47 CFR PART 15 C

TEST REPORT

of

RFID Reader

Brand Name:	Convergence Systems Limited
Model Name:	CS468-2
Report No.:	SZ10080004E01
FCC ID.:	UB4CS468C1GEN2

prepared for

Convergence Systems Limited
20/F chung Nam Building, 1 Lockhart Road, Wanchai, Hong Kong

prepared by

Shenzhen Morlab Communications Technology Co., Ltd.
Morlab Laboratory
3/F, Electronic Testing Building, Shahe Road, Xili,
Nanshan District, Shenzhen, 518055 P. R. China
Tel: +86 755 86130398
Fax: +86 755 86130218

TABLE OF CONTENTS

Change History		
Issue	Date	Reason for change
1.0	October 21, 2010	First edition

1. TEST CERTIFICATION

Equipment under Test:	RFID Reader
Brand Name:	Convergence Systems Limited
Model Name:	CS468-2
FCC ID:	UB4CS468C1GEN2
Applicant:	Convergence Systems Limited 20/F chung Nam Building, 1 Lockhart Road, Wanchai, Hong Kong
Manufacturer:	Nam Tai Electronic(Shenzhen) Lo. Ltd No.38 Luogang Road, Luogang Industrial Zone, Bu Ji, Shen Zhen, China
Test Standards:	47 CFR Part 15 Subpart C
Test Date(s):	August 06, 2010 - October 13, 2010
Test Result:	PASS

*** We Hereby Certify That:**

The equipment under test was tested by Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory. The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the requirement of related FCC rules.

The test results of this report only apply for the tested sample equipment identified above. The test report shall be invalid without all the signatures of the test engineer, the reviewer and the approver.

Tested by: Ni Yong Dated: 2010.10.21
Ni Yong

Reviewed by: Wei Yanquan Dated: 2010.10.21
Wei Yanquan

Approved by: Shu Luan Dated: 2010.10.21
Shu Luan

2. GENERAL INFORMATION

2.1 EUT Description

EUT Type ..... : RFID Reader
Model Name..... : CS468-2
Serial No. ..... : (n.a, marked #1 by test site)
Hardware Version..... : V1.0
Software Version ..... : V1.0
Modulation Type ..... : Frequency Hopping Spread Spectrum (FHSS)
Data Type ..... : DSB-ASK, PR-ASK
Frequency..... : The frequency range used is 902MHz - 928MHz (50 channels, at intervals of 500KHz)
Option Power Supply A ..... : AC Adapter
Model Name: YS04-120250U/J
Serial No.: (n.a. marked #1 by test site)
Rated Input: ~ 100-240V, 1.0A Max, 50/60Hz
Rated Output: ⎓ 12V, 2500mA
Option Power Supply B ..... : POE

EUT specification and Test Model:

Profile*	0	1	2	3	4	5
R-T Modulation	DSB-ASK	DSB-ASK	PR-ASK	PR-ASK	DSB-ASK	PR-ASK
Tari (μs)	25.00	12.50	25.00	25.00	6.25	25.00
R-T speed (kbps)	40	80	40	40	160	40
PIE	2:1	2:1	1.5:1	1.5:1	1.5:1	1.5:1
Pulse Width (uS)	12.50	6.25	12.50	12.50	3.13	12.50
T-R LF (kbps)	40	160	250	300	400	250
T-R Modulation	FM0	Miller-2	Miller-4	Miller-4	FM0	Miller-2
Divide Ratio	8	8	64/3	64/3	8	64/3
T-R Data Rate (kbps)	40	80	62.5	75	400	125
*: We just tested Profile 1, profile 2 and profile 4 for the different data mode in this report.						

Remark:

Note 1: The EUT is a RFID Fixed Reader, it contains Radio Module operating at 900MHz ISM band; the frequencies allocated for the Radio Module is F(MHz)=902.25+0.5*n (1<=n<=50). The lowest, middle, highest channel numbers of the Radio Module used and tested in this report are separately 1 (902.75MHz), 26 (915.25MHz) and 50 (927.25MHz).

Note 2: The EUT can powered by AC adapter or POE separately, so we test two power mode for Radiated Emission in this report.

Note 3: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

2.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart C (900 MHz ISM Band Frequency Hopping Spread Spectrum Transmitter) for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15 (10-1-09 Edition)	Radio Frequency Devices

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	15.247(a)	Number of Hopping Frequency	PASS
2	15.247(b)	Peak Output Power	PASS
3	15.247(a)	20dB Bandwidth	PASS
4	15.247(a)	Carrier Frequency Separation	PASS
5	15.247(a)	Time of Occupancy (Dwell time)	PASS
6	15.247(c)	Conducted Spurious Emission	PASS
7	15.247(c)	Band Edge	PASS
8	15.207	Conducted Emission	PASS
9	15.209 15.247(c)	Radiated Emission	PASS

2.3 Facilities and Accreditations

2.3.1 Facilities

Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L3572.

All measurement facilities used to collect the measurement data are located at 3/F, Electronic Testing Building, Shahe Road, Xili, Nanshan District, Shenzhen, 518055 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22; the FCC registration number is 741109.

2.3.2 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (℃):	15 - 35
Relative Humidity (%):	30 -60
Atmospheric Pressure (kPa):	86-106

3. 47 CFR PART 15C REQUIREMENTS

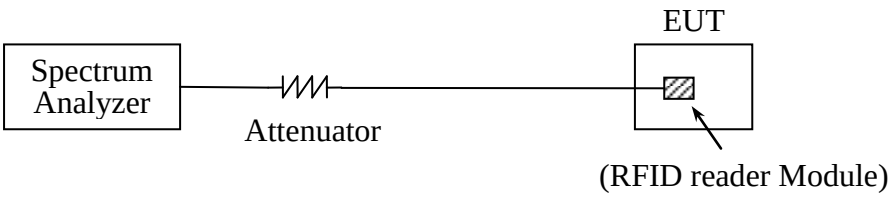
3.1 Number of Hopping Frequency

3.1.1 Requirement

According to FCC section 15.247(a)(1)(i), frequency hopping systems operating in the 902MHz to 928MHz bands shall use at least 50 hopping frequencies if the 20dB bandwidth of the hopping channel is less than 250KHz; or at least 25 hopping frequencies if the 20dB bandwidth of the hopping channel is 250KHz or greater.

3.1.2 Test Description

A. Test Setup:



The RFID Reader Module of the EUT, which is powered by the AC adapter, is coupled to the Spectrum Analyzer (SA) with Attenuators the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. During the measurement, the RFID Reader Module of the EUT is activated by the PC via Lan port, and is set to operate under hopping mode transmitting.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	Agilent	E7405A	US44210471	2009.09	2year
Attenuator	Resnet	3dB	(n.a.)	(n.a.)	(n.a.)

3.1.3 Test Result

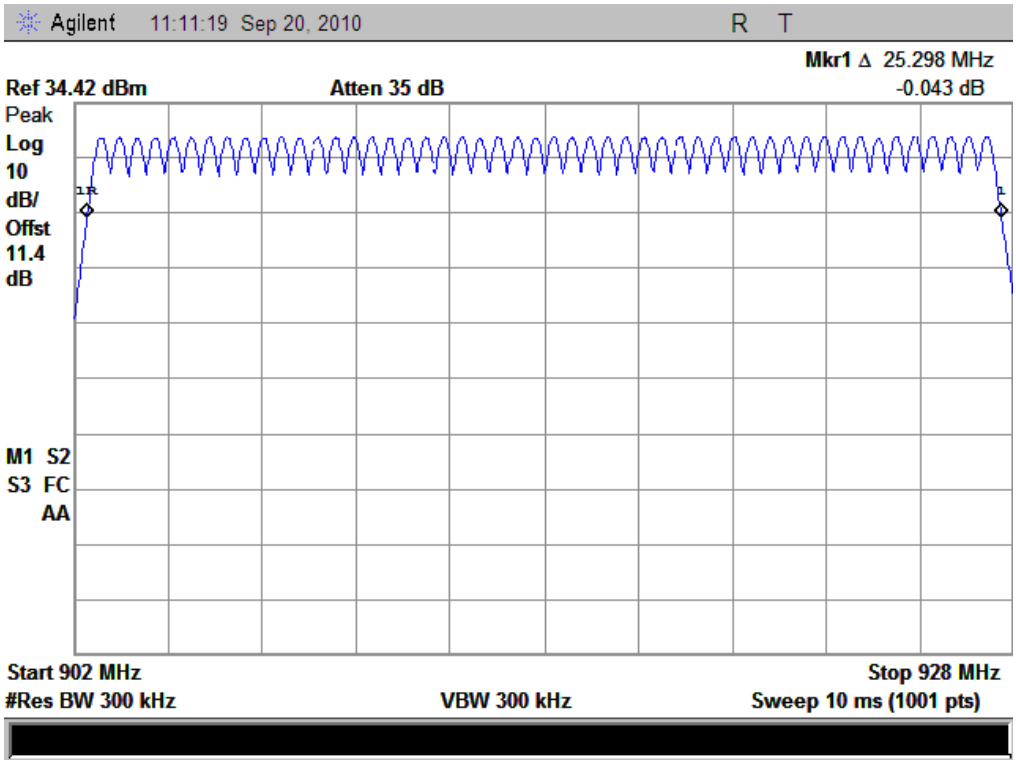
The RFID Reader Module operates at hopping-on test mode; the frequencies number employed is counted to verify the Module's using the number of hopping frequency.

A. Test Verdict:

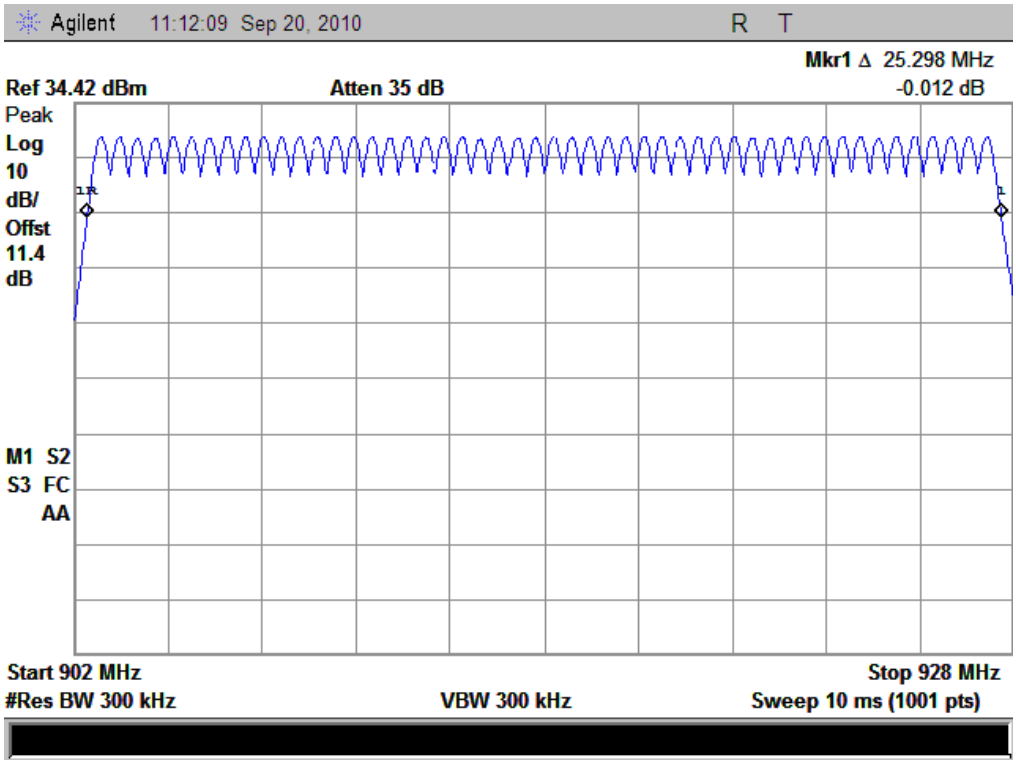
Note: for the 20dB band width please refer to section 3.3 in this report.

Profile	Frequency Block (MHz)	Measured Channel Numbers	20dB BandWidth	Min. Limit	Refer to Plot	Verdict
1	902 - 928	50	25.298MHz	50	Plot A	PASS
2	902 - 928	50	25.298MHz	50	Plot B	PASS
4	902 - 928	50	25.298MHz	25	Plot C	PASS

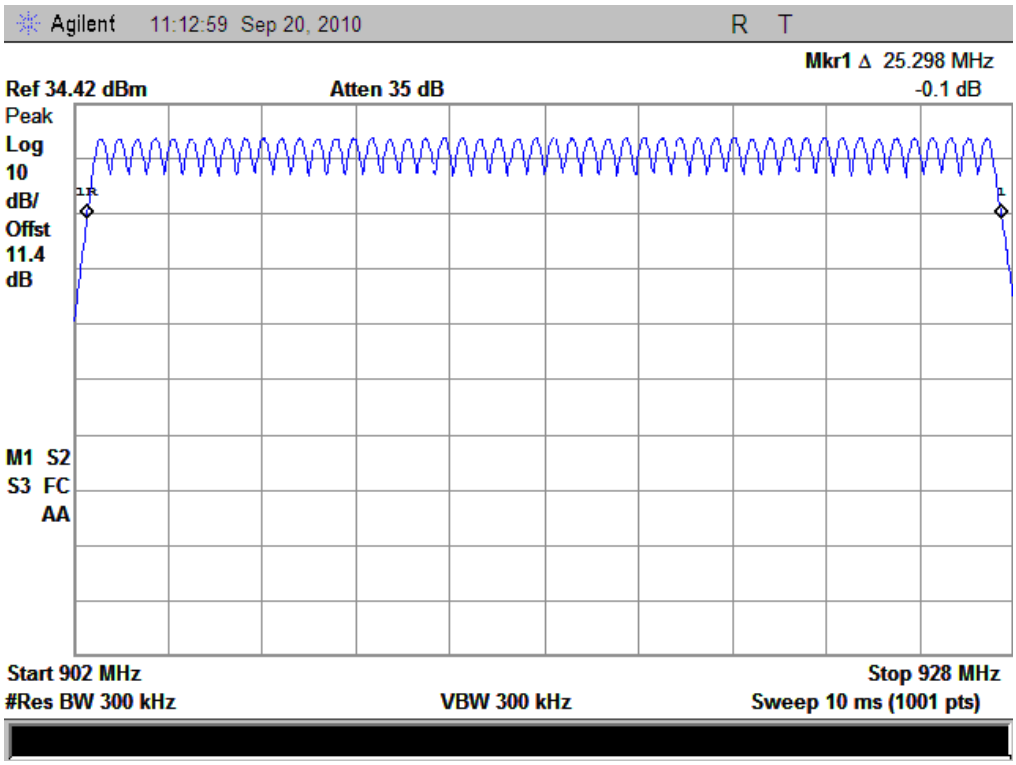
B. Test Plot:



(Plot A: Profile 1 902MHz to 928MHz)



(Plot B: Profile 2 902MHz to 928MHz)



(Plot C: Profile 3 902MHz to 928MHz)

3.2 Peak Output Power

3.2.1 Requirement

According to FCC section 15.247(b)(2), for frequency hopping systems that operates in the 902MHz to 928MHz band employing at least 10 hopping channels, the maximum peak output power of the intentional radiator shall not exceed 1Watt. and 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels.

3.2.2 Test Description

See section 3.1.2 of this report.

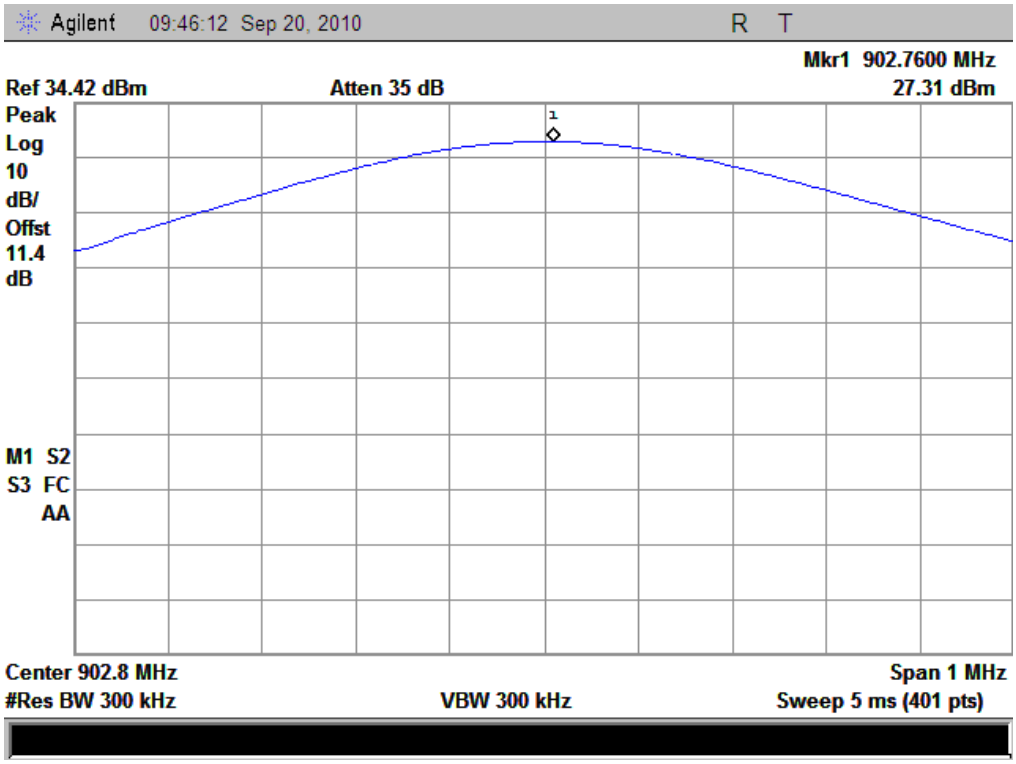
3.2.3 Test Result

The RFID Reader Module operates at hopping-off test mode. The lowest, middle and highest channels are selected to perform testing to verify the conducted RF output peak power of the Module.

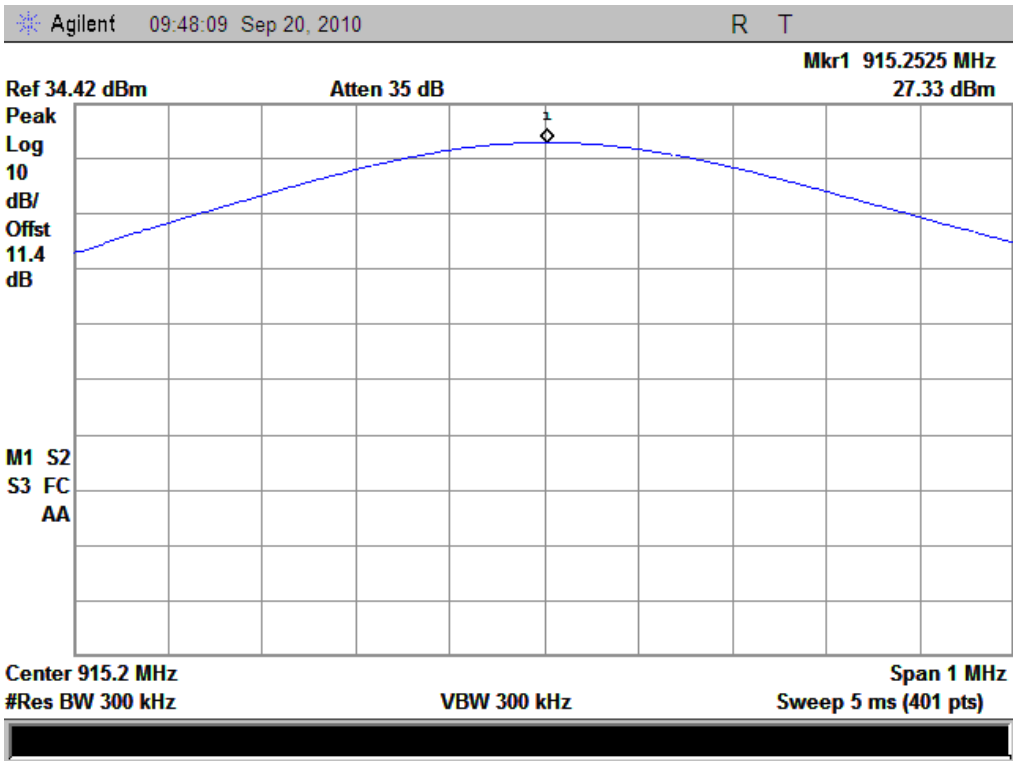
A. Test Verdict:

Profile	Channel	Frequency (MHz)	Measured Output Peak Power			Limit (W)	Verdict
			dBm	W	Refer to Plot		
1	1	902.75	27.31	0.54	Plot A	1	PASS
	26	915.25	27.33	0.54	Plot B		PASS
	50	927.25	27.47	0.56	Plot C		PASS
2	1	902.75	27.69	0.59	Plot D	1	PASS
	26	915.25	27.7	0.59	Plot E		PASS
	50	927.25	27.52	0.56	Plot F		PASS
4	1	902.75	27.78	0.60	Plot G	1	PASS
	26	915.25	27.47	0.56	Plot H		PASS
	50	927.25	27.5	0.56	Plot I		PASS

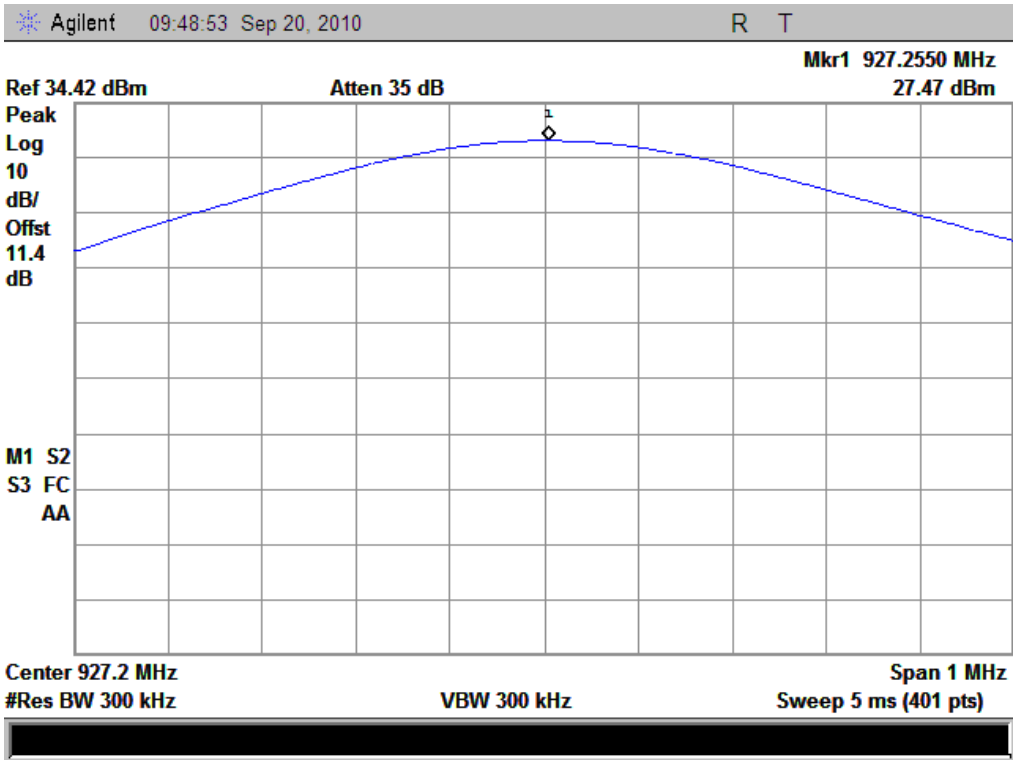
B. Test Plot:



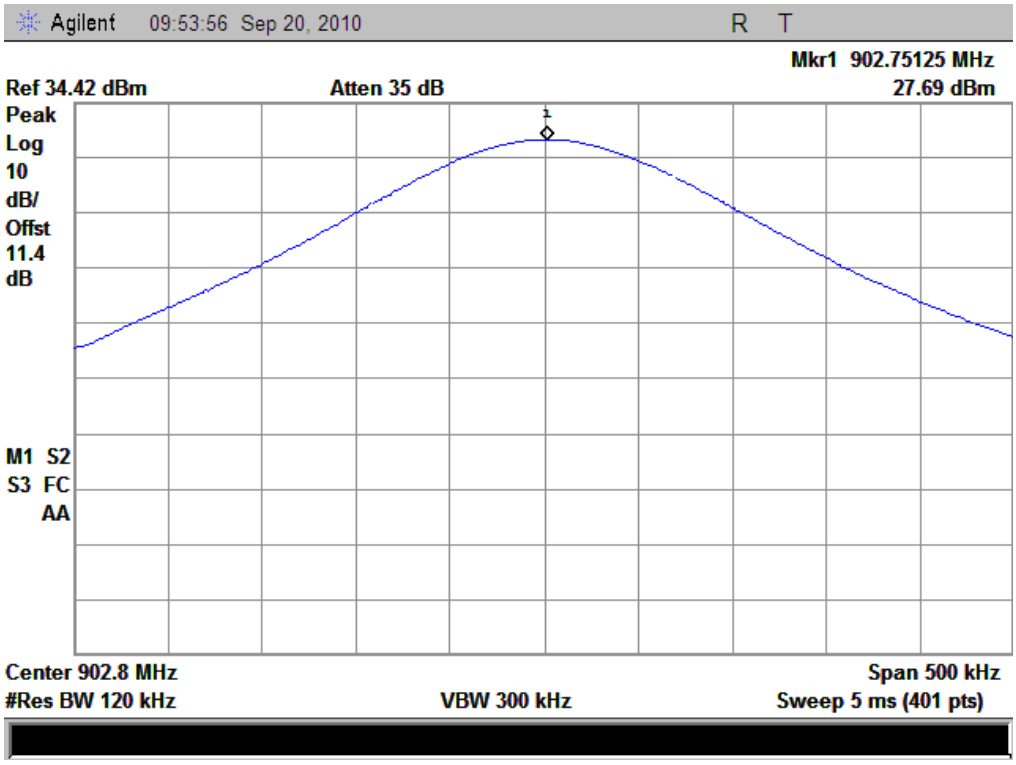
(Plot A: Profile 1 Channel = 1)



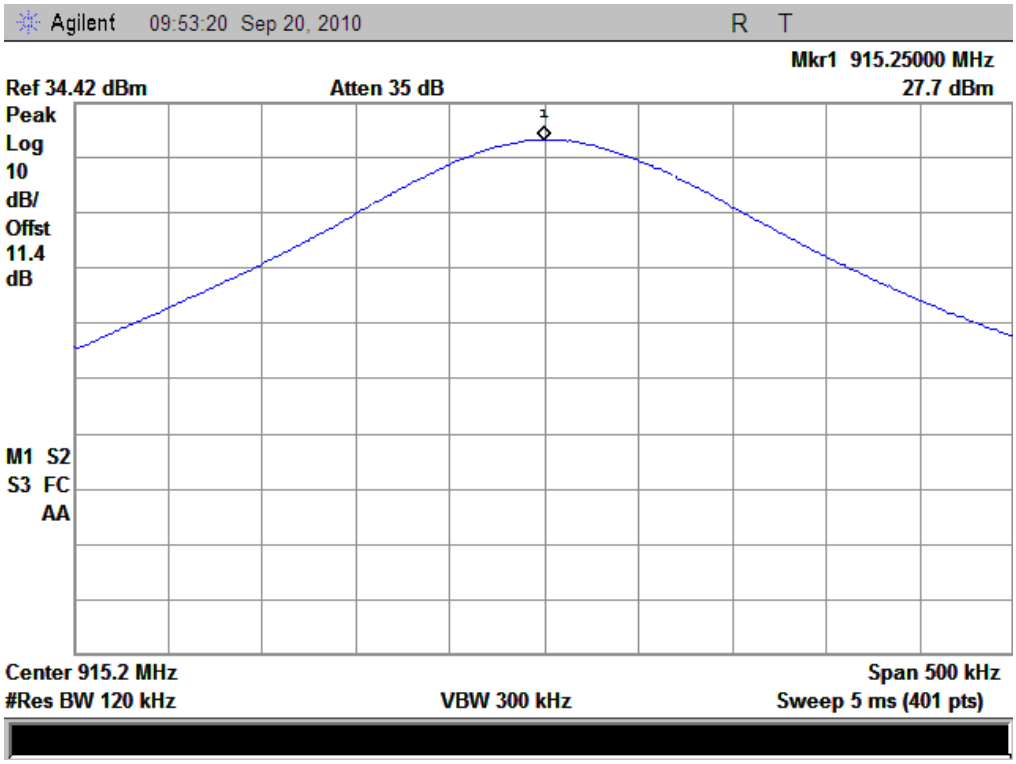
(Plot B: Profile 1 Channel = 26)



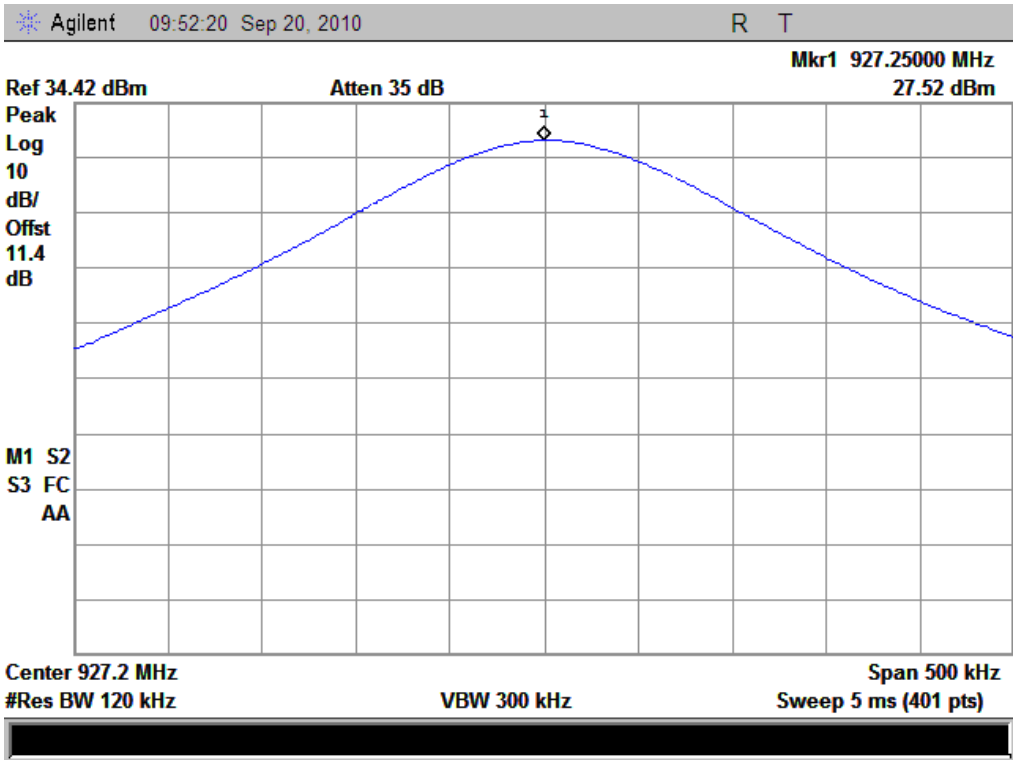
(Plot C: Profile 1 Channel = 50)



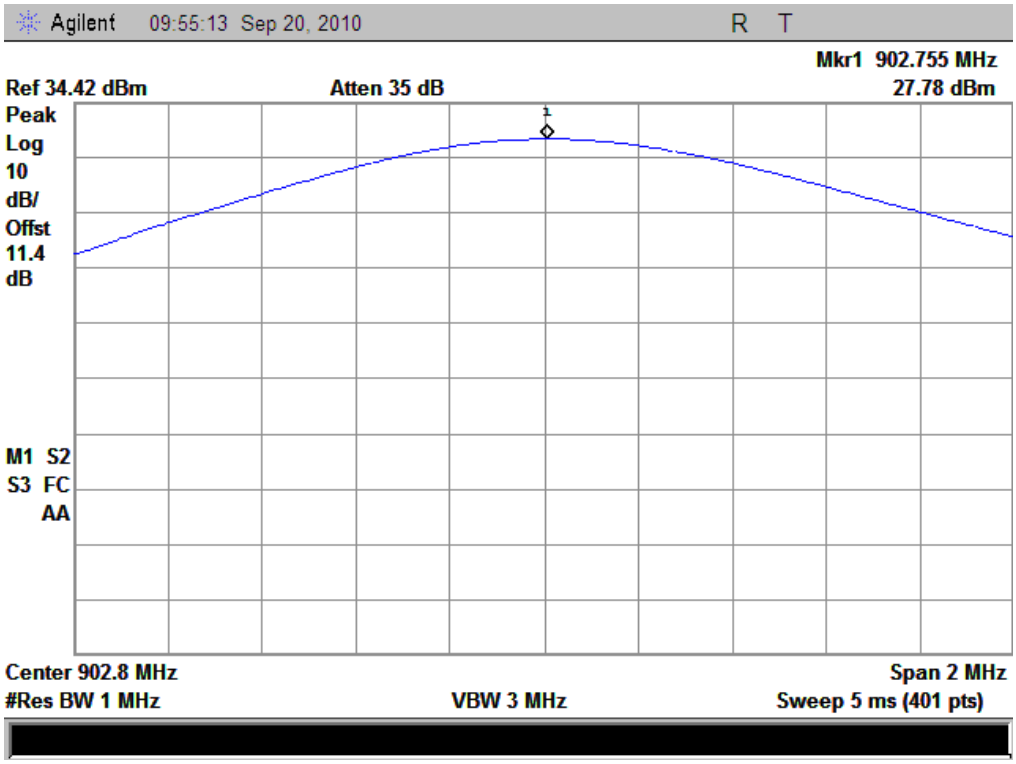
(Plot D: Profile 2 Channel = 1)



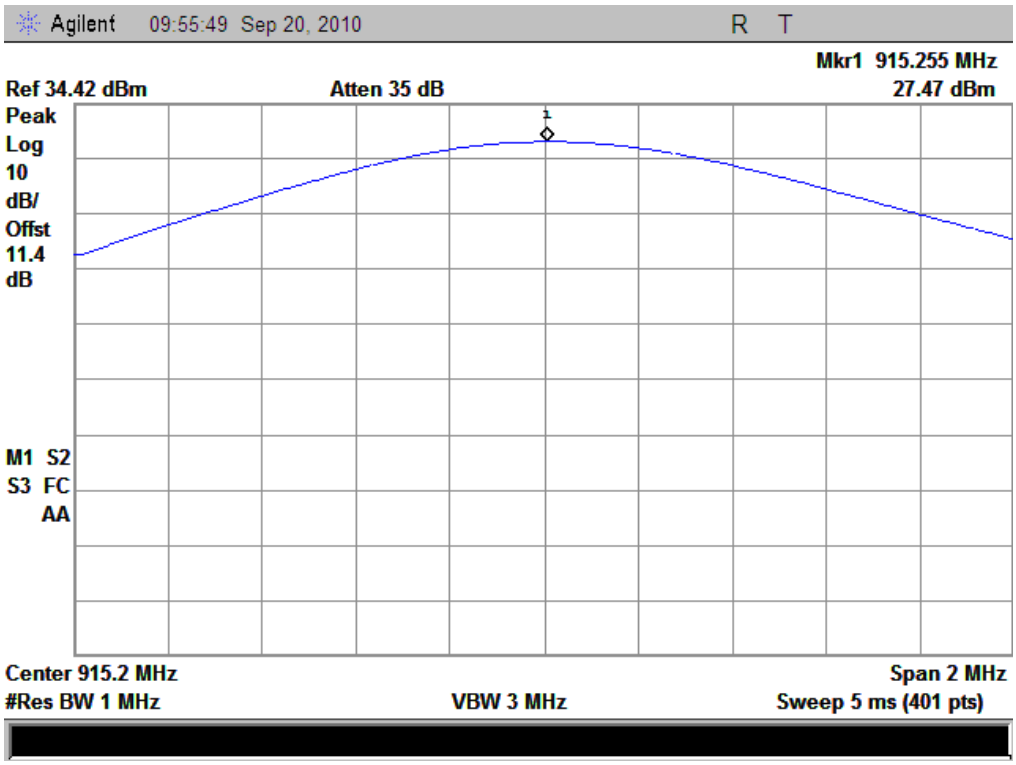
(Plot E: Profile 2 Channel = 26)



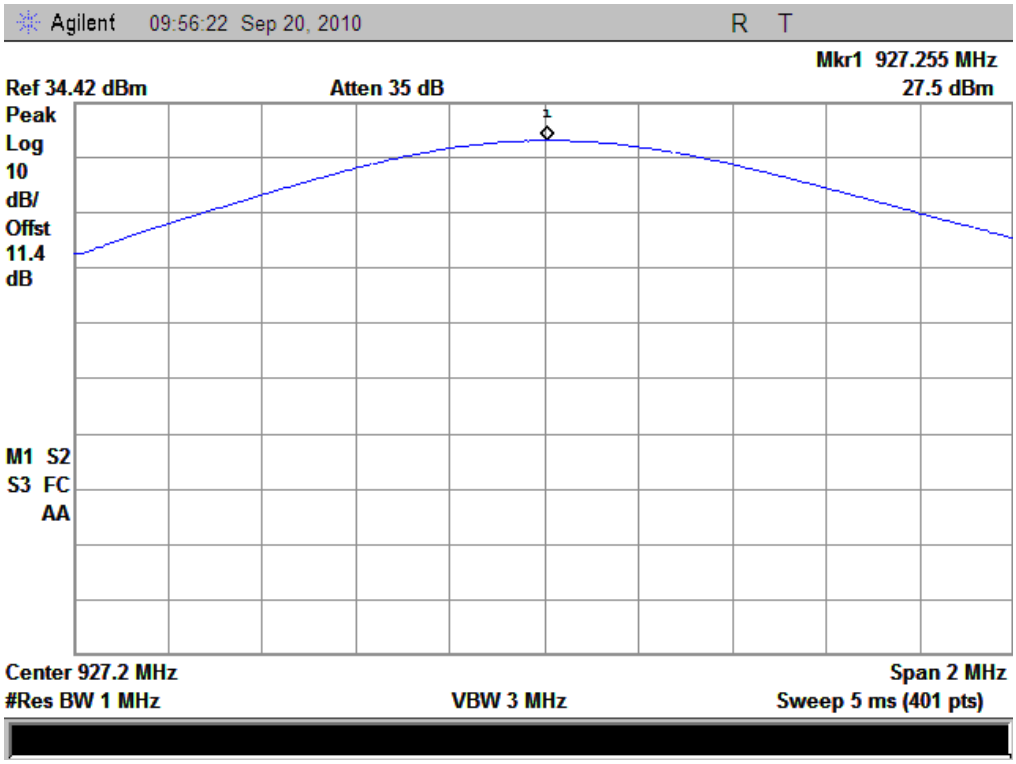
(Plot F: Profile 2 Channel = 50)



(Plot G: Profile 4 Channel = 1)



(Plot H: Profile 4Channel = 26)



(Plot I: Profile 4 Channel = 50)

3.3 20dB Bandwidth

3.3.1 Definition

The 20dB bandwidth should be tested with the RBW>= 1% of the 20dB bandwidth., and the span should be 2 to 3 times the 20dB bandwidth, centered on the channel.

3.3.2 Test Description

See section 3.1.2 of this report.

3.3.3 Test Result

The RFID Reader Module operates at hopping-off test mode. The lowest, middle and highest channels are selected to perform testing to record the 20dB bandwidth of the Module.

A. Test Verdict:

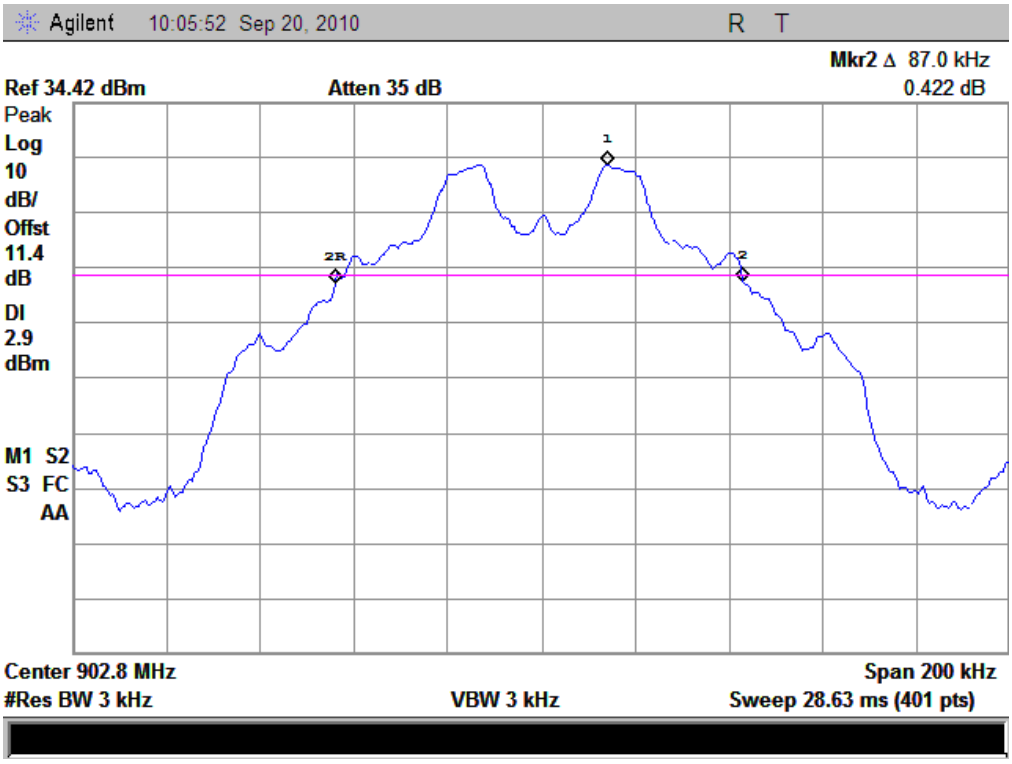
Profile	Channel	Frequency (MHz)	20dB Bandwidth (KHz)	Refer to Plot
1	1	902.75	168.75	Plot A
	26	915.25	167.50	Plot B
	50	927.25	168.75	Plot C
2	1	902.75	87.00	Plot D
	26	915.25	85.00	Plot E
	50	927.25	84.50	Plot F
4	1	902.75	425.00	Plot G
	26	915.25	430.00	Plot H
	50	927.25	377.50	Plot I

B. Test Plot:

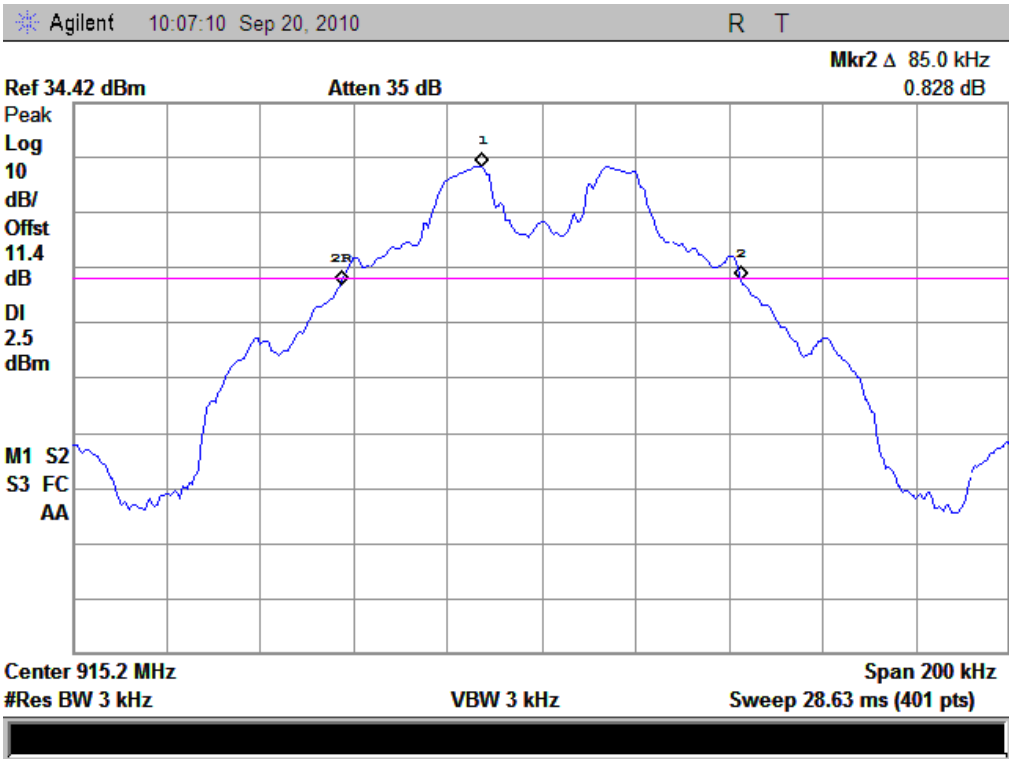
(Plot A: Profile 1 Channel = 1)

(Plot B: Profile 1 Channel = 26)

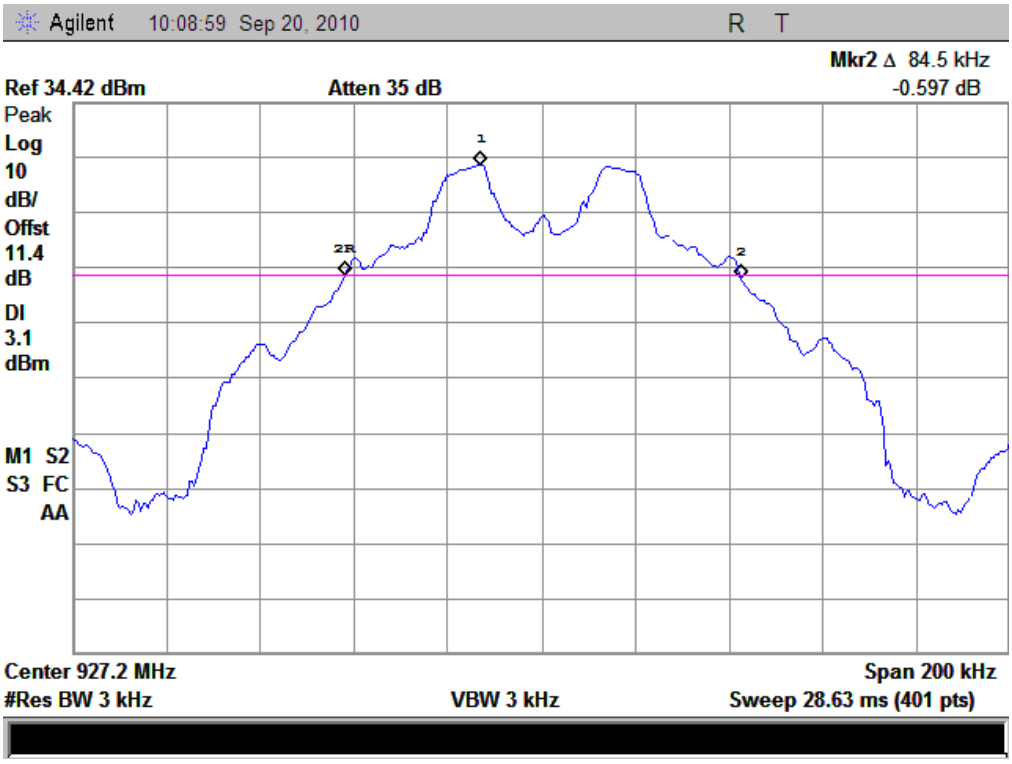
(Plot C: Profile 1 Channel = 50)



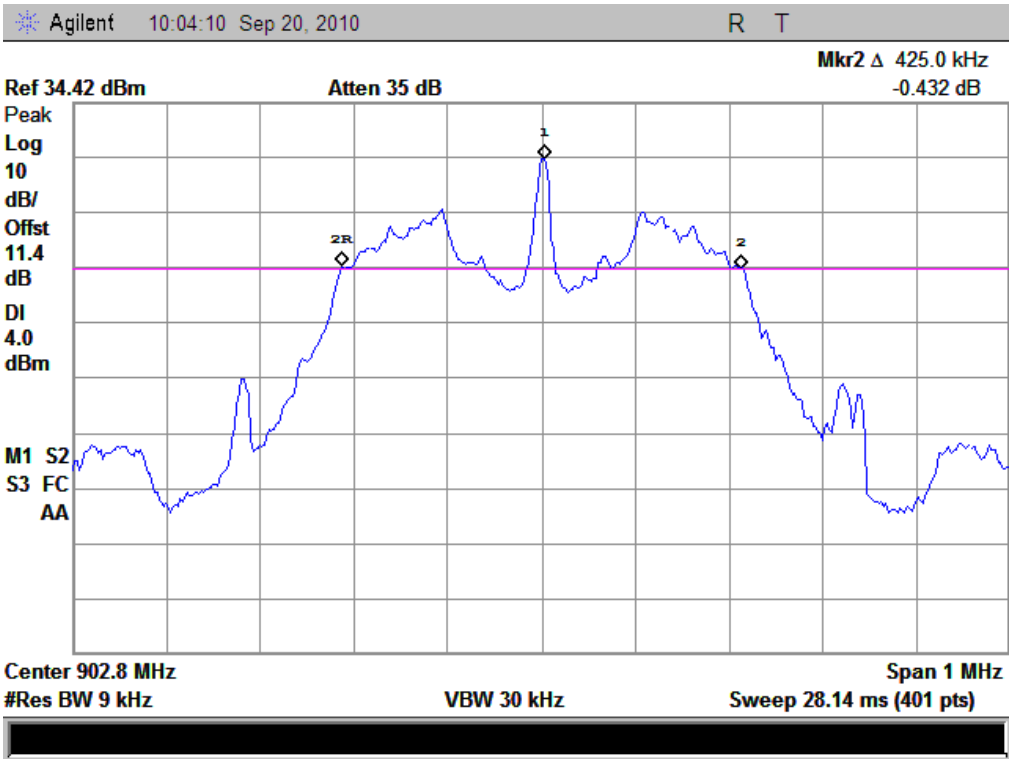
(Plot D: Profile 2 Channel = 1)



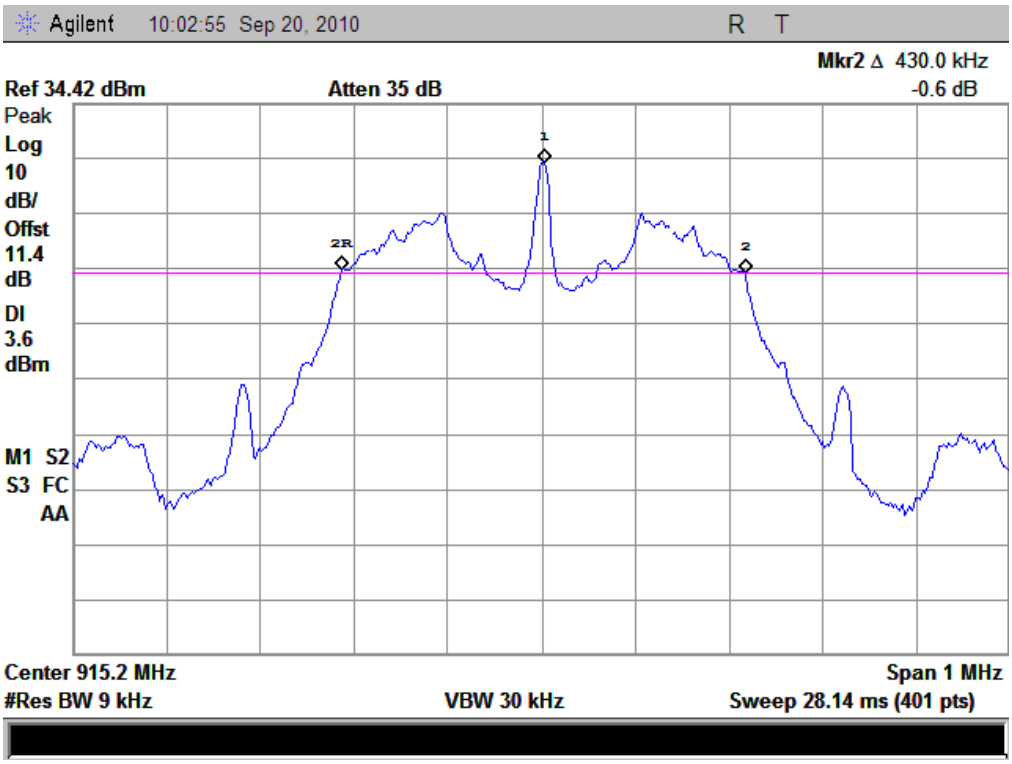
(Plot E: Profile 2 Channel = 26)



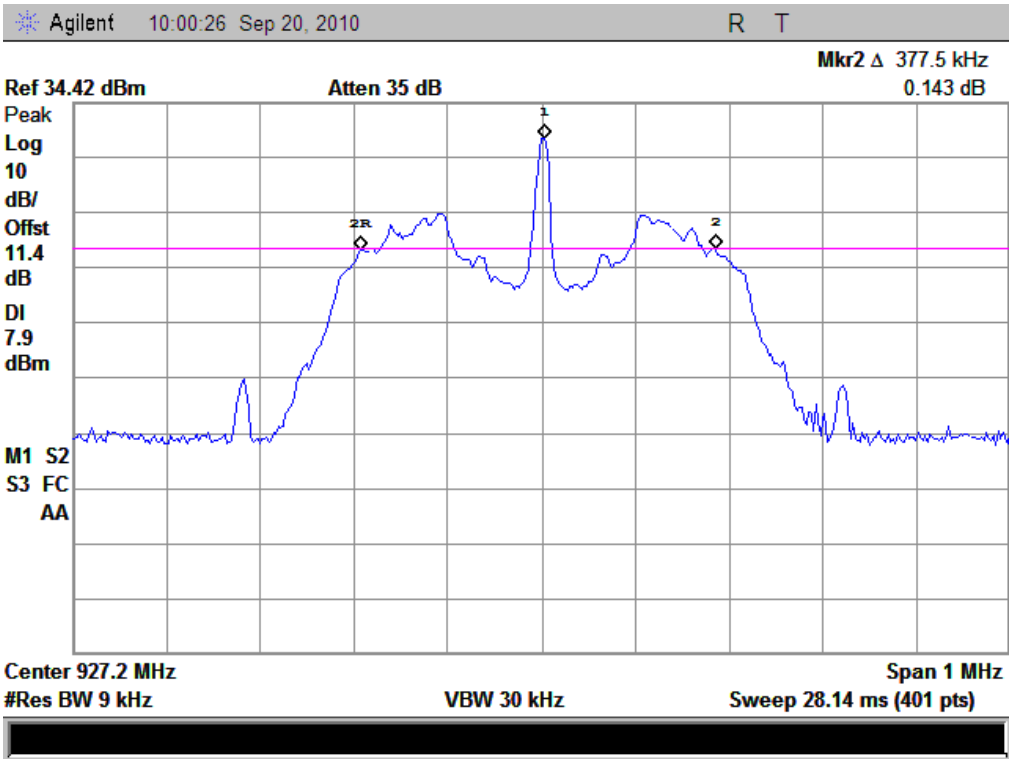
(Plot F: Profile 2 Channel = 50)



(Plot G: Profile 4 Channel = 1)



(Plot H: Profile 4Channel = 26)



(Plot I: Profile 4 Channel = 50)

3.4 Carried Frequency Separation

3.4.1 Definition

According to FCC section 15.247(a)(1), frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater.

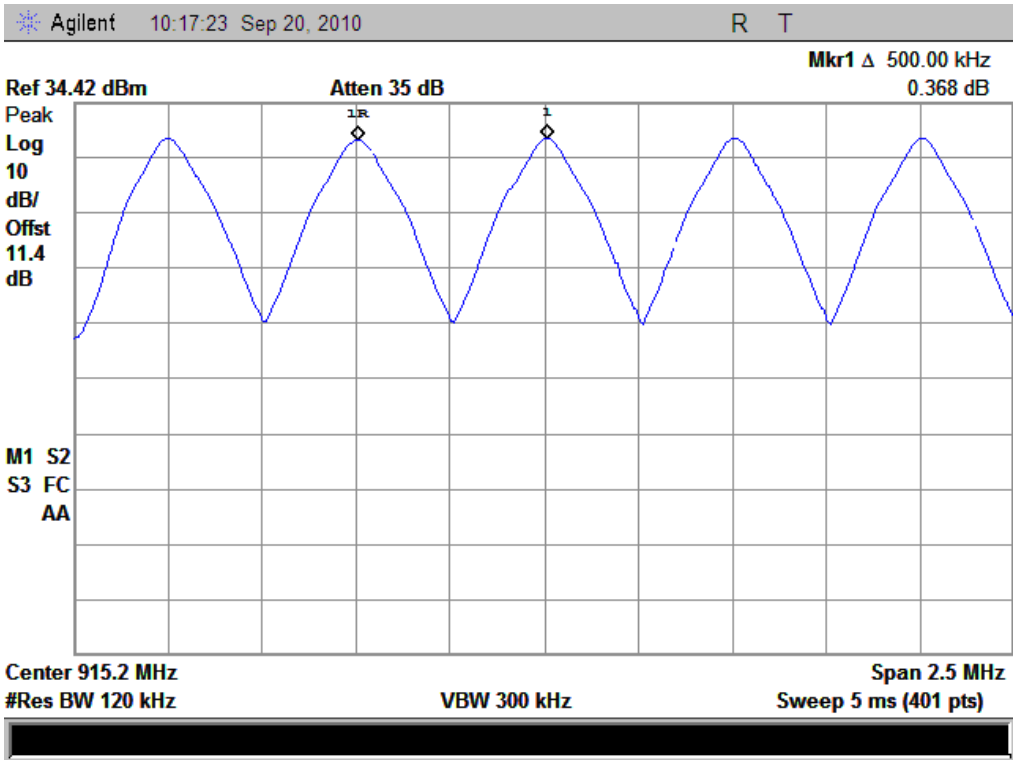
3.4.2 Test Description

See section 3.1.2 of this report.

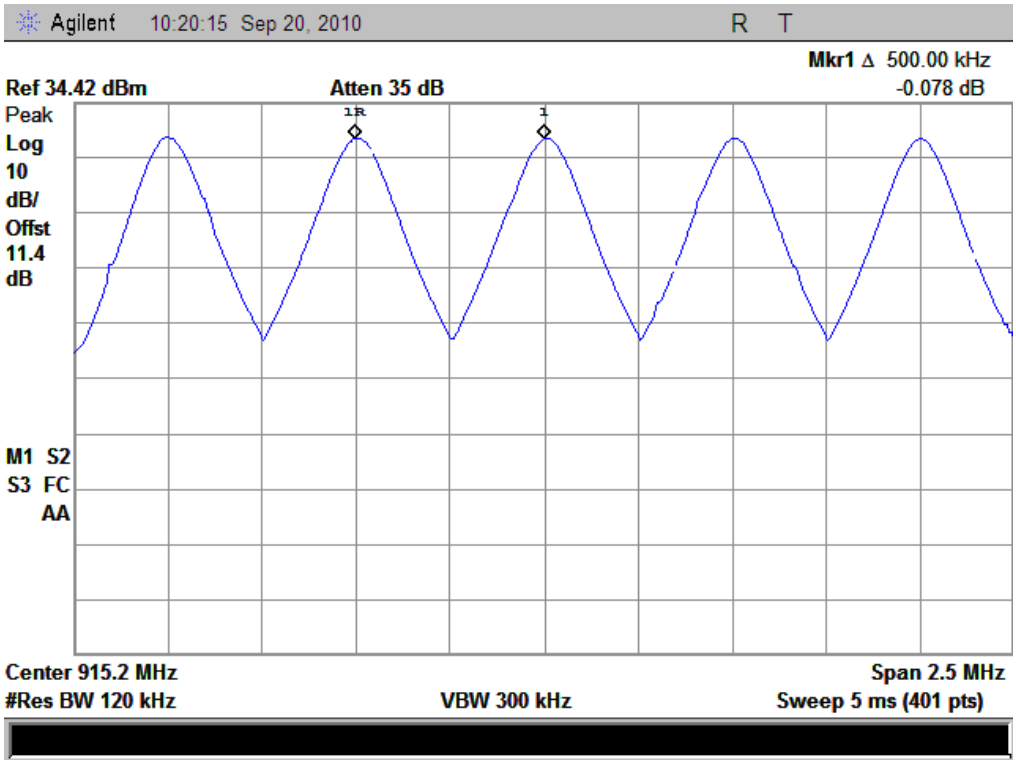
3.4.3 Test Result

The RFID Reader Module operates at hopping-on test mode.

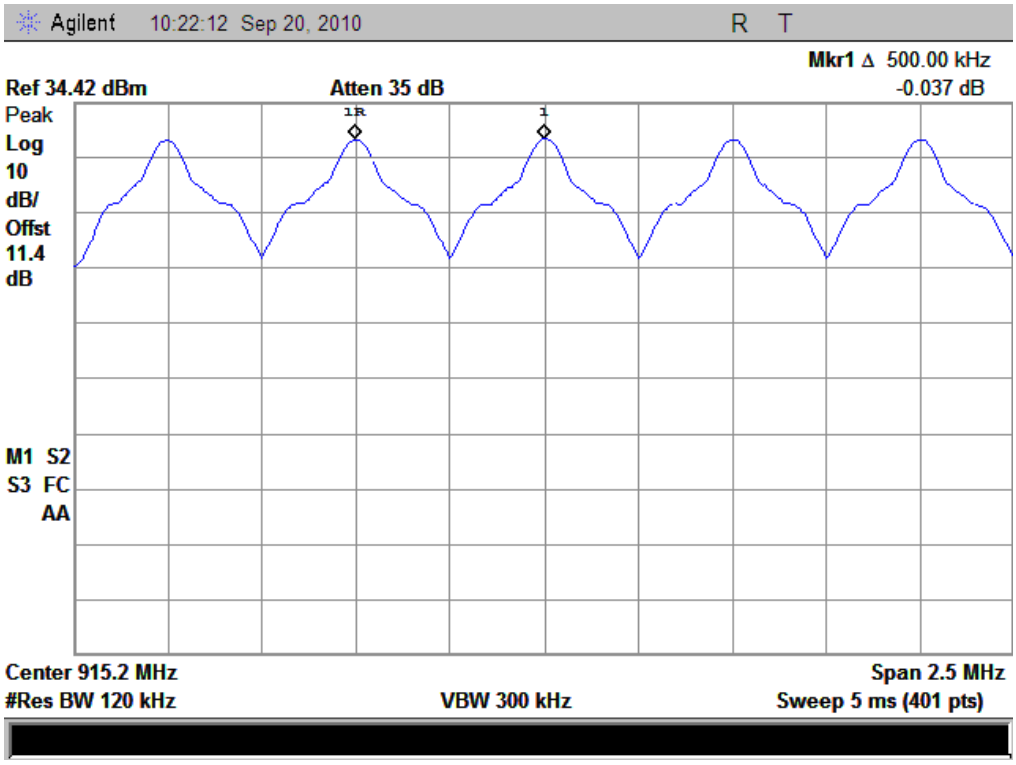
For any adjacent channels (e.g. the channel 25 and 26 as showed in the Plot A), the Module does have hopping channel carrier frequencies separated by a minimum of 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater. So, the verdicts is PASS.



(Plot A: Profile 1 Carried Frequency Separation)



(Plot B: Profile 2 Carried Frequency Separation)



(Plot C: Profile 4 Carried Frequency Separation)

3.5 Time of Occupancy (Dwell time)

3.5.1 Requirement

According to FCC section 15.247(a)(1)(i), frequency hopping systems in the 902 - 928MHz band shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period..

3.5.2 Test Description

See section 3.1.2 of this report.

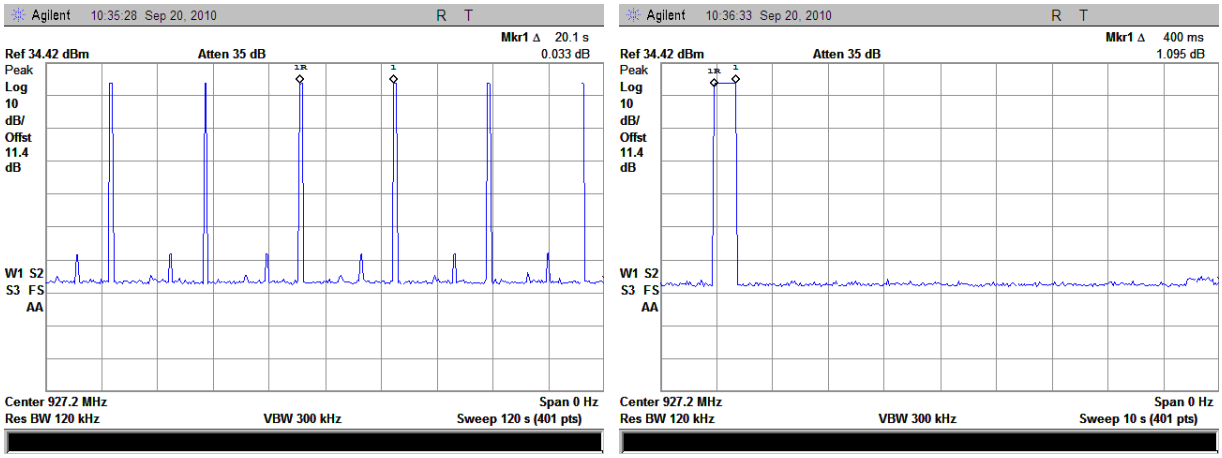
3.5.3 Test Result

The highest channel is selected to perform testing to record the dwell time of each occupation measured in this channel, which is called Pulse Time here.

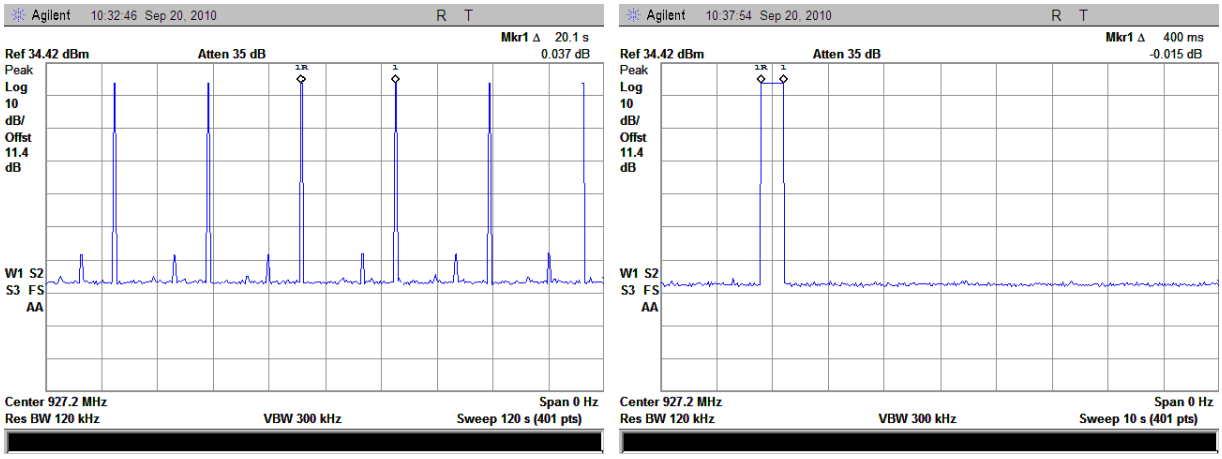
A. Test Verdict:

Profile	Channel	Pulse Time/Circle time		Limit (s) / Circle time(s)	Verdict
		s	Refer to Plot		
1	50	0.4/20.1	Plot A	0.4/20	PASS
2	50	0.4/20.1	Plot B		PASS
4	50	0.4/20.1	Plot C	0.4/10	PASS

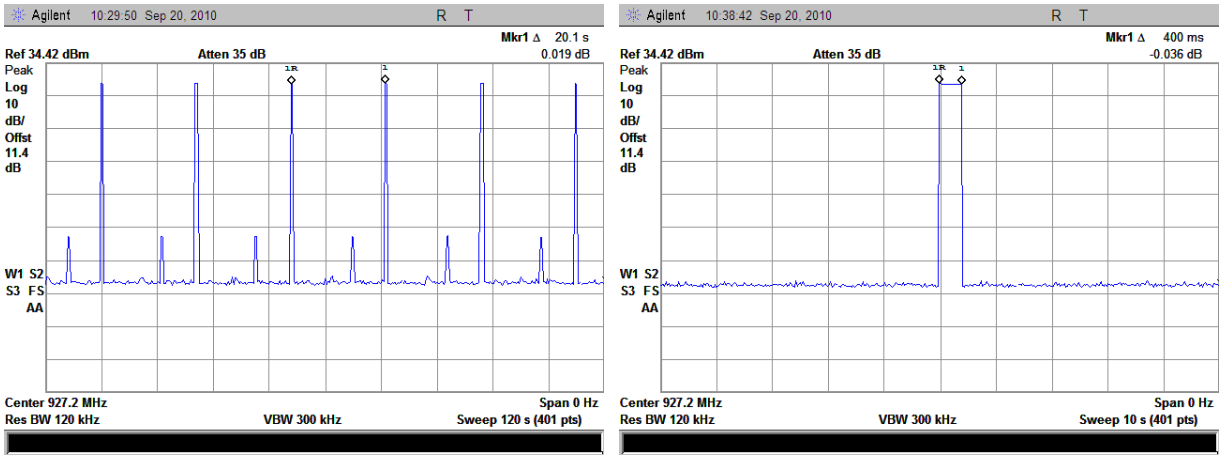
B. Test Plot:



(Plot A: Profile 1 Channel = 50, circle time and single pulse)



(Plot B: Profile 2 Channel = 50, circle time and single pulse)



(Plot C: Profile 3 Channel = 50, circle time and single pulse)

3.6 Conducted Spurious Emissions

3.6.1 Requirement

According to FCC section 15.247(c), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

3.6.2 Test Description

See section 3.1.2 of this report.

3.6.3 Test Result

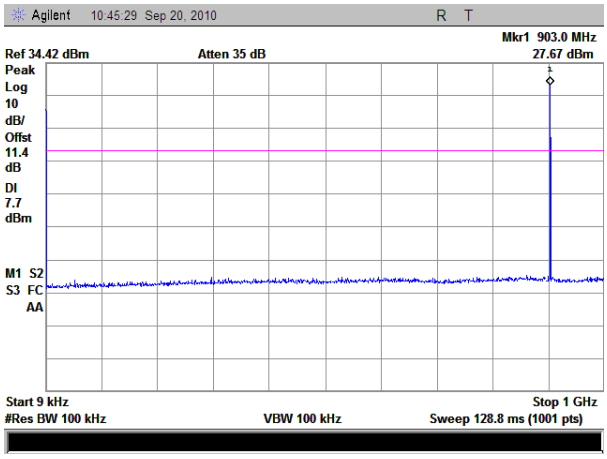
The RFID Reader Module operates at hopping-off test mode. The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions.

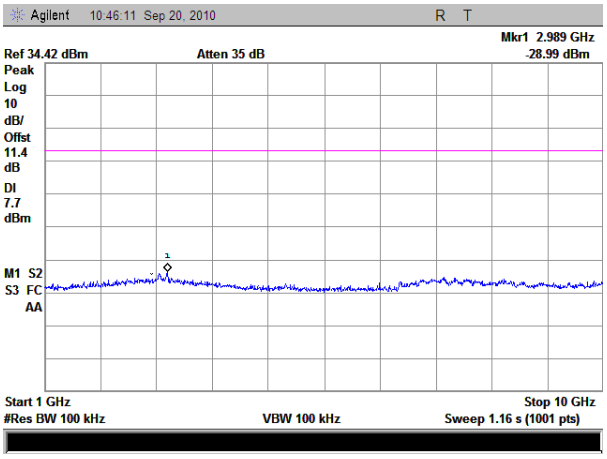
A. Test Verdict:

Profile	Channel	Frequency (MHz)	Measured Max. Out of Band Emission (dBm)	Plot	Limit (dBm)		Verdict
					Carrier Level	Calculated -20dBc Limit	
1	1	902.75	-28.99	Plot A	27.67	7.7	PASS
	26	915.25	-29.83	Plot B	27.51	7.5	PASS
	50	927.25	-29.58	Plot C	27.69	7.7	PASS
2	1	902.75	-30.31	Plot D	27.84	7.8	PASS
	26	915.25	-29.42	Plot E	27.79	7.8	PASS
	50	927.25	-30.36	Plot F	27.94	7.9	PASS
4	1	902.75	-30.13	Plot G	25.49	5.5	PASS
	26	915.25	-30.35	Plot H	25.35	5.3	PASS
	50	927.25	-30	Plot I	25.42	5.4	PASS

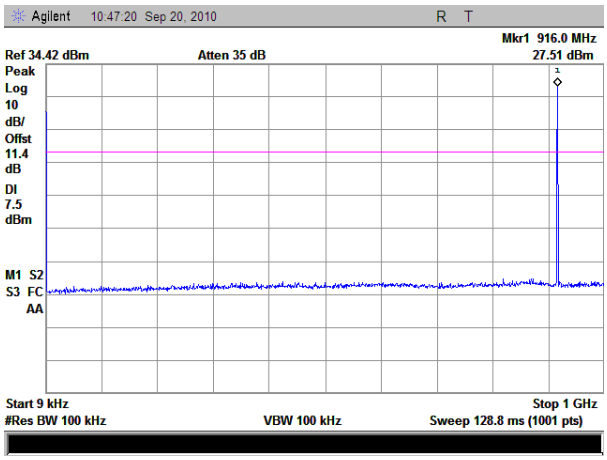
B. Test Plot:

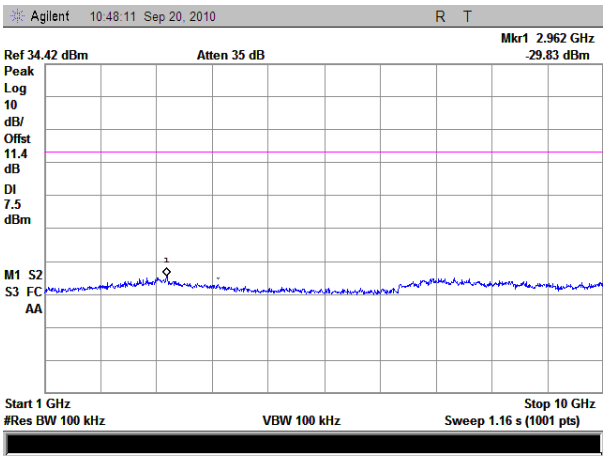
Note: the power of the Module transmitting frequency should be ignored.



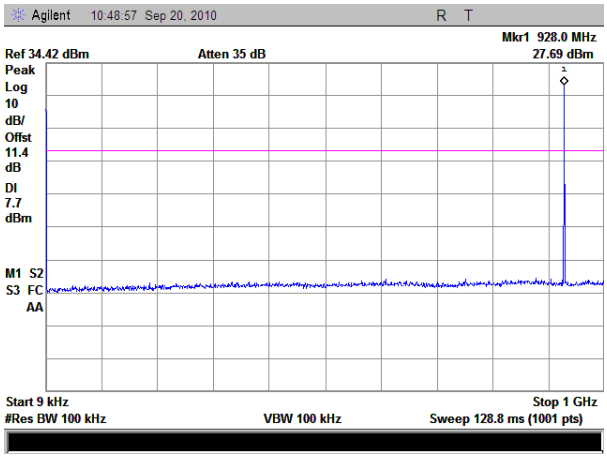


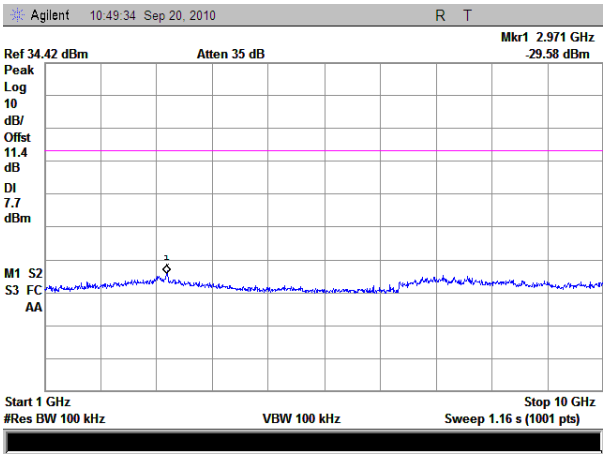
(Plot A: Profile 1 Channel = 1)



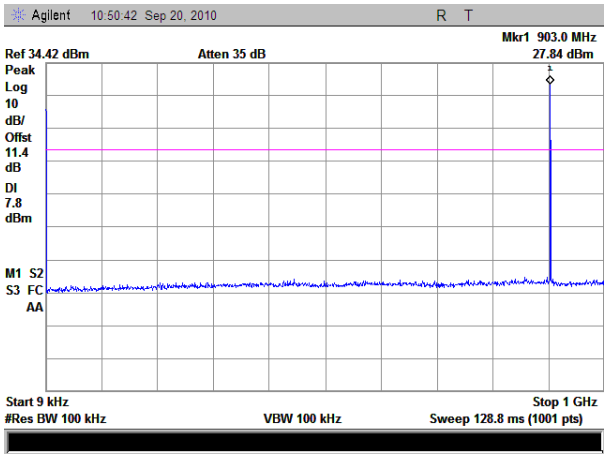


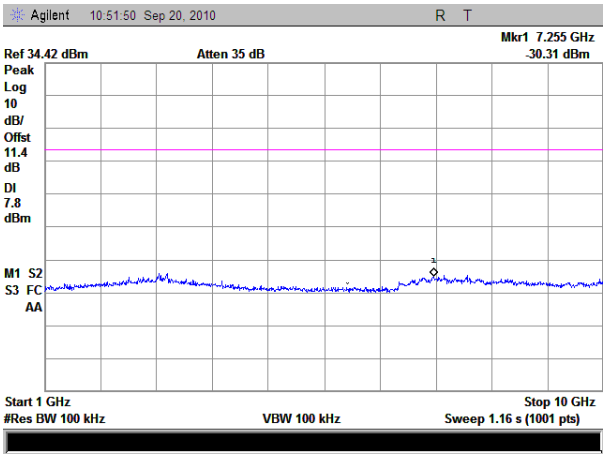
(Plot B: Profile 1 Channel = 26)



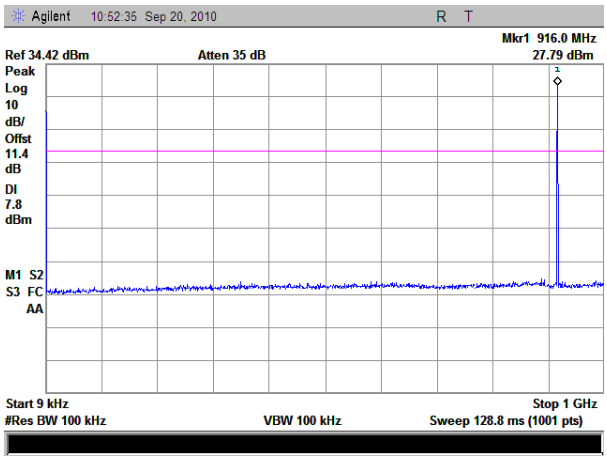


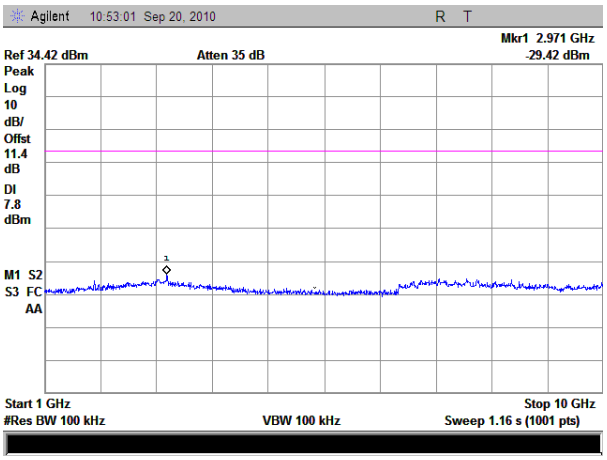
(Plot C: Profile 1 Channel = 50)



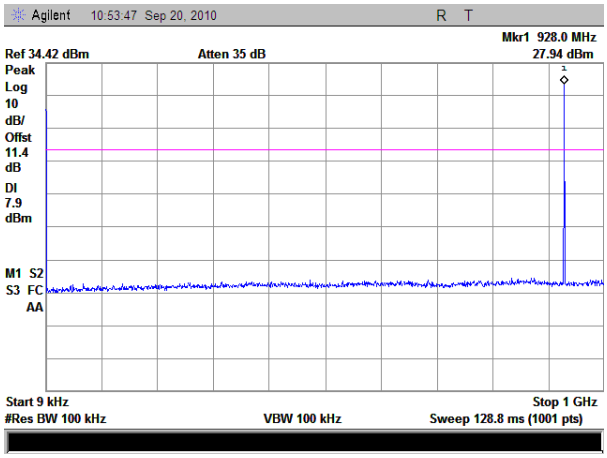


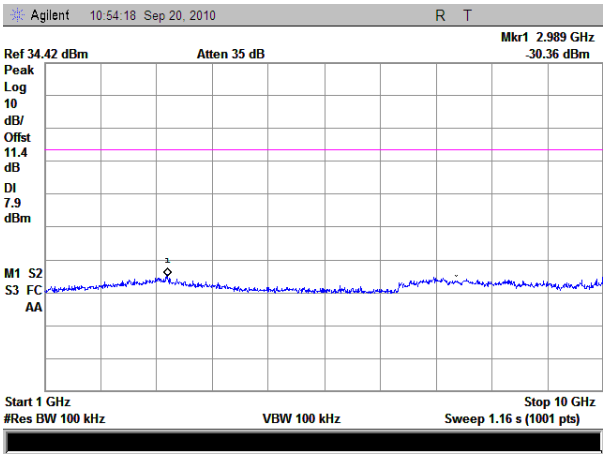
(Plot D: Profile 2 Channel = 1)



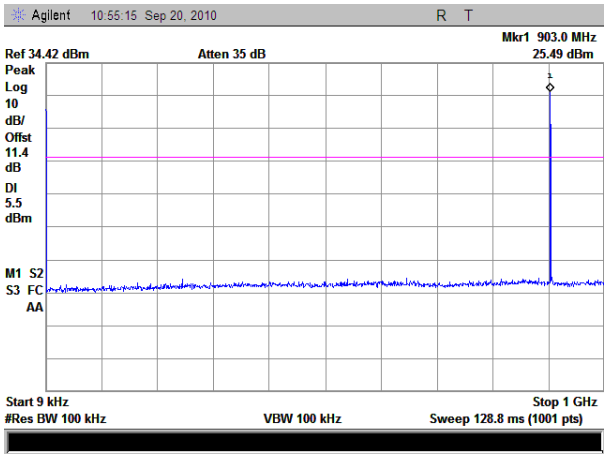


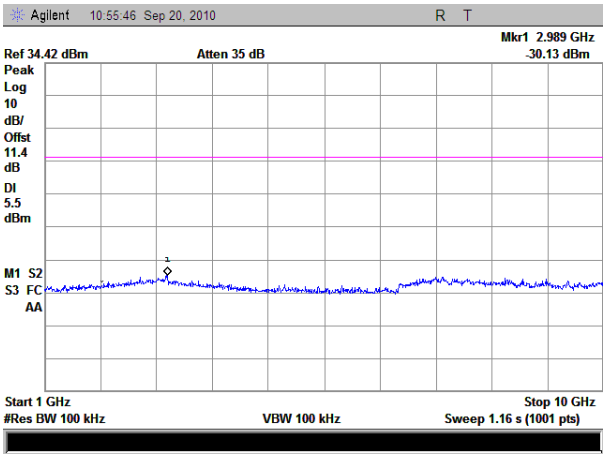
(Plot E: Profile 2 Channel = 26)



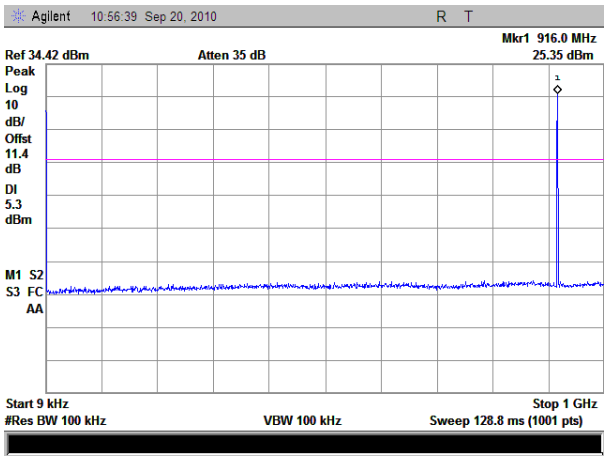


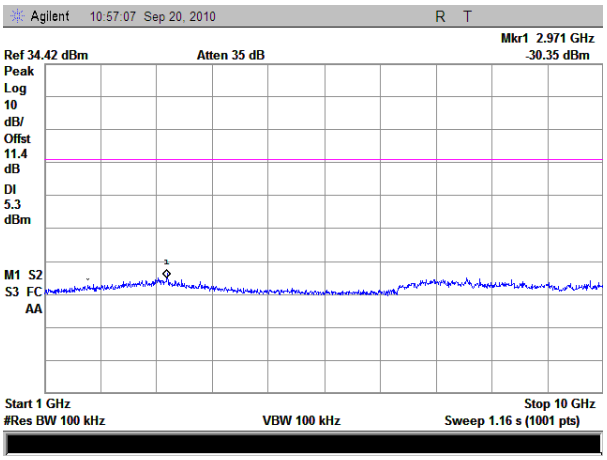
(Plot F: Profile 2 Channel = 50)



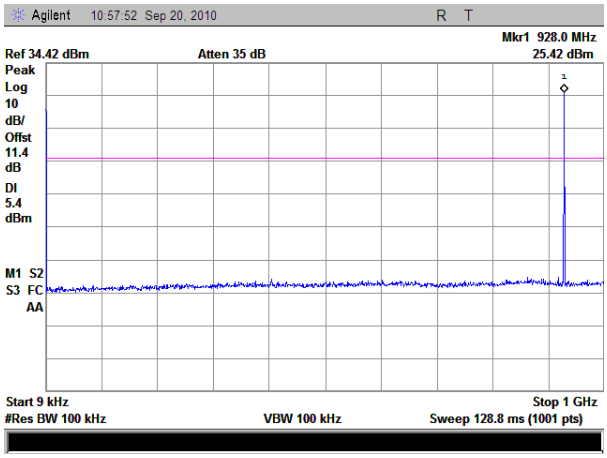


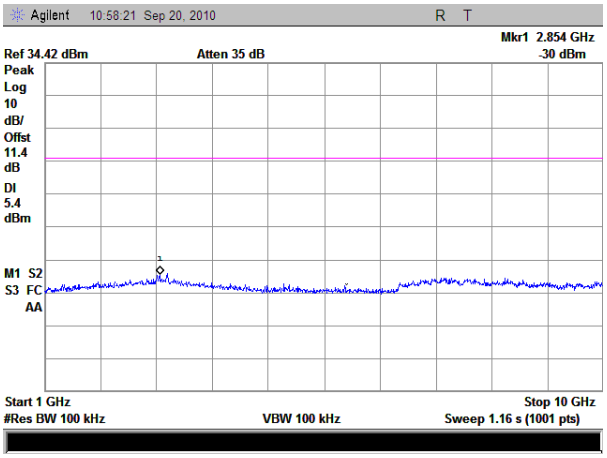
(Plot G: Profile 4 Channel = 1)





(Plot H: Profile 4 Channel = 26)





(Plot I: Profile 4 Channel = 50)

3.7 Band Edge

3.7.1 Requirement

According to FCC section 15.247(c), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

3.7.2 Test Description

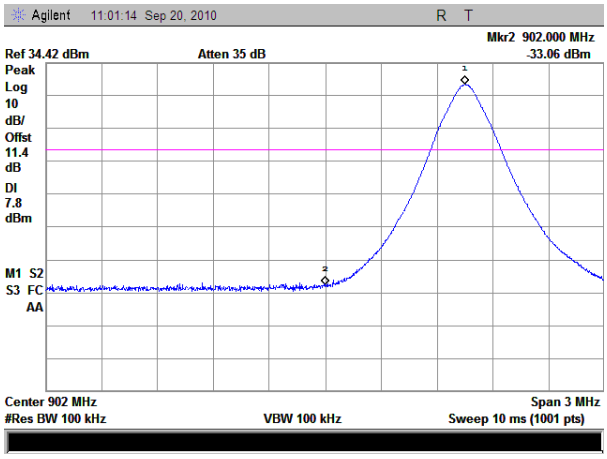
See section 3.1.2 of this report Test Result

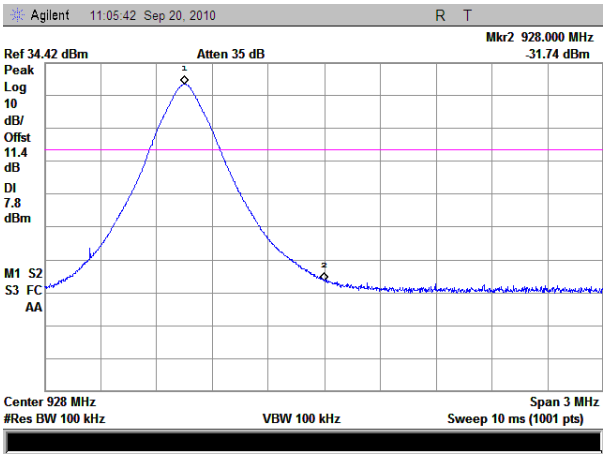
The RFID Reader Module operates at hopping-off test mode. The lowest and highest channels are tested to verify the band edge emissions.

A. Test Verdict:.

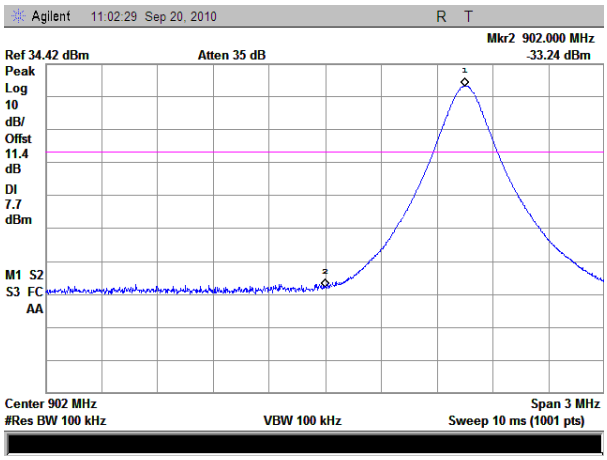
Profile	Channel	Test Frequency (MHz)	Minimum Measured Attenuation (dB)	Minimum Allowed Attenuation (dB)	Margin (dB)	Verdict
1	1	902	60.86	20	40.86	PASS
	50	928	59.54	20	39.54	PASS
2	1	902	60.94	20	40.94	PASS
	50	928	59.96	20	39.96	PASS
4	1	902	60.54	20	40.54	PASS
	50	928	59.08	20	39.08	PASS

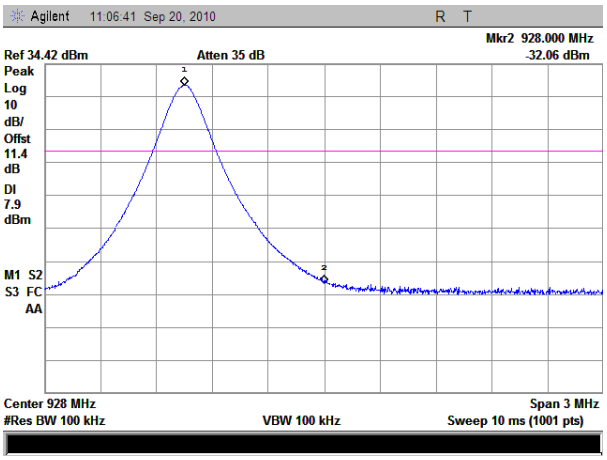
B. Test Plot:



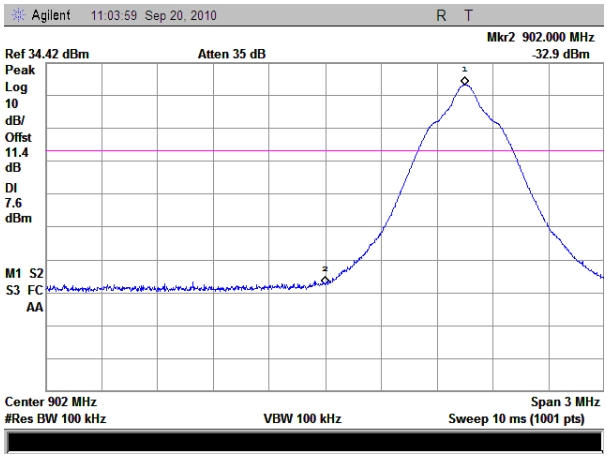


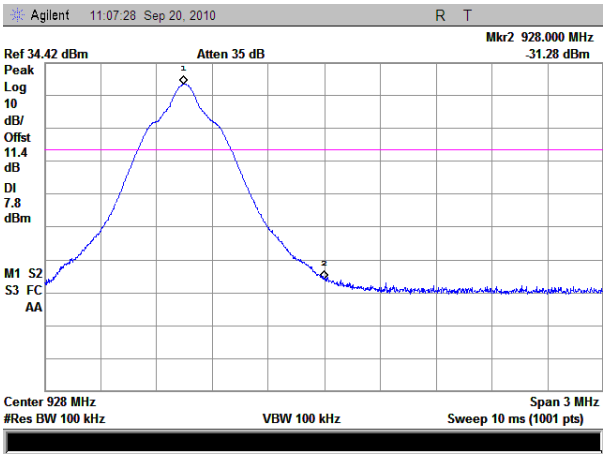
(Plot A: Profile 1 Channel = 1, 50)





(Plot B: Profile 2 Channel = 1, 50)





(Plot C: Profile 4 Channel = 1, 50)

3.8 Conducted Emission

3.8.1 Requirement

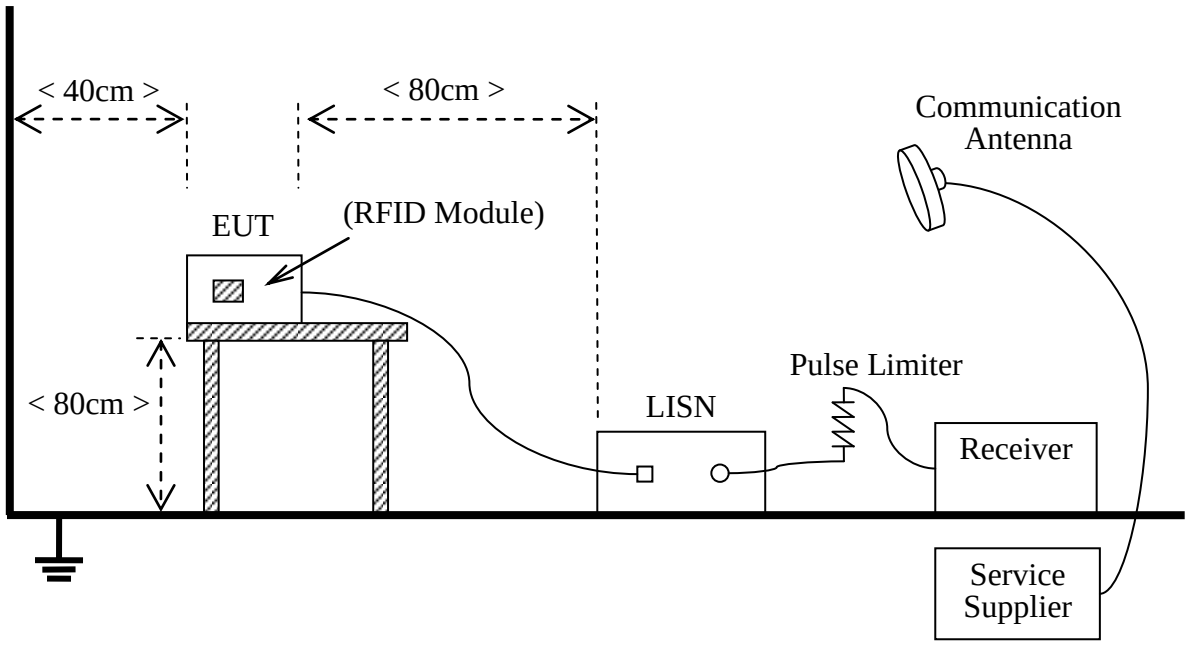
According to FCC section 15.207, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

NOTE:
(a) The lower limit shall apply at the band edges.
(b) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

3.8.2 Test Description

A. Test Setup:



The Table-top EUT was placed upon a non-metallic table 0.8m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.4:2003

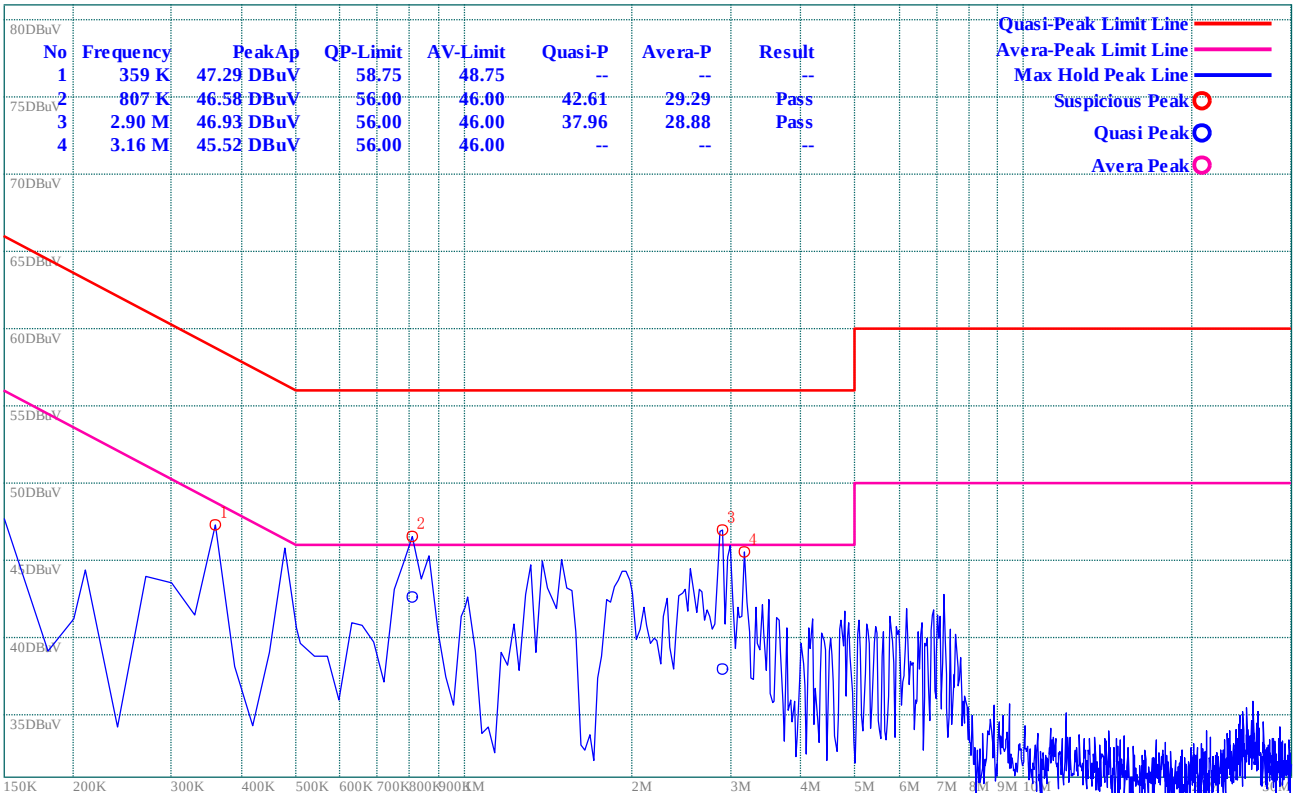
The RFID Reader Module of the EUT is powered by the Battery charged with the AC Adapter which is powered by 120V, 60Hz AC mains supply. The factors of the site are calibrated to correct the reading. During the measurement, the RFID Reader Module is activated and controlled by PC, and is set to operate under hopping-on test mode transmitting packages at maximum power.

B. Equipments List:

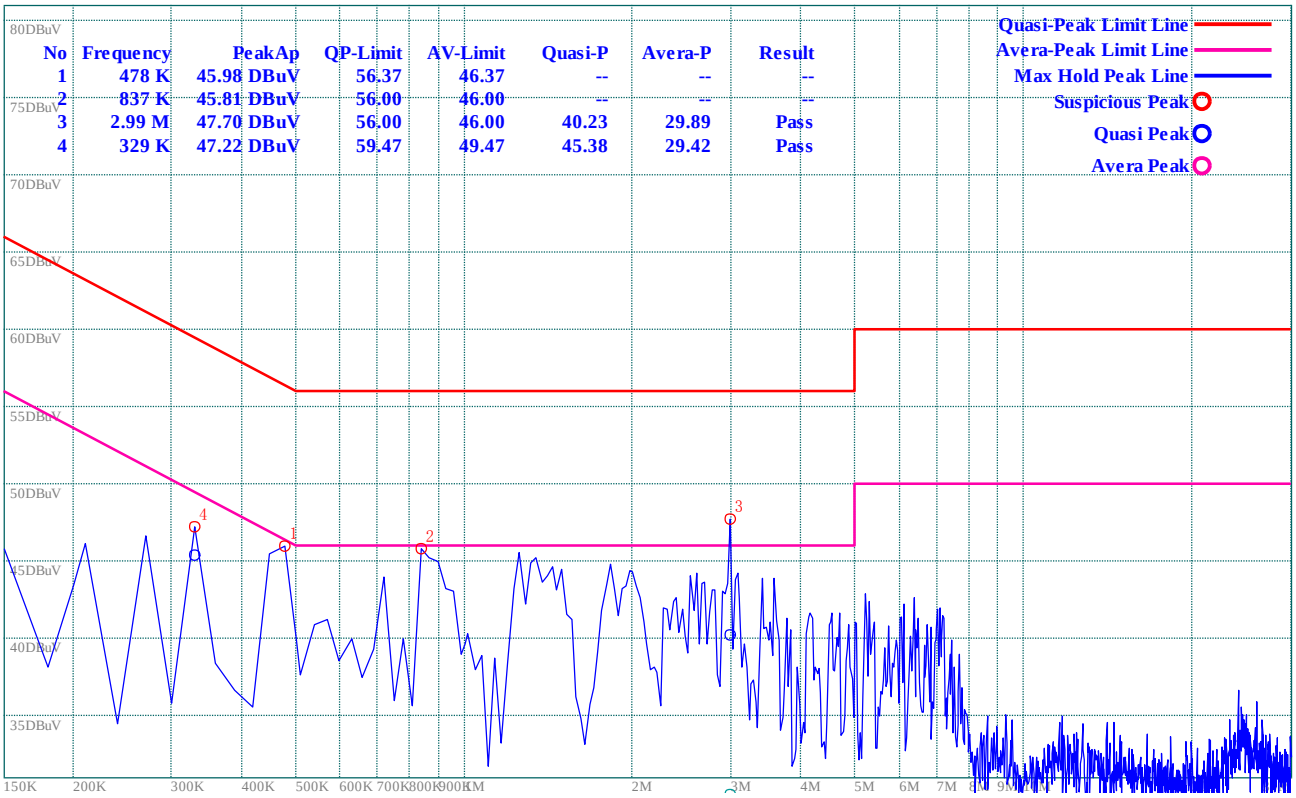
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2009.09	2year
LISN	Schwarzbeck	NSLK 8127	812744	2009.09	2year
Pulse Limiter (20dB)	Schwarzbeck	VTSD 9561-D	9391	(n.a.)	(n.a.)

3.8.3 Test Result

The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

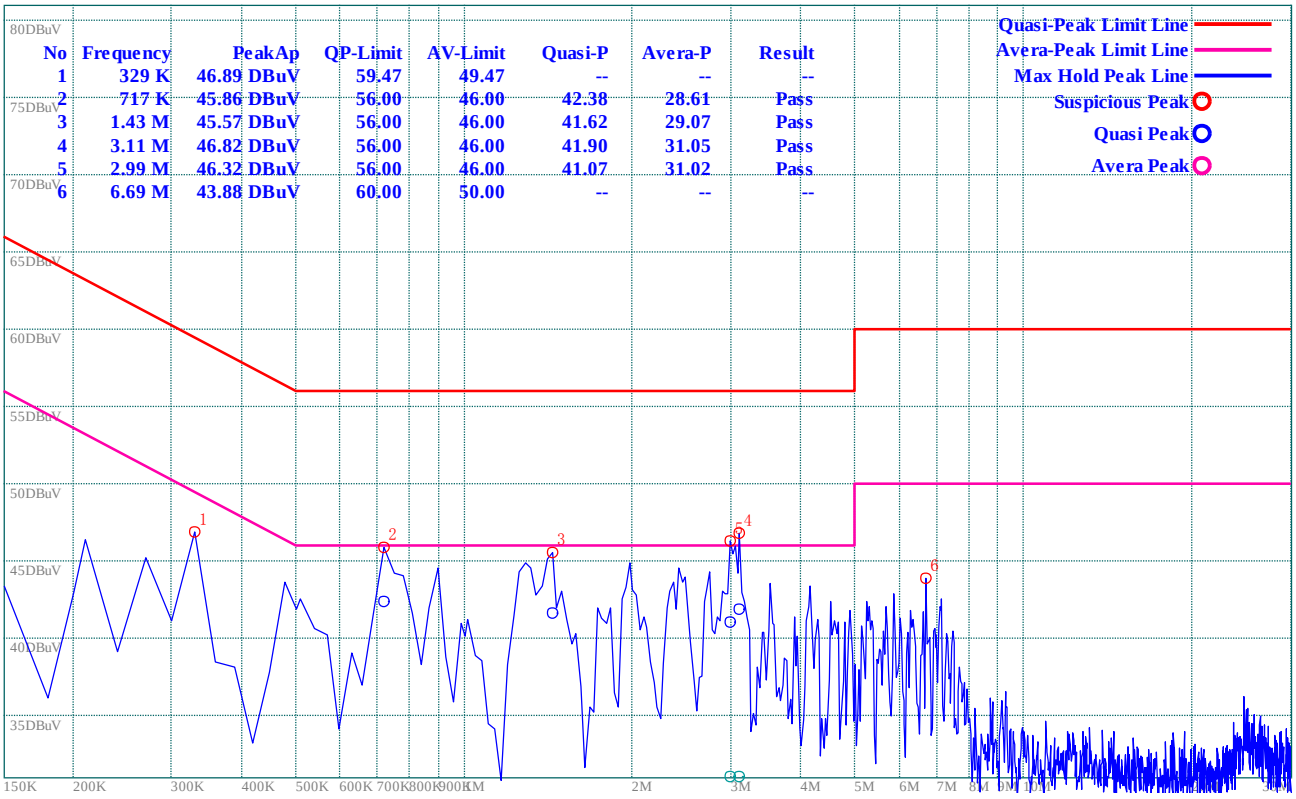


(Plot A:Profile 1 L Phase)



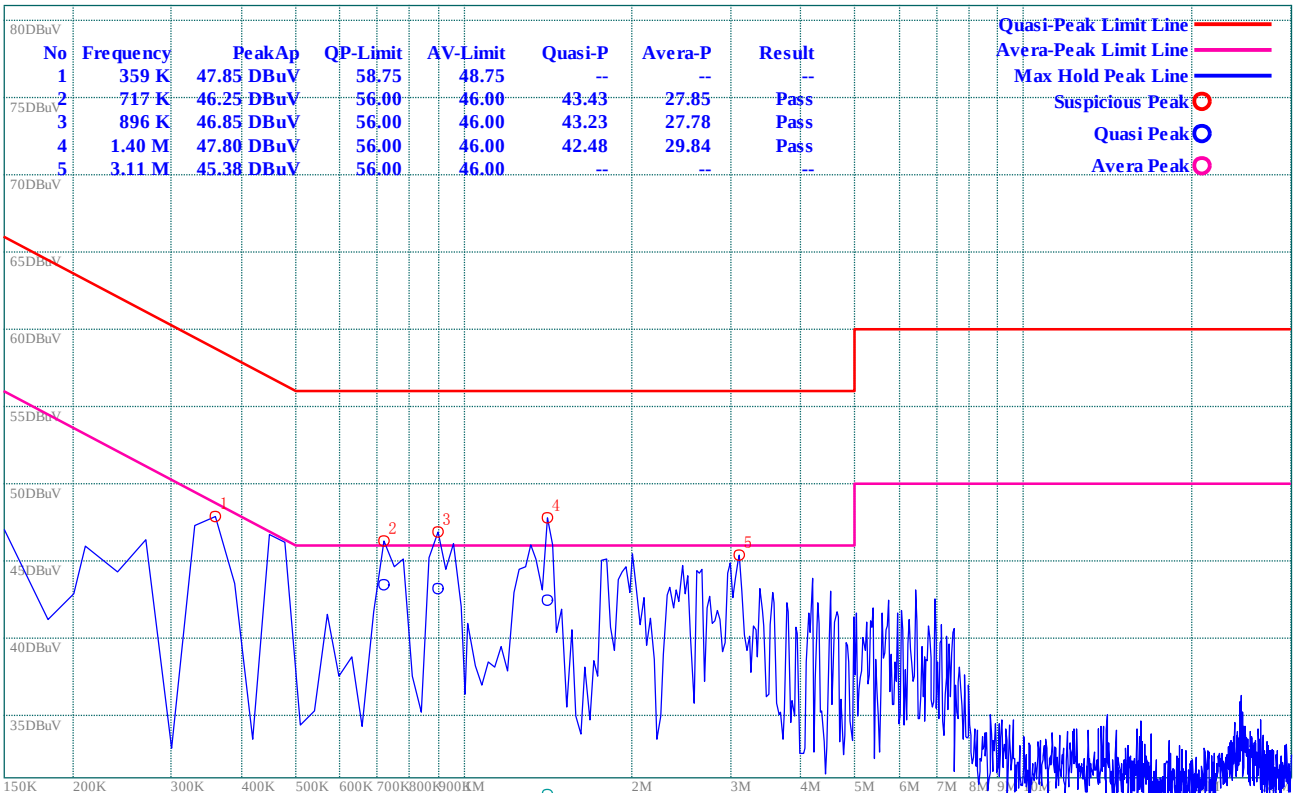
No	Frequency	PeakAp	QP-Limit	AV-Limit	Quasi-P	Avera-P	Result
1	478 K	45.98 DBuV	56.37	46.37	--	--	--
2	837 K	45.81 DBuV	56.00	46.00	--	--	--
3	2.99 M	47.70 DBuV	56.00	46.00	40.23	29.89	Pass
4	329 K	47.22 DBuV	59.47	49.47	45.38	29.42	Pass

(Plot B: Profile 1 N Phase)



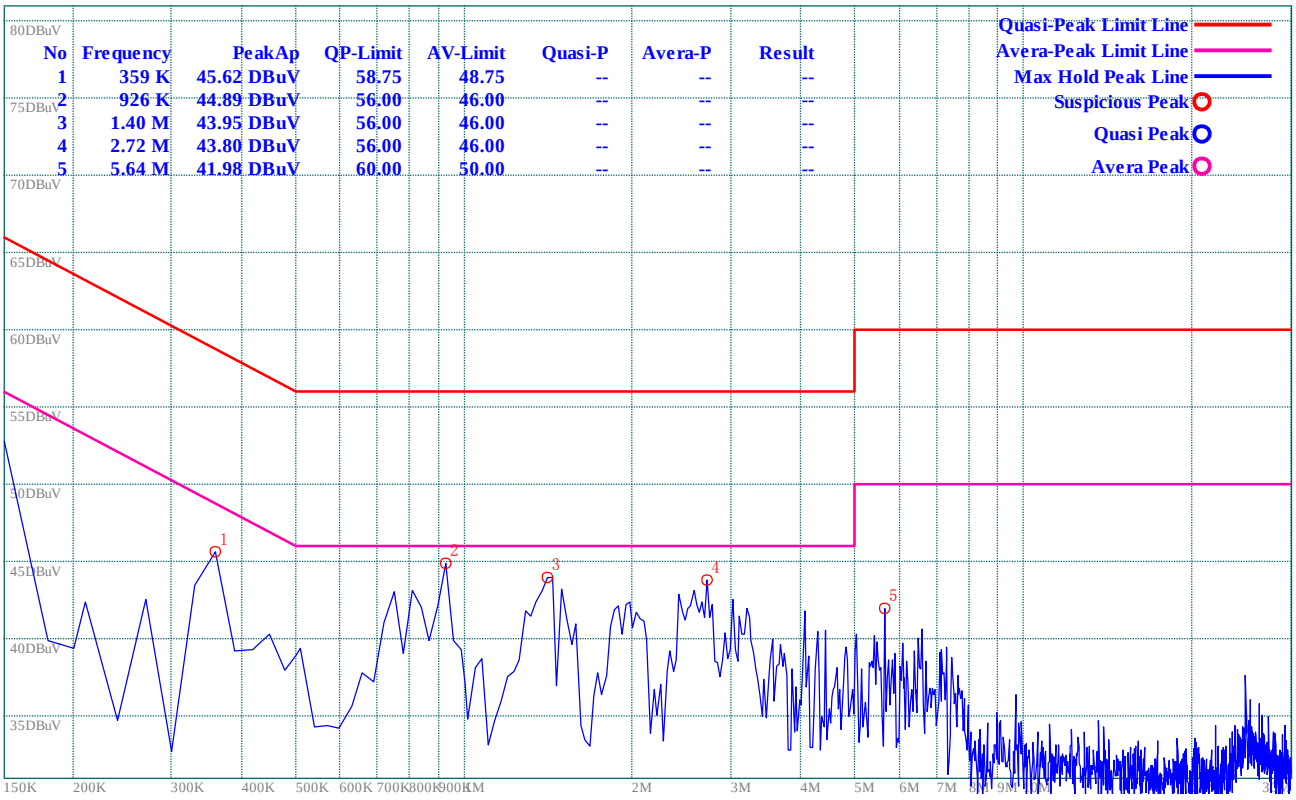
No	Frequency	PeakAp	QP-Limit	AV-Limit	Quasi-P	Avera-P	Result
1	329 K	46.89 DBuV	59.47	49.47	--	--	--
2	717 K	45.86 DBuV	56.00	46.00	42.38	28.61	Pass
3	1.43 M	45.57 DBuV	56.00	46.00	41.62	29.07	Pass
4	3.11 M	46.82 DBuV	56.00	46.00	41.90	31.05	Pass
5	2.99 M	46.32 DBuV	56.00	46.00	41.07	31.02	Pass
6	6.69 M	43.88 DBuV	60.00	50.00	--	--	--

(Plot C:Profile 2 L Phase)



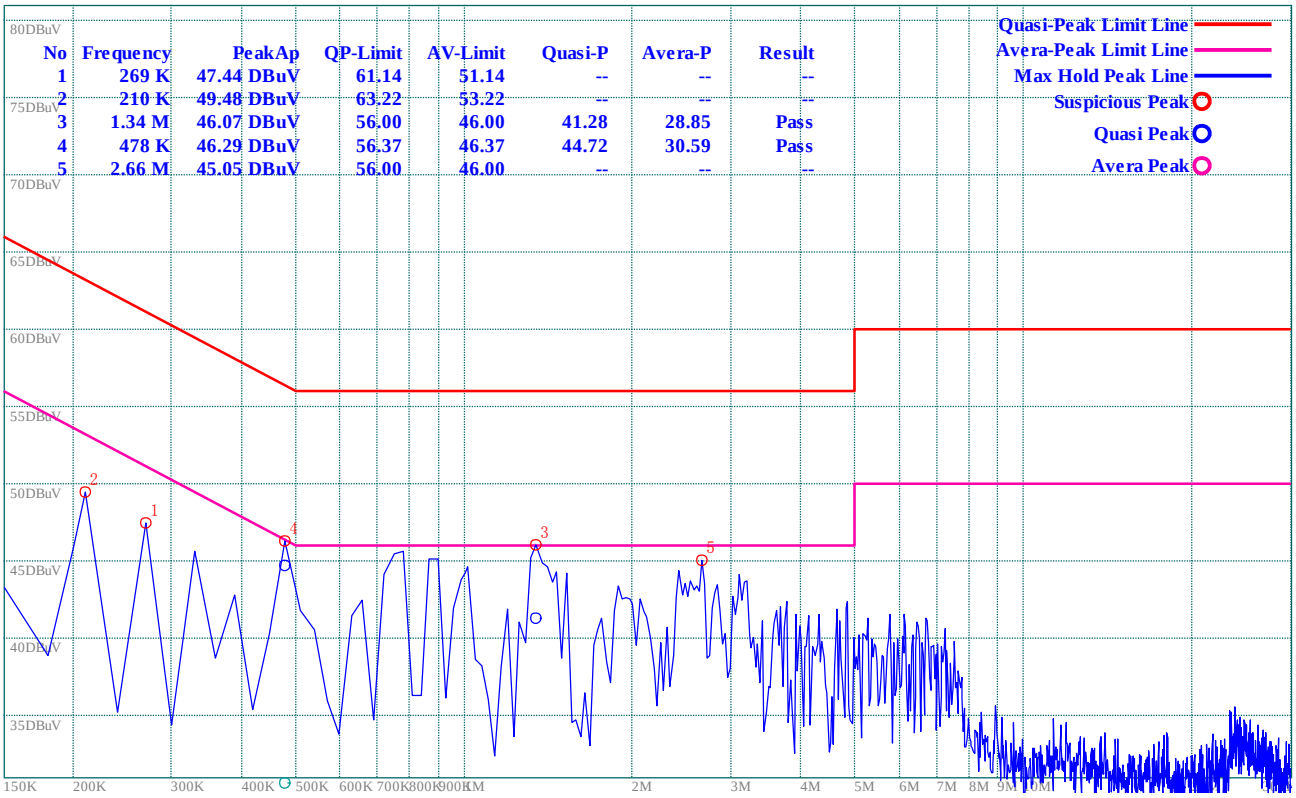
No	Frequency	PeakAp	QP-Limit	AV-Limit	Quasi-P	Avera-P	Result
1	359 K	47.85 DBuV	58.75	48.75	--	--	--
2	717 K	46.25 DBuV	56.00	46.00	43.43	27.85	Pass
3	896 K	46.85 DBuV	56.00	46.00	43.23	27.78	Pass
4	1.40 M	47.80 DBuV	56.00	46.00	42.48	29.84	Pass
5	3.11 M	45.38 DBuV	56.00	46.00	--	--	--

(Plot D: Profile 2 N Phase)



No	Frequency	PeakAp	QP-Limit	AV-Limit	Quasi-P	Avera-P	Result
1	359 K	45.62 DBuV	58.75	48.75	--	--	--
2	926 K	44.89 DBuV	56.00	46.00	--	--	--
3	1.40 M	43.95 DBuV	56.00	46.00	--	--	--
4	2.72 M	43.80 DBuV	56.00	46.00	--	--	--
5	5.64 M	41.98 DBuV	60.00	50.00	--	--	--

(Plot E:Profile 4 L Phase)



No	Frequency	PeakAp	QP-Limit	AV-Limit	Quasi-P	Avera-P	Result
1	269 K	47.44 DBuV	61.14	51.14	--	--	--
2	210 K	49.48 DBuV	63.22	53.22	--	--	--
3	1.34 M	46.07 DBuV	56.00	46.00	41.28	28.85	Pass
4	478 K	46.29 DBuV	56.37	46.37	44.72	30.59	Pass
5	2.66 M	45.05 DBuV	56.00	46.00	--	--	--

(Plot F: Profile 4 N Phase)

3.9 Radiated Emission

3.9.1 Requirement

According to FCC section 15.247(c), radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

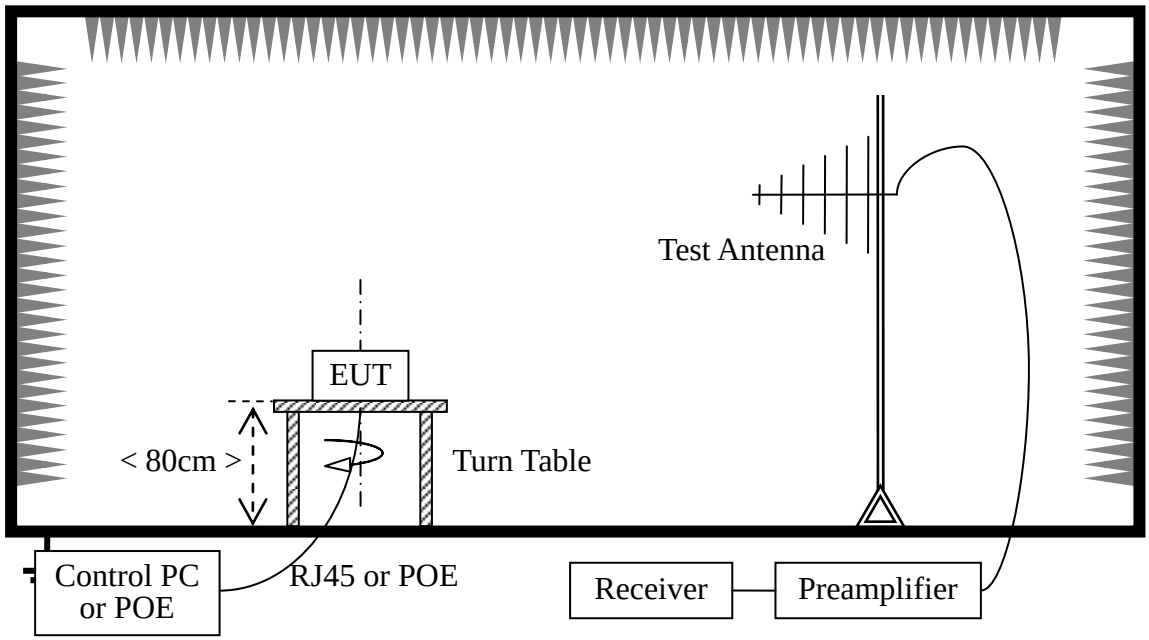
According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)	Detector
30 - 88	100	3	QP
88 - 216	150	3	QP
216 - 960	200	3	QP
960 - 1000	500	3	QP
Above 1000	500	3	AV

In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table)

3.9.2 Test Description

A. Test Setup:



The test site semi-anechoic chamber has met the requirement of NSA tolerance 4dB according to the standards: ANSI C63.4 (2003). The EUT was set-up on insulator 80cm above the Ground Plane. The set-up and test methods were according to ANSI C63.4.

The RFID Reader Module of the EUT is powered by the Battery charged with the AC Adapter which is powered by 120V, 60Hz AC mains supply. The Module is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading. During the measurement, the RFID Reader Module is activated and controlled by PC, and is set to operate under hopping-on test mode transmitting packages at maximum power.

For the Test Antenna: In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength, the azimuth range of turntable was 0^o to 360^o, the receive antenna has two polarizations horizontal and vertical. When doing measurements above 1GHz, the EUT was placed within the 3dB beam width range of the horn antenna, and the EUT was tested in 3 orthogonal positions as recommended in ANSI C63.4 for Radiated Emissions and the worst-case data was presented.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2009.9	2year
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2009.9	2year
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2009.9	2year
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2009.9	2year
Test Antenna - circular	R&S	AC004R1	0749.3000.03	2009.9	2year

3.9.3 Test Result

A. Test Verdict for Harmonics:

The un-wanted Emissions for profile 1 with AC adapter:

Test result of channel: 1 (902.75MHz)

Frequency (MHz)	PK Level (dBμ)	QP Level (dBμ)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
33.165 M	30.7	26.3	40	-13.7	282	100	Horizontel
30.202M	36.4	32	40	-8	127	100	Vertical
32.446 M	37.9	33.2	40	-6.8	309	100	Vertical

Test result of channel: 26 (915.75MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμ	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
33.197 M	31.4	26.4	40	-13.6	157	100	Horizontel
32.63 M	37.9	33.4	40	-6.6	37	100	Vertical
30.056M	37.4	33.4	40	-6.6	197	100	Vertical

Test result of channel: 50 (927.25MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
33.1M	28.5	25.3	40	-14.7	91	100	Horizontel
32.042 M	31.9	27.7	40	-12.3	124	100	Vertical

The un-wanted Emissions for profile 2 with AC adapter:

Test result of channel: 1 (902.75MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
33.182 M	31.4	27	40	-13	225	100	Horizontel
32.251 M	37.4	32.9	40	-7.1	69	100	Vertical

Test result of channel: 26 (915.75MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
32.751M	27.3	22.1	40	-17.9	221	100	Horizontel
190.418 M	32	31	43.5	-12.5	93	100	Vertical
32.467 M	37.7	33.4	40	-6.6	101	100	Horizontel
30.138MHz	37.3	32.8	40	-7.2	27	100	Horizontel

Test result of channel: 50 (927.25MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
33.1M	27	26.1	40	-13.9	321	100	Horizontel
32.436 M	31.6	27.2	40	-12.8	87	100	Vertical

The un-wanted Emissions for profile 4 with AC adapter:

Test result of channel: 1 (902.75MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
32.251M	37.4	32.9	40	-7.1	102	100	Horizontel
32.14M	36.6	32.4	40	-7.6	178	100	Vertical
31.316 M	35.5	31.5	40	-8.5	29	100	Vertical

Test result of channel: 26 (915.75MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
32.843 M	27.5	22.6	40	-17.4	129	100	Horizontel
190.276 M	31.9	30.9	43.5	-12.6	198	100	Horizontel
32.394M	37.4	33.1	40	-6.9	302	100	Vertical
32.251 M	37.1	33.2	40	-6.8	182	100	Vertical

Test result of channel: 50 (927.25MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
33.315M	28	27.14	40	-12.86	39	100	Horizontel
32.444 M	33.1	29.1	40	-10.9	215	100	Vertical

The un-wanted Emissions for profile 1 with POE:

Test result of channel: 1 (902.75MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
32.679 M	29.6	25.7	40	-14.3	207	100	Horizontel
130.856M	36.7	32.5	43.5	-11	116	100	Horizontel
146.514M	34.3	31.2	43.5	-12.3	67	100	Horizontel
29.212 M	33.4	30.6	40	-9.4	12	100	Vertical
131.247 M	36.9	34.9	43.5	-8.6	348	100	Vertical
146.908 M	34.9	32.2	43.5	-11.3	301	100	Vertical

Test result of channel: 26 (915.75MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
149.198 M	38.4	35.5	43.5	-8	29	100	Horizontel
30.126 M	31.3	29.7	40	-10.3	157	100	Vertical
130.757M	37.7	35.6	43.5	-7.9	314	100	Vertical

Test result of channel: 50 (927.25MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
102.1 M	32.5	30.4	43.5	-13.1	218	100	Horizontel
150.77 M	38.4	36.4	43.5	-7.1	129	100	Horizontel
148.1M	33.7	31.2	43.5	-12.3	202	100	Vertical

The un-wanted Emissions for profile 2 with POE:

Test result of channel: 1 (902.75MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
32.615 M	30.6	27.1	40	-12.9	192	100	Horizontel
30.625M	31	29	40	-11	79	100	Horizontel
131.971 M	36.4	32.6	43.5	-10.9	177	100	Horizontel
147.299M	33.8	31.4	43.5	-12.1	314	100	Horizontel
30.271M	32.6	27.7	40	-12.3	303	100	Vertical
131.563M	36.8	32.7	43.5	-10.8	128	100	Vertical
146.298M	34.8	32.5	43.5	-11	103	100	Vertical

Test result of channel: 26 (915.75MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
149.307 M	39.2	36.9	43.5	-6.6	104	100	Horizontel
32.572 M	31.9	29.6	40	-10.4	125	100	Vertical
131.946M	36.9	34.1	43.5	-9.4	175	100	Vertical

Test result of channel: 50 (927.25MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
102.1 M	33.5	31.4	43.5	-12.1	219	100	Horizontel
150.593M	37	32.6	40	-7.4	89	100	Horizontel
150.6 M	35.3	32.6	43.5	-10.9	192	100	Vertical

The un-wanted Emissions for profile 4 with POE:

Test result of channel: 1 (902.75MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
30.711M	31	27.6	40	-12.4	123	100	Horizontel
109.167 M	29.2	26.9	43.5	-16.6	77	100	Horizontel
131.321 M	37.2	35.1	43.5	-8.4	165	100	Horizontel
154.262 M	32.6	0.4	43.5	-43.1	11	100	Horizontel
30.332 M	35.1	33.3	40	-6.7	258	100	Vertical
131.671 M	38.9	35.9	43.5	-7.6	88	100	Vertical

Test result of channel: 26 (915.75MHz)

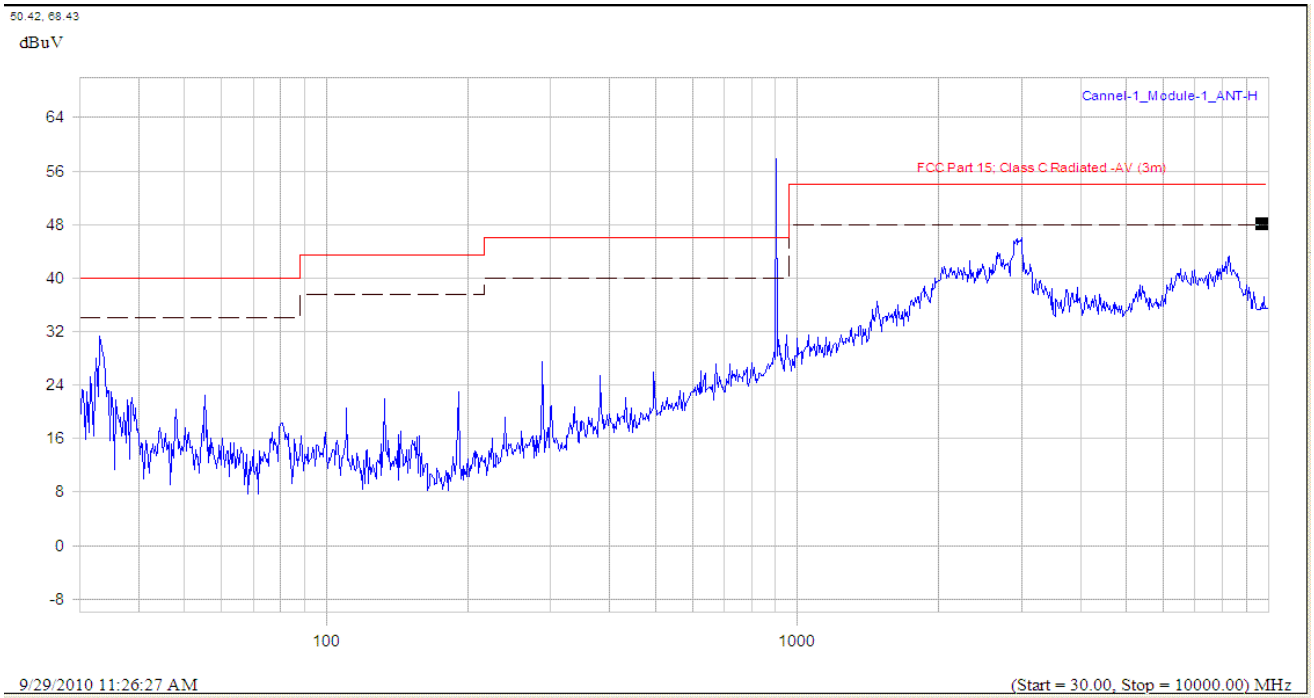
Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
149.979 M	38.4	32.7	43.5	-10.8	142	100	Horizontel
30.099 M	33.6	31.8	40	-8.2	73	100	Vertical
110.038 M	28.5	24.3	43.5	-19.2	249	100	Vertical
131.951 M	37	34.1	43.5	-9.4	183	100	Vertical

Test result of channel: 50 (927.25MHz)

Frequency (MHz)	PK Level (dBμV/m)	QP Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Azimuth (deg)	Height (cm)	Antenna Polarization
153.649 M	38.1	36.3	43.5	-7.2	167	100	Horizontel
102.1 M	33.6	31.1	43.5	-12.4	358	100	Horizontel
150.724 M	35.9	33.9	43.5	-9.6	99	100	Vertical

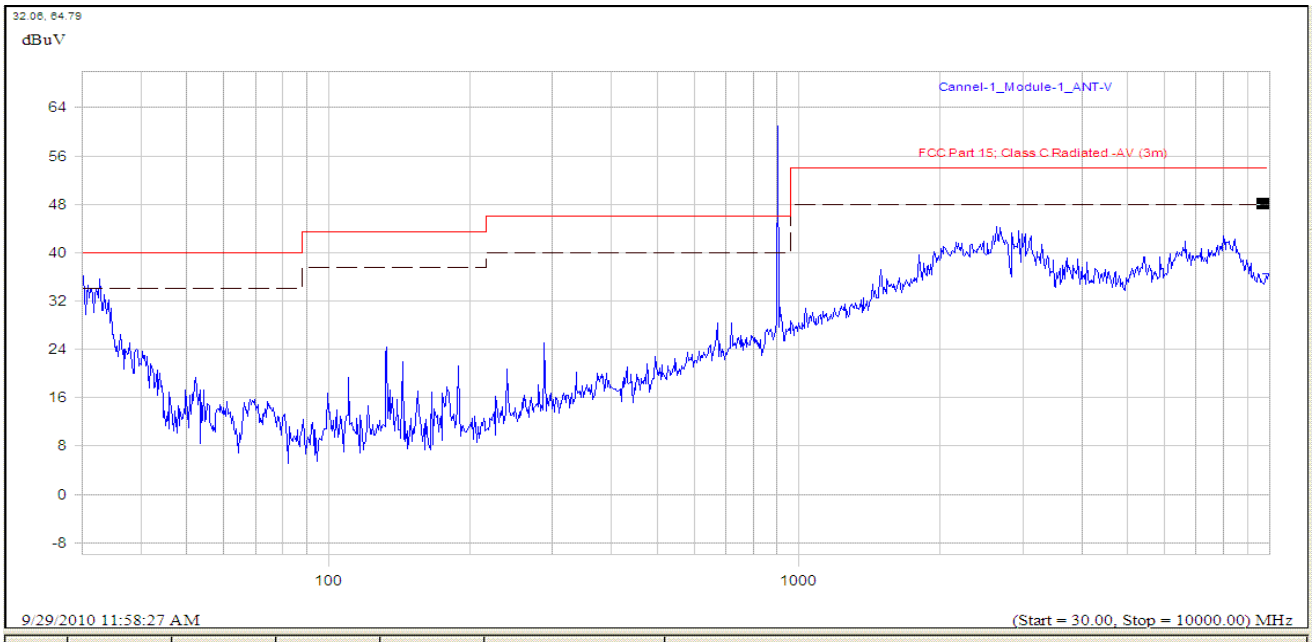
B. Test Plots for the Whole Measurement Frequency Range:

Profile 1 with AC Adapter



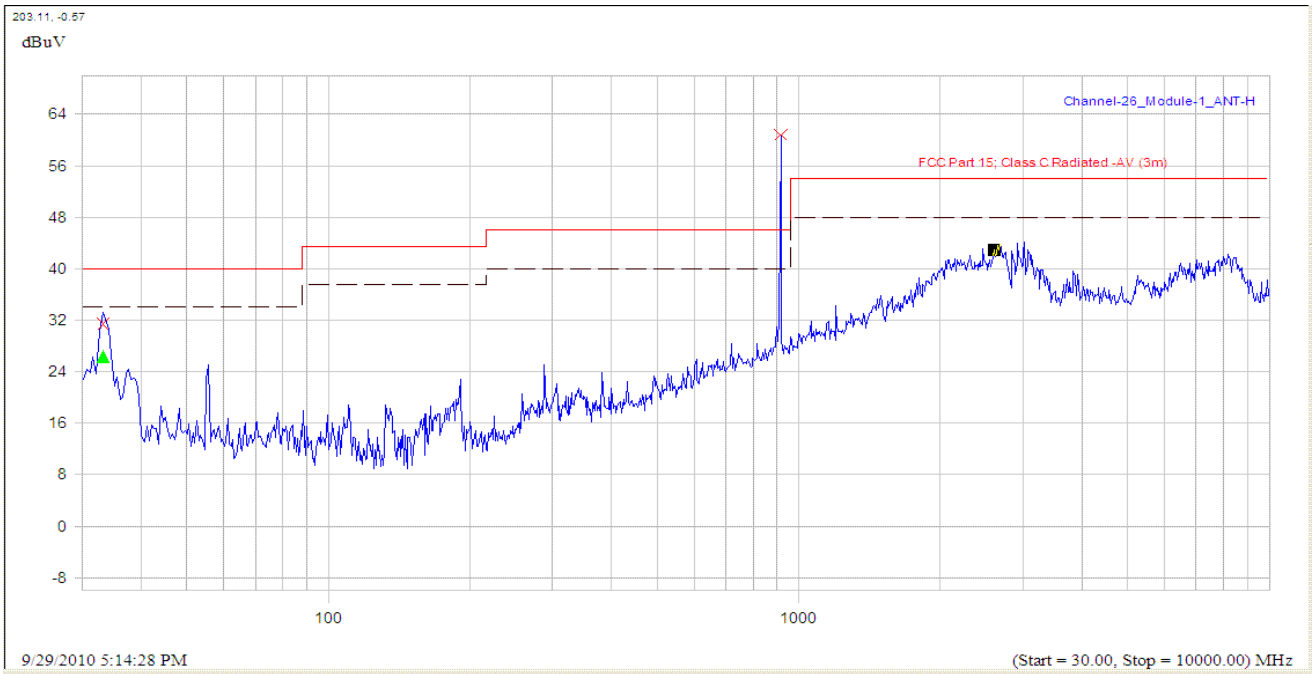
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	33.165	30.7	26.3		Cannel-1_Module-1_ANT-H	
2	902.950	57.8			Cannel-1_Module-1_ANT-H	

(Plot A.1: Channel = 1 Antenna Horizonta)



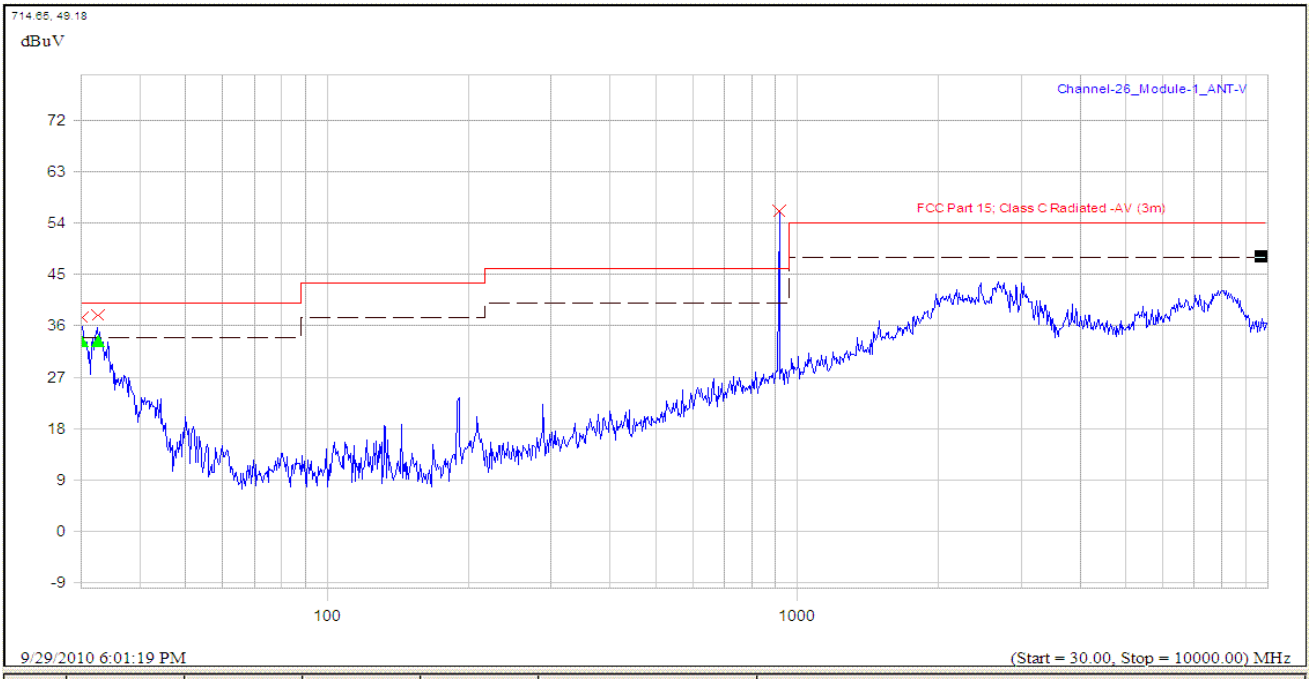
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	30.202	36.4	32.0		Cannel-1_Module-1_ANT-V	Limit: 40dBuV/m
2	32.446	37.9	33.2		Cannel-1_Module-1_ANT-V	Limit: 40dBuV/m
3	903.000	61.0			Cannel-1_Module-1_ANT-V	

(Plot A.2: Channel = 1 Antenna Vertical)



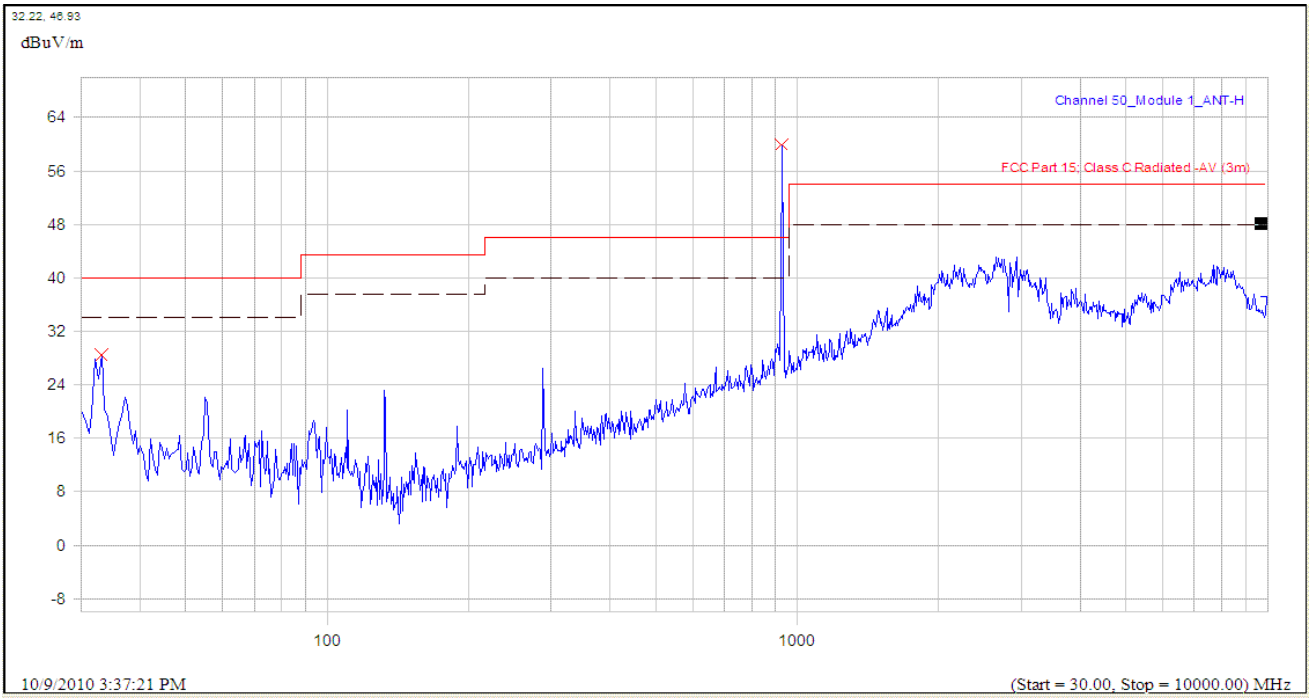
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	33.197	31.4	26.4		Channel-26_Module-1_ANT-H	QP-Limit: 40dBuV/m
2	915.500	60.8			Channel-26_Module-1_ANT-H	

(Plot B.1: Channel = 26 Antenna Horizontal)



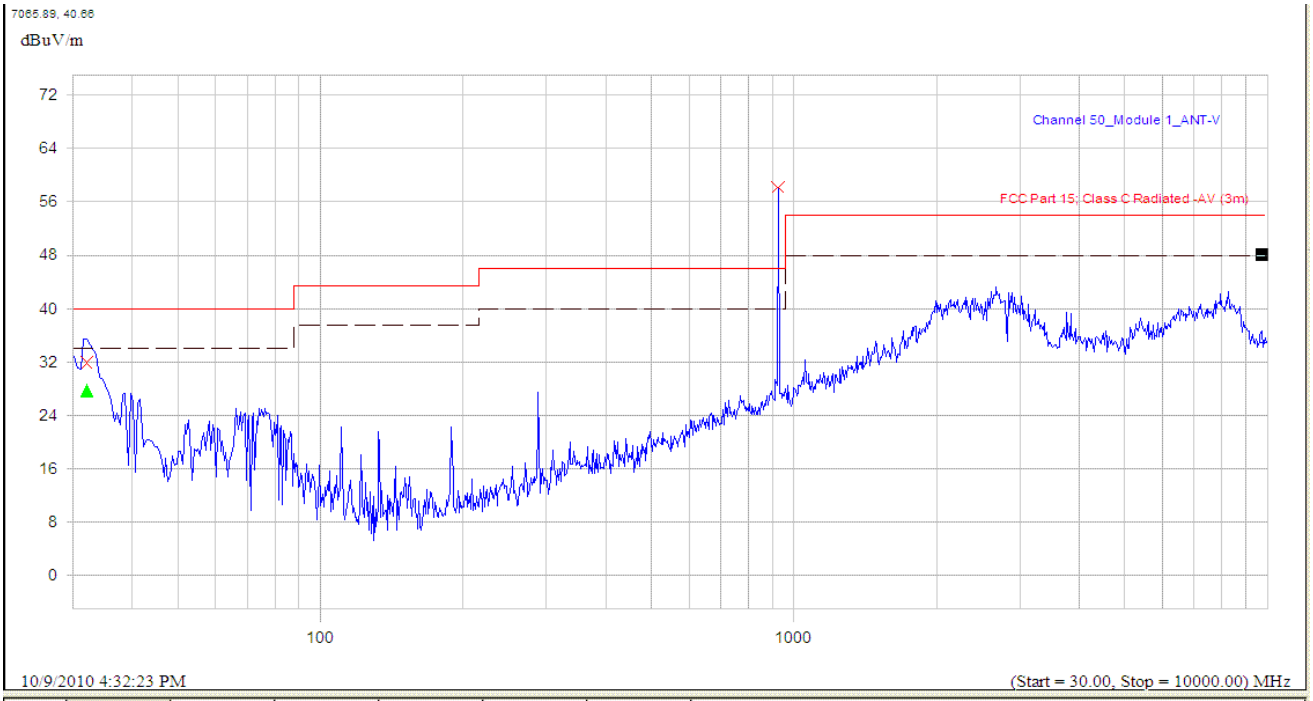
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	32.630	37.9	33.4		Channel-26_Module-1_ANT-V	QP-Limit: 40dBuV/m
2	30.056	37.4	33.4		Channel-26_Module-1_ANT-V	QP-Limit: 40dBuV/m
3	915.500	56.0			Channel-26_Module-1_ANT-V	

(Plot B.2: Channel = 26 Antenna Vertical)



	Frequency MHz	Peak dBuV/m	Delta Pk-Limit dB	QP dBuV/m	Delta QP-Limit dB	Trace Name	Comment
1	33.100	28.5	0.0		0.0	Channel 50_Modu	QP-Limit: 40dBuV/m
2	927.500	59.9	0.0		0.0	Channel 50_Modu	

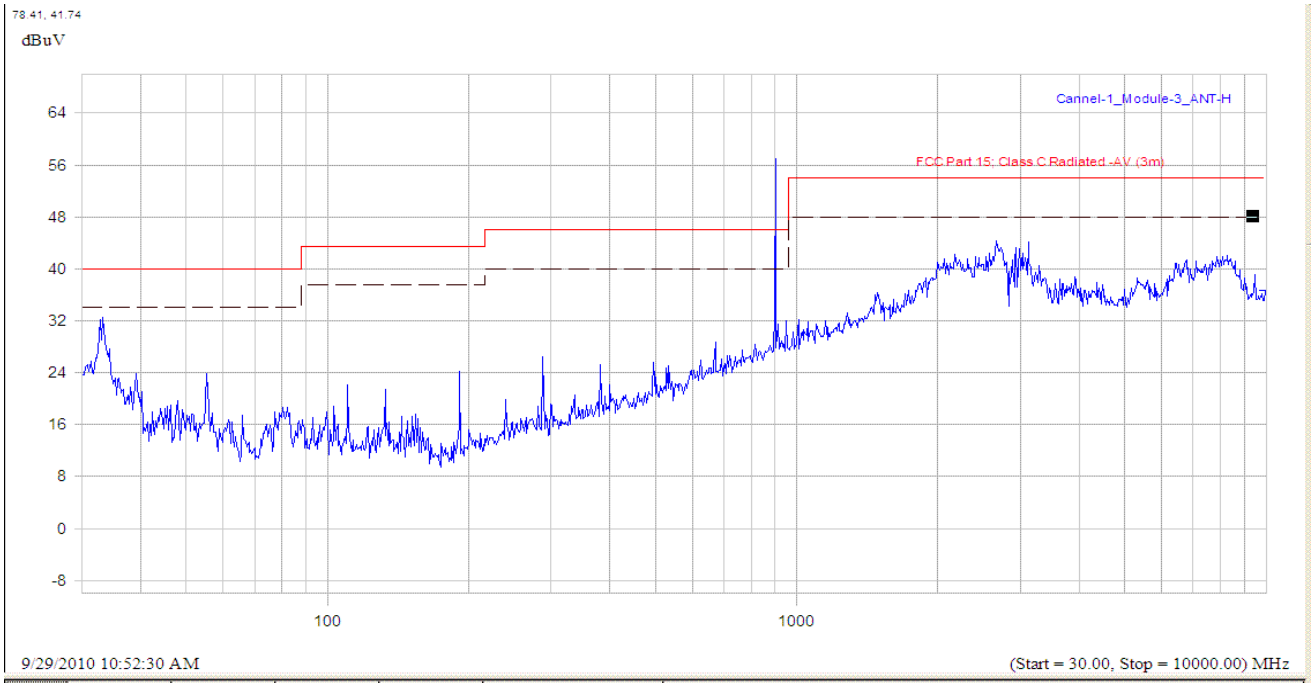
(Plot C.1: Channel = 50 Antenna Horizontal)



	Frequency MHz	Peak dBuV/m	Delta Pk-Limit dB	QP dBuV/m	Delta QP-Limit dB	Trace Name	Comment
1	32.042	31.9	0.0	27.7	0.0	Channel 50_Modu	
2	927.000	58.1	0.0		0.0	Channel 50_Modu	

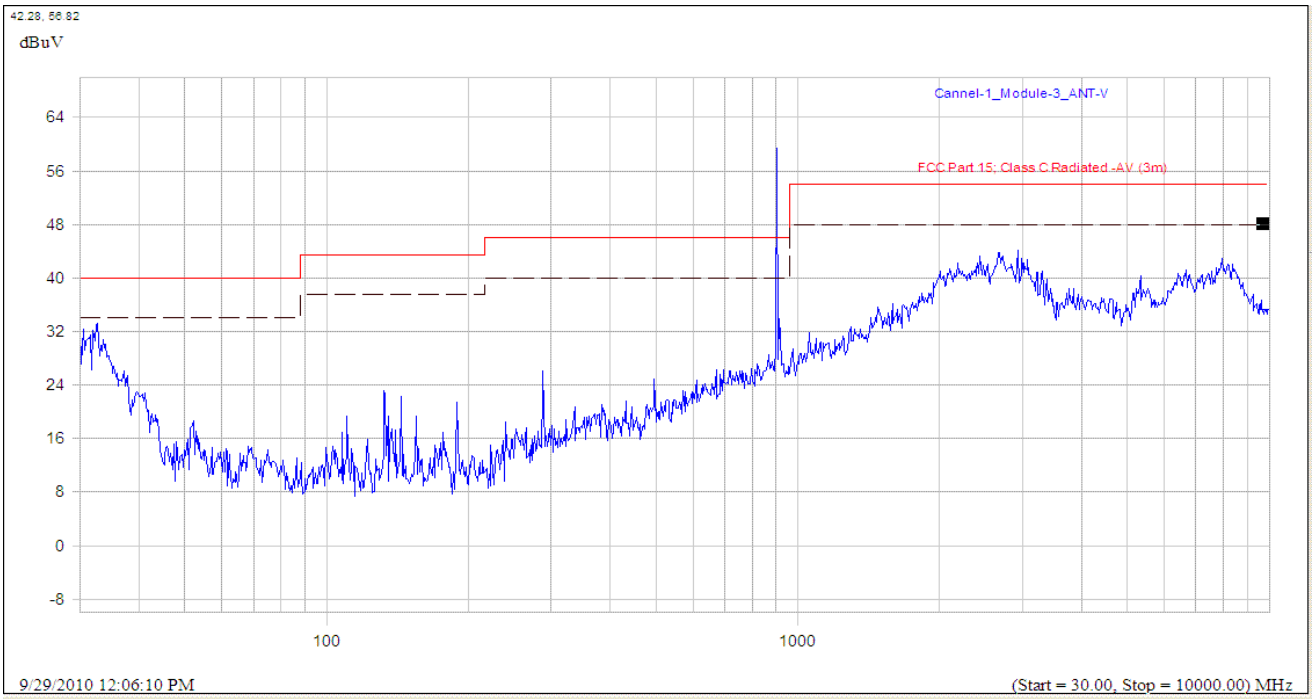
(Plot C.2: Channel = 50 Antenna Vertical)

Profile 2 with AC Adapter



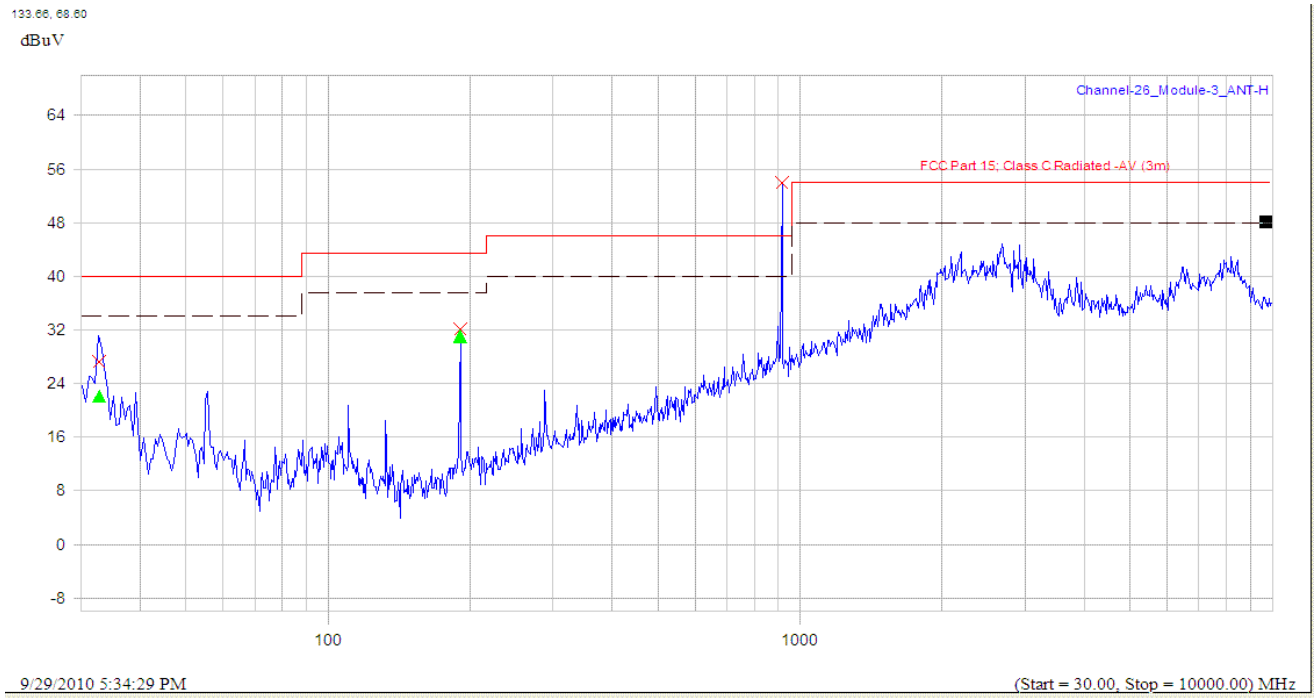
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	902.748	57.3	56.8		Cannel-1_Module-3_ANT-H	
2	33.182	31.4	27.0		Cannel-1_Module-3_ANT-H	

(Plot A.1: Channel = 1 Antenna Horizonta)



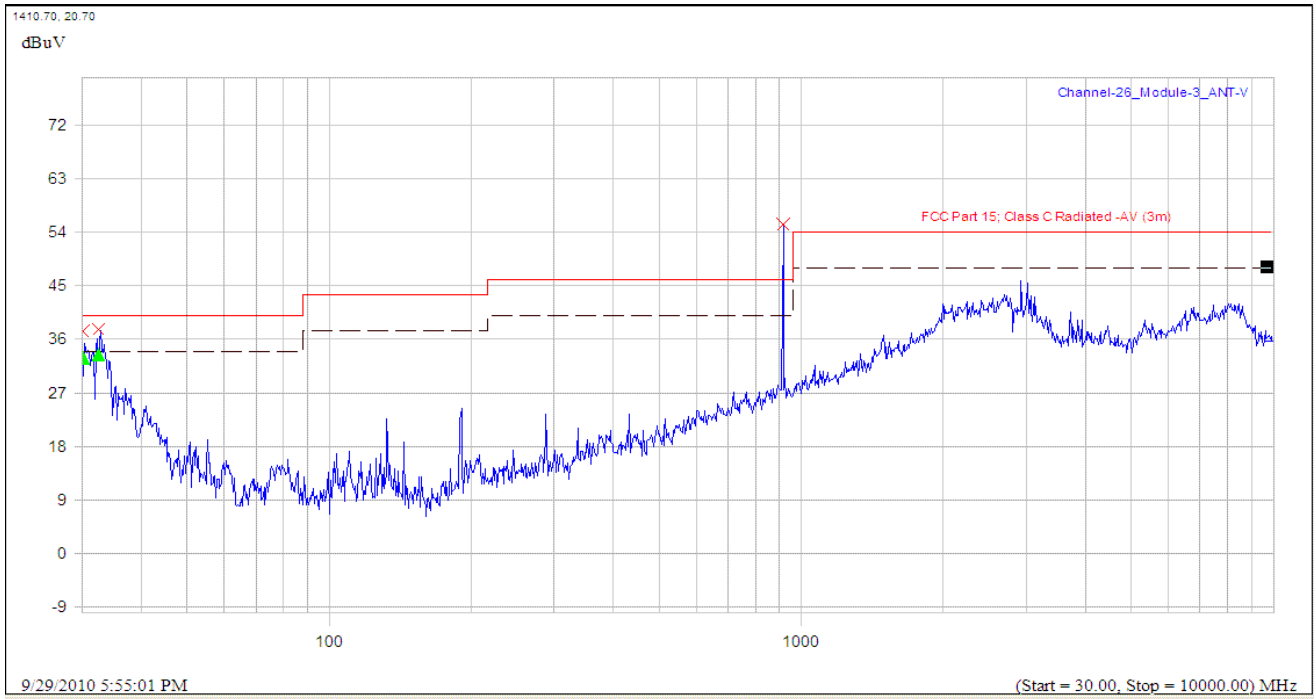
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	32.251	37.4	32.9		Cannel-1_Module-3_ANT-V	QP-Limit: 40dBuV/m
2	903.000	59.4			Cannel-1_Module-3_ANT-V	

(Plot A.2: Channel = 1 Antenna Vertical)



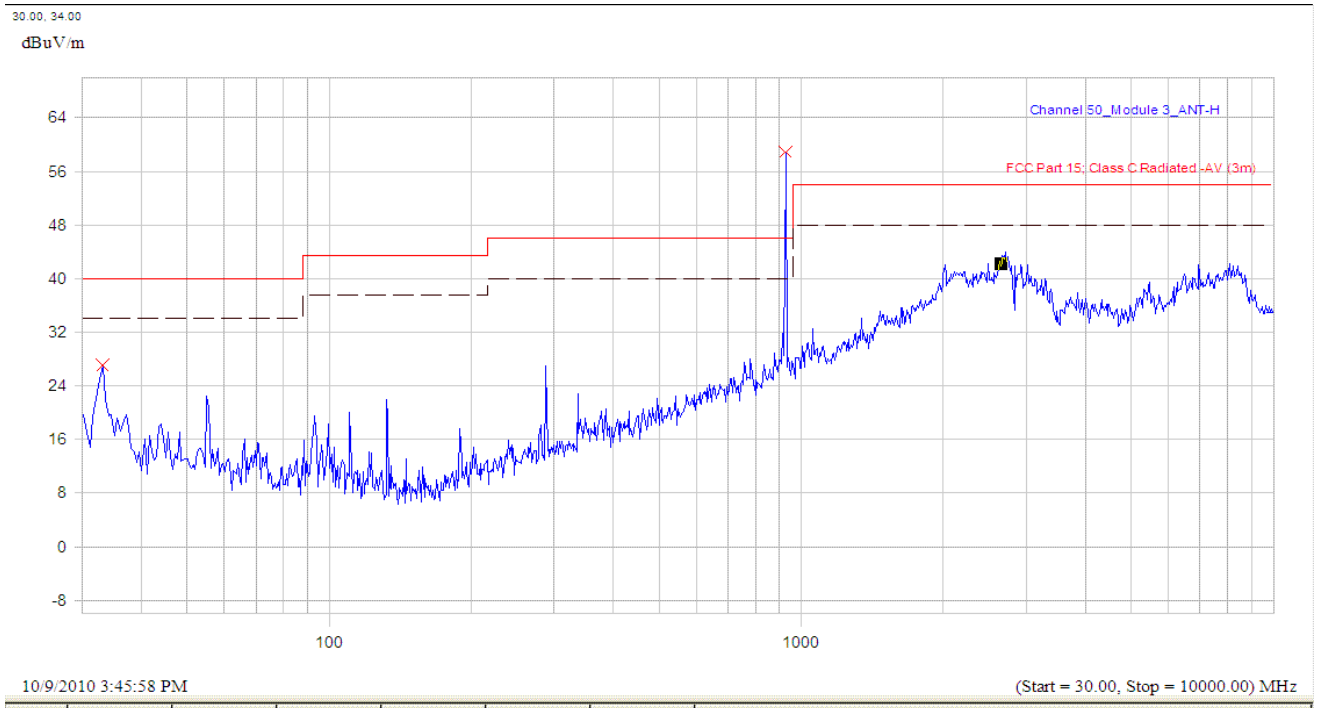
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	32.751	27.3	22.1		Channel-26_Module-3_ANT-H	QP-Limit: 40dBuV/m
2	190.418	32.0	31.0		Channel-26_Module-3_ANT-H	QP-Limit: 43.5dBuV/m
3	915.500	54.0			Channel-26_Module-3_ANT-H	

(Plot B.1: Channel = 26 Antenna Horizontal)



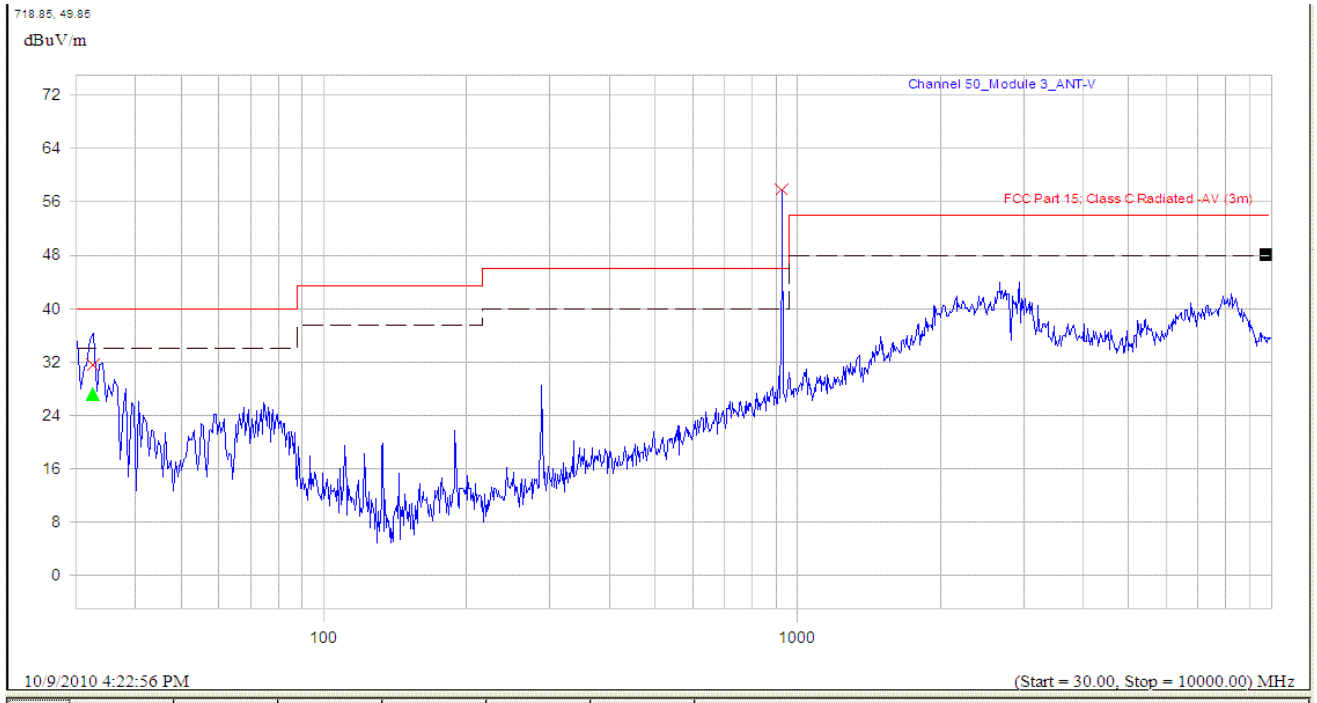
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	32.467	37.7	33.4		Channel-26_Module-3_ANT-V	QP-Limit: 40dBuV/m
2	30.138	37.3	32.8		Channel-26_Module-3_ANT-V	QP-Limit: 40dBuV/m
3	915.500	55.3			Channel-26_Module-3_ANT-V	

(Plot B.2: Channel = 26 Antenna Vertical)



	Frequency MHz	Peak dBuV/m	Delta Pk-Limit dB	QP dBuV/m	Delta QP-Limit dB	Trace Name	Comment
1	33.100	27.0	0.0		0.0	Channel 50_Modu	
2	927.500	58.9	0.0		0.0	Channel 50_Modu	

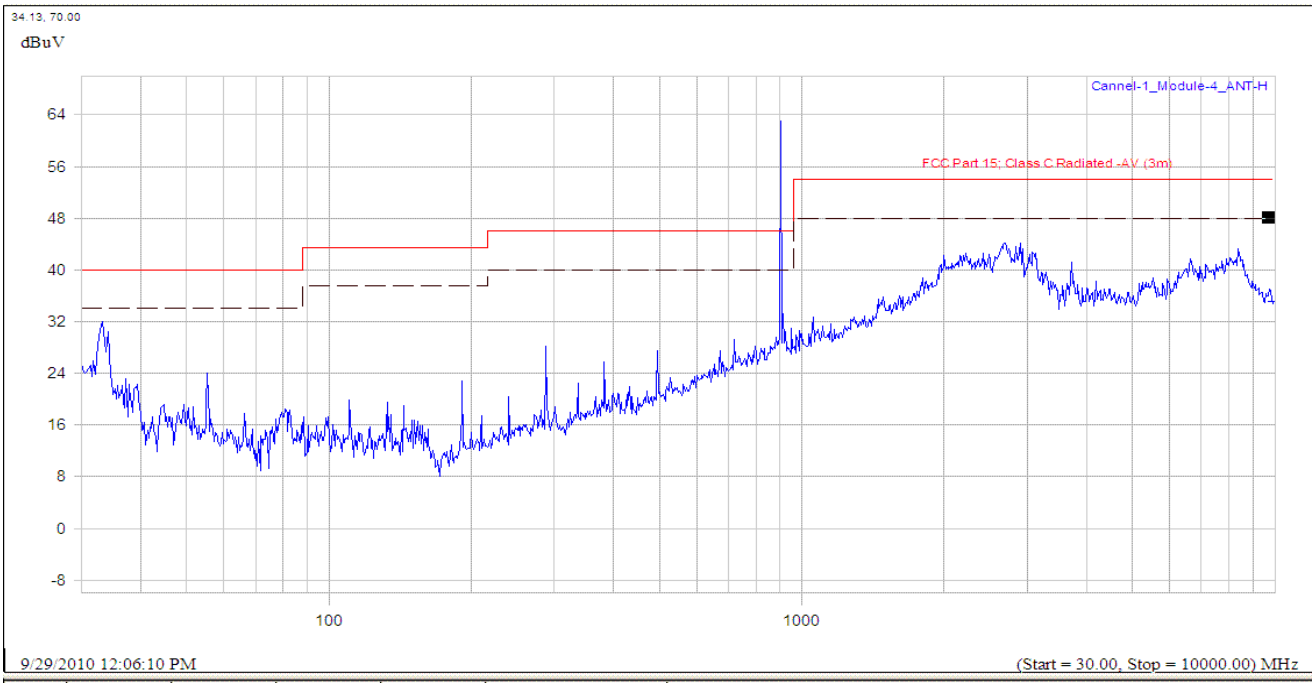
(Plot C.1: Channel = 50 Antenna Horizontal)



	Frequency MHz	Peak dBuV/m	Delta Pk-Limit dB	QP dBuV/m	Delta QP-Limit dB	Trace Name	Comment
1	32.436	31.6	0.0	27.2	0.0	Channel 50_Modu	
2	927.200	57.8	0.0		0.0	Channel 50_Modu	

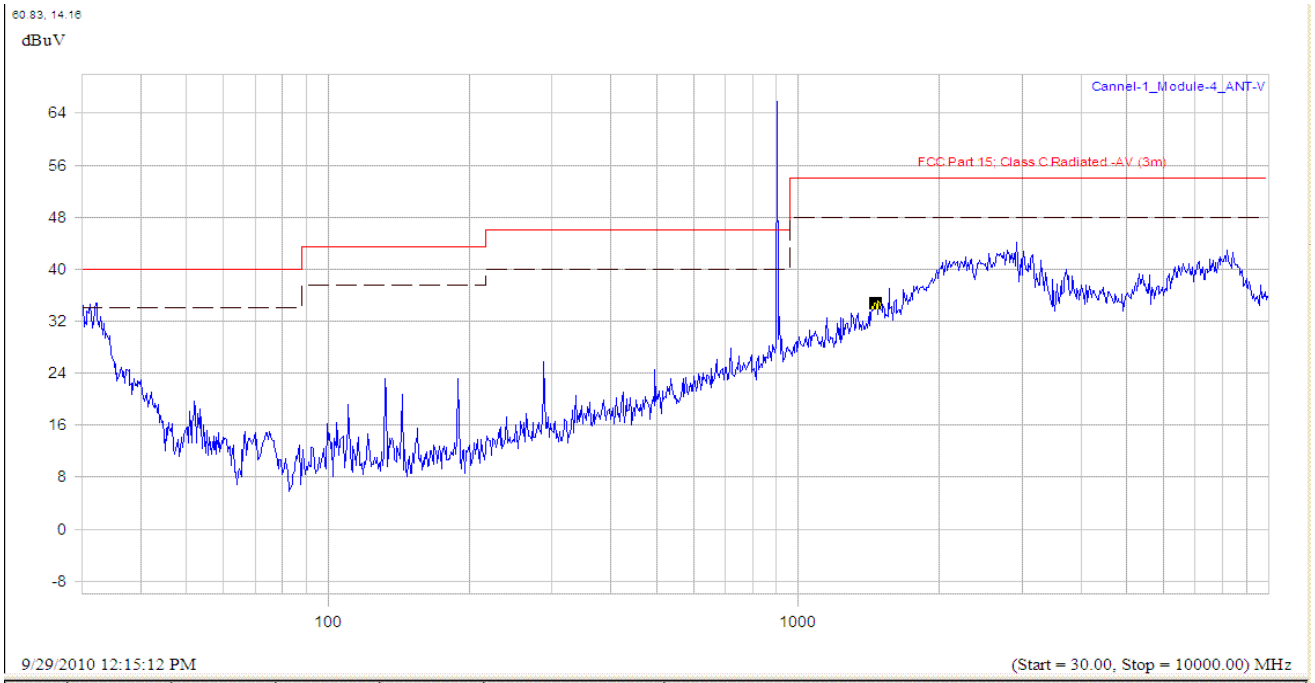
(Plot C.2: Channel = 50 Antenna Vertical)

Profile 4 with AC Adapter



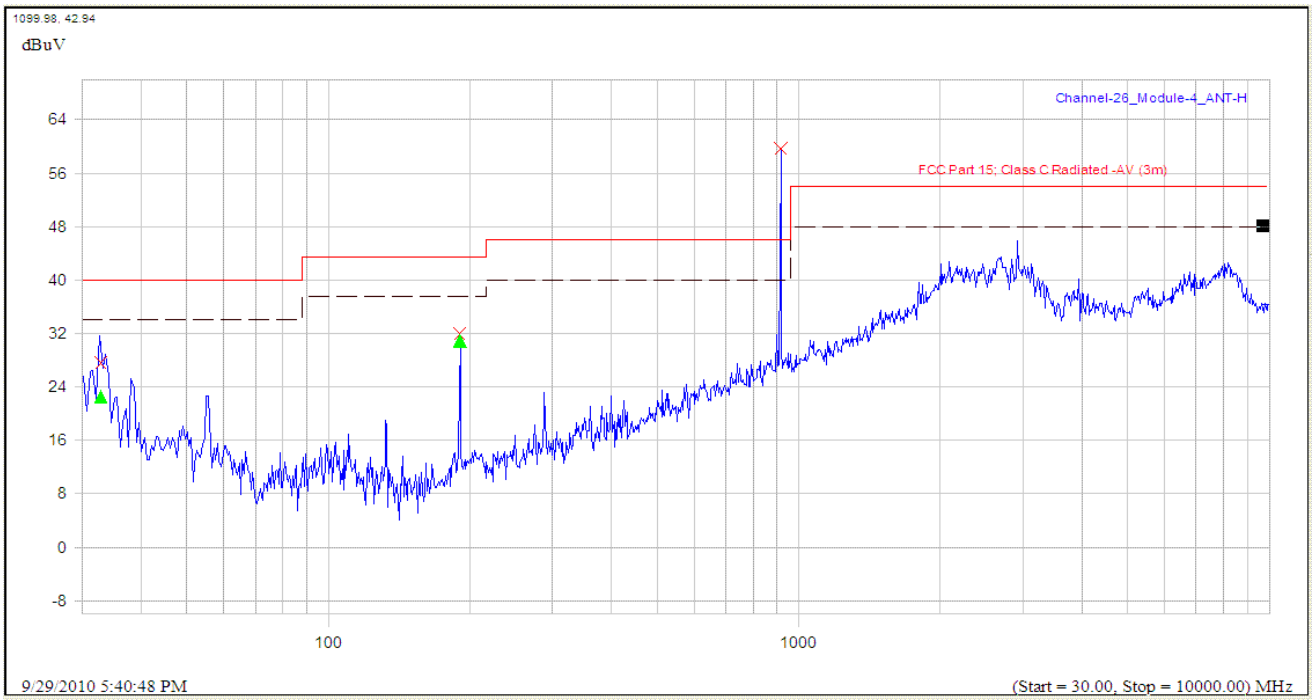
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	32.251	37.4	32.9		Cannel-1_Module-3_ANT-H	QP-Limit: 40dBuV/m
2	903.000	59.4			Cannel-1_Module-3_ANT-H	

(Plot A.1: Channel = 1 Antenna Horizonta)



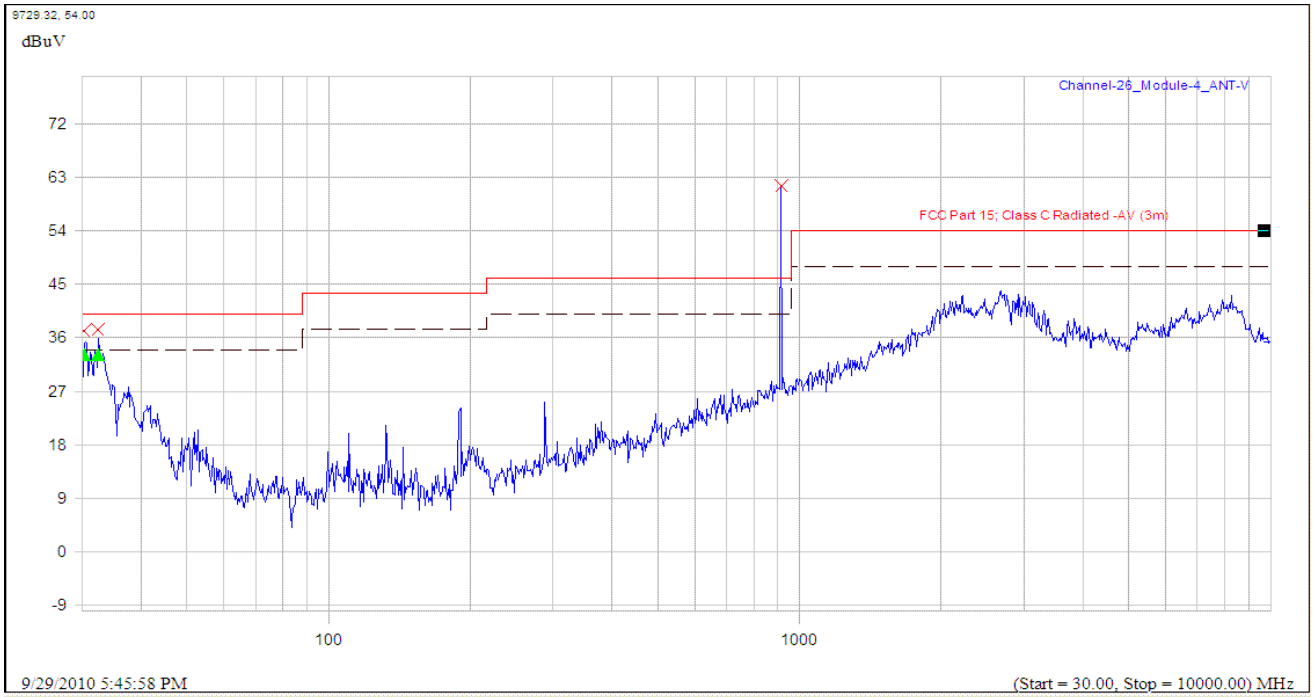
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	32.140	36.6	32.4		Cannel-1_Module-4_ANT-V	QP-Limit: 40dBuV/m
2	31.316	35.5	31.5		Cannel-1_Module-4_ANT-V	QP-Limit: 40dBuV/m
3	903.000	65.9			Cannel-1_Module-4_ANT-V	

(Plot A.2: Channel = 1 Antenna Vertical)



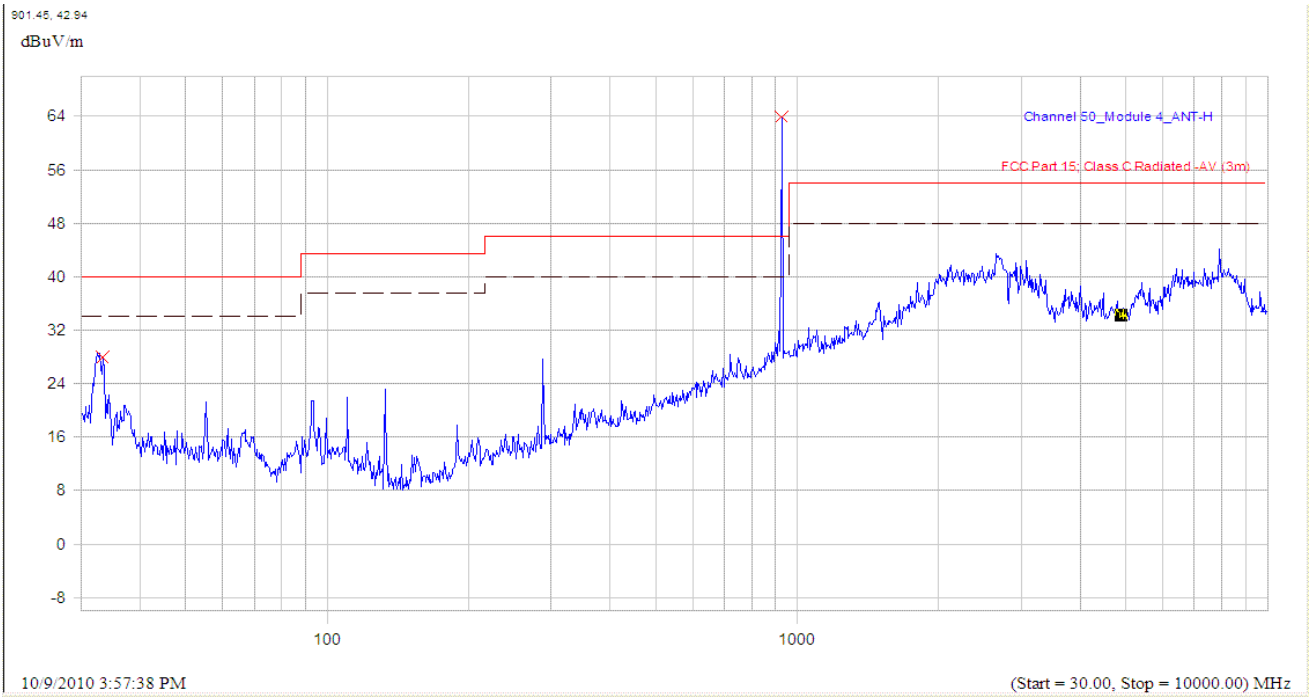
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	32.843	27.5	22.6		Channel-26_Module-4_ANT-H	QP-Limit: 40dBuV/m
2	190.276	31.9	30.9		Channel-26_Module-4_ANT-H	QP-Limit: 43.5dBuV/m
3	915.500	59.6			Channel-26_Module-4_ANT-H	

(Plot B.1: Channel = 26 Antenna Horizontal)



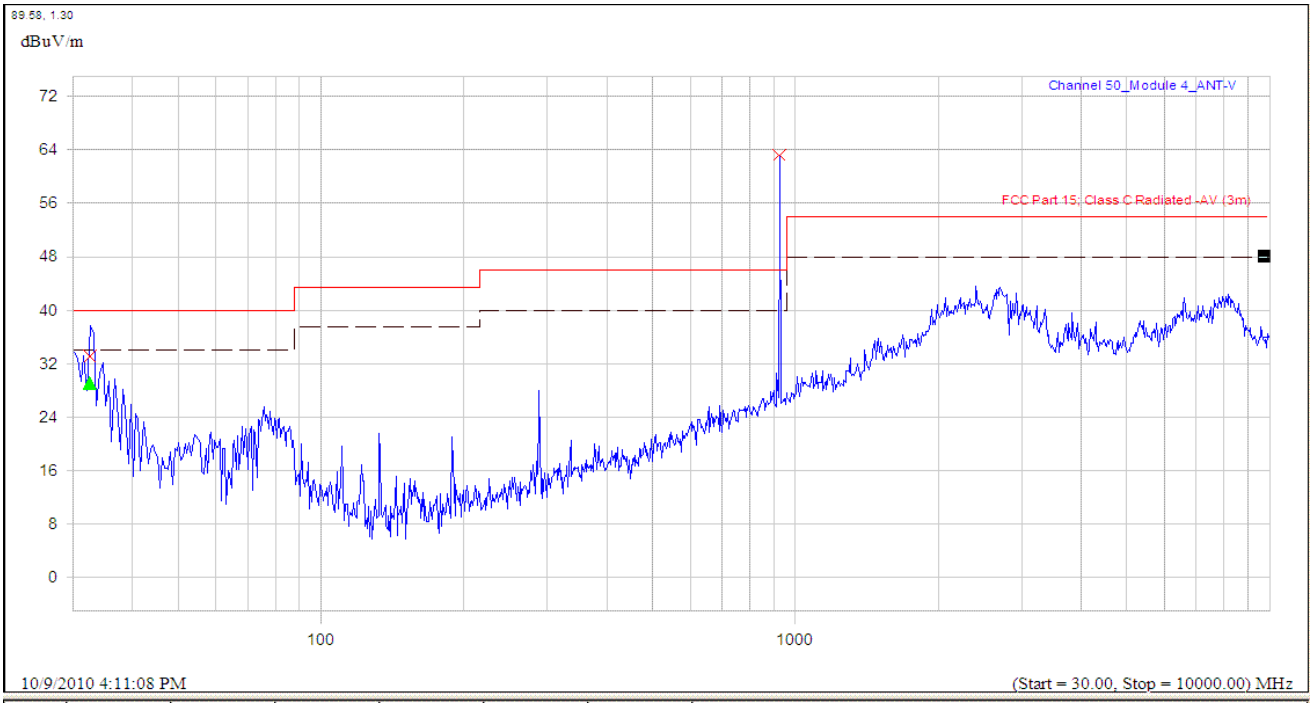
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	32.394	37.4	33.1		Channel-26_Module-4_ANT-V	QP-Limit: 40dBuV/m
2	30.251	37.1	33.2		Channel-26_Module-4_ANT-V	QP-Limit: 40dBuV/m
3	915.000	61.5			Channel-26_Module-4_ANT-V	

(Plot B.2: Channel = 26 Antenna Vertical)



	Frequency MHz	Peak dBuV/m	Delta Pk-Limit dB	QP dBuV/m	Delta QP-Limit dB	Trace Name	Comment
1	33.315	28.0	0.0		0.0	Channel 50_Modu	
2	927.300	63.9	0.0		0.0	Channel 50_Modu	

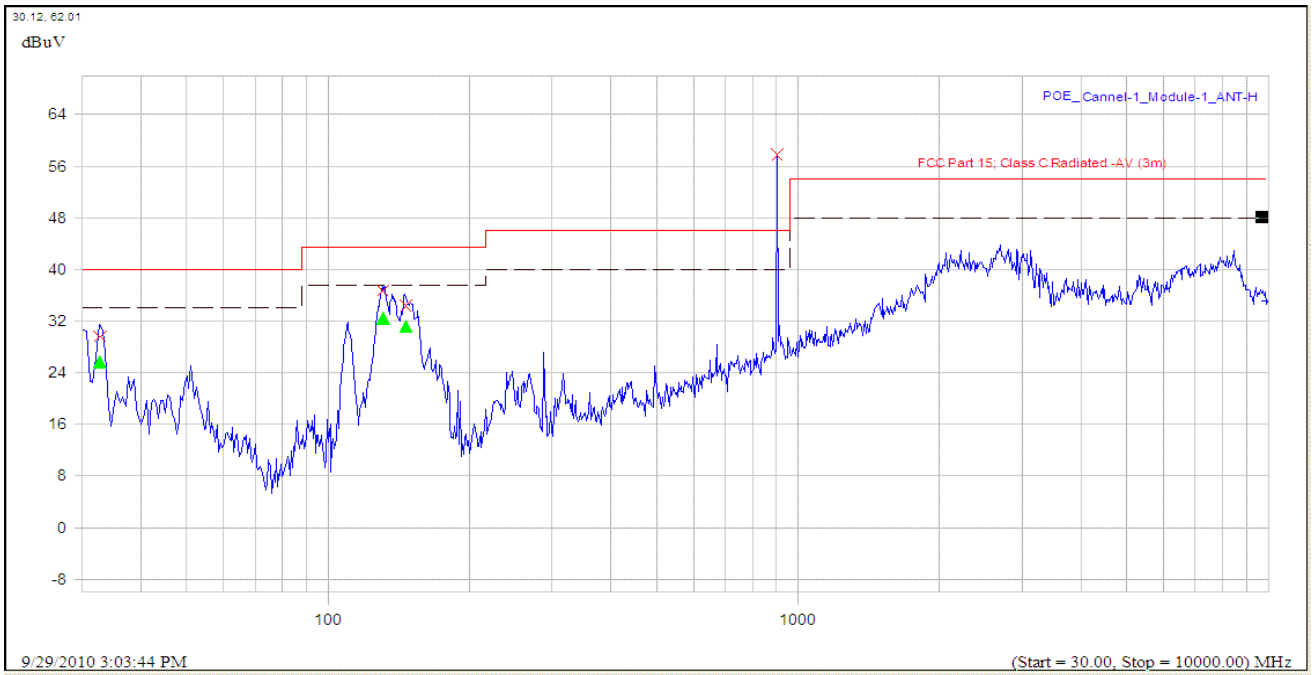
(Plot C.1: Channel = 50 Antenna Horizontal)



	Frequency MHz	Peak dBuV/m	Delta Pk-Limit dB	QP dBuV/m	Delta QP-Limit dB	Trace Name	Comment
1	32.444	33.1	0.0	29.1	0.0	Channel 50_Modu	
2	927.200	63.2	0.0		0.0	Channel 50_Modu	

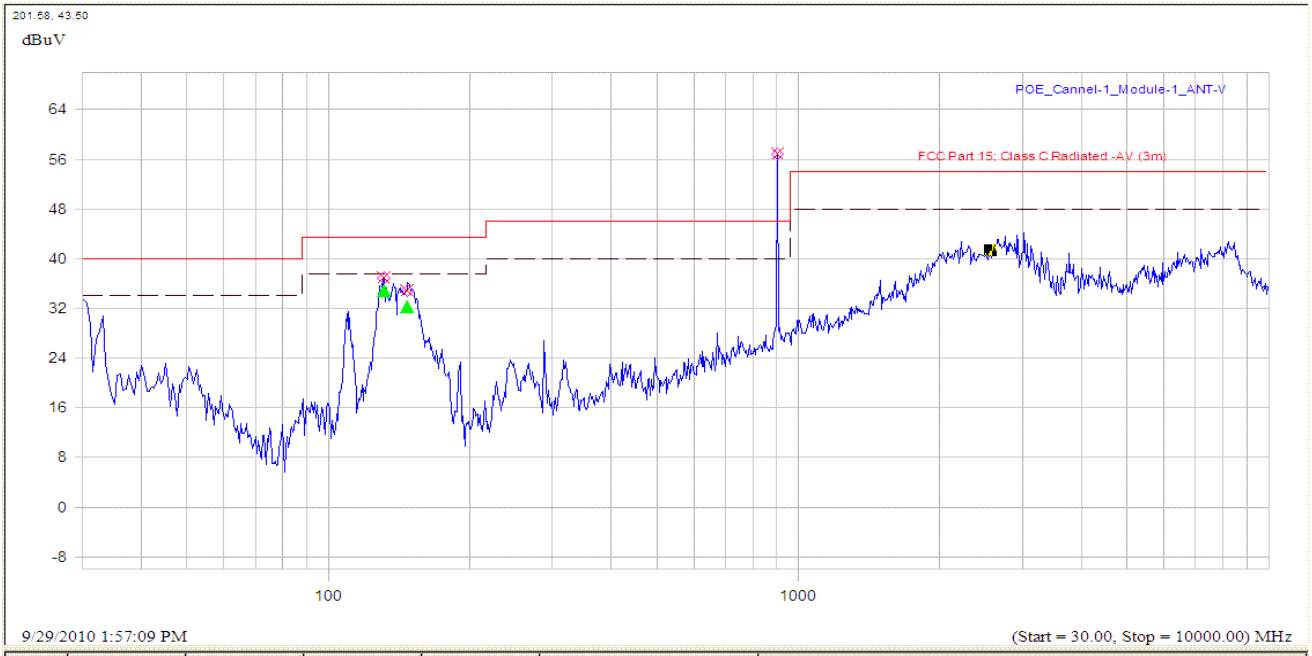
(Plot C.2: Channel = 50 Antenna Vertical)

Profile 1 with POE



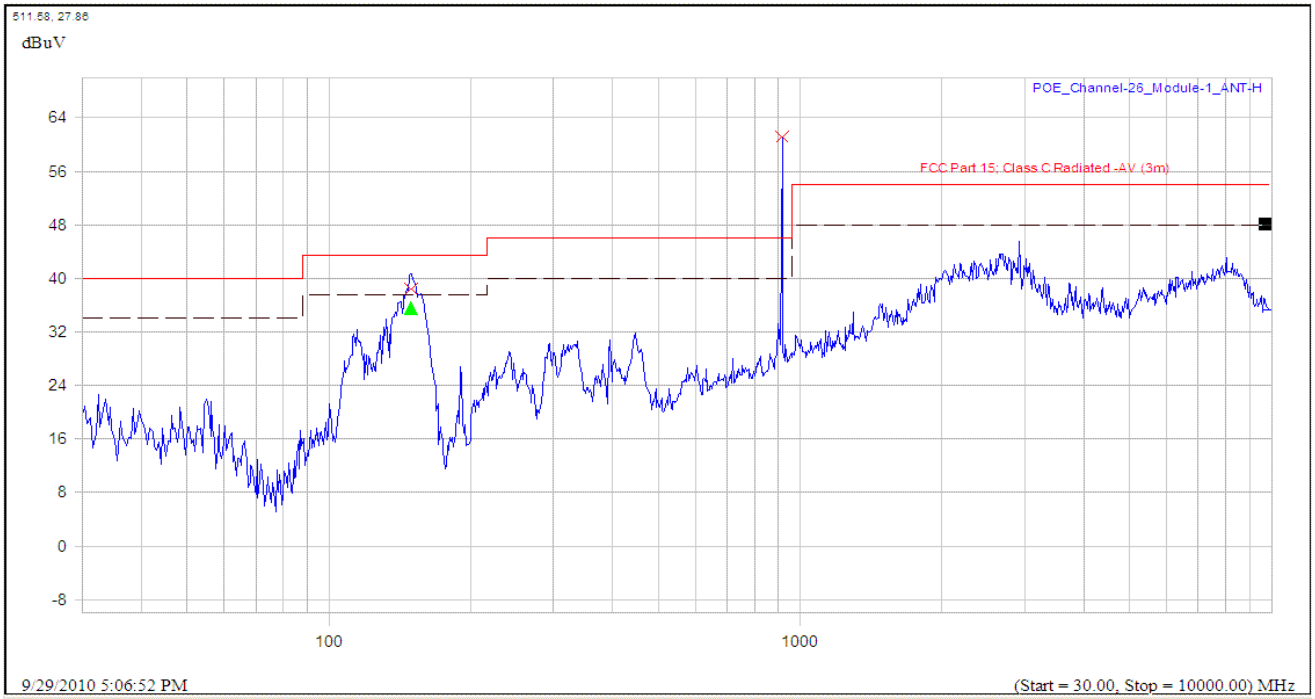
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	32.679	29.6	25.7		POE_Channel-1_Module-1_ANT-H	QP-Limit: 40dBuV/m
2	130.856	36.7	32.5		POE_Channel-1_Module-1_ANT-H	QP-Limit: 43.5dBuV/m
3	146.514	34.3	31.2		POE_Channel-1_Module-1_ANT-H	QP-Limit: 43.5dBuV/m
4	903.000	57.8			POE_Channel-1_Module-1_ANT-H	

(Plot A.1: Channel = 1 Antenna Horizonta)



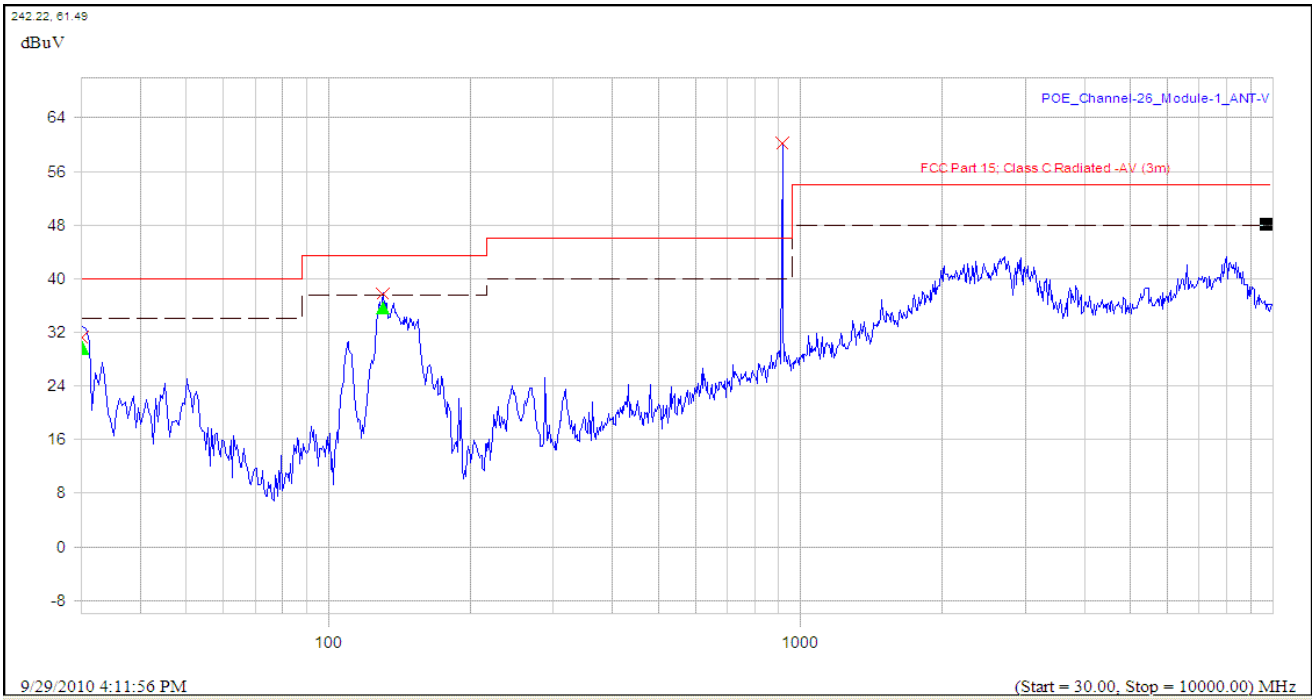
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	29.212	33.4	30.6		POE_Cannel-1_Module-1_ANT-V	QP-Limit: 40dBuV/m
2	131.247	36.9	34.9		POE_Cannel-1_Module-1_ANT-V	QP-Limit: 43.5dBuV/m
3	146.908	34.9	32.2		POE_Cannel-1_Module-1_ANT-V	QP-Limit: 43.5dBuV/m
4	903.000	56.9			POE_Cannel-1_Module-1_ANT-V	

(Plot A.2: Channel = 1 Antenna Vertical)



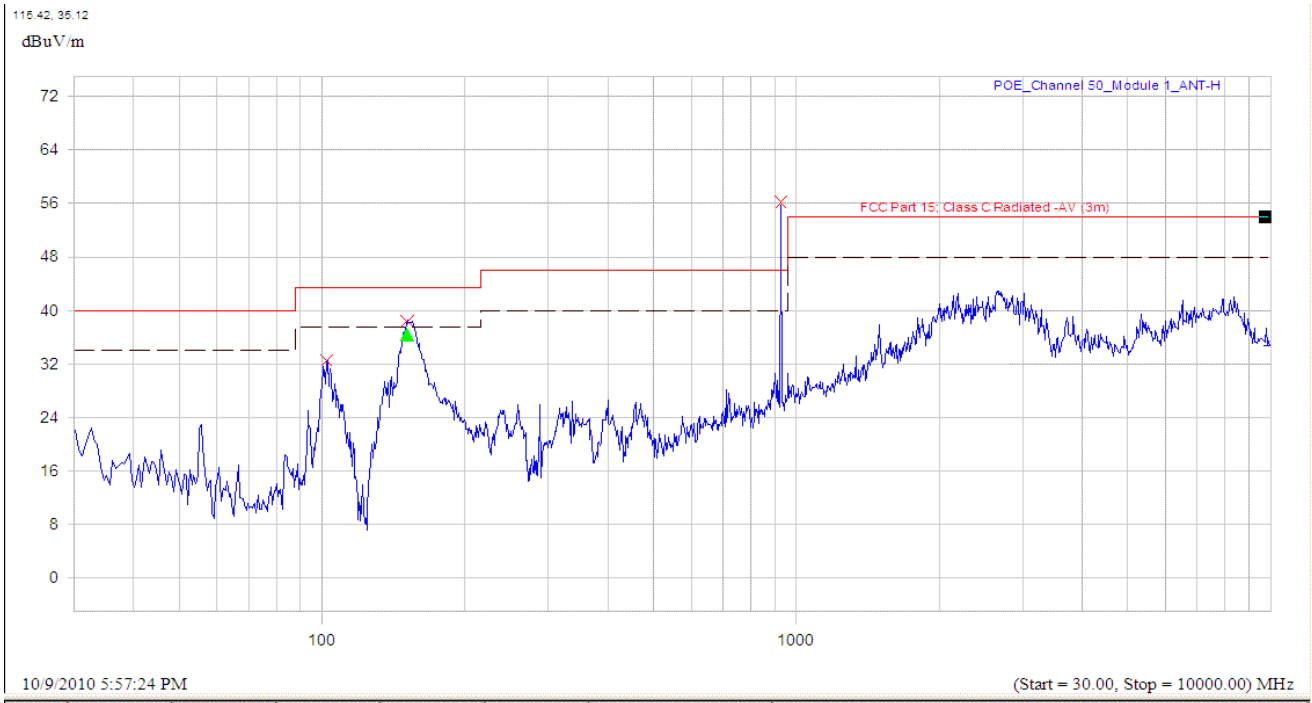
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	149.198	38.4	35.5		POE_Channel-26_Module-1_ANT-H	QP-Limit: 43.5dbuV/m
2	915.500	61.1			POE_Channel-26_Module-1_ANT-H	

(Plot B.1: Channel = 26 Antenna Horizontal)



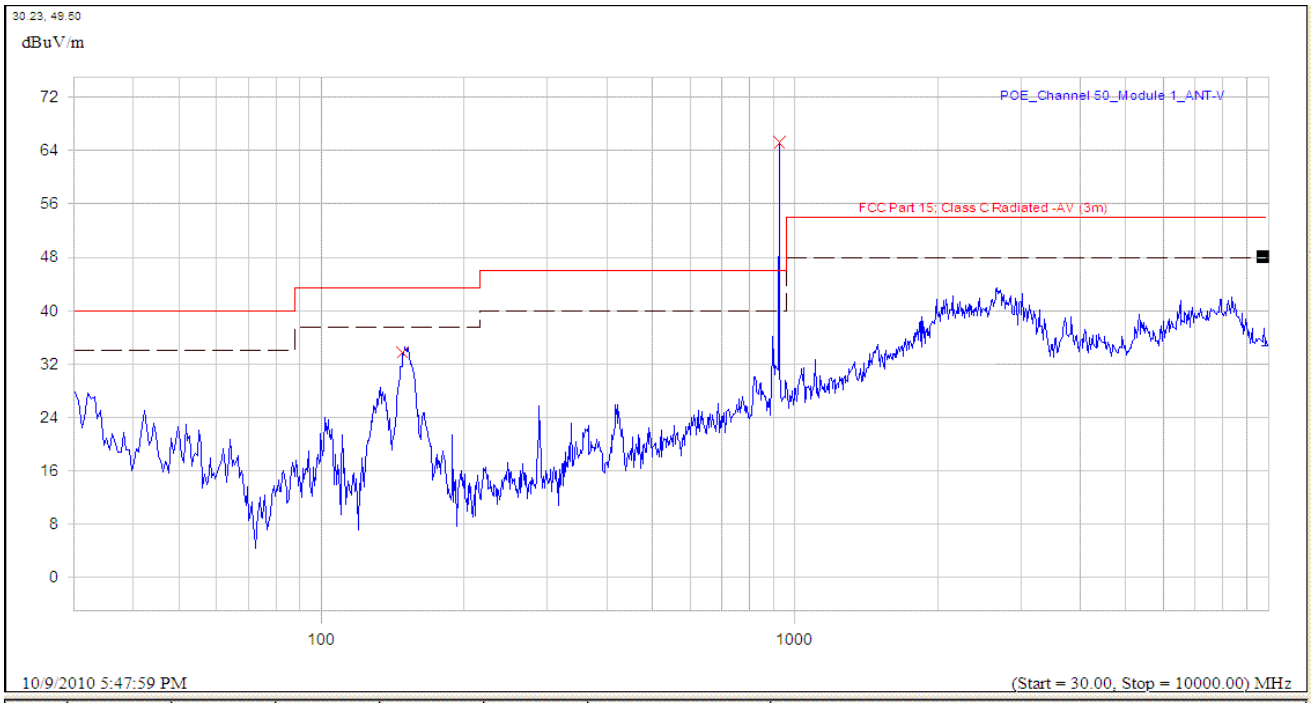
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	30.126	31.3	29.7		POE_Channel-26_Module-1_ANT-V	QP-Limit: 40dBuV/m
2	130.757	37.7	35.6		POE_Channel-26_Module-1_ANT-V	QP-Limit: 43.5dBuV/m
3	915.500	60.2			POE_Channel-26_Module-1_ANT-V	

(Plot B.2: Channel = 26 Antenna Vertical)



	Frequency MHz	Peak dBuV/m	Delta Pk-Limit dB	QP dBuV/m	Delta QP-Limit dB	Trace Name	Comment
1	102.100	32.5	0.0		0.0	POE_Channel 50_Module 1_AN	
2	150.770	38.4	0.0	36.4	0.0	POE_Channel 50_Module 1_AN	
3	927.500	56.1	0.0		0.0	POE_Channel 50_Module 1_AN	

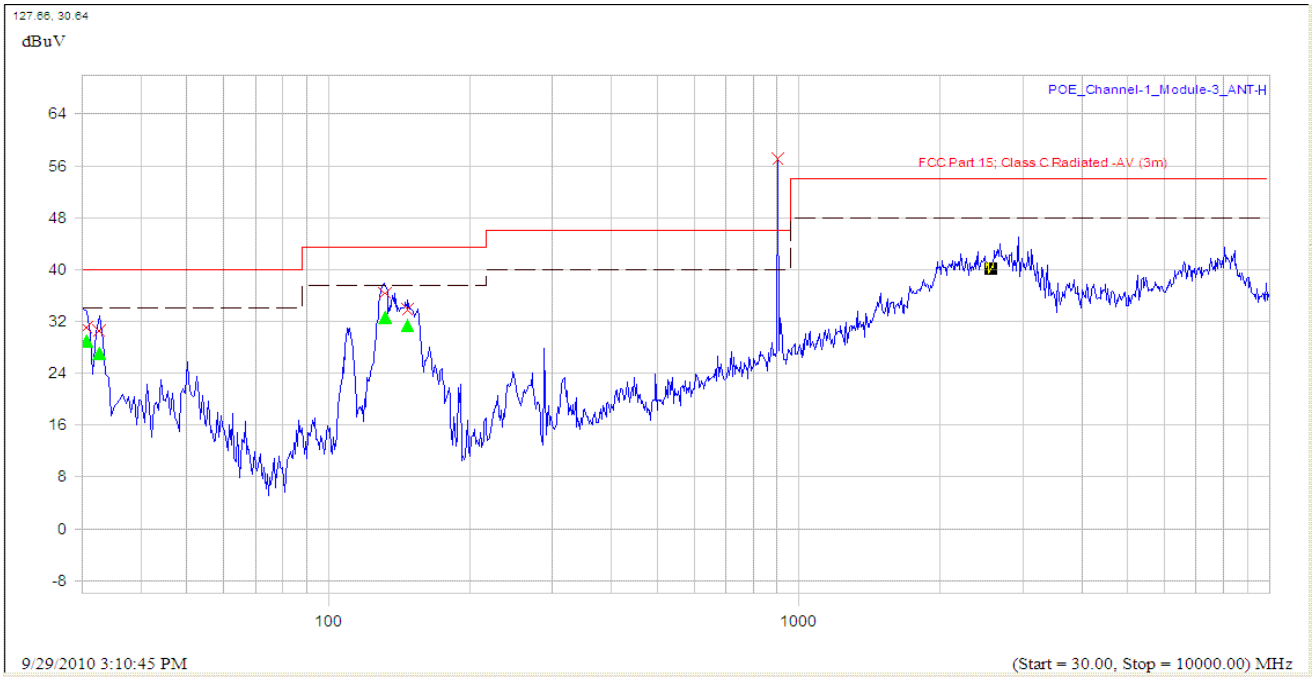
(Plot C.1: Channel = 50 Antenna Horizontal)



	Frequency MHz	Peak dBuV/m	Delta Pk-Limit dB	QP dBuV/m	Delta QP-Limit dB	Trace Name	Comment
1	927.500	65.1	0.0		0.0	POE_Channel 50_Module 1_AN	
2	148.100	33.7	0.0		0.0	POE_Channel 50_Module 1_AN	

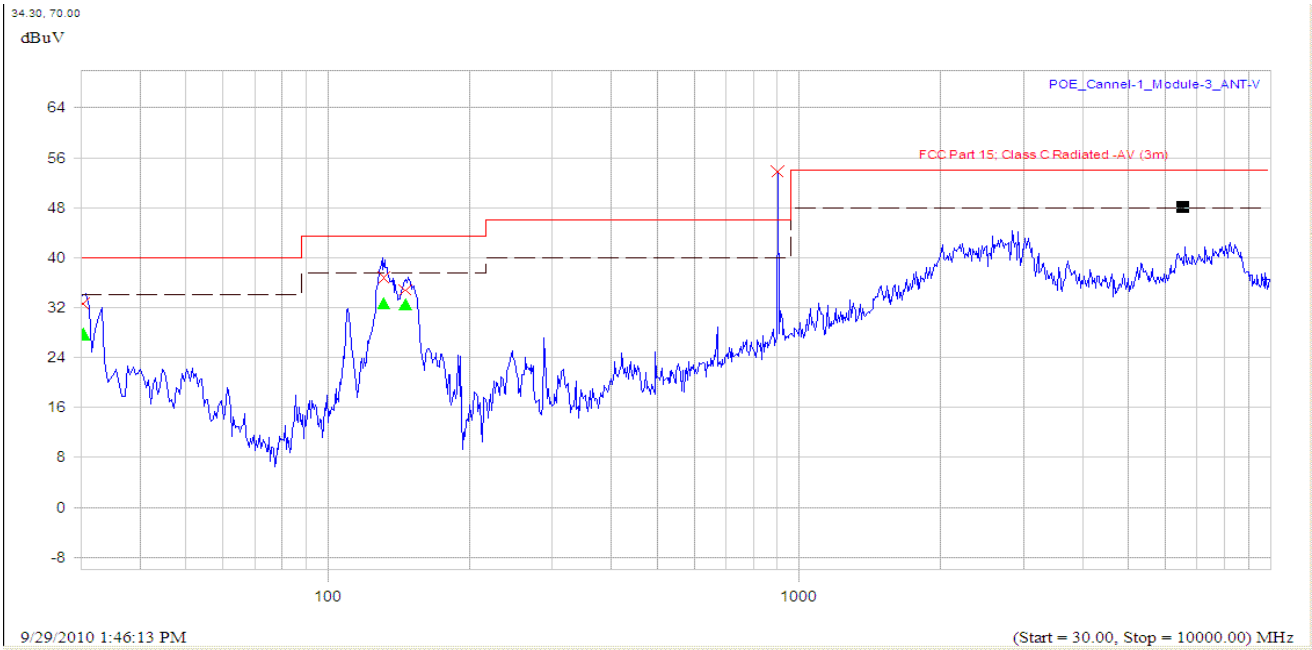
(Plot C.2: Channel = 50 Antenna Vertical)

Profile 2 with POE



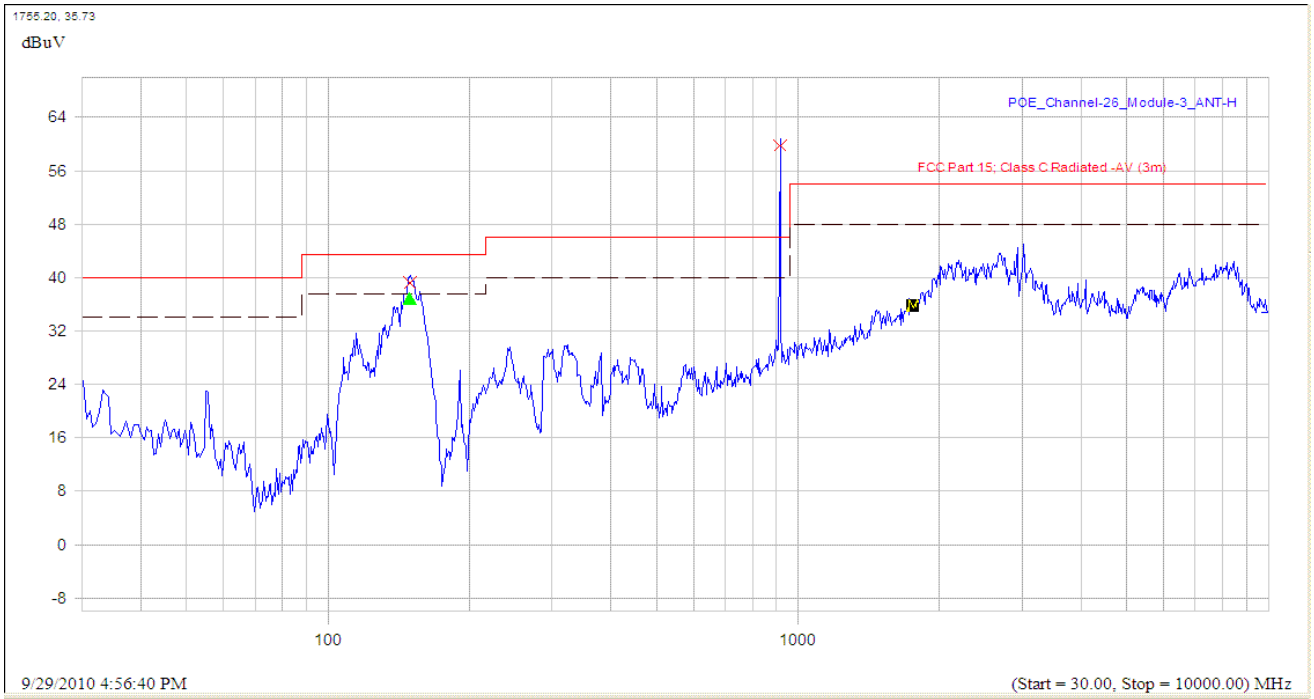
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	32.615	30.6	27.1		POE_Channel-1_Module-3_ANT-H	QP-Limit: 40dBuV/m
2	30.625	31.0	29.0		POE_Channel-1_Module-3_ANT-H	QP-Limit: 40dBuV/m
3	131.971	36.4	32.6		POE_Channel-1_Module-3_ANT-H	QP-Limit: 43.5dBuV/m
4	147.299	33.8	31.4		POE_Channel-1_Module-3_ANT-H	QP-Limit: 43.5dBuV/m
5	903.000	57.0			POE_Channel-1_Module-3_ANT-H	

(Plot A.1: Channel = 1 Antenna Horizonta)



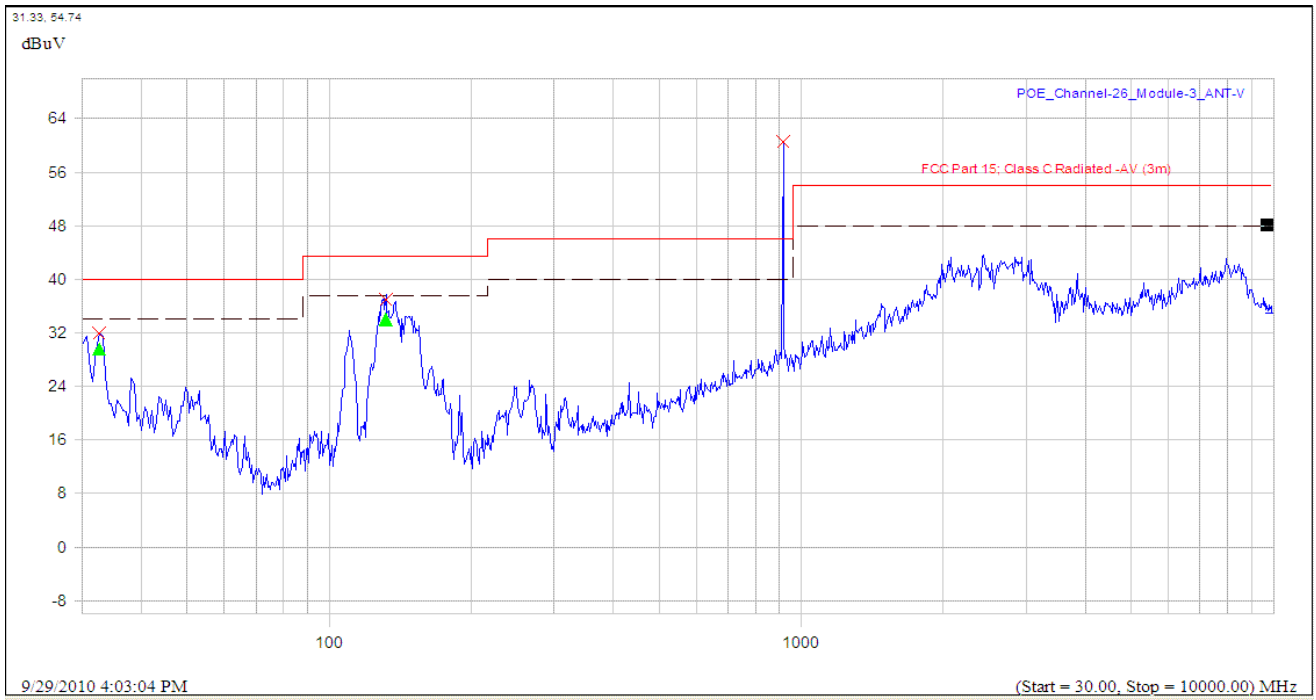
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	30.271	32.6	27.7		POE_Cannel-1_Module-4_ANT-	QP-Limit: 40dBuV/m
2	131.563	36.8	32.7		POE_Cannel-1_Module-4_ANT-	QP-Limit: 43.5dBuV/m
3	146.298	34.8	32.5		POE_Cannel-1_Module-3_ANT-	QP-Limit: 43.5dBuV/m
4	902.500	53.8			POE_Cannel-1_Module-3_ANT-	

(Plot A.2: Channel = 1 Antenna Vertical)



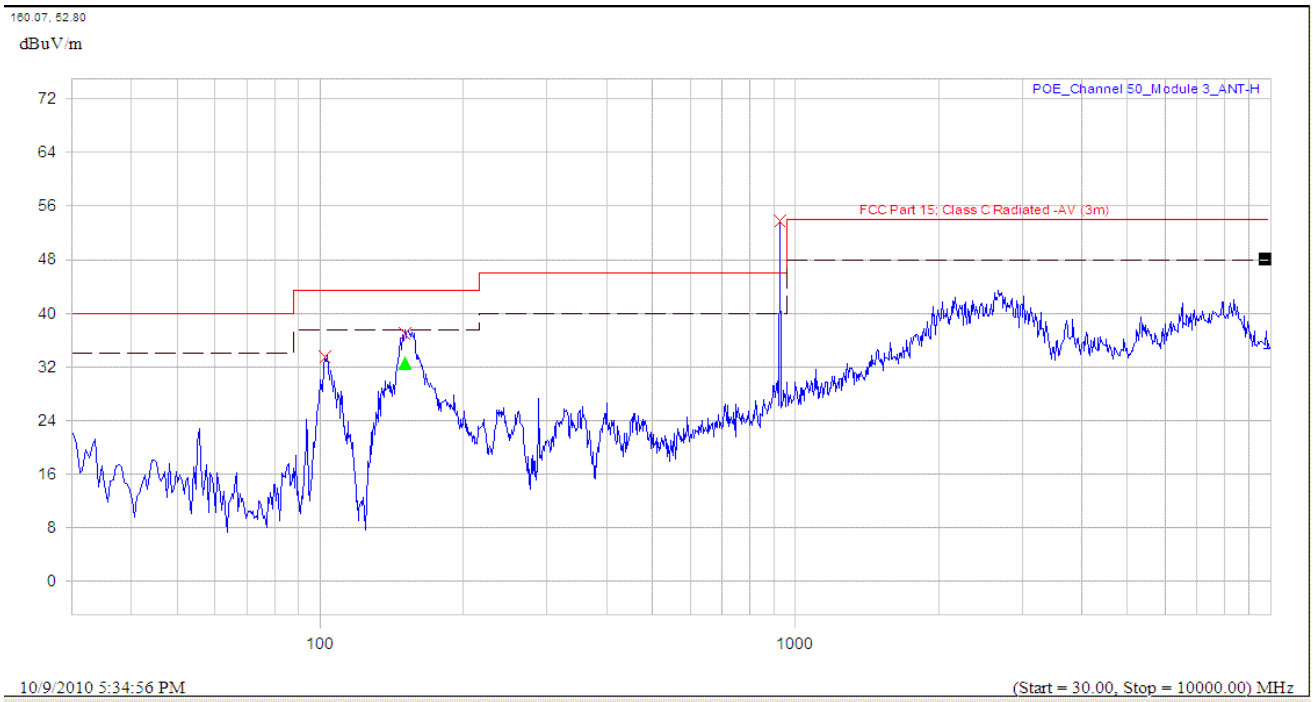
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	149.307	39.2	36.9		POE_Channel-26_Module-3_ANT-H	QP-Limit: 43.5dBuV/m
2	915.000	59.7			POE_Channel-26_Module-3_ANT-H	

(Plot B.1: Channel = 26 Antenna Horizontal)



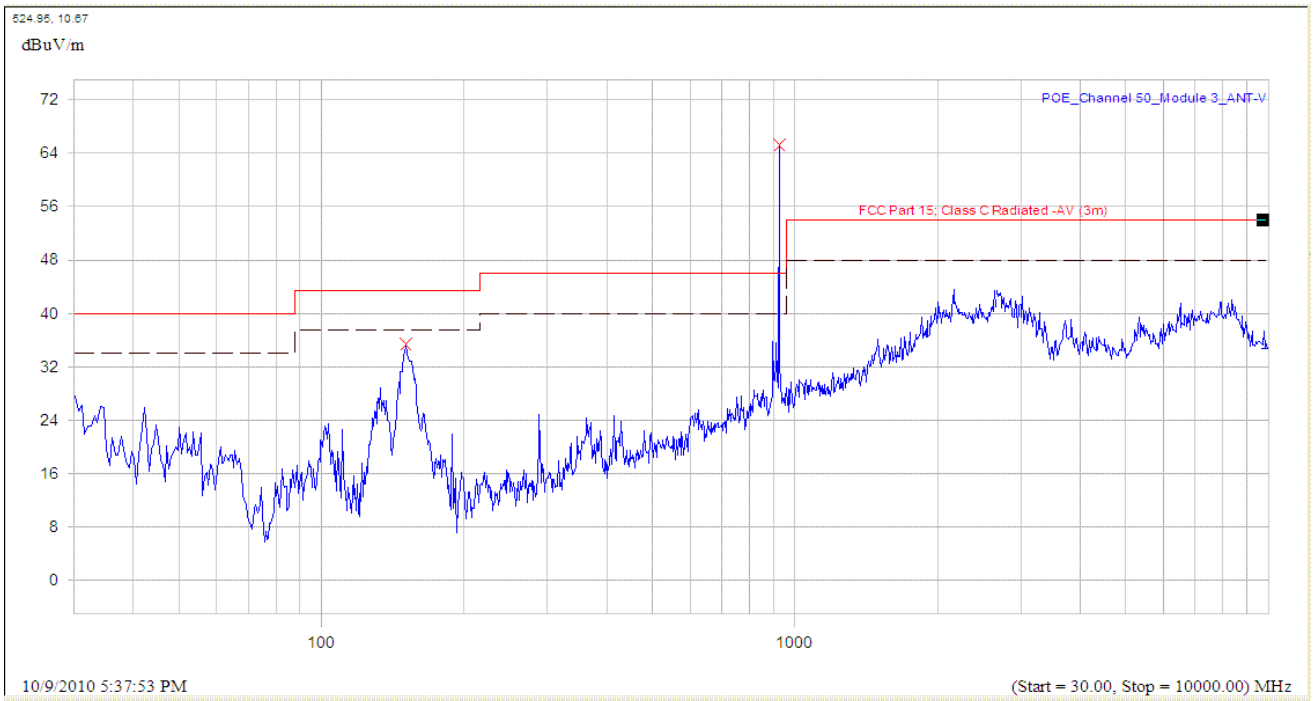
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	32.572	31.9	29.6		POE_Channel-26_Module-3_ANT-V	QP-Limit: 40dBuV/m
2	131.946	36.9	34.1		POE_Channel-26_Module-3_ANT-V	QP-Limit: 43.5dBuV/m
3	915.500	60.5			POE_Channel-26_Module-3_ANT-V	

(Plot B.2: Channel = 26 Antenna Vertical)



	Frequency MHz	Peak dBuV/m	Delta Pk-Limit dB	QP dBuV/m	Delta QP-Limit dB	Trace Name	Comment
1	102.100	33.5	0.0		0.0	POE_Channel 50_Module 3_AN	
2	150.593	37.0	0.0	32.6	0.0	POE_Channel 50_Module 3_AN	QP-Limit: 43.5dBuV/m
3	927.500	53.8	0.0		0.0	POE_Channel 50_Module 3_AN	

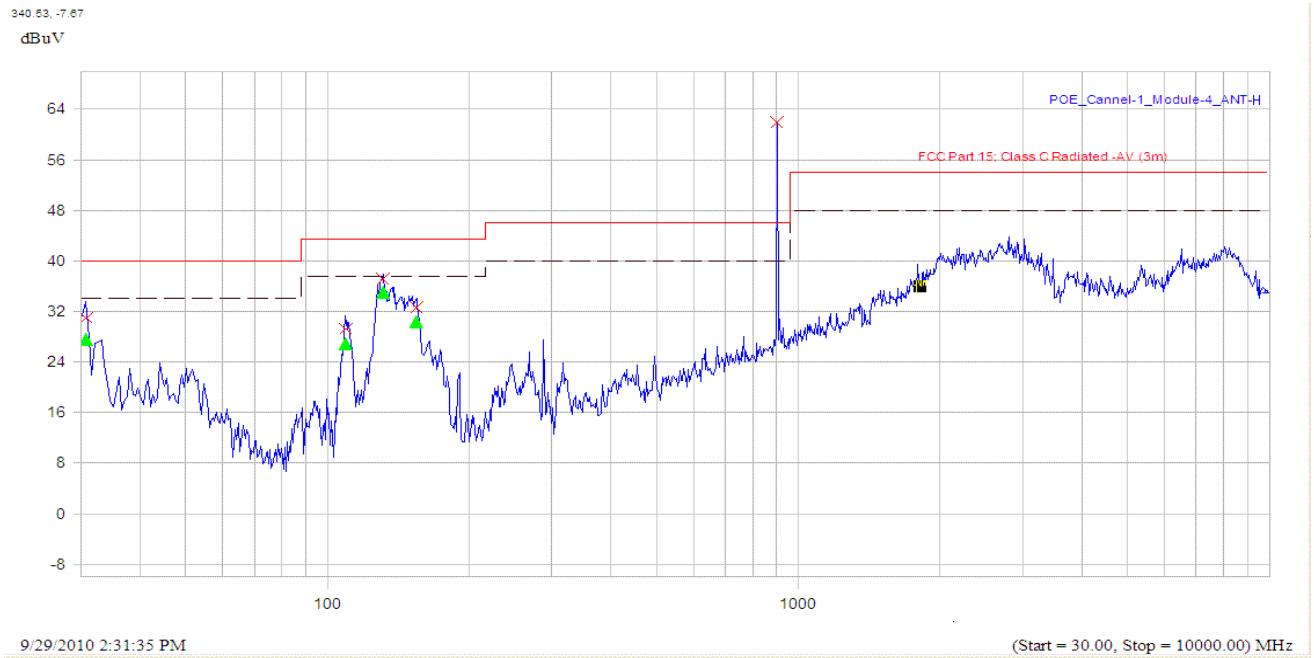
(Plot C.1: Channel = 50 Antenna Horizontal)



	Frequency MHz	Peak dBuV/m	Delta Pk-Limit dB	QP dBuV/m	Delta QP-Limit dB	Trace Name	Comment
1	150.600	35.3	0.0		0.0	POE_Channel 50_Module 3_AN	
2	927.500	65.2	0.0		0.0	POE_Channel 50_Module 3_AN	

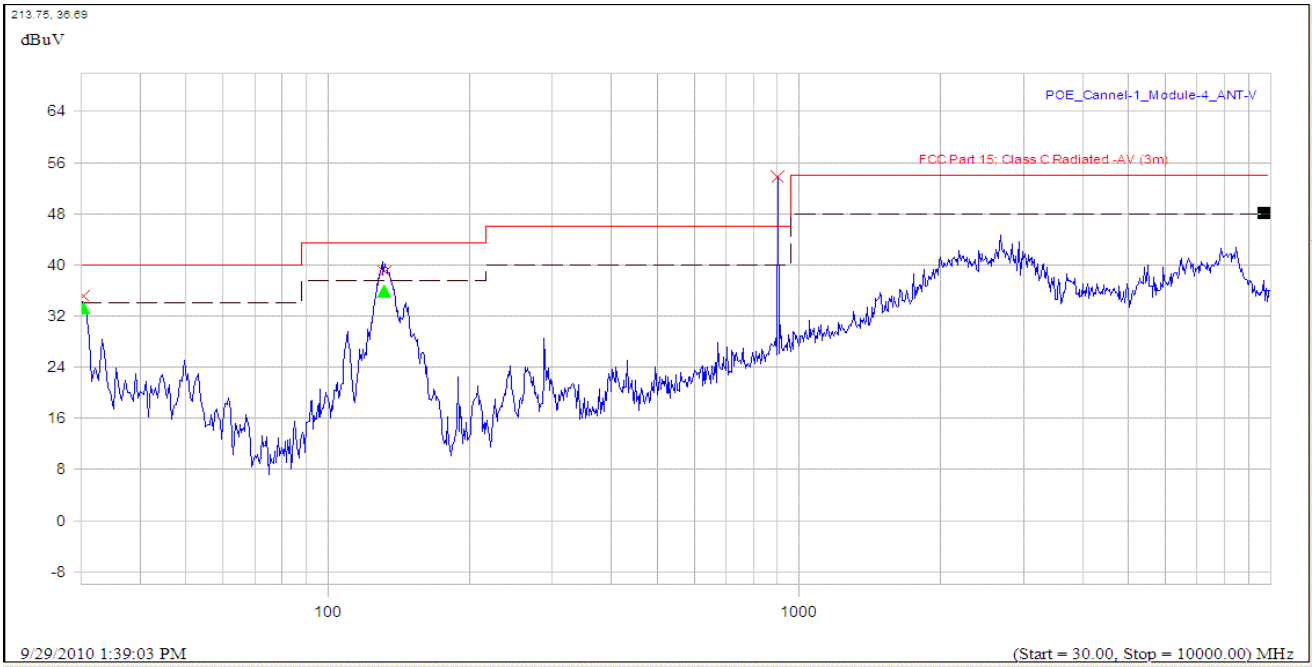
(Plot C.2: Channel = 50 Antenna Vertical)

Profile 4 with POE



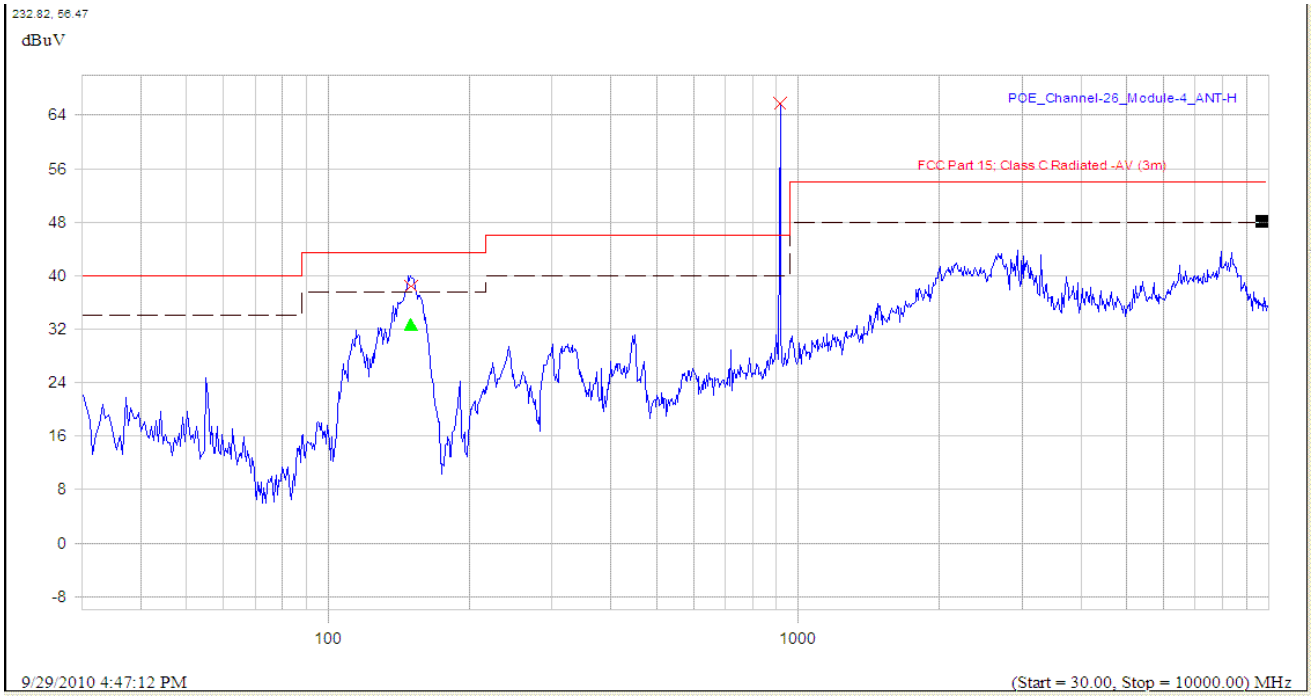
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	30.711	31.0	27.6		POE_Cannel-1_Module-4_ANT-H	QP-Limit: 40dBuV/m
2	109.167	29.2	26.9		POE_Cannel-1_Module-4_ANT-H	QP-Limit: 43.5dBuV/m
3	131.321	37.2	35.1		POE_Cannel-1_Module-4_ANT-H	QP-Limit: 43.5dBuV/m
4	154.262	32.6	30.4		POE_Cannel-1_Module-4_ANT-H	QP-Limit: 43.5dBuV/m
5	902.500	61.9			POE_Cannel-1_Module-4_ANT-H	

(Plot A.1: Channel = 1 Antenna Horizonta)



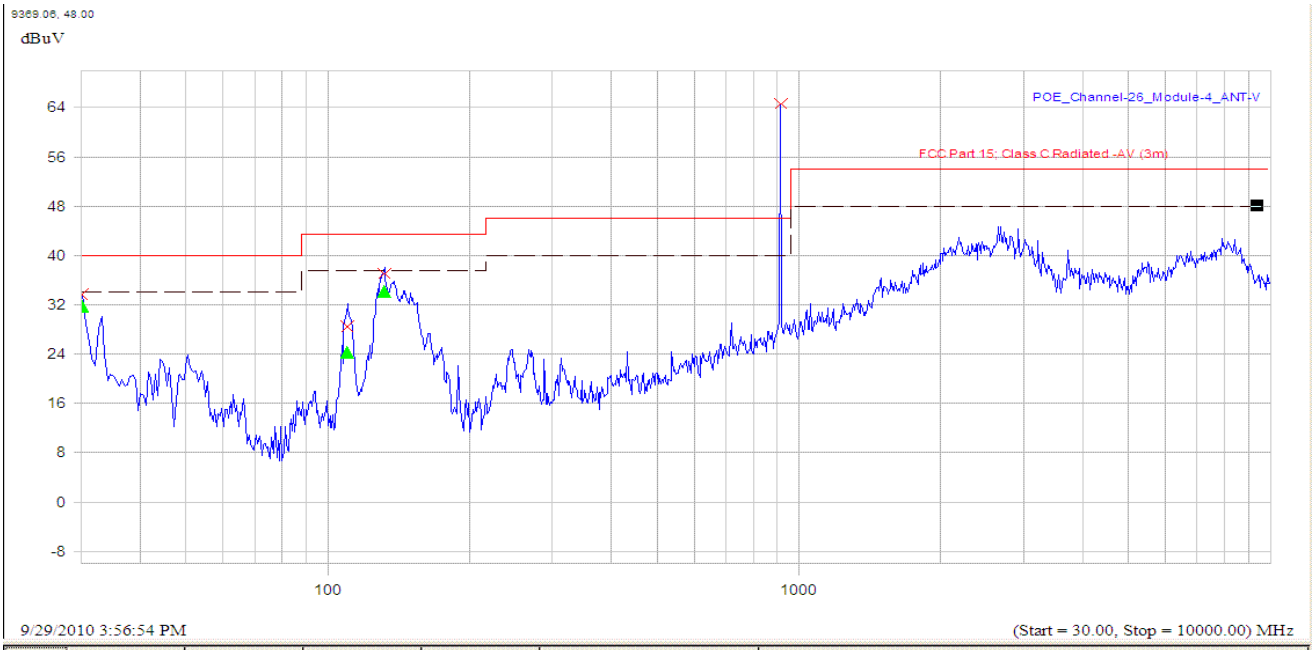
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	30.332	35.1	33.3		POE_Cannel-1_Module-4_ANT-	QP-Limit: 40dBuV/m
2	131.671	38.9	35.9		POE_Cannel-1_Module-4_ANT-	QP-Limit: 43.5dBuV/m
3	902.500	53.8			POE_Cannel-1_Module-4_ANT-	

(Plot A.2: Channel = 1 Antenna Vertical)



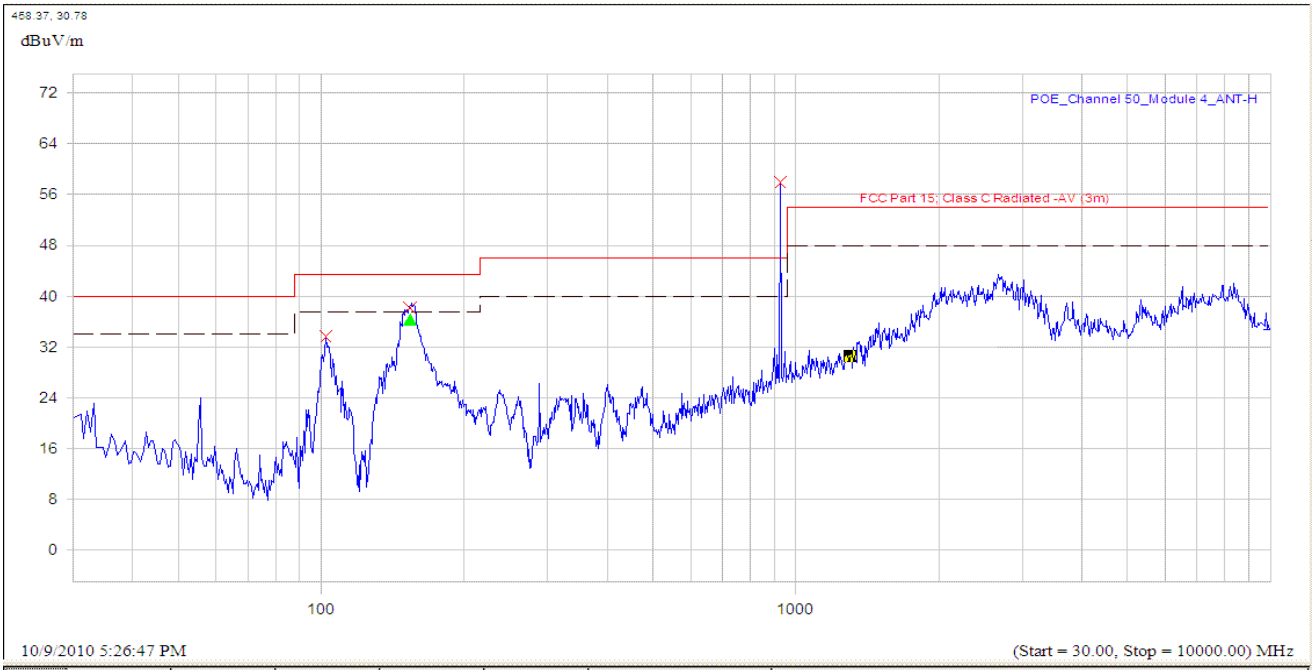
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	149.979	38.4	32.7		POE_Channel-26_Module-4_ANT-H	QP-Limit: 43.5dBuV/m
2	915.500	65.7			POE_Channel-26_Module-4_ANT-H	

(Plot B.1: Channel = 26 Antenna Horizontal)



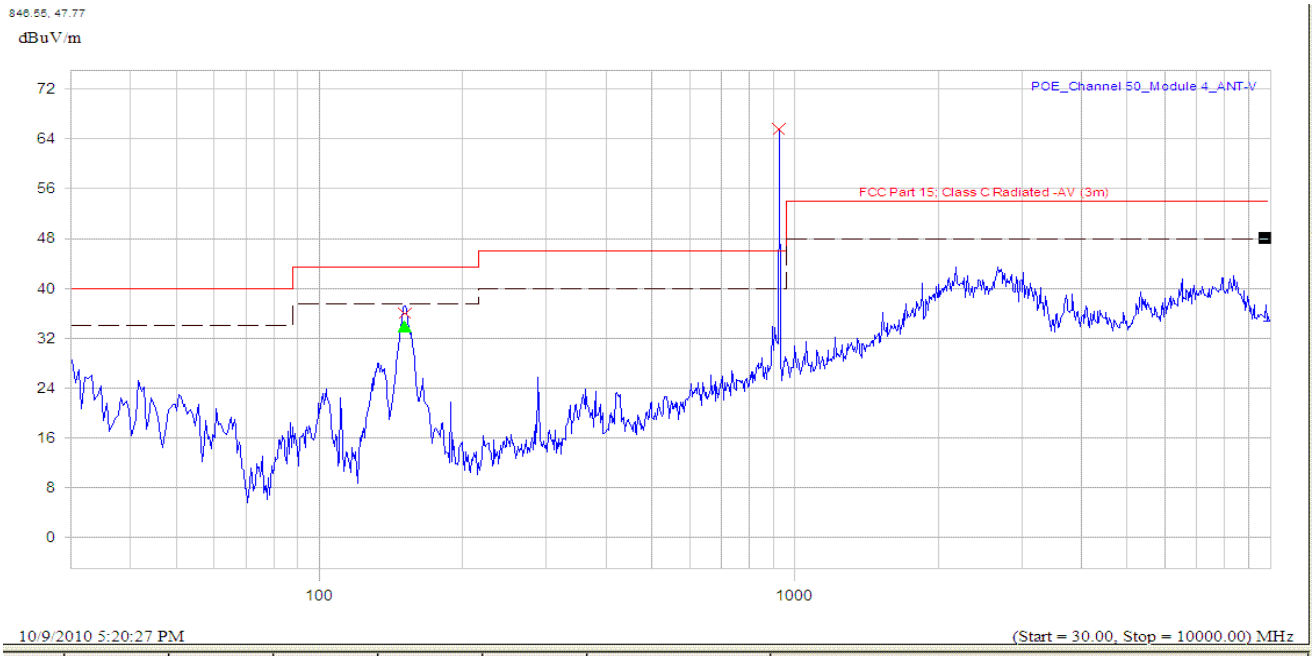
	Frequency MHz	Peak dBuV	QP dBuV	Avg dBuV	Trace Name	Comment
1	30.099	33.6	31.8		POE_Channel-26_Module-4_ANT-V	QP-Limit: 40dBuV/m
2	110.038	28.5	24.3		POE_Channel-26_Module-4_ANT-V	QP-Limit: 43.5dBuV/m
3	131.951	37.0	34.1		POE_Channel-26_Module-4_ANT-V	QP-Limit: 43.5dBuV/m
4	915.000	64.6			POE_Channel-26_Module-4_ANT-V	

(Plot B.2: Channel = 26 Antenna Vertical)



	Frequency MHz	Peak dBuV/m	Delta Pk-Limit dB	QP dBuV/m	Delta QP-Limit dB	Trace Name	Comment
1	153.649	38.1	0.0	36.3	0.0	POE_Channel 50_Module 4_AN	
2	102.100	33.6	0.0		0.0	POE_Channel 50_Module 4_AN	
3	927.500	57.9	0.0		0.0	POE_Channel 50_Module 4_AN	

(Plot C.1: Channel = 50 Antenna Horizontal)



	Frequency MHz	Peak dBuV/m	Delta Pk-Limit dB	QP dBuV/m	Delta QP-Limit dB	Trace Name	Comment
1	150.724	35.9	0.0	33.9	0.0	POE_Channel 50_Module 4_AN	QP-Limit: 43.5dBuV/m
2	927.100	65.5	0.0		0.0	POE_Channel 50_Module 4_AN	

(Plot C.2: Channel = 50 Antenna Vertical)

** END OF REPORT **