080CT-A	MAIN
C216	CU3035	C1608JB1H102KT-AS	MAIN
C217	CU3035	C1608JB1H102KT-AS	MAIN
C218	CU3019	C1608CH1H470JT-AS	MAIN
C219	CU3035	C1608JB1H102KT-AS	MAIN
C221	CU3016	C1608CH1H270JT-AS	MAIN
C222	CU3016	C1608CH1H270JT-AS	MAIN
C223	CU3011	C1608CH1H100DT-AS	MAIN
C224	CU3031	C1608JB1H471KT-AS	MAIN
C225	CS0376	TMCMA0G226MTR	MAIN
C226	CU3019	C1608CH1H470JT-AS	MAIN
C227	CU3031	C1608JB1H471KT-AS	MAIN
C228	CU3035	C1608JB1H102KT-AS	MAIN
C229	CU3035	C1608JB1H102KT-AS	MAIN
C230	CU3035	C1608JB1H102KT-AS	MAIN
C231	CU3013	C1608CH1H150JT-AS	MAIN
C232	CU3019	C1608CH1H470JT-AS	MAIN
C233	CU3011	C1608CH1H100DT-AS	MAIN
C234	CU3035	C1608JB1H102KT-AS	MAIN
C235	CU3011	C1608CH1H100DT-AS	MAIN
C236	CU3001	C1608CH1H0R5CT-AS	MAIN
C237	CU3002	C1608CH1H010CT-AS	MAIN
C238	CU3031	C1608JB1H471KT-AS	MAIN
C239	CU3085	C1608CH1H300JT-AS	MAIN
C240	CU3006	C1608CH1H050CT-AS	MAIN
C241	CU3031	C1608JB1H471KT-AS	MAIN
C242	CU3015	C1608CH1H220JT-AS	MAIN

REF	PART CODE	DESCRIPTION	UNIT
C243	CU3007	C1608CH1H060CT-A	MAIN
C244	CU3013	C1608CH1H150JT-AS	MAIN
C245	CU3101	C1608JB1C473KT-NS	MAIN
C247	CU3002	C1608CH1H010CT-AS	MAIN
C248	CU3002	C1608CH1H010CT-AS	MAIN
C249	CU3015	C1608CH1H220JT-AS	MAIN
C250	CU3021	C1608CH1H680JT-AS	MAIN
C251	CS0397	TMCP1C105MTR	MAIN
C252	CU3031	C1608JB1H471KT-AS	MAIN
C253	CU3047	C1608JB1H103KT-N	MAIN
C254	CS0376	TMCMA0G226MTR	MAIN
C255	CU3035	C1608JB1H102KT-AS	MAIN
C256	CU3003	C1608CH1H020CT-AS	MAIN
C257	CU3007	C1608CH1H060CT-A	MAIN
C258	CU3009	C1608CH1H080CT-A	MAIN
C260	CU3035	C1608JB1H102KT-AS	MAIN
C261	CU3035	C1608JB1H102KT-AS	MAIN
C262	CS0376	TMCMA0G226MTR	MAIN
C263	CU3035	C1608JB1H102KT-AS	MAIN
C264	CU3035	C1608JB1H102KT-AS	MAIN
C265	CU3035	C1608JB1H102KT-AS	MAIN
C266	CU3031	C1608JB1H471KT-AS	MAIN
C267	CU3015	C1608CH1H220JT-AS	MAIN
C268	CU3012	C1608CH1H120JT-AS	MAIN
C269	CU3008	C1608CH1H070CT-A	MAIN
C270	CU3035	C1608JB1H102KT-AS	MAIN
C271	CU3031	C1608JB1H471KT-AS	MAIN
C272	CU3002	C1608CH1H010CT-AS	MAIN
C273	CS0394	TMCMB0J476MTR	MAIN
C274	CU3021	C1608CH1H680JT-AS	MAIN
C275	CU3002	C1608CH1H010CT-AS	MAIN
C276	CU3019	C1608CH1H470JT-AS	MAIN
C278	CU3013	C1608CH1H150JT-AS	MAIN
C279	CU3019	C1608CH1H470JT-AS	MAIN
C280	CU3035	C1608JB1H102KT-AS	MAIN
C281	CU3035	C1608JB1H102KT-AS	MAIN
C282	CU3014	C1608CH1H180JT-AS	MAIN
C283	CU3016	C1608CH1H270JT-AS	MAIN
C284	CU3014	C1608CH1H180JT-AS	MAIN
C285	CU3101	C1608JB1C473KT-NS	MAIN
C287	CU3009	C1608CH1H080CT-A	MAIN

REF	PART CODE	DESCRIPTION	UNIT
C288	CU3011	C1608CH1H100DT-AS	MAIN
C288	CU3009	C1608CH1H080CT-A	MAIN
C289	CS0397	TMCP1C105MTR	MAIN
C290	CU3015	C1608CH1H220JT-AS	MAIN
C291	CU3016	C1608CH1H270JT-AS	MAIN
C292	CU3035	C1608JB1H102KT-AS	MAIN
C293	CS0378	TMCMC0G107MTR	MAIN
C294	CU3035	C1608JB1H102KT-AS	MAIN
C295	CU3035	C1608JB1H102KT-AS	MAIN
C297	CU3035	C1608JB1H102KT-AS	MAIN
C298	CU3009	C1608CH1H080CT-A	MAIN
C299	CU3035	C1608JB1H102KT-AS	MAIN
C300	CU3031	C1608JB1H471KT-AS	MAIN
C301	CU3031	C1608JB1H471KT-AS	MAIN
C302	CU3047	C1608JB1H103KT-N	MAIN
C303	CU3003	C1608CH1H020CT-AS	MAIN
C304	CU3008	C1608CH1H070CT-A	MAIN
C305	CU3035	C1608JB1H102KT-AS	MAIN
C306	CU3031	C1608JB1H471KT-AS	MAIN
C308	CU3035	C1608JB1H102KT-AS	MAIN
C309	CU3015	C1608CH1H220JT-AS	MAIN
C310	CU3012	C1608CH1H120JT-AS	MAIN
C311	CU3035	C1608JB1H102KT-AS	MAIN
C312	CU3047	C1608JB1H103KT-N	MAIN
C316	CU3035	C1608JB1H102KT-AS	MAIN
C320	CU3047	C1608JB1H103KT-N	MAIN
C322	CU3003	C1608CH1H020CT-AS	MAIN
C323	CU3003	C1608CH1H020CT-AS	MAIN
C324	CS0397	TMCP1C105MTR	MAIN
C325	CU3111	C1608JB1C104KT-N	MAIN
C326	CS0376	TMCMA0G226MTR	MAIN
C327	CU3035	C1608JB1H102KT-AS	MAIN
C328	CU3035	C1608JB1H102KT-AS	MAIN
C329	CU3047	C1608JB1H103KT-N	MAIN
C330	CS0397	TMCP1C105MTR	MAIN
C331	CS0397	TMCP1C105MTR	MAIN
C332	CU3027	C1608CH1H221JT-AS	MAIN
C333	CU3111	C1608JB1C104KT-N	MAIN
C334	CU3051	C1608JB1E223KT-NS	MAIN
C335	CU3051	C1608JB1E223KT-NS	MAIN
C336	CS0397	TMCP1C105MTR	MAIN

REF	PART CODE	DESCRIPTION	UNIT
C337	CU3035	C1608JB1H102KT-AS	MAIN
C338	CU3039	C1608JB1H222KT-AS	MAIN
C339	CU3047	C1608JB1H103KT-N	MAIN
C340	CU3111	C1608JB1C104KT-N	MAIN
C341	CU3035	C1608JB1H102KT-AS	MAIN
C342	CU3111	C1608JB1C104KT-N	MAIN
C343	CU3039	C1608JB1H222KT-AS	MAIN
C344	CS0367	TMCMA0J106MTR	MAIN
C345	CS0397	TMCP1C105MTR	MAIN
C346	CU3047	C1608JB1H103KT-N	MAIN
C347	CS0367	TMCMA0J106MTR	MAIN
C348	CU3051	C1608JB1E223KT-NS	MAIN
C349	CU3051	C1608JB1E223KT-NS	MAIN
C350	CU3021	C1608CH1H680JT-AS	MAIN
C351	CU3111	C1608JB1C104KT-N	MAIN
C352	CS0403	TMCP1D224MTR	MAIN
C353	CU3039	C1608JB1H222KT-AS	MAIN
C354	CU3035	C1608JB1H102KT-AS	MAIN
C355	CU3111	C1608JB1C104KT-N	MAIN
C356	CU3111	C1608JB1C104KT-N	MAIN
C357	CU3111	C1608JB1C104KT-N	MAIN
C358	CU3111	C1608JB1C104KT-N	MAIN
C359	CU3111	C1608JB1C104KT-N	MAIN
C360	CS0397	TMCP1C105MTR	MAIN
C361	CU3111	C1608JB1C104KT-N	MAIN
C362	CU3102	C1608JB1C333KT-NS	MAIN
C363	CU3100	C1608JB1C393KT-NS	MAIN
C364	CU3111	C1608JB1C104KT-N	MAIN
C365	CU3035	C1608JB1H102KT-AS	MAIN
C366	CS0397	TMCP1C105MTR	MAIN
C367	CU3037	C1608JB1H152KT-AS	MAIN
C368	CU3035	C1608JB1H102KT-AS	MAIN
C369	CU3115	C1608RH1H101JT-A	MAIN
C371	CU3111	C1608JB1C104KT-N	MAIN
C372	CU3035	C1608JB1H102KT-AS	MAIN
C373	CU3111	C1608JB1C104KT-N	MAIN
C374	CU3035	C1608JB1H102KT-AS	MAIN
C375	CS0394	TMCMB0J476MTR	MAIN
C376	CS0378	TMCMC0G107MTR	MAIN
C377	CU3111	C1608JB1C104KT-N	MAIN
C378	CU3035	C1608JB1H102KT-AS	MAIN

REF	PART CODE	DESCRIPTION	UNIT
C379	CU3031	C1608JB1H471KT-AS	MAIN
C380	CS0397	TMCP1C105MTR	MAIN
C381	CU3035	C1608JB1H102KT-AS	MAIN
C382	CU3047	C1608JB1H103KT-N	MAIN
C383	CU3026	C1608CH1H181JT-AS	MAIN
C384	CU3029	C1608JB1H331KT-AS	MAIN
C386	CU3111	C1608JB1C104KT-N	MAIN
C387	CU3006	C1608CH1H050CT-AS	MAIN
C388	CU3031	C1608JB1H471KT-AS	MAIN
C390	CU3031	C1608JB1H471KT-AS	MAIN
C391	CU3111	C1608JB1C104KT-N	MAIN
C393	CU3111	C1608JB1C104KT-N	MAIN
C394	CU3111	C1608JB1C104KT-N	MAIN
C395	CU3009	C1608CH1H080CT-A	MAIN
CN201	UE0313	H.FL-R-SMT2(C)(10)	MAIN
CN202	UE0320	PI28E02M	MAIN
CN203	UE0317	DF12D(5.0)30DP0.5V81	MAIN
D201	XD0319	MA2S077-TX	MAIN
D202	XD0319	MA2S077-TX	MAIN
D203	XD0316	MA2S376-TX	MAIN
D204	XD0319	MA2S077-TX	MAIN
D206	XD0316	MA2S376-TX	MAIN
D207	XD0316	MA2S376-TX	MAIN
D208	XD0319	MA2S077-TX	MAIN
D209	XD0312	MA2S30400L	MAIN
D210	XD0316	MA2S376-TX	MAIN
D211	XD0319	MA2S077-TX	MAIN
D212	XD0312	MA2S30400L	MAIN
D213	XD0319	MA2S077-TX	MAIN
D214	XD0319	MA2S077-TX	MAIN
D215	XD0319	MA2S077-TX	MAIN
D217	XD0319	MA2S077-TX	MAIN
D218	XD0319	MA2S077-TX	MAIN
D221	XD0315	MA2S728-TX	MAIN
D222	XD0231	DAP202U T106	MAIN
D223	XD0251	MA741WA TX	MAIN
D224	XD0231	DAP202U T106	MAIN
D225	XD0156	CHIP UDZ TE-17 3.6B	MAIN
D226	XL0054	LN28WP	MAIN
D228	XD0319	MA2S077-TX	MAIN
D229	XD0319	MA2S077-TX	MAIN

REF	PART CODE	DESCRIPTION	UNIT
D230	XD0230	DAN202U T106	MAIN
FL201	XC0045	EFCH435MWNP1	MAIN
FL201	XC0046	EFCH445MWNP1	MAIN
FL202	XC0040	PBFC450P15DR	MAIN
IC201	XA0545	uPC2771T	MAIN
IC202	XA0543	M64082AGP	MAIN
IC203	XA0533	XC61AC2902MR	MAIN
IC204	XA0519	XC62SPR332MR	MAIN
IC206	XA0546	uPC2758T	MAIN
IC207	XA0515	TK14521MTL	MAIN
IC208	XA0537	BA4510FV-E2	MAIN
IC209	XA0524	TC7S66FU(TE85L)	MAIN
IC210	XA0573	NJM2904V	MAIN
IC211	XA0210	NJM2070M T1	MAIN
IC212	XA0348	TC4W53FU(TE12)	MAIN
JK201	UJ0044	HSJ1621-019010	MAIN
L201	QC0288	NL252018T-1R0J	MAIN
L202	QC0538	LQN21AR10J04	MAIN
L203	QC0536	LQN21A56NJ04	MAIN
L204	QC0536	LQN21A56NJ04	MAIN
L205	QC0536	LQN21A56NJ04	MAIN
L206	QC0533	LQN21A39NJ04	MAIN
L207	QKA65A	MR1.5 3.5T 0.4	MAIN
L208	QKAC5A	MR1.5 12.5T 0.4	MAIN
L208	QKAB5A	COIL MR1.5 11.5T 0.4	MAIN
L209	QC0276	NL252018T-R10J	MAIN
L210	QC0292	NL252018T-2R2J	MAIN
L211	QC0292	NL252018T-2R2J	MAIN
L212	QC0418	LL1608-F10NK	MAIN
L213	QKA25A	MR1.5 2.5T 0.4	MAIN
L214	QC0528	LQN21A15NJ04	MAIN
L215	QC0530	LQN21A22NJ04	MAIN
L217	QC0526	LQN21A10NJ04	MAIN
L218	QC0288	NL252018T-1R0J	MAIN
L219	QC0397	LQN1A8N8J04	MAIN
L220	QC0288	NL252018T-1R0J	MAIN
L221	QC0529	LQN21A18NJ04	MAIN
L222	QC0528	LQN21A15NJ04	MAIN
L223	QC0535	LQN21A56NJ04	MAIN
L224	QC0535	LQN21A56NJ04	MAIN
L225	QC0430	MLF1608DR10K-T	MAIN

REF	PART CODE	DESCRIPTION	UNIT
L226	QC0534	LQN21A47NJ04	MAIN
L227	QC0430	MLF1608DR10K-T	MAIN
L228	QA0070	L QA0070 -T	MAIN
L229	QC0534	LQN21A47NJ04	MAIN
L230	QC0534	LQN21A47NJ04	MAIN
L232	QC0422	LL1608-F22NK	MAIN
L233	QC0529	LQN21A18NJ04	MAIN
L234	QC0420	LL1608-F15NK	MAIN
L236	QC0421	LL1608-F18NK	MAIN
L237	QC0426	LL1608-F47NK	MAIN
L238	QC0046	NL322522T-3R9J-3	MAIN
L239	QC0288	NL252018T-1R0J	MAIN
L240	QC0422	LL1608-F22NK	MAIN
MC201	EY0012	EM-123T	MAIN
Q201	XE0034	MRF9745T1	MAIN
Q202	XT0138	2SC5066-O(TE85L)	MAIN
Q203	XT0138	2SC5066-O(TE85L)	MAIN
Q204	XT0138	2SC5066-O(TE85L)	MAIN
Q205	XT0138	2SC5066-O(TE85L)	MAIN
Q206	XT0138	2SC5066-O(TE85L)	MAIN
Q207	XT0138	2SC5066-O(TE85L)	MAIN
Q208	XT0135	2SD2216R-TX R	MAIN
Q209	XU0092	UN911H-TX	MAIN
Q210	XU0188	XP1116-TX	MAIN
Q211	XU0188	XP1116-TX	MAIN
Q212	XU0188	XP1116-TX	MAIN
Q213	XU0188	XP1116-TX	MAIN
Q214	XU0171	XP1111-TX	MAIN
Q215	XU0099	UN9216-R-TX	MAIN
Q216	XU0099	UN9216-R-TX	MAIN
Q217	XU0092	UN911H-TX	MAIN
Q218	XT0135	2SD2216R-TX R	MAIN
Q219	XU0177	XP1216-TX	MAIN
Q220	XU0099	UN9216-R-TX	MAIN
Q221	XU0152	UMC5NTR	MAIN
Q222	XT0138	2SC5066-O(TE85L)	MAIN
Q223	XU0099	UN9216-R-TX	MAIN
R201	RK3050	ERJ3GSYJ103V	MAIN
R202	RK3038	ERJ3GSYJ102V	MAIN
R203	RK3030	ERJ3GSYJ221V	MAIN
R204	RK3030	ERJ3GSYJ221V	MAIN
R205	RK3058	ERJ3GSYJ473V	MAIN

REF	PART CODE	DESCRIPTION	UNIT
R206	RK3020	ERJ3GSYJ330V	MAIN
R207	RK3022	ERJ3GSYJ470V	MAIN
R208	RK3018	ERJ3GSYJ220V	MAIN
R209	RK3038	ERJ3GSYJ102V	MAIN
R210	RK3050	ERJ3GSYJ103V	MAIN
R211	RK3062	ERJ3GSYJ104V	MAIN
R212	RK3050	ERJ3GSYJ103V	MAIN
R214	RK3058	ERJ3GSYJ473V	MAIN
R215	RK3030	ERJ3GSYJ221V	MAIN
R216	RK3042	ERJ3GSYJ222V	MAIN
R217	RK3044	ERJ3GSYJ332V	MAIN
R218	RK3034	ERJ3GSYJ471V	MAIN
R219	RK3050	ERJ3GSYJ103V	MAIN
R220	RK3050	ERJ3GSYJ103V	MAIN
R221	RK3043	ERJ3GSYJ272V	MAIN
R223	RK3022	ERJ3GSYJ470V	MAIN
R224	RK3022	ERJ3GSYJ470V	MAIN
R225	RK3062	ERJ3GSYJ104V	MAIN
R226	RK3050	ERJ3GSYJ103V	MAIN
R227	RK3042	ERJ3GSYJ222V	MAIN
R229	RK3044	ERJ3GSYJ332V	MAIN
R230	RK3062	ERJ3GSYJ104V	MAIN
R233	RK3034	ERJ3GSYJ471V	MAIN
R234	RK3050	ERJ3GSYJ103V	MAIN
R235	RK3050	ERJ3GSYJ103V	MAIN
R236	RK3043	ERJ3GSYJ272V	MAIN
R237	RK3042	ERJ3GSYJ222V	MAIN
R238	RK3050	ERJ3GSYJ103V	MAIN
R239	RK3026	ERJ3GSYJ101V	MAIN
R240	RK3022	ERJ3GSYJ470V	MAIN
R241	RK3042	ERJ3GSYJ222V	MAIN
R242	RK3034	ERJ3GSYJ471V	MAIN
R243	RK3042	ERJ3GSYJ222V	MAIN
R244	RK3059	ERJ3GSYJ563V	MAIN
R245	RK3022	ERJ3GSYJ470V	MAIN
R246	RK3042	ERJ3GSYJ222V	MAIN
R247	RK3042	ERJ3GSYJ222V	MAIN
R248	RK3034	ERJ3GSYJ471V	MAIN
R249	RK3059	ERJ3GSYJ563V	MAIN
R250	RK3042	ERJ3GSYJ222V	MAIN
R251	RK3038	ERJ3GSYJ102V	MAIN
R252	RK3039	ERJ3GSYJ122V	MAIN
R253	RK3058	ERJ3GSYJ473V	MAIN
R254	RK3022	ERJ3GSYJ470V	MAIN
R255	RK3022	ERJ3GSYJ470V	MAIN
R256	RK3046	ERJ3GSYJ472V	MAIN

REF	PART CODE	DESCRIPTION	UNIT
R257	RK3022	ERJ3GSYJ470V	MAIN
R258	RK3058	ERJ3GSYJ473V	MAIN
R259	RK3056	ERJ3GSYJ333V	MAIN
R260	RK3063	ERJ3GSYJ124V	MAIN
R261	RK3056	ERJ3GSYJ333V	MAIN
R262	RK3054	ERJ3GSYJ223V	MAIN
R263	RK3058	ERJ3GSYJ473V	MAIN
R264	RK3056	ERJ3GSYJ333V	MAIN
R265	RK3062	ERJ3GSYJ104V	MAIN
R266	RK3058	ERJ3GSYJ473V	MAIN
R267	RK3058	ERJ3GSYJ473V	MAIN
R268	RK3056	ERJ3GSYJ333V	MAIN
R269	RK3058	ERJ3GSYJ473V	MAIN
R270	RK3052	ERJ3GSYJ153V	MAIN
R271	RK3058	ERJ3GSYJ473V	MAIN
R272	RK3058	ERJ3GSYJ473V	MAIN
R273	RK3073	ERJ3GSYJ824V	MAIN
R274	RK3050	ERJ3GSYJ103V	MAIN
R275	RK3066	ERJ3GSYJ224V	MAIN
R276	RK3056	ERJ3GSYJ333V	MAIN
R277	RK3061	ERJ3GSYJ823V	MAIN
R278	RK3054	ERJ3GSYJ223V	MAIN
R279	RK3058	ERJ3GSYJ473V	MAIN
R280	RK3056	ERJ3GSYJ333V	MAIN
R281	RK3038	ERJ3GSYJ102V	MAIN
R282	RK3062	ERJ3GSYJ104V	MAIN
R283	RK3066	ERJ3GSYJ224V	MAIN
R284	RK3073	ERJ3GSYJ824V	MAIN
R285	RK3050	ERJ3GSYJ103V	MAIN
R286	RK3043	ERJ3GSYJ272V	MAIN
R287	RK3056	ERJ3GSYJ333V	MAIN
R288	RK3001	ERJ3GSY0R00V	MAIN
R289	RK3069	ERJ3GSYJ394V	MAIN
R290	RK3034	ERJ3GSYJ471V	MAIN
R291	RK3026	ERJ3GSYJ101V	MAIN
R292	RK3050	ERJ3GSYJ103V	MAIN
R293	RK3074	ERJ3GSYJ105V	MAIN
R294	RK3063	ERJ3GSYJ124V	MAIN
R295	RK3026	ERJ3GSYJ101V	MAIN
R296	RK3046	ERJ3GSYJ472V	MAIN
R297	RK3061	ERJ3GSYJ823V	MAIN
R298	RK3061	ERJ3GSYJ823V	MAIN
R299	RK3061	ERJ3GSYJ823V	MAIN
R300	RK3070	ERJ3GSYJ474V	MAIN
R302	RK3050	ERJ3GSYJ103V	MAIN
R303	RK3044	ERJ3GSYJ332V	MAIN

REF	PART CODE	DESCRIPTION	UNIT
R304	RK3040	ERJ3GSYJ152V	MAIN
R305	RK3036	ERJ3GSYJ681V	MAIN
R306	RK3078	ERJ3GSYJ225V	MAIN
R307	RK3070	ERJ3GSYJ474V	MAIN
R308	RK3070	ERJ3GSYJ474V	MAIN
R309	RK3062	ERJ3GSYJ104V	MAIN
R310	RK3044	ERJ3GSYJ332V	MAIN
R311	RK3056	ERJ3GSYJ333V	MAIN
R312	RK3070	ERJ3GSYJ474V	MAIN
R313	RK3038	ERJ3GSYJ102V	MAIN
R314	RK3030	ERJ3GSYJ221V	MAIN
R315	RK3074	ERJ3GSYJ105V	MAIN
R316	RK3001	ERJ3GSY0R00V	MAIN
R317	RK3062	ERJ3GSYJ104V	MAIN
R318	RK3014	ERJ3GSYJ100V	MAIN
R319	RK3054	ERJ3GSYJ223V	MAIN
R320	RK3032	ERJ3GSYJ331V	MAIN
R321	RK3042	ERJ3GSYJ222V	MAIN
R323	RK3038	ERJ3GSYJ102V	MAIN
R324	RK3030	ERJ3GSYJ221V	MAIN
R325	RK3030	ERJ3GSYJ221V	MAIN
R326	RK3056	ERJ3GSYJ333V	MAIN
R327	RK3054	ERJ3GSYJ223V	MAIN
R328	RK3026	ERJ3GSYJ101V	MAIN
R329	RK3050	ERJ3GSYJ103V	MAIN
R330	RK3001	ERJ3GSY0R00V	MAIN
R331	RK3039	ERJ3GSYJ122V	MAIN
SW201	US0022	HSW1060-01-010	MAIN
TC201	CT0037	CTZ2S-10A-W2	MAIN
VR201	RH0144	MVR22HXBRN223	MAIN
VR202	RH0144	MVR22HXBRN223	MAIN
VR203	RH0138	MVR22HXBRN222	MAIN
VR204	RH0140	MVR22HXBRN472	MAIN
X201	XQ0103	TOP-B 21.250MHZ	MAIN
XF201	XF0033	DSF753S 20.800MHZ	MAIN
XF201	XF0034	DSF753S 21.700MHZ	MAIN
	UP0348B	DJC5 PC BOARD 1/2	MAIN
	FM0145	CHARGER TERMINALS	MAIN
	TS0148	VCO COPPER SHEET	MAIN
	TS0149	VCO CASE XH700	MAIN
C401	CU3035	C1608JB1H102KT-AS	PTT
L401	QC0442	MLF1608A1R0K-T	PTT
L402	QC0442	MLF1608A1R0K-T	PTT
SW401	UU0026	EVQPLBA08	PTT
	AE0022	SCREW	MECH
	AF0010	SCREW	MECH

REF	PART CODE	DESCRIPTION	UNIT
	DK0128	FRONT PANEL	MECH
	ED0008A	ML11-1657	MECH
	FG0138	CUSHION DR130	MECH
	FG0234Y	MIC HOLDER	MECH
	FM0166	FRAME	MECH
	FP0115A	CHASSIS	MECH
	FP0116	PWR SW	MECH
	FP0117	PTT SW	MECH
	FP0118	LCD HOLDER	MECH
	FP0120	SW COVER	MECH
	KB0067A	REAR CASING	MECH
	KM0230	FRONT CASING	MECH
	YX0004	TAPE	MECH
	FM0165	ANT BASE	MECH
	TS0150	CPU GROUND	MECH
SP201	ES0020	SPEAKER	MECH
	FP0136	SP-SPACER	MECH
W201	MBCKO6AA		MAIN
W202	MRCKH5AA		MAIN
W203	MRCLO2AA		MAIN
W204	MBCKH9GG		MAIN
W205	MRCKH9GG		MAIN
W401	MACL07AA		PTT
W402	MWLH07GG		PTT
	BS0017	SOFT CASE DJC5	PACK
	DS0388	SERIAL NO.PLATE (E)	PACK
	DS0397	SERIAL NO.PLATE (T)	PACK
	EA68	ANTENNA DJC5	PACK
	EDC76Z	AC ADAPTER 120V (T)	PACK
	EDC77Z	AC ADAPTER 230V (E)	PACK
	EDH26A	CHARGER	PACK
	HK0436	PACKAGE SMALL	PACK
	HK0437	PACKAGE BIG	PACK
	HM0171	CARTON BOX (10PCS)	PACK
	HP0006	PROTECT.BAG (5×90×170)	PACK
	HP0031	PROTECT.BAG (5×100×200)	PACK
	HU0114	INNER 10PCS	PACK
	PH0009B	WARRANTY CERT EXPORT (T)	PACK
	PR0237	FCC PART15 (T)	PACK
	PR0345	LABEL (T)	PACK
	PS0273A	MANUAL for EDH26	PACK
	PS0277B	MANUAL for DJC5T	PACK
	PT0004A	LABEL (SERIAL NO.FOR CARTON)	PACK
	PR0309	CE-MARKLABEL (E)	PACK

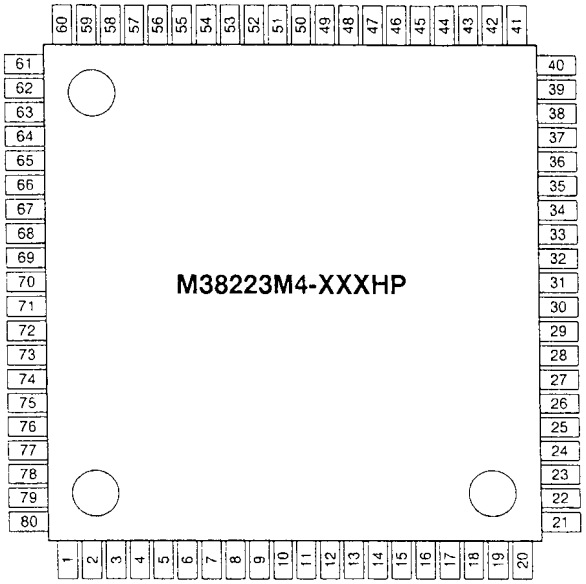
SEMICONDUCTOR DATA

(1) Terminal function of CPU

No.	Terminal	Signal	I/O	Description
1	AN7	BP1	I	Band edge
2	AN6	BP2	I	Default setting
3	AN5	BP3	I	Expand mode
4	AN4	TIN	I	Tone input
5	AN3	SQL	I	Squelch input
6	P62	UPC	O	UHF PLL PO
7	P61	38C	O	380MHz RX PO
8	P60	AFS	O	AF switch
9	P57	AFPC	O	AF power supply
10	Tout	BEEP	O	Beep output
11	P55	AM	O	AM power supply
12	CNTR0	TBST	O	Tone burst output
13	P53	STB1	O	PLL strobe
14	P52	CLK	O	PLL clock
15	P51	DATA	O	PLL data
		UL	I	PLL lock input
16	P50	TVC	O	TX power supply
17	P47	TUC	O	TX power supply
18	P46	MSW	O	Mic switch
19	TxD	CTX	O	Clone TX
20	RxD	CRX	I	Clone RX
21	P43	RUC	O	430MHz RX power supply
22	INT0	BU	I	Backup signal
23	P41	RVC	O	145MHz RX power supply
24	P40	PT3	I	PTT key input
25	RESET	RST	I	Reset signal input
26	P71	SDA	I/O	EEPROM data
27	P70	SCL	O	EEPROM clock
28	Xin	Xin	I	Clock input
29	Xout	Xout	O	Clock output
30	Vss	GND	I	Ground 0V
31	P27	BAND	I	BAND key
32	P26	FUNC	I	FUNC key
33	P25	VOL/SQL	I	VOL/SQL key
34	P24	CALL	I	CALL key
35	P23	UP	I	UP key
36	P22	MONI	I	MONI key
37	P21	VM	I	V/M key
38	P20	DOWN	I	DOWN key
39	P17			
40	P16			

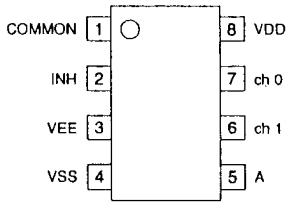
No.	Terminal	Signal	I/O	Description
41	P15			
42	P14			
43	P13			
44	P12			
45	P11			
46	P10			
47	P07	VPC	O	VHF PLL power supply
48	P06	VR03	O	Volume level 3
49	P05	VR02	O	Volume level 2
50	P04	VR01	O	Volume level 1
51	P03	TON4	O	Tone output 4 1/2 VDD
52	P02	TON3	O	Tone output 3 1/4 VDD
53	P01	TON2	O	Tone output 2 1/8 VDD
54	P00	TON1	O	Tone output 1 1/16 VDD
55	SEG15	SEG15	O	
56	SEG14	SEG14	O	
57	SEG13	SEG13	O	
58	SEG12	SEG12	O	
59	SEG11	SEG11	O	
60	SEG10	SEG10	O	
61	SEG9	SEG9	O	
62	SEG8	SEG8	O	
63	SEG7	SEG7	O	
64	SEG6	SEG6	O	
65	SEG5	SEG5	O	
66	SEG4	SEG4	O	
67	SEG3	SEG3	O	
68	SEG2	SEG2	O	
69	SEG1	SEG1	O	
70	SEG0	SEG0	O	
71	Vcc	VDD		
72	Vref	VDD		
73	AVss	GND		
74	COM3	COM3	O	
75	COM2	COM2	O	
76	COM1	COM1	O	
77	COM0	COM0	O	
78	VL3	VL3	I	
79	VL2	VL2	I	
80	VL1	VL1	I	

(2) CPU Pin Assignment (XA0578)



(3) TC4W53FU (XA0348)

Pin Assignment



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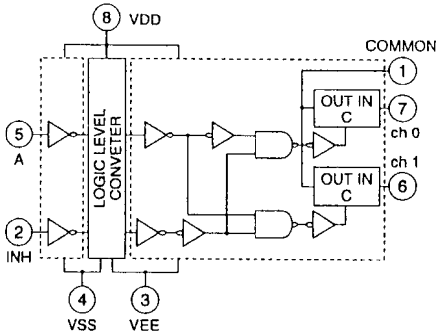
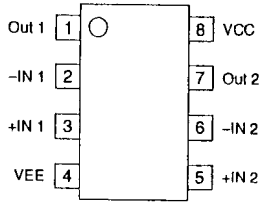


(4) BA4510FV (XA0537)

Pin Assignment



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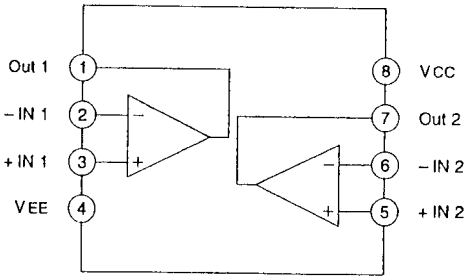
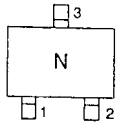
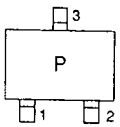
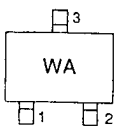
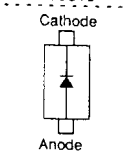
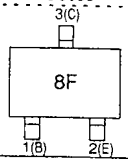
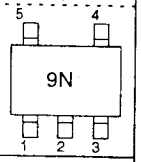
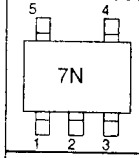
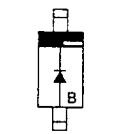
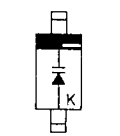
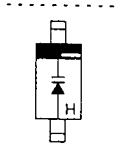
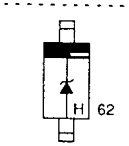
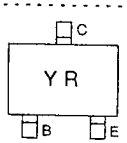
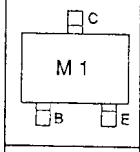
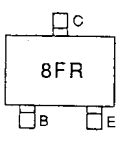
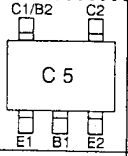
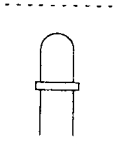
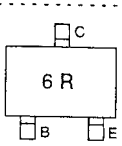
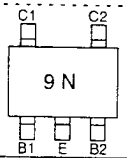
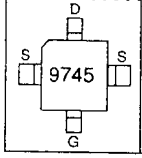
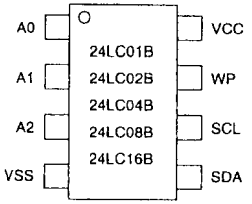


(5) Transistor, Diode and LCD Outline Drawings

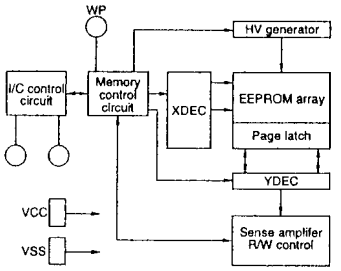
DAN202U XD0230 	DAP202U XD0231 	MA741WA XD0251 	MA2S077 XD0319 	UN9216 XU0099 	XP1111 XU0171 
XX1116 XU0188 	MA2S728 XD0315 	MA2S304 XD0312 	MA2S376 XD0316 	UDZ3.6B XD0156 	2SD2216R XT0135 
2SC5066 XT0138 	UN9216 XU0099 	UMC5 XU0152 	LN28WP XL0054 	UN911H XU0092 	XP1216 XU0177 
MRF9745 XE0034 					

(6) 24LC04BT-1 (XA0548)

EEPROM SO Package

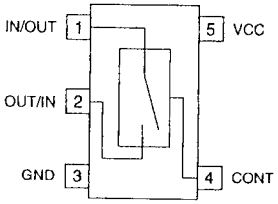


Block Diagram



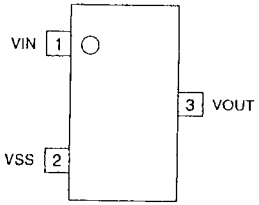
(7) TC7S66FU (XA0524)

Pin Assignment

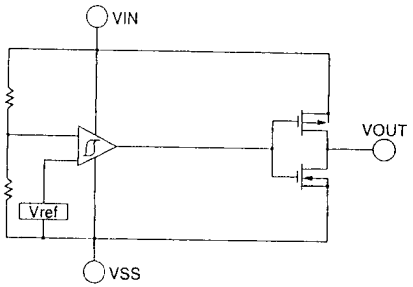


(8) XC61AC2902MR (XA0533)

Pin Assignment

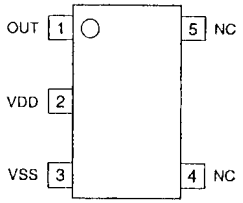


Block Diagram

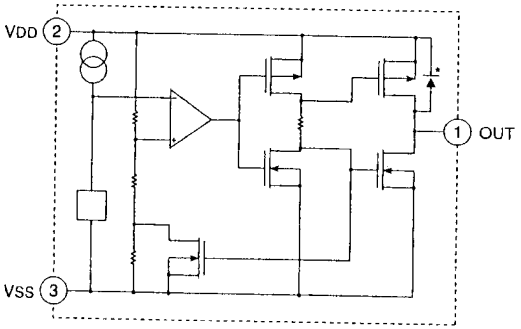


(9) S-80730SL-AT (XA0356)

Pin Assignment



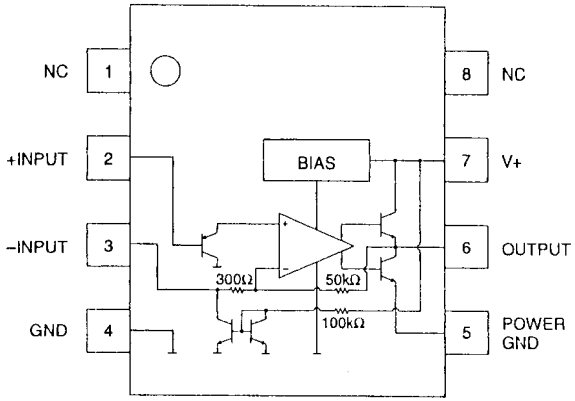
Block Diagram



(10) NJM2070M (XA0210)

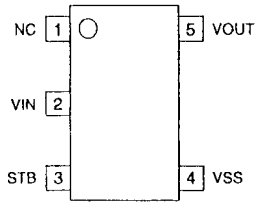
Low Voltage Power Amplifier

Block Diagram

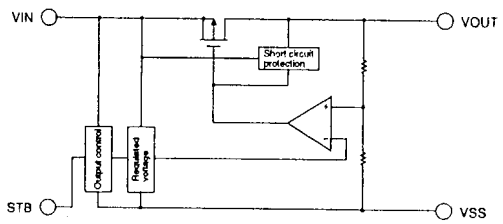


(11) XC62SPR332MR (XA0519)

Pin Assignment

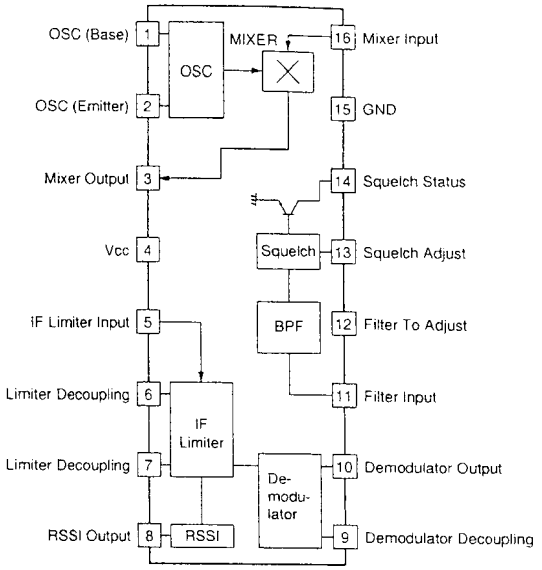


Block Diagram



(12) TK14521M (XA0515)

IF System

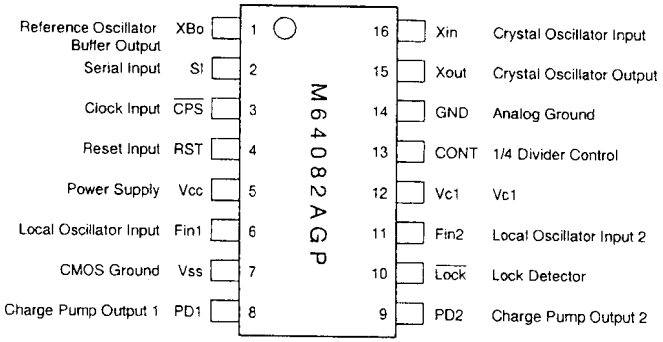


Ta = 25°C, Vcc = 3V, fin = 10.7MHz, fm = 1kHz, Mod = ±3kHz

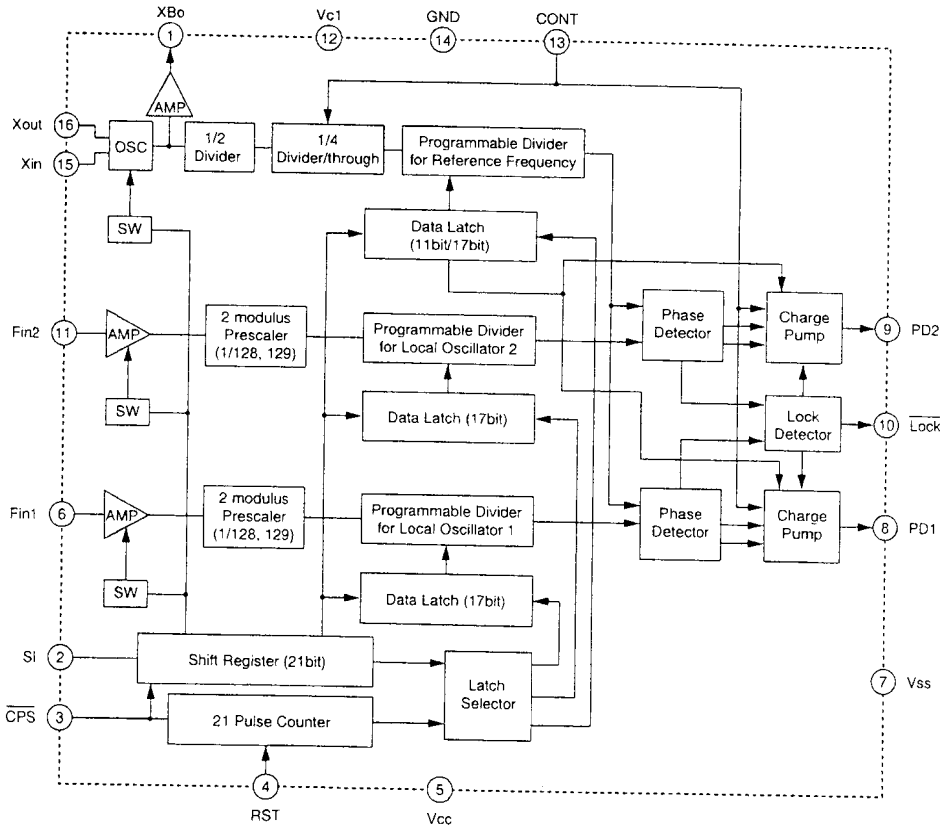
Parameter	Symbol	Ratings			Unit	Condition
		Min	Typical	Max		
Supply Current	Icc	4.3	7.0	9.8	mA	No signal
Mixer + IF part						
Limiting Sensitivity	Limit	-94	-100	-106	dBm	-3.0dB point
Output Voltage	Vo	200	300	400	mVrms	
Distortion	THD		0.8	2.8	%	
S/N	S/N	40	46	52	dB	
AM Rejection Ratio	AMRR	30	40		dB	AM 30% mod
Mixer Coversion Gain	GM	20	26	32	dB	
Mixer 3rd Intercept point	ICP	-10	-3		dBm	
Mixer Input Impedance	RIM	2.8	3.6	4.4	KΩ	DC Test
Mixer Output Impedance	ROM	1.2	1.5	1.9	KΩ	DC Test
Limiter Input Impedance	RIFIN	1.2	1.5	1.9	KΩ	DC Test
RSSI part						
RSSI Output Current 1	IRSSI 1	41	60	88	μA	-30dBm is input.
RSSI Output Current 2	IRSSI 2	22	40	59	μA	-60dBm is input.
RSSI Output Current 3	IRSSI 3	10	17	25	μA	-100dBm is input.
Squelch BPF part						
Center Frequency 1	fCT 1	10.5	15.0	21.0	kHz	Center frequency setting R=∞
Center Frequency 2	fCT 2	21.0	30.0	39.0	kHz	Center frequency setting R=36 kΩ
Center Frequency 3	fCT 3	38.5	55.0	71.5	kHz	Center frequency setting R=6.8 kΩ
Squelch Output Current	ISQ	6	10	18	μA	Center frequency setting R=36 kΩ 25mVrms is input (Pin11)
Squelch ON Voltage	VSQ(ON)	0.40	0.47	0.54	V	DC voltage is input to pin13.
Squelch OFF Voltage	VSQ(OFF)	0.50	0.57	0.64	V	DC voltage is input to pin13.

(13) M64082AGP (XA0543)

520MHz Dual 1 Chip PLL Frequency Synthesizer



Block Diagram

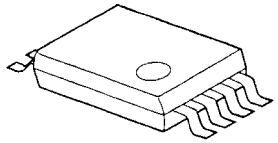


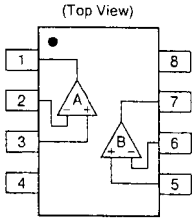
Terminal Description

No.	Symbol	Pin Name	Description
1	XBo	Buffer output	Buffer output terminal of reference frequency
2	SI	Data input	Data input terminal of shift register
3	$\overline{CPS}$	Clock pulse input	Clock pulse input terminal of shift register
4	RST	Reset pulse input	Reset pulse input terminal of 21 pulse counter
5	Vcc	Power supply terminal	1.8~5.5V
6	FIN1	Local Oscillator Input 1	Local oscillator frequency (VCO) input Fmax=520MHz
7	Vss	CMOS ground	0V
8	PD1	Phase detector output 1	Tristate output. Output is HiZ when PLL1 is turned OFF.
9	PD2	Phase detector output 2	Tristate output. Output is HiZ when PLL2 is turned OFF.
10	$\overline{Lock}$	Lock detector output	Lock="L", Unlock="H"
11	FIN2	Local Oscillator Input 2	Local oscillator frequency (VCO) input Fmax=520MHz
12	Vc1		connected to the analog power supply terminal inside the IC.
13	CONT	Divider control terminal	Changes divide ratio settings of reference frequency H: 8 x n L: 2 x n
14	GND	Analog ground	0V
15	XOUT	Crystal Oscillator Output	Reference oscillator (10~25MHz) is input to XIN.
16	XIN	Crystal Oscillator Input	Crystal oscillator is also available.

(14) NJM2904V (XA0573)

Dual Single Supply Operational Amplifier



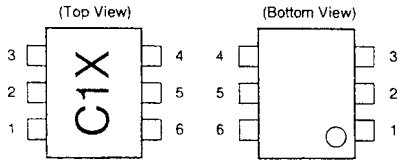


1: A OUTPUT
2: A – INPUT
3: A + INPUT
4: GND
5: B + INPUT
6: B – INPUT
7: B OUTPUT
8: V+

(15) μPC2758T (XA0546)

L Band Down Converter IC

Terminal Connection



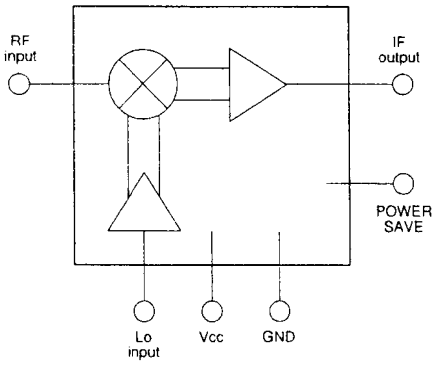
No.	Name
1	RF input
2	GND
3	Lo input
4	PS
5	Vcc = 3V
6	IF output

Specfications

(TA = +25°C, Vcc = 3.0V, PLOin = –10dBm, ZL = ZS = 50Ω)

Icc (mA)	CG (dB)	SSB NF (dB)	fRF (GHz)	PO (SAT) (dBm)	OIP3 (dBm)
11	19	9	0.1~2.0	–4	+11

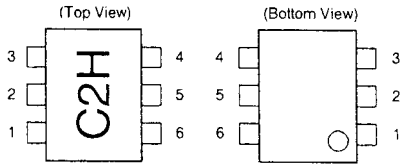
Block Diagram



(16) μPC2771T (XA0545)

Middle Power RF Amplifier

Terminal Connection



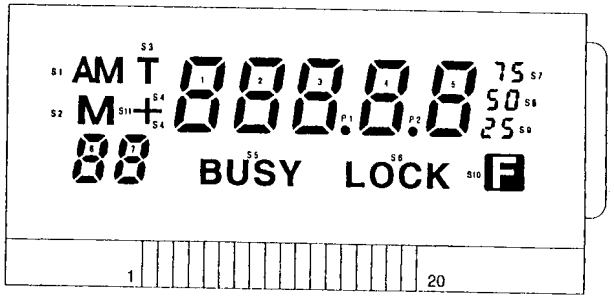
No.	Name
1	Input
2	GND
3	GND
4	Output
5	GND
6	Vcc = 3V

Specfications

(TA = +25°C, Vcc = 3.0V, ZL = ZS = 50Ω)

Vcc (V)	Icc (mA)	GP (dB)	fu (GHz)	PO (SAT) (dBm)	P1dB (dBm)
3	36	21	2.1	+12.5	+11.5

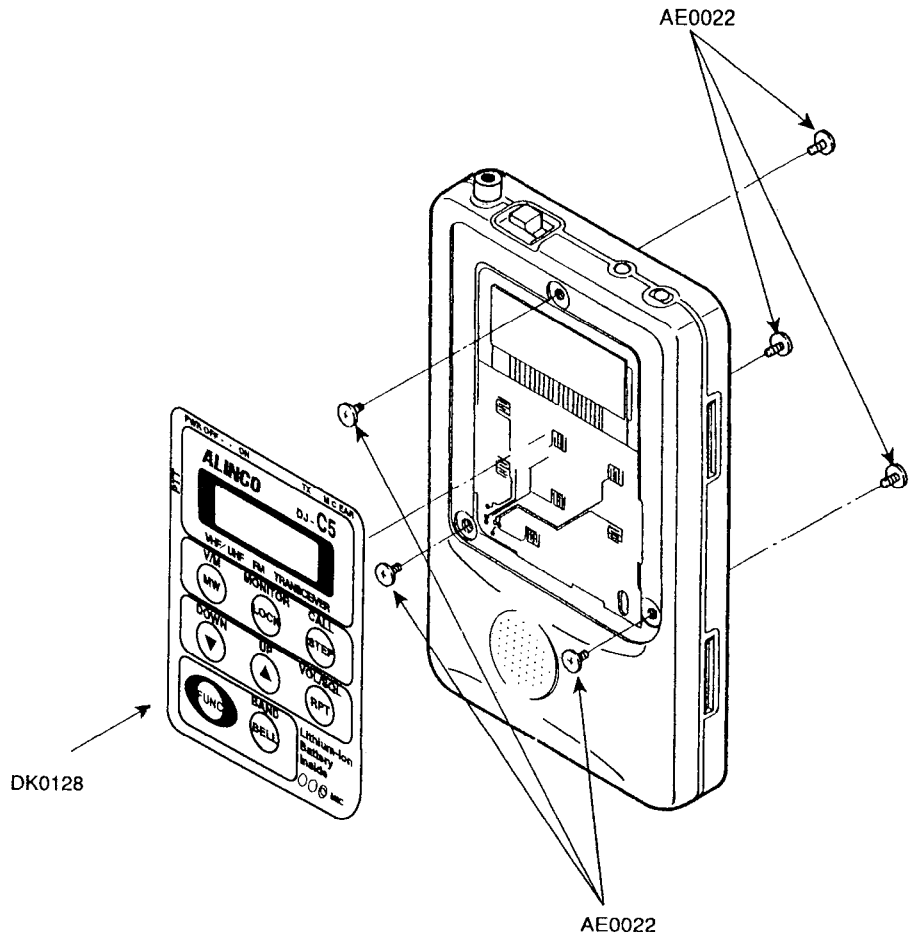
(17) LCD Diagram

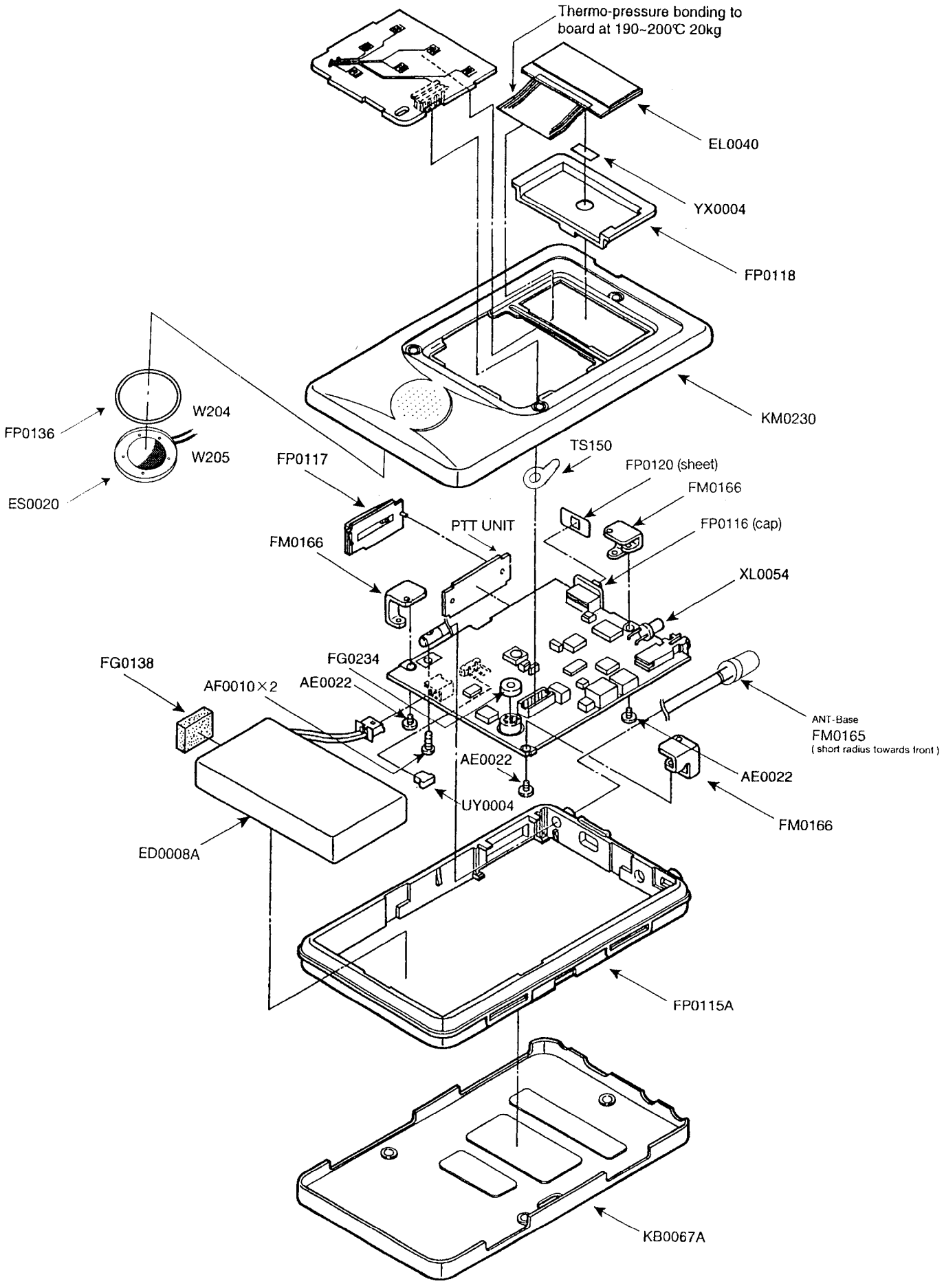


LCD Pin Table

LCD PIN TABLE				
NO.	COM 0	COM 1	COM 2	COM 3
1	COM 0	--	--	--
2	--	COM 1	--	--
3	--	--	COM 2	--
4	--	--	--	COM 3
5	6F	6G	6E	S1
6	6A	6B	6C	6D
7	7F	7G	7E	S2
8	7A	7B	7C	7D
9	1F	1G	1E	
10	1A	1B	1C	1D
11	2F	2G	2E	S6
12	2A	2B	2C	2D
13	3F	3G	3E	S7
14	3A	3B	3C	3D
15	4F	4G	4E	P1
16	4A	4B	4C	4D
17	5F	5G	5E	P2
18	5A	5B	5C	5D
19	S8	S9	S10	S11
20	S3	S4	S11	

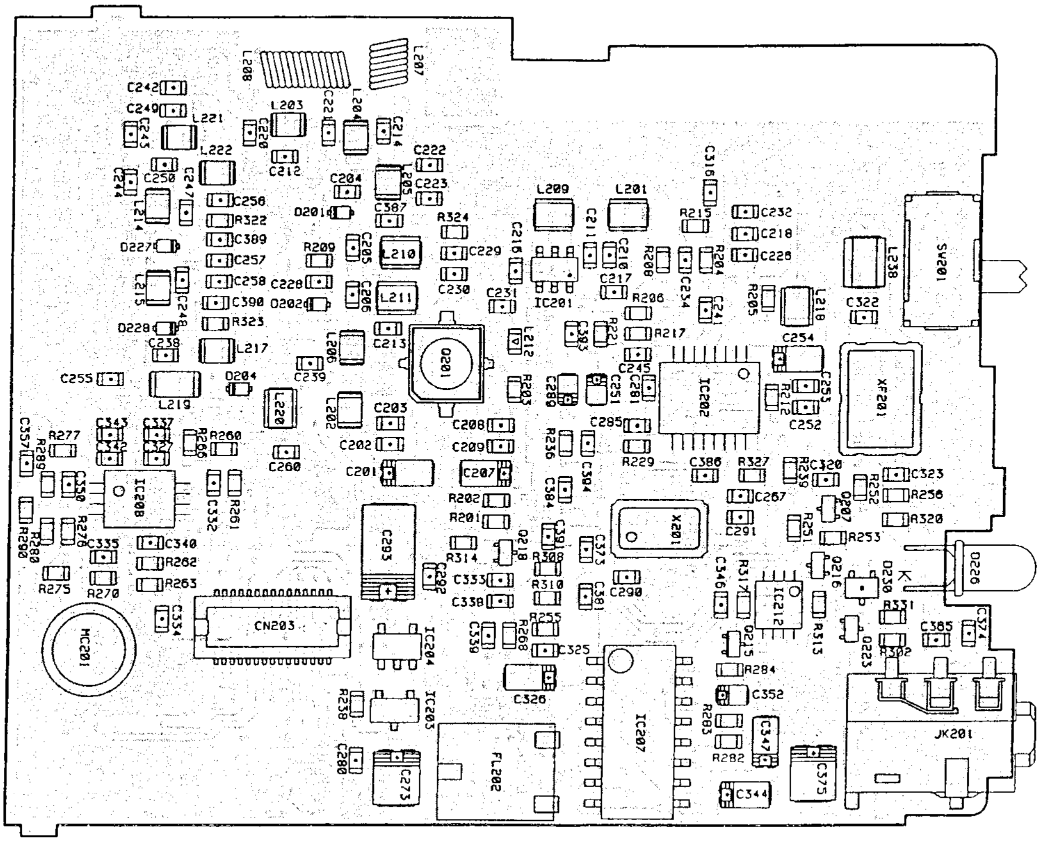
EXPLODED VIEW




Thermo-pressure bonding to board at 190~200℃ 20kg
EL0040
YX0004
FP0118
KM0230
TS150
FP0120 (sheet)
FM0166
FP0116 (cap)
XL0054
FP0136
W204
W205
ES0020
FP0117
PTT UNIT
FM0166
FG0138
FG0234
AF0010×2
AE0022
AE0022
UY0004
ANT-Base
FM0165
(short radius towards front)
AE0022
FM0166
ED0008A
FP0115A
KB0067A

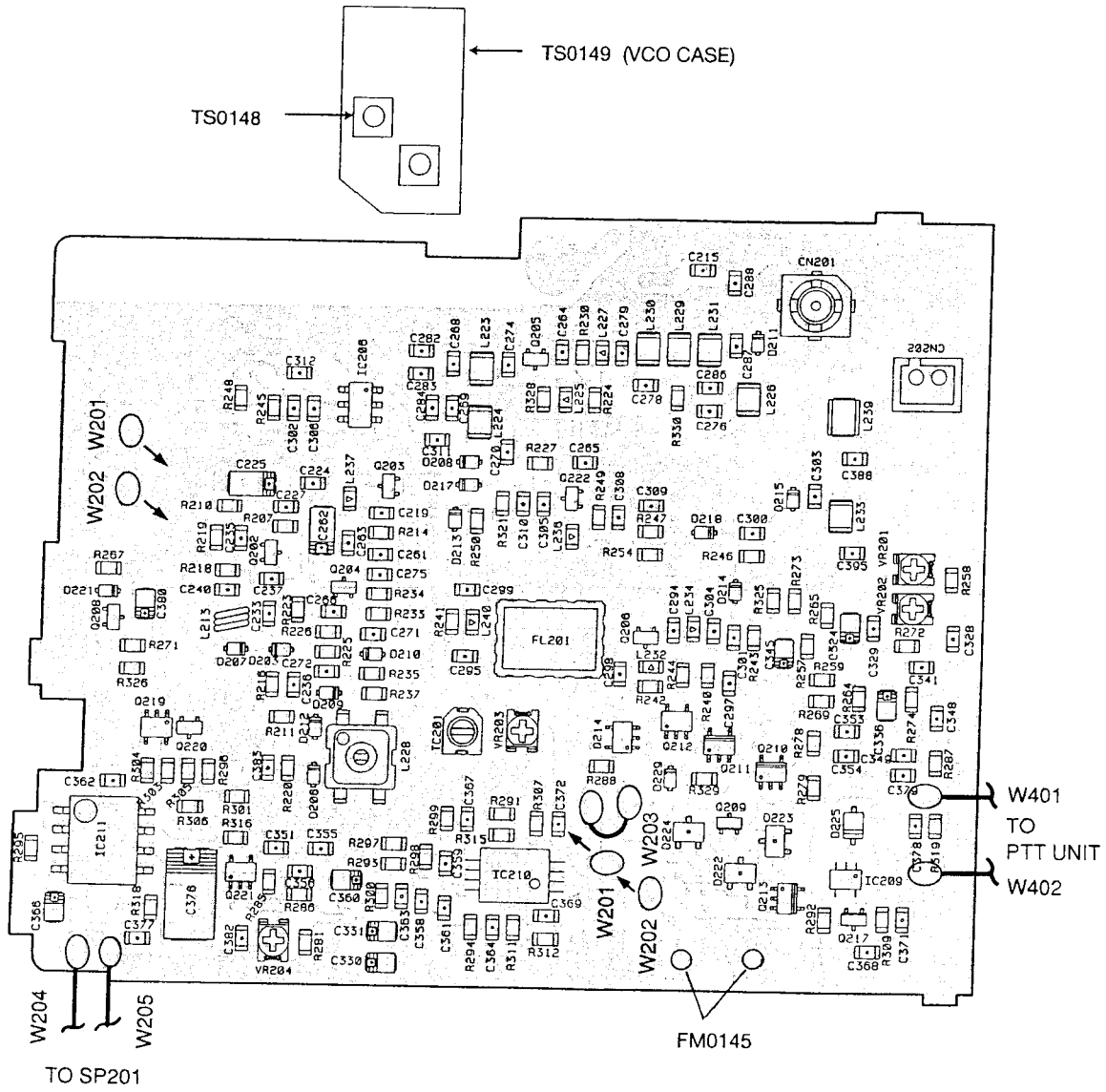
COMPONENT LOCATOR

(1) MAIN UNIT sideA



	J	T	E
L208	QKAB5A	QKAC5A	QKAB5A
XF201	20.8MHz	21.7MHz	20.8MHz

MAIN UNIT sideB

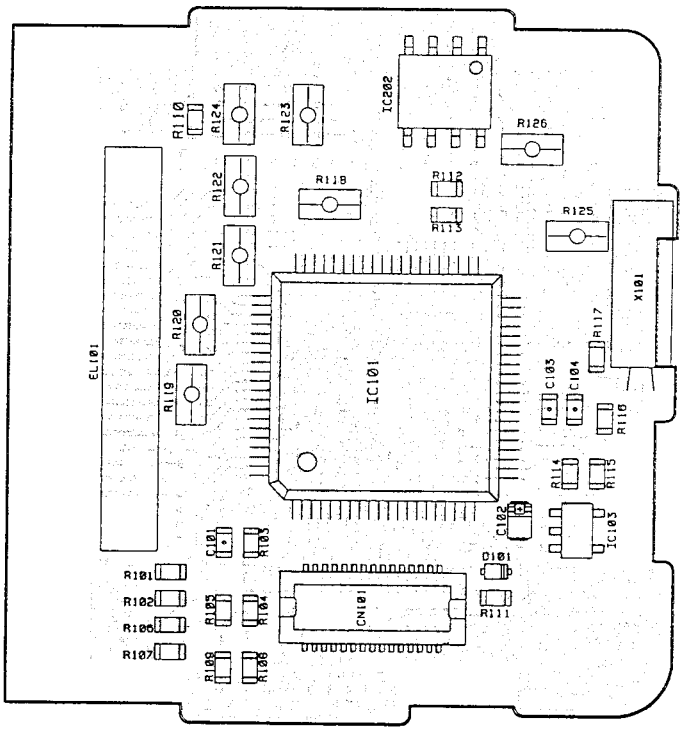


	J	T	E	TA/EA
W203	○	|	|	○

○ = open | = short

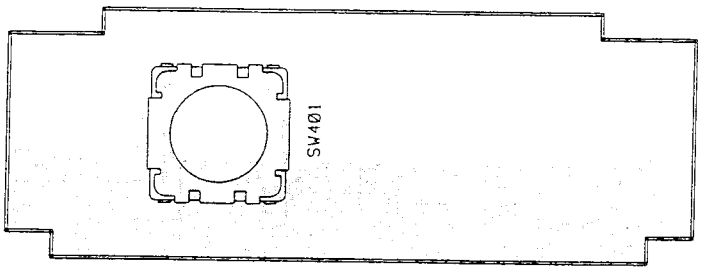
	J	T	E
FL201	XC0045	XC0046	XC0045
R288	0	NC	NC
W203	NC	YES	YES
C288	8P	10P	8P
C215	10P	8P	10P

(2) CPU UNIT sideA

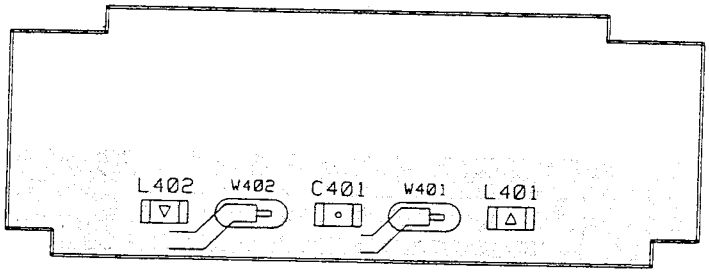


CPU UNIT sideB

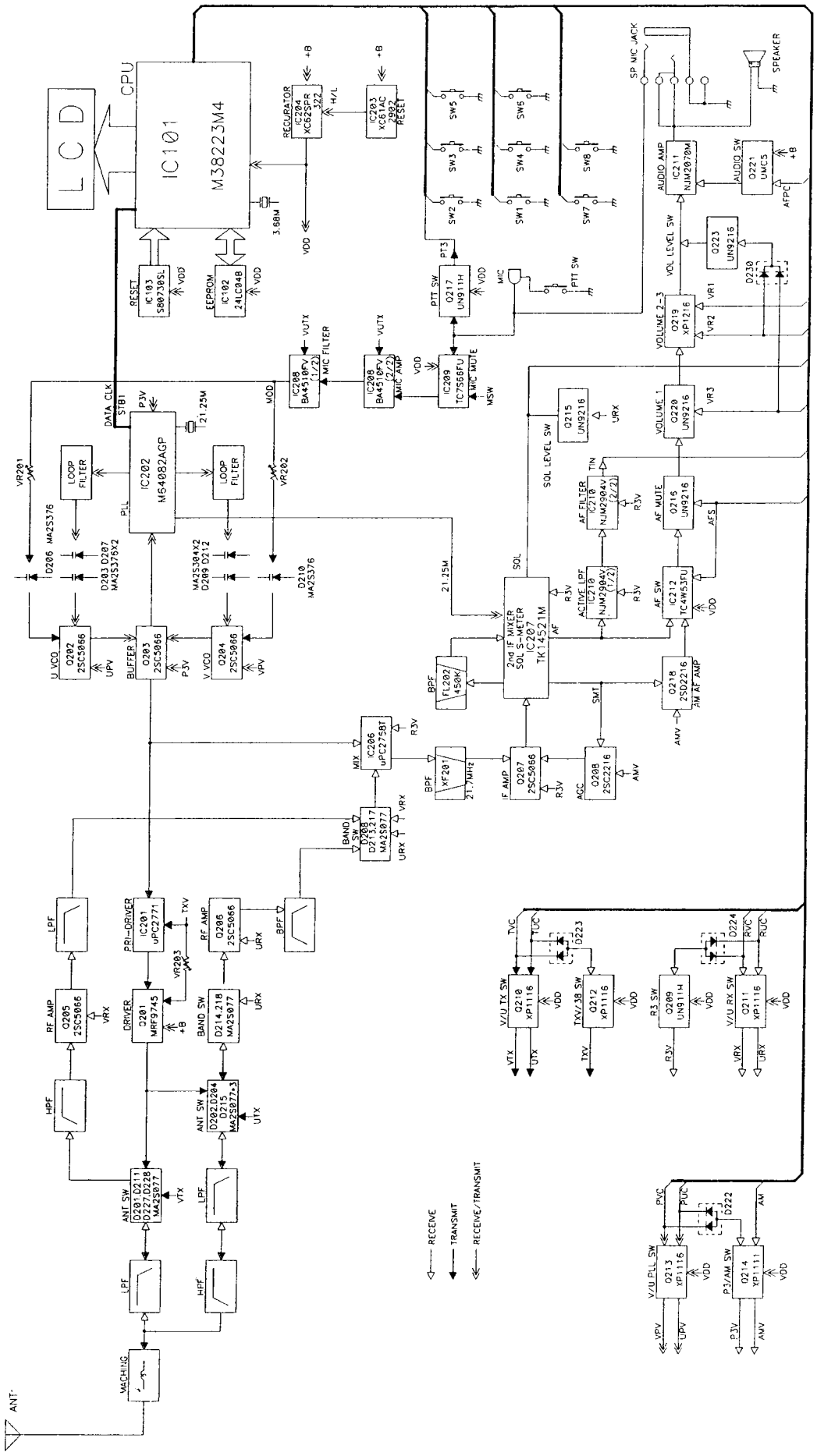
(3) PTT UNIT sideA



PTT UNIT sideB

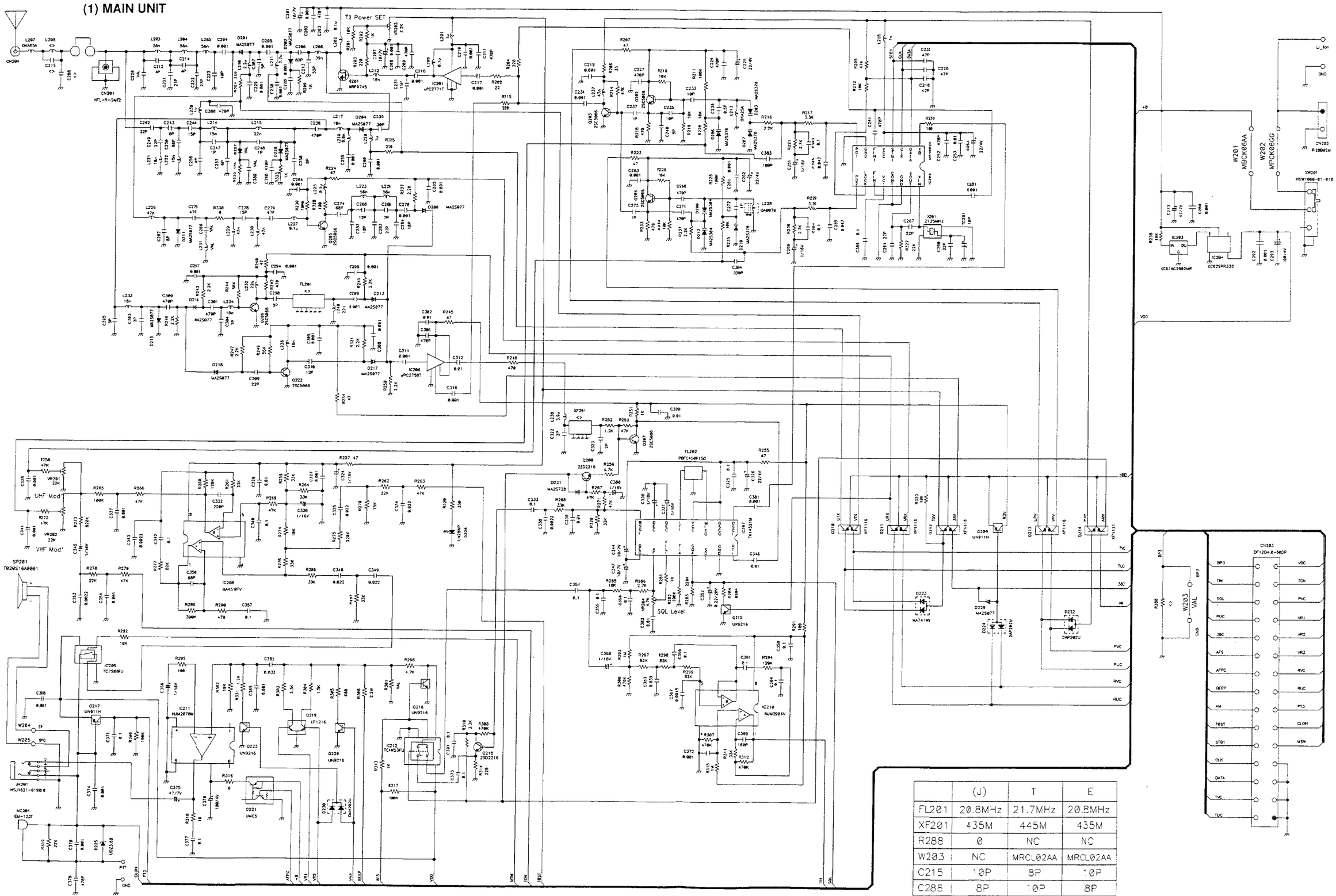


BLOCK DIAGRAM



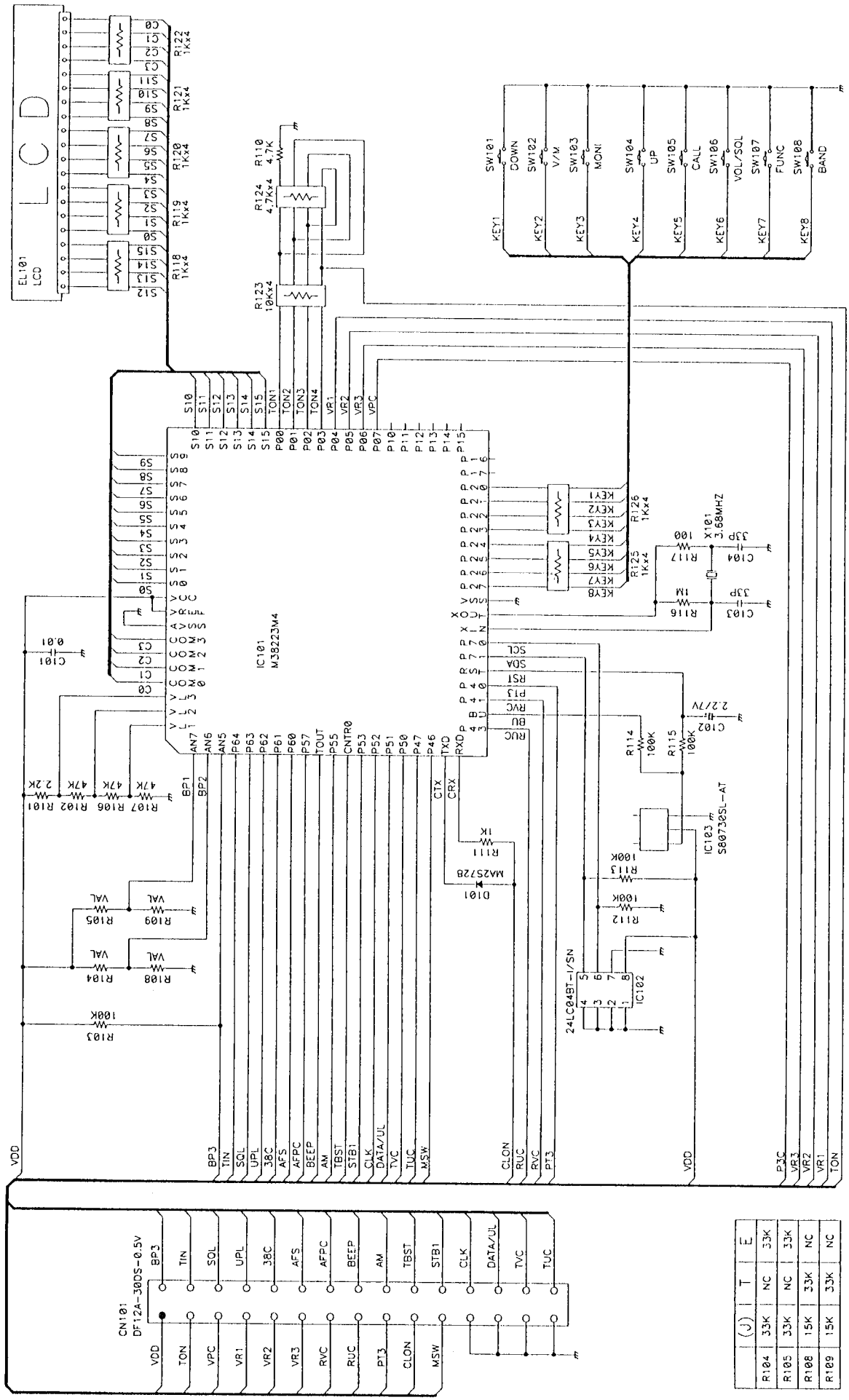
CIRCUIT DIAGRAM

(1) MAIN UNIT



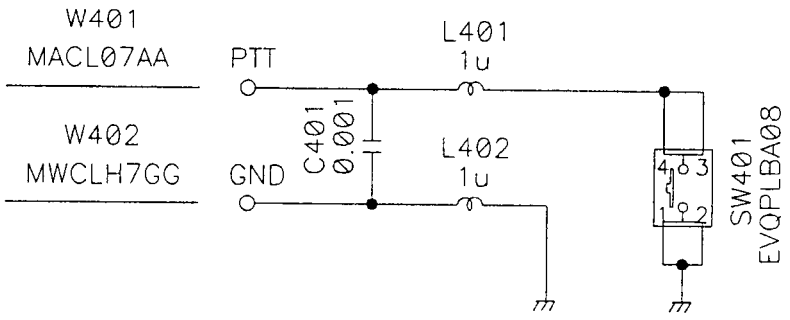
	(J)	T	E
FL201	20.8MHz	21.7MHz	20.8MHz
XF201	435M	445M	435M
R288	0	NC	NC
W203	NC	MRCL02AA	MRCL02AA
C215	10P	8P	10P
C288	8P	10P	8P
L208	QKAB5A	QKAC5A	QKAB5A

(2) CPU UNIT



	(J)	T	E
R104	33K	NC	33K
R105	33K	NC	33K
R108	15K	33K	NC
R109	15K	33K	NC

(3) PTT UNIT


W401
MACL07AA
W402
MWCLH7GG
PTT
GND
C401
0.001
L401
1u
L402
1u
SW401
EVQPLBA08
4
3
2

ALINCO, INC.

Head office: "TWIN 21" MID Tower Building 23F
1-61, 2-Chome, Shiromi, Chuo-ku, Osaka 540-8580 Japan
Phone: 06-946-8150 Fax: 06-946-8175 Telex: 63086
E-mail: 101243.1446@compuserve.com
U.S.A.: 438 Amapola Ave., Suite 130, Torrance, CA 90501-6201 U.S.A.
Phone: 310-618-8616 Fax: 310-618-8758
http://www.alinco.com/
Germany: Eschborner Landstrasse 55, 60489 Frankfurt am Main, Germany
Phone: 069-786018 Fax: 069-789-60766

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