

Exhibit 6 Revision A – Test Report

**General Dynamics C4 Systems
VHF CM-350 Digital Transmitter (VDT)**

FCC ID: MIJCM350V

Model No. CM-350

Equipment Applicant: General Dynamics C4 Systems
8220 E. Roosevelt St.
Scottsdale, Arizona 85257

Tests Conducted By: General Dynamics C4 Systems
EMC Test Facility
8201 E. McDowell Rd.
Scottsdale, Arizona 85257

Test Summary: Complies with FCC Part 87, Aviation Services

The General Dynamics EMC Laboratory
is accredited through the



NVLAP Lab Code 100405-0

This document shall not be reproduced,
except in full, without the written approval
of the laboratory. This document shall no
be used by the client to claim product
endorsement by NVLAP or any agency
of the U.S. Government.

6.0 Introduction

6.0.1 Facility Description

The majority of the EMI testing of the CM-350 was performed by TELERAD (OEM) and EMITECH Test Laboratory. Some of the testing was performed at General Dynamics C4 Systems (GDC4S), EMC/TEMPEST Test Laboratory which is located in the southeast wing of the Hayden building at 8201 E. McDowell Road, Scottsdale, AZ.

The GDC4S EMC test facility includes a certified three-meter and ten-meter Open Area Test Site (OATS) and several shielded enclosures. The facility has been found to be in compliance with the requirements of Section 2.948 of the FCC rules, per Registration Number 90811, dated July 18, 2007. The facility has also been issued a Certificate of Accreditation through the National Voluntary Laboratory Accreditation Program (NVLAP) by NIST. This is under NVLAP Code: 100405-0 and is effective through September 30, 2008. The facility is in compliance with all CISPR 16 requirements.

6.0.2 Quality System

The GDC4S EMI/TEMPEST Test Laboratory maintains a Quality Manual that describes the quality assurance program of the EMC/TEMPEST Facility to set forth procedures covering all quality assurance functions. This manual has been constructed to reflect a quality program in compliance with the requirements of the following:

- National Institute of Standards & Technology (NIST) National Voluntary Laboratory Accreditation Program (NVLAP)
- NIST Handbook 150-11 (2007 Edition)
- ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories
- National Security Agency Technical and Security Requirements Document for the Endorsed TEMPEST Test Services Program NSA TSRD No. 88-9C rev. 2

6.0.3 Standard References

- | | |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 47 CFR 2 | Code of Federal Regulations, Title 47, Part 2, "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations" |
| 47 CFR 87 | Code of Federal Regulations, Title 47, Part 87, "Aviation Services" |
| C63.4-2003 | American National Standards Institute (ANSI), "Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz" |

6.1 Test Requirements

The CM-350 transmitter is subject to FCC Part 87 and Part 2 for FCC Certification for units deployable in the United States. The following tests, as specified in FCC Part 2, with limits as defined in FCC Part 87, and shown in Table 6.1-1 below were performed on the CM-350. Several of the tests were performed by the OEM and the test reports are attached as Exhibits 6A and 6B. Table 6.1-1 provides a cross-reference between the FCC requirement compliance and the ETS 300 676 test report used for “CE” compliance.

Table 6.1-1 FCC Certification Technical Requirement and Test Report Cross-Reference

<i>47 CFR Parts 2 & 87 Requirements</i>	<i>Requirement Description</i>	<i>TELERAD EM9000A Test Report (Exhibit 6A)</i>	<i>Compliance</i>
87.131 2.1046	Power and Emissions	1.2.3, 1.3.2, 1.4.2	Yes
87.133 2.1055	Frequency Stability	1.2.2, 1.3.1, 1.4.1	Yes
87.135 2.1049	Occupied Bandwidth	<i>Provided in this Exhibit Section 6.2.1</i>	Yes
87.139 2.1051 2.1053	Emission Limitations	1.2.10, 1.3.9, 1.4.9	Yes
87.141 2.1047	Modulation Requirements	<i>Provided in this Exhibit Section 6.2.2</i>	Yes
<i>47 CFR Part 15 Requirement</i>	<i>Requirement Description</i>	<i>EMITECH Test Report RC-01-40393 (Exhibit 6B)</i>	<i>Compliance</i>
15.107	AC Conducted Emissions	8.0	Yes
15.109	Radiated Emissions Rcv/Standby	7.0	Yes
15.209	Radiated Emissions Transmit	7.0	Yes

6.2 Test Results

The majority of the test results are detailed in Exhibits 6A and 6B per the cross-reference table provided in Section 6.1.

6.2.1 Occupied Bandwidth

The occupied bandwidth measurements for the CM-350 VDT were performed using the test setup in Figure 6.2-1. A spectrum analyzer was used to observe the radio frequency spectrum with the transmitter operating in a normal mode, modulated by a frequency of 2500 Hz at a level 16 dB above 50% modulation. The power ratio in dB representing 99.0% of the total mean power was recorded from the spectrum analyzer.

Requirements of 2.1049(c)(1) and applicable paragraphs of Part 87 are met. There are no deviations to the specifications.

The test results are summarized in Table 6.2 and are also illustrated in Figures 6.2-2 and 6.2-3.

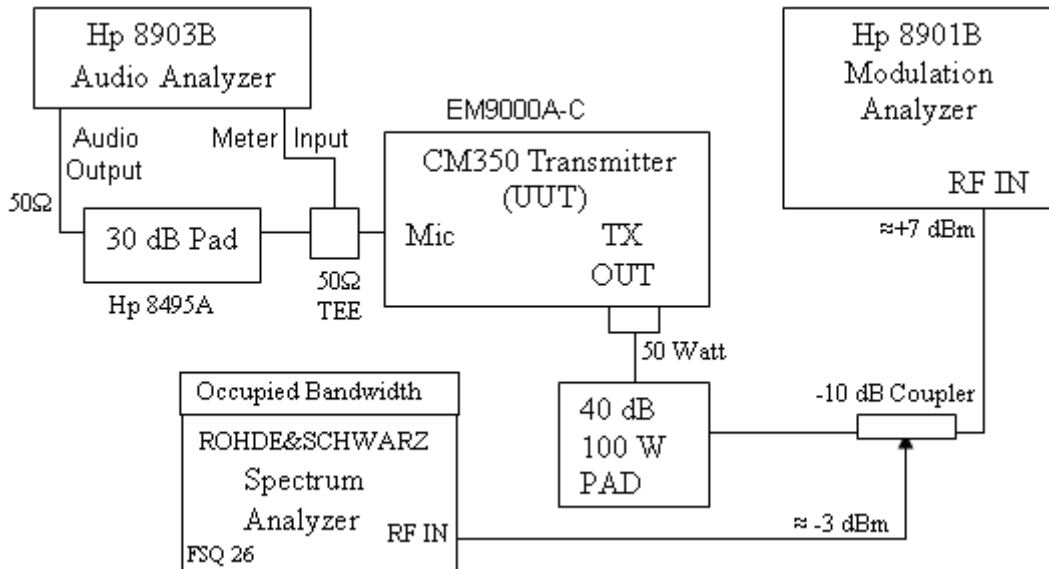


Figure 6.2-1 Occupied Bandwidth Test Setup

Table 6.2-1 Test Results for Occupied Bandwidth Measurements

Channel Spacing	Fc MHz	Occupied BW kHz
25 kHz	127.500	5.46
8.33 kHz	127.500	5.42

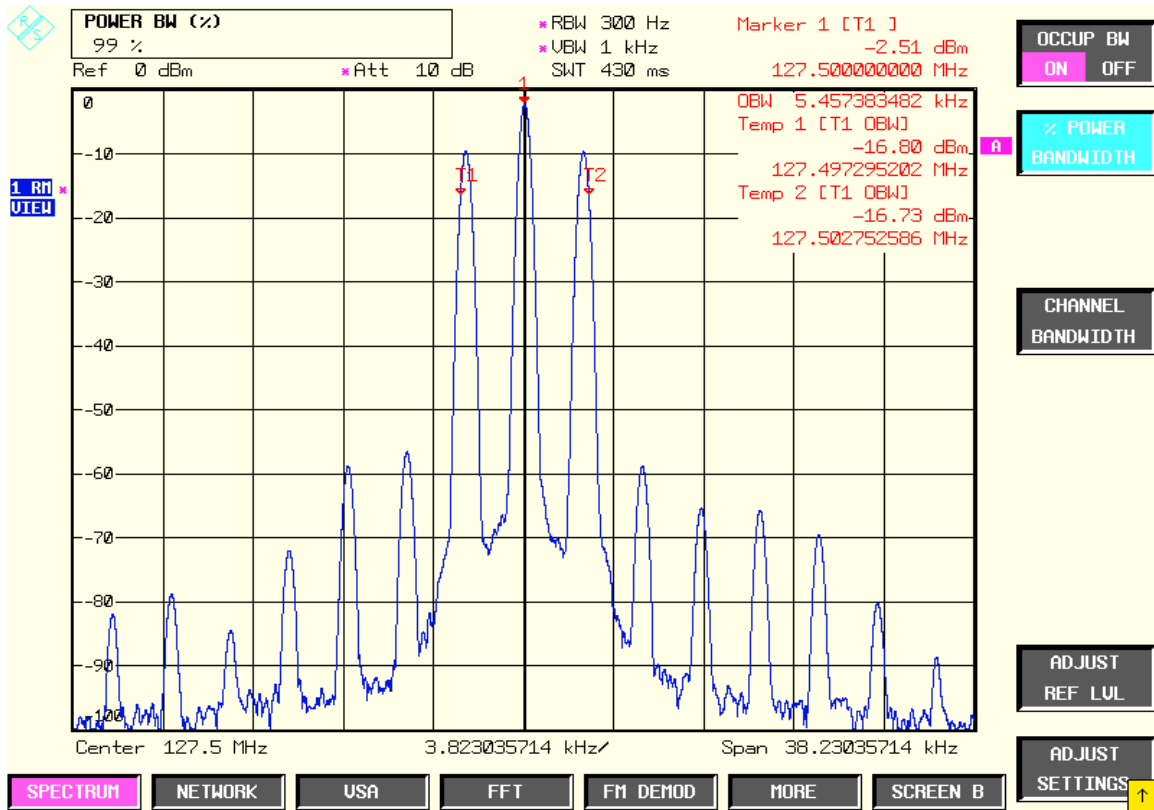


Figure 6.2-2 Occupied Bandwidth, Channel Spacing 25 kHz

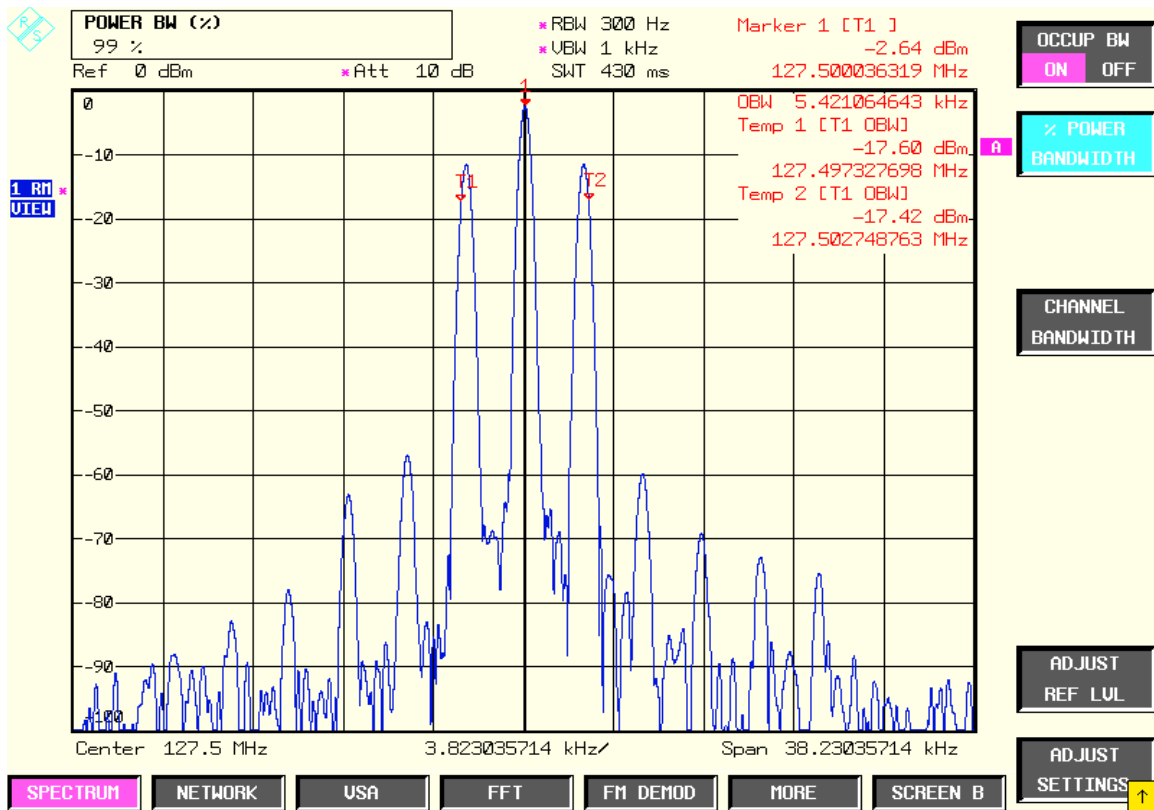


Figure 6.2-3 Occupied Bandwidth, Channel Spacing 8.33 kHz

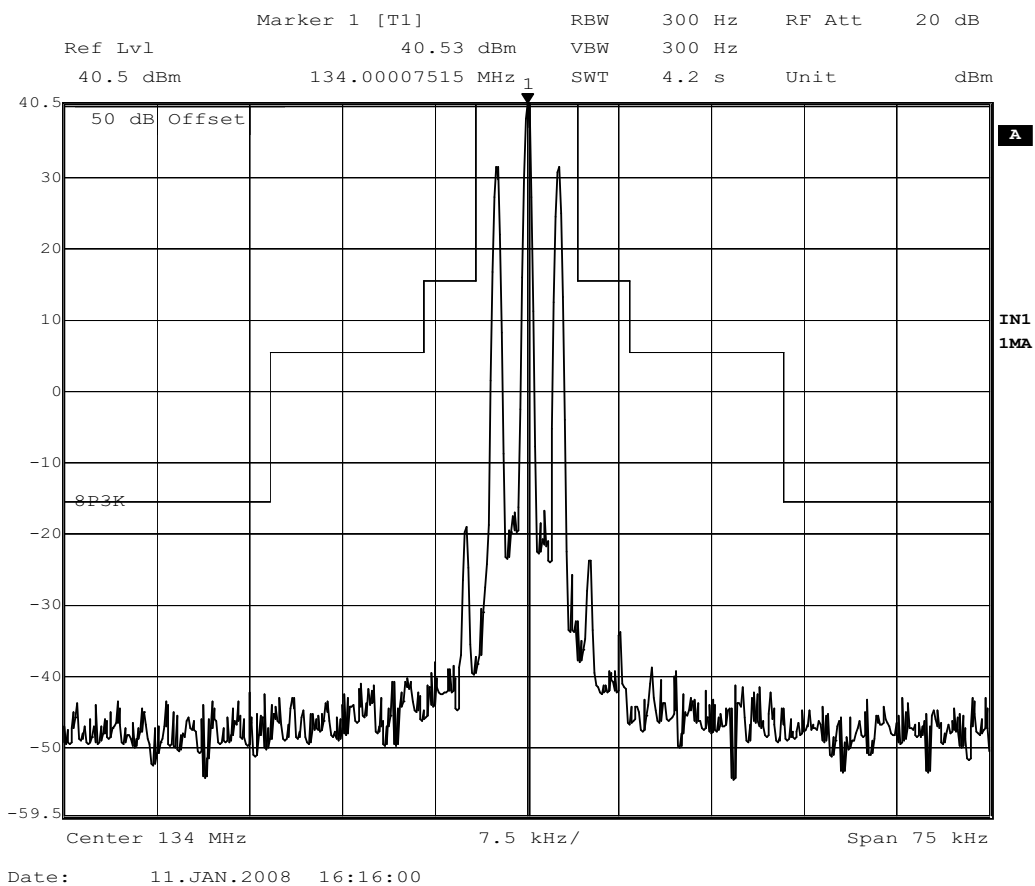


Figure 6.2-4 Carrier Spectrum Mask @ 134 MHz

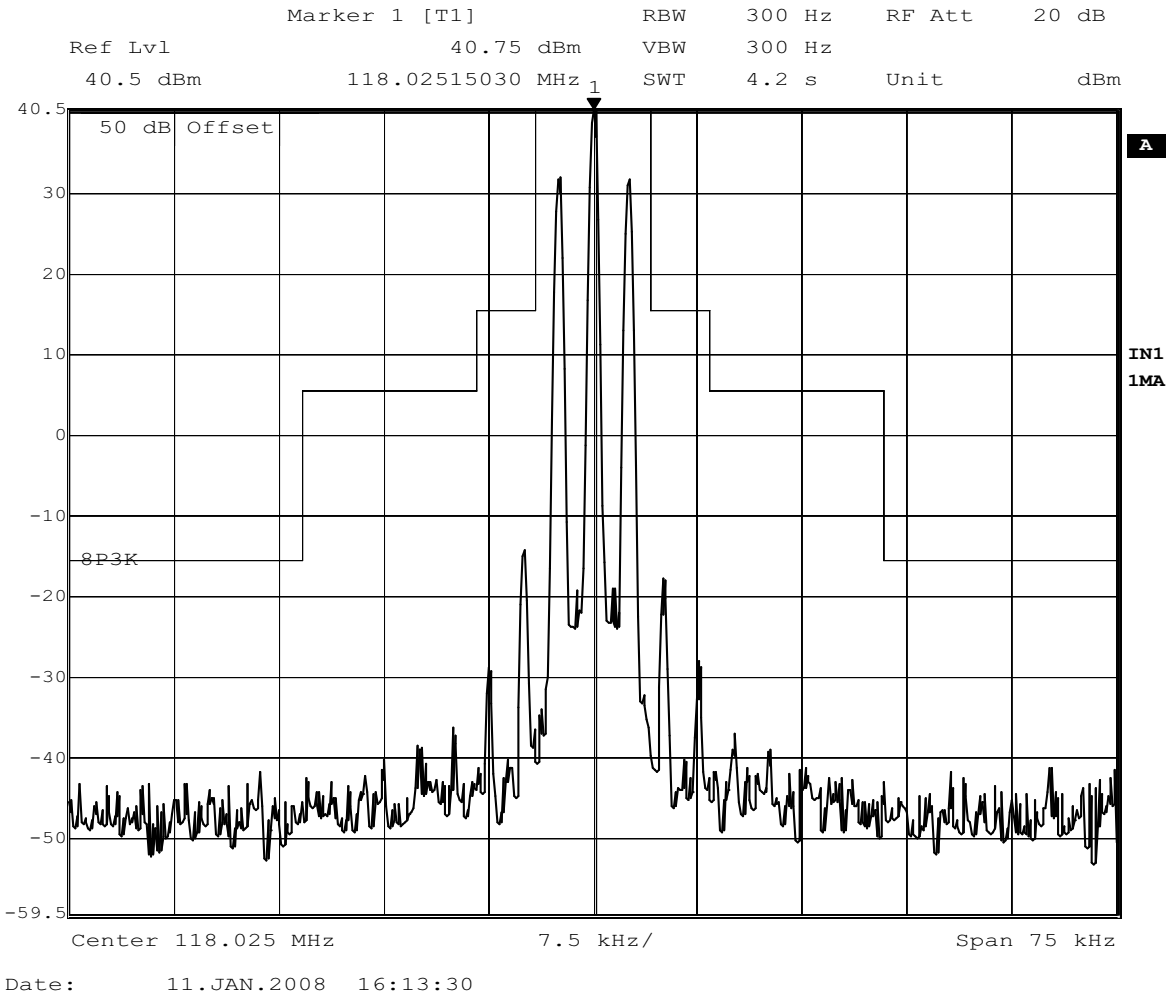


Figure 6.2-5 Carrier Spectrum Mask @ 118 MHz

6.2.2 Modulation Characteristics

Figure 6.2-6 illustrates the test setup used for measuring the audio response of the modulator. Data was taken and recorded with the hp 4195A audio network analyzer. The graph recorded, Figure 6.2-7, is showing the audio frequency response of the modulator. The audio spectrum analyzer was set to 1 kHz and the signal injected into the audio input port of the UUT. The amplitude was adjusted to obtain 50% modulation at 1000 Hz. This level was then taken as the 0-dB reference. The 0 dB reference was about 1 mV RMS. The frequency of the analyzer was then swept and the output level recorded while holding the input level constant. The UUT is set for 25 kHz channel spacing.

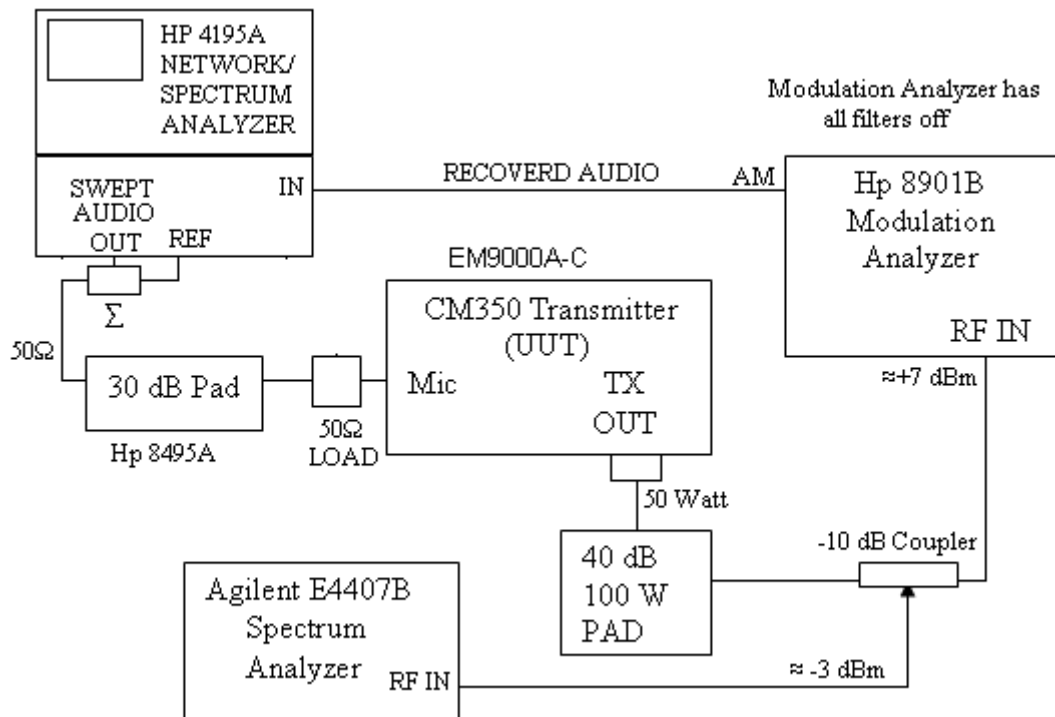


Figure 6.2-6 Audio Response Characteristics Measurement Test Setup

CM350 VDT Transmitter is Model EM9000A-C, S/N 1510, Audio Input at 1.0 mV.

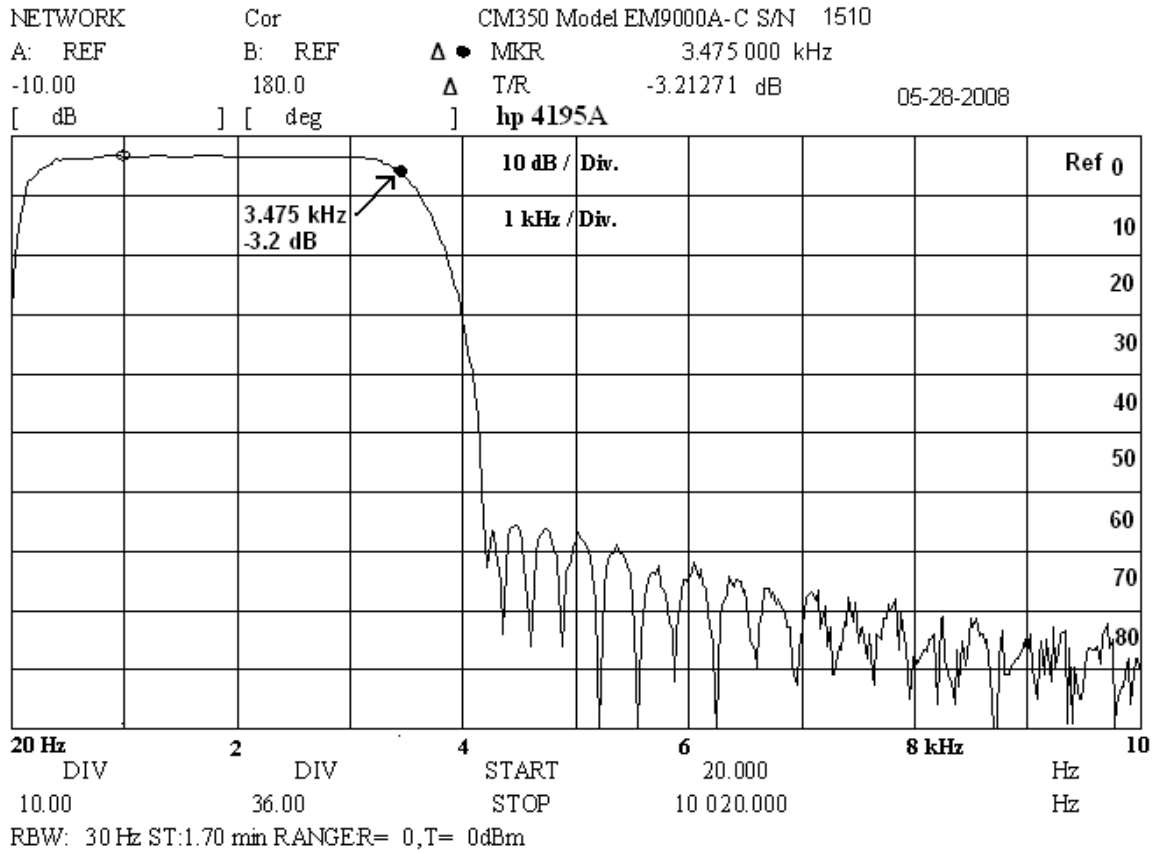


Figure 6.2-7 Audio Frequency Response

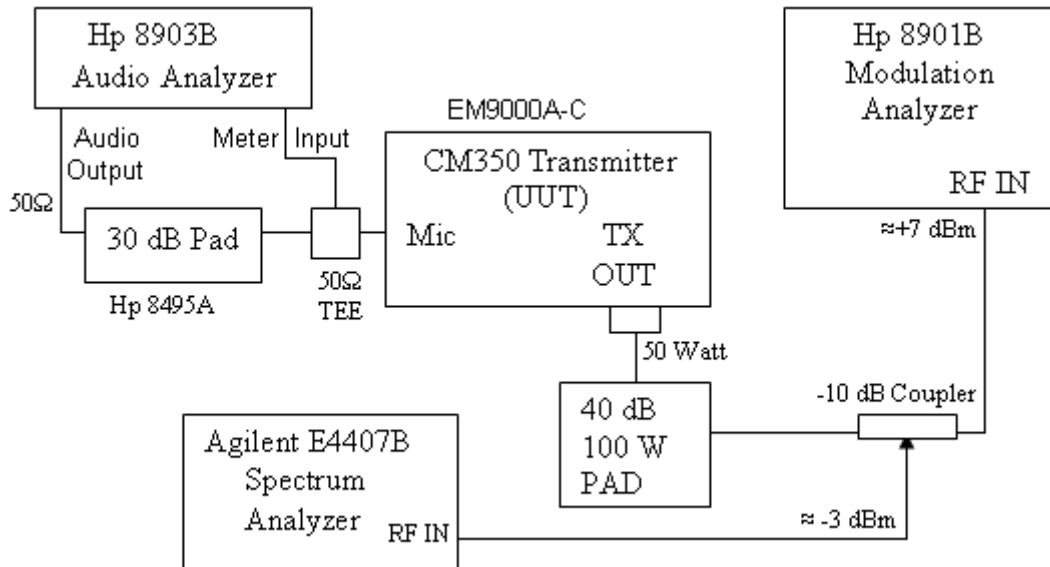


Figure 6.2-8 Modulation AGC Characteristics Measurement Test Setup

The radio frequency output was coupled to a HP Spectrum Analyzer and the hp modulation analyzer. The spectrum analyzer was used to observe the radio frequency spectrum with the transmitter operating in its various modes. The modulation analyzer was used to measure the percent AM modulation.

Results:

Data was taken and recorded in the table below. Data was taken while holding the audio frequency at 500 Hz, 1 kHz and 2 kHz into the UUT. The audio frequency analyzer was first set to 1 kHz and the signal injected into the audio input port of the UUT. The amplitude was adjusted to obtain 50% modulation at 1000 Hz. This level was then taken as the 0-dB reference. The 0 dB reference was about 1 mV RMS. The amplitude of the generator was then varied and the output level recorded while holding each of the frequency tones constant. The UUT is set for 25 kHz channel spacing.

Figure 6.2-9 shows the modulation response for each of three tones while the input voltage was varied. The frequency is held constant and the modulation is read from the hp 8901B modulation analyzer. The specifications of Paragraph 2.1047 and applicable parts of 87 are met.

Table 6.2-2 Modulation AGC Characteristics at 500 Hz, 1 kHz and 2 kHz Tones

Measured % AM (Mic Input)				
Level dB	% AM 500 Hz	% AM 1000 Hz	% AM 2000 Hz	Volts RMS
-20	5.8	9.0	6.6	100 μ V
-18	6.0	10.5	8.0	
-16	8.2	11.8	8.8	
-14	9.5	13.5	10.5	
-12	12.0	15.0	12.6	
-10	14.0	18.0	15.2	320 μ V
-8	17.0	21.0	18.5	
-6	21.0	25.0	22.5	
-4	26.0	30.0	28.0	
-2	32.0	37.0	34.0	
0	40.0	45.0	42.0	1.00 mV
2	49.5	55.5	52.6	
4	61.5	68.8	65.0	
6	77.0	85.0	81.0	
8	86.0	87.0	86.0	
10	86.0	87.0	86.2	3.2 mV
16	86.0	87.0	86.2	
20	86.0	87.0	86.2	10 mV
25	86.0	87.0	86.2	
30	86.0	87.0	86.2	32 mV

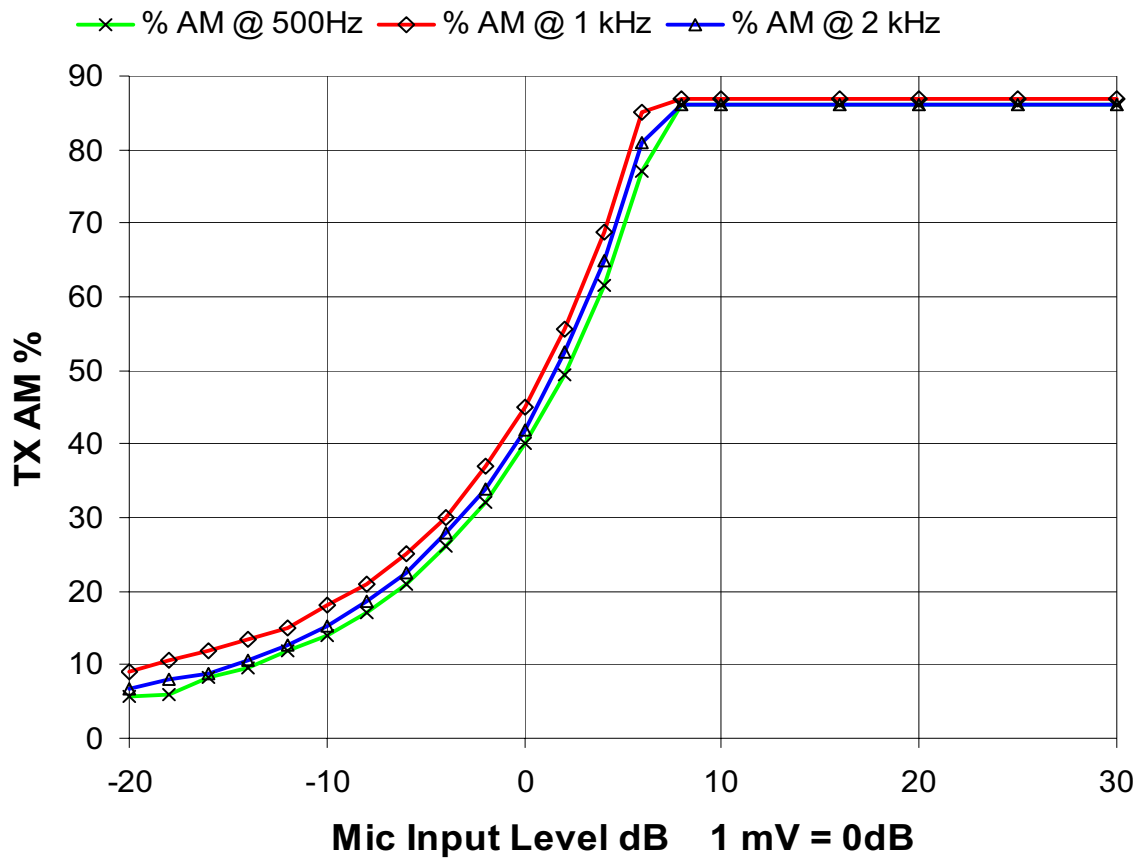


Figure 6.2-9 Modulation Response