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GE Energy

Functional Testing Specification

*Parts & Repair Services
Louisville, KY*

LOU-GED-IS200AVIFHx

Test Procedure for a IS200AVIFH1A

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DATE 01/07/2011	DATE	DATE	DATE 1/13/2011

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1. SCOPE

1.1 This is a functional testing procedure for an IS200AVIFHx Card.

2. STANDARDS OF QUALITY

2.1 Refer to the current revision of the IPC-A-610 standard for workmanship standards.

3. APPLICABLE DOCUMENTS

3.1 The following document(s) shall form part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue shall apply.

3.1.1 Check board's electronic folder for more information

4. ENGINEERING REQUIREMENTS

4.1 Equipment Cleaning

4.1.1 Equipment should be clean and free of debris prior to applying power unless performing an initial check. Refer to site specific SRA's for cleaning guidelines.

4.2 Equipment Inspection

4.2.1 Equipment should be visually inspected for any defects prior to applying power. This inspection should include the following as a minimum:

4.2.1.1 Wires - broken, cracked, or loosely connected

4.2.1.2 Terminal strips / connectors - broken or cracked

4.2.1.3 Components - visually damaged

4.2.1.4 Capacitors - bloated or leaking

4.2.1.5 Solder joints - damaged or cold

4.2.1.6 Circuit board - burned or de-laminated

4.2.1.7 Printed wire runs / Traces - burned or damaged

5. EQUIPMENT REQUIRED

5.1 The following equipment is required to perform the process requirements. Equipment may be substituted provided that all accuracy's and test ratios are equivalent or better.

Qty	Reference #	Description
2	*	Fluke 87 DMM (or equivalent)
1	H188965	KEPCO BOP 500M Bi-Polar power supply
2	*	TENMA 72-2080 Laboratory DC Power Supplies
1	H188974	Sorenson DCR 300-3B power supply
1	H188621	DC Millivolt Source
1	*	Tektronix TDS 2012B O-Scope (or equivalent)
1	*	Tenma 72-5010 Function Generator (or equivalent)

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6. TESTING PROCESS

6.1 Setup



Note: Do NOT apply power to the unit under test at this time.

- 6.1.1 Check resistance from **LNKP** to **LNKN** and from **PBUS** to **NBUS** stab-on connectors. Ohmmeter should read over 400 Kohms (not shorted).
- 6.1.2 Connect 1st Multimeter positive lead to positive output of KEPCO.
- 6.1.3 Connect 1st Multimeter negative lead to negative output of 1st Tenma.
- 6.1.4 Set 1st Multimeter to measure DC Volts. This meter should be left connected to monitor output voltage.
- 6.1.5 Connect positive output of KEPCO to **LNKP** and **PBUS** stab-on connectors.
- 6.1.6 Connect positive output of 1st Tenma to negative output of Sorenson power supply. Set 1st Tenma power supply tracking for series.
- 6.1.7 Connect positive output of Sorenson power supply to negative output of KEPCO power supply.
- 6.1.8 Connect negative output of 1st Tenma to **LNKN** and **NBUS** stab-on connectors.
- 6.1.9 Connect –18 VDC from Tenma power supply to connector XP pin 31.
- 6.1.10 Connect +18 VDC from Tenma power supply to connector XP pin 32.
- 6.1.11 Connect +18 VDC and –18 VDC returns to connector XP pin 7 (**DCOM**).
- 6.1.12 Connect a 2400-Ohm resistor from connector XP pin 39 to connector XP pin 40. This puts a light load across the 24 VDC output will serve to keep the 24 VDC output from floating >50VDC.

6.2 Testing Procedure

6.2.1 Power Supply Testing

- 6.2.1.1 Apply –18VDC and +18VDC to unit from Tenma power supply.
 - 6.2.1.1.1 Check for +12VDC +/-0.5 VDC from IC U6 pin 5 to **DCOM**.
 - 6.2.1.1.2 Check for -12VDC +/-0.5 VDC from IC U6 pin 6 to **DCOM**.
 - 6.2.1.1.3 Apply +425 VDC (**LKNx**) from KEPCO to unit; leave 1st Tenma power supply adjusted for 0 V output at this time.
 - 6.2.1.1.4 After approximately 5 seconds the **PSOK** LED should come on.
 - 6.2.1.1.5 The **CNOVK** LED will remain off. This LED will only come on if the input **LNKP** and **LNKN** voltages reach 475 VDC or higher.
 - 6.2.1.1.6 Check for +5 +/-0.5 VDC from IC U6 pin 3 to **DCOM**.

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- 6.2.1.1.7** Check for approximately +24.5 VDC +/-2.5 VDC across resistor connected to connector XP pin 39 and XP connector pin 40.
- 6.2.1.1.8** Check for approximately 18.5 VAC +/-1.5 VAC @ 26 KHz +/- 2 KHz from connector CVPPL pin 1 to connector CVPPL pin 2.
- 6.2.1.1.9** With the negative Multimeter lead on the cathode of each of the following diodes, check for -7.5 +/-0.5 VDC across diodes D15, D24, and D33 with the positive Multimeter lead.
- 6.2.1.1.10** With the negative Multimeter lead on the anode of each of the following diodes, check for +15 +/-1.0 VDC across diodes D16, D25, and D34 with the positive Multimeter lead.
- 6.2.1.1.11** With the negative Multimeter lead on the cathode of each of the following diodes, check for -7.5 +/-0.5 VDC across diodes D18, D27, and D36 with the positive Multimeter lead.
- 6.2.1.1.12** With the negative Multimeter lead on the anode of each of the following diodes, check for +15 +/-1.0 VDC across diodes D17, D26, and D35 with the positive Multimeter lead.
- 6.2.1.1.13** With the negative Multimeter lead on the negative side of each of the following capacitors, check for +13 +/-1.0 VDC across capacitors C39, C69, and C99 with the positive Multimeter lead.
- 6.2.1.1.14** With the negative Multimeter lead on the negative side of C39, check for +5 VDC +/-0.7 VDC on IC U12 pin 2 with the positive Multimeter lead.
- 6.2.1.1.15** With the negative Multimeter lead on the negative side of C69, check for +5 VDC +/-0.7 VDC on IC U20 pin 2 with the positive Multimeter lead.
- 6.2.1.1.16** With the negative Multimeter lead on the negative side of C99, check for +5 VDC +/-0.7 VDC on IC U28 pin 2 with the positive Multimeter lead.
- 6.2.1.1.17** Connect Multimeter positive lead to connector CVPL pin 5 and Multimeter negative lead to connector CVPL pin 6. Should read logic low (<0.8VDC).
- 6.2.1.1.18** Connect connector CVPL pin 1 to connector CVPL pin 2. Leave this connection made for the remainder of testing.
- 6.2.1.1.19** Adjust 1st Tenma power supply for maximum output, **LKNx** voltage for 475 VDC.
- 6.2.1.1.20** Relay K1 should engage, the **CNVOK** led should come on (and stay on as long as input link voltage stays above 475 VDC), and Multimeter should read 24.5 VDC +/- 1.5VDC.

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6.2.1.1.21 Check from connector XP pin 1 to connector XP pin 2, Multimeter should read 0.8 VDC +/- 0.3 VDC with **LKNx** voltage set for 475 VDC.

6.2.2 Temperature Feedbacks

6.2.2.1.1 Check for +10.01 VDC +/-0.5 VDC from connector XP pin 34 to **DCOM**.

6.2.2.1.2 Check for +5.11 VDC +/-0.5 VDC from connector XP pin 33 to **DCOM**.

6.2.2.1.3 Check for +5 VDC +/-0.5 VDC from connector XP pin 24 to **DCOM**. Leave Multimeter connected to this point for the following tests.

6.2.2.1.4 Connect connector CVPL pin3 to connector CVPL pin 4. Multimeter should read logic low (<0.8 VDC).

6.2.2.1.5 Connect connector T1PL pin 1 to T1PL pin 2. Multimeter should read logic high (>4.2 VDC) as long as this connection is made.

6.2.2.1.6 Disconnect connector T1PL pin 1 from T1PL pin 2. Multimeter should read logic low (<0.8 VDC).

6.2.2.1.7 Connect connector T2PL pin 1 to T2PL pin 2. Multimeter should read logic high (>4.2 VDC) as long as this connection is made.

6.2.2.1.8 Disconnect connector T2PL pin 1 from T2PL pin 2. Multimeter should read logic low (<0.8 VDC).

6.2.2.1.9 Connect connector T3PL pin 1 to T3PL pin 2. Multimeter should read logic high (>4.2 VDC) as long as this connection is made.

6.2.2.1.10 Disconnect connector T3PL pin 1 from T3PL pin 2. Multimeter should read logic low (<0.8 VDC).

6.2.2.1.11 Disconnect connector CVPL pin 3 from CVPL pin 4. Multimeter should read logic high (>4.2 VDC).

6.2.3 DC Link Feedback

6.2.3.1 JP1 set for 400

6.2.3.1.1 Make sure JP1 jumper is set for 400.

6.2.3.1.2 Connect Multimeter negative lead to **DCOM**.

6.2.3.1.3 Adjust **LKNx** input voltage for 220 VDC.

6.2.3.1.4 Using positive lead of Multimeter check U36 pin 14, Multimeter should read 0 VDC +/- 0.5 VDC.

6.2.3.1.5 Adjust **LKNx** input voltage for 340 VDC.

6.2.3.1.6 Using positive lead of Multimeter check U36 pin 14, Multimeter should read 5 VDC +/- 0.5 VDC.

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- 6.2.3.1.7** Using positive lead of Multimeter check IC U36 pin 1, Multimeter should read 0 VDC ± 0.5 VDC (Relay K1 may energize when lead touches IC U36).
- 6.2.3.1.8** Using positive lead of Multimeter check IC U36 pin 2, Multimeter should read 0 VDC ± 0.5 VDC.
- 6.2.3.1.9** Adjust **LKNx** input voltage for 475 VDC, Multimeter should read 24 VDC ± 0.5 VDC. Relay K1 should energize and **CNVOK** LED should come on.
- 6.2.3.1.10** Using positive lead of Multimeter check IC U36 pin 14, Multimeter should read 5 VDC ± 0.5 VDC.
- 6.2.3.1.11** Using positive lead of Multimeter check IC U36 pin 1, Multimeter should read 5 VDC ± 0.5 VDC
- 6.2.3.1.12** Using positive lead of Multimeter check IC U36 pin 2, Multimeter should read 0 VDC ± 0.5 VDC.
- 6.2.3.1.13** Adjust **LKNx** input voltage for 750 VDC, Multimeter should read 24 VDC ± 0.5 VDC.
- 6.2.3.1.14** Using positive lead of Multimeter check IC U36 pin 14, Multimeter should read 5 VDC ± 0.5 VDC.
- 6.2.3.1.15** Using positive lead of Multimeter check IC U36 pin 1, Multimeter should read 5 VDC ± 0.5 VDC
- 6.2.3.1.16** Using positive lead of Multimeter check IC U36 pin 2, Multimeter should read 5 VDC ± 0.5 VDC.

6.2.3.2 JP1 set for 460

- 6.2.3.2.1** Make sure JP1 jumper is set for 460.
- 6.2.3.2.2** Connect Multimeter negative lead to **DCOM**.
- 6.2.3.2.3** Adjust **LKNx** input voltage for 220 VDC.
- 6.2.3.2.4** Using positive lead of Multimeter check U36 pin 14, Multimeter should read 0 VDC ± 0.5 VDC.
- 6.2.3.2.5** Adjust **LKNx** input voltage for 360 VDC.
- 6.2.3.2.6** Using positive lead of Multimeter check U36 pin 14, Multimeter should read 5 VDC ± 0.5 VDC.
- 6.2.3.2.7** Using positive lead of Multimeter check IC U36 pin 1, Multimeter should read 0 VDC ± 0.5 VDC (Relay K1 may energize when lead touches IC U36).

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- 6.2.3.2.8** Using positive lead of Multimeter check IC U36 pin 2, Multimeter should read 0 VDC +/-0.5 VDC.
- 6.2.3.2.9** Adjust **LKNx** input voltage for 540 VDC, Multimeter should read 24 VDC -/+ 0.5 VDC. Relay K1 should energize and CNVOK LED should come on.
- 6.2.3.2.10** Using positive lead of Multimeter check IC U36 pin 14, Multimeter should read 5 VDC +/-0.5 VDC.
- 6.2.3.2.11** Using positive lead of Multimeter check IC U36 pin 1, Multimeter should read 5 VDC +/-0.5 VDC
- 6.2.3.2.12** Using positive lead of Multimeter check IC U36 pin 2, Multimeter should read 0 VDC +/-0.5 VDC.
- 6.2.3.2.13** Adjust **LKNx** input voltage for 830 VDC, Multimeter should read 24 VDC -/+ 0.5 VDC.
- 6.2.3.2.14** Using positive lead of Multimeter check IC U36 pin 14, Multimeter should read 5 VDC +/-0.5 VDC.
- 6.2.3.2.15** Using positive lead of Multimeter check IC U36 pin 1, Multimeter should read 5 VDC +/-0.5 VDC
- 6.2.3.2.16** Adjust **LKNx** voltage to 475 VDC.

6.2.4 DB Interface Verification

- 6.2.4.1.1** JP2 set for default (1 to 2).
- 6.2.4.1.2** Connect positive lead of Multimeter to FLPL pin 11 and negative lead of Multimeter to **DCOM**.
- 6.2.4.1.3** Cycle power to unit. Multimeter should read 5 VDC +/- 0.5 VDC.
- 6.2.4.1.4** Set JP2 for DB Status ENABLE (2 to 3). Multimeter should read <0.8 VDC +/- 0.2 VDC (logic low).
- 6.2.4.1.5** Using positive lead of Multimeter check IC U1 pin 14 for >4.2 VDC (logic high).
- 6.2.4.1.6** Connect +5 VDC +/- 0.2 VDC to connector DBPL pin 1.
- 6.2.4.1.7** Connect +5 VDC return to connector DBPL pin2.
- 6.2.4.1.8** Using positive lead of Multimeter check IC U1 pin 14 for <0.8 VDC (logic low).

6.2.5 Shunt Feedback Operation

6.2.5.1 Phase A Shunt Feedback Operation

- 6.2.5.1.1** Connect positive lead of Millivolt source to connector A2PL pin 2 and negative lead of Millivolt source to connector A2PL pin 1. Set output to 0 VDC.

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6.2.5.1.2 Connect positive lead of Multimeter to connector XP pin 26 and negative lead to connector XP pin 25. Multimeter should read –0.2 VDC +/- 0.05 VDC.

6.2.5.1.3 Adjust Millivolt source to + 238mV. Multimeter should read +2.3 VDC +/- 0.5 VDC.

6.2.5.1.4 Adjust Millivolt source to – 238mV. Multimeter should read –2.7 VDC.

6.2.5.2 Phase B Shunt Feedback Operation

6.2.5.2.1 Connect positive lead of Millivolt source to connector B2PL pin 2 and negative lead of Millivolt source to connector B2PL pin 1. Set output to 0 VDC.

6.2.5.2.2 Connect positive lead of Multimeter to connector XP pin 28 and negative lead to connector XP pin 27. Multimeter should read –0.2 VDC +/- 0.05 VDC.

6.2.5.2.3 Adjust Millivolt source to + 238mV. Multimeter should read +2.3 VDC +/- 0.5 VDC.

6.2.5.2.4 Adjust Millivolt source to – 238mV. Multimeter should read –2.7 VDC.

6.2.5.3 Phase C Shunt Feedback Operation

6.2.5.3.1 Connect positive lead of Millivolt source to connector C2PL pin 2 and negative lead of Millivolt source to connector C2PL pin 1. Set output to 0 VDC.

6.2.5.3.2 Connect positive lead of Multimeter to connector XP pin 30 and negative lead to connector XP pin 29. Multimeter should read –0.2 VDC +/- 0.05 VDC.

6.2.5.3.3 Adjust Millivolt source to + 238mV. Multimeter should read +2.3 VDC +/- 0.5 VDC.

6.2.5.3.4 Adjust Millivolt source to – 238mV. Multimeter should read –2.7 VDC.

6.2.6 IGBT Gate Driver Operations

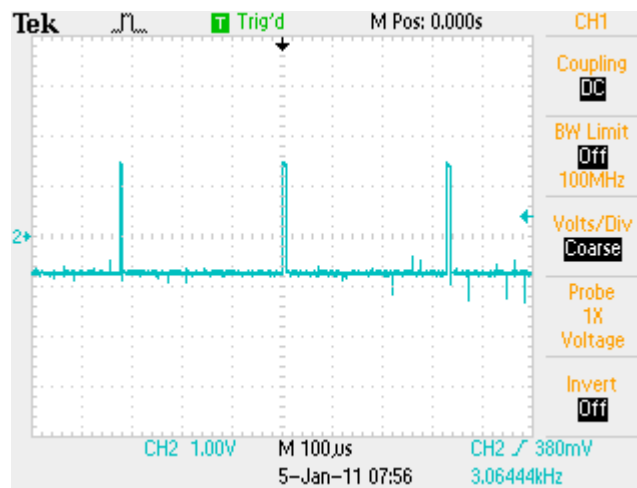
6.2.6.1 Phase A (U) Lower Gate

6.2.6.1.1 Make sure the **LKNx** voltage is still adjusted for 475 VDC (or higher) and that the **CNVOK LED** is on (K1 energized).

6.2.6.1.2 Connect connector XP pin 11 to **DCOM**.

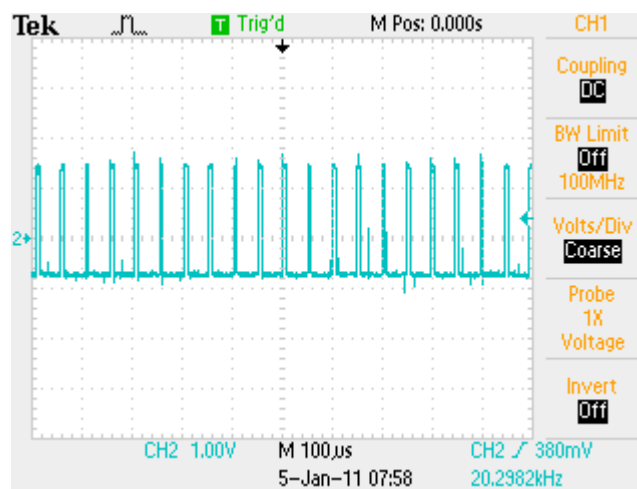
6.2.6.1.3 Connect Function Generator main output positive lead to connector XP pin 3 and the negative output lead to **DCOM**. Set Frequency Generator for square-wave output, 4 Vp-p, at 3 KHz.

- 6.2.6.1.4** Connect positive lead of Multimeter to connector A1PL pin 2 and negative lead of Multimeter to connector A1PL pin 4. Set Multimeter to read AC Volts.
- 6.2.6.1.5** Connect O-Scope probe to connector A1PL pin 3 and O-scope ground to connector A1PL pin 4.
- 6.2.6.1.6** The Multimeter should read 315 mV AC +/- 50 mV AC. The O-Scope should display the following:



6.2.6.1.6.1

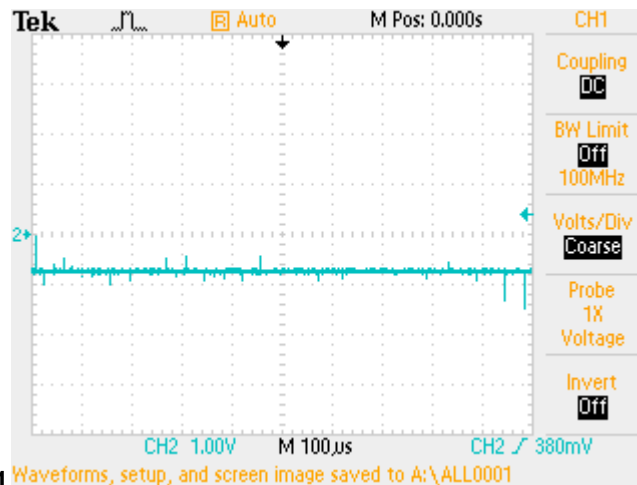
- 6.2.6.1.7** Adjust the Frequency Generator output frequency to 20 KHz.
- 6.2.6.1.8** The Multimeter should read 1.6 V AC +/- 0.3 V AC. The O-Scope should display the following:



6.2.6.1.8.1

6.2.6.1.9 Adjust the Frequency Generator output frequency to 0 Hz.

6.2.6.1.10 The Multimeter should read <20 mV AC. The O-Scope should display the following:



6.2.6.1.10.1 Waveforms, setup, and screen image saved to A:\ALL0001

6.2.6.2 Phase A (U) Upper Gate

6.2.6.2.1 Make sure the **LKNx** voltage is still adjusted for 475 VDC (or higher) and that the **CNVOK LED** is on (K1 energized).

6.2.6.2.2 Connect connector XP pin 17 to **DCOM**.

6.2.6.2.3 Connect Function Generator main output positive lead to connector XP pin 3 and the negative output lead to **DCOM**. Set Frequency Generator for square-wave output, 4 Vp-p, at 3 KHz.

6.2.6.2.4 Connect positive lead of Multimeter to connector A2PL pin 4 and negative lead of Multimeter to connector A2PL pin 6. Set Multimeter to read AC Volts.

6.2.6.2.5 Connect O-Scope probe to connector A2PL pin 5 and O-scope ground to connector A2PL pin 6.

6.2.6.2.6 The Multimeter should read 315 mV AC +/- 50 mV AC. The O-Scope should display the same image as in step **6.2.6.1.6.1**.

6.2.6.2.7 Adjust the Frequency Generator output frequency to 20 KHz.

6.2.6.2.8 The Multimeter should read 1.6 V AC +/- 0.3 V AC. The O-Scope should display the same image as in step **6.2.6.1.8.1**.

6.2.6.2.9 Adjust the Frequency Generator output frequency to 0 Hz.

6.2.6.2.10 The Multimeter should read <20 mV AC. The O-Scope should display the same image as in step **6.2.6.1.10.1**.

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6.2.6.3 Phase B (V) Lower Gate

- 6.2.6.3.1 Make sure the **LKNx** voltage is still adjusted for 475 VDC (or higher) and that the **CNVOK LED** is on (K1 energized).
- 6.2.6.3.2 Connect connector XP pin 13 to **DCOM**.
- 6.2.6.3.3 Connect Function Generator main output positive lead to connector XP pin 3 and the negative output lead to **DCOM**. Set Frequency Generator for square-wave output, 4 Vp-p, at 3 KHz.
- 6.2.6.3.4 Connect positive lead of Multimeter to connector B1PL pin 2 and negative lead of Multimeter to connector B1PL pin 4. Set Multimeter to read AC Volts.
- 6.2.6.3.5 Connect O-Scope probe to connector B1PL pin 3 and O-scope ground to connector B1PL pin 4.
- 6.2.6.3.6 The Multimeter should read 315 mV AC +/- 50 mV AC. The O-Scope should display the same image as in step **6.2.6.1.6.1**.
- 6.2.6.3.7 Adjust the Frequency Generator output frequency to 20 KHz.
- 6.2.6.3.8 The Multimeter should read 1.6 V AC +/- 0.3 V AC. The O-Scope should display the same image as in step **6.2.6.1.8.1**.
- 6.2.6.3.9 Adjust the Frequency Generator output frequency to 0 Hz.
- 6.2.6.3.10 The Multimeter should read <20 mV AC. The O-Scope should display the same image as in step **6.2.6.1.10.1**.

6.2.6.4 Phase B (V) Upper Gate

- 6.2.6.4.1 Make sure the **LKNx** voltage is still adjusted for 475 VDC (or higher) and that the **CNVOK LED** is on (K1 energized).
- 6.2.6.4.2 Connect connector XP pin 19 to **DCOM**.
- 6.2.6.4.3 Connect Function Generator main output positive lead to connector XP pin 3 and the negative output lead to **DCOM**. Set Frequency Generator for square-wave output, 4 Vp-p, at 3 KHz.
- 6.2.6.4.4 Connect positive lead of Multimeter to connector B2PL pin 4 and negative lead of Multimeter to connector B2PL pin 6. Set Multimeter to read AC Volts.
- 6.2.6.4.5 Connect O-Scope probe to connector B2PL pin 5 and O-scope ground to connector B2PL pin 6.
- 6.2.6.4.6 The Multimeter should read 315 mV AC +/- 50 mV AC. The O-Scope should display the same image as in step **6.2.6.1.6.1**.

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- 6.2.6.4.7** Adjust the Frequency Generator output frequency to 20 KHz.
- 6.2.6.4.8** The Multimeter should read 1.6 V AC +/- 0.3 V AC. The O-Scope should display the same image as in step **6.2.6.1.8.1**.
- 6.2.6.4.9** Adjust the Frequency Generator output frequency to 0 Hz.
- 6.2.6.4.10** The Multimeter should read <20 mV AC. The O-Scope should display the same image as in step **6.2.6.1.10.1**.

6.2.6.5 Phase C (W) Lower Gate

- 6.2.6.5.1** Make sure the **LKNx** voltage is still adjusted for 475 VDC (or higher) and that the **CNVOK LED** is on (K1 energized).
- 6.2.6.5.2** Connect connector XP pin 15 to **DCOM**.
- 6.2.6.5.3** Connect Function Generator main output positive lead to connector XP pin 3 and the negative output lead to **DCOM**. Set Frequency Generator for square-wave output, 4 Vp-p, at 3 KHz.
- 6.2.6.5.4** Connect positive lead of Multimeter to connector C1PL pin 2 and negative lead of Multimeter to connector C1PL pin 4. Set Multimeter to read AC Volts.
- 6.2.6.5.5** Connect O-Scope probe to connector C1PL pin 3 and O-scope ground to connector C1PL pin 4.
- 6.2.6.5.6** The Multimeter should read 315 mV AC +/- 50 mV AC. The O-Scope should display the same image as in step **6.2.6.1.6.1**.
- 6.2.6.5.7** Adjust the Frequency Generator output frequency to 20 KHz.
- 6.2.6.5.8** The Multimeter should read 1.6 V AC +/- 0.3 V AC. The O-Scope should display the same image as in step **6.2.6.1.8.1**.
- 6.2.6.5.9** Adjust the Frequency Generator output frequency to 0 Hz.
- 6.2.6.5.10** The Multimeter should read <20 mV AC. The O-Scope should display the same image as in step **6.2.6.1.10.1**.

6.2.6.6 Phase C (W) Upper Gate

- 6.2.6.6.1** Make sure the **LKNx** voltage is still adjusted for 475 VDC (or higher) and that the **CNVOK LED** is on (K1 energized).
- 6.2.6.6.2** Connect connector XP pin 21 to **DCOM**.
- 6.2.6.6.3** Connect Function Generator main output positive lead to connector XP pin 3 and the negative output lead to **DCOM**. Set Frequency Generator for square-wave output, 4 Vp-p, at 3 KHz.

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- 6.2.6.6.4** Connect positive lead of Multimeter to connector C2PL pin 4 and negative lead of Multimeter to connector C2PL pin 6. Set Multimeter to read AC Volts.
- 6.2.6.6.5** Connect O-Scope probe to connector C2PL pin 5 and O-scope ground to connector C2PL pin 6.
- 6.2.6.6.6** The Multimeter should read 315 mV AC +/- 50 mV AC. The O-Scope should display the same image as in step **6.2.6.1.6.1**.
- 6.2.6.6.7** Adjust the Frequency Generator output frequency to 20 KHz.
- 6.2.6.6.8** The Multimeter should read 1.6 V AC +/- 0.3 V AC. The O-Scope should display the same image as in step **6.2.6.1.8.1**.
- 6.2.6.6.9** Adjust the Frequency Generator output frequency to 0 Hz.
- 6.2.6.6.10** The Multimeter should read <20 mV AC. The O-Scope should display the same image as in step **6.2.6.1.10.1**.

6.2.7 EPLD (U1) Program verification

- 6.2.7.1** Remove socketed programmed IC U1. Using the Datalink programmer, verify that U1 is programmed correctly.
 - 6.2.7.1.1** Select device Altera 7064-PL44.
 - 6.2.7.1.2** Load data from PC file - N:\Firmware\44S firmware\770225\006a\225-006a.pof.
 - 6.2.7.1.3** Select **VERIFY ONLY** from PROCESS menu.
 - 6.2.7.1.3.1** Checksum displayed should be **000DDC68**. If not either reprogram or replace with new.

6.3 *TEST COMPLETE*****

7. NOTES

7.1 None at this time.

8. ATTACHMENTS

8.1 None at this time.