REV NO. A	TITLE
68A999175 CONT ON SHEET FL. SH NO. 1	OPERATIONAL AMPLIFIER - TEST SPECIFICATION FIRST MADE FOR IC3600A0AF1, IC3600A0AF2

REVISIONS

ELEMENTARY - IC3600A0AF1 SH. 3.0 AND IC3600A0AF2 SH. 3.0

POWER INPUTS: PINS 2 AND 50 COMMON
PIN 24 +50V
PIN 30 -50V

LOAD - CONNECT 1.5K LOAD FROM OUTPUT TO COMMON (OUTPUT PIN 20)

SET AMPLIFIER BIAS - CONNECT 1 MEG FEEDBACK FROM OUTPUT TO INPUT. (PIN 20 TO PIN 6) CONNECT 10K INPUT RESISTOR FROM INPUT TO COMMON THROUGH A SWITCH. CONNECT NON-INVERTING INPUT (PIN 4) TO COMMON. CLOSE SWITCH; ADJUST R1 TO ACHIEVE 0V ± 10 MV OUTPUT. OPEN SWITCH OUTPUT SHOULD BE 0V ± 250 MV.

TEST FOR OUTPUT RANGE - CONNECT 100K FEEDBACK FROM OUTPUT TO INPUT. (PIN 20 TO PIN 6). CONNECT NON-INVERTING INPUT (PIN 4) TO COMMON. CONNECT 150K INPUT RESISTOR FROM +50V TO INPUT (PIN 6) OUTPUT SHOULD BE AT LEAST -24 VOLTS. RECONNECT INPUT RESISTOR TO -50 VOLTS. OUTPUT SHOULD BE AT LEAST +24 VOLTS. VOLTAGE ON PIN 20 SHOULD BE THE SAME AS PIN 22.

CHECK AMPLIFIER OUTPUT FOR NOISE - WITH SAME CONNECTIONS AS ABOVE USE RMS VOLTMETER TO MEASURE AC VOLTAGE FROM OUTPUT TO COMMON. AC VOLTAGE SHOULD NOT EXCEED 25 MV.

CHECK AMPLIFIER STABILITY - CONNECT SCOPE TO OUTPUT. PEAK TO PEAK HIGH FREQUENCY RIPPLE SHOULD NOT EXCEED 100 MV UNDER THE FOLLOWING CONDITIONS.

1. 100K RESISTOR FROM INPUT TO COMMON. FEEDBACK RESISTOR CHANGED SLOWLY FROM .5 MEG TO ZERO OHMS.
2. CONNECT 1 MEG. FEEDBACK RESISTOR IN PARALLEL WITH CAPACITOR DECADE BOX. CHANGE CAPACITOR FROM .001MFD TO 1MFD.
3. WITH 100K RESISTOR FROM INPUT TO COMMON AND 1 MEG FEEDBACK RESISTOR, CONNECT CAPACITOR DECADE BOX FROM OUTPUT TO COMMON. INCREASE CAPACITOR FROM .0001 MFD TO .001MFD.

CHECK AMPLIFIER NON-INVERTING INPUT - CONNECT 100K FEEDBACK FROM OUTPUT TO INPUT, AND 3.3K FROM INPUT TO COMMON. REMOVE CONNECTION FROM NON-INVERTING INPUT (PIN 4) TO COMMON. APPLY 1 VOLT POSITIVE TO NON-INVERTING INPUT. OUTPUT SHOULD BE APPROXIMATELY 25 VOLTS POSITIVE. APPLY 1 VOLT NEGATIVE TO NON-INVERTING INPUT. OUTPUT SHOULD BE APPROXIMATELY 25 VOLTS NEGATIVE.

FOR DUAL AMPLIFIER - REPEAT ABOVE TESTS USING PINS AS OUTLINED BELOW:
FOR INPUT PIN 6 USE PIN 34
FOR NON-INVERTING INPUT PIN 4 USE PIN 32
FOR OUTPUT PIN 20 USE PIN 44
FOR OUTPUT PIN 22 USE PIN 42
BUS CONNECTIONS TO PINS 2, 24, 30 AND 50 DO NOT CHANGE.

VOLTAGE LIMITER TEST: - (START WITH NO ELECTRICAL CONNECTION TO CARD:)
1- CONNECT 4.7K 1/2 W RESISTOR FROM +50V TO PIN 6; CONNECT 0V TO PIN 8. READ +27.5 ± 1.5V WITH RESPECT TO 0V AT PIN 6 WITH VOLTMETER.
2- CONNECT 4.7K 1/2 W RESISTOR FROM -50V TO PIN 6; CONNECT 0V TO PIN 8. READ -27.5 ± 1.5V WITH RESPECT TO 0V AT PIN 6 WITH VOLTMETER.

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PRINTS TO

MADE BY	APPROVALS		
DARLENE ALLIE	D.J.M.	INDUSTRY CONTROL (DIV OR DEPT.)	68A999175
ISSUED MAY 9, 1969		SALEM, VIRGINIA (LOCATION)	CONT ON SHEET FL. SH NO. 1