TEST SPEC FOR IC4501A106

WIRE CHECK

POWER INPUT

+50V ON P50, COMMON ON 0V

LOAD

2.7K, 1/2 WATT RESISTOR BETWEEN TERMINALS 03 AND 04

10KC SYM ADJUST

SCOPE ON T1 AND T2 ADJ FOR EQUAL ON AND OFF TIME MEASURED AT 0V. PERIOD = 100 +/-15 μ SEC.

ZERO AMPLIFIER

SHORT INP TO INN. ADJUST GAIN MAX CW.
ADJ BAL TO OBTAIN 0V +/-5MV. ACROSS LOAD

GAIN CHECK

A. APPLY .067V +/-.001V ACROSS INN AND INP.
OUTPUT SHOULD READ GREATER THAN 15V. ADJ GAIN FULL CCW, OUTPUT SHOULD READ EQUAL TO OR LESS THAN 2.5V. ADJ GAIN FOR 10V OUT. NOTE. VOLTS OUT

B. REVERSE POLARITY OF INPUT TO INN AND INP
RESET INPUT IF NECESSARY TO .067V +/-.001V
OUTPUT SHOULD BE OPPOSITE POLARITY AND MATCH READING NOTED IN "A" WITHIN +/-200MV.

IF THE READING DOES NOT MEET SPEC AND THE DIFF IS LESS THAN 400MV THEN DO STEP C OTHERWISE GO TO STEP D

C. CAN COMPENSATE BY ADJUSTING BAL POT. IE.
IF THE READING 10.00V IN STEP A AND THE READING IS 10.35V. IN STEP B THEN ADJ BAL TO GIVE 10.175V AND REPEAT STEP A AND STEP B. IF THIS WORKS THEN CHECK OUTPUT WITH INN AND INP SHORTED. SHOULD READ 0 -/-200MV. IF GOOD GO TO E.

D. IF DIFF IS GREATER THAN 400MV OR FAILS C THEN OPEN T3.[ONE LEAD GOES TO THE 866 PWB THE OTHER TO THE 827 PWB.]APPLY 12.0V BETWEEN T4 AND THE LEAD TO THE 827 PWB. NOTE THE OUTPUT. REVERSE THE INPUT TO T4 AND THE LEAD TO THE 827 PWB. THE TWO READINGS MUST MATCH WITHIN 100MV. IF NOT THE 827 PWB DOES NOT MEET SPEC. IF THIS IS GOOD THEN APPLY A 2.7K LOAD TO THE OTHER LEAD ON T3 AND TO T4. REMOVE THE 12V PS. REPEAT STEPS A AND B MEASURING ACROSS THIS LOAD RESISTOR. THIS TESTS THE 866 PWB. THE DIFF SHOULD BE LESS THAN 200MV

ON SOME UNITS IT MAY BE NECESSARY TO CHANGE R39 ON THE 866 PWB FROM 680 OHMS TO 560 OHMS TO GET DESIRED GAIN.

REV. 1	REV. 4	REV. 7	PRINTS TO P6A,6T	ENGINEER DER	GENERAL ELECTRIC	TEST SPECIFICATIONS
REV. 2	REV. 5	ISSUED JULY 28 1966				
REV. 3	REV. 6 80938[illegible] 7/22/81 VCT RELTYPED	MADE BY B.O. OGDEN			SALEM, VA. U.S.A.	68A993607 CONT. ON SH. 2 SH. NO. 1

DSD 0151 (09-76)

VOLTAGE RANGE TEST

WHEN UNIT PASSES STEPS A,B,C,D AND WITH THE UNIT WIRED CORRECTLY.

E. INCREASE THE INPUT FROM .087V TO .15V. THE OUTPUT SHOULD BE 20V OR GREATER.

F. REVERSE THE INPUT AND THE OUTPUT SHOULD BE 20V OR GREATER WITH OPPOSITE POLARITY OF STEP E.

OUTPUT NOISE CHECK

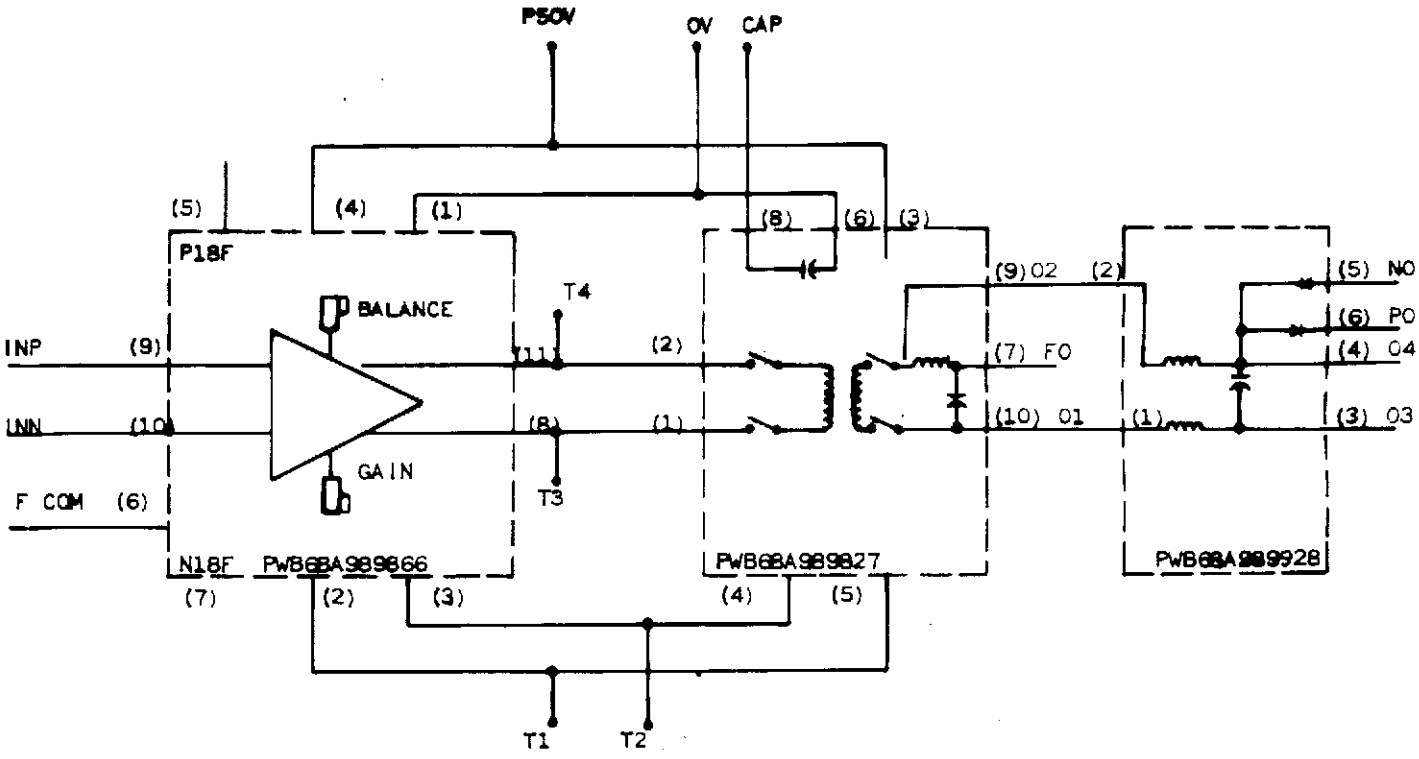
WITH OUTPUT SET TO +15V AND -15V USE SCOPE TO MEASURE NOISE OUTPUT ON O3 AND O4. MUST BE LESS THAN 15MV PEAK TO PEAK. [IGNORE THE 60 HZ FREQ.]

MECHANICAL TEST.

ALL TERMIPOINT CONNECTIONS ARE TO BE 100% "PULL" TESTED.

END OF TEST

REV. 1	REV. 4	REV. 7	PRINTS TO P6A,6T	ENGINEER DER	GENERAL ELECTRIC	TEST SPECIFICATIONS
REV. 2	REV. 5	ISSUED 7/27/81				68A993607
REV. 3	REV. 6	MADE BY D.E. RHODES			SALEM, VA. U.S.A.	CONT. ON SH. FL. SH. NO. 2



SPECIFICATIONS:

1. INPUT POWER - 50V ±7.5V, 50 MA MAX.
2. OUTPUT - ±20V MAX., ±8 MA IF 50V POWER SUPPLY IS USED. CURRENT RATING REDUCES TO 3 MA IF 42.5 V POWER SUPPLY IS USED.
3. GAIN ADJUSTMENT - POTENTIOMETER ON CARD PROVIDES 37 TO 225 VOLTS/VOLT.
4. ISOLATION - SIGNAL INPUT HAS 600 VOLT INSULATION RATING TO OUTPUT AND TO POWER SUPPLY. OUTPUT HAS 250V INSULATION RATING TO POWER SUPPLY.
5. SIGNAL INPUT IMPEDANCE - 660 OHMS
6. OFFSET - ±150 MICROVOLTS (REFERRED TO INPUT)
7. OFFSET STABILITY - ±5 MICROVOLTS PER °C (REFERRED TO INPUT AND ±200 MICROVOLTS PER °C (REFERRED TO OUTPUT).
8. GAIN STABILITY - .03% PER °C.
9. FREQUENCY RESPONSE - 3DB DOWN AT 400 CYCLES 10° PHASE SHIFT AT 50 CYCLES
10. OUTPUT NOISE - LESS THAN 15 MV PEAK TO PEAK.

APPLICATION DATA:

THIS PACKAGE CONSISTS OF CURRENT SENSOR AMPLIFIER 68A989866 AND ISOLATION AMPLIFIER 68A989827 PLUS A FILTER NETWORK.

THE SIGNAL INPUT TO THE ISOLATED CURRENT SENSOR WILL NORMALLY BE TAKEN FROM A 100 MILLIVOLT SHUNT. THE AMPLIFIER GAIN IS ADJUSTABLE AND SHOULD NORMALLY BE ADJUSTED TO GIVE 15 VOLTS OUTPUT AT THE MAXIMUM EXPECTED INPUT SIGNAL. EACH 1/10 REVOLUTION OF THE GAIN POT WILL GIVE A CHANGE OF APPROXIMATELY 36 MILLIVOLTS IN THE AMOUNT OF INPUT SIGNAL REQUIRED FOR 15 VOLTS OUTPUT.

THE ISOLATED CURRENT SENSOR PROTOTYPES PROVIDED MORE THAN 90DB REJECTION OF 60 CYCLE COMMON MODE VOLTAGE. SINCE THE AMPLIFIER HAS A HIGH GAIN THE INPUT WIRES MUST BE PROTECTED AGAINST NOISE PICK-UP. TWISTED INPUT LEADS WILL GIVE SATISFACTORY PROTECTION IF THE INPUT LEADS ARE 6 FEET OR LESS IN LENGTH. OUTPUT LINES SHOULD BE SHIELDED TWISTED AND SHOULD BE RUN IN A LEVEL 1 WIRE TRAY UNLESS THE ISOLATOR IS PAGE MOUNTED.

WHEN THE INPUT POWER IS TAKEN FROM A 250 VOLT EXCITER BUS, IT IS RECOMMENDED THAT A 2000 OHM RESISTOR BE CONNECTED IN SERIES WITH EACH INPUT LINE. THIS WILL HELP REDUCE COMMON MODE INPUT FROM THE POWER SOURCE, AND WILL ALSO LIMIT THE FAULT CURRENT IF ONE OF THE INPUT POWER TERMINALS SHOULD ACCIDENTALLY BE GROUNDED.

REV/ 10-24-66 B.O. Ogden	REV	GENERAL ELECTRIC INDUSTRY CONTROL DEPT. SALEM, VA. U.S.A.	TITLE ELEMENTARY ISOLATED CURRENT SENSOR (IC4501A106A)				
REV. 2nd July 1, 1967	REV						
MADE BY B. O. OGDEN		APPROVALS	PRINTS TO	DL1	P6A	6T	68A993606
ISSUED July 28-1966							CONT ON SHEET FL SH NO. 1

FORM IC 2143B (9-64)