FCC PART 15, SUBPART B and SUBPART C
TEST REPORT

for

SHOPPER CALL BOX

MODEL: CB529A

Prepared for

INDYME SOLUTIONS, INC.
8295 AERO PLACE
SAN DIEGO, CA 92123

Prepared by:_____

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DATE: APRIL 10, 2012

	REPORT BODY	APPENDICES					TOTAL
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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:	Shopper Call Box Model: CB529A
Product Description:	See Expository Statement
Modifications:	The EUT was not modified during the testing.
Manufacturer:	Indyme Solutions, Inc. 8295 Aero Place San Diego, CA 92123
Test Date:	March 20, 2012
Test Specifications:	CFR Title 47, Part 15 Subpart B, Section 15.109 and Part 15 Subpart C, Sections 15.205, 15.207, 15.209 and 15.231
Test Procedure:	ANSI C63.10: 2009 CFR 47, 15.231
Test Deviations:	The test procedure was not deviated from during the testing.

SUMMARY OF TEST RESULTS

TEST	DESCRIPTION	RESULTS
1	Conducted RF Emissions , 150 kHz - 30 MHz	Complies with the limits in CFR Title 47, FCC Part 15 Subpart C, section 15.207.
2	Radiated RF Emissions, 0.10 -30 MHz	Complies with the limits of CFR Title 47, Part 15, Subpart C, sections 15.205 & 15.209
3	Radiated RF Emissions, 30 - 4000 MHz	Complies with the limits of CFR Title 47, Part 15, Subpart B & C, sections 15.109, 15.205, & 15.209
4	-20 dB Occupied Bandwidth of the Emission	Complies with the limits of CFR Title 47, Part 15, Subpart C, section 15.231
5	Peak Radiated EMI	Complies with the limits of CFR Title 47, Part 15, Subpart C, section 15.231

1. PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the Shopper Call Box Model: CB529A. 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, Subparts B & C, sections 15.109, 15.107, 15.205, 15.207, 15.209 and 15.231.

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

Indyme Solutions, Inc.

Greg King	Compliance Engineer

Compatible Electronics, Inc.

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

2.4 Date Test Sample was Received

The test sample was received on March 20, 2012.

2.5 Disposition of the Test Sample

The sample remains at Compatible Electronics at the time of this report.

2.6 Abbreviations and Acronyms

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

RF	Radio Frequency
CLA	Cigar Lighter Adaptor
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

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 Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

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 Shopper Call Box Model: CB529A (EUT) was set up in a table top configuration. A twisted pair cable was connected to the EUT and not terminated at the other end. The EUT was either powered by two C size batteries or the power supply. The transmit antenna of the EUT is a wire soldered to the PCB, which is contained inside the plastic housing.

The EUT was explored in 3 orthogonal axes (X-axis, Y-axis and Z-axis). The X-axis in the Battery mode was determined to produce the worst case emissions therefore all tests were performed in this axis. The EUT was continuously transmitting throughout the testing.

The AC mains voltage was varied ±15% of the AC voltage resulting with no variation of amplitude or frequency.

Please see Appendix E for the data sheets.

4.1.1 Cable Construction and Termination

Cable 1 This is a 1.1-meter unshielded twisted pair cable connected to the EUT and left not terminated. The cable was hardwired at the EUT end and was left not terminated at the opposite end. The cable was bundled to a length of 40 centimeters.

5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

5.1 EUT and Accessory List

EQUIPMENT	MANUFACTURER	MODEL NUMBER	SERIALNUMBER	FCC ID
SHOPPER CALL BOX (EUT)	INDYME SOLUTIONS, INC.	CB529A	NONE	**J69CB529A**
POWER SUPPLY (EUT)	AUTEC POWER SYSTEMS	SA08-15US12R-A	NONE	NONE
BATTERY	ENERGIZER	R14 “C SIZE”	NONE	NONE

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	HP	Pavilion Slimline	MXV94400D8	N/A	N/A
EMI Receiver	Rohde & Schwarz	ESIB40	100219	9/20/2011	9/20/2012
RF RADIATED EMISSIONS TEST EQUIPMENT					
CombiLog Antenna	Com-Power	AC-220	25857	6/7/2011	6/7/2012
Loop Antenna	Com-Power	AL-130	17085	1/26/2011	1/26/2013
Horn Antenna	Com-Power	AH-118	071250	10/1/2010	10/1/2012
Pre-Amplifier	Com-Power	PA-122	181923	1/5/2012	1/5/2013
Antenna Mast	Sunol Sciences Corporation	TWR 95-4	081309-3	N/A	N/A
Turntable	Sunol Sciences Corporation	FM2011VS	N/A	N/A	N/A
Mast and Turntable Controller	Sunol Sciences Corporation	SC104V	081309-1	N/A	N/A
Measurement and Automation Software	TDK TestLab	Version 5.53	N/A	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 was mounted on a 1.0 by 1.5 meter non-conductive table 0.8 meters above the ground plane.

The EUT was placed at the edge of the table, in accordance with ANSI C63.10. The test site receive antenna distance was measured from the closest periphery of the EUT setup.

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 63.4. 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 in CFR Title 47, FCC Part 15 Subpart B and C, Section 15.207.

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 spurious emission frequencies above 1 GHz were investigated with the built-in average detector.

The harmonic emissions frequencies were investigated with the duty cycle correction factor.

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
1 GHz to 4 GHz	1 MHz	Horn Antenna

The Semi-Anechoic test site of Compatible Electronics, Inc., Lab P (Lake Forest) was used for all tests. This test sites are 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. 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 EUT was continuously transmitting during the test. The EUT was tested at a 3-meter test distance to obtain the final test data. 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, section 15.109; and CFR Title 47, Part 15, Subpart C, sections 15.205, 15.209 and 15.231. 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 final qualification data sheets are located in Appendix E. This data also shows compliance at the band edges.

Duty Cycle Correction Factor = -14.705dB

$$\delta(\mathrm{dB}) = 20\log\left[\sum\left(nt_1 + mt_2 + \ldots + \xi t_x\right)/T\right]$$

where

n is the number of pulses of duration *t*1
m is the number of pulses of duration *t*2
ξ is the number of pulses of duration *tx*
T is the period of the pulse train or 100 ms if the pulse train length is greater than 100 ms

1.022ms * 18 = 18.396

18.396 / 100ms = .18396

20 log (.18396) = -14.705 dB correction factor

Test Results:

The EUT complies with Part 15, Subpart C, section 15.231.

7.1.5 Bandwidth of the Fundamental

The -20 dB bandwidth was checked using the EMI Receiver to see that the emissions were wholly within the 0.25% of the operating frequency centered on the fundamental frequency. The RBW was set to 10 kHz and the VBW was set to 30 kHz. A Plot of the -20 dB bandwidth is located in Appendix E.

Test Results:

The EUT complies with the requirements of CFR Title 47, Part 15, Subpart C, section 15.231 (c) for the -20 dB bandwidth of the fundamental. The EUT has a -20 dB bandwidth that is lies wholly within the 0.25% of the operating frequency centered on the fundamental frequency.

8. CONCLUSIONS

The Shopper Call Box Model: CB529A 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, 15.207, 15.209, and 15.231 for the transmitter portion.

APPENDIX A

LABORATORY RECOGNITIONS

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-2848, C-3142, T-1450

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

There were no modifications made to the EUT during the tests.

APPENDIX C

ADDITIONAL MODELS COVERED UNDER THIS REPORT

ADDITIONAL MODELS COVERED UNDER THIS REPORT

USED FOR THE PRIMARY TEST

Shopper Call Box
Model: CB529A
S/N: None

Additional Model Numbers:

There were no additional models tested.

APPENDIX D

DIAGRAMS, CHARTS, AND PHOTOS

FIGURE 1: PLOT MAP AND LAYOUT OF RADIATED TEST SITE

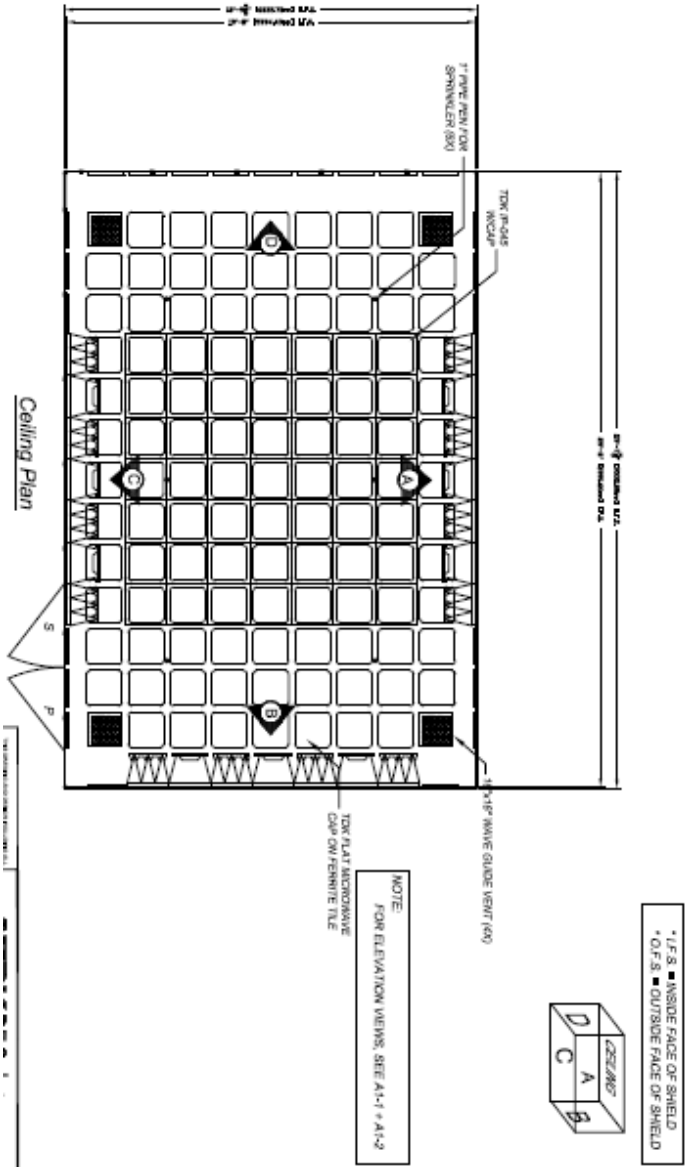


Figure 1 TDK FAC-3 test chamber

*FIGURE 2: RADIATED EMISSIONS 3-METER SEMI-*ANECHOIC *TEST CHAMBER ABOVE 1 GHz*

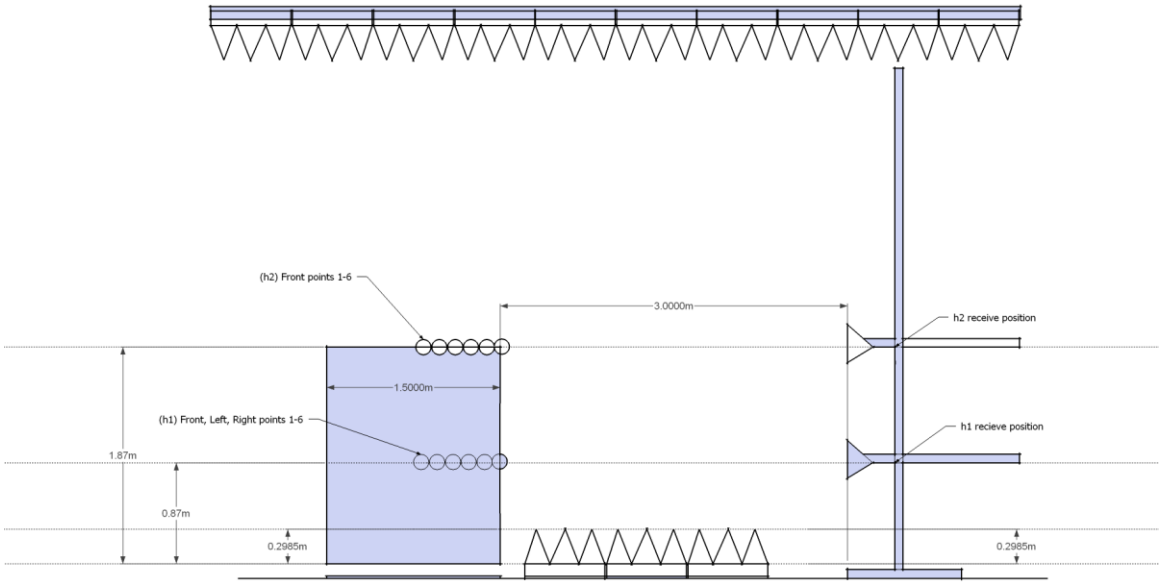
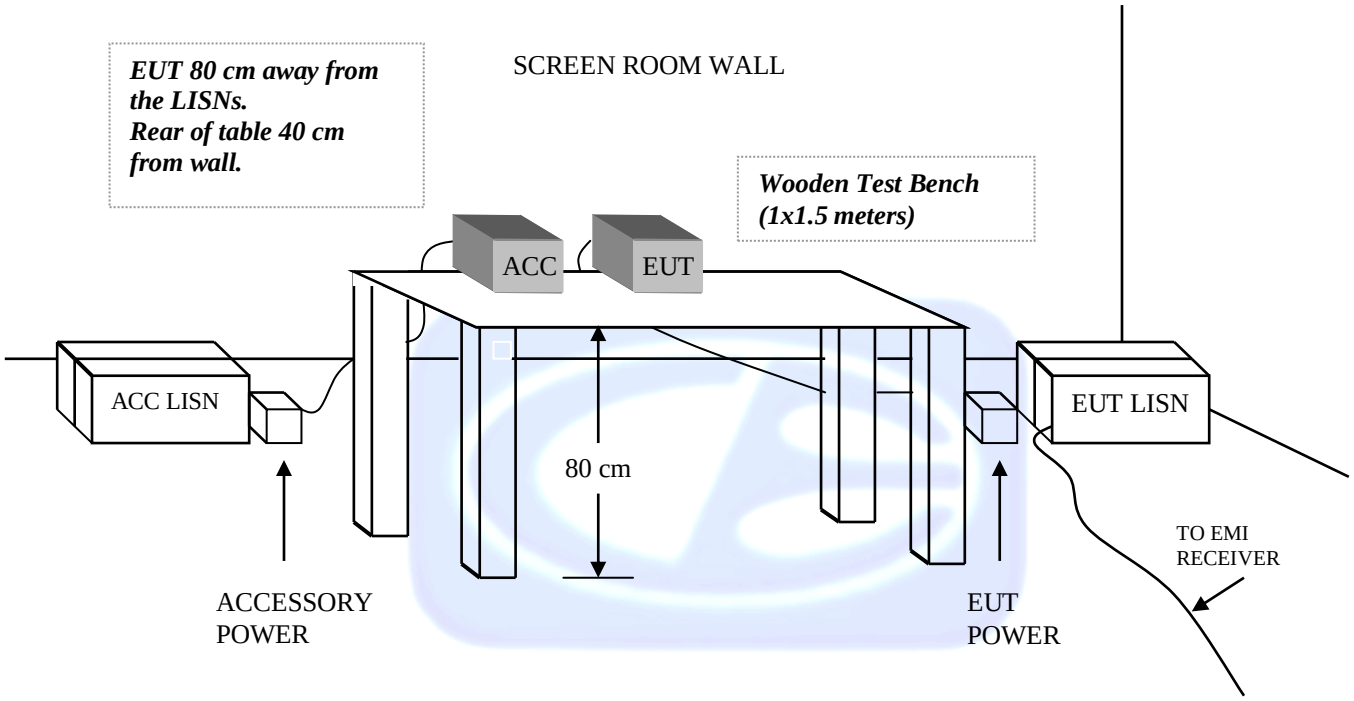


FIGURE 3: CONDUCTED EMISSIONS TEST SETUP



COM-POWER AC-220

LAB R - COMBILOG ANTENNA

S/N: 25857

CALIBRATION DUE: JUNE 07, 2012

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
30	17.2	**180**	8.5
35	17.6	**200**	9.0
40	18.3	**250**	11.7
45	17.1	**300**	14.2
50	16.1	**300**	13.4
60	13.1	**400**	15.0
70	8.6	**500**	16.0
80	5.5	**600**	17.9
90	7.2	**700**	20.2
100	8.2	**800**	21.1
120	9.4	**900**	20.5
140	8.6	**1000**	22.6
160	8.4		

COM-POWER AH-118

HORN ANTENNA

S/N: 071250

CALIBRATION DUE: OCTOBER 01, 2012

FREQUENCY (MHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
1000	24.0	**9500**	35.9
1500	23.9	**10000**	40.4
2000	27.9	**10500**	41.7
2500	29.6	**11000**	38.9
3000	30.7	**11500**	40.3
3500	30.3	**12000**	38.1
4000	28.6	**12500**	42.8
4500	30.7	**13000**	38.8
5000	33.0	**13500**	36.9
5500	32.9	**14000**	43.7
6000	34.1	**14500**	42.0
6500	37.2	**15000**	42.0
7000	37.9	**15500**	37.9
7500	38.3	**16000**	38.5
8000	38.5	**16500**	38.2
8500	36.9	**17000**	39.2
9000	40.2	**17500**	42.8
		18000	43.2

COM-POWER PA-122

1-18GHz - PREAMPLIFIER

S/N: 181923

CALIBRATION DUE: JANUARY 05, 2013

FREQUENCY (GHz)	FACTOR (dB)	FREQUENCY (MHz)	FACTOR (dB)
1000	34.7	**9500**	33.9
1500	33.9	**10000**	33.2
2000	33.3	**10500**	32.7
2500	33.4	**11000**	31.3
3000	33.1	**11500**	31.9
3500	33.2	**12000**	32.6
4000	33.0	**12500**	34.0
4500	32.3	**13000**	33.2
5000	32.1	**13500**	33.0
5500	31.9	**14000**	33.5
6000	31.7	**14500**	34.5
6500	31.8	**15000**	33.9
7000	34.0	**15500**	33.4
7500	33.3	**16000**	35.2
8000	31.7	**16500**	35.7
8500	32.3	**17000**	34.7
9000	33.0	**17500**	34.4
		18000	33.5

COM-POWER AL-130

LOOP ANTENNA

S/N: 17085

CALIBRATION DATE: JANUARY 26, 2011

FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)	FREQUENCY (MHz)	MAGNETIC (dB/m)	ELECTRIC (dB/m)
0.009	-41.14	10.36	**0.8**	-40.91	10.59
0.01	-40.98	10.52	**0.9**	-40.80	10.70
0.02	-40.87	10.63	**1.0**	-40.81	10.69
0.03	-40.13	11.37	**2.0**	-40.51	10.99
0.04	-40.42	11.08	**3.0**	-40.54	10.96
0.05	-41.06	10.44	**4.0**	-40.44	11.06
0.06	-41.07	10.43	**5.0**	-40.32	11.18
0.07	-41.12	10.38	**6.0**	-40.69	10.81
0.08	-41.03	10.47	**7.0**	-40.37	11.13
0.09	-41.04	10.46	**8.0**	-39.99	11.51
0.1	-41.26	10.24	**9.0**	-40.00	11.50
0.2	-41.23	10.27	**10.0**	-40.08	11.42
0.3	-41.26	10.24	**15.0**	-42.36	9.14
0.4	-41.14	10.36	**20.0**	-38.75	12.75
0.5	-41.24	10.26	**25.0**	-40.70	10.80
0.6	-41.22	10.28	**30.0**	-41.09	10.41
0.7	-41.12	10.38			

VIEW 1
(X-AXIS)

INDYME SOLUTIONS, INC.
SHOPPER CALL BOX
MODEL: CB529A
FCC SUBPART B AND C – RADIATED SPURIOUS EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

VIEW
(X-AXIS)

INDYME SOLUTIONS, INC.
SHOPPER CALL BOX
MODEL: CB529A
FCC SUBPART B AND C – RADIATED SPURIOUS EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

VIEW 1
(X-AXIS)

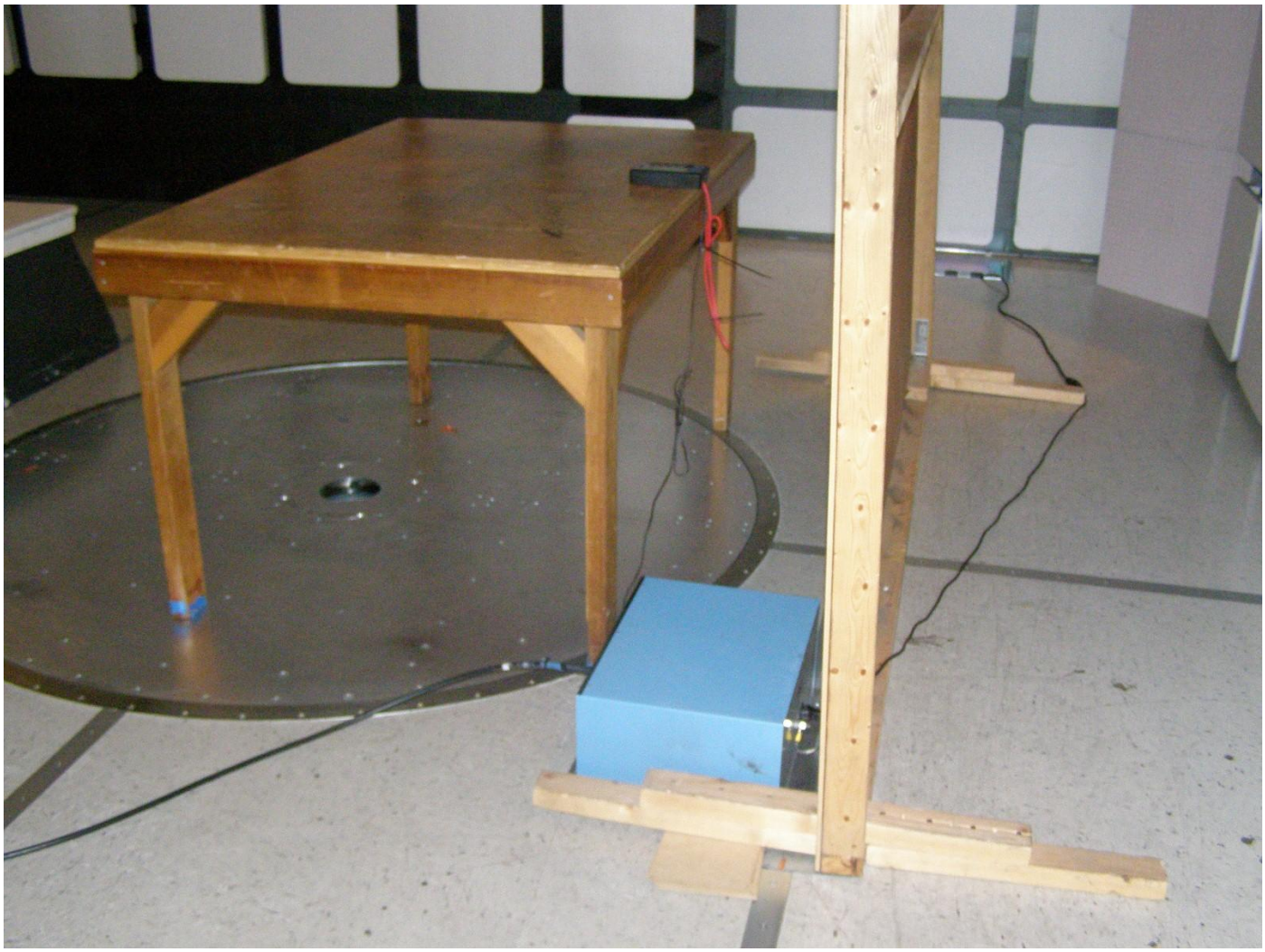
INDYME SOLUTIONS, INC.
SHOPPER CALL BOX
MODEL: CB529A
FCC SUBPART B AND C – RADIATED SPURIOUS EMISSIONS ABOVE 1GHZ

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

VIEW
(X-AXIS)

INDYME SOLUTIONS, INC.
SHOPPER CALL BOX
MODEL: CB529A
FCC SUBPART B AND C – RADIATED SPURIOUS EMISSIONS ABOVE 1GHZ

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS



VIEW 1
(X-AXIS)

INDYME SOLUTIONS, INC.
SHOPPER CALL BOX
MODEL: CB529A WITH POWER SUPPLY
FCC SUBPART B AND C – CONDUCTED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

VIEW
(X-AXIS)

INDYME SOLUTIONS, INC.
SHOPPER CALL BOX
MODEL: CB529A WITH POWER SUPPLY
FCC SUBPART B AND C – CONDUCTED EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

VIEW 1
(X-AXIS)

INDYME SOLUTIONS, INC.
SHOPPER CALL BOX
MODEL: CB529A WITH POWER SUPPLY
FCC SUBPART B AND C – RADIATED SPURIOUS EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

VIEW
(X-AXIS)

INDYME SOLUTIONS, INC.
SHOPPER CALL BOX
MODEL: CB529A WITH POWER SUPPLY
FCC SUBPART B AND C – RADIATED SPURIOUS EMISSIONS

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

VIEW 1
(X-AXIS)

INDYME SOLUTIONS, INC.
SHOPPER CALL BOX
MODEL: CB529A WITH POWER SUPPLY
FCC SUBPART B AND C – RADIATED SPURIOUS EMISSIONS ABOVE 1GHZ

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

VIEW
(X-AXIS)

INDYME SOLUTIONS, INC.
SHOPPER CALL BOX
MODEL: CB529A WITH POWER SUPPLY
FCC SUBPART B AND C – RADIATED SPURIOUS EMISSIONS ABOVE 1GHZ

PHOTOGRAPH SHOWING THE EUT CONFIGURATION FOR MAXIMUM EMISSIONS

APPENDIX E

DATA SHEETS

FUNDAMENTAL AND HARMONIC EMISSIONS

BATTERY POWERED

DATA SHEETS

PEAK TRANSMIT EMI

FCC 15.231

Indyme
Periodic Operation Device
Model: CB529A
Duty Cycle
Correction Factor: 14.705

Date: 03/20/12
Lab: R
Tested By: Matt Harrison

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

Freq. (MHz)	Peak EMI (dBµV/m)	Duty Cycle AVG (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol (H/V)
303.813	81.20	66.49	74.92	-8.43	H
303.813	70.81	56.11	74.92	-18.82	V

Vertical Harmonic Emissions

FCC 15.231
Indyme
Periodic Operation Device
Model: CB529a
Duty Cycle Correction Factor: 14.705

Date: 03/20/2012
Lab: R
Tested By: Matt Harrison

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

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
607.60	49.68	V	74.93	-25.25	Peak	1	185	
607.60	34.98	V	54.93	-19.95	Avg	1	185	
911.40	51.40	V	74.93	-23.53	Peak	1	0	
911.40	36.70	V	54.93	-18.23	Avg	1	0	
1215.20	48.79	V	73.98	-25.19	Peak	1.28	74	**In Restricted Band**
1215.20	34.09	V	53.98	-19.89	Avg	1.28	74	**In Restricted Band**
1519.00	48.48	V	73.98	-25.50	Peak	1	302	**In Restricted Band**
1519.00	33.78	V	53.98	-20.21	Avg	1	302	**In Restricted Band**
1822.80	48.27	V	74.93	-26.66	Peak	1.11	358	
1822.80	33.57	V	54.93	-21.37	Avg	1.11	358	
2126.60	47.19	V	74.93	-27.74	Peak	1.16	75	
2126.60	32.49	V	54.93	-22.44	Avg	1.16	75	
2430.40	47.51	V	74.93	-27.42	Peak	1.48	275	
2430.40	32.81	V	54.93	-22.12	Avg	1.48	275	
2734.20	47.46	V	73.98	-26.52	Peak	2.65	330	**In Restricted Band**
2734.20	32.76	V	53.98	-21.22	Avg	2.65	330	**In Restricted Band**
3038.17	48.37	V	74.93	-26.56	Peak	3.89	327	
3038.17	33.67	V	54.93	-21.27	Avg	3.89	327	

Test distance
3 meter

Horizontal Harmonic Emissions

FCC 15.231
Indyme
Periodic Operation Device
Model: CB529a
Duty Cycle Correction Factor: 14.705

Date: 03/20/2012
Lab: R
Tested By: Matt Harrison

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

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
607.60	50.00	H	74.93	-24.93	Peak	2.00	40	
607.60	35.30	H	54.93	-19.63	Avg	2.00	40	
911.40	58.13	H	74.93	-16.80	Peak	1.00	100	
911.40	43.43	H	54.93	-11.51	Avg	1.00	100	
1215.20	50.73	H	73.98	-23.25	Peak	1.00	348	**In Restricted Band**
1215.20	36.03	H	53.98	-17.96	Avg	1.00	348	**In Restricted Band**
1519.00	53.79	H	73.98	-20.49	Peak	1.11	0	**In Restricted Band**
1519.00	36.09	H	53.98	-15.84	Avg	1.11	0	**In Restricted Band**
1822.80	54.39	H	74.93	-20.54	Peak	1.05	4	
1822.80	39.69	H	54.93	-14.25	Avg	1.05	4	
2126.60	44.54	H	74.93	-30.39	Peak	2.09	225	
2126.60	29.84	H	54.93	-25.09	Avg	2.09	225	
2430.40	48.58	H	74.93	-26.35	Peak	1.42	214	
2430.40	33.88	H	54.93	-21.06	Avg	1.42	214	
2734.20	48.74	H	73.98	-25.24	Peak	1.98	193	**In Restricted Band**
2734.20	34.04	H	53.98	-19.94	Avg	1.98	193	**In Restricted Band**
3038.17	48.88	H	74.93	-26.05	Peak	3.65	298	
3038.17	34.18	H	54.93	-20.75	Avg	3.65	298	

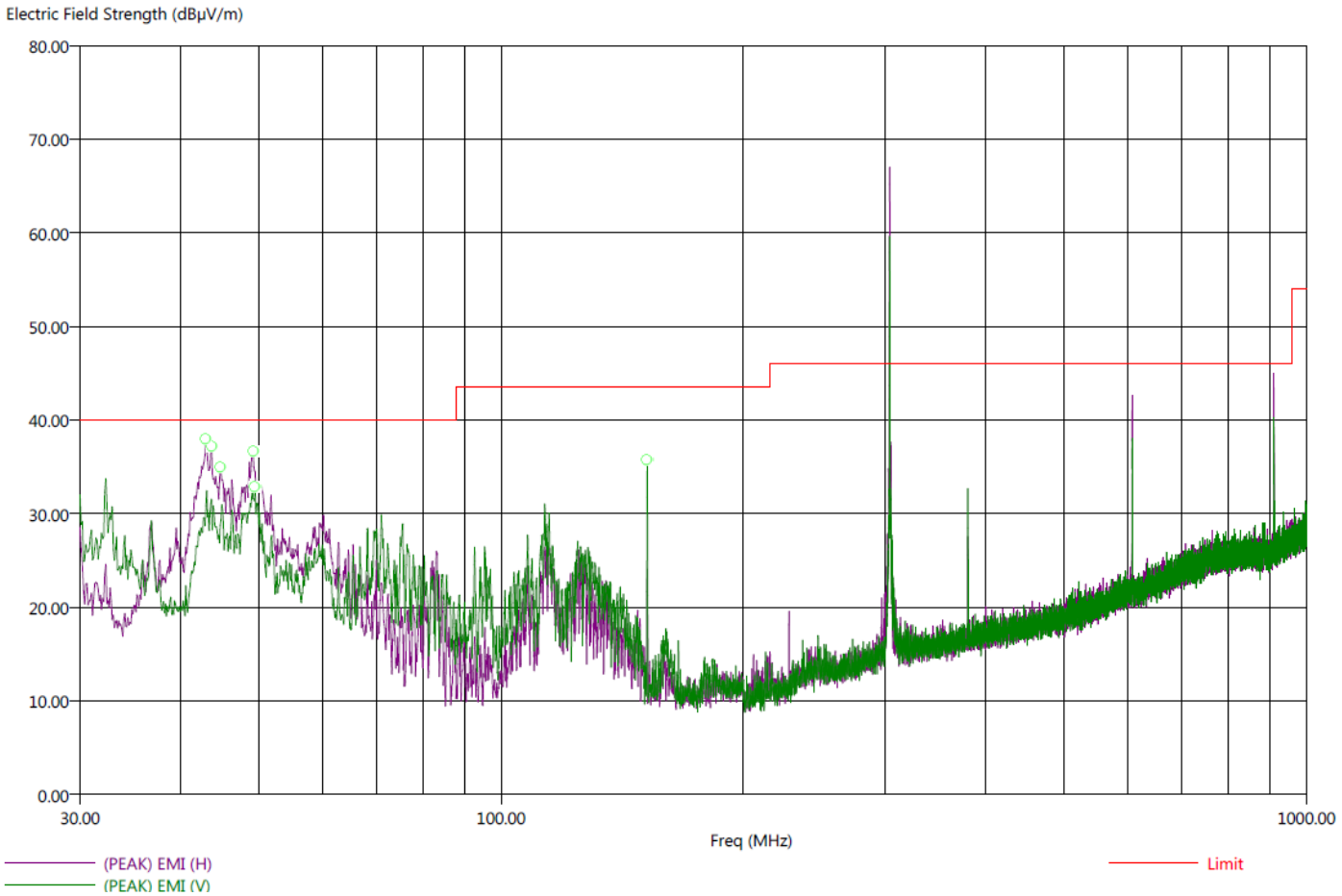
Test distance
3 meter

RADIATED SPURIOUS EMISSIONS
BATTERY POWERED

DATA SHEETS

Title: FCC 15.209 Class B 3/20/2012 1:11:53 PM
File: Radiated Pre-Scan 30-1000Mhz.set Sequence: Preliminary Scan
Operator: Matt Harrison
EUT Type: CB529A With Cable
EUT Condition: Continuously Transmitting 303MHz
Comments: Witness: Greg
Temp: 66f
Hum: 30%
Battery Operated

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



No emissions found between 9kHz - 30 MHz

```
Title: FCC 15.209 Class B                          3/20/2012 1:34:28 PM
File: Radiated Final 30-1000Mhz.set                Sequence: Final Measurements
Operator: Matt Harrison
EUT Type: CB529A With Cable
EUT Condition: Continuously Transmitting 303MHz
Comments: Witness: Greg
Temp: 66f
Hum: 30%
Battery Powered
```

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

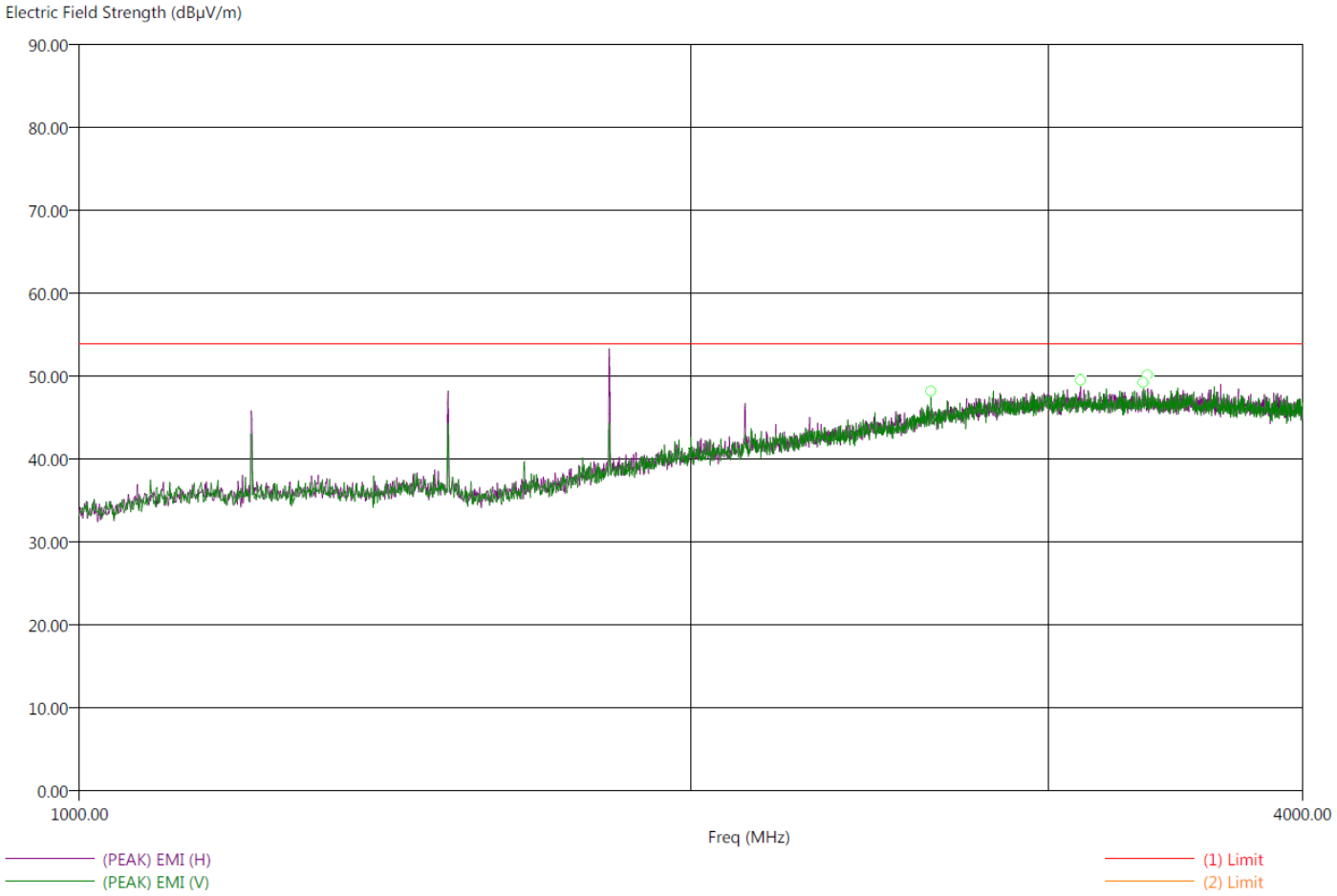
Freq (MHz)	(QP)Margin (dB)	(QP)EMI (dBµV/m)	(PEAK)EMI (dBµV/m)	Limit (dBµV/m)	Pol	Ttbl Agl (deg)	Twr Ht (cm)	Transducer (dB)	Cable (dB)
43.00	-4.65	35.35	40.13	40.00	H	82.00	301.97	17.54	0.60
43.70	-6.05	33.95	38.73	40.00	H	140.50	293.31	17.42	0.60
44.80	-8.97	31.03	36.58	40.00	H	125.00	296.65	17.13	0.60
49.20	-5.80	34.20	38.42	40.00	H	289.75	104.47	16.28	0.60
49.50	-15.36	24.64	30.91	40.00	V	114.25	119.04	16.20	0.60
151.90	-10.21	33.31	36.13	43.52	V	250.50	139.10	8.48	1.11

No emissions found between 9kHz - 30 MHz

Title: FCC 15.209 Class B
File: Radiated Pre-scan 1-18GHz.set
Operator: Matt Harrison
EUT Type: CB529A With Cable
EUT Condition: Continuously Transmitting 303MHz
Comments: Witness: Greg
Temp: 66f
Hum: 30%
Battery Powered

3/20/2012 2:14:47 PM
Sequence: Preliminary Scan

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



Title: FCC 15.209 Class B
File: Radiated Final 1-18GHz_Batt.set
Operator: Matt Harrison
EUT Type: CB529A With Cable
EUT Condition: Continuously Transmitting 303MHz
Comments: Witness: Greg
Temp: 66f
Hum: 30%
Battery Powered

3/20/2012 2:31:50 PM
Sequence: Final Measurements

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

Freq (MHz)	(AVG) Margin (dB)	(AVG) EMI (dBµV/m)	(PEAK) EMI (dBµV/m)	Limit (dBµV/m)	Pol	Ttbl Agl (deg)	Twr Ht (cm)	Transducer (dB)	Cable (dB)	Preamp (dB)
2624.60	-19.44	34.54	47.32	53.98	V	175.25	396.71	29.89	7.93	33.32
3111.11	-17.54	36.44	49.69	53.98	H	9.00	286.38	30.61	8.89	33.12
3341.19	-17.40	36.58	49.07	53.98	V	281.25	130.62	30.42	9.27	33.17
3356.46	-17.62	36.36	49.46	53.98	H	2.75	180.71	30.41	9.29	33.17

FUNDAMENTAL AND HARMONIC EMISSIONS

AC POWERED

DATA SHEETS

PEAK TRANSMIT EMI

FCC 15.231

Indyme
Periodic Operation Device
Model: CB529A
Duty Cycle
Correction Factor: 14.705

Date: 03/20/12
Lab: R
Tested By: Matt Harrison

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

Freq. (MHz)	Peak EMI (dBµV/m)	Duty Cycle AVG (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol (H/V)
303.813	73.79	59.08	74.92	-15.84	H
303.813	70.07	55.36	74.92	-19.56	V

Vertical Harmonic Emissions

FCC 15.231

Indyme
Periodic Operation Device
Model: CB529a
Duty Cycle Correction Factor: -14.705

Date: 03/20/12
Lab: R
Tested By: Matt Harrison

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

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
607.60	52.97	V	74.93	-21.96	Peak	1	210	
607.60	38.27	V	54.93	-16.66	Avg	1	210	
911.40	55.94	V	74.93	-18.99	Peak	1.3	240	
911.40	41.24	V	54.93	-13.69	Avg	1.3	240	
1215.20	49.32	V	73.98	-24.66	Peak	1.35	262	**In Restricted Band**
1215.20	34.61	V	53.98	-19.37	Avg	1.35	262	**In Restricted Band**
1519.00	48.75	V	73.98	-25.23	Peak	1.16	315	**In Restricted Band**
1519.00	34.62	V	53.98	-19.36	Avg	1.16	315	**In Restricted Band**
1822.80	49.50	V	74.93	-25.43	Peak	1	202	
1822.80	34.80	V	54.93	-20.13	Avg	1	202	
2126.60	48.57	V	74.93	-26.36	Peak	1.05	65	
2126.60	33.87	V	54.93	-21.06	Avg	1.05	65	
2430.40	48.86	V	74.93	-26.07	Peak	1	277	
2430.40	34.16	V	54.93	-20.77	Avg	1	277	
2734.20	47.44	V	73.98	-26.54	Peak	3.4	6	**In Restricted Band**
2734.20	32.74	V	53.98	-21.24	Avg	3.4	6	**In Restricted Band**
3038.17	49.38	V	74.93	-25.55	Peak	1.08	241	
3038.17	34.68	V	54.93	-20.25	Avg	1.08	241	

Test distance
3 meter

Horizontal Harmonic Emissions

FCC 15.231

Indyme
Periodic Operation Device
Model: CB529a
Duty Cycle Correction Factor: -14.705

Date: 03/20/12
Lab: R
Tested By: Matt Harrison

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

Freq. (MHz)	Level (dBuV)	Pol (v/h)	Limit	Margin	Peak / QP / Avg	Ant. Height (m)	Table Angle (deg)	Comments
607.60	50.91	H	74.93	-24.02	Peak	1.00	12	
607.60	36.21	H	54.93	-18.73	Avg	1.00	12	
911.40	62.16	H	74.93	-12.77	Peak	1.00	155	
911.40	47.46	H	54.93	-7.48	Avg	1.00	155	
1215.20	49.32	H	73.98	-24.66	Peak	1.75	170	**In Restricted Band**
1215.20	34.62	H	53.98	-19.37	Avg	1.75	170	**In Restricted Band**
1519.00	53.27	H	73.98	-20.71	Peak	1.00	0	**In Restricted Band**
1519.00	38.57	H	53.98	-15.42	Avg	1.00	0	**In Restricted Band**
1822.80	53.63	H	74.93	-21.30	Peak	1.00	7	
1822.80	38.93	H	54.93	-16.01	Avg	1.00	7	
2126.60	46.37	H	74.93	-28.56	Peak	3.33	360	
2126.60	31.67	H	54.93	-23.27	Avg	3.33	360	
2430.40	48.72	H	74.93	-26.21	Peak	1.05	216	
2430.40	34.02	H	54.93	-20.92	Avg	1.05	216	
2734.20	47.46	H	73.98	-26.52	Peak	3.95	80	**In Restricted Band**
2734.20	32.76	H	53.98	-21.23	Avg	3.95	80	**In Restricted Band**
3038.17	49.00	H	74.93	-25.93	Peak	1.94	23	
3038.17	34.30	H	54.93	-20.64	Avg	1.94	23	

Test distance
3 meter

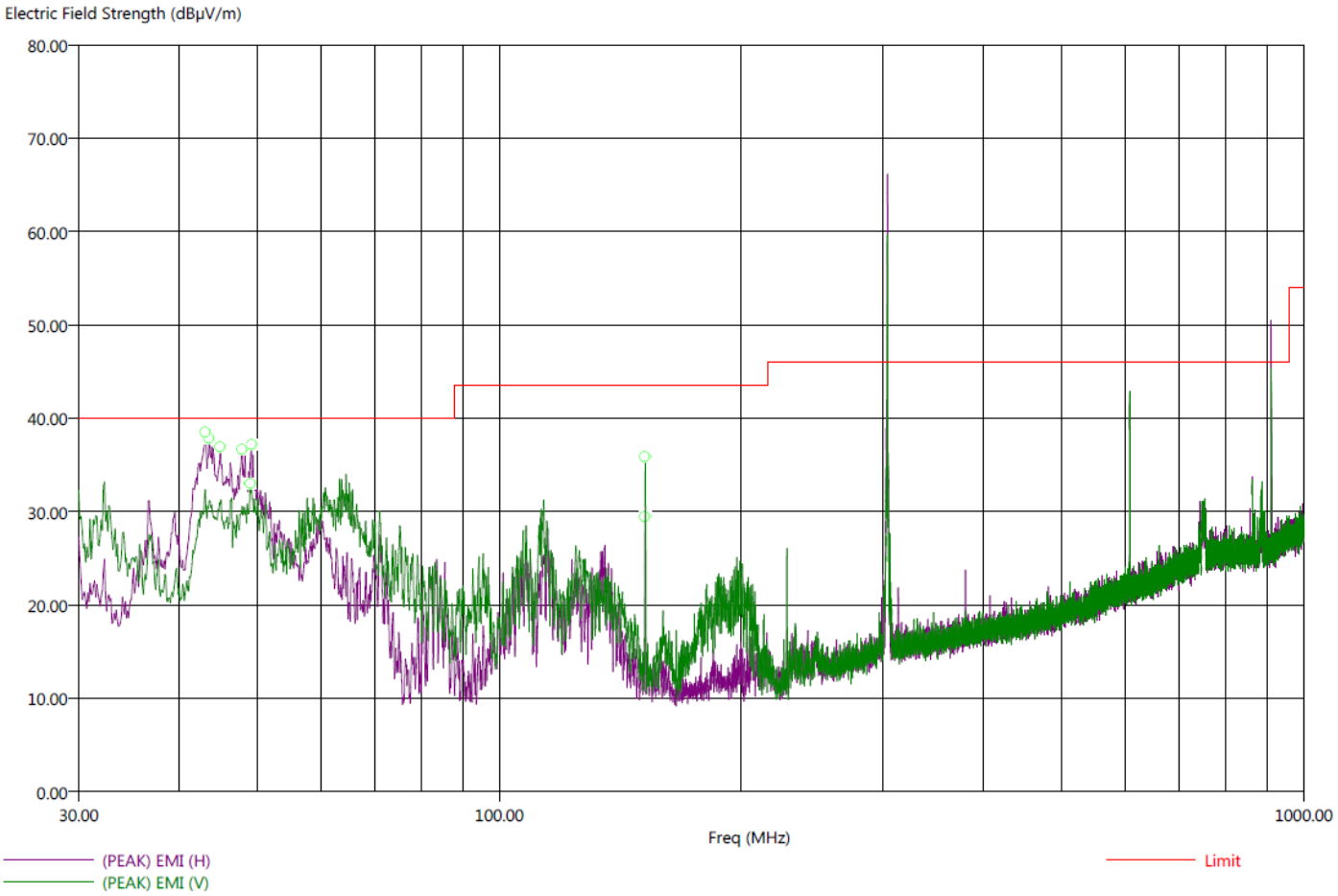
RADIATED SPURIOUS EMISSIONS

AC POWER

DATA SHEETS

```
Title: FCC 15.209 Class B                                  3/20/2012 11:12:11 AM
File: Radiated Pre-Scan 30-1000Mhz_PSU.set                 Sequence: Preliminary Scan
Operator: Matt Harrison
EUT Type: CB529A with Cable, Connected to Power Supply
EUT Condition: Continuously Transmitting 303MHz
Comments: Witness: Greg
Temp: 66f
Hum: 30%
120V 60Hz
```

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



No emissions found between 9kHz - 30 MHz

```
Title: FCC 15.209 Class B                          3/20/2012 11:33:26 AM
File: Radiated Final 30-1000Mhz_PSU.set            Sequence: Final Measurements
Operator: Matt Harrison
EUT Type: CB529A With Cable, Connected to Power Supply
EUT Condition: Continuously Transmitting 303MHz
Comments: Witness: Greg
Temp: 66f
Hum: 30%
120V 60Hz
```

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

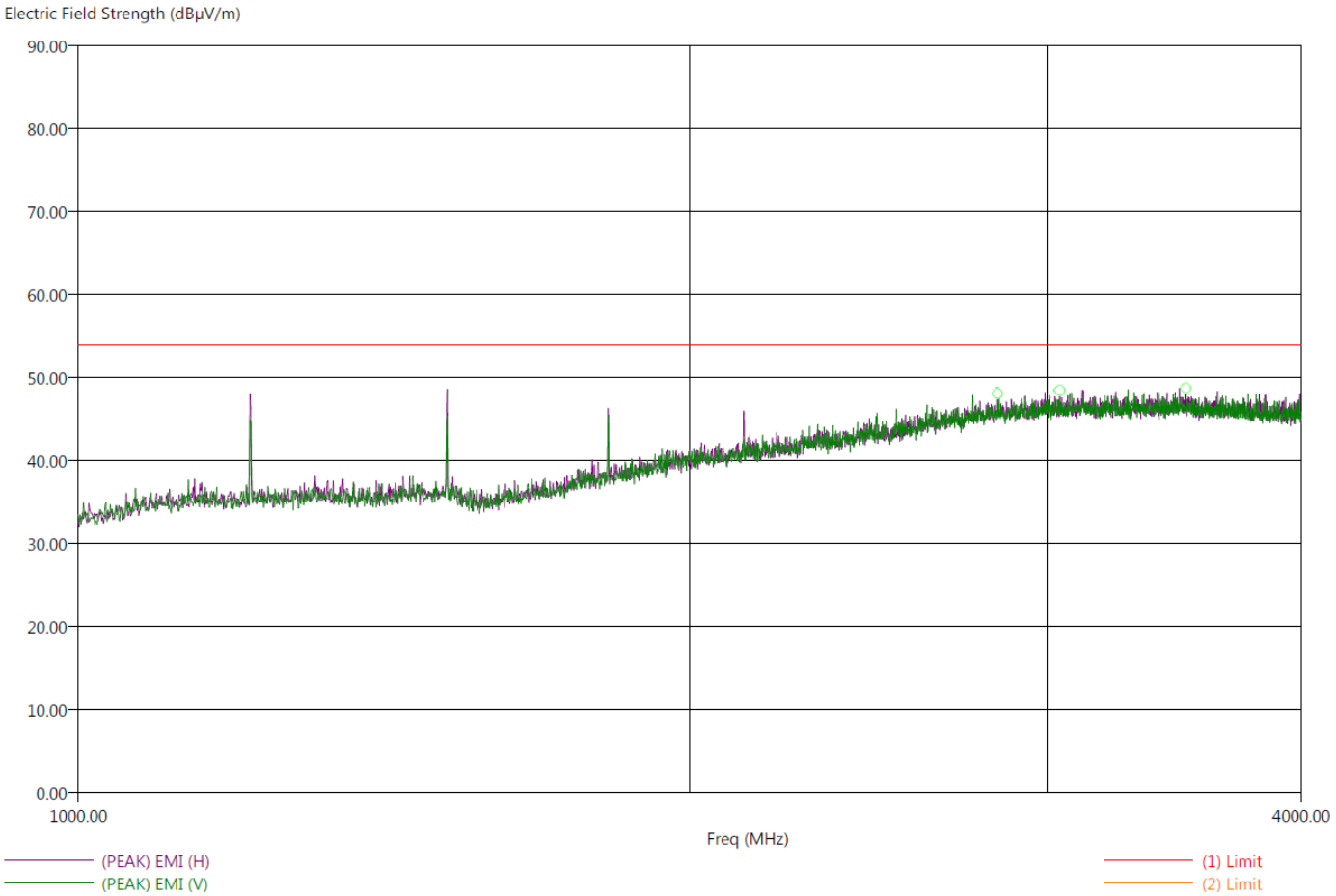
Freq (MHz)	(QP)Margin (dB)	(QP)EMI (dBµV/m)	(PEAK)EMI (dBµV/m)	Limit (dBµV/m)	Pol	Ttbl Agl (deg)	Twr Ht (cm)	Transducer (dB)	Cable (dB)
43.10	-4.81	35.19	39.85	40.00	H	314.50	276.35	17.54	0.60
43.60	-5.67	34.33	39.44	40.00	H	74.25	285.61	17.41	0.60
45.00	-8.22	31.78	36.74	40.00	H	223.50	297.55	17.11	0.60
47.90	-9.58	30.42	35.20	40.00	H	17.50	319.70	16.52	0.60
49.00	-10.55	29.45	34.12	40.00	V	234.75	325.73	16.28	0.60
49.20	-8.43	31.57	37.58	40.00	H	360.00	114.80	16.24	0.60
151.90	-14.49	29.03	31.87	43.52	H	221.50	297.25	8.48	1.11
151.90	-4.38	39.14	41.81	43.52	V	354.00	104.65	8.48	1.11

No emissions found between 9kHz - 30 MHz

Title: FCC 15.209 Class B
File: Radiated Pre-scan 1-18GHz_PSU.set
Operator: Matt Harrison
EUT Type: CB529A With Cable, Connected to PSU
EUT Condition: Continuously Transmitting 303MHz
Comments: Witness: Greg
Temp: 66f
Hum: 30%
120V 60Hz

3/20/2012 3:39:21 PM
Sequence: Preliminary Scan

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



Title: FCC 15.209 Class B
File: Radiated Final 1-18GHz_PSU.set
Operator: Matt Harrison
EUT Type: CB529A With Cable, Connected to PSU
EUT Condition: Continuously Transmitting 303MHz
Comments: Witness: Greg
Temp: 66f
Hum: 30%
120V 60Hz

3/20/2012 3:54:13 PM
Sequence: Final Measurements

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

Freq (MHz)	(AVG) Margin (dB)	(AVG) EMI (dBµV/m)	(PEAK) EMI (dBµV/m)	Limit (dBµV/m)	Pol	Ttbl Agl (deg)	Twr Ht (cm)	Transducer (dB)	Cable (dB)	Preamp (dB)
2834.21	-18.56	35.42	48.23	53.98	H	156.75	133.25	30.36	8.63	33.19
3042.98	-18.16	35.82	48.37	53.98	H	130.50	260.95	30.66	8.77	33.11
3510.69	-17.80	36.18	48.77	53.98	V	0.00	371.52	30.26	9.52	33.20

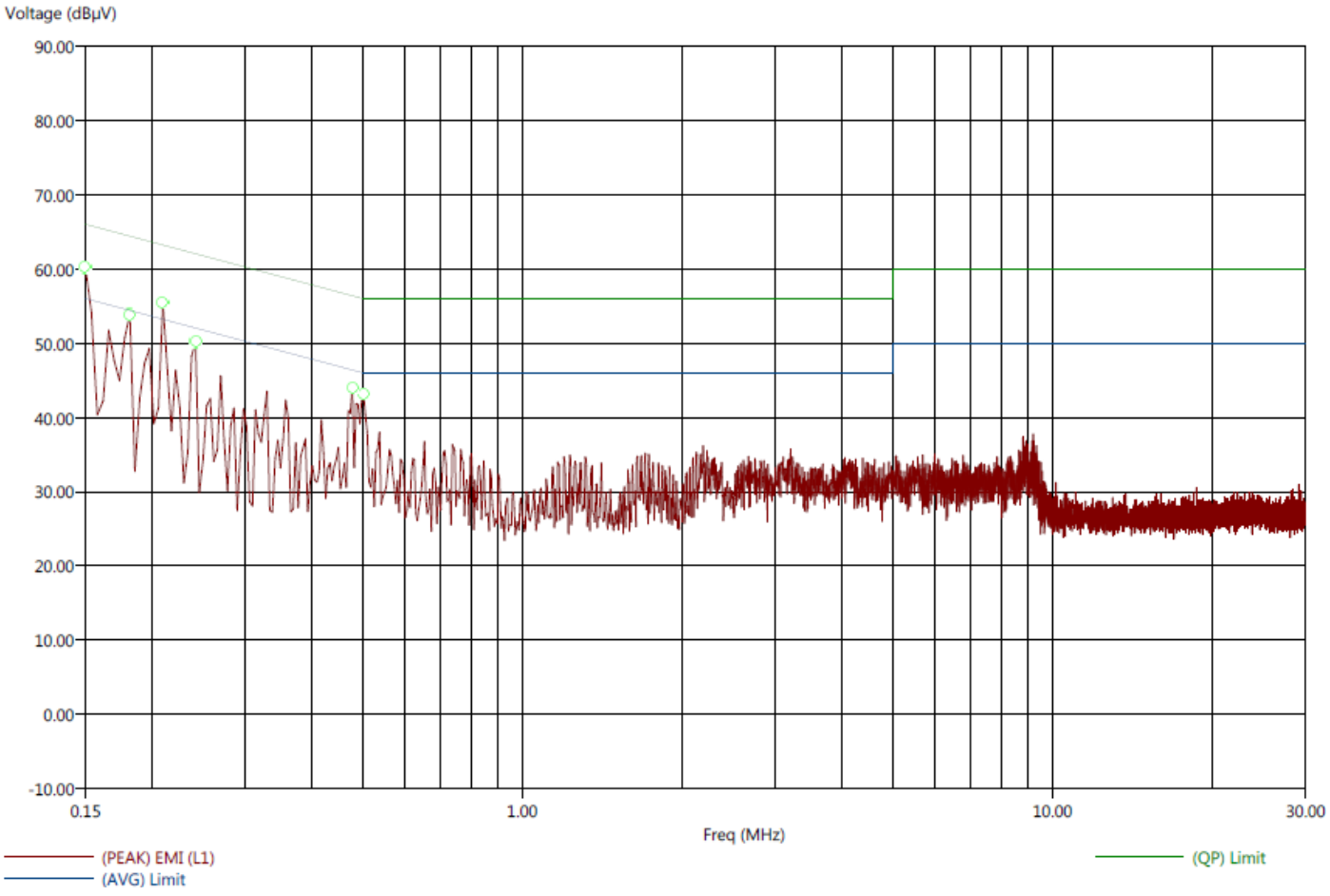
CONDUCTED EMISSIONS
AC POWERED

DATA SHEETS

Title: FCC 15.207 Class B
File: Conducted Pre-Line.set
Operator: Matt Harrison
EUT Type: CB529A With Cable, Connected to PSU
EUT Condition: Continuously Transmitting 303MHz
Comments: Witness: Greg
Temp: 66f
Hum: 30%
120V 60Hz

3/20/2012 5:01:20 PM
Sequence: Preliminary Scan

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



Title: FCC 15.207 Class B
File: Conducted Final-Line.set
Operator: Matt Harrison
EUT Type: CB529A With Cable, Connected to PSU
EUT Condition: Continuously Transmitting 303MHz
Comments: Witness: Greg
Temp: 66f
Hum: 30%
120V 60Hz

3/20/2012 5:03:47 PM
Sequence: Final Measurements

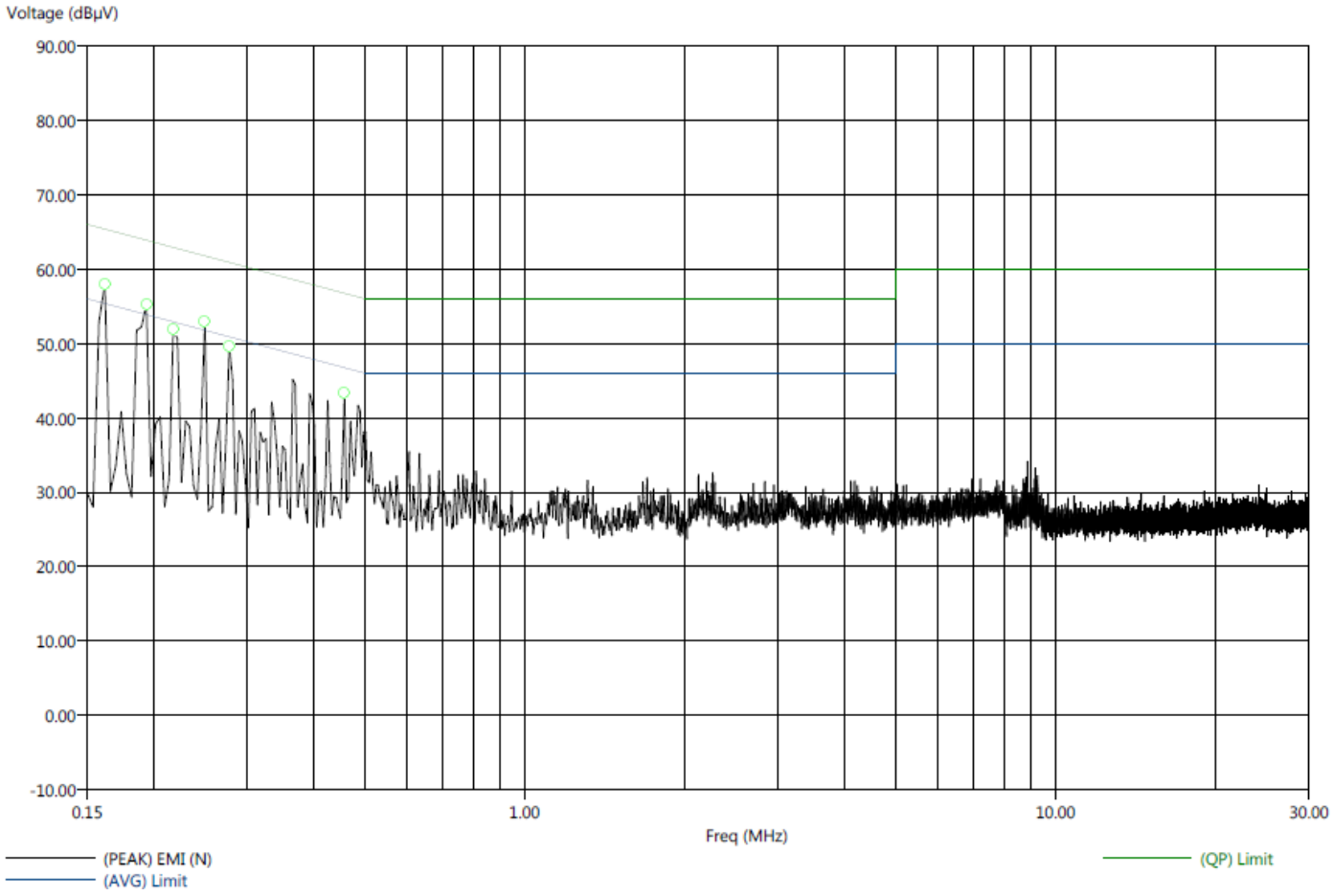
Compatible Electronics, Inc. FAC- 3 (LAB R)

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)
0.15	-31.17	-18.66	24.83	47.34	58.53	56.00	66.00	0.12	0.00
0.18	-28.69	-20.25	25.71	44.14	59.23	54.39	64.39	0.10	0.00
0.21	-27.76	-20.84	25.44	42.37	52.32	53.21	63.21	0.09	0.00
0.24	-30.34	-21.45	21.68	40.57	50.91	52.03	62.03	0.08	0.00
0.48	-20.63	-18.22	25.75	38.16	48.06	46.37	56.37	0.05	0.00
0.50	-20.73	-17.25	25.27	38.75	43.60	46.00	56.00	0.05	0.00

Title: FCC 15.207 Class B
File: Conducted Pre-Neutral.set
Operator: Matt Harrison
EUT Type: CB529A With Cable, Connected to PSU
EUT Condition: Continuously Transmitting 303MHz
Comments: Witness: Greg
Temp: 66f
Hum: 30%
120V 60Hz

3/20/2012 5:06:08 PM
Sequence: Preliminary Scan

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



Title: FCC 15.207 Class B
File: Conducted Final-Neutral.set
Operator: Matt Harrison
EUT Type: CB529A With Cable, Connected to PSU
EUT Condition: Continuously Transmitting 303MHz
Comments: Witness: Greg
Temp: 66f
Hum: 30%
120V 60Hz

3/20/2012 5:08:34 PM
Sequence: Final Measurements

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

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)
0.16	-33.16	-17.91	22.21	47.45	59.86	55.36	65.36	0.12	0.00
0.19	-31.14	-17.92	22.73	45.94	57.38	53.86	63.86	0.10	0.00
0.22	-32.02	-20.36	20.87	42.54	56.83	52.89	62.89	0.09	0.00
0.25	-33.41	-21.81	18.35	39.95	52.65	51.76	61.76	0.08	0.00
0.28	-33.57	-21.90	17.31	38.98	52.91	50.88	60.88	0.07	0.00
0.46	-32.34	-26.58	14.38	30.15	43.96	46.73	56.73	0.05	0.00

-20 dB BAND WIDTH

DATA SHEETS

-20 dB BAND WIDTH

FCC 15.231

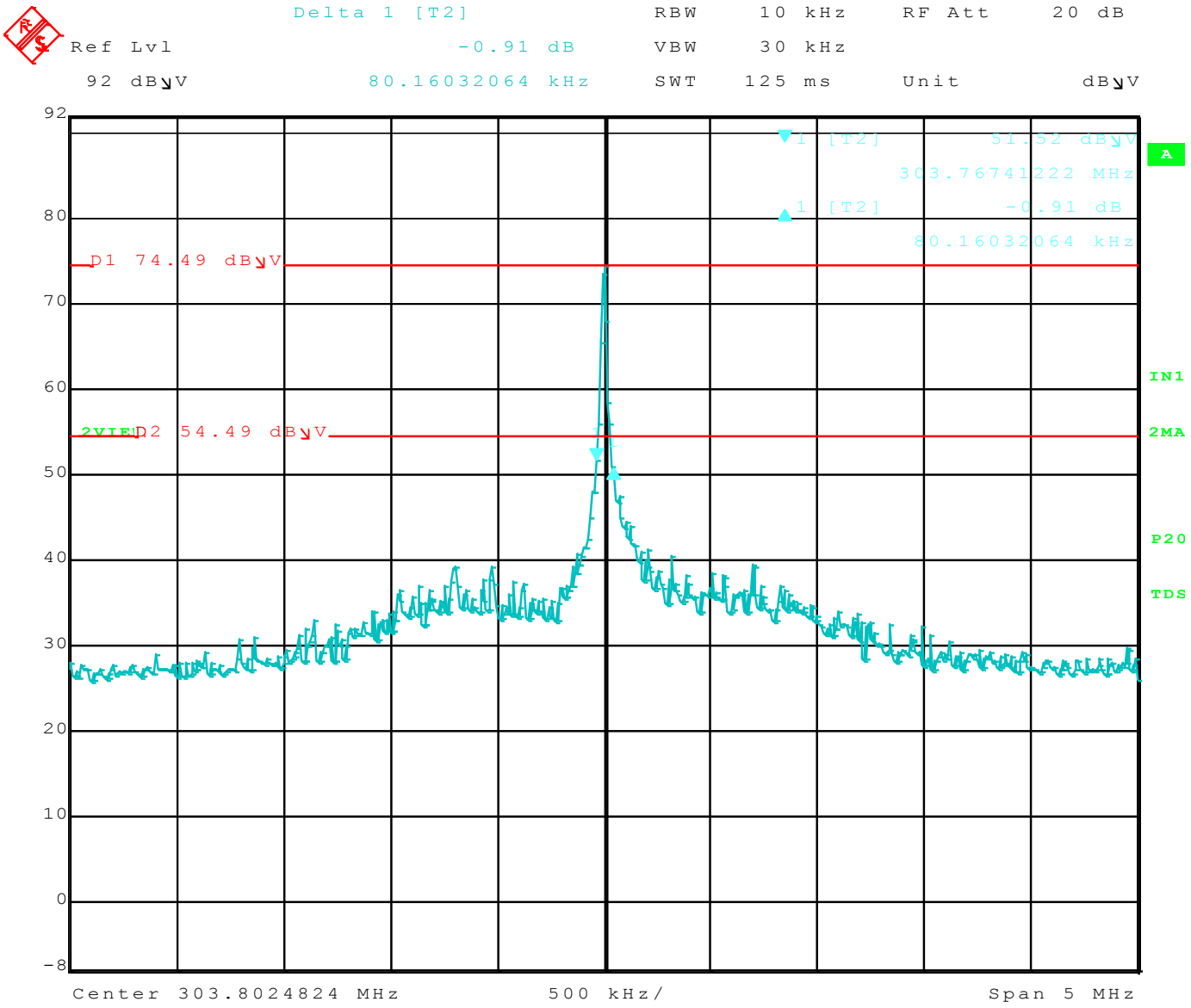
Indyme
Periodic Operation Device
Model: CB529A

Date: 03/20/12
Lab: R
Tested By: Matt Harrison

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

Freq. (MHz)	Bandwidth (kHz)	Limit (kHz)	Margin (kHz)	Comments
303.8	80.16	759.53	-679.37	

-20 dB Occupied Bandwidth Plot

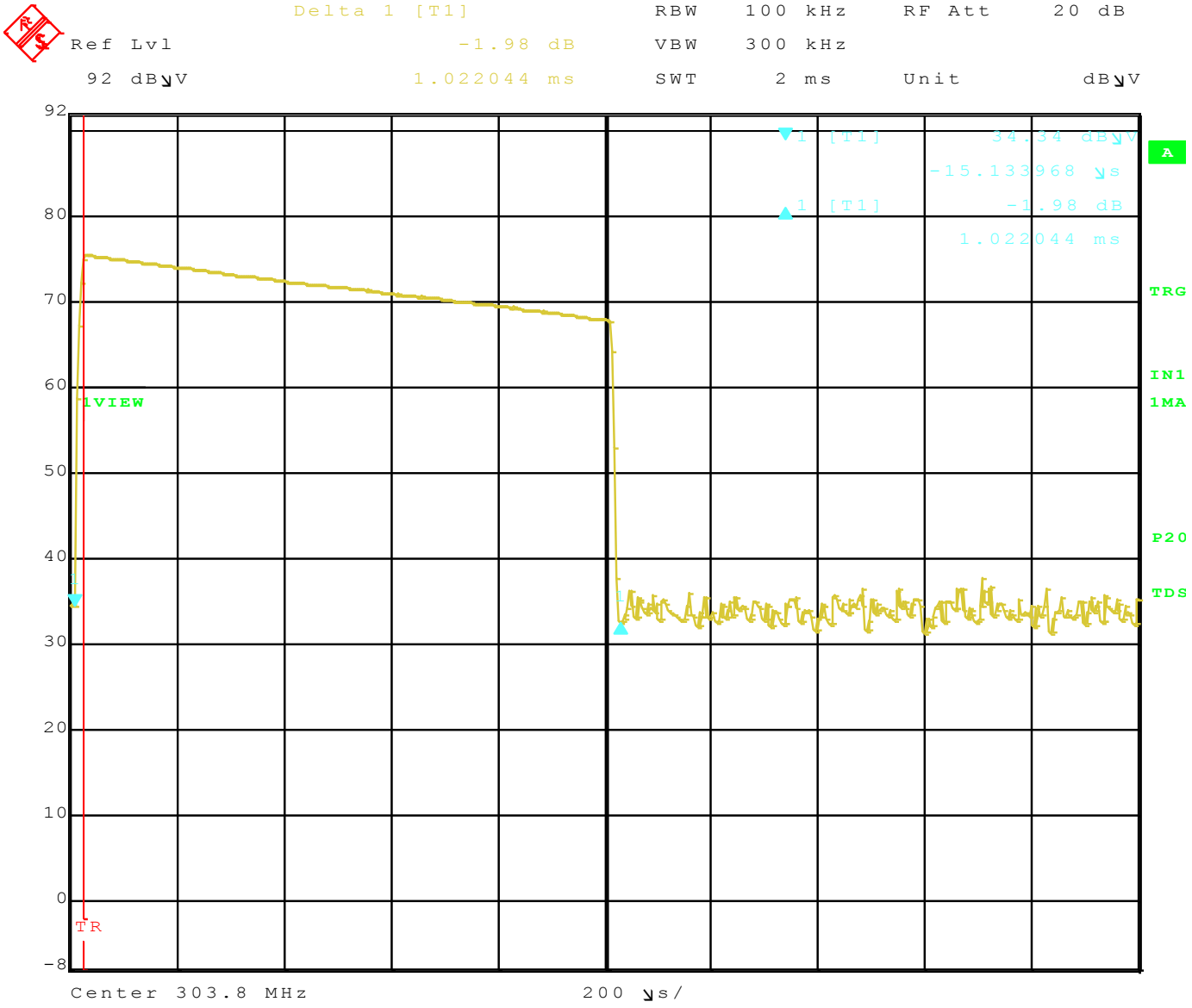


Title: Indyme 529a SN1
Comment A: 20dB Bandwidth
Date: 20.MAR.2012 08:16:28

DUTY CYCLE

DATA SHEETS

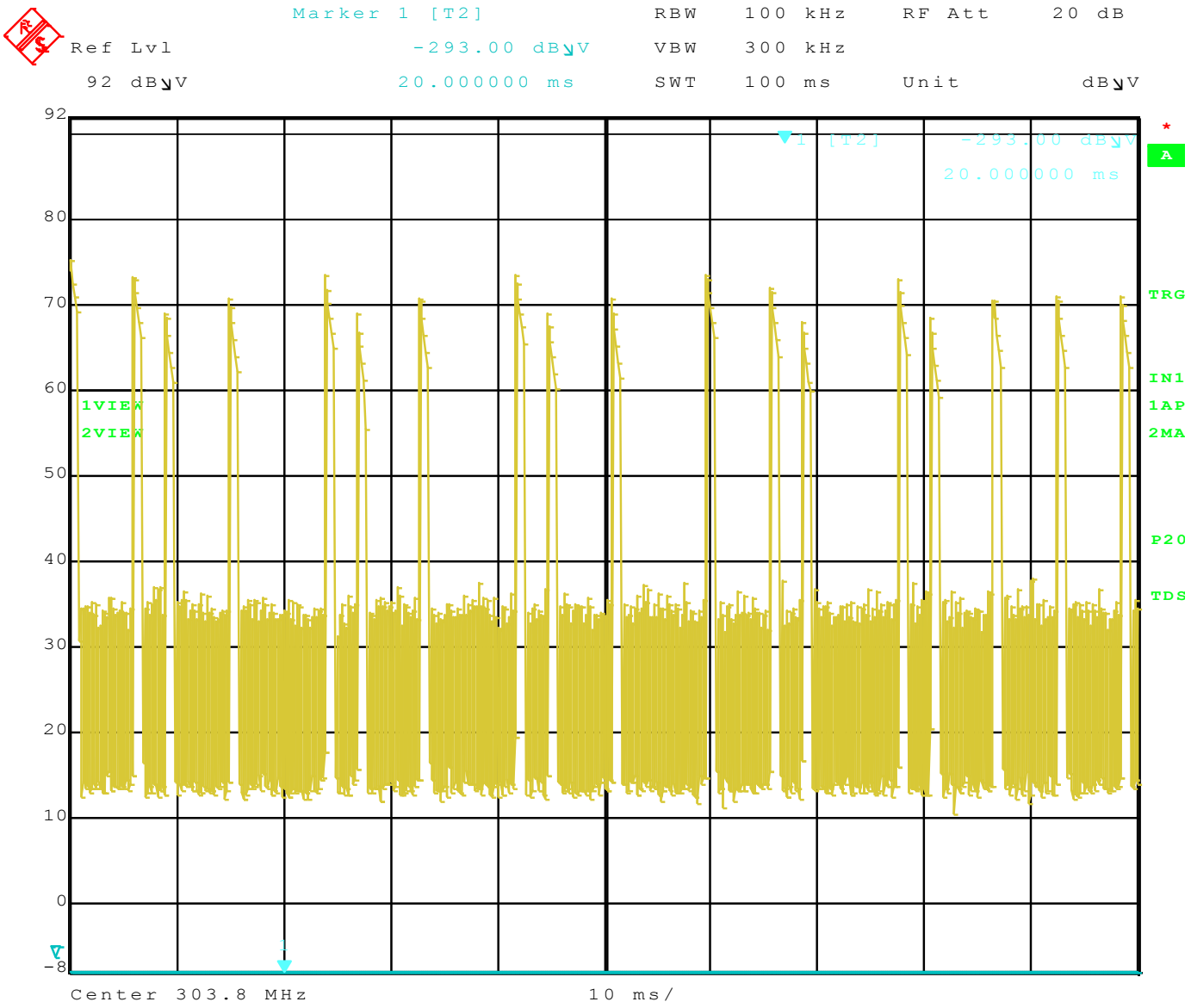
Pulse Duration Time



Title: Indyme 529a SN1
Comment A: Time of Occupancy
Date: 20.MAR.2012 08:29:56

Time of Pulse = 1.022044 mS

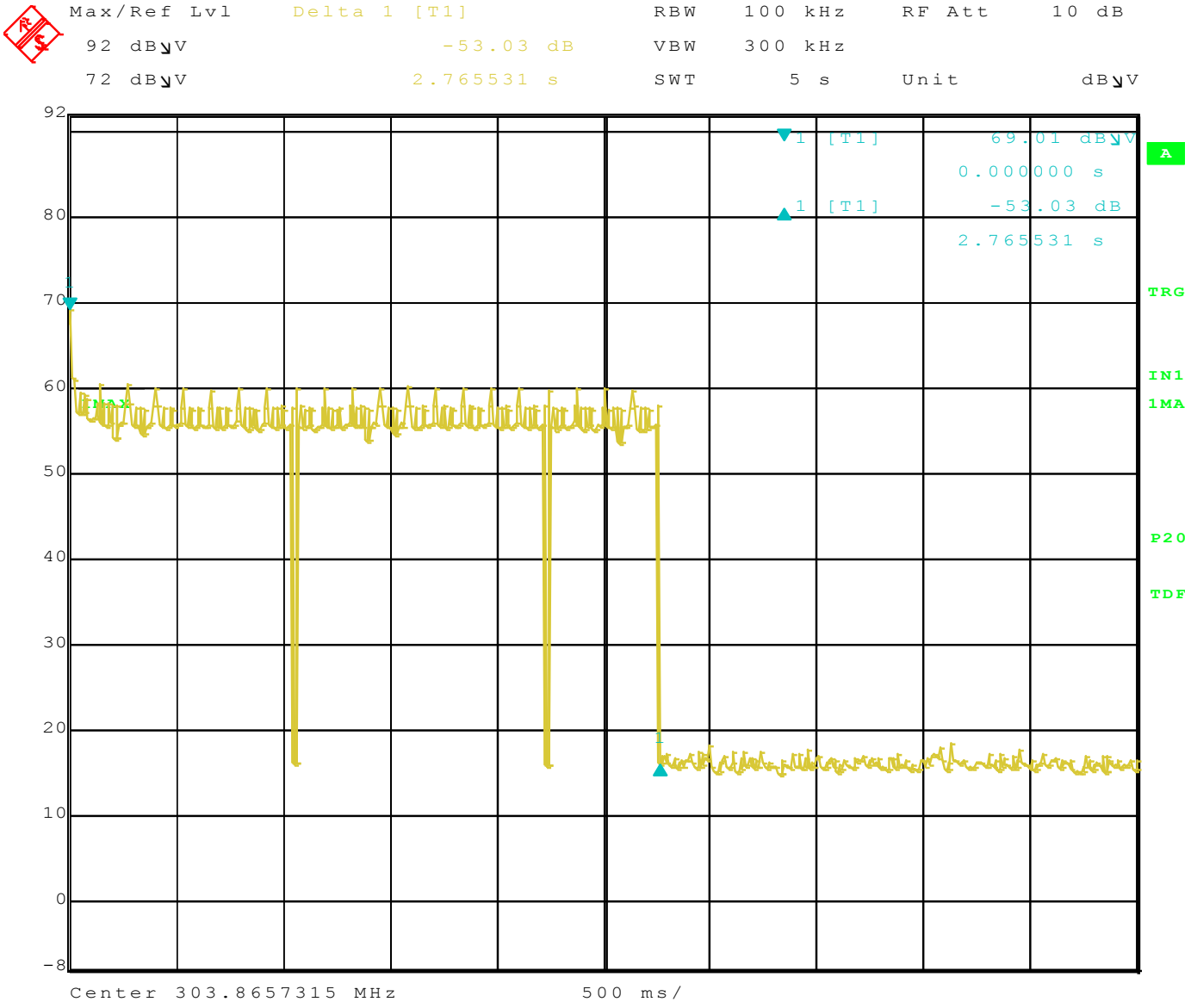
Number of Pulses



Title: Indyme 529a SN1
Comment A: Number of Pulses
Date: 20.MAR.2012 08:27:29

Number of Pulses in Worst Case 100 mS = 18
Duty Cycle = 1.022044 mS*18 = 18.396792 mS = 18.39%
The Peak to Average Duty Cycle Correction = 14.705

Transmit Time



Title: Indyme CB529a
Comment A: Transmit Time Out
Date: 3.APR.2012 09:53:29

Transmit Time = 2.765531 S