1. PURPOSE

Outlined below is the procedure used to test and tune the PDL amplifier assembly.

2. HISTORY

Rev 01   May 14, 1996 - initial release

3. REFERENCES

D00476   SCHM,PDLBSE,AMP,35W
D00036.dwg   ACAD drawing of test setup

4. REQUIRED EQUIPMENT

12.5V (10A min) Power supply
HP 8711B Scalar Analyzer
HP Desk Jet 682C Printer
HP973A 10A DVM (or equivalent)
Test Controller Card with 11 pin Molex cable
cables and connectors as required
Mini-circuit CAT-20 20dB attenuator
EIN 503L 3W linear RF amplifier
Pasternak PE7021 30 dB / 100W attenuator
Bird 43 Watt meter with 5W element
Bird 43 Watt meter with 100W element

5. PROCEDURE

5.1 Calibrate and Set Up

Connect the test equipment as shown in the figure below. Turn on the line power to all of the test equipment. After waiting 30 minutes, attach the cable coming from the output of the 5W Bird Wattmeter directly to the input of the 100W Bird Wattmeter and normalize the Scalar Analyzer.

Use a DVM to verify that the Power Supply voltage is set to 12.5 VDC +/- 0.1 VDC.

Load the program PDL450.35W stored in the Analyzer to provide appropriate sweep and gain parameters.

5.2 Connect UUT

Attach the cable designated "A" in the figure below to the pcb-mounted MCX connector (the input to the Amp) on the UUT. Attach the cable designated as "B" in figure 1 to the panel mounted BNC connector on the back of the heat sink (the external antenna connection).

Attach the red alligator lead of the power supply to the "+" terminal of the power connector (pin 1 on J1) on the UUT. Attach the black alligator lead of the power supply to the negative terminal (pin 2 on J1).

Attach the 11 pin Molex cable from the Test Controller Card to the UUT.

5.3 RF Power Measurement

Write the serial number on the report sheet and execute the test program.   Put the high low power switch in the high power position.   The limit lines for pass/fail are set for 35W +/- 20%. Adjust VC1, VC2, and VC3, in order until the UUT passes. Plot the results.
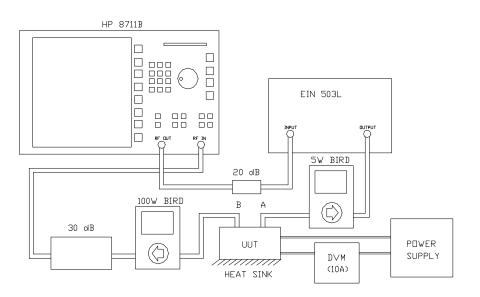
5.4 Average Supply Current

Read the ammeter and record the average current on the report sheet while the UUT is being swept.

5.5 Average Reflected Power

Read the 5W Bird Wattmeter and record the average reflected power on the report sheet while the UUT is being swept.

5.6 Record Data

Insert the report sheet into the printer and plot the results.