

Section 5

Non-Routine Adjustments

5-1. INTRODUCTION

5-2. This section contains information on the non-routine adjustments. The procedures given below assume that the 6070A/6071A has been fully factory calibrated and only adjustment of the controls that do not affect the Calibration EPROM is required. Do not adjust the controls indiscriminately.

5-3. ACCESS AND ASSEMBLY IDENTIFICATION

5-4. Access to the major assemblies is described in Section 3, Access Procedures. Section 3 also contains illustrations that identify the location of the major assemblies.

5-5. ADJUSTMENT CONTROLS

5-6. Refer to Table 4-5, Internal Adjustment Controls. This table lists each circuit board and the adjustment controls. Notice that many of the controls require reprogramming of the Calibration EPROM. If these controls need adjusting, the user is urged to return the generator to the nearest John Fluke Service Center. Refer to the Shipping and Service information that is given in Section 2 of the Calibration Manual.

5-7. TEST EQUIPMENT REQUIRED

5-8. Refer to the List of Required Test Equipment located in Section 1 of the Calibration Manual.

5-9. NON-ROUTINE ADJUSTMENT PROCEDURES

5-10. The non-routine adjustment procedures describe adjustment of controls that can be made without affecting the Calibration EPROM. These controls are not described in the Calibration Procedures in the Calibration Manual.

WARNING

HIGH VOLTAGES ARE EXPOSED WHEN PERFORMING MAINTENANCE PROCEDURES ON AND NEAR THE POWER SUPPLY. OBSERVE ALL APPLICABLE SAFETY PRECAUTIONS IF LINE POWER IS CONNECTED TO THE INSTRUMENT.

CAUTION

TO PREVENT COMPONENT DAMAGE, OBSERVE STATIC AWARENESS PRECAUTIONS. REFER TO THE YELLOW INSERT SHEET IN FRONT OF SECTION 4.

5-11. A3A1 Phase Detector PCB

5-12. The non-routine adjustments for the A3A1 Phase Detector PCB are as follows:

R2 Offset Voltage Adjust
R35 Integrator Offset Adjust

PURPOSE: Adjustment of non-routine controls

TEST EQUIPMENT: DMM

REMARKS: The UUT and all test equipment must be at room temperature and must be operating for at least 30 minutes before this procedure is started.

5-13. Complete the following steps to adjust the non-routine adjustment controls:

1. Complete the disassembly portion of the Interior Access Procedure (Section 3) to gain access to the A3A1 Phase Detector PCB. Short TP10 to ground.

2. Program the UUT for FM deviation of 999 kHz and press the FM EXT switch. Program the UUT for a frequency of 519 MHz.
3. Connect the DMM low test lead to TP10 (ground) and the high test lead (+) to TP2.
4. Adjust R2 for a DMM indication at TP2 of 0 ± 0.1 mV.
5. Connect the DMM high test lead (+) to TP3 and the low test (-) lead to TP13.
6. Adjust R35 for a DMM indication of 0 ± 0.5 mV.
7. Disconnect the DMM.
8. Remove power from the UUT and complete the assembly portion of the Interior Access Procedures.

5-14. A3A3 Discriminator

5-15. The following are the non-routine adjustments for the A3A3 Discriminator PCB:

R45 Phase Shifter
 R86 Discriminator Zero Adjustment
 R146 FET Tracking Adjustment

PURPOSE: Adjustment of non-routine controls

TEST EQUIPMENT: DMM, Power Supply (0 - 5)

REMARKS: The UUT and all test equipment must be at room temperature and must be operating for at least 30 minutes before this procedure is started.

5-16. Complete the following steps to adjust R86, Discriminator Zero Adjustment:

1. Complete the disassembly portion of the Interior Access Procedure (Section 3) to gain access to the A3A3 Discriminator PCB.
2. Program the UUT to approximately 385 MHz as follows:
 - a. Press SHIFT, FREQ STEP. Frequency step size appears in the FREQUENCY Display (typically, 1.0XXX MHz).
 - b. Step the UUT RF output frequency as close to 385 MHz as possible.

3. Connect the DMM between TP5 and ground. Set DMM to 100 mV range.
4. Adjust R86 to indicate 0 ± 1 mV.
5. Disconnect the DMM from TP5 and ground.

5-17. Complete the following steps to adjust control R45, Phase Shifter Zero Adjustment:

1. Step the UUT frequency from the 385 MHz obtained in the above paragraph as close as possible (but not exceeding) 520 MHz.
2. Connect the DMM between TP2 and ground.
3. Adjust R45 to indicate 0 ± 0.1 volts.
4. Disconnect the DMM from TP2 and ground.
5. Complete the assembly portion of the Interior Access Procedures.

5-18. Complete the following steps for the R146 FET Tracking Adjustment. This adjustment must be made when either Q4 FET or Q5 FET are replaced.

1. Disconnect cable W41 from A3A3J1.
2. Connect the 0 - 5 volt power supply between TP4 (+) and chassis ground (-).
3. Connect the DMM positive test lead to pin 1 of Q5 and connect the negative test lead to the junction of R98 and pin 1 of Q4.
4. Set the DMM on 2k ohm scale.
5. Adjust the power supply voltage until the DMM indicates 122 ohms.
6. Set the DMM on 20k ohm scale and connect the DMM positive test lead to pin 4 of Q4.
7. Adjust R146 for an indication of 7.9k ohms on the DMM.
8. Disconnect the DMM and power supply.
9. Reconnect cable W41 to A3A3J1.
10. Complete the assembly portion of the Interior Access Procedures.

5-19. A3A6 Single Sideband Mixer (Control R30)

5-20. The following procedure is the non-routine adjustment of R30 Phase Detector Gain located on the A3A3 Single Sideband Mixer PCB.

PURPOSE: Adjustment of non-routine control

TEST EQUIPMENT: Low Frequency Synthesized Signal Generator, Modulation Analyzer, RMS Voltmeter

REMARKS: 1. This control is used to adjust the FM flatness.

2. The UUT and all test equipment must be at room temperature and must be operating for at least 30 minutes before this procedure is started.

5-21. Complete the following steps to adjust the FM flatness:

1. Complete the disassembly portions of the Interior Access Procedure (Section 3) to gain access to the A3A3 Single Sideband Mixer PCB (SSB Mixer PCB).

2. Set up the equipment as follows:

a. Connect the Low Frequency Synthesized Signal Generator output to the UUT MOD IN connector through a BNC tee. Connect the RMS Voltmeter input to the other arm of the BNC tee.

b. Connect the UUT RF OUTPUT connector to the Modulation Analyzer input.

c. Set the RMS Voltmeter dB/VOLTS control to the VOLTS position.

d. Program the Modulation Analyzer to AUTO, FM, 50 Hz HP Filter, and PEAK +.

e. Program the Low Frequency Synthesized Signal Generator for an output of 10 kHz at a level of 707.1 mV as measured on the RMS Voltmeter.

3. Program the UUT to RECAL 96 and turn on EXT FM.

4. Program a new frequency step size as follows:

a. Press SHIFT, FREQ STEP. Frequency step size appears in the FREQUENCY Display (typically, 1.0XXX MHz).

b. Program a new frequency step size that is equal to four times the value displayed in step a.

5. Step up the UUT RF output frequency as close to 385 MHz as possible.

6. Edit the modulation deviation on the UUT for a deviation as close to 100.0 kHz as possible as indicated on the Modulation Analyzer.

7. Record the Modulation Analyzer deviation indication.

8. Adjust the frequency of the Low Frequency Synthesized Signal Generator to kHz.

9. Adjust R30 on the SSB Mixer for a reading of 2 kHz larger (approximately 102 kHz) than that recorded in step 7.

10. Disconnect the test instruments.

11. Remove power from the UUT and complete the assembly portion of the Interior Access Procedures.

5-22. A3A6 Single Sideband Mixer (Controls R51 and R52)

5-23. The following are two of the three non-routine adjustments for the A3A6 Single Sideband Mixer PCB:

R51 Lower Frequency Limit
R52 Upper Frequency Limit

PURPOSE: Adjustment of non-routine controls

TEST EQUIPMENT: Frequency Counter

REMARKS: 1. These two adjustments set the frequency limits of the A3A6 Single Sideband Mixer VCO (Clean-up Loop VCO) to prevent the frequency from going into regions of unstable operation.

2. The UUT and all test equipment must be at room temperature and must be operating for at least 30 minutes before this procedure is started.

5-24. Complete the following steps to set the frequency limits of the Single Sideband Mixer VCO:

1. Complete the disassembly portions of the Interior Access Procedure (Section 3) to gain access to the A3A6 Single Sideband Mixer VCO PCB (SSB Mixer PCB).

2. Program the UUT to recall memory location 98 (standard power-on setup).
3. If the UUT has the 607XA-130 Oven Reference Option installed, place SW1 on the A3A2 Nonvolatile Memory PCB in the INT X.0. position.
4. Disconnect cable W38 from the A3A10 VCO Resonator PCB J2.
5. Connect the counter (channel C) to the A3A10 VCO Resonator PCB J2.
6. Set the UUT POWER switch to STBY.
7. Remove U4. (This will cause the SSB Mixer VCO to be driven to the low-frequency limit.)
8. Set the UUT POWER switch to ON.
9. Adjust R51 for a counter reading of 230 MHz.
10. Set the UUT POWER switch to STBY.
11. Replace U4.
12. Set the UUT POWER switch to ON.
13. Disconnect cable W39 from the A3A10 VCO Resonator PCB J1. (This causes the VCO to tune to the high frequency limit.)
14. Adjust R52 for a counter reading of 535 MHz.
15. Disconnect the frequency counter.
16. Reconnect cables W39 and W38 and reset switch SW1.
17. Remove power from the UUT and complete the assembly portion of the Interior Access Procedures.

5-25. A3A7 Sub-Synthesizer PCB

5-26. The following is the non-routine adjustment of L5 VCO Frequency Adjust located on the A3A7 Sub-Synthesizer PCB.

PURPOSE: Adjustment of non-routine control

TEST EQUIPMENT: DMM, Frequency Counter

REMARKS: The UUT and all test equipment must be at room temperature and must be operating for at least 30 minutes before this procedure is started.

5-27. Complete the following steps to adjust L5 VCO Frequency Adjust:

1. Complete the disassembly portions of the Interior Access Procedure (Section 3) to gain access to the A3A7 Sub-Synthesizer PCB.
2. Connect the Frequency Counter to J2 located on the A3A7 PCB.
3. Program the UUT for an RF frequency of 250.201 MHz and verify that the frequency counter indicates 804.000 kHz.
4. Press REL FREQ pushbutton switch (control lighted).
5. Connect the DMM between TP8 and TP16 (ground).
6. Adjust L5 for 2.5 ± 0.1 volts as indicated on the DMM. Install locking nut on L5.
7. Measure voltage on the DMM to three decimal places and record as voltage 1.
8. Program the UUT for a frequency step size of 10 KHz.
9. Increment the UUT by 10 kHz. Observe that the frequency counter indication is incremented by 40 kHz.
10. Measure voltage on the DMM to three decimal places and record as voltage 2.
11. Continue incrementing the UUT by 10 kHz to 90 kHz and observe that the frequency counter indication changes by 40 kHz/step.
12. As indicated in Table 5-1, increment each remaining frequency step (0 through 9 steps) observing the Frequency Counter Indication for each step.

Table 5-1. Frequency Steps

FREQ STEP (UUT)	FREQUENCY COUNTER INDICATION (FREQUENCY/STEPS)
1 kHz/steps	4 kHz/step
100 Hz/steps	400 Hz/step
10 Hz/steps	40 Hz/step
1 Hz/steps	4 Hz/step

13. At this point the UUT FREQUENCY display should indicate 250.300999. The voltage indication

on the DMM connected to TP8 should be less than 9.5 volts.

14. Record the DMM voltage indication to three decimal places as voltage 3.

15. If the voltage at TP8 is greater than 9.5 volts, readjust L5 to 9.5 volts.

16. If L5 is readjusted, perform the procedures in steps 6 through 14 and record the new voltages.

17. Decrement the UUT by 1 kHz and record the voltage at TP8 to three decimal places as voltage 4.

18. The ratio $(V4-V3)/V2-V1$ must be less than 1.5.

19. Disconnect the test instruments.

20. Remove power from the UUT and complete the assembly portion of the Interior Access Procedures.

5-28. A3A9 Synthesizer Distribution PCB

5-29. The following are the non-routine adjustments for the A3A9 Synthesizer Distribution PCB:

C9 High Frequency Compensation
R8 KV DAC (U8) Offset Adjustment

PURPOSE: Adjustment of non-routine controls

TEST EQUIPMENT: DMM, Low Frequency Synthesized Signal Generator, RMS Voltmeter

REMARKS: The UUT and all test equipment must be at room temperature and must be operating for at least 30 minutes before this procedure is started.

5-30. Complete the following steps to adjust the non-routine adjustment controls:

1. Complete the disassembly portion of the Interior Access Procedure (Section 3) to gain access to the A3A9 Synthesizer Distribution PCB.
2. Short J16 to ground.
3. Connect a DMM to P3-11.
4. Program the UUT to 519.9 MHz, FM deviation 999 kHz, Shift 21 (High Deviation Mode), EXT FM.

5. Adjust R8 for 0 ± 0.5 mV.

6. Disconnect the short from J16.

7. Connect the Low Frequency Synthesized Signal Generator to J16, set the frequency to 1 kHz, and set the level to 176.8 mV terminated.

8. Connect the RMS Voltmeter to P3-11 and adjust the voltmeter for dB relative setting.

9. Set the Low Frequency Synthesized Signal Generator to 500 kHz frequency. Adjust C9 for an RMS Voltmeter indication of -3.01 ± 0.1 dB.

10. Disconnect the test instruments.

11. Remove power from the UUT and complete the assembly portion of the Interior Access Procedures.

5-31. A4A2 Modulation Oscillator PCB

5-32. The following are the non-routine adjustments for the A4A2 Modulation Oscillator PCB:

R13 FET Bias Adjustment
R23 Offset Voltage Adjustment
R27 Bias Current Compensation Adjust

PURPOSE: Adjustment of non-routine controls

TEST EQUIPMENT: DMM

REMARKS: The UUT and all test equipment must be at room temperature and must be operating for at least 30 minutes before this procedure is started.

5-33. Complete the following steps to adjust the non-routine adjustment controls:

1. Complete the disassembly portion of the Interior Access Procedure (Section 3) to gain access to the A4A2 Modulation Oscillator PCB.
2. Program the UUT to a modulation frequency of 10 kHz. Program in SHIFT 31 to enable fixed range.
3. Using the rotary knob, edit the modulation frequency up to 25.5 kHz.
4. Connect the DMM to TP1 on the A4A2 Modulation Oscillator PCB with a $1 \mu\text{F}$ capacitor across the DMM leads.

5. Adjust R23 for 0 ± 0.1 mV as indicated on the DMM.
6. Using a rotary knob, edit modulation frequency to 1.0 kHz and adjust R27 for 0 ± 0.5 mV.
7. Using the filter, connect the DMM to TP2.
8. Adjust R29 for 0 ± 0.5 mV as indicated on the DMM.
9. Repeat steps 4 through 8 until the voltage is 0 ± 1 mV at the rotary knob settings of 25.5 kHz, and 1 kHz at TP1 and TP2.
10. Program in SHIFT 30 to disable fixed range.
11. Program the UUT to 21 kHz modulation frequency.
12. Connect the DMM to TP5 and adjust R13 for -1.5 ± 0.01 volts.

5-34. A4A4 Modulator Divider PCB

5-35. The following are the non-routine adjustments for the A4A4 Modulator Divider PCB:

R24 Modulator Gain Adjust (U18)
 R26 Modulator Gain Adjust (U10)
 R28 Modulator Gain Adjust (U8)
 R30 Modulator Gain Adjust (U12)
 R32 Modulator Gain Adjust (U5)
 R39 Modulator Gain Adjust (Q3)
 R47 Modulator Gain Adjust (Q4)

PURPOSE: Adjustment of modulator bias controls for proper operation after modulator replacement

TEST EQUIPMENT: Power Meter with power sensor, 10 dB attenuator, DMM

REMARKS: 1. The ALC loop gain and bandwidth is optimized in the factory for each RF frequency band by the adjustment of modulator bias controls R26, R28, R32, R39, R47, R24, and by the selection of resistors, R3, R4, R5, R6, R9, R8, R7, respectively. This optimization requires test equipment that is not commercially available and is consequently not given here. This procedure can be used to adjust the modulator bias control for proper operation if a modulator PCB is replaced and should not be used as a

routine calibration procedure. ALC gain control R88 is a factory sealed adjustment to correct the ALC loop for detector efficiency and total RF gain. ALC gain control R88 does not require adjustment unless the detector or RF amplifiers are replaced, which will necessitate factory recalibration of the correction EPROM.

2. The UUT and all test equipment must be at room temperature and must be operating for at least 30 minutes before this procedure is started.

5-36. Complete the following steps to adjust the modulator bias for proper operation after modulator replacement:

1. Complete the disassembly portion of the Interior Access Procedure (Section 3) to gain access to the A4A4 Modulator Divider PCB.
2. Verify the input to A4A4J13 from A3A3J10.
3. Apply power to the UUT.
4. Program the UUT to RECALL 98 and the frequency to 500 MHz.
5. Connect the power meter with the 10-dB pad to output connector A4A4J3. (The output connector A4A4J3 is found in the A4A7 Output Amplifier Compartment or in the A4A6 Times Two Output Amplifier compartment in the 6071A.)
6. Verify the voltage from A4A4P3 to ground is $-10V \pm 2V$.
7. Verify the voltage from TP1 to ground is $+17.2V \pm 0.7V$. Connect the DMM to TP1.
8. Connect the DMM test leads: high to TP1 and low to TP2. (This monitors the modulator current at 10 mV/mA.)
9. Determine from Table 5-2 the correct modulator bias control and program the UUT to the indicated frequency according to the Frequency Band or modulator reference designator to be readjusted.
10. Adjust the appropriate bias control for a maximum indication on the power meter but do not allow the DMM reading to exceed 0.55V DC.

Table 5-2. Modulator Bias Control Adjustments

BAND FREQ	MODULATOR	PROGRAM FREQUENCY	MODULATOR BIAS CONTROL
A	U10	500 MHz	R26
B	U4	300 MHz	R28
C	U12	200 MHz	R30
D	U5	150 MHz	R32
E	Q3	100 MHz	R39
F	Q2	75 MHz	R47
G	U18	50 MHz	R24

NOTE

There should be no indication on the DMM in the 'G' Band, Modulator U18, Control R24.

11. Disconnect the power meter and the DMM.

12. Remove power from the UUT and complete the assembly portion of the Interior Access Procedures.

5-37. A4A6 X2 Output Amplifier Service Routine Adjustment

PURPOSE: Service Routine of the A4A6 Output Amplifier after replacement of any part listed in Table 4-9.

TEST EQUIPMENT: Calibrated 10-dB Attenuator, DMM, Power Meter, RMS Voltmeter, Spectrum Analyzer

REMARKS: 1. The Service Routine Adjustment consists of the following sequential procedures.

a. Detector/Leveling Loop Offset Balance

b. Unleveled Indicator Check

c. U2 and U9 Amplifier Current Adjust and Harmonic Check

2. The UUT and all test equipment must be at room temperature and must be operating for at least 30 minutes before this procedure is started.

5-38. Perform the Detector/Leveling Loop Offset and Balance Adjustment as follows:

1. Complete the disassembly portion of the Interior Access Procedure (Section 3) to gain access to the A4A6 X2 Output Amplifier PCB.

2. Program the UUT front panel to 5 MHz, +10 dBm. Press the RF OUTPUT ON/off switch to off (control light off).

3. Set the DMM to DC volts, autoranging. Short the test leads together and zero the meter. Connect the DMM high lead to TP1 and the low lead to TP2. Adjust R53 for an indication of -20 ± 20 microvolts.

4. Connect the DMM high lead to TP3 and the low lead to TP4. Adjust R60 for a indication of 0 ± 20 microvolts.

5. Press the RF OUTPUT ON/off switch to ON (control light on). Verify that the Level UNCAL annunciator on the front panel is not on or flashing.

6. Connect the DMM high lead to TP6 and the low lead to TP5. Adjust R75 for an indication of 0 ± 20 microvolts.

7. Connect the DMM high lead to TP3 and the low lead to TP2. Press the RF OUTPUT ON/off switch to off (control off).

8. Adjust R29 for an indication of 0 ± 60 microvolts.

9. Program the UUT to 4.999 MHz and note the DMM indication.

10. Program the UUT to 5 MHz and adjust R29 for a reading of one fourth the magnitude and the same polarity as the indication noted in step 8.

11. Program the UUT to 4.999 MHz and adjust R37 for an indication on the DMM of 0 ± 60 microvolts.

12. Program the UUT to 5 MHz and adjust R29 for an indication on the DMM of 0 ± 60 microvolts.

13. Program the UUT to 4.999 MHz and check that the DMM indicates 0 ± 60 microvolts. If not, repeat steps k, l, and m until the DMM indicates 0 ± 60 microvolts with either frequency programmed.

14. Program the UUT to 5 MHz, and set the level to +10 dBm. Press the RF OUTPUT ON/off switch to ON (indicator light off).

15. Connect the RMS Voltmeter with a 50-ohm termination to the RF OUTPUT connector.

16. Set the RMS Voltmeter to Relative mode.
17. Program the UUT to 4.999 MHz. Note the RMS Voltmeter indication.
18. Adjust R35 for an RMS Voltmeter indication of one-half the reading noted in step 17.
19. Repeat steps 6 through 18 until the DMM reading change is $0 \pm 60 \mu\text{V}$ and the RMS Voltmeter reading changes $< 0.05 \text{ dB}$.
20. Remove the DMM and proceed to the Unleveled Indicator Check.

5-39. Perform the Unleveled Indicator Check as follows:

1. Program the UUT to 5 MHz, and set the level to 0 dBm.
2. Press the RF OUTPUT ON/off switch to ON (indicator on). Note the AMPLITUDE UNCAL annunciator is not flashing.
3. Connect the DMM high lead to TP8 and the low lead to ground. The DMM should indicate a TTL low ($< 0.8\text{V DC}$).
4. Disconnect P3. Observe that the AMPLITUDE UNCAL annunciator flashes and that the DMM indicates a TTL high ($> 3\text{V DC}$).
5. Remove the DMM, reconnect P3, and proceed to the U2 and U9 Amplifier Current Adjust and Harmonic Check.

5-40. Perform the U2 and U9 Amplifier Current Adjust and Harmonic Check as follows:

1. Set the Power Meter to +20 dBm range and connect the Power Meter to the RF OUTPUT connector.
2. Program the UUT to 519.9 MHz, +13 dBm, Shift 81, Shift 31.
3. Edit the 0.1 dB digit until the level on the Power Meter no longer increases. The output level must be greater than +15 dBm.
4. Edit the level down to +13 dBm on the Power Meter. Disconnect the Power Meter, and connect the Spectrum Analyzer. Harmonics must be at least -35 dBm. Adjust R20 to minimize harmonics if necessary.
5. Disconnect the Spectrum Analyzer and reconnect the power meter through a 10 dB pad.

6. Program the UUT to 20.9 dBm. The Power Meter indication should be at least +10 dBm. Edit the level down to +9 dBm indication on the Power Meter.

7. Disconnect the Power Meter and connect the Spectrum Analyzer.

8. Set the Spectrum Analyzer to +30 dBm. Harmonics should be at least -25 dBc (dB below the carrier) without the RPP (607XA-870 Reverse Power Protection), or harmonics should be at least -20 dBc with the RPP.

9. Disconnect the test instruments.

10. Remove power from the UUT and complete the assembly portion of the Interior Access Procedures.

5-41. A4A6 X2 Output Amplifier Subharmonic Adjustment Procedure

PURPOSE: To adjust subharmonic output of the A4A6 X2 Output Amplifier

TEST EQUIPMENT: Spectrum Analyzer

REMARKS: The UUT and all test equipment must be at room temperature and must be operating for at least 30 minutes before this procedure is started.

5-42. Complete the following steps to perform the Subharmonic Adjustment Procedure:

1. Complete the disassembly portion of the Interior Access Procedure (Section 3) to gain access to the A4A6 X2 Output Amplifier PCB.
2. Program the UUT to 520 MHz at a level of +7 dBm.
3. Connect the Spectrum Analyzer to the RF OUTPUT connector.
4. Set the Spectrum Analyzer to +10 dBm full scale and set to full scan sweep.
5. While observing harmonically related products at F/2 and 3F/2, edit the frequency at the UUT in 1-MHz steps from 520 MHz to 1040 MHz.
6. Verify that F/2 and 3F/2 should never exceed -35 dBc. If necessary, adjust R91 (accessible through the cover hole) to reduce F/2 or 3F/2.
7. Disconnect the test equipment from the UUT.

8. Remove power from the UUT and complete the assembly portion of the Interior Access Procedure.

5-43. A4A6 S2 Output Amplifier Level Flatness Check and A4A7 Output Amplifier Level Flatness Check

PURPOSE: To check the Output Amplifier for signal level flatness

TEST EQUIPMENT: Calibrated 10 dB Attenuator, Calibrated Power Sensor, Power Meter

REMARKS: 1. The first six steps apply to Models 6070A and 6071A. The remaining steps apply to Model 6071A only. The A4A7 PCB is located in Model 6070A, and the A4A6 PCB is located in Model 6071A.

2. The UUT and all test equipment must be at room temperature and must be operating for at least 30 minutes before this procedure is started.

5-44. Complete the following steps to perform the Level Flatness Check (6070A/6071A):

1. Program the UUT to 4.9 MHz at a level of +8 dBm.

2. Connect the Power Meter with the Calibrated Power Sensor through a 10-dB Attenuator to the UUT RF OUTPUT.

3. Edit the frequency in 1 MHz steps from 4.9 MHz to 519.9 MHz. The maximum allowable peak-to-peak variation is ± 0.4 dB.

4. Program the UUT to 4.9 MHz and +14 dBm.

5. Edit the frequency in 1-MHz steps from 4.9 MHz to 519.9 MHz. The maximum allowable peak-to-peak variation is ± 0.8 dB.

6. If the UUT is a Model 6070A Synthesized RF Signal Generator, disconnect the test instruments. Remove power from the UUT (6070A) and complete the assembly portion of the Interior Access Procedures.

7. Proceed with the following steps if the UUT is a Model 6071A Synthesized RF Signal Generator.

8. Program the UUT to 520 MHz and +6 dBm.

9. Edit the frequency in 1-MHz steps from 520 MHz to 1040 MHz. The maximum allowable variation is ± 0.8 dB.

10. Program the UUT to 520 MHz at a level of +7 dBm.

11. Edit the frequency in 1 MHz steps from 520 MHz to 1040 MHz. The maximum allowable variation is ± 10 dB.

12. Disconnect the test instruments.

13. Complete the assembly portion of the Interior Access Procedures.

5-45. A4A7 Output Amplifier Service Routine Adjustment

PURPOSE: Service Routine of A4A7 Output Amplifier after replacement of any part listed in Table 4-10.

TEST EQUIPMENT: Calibrated 10-dB Attenuator, DMM, Power Meter, RMS Voltmeter, Spectrum Analyzer

REMARKS: 1. The Service Routine Adjustment consists of the following sequential procedures:

a. Detector/Leveling Loop Offset Balance.

b. Unleveled Indicator Check.

c. U2 and U6 Amplifier Current Adjust and Harmonic Check.

2. The UUT and all test equipment must be at room temperature and must be operating for at least 30 minutes before this procedure is started.

5-46. Perform the Detector/Leveling Loop Offset and Balance Adjustment as follows:

1. Complete the disassembly portion of the Interior Access Procedure (Section 3) to gain access the A4A7 Output Amplifier PCB.

2. Program the UUT to 5 MHz, +10 dBm. Press the RF OUTPUT ON/off switch to off (control light off).

3. Set the DMM to DC volts, autoranging. Short the test leads together and zero the meter. Connect the DMM high lead to TP1 and the low lead to TP2. Adjust R9 for an indication of -20 ± 20 microvolts.
 4. Connect the DMM high lead to TP3 and the low lead to TP4. Adjust R24 for an indication of 20 ± 20 microvolts.
 5. Press the RF OUTPUT ON/off switch to ON (control light on). Verify that the Level UNCAL annunciator on the front panel is not on or flashing.
 6. Connect the DMM high lead to TP6 and the low lead to TP5. Adjust R36 for an indication of 0 ± 20 microvolts.
 7. Connect the DMM high lead to TP3 and the low lead to TP2. Press the RF OUTPUT ON/off switch to off (control light off).
 8. Adjust R4 for an indication of 0 ± 60 microvolts.
 9. Program the UUT to 4.999 MHz and note the DMM indication.
 10. Program the UUT to 5 MHz and adjust R4 for a reading of one-fourth the magnitude and the same polarity as the indication noted in step 9.
 11. Program the UUT to 4.999 MHz and adjust R6 for an indication on the DMM of 0 ± 60 microvolts.
 12. Program the UUT to 5 MHz and adjust R4 for an indication on the DMM of 0 ± 60 microvolts.
 13. Program the UUT to 4.999 MHz and check that the DMM indicates 0 ± 60 microvolts. If it does not, repeat steps 11, 12, and 13 until the DMM indicates 0 ± 60 microvolts with either frequency programmed.
 14. Program the UUT to 5 MHz, level to 10 +10 dBm. Press RF OUTPUT ON/off switch to ON (control light on).
 15. Connect the RMS Voltmeter with a 50-ohm termination to the RF OUTPUT connector.
 16. Set the RMS Voltmeter to Relative mode.
 17. Program the UUT to 4.999 MHz. Note the RMS Voltmeter measurement.
 18. Adjust R48 for an RMS Voltmeter indication of one-half the measurement noted in step 17.
 19. Repeat steps 7 through 18 until the DMM measurement change is 0 ± 60 μ V and the RMS Voltmeter measurement changes < 0.05 dB.
 20. Remove the DMM and proceed to the Unleveled Indicator Check.
- 5-47. Perform the Unleveled Indicator Check as follows:
1. Program the UUT to 5 MHz at a level of 0 dBm.
 2. Press the RF OUTPUT ON/off switch to ON (indicator light on). Note the AMPLITUDE UNCAL annunciator is not flashing.
 3. Connect the DMM high lead to TP8 and the low lead to ground. The DMM should indicate a TTL low (< 0.8 V DC).
 4. Disconnect P3. Observe that the AMPLITUDE UNCAL annunciator flashes and that the DMM indicates a TTL high (> 30 V DC).
 5. Remove the DMM, reconnect P3, and proceed to the U2 and U6 Amplifier Current Adjust and Harmonic Check.
- 5-48. Perform the U2 and the U6 Amplifier Current Adjust and Harmonic Check as follows:
1. Set the Power Meter to +20 dBm range and connect the Power Meter to the RF OUTPUT connector.
 2. Program the UUT to 519.9 MHz, +13 dBm, Shift 81, Shift 31.
 3. Edit the 0.1 dB digit until the level on the Power Meter no longer increases. Output level must be greater than +15 dBm.
 4. Edit the level back down to +13 dBm on the Power Meter. Disconnect the Power Meter and connect the Spectrum Analyzer. Harmonics must be at least -35 dBm. Adjust R20 to minimize harmonics if necessary.
 5. Disconnect the Spectrum Analyzer and reconnect the Power Meter through a 10 dB pad.
 6. Program the UUT to 20.9 dBm. The Power Meter indication should be at least +10 dBm. Edit the level down to +9 dBm indication on the Power Meter.
 7. Disconnect the Power Meter and connect the Spectrum Analyzer.

8. Set the Spectrum Analyzer to +30 dBm. Harmonics should be at least -35 dB below the carrier without the RPP (607XA-870 Reverse Power Protection) or harmonics should be at least -25 dB below the carrier with the RPP. Adjust R57 if necessary.

9. Disconnect the test instruments.

10. Remove power from the UUT and complete the assembly portion of the Interior Access Procedures.

5-49. A4A9 Heterodyne Converter PCB

5-50. The following are the non-routine adjustments for the A4A9 Heterodyne Converter PCB:

C22 Matching Capacitor
C15 Tuning Capacitor
R6 Gain Adjustment (Q1)
R42 Gain Adjustment (Q2)

PURPOSE: To perform tuning and gain adjustment of bandpass amplifiers Q1 and Q2 to optimize the local oscillator input level to mixer U2.

TEST EQUIPMENT: Power Meter with Power Sensor, Calibrated 10 dB Attenuator, DMM, Frequency Counter.

REMARKS: 1. This procedure is only necessary if Q1 or Q2 have been replaced or if any adjustment has been altered.

2. The UUT and all test equipment must be at room temperature and must be operating for at least 30 minutes before this procedure is started.

5-51. Complete the following steps to perform tuning and gain adjustments of bandpass amplifiers Q1 and Q2:

1. Complete the disassembly portions of the Interior Access Procedure (Section 3) to gain access to the A4A9 Heterodyne Converter PCB.

2. The A4A9 Heterodyne Converter PCB must be mounted in the A4 Output Plate and the signal supplied from the A4A8 Heterodyne Oscillator PCB must be connected to the input at A4A9P1. If the input signal is to come from another source, a DC block must be used.

3. Verify that the input to A4A9P1 is 520.000 MHz at a level of +7 \pm 2 dBm.

4. Program the UUT to: Recal 98, Frequency 50 MHz.

5. Lift one end of R19 from the socket (the end away from the junction of R17, R18, and R19) and connect it to the socket leading to TP4.

6. Connect the Power Meter, with the 10-dB Pad, to TP4 with a short (<6 inch) cable. Set potentiometers R6 and R42 to maximum counterclockwise.

7. Connect the DMM between TP2 to ground (TP5).

8. Energize the power supply observing the voltage on the DMM connected to TP2. The indication should be 17.2V ~~\pm 0.7~~ volts. \pm 0.7

9. Connect the DMM positive lead to TP2 and the negative lead to TP1.

10. Adjust R6 for a reading of 0.3 volts (30 mA bias in Q2).

11. Disconnect the DMM negative lead from TP1 and connect to TP3.

12. Adjust R42 for a reading of 0.4 volts (40 mA bias in Q1).

13. Adjust C11, C15, R6, and R42 for a maximum indication on the power meter.

NOTE

These adjustments are interactive so they will have to be adjusted such that voltmeter reading remains less than 0.55 volts (55 mA maximum bias in Q1). A metallic tuning tool has enough capacitance to cause some detuning of C11. Use care in making this adjustment.

14. When all adjustments are optimized, the power meter should indicate +17 dBm, and voltages between TP2 to TP1 and TP2 to TP3 must be less than 0.55 volts.

15. If necessary, adjust R6 for a power meter indication +14 dBm to +17 dBm. The minimum allowable indication is +14 dBm.

16. If a significant change is made in the setting of R6, readjust C11, C15, and R42 for a maximum indication on the power meter and recheck the voltage between TP2 to TP1 and TP2 to TP3.

17. Disconnect the test instruments.
18. Remove power from the UUT and reconnect R19 to the normal configuration.
19. Complete the assembly portion of the Interior Access Procedures.

5-52. A4A10 Modulation Distribution PCB

5-53. The following are the non-routine adjustments for the A4A10 Modulation Distribution PCB.

- C13 High Frequency Response, Adjustment, U26
- R12 X6.25 (1.25 Scale Factor) Gain Adjustment
- R14 X4 (0.8 Scale Factor) Gain Adjustment
- R13 X5 (X1 Scale Factor) Gain Adjustment
- R38 Level DAC Adjustment
- R41 FM DAC Offset Adjustment
- R43 Offset Voltage Adjustment (U19)
- R44 ± Gain Balance (U23)
- R46 -1 Gain Offset Voltage Adjustment (U23)
- R50 1/N DAC Offset Voltage Adjustment (U19)
- R54 DCFM Buffer Offset Voltage Adjustment (U18)
- R58 AMDAC Offset Voltage Adjustment (U28)
- R61 +1 Gain Offset Voltage Adjustment (U23)

PURPOSE: Adjustment of non-routine controls

TEST EQUIPMENT: DMM, Low Frequency Synthesized Generator, RMS Voltmeter, Modulation Analyzer

- REMARKS:**
1. There are three categories of adjustment procedures:
 - a. AC Adjustments
 - b. DC Adjustments
 - c. AM Adjustments
 2. All test equipment must be at room temperature and must be operating for at least 30 minutes before this procedure is started.
 3. The UUT must be warmed up for a minimum of two hours with all covers in place before this procedure is started.

5-54. AC ADJUSTMENTS

1. Complete the disassembly portion of the Interior Access Procedure (Section 3) to gain access the A4A10 Modulation Distribution PCB.

2. Set up the equipment as follows:

- a. Connect the Low Frequency Synthesized Signal Generator output to the UUT MOD IN connector through a BNC tee. Connect the RMS Voltmeter input to the other arm of the BNC tee.
- b. Set the RMS Voltmeter dB/Volts control to the Volts position.
- c. Program the Low Frequency Synthesizer Signal Generator for an output of 1 kHz at a level of 707.1 mV rms as measured on the RMS Voltmeter.
- d. Program the UUT for an RF output frequency of 100 MHz, a level of +7 dBm, and an FM deviation of 49.9 kHz. Turn on the EXT FM/ØM and disable the DC COUPLED controls.

3. Connect the DMM positive lead to TP7 and connect the negative lead to ground. Adjust R14 for 2.69V rms.

4. Program the UUT for an RF output frequency of 300 MHz, a level of +7 dBm, and an FM deviation of 49.9 kHz. Adjust R13 for 3.36V rms.

5. Program the UUT for an RF output frequency of 50 MHz, a level of +7 dBm, and an FM deviation of 49.9 kHz. Adjust R44 for 3.36V rms.

6. Program the UUT for an RF output frequency of 800 MHz, a level of +7 dBm, and an FM deviation of 199.9 kHz. Adjust R12 for 4.20V rms. *3.36*

7. Program the UUT for an RF output frequency of 300 MHz, a level of +7 dBm, and an FM deviation of 49.9 kHz. Enable fixed range (Shift 31) and with rotary knob dial FM deviation to 5.0 kHz.

8. Program the Low Frequency Synthesized Signal Generator for an output of 500 kHz. Adjust C13 for 0.270 mV rms. *270 mV?*

9. Remove the Low Frequency Synthesized Signal Generator and the DMM.

5-55. DC ADJUSTMENTS

1. Connect the DMM positive lead to TP5 and the negative lead to anode of CR8.
2. Program the UUT for an RF output frequency of 250 Mhz, a level of +7 dBm, and an FM deviation of 0.0 Hz. Turn on the EXT FM/ØM.
3. Adjust R41 for 0 ±0.1 mV.

TP7
✓
✓
99.9 → 3.36
199.9?
270 mV?

4. Connect the DMM positive lead to TP7 and the negative lead to anode of CR8. Adjust R46 for 0 ± 1 mV.

5. Program the UUT for an RF output frequency of 50 MHz, a level of +7 dBm, and an FM deviation of 0 Hz. Verify that EXT FM/ØM is enabled (indicator light on).

6. Adjust R61 for 0 ± 1 mV.

7. Connect the DMM positive lead to TP8 and the negative lead to anode of CR8. Adjust R43 for 0 ± 1 mV.

8. Program the UUT for an RF output frequency of 250 MHz, a level of +7 dBm, and an FM deviation of 0 Hz. Verify that EXT FM/ØM is enabled (indicator light on). Program DCFM (Shift 11).

9. Connect the DMM positive lead to TP9 and the negative lead to the anode of CR8. Adjust R50 for 0 ± 1 mV.

10. Program the UUT for an RF output frequency of 519 MHz, a level of +7 dBm, and an FM deviation of 499 kHz. Verify that EXT FM/ØM is enabled. Program DCFM off (Shift 10).

11. Connect the DMM positive lead to TP11 and the negative lead to the anode of CR8. Adjust R54 for 0 ± 1 mV.

5-56. AM ADJUSTMENTS

1. Program the UUT to EXT AM, a level of +6 dBm, and AM deviation of 0 percent.

2. Enable Fixed Range (Shift 31) Edit Level, and rotate the knob counterclockwise for minimum level indication.

3. Connect the DMM positive lead to the cathode of CR3 and connect the negative lead to the anode of CR8.

4. Adjust R58 for 0 ± 0.1 mV.

5. Connect the DMM positive lead to TP10 and connect the negative lead to the anode of CR8.

6. Adjust R38 for 0 ± 0.1 mV.

7. Disconnect the test instruments.

8. Remove power from the UUT and complete the assembly portion of the Interior Access Procedures.

1

2

3

4

Section 6

List of Replaceable Parts

TABLE OF CONTENTS

ASSEMBLY NAME	TABLE		FIGURE	
	NO.	PAGE	NO.	PAGE
6070A/6071A Final Assembly	6-1	6-3	6-1	6-5
A1/A2 Front Panel and Controller Assembly	6-2	6-9	6-2	6-9
A1 Front Panel Assembly	6-2A	6-10	6-2A	6-11
A1A1 Front Panel PCB Assembly	6-3	6-12	6-3	6-18
A2 Controller Assembly	6-4	6-19	6-4	6-19
A2A1 Controller PCB Assembly	6-5	6-20	6-5	6-24
A2A2 Option -570 (See Section 7B)				
A2A4 Controller Motherboard	6-6	6-25	6-6	6-25
A3 Synthesizer Module Assembly	6-7	6-26	6-7	6-27
A3A1 Phase Detector PCB Assembly	6-8	6-29	6-8	6-33
A3A2 10 MHz Reference PCB Assembly	6-9	6-34	6-9	6-37
A3A3 Delay Discriminator PCB Assembly	6-10	6-38	6-10	6-46
A3A4 N/1 Divider PCB Assembly	6-11	6-47	6-11	6-49
A3A5 VCO Resonator PCB Assembly	6-12	6-50	6-12	6-51
A3A6 Single Sideband Mixer PCB Assembly	6-13	6-52	6-13	6-56
A3A7 Sub Synthesizer PCB Assembly	6-14	6-57	6-14	6-62
A3A8 Synthesizer Control Buffer PCB Assembly	6-15	6-63	6-15	6-64
A3A9 Synthesizer Distribution PCB Assembly	6-16	6-65	6-16	6-67
A3A10 VCO Resonator PCB Assembly	6-17	6-68	6-17	6-69
A4 Output Module Assembly	6-18	6-70	6-18	6-71
A4A2 Modulation Oscillator PCB Assembly	6-19	6-73	6-19	6-75
A4A3 Attenuator PCB Assembly	6-20	6-76	6-20	6-79
A4A4 Modulator Divider PCB Assembly	6-1	6-80	6-21	6-86
A4A5 Option -870 (See Section 7D)				
A4A6 X2 Output Amplifier PCB Assembly (6071A)	6-22	6-87	6-22	6-94
A4A7 Output Amplifier PCB Assembly (6070A)	6-23	6-95	6-23	6-99
A4A8 Hetrodyne Oscillator PCB Assembly	6-24	6-100	6-24	6-105
A4A9 Hetrodyne Converter PCB Assembly	6-25	6-106	6-25	6-109
A4A10 Modulator Distribution PCB Assembly	6-26	6-110	6-26	6-115
A5 Power Supply Assembly	6-27	6-116	6-27	6-118
A5A1 Power Supply PCB Assembly	6-28	6-120	6-28	6-122
A5A2 P/S Regulator PCB Assembly	6-29	6-123	6-29	6-125
A5A3 Auxiliary Transformer PCB Assembly	6-30	6-126	6-30	6-127
A5A4 Input Rectifier PCB Assembly	6-31	6-128	6-31	6-128
A5A5 Switching Transistors Assembly	6-32	6-129	6-32	6-129
A5A6 Power Supply Capacitor PCB Assembly	6-33	6-131	6-33	6-131
A6 Rear Panel Assembly	6-34	6-132	6-34	6-133
A6A1 IEEE Connector PCB Panel Assembly	6-35	6-134	6-35	6-134
A6A2 Series Pass Motherboard PCB Assembly	6-36	6-135	6-36	6-136
A6A3 +5V Series Pass PCB Assembly	6-37	6-137	6-37	6-138
A6A4 +12V, -12V, +24V Series Pass PCB Assembly	6-38	6-139	6-38	6-140
A7 Delay Cable Assembly	6-39	6-141	6-39	6-141
A8 Maintenance Extender Board (Not Illustrated)				

6-1. INTRODUCTION

6-2. This section contains an illustrated parts breakdown of the instrument. A similar parts list is included in the Options and Accessories Section for each of the options. Components are listed alphanumerically by assembly. Both electrical and mechanical components are listed by reference designation. Each listed part is shown in an accompanying illustration.

6-3. Parts lists include the following information:

1. Reference Designation.
2. Description of Each Part.
3. FLUKE Stock Number.
4. Federal Supply Code for Manufacturers.
5. Manufacturer's Part Number.
6. Total Quantity of Components Per Assembly.
7. Recommended quantity: This entry indicates the recommended number of spare parts necessary to support one to five instruments for a period of 2 years. This list presumes an availability of common electronic parts at the maintenance site. For maintenance for 1 year or more at an isolated site, it is recommended that at least one of each assembly in the instrument be stocked. In the case of optional subassemblies, plug-ins, etc., that are not always part of the instrument or are deviations from the basic instrument model, the REC QTY column lists the recommended spares quantity for the items in that particular assembly.

6-4. HOW TO OBTAIN PARTS

6-5. Components may be ordered directly from the manufacturer's part number, or from the John Fluke Mfg. Co., Inc. or an authorized representative by using the FLUKE STOCK NUMBER. In the event the part ordered has been replaced by a new or improved part, the replacement will be accompanied by an explanatory note and installation instructions if necessary.

6-6. To ensure prompt and efficient handling of your order, include the following information.

1. Quantity.
2. FLUKE Stock Number.
3. Description.
4. Reference Designation.
5. Printed Circuit Board Part Number and Revision Letter.
6. Instrument Model and Serial Number.

6-7. A Recommended Spare Parts Kit for your basic instrument is available from the factory. This kit contains those items listed in the REC QTY column for the parts lists in the quantities recommended.

6-8. Parts price information is available from the John Fluke Mfg. Co., Inc. or its representative. Prices are also available in a Fluke Replacement Parts Catalog, which is available upon request.

CAUTION



Indicated devices are subject to damage by static discharge.

Table 6-1. 6070A/6071A Final Assembly

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N D T E
	SIGNAL GENERATOR FINAL ASSEMBLY FIGURE 6-1 (6070A/6071A-T&B, 5001)	6070A	AND	6071A			1
A1/A2	FRONT PANEL AND CONTROLLER ASSEMBLY (6070A)	531129	89536	531129		1	
	(6071A)	546226	89536	546226			
A3⊙	SYNTHESIZER MODULE ASSEMBLY	497198	89536	497198		1	
A4⊙	OUTPUT MODULE ASSEMBLY	497172	89536	497172		1	
	6070A	497172	89536	497172		1	
	6071A	546234	89536	546234		1	
A5/A6	REAR PANEL ASSEMBLY	497206	89536	497206		1	
A7	DELAY CABLE ASSEMBLY (A3)	527457	89536	527457		1	2
A8	MAINTENANCE EXTENDER CARD (6070A/6071A)	546390	89536	546390		1	
H1	SCREW, FHP, 6-32 X 1/4	320093	89536	320093		46	
H2	SCREW, SEMS, 6-32 X 1/2	177030	89536	177030		4	
H3	SCREW, PAN HEAD, 6-32	152165	89536	152165		6	
H5	SCREW, SHOULDER, #8	528653	89536	528653		2	
H6	SCREW, PHP, 8-32 X 1/4	320044	89536	320044		4	
H7	SCREW, FHP, 8-32 X 1	353052	89536	353052		8	
H8	WASHER, LOCK, #8	111070	89536	111070		12	
H9	HINGE	487868	89536	487868		2	
H10	SCREW, SHOULDER (A3)	528653	89536	528653		2	2
H11	WASHER, LOCK, #8 (A3)	111070	89536	111070		4	2
H12	WASHER, FLAT (A3)	111054	89536	111054		44	2
H13	SCREW, PHP, 4-40 X 5/16	268193	89536	268193		12	
MP1	ANCHOR, CABLE	571927	06915	UC-4		1	
MP2	BAIL, STAND	523571	89536	523571		2	
MP3	CLAMP, CABLE	479428	89536	479428		1	
MP4	COVER, BOTTOM UNIT	462382	89536	462382		1	
MP5	COVER, TOP UNIT	462374	89536	462374		1	
MP6	DECAL, HANDLE	394395	89536	394395		4	
MP7	TRIM, SIDE CHASSIS	489187	89536	489187		2	
MP8	DECAL, SIDE TRIM	604736	89536	604736		2	
MP9	FOOT, BAIL STAND	527473	89536	527473		4	
MP10	FUSE, COVER, 110V	546606	89536	546606		1	
MP11	FUSE, COVER, 220V	546614	89536	546614		1	
MP12	SERIAL PLATE	472795	89536	472795		1	
MP13	LINE CORD (NOT SHOWN)	284174	89536	284174		1	
MP14	PLUG, HOLE (AUX OUT)	101774	89536	101774		1	
MP15	CABLE ANCHOR (A3)	529974	06915	UC-2		2	2
MP16	COVER, BOTTOM (A3)	537332	89536	537332		1	2
MP17	COVER, TOP (A3)	537340	89536	537340		1	2
MP18	COVER, TOP (A3)	537381	89536	537381		1	2
MP19	HINGE, MODULE (A3)	487868	89536	487868		2	2
MP20	SIDE CHASSIS ASSEMBLY (A3)	516286	89536	516286		2	2
MP21	PLUG, HOLE, 1/2" DIA (A3)	101774	89536	101774		1	2
MP22	GUIDE, INSTRUCTION CARD	527770	89536	527770		2	

Table 6-1. 6070A/6071A Final Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N D T E
MP23	TRAY, INSTRUCTION	487483	89536	487483	1		
TM1	6070/6071A MANUAL SET	577577	89536	577577			
TM1A	MANUAL, CALIBRATION	577551	89536	577551			
TM1B	MANUAL, OPERATOR	577544	89536	577544			
TM1C	MANUAL, SERVICE	578054	89536	578054			
TM1D	MANUAL, SCHEMATIC DIAGRAM	578781	89536	578781			
TM1E	MANUAL, BINDERS/CARDS	578062	89536	578062			
TM2	INSTRUCTION CARD	524793	89536	524793	1		
W3	CABLE ASSEMBLY, MOD, I/F	521781	89536	521781	1		
W4	CABLE ASSEMBLY, IEEE, I/F	521799	89536	521799	1		
W12	CABLE ASSEMBLY, SEMI-RIGID (A3)	523522	89536	523522	1		
W13	CABLE ASSEMBLY, SEMI-RIGID (A3)	523456	89536	523456	1		
W14	CABLE, SR, 240-520	508499	89536	508499	1		
W15	CABLE, SR, VAR 10	508580	89536	508580	1		
W16	CABLE, SR, HET 10	508572	89536	508572	1		
W17	CABLE, RG 188	205823	89536	205823	1		
W20	CABLE, SR, REF IN	508531	89536	508531	1		
W21	CABLE, SR, REF OUT	508523	89536	508523	1		
W24	CABLE, BNC	576090	89536	576090	1		
W25	CABLE, RG 188	259754	89536	259754	1		
W53	CABLE, RG 188	546705	89536	546705	1		
W72	CABLE ASSEMBLY, P/S	527440	89536	527440	1		
KIT	RECOMMENDED SPARE PARTS KIT	641746	89536	641746			1
	1	BEFORE ORDERING SPARE PARTS OR SPARE PCB ASSEMBLIES, PLEASE CONTACT YOUR NEAREST JOHN FLUKE SERVICE CENTER FOR INFORMATION					
	2	THESE ITEMS ARE USED ON THE A3 MODULE.					

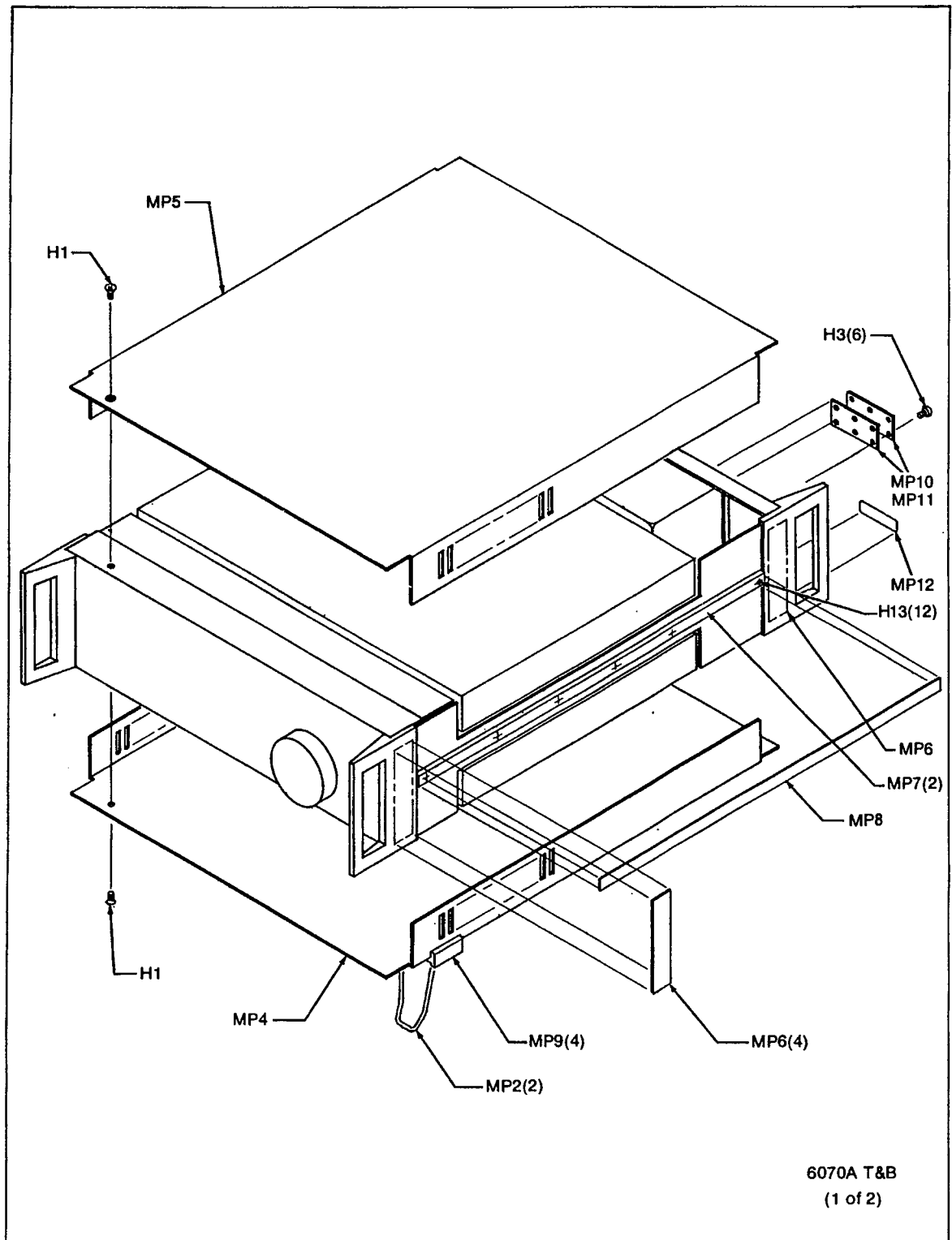
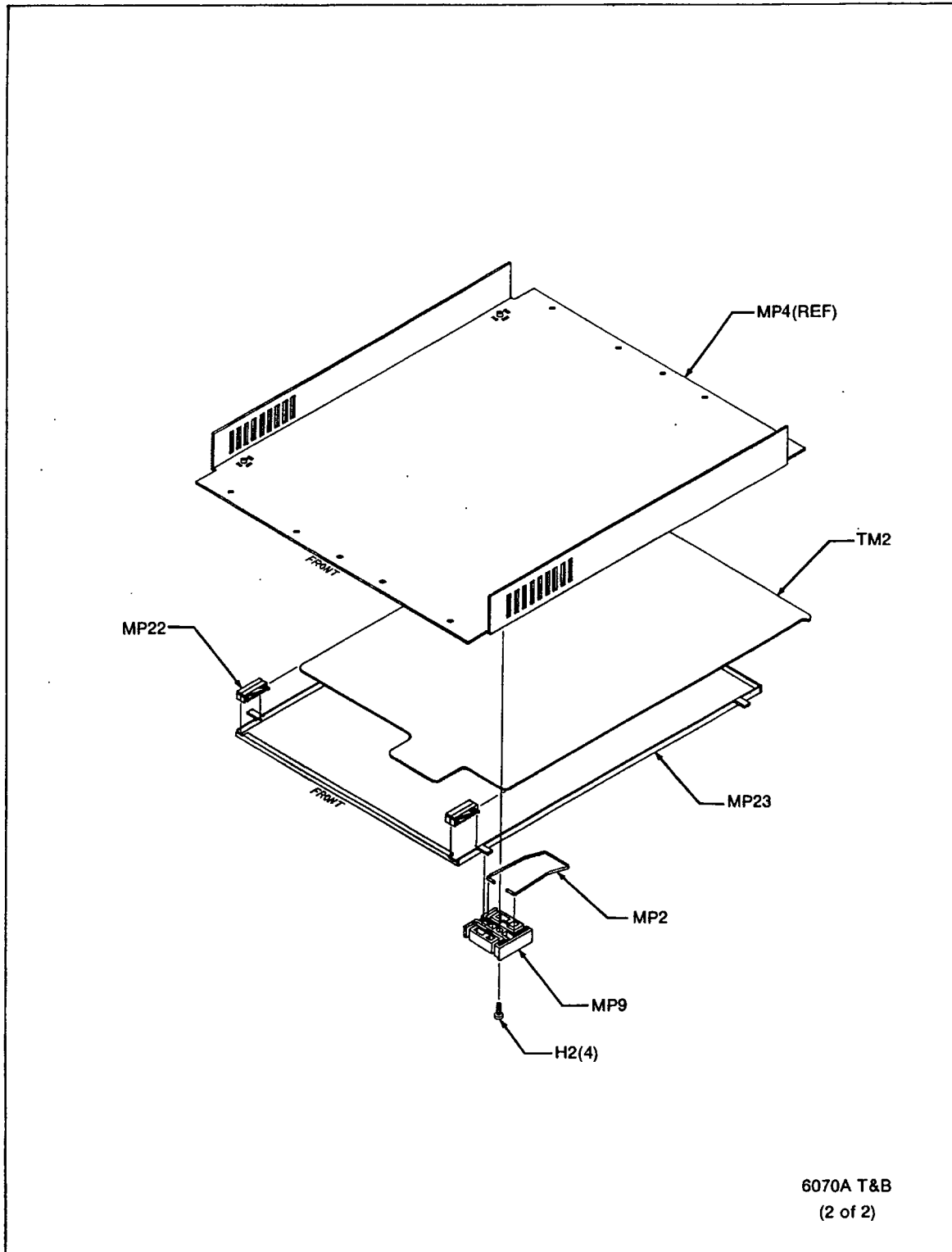


Figure 6-1. 6070A/6071A Final Assembly



6070A T&B
(2 of 2)

Figure 6-1. 6070A/6071A Final Assembly (cont)

Table 6-2. A1/A2 Front Panel and Controller Assembly

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
A1/A2	FRONT PANEL AND CONTROLLER ASSEMBLY FIGURE 6-2 (6070A/71A-4206T)	6070A	AND	6071A			
A1	FRONT PANEL ASSEMBLY					REF	
A2	CONTROLLER ASSEMBLY					REF	
H1	SCREW, FHP, 6-32 X 1/4	320093	89536	320093	8		
W1	CABLE ASSEMBLY	521773	89536	521773	1		
W71	CABLE ASSEMBLY	521765	89536	521765	1		

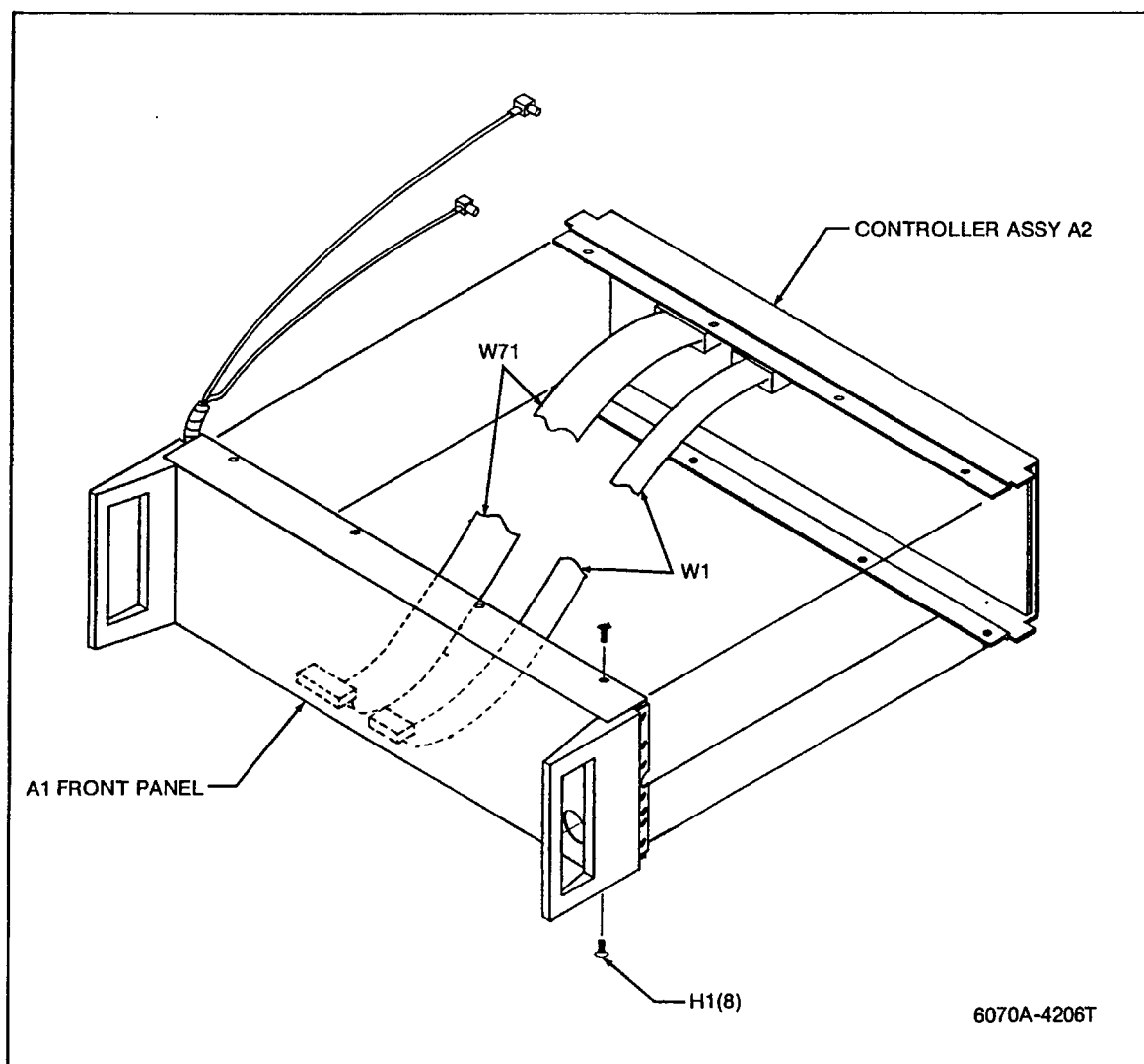


Figure 6-2. A1/A2 Front Panel and Controller Assembly

6070A/6071A

Table 6-2A. A1 Front Panel Assembly

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
A1	FRONT PANEL ASSEMBLY FIGURE 6-2A (6070A/71A-4206T)	6070A	AND	6071A		REF	1
A1A1⊗	FRONT PANEL PCB ASSEMBLY	462390	89536	462390		1	
A1A2⊗	ENCODER ASSEMBLY (NOT ILLUSTRATED)	497222	89536	497222		1	
H2	SCREW, FHP, 6-32 X 1/4	320093	89536	320093		7	
H4	SCREW, FHP, 6-32 X 1/2	320051	89536	320051		8	
H5	SCREW, CAP, BLACK 8-32 X 3/8	295105	89536	295105		4	
H6	SCREW, FHP, 8-32 X 3/8	114116	89536	114116		10	
H7	WASHER	544239	89536	544239		1	
H9	WASHER, SPRING STEEL	571968	89536	571968		8	
MP1	BUSHING, INSULATION	537803	89536	537803		1	
MP2	CORNER BRACKET ASSEMBLY	540708	89536	540708		2	
MP3	FRONT PANEL	462358	89536	462358		1	
MP4	HANDLE, BLACK	394312	89536	394312		2	
MP6	KNOB, ENCODER TUNING	514950	89536	514950		1	
MP7	SHIELD, PROTECTIVE	536623	89536	536623		1	
MP8	DECAL, FRONT PANEL						
	6070A	508325	89536	508325		1	
	6071A	535500	89536	535500		1	
	1	PROCURABLE AT COMPONENT LEVEL ONLY.					

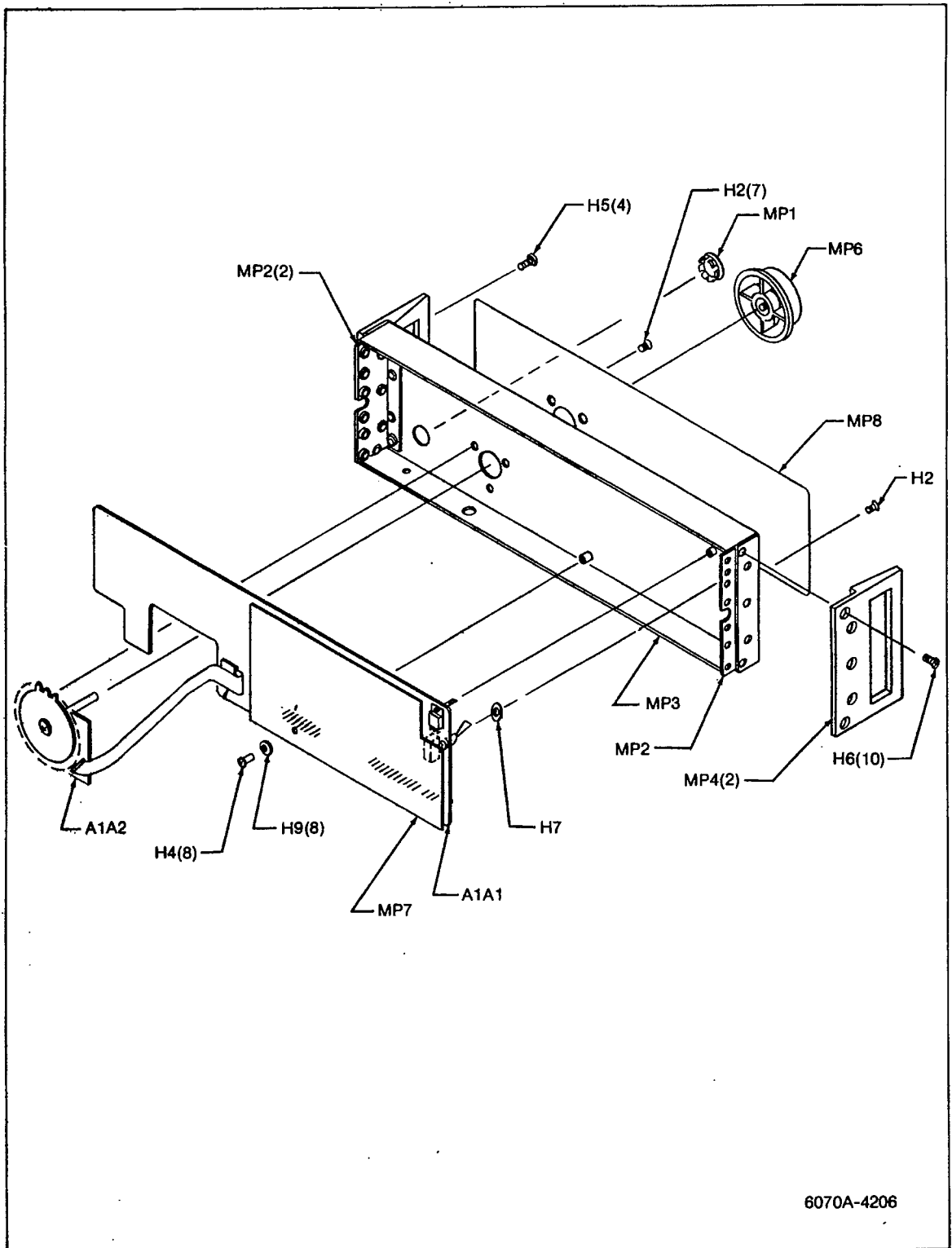


Figure 6-2A. A1 Front Panel Assembly

Table 6-3. A1A1 Front Panel PCB Assembly

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N O T E
A1A1①	FRONT PANEL PCB ASSEMBLY FIGURE 6-3 (6070A-4001T)	462390	89536	462390		REF	
C1	CAP, CER, 330 UF +/-10%, 6V	193011	56289	150D330X9006S2	1		
C2	CAP, TA, 2.2 UF +/-2%, 15V	364216	56289	196D225X0015HA1	2		
C3	CAP, TA, 220 UF +/-20%, 6V	408682	56289	196D227X0006TE4	1		
C4	CAP, TA, 2.2 UF +/-2%, 15V	364216	56289	196D225X0015HA1	REF		
C5	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1	2		
C6	CAP, TA, 1 UF +/-20%, 35V	161919	56289	196D010X0035G	1		
C7	CAP, CER, 100 PF +/-10%, 1000V	105593	71590	DD-101	1		
C8	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1	REF		
C9	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	11		
C10	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C11	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C12	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C13	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C14	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C15	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C16	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C17	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C18	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C19	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
DS1	LIGHT EMITTING DIODE	504761	14936	MV57 124	17		4
DS2	LED, LIGHT BAR MODULE	534834	28480	HLMP 2300	7		2
DS3	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS4	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS5	LED, LIGHT BAR MODULE	534834	28480	HLMP 2300	REF		
DS6	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS7	LED, LIGHT BAR MODULE	534834	28480	HLMP 2300	REF		
DS8	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS9	LED, LIGHT BAR MODULE	534834	28480	HLMP 2300	REF		
DS10	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS11	LED, LIGHT BAR MODULE	534834	28480	HLMP 2300	REF		
DS12	LED, LIGHT BAR MODULE	534834	28480	HLMP 2300	REF		
DS13	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS14	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS15	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS24	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS25	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS26	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS27	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS28	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS29	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS30	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS31	LED, LIGHT BAR MODULE	534834	28480	HLMP 2300	REF		
DS32	LIGHT EMITTING DIODE	504761	14936	MV57 124	REF		
DS40	DISPLAY, LED, COMMON ANODE	472951	28480	QDSP3011	2		1
DS41	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016	16		4
DS42	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016	REF		
DS43	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016	REF		

Table 6-3. A1A1 Front Panel PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N D T E
DS44	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016		REF	
DS45	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016		REF	
DS46	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016		REF	
DS47	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016		REF	
DS48	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016		REF	
DS49	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016		REF	
DS50	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016		REF	
DS51	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016		REF	
DS52	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016		REF	
DS53	DISPLAY, LED, COMMON ANODE	472951	28480	QDSP3011		REF	
DS54	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016		REF	
DS55	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016		REF	
DS56	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016		REF	
DS57	DISPLAY, LED, SEVEN SEGMENT	472944	28480	QDSP3016		REF	
H1	SCREW, NYLON, 6-32 X 1/2 (W/Q12)	115006	89536	115006		1	
J1	CONNECTOR, POST	267500	00779	86144-2		34	
J2	CONNECTOR, POST	267500	00779	86144-2		REF	
J3	CONNECTOR, POST	267500	00779	86144-2		REF	
J4	CONNECTOR, COAXIAL	479162	24931	28JR175		3	
J5	CONNECTOR, COAXIAL	479162	24931	28JR175		REF	
J6	CONNECTOR, COAXIAL	479162	24931	28JR175		REF	
L1	INDUCTOR, 50 MH	540823	89536	540823		1	
L2	INDUCTOR, 6-TURN	320911	89536	320911		2	
L3	INDUCTOR, 6-TURN	320911	89536	320911		REF	
L4	INDUCTOR, 1000 MH	256107	24759	MR-1000		1	
MP1	BUMPER, STICK-ON (W/R30)	543488	89536	543488		1	
MP2	COMPONENT TIE DOWN	422857	89536	422857		1	
MP3	PUSHBUTTON, BLACK	457390	89536	457390		1	
MP4	PUSHBUTTON, BLUE	406736	89536	406736		1	
MP6	PUSHBUTTON, LARGE, PUTTY GRAY	406819	89536	406819		2	
MP7	PUSHBUTTON, LIGHT PUTTY GRAY	401307	89536	401307		14	
MP8	PUSHBUTTON, LARGE, MEDIUM PUTTY GRAY	546382	89536	546382		2	
MP9	PUSHBUTTON, MEDIUM PUTTY GRAY	546358	89536	546358		4	
MP10	PUSHBUTTON, WHITE	406744	89536	406744		12	
MP11	PUSHBUTTON, YELLOW	419937	89536	419937		6	
Q1	TRANSISTOR, SI, PNP	352369	12040	2N4403		REF	
Q2	TRANSISTOR, SI, PNP	523647	04713	MPS6562S		REF	
Q3	TRANSISTOR, SI, PNP	523647	04713	MPS6562S		REF	
Q4	TRANSISTOR, SI, PNP	523647	04713	MPS6562S		REF	
Q5	TRANSISTOR, SI, PNP	523647	04713	MPS6562S		REF	
Q6	TRANSISTOR, SI, PNP	523647	04713	MPS6562S		REF	
Q7	TRANSISTOR, SI, PNP	523647	04713	MPS6562S		REF	
Q8	TRANSISTOR, SI, PNP	523647	04713	MPS6562S		REF	
Q9	TRANSISTOR, SI, PNP	523647	04713	MPS6562S		REF	
Q10	TRANSISTOR, SI, PNP	352369	12040	2N4403		REF	
Q11	TRANSISTOR, SI, NPN	218396	04713	2N3904		1	1
Q12	TRANSISTOR, SI, PNP, POWER	369660	01295	TIP32		1	1
R1	RES, DEP. CAR, 180 +/-5%, 1/4W	441436	80031	CR251-4-5P180E		2	
R2	RES, DEP. CAR, 47K +/-5%, 1/4W	348896	80031	CR251-4-5P47K		2	
R3	RES, DEP. CAR, 180 +/-5%, 1/4W	441436	80031	CR251-4-5P180E		REF	

Table 6-3. A1A1 Front Panel PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
R4	RES, DEP. CAR, 47K +/-5%, 1/4W	348896	80031	CR251-4-5P47K	REF		
R6	RES, DEP. CAR, 120 +/-5%, 1/4W	442293	80031	CR251-4-5P120E	4		
R7	RES, DEP. CAR, 62 +/-5%, 1/4W	441634	80031	CR251-4-5P62E	6		
R8	RES, DEP. CAR, 62 +/-5%, 1/4W	441634	80031	CR251-4-5P62E	REF		
R9	RES, DEP. CAR, 62 +/-5%, 1/4W	441634	80031	CR251-4-5P62E	REF		
R10	RES, DEP. CAR, 62 +/-5%, 1/4W	441634	80031	CR251-4-5P62E	REF		
R11	RES, DEP. CAR, 62 +/-5%, 1/4W	441634	80031	CR251-4-5P62E	REF		
R12	RES, DEP. CAR, 62 +/-5%, 1/4W	441634	80031	CR251-4-5P62E	REF		
R13	RES, COMP, 1.5K +/-5%, 1/2W	266353	01121	EB1525	1		
R14	RES, DEP. CAR, 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	3		
R15	RES, DEP. CAR, 5.1K +/-5%, 1/4W	368712	80031	CR251-4-5P5K1	1		
R16	RES, DEP. CAR, 130 +/-5%, 1/4W	442301	80031	CR251-4-5P130E	3		
R17	RES, DEP. CAR, 130 +/-5%, 1/4W	442301	80031	CR251-4-5P130E	REF		
R18	RES, DEP. CAR, 130 +/-5%, 1/4W	442301	80031	CR251-4-5P130E	REF		
R19	RES, DEP. CAR, 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R20	RES, DEP. CAR, 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R21	RES, DEP. CAR, 120 +/-5%, 1/4W	442293	80031	CR251-4-5P120E	REF		
R22	RES, DEP. CAR, 120 +/-5%, 1/4W	442293	80031	CR251-4-5P120E	REF		
R23	RES, DEP. CAR, 120 +/-5%, 1/4W	442293	80031	CR251-4-5P120E	REF		
R24	RES, DEP. CAR, 10 +/-5%, 1/4W	340075	80031	CR251-4-5P10E	4		
R25	RES, DEP. CAR, 10 +/-5%, 1/4W	340075	80031	CR251-4-5P10E	REF		
R26	RES, DEP. CAR, 2K +/-5%, 1/4W	441469	80031	CR251-4-5P2K	2		
R27	RES, DEP. CAR, 10 +/-5%, 1/4W	340075	80031	CR251-4-5P10E	REF		
R28	RES, DEP. CAR, 10 +/-5%, 1/4W	340075	80031	CR251-4-5P10E	REF		
R29	RES, DEP. CAR, 150 +/-5%, 1/4W	343442	80031	CR251-4-5P150E	1		
R30	RES, VAR, 1K +/-10%, 2W	614107	32997	3852C-166-102A	1		
R31	RES, MTL. FILM, 475 +/-1%, 1/8W	320010	91637	CMF554750F	1		
R32	RES, MTL. FILM, 5.62K +/-1%, 1/8W	235168	91637	CMF555621F	1		
R33	RES, MTL. FILM, 144.86K +/-0.1%, 1/8W	386391	89536	386391	1		
R34	RES, DEP. CAR, 0.5 +/-5%, 1/4W	381954	80031	CR251-4-5P0.5E	2		
R35	RES, DEP. CAR, 2K +/-5%, 1/4W	441469	80031	CR251-4-5P2K	REF		
R36	RES, DEP. CAR, 470 +/-5%, 1/4W	343434	80031	CR251-4-5P471E	3		
R37	RES, WW, 2 +/-1%, 2W	229542	89536	229542	1		
R38	RES, DEP. CAR, 0.5 +/-5%, 1/4W	381954	80031	CR251-4-5P0.5E	REF		
R39	RES, DEP. CAR, 470 +/-5%, 1/4W	343434	80031	CR251-4-5P471E	REF		
R40	RES, DEP. CAR, 470 +/-5%, 1/4W	343434	80031	CR251-4-5P471E	REF		
S00	SWITCH, LIGHT PUTTY GRAY (AM)	507335	89536	507335	8		
S1	SWITCH, SPDT, TOGGLE	519470	09353	U11-P4-D-C-Q-W/7807	1		2
S01	SWITCH, LIGHTED, PUTTY GRAY (FM/OM)	507335	89536	507335	REF		
S02	SWITCH, LIGHTED, PUTTY GRAY (AM)	507335	89536	507335	REF		
S03	SWITCH, LIGHTED, PUTTY GRAY (FM/OM)	507335	89536	507335	REF		
S05	SWITCH, LIGHTED, PUTTY GRAY (DC COUPLED)	507335	89536	507335	REF		
S07	SWITCH, UNLIGHTED (LOCAL)	507319	89536	507319	42		9
S10	SWITCH, UNLIGHTED (FREQUENCY)	507319	89536	507319	REF		
S11	SWITCH, UNLIGHTED (AMPL)	507319	89536	507319	REF		
S12	SWITCH, UNLIGHTED (MOD FREQ)	507319	89536	507319	REF		
S13	SWITCH, UNLIGHTED. (AM)	507319	89536	507319	REF		
S14	SWITCH, UNLIGHTED (FM/OM)	507319	89536	507319	REF		
S15	SWITCH, LIGHTED, ORANGE (SHIFT)	524082	89536	524082	1		1
S16	SWITCH, UNLIGHTED (INTEROGATE)	507319	89536	507319	REF		

Table 6-3. A1A1 Front Panel PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NO TE
S20	SWITCH, UNLIGHTED (STORE)	507319	89536	507319			REF
S21	SWITCH, UNLIGHTED (TOP)	507319	89536	507319			REF
S22	SWITCH, UNLIGHTED (RECALL)	507319	89536	507319			REF
S25	SWITCH, UNLIGHTED (NEXT !)	507319	89536	507319			REF
S26	SWITCH, UNLIGHTED (NEXT !)	507319	89536	507319			REF
S27	SWITCH, UNLIGHTED (TOP)	507319	89536	507319			REF
S30	SWITCH, UNLIGHTED (0)	507319	89536	507319			REF
S31	SWITCH, UNLIGHTED (1)	507319	89536	507319			REF
S32	SWITCH, UNLIGHTED (2)	507319	89536	507319			REF
S33	SWITCH, UNLIGHTED (3)	507319	89536	507319			REF
S34	SWITCH, UNLIGHTED (4)	507319	89536	507319			REF
S35	SWITCH, UNLIGHTED (5)	507319	89536	507319			REF
S36	SWITCH, UNLIGHTED (6)	507319	89536	507319			REF
S37	SWITCH, UNLIGHTED (7)	507319	89536	507319			REF
S40	SWITCH, UNLIGHTED (8)	507319	89536	507319			REF
S41	SWITCH, UNLIGHTED (9)	507319	89536	507319			REF
S42	SWITCH, UNLIGHTED (.)	507319	89536	507319			REF
S43	SWITCH, UNLIGHTED (+/-)	507319	89536	507319			REF
S44	SWITCH, UNLIGHTED (MHz/v)	507319	89536	507319			REF
S45	SWITCH, UNLIGHTED (kHz/mV)	507319	89536	507319			REF
S46	SWITCH, UNLIGHTED (Hz/uV)	507319	89536	507319			REF
S47	SWITCH, UNLIGHTED (RAD/dB(m))	507319	89536	507319			REF
S50	SWITCH, UNLIGHTED (\$)	507319	89536	507319			REF
S51	SWITCH, UNLIGHTED (CLEAR)	507319	89536	507319			REF
S52	SWITCH, UNLIGHTED (!)	507319	89536	507319			REF
S53	SWITCH, UNLIGHTED (!)	507319	89536	507319			REF
S54	SWITCH, UNLIGHTED (AMPL)	507319	89536	507319			REF
S55	SWITCH, UNLIGHTED (MOD)	507319	89536	507319			REF
S56	SWITCH, UNLIGHTED (FREQ)	507319	89536	507319			REF
S57	SWITCH, UNLIGHTED (OFF)	507319	89536	507319			REF
S61	SWITCH, LIGHTED, PUTTY GRAY (MANUAL)	507335	89536	507335			REF
S62	SWITCH, UNLIGHTED (SINGLE)	507319	89536	507319			REF
S63	SWITCH, UNLIGHTED (AUTO)	507319	89536	507319			REF
S64	SWITCH, LIGHTED, PUTTY GRAY (SLOW)	507335	89536	507335			REF
S65	SWITCH, UNLIGHTED (OFF)	507319	89536	507319			REF
S66	SWITCH, LIGHTED, BLACK (REL FREQ)	507327	89536	507327	2		1
S67	SWITCH, LIGHTED, BLACK (REL AMPL)	507327	89536	507327			REF
S70	SWITCH, LIGHTED, PUTTY GRAY (ON)	507335	89536	507335			REF
S71	SWITCH, UNLIGHTED (<---)	507319	89536	507319			REF
S72	SWITCH, UNLIGHTED (--->)	507319	89536	507319			REF
TP1	CONNECTOR, TEST POINT	512889	00779	62395-1		4	
TP2	CONNECTOR, TEST POINT	512889	00779	62395-1			REF
TP3	CONNECTOR, TEST POINT	512889	00779	62395-1			REF
TP4	CONNECTOR, TEST POINT	512889	00779	62395-1			REF
U1	IC, LINEAR, OP-AMP	418566	12040	LM358N	2		1
U2	IC, 8-BIT ADDRESSABLE LATCH	419242	01295	SN74LS259N	8		2
U3	RESISTOR NETWORK	501502	89536	501502	2		
U4	IC, TRANSISTOR ARRAY, 7-DRIVERS	413237	56289	ULN2003A	6		2
U5	IC, TRANSISTOR ARRAY, 7-DRIVERS	413237	56289	ULN2003A			REF
U6	RESISTOR NETWORK	448423	89536	448423	2		

Table 6-3. A1A1 Front Panel PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NO TE
U7	IC, TTL, HEX INVERTER, BUFFER/DRIVER	288605	01295	SN7416N	3		1
U8	IC, 8-BIT ADDRESSABLE LATCH	419242	01295	SN74LS259N	REF		
U9	IC, TRANSISTOR ARRAY, 7-DRIVERS	413237	56289	ULN2003A	REF		
U10	IC, 8-BIT ADDRESSABLE LATCH	419242	01295	SN74LS259N	REF		
U11	RESISTOR NETWORK	446880	89536	446880	1		
U12	RESISTOR NETWORK	381616	89536	381616	1		
U13	IC, TRANSISTOR ARRAY, 7-DRIVERS	413237	56289	ULN2003A	REF		
U14	IC, TRANSISTOR ARRAY, 7-DRIVERS	413237	56289	ULN2003A	REF		
U15	IC, TTL, LO-PWR, 3-8 LINE DECODER	407585	01295	SN74LS138N	1		1
U16	IC, 8-BIT ADDRESSABLE LATCH	419242	01295	SN74LS259N	REF		
U17	RESISTOR NETWORK	501502	89536	501502	REF		
U18	IC, TRANSISTOR ARRAY, 7-DRIVERS	413237	56289	ULN2003A	REF		
U19	IC, 8-BIT ADDRESSABLE LATCH	419242	01295	SN74LS259N	REF		
U20	IC, LO-PWR SCHOTTKY	404186	01295	SN74LS123N	1		1
U21	IC, LO-PWR SCHOTTKY	393124	01295	SN74LS74N	1		1
U22②	IC, C-MOS, QUAD, 2-INPUT NAND GATE	355198	04713	MC14011UBCP	2		1
U23	IC, TTL, LO-PWR SCHOTTKY DATA SELECT	407577	01295	SN74LS251N	1		1
U24②	IC, C-MOS, QUAD, 2-INPUT NAND GATE	355198	04713	MC14011UBCP	REF		
U25②	IC, C-MOS, QUAD, 2-INPUT NAND GATE	404632	02735	CD4093BE	1		1
U26	RESISTOR NETWORK	414003	89536	414003	1		
U27	RESISTOR NETWORK	448423	89536	448423	REF		
U28	IC, TTL, HEX INVERTER, BUFFER/DRIVER	288605	01295	SN7416N	REF		
U29	IC, TTL, HEX INVERTER, BUFFER/DRIVER	288605	01295	SN7416N	REF		
U30	IC, 8-BIT ADDRESSABLE LATCH	419242	01295	SN74LS259N	REF		
U31	IC, 8-BIT ADDRESSABLE LATCH	419242	01295	SN74LS259N	REF		
U32	IC, 8-BIT ADDRESSABLE LATCH	419242	01295	SN74LS259N	REF		
U33	IC, LINEAR, OP-AMP	418566	12040	LM358N	REF		
U34	IC, MONOLITHIC, 10-BIT D/A CONVERTER	477760	24355	AD561J	1		1
W10	CABLE ASSEMBLY	527580	89536	527580	1		
W11	CABLE ASSEMBLY	577916	89536	577916	1		
XDS2	SOCKET, 4-POS, SIP	461756	00779	583773-1	5		
XDS5	SOCKET, 4-POS, SIP	461756	00779	583773-1	REF		
XDS7	SOCKET, 4-POS, SIP	461756	00779	583773-1	REF		
XDS9	SOCKET, 4-POS, SIP	461756	00779	583773-1	REF		
XDS11	SOCKET, 8-POS, SIP	512293	00779	1-583773-5	1		
XDS12	SOCKET, 8-POS, SIP	512293	00779	1-583773-5	REF		
XDS31	SOCKET, 4-POS, SIP	461756	00779	583773-1	REF		
XDS40	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	26		
XDS41	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XDS42	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XDS43	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XDS44	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XDS45	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XDS46	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XDS47	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XDS48	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XDS49	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XDS50	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XDS51	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XDS52	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		

Table 6-3. A1A1 Front Panel PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N O T E
XDS53	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XDS54	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XDS55	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XDS56	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XDS57	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XU1	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	2		
XU2	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	22		
XU3	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU4	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU5	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU6	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU7	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XU8	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU9	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU10	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU12	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XU13	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU14	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU15	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU16	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU17	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU18	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU19	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU20	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU21	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XU22	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XU23	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU24	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XU25	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XU27	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU28	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XU29	SOCKET, IC, 14 PIN	453514	71785	133-59-90-0901/14E	REF		
XU30	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU31	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU32	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU33	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	REF		
XU34	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		

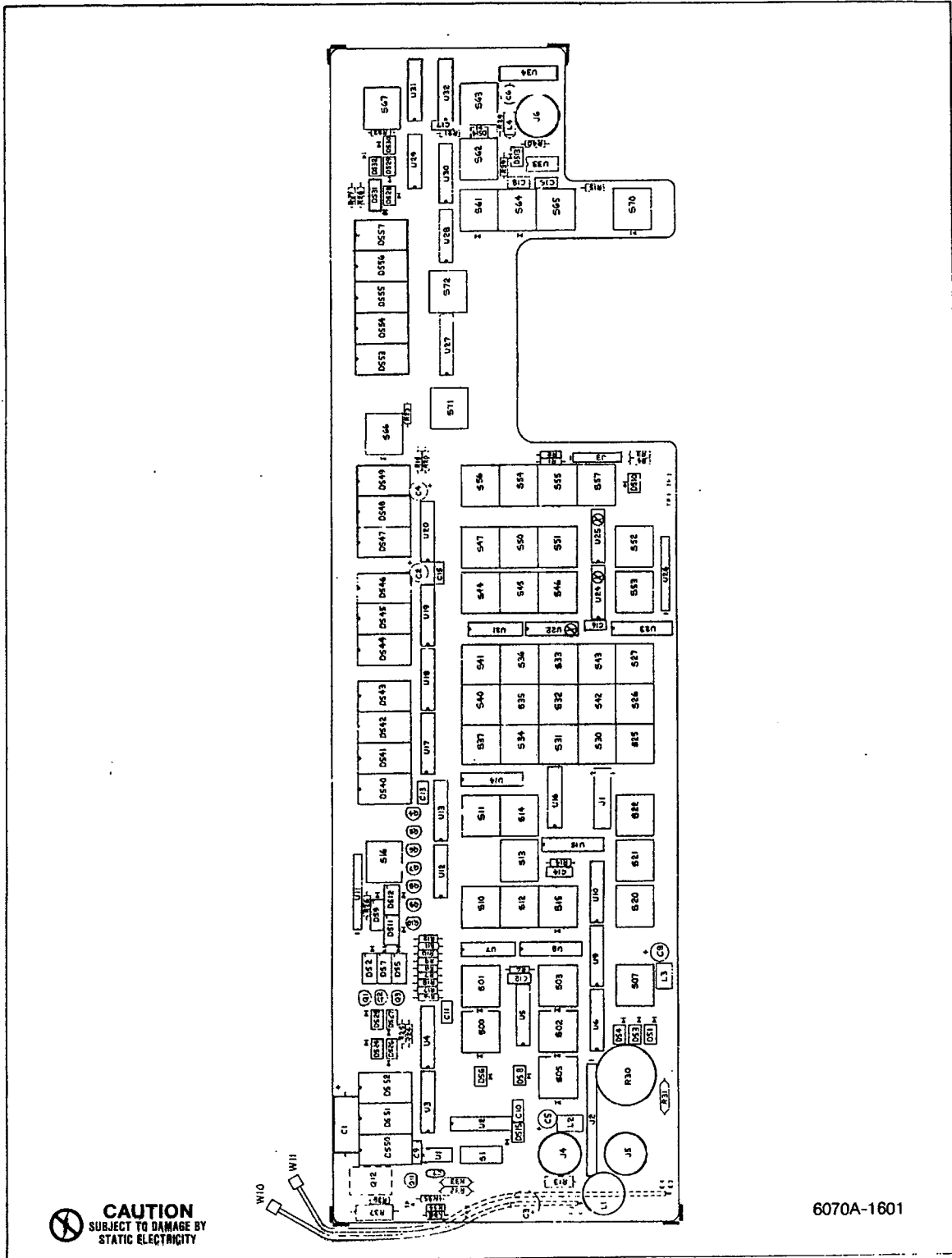


Figure 6-3. A1A1 Front Panel PCB Assembly

Table 6-4. A2 Controller Assembly

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N D T E
A2	CONTROLLER ASSEMBLY FIGURE 6-4 (6070A/71A-4206T)	6070A	AND	6071A		REF	1
A2A1	CONTROLLER PCB ASSEMBLY	462424	89536	462424		1	
A2A4	CONTROLLER PCB ASSEMBLY	489674	89536	489674		1	
H1	SCREW, SELF LOCKING, 6-32 X 1/2	177030	89536	177030		1	
H2	SCREW, FHP, 6-32 X 1/4	320093	89536	320093		10	
H3	SCREW, SELF LOCKING, 6-32 X 1/4	178533	89536	178533		6	
H4	SCREW, PHP, 6-32 X 3/8	334458	89536	334458		7	
H7	WASHER, SPRING STEEL	571968	89536	571968		7	
MP1	NYLON SPACER	543223	89536	543223		1	
MP5	HOUSING, CONTROLLER	509109	89536	509109		1	
MP8	GASKET, RFI,	519231	89536	519231		A/R	
MP9	PLATE, CONTROLLER	488452	89536	488452		1	

1 PROCURABLE AT COMPONENT LEVEL ONLY.

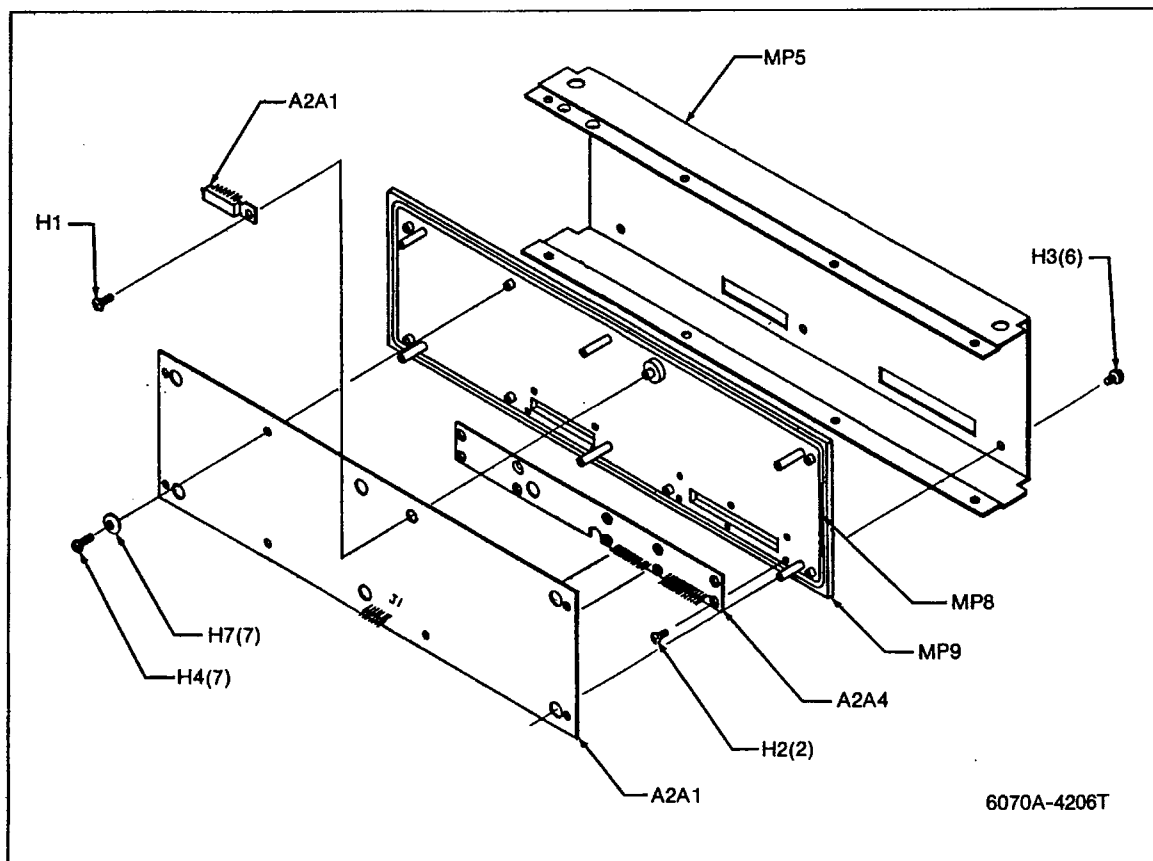


Figure 6-4. A2 Controller Assembly

Table 6-5. A2A1 Controller PCB Assembly

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NO TE
A2A1①	CONTROLLER PCB ASSEMBLY FIGURE 6-5 (6070A-4004T-25/25T)	462424	89536	462424		REF	
C1	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		18	
C2	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C3	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C4	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C5	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C6	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C7	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C8	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C9	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1		7	
C10	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1		REF	
C12	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1		REF	
C13	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1		REF	
C14	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1		REF	
C15	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1		REF	
C17	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D225X0020HA1		6	
C18	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1		REF	
C19	CAP, CER, 0.1 UF +/-GMV, 50V	369199	71590	U1-50-103		1	
C20	CAP, CER, 15 FF +/-2%, 100V	369074	89536	369074		1	
C22	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D225X0020HA1		REF	
C23	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C24	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C26	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C27	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C28	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C29	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D225X0020HA1		REF	
C30	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C31	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C32	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C33	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C34	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D225X0020HA1		REF	
C37	CAP, TA, 0.22 UF +/-20%, 35V	161331	56289	196D224X0035HA1		REF	
C38	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D225X0020HA1		REF	
C39	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D225X0020HA1		REF	
C40	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M		1	
C41	CAP, ELECT, 1500 UF -10/+100%, 6.3V	166330	80031	ET152X6P3A01		2	
C42	CAP, ELECT, 1500 UF -10/+100%, 6.3V	166330	80031	ET152X6P3A01		REF	
C43	CAP, CER, 100 PF +/-2%, 100V	512848	89536	512848		1	
CR2	DIODE, HI-SPEED SWITCHING	203323	04713	1N4448		5	1
CR4	DIODE, SI	343491	04713	1N4001		1	1
CR5	DIODE, HI-SPEED SWITCHING	203323	04713	1N4448		REF	
CR6	DIODE, HI-SPEED SWITCHING	203323	04713	1N4448		REF	
CR7	DIODE, LIGHT EMITTING	369777	28480	5082-4480		1	1
CR9	DIODE, HI-SPEED SWITCHING	203323	04713	1N4448		REF	
CR10	DIODE, HI-SPEED SWITCHING	203323	04713	1N4448		REF	
CR11	DIODE, ZENER	393579	04713	1N4567		1	1
J1	CONNECTOR, POST	267500	00779	86144-2		65	
L1	INDUCTOR, 6 TURN	320911	89536	320911		4	

Table 6-5. A2A1 Controller PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N O T E
L2	INDUCTOR, 6 TURN	320911	89536	320911	REF		
L3	INDUCTOR, 0.27 UH	313031	24759	MRO.27	1		
L4	INDUCTOR, +5V LINE	540823	89536	540823	1		
L5	INDUCTOR, 6 TURN	320911	89536	320911	REF		
L6	INDUCTOR, 6 TURN	320911	89536	320911	REF		
P1	CONNECTOR, 17 CIRCUIT	513408	27264	22-17-2172	3		
P2	CONNECTOR, 13 CIRCUIT	513390	27264	22-17-2132	2		
P3	CONNECTOR, 17 CIRCUIT	513408	27264	22-17-2172	REF		
Q1	TRANSISTOR, SI, PNP	195974	04713	2N3906	1	1	
Q2	TRANSISTOR, SI, NPN	218396	04713	2N3904	1	1	
R1	RES, DEP. CAR, 20 +/-5%, 1/4W	442202	80031	CR251-4-5P20E	4		
R2	RES, DEP. CAR, 20 +/-5%, 1/4W	442202	80031	CR251-4-5P20E	REF		
R3	RES, DEP. CAR, 20 +/-5%, 1/4W	442202	80031	CR251-4-5P20E	REF		
R4	RES, DEP. CAR, 20 +/-5%, 1/4W	442202	80031	CR251-4-5P20E	REF		
R5	RES, DEP. CAR, 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	4		
R6	RES, DEP. CAR, 330 +/-5%, 1/4W	368720	80031	CR251-4-5P330E	1		
R7	RES, DEP. CAR, 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	9		
R8	RES, COMP, 39 +/-10%, 1W	109645	01121	GB3901	1		
R9	RES, DEP. CAR, 82K +/-5%, 1/4W	348912	80031	CR251-4-5P82K	1		
R10	RES, DEP. CAR, 510 +/-5%, 1/4W	441600	80031	CR251-4-5P510E	1		
R11	RES, DEP. CAR, 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	REF		
R12	RES, MTL. FILM, 3.32K +/-1%, 1/8W	312652	91637	CMF553321F	1		
R13	RES, MTL. FILM, 4.75K +/-1%, 1/8W	260679	91637	CMF554751F	1		
R14	RES, DEP. CAR, 1.8K +/-5%, 1/4W	441444	80031	CR251-4-5P1K8	1		
R15	RES, DEP. CAR, 1.3K +/-5%, 1/4W	441394	80031	CR251-4-5P1K3	1		
R18	RES, DEP. CAR, 6.8K +/-5%, 1/4W	368761	80031	CR251-4-5P6K8	1		
R19	RES, MTL. FILM, 20K +/-1%, 1/8W	291872	91637	CMF552002F	3		
R20	RES, MTL. FILM, 20K +/-1%, 1/8W	291872	91637	CMF552002F	REF		
R21	RES, MTL. FILM, 1.96K +/-1%, 1/8W	288423	91637	CMF551961F	1		
R22	RES, MTL. FILM, 20K +/-1%, 1/8W	291872	91637	CMF552002F	REF		
R23	RES, DEP. CAR, 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R24	RES, DEP. CAR, 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R25	RES, DEP. CAR, 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R26	RES, DEP. CAR, 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R27	RES, DEP. CAR, 680 +/-5%, 1/4W	368779	80031	CR251-4-5P680E	1		
R28	RES, DEP. CAR, 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	REF		
R29	RES, DEP. CAR, 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	REF		
R30	RES, DEP. CAR, 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R31	RES, VAR, 500 +/-10%, 1/2W	447730	89536	447730	1		
R35	RES, DEP. CAR, 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
RT1	RES, TEMP. SENS. NEG TC	501304	50157	1D101	1		
TP1	CONNECTOR, TEST POINT	512889	00779	62395-1	2		
TP2	CONNECTOR, TEST POINT	512889	00779	62395-1	REF		
U1⊙	IC, MOS, SI, N-CHANNEL, GATE	472902	34649	P2114L	4	1	
U2⊙	IC, MOS, SI, N-CHANNEL, GATE	472902	34649	P2114L	REF		
U3⊙	IC, MOS, SI, N-CHANNEL, GATE	472902	34649	P2114L	REF		
U4⊙	IC, MOS, SI, N-CHANNEL, GATE	472902	34649	P2114L	REF		
U7⊙	IC, PROGRAMMED E-PROM	633537	89536	633537	1	1	
U8⊙	IC, PROGRAMMED E-PROM	633545	89536	633545	1	1	
U9⊙	IC, PROGRAMMED E-PROM	633552	89536	633552	1	1	

Table 6-5. A2A1 Controller PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NO TE
U10⊙	IC, PROGRAMMED E-PROM	633560	89536	633560	1	1	
U11⊙	IC, PROGRAMMED E-PROM	633529	89536	633529	1	1	
U12⊙	IC, PROGRAMMED E-PROM	633578	89536	633578	1	1	
U13⊙	IC, PROGRAMMED E-PROM	633586	89536	633586	1	1	
U14⊙	IC, PROGRAMMED E-PROM	633594	89536	633594	1	1	
U15⊙	IC, PROGRAMMED E-PROM	633602	89536	633602	1	1	
U16⊙	IC, TTL, LO-PWR, 3-8 LINE DECODER	407585	01295	SN74LS138N	3	1	
U17	HEADER, PROGRAMMED	413039	89536	413039	2	1	
U18	HEADER, PROGRAMMED	413039	89536	413039	REF		
U19⊙	IC, TTL, POS/NAND, HEX INVERTER	394536	01295	SN74LS05	1	1	
U20	RESISTOR NETWORK	414003	89536	414003	3	1	
U21	RESISTOR NETWORK	414003	89536	414003	REF		
U22⊙	IC, MICRO PROCESSOR	473249	01295	TMS9900	1	1	
U23	RESISTOR NETWORK	484303	89536	484303	1	1	
U24	IC, LIN, 3-TERMINAL NEG FIXED VOLT REG	454793	04713	MC79L05ACP	1	1	
U25	IC, HEAT SINK ASSY.	527390	89536	527390	1	1	
U26⊙	IC, NMOS, PROGRAMMABLE SYSTEMS INTERFACE	454991	01295	TMS9901N	1	1	
U27⊙	IC, LO-PWR, SCHOTTKY TRI-ST OCTAL BFR.	429902	12040	DMB1LS95N	6	2	
U28⊙	IC, LO-PWR, SCHOTTKY TRI-ST OCTAL BFR.	429902	12040	DMB1LS95N	REF		
U29	RESISTOR NETWORK	500876	89536	500876	1	1	
U30	SWITCH ASSEMBLY, 4-SPST	408559	00779	435166-2	1	1	
U31⊙	IC, LO-PWR, SCHOTTKY TRI-ST OCTAL BFR.	429902	12040	DMB1LS95N	REF		
U32	IC, TTL, LO-PWR SCHOTTKY HEX/QUADRUPLE	393215	01295	SN74LS175N	1	1	
U33⊙	IC, LO-PWR, SCHOTTKY TRI-ST OCTAL BFR.	429902	12040	DMB1LS95N	REF		
U34⊙	IC, TTL, LO-PWR, 3-8 LINE DECODER	407585	01295	SN74LS138N	REF		
U35⊙	IC, TTL, LO-PWR, 3-8 LINE DECODER	407585	01295	SN74LS138N	REF		
U36⊙	IC, LO-PWR, SCHOTTKY TRI-ST OCTAL BFR.	429902	12040	DMB1LS95N	REF		
U37⊙	IC, TTL, QUAD, 2-INPUT, POS NAND GATE	393033	01295	SN74LS00N	2	1	
U38⊙	IC, TTL, HEX INVERTER	393058	01295	SN74LS04N	1	1	
U39⊙	IC, MOS, N-CHANNEL, SI	477794	04713	MC68488P	1	1	
U40⊙	IC, TTL, QUAD, 2-INPUT POS OR GATE	393108	01295	SN74LS32N	1	1	
U41	IC, QUAD, INTERFACE, BUS XCVR	428649	04713	MC3446P	4	1	
U42⊙	IC, TTL, QUAD, 2-INPUT, POS NAND GATE	393033	01295	SN74LS00N	REF		
U43⊙	IC, TTL, QUAD, 2-INPUT POS AND GATE	393066	01295	SN74LS08N	1	1	
U44⊙	IC, LO-PWR, SCHOTTKY TRI-ST OCTAL BFR.	429902	12040	DMB1LS95N	REF		
U45	IC, QUAD, INTERFACE, BUS XCVR	428649	04713	MC3446P	REF		
U46⊙	IC, LO-POWER SCHOTTKY	393124	01295	SN74LS74N	2	1	
U47⊙	IC, LO-POWER SCHOTTKY	393124	01295	SN74LS74N	REF		
U48⊙	IC, TTL, QUAD BUS BUFFERS	472746	01295	SN74LS125N	1	1	
U49	RESISTOR NETWORK	414003	89536	414003	REF		
U50	IC, QUAD, INTERFACE, BUS XCVR	428649	04713	MC3446P	REF		
U51	IC, QUAD, INTERFACE, BUS XCVR	428649	04713	MC3446P	REF		
U52	IC, LINEAR COMPARATOR	352195	01295	SN72311P	2	1	
U53	IC, LINEAR COMPARATOR	352195	01295	SN72311P	REF		
XA2A2P1	CONNECTOR, POST	267500	00779	86144-2	REF		
XA2A2P2	CONNECTOR, POST	513861	00779	1-87022-7	11		
XU1	SOCKET, IC, 18-PIN	413229	01295	C93102	4		
XU2	SOCKET, IC, 18-PIN	413229	01295	C93102	REF		
XU3	SOCKET, IC, 18-PIN	413229	01295	C93102	REF		
XU4	SOCKET, IC, 18-PIN	413229	01295	C93102	REF		

Table 6-5. A2A1 Controller PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	M D T E
XU7	SOCKET, IC, 24-PIN	376236	91506	324-AG39D	9		
XU8	SOCKET, IC, 24-PIN	376236	91506	324-AG39D	REF		
XU9	SOCKET, IC, 24-PIN	376236	91506	324-AG39D	REF		
XU10	SOCKET, IC, 24-PIN	376236	91506	324-AG39D	REF		
XU11	SOCKET, IC, 24-PIN	376236	91506	324-AG39D	REF		
XU12	SOCKET, IC, 24-PIN	376236	91506	324-AG39D	REF		
XU13	SOCKET, IC, 24-PIN	376236	91506	324-AG39D	REF		
XU14	SOCKET, IC, 24-PIN	376236	91506	324-AG39D	REF		
XU15	SOCKET, IC, 24-PIN	376236	91506	324-AG39D	REF		
XU16	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	10		
XU17	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU18	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU19	SOCKET, IC, 14-PIN	370304	12040	MM74C906M	9		
XU22	SOCKET, IC, 64-PIN	483842	06776	ICN-649-S5-T/G	1		
XU25	SOCKET, IC, 20-PIN	454421	01295	C932002	7		
XU26	SOCKET, IC, 40-PIN	429282	09922	DILB40P-108	2		
XU27	SOCKET, IC, 20-PIN	454421	01295	C932002	REF		
XU28	SOCKET, IC, 20-PIN	454421	01295	C932002	REF		
XU31	SOCKET, IC, 20-PIN	454421	01295	C932002	REF		
XU32	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU33	SOCKET, IC, 20-PIN	454421	01295	C932002	REF		
XU34	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU35	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU36	SOCKET, IC, 20-PIN	454421	01295	C932002	REF		
XU37	SOCKET, IC, 14-PIN	370304	12040	MM74C906M	REF		
XU38	SOCKET, IC, 14-PIN	370304	12040	MM74C906M	REF		
XU39	SOCKET, IC, 40-PIN	429282	09922	DILB40P-108	REF		
XU40	SOCKET, IC, 14-PIN	370304	12040	MM74C906M	REF		
XU41	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU42	SOCKET, IC, 14-PIN	370304	12040	MM74C906M	REF		
XU43	SOCKET, IC, 14-PIN	370304	12040	MM74C906M	REF		
XU44	SOCKET, IC, 20-PIN	454421	01295	C932002	REF		
XU45	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU46	SOCKET, IC, 14-PIN	370304	12040	MM74C906M	REF		
XU47	SOCKET, IC, 14-PIN	370304	12040	MM74C906M	REF		
XU48	SOCKET, IC, 14-PIN	370304	12040	MM74C906M	REF		
XU50	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU51	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU52	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	2		
XU53	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	REF		

Table 6-6. A2A4 Controller Mother Board

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N D T E
A2A4	CONTROLLER MOTHER BOARD FIGURE 6-6 (6070A-4033)	489674	89536	489674		REF	
XA2A1P1	CONNECTOR, POST	513861	00779	1-87022-7	58		
XA2A1P2	CONNECTOR, POST	513861	00779	1-87022-7		REF	
XA2A1P3	CONNECTOR, POST	543538	00779	543538	14		

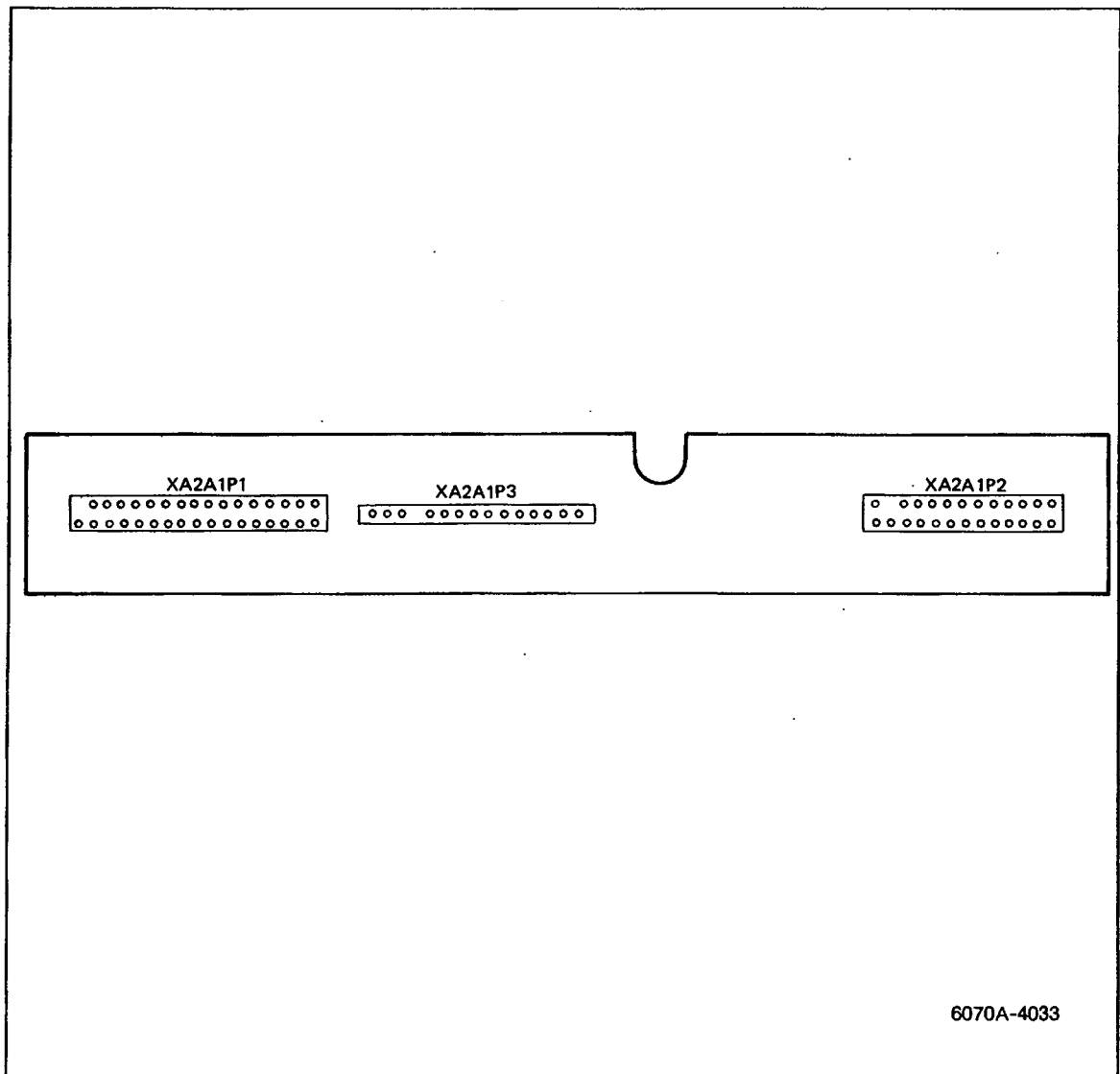


Figure 6-6. A2A4 Controller Mother Board

Table 6-7. A3 Synthesizer Module Assembly

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N D T E
A3②	SYNTHESIZER MODULE ASSEMBLY FIGURE 6-7 (6070A-4202)	497198	89536	497198		REF	1
A3A1	PHASE DETECTOR PCB ASSEMBLY	463521	89536	463521		1	
A3A2②	10 MHZ REFERENCE PCB ASSEMBLY	463646	89536	463646		1	
A3A3②	DELAY DISCRIMINATOR PCB ASSEMBLY	463653	89536	463653		1	
A3A4	N/1 DIVIDER PCB ASSEMBLY	463547	89536	463547		1	
A3A5	VCO RESONATOR PCB ASSEMBLY (MATCHED TO A3A10)	463364	89536	463364		1	
A3A6	SINGLE SIDEBAND MIXER PCB ASSEMBLY	463513	89536	463513		1	
A3A7②	SUB SYNTHESIZER PCB ASSEMBLY	463554	89536	463554		1	
A3A8②	SYNTHESIZER CONTROL BUFFER PCB ASSEMBLY	463638	89536	463638		1	
A3A9②	SYNTHESIZER DISTRIBUTION PCB ASSEMBLY	463687	89536	463687		1	
A6A3A10	VCO RESONATOR PCB ASSEMBLY (MATCHED TO A3A5)	463364	89536	463364		1	
H1	SCREW, FHP, 6-32 X 1/4	320093	89536	320093		8	
H2	SCREW, FHP, 6-32 X 9/32	544122	89536	544122		95	
H3	SCREW, FHP, 6-32 X 5/8	335158	89536	335158		2	
H4	SCREW, FHP, 6-32 X 5/8	412841	89536	412841		4	
H5	SCREW, FHP, 8-32 X 1/4	320044	89536	320044		4	
H6	WASHER, LOCK, #6	110692	89536	110692		2	
H7	WASHER, SPRING	571968	89536	571968		50	
J1-J10	CONNECTOR, FEED THRU (NOT LISTED) (PART OF MODULE FRAME WORK)						
MP1	PCB PULL AIDE	541730	89536	541730		30	
MP2	BRACKET, HEAT SINK	514992	89536	514992		2	
MP3	CAN, SUB SYNTH	534669	89536	534669		1	
MP4	CAN, VCO	524280	89536	524280		2	
MP5	COVER, SSB MIXER	580761	89536	580761		1	
MP6	FOOT, RUBBER	543488	52152	SJ-5008		1	
MP7	SPACER, MALE/FEMALE	585372	89536	585372		1	
U6	SEE A3A3 PCB ASSEMBLY, U6						
U23	SEE A3A3 PCB ASSEMBLY, U23						
W22	CABLE ASSEMBLY, SEMI-RIGID	508515	89536	508515		1	
W23	CABLE ASSEMBLY, RF	205773	89536	205773		1	
W31	CABLE ASSEMBLY, SEMI RIGID (SEE A3A3)						
W32	CABLE ASSEMBLY, SEMI RIGID (SEE A3A3)						
W33	CABLE ASSEMBLY, DD TO VCO (SEE A3A3)						
W34	CABLE ASSEMBLY	537761	89536	537761		2	
W35	CABLE ASSEMBLY	537761	89536	537761		REF	
W36	CABLE ASSEMBLY, RF	537787	89536	537787		1	

Table 6-7. A3 Synthesizer Module Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
W37	CABLE ASSEMBLY, RF (SEE A3A2)						
W38	CABLE ASSEMBLY, RF	205757	89536	205757		1	
W39	CABLE ASSEMBLY, SSB/VCO (SEE A3A6)						
W40	CABLE ASSEMBLY, RF (SEE A3A2)						
W41	CABLE ASSEMBLY (SEE A3A5)						
W42	CABLE ASSEMBLY (SEE A3A10)						
<p>1 THE A3 HARDWARE, COVERS, ETC., CAN BE FOUND ON THE MAIN FINAL ASSEMBLY AS MARKED BY A3, TABLE 6-1.</p>							

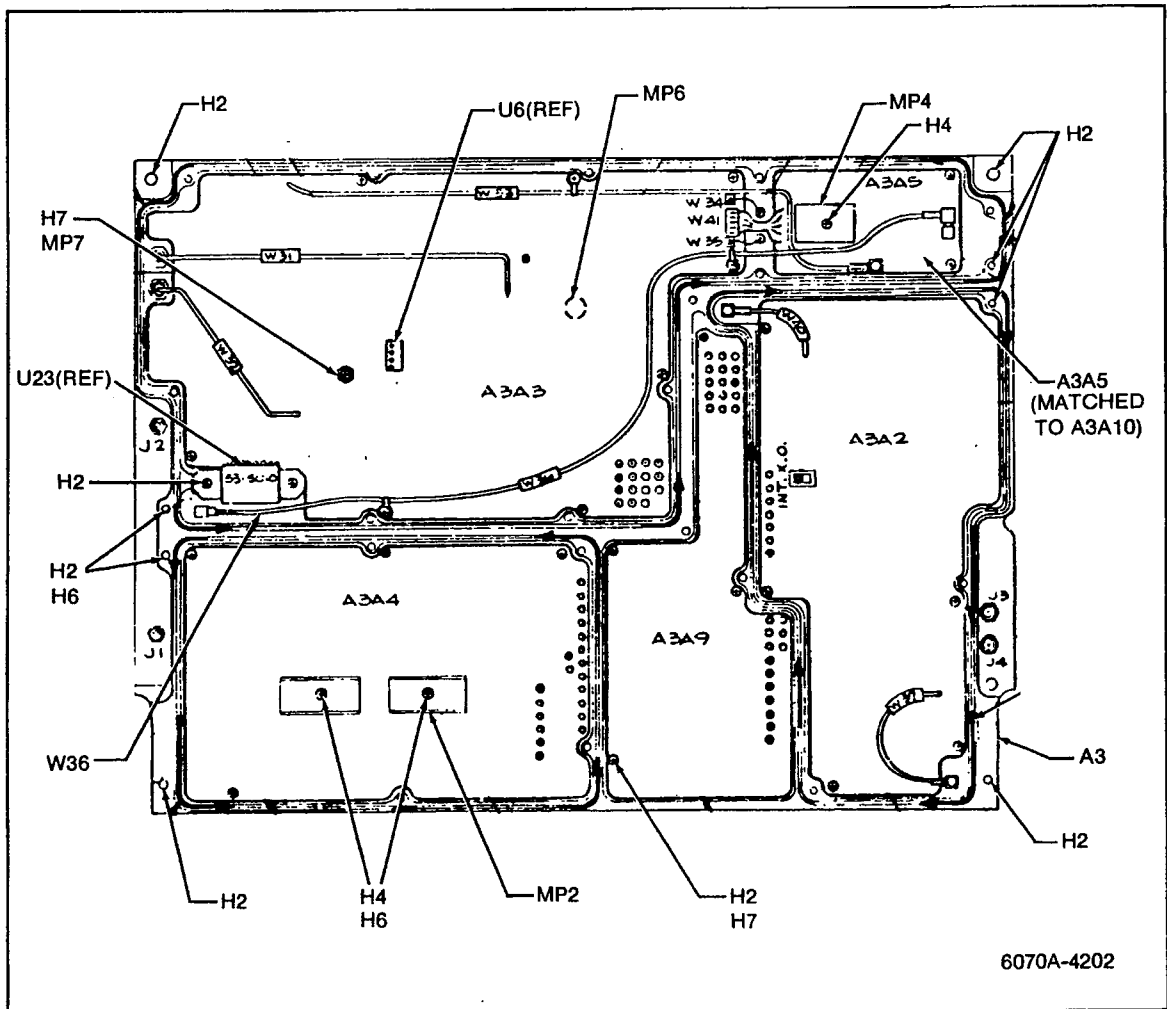


Figure 6-7. A3 Synthesizer Module Assembly

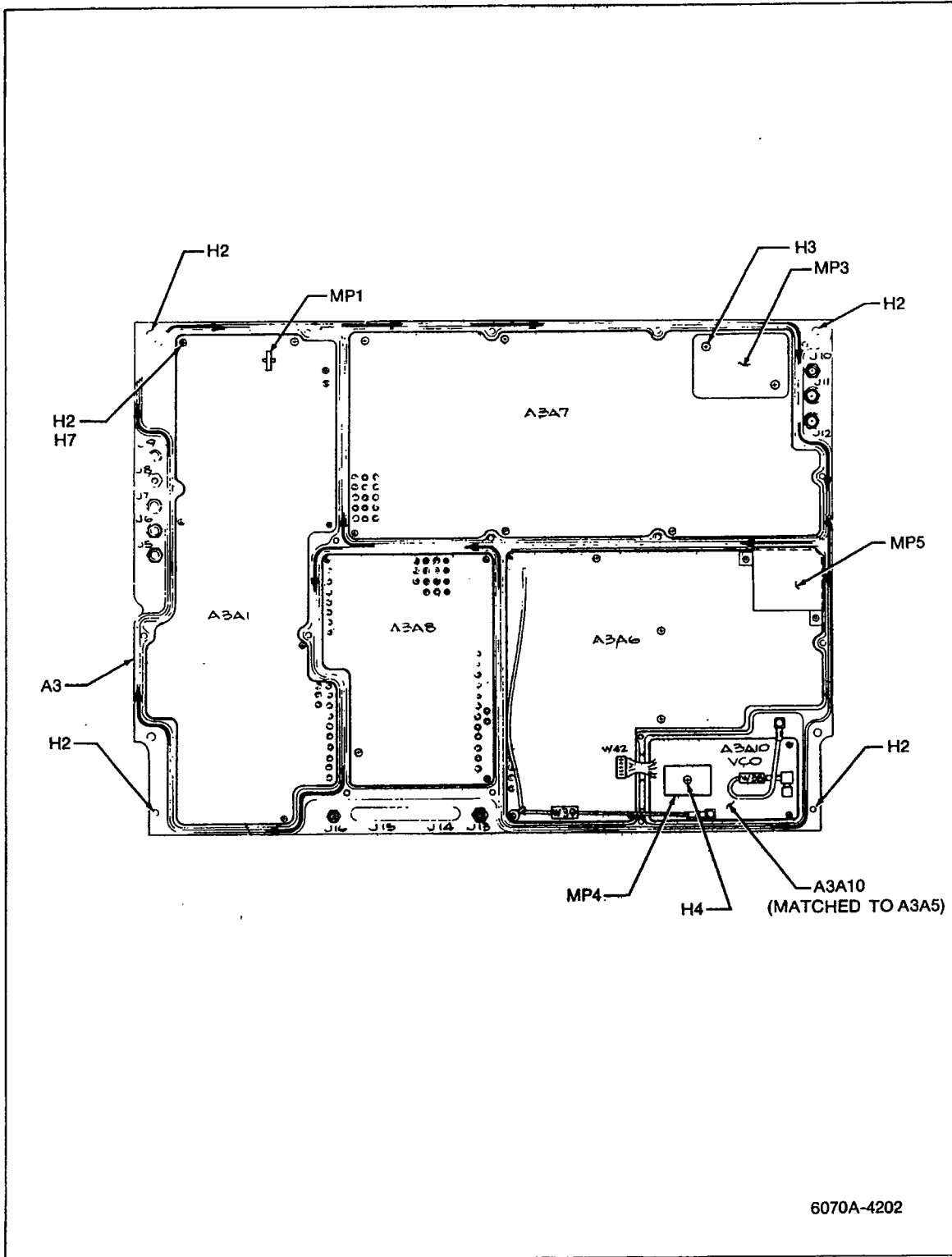


Figure 6-7. A3 Synthesizer Module Assembly (cont)

Table 6-8. A3A1 Phase Detector PCB Assembly

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NO TE
A3A1	PHASE DETECTOR PCB ASSEMBLY FIGURE 6-8 (6070A-4008T)	463521	89536	463521			REF
C1	CAP, PLASTIC, 0.027 UF +/-10%, 250V	267120	73445	C280AE/A27K	1		
C2	CAP, CER, 150 PF +/-5%, 100V	512988	89536	512988	2		
C3	CAP, MYLAR, 0.01 UF +/-10%, 250V	325548	73445	C280MAE/A10K	1		
C4	CAP, CER, 750 PF +/-5%, 50V	528521	89536	528521	1		
C5	CAP, CER, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022	10		
C6	CAP, CER, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022			REF
C7	CAP, CER, 150 PF +/-5%, 100V	512988	89536	512988			REF
C8	CAP, POLY, 0.00715 UF +/-1%	422980	89536	422980	1		
C9	CAP, CER, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022			REF
C10	CAP, CER, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022			REF
C11	CAP, CER, 47 PF +/-2%, 100V	512368	89536	512368	1		
C12	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1	3		
C13	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1			REF
C14	CAP, MYLAR, 0.0033 UF +/-10%, 50V	402867	80031	75F1R5A332	1		
C15	CAP, POLY, 0.0786 UF +/-1%, 50V	422998	89536	422998	1		
C16	CAP, CER, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022			REF
C17	CAP, CER, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022			REF
C20	CAP, CER, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022			REF
C21	CAP, TA, 10 UF +/-20%, 15V	193623	56289	196D106X0015A1	5		
C22	CAP, TA, 10 UF +/-20%, 15V	193623	56289	196D106X0015A1			REF
C23	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M	2		
C24	CAP, POLY, 620 PF +/-1%, 63V	513150	12954	B31063-620-1-63	1		
C25	CAP, POLY, 120 PF +/-1%, 63V	513168	12954	B31063-120-1-63	1		
C26	CAP, MYLAR, 0.82 UF +/-10%, 50V	530477	89536	530477	1		
C27	CAP, CER, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022			REF
C28	CAP, POLY, 5600 PF +/-5%, 63V	513135	12954	B31310/5600/5/63	1		
C29	CAP, POLY, 1800 PF +/-5%, 63V	513143	12954	B31063-1800-5-63	1		
C30	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M			REF
C31	CAP, CER, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022			REF
C32	CAP, CER 22 PF +/-2%, 100V	512871	89536	512871	1		
C33	CAP, POLY, 1300 PF +/-5%, 63V	513127	12954	B31063-1300-6-63	1		
C34	CAP, TA, 10 UF +/-20%, 15V	193623	56289	196D106X0015A1			REF
C35	CAP, CER, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022			REF
C36	CAP, CER, 100 PF +/-2%, 100V	512848	89536	512848	1		
C37	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1			REF
C38	CAP, TA, 10 UF +/-20%, 15V	193623	56289	196D106X0015A1			REF
C39	CAP, TA, 2.2 UF +/-20%, 15V	364216	56289	196D225X0015HA1	1		
C40	CAP, TA, 10 UF +/-20%, 15V	193623	56289	196D106X0015A1			REF
CR1	DIODE, 2 PELLETT	375477	09214	MPD200	4		1
CR2	DIODE, 2 PELLETT	375477	09214	MPD200			REF
CR3	DIODE, 2 PELLETT	375477	09214	MPD200			REF
CR4	DIODE, 2 PELLETT	375477	09214	MPD200			REF
CR5	DIODE, SI, SWITCHING	313247	28480	HP5082-6264	4		1
CR6	DIODE, SI, SWITCHING	313247	28480	HP5082-6264			REF
CR7	DIODE, SI, SWITCHING	313247	28480	HP5082-6264			REF
CR8	DIODE, SI, SWITCHING	313247	28480	HP5082-6264			REF
CR9	DIODE, SI, HI-SPEED SWITCHING	203323	07910	1N4448	4		1

Table 6-8. A3A1 Phase Detector PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
CR10	DIODE, SI, HI-SPEED SWITCHING	203323	07910	1N4448	REF		
CR11	DIODE, SI, HI-SPEED SWITCHING	203323	07910	1N4448	REF		
CR12	DIODE, SI, HI-SPEED SWITCHING	203323	07910	1N4448	REF		
CR13	DIODE, ZENER, 20.0 +/-5%	180463	04713	1N968B	1	1	
J1	CONNECTOR, RF, SMB	512095	16733	702033	1		
J3	CONNECTOR, RF, SMA	512087	16733	705147-001	2		
J4	CONNECTOR, RF, SMA	512087	16733	705147-001	REF		
K1	RELAY, 10W, 200V, 0.5A	461434	89536	461434	1		
L2	CHOKE, 6-TURN	320911	89536	320911	3		
L3	CHOKE, 6-TURN	320911	89536	320911	REF		
L4	INDUCTOR, 4.09 UH	510289	89536	510289	1		
L5	INDUCTOR, 5.11 UH	611913	89536	611913	1		
L6	CHOKE, 6-TURN	320911	89536	320911	REF		
P1	COMPONENT LEAD, SPRING TYPE	544056	00779	50871-1	15		
P2	COMPONENT LEAD, SPRING TYPE	544056	00779	50871-1	REF		
Q1	TRANSISTOR, PNP, HI-SPEED SWITCHING	369629	07263	543576	2	1	
Q2	TRANSISTOR, PNP, HI-SPEED SWITCHING	369629	07263	543576	REF		
Q3	TRANSISTOR	248351	04713	MPS918	2	1	
Q4	TRANSISTOR	248351	04713	MPS918	REF		
Q5	TRANSISTOR, SI, PNP	225599	89536	2N4250	2	1	
Q6	TRANSISTOR, SI, PNP	225599	89536	2N4250	REF		
Q7	TRANSISTOR, FIELD EFFECT	477729	89536	477729	2	1	
Q8	TRANSISTOR, FIELD EFFECT	477729	89536	477727	REF		
Q9	TRANSISTOR, NPN	218396	89536	218396	1	1	
R1	RES, DEP. CAR, 56K +/-5%, 1/4W	441626	80031	CR251-4-5P56K	1		
R2	RES, VAR, 10K +/-10%, 1/2W	309674	75378	360T-103A	1		
R3	RES, MTL. FILM, 887 +/-1%, 1/8W	320382	91637	CMF558870F	1		
R4	RES, VAR, 1K, +/-10%, 1/2W	393728	32997	3299W-CR2-102	1		
R5	RES, VAR, 200 +/-10%, 1/2W	275743	89536	275743	2		
R6	RES, MTL. FILM, 2.15K +/-1%, 1/8W	293712	91637	CMF552151F	1		
R7	RES, MTL. FILM, 200K +/-1%, 1/8W	235226	91637	CMF552003F	1		
R8	RES, MTL. FILM, 100 +/-0.1%, 1/8W	474437	89536	474437	1		
R9	RES, MTL. FILM, 2.05K +/-1%, 1/8W	293704	91637	CMF552051F	1		
R10	RES, VAR, 200 +/-10%, 1/2W	275743	89536	275743	REF		
R11	RES, DEP. CAR, 200K +/-5%, 1/4W	441485	80031	CR251-4-5P200K	1		
R12	RES, VAR, 2K	309666	89536	309666	1		
R13	RES, MTL. FILM, 1.54K +/-1%, 1/8W	289066	91637	CMF551541F	1		
R14	RES, MTL. FILM, 15.4K +/-1%, 1/8W	261651	91637	CMF551542F	1		
R15	RES, COMP, 510 +/-5%, 1/4W	441600	01121	CB5115	1		
R16	RES, DEP. CAR, 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	3		
R17	RES, DEP. CAR, 2.4K +/-5%, 1/4W	441493	80031	CR251-4-5P2K4	1		
R18	RES, COMP, 4.7K +/-5%, 1/4W	348821	01121	CB4725	1		
R19	RES, DEP. CAR, 130 +/-5%, 1/4W	442301	80031	CR251-4-5P130E	1		
R20	RES, DEP. CAR, 220 +/-5%, 1/4W	342626	80031	CR251-4-5P220E	2		
R21	RES, DEP. CAR, 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	2		
R22	RES, DEP. CAR, 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	REF		
R23	RES, DEP. CAR, 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	REF		
R24	RES, DEP. CAR, 36 +/-36%, 1/4W	442236	80031	CR251-4-5P36E	2		
R25	RES, VAR, 1K +/-10%, 1/2W	275750	11236	360T102A	2		
R26	RES, MTL. FILM, 1.13K +/-1%, 1/8W	347179	91637	CMF551131F	1		

Table 6-8. A3A1 Phase Detector PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
R27	RES, DEP. CAR, 200 +/-5%, 1/4W	441451	80031	CR251-4-5P200E	4		
R28	RES, MTL. FILM, 1.00K +/-1%, 1/8W	168229	91637	CMF551001F	2		
R29	RES, DEP. CAR, 200 +/-5%, 1/4W	441451	80031	CR251-4-5P200E	REF		
R30	RES, DEP. CAR, 390K +/-5%, 1/4W	442475	80031	CR251-4-5P390K	1		
R31	RES, MTL. FILM, 1.00K +/-1%, 1/8W	168229	91637	CMF551001F	REF		
R32	RES, COMP, 470 +/-5%, 1/2W	108787	01121	EB4715	2		
R33	RES, DEP. CAR, 36 +/-36%, 1/4W	442236	80031	CR251-4-5P36E	REF		
R34	RES, COMP, 470 +/-5%, 1/2W	108787	01121	EB4715	REF		
R35	RES, VAR, 25K +/-10%, 1/2W	494591	11236	360T-253A	1		
R36	RES, DEP. CAR, 6.2K +/-5%, 1/4W	442368	80031	CR251-4-5P6K2	1		
R37	RES, VAR, 1K +/-10%, 1/2W	275750	11236	360T102A	REF		
R38	RES, DEP. CAR, 2.7K +/-5%, 1/4W	386490	80031	CR251-4-5P2K7	2		
R39	RES, DEP. CAR, 200 +/-5%, 1/4W	441451	80031	CR251-4-5P200E	REF		
R40	RES, DEP. CAR, 200 +/-5%, 1/4W	441451	80031	CR251-4-5P200E	REF		
R41	RES, DEP. CAR, 220 +/-5%, 1/4W	342626	80031	CR251-4-5P220E	REF		
R42	RES, MTL. FILM, 499 +/-1%, 1/8W	168211	91637	CMF554990F	3		
R43	RES, MTL. FILM, 499 +/-1%, 1/8W	168211	91637	CMF554990F	REF		
R44	RES, MTL. FILM, 499 +/-1%, 1/8W	168211	91637	CMF554990F	REF		
R45	RES, MTL. FILM, 2.00K +/-1%, 1/8W	235226	91637	CMF552001F	2		
R46	RES, MTL. FILM, 2.00K +/-1%, 1/8W	235226	91637	CMF552001F	REF		
R47	RES, MTL. FILM, 5.49K +/-1%, 1/8W	334565	91637	CMF555491F	1		
R48	RES, DEP. CAR, 2K +/-5%, 1/4W	441469	80031	CR251-4-5P2K	1		
R49	RES, DEP. CAR, 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R50	RES, DEP. CAR, 100 +/-5%, 1/4W	348771	80031	CR251-4-5P100E	1		
R51	RES, DEP. CAR, 1.5K +/-5%, 1/4W	343418	80031	CR251-4-5P1K5	1		
R52	RES, DEP. CAR, 3.3K +/-5%, 1/4W	348813	80031	CR251-4-5P3K3	1		
R53	RES, DEP. CAR, 82 +/-5%, 1/4W	442277	80031	CR251-4-5P82E	1		
R54	RES, DEP. CAR, 2.7K +/-5%, 1/4W	386490	80031	CR251-4-5P2K7	REF		
S1	SWITCH, SLIDE, DPDT	393629	10389	23-021-114	1		1
TP1-TP16	TEST POINTS	512889	02660	62395-1834	16		
U1	IC, TTL, SCHOTTKY QUAD 2-IN, POS NOR GAT	403626	01295	SN74S02N	1		1
U2	IC, TTL, PRESET DECADE OR BINARY CNTR	473835	01295	SN74S196N	1		1
U3	IC, DUAL, "D" TYPE, EDGE TRIGGERED, F/F	418269	01295	SN74S74N	1		1
U4	IC, TTL, QUAD 2-IN, NAND GATE	363580	01295	SN74S00N	1		1
U5	IC, OP-AMP, LO-NOISE	477745	18324	NE5534AN	1		1
U6	IC, LINEAR, QUAD COMPARATOR	387233	12040	LM339N	3		1
U7	IC, LINEAR, QUAD COMPARATOR	387233	12040	LM339N	REF		
U8	IC, LINEAR, QUAD COMPARATOR	387233	12040	LM339N	REF		
U9	IC, TTL, LO-PWR, 3-8 LINE DECODER	407585	01295	SN74LS138N	1		1
U10	RESISTOR NETWORK, 10K, 10-PIN SIP	414003	89536	414003	1		1
U11	IC, TTL, DUAL ONE-SHOT	404186	01295	SN74LS123N	1		1
U12	IC, LINEAR ARRAY, 2-PNP, 16-PIN DIP	418954	02735	CA3096E	1		1
U13	IC, LINEAR, OP-AMP	472779	12040	LF386N	1		1
U14	IC, LINEAR, D-MOS FET QUAD ANALOG	507228	18324	SD5002N	3		1
U15	IC, LINEAR, D-MOS FET QUAD ANALOG	507228	18324	SD5002N	REF		
U16	IC, HYBRID ASSEMBLY	492702	89536	492702	1		1
U17	RESISTOR NETWORK, 10K, 16-PIN DIP	501841	89536	501841	1		1
U18	IC, LINEAR, OP-AMP, J-FET INPUT	483438	89536	483438	1		1
U19	IC, LINEAR, D-MOS FET QUAD ANALOG	507228	18324	SD5002N	REF		
U20	IC, LINEAR, OP-AMP	495051	18324	NE5534N	1		1

Table 6-8. A3A1 Phase Detector PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N O T E
XU1	SOCKET, IC, 16-PIN DIP	370304	12040	MM74C906N	8		
XU2	SOCKET, IC, 16-PIN DIP	370304	12040	MM74C906N	REF		
XU3	SOCKET, IC, 16-PIN DIP	370304	12040	MM74C906N	REF		
XU4	SOCKET, IC, 16-PIN DIP	370304	12040	MM74C906N	REF		
XU5	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	3		
XU6	SOCKET, IC, 16-PIN DIP	370304	12040	MM74C906N	REF		
XU7	SOCKET, IC, 16-PIN DIP	370304	12040	MM74C906N	REF		
XU8	SOCKET, IC, 16-PIN DIP	370304	12040	MM74C906N	REF		
XU9	SOCKET, IC, 16-PIN DIP	370312	91506	316-AG39D	7		
XU11	SOCKET, IC, 16-PIN DIP	370312	91506	316-AG39D	REF		
XU12	SOCKET, IC, 16-PIN DIP	370312	91506	316-AG39D	REF		
XU13	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	REF		
XU14	SOCKET, IC, 16-PIN DIP	370312	91506	316-AG39D	REF		
XU15	SOCKET, IC, 16-PIN DIP	370312	91506	316-AG39D	REF		
XU17	SOCKET, IC, 16-PIN DIP	370312	91506	316-AG39D	REF		
XU18	SOCKET, IC, 16-PIN DIP	370304	12040	MM74C906N	REF		
XU19	SOCKET, IC, 16-PIN DIP	370312	91506	316-AG39D	REF		
XU20	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	REF		

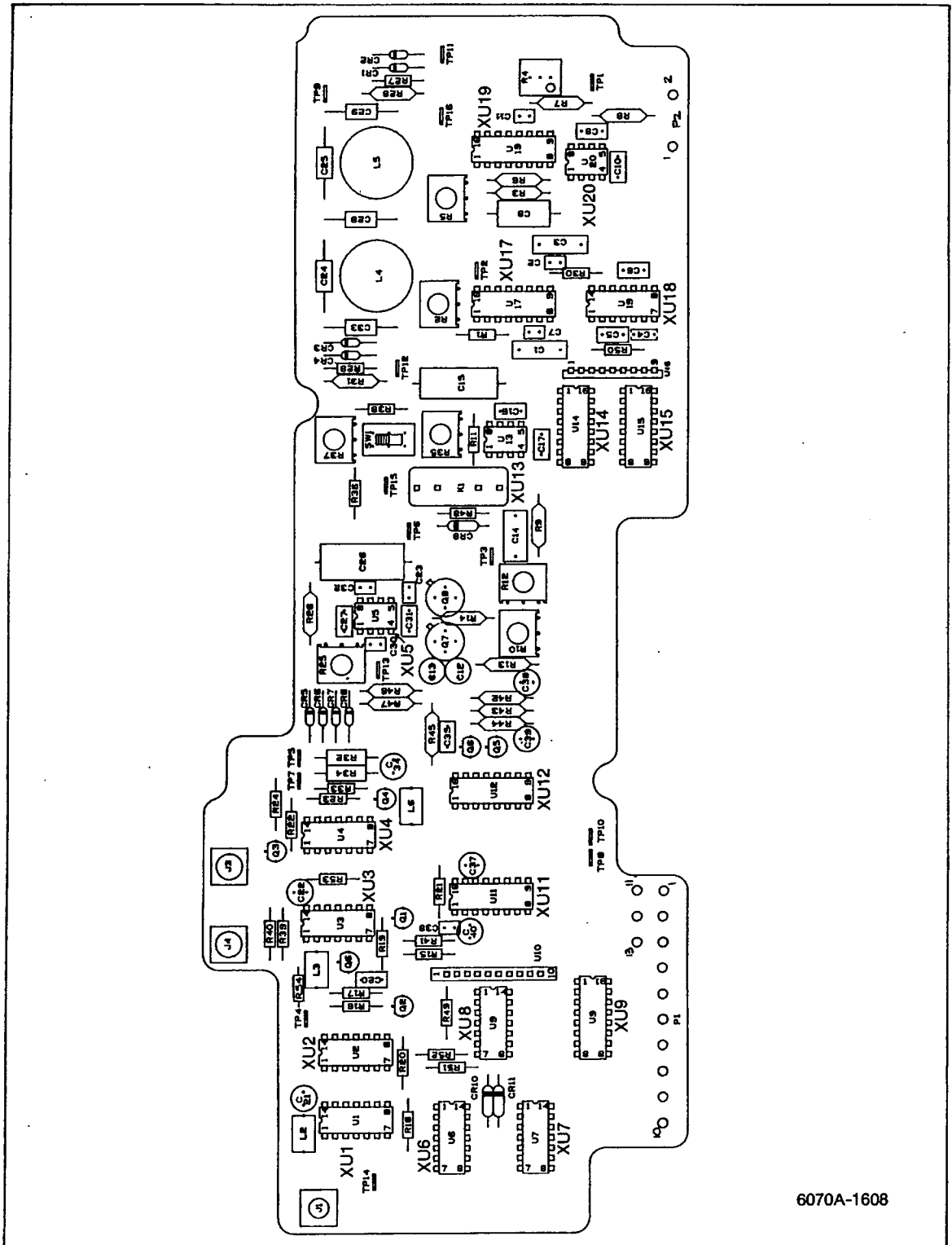


Figure 6-8. A3A1 Phase Detector PCB Assembly

6070A-1608

Table 6-9. A3A2 10 MHz Reference PCB Assembly

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N O T E
A3A2②	10 MHZ REFERENCE PCB ASSEMBLY FIGURE 6-9 (6070A-4021T)	463646	89536	463646			REF
C1	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1		14	
C2	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1			REF
C3	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1			REF
C4	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1			REF
C5	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M		3	
C6	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1			REF
C7	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1			REF
C8	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M			REF
C9	CAP, VAR, 22 PF 100V	369207	80031	C010KA/20E		1	
C10	CAP, CER, 22 PF +/-2%, 100V	512871	89536	512871		1	
C11	CAP, CER, 33 PF +/-2%, 100V	513226	89536	513226		1	
C12	CAP, CER, 15 PF +/-2%, 100V	369074	89536	369074		1	
C13	CAP, CER, 39 PF +/-2%, 100V	512962	89536	512962		1	
C14	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1			REF
C15	CAP, POLY, 0.022 UF +/-10%, 250V	234484	73445	C280AE/A22K		1	
C16	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1			REF
C17	CAP, CER, 4700 PF	362871	72982	8121-A100-W5R-472M		1	
C18	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1			REF
C19	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1			REF
C20	CAP, CER, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022		2	
C21	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1			REF
C22	CAP, CER, 0.01 UF +/-20%, 100V	407361	72982	8121-A100-W5R-103M		2	
C23	CAP, CER, 0.047 UF +/-20%, 50V	460733	71590	CW20C473M		2	
C24	CAP, CER, 0.047 UF +/-20%, 50V	460733	71590	CW20C473M			REF
C25	CAP, CER, 500 PF +/-10%, 1 KV	105692	71590	2DDH60N501K		1	
C26	CAP, CER, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022			REF
C27	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M			REF
C28	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1		1	
C29	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1			REF
C30	CAP, CER, 56 PF +/-2%, 100V	512970	89536	512970		1	
C31	CAP, CER, 150 PF +/-5%, 100V	512988	89536	512988		1	
C32	CAP, CER, 0.01 UF +/-20%, 100V	407361	72982	8121-A100-W5R-103M			REF
C33	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1			REF
C34	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1			REF
CR1	DIODE, TUNING, 200MA	363812	04713	MV109		1	
CR3	DIODE, SI, HI-SPEED SWITCHING	203323	07910	1N4448		2	
CR4	DIODE, SI, HI-SPEED SWITCHING	203323	07910	1N4448			REF
J5	CONNECTOR, RF, SMA	512087	16733	705147-001		4	
J6	CONNECTOR, RF, SMA	512087	16733	705147-001			REF
J7	CONNECTOR, RF, SMA	512087	16733	705147-001			REF
J8	CONNECTOR, RF, SMB	512095	16733	702033		1	
J9	CONNECTOR, RF, SMA	512087	16733	705147-001			REF
L1	INDUCTOR, 6 TURN	320911	89635	320911		9	
L2	INDUCTOR, 6 TURN	320911	89635	320911			REF
L3	INDUCTOR, 6 TURN	320911	89635	320911			REF
L4	INDUCTOR, 6 TURN	320911	89635	320911			REF
L5	INDUCTOR, RF, 270 UH +/-5%, 260 MA	186270	72259	WEE270		1	

Table 6-9. A3A2 10 MHz Reference PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
L6	INDUCTOR, 6 TURN	320911	89635	320911		REF	
L7	INDUCTOR, 6 TURN	320911	89635	320911		REF	
L8	INDUCTOR, 6 TURN	320911	89635	320911		REF	
L9	INDUCTOR, 6 TURN	320911	89635	320911		REF	
L10	INDUCTOR, 6 TURN	320911	89635	320911		REF	
P1	CONNECTOR, RECEPTACLE	544056	00779	50871-1	7		
Q1	TRANSISTOR, SI, PNP	195974	64713	2N3906	1	1	
Q2⓪	TRANSISTOR, FET	403634	12040	J310	2	1	
Q3⓪	TRANSISTOR, FET	403634	12040	J310	REF		
Q4	TRANSISTOR, SI, NPN	218081	04713	MPS6520	3	1	
Q5	TRANSISTOR, SI, NPN	218081	04713	MPS6520	REF		
Q6	TRANSISTOR, SI, NPN	218081	04713	MPS6520	REF		
R1	RES, DEP. CAR. 1.5K +/-5%, 1/4W	343418	80031	CR251-4-5P1K5	1		
R2	RES, DEP. CAR. 390 +/-5%, 1/4W	441543	80031	CR251-4-5P390E	1		
R3	RES, DEP. CAR. 2.2K +/-5%, 1/4W	343400	80031	CR251-4-5P2K2	1		
R4	RES, DEP. CAR. 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	6		
R5	RES, DEP. CAR. 2.7K +/-5%, 1/4W	386490	80031	CR251-4-5P2K7	1		
R6	RES, DEP. CAR. 100 +/-5%, 1/4W	348771	80031	CR251-4-5P100E	2		
R7	RES, DEP. CAR. 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	REF		
R8	RES, DEP. CAR. 1M +/-5%, 1/4W	348987	80031	CR251-4-5P1M	1		
R9	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	7		
R10	RES, DEP. CAR. 5.6K +/-5%, 1/4W	442350	80031	CR251-4-5P5K6	1		
R11	RES, COMP, 4.7K +/-5%, 1/4W	348821	01121	CB4725	4		
R12	RES, COMP, 4.7K +/-5%, 1/4W	348821	01121	CB4725	REF		
R13	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R14	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R15	RES, DEP. CAR. 56 +/-5%, 1/4W	342618	80031	CR251-4-5P56E	1		
R16	RES, MTL. FILM, 100K +/-1%, 1/8W	248807	91637	CMF551003F	1		
R17	RES, MTL. FILM, 15K +/-1%, 1/8W	285296	91637	CMF551502F	1		
R18	RES, DEP. CAR. 270 +/-5%, 1/4W	348789	80031	CR251-4-5P270E	3		
R19	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R20	RES, DEP. CAR. 47 +/-5%, 1/4W	441592	80031	CR251-4-5P47E	2		
R21	RES, DEP. CAR. 47 +/-5%, 1/4W	441592	80031	CR251-4-5P47E	REF		
R22	RES, DEP. CAR. 470 +/-5%, 1/4W	343434	80031	CR251-4-5P470E	2		
R23	RES, DEP. CAR. 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	REF		
R24	RES, DEP. CAR. 330 +/-5%, 1/4W	368720	80031	CR251-4-5P330E	1		
R25	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R26	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R27	RES, DEP. CAR. 270 +/-5%, 1/4W	348789	80031	CR251-4-5P270E	REF		
R28	RES, DEP. CAR. 68 +/-5%, 1/4W	414532	80031	CR251-4-5P68E	1		
R29	RES, DEP. CAR. 130 +/-5%, 1/4W	442301	80031	CR251-4-5P130E	1		
R30	RES, DEP. CAR. 91 +/-5%, 1/4W	441683	80031	CR251-4-5P91E	1		
R31	RES, DEP. CAR. 430 +/-5%, 1/4W	441568	80031	CR251-4-5P430E	1		
R32	RES, DEP. CAR. 220 +/-5%, 1/4W	342626	80031	CR251-4-5P220E	1		
R33	RES, COMP, 4.7K +/-5%, 1/4W	348821	01121	CB4725	REF		
R35	RES, DEP. CAR. 3.3 +/-5%, 1/4W	348730	80031	CR251-4-5P3R3	1		
R36	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R37	RES, DEP. CAR. 20K +/-5%, 1/4W	441477	80031	CR251-4-5P20K	1		
R38	RES, COMP, 4.7K +/-5%, 1/4W	348821	01121	CB4725	REF		
R39	RES, DEP. CAR. 100 +/-5%, 1/4W	348771	80031	CR251-4-5P100E	REF		

Table 6-9. A3A2 10 MHz Reference PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
R40	RES, DEP. CAR, 33K +/-5%, 1/4W	348888	80031	CR251-4-5P3K3	1		
R41	RES, DEP. CAR, 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	REF		
R42	RES, DEP. CAR, 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	REF		
R43	RES, DEP. CAR, 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	REF		
R44	RES, MTL. FILM, 6.04K +/-1%, 1/8W	285189	91637	CMF556041F	1		
R45	RES, DEP. CAR, 470 +/-5%, 1/4W	343434	80031	CR251-4-5P470E	REF		
R46	RES, DEP. CAR, 270 +/-5%, 1/4W	348789	80031	CR251-4-5P270E	REF		
R47	RES, DEP. CAR, 270 +/-5%, 1/4W	348789	80031	CR251-4-5P270E	1		
S1	SWITCH, SLIDE, DPDT	393629	10389	23-021-114	1	1	
TP1-TP4	TEST POINT	512889	02660	62395-1834	4		
U1	IC, TTL, QUAD 2-IN, NAND GATE	363580	01295	SN74S00N	3		1
U2⊙	IC, COS/MOS, QUAD, BILATERAL SWITCH	363838	02735	CD4016AE	1		1
U3	IC, LINEAR, OP-AMP	472779	12040	LF386N	1		1
U4	IC, TTL, HEX INVERTER	288605	01295	SN7416N	1		1
U5	IC, DUAL, "D" TYPE, EDGE TRIGGERED, F/F	418269	01295	SN74S74N	2		1
U6⊙	IC, TTL, HEX INVERTER	393058	01295	SN74LS04N	1		1
U7	IC, HI-SPEED ANALOG VOL COMPARATOR	386920	12040	LM361N	1		1
U8	IC, TTL, QUAD 2-IN, NAND GATE	363580	01295	SN74S00N	REF		
U9⊙	IC, TTL, QUAD, 2-IN, POS-NAND GATE	393033	01295	SN74LS00N	1		1
U10	IC, MSL, MONOSTBL MULTIVIBRATOR	293134	04713	MC8601P	2		1
U11	IC, TTL, AND-OR-INVERT GATES	379289	01295	SN74S64N	1		1
U12	IC, TTL, SCHOTTKY, HEX INVERTER	413617	01295	SN74S04N	1		1
U13	IC, TTL, QUAD 2-IN, NAND GATE	363580	01295	SN74S00N	REF		
U14	IC, MSL, MONOSTBL MULTIVIBRATOR	293134	04713	MC8601P	REF		
U15	IC, DUAL, "D" TYPE, EDGE TRIGGERED, F/F	418269	01295	SN74S74N	REF		
W37	CABLE, RF	526723	89536	526723	2		
W40	CABLE, RF	526723	89536	526723	REF		
XU1	SOCKET, 14-PIN	370304	12040	MM74C906N	14		
XU2	SOCKET, 14-PIN	370304	12040	MM74C906N	REF		
XU3	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	1		
XU4	SOCKET, 14-PIN	370304	12040	MM74C906N	REF		
XU5	SOCKET, 14-PIN	370304	12040	MM74C906N	REF		
XU6	SOCKET, 14-PIN	370304	12040	MM74C906N	REF		
XU7	SOCKET, 14-PIN	370304	12040	MM74C906N	REF		
XU8	SOCKET, 14-PIN	370304	12040	MM74C906N	REF		
XU9	SOCKET, 14-PIN	370304	12040	MM74C906N	REF		
XU10	SOCKET, 14-PIN	370304	12040	MM74C906N	REF		
XU11	SOCKET, 14-PIN	370304	12040	MM74C906N	REF		
XU12	SOCKET, 14-PIN	370304	12040	MM74C906N	REF		
XU13	SOCKET, 14-PIN	370304	12040	MM74C906N	REF		
XU14	SOCKET, 14-PIN	370304	12040	MM74C906N	REF		
XU15	SOCKET, 14-PIN	370304	12040	MM74C906N	REF		
XY1	SOCKET, CRYSTAL	285262	71785	1-33-23-92-045	1		
Y1	CRYSTAL, 10 MHZ	536565	33096	PB1360	1		1

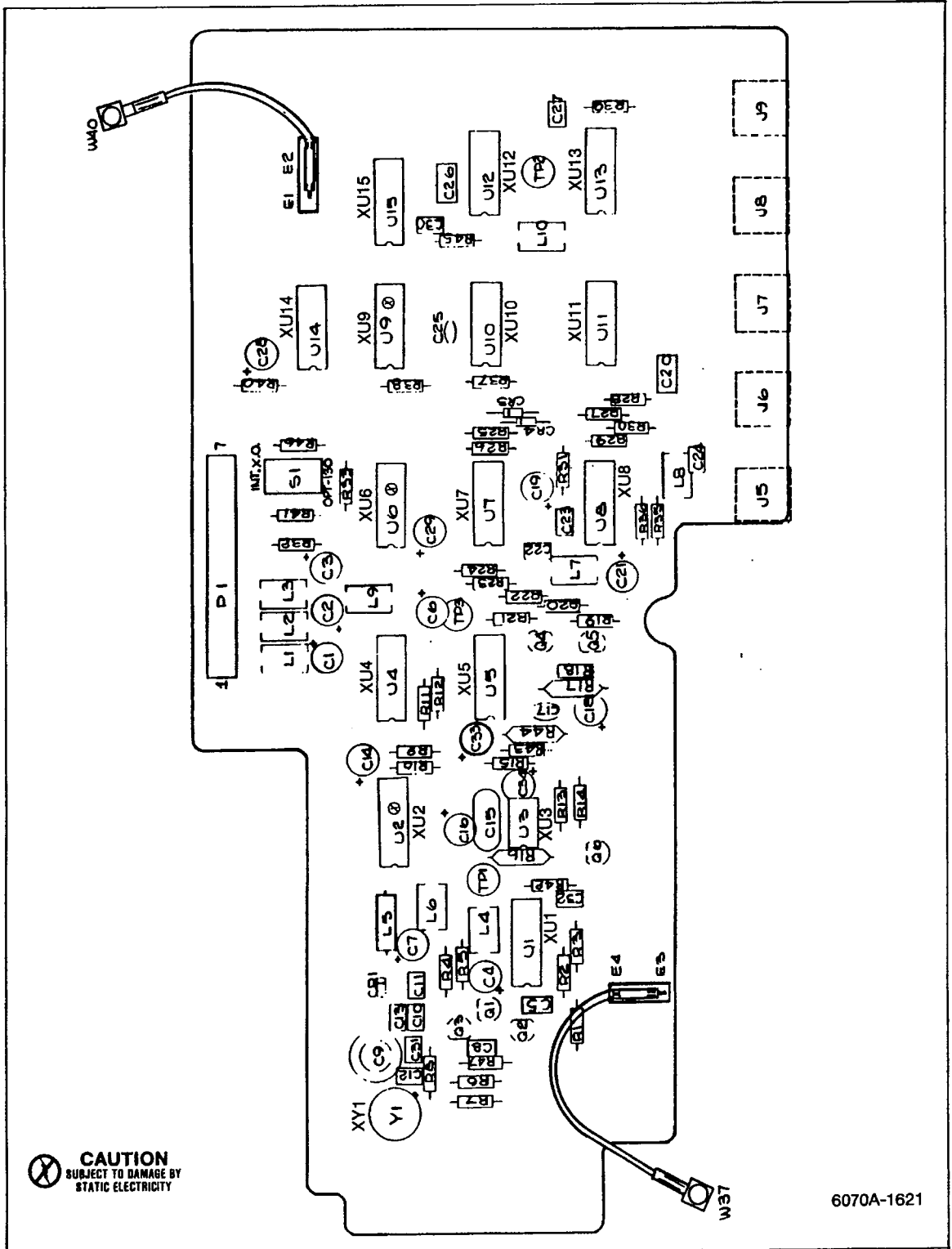


Figure 6-9. A3A2 10 MHz Reference PCB Assembly

Table 6-10. A3A3 Delay Discriminator PCB Assembly

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
A3A3Q	DELAY DISCRIMINATOR PCB ASSEMBLY FIGURE 6-10 (6070A-4022T)	463653	89536	463653		REF	
C1	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	25		
C2	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M		REF	
C4	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1	2		
C5	CAP, CER, 1.0 PF +/-0.25PF, 100V	512145	89536	512145	5		
C6	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M		REF	
C7	CAP, TA, 82 UF +/-20%, 20V	357392	12954	D82GS2D20M	3		
C8	CAP, TA, 22 UF +/-20%, 10V	474288	56289	195D223X0010TE4	1		
C9	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	21		
C10	CAP, CER, 470 PF +/-10%, 50V	513085	89536	513085	7		
C11	CAP, CER, 470 PF +/-10%, 50V	513085	89536	513085		REF	1
C13	CAP, CER, 470 PF +/-10%, 50V	513085	89536	513085		REF	1
C14	CAP, POLY, 0.10 UF +/-10%, 100V	393439	89536	393439	3		
C15	CAP, CER, 2.7 PF +/-0.25PF, 100V	363705	89536	363705	6		
C16	CAP, CER, 4.7 PF +/-0.25PF, 100V	362772	89536	363772	2		
C17	CAP, CER, 12 PF +/-2%, 100V	376871	89536	376871	2		
C18	CAP, CER, 12 PF +/-2%, 100V	376871	89536	376871		REF	
C19	CAP, CER, 2.7 PF +/-0.25PF, 100V	363705	89536	363705		REF	
C20	CAP, CER, 4.7 PF +/-0.25PF, 100V	362772	89536	363772		REF	
C21	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M		REF	1
C22	CAP, CER, 1.0 PF +/-0.25PF, 100V	512145	89536	512145		REF	1
C23	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M		REF	1
C24	CAP, CER, 1.0 PF +/-0.25PF, 100V	512145	89536	512145		REF	1
C25	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M		REF	1
C26	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K		REF	
C27	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K		REF	
C28	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M		REF	
C29	CAP, CER, 220 PF +/-5%, 100V	512111	89536	512111	1		
C30	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K		REF	
C31	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K		REF	
C32	CAP, POLY, 0.10 UF +/-10%, 100V	393439	89536	393439		REF	
C33	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K		REF	
C34	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K		REF	
C35	CAP, CER, 0.01 UF +/-20%, 100V	407361	72982	8121-A100-W5R-103M	3		
C36	CAP, FILM, 0.0022 UF +/-10%, 50V	313239	06001	75F1R5A322	1		
C37	CAP, TA, 15 UF 20V	519686	56289	196D156X0020KE4	2		
C38	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K		REF	
C39	CAP, POLY, 0.47 UF +/-10%, 100V	369124	89536	369124	3		
C40	CAP, POLY, 0.47 UF +/-10%, 100V	369124	89536	369124		REF	
C41	CAP, CER, 100 PF +/-2%, 100V	369173	80031	2222-638-1010	3		
C42	CAP, TA, 4.7 UF +/-20%, 50V	363721	56289	196D475X9015HA1	2		
C43	CAP, CER, 22 PF +/-2%, 100V	512871	89536	512871	1		
C44	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K		REF	
C45	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K		REF	
C46	CAP, MYLAR, 0.22 UF +/-10%, 100V	436113	73445	C280MAH/A220K	2		
C47	CAP, TA, 4.7 UF +/-20%, 50V	363721	56289	196D475X9015HA1		REF	
C48	CAP, POLY, 0.10 UF +/-10%, 100V	393439	89536	393439		REF	
C49	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K		REF	

Table 6-10. A3A3 Delay Discriminator PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
C50	CAP, POLY, 0.47 UF +/-10%, 100V	369124	89536	369124	REF		
C51	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C52	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C53	CAP, CER, 470 PF +/-10%, 50V	513085	89536	513085	REF		1
C54	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C55	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C56	CAP, TA, 15 UF 20V	519686	56289	196D156X0020KE4	REF		
C57	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C58	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C59	CAP, CER, 0.01 UF +/-20%, 100V	407361	72982	8121-A100-W5R-103M	REF		
C60	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C61	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C62	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C63	CAP, CER, 2.7 PF +/-0.25PF, 100V	363705	89536	363705	REF		1
C64	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C65	CAP, CER, 0.01 UF +/-20%, 100V	407361	72982	8121-A100-W5R-103M	REF		
C66	CAP, CER, 2.7 PF +/-0.25PF, 100V	363705	89536	363705	REF		1
C67	CAP, TA, 10 UF +/-20%, 35V	417683	56289	196D106X0035KA1	1		
C68	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		1
C69	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1	REF		
C70	CAP, CER, 1.0 PF +/-0.25PF, 100V	512145	89536	512145	REF		1
C71	CAP, CER, 470 PF +/-10%, 50V	513085	89536	513085	REF		1
C72	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C73	CAP, CER, 1.0 PF +/-0.25PF, 100V	512145	89536	512145	REF		
C74	CAP, CER, 100 PF +/-2%, 100V	369173	80031	2222-638-1010	REF		
C75	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C76	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C77	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C78	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		1
C79	CAP, CER, 2.7 PF +/-0.25PF, 100V	363705	89536	363705	REF		1
C80	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		1
C81	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C82	CAP, CER, 2.7 PF +/-0.25PF, 100V	363705	89536	363705	REF		1
C83	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C84	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C85	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C86	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C87	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C88	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C89	CAP, CER, 100 PF +/-2%, 100V	369173	80031	2222-638-1010	REF		
C90	CAP, TA, 82 UF +/-20%, 20V	357392	12954	D82GS2D20M	REF		
C91	CAP, TA, 82 UF +/-20%, 20V	357392	12954	D82GS2D20M	REF		
C92	CAP, MYLAR, 0.033 UF +/-10%, 250V	234492	73445	C280MAE/A33K	1		
C93	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C94	CAP, CER, 0.22 UF +/-20%, 50V	309849	71590	CW30C224K	REF		
C95	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D225X0020HA1	3		
C96	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D225X0020HA1	REF		
C97	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C98	CAP, CER, 470 PF +/-10%, 50V	513085	89536	513085	REF		
C99	CAP, CER, 470 PF +/-10%, 50V	513085	89536	513085	REF		

Table 6-10. A3A3 Delay Discriminator PCB Assembly (cont)

REF OES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NO TE
C102	CAP, MYLAR, 0.22 UF +/-10%, 100V	436113	73445	C280MAH/A220K	REF		
C103	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D225X0020HA1	REF		
C104	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C105	CAP, TA, 68 UF 6V/8V	519702	56289	196D686X0008KE4	2		
C106	CAP, TA, 68 UF 6V/8V	519702	56289	196D686X0008KE4	REF		
CR1	DIODE, SI, SMALL SIGNAL	313247	28484	HP5082-6264	2	1	
CR2	DIODE, SI, SMALL SIGNAL	313247	28484	HP5082-6264	REF		
CR3	DIODE, RF ATTENUATING	508077	26629	KS8379	6	2	
CR4	DIODE, RF ATTENUATING	508077	26629	KS8379	REF		
CR5	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	20	4	
CR6	DIODE, SET OF 6 (PART OF CR7-CR11)	508051	89536	508051	1	1	1
CR7	(PART OF CR6)						1
CR8	(PART OF CR6)				REF		1
CR9	(PART OF CR6)				REF		1
CR10	(PART OF CR6)				REF		1
CR11	(PART OF CR6)				REF		1
CR12	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR13	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR14	DIODE, SET OF 3 (PART OF CR15 & CR40)	508085	89536	508085	1	1	1
CR15	(PART OF CR14)						1
CR16	DIODE, ZENER	357848	04713	SZG20118	2	1	
CR17	DIODE, ZENER	357848	04713	SZG20118	REF		
CR18	DIODE, RF ATTENUATING	508077	26629	KS8379	REF		1
CR19	DIODE, RF ATTENUATING	508077	26629	KS8379	REF		1
CR20	DIODE, RF ATTENUATING	508077	26629	KS8379	REF		1
CR21	DIODE, RF ATTENUATING	508077	26629	KS8379	REF		1
CR22	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR23	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR24	DIODE, SMALL SIGNAL	402776	28480	HP3379	4	1	1
CR25	DIODE, SMALL SIGNAL	402776	28480	HP3379	REF		1
CR26	DIODE, SMALL SIGNAL	402776	28480	HP3379	REF		1
CR27	DIODE, SMALL SIGNAL	402776	28480	HP3379	REF		1
CR28	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR29	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR30	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR31	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR32	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR33	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR34	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR35	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR36	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR37	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR38	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR39	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR40	--(PART OF CR14)						
CR41	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR42	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR43	DIODE, SI, HIGH-SPEED SWITCHING	203323	07910	1N4448	REF		
CR44	DIODE, ZENER	159798	04713	1N751A	2	1	
CR45	DIODE, ZENER	159798	04713	1N751A	REF		

Table 6-10. A3A3 Delay Discriminator PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NO TE
J1	CONNECTOR, POST	267500	00779	87022-1	7		
J2	CONNECTOR, POST	267500	00779	87022-1	REF		
J3	CONNECTOR, POST	267500	00779	87022-1	REF		
J10	CONNECTOR, RF, SMA	512087	16733	705147-001	1		
K1	RELAY, DPDT	407536	71482	HFW1230K05	1		
K2	RELAY, SPST, 3W, 28VDC	461434	15636	R7254-1	3		
K3	RELAY, SPST, 3W, 28VDC	461434	15636	R7254-1	REF		
K4	RELAY, SPST, 3W, 28VDC	461434	15636	R7254-1	REF		
L1	INDUCTOR, 0.47 UH +/-10%, 1060 mA	320929	24759	MRO.47	9		1
L2	INDUCTOR, 0.47 UH +/-10%, 1060 mA	320929	24759	MRO.47	REF		1
L3	INDUCTOR, 0.47 UH +/-10%, 1060 mA	320929	24759	MRO.47	REF		1
L4	INDUCTOR, 0.47 UH +/-10%, 1060 mA	320929	24759	MRO.47	REF		1
L6	INDUCTOR, 0.1 UH	257154	24759	MR-0.10	3		1
L7	INDUCTOR, 0.1 UH	257154	24759	MR-0.10	REF		1
L8	INDUCTOR, 0.1 UH	257154	24759	MR-0.10	REF		1
L18	INDUCTOR, 0.47 UH +/-10%, 1060 mA	320929	24759	MRO.47	REF		1
L19	INDUCTOR, 0.47 UH +/-10%, 1060 mA	320929	24759	MRO.47	REF		1
L20	INDUCTOR, 0.47 UH +/-10%, 1060 mA	320929	24759	MRO.47	REF		1
L21	INDUCTOR, 0.47 UH +/-10%, 1060 mA	320929	24759	MRO.47	REF		1
L22	INDUCTOR, 0.47 UH +/-10%, 1060 mA	320929	24759	MRO.47	REF		1
L23	INDUCTOR, 0.22 UH, 2050 mA	261735	24759	MRO.22	1		
MP1	INSERTS, BOARD (NOT SHOWN)	376418	89536	376418	67		
MP2	AIDE, PCB PULL	541730	89536	541730	4		
MP3	HEADER, DIODE	607747	89536	607747	1		
P1	COMPONENT LEAD, SPRING TYPE	544056	89536	544056	15		
Q1	TRANSISTOR, SI, PNP	225599	07263	2N4250	2		1
Q2	TRANSISTOR, SI, PNP	225599	07263	2N4250	REF		
Q3	TRANSISTOR, SI, NPN	346916	89536	346916	1		1
Q4⊙	TRANSISTOR, D-MOS	507905	18324	SD305EE	3		1
Q5⊙	TRANSISTOR, D-MOS	507905	18324	SD305EE	REF		
Q6	TRANSISTOR, DUAL, NPN	478099	12040	LM3940M	1		1
Q7	TRANSISTOR, FIELD EFFECT	477729	18324	SD213EE	1		1
Q9⊙	TRANSISTOR, D-MOS	507905	18324	SD305EE	REF		
Q10	TRANSISTOR, SI, NPN	218396	04713	2N3904	1		1
Q11	TRANSISTOR, SI, PNP	402586	04713	2N2905A	1		1
R1	RES, DEP. CAR, 4.7 +/-5%, 1/4W	441584	80031	CR251-4-5P4E7	1		
R2	RES, DEP. CAR, 430 +/-5%, 1/4W	441568	80031	CR251-4-5P430E	2		
R3	RES, DEP. CAR, 390 +/-5%, 1/4W	441543	80031	CR251-4-5P390E	2		
R4	RES, DEP. CAR, 330 +/-5%, 1/4W	368720	80031	CR251-4-5P330E	2		
R5	RES, DEP. CAR, 680 +/-5%, 1/4W	368779	80031	CR251-4-5P680E	3		
R6	RES, COMP, 47 +/-5%, 1/8W	512061	01121	BB4705	3		1
R7	RES, DEP. CAR, 10 +/-5%, 1/4W	340075	80031	CR251-4-5P10E	3		
R8	RES, DEP. CAR, 68 +/-5%, 1/4W	414532	80031	CR251-4-5P68E	1		
R9	RES, DEP. CAR, 47 +/-5%, 1/4W	441592	80031	CR251-4-5P47E	4		
R10	RES, DEP. CAR, 11 +/-5%, 1/4W	442160	80031	CR251-4-5P11E	2		
R11	RES, DEP. CAR, 11 +/-5%, 1/4W	442160	80031	CR251-4-5P11E	REF		
R12	RES, DEP. CAR, 110 +/-5%, 1/4W	442285	80031	CR251-4-5P11E	1		
R13	RES, MTL. FILM, 3.92K +/-1%, 1/8W	294801	91637	CMF553921F	1		
R14	RES, MTL. FILM, 14.7K +/-1%, 1/8W	226225	91637	CMF551472F	3		
R15	RES, DEP. CAR, 560 +/-5%, 1/4W	385948	80031	CR251-4-5P560E	1		

Table 6-10. A3A3 Delay Discriminator PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
R16	RES, MTL. FILM, 14.7K +/-1%, 1/8W	226225	91637	CMF551472F	REF		
R17	RES, DEP. CAR. 39K +/-5%, 1/4W	442400	80031	CR251-4-5P39K	1		
R18	RES, MTL. FILM, 14.7K +/-1%, 1/8W	226225	91637	CMF551472F	REF		
R19	RES, DEP. CAR. 4.7K +/-5%, 1/4W	348821	80031	CR251-4-5P4K7	4		
R20	RES, DEP. CAR. 1.5M +/-5%, 1/4W	349001	80031	CR251-4-5P1M5	1		
R21	RES, DEP. CAR. 10 +/-5%, 1/4W	340075	80031	CR251-4-5P10E	REF		
R22	RES, DEP. CAR. 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	4		
R23	RES, DEP. CAR. 470K +/-5%, 1/4W	342634	80031	CR251-4-5P470K	1		1
R24	RES, VAR. 25K +/-10%, 1/2W	494591	11236	360T-253A	3		1
R25	RES, DEP. CAR. 12K +/-5%, 1/4W	348847	80031	CR251-4-5P12K	1		
R26	RES, DEP. CAR. 100K +/-5%, 1/4W	348920	80031	CR251-4-5P100K	1		
R27	RES, DEP. CAR. 100 +/-5%, 1/4W	348771	80031	CR251-4-5P100E	4		
R28	RES, DEP. CAR. 47K +/-5%, 1/4W	348896	80031	CR251-4-5P47K	4		
R29	RES, DEP. CAR. 430 +/-5%, 1/4W	441568	80031	CR251-4-5P430E	REF		
R30	RES, DEP. CAR. 47 +/-5%, 1/4W	441592	80031	CR251-4-5P47E	REF		1
R31	RES, DEP. CAR. 20K +/-5%, 1/4W	441477	80031	CR251-4-5P20K	1		1
R32	RES, MTL. FILM, 7.50K +/-1%, 1/8W	223529	91637	CMF557501F	2		
R33	RES, MTL. FILM, 3.74K +/-1%, 1/8W	272096	91637	CMF553741F	1		
R34	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	9		
R35	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R36	RES, COMP, 47 +/-5%, 1/8W	512061	01121	BB4705	REF		
R37	RES, DEP. CAR. 100 +/-5%, 1/4W	348771	80031	CR251-4-5P100E	REF		
R40	RES, DEP. CAR. 100 +/-5%, 1/4W	348771	80031	CR251-4-5P100E	REF		
R41	RES, COMP, 51 +/-5%, 1/8W	266262	01121	BB5105	2		
R42	RES, COMP, 47 +/-5%, 1/8W	512061	01121	BB4705	REF		
R43	RES, MTL. FILM, 1.65K +/-1%, 1/8W	293662	91637	CMF551651F	1		
R44	RES, MTL. FILM, 825 +/-1%, 1/8W	294892	91637	CMF558250F	1		
R45	RES, VAR. 200 +/-10%, 1/2W	275743	89536	275743	1		
R46	RES, DEP. CAR. 47 +/-5%, 1/4W	441592	80031	CR251-4-5P47E	REF		1
R47	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R48	RES, VAR. 1M +/-10%, 1/2W	276691	89536	276691	2		1
R49	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R50	RES, VAR. 1M +/-10%, 1/2W	276691	89536	276691	REF		1
R51	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R52	RES, DEP. CAR. 16K +/-5%, 1/4W	442376	80031	CR251-4-5P16K	1		
R53	RES, VAR. 25K +/-10%, 1/2W	494591	11236	360T-253A	REF		
R54	RES, MTL. FILM, 7.50K +/-1%, 1/8W	223529	91637	CMF557501F	REF		
R55	RES, DEP. CAR. 680 +/-5%, 1/4W	368779	80031	CR251-4-5P680E	REF		
R56	RES, MTL. FILM, 10.0K +/-1%, 1/8W	168260	91637	CMF551002F	2		
R57	RES, DEP. CAR. 620 +/-5%, 1/4W	442319	80031	CR251-4-5P620E	2		
R58	RES, COMP, 51 +/-5%, 1/8W	266262	01121	BB5105	REF		
R59	RES, MTL. FILM, 3.83K +/-1%, 1/8W	235143	91637	CMF553831F	1		
R60	RES, MTL. FILM, 2.49K +/-1%, 1/8W	226209	91637	CMF552491F	3		
R61	RES, MTL. FILM, 12.4K +/-1%, 1/8W	261644	91637	CMF551242F	1		
R62	RES, DEP. CAR. 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	REF		
R63	RES, MTL. FILM, 8.25K +/-1%, 1/8W	294959	91637	CMF558251F	1		
R64	RES, MTL. FILM, 1M +/-1%, 1/8W	268797	91637	CMF551004F	1		
R65	RES, DEP. CAR. 1.5K +/-5%, 1/4W	343418	80031	CR251-4-5P1K5	2		
R66	RES, DEP. CAR. 3.3K +/-5%, 1/4W	348813	80031	CR251-4-5P3K3	2		
R67	RES, VAR. 25K +/-10%, 1/2W	494591	11236	360T-253A	REF		

Table 6-10. A3A3 Delay Discriminator PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
R68	RES, MTL. FILM, 1.5K +/-1%, 1/8W	313098	91637	CMF551501F	1		
R69	RES, DEP. CAR. 30 +/-5%, 1/4W	442228	80031	CR251-4-5P30E	2		
R70	RES, MTL. FILM, 499 +/-1%, 1/8W	168211	91637	CMF554990F	3		
R71	RES, MTL. FILM, 10.0K +/-1%, 1/8W	168260	91637	CMF551002F	REF		
R72	RES, MTL. FILM, 54.9 +/-1%, 1/8W	305920	91637	CMF5554R9E	1		
R73	RES, DEP. CAR. 330 +/-5%, 1/4W	368720	80031	CR251-4-5P330E	REF		
R74	RES, MTL. FILM, 16.9K +/-1%, 1/8W	267146	91637	CMF551692F	1		
R75	RES, MTL. FILM, 100K +/-1%, 1/8W	248807	91637	CMF551003F	3		
R76	RES, MTL. FILM, 100K +/-1%, 1/8W	248807	91637	CMF551003F	REF		
R77	RES, MTL. FILM, 100K +/-1%, 1/8W	248807	91637	CMF551003F	REF		
R78	RES, DEP. CAR. 4.7K +/-5%, 1/4W	348821	80031	CR251-4-5P4K7	REF		
R79	RES, DEP. CAR. 8.2K +/-5%, 1/4W	441675	80031	CR251-4-5P8K2	1		
R80	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R81	RES, DEP. CAR. 11K +/-5%, 1/4W	441360	80031	CR251-4-5P11K	1		
R82	RES, DEP. CAR. 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	REF		
R83	RES, MTL. FILM, 499 +/-1%, 1/8W	168211	91637	CMF554990F	REF		
R84	RES, MTL. FILM, 3.16K +/-1%, 1/8W	235291	91637	CMF553161F	1		
R85	RES, DEP. CAR. 30 +/-5%, 1/4W	442228	80031	CR251-4-5P30E	REF		
R86	RES, VAR. 10K +/-10%, 1/2W	309674	75378	360T-103A	1		
R89	RES, DEP. CAR. 150K +/-5%, 1/4W	348938	80031	CR251-4-5P150K	2		
R90	RES, MTL. FILM, 499 +/-1%, 1/8W	168211	91637	CMF554990F	REF		
R91	RES, MTL. FILM, 2.49K +/-1%, 1/8W	226209	91637	CMF552491F	REF		
R92	RES, MTL. FILM, 2.49K +/-1%, 1/8W	226209	91637	CMF552491F	REF		
R93	RES, MTL. FILM, 14 +/-1%, 1/8W	494484	91637	CMF5514R0F	1		
R95	RES, COMP, 750 +/-5%, 1/2W	108894	01121	EB7515	1		
R96	RES, MTL. FILM, 150 +/-1%, 1/8W	448555	91637	CMF551500F	1		
R97	RES, DEP. CAR. 620 +/-5%, 1/4W	442319	80031	CR251-4-5P620E	REF		
R99	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R100	RES, DEP. CAR. 2.4K +/-5%, 1/4W	441493	80031	CR251-4-5P2K4	1		
R103	RES, VAR. 500 +/-10%, 1/2W	520783	32997	3299W-CR2-501	1		
R104	RES, DEP. CAR. 200K +/-5%, 1/4W	441485	80031	CR251-4-5P200K	2		
R105	RES, DEP. CAR. 47 +/-5%, 1/4W	441592	80031	CR251-4-5P47E	REF		
R106	RES, MTL. FILM, 1.00K +/-1%, 1/8W	168229	91637	CMF551001F	4		
R107	RES, DEP. CAR. 1M +/-5%, 1/4W	348987	80031	CR251-4-5P1M	2		
R108	RES, DEP. CAR. 10 +/-5%, 1/4W	340075	80031	CR251-4-5P10E	REF		
R109	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R110	RES, VAR. 100 +/-10%, 1/2W	381913	32997	3299W-CR2-101	1		1
R113	RES, DEP. CAR. 0.5 +/-5%, 1/4W	381954	80031	CR251-4-5P0.5E	1		
R114	RES, MTL. FILM, 73.2K +/-1%, 1/8W	237222	91637	CMF557322F	1		
R115	RES, DEP. CAR. 3K +/-5%, 1/4W	441527	80031	CR251-4-5P3K	1		
R116	RES, DEP. CAR. 200 +/-5%, 1/4W	441451	80031	CR251-4-5P200E	1		
R117	RES, DEP. CAR. 47K +/-5%, 1/4W	348896	80031	CR251-4-5P47K	REF		
R118	RES, DEP. CAR. 47K +/-5%, 1/4W	348896	80031	CR251-4-5P47K	REF		
R119	RES, DEP. CAR. 150K +/-5%, 1/4W	348938	80031	CR251-4-5P150K	REF		
R120	RES, DEP. CAR. 4.7K +/-5%, 1/4W	348821	80031	CR251-4-5P4K7	REF		
R121	RES, DEP. CAR. 2K +/-5%, 1/4W	441469	80031	CR251-4-5P2K	1		
R122	RES, MTL. FILM, 143 +/-1%, 1/8W	192906	91637	CMF551430F	1		
R123	RES, MTL. FILM, 137 +/-1%, 1/8W	235218	91637	CMF551370F	1		
R124	RES, DEP. CAR. 15 +/-5%, 1/4W	348755	80031	CR251-4-5P15E	1		
R125	RES, MTL. FILM, 1.00K +/-1%, 1/8W	168229	91637	CMF551001F	REF		

Table 6-10. A3A3 Delay Discriminator PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
R126	RES, MTL. FILM, 1.00K +/-1%, 1/8W	168229	91637	CMF551001F	REF		
R127	RES, MTL. FILM, 1.00K +/-1%, 1/8W	168229	91637	CMF551001F	REF		
R128	RES, DEP. CAR. 200K +/-5%, 1/4W	441485	80031	CR251-4-5P200K	REF		
R129	RES, DEP. CAR. 390K +/-5%, 1/4W	442475	80031	CR251-4-5P390K	1		
R131	RES, DEP. CAR. 120K +/-5%, 1/4W	441386	80031	CR251-4-5P120K	1		
R132	RES, DEP. CAR. 1M +/-5%, 1/4W	348987	80031	CR251-4-5P1M	REF		
R133	RES, DEP. CAR. 110K +/-5%, 1/4W	442426	80031	CR251-4-5P110K	1		
R134	RES, COMP, 270 +/-5%, 1/2W	159616	01121	EB2715	1		
R135	RES, DEP. CAR. 100 +/-5%, 1/4W	348771	80031	CR251-4-5P100E	REF		
R136	RES, DEP. CAR. 390 +/-5%, 1/4W	441543	80031	CR251-4-5P390E	REF		
R137	RES, DEP. CAR. 47K +/-5%, 1/4W	348896	80031	CR251-4-5P47K	REF		
R138	RES, DEP. CAR. 4.7K +/-5%, 1/4W	348821	80031	CR251-4-5P4K7	REF		
R139	RES, DEP. CAR. 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	REF		
R140	RES, DEP. CAR. 3.3K +/-5%, 1/4W	348813	80031	CR251-4-5P3K3	REF		
R141	RES, DEP. CAR. 1.5K +/-5%, 1/4W	343418	80031	CR251-4-5P1K5	REF		
R142	RES, DEP. CAR. 680 +/-5%, 1/4W	368779	80031	CR251-4-5P680E	REF		
R143	RES, DEP. CAR. 56K +/-5%, 1/4W	441626	80031	CR251-4-5P56K	1		
R144	RES, DEP. CAR. 9.1K +/-5%, 1/4W	441691	80031	CR251-4-5P9K1	1		
R145	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	80031	CR251-4-5P10K	REF		
R146	RES, VAR. 50K +/-10%, 1/2W	335778	11236	360T-503A	1		
R147	RES, MTL. FILM, 124K +/-1%, 1/8W	288407	91637	CMF551243F	1		
R148	RES, MTL. FILM, 36.5K +/-5%, 1/8W	235309	91637	CMF553652F	1		
R149	RES, MTL. FILM, 27.4K +/-1%, 1/8W	241471	91637	CMF552742F	1		
S1	SWITCH, SLIDE, DPDT	393629	10389	23-021-114	1	1	
T1	TRANSFORMER, DIRECT COUPLER	514414	89536	514414	2		1
T2	TRANSFORMER, DIRECT COUPLER	514414	89536	514414	REF		1
T3	TRANSFORMER, STEP-UP	514406	89536	514406	1		1
TP1-TP6	CONNECTOR, TEST POINT	512889	00779	62395-1	6		
U1	IC, HYBRID, 8DB POWER AMP	492801	89536	492801	3	1	
U2	IC, HYBRID, 8DB POWER AMP	492801	89536	492801	REF		
U3	IC, HYBRID, 8DB POWER AMP	492801	89536	492801	REF		
U4	IC, OP-AMP, LO-NOISE	477745	18324	NE5534AN	2	1	
U5	IC, LINEAR, OP-AMP, J-FET INPUT	454454	89536	454454	4	1	1
U6	MIXER, TFM-2	512103	89536	512103	1	1	1
U7	IC, LINEAR, OP-AMP, J-FET INPUT	454454	89536	454454	REF		
U8	IC, LINEAR, OP-AMP, J-FET INPUT	454454	89536	454454	REF		
U9	RESISTOR NETWORK, 10K	500710	89536	500710	1	1	
U10	IC, LINEAR, OP-AMP, J-FET INPUT	454454	89536	454454	REF		
U11	IC, LINEAR, OP-AMP	472779	12040	LF386N	2	1	
U12	IC, LINEAR, OP-AMP	472779	12040	LF386N	REF		
U13	IC, LINEAR, TIMER	402610	18324	NE555N	1	1	
U14	IC, OP-AMP, LO-NOISE	477745	18324	NE5534AN	REF		
U15	RESISTOR NETWORK	380618	89536	380618	1	1	
U16	IC, LINEAR, QUAD COMPARATOR	387233	12040	LM339N	2	1	
U17	IC, HYBRID MOD ATTEN	496950	89536	496950	1	1	
U18	IC, LINEAR, D-MOS FET QUAD ANALOG	507228	18324	SD50021J	1	1	
U19	RESISTOR NETWORK, 10K	412924	89536	412924	1	1	
U20	IC, LINEAR, QUAD COMPARATOR	387233	12040	LM339N	REF		
U21	IC, TTL, SCHOTTKY 3-8 LINE DECODER	407585	01295	SN74LS138N	1	1	
U22	IC, TTL, HEX INVERTER	407593	01295	SN7406N	1	1	

Table 6-10. A3A3 Delay Discriminator PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
U23	HYBRID, 7 DB POWER AMP	492751	89536	492751	1	1	1
W1	HYBRID COUPLER, 3T	526517	89536	526517	1		
W2	HYBRID COUPLER	526558	89536	526558	1		1
W3	HYBRID COUPLER, 3T	526525	89536	526525	1		1
W31	CABLE ASSEMBLY, SEMI-RIGID	524710	89536	524710	1		
W32	CABLE ASSEMBLY, SEMI-RIGID	524728	89536	524728	1		
W33	CABLE ASSEMBLY, DD TO VCO	538249	89536	538249	1		
XQ1	SOCKET, TRANSISTOR	285262	71785	1-33-23-92-045	2		
XQ2	SOCKET, TRANSISTOR	285262	71785	1-33-23-92-045	REF		
XQ6	SOCKET, TRANSISTOR, 8-PIN	408450	89536	408450	1		
XU4	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	9		
XU5	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	REF		
XU7	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	REF		
XU8	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	REF		
XU9	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	4		
XU10	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	REF		
XU11	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	REF		
XU12	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	REF		
XU13	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	REF		
XU14	SOCKET, IC, 8-PIN	478016	91506	308-AG39D	REF		
XU15	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU16	SOCKET, IC, 14-PIN	370304	12040	MM74C906N	3		
XU18	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU20	SOCKET, IC, 14-PIN	370304	12040	MM74C906N	REF		
XU21	SOCKET, IC, 16-PIN	370312	91506	316-AG39D	REF		
XU22	SOCKET, IC, 14-PIN	370304	12040	MM74C906N	REF		
1	THESE COMPONENTS IF ADJUSTED OR REPLACED, REQUIRE REPROGRAMMING OF THE CALIBRATION EPROM. IF YOUR FACILITY IS NOT EQUIPT TO REPROGRAM THE CALIBRATION EPROM, CONTACT YOUR NEAREST FLUKE SERVICE CENTER.						

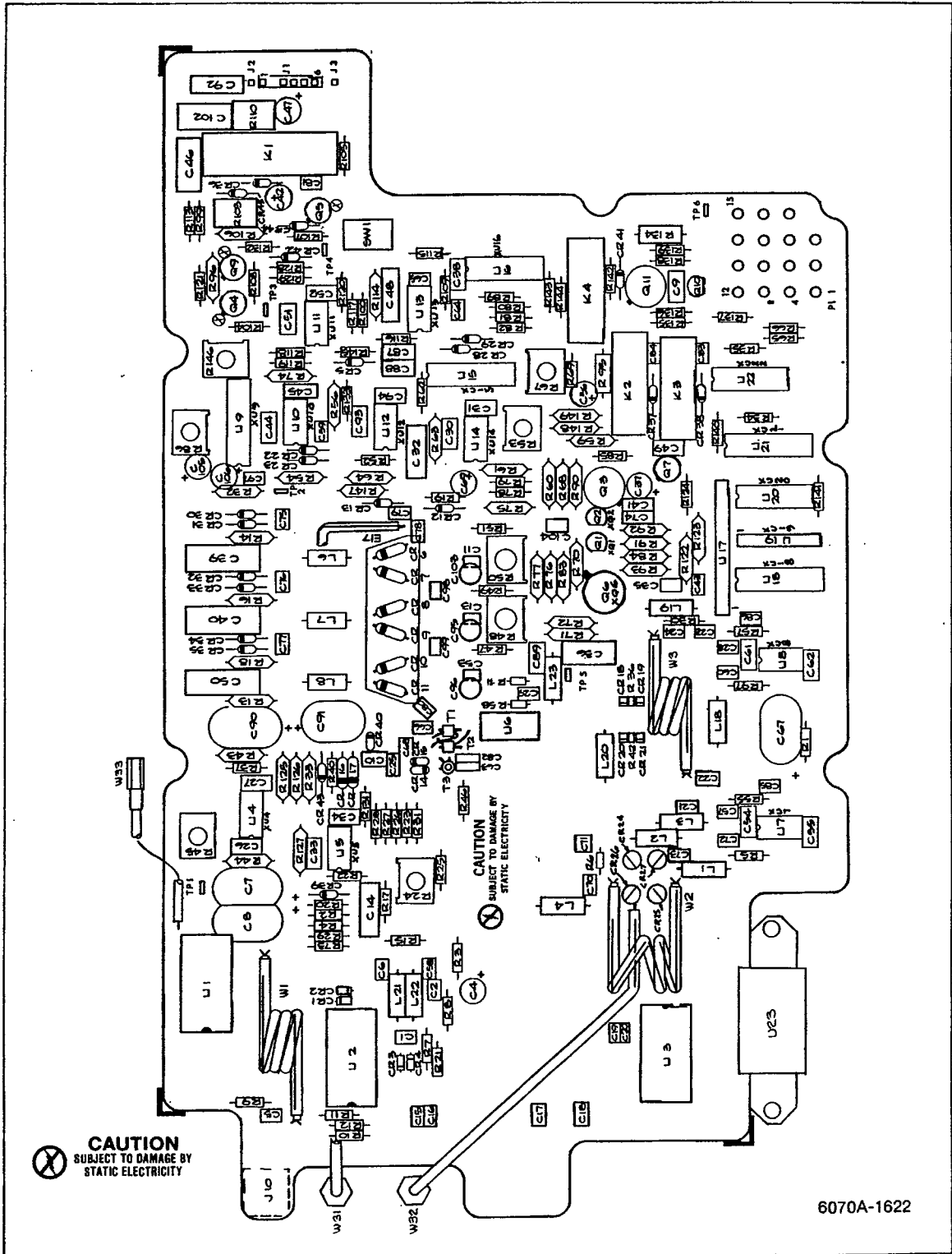


Figure 6-10. A3A3 Delay Discriminator PCB Assembly

Table 6-11. A3A4 N/1 Divider PCB Assembly

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
A3A4	N/1 DIVIDER PCB ASSEMBLY FIGURE 6-11 (6070A-4010-12T)	463547	89536	463547			REF
C1	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	1962225X0020HA1		3	
C2	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	1962225X0020HA1			REF
C3	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1		1	
C4	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M		8	
C5	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M			REF
C6	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M			REF
C7	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M			REF
C8	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M			REF
C9	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M			REF
C10	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M			REF
C11	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D2225X0020HA1			REF
C13	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M			REF
CR1	DIODE, SI, SWITCHING	313247	28480	HP5082-6264		3	1
CR2	DIODE, SI, SWITCHING	313247	28480	HP5082-6264			REF
CR3	DIODE, SI, SWITCHING	313247	28480	HP5082-6264			REF
J1	CONNECTOR, RF, SMB	512095	16733	702033		1	
J2	CONNECTOR, RF, SMB	352450	98291	51-051-0000		1	
J13	CONNECTOR, RF, SMA	512087	16733	705147-001		1	
L1	CHOKER, 6-TURN	320911	89536	320911		2	
L2	CHOKER, 6-TURN	320911	89536	320911			REF
MP1	SOCKET, COMPONENT LEAD (NOT SHOWN)	376418	22526	75060-007		64	
P1-P2	COMPONENT LEAD, SPRING TYPE	544056	00779	50871-1		19	
Q1	TRANSISTOR, SI, PNP	226290	04713	MPS3640		2	1
Q2	TRANSISTOR, SI, PNP	226290	04713	MPS3640			REF
Q3	TRANSISTOR, SI, NPN	248351	04713	MPS918		1	1
R1	RES. COMP, 47 +/-10%, 1/8W	272211	01121	BB4701		2	
R2	RES. COMP, 47 +/-10%, 1/8W	272211	01121	BB4701			REF
R3	RES. COMP, 220 +/-10%, 1/8W	153957	01121	BB2211		2	
R4	RES. COMP, 220 +/-10%, 1/8W	153957	01121	BB2211			REF
R5	RES. COMP, 10 +/-10%, 1/8W	321125	01121	BB1001		2	
R6	RES. COMP, 10 +/-10%, 1/8W	321125	01121	BB1001			REF
R7	RES, DEP. CAR. 560 +/-5%, 1/4W	385948	80031	CR251-4-5P561E		6	
R8	RES, DEP. CAR. 560 +/-5%, 1/4W	385948	80031	CR251-4-5P561E			REF
R9	RES, DEP. CAR. 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K		1	
R10	RES, DEP. CAR. 560 +/-5%, 1/4W	385948	80031	CR251-4-5P561E			REF
R11	RES, DEP. CAR. 91 +/-5%, 1/4W	441683	80031	CR251-4-5P91E		1	
R12	RES, DEP. CAR. 150 +/-5%, 1/4W	343442	80031	CR251-4-5P150E		2	
R13	RES, DEP. CAR. 430 +/-5%, 1/4W	441568	80031	CR251-4-5P431E		1	
R14	RES, DEP. CAR. 560 +/-5%, 1/4W	385948	80031	CR251-4-5P561E			REF
R15	RES, DEP. CAR. 560 +/-5%, 1/4W	385948	80031	CR251-4-5P561E			REF
R16	RES, DEP. CAR. 560 +/-5%, 1/4W	385948	80031	CR251-4-5P561E			REF
R17	RES, DEP. CAR. 470 +/-5%, 1/4W	343434	80031	CR251-4-5P471E		2	
R18	RES, DEP. CAR. 470 +/-5%, 1/4W	343434	80031	CR251-4-5P471E			REF
R19	RES, DEP. CAR. 39 +/-5%, 1/4W	340836	80031	CR251-4-5P39E		1	
R20	RES, DEP. CAR. 10 +/-5%, 1/4W	340075	80031	CR251-4-5P10E		1	
R21	RES, DEP. CAR. 100 +/-5%, 1/4W	348771	80031	CR251-4-5P100E		1	
R22	RES, DEP. CAR. 150 +/-5%, 1/4W	343442	80031	CR251-4-5P150E			REF

Table 6-11. A3A4 N/1 Divider PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NOTE
R23	RES, DEP. CAR, 4.7K +/-5%, 1/4W	348821	80031	CR251-4-5P4K7	6		
R24	RES, DEP. CAR, 390 +/-5%, 1/4W	441543	80031	CR251-4-5P390E	1		
R25	RES, DEP. CAR, 4.7K +/-5%, 1/4W	348821	80031	CR251-4-5P4K7	REF		
R26	RES, DEP. CAR, 4.7K +/-5%, 1/4W	348821	80031	CR251-4-5P4K7	REF		
R27	RES, DEP. CAR, 4.7K +/-5%, 1/4W	348821	80031	CR251-4-5P4K7	REF		
R28	RES, DEP. CAR, 4.7K +/-5%, 1/4W	348821	80031	CR251-4-5P4K7	REF		
R29	RES, DEP. CAR, 4.7K +/-5%, 1/4W	348821	80031	CR251-4-5P4K7	REF		
R30	RES, COMP, 100 +/-10%, 1/8W	261826	01121	BB1011	1		
S1	SWITCH, SLIDE, DPDT	393629	10389	23-021-114	1	1	
TP1-TP3	TEST POINT	512889	02660	62395-1834	6		
TP5-TP7	TEST POINT	512889	02660	62395-1834	REF		
U1	IC, 8-BIT ADDRESSABLE LATCH	419242	01295	SN74LS259N	2	1	
U2	IC, 8-BIT ADDRESSABLE LATCH	419242	01295	SN74LS259N	REF		
U3	IC, TTL LO-PWR SCHTKY OCTAL "D" TYPE F/F	454892	01295	SN74LS273N	2	1	
U4	IC, TTL, QUAD, 2-INPUT, POS NAND GATE	393033	01295	SN74LS00N	1	1	
U5	IC, TTL DUAL D-TYPE FLIP/FLOP	393124	01295	SN74LS74N	2	1	
U6	IC, TTL DUAL D-TYPE FLIP/FLOP	393124	01295	SN74LS74N	REF		
U7	IC, TTL, HEX INVERTER	393058	01295	SN74LS04N	1	1	
U8	IC, TTL, SYNC DECADE RATE MULTIPLIER	454884	01295	SN74167N	1	1	
U9	IC, TTL LO-PWR SCHTKY OCTAL "D" TYPE F/F	454892	01295	SN74LS273N	REF		
U10	IC, TTL, QUAD, 2-INPUT NOR GATE	393041	01295	SN74LS02N	1	1	
U11	RESISTOR NETWORK, 4.7K	494690	89536	494690	2	1	
U12	RESISTOR NETWORK, 4.7K	494690	89536	494690	REF		
U13	IC, ECL, 2-MOD PRESCALER, PHASE LOCKED	454900	89536	454900	1	1	
U14	IC, ECL, UNIVERSAL DECADE COUNTER	525329	18324	10137F	3	1	
U15	IC, ECL, UNIVERSAL DECADE COUNTER	525329	18324	10137F	REF		
U16	IC, ECL, UNIVERSAL DECADE COUNTER	525329	18324	10137F	REF		
U17	IC, ECL, DUAL TYPE "D", M-S, F-F	525345	04713	MC10231L	1	1	
U18	RESISTOR NETWORK, 510 +/-2%, 1/8W	459974	89536	459974	1	1	
U19	IC, ECL, QUAD, 2-INPUT NOR, 16-PIN DIP	380881	04713	MC10102P	1	1	
U20	IC, DUAL, "D" TYPE, EDGE TRIGGERED, F/F	418269	01295	SN74S74N	1	1	
XU1	SOCKET, IC, 16-PIN DIP	370312	91506	316-AG39D	5		
XU2	SOCKET, IC, 16-PIN DIP	370312	91506	316-AG39D	REF		
XU3	SOCKET, IC, 20-PIN	454421	01295	C932002	2		
XU4	SOCKET, IC, 14-PIN	370304	12040	MM74C906N	6		
XU5	SOCKET, IC, 14-PIN	370304	12040	MM74C906N	REF		
XU6	SOCKET, IC, 14-PIN	370304	12040	MM74C906N	REF		
XU7	SOCKET, IC, 14-PIN	370304	12040	MM74C906N	REF		
XU8	SOCKET, IC, 16-PIN DIP	370312	91506	316-AG39D	REF		
XU9	SOCKET, IC, 20-PIN	454421	01295	C932002	REF		
XU10	SOCKET, IC, 14-PIN	370304	12040	MM74C906N	REF		
XU17	SOCKET, IC, 16-PIN DIP	370312	91506	316-AG39D	REF		
XU19	SOCKET, IC, 16-PIN DIP	370312	91506	316-AG39D	REF		
XU20	SOCKET, IC, 14-PIN	370304	12040	MM74C906N	REF		

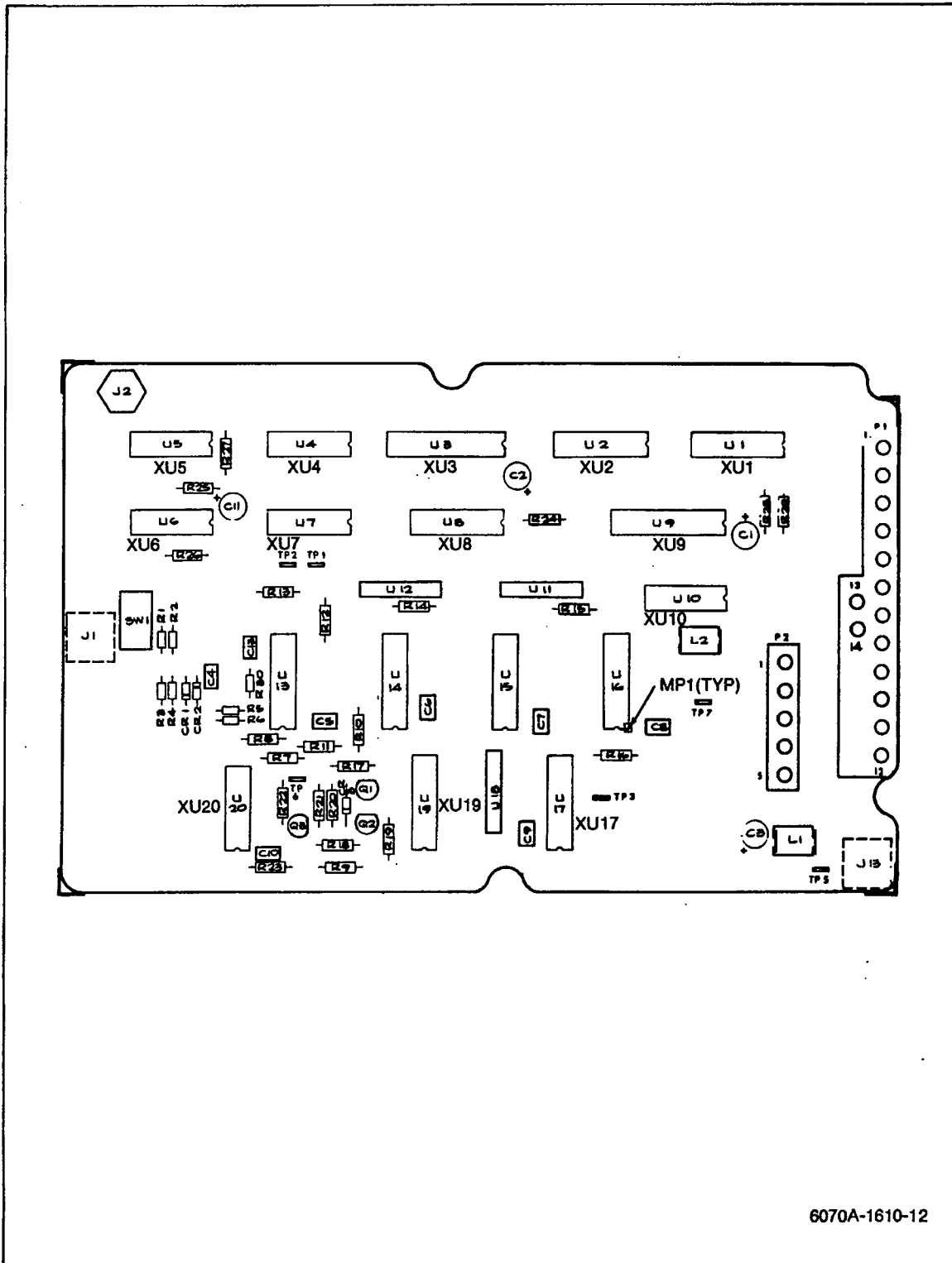
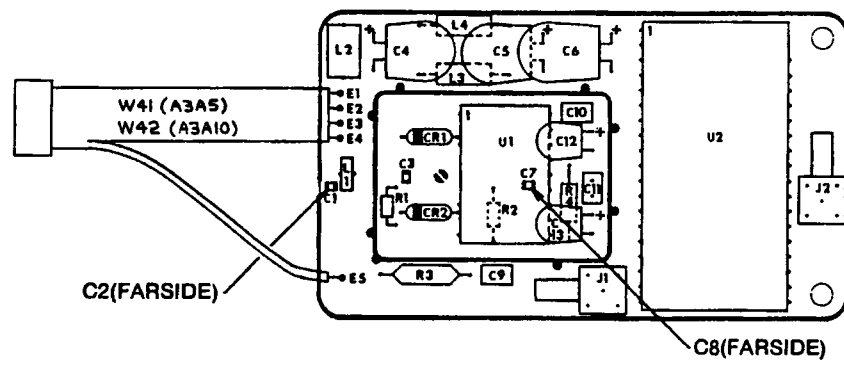


Figure 6-11. A3A4 N/1 Divider PCB Assembly

Table 6-12. A3A5 VCO Resonator PCB Assembly

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NO TE
A3A5	VCO RESONATOR PCB ASSEMBLY FIGURE 6-12 (6070A-4012T) (MATCHED TO A3A10 PCB)	463364	89536	463364	REF		1
C1	CAP, CHIP, 1000 PF +/-5%, 50V	484378	89536	484378	2		
C2	CAP, CHIP, 1000 PF +/-5%, 50V	484378	89536	484378	REF		
C3	CAP, CHIP, 22 PF +/-5%, 50V	484360	89536	484360	1		
C4	CAP, TA, 68 UF +/-20%, 15V	193615	56289	196D686X0015LA3	1		
C5	CAP, TA, 82 UF +/-20%, 20V	357392	12954	D82GS2D20M	2		
C6	CAP, TA, 82 UF +/-20%, 20V	357392	12954	D82GS2D20M	REF		
C7	CAP, CHIP, 330 PF +/-5%, 50V	512038	89536	512038	2		
C8	CAP, CHIP, 330 PF +/-5%, 50V	512038	89536	512038	REF		
C9	CAP, CER. 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	3		
C10	CAP, CER. 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C11	CAP, CER. 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M	REF		
C12	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1	2		
C13	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1	REF		
CR1	DIODE, VARACTOR TUNING (SET OF 4)	534875	91462	DKV6534CM4	1	1	2
CR2	PART OF CR1						2
J1	CONN, COAX, SNAP-ON RECPT, PCB MOUNT	353243	98291	51-053-0000	2		
J2	CONN, COAX, SNAP-ON RECPT, PCB MOUNT	353243	98291	51-053-0000	REF		
L1	INDUCTOR, 10T	463448	89536	463448	1		
L2	CHOKE, 6-TURN	320911	89536	320911	1		
L3	CHOKE, RF, 180 UH +/-5%, 300 MA	174771	72259	WEE-180	2		
L4	CHOKE, RF, 180 UH +/-5%, 300 MA	174771	72259	WEE-180	REF		
R1	RES, COMP, 22 +/-5%, 1/8W	474767	01121	BB1-82205	2		
R2	RES, COMP, 22 +/-5%, 1/8W	474767	01121	BB1-82205	REF		
R3	RES, MTL. FILM, 84.5 +/-1%, 1/8W	236851	91637	CMF558452F	1		
R4	RES, DEP. CAR, 560 +/-5%, 1/4W	385948	80031	CR251-4-5P560E	1		
U1	VCO, HYBRID ASSEMBLY	492793	89536	492793	1	1	
U2	VCO BUFFER, HYBRID ASSEMBLY	492736	89536	492736	1	1	
W41	CABLE ASSEMBLY	508986	89536	508986	1		
1	BEFORE ORDERING SPARE PARTS OR SPARE PCB ASSEMBLIES, PLEASE CONTACT YOUR NEAREST JOHN FLUKE SERVICE CENTER FOR INFORMATION						
2	MATCHED TO CR1/CR2 LOCATED ON ASSEMBLY A3A10						



6070A-1612

Figure 6-12. A3A5 VCO Resonator PCB Assembly

Table 6-13. A3A6 Single Sideband Mixer PCB Assembly

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	NO TE
A3A6	SINGLE SIDEBAND MIXER PCB ASSEMBLY FIGURE 6-13 (6070A-4007T)	463513	89536	463513			REF
C1	CAP, TA, 22 UF +/-20%, 35V	394775	56289	196D226X0035TE4		1	
C2	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1		3	
C3	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1			REF
C4	CAP, TA, 22 UF +/-20%, 15V	423012	56289	196D226X0015KA1			REF
C5	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M		16	
C6	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M			REF
C7	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M			REF
C8	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M			REF
C9	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M			REF
C10	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D2225X0020HA1		6	
C11	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M			REF
C12	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M			REF
C14	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M			REF
C15	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M			REF
C16	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M			REF
C17	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D2225X0020HA1			REF
C18	CAP, CERM, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022		4	
C19	CAP, CERM, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022			REF
C20	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M			REF
C21	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D2225X0020HA1			REF
C22	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D2225X0020HA1			REF
C23	CAP, CER, 0.001 UF +/-20%, 500V	402966	72982	8121-A100-W5R-102M		1	
C24	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1		3	
C25	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1			REF
C26	CAP, TA, 10 UF +/-20%, 35V	417683	56289	196D106X0035PE4		1	
C27	CAP, MYLAR, .047 UF +/-10%, 250V	162008	73445	C280MAE/A47K		1	
C28	CAP, CER, 100 PF +/-2%, 100V	512848	89536	512848		1	
C30	CAP, TA, 10 UF +/-20%, 20V	330662	56289	196D106X0020KA1			REF
C31	CAP, CER, 360 PF +/-5%, 50V	528471	89536	528471		1	
C32	CAP, CER, 620 PF +/-5%, 50V	528513	89536	528513		2	
C33	CAP, CER, 150 PF +/-5%, 100V	512988	89536	512988		1	
C34	CAP, CER, 1800 PF +/-5%, 50V	528547	89535	528547		1	
C35	CAP, CER, 68 PF +/-2%, 100V	362756	89536	362756		1	
C36	CAP, CER, 620 PF +/-5%, 50V	528513	89536	528513			REF
C37	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M			REF
C38	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M			REF
C39	CAP, TA, 0.47 UF +/-20%, 35V	161349	56289	196D474X0035HA1		1	
C40	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D2225X0020HA1			REF
C41	CAP, CERM, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022			REF
C42	CAP, CER, 1000 PF +/-5%, 50V	528539	89536	528539		2	
C43	CAP, CER, 3300 PF +/-5%, 50V	528554	89536	528554		2	
C44	CAP, CER, 5600 PF +/-5%, 50V	528596	89536	528596		2	
C45	CAP, CERM, 0.22 UF +/-20%, 50V	309849	72982	8131-050-651-022			REF
C46	CAP, CER, 1000 PF +/-5%, 50V	528539	89536	528539			REF
C47	CAP, CER, 3300 PF +/-5%, 50V	528554	89536	528554			REF
C48	CAP, CER, 5600 PF +/-5%, 50V	528596	89536	528596			REF
C49	CAP, TA, 2.2 UF +/-20%, 20V	161927	56289	196D2225X0020HA1			REF

Table 6-13. A3A6 Single Sideband Mixer PCB Assembly (cont)

REF DES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N O T E
C50	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M	REF		
C51	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M	REF		
C52	CAP, CER, 0.005 UF +/-20%, 50V	255471	51642	200-050-601-502M	REF		
CR1	DIODE, SI, SWITCHING	313247	28480	HP5082-6264	4		1
CR2	DIODE, SI, SWITCHING	313247	28480	HP5082-6264	REF		
CR3	DIODE, SI, SWITCHING	313247	28480	HP5082-6264	REF		
CR4	DIODE, SI, SWITCHING	313247	28480	HP5082-6264	REF		
CR5	DIODE, SI, HI-SPEED SWITCHING	203323	07910	1N4448	3		1
CR8	DIODE, 2 PELLETT	375477	09214	MPD200	4		1
CR9	DIODE, 2 PELLETT	375477	09214	MPD200	REF		
CR10	DIODE, 2 PELLETT	375477	09214	MPD200	REF		
CR11	DIODE, 2 PELLETT	375477	09214	MPD200	REF		
CR12	DIODE, SI, HI-SPEED SWITCHING	203323	07910	1N4448	REF		
CR13	DIODE, SI, HI-SPEED SWITCHING	203323	07910	1N4448	REF		
J1	CONNECTOR, RF, SMB	512095	16733	702033	2		
J2	CONNECTOR, RF, SMB	512095	16733	702033	REF		
J3	CONNECTOR, POST	267500	00799	86144-2	5		
L1	CHOKE, 6-TURN	320911	89536	320911	13		
L2	CHOKE, 6-TURN	320911	89536	320911	REF		
L3	CHOKE, 6-TURN	320911	89536	320911	REF		
L4	CHOKE, 6-TURN	320911	89536	320911	REF		
L5	CHOKE, 6-TURN	320911	89536	320911	REF		
L6	INDUCTOR, 1000 UH +/-5%	461541	24759	MP-1000	1		
L7	INDUCTOR, 1800 UH +/-10%	461517	24759	MR-1800	1		
L8	INDUCTOR, 330 UH +/-10%	479303	24759	MR-330	1		
L9	CHOKE, 6-TURN	320911	89536	320911	REF		
L10	INDUCTOR, 56 UH +/-5%	461525	24759	MP-56	2		
L11	CHOKE, 6-TURN	320911	89536	320911	REF		
L12	CHOKE, 6-TURN	320911	89536	320911	REF		
L13	INDUCTOR, 56 UH +/-5%	461525	24759	MP-56	REF		
L14	CHOKE, 6-TURN	320911	89536	320911	REF		
L15	CHOKE, 6-TURN	320911	89536	320911	REF		
L16	CHOKE, 6-TURN	320911	89536	320911	REF		
L17	CHOKE, 6-TURN	320911	89536	320911	REF		
L18	CHOKE CORE	321182	89536	321182	4		
L19	CHOKE, 6-TURN	320911	89536	320911	REF		
L20	CHOKE CORE	321182	89536	321182	REF		
L21	CHOKE CORE	321182	89536	321182	REF		
L22	CHOKE CORE	321182	89536	321182	REF		
MP1	AIDE, PCB PULL (NOT SHOWN)	541730	89536	541730	2		
MP2	FENCE, SSB MIXER (NOT SHOWN)	541664	89536	541664	1		
MP3	SHIELD, SSB MIXER (NOT SHOWN)	515965	89536	515965	1		
P1	COMPONENT LEAD, SPRING TYPE	544056	89536	544056	5		
Q1	TRANSISTOR, SI, PNP	402586	04713	2N905A	1		
Q2	TRANSISTOR, SI, PNP	229898	04713	MPS6522	1		
R1	RES, COMP, 220 +/-10%, 1/8W	153957	01121	BB1-822010	2		
R2	RES, COMP, 220 +/-10%, 1/8W	153957	01121	BB1-822010	REF		
R3	RES, DEP. CAR. 27K +/-5%, 1/4W	441501	89536	441501	2		
R4	RES, COMP, 510 +/-5%, 1/4W	441600	01121	005115	4		
R5	RES, COMP, 510 +/-5%, 1/4W	441600	01121	005115	REF		

Table 6-13. A3A6 Single Sideband Mixer PCB Assembly (cont)

REF QES	DESCRIPTION	FLUKE STOCK NO.	MFG SPLY CODE	MFG PART NO.	TOT QTY	REC QTY	N O T E
R6	RES, DEP. CAR. 560 +/-5%, 1/4W	385948	80031	CR251-4-5P560E	8		
R7	RES, DEP. CAR. 47 +/-5%, 1/4W	441592	80031	CR251-4-5P47E	3		
R8	RES, DEP. CAR. 47 +/-5%, 1/4W	441592	80031	CR251-4-5P47E	REF		
R9	RES, COMP, 150 +/-5%, 1/2W	186056	89536	186056	2		
R10	RES, COMP, 150 +/-5%, 1/2W	186056	89536	186056	REF		
R11	RES, MTL. FILM, 10K +/-1%, 1/8W	168260	91637	CMF55103	1		
R12	RES, MTL. FILM, 2K +/-1%, 1/8W	235226	91637	CMF552001F	1		
R13	RES, DEP. CAR. 560 +/-5%, 1/4W	385948	80031	CR251-4-5P560E	REF		
R14	RES, DEP. CAR. 560 +/-5%, 1/4W	385948	80031	CR251-4-5P560E	REF		
R15	RES, DEP. CAR. 560 +/-5%, 1/4W	385948	80031	CR251-4-5P560E	REF		
R16	RES, COMP, 510 +/-5%, 1/4W	441600	01121	005115	REF		
R17	RES, COMP, 510 +/-5%, 1/4W	441600	01121	005115	REF		
R18	RES, DEP. CAR. 27K +/-5%, 1/4W	441501	89536	441501	REF		
R19	RES, DEP. CAR. 560 +/-5%, 1/4W	385948	80031	CR251-4-5P560E	REF		
R20	RES, COMP, 22 +/-5%, 1/8W	474767	01121	BB1-82205	4		
R21	RES, DEP. CAR. 560 +/-5%, 1/4W	385948	80031	CR251-4-5P560E	REF		
R22	RES, COMP, 22 +/-5%, 1/8W	474767	01121	BB1-82205	REF		
R23	RES, DEP. CAR. 470 +/-5%, 1/4W	343434	89536	343434	3		
R24	RES, DEP. CAR. 470 +/-5%, 1/4W	343434	89536	343434	REF		
R25	RES, DEP. CAR. 6.8K +/-5%, 1/4W	368761	80031	CR251-4-5P6K8	1		
R26	RES, MTL. FILM, 4.02K +/-1%, 1/8W	235325	91637	CMF554021F	1		
R27	RES, MTL. FILM, 1K +/-1%, 1/8W	168229	91637	CMF551001F	4		
R28	RES, MTL. FILM, 3.65K +/-1%, 1/8W	168252	91637	CMF553651F	2		
R29	RES, MTL. FILM, 825 +/-1%, 1/8W	294892	91637	CMF55 CHECK REST	1		
R30	RES, VAR, 1K +/-10%, 1/2W	275750	11236	360T102A	1		
R31	RES, DEP. CAR. 47 +/-5%, 1/4W	441592	80031	CR251-4-5P47E	REF		
R32	RES, DEP. CAR. 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	2		
R33	RES, MTL. FILM, 1.27K +/-1%, 1/8W	267369	91637	CMF551271F	1		
R34	RES, MTL. FILM, 2.67K +/-1%, 1/8W	289587	91637	CMF552671F	1		
R35	RES, MTL. FILM, 3.74K +/-1%, 1/8W	272096	91637	CMF553743F	1		
R36	RES, DEP. CAR. 100 +/-5%, 1/4W	348771	80031	CR251-4-5P100E	3		
R37	RES, MTL. FILM, 5.76K +/-1%, 1/8W	260349	91637	CMF555761F	1		
R38	RES, DEP. CAR. 100 +/-5%, 1/4W	348771	80031	CR251-4-5P100E	REF		
R39	RES, MTL. FILM, 1K +/-1%, 1/8W	168229	91637	CMF551001F	REF		
R40	RES, DEP. CAR. 560 +/-5%, 1/4W	385948	80031	CR251-4-5P560E	REF		
R41	RES, DEP. CAR. 560 +/-5%, 1/4W	385948	80031	CR251-4-5P560E	REF		
R42	RES, COMP, 22 +/-5%, 1/8W	474767	01121	BB1-82205	REF		
R43	RES, COMP, 22 +/-5%, 1/8W	474767	01121	BB1-82205	REF		
R44	RES, DEP. CAR. 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	REF		
R45	RES, DEP. CAR. 1K +/-5%, 1/4W	343426	80031	CR251-4-5P1K	REF		
R46	RES, MTL. FILM, 49.9 +/-1%, 1/8W	305896	91637	CMF5549R9F	3		
R47	RES, DEP. CAR. 10K +/-5%, 1/4W	348839	89536	348839	1		
R48	RES, MTL. FILM, 4.53K +/-1%, 1/8W	260331	91637	CMF554531F	1		
R49	RES, MTL. FILM, 10.5K +/-1%, 1/8W	234096	91637	CMF551052F	1		
R50	RES, MTL. FILM, 1.5K +/-1%, 1/8W	313098	91637	CMF55152F	1		
R51	RES, VAR, 2K	309666	89536	309666	1		
R52	RES, VAR, 5K +/-10%, 1/2W	327569	11236	360T502A	1		
R53	RES, DEP. CAR. 470 +/-5%, 1/4W	343434	89536	343434	REF		
R54	RES, DEP. CAR. 56 +/-5%, 1/4W	342618	80031	CR251-4-5P56E	1		
R55	RES, DEP. CAR. 100 +/-5%, 1/4W	348771	80031	CR251-4-5P100E	REF		
R56	RES, MTL. FILM, 3.65K +/-1%, 1/8W	168252	91637	CMF553651F	REF		