



Underwriters Laboratories Inc.
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Melville, NY 11747

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Job Number:	581226
File Number:	NC9394
Date:	07 Mar 07
Model:	GO4
FCC ID:	U5Z-GO2-4

Electromagnetic Compatibility Test Report

For

JCM TECHNOLOGIES S A

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Job Number: 581226 NC9394 Page 2 of 37
Model Number: GO4 FCC ID:
Client Name: JCM TECHNOLOGIES S A
FCC ID: U5Z-GO2-4

Test Report Details

Tests Performed By: **Underwriters Laboratories Inc.
1285 Walt Whitman Rd.
Melville, NY 11747**

Tests Performed For: **JCM TECHNOLOGIES S A
BISBE MORGADES, 46 BAIXOS
VIC, 08500**

Applicant Contact: **GEMMA REVERTER**
Title: **Product Development (R&D)**
Phone: **(93) 883-3231**
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E-mail: **GREVERTER@JCM-TECH.COM**

Test Report Date: **07 Mar 07**

Product Type: **Receiver**

Product standards **FCC Part 15, Subpart C 15.209, 15.231, 15.31
FCC Part 15, Subpart B, 15.109**

Model Number: **GO4**

Sample Serial Number: **Not provided**

EUT Category: **RF Remote Control Transmitter – 868.35MHz**

Testing Start Date: **22 Feb 07**

Date Testing Complete: **06 March 07**

Overall Results: Compliant

Underwriters Laboratories Inc. reports apply only to the specific samples tested under stated test conditions. All samples tested were in good operating condition throughout the entire test program. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. Underwriters Laboratories Inc. shall have no liability for any deductions, inferences or generalizations drawn by the client or others from Underwriters Laboratories Inc. issued reports. This report shall not be used to claim, constitute or imply product certification, approval, or endorsement by NVLAP, A2LA, or any agency of the US government.

This report may contain test results that are not covered by the NVLAP or A2LA accreditation. The scope of accreditation is limited to the specific tests that are listed on the NVLAP and/or A2LA websites referenced at the end of this report.

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Report Revision History

Revision Date	Description	Revised By	Revision Reviewed By
03 Mar 07	Original	--	--
03 Apr 2007	Revised FCC ID number	B. DeLisi	J. Danisi

1.0 GENERAL - Product Description

1.1 Equipment Description

The GO4 is an 868 MHz RADIO TRANSMITTER WITH HIGH SECURITY ROLLING CODE, SIDE-PROG SYSTEM AND APS (APPROACHING SYSTEM). The device has 100 m range and is powered by a 3V lithium battery. Its dimensions are 62 x 33 x 11 mm. It features 19 trillion combinations of codes.

The GO4 also represents the GO2, which is an identical device but only has 2 buttons instead of 4.

1.2 Equipment Marking Plate

Not Applicable

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1.3 Device Configuration During Test

1.3.1 Equipment Used During Test:

Use*	Product Type	Manufacturer	Model	Comments
EUT	Receiver	JCM TECHNOLOGIES S A	GO4	The GO4 also represents the GO2 transmitter. The number of active buttons is reduced on the GO2 but all circuits are the same.
Note: * EUT - Equipment Under Test, AE - Auxiliary/Associated Equipment, or SIM - Simulator (Not Subjected to Test)				

1.3.2 Input/Output Ports:

Port #	Name	Type*	Cable Max. >3m (Y/N)	Cable Shielded (Y/N)	Comments
0	Enclosure	N/E	—	—	None
1	Mains	Battery	NA	NA	3Vdc Battery
Note: *AC = AC Power Port DC = DC Power Port N/E = Non-Electrical I/O = Signal Input or Output Port (Not Involved in Process Control) TP = Telecommunication Ports					

1.3.3 EUT Internal Operating Frequencies:

Frequency (MHz)	Description	Frequency (MHz)	Description
868.35	Transmit Frequency	4	Microprocessor

1.3.4 Power Interface:

Mode # /Rated	Voltage (V)	Current (A)	Power (W)	Frequency (DC/AC-Hz)	Phases (#)	Comments
Rated	3	-	-	DC	-	Powered by 3Vdc Battery
1	3	-	-	DC	-	None

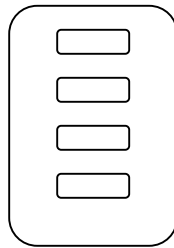
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1.4 Block Diagram:

The diagram below illustrates the configuration of the equipment above.



1.5 EUT Operation Modes

Mode #	Description
1	Continuously transmitting.
2	Periodically transmitting.

1.6 EUT Configurations

Mode #	Description
1	Stand Alone Device

2.0 Results Summary

The tests listed in the Summary of Testing section of this report have been performed and the results recorded by Underwriters Laboratories Inc. in accordance with the procedures stated in each test requirement and specification. The applicant determined the list of tests performed were applicable to the Equipment Under Test. As a result, the subject product has been verified to comply or not comply as noted in the Summary of Testing with each test specification. The test results relate only to the items tested.

2.1 Reference Standards

Standard Number	Standard Name	Standard Date
Part 15, Subpart C 15.35, 15.209, 15.231	Part 15 - Radio Frequency Devices	2006

2.2 Results Summary

Requirement – Test	Result (C/NC)*
15.35 Pulse Train	C
15.209 Radiated Emissions Restricted Bands	C
15.231 Radiated Emissions – Fundamental and Spurious Emissions	C
15.231 a) 1) Cease Operation	C
15.231 c) Occupied Bandwidth	C

Note: C-Compliant, NC-Non-Compliant

2.3 Deviations from standard test methods

None

2.4 Device Modifications Necessary for Compliance

None



Bob DeLisi (Ext.22452)
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 International EMC Services
 Conformity Assessment Services-



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 Lead Engineering Associate
 International EMC Services
 Conformity Assessment Services

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3.0 Calibration of Equipment Used for Measurement

All test equipment and test accessories are calibrated on a regular basis. The maximum time between calibrations is one year or the manufacturers' recommendation, whichever is less.

All test equipment calibrations are traceable to the National Institute of Standards and Technology (NIST); therefore, all test data recorded in this report is traceable to NIST.

4.0 EMISSIONS TEST RESULTS

Unless specified otherwise in the individual Methods, the tests shall be conducted under the following ambient conditions. Confirmation of these conditions shall be verified at the time the test is conducted.

Ambient Temperature, °C	22.5 ± 2.5	Relative Humidity, %	45 ± 15	Barometric Pressure, mBar	950 ± 150
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4.1 Test Conditions and Results – PULSE TRAIN

Test Description	Measurements were made in the laboratory environment. A Dipole antenna tuned to the transmit frequency was attached to the input of a spectrum analyzer. The pulse train was measured with the spectrum analyzer set to zero span at the fundamental frequency.	
Basic Standard	FCC Part 15, Subpart A	

Table 1 Pulse Train Configuration Settings

Power Interface Mode # (See Section 1.3.4)	EUT Configurations Mode # (See Section 1.6)	EUT Operation Mode # (See 1.5)
1	1	2
Supplementary information: None		

Table 2 Pulse Train Test Equipment

Test Equipment Used			
Description	Manufacturer	Model	Identifier
EMI Receiver	Rohde & Schwarz	ESIB26	ME5B-081
Oscilloscope	Tektronix	TDS3054	ME5B-173
Dipole Antenna	EMCO	3121C - B4	ME5A-751
Temp/Humidity/ Pressure Meter	Cole Parmer	99760-00	4848

Figure 1 Pulse Train Graph

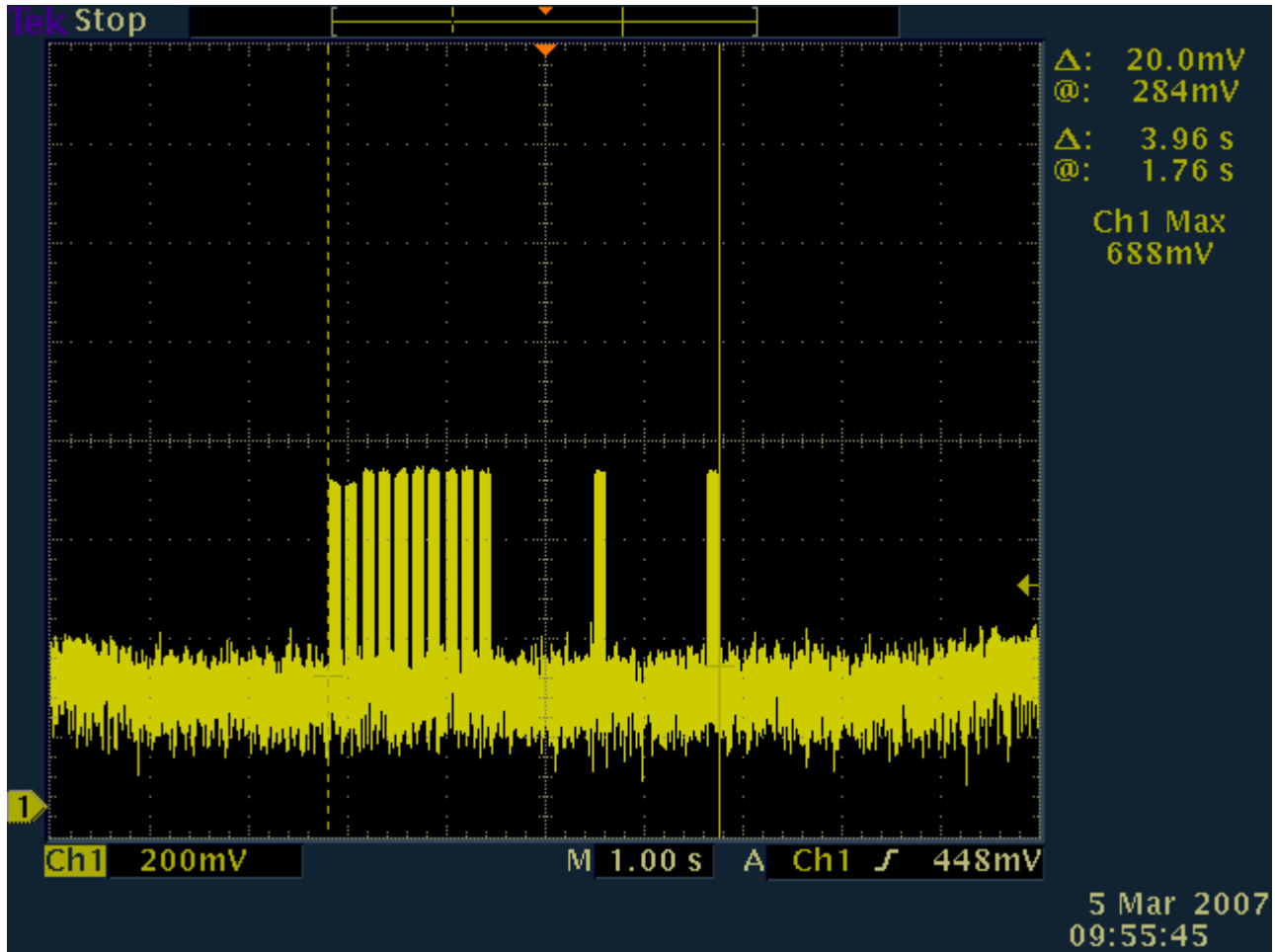


Figure 2 Pulse Train Graph

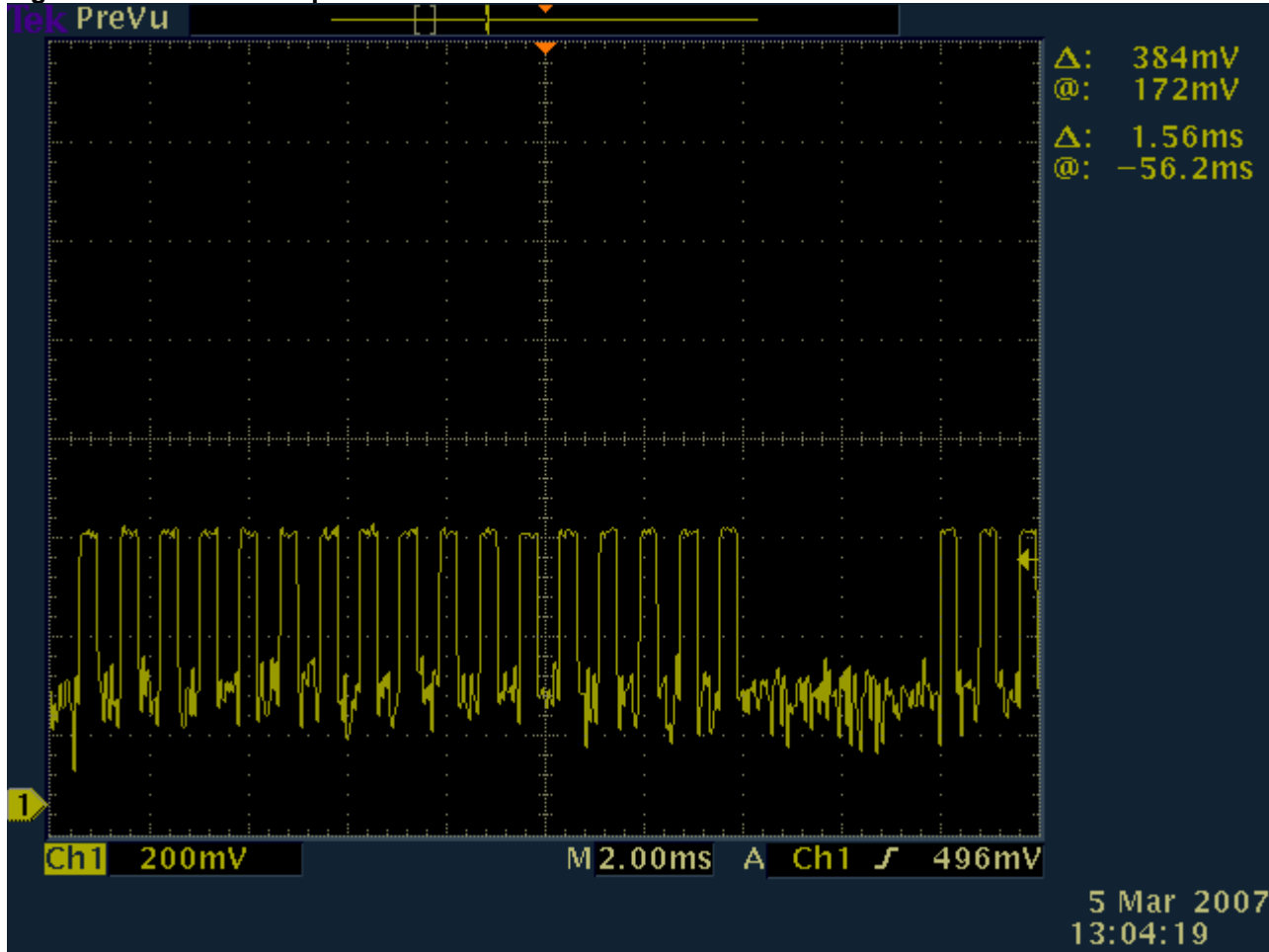


Figure 3 Pulse Train Graph

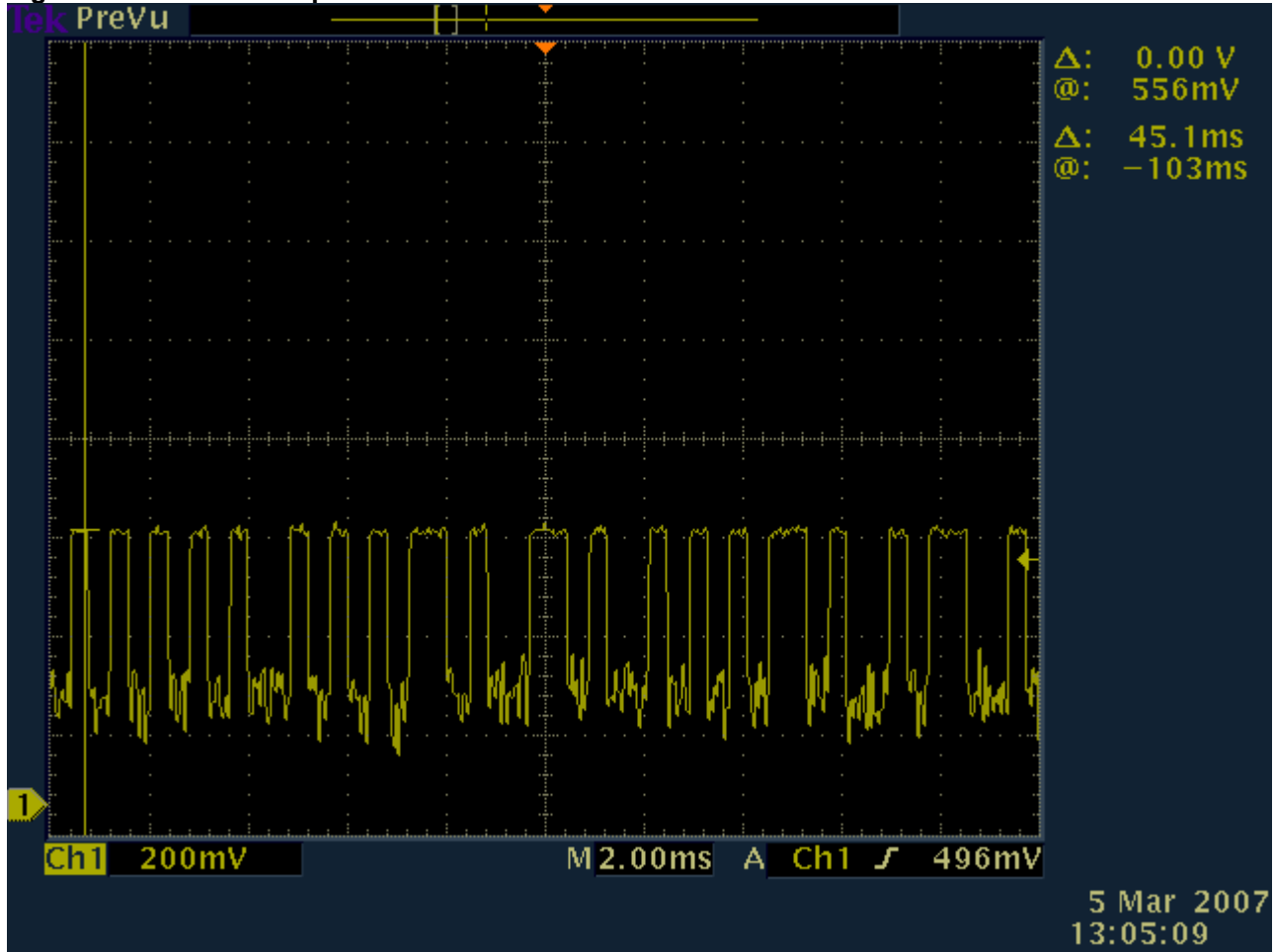


Figure 4 Pulse Train Graph

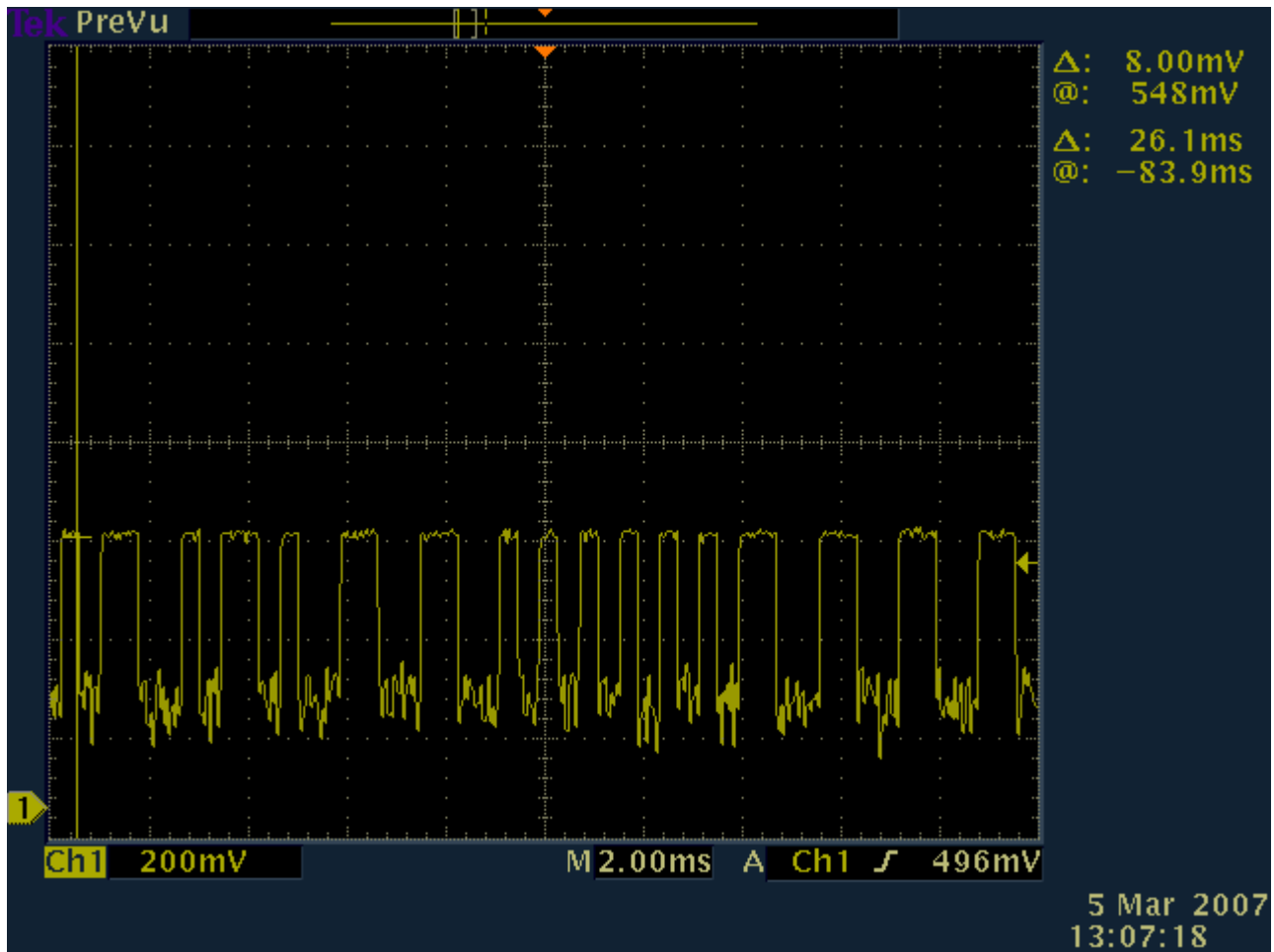


Figure 5 Pulse Train Graph

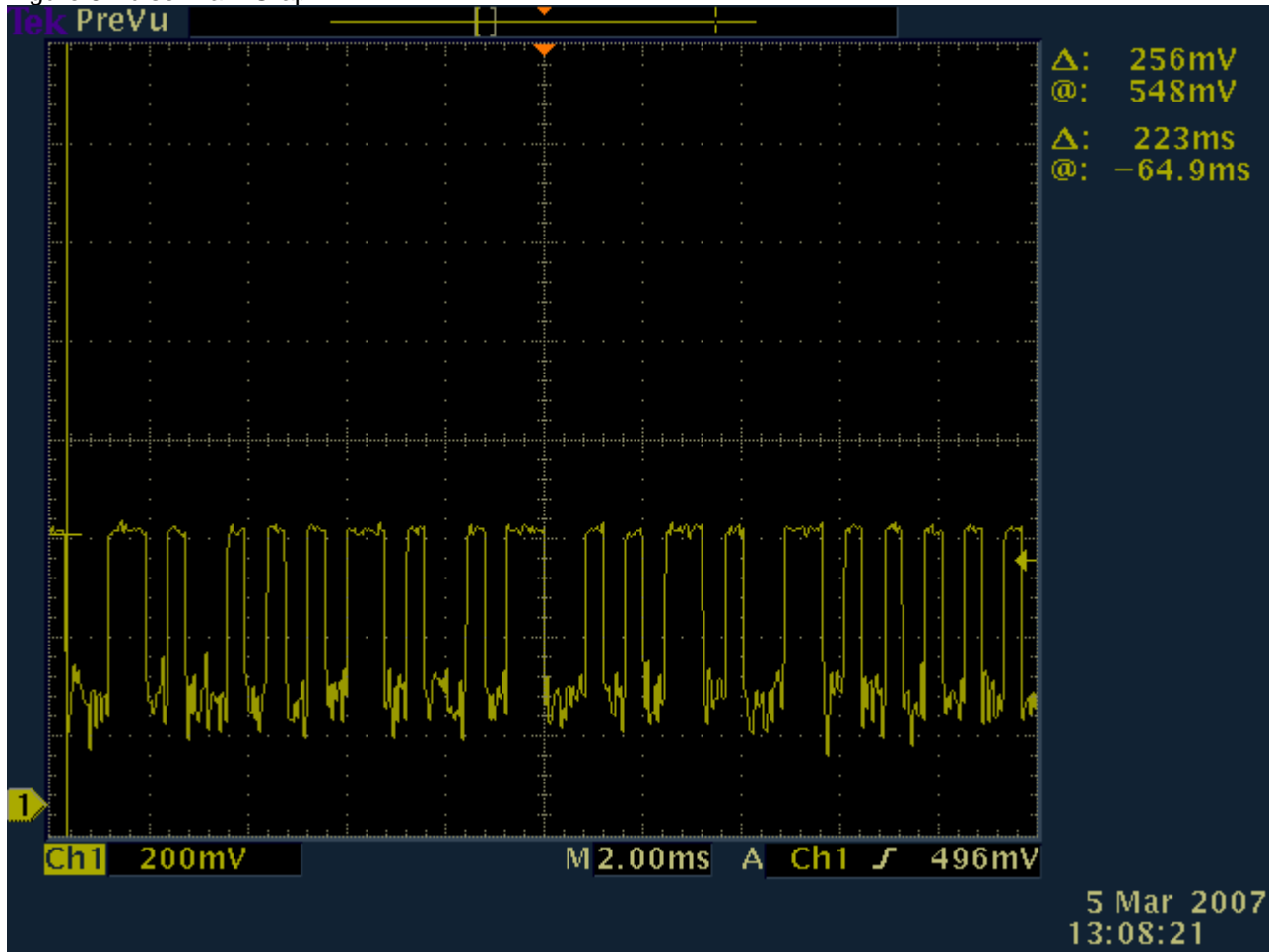


Figure 6 Pulse Train Graph

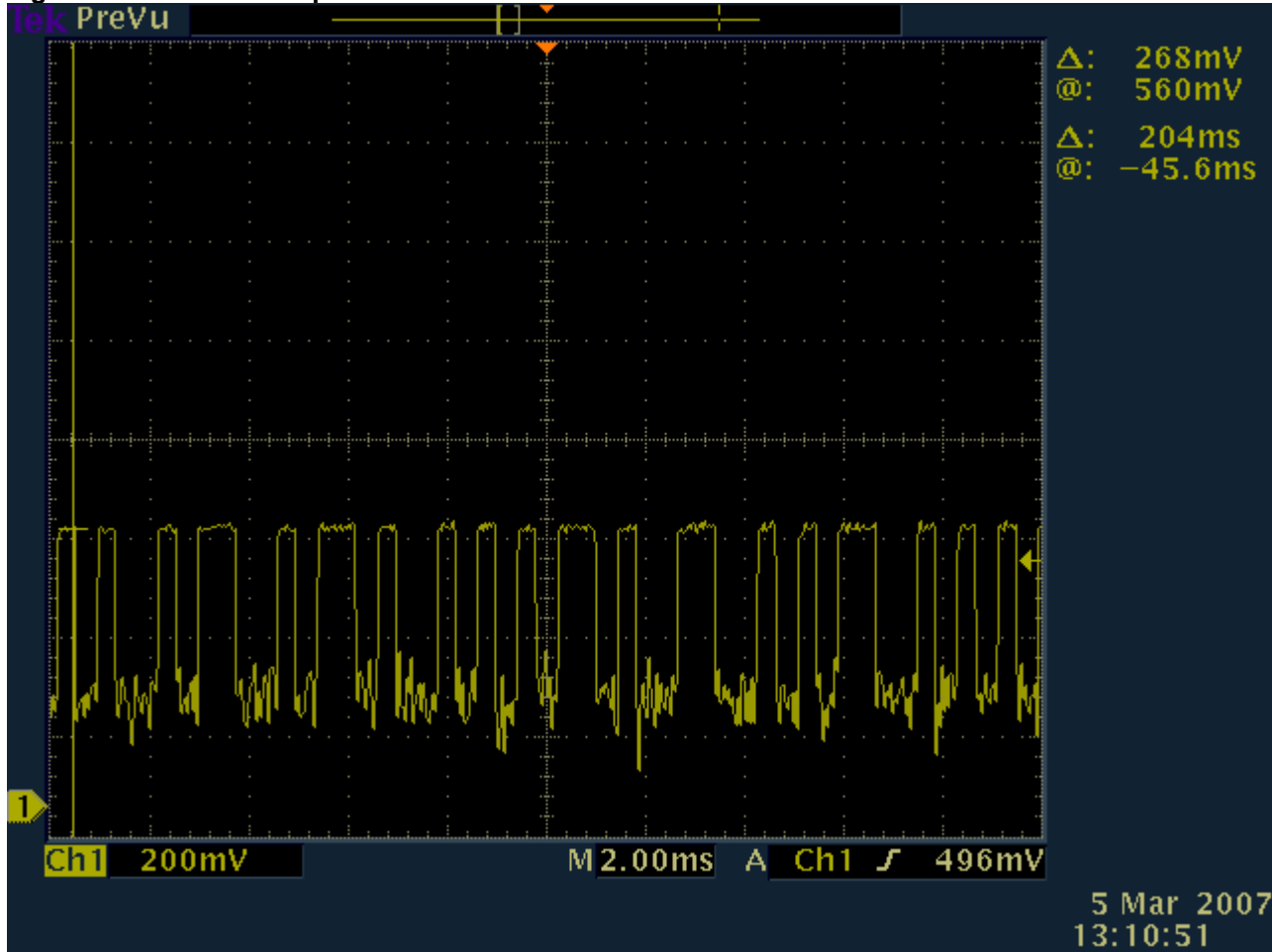
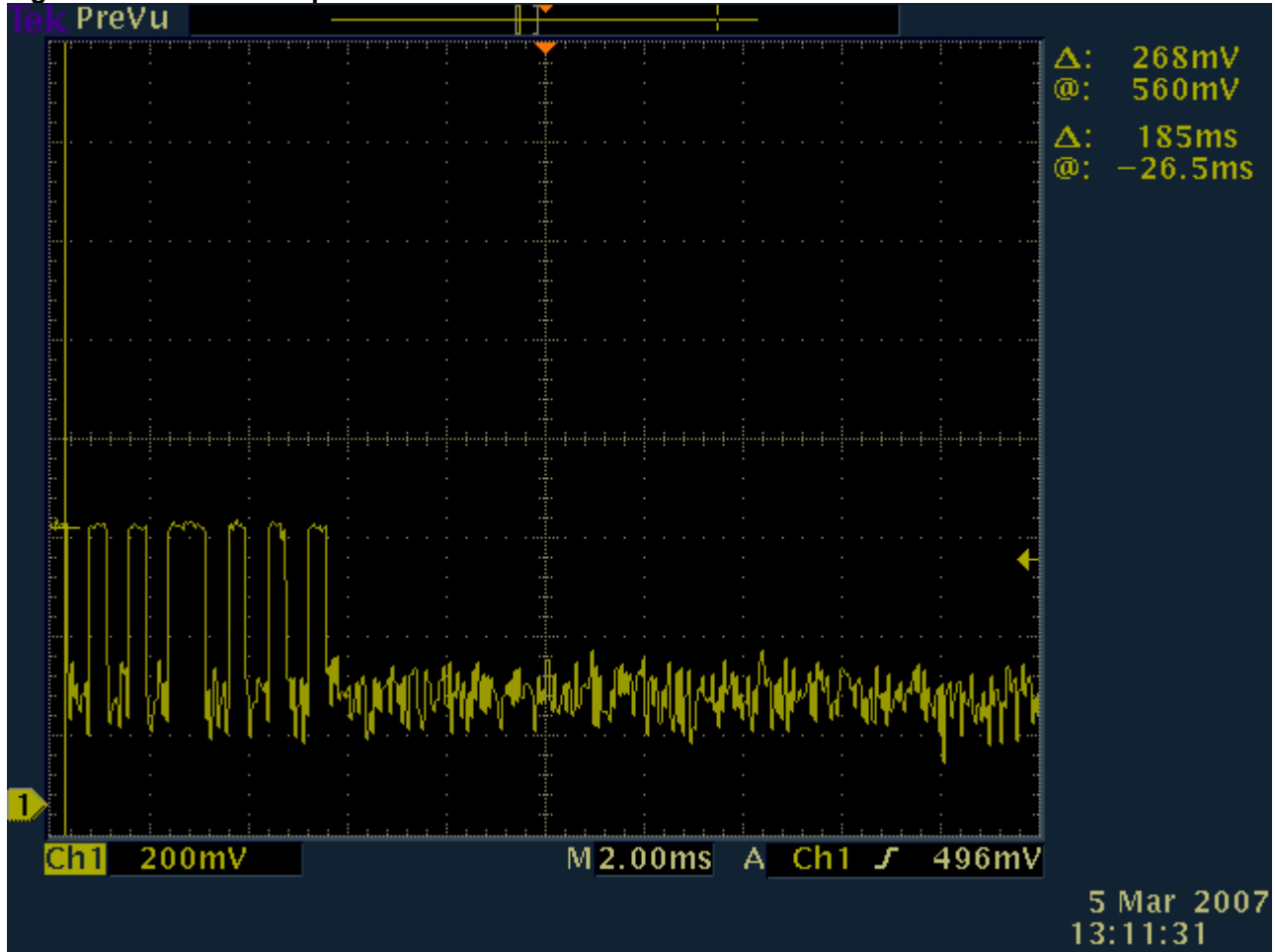


Figure 7 Pulse Train Graph



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4.2 Test Conditions and Results – CEASE OPERATION

Test Description	Measurements were made in the laboratory environment. A Dipole antenna tuned to the transmit frequency was attached to the input of a spectrum analyzer. The device was operated and the transmission time measured with the spectrum analyzer set to zero span at the fundamental frequency.
Basic Standard	FCC Part 15, Subpart C

Table 3 Cease Operation Configuration Settings

Power Interface Mode # (See Section 1.3.4)	EUT Configurations Mode # (See Section 1.6)	EUT Operation Mode # (See 1.5)
1	1	2
Supplementary information: None		

Table 4 Cease Operation Test Equipment

Test Equipment Used			
Description	Manufacturer	Model	Identifier
EMI Receiver	Rohde & Schwarz	ESIB26	ME5B-081
Oscilloscope	Tektronix	TDS3054	ME5B-173
Dipole Antenna	EMCO	3121C - B4	ME5A-751
Temp/Humidity/ Pressure Meter	Cole Parmer	99760-00	4848

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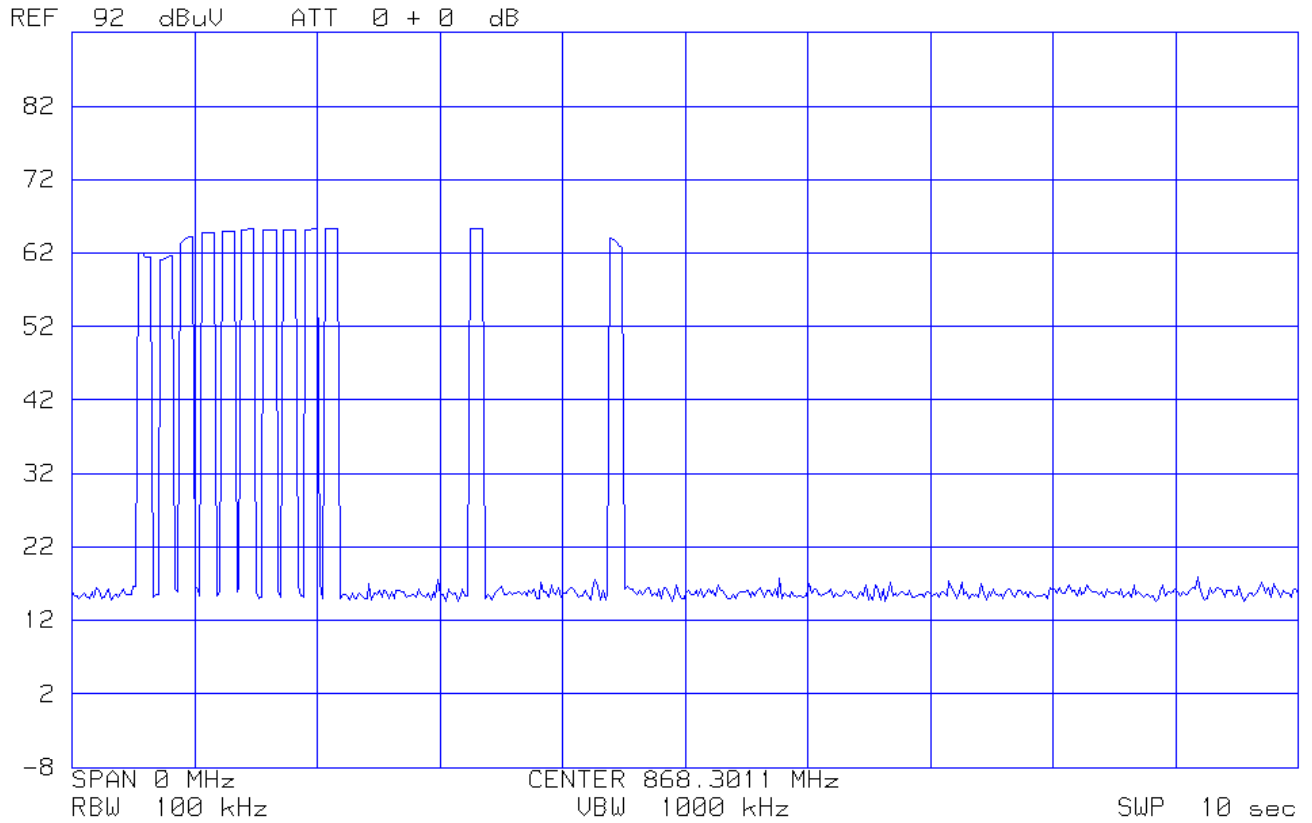
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Figure 8 Test Setup for Cease Operation



Figure 9 Cease Operation Graph



4.3 Test Conditions and Results – OCCUPIED BANDWIDTH

Test Description	Measurements were made in the laboratory environment. A Dipole antenna tuned to the transmit frequency was attached to the input of a spectrum analyzer. The device was operated and the spectrum analyzer resolution bandwidth set per the appropriate standard.
Basic Standard	
Occupied Bandwidth Limits	
0.25% of Fundamental	

Table 5 Occupied Bandwidth Configuration Settings

Power Interface Mode # (See Section 1.3.4)	EUT Configurations Mode # (See Section 1.6)	EUT Operation Mode # (See 1.5)
1	1	2
Supplementary information: None		

Table 6 Occupied Bandwidth Spectrum Analyzer Settings

Resolution Bandwidth (MHz)	Occupied Bandwidth Requirements	
	dBc	%
10kHz	-20	NA
Supplementary information: None		

Table 7 Occupied Bandwidth Test Equipment

Test Equipment Used			
Description	Manufacturer	Model	Identifier
EMI Receiver	Rohde & Schwarz	ESIB26	ME5B-081
Oscilloscope	Tektronix	TDS3054	ME5B-173
Dipole Antenna	EMCO	3121C - B4	ME5A-751
Temp/Humidity/ Pressure Meter	Cole Parmer	99760-00	4848

Job Number: 581226
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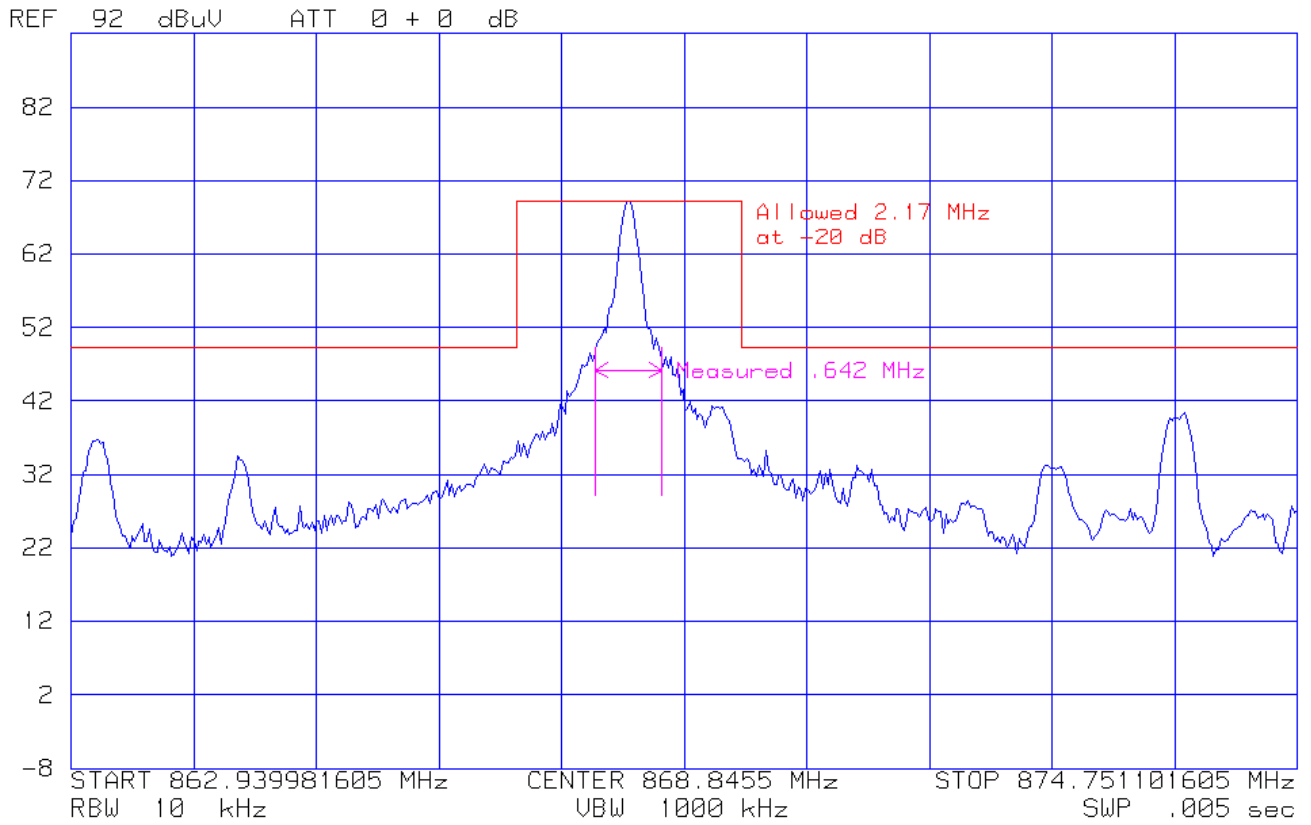
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Figure 10 Test Setup for Occupied Bandwidth



Figure 11 Occupied Bandwidth Graph



4.4 Test Conditions and Results – RADIATED EMISSIONS

Test Description	Measurements were made in a 10-meter semi-anechoic chamber that complies to CISPR 16/ANSI C63.4. Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 3-meters. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in both horizontal and vertical polarities. Final measurements (quasi-peak or average as noted) were then performed by rotating the EUT 360° and adjusting the receive antenna height from 1 to 4-meters. All frequencies were investigated in both horizontal and vertical antenna polarity, where applicable.		
	Frequency range	Measurement Point	
Fully configured sample scanned over the following frequency range	30MHz – 1GHz	(3 meter measurement distance)	
Fully configured sample scanned over the following frequency range	1GHz – 10GHz	(3 meter measurement distance)	
Limits - Class B			
Frequency (MHz)	Limit (dBµV/m)		
	Quasi-Peak	Average	
	General Emissions	Fundamental	Spurious
4-30	69.5	-	-
30 – 88	40	-	-
88 – 216	43.5	-	-
216-960	46	-	
1000-5000	54		61.94
868.35MHz		81.94	
Supplementary information: Spurious limits are only applied against products of the transmitter. All other emissions must meet the general limits.			
Note that only the emissions in the orientation that produced the highest emissions are reported. The EUT was rotated in the 3 orthogonal axis to find the orientation that produced the highest emissions.			

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Table 8 Radiated Emissions EUT Configuration Settings

Power Interface Mode # (See Section 1.3.4)	EUT Configurations Mode # (See Section 1.6)	EUT Operation Mode # (See 1.5)
1	1	1
Supplementary information: None		

Table 9 Radiated Emissions Test Equipment

Test Equipment Used			
Description	Manufacturer	Model	Identifier
EMI Receiver	Rohde & Schwarz	ESIB26	ME5B-081
Bicon Antenna	Schaffner	VBA6106A	SN: 22681
Log-P Antenna	Schaffner	UPA6109	SN: 22987
Horn Antenna	Electro-Metrics	RGA-180	ME5-565
Active Loop Antenna	EMCO	6507	ME5A-288
Preamp (1 - 26GHz)	HP	8449B	ME5-914

Figure 12 Test setup for Radiated Emissions – 4-30MHz – Front and Rear Views

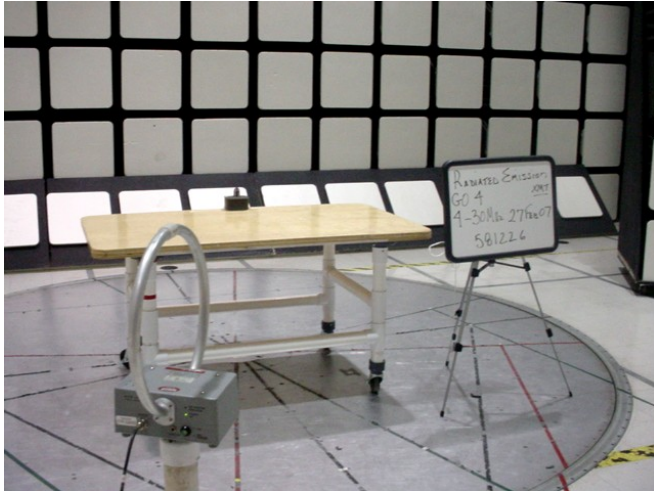


Figure 13 Test setup for Radiated Emissions – 30-100MHz – Front and Rear Views

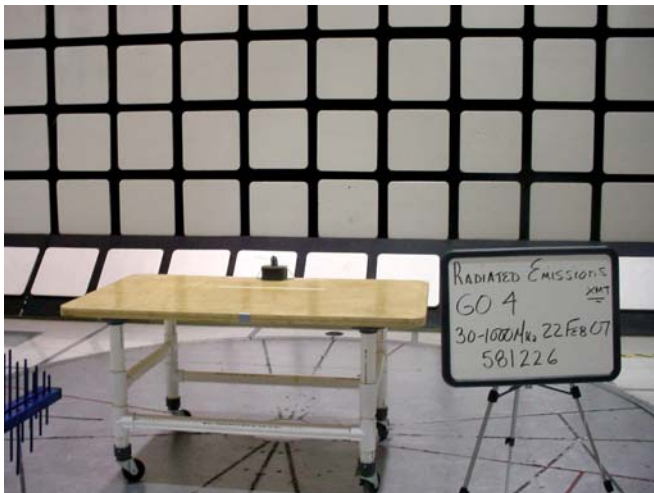


Figure 14 Test setup for Radiated Emissions – 1-5GHz – Front and Rear Views

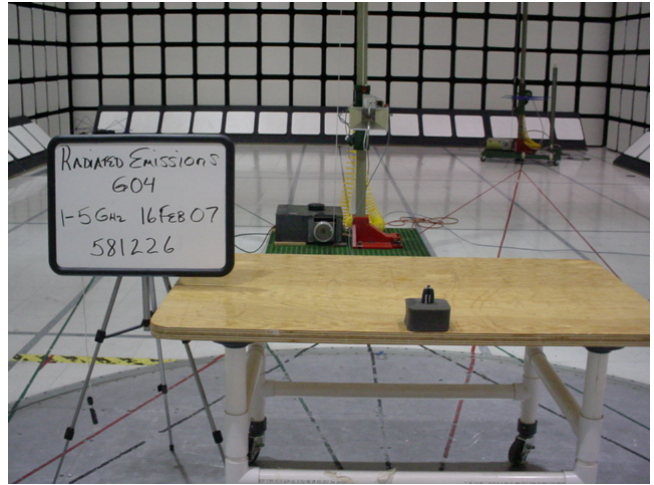
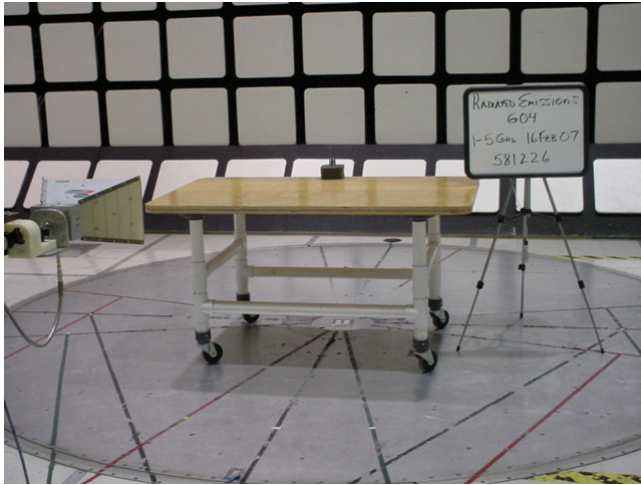


Figure 15 Test setup for Radiated Emissions – 5-10GHz – Front and Rear Views

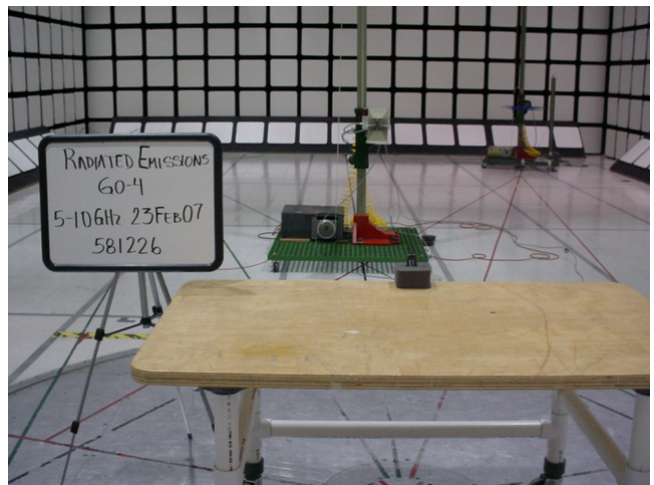
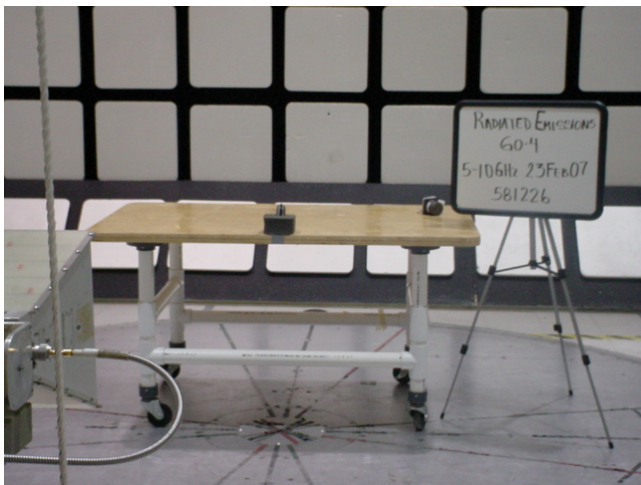
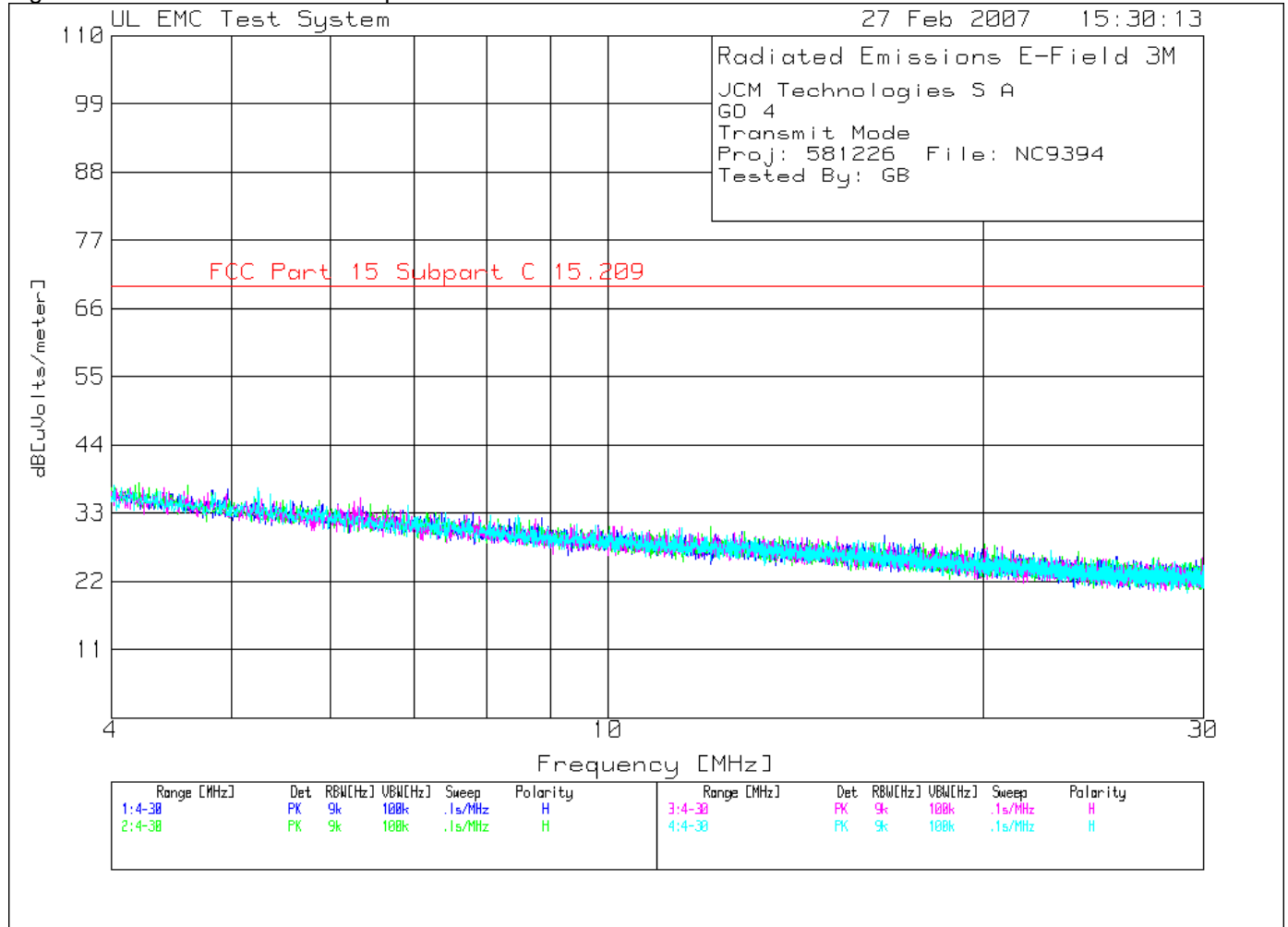


Figure 16 Radiated Emissions Graph



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Table 10 Radiated Emissions Data Points

JCM Technologies S A
 GO 4

Transmit Mode

Proj: 581226 File: NC9394

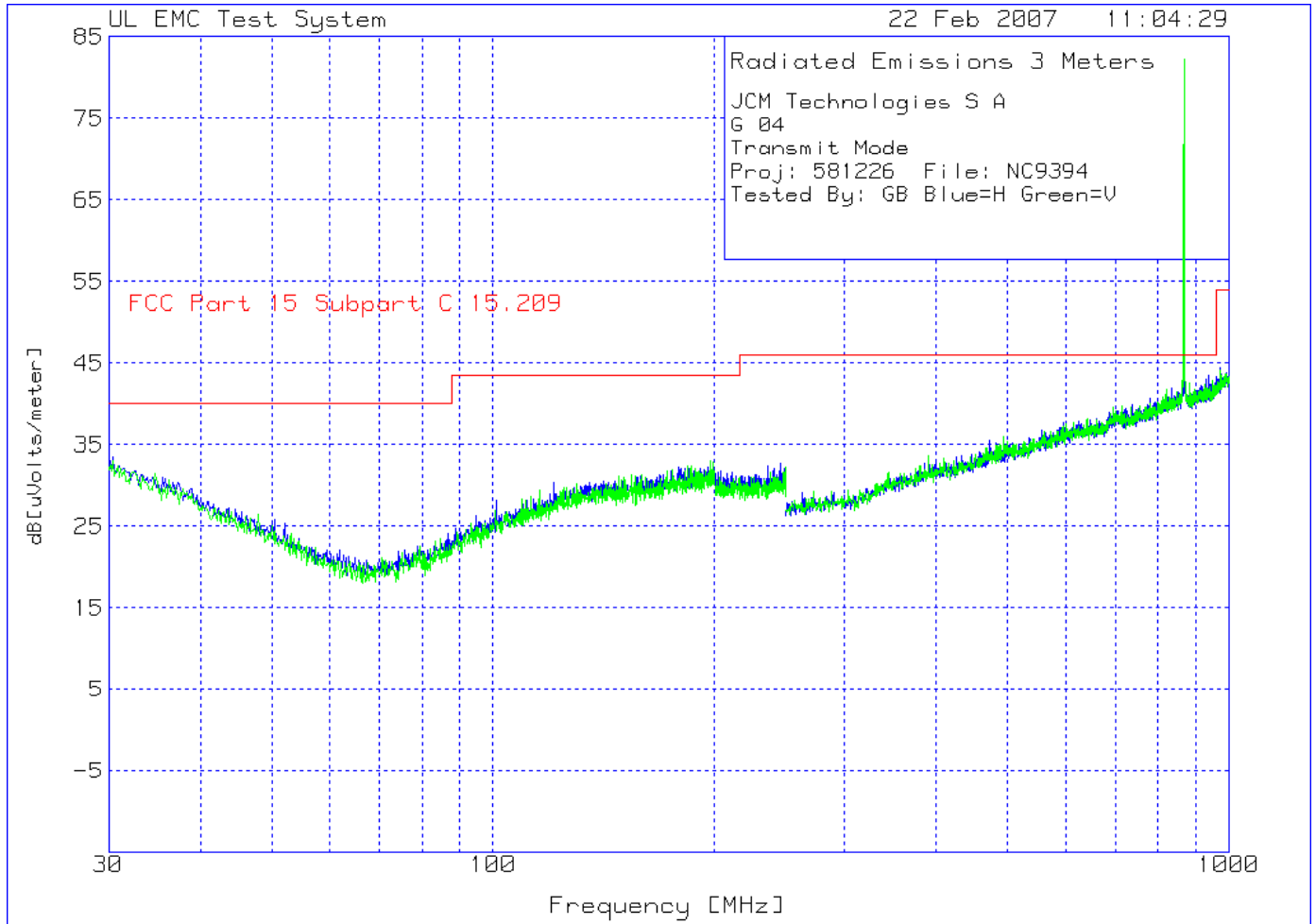
Tested By: GB

5	6	Test	Meter	Gain/Loss	Transducer	Level	Limit:1	2	3	4
No.	Frequency	Reading	Factor	Factor	dB[uVolts/meter]					
	[MHz]	[dB(uV)]	[dB]	[dB]						
=====										
0° 4 - 30MHz -----										
5	16.63916	12.8 pk	.3	16.2	29.3	69.5				
	Azimuth:246	Height:100	Horz	Margin [dB]		-40.2				
6	17.62091	12.21 pk	.3	16.3	28.81	69.5				
	Azimuth:103	Height:100	Horz	Margin [dB]		-40.69				
45° 4 - 30MHz -----										
1	4.21455	22.25 pk	.2	15.4	37.85	69.5				
	Azimuth:178	Height:120	Horz	Margin [dB]		-31.65				
2	4.60465	22.02 pk	.2	15.3	37.52	69.5				
	Azimuth:358	Height:120	Horz	Margin [dB]		-31.				
90° 4 - 30MHz -----										
4	6.34059	19.94 pk	.2	15.3	35.44	69.5				
	Azimuth:298	Height:140	Horz	Margin [dB]		-34.06				
135° 4 - 30MHz -----										
3	5.24831	21.62 pk	.2	15.2	37.02	69.5				
	Azimuth:120	Height:160	Horz	Margin [dB]		-32.48				

LIMIT 1: FCC Part 15 Subpart C 15.209

pk - Peak detector
 qp - Quasi-Peak detector
 av - Average detector

Figure 17 Radiated Emissions Graph



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Table 11 Radiated Emissions Data Points

JCM Technologies S A
 G 04
 Transmit Mode
 Proj: 581226 File: NC9394
 Tested By: GB Blue=H Green=V

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	Average Correction Factor[dB]	Average Level [dBUV/m]

Horizontal 30 - 250MHz -----								
1	100.8873	17.4 pk	0	10.7	28.1	43.5	-	-
	Azimuth:346	Height:101	Horz	Margin [dB]		-15.4	-	-
2	120.994	17.26 pk	0	13.1	30.36	43.5	-	-
	Azimuth:242	Height:250	Horz	Margin [dB]		-13.14	-	-
4	245.5971	15.74 pk	.3	16.7	32.74	46	-	-
	Azimuth:346	Height:400	Horz	Margin [dB]		-13.26	-	-

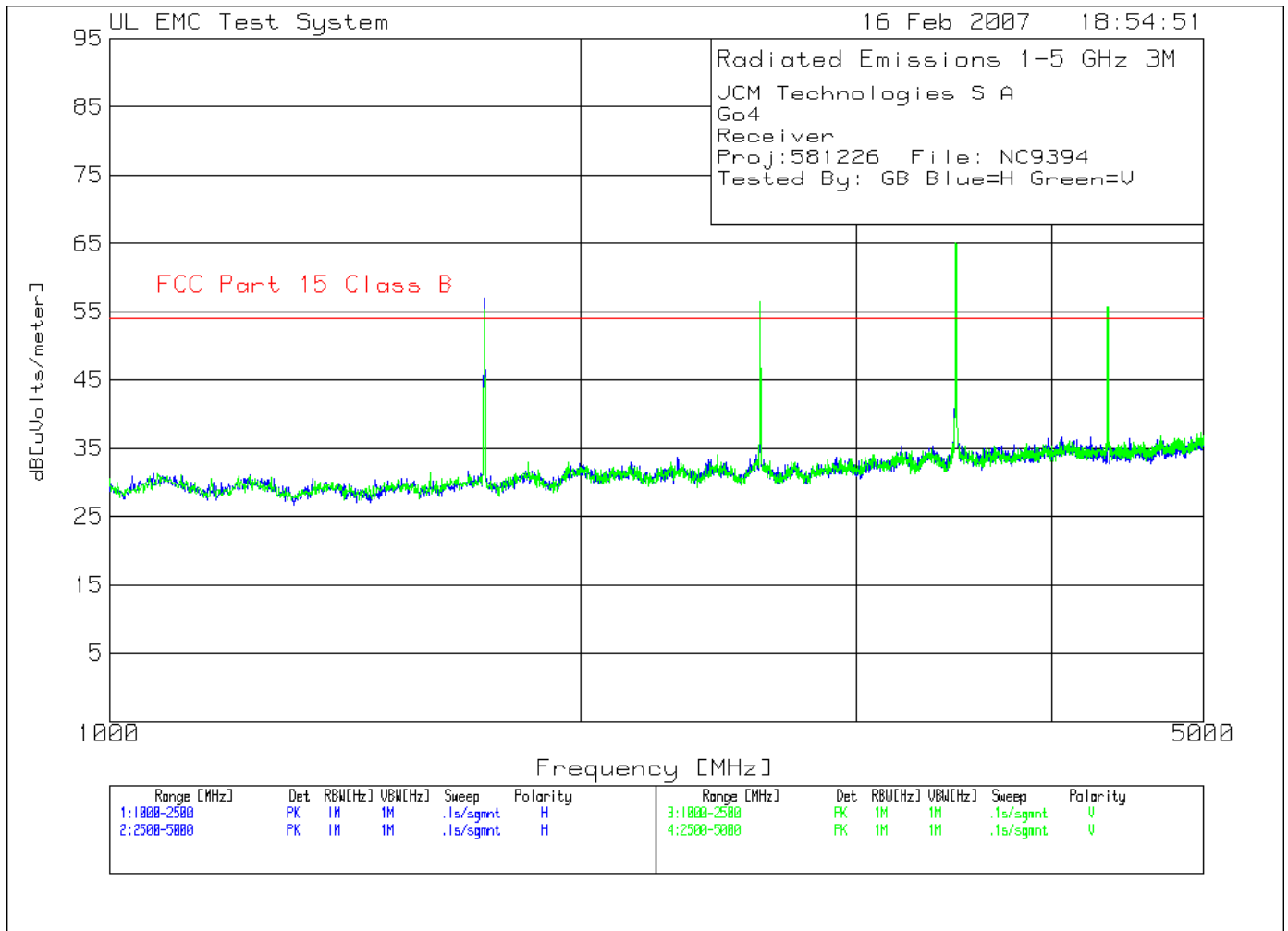
Vertical 30 - 250MHz -----								
3	197.6051	16.66 pk	.3	16	32.96	43.5	-	-
	Azimuth:196	Height:101	Vert	Margin [dB]		-10.54	-	-

Horizontal 250 - 1000MHz -----								
5	868.4123	56 pk	1.5	22.8	80.3	81.94	-7.04	73.26
	Azimuth:358	Height:101	Horz	Margin [dB]			-8.68	

Vertical 250 - 1000MHz -----								
6	868.4123	57.9 pk	1.5	22.8	82.2	81.94	-7.04	75.16
	Azimuth:96	Height:101	Vert	Margin [dB]			-6.78	

LIMIT 1: FCC Part 15 Subpart C 15.209/15.231								

Figure 18 Radiated Emissions Graph



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Table 12 Radiated Emissions Data Points

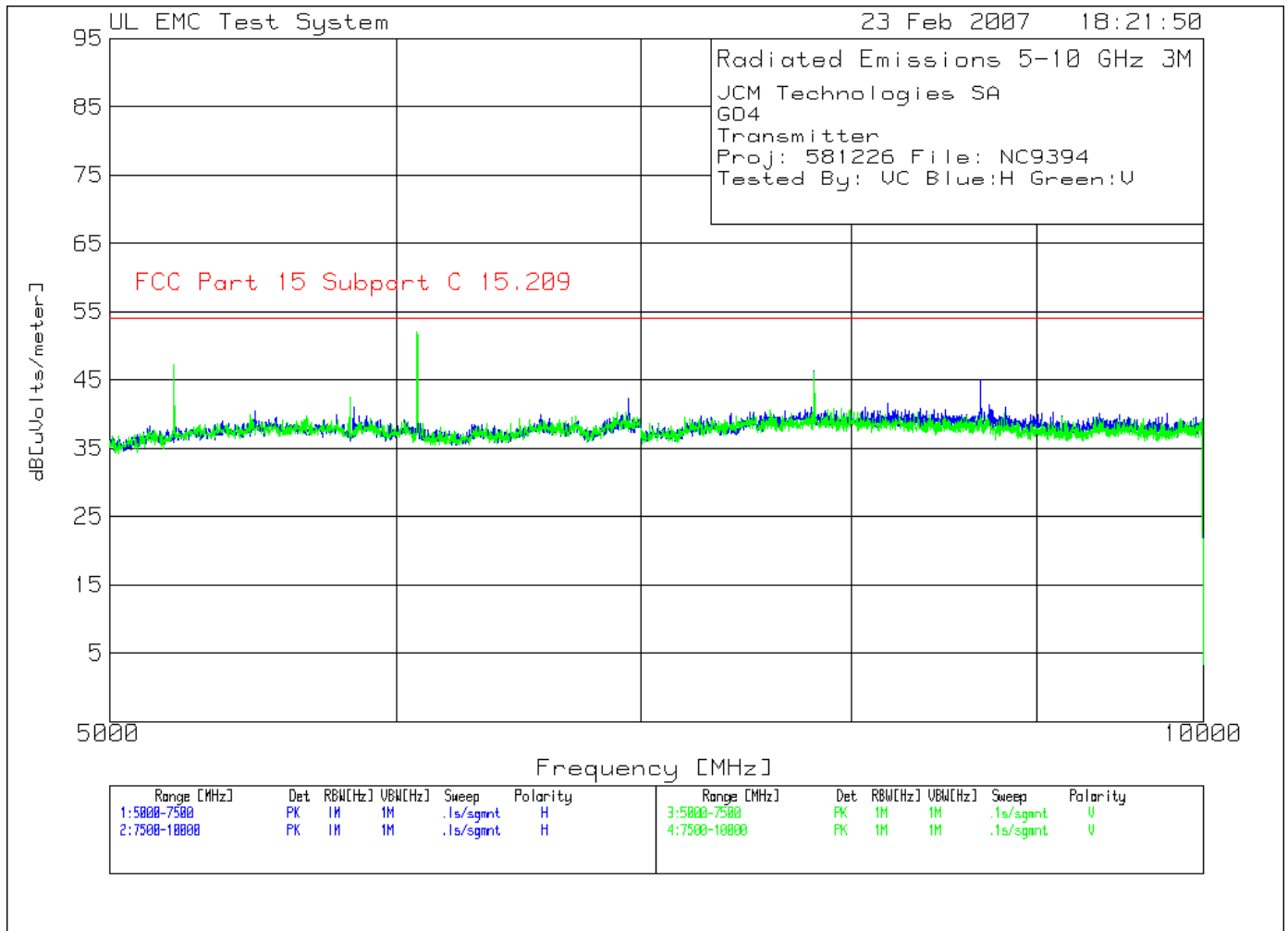
JCM Technologies S A
 Go4
 Receiver
 Proj:581226 File: NC9394
 Tested By: GB Blue=H Green=V

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	Average Correction Factor[dB]	Average Level [dBuV/m]
Horizontal 1000 - 2500MHz -----								
1	1737.237	64.22 pk	-33.8	26.5	56.92	61.94	-7.04	49.88
	Azimuth:32	Height:100	Horz	Margin [dB]			-12.06	
Horizontal 2500 - 5000MHz -----								
2	2605.07	56.37 pk	-32.7	29.2	52.87	61.94	-7.04	45.83
	Azimuth:223	Height:200	Horz	Margin [dB]			-16.11	
3	3472.315	63.54 pk	-31.3	31.5	63.74	61.94	-7.04	56.7
	Azimuth:353	Height:200	Horz	Margin [dB]			-5.24	
4	4341.227	48.5 pk	-30.7	32.4	50.2	61.94	-7.04	43.16
	Azimuth:33	Height:100	Horz	Margin [dB]			-18.78	
Vertical 1000 - 2500MHz -----								
5	1737.237	62.67 pk	-33.8	26.5	55.37	61.94	-7.04	48.33
	Azimuth:359	Height:200	Vert	Margin [dB]			-13.61	
Vertical 2500 - 5000MHz -----								
6	2603.402	60.07 pk	-32.7	29	56.37	61.94	-7.04	49.33
	Azimuth:251	Height:101	Vert	Margin [dB]			-12.61	
7	3472.315	65.08 pk	-31.3	31.2	64.98	61.94	-7.04	7.94
	Azimuth:109	Height:101	Vert	Margin [dB]			-4.00	
8	4341.227	53.85 pk	-30.7	32.6	55.75	61.94	-7.04	8.71
	Azimuth:223	Height:101	Vert	Margin [dB]			-13.23	

LIMIT 1: FCC Part 15 Subpart C 15.231

pk - Peak detector
 qp - Quasi-Peak detector
 av - Average detector
 avlg - denotes average log detection
 ave - denotes average detection
 tm - Trace Math Result

Figure 19 Radiated Emissions Graph



Job Number: 581226
 Model Number: GO4
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 FCC ID:

Table 13 Radiated Emissions Data Points

JCM Technologies SA
 GO4
 Transmitter
 Proj: 581226 File: NC9394
 Tested By: VC Blue:H Green:V

No.	Test Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts/meter]	Limit:1	Average Correction Factor[dB]	Average Level [dBUV/m]
Horizontal 5000 - 7500MHz -----								
4	6946.298	35.17 pk	-28	35.2	42.37	61.94	-7.04	35.33
	Azimuth:158	Height:101	Horz	Margin [dB]			-26.61	
Horizontal 7500 - 10000MHz -----								
5	7813.542	36.28 pk	-26.9	36.9	46.28	61.94	-7.04	39.24
	Azimuth:140	Height:101	Horz	Margin [dB]			-22.7	
6	8682.455	35.1 pk	-27.8	37.8	45.1	61.94	-7.04	38.06
	Azimuth:247	Height:101	Horz	Margin [dB]			-23.88	
Vertical 5000 - 7500MHz -----								
1	5208.472	43.01 pk	-29.5	33.8	47.31	61.94	-7.04	40.27
	Azimuth:189	Height:100	Vert	Margin [dB]			-21.67	
2	5823.883	36.65 pk	-28.7	34.5	42.45	61.94	-7.04	35.41
	Azimuth:42	Height:100	Vert	Margin [dB]			-26.53	
3	6077.385	46.44 pk	-28.9	34.5	52.04	61.94	-7.04	45.00
	Azimuth:109	Height:100	Vert	Margin [dB]			-16.94	

LIMIT 1: FCC Part 15 Subpart C 15.231

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4.5 Fundamental Frequency and Spurious Emissions Measurement Limit Calculations

Limit Calculation

Fundamental Frequency is MHz

$$\text{Limit} = 20 * \log (\text{mV/m})$$

$$\text{Limit} = 20 * \log (12500)$$

$$\text{Limit} = 81.94\text{dBuV/m}$$

Spurious Emissions Limit

Fundamental Frequency is above 470MHz

$$\text{Limit} = 20 * \log (\text{uV/m})$$

$$\text{Limit} = 20 * \log (1250)$$

$$\text{Limit} = 61.94\text{dBuV}$$

Radiated Emissions Limit conversion from $\mu\text{V/m}$ to $\text{dB}\mu\text{V/m}$ (accordance with paragraph 15.209)

$$\text{Radiated Emissions Limit (dB}\mu\text{V/m)} = 20 * \log (\mu\text{V/m})$$

$$\text{Radiated Emissions Limit (dB}\mu\text{V/m)} = 20 * \log (90)$$

$$\text{Radiated Emissions Limit (dB}\mu\text{V/m)} = 39.1$$

Radiated Emissions test data obtained during measurements.

Field Strength (dB $\mu\text{V/m}$) = Measured field strength (dB $\mu\text{V/m}$) + Antenna Factor (dB) + Cable Factor (dB)

$$\text{Field Strength (dB}\mu\text{V/m)} = 57.9\text{dB}\mu\text{V/m} + 22.8\text{dB} + 1.5\text{dB}$$

$$\text{Field Strength (dB}\mu\text{V/m)} = 82.2$$

Duty Cycle Correction Factor calculation.

Total number of pulses counted in 100ms.

Total time on = 44.48mS

$$\text{Duty cycle correction factor} = 20 \log (44.48\text{ms} / 100\text{ms})$$

$$= 20 \log (0.4448)$$

$$= - 7.04\text{dB}$$

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Appendix A

Accreditations and Authorizations



NVLAP Lab code: 100255-0

NVLAP: Recognized under the National Voluntary Laboratory Accreditation Program (NVLAP) for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC EN17025 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. For a full scope listing see <http://ts.nist.gov/ts/htdocs/210/214/scopes/1002550.htm>



FCC: Details of the measurement facilities used for these tests have been filed with the Federal Communications Commission's Laboratory in Columbia, Maryland (Ref. No. 91040).



Industry Canada Industrie Canada

Industry of Canada: Accredited by Industry Canada for performance of radiated measurements. Our test site complies with RSP 100, Issue 7, Section 3.3. File #: IC 2181



VCCI: Accepted as an Associate Member to the VCCI. The measurement facilities detailed in this test report have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. Registration Nos.: (Radiated Emissions) R-797, (Conducted Emissions) C-832, C-833, C-834 and (Conducted Emissions - Telecommunications Ports) T-160.

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ICASA: ICASA (Independent Communications Authority of South Africa) has appointed UL as a Designated Test Laboratory to test Telecommunications equipment for type approval in compliance with CISPR 22 to assist in fulfilling its mandate under section 54(1) of the Telecommunications Act, 1996 (Act 103 of 1996).



NIST/CAB: Validated by the European Commission as a U.S. Conformity Assessment Body (CAB) of the U.S.-EU Mutual Recognition Agreement (MRA) for the Electromagnetic Compatibility - Council Directive 89/336/EEC, Article 10 (2). Also validated for the Telecommunication Equipment-Council Directive 99/5/EC, Annex III and IV, Identification Number: 0983.

NIST/CAB: Provisioned to act as a U.S. Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the Asia Pacific Economic Cooperation (APEC) MRA between the American Institute in Taiwan (AIT) and the United States. Our laboratory is considered qualified to test equipment subject to the applicable EMC regulations of the Chinese Taipei Bureau of Standards, Metrology and Inspection (BSMI) which require testing to CNS 13438 (CISPR 22).

NIST/CAB: Recognized by the Infocomm Development Authority of Singapore (IDA) under the Asia Pacific Economic Cooperation Mutual Recognition Agreement (APEC MRA). Our laboratory is provisionally designated to act as a Conformity Assessment Body (CAB) under Appendix B, Phase I Procedures, of the APEC MRA. Our scope of designation includes IDA TS EMC (CISPR 22), IEC 61000-4-2, -4-3, -4-4, -4-5, and -4-6