FT-530

Technical Supplement

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Este manual foi doado por Bernardo Charnis da empresa wirelesstech.com.br para ser scaneado e disponibilizado GRATUITAMENTE a toda a comunidade

Scaneado em cores, 300 DPI (é o maximo que minha maquina faz, nao me batam) em uma copiadora Lexmark X864de, imagens tratadas com o programa IRFANVIEW e pdf gerado com o Adobe Acrobat XI Pro, usando Clearscan

Eu scaneio, trato e disponibilizo manuais gratuitamente meramente pelo prazer de faze-lo. Caso voce queira ajudar com manuais, insumos e ate mesmo uma merrequinha pra ajudar na conta de luz e na manutenção da maquina, entre em contato pelo email alexandre.tabajara@gmail.com (tambem é pix)

Obrigado a todos que ajudaram ate aqui

Os sites onde esses scans podem ser encontrados:
- www.bama.org
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ATENÇÃO: AS PAGINAS EM BRANCO ESTAO EXATAMENTE COMO NO MANUAL. O OBJETIVO DE MANTE-LAS É VOCE PODER IMPRIMIR UM MANUAL IDENTICO AO ORIGINAL. NAO ESTÁ FALTANDO PAGINA NENHUMA NO MANUAL

Distribuição **GRATUITA**. Respeite o meu trabalho.
São Paulo, 31 de Julho de 2021

Contents

About This Manual

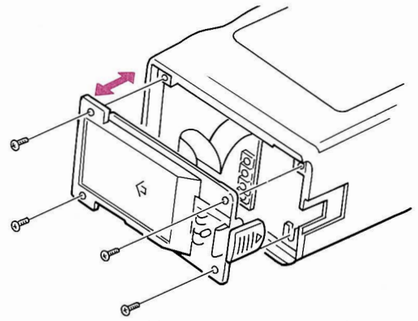
The information in this manual is intended to supplement the *FT-530 Operating Manual*, for servicing the transceiver. Specifications and details of operation and options are provided in the operating manual, and are not reprinted herein. Therefore, this manual is not intended to serve as an independent reference, but to be used in conjunction with the information provided in the operating manual. The FT-530 is intended to be serviced only by qualified technicians.

Two pcb layout diagrams are provided for each double-sided circuit board in the transceiver. Each side of the board is referred to by the type of the majority of components installed on that side ("leaded" or "chip-only"). In most cases one side has only chip components, and the other has either a mixture of both chip and leaded components (trimmers, coils, electrolytic capacitors, ICs, etc.), or leaded components only.

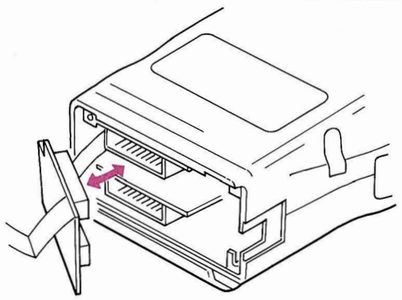
While we believe the technical information in this manual is correct, Yaesu cannot assume any liability for damage that may occur as a result of typographical or other errors that may be present. Your cooperation in pointing out any inconsistencies in the technical information would be appreciated.

The technical information in this manual supercedes all previously published information on this product. Where information is duplicated in this manual and the operating manual, this manual should generally be considered more current.

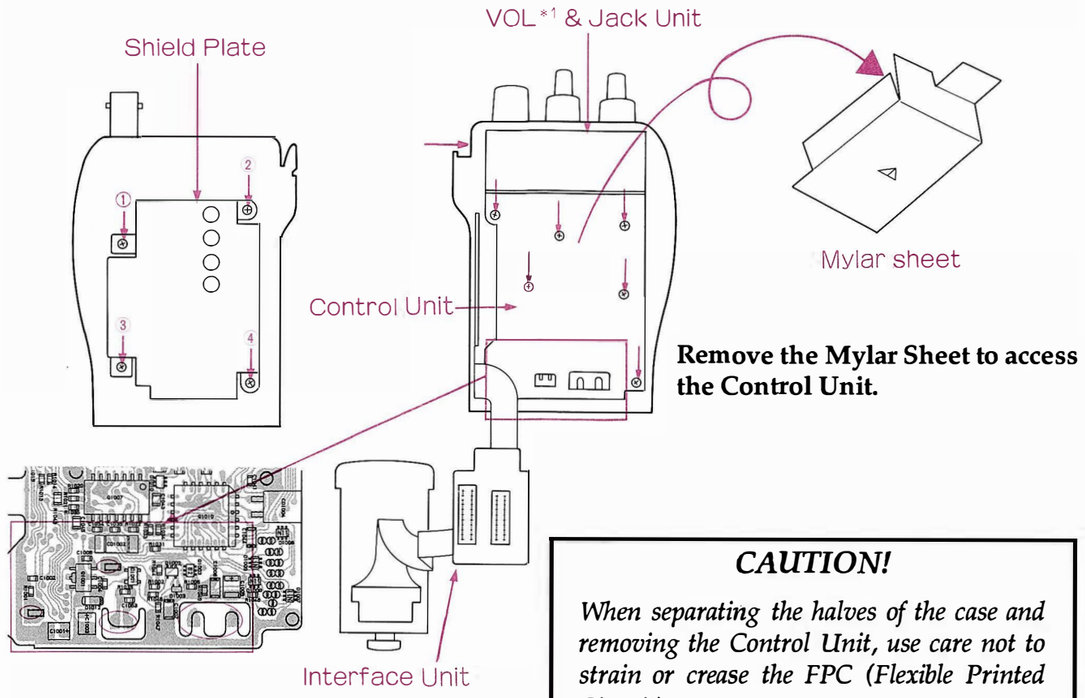
Yaesu Musen reserves the right to make changes in the circuitry of this transceiver, in the interest of technological improvement, without obligation to owners.



With the radio off, remove the soft case, if used, and the battery pack.
Remove the four screws on the bottom, and gently pull the bottom cover assembly out.



Just inside the bottom cover, disconnect the Interface Unit from the Control Unit, by prying up on alternate sides of the board with a small screwdriver.



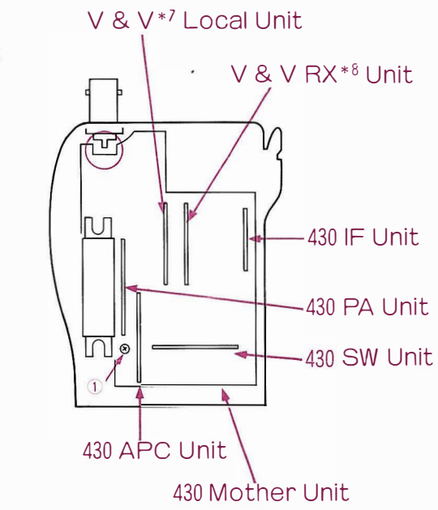
Remove the Mylar Sheet to access the Control Unit.

CAUTION!

When separating the halves of the case and removing the Control Unit, use care not to strain or crease the FPC (Flexible Printed Circuit).

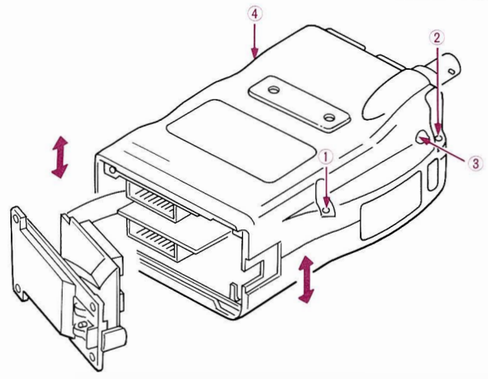
*1 VOL: Potentiometer

To access the 144 Mother Unit, remove the four screws affixing the shield plate in the rear half of the case.
To remove the Control Unit with the VOL and Jack Units, unsolder the six points indicated, and remove the seven screws.

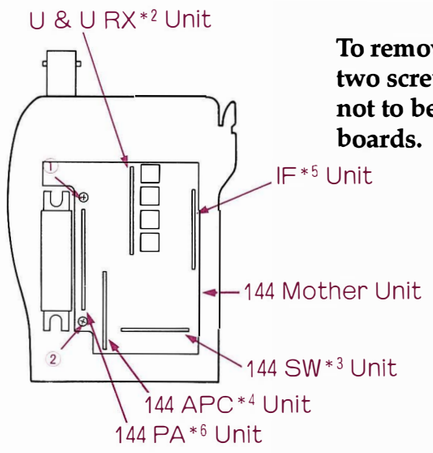


To remove the 430 Mother Unit, unsolder the antenna terminal and then remove the screw affixing the board.

*7 V & V: VHF & VHF
*8 V & V RX: VHF & VHF Receive

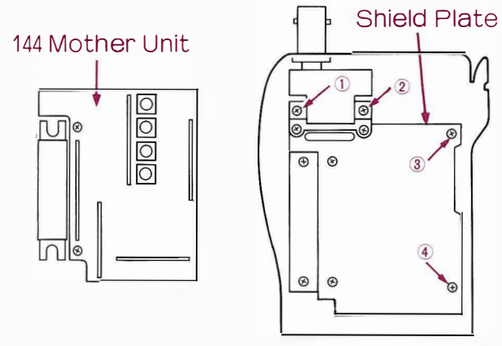


Remove the four screws in the rear cover, then carefully separate the front and rear halves of the case.



To remove the 144 Mother Unit, remove the two screws affixing the board. Be careful not to bend the pins connecting the other boards.

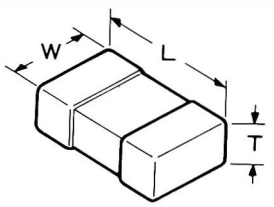
*2 U & U RX: UHF & UHF Receive
*3 SW: Switch
*4 APC: Automatic Power Control
*5 IF: Intermediate Frequency
*6 PA: Power Amplifier



To access the 430 Mother Unit, remove the four screws affixing the shield plate.

The diagrams below indicate some of the distinguishing features of common chip components.

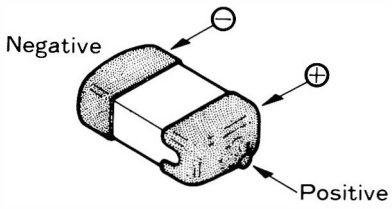
Ceramic Capacitors



(Unit : mm)

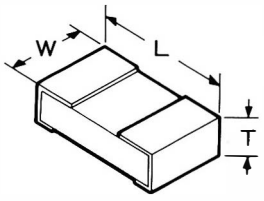
Type	L	W	T
3216	3.2	1.6	0.45~0.60
2125	2.0	1.25	0.35~0.50
1608	1.6	0.8	0.65~0.95

Tantalum Capacitors



Polarized. Unmarked
(determine value from layout and Parts List)

Resistors



Type	L	W	T
1/10	2.0	1.25	0.45
1/16	1.6	0.8	0.45

INDICATED LETTERS

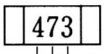
1 2 3 4

5 6 7 8

9 0 .

Type RMC 1/10W, 1/16W

Marking* 100, 222, 473·····



Ten unit	One unit	Multiplier code
0	0	10^0
1	1	10^1
2	2	10^2
3	3	10^3
4	4	10^4
5	5	10^5
6	6	10^6
7	7	10^7
8	8	10^8
9	9	10^9

Examples :

100 = 10Ω

222 = 2.2kΩ

473 = 47kΩ

Chip Component Information

Replacing Chip Components

Chip components are installed at the factory by a series of robots. The first one places a spot of adhesive resin at the location where each part is to be installed, and later robots handle and place parts using vacuum suction.

For single-sided boards, solder paste is applied and the board is then baked to harden the resin and flow the solder. For double-sided boards, no solder paste is applied, but the board is baked (or exposed to ultra-violet) to cure the resin before dip soldering.

In our laboratories and service shops, small quantities of chip components are mounted manually by applying a spot of resin, placing with tweezers, and then soldering by very small dual streams of hot air (without physical contact during soldering). We remove parts by first removing solder using a vacuum suction iron, which applies a light, steady vacuum at the iron tip, and then breaking the adhesive with tweezers.

The special vacuum soldering/desoldering equipment is recommended if you expect to do a lot of chip replacements. Otherwise, it is usually possible to remove and replace chip components with only a tapered, temperature-controlled soldering iron, a set of tweezers and braided copper solder wick. Soldering iron temperature should be below 280 ℃ (536 °F).

Precautions for Chip Replacement

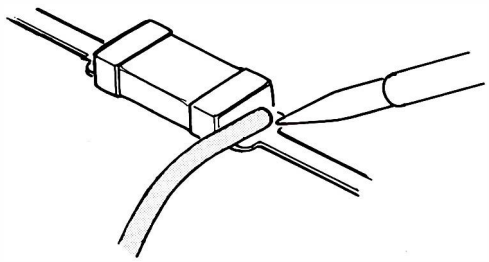
✘ Do not disconnect a chip forcefully, or the foil pattern may peel off the board.

✘ Never re-use a chip component. Dispose of all removed chip components immediately to avoid mixing with new parts.

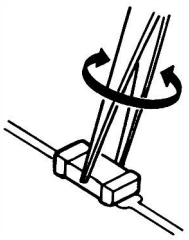
✘ Limit soldering time to 3 seconds or less to avoid damaging the component and board.

Removing Chip Components

❒ Remove the solder at each joint, one joint at a time, using solder wick whetted with non-acidic flux as shown below. Avoid applying pressure, and do not attempt to remove the tinning from the chip's electrode.



❒ Grasp the chip on both sides with tweezers, and gently twist the tweezers back and forth (to break the adhesive bond) while alternately heating each electrode. Be careful to avoid peeling the foil traces from the board. Dispose of the chip when removed.

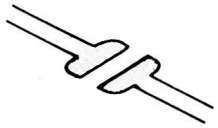


❒ After removing the chip, use the copper braid and soldering iron to which away any excess solder and smooth the land for installation of the replacement part.

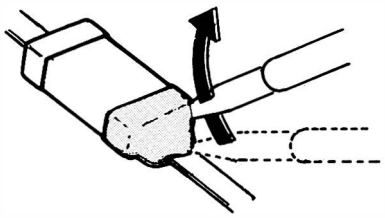
Installing a Replacement Chip

As the value of some chip components is not indicated on the body of the chip, be careful to get the right part for replacement.

❒ Apply a small amount of solder to the land on one side where the chip is to be installed. Avoid too much solder, which may cause bridging (shorting to other parts).

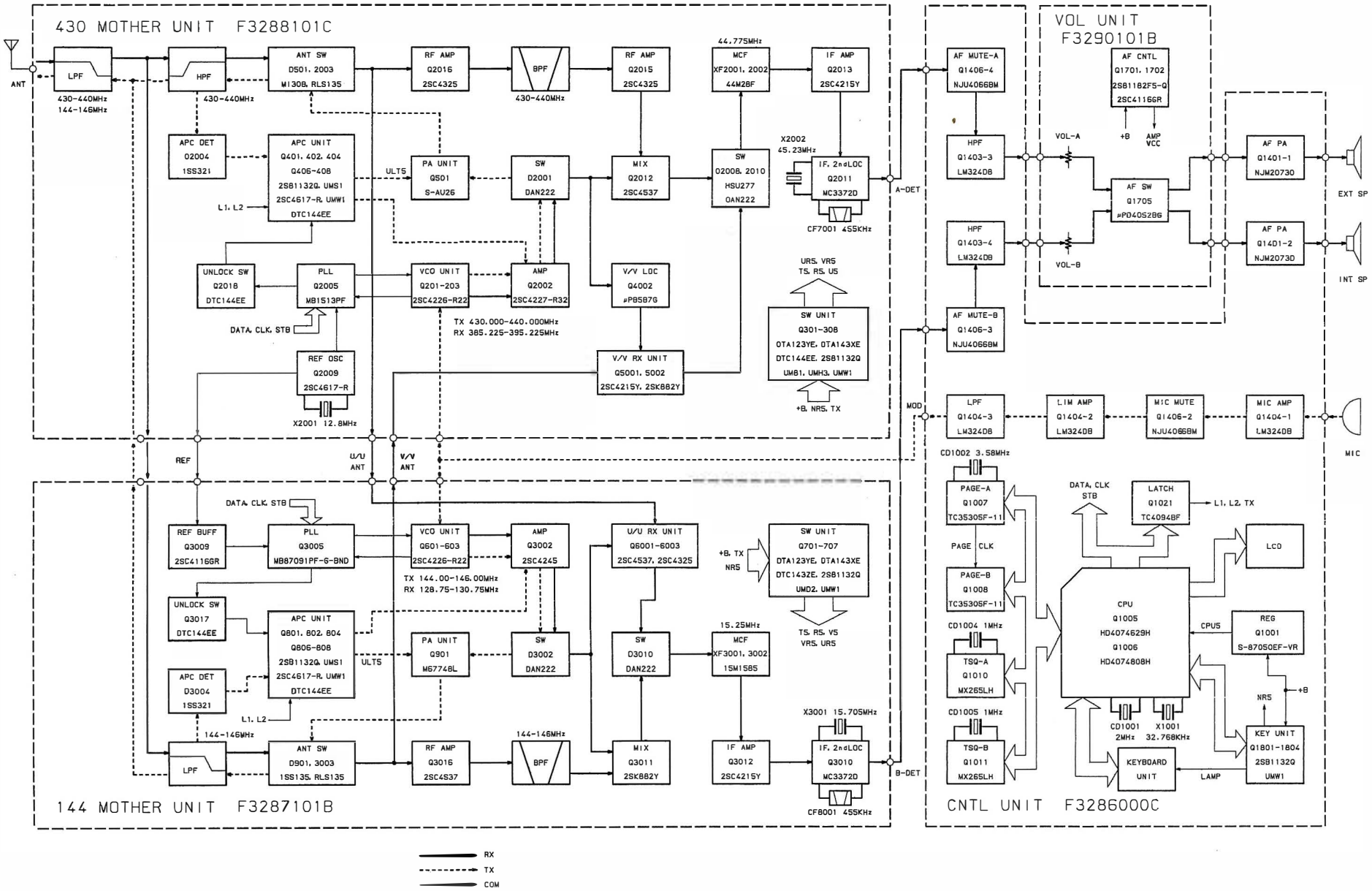


❒ Hold the chip with tweezers in the desired position, and apply the soldering iron with a motion line that indicated by the arrow in the diagram below. Do not apply heat for more than 3 seconds.



❒ Remove the tweezers and solder the electrode on the other side in the manner just described.

Block Diagram



The FT-530 electronics consists of three major boards: the 144 and 430 (MHz) motherboards (or Mother Units) and the Control Unit, and numerous minor boards that mount on these. The motherboards include the receiver front ends, IF and PLL subsystem ICs, and support daughter boards for transmit stages, local VCOs, supply regulation and switching circuits. The Control Unit includes the microprocessors and tone generator/decoder chips, and supports daughter boards for the display, keys and keypad, audio circuits and an interface board for coupling with the motherboards. While reading this description, you can refer to the block diagram for an overview of the major circuit blocks, and to the schematic diagrams for component details.

Antenna Duplexer

Incoming RF from the antenna jack passes through a 450-MHz low-pass filter on the 430 Mother Unit before application to two band-switching networks: coil L2009, diode D2003 and capacitor C2033 on the 430 Mother Unit, and D501 on the 430 PA Unit for UHF signals; and coil L3006, diode D3003 and capacitor C3029 on the 144 Mother Unit, and D901 on the 144 PA Unit for VHF signals. These networks filter VHF signals from the UHF receiver and UHF signals from the VHF receiver, allowing each band to operate independently while sharing the same antenna connection.

VHF Reception

VHF signals passed by the duplexer are applied to a varactor-tuned band-pass filter consisting of T3004 and D3016/D3017 before RF amplification by Q3016 (2SC4537). The amplified RF is then band-pass filtered again by varactor-tuned resonators T3003/D3020/-D3023, T3002/D3019/D3022 and T3001/-D3018/D3021 to ensure pure in-band input to 1st mixer Q3011 (2SK882Y). Tuning voltage for the varactors is provided by VHF PLL Q3005, buffered by Q3007 (2SK880GR).

Buffered 128.75 ~ 138.75-MHz output from the VCO Unit is amplified by Q3002 (2SC-4245) and applied to the 1st mixer. The resulting 15.25-MHz 1st mixer product is passed through dual monolithic crystal filters XF-3001/XF3002 (± 7.5-kHz BW) to strip away all but the desired signal, which is then amplified by Q3012 (2SC4215Y) before delivery to FM IF subsystem IC Q3010 (MC3372D), containing the 2nd mixer, 2nd local oscillator, limiter amplifier, noise amplifier, S-meter amplifier and squelch gates. A 2nd local signal is generated from 15.705-MHz crystal X3001, which produces the 455-kHz 2nd IF when mixed with the 1st IF signal within Q3010. The 2nd IF is passed through ceramic filter CF8001 on the IF Unit daughter board to strip away unwanted mixer products, and is then applied to the limiter amp in Q3010, which removes amplitude variations in the 455-kHz IF before detection of the speech by ceramic discriminator CD8001, also on the daughter board.

Detected audio from pin 9 of Q3010 is de-emphasized and passed to detector output gates Q8001 and Q8002 (2SC4116GR × 2) and gate controller Q8003 (DTC144EE) on the 144 IF Unit. If the squelch is open, the signal is then delivered via the 144 Mother Unit, Interface Unit and Control Unit (for sampling by CTCSS & DTMF detectors), and then to the MIC/AF Amp Unit.

VHF Squelch Control

When no carrier is received, noise at the output of the detector stage in Q3010 is amplified and band-pass filtered by the noise amp section of Q3010 and the network between pins 9 and 10, and then rectified by D3013. The resulting DC squelch control voltage, adjusted by the **SQL** control on the VOL Unit, is passed to the squelch switching section within Q3010. While no carrier is received, pin 14 of Q3010 (the Scan Stop line) remains low, signaling pin 9 of microprocessor Q1006 (HD4074808H) on the Control Unit to keep the green (Busy) half of the VHF **ON AIR/BUSY** LED off, and holding the AF MUTE line to the MIC AF Amp Unit high to block VHF receiver audio from passing through analog gate Q1406 while no signal is being received, and during transmission.

When a carrier appears at the discriminator, noise is removed from the output, causing pin 14 of Q3010 to go high and signaling microprocessor Q1006 to activate the **BUSY** LED. The microprocessor then checks CTCSS chip

Q1011 (MX265LH) and DTMF decoder chip Q1008 (TC35305F) for CTCSS or DTMF code squelch information, respectively. If not transmitting and tone squelch is not activated, or if the received tone matches that programmed, the microprocessor stops scanning, if active, and allows audio to pass through muting gate Q1406 to the amplifier and loudspeaker.

VHF Single-Band Dual Receive

When VHF single-band dual receive operation is active, a portion of the received VHF RF passing through the antenna switching network (and applied to the VHF front end) is sampled through diodes D3005 on the 144 Mother Unit and D2027 on the 430 Mother Unit, for delivery to the V/V Rx Unit daughter board on the 430 Mother Unit. On this daughter board, the signals are band-pass filtered and amplified by Q5002 (2SK882Y) before application to mixer Q5001 (2SC4215Y). This mixer also receives output from the 430-MHz VCO Unit, after it is divided by four in Q4002 (μPB587G) on the V/V Local Unit. The resulting 44.775-MHz sub-receiver 1st IF signal (V/V IF) is applied to the UHF receiver IF chain before monolithic filter XF2002, and is then handled just as a UHF signal would be in UHF operation.

AF Output

On the MIC/AF Amp Unit, detector audio from either the 144 or 430 Mother Unit is applied through analog switch Q1406-3 or -4 (¼ NJU4066BW) to high-pass filter Q1403-4 or -3 (¼ LM324DB), respectively, which removes the CTCSS tone, if present, and adds keypad beeps and DTMF monitor tones as needed via Q1403-2. The resulting audio is delivered through the respective volume control and audio selector Q1705 (μPD4052BG) on the Volume Unit, which selects VHF and UHF audio on the internal or external (**EAR** jack) loudspeakers, separate or mixed, through dual audio amplifier Q1401 (NJM2073D) on the Mic/AF Amp Unit. When no external loudspeaker is connected, D1402 signals the microprocessor to cause audio selector Q1705 to mix both channels of audio together for the internal loudspeaker.

UHF Reception

UHF signals passed by the duplexer are applied to a varactor-tuned band-pass filter consisting of L2015 and D2017/D2021 before RF amplification by Q2016 (2SC4325). The amplified RF is then band-pass filtered again by varactor-tuned resonators L2018/D2016/-D2020 and L2017/D2015/D2019, further amplified by Q2015 (2SC4325) and filtered once more by L2016/D2014/D2018 to ensure pure in-band input to 1st mixer Q2012 (2SC4537). Tuning voltage for the varactors is provided by UHF PLL Q2005, buffered by Q2007 (2SK-880GR).

Buffered output between 385.225 and 405.225-MHz from the VCO Unit is amplified by Q2002 (2SC4227-R32) and applied to the 1st mixer. The resulting 44.775-MHz 1st mixer product is passed through dual monolithic crystal filters XF2001/XF2002 (±7.5-kHz BW) to strip away all but the desired signal, which is then amplified by Q2013 (2SC4215Y) before delivery to FM IF subsystem IC Q2011 (MC-3372D), which contains the 2nd mixer, 2nd local oscillator, limiter amplifier, noise amplifier, S-meter amplifier and squelch gates.

A 2nd local signal is generated from 45.23-MHz crystal X2002, which produces the 455-kHz 2nd IF when mixed with the 1st IF signal within Q2011. The 2nd IF is passed through ceramic filter CF7001 on the IF Unit daughter board to strip away unwanted mixer products, and is then applied to the limiter amp in Q2011, which removes amplitude variations in the 455-kHz IF before detection of the speech by ceramic discriminator CD7001, also on the daughter board.

Detected audio from pin 9 of Q2011 is de-emphasized and delivered via the 430 Mother Unit, Interface Unit and Control Unit (for sampling by CTCSS & DTMF detectors), to the MIC/AF Amp Unit. Receiver audio amplification is as already described.

UHF Squelch Control

When no carrier is received, noise at the output of the detector stage in Q2011 is amplified and band-pass filtered by the noise amp section of Q2011 and the network between pins 9 and 10, and then rectified by D2012. The resulting DC squelch control voltage, adjusted

by the **SQL** control on the Vol Unit, is passed to the squelch switching section within Q2011. While no carrier is received, pin 14 of Q2011 (the Scan Stop line) remains low, signaling pin 7 of microprocessor Q1006 on the Control Unit to keep the green (Busy) half of the UHF **ON AIR/BUSY** LED off, and holding the AF MUTE line to the MIC AF Amp Unit high to block UHF receiver audio from passing through analog gate Q1406 while no signal is being received, as well as during transmission.

When a carrier appears at the discriminator, noise is removed from the output, causing pin 14 of Q2011 to go high and signaling microprocessor Q1006 to activate the **BUSY** LED. The microprocessor then checks CTCSS chip Q1010 (MX265LH) and DTMF decoder chip Q1007 (TC35305F) for CTCSS or DTMF code squelch information, respectively. If not transmitting and tone squelch is not activated, or if the received tone matches that programmed, the microprocessor stops scanning, if active, and allows audio to pass through muting gate Q1406 to the amplifier and loudspeaker.

UHF Single-Band Dual Receive

When UHF single-band dual receive operation is active, a portion of the received UHF RF passing through the antenna switching network (and applied to the UHF front end) is delivered to diode D3024 on the 144 Mother Unit for application to the U/U Rx Unit daughter board, also on the 144 Mother Unit. Here, the signals are band-pass filtered and amplified by Q6002 and Q6003 (both 2SC-4325) before application to mixer Q6001 (2SC-4537). This mixer also receives the third harmonic of the *144*-MHz VCO Unit. The resulting 15.25-MHz sub-receiver 1st IF signal (U/U IF) is applied to the VHF receiver IF chain just before monolithic filter XF3002, and is then handled just as a VHF signal would be in VHF operation.

Transmitter Audio Stages

Speech input from the microphone is delivered to the Mic/AF Amp Unit for amplification and pre-emphasis by Q1404-1 (¼ LM324DB). Unless the microphone is disabled, the audio is then passed through Mic Mute gate Q1406-2 (¼ NJU4066BW). The IDC (instantaneous deviation control) utilizes the symmetrical saturation characteristics of operational amplifier Q1404-2 (¼ LM324DB), to process transmitted audio. This then passes through the splatter filter consisting of Q1404-3 (¼ LM324DB), R1451~53, C1446, C1449 and C1450 which form a 3-pole Butterworth Filter (approx. 2.8 kHz cutoff) before delivery to the modulator.

If VOX is enabled, a sample of the output of the IDC stage is used to activate the transmitter via Q1404-4 (¼ LM324DB) and microprocessor Q1005 (HD4074629H).

If Tone Burst or DTMF is enabled for transmission, the tone is generated by microprocessor Q1005, buffered by Q1403-2 and applied to the IDC stage in place of speech audio. Also, the tone is amplified for monitoring in the loudspeaker, as mentioned before. The microprocessor closes Mic Mute gate Q1406-2 when transmitting a tone, or when transmission is disabled.

The modulating audio is delivered first to the Control Unit, where it may pick up a generated CTCSS tone, and then through the modulation potentiometers on the Interface Unit. The transmit audio is next delivered to both Mother Units, where it is either disabled (on the receiving band) by Q3018 (VHF) or Q2010 (UHF, both DTC144EE), or delivered to modulating varactors D203 (in the UHF VCO) or D605 (in the VHF transmitter VCO), frequency modulating the PLL carrier up to ± 5 kHz from the unmodulated carrier at the transmitting frequency.

Late VHF Transmit Stages

On the 144 VCO Unit, the modulated signal from VHF transmitter VCO Q602 (2SC4226) is buffered by Q603 (2SC4226) and returned to the 144 Mother Unit for amplification by Q3002 (2SC4245), and then final amplification by VHF PA module Q901 (M67748L) on the 144 PA Unit. The transmit signal then passes through antenna t/r switch D901 before returning to the duplexer network on the 144 Mother Unit and then a 3-pole low-pass filter consisting of L3001, L3002, C3016, C3005, C3006 and C3019 (mounted on the 144 Mother Unit) and L2006, C2021, C2022 and C2031 and the 2-pole LPF (L2002, L2003, C2031, C2022, C2007, C2023, C2032 and C2073) mounted on

the 430 Mother Unit, before delivery to the antenna.

VHF Automatic Transmit Power Control (APC)

RF power output from the VHF final amplifier is sampled and rectified by D3004 (1SS-321). The resulting DC is fed back through Q801 (2SB1132Q) and Q802 (2SC4617) on the APC Unit to driver Q3002 (2SC4245) on the 144 Mother Unit, controlling the level of drive to the PA module, and thus the power output. The microprocessor selects either high or one of three low power levels via Q804 (UMS1).

When the VHF transmitter PLL is unlocked, or while receiving, the INH line causes the ULT5 line to be dropped via Q808 (DTC144-EE), Q806 (UMW1) and Q807 (2SB1132Q), which disables transmission by biasing final amplifier Q901 off and opening VHF t/r switch D901.

VHF Transmit/Receive Switching

Closing the PTT switch on the Key Unit pulls one side of the microphone low, which turns on Q1405 (2SA1586Y) on the Mic/AF Amp Unit, putting 5 volts on PTT pin 33 of microprocessor Q1005 on the Control Unit. The microprocessor then delivers appropriate serial data to shift register Q1201 (TC4094BF) on the Interface Unit to raise the TX line to the 144 Switch Unit (via the 144 Mother Unit) where Q703 (DTA123YE) turns off the receiver R5 line, and Q704 (UMD2) and Q701 (DTA-143XE) turn on the transmitter T5 line. This T5 signal is delivered to the 144 APC Unit where it causes the ULT5 line to go high via Q806 and Q807, which in turn biases the VHF PA module on and closes t/r switch D901 on the 144 PA Unit. At the same time, Q801 on the 144 APC Unit turns on Q3002 on the 144 Mother Unit to drive the PA module.

Late UHF Transmit Stages

On the 430 VCO Unit, the modulated signal from UHF VCO Q201 (2SC4226) is buffered by Q202 (2SC4226) and returned to the 430 Mother Unit for amplification by Q2002 (2SC-4227), and then final amplification by UHF PA module Q501 (S-AU26) on the 430 PA Unit. The transmit signal then passes through antenna t/r switch D501 before returning to the duplexer network and the 3-pole low-pass filter consisting of L2001~3, C2014, C2018, C2007, C2022~23, C20131~32 and C2037 mounted on the 430 Mother Unit before delivery to the antenna.

UHF Automatic Transmit Power Control (APC)

RF power output from the UHF final amplifier is sampled and rectified by D2004 (1SS-321). The resulting DC is fed back through Q401 (2SB1132Q) and Q402 (2SC4617) on the 430 APC Unit to driver Q2002 (2SC4227) on the 430 Mother Unit, controlling the level of drive to the PA module, and thus the power output. The microprocessor selects either high or one of three low power levels via Q404 (UMS1).

When the UHF PLL is unlocked, or while receiving, the INH line causes the ULT5 line to be dropped via Q408 (DTC144EE), Q406 (UMW1) and Q407 (2SB1132Q), which disables the transmitter by biasing final amplifier Q501 off and opening UHF t/r switch D501.

UHF Transmit/Receive Switching

As for VHF, closing the PTT line raises the TX line via Q1405 on the Mic/AF Amp Unit, Q1005 on the Control Unit and Q1201 on the Interface Unit. This line connects to the 430 Switch Unit (via the 430 Mother Unit) where Q303 (DTA123YE) turns off the receiver R5 line, and Q304 (UMD2) and Q301 (DTA143XE) turn on the transmitter T5 line. This T5 signal is delivered to the 430 APC Unit where it causes the ULT5 line to go high via Q406 and Q407, which in turn biases the UHF PA module on and closes t/r switch D501 on the 430 PA Unit. At the same time, Q401 on the 430 APC Unit turns on Q2002 on the 430 Mother Unit to drive the PA module.

VHF PLL Frequency Synthesizer

The VHF PLL circuitry consists of separate receive and transmit VCOs Q601 and Q602, and VCO buffer Q603 (all 2SC4226) on the 144 VCO Unit; PLL subsystem IC Q3005 (MB87-091PF-G-BND) on the 144 Mother Unit, and 12.8-MHz reference oscillator X2001/Q2009 on the 430 Mother Unit. Q3005 contains a prescaler, reference divider, serial-to-parallel data latch, programmable divider, phase comparator, charge pump and a power saver circuit.

Receiver VCO Q601 oscillates between 128.75 and 138.75 MHz according to model version and the programmed receiving frequency. The VCO output is buffered by Q603 and returned to the 144 Mother Unit, where a sample of that output is buffered by Q3004 (2SC4215Y) for application to the prescaler section of Q3005. There the VCO signal is divided by 64 or 65, according to a control signal from the data latch section of Q3005, before being applied to the programmable divider section of Q3005.

The data latch section of Q3005 also receives serial dividing data from microprocessor Q1005 on the Control Unit, which causes the pre-divided VCO signal to be further divided in the programmable divider section, depending upon the desired receive frequency, so as to produce a 5-kHz or 6.25-kHz derivative of the current VCO frequency. Meanwhile, the reference divider section of Q3005 divides the 12.8-MHz crystal reference from the 430 Mother Unit, after buffering by Q3009 (2SC4116GR), by 2560 (or 2048) to produce the 5-kHz (or 6.25-kHz) loop reference (respectively).

The 5-kHz (or 6.25-kHz) signal from the programmable divider (derived from the VCO) and that derived from the reference oscillator are applied to the phase detector section of Q3005, which produces a dual 5-V pulsed output with pulse duration depending on the phase difference between the input signals. This pulse train is filtered to DC and returned to varactors D603/D604 (for the transmitter) and D601/D602 (for the receiver) on the 144 VCO Unit.

Changes in the level of the DC voltage applied to the varactors affect the reactance in the tank circuit of the VCO, changing the oscillating frequency of the VCO according to the phase difference between the signals derived from the VCO and the crystal reference oscillator. The VCO is thus phase-locked to the crystal reference oscillator.

The output of receiver VCO Q601, after buffering by Q603, is delivered to the 144 Mother Unit for amplification by Q3002 before application to the 1st mixer, as described previously.

For VHF transmission, transmitter VCO Q602 oscillates between 140 and 150 MHz according to the model version and programmed transmit frequency. The remainder of the PLL circuitry is shared with the receiver. However, the dividing data from the microprocessor is such that the VCO frequency is at the actual transmit frequency (rather than offset for IFs, as in the receiving case). Also, the transmitter VCO is modulated by the speech audio applied to D605, as described previously. Receive and transmit 5-V buses select which VCO is to be active by Q604 and Q605 (both DTC144EE), respectively. FET Q3007 (2SK880GR) on the 144 Mother Unit buffers the VCV line for application to the tracking bandpass filters in the receiver front end.

When the power saving feature is active, the microprocessor periodically signals the PLL IC to conserve power and shorten lock-up time.

UHF PLL Frequency Synthesizer

The UHF PLL circuitry consists of VCO Q201 and VCO buffers Q202 and Q203 (all 2SC4226) on the 430 VCO Unit, and PLL subsystem IC Q2005 (MB1315PF) and 12.8-MHz reference oscillator X2001/Q2009 on the 430 Mother Unit. Q2005 contains a prescaler, reference divider, serial-to-parallel data latch, programmable divider, phase comparator, and a power saver circuit.

For receiving, VCO Q201 oscillates between 385.225 and 405.225 MHz according to model version and the programmed receiving frequency. A portion of the VCO output is buffered by Q203 and returned to the prescaler section of Q2005 on the 430 Mother Unit. There the VCO signal is divided by 64 or 65, according to a control signal from the data latch section of Q2005, before being applied to the programmable divider section of Q2005.

The data latch section of Q2005 also receives serial dividing data from microprocessor Q1005 on the Control Unit, which causes the pre-divided VCO signal to be further divided in the programmable divider section, depending upon the desired receive frequency, so as to produce a 5-kHz or 6.25-kHz derivative of the current VCO frequency. Meanwhile, the reference divider section of Q2005 divides

the 12.8-MHz crystal reference, after buffering by Q2009 (2SC4116GR), by 2560 (or 2048) to produce the 5-kHz (or 6.25-kHz) loop reference (respectively).

The 5-kHz (or 6.25-kHz) signal from the programmable divider (derived from the VCO) and that derived from the reference oscillator are applied to the phase detector section of Q2005, which produces a dual 5-V pulsed output with pulse duration depending on the phase difference between the input signals. This pulse train is filtered to DC and returned to varactors D201/D202 on the 430 VCO Unit.

Changes in the level of the DC voltage applied to the varactors affect the reactance in the tank circuit of the VCO, changing the oscillating frequency of the VCO according to the phase difference between the signals derived from the VCO and the crystal reference oscillator. The VCO is thus phase-locked to the crystal reference oscillator.

The output of VCO Q201 is also buffered by Q202 and delivered to the 430 Mother Unit for amplification by Q2002 before application to the 1st mixer, as described previously.

For UHF transmission, VCO Q201 oscillates between 430 and 450 MHz according to the model version and programmed transmit frequency. The remainder of the PLL circuitry is shared with the receiver. However, the dividing data from the microprocessor is such that the VCO frequency is at the actual transmit frequency (rather than offset for IFs, as in the receiving case). Also, for transmission, the VCO is modulated by the filtered speech audio applied to the tank circuit at D203, as described previously. Receive and transmit 5-V buses select which VCO is to be active by Q204 and Q205 (both DTC144EE), respectively. FET Q2007 (2SK880GR) on the 430 Mother Unit buffers the VCV line for application to the tracking band-pass filters in the receiver front end.

When the power saving feature is active, the microprocessor periodically signals the PLL IC to conserve power and shorten lock-up time.

Spurious Emissions

Spurious emissions from the 144 & 430 Mother Units radiating through the outer enclosure are reduced by die-cast aluminum shielding. By-pass capacitors are also utilized on the external **EAR** & **MIC** connectors.

Power-On Sequencing

Pressing the orange **POWER** switch applies 5 volts to CPU5 pin 24 of microprocessor Q1005 to wake it up. This pulls the NR5 line high via Q1801 (2SB1132Q) on the Key Unit, which provides 5 volts to the 144 and 430 Switch Units, which in turn provide regulated voltage to the other boards.

Battery Charger & Power Control

EXT DC jack J2004 on the 430 Mother Unit applies voltage to the B+ line through diode D2030 to operate the transceiver, and through regulator Q2017 (2SB1132Q) to the charging terminal of the battery. The outer (negative) contact of the **EXT DC** jack disconnects the negative side of the battery from direct chassis ground connection, placing diode D2024 in line instead when a plug is inserted in the jack.

The FT-530 is carefully aligned at the factory for the specified performance across the amateur bands. Realignment should therefore not be necessary except in the event of a component failure. All component replacement and service should be performed only by an authorized Yaesu representative, or the warranty policy may be voided.

The following procedures cover the sometimes critical and tedious adjustments that are not normally required once the transceiver has left the factory. However, if damage occurs and some parts subsequently be replaced, realignment may be required. If a sudden problem occurs during normal operation, it is likely due to component failure; realignment should not be done until after the faulty component has been replaced.

We recommend that servicing be performed only by authorized Yaesu service technicians who are experienced with the circuitry and fully equipped for repair and alignment. Therefore, if a fault is suspected, contact the dealer from whom the transceiver was purchased for instructions regarding repair. Authorized Yaesu service technicians realign all circuits and make complete performance checks to ensure compliance with specifications after replacing any faulty components.

Those who do undertake any of the following alignments are cautioned to proceed at their own risk. Problems caused by unauthorized attempts at realignment are not covered by the warranty policy. Also, Yaesu must reserve the right to change circuits and alignment procedures in the interest of improved performance, without notifying owners.

Under no circumstances should any alignment be attempted unless the normal function and operation of the transceiver are clearly understood, the cause of the malfunction has been clearly pinpointed and any faulty components replaced, and the need for realignment determined to be absolutely necessary.

The following test equipment (and thorough familiarity with its correct use) is necessary for complete realignment. Correction of problems caused by misalignment resulting from use of improper test equipment is not covered under the warranty policy. While most steps do not require all of the equipment listed, the interactions of some adjustments may require that more complex adjustments be performed afterwards. Do not attempt to perform only a single step unless it is clearly isolated electrically from all other steps. Rather, have all test equipment ready before beginning, and follow all of the steps in a section in the order presented.

Required Test Equipment

- ❒ RF Signal Generator with calibrated output level at 450 MHz
- ❒ Deviation Meter (linear detector)
- ❒ AF Millivoltmeter
- ❒ Inline Wattmeter accurate to 450 MHz
- ❒ Regulated DC Power Supply adjustable from 5 to 13 V, 2 A, with milliammeter
- ❒ 50-Ω Dummy Load: 10 W at 450 MHz
- ❒ Frequency Counter: ±0.2-ppm accuracy at 450 MHz
- ❒ AF Signal Generator
- ❒ DC Voltmeter: high impedance
- ❒ UHF Sampling Coupler

Alignment Preparation & Precautions

A 50-Ω dummy load and inline wattmeter must be connected to the antenna jack in all procedures that call for transmission, except where specified otherwise. Correct alignment is not possible with an antenna.

After completing one step, read the next step to determine if the same test equipment will be required. If not, remove the test equipment (except power supply, dummy load and wattmeter, if connected) before proceeding.

Correct alignment requires that the ambient temperature be the same as that of the transceiver and test equipment, and that this temperature be held constant between 20 and 30 °C (68 ~ 86 °F). If the transceiver is brought into the shop from hot or cold air it should be

allowed some time for equalization with the environment before alignment.

Whenever possible, alignments should be made with oscillator shields and circuit boards firmly affixed in place. Also, the test equipment must be warmed up before beginning.

Most alignment procedures call for tuning the transceiver to the high or low band edge, or to band center. The actual frequency differs between different versions, so the technician should make sure of the band limits of each set to be aligned before beginning.

Note: Signal levels in dB referred to in the alignment are based on 0 dBμ = 0.5 dBμV.

Alignment

Reference Oscillator

- ❒ Tune the transceiver to the center of the UHF band (for the version being aligned).
- ❒ Connect the CM coupler and 50-Ω dummy load to the antenna connector, and the frequency counter to sample the RF output.
- ❒ Key the transmitter and adjust TC2001 on the 430 Mother Unit to match the display to the counter frequency (within 100 Hz).

UHF Power Output

- ❒ Connect the 50-Ω dummy load and inline wattmeter to the antenna jack.
- ❒ Tune to the high edge of the UHF band (for the version being aligned), and select high power output.
- ❒ Key the transmitter and adjust VR401 on the UHF PA Unit for 5 watts on the meter.
- ❒ Select each of the low power settings, key the transmitter, and confirm the following wattmeter readings.

Setting	RF Output
Low 1	0.3 ~ 1.1 W
Low 2	1.3 ~ 2.3 W
Low 3	2.6 ~ 4.5 W

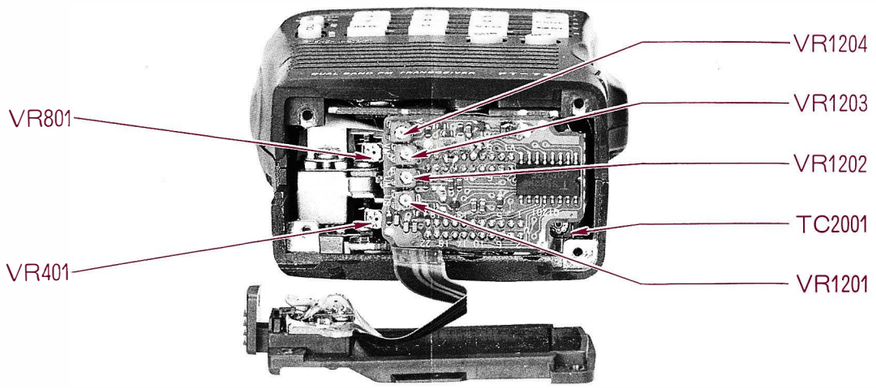
- ❒ Now tune to the low edge of the band and confirm 4~6 W high power output, and between 0.3 and 1 W in the Low 1 setting.

UHF Transmitter Deviation

- ❒ Tune to the center of the band, and adjust the AF generator attenuator to inject 25 mV at 1 kHz to the **MIC** jack.
- ❒ Key the transmitter and adjust VR1202 on the Interface Unit for ± 4.8 kHz deviation on the deviation meter.

UHF S-Meter Calibration

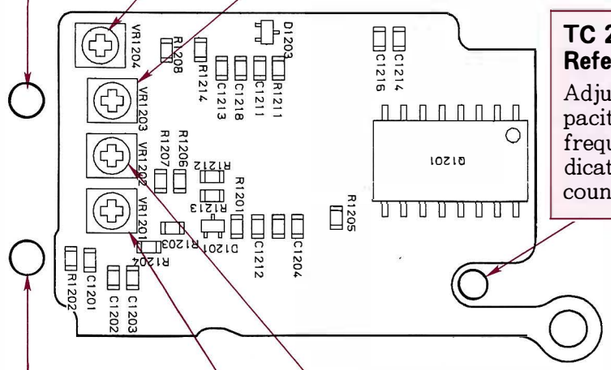
- ❒ Tune the transceiver and RF signal generator to the center of the UHF band, and inject 20 dBμ RF modulated with ±3.5-kHz deviation of a 1-kHz tone at the antenna connector.
- ❒ Adjust VR1201 on the Interface Unit so that all S-meter segments are just on.



VR 801 VHF Power Output
Transmit in the center of the VHF band using high power setting. Adjust for 5W.

VR 1204 VHF S-Meter Calibration
While receiving the 20 dB μ test signal (3.5kHz dev. @ 1kHz), adjust VR 1204 for max S-meter indication (all segments should display).

VR 1203 VHF Transmitter Deviation
Inject 25mV at 1kHz to the MIC jack. Transmit and adjust for ±4.8kHz deviation.



TC 2001 Reference Oscillator
Adjust the trimmer capacitor to the alignment frequency ±100Hz, as indicated on the frequency counter.

VR 1202 UHF Transmitter Deviation
Inject 25mV at 1kHz to the MIC jack. Transmit and adjust for ±4.8kHz deviation.

VR 401 UHF Power Output
Transmit in the center of the UHF band using high power setting. Adjust for 5W.

VR 1201 UHF S-Meter Calibration
While receiving the 20 dB μ test signal (3.5kHz dev. @ 1kHz), adjust VR 1201 for max S-meter indication (all segments should display).

VHF Power Output

- ❒ Connect the 50-Ω dummy load and inline wattmeter to the antenna jack.
- ❒ Tune to the high edge of the VHF band (for the version being aligned), and select high power output.
- ❒ Key the transmitter and adjust VR801 on the VHF PA Unit for 5 watts on the meter.
- ❒ Select each of the low power settings, key the transmitter, and confirm the following wattmeter readings.

Setting	RF Output
Low 1	0.3 ~ 1.1 W
Low 2	1.3 ~ 2.3 W
Low 3	2.6 ~ 4.5 W

- ❒ Now tune to the low edge of the band and confirm 4~6 W high power output, and between 0.3 and 1 W in the Low 1 setting.

VHF Transmitter Deviation

- ❒ Tune to the center of the band, and adjust the AF generator attenuator to inject 25 mV at 1 kHz to the **MIC** jack.
- ❒ Key the transmitter and adjust VR1203 on the Interface Unit for ± 4.8 kHz deviation on the deviation meter.

VHF S-Meter Calibration

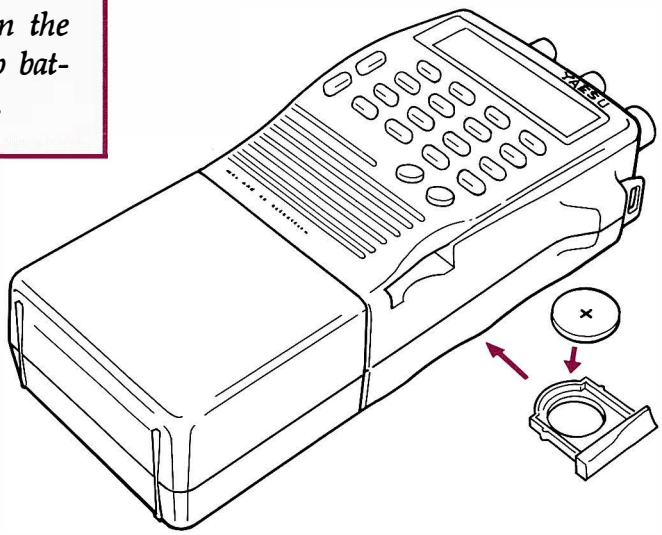
- ❒ Tune the transceiver and RF signal generator to the center of the VHF band, and inject 20 dBμ RF modulated with ±3.5-kHz deviation of a 1-kHz tone at the antenna connector.
- ❒ Adjust VR1204 on the Interface Unit so that all S-meter segments are just on.

Lithium Battery Replacement

- ❒ Pull the backup battery holder out of the left side.
- ❒ Set the new lithium battery (type CR1220 or equivalent) in the holder, positive side up, and replace the holder.

Lithium battery
YAESU P/N: Q9000573

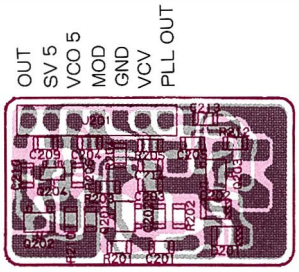
> ***Important!***
>
> *A battery pack should be installed on the transceiver when replacing the backup battery, to avoid loosing data in memories.*



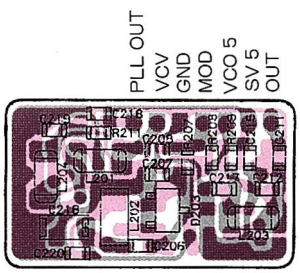
Resetting the CPUs

Resetting the CPUs clears all memories, repeater shifts and other settings to their defaults, and leaves the transceiver CPUs in the same state as when the set left the factory.

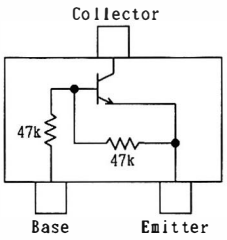
To reset the CPUs, hold both the **MR** button and **REV** key while turning the transceiver on ("soft reset"). If you still have a problem, remove thboth the battery pack (or external DC power supply) and the Lithium backup battery, and let the transceiver set for at least 30 seconds.



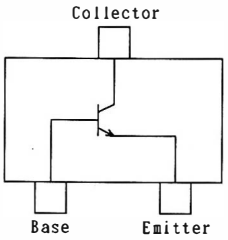
component side



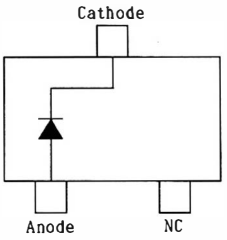
chip-only side



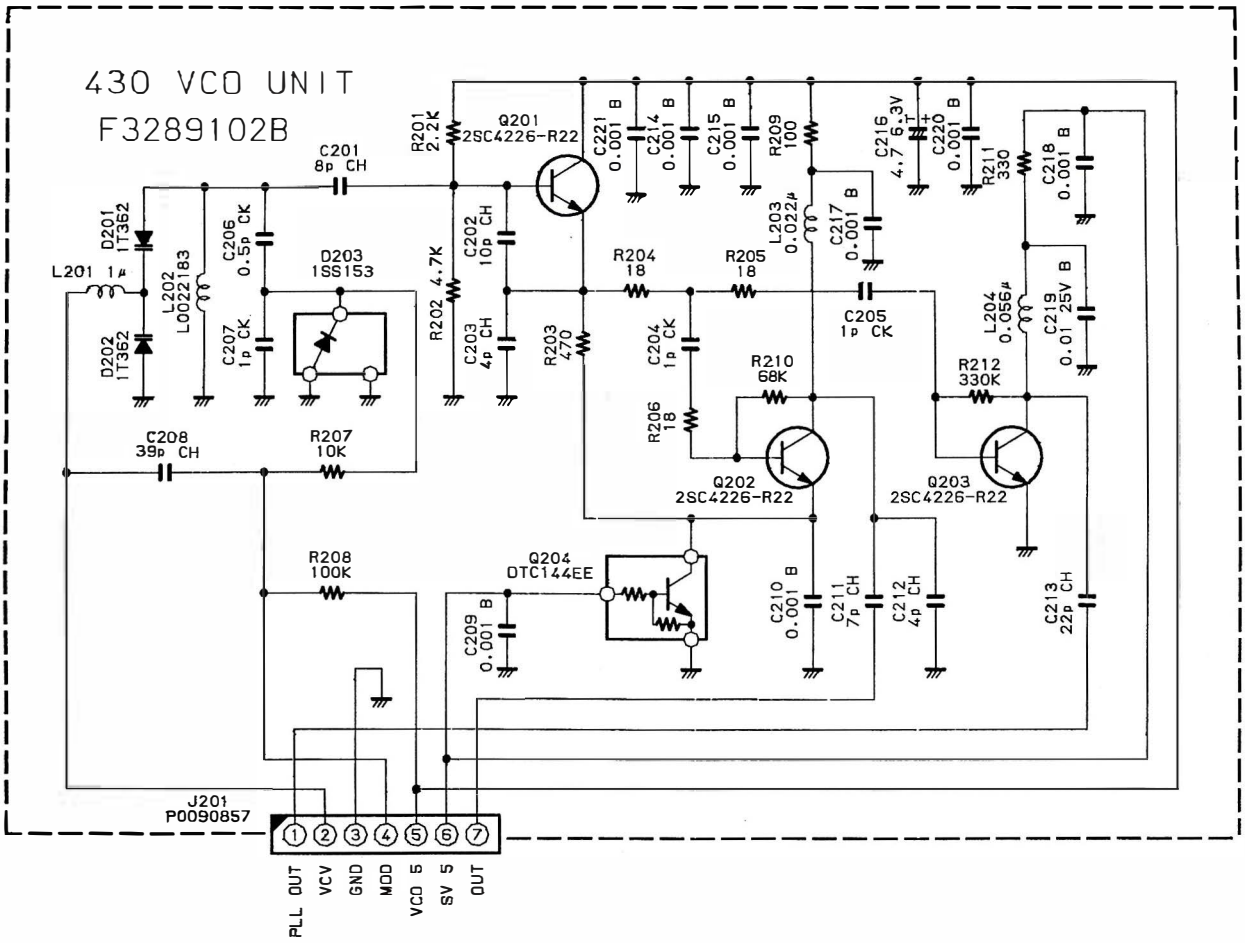
DTC144EE (26)
(Q204)



2SC4226 (R22)
(Q201, 202, 203)



1SS153 (A9)
(D203)



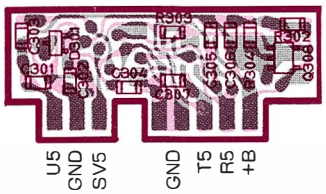
To 430-MHz Mother Unit
(See Page 3L-1)

NOTE:
RESISTOR VALUES ARE IN Ω. 1/16W ;
CAPACITOR VALUES ARE IN μF. 50V ;
(T) CAPACITOR VALUES ARE TANTALUM ;
UNLESS OTHERWISE NOTED.

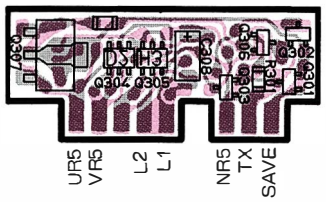
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** 430-MHz VCO UNIT ***						
	PCB With Components					CA0681001		
	Printed Circuit Board					F3289102A		
C 0201	CHIP CAP.	8pF	50V	CH	GRM39CH080D50PT	K22174209		
C 0202	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		
C 0203	CHIP CAP.	4pF	50V	CH	GRM39CH040C50PT	K22174205		
C 0204	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		
C 0205	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		
C 0206	CHIP CAP.	0.5pF	50V	CK	GRM39CK0R5C50PT	K22174201		
C 0207	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		
C 0208	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		
C 0209	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0210	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0211	CHIP CAP.	7pF	50V	CH	GRM39CH070D50PT	K22174208		
C 0212	CHIP CAP.	4pF	50V	CH	GRM39CH040C50PT	K22174205		
C 0213	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		
C 0214	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0215	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0216	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 0217	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0218	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0219	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 0220	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0221	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
D 0201	DIODE				1T362-T8	G2070102		
D 0202	DIODE				1T362-T8	G2070102		
D 0203	DIODE				1SS153-T2B	G2070032		
J 0201	CONNECTOR				9230B-1-07Z003-T	P0090857		
L 0201	COIL	1uH			32CS 380LB-1ROM=P	L1690016		
L 0202	COIL				3.0T1.5D0.32UEW R	L0022183		
L 0203	COIL	0.022uH			32CS 380NB-22NM=P	L1690023		
L 0204	COIL	0.056uH			32CS 380NB-56NM=P	L1690061		
Q 0201	TRANSISTOR				2SC4226-T2B R22	G3342267B		
Q 0202	TRANSISTOR				2SC4226-T2B R22	G3342267B		
Q 0203	TRANSISTOR				2SC4226-T2B R22	G3342267B		
Q 0204	TRANSISTOR				DTC144EE TL	G3070075		
R 0201	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 0202	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 0203	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 0204	CHIP RES.	18	1/16W	5%	RMC1/16 180JATP	J24185180		
R 0205	CHIP RES.	18	1/16W	5%	RMC1/16 180JATP	J24185180		
R 0206	CHIP RES.	18	1/16W	5%	RMC1/16 180JATP	J24185180		
R 0207	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		

430-MHz VCO Unit

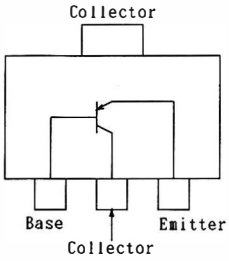
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
R 0208	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0209	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		
R 0210	CHIP RES.	68K	1/16W	5%	RMC1/16 683JATP	J24185683		
R 0211	CHIP RES.	330	1/16W	5%	RMC1/16 331JATP	J24185331		
R 0212	CHIP RES.	330K	1/16W	5%	RMC1/16 334JATP	J24185334		
	SHIELD CASE VCO					R0142750		



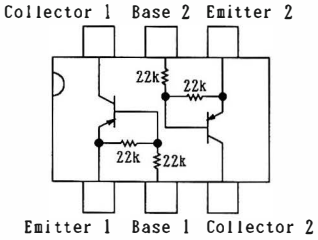
component side



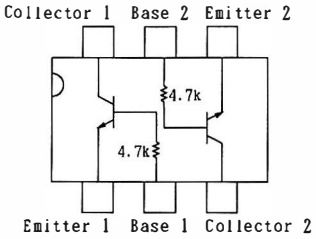
chip-only side



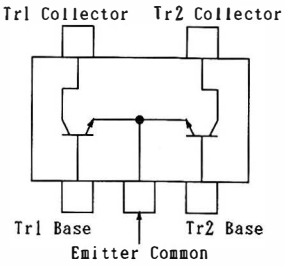
2SB1132
(Q307)



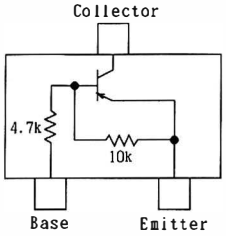
UMB1 (B1)
(Q304)



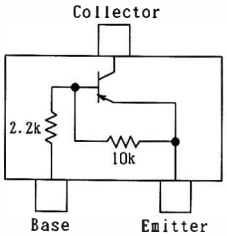
UMH3 (H3)
(Q305)



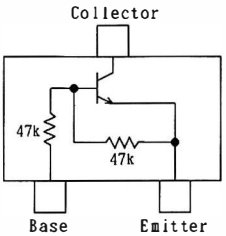
UMW1 (W1)
(Q308)



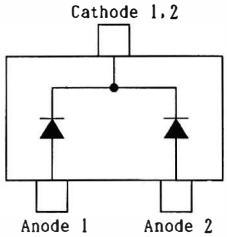
DTA143XE (33)
(Q302)



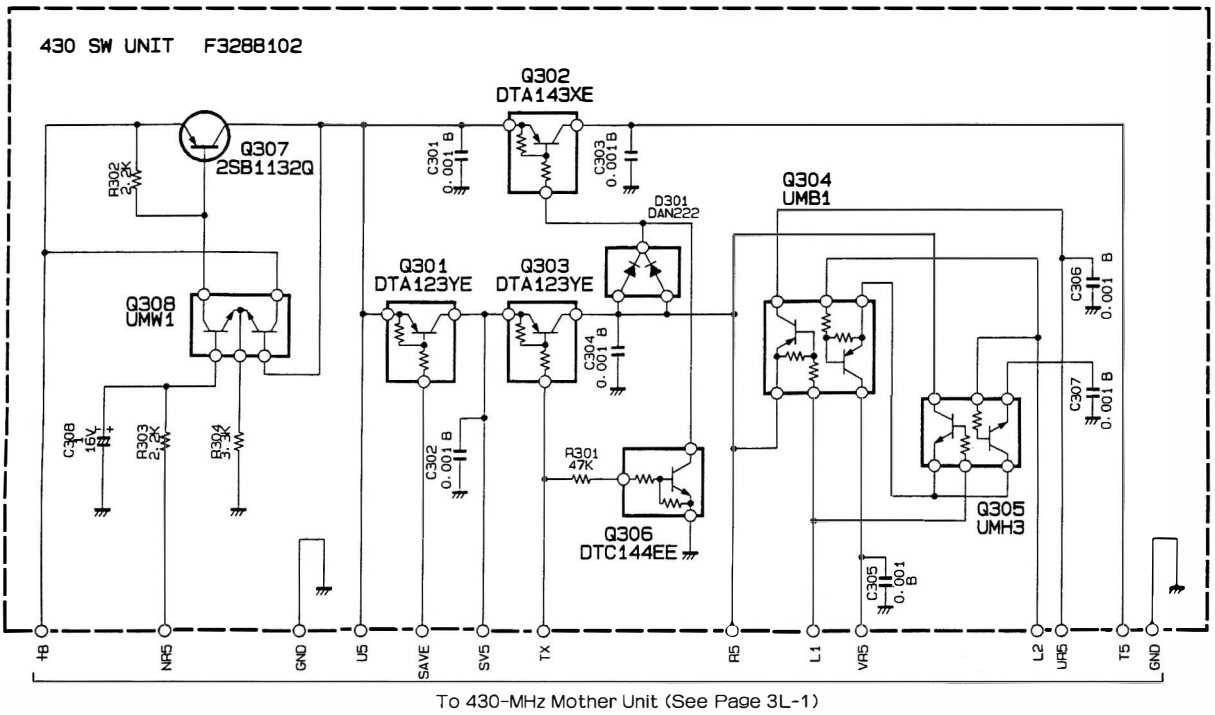
DTA123YE (52)
(Q301, 303)



DTC144EE (26)
(Q306)



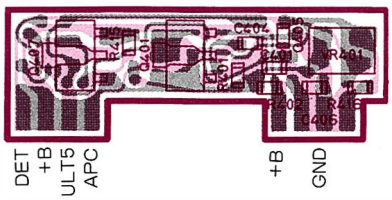
DAN222 (N)
(D301)



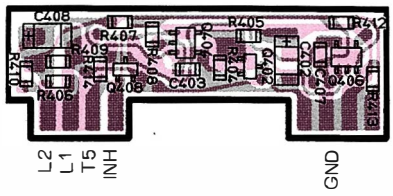
To 430-MHz Mother Unit (See Page 3L-1)

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** 430-MHz SW UNIT ***						
	PCB With Components					CP4050001		
	Printed Circuit Board					F3288102		
C 0301	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0302	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0303	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0304	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0305	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0306	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0307	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0308	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
D 0301	DIODE				DAN222 TL	G2070174		
Q 0301	TRANSISTOR				DTA123YE TL	G3070094		
Q 0302	TRANSISTOR				DTA143XE TL	G3070093		
Q 0303	TRANSISTOR				DTA123YE TL	G3070094		
Q 0304	TRANSISTOR				UMB1 TN	G3070097		
Q 0305	TRANSISTOR				UMH3 TN	G3070101		
Q 0306	TRANSISTOR				DTC144EE TL	G3070075		
Q 0307	TRANSISTOR				2SB1132 T100 Q	G3211327Q		
Q 0308	TRANSISTOR				UMW1 TR	G3070078		
R 0301	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 0302	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 0303	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 0304	CHIP RES.	3.3K	1/16W	5%	RMC1/16 332JATP	J24185332		

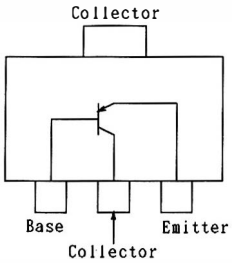
Notes



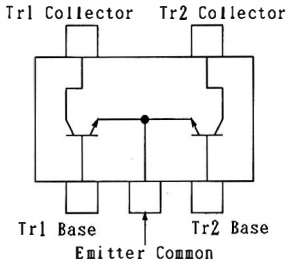
component side



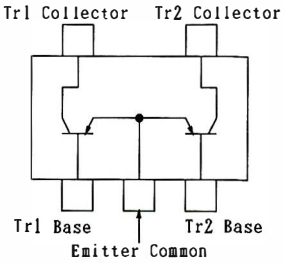
chip-only side



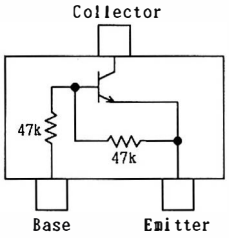
2SB1132
(Q401, 407)



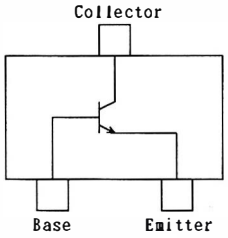
UMW1 (W1)
(Q406)



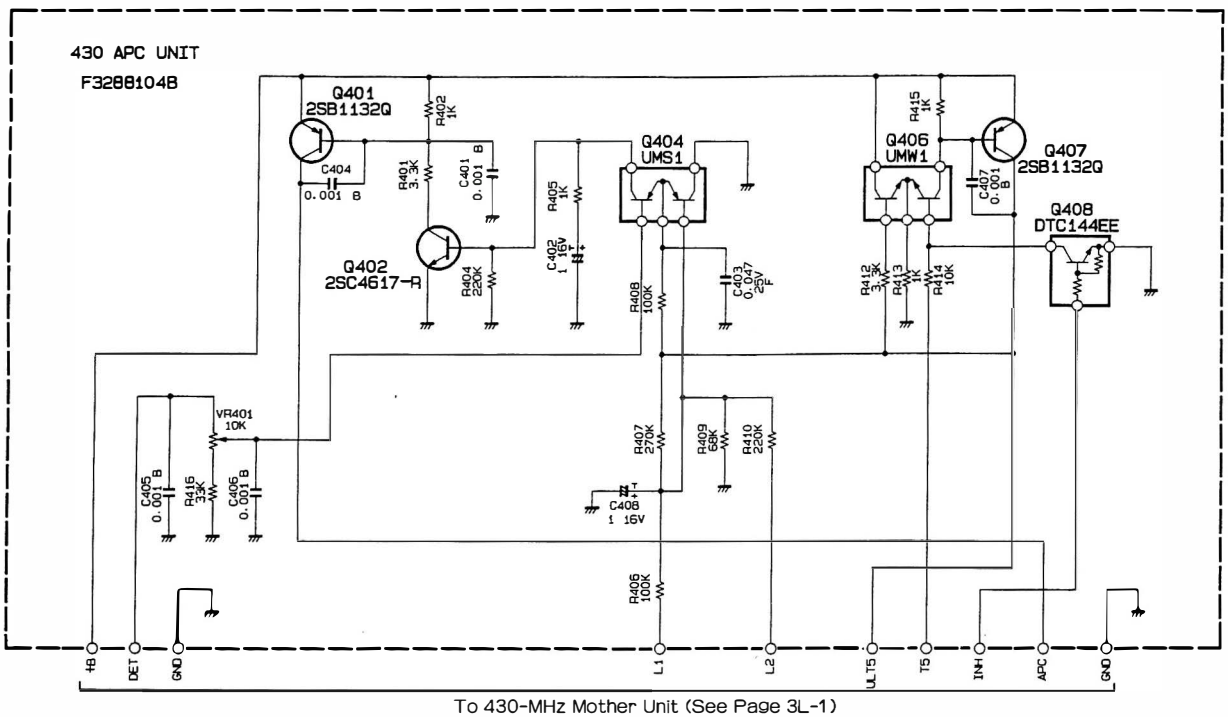
UMS1 (S1)
(Q404)



DTC144EE (26)
(Q408)



2SC4617 (BR)
(Q402)

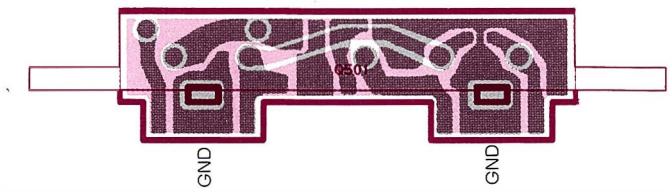


To 430-MHz Mother Unit (See Page 3L-1)

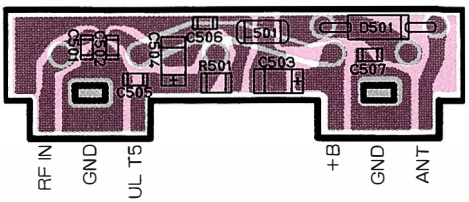
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** 430-MHz APC UNIT ***						
	PCB With Components					CP4051001		
	Printed Circuit Board					F3288104A		
C 0401	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0402	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 0403	CHIP CAP.	0.047uF	25V	F	GRM39F473Z25PT	K22145002		
C 0404	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0405	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0406	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0407	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0408	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
Q 0401	TRANSISTOR				2SB1132 T100 Q	G3211327Q		
Q 0402	TRANSISTOR				2SC4617 TL R	G3346178R		
Q 0404	TRANSISTOR				UMS1 TR	G3070077		
Q 0406	TRANSISTOR				UMW1 TR	G3070078		
Q 0407	TRANSISTOR				2SB1132 T100 Q	G3211327Q		
Q 0408	TRANSISTOR				DTC144EE TL	G3070075		
R 0401	CHIP RES.	3.3K	1/16W	5%	RMC1/16 332JATP	J24185332		
R 0402	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0404	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 0405	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0406	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0407	CHIP RES.	270K	1/16W	5%	RMC1/16 274JATP	J24185274		
R 0408	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0409	CHIP RES.	68K	1/16W	5%	RMC1/16 683JATP	J24185683		
R 0410	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 0412	CHIP RES.	3.3K	1/16W	5%	RMC1/16 332JATP	J24185332		
R 0413	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0414	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 0415	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0416	CHIP RES.	33K	1/16W	5%	RMC1/16 333JATP	J24185333		
VR0401	POT.	10K			RH03AVA14X01A	J50785103		

Notes

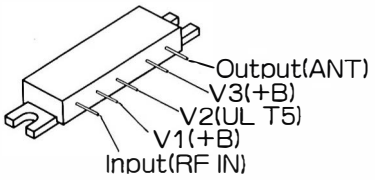
430-MHz Power Amplifier (PA) Unit



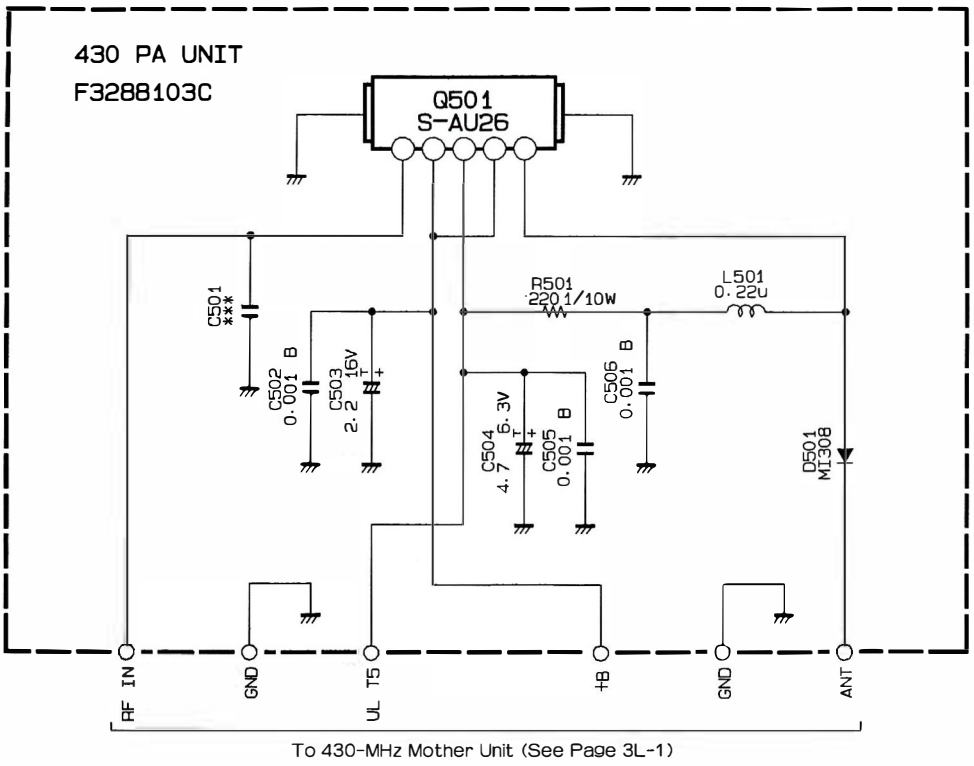
component side



chip-only side



S-AU26
(Q501)

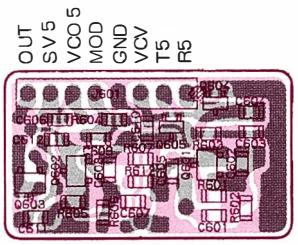


To 430-MHz Mother Unit (See Page 3L-1)

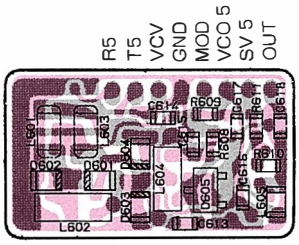
430-MHz Power Amplifier (PA) Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** 430-MHz PA UNIT ***						
	PCB With Components					CP4052001		
	Printed Circuit Board					F3288103B		
C 0502	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0503	TANTALUM CHIP CAP.	2.2uF	16V		TEMSVA1C225M-8R	K78120015		
C 0504	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 0505	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0506	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
D 0501	DIODE				MI308	G2090337		
L 0501	M.RFC	0.22uH			LER015TR22M	L1690111		
Q 0501	IC				S-AU26	G1091201		
R 0501	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
	SHIELD PLATE					R0142640		

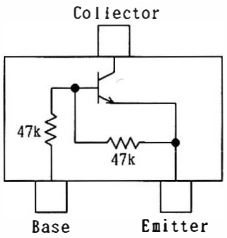
Notes



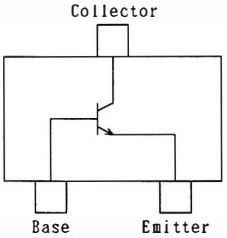
component side



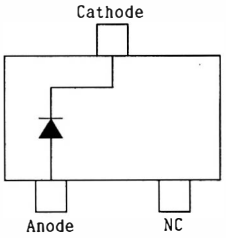
chip-only side



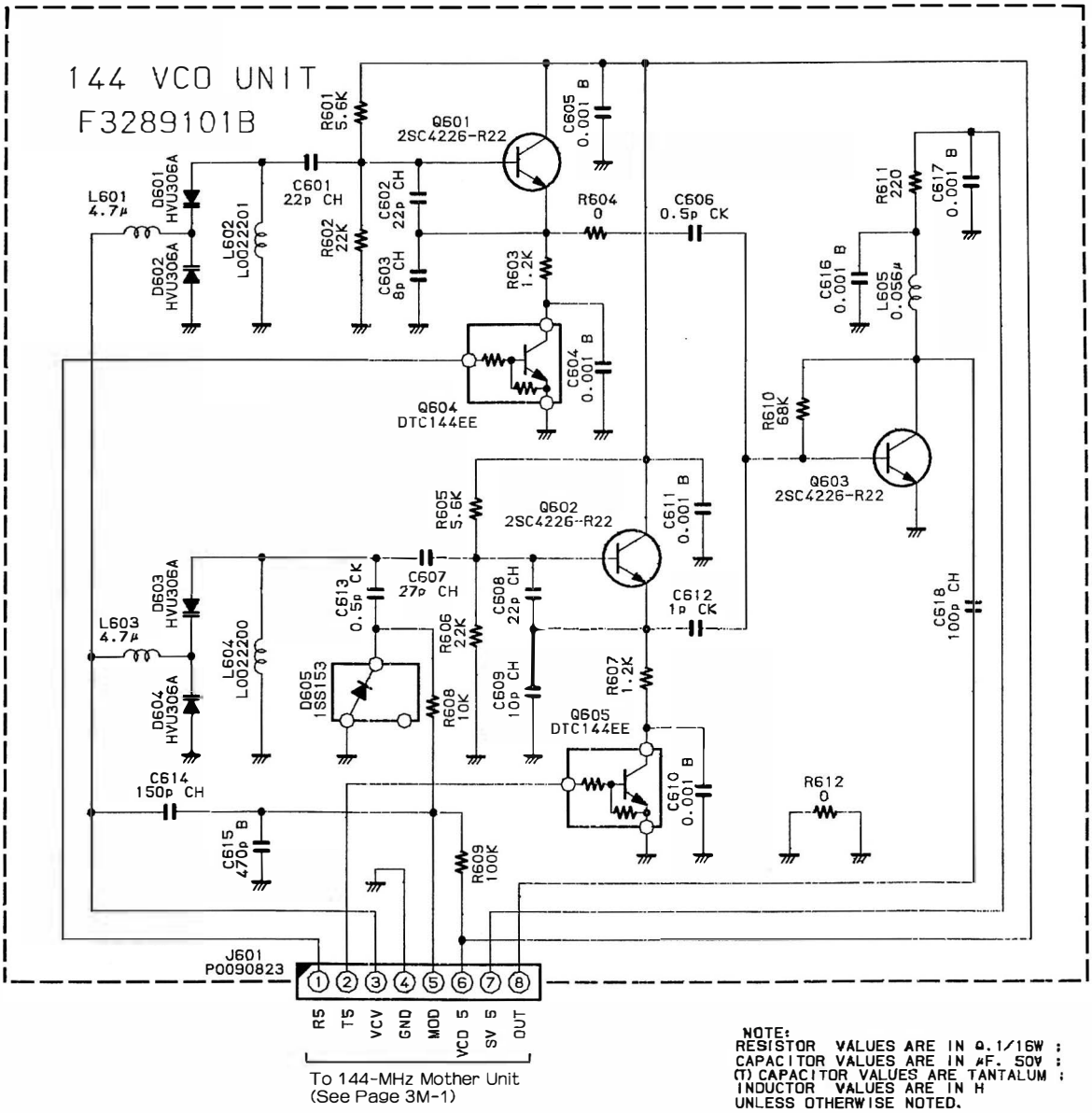
DTC144EE (26)
(Q604, 605)



2SC4226 (R22)
(Q601, 602, 603)



1SS153 (A9)
(D605)



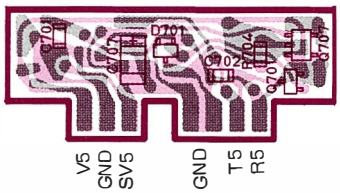
To 144-MHz Mother Unit
(See Page 3M-1)

NOTE:
RESISTOR VALUES ARE IN Ω, 1/16W ;
CAPACITOR VALUES ARE IN μF, 50V ;
(T) CAPACITOR VALUES ARE TANTALUM ;
INDUCTOR VALUES ARE IN H
UNLESS OTHERWISE NOTED.

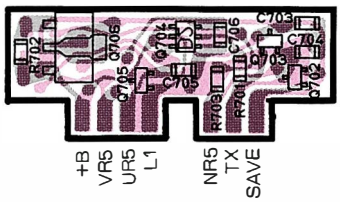
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** 144-MHz VCO UNIT ***						
	PCB With Components					CA0680001		
	Printed Circuit Board					F3289101		
C 0601	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		
C 0602	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		
C 0603	CHIP CAP.	8pF	50V	CH	GRM39CH080D50PT	K22174209		
C 0604	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0605	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0606	CHIP CAP.	0.5pF	50V	CK	GRM39CK0R5C50PT	K22174201		
C 0607	CHIP CAP.	27pF	50V	CH	GRM39CH270J50PT	K22174221		
C 0608	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		
C 0609	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		
C 0610	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0611	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0612	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		
C 0613	CHIP CAP.	0.5pF	50V	CK	GRM39CK0R5C50PT	K22174201		
C 0614	CHIP CAP.	150pF	50V	CH	GRM39CH151J50PT	K22174239		
C 0615	CHIP CAP.	470pF	50V	B	GRM39B471M50PT	K22174805		
C 0616	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0617	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0618	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
D 0601	DIODE				HVU306A5TRF	G2070132		
D 0602	DIODE				HVU306A5TRF	G2070132		
D 0603	DIODE				HVU306A5TRF	G2070132		
D 0604	DIODE				HVU306A5TRF	G2070132		
D 0605	DIODE				1SS153-T2B	G2070032		
J 0601	CONNECTOR				9230B-1-08Z003-T	P0090823		
L 0601	M.RFC	4.7uH			LER015T4R7K	L1690127		
L 0602	COIL				11.0T1.5D0.32UEW R	L0022201		
L 0603	M.RFC	4.7uH			LER015T4R7K	L1690127		
L 0604	COIL				9.0T1.5D0.32UEW R	L0022200		
L 0605	M.RFC	0.056uH			LL2012·F56N	L1690175		
Q 0601	TRANSISTOR				2SC4226-T2B R22	G3342267B		
Q 0602	TRANSISTOR				2SC4226-T2B R22	G3342267B		
Q 0603	TRANSISTOR				2SC4226-T2B R22	G3342267B		
Q 0604	TRANSISTOR				DTC144EE TL	G3070075		
Q 0605	TRANSISTOR				DTC144EE TL	G3070075		
R 0601	CHIP RES.	5.6K	1/16W	5%	RMC1/16 562JATP	J24185562		
R 0602	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 0603	CHIP RES.	1.2K	1/16W	5%	RMC1/16 122JATP	J24185122		
R 0604	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		
R 0605	CHIP RES.	5.6K	1/16W	5%	RMC1/16 562JATP	J24185562		
R 0606	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		

144-MHz VCO Unit

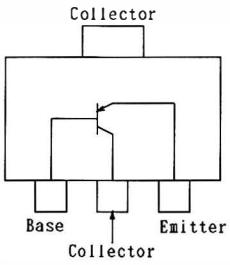
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
R 0607	CHIP RES.	1.2K	1/16W	5%	RMC1/16 122JATP	J24185122		
R 0608	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 0609	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0610	CHIP RES.	68K	1/16W	5%	RMC1/16 683JATP	J24185683		
R 0611	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		
R 0612	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		
	SHIELD CASE VCO					R0142750		



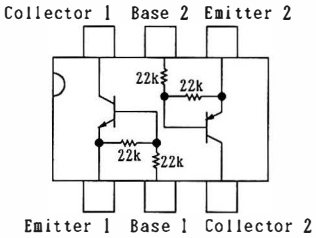
component side



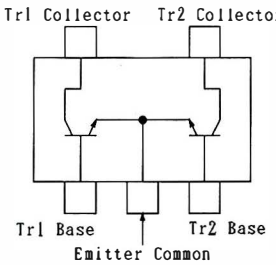
chip-only side



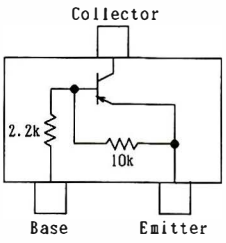
2SB1132
(Q706)



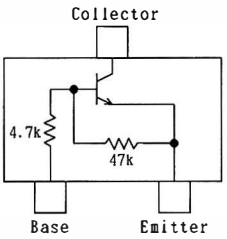
UMD2 (D2)
(Q704)



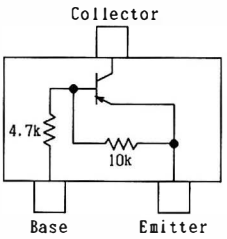
UMW1 (W1)
(Q707)



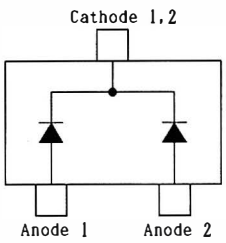
DTA143XE (33)
(Q701)



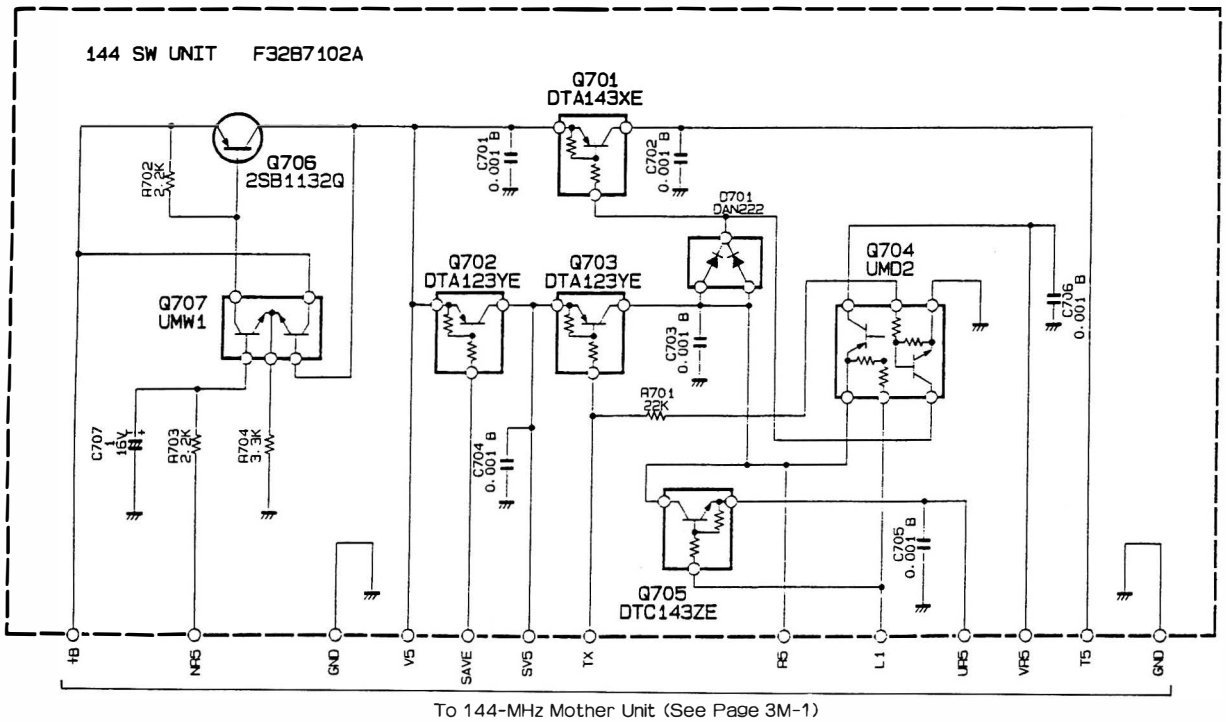
DTC143ZE (E23)
(Q705)



DTA123YE (52)
(Q702, 703)



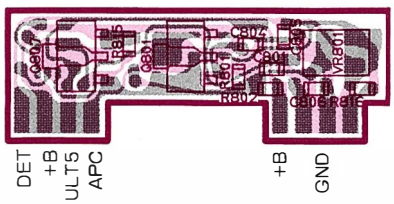
DAN222 (N)
(D701)



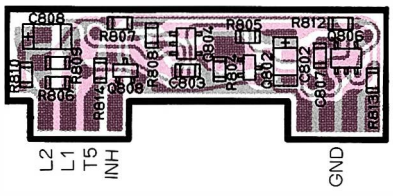
To 144-MHz Mother Unit (See Page 3M-1)

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** 144-MHz SW UNIT ***						
	PCB With Components					CP4061001		
	Printed Circuit Board					F3287102A		
C 0701	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0702	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0703	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0704	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0705	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0706	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0707	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
D 0701	DIODE				DAN222 TL	G2070174		
Q 0701	TRANSISTOR				DTA143XE TL	G3070093		
Q 0702	TRANSISTOR				DTA123YE TL	G3070094		
Q 0703	TRANSISTOR				DTA123YE TL	G3070094		
Q 0704	TRANSISTOR				UMD2 TR	G3070076		
Q 0705	TRANSISTOR				DTC143ZE TL	G3070102		
Q 0706	TRANSISTOR				2SB1132 T100 Q	G3211327Q		
Q 0707	TRANSISTOR				UMW1 TR	G3070078		
R 0701	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 0702	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 0703	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 0704	CHIP RES.	3.3K	1/16W	5%	RMC1/16 332JATP	J24185332		

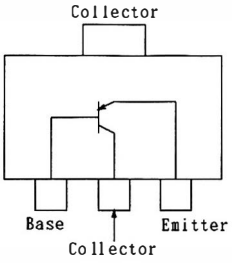
Notes



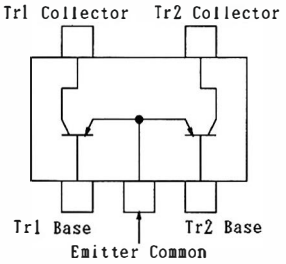
component side



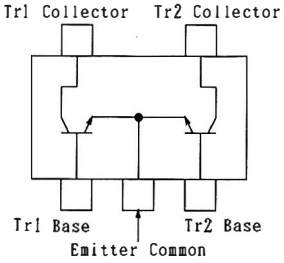
chip-only side



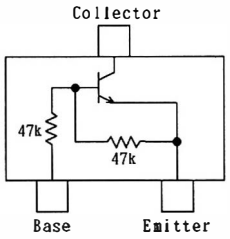
2SB1132
(Q801, 807)



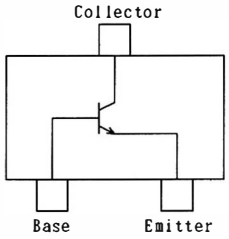
UMS1 (S1)
(Q804)



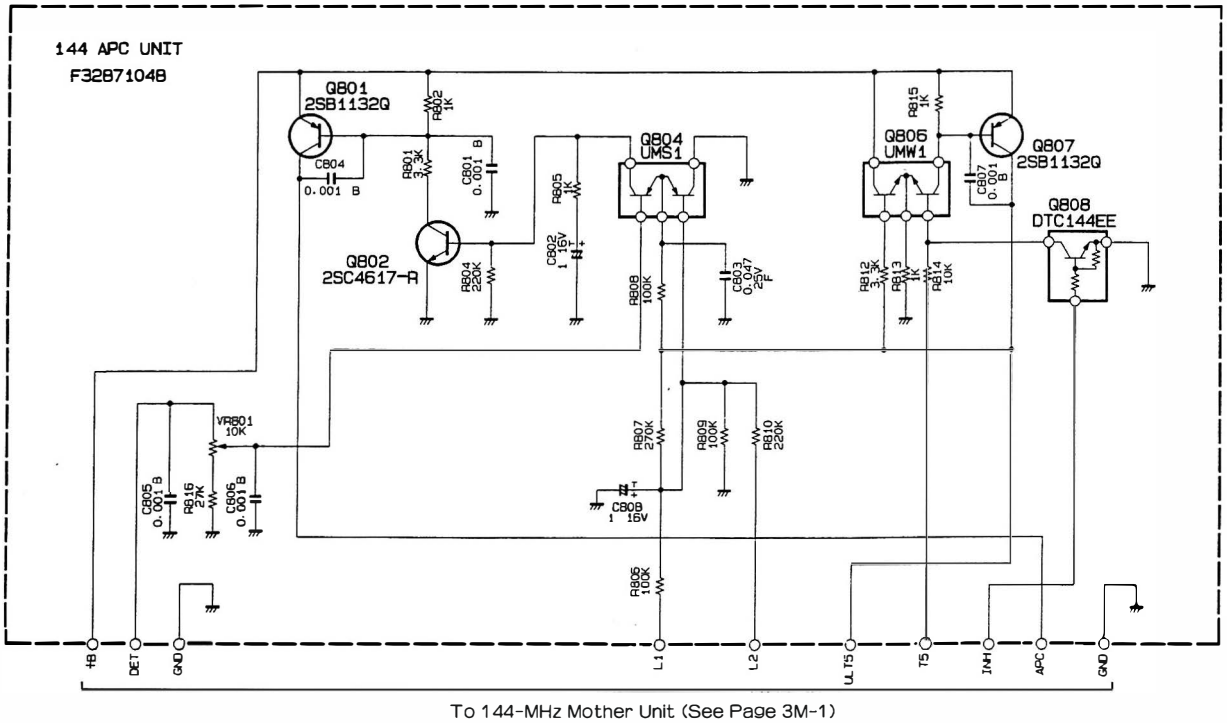
UMW1 (W1)
(Q806)



DTC144EE (26)
(Q808)



2SC4617 (BR)
(Q802)

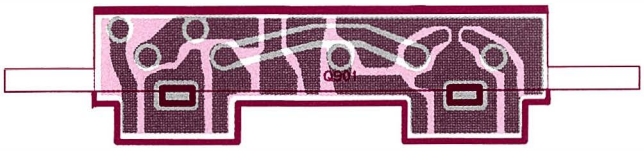


To 144-MHz Mother Unit (See Page 3M-1)

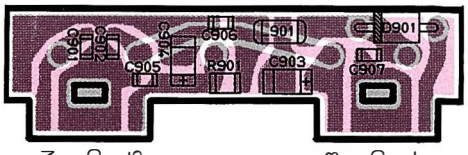
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** 144-MHz APC UNIT ***						
	PCB With Components					CP4062001		
	Printed Circuit Board					F3287104B		
C 0801	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0802	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 0803	CHIP CAP.	0.047uF	25V	F	GRM39F473Z25PT	K22145002		
C 0804	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0805	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0806	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0807	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0808	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
Q 0801	TRANSISTOR				2SB1132 T100 Q	G3211327Q		
Q 0802	TRANSISTOR				2SC4617 TL R	G3346178R		
Q 0804	TRANSISTOR				UMS1 TR	G3070077		
Q 0806	TRANSISTOR				UMW1 TR	G3070078		
Q 0807	TRANSISTOR				2SB1132 T100 Q	G3211327Q		
Q 0808	TRANSISTOR				DTC144EE TL	G3070075		
R 0801	CHIP RES.	3.3K	1/16W	5%	RMC1/16 332JATP	J24185332		
R 0802	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0804	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 0805	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0806	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0807	CHIP RES.	270K	1/16W	5%	RMC1/16 274JATP	J24185274		
R 0808	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0809	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 0810	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 0812	CHIP RES.	3.3K	1/16W	5%	RMC1/16 332JATP	J24185332		
R 0813	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0814	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 0815	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 0816	CHIP RES.	27K	1/16W	5%	RMC1/16 273JATP	J24185273		
VR0801	POT.	10K			RH03AVA14X01A	J50785103		

Notes

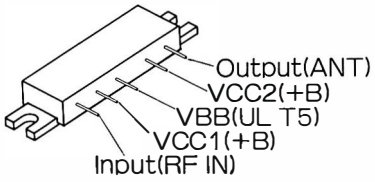
144-MHz Power Amplifier (PA) Unit



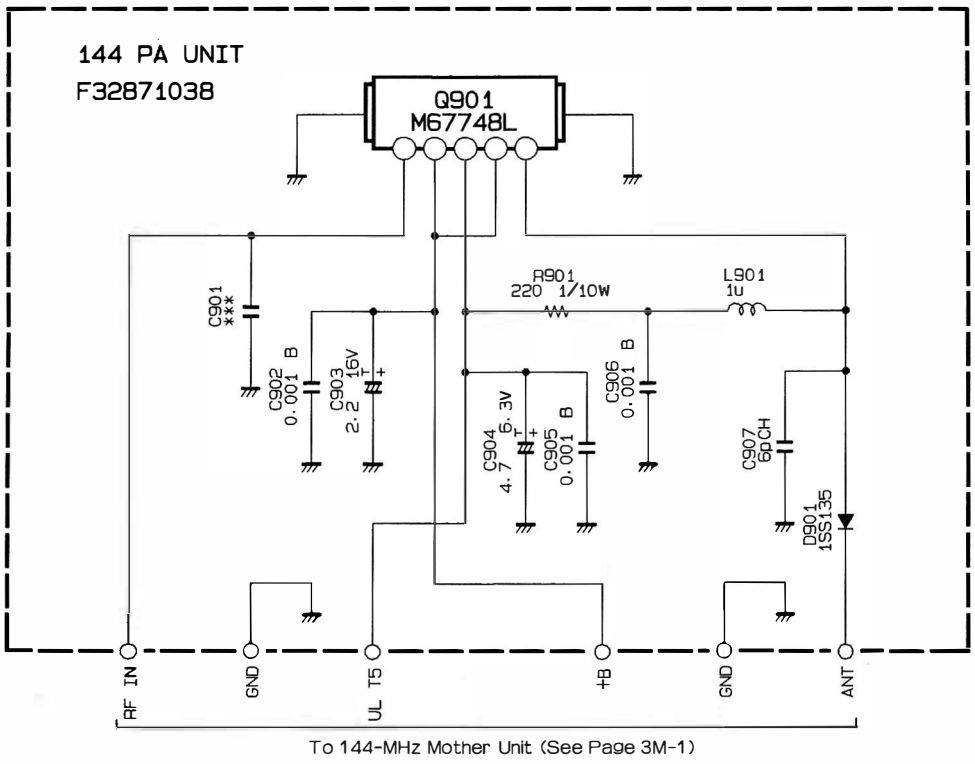
component side



chip-only side



M67748L
(Q901)



To 144-MHz Mother Unit (See Page 3M-1)

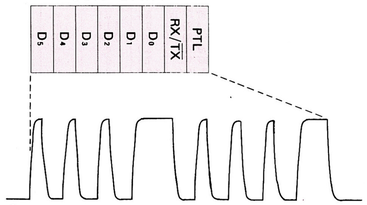
144-MHz Power Amplifier (PA) Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** 144-MHz PA UNIT ***						
	PCB With Components					CP4063001		
	Printed Circuit Board					F3287103A		
C 0902	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0903	TANTALUM CHIP CAP.	2.2uF	16V		TEMSVA1C225M-8R	K78120015		
C 0904	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 0905	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0906	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 0907	CHIP CAP.	6pF	50V	CH	GRM39CH060D50PT	K22174207		
D 0901	DIODE				1SS135 T-77	G2060005		
L 0901	M.RFC	1uH			LER015T1R0M	L1690119		
Q 0901	IC				M67748L	G1091200		
R 0901	CHIP RES.	220	1/10W	5%	RMC1/10T 221J	J24205221		
	SHIELD PLATE					R0142640		

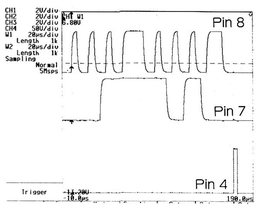
Notes

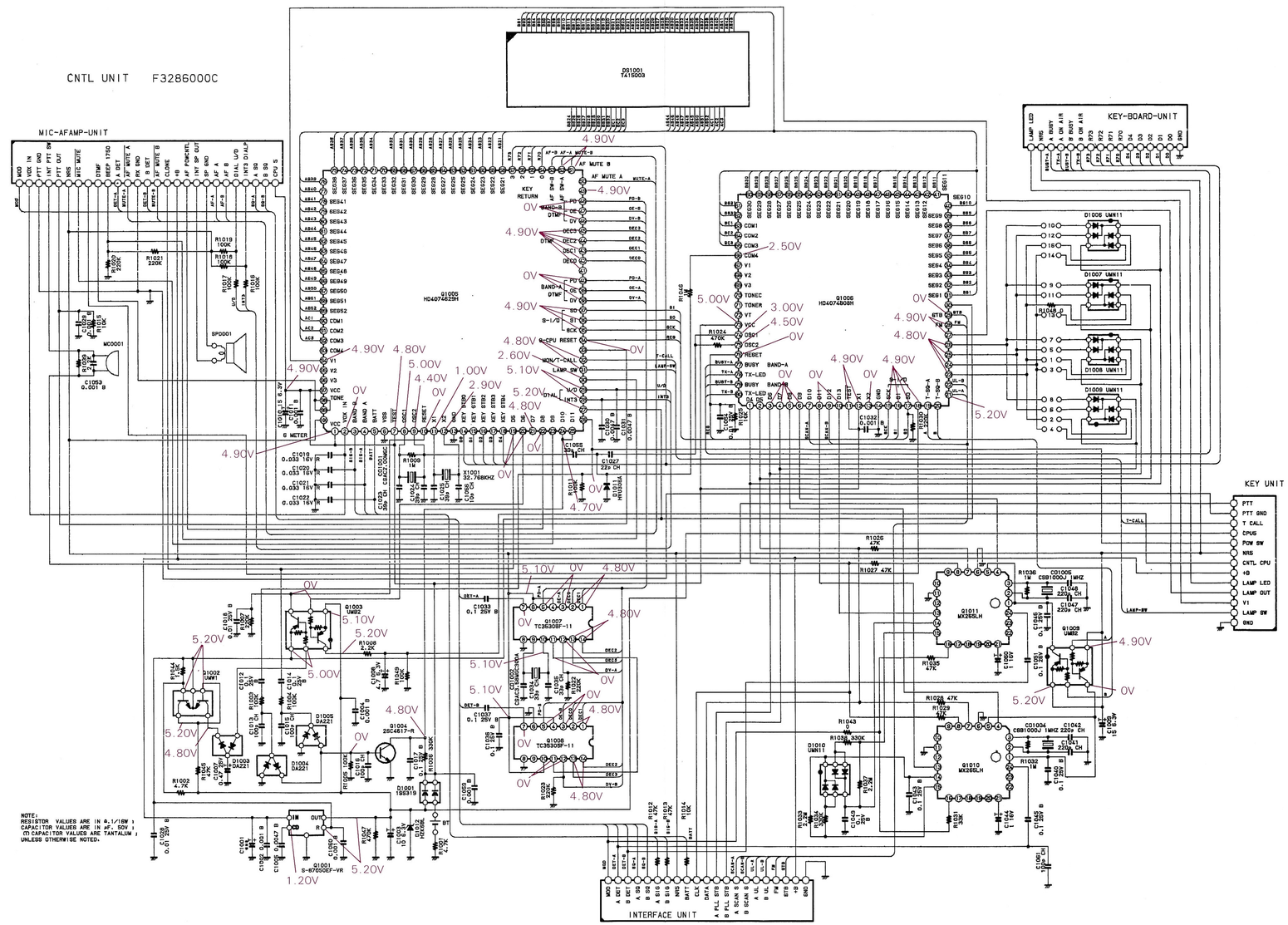
PCB Addr.	Pin #	Pin Name	Rx	Rx Save	Tx	Notes
Q1001	5	IN	11.4	←	10.7	
Q1005	3	AN1	0.4	0.4	0.1	
	4	AN2	0.3	0.2	1.0	
	5	AN3	3.4	3.4	3.3	
	23	MIC-MT	0	←	4.8	
	33	PTTOUT	0	←	5.2	
	35	SCK	S 4.9	←	←	S: Square Wave
	36	SO	S 4.9	←	←	S: Square Wave
	37	SI	S 4.9	←	←	S: Square Wave
	50	MUTE-A	4.9	0	←	
	51	MUTE-B	4.9	0	←	
	98	COLUMN	0	←	DA 5.0	D: DTMF Tx; A: max. DC offset
	99	ROW	0	←	DA 5.0	D: DTMF Tx; A: max. DC offset
Q1006	1	CLK	0	P 4.8	0	P: in sync with Save Pulse
	2	DATA	0	P 4.8	0	P: in sync with Save Pulse
	7	SCAN-A	5.0	P 5.0	0.6	P: in sync with Save Pulse
	9	SCAN-B	4.9	P 4.9	0.6	P: in sync with Save Pulse
	15	SCK	P 4.9	←	←	P: in sync with Save Pulse
	16	SI	P 4.9	←	←	P: in sync with Save Pulse
	17	SO	P 4.9	←	←	P: in sync with Save Pulse
	19	T-SQ-A	0	4.9	0	
	20	T-SQ-B	0	4.9	0	
	21	UL-A	U 5.2	←	←	U: Lock(Unlock: 0V)
	22	UL-B	U 4.9	U 5.0	←	U: Lock(Unlock: 0V)
	74	OSC1	A 3.0	←	←	A: max. DC offset
	75	OSC2	A 4.5	←	←	A: max. DC offset
	77	BUSY-A	0.2	4.9	←	
	78	TX-A	4.9	←	0.2	
	79	BUSY-B	0.2	4.9	←	
	80	TX-B	4.9	←	0.2	
Q1009	1	Coil	4.9	0	5.1	With Tone Squelch activated on both bands
	2	Base2	0	4.9	←	With Tone Squelch activated on both bands
	5	Base1	0	4.8	←	With Tone Squelch activated on both bands
Q1010	1	VDD	5.0	0	5.1	
	2	XTL	A 5.0	0	A 5.0	A: max. DC offset
	3	XTL	A 5.0	0	A 5.0	A: max. DC offset
	5	VDD	5.2	0	5.1	
	7	DATA	0.3	0	0.3	
	8	CLK	0.3	0	0.3	
	13	RXTDEC	0	0	5.1	
	14	DECCOM	4.8	0	←	
	15	RXTONE	5.1	0	←	
	16	TXTONE	1.6	1.6	1.9	
	21	BIAS	2.5	0	2.5	
	24	TONEIN	A 1.0	0	2.3	A: max. DC offset
Q1011	1	VDD	5.0	0	5.1	
	2	XTL	A 5.0	0	A 5.0	A: max. DC offset
	3	XTL	A 5.0	0	A 5.0	A: max. DC offset
	5	VDD	5.2	0	5.1	
	7	DATA	0.3	0	0.3	
	8	CLK	0.3	0	0.3	
	13	RXTDEC	0	0	5.1	
	14	DECCOM	4.8	0	←	
	15	RXTONE	5.1	0	←	
	16	TXTONE	1.6	1.6	1.9	
	21	BIAS	2.5	0	2.5	
	24	TONEIN	A 1.0	0	2.3	A: max. DC offset

8bit DATA

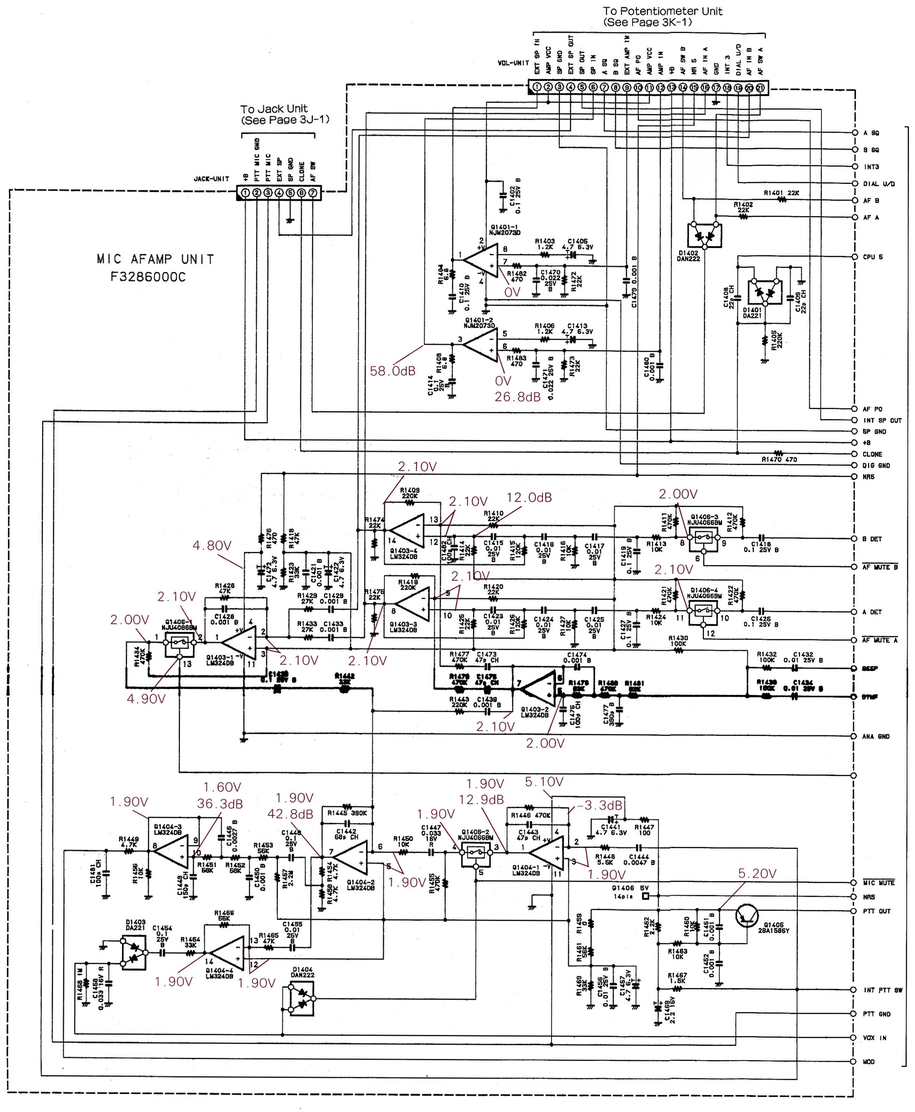


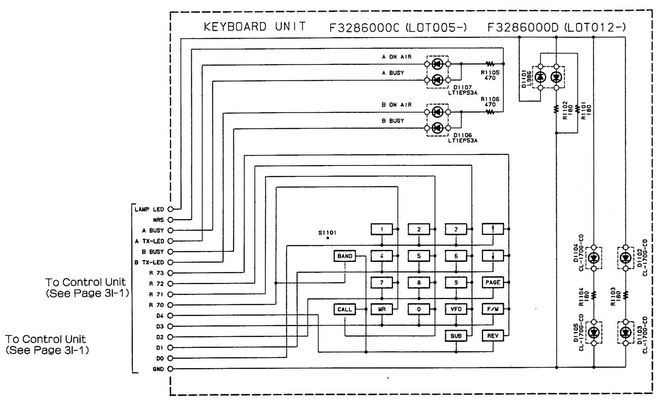
Q1010 Tone freq.=88.5Hz

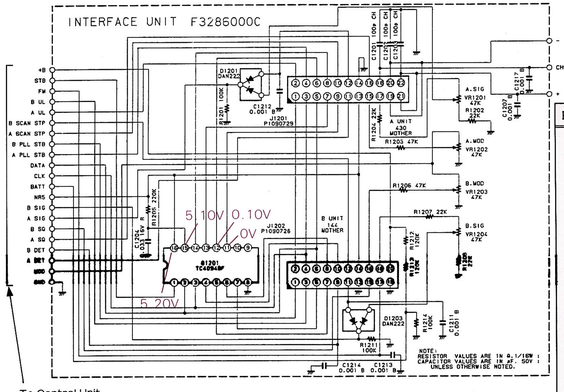


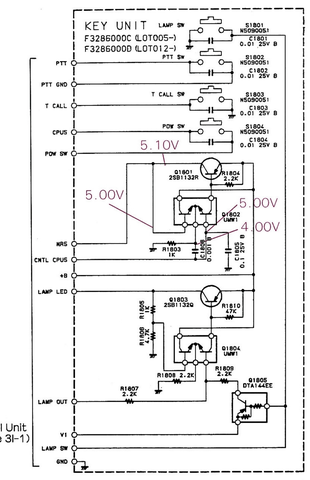


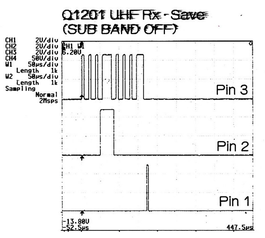
MIC AF Amplifier, Keyboard, Key & Interface Unit

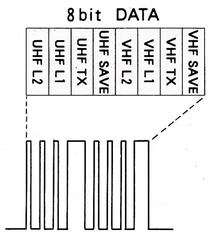












PCB Addr.	Pin #	Pin Name	RX	RX Save	TX	Notes
J1201	6	L1	0.1	0	5.0	
	7	TX	0.6	0	5.2	
	8	SAVE	0.6	P 5.2	0.6	P: in sync with Save Pulse
	9	L2	0	0	4.9	
	10	SCAN	0	P 5.0	0.6	P: in sync with Save Pulse
	11	DET	1.5	P 1.5	0	P: in sync with Save Pulse
	12	TEMP	0	←	1.3	
	15	MOD	0	←	0.8	
	16	SQ VOL	0	C 1.7	0	C: Squelch closed
	17	SIG	I 3.5	P 1.7	0	I: Input 435.00MHz, 20dBμ; P: in sync with Save Pulse
	18	CHG	11.6	←	11.4	
	19	-	0	←	←	
	20	-	0	←	←	
	21	+	B	←	←	B=0 with EXT DC, or Battery voltage
	22	+	B	←	←	B=0 with EXT DC, or Battery voltage

PCB Addr.	Pin #	Pin Name	RX	RX Save	TX	Notes
J1202	5	L2	0	←	5.2	
	7	TX	0.6	P 0.6	5.2	P: in sync with Save Pulse
	8	L1	0.1	P 0.1	4.9	P: in sync with Save Pulse
	9	DET	3.0	P 3.0	0.6	P: in sync with Save Pulse
	10	SAVE	0.6	P 5.2	0.6	P: in sync with Save Pulse
	11	TEMP	0	←	1.3	
	12	**SCAN**	**0**	**P 5.0**	**0.6**	**P: in sync with Save Pulse**
	15	**SQ VOL**	**0**	**C 1.8**	**0**	**C: Squelch closed**
	16	**MOD**	**0.5**	**A 0.5**	**0.5**	**A: max. DC offset**
	17	FM	0.1	0	←	
	18	SIG	I 2.4	P 0.5	0	I: Input 145.00MHz, 20dBμ; P: synced with Save Pulse
	20	+B	11.5	←	11.4	

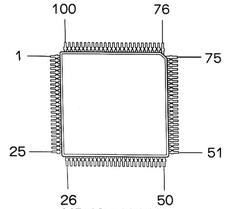
PCB Addr.	Pin #	Pin Name	RX	RX Save	TX	Notes
Q1201	1	STB	0	S 5.0	0	S: Square Wave
	2	DATA	0	S 5.0	0	S: Square Wave
	3	CLK	0	S 5.0	0	S: Square Wave
	4	SAVE	T 0.6	P 5.0	0.6	T: see Table 1; P: in sync with Save Pulse
	5	TX-B	T 0.6	P 0.6	5.1	T: see Table 1; P: in sync with Save Pulse
	6	L1-B	T 0.1	←	T 4.9	T: see Table 1
	7	L2-B	T 0	←	T 5.1	T: see Table 1
	13	TX-A	T 0.6	P 0.6	5.2	T: see Table 1; P: in sync with Save Pulse
	14	SAVE	T 0.6	P 5.1	0.6	T: see Table 1; P: in sync with Save Pulse
Q1401	1	SPIN	3.3	0.5	←	
	2	VCC	7.3	0	←	
	3	**SPIN**	**3.3**	**0.5**	←	
	5	**IN**	**0.6**	**0.4**	←	
	8	IN	0.6	0.4	←	
Q1405		Col	0	0	5.2	
		Base	5.2	5.2	4.5	
Q1406	3	IN-M	1.8	←	1.9	
	5	MUTE-M	0	0	4.8	
	8	MUTE-B	D 4.8	0	←	D: Dual Band Rx
	9	IN-B	A 3.3	←	2.0	A: max. DC offset
	10	IN-A	A 3.2	←	2.0	A: max. DC offset
	12	MUTE-A	D 4.9	0	←	D: Dual Band Rx
Q1801		Base	11.1	11.0	10.8	
		Emit	10.5	10.5	10.2	
Q1802	1	Col1	11.4	11.4	11.0	
	2	Col2	10.8	10.8	10.3	
Q1803		Col	0	←	←	Lamp on= 5.9
		Base	11.3	11.4	10.8	Lamp on=11.3
Q1804		Emit	11.3	11.3	11.0	Lamp on=10.7
	1	Col1	11.4	11.4	10.8	Lamp on=11.3
	2	Col2	11.3	11.3	10.8	Lamp on=10.6
	3	Base2	0	←	←	Lamp on= 4.8
	4	Emit	0	←	←	Lamp on= 4.2
	5	Basel	0	←	←	Lamp on= 4.9
Q1805		Col	0	←	←	Lamp on= 4.8
		Base	4.8	←	←	Lamp on= 4.8
		Emit	4.8	←	←	Lamp on= 4.8

PCB Addr.	Pin #	Pin Name	RX	RX Save	TX	Notes
J1601	1	+B	11.5	←	11.1	
	3	PTT MIC	5.2	←	1.8	
	7	AF SW	0.0	←	←	using EXT MIC: 3.6V
J1701	1	EX SP IN	3.4	0.6	←	Sub Band off
	2	AMP VCC	7.6	0	←	Sub Band off
	4	EX SP OUT	0.1	0	←	Sub Band off
	6	INT SP IN	3.4	0.6	←	Sub Band off
	7	A SQ.	0	C 1.8	0	Sub Band off; C: squelch closed
	8	B SQ	0	C 1.8	0	Sub Band off; C: squelch closed
	10	AF PO	5.0	0	←	Sub Band off
	11	AMP VCC	7.5	0	←	Sub Band off
	16	AF IN A	W 0.2	0	←	Sub Band off; W: White Noise
	20	AF IN B	W 0.2	0	←	Sub Band off; W: White Noise

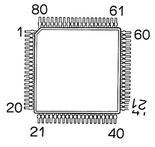
Table 1

VHF	VHF Low	VHF High	U&U Low	U&U High	Tx High	Tx Low1	Tx Low2	Tx Low3	Save ON	Save OFF	Tx	Rx
Save	X	X	X	X	X	X	X	X	H	L	X	X
Tx B	L	L	L	L	H	L	H	H	X	X	H	L
L1 B	L	L	H	L	H	L	L	H	X	X	X	X
L2 B	H	L	H	L	H	L	L	L	X	X	X	X

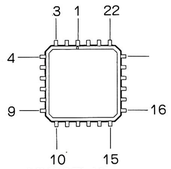
UHF	UHF Low	UHF High	V&V	V&V LO	Tx High	Tx Low1	Tx Low2	Tx Low3	Save ON	Save OFF	Tx	Rx
Save	X	X	X	X	X	X	X	X	H	L	X	X
Tx A	L	L	L	L	H	L	H	H	X	X	H	L
L1 A	L	L	H	L	H	L	L	H	X	X	X	X
L2-A	H	L	L	H	H	L	H	L	X	X	X	X



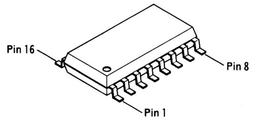
HD4074629H
(Q1005)



HD4074808H
(Q1006)



MX265LH
(Q1010, 1011)



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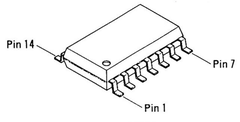
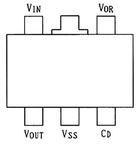
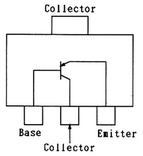
(Q1201)



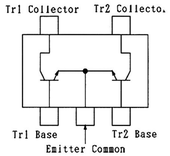
TC35305F
(Q1007, 1008)
LM324DB
(Q1403, 1404)
NJU4066BM
(Q1406)



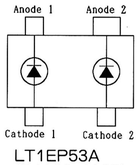
S-87050EF (VR)
(Q1001)



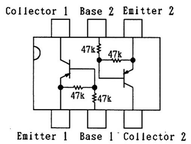
2SB1132
(Q1801, 1803)



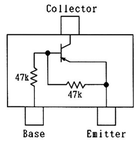
UMW1 (W1)
(Q1002, 1802, 1804)



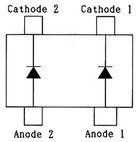
LT1EP53A
(D1106, 1107)



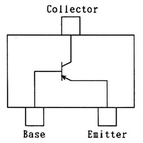
UMB2 (B2)
(Q1003, 1009)



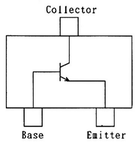
DTA144EE (16)
(1805)



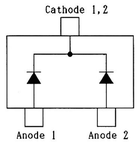
1SS319 (A4)
(D1001)



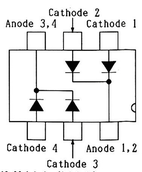
2SA1586Y (SO)
(Q1405)



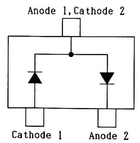
2SC4617 (BR)
(Q1004)



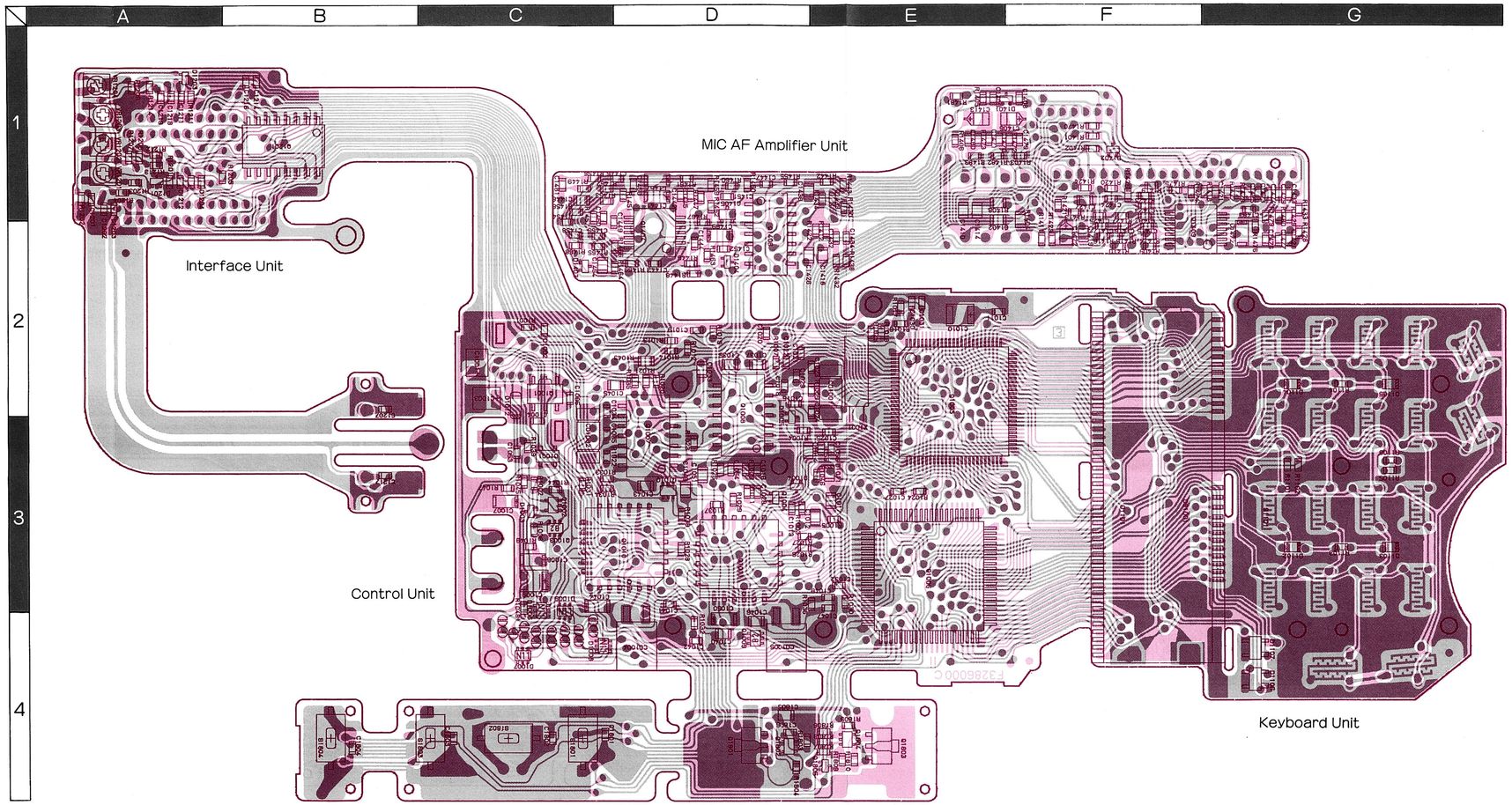
DAN222 (N)
(D1201, 1203
1402, 1404)

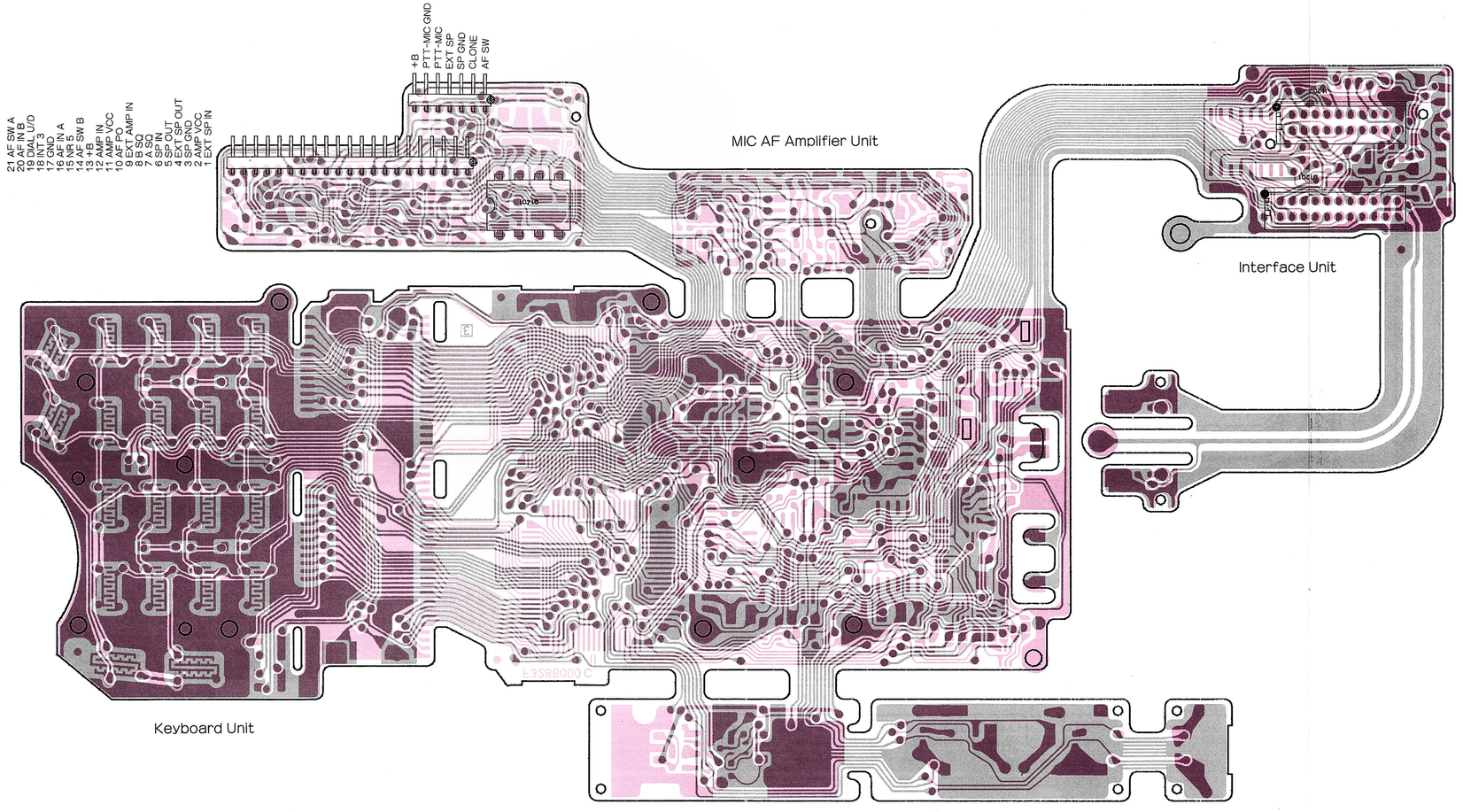


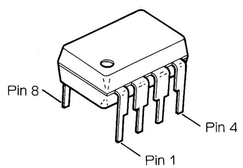
UMN11 (N11)
(D1006, 1007, 1008
1009, 1010)



DA221 (K)
(D1003, 1004, 1005
1401, 1403







NJM2073D
(Q1401)

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** CNTL UNIT ***						
	PCB With CNTL,KEY,KEYBOARD,INTERFACE,MIC AF AMP UNIT					CA0815002	TYP A1	
	PCB With CNTL,KEY,KEYBOARD,INTERFACE,MIC AF AMP UNIT					CA0815003	TYP A2	
	PCB With CNTL,KEY,KEYBOARD,INTERFACE,MIC AF AMP UNIT					CA0815004	TYP A3	
	PCB With CNTL,KEY,KEYBOARD,INTERFACE,MIC AF AMP UNIT					CA0815005	TYP B1	
	PCB With CNTL,KEY,KEYBOARD,INTERFACE,MIC AF AMP UNIT					CA0815006	TYP B2	
	PCB With CNTL,KEY,KEYBOARD,INTERFACE,MIC AF AMP UNIT					CA0815007	TYP B3	
	PCB With CNTL,KEY,KEYBOARD,INTERFACE,MIC AF AMP UNIT					CA0815008	TYP C1	
	PCB With CNTL,KEY,KEYBOARD,INTERFACE,MIC AF AMP UNIT					CA0815009	TYP C2	
	PCB With CNTL,KEY,KEYBOARD,INTERFACE,MIC AF AMP UNIT					CA0815010	TYP C3	
	PCB With CNTL,KEY,KEYBOARD,INTERFACE,MIC AF AMP UNIT					CA0815011	TYP D	
	PCB With CNTL,KEY,KEYBOARD,INTERFACE,MIC AF AMP UNIT					CA0815012	TYP H1	
	PCB With CNTL,KEY,KEYBOARD,INTERFACE,MIC AF AMP UNIT					CA0815013	TYP H2	
	PCB With CNTL,KEY,KEYBOARD,INTERFACE,MIC AF AMP UNIT					CA0815014	TYP H3	
	Printed Circuit Board					F3286000C		
C 1002	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1003	TANTALUM CHIP CAP.	10uF	6.3V		TEMSVB20J106M-8R	K78080019		
C 1004	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1005	CHIP CAP.	0.0047uF	50V	B	GRM39B472M50PT	K22174817		
C 1007	TANTALUM CHIP CAP.	0.47uF	25V		TESVA1E474M1-8R	K78140009		
C 1008	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 1009	TANTALUM CHIP CAP.	15uF	6.3V		TEMSVB20J156M-8R	K78080023		
C 1010	TANTALUM CHIP CAP.	15uF	6.3V		TEMSVB20J156M-8R	K78080023		
C 1011	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1012	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1013	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 1014	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1015	CHIP CAP.	0.033uF	16V	R	GRM39R333K16PT	K22124801		
C 1016	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 1017	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1018	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 1019	CHIP CAP.	0.033uF	16V	R	GRM39R333K16PT	K22124801		
C 1020	CHIP CAP.	0.033uF	16V	R	GRM39R333K16PT	K22124801		
C 1021	CHIP CAP.	0.033uF	16V	R	GRM39R333K16PT	K22124801		
C 1022	CHIP CAP.	0.033uF	16V	R	GRM39R333K16PT	K22124801		
C 1023	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		
C 1024	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		
C 1025	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		
C 1027	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		
C 1028	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 1029	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1030	CHIP CAP.	0.0047uF	50V	B	GRM39B472M50PT	K22174817		
C 1031	CHIP CAP.	0.0047uF	50V	B	GRM39B472M50PT	K22174817		
C 1032	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1033	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1034	CHIP CAP.	33pF	50V	CH	GRM39CH330J50PT	K22174223		
C 1035	CHIP CAP.	33pF	50V	CH	GRM39CH330J50PT	K22174223		
C 1036	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		

Control Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
C 1037	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1040	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1041	CHIP CAP.	220pF	50V	CH	GRM39CH221J50PT	K22174243		
C 1042	CHIP CAP.	220pF	50V	CH	GRM39CH221J50PT	K22174243		
C 1043	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1044	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 1045	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1046	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1047	CHIP CAP.	220pF	50V	CH	GRM39CH221J50PT	K22174243		
C 1048	CHIP CAP.	220pF	50V	CH	GRM39CH221J50PT	K22174243		
C 1049	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1050	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 1051	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1053	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1054	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 1055	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		
C 1056	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		
C 1059	CERAMIC CAP.	0.001uF	50V	B	UP050B102K-A-B	K28179001		
C 1060	CERAMIC CAP.	0.001uF	50V	B	UP050B102K-A-B	K28179001		
C 1061	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
CO1001	CERAMIC OSC				CSAC2.00MGC-TC	H7900800		
CO1002	CERAMIC OSC				CSAC3.58MGC300A-TC	H7900790		
CO1004	CERAMIC OSC		1MHz		CSB1000J221T	H7900550		
CO1005	CERAMIC OSC		1MHz		CSB1000J221T	H7900550		
D 1001	DIODE				1SS319 TE85R	G2070080		
D 1003	DIODE				DA221 TL	G2070178		
D 1004	DIODE				DA221 TL	G2070178		
D 1005	DIODE				DA221 TL	G2070178		
D 1006	DIODE				UMN11 TN	G2070198		
D 1007	DIODE				UMN11 TN	G2070198		
D 1008	DIODE				UMN11 TN	G2070198		
D 1009	DIODE				UMN11 TN	G2070198		
D 1010	DIODE				UMN11 TN	G2070198		
D 1011	DIODE				HVU306A5TRF	G2070132		
D 1012	DIODE				HZK6BL-TR	G2070294		
DS1001	LCD				T415003	G6090090		
Q 1001	IC				S-87050EF-VR-T1	G1091342		C2
Q 1002	TRANSISTOR				UMW1 TR	G3070078		C3
Q 1003	TRANSISTOR				UMB2 TN	G3070082		C3
Q 1004	TRANSISTOR				2SC4617 TL R	G3346178R		D3
Q 1005	IC				HD4074629H	G1091667		E2
Q 1006	IC				HD4074808H	G1091669		E3
Q 1007	IC				TC35305F-11 TP2	G1091177		D3
Q 1008	IC				TC35305F-11 TP2	G1091177		D2
Q 1009	TRANSISTOR				UMB2 TN	G3070082		D4
Q 1010	IC				MX265LH-TR	G1091588		D3
Q 1011	IC				MX265LH-TR	G1091588		D3

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
R 1001	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 1002	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 1003	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 1004	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 1005	CHIP RES.	330K	1/16W	5%	RMC1/16 334JATP	J24185334		
R 1006	CHIP RES.	330K	1/16W	5%	RMC1/16 334JATP	J24185334		
R 1007	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 1008	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 1009	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		
R 1011	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 1012	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 1013	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 1014	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 1015	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 1016	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 1017	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 1018	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 1019	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 1020	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 1021	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 1022	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 1023	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 1024	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1025	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 1026	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 1027	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 1028	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 1029	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 1030	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 1031	CHIP RES.	33K	1/16W	5%	RMC1/16 333JATP	J24185333		
R 1032	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		
R 1033	CHIP RES.	2.2M	1/16W	5%	RMC1/16 225JATP	J24185225		
R 1034	CHIP RES.	330K	1/16W	5%	RMC1/16 334JATP	J24185334		
R 1035	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 1036	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		
R 1037	CHIP RES.	2.2M	1/16W	5%	RMC1/16 225JATP	J24185225		
R 1038	CHIP RES.	330K	1/16W	5%	RMC1/16 334JATP	J24185334		
R 1039	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 1043	CHIP RES.	0	1/10W	5%	RMC1/10T 000J	J24205000		
R 1044	CHIP RES.	1.5K	1/16W	5%	RMC1/16 152JATP	J24185152		
R 1045	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 1046	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		
R 1047	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1048	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		
R 1049	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
X 1001	XTAL	32.768KHz				H0103024		
	METAL HOLDER					R0517510		
	RUBBER CONDUCTOR(2pcs)					R7142650		
	DOUBLE FACE ADHESIVE					R7143900		
	SHIELD PLATE					R0807200		

Keyboard Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** KEYBOARD UNIT ***						
D 1101	LED				L986	G2090531		
D 1102	LED				CL-170G-CD-T	G2070226		
D 1103	LED				CL-170G-CD-T	G2070226		
D 1104	LED				CL-170G-CD-T	G2070226		
D 1105	LED				CL-170G-CD-T	G2070226		
D 1106	LED				LT1EP53A	G2070066		
D 1107	LED				LT1EP53A	G2070066		
R 1101	CHIP RES.	180	1/16W	5%	RMC1/16 181JATP	J24185181		
R 1102	CHIP RES.	180	1/16W	5%	RMC1/16 181JATP	J24185181		
R 1103	CHIP RES.	180	1/16W	5%	RMC1/16 181JATP	J24185181		
R 1104	CHIP RES.	180	1/16W	5%	RMC1/16 181JATP	J24185181		
R 1105	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 1106	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** INTERFACE UNIT ***						
C 1201	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 1202	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 1203	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 1204	CHIP CAP.	0.033uF	16V	R	GRM39R333K16PT	K22124801		
C 1207	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1211	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1212	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1213	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1214	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1217	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
D 1201	DIODE				DAN222 TL	G2070174		
D 1203	DIODE				DAN222 TL	G2070174		
J 1201	CONNECTOR				52022-2210	P1090729		
J 1202	CONNECTOR				52022-2010	P1090728		
Q 1201	IC				TC4094BF TP2	G1091346		B1
R 1201	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 1202	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 1203	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 1204	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 1205	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 1206	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 1207	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 1208	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 1211	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 1212	CHIP RES.	120K	1/16W	5%	RMC1/16 124JATP	J24185124		
R 1213	CHIP RES.	120K	1/16W	5%	RMC1/16 124JATP	J24185124		
R 1214	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
VR1201	POT.	47K			RH03AYAS4X	J51778473		
VR1202	POT.	47K			RH03AYAS4X	J51778473		
VR1203	POT.	47K			RH03AYAS4X	J51778473		
VR1204	POT.	47K			RH03AYAS4X	J51778473		

MIC AF Amplifier Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** MIC AF AMP UNIT ***						
C 1402	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1405	TANTALUM CHIP CAP.	4.7uF	6.3V		F950J475MSAAF1Q2	K78080002		
C 1408	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		
C 1409	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		
C 1410	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1413	TANTALUM CHIP CAP.	4.7uF	6.3V		F950J475MSAAF1Q2	K78080002		
C 1414	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1415	CHIP CAP.	0.01uF	25V	B	GRM39B103K25PT	K22144803		
C 1416	CHIP CAP.	0.01uF	25V	B	GRM39B103K25PT	K22144803		
C 1417	CHIP CAP.	0.01uF	25V	B	GRM39B103K25PT	K22144803		
C 1418	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1419	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1421	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1422	TANTALUM CHIP CAP.	4.7uF	6.3V		F950J475MSAAF1Q2	K78080002		
C 1423	CHIP CAP.	0.01uF	25V	B	GRM39B103K25PT	K22144803		
C 1424	CHIP CAP.	0.01uF	25V	B	GRM39B103K25PT	K22144803		
C 1425	CHIP CAP.	0.01uF	25V	B	GRM39B103K25PT	K22144803		
C 1426	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1427	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1428	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1429	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1432	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 1433	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1434	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 1438	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1439	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1441	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 1442	CHIP CAP.	68pF	50V	CH	GRM39CH680J50PT	K22174231		
C 1443	CHIP CAP.	47pF	50V	CH	GRM39CH470J50PT	K22174227		
C 1444	CHIP CAP.	0.0047uF	50V	B	GRM39B472M50PT	K22174817		
C 1446	CHIP CAP.	0.0027uF	50V	B	GRM39B272M50PT	K22174814		
C 1447	CHIP CAP.	0.033uF	16V	R	GRM39R333K16PT	K22124801		
C 1448	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1449	CHIP CAP.	150pF	50V	CH	GRM39CH151J50PT	K22174239		
C 1450	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1451	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1452	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1454	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1455	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 1456	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 1457	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 1458	CHIP CAP.	0.033uF	16V	R	GRM39R333K16PT	K22124801		
C 1469	TANTALUM CHIP CAP.	2.2uF	16V		TEMSVA1C225M-8R	K78120015		
C 1470	CHIP CAP.	0.022uF	25V	B	GRM39B223K25PT	K22144807		
C 1471	CHIP CAP.	0.022uF	25V	B	GRM39B223K25PT	K22144807		
C 1472	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 1473	CHIP CAP.	47pF	50V	CH	GRM39CH470J50PT	K22174227		
C 1474	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1475	CHIP CAP.	47pF	50V	CH	GRM39CH470J50PT	K22174227		

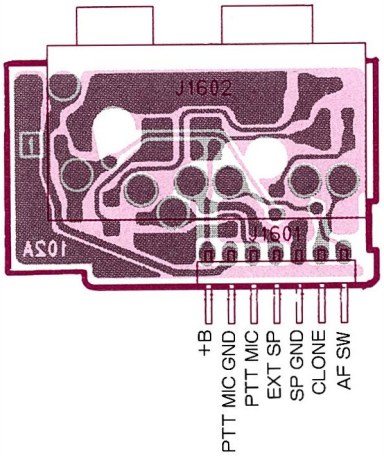
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
C 1476	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 1477	CHIP CAP.	390pF	50V	B	GRM39B391M50PT	K22174804		
C 1479	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1480	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1481	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 1482	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 1483	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
D 1401	DIODE				DA221 TL	G2070178		
D 1402	DIODE				DAN222 TL	G2070174		
D 1403	DIODE				DA221 TL	G2070178		
D 1404	DIODE				DAN222 TL	G2070174		
Q 1401	IC				NJM2073D	G1091355		
Q 1403	IC				LM324DB ELL2000	G1091351		F2
Q 1404	IC				LM324DB ELL2000	G1091351		D2
Q 1405	TRANSISTOR				2SA1586Y TE85R	G3115867Y		D1
Q 1406	IC				NJU4066BM(T2)	G1091433		D2
R 1401	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 1402	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 1403	CHIP RES.	1.2K	1/16W	5%	RMC1/16 122JATP	J24185122		
R 1404	CHIP RES.	6.8	1/10W	5%	RMC1/10T 6R8J	J24205689		
R 1405	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 1406	CHIP RES.	1.2K	1/16W	5%	RMC1/16 122JATP	J24185122		
R 1408	CHIP RES.	6.8	1/10W	5%	RMC1/10T 6R8J	J24205689		
R 1409	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 1410	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 1411	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1412	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1413	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 1414	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 1415	CHIP RES.	120K	1/16W	5%	RMC1/16 124JATP	J24185124		
R 1416	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 1418	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 1419	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 1420	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 1421	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1422	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1423	CHIP RES.	33K	1/16W	5%	RMC1/16 333JATP	J24185333		
R 1424	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 1425	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 1426	CHIP RES.	120K	1/16W	5%	RMC1/16 124JATP	J24185124		
R 1427	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 1428	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 1429	CHIP RES.	27K	1/16W	5%	RMC1/16 273JATP	J24185273		
R 1430	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 1432	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 1433	CHIP RES.	27K	1/16W	5%	RMC1/16 273JATP	J24185273		
R 1434	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1438	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		

MIC AF Amplifier Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
R 1442	CHIP RES.	33K	1/16W	5%	RMC1/16 333JATP	J24185333		
R 1443	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 1445	CHIP RES.	390K	1/16W	5%	RMC1/16 394JATP	J24185394		
R 1446	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1447	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		
R 1448	CHIP RES.	5.6K	1/16W	5%	RMC1/16 562JATP	J24185562		
R 1449	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 1450	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 1451	CHIP RES.	56K	1/16W	5%	RMC1/16 563JATP	J24185563		
R 1452	CHIP RES.	56K	1/16W	5%	RMC1/16 563JATP	J24185563		
R 1453	CHIP RES.	56K	1/16W	5%	RMC1/16 563JATP	J24185563		
R 1454	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 1455	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1456	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 1457	CHIP RES.	2.2M	1/16W	5%	RMC1/16 225JATP	J24185225		
R 1458	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 1459	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		
R 1460	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 1461	CHIP RES.	56K	1/16W	5%	RMC1/16 563JATP	J24185563		
R 1462	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 1463	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 1464	CHIP RES.	33K	1/16W	5%	RMC1/16 333JATP	J24185333		
R 1465	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 1466	CHIP RES.	56K	1/16W	5%	RMC1/16 563JATP	J24185563		
R 1467	CHIP RES.	1.5K	1/16W	5%	RMC1/16 152JATP	J24185152		
R 1468	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		
R 1469	CHIP RES.	33K	1/16W	5%	RMC1/16 333JATP	J24185333		
R 1470	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 1472	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 1473	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 1474	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 1475	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 1476	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 1477	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1478	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1479	CHIP RES.	82K	1/16W	5%	RMC1/16 823JATP	J24185823		
R 1480	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1481	CHIP RES.	82K	1/16W	5%	RMC1/16 823JATP	J24185823		
R 1482	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 1483	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** KEY UNIT ***						
C 1801	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 1802	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 1803	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 1804	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 1805	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1806	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
Q 1801	TRANSISTOR				2SB1132 T100 R	G3211327R		D4
Q 1802	TRANSISTOR				UMW1 TR	G3070078		D4
Q 1803	TRANSISTOR				2SB1132 T100 Q	G3211327Q		E4
Q 1804	TRANSISTOR				UMW1 TR	G3070078		E4
Q 1805	TRANSISTOR				DTA144EE TL	G3070074		E4
R 1803	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 1804	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 1805	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 1806	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 1807	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 1808	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 1809	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 1810	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
S 1801	TACT SWITCH				SKQDAA	N5090051		
S 1802	TACT SWITCH				SKQDAA	N5090051		
S 1803	TACT SWITCH				SKQDAA	N5090051		
S 1804	TACT SWITCH				SKQDAA	N5090051		

Notes



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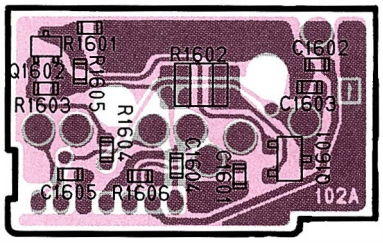
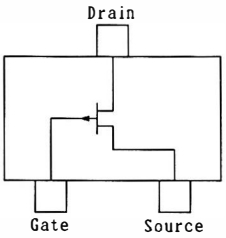
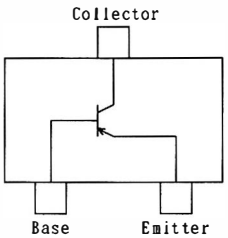


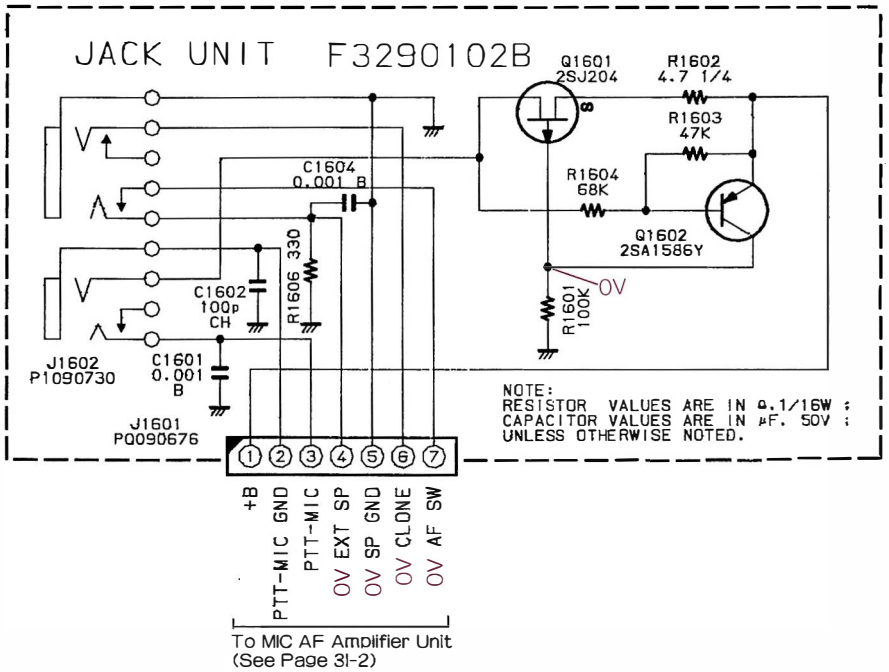
chip-only side



2SJ204 (H15)
(Q1601)



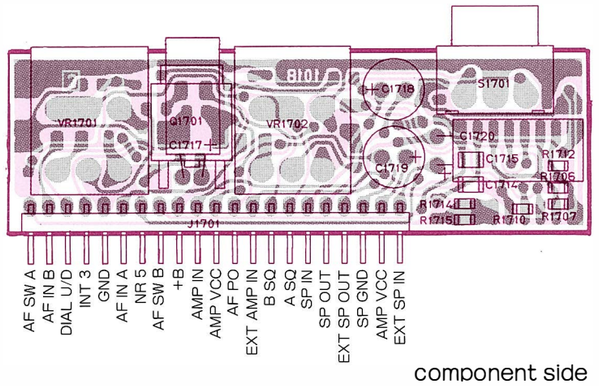
2SA1586Y
(Q1602)



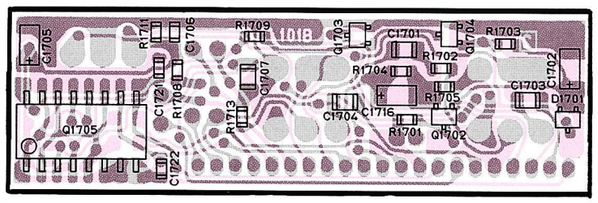
PCB Addr.	Pin #	Pin Name	RX	RX Save	TX	Notes
Q1601		Source	11.8	←	11.1	
		Drain	11.8	←	11.0	
Q1602		Base	11.8	←	11.0	
		Emit	11.8	←	11.1	using MH29A2B

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** JACK UNIT ***						
	PCB With Components					CA0820001		
	Printed Circuit Board					F3290102A		
C 1601	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 1602	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 1604	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
J 1601	CONNECTOR				9230B-1-07Z009-T	P0090676		
J 1602	CONNECTOR				HSJ1468-01-010	P1090730		
Q 1601	FET				2SJ204-T1B	G3702048		
Q 1602	TRANSISTOR				2SA1586Y TE85R	G3115867Y		
R 1601	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 1602	CHIP RES.	4.7	1/4W	5%	RMC1/4 4R7JATP	J24245479		
R 1603	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 1604	CHIP RES.	68K	1/16W	5%	RMC1/16 683JATP	J24185683		
R 1606	CHIP RES.	330	1/16W	5%	RMC1/16 331JATP	J24185331		
	MYLAR FILM					R7143000		

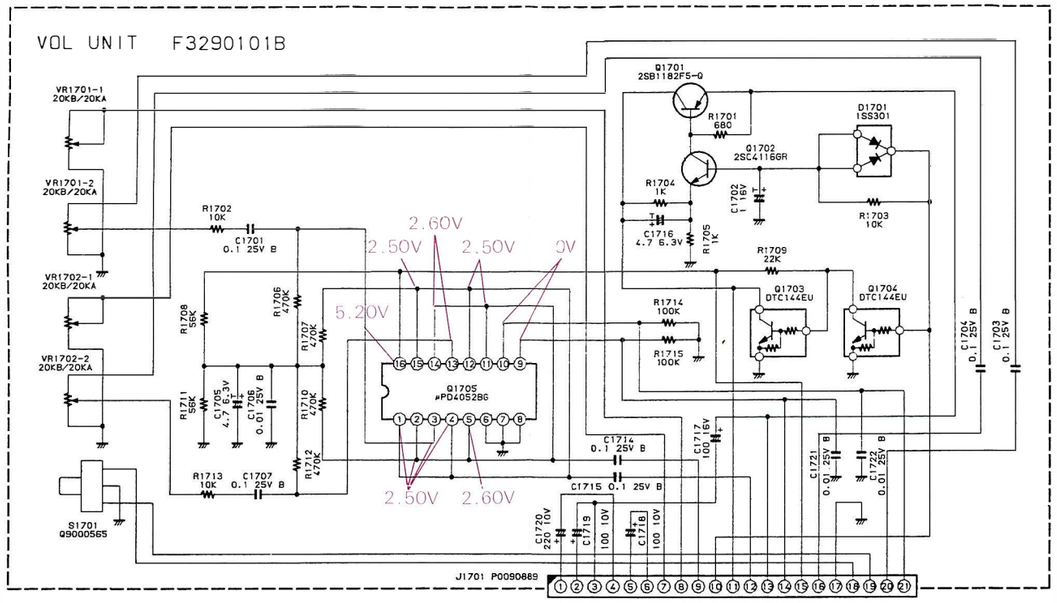
Notes



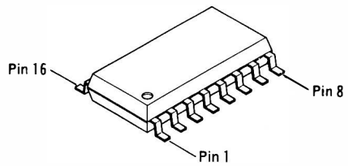
component side



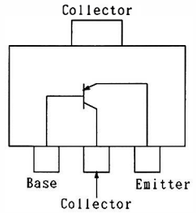
chip-only side



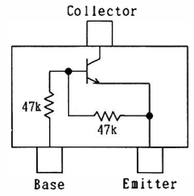
NOTE:
RESISTOR VALUES ARE IN Ω,1/16W :
CAPACITOR VALUES ARE IN μF, 50V :
(T) CAPACITOR VALUES ARE TANTALUM :
UNLESS OTHERWISE NOTED.



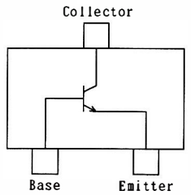
μPD4052BG
(Q1705)



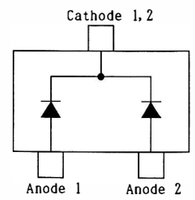
2SB1182
(Q1701)



DTC144EU (26)
(Q1703, 1704)



2SC4116GR (LG)
(Q1702)



1SS301 (B3)
(D1701)

PCB Addr.	Pin #	Pin Name	RX	RX Save	TX	Notes
Q1701		Col	7.3	0	←	
		Base	10.7	11.3	10.8	
		Emit	11.3	11.3	10.9	
Q1702		Col	11.9	11.9	11.1	
		Base	4.8	0	←	
		Emit	4.2	0	←	
Q1703		Col	7.3	0	←	
		Base	0	3.7	←	
Q1704		Col	0	3.7	←	
		Base	4.8	0	←	
Q1705	9	AFSW B	T 0.6	←	←	T: see Table 2
	10	AFSW A	T 0.6	←	←	T: see Table 2

Table 2 Audio Switching

AF SW A	AF SW B	Internal Speaker		External Speaker	
PIN 10	PIN 9	VHF	UHF	VHF	UHF
L	L	○	○	×	×
H	L	×	×	○	○
L	H	×	○	○	×
H	H	○	×	×	○

Potentiometer (VOL) Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** VOL UNIT ***						
	PCB With Components					CA0816001		
	Printed Circuit Board					F3290101B		
C 1701	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1702	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 1703	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1704	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1705	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 1706	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 1707	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1714	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1715	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 1716	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 1717	AL.ELECTRO.CAP.	100uF	16V		RE3-16V101M	K40129063		
C 1718	AL.ELECTRO.CAP.	100uF	10V		RE2-10V101M	K40109024		
C 1719	AL.ELECTRO.CAP.	100uF	10V		RE2-10V101M	K40109024		
C 1720	AL.ELECTRO.CAP.	220uF	10V		CEDSM1A221M	K40109027		
C 1721	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 1722	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
D 1701	DIODE				1SS301 TE85R	G2070086		
J 1701	CONNECTOR				9230B-1-21Z009-T	P0090889		
Q 1701	TRANSISTOR				2SB1182-TLQ	G3070063		
Q 1702	TRANSISTOR				2SC4116GR TE85R	G3341167G		
Q 1703	TRANSISTOR				DTC144EU T107	G3070041		
Q 1704	TRANSISTOR				DTC144EU T107	G3070041		
Q 1705	IC				UPD4052BG-T2	G1091033		
R 1701	CHIP RES.	680	1/16W	5%	RMC1/16 681JATP	J24185681		
R 1702	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 1703	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 1704	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 1705	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 1706	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1707	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1708	CHIP RES.	56K	1/16W	5%	RMC1/16 563JATP	J24185563		
R 1709	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 1710	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1711	CHIP RES.	56K	1/16W	5%	RMC1/16 563JATP	J24185563		
R 1712	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 1713	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 1714	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 1715	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
S 1701	ROTARY CODE S.W.				EC09P20-48	Q9000565		
VR1701	POT.	20K/20K		B/A	TP96D00	J62800116		
VR1702	POT.	20K/20K		B/A	TP96D00	J62800116		

Notes

*** 430 MOTHER UNIT ***

PCB Addr.	Pin #	Pin Name	RX	RX Save	TX	Notes
Q2001		Col	5.1	P 5.1	5.1	P: in sync with Save Pulse
		Base	0.6	P 5.0	0.6	P: in sync with Save Pulse
Q2002		Col	0.8	←	4.4	
		Base	0.5	←	0.4	
Q2005	1	OSCIN	2.3	P 2.3	←	P: in sync with Save Pulse
	6	DO	1.3	←	3.2	
	10	F-IN	2.7	S 4.0	←	S: Square Wave
	11	CLK	0	S 4.8	←	S: Square Wave
	13	DATA	0	S 4.8	←	S: Square Wave
	20	P.SAVE	5.0	P 5.0	←	P: in sync with Save Pulse
Q2007		Source	1.5	←	3.5	
		Gate	1.2	←	3.1	
Q2010		Col	0	←	0.7	
		Base	5.0	P 5.0	0.6	P: in sync with Save Pulse
Q2011	1	OSCIN	4.8	P 4.8	←	P: in sync with Save Pulse
	2	OSCOUT	4.2	P 4.2	←	P: in sync with Save Pulse
	3	MIXOUT	4.0	P 4.0	0.1	P: in sync with Save Pulse
	4	VCC	4.9	P 4.9	0.6	P: in sync with Save Pulse
	5	LIM-IN	3.9	P 3.9	0.2	P: in sync with Save Pulse
	6	DEC1	3.9	P 3.9	0.2	P: in sync with Save Pulse
	7	DEC2	3.9	P 3.9	0.2	P: in sync with Save Pulse
	8	QUADIN	4.9	P 4.9	0.6	P: in sync with Save Pulse
	9	AF-OUT	A 1.5	A 1.5	0	A: max. DC offset
	10	FAMPIN	A 0.4	A 0.4	0	A: max. DC offset
	11	FAMPOU	3.5	A 3.5	0	A: max. DC offset
	12	SQSWIN	0	C 1.6	0	C: Squelch closed
	13	SMETER	1.5	A 1.5	0	A: max. DC offset
	14	SQSWOU	0	P 5.0	0.6	P: in sync with Save Pulse
	16	MIX-IN	1.7	P 1.8	0.6	P: in sync with Save Pulse
Q2012		Col	3.8	P 3.8	0	P: in sync with Save Pulse
		Base	0.6	P 0.6	0	P: in sync with Save Pulse
Q2013		Col	4.1	P 4.1	0.6	P: in sync with Save Pulse
		Base	0.7	0.7	0	
Q2014		Col	1.6	1.6	0	
		Base	0	0	4.8	
Q2015		Col	3.6	P 3.6	0.1	P: in sync with Save Pulse
		Base	0.6	P 0.6	0	P: in sync with Save Pulse
Q2016		Col	3.7	P 3.7	0	P: in sync with Save Pulse
		Base	0.7	P 0.7	0	P: in sync with Save Pulse
Q2017		Col	11.8	←	11.4	
		Base	11.1	←	10.8	
		Emit	11.8	←	11.4	

*** 430 VCO UNIT (Daughterboard) ***

Pin #	Pin Name	RX	RX Save	TX	Notes
2	VCV	1.3	←	3.1	f=435.00MHz
4	MOD	4.5	—	4.5	
6	SV 5	5.1	P 5.1	5.1	P: in sync with Save Pulse

*** 430 SW UNIT (Daughterboard) ***

Pin #	Pin Name	RX	RX Save	TX	Notes
1	UR5	5.0	P 5.0	0	P: in sync with Save Pulse
4	L1	0	←	4.9	
5	L2	0.1	←	4.9	
7	TX	0.6	P 0.6	5.2	P: in sync with Save Pulse
8	SAVE	0.6	P 5.2	0.6	P: in sync with Save Pulse
11	SV5	5.2	P 5.2	5.2	P: in sync with Save Pulse
13	T5	0	←	5.2	
14	R5	5.1	P 5.1	0.6	P: in sync with Save Pulse
15	+B	11.5	←	11.2	

*** 430 APC UNIT (Daughterboard) ***

Pin #	Pin Name	RX	RX Save	TX	Notes
1	DET	0	←	2.6	
2	+B	11.5	←	11.2	
3	ULT5	0	←	5.2	
4	APC	0.7	←	10.9	
5	L2	0	←	4.9	
6	L1	0.1	←	4.9	
7	T5	0	←	5.2	
8	INH	4.6	P 4.6	0.3	P: in sync with Save Pulse

*** 430 PA UNIT (Daughterboard) ***

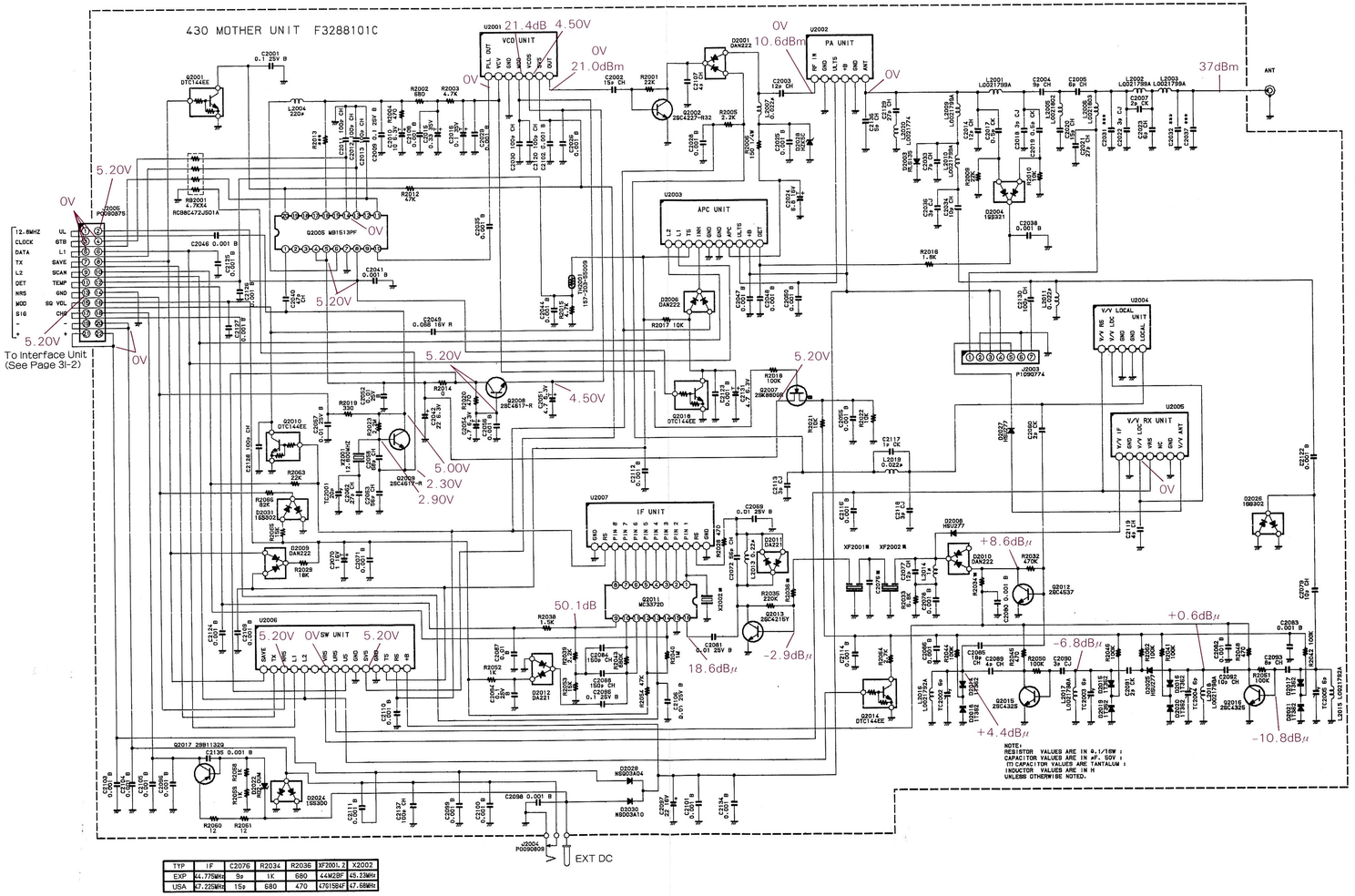
Pin #	Pin Name	RX	RX Save	TX	Notes
3	+B	11.4	←	11.0	
4	ULT5	0	←	5.2	

*** V&V RX UNIT (Daughterboard) ***

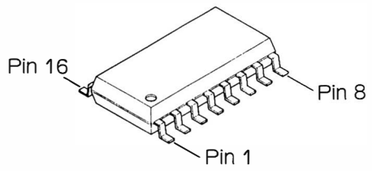
Pin #	Pin Name	RX	RX Save	TX	Notes
1	V/V ANT	1.5	P 1.5	—	P: in sync with Save Pulse
3	VR 5	4.1	P 4.1	—	P: in sync with Save Pulse
6	V/V IF	3.1	P 3.1	—	P: in sync with Save Pulse

*** 430 IF UNIT (Daughterboard) ***

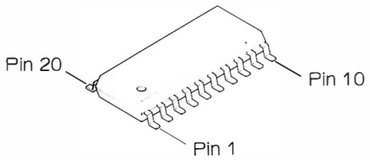
Pin #	Pin Name	RX	RX Save	TX	Notes
2	R5	5.1	P 5.1	0.6	P: in sync with Save Pulse



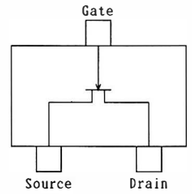
TYP	IF	C2076	R2034	R2036	XF2001,2	X2002
EXP	44.775MHz	9p	1K	680	44M2BF	45.23MHz
USA	47.225MHz	15p	680	470	47015B4F	47.68MHz



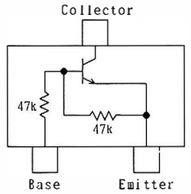
MC3372DR
(Q2011)



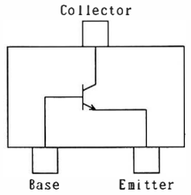
MB1513PFV
(Q2005)



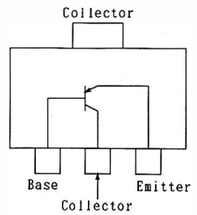
2SK880GR (XG)
(Q2007)



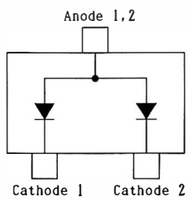
DTC144EE (26)
(Q2001, 2010, 2014
2018)



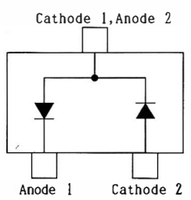
2SC4215Y (QY)
(Q2013)
2SC4227 (R32)
(Q2002)
2SC4325 (MO)
(Q2015, 2016)
2SC4537 (IS)
(Q2012)
2SC4617 (BR)
(Q2008, 2009)



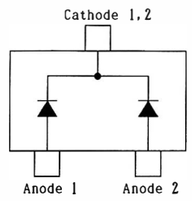
2SB1132
(Q2017)



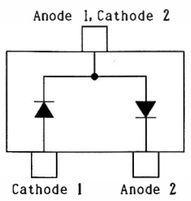
1SS300 (A3)
(D2024)



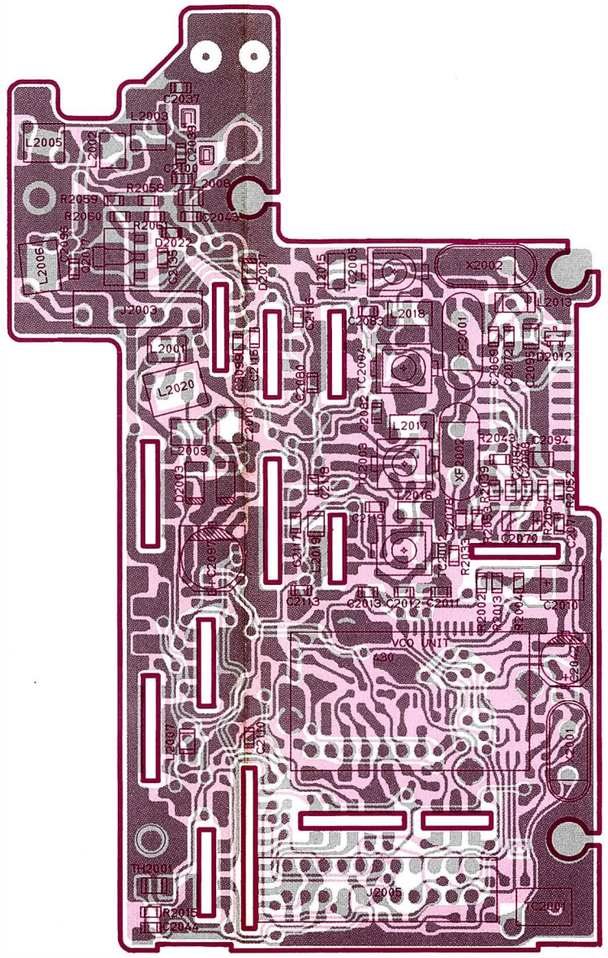
1SS302 (C3)
(D2026, 2031)



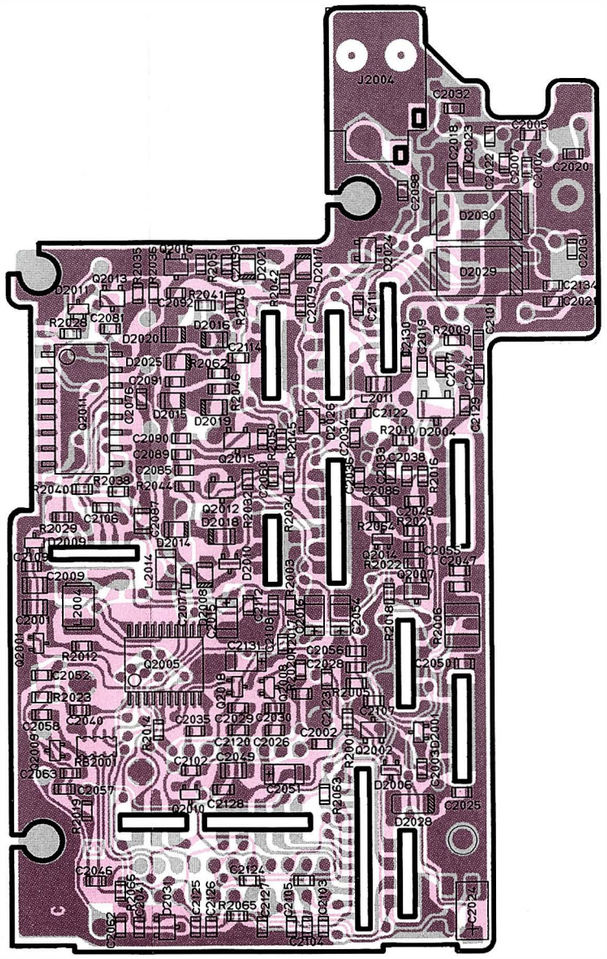
1SS321 (F9)
(D2004)
DAN222 (N)
(D2001, 2006, 2009
2010)



DA221 (K)
(D2011, 2012)



component side



chip-only side

J2005
To Interface Unit

1. 12.8MHz	2. UL
3. CLOCK	4. STB
5. DATA	6. L1
7. TX	8. SAVE
9. L2	10. SCAN
11. DET	12. TEMP
13. NR5	14. GND
15. MOD	16. SQ VOL
17. SIG	18. CHG
19. –	20. –
21. +	22. +

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** 430-MHz MOTHER UNIT ***						
	PCB With 430-MHz MOTHER, VCO, SW, APC, PA, V&V RX, IF, V&V LOCAL UNIT					CP3844002	DST EXP	
	PCB With 430-MHz MOTHER, VCO, SW, APC, PA, V&V RX, IF, V&V LOCAL UNIT					CP3844003	DST USA	
	Printed Circuit Board					F3288101C		
C 2001	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 2002	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		
C 2003	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		
C 2004	CHIP CAP.	9pF	50V	CH	GRM39CH090D50PT	K22174210		
C 2005	CHIP CAP.	6pF	50V	CH	GRM39CH060D50PT	K22174207		
C 2007	CHIP CAP.	2pF	50V	CK	GRM39CK020C50PT	K22174203		
C 2009	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 2010	TANTALUM CHIP CAP.	10uF	6.3V		TEMSVB20J106M-8R	K78080019		
C 2011	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 2012	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 2013	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 2014	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		
C 2015	TANTALUM CHIP CAP.	0.33uF	35V		TESVA1V334M1-8R	K78160028		
C 2016	TANTALUM CHIP CAP.	0.1uF	35V		TESVA1V104M1-8R	K78160025		
C 2017	CHIP CAP.	0.5pF	50V	CK	GRM39CK0R5C50PT	K22174201		
C 2018	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		
C 2019	CHIP CAP.	0.5pF	50V	CK	GRM39CK0R5C50PT	K22174201		
C 2020	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215		
C 2021	CHIP CAP.	27pF	50V	CH	GRM39CH270J50PT	K22174221		
C 2022	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		
C 2023	CHIP CAP.	6pF	50V	CH	GRM39CH060D50PT	K22174207		
C 2024	TANTALUM CHIP CAP.	6.8uF	16V		TEMSVB21C685M-8R	K78120017		
C 2025	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2026	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2028	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2029	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2030	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 2033	CHIP CAP.	7pF	50V	CH	GRM39CH070D50PT	K22174208		
C 2034	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		
C 2035	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2036	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		
C 2038	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2040	CHIP CAP.	47pF	50V	CH	GRM39CH470J50PT	K22174227		
C 2041	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2042	AL. ELECTRO. CAP.	22uF	6.3V		ECEV0JA220R	K48080001		
C 2044	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2046	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2047	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2048	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2049	CHIP CAP.	0.068uF	16V	R	GRM40R683M16PT	K22120805		
C 2050	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2051	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 2052	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2054	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		

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REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
C 2055	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2056	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2057	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2058	CHIP CAP.	68pF	50V	CH	GRM39CH680J50PT	K22174231		
C 2060	CHIP CAP.	2pF	50V	CK	GRM39CK020C50PT	K22174203		
C 2062	CHIP CAP.	27pF	50V	CH	GRM39CH270J50PT	K22174221		
C 2063	CHIP CAP.	56pF	50V	CH	GRM39CH560J50PT	K22174229		
C 2069	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2070	TANTALUM CHIP CAP.	1uF	16V		TESVA1C105M1-8R	K78120009		
C 2071	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2072	CHIP CAP.	56pF	50V	CH	GRM39CH560J50PT	K22174229		
C 2076	CHIP CAP.	9pF	50V	CH	GRM39CH090D50PT	K22174210	TYP EXP	
C 2076	CHIP CAP.	15pF	50V	CH	GRM39CH150J50PT	K22174215	TYP USA	
C 2077	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		
C 2078	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2079	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		
C 2080	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2081	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2082	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2083	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2084	CHIP CAP.	150pF	50V	CH	GRM39CH151J50PT	K22174239		
C 2085	CHIP CAP.	18pF	50V	CH	GRM39CH180J50PT	K22174217		
C 2086	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2087	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817		
C 2088	CHIP CAP.	150pF	50V	CH	GRM39CH151J50PT	K22174239		
C 2089	CHIP CAP.	4pF	50V	CH	GRM39CH040C50PT	K22174205		
C 2090	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		
C 2091	CHIP CAP.	2pF	50V	CK	GRM39CK020C50PT	K22174203		
C 2092	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		
C 2093	CHIP CAP.	8pF	50V	CH	GRM39CH080D50PT	K22174209		
C 2094	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 2095	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 2096	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2097	AL.ELECTRO.CAP.	22uF	16V		ECEV1CA220P	K48120002		
C 2098	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2099	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2100	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2101	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2102	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2103	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2104	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2105	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2106	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 2107	CHIP CAP.	4pF	50V	CH	GRM39CH040C50PT	K22174205		
C 2108	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2109	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2110	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2111	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2112	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2113	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		
C 2114	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
C 2115	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2116	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2117	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		
C 2118	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		
C 2119	CHIP CAP.	4pF	50V	CH	GRM39CH040C50PT	K22174205		
C 2120	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 2122	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2123	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2124	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2125	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2126	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2127	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2128	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 2129	CHIP CAP.	27pF	50V	CH	GRM39CH270J50PT	K22174221		
C 2130	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 2131	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 2134	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2135	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 2136	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		
C 2137	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
D 2001	DIODE				DAN222 TL	G2070174		
D 2003	DIODE				RLS135 TE-11	G2070128		
D 2004	DIODE				1SS321 TE85R	G2070076		
D 2006	DIODE				DAN222 TL	G2070174		
D 2008	DIODE				HSU277	G2070118		
D 2009	DIODE				DAN222 TL	G2070174		
D 2010	DIODE				DAN222 TL	G2070174		
D 2011	DIODE				DA221 TL	G2070178		
D 2012	DIODE				DA221 TL	G2070178		
D 2014	DIODE				1T362-T8	G2070102		
D 2015	DIODE				1T362-T8	G2070102		
D 2016	DIODE				1T362-T8	G2070102		
D 2017	DIODE				1T362-T8	G2070102		
D 2018	DIODE				1T362-T8	G2070102		
D 2019	DIODE				1T362-T8	G2070102		
D 2020	DIODE				1T362-T8	G2070102		
D 2021	DIODE				1T362-T8	G2070102		
D 2022	DIODE				RD2.0UM-T2	G2070190		
D 2024	DIODE				1SS300 TE85R	G2070084		
D 2025	DIODE				HSU277	G2070118		
D 2026	DIODE				1SS302 TE85R	G2070088		
D 2027	DIODE				HSU277	G2070118		
D 2028	DIODE				HZK5C TR	G2070270		
D 2029	DIODE				NSQ03A04-TE16L3	G2070274		
D 2030	DIODE				NSD03A10-TE16L3	G2070272		
D 2031	DIODE				1SS302 TE85R	G2070088		
J 2003	CONNECTOR				9120S-07B	P1090774		
J 2004	CONNECTOR				HEC3600-01-110	P0090809		
J 2005	CONNECTOR				53020-2210	P0090875		

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REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
L 2001	COIL				2.5T2.0D0.5UEW R	L0021799A		
L 2002	COIL				2.5T2.0D0.5UEW R	L0021799A		
L 2003	COIL				2.5T2.0D0.5UEW R	L0021799A		
L 2004	COIL	220uH			32CS 380HB-221K=P	L1690055		
L 2005	COIL				5.5T2.0D0.5UEW R	L0021802		
L 2006	COIL				6.5T2.0D0.5UEW R	L0021803		
L 2007	M.RFC	0.022uH			LL2012·F22N	L1690170		
L 2009	COIL				2.5T2.0D0.5UEW R	L0021799A		
L 2010	COIL				2.5T2.0D0.5UEW R	L0021799A		
L 2011	M.RFC	0.022uH			LL2012·F22N	L1690170		
L 2013	M.RFC	0.22uH			LER015TR22M	L1690111		
L 2014	M.RFC	1uH			LER015T1R0M	L1690119		
L 2015	COIL				1.5T1.5D0.4UEW R	L0021792A		
L 2016	COIL				1.5T1.5D0.4UEW R	L0021792A		
L 2017	COIL				1.5T2.0D0.5UEW R	L0021798A		
L 2018	COIL				1.5T2.0D0.5UEW R	L0021798A		
L 2019	M.RFC	0.022uH			LL2012·F22N	L1690170		
L 2020	COIL				6.5T2.0D0.5UEW R	L0021774A		
Q 2001	TRANSISTOR				DTC144EE TL	G3070075		
Q 2002	TRANSISTOR				2SC4227-T2B R32	G3342277B		
Q 2005	IC				MB1513PFV-G-BND-EF	G1091476		
Q 2007	FET				2SK880GR TE85R	G3808807G		
Q 2008	TRANSISTOR				2SC4617 TL R	G3346178R		
Q 2009	TRANSISTOR				2SC4617 TL R	G3346178R		
Q 2010	TRANSISTOR				DTC144EE TL	G3070075		
Q 2011	IC				MC3372DR	G1091339		
Q 2012	TRANSISTOR				2SC4537 TR	G3345377		
Q 2013	TRANSISTOR				2SC4215Y TE85R	G3342157Y		
Q 2014	TRANSISTOR				DTC144EE TL	G3070075		
Q 2015	TRANSISTOR				2SC4325 TE85R	G3343257		
Q 2016	TRANSISTOR				2SC4325 TE85R	G3343257		
Q 2017	TRANSISTOR				2SB1132 T100 Q	G3211327Q		
Q 2018	TRANSISTOR				DTC144EE TL	G3070075		
R 2001	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 2002	CHIP RES.	680	1/16W	5%	RMC1/16 681JATP	J24185681		
R 2003	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 2004	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 2005	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 2006	CHIP RES.	150	1/4W	5%	RMC1/4 151JATP	J24245151		
R 2009	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 2010	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 2012	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 2014	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		
R 2015	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 2016	CHIP RES.	1.8K	1/16W	5%	RMC1/16 182JATP	J24185182		
R 2017	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 2018	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2019	CHIP RES.	330	1/16W	5%	RMC1/16 331JATP	J24185331		

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
R 2020	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 2021	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 2022	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 2023	CHIP RES.	2.2M	1/16W	5%	RMC1/16 225JATP	J24185225		
R 2028	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 2029	CHIP RES.	18K	1/16W	5%	RMC1/16 183JATP	J24185183		
R 2032	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 2033	CHIP RES.	6.8K	1/16W	5%	RMC1/16 682JATP	J24185682		
R 2034	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102	TYP EXP	
R 2034	CHIP RES.	680	1/16W	5%	RMC1/16 681JATP	J24185681	TYP USA	
R 2035	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 2036	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471	TYP USA	
R 2036	CHIP RES.	680	1/16W	5%	RMC1/16 681JATP	J24185681	TYP EXP	
R 2038	CHIP RES.	1.5K	1/16W	5%	RMC1/16 152JATP	J24185152		
R 2039	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 2040	CHIP RES.	1M	1/16W	5%	RMC1/16 105JATP	J24185105		
R 2041	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2042	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2043	CHIP RES.	680K	1/16W	5%	RMC1/16 684JATP	J24185684		
R 2044	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2045	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 2046	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2048	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 2050	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2051	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2052	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 2053	CHIP RES.	15K	1/16W	5%	RMC1/16 153JATP	J24185153		
R 2054	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 2058	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 2059	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 2060	CHIP RES.	12	1/16W	5%	RMC1/16 120JATP	J24185120		
R 2061	CHIP RES.	12	1/16W	5%	RMC1/16 120JATP	J24185120		
R 2062	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 2063	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 2064	CHIP RES.	2.7K	1/16W	5%	RMC1/16 272JATP	J24185272		
R 2065	CHIP RES.	15K	1/16W	5%	RMC1/16 153JATP	J24185153		
R 2066	CHIP RES.	82K	1/16W	5%	RMC1/16 823JATP	J24185823		
RB2001	BLOCK RES.	4.7KX4			RCB8C472J501A	J42900001		
TC2001	TRIMMER CAP.	20pF			ECR-LB020E12	K91000188		
TC2002	TRIMMER CAP.	6pF			TZBX4Z060BA110T00	K91000189		
TC2003	TRIMMER CAP.	6pF			TZBX4Z060BA110T00	K91000189		
TC2004	TRIMMER CAP.	6pF			TZBX4Z060BA110T00	K91000189		
TC2005	TRIMMER CAP.	6pF			TZBX4Z060BA110T00	K91000189		
TH2001	THERMISTOR				157-203-55009TP	G9090045		
X 2001	XTAL	12.800MHz				H0103061		
X 2002	XTAL	45.23MHz				H0103038	TYP EXP	
X 2002	XTAL	47.68MHz				H0103041	TYP USA	
XF2001	XTAL				44M2BF	H1102214	TYP EXP	
XF2001	XTAL				47G15B4F	H1102211	TYP USA	

Notes

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PCB Addr.	Pin #	Pin Name	RX	RX Save	TX	Notes
Q3001		Col	5.1	P 5.1	5.1	P: in sync with Save Pulse
		Base	0.6	P 5.0	0.6	P: in sync with Save Pulse
Q3002		Col	3.0	P 3.0	3.8	P: in sync with Save Pulse
		Base	0.7	P 0.6	0.4	P: in sync with Save Pulse
Q3003		Col	0.1	←	←	
		Base	0.2	←	0.2	
Q3004		Col	2.3	P 2.3	2.4	P: in sync with Save Pulse
		Base	0.7	P 0.7	0.7	P: in sync with Save Pulse
Q3005	1	VDD	4.9	5.1	5.0	
	2	CLK	0	S 4.9	←	S: Square Wave
	3	DATA	0	S 4.9	←	S: Square Wave
	5	FIN	2.4	P 2.4	2.3	P: in sync with Save Pulse
	6	PS	5.1	P 5.1	5.2	P: in sync with Save Pulse
	7	LD	4.9	5.0	4.9	
	8	DO	1.1	1.1	1.3	
	9	RC	3.0	P 3.0	3.0	P: in sync with Save Pulse
	15	OSCIN	A 2.3	P 2.3	2.3	A: max. DC offset; P: in sync with Save Pulse
Q3007		Source	1.6	1.6	1.7	
		Gate	1.2	1.1	1.3	
Q3009		Base	0.6	0.6	0.7	
Q3010	1	OSCIN	4.7	P 4.7	0.6	P: in sync with Save Pulse
	2	OSCOUT	4.2	P 4.2	0.1	P: in sync with Save Pulse
	3	MIXOUT	3.9	P 3.9	0.2	P: in sync with Save Pulse
	4	VCC	4.8	P 4.8	0.6	P: in sync with Save Pulse
	5	LIM-IN	3.9	P 3.9	0	P: in sync with Save Pulse
	6	DEC1	3.9	P 3.9	0	P: in sync with Save Pulse
	7	DEC2	3.9	P 3.9	0	P: in sync with Save Pulse
	8	QUADIN	4.8	P 4.8	0.6	P: in sync with Save Pulse
	9	AF-OUT	A 2.5	P 1.5	0	A: max. DC offset; P: in sync with Save Pulse
	10	FAMPIN	A 0.6	A 0.6	0	A: max. DC offset
	11	FAMPOU	A 4.3	P 4.3	0	A: max. DC offset; P: in sync with Save Pulse
	12	SQSWIN	0	←	0	C: Squelch Closed
	13	SMETER	A 1.1	A 1.1	0	A: max. DC offset
	14	SQSWOU	0	P 5.0	0.6	P: in sync with Save Pulse
	16	MIX-IN	1.7	P 1.7	0.5	P: in sync with Save Pulse
Q3011		Drain	4.9	P 4.9	0	P: in sync with Save Pulse
		Gate	0.5	P 0.5	0	P: in sync with Save Pulse
Q3012		Col	3.2	P 4.6	0	P: in sync with Save Pulse
		Base	0.7	←	0	
Q3013		Col	2.0	P 2.0	0.5	P: in sync with Save Pulse
		Base	0.2	←	0	
		Emit	2.8	P 2.8	0	P: in sync with Save Pulse
Q3014		Col	1.5	←	1.6	
Q3015		Col	2.8	P 2.8	0	P: in sync with Save Pulse
Q3016		Col	4.2	P 4.2	0	P: in sync with Save Pulse
		Base	0.6	P 0.6	0	P: in sync with Save Pulse
Q3017		Base	4.9	5.1	4.9	
Q3018		Col	3.3	P 3.3	3.6	P: in sync with Save Pulse
		Base	5.0	P 5.0	0	P: in sync with Save Pulse
Q3019		Col	4.8	P 4.8	0	P: in sync with Save Pulse

*** 144 VCO UNIT (Daughterboard) ***

Pin #	Pin Name	RX	RX Save	TX	Notes
1	R5	5.0	P 5.0	0	P: in sync with Save Pulse
2	T5	0	←	5.3	
3	VCV	1.2	←	1.3	f=145.00MHz
5	MOD	0	—	4.5	
7	SV5	5.2	P 5.2	5.2	P: in sync with Save Pulse

*** 144 SW UNIT (Daughterboard) ***

Pin #	Pin Name	RX	RX Save	TX	Notes
1	+B	11.5	←	11.2	
2	VR5	5.0	P 5.0	0.0	P: in sync with Save Pulse
3	UR5	0.0	←	0.6	
4	L2	0.0	←	5.0	
6	TX	0.6	P 0.6	5.2	P: in sync with Save Pulse
7	SAVE	0.6	P 5.2	0.6	P: in sync with Save Pulse
10	SV5	5.1	P 5.1	5.1	P: in sync with Save Pulse
13	T5	0.0	←	5.2	
14	R5	5.0	P 5.0	0.6	P: in sync with Save Pulse

*** 144 APC UNIT (Daughterboard) ***

Pin #	Pin Name	RX	RX Save	TX	Notes
1	DET	0.0	←	3.7	
2	+B	11.5	←	11.2	
3	ULT5	0.0	←	5.2	
4	APC	0.0	←	3.7	
6	L2	0.0	←	5.2	
7	L1	0.1	0.0	4.9	
8	T5	0.0	←	5.2	
9	INH	4.6	P 4.6	0.6	P: in sync with Save Pulse

*** 144 PA UNIT (Daughterboard) ***

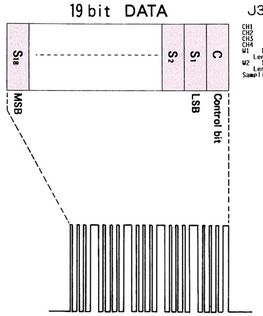
Pin #	Pin Name	RX	RX Save	TX	Notes
1	ANT	0.0	←	—	
3	+B	11.5	←	11.2	
4	ULT5	0.0	←	5.3	

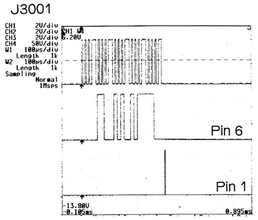
*** U&U RX UNIT (Daughterboard) ***

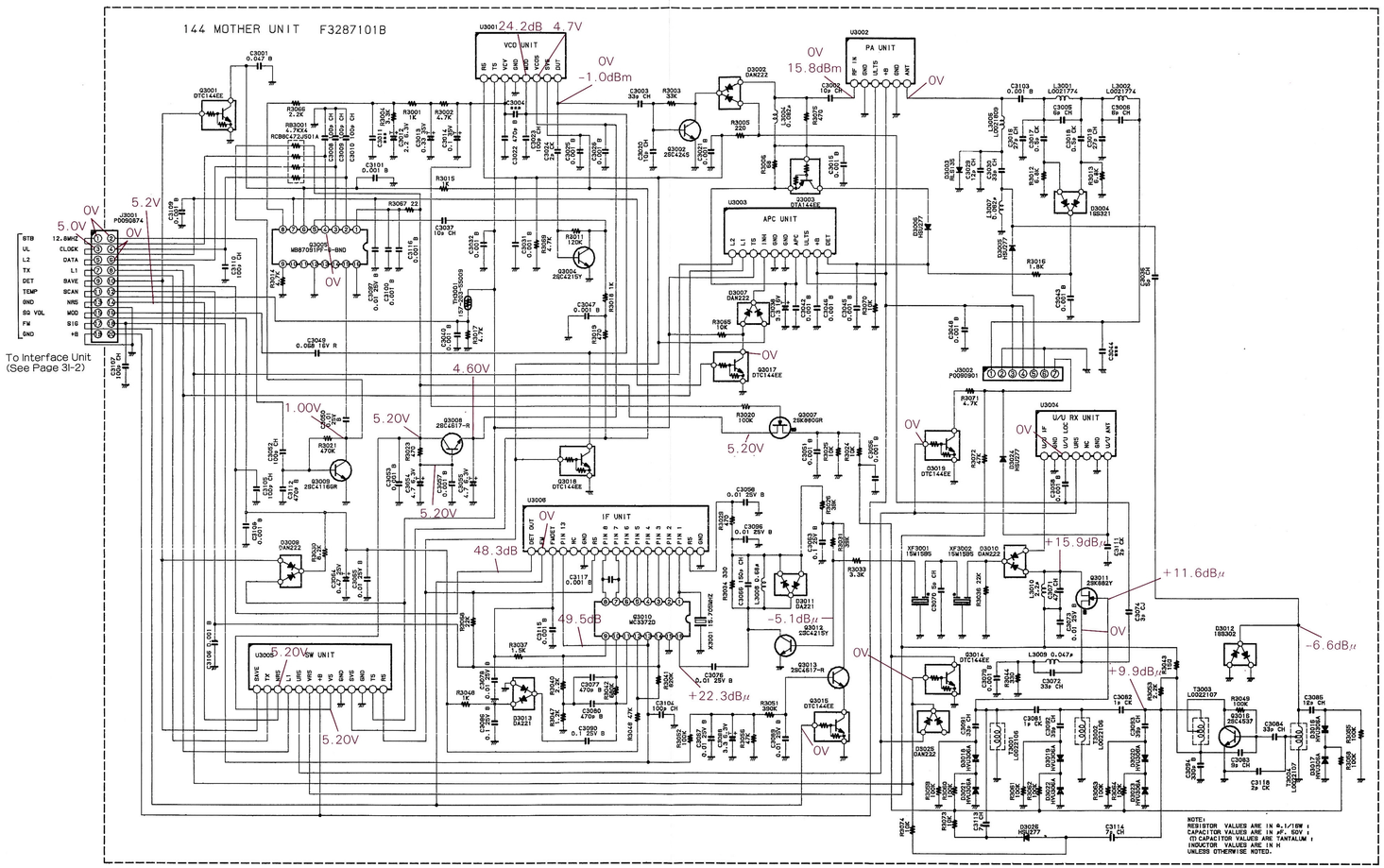
Pin #	Pin Name	RX	RX Save	TX	Notes
1	U/U ANT	2.5	P 2.5	—	P: in sync with Save Pulse
2	UR5	4.5	P 4.5	—	P: in sync with Save Pulse
4	IF	4.2	P 4.2	—	P: in sync with Save Pulse

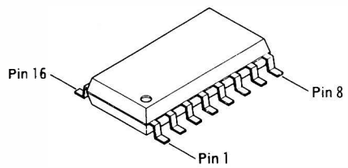
*** 144 IF UNIT (Daughterboard) ***

Pin #	Pin Name	RX	RX Save	TX	Notes
2	R5	5.1	P 5.1	0.6	
4	PIN13	0.8	—	0.0	
5	DET	1.2	—	0.0	
6	FM	0.0	←	←	
7	DET OUT	3.1	←	0.6	

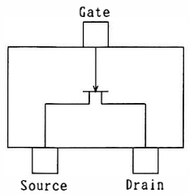




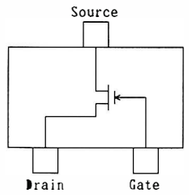




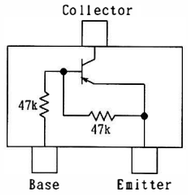
MB87091PF
(Q3005)
MC3372DR
(Q3010)



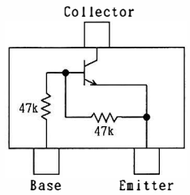
2SK880GR (XG)
(Q3007)



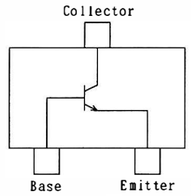
2SK882Y (TY)
(Q3011)



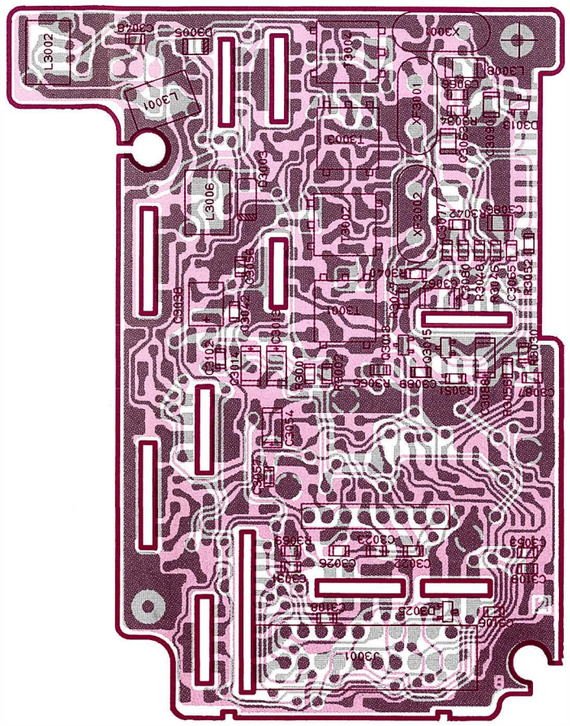
DTA144EE (16)
(Q3003)



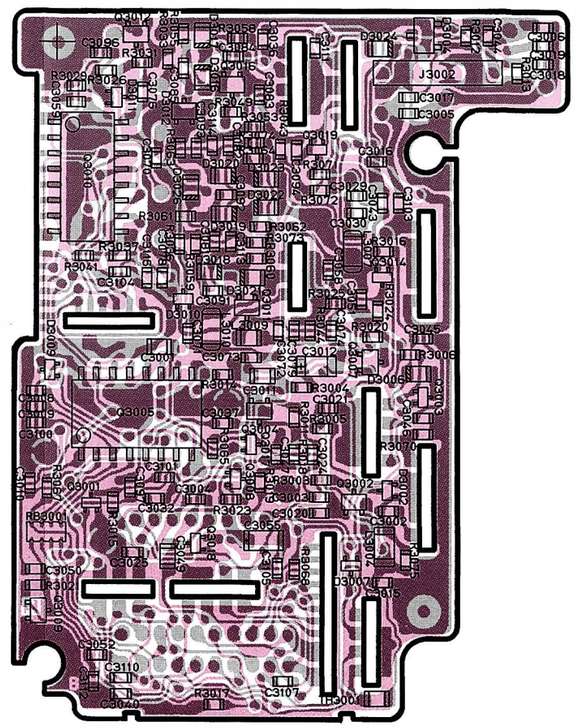
DTC144EE (26)
(Q3001, 3014, 3015
3017, 3018, 3019)



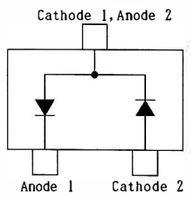
2SC4116GR (LG)
(Q3009)
2SC4215Y (QY)
(Q3004, 3012)
2SC4245 (QY)
(Q3002)
2SC4537 (IS)
(Q3016)
2SC4617 (BR)
(Q3008, 3013)



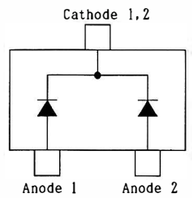
component side



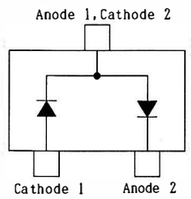
chip-only side



1SS302 (C3)
(D3012)



1SS321 (F9)
(D3004)
DAN222 (N)
(D3002, 3007, 3009
3010, 3025



DA221 (K)
(D3011, 3013)

J3001
To Interface Unit

1. STB	2. 12.8MHz	3. UL	4. CLOCK
5. L2	6. DATA	7. TX	8. L1
9. DET	10. SAVE	11. TEMP	12. SCAN
13. GND	14. NR5	15. SQ VOL	16. MOD
17. FM	18. SIG	19. GND	20. +B

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** 144-MHz MOTHER UNIT ***						
	PCB With 144-MHz MOTHER, VCO, SW, APC, PA, U&U RX, IF UNIT					CP3851001		
	Printed Circuit Board					F3287101B		
C 3001	CHIP CAP.	0.047uF	50V	B	GRM40B473M50PT	K22170823		
C 3002	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		
C 3003	CHIP CAP.	33pF	50V	CH	GRM39CH330J50PT	K22174223		
C 3005	CHIP CAP.	6pF	50V	CH	GRM39CH060D50PT	K22174207		
C 3006	CHIP CAP.	6pF	50V	CH	GRM39CH060D50PT	K22174207		
C 3008	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 3009	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 3010	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 3012	TANTALUM CHIP CAP.	2.2uF	6.3V		TESVA0J225M1-8R	K78080009		
C 3013	TANTALUM CHIP CAP.	0.33uF	35V		TESVA1V334M1-8R	K78160028		
C 3014	TANTALUM CHIP CAP.	0.1uF	35V		TESVA1V104M1-8R	K78160025		
C 3015	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3016	CHIP CAP.	27pF	50V	CH	GRM39CH270J50PT	K22174221		
C 3017	CHIP CAP.	0.5pF	50V	CK	GRM39CK0R5C50PT	K22174201		
C 3018	CHIP CAP.	0.5pF	50V	CK	GRM39CK0R5C50PT	K22174201		
C 3019	CHIP CAP.	27pF	50V	CH	GRM39CH270J50PT	K22174221		
C 3020	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		
C 3021	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3022	CHIP CAP.	470pF	50V	B	GRM39B471M50PT	K22174805		
C 3023	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 3024	CHIP CAP.	2pF	50V	CK	GRM39CK020C50PT	K22174203		
C 3025	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3026	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3029	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		
C 3030	CHIP CAP.	33pF	50V	CH	GRM39CH330J50PT	K22174223		
C 3031	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3032	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3036	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		
C 3037	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		
C 3038	TANTALUM CHIP CAP.	3.3uF	16V		TESVB21C335M8R	K78120010		
C 3040	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3042	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3043	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3045	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3046	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3047	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3048	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3049	CHIP CAP.	0.068uF	16V	R	GRM40R683M16PT	K22120805		
C 3050	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 3051	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3052	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 3053	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3054	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 3055	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 3056	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		

144-MHz Mother Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
C 3057	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3058	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3059	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 3063	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 3064	TANTALUM CHIP CAP.	0.47uF	25V		TESVA1E474M1-8R	K78140009		
C 3065	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 3066	CHIP CAP.	150pF	50V	CH	GRM39CH151J50PT	K22174239		
C 3070	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		
C 3071	CHIP CAP.	47pF	50V	CH	GRM39CH470J50PT	K22174227		
C 3072	CHIP CAP.	33pF	50V	CH	GRM39CH330J50PT	K22174223		
C 3073	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 3074	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		
C 3076	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 3077	CHIP CAP.	470pF	50V	B	GRM39B471M50PT	K22174805		
C 3078	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 3079	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3080	CHIP CAP.	470pF	50V	B	GRM39B471M50PT	K22174805		
C 3081	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		
C 3082	CHIP CAP.	1pF	50V	CK	GRM39CK010C50PT	K22174202		
C 3083	CHIP CAP.	9pF	50V	CH	GRM39CH090D50PT	K22174210		
C 3084	CHIP CAP.	33pF	50V	CH	GRM39CH330J50PT	K22174223		
C 3085	CHIP CAP.	12pF	50V	CH	GRM39CH120J50PT	K22174213		
C 3086	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 3087	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 3088	TANTALUM CHIP CAP.	3.3uF	6.3V		TESVA0J335M1-8R	K78080021		
C 3089	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 3090	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 3091	CHIP CAP.	33pF	50V	CH	GRM39CH330J50PT	K22174223		
C 3092	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		
C 3093	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		
C 3094	CHIP CAP.	330pF	50V	B	GRM39B331K50PT	K22174820		
C 3096	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 3097	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 3100	CERAMIC CAP.	0.001uF	50V	B	UP050B102K-A-B	K28179001		
C 3101	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3103	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3104	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 3105	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 3106	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3107	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 3108	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3109	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3110	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 3111	CHIP CAP.	2pF	50V	CK	GRM39CK020C50PT	K22174203		
C 3112	CHIP CAP.	470pF	50V	B	GRM39B471M50PT	K22174805		
C 3113	CHIP CAP.	7pF	50V	CH	GRM39CH070D50PT	K22174208		
C 3114	CHIP CAP.	7pF	50V	CH	GRM39CH070D50PT	K22174208		
C 3115	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3116	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3117	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 3118	CHIP CAP.	2pF	50V	CK	GRM39CK020C50PT	K22174203		

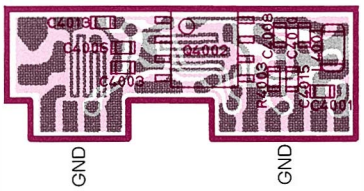
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
D 3002	DIODE				DAN222 TL	G2070174		
D 3003	DIODE				RLS135 TE-11	G2070128		
D 3004	DIODE				1SS321 TE85R	G2070076		
D 3005	DIODE				HSU277	G2070118		
D 3006	DIODE				HSU277	G2070118		
D 3007	DIODE				DAN222 TL	G2070174		
D 3009	DIODE				DAN222 TL	G2070174		
D 3010	DIODE				DAN222 TL	G2070174		
D 3011	DIODE				DA221 TL	G2070178		
D 3012	DIODE				1SS302 TE85R	G2070088		
D 3013	DIODE				DA221 TL	G2070178		
D 3016	DIODE				HVU306A5TRF	G2070132		
D 3017	DIODE				HVU306A5TRF	G2070132		
D 3018	DIODE				HVU306A5TRF	G2070132		
D 3019	DIODE				HVU306A5TRF	G2070132		
D 3020	DIODE				HVU306A5TRF	G2070132		
D 3021	DIODE				HVU306A5TRF	G2070132		
D 3022	DIODE				HVU306A5TRF	G2070132		
D 3023	DIODE				HVU306A5TRF	G2070132		
D 3024	DIODE				HSU277	G2070118		
D 3025	DIODE				DAN222 TL	G2070174		
D 3026	DIODE				HSU277	G2070118		
J 3001	CONNECTOR				53020-2010	P0090874		
J 3002	CONNECTOR				9230B-1-07Z044-T	P0090901		
L 3001	COIL				6.5T2.0D0.5UEW R	L0021774A		
L 3002	COIL				6.5T2.0D0.5UEW R	L0021774A		
L 3004	M.RFC	0.082uH			LER015T082M	L1690197		
L 3006	COIL				6.5T2.5D0.5UEW R	L0021809		
L 3007	M.RFC	0.082uH			LER015T082M	L1690197		
L 3008	M.RFC	0.68uH			LER015TR68M	L1690117		
L 3009	M.RFC	0.047uH			LL2012·F47N	L1690174		
L 3010	M.RFC	2.2uH			LER015T2R2M	L1690123		
Q 3001	TRANSISTOR				DTC144EE TL	G3070075		
Q 3002	TRANSISTOR				2SC4245 TE85R	G3342457		
Q 3003	TRANSISTOR				DTA144EE TL	G3070074		
Q 3004	TRANSISTOR				2SC4215Y TE85R	G3342157Y		
Q 3005	IC				MB87091PF-G-BND-TF	G1091363		
Q 3007	FET				2SK880GR TE85R	G3808807G		
Q 3008	TRANSISTOR				2SC4617 TL R	G3346178R		
Q 3009	TRANSISTOR				2SC4116GR TE85R	G3341167G		
Q 3010	IC				MC3372DR	G1091339		
Q 3011	FET				2SK882Y TE85R	G3808827Y		
Q 3012	TRANSISTOR				2SC4215Y TE85R	G3342157Y		
Q 3013	TRANSISTOR				2SC4617 TL R	G3346178R		
Q 3014	TRANSISTOR				DTC144EE TL	G3070075		
Q 3015	TRANSISTOR				DTC144EE TL	G3070075		
Q 3016	TRANSISTOR				2SC4537 TR	G3345377		

144-MHz Mother Unit

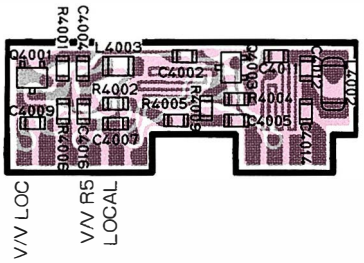
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
Q 3017	TRANSISTOR				DTC144EE TL	G3070075		
Q 3018	TRANSISTOR				DTC144EE TL	G3070075		
Q 3019	TRANSISTOR				DTC144EE TL	G3070075		
R 3001	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 3002	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 3003	CHIP RES.	33K	1/16W	5%	RMC1/16 333JATP	J24185333		
R 3004	CHIP RES.	3.3K	1/16W	5%	RMC1/16 332JATP	J24185332		
R 3005	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		
R 3006	CHIP RES.	68	1/16W	5%	RMC1/16 680JATP	J24185680		
R 3011	CHIP RES.	120K	1/16W	5%	RMC1/16 124JATP	J24185124		
R 3012	CHIP RES.	6.8K	1/16W	5%	RMC1/16 682JATP	J24185682		
R 3013	CHIP RES.	6.8K	1/16W	5%	RMC1/16 682JATP	J24185682		
R 3014	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 3015	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 3016	CHIP RES.	1.8K	1/16W	5%	RMC1/16 182JATP	J24185182		
R 3017	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 3018	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 3019	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 3020	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 3021	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 3023	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 3024	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 3025	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 3026	CHIP RES.	39K	1/16W	5%	RMC1/16 393JATP	J24185393		
R 3029	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 3030	CHIP RES.	8.2K	1/16W	5%	RMC1/16 822JATP	J24185822		
R 3031	CHIP RES.	39K	1/16W	5%	RMC1/16 393JATP	J24185393		
R 3033	CHIP RES.	3.3K	1/16W	5%	RMC1/16 332JATP	J24185332		
R 3034	CHIP RES.	330	1/16W	5%	RMC1/16 331JATP	J24185331		
R 3036	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 3037	CHIP RES.	1.5K	1/16W	5%	RMC1/16 152JATP	J24185152		
R 3040	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 3041	CHIP RES.	820K	1/16W	5%	RMC1/16 824JATP	J24185824		
R 3042	CHIP RES.	680K	1/16W	5%	RMC1/16 684JATP	J24185684		
R 3043	CHIP RES.	150	1/16W	5%	RMC1/16 151JATP	J24185151		
R 3044	CHIP RES.	330	1/16W	5%	RMC1/16 331JATP	J24185331		
R 3046	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 3047	CHIP RES.	1.2K	1/16W	5%	RMC1/16 122JATP	J24185122		
R 3048	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 3049	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 3051	CHIP RES.	390K	1/16W	5%	RMC1/16 394JATP	J24185394		
R 3052	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 3053	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 3055	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 3056	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 3058	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 3059	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 3060	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 3061	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 3062	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
R 3063	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 3064	CHIP RES.	100K	1/16W	5%	RMC1/16 104JATP	J24185104		
R 3065	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 3066	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 3067	CHIP RES.	22	1/16W	5%	RMC1/16 220JATP	J24185220		
R 3068	CHIP RES.	22K	1/16W	5%	RMC1/16 223JATP	J24185223		
R 3069	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 3070	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 3071	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 3072	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 3073	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 3074	CHIP RES.	10K	1/16W	5%	RMC1/16 103JATP	J24185103		
R 3075	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
RB3001	BLOCK RES.	4.7KX4			RCB8C472J501A	J42900001		
T 3001	COIL				432AN-1315Z=P1	L0022106		
T 3002	COIL				432AN-1315Z=P1	L0022106		
T 3003	COIL				432AN-1314BY=P1	L0022107		
T 3004	COIL				432AN-1314BY=P1	L0022107		
TH3001	THERMISTOR				157-203-55009TP	G9090045		
X 3001	XTAL	15.705MHz				H0103042		
XF3001	XTAL				15M15B5	H1102210		
	GROUND SPRING					R0143240A		

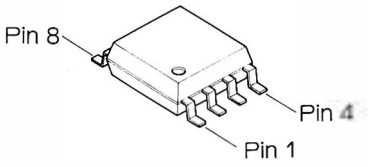
Notes



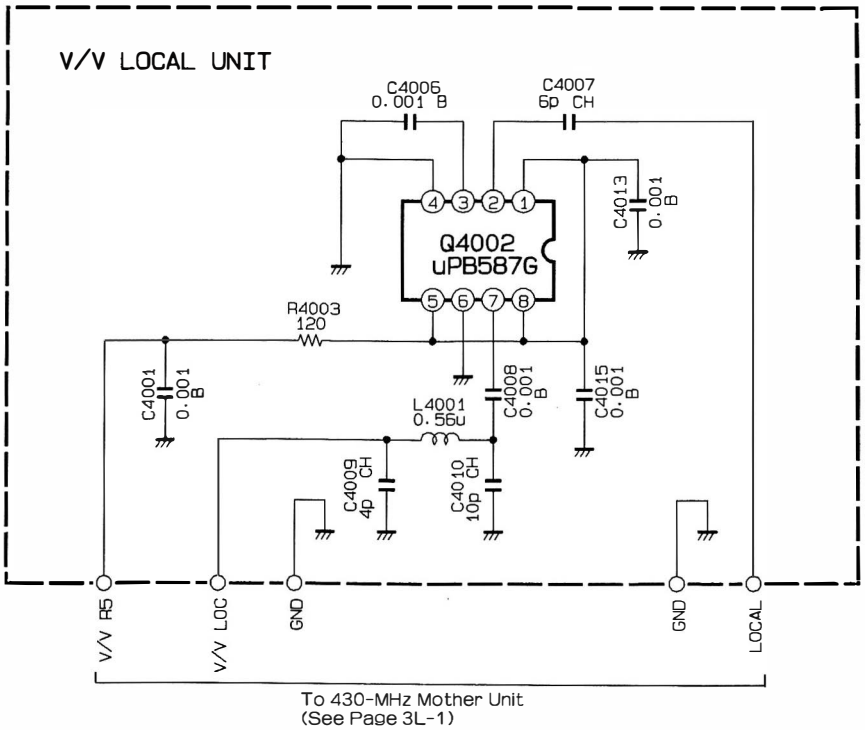
component side



chip-only side



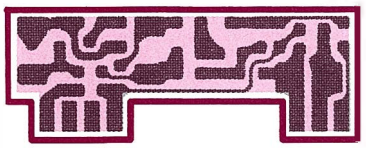
μPB587G
(Q4002)



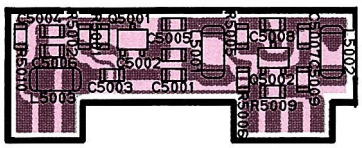
VHF & VHF (V & V) Local Unit

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** V&V LOCAL UNIT ***						
	PCB With Components					CP4053001		
	Printed Circuit Board					F3288107A		
C 4001	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 4006	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 4007	CHIP CAP.	6pF	50V	CH	GRM39CH060D50PT	K22174207		
C 4008	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 4009	CHIP CAP.	4pF	50V	CH	GRM39CH040C50PT	K22174205		
C 4010	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		
C 4013	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 4015	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
L 4001	M.RFC	0.56uH			LER015TR56M	L1690116		
Q 4002	IC				UPB587G-E1	G1091326		
R 4003	CHIP RES.	120	1/16W	5%	RMC1/16 121JATP	J24185121		

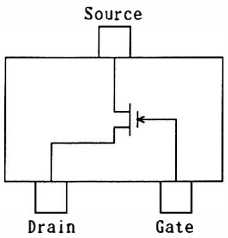
Notes



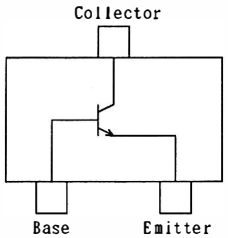
solder side



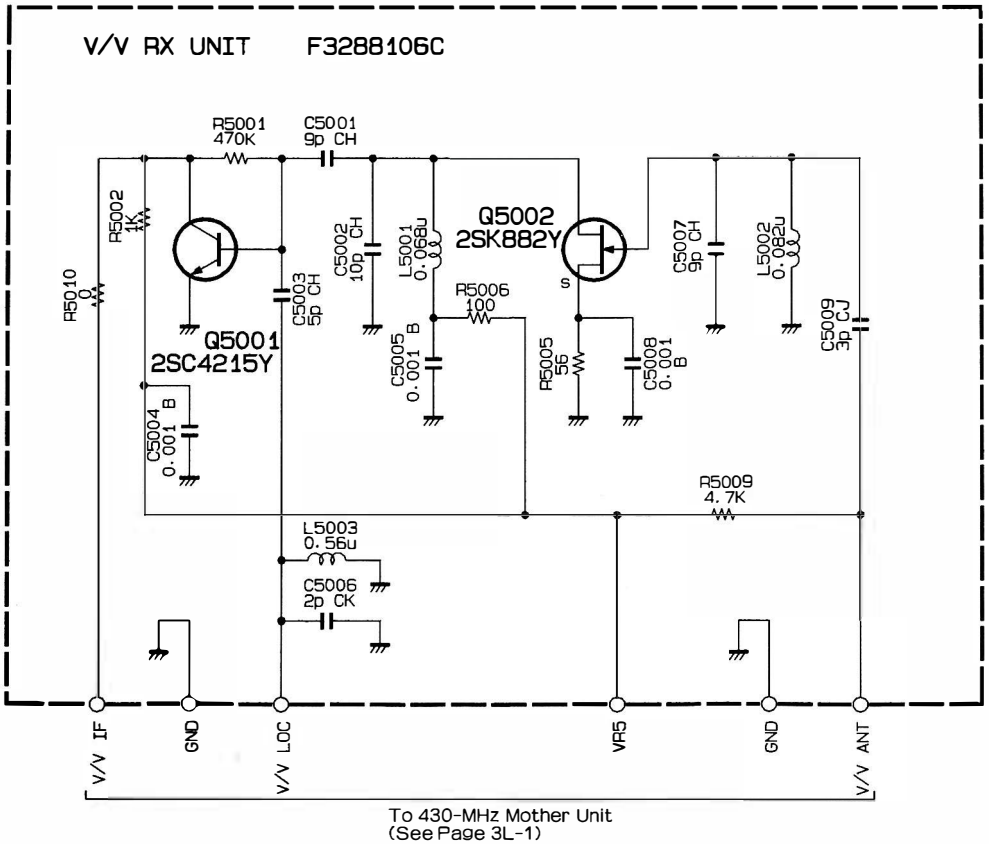
chip-only side



2SK882Y (TY)
(Q5002)



2SC4215Y (QY)
(Q5001)

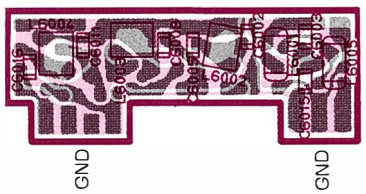


To 430-MHz Mother Unit
(See Page 3L-1)

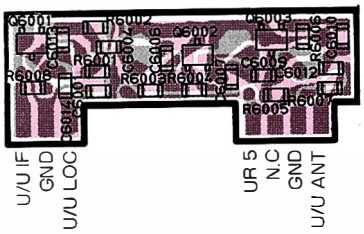
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** V&V RX UNIT ***						
	PCB With Components					CP4054001		
	Printed Circuit Board					F3288106A		
C 5001	CHIP CAP.	9pF	50V	CH	GRM39CH090D50PT	K22174210		
C 5002	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		
C 5003	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		
C 5004	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 5005	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 5006	CHIP CAP.	2pF	50V	CK	GRM39CK020C50PT	K22174203		
C 5007	CHIP CAP.	9pF	50V	CH	GRM39CH090D50PT	K22174210		
C 5008	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 5009	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		
L 5001	M.RFC	0.068uH		K	LER015T068K	L1690261		
L 5002	M.RFC	0.082uH		K	LER015T082K	L1690262		
L 5003	M.RFC	0.56uH			LER015TR56M	L1690116		
Q 5001	TRANSISTOR				2SC4215Y TE85R	G3342157Y		
Q 5002	FET				2SK882Y TE85R	G3808827Y		
R 5001	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 5002	CHIP RES.	1K	1/16W	5%	RMC1/16 102JATP	J24185102		
R 5005	CHIP RES.	56	1/16W	5%	RMC1/16 560JATP	J24185560		
R 5006	CHIP RES.	100	1/16W	5%	RMC1/16 101JATP	J24185101		
R 5009	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 5010	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		

Notes

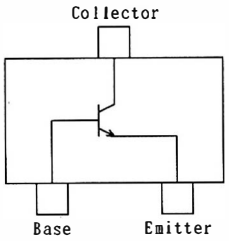
UHF & UHF (U & U) Rx Unit



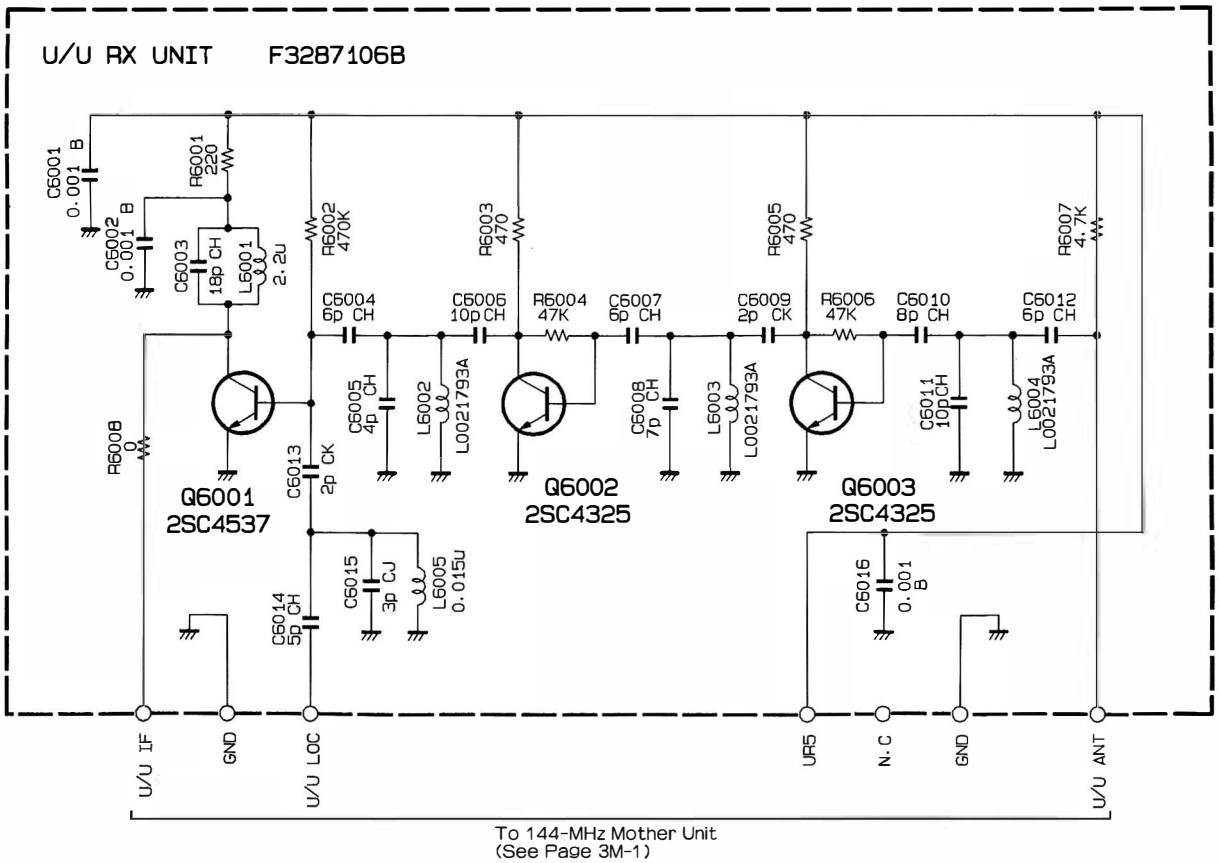
component side



chip-only side

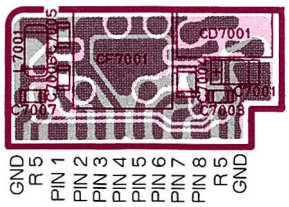


2SC4325 (MO)
(Q6002, 6003)
2SC4537 (IS)
(Q6001)

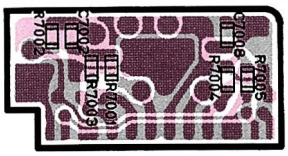


REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** U&U RX UNIT ***						
	PCB With Components					CP4064001		
	Printed Circuit Board					F3287106A		
C 6001	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 6002	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 6003	CHIP CAP.	18pF	50V	CH	GRM39CH180J50PT	K22174217		
C 6004	CHIP CAP.	6pF	50V	CH	GRM39CH060D50PT	K22174207		
C 6005	CHIP CAP.	4pF	50V	CH	GRM39CH040C50PT	K22174205		
C 6006	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		
C 6007	CHIP CAP.	6pF	50V	CH	GRM39CH060D50PT	K22174207		
C 6008	CHIP CAP.	7pF	50V	CH	GRM39CH070D50PT	K22174208		
C 6009	CHIP CAP.	2pF	50V	CK	GRM39CK020C50PT	K22174203		
C 6010	CHIP CAP.	8pF	50V	CH	GRM39CH080D50PT	K22174209		
C 6011	CHIP CAP.	10pF	50V	CH	GRM39CH100D50PT	K22174211		
C 6012	CHIP CAP.	6pF	50V	CH	GRM39CH060D50PT	K22174207		
C 6013	CHIP CAP.	2pF	50V	CK	GRM39CK020C50PT	K22174203		
C 6014	CHIP CAP.	5pF	50V	CH	GRM39CH050C50PT	K22174206		
C 6015	CHIP CAP.	3pF	50V	CJ	GRM39CJ030C50PT	K22174204		
C 6016	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
L 6001	M.RFC	2.2uH			LER015T2R2M	L1690123		
L 6002	COIL				2.5T1.5D0.4UEW R	L0021793A		
L 6003	COIL				2.5T1.5D0.4UEW R	L0021793A		
L 6004	COIL				2.5T1.5D0.4UEW R	L0021793A		
L 6005	M.RFC	0.015uH			LER015T015M	L1690188		
Q 6001	TRANSISTOR				2SC4537 TR	G3345377		
Q 6002	TRANSISTOR				2SC4325 TE85R	G3343257		
Q 6003	TRANSISTOR				2SC4325 TE85R	G3343257		
R 6001	CHIP RES.	220	1/16W	5%	RMC1/16 221JATP	J24185221		
R 6002	CHIP RES.	470K	1/16W	5%	RMC1/16 474JATP	J24185474		
R 6003	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 6004	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 6005	CHIP RES.	470	1/16W	5%	RMC1/16 471JATP	J24185471		
R 6006	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 6007	CHIP RES.	4.7K	1/16W	5%	RMC1/16 472JATP	J24185472		
R 6008	CHIP RES.	0	1/16W	5%	RMC1/16 000JATP	J24185000		

Notes



component side



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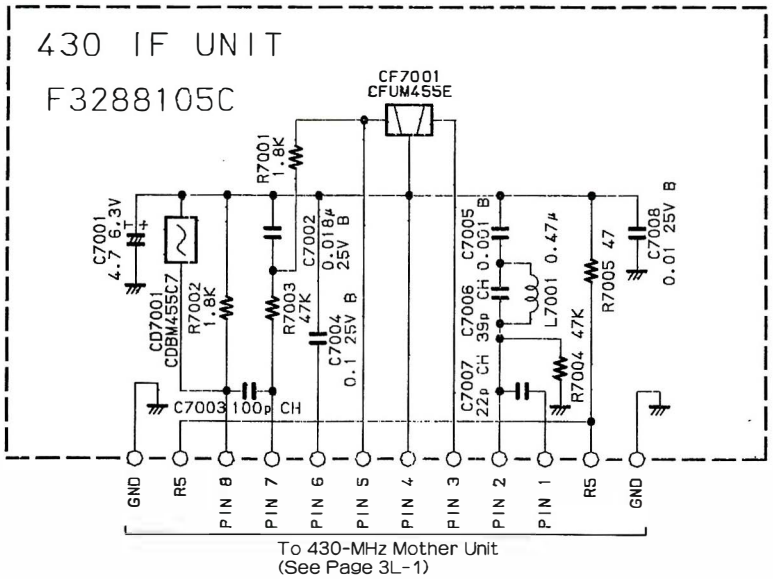
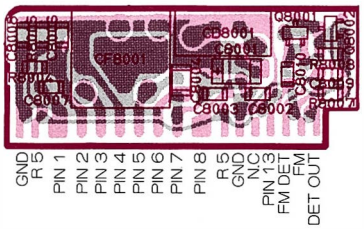
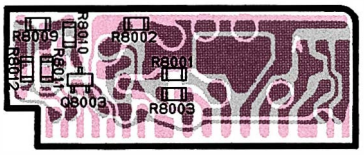


NOTE:
RESISTOR VALUES ARE IN Ω.1/16W ;
CAPACITOR VALUES ARE IN µF. 50V ;
(T) CAPACITOR VALUES ARE TANTALUM ;
UNLESS OTHERWISE NOTED.

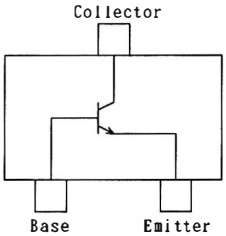
REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
			*** 430-MHz IF UNIT ***					
	PCB With Components					CP4055001		
	Printed Circuit Board					F3288105A		
C 7001	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 7002	CHIP CAP.	0.018uF	25V	B	GRM39B183K25PT	K22144806		
C 7003	CHIP CAP.	100pF	50V	CH	GRM39CH101J50PT	K22174235		
C 7004	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 7005	CHIP CAP.	0.001uF	50V	B	GRM39B102M50PT	K22174809		
C 7006	CHIP CAP.	39pF	50V	CH	GRM39CH390J50PT	K22174225		
C 7007	CHIP CAP.	22pF	50V	CH	GRM39CH220J50PT	K22174219		
C 7008	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
CD7001	CERAMIC DISC				CDBM455C7	H7900480		
CF7001	CERAMIC FILTER				CFUM455E	H3900413		
L 7001	M.RFC	0.47uH			LER015TR47M	L1690115		
R 7001	CHIP RES.	1.8K	1/16W	5%	RMC1/16 182JATP	J24185182		
R 7002	CHIP RES.	1.8K	1/16W	5%	RMC1/16 182JATP	J24185182		
R 7003	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 7004	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 7005	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		



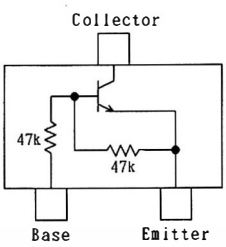
component side



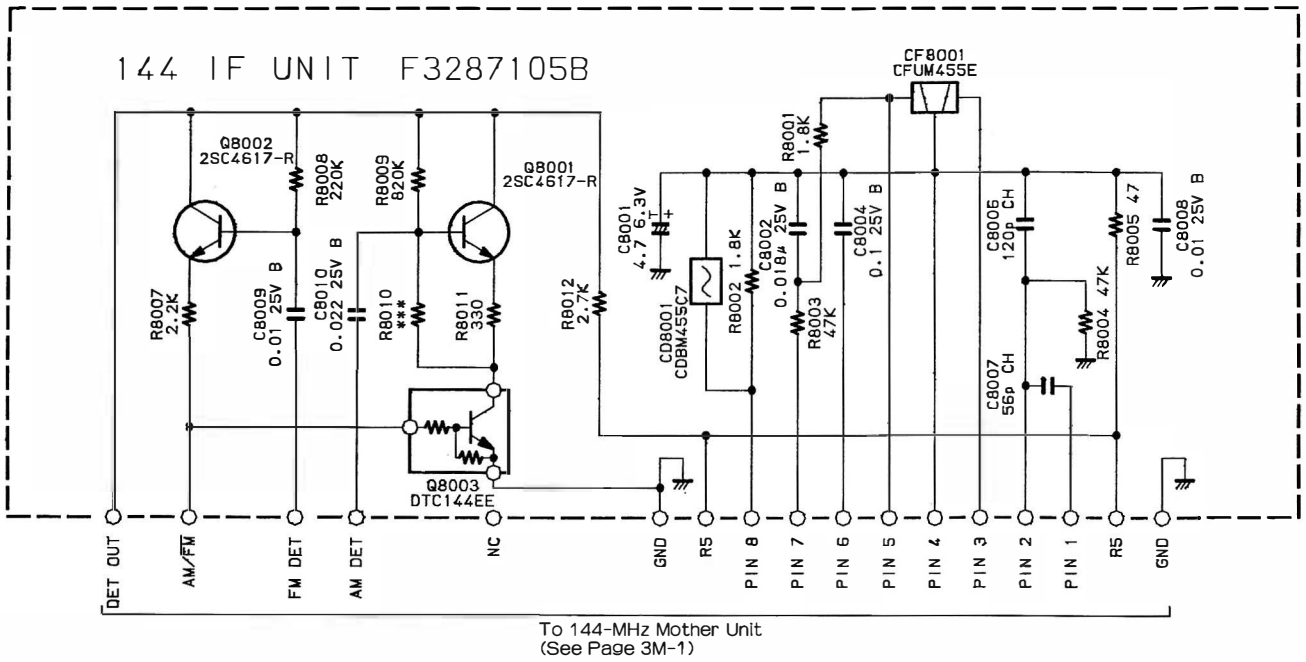
chip-only side



2SC4617 (BR)
(Q8001, 8002)



DTC144EE (26)
(Q8003)



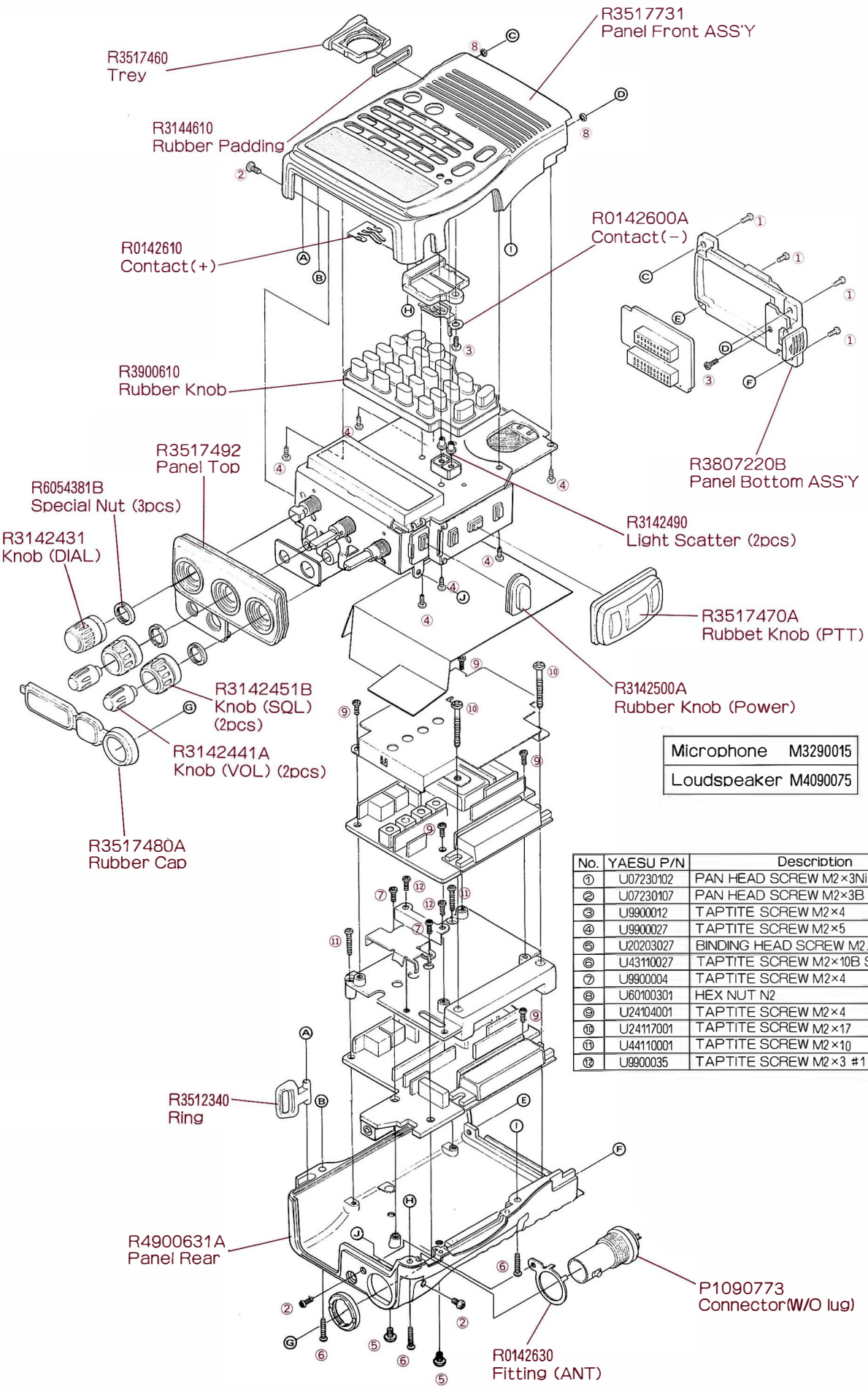
To 144-MHz Mother Unit
(See Page 3M-1)

NOTE:
RESISTOR VALUES ARE IN Ω.1/16W ;
CAPACITOR VALUES ARE IN μF. 50V ;
(T) CAPACITOR VALUES ARE TANTALUM ;
UNLESS OTHERWISE NOTED.

REF.	MFGR'S DESIG	VALUE	WV	TOL.	DESCRIPTION	YAESU P/N	VERS.	ADDR.
		*** 144-MHz IF UNIT ***						
	PCB With Components					CP4065001		
	Printed Circuit Board					F3287105A		
C 8001	TANTALUM CHIP CAP.	4.7uF	6.3V		TEMSVA0J475M-8R	K78080017		
C 8002	CHIP CAP.	0.018uF	25V	B	GRM39B183K25PT	K22144806		
C 8004	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811		
C 8006	CHIP CAP.	120pF	50V	CH	GRM39CH121J50PT	K22174237		
C 8007	CHIP CAP.	56pF	50V	CH	GRM39CH560J50PT	K22174229		
C 8008	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 8009	CHIP CAP.	0.01uF	25V	B	GRM39B103M25PT	K22144802		
C 8010	CHIP CAP.	0.022uF	25V	B	GRM39B223K25PT	K22144807		
CD8001	CERAMIC DISC				CDBM455C7	H7900480		
CF8001	CERAMIC FILTER				CFUM455E	H3900413		
Q 8001	TRANSISTOR				2SC4617 TL R	G3346178R		
Q 8002	TRANSISTOR				2SC4617 TL R	G3346178R		
Q 8003	TRANSISTOR				DTC144EE TL	G3070075		
R 8001	CHIP RES.	1.8K	1/16W	5%	RMC1/16 182JATP	J24185182		
R 8002	CHIP RES.	1.8K	1/16W	5%	RMC1/16 182JATP	J24185182		
R 8003	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 8004	CHIP RES.	47K	1/16W	5%	RMC1/16 473JATP	J24185473		
R 8005	CHIP RES.	47	1/16W	5%	RMC1/16 470JATP	J24185470		
R 8007	CHIP RES.	2.2K	1/16W	5%	RMC1/16 222JATP	J24185222		
R 8008	CHIP RES.	220K	1/16W	5%	RMC1/16 224JATP	J24185224		
R 8009	CHIP RES.	820K	1/16W	5%	RMC1/16 824JATP	J24185824		
R 8011	CHIP RES.	330	1/16W	5%	RMC1/16 331JATP	J24185331		
R 8012	CHIP RES.	2.7K	1/16W	5%	RMC1/16 272JATP	J24185272		

Notes

Exploded View & Miscellaneous Parts



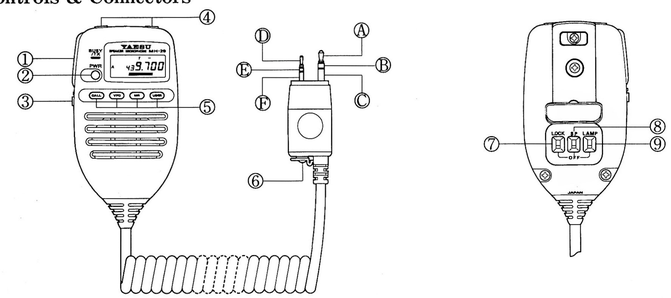
Microphone	M3290015
Loudspeaker	M4090075

No.	YAESU P/N	Description	Qty.
①	U07230102	PAN HEAD SCREW M2×3Ni #1	4
②	U07230107	PAN HEAD SCREW M2×3B #1	3
③	U9900012	TAPTITE SCREW M2×4	2
④	U9900027	TAPTITE SCREW M2×5	6
⑤	U20203027	BINDING HEAD SCREW M2.6×3B SUS	2
⑥	U43110027	TAPTITE SCREW M2×10B SUS	3
⑦	U9900004	TAPTITE SCREW M2×4	2
⑧	U60100301	HEX NUT N2	2
⑨	U24104001	TAPTITE SCREW M2×4	5
⑩	U24117001	TAPTITE SCREW M2×17	2
⑪	U44110001	TAPTITE SCREW M2×10	2
⑫	U9900035	TAPTITE SCREW M2×3 #1	2

Specifications

Microphone Impedance : 2kΩ
Speaker Impedance : 8Ω
Speaker Maximum Input : 0.4W
Operating Temperature Range : −20℃～+60℃
Voltage Requirement : 6V～16V
Current Consumption : 1.5mA (SQL ON, LAMP OFF)/25mA (LAMP ON)
Data Protocol : Asynchronus, 9600bps
Weight : 140 g

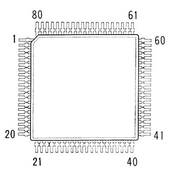
Controls & Connectors



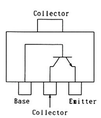
① PTT Switch
② PWR Switch
③ LAMP Ⓕ Switch
④ UP／DWN Key
⑤ Keyboard
⑥ EXT SP Jack
⑦ LOCK Switch
⑧ SP Switch
⑨ LAMP Switch
Ⓐ SP
Ⓑ SIO
Ⓒ GND
Ⓓ MIC/PTT
Ⓔ +B
Ⓕ MIC GND

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.
		*** MAIN ASSY ***					
C 0201	CERAMIC CAP.	0.001uF	50V	B	DD104B102K50	K10176102	
MC0201	MIC ELEMENT				EM-78C	M3290005	
SP0201	SPEAKER				SI36D04 0.25W/70HM	M4090082	
	CURL CORD ASS'Y					S8100261	
	CASE FRONT ASS'Y(W/NYLON MESH,LCD WINDOW,ADH. TAPE)					S8000908	
	CASE REAR ASS'Y(W/REAR COVER)					S8000909	
	RUBBER KNOB					S8000910	
	CUSHION KNOB					S8000911	
	MIC HOLDER					R3130400	
	TAPTITE SCREW M3X8B					U43308007	
	TAPTITE SCREW M2X5					U23105001	
	PAN HEAD SCREW M3X5B					U00305007	
	HEX NUT N3 #1					U60300101	

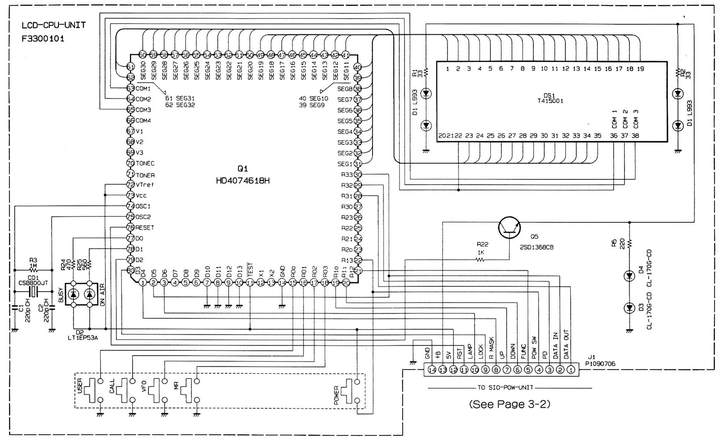
REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.
		*** LCD-CPU UNIT ***					
	Printed Circuit Board					F3300101	
C 0001	CHIP CAP.	220pF	50V	CH	GRM40CH221J50PT	K22170243	
C 0002	CHIP CAP.	220pF	50V	CH	GRM40CH221J50PT	K22170243	
C00001	CERAMIC OSC				CSB800JT	H7900530	
D 0001	LED				L993	G2090537	
D 0002	LED				LT1EP53A	G2070066	
D 0003	LED				CL-170G-CD-T	G2070226	
D 0004	LED				CL-170G-CD-T	G2070226	
DS0001	LCD				T415001	G6090083	
J 0001	CONNECTOR				52190-1417	P1090706	
Q 0001	IC				HD404618A74H	G1091665	
Q 0005	TRANSISTOR				2SD1368CB TL	G3413688B	
R 0001	CHIP RES.	33	1/10W		RMC1/10T 330J	J24205330	
R 0002	CHIP RES.	33	1/10W		RMC1/10T 330J	J24205330	
R 0003	CHIP RES.	1M	1/10W		RMC1/10T 105J	J24205105	
R 0005	CHIP RES.	220	1/10W		RMC1/10T 221J	J24205221	
R 0022	CHIP RES.	1K	1/10W		RMC1/10T 102J	J24205102	
R 0024	CHIP RES.	470	1/10W		RMC1/10T 471J	J24205471	
R 0025	CHIP RES.	560	1/10W		RMC1/10T 561J	J24205561	

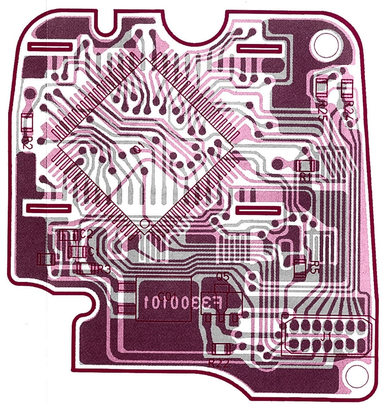


HD404618A74H
(Q0001)

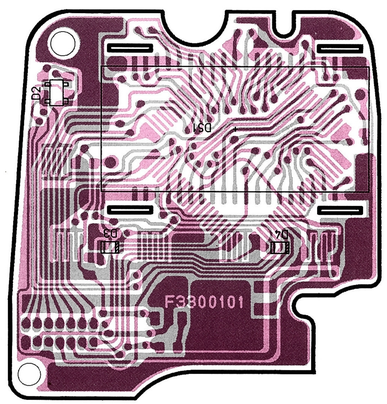


2SD1368CB(CB)
(Q0005)



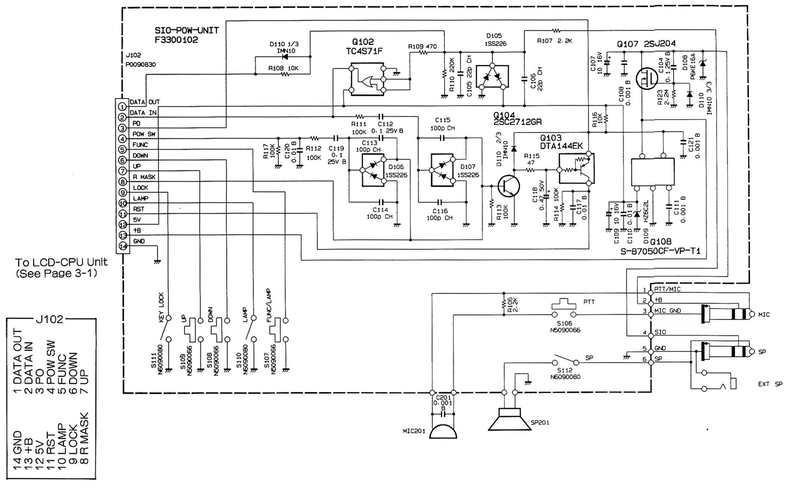


Obverse view of LCD-CPU Unit



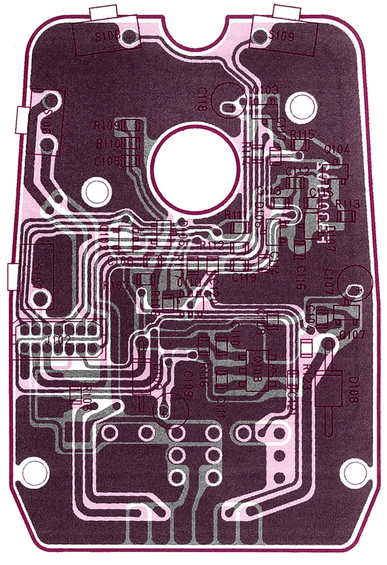
Reverse view of LCD-CPU Unit

J0001
7. UP
6. DOWN
5. FUNC
4. POW SW
3. PO
2. DATA IN
1. DATA OUT
8. R.MASK
9. LOCK
10. LAMP
11. RST
12. 5V
13. +B
14. GND

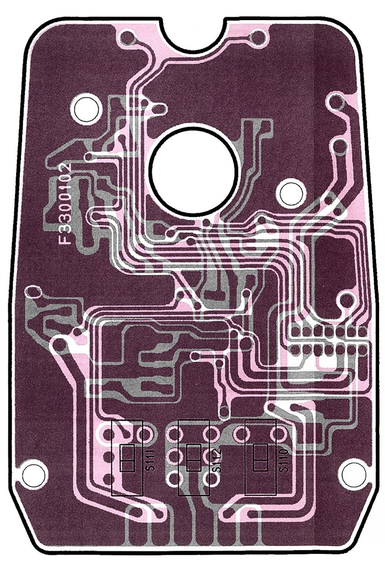


J102

1	DATA OUT
2	DATA IN
3	PO
4	POW SW
5	FUNC
6	DOWN
7	UP
8	R MASK
9	LOCK
10	LAMP
11	RST
12	5V
13	+B
14	GND

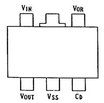


Obverse view of SIO-POW Unit

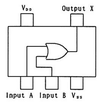


Reverse view of SIO-POW Unit

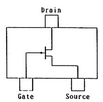
REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.
	*** SIO-POW UNIT ***						
	Printed Circuit Board					F3300102	
C 0104	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811	
C 0105	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219	
C 0106	CHIP CAP.	22pF	50V	CH	GRM40CH220J50PT	K22170219	
C 0107	AL. ELECTRO. CAP.	10uF	16V		RC2-16V100M	K40129012	
C 0108	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805	
C 0109	AL. ELECTRO. CAP.	10uF	16V		RC2-16V100M	K40129012	
C 0110	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817	
C 0111	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805	
C 0112	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811	
C 0113	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235	
C 0114	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235	
C 0115	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235	
C 0116	CHIP CAP.	100pF	50V	CH	GRM40CH101J50PT	K22170235	
C 0117	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817	
C 0118	AL. ELECTRO. CAP.	0.47uF	50V		RC2-50VR47M	K40179005	
C 0119	CHIP CAP.	0.1uF	25V	B	GRM40B104M25PT	K22140811	
C 0120	CHIP CAP.	0.01uF	50V	B	GRM40B103M50PT	K22170817	
C 0121	CHIP CAP.	0.001uF	50V	B	GRM40B102M50PT	K22170805	



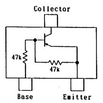
S-87050CF (VP)
(Q108)



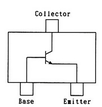
TC4S71F (C4)
(Q102)



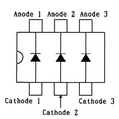
2SJ204 (H15)
(Q107)



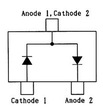
DTA144EK (16)
(Q103)



2SC2712GR (LG)
(Q104)



IMN10 (N10)
(D110)



1SS226 (C3)
(D105,106,107)

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.
D 0105	DIODE				1SS226 TE85R	G2070003	
D 0106	DIODE				1SS226 TE85R	G2070003	
D 0107	DIODE				1SS226 TE85R	G2070003	
D 0108	SURGE ABSORBER				P6KE16A	Q9000566	
D 0109	DIODE				HZ6C2L	G2090225	
D 0110	DIODE				IMN10 T108	G2070078	
J 0102	CONNECTOR				53130-1417	P0090830	
Q 0102	IC				TC4S71F TE85R	G1090906	
Q 0103	TRANSISTOR				DTA144EK T146	G3070069	
Q 0104	TRANSISTOR				2SC2712GR TE85R	G3327127G	
Q 0107	FET				2SJ204-T1B	G3702048	
Q 0108	IC				S-87050CF-VP-T1	G1091341	
R 0106	CHIP RES.	2.2K	1/10W		RMC1/10T 222J	J24205222	
R 0107	CHIP RES.	2.2K	1/10W		RMC1/10T 222J	J24205222	
R 0108	CHIP RES.	10K	1/10W		RMC1/10T 103J	J24205103	
R 0109	CHIP RES.	470	1/10W		RMC1/10T 471J	J24205471	
R 0110	CHIP RES.	220K	1/10W		RMC1/10T 224J	J24205224	
R 0111	CHIP RES.	100K	1/10W		RMC1/10T 104J	J24205104	
R 0112	CHIP RES.	100K	1/10W		RMC1/10T 104J	J24205104	
R 0113	CHIP RES.	100K	1/10W		RMC1/10T 104J	J24205104	
R 0114	CHIP RES.	100K	1/10W		RMC1/10T 104J	J24205104	
R 0115	CHIP RES.	47	1/10W		RMC1/10T 470J	J24205470	
R 0116	CHIP RES.	10K	1/10W		RMC1/10T 103J	J24205103	
R 0117	CHIP RES.	100K	1/10W		RMC1/10T 104J	J24205104	
R 0123	CHIP RES.	2.2M	1/10W		RMC1/10T 225J	J24205225	
S 0106	TACT SWITCH				SKHLLD	N5090066	
S 0107	TACT SWITCH				SKHLLD	N5090066	
S 0108	TACT SWITCH				SKHLLD	N5090066	
S 0109	TACT SWITCH				SKHLLD	N5090066	
S 0110	SLIDE SWITCH				SS300-A22B4C-2	N6090080	
S 0111	SLIDE SWITCH				SS300-A22B4C-2	N6090080	
S 0112	SLIDE SWITCH				SS300-A22B4C-2	N6090080	

Specifications

Input Voltage: 100～234 VAC

Quick Charging Current (Approximate, mA)

FNB-25; 700mA

FNB-26; 1100mA

FNB-27; 700mA

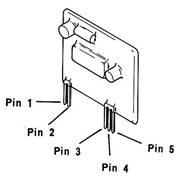
FNB-28; 700mA

Trickle Charging Current: Less than 0.2C

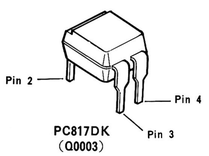
Operating Temperature: 0℃～40℃

Size: W157×H50×D80 (*mm*)

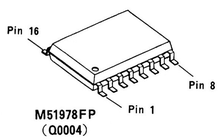
Weight: 350 *g*



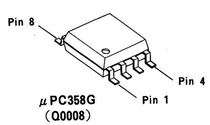
KS106B
(Q0012)



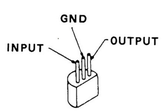
PC817DK
(Q0003)



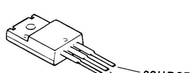
M51978FP
(Q0004)



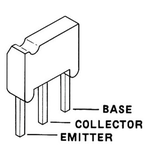
μPC358G
(Q0008)



μPC78L05J
(Q0011)



2SK1030
(Q0001)



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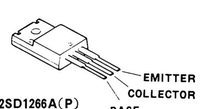
(Q0006)



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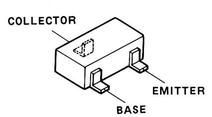
(Q0002)



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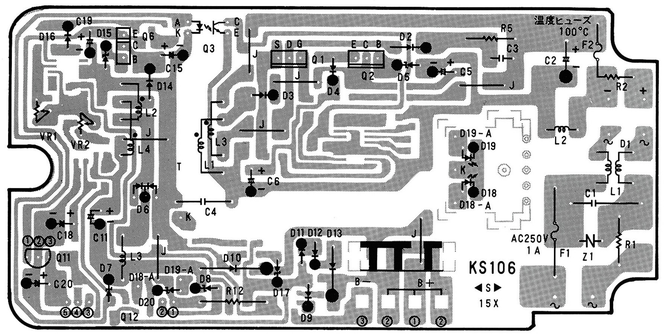
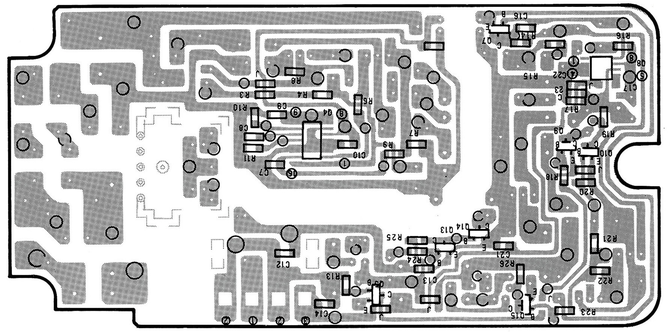
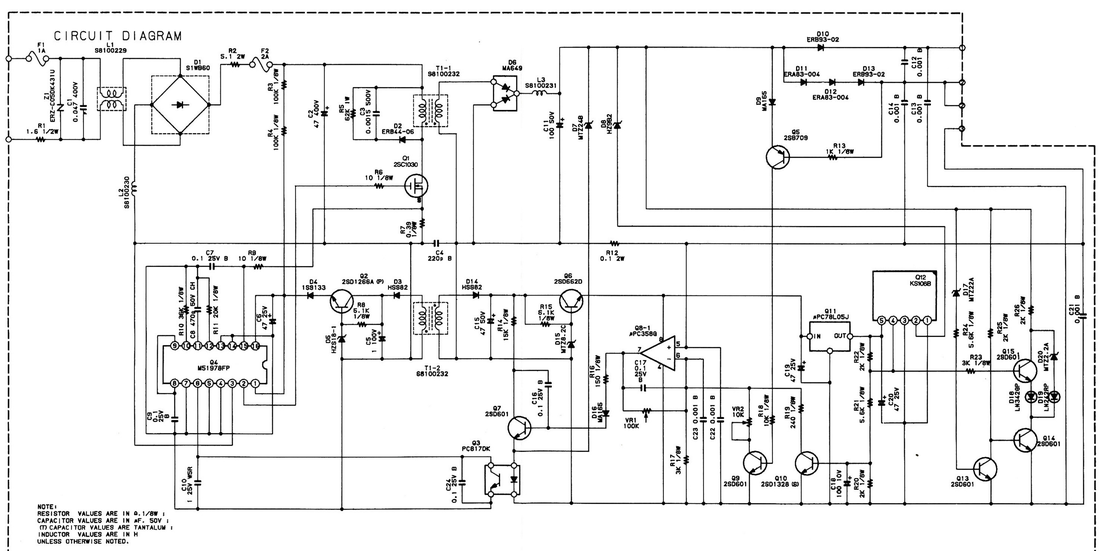
(Q0010)
2SB709
(Q0005)
2SD601
(Q0007, 0009
0013, 0014
0015)



Component Side

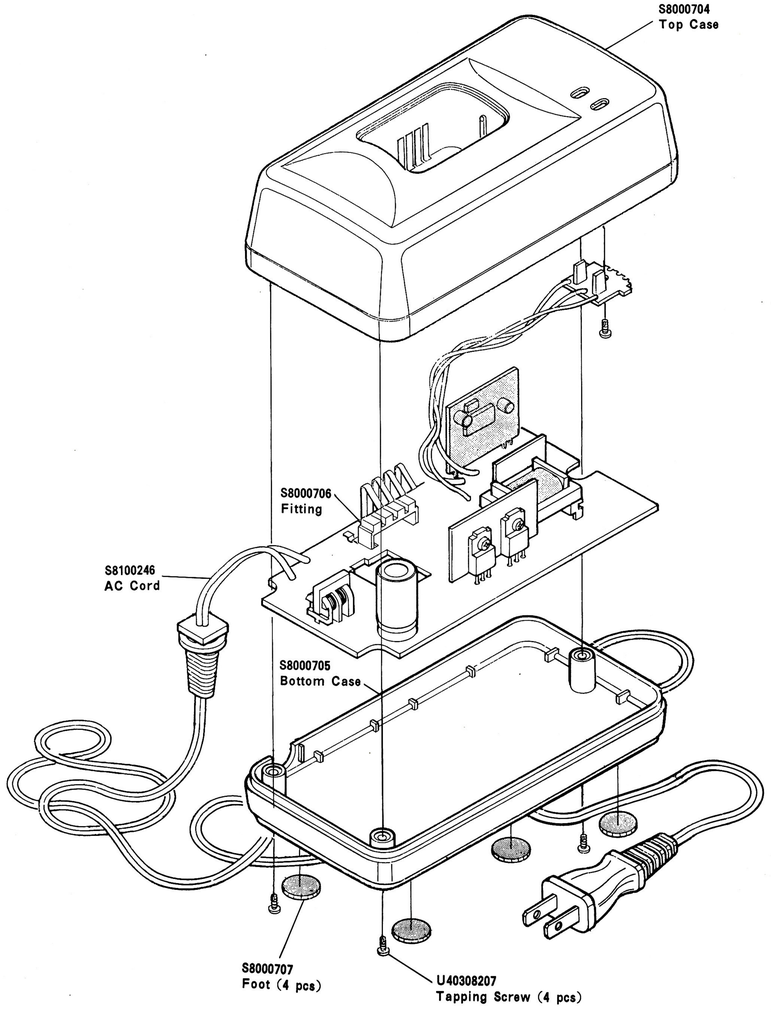


Chip-only Side



REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.
C 0001	FILM CAP.	0.047uF	400V		ECQE473T282	K52260002	
C 0002	AL. ELECTRO. CAP.	47uF	400V		400USP47MZ25	K40269003	
C 0003	CERAMIC CAP.	0.0015uF	500V		ECK-D2H152KB5	K10279001	
C 0004	CAP.	220pF		B	DE1010B221KACT4K-KD	K10269001	
C 0005	AL. ELECTRO. CAP.	1uF	100V		ECE-A2AGE010	K40269002	
C 0006	AL. ELECTRO. CAP.	47uF	25V		RE2-25V470M	K40149035	
C 0007	CHIP CAP.	0.1uF	25V	B	GRM42-6B104M25PT	K22141809	
C 0008	CHIP CAP.	470pF	50V	CH	GRM42-6CH471J50T	K22171251	
C 0009	CHIP CAP.	0.1uF	25V	B	GRM42-6B104M25PT	K22141809	
C 0010	CHIP CAP.	1uF	25V	Y5V	CM316Y5V105K25VAB	K22140002	
C 0011	AL. ELECTRO. CAP.	100uF	50V		RE2-50V101M	K40179032	
C 0012	CHIP CAP.	0.001uF	50V	B	GRM42-6B102M50PT	K22171801	
C 0013	CHIP CAP.	0.001uF	50V	B	GRM42-6B102M50PT	K22171801	
C 0014	CHIP CAP.	0.001uF	50V	B	GRM42-6B102M50PT	K22171801	
C 0015	AL. ELECTRO. CAP.	47uF	50V		RE2-50V470M	K40179028	
C 0016	CHIP CAP.	0.1uF	25V	B	GRM42-6B104M25PT	K22141809	
C 0017	CHIP CAP.	0.1uF	25V	B	GRM42-6B104M25PT	K22141809	
C 0018	AL. ELECTRO. CAP.	100uF	10V		ECE-A1AU101	K40109031	
C 0019	AL. ELECTRO. CAP.	47uF	25V		RE2-25V470M	K40149035	
C 0020	AL. ELECTRO. CAP.	47uF	25V		RE2-25V470M	K40149035	
C 0021	CHIP CAP.	0.001uF	50V	B	GRM42-6B102M50PT	K22171801	
C 0022	CHIP CAP.	0.001uF	50V	B	GRM42-6B102M50PT	K22171801	
C 0023	CHIP CAP.	0.001uF	50V	B	GRM42-6B102M50PT	K22171801	
C 0024	CHIP CAP.	0.1uF	25V	B	GRM42-6B104M25PT	K22141809	
D 0001	DIODE				S1WB60	G2090515	
D 0002	DIODE				ERB44-06	G2090516	
D 0003	DIODE				HSS82	G2090517	
D 0004	DIODE				1SS133	G2090389	
D 0005	DIODE				HZS18-1	G2090518	
D 0006	DIODE				MA649	G2090540	
D 0007	DIODE				MTZ24B	G2090541	
D 0008	DIODE				HZ9B2	G2090542	
D 0009	DIODE				MA165	G2090543	
D 0010	DIODE				ERB93-02	G2090544	
D 0011	DIODE				ERA83-004	G2090545	
D 0012	DIODE				ERA83-004	G2090545	
D 0013	DIODE				ERB93-02	G2090544	
D 0014	DIODE				HSS82	G2090517	
D 0015	DIODE				MTZ8.2C	G2090546	
D 0016	DIODE				MA165	G2090543	
D 0017	DIODE				MTZ22A	G2090547	
D 0018	LED				LN342GP	G2090548	
D 0019	LED				LN242RP	G2090549	
D 0020	DIODE				MTZ2.2A	G2090550	
F 0001	FUSE				FGMLB250V1A	Q0000042	
F 0002	THERMAL FUSE				SM095B0	Q0000044	
L 0001	COIL				SU9V-05020	S8100229	
L 0002	TOROIDAL				SN-8S500	S8100230	
L 0003	TOROIDAL				HP-032	S8100231	
Q 0001	FET				2SK1030	G3810300	
Q 0002	TRANSISTOR				2SD1266A(P)	G3412661P	
Q 0003	PHOTO COUPLER				PC817DK	G0090015	

REF.	DESCRIPTION	VALUE	WV	TOL.	MFGR'S DESIG	YAESU P/N	VERS.
Q 0004	IC				M51978FP	G1091298	
Q 0005	TRANSISTOR				2SB709	G3207090	
Q 0006	TRANSISTOR				2SD662B	G3406620B	
Q 0007	TRANSISTOR				2SD601	G3406010	
Q 0008	IC				UPC358G	G1090564	
Q 0009	TRANSISTOR				2SD601	G3406010	
Q 0010	TRANSISTOR				2SD1328(S)	G3413280S	
Q 0011	IC				UPC78L05J	G1090848	
Q 0012	IC				KS106B	G1091592	
Q 0013	TRANSISTOR				2SD601	G3406010	
Q 0014	TRANSISTOR				2SD601	G3406010	
Q 0015	TRANSISTOR				2SD601	G3406010	
R 0001	RES.	1.6	1/2W		ERD-50TMJ1R6V	J20279009	
R 0002	RES.	5.1	2W		ERW-2PK5R1	J31336519	
R 0003	CHIP RES.	100K	1/8W		RMC1/8T 104J	J24215104	
R 0004	CHIP RES.	100K	1/8W		RMC1/8T 104J	J24215104	
R 0005	METAL FILM RES.	62K	1W		ERG-1SJ623	J22309021	
R 0006	CHIP RES.	10	1/8W		RMC1/8T 100J	J24215100	
R 0007	CHIP RES.	0.39	1/8W		ERJ-8GEYJR39	J23219001	
R 0008	CHIP RES.	5.1K	1/8W		RMC1/8T 512J	J24215512	
R 0009	CHIP RES.	10	1/8W		RMC1/8T 100J	J24215100	
R 0010	CHIP RES.	36K	1/8W		RMC1/8T 363J	J24215363	
R 0011	CHIP RES.	20K	1/8W		RMC1/8T 203J	J24215203	
R 0012	RES.	0.1	2W		ERW-2PJR10	J31335019	
R 0013	CHIP RES.	1K	1/8W		RMC1/8T 102J	J24215102	
R 0014	CHIP RES.	15K	1/8W		RMC1/8T 153J	J24215153	
R 0015	CHIP RES.	5.1K	1/8W		RMC1/8T 512J	J24215512	
R 0016	CHIP RES.	150	1/8W		RMC1/8T 151J	J24215151	
R 0017	CHIP RES.	3K	1/8W		RMC1/8T 302J	J24215302	
R 0018	CHIP RES.	10K	1/8W		RMC1/8T 103J	J24215103	
R 0019	CHIP RES.	240	1/8W		RMC1/8T 241J	J24215241	
R 0020	CHIP RES.	2K	1/8W		RMC1/8T 202J	J24215202	
R 0021	CHIP RES.	5.6K	1/8W		RMC1/8T 562J	J24215562	
R 0022	CHIP RES.	2K	1/8W		RMC1/8T 202J	J24215202	
R 0023	CHIP RES.	3K	1/8W		RMC1/8T 302J	J24215302	
R 0024	CHIP RES.	5.6K	1/8W		RMC1/8T 562J	J24215562	
R 0025	CHIP RES.	2K	1/8W		RMC1/8T 202J	J24215202	
R 0026	CHIP RES.	2K	1/8W		RMC1/8T 202J	J24215202	
T 0001	TRANS.				KS64B	S8100232	
VR0001	POT.	100K			EVN-D8AA00B15	S8100219	
VR0002	POT.	10K			EVN-D8AA00B14	S8100220	
Z 0001	SURGE ABSORBER				ERZ-C05DK431U	Q9000559	



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