FURWO SERVICE MANUAL

SSB RADIOTELEPHONE

MODEL FS-1550



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* * * CONTENTS * * *

		<u>Page</u>	
SPECIFICATIONS		-1-	
LIST FOR RECOMMENDED MAINTENANCE PARTS		-3-	
CHAPTER 1 CIRCUIT DESCRIPTION	1-1	thru	1-11
 1.1 Difference Between FS-1550 and FS-1500 Series 1.2 Transceiver Unit 1. Transmitter Section 2. Local Oscillator Section 3. Receiver Section 4. Panel/CPU Section 5. Power Supply Section 		1-1 1-2 1-2 1-3 1-4 1-5 1-1()
1.3 Antenna Coupler Unit 1. Block Description of Coupler 2. Tuning Sequence of Coupler General Block Diagram Transmitter Block Diagram Local OSC Block Diagram Receiver Block Diagram Power Supply Block Diagram Antenna Coupler Block Diagram Frequency Spectrum		1-1: 1-1: 1-1: 1-1: 1-1: 1-1: 1-2: 1-2:	1 1 6 7 3 9 0
CHAPTER 2 SETTING-UP	2-1	thru	2-5
 2.1 Function of DIP Switches 2.2 Alternation of I_{ANT} and I_{FIL} 2.3 Writing a Frequency into Memory 2.4 Alternation of Input Voltage for Rectifier PR-270 2.5 Alternation of Input Voltage for DC-DC Converter PC 	-220	2-1 2-2 2-3 2-4 2-5	
CHAPTER 3 ADJUSTMENT	3-1	thru	3-8
 3.1 Necessary Test Instruments 3.2 Line Voltage Check 3.3 Local OSC Frequency/Level Check 3.4 PA Bias Adjustment 3.5 Transmitter Output Level Adjustment 3.6 Receiver Adjustment 3.7 Check of Antenna Coupler 		3-1 3-2 3-2 3-3 3-4 3-7 3-8	
CHAPTER 4 TROUBLESHOOTING	4-1	thru	4-7
 4.1 Self-test 4.2 Replacement of Major Parts 1. Final Transistor Q3, Q4 (PA Board) 2. Replacement of P.C. Board 		4-1 4-2 4-2 4-3	

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CHAPTER 5	PARTS LOCATION	5-1	thru	5-4
5.1	Transceiver Unit 1. 05P0271 CPU Board 2. 05P0328A TX/RX Board 3. 05P0273A TX FIL Board 05P0274 PA Board 05P0326 RELAY Board		5-1 5-1 5-2	
5.2	05P0276 SW REG Board Antenna Coupler Unit		5-3 5-4	
3.2	1. 05P0278 COUPLER Board		5-4	
CHAPTER 6	SPECIFICATIONS OF MAJOR COMPONENTS		6-1	
6.1	Specifications of IC's		6-1	
CHAPTER 7	ELECTRICAL PARTS LIST	EP-1	thru	EP-11
INTERCONNE	CTION DIAGRAM		D-1	
SCHEMATIC	DIAGRAMS	S-1	thru	S-9
SCHEMATIC	DIAGRAMS FOR EXTERNAL POWER SUPPLY UNIT	S-10	thru	S-12
APPENDIX A	Connection of TELEX Terminal	APA-1	thru	APA-3
APPENDIX B	Notes for Flush Mount Installation		APB-1	l
APPENDIX C	ITU/TELEX Frequency Lists	APC-1	thru	APC-5

SPECIFICATIONS OF FS-1550

GENERAL CHARACTERISTICS

1. Frequency Range

1.6 to 23MHz in 10Hz steps 525 - 1605kHz (receive only, where permitted by authorities. Degraded sensitivity)

2. Frequency Accuracy

After warmup: TX ± 20Hz
Tuning Error: RX 20Hz (5Hz by
clarifier)

Tuning Drift: RX 10Hz (15 min.)

3. Communication System Simplex or semi-duplex

4. Class of Emission

J3E, H3E, R3E (option: A1A, F1B; T/A spec not considered) Automatic selection H3E on 2182kHz, manual override to other emission.

5. Number of Channels Separate TX, RX Frequencies:

TX: 64 factory programmed, recalled by CH No.

RX: 10Hz step free selection independent of TX frequency, user programmable with CH No. 1 - 64.

Paired TX/RX Frequencyies: Factory programmed 64 TX/RX pairs selected by CH No. 1 - 64.

ITU HF: 192 ITU channels (Available in both Separate and Paired TX/RX frequency versions)

6. Power Supply

13.6 VDC $\pm 15\%$, 18A (TX), 1.2A(Std-by) 24 or 32VDC with extra DC-DC con-

verter

110/220VAC with extra rectifier

TRANSMITTER CHARACTERISTICS

1. RF OUTPUT POWER

J3E/R3E/H3E: 150 Wpep at 50 ohm load (@13.6VDC, IEC rec.), reduction to 60 Wpep or less A1A/F1B (option): 100W

2. Two-tone Alarm Generator

Built in as standard.

ANTENNA COUPLER CHARACTERISTICS

1. Input Impedance 50 ohms

2. Antenna

6 - 15m wire or whip

3. Tuning Speed

0.2 to 2 sec typical

RECEIVER CHARACTERISTICS

1. Receiving System

Double-conversion superheterodyne IF: 54.455MHz and 455kHz

2. Sensitivity

Input level at 50 ohms to produce SINAD 20dB
J3E/R3E: 3dBuV (1.4uVemf)
H3E: 16dBuV (6.3uVemf)

3. Selectivity

J3E/R3E: 350 to 2700Hz H3E: ±3kHz A1A/F1B(option): ±150Hz

4. Scan

8 groups (8 ch/group), All channels in slelcted band on ITU channels. Dwell time 1 - 9 sec where trafic is present.

5. Audio Output

3W rated into internal speaker 5W max. into external 4-ohm speaker

6. Other Features

AGC: ON/OFF; RF Gain: Adjustable; Noise Blanker: always in circuit; Squelch: ON/OFF; Dimmer: OFF/Dark/Med/Bright; Speaker: ON/OFF (Handset always alive)

EQUIPMENT LIST

(Standard)

Main Unit w/ Mounting Bracket
Telephone Handset
Antenna Coupler

1set
1set
1set

(Optional)

DC-DC Converter PC-220 for 24 or 32 VDC

Rectifier PR-270 for 110/220VAC mains Flushmount Adapter for Main Unit

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ANTENNA COUPLER (AT-1500)

Tuning System CPU controlled fully automatic tuning system

Frequency Range 1.6 to 25 MHz

Input Impedance 50 ohms (Viewed from transceiver)

Antenna Required 6 to 15 m wire or whip

Power Capability 150 Wpep, 75 W continuous

Tuning Power 10 W

VSWR Less than 1.5

Tune-up Time Within 2 to 15 sec.

Within 0.5 sec. in the pretuned bands

Switches/controls MANUAL 2182 kHz tuning facility

TEST switch (Self-test)

Power Requirement 15 VDC (supplied from transceiver), 0.6 A max.

Ambient Temperature - 30°C to + 60°C at 95% RH

Construction Weather-proof plastic cabinet, stainless steel mount

Coating Color White

Dimensions $267 \text{ mm (W)} \times 390 \text{ mm (H)} \times 90 \text{ mm (D)}$

 $(10.5" \times 15.4" \times 3.5")$

Weight Approx. 2.9 kg (6.4 lbs.)



MAINTENANCE PARTS LIST FOR FS1550

*1:DEPOT MAINTENANCE PARTS FOR 10 SETS IN 2 YEARS *2:SHIPBORNE RUNNING PARTS FOR 1 SET IN 2 YEARS

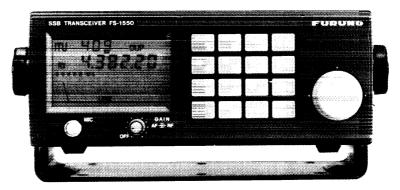
CODE NO.	NAME OF PARTS	TYPE	SPECIFICATIONS	QUANTITY *1 *2	1TY *2	REMARKS
00-113-44	RANSISTO	SC3240		91	5 +	PAIR
000-118-083 000-126-340 000-127-940	TANSISIOR TANSISIOR TANSISIOR TANSISIOR	25C3133 25C3133 25D667A		n 40 60 L	7 2 7 7	PAIR
00-113-44 00-113-44 00-129-35	KANSISTO ET	SK751A SK125		00	. 22	PAIR
00-107-97		MA649		8	H	
000-110-984 000-112-744 000-113-353 000-113-391 000-113-393 000-113-395		UPC1242H S@ VOX VOX IF NB AGC ALC	0550393-0 0550393-0 0550392-0 0550394-0 0550396-0	ммммммм	нананана	
000-103-544 000-113-428 000-113-485	RELAY RELAY RELAY	G68-1114P-US DC12V G68-2114P-DC12V G4W-2212PUSTV5-DC12V	,	10	F 2 T	
000-549-017	FUSE GLASS TUBE TYPE	FGB0 30A AC125V	0050081	20	ν.	
000-113-465	LOUDSPEAKER	21008047	0550391-0	٣	ı	
000-112-622	MICROPHONE WITH CURL CORD	DM1620FZ1 W/FM10PS6H	4 FM-2510	М	₩	
005-592-270 005-592-310 005-592-370 005-592-440 005-592-440 005-593-600	PRINTED CIRCUIT BOARD PRINTED CIRCUIT BOARD PRINTED CIRCUIT BOARD FRONT PANEL ASSEMBLY PRINTED CIRCUIT BOARD PRINTED CIRCUIT BOARD	05P0274,PA 05P0276,SW REG 05P0278,COUP FRONT PANEL 05P0273A,TX/FIL 05P0326,RELAY 05P0328A,TX/RX	FS-1500/1550 FS-1500/1550 AT-1500 FS-1550 FS-1500/1550 FS-1500/1550	нананан		
000-287-502	MODULE CAPACITOR	EXF-P41032W	0.01UF 50V	9		
000-375-524 000-375-538 000-375-539	METAL OXIDE FILM RESISTOR METAL OXIDE FILM RESISTOR METAL OXIDE FILM RESISTOR	ERG-3SJ560P ERG-3SJ821P ERG-3SJ102P	00S0102-0 00S0102-0 3W 1K	000		



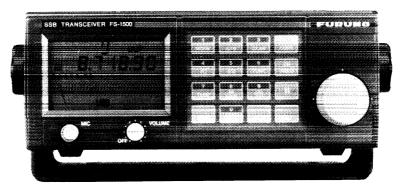
CHAPTER 1 CIRCUIT DISCRIPTION

1.1 Major Difference Between FS-1550 and FS-1500 Series

FUNCTION	FS-1550	FS-1500 Series
Display of TX Frequency	Enable	Disable
RF GAIN Control Knob	Provided	Not provided
AGC Control Knob	Provided	Not provided
Setting Different Channel Numbers for TX and RX (Cross Band Operation) on ITU Ch. and/or User Ch.	Enable	Disable
Baud Rate of RS-232C Data	Fixed (4800)	Selectable (9600 OR 4800)



Front View of FS-1550



Front View of FS-1500



1.2 Transceiver Unit

The FS-1550 radiotelephone set is a modern, 2-unit design. The 2 units are transceiver unit and antenna coupler unit. The transceiver unit contains 6 printed circuit boards; the CPU board, TX/RX board, TX FIL board, PA board, RELAY board and the SW REG board.

1. Transmitter Section

Refer to the Transmitter Block Diagrams on page 1-17.

An audio signal applied to the microphone is amplified by U10 of the TX/RX board. U10 also compresses excessive level of speech to achieve proper modulation level.

The compressed audio signal is switched by Hybrid IC U12 and applied to Double Balanced Modulator (DBM) CR28. The DBM modulates the audio signal with the 3rd local oscillation frequency 456.5kHz (USB) and outputs a Double Side Band (DSB) signal with suppressed carrier.

The DSB signal is amplified by Buffer Amplifier Q12 and passed to Crystal Filter FL3 where unwanted Upper Side Band (USB) component is rejected and only Lower Side Band (LSB) component is selected.

In order to inject the carrier for class of emission R3E and H3E, the 3rd local oscillation frequency 456.5kHz is injected at the output of FL3 and carrier level for R3E and H3E is adjusted by potentiometer R85 and R87, respectively.

The LSB signal is mixed with the 2nd local oscillation frequency 54MHz by the 2nd Mixer CR27 DBM, resulting in the output of a 54.455MHz LSB signal.

The 54.455MHz LSB signal is amplified by Buffer Amplifier Q10 and passes through Crystal Filter FL1 (54.455MHz) where unwanted components are deleted.

The 1st Mixer CR26 DBM mixes the LSB signal with the 1st local oscillation frequency (f + 54.4565MHz) to generate a transmit frequency ("f") from 1.6 to 23 MHz. As the Mixer outputs the difference frequency, the LSB signal is converted to a USB signal.

The USB signal output goes to a combination of a Low Pass Filter (LPF) and a High Pass Filter (HPF) consisting of coils L7 to L10 and capacitors C48 to C57 which delete unwanted components.

The USB signal is amplified by Wideband Amplifier IC U2 and Buffer Amplifiers Q7 and Q5 to a level required to drive the BO4 Power Amplifier (P.A.).

In the PA section an input from the TX/RX board is amplified by two push-pull amplifiers, consisting of Q1 and Q2, and Q3 and Q4, to a level of nominal output power.

The Power Amplifier incorporates Temperature Detector, comprised of RT2 and U1, which monitors the temperature of the power amplifier transistors. When the temperature at the top of the transistors exceeds approx. 80°C , the Temperature Detector outputs DC voltage which is recognized as "over-temp" by MPU, resulting that the gain of Wideband Amplifier U2 of the TX/RX board is decreased "LOW POWER".

The output of the PA passes through an LPF in the BO3 TX FIL board where harmonics of the signal are deleted. Spurious components contained in the signal output from the LPF are attenuated by at least 65 dB relative to the wanted signal.

LPF	Cut-off Frequency
B1	2.4 MHz
B2	3.6 MHz
B3	6.0 MHz
B4	10.0 MHz
B5	18.0 MHz
B6	30.0 MHz

L14, CR1, CR2 and U1 of the TX FIL board form the SWR Detector which detects excessive Standing Wave due to antenna matching failure or open-circuited or short-circuited antenna terminal. Should one of these occur, the SWR detector reduces the gain of the Wideband Amplifier U2 in the BO2 TX/RX board to protect the PA from damage. U2 also controls power reduction with DC voltage sent by the CPU.

If the PA is driven to produce output power exceeding the rated power, the DC voltage of the ALC signal is increased, gain at U2 is decreased and the drive level (output level of the TX/RX board) is decreased so as not to exceed the rated output power.

2. Local Oscillator Section

Refer to the Local Oscillator Block Diagram on Page 1-18.

All local oscillation frequencies are generated by the VCO (Voltage Controlled Oscillator) section of the TX/RX board.

Table 1.2 Local Oscillation Frequency

	USB/R3E	LSB	TLX	CW	AM
1st LO (kHz)	F+54456.5	F+54453.5	F+54455.0	F+54455.0	F+54455.0
2nd LO (kHz)	54000.0	54000.0	54000.0	54000.0	54000.0
3rd LO (kHz)	456.5	453.5	456.7	(TX)455.0 (RX)455.8	455.0

49.5 MHz is oscillated by crystal Yl in the oven and U9. 49.5 MHz is divided by 11 by U10, becoming 4.5 MHz, which is used as the reference frequency for the Phase Lock Loops.



The 1st local oscillation frequency is generated by 2 Phase Lock Loops, Loop-1 and Loop-2. A frequency between 50.500 and 51.499 MHz in 1 kHz steps is produced by PLL IC U2 and VCO Q1. The resultant frequency is divided by 100 by U3 and mixed with 49.5 MHz by U4 resulting in the generation of a frequency between 50.00500 and 50.01499 MHz in 10 Hz increments.

Loop-1 generates, with PLL IC U5 and VCO Q7, 1st local oscillation frequency (f+54.455MHz in 10Hz steps). Mixer U8 outputs a frequency from 4.55 to 34.44MHz in 10kHz steps by mixing a frequency between 50.500 to 51.499MHz with the output frequency of the Loop-2.

The 2nd local oscillation frequency (54.0MHz) is synthesized with the crystal oscillation frequency (49.5 MHz) and the reference frequency (4.5MHz).

Loop-3 consisting of PLL IC U11 and VCO Q15 generates a frequency between 45.35 and 45.68MHz in 10kHz steps. This is divided by 100 by U12 to generate the 3rd local oscillation frequency (453.5 to 456.8kHz) depending on class of emission.

3. Receiver Section

Refer to the Receiver Block Diagram on page 1-19.

A received frequency ("f"), passes through the antenna matching network in the antenna coupler unit, and is sent to an LPF in BO3 TX FIL board. The signal then passes through the BC rejection filter which deletes incoming broadcasting signal in the BC band and an LPF which protects local frequency signals from passing through the antenna system. The received signal is passed through Induction Rejector CR1 and CR2, amplified by RF Amplifier Q1 and Q2 and supplied to the 1st Mixer CR26 DBM.

1st mixer mixes the received signal with the lst local oscillation frequency (f + 54.455 MHz). The lst IF (54.455 MHz) passes through filter FL4 (± 4 kHz bandwidth) for rejection of unwanted components and then is amplified by Ul.

The amplified 1st IF signal is mixed with the 2nd local oscillation frequency (54.0 MHz) by the 2nd Mixer CR27 DBM resulting in the output of the 455 kHz 2nd IF signal. CR16, CR17 and the hybrid IC U4 cut spike noise in the 2nd IF signal. The 2nd IF signal is applied to a bandpass filter FL3, FL4 or FL5 in accordance with the class of emission selected. It is then amplified by hybrid IC U7 and supplied to Detector CR28 thru a BPF and Buffer Amplifier Q13.

CR28 mixes the 2nd IF signal with the 3rd local oscillation frequency (456.5MHz, for USB), which results in the output of an audio frequency signal.

For reception of an H3E signal, Detectors CR19 and CR20 are used to obtain the audio signal which is amplified by hybrid IC U8.

U8 also generates an AGC signal to control with voltage gain of the 1st IF Amplifier U1 and the 2nd IF Amplifier U7.



The audio signal is applied to hybrid IC U12 and then fed to Line Amplifier U15. The output of the Line Amplifier is used as "LINE OUTPUT" signal, but also is applied to Squelch Control U11. The squelch control mutes audio output in the absence of a signal.

The audio signal is finally amplified by AF Power Amplifier U13 to drive a loudspeaker. The level of audio output is adjustable by a volume control on the front panel.

4. Panel/CPU Section

Refer to the General Block Diagram on page 1-16.

MPU U1 of the B01 CPU board receives and processes key and channel selector operations. Received signal strength or antenna current is converted into a digital signal by Analog-to-Digital Converter U3 and processed by the MPU. Signal strength or antenna current (or 50 ohm line current) is graphically indicated on the LCD.

ITU channel data is stored in the ROM section of the MPU. User-programmed channel data (2 \times 64 channels) is stored in the Electrically Erasable PROM U4.

When a frequency is selected through the keyboard or a rotary knob, the MPU displays the frequency on the LCD and sends necessary data to each PLL on the TX/RX board.

For dimmer adjustment, the MPU controls the amount of current supplied to each illumination lamp in accordance with instructions received through the keyboard.

The following descriptions provide more detailed information about the devices employed by the BO1 CPU board. The Schematic Diagram on page S-2 should also be referred to.



<< U1 >>

System Control

Front panel key or dial operation is received by the MPU U1 and after it is judged to be valid or invalid, required data are synchronized by the clock and sent to each circuit block.

The figure below shows the outline block diagram of U1.

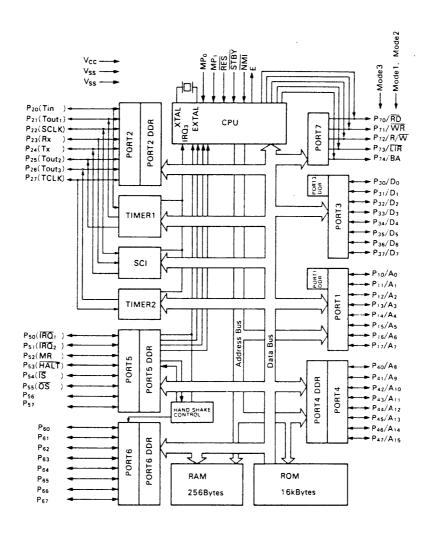


Fig. 1-1 Block Diagram of U1 of CPU Board



U1 is a one chip microprocessor comprised of an 8 bit CPU, 256 Byte RAM, 16k Byte ROM, timers, serial and parallel interfaces, etc. Because it is of one chip construction, no external ROM/RAM is used. Consequently, data loaded on the data bus or the address bus is not directly sent to external circuits but is passed through a parallel or series I/O port where external events (key operation, etc.) are monitored and control signals are sent to external circuits.

The ROM preserves, when the power is removed or reset, system control program, test program, ITU channel frequencies and corresponding data and other fixed data.

The RAM temporarily stores key operations, last-selected channel frequency and channel data (Simp/Dup/Class of Emission). Channel frequency and channel data are preserved by this RAM when the power is removed.

<< U2 >>

U2, a LCD Control IC, drives the LCD display according to data/commands serially sent from the MPU.

Transmission of Command/Data

Serial data input and clock from pin SCK are sent out via pin SI to an internal shift register.

Transmission data; i.e., command or display data, are differentiated by the C/D pin. The MPU monitors the BUSY output of the LCD Control, and if "READY" transmits data.

Driving the LCD

The LCD is made up of 4 common lines and 32 segment lines. An area on the LCD is blackened by voltage applied to its corresponding segment.

<< U3 >>

A/D Converter U3 digitally converts receive signal strength or antenna current and sends it to the MPU as synchronous serial data. The address data to determine which one of four analog inputs should be A/D converted is sent from the MPU as synchronous serial data. After A/D conversion is completed, the EOC (End Of Conversion) terminal goes into "L" state. The CPU reads EOC terminal status and outputs a clock signal to SCK (shift clock) terminal of U3. Then, U3, in synchronization with the shift clock, returns converted data to the CPU via pin SO. Note that in actual practice only two of four channels are used; AO (receive signal strength) and A1 (antenna current or 50 ohm line current).

<< U4 >>

U4 stores user channel data (Simp/Dup/Class of Emission) which has been memorized by channel programming.



<< U5 >>

Chip Selection (Address Decoder)

U5 is partially comprised of two 2-to 4-line decoders; one reads key operation and the other is used for controlling LCD driver U2 and A/D Converter U3.

Reading of Key Operation

As shown in the figure below, the keyboard is arranged in 4 rows X 4 columns of keys (16 keys total). Which one of the four rows of keys should be binarally converted is determined by the MPU's two bit address P54/55. Each column has a pull-up resistor and whenever a key is pressed the corresponding column goes into "L" state. Data sent from a column is read by Input Ports P10-13 and compared with address (row) information to determine which key has been pressed. Note that the entire operation is not initiated as soon as a key is pressed; the MPU continually reads key status in fixed intervals.

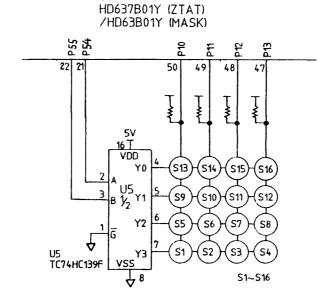


Fig. 1-2 Keyboard Matrix

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<< U6 >>

Analog Multiplexer U6 reads DIP Switch status. As shown below, U6 is an 8-contact rotary switch. The setting selected is binarally converted at the terminals A, B and C for output to the MPU. Since a pull-up resistor is connected to the COM terminal, the switch selected goes into "L" state when ON and "H" state when OFF.

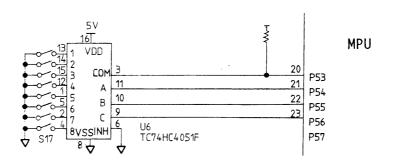


Fig. 1-3 Analog Multiplexer U6

<< U7 >>

Lamp Status

Parallel Input/Series Output Shift Register U7 controls lamp ON/OFF status. When the DIM key is pressed, the CPU serially loads shift clock and data onto P35/36, respectively, and sends them to U7. When updating of data is completed, the contents of U7 are latched by a latch pulse output from P37 to the open-drain output.



5. Power Supply Section

Refer to the Power Supply Block Diagram on page 1-20.

The power supply section consists of RELAY and SW REG boards. The operating range of this section is 12V + 30%, -10%.

A regulated power supply (model PR-270) is prepared for AC ship's mains and a DC-DC converter (model PC-220), for 24V/32VDC. When external power supply unit is prepared locally, use a unit whose able current output is from 2A to max. 30A with minimum voltage fluctuation. An ordinary rectifier can not be used.

A 2m power cable with two 30A fuses in snap-in holders is supplied as standard. If another type of cable is used, ensure that it is properly "fused."

The negative terminal of the battery is floating. Input voltage is always applied to the relay K1, overvoltage detector consisting of Q1, U1, and an oven even if the power is off.

When the power switch is turned on, the relay K1 is driven and input voltage is applied to the switching regulator and a PA circuit.

The PA circuit operates with the input voltage, but other circuits operate with internal +15V provided by the switching regulator or +5V produced from the +15V.

The antenna coupler is also powered with +15V. A 1A breaker is provided in the coupler. +5V for the coupler is produced internally.



1.3 Antenna Coupler Unit

1. Block Description of Coupler

Refer to the Antenna Coupler Block Diagram on page 1-21.

When the PTT switch or [TUNE] key is depressed, "tune" signal is applied to the Antenna Coupler, Relay K1 and K2 are energized and CW signal of approx. 10W is fed from the transceiver 50 ohm antenna terminal to the reactive antenna through a Phase Detector, VSWR Detector (T2), the Matching Network consisting of C1-C18 and L1-L10 and Antenna Current Detector (T3).

MPU U8 selects, according to signals sent from T1 and T2, suitable constants through a combination of capacitors and coils. The initial constants are automatically defined by the MPU depending on the frequency which is read out by a counter consisting of Q1 and U1. The suitable value is stored in the memory of U8 as initial value, for use when the same frequency is selected later. This stored data is held for about one week by super capacitor C42.

The function of DIP switches S3 to S6 is to enable manual matching on 2182kHz. An LED is provided for each relay to indicate switching on or off capacitors and coils. LED CR53 and CR54 are lighted when the matching L-C network is in circuit. LED's CR33 through CR52 are lighted when the relevant coil or capacitor is connected.

S1 "TUNE" is provided to enable manual tuning.

A 50 ohm dummy composed of R25 thru R27 is incorporated for adjusting the VSWR detector. Shunt capacitor C16 thru C18 is normally connected between antenna line and ground to reduce the antenna impedance. Connectors are provided to disconnect the shunt capacitor when only low frequencies are used.

2. Tuning Sequence of Coupler

The basic function of the coupler is to check matching condition whenever there is a change in frequency. If data for a matching condition are available (stored in memory), the coupler reads such data and immediately makes matching.

Fig. 1.4 shows impedance characteristics of vertical grounding type antenna used for ships. When the length of the antenna is shorter than $1/4\lambda$, the characteristic of the antenna is "capacitive". When the length is $1/4\lambda$, it shows a pure resistance of approx. 36 ohms.

When the length is longer than that, "inductive" characteristic is obtained. Then the value of radiation resistance becomes from several hundred ohms to several kilo ohms depending on the size of wire, environmental conditions, and structure. A peak value is obtained at $1/2\,\lambda$.

For example, in a 7m-long antenna, the characteristic is capacitive for the frequency range from 1.6 to 12 MHz and inductive for over 12MHz.



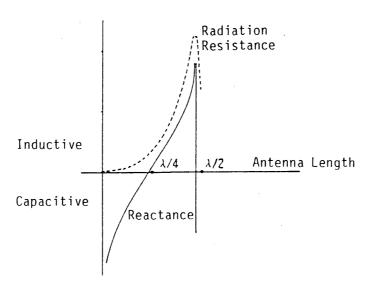


Fig. 1-4 Impedance Characteristics of Vertical Grounding Antenna

In the case of a "capacitive antenna" (Fig. 1-5), a coil "Lx" to cancel the capacitance "Ca" is connected. When viewed from the left side of the matching network, the impedance "Zx" on the right side becomes "ra". The circuits of "Lo" and "Co" converts the impedance viewed from the cable connection side "Zo" (50 ohm) and "Zx" from the antenna side.

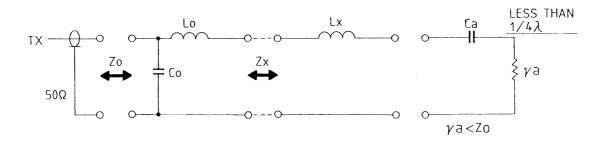


Fig. 1-5 Capacitive Antenna

In the case of an "inductive antenna" (Fig. 1-6), a capacitor "Cx" to cancel the inductance "La'" is connected. Conversion is made by "Lo" and "Co".

The positions for inserting capacitor and coil are different between capacitive and inductive antennas.

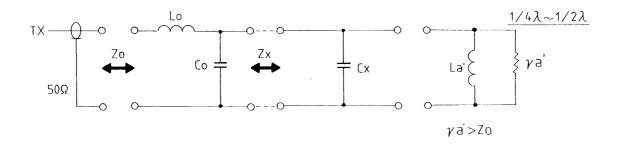


Fig. 1-6 Inductive Antenna



Fig. 1.7 shows the matching circuit of AT-1500. A matching circuit of L and C according to the antenna condition mentioned earlier is made by switching a number of coils and capacitors with relays. An optimum L-C combination is automatically selected by the control of the CPU.

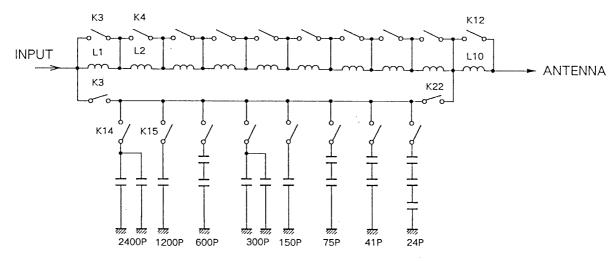
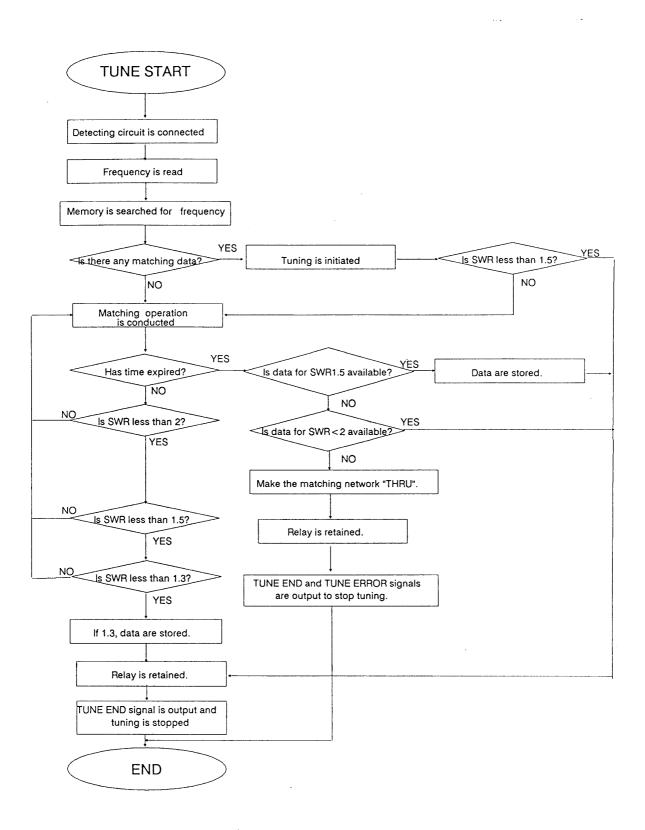


Fig. 1-7 Matching Circuit

The matching procedure is basically as follows;

- 1. When TUNE switch or PTT switch of FS-1550 is pressed, AT-1500 will automatically start controlling.
- 2. FS-1550 is set to the "CW" mode and ready for transmission. The power is set to approx. 10W.
- 3. AT-1500 starts to select matching points. In order to make matching, phase and SWR value are detected for use as data. L-C combination is selected using a CPU-stored program.
- 4. When the optimum condition is detected, tuning is stopped and L-C combination is stored in the RAM.
- 5. Transmission is stopped by a BUSY signal from AT-1500 and the last-used mode is restored.

These procedures are shown in the flow chart on the next page.





Operations of L-C matching network

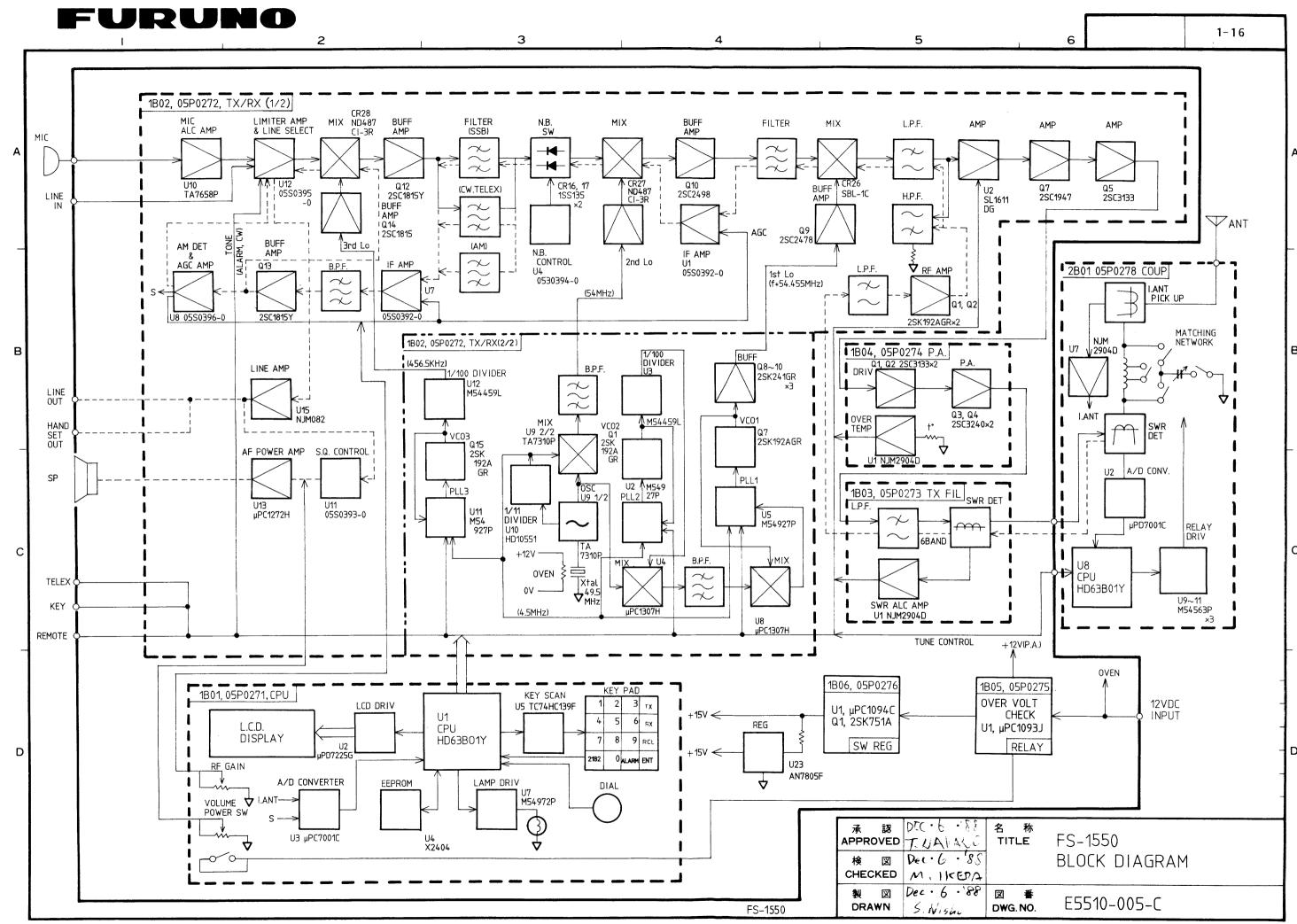
The matching operation starts by conducting the "phase check" to estimate the approximate values of L and C. Then, the best SWR value is found by increasing/decreasing "C".

[Capacitive antenna]

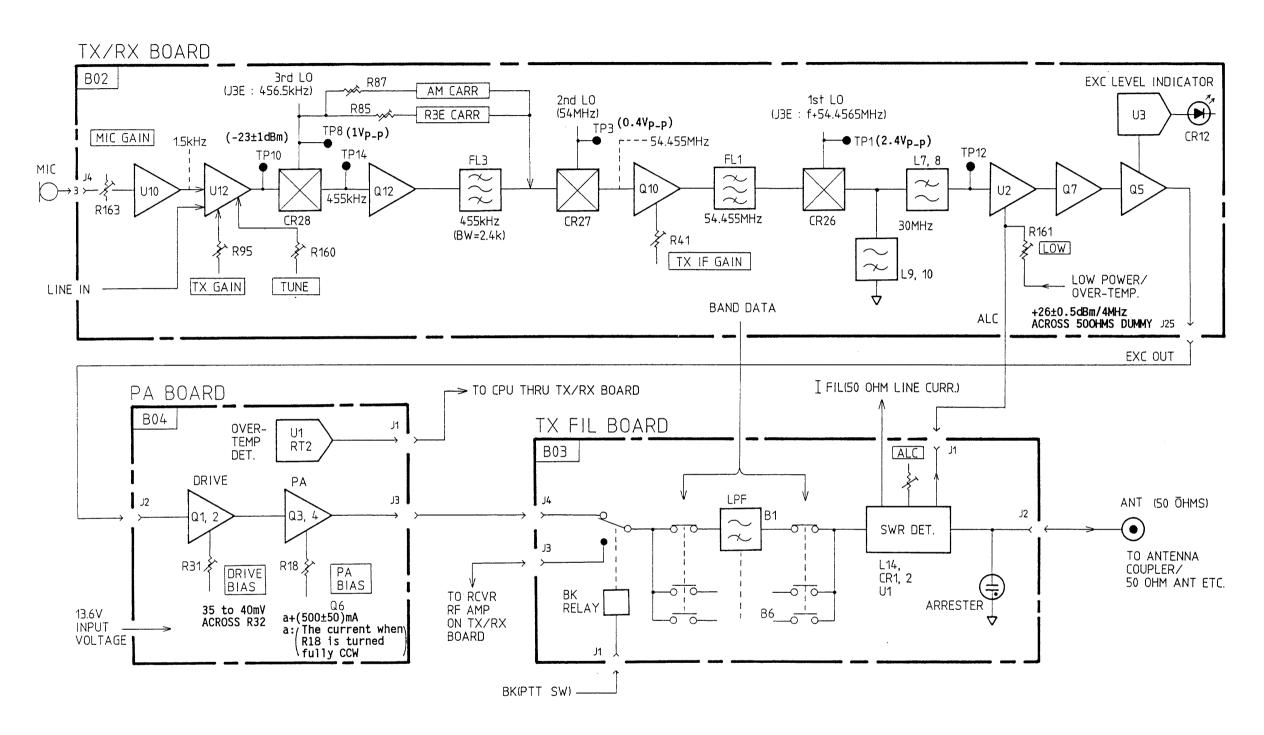
- 1. "Phase Check" is conducted.
- 2. "L" is increased to find the point where the phase changes from "capacitive" to "inductive".
- 3. While observing SWR value, "L" is increased slightly and then "C" is increased.
- 4. Step 3 is repeated until the point where SWR is less than 1.3 is found.
- 5. When a combination of L and C which satisfies "SWR 1.3" is found, the data is stored in the RAM.
- 6. If time has expired before a combination of L and C which satisfies "SWR 1.3" is found and SWR is less than 1.5, the data is stored in the RAM.

[Inductive antenna]

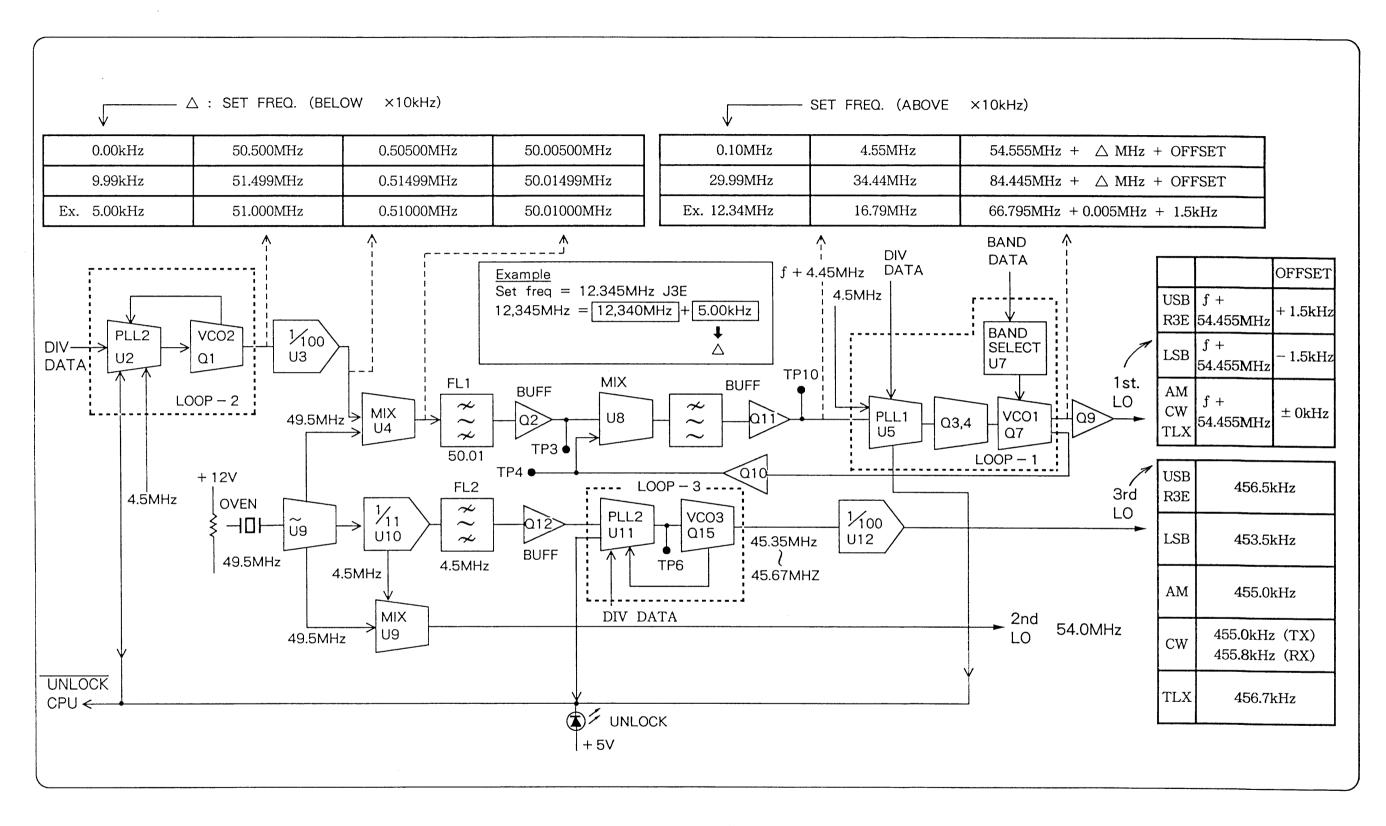
- 1. "Phase Check" is conducted.
- 2. "C" is increased to find the point where the phase changes from "inductive" to "capacitive".
- While observing SWR value, "C" is increased slightly and then "L" is increased.
- 4. Step 3 is repeated until the point which satisfies "SWR 1.3" is found.
- 5. Same as steps 5 and 6 for "capacitive antenna".
- * If a data which satisfies "SWR 2" is not found from the data obtained by the latest matching sequence, the matching network is made "THROUGH" and tuning is stopped. (Time out = 15 sec. In this condition "TUNE OK" is not indicated but some of the power can be emitted in spite of mismatching.)



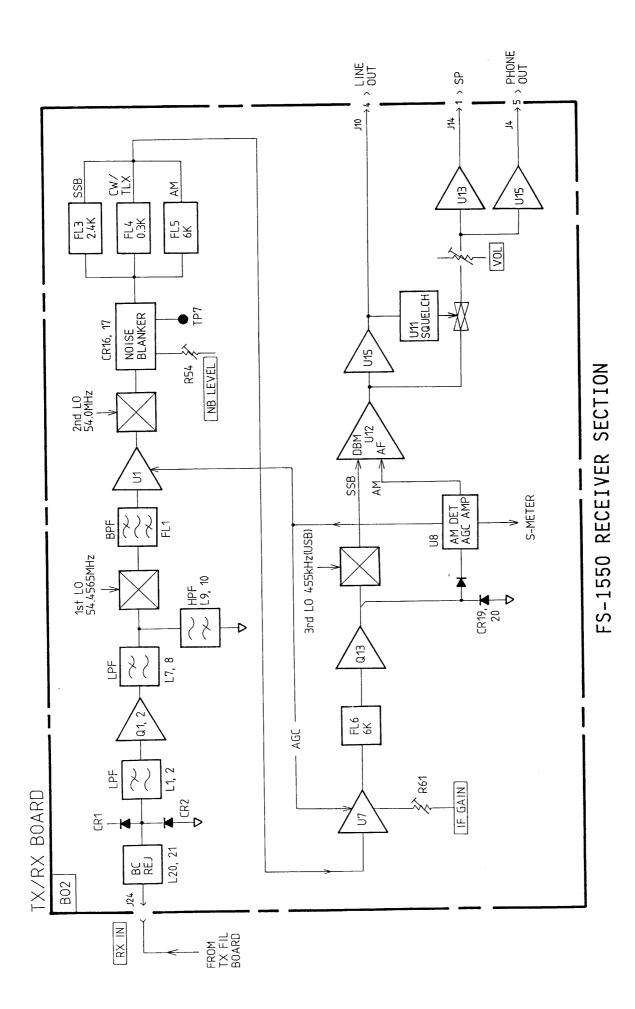
FURUNO ELECTRIC CO., LTD.



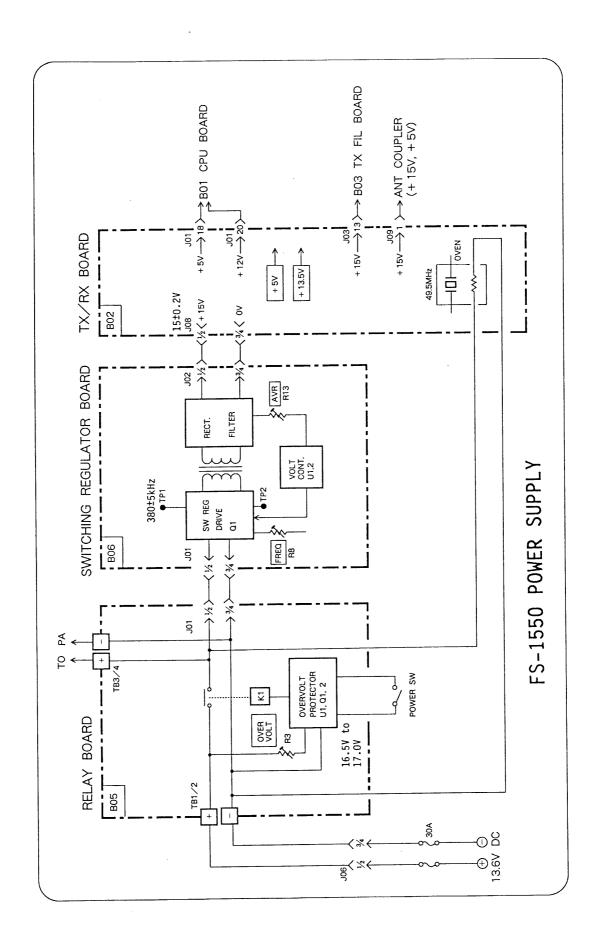
FS-1550 TRANSMITTER SECTION

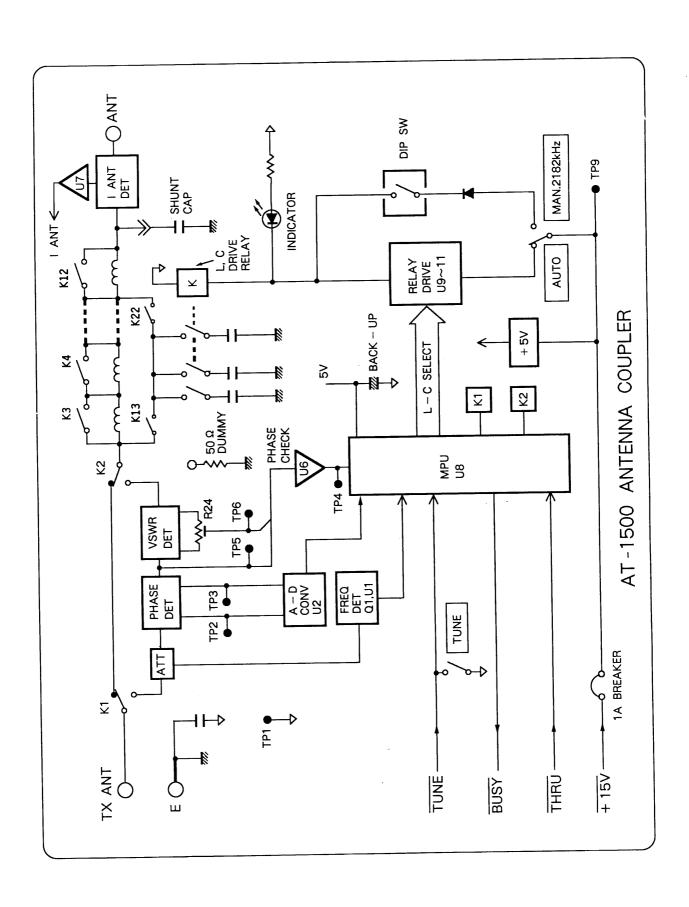


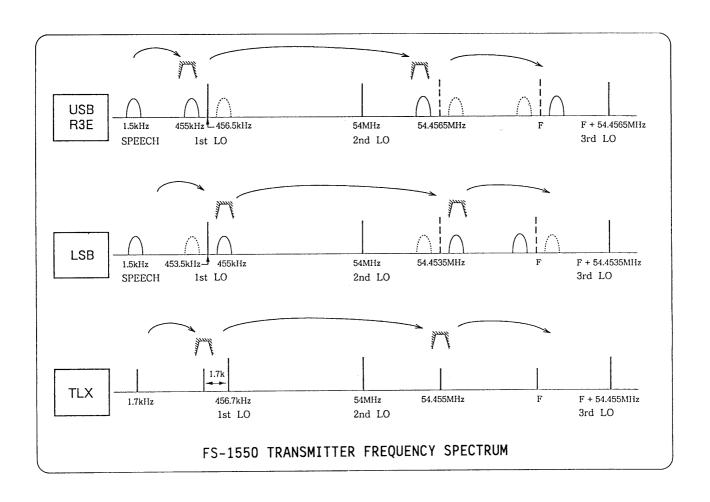
FS-1550 LOCAL OSC

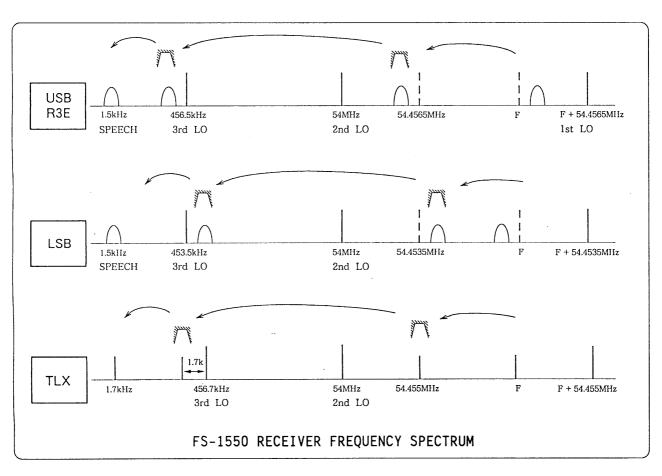


1-19











CHAPTER 2 SETTING-UP

This FS-1550 radiotelephone is provided with DIP switches to tailor it according to local regulations and user's requirements.

—— CAUTION —

This instruction is prepared for use by authorized FURUNO agents or dealers to preset the equipment to comply with the local regulations of the user of this radiotelephone. Please carefully read the instructions and follow the recommended precedures for presetting the equipment.

FURUNO will assume no responsibility for the inconvenience or disturbance to communications due to inadequate or unlawful presetting of the equipment.

Please note again that the preset must be carried out by an authorized agent or dealer, not by the operator or owner of the equipment.

2.1 Function Of DIP Switches

Refer to the "CHAPTER 5 PARTS LOCATION" for location of the switches.

Table 2-1 DIP Switch and Corresponding Function

No. of DIP SW.	FUNCTION	S17-1	S17-2
&	FREE TX/RX + ITU (TX/RX) + CUSTOM TX/RX FREE RX + ITU (TX/RX) + CUSTOM TX/RX FREE RX + ITU (RX) + CUSTOM TX/RX CUSTOM TX/RX	ON OFF ON OFF	ON ON OFF OFF

	FUNCTION	ON	OFF
S17-3	Initial class of emission at 2182kHz	J3E (USB)	НЗЕ
S17-4	Usage of CW and TELEX	ENABLE	DISABLE
S17-5	Channelizing custom frequencies	TX and RX	RX only
S17-6	Sending "TUNE" signal to Antenna Coupler	ENABLE	DISABLE
S17-7	Receiving of 100kHz to 1,600kHz	ENABLE	DISABLE
S17-8	Display of the class of emission	ALL	Other than USB

^{*1:} When a 50 ohm antenna such as doublet antenna, trap vertical, solid antenna matching device, etc. is directly connected to the transceiver unit, S17-6 should be turned to "OFF".



Table 2-2 DIP Switch and Corresponding Function

No. of DIP SW.	FUNCTION	IANT	I _{FIL}
S19	Indication of I _{ANT} or I _{FIL}	I _{ANT}	I _{FIL} *2

No. of DIP SW.	FUNCTION	ON	OFF
S20	Propagation Standard for RS-232C Port	T-BUS for TT-1600	FURUNO I/F

*2: For "IFIL", refer to 2.2.

Standard Setting

Table 2-3 Standard Setting

No. of DIP SW.	ON/OFF
S17-1	OFF
S17-2	ON
S17-3	0FF
S17-4	0FF
S17-5	OFF
S17-6	ON
S17-7	ON
S17-8	ON
S19	I _{ANT}
S20	OFF

2.2 Alternation of I_{ANT} and I_{FIL}

Some licensing authorities require an indication of transmitter antenna current in amperes. The FS-1550 is factory set to display this. If not required by law, some users may prefer the meter to indicate power on the filter output line, which will be more uniform over the various frequencies and with various antenna configurations. This is accomplished by switching S19 to $I_{\rm FIL}$.



2.3 Writing a Frequency into Memory

- 1) Turn on the power while pressing and holding [RCL]. Release [RCL] after "MEMO" appears on the LCD display.
- 2) Select a desired channel number by the tuning dial. (Rotate the tuning dial to reach desired TX channel. If you are channelizing a RX frequency, rotate it one click further to reach RX channel.)
- 3) Define the class of emission by selecting a desired one such as J3E(USB) through the [MODE] key.
- 4) Press [TX] or [RX] and enter desired frequency to the digit of 10Hz (i.e., 2182.00 the decimal point is not necessary to enter, but do not neglect entry of 00).
- 5) Press [ENT].
- 6) Repeat steps 2 to 5 for other channels as many as necessary.

NOTE:

- 1. After TX frequencies are channelized, never fail to set segment No. 5 of DIP switch S17 to the OFF position.
- 2. How to channelize the RX frequencies is described in the Operator's Manual, but the method to channelize the TX frequencies is not disclosed to operators. Precaution should be taken to prevent users from channelizing unauthorized transmitting frequencies.

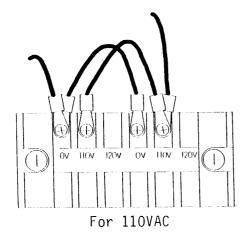
2.4 Alternation of Input Voltage for RECTIFIER UNIT PR-270

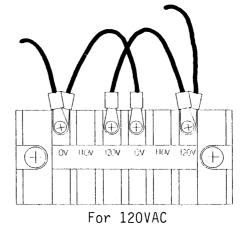
The input voltage of the model PR-270 Rectifier Unit can be set to 110/120/220/230/240 VAC.

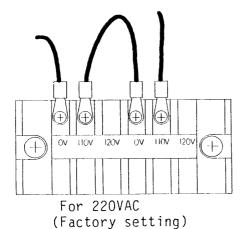
Remove the top cover of the rectifier and change the lead connection on the input terminal of power transformer. Also change the fuse if necessary.

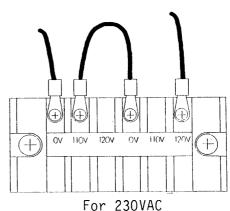
Supply	voltage
110/120	OVAC
220/230)/240VAC

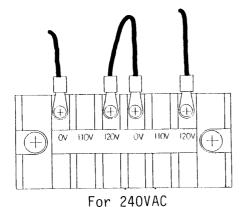
Туре	of	fuse
	LOA	
	5A	











-CAUTION-

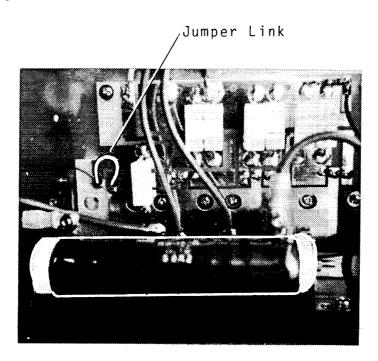
To alterate the supply voltage, move only blue-lugged white wires. Leave the two yellow-lugged gray wires on OV and 110V terminal, as they are connected to the fan.

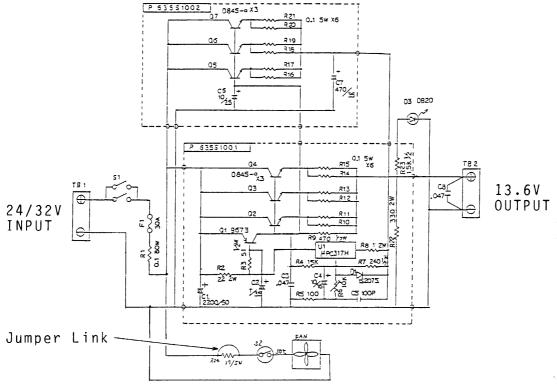
For 110V and 120V connection, use the jumper wire connected to the first 120V terminal from the right.



2.5 Alterating of Input Voltage for DC-DC CONVERTER PC-220

The input voltage of the DC-DC converter can be set for either 24VDC (factory setting) or 32VDC. To enable 32VDC operation, remove the jumper link (see figure below).



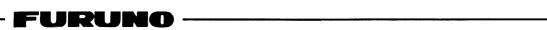




CHAPTER 3. ADJUSTMENT

3.1 Necessary Test Instruments

Test Instrument	Minimum Requirement	Use	
Multimeter	10k ohms/VDC	Voltage check	
DC Ammeter	30A, 2A	Input current check	
Frequency Counter	100MHz	Frequency check	
Precision AC Voltmeter (VTVM) with RF Probe	Volt Range: 1mV to 3V dB Range: -50 to +20dBm	Level check Sensitivity check	
Standard Signal Generator with 50 ohm Adaptor	Freq. Range: 100kHz to 30MHz Output Level: -10 to +110dBu Output Impedance: 50 ohms	Sensitivity check	
Distortion Meter		Sensitivity check	
Audio Dummy	8 ohm, 10W Enamelled Resistor with EXT. Sp. Plug.	Sensitivity check	
Oscilloscope	Freq. Response: 50MHz	Waveform check	
RF Power Meter	Dummy Terminated Type, Impedance: 50 ohms Capacity: 100W average Freq. Range: 50MHz	Power check	
Dummy Ant. for Coupler	10 ohms +250pF (for 1.6 -4MHz) 50 ohms (for 6-23MHz)	Performance check	
SSB Two-tone Generator or 2 AF Oscillators	Freq. Range: 1 to 3kHz Impedance: 600 ohms Output Level: OdBm(0.77Vrms) Attenuator: 60dB/1dB step	Power check	
Two-tone Mixing Network	See section 3.5.	Not necessary when two-tone gen. is available.	
AF Signal Cable w/Switch	MIC PLUG: FM-10PS-6h Two-tone signal * Prepare locally.	Transmitter adjust- ment.	
Regulated DC Power Supply	13.6VDC/30A or greater		



3.2 Line Voltage Check

Prior to the adjustment, check the following.

No	Check Item	Check PCB	Point Point	Ratings	Adjust;	Condition/Remarks
1	Input Voltage	RELAY 05P0275	TB1(+) TB4(-)	13.6V (12V-10% +30%)		
2	+15V	SW REG. 05P0276	J2-1 J2-3	15±0.2V	[AVR] R13	If not, check sw reg. frequency.
3	SW REG. Frequency		TP1 TP2	380±5kHz	[FREQ] R8	
4	Over-voltage Protector	RELAY 05P0275	TB3(+) TB4(-)	16.5-17.0V	OVERVOLT R3	Disconnect PA and SW REG.

3.3 Local OSC Frequency/Level Check

No	Check Item	Check Point	Ratings		Condition/Remarks
			Freq.	Level	
1	2nd LO	TP3(+)-TP4(-) on TX/RX Board	54MHz ±5Hz	0.4Vp-p or greater	
2	3rd LO	TP8(+)-TP9(-) on TX/RX Board	456.5kHz 455kHz	1.0Vp-p or greater	USB, 4MHz H3E, 4MHz
3	1st LO	TP1(+)-TP6(-) on TX/RX Board	f+54.455MHz +1.5kHz	2.4Vp-p or greater	USB, 4MHz
			f+54.455MHz		H3E, 4MHz



3.4 PA Bias Adjustment

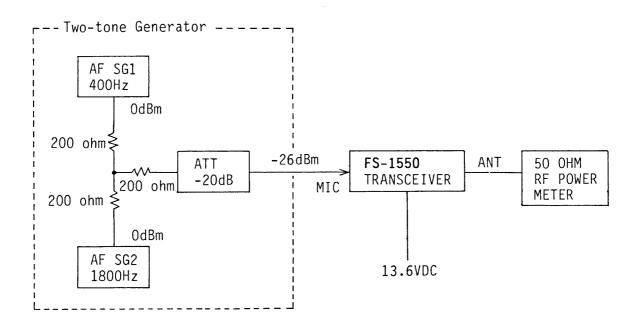
No	Check Item	Check Point	Ratings	Adjust;	Condition/Remarks
1	Drive Bias	Across R32	35-40mV	R31	No AF signal to MIC input.
2	PA Bias	Input Current	<pre></pre>	R18	Terminate transceiver with 50 ohm dummy.

NOTE

- 1) BIAS ADJUSTMENT: Turn R18 fully counterclockwise and adjust DRIVE BIAS R31 for 35 to 40mV across R32 (0.22 ohms). Then adjust PA BIAS R18 so that the input current is 500 ± 50 mA higher than the one (\aleph) obtained by DRIVE BIAS adjustment.
- 2) When the components of the PA board are replaced, above check should be done.
- 3) If bias for PA stage is incorrectly adjusted, spurious emission may increase.



3.5 Transmitter Output Level Adjustment



No.	Check Item	Ratings	Adjust;	Conditions/Remarks
1	Max. Power	90W	R41 [TX_IF GAIN]	J3E, 4MHz MIC Input: 2-tone, -26dBm R5(ALC) fully CCW
2	ALC Level	75W	R5 [ALC]	J3E, 4MHz MIC Input: -26dBm
3	Output Power	60-90W	R95 [TX GAIN]	
4	Low Power	20W	R161 [LOW]	
5	TUNE Power	15W	R160 [TUNE]	J3E, 4MHz Press [TUNE] key
6	H3E Power	40-50W	R87 [AM]	H3E, (2182kHz) Press PTT switch with no audio input
7	R3E Power	1.5-4W	R85 [R3E]	R3E, 4MHz Press PTT switch with no audio input

W: Average power



NOTE

1) Before performing the adjustment, the output level of SG1 should be adjusted so that the "100% modulation wave" is observed at the ANT terminal.



100% modulation wave.

- 2) Before beginning the adjustment, the PA and TX FIL boards should be covered with a "shield plate".
- 3) Power difference of max. 30W (max. 90W, min. 60W) may be observed between the highest power band and lowest power band (not the highest frequency and the lowest frequency). This is due to the frequency response of the power amplifier. Disregard the difference.
- 4) When the waveforms shown below are observed when the oscilloscope is coupled to the PA stage, readjustment of transmitter circuit may be required.

Waveform	Cause/Remedy
Clipped at peak level	Excessive drive. Check the MIC GAIN pot. R163.
Unstable	Incorrect amplifier bias. Readjust BIAS adj.

- 5) Peak output power of approx. 100W will be observed on the power meter when you whistle into microphone.
- 6) When the output power is far less than the rated power with proper AF input signal, check the TX younger stage.

No	Check Item	Ratings	Adjust;	Condition/Remarks
1	MIC Amp Level	-23±1dBm /600 ohms	R95 [TX GAIN]	R163 [MIC GAIN] fully colckwise. USB, 4MHz. Mic input: -26dBm/600 ohms 2-tone.
2	Exciter Output	+26±0.5dBm /50 ohms	R41 [TX IF GAIN]	As above. Disconnect coax. from PA board; then check the level by precision AC voltmeter, coupled with 50 ohm dummy and attenuator.



* The EXC OUTPUT LEVEL INDICATOR CR12 is provided to check the output level. However, if the level detect level is set high, the indicator may not light on some bands due to frequency response.

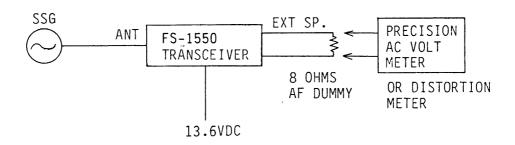
Procedure for Power Adjustment

- 1) Connect a 50 chm power meter to the ANT connector and select J3E on any frequency of 4MHz band.
- 2) Rotate R5 (ALC) fully counterclockwise.
- 3) Confirm R163 (MIC GAIN) is turned fully clockwise.
- 4) Apply 2-tone signal 400Hz and 1800Hz into MIC terminal at a level of -26dBm.
- 5) Adjust R41 (TX IF GAIN) for reading of approx. 90W (average power) on the power meter.
- 6) Decrease output power to 75W by adjusting R5 (ALC).
- 7) Adjust R95 (TX GAIN) for 60 to 90W on all bands.



3.6 Receiver Adjustment

CAUTION: Before beginning the adjustment, MIC plug (PTT switch) should be disconnected to prevent SSG from being damaged due to accidental emission.



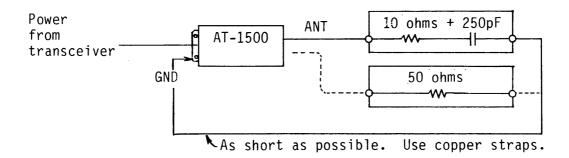
No	Check Item	Ratings	Adjust;	Condition/Remarks
1	IF Gain	S = 0 ↔ 1	R61 [IF GAIN] on TX/RX Board	Input signal: 4MHz, 6dBu. S-meter respond gradually so adjust slowly.
2	S-meter	S = 5 ± 1		20dBu
		$S = 8 \pm 1$	_	40dBu
3	Overall Sensitivity	−3 ± 3dBu		The input level to obtain AF output of 1W.
4	J3E Sensitivity	+3dBu or better		SINAD 20dB, J3E, 4MHz

Quick Check of Receiver Sensitivity

- 1) Select J3E on any frequency of 4MHz band.
- 2) Connect SSG (standard signal generator), set to receive frequency and output of approx. 30dB, to the ANT connector of transceiver unit.
- 3) Adjust SSG frequency precisely for maximum audio output.
- 4) Gradually decrease the SSG output until noise is slightly present.
- 5) Read out the SSG attenuator reading. If the reading is OdB or less (-6dB), the receiver sensitivity is satisfactory.



3.7 Check of Antenna Coupler



No	Check Item	Check Point	Ratings	Condition/Remarks
1	Tuning Detector Output Level			USB, 4MHz LOW. (10±0.5W temporarily adjust by R161 [LOW] on TX/RX board.)
	Level	TP6(+) - TP5	-40 to -100mV	R24 fully CCW.
		•••	180 to 140mV	R24 fully CW.
			0 <u>+</u> 1mV	Adjust by R24.
		TP3(+) - TP1(-)	1350 - 1650mV	
		TP2(+) - TP1(-)	5mV or less	
2	Automatic Tuning	Status of relays and LCD window (TUNE OK)	Tuning is conducted.	10 ohm + 250pF dummy for 1.6 to 4.5MHz. 50 ohm dummy for 6 to 23MHz.
3	"THRU" function	Status of LED	CR33, 34, 51, 52 and 42 are lit when tuning is completed. (Matching network is shorted to pass received signal.)	10 ohm + 250pF dummy. 3MHz, DUP. Repeat TX and RX. * Check if S2-4 is "off" when this function is suspected.
4	Antenna Current	LCD window	1.5 - 2A	10 ohm + 250pF dummy. 2MHz Input power to be 50W (average).



CHAPTER 4 TROUBLESHOOTING

4.1 Self-test

The AT-1500 antenna coupler is equipped with self-test facility for checking the performance.

CHECK OF RELAY

The function of the relays which select capacitor and coil may be checked for proper operation as shown below.

- 1) Open the shield cover inside the coupler. Locate DIP switch S2.
- 2) Set No.2 of S2 to "ON".
- 3) Press "TUNE" switch S1.
- 4) Then each LED (CR33 to CR52) will light one by one for 1 sec. if the corresponding relay is energized, and they all blink at once upon completion of the test.

LED and corresponding relay

CR	33	_	K	3	CR	38	_	K	8	CR	43	_	Κ	14	CR	48	-	K	19
CR	34	_	Κ	4	CR	39	_	Κ	9	CR	44	-	K	15	CR	49	-	K	20
CR	35	_	K	5	CR	40	-	Κ	10	CR	45	-	K	16	CR	50	-	K	21
CR	36	_	K	6	CR	41	-	K	11	CR	46	-	K	17	CR	51	-	K	13
CR	37	_	K	7	CR	42	_	K	12	CR	47	-	K	18	CR	52	-	Κ	22

Note: For the location of the LED's see "CHAPTER 5 PARTS LOCATION".

- 5) Now the tuner is returned to normal operating status.
- 6) Re-set No.2 of DIP switch S2 to "OFF" otherwise transmission will be impossible.
- 7) Ensure that all switches of DIP switch S2 are set to "OFF" before you close the cover.



- 4.2 Replacement of Major Parts
- 1. Final Transistor Q3, Q4 (P.A. board)
- 1) Loosen two fixing bolts and unsolder four pins to release the defective transistor.
- 2) Orientate the new transistors as shown below.
- 3) Tighten the fixing bolts and solder the transistors.

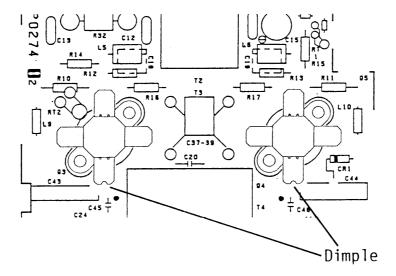
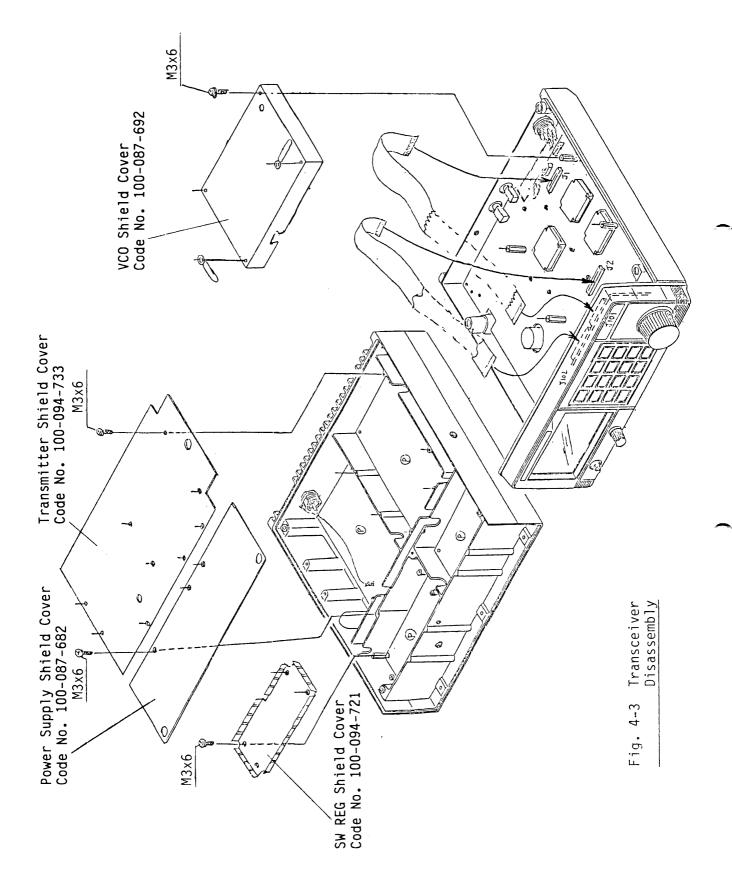


Fig. 4-2 Direction of the transistor



2. Replacement of P.C. Board



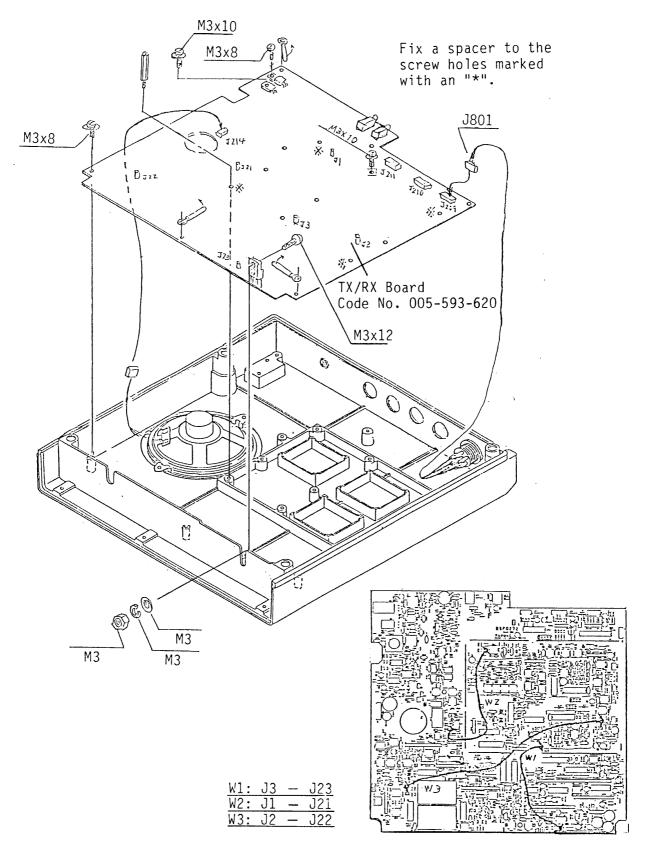


Fig. 4-4 TX/RX Board Disassembly



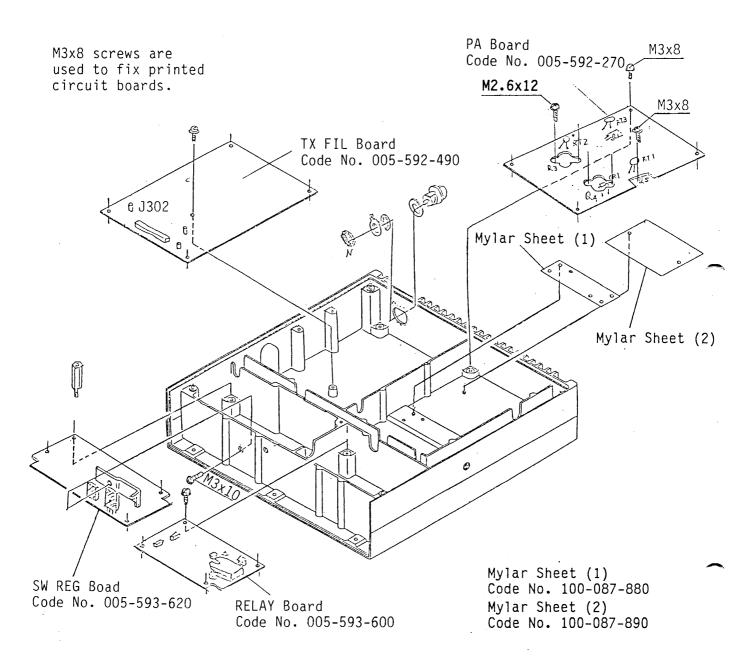


Fig. 4-5 Disassembly of P.C. Boards from Top Chassis

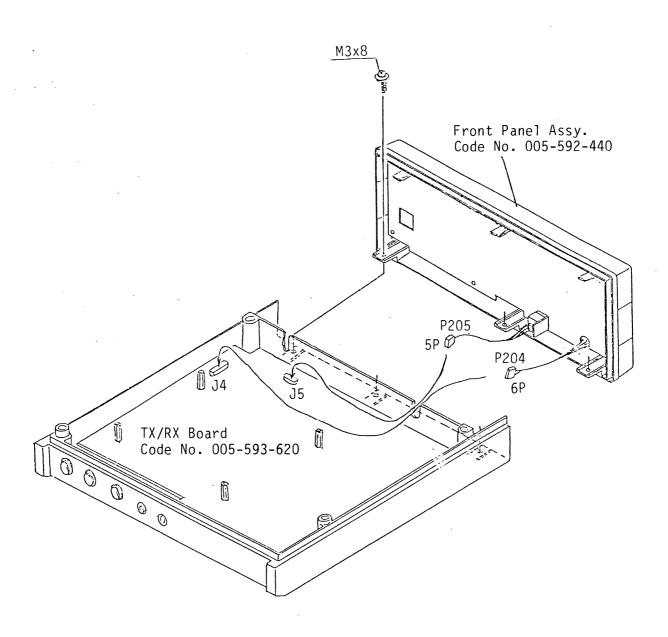


Fig. 4-6 Front Panel Disassembly

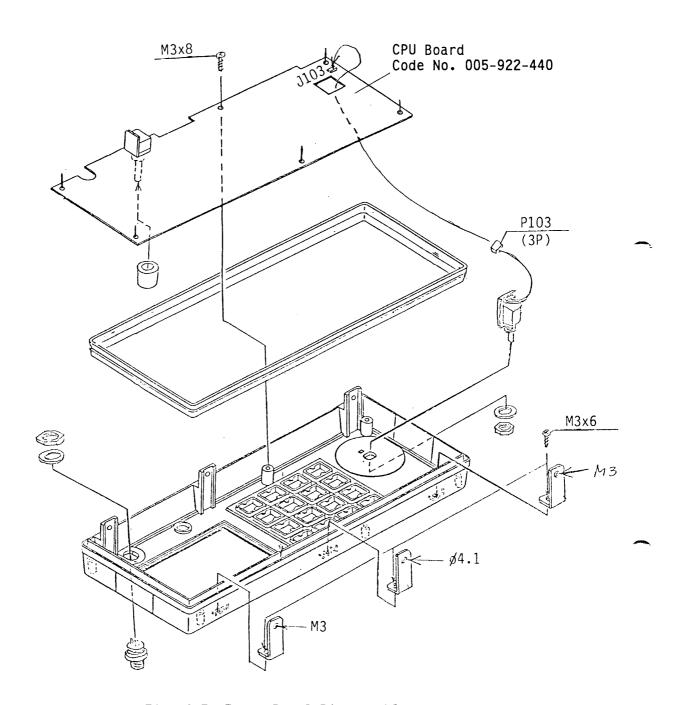


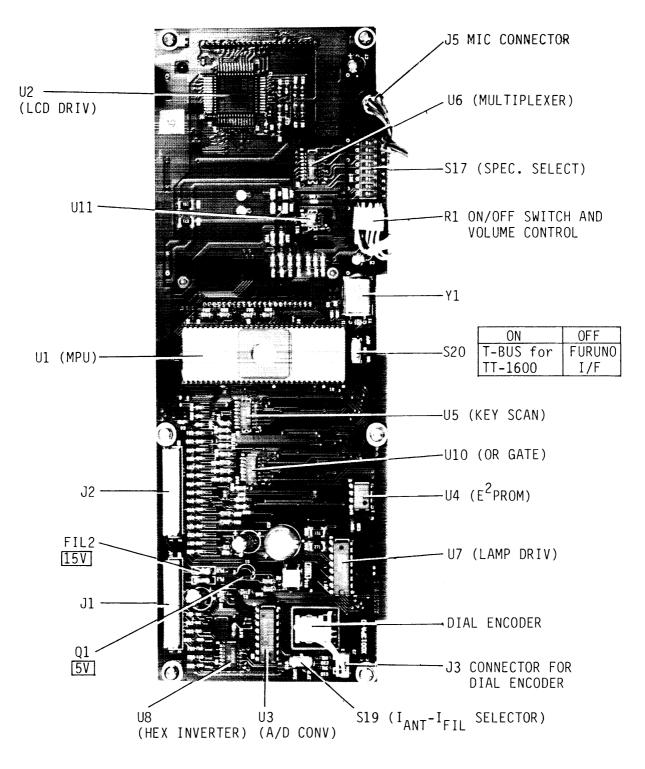
Fig. 4-7 Front Panel Disassembly



CHAPTER 5 PARTS LOCATION

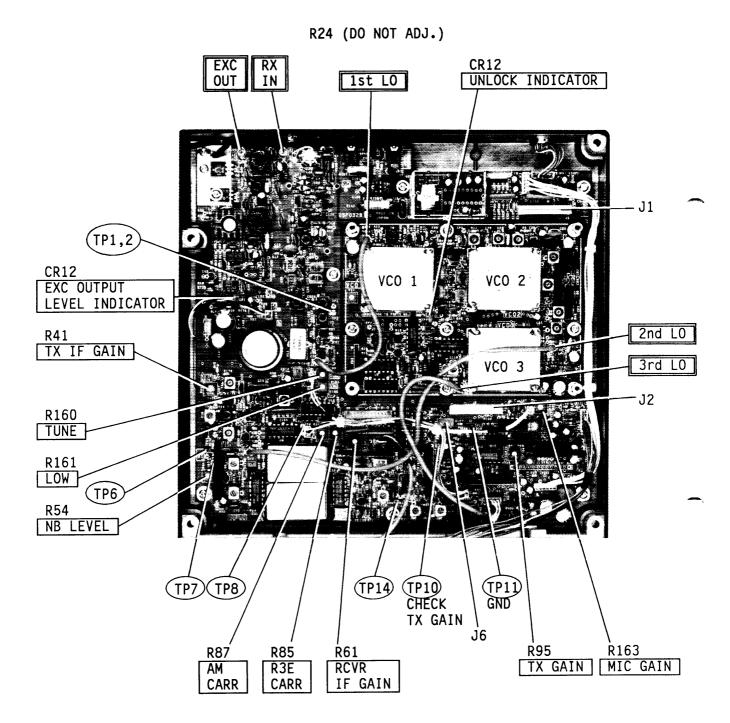
5.1 TRANSCEIVER UNIT

1. 05P0271 CPU Board



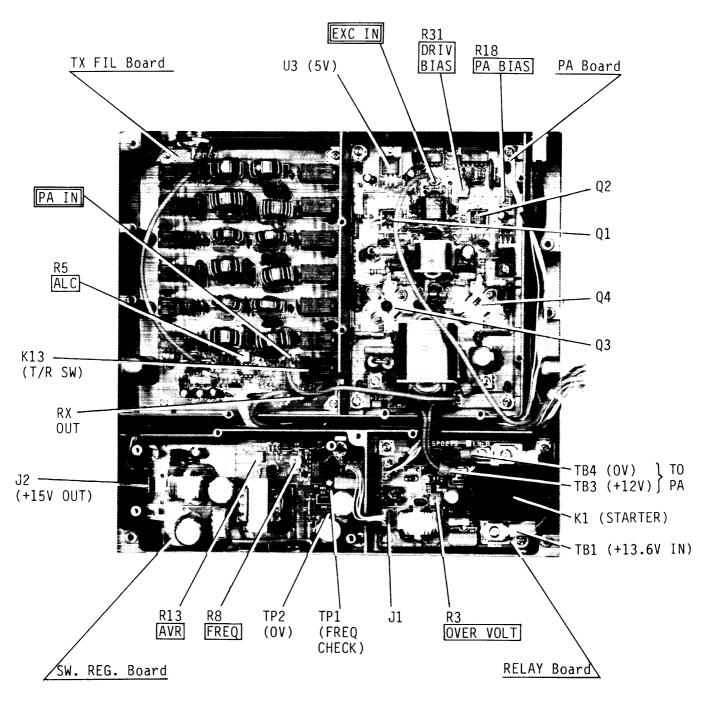
FURUNO

2. 05P0328 TX/RX Board



FURUNO

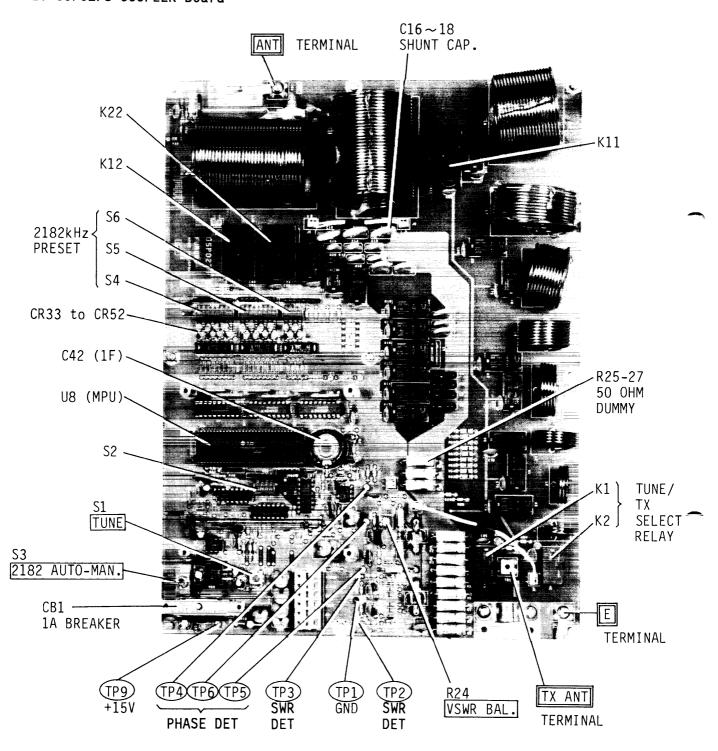
3. 05P0273A TX FIL Board 05P0274A PA Board 05P0326 RELAY Board 05P0276 SW REG Board





5.2 ANTENNA COUPLER

1. 05P0278 COUPLER Board





CHAPTER 6 SPECIFICATIONS OF MAJOR COMPONENTS

6.1 Specifications of IC's

DEVICE	FUNCTION	MANUFACTURER
MSM4051RS 05S0392 05S0393 05S0394 05S0395 05S0396 HD637B01Y NJM082 NJM2904D LT1080CN M54459 M54563P M54563P M54927P M54972P UPC1037H UPC1037H UPC1094C UPC1242H UPD7001C UPD7225G AN7805F SL1611C/DG SN74HC139 TA7658P TC4013BAP	Single 8-channel Multiplexer/Demultiplexer IF AMP SQ DET NB DET ALC AMP AGC AMP Microprocessor Operational Amplifier operational Amplifier Operational Amplifier Quad Diff Line (RS232C) Driver Receiver 1/100 High Speed Divider 8-unit 500mA Source Type Darlington Transistor As 8-unit 500mA Source Type Darlington Transistor As Serial Input PLL Frequency Synthesizer 8-bit Serial-Input Latched Driver Audio Power Amplifier Switching Regulator Control Audio Power Amplifier A/D Converter Programmable LCD Controller/Driver Regulator VIDEO, IF and RF Amplifier Dual 2-line to 4-line Decoders Built-in ALC, Dual Pre-amplifier FLIP-FLOP	OKI FURUNO FURUNO FURUNO FURUNO FURUNO HITACHI JRC JRC LINEAR MITSUBISHI SY. MITSUBISHI MITSUBISHI MITSUBISHI MITSUBISHI NEC NEC NEC NEC NEC NEC PANASONIC PLESSEY TEXAS INST. TOSHIBA TOSHIBA
TA7658P	Built-in ALC, Dual Pre-amplifier	TOSHIBA

	URUI				SB RADIOTEL	LL F TO INC			EP-1
SYMBOL 記号	TYPE 型 名	SPECIFICATIONS 規格	CODE NO. コード番号	REMARKS 備 考	SYMBOL 記号	TYPE 型 名	SPECIFICATIONS 規格	CODE NO. コード番号	REMARK 備 考
	TRA	NSCEIVER UN	IT						
					PARTS ON	FRONT PANEL			
PARTS ON	CHASSIS				1807J0005	JACK FM10RS(1)-6HA	シ^^サク	000-113-456	
	PRINTED CIRCUIT	BOARDフ®リントキハツン				RESISTOR	デイコウ		
	05P0328A,TX/RX 05P0273A,TX/FIL 05P0274,PA 05P0326,RELAY	FS-1550 FS-1500/1550 FS-1500/1550 FS-1500/1550	005-593-62 005-592-49 005-592-27 005-593-60)	1807R0001	RK0972211	0580556-0	000-115-252	
	05P0276,SW REG	FS-1500/1550	005-592-31		180750001	SWITCH 05S0517-0	スイツチ 05S0517-0	000-114-134	
	ASSEMBLY FRONT PANEL	25c5 F5-1550	005-592-440	1		INTEGRATED CIRCUIT	シュウセキカイロ		
	JACK		003-3+2-440	,	180700001	HD637H01Y0P	52700715	000-113-481	
1808J0001 1808J0002 1808J0003 1808J0004 1808J0006	FM14-6SM FM214-7SM FM214-5SM(1) M-BR-H*BS*	<i>5</i> ₩₹ <i>90</i>	000-113-528 000-113-463 000-113-463 000-506-493 000-113-463	S	1807V1001	LCD DISPLAY	I # Ð Ð Þ Ð Þ Þ Þ Þ Þ Þ Þ Þ Þ Þ Þ Þ Þ Þ Þ	000-116-368	LCD PANI
	LOUDSPEAKER	λ է°∼ 'n−							
1B08LS0001		0550391-0	000-113-465	i					

NOTE: 備考:

SYMBOL 記号	TYPE 型 名	SPECIFICATIONS 規格	CODE NO. コード番号	REMARKS 備 考	SYMBOL 記号	TYPE 型名	SPECIFI 規	CATIONS 格	CODE NO. コード番号	REM.	ARKS 考
	1,3,32,1				1802C0097 1802C0098 1802C0099	00306F104Z25 D0306F104Z25 D0104B102K50V	0.050	0130-0 0130-0 0PF 50V	000-108-9 000-108-9 000-252-1	68	
1802	05P0328A	TX/RX (1/2)	005-593	-620	1802C0100 1802C0101 1802C0102 1802C0103 1802C0104 1802C0105 1802C0106	FCE-A1FU220E FCG-P1H122J7 00306F104Z25 ECG-V1H104JZ 00306F104Z25 D01048102K50V ECF-A1EU100E	0.00 0050 0.10 0050 1000	F 25V 012UF 50V 0130-0 UF 50V 0130-0 0PF 50V	000-201-6 000-262-7 000-108-9 000-261-5 000-108-9 000-252-1 000-201-8	14 68 24 68 71	
	CAPACITOR	コンテ"ンサー			1802C0108	ECE-A160100E ECE-A1601016	10UF	25V 100MF 25V	000-201-8	12	
1802C0001 1802C0002 1802C0004 1802C0004 1802C0005 1802C0008	ECG-81H152JZ ECG-81H682JZ ECG-81H102JZ ECG-81H183JZ DD109E103P50V ECE-A1FU100E DD109E103P50V	1500PF 50V 6800PF 50V 1000PF 50V 0.01#UF 50V 0.01#UF 50V 10UF 25V	000-102-42 000-102-68 000-100-75 000-100-12 000-253-43 000-201-31	80 83 26 86 12	180200109	ECO-V1H104JZ ECO-V1H104JZ ECC-A1E01005 ECE-A1E01006 ECE-A1F01006 ECF-A1F0100E ECE-A1F0101E	0.10 0.10 100F 100F 100F	1F 50V F 50V F 25V F 25V F 25V F 25V D 100MF 25V	000-261-5 000-261-5 000-201-8 000-201-8 000-201-8 000-201-8	24 12 12 12 12	
1802C0010 1802C0011 1802C0012 1802C0013 1802C0014 1802C0015	DD109E103P50V DD109E103P50V DD109E103P50V	0.01UF 50V 0.01UF 50V 0.01UF 50V 0.01UF 50V 0.01UF 50V 0.01UF 50V	000-253-43 000-253-43 000-253-43 000-253-43 000-253-43	86 86 86 86 86	1802C0116 1802C0117 1802C0118 1802C0119	ECE-A1EU100F ECQ-B1H102JZ ECE-A1EU470E FCE-A1EU470E ECE-A1EU470E ECG-V1H224JZ	1 1 U F 1 0 0 0 4 7 U F 4 7 U F	7 25 V 10 PF 50 V 17 25 V 17 25 V 18 25 V 19 20 F 50 V	000-201-8 000-100-7 000-201-8 000-201-8 000-201-8	12 53 15 15	
1802C0018 1802C0019 1802C0020 1802C0021 1802C0022 1802C0023	D0109E103P50V ECE-A1FU100E D0109E103P50V D0109E103P50V	0.01UF 50V 0.01UF 50V 0.01UF 50V 10UF 25V 0.01UF 50V 0.01UF 50V	000-253-43 000-253-43 000-253-43 000-253-43 000-253-43 000-253-43 000-253-43	56 56 12 36 36 36	1802C0122 1802C0123 1802C0124 1802C0125	ECE-A1FU4716 ECE-A1FU1000 ECE-A1FU1006 EXC-EMT103DC	470U 10UF 10UF 08S0 08S0 08S0	UF 25V = 25V = 25V 0078-1 0078-1 0078-1	000-201-8 000-201-8 000-201-8 000-107-9 000-107-9 000-107-9 000-107-9	17 12 12 94 94	
1802C0025 1802C0026 1802C0027 1802C0028 1802C0029	DD109E103P50V	0.01UF 50V 0.01UF 50V 00S0130-0 10UF 25V 00S0130-0 0.01UF 50V 00S013U-0	000-253-43 000-108-96 000-108-96 000-108-96 000-253-43 000-103-96	86 12 53	1802C0130 1802C0131 1802C0132 1402C0133 1802C0134	EXF-P4103ZW EXF-P4103ZW ECE-AIHN0105F ECE-AIHN0105F DD306F104Z25 DD306F104Z25	0.01 0.01 1UF 1UF 0050	EUF 50V LUF 50V 50V 50V 0130-0	000-287-5 000-287-5 000-206-1 000-206-1 000-108-9	02 02 .08 .08	
1802C0032 1802C0033 1802C0034 1802C0035 1802C0036 1802C0037	00109E103P50V 00109E103P50V 00109E103P50V 00109E103P50V 00109E103P50V 00306F104225 ECE-A1EU100E	0.01UF 50V 0.01UF 50V 0.01UF 50V 0.01UF 50V 0.050130-0 10UF 25V	000-253-43 000-253-43 000-253-43 000-253-43 000-108-96	36 36 36 36 58	1802C0136 1802C0137 1802C0138 1802C0139	DD109E103P50V ECE-A1HU010E EXC-EMT103DC ECE-A1FU100E ECE-A1FU100E	1UF 0850 10UF	1UF 50V 50V 0078-1 = 25V = 25V	000-253-4 000-206-1 000-107-9 000-201-8 000-201-8	15 94 12	
1802C0038 1802C0039 1802C0040 1802C0041 1802C0044 1802C0044	DD306F104Z5 DD109E103P50V DD109E103P50V DD109E103P50V DD104310ZK50V DD104E103P50V ECE-A1EU100E DD109E103P50V	0650130-0 0.01UF 50V 0.01UF 50V 0.01UF 50V 1000PF 50V 0.01UF 50V 10UF 50V	000-108-94 000-253-4 000-253-4 000-253-4 000-253-4 000-253-4 000-253-4	36 36 71 36 12		ECE-A1AU471E ECE-A1CU227E ECM-B1H103JZ ECM-B1H103JZ DD109E103P50V ECE-A1HU010E DD109E103P50V DD109E103P50V	2200 0.01 0.01 0.01 1UF 0.01	JF 10V JUF,16V LUF 50V LUF 50V LUF 50V SOV LUF 50V LUF 50V	000-206-1 000-201-8 000-100-1 000-100-1 000-253-4 000-253-4 000-253-4	310 .25 .25 .36 .15	
1802C9051 1802C0052 1802C0053 1802C0054 1802C0055	ECC-F1H470JC ECC-F1H690JC ECC-F1H150JC 90164h151K50V02 ECC-F1H470JC DD1044H31K50V ECC-F1H330JC DD1046471K53V02 ECC-F1H470JC	47PF 50VDC 68PF 50V 15PF 50V 15UPF 50VDC 47PF 50VDC 47PF 50VDC 47PF 50VDC 470PF 50V	000-255-2 000-256-9 000-256-1 000-255-2 000-113-3 000-255-2 000-255-2	30 02 73 33 26 65 22 76	1802C0151 1802C0152 1802C0153 1802C0154 1802C0155 1802C0155 1802C0157	DD1096103P50V EXE-P4103ZW EXE-P4103ZW EXE-P4103ZW DD109E103P50V	0.01 0.01 0.01 0.01 0.01 0.01 1500	F 25V 1UF 50V 1UF 50V 1UF 50V 1UF 50V 1UF 50V 0UF 50V 00F 50V 0UF 25V	000-201-3 000-253-4 000-253-4 000-237-5 000-237-5 000-237-5 000-253-4 000-102-4	36 436 502 502 436 427 768	
180200058	ECC-F1H390JC FCC-F1H390JC DD104B181K50V DB104B102K50V DD104B102K50V DD104B102K50V DD104B102K50V	39PF 50VDC 180PF 50V 1000PF 50V 1000PF 50V 1000PF 50V 1000PF 50V	000-255-2 000-255-2 000-255-2 000-252-1 000-252-1 000-252-1 000-252-1	24 24 65 71 71 71 71	1802C0161 1802C0162 1802C0164 1802C0165 1802C0166 1802C0163	DD1046102K50V DD1046102K50V ECE-A1EU100E	0050 0050 1000 1000 1000 2PF	0130-0 0130-0 0130-0 0PF 50V 0PF 50V F 25V 50VDC UF 50V	000-108-9 000-108-9 000-108-9 000-252-1 000-252-1 000-201-8 000-255-2	968 171 171 312	
1802C0066 1802C0067 1802C0068 1802C0069 1802C0070	DD1048102K50V DD1048102K50V DD1048102K50V DD1048102K50V	1000PF 50V 1000PF 50V 1000PF 50V 1000PF 50V 1000PF 50V	000-252-1 000-252-1 000-252-1 000-252-1 000-252-1	71 71 71 71 71	1802C0170 1802C0171 1802C0172 1802C0173 1802C0174 1802C0174	ECC-F1H150JC DD1048151K50V07 ECC-F1H470JC ECC-F1H630JC	1521 1501 4721 6821	PF, 50V F 50V PF 50V F 50V F 50V F 25V	000-256-9 000-256-9 000-252-1 000-255-2 000-255-2	902 173 226 230	
1802C0072 1802C0073 1802C0074 1802C0075 1802C0075 1802C0077 1802C0072	DD1045102K50V DD104B102K50V ECE-A1FU100E ECG-P1H102JZ DD104B101K50V ECG-P1H102JZ	1000PF 50V 1000PF 50V 1000PF 50V 10UF 25V 1000PF 25V 1000PF 25V 1000PF 25V	000-252-1 000-252-1 000-252-1 000-201-8 000-592-2 000-252-1 000-592-2	71 71 12 52 72 52	1802C0180 1802C0181 1802C0182 1802C0183 1802C0184 1802C0185 1802C0185	DD1048162K50V DD109E103P50V DD306F104Z25 ECR-R1H103JZ D0306F104Z25 FCE-A1FU4R7E ECE-A1FU100E	100 0.0 00S 0.0 00S 4.7 100	0PF 50V 0PF 50V 1UF 50V 0130-0 1UF 50V 0130-0 U 25V F 25V	000-252-1 000-252-1 000-253-4 000-103-9 000-100-1 000-103-9 000-114-1	171 436 968 125 968 132 812	
1802C0080 1802C0081 1802C0082 1802C0083 1802C0084 1802C0085 1802C0087 1802C0087	ECE-A1FU100E D0306F104425 D0306F104225 D0306F104225 D0306F104225 D0306F104225 D0306F104225 D0306F104225	00S0130-0 10UF 25V 00S0130-0 00S0130-0 00S0130-0 00S0130-0 00S0130-0 00S0130-0 00S0130-0	000-108-9 000-201-3 000-108-9 000-108-9 000-108-9 000-108-9 000-108-9 000-108-9	12 68 68 63 68 68 68 68	1802C0186 1802C0187 1802C0191 1802C0192 1802C0193 1802C0194 1802C0194	ECE-ALEU106E FCG-V1H104JZ DD306F104Z25 ECE-ALFU100E ECE-ALFU200E DU104b221K50V02 DD109E103F50V	0.1 005 100 100 270 220 0.0	F 25V UF 50V 0130-0 F 25V F 25V PF 50WV 1UF 50V 0130-0 0130-0	000-201-8 000-261-5 000-108-9 000-201-8 000-201-9 000-252-9 000-253-9 000-108-9	968 812 812 813 174 436 968	
1802C0090 1802C0091 1802C0092 1802C0093 1802C0094 1802C0095	FCN-P1H102JZ DD109E103P50V DD109F103P50V ECF-A1EU100E DD306F104Z25	0.1UF 50V 1000PF 50V 0.01UF 50V 0.01UF 50V 10UF 25V 0050130-U 1000PF 25V	000-261-5 000-262-7 000-253-4 000-253-4 000-201-3 000-103-3	13 36 36 12 63	180200199	ECG-V1H104JZ ECG-V1H474JZ	0.1	7UF 50V	000-261-9	524	

NOTE: 備考:

EP-3

								EP-3
SYMBOL 記号	TYPE 型 名	SPECIFICATIONS 規 格	CODE NO. REMARK コード番号 備 考	i	TYPE 型 名	SPECIFICATIONS 規格	CODE NO. コード番号	REMARKS 備 考
1802CR000	2 V06C	3"11-1"	000-136-005 000-136-005	1502R0010 1802R0011 1802R0012 1802R0013	ER9-16TJ470 ER9-16TJ150 ER9-16TJ332 EK9-16TJ332	0.16W 47 0050095-U 0.16W 3.3K 0.16W 3.3K	000-329-00 000-330-84 000-329-04 000-329-04	.3 .5
1802CR000 1802CR000 1802CR001 1802CR001 1802CR001	8 155135 2 LN28 RPH 3 155133		000-103-075 000-103-075 000-103-071 000-103-097 000-103-097	1802R0014 1802R0015 1802R0016 1802R0017 1802R0019	ERD-16TJ332 ERD-16TJ103 ERD-16TJ102 ERD-16TJ470 ERD-16TJ103	0.16% 3.3K 0.16% 10K 0.16% 1K 0.16% 47 0.16% 47	000-329-04 000-330-86 000-330-86 000-329-06 000-330-86	5)2)1 · ·
1B02CR001 1B02CR001 1B02CR001 1B02CR001 1B02CR001	.5 15S135 .6 15S135 .7 1SS135 .8 1SS133		000-193-075 000-193-075 000-103-075 000-103-075 000-193-097	1802K0020 1802K0021 1802K0022 1802K0023 1802K0024	ERP-16TJ331 ERP-16TJ680 ERP-16TJ102 ERP-16TJ220 ERP-16TJ220	0.16W 330 0.16W 68 0.16W 1K 0.16W 22 0.16W 22	000-329-02 000-329-00 000-330-80 000-330-84)1)1 ,7
1802CR002 1802CR002 1802CR002 1802CR002 1802CR002	1 155133 3 155133 4 155133		000-103-097 000-103-097 000-103-097 000-103-097 000-103-097	1802R0025 1802R0026 1802R0027 1802R0028 1802R0028	ERG-15J391P ERG-16TJ2R2 ERG-16TJ470 ERG-16TJ101 ERG-16TJ103	0050102-0 0.16W 2.2 0.16W 47 0.16W 100 0.16W 10K	000-375-40 000-330-82 000-329-00 000-329-01 000-330-80	14 23 15 .3
1802CR002 1802CR002	7 ND487C1-3R 8 ND487C1-3R 9 15S133	D.3.M	000-179-000 000-133-582 000-133-382 000-103-097	1802k0030 1802k0033 1802k0034 1802k0035 1802k0036	ERD-16TJ103 ERD-16TJ470 ERD-16TJ470 ERD-16TJ223 ERD-16TJ103	0.16W 10K 0.15W 47 0.16W 47 0.16W 22K 0.16W 10K	000-330-80 000-329-00 000-329-00 000-330-81	15 15 .0
1802CR003 1802CR003 1802CR003 1802CR003	1 155133 2 155133		000-103-097 000-103-097 000-103-097 000-103-097	1802R0037 1802R0038 1802R0039	ERD-16TJ107 ERD-16TJ101 ERD-16TJ332	0.16W 1K 0.16W 100 0.16W 3.3K	000-330-80 000-330-80 000-329-04 000-329-04	11 .3 .5
1802FL000	FILTER	フイルター 05S0589-0	000-116-691	1802R0040 1802R0041 1802R0042 1802R0043 1802R0044	EVM-NCGA01912 ERO-16TJ221 ERD-16TJ103 ERO-16TJ103	0.16w 3.5K 100 0.16w 220 0.16w 10K 0.16w 10K	090-103-62 090-329-02 090-330-80 000-330-80	13 21 02 02
1802FL000 1802FL000 1802FL000 1802FL000	3 K00F24H 4 5F0L04	0550591-0 0550590-0 0550406-0 0550406-0	000-116-692 000-116-693 000-113-402 000-113-402 000-115-258	1802R0045 1802R0046 1802R0047 1802R0048 1802R0049	ERD-16TJ332 ERD-16TJ332 FRD-16TJ331 ERD-16TJ223 FRD-16TJ470	0-16W 3-3K 0-16W 3-3K 0-16W 530 0-16W 22K 0-16W 47	000-329-04 000-329-04 000-329-02 000-330-51 000-329-00	5 !5 .0
	COIL	ጋብル		1802R0050 1302R0051 1802R0052 1802R0053 1802R0054	ERD-16TJ103 ERD-16TJ101 ERD-16TJ102 ERD-16TJ472 EVM-MCGA01B13	0.16W 10K 0.16W 100 0.16W 1K 0.16W 4.7K	000-330-80 000-329-01 000-330-80 000-330-81 000-103-59	.3)1 .2
. 1802L0001 1802L0003 1802L0005 1802L0006	LAE03NAK22M R22 05S4058-0 R82 05S4072-0 LAE03NA102K	0.33UH 0.22UH 0.22UF 0.82UH	000-428-135 000-428-134 000-428-296 000-428-308 000-108-083	1802R0055 1802R0055 1802R0057 1802R0058 1802R0058	ERD-16TJ472 ERD-16TJ472 ERD-16TJ472 ERD-16TJ103 ERD-16TJ102 ERD-16TJ472	0.16W 4.7K 0.16W 4.7K 0.16W 10K 0.16W 1K 0.16W 4.7K	000-330-81 000-330-81 000-330-80 000-330-80 000-330-81	.2 .2)2
1802L0007 1802L0008 1802L0009	R33 05S4062-0 05S4055-0 R15 R18 05S4056-0	0.240H 0.330F 150H 0.180H	000-428-297 000-428-301 000-428-294 000-428-295	1802R0060 1802R0061 1802R0062	ERD-16TJ562 EVM-MCGA01814 ERD-16TJ562	0.16W 5.6K 10K 0.16W 5.6K	000-329-05 000-103-63 000-329-05	50 52 50
1802L0011 1802L0012 1802L0013 1802L0014 1802L0015 1802L0015	LALO3NA100K LALO3NA100K LALO3NA100K LALO3NA102K LALO3NA102K LALO3NA102K	10UH 10UH 10UH	000-428-144 000-423-144 000-423-144 000-103-083 000-103-083 000-103-083 000-103-388	1802R0063 1802R0064 1802R0065 1802R0066 1302R0067 1802R0068	ERD-16TJ331 ERD-16TJ331 ERD-16TJ103 ERD-16TJ103 ERD-16TJ102 ERD-16TJ103 ERD-16TJ470	0.16w 330 0.16w 330 0.16w 10K 0.16w 10K 0.16w 1K 0.16w 10K 0.16w 47	000-329-02 000-329-02 000-330-80 000-330-80 000-330-80 000-329-00	!5 2 2 1 1
1802L0019 1802L0019	LALU3NA101K LALU3NA101K	100UH 100UH	000-428-133 090-428-133	1802R0070 1802R0071 1802R0072	ERD-16TJ101 ERD-16TJ473 ERD-16TJ103	0.16W 10J 0.16W 47K 0.16W 10K	000-329-01 000-330-81 000-330-86	. 4
1802L0021 1802L0023 1802L0024 1802L0025	LALO3NA4R7K LALO3NA5R6K LALO3NA100K	4.7UH 10UH	000-428-141 000-428-142 000-428-144 000-108-083	1802R0073 1802R0074 1802R0075 1802R0076 1802R0077 1802R0078	ERD-16TJ472 EKD-16TJ331 ERD-16TJ681 ERD-16TJ472 ERD-16TJ103 EKD-16TJ103 ERD-16TJ103	0.16w 4.7K 0.16w 330 0.16w 680 0.16w 4.7K 0.16w 1K 0.16w 10K 0.16w 10K	000-330-81 000-329-02 000-330-81 000-330-80 000-330-80 000-330-80	?5 13 12 01
180240001	TRANSISTOR	トランシ"スクー	000-129-359	1802R0080 1802R0081	ERD-16TJ470 ERD-16TJ273	0.16W 47 0.16W 27K	000-329-00 000-330-81	1
180240003 180240003 180240005 180240006 180240006	2 25K125 5 UN4122 2 25C3133 2 25C1212AC 2 25C1947 UN4122		000-129-359 000-129-359 000-113-381 000-126-340 000-124-792 000-125-785 000-13-381	1802R0082 1802R0083 1802R0084 1802R0085 1802R0085 1802R0087 1802R0088	ERD-16TJ101 ERD-16TJ472 ERD-16TJ103 EVM-MCGA01B14 ERD-16TJ332 EVM-MCGA01B53 ERD-25PJ102	0.16w 100 0.16w 4.7K 0.16w 10K 10K 0.16w 3.3K 5K (0050119) 0.25w 1K	000-329-01 000-330-81 000-330-80 000-103-63 000-329-04 000-103-63 000-330-35	12 02 32 55
180240010 180240011 180240012 180240013 180240015 180240016 180240016	25C2498 25C2498 25C1815-Y 25C1815-Y 25C1815-Y 0 UN4122 0 UN4122 0 UN4122 0 UN4122		000-126-200 000-126-200 000-125-631 000-125-631 000-125-631 000-113-381 000-113-381 000-113-381 000-113-381	1902R0090 1302R0091 1302R0092 1802R0093 1802R0094 1802R0096 1802R0097 1802R0093 1802R0093	ERD-16TJ681 ERD-16TJ223 ERD-16TJ323 ERD-16TJ323 ERD-16TJ03 ERD-16TJ224 EVM-MCGA01B53 ERD-16TJ472 ERD-16TJ472 FRD-16TJ473 FRD-16TJ471	0.16w 680 0.16w 22K 0.16w 82K 0.16w 10K 0.16w 220K 5K (0050119) 0.16w 4.7K 0.16w 4.7K 0.16w 15K 0.16w 470	000-330-81 000-339-00 000-330-80 000-330-80 000-1339-08 000-330-83 000-330-83 000-329-00	10 73 32 80 81 12
180240019 180240020 180240021 180240023 180240023 180240025 180240025	UN4211 UN4122 UN4211 UN4122 UN4122 UN4122		000-108-963 000-103-963 000-113-381 000-118-963 000-113-381 000-113-381 000-108-963 000-125-631	1802R0100 1802R0101 1802R0102 1802R0103 1302R0104 1802R0105 1302R0106 1802R0107	ERD-16TJ472 ERD-16TJ334 ERD-16TJ334 ERD-16TJ331 ERD-16TJ472 FRD-16TJ473 ERD-16TJ473 ERD-16TJ473 ERD-16TJ472 ERD-16TJ472 ERD-16TJ472 ERD-16TJ472	0.16w 4.7K 0.16w 330K 0.16w 330K 0.16w 4.7K 0.16w 4.7K 0.16w 4.7K 0.16w 330 2w 1 0.16w 4.7K	000-330-81 000-329-04 000-330-81 000-330-81 000-329-04 000-329-04 000-375-44 000-330-81	12 34 12 25 12 14 01 56
1B02k0001	RESISTOR ERD-16TJ103	デイコウ 0・16√ 10K	000-330-802					
1802K0001 1802K0002 1802R0008	ERD-16TJ103	0.16W 10K 0.16W 10K 0.16W 47 0.16W 1K	000-330-802 000-330-802 000-329-005 000-330-801					

NOTE:

備 考:

	TYPE 型 名	SPECIFICATIONS 規 格	コード番号	REMARK 備 考	1	TYPE SI 型名	PECIFI 規	ICATIONS 格	CODE NO. コード番号	備	IARK 考
1802K0110 1802R0111 1802R0112	ERD-16TJ102 FRD-16TJ150 FRD-16TJ470	0.16 # 15 0050095-0 0.16 # 47	000-330-80 000-330-84 000-329-00	3 5	180200001			t+t10 0392-0	000-113-3		
1802R0113 1802R0114	ERD-16TJ470 ERD-16TJ470	0.16w 47 0.16w 47 0.16w 47	000-329-00 000-329-00 000-329-00	5	1802U1002 1802U0003	SE1611C/PG NJM2904			000-169-1 000-113-3	92	
LB02R0116	ERD-16TJ470 ERD-16TJ101 ERD-16TJ101	0.16w 47 0.16w 100 0.16w 100	000-329-01	3	1802U0004 1802U0005		055	0394-0	000-113-3 000-163-2	64	
1B02R0118	ERD-16TJ101 ERD-16TJ101	0.16W 100 0.16W 100	000-329-01 000-329-01	3	180200006 180200007 180200008	I F		0392-0 0396-0	000-163-2 000-113-3 000-113-3	91	
180280120	ERD-16TJ102	0.16W 1K	000-330-80		1802U0009		0.73	0370-0	000-113-2		
LB02R0122	ERD-16TJ102 ERD-16TJ102	0.16W 1K 0.16W 1K	000-330-80	1	1802U0010 1802U0011			0393-0	000-106-2 000-112-7		
LB02R0124	FRD-16TJ102 ERD-16TJ472	0.164 1K 0.164 4.7K 0.16W 10K	000-330-80 000-330-81 000-330-30	2	180200012	ALC UPC1242H	055	0395-0	000-113-3 000-110-9	84	
LB02R0125 LB02R0126 LB02R0127	FRD-16TJ103 ERD-16TJ101 ERD-16TJ101	0.16W 100 0.16W 100 0.16W 100	000-329-01	3	1802U0014 1802U0015	TC4066BP NJM082			000-163-2 000-113-3	96	
1802R0128	ERD-16TJ101 ERD-16TJ101	0.16w 100 0.16w 100	000-329-01	3	1802U0016 1802U0017	VOX M54972P	055	0397-0	000-113-3	80	
	ERD-16TJ101	0.16W 100	000-329-01		1802U0018 1802U0019	M54972P M54972P			000-113-3 000-113-3		
1802K0131 1802K0132	ERD-16TJ101 ERD-16TJ101	0.16W 100 0.16W 100	000-329-01	3	1802U0021 1802U0022	M54581P LT1080C∷			000-106-2 000-111-4		
E02R0134	ERD-16TJ101 ERD-16TJ101	0.164 100 0.164 100	000-329-01 000-329-01	3	180200023	AN7505F			000-113-4		
LB02R9136	ERD-16TJ101 ERD-16TJ101	0.16W 100 0.16W 100	000-329-01	3							
1802R0138	ERD-16TJ103 ERD-16TJ101	0.16W 10K 0.16W 100	000-330-80 000-329-01 000-330-30	3		POTENTIOMETER		ンショメーター			
	ERD-16TJ102 EXE-F5E472J	0.16w 1K 0.125W 4.7KX4	000-379-07		1802VR0002	HZ12A-1L	ZEN	ER	000-113-3	883	
LB02R0141	EXB-F5E472J EXB-F5E472J	0.125W 4.7KX4 0.125W 4.7KX4	000-379-07 000-379-07	3							
L802R0143 L802R0144	FX8-F5E472J FRG-3SJ180P	0.125W 4.7KX4 0050102-0	000-379-07 000-375-51	3		CABLE WITH CONNECTO			000 533 (.7.	
LB02R0145 LB02R0146	ERD-16TJ392 ERD-16TJ102	0.16W 3.9K 0.16W 1K	000-329-04	7	1802w0001 1802w0002 1802w0003	L-250	075	0046-0 0046-0 0046-0	000-522-0 000-522-0 000-522-0	04	
180280154	FRD-16TJ152	0.16W 1.5K	000-329-03		180240003	L-17 0	013	0040	000 522 0	,,,	
1802R0155 1802R0156	ERD-16TJ222 ERD-16TJ331	0.16W 2.2K 0.16W 330	000-330-80	5		HEAT SINK	#9 2	ツハ"ン			
1802R0157 1802R0158 1802R0159	ERD-16TJ331 ERD-16TJ101 ERD-16TJ472	0.16W 330 0.16W 100 0.16W 4.7K	000-329-02 000-329-01 000-330-81	3	1802X90071				000-113-3		
1802K0139		5K (00S0119)	000-330-81		1802XQ0072	MC213A820			000-113-3	98	
	EVM-MCGA01B14	10K 0.16W 220	000-103-63	2							
1B02R0163 1B02R0164	EVM-MCGA01852 ERD-16TJ472	00S0119-1 0.16% 4.7K	000-103-59 000-330-81	.5							
1302R0165 1802R0166	ERD-16TJ102	0.16W 1K 0.16W 10K	000-330-80								
1802R0167 1802R0168	ERD-16TJ150 ERD-16TJ102	0080095-0 0.16w 1K	000-330-34 000-330-30								
	ERD-16TJ681	0.16w 680	000-330-81								
180280171	ERD-16TJ102 ERD-16TJ472	0.16W 1K 0.16W 4.7K	000-330-80	2							
1802R0172 1802R0173	ERD-16TJ331	0.16W 10K 0.16W 330 0.16W 4.7K	000-330-80 000-329-02 000-330-81	5							
1802R0174 1802R0175 1802R0176	ERD-16TJ472 ERD-16TJ472 ERD-16TJ470	0.16W 4.7K 0.16W 4.7K 0.16W 47	000-330-31	2							
180280178	ERD-16TJ681 ERD-16TJ472	0.16% 680 0.16% 4.7K	000-330-81	3							
	ERD-16TJ472	0.16W 4.7K	000-330-81								
LB02R0181	ERD-16TJ472 ERD-16TJ473	0.16W 4.7K 0.16W 47K	000-330-81 000-330-81								
LB02R0183 LB02R0184	ERD-16TJ103 ERD-16TJ472	0.16W 10K 0.16W 4.7K	000-330-80 000-330-81	.2							
1802R0186	ERD-16TJ101 ERD-16TJ472	0.16W 100 0.16W 4.7K	000-329-01 000-330-81	.2							
	ERD-16TJ102 ERD-16TJ332	0.16W 1K 0.16W 3.3K	000-330-80 000-329-04								
	ERD-16TJ100 ERD-16TJ683	0.16W 10 0.16W 63K	000-330-83								
	ERD-16TJ103	0.16W 10K	000-330-80	12							
	THERMISTOR	サーミスター									
1802RT0001	D-33A		000-180-62								
1802RT0002 1802RT0003 1802RT0004	D-33A		000-180-62 000-180-62 000-180-62	15							
	TRANSFORMER	トランス									
1802T0001 1802T0002	5T476	0550355-0 0550420-0	000-109-05	39							
1802T0003 1802T0004 1802T0007	5T476	0550355-0 0550420-0 0550355-0	000-109-05 000-113-38 000-109-05	39							
180210007 1802T0011		0550417-0	000-109-03		1						
1802T0011 1802T0012 1802T0013	5T475 5T460	0550417-0 0550419-0 0550355-0	000-113-36 000-109-05	59							
1802T0014 1802T0015	5T460	0550355-0 0550419-0	000-109-05 000-113-36	5 4							
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EP-5

YMBOL 記号	TYPE 型 名	SPECIFICATIONS 規格	CODE NO. コード番号	REMA 備	RKS 考	SYMBOL 記号	TYPE 型 名	SPECIFIC 規	ATIONS 格	CODE NO. コード番号	REM /	ARKS 考
						1802C1098 1502C1099	55109E103P50V 65104E102E50V	0.01	UF 50V PF 50V	000-253-4 000-252-1		
1802	05P0328A	TX/RX (2/2)	005-593	-620		180 2 C 11 0 0 180 2 C 11 0 0 180 2 C 11 0 2 180 2 C 11 0 3 180 2 C 11 0 5 180 2 C 11 0 5 180 2 C 11 0 7 180 2 C 11 0 8 180 2 C 11 0 9	DD109E103P50V D0104310ZK50V EC9=b1H223JZ FC9=V1H104JZ FC9=V1H04JZ FC9=A1CJ471: D010491JZK50V FCC=F1H330JC ECC=F1H220JC FCC=F1H330JC	0.01 1000 0.01 0.10 0.10 4700 1000 33PF 22PF	UF 50V PF 50V UF 50V F 50V UF 50V F 16V PF 50V 50VDC 50VDC	000-253-4 000-252-1 000-100-1 000-100-1 000-100-1 000-201-3 000-252-1 000-255-2 000-255-2	36 71 27 24 25 08 71 22	
1802C1001	EXF-P4102ZW	1000PF 50V	000-106-0			1302C1110	DD1048102K50V02	1000	PF 50V	000-252-1	71	
1502C1002 1802C1003 1802C1004 1802C1005 1802C1007 1802C1008	DD169E103P50V DD104B102K50V ECC-F1H010CC ECR-V1H104JZ ECC-V1H104JZ ECC-V1H104JZ	1000FF 50V 0.01UF 50V 1000FF 50V 1PF 50VPC 0.1UF 50V 0.1UF 50V	000-106-0 000-253-4 000-252-1 000-255-2 000-261-5 000-261-5 000-100-1	36 71 01 24 24 25		1802C1111 1802C1112 1802C1113 1802C1114 1302C1115 1802C1115 1802C1116	001048102X50V02 ECC-F1H010CC ECC-F1H010CC DD1048102X50V02 DD1048102X50V02 DD109E103P50V DD109E103P50V DD1048102X50V02	1PF 1PF 1000 1000 0.01 0.01	PF 50V 50VDC 50VDC PF 50V PF 50V UF 50V PF 50V	000-252-1 000-255-2 000-255-2 000-252-1 000-252-1 000-253-4 000-252-1	01 71 71 36 36 71	
1B02C1010 1B02C1011 1B02C1013 1B02C1014 1B02C1015 1B02C1016 1B02C1017 1B02C1018 1B02C1019	DD104B102K50V02 ECC-F1H30JC ECC-F1H100DS ECC-F1H150JS DD1045102K50V02 ECE-A1AU471E ECC-F1H010CC DD109E103P50V	1000PF 50V 1000PF 50V 33PF 50VDC 10PF 50V 15PF 50V 1000PF 50V 470UF 10V 1PF 50VDC 0.01UF 50V 1000PF 50V	000-252-1 000-255-2 000-115-9 000-108-8 000-255-2 000-255-2 000-255-2 000-255-2	71 22 30 23 71 18 01 36 71		1802C1121 1802C1122 1802C1123 1802C1124 1802C1125 1802C1125 1802C1127 1802C1127	DU306F104Z75 EXC-EMT103DC DD100E103P50V ECE-A1CU471E ECE-A1EU100E EXC-EMT103DC ECE-A1AU471E DD109E103P50V DU306F104Z25 DD104d102X50V02	0850 0.01 470U 10UF 0850 470U 0.01 0.1U	078-1 F 10V UF 50V F 25V PF 50V	000-108-9 000-107-9 000-253-4 000-201-8 000-201-8 000-107-9 000-2553-4 000-108-9 000-252-1	94 36 08 12 94 18 36 68 71	
1802C1020 1802C1021 1802C1022	D01043102K50V	1000PF 50V 1000PF 50V 1000PF 50V	000-252-1 000-252-1 000-252-1	71 71		1802C1129	SCE-A1FU1005	1001	?5V	000-201-8	12	
1802C1023 1802C1024 1802C1025	00109E103P50V 00104B102K50V 001092103P50V	0.01UF 50V 1000PF 50V 0.01UF 50V	000-253-4 000-252-1 000-253-4	71			9100E	2"11	- h "			
1802C1026 1802C1027 1802C1028 1802C1029	ECE-A1EU100E ECE-A1EU100E UU104B102K50V	100F 25V 100F 25V 1000PF 50V 0.010F 50V	000-201-3 000-201-3 000-201-3 000-252-1 000-253-4	12 12 71		1802CR1001 1802CR1002 1802CR1003 1802CR1004 1802CR1004	155135 155135 155135 155135		.CAP.	000-114-1 000-108-0 000-108-0 000-108-0 000-108-0	75 75 75 75	
1802C1030 1802C1031	DD1048102K50V	1000F 10V 1000PF 50V 0.010F 50V	000-206-1 000-252-1 000-253-4	71		1802CR1006 1802CR1007 1802CR1008	15V68	VARI	.CAP. .CAP. .CAP.	000-114-1 000-114-1 000-114-1	20	
1802C1032 1802C1033 1802C1034 1802C1035 1802C1036 1302C1037 1802C1038	D01043102K50V D01048102K50V EC0-R1H223JZ EC3-V1H104JZ EC3-V1H104JZ	1000PF 50V 1000PF 50V 0.01UF 50V 0.1UF 50V 0.1UF 50V 0.050130-0	000-252-1 000-252-1 000-100+1 000-261-5 000-261-5 000-105-9	71 71 27 24 24		1802CR1009 1802CR1010 1802CR1011 1802CR1012	15V68 15S133 15V68	VARI	.CAP.	000-114-1 000-103-0 000-114-1 000-108-0	20 97 20	
130201039	ECN-V1H104JZ	0.1UF 50V	000-261-5 000-261-5	24			FILTER	フイルタ	-			
1802C1040 1802C1046 1802C1047 1802C1048 1802C1049	001043102K50V 001043102K50V 001045102K50V	0.1UF 50V 1900PF 50V 1000PF 50V 1000PF 50V 1000PF 50V	000-252-1 000-252-1 000-252-1 000-252-1	71 71 71		1502FL1001 1802FL1002	50U14A 50.01	MHZ 0550 MHZ 0550	592-0	000-116-6 000-113-3		
1802C1050 1802C1051		1000PF 50V 1000PF 50V	000-252-1 000-252-1	71 71			COIL	314				
1802C1052 1802C1053 1802C1054 1802C1055 1802C1056 1802C1057 1802C1058 1802C1059	901048102K50V DD1048102K50V DD1048102K50V ECE-A1CU471E ECE-A1CU100E DD1048102K50V DD1048102K50V	1000PF 50V 1000PF 50V 1000PF 50V 470UF,16V 10UF 25V 1000PF 50V 1000PF 50V	000-252-1 000-252-1 000-252-1 000-251-8 000-201-8 000-252-1 000-252-1	71 71 71 08 12 71 71		1802L1001 1502L1002 1862L1003 1502L1004 1802L1005 1802L1006 1802L1007 1802L1007	LAL03NA100K LAL03NA100K LAL03NA100K LAL03NA100K LAL03NA100K LAL03NA100K P24 0554059-0 R19 0554056-0	100H 100H 100H 100H 100H 0.24	I I I I I I I I	000-428-1 000-428-1 000-428-3 000-428-3 000-428-3 000-428-3 000-428-3	44 44 44 44 97	
1862C1060 1802C1061		1000PF 50V 10PF,50V	000-252-1 000-255-2	10		1302L1009	05S4055-1 P15	1501	1	000-428-2	94	
1802C1062 1802C1063 1802C1064 1802C1065 1802C1066 1802C1067 1802C1068	00104n102K50V ECC-F1H100DC DD104B102K50V DD104B102K50V DU109E103P50V	1000PF 50V 100PF 50V 10PF,50V 1000PF 50V 1000PF 50V 0.01UF 50V 1000PF 50V	000-252-1 000-252-1 000-255-2 000-252-1 000-252-1 000-253-4	71 10 71 71 36		1802L1011 1802L1012 1802L1013	R1P 0554056-0 LAL03NA101K LAL03NA100K LAL03NA100K LAL03NA100K	0.18 100U 10UH 10UH	JH • •	000-428-2 000-428-1 000-428-1 000-428-1 000-428-1	.33 .44 .44	
186201069	DD1048121K50V	120PF 50V 15PF 50V	000-111-4				TRANSISTOR	トランジ	/*X3-			
1802C1070 1302C1071 1802C1072 1802C1073 1802C1074 1802C1075 1802C1076 1802C1077 1802C1077	001040131K50V FCC-F1H470JC D01042121K50V D01091103F50V FCC-F1H470JC D01043471K50V02 ECC-F1H330JC D010440181K50V	13PF 50VD 47PF 50VDC 120PF 50V 0-01UF 50V 47PF 50VDC 470PF 50VDC 130PF 50V 47PF 50VDC	000-273-9 000-111-4 000-255-2 000-253-4 000-255-2 000-255-2 000-255-2	65 26 35 36 26 76 22		160281002 180281003 180281004 180281005 180281006 160281007 180281008	UN4211 UN4211			000-129- 000-110- 000-129- 000-124- 000-108- 000-108- 000-129- 000-110-	986 263 81 963 963 963 986	
	D01048102K50V D01048102K50V ECC-F1H180JC TZ03M10UFK ECC-F1H220JC D01048102K50V	0.010F 50V 1000PF 50V 1000PF 50V 100PF 50V 20PF 50V 1000PF 50V 1000PF 50V 1000PF 50V	000-253-4 000-252-1 000-252-1 000-255-2 000-113-3 000-252-1 000-252-1 000-252-3	71 71 16 666 05 71 71		180241011 180241012 180241013 180241014 180241015 180241016	25K192A-GR			000-110- 000-129- 000-125- 000-125- 000-129- 000-129- 000-113- 000-114-	986 375 331 963 375 381	
1802C1090 1802C1091 1302C1092 1802C1093 1802C1094 1802C1095	001045102K50V 001045102K50V 001049102K50V ECE-A1E0101E 001048102K50V	1000PF 50V 1000PF 50V 1000PF 50V %5.0 100MF 25V 1010PF 50V 1010PF 50V 4PF 50VPC	000-252-1 000-252-1 000-252-1 000-252-1 000-252-1 000-252-1	.71 .71 .05 .71 .71		1802R1002 1802R1003		0.16	0 6w 1K 6w 4_7K 6w 1K 6w 47K	000-330- 000-330- 000-330- 000-330-	312 301	

NOTE:

EP-6

i	TYPE 型 名	SPECIFICATIONS 規格	CODE NO. コード番号		KS 考	1	TYPE 型 名	SPEC 規	IFICATIONS L 格	CODE NO. コード番号	REM. 備	ARKS 考
1802R1006 1802R1007 1802R1008	ERD-16TJ221	0.16W 100 0.16W 1K 0.16W 4.7K 0.16W 220	000-329-03 000-330-80 000-330-83 000-329-03	01 12 21		180201001 180201002 180201003	M54927P	ۈ T1	/20† † †10	000-104-3 000-113-3 000-150-9	78 12	
1802R1010 1802R1011 1802R1012 1802R1013 1802R1014 1502R1015 1802R1016 1802R1017 1802R1017	ERO-16TJ473 ERD-16TJ472 ERO-16TJ472 ERO-16TJ471 ERO-16TJ471 ERO-16TJ471 ERO-16TJ152 ERD-16TJ103 ERD-16TJ103	0.16w 4.7K 0.16w 220 0.16w 4.7K 0.16w 10K 0.16w 4.70 0.16w 680 0.16w 1.5K 0.16w 10K	000-330-8 000-329-0 000-330-8 000-330-8 000-329-0 000-329-0 000-329-0 000-330-8	14 21 12 02 29 13 39 02		1802U1004 1802U1005 1802U1006	UPC1037H #54927P TC4066*P #54972P UPC1037H TA7310P HD10551			000-113-3 000-113-3 000-163-2 000-113-3 000-113-3 000-101-3	79 178 164 180 179 137	
1802R1019 1802R1022 1802R1023 1802R1024 1802R1025 1802R1026	ERD-16TJ222 ERD-16TJ750 ERD-16TJ750 EVM-MCGA01853 ERD-16TJ392	0.16w 75 0.16W 75 5K (00S0119) 0.16W 3.9K	000-329-03 000-329-03 000-103-63 000-329-03	10 10 31 47		180201012 180201613	M54459L TC40668P ZENER DIODF		ツエナータ ペイオートペ	000-150-9 000-163-2	912 964	
1802R1027 1802R1028 1802R1029 1802R1030	ERD-16TJ103 ERD-16TJ103 ERD-16TJ332 ERD-16TJ473		000-329-00 000-330-80 000-330-80 000-329-00			1802VR1001 1802VR1002 1802VR1003	HZ 6A2L		ZENER ZENER	000-113-1 000-133-2 000-113-1	27	
1802R1031 1302R1032 1802R1033 1802R1034 1802R1035 1802R1035 1802R1037 1802R1033 1802R1039	ERD-16TJ471 ERD-16TJ471 ERD-16TJ473 ERD-16TJ473 ERD-16TJ473 ERD-16TJ473 ERD-16TJ221 ERD-16TJ221 ERD-16TJ221 ERD-16TJ221	0.16W 100 0.16W 470 0.16W 47K 0.16W 220 0.16W 47K 0.16W 220 0.16W 100 0.16W 220 0.16W 10K	000-330-8 000-329-0 000-329-0 000-330-8 000-330-8 000-329-0 000-329-0 000-329-0 000-330-8	14 21 14 21 13 21		1802Y1001	CRYSTAL		2 ป X 2 II 0 5 S 0 5 9 3 = 0	000-116-	695	
1802R1040 1802R1041 1802R1042 1802R1043 1802R1045 1802R1045 1802R1047 1802R1047 1802R1048 1802R1049	ERD-16TJ157 ERD-16TJ150 ERD-16TJ470	0.16w 220 0.16w 1.5K 0050095-0 0.16w 47 0.16w 47 0.16w 220 0.16w 1K 0.16w 220 0.16w 220 0.16w 220	000-329-0 000-329-0 000-329-0 000-329-0 000-329-0 000-330-8 000-329-0 000-329-0	39 43 05 05 21 01 21								
1802R1050 1802R1051 1802R1052 1802R1053 1802R1054 1802R1055 1802R1057 1802R1057 1802R1055 1802R1058	ERD-16TJ102 ERD-16TJ470 ERD-16TJ101 ERD-16TJ221 ERD-16TJ104 ERD-16TJ102 ERD-16TJ102 ERD-16TJ102 ERD-16TJ102 ERD-16TJ102 ERD-16TJ102	0.16W 1K 0.16W 47 0.16W 100 0.16W 200 0.16W 3.5K 0.16W 1K 0.16W 1K 0.16W 1K 0.16W 1K 0.16W 1K	000-330-8 000-329-0 000-329-0 000-329-0 000-330-8 000-330-8 000-330-8	05 13 21 03 45 01 01								
1902R1060 1802R1061 1802R1062 1802R1063 1802R1064 1802R1066 1802R1066 1802R1066 1802R1066	ERD-16TJ101 ERD-16TJ472 ERD-16TJ221 EXB-F5E472J ERD-16TJ221 ERD-16TJ471 ERD-16TJ480 ERD-16TJ480 ERD-16TJ480 ERD-16TJ680	0.16W 100 0.16W 4.7K 0.16W 220 0.125W 4.7KX4 0.16W 270 0.16W 470 0.16W 68 0.16W 330 0.16W 68	000-329-0 000-329-0 000-329-0 000-329-0 000-329-0 000-329-0 000-329-0 000-330-8	12 21 73 21 29 09 25		1803	05P0273A		TX FIL	005-59	2-490)
1802R1071 1802R1072 1802R1073	ERD-16TJ560 ERD-16TJ221 ERD-16TJ101 ERD-16TJ630 ERD-16TJ101	0.16w 56 0.16w 220 0.16w 100 0.16w 68 0.16w 100	000-329-0 000-329-0 000-329-0 000-329-0 000-329-0	21 13 09		1803C0001 1803C0002 1803C0003 1803C0004 1803C0005	CAPACITOR D0109E103P50V D0109E103P50V D0109E103P50V D0109E103P50V D0109E103P50V	,	0.01UF 50V 0.01UF 50V 0.01UF 50V 0.01UF 50V 0.01UF 50V 0.01UF 50V 0.01UF 50V	000-253- 000-253- 000-253- 000-253- 000-253-	436 436 436 436	
1802RT100J	THERMISTOR	7-ER9-	000-113-3	77		1803C0007 1803C0008 1803C0009	DD109E103P50V DD1u9E103P50V		0.01UF 50V 0.01UF 50V 0.01UF 50V	000-253- 000-253- 000-253-	436 436	
1802T1001 1302T1002 1802T1003 1802T1004 1802T1005	TRANSFORMER 51477 51469 51499 51475 51477 51478	1557 0550421-0 0550418-0 0550418-0 0550419-0 0550421-0 0550421-0	000-113-3 000-113-3 000-113-3 000-113-3 000-113-3	63 63 69 67		1803C0011 1803C0012 1803C0013 1803C0014 1803C0015 1803C0016 1803C0017	DM19C222K5		0.01UF 50V 0.01UF 50V 0.01UF 50V 0.01UF 50V 1300PF 500V 160PF 500V 2200PF, 500V 470PF 500V 1700PF, 500V	000-253- 000-253- 000-253- 000-253- 000-113- 000-106- 000-226- 000-116- 000-222- 000-113-	436 436 436 416 124 482 123 448	
1802T1006 1802T1007 1802T1008 1502T1009 1802T1010 1802T1012 1802T1012 1802T1013 1802T1014 1802T1013	51479 51480 51460 51513 51475 51475 51475	0550423-0 0550424-0 0550425-0 0550425-0 0550419-0 0550419-0 0550419-0 0550421-0 0550421-0	000-113-3 000-113-3 000-109-0 000-113-3 000-113-3 000-113-3 000-113-3 000-113-3	71 72 54 73 669 669 667		1803C0020 1803C0021 1803C0022	D010CH111J500V PM19C152K5 DD10SL331K500V PM19C751K5 DD12SL561K500V D009CH680J500V PM19C911K5 DD12CH201J500V DD11SL471K500V		110PF 500V 1500PF 500V 330PF 500V 750PF 500V 60PF 500V 200PF 500V 200PF 500V 360PF 500V	000-106- 000-113- 000-113- 000-106- 000-106- 000-106- 000-113- 000-106- 000-113-	413 119 419 118 134 417 139	
						180 3C0 0 30 180 3C0 0 31 180 3C0 0 32 180 3C0 0 33 180 3C0 0 35 180 3C0 0 35 180 3C0 0 36 180 3C0 0 36 180 3C0 0 36	DUO7CH430J500V DD12SL561K500V DD10CH121J500V DD10SL301K500V DD12CH131J500V DD15CH23UJ500V DD10SCH320J500V DD11CH131J500V DD11CH131J500V		43PF 500V 560PF 500V 120PF 500V 300PF 500V 300PF 500V 22PF 500V 300PF 500V 62PF 500V 160PF 500V	000-115- 000-106- 000-106- 000-106- 000-106- 000-106- 000-113- 000-106- 000-106-	118 128 121 138 141 121 422	

NOTE:

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EP-7

Part										EP-7
	SYMBOL 記号					1				REMARKS 備 考
1803C0001 15513	1803C0040 1803C0041 1803C0042 1803C0044 1803C0044 1803C0046 1803C0050 1803C0050 1803C0051 1803C055 1803C055 1803C055 1803C055 1803C0056 1803C0056 1803C0056 1803C0056	DD05CH150U50nV DD12CH181U50nV DD12CH38U55nV DD07CH38Q5SpNV DC05CH59Q5SpNV DD10CH191U55nV ECC-V14T0UC D005CH59Q5SpNV DD10CH191U55nV ECC-V14H04UZ ECC-SHH03UZ ECC-SHH03UZ ECC-SHH03UZ ECC-SHH03UZ ECC-SHH03UZ ECC-SHH03UZ ECC-SHH03UZ	13PF 500V 120PF 500V 34PF 500V 47PF 50VDC 5PF 500V 100PF 500V 0.10F 50V 0.10F 50V	コード番号 000-113-42 000-106-17 000-135-62 000-115-62 000-115-62 000-201-52 000-201-52 000-201-52 000-201-52 000-201-52 000-201-52 000-201-52 000-201-52 000-201-52	備 考	180380001 180380002 180380003 180380006 180380006 180380006 190380000 190380010 180380011 180380012 180380013 180380013	でESISION EED-25PJ332 EEC-25J3900 EEC-25J3900 EEC-15J103 EEC-15J103 EEC-15J103 EEC-15J101 EEC-15J101 EEC-16J1473 EEC-16J473 EEC-16J473 EEC-16J101 EEC-16J101 EEC-16J101 EEC-16J101 EEC-16J103 EEC-16J103	現 格 9 130 0.25m 3.3K 00.50102-0 0.16m 10K 0.16m 10K 1 10 0.16m 10 0.16m 47K 0.16m 47K 0.16m 47K 0.16m 47K 0.16m 47K 0.16m 10K 0.16m 10K	ロード番号 000-330-36 000-330-30 000-330-30 000-330-30 000-330-30 000-330-31 000-330-81 000-330-81 000-330-81 000-330-80	備 考 9000 000 000 000 000 000 000 000 000 0
1803/00001 T04-3500	1803CR0003 1803CR0004 1803CR0005 1803CR0007 1803CR0007 1803CR0008 1803CR0009	185133 185133 18512 18552 18552 18552 18582 18582		090-103-09 000-103-09 000-114-02 000-114-02 000-114-02 000-114-02 000-114-02 000-114-02	7 7 1 1 1 1 1 1					
JACK		ARPESTER	7629 -							
1803/0000	180350001	T03-3593		000-113-42	7					
1803K0001 1803K0002 1803K002 1803K0002 1803K0002 1803K0002 1803K0002 1803K	1803J0002 1803J0003	IL-S-13P-S2T2-FF TMP-J01X-V6 TMP-J01X-V6 TMP-J01X-V6	1950079-0 0550455 0550455 0550455	000-509-85 000-509-85	9	1804	05P0274	P.A.	005-592-2	270
1804(0014 1804(0015 1804	1803K0002 1803K0003 1303K0004 1803K0005 1803K0007 1803K0007 1803K0009 1803K0010 1803K0011 1803K0012	GoP-1114P-US-AP-12V GoB-1114P-US-AP-12V GOB-1114P-US-AP-12V GOB-1114P-US-AP-12V GOB-1114P-US-AP-12V GOB-1114P-US-AP-12V GOB-1114P-US-AP-12V GOB-1114P-US-AP-12V GOB-1114P-US-AP-12V GOB-1114P-US-AP-12V GOB-1114P-US-AP-12V	9b-	000-114-40 000-114-40 000-114-40 000-114-40 000-114-40 000-114-40 000-114-40 000-114-40 000-114-40	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	1604C0002 1804C0003 1804C0005 1804C0005 1804C0006 1804C0008 1804C0009	FC V-818472JZ FCO-818472JZ ECO-818473JZ ECO-818473JZ ECO-818473JZ ECO-818474JZ FCO-818474JZ FCC-F18474JZ FCC-F18474JZ FCO-818474JZ FCO-818474JZ	4700PF 50V 4700PF 50V 0.01UF 50V 0.01UF 50V 100UF 10V 0.1UF 50V 100PF, 50V 510PF, 100V	000-102-49 000-100-12 000-100-12 000-206-11 000-261-52 000-261-52 000-256-91 000-261-52	3 5 5 3 4 4 4 4 9 9 5
1804C0032 FXF-P4102ZW 1000PF 50V 090-106-073 1804C0033 FXF-P4104ZZ 0.1HF 50V 000-261-524 1804C0034 ECO-V1H104ZZ 0.1HF 50V 000-261-524	180 3L0001 140 3L0002 180 3L0003 180 3L0005 180 3L0005 180 3L0007 180 3L0009 180 3L0010 180 3L0011 180 3L0011	COIL 51508 51023 51024 51025 51026 51503 515027 51029 51505 51506 51506 51507	0550472-0 0554024-0 0554024-0 0554025-0 0554026-0 0554027-0 0554023-0 0554023-0 0554023-0 0550471-0 0550471-0	010-113-42 000-732-57 000-732-57 000-732-57 000-732-57 000-732-57 000-732-57 000-732-57 000-113-43 000-113-43 000-115-43	9 3 4 5 5 6 0 7 7 3 9	1804C0014 1604C0015 1604C0016 1504C0013 1304C0019 1604C0019 1604C0020 1804C0021 1804C0024 1804C0025 1804C0025 1304C0027 1304C0027 1304C0027 1304C0028 1304C0023 1304C0023 1304C0023 1304C0023 1304C0023	ECO-VIHIOAJZ ECC-AIAVATIE DD109E103P50V ECC-AIAVATIE DD109E103P50V ECC-AIAVID1E C5650SLIM632K C5650SLIM632K DM19C122K5 FCC-AICULU2E MD2-2-224K FCC-AICULU3E MD2-2-224K FCC-AICUL00E ECC-AICUL00E ECC-AICUL00E ECC-AICUL00E ECC-AICUL00E ECC-AICUL00E DD109L103P50V DD109E103P50V DD109E103P50V DD109E103P50V DD109E103P50V DD109E103P50V EXE-P4102ZW FCC-YIM10AJZ	0.1UF 50V 47JUF 10V 0.01UF 50V 10UF 10V 6800PF 6200PF 1200PF, 500V 1000PF, 500V 0.22UF 250WV 0.1UF 10VV 0.22UF 250WV 10UF 25V 10UF 25V 0.01UF 50V 0.01UF 50V	000-261-52: 000-20-11 000-253-43: 000-20-113-43: 000-113-43: 000-222-44: 000-253-43: 000-253-43: 000-253-43: 000-253-43: 000-253-43: 000-253-43: 000-253-43: 000-253-43:	4

備考

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EP-8

MBOL 号	TYPE 型 名	SPECIFICA [*] 規	TIONS 格	CODE NO. コード番号	REM/ 備	ARKS 考		TYPE S型名	SPECIFIC 規	格 格	CODE NO. コード番号	備	ARKS 考
	B109E	タペイオートツ	`										
180409001	SV02YS			000-106-1	70								
	JACK	5 " 1"7					1805	05P0326	REL	AY	005-593	-600	
1504 J0002	IL-S-4P-52T2-EF TMP-J01X-V6 TMP-J01X-V6	1950075 0530455 0550455	ō	000-108-0 000-509-3 000-509-3	59								
								CAPACITOR	コンチ"	Σ 9−			
	COIL	31%					180500002	∺32562-E1155J ⊬32562-E1155J	1.59	F 100V F 100V	000-101-1 000-101-1	171	
1804L0002 1804L0003	Fis=225	10UH 10UH		000-428-1 000-428-1 000-424-1 000-424-1 000-428-9 000-428-9 000-423-9	44 49 49 00 00		180500004 180500005 180500006 180500007 180500008	#32562-E1155J ECF-A1T0471r #0109E103P50V FCG-V1H104JZ #0109E103P50V FCG-V1H104JZ ECG-V1H104JZ	470U 0.01 0.1U 0.01 0.1U	F 100V F 25V UF 50V F 50V UF 50V F 50V F 50V	000-101-1 000-201-8 000-253-4 000-261-5 000-261-5 000-261-5	317 -36 -524 -36 -524	
1804L0003 1804L0009				000-428-9 000-428-9			1805C0010	FCG-V1H104JZ 058310-75D223550V	0.1U 0454	F 50V 163-0	000-261-5 000-103-7	524 745	
180419010	F9-801			000-428-9	50		180500012	DSS310-75D223S50V		163-0	000-103-7		
	TRANSISTOR	トランシヅス	9-					01000	9"11	- h "			
1804-00001 1804-0002	2503133			000-126-3 000-126-3 000-113-4	40		1805CR0001 1805CR0002				000-136-0	005	
	25C3240 2SD1271A+P			000-113-4 000-128-0	.40 .69				_				
	2SA1315-Y			000-113-0			186561.0001	FILTER SC-05-100	フイルタ 1 UH		000-424-9	972	
	RESISTOR	テイコウ					1,555, 20001						
1804R0001 1804R0002	FRD-25TJ681 FRD-25PJ100	0.25W (000-330-3 000-330-3				PELAY	"1 0-				
1804R0003 1804R0004 1804R0005 1804R0006	ERD-25TJ681 ERO-25PJ2R2 ERO-25PJ2R2 ERD-25PJ470	0.25W 0.25W 0.25W 0.25W 0.25W	680 2.2 2.2 47	000-330-3 000-330-2 000-330-2 000-330-3 000-330-3	53 297 297 325		1305K0001	G4F-11123T-DC12V TRANSISTOR	トランシ	,~39-	000-113-4	446	
1504R0007 1804R0008 1804R0009	ERD-25PJ470 ERD-25PJ330 ERD-25PJ330	0.25W 0.25W	33	000-330-3 000-330-3	21		130540001	UN4211	,,,,,	,	000-108-9	963	
1804R0910 1804R0911 1804R0012	ERG-25J470P ERG-25J470P ERX-15J172P ERX-15J1R2P	2W 47 2W 47 0.5W 1 0.5W 1	.2 5%	000-375-4 000-375-4 000-375-3 000-375-3	57 572		T402/40005	2SD667A RESISTOR	テイコウ)	000-127-	940	
1804R0013 1804R0014 1804R0015 1804R0016 1804R0017 1804R0018 1804R0019	ERD-50TJ100 ERD-50TJ100 ERD-50TJ100 ERX-15J3P3P ERX-15J3R3P EVM-MCGA01B12 ERD-16TJ271	0.5W 1 0.5W 1 0.5W 1 3.3.1W 3.3.1W 100 0.16W	0	000-375-3 000-330-0 000-375-3 000-375-3 000-103-6	009 009 377 377 528		1805R0002 1805R0003 1805R0004 1805R0005	ERG-25J220P ERD-16TJ102 EVM-MCGA01B53 ERD-16TJ102 ERD-16TJ102 ERD-16TJ102	2W 2 0.16 5K (0.16		000-375-0 000-330-0 000-103-0 000-330-0 000-330-0	801 631 801 801	
1804R0020 1804R0021 1804R0022 1804R0023	ERX-3SJ497P ERD-16TJ102 ERD-16TJ102 ERD-16TJ102 ERD-16TJ102	005010 0.16W 0.16W 0.16W	1 K 1 K 1 K	000-375-5 000-330-8 000-330-8 000-330-8	301 301 301		1805KC007	ERD-16TJ101 ERD-16TJ101	0.16	SW 100 SW 100	000-329- 000-329-	013	
1804R0024 1804R0025 1804R0026	ERD-16TJ222 ERD-16TJ271	0.16W 0.16W 0.16W	2.2K 270	000-330-8	09			THERMISTOR	サーミス	t9-	000 100		
1B04R0028	ERD-16TJ222 ERD-16TJ222 ERD-16TJ122	0.16W 0.16W 0.16W	2.24	000-330-8 000-330-8 000-329-0	309		1605KT0001	. N-22A			000-180-	017	
1804R0030 1804R0031 1804R0032 1804R0033 1804R0034	ERD-16TJ102 EVM-MCGA01B12 ERX-2SJR22 ERD-16TJ680 FRD-16TJ100 ERD-16TJ101	0.16W 100 2W 0.2 0.16W 0.16W	1K 2 68 10	000-330-8 000-103-6 000-102-4 000-329-0 000-330-8 000-329-0	301 528 -35 509		180500001	INTEGRATED CIRCUIT	Γ ∌1 9t	2‡1110	000-113-	445	
1804RT0001	THERMISTOR D-22A	サーミスター		000-180-6	517								
1804RT0003	? D-33A			000-180-6	25								
	TRANSFORMER	トランス											
1804T0001 1804T0002	5T018A 5T523	055401 055047		000-750-7 000-113-4									
1804T0003 1804T0004	5T525	055047 055047	5-0	000-113-4	43								
	INTEGRATED CIRCUI	T 9196+6	10										
	NJ429040			000-113-4									
1804U0001 1804U0002				UUU-134-6	48								

NOTE:

備 考:



EP-9

YMBOL 記号	TYPE 型名	SPECIFICATIONS 規格	CODE NO. コード番号	REMARKS 備 考	SYMBOL 記号	TYPE 型名	SPECIFICATIONS 規格	CODE NO. コード番号	REMAR
						ANTENNA	COUPLER UN	IT	
1806	05P0276	SW REG	005-592-	-310	PARTS ON	CHASSIS			
	CAPACITOR	コンテツンサー				TISCELLANEOUS	979		
1806C0001 1806C0002 1806C0003 1806C0004 1806C0005 1806C0006 1806C0007 1806C0008	832562-E1155J ECF-A1EF5102F ECE-A1EF5102F FC0-P1101J7 FC0-P1152JZ ECC-V1H104JZ ECE-A1FU470E ECQ-V1H104JZ ECF-A1H0010E	1.5UF 100V 1000UF 25V 1000UF 25V 100PF 100JV N5.5 0.1UF 50V 47UF 25V 0.1UF 50V	000-101-17 000-113-49 000-113-49 000-261-80 000-261-52 000-261-52 000-261-52 000-261-52	51 51 21 28 24 55	1	SB-63 PRINTED CIRCUIT BOX 05P0278.COUP	AKDフ°リント‡/1ペン AT−1500	000-113-498	ANT. INSULAT
1806C0010 1306C0011 1806C0012 1806C0013 1806C0015 1806C0016 1806C0016 1806C0017 1806C0018	PRF132CH102J50 ECA-91H103JZ ECE-A1FF5102F ECE-A1FF5102F ECE-VINI04JZ ECF-A1EJ101F ECA-VINI04JZ DSS310-75D22355JV DSS310-75D22355JV ECE-VINI04JZ	1000PF 50V 0.01UF 50V 1000UF 25V 1000UF 25V 0.1UF 50V W5.0 10MF 25V 0.1UF 50V 0454163-0 0454163-0 0.1UF 50V	000-105-37 000-100-12 000-113-45 000-113-45 000-261-52 000-261-52 000-261-52 000-103-74 000-261-52	5 1 1 4 5 4 5 5					
130600021	ECO-V1H104JZ ECO-V1H104JZ ECG-P1101JZ	0.1UF 50V 0.1UF 50V 100PF 100WV	000-261-52 000-261-57 000-261-80	4					
	DIODE	タ"イオート"							
1806CR0001	MA649		010-117-97	3					
120451.0001	FILTER	21b9-							
1806FL0001	SC-05-100	104 5A	070-424-97	2					
	COIL	コイル							
1806L0001	HP-032		099-108-77	6					
	TRANSISTOR	トランシペスター			2B01	05P0278	COUP	005-922	-750
180600001	25K751A		000-113-44	9					
	RESISTOR	デイ ヨウ				CAPACITOR	コンテペンサー		
1806R0002 1806R0003 1806R0004 1806R0005 1806R0006 1806R0007 1806R0008	ERR-50TJ4K7 ERR-50TJ561 ERR-50TJ100 ERR-16TJ220 ERR-16TJ273 ERR-16TJ183 ERR-16TJ183 ERR-16TJ103 ERR-16TJ102	0.5W 4.7 0.5W 560 0.5W 10 0.16W 22 0.16W 27K 0.16W 13K 0.16W 10K 10K 0.16W 1K	000-330-00 000-330-05 000-330-06 000-330-84 000-330-81 000-330-80 000-330-80	1 9 7 1 1 2 2	2801C0001 2801C0002 2801C0003 2801C0005 2801C0005 2801C0007 2801C0007 2801C0008	DM19C122K5 DM19C122K5 DM19C122K5 DM19C122K5 DE12075L151J3KV DE12075L151J3KV DE12075L151J3KV	1200FF, 500V 1200PF, 500V 1200PF, 500V 1200PF, 500V 1200PF, 500V 150PF 3KV 150PF 3KV 150PF 3KV	000-222-44 000-222-44 000-222-44 000-222-44 000-222-44 000-106-21 000-106-21 000-106-21	8 8 8 8 2 2
1806R0011 1806R0012 1806R0013 1806R0014	ERD-16TJ107 ERD-16TJ151 FRD-16TJ151 FRD-16TJ1472 EVM-MCGA01913 ERG-16TJ107 ERG-15J101P	0.16w 1K 0.25w 150 0.16w 4.7K 1K 0.16w 1K 100.14	090-330-80 000-329-01 000-330-81 000-103-59 000-330-30 000-375-39	7 2 3 1	2301C0010 2801C0011 2801C0012 2801C0013 2801C0015 2801C0016 2801C0016 2801C0017 2801C0018	DE09075L820J3KV DE09075L820J3KV DE08075L680J3KV DE08075L680J3KV DE08075L680J3KV DE15105L151J6KV DE15105L151J6KV DE15105L151J6KV	150PF 3KV 82PF 3KV 82PF 3KV 6RPF 3KV 6RPF 3KV 6RPF 3KV 150PF 6KV 150PF 6KV	000-106-21 000-106-21 000-113-48 000-113-48 000-113-49 000-113-48 000-113-48 000-113-48	1 1 2 2 2 2 3 3
130670001	THANSFORMER 5T481	1502 0550416=0	000-113-45	0	2801C0019 2801C0020	ECG-V1H104JZ	0.01UF 50V	000-253-43	4
1806U0001 1806U0002 1806U0003	PC-0174		000-113-46 000-134-27 000-115-44	0 3	2801C0021 2801C0022 2801C0023 2801C0025 2801C0026 2801C0027 2801C0027 2801C0028	D0109E103P50V ECC-F1H150JC RPE132CH331J50 ECC-F1H150JC RPF132CH331J50 9D109E103P50V ECC-F1H12CJC	0.010F 50V 0.010F 50V 15PF 50V 330PF 50V 15PF 50V 0.010F 50V 0.010F 50V 0.010F 50V	000-253-43 000-253-43 000-256-90 000-105-38 000-256-90 000-253-43 000-253-43	6 2 9 2 9 6 6
					2801C0030 2801C0031 2801C0033 2801C0034 2801C0035 2801C0036 2801C0037 2801C0037 2801C0038	00109E103P50V 00109E103P50V 00109E103P50V 00109E103P50V 00109E103P50V 005310-75023S50V 00109E103P50V	0.01UF 50V 0.01UF 50V 0.01UF 50V 0.01UF 50V 0.01UF 50V 0.01UF 50V 0.01UF 50V 0.01UF 50V 10UF 25V 0.01UF 50V	000-253-43 000-253-43 000-253-43 000-253-43 000-253-43 000-103-74 000-253-43 000-203-43	6 6 6 6 5 6

SYMBOL 記号	TYPE 型 名	SPECIFICATIONS 規格	CODE NO. コード番号		KS		TYPE 型 名	SPECIFI 規	CATIONS 格	CODE NO. コード番号	REM/	ARKS 考
280100040	DU109E103P50V	0.01UF 50V	000-253-4	36	-	2301C. €920	15532			000-114-02 000-114-02		
2801C0041 2801C0042	DD306F104Z25 EfC-F5R5U105	0050130-0 1F 5.5V 0454163-0	000-103-99 000-113-49 000-103-79	R 4		2801CR0022 2801CR0022 2801CR0023	15532			000-114-02	?1	
2801C0043 2801C0044 2801C0045	DSS310-75D223550V DSS310-75D223550V ECC-F1H470JC		000-103-7- 000-255-2	45		2B01CR0024 2B01CR0025	15582 15582			000-114-07 000-114-07	1	
2801C0046 2801C0047	00109E103P50V 00104B102K50V	0.01UF 50V 1000PF 50V	000-253-4	36 71		2801CR0026 2801CR0027 2801CR0028	15582			000-114-02 000-114-02 000-114-02	1	
2801C0043 2801C0049	DD1048102K50V DD1048102K50V	1000PF 50V 1000PF 50V	000-252-1 000-252-1			2801CR0029				000-114-02	21	
280100051	ECF-A1HU3R3E ECQ-V1H104JZ	w5.0 3.3MF 50V 0.1UF 50V	000-261-5	24		2801CR0030 2801CR0031	15582			000-114-02 000-114-02 000-114-02	21	
230100053	ECE-A1EU100E ECE-A1EU100E	10UF 25V 10UF 25V 00S0130-U	000-201-3 000-201-3 000-108-9	12		2801CR0032 2801CR0033 2801CR0034	LWZ8 RPH			000-114-07	1	
2801C0055 2801C0056	DD306F104Z25 DD306F104Z25 DD306F104Z25	0050130-0 0050130-0	000-108-9 000-103-9	68		2801CR0035 2801CR0036	EN28 KPH EN28 KPH			000-108-07	71	
2801C0057 2801C0058	ECC-F1H330JC ECC-F1H330JC DD109E103P50V	33PF 50VUC 33PF 50VUC 0.01UF 50V	000-255-2 000-255-2 000-253-4	2.2		2801CR003R 2801CR003R 2801CR0039	LN28 RPH			000-198-07 000-198-07 000-198-07	1	
2801C0059 2801C0060	DD109E103P50V	0.01UF 50V	000-253-4	36		2801CR0040	LN28 RPH			000-108-0		
2801C0061 2801C0062	D0109E103P50V D5S310-750223S50V		000-253-4 000-103-7 000-103-7	45		2801CR0041 2801CR0042 2801CR0043	LN28 RPH			000-108-00 000-108-00 000-108-00	71	
2801C0063 2801C0064 2801C0065	DSS310-750223850V DSS310-750223850V DSS310-750223850V	0454163-0	000-103-7	45		2801CR0044 2801CR0045	Ln28 RPH LN28 RPH			000-108-0	71 71	
2801C0066 2801C0067	DSS310-75D223S50V ECE-A1EU101E	0454163-0 W5.0 100MF 25V	000-103-7 000-206-1	0.5		2801CR0046 2801CR0047 2801CR0048	LN28 RPH			000-103-0 000-108-0 000-108-0	71	
2801C0068 2801C0069	DD109E103P50V EXF-P4103ZW	0.01UF 50V 0.01UF 50V	000-253-4 000-257-5	0.2		2B01CR0049	LN28 RPH			000-108-0	71	
280100071		0.01UF 50V 0.01UF 50V	000-237-5 000-237-5	0.2		2801CR0050 2801CR0051 2801CR0052	LN28 RPH			000-108-0 000-108-0 000-108-0	71	
	EXF-P4103ZW EXF-P4103ZW DD109E103P50V	0.01UF 50V 0.01UF 50V 0.01UF 50V	000-237-5 000-237-5 000-253-4	0.2		2801CR0053 2801CR0054	LN28 KPH LN26 RPH			000-108-0	71 71	
2801C0075 2801C0076	DD109E103P50V DD109E103P50V	0.01UF 50V 0.01UF 50V	000-253-4 000-253-4	36 36		2801CR0055 2801CR0056 2801CR0057	MALSAS-1			000-106-2 000-106-2 000-106-2	31	
2801C0077 2801C0078 2801C0079		0.01UF 50V 0.01UF 50V 0.01UF 50V	000-253-4 000-253-4 000-253-4	36		2801CR0059 2801CR0059	155133			000-103-0 000-103-0	97	
280100080	DD109E103P50V	0.01UF 50V	000-253-4	36								
2801C0081 2801C0082 2801C0083		0.01UF 50V 0.01UF 50V 0.01UF 50V	000-253-4 000-253-4 000-253-4	36			PELAY	リレー				
2801C0084 2801C0085	DD109E103P50V DD109E103P50V	0.01UF 50V 0.01UF 50V	000-253-4	36 36		2801K0001 2801K0002 2801K0003	G68-2114P-US-AP-1 G68-2114P-US-AP-1 G68-1114P-US-AP-1	1 2 V		000-114-4 000-114-4 000-114-4	06	
2801C0086 2801C0087 2801C0088	DD109E103P50V	0.01UF 50V 0.01UF 50V 0.01UF 50V	000-253-4 000-253-4 000-253-4	36		2B01K0004 2B01K0005	G68-1114P-US-AP-1 G68-1114P-US-AP-1	1 2 V 1 2 V		000-114-4 000-114-4	05 05	
280100089	DD109E103P50V	0.01UF 50V	000-253-4	36		2801K0006 2801K0007 2801K0008	G6R-1114P-US-AP-1 G6R-1114P-US-AP-1 G6R-1114P-US-AP-1	127		000-114-4 000-114-4 000-114-4	0.5	
2801C0090 2801C0091 2801C0092	DD109E103P50V	0.01UF 50V 0.01UF 50V 0.01UF 50V	000-253-4 000-253-4 000-253-4	3.5		2801K0009	G68-1114P-US-AP-1	1 2 V		000-114-4	05	
2801C0093 2801C0094	DD109E103P50V DD109E103P50V	0.01UF 50V 0.01UF 50V	000-253-4	36 36		2801K0010 2801K0011	668-1114P-US-AP-1 64W-2212PUSTV5-0	C12V		000-114-4 000-113-4 000-113-4	٩5	
2801C0095 2801C0096 2801C0097	DD109E103P50V DD109E103P50V DD109E103P50V	0.010F 50V 0.010F 50V 0.010F 50V	000-253-4 000-253-4 000-253-4	36		2801K0012 2801K0013 2801K0014	G4w-2212PUSTV5-D0 G6B-1114P-US-AP-1 G6B-1114P-US-AP-1	150		000-114-4	0.5	
2801C0097 2801C0098 2801C0099	EXF-P4103ZW	0.01UF 50V 0.01UF 50V	000-237-5 000-253-4	0.2		2801K0015 2801K0016	G68-1114P-US-AP-1 G68-1114P-US-AP-1 G68-1114P-US-AP-1	1 2 V		000-114-4 000-114-4 000-114-4	0.5	
2801C0100 2801C0101	00306F104Z25 D0306F104Z25	0050130-0 0050130-0	000-108-9 000-108-9			2801K0017 2801K0013 2801K0019	G68-1114P-US-AP-1 G6P-1114P-US-AP-1	1 2 V		000-114-4	05	
280100102		10UF 25V 10PF,50V	000-251-3 000-255-2	12		2301K0020	G68-1114P-US-AP-1 G68-1114P-US-AP-1	1 2 V		000-114-4 000-114-4		
						2801K0021 2801K0022	G4W-2212PUSTV5-90	C15A		000-113-4		
	CIRCUIT BRÉAKER	サーキットフッレーカー					Corti	コイル				
2801CB0001	1 T3C5101-01-0411	125V 1A	000-106-2	65		280 1 L0001		055	4331-1	000-106-2		
	CHOKE COIL	チョーク コイル				2801L0002 2801L0003 2801L0004		055	4332-1 4333-1 4334-1	000-106-2 000-106-2 000-106-2	20	
2801CH000: 2801CH000:		0584031-0 0584031-0	000-732-5 000-732-5			2301L0005 2801L0006	51335 51585	05S 05S	4335-0 0511-0	000-106-2 000-114-1	26 26	
2801CH000		0554383-0	000-107-6			2801L0007 2801L0008 2801L0007	51586 51587 51538	055	0512-0 0513-0 0514-0	000-114-1 000-114-1 000-114-1	28	
	DIODE	タペイオートペ				2801L0010	51593	055	0516-0	000-114-1	31	
2801CF000	1 15582		000-114-0			2801L0012	LAL03NA101K LAL03NA101K LAL03NA101K	100 100 100	Url	000-428-1 000-428-1 000-428-1	33	
2B01CR0000 2B01CR0000 2B01CR0000	3 15532		000-114-0 000-114-0 000-114-0	21		50010,013	EMEGRANIATA	100		100 420-1	-	
2801CR000 2501CR000	5 15562 6 155133		000-114-0	21 97			TRANSISTOR	トラン	シ ^ スク -			
2801CR000 2801CR0000 2801CR0000	F 15S133		000-103-0 000-103-0 000-103-0	97			25A1315-Y			000-126-2 000-118-0	83	
2801CR001	0 3dZ61 .		000-129-9	20		280100003	2SC1815-Y			000-125-6	51	
2801CR001 2801CR001 2801CR001	2 15502		000-114-0 000-114-0 000-114-0	171			RESISTOR	713	ゥ			
2801CR001 2801CR001	4 1558? 5 1558?		000-114-0 000-114-0)?1 21		2301R0001 2801R0002	ERG-35J821P ERG-35J821P	0.05	0102-0 0102-0	000-375-5 000-375-5		
2301CR001 2301CR001 2801CR001	7 15582		000-114-0 000-114-0 000-114-0	21		2801R0003 2801R0004	ERG-3SJ102P ERG-3SJ560P	0 0 S 0 0 S	0102-0	000-375-5 000-375-5	39 24	
2301CR001			090-114-0			2801R0006	ERG-35J560P ERG-35J560P ERG-35J871P	0.05	0102-0 0102-0 0102-0	000-375-5 000-375-5 000-375-5	24	
						2001/10008	ERG-35J521P FRG-35J102P	0.05	0102-0 0102-0	000-375-5 000-375-5	3.8	
NOTE:						L		-				

NOTE: 備考:



EP-11

MBOL 号	TYPE 型 名	SPECIFICATIONS 規格	CODE NO. コード番号	REMARKS 備 考	SYMBOL 記号	TYPE 型 名	SPECIFICATIONS 規格	CODE NO. コード番号	REMARK 備 考
-	ERD-16TJ103	0.16 × 10 K	000-330-30		HO 7	INTLORATED CIRCUIT		- im7	und 15
2801R0011 2801R0012 2801R0013 2801R0015 2801R0015 2801R0016 2801R0017 2801R0018 2801R0019	FRD-25PJ101 FRD-25PJ101 FRD-25PJ101 FRD-25PJ101 FRD-16TJ103 FRD-16TJ471 FRG-15J101P FRG-15J300P FRG-15J300P	0.25 × 100 0.25 × 100 0.25 × 100 0.25 × 100 0.16 × 100 0.16 × 100 0.16 × 470 100 × 18 1 × 39 1 × 39	000-370-3 000-330-3 000-330-3 000-330-3 000-330-3 000-329-0 000-375-3 000-375-3	33 33 33 32 29 27	280100001 280100002 28010003 280100004 280100005 280100006 280100008 280100008	TC74HC390P UPD77031C TC74HC14P *51953RL NJM7805A NJM24039 NJM29040 HU63H01Y9676P #54563P	0550522-0	000-100-8 000-112-3 000-153-4 000-153-0 000-113-4 000-113-4 000-113-4	75 21 52 48 80 34
2801R0020 2801R0021 2601R0022 2801R0023 2801R0024 2801R0025 2801R0026 2801R0028 2801R0028 2801R0028	ER0-16TJ152 FR0-16TJ152 ER0-16TJ392 ERD-16TJ392 EW-MCGA01R53 EWG-3SJ151P ERG-3SJ151P ERG-3SJ151P ERD-16TJ273 ERD-16TJ273	0.16w 1.5K 0.16w 3.9K 0.16w 3.9K 0.16w 3.9K 0.16w 3.9K 0.000102-0 0.00102-0 0.00102-0 0.16w 27K 0.16w 27K	000-329-03 000-329-03 000-329-04 000-329-04 000-103-03 000-375-52 000-375-52 000-375-34 000-330-41	59 • 7 • 7 • 7 • 5 • 1 • 9 • 9 • 9 • 9 • 1	280100013	MS4563P MS4563P EXB-R88-472J EXB-R87-472J EXB-R87-472J	ホ ♥ テひ シ ∃メー♡~	000-106-2 000-106-2 000-379-0 000-379-0 000-112-2	28 28 55
2801K0030 2801R0031	ERG-2SJ101P ERD-16TJ222	2W 100 0.16W 2.2K	000-375-46 000-330-80		2501VR0001 2801VR0002		ZENER	000-104-4 000-111-8	
2801R0032 2801R0033 2801R0034 2801R0035 2801R0037 2801R0037 2801R0038 2801R0039	ERD-16TJ102 ERD-16TJ102 ERD-16TJ223 ERD-16TJ223 ERD-16TJ101 ERD-16TJ102 ERD-16TJ470 ERD-16TJ470	0.16w 1K 0.16w 1Y 0.16w 22K 0.16w 22K 0.16w 100 0.16w 1K 0.16w 47 0.16w 10K	000-330-30 000-330-30 000-330-61 000-330-61 000-329-01 000-329-00 000-330-30	0 0 0 .3 0 1	280170001	CRYSTAL 4M	24スタル HZ 05S0594 - 0	000-116-6	96
2801R0040 2801R0041 2801R0042 2801R0043 2801R0045 2801R0045 2801R0046 2R01R0047 2801R0047 2801R0048 2801R0049	ERD-16TJ103 ERD-16TJ101 ERD-16TJ104 ERD-16TJ103 ERD-16TJ103 ERD-16TJ103 ERD-16TJ471 ERD-16TJ472 ERD-16TJ472 ERD-16TJ472 ERD-16TJ472 ERD-16TJ472	0.16w 10K 0.16w 100K 0.16w 100K 0.16w 10K 0.16w 10K 0.16w 10K 0.16w 47V 0.16w 4.7K 0.16w 4.7K	000-330-80 000-329-01 000-330-80 000-330-80 000-330-80 000-330-80 000-329-02 000-330-81 000-330-81	.3 .3 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2					
2801x0050 2801x0051 2801x0052 2801x0052 2801x0053 2801x0055 2801x0057 2801x0057 2801x0069 2801x0060 2801x0060 2801x0062 2801x0062 2801x0062 2801x0062 2801x0062 2801x0062 2801x0063 2801x00667 2801x00667 2801x00667	EXR-F5F103J ERD-16TJJ02 ERD-16TJJ01 ERD-16TJ472 END-16TJ472 END-16TJ477 EXR-F9E103J ERD-16TJJ01 ERD-16TJJ01 END-16TJJ01 END-16TJJ01 END-16TJJ03 END-16TJJ03 END-16TJJ03 END-16TJJ03 END-16TJJ03 END-16TJJ03 END-16TJJ03 END-16TJJ03 END-16TJJ03 END-25PJ220 END-25PJ220 END-25PJ220 END-25PJ220 END-25PJ220 END-25PJ220 END-25PJ220 END-25PJ220 END-25PJ220 END-25PJ220 END-25PJ220 END-25PJ220	10KX4 0.16w 1K 0.16w 1.00 0.16w 4.7K 0.16w 27K 0.16w 27K 0.125 w 10K 0.16w 100 0.16w 100 0.16w 100 0.16w 10K 0.25w 22	000-330-38 000-330-31 000-330-31 000-330-31 000-330-31 000-330-31 000-330-30 000-330-30 000-330-30 000-330-30 000-330-30 000-330-31 000-330-31 000-330-31 000-330-31	11 3 3 2 2 2 1 1 1 1 3 3 1 3 3 9 9 2 2 2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7					
2801R0070 2801R0071 2801R0072 2801R0073 2801R0073 2801R0075 2801R0076 2501R0077 2801R0077 2801R0077 2801R0077	FKD-25PJ220 EKD-25PJ220 EKD-16TJ220 EKD-16TJ220 EKD-16TJ220 EKD-16TJ220 EKD-16TJ220 FKD-15TJ220 EKD-16TJ220 EKD-16TJ220 EKD-16TJ220 EKD-16TJ220 EKD-16TJ220	0.25% 22 0.25% 22 0.16% 22 0.16% 22 0.16% 22 0.16% 22 0.16% 22 0.16% 22 0.16% 22 0.16% 22	000-330-31 000-330-54 000-330-54 000-330-54 000-330-34 000-330-34 000-330-34 000-330-34	7 7 7 7 7 7					
2801R0080 2801R0081 2501R0082 2801R0083 2801R0084 2801R0085 2801R0085 2501R0087 2801R0088	ERD-16/1/20 ERD-16/1/20 ERD-16/1/20 ERD-16/1/20 ERD-16/1/20 ERD-16/1/20 ERD-16/1/20 ERD-16/1/47 ERD-16/1/10 ERD-16/1/10 ERD-16/1/10 ERD-16/1/10	0.16% 2? 0.16% 22 0.16% 2? 0.16% 2? 0.16% 4.7% 0.16% 2? 0.16% 4.7% 0.16% 1% 0.16% 10%	000-330-84 000-330-84 000-330-84 000-330-84 000-330-34 000-330-34 000-330-30 000-330-80	7 7 7 7 2 7 2 7 2					
2801R0091	EKD-16TJ103 EKD-16TJ562 ERD-16TJ103	0.16W 10K 0.16W 5.6K 0.16W 10K	000-330-80 000-329-05 000-330-80	0					
	SWITCH	スイツチ							
280150001 280150002 280150003 280150004 280150005 280150006	62T-14 51D-0401 M-2012R 51D-0801 51D-0801 51D-0801 51D-0401		090-196-10 000-196-10 000-474-34 000-196-19 000-196-19	5 4 4 4					
	TERMINAL BOAPO	955N"5							
2801T80001 2801T40002 2801T80003	236-1068(1-6)		000-108-79 000-104-34 000-104-79	0					

NOTE:

備考