


**FCC PART 15, SUBPART C
TEST REPORT***for***TV TRANSMITTER****MODEL: IG-TVTS-1**Prepared for
INTEGRAVICS, LLC
3820 SWEET BRIAR DRIVE
MEDINA, OHIO 44256Prepared by: 

JOSH HANSEN

Approved by: 

JOEY MADLANGBAYAN

COMPATIBLE ELECTRONICS INC.
20621 Pascal Way
LAKE FOREST, CA 92630
(949) 587-0400

DATE: AUGUST 19, 2009

	REPORT BODY	APPENDICES					TOTAL
		A	B	C	D	E	
PAGES	17	2	2	2	9	30	62

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1	Conducted Emissions Test Setup
2	Plot Map And Layout of Test Site

GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by Compatible Electronics Inc., which is an independent testing and consulting firm. The test report is based on testing performed by Compatible Electronics personnel according to the measurement procedures described in the test specifications given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced without the written permission of Compatible Electronics, unless done so in full.

This report must not be used to claim product endorsement by NVLAP, NIST or any other agency of the U.S. Government.

Device Tested: TV Transmitter
Model: IG-TVTS-1

Product Description: See Expository Statement.

Modifications: The EUT was not modified.

Manufacturer: Integravics LLC
3820 Sweet Briar Drive
Medina ,Ohio 44256

Test Dates: July 1, 2, 30 August 18 2010

Test Specifications: CFR Title 47, Part 15 Subpart C, Sections 15.205, 15.209 and 15.237

Test Procedure: ANSI C63.10: 2009

Test Deviations: The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Radiated RF Emissions, 10 kHz – 30 MHz & 30 - 1000 MHz	Complies with the limits of CFR Title 47, Part 15, Subpart C, section 15.205, 15.209, 15.237 (b), and 15.237 (c).
2	Conducted RF Emissions, 150 kHz – 30 MHz	Complies with the limits of CFR Title 47, Part 15, Subpart C, section 15.207.
3	-20 dB Bandwidth of the Fundamental	Complies with the limits of CFR Title 47, Part 15, Subpart C, section 15.237 (b).
4	Peak Radiated EMI	Complies with the limits of CFR Title 47, Part 15, Subpart C, section 15.237 (c).
5	Restricted Bands and Bandedge	Complies with the limits of CFR Title 47, Part 15, Subpart C, section 15.205, and 15.237 (c).
6	Variation of The Input Power	Complies with CFR Title 47, Part 15 Subpart C, section 15.31

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the TV Transmitter Model: IG-TVTS-1. The EMI measurements were performed according to the measurement procedure described in ANSI C63.10. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the specification limits defined by CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.237.



2. ADMINISTRATIVE DATA

2.1 Location of Testing

The EMI tests described herein were performed at the test facility of Compatible Electronics, 20621 Pascal Way, Lake Forest, California 92630.

2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test. The calibration is traceable to the National Institute of Standards and Technology (NIST).

2.3 Cognizant Personnel

Integravics LLC

Dan Lyons President

Compatible Electronics, Inc.

Josh Hansen Lab Manager
Joey Madlangbayan Test Engineer
Jeff Klinger Director of Engineering

2.4 Date Test Sample was Received

The test sample was received on July 1, 2010.

2.5 Disposition of the Test Sample

The sample has not yet been returned to Integravics LLC as of July 2, 2010.

2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network
FM	Frequency Modulation
MP3	MPEG Audio Layer 3

3. APPLICABLE DOCUMENTS

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
CFR Title 47, Part 15	FCC Rules – Radio frequency devices (including digital devices)
ANSI C63.10 2009	American National Standard for Testing Unlicensed Wireless Devices

4. DESCRIPTION OF TEST CONFIGURATION

4.1 Description Of Test Configuration - EMI

Setup and operation of the equipment under test.

Specifics of the EUT and Peripherals Tested

The TV Transmitter Model: IG-TVTS-1 (EUT) was setup in a tabletop configuration while connected to an MP3 player and AC adapter via the RCA audio and DC power input ports. An audio signal from the MP3 player was fed to the audio input jack. The transmitting antenna was connected to the chassis via BNC connector.

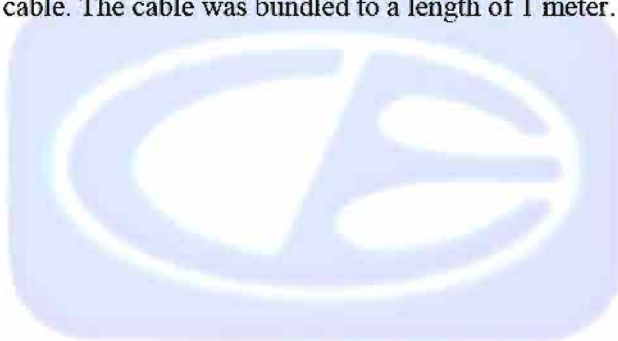
The low, middle, and high channels were measured and then investigated in the X, and Y axis positions to find which axis produced the highest emissions. The EUT was also configured in a mode with and without a 100ft BNC Coax Cable.

The worst case configuration was without the 100ft BNC Coax Cable and in the Y-Axis position. All final data was taken in this configuration. Please see Appendix E for the data sheets.

4.1.1 Cable Construction and Termination

Cable 1 This is a 2 meter unshielded audio cable connecting the output of the MP3 player to the audio input of the EUT. There is a 3.5 mm phone jack at the MP3 player end and a pair of RCA connectors at the EUT end of the cable. The cable was bundled to a length of 1 meter.

Cable 2 This is a 30 meter shielded coax cable connecting the antenna to the EUT. There is a BNC connector at both ends of the cable. The cable was bundled to a length of 1 meter.



5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT**5.1 EUT and Accessory List**

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	FCC ID
TV TRANSMITTER (EUT)	INTEGRAVICS LLC	IG-TVTS-1	NONE	YKU-IG-TVTS-1
MP3 PLAYER	INSIGNIA	NS-DA1G	BAB3071010002888	N/A
DC SUPPLY	JAMECO	DBU60050	N/A	N/A
REMOTELY LOCATED				
RF RECEIVER	INTEGRAVICS	IG-TVR-1	NONE	N/A
EARPHONES	PANASONIC	RP-HS6-S	NONE	N/A

5.2 EMI Test Equipment

EQUIPMENT TYPE	MANU-FACTURER	MODEL NUMBER	SERIAL NUMBER	CALIBRATION DATE	CALIBRATION DUE DATE
GENERAL TEST EQUIPMENT USED FOR ALL RF EMISSIONS TESTS					
Computer	Compatible Electronics	N/A	N/A	N/A	N/A
EMI Receiver	Rohde & Schwarz	ESIB40	100172	1/07/2009	1/07/2011
Monitor	ICS Advent	N/A	N/A	N/A	N/A
RF RADIATED EMISSIONS TEST EQUIPMENT					
Antenna, CombiLog	Com Power	AC-220	25857	5/06/2010	5/06/2011
Loop Antenna	Com-Power	AL-130	17085	8/01/2008	8/01/2010
Antenna Mast	Sunol Sciences Corporation	SC104V	081309-1	N/A	N/A
Turntable	Sunol Sciences Corporation	FM2011VS	NONE	N/A	N/A
Mast and Turntable Controller	Sunol Sciences Corporation	TWR95.4	081309-3	N/A	N/A

6. TEST SITE DESCRIPTION

6.1 Test Facility Description

Please refer to section 2.1 and 7.1 of this report for EMI test location.

6.2 EUT Mounting, Bonding and Grounding

The EUT and MP3 player were mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was placed in the center, and on the back edge of the table, in accordance with ANSI C63.10: 2009. The test site receive antenna distance was measured from the closest periphery of the EUT setup. The accessory unit was placed 10 cm to either side of the EUT. The AC adapter was remotely located.

The EUT and accessories were investigated for worst case placement; the above configuration yielded the worst case configuration.

The EUT was not grounded.

7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests. Test results are also included in this section.

7.1 RF Emissions

7.1.1 Conducted Emissions Test

The EMI receiver was used as a measuring meter. A quasi-peak and/or average reading was taken only where indicated in the data sheets. The LISN output was measured using the EMI receiver. The output of the second LISN was terminated by a 50-ohm termination. The effective measurement bandwidth used for this test was 9 kHz.

Please see section 6.2 of this report for mounting, bonding, and grounding of the EUT. The EUT received its power through the LISN, which was bonded to the ground plane. The EUT was set up with the minimum distances from any conductive surfaces as specified in ANSI 63.10. The excess power cord was wrapped in a figure eight pattern to form a bundle not exceeding 0.4 meters in length.

The conducted emissions from the EUT were maximized for operating mode as well as cable placement. The final data was collected under program control by the computer software. The final qualification data is located in Appendix E.

Test Results:

The EUT complies with the **Class B** limits for CFR Title 47 Part 15 FCC Subpart B for conducted emissions.

7.1.2 Radiated Emissions (Spurious and Harmonics) Test

The receiver was used as a measuring meter. The receiver was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the receiver records the highest measured reading over all the sweeps.

The frequencies above 1 GHz and the fundamental for the low, middle, and high channels were investigated with the built in average detector.

The measurement bandwidths and transducers used for the radiated emissions (Spurious) tests were:

FREQUENCY RANGE	EFFECTIVE MEASUREMENT BANDWIDTH	TRANSDUCER
9 kHz to 150 kHz	200 Hz	Active Loop Antenna
150 kHz to 30 MHz	9 kHz	Active Loop Antenna
30 MHz to 1 GHz	120 kHz	CombiLog Antenna

The Semi-Anechoic test site of Compatible Electronics, Inc, Lab R, was used for radiated emission testing. This test site is set up according to ANSI C63.10. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Final data was collected in the worst case configuration of the EUT (low mid and high channels). At each reading, the EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength). The loop antenna was also rotated in the horizontal and vertical axis in order to ensure accurate results.

7.1.3 Radiated Emissions (Spurious and Harmonics) Test (Continued)

The emissions from the EUT were investigated while operated on each of three channels, 72.1MHz, 74.7MHz and 75.9MHz. The EUT was receiving audio from the MP3 player. The volume was configured to maximum amplitude. The EUT was tested at a 3-meter test distance to obtain the final test data. All three channels were scanned and are presented. The resolution bandwidth was 100 kHz and video bandwidth 300 kHz. The final qualification data sheets are located in Appendix E.

Test Results:

The EUT complies with the **Class B** limits of CFR Title 47, Part 15, Subpart B; and CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209, and 15.237. There were no emissions found below 30MHz

7.1.4 Peak radiated EMI

The EUT was tested at a 3-meter test distance to obtain the final test data. The EUT was maximized to obtain highest emission. The EUT was receiving audio from the MP3 player. The volume was configured to maximum amplitude. All three channels were measured and are presented. The resolution bandwidth was 100 kHz and video bandwidth 300 kHz. Plots of the peak radiated EMI are located in Appendix E.

Test Results:

The EUT complies with Part 15, Subpart C, section 15.237.

7.1.5 Bandwidth of the Fundamental

The -20 dB bandwidth was checked using the EMI Receiver to see that it was wholly within the 200 kHz band centered on the operating frequency. The RBW was set to 5 kHz and the VBW was set to 30 kHz. All three channels were measured and are presented. Plots of the -20 dB bandwidth are located in Appendix E.

Test Results:

The EUT complies with the requirements of CFR Title 47, Part 15, Subpart C, section 15.237 (b) for the -20 dB bandwidth of the fundamental. The EUT has a -20 dB bandwidth that is wholly within the 200 kHz band centered on the operating frequency.

7.1.5 Restricted Bands and Bandedge

The EUT was tested at a 3-meter test distance to obtain the final test data. The EUT was maximized to obtain highest emission. The EUT was receiving audio from the MP3 player. The volume was configured to maximum amplitude. Using the Marker Delta methods each of the band edges were investigated. Plots of the peak radiated EMI are located in Appendix E.

Test Results:

The EUT complies with Part 15, Subpart C, section 15.205 and 15.237.

7.1.5 Variation of The Input Power

The EUT was then connected to the Elgar AC Power Source Model: SW 5250A. AC Power Source allows the Vac input to be varied.

The AC input was then dropped to 85% (97.75 Vac) and raised to 115% (132.25 Vac). The actual AC input was measured using a calibrated Fluke Multimeter Model: 73, Serial Number: 77650234, Calibration Due Date: June 02, 2011. The fundamental of the EUT was then verified again to see that the amplitude did not change.

Test Results:

The EUT does not change amplitude at the fundamental when the AC input voltage is varied between 85% and 115% of the input nominal rated supply voltage.

8. CONCLUSIONS

The TV TRANSMITTER Model: IG-TVTS-1 meets all of the specification limits defined in CFR Title 47, Part 15, Subpart B for the digital portion; and the limits defined in Subpart C, sections 15.205, 15.209, and 15.237 for the transmitter portion.



APPENDIX A

LABORATORY RECOGNITIONS

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400

LABORATORY RECOGNITIONS

Compatible Electronics has the following agency accreditations:

National Voluntary Laboratory Accreditation Program - Lab Code: 200527-0

Voluntary Control Council for Interference - Registration Numbers: R-3276, C-3645, T-11758

Bureau of Standards and Metrology Inspection - Reference Number: SL2-IN-E-1031

Conformity Assessment Body for the EMC Directive Under the US/EU MRA Appointed by NIST

Compatible Electronics is recognized or on file with the following agencies:

Industry Canada
Site Number: 2154C-1



APPENDIX B

MODIFICATIONS TO THE EUT

MODIFICATIONS TO THE EUT

No modifications were made to the EUT.





APPENDIX C

***ADDITIONAL MODELS COVERED
UNDER THIS REPORT***

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

TV TRANSMITTER
Model: IG-TVTS-1
S/N: None

Additional Model Numbers:

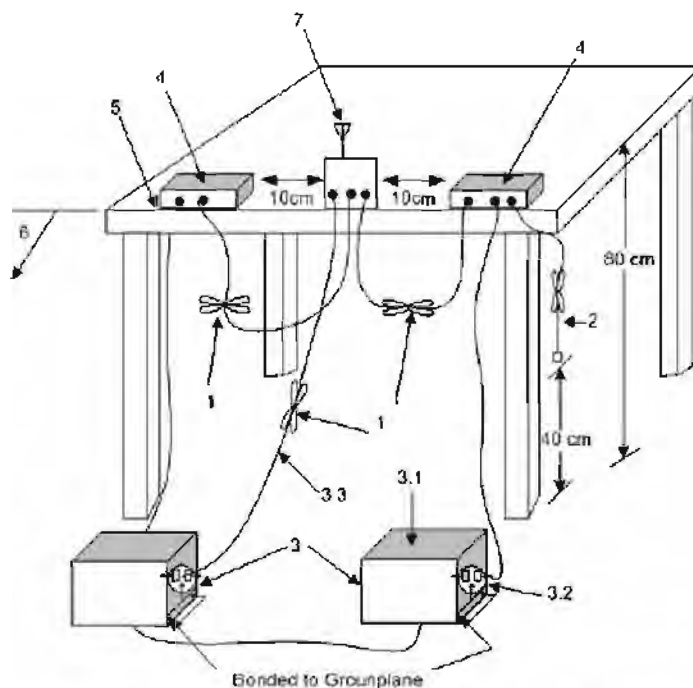
NO ADDITIONAL MODELS



APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

FIGURE 1: CONDUCTED EMISSIONS TEST SETUP



- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long see (see 6.2.3.1).
- I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m (see 6.2.2).
- EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN can be placed on top of, or immediately beneath, reference ground plane (see 6.2.2 and 6.2.3).
- 2.1 All other equipment powered from additional LISN(s).
- 2.2 A multiple-outlet strip can be used for multiple power cords of non-EUT equipment.
- 2.3 LISN at least 80 cm from nearest part of EUT chassis.
- Non-EUT components of EUT system being tested.
- Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop (see 6.2.3.1).
- Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane (see 6.2.2 for option).
- Antenna may be integral or detachable. If detachable, the antenna shall be attached for this test.

FIGURE 2: PLOT MAP AND LAYOUT OF RADIATED TEST SITE

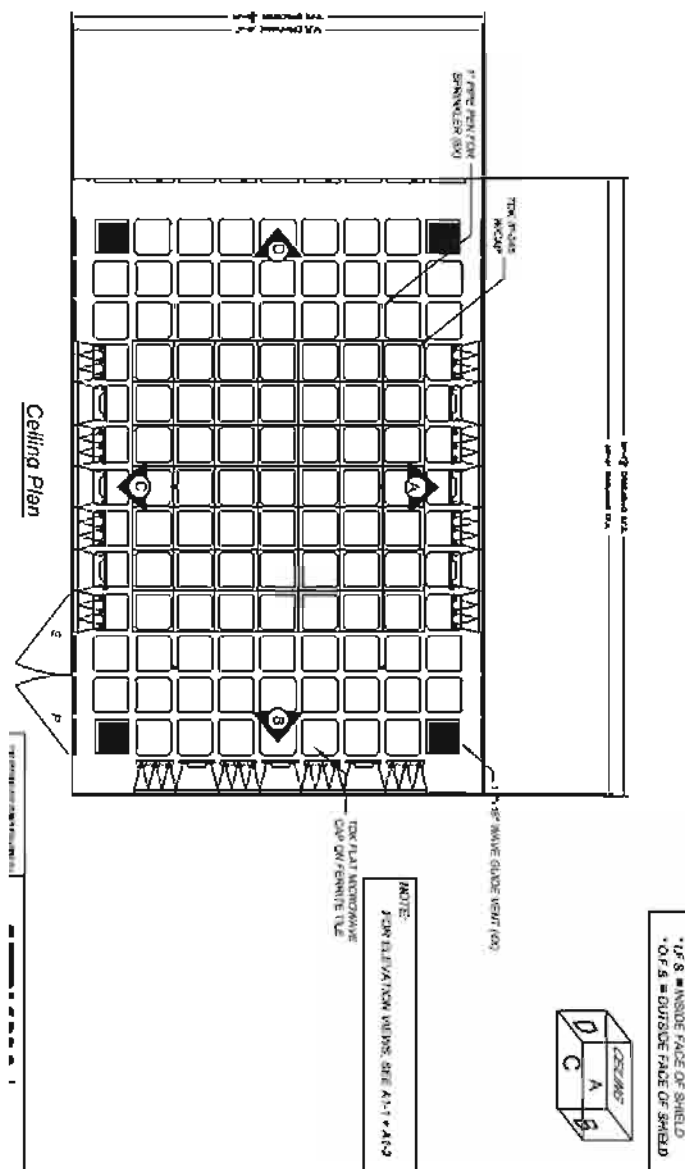


Figure 1 TDK FAC-3 test chamber

COM-POWER AC-220

LAB R - COMBYLOG ANTENNA

S/N: 25857

CALIBRATION DUE: MAY 06, 2011

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30.0	19.8	200.0	10.3
35.0	19.6	250.0	11.7
40.0	18.4	275.0	13.2
45.0	17.0	300.0	13.8
50.0	16.1	400.0	16.5
60.0	15.2	500.0	18.1
70.0	8.1	600.0	18.9
80.0	6.7	700.0	20.5
90.0	8.5	800.0	21.8
100.0	9.4	900.0	23.1
120.0	10.0	1000.0	24.0
125.0	11.1	1200.0	23.6
140.0	9.5	1400.0	25.1
150.0	9.3	1600.0	25.2
160.0	9.1	1800.0	27.9
175.0	9.4	2000.0	28.6
180.0	9.5		

COM-POWER AL-130**LOOP ANTENNA****S/N: 17085****CALIBRATION DATE: 8/1/08**

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)	FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-43	8.5	0.8	-41.53	9.97
0.01	-41.93	9.57	0.9	-41.46	10.04
0.02	-41.29	10.21	1	-41.29	10.21
0.03	-40.73	10.77	2	-40.97	10.53
0.04	-41.03	10.47	3	-41.1	10.4
0.05	-42.37	9.13	4	-41.36	10.14
0.06	-41.6	9.9	5	-40.93	10.57
0.07	-41.96	9.54	6	-40.67	10.83
0.08	-42.1	9.4	7	-41.07	10.43
0.09	-41.83	9.67	8	-40.9	10.6
0.1	-41.83	9.67	9	-40.1	11.4
0.2	-44.46	7.04	10	-41.16	10.34
0.3	-41.73	9.77	15	-47.97	3.53
0.4	-41.8	9.7	20	-40.77	10.73
0.5	-41.8	9.7	25	-44.37	7.13
0.6	-41.33	10.17	30	-43.1	8.4
0.7	-41.36	10.14			



FRONT VIEW

INTEGRAVICS, LLC.
TV TRANSMITTER
MODEL: IG-TVTS-1

FCC SUBPART B AND C – RADIATED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



BACK VIEW

INTEGRAVICS, LLC.
TV TRANSMITTER
MODEL: IG-TVTS-1
FCC SUBPART B AND C – RADIATED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**

Brea Division
114 Olinda Drive
Brea, CA 92823
(714) 579-0500

Agoura Division
2337 Troutdale Drive
Agoura, CA 91301
(818) 597-0600

Silverado Division
19121 El Toro Road
Silverado, CA 92676
(949) 589-0700

Lake Forest Division
20621 Pascal Way
Lake Forest, CA 92630
(949) 587-0400



FRONT VIEW

INTEGRAVICS LLC
TV TRANSMITTER
MODEL: IG-TVTS-1
FCC SUBPART B AND C – CONDUCTED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



BACK VIEW

INTEGRAVICS LLC
TV TRANSMITTER
MODEL: IG-TVTS-1
FCC SUBPART B AND C – CONDUCTED EMISSIONS

**PHOTOGRAPH SHOWING THE EUT CONFIGURATION
FOR MAXIMUM EMISSIONS**



DATA SHEETS



RADIATED EMISSIONS

SPURIOUS AND HARMONICS

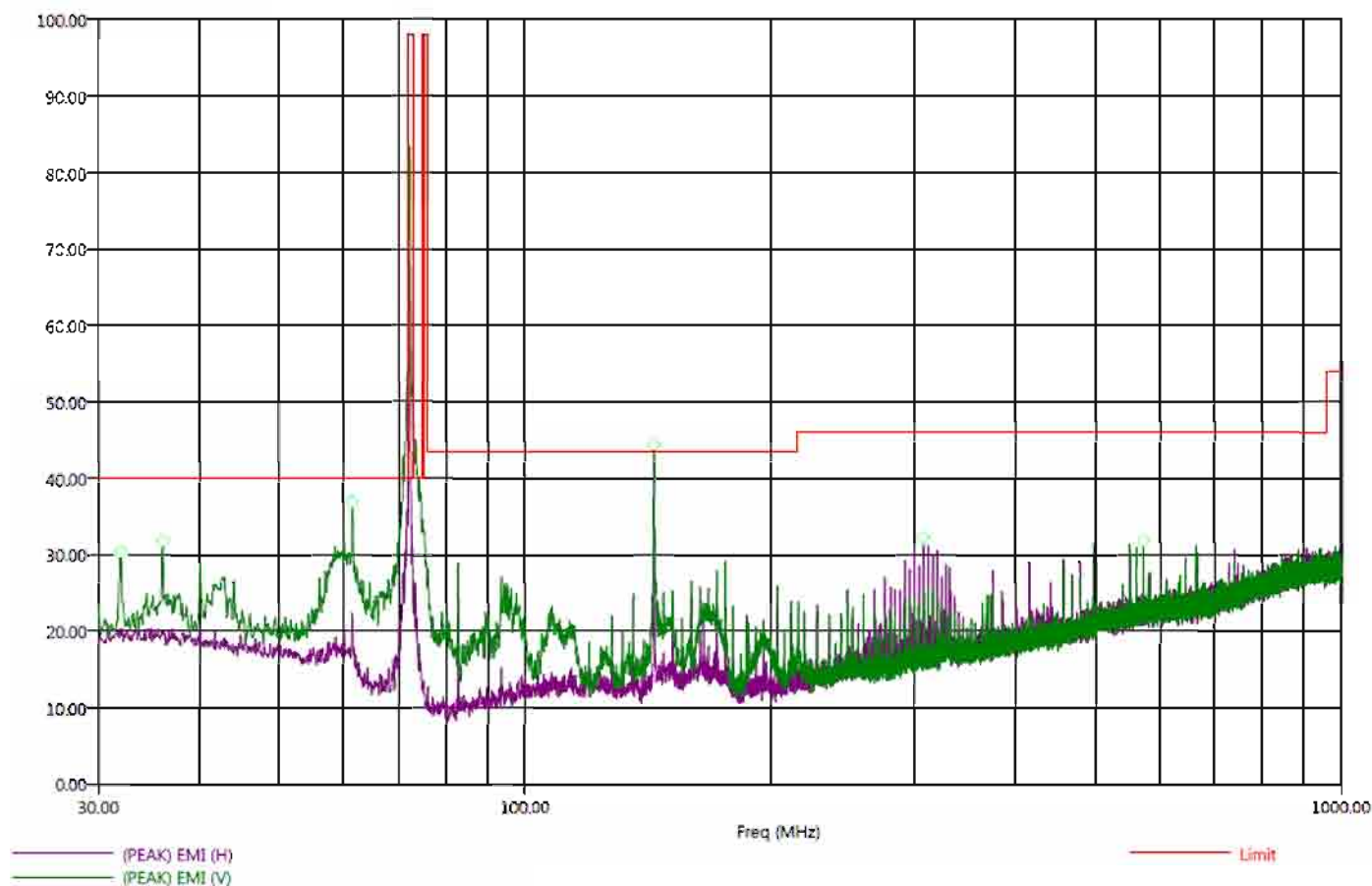
DATA SHEETS

Title: FCC 15.237
File: Radiated Pre-scan 30-1000Mhz 6.set
Operator: Josh Hansen
EUT Type: IG-TVTS-1
EUT Condition: Low Channel
Comments: Y axis (Vertical Wall mount)
Temp: 65f
Hum: 35%
120V 60Hz

7/1/2010 4:38:01 PM
Sequence: Preliminary Scan



Electric Field Strength (dB μ V/m)



Title: FCC 15.237
File: Radiated Final 30-1000Mhz 6.set
Operator: Josh Hansen
EUT Type: IG-TVTS-1
EUT Condition: Low Channel
Comments: Y axis (Vertical Wall mount)
Temp: 65f
Hum: 35%
120V 60Hz

7/1/2010 4:58:04 PM
Sequence: Final Measurements



Compatible Electronics, Inc. FAC- 3 (LAB R)

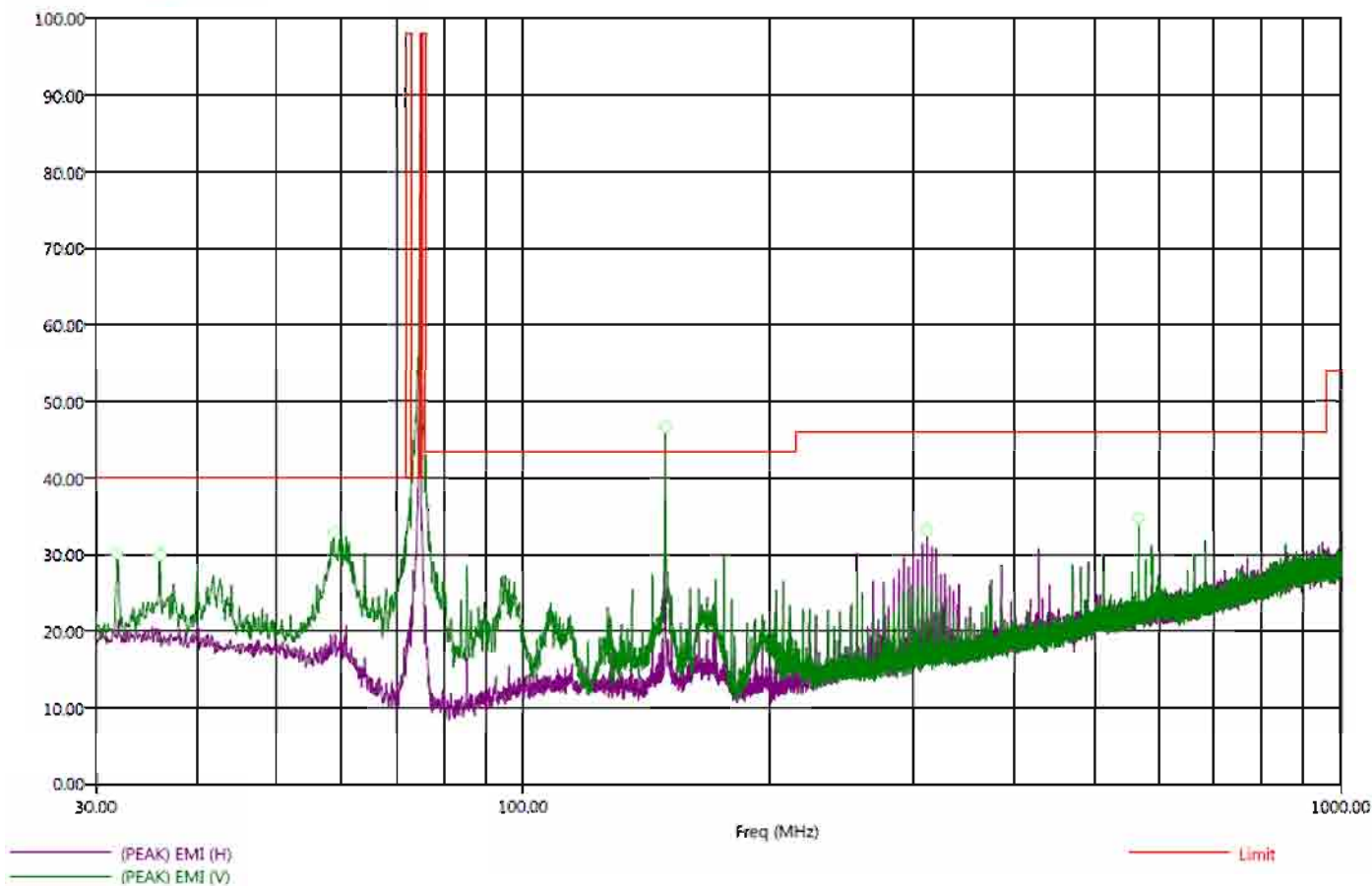
Freq (MHz)	(QP) Margin (dB)	(QP) EMI (dBμV/m)	(PEAK) EMI (dBμV/m)	Limit (dBμV/m)	Pol	Ttbt Agl (deg)	Twr Ht (cm)
32.00	-15.41	24.59	32.08	40.00	V	191.50	137.05
36.00	-16.02	23.98	32.98	40.00	V	212.00	99.82
61.40	-8.81	31.19	37.50	40.00	V	359.75	106.88
144.20	-9.92	33.60	45.92	43.52	V	217.75	112.64
308.00	-14.75	31.25	33.14	46.00	H	180.00	99.82
571.70	-14.93	31.07	34.11	46.00	V	264.50	101.88

Title: FCC 15.237
File: Radiated Pre-scan 30-1000Mhz 5.set
Operator: Josh Hansen
EUT Type: IG-TVTS-1
EUT Condition: Mid Channel
Comments: Y axis (Vertical Wall mount)
Temp: 65f
Hum: 35%
120V 60Hz

7/1/2010 4:01:31 PM
Sequence: Preliminary Scan



Electric Field Strength (dBuV/m)



Title: FCC 15.237
File: Radiated Final 30-1000Mhz 5.set
Operator: Josh Hansen
EUT Type: IG-TVTS-1
EUT Condition: Mid Channel
Comments: Y axis (Vertical Wall mount)
Temp: 65f
Hum: 35%
120V 60Hz

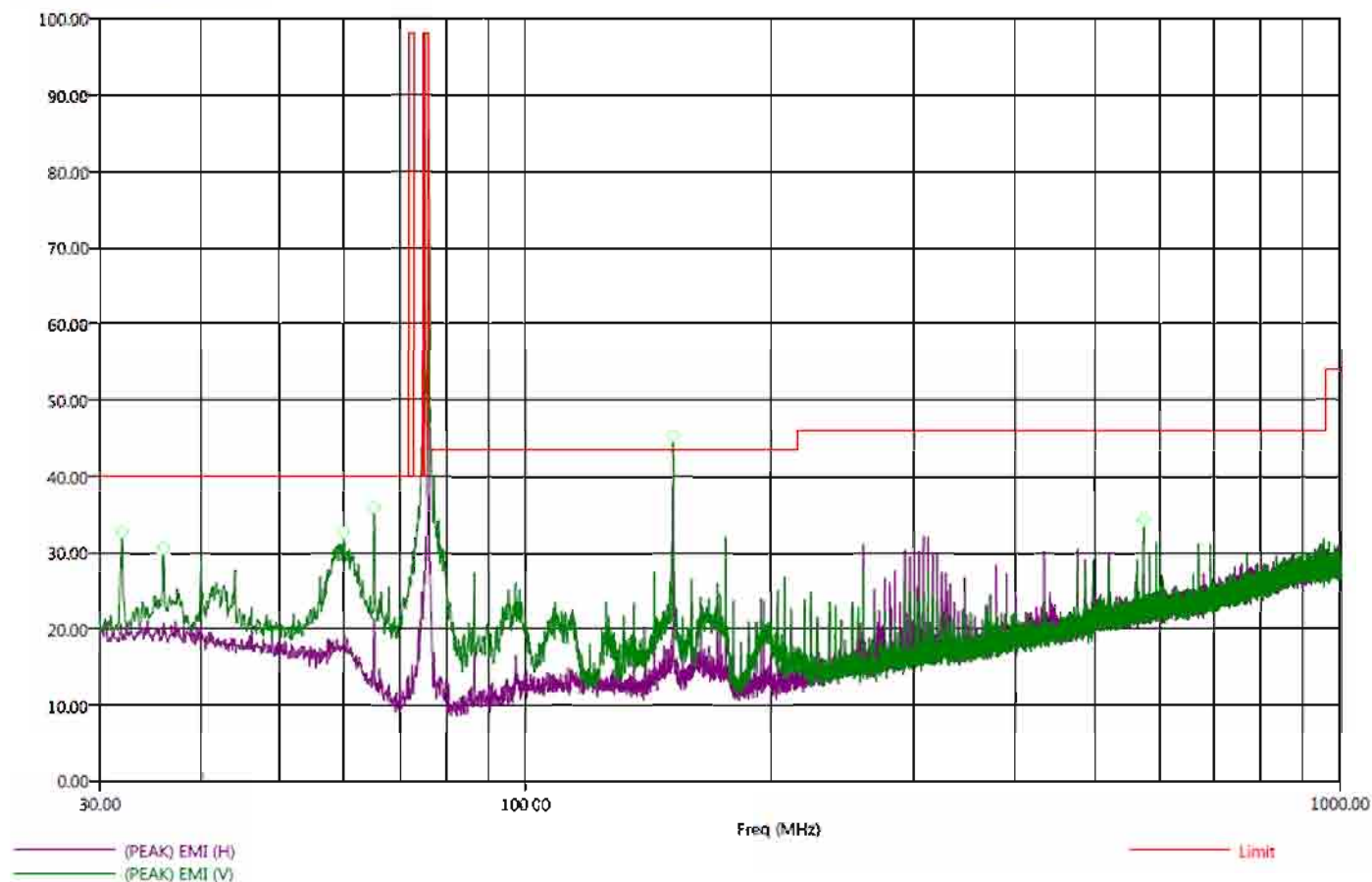
7/1/2010 4:22:04 PM
Sequence: Final Measurements



Freq (MHz)	(QP) Margin (dB)	(QP) EMI (dBμV/m)	(PEAK) EMI (dBμV/m)	Limit (dBμV/m)	Pol	Ttbt Agl (deg)	Twr Ht (cm)
31.90	-14.15	25.85	33.13	40.00	V	249.25	142.76
36.00	-16.18	23.82	32.47	40.00	V	189.25	99.82
58.70	-15.84	24.16	34.74	40.00	V	115.75	104.70
149.40	-6.20	37.32	52.60	43.52	V	267.00	125.41
312.00	-17.51	28.49	32.66	46.00	H	164.75	106.29
565.90	-13.23	32.77	35.98	46.00	V	250.75	109.76

Title: FCC 15.237
File: Radiated Pre-scan 30-1000Mhz 4.set
Operator: Josh Hansen
EUT Type: IG-TVTS-1
EUT Condition: High Channel
Comments: Y axis (Vertical Wall mount)
Temp: 65f
Hum: 35%
120V 60Hz

7/1/2010 3:11:23 PM
Sequence: Preliminary Scan

Electric Field Strength (dB μ V/m)

Title: FCC 15.237
File: Radiated Final 30-1000Mhz 4.set
Operator: Josh Hansen
EUT Type: IG-TVTS-1
EUT Condition: High Channel
Comments: Y axis (Vertical Wall mount)
Temp: 65f
Hum: 35%
120V 60Hz

7/1/2010 3:44:38 PM
Sequence: Final Measurements



Freq (MHz)	(QP) Margin (dB)	(QP) EMI (dB μ V/m)	(PEAK) EMI (dB μ V/m)	Limit (dB μ V/m)	Pol	Ttbl Agl (deg)	Twr Ht (cm)
32.00	-14.87	25.13	32.73	40.00	V	5.75	107.58
36.00	-17.25	22.75	31.93	40.00	V	285.50	100.05
59.90	-12.80	27.20	36.07	40.00	V	119.75	118.17
65.20	-7.39	32.61	37.95	40.00	V	0.00	107.00
151.80	-9.09	34.43	47.56	43.52	V	178.75	104.05
573.10	-12.00	34.00	36.52	46.00	V	261.75	106.17

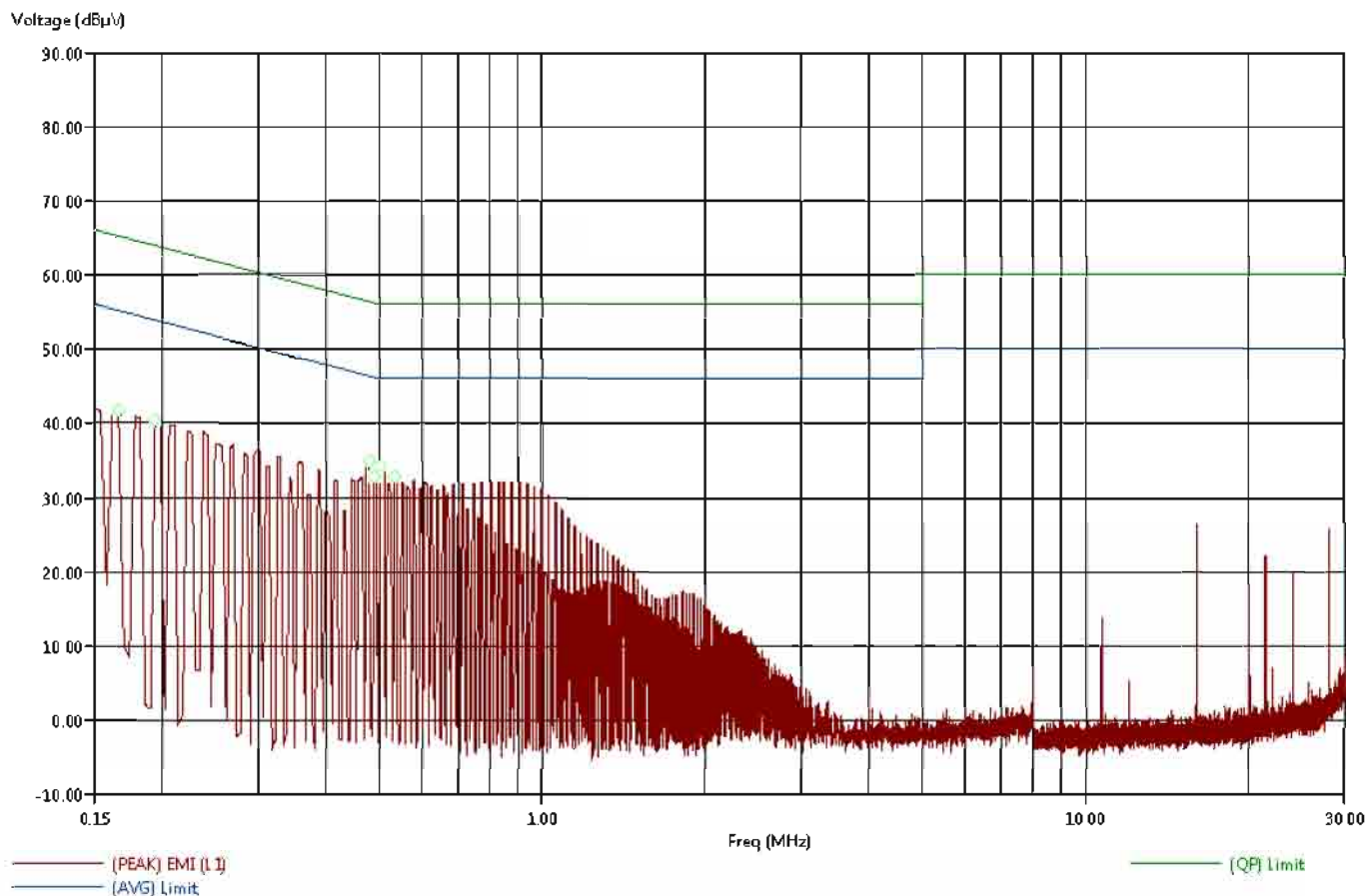


AC CONDUCTED EMISSIONS

DATA SHEETS

Title: FCC 15.207
File: Conducted Pre-Line.set
Operator: Josh Hansen
EUT Type: IG-TVTS-1
EUT Condition: High Channel
Comments: Y axis (Vertical Wall mount)
Temp: 68f
Hum: 50%
120V 60Hz

7/2/2010 6:07:52 PM
Sequence: Preliminary Scan



Title: FCC 15.207
File: Conducted Final-Line.set
Operator: Josh Hansen
EUT Type: IG-TVTS-1
EUT Condition: High Channel
Comments: Y axis (Vertical Wall mount)
Temp: 68f
Hum: 50%
120V 60Hz

7/2/2010 7:01:51 PM
Sequence: Final Measurements

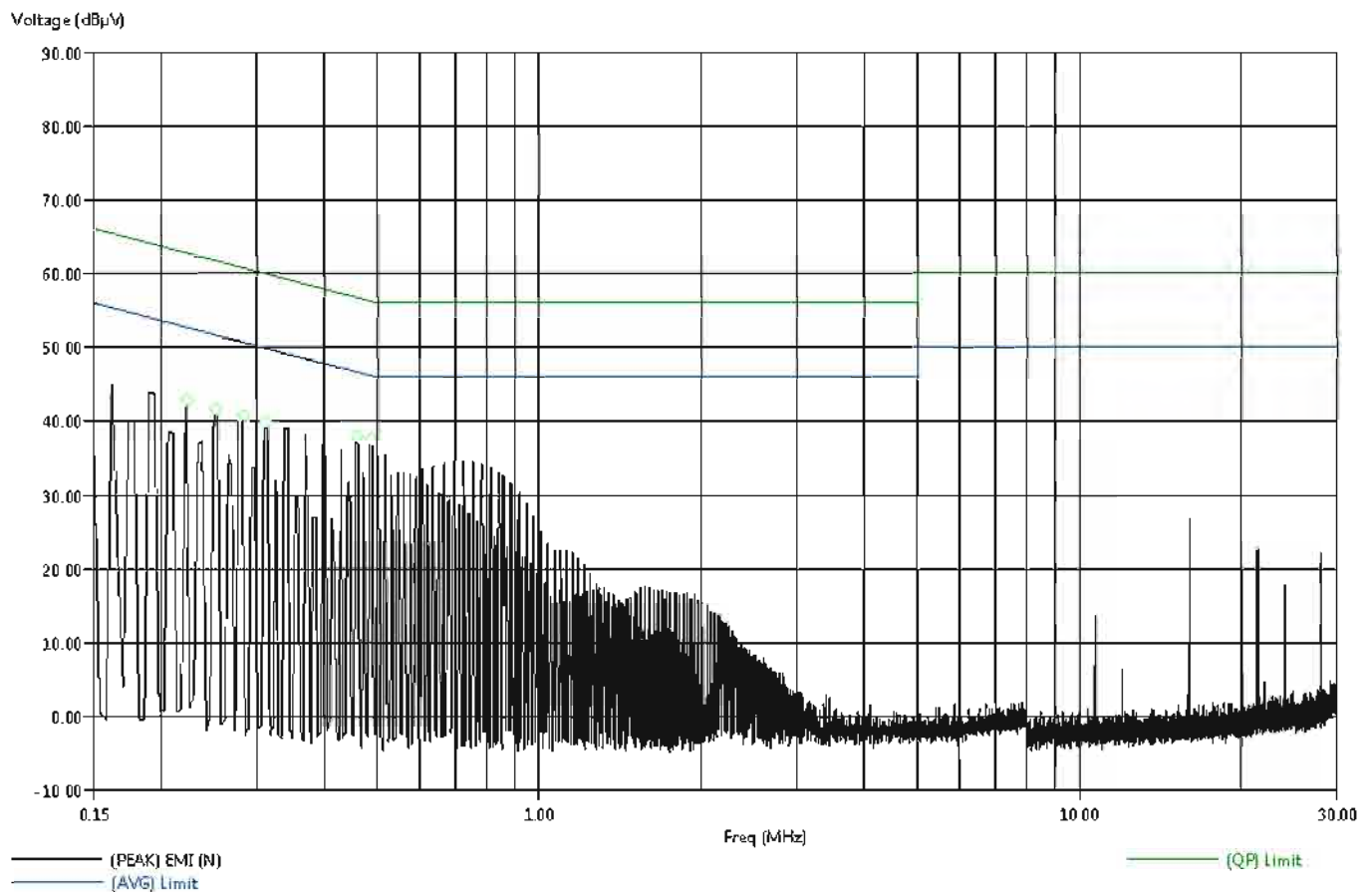


Freq(MHz)	(AVG) Margin AVL(dB)	(QP) Margin QPL(dB)	(AVG) EMI(dBuV)	(QP) EMI(dBuV)	(PEAK) EMI(dBuV)	(AVG) Limit(dBuV)	(QP) Limit(dBuV)	Transducer (dB)	Cable(dB)
0.17	-36.62	-18.38	18.54	46.78	53.78	55.16	65.16	0.14	0.07
0.19	-37.12	-17.50	16.74	46.37	53.10	53.86	63.86	0.12	0.10
0.48	-36.06	-15.66	10.31	40.72	47.35	46.37	56.37	0.07	0.20
0.49	-36.41	-16.01	9.76	40.15	47.02	46.17	56.17	0.07	0.20
0.50	-36.89	-16.57	9.11	39.43	46.41	46.00	56.00	0.07	0.20
0.53	-38.26	-18.20	7.74	37.80	43.92	46.00	56.00	0.07	0.20

Title: FCC 15.207
File: Conducted Pre-Neutral.set
Operator: Josh Hansen
EUT Type: IG-TVTS-1
EUT Condition: High Channel
Comments: Y axis (Vertical Wall mount)
Temp: 68f
Hum: 50%
120V 60Hz

7/2/2010 6:56:26 PM
Sequence: Preliminary Scan

Compatible Electronics, Inc. FAC-3 (LAB R)



Title: FCC 15.207
File: Conducted Final-Neutral.set
Operator: Josh Hansen
EUT Type: IG-TVTS-1
EUT Condition: High Channel
Comments: Y axis (Vertical Wall mount)
Temp: 68f
Hum: 50%
120V 60Hz

7/2/2010 6:58:49 PM
Sequence: Final Measurements



Freq(MHz)	(AVG) Margin AVL(dB)	(QP) Margin QPL(dB)	(AVG) EMI(dBuV)	(QP) EMI(dBuV)	(PEAK) EMI(dBuV)	(AVG) Limit(dBuV)	(QP) Limit(dBuV)	Transducer (dB)	Cable(dB)
0.22	-43.46	-27.67	9.28	35.07	43.06	52.74	62.74	0.11	0.11
0.25	-43.47	-27.71	8.29	34.05	42.28	51.76	61.76	0.10	0.12
0.28	-44.28	-27.91	6.48	32.84	41.21	50.76	60.76	0.09	0.14
0.31	-44.99	-27.97	4.98	32.00	40.33	49.97	59.97	0.09	0.15
0.46	-44.20	-26.86	2.53	29.87	38.02	46.73	56.73	0.07	0.19
0.49	-44.05	-26.34	2.18	29.89	37.99	46.24	56.24	0.07	0.20



-20 dB BANDWIDTH

DATA SHEETS

Title: FCC 15.237 Occupied Bandwidth
Operator: Josh Hansen
EUT Type: IG-TVTS-1
EUT Condition: High Channel
Comments: Y axis (Vertical Wall mount)
Temp: 65f
Hum: 48%
120V 60Hz

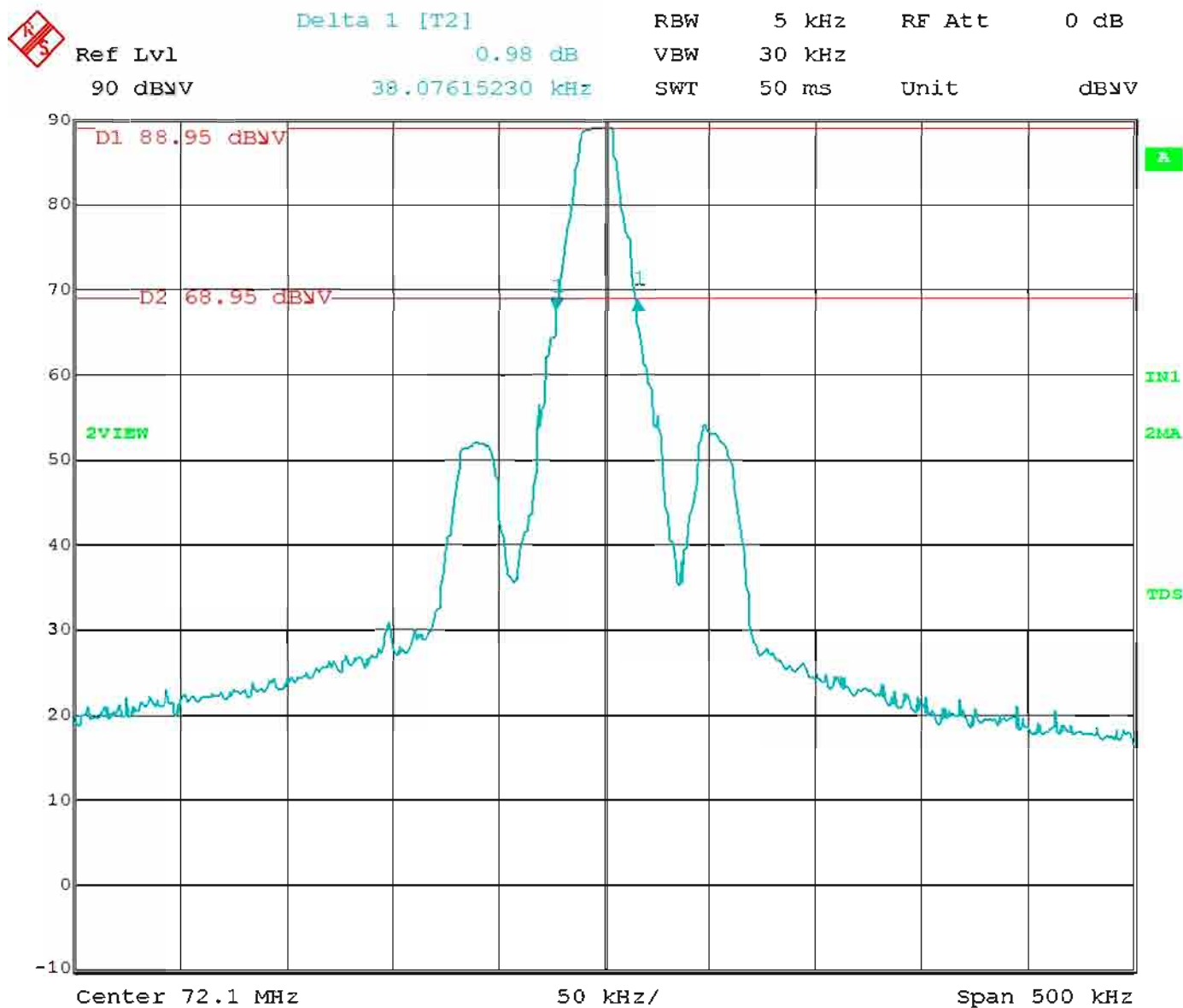
7/30/2010
Final Measurements



Compatible Electronics, Inc. FAC- 3 (LAB R)

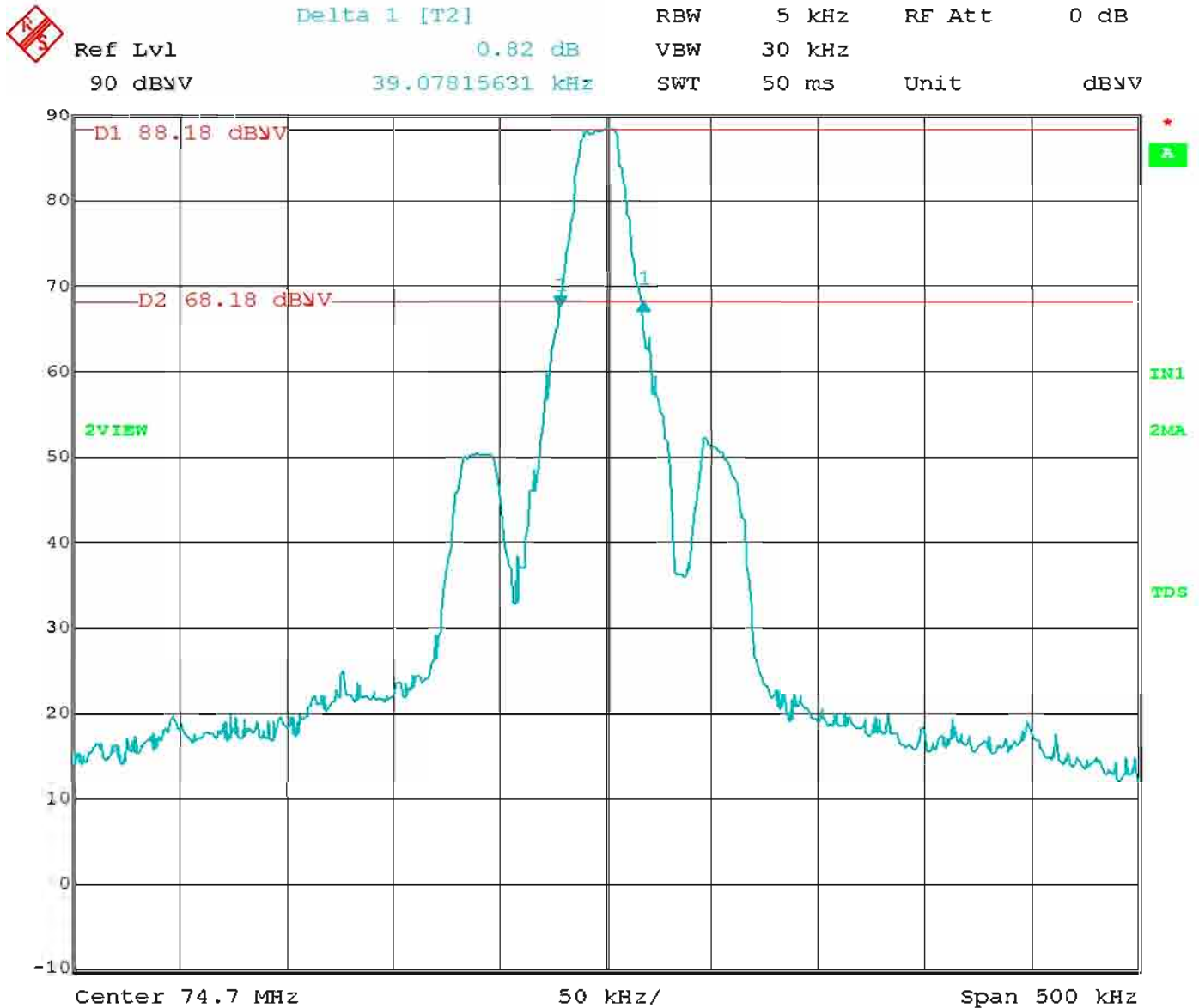
Freq (MHz)	Occupied Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
72.1	38.07	200	-161.92
74.7	39.07	200	-160.92
75.9	39.07	200	-160.92

Low Channel -20 dB Bandwidth Plot



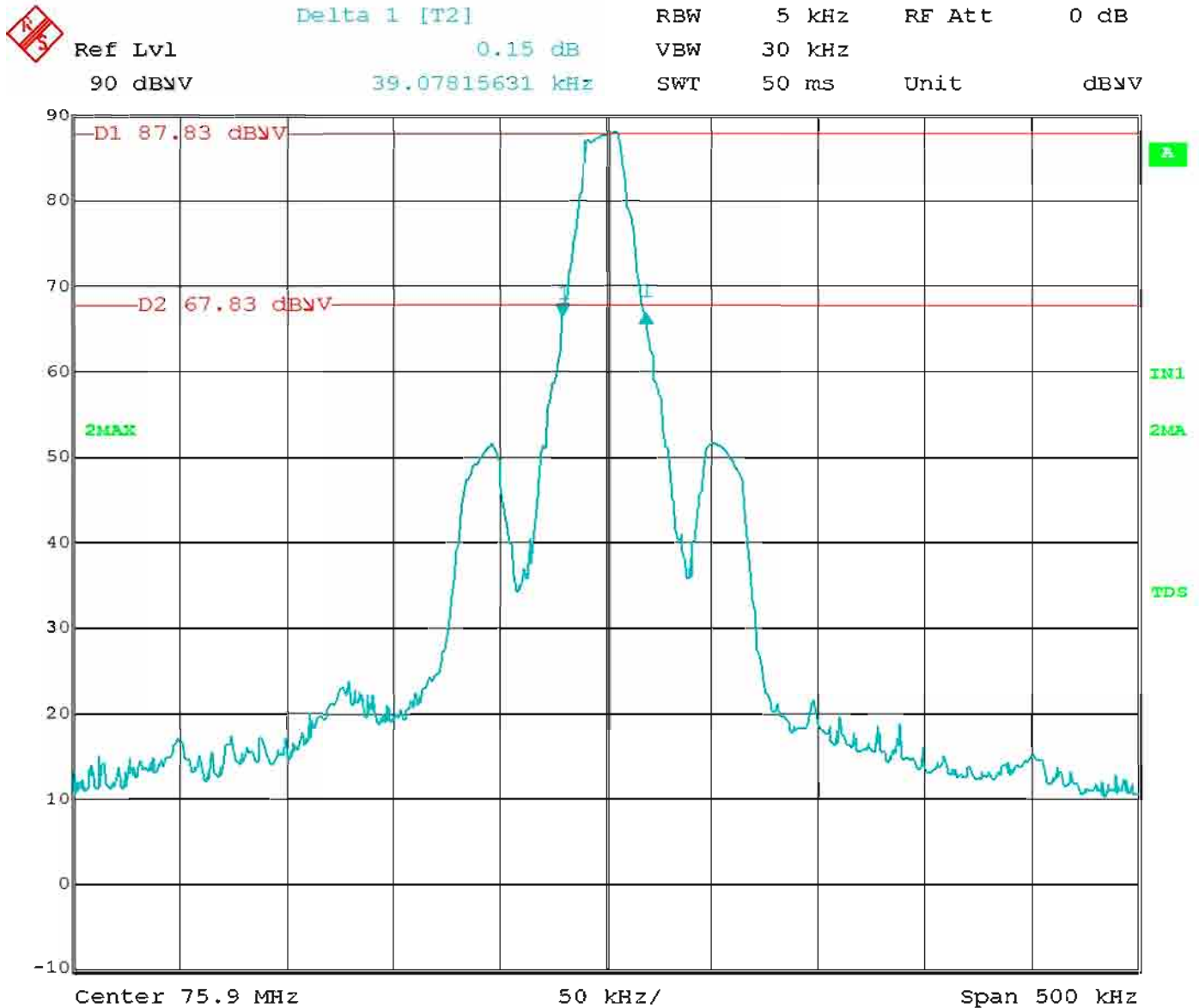
Date: 30.JUL.2010 17:03:59

Mid Channel -20 dB Bandwidth Plot

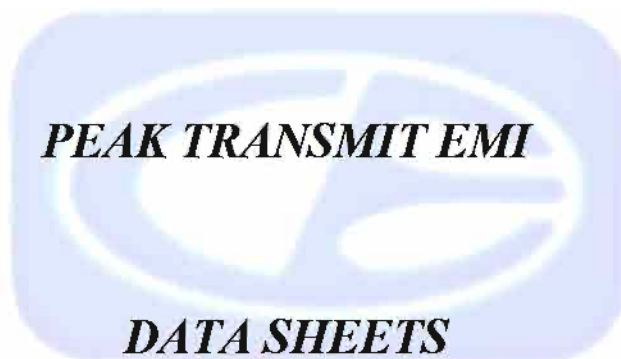


Date: 30.JUL.2010 16:56:31

High Channel -20 dB Bandwidth Plot



Date: 30.JUL.2010 17:01:22



Title: FCC 15.237 Peak Transmit EMI
Operator: Josh Hansen
EUT Type: IG-TVTS-1
EUT Condition: High Channel
Comments: Y axis (Vertical Wall mount)
Temp: 68f
Hum: 50%
120V 60Hz

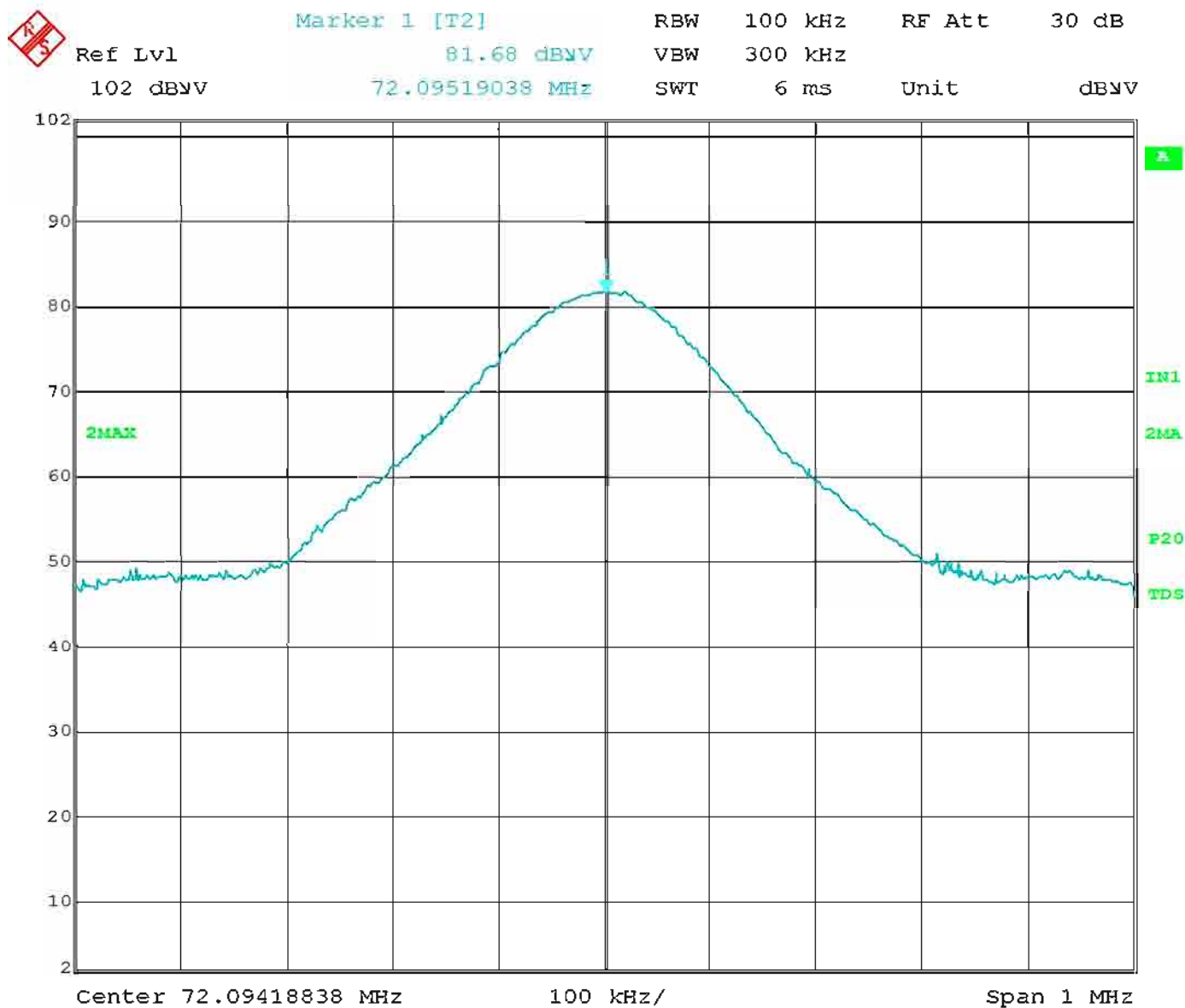
7/2/2010
Final Measurements



Compatible Electronics, Inc. FAC- 3 (LAB R)

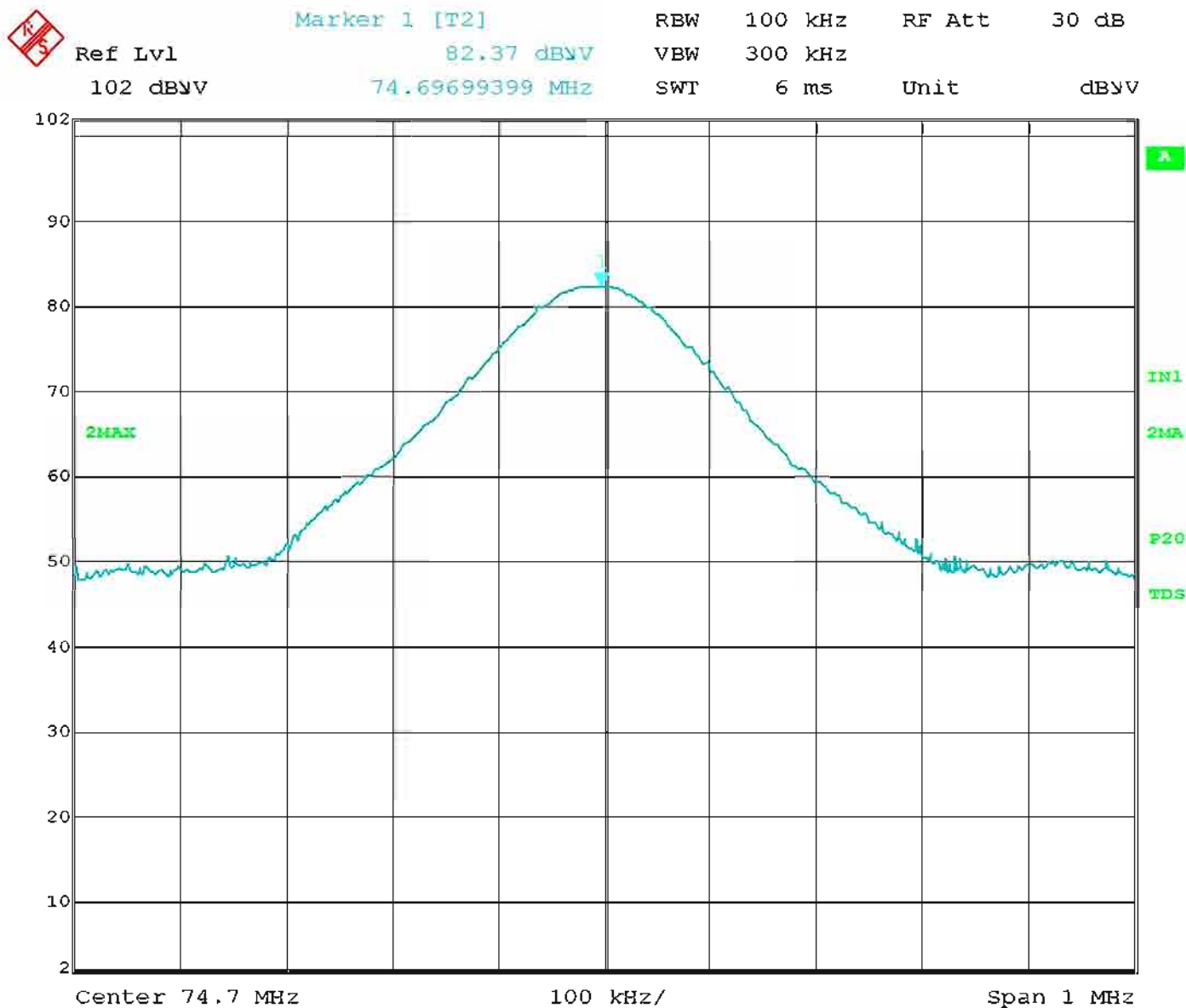
Freq (MHz)	Peak EMI (dBµV/m)	Limit (dBµV/m)	Margin (dB)
72.1	81.68	98.06	-16.38
74.7	82.37	98.06	-23.37
75.9	82.88	98.06	-15.18

Low Channel Peak Transmit EMI Plot



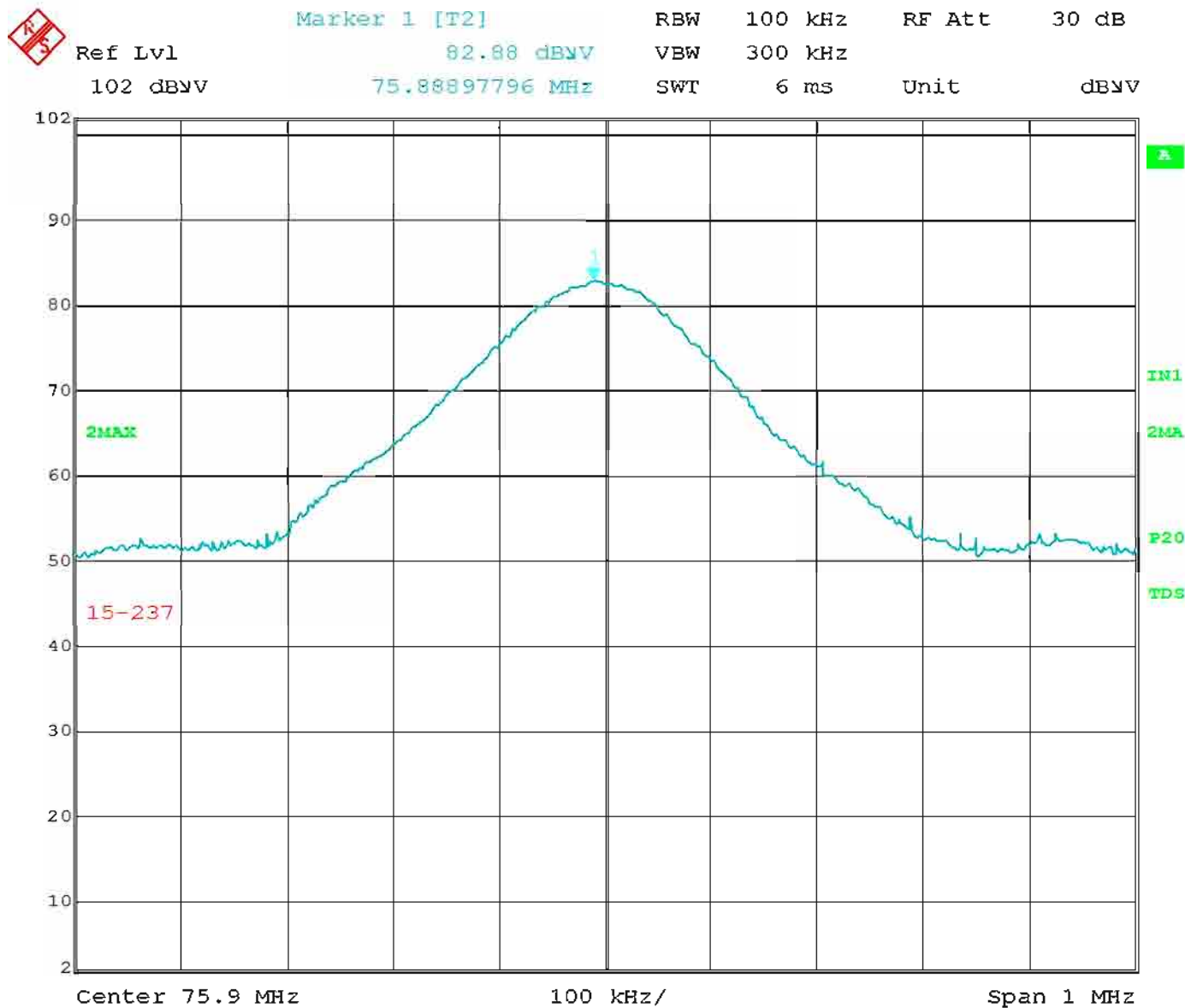
Date: 2.JUL.2010 14:41:07

Mid Channel Peak Transmit EMI Plot



Date: 2.JUL.2010 14:47:16

High Channel Peak Transmit EMI Plot



Date: 2.JUL.2010 14:50:55

***RESTRICTED BANDS
AND
BANDEDGE
DATA SHEETS***

Title: FCC 15.237 Restricted Band and Bandedge

8/18/2010

Operator: Josh Hansen

Final Measurements

EUT Type: IG-TVTS-1

EUT Condition: High Channel

Comments: Y axis (Vertical Wall mount)

Temp: 68f

Hum: 50%

120V 60Hz


Compatible Electronics, Inc. FAC- 3 (LAB R)

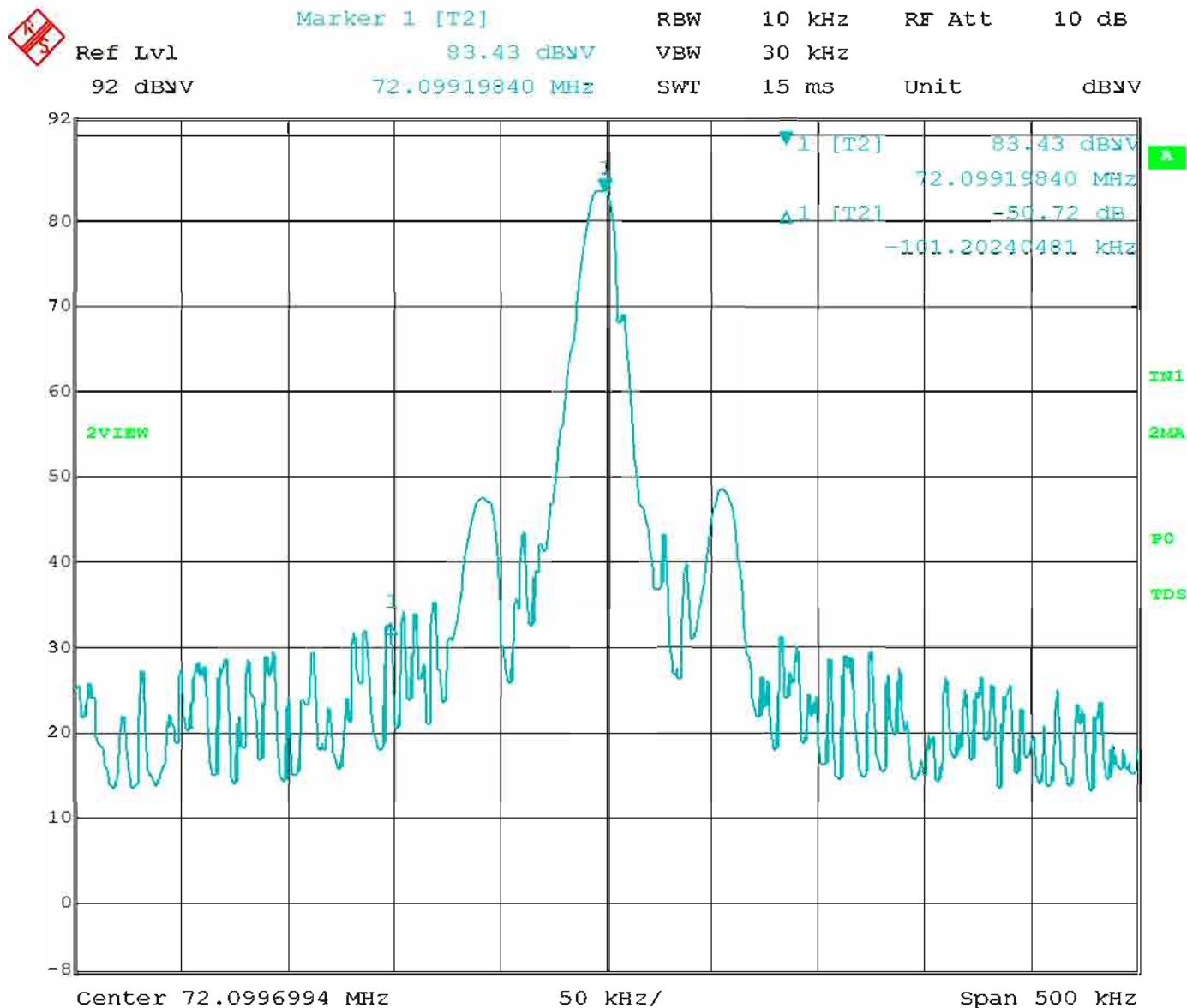
Fundamental Frequency (MHz)	Field Strength Level of Fund. (dBµV/m)	Freq of Max. Band-edges Emission (MHz)	Delta Marker (dB)*	Calculated. Max. Out of Band Emission Level (dBµV/m) **	Limit (dBµV/m)	Margin (dB)
72.1	81.68	71.888	50.72	30.96	63.52	-32.56
72.9	88.15	73.008	54.43	33.72	40.0	-6.28
74.7	82.37	74.596	57.48	24.89	40.0	-15.11
74.7	82.37	74.804	60.71	21.66	40.0	-18.34
75.3	90.17	75.201	61.39	28.78	40.0	-11.22
75.9	82.88	75.998	62.60	20.28	63.52	-43.24

* According to step 2 of Marker-Delta Method DA-00-705A1 (following plots included).

** According to step 3 of Marker-Delta Method:

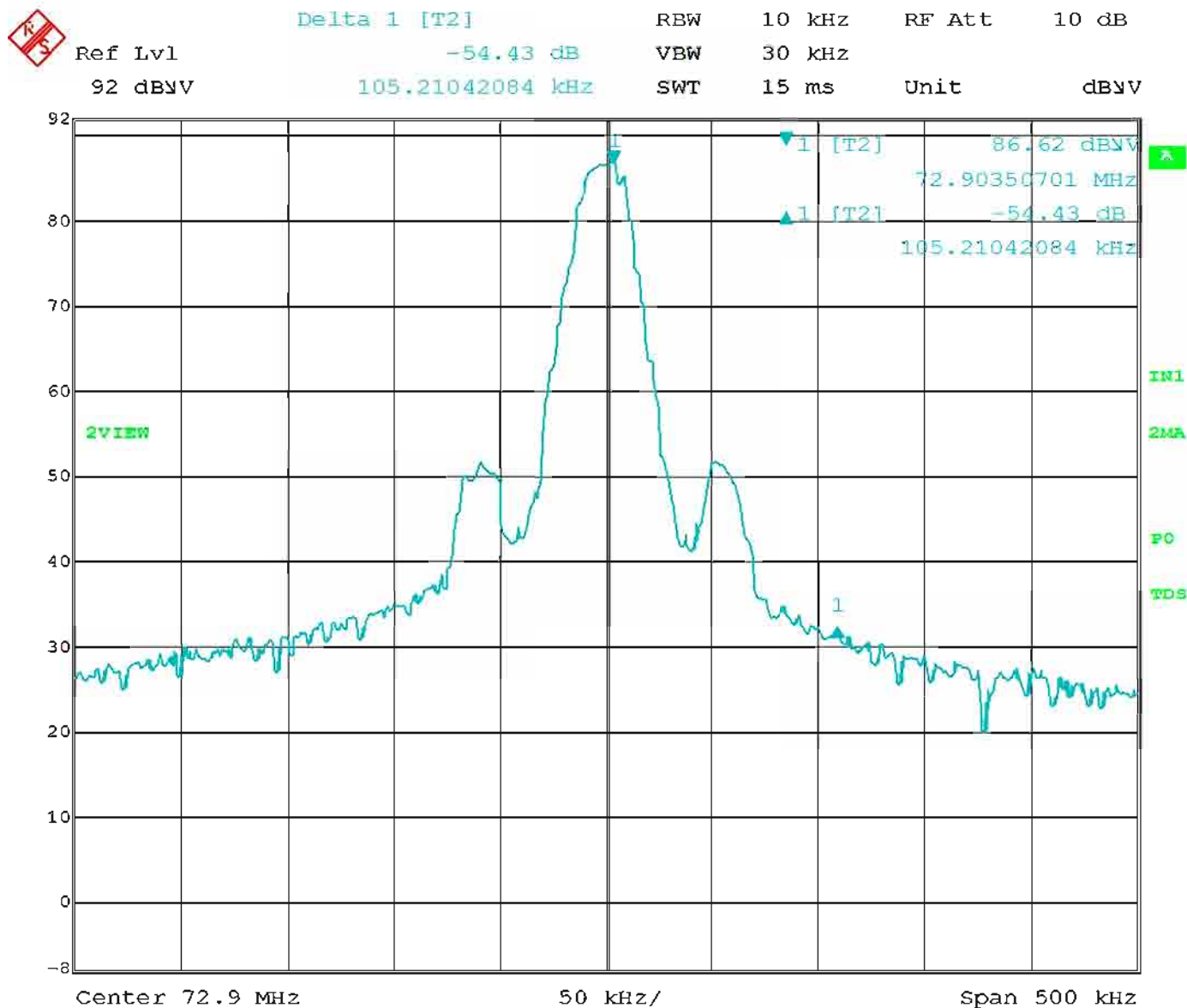
Calculated Emission Level = Field Strength Level - Delta Marker Level

72.1 MHz Delta Marker



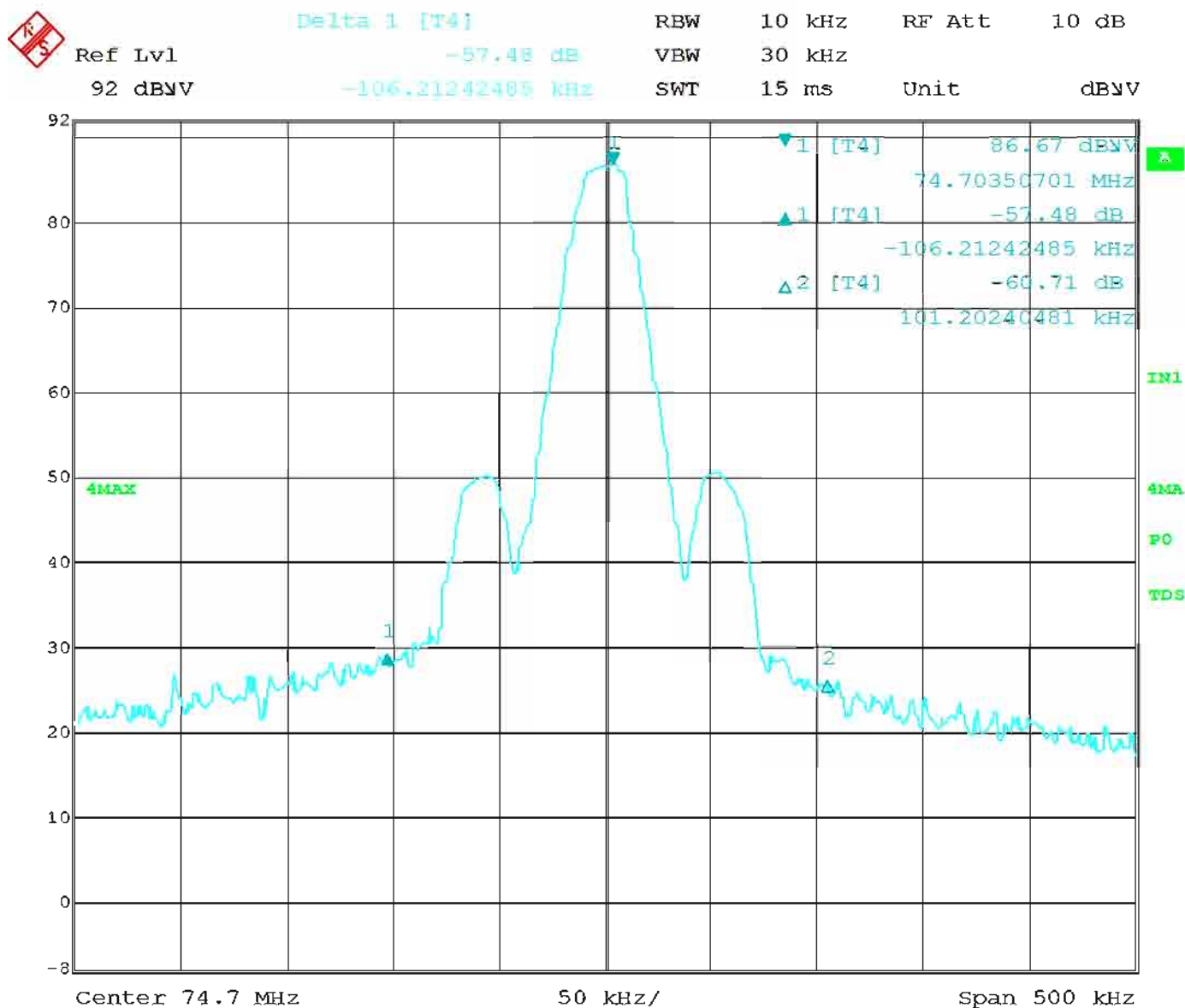
Date: 18.AUG.2010 20:38:54

72.9 MHz Delta Marker



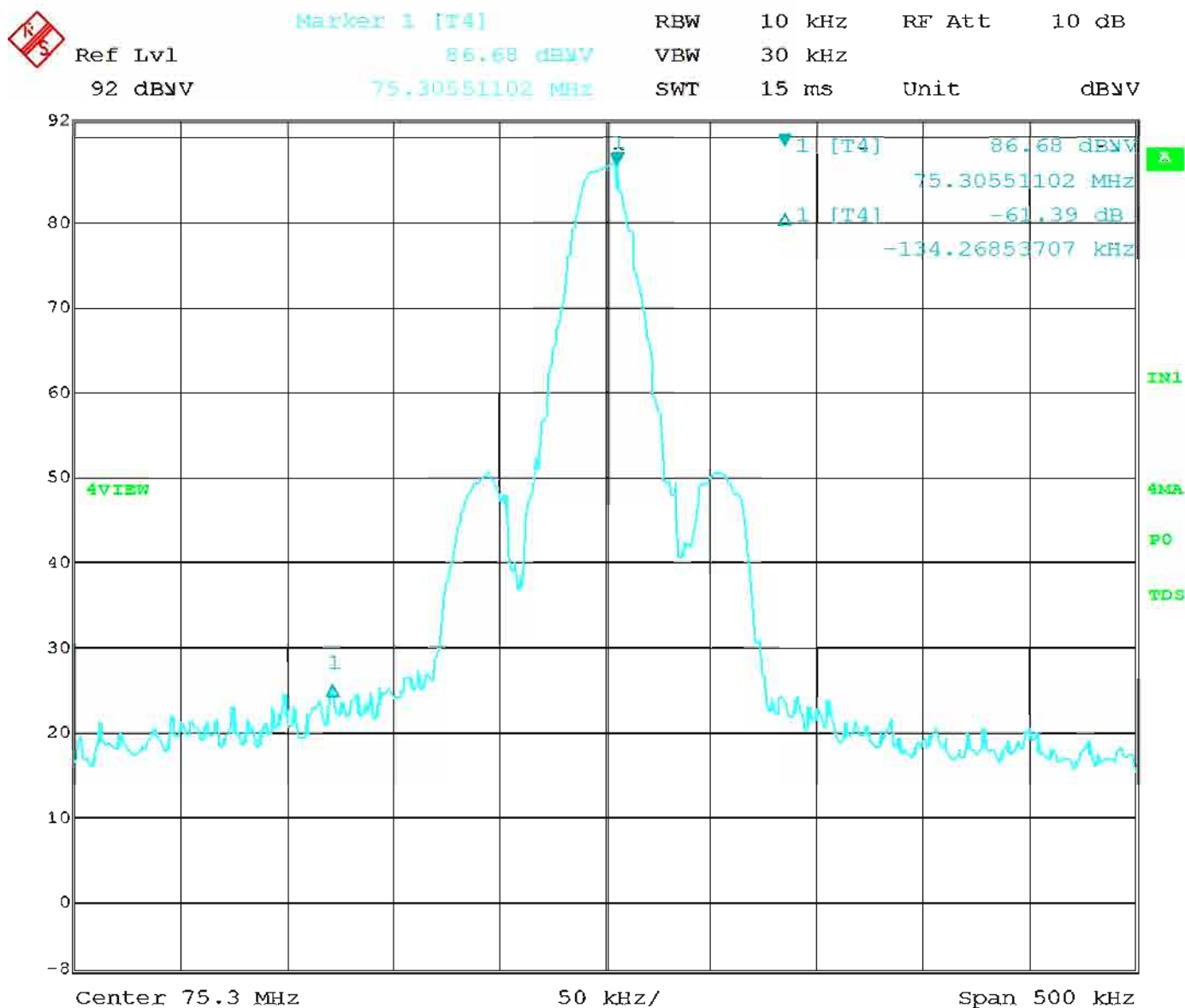
Date: 18.AUG.2010 20:49:58

74.7 MHz Delta Marker



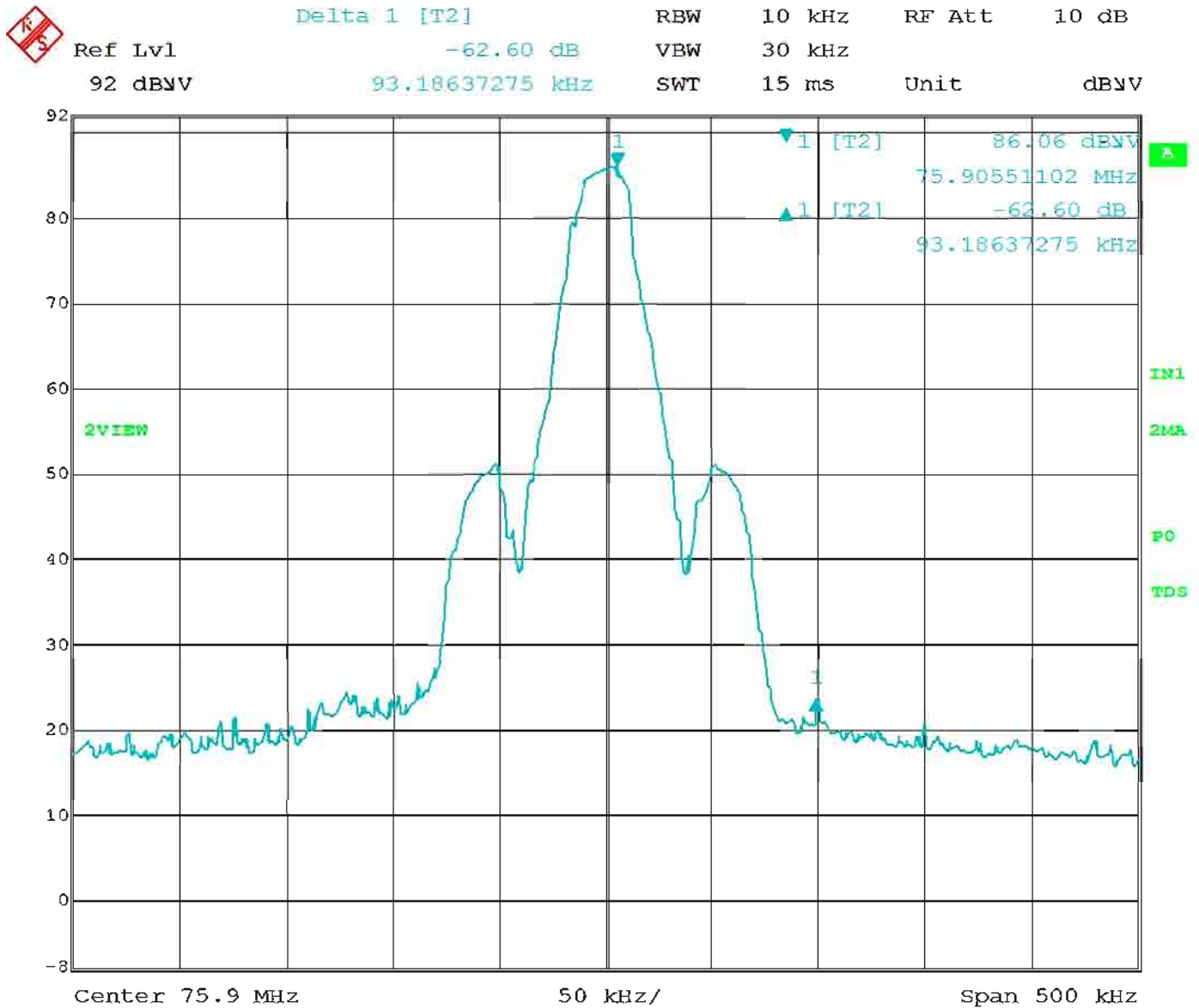
Date: 18.AUG.2010 20:59:58

75.3 MHz Delta Marker



Date: 18.AUG.2010 21:07:11

75.9 MHz Delta Marker



Date: 18.AUG.2010 21:12:58