

DR-135 / DR-235 / DR-435

Service Manual

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ALINCO, INC.

SPECIFICATIONS

■ General

| Frequency coverage | DR-135 | DR-235 | DR-435 |
|----------------------------|--|--|--|
| T,TG (U.S amateur) | 118.000 ~ 135.995MHz (AM RX) 136.000 ~ 173.995MHz (RX) 144.000 ~ 147.995MHz (TX) | 216.000 ~ 279.995MHz (RX) 222.000 ~ 224.995MHz (TX) | 350.000 ~ 511.995MHz (RX) 430.000 ~ 449.995MHz (TX) |
| E,EG (European amateur) | 144.000 ~ 145.995MHz (RX.TX) | | 430.000 ~ 439.995MHz (RX.TX) |
| TA,TAG (Commercial) | 118.000 ~ 135.995MHz (AM RX) 136.000 ~ 173.995MHz (RX.TX) | | |

| | | | |
|---------------------------|---|-----------|------------|
| Operating mode | FM 16K0F3E (Wide mode) 8K50F3E (Narrow mode) | | |
| Frequency resolution | 5,8,33,10,12.5,15,20,25,30,50 KHz | | |
| Number of memory channels | 100 | | |
| Antenna impedance | 50Ω unbalanced | | |
| Power requirement | 13.8V DC ±15% (11.7 to 15.8V) | | |
| Ground method | Negative ground | | |
| Current drain Receive | 0.6A(Max.) 0.4A(Squelched) | | |
| Transmit | 11.0A max. | 8.0A max. | 10.0A max. |
| Operating temperature | - 10°C to 60°C | | |
| Frequency stability | ±5ppm | | |
| Dimensions | 142(w)×40(h)×174(d) mm (142×40×188mm for projection included) | | |
| Weight | Approx. 1.0kg | | |

■ Transmitter

| | | | |
|-----------------------------|---|---------------|---------------|
| Output power | High:50W (144-148MHz) | High:25W | High:35W |
| | More than 33W (136-174MHz) | | |
| | Mid:10W | Mid:10W | Mid:10W |
| | Low:Approx.5W | Low:Approx.5W | Low:Approx.5W |
| Modulation system | Variable reactance frequency modulation | | |
| Maximum frequency deviation | ±5kHz (Wide mode) ±2.5kHz (Narrow mode) | | |
| Spurious emission | -60dB | | |
| Adjacent channel power | -60dB | | |
| Noise and hum ratio | -40dB (Wide mode) -34dB (Narrow mode) | | |
| Microphone impedance | 2kΩ | | |

■ Receiver

| | | | |
|------------------------------------|-------------------------------------|-------------------------|-------------------------|
| Sensitivity | -16dBu for 12dB SINAD | | |
| Receiver circuitry | Double conversion superheterodyne | | |
| Intermediate frequency | 1st 21.7MHz 2nd 450kHz | 1st 30.85MHz 2nd 455kHz | 1st 30.85MHz 2nd 455kHz |
| Squelch sensitivity | -18dBu | | |
| Adjacent channel selectivity | -65dB(Wide mode) -55dB(Narrow mode) | | |
| Intermodulation rejection ratio | 60dB | | |
| Spurious and image rejection ratio | 70dB | | |
| Audio output power | 2.0W (8Ω,10%THD) | | |

! Note: All specifications are subject to change without notice or obligation.

CIRCUIT DESCRIPTION DR-135/DR-235/DR-435

1) Receiver System (DR-135)

The receiver system is a double superheterodyne system with a 21.7 MHz first IF and a 450 kHz second IF.

1. Front End

The received signal at any frequency in the 136.000MHz to 173.995MHz range is passed through the low-pass filter (L116, L115, L114, L113, C204, C203, C202, C216 and C215) and tuning circuit (L105, L104 and D105, D104), and amplified by the RF amplifier (Q107). The signal from Q107 is then passed through the tuning circuit (L103, L102, and varicaps D103 and D102) and converted into 21.7 MHz by the mixer (Q106). The tuning circuit, which consists of L105, L104, varicaps D105 and D104, L103, L102, varicaps D103 and D102, is controlled by the tracking voltage from the VCO. The local signal from the VCO is passed through the buffer (IC112), and supplied to the source of the mixer (Q106). The radio uses the lower side of the superheterodyne system.

2. IF Circuit

The mixer mixes the received signal with the local signal to obtain the sum and difference between them. The crystal filter (XF102, XF101) selects 21.7 MHz frequency from the results and eliminates the signals of the unwanted frequencies. The first IF amplifier (Q105) then amplifies the signal of the selected frequency.

3. Demodulator Circuit

After the signal is amplified by the first IF amplifier (Q105), it is input to pin 24 of the demodulator IC (IC108). The second local signal of 21.25 MHz (shared with PLL IC reference oscillation), which is oscillated by the internal oscillation circuit in IC116 and crystal (X103), is input through pin 1 of IC108. Then, these two signals are mixed by the internal mixer in IC108 and the result is converted into the second IF signal with a frequency of 450 kHz. The second IF signal is output from pin 3 of IC108 to the ceramic filter (FL101 or FL102), where the unwanted frequency band of that signal is eliminated, and the resulting signal is sent back to the IC108 through pins 5.

The second IF signal input via pin 5 is demodulated by the internal limiter amplifier and quadrature detection circuit in IC108, and output as an audio signal through pin 12.

4. Audio Circuit

The audio signal from pin 12 of IC108 is amplified by the audio amplifier (IC104:A), and switched by the signal switch IC (IC111) and then input it to the de-emphasis circuit.

and is compensated to the audio frequency characteristics in the de-emphasis circuit (R203, R207, R213, R209, C191, C218, C217) and amplified by the AF amplifier (IC104:D). The signal is then input to volume (VR1). The adjusted signal is sent to the audio power amplifier (IC117) through pin 1 to drive the speaker.

5. Squelch Circuit

The detected output which is outputted from the pin 12 of IC108 is inputted to pin 19 of IC108 after it was been amplified by IC104:A and it is outputted from pin 20 after the noise component was been eliminated from the composed band pass filter in the built in amplifier of the IC, then the signal is rectified by D106 to convert into DC component. The adjusted voltage level at VR101 is delivered to the comparator of the CPU.

The voltage is led to pin 2 of CPU and compared with the setting voltage. The squelch will open if the input voltage is lower than the setting voltage.

During open squelch, pin 30 (SQC) of the CPU becomes "L" level, AF control signal is being controlled and sounds is outputted from the speaker.)

6. AIR Band Reception(T only)

When the frequency is within 118~135.995MHz, Q110 automatically turns ON, pin 14 of IC108 becomes "L" level and the condition becomes in AM detection mode.

The receiver signal passed through the duplexer is let to the antenna switch (D107,D101). After passing through the band-pass filter, the signal is amplified by RF amplifier Q112. Secondly the signal is mixed with the signal from the first local oscillator in the first-mixer Q106,then converted into the first IF. Its unwanted signal is let to IC106, pin24. Then converted into the second IF. and is demodulated by AM decoder of IC106, and is output from pin13 as the AF signal.

7. WIDE/NARROW switching circuit

The 2nd IF 450 kHz signal which passes through filter FL101 (wide) and FL102 (narrow) during narrow, changes its width using the width control switching IC103 and IC102.

2) Transmitter System (DR-135)

1. Modulator Circuit

The audio signal is converted to an electrical signal by the microphone, and input it to the microphone amplifier (Q6). Amplified signal which passes through mic-mute control IC109 is adjusted to an appropriate mic-volume by means of mic-gain adjust VR106.

IC114:A and B consists of two operational amplifiers; one amplifier (pins 1, 2, and 3) is composed of pre-emphasis and IDC circuits and the other (pins 5, 6, and 7) is composed of a splatter filter. The maximum frequency deviation is obtained by VR107. and input to the signal switch (IC113) (9600 bps packet signal input switch) and input to the cathode of the varicap of the VCO, to change the electric capacity in the oscillation circuit. This produces the frequency modulation.

2. Power Amplifier Circuit

The transmitted signal is oscillated by the VCO, amplified by the drive amplifier (IC112) and younger amplifier (Q115), and input to the final power module (IC110). The signal is then amplified by the final power module (IC110) and led to the antenna switch (D110) and low-pass filter (L113, L114, L115, L116, C215, C216, C202, C203 and C204), where unwanted high harmonic waves are reduced as needed, and the resulting signal is supplied to the antenna.

3. APC Circuit

Part of the transmission power from the low-pass filter is detected by D111 and D112, converted to DC. The detection voltage is passed through the APC circuit (Q118, Q117, Q116), then it controls the APC voltage supplied to the younger amplifier Q115 and the final power module IC110 to fix the transmission power.

3) PLL Synthesizer Circuit (DR-135)

1. PLL

The dividing ratio is obtained by sending data from the CPU (IC1) to pin 2 and sending clock pulses to pin 3 of the PLL IC (IC116). The oscillated signal from the VCO is amplified by the buffer (Q134 and Q135) and input to pin 15 of IC116. Each programmable divider in IC116 divides the frequency of the input signal by N according to the frequency data, to generate a comparison frequency of 5 or 6.25 kHz.

2. Reference Frequency Circuit

The reference frequency appropriate for the channel steps is obtained by dividing the 21.25 MHz reference oscillation (X103) by 4250 or 3400, according to the data from the CPU (IC1). When the resulting frequency is 5 kHz, channel steps of 5, 10, 15, 20, 25, 30, and 50 kHz are used. When it is 6.25 kHz, the 12.5 kHz channel step is used.

3. Phase Comparator Circuit

The PLL (IC116) uses the reference frequency, 5 or 6.25kHz. The phase comparator in the IC116 compares the phase of the frequency from the VCO with that of the comparison frequency, 5 or 6.25kHz, which is obtained by the internal divider in IC116.

4. PLL Loop Filter Circuit

If a phase difference is found in the phase comparison between the reference frequency and VCO output frequency, the charge pump output (pin 13) of IC116 generates a pulse signal, which is converted to DC voltage by the PLL loop filter and input to the varicap of the VCO unit for oscillation frequency control.

5. VCO Circuit

A Colpitts oscillation circuit driven by Q131 directly oscillates the desired frequency. The frequency control voltage determined in the CPU (IC1) and PLL circuit is input to the varicaps (D122 and D123). This change the oscillation frequency, which is amplified by the VCO buffer (Q134) and output from the VCO area.

6. VCO Shift Circuit

During transmission or the AIR band Reception (118~136 MHz), the VCO shift circuit turns ON Q138, change control the capacitance of L123 and safely oscillates the VCO by means of H signal from pin 16 of IC116.)

4) Receiver System (DR-235)

The receiver system is a double superheterodyne system with a 30.85 MHz first IF and a 455 kHz second IF.

1. Front End

The received signal at any frequency in the 216.000MHz to 279.995MHz range is passed through the low-pass filter (L116, L115, L114, L113, C204, C203, C202, C216 and C215) and tuning circuit (L105, L104 and D105, D104), and amplified by the RF amplifier (Q107). The signal from Q107 is then passed through the tuning circuit (L103, L107, L102, and varicaps D103, D107 and D102) and converted into 30.85 MHz by the mixer (Q106). The tuning circuit, which consists of L105, L104, varicaps D105 and D104, L103, L107, L102, varicaps D103, D107 and D102, is controlled by the tracking voltage from the VCO. The local signal from the VCO is passed through the buffer (Q112), and supplied to the source of the mixer (Q106). The radio uses the lower side of the superheterodyne system.

2. IF Circuit

The mixer mixes the received signal with the local signal to obtain the sum of and difference between them. The crystal filter (XF102, XF101) selects 30.85 MHz frequency from the results and eliminates the signals of the unwanted frequencies. The first IF amplifier (Q105) then amplifies the signal of the selected frequency.

3. Demodulator Circuit

After the signal is amplified by the first IF amplifier (Q105), it is input to pin 24 of the demodulator IC (IC108). The second local signal of 30.395 MHz, which is oscillated by the internal oscillation circuit in IC108 and crystal (X104), is input through pin 1 of IC108. Then, these two signals are mixed by the internal mixer in IC108 and the result is converted into the second IF signal with a frequency of 455 kHz. The second IF signal is output from pin 3 of IC108 to the ceramic filter (FL101 or FL102), where the unwanted frequency band of that signal is eliminated, and the resulting signal is sent back to the IC108 through pins 5. The second IF signal input via pin 5 is demodulated by the internal limiter amplifier and quadrature detection circuit in IC108, and output as an audio signal through pin 12.

4. Audio Circuit

The audio signal from pin 12 of IC108 is amplified by the audio amplifier (IC104:A), and switched by the signal switch IC (IC111) and then input it to the de-emphasis circuit.

and is compensated to the audio frequency characteristics in the de-emphasis circuit (R203, R207, R213, R209, C191, C218, C217) and amplified by the AF amplifier (IC104:D). The signal is then input to volume (VR1) . The adjusted signal is sent to the audio power amplifier (IC117) through pin 1 to drive the speaker.

5. Squelch Circuit

The detected output which is outputted from the pin 12 of IC108 is inputted to pin 19 of IC108 after it was been amplified by IC104:A and it is outputted from pin 20 after the noise component was been eliminated from the composed band pass filter in the built in amplifier of the IC, then the signal is rectified by D106 to convert into DC component. The adjusted voltage level at VR101 is delivered to the comparator of the CPU.

The voltage is led to pin 2 of CPU and compared with the setting voltage. The squelch will open if the input voltage is lower than the setting voltage.

During open squelch, pin 30 (SQC) of the CPU becomes "L" level, AF control signal is being controlled and sounds is outputted from the speaker.)

6. AIR Band Reception(T only)

If it is made air band receiving mode, IF signal is demodulated by AM decoder of IC106, and is output from pin13 as the AF signal.

7. WIDE/NARROW switching circuit

The 2nd IF 455 kHz signal which passes through filter FL101 (wide) and FL102 (narrow) during narrow, changes its width using the width control switching IC103 and IC102.

5) Transmitter System (DR-235)

1. Modulator Circuit

The audio signal is converted to an electrical signal by the microphone, and input it to the microphone amplifier (Q6). Amplified signal which passes through mic-mute control IC109 is adjusted to an appropriate mic-volume by means of mic-gain adjust VR106.

IC114:A and B consists of two operational amplifiers; one amplifier (pins 1, 2, and 3) is composed of pre-emphasis and IDC circuits and the other (pins 5, 6, and 7) is composed of a splatter filter. The maximum frequency deviation is obtained by VR107. and input to the signal switch (IC113) (9600 bps packet signal input switch) and input to the cathode of the varicap of the VCO, to change the electric capacity in the oscillation circuit. This produces the frequency modulation.

2. Power Amplifier Circuit

The transmitted signal is oscillated by the VCO, amplified by the drive amplifier (IC112) and younger amplifier (Q115), and input to the final power module (IC110). The signal is then amplified by the final power module (IC110) and led to the antenna switch (D110) and low-pass filter (L113, L114, L115, L116, C215, C216, C202, C203 and C204), where unwanted high harmonic waves are reduced as needed, and the resulting signal is supplied to the antenna.

3. APC Circuit

Part of the transmission power from the low-pass filter is detected by D111 and D112, converted to DC. The detection voltage is passed through the APC circuit (Q118, Q117, Q116), then it controls the APC voltage supplied to the younger amplifier Q115 and the final power module IC110 to fix the transmission power.

6) PLL Synthesizer Circuit (DR-235)

1. PLL

The dividing ratio is obtained by sending data from the CPU (IC1) to pin 2 and sending clock pulses to pin 3 of the PLL IC (IC501). The oscillated signal from the VCO is amplified by the buffer (Q504 and Q501) and input to pin 15 of IC501. Each programmable divider in IC501 divides the frequency of the input signal by N according to the frequency data, to generate a comparison frequency of 5 or 6.25 kHz.

2. Reference Frequency Circuit

The reference frequency appropriate for the channel steps is obtained by dividing the 12.8 MHz reference oscillation (X103) by 2560 or 2048, according to the data from the CPU (IC1). When the resulting frequency is 5 kHz, channel steps of 5, 10, 15, 20, 25, 30, and 50 kHz are used. When it is 6.25 kHz, the 12.5 kHz channel step is used.

3. Phase Comparator Circuit

The PLL (IC501) uses the reference frequency, 5 or 6.25kHz. The phase comparator in the IC501 compares the phase of the frequency from the VCO with that of the comparison frequency, 5 or 6.25kHz, which is obtained by the internal divider in IC501.

4. PLL Loop Filter Circuit

If a phase difference is found in the phase comparison between the reference frequency and VCO output frequency, the charge pump output (pin 13) of IC501 generates a pulse signal, which is converted to DC voltage by the PLL loop filter and input to the varicap of the VCO unit for oscillation frequency control.

5. VCO Circuit

A Colpitts oscillation circuit driven by Q503 directly oscillates the desired frequency. The frequency control voltage determined in the CPU (IC1) and PLL circuit is input to the varicaps (D503 and D504). This change the oscillation frequency, which is amplified by the VCO buffer (Q504) and output from the VCO area.

7) Receiver System (DR-435)

The receiver system is a double superheterodyne system with a 30.85 MHz first IF and a 455 kHz second IF.

1. Front End

The received signal at any frequency in the 430.00MHz to 439.995MHz range is passed through the low-pass filter (L115, L114, L116, C204, C203, C202, C216 and C215) and amplified by the RF amplifier (Q107). The signal from Q107 is then passed through the BPF circuit (L103, L102) and converted into 30.85 MHz by the mixer (Q106). The local signal from the VCO is passed through the buffer (Q503,Q504), and supplied to the source of the mixer (Q106). The radio uses the lower side of the superheterodyne system.

2. IF Circuit

The mixer mixes the received signal with the local signal to obtain the sum of and difference between them. The crystal filter (XF101) selects 30.85MHz frequency from the results and eliminates the signals of the unwanted frequencies. The first IF amplifier (Q105) then amplifies the signal of the selected frequency.

3. Demodulator Circuit

After the signal is amplified by the first IF amplifier (Q105), it is input to pin 20 of the demodulator IC (IC108). The second local signal of 30.85MHz (Crystal oscillator) is input pin 1 of IC108. Then, these two signals are mixed by the internal mixer in IC108 and the result is converted into the second IF signal with a frequency of 455 kHz. The second IF signal is output from pin 4 of IC108 to the ceramic filter (FL101 or FL102), where the unwanted frequency band of that signal is eliminated, and the resulting signal is sent back to the IC108 through pins 6.

The second IF signal input via pin 6 is demodulated by the internal limiter amplifier and quadrature detection circuit in IC108, and output as an audio signal through pin 11.

4. Audio Circuit

The audio signal from pin 11 of IC108 is amplified by the audio amplifier (IC104:A), and switched by the signal switch IC (IC111) and then input it to the de-emphasis circuit.

and is compensated to the audio frequency characteristics in the de-emphasis circuit (R203, R207, R213, R209, C191, C218, C217) and amplified by the AF amplifier (IC104:D). The signal is then input to volume (VR1). The adjusted signal is sent to the audio power amplifier (IC117) through pin 1 to drive the speaker.

5. Squelch Circuit

The detected output which is outputted from the pin 11 of IC108 is inputted to pin 13 of IC108 after it was been amplified by IC104:A and it is outputted from pin 14 after the noise component was been eliminated from the composed band pass filter in the built in amplifier of the IC, then the signal is rectified by D106 to convert into DC component. The adjusted voltage level at VR101 is delivered to the comparator of the CPU.

The voltage is led to pin 2 of CPU and compared with the setting voltage. The squelch will open if the input voltage is lower than the setting voltage.

During open squelch, pin 30 (SQC) of the CPU becomes "L" level, AF control signal is being controlled and sounds is outputted from the speaker.

6. WIDE/NARROW switching circuit

The 2nd IF 455 KHz signal which passes through filter FL101 (wide) and FL102 (narrow) during narrow, changes its width using the width control switching IC103 and IC102.

8) Transmitter System (DR-435)

1. Modulator Circuit

The audio signal is converted to an electrical signal by the microphone, and input it to the microphone amplifier (Q6). Amplified signal which passes through mic. mute control IC109 is adjusted to an appropriate mic. volume by means of mic. gain adjust VR106.

IC114:A and B consists of two operational amplifiers; one amplifier (pins 1, 2, and 3) is composed of pre-emphasis and IDC circuits and the other (pins 5, 6, and 7) is composed of a splatter filter. The maximum frequency deviation is obtained by VR107. and input to the signal switch (IC113) (9600 bps packet signal input switch) and input to the cathode of the varicap of the VCO, to change the electric capacity in the oscillation circuit. This produces the frequency modulation.

2. Power Amplifier Circuit

The transmitted signal is oscillated by the VCO, amplified by the drive amplifier (Q131, Q125) and younger amplifier (Q115), and input to the final power module (IC110). The signal is then amplified by the final power module (IC110) and led to the antenna switch (D110) and low-pass filter (L116, L114, L115, C215, C216, C202, C203 and C204), where unwanted high harmonic waves are reduced as needed, and the resulting signal is supplied to the antenna.

3. APC Circuit

Part of the transmission power from the low-pass filter is detected by D111 and D112, converted to DC. The detection voltage is passed through the APC circuit(Q118, Q117, Q116), then it controls the APC voltage supplied to the younger amplifier Q115 and the final power module IC110 to fix the transmission power.

9) PLL Synthesizer Circuit (DR-435)

1. PLL

The dividing ratio is obtained by sending data from the CPU (IC1) to pin 2 and sending clock pulses to pin 3 of the PLL IC (IC501). The oscillated signal from the VCO is amplified by the buffer (Q503 and Q501) and input to pin 15 of IC501. Each programmable divider in IC501 divides the frequency of the input signal by N according to the frequency data, to generate a comparison frequency of 5 or 6.25 kHz.

2. Reference Frequency Circuit

The reference frequency appropriate for the channel steps is obtained by dividing the 21.25 MHz reference oscillation (X103) by 4250 or 3400, according to the data from the CPU (IC1). When the resulting frequency is 5 kHz, channel steps of 5, 8.33, 10, 15, 20, 25, 30, and 50 kHz are used. When it is 6.25 kHz, the 12.5 kHz channel step is used.

3. Phase Comparator Circuit

The PLL (IC501) uses the reference frequency, 5 or 6.25kHz. The phase comparator in the IC501 compares the phase of the frequency from the VCO with that of the comparison frequency, 5 or 6.25kHz, which is obtained by the internal divider in IC501.

4. PLL Loop Filter Circuit

If a phase difference is found in the phase comparison between the reference frequency and VCO output frequency, the charge pump output (pin 13) of IC501 generates a pulse signal, which is converted to DC voltage by the PLL loop filter and input to the varicap of the VCO unit for oscillation frequency control.

5. VCO Circuit

A Colpitts oscillation circuit driven by Q502 directly oscillates the desired frequency. The frequency control voltage determined in the CPU (IC1) and PLL circuit is input to the varicaps (D502 and D503). This change the oscillation frequency, which is amplified by the VCO buffer (Q503,504) and output from the VCO unit.

10) CPU and Peripheral Circuits (DR-135 DR-235 DR-435)

1. LCD Display Circuit

The CPU turns ON the LCD via segment and common terminals with 1/4 the duty and 1/3 the bias, at the frame frequency is 64Hz.

2. Dimmer Circuit

The dimmer circuit makes the output of pin 13 of CPU (IC1) into "H" level at set mode, so that Q9 and Q3 will turn ON to make the lamp control resistor R84 short and make its illumination bright. But on the other hand, if the dimmer circuit makes pin 13 into "L" level, Q9 and Q3 will turn OFF, R84's illumination will become dimmer as its hang on voltage falls down in the working LED (D11, D2, D5, D3 and D6).

3. Reset and Backup

When the power form the DC cable increases from Circuits 0 V to 2.5 or more, "H" level reset signal is output form the reset IC (IC4) to pin 33 of the CPU (IC1), causing the CPU to reset. The reset signal, however, waits at 100, and does not enter the CPU until the CPU clock (X1) has stabilized.

4. S(Signal) Meter Circuit

The DC potential of pin 16 of IC106 is input to pin 1 of the CPU (IC1), converted from an analog to a digital signal, and displayed as the S-meter signal on the LCD.

5. DTMF Encoder

The CPU (IC1) is equipped with an internal DTMF encoder. The DTMF signal is output from pin 10, through R35, R34 and R261 (for level adjustment), and then through the microphone amplifier (IC114:A), and is sent to the varicap of the VCO for modulation. At the same time, the monitoring tone passes through the AF circuit and is output form the speaker.

6. Tone Encoder

The CPU (IC1) is equipped with an internal tone encoder. The tone signal (67.0 to 250.3 Hz) is output from pin 9 of the CPU to the varicap (D122 and D123) of the VCO for modulation.

7. DCS Encoder

The CPU (IC1) is equipped with an internal DCS code encoder. The code (023 to 754) is output from pin 9 of the CPU to the varicap (D124) of the PLL reference oscillator. When DCS is ON, DCS MUTE circuit (Q126-ON, Q133-ON, Q132-OFF) works. The modulation activates in X103 side only.

8. CTCSS, DCS Decoder

The voice band of the AF output signal from pin 1 of IC104:A is cut by sharp active filter IC104:B and C (VCVS) and amplified, then led to pin 4 of CPU. The input signal is compared with the programmed tone frequency code in the CPU. The squelch will open when they match. During DCS, Q108 is ON, C156 is working and cut off frequency is lowered.

11) Power Supply Circuit

When power supply is ON, there is a "L" signal being inputted to pin 39 (PSW) of CPU which enables the CPU to work.

Then, "H" signal is outputted from the pin 41 (C5C) of CPU and drives ON the power supply switch control Q8 and Q7 which turns the 5VS ON.

5VS turns ON the PLL IC116, main power supply switch Q127 and Q122, AF POWER IC117 and the 8 V of AVR (IC115).

During reception, pin 29 (R5) of CPU outputs "H" level, Q124 is ON, and the reception circuits supplied by 8 V.

While during transmission, pin 28 (T5) of CPU outputs "L" level which is reverse by Q11 so that the output in Q128 will be "H" level, Q123 is ON, and the transmission circuit is supplied by 8 V.

Or, in the case when the condition of PLL is UNLOCK, "H" level is outputted from pin 14 of IC106, UNLOCK switch Q129 is ON, transmission switch Q128 is OFF which makes the transmission to stop.

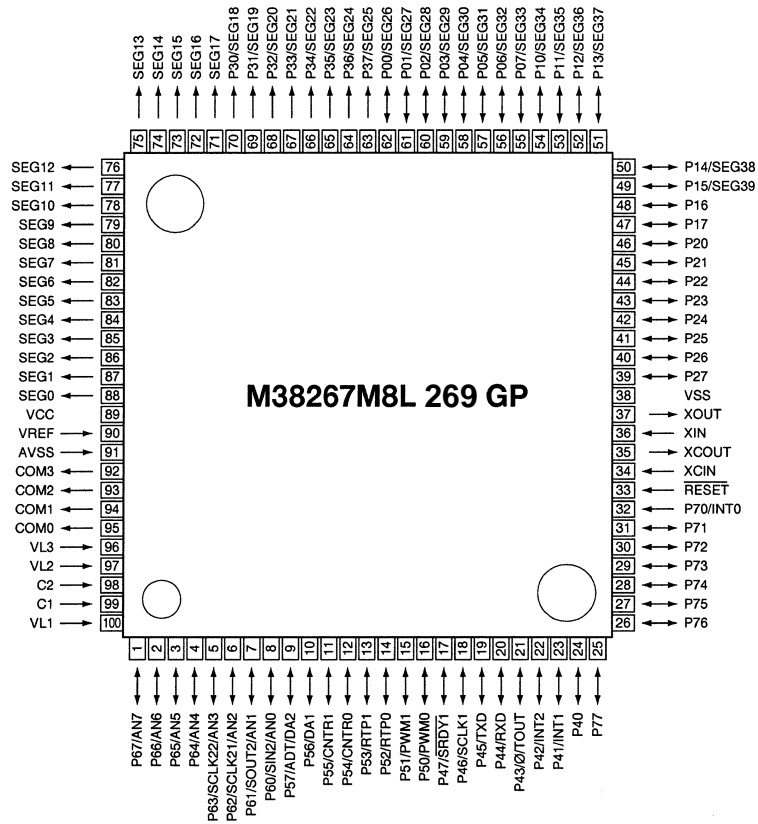
1. ACC External Power Supply Terminal

When optional power supply cord DEC-37 etc. is connected to the external power supply terminal JK101, with ACC power supply ON, switch Q101 will turn ON, 5 V of AVR IC101 pin 2 (STB) becomes "L" which makes C5V to turn ON. With this, it can turn the power supply of the radio ON.

12) M3826M8L269GP (XA0818)

CPU

Terminal Connection
(TOP VIEW)



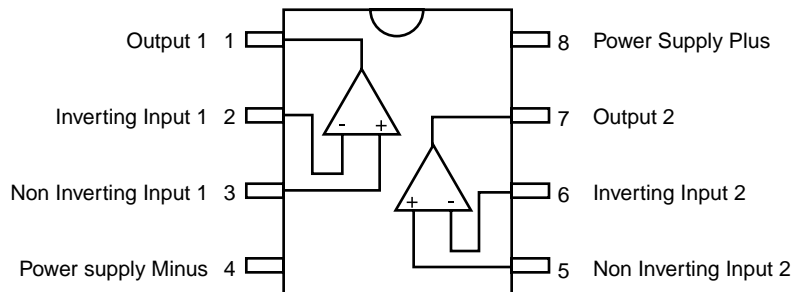
| No. | Pin Name | Function | I/O | PU | Logic | Description |
|-----|----------------|----------|-----|----|-----------------|---|
| 1 | P67/AN7 | SMT | I | - | A/D | S-meter input |
| 2 | P66/AN6 | SQL | I | - | A/D | Noise level input for squelch |
| 3 | P65/AN5 | BAT | I | - | A/D | Battery voltage input |
| 4 | P64/AN4 | TIN | I | - | A/D | CTCSS tone input/DSC code input |
| 5 | P63/SCLK22/AN3 | BP1 | I | - | A/D | Band plan 1 |
| 6 | P62/SCLK21/AN2 | BP2 | I | - | A/D | Band plan 2 |
| 7 | P61/SOUT2/AN1 | DCSW | O | - | Activ high | DCS signal mute |
| 8 | P60/SIN2/AN0 | RE2 | I | - | Activ low | Rotary encoder input |
| 9 | P57/ADT/DA2 | TOUT | O | - | D/A | CTCSS tone output/DCS tone output |
| 10 | P56/DA1 | DOUT | O | - | D/A | DTMF output |
| 11 | P55/CNTR1 | SCL | O | - | Pulse | Serial clock for EEPROM |
| 12 | P54/CNTR0 | TBST | O | - | Pulse | Tone burst output |
| 13 | P53/RTP1 | BP4 | I | - | - | Band plan 4 |
| 14 | P52/RTP0 | MUTE | I/O | - | Activ low | Microphone mute/Security alarm SW |
| 15 | P51/PWM3 | CLK | O | - | Pulse | Serial clock output for PLL,scramble |
| 16 | P50/PWM | DATA | I/O | - | Pulse | Serial data output for PLL scramble/PLL unlock signal input |
| 17 | P47/SROY1 | TSTB | I/O | - | Activ low/Pulse | Trunking board detection / Strobe signal to trunking board |
| 18 | P46/SCLK1 | STB | O | - | Pulse | Strobe for PLL IC |
| 19 | P45/TXD | UTX | O | - | Pulse | UART data transmission output |
| 20 | P44/RXD | RTX | I | - | Pulse | UART data reception output |
| 21 | P43/Φ/TOUT | BEEP | I/O | - | Pulse/Activ low | Beep tone/Band plan 3 |
| 22 | P42/INT2 | SEC | I | - | Activ high | Security voltage input |
| 23 | P41/INT1 | RE1 | I | - | Activ low | Rotary encoder input |
| 24 | P40 | DSQ | I | - | Activ high | Digital squelch input |
| 25 | P77 | PTT | I | - | Activ low | PTT input |
| 26 | P7 | SSTB | O | - | Pulse/Activ low | Strobe signal to scramble IC/Security mode |
| 27 | P75 | W/N | O | - | Activ low | Wide Narrow SW |
| 28 | P74 | T5 | O | - | Activ low | TX power ON/OFF output |
| 29 | P73 | R5 | O | - | Activ high | RX power ON/OFF output |
| 30 | P72 | SQC | O | - | Activ low | SQL ON/OFF |
| 31 | P71 | C/S | O | - | Activ low | Digital scramble ON/OFF |
| 32 | P70/INTO | BU | I | - | Activ low | Backup signal detection input |
| 33 | RESET | RESET | I | - | Activ low | Reset input |
| 34 | Xcin | Xcin | - | - | - | - |
| 35 | Xcout | Xcout | - | - | - | - |
| 36 | Xin | Xin | - | - | - | Main clock input |
| 37 | Xout | Xout | - | - | - | Main clock output |
| 38 | Vss | GND | - | - | - | CPU GND |
| 39 | P27 | PSW | I | - | Activ low | Power switch input |
| 40 | P26 | SDA | O | - | Pulse | Serial data for EEPROM |
| 41 | P25 | C5C | O | - | Activ high | C5V power ON/OFF output |
| 42 | P24 | AIR | O | - | Activ high | Air band SW / Tx middle power |
| 43 | P23 | LOW | O | - | Activ high | Tx low power |
| 44 | P22 | EXP | O | - | Activ high | Trunking data SW |
| 45 | P21 | SW6 | I | * | Activ low | Key sw6 (SQL) |
| 46 | P20 | SW5 | I | * | Activ low | Key sw5 (CALL) |
| 47 | P17 | SW4 | I | * | Activ low | Key sw4 (TSQ) |
| 48 | P16 | SW3 | I | * | Activ low | Key sw3 (MHz) |
| 49 | P15/SEG39 | SW2 | I | * | Activ low | Key sw2 (V/M) |
| 50 | P14/SEG38 | SW1 | I | * | Activ low | Key sw1 (FUNC) |
| 51 | P13/SEG37 | DOWN | I | * | Activ low | Mic down input |
| 52 | P12/SEG36 | DUD | I | - | - | Digital unit detect |
| 53 | P11/SEG35 | SCR | I | * | Active low | Scramble IC ready signal/Packet PTT |
| 54 | P10/SEG34 | UP | I | * | Active low | Mic down input |
| 55 | P07/SEG33 | S33 | O | - | - | LCD segment signal |

| No. | Pin Name | Function | I/O | PU | Logic | Description |
|-----|-----------|----------|-----|----|-------|---------------------------|
| 56 | P06/SEG32 | S32 | O | - | - | LCD segment signal |
| 57 | P05/SEG31 | S31 | O | - | - | |
| 58 | P04/SEG30 | S30 | O | - | - | |
| 59 | P03/SEG29 | S29 | O | - | - | |
| 60 | P02/SEG28 | S28 | O | - | - | |
| 61 | P01/SEG27 | S27 | O | - | - | |
| 62 | P00/SEG26 | S26 | O | - | - | |
| 63 | P37/SEG25 | S25 | O | - | - | |
| 64 | P36/SEG24 | S24 | O | - | - | |
| 65 | P35/SEG23 | S23 | O | - | - | |
| 66 | P34/SEG22 | S22 | O | - | - | |
| 67 | P33/SEG21 | S21 | O | - | - | |
| 68 | P32/SEG20 | S20 | O | - | - | |
| 69 | P31/SEG19 | S19 | O | - | - | |
| 70 | P30/SEG18 | S18 | O | - | - | |
| 71 | SEG17 | S17 | O | - | - | |
| 72 | SEG16 | S16 | O | - | - | |
| 73 | SEG15 | S15 | O | - | - | |
| 74 | SEG14 | S14 | O | - | - | |
| 75 | SEG13 | S13 | O | - | - | |
| 76 | SEG12 | S12 | O | - | - | |
| 77 | SEG11 | S11 | O | - | - | |
| 78 | SEG10 | S10 | O | - | - | |
| 79 | SEG9 | S9 | O | - | - | |
| 80 | SEG8 | S8 | O | - | - | |
| 81 | SEG7 | S7 | O | - | - | |
| 82 | SEG6 | S6 | O | - | - | |
| 83 | SEG5 | S5 | O | - | - | |
| 84 | SEG4 | S4 | O | - | - | |
| 85 | SEG3 | S3 | O | - | - | |
| 86 | SEG2 | S2 | O | - | - | |
| 87 | SEG1 | S1 | O | - | - | |
| 88 | SEG0 | S0 | O | - | - | |
| 89 | Vcc | VDD | - | - | - | CPU power terminal |
| 90 | Vref | Vref | - | - | - | AD converter power supply |
| 91 | Avss | Avss | - | - | - | AD converter GND |
| 92 | COM3 | COM3 | O | - | - | LCD COM3 output |
| 93 | COM2 | COM2 | O | - | - | LCD COM2 output |
| 94 | COM1 | COM1 | O | - | - | LCD COM1 output |
| 95 | COM0 | COM0 | O | - | - | LCD COM0 output |
| 96 | VL3 | VL3 | - | - | - | LCD power supply |
| 97 | VL2 | VL2 | - | - | - | |
| 98 | C2 | I | - | - | - | - |
| 99 | C1 | C1 | - | - | - | - |
| 100 | VL1 | VL1 | I | - | A/D | LCD power supply |

SEMICONDUCTOR DATA

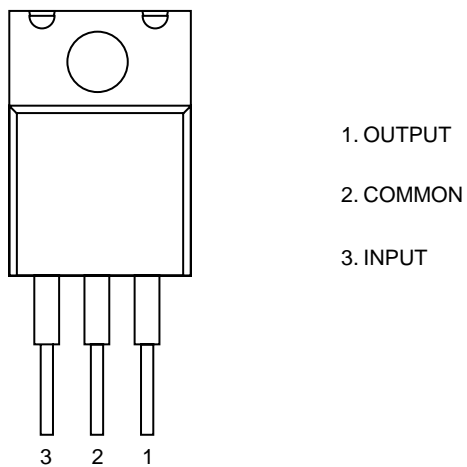
1) M5218FP (XA0068)

Dual Low Noise
Operational Amplifiers



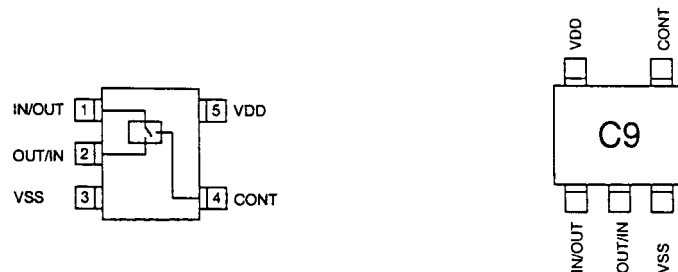
2) NJM7808FA (XA0102)

Pin Assignment



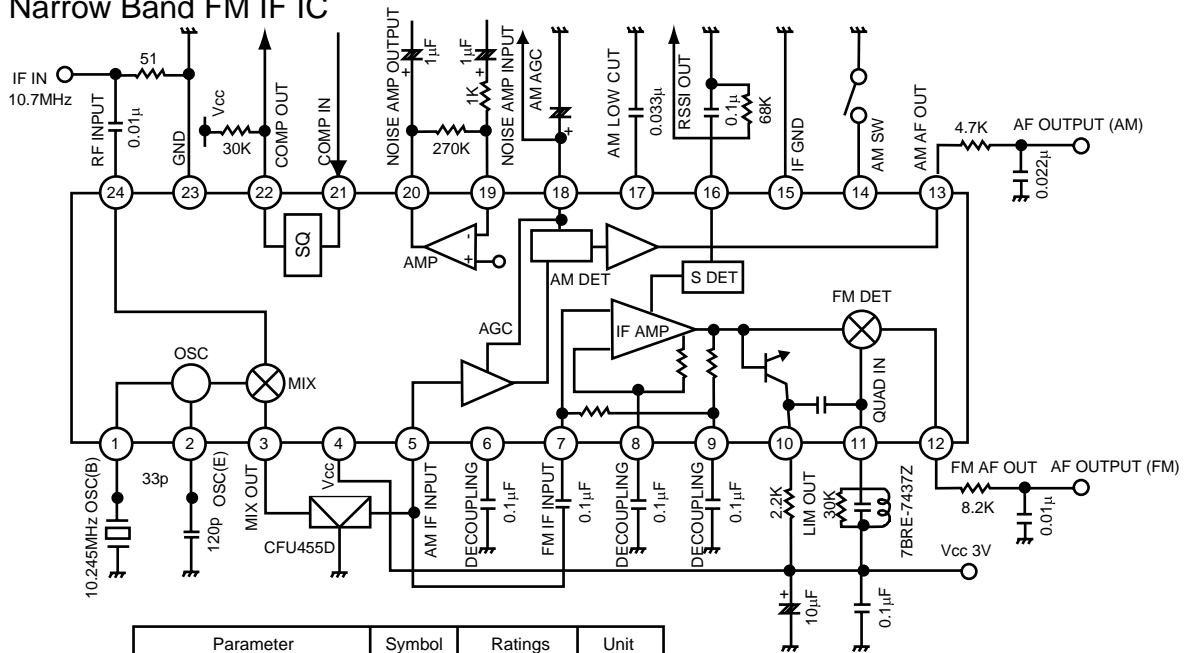
3) TC4S66F (XA0115)

Bilateral Switch



4) TK10930VTL (XA0223)

Narrow Band FM IF IC



| Parameter | Symbol | Ratings | Unit |
|-----------------------|---------|----------|------|
| Supply voltage | Vcc max | 10.0 | V |
| Power dissipation | Pd | 400 | mW |
| Storage temperature | Tstg | -55~+150 | °C |
| Operating temperature | Top | -30~+75 | °C |
| Operating voltage | Vop | 2.5~8.5 | V |
| Operating frequency | fop | ~60 | MHz |

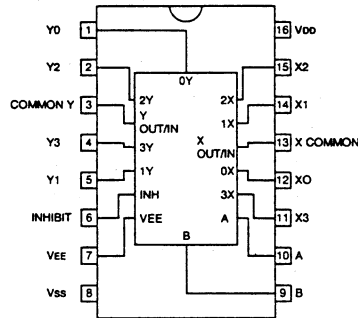
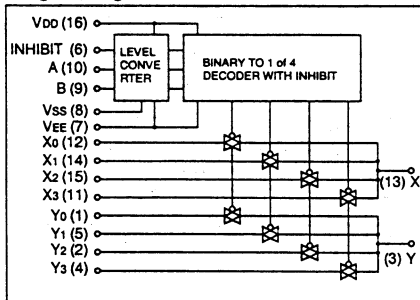
Ta=25°C Vcc=3V

| Parameter | Symbol | Ratings | | | Unit | Condition |
|--------------------------|--------|---------|---------|-----|-------|---|
| | | Min | Typical | Max | | |
| Supply Current 1 | Icc1 | | 6.8 | 8.9 | mA | No signal, AM ON |
| Supply Current 2 | Icc2 | | 3.9 | 5.3 | mA | No signal, AM OFF |
| Mixer Conversion Gain | Mg | | 20 | | dB | |
| Mixer Input Impedance | Mz | | 3.6 | | KΩ | DC Test |
| FM | | | | | | |
| Limiting Sensitivity | Limit | | 2.0 | 8.0 | μV | -3.0dB |
| Output Voltage | Vo1 | 85 | 150 | 230 | mVrms | 10mVin +/-3kHz DEV |
| Distortion | THD1 | | 1.0 | 2.0 | % | 10mVin +/-3kHz DEV |
| Output Impedance | Zo | | 800 | | Ω | 10mVin |
| Filter Gain | Gf | 30 | 38 | | dB | Fin=30kHz, Vo=100mV |
| Scan Control Hi Voltage | SH | 2.3 | | | V | Squelch input=2.5V |
| Scan Control Low Voltage | SL | | | 0.3 | V | Squelch input=0V |
| Squelch Hysteresis | Hys | | 30 | | mV | |
| S meter Output Voltage | S0 | | 0.05 | 0.5 | V | Vin=0mV, RS=68kΩ |
| S meter Output Voltage | S1 | 0.05 | 0.5 | 0.9 | V | Vin=0.01mV, RS=68kΩ |
| S meter Output Voltage | S2 | 0.7 | 1.2 | 1.7 | V | Vin=0.1mV, RS=68kΩ |
| S meter Output Voltage | S3 | 1.2 | 1.8 | 2.5 | V | Vin=1mV, RS=68kΩ |
| S meter Output Voltage | S4 | 1.6 | 2.3 | 2.9 | V | Vin=10mV, RS=68kΩ |
| S meter Output Voltage | S5 | 1.8 | 2.4 | 2.9 | V | Vin=100mV, RS=68kΩ |
| AM | | | | | | |
| Sensitivity | US | 20 | 15 | | μV | required input level to get 20mV rms output |
| Output Voltage | Vo2 | 60 | 120 | 160 | mVrms | 1kHz, 30%, Vin=1mV |
| Distortion-1 | THD2 | | 1.0 | 2.0 | % | 1kHz, 30%, Vin=1mV |
| Distortion-2 | THD3 | | 2.0 | 4.0 | % | 1kHz, 30%, Vin=1mV |
| S/N | S/N | 40 | 48 | | dB | 1kHz, 30%, Vin=1mV |
| AM OFF | Vo | -0.3 | | 0.3 | % | |

5) BU4052BF (XA0236)

Analog Multiplexer/Demultiplexer

Logic Diagram



Truth Table

| INHIBIT | A | B | ON SWITCH |
|---------|---|---|-----------|
| L | L | L | X0 Y0 |
| L | H | L | X1 Y1 |
| L | L | H | X2 Y2 |
| L | H | H | X3 Y3 |
| H | X | X | NONE |

X: Don't Care

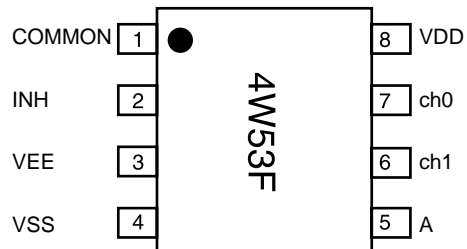
6) TC4W53FU (XA0348)

Multiplexer/Demultiplexer

Function Table

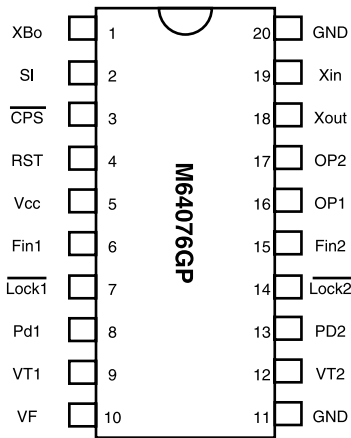
| Control input | | ON channel |
|---------------|---|------------|
| INH | A | |
| L | L | ch0 |
| L | H | ch1 |
| H | * | NONE |

* Don't Care



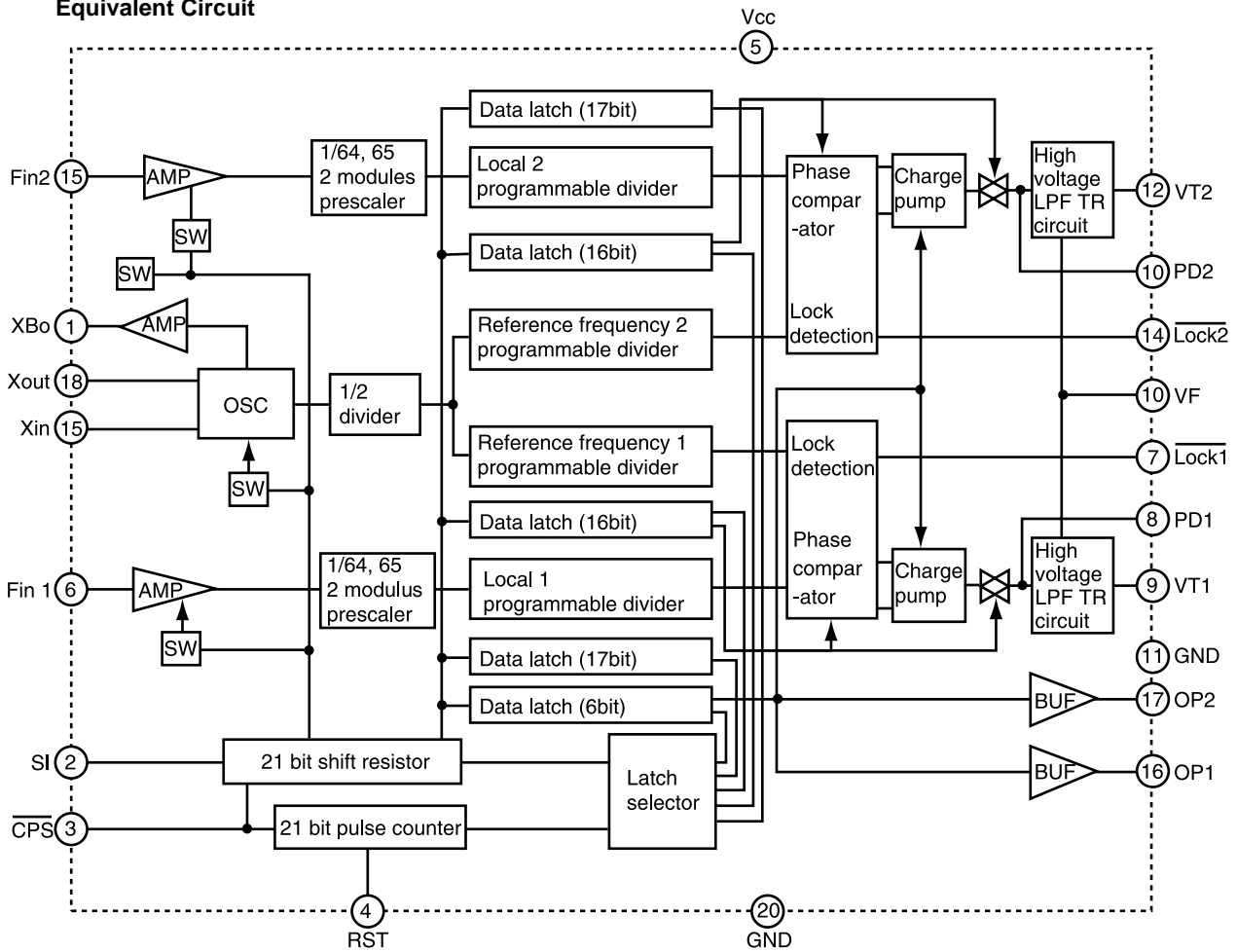
7) M64076GP (XA0352)

Dual PLL Synthesizer



| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|----------------------------------|--------|--|------|------|------|------|
| Power supply voltage | Vcc | Fin=80~520MHz Vin=-10dBm | 2.7 | - | 5.5 | V |
| LPF supply voltage | VF | | - | 9 | 12 | V |
| Local oscillator input level | Vin | Fin=80~520MHz | -20 | - | -4 | dBm |
| Local oscillator input frequency | Fin | Vin=-20~-4dBm Vcc=2.7~5.5V | 80 | - | 520 | MHz |
| Xin input level | Vxin | Vcc=2.7~5.5V Fxin=10~25MHz Sine wave | 0.4 | - | 1.4 | Vp-p |
| Xin input frequency | Fxin | Vcc=2.7~5.5V Vxin=0.4~1.4Vp-p | 10 | - | 25 | MHz |

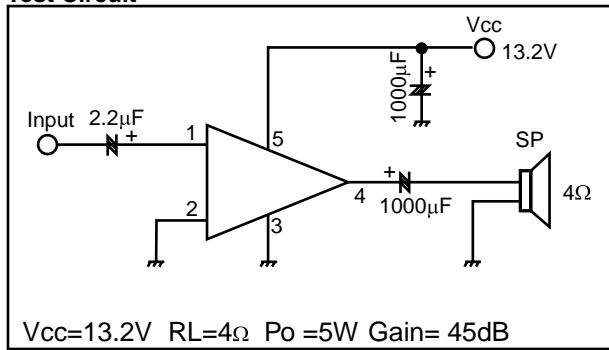
Equivalent Circuit



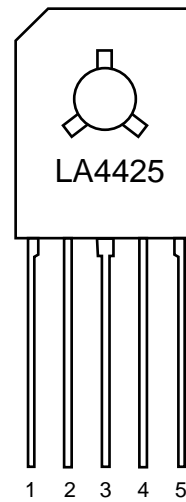
8) LA4425A (XA0410)

5W Audio Power Amplifiers

Test Circuit

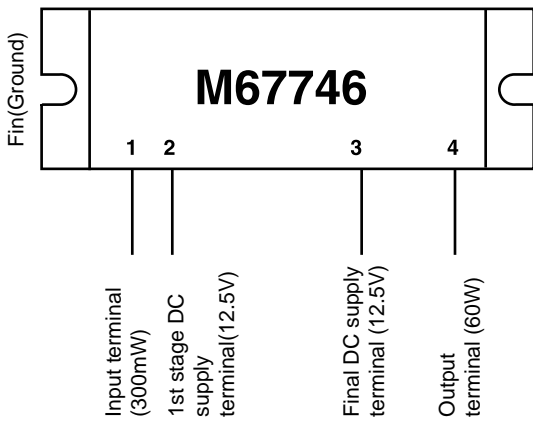


Vcc=13.2V RL=4Ω Po =5W Gain= 45dB



9) M67746 (XA0412)

144 ~ 148MHz 60W
RF Power Module

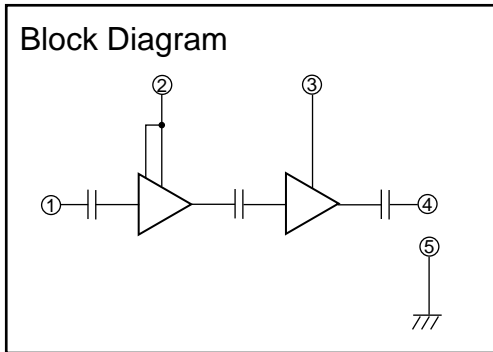
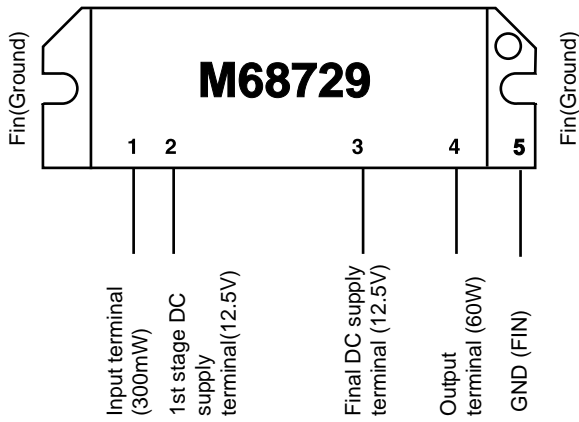


| Rating | Symbol | Ratings | Unit |
|----------------------------|----------|--------------|------|
| Supply voltage | Vcc | 17 | V |
| Total current | Icc | 20 | A |
| Input power | Pin(max) | 600 | mW |
| Output Power | Po(max) | 70 | W |
| Operation case temperature | Tc(op) | -30 to + 110 | °C |
| Storage temperature | Tstg | -40 to + 110 | °C |

Zg=Zl=50Ω

10) M68729 (XA0591)

220 ~ 246MHz 30W
RF Power Module



PIN :

- ① Pin : RF INPUT
- ② Vcc1 : 1st. DC SUPPLY
- ③ Vcc2 : 2nd. DC SUPPLY
- ④ PO : RF OUTPUT
- ⑤ GND : FIN

ABSOLUTE MAXIMUM RATING(TC = 25°C)

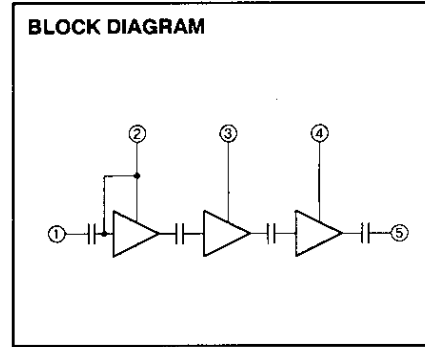
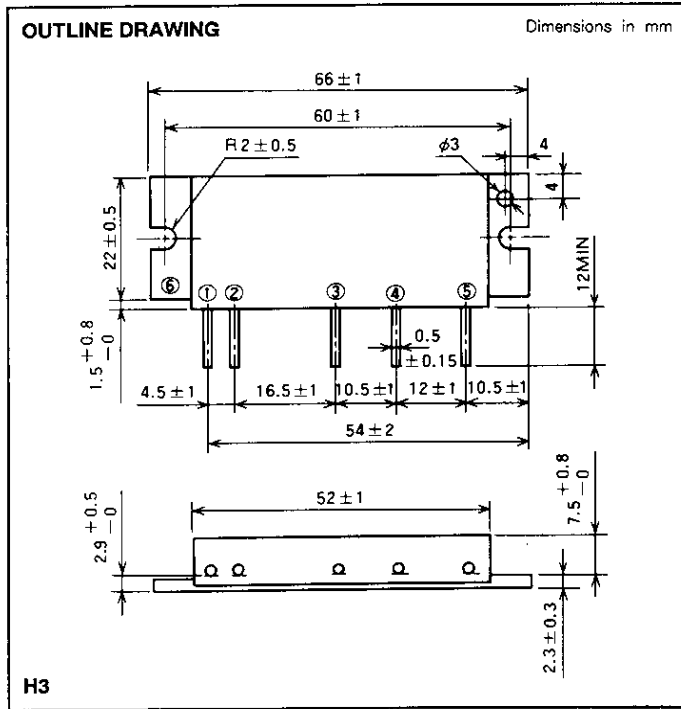
| Rating | Symbol | Ratings | Unit |
|----------------------------|----------|--------------|------|
| Supply voltage | Vcc | 17 | V |
| Total current | Icc | 10 | A |
| Input power | Pin(max) | 600 | mW |
| Output Power | Po(max) | 40 | W |
| Operation case temperature | Tc(op) | -30 to + 110 | °C |
| Strage temperature | Tstg | -40 to + 110 | °C |

Zg=Zl=50Ω

ELECTRICAL CHARACTERISTICS

| Symbol | Parameter | Test conditions | Limits | | Unit |
|----------|---------------------|---|---------------------------|-----|------|
| | | | Min | Max | |
| f | Frequency range | Vcc1,2 = 12.5V Pin = 300mV ZG = ZL = 50Ω | 220 | 246 | MHz |
| Po | Output power | | 30 | | W |
| η_T | Total efficiency | | 40 | | % |
| 2fo | 2nd. harmonic | | | -30 | dBc |
| 3fo | 3rd. harmonic | | | -30 | dBc |
| pin | Input VSWR | | | 3 | - |
| - | Load VSWR tolerance | Vcc1,2 = 15.2V Po = 30W(Pin = Controlled) Load VSWR = 20:1 (All phase), ZG = 50Ω | No degradation or destroy | | - |

11) M57788M (XA0077)



PIN :
 ① Pin : RF INPUT
 ② Vcc1 : 1st. DC SUPPLY
 ③ Vcc2 : 2nd. DC SUPPLY
 ④ Vcc3 : 3rd. DC SUPPLY
 ⑤ Po : RF OUTPUT
 ⑥ GND : FIN

ABSOLUTE MAXIMUM RATINGS (T_C = 25 °C unless otherwise noted)

| Symbol | Parameter | Conditions | Ratings | Unit |
|----------------------|----------------------------|--|---------|------|
| V _{cc1} | Supply voltage | | 16 | V |
| V _{cc2,3} | | | 17 | V |
| I _{cc} | Total current | | 12 | A |
| P _{in(max)} | Input power | Z _G = Z _L = 50 Ω | 0.5 | W |
| P _{o(max)} | Output power | Z _G = Z _L = 50 Ω | 50 | W |
| T _{C(OP)} | Operation case temperature | | -30~110 | °C |
| T _{stg} | Storage temperature | | -40~110 | °C |

ELECTRICAL CHARACTERISTICS (T_C = 25 °C unless otherwise noted)

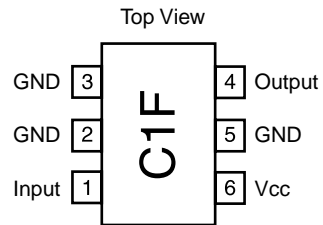
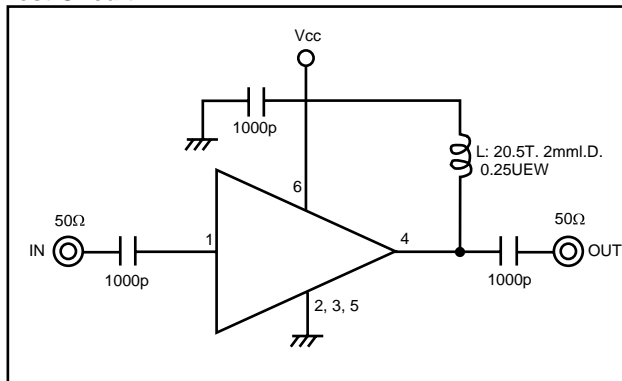
| Symbol | Parameter | Test conditions | Limits | | Unit |
|-----------------|---------------------|--|----------------|-----|------|
| | | | Min | Max | |
| f | Frequency range | | 430 | 450 | MHz |
| P _o | Output power | P _{in} = 0.4W | 40 | | W |
| η _T | Total efficiency | V _{cc} = 12.5V | 40 | | % |
| 2f _o | 2nd. harmonic | Z _G = Z _L = 50 Ω | | -30 | dB |
| ρ _{in} | Input VSWR | | | 2.8 | - |
| - | Load VSWR tolerance | V _{cc} = 15.2V, P _o = 40W (P _{in} : controlled) Load VSWR=8.8:1 (All phase), 2sec. Z _G = 50 Ω | No degradation | | - |

12) μ PC2710T (XA0449)

RF Amplifier

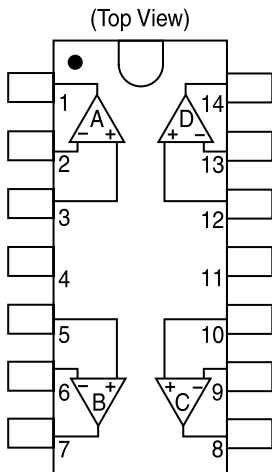
| Parameter | Symbol | Condition | Ratings | Unit |
|-------------------------|---------|---------------------------------|---------|------|
| Supply voltage | Vcc | | 5.0 | V |
| Circuit current | Icc | Vcc=5V, no signa | 22 | mA |
| Power gain | GP | Vcc=5V, f=500MHz | 33 | dB |
| Staturated output power | Po(sat) | Vcc=5V, f=500MHz, Pin=-8dBm | +13.5 | dBm |
| Noise figure | NF | Vcc=5V, f=500MHz | 3.5 | dB |
| Upper frequency (-3dB) | fu | Vcc=5V, Reference freq. =100MHz | 1000 | MHz |
| Isolation | ISL | Vcc=5V, f=500MHz | 39 | dB |
| Input return loss | RL in | Vcc=5V, f=500MHz | 6 | dB |
| Output return loss | RL out | Vcc=5V, f=500MHz | 12 | dB |
| Gain flatness | Gp | Vcc=5V, f=0.1~0.6GHz | 0.8 | dB |

Test Circuit



13) NJM2902 (XA0596)

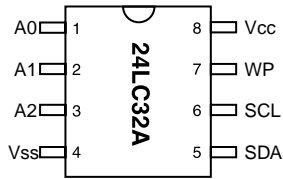
Pin Assignment



- | | |
|-------------------|---------------|
| 1. A OUTPUT | 8. C OUTPUT |
| 2. A-ININPUT | 9. C-ININPUT |
| 3. A+INPUT | 10. C+INPUT |
| 4. V ⁺ | 11. GND |
| 5. B+INPUT | 12. D+INPUT |
| 6. B-ININPUT | 13. D-ININPUT |
| 7. B OUTPUT | 14. D OUTPUT |

14) 24LC32A (XA0604)

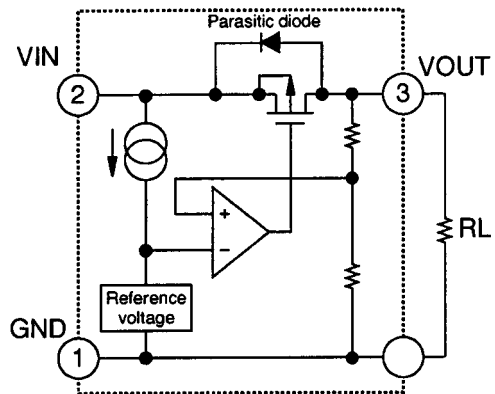
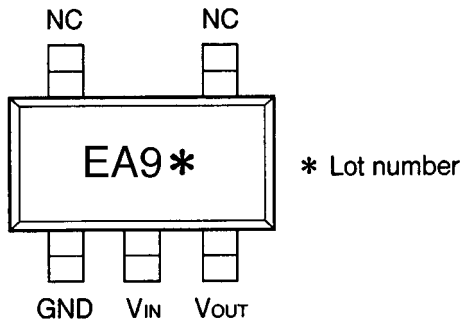
PDIP



| Name | Function |
|--------|--------------------------------|
| A0..A2 | User Configurable Chip Selects |
| Vss | Ground |
| SDA | Serial Address/Data I/O |
| SCL | Serial Clock |
| WP | Write Protect Input |
| Vcc | +2.5V~6.0V Power Supply |

15) S-80845ALMP-EA9-T2 (XA0620)

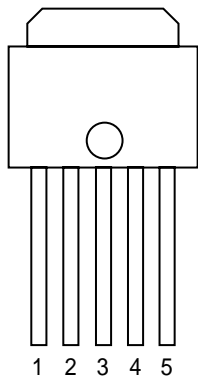
V_{in}=18V
I_{out}=100mA



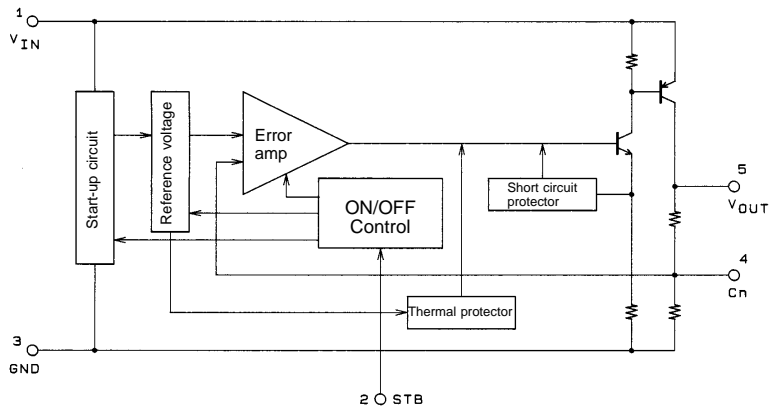
16) L88MS05TLL (XA0675)

5V Voltage Regulator With On/Off Function

Pin Assignment



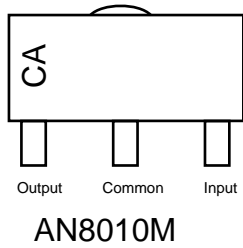
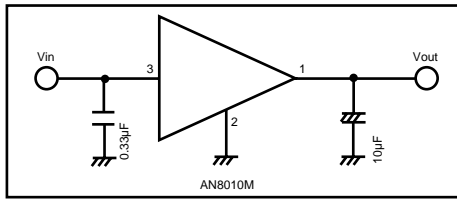
- 1. VIN
- 2. STB
- 3. GND
- 4. Cn
- 5. VOUT



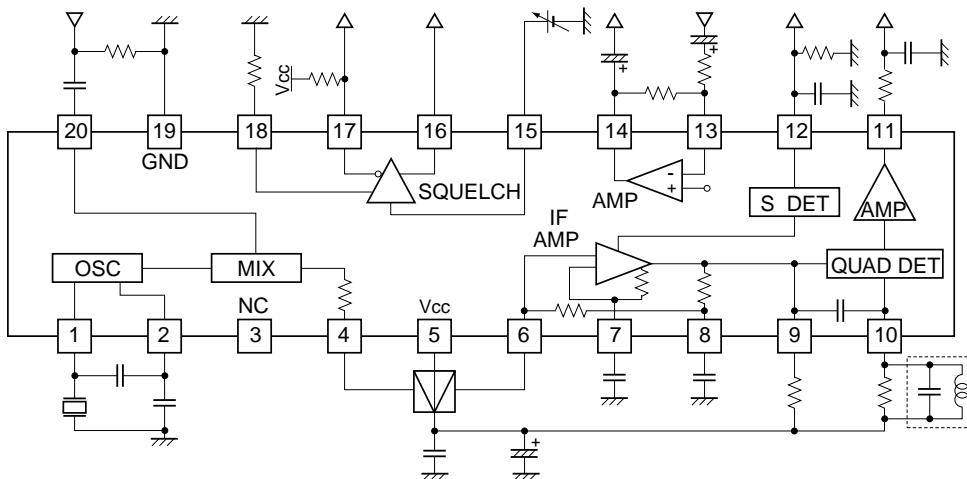
17) AN8010M (XA0119)

Voltage Regulator

Test Circuit



18) TK10489M (XA0314)



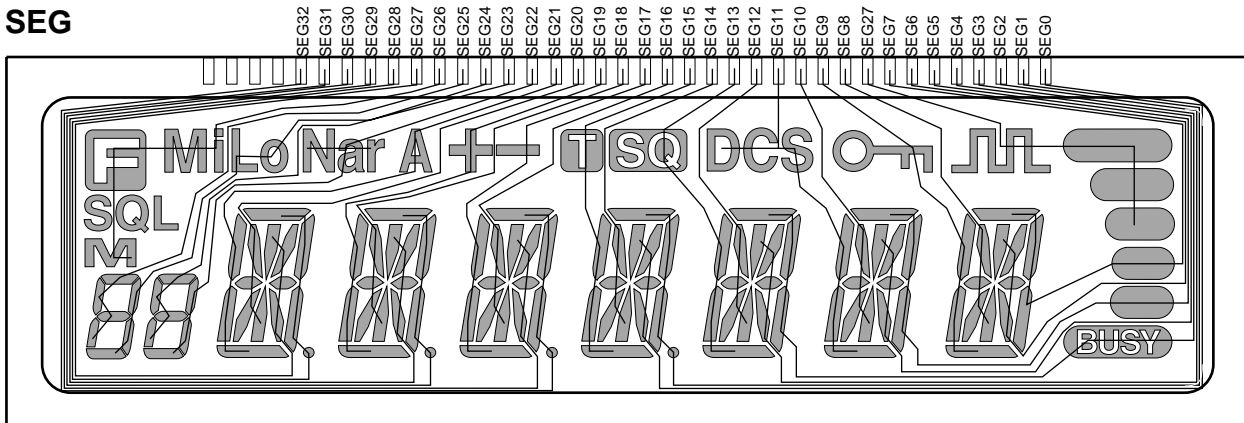
19) Transistor, Diode, and LED Outline Drawings

Top View

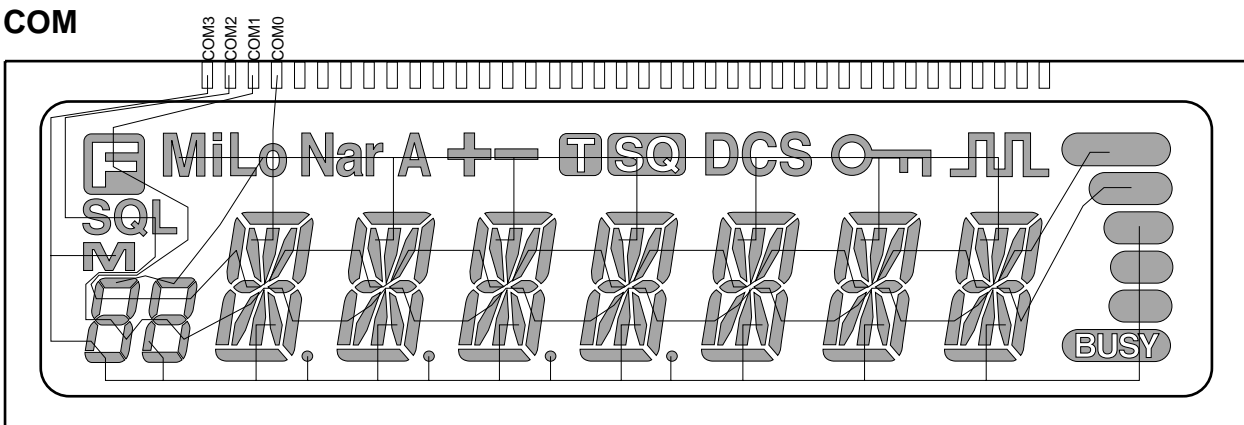
| | | | | | | |
|--------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|
| RLS-73 XD0363 | 1SS355 XD0254 | 1SS356 XD0272 | 1SV214 XD0131 | 1SV237 XD0141 | 1SV262 XD0300 | 1SV268 XD0301 |
| | | | | | | |
| DA204U XD0130 | DAN235U XD0246 | DSA3A1 XD0131 | MA304 XD0299 | MA729 XD0300 | MA8100 XD0297 | MA742 XD0250 |
| | | | | | | |
| MI407 XD0013 | 2SK508 XE0010 | 2SK880GR XE0021 | 3SK131V12 XE0028 | 2SA1036K XT0110 | 2SA1576 XT0094 | 2SA1736 XT0099 |
| | | | | | | |
| 2SB1132 XT0061 | 2SB1292F XT0112 | 2SC2954 XT0084 | 2SC3356 XT0030 | 2SC3357 XT0048 | 2SC4081 XT0095 | 2SC4099 XT0096 |
| | | | | | | |
| 2SC4215 XT0124 | 2SC4226 XT0141 | 2SC4245 XT0125 | 3SK184S XE0013 | DTA114YU XU0112 | DTC114EU XU0131 | DTC144EUA XU0148 |
| | | | | | | |
| DTC144YU XU0029 | FA1111C XL0069 | FA1111C XL0077 | UDZ5.1B XD0165 | UMC3TR XU0047 | UMC5N XU0152 | U1BC44 XD0135 |
| | | | | | | |
| XP1215 XU0178 | | | | | | |
| | | | | | | |

20) LCD Connection (TTR3626UPFDHN)

SEG

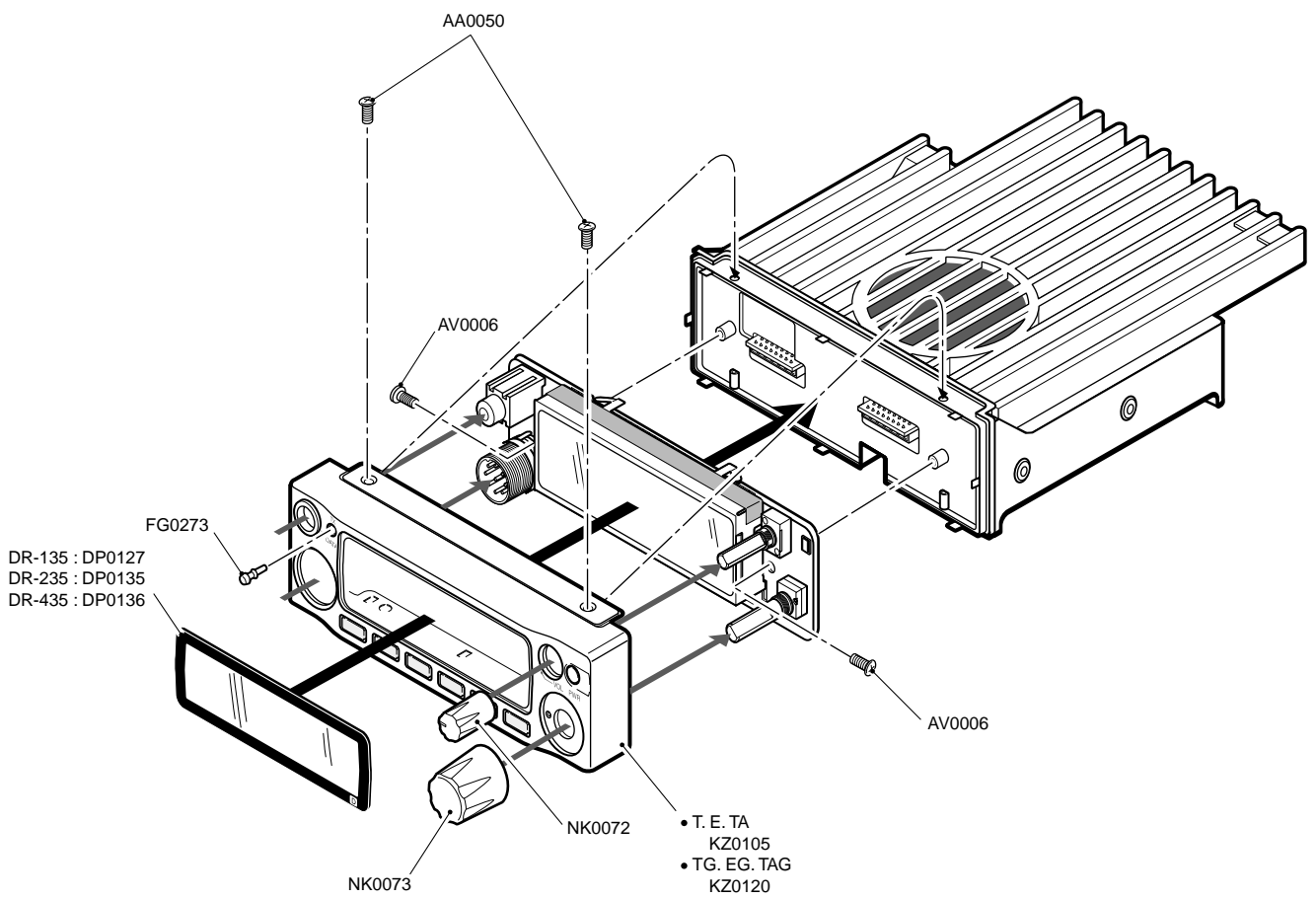


COM

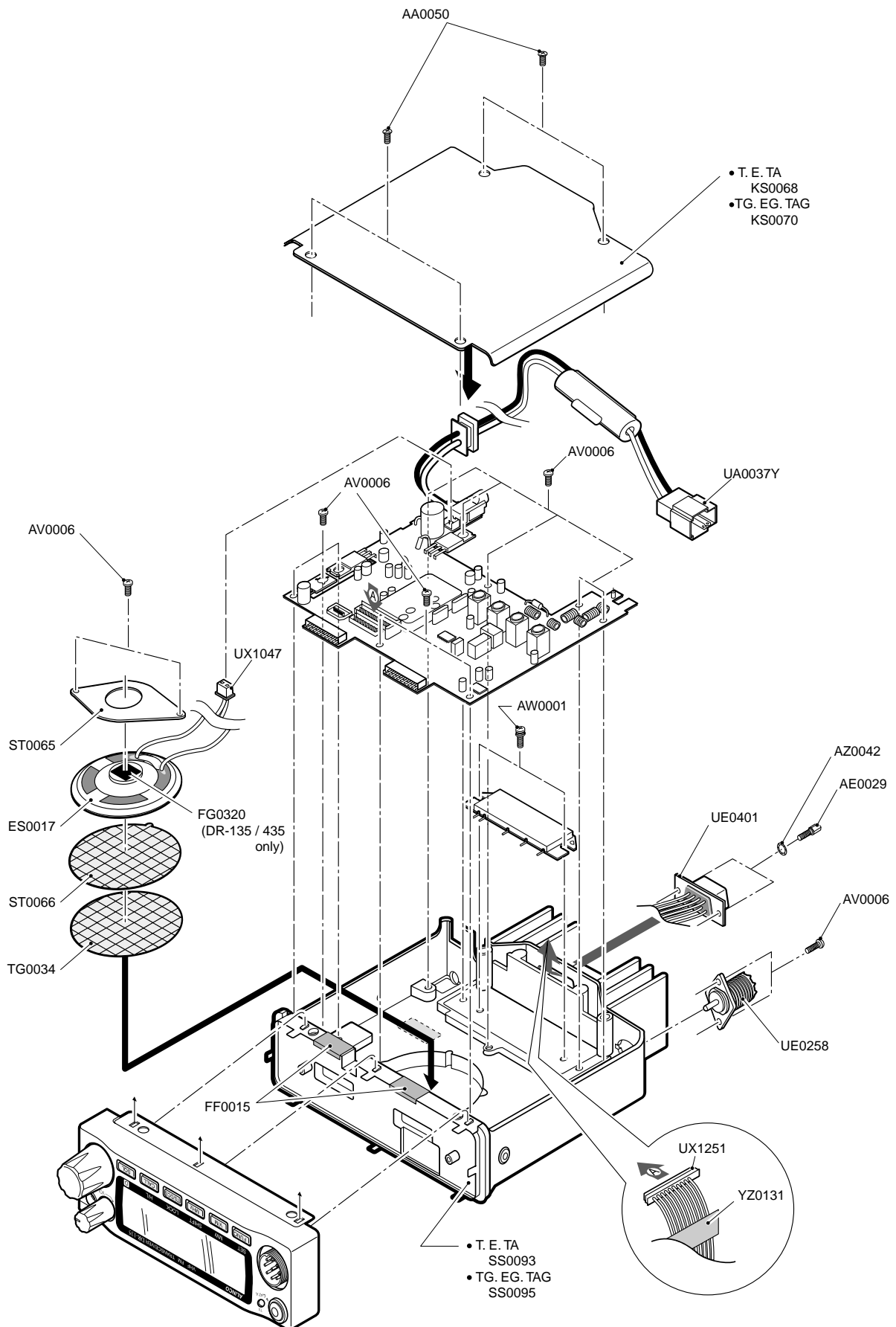


EXPLODED VIEW

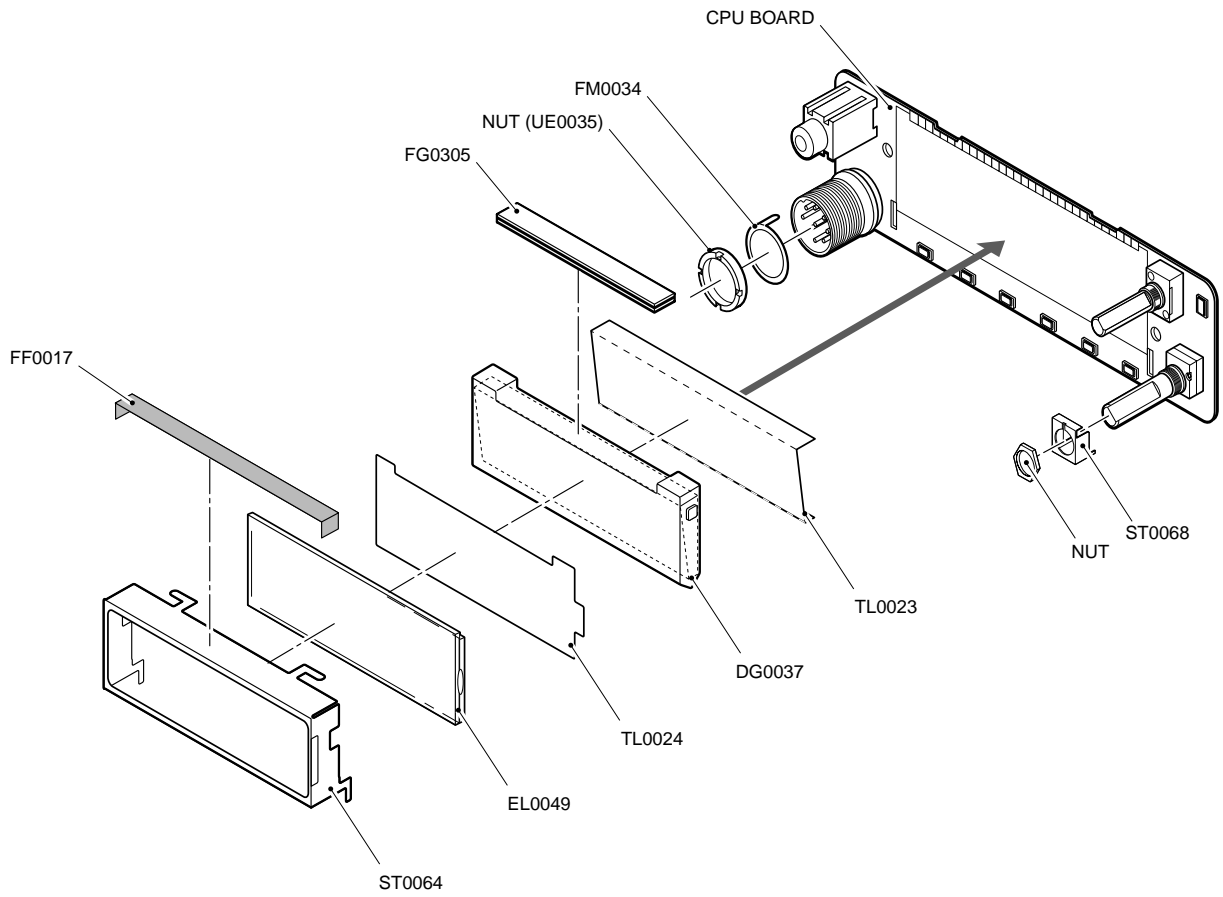
1) Top and Front View



2) Bottom View



3) LCD Assembly



PARTS LIST

CPU

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver | Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-----------------|----------------------|--------|--------|--------|-----------|----------|-----------|-------------|-------------------|--------|--------|--------|------|
| | | | | DR-135 | DR-235 | DR-435 | | | | | | DR-135 | DR-235 | DR-435 | |
| C1 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | 1 | 1 | | R11 | RK3046 | Chip R. | MCR03EZHJ472 | 1 | 1 | 1 | |
| C2 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | 1 | 1 | | R13 | RK3001 | Chip R. | MCR03EZHJ000 | 1 | - | 1 | E,EG |
| C3 | CU3049 | Chip C. | C1608JB1E153KT-NS | 1 | 1 | 1 | | R14 | RK3048 | Chip R. | MCR03EZHJ682 | 1 | 1 | 1 | |
| C4 | CU3049 | Chip C. | C1608JB1E153KT-NS | 1 | 1 | 1 | | R15 | RK3001 | Chip R. | MCR03EZHJ000 | - | - | 1 | |
| C5 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | 1 | 1 | | R16 | RK3001 | Chip R. | MCR03EZHJ000 | 1 | 1 | 1 | T,TG |
| C6 | CU3023 | Chip C. | C1608CH1H101JT-AS | 1 | 1 | 1 | | R19 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | 1 | 1 | |
| C7 | CU3023 | Chip C. | C1608CH1H101JT-AS | 1 | 1 | 1 | | R20 | RK3046 | Chip R. | MCR03EZHJ472 | 1 | 1 | 1 | |
| C8 | CU3043 | Chip C. | C1608JB1H472KT-NS | 1 | 1 | 1 | | R21 | RK3030 | Chip R. | MCR03EZHJ221 | 1 | 1 | 1 | |
| C9 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | 1 | 1 | | R22 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | 1 | 1 | |
| C10 | CU3043 | Chip C. | C1608JB1H472KT-NS | 1 | 1 | 1 | | R23 | RK3064 | Chip R. | MCR03EZHJ154 | 1 | 1 | 1 | |
| C11 | CU3043 | Chip C. | C1608JB1H472KT-NS | 1 | 1 | 1 | | R24 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| C12 | CU3101 | Chip C. | C1608JB1C473KT-NS | 1 | 1 | 1 | | R25 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| C13 | CS0049 | Chip tantalum | TMCSA1C105MTR | 1 | 1 | 1 | | R26 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| C14 | CU3014 | Chip C. | C1608CH1H180JT-AS | 1 | 1 | 1 | | R27 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| C15 | CU3014 | Chip C. | C1608CH1H180JT-AS | 1 | 1 | 1 | | R28 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | 1 | 1 | |
| C16 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | 1 | 1 | | R29 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | 1 | 1 | |
| C17 | CS0372 | Chip tantalum | TMCMB1C106MTR | 1 | 1 | 1 | | R30 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | 1 | 1 | |
| C18 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | 1 | 1 | | R31 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | 1 | 1 | |
| C19 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | 1 | 1 | | R32 | RK3044 | Chip R. | MCR03EZHJ332 | 1 | 1 | 1 | |
| C20 | CU3101 | Chip C. | C1608JB1C473KT-NS | 1 | 1 | 1 | | R33 | RK3034 | Chip R. | MCR03EZHJ471 | 1 | 1 | 1 | |
| C21 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | 1 | 1 | | R34 | RK3047 | Chip R. | MCR03EZHJ562 | 1 | 1 | 1 | |
| C22 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | 1 | 1 | | R35 | RK3052 | Chip R. | MCR03EZHJ153 | 1 | 1 | 1 | |
| C23 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | 1 | 1 | | R36 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | 1 | 1 | |
| C24 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | 1 | 1 | | R37 | RK3049 | Chip R. | MCR03EZHJ822 | 1 | 1 | 1 | |
| C25 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | 1 | 1 | | R38 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| C26 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | 1 | 1 | | R39 | RK3058 | Chip R. | MCR03EZHJ473 | 1 | 1 | 1 | |
| C27 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | 1 | 1 | | R40 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | 1 | 1 | |
| C28 | CS0394 | Chip tantalum | TMCMB0J476MTR | 1 | 1 | 1 | | R41 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | 1 | 1 | |
| C29 | CS0049 | Chip tantalum | TMCSA1C105MTR | 1 | 1 | 1 | | R42 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| C30 | CS0372 | Chip tantalum | TMCMB1C106MTR | 1 | 1 | 1 | | R43 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| C31 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | 1 | 1 | | R44 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | 1 | 1 | |
| C32 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | 1 | 1 | | R45 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| CN1 | UE0398 | Connector | 20-5082-3010-17-100 | 1 | 1 | 1 | | R47 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | 1 | 1 | |
| CN2 | UE0398 | Connector | 20-5082-3010-17-100 | 1 | 1 | 1 | | R48 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | 1 | 1 | |
| CN3 | UE0035 | Mic Connector | FM214-8SMPY | 1 | 1 | 1 | | R49 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | 1 | 1 | |
| D1 | XL0069 | Chip LED | FA1111C-TR | 1 | 1 | 1 | | R50 | RK3070 | Chip R. | MCR03EZHJ474 | 1 | 1 | 1 | |
| D2 | XL0077 | Chip LED | FA1111C-TR C,D,ERANK | 1 | 1 | 1 | | R51 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | 1 | 1 | |
| D3 | XL0077 | Chip LED | FA1111C-TR C,D,ERANK | 1 | 1 | 1 | | R52 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | 1 | 1 | |
| D4 | XL0069 | Chip LED | FA1111C-TR | 1 | 1 | 1 | | R53 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | 1 | 1 | |
| D5 | XL0077 | Chip LED | FA1111C-TR C,D,ERANK | 1 | 1 | 1 | | R54 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| D6 | XL0077 | Chip LED | FA1111C-TR C,D,ERANK | 1 | 1 | 1 | | R55 | RK3074 | Chip R. | MCR03EZHJ105 | 1 | 1 | 1 | |
| D8 | XD0254 | Chip Diode | 1SS355 TE17 | 1 | 1 | 1 | | R56 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| D9 | XD0291 | Chip Diode | MA729-TX | 1 | 1 | 1 | | R57 | RK3066 | Chip R. | MCR03EZHJ224 | 1 | 1 | 1 | |
| D10 | XD0135 | Chip Diode | U1BC44 TE12R | 1 | 1 | 1 | | R58 | RK3034 | Chip R. | MCR03EZHJ471 | 1 | 1 | 1 | |
| D11 | XL0077 | Chip LED | FA1111C-TR C,D,ERANK | 1 | 1 | 1 | | R59 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | 1 | 1 | |
| D12 | XD0165 | Chip Diode | UDZSTE-17 5.1B | 1 | 1 | 1 | | R60 | RK3034 | Chip R. | MCR03EZHJ471 | 1 | 1 | 1 | |
| D13 | XD0165 | Chip Diode | UDZSTE-17 5.1B | 1 | 1 | 1 | | R61 | RK3074 | Chip R. | MCR03EZHJ105 | 1 | 1 | 1 | |
| D14 | XD0291 | Chip Diode | MA729-TX | 1 | 1 | 1 | | R62 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| D15 | XD0165 | Chip Diode | UDZSTE-17 5.1B | 1 | 1 | 1 | | R63 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | 1 | 1 | |
| D16 | XD0291 | Chip Diode | MA729-TX | 1 | 1 | 1 | | R64 | RK3046 | Chip R. | MCR03EZHJ472 | 1 | 1 | 1 | |
| D17 | XD0291 | Chip Diode | MA729-TX | 1 | 1 | 1 | | R65 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | 1 | 1 | |
| D19 | XD0363 | Chip Diode | RLS-73TE-11 | 1 | 1 | 1 | | R66 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| IC1 | XA0818 | CPU | M38267M8L269GP | 1 | 1 | 1 | | R67 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | 1 | 1 | |
| IC2 | XA0604 | IC | 24LC32AT-I/SN | 1 | 1 | 1 | | R68 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| IC4 | XA0620 | IC | S-80845ALMP-EA9-T2 | 1 | 1 | 1 | | R69 | RK3046 | Chip R. | MCR03EZHJ472 | 1 | 1 | 1 | |
| IC5 | XA0675 | IC | L88MS05TLL-TL | 1 | 1 | 1 | | R70 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | 1 | 1 | |
| JK1 | UJ0047 | Jack | HSJ2013-01-120 | 1 | 1 | 1 | | R71 | RK3072 | Chip R. | MCR03EZHJ684 | 1 | 1 | 1 | |
| JP3 | MACL04GG | Wire | #30AH1-040-H1 | 1 | 1 | 1 | T,TG,E,EG | R72 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| LCD1 | EL0049 | LCD | TTR3626 UPTDHN | 1 | 1 | 1 | | R73 | RK3032 | Chip R. | MCR03EZHJ331 | 1 | 1 | 1 | |
| Q1 | XU0029 | Chip Transistor | DTC114YUA T106 | 1 | 1 | 1 | | R74 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | 1 | 1 | |
| Q2 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | 1 | 1 | | R75 | RK3046 | Chip R. | MCR03EZHJ472 | 1 | 1 | 1 | |
| Q3 | XT0110 | Chip Transistor | 2SA1036K T146Q | 1 | 1 | 1 | | R76 | RK3032 | Chip R. | MCR03EZHJ331 | 1 | 1 | 1 | |
| Q4 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | 1 | 1 | | R77 | RK3028 | Chip R. | MCR03EZHJ151 | 1 | 1 | 1 | |
| Q5 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | 1 | 1 | | R79 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | 1 | 1 | |
| Q6 | XT0095 | Chip Transistor | 2SC4081 T106R | 1 | 1 | 1 | | R80 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | 1 | 1 | |
| Q7 | XT0061 | Chip Transistor | 2SB1132T 100Q | 1 | 1 | 1 | | R82 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| Q8 | XU0029 | Chip Transistor | DTC114YUA T106 | 1 | 1 | 1 | | R83 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | 1 | 1 | |
| Q9 | XU0148 | Chip Transistor | DTC114EUA T106 | 1 | 1 | 1 | | R84 | RK0008 | Chip R. | ERJ6GEYJ330V | 1 | 1 | 1 | |
| Q10 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | 1 | 1 | | R85 | RK3046 | Chip R. | MCR03EZHJ472 | 1 | 1 | 1 | |
| Q11 | XU0112 | Chip Transistor | DTA114YUA T106 | 1 | 1 | 1 | | R86 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| Q12 | XU0112 | Chip Transistor | DTA114YUA T106 | 1 | 1 | 1 | | R87 | RK3054 | Chip R. | MCR03EZHJ223 | 1 | 1 | 1 | |
| Q13 | XU0112 | Chip Transistor | DTA114YUA T106 | 1 | 1 | 1 | | R88 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| R1 | RK3054 | Chip R. | MCR03EZHJ223 | 1 | 1 | 1 | | R89 | RK3058 | Chip R. | MCR03EZHJ473 | 1 | 1 | 1 | |
| R2 | RK3001 | Chip R. | MCR03EZHJ000 | - | - | - | | R90 | RK3058 | Chip R. | MCR03EZHJ473 | 1 | 1 | 1 | |
| R4 | RK3054 | Chip R. | MCR03EZHJ223 | 1 | 1 | 1 | | R91 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| R5 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | | R92 | RK3032 | Chip R. | MCR03EZHJ331 | 1 | 1 | 1 | |
| R6 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | | R95 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | 1 | 1 | |
| R7 | RK3023 | Chip R. | MCR03EZHJ560 | 1 | 1 | 1 | | R96 | RK4014 | Chip R. | ERJ12YJ100U | 1 | 1 | 1 | |
| R8 | RK3023 | Chip R. | MCR03EZHJ560 | 1 | 1 | 1 | | R97 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | 1 | 1 | |
| R9 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | 1 | 1 | | RE1 | UR0015 | Dial | RH90N74E20-A90770 | 1 | 1 | 1 | |
| R10 | RK3032 | Chip R. | MCR03EZHJ331 | 1 | 1 | 1 | | RL1 | UL0020 | Relay | ATQ209 | 1 | 1 | 1 | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-------------|----------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| SW1 | UU0015Z | Switch | EVQPPXA25 | 1 | 1 | 1 | |
| SW2 | UU0015Z | Switch | EVQPPXA25 | 1 | 1 | 1 | |
| SW3 | UU0015Z | Switch | EVQPPXA25 | 1 | 1 | 1 | |
| SW4 | UU0015Z | Switch | EVQPPXA25 | 1 | 1 | 1 | |
| SW5 | UU0015Z | Switch | EVQPPXA25 | 1 | 1 | 1 | |
| SW6 | UU0015Z | Switch | EVQPPXA25 | 1 | 1 | 1 | |
| SW7 | UU0015Z | Switch | EVQPPXA25 | 1 | 1 | 1 | |
| VR1 | RV0035 | Variable | EVUF2JFK4B14 | 1 | 1 | 1 | |
| W1 | UX1270 | Wire | WIRE DR235 W1 | 1 | 1 | 1 | |
| X1 | XQ0131 | Xtal | CSA310/3.6864MHz | 1 | 1 | 1 | |
| | TL0024 | | DIFFUSION SHEET 135 | 1 | 1 | 1 | |
| | YZ0042 | | CEMENT G17 / 1G | 1 | 1 | 1 | |
| | ST0068 | | DIAL FITTING | 1 | 1 | 1 | |
| | FG0305 | | LCD RUB.CONNECT. 135 | 1 | 1 | 1 | |
| | TL0023 | | REFLECTION DR135 | 1 | 1 | 1 | |
| | DG0037 | | LCD LIGHT DR135 | 1 | 1 | 1 | |
| | FM0034 | | MIC GND PLATE | 1 | 1 | 1 | |
| | FP0034 | | MIC SPACER DR110 | 1 | 1 | 1 | |
| | ST0064 | | LCD HOLDER DR135 | 1 | 1 | 1 | |

Main Unit (DR-135)

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-----------------|-------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| C101 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C102 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C103 | CS0049 | Chip tantalum | TMCSA1C105MTR | 1 | | | |
| C104 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C105 | CS0394 | Chip tantalum | TMCMBOJ476MTR | 1 | | | |
| C106 | CU3051 | Chip C. | C1608JB1E223KT-NS | 1 | | | |
| C107 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C108 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C109 | CS0216 | Chip tantalum | TMCMB1A106MTR | 1 | | | |
| C110 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C111 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C112 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C113 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C114 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C115 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C116 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C117 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C118 | CU3049 | Chip C. | C1608JB1E153KT-NS | 1 | | | |
| C119 | CU3051 | Chip C. | C1608JB1E223KT-NS | 1 | | | |
| C120 | CU3021 | Chip C. | C1608CH1H680JT-AS | 1 | | | |
| C121 | CU3005 | Chip C. | C1608CH1H040CT-AS | 1 | | | |
| C122 | CU3002 | Chip C. | C1608CH1H010CT-AS | 1 | | | |
| C123 | CU3015 | Chip C. | C1608CH1H220JT-AS | 1 | | | |
| C124 | CU3040 | Chip C. | C1608JB1H272KT-NS | 1 | | | |
| C125 | CU3044 | Chip C. | C1608JB1H562KT-NS | 1 | | | |
| C126 | CU3038 | Chip C. | C1608JB1H182KT-AS | 1 | | | |
| C127 | CU3041 | Chip C. | C1608JB1H332KT-NS | 1 | | | |
| C129 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C130 | CS0049 | Chip tantalum | TMCSA1C105MTR | 1 | | | |
| C132 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C133 | CU3005 | Chip C. | C1608CH1H040CT-AS | 1 | | | |
| C134 | CU3042 | Chip C. | C1608JB1H392KT-NS | 1 | | | |
| C135 | CU3044 | Chip C. | C1608JB1H562KT-NS | 1 | | | |
| C137 | CU3017 | Chip C. | C1608CH1H330JT-AS | 1 | | | |
| C138 | CS0049 | Chip tantalum | TMCSA1C105MTR | 1 | | | |
| C139 | CU3017 | Chip C. | C1608CH1H330JT-AS | 1 | | | |
| C140 | CU3017 | Chip C. | C1608CH1H330JT-AS | 1 | | | |
| C141 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C142 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C143 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C144 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C145 | CU3003 | Chip C. | C1608CH1H020CT-AS | 1 | | | |
| C146 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C148 | CU3017 | Chip C. | C1608CH1H330JT-AS | 1 | | | |
| C149 | CU3017 | Chip C. | C1608CH1H330JT-AS | 1 | | | |
| C150 | CU3005 | Chip C. | C1608CH1H040CT-AS | 1 | | | |
| C151 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C152 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C153 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C154 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C155 | CU3007 | Chip C. | C1608CH1H060CT-A | 1 | | | |
| C156 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C157 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C158 | CU3013 | Chip C. | C1608CH1H150JT-AS | 1 | | | |
| C159 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C160 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C161 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C162 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C165 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C167 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C168 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C169 | CU3027 | Chip C. | C1608CH1H221JT-AS | 1 | | | |
| C171 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C172 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-----------------|---------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| C173 | CU3037 | Chip C. | C1608JB1H152KT-AS | 1 | | | |
| C174 | CU3029 | Chip C. | C1608JB1H331KT-AS | 1 | | | |
| C175 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C176 | CU3018 | Chip C. | C1608CH1H390JT-AS | 1 | | | |
| C177 | CU3018 | Chip C. | C1608CH1H390JT-AS | 1 | | | |
| C179 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C180 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C181 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C182 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C183 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C184 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C185 | CS0232 | Chip tantalum | TMCSA1V474MTR | 1 | | | |
| C186 | CU3008 | Chip C. | C1608CH1H070CT-A | 1 | | | |
| C187 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C188 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C189 | CU3011 | Chip C. | C1608CH1H100DT-AS | 1 | | | |
| C190 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C191 | CU3102 | Chip C. | C1608JB1C333KT-NS | 1 | | | |
| C192 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C193 | CU4033 | Chip C. | GRM42-6X7R102K500PT | 1 | | | |
| C194 | CU3012 | Chip C. | C1608CH1H120JT-AS | 1 | | | |
| C195 | CU3012 | Chip C. | C1608CH1H120JT-AS | 1 | | | |
| C196 | CU3023 | Chip C. | C1608CH1H101JT-AS | 1 | | | |
| C197 | CU4003 | Chip C. | GRM42-6CK020C500PT | 1 | | | |
| C198 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C199 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C200 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C201 | CU4014 | Chip C. | GRM42-6CH180J500PT | 1 | | | |
| C202 | CU4016 | Chip C. | GRM42-6CH270J500PT | 1 | | | |
| C203 | CU4016 | Chip C. | GRM42-6CH270J500PT | 1 | | | |
| C204 | CU4013 | Chip C. | GRM42-6CH150J500PT | 1 | | | |
| C205 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C206 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C207 | CU3002 | Chip C. | C1608CH1H010CT-AS | 1 | | | |
| C208 | CU3002 | Chip C. | C1608CH1H010CT-AS | 1 | | | |
| C209 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C210 | CU3003 | Chip C. | C1608CH1H020CT-AS | 1 | | | |
| C211 | CU3003 | Chip C. | C1608CH1H020CT-AS | 1 | | | |
| C212 | CE0364 | Electrolytic C. | 16MV 47SWB+TS | 1 | | | |
| C213 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C214 | CU3015 | Chip C. | C1608CH1H220JT-AS | 1 | | | |
| C215 | CU4016 | Chip C. | GRM42-6CH270J500PT | 1 | | | |
| C216 | CU4016 | Chip C. | GRM42-6CH270J500PT | 1 | | | |
| C217 | CU3051 | Chip C. | C1608JB1E223KT-NS | 1 | | | |
| C218 | CU3051 | Chip C. | C1608JB1E223KT-NS | 1 | | | |
| C219 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C220 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C221 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C222 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C223 | CE0364 | Electrolytic C. | 16MV 47SWB+TS | 1 | | | |
| C224 | CU3023 | Chip C. | C1608CH1H101JT-AS | 1 | | | |
| C225 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C226 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C227 | CS0049 | Chip tantalum | TMCSA1C105MTR | 1 | | | |
| C228 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C229 | CU3101 | Chip C. | C1608JB1C473KT-NS | 1 | | | |
| C230 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C231 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C232 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C233 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C234 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C235 | CU3014 | Chip C. | C1608CH1H180JT-AS | 1 | | | |
| C236 | CU3014 | Chip C. | C1608CH1H180JT-AS | 1 | | | |
| C237 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C238 | CS0049 | Chip tantalum | TMCSA1C105MTR | 1 | | | |
| C239 | CS0049 | Chip tantalum | TMCSA1C105MTR | 1 | | | |
| C240 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C241 | CU3022 | Chip C. | C1608CH1H820JT-AS | 1 | | | |
| C242 | CU3051 | Chip C. | C1608JB1E223KT-NS | 1 | | | |
| C243 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C244 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C245 | CS0049 | Chip tantalum | TMCSA1C105MTR | 1 | | | |
| C246 | CU3043 | Chip C. | C1608JB1H472KT-NS | 1 | | | |
| C247 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C248 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C249 | CU3038 | Chip C. | C1608JB1H182KT-AS | 1 | | | |
| C250 | CU3026 | Chip C. | C1608CH1H181JT-AS | 1 | | | |
| C251 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C252 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C253 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C254 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C255 | CE0364 | Electrolytic C. | 16MV 47SWB+TS | 1 | | | |
| C256 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C257 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C258 | CS0049 | Chip tantalum | TMCSA1C105MTR | 1 | | | |
| C259 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C260 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C261 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C262 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-----------------|---------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| C263 | CE0100 | Electrolytic C. | 16MV 22UW | 1 | | | |
| C264 | CU3031 | Chip C. | C1608JB1H471KT-AS | 1 | | | |
| C265 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C266 | CU3064 | Chip C. | C1608CH1H1R5CT-AS | 1 | | | |
| C267 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C268 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C269 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C270 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C271 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C272 | CS0220 | Chip tantalum | TMCMA1C225MTR | 1 | | | |
| C273 | CS0220 | Chip tantalum | TMCMA1C225MTR | 1 | | | |
| C274 | CU3016 | Chip C. | C1608CH1H270JT-AS | 1 | | | |
| C275 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C276 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C277 | CE0343 | Electrolytic C. | 16MV 1000HC+T | 1 | | | |
| C278 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C279 | CU3051 | Chip C. | C1608JB1E223KT-NS | 1 | | | |
| C280 | CU3016 | Chip C. | C1608CH1H270JT-AS | 1 | | | |
| C281 | CU3009 | Chip C. | C1608CH1H080CT-A | 1 | | | |
| C282 | CU3064 | Chip C. | C1608CH1H1R5CT-AS | 1 | | | |
| C283 | CU3027 | Chip C. | C1608CH1H221JT-AS | 1 | | | |
| C284 | CU3002 | Chip C. | C1608CH1H010CT-AS | 1 | | | |
| C285 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C286 | CU3027 | Chip C. | C1608CH1H221JT-AS | 1 | | | |
| C287 | CS0063 | Chip tantalum | TMCMA1V104MTR | 1 | | | |
| C288 | CU3011 | Chip C. | C1608CH1H100DT-AS | 1 | | | |
| C289 | CU3051 | Chip C. | C1608JB1E223KT-NS | 1 | | | |
| C290 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C291 | CU3011 | Chip C. | C1608CH1H100DT-AS | 1 | | | |
| C292 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C293 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C294 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C295 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C296 | CU3011 | Chip C. | C1608CH1H100DT-AS | 1 | | | |
| C297 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C298 | CU3009 | Chip C. | C1608CH1H080CT-A | 1 | | | |
| C299 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C300 | CU3015 | Chip C. | C1608CH1H220JT-AS | 1 | | | |
| C301 | CU3023 | Chip C. | C1608CH1H101JT-AS | 1 | | | |
| C302 | CU3023 | Chip C. | C1608CH1H101JT-AS | 1 | | | |
| C303 | CU3023 | Chip C. | C1608CH1H101JT-AS | 1 | | | |
| C304 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C305 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C306 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C307 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C308 | CE0342 | Electrolytic C. | 16MV 470HC+TS | 1 | | | |
| C309 | CU3051 | Chip C. | C1608JB1E223KT-NS | 1 | | | |
| C310 | CU3023 | Chip C. | C1608CH1H101JT-AS | 1 | | | |
| C311 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C312 | CU3011 | Chip C. | C1608CH1H100DT-AS | 1 | | | |
| C313 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C314 | CS0237 | Chip tantalum | TMCMA1A475MTR | 1 | | | |
| C315 | CS0237 | Chip tantalum | TMCMA1A475MTR | 1 | | | |
| C316 | CS0237 | Chip tantalum | TMCMA1A475MTR | 1 | | | |
| C317 | CS0237 | Chip tantalum | TMCMA1A475MTR | 1 | | | |
| C318 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C319 | CS0237 | Chip tantalum | TMCMA1A475MTR | 1 | | | |
| C320 | CS0237 | Chip tantalum | TMCMA1A475MTR | 1 | | | |
| C321 | CS0220 | Chip tantalum | TMCMA1C225MTR | 1 | | | |
| C322 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C323 | CU3018 | Chip C. | C1608CH1H390JT-AS | 1 | | | |
| C324 | CU3016 | Chip C. | C1608CH1H270JT-AS | 1 | | | |
| C325 | CU3018 | Chip C. | C1608CH1H390JT-AS | 1 | | | |
| C326 | CU3029 | Chip C. | C1608JB1H331KT-AS | 1 | | | |
| C327 | CU3034 | Chip C. | C1608JB1H821KT-AS | 1 | | | |
| CN101 | UE0369 | Connector | AXN49301616 | 1 | | | |
| CN102 | UE0397 | Connector | 10-5082-3110-17-100 | 1 | | | |
| CN103 | UE0397 | Connector | 10-5082-3110-17-100 | 1 | | | |
| CN104 | UA0037Y | Wire | DC CABLE UA0037 | 1 | | | |
| CN105 | UE0394 | Connector | PI28A15M | 1 | | | |
| CN106 | UE0043 | Connector | PI22A02M | 1 | | | |
| CN107 | UE0393 | Connector | PI28A11M | 1 | | | |
| CN110 | UE0341 | Connector | PI28A02M | 1 | | | |
| D101 | XD0246 | Chip Diode | DAN235UT 106 | 1 | | | |
| D102 | XD0299 | Chip Diode | MA304-TX | 1 | | | |
| D103 | XD0299 | Chip Diode | MA304-TX | 1 | | | |
| D104 | XD0299 | Chip Diode | MA304-TX | 1 | | | |
| D105 | XD0299 | Chip Diode | MA304-TX | 1 | | | |
| D106 | XD0250 | Chip Diode | MA742 TX | 1 | | | |
| D107 | XD0246 | Chip Diode | DAN235UT 106 | 1 | | | |
| D108 | XD0130 | Chip Diode | DA204U T106 | 1 | | | |
| D109 | XD0301 | Chip Diode | 1SV268-TD | 1 | | | |
| D110 | XD0013 | Diode | MI407 | 1 | | | |
| D111 | XD0250 | Chip Diode | MA742 TX | 1 | | | |
| D112 | XD0250 | Chip Diode | MA742 TX | 1 | | | |
| D113 | XD0254 | Chip Diode | 1SS355 TE17 | 1 | | | |
| D114 | XD0246 | Chip Diode | DAN235UT 106 | 1 | | | |
| D115 | XD0254 | Chip Diode | 1SS355 TE17 | 1 | | | |
| D116 | XD0165 | Chip Diode | UDZSTE-17 5.1B | 1 | | | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-----------------|------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| D117 | XD0254 | Chip Diode | 1SS355 TE17 | 1 | | | |
| D118 | XD0130 | Chip Diode | DA204U T106 | 1 | | | |
| D119 | XD0254 | Chip Diode | 1SS355 TE17 | 1 | | | |
| D120 | XD0131 | Chip Diode | 1SV214 TPH4 | 1 | | | |
| D121 | XD0274 | Diode | DSA3A1 | 1 | | | |
| D122 | XD0300 | Chip Diode | 1SV262TPH2 | 1 | | | |
| D123 | XD0300 | Chip Diode | 1SV262TPH2 | 1 | | | |
| D124 | XD0131 | Chip Diode | 1SV214 TPH4 | 1 | | | |
| D125 | XD0272 | Chip Diode | 1SS356 TW11 | 1 | | | |
| D126 | XD0254 | Chip Diode | 1SS355 TE17 | 1 | | | |
| D127 | XD0165 | Chip Diode | UDZSTE-17 5.1B | 1 | | | |
| D128 | XD0291 | Chip Diode | MA729-TX | 1 | | | |
| D129 | XD0291 | Chip Diode | MA729-TX | 1 | | | |
| D130 | XD0254 | Chip Diode | 1SS355 TE17 | 1 | | | |
| FL101 | XC0070 | Ceramic Filter | ALFYM450E=K | 1 | | | |
| FL102 | XC0052 | Ceramic Filter | ALFYM450G=K | 1 | | | |
| IC101 | XA0675 | IC | L88MS05TLL-TL | 1 | | | |
| IC102 | XA0348 | IC | TC4W53FU(TE12) | 1 | | | |
| IC103 | XA0348 | IC | TC4W53FU(TE12) | 1 | | | |
| IC104 | XA0596 | IC | NJM2902V-TE1 | 1 | | | |
| IC108 | XA0223 | IC | TK10930VTL | 1 | | | |
| IC109 | XA0115 | IC | TC4S66F TE85R | 1 | | | |
| IC110 | XA0412 | IC | M67746 | 1 | | | |
| IC111 | XA0236 | IC | BU4052BCF-E2 | 1 | | | |
| IC112 | XA0449 | IC | UPC2710T-E3 | 1 | | | |
| IC113 | XA0348 | IC | TC4W53FU(TE12) | 1 | | | |
| IC114 | XA0068 | IC | M5218AFP/600E | 1 | | | |
| IC115 | XA0102 | IC | NJM7808FA | 1 | | | |
| IC116 | XA0352 | IC | M64076GP | 1 | | | |
| IC117 | XA0410 | IC | LA4425A | 1 | | | |
| JK101 | UJ0046 | Jack | MJ82-1 | 1 | | | |
| JK102 | UJ0024Z | Jack | LGY6501-0600 | 1 | | | |
| L101 | QC0043 | Chip Inductor | NL322522T-2R2J-3 | 1 | | | |
| L102 | QA0084 | Coil | HELICAL FILTER | 1 | | | |
| L103 | QA0084 | Coil | HELICAL FILTER | 1 | | | |
| L104 | QA0084 | Coil | HELICAL FILTER | 1 | | | |
| L105 | QA0084 | Coil | HELICAL FILTER | 1 | | | |
| L106 | QC0067 | Chip Inductor | NL322522T-R10JA | 1 | | | |
| L107 | QC0065 | Chip Inductor | NL322522T-068JA | 1 | | | |
| L108 | QC0065 | Chip Inductor | NL322522T-068JA | 1 | | | |
| L111 | QKA45E | Coil | MR3.0 4.5T 0.8 | 1 | | | |
| L112 | QKA35D | Coil | MR3.0 3.5T 0.6 | 1 | | | |
| L113 | QKA45E | Coil | MR3.0 4.5T 0.8 | 1 | | | |
| L114 | QKA45E | Coil | MR3.0 4.5T 0.8 | 1 | | | |
| L115 | QKA45E | Coil | MR3.0 4.5T 0.8 | 1 | | | |
| L116 | QKA45E | Coil | MR3.0 4.5T 0.8 | 1 | | | |
| L117 | QC0065 | Chip Inductor | NL322522T-068JA | 1 | | | |
| L118 | QKA95D | Coil | MR3.0 9.5T 0.6 | 1 | | | |
| L119 | QC0039 | Chip Inductor | NL322522T-1R0J-3 | 1 | | | |
| L120 | QC0063 | Chip Inductor | NL322522T-047JA | 1 | | | |
| L121 | QC0043 | Chip Inductor | NL322522T-2R2J-3 | 1 | | | |
| L122 | QC0040 | Chip Inductor | NL322522T-1R2J-3 | 1 | | | |
| L123 | QA0127 | Coil | VCO QA0127 5CBM | 1 | | | |
| L124 | QC0442 | Chip Inductor | MLF1608A1R0K-T | 1 | | | |
| L125 | QC0430 | Chip Inductor | MLF1608DR10K-T | 1 | | | |
| L126 | QC0040 | Chip Inductor | NL322522T-1R2J-3 | 1 | | | |
| L127 | QC0126 | Chip Inductor | NL322522T-R22J-3 | 1 | | | |
| L128 | QC0125 | Chip Inductor | NL322522T-R18J-3 | 1 | | | |
| Q101 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | | | |
| Q102 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | | | |
| Q103 | XU0047 | Chip Transistor | UMC3NTR | 1 | | | |
| Q104 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | | | |
| Q105 | XT0096 | Chip Transistor | 2SC4099 T106N | 1 | | | |
| Q106 | XE0028 | FET | 3SK131V12-T1 | 1 | | | |
| Q107 | XE0028 | FET | 3SK131V12-T1 | 1 | | | |
| Q108 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | | | |
| Q110 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | | | |
| Q111 | XE0021 | FET | 2SK880GR TE85L | 1 | | | |
| Q112 | XT0096 | Chip Transistor | 2SC4099 T106N | 1 | | | |
| Q113 | XU0047 | Chip Transistor | UMC3NTR | 1 | | | |
| Q114 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | | | |
| Q115 | XT0084 | Chip Transistor | 2SC2954 T1 | 1 | | | |
| Q116 | XT0112 | Transistor | 2SB1292F | 1 | | | |
| Q117 | XT0095 | Chip Transistor | 2SC4081 T106R | 1 | | | |
| Q118 | XT0094 | Chip Transistor | 2SA1576A T106R | 1 | | | |
| Q119 | XU0148 | Chip Transistor | DTC114EUA T106 | 1 | | | |
| Q120 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | | | |
| Q121 | XU0178 | Chip Transistor | XP1215-TX | 1 | | | |
| Q122 | XT0099 | Chip Transistor | 2SA1736 TE12R | 1 | | | |
| Q123 | XT0061 | Chip Transistor | 2SB1132T 100Q | 1 | | | |
| Q124 | XU0047 | Chip Transistor | UMC3NTR | 1 | | | |
| Q125 | XE0021 | FET | 2SK880GR TE85L | 1 | | | |
| Q126 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | | | |
| Q127 | XT0095 | Chip Transistor | 2SC4081 T106R | 1 | | | |
| Q128 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | | | |
| Q129 | XU0148 | Chip Transistor | DTC114EUA T106 | 1 | | | |
| Q130 | XU0112 | Chip Transistor | DTA114YUA T106 | 1 | | | |
| Q131 | XE0010 | FET | 2SK508K52 T2B | 1 | | | |
| Q132 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | | | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-----------------|------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| Q133 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | | | |
| Q134 | XT0124 | Chip Transistor | 2SC4215-Y(TE85L) | 1 | | | |
| Q135 | XT0124 | Chip Transistor | 2SC4215-Y(TE85L) | 1 | | | |
| Q136 | XU0148 | Chip Transistor | DTC144EUA T106 | 1 | | | |
| Q137 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | | | |
| Q138 | XU0131 | Chip Transistor | DTC114EUA T106 | 1 | | | |
| Q139 | XT0095 | Chip Transistor | 2SC4081 T106R | 1 | | | |
| Q140 | XT0095 | Chip Transistor | 2SC4081 T106R | 1 | | | |
| Q141 | XU0148 | Chip Transistor | DTC144EUA T106 | 1 | | | |
| Q142 | XU0148 | Chip Transistor | DTC144EUA T106 | 1 | | | |
| R101 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R102 | RK3091 | Chip R. | MCR03EZPFX3902 | 1 | | | |
| R103 | RK3091 | Chip R. | MCR03EZPFX3902 | 1 | | | |
| R104 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R105 | RK3028 | Chip R. | MCR03EZHJ151 | 1 | | | |
| R106 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R107 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R109 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R110 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R111 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R112 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R113 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R114 | RK3041 | Chip R. | MCR03EZHJ182 | 1 | | | |
| R115 | RK3043 | Chip R. | MCR03EZHJ272 | 1 | | | |
| R116 | RK3034 | Chip R. | MCR03EZHJ471 | 1 | | | |
| R117 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R118 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R119 | RK3052 | Chip R. | MCR03EZHJ153 | 1 | | | |
| R120 | RK3045 | Chip R. | MCR03EZHJ392 | 1 | | | |
| R121 | RK3063 | Chip R. | MCR03EZHJ124 | 1 | | | |
| R122 | RK3059 | Chip R. | MCR03EZHJ563 | 1 | | | |
| R123 | RK3061 | Chip R. | MCR03EZHJ823 | 1 | | | |
| R124 | RK3057 | Chip R. | MCR03EZHJ393 | 1 | | | |
| R125 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R126 | RK3052 | Chip R. | MCR03EZHJ153 | 1 | | | |
| R128 | RK3058 | Chip R. | MCR03EZHJ473 | 1 | | | |
| R129 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R130 | RK3060 | Chip R. | MCR03EZHJ683 | 1 | | | |
| R131 | RK3061 | Chip R. | MCR03EZHJ823 | 1 | | | |
| R132 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R133 | RK3037 | Chip R. | MCR03EZHJ821 | 1 | | | |
| R134 | RK3055 | Chip R. | MCR03EZHJ273 | 1 | | | |
| R135 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R136 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R137 | RK3067 | Chip R. | MCR03EZHJ274 | 1 | | | |
| R138 | RK3059 | Chip R. | MCR03EZHJ563 | 1 | | | |
| R139 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R140 | RK3072 | Chip R. | MCR03EZHJ684 | 1 | | | |
| R141 | RK3064 | Chip R. | MCR03EZHJ154 | 1 | | | |
| R142 | RK3054 | Chip R. | MCR03EZHJ223 | 1 | | | |
| R143 | RK3043 | Chip R. | MCR03EZHJ272 | 1 | | | |
| R144 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R147 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R148 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R150 | RK3001 | Chip R. | MCR03EZHJ000 | 1 | | | |
| R151 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R152 | RK3001 | Chip R. | MCR03EZHJ000 | 1 | | | |
| R153 | RK3048 | Chip R. | MCR03EZHJ682 | 1 | | | |
| R154 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R155 | RK3052 | Chip R. | MCR03EZHJ153 | 1 | | | |
| R156 | RK3034 | Chip R. | MCR03EZHJ471 | 1 | | | |
| R157 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R158 | RK3030 | Chip R. | MCR03EZHJ221 | 1 | | | |
| R160 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R161 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R162 | RK3021 | Chip R. | MCR03EZHJ390 | 1 | | | |
| R163 | RK3014 | Chip R. | MCR03EZHJ100 | 1 | | | |
| R164 | RK3014 | Chip R. | MCR03EZHJ100 | 1 | | | |
| R165 | RK3074 | Chip R. | MCR03EZHJ105 | 1 | | | |
| R166 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R167 | RK3055 | Chip R. | MCR03EZHJ273 | 1 | | | |
| R168 | RK3054 | Chip R. | MCR03EZHJ223 | 1 | | | |
| R169 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R171 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R172 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R173 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R174 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R176 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R177 | RK3054 | Chip R. | MCR03EZHJ223 | 1 | | | |
| R179 | RK3074 | Chip R. | MCR03EZHJ105 | 1 | | | |
| R180 | RK3034 | Chip R. | MCR03EZHJ471 | 1 | | | |
| R181 | RK3066 | Chip R. | MCR03EZHJ224 | 1 | | | |
| R182 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R183 | RK3074 | Chip R. | MCR03EZHJ105 | 1 | | | |
| R184 | RK3058 | Chip R. | MCR03EZHJ473 | 1 | | | |
| R185 | RK3070 | Chip R. | MCR03EZHJ474 | 1 | | | |
| R186 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R187 | RK3058 | Chip R. | MCR03EZHJ473 | 1 | | | |
| R188 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-------------|--------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| R189 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R190 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R191 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R192 | RK3058 | Chip R. | MCR03EZHJ473 | 1 | | | |
| R193 | RK3043 | Chip R. | MCR03EZHJ272 | 1 | | | |
| R195 | RK3070 | Chip R. | MCR03EZHJ474 | 1 | | | |
| R196 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R197 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R198 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R199 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R200 | RK3070 | Chip R. | MCR03EZHJ474 | 1 | | | |
| R201 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R202 | RK0028 | Chip R. | ERJ6GEYJ471V | 1 | | | |
| R203 | RK3056 | Chip R. | MCR03EZHJ333 | 1 | | | |
| R204 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R205 | RK0069 | Chip R. | ERJ6GEYJ104V | 1 | | | |
| R206 | RK0001 | Chip R. | ERJ6GEYJ100V | 1 | | | |
| R207 | RK3052 | Chip R. | MCR03EZHJ153 | 1 | | | |
| R208 | RK3034 | Chip R. | MCR03EZHJ471 | 1 | | | |
| R209 | RK3061 | Chip R. | MCR03EZHJ823 | 1 | | | |
| R210 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R211 | RK4018 | Chip R. | ERJ12YJ220U | 1 | | | |
| R212 | RK4026 | Chip R. | ERJ12YJ101U | 1 | | | |
| R213 | RK3049 | Chip R. | MCR03EZHJ822 | 1 | | | |
| R214 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R215 | RK3043 | Chip R. | MCR03EZHJ272 | 1 | | | |
| R216 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R217 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R218 | RK3058 | Chip R. | MCR03EZHJ473 | 1 | | | |
| R219 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R220 | RK4034 | Chip R. | ERJ12YJ471U | 1 | | | |
| R221 | RK3052 | Chip R. | MCR03EZHJ153 | 1 | | | |
| R222 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R223 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R224 | RK4024 | Chip R. | ERJ12YJ680U | 1 | | | |
| R225 | RK3017 | Chip R. | MCR03EZHJ180 | 1 | | | |
| R226 | RK3015 | Chip R. | MCR03EZHJ120 | 1 | | | |
| R227 | RK3030 | Chip R. | MCR03EZHJ221 | 1 | | | |
| R228 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R229 | RK3045 | Chip R. | MCR03EZHJ392 | 1 | | | |
| R230 | RK3033 | Chip R. | MCR03EZHJ391 | 1 | | | |
| R231 | RK3033 | Chip R. | MCR03EZHJ391 | 1 | | | |
| R232 | RK3031 | Chip R. | MCR03EZHJ271 | 1 | | | |
| R233 | RK3031 | Chip R. | MCR03EZHJ271 | 1 | | | |
| R234 | RK3054 | Chip R. | MCR03EZHJ223 | 1 | | | |
| R235 | RK3053 | Chip R. | MCR03EZHJ183 | 1 | | | |
| R236 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R237 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R238 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R239 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R240 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R241 | RK3051 | Chip R. | MCR03EZHJ123 | 1 | | | |
| R242 | RK3044 | Chip R. | MCR03EZHJ332 | 1 | | | |
| R243 | RK3054 | Chip R. | MCR03EZHJ223 | 1 | | | |
| R244 | RK3068 | Chip R. | MCR03EZHJ334 | 1 | | | |
| R245 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R246 | RK3046 | Chip R. | MCR03EZHJ472 | 1 | | | |
| R247 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R248 | RK3070 | Chip R. | MCR03EZHJ474 | 1 | | | |
| R249 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R250 | RK3070 | Chip R. | MCR03EZHJ474 | 1 | | | |
| R251 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R252 | RK3070 | Chip R. | MCR03EZHJ474 | 1 | | | |
| R253 | RK3057 | Chip R. | MCR03EZHJ393 | 1 | | | |
| R254 | RK3057 | Chip R. | MCR03EZHJ393 | 1 | | | |
| R255 | RK3046 | Chip R. | MCR03EZHJ472 | 1 | | | |
| R256 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R257 | RK3046 | Chip R. | MCR03EZHJ472 | 1 | | | |
| R258 | RK3057 | Chip R. | MCR03EZHJ393 | 1 | | | |
| R259 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R260 | RK3054 | Chip R. | MCR03EZHJ223 | 1 | | | |
| R261 | RK3054 | Chip R. | MCR03EZHJ223 | 1 | | | |
| R262 | RK3067 | Chip R. | MCR03EZHJ274 | 1 | | | |
| R263 | RK3052 | Chip R. | MCR03EZHJ153 | 1 | | | |
| R264 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R265 | RK3047 | Chip R. | MCR03EZHJ562 | 1 | | | |
| R266 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R267 | RK3022 | Chip R. | MCR03EZHJ470 | 1 | | | |
| R268 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R269 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R270 | RK3060 | Chip R. | MCR03EZHJ683 | 1 | | | |
| R271 | RK4034 | Chip R. | ERJ12YJ471U | 1 | | | |
| R272 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R273 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R274 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R275 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R276 | RK3034 | Chip R. | MCR03EZHJ471 | 1 | | | |
| R277 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R278 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|---------------|--------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| R279 | RK3046 | Chip R. | MCR03EZHJ472 | 1 | | | |
| R280 | RK3058 | Chip R. | MCR03EZHJ473 | 1 | | | |
| R281 | RK3041 | Chip R. | MCR03EZHJ182 | 1 | | | |
| R282 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R283 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R284 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R285 | RK3054 | Chip R. | MCR03EZHJ223 | 1 | | | |
| R286 | RK3034 | Chip R. | MCR03EZHJ471 | 1 | | | |
| R287 | RK3046 | Chip R. | MCR03EZHJ472 | 1 | | | |
| R288 | RK3046 | Chip R. | MCR03EZHJ472 | 1 | | | |
| R289 | RK3046 | Chip R. | MCR03EZHJ472 | 1 | | | |
| R290 | RK3054 | Chip R. | MCR03EZHJ223 | 1 | | | |
| R291 | RK3022 | Chip R. | MCR03EZHJ470 | 1 | | | |
| R292 | RK3018 | Chip R. | MCR03EZHJ220 | 1 | | | |
| R293 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R294 | RK3052 | Chip R. | MCR03EZHJ153 | 1 | | | |
| R295 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R297 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R298 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R299 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R300 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R301 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R302 | RK3024 | Chip R. | MCR03EZHJ680 | 1 | | | |
| R303 | RK3056 | Chip R. | MCR03EZHJ333 | 1 | | | |
| R304 | RK3059 | Chip R. | MCR03EZHJ563 | 1 | | | |
| R305 | RK3058 | Chip R. | MCR03EZHJ473 | 1 | | | |
| R306 | RK3076 | Chip R. | MCR03EZHJ155 | 1 | | | |
| R307 | RK3001 | Chip R. | MCR03EZHJ000 | 1 | | | |
| R308 | RK3076 | Chip R. | MCR03EZHJ155 | 1 | | | |
| R309 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R310 | RK3026 | Chip R. | MCR03EZHJ101 | 1 | | | |
| R311 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R312 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R313 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R314 | RK3022 | Chip R. | MCR03EZHJ470 | 1 | | | |
| R315 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R316 | RK3051 | Chip R. | MCR03EZHJ123 | 1 | | | |
| R318 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| R319 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R320 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R321 | RK3043 | Chip R. | MCR03EZHJ272 | 1 | | | |
| R322 | RD0108 | Jumper | J1/6Z | 1 | | | |
| R323 | RK3001 | Chip R. | MCR03EZHJ000 | 1 | | | |
| R324 | RK3014 | Chip R. | MCR03EZHJ100 | 1 | | | |
| R325 | RK3066 | Chip R. | MCR03EZHJ224 | 1 | | | |
| R326 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R327 | RK3092 | Chip R. | MCR03EZF7502 | 1 | | | |
| R328 | RD3013 | Resistor | ERX1S1J00 | 1 | | | |
| R329 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R330 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R331 | RK3038 | Chip R. | MCR03EZHJ102 | 1 | | | |
| R332 | RK3054 | Chip R. | MCR03EZHJ223 | 1 | | | |
| R333 | RK3062 | Chip R. | MCR03EZHJ104 | 1 | | | |
| R334 | RK3042 | Chip R. | MCR03EZHJ222 | 1 | | | |
| R335 | RK3050 | Chip R. | MCR03EZHJ103 | 1 | | | |
| SH101 | TS0032B | Case | VCO CASE | 1 | | | |
| TC101 | CT0012 | Trimmer C. | CTZ3S-10A-W1-P | 1 | | | |
| TH102 | XS0031 | Thermistor | NTCCM16084BH682KCT | 1 | | | |
| VR101 | RH0146 | Trimmer R. | MVR22HXBRN473 | 1 | | | |
| VR102 | RH0148 | Trimmer R. | MVR22HXBRN104 | 1 | | | |
| VR103 | RH0142 | Trimmer R. | MVR22HXBRN103 | 1 | | | |
| VR104 | RH0142 | Trimmer R. | MVR22HXBRN103 | 1 | | | |
| VR105 | RH0142 | Trimmer R. | MVR22HXBRN103 | 1 | | | |
| VR106 | RH0146 | Trimmer R. | MVR22HXBRN473 | 1 | | | |
| VR107 | RH0140 | Trimmer R. | MVR22HXBRN472 | 1 | | | |
| VR108 | RH0148 | Trimmer R. | MVR22HXBRN104 | 1 | | | |
| X101 | XK0003 | Discriminator | CDBM450C7 | 1 | | | |
| X103 | XQ0112 | Xtal | UM-5 21.250MHZ | 1 | | | |
| XF101 | XF0041 | Xtal Filter | UM5 21.7M 21R15A5 | 1 | | | |
| XF102 | XF0041 | Xtal Filter | UM5 21.7M 21R15A5 | 1 | | | |
| | UP0400B | P.C.B | DR135 INTEGRATED | 1 | | | |
| | SD0034 | Spring | GND SPRING DR130 | 3 | | | |
| | TZ0072 | | SHEET | 1 | | | |
| | TZ0049 | | SILICON DUMPER | 3 | | | |
| | FG0327 | | CUSHION DR135 | 1 | | | |

Main Unit (DR-235)

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|---------------|-------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| C101 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C102 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C103 | CS0049 | Chip tantalum | TMCSA1C105MTR | 1 | | | |
| C104 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C105 | CS0394 | Chip tantalum | TMCSA1C105MTR | 1 | | | |
| C106 | CU3051 | Chip C. | C1608JB1E223KT-NS | 1 | | | |
| C107 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C108 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-----------------|---------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| C109 | CS0216 | Chip tantalum | TMCMA1A106MTR | 1 | | | |
| C110 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C111 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C112 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C113 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C114 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C115 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C117 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C118 | CU3049 | Chip C. | C1608JB1E153KT-NS | 1 | | | |
| C119 | CU3051 | Chip C. | C1608JB1E223KT-NS | 1 | | | |
| C120 | CU3021 | Chip C. | C1608CH1H680JT-AS | 1 | | | |
| C121 | CU3003 | Chip C. | C1608CH1H020CT-AS | 1 | | | |
| C122 | CU3002 | Chip C. | C1608CH1H010CT-AS | 1 | | | |
| C123 | CU3013 | Chip C. | C1608CH1H150JT-AS | 1 | | | |
| C124 | CU3040 | Chip C. | C1608JB1H272KT-NS | 1 | | | |
| C125 | CU3044 | Chip C. | C1608JB1H562KT-NS | 1 | | | |
| C126 | CU3038 | Chip C. | C1608JB1H182KT-AS | 1 | | | |
| C127 | CU3041 | Chip C. | C1608JB1H332KT-NS | 1 | | | |
| C129 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C130 | CS0220 | Chip tantalum | TMCMA1C225MTR | 1 | | | |
| C132 | CU3027 | Chip C. | C1608CH1H221JT-AS | 1 | | | |
| C133 | CU3003 | Chip C. | C1608CH1H020CT-AS | 1 | | | |
| C134 | CU3042 | Chip C. | C1608JB1H392KT-NS | 1 | | | |
| C135 | CU3044 | Chip C. | C1608JB1H562KT-NS | 1 | | | |
| C137 | CU3015 | Chip C. | C1608CH1H220JT-AS | 1 | | | |
| C138 | CS0049 | Chip tantalum | TMCSA1C105MTR | 1 | | | |
| C139 | CU3015 | Chip C. | C1608CH1H220JT-AS | 1 | | | |
| C140 | CU3015 | Chip C. | C1608CH1H220JT-AS | 1 | | | |
| C141 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C142 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C143 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C144 | CU3009 | Chip C. | C1608CH1H080CT-A | 1 | | | |
| C145 | CU3003 | Chip C. | C1608CH1H020CT-AS | 1 | | | |
| C146 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C148 | CU3019 | Chip C. | C1608CH1H470JT-AS | 1 | | | |
| C149 | CU3023 | Chip C. | C1608CH1H101JT-AS | 1 | | | |
| C150 | CU3002 | Chip C. | C1608CH1H010CT-AS | 1 | | | |
| C151 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C152 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C153 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C154 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C155 | CU3012 | Chip C. | C1608CH1H120JT-AS | 1 | | | |
| C156 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C157 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C158 | CU3013 | Chip C. | C1608CH1H150JT-AS | 1 | | | |
| C159 | CU3018 | Chip C. | C1608CH1H390JT-AS | 1 | | | |
| C160 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C161 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C162 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C165 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C168 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C169 | CU3027 | Chip C. | C1608CH1H221JT-AS | 1 | | | |
| C170 | CU3003 | Chip C. | C1608CH1H020CT-AS | 1 | | | |
| C171 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C172 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C173 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C174 | CU3029 | Chip C. | C1608JB1H331KT-AS | 1 | | | |
| C175 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C176 | CU3002 | Chip C. | C1608CH1H010CT-AS | 1 | | | |
| C177 | CU3015 | Chip C. | C1608CH1H220JT-AS | 1 | | | |
| C179 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 | | | |
| C180 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C182 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C183 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C184 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C185 | CS0061 | Chip tantalum | TMCSA1V224MTR | 1 | | | |
| C186 | CU3013 | Chip C. | C1608CH1H150JT-AS | 1 | | | |
| C187 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C188 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C189 | CU3011 | Chip C. | C1608CH1H100DT-AS | 1 | | | |
| C190 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 | | | |
| C191 | CU3102 | Chip C. | C1608JB1C333KT-NS | 1 | | | |
| C193 | CU4033 | Chip C. | GRM42-6X7R102K500PT | 1 | | | |
| C194 | CU3008 | Chip C. | C1608CH1H070CT-A | 1 | | | |
| C195 | CU3010 | Chip C. | C1608CH1H090CT-A | 1 | | | |
| C196 | CU3013 | Chip C. | C1608CH1H150JT-AS | 1 | | | |
| C198 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C199 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C200 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C201 | CU4011 | Chip C. | GRM42-6CH100D500PT | 1 | | | |
| C202 | CU4013 | Chip C. | GRM42-6CH150J500PT | 1 | | | |
| C203 | CU4013 | Chip C. | GRM42-6CH150J500PT | 1 | | | |
| C204 | CU4008 | Chip C. | GRM42-6CH070D500PT | 1 | | | |
| C205 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C206 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | 1 | | | |
| C207 | CU3002 | Chip C. | C1608CH1H010CT-AS | 1 | | | |
| C208 | CU3002 | Chip C. | C1608CH1H010CT-AS | 1 | | | |
| C209 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |
| C209 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 | | | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver | Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-----------------|--------------------|--------|--------|--------|-----|----------|-----------|-----------------|---------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | | | | | | DR-135 | DR-235 | DR-435 | |
| C211 | CU3003 | Chip C. | C1608CH1H020CT-AS | | | 1 | | CN102 | UE0397 | Connector | 10-5082-3110-17-100 | | | 1 | |
| C212 | CE0364 | Electrolytic C. | 16MV 47SWB+TS | | | 1 | | CN03 | UE0397 | Connector | 10-5082-3110-17-100 | | | 1 | |
| C213 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | CN104 | UA0037Y | Connector | DC CABLE UA0037 | | | 1 | |
| C215 | CU4013 | Chip C. | GRM42-6CH150J500PT | | | 1 | | CN105 | UE0394 | Connector | PI28A15M | | | 1 | |
| C216 | CU4013 | Chip C. | GRM42-6CH150J500PT | | | 1 | | CN106 | UE0043 | Connector | PI22A02M | | | 1 | |
| C217 | CU3051 | Chip C. | C1608JB1E223KT-NS | | | 1 | | CN107 | UE0393 | Connector | PI28A11M | | | 1 | |
| C218 | CU3051 | Chip C. | C1608JB1E223KT-NS | | | 1 | | CN110 | UE0341 | Connector | PI28A02M | | | 1 | |
| C219 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | D101 | XD0112 | Chip Diode | 1SV128 TE85L | | | 1 | |
| C220 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | D102 | XD0131 | Chip Diode | 1SV214 TPH4 | | | 1 | |
| C221 | CU3047 | Chip C. | C1608JB1H103KT-N | | | 1 | | D103 | XD0131 | Chip Diode | 1SV214 TPH4 | | | 1 | |
| C222 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | D104 | XD0131 | Chip Diode | 1SV214 TPH4 | | | 1 | |
| C223 | CE0100 | Electrolytic C. | 16MV 22UW | | | 1 | | D105 | XD0131 | Chip Diode | 1SV214 TPH4 | | | 1 | |
| C224 | CU3023 | Chip C. | C1608CH1H101JT-AS | | | 1 | | D106 | XD0250 | Chip Diode | MA742 TX | | | 1 | |
| C225 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | D107 | XD0131 | Chip Diode | 1SV214 TPH4 | | | 1 | |
| C226 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | D108 | XD0130 | Chip Diode | DA204U T106 | | | 1 | |
| C227 | CS0049 | Chip tantalum | TMCSA1C105MTR | | | 1 | | D109 | XD0301 | Chip Diode | 1SV268-TD | | | 1 | |
| C228 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | D110 | XD0013 | Diode | MI407 | | | 1 | |
| C229 | CU3101 | Chip C. | C1608JB1C473KT-NS | | | 1 | | D111 | XD0250 | Chip Diode | MA742 TX | | | 1 | |
| C230 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | D112 | XD0250 | Chip Diode | MA742 TX | | | 1 | |
| C231 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | D113 | XD0254 | Chip Diode | 1SS355 TE17 | | | 1 | |
| C232 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | D114 | XD0246 | Chip Diode | DAN235UT 106 | | | 1 | |
| C233 | CU3011 | Chip C. | C1608CH1H100DT-AS | | | 1 | | D115 | XD0254 | Chip Diode | 1SS355 TE17 | | | 1 | |
| C234 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | D117 | XD0254 | Chip Diode | 1SS355 TE17 | | | 1 | |
| C235 | CU3003 | Chip C. | C1608CH1H020CT-AS | | | 1 | | D118 | XD0130 | Chip Diode | DA204U T106 | | | 1 | |
| C237 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | D119 | XD0254 | Chip Diode | 1SS355 TE17 | | | 1 | |
| C238 | CS0049 | Chip tantalum | TMCSA1C105MTR | | | 1 | | D120 | XD0254 | Chip Diode | 1SS355 TE17 | | | 1 | |
| C239 | CS0049 | Chip tantalum | TMCSA1C105MTR | | | 1 | | D121 | XD0274 | Chip Diode | DSA3A1 | | | 1 | |
| C240 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | | 1 | | D124 | XD0131 | Chip Diode | 1SV214 TPH4 | | | 1 | |
| C241 | CU3022 | Chip C. | C1608CH1H820JT-AS | | | 1 | | D127 | XD0165 | Chip Diode | CHIP UDZSTE-17 5.1B | | | 1 | |
| C242 | CU3051 | Chip C. | C1608JB1E223KT-NS | | | 1 | | D128 | XD0291 | Chip Diode | MA729-TX | | | 1 | |
| C243 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | | 1 | | D129 | XD0291 | Chip Diode | MA729-TX | | | 1 | |
| C244 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | | 1 | | FL101 | XC0047 | Ceramic Filter | ALFYM455E=K | | | 1 | |
| C245 | CS0049 | Chip tantalum | TMCSA1C105MTR | | | 1 | | FL102 | XC0036 | Ceramic Filter | ALFYM455G | | | 1 | |
| C246 | CU3043 | Chip C. | C1608JB1H472KT-NS | | | 1 | | IC101 | XA0675 | IC | L88MS05TLL-TL | | | 1 | |
| C247 | CU3111 | Chip C. | C1608JB1C104KT-N | | | 1 | | IC102 | XA0348 | IC | TC4W53FU(TE12) | | | 1 | |
| C248 | CU3047 | Chip C. | C1608JB1H103KT-N | | | 1 | | IC103 | XA0348 | IC | TC4W53FU(TE12) | | | 1 | |
| C249 | CU3038 | Chip C. | C1608JB1H182KT-AS | | | 1 | | IC104 | XA0596 | IC | NJM2902V-TE1 | | | 1 | |
| C250 | CU3026 | Chip C. | C1608CH1H181JT-AS | | | 1 | | IC108 | XA0223 | IC | TK10930VTL | | | 1 | |
| C251 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | | 1 | | IC109 | XA0115 | IC | TC4S66F TE85R | | | 1 | |
| C252 | CU3008 | Chip C. | C1608CH1H070CT-A | | | 1 | | IC110 | XA0591 | IC | M68729 | | | 1 | |
| C253 | CU3111 | Chip C. | C1608JB1C104KT-N | | | 1 | | IC111 | XA0236 | IC | BU4052BCF-E2 | | | 1 | |
| C254 | CU3111 | Chip C. | C1608JB1C104KT-N | | | 1 | | IC112 | XA0119 | IC | AN8010M E1 | | | 1 | |
| C255 | CE0364 | Electrolytic C. | 16MV 47SWB+TS | | | 1 | | IC113 | XA0348 | IC | TC4W53FU(TE12) | | | 1 | |
| C256 | CU3111 | Chip C. | C1608JB1C104KT-N | | | 1 | | IC114 | XA0068 | IC | M5218AFP/600E | | | 1 | |
| C257 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | | 1 | | IC115 | XA0102 | IC | NJM7808FA | | | 1 | |
| C258 | CS0049 | Chip tantalum | TMCSA1C105MTR | | | 1 | | IC117 | XA0410 | IC | LA4425A | | | 1 | |
| C259 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | JK101 | UJ0046 | Jack | MJ82-1 | | | 1 | |
| C260 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | | 1 | | JK102 | UJ0024Z | Jack | LGY6501-0600 | | | 1 | |
| C261 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | JP105 | RD0108 | Jumper | J1/6Z | | | 1 | |
| C262 | CU3111 | Chip C. | C1608JB1C104KT-N | | | 1 | | L101 | QC0043 | Chip Inductor | NL322522T-2R2J-3 | | | 1 | |
| C263 | CS0220 | Chip tantalum | TMCSA1C225MTR | | | 1 | | L102 | QA0155 | Coil | E544ENAS-110251 | | | 1 | |
| C264 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | L103 | QA0155 | Coil | E544ENAS-110251 | | | 1 | |
| C265 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | L104 | QA0155 | Coil | E544ENAS-110251 | | | 1 | |
| C266 | CU3007 | Chip C. | C1608CH1H060CT-A | | | 1 | | L105 | QA0155 | Coil | E544ENAS-110251 | | | 1 | |
| C267 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | L106 | QC0061 | Chip Inductor | NL322522T-033JA | | | 1 | |
| C268 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | L107 | QA0155 | Coil | E544ENAS-110251 | | | 1 | |
| C270 | CU3047 | Chip C. | C1608JB1H103KT-N | | | 1 | | L111 | QKA35E | Coil | MR3.0 3.5T 0.8 | | | 1 | |
| C271 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | L112 | QKA25D | Coil | MR3.0 2.5T 0.6 | | | 1 | |
| C272 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | | 1 | | L113 | QKA35E | Coil | MR3.0 3.5T 0.8 | | | 1 | |
| C274 | CU3018 | Chip C. | C1608CH1H390JT-AS | | | 1 | | L114 | QKA35E | Coil | MR3.0 3.5T 0.8 | | | 1 | |
| C276 | CU3047 | Chip C. | C1608JB1H103KT-N | | | 1 | | L115 | QKA35E | Coil | MR3.0 3.5T 0.8 | | | 1 | |
| C277 | CE0343 | Electrolytic C. | 16MV 1000HC+T | | | 1 | | L116 | QKA35E | Coil | MR3.0 3.5T 0.8 | | | 1 | |
| C278 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | L117 | QC0061 | Chip Inductor | NL322522T-033JA | | | 1 | |
| C280 | CU3019 | Chip C. | C1608CH1H470JT-AS | | | 1 | | L118 | QKA95D | Coil | MR3.0 9.5T 0.6 | | | 1 | |
| C286 | CU3027 | Chip C. | C1608CH1H221JT-AS | | | 1 | | L119 | QC0061 | Chip Inductor | NL322522T-033JA | | | 1 | |
| C291 | CU3011 | Chip C. | C1608CH1H100DT-AS | | | 1 | | Q101 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | |
| C292 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | Q102 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | |
| C294 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | Q104 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | |
| C297 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | Q105 | XT0096 | Chip Transistor | 2SC4099 T106N | | | 1 | |
| C298 | CU3015 | Chip C. | C1608CH1H220JT-AS | | | 1 | | Q106 | XE0013 | FET | 3SK184 TX S | | | 1 | |
| C300 | CU4011 | Chip C. | GRM42-6CH100D500PT | | | 1 | | Q107 | XE0013 | FET | 3SK184 TX S | | | 1 | |
| C301 | CU3023 | Chip C. | C1608CH1H101JT-AS | | | 1 | | Q108 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | |
| C302 | CU3023 | Chip C. | C1608CH1H101JT-AS | | | 1 | | Q110 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | |
| C303 | CU3023 | Chip C. | C1608CH1H101JT-AS | | | 1 | | Q111 | XE0021 | FET | 2SK880GR TE85L | | | 1 | |
| C305 | CU3047 | Chip C. | C1608JB1H103KT-N | | | 1 | | Q112 | XT0125 | Chip Transistor | 2SC4245-Y(TE85L) | | | 1 | |
| C306 | CU3111 | Chip C. | C1608JB1C104KT-N | | | 1 | | Q113 | XU0047 | Chip Transistor | UMC3NTR | | | 1 | |
| C307 | CU3047 | Chip C. | C1608JB1H103KT-N | | | 1 | | Q115 | XT0084 | Chip Transistor | 2SC2954 T1 | | | 1 | |
| C308 | CE0342 | Electrolytic C. | 16MV 470HC+TS | | | 1 | | Q116 | XT0112 | Transistor | 2SB1292F | | | 1 | |
| C309 | CU3051 | Chip C. | C1608JB1E223KT-NS | | | 1 | | Q117 | XT0095 | Chip Transistor | 2SC4081 T106R | | | 1 | |
| C310 | CU3023 | Chip C. | C1608CH1H101JT-AS | | | 1 | | Q118 | XT0094 | Chip Transistor | 2SA1576A T106R | | | 1 | |
| C314 | CS0237 | Chip tantalum | TMCSA1A475MTR | | | 1 | | Q119 | XU0148 | Chip Transistor | DTC144EUA T106 | | | 1 | |
| C315 | CS0237 | Chip tantalum | TMCSA1A475MTR | | | 1 | | Q120 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | |
| C316 | CS0237 | Chip tantalum | TMCSA1A475MTR | | | 1 | | Q121 | XU0178 | Chip Transistor | XP1215-TX | | | 1 | |
| C317 | CS0237 | Chip tantalum | TMCSA1A475MTR | | | 1 | | Q122 | XT0099 | Chip Transistor | 2SA1736 TE12R | | | 1 | |
| C318 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | Q123 | XT0061 | Chip Transistor | 2SB1132T 100Q | | | 1 | |
| C319 | CS0237 | Chip tantalum | TMCSA1A475MTR | | | 1 | | Q124 | XU0047 | Chip Transistor | UMC3NTR | | | 1 | |
| C320 | CS0237 | Chip tantalum | TMCSA1A475MTR | | | 1 | | Q125 | XE0021 | FET | 2SK880GR TE85L | | | 1 | |
| C321 | CS0220 | Chip tantalum | TMCSA1C225MTR | | | 1 | | Q126 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | |
| C322 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | | Q127 | XT0095 | Chip Transistor | 2SC4081 T106R | | | 1 | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-----------------|------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| Q128 | XU0131 | Chip Transistor | DTC114EUA T106 | | 1 | | |
| Q129 | XU0148 | Chip Transistor | DTC144EUA T106 | | 1 | | |
| Q130 | XU0112 | Chip Transistor | DTA114YUA T106 | | 1 | | |
| Q131 | XT0030 | Chip Transistor | 2SC3356T1BR24/25 | | 1 | | |
| Q132 | XU0131 | Chip Transistor | DTC114EUA T106 | | 1 | | |
| Q133 | XU0131 | Chip Transistor | DTC114EUA T106 | | 1 | | |
| Q136 | XU0148 | Chip Transistor | DTC144EUA T106 | | 1 | | |
| Q137 | XU0131 | Chip Transistor | DTC114EUA T106 | | 1 | | |
| Q139 | XT0095 | Chip Transistor | 2SC4081 T106R | | 1 | | |
| Q140 | XT0095 | Chip Transistor | 2SC4081 T106R | | 1 | | |
| Q141 | XU0148 | Chip Transistor | DTC144EUA T106 | | 1 | | |
| Q142 | XU0148 | Chip Transistor | DTC144EUA T106 | | 1 | | |
| R101 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R102 | RK3091 | Chip R. | MCR03EZXPF3902 | | 1 | | |
| R103 | RK3091 | Chip R. | MCR03EZXPF3902 | | 1 | | |
| R104 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R105 | RK3028 | Chip R. | MCR03EZHJ151 | | 1 | | |
| R106 | RK3026 | Chip R. | MCR03EZHJ101 | | 1 | | |
| R107 | RK3026 | Chip R. | MCR03EZHJ101 | | 1 | | |
| R108 | RK3023 | Chip R. | MCR03EZHJ560 | | 1 | | |
| R109 | RK3026 | Chip R. | MCR03EZHJ101 | | 1 | | |
| R110 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R111 | RK3001 | Chip R. | MCR03EZHJ000 | | 1 | | |
| R112 | RK3026 | Chip R. | MCR03EZHJ101 | | 1 | | |
| R114 | RK3041 | Chip R. | MCR03EZHJ182 | | 1 | | |
| R115 | RK3043 | Chip R. | MCR03EZHJ272 | | 1 | | |
| R116 | RK3038 | Chip R. | MCR03EZHJ102 | | 1 | | |
| R117 | RK3071 | Chip R. | MCR03EZHJ564 | | 1 | | |
| R118 | RK3026 | Chip R. | MCR03EZHJ101 | | 1 | | |
| R119 | RK3052 | Chip R. | MCR03EZHJ153 | | 1 | | |
| R120 | RK3045 | Chip R. | MCR03EZHJ392 | | 1 | | |
| R121 | RK3063 | Chip R. | MCR03EZHJ124 | | 1 | | |
| R122 | RK3059 | Chip R. | MCR03EZHJ563 | | 1 | | |
| R123 | RK3061 | Chip R. | MCR03EZHJ823 | | 1 | | |
| R124 | RK3057 | Chip R. | MCR03EZHJ393 | | 1 | | |
| R125 | RK3036 | Chip R. | MCR03EZHJ681 | | 1 | | |
| R126 | RK3049 | Chip R. | MCR03EZHJ822 | | 1 | | |
| R128 | RK3060 | Chip R. | MCR03EZHJ683 | | 1 | | |
| R129 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R130 | RK3060 | Chip R. | MCR03EZHJ683 | | 1 | | |
| R131 | RK3061 | Chip R. | MCR03EZHJ823 | | 1 | | |
| R132 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R133 | RK3037 | Chip R. | MCR03EZHJ821 | | 1 | | |
| R134 | RK3055 | Chip R. | MCR03EZHJ273 | | 1 | | |
| R135 | RK3052 | Chip R. | MCR03EZHJ153 | | 1 | | |
| R136 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R137 | RK3067 | Chip R. | MCR03EZHJ274 | | 1 | | |
| R138 | RK3059 | Chip R. | MCR03EZHJ563 | | 1 | | |
| R139 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R140 | RK3072 | Chip R. | MCR03EZHJ684 | | 1 | | |
| R141 | RK3064 | Chip R. | MCR03EZHJ154 | | 1 | | |
| R142 | RK3057 | Chip R. | MCR03EZHJ393 | | 1 | | |
| R143 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R144 | RK3042 | Chip R. | MCR03EZHJ222 | | 1 | | |
| R147 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R148 | RK3062 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R151 | RK3050 | Chip R. | MCR03EZHJ104 | | 1 | | |
| R152 | RK3001 | Chip R. | MCR03EZHJ000 | | 1 | | |
| R153 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R155 | RK3052 | Chip R. | MCR03EZHJ153 | | 1 | | |
| R156 | RK3034 | Chip R. | MCR03EZHJ471 | | 1 | | |
| R157 | RK3062 | Chip R. | MCR03EZHJ104 | | 1 | | |
| R158 | RK3026 | Chip R. | MCR03EZHJ101 | | 1 | | |
| R160 | RK3062 | Chip R. | MCR03EZHJ104 | | 1 | | |
| R161 | RK3062 | Chip R. | MCR03EZHJ104 | | 1 | | |
| R162 | RK3023 | Chip R. | MCR03EZHJ560 | | 1 | | |
| R163 | RK3014 | Chip R. | MCR03EZHJ100 | | 1 | | |
| R164 | RK3014 | Chip R. | MCR03EZHJ100 | | 1 | | |
| R165 | RK3074 | Chip R. | MCR03EZHJ105 | | 1 | | |
| R167 | RK3052 | Chip R. | MCR03EZHJ153 | | 1 | | |
| R168 | RK3054 | Chip R. | MCR03EZHJ223 | | 1 | | |
| R171 | RK3062 | Chip R. | MCR03EZHJ104 | | 1 | | |
| R172 | RK3062 | Chip R. | MCR03EZHJ104 | | 1 | | |
| R173 | RK3026 | Chip R. | MCR03EZHJ101 | | 1 | | |
| R174 | RK3034 | Chip R. | MCR03EZHJ471 | | 1 | | |
| R176 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R179 | RK3074 | Chip R. | MCR03EZHJ105 | | 1 | | |
| R180 | RK3001 | Chip R. | MCR03EZHJ000 | | 1 | | |
| R181 | RK3042 | Chip R. | MCR03EZHJ222 | | 1 | | |
| R182 | RK3062 | Chip R. | MCR03EZHJ104 | | 1 | | |
| R183 | RK3074 | Chip R. | MCR03EZHJ105 | | 1 | | |
| R184 | RK3057 | Chip R. | MCR03EZHJ393 | | 1 | | |
| R185 | RK3070 | Chip R. | MCR03EZHJ474 | | 1 | | |
| R186 | RK3026 | Chip R. | MCR03EZHJ101 | | 1 | | |
| R187 | RK3058 | Chip R. | MCR03EZHJ473 | | 1 | | |
| R189 | RK3038 | Chip R. | MCR03EZHJ102 | | 1 | | |
| R190 | RK3038 | Chip R. | MCR03EZHJ102 | | 1 | | |
| R191 | RK3038 | Chip R. | MCR03EZHJ102 | | 1 | | |
| R192 | RK3054 | Chip R. | MCR03EZHJ223 | | 1 | | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-------------|--------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| R193 | RK3043 | Chip R. | MCR03EZHJ272 | | 1 | | |
| R195 | RK3070 | Chip R. | MCR03EZHJ474 | | 1 | | |
| R196 | RK3038 | Chip R. | MCR03EZHJ102 | | 1 | | |
| R198 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R200 | RK3070 | Chip R. | MCR03EZHJ474 | | 1 | | |
| R202 | RK0028 | Chip R. | ERJ6GEYJ471V | | 1 | | |
| R203 | RK3056 | Chip R. | MCR03EZHJ333 | | 1 | | |
| R204 | RK3062 | Chip R. | MCR03EZHJ104 | | 1 | | |
| R205 | RK0069 | Chip R. | ERJ6GEYJ104V | | 1 | | |
| R206 | RK0001 | Chip R. | ERJ6GEYJ100V | | 1 | | |
| R207 | RK3052 | Chip R. | MCR03EZHJ153 | | 1 | | |
| R208 | RK3028 | Chip R. | MCR03EZHJ151 | | 1 | | |
| R209 | RK3061 | Chip R. | MCR03EZHJ823 | | 1 | | |
| R210 | RK3038 | Chip R. | MCR03EZHJ102 | | 1 | | |
| R211 | RK4018 | Chip R. | ERJ12YJ220U | | 1 | | |
| R212 | RK4026 | Chip R. | ERJ12YJ101U | | 1 | | |
| R213 | RK3049 | Chip R. | MCR03EZHJ822 | | 1 | | |
| R214 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R215 | RK3041 | Chip R. | MCR03EZHJ182 | | 1 | | |
| R216 | RK3042 | Chip R. | MCR03EZHJ222 | | 1 | | |
| R217 | RK3042 | Chip R. | MCR03EZHJ222 | | 1 | | |
| R218 | RK3058 | Chip R. | MCR03EZHJ473 | | 1 | | |
| R219 | RK3042 | Chip R. | MCR03EZHJ222 | | 1 | | |
| R220 | RK4034 | Chip R. | ERJ12YJ471U | | 1 | | |
| R221 | RK3052 | Chip R. | MCR03EZHJ153 | | 1 | | |
| R222 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R223 | RK3026 | Chip R. | MCR03EZHJ101 | | 1 | | |
| R224 | RK4026 | Chip R. | ERJ12YJ101U | | 1 | | |
| R225 | RK3001 | Chip R. | MCR03EZHJ000 | | 1 | | |
| R226 | RK3026 | Chip R. | MCR03EZHJ101 | | 1 | | |
| R227 | RK3030 | Chip R. | MCR03EZHJ221 | | 1 | | |
| R228 | RK3062 | Chip R. | MCR03EZHJ104 | | 1 | | |
| R229 | RK3048 | Chip R. | MCR03EZHJ682 | | 1 | | |
| R230 | RK3054 | Chip R. | MCR03EZHJ223 | | 1 | | |
| R231 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R232 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R234 | RK3054 | Chip R. | MCR03EZHJ223 | | 1 | | |
| R235 | RK3053 | Chip R. | MCR03EZHJ183 | | 1 | | |
| R236 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R237 | RK3026 | Chip R. | MCR03EZHJ101 | | 1 | | |
| R238 | RK3062 | Chip R. | MCR03EZHJ104 | | 1 | | |
| R239 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R240 | RK3038 | Chip R. | MCR03EZHJ102 | | 1 | | |
| R241 | RK3051 | Chip R. | MCR03EZHJ123 | | 1 | | |
| R242 | RK3044 | Chip R. | MCR03EZHJ332 | | 1 | | |
| R243 | RK3054 | Chip R. | MCR03EZHJ223 | | 1 | | |
| R244 | RK3068 | Chip R. | MCR03EZHJ334 | | 1 | | |
| R245 | RK3038 | Chip R. | MCR03EZHJ102 | | 1 | | |
| R246 | RK3046 | Chip R. | MCR03EZHJ472 | | 1 | | |
| R247 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R248 | RK3070 | Chip R. | MCR03EZHJ474 | | 1 | | |
| R249 | RK3042 | Chip R. | MCR03EZHJ222 | | 1 | | |
| R250 | RK3070 | Chip R. | MCR03EZHJ474 | | 1 | | |
| R251 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R252 | RK3070 | Chip R. | MCR03EZHJ474 | | 1 | | |
| R253 | RK3057 | Chip R. | MCR03EZHJ393 | | 1 | | |
| R254 | RK3057 | Chip R. | MCR03EZHJ393 | | 1 | | |
| R255 | RK3046 | Chip R. | MCR03EZHJ472 | | 1 | | |
| R256 | RK3026 | Chip R. | MCR03EZHJ101 | | 1 | | |
| R257 | RK3046 | Chip R. | MCR03EZHJ472 | | 1 | | |
| R258 | RK3057 | Chip R. | MCR03EZHJ393 | | 1 | | |
| R259 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R260 | RK3054 | Chip R. | MCR03EZHJ223 | | 1 | | |
| R261 | RK3054 | Chip R. | MCR03EZHJ223 | | 1 | | |
| R262 | RK3068 | Chip R. | MCR03EZHJ334 | | 1 | | |
| R263 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R264 | RK3038 | Chip R. | MCR03EZHJ102 | | 1 | | |
| R265 | RK3047 | Chip R. | MCR03EZHJ562 | | 1 | | |
| R266 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R267 | RK3030 | Chip R. | MCR03EZHJ221 | | 1 | | |
| R269 | RK3062 | Chip R. | MCR03EZHJ104 | | 1 | | |
| R271 | RK4034 | Chip R. | ERJ12YJ471U | | 1 | | |
| R272 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R273 | RK3062 | Chip R. | MCR03EZHJ104 | | 1 | | |
| R274 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R275 | RK3022 | Chip R. | MCR03EZHJ470 | | 1 | | |
| R277 | RK3042 | Chip R. | MCR03EZHJ222 | | 1 | | |
| R279 | RK3046 | Chip R. | MCR03EZHJ472 | | 1 | | |
| R280 | RK3058 | Chip R. | MCR03EZHJ473 | | 1 | | |
| R281 | RK3041 | Chip R. | MCR03EZHJ182 | | 1 | | |
| R282 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R283 | RK3038 | Chip R. | MCR03EZHJ102 | | 1 | | |
| R284 | RK3030 | Chip R. | MCR03EZHJ221 | | 1 | | |
| R285 | RK3050 | Chip R. | MCR03EZHJ103 | | 1 | | |
| R286 | RK3045 | Chip R. | MCR03EZHJ392 | | 1 | | |
| R287 | RK3046 | Chip R. | MCR03EZHJ472 | | 1 | | |
| R288 | RK3014 | Chip R. | MCR03EZHJ100 | | 1 | | |
| R290 | RK3038 | Chip R. | MCR03EZHJ102 | | 1 | | |
| R291 | RK3001 | Chip R. | MCR03EZHJ000 | | 1 | | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|---------------|-------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| R295 | RK3038 | Chip R. | MCR03EZJ102 | | 1 | | |
| R297 | RK3050 | Chip R. | MCR03EZJ103 | | 1 | | |
| R303 | RK3057 | Chip R. | MCR03EZJ393 | | 1 | | |
| R304 | RK3057 | Chip R. | MCR03EZJ393 | | 1 | | |
| R306 | RK3076 | Chip R. | MCR03EZJ155 | | 1 | | |
| R308 | RK3076 | Chip R. | MCR03EZJ155 | | 1 | | |
| R309 | RK3050 | Chip R. | MCR03EZJ103 | | 1 | | |
| R311 | RK3038 | Chip R. | MCR03EZJ102 | | 1 | | |
| R312 | RK3038 | Chip R. | MCR03EZJ102 | | 1 | | |
| R313 | RK3038 | Chip R. | MCR03EZJ102 | | 1 | | |
| R315 | RK3042 | Chip R. | MCR03EZJ222 | | 1 | | |
| R316 | RK3051 | Chip R. | MCR03EZJ123 | | 1 | | |
| R318 | RK3050 | Chip R. | MCR03EZJ103 | | 1 | | |
| R319 | RK3062 | Chip R. | MCR03EZJ104 | | 1 | | |
| R320 | RK3062 | Chip R. | MCR03EZJ104 | | 1 | | |
| R322 | RD0108 | Jumper | J1/6Z | | 1 | | |
| R323 | RK3001 | Chip R. | MCR03EZJ000 | | 1 | | |
| R324 | RK3014 | Chip R. | MCR03EZJ100 | | 1 | | |
| R325 | RK3066 | Chip R. | MCR03EZJ224 | | 1 | | |
| R326 | RK3038 | Chip R. | MCR03EZJ102 | | 1 | | |
| R327 | RK3092 | Chip R. | MCR03EZPFX7502 | | 1 | | |
| R328 | RD3013 | Resistor | ERX1S1J100 | | 1 | | |
| R329 | RK3062 | Chip R. | MCR03EZJ104 | | 1 | | |
| R330 | RK3062 | Chip R. | MCR03EZJ104 | | 1 | | |
| R331 | RK3040 | Chip R. | MCR03EZJ152 | | 1 | | |
| R332 | RK3054 | Chip R. | MCR03EZJ223 | | 1 | | |
| R333 | RK3062 | Chip R. | MCR03EZJ104 | | 1 | | |
| R334 | RK3042 | Chip R. | MCR03EZJ222 | | 1 | | |
| TC101 | CT0012 | Trimmer | CTZ3S-10A-W1-P | | 1 | | |
| TH101 | XS0031 | Thermistor | NTCCM16084B682KCT | | 1 | | |
| VR101 | RH0146 | Trimmer R. | MVR22HXBRN473 | | 1 | | |
| VR102 | RH0148 | Trimmer R. | MVR22HXBRN104 | | 1 | | |
| VR103 | RH0142 | Trimmer R. | MVR22HXBRN103 | | 1 | | |
| VR104 | RH0144 | Trimmer R. | MVR22HXBRN223 | | 1 | | |
| VR105 | RH0142 | Trimmer R. | MVR22HXBRN103 | | 1 | | |
| VR106 | RH0146 | Trimmer R. | MVR22HXBRN473 | | 1 | | |
| VR107 | RH0140 | Trimmer R. | MVR22HXBRN472 | | 1 | | |
| VR108 | RH0148 | Trimmer R. | MVR22HXBRN104 | | 1 | | |
| W101 | MBAG02GG | Wire | #22BH1-020-H1 | | 1 | | |
| W102 | MBCL02GG | Wire | #30BH1-020-H1 | | 1 | | |
| X101 | XK0002 | Discriminator | CDBM455C7 | | 1 | | |
| X103 | XQ0096 | Xtal | 12.8MHZ 5PPM UM5 | | 1 | | |
| X104 | XQ0058A | Xtal | UM-5 30.395MHZ | | 1 | | |
| XF101 | XF0014Z | Xtal Filter | 30M152A 30.85MHZ | | 1 | | |
| | SD0034 | | GND SPRING DR130 | | 1 | | |
| | TS0164A | | VCO CASE DR235 | | 1 | | |
| | TZ0049 | | SILICON DUMPER | | 1 | | |
| | TZ0072 | | SHEET | | 1 | | |
| | UP0414 | P.C.Board | | | 1 | | |

VCO Unit (DR-235)

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|---------------|-------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| C503 | CU3039 | Chip C. | C1608JB1H222KT-AS | | 1 | | |
| C504 | CU3051 | Chip C. | C1608JB1E223KT-NS | | 1 | | |
| C505 | CS0220 | Chip tantalum | TMCSA1C225MTR | | 1 | | |
| C506 | CS0220 | Chip tantalum | TMCSA1C225MTR | | 1 | | |
| C507 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C508 | CS0063 | Chip tantalum | TMCSA1V104MTR | | 1 | | |
| C511 | CU3047 | Chip C. | C1608JB1H103KT-N | | 1 | | |
| C512 | CU3047 | Chip C. | C1608JB1H103KT-N | | 1 | | |
| C513 | CU3008 | Chip C. | C1608CH1H070CT-A | | 1 | | |
| C514 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C515 | CU3006 | Chip C. | C1608CH1H050CT-AS | | 1 | | |
| C516 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C517 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C518 | CU3003 | Chip C. | C1608CH1H020CT-AS | | 1 | | |
| C519 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C520 | CS0382 | Chip tantalum | TMCSA1A226MTR | | 1 | | |
| C523 | CU3004 | Chip C. | C1608CH1H030CT-AS | | 1 | | |
| C524 | CU3027 | Chip C. | C1608CH1H221JT-AS | | 1 | | |
| C525 | CU3009 | Chip C. | C1608CH1H080CT-A | | 1 | | |
| C526 | CU3002 | Chip C. | C1608CH1H010CT-AS | | 1 | | |
| C527 | CU3009 | Chip C. | C1608CH1H080CT-A | | 1 | | |
| C528 | CU3003 | Chip C. | C1608CH1H020CT-AS | | 1 | | |
| C529 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C530 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C531 | CU3011 | Chip C. | C1608CH1H100DT-AS | | 1 | | |
| CN501 | UE0420 | Connector | B8P-BC-2 | | 1 | | |
| CN502 | UE0185 | Connector | B6P-BC-2 | | 1 | | |
| D501 | XD0131 | Chip Diode | 1SV214 TPH4 | | 1 | | |
| D503 | XD0300 | Chip Diode | 1SV262TPH2 | | 1 | | |
| D504 | XD0300 | Chip Diode | 1SV262TPH2 | | 1 | | |
| IC501 | XA0352 | IC | M64076GP | | 1 | | |
| L501 | QC0104 | Chip Inductor | LER015T1R5M | | 1 | | |
| L503 | QA0147 | Chip Inductor | 4VP-5.25T | | 1 | | |
| L504 | QC0104 | Chip Inductor | LER015T1R5M | | 1 | | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-----------------|------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| L505 | QC0104 | Chip Inductor | LER015T1R5M | | 1 | | |
| L506 | QC0544 | Chip Inductor | LER015TR47M | | 1 | | |
| L507 | QC0430 | Chip Inductor | MLF1608DR10K-T | | 1 | | |
| Q501 | XT0124 | Chip Transistor | 2SC4215-Y(TE85L) | | 1 | | |
| Q503 | XE0010 | FET | 2SK508K52 T2B | | 1 | | |
| Q504 | XT0124 | Chip Transistor | 2SC4215-Y(TE85L) | | 1 | | |
| R502 | RK3022 | Chip R. | MCR03EZJ470 | | 1 | | |
| R503 | RK3030 | Chip R. | MCR03EZJ221 | | 1 | | |
| R504 | RK3001 | Chip R. | MCR03EZJ000 | | 1 | | |
| R505 | RK3048 | Chip R. | MCR03EZJ682 | | 1 | | |
| R506 | RK3052 | Chip R. | MCR03EZJ153 | | 1 | | |
| R507 | RK3042 | Chip R. | MCR03EZJ222 | | 1 | | |
| R508 | RK3026 | Chip R. | MCR03EZJ101 | | 1 | | |
| R509 | RK3034 | Chip R. | MCR03EZJ471 | | 1 | | |
| R510 | RK3054 | Chip R. | MCR03EZJ223 | | 1 | | |
| R511 | RK3044 | Chip R. | MCR03EZJ332 | | 1 | | |
| R512 | RK3022 | Chip R. | MCR03EZJ470 | | 1 | | |
| R513 | RK3050 | Chip R. | MCR03EZJ103 | | 1 | | |
| R514 | RK3060 | Chip R. | MCR03EZJ683 | | 1 | | |
| R518 | RK3025 | Chip R. | MCR03EZJ820 | | 1 | | |
| R519 | RK3022 | Chip R. | MCR03EZJ470 | | 1 | | |
| R520 | RK3045 | Chip R. | MCR03EZJ392 | | 1 | | |
| R521 | RK3026 | Chip R. | MCR03EZJ101 | | 1 | | |
| R522 | RK3034 | Chip R. | MCR03EZJ471 | | 1 | | |
| R523 | RK3050 | Chip R. | MCR03EZJ103 | | 1 | | |

Main Unit (DR-435)

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-----------------|-------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| C101 | CU3047 | Chip C. | C1608JB1H103KT-N | | 1 | | |
| C102 | CU3047 | Chip C. | C1608JB1H103KT-N | | 1 | | |
| C103 | CS0049 | Chip tantalum | TMCSA1C105MTR | | 1 | | |
| C104 | CU3047 | Chip C. | C1608JB1H103KT-N | | 1 | | |
| C105 | CS0394 | Chip tantalum | TMCSA1C476MTR | | 1 | | |
| C106 | CU3051 | Chip C. | C1608JB1E223KT-NS | | 1 | | |
| C107 | CU3111 | Chip C. | C1608JB1C104KT-N | | 1 | | |
| C108 | CU3047 | Chip C. | C1608JB1H103KT-N | | 1 | | |
| C109 | CS0372 | Chip tantalum | TMCSA1C106MTR | | 1 | | |
| C110 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C111 | CU3047 | Chip C. | C1608JB1H103KT-N | | 1 | | |
| C112 | CU3047 | Chip C. | C1608JB1H103KT-N | | 1 | | |
| C113 | CU3047 | Chip C. | C1608JB1H103KT-N | | 1 | | |
| C114 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C115 | CE0350 | Electrolytic C. | 16MV 100HC | | 1 | | |
| C116 | CU3047 | Chip C. | C1608JB1H103KT-N | | 1 | | |
| C117 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C118 | CU3049 | Chip C. | C1608JB1E153KT-NS | | 1 | | |
| C119 | CU3051 | Chip C. | C1608JB1E223KT-NS | | 1 | | |
| C120 | CU3020 | Chip C. | C1608CH1H560JT-AS | | 1 | | |
| C121 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C122 | CU3047 | Chip C. | C1608JB1H103KT-N | | 1 | | |
| C123 | CU3012 | Chip C. | C1608CH1H120JT-AS | | 1 | | |
| C124 | CU3040 | Chip C. | C1608JB1H272KT-NS | | 1 | | |
| C125 | CU3044 | Chip C. | C1608JB1H562KT-NS | | 1 | | |
| C126 | CU3038 | Chip C. | C1608JB1H182KT-AS | | 1 | | |
| C127 | CU3041 | Chip C. | C1608JB1H332KT-NS | | 1 | | |
| C129 | CU3008 | Chip C. | C1608CH1H070CT-A | | 1 | | |
| C130 | CS0220 | Chip tantalum | TMCSA1C225MTR | | 1 | | |
| C131 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C132 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C133 | CU3027 | Chip C. | C1608CH1H221JT-AS | | 1 | | |
| C134 | CU3042 | Chip C. | C1608JB1H392KT-NS | | 1 | | |
| C135 | CU3044 | Chip C. | C1608JB1H562KT-NS | | 1 | | |
| C137 | CU3017 | Chip C. | C1608CH1H330JT-AS | | 1 | | |
| C138 | CS0049 | Chip tantalum | TMCSA1C105MTR | | 1 | | |
| C139 | CU3031 | Chip C. | C1608JB1H471KT-AS | | 1 | | |
| C141 | CU3008 | Chip C. | C1608CH1H070CT-A | | 1 | | |
| C142 | CU3111 | Chip C. | C1608JB1C104KT-N | | 1 | | |
| C143 | CU3111 | Chip C. | C1608JB1C104KT-N | | 1 | | |
| C144 | CU3015 | Chip C. | C1608CH1H220JT-AS | | 1 | | |
| C145 | CU3064 | Chip C. | C1608CH1H1R5CT-AS | | 1 | | |
| C146 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | 1 | | |
| C149 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C150 | CU3016 | Chip C. | C1608CH1H270JT-AS | | 1 | | |
| C151 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C152 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | 1 | | |
| C153 | CU3003 | Chip C. | C1608CH1H020CT-AS | | 1 | | |
| C154 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C155 | CU3011 | Chip C. | C1608CH1H100DT-AS | | 1 | | |
| C156 | CU3047 | Chip C. | C1608JB1H103KT-N | | 1 | | |
| C157 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C158 | CU3004 | Chip C. | C1608CH1H030CT-AS | | 1 | | |
| C159 | CU3018 | Chip C. | C1608CH1H390JT-AS | | 1 | | |
| C160 | CU3016 | Chip C. | C1608CH1H270JT-AS | | 1 | | |
| C161 | CU3035 | Chip C. | C1608JB1H102KT-AS | | 1 | | |
| C162 | CU3023 | Chip C. | C1608CH1H101JT-AS | | 1 | | |
| C165 | CU3111 | Chip C. | C1608JB1C104KT-N | | 1 | | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-----------------|---------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| C167 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C169 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C170 | CU3016 | Chip C. | C1608CH1H270JT-AS | | | 1 | |
| C173 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C174 | CU3029 | Chip C. | C1608JB1H331KT-AS | | | 1 | |
| C175 | CU3111 | Chip C. | C1608JB1C104KT-N | | | 1 | |
| C176 | CU3016 | Chip C. | C1608CH1H270JT-AS | | | 1 | |
| C179 | CU3111 | Chip C. | C1608JB1C104KT-N | | | 1 | |
| C180 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C181 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C182 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C183 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C184 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C185 | CS0232 | Chip tantalum | TMCMA1V474MTR | | | 1 | |
| C187 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C188 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C189 | CU3015 | Chip C. | C1608CH1H220JT-AS | | | 1 | |
| C190 | CU3047 | Chip C. | C1608JB1H103KT-N | | | 1 | |
| C191 | CU3102 | Chip C. | C1608JB1C333KT-NS | | | 1 | |
| C192 | CU3047 | Chip C. | C1608JB1H103KT-N | | | 1 | |
| C193 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C194 | CU3004 | Chip C. | C1608CH1H030CT-AS | | | 1 | |
| C195 | CU3064 | Chip C. | C1608CH1H1R5CT-AS | | | 1 | |
| C196 | CU3011 | Chip C. | C1608CH1H100DT-AS | | | 1 | |
| C197 | CU4033 | Chip C. | GRM42-6X7R102K500PT | | | 1 | |
| C198 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | | 1 | |
| C199 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | | 1 | |
| C200 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C201 | CU4003 | Chip C. | GRM42-6CK020C500PT | | | 1 | |
| C202 | CU4011 | Chip C. | GRM42-6CH100D500PT | | | 1 | |
| C203 | CU4004 | Chip C. | GRM42-6CJ030C500PT | | | 1 | |
| C204 | CU4003 | Chip C. | GRM42-6CK020C500PT | | | 1 | |
| C205 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C206 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | | 1 | |
| C207 | CU3002 | Chip C. | C1608CH1H010CT-AS | | | 1 | |
| C208 | CU3002 | Chip C. | C1608CH1H010CT-AS | | | 1 | |
| C209 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C210 | CU3003 | Chip C. | C1608CH1H020CT-AS | | | 1 | |
| C211 | CU3003 | Chip C. | C1608CH1H020CT-AS | | | 1 | |
| C212 | CE0364 | Electrolytic C. | 16MV 47SWB+TS | | | 1 | |
| C213 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C214 | CU3004 | Chip C. | C1608CH1H030CT-AS | | | 1 | |
| C215 | CU4008 | Chip C. | GRM42-6CH070D500PT | | | 1 | |
| C216 | CU4011 | Chip C. | GRM42-6CH100D500PT | | | 1 | |
| C217 | CU3051 | Chip C. | C1608JB1E223KT-NS | | | 1 | |
| C218 | CU3051 | Chip C. | C1608JB1E223KT-NS | | | 1 | |
| C219 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C220 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C221 | CU3047 | Chip C. | C1608JB1H103KT-N | | | 1 | |
| C222 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C223 | CE0364 | Electrolytic C. | 16MV 47SWB+TS | | | 1 | |
| C224 | CU3023 | Chip C. | C1608CH1H101JT-AS | | | 1 | |
| C225 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C226 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C227 | CS0049 | Chip tantalum | TMCSA1C105MTR | | | 1 | |
| C228 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C229 | CU3101 | Chip C. | C1608JB1C473KT-NS | | | 1 | |
| C230 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C231 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C234 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C235 | CU3011 | Chip C. | C1608CH1H100DT-AS | | | 1 | |
| C236 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C237 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C238 | CS0049 | Chip tantalum | TMCSA1C105MTR | | | 1 | |
| C239 | CS0063 | Chip tantalum | TMCSA1V104MTR | | | 1 | |
| C240 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | | 1 | |
| C241 | CU3022 | Chip C. | C1608CH1H820JT-AS | | | 1 | |
| C242 | CU3051 | Chip C. | C1608JB1E223KT-NS | | | 1 | |
| C243 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | | 1 | |
| C244 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | | 1 | |
| C245 | CS0049 | Chip tantalum | TMCSA1C105MTR | | | 1 | |
| C246 | CU3043 | Chip C. | C1608JB1H472KT-NS | | | 1 | |
| C247 | CU3111 | Chip C. | C1608JB1C104KT-N | | | 1 | |
| C248 | CU3047 | Chip C. | C1608JB1H103KT-N | | | 1 | |
| C249 | CU3038 | Chip C. | C1608JB1H182KT-AS | | | 1 | |
| C250 | CU3026 | Chip C. | C1608CH1H181JT-AS | | | 1 | |
| C251 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | | 1 | |
| C253 | CU3111 | Chip C. | C1608JB1C104KT-N | | | 1 | |
| C254 | CU3111 | Chip C. | C1608JB1C104KT-N | | | 1 | |
| C255 | CE0364 | Electrolytic C. | 16MV 47SWB+TS | | | 1 | |
| C256 | CU3111 | Chip C. | C1608JB1C104KT-N | | | 1 | |
| C257 | CE0339 | Electrolytic C. | 16MV 10SWB+TS | | | 1 | |
| C259 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C261 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C267 | CU3023 | Chip C. | C1608CH1H101JT-AS | | | 1 | |
| C270 | CU3047 | Chip C. | C1608JB1H103KT-N | | | 1 | |
| C277 | CE0343 | Electrolytic C. | 16MV 1000HC+T | | | 1 | |
| C278 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C284 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-----------------|---------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| C286 | CU3027 | Chip C. | C1608CH1H221JT-AS | | | 1 | |
| C289 | CS0049 | Chip tantalum | TMCSA1C105MTR | | | 1 | |
| C291 | CU3011 | Chip C. | C1608CH1H100DT-AS | | | 1 | |
| C292 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C294 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C297 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C298 | CU3005 | Chip C. | C1608CH1H040CT-AS | | | 1 | |
| C305 | CU3047 | Chip C. | C1608JB1H103KT-N | | | 1 | |
| C306 | CU3111 | Chip C. | C1608JB1C104KT-N | | | 1 | |
| C307 | CU3047 | Chip C. | C1608JB1H103KT-N | | | 1 | |
| C308 | CE0342 | Electrolytic C. | 16MV 470HC+TS | | | 1 | |
| C309 | CU3051 | Chip C. | C1608JB1E223KT-NS | | | 1 | |
| C310 | CU3023 | Chip C. | C1608CH1H101JT-AS | | | 1 | |
| C311 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C312 | CU3004 | Chip C. | C1608CH1H030CT-AS | | | 1 | |
| C314 | CS0237 | Chip tantalum | TMCMA1A475MTR | | | 1 | |
| C315 | CS0237 | Chip tantalum | TMCMA1A475MTR | | | 1 | |
| C316 | CS0237 | Chip tantalum | TMCMA1A475MTR | | | 1 | |
| C317 | CS0237 | Chip tantalum | TMCMA1A475MTR | | | 1 | |
| C318 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C319 | CS0237 | Chip tantalum | TMCMA1A475MTR | | | 1 | |
| C320 | CE0100 | Electrolytic C. | 16MV 22UW | | | 1 | |
| C321 | CS0220 | Chip tantalum | TMCMA1C225MTR | | | 1 | |
| C322 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| CN101 | UE0369 | Connector | AXN49301616 | | | 1 | |
| CN102 | UE0397 | Connector | 10-5082-3110-17-100 | | | 1 | |
| CN103 | UE0397 | Connector | 10-5082-3110-17-100 | | | 1 | |
| CN104 | UA0037Y | Wire | DC CABLE UA0037 | | | 1 | |
| CN105 | UE0394 | Connector | PI28A15M | | | 1 | |
| CN106 | UE0043 | Connector | PI22A02M | | | 1 | |
| CN107 | UE0393 | Connector | PI28A11M | | | 1 | |
| CN108 | UE0369 | Connector | AXN49301616 | | | 1 | |
| CN109 | UE0041 | Connector | TMPJ01XV6 | | | 1 | |
| CN110 | UE0341 | Connector | PI28A02M | | | 1 | |
| D101 | XD0141 | Chip Diode | 1SV237 TE85R | | | 1 | |
| D102 | XD0254 | Chip Diode | 1SS355 TE17 | | | 1 | |
| D103 | XD0254 | Chip Diode | 1SS355 TE17 | | | 1 | |
| D104 | XD0254 | Chip Diode | 1SS355 TE17 | | | 1 | |
| D105 | XD0291 | Chip Diode | MA729-TX | | | 1 | |
| D106 | XD0250 | Chip Diode | MA742 TX | | | 1 | |
| D107 | XD0141 | Chip Diode | 1SV237 TE85R | | | 1 | |
| D108 | XD0254 | Chip Diode | 1SS355 TE17 | | | 1 | |
| D109 | XD0301 | Chip Diode | 1SV268-TD | | | 1 | |
| D110 | XD0013 | Diode | MI407 | | | 1 | |
| D111 | XD0250 | Chip Diode | MA742 TX | | | 1 | |
| D112 | XD0250 | Chip Diode | MA742 TX | | | 1 | |
| D113 | XD0254 | Chip Diode | 1SS355 TE17 | | | 1 | |
| D114 | XD0141 | Chip Diode | 1SV237 TE85R | | | 1 | |
| D115 | XD0254 | Chip Diode | 1SS355 TE17 | | | 1 | |
| D116 | XD0297 | Chip Diode | MA8100-TX | | | 1 | |
| D118 | XD0130 | Chip Diode | DA204U T106 | | | 1 | |
| D119 | XD0254 | Chip Diode | 1SS355 TE17 | | | 1 | |
| D121 | XD0274 | Diode | DSA3A1 | | | 1 | |
| D124 | XD0131 | Chip Diode | 1SV214 TPH4 | | | 1 | |
| D127 | XD0165 | Chip Diode | UDZSTE-17 5.1B | | | 1 | |
| D128 | XD0291 | Chip Diode | MA729-TX | | | 1 | |
| D129 | XD0291 | Chip Diode | MA729-TX | | | 1 | |
| FL101 | XC0047 | Ceramic Filter | ALFYM455E=K | | | 1 | |
| FL102 | XC0036 | Ceramic Filter | ALFYM455G | | | 1 | |
| IC101 | XA0675 | IC | L88MS05TLL-TL | | | 1 | |
| IC102 | XA0348 | IC | TC4W53FU(TE12) | | | 1 | |
| IC103 | XA0348 | IC | TC4W53FU(TE12) | | | 1 | |
| IC104 | XA0596 | IC | NJM2902V-TE1 | | | 1 | |
| IC108 | XA0314 | IC | TK10489MTL | | | 1 | |
| IC109 | XA0115 | IC | TC4S66F TE85R | | | 1 | |
| IC110 | XA0077A | IC | M57788M E | | | 1 | |
| IC111 | XA0236 | IC | BU4052BCF-E2 | | | 1 | |
| IC113 | XA0348 | IC | TC4W53FU(TE12) | | | 1 | |
| IC114 | XA0068 | IC | M5218AFP/600E | | | 1 | |
| IC115 | XA0102 | IC | NJM7808FA | | | 1 | |
| IC117 | XA0410 | IC | LA4425A | | | 1 | |
| JK101 | UJ0046 | Jack | MJ82-1 | | | 1 | |
| JK102 | UJ0024Z | Jack | LGY6501-0600 | | | 1 | |
| L101 | QC0043 | Chip Inductor | NL322522T-2R2J-3 | | | 1 | |
| L102 | QA0104 | Coil | QA0104 | | | 1 | |
| L103 | QA0104 | Coil | QA0104 | | | 1 | |
| L104 | QC0057 | Chip Inductor | NL322522T-015JA | | | 1 | |
| L105 | QC0057 | Chip Inductor | NL322522T-015JA | | | 1 | |
| L106 | QC0055 | Chip Inductor | NL322522T-010JA | | | 1 | |
| L107 | QC0057 | Chip Inductor | NL322522T-015JA | | | 1 | |
| L108 | QC0124 | Chip Inductor | NL322522T-R15J-3 | | | 1 | |
| L109 | QC0061 | Chip Inductor | NL322522T-033JA | | | 1 | |
| L111 | QKA25E | Coil | MR3.0 2.5T 0.8 | | | 1 | |
| L112 | QKA15D | Coil | MR3.0 1.5T 0.6 | | | 1 | |
| L113 | QC0062 | Chip Inductor | NL322522T-039JA | | | 1 | |
| L114 | QKA15E | Coil | MR3.0 1.5T 0.8 | | | 1 | |
| L115 | QKA15E | Coil | MR3.0 1.5T 0.8 | | | 1 | |
| L116 | QKA15E | Coil | MR3.0 1.5T 0.8 | | | 1 | |
| L117 | QKA25D | Coil | MR3.0 2.5T 0.6 | | | 1 | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver | Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-----------------|------------------|--------|--------|--------|-----|----------|-----------|-------------|--------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | | | | | | DR-135 | DR-235 | DR-435 | |
| L118 | QKA95D | Coil | MR3.0 9.5T 0.6 | | | 1 | | R153 | RK3038 | Chip R. | MCR03EZJH102 | | | 1 | |
| L119 | QC0059 | Chip Inductor | NL322522T-022JA | | | 1 | | R154 | RK3042 | Chip R. | MCR03EZJH222 | | | 1 | |
| L120 | QC0059 | Chip Inductor | NL322522T-022JA | | | 1 | | R155 | RK3052 | Chip R. | MCR03EZJH153 | | | 1 | |
| Q101 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | | R156 | RK3034 | Chip R. | MCR03EZJH471 | | | 1 | |
| Q102 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | | R157 | RK3058 | Chip R. | MCR03EZJH473 | | | 1 | |
| Q103 | XU0152 | Chip Transistor | UMC5NTR | | | 1 | | R158 | RK3026 | Chip R. | MCR03EZJH101 | | | 1 | |
| Q104 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | | R160 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | |
| Q105 | XT0125 | Chip Transistor | 2SC4245-Y(TE85L) | | | 1 | | R161 | RK3034 | Chip R. | MCR03EZJH471 | | | 1 | |
| Q106 | XE0013 | Chip Transistor | 3SK184 TX S | | | 1 | | R162 | RK3026 | Chip R. | MCR03EZJH101 | | | 1 | |
| Q107 | XE0013 | Chip Transistor | 3SK184 TX S | | | 1 | | R163 | RK3026 | Chip R. | MCR03EZJH101 | | | 1 | |
| Q108 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | | R164 | RK0107 | Chip R. | ERJ6GEY0R00V | | | 1 | |
| Q110 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | | R165 | RK3074 | Chip R. | MCR03EZJH105 | | | 1 | |
| Q111 | XT0141 | Chip Transistor | 2SC4226-T1 R24 | | | 1 | | R168 | RK3054 | Chip R. | MCR03EZJH223 | | | 1 | |
| Q112 | XT0141 | Chip Transistor | 2SC4226-T1 R24 | | | 1 | | R172 | RK3056 | Chip R. | MCR03EZJH333 | | | 1 | |
| Q113 | XU0152 | Chip Transistor | UMC5NTR | | | 1 | | R173 | RK3026 | Chip R. | MCR03EZJH101 | | | 1 | |
| Q114 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | | R176 | RK3044 | Chip R. | MCR03EZJH332 | | | 1 | |
| Q115 | XT0084 | Chip Transistor | 2SC2954 T1 | | | 1 | | R180 | RK3038 | Chip R. | MCR03EZJH102 | | | 1 | |
| Q116 | XT0112 | Transistor | 2SB1292F | | | 1 | | R181 | RK3062 | Chip R. | MCR03EZJH104 | | | 1 | |
| Q117 | XT0095 | Chip Transistor | 2SC4081 T106R | | | 1 | | R182 | RK3042 | Chip R. | MCR03EZJH222 | | | 1 | |
| Q118 | XT0094 | Chip Transistor | 2SA1576A T106R | | | 1 | | R183 | RK3060 | Chip R. | MCR03EZJH683 | | | 1 | |
| Q119 | XU0148 | Chip Transistor | DTC114EUA T106 | | | 1 | | R184 | RK3058 | Chip R. | MCR03EZJH473 | | | 1 | |
| Q120 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | | R185 | RK3070 | Chip R. | MCR03EZJH474 | | | 1 | |
| Q121 | XU0178 | Chip Transistor | XP1215-TX | | | 1 | | R186 | RK3062 | Chip R. | MCR03EZJH104 | | | 1 | |
| Q122 | XT0099 | Chip Transistor | 2SA1736 TE12R | | | 1 | | R187 | RK3058 | Chip R. | MCR03EZJH473 | | | 1 | |
| Q123 | XT0061 | Chip Transistor | 2SB1132T 100Q | | | 1 | | R188 | RK3026 | Chip R. | MCR03EZJH101 | | | 1 | |
| Q124 | XU0152 | Chip Transistor | UMC5NTR | | | 1 | | R189 | RK3038 | Chip R. | MCR03EZJH102 | | | 1 | |
| Q125 | XT0048 | Chip Transistor | 2SC3357RE T1 | | | 1 | | R190 | RK3038 | Chip R. | MCR03EZJH102 | | | 1 | |
| Q126 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | | R191 | RK3038 | Chip R. | MCR03EZJH102 | | | 1 | |
| Q127 | XT0095 | Chip Transistor | 2SC4081 T106R | | | 1 | | R192 | RK3058 | Chip R. | MCR03EZJH473 | | | 1 | |
| Q128 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | | R193 | RK3038 | Chip R. | MCR03EZJH102 | | | 1 | |
| Q129 | XU0148 | Chip Transistor | DTC114EUA T106 | | | 1 | | R195 | RK3070 | Chip R. | MCR03EZJH474 | | | 1 | |
| Q130 | XU0112 | Chip Transistor | DTA114YUA T106 | | | 1 | | R196 | RK3038 | Chip R. | MCR03EZJH102 | | | 1 | |
| Q131 | XT0141 | Chip Transistor | 2SC4226-T1 R24 | | | 1 | | R197 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | |
| Q132 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | | R198 | RK3042 | Chip R. | MCR03EZJH222 | | | 1 | |
| Q133 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | | R199 | RK3042 | Chip R. | MCR03EZJH222 | | | 1 | |
| Q134 | XT0095 | Chip Transistor | 2SC4081 T106R | | | 1 | | R200 | RK3070 | Chip R. | MCR03EZJH474 | | | 1 | |
| Q135 | XT0095 | Chip Transistor | 2SC4081 T106R | | | 1 | | R201 | RK3042 | Chip R. | MCR03EZJH222 | | | 1 | |
| Q136 | XU0148 | Chip Transistor | DTC114EUA T106 | | | 1 | | R203 | RK3056 | Chip R. | MCR03EZJH333 | | | 1 | |
| Q137 | XU0131 | Chip Transistor | DTC114EUA T106 | | | 1 | | R204 | RK3062 | Chip R. | MCR03EZJH104 | | | 1 | |
| Q139 | XT0095 | Chip Transistor | 2SC4081 T106R | | | 1 | | R206 | RK0130 | Chip R. | ERJ6GEY4R7V | | | 1 | |
| Q140 | XT0095 | Chip Transistor | 2SC4081 T106R | | | 1 | | R207 | RK3052 | Chip R. | MCR03EZJH153 | | | 1 | |
| Q141 | XU0148 | Chip Transistor | DTC114EUA T106 | | | 1 | | R208 | RK3034 | Chip R. | MCR03EZJH471 | | | 1 | |
| Q142 | XU0148 | Chip Transistor | DTC114EUA T106 | | | 1 | | R209 | RK3061 | Chip R. | MCR03EZJH823 | | | 1 | |
| R101 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | | R210 | RK3030 | Chip R. | MCR03EZJH221 | | | 1 | |
| R102 | RK3091 | Chip R. | MCR03EZPF3902 | | | 1 | | R211 | RK4018 | Chip R. | ERJ12YJ220U | | | 1 | |
| R103 | RK3091 | Chip R. | MCR03EZPF3902 | | | 1 | | R212 | RK4026 | Chip R. | ERJ12YJ101U | | | 1 | |
| R104 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | | R213 | RK3049 | Chip R. | MCR03EZJH822 | | | 1 | |
| R105 | RK3028 | Chip R. | MCR03EZJH151 | | | 1 | | R214 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | |
| R106 | RK3026 | Chip R. | MCR03EZJH101 | | | 1 | | R215 | RK3036 | Chip R. | MCR03EZJH681 | | | 1 | |
| R107 | RK3026 | Chip R. | MCR03EZJH101 | | | 1 | | R216 | RK3042 | Chip R. | MCR03EZJH222 | | | 1 | |
| R109 | RK3026 | Chip R. | MCR03EZJH101 | | | 1 | | R217 | RK3042 | Chip R. | MCR03EZJH222 | | | 1 | |
| R110 | RK3068 | Chip R. | MCR03EZJH334 | | | 1 | | R218 | RK3060 | Chip R. | MCR03EZJH683 | | | 1 | |
| R111 | RK3044 | Chip R. | MCR03EZJH332 | | | 1 | | R219 | RK3042 | Chip R. | MCR03EZJH222 | | | 1 | |
| R112 | RK3022 | Chip R. | MCR03EZJH470 | | | 1 | | R220 | RK4034 | Chip R. | ERJ12YJ471U | | | 1 | |
| R113 | RK3022 | Chip R. | MCR03EZJH470 | | | 1 | | R221 | RK3051 | Chip R. | MCR03EZJH123 | | | 1 | |
| R114 | RK3042 | Chip R. | MCR03EZJH222 | | | 1 | | R222 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | |
| R115 | RK3041 | Chip R. | MCR03EZJH182 | | | 1 | | R223 | RK3026 | Chip R. | MCR03EZJH101 | | | 1 | |
| R116 | RK3030 | Chip R. | MCR03EZJH221 | | | 1 | | R224 | RK3018 | Chip R. | MCR03EZJH220 | | | 1 | |
| R117 | RK3070 | Chip R. | MCR03EZJH474 | | | 1 | | R226 | RK3038 | Chip R. | MCR03EZJH102 | | | 1 | |
| R118 | RK3026 | Chip R. | MCR03EZJH101 | | | 1 | | R227 | RK3034 | Chip R. | MCR03EZJH471 | | | 1 | |
| R119 | RK3052 | Chip R. | MCR03EZJH153 | | | 1 | | R228 | RK3054 | Chip R. | MCR03EZJH223 | | | 1 | |
| R120 | RK3045 | Chip R. | MCR03EZJH392 | | | 1 | | R229 | RK3045 | Chip R. | MCR03EZJH392 | | | 1 | |
| R121 | RK3063 | Chip R. | MCR03EZJH124 | | | 1 | | R230 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | |
| R122 | RK3059 | Chip R. | MCR03EZJH563 | | | 1 | | R231 | RK3022 | Chip R. | MCR03EZJH470 | | | 1 | |
| R123 | RK3061 | Chip R. | MCR03EZJH823 | | | 1 | | R234 | RK3054 | Chip R. | MCR03EZJH223 | | | 1 | |
| R124 | RK3057 | Chip R. | MCR03EZJH393 | | | 1 | | R235 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | |
| R125 | RK3036 | Chip R. | MCR03EZJH681 | | | 1 | | R236 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | |
| R126 | RK3049 | Chip R. | MCR03EZJH822 | | | 1 | | R237 | RK3026 | Chip R. | MCR03EZJH101 | | | 1 | |
| R128 | RK3062 | Chip R. | MCR03EZJH104 | | | 1 | | R238 | RK3062 | Chip R. | MCR03EZJH104 | | | 1 | |
| R129 | RK0069 | Chip R. | ERJ6GEYJ104V | | | 1 | | R239 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | |
| R131 | RK3054 | Chip R. | MCR03EZJH223 | | | 1 | | R240 | RK3038 | Chip R. | MCR03EZJH102 | | | 1 | |
| R132 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | | R241 | RK3051 | Chip R. | MCR03EZJH123 | | | 1 | |
| R133 | RK3032 | Chip R. | MCR03EZJH331 | | | 1 | | R242 | RK3038 | Chip R. | MCR03EZJH102 | | | 1 | |
| R134 | RK3054 | Chip R. | MCR03EZJH223 | | | 1 | | R243 | RK3054 | Chip R. | MCR03EZJH223 | | | 1 | |
| R135 | RK3056 | Chip R. | MCR03EZJH333 | | | 1 | | R244 | RK3068 | Chip R. | MCR03EZJH334 | | | 1 | |
| R136 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | | R245 | RK3038 | Chip R. | MCR03EZJH102 | | | 1 | |
| R137 | RK3067 | Chip R. | MCR03EZJH274 | | | 1 | | R246 | RK3046 | Chip R. | MCR03EZJH472 | | | 1 | |
| R138 | RK3059 | Chip R. | MCR03EZJH563 | | | 1 | | R247 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | |
| R139 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | | R248 | RK3070 | Chip R. | MCR03EZJH474 | | | 1 | |
| R140 | RK3072 | Chip R. | MCR03EZJH684 | | | 1 | | R249 | RK3044 | Chip R. | MCR03EZJH332 | | | 1 | |
| R141 | RK3064 | Chip R. | MCR03EZJH154 | | | 1 | | R250 | RK3070 | Chip R. | MCR03EZJH474 | | | 1 | |
| R142 | RK3055 | Chip R. | MCR03EZJH273 | | | 1 | | R251 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | |
| R143 | RK3038 | Chip R. | MCR03EZJH102 | | | 1 | | R252 | RK3070 | Chip R. | MCR03EZJH474 | | | 1 | |
| R144 | RK3042 | Chip R. | MCR03EZJH222 | | | 1 | | R253 | RK3057 | Chip R. | MCR03EZJH393 | | | 1 | |
| R147 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | | R254 | RK3057 | Chip R. | MCR03EZJH393 | | | 1 | |
| R148 | RK3062 | Chip R. | MCR03EZJH104 | | | 1 | | R255 | RK3046 | Chip R. | MCR03EZJH472 | | | 1 | |
| R150 | RK3058 | Chip R. | MCR03EZJH473 | | | 1 | | R256 | RK3026 | Chip R. | MCR03EZJH101 | | | 1 | |
| R151 | RK3050 | Chip R. | MCR03EZJH103 | | | 1 | | R257 | RK3046 | Chip R. | MCR03EZJH472 | | | 1 | |
| R152 | RK3038 | Chip R. | MCR03EZJH102 | | | 1 | | R258 | RK3057 | Chip R. | MCR03EZJH393 | | | 1 | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|---------------|--------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| R259 | RK3050 | Chip R. | MCR03EZHU103 | | | 1 | |
| R260 | RK3054 | Chip R. | MCR03EZHU223 | | | 1 | |
| R261 | RK3054 | Chip R. | MCR03EZHU223 | | | 1 | |
| R262 | RK3069 | Chip R. | MCR03EZHU394 | | | 1 | |
| R263 | RK3051 | Chip R. | MCR03EZHU123 | | | 1 | |
| R264 | RK3038 | Chip R. | MCR03EZHU102 | | | 1 | |
| R265 | RK3062 | Chip R. | MCR03EZHU104 | | | 1 | |
| R266 | RK3050 | Chip R. | MCR03EZHU103 | | | 1 | |
| R268 | RK3050 | Chip R. | MCR03EZHU103 | | | 1 | |
| R269 | RK3074 | Chip R. | MCR03EZHU105 | | | 1 | |
| R271 | RK4034 | Chip R. | ERJ12YJ471U | | | 1 | |
| R272 | RK3050 | Chip R. | MCR03EZHU103 | | | 1 | |
| R273 | RK3050 | Chip R. | MCR03EZHU103 | | | 1 | |
| R274 | RK3050 | Chip R. | MCR03EZHU103 | | | 1 | |
| R277 | RK3042 | Chip R. | MCR03EZHU222 | | | 1 | |
| R279 | RK3046 | Chip R. | MCR03EZHU472 | | | 1 | |
| R280 | RK1028 | Chip R. | ERJ8GEYJ471V | | | 1 | |
| R281 | RK3041 | Chip R. | MCR03EZHU182 | | | 1 | |
| R282 | RK3018 | Chip R. | MCR03EZHU220 | | | 1 | |
| R283 | RK3038 | Chip R. | MCR03EZHU102 | | | 1 | |
| R287 | RK3046 | Chip R. | MCR03EZHU472 | | | 1 | |
| R291 | RK3026 | Chip R. | MCR03EZHU101 | | | 1 | |
| R293 | RK3050 | Chip R. | MCR03EZHU103 | | | 1 | |
| R295 | RK3038 | Chip R. | MCR03EZHU102 | | | 1 | |
| R296 | RK3058 | Chip R. | MCR03EZHU473 | | | 1 | |
| R297 | RK3050 | Chip R. | MCR03EZHU103 | | | 1 | |
| R303 | RK3049 | Chip R. | MCR03EZHU822 | | | 1 | |
| R304 | RK3049 | Chip R. | MCR03EZHU822 | | | 1 | |
| R305 | RK3042 | Chip R. | MCR03EZHU222 | | | 1 | |
| R306 | RK3076 | Chip R. | MCR03EZHU155 | | | 1 | |
| R308 | RK3076 | Chip R. | MCR03EZHU155 | | | 1 | |
| R309 | RK3050 | Chip R. | MCR03EZHU103 | | | 1 | |
| R310 | RK3042 | Chip R. | MCR03EZHU222 | | | 1 | |
| R315 | RK3042 | Chip R. | MCR03EZHU222 | | | 1 | |
| R316 | RK3051 | Chip R. | MCR03EZHU123 | | | 1 | |
| R318 | RK3050 | Chip R. | MCR03EZHU103 | | | 1 | |
| R319 | RK3062 | Chip R. | MCR03EZHU104 | | | 1 | |
| R320 | RK3062 | Chip R. | MCR03EZHU104 | | | 1 | |
| R322 | RD0108 | Jumper | J1/6Z | | | 1 | |
| R324 | RK3014 | Chip R. | MCR03EZHU100 | | | 1 | |
| R325 | RK3066 | Chip R. | MCR03EZHU224 | | | 1 | |
| R326 | RK3038 | Chip R. | MCR03EZHU102 | | | 1 | |
| R327 | RK3092 | Chip R. | MCR03EZPFX7502 | | | 1 | |
| R328 | RD3013 | Resistor | ERX1SJ100 | | | 1 | |
| R329 | RK3062 | Chip R. | MCR03EZHU104 | | | 1 | |
| R330 | RK3062 | Chip R. | MCR03EZHU104 | | | 1 | |
| R331 | RK3038 | Chip R. | MCR03EZHU102 | | | 1 | |
| R332 | RK3054 | Chip R. | MCR03EZHU223 | | | 1 | |
| R333 | RK3062 | Chip R. | MCR03EZHU104 | | | 1 | |
| R334 | RK3042 | Chip R. | MCR03EZHU222 | | | 1 | |
| SH101 | TS0164A | Case | VCO CASE DR235 | | | 1 | |
| TC101 | CT0012 | Trimmer C. | CTZ3S-10A-W1-P | | | 1 | |
| TC102 | CT0012 | Trimmer C. | CTZ3S-10A-W1-P | | | 1 | |
| TC103 | CT0012 | Trimmer C. | CTZ3S-10A-W1-P | | | 1 | |
| TH101 | XS0031 | Thermistor | NTCCM16084BH682KCT | | | 1 | |
| TH102 | XS0030 | Thermistor | NTCCM16084LH223KCT | | | 1 | |
| VR101 | RH0146 | Trimmer R. | MVR22HXBRN473 | | | 1 | |
| VR102 | RH0148 | Trimmer R. | MVR22HXBRN104 | | | 1 | |
| VR103 | RH0142 | Trimmer R. | MVR22HXBRN103 | | | 1 | |
| VR104 | RH0142 | Trimmer R. | MVR22HXBRN103 | | | 1 | |
| VR105 | RH0142 | Trimmer R. | MVR22HXBRN103 | | | 1 | |
| VR106 | RH0146 | Trimmer R. | MVR22HXBRN473 | | | 1 | |
| VR107 | RH0140 | Trimmer R. | MVR22HXBRN472 | | | 1 | |
| X101 | XK0002 | Discriminator | CDBM455C7 | | | 1 | |
| X103 | XQ0112 | Xtal | UM-5 21.250MHZ | | | 1 | |
| X104 | XQ0058Z | Xtal | UM5 30.395MHZ | | | 1 | |
| XF101 | XF0014Z | Xtal Filter | 30M152A 30.85MHZ | | | 1 | |
| | TZ0072 | | SHEET | | | 1 | |
| | UP0415 | P.C.B | DR435 INTEGRATED | | | 1 | |
| | SD0034 | | GND SPRING DR130 | | | 1 | |
| | TZ0049 | | SILICON DUMPER | | | 2 | |

VCO Unit (DR-435)

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|---------------|-------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| C501 | CU3047 | Chip C. | C1608JB1H103KT-N | | | 1 | |
| C502 | CU3023 | Chip C. | C1608CH1H101JT-AS | | | 1 | |
| C503 | CU3047 | Chip C. | C1608JB1H103KT-N | | | 1 | |
| C504 | CU3023 | Chip C. | C1608CH1H101JT-AS | | | 1 | |
| C505 | CU3023 | Chip C. | C1608CH1H101JT-AS | | | 1 | |
| C506 | CU3031 | Chip C. | C1608JB1H471KT-AS | | | 1 | |
| C507 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C508 | CU3102 | Chip C. | C1608JB1C333KT-NS | | | 1 | |
| C509 | CS0220 | Chip tantalum | TMCMA1C225MTR | | | 1 | |
| C510 | CS0220 | Chip tantalum | TMCMA1C225MTR | | | 1 | |
| C511 | CU3006 | Chip C. | C1608CH1H050CT-AS | | | 1 | |
| C512 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-----------------|-------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| C513 | CS0063 | Chip tantalum | TMCSA1V104MTR | | | 1 | |
| C514 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C515 | CU3003 | Chip C. | C1608CH1H020CT-AS | | | 1 | |
| C516 | CU3019 | Chip C. | C1608CH1H470JT-AS | | | 1 | |
| C517 | CU3006 | Chip C. | C1608CH1H050CT-AS | | | 1 | |
| C518 | CU3004 | Chip C. | C1608CH1H030CT-AS | | | 1 | |
| C519 | CU3002 | Chip C. | C1608CH1H010CT-AS | | | 1 | |
| C520 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C521 | CU3003 | Chip C. | C1608CH1H020CT-AS | | | 1 | |
| C522 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C523 | CS0372 | Chip tantalum | TMCMB1C106MTR | | | 1 | |
| C524 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C525 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C526 | CU3011 | Chip C. | C1608CH1H100DT-AS | | | 1 | |
| C527 | CU3011 | Chip C. | C1608CH1H100DT-AS | | | 1 | |
| C528 | CU3035 | Chip C. | C1608JB1H102KT-AS | | | 1 | |
| C529 | CU3006 | Chip C. | C1608CH1H050CT-AS | | | 1 | |
| CN501 | UE0368 | Connector | AXN39301613 | | | 1 | |
| D501 | XD0131 | Chip Diode | 1SV214 TPH4 | | | 1 | |
| D502 | XD0131 | Chip Diode | 1SV214 TPH4 | | | 1 | |
| D503 | XD0131 | Chip Diode | 1SV214 TPH4 | | | 1 | |
| IC501 | XA0352 | IC | M64076GP | | | 1 | |
| L501 | QC0101 | Chip Inductor | LER015TR82M | | | 1 | |
| L503 | QA0093 | Chip Inductor | QA0093 | | | 1 | |
| L504 | QC0101 | Chip Inductor | LER015TR82M | | | 1 | |
| L505 | QC0096 | Chip Inductor | LER015TR33M | | | 1 | |
| L506 | QC0430 | Chip Inductor | MLF1608DR10K-T | | | 1 | |
| L507 | QC0430 | Chip Inductor | MLF1608DR10K-T | | | 1 | |
| Q501 | XT0124 | Chip Transistor | 2SC4215-Y(TE85L) | | | 1 | |
| Q502 | XE0010 | Chip FET | 2SK508K52 T2B | | | 1 | |
| Q503 | XT0125 | Chip Transistor | 2SC4245-Y(TE85L) | | | 1 | |
| Q504 | XT0125 | Chip Transistor | 2SC4245-Y(TE85L) | | | 1 | |
| R501 | RK3030 | Chip R. | MCR03EZHU221 | | | 1 | |
| R502 | RK3022 | Chip R. | MCR03EZHU470 | | | 1 | |
| R503 | RK3038 | Chip R. | MCR03EZHU102 | | | 1 | |
| R504 | RK3038 | Chip R. | MCR03EZHU102 | | | 1 | |
| R505 | RK3038 | Chip R. | MCR03EZHU102 | | | 1 | |
| R506 | RK3001 | Chip R. | MCR03EZHU000 | | | 1 | |
| R507 | RK3047 | Chip R. | MCR03EZHU562 | | | 1 | |
| R508 | RK3050 | Chip R. | MCR03EZHU103 | | | 1 | |
| R509 | RK3038 | Chip R. | MCR03EZHU102 | | | 1 | |
| R510 | RK3026 | Chip R. | MCR03EZHU101 | | | 1 | |
| R511 | RK3034 | Chip R. | MCR03EZHU471 | | | 1 | |
| R512 | RK3054 | Chip R. | MCR03EZHU223 | | | 1 | |
| R513 | RK3043 | Chip R. | MCR03EZHU272 | | | 1 | |
| R514 | RK3060 | Chip R. | MCR03EZHU683 | | | 1 | |
| R515 | RK3058 | Chip R. | MCR03EZHU473 | | | 1 | |
| R516 | RK3022 | Chip R. | MCR03EZHU470 | | | 1 | |
| R517 | RK3060 | Chip R. | MCR03EZHU683 | | | 1 | |
| R518 | RK3022 | Chip R. | MCR03EZHU470 | | | 1 | |
| R519 | RK3022 | Chip R. | MCR03EZHU470 | | | 1 | |
| R520 | RK3050 | Chip R. | MCR03EZHU103 | | | 1 | |
| R521 | RK3045 | Chip R. | MCR03EZHU392 | | | 1 | |
| R522 | RK3030 | Chip R. | MCR03EZHU221 | | | 1 | |
| R523 | RK3030 | Chip R. | MCR03EZHU221 | | | 1 | |
| R524 | RK3050 | Chip R. | MCR03EZHU103 | | | 1 | |
| R525 | RK3042 | Chip R. | MCR03EZHU222 | | | 1 | |
| R526 | RK3044 | Chip R. | MCR03EZHU332 | | | 1 | |
| R527 | RK3038 | Chip R. | MCR03EZHU102 | | | 1 | |

Mechanical Parts

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|----------------|-------------------|--------|--------|--------|-------|
| | | | | DR-135 | DR-235 | DR-435 | |
| CN7 | UE0401 | Dsub Connector | K-D-09S-SE | 1 | 1 | 1 | |
| CN6 | UX1251 | Wire | WIRE DSUB | 1 | 1 | 1 | |
| | ES0017 | Speaker | 057M9017 | 1 | 1 | 1 | |
| | UX1047 | Wire | Speaker | 1 | 1 | 1 | |
| | AA0050 | Screw | M2.6+6 FE/B.Zn | 6 | 6 | 6 | |
| | AE0029 | Screw | RDG-LNA-W1(01) | 2 | 2 | 2 | |
| | AV0006 | Screw | B2.6+8 Fe/Ni | 16 | 16 | 16 | |
| | AW0001 | Screw | 3+8 Fe/Ni | 2 | 2 | 2 | |
| | AZ0042 | Washer | | 2 | 2 | 2 | |
| | DP0127 | LCD PANEL | DR135 | 1 | - | - | |
| | DP0135 | LCD PANEL | DR235 | - | 1 | - | |
| | DP0136 | LCD PANEL | DR435 | - | - | 1 | |
| | FF0015 | Cloth | BLIND CLOTH DR110 | 2 | 2 | 2 | |
| | FF0017 | Cloth | BLIND CLOTH DR570 | 1 | 1 | 1 | |
| | FG0273 | Rubber | ON AIR KEY RUBBER | 1 | 1 | 1 | |
| | FG0320 | SP Cushion | | 1 | 1 | 1 | |
| | KS0068 | Bottom Case | DR135 | 1 | 1 | 1 | T,E |
| | KS0070 | Bottom Case | G DR135 | 1 | 1 | 1 | TG,EG |
| | KZ0105 | Front Panel | DR135 | 1 | 1 | 1 | T,E |
| | KZ0120 | Front Panel | G DR135 | 1 | 1 | 1 | TG,EG |
| | NK0072 | Knob | VOL DR135 | 1 | 1 | 1 | |
| | NK0073 | Knob | DIAL DR135 | 1 | 1 | 1 | |
| | SS0093 | Chassis | DR135 | 1 | 1 | 1 | T,E |
| | SS0095 | Chassis | G DR135 | 1 | 1 | 1 | TG,EG |

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|---------------|--------------------|--------|--------|--------|------|
| | | | | DR-135 | DR-235 | DR-435 | |
| | ST0065 | SP Holder | DR135 | 1 | 1 | 1 | |
| | ST0066 | SP FITTING | DR135 | 1 | 1 | 1 | |
| | TG0034 | SP Himelon | DR135 | 1 | 1 | 1 | |
| | UE0258 | ANT Connector | FM-M.D.R-(4) | 1 | 1 | 1 | |
| | YZ0131 | Tape | #9110 12X1mm | 60 | 60 | 60 | |
| | DS0388A | | Model Name Plate | 1 | - | 1 | E,EG |
| | DS0429 | | Model Name Plate | 1 | 1 | 1 | T,TG |
| | PR0309 | Label | CE-MARKLABEL DJG5E | 2.2 | - | 2.2 | E,EG |
| | PR0451 | Label | FCC Part 15 Seal | 1 | 1 | 1 | T,TG |
| | PR0452 | Label | FCC Home Use Seal | 1 | 1 | 1 | T,TG |

Packing Parts

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|--------------|----------------------|--------|--------|--------|------|
| | | | | DR-135 | DR-235 | DR-435 | |
| | HK0486 | Package | Item Carton DR135 | 1 | - | - | |
| | HK0507 | Package | Item Carton DR235T | - | 1 | - | T,TG |
| | HK0508 | Package | Item Carton DR435T | - | - | 1 | |
| | HM0203 | Carton Box | 5PCS | 0.2 | 0.2 | 0.2 | |
| | HU0099 | P.MTL/Carton | FRONT DR605 | 1 | 1 | 1 | |
| | HU0159 | P.MTL/Carton | Fixture | 1 | 1 | 1 | |
| | HU0161 | P.MTL/Carton | Fixture 5PCS | 0.4 | 0.4 | 0.4 | |
| | PR0345 | Label | T | 3 | 3 | 3 | T,TG |
| | PT0004A | Label | SERIAL NO.FOR CARTON | 2 | 2 | 2 | |

ACCESSORIES

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-------------|-------------------------|--------|--------|--------|------|
| | | | | DR-135 | DR-235 | DR-435 | |
| | ADFM78 | Bracket | DR130 | 1 | 1 | 1 | |
| | ADUA38 | Power cable | R-B2.0X3M RECEPT.15A | 1 | 1 | 1 | |
| | EMS53 | Microphone | | 1 | 1 | 1 | E,EG |
| | EMS56 | Microphone | | 1 | - | - | |
| | EMS57 | Microphone | Remote control | - | 1 | 1 | T,TG |
| | HP0009 | Plastic bag | 5X125X250(ADUA38) | 1 | 1 | 1 | |
| | HP0035 | Plastic bag | 5X200X250(DR135) | 1 | 1 | 1 | |
| | PH0009A | | Registration Card | 1 | 1 | 1 | T,TG |
| | PK0078 | | Schematic Diagram DR135 | 1 | - | - | |
| | PK0083 | | Schematic Diagram DR235 | - | 1 | - | T,TG |
| | PK0085 | | Schematic Diagram DR435 | - | - | 1 | |
| | PR0454 | Label | Security Seal T | 2 | 2 | 2 | |
| | PS0370 | Manual | INSTRUCTION DR235T | 1 | 1 | 1 | |
| | UX1259 | Wire | SCR1 | 1 | 1 | 1 | |
| | UX1260 | Wire | SCR2 | 1 | 1 | 1 | |

ACCESSORIES (SCREW SET)

| Ref. No. | Parts No. | Description | Parts Name | Qty | | | Ver |
|----------|-----------|-------------|---------------------|--------|--------|--------|-----|
| | | | | DR-135 | DR-235 | DR-435 | |
| | AA0013 | Screw | M5+20 Fe/Zn | 4 | 4 | 4 | |
| | AE0012 | Screw | HEXH/D M4+8 Fe/B.Zn | 4 | 4 | 4 | |
| | AJ0003 | Screw | T5+20 Fe/Zn | 4 | 4 | 4 | |
| | AJ0003 | Nut | N5x0.8 Fe/Zn | 4 | 4 | 4 | |
| | AZ0009 | Washer | 5x9.2x1.3 Fe/Zn | 4 | 4 | 4 | |
| | AZ0010 | Washer | 5x12x0.8 Fe/Zn | 4 | 4 | 4 | |
| | EF0005 | Fuse | FGBO 125V 15A | 2 | 2 | 2 | |
| | FM0079Z | SPANNER | DR130 | 1 | 1 | 1 | |
| | HP0006 | Plastic bag | 5X90X170 | 1 | 1 | 1 | |
| | YZ0121 | Tape | Tape 10mm | 2 | 2 | 2 | |

TNC (EJ41U)

| Ref.No. | Parts No. | Description | Parts Name | Qty |
|---------|-----------|-------------|--------------------|-----|
| BAT1 | ED0006 | Battery | BR2032 1F2 | 1 |
| C1 | CS0408 | Chip Tantal | 6MCM156MATER | 1 |
| C2 | CS0408 | Chip Tantal | 6MCM156MATER | 1 |
| C3 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 |
| C4 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 |
| C5 | CU9018 | Chip C. | C3216JB1C105MT-N | 1 |
| C6 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 |
| C7 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 |
| C8 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 |
| C9 | CU3051 | Chip C. | C1608JB1E223KT-NS | 1 |
| C10 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 |
| C11 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 |
| C12 | CU9018 | Chip C. | C3216JB1C105MT-N | 1 |
| C13 | CU3051 | Chip C. | C1608JB1E223KT-NS | 1 |
| C14 | CU3116 | Chip C. | C1608CH1H471JT-AS | 1 |
| C15 | CU3051 | Chip C. | C1608JB1E223KT-NS | 1 |
| C16 | CU3051 | Chip C. | C1608JB1E223KT-NS | 1 |
| C17 | CU3045 | Chip C. | C1608JB1H682KT-NS | 1 |
| C18 | CU3045 | Chip C. | C1608JB1H682KT-NS | 1 |
| C19 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 |
| C20 | CU9018 | Chip C. | C3216JB1C105MT-N | 1 |
| C21 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 |
| C22 | CU3035 | Chip C. | C1608JB1H102KT-AS | 1 |
| C23 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 |
| C24 | CU3004 | Chip C. | C1608CH1H030CT-AS | 1 |
| C25 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 |
| C26 | CU3027 | Chip C. | C1608CH1H221JT-AS | 1 |
| C27 | CU3023 | Chip C. | C1608CH1H101JT-AS | 1 |
| C28 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 |
| C29 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 |
| C30 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 |
| C31 | CU3062 | Chip C. | C1608CH1H160JT-A | 1 |
| C32 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 |
| C33 | CS0049 | Chip Tantal | TMCSA1C105MTR | 1 |
| C34 | CS0394 | Chip Tantal | TMCMB0J476MTR | 1 |
| C35 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 |
| C36 | CU3019 | Chip C. | C1608CH1H470JT-AS | 1 |
| C37 | CU3043 | Chip C. | C1608JB1H472KT-NS | 1 |
| C38 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 |
| C39 | CU3047 | Chip C. | C1608JB1H103KT-N | 1 |
| C40 | CU3045 | Chip C. | C1608JB1H682KT-NS | 1 |
| C41 | CU3116 | Chip C. | C1608CH1H471JT-AS | 1 |
| C42 | CU9018 | Chip C. | C3216JB1C105MT-N | 1 |
| C43 | CU3039 | Chip C. | C1608JB1H222KT-AS | 1 |
| C44 | CU3051 | Chip C. | C1608JB1E223KT-NS | 1 |
| C45 | CU3045 | Chip C. | C1608JB1H682KT-NS | 1 |
| C46 | CU3039 | Chip C. | C1608JB1H222KT-AS | 1 |
| C48 | CU3111 | Chip C. | C1608JB1C104KT-N | 1 |
| CN1 | UE0402 | Connector | PI28B11M | 1 |
| D1 | XL0036 | LED | SML-310MTT86 | 1 |
| D2 | XL0035 | LED | SML-310UTT86 | 1 |
| D3 | XL0036 | LED | SML-310MTT86 | 1 |
| D4 | XL0036 | LED | SML-310MTT86 | 1 |
| D5 | XD0291 | Diode | MA729-TX | 1 |
| D6 | XD0291 | Diode | MA729-TX | 1 |
| IC1 | XA0678 | IC | TGT0210Q | 1 |
| IC2 | XA0463 | IC | TA75S393F(TE85L) | 1 |
| IC3 | XA0679 | IC | TMT0110Q | 1 |
| IC4 | XA0224 | IC | NJM2904M T1 | 1 |
| IC5 | XA0326 | IC | NJM2903(T1) | 1 |
| IC6 | XA0680 | IC | ADM232AARN-REEL | 1 |
| IC7 | XA0668 | IC | S-80829ALNP-EAS-T2 | 1 |
| L2 | QB0044 | Chip Coil | BK1608HM601-T | 1 |
| Q1 | XT0095 | Transistor | 2SC4081 T106R | 1 |
| Q2 | XT0094 | Transistor | 2SA1576A T106R | 1 |
| Q3 | XT0094 | Transistor | 2SA1576A T106R | 1 |
| Q4 | XT0094 | Transistor | 2SA1576A T106R | 1 |
| Q5 | XE0029 | FET | 2SK1580-T1 | 1 |
| Q6 | XT0095 | Transistor | 2SC4081 T106R | 1 |
| Q7 | XU0078 | Transistor | UN521L-TX | 1 |
| Q8 | XT0095 | Transistor | 2SC4081 T106R | 1 |
| Q9 | XT0094 | Transistor | 2SA1576A T106R | 1 |
| Q10 | XT0095 | Transistor | 2SC4081 T106R | 1 |
| Q11 | XT0095 | Transistor | 2SC4081 T106R | 1 |
| R1 | RK3062 | Chip R. | MCR03EZHU104 | 1 |
| R2 | RK3062 | Chip R. | MCR03EZHU104 | 1 |
| R3 | RK3062 | Chip R. | MCR03EZHU104 | 1 |
| R4 | RK3062 | Chip R. | MCR03EZHU104 | 1 |
| R5 | RK3034 | Chip R. | MCR03EZHU471 | 1 |
| R6 | RK3034 | Chip R. | MCR03EZHU471 | 1 |
| R7 | RK3034 | Chip R. | MCR03EZHU471 | 1 |
| R8 | RK3032 | Chip R. | MCR03EZHU331 | 1 |
| R9 | RK3038 | Chip R. | MCR03EZHU102 | 1 |
| R10 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R11 | RK3066 | Chip R. | MCR03EZHU224 | 1 |
| R12 | RK3038 | Chip R. | MCR03EZHU102 | 1 |

| Ref.No. | Parts No. | Description | Parts Name | Qty |
|---------|-----------|-------------|-----------------|-------|
| R13 | RK3038 | Chip R. | MCR03EZHU102 | 1 |
| R14 | RK3038 | Chip R. | MCR03EZHU102 | 1 |
| R15 | RK3038 | Chip R. | MCR03EZHU102 | 1 |
| R16 | RK3038 | Chip R. | MCR03EZHU102 | 1 |
| R17 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R18 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R19 | RK3038 | Chip R. | MCR03EZHU102 | 1 |
| R20 | RK3038 | Chip R. | MCR03EZHU102 | 1 |
| R21 | RK3053 | Chip R. | MCR03EZHU183 | 1 |
| R22 | RK3054 | Chip R. | MCR03EZHU223 | 1 |
| R23 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R24 | RK3071 | Chip R. | MCR03EZHU564 | 1 |
| R25 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R26 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R27 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R28 | RK3048 | Chip R. | MCR03EZHU682 | 1 |
| R29 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R30 | RK3044 | Chip R. | MCR03EZHU332 | 1 |
| R32 | RK3042 | Chip R. | MCR03EZHU222 | 1 |
| R33 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R34 | RK3051 | Chip R. | MCR03EZHU123 | 1 |
| R35 | RK3051 | Chip R. | MCR03EZHU123 | 1 |
| R36 | RK3054 | Chip R. | MCR03EZHU223 | 1 |
| R37 | RK3051 | Chip R. | MCR03EZHU123 | 1 |
| R38 | RK3051 | Chip R. | MCR03EZHU123 | 1 |
| R39 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R40 | RK3051 | Chip R. | MCR03EZHU123 | 1 |
| R41 | RK3054 | Chip R. | MCR03EZHU223 | 1 |
| R42 | RK3044 | Chip R. | MCR03EZHU332 | 1 |
| R44 | RK3001 | Chip R. | MCR03EZHU000 | 1 |
| R45 | RK3030 | Chip R. | MCR03EZHU221 | 1 |
| R46 | RK3057 | Chip R. | MCR03EZHU393 | 1 |
| R47 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R48 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R49 | RK3046 | Chip R. | MCR03EZHU472 | 1 |
| R50 | RK3038 | Chip R. | MCR03EZHU102 | 1 |
| R51 | RK3061 | Chip R. | MCR03EZHU823 | 1 |
| R52 | RK3058 | Chip R. | MCR03EZHU473 | 1 |
| R53 | RK3054 | Chip R. | MCR03EZHU223 | 1 |
| R54 | RK3001 | Chip R. | MCR03EZHU000 | 1 |
| R55 | RK3062 | Chip R. | MCR03EZHU104 | 1 |
| R56 | RK3064 | Chip R. | MCR03EZHU154 | 1 |
| R57 | RK3058 | Chip R. | MCR03EZHU473 | 1 |
| R58 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R59 | RK3001 | Chip R. | MCR03EZHU000 | 1 |
| R60 | RK3044 | Chip R. | MCR03EZHU332 | 1 |
| R61 | RK3001 | Chip R. | MCR03EZHU000 | 1 |
| R62 | RK3060 | Chip R. | MCR03EZHU683 | 1 |
| R63 | RK3029 | Chip R. | MCR03EZHU181 | 1 |
| R64 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R65 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R66 | RK3059 | Chip R. | MCR03EZHU563 | 1 |
| R67 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R68 | RK3054 | Chip R. | MCR03EZHU223 | 1 |
| R69 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R70 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R71 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R72 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R73 | RK3001 | Chip R. | MCR03EZHU000 | 1 |
| R74 | RK3058 | Chip R. | MCR03EZHU473 | 1 |
| R75 | RK3062 | Chip R. | MCR03EZHU104 | 1 |
| R76 | RK3064 | Chip R. | MCR03EZHU154 | 1 |
| R77 | RK3030 | Chip R. | MCR03EZHU221 | 1 |
| R78 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R79 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R80 | RK3058 | Chip R. | MCR03EZHU473 | 1 |
| R81 | RK3058 | Chip R. | MCR03EZHU473 | 1 |
| R82 | RK3044 | Chip R. | MCR03EZHU332 | 1 |
| R83 | RK3074 | Chip R. | MCR03EZHU105 | 1 |
| R84 | RK3050 | Chip R. | MCR03EZHU103 | 1 |
| R85 | RK3046 | Chip R. | MCR03EZHU472 | 1 |
| R87 | RK3062 | Chip R. | MCR03EZHU104 | 1 |
| R88 | RK3062 | Chip R. | MCR03EZHU104 | 1 |
| VR1 | RH0142 | Trim.Pot | MVR22HXBRN103 | 1 |
| VR2 | RH0142 | Trim.Pot | MVR22HXBRN103 | 1 |
| W2 | UX1253 | Connector | WIRE TNC | 1 |
| X1 | XQ0124 | Xtal | AT-49 7.9872MHZ | 1 |
| | UP0402 | PCB | EJ41U (TNC) | 0.125 |
| | FF0033 | VELCRO | A | 1 |
| | FG0040 | Cushion | | 2 |
| | TZ0024 | Insulator | LITHIUM BATT. | 1 |
| | TZ0056 | Insulator | SILICON 49U | 1 |
| | YZ0131 | Tape | #9110 12X1mm | 25 |

TNC (EJ41U) Packing Parts

| Ref.No. | Parts No. | Description | Parts Name | Qty |
|---------|-----------|-------------|---------------------|-----|
| | FD0001 | Floppy-Disc | (WIN2HD) | 1 |
| | FF0034 | VELCRO | B | 1 |
| | FG0040 | Cushion | | 1 |
| | HK0487 | Package | Item Carton EJ41U | 1 |
| | HP0029 | Plastic bag | 5X100X100 | 1 |
| | HP0040 | Plastic bag | 8X130X200 | 1 |
| | PF0061 | SHEET | EJ41U | 1 |
| | PR0449 | Label | EJ41U | 1 |
| | PS0354 | Manual | INSTRUCTION EJ41U | 1 |
| | PS0355 | Manual | INST-DISC EJ41U | 1 |
| | UJZ0030 | Plug | MP-013LC 3.5mm Plug | 1 |

DR-135 ADJUSTMENT

1) Adjustment Spot

Power Supply Voltage 13.8 V

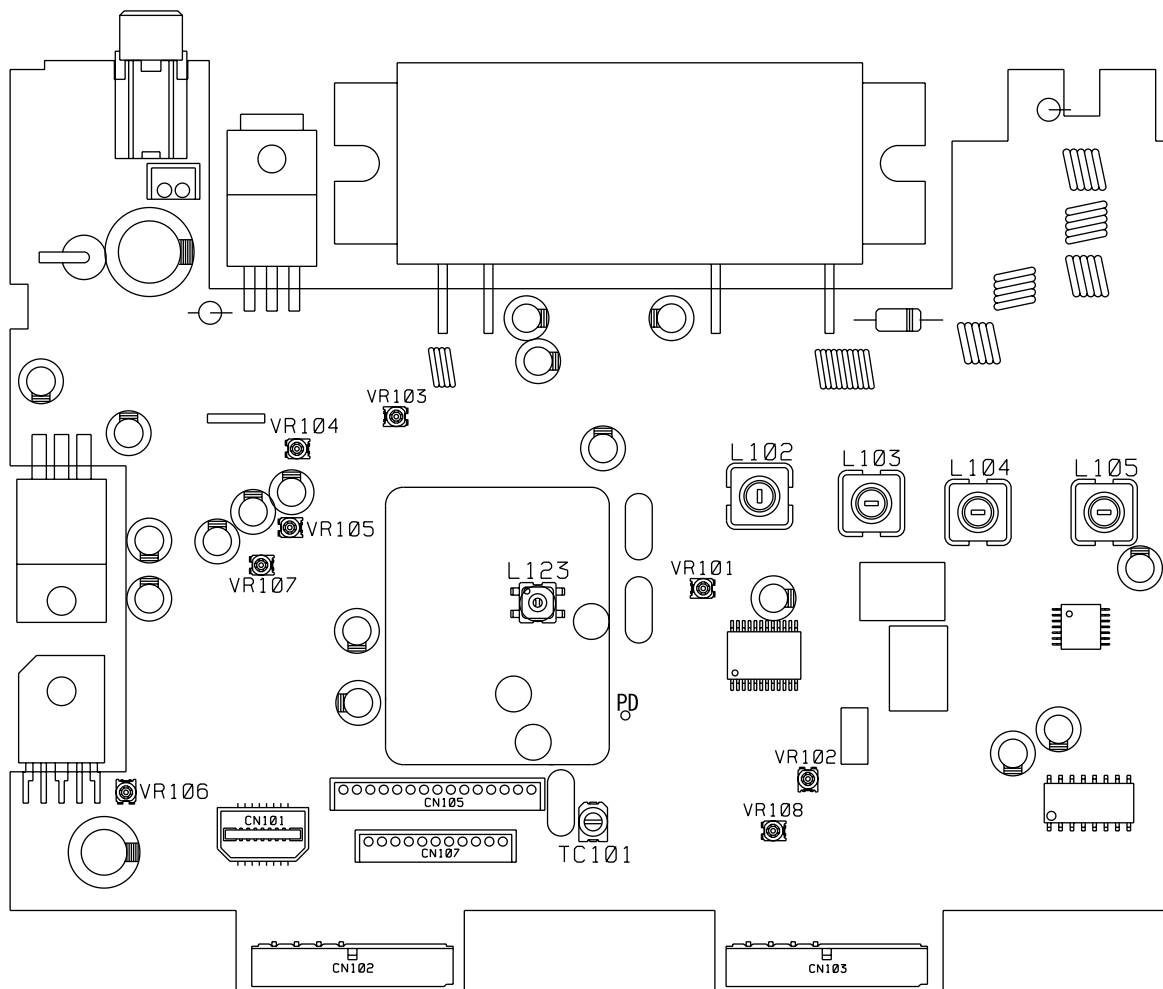
Output of SSG is all EMF indication

If without instruction, WIDE mode

If without instruction, SSG output is MOD 1KHz WIDE DEV 3.5KHz/DEV, NARROW DEV 1.75KHz/DEV

Standard Modulation is also based above.

Speaker load is 8Ω and Output is 50~100 mV.



Attention: Don't set the variable resistor into its open position.

2) VCO and RX Adjustment Specification

| ITEM | CONDITION | UNIT | ADJ.SPOT | ADJUSTING METHOD |
|----------------------------------|--|------|--------------------------|---|
| Adjustment Frequency | 145.90MHz TX | MAIN | TC101 | Adjust so that Tx Frequency becomes within 145.90MHz±100Hz |
| VCO Adjustment | 136.00MHz RX | MAIN | L123 | Adjust so that PD voltage becomes 1.5V |
| VCO Confirmation | 173.99MHz RX | MAIN | | Confirm if PD voltage becomes less than 7.3 V |
| Rx Signal Sensitivity Adjustment | 146.05MHz 136.05MHz 146.05MHz 173.95MHz | MAIN | L105, L104 L103, L102 | Repeatedly adjust so that the Rx sensitivity becomes in maximum. Confirm: At -7dBu SINAD more than 12dB At -8dBu SINAD more than 12dB At -6dBu SINAD more than 12dB |
| Squelch Adjustment | 146.05MHz SSG OFF Indication 01 | MAIN | VR101 | Adjust so that the squelch stops at perfectly close location |
| S Meter Adjustment | 146.05MHz SSG20dBu 1KHz 3.5KHz/DEV | MAIN | VR102 | Adjust so that all the indicator appears |

3) Tx Adjustment Specification

| ITEM | CONDITION | UNIT | ADJ.SPOT | ADJUSTING METHOD |
|--------------------------------------|--|------|----------|---------------------------------|
| HI POWER Adjustment | 146.00MHz HI POWER | MAIN | VR103 | Adjust to 50.0±1.0W |
| MID POWER Adjustment | 146.00MHz MID POWER | MAIN | VR104 | Adjust to 10.0±1.0W |
| LOW POWER Confirmation | 146.00MHz LOW POWER | MAIN | | Confirm if it becomes 4.0 ±1.0W |
| Maximum Deviation Adjustment | 146.00MHz MOD 1KHz40mVemf WIDE | MAIN | VR107 | 4.5±0.1KHz/DEV |
| Maximum Deviation Adjustment | 146.00MHz MOD 1KHz40mVemf NARROW | MAIN | VR105 | 2.2±0.1KHz/DEV |
| Mic Gain Adjustment | 146.00MHz MOD 1KHz4mVemf WIDE | MAIN | VR106 | 3.0±0.1KHz/DEV |
| CTCSS Modulation Level Confirmation | 146.00MHz 88.5Hz | MAIN | | 800±200Hz/DEV 3KHz LPF ON |
| DCS Modulation Level Adjustment | 146.00MHz 255 Code | MAIN | VR108 | 800±50Hz/DEV 3KHz LPF ON |
| 1750Hz Modulation Level Confirmation | 146.00MHz 1750Hz | MAIN | | 3.0±0.5KHz/DEV |
| DTMF Modulation Level Confirmation | 146.00MHz DTMF ⊕ Press the V/M key during TX | MAIN | | 3.0±0.5KHz/DEV |

4) Rx Test Specification

| TEST ITEM | CONDITION | ADJ STANDARD | TEST STANDARD | NOTE |
|---------------------|---------------------------------|--|--|---|
| RX Sensitivity | 136.05MHz | Less than -7dBu | Less than -6dBu | 12dB SINAD |
| | 146.05MHz | Less than -8dBu | Less than -7dBu | |
| | 173.95MHz | Less than -6dBu | Less than -5dBu | |
| | 146.05MHz NARROW | Less than -8dBu | Less than -7dBu | |
| | 135.05MHz | Less than 9dBu | Less than 10dBu | AM 10dB S/N |
| RX Distortion | WIDE | Less than 4% | Less than 5% | SSG OUT PUT 30dBu |
| | NARROW | | | |
| RX S/N | WIDE | More than 40dB | More than 38dB | SSG OUT PUT 30dBu 0.3~3KHzBPF OFF |
| | NARROW | More than 34dB | More than 32dB | |
| Squelch Sensitivity | 146.05MHz | Squelch Open | Squelch Open | SSG Output -10dBu |
| | Indication 02 | Squelch Close | Squelch Close | SSG Output OFF |
| S Meter | 146.05MHz 1KHz 3.5KHz/DEV | All appears at 20dBu | All appears at 25dBu | Decrease SSG level and decrease S Meter level |
| AF Output | 146.05MHz | More than 2W | More than 2W | SSG Output 30dBu |
| CTCSS Sensitivity | WIDE | Open at 500Hz/DEV | Open at 500Hz/DEV | SSG Output 0dBu 88.5Hz |
| | NARROW | Open at 250Hz/DEV | Open at 250Hz/DEV | |
| DCS Sensitivity | WIDE | Opens when Test Equipment is in Tx | Opens when Test Equipment is in Tx | 255 code |
| | NARROW | Opens when Test Equipment is in Tx | Opens when Test Equipment is in Tx | 255 code |
| Drain Current | 146.05MHz | Less than 0.65A | Less than 0.65A | MAX VR |
| Power Off Current | 146.05MHz | Less than 10mA | Less than 10mA | Power Off |
| Howling | 146.05MHz | Don't occur | Don't occur | SSG Output 60dBu MOD OFF MAX VR |

5) Tx Test Specification

| TEST ITEM | CONDITION | ADJ STANDARD | TEST STANDARD | NOTE |
|----------------------------|---------------------|----------------------------------|----------------------------------|--|
| TX Output HI POWER | 136.00MHz | More than 33W | More than 33W | ←TA, TAG ONLY |
| | 144.00MHz | 50±1W | 50±3W | |
| | 146.00MHz | 50±1W | 50±3W | ←T, TG ONLY ←TA, TAG ONLY |
| | 148.00MHz | 50±1W | 50±3W | |
| | 173.99MHz | More than 33W | More than 33W | |
| TX Output MID POWER | 146.00MHz | 10±1W | 10 ±2W | |
| TX Output LOW POWER | 146.00MHz | 4±1W | 3~6W | |
| Drain Current | 146.00MHz | Less than 10A | Less than 11A | |
| Frequency Deviation | 146.00MHz | Within ±0.3KHz | Within±0.5KHz | |
| Spurious | 136.00MHz | More than 60dB | More than 55dB | M and L standard power is also the same as of H power level |
| | 144.00MHz | More than 65dB | More than 60dB | |
| | 146.00MHz | More than 65dB | More than 60dB | |
| | 148.00MHz | More than 65dB | More than 60dB | |
| | 173.99MHz | More than 60dB | More than 55dB | |
| | | | TA, TAG ONLY | |
| Modulation Level | WIDE 146.00MHz | 3.0±0.1KHz/DEV 4.5±0.1KHz/DEV | 3.0±0.2KHz/DEV 4.5±0.2KHz/DEV | MIC IN 4mVemf MIC IN 40mVemf |
| | NARROW 146.00MHz | 2.2±0.1KHz/DEV | 2.2±0.2KHz/DEV | MIC IN 40mVemf |
| CTCSS Modulation Level | WIDE 146.00MHz | 800±200Hz/DEV | 800±200Hz/DEV | 88.5Hz 3KHz LPF ON |
| DCS Modulation Level | WIDE 146.00MHz | 800±200Hz/DEV | 800±200Hz/DEV | Code 255 3KHz LPF ON |
| | NARROW 146.00MHz | 450±100Hz/DEV | 450±100Hz/DEV | Code 255 3KHz LPF ON |
| 1750Hz Modulation Level | WIDE 146.00MHz | 3.0±0.5KHz/DEV | 3.0±0.5KHz/DEV | |
| DTMF Modulation Level | WIDE 146.00MHz | 3.0±0.5KHz/DEV | 3.0±0.5KHz/DEV | Press the V/M key during TX |
| Modulation Distortion | 146.00MHz | Less than 3% | Less than 4% | |
| TX S/N | WIDE | More than 40dB | More than 38dB | 0.3 ~ 3KHz BPF ON |
| | NARROW | More than 34dB | More than 32dB | |

DR-235 ADJUSTMENT

1) Adjustment Spot

Power Supply Voltage 13.8 V

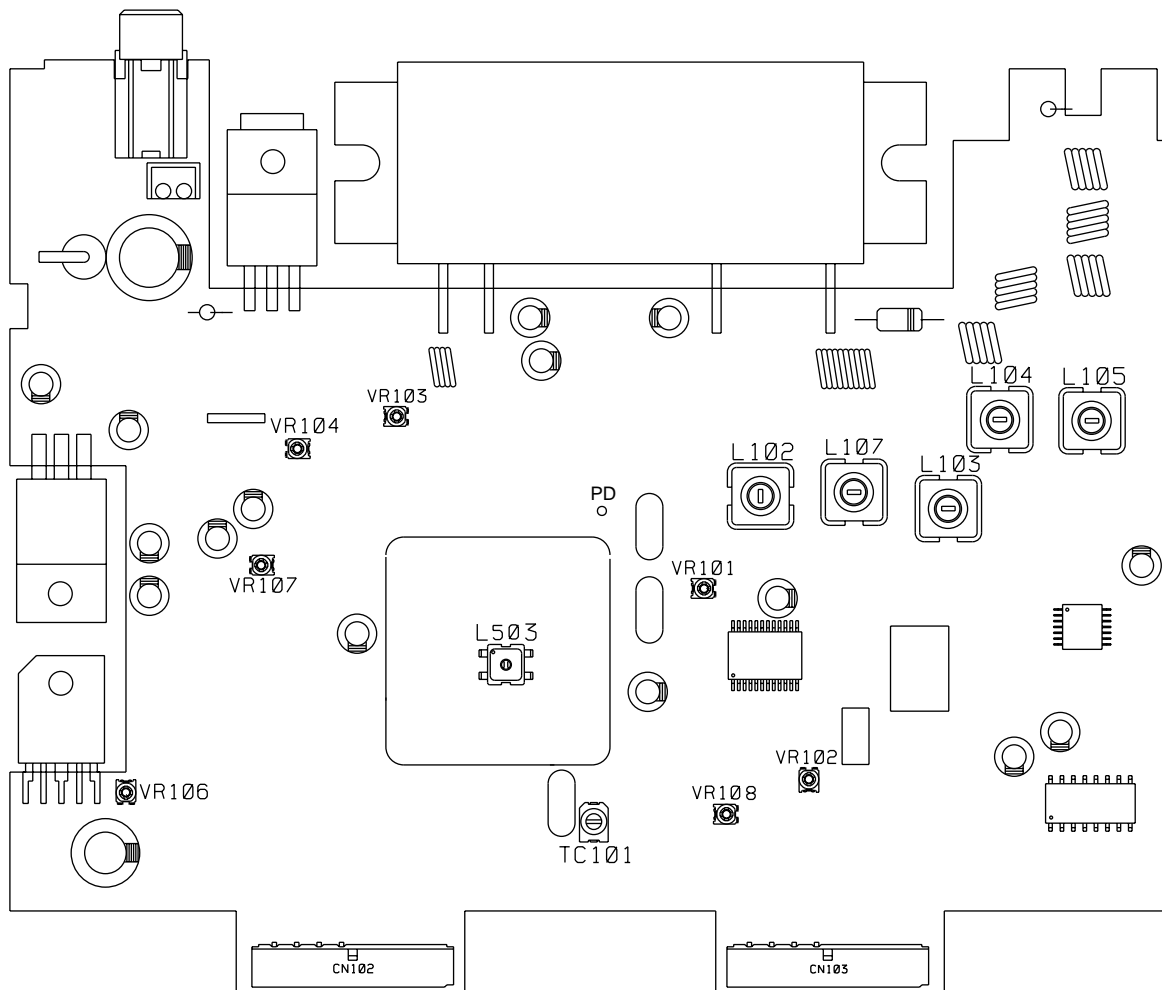
Output of SSG is all EMF indication

If without instruction, WIDE mode

If without instruction, SSG output is MOD 1KHz WIDE DEV 3.5KHz/DEV, NARROW DEV 1.75KHz/DEV

Standard Modulation is also based above.

Speaker load is 8Ω and Output is 50~100 mV.



Attention: Don't set the variable resistor into its open position.

2) VCO and RX Adjustment Specification

| ITEM | CONDITION | UNIT | ADJ.SPOT | ADJUSTING METHOD |
|----------------------------------|--|------|----------------------------------|---|
| Adjustment Frequency | 224.90MHz TX | MAIN | TC101 | Adjust so that Tx Frequency becomes within 224.90MHz±100Hz |
| VCO Adjustment | 225.00MHz RX | VCO | L503 | Adjust so that PD voltage becomes 2.2V |
| VCO Confirmation | 224.99MHz TX | VCO | | Confirm if PD voltage becomes less than 6.2 V |
| Rx Signal Sensitivity Adjustment | 223.50MHz 216.05MHz 223.50MHz 250.05MHz | MAIN | L105, L104 L103, L107 L102 | Repeatedly adjust so that the Rx sensitivity becomes in maximum. Confirm: At -7dBu SINAD more than 12dB At -8dBu SINAD more than 12dB At -3dBu SINAD more than 12dB |
| Squelch Adjustment | 223.50MHz SSG OFF Indication 01 | MAIN | VR101 | Adjust so that the squelch stops at perfectly close location |
| S Meter Adjustment | 223.50MHz SSG20dBu 1KHz 3.5KHz/DEV | MAIN | VR102 | Adjust so that all the indicator appears |

3) Tx Adjustment Specification

| ITEM | CONDITION | UNIT | ADJ.SPOT | ADJUSTING METHOD |
|--------------------------------------|--|------|----------|--------------------------------|
| HI POWER Adjustment | 223.50MHz HI POWER | MAIN | VR103 | Adjust to 25.0±1.0W |
| MID POWER Adjustment | 223.50MHz MID POWER | MAIN | VR104 | Adjust to 10.0±1.0W |
| LOW POWER Confirmation | 223.50MHz LOW POWER | MAIN | | Confirm if it becomes 4.5±1.0W |
| Maximum Deviation Adjustment | 223.50MHz MOD 1KHz40mVemf WIDE | MAIN | VR107 | 4.5±0.1KHz/DEV |
| Maximum Deviation Adjustment | 223.50MHz MOD 1KHz40mVemf NARROW | MAIN | VR105 | 2.2±0.1KHz/DEV |
| Mic Gain Adjustment | 223.50MHz MOD 1KHz4mVemf WIDE | MAIN | VR106 | 3.0±0.1KHz/DEV |
| CTCSS Modulation Level Confirmation | 223.50MHz 88.5Hz | MAIN | | 800±300Hz/DEV 3KHz LPF ON |
| DCS Modulation Level Adjustment | 223.50MHz 255 Code | MAIN | VR108 | 800±100Hz/DEV 3KHz LPF ON |
| 1750Hz Modulation Level Confirmation | 223.50MHz 1750Hz | MAIN | | 3.0±0.5KHz/DEV |
| DTMF Modulation Level Confirmation | 223.50MHz DTMF ⊕ Press the V/M key during TX | MAIN | | 3.0±0.5KHz/DEV |

4) Rx Test Specification

| TEST ITEM | CONDITION | ADJ STANDARD | TEST STANDARD | NOTE |
|---------------------|---------------------------------|--|--|---|
| RX Sensitivity | 216.05MHz | Less than -7dBu | Less than -6dBu | 12dB SINAD |
| | 223.50MHz | Less than -8dBu | Less than -7dBu | |
| | 250.05MHz | Less than -3dBu | Less than -2dBu | |
| | 223.50MHz NARROW | Less than -8dBu | Less than -7dBu | |
| | 223.50MHz | Less than +6dBu | Less than +7dBu | AM 10dB S/N |
| RX Distortion | WIDE | Less than 4% | Less than 5% | SSG OUT PUT 30dBu |
| | NARROW | | | |
| RX S/N | WIDE | More than 40dB | More than 38dB | SSG OUT PUT 30dBu 0.3~3KHzBPF OFF |
| | NARROW | More than 34dB | More than 32dB | |
| Squelch Sensitivity | 223.50MHz | Squelch Open | Squelch Open | SSG Output -10dBu |
| | Indication 02 | Squelch Close | Squelch Close | SSG Output OFF |
| S Meter | 223.50MHz 1KHz 3.5KHz/DEV | All appears at 20dBu | All appears at 25dBu | Decrease SSG level and decrease S Meter level |
| AF Output | 223.50MHz | More than 2W | More than 2W | SSG Output 30dBu |
| CTCSS Sensitivity | WIDE | Open at 500Hz/DEV | Open at 500Hz/DEV | SSG Output 0dBu 88.5Hz |
| | NARROW | Open at 250Hz/DEV | Open at 250Hz/DEV | |
| DCS Sensitivity | WIDE | Opens when Test Equipment is in Tx | Opens when Test Equipment is in Tx | 255 code |
| | NARROW | Opens when Test Equipment is in Tx | Opens when Test Equipment is in Tx | 255 code |
| Drain Current | 223.50MHz | Less than 0.65A | Less than 0.65A | MAX VR |
| Power Off Current | 223.50MHz | Less than 10mA | Less than 10mA | Power Off |
| Howling | 223.50MHz | Don't occur | Don't occur | SSG Output 60dBu MOD OFF MAX VR |

5) Tx Test Specification

| TEST ITEM | CONDITION | ADJ STANDARD | TEST STANDARD | NOTE |
|-------------------------------|---------------------|----------------------------------|----------------------------------|--|
| TX Output HI POWER | 222.00MHz | 25±1W | 25±3W | |
| | 223.50MHz | 25±1W | 25±3W | |
| | 224.99MHz | 25±1W | 25±3W | |
| TX Output MID POWER | 223.50MHz | 10±1W | 10±2W | |
| TX Output LOW POWER | 223.50MHz | 4.5±1W | 3~6W | |
| Drain Current | 223.50MHz | Less than 7A | Less than 8A | |
| Frequency Deviation | 223.50MHz | Within±0.5KHz | Within±0.7KHz | |
| Spurious | 222.00MHz | More than 65dB | More than 60dB | M and L standard power is also the same as of H power level |
| | 223.50MHz | More than 65dB | More than 60dB | |
| | 224.99MHz | More than 65dB | More than 60dB | |
| Modulation Level | WIDE 223.50MHz | 3.0±0.1KHz/DEV 4.5±0.1KHz/DEV | 3.0±0.2KHz/DEV 4.5±0.2KHz/DEV | MIC IN 4mVemf MIC IN 40mVemf |
| | NARROW 223.50MHz | 2.2±0.1KHz/DEV | 2.2±0.2KHz/DEV | MIC IN 40mVemf |
| CTCSS Modulation Level | WIDE 223.50MHz | 800±200Hz/DEV | 800±200Hz/DEV | 88.5Hz 3KHz LPF ON |
| DCS Modulation Level | WIDE 223.50MHz | 800±100Hz/DEV | 800±200Hz/DEV | Code 255 3KHz LPF ON |
| | NARROW 146.00MHz | 500±100Hz/DEV | 450±100Hz/DEV | Code 255 3KHz LPF ON |
| 1750Hz Modulation Level | WIDE 146.00MHz | 3.0±0.5KHz/DEV | 3.0±0.5KHz/DEV | |
| DTMF Modulation Level | WIDE 146.00MHz | 3.0±0.5KHz/DEV | 3.0±0.5KHz/DEV | Press the V/M key during TX |
| Modulation Distortion | 146.00MHz | Less than 3% | Less than 4% | |
| TX S/N | WIDE | More than 40dB | More than 38dB | 0.3~3KHz BPF ON |
| | NARROW | More than 34dB | More than 32dB | |

DR-435 ADJUSTMENT

1) Adjustment Spot

Power Supply Voltage 13.8 V

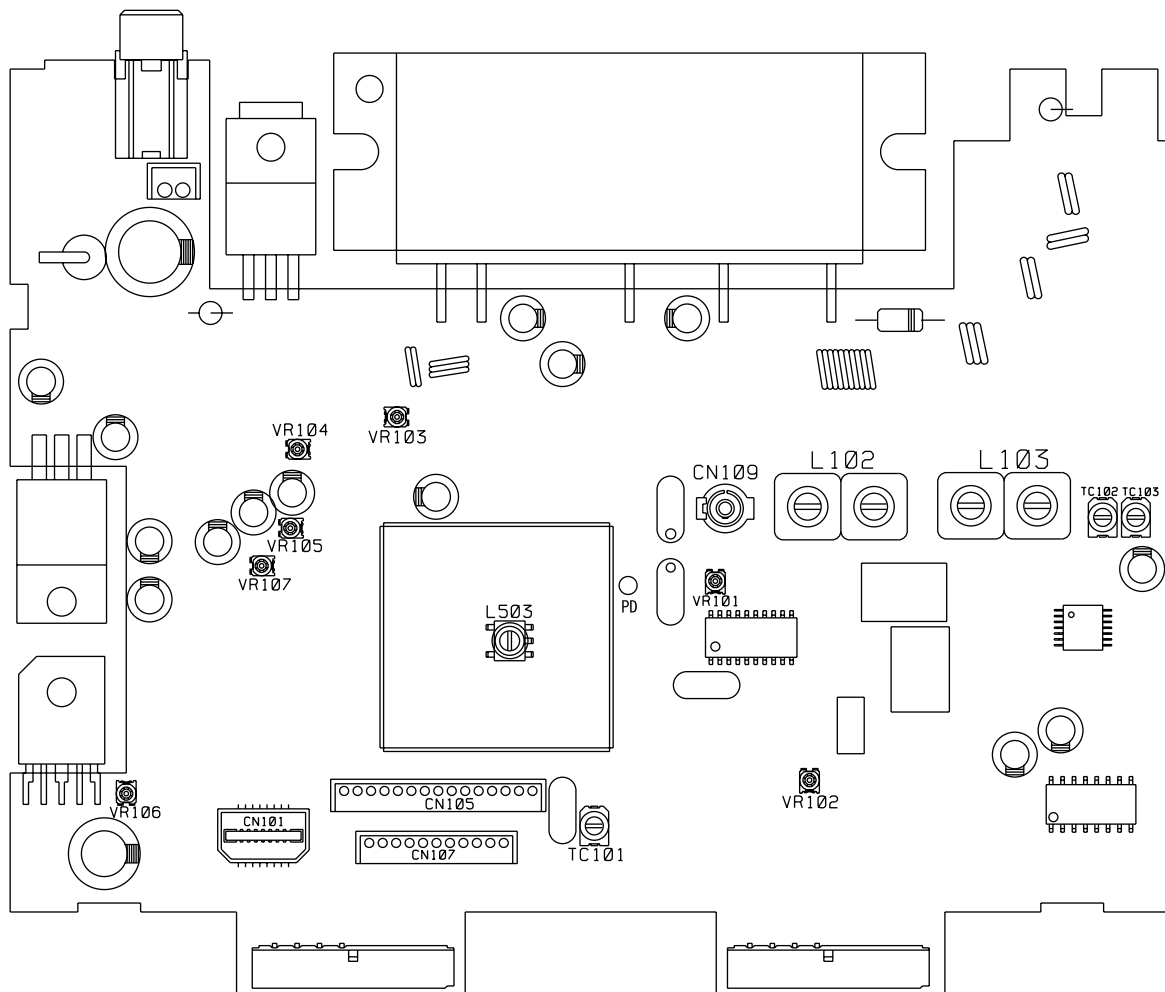
Output of SSG is all EMF indication

If without instruction, WIDE mode

If without instruction, SSG output is MOD 1KHz WIDE DEV 3.5KHz/DEV, NARROW DEV 1.75KHz/DEV

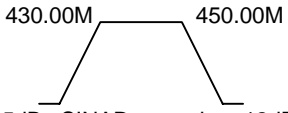
Standard Modulation is also based above.

Speaker load is 8Ω and Output is 50~100 mV.



Attention: Don't set the variable resistor into its open position.

2) VCO and RX Adjustment Specification

| ITEM | CONDITION | UNIT | ADJ.SPOT | ADJUSTING METHOD |
|----------------------------------|--|------|------------------------------|---|
| Adjustment Frequency | 439.00MHz TX | MAIN | TC101 | Adjust so that Tx Frequency becomes within 439.00MHz±100Hz |
| VCO Adjustment | 425.00MHz RX | VCO | L503 | Adjust so that PD voltage becomes 1.7V |
| VCO Confirmation | 511.95MHz RX | VCO | | Confirm if PD voltage becomes less than 9.0 V |
| Rx Signal Sensitivity Adjustment | 440.05MHz 430.05MHz 440.05MHz 450.05MHz | MAIN | TC103 TC102 L103, L102 | It is a tracking generator from an antenna connector. -30dBm is inputted. And when CN109 is seen with a spectrum analyzer, by the maximum gain, it becomes as it is shown in the following figure, and appearance adjustment is carried out.  At -7.5dBu SINAD more than 12dB At -7.5dBu SINAD more than 12dB At -7.5dBu SINAD more than 12dB |
| Squelch Adjustment | 440.05MHz SSG OFF Indication 01 | MAIN | VR101 | Adjust so that the squelch stops at perfectly close location |
| S Meter Adjustment | 440.05MHz SSG20dBu 1KHz 3.5KHz/DEV | MAIN | VR102 | Adjust so that all the indicator appears |

3) Tx Adjustment Specification

| ITEM | CONDITION | UNIT | ADJ.SPOT | ADJUSTING METHOD |
|--------------------------------------|--|------|----------|--------------------------------|
| HI POWER Adjustment | 440.00MHz HI POWER | MAIN | VR103 | Adjust to 35.0±1.0W |
| MID POWER Adjustment | 440.00MHz MID POWER | MAIN | VR104 | Adjust to 10.0±1.0W |
| LOW POWER Confirmation | 440.00MHz LOW POWER | MAIN | | Confirm if it becomes 5.0±1.0W |
| Maximum Deviation Adjustment | 440.00MHz MOD 1KHz40mVemf WIDE | MAIN | VR107 | 4.5±0.1KHz/DEV |
| Maximum Deviation Adjustment | 440.00MHz MOD 1KHz40mVemf NARROW | MAIN | VR105 | 2.2±0.1KHz/DEV |
| Mic Gain Adjustment | 440.00MHz MOD 1KHz4mVemf WIDE | MAIN | VR106 | 3.0±0.1KHz/DEV |
| CTCSS Modulation Level Confirmation | 440.00MHz 88.5Hz | MAIN | | 800±200Hz/DEV 3KHz LPF ON |
| DCS Modulation Level Confirmation | 440.00MHz 255 Code | MAIN | | 800±200Hz/DEV 3KHz LPF ON |
| 1750Hz Modulation Level Confirmation | 440.00MHz 1750Hz | MAIN | | 3.0±0.5KHz/DEV |
| DTMF Modulation Level Confirmation | 440.00MHz DTMF ⊕ Press the V/M key during TX | MAIN | | 3.0±0.5KHz/DEV |

4) Rx Test Specification

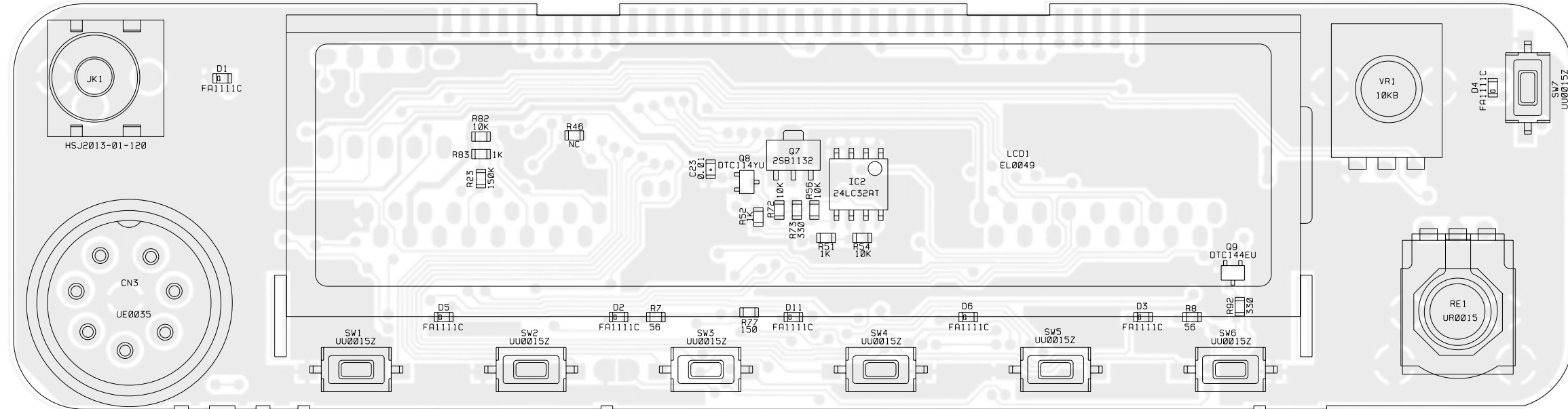
| TEST ITEM | CONDITION | ADJ STANDARD | TEST STANDARD | NOTE |
|---------------------|---|---------------------------------------|---------------------------------------|---|
| RX Sensitivity | 350.05MHz | Less than -1dBu | Less than 0dBu | 12dBSINAD |
| | 430.05MHz | Less than -7.5dBu | Less than -6.5dBu | |
| | 440.05MHz | Less than -7.5dBu | Less than -6.5dBu | |
| | 450.05MHz | Less than -7.5dBu | Less than -6.5dBu | |
| | 511.95MHz | Less than +1dBu | Less than +2dBu | |
| | 440.05MHz NARROW | Less than -7.5dBu | Less than -6.5dBu | |
| RX Distortion | WIDE | Less than 4% | Less than 5% | SSG Output 40dBu |
| | NARROW | | | |
| RX S/N | WIDE | More than 40dB | More than 38dB | SSG Output 40dBu 0.3~3KHzBPF OFF |
| | NARROW | More than 34dB | More than 32dB | |
| Squelch Sensitivity | 440.05MHz | Squelch Open | Squelch Open | SSG Output -10dBu |
| | Indication 02 | Squelch Close | Squelch Close | SSG Output OFF |
| S Meter | 440.05MHz 1KHz 3.5KHz/DEV | All appears at 20dBu | All appears at 25dBu | Decrease SSG level and decrease S Meter level |
| AF Output | 440.05MHz | More than 2W | More than 2W | SSG Output 40dBu |
| CTCSS Sensitivity | WIDE | Open at 500Hz/DEV | Open at 500Hz/DEV | SSG Output 0dBu 88.5Hz |
| | NARROW | Open at 250Hz/DEV | Open at 250Hz/DEV | |
| DCS Sensitivity | WIDE | Opens when Test Equipment is in Tx | Opens when Test Equipment is in Tx | 255 code |
| | NARROW | Opens when Test Equipment is in Tx | Opens when Test Equipment is in Tx | 255 code |
| Drain Current | 440.05MHz | Less than 0.7A | Less than 0.7A | MAX VR |
| Power Off Current | 440.05MHz | Less than 10mA | Less than 10mA | Power Off |
| Howling | 440.05MHz TP,TPG WIDE MODE OTHER NARROW MODE | Don't occur | Don't occur | SSG Output 60dBu MOD OFF MAX VR |

5) Tx Test Specification

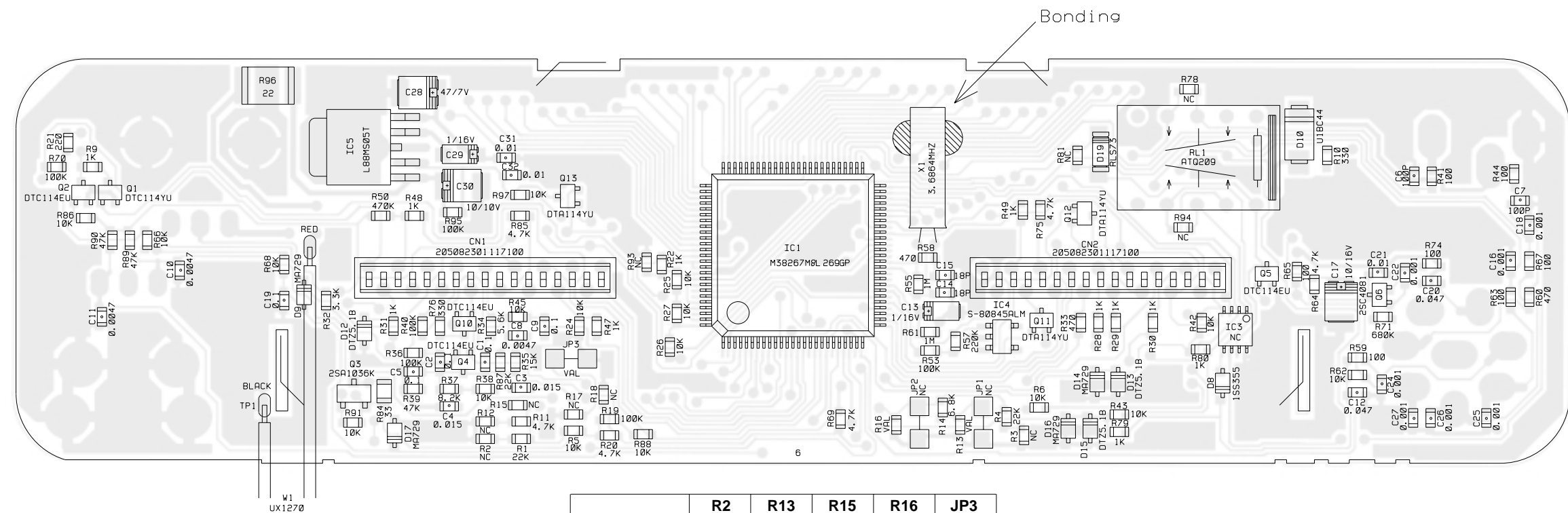
| TEST ITEM | CONDITION | ADJ STANDARD | TEST STANDARD | NOTE |
|-------------------------------|-------------------------------------|--|--|--|
| TX Output HI POWER | 430.00MHz | 35±1W | 35±3W | ← T,TG ONLY |
| | 440.00MHz | | 35±3W | |
| | 450.00MHz | | 35±3W | |
| TX Output MID POWER | 440.00MHz | 10±1W | 10±2W | |
| TX Output LOW POWER | 440.00MHz | 5±1W | 5±2W | |
| Drain Current | 440.00MHz | Less than 9A | Less than 10A | |
| Frequency Deviation | 440.00MHz | Within ±0.5KHz | Within ±1.0KHz | |
| Spurious | 430.00MHz 440.00MHz 450.00MHz | More than 62dB More than 62dB More than 62dB | More than 60dB More than 60dB More than 60dB 450MHz T,TG ONLY | M and L standard power is also the same as of H power level |
| Modulation Level | WIDE 440.00MHz | 3.0±0.1KHz/DEV 4.5±0.1KHz/DEV | 3.0±0.2KHz/DEV 4.5±0.2KHz/DEV | MIC IN 4mVemf MIC IN 40mVemf |
| | NARROW 440.00MHz | 2.2±0.1KHz/DEV | 2.2±0.2KHz/DEV | MIC IN 40mVemf |
| CTCSS Modulation Level | WIDE 440.00MHz | 800±200Hz/DEV | 800±200Hz/DEV | 88.5Hz 3KHz LPF ON |
| DCS Modulation Level | WIDE 440.00MHz | 800±200Hz/DEV | 800±200Hz/DEV | Code 255 3KHz LPF ON |
| | NARROW 440.00MHz | 450±100Hz/DEV | 450±100Hz/DEV | Code 255 3KHz LPF ON |
| 1750Hz Modulation Level | WIDE 440.00MHz | 3.0±0.5 KHz/DEV | 3.0±0.5 KHz/DEV | |
| DTMF Modulation Level | WIDE 440.00MHz | 3.0±0.5 KHz/DEV | 3.0±0.5 KHz/DEV | Press the V/M key during TX |
| Modulation Distortion | 440.00MHz | Less than 3% | Less than 4% | |
| TX S/N | WIDE | More than 40dB | More than 38dB | 0.3~3KHz BPF ON |
| | NARROW | More than 34dB | More than 32dB | |

PC BOARD VIEW

1) CPU Unit Side A DR-135 (UP 0400B) DR-235 (UP 0414) DR-435 (UP 0415)

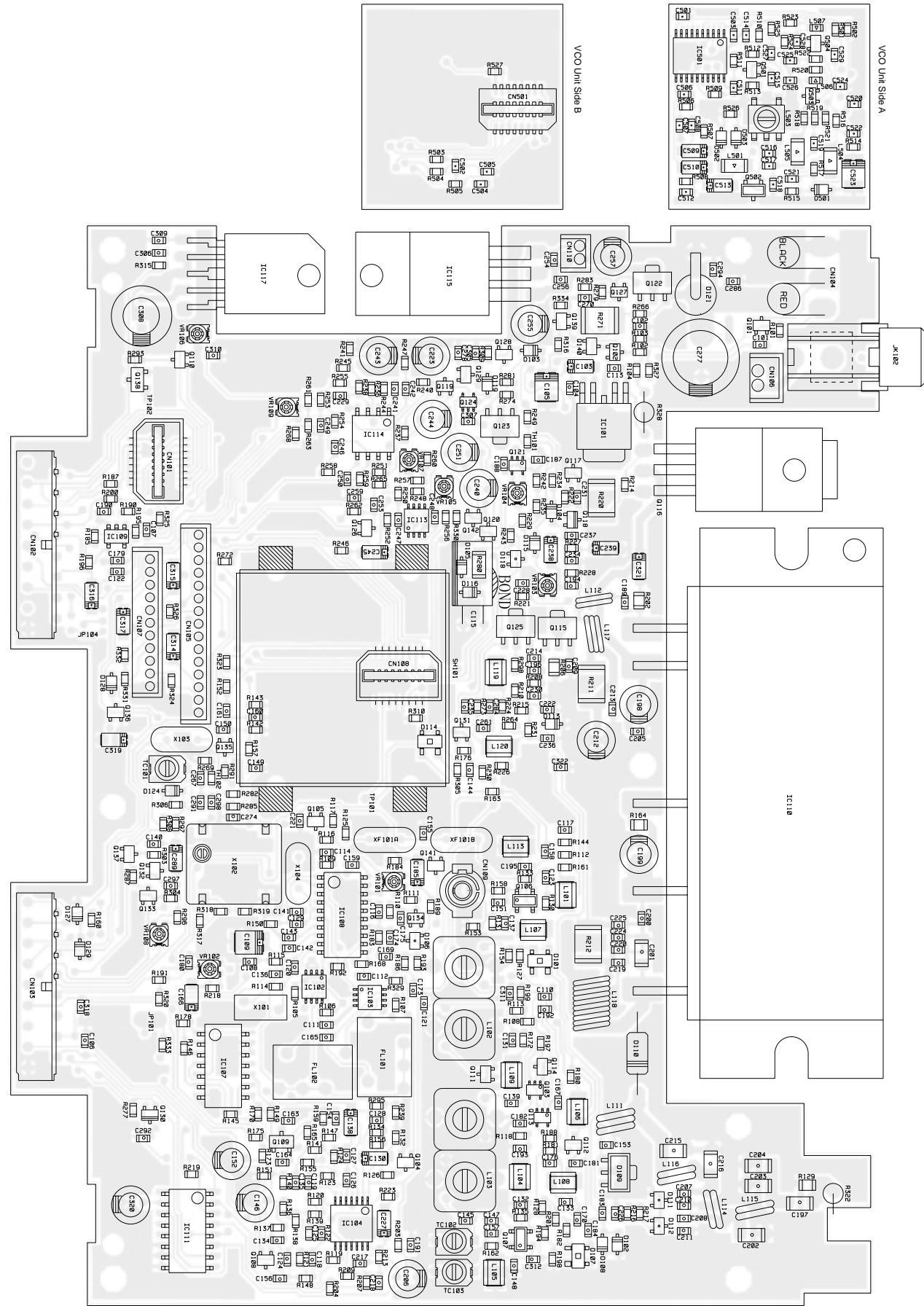


2) CPU Unit Side B DR-135 (UP 0400B) DR-235 (UP 0414) DR-435 (UP 0415)

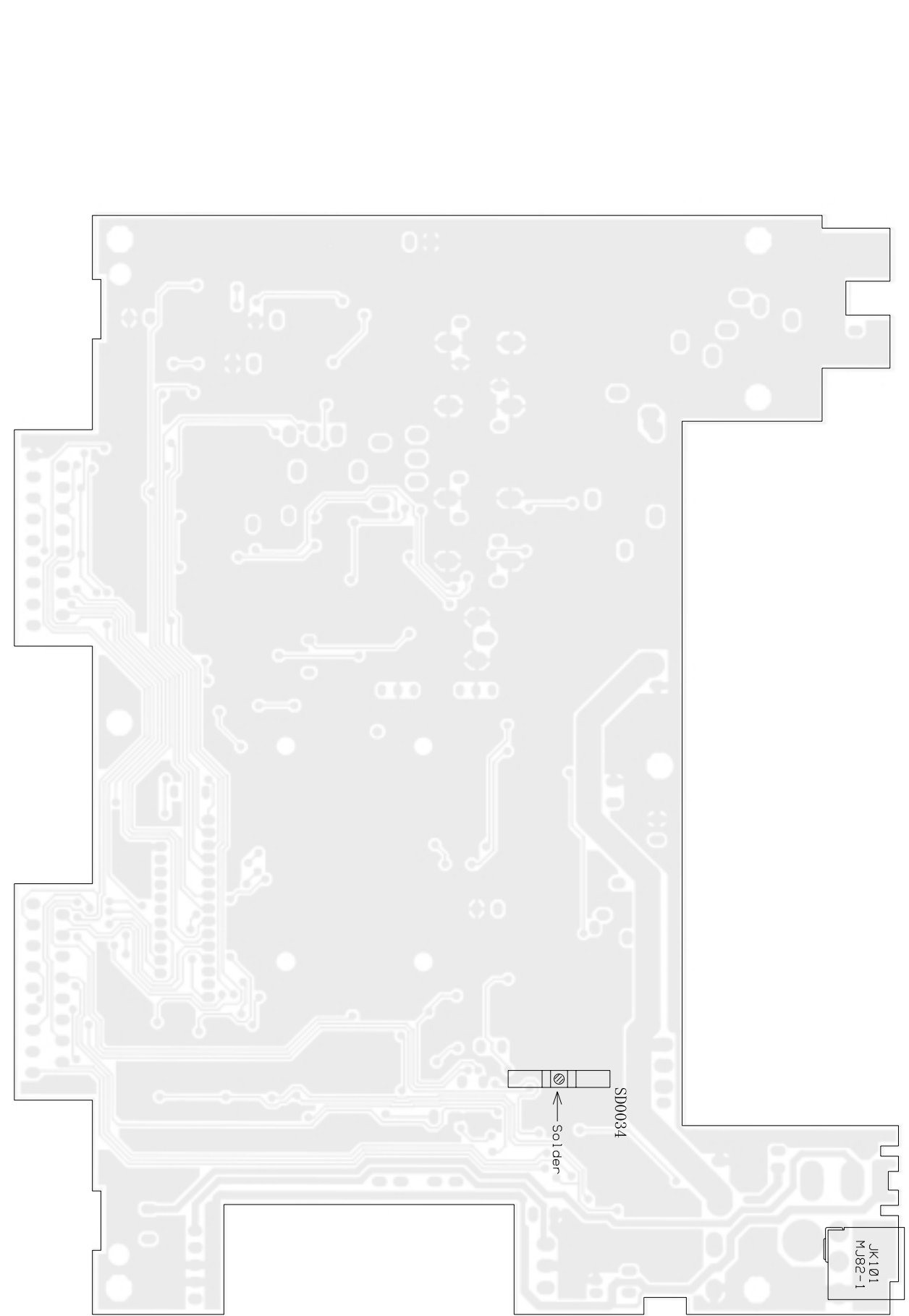


| | R2 | R13 | R15 | R16 | JP3 |
|--------------|----|-----|-----|-----|--------|
| DR135 T,TG | NC | NC | NC | 0 | JUMPER |
| DR135 E,EG | NC | 0 | NC | NC | JUMPER |
| DR135 TA,TAG | NC | NC | NC | 0 | NC |
| DR235 T,TG | 0 | NC | NC | 0 | JUMPER |
| DR435 T,TG | NC | NC | 0 | 0 | JUMPER |
| DR435 E,EG | NC | 0 | 0 | NC | JUMPER |

7) MAIN Unit Side A DR-435 (UP 0415)

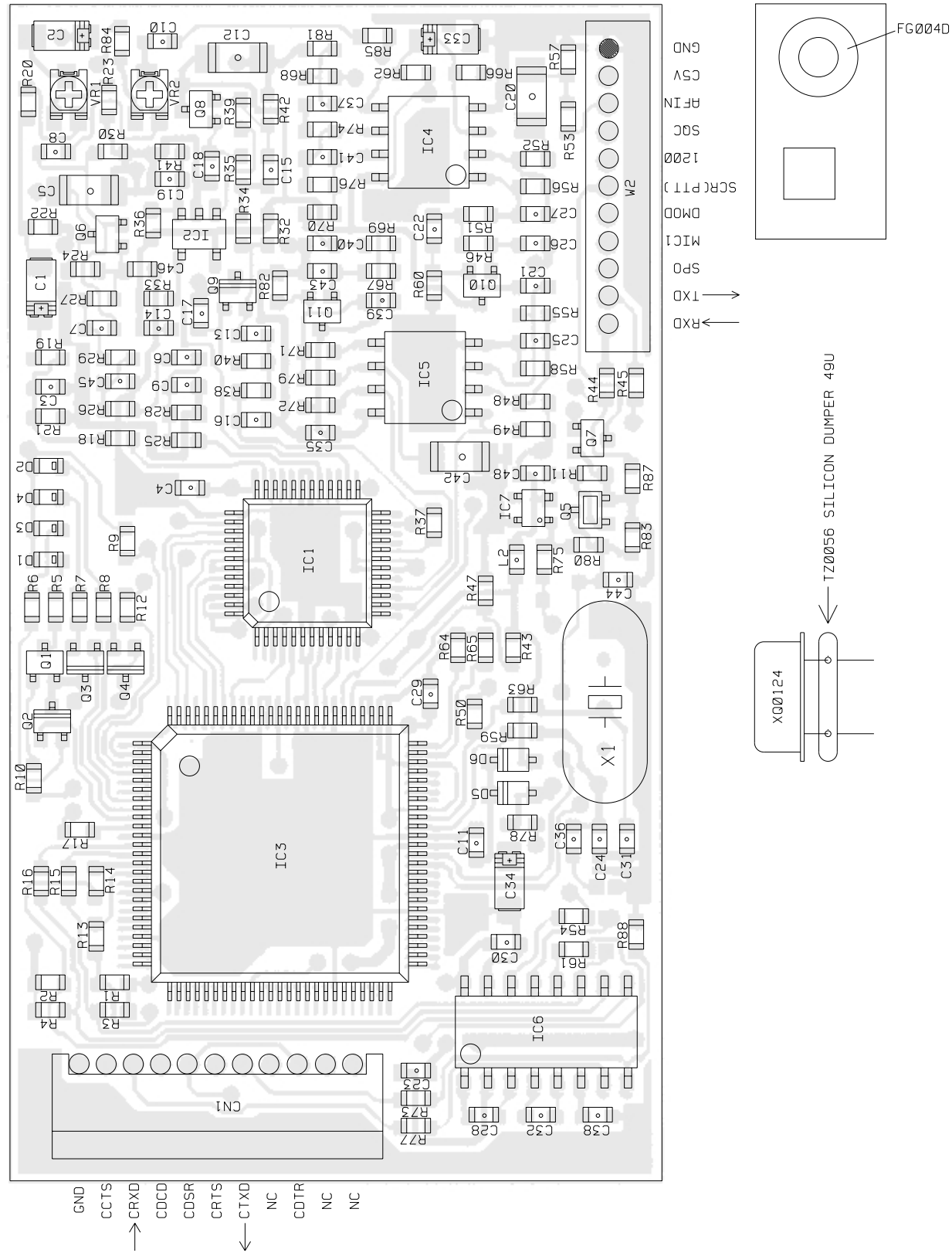


8) MAIN Unit Side B DR-435 (UP 0415)

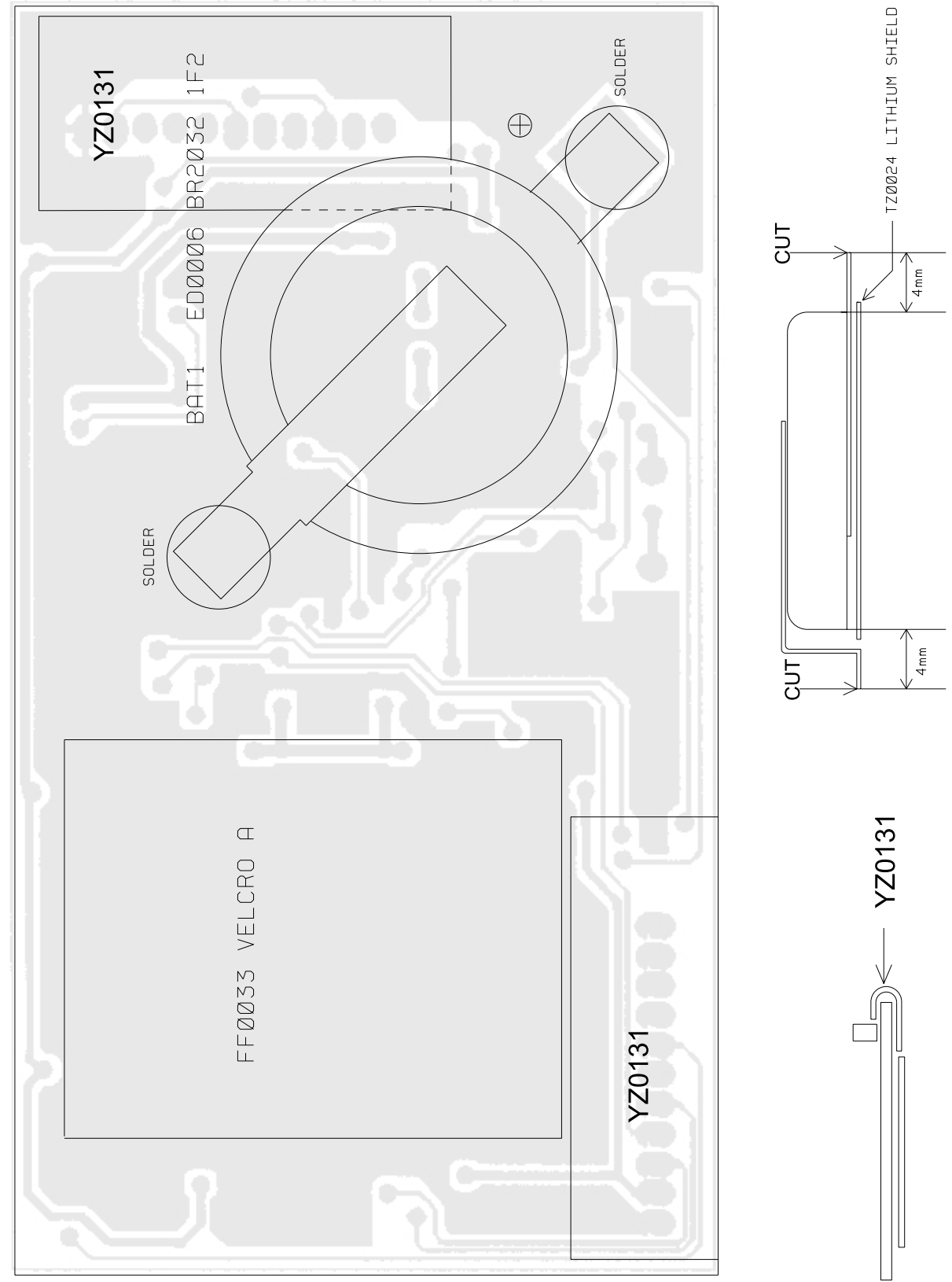


9) TNC Unit Side A (UP 0402) (DR-135TP only)

OPTION unit (EJ41U)

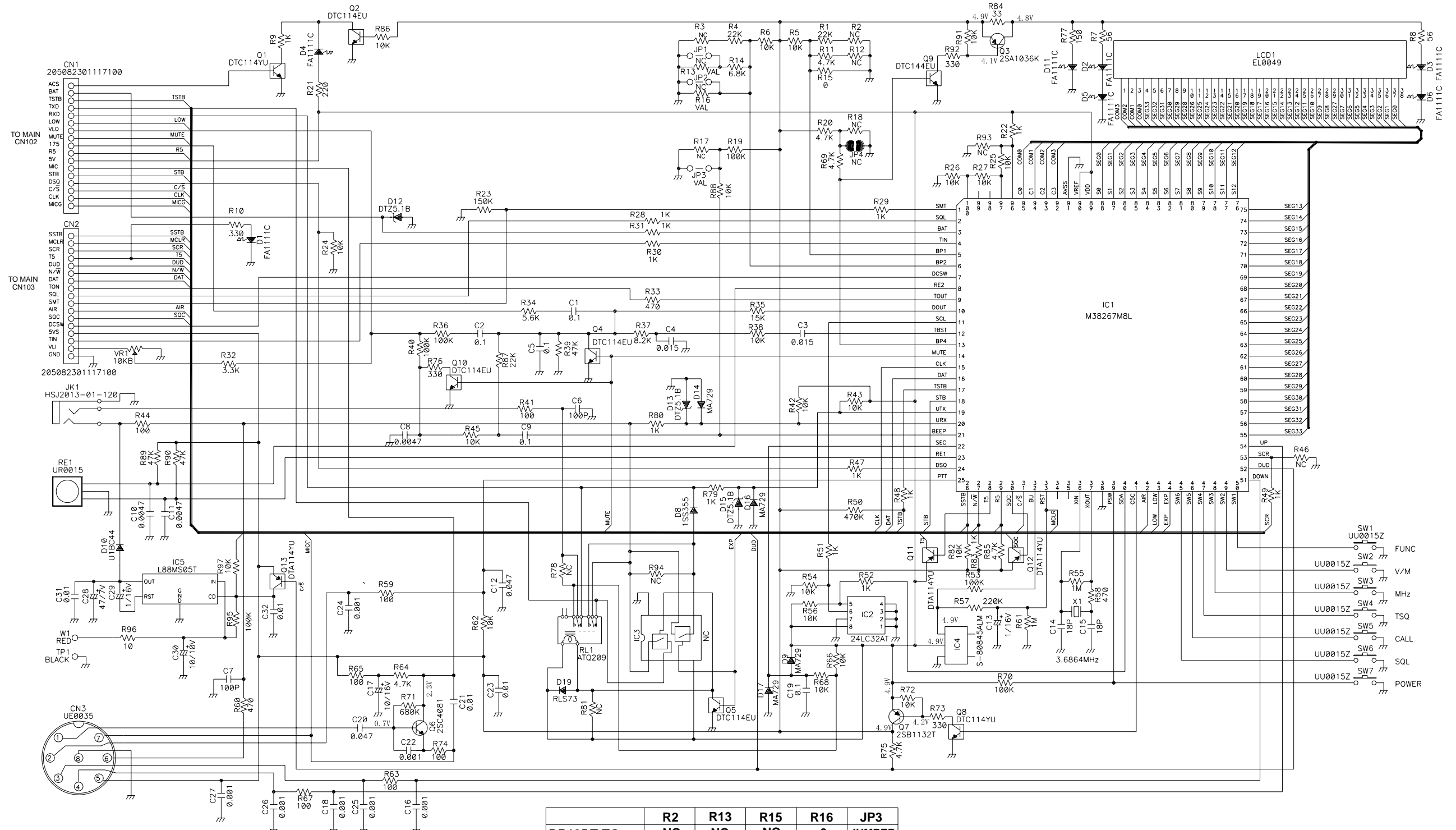


10) TNC Unit Side B (UP 0402) (DR-135TP only)



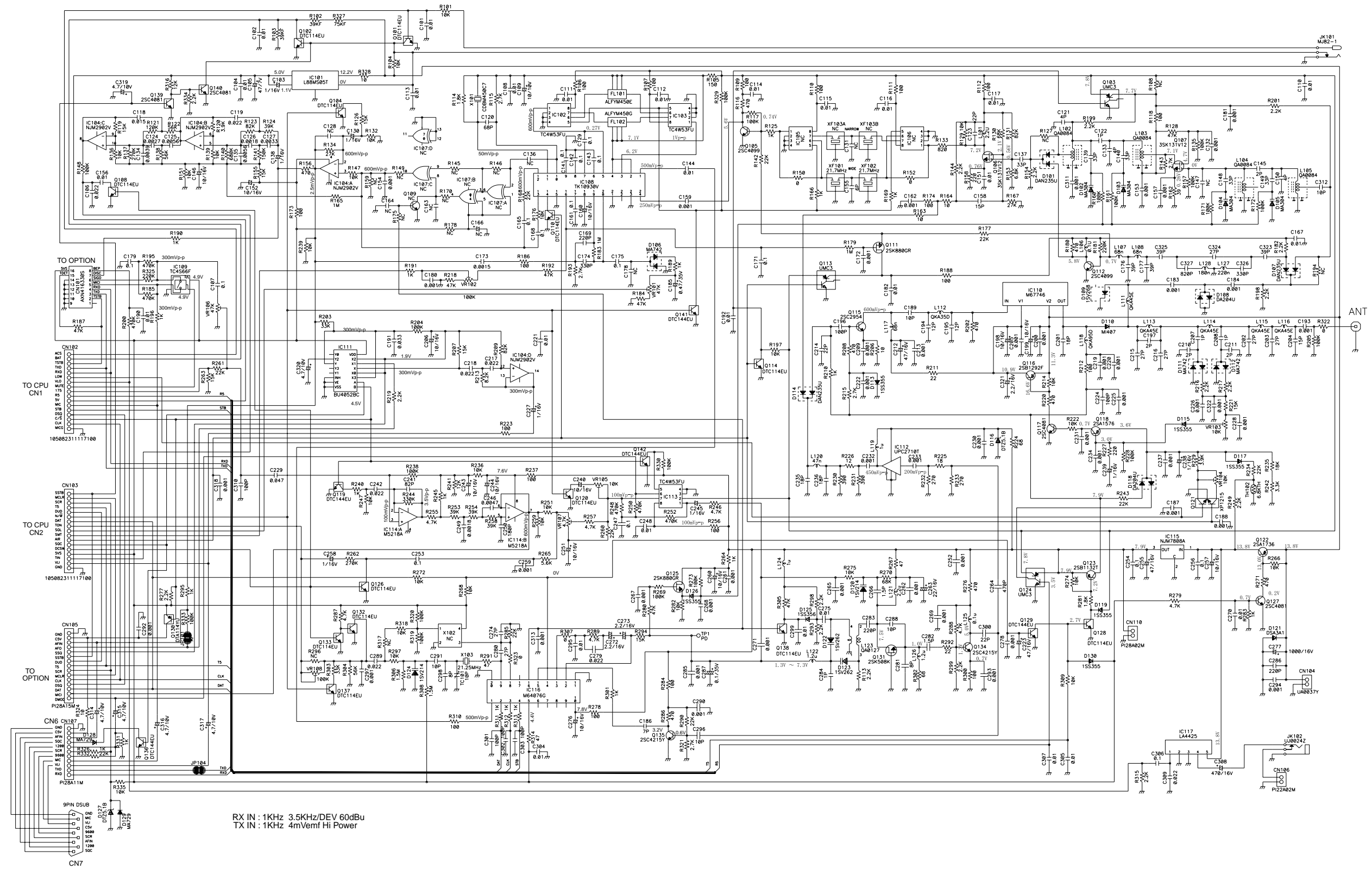
SCHMATIC DIAGRAM

1) CPU Unit DR-135 / DR-235 / DR-435

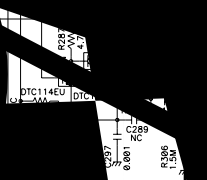
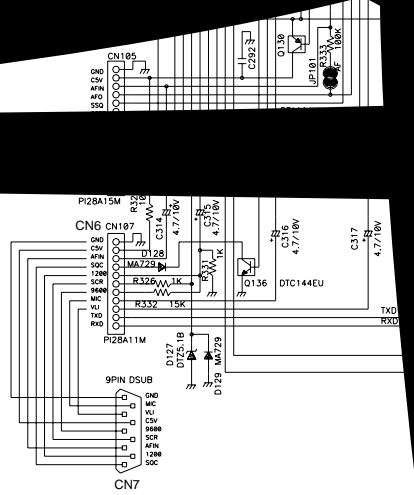
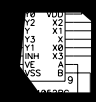
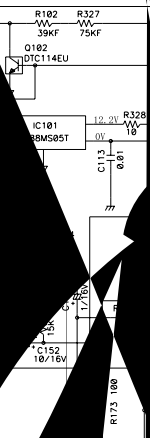


| | R2 | R13 | R15 | R16 | JP3 |
|---------------|----|-----|-----|-----|--------|
| DR135 T, TG | NC | NC | NC | 0 | JUMPER |
| DR135 E, EG | NC | 0 | NC | NC | JUMPER |
| DR135 TA, TAG | NC | NC | NC | 0 | NC |
| DR235 T, TG | 0 | NC | NC | 0 | JUMPER |
| DR435 T, TG | NC | NC | 0 | 0 | JUMPER |
| DR435 E, EG | NC | 0 | 0 | NC | JUMPER |

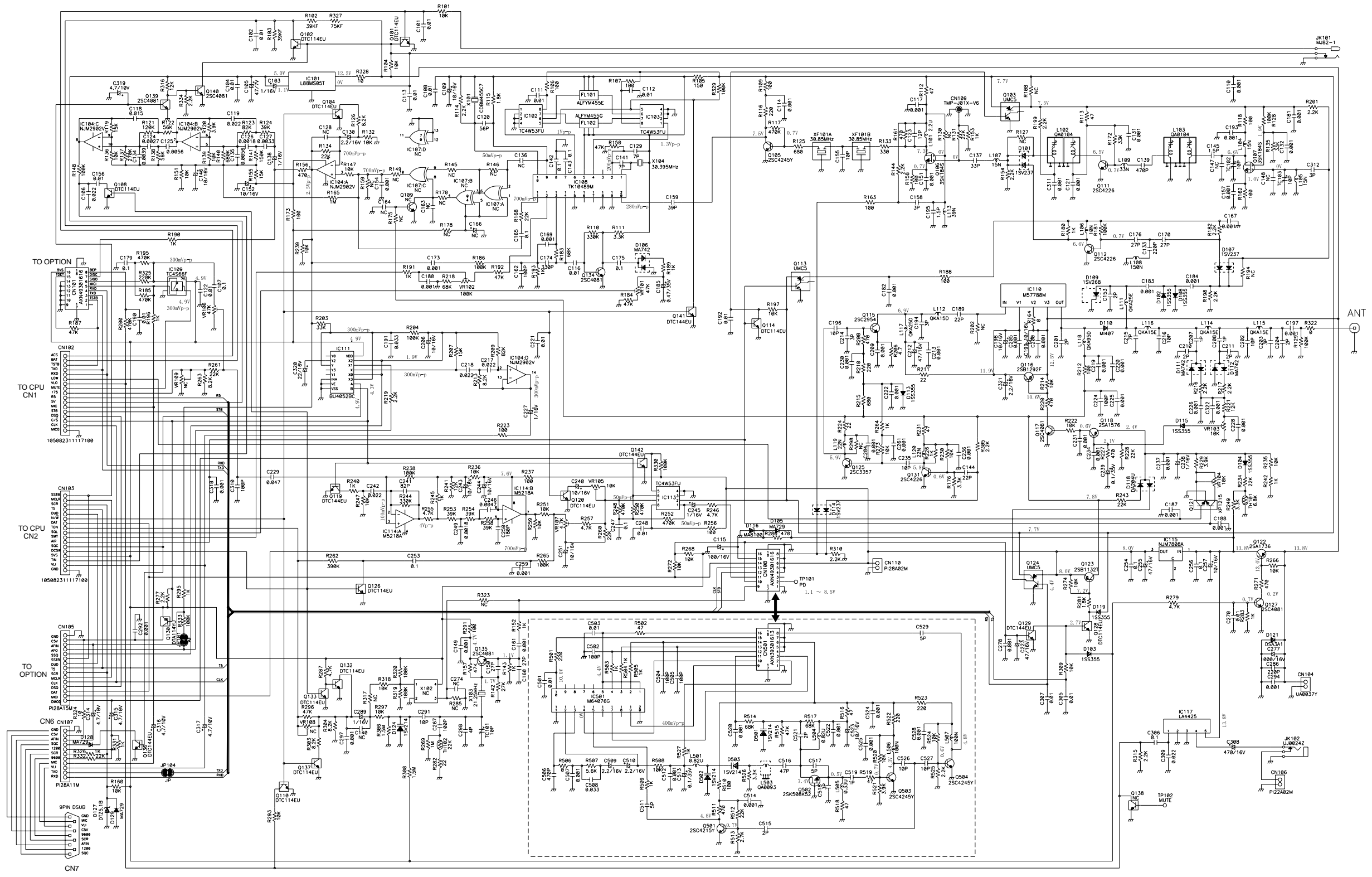
2) MAIN Unit DR-135



EXT. POWER CONTROL

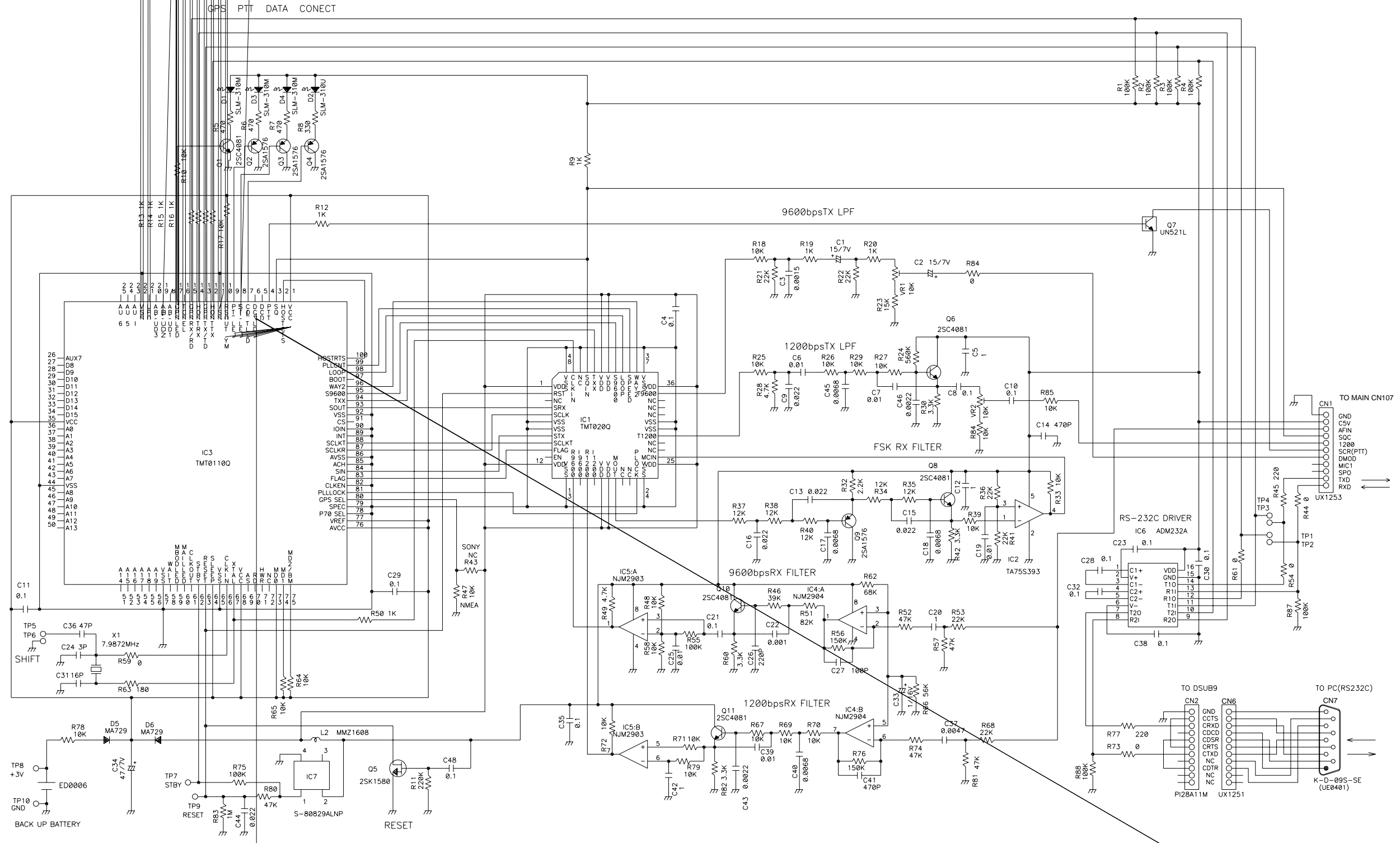


4) MAIN Unit DR-435



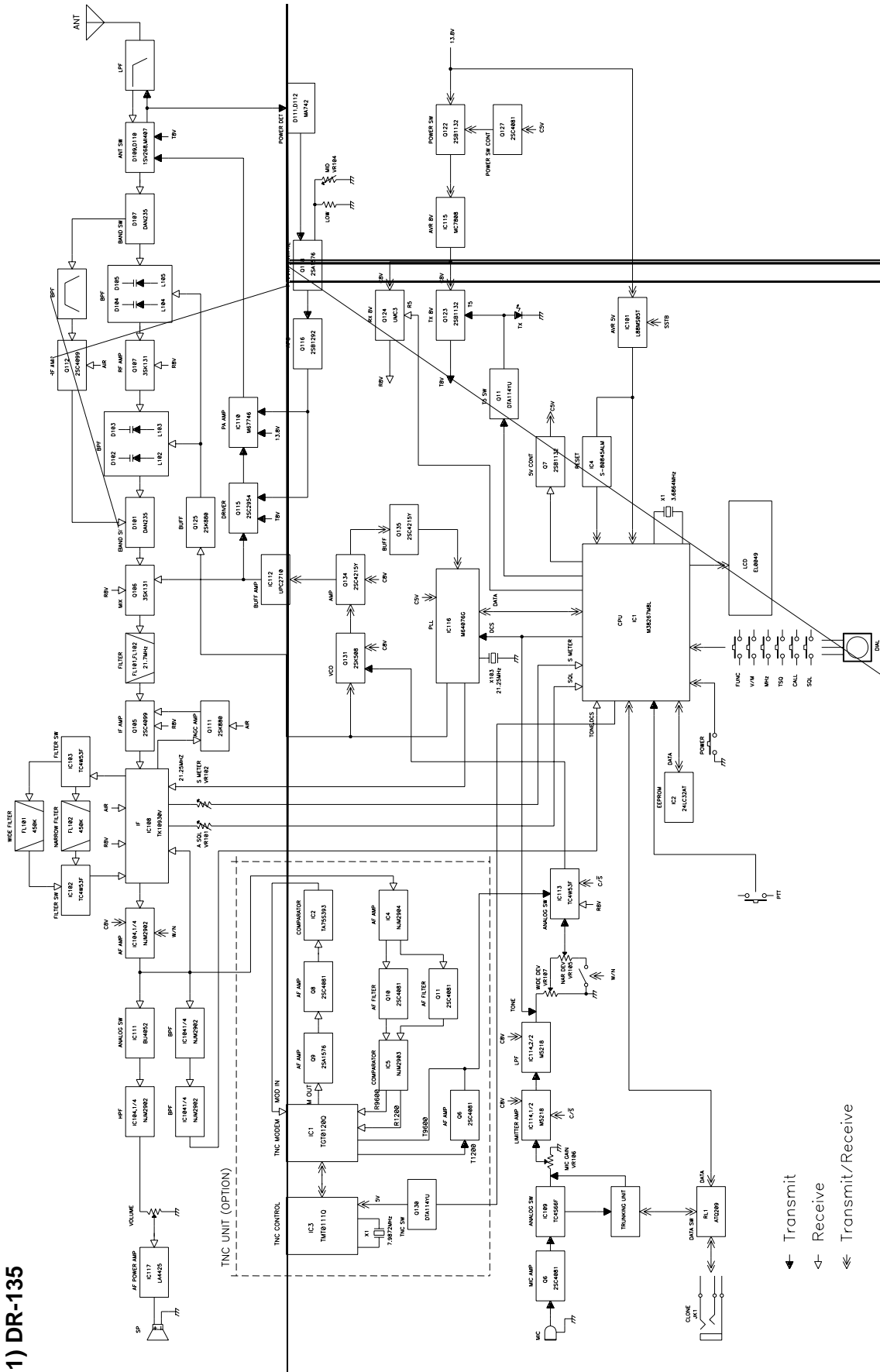
RX IN : 1KHz 3.5KHz/DEV 60dBu
TX IN : 1KHz 4mVeff Hi Power

5) TNC Unit (DR-135TP only) or option



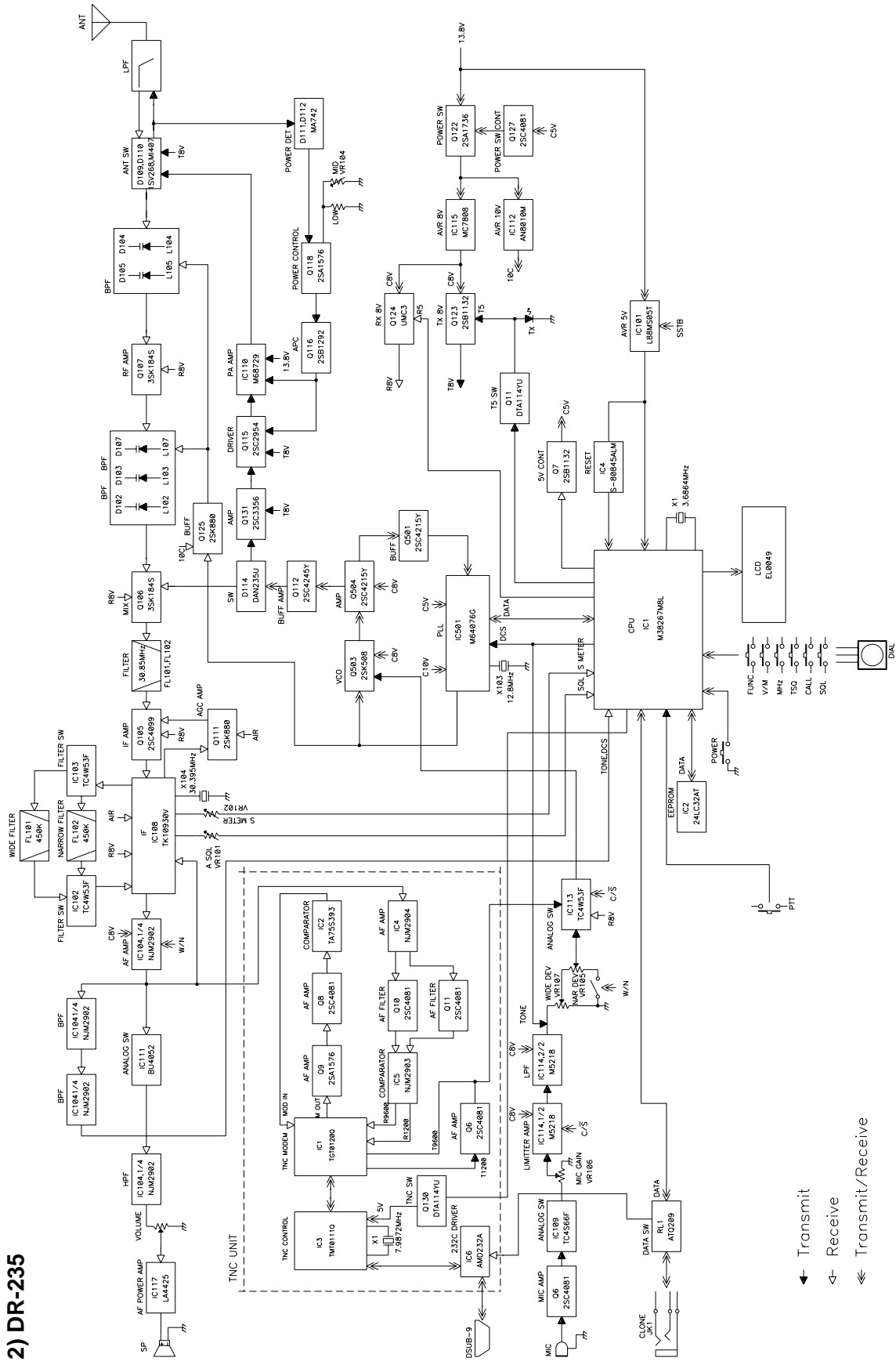
BLOCK DIAGRAM

1) DR-135



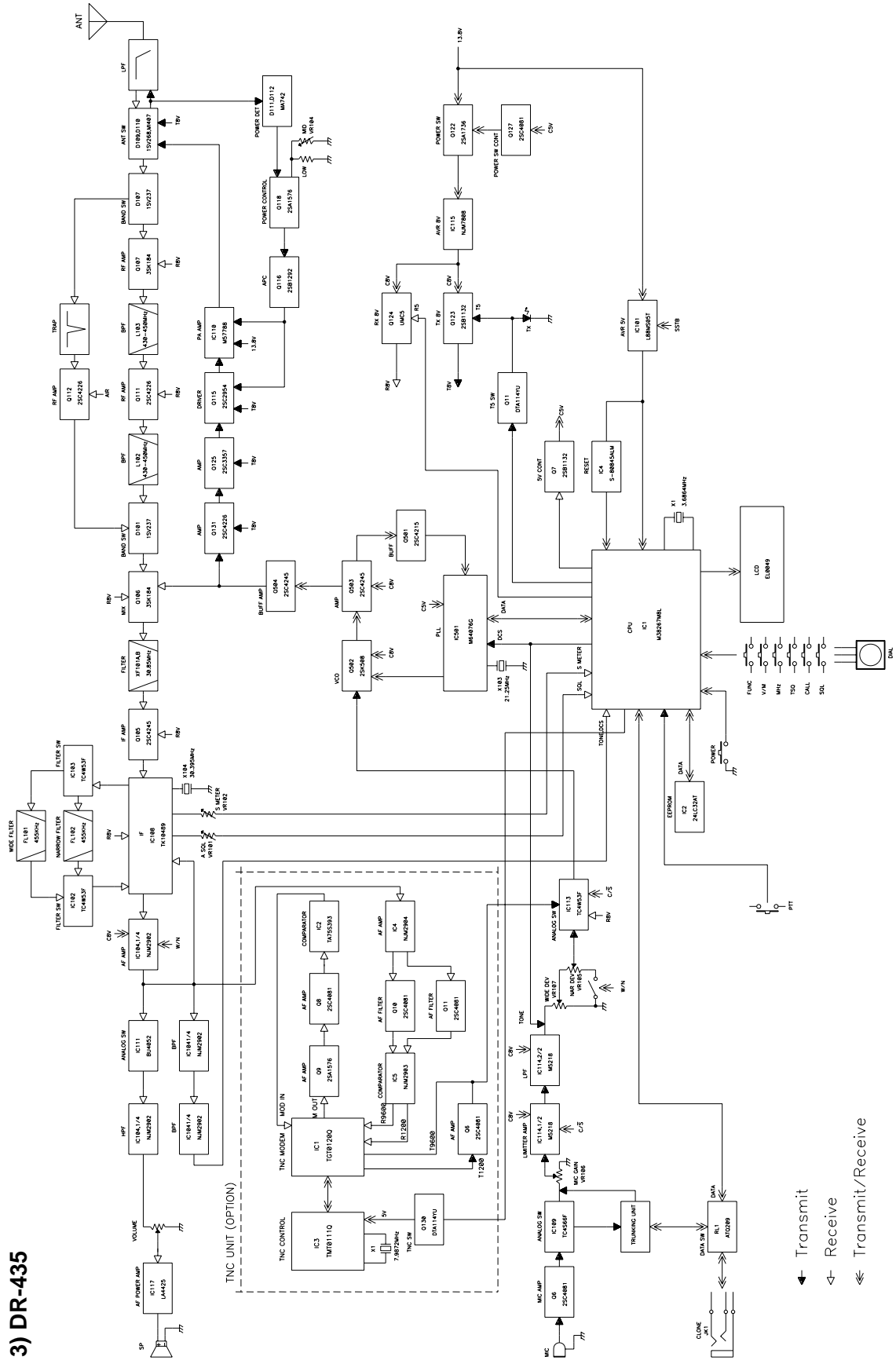
- ◀ Transmit
- ◁ Receive
- ◀◀ Transmit/Receive

2) DR-235



- ◀ Transmit
- ◁ Receive
- ◀◀ Transmit/Receive

3) DR-435



← Transmit
 ← Receive
 ← Transmit/Receive

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