

g -GE Canada Electronic Products Repair

Test Instructions for

0471L0563 G001

Device Number

Precision operational amplifier

Description of Device

Originated By: Dennis Cully
Typed Name

Date: May 17, 2005
mm/dd/yy

Approved By: Lucio Carrescia
Signature

Approval Date: May 17, 2005
mm/dd/yy

TEST INSTRUCTIONS

PREVIOUS REVISION SHEET

0471L0563 G001

Device Number

Precision operational amplifier

Description of Device

[illegible]

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Precision operational amplifier
0471L0563 G001
Date: May 17, 2005

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1. PURPOSE:

- a. Static and dynamic test procedures for Precision operational amplifier 0471L0563 G001

2. ELEMENTARY:

- a. S & C data book 1188 section 563 drawing number 0238A2898

3. EQUIPMENT:

- a. Interface card - TL # 00412 or equivalent Use Test JIG doc as reference-
- b. Oscilloscope Fluke PM3994B TL# 00666 or equivalent.
- c. Multi meter HP 34401A TL# 00321 or equivalent.
- d. ± 15 VDC power supply TL# 00199 or equivalent.
- e. Function Generator HP 8116A TL# 00793 or equivalent.
- f. 51 pin universal jig TL# 00199 or equivalent.

4. SET UP:

- a. Install the interface card into the 51 pin universal jig.
- b. Install UUT into the 51 pin universal jig.
- c. Set the power supplies for ± 15 VDC.
- d. Connect COM to TJ50.
- e. Connect +15VDC to TJ27.
- f. Connect -15VDC to TJ29.

5. PROCEDURE:

- a. Zeroing
 - i. Put switch 1 and switch 2 down
 - ii. Ensure that the Berg jumper is connected.
 - iii. Energize the power supplies.
 - iv. Set all R1 pots CCW.
 - v. Test each circuit one at a time as you wire each circuit 1-6 do Zeroing, Gain and Functionality tests with each circuit you do. Using jumper for switch. See test interface sheet.
 - vi. Adjust the output of circuit number one at TJ09 with R5A to 0 VDC ± 0.15 MV.
 - vii. Adjust the output of circuit number two at TJ16 with R5B to 0 VDC ± 0.15 MV.
 - viii. Adjust the output of circuit number three at TJ23 with R5C to 0 VDC ± 0.15 MV.
 - ix. Adjust the output of circuit number four at TJ35 with R5D to 0 VDC ± 0.15 MV.
 - x. Adjust the output of circuit number five at TJ42 with R5E to 0 VDC ± 0.15 MV.
 - xi. Adjust the output of circuit number six at TJ49 with R5F to 0 VDC ± 0.15 MV.

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b. Gain

- i. Put switch 1 and switch 2 up.
- ii. Circuit # 1
 1. Adjust R1A CW until the voltage on TPA is $-10 \text{ VDC} \pm 5 \text{ MV}$.
 2. The output voltage on TJ09 should be $+10 \text{ VDC} \pm 110 \text{ MV}$.
 3. Put switch 2 down and the output on TJ09 should be $-10 \text{ VDC} \pm 110 \text{ MV}$.
 4. The positive and negative output peaks should be of the same magnitude within 10 MV .
 5. Put switch 2 up
- iii. Circuit # 2
 1. Adjust R1B CW until the voltage on TPB is $-10 \text{ VDC} \pm 5 \text{ MV}$.
 2. The output voltage on TJ16 should be $+10 \text{ VDC} \pm 110 \text{ MV}$.
 3. Put switch 2 down and the output on TJ16 should be $-10 \text{ VDC} \pm 110 \text{ MV}$.
 4. The positive and negative output peaks should be of the same magnitude within 10 MV .
 5. Put switch 2 up
- iv. Circuit # 3
 1. Adjust R1C CW until the voltage on TPC is $-10 \text{ VDC} \pm 5 \text{ MV}$.
 2. The output voltage on TJ23 should be $+10 \text{ VDC} \pm 110 \text{ MV}$.
 3. Put switch 2 down and the output on TJ23 should be $-10 \text{ VDC} \pm 110 \text{ MV}$.
 4. The positive and negative output peaks should be of the same magnitude within 10 MV .
 5. Put switch 2 up
- v. Circuit # 4
 1. Adjust R1D CW until the voltage on TPD is $-10 \text{ VDC} \pm 5 \text{ MV}$.
 2. The output voltage on TJ35 should be $+10 \text{ VDC} \pm 110 \text{ MV}$.
 3. Put switch 2 down and the output on TJ35 should be $-10 \text{ VDC} \pm 110 \text{ MV}$.
 4. The positive and negative output peaks should be of the same magnitude within 10 MV .
 5. Put switch 2 up
- vi. Circuit # 5
 1. Adjust R1E CW until the voltage on TPE is $-10 \text{ VDC} \pm 5 \text{ MV}$.
 2. The output voltage on TJ42 should be $+10 \text{ VDC} \pm 110 \text{ MV}$.
 3. Put switch 2 down and the output on TJ42 should be $-10 \text{ VDC} \pm 110 \text{ MV}$.
 4. The positive and negative output peaks should be of the same magnitude within 10 MV .
 5. Put switch 2 up
- vii. Circuit # 6
 1. Adjust R1F CW until the voltage on TPF is $-10 \text{ VDC} \pm 5 \text{ MV}$.
 2. The output voltage on TJ49 should be $+10 \text{ VDC} \pm 110 \text{ MV}$.

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3. Put switch 2 down and the output on TJ49 should be $-10 \text{ VDC} \pm 110 \text{ MV}$.
4. The positive and negative output peaks should be of the same magnitude with in 10 MV.
5. Put switch 2 up
- c. Functionality Test
 - i. Remove the berg jumper on jig TL# 00412.
 - ii. Connect a 15 volt 2.5KHZ square wave into TJ03
 - iii. The output of each circuit should be inverted at 10 volts with slightly rounded corners caused by C1.
- d. Seal all R5 potentiometers.
6. UPGRADES:
 - a. There are no upgrades to this card.
7. END.