9.1.0 SCOPE

THIS DOCUMENT ESTABLISHES THE PERFORMANCE REQUIREMENT AND RECOMMENDED TESTS FOR THE POWER SUPPLY MODULE IDENTIFIED AS.

DS382OPS5

THIS SPECIFICATION WILL CHECK DIGITAL LOGIC ANALOG TRANSFER FUNCTIONS AND COMPONENT TOLERANCES.

9.2.0 TEST EQUIPMENT

9.2.1 STANDARD EQUIPMENT REQUIRED

TEST EQUIPMENT SHALL BE PROVIDED WHICH MEETS THE REQUIREMEMTS AND ACCURACIES PRESCRIBED IN THIS SPECIFICATION. ALL TEST EQUIPMENT IS DEFINED BY QUALITY CONTROL STANDARD_____ EXCEPT AS NOTED IN SECTION 9.2.2.

9.2.2 SPECIAL EQUIPMENT REQUIRED.

NONE

9.3.0 POWER SUPPLY REQUIREMENTS AND PIN CONNECTIONS

THE FOLLOWING REGULATED INPUT VOLTAGE SOURCES ARE REQUIRED TO TEST THIS PRODUCT MODULE.

NOMINAL VOLTAGE (1)	MAXIMUM CURRENT (2) (AMPS)	MIN. ADJ RANGE	% REG	MAX VOLTAGE (3)	PIN(S)
115VAC	15A	±39 %	±2 %	137	ACH, ACL

NOTES.

1. NOMINAL VOLTAGE (±2 %) USED UNLESS OTHERWISE SPECIFIED.
2. ELEMENTS REQUIRING MORE THAN THE MAXIMUM VALUE MAY SUFFER DAMAGE.
3. VOLTAGE ABOVE MAXIMUM MAY IMPAIR ELEMENT LIFE.

POWER IN MODULE 225 WATTS MAX

POWER IN LEADS 400 WATTS MAX

REV. 1	REV. 4	REV. 7	PRINTS TO DL119 BHEL	ENGINEER 3-16-79	GENERAL ELECTRIC	APPLICATION DATA
REV. 2	REV. 5	ISSUED 3-16-79				
REV. 3	REV. 6	MADE BY W.D. BRACKMAN			SALEM, VA. U.S.A.	DS382OPS5 CONT. ON SH. 9BA SH. NO. 9AA

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9.4.0 SETUP INITIAL LOADING

9.4.1 P5 LOAD

A SWITCHABLE LOAD SHALL BE CONNECTED BETWEEN PIN 5 OF CONNECTORS JA THROUGH JE WIRED IN PARALLED AND PIN 6 OF JA THROUGH JE WIRED IN PARALLEL. THE SWITCHABLE LOAD SHALL PROVIDE A SELECTION OF EITHER AN "OPEN CURCUIT", "HALF LOAD" (0.250 OHMS ± 2 % AT 100 WATTS), "FULL LOAD" (0.125 OHMS ± 2 % AT 200 WATTS), OR A "SHORT CIRCUIT".

9.4.2 P28 LOAD

A SWITCHABLE LOAD SHALL BE CONNECTED BETWEEN PIN 8 OF CONNECTORS JA THROUGH JC WIRED IN PARALLEL AND PIN 7 OF JA THROUGH JC WIRED IN PARALLEL. THE SWITCHABLE LOAD SHALL PROVIDE A SELECTION OF AN "OPEN CIRCUIT", "HALF LOAD" (11.2 OHMS ±2 % AT 70 WATTS), OR "FULL LOAD" (5.6 OHMS ±2 % AT 140 WATTS).

9.4.3 P15 LOAD

A SWITCHABLE LOAD SHALL BE CONNECTED BETWEEN PIN 10 OF JA. THE SWITCHABLE LOAD SHALL PROVIDE A SELECTION OF AN "OPEN CIRCUIT", "HALF LOAD" (15 OHMS ±2 % AT 15 WATTS), "FULL LOAD" (7.5 OHMS ±2 % AT 30 WATTS), OR A "SHORT CURCUIT".

9.4.4 N15 LOAD

A SWITCHABLE LOAD SHALL BE CONNECTED BETWEEN PIN 11 OF JB AND PIN 12 OF JB. THE SWITCHABLE LOAD SHALL PROVIDE A SELECTION OF AN "OPEN CIRCUIT", "HALF LOAD" (15 OHMS ± 2 % AT 15 WATTS), OR "FULL LOAD" (7.5 OHMS ±2 % AT 30 WATTS).

9.4.5 CONNECT A 10 OHM ±2 %, 2 WATT RESISTOR FROM JA-3 TO THE END OF THE P5 LOAD WHICH IS WIRED TO PIN 5 OF JA THROUGH JE.

9.4.6 CONNECT A SIGNAL JUMPER FROM JA-4 TO THE END OF THE P5 LOAD WHICH IS WIRED TO PIN 6 OF JA THROUGH JE.

9.5.0 SIGNAL LEVELS

NONE

9.6.0 TEST PROCEEDURE

9.6.1 INITIAL STARTUP

9.6.1.1 SET ALL LOADS TO "HALF LOAD".

BHEL

REV. 1 OEB 11/2/79 WC	REV. 4	REV. 7	PRINTS TO DL119	ENGINEER 3-16-79	GENERAL ELECTRIC	TEST INSTRUCTIONS
REV. 2	REV. 5	ISSUED 3-16-79				DS3820PS5
REV. 3	REV. 6	MADE BY W.D. BRACKMAN			SALEM, VA. U.S.A.	CONT. ON SH. 9CA SH. NO. 9BA

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9.6.1.2 TURN ON NOMINAL AC INPUT VOLTAGE, VERIFY THE FOLLOWING VOLTAGE.

FROM	TO	VOLTAGE	MAX. RIPPLE AND NOISE*
TP-1	JF-6	15±2VDC	
TP-3	JF-6	1±1VDC	
TP-4	JF-6	9±1 VDC	
TP-5	JF-6	3±2VDC	
TP-6	JF-6	1±1VDC	
JF-5	JF-6	6±1VDC	
JF-8	JF-6	28±0.5VDC	
JF-10	JF-12	15±0.1VDC	
JF-11	JF-12	-15±0.13VDC	
P5(TB2)	DCOM(TB2)	6±1VDC	
P28(TB2)	DCOM(TB2)	28±0.5VDC	600MV P-P
P15(TB2)	ACOM(TB2)	15±0.13VDC	150MV P-P
N15(TB2)	ACOM(TB2)	-15±0.13VDC	150MV P-P
R5H(TB2)	R5L(TB2)	5±.15VDC	150MV P-P

9.6.1.3 VERIFY THAT THE "READY" LED IS ILLUMINATED.

9.6.1.4 VERIFY THE FOLLOWING RESISTANCES WITH AN OHMETER.

FROM	TO	RESISTANCE
ACOM	DCOM	2OM MIN
LVSL	DCOM	100K MIN
LVSH	DCOM	100HM MAX

9.6.2.0 REGULATION AND SOFT START TESTS.

9.6.2.2 REMOVE AC INPUT VOLTAGE. SET AC VOLTAGE TO 87VRMS ±2% AND SET ALL LOADS TO "FULL LOAD". TURN ON THE AC INPUT AND OBSERVE THAT THE "READY" LED LIGHTS WITHIN 1 SEC.

9.6.2.2 VERIFY THE FOLLOWING VOLTAGES

FROM	TO	VOLTAGE	MAXIMUM RIPPLE AND NOISE *
TB2-7 (R5H)	TB2-8 (R5L)	5±.05VDC	150MV P-P
JF-8	JF-6	28±0.5VDC	600MV P-P
JF-10	JF-12	15±0.13VDC	250MV P-P
JF-11	JF-12	-15±0.13VDC	250MV P-P

9.6.2.3 REMOVE AC INPUT AND SET ALL LOADS TO "OPEN CIRCUIT". TURN ON AC AND OBSERVE THAT THE "READY" LED LIGHTS WITHIN 1 SEC. REPEAT 9.6.2.2.

* MEASURED AT T.B.2. BHEL

REV. 1 OCB 11/2/79 WC	REV. 4	REV. 7	PRINTS TO DL119	ENGINEER 3-16-79 W.D. Brackman	GENERAL ELECTRIC	TEST INSTRUCTIONS
REV. 2 BEJ 12/29/82 PJR	REV. 5	ISSUED 3-16-79				
REV. 3	REV. 6	MADE BY W.D. BRACKMAN			SALEM, VA. U.S.A.	DS3820PS5 CONT. ON SH. 9DA SH. NO. 9CA

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9.6.2.3 REMOVE AC INPUT AND SET TO 127VRMS±2%. TURN ON AC AND OBSERVE THAT "READY" LED LIGHTS WITHIN 1 SEC. REPEAT 9.6.2.2.

9.6.2.5 REMOVE AC INPUT AND SET ALL LOADS TO "FULL LOAD". TURN ON AC AND OBSERVE THAT THE "READY" LED LIGHTS. REPEAT 9.6.2.2.

9.6.3 OVERLOAD AND CROWBAR TESTS.

9.6.3.1 SET ALL LOADS TO "HALF LOAD". "READY" LED SHALL REMAIN LIGHTED. SET AC INPUT VOLTAGE TO NOMINAL.

9.6.3.2 SWITCH THE P5 LOAD "SHORT CIRCUIT" AND OBSERVE THAT THE "READY" LED GOES OUT. VERIFY THAT THE INPUT CURRENT IS LESS THAN 0.25 RMS.

9.6.3.3 RESET P5 LOAD TO "HALF LOAD" AND TURN THE AC OFF FOR AT LEAST 3 SECONDS AND TURN BACK ON. "READY" LED SHALL LIGHT.

9.6.4 OVER VOLTAGE TEST

9.6.4.1 CONNECT A 15 OHM ±2% 2 WATT RESISTOR ACROSS TB2-7 AND TB2-8 OBSERVE THAT THE "READY" LED GOES OUT AND THAT THE INPUT CURRENT IS LESS THAN 0.25A RMS.

9.6.4.2 REMOVE THE 15 OHM RESISTOR. TURN THE AC OFF FOR AT LEAST 3 SECONDS AND TURN BACK ON. THE "READY" LRD SHALL LIGHT.

9.6.5 LOAD TRANSIENT TESTS

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. . .

9.6.5.1 SET ALL LOADS TO "OPEN CIRCUIT" AND SWITCH EACH LOAD, IN TURN, BETWEEN "OPEN CIRCUIT" AND "HALF LOAD" 3 TIMES LEAVING IN THE "OPEN CIRCUIT" CONDITION. THE "READY" LED SHALL NOT BE AFFECTED.

9.6.6 MISSING VOLTAGE TEST.

9.6.6.1 SET P5, P28 AND N15 LOAD TO "FULL LOAD" REMOVE AC INPUT POWER AND SET THE P15 LOAD TO "SHORT CIRCUIT". OBSERVE THAT THE AC LINE CURRENT DROPS TO LESS THAN 0.25RMS. WITHIN 1 SEC OF TURNING ON THE INPUT POWER, THE "READY" LED SHALL NOT LIGHT, EVEN MOMENTARILY.

9.6.7 HOLDUP TIME TEST.

BHEL

REV. 1 OEB 11/2/79 WO	REV. 4	REV. 7	PRINTS TO DL119	ENGINEER 3-16-79	GENERAL ELECTRIC	TEST INSTRUCTIONS
REV. 2	REV. 5	ISSUED 3-16-79				
REV. 3	REV. 6	MADE BY W.D. BRACKMAN			SALEM, VA. U.S.A.	DS3820PS5 CONT. ON SH. 9EA SH. NO. 9DA

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9.6.7.1 SET ALL LOADS TO "FULL LOAD" AND SET THE AC INPUT VOLTAGE TO 87VRMS ±2 % .

9.6.7.2 MEASURE THE TIME LAPS BETWEEN THE STEP CHANGE IN VOLTAGE ON TP-5 UNTIL THE VOLTAGE ON JF-8 DROPS BELOW 20VDC. THIS SEQUENCE IS INIATED BY TURNING OFF THE AC INPUT POWER AND THE DURATIONS SHALL BE GREATER THAN 10MS.

9.6.8 THE END OF TEST FOR PS5A REMOVE ALL POWER SOURCE.

9.6.9 PS5B SPECIAL TEST THE OHMS BETWEEN TB2 AND TB2-15 SHOULD BE 475±25Ω.

REV. 1 OED 1-9-81- PJ	REV. 4	REV. 7	PRINTS TO DL119 BHEL	ENGINEER 3-16-79 W.D. Brackman	GENERAL ELECTRIC	APPLICATION DATA
REV. 2	REV. 5	ISSUED 3-16-79				
REV. 3	REV. 6	MADE BY W.D. BRACKMAN			SALEM, VA. U.S.A.	DS 3820PS5 CONT. DRWG. FL. SH. NO. 9EA

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