9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205, §15.209, §15.247 (d)

IC RSS-GEN Clause 8.9 (Transmitter)

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	=
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz measurements and 1.5 m above the ground plane for above 1GHz measurements. The antenna to EUT distance is 3 meters.

For measurements below 1 GHz the resolution bandwidth is set to 120 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements for the 30-1000 MHz range, 9 kHz for peak detection measurements or 9 kHz for quasi-peak detection measurements for the 0.15-30 MHz range and 200 Hz for peak detection measurements or 200 Hz for quasi-peak detection measurements for the 9 to 150 kHz range. Peak detection is used unless otherwise noted as quasi-peak.

For peak measurements above 1 GHz, the resolution bandwidth is set to 1 MHz and the video bandwidth is set to 3 MHz. For average measurements above 1GHz, the resolution bandwidth and video bandwidth are set as described in ANSI C63.10:2013 for the applicable measurement. For this evaluation, RMS Power Averaging was used and the resolution/video bandwidth settings were 1MHz/3MHz.

The spectrum from 9kHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

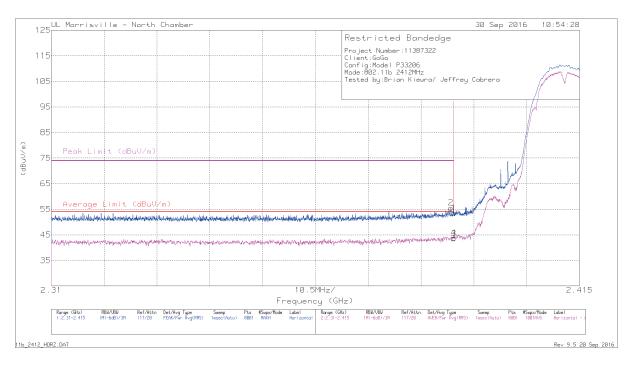
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

FORM NO: 03-EM-F00858

9.2. TRANSMITTER ABOVE 1 GHz

9.2.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency	Meter	Det	AF AT0069	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	Limit	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)		(dBuV/m)	(dB)			
2	* 2.389	47.47	Pk	32.2	-24.1	0	55.57	-	-	74	-18.43	200	390	Н
1	* 2.39	45.46	Pk	32.2	-24.2	0	53.46	-	-	74	-20.54	200	390	Н
3	* 2.39	35.57	RMS	32.2	-24.2	1.01	44.58	54	-9.42	-	-	200	390	Н
4	* 2.39	35.76	RMS	32.2	-24.2	1.01	44.77	54	-9.23	-	-	200	390	Н

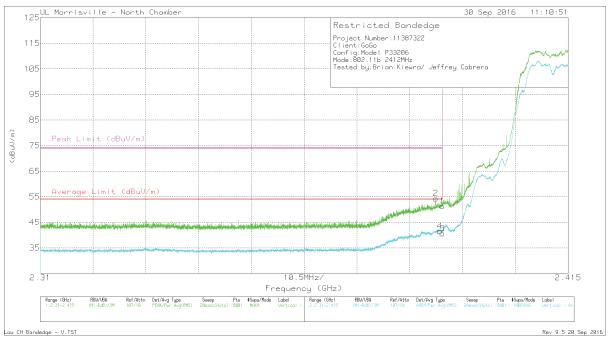
^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

Rev 9.5 20 Sep 2016

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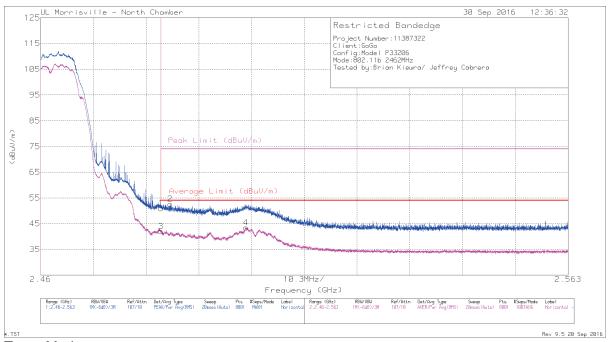


Trace Markers

Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	Corr	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.39	43.76	Pk	32.1	-24.5	0	51.36	-	-	74	-22.64	354	386	V
2	* 2.389	46.74	Pk	32.1	-24.5	0	54.34	-	-	74	-19.66	354	386	V
3	* 2.39	33.01	RMS	32.1	-24.5	1.01	41.62	54	-12.38	-	-	354	386	V
4	* 2.389	33.89	RMS	32.1	-24.5	1.01	42.5	54	-11.5	-	-	354	386	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band Pk - Peak detector RMS - RMS detection Rev 9.5 20 Sep 2016

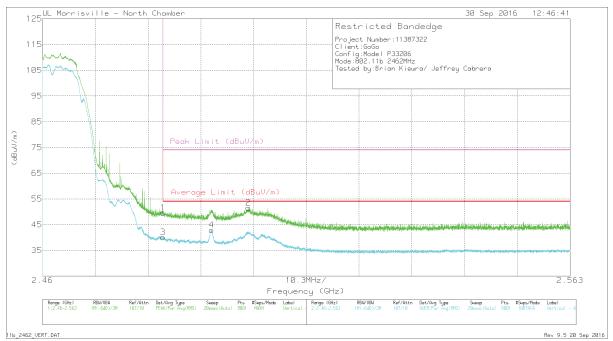
RESTRICTED BANDEDGE (HIGH CHANNEL 11)



Trace Markers

Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	43.08	Pk	32.3	-24.4	0	50.98	-	-	74	-23.02	44	393	Н
2	* 2.485	44.76	Pk	32.3	-24.4	0	52.66	-	-	74	-21.34	44	393	Н
3	* 2.484	33.1	RMS	32.3	-24.4	1.01	42.01	54	-11.99	-	-	44	393	Н
4	2.5	34.54	RMS	32.3	-24.4	1.01	43.45	54	-10.55	-	-	44	393	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band



Trace Markers

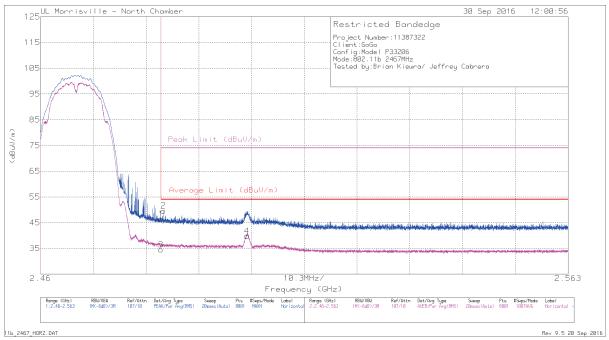
Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	41.76	Pk	32.3	-24.4	0	49.66	-	-	74	-24.34	1	353	V
3	* 2.484	31.19	RMS	32.3	-24.4	1.01	40.1	54	-13.9	-	-	1	353	V
4	* 2.493	34.02	RMS	32.3	-24.4	1.01	42.93	54	-11.07	-	-	1	353	V
2	2.5	43.69	Pk	32.3	-24.4	0	51.59	-	-	74	-22.41	1	353	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector RMS - RMS detection Rev 9.5 20 Sep 2016

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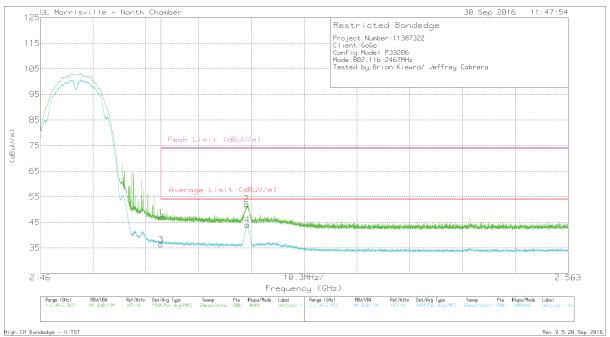
RESTRICTED BANDEDGE (HIGH CHANNEL 12)



Trace Markers

Marker	Frequency	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	38.45	Pk	32.3	-24.4	0	46.35	-	-	74	-27.65	106	341	Н
2	* 2.484	41.72	Pk	32.3	-24.4	0	49.62	-	-	74	-24.38	106	341	Н
3	* 2.484	26.65	RMS	32.3	-24.4	1.01	35.56	54	-18.44	-	-	106	341	Н
4	2.5	31.88	RMS	32.3	-24.4	1.01	40.79	54	-13.21	-	-	106	341	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

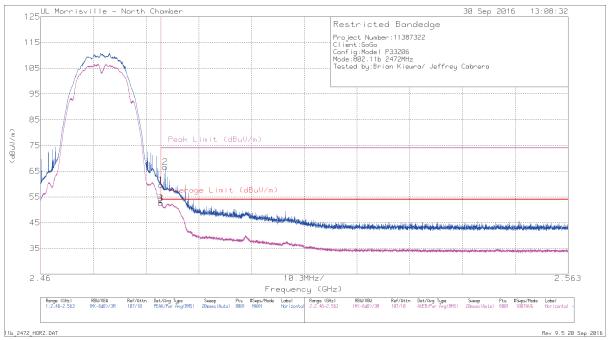


Trace Markers

Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	39.02	Pk	32.3	-24.4	0	46.92	-	-	74	-27.08	360	345	V
3	* 2.484	27.41	RMS	32.3	-24.4	1.01	36.32	54	-17.68	-	-	360	345	V
2	2.5	44.32	Pk	32.3	-24.4	0	52.22	-	-	74	-21.78	360	345	V
4	2.5	35.17	RMS	32.3	-24.4	1.01	44.08	54	-9.92	-	-	360	345	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band Pk - Peak detector RMS - RMS detection Rev 9.5 20 Sep 2016

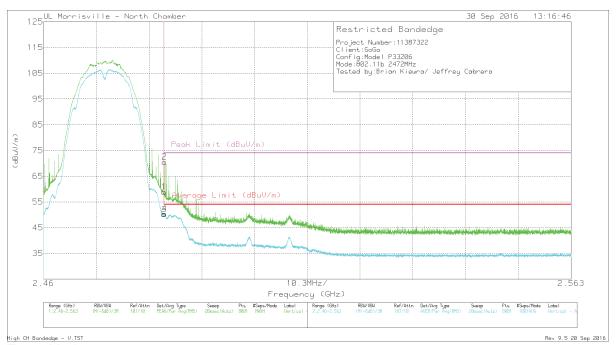
RESTRICTED BANDEDGE (HIGH CHANNEL 13)



Trace Markers

Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	51.74	Pk	32.3	-24.4	0	59.64	-	-	74	-14.36	40	350	Н
2	* 2.484	58.71	Pk	32.3	-24.4	0	66.61	-	-	74	-7.39	40	350	Н
3	* 2.484	43.65	RMS	32.3	-24.4	1.01	52.56	54	-1.44	-	-	40	350	Н
4	* 2.484	43.7	RMS	32.3	-24.4	1.01	52.61	54	-1.39	-	-	40	350	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band



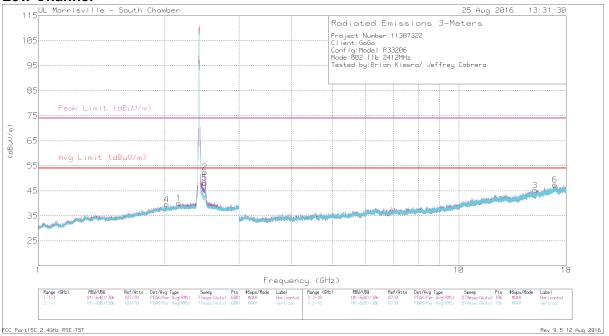
Trace Markers

Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	51.02	Pk	32.3	-24.4	0	58.92	-	-	74	-15.08	1	345	V
2	* 2.484	62.63	Pk	32.3	-24.4	0	70.53	-	-	74	-3.47	1	345	V
3	* 2.484	41.28	RMS	32.3	-24.4	1.01	50.19	54	-3.81	-	-	1	345	V
4	* 2.484	41.43	RMS	32.3	-24.4	1.01	50.34	54	-3.66	-	-	1	345	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

HARMONICS AND SPURIOUS EMISSIONS

Low Channel



Trace Markers

Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
2	* 2.488	50.92	PK2	32.4	-24.7	0	58.62	-	-	74	-15.38	78	199	Н
	* 2.487	42.17	MAv1	32.4	-24.7	1.01	50.88	54	-3.12	1	-	78	199	Н
5	* 2.487	47.1	PK2	32.4	-24.7	0	54.8	-	-	74	-19.2	71	199	V
	* 2.487	38.97	MAv1	32.4	-24.7	1.01	47.68	54	-6.32	1	-	71	199	V
4	2.02	31.33	Pk	31.2	-23	0	39.53	-	-	1	-	0-360	199	V
1	2.156	31.67	Pk	31.7	-23.3	0	40.07	-	-	ı	-	0-360	101	Н
3	15.17	30.32	Pk	39.9	-25	0	45.22	-	-	-	-	0-360	101	Н
6	16.923	30.18	Pk	41.6	-24.3	0	47.48	-	-	-	-	0-360	199	V

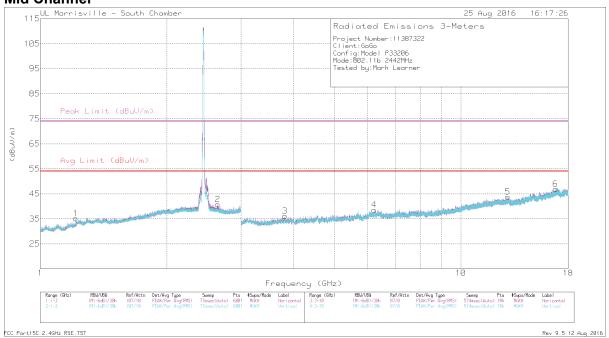
^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 -Maximum Peak

MAv1 - Maximum RMS Average

Mid Channel



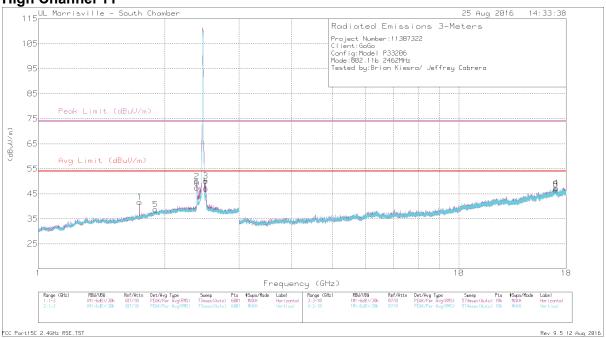
Trace Markers

11400	- IVIAIINO	,10												
Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
1	* 1.214	35.59	PK2	28.4	-23.9	0	40.09	-	-	74	-33.91	284	100	Н
	* 1.216	23.38	MAv1	28.4	-23.9	1.01	27.88	54	-25.11	1	-	284	100	Н
3	* 3.822	40.7	PK2	33.4	-33	0	41.1	-	-	74	-32.9	235	198	V
	* 3.821	29.88	MAv1	33.4	-33	1.01	31.29	54	-22.71	1	-	235	198	V
2	2.643	34.02	Pk	32.5	-25.7	0	40.82	-	-	•	-	0-360	100	Н
4	6.221	32.71	Pk	35.4	-29.5	0	38.61	-	-	-	-	0-360	101	Н
5	12.924	29.73	Pk	39.2	-25.1	0	43.83	-	-	-	-	0-360	101	V
6	16.797	29.97	Pk	41.6	-24.6	0	46.97	-	-	-	-	0-360	101	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector PK2 -Maximum Peak MAv1 - Maximum RMS Average Rev 9.5 12 Aug 2016





Trace Markers

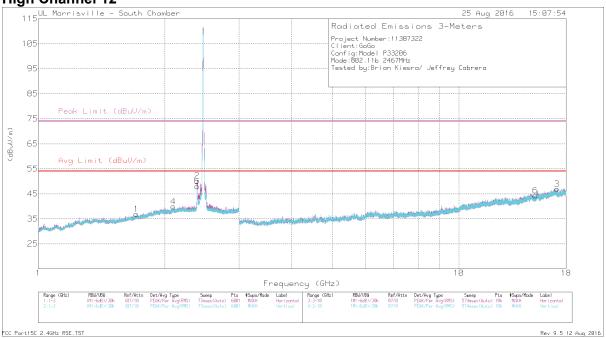
Hace	z iviai ke	:15												
Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
2	* 2.383	46.71	PK2	32.1	-24.1	0	54.71	-	-	74	-19.29	13	198	Н
	* 2.383	38.86	MAv1	32.1	-24.1	1.01	47.87	54	-6.13	-	-	13	198	Н
3	* 2.5	48.43	PK2	32.5	-24.8	0	56.13	-	-	74	-17.87	94	104	Н
	*2.5	38.07	MAv1	32.5	-24.8	1.01	46.78	54	-7.22	-	-	94	104	Н
6	* 2.385	44.46	PK2	32.2	-24.1	0	52.56	-	-	74	-21.44	113	198	V
	* 2.383	35.92	MAv1	32.1	-24.1	1.01	44.93	54	-9.07	-	-	113	198	V
1	1.741	34.84	Pk	29.4	-22.5	0	41.74	-	-	-	-	0-360	199	Н
5	1.899	30.55	Pk	30.7	-22.5	0	38.75	-	-	-	-	0-360	199	V
7	2.501	39.46	Pk	32.5	-24.8	0	47.16	-	-	-	-	0-360	199	V
8	17.006	30.07	Pk	41.5	-24.8	0	46.77	-	-	-	-	0-360	101	V
4	17.029	30.19	Pk	41.5	-24.4	0	47.29	-	-	-	-	0-360	199	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector PK2 - Maximum Peak

MAv1 - Maximum RMS Average





Trace Markers

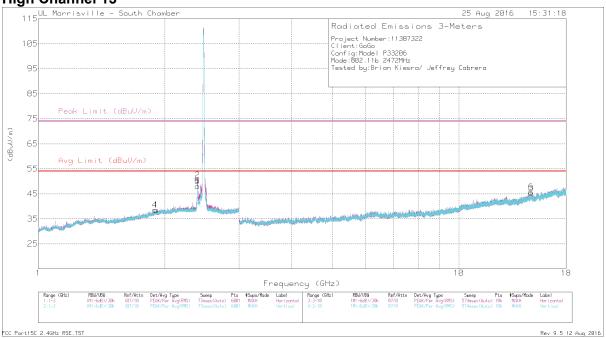
11400	IVIGINO	,10												
Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
2	* 2.39	44.23	PK2	32.2	-24.2	0	52.23	-	-	74	-21.77	164	103	Н
	* 2.39	35.1	MAv1	32.2	-24.2	1.01	44.11	54	-9.89	1	-	164	103	Н
5	* 2.39	42.38	PK2	32.2	-24.2	0	50.38	-	-	74	-23.62	86	103	V
	* 2.39	32.12	MAv1	32.2	-24.2	1.01	41.13	54	-12.87	-	-	86	103	V
4	1.893	30.32	Pk	30.7	-22.5	0	38.52	-	-	•	-	0-360	101	V
1	1.908	30.41	Pk	30.8	-22.6	0	38.61	-	-	-	-	0-360	199	Н
6	14.841	30.1	Pk	39.8	-24.2	0	45.7	-	-	-	-	0-360	101	V
3	14.865	29.33	Pk	39.8	-23.9	0	45.23	-	-	-	-	0-360	101	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector PK2 - Maximum Peak

MAv1 - Maximum RMS Average

High Channel 13



Trace Markers

1100	o iviai ko	,10												
Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
2	2.392	48.74	PK2	32.2	-24.2	0	56.74	-	-	74	-17.26	202	100	Н
	2.391	40.55	MAv1	32.2	-24.2	1.01	49.56	54	-4.44	-	-	202	100	Н
5	2.391	45	PK2	32.2	-24.2	0	53	-	-	74	-21	358	100	V
	2.391	36.35	MAv1	32.2	-24.2	1.01	45.36	54	-8.64	-	-	358	100	V
4	1.893	30.32	Pk	30.7	-22.5	0	38.52	-	-	1	-	0-360	101	V
1	1.908	30.41	Pk	30.8	-22.6	0	38.61	-	-	-	-	0-360	199	Н
6	14.841	30.1	Pk	39.8	-24.2	0	45.7	-	-	-	-	0-360	101	V
3	14.865	29.33	Pk	39.8	-23.9	0	45.23	-	-	-	-	0-360	101	Н

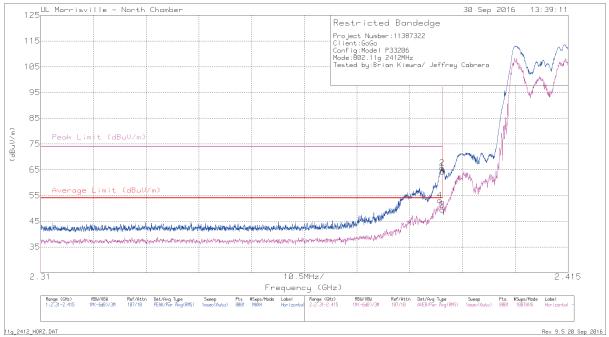
^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector
PK2 - Maximum Peak
MAy1 Maximum PMS /

MAv1 - Maximum RMS Average

9.2.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND

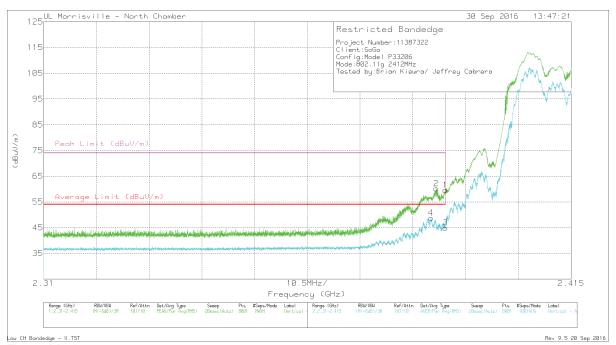
RESTRICTED BANDEDGE (LOW CHANNEL)



Trace Markers

Marker	Frequency	Meter	Det	AF AT0069	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
4	* 2.389	40.33	RMS	32.2	-24.1	4.68	53.11	54	89	-	-	101	328	Н
1	* 2.39	56.23	Pk	32.2	-24.2	0	64.23	-	-	74	-9.77	101	328	Н
2	* 2.39	57.71	Pk	32.2	-24.2	0	65.71	-	-	74	-8.29	101	328	Н
3	* 2.39	36.78	RMS	32.2	-24.2	4.68	49.46	54	-4.54	-	-	101	328	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band



Trace Markers

Marker	Frequency	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
4	* 2.387	36.47	RMS	32.1	-24.5	4.68	48.75	54	-5.25	-	-	16	331	V
2	* 2.388	52.59	Pk	32.1	-24.5	0	60.19	-	-	74	-13.81	16	331	V
1	* 2.39	51.96	Pk	32.1	-24.5	0	59.56	-	-	74	-14.44	16	331	V
3	* 2.39	32.7	RMS	32.1	-24.5	4.68	44.98	54	-9.02	-	-	16	331	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

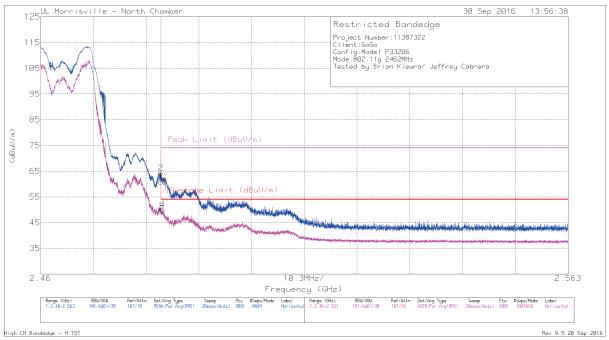
Pk - Peak detector

RMS - RMS detection

 REPORT NO: 11387322-E1
 DATE: 2016-10-25

 FCC ID: WPX-ACWAP
 IC: 8014A-ACWAP

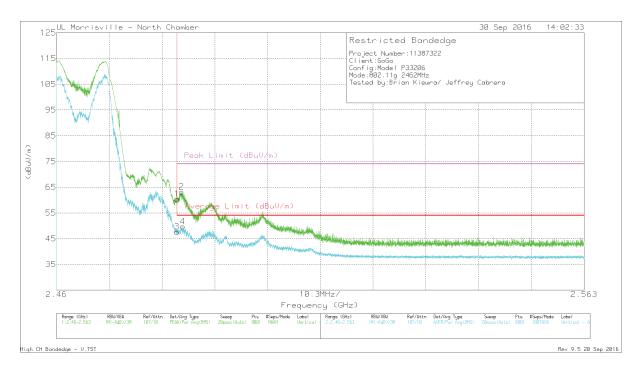
RESTRICTED BANDEDGE (HIGH CHANNEL 11)



Trace Markers

Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	53.09	Pk	32.3	-24.4	0	60.99	-	-	74	-13.01	258	340	Н
2	* 2.484	56.35	Pk	32.3	-24.4	0	64.25	-	-	74	-9.75	258	340	Н
3	* 2.484	36.76	RMS	32.3	-24.4	4.68	49.34	54	-4.66	-	-	258	340	Н
4	* 2.484	37.51	RMS	32.3	-24.4	4.68	50.09	54	-3.91	-	-	258	340	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band



Trace Markers

Marker	Frequency	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	52.56	Pk	32.3	-24.4	0	60.46	-	-	74	-13.54	7	273	V
2	* 2.484	55.29	Pk	32.3	-24.4	0	63.19	-	-	74	-10.81	7	273	V
3	* 2.484	35.09	RMS	32.3	-24.4	4.68	47.67	54	-6.33	-	-	7	273	V
4	* 2.485	37.13	RMS	32.3	-24.4	4.68	49.71	54	-4.29	-	-	7	273	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band Pk - Peak detector

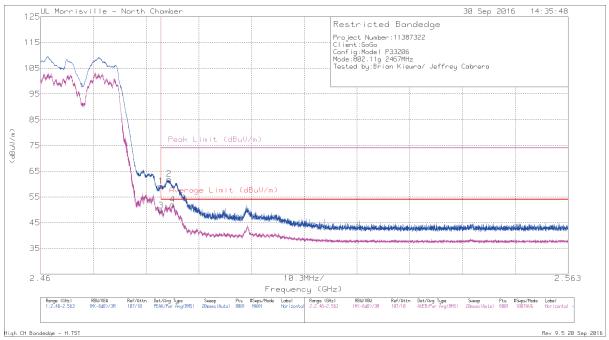
RMS - RMS detection

Rev 9.5 20 Sep 2016

 REPORT NO: 11387322-E1
 DATE: 2016-10-25

 FCC ID: WPX-ACWAP
 IC: 8014A-ACWAP

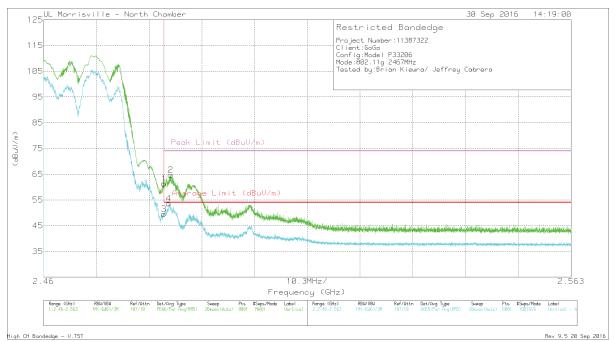
RESTRICTED BANDEDGE (HIGH CHANNEL 12)



Trace Markers

Marker	Frequency	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarit
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	у
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	51.34	Pk	32.3	-24.4	0	59.24	-	-	74	-14.76	98	277	Н
2	* 2.485	54.09	Pk	32.3	-24.4	0	61.99	-	-	74	-12.01	98	277	Н
3	* 2.484	37.13	RMS	32.3	-24.4	4.68	49.71	54	-4.29	-	-	98	277	Н
4	* 2.486	39.46	RMS	32.3	-24.4	4.68	52.04	54	-1.96	-	-	98	277	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

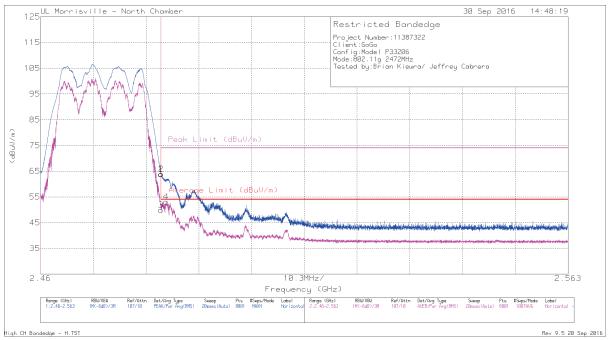


Trace Markers

Marker	Frequency	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	53.43	Pk	32.3	-24.4	0	61.33	-	-	74	-12.67	7	271	V
2	* 2.485	56.83	Pk	32.3	-24.4	0	64.73	-	-	74	-9.27	7	271	V
3	* 2.484	36.96	RMS	32.3	-24.4	4.68	49.54	54	-4.46	-	-	7	271	V
4	* 2.484	41.02	RMS	32.3	-24.4	4.68	53.60	54	40	-	-	7	271	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

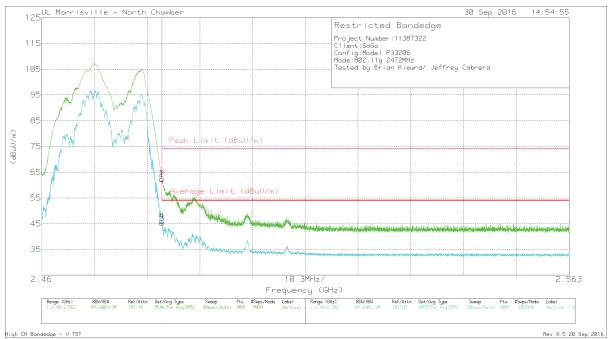
RESTRICTED BANDEDGE (HIGH CHANNEL 13)



Trace Markers

Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	55.87	Pk	32.3	-24.4	0	63.77	-	-	74	-10.23	24	276	Н
2	* 2.484	56	Pk	32.3	-24.4	0	63.9	-	-	74	-10.1	24	276	Н
3	* 2.484	37.34	RMS	32.3	-24.4	4.68	49.92	54	-4.08	-	-	24	276	Н
4	* 2.485	40.53	RMS	32.3	-24.4	4.68	53.11	54	89	-	-	24	276	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band



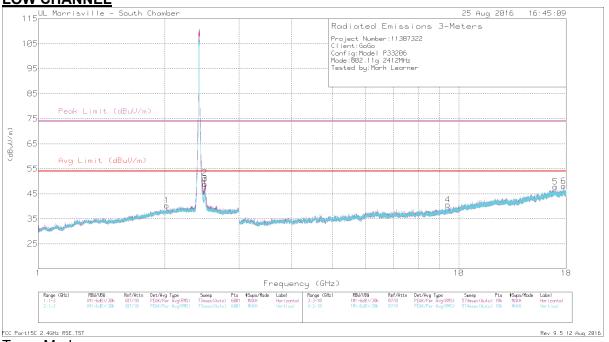
Trace Markers

Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	54.48	Pk	32.3	-24.4	0	62.38	-	-	74	-11.62	25	275	V
2	* 2.484	54.49	Pk	32.3	-24.4	0	62.39	-	-	74	-11.61	25	275	V
3	* 2.484	37.4	RMS	32.3	-24.4	4.68	49.98	54	-4.02	-	-	25	275	V
4	* 2.484	38.12	RMS	32.3	-24.4	4.68	50.74	54	-3.26	-	-	25	275	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL



Trace Markers

Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
2	* 2.487	50.18	PK2	32.4	-24.7	0	57.88	-	-	74	-16.12	78	200	Н
	* 2.487	40.94	MAv1	32.4	-24.7	4.68	53.32	54	-0.68	1	-	78	200	Н
3	* 2.487	46.8	PK2	32.4	-24.7	0	54.5	1	-	74	-19.5	71	198	V
	* 2.487	37.9	MAv1	32.4	-24.7	4.68	50.28	54	-3.72	1	-	71	198	V
6	* 17.739	34.6	PK2	41.2	-22.6	0	53.2	1	-	74	-20.8	91	103	Н
	* 17.739	23.25	MAv1	41.2	-22.6	4.68	46.53	54	-7.47	1	-	91	103	Н
4	* 9.418	35.71	PK2	36.4	-27.1	0	45.01	-	-	74	-28.99	59	199	V
	* 9.414	24.7	MAv1	36.4	-27.1	4.68	38.68	54	-15.32	1	-	59	199	V
1	2.021	32.17	Pk	31.2	-23	0	40.37	1	-	1	-	0-360	199	Н
5	16.961	30.85	Pk	41.5	-24.5	0	47.85	ı	-	1	-	0-360	199	Н

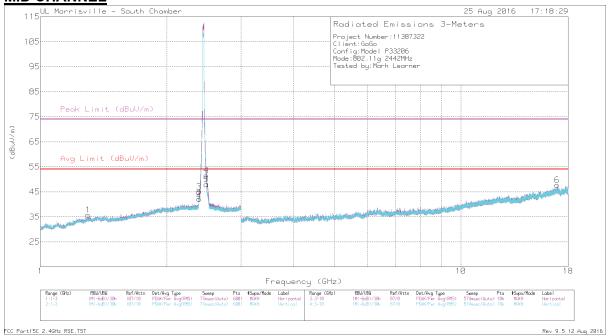
^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

MID CHANNEL



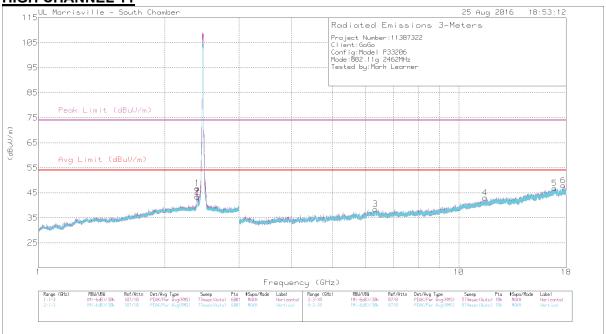
Trace Markers

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Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
3	* 2.383	44	PK2	32.1	-24.1	0	52	-	-	74	-22	155	268	Н
	* 2.383	30.86	MAv1	32.1	-24.1	4.68	43.54	54	-10.46	-	-	155	268	Н
4	* 2.484	52.37	PK2	32.4	-24.7	0	60.07	-	-	74	-13.93	89	110	Н
	* 2.485	38.75	MAv1	32.4	-24.7	4.68	51.13	54	-2.87	-	-	89	110	Н
1	* 1.298	36.09	PK2	28.8	-23.3	0	41.59	1	-	74	-32.41	123	103	V
	* 1.3	24.35	MAv1	28.8	-23.3	4.68	34.53	54	-19.47	-	-	123	103	V
2	* 2.389	42.19	PK2	32.2	-24.1	0	50.29	-	-	74	-23.71	53	240	V
	* 2.389	29.18	MAv1	32.2	-24.1	4.68	41.96	54	-12.04	-	-	53	240	V
5	* 2.484	50.02	PK2	32.4	-24.7	0	57.72	-	-	74	-16.28	93	288	V
	* 2.484	35.82	MAv1	32.4	-24.7	4.68	48.20	54	-5.8	-	-	93	288	V
6	16.948	30.75	Pk	41.5	-24.5	0	47.75	-	-	-	-	0-360	199	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector PK2 - Maximum Peak MAv1 - Maximum RMS Average

HIGH CHANNEL 11



Trace Markers

Marker	Frequency		Det	AF	Amp/Cbl/	_	Corrected			Peak Limit		Azimuth		Polarity
	(GHz)	Reading (dBuV)		AT0069 (dB/m)	Fltr/Pad (dB)	Corr (dB)	Reading (dBuV/m)	(dBuV/m)	(dB)	(dBuV/m)	Margin (dB)	(Degs)	(cm)	
1	* 2.389	47.86	PK2	32.2	-24.1	0	55.96	-	-	74	-18.04	151	333	Н
	* 2.388	36.19	MAv1	32.2	-24.1	4.68	48.97	54	-5.03	-	-	151	333	Н
2	* 2.389	45.38	PK2	32.2	-24.1	0	53.48	-	-	74	-20.52	48	337	V
	* 2.389	33.62	MAv1	32.2	-24.1	4.68	46.40	54	-7.6	1	-	48	337	V
4	* 11.554	34.77	PK2	38.4	-25.2	0	47.97	-	-	74	-26.03	127	201	Н
	* 11.554	23.81	MAv1	38.4	-25.2	4.68	41.69	54	-12.31	-	-	127	201	Н
6	* 17.727	35	PK2	41.2	-22.8	0	53.4	-	-	74	-20.6	56	103	V
	* 17.726	24.12	MAv1	41.2	-22.8	4.68	47.2	54	-6.8	1	-	56	103	V
3	6.336	31.66	Pk	35.4	-28.6	0	38.46	-	-	-	-	0-360	199	V
5	16.885	28.96	Pk	41.6	-23.7	0	46.86	-	-	-	-	0-360	101	V

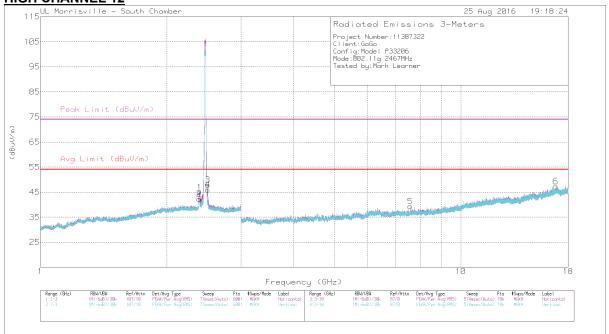
^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

HIGH CHANNEL 12



Trace Markers

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Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
2	* 2.389	42.4	PK2	32.2	-24.1	0	50.5	-	-	74	-23.5	49	299	V
	* 2.389	30.74	MAv1	32.2	-24.1	4.68	43.52	54	-10.48	-	-	49	299	V
5	* 7.582	36.6	PK2	35.7	-28.5	0	43.8	-	-	74	-30.2	83	299	Н
	* 7.584	25.56	MAv1	35.7	-28.5	4.68	37.44	54	-16.56	-	-	83	299	Н
1	2.393	36.95	Pk	32.2	-24.2	0	44.95	•	-	1	-	0-360	102	Н
3	2.5	40.2	Pk	32.5	-24.8	0	47.9	-	-	-	-	0-360	236	Н
4	2.5	38.31	Pk	32.5	-24.8	0	46.01	1	-	-	-	0-360	101	V
6	16.813	29.75	Pk	41.6	-24.1	0	47.25	-	-	-	-	0-360	101	V

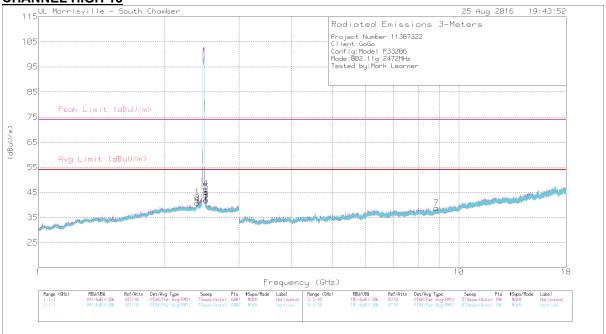
^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

CHANNEL HIGH 13



Trace Markers

Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
1	* 2.39	39.48	PK2	32.2	-24.2	0	47.48	-	-	74	-26.52	77	148	Н
	* 2.389	28.52	MAv1	32.2	-24.1	4.68	41.3	54	-12.7	1	-	77	148	Н
2	* 2.388	38.94	PK2	32.2	-24.1	0	47.04	-	-	74	-26.96	148	331	V
	* 2.388	26.49	MAv1	32.2	-24.1	4.68	39.27	54	-14.73	1	-	148	331	V
4	2.5	38.81	Pk	32.5	-24.8	0	46.51	-	-	1	-	0-360	199	Н
3	2.5	33.99	Pk	32.5	-24.8	0	41.69	-	-	-	-	0-360	199	V
5	2.508	37.58	Pk	32.5	-24.9	0	45.18	-	-	1	-	0-360	101	Н
6	2.508	34.48	Pk	32.5	-24.9	0	42.08	-	-	-	-	0-360	101	V
7	8.837	30.35	Pk	35.8	-27.4	0	38.75	-	-	-	-	0-360	101	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

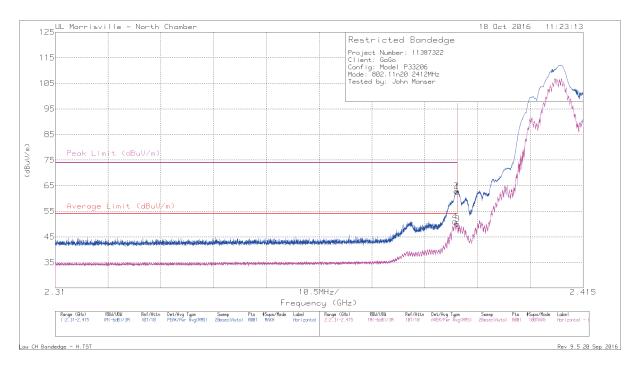
Pk - Peak detector

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

9.2.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL - CDD MCS0)

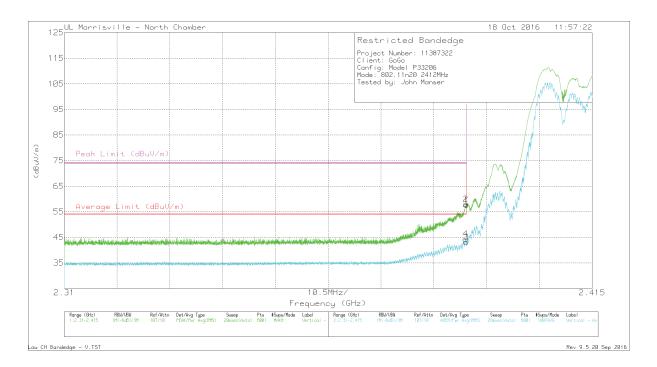


Marker	Freq.	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.39	54.99	Pk	32.1	-24.5	0	62.59	-	-	74	-11.41	86	207	Н
2	* 2.39	55.34	Pk	32.1	-24.5	0	62.94	-	-	74	-11.06	86	207	Н
3	* 2.39	40.2	RMS	32.1	-24.5	2.28	50.08	54	-3.92	-	-	86	207	Н
4	* 2.39	41.1	RMS	32.1	-24.5	2.28	50.98	54	-3.02	-	-	86	207	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector RMS - RMS detection Rev 9.5 20 Sep 2016 DATE: 2016-10-25

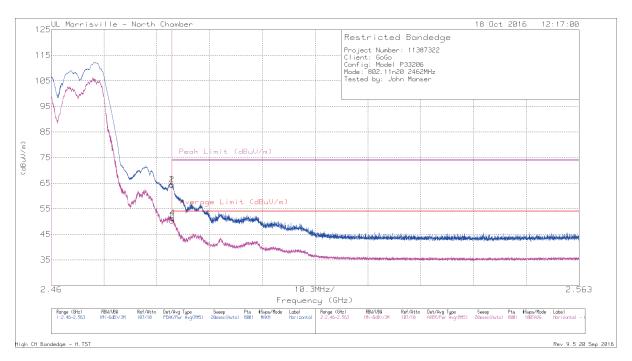
IC: 8014A-ACWAP



Marker	Freq.	Meter	Det	AF	Amp/Cbl	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	/Fltr/Pa	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	d (dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.39	49.99	Pk	32.1	-24.5	0	57.59	-	-	74	-16.41	3	397	V
2	* 2.39	50.37	Pk	32.1	-24.5	0	57.97	-	-	74	-16.03	3	397	V
3	* 2.39	33.18	RMS	32.1	-24.5	2.28	43.06	54	-10.94	-	-	3	397	V
4	* 2.39	34.49	RMS	32.1	-24.5	2.28	44.37	54	-9.63	-	-	3	397	V

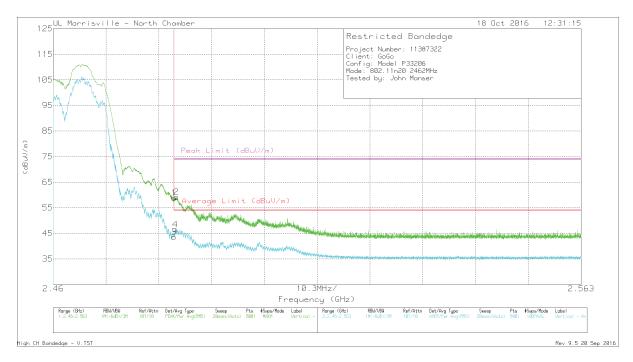
^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

RESTRICTED BANDEDGE (HIGH CHANNEL 11 - CDD MCS0)



Marker	Freq	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	56.42	Pk	32.3	-24.4	0	64.32	-	-	74	-9.68	64	396	Н
2	* 2.484	56.55	Pk	32.3	-24.4	0	64.45	-	-	74	-9.55	64	396	Н
3	* 2.484	40.2	RMS	32.3	-24.4	2.28	50.38	54	-3.62	-	-	64	396	Н
4	* 2.484	41.18	RMS	32.3	-24.4	2.28	51.36	54	-2.64	-	-	64	396	Н

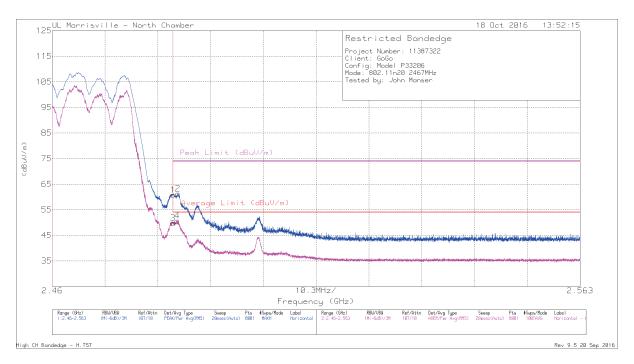
^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band



Marker	Freq	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	50.9	Pk	32.3	-24.4	0	58.8	-	-	74	-15.2	11	349	V
2	* 2.484	51.28	Pk	32.3	-24.4	0	59.18	-	-	74	-14.82	11	349	V
3	* 2.484	33.43	RMS	32.3	-24.4	2.28	43.61	54	-10.39	-	-	11	349	V
4	* 2.484	36.36	RMS	32.3	-24.4	2.28	46.54	54	-7.46	-	-	11	349	V

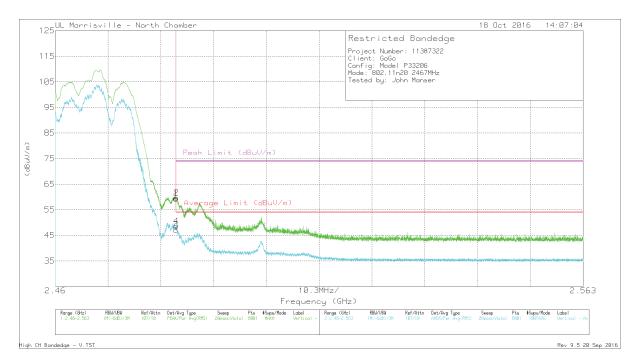
^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

RESTRICTED BANDEDGE (HIGH CHANNEL 12 - CDD MCS0)



Marker	Freq.	Meter	Det	AF	Amp/Cbl	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	/Fltr/Pa	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	d (dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	52.91	Pk	32.3	-24.4	0	60.81	-	-	74	-13.19	69	353	Н
2	* 2.485	53.43	Pk	32.3	-24.4	0	61.33	-	-	74	-12.67	69	353	Н
3	* 2.484	39.71	RMS	32.3	-24.4	2.28	49.89	54	-4.11	-	-	69	353	Н
4	* 2.484	40.52	RMS	32.3	-24.4	2.28	50.7	54	-3.3	-	-	69	353	Н

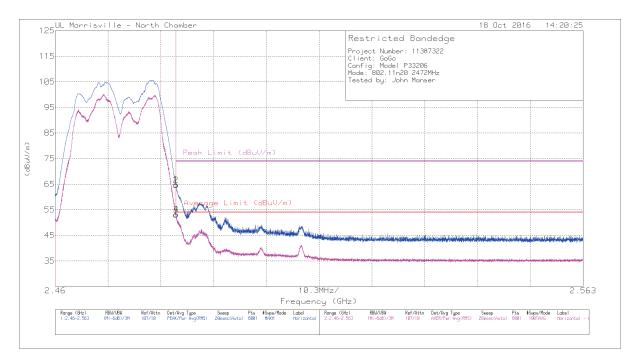
^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band



Marker	Freq.	Meter	Det	AF AT0072	Amp/Cbl	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	/Fltr/Pa	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			d (dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	51.45	Pk	32.3	-24.4	0	59.35	-	-	74	-14.65	6	386	V
2	* 2.484	51.78	Pk	32.3	-24.4	0	59.68	-	-	74	-14.32	6	386	V
3	* 2.484	37.01	RMS	32.3	-24.4	2.28	47.19	54	-6.81	-	-	6	386	V
4	* 2.484	38.46	RMS	32.3	-24.4	2.28	48.64	54	-5.36	-	-	6	386	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

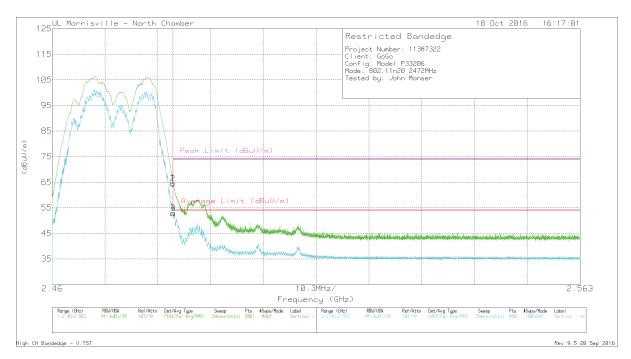
RESTRICTED BANDEDGE (HIGH CHANNEL 13 - CDD MCS0)



Marker	Freq.	Meter	Det	AF	Amp/Cbl	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	/Fltr/Pa	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	d (dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	56.92	Pk	32.3	-24.4	0	64.82	-	-	74	-9.18	249	384	Н
2	* 2.484	56.69	Pk	32.3	-24.4	0	64.59	-	-	74	-9.41	249	384	Н
3	* 2.484	42.89	RMS	32.3	-24.4	2.28	53.07	54	93	-	-	249	384	Н
4	* 2.484	42.98	RMS	32.3	-24.4	2.28	53.16	54	84	-	-	249	384	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

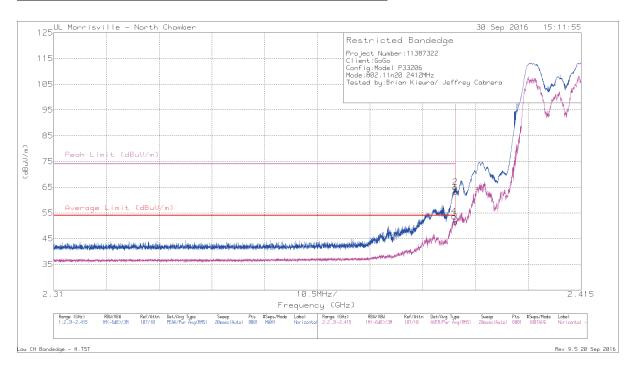
Pk - Peak detector RMS - RMS detection



Marker	Freq.	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	56.88	Pk	32.3	-24.4	0	64.78	-	-	74	-9.22	353	373	V
2	* 2.484	56.52	Pk	32.3	-24.4	0	64.42	-	-	74	-9.58	353	373	V
3	* 2.484	42.7	RMS	32.3	-24.4	2.28	52.88	54	-1.12	-	-	353	373	V
4	* 2.484	42.7	RMS	32.3	-24.4	2.28	52.88	54	-1.12	-	-	353	373	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

RESTRICTED BANDEDGE (LOW CHANNEL - SDM MCS16)



Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.39	55.49	Pk	32.1	-24.5	0	63.09	-	-	74	-10.91	99	288	Н
2	* 2.39	57.43	Pk	32.1	-24.5	0	65.03	-	-	74	-8.97	99	288	Н
3	* 2.39	39.22	RMS	32.1	-24.5	4.68	51.50	54	-2.50	-	-	99	288	Н
4	* 2.39	41.36	RMS	32.1	-24.5	4.68	53.64	54	36	-	-	99	288	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

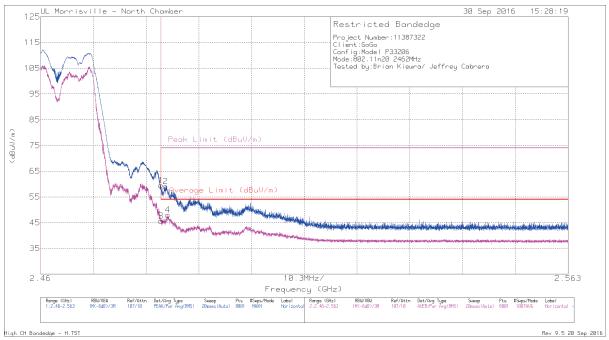


Trace Markers

Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margi	Peak Limit	PK	Azimut	Heigh	Polarit
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	n	(dBuV/m)	Margin	h	t	у
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)	(dB)		(dB)	(Degs)	(cm)	
1	* 2.39	52.02	Pk	32.1	-24.5	0	59.62	-	-	74	-14.38	20	255	٧
2	* 2.39	53.06	Pk	32.1	-24.5	0	60.66	-	-	74	-13.34	20	255	٧
3	* 2.39	35.59	RMS	32.1	-24.5	4.68	47.87	54	-6.07	-	-	20	255	٧
4	* 2.39	36.46	RMS	32.1	-24.5	4.68	48.74	54	-5.20	-	-	20	255	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

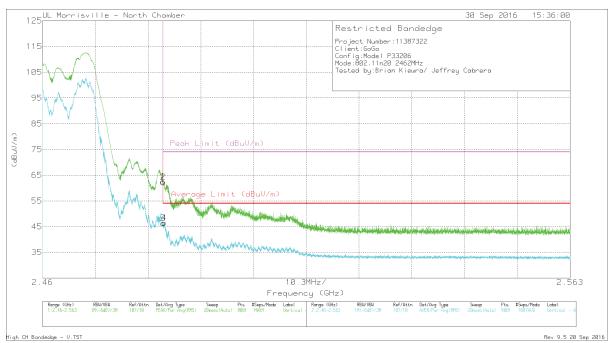
RESTRICTED BANDEDGE (HIGH CHANNEL 11 – SDM MCS16)



Trace Markers

Marker	Frequency	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	51.58	Pk	32.3	-24.4	0	59.48	-	-	74	-14.52	46	256	Н
2	* 2.484	51.22	Pk	32.3	-24.4	0	59.12	-	-	74	-14.88	46	256	Н
3	* 2.484	33.1	RMS	32.3	-24.4	4.68	45.68	54	-8.32	-	-	46	256	Н
4	* 2.485	35.41	RMS	32.3	-24.4	4.68	47.99	54	-6.02	-	-	46	256	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

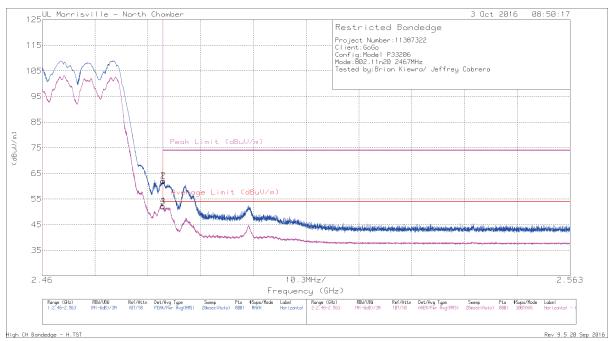


Trace Markers

Marker	Frequency	Meter	Det	AF AT0072	Amp/Cbl	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	/Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	54.68	Pk	32.3	-24.4	0	62.58	-	-	74	-11.42	3	269	V
2	* 2.484	54.35	Pk	32.3	-24.4	0	62.25	-	-	74	-11.75	3	269	V
3	* 2.484	33.72	RMS	32.3	-24.4	4.68	46.30	54	-7.70	-	-	3	269	V
4	* 2.484	33.93	RMS	32.3	-24.4	4.68	46.51	54	-7.49	=	-	3	269	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

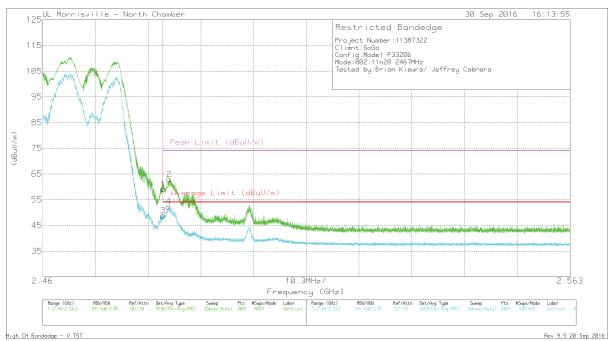
RESTRICTED BANDEDGE (HIGH CHANNEL 12 – SDM MCS16)



Trace Markers

Marker	Frequency	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	54.05	Pk	32.3	-24.4	0	61.95	1	-	74	-12.05	53	266	Н
2	* 2.484	54.29	Pk	32.3	-24.4	0	62.19	1	-	74	-11.81	53	266	Н
3	* 2.484	39.51	RMS	32.3	-24.4	4.68	52.09	54	-1.91	-	-	53	266	Н
4	* 2.484	39.69	RMS	32.3	-24.4	4.68	52.27	54	-1.73	ı	-	53	266	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band



Trace Markers

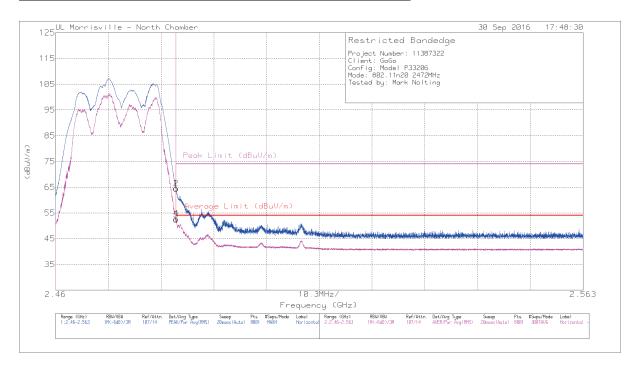
Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	51.1	Pk	32.3	-24.4	0	59	-	-	74	-15	24	276	V
2	* 2.485	55	Pk	32.3	-24.4	0	62.9	-	-	74	-11.1	24	276	V
3	* 2.484	36.2	RMS	32.3	-24.4	4.68	48.78	54	-5.22	-	-	24	276	V
4	* 2.485	39.68	RMS	32.3	-24.4	4.68	52.26	54	-1.74	-	-	24	276	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

 REPORT NO: 11387322-E1
 DATE: 2016-10-25

 FCC ID: WPX-ACWAP
 IC: 8014A-ACWAP

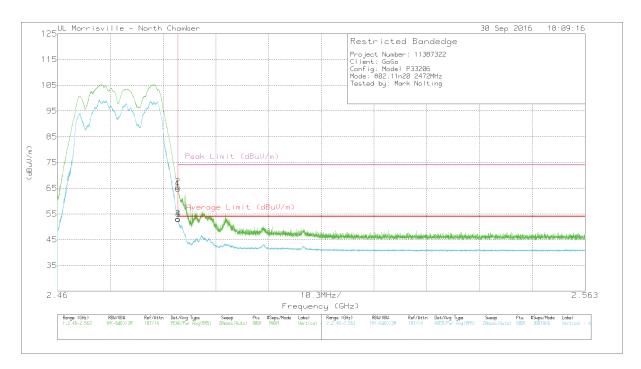
RESTRICTED BANDEDGE (HIGH CHANNEL 13 – SDM MCS16)



Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	56.58	Pk	32.3	-24.4	0	64.48	-	-	74	-9.52	308	106	Н
2	* 2.484	56.55	Pk	32.3	-24.4	0	64.45	-	-	74	-9.55	308	106	Н
3	* 2.484	39.81	RMS	32.3	-24.4	4.68	52.39	54	-1.61	-	-	308	106	Н
4	* 2.484	40.23	RMS	32.3	-24.4	4.68	52.81	54	-1.19	-	-	308	106	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector RMS - RMS detection



Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	56.92	Pk	32.3	-24.4	0	64.82	-	-	74	-9.18	7	267	V
2	* 2.484	57.66	Pk	32.3	-24.4	0	65.56	-	-	74	-8.44	7	267	V
3	* 2.484	40.57	RMS	32.3	-24.4	4.68	53.15	54	85	-	-	7	267	V
4	* 2.484	40.38	RMS	32.3	-24.4	4.68	52.96	54	-1.04	-	-	7	267	V

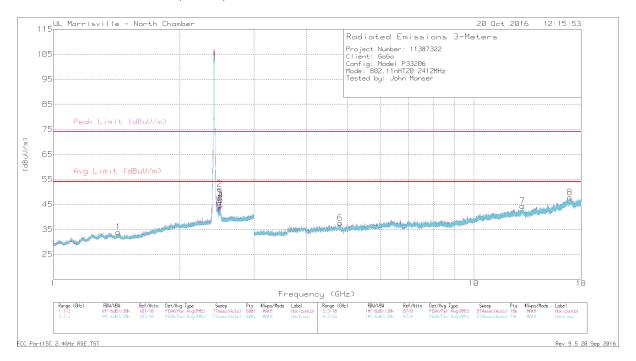
^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

Note – Low Channel for both 802.11g and 802.11n HT20 SDM Mode was found to be worst-case. Therefore, Low channel CDD (MCS0) was spot checked to compare to 802.11g and 802.11n SDM. The results were found to be similar, therefore no additional Radiated Spurious Emissions were performed in the 802.11n HT20 CDD mode.

LOW CHANNEL - CDD (MCS0)



Marker	Freq	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)				(dB)			
2	* 2.487	48.24	PK2	32.3	-24.4	0	56.14	-	-	74	-17.86	58	309	Н
	* 2.487	41.06	MAv1	32.3	-24.4	2.28	51.24	54	-2.76	-	-	58	309	Н
1	* 1.426	36.24	PK2	28.5	-25.2	0	39.54	-	-	74	-34.46	308	159	V
	* 1.426	24.05	MAv1	28.5	-25.2	2.28	29.63	54	-24.37	-	-	308	159	V
3	* 2.487	47.6	PK2	32.3	-24.4	0	55.5	-	-	74	-18.5	326	280	V
	* 2.487	39.79	MAv1	32.3	-24.4	2.28	49.97	54	-4.03	-	-	326	280	V
5	* 2.5	45.22	PK2	32.3	-24.4	0	53.12	-	-	74	-20.88	324	348	V
	* 2.5	34.91	MAv1	32.3	-24.4	2.28	45.09	54	-8.91	-	-	324	348	V
6	* 4.812	41.34	PK2	34	-31.7	0	43.64	-	-	74	-30.36	331	109	Н
	* 4.811	29.14	MAv1	34	-31.7	2.28	33.72	54	-20.28	-	-	331	109	Н
4	2.5	38.69	Pk	32.3	-24.4	0	46.59	-	-	-	-	0-360	103	Н
7	13.058	30.72	Pk	39.2	-25.6	0	44.32	-	-	-	-	0-360	102	V
8	16.924	29.96	Pk	42	-24.2	0	47.76	ı	-	1	-	0-360	199	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

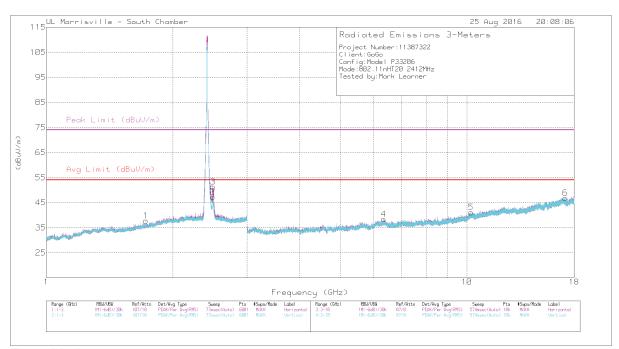
PK2 -Maximum Peak

MAv1 - Maximum RMS Average

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LOW CHANNEL - SDM (MCS16)



Trace Markers

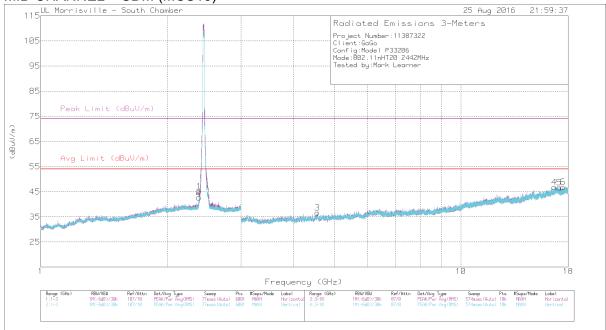
Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
3	* 2.488	50.06	PK2	32.4	-24.7	0	57.76	-	-	74	-16.24	82	130	Н
	* 2.488	38.5	MAv1	32.4	-24.7	4.68	50.88	54	-3.12	1	-	82	130	Н
2	* 2.487	46.01	PK2	32.4	-24.7	0	53.71	-	-	74	-20.29	69	202	V
	* 2.487	35.69	MAv1	32.4	-24.7	4.68	48.07	54	-5.93	1	-	69	202	V
1	1.724	30.85	Pk	29.3	-22.4	0	37.75	-	-	ı	-	0-360	201	V
4	6.341	31.41	Pk	35.5	-28.5	0	38.41	-	-	1	-	0-360	199	Н
5	10.23	29.52	Pk	37.3	-25.7	0	41.12	-	-	-	-	0-360	101	V
6	17.151	29.09	Pk	41.4	-23.6	0	46.89	-	-	ı	-	0-360	101	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MID CHANNEL - SDM (MCS16)



Trace Markers

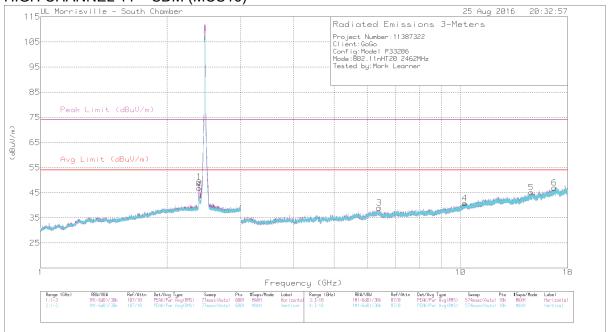
Hace	- IVIAI NE	10												
Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
1	* 2.384	43.24	PK2	32.1	-24.1	0	51.24	-	-	74	-22.76	187	100	Н
	* 2.383	29.91	MAv1	32.1	-24.1	4.68	42.59	54	-11.41	-	-	187	100	Н
2	* 2.384	40.5	PK2	32.1	-24.1	0	48.5	•	-	74	-25.5	26	199	V
	* 2.383	28.23	MAv1	32.1	-24.1	4.68	40.91	54	-13.09	-	-	26	199	V
3	* 4.559	40.88	PK2	34	-32	0	42.88	•	-	74	-31.12	71	199	V
	* 4.558	29.52	MAv1	34	-32	4.68	36.2	54	-17.8	-	-	71	199	V
4	16.696	30.48	Pk	41.5	-25.2	0	46.78	-	-	-	-	0-360	101	V
5	17.147	28.83	Pk	41.4	-23.6	0	46.63	-	-	-	-	0-360	101	Н
6	17.493	29.64	Pk	41.1	-23.9	0	46.84	-	-	-	-	0-360	199	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

HIGH CHANNEL 11 – SDM (MCS16)



Trace Markers

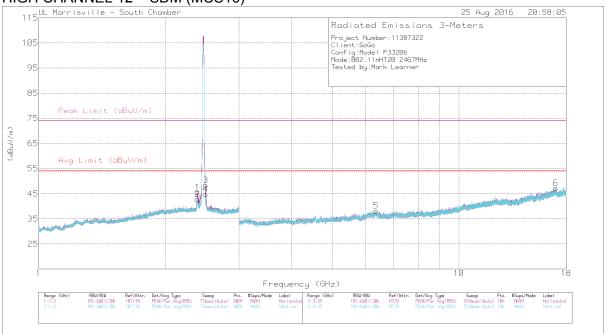
Marker	Frequency		Det	AF	Amp/Cbl/	DC	Corrected	-	_	Peak Limit		Azimuth		Polarity
	(GHz)	Reading (dBuV)		AT0069 (dB/m)	Fltr/Pad (dB)	Corr (dB)	Reading (dBuV/m)	(dBuV/m)	(dB)	(dBuV/m)	Margin (dB)	(Degs)	(cm)	
1	* 2.384	48.93	PK2	32.2	-24.1	0	57.03	-	-	74	-16.97	154	269	Н
	* 2.383	37.94	MAv1	32.1	-24.1	4.68	50.62	54	-3.38	-	-	154	269	Н
2	* 2.388	47.16	PK2	32.2	-24.1	0	55.26	-	-	74	-18.74	44	304	V
	* 2.388	35.12	MAv1	32.2	-24.1	4.68	47.90	54	-6.1	-	-	44	304	V
3	6.402	32.96	Pk	35.4	-29.3	0	39.06	-	-	-	-	0-360	199	Н
4	10.242	29.1	Pk	37.3	-25.6	0	40.8	-	-	-	-	0-360	101	V
5	14.736	30.64	Pk	39.8	-25.3	0	45.14	-	-	-	-	0-360	101	V
6	16.73	30.69	Pk	41.6	-25.3	0	46.99	-	-	-	-	0-360	199	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

HIGH CHANNEL 12 - SDM (MCS16)



Trace Markers

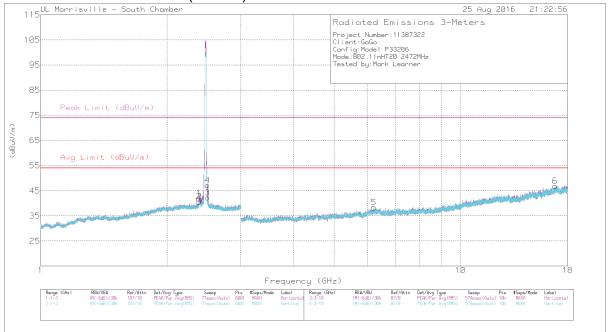
11400	o iviaine	,10												
Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
1	* 2.39	44.2	PK2	32.2	-24.1	0	52.3	-	-	74	-21.7	186	204	Н
	* 2.389	32.59	MAv1	32.2	-24.1	4.68	45.37	54	-8.63	-	-	186	203	Н
2	* 2.388	43.26	PK2	32.2	-24.1	0	51.36	1	-	74	-22.64	66	281	V
	* 2.388	31.18	MAv1	32.2	-24.1	4.68	43.96	54	-10.04	-	-	66	281	V
3	2.5	40.68	Pk	32.5	-24.8	0	48.38	1	-	-	-	0-360	102	Н
4	2.5	37.08	Pk	32.5	-24.8	0	44.78	-	-	-	-	0-360	101	V
5	6.355	31.7	Pk	35.5	-29	0	38.2	1	-	-	-	0-360	199	V
6	16.993	30.65	Pk	41.5	-24.9	0	47.25	-	-	-	-	0-360	101	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

HIGH CHANNEL 13 – SDM (MCS16)



Trace Markers

Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
1	* 2.385	40.58	PK2	32.2	-24.1	0	48.68	-	-	74	-25.32	187	196	Н
	* 2.385	28.05	MAv1	32.2	-24.1	4.68	40.83	54	-13.17	1	-	187	196	Н
4	* 2.5	43.81	PK2	32.5	-24.8	0	51.51	1	-	74	-22.49	77	221	Н
	* 2.5	33.44	MAv1	32.5	-24.8	4.68	45.82	54	-8.18	-	-	77	221	Н
2	* 2.387	39.02	PK2	32.2	-24.1	0	47.12	1	-	74	-26.88	135	179	V
	* 2.389	26.65	MAv1	32.2	-24.1	4.68	39.43	54	-14.57	1	-	135	179	V
3	2.5	41.45	PK2	32.5	-24.8	0	49.15	ı	-	1	-	100	199	V
	2.5	29.78	MAv1	32.5	-24.8	.3	37.78	1	-	1	-	100	199	V
5	6.223	32.46	Pk	35.4	-29.5	0	38.36	1	-	-	-	0-360	101	Н
6	16.792	29.9	Pk	41.6	-24.6	0	46.9	-	-	-	-	0-360	199	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

9.2.4. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL - CDD MCS0)



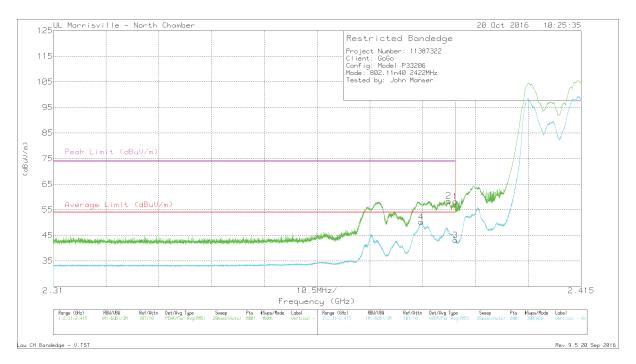
Marker	Freq	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.39	54.85	Pk	32.1	-24.5	0	62.45	-	-	74	-11.55	59	329	Н
2	* 2.39	55.7	Pk	32.1	-24.5	0	63.3	-	-	74	-10.7	59	329	Н
3	* 2.39	43.08	RMS	32.1	-24.5	1.11	51.79	54	-2.21	-	-	59	329	Н
4	* 2.389	44.65	RMS	32.1	-24.5	1.11	53.36	54	64	-	-	59	329	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

Rev 9.5 20 Sep 2016



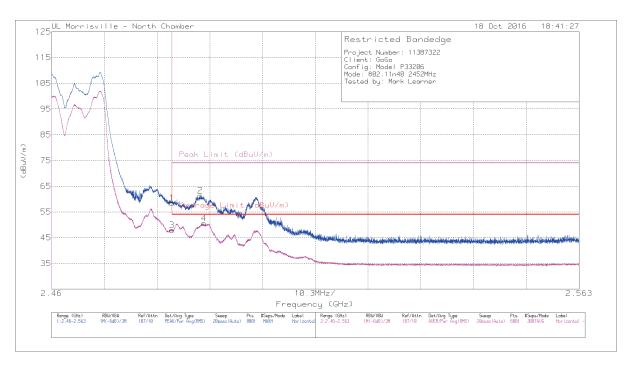
Marker	Freq	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarit
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	у
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.39	50.58	Pk	32.1	-24.5	0	58.18	-	-	74	-15.82	8	329	V
2	* 2.389	50.83	Pk	32.1	-24.5	0	58.43	-	-	74	-15.57	8	329	V
3	* 2.39	34.4	RMS	32.1	-24.5	1.11	43.11	54	-10.89	-	-	8	329	V
4	* 2.383	41.5	RMS	32.1	-24.5	1.11	50.21	54	-3.79	-	-	8	329	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

 REPORT NO: 11387322-E1
 DATE: 2016-10-25

 FCC ID: WPX-ACWAP
 IC: 8014A-ACWAP

RESTRICTED BANDEDGE (HIGH CHANNEL 9 - CDD MCS0)

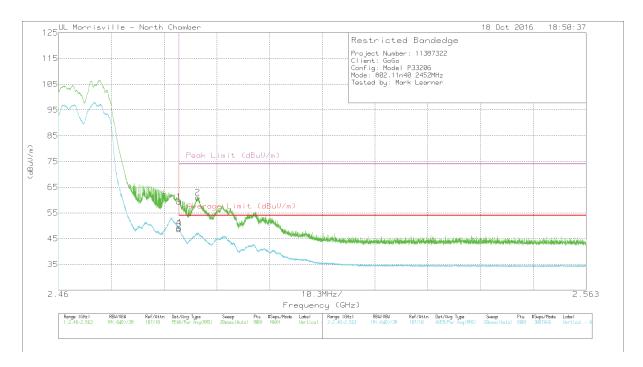


Marker	Freq	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	50.62	Pk	32.3	-24.4	0	58.52	-	-	74	-15.48	60	352	Н
2	* 2.489	53.47	Pk	32.3	-24.4	0	61.37	-	-	74	-12.63	60	352	Н
3	* 2.484	38.92	RMS	32.3	-24.4	1.11	47.93	54	-6.07	-	-	60	352	Н
4	* 2.49	41.57	RMS	32.3	-24.4	1.11	50.58	54	-3.42	-	-	60	352	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

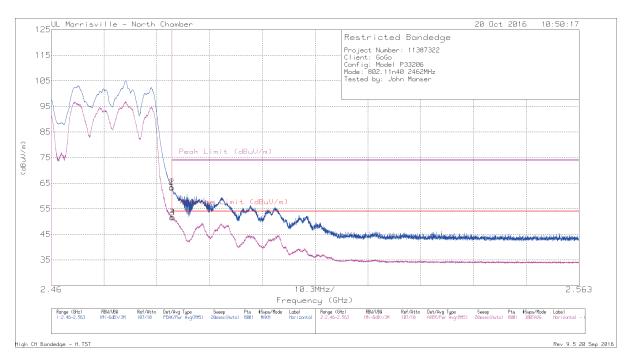


Marker	Freq	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	51.48	Pk	32.3	-24.4	0	59.38	-	-	74	-14.62	3	388	V
2	* 2.487	53.1	Pk	32.3	-24.4	0	61	-	-	74	-13	3	388	V
3	* 2.484	39.68	RMS	32.3	-24.4	1.11	48.69	54	-5.31	-	-	3	388	V
4	* 2.484	40.25	RMS	32.3	-24.4	1.11	49.26	54	-4.74	-	-	3	388	٧

 $^{^{\}star}$ - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

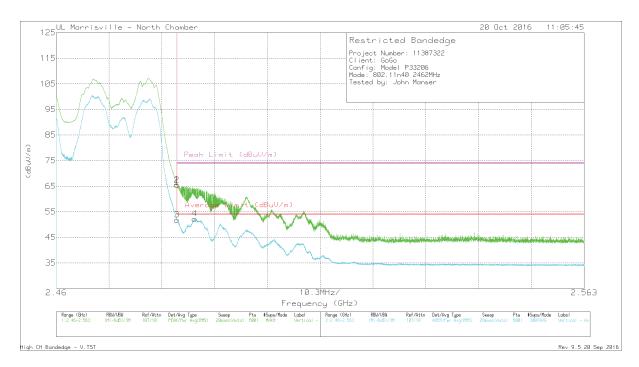
Pk - Peak detector RMS - RMS detection

RESTRICTED BANDEDGE (HIGH CHANNEL 11 - CDD MCS0)



Marker	Freq	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	55.3	Pk	32.3	-24.4	0	63.2	-	-	74	-10.8	218	330	Н
2	* 2.484	55.52	Pk	32.3	-24.4	0	63.42	-	-	74	-10.58	218	330	Н
3	* 2.484	42.6	RMS	32.3	-24.4	1.11	51.61	54	-2.39	-	-	218	330	Н
4	* 2.484	42.65	RMS	32.3	-24.4	1.11	51.66	54	-2.34	=	-	218	330	Н

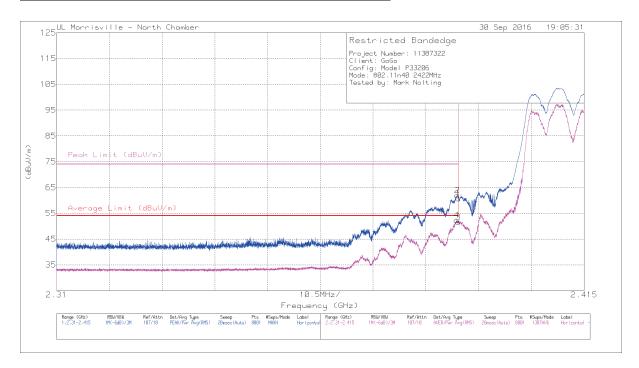
^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band



Marker	Freq	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	57.64	Pk	32.3	-24.4	0	65.54	-	-	74	-8.46	352	373	V
2	* 2.484	57.52	Pk	32.3	-24.4	0	65.42	-	-	74	-8.58	352	373	V
3	* 2.484	42.87	RMS	32.3	-24.4	1.11	51.88	54	-2.12	-	-	352	373	V
4	* 2.487	43.24	RMS	32.3	-24.4	1.11	52.25	54	-1.75	-	-	352	373	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

RESTRICTED BANDEDGE (LOW CHANNEL - SDM MCS16)

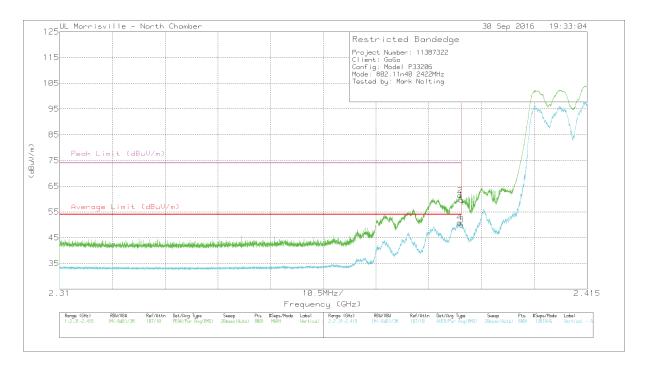


Marker	Frequency	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.39	53.12	Pk	32.1	-24.5	0	60.72	-	-	74	-13.28	308	124	Н
2	* 2.39	54.34	Pk	32.1	-24.5	0	61.94	-	-	74	-12.06	308	124	Н
3	* 2.39	42.81	RMS	32.1	-24.5	1.12	51.53	54	-2.47	-	-	308	124	Н
4	* 2.39	43.56	RMS	32.1	-24.5	1.12	52.28	54	-1.72	-	-	308	124	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



Marker	Frequency	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.39	52.12	Pk	32.1	-24.5	0	59.72	-	-	74	-14.28	359	245	V
2	* 2.39	53.83	Pk	32.1	-24.5	0	61.43	-	1	74	-12.57	359	245	V
3	* 2.39	41.37	RMS	32.1	-24.5	1.12	50.09	54	-3.91	-	-	359	245	V
4	* 2.39	42.14	RMS	32.1	-24.5	1.12	50.86	54	-3.14	-	-	359	245	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

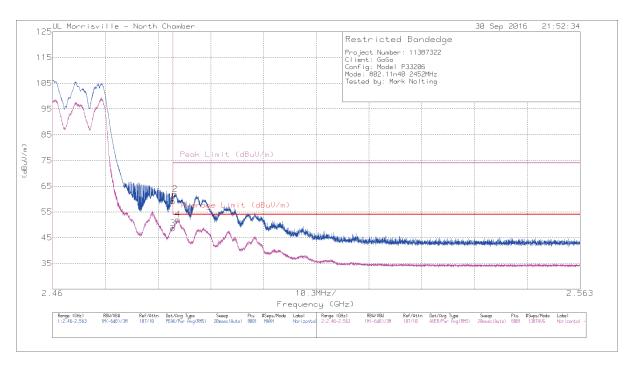
Pk - Peak detector

RMS - RMS detection

 REPORT NO: 11387322-E1
 DATE: 2016-10-25

 FCC ID: WPX-ACWAP
 IC: 8014A-ACWAP

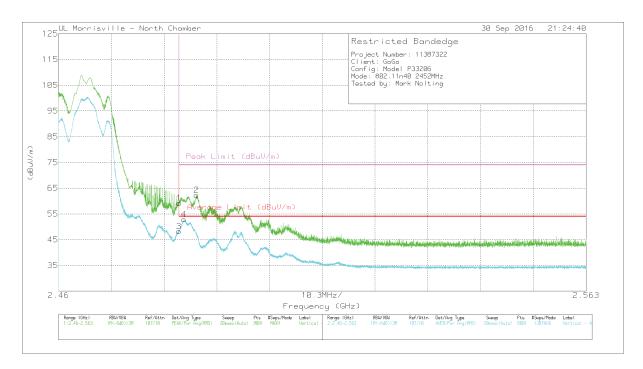
RESTRICTED BANDEDGE (HIGH CHANNEL 9 – SDM MCS16)



Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	51.2	Pk	32.3	-24.4	0	59.1	-	-	74	-14.9	308	146	Н
2	* 2.484	54.06	Pk	32.3	-24.4	0	61.96	-	-	74	-12.04	308	146	Н
3	* 2.484	39.63	RMS	32.3	-24.4	1.12	48.65	54	-5.35	-	-	308	146	Н
4	* 2.484	43.06	RMS	32.3	-24.4	1.12	52.08	54	-1.92	-	-	308	146	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector RMS - RMS detection

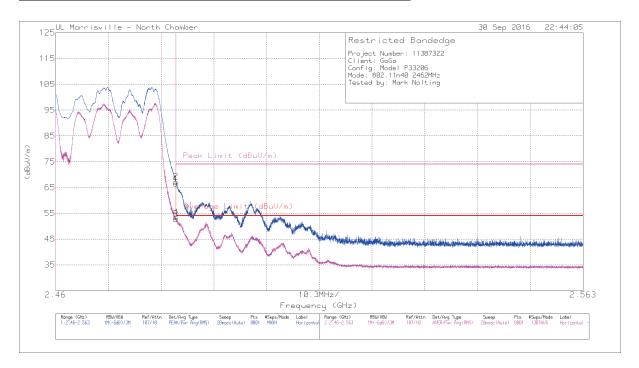


Marker	Frequency	Meter	Det	AF AT0072	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		(dB/m)	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)			(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	51.3	Pk	32.3	-24.4	0	59.2	-	-	74	-14.8	12	275	V
3	* 2.484	39.23	RMS	32.3	-24.4	1.12	48.25	54	-5.75	-	-	12	275	V
4	* 2.484	43.87	RMS	32.3	-24.4	1.12	52.89	54	-1.11	-	-	12	275	V
2	* 2.487	54.37	Pk	32.3	-24.4	0	62.27	-	-	74	-11.73	12	275	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector RMS - RMS detection

RESTRICTED BANDEDGE (HIGH CHANNEL 11 – SDM MCS16)

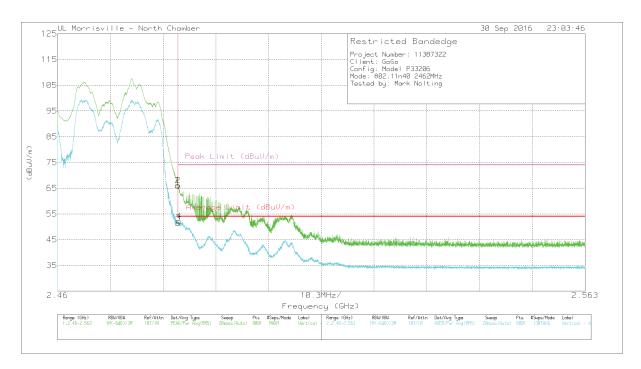


Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	58.55	Pk	32.3	-24.4	0	66.45	-	-	74	-7.55	307	110	Н
2	* 2.484	59.33	Pk	32.3	-24.4	0	67.23	-	-	74	-6.77	307	110	Н
3	* 2.484	43.67	RMS	32.3	-24.4	1.12	52.69	54	-1.31	-	-	307	110	Н
4	* 2.484	44.4	RMS	32.3	-24.4	1.12	53.42	54	58	-	-	307	110	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Average	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	Limit	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)	(dBuV/m)			(dB)			
1	* 2.484	58.27	Pk	32.3	-24.4	0	66.17	-	-	74	-7.83	11	273	V
2	* 2.484	58.13	Pk	32.3	-24.4	0	66.03	-	-	74	-7.97	11	273	V
3	* 2.484	42.39	RMS	32.3	-24.4	1.12	51.41	54	-2.59	-	-	11	273	V
4	* 2.484	43.12	RMS	32.3	-24.4	1.12	52.14	54	-1.86	-	-	11	273	V

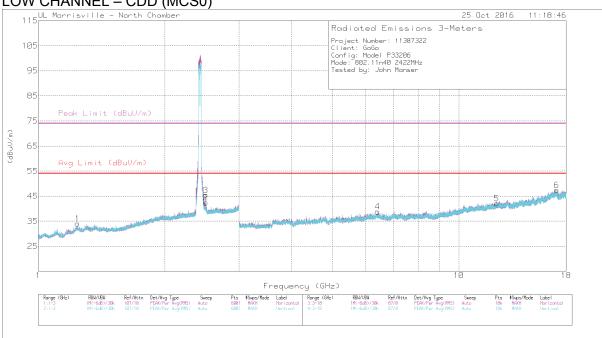
^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

Note - Low Channel for 802.11n HT40 SDM Mode was found to be worst-case. Therefore, Low channel CDD (MCS0) was spot checked to compare to 802.11n SDM. The results were found to be similar, therefore no additional Radiated Spurious Emissions were performed in the 802.11n HT40 CDD mode.





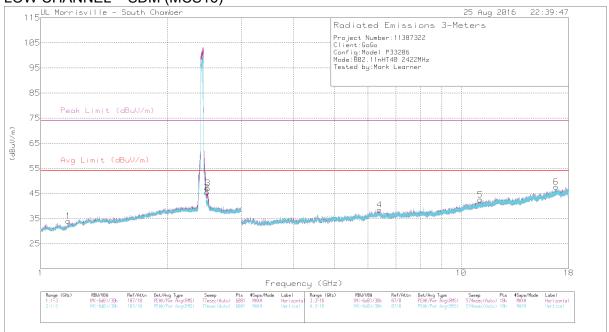
Marker	Freq	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0072	Fltr/Pad	(dB)	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)				(dB)			
3	* 2.5	44.52	PK2	32.3	-24.4	0	52.42	-	-	74	-21.58	55	352	Н
	* 2.5	34.65	MAv1	32.3	-24.4	1.11	43.66	54	-10.34	-	-	55	352	Н
1	* 1.237	36.16	PK2	29	-26	0	39.16	-	-	74	-34.84	85	160	V
	* 1.239	24.43	MAv1	29	-26	1.11	28.54	54	-25.46	-	-	85	160	V
2	* 2.5	42.5	PK2	32.3	-24.4	0	50.4	-	-	74	-23.6	357	375	V
	* 2.5	32.58	MAv1	32.3	-24.4	1.11	41.59	54	-12.41	-	-	357	375	V
5	* 12.307	35.94	PK2	38.9	-26	0	48.84	-	-	74	-25.16	106	152	Н
	* 12.308	24.52	MAv1	38.9	-26	1.11	38.53	54	-15.47	-	-	106	152	Н
4	6.406	33.44	Pk	35.4	-30	0	38.84	-	-	-	-	0-360	102	Н
6	17.098	30.85	Pk	41.7	-25.2	0	47.35	-	-	-	-	0-360	199	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak





Trace Markers

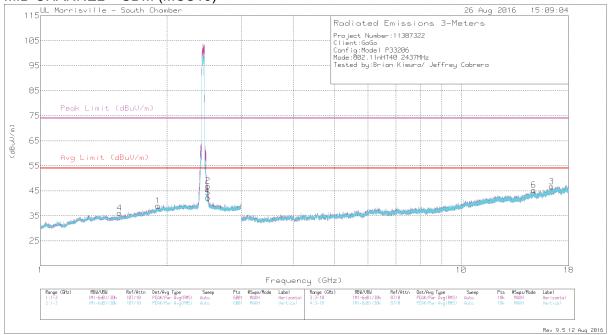
Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
1	* 1.164	35.57	PK2	27.6	-24.2	0	38.97	-	-	74	-35.03	47	199	Н
	* 1.164	24.32	MAv1	27.6	-24.2	1.12	28.84	54	-25.16	-	-	47	199	Н
2	* 2.488	45.65	PK2	32.4	-24.7	0	53.35	-	-	74	-20.65	81	200	Н
	* 2.487	33.79	MAv1	32.4	-24.7	1.12	42.61	54	-11.39	-	-	81	200	Н
3	* 2.5	44.84	PK2	32.5	-24.8	0	52.54	-	-	74	-21.46	78	220	Н
	* 2.5	35.43	MAv1	32.5	-24.8	1.12	44.25	54	-9.75	-	-	78	220	Н
5	* 11.106	34.85	PK2	38	-25.1	0	47.75	-	-	74	-26.25	84	221	V
	* 11.104	22.84	MAv1	38	-25.1	1.12	36.86	54	-17.14	-	-	84	221	V
4	6.4	32.37	Pk	35.4	-29.3	0	38.47	-	-	-	-	0-360	101	Н
6	16.797	30.68	Pk	41.6	-24.6	0	47.68	-	-	-	-	0-360	199	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MID CHANNEL - SDM (MCS16)



Trace Markers

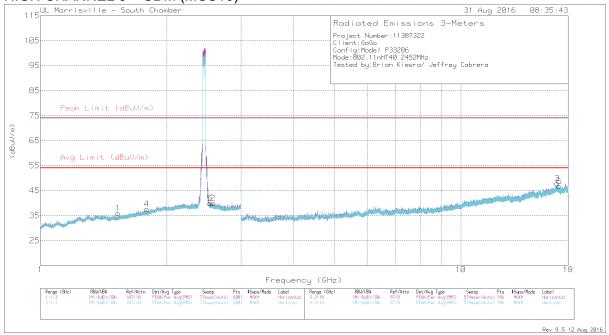
Hace	- Iviai KC	13												
Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
4	* 1.544	35.46	PK2	28.1	-22.6	0	40.96	-	-	74	-33.04	118	199	V
	* 1.544	23.53	MAv1	28.1	-22.6	1.12	30.15	54	-23.85	1	-	118	199	V
1	1.902	30.7	Pk	30.8	-22.5	0	39	-	-	-	-	0-360	199	Н
2	2.5	39.32	Pk	32.5	-24.8	0	47.02	-	-	-	-	0-360	101	Н
5	2.502	34.56	Pk	32.5	-24.8	0	42.26	-	-	•	-	0-360	199	V
6	14.867	29.19	Pk	39.9	-23.8	0	45.29	-	-	-	-	0-360	199	V
3	16.396	31.01	Pk	41	-25.3	0	46.71	-	-	-	-	0-360	199	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

HIGH CHANNEL 9 – SDM (MCS16)



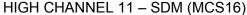
Trace Markers

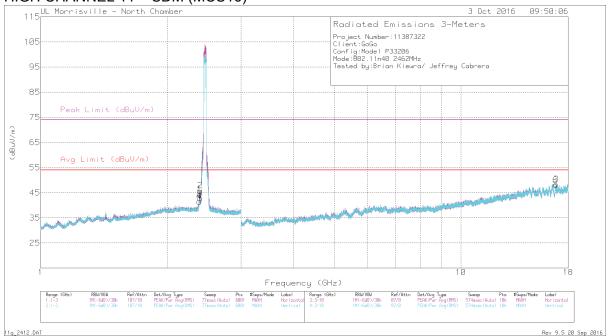
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Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	Corr	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)	(dB)	(dBuV/m)				(dB)			
1	* 1.53	35.43	PK2	28	-22.6	0	40.83	-	-	74	-33.17	107	198	Н
	* 1.529	23.37	MAv1	28	-22.6	1.12	29.89	54	-24.11	-	-	107	198	Н
4	1.792	30.28	Pk	29.9	-22.6	0	37.58	-	-	-	-	0-360	199	V
5	2.53	32.31	Pk	32.5	-24.9	0	39.91	-	-	-	-	0-360	199	V
2	2.576	32.73	Pk	32.4	-25.2	0	39.93	-	-	-	-	0-360	101	Н
3	16.958	30.87	Pk	41.5	-24.5	0	47.87	-	-	-	-	0-360	199	Н
6	17.165	29.14	Pk	41.3	-23.7	0	46.74	-	-	-	-	0-360	199	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak





Trace Markers

Marker	Frequency	Meter	Det	AF	Amp/Cbl/	DC Corr	Corrected	Avg Limit	Margin	Peak Limit	PK	Azimuth	Height	Polarity
	(GHz)	Reading		AT0069	Fltr/Pad	(dB)	Reading	(dBuV/m)	(dB)	(dBuV/m)	Margin	(Degs)	(cm)	
		(dBuV)		(dB/m)	(dB)		(dBuV/m)				(dB)			
1	* 2.388	42.43	PK2	32.2	-24.1	0	50.53	-	-	74	-23.47	89	101	Н
	* 2.388	31.3	MAv1	32.2	-24.1	1.12	40.52	54	-13.48	-	-	89	101	Н
4	* 2.384	41.39	PK2	32.1	-24.1	0	49.39	-	-	74	-24.61	26	198	V
	* 2.386	29.15	MAv1	32.2	-24.1	1.12	38.37	54	-15.63	-	-	26	198	V
2	2.398	37.73	Pk	32.3	-24.2	0	45.83	-	-	-	-	0-360	199	Н
5	2.4	34.79	Pk	32.3	-24.3	0	42.79	-	-	-	-	0-360	102	V
6	16.808	30.55	Pk	41.6	-24.1	0	48.05	-	-	-	-	0-360	102	V
3	16.849	30.69	Pk	41.6	-24	0	48.29	-	-	-	-	0-360	102	Н

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

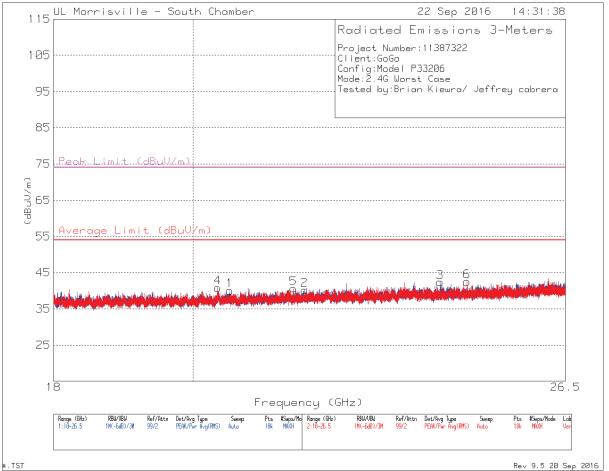
PK2 - Maximum Peak

MAv1 - Maximum RMS Average

Rev 9.5 20 Sep 2016

9.2.5. WORST-CASE ABOVE 18GHz

SPURIOUS EMISSIONS 18-26GHz (WORST-CASE CONFIGURATION)



Trace Markers

Marker	Frequency	Meter	Det	AF	Amp/Cbl	Corrected	Average	Margin	Peak	Margin	Azimuth	Height	Polarity
	(GHz)	Reading		AT0076	(dB)	Reading	Limit	(dB)	Limit	(dB)	(Degs)	(cm)	
		(dBuV)		(dB/m)		(dBuV/m)	(dBuV/m)		(dBuV/m)				
1	* 20.562	46.85	PK2	33.2	-40	40.05	54	-13.95	74	-33.95	358	102	Н
4	* 20.378	46.71	PK2	33.3	-39.9	40.11	54	-13.89	74	-33.89	171	201	V
5	21.578	46.92	Pk	33.4	-39.7	40.62	54	-13.38	74	-33.38	0-360	101	V
2	21.759	46.86	Pk	33.4	-40	40.26	54	-13.74	74	-33.74	0-360	101	Н
3	24.104	47.07	Pk	34.1	-38.8	42.37	54	-11.63	74	-31.63	0-360	101	Н
6	24.599	46.86	Pk	34.3	-38.6	42.56	54	-11.44	74	-31.44	0-360	101	V

^{* -} indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

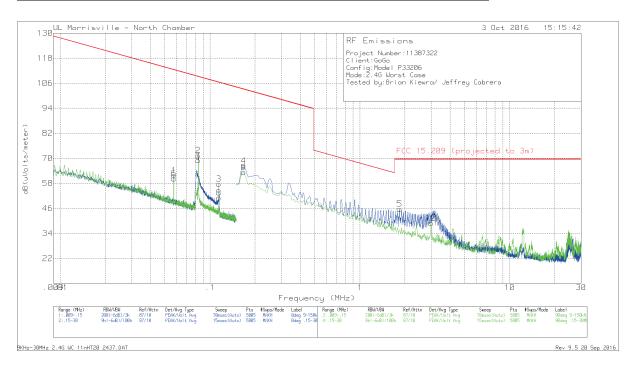
Rev 9.5 20 Sep 2016

REPORT NO: 11387322-E1 FCC ID: WPX-ACWAP

9.3. WORST-CASE BELOW 1 GHz

Note: All measurements were made at a test distance of 3 m. The limits in the plots and tabular data are the FCC/IC limits extrapolated from the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz – 30 MHz) to the measurement distance to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were 40*Log (specification distance / test distance). Although these tests were performed at a test site other than an open area test site, adequate comparison measurements were confirmed against 30 m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 937606.

SPURIOUS EMISSIONS 9kHz to 30 MHz (WORST-CASE CONFIGURATION)\



Marker	Frequency	Meter	Det	AT0079 AF	Cbl	Corrected	FCC 15.209	Margin	Azimuth
	(MHz)	Reading		(dB/m)	(dB)	Reading	(projected to 3m)	(dB)	(Degs)
		(dBuV)				dB(uV/m)			
6	.0573	47.95	Pk	12.3	.1	60.35	112.44	-52.09	0-360
1	.05733	49.39	Pk	12.3	.1	61.79	112.44	-50.65	0-360
2	.08342	59.23	Pk	12	.1	71.33	109.18	-37.85	0-360
7	.08345	56.87	Pk	12	.1	68.97	109.18	-40.21	0-360
3	.11462	45.62	Pk	12	.1	57.72	106.42	-48.7	0-360
8	.11462	38.95	Pk	12	.1	51.05	106.42	-55.37	0-360
4	.1679	54.35	Pk	11.9	.1	66.35	103.1	-36.75	0-360
9	.1679	51.28	Pk	11.9	.1	63.28	103.1	-39.82	0-360
5	1.84406	33.4	Pk	12.1	.2	45.7	69.54	-23.84	0-360
10	2.98934	26.51	Pk	12.1	.3	38.91	69.54	-30.63	0-360

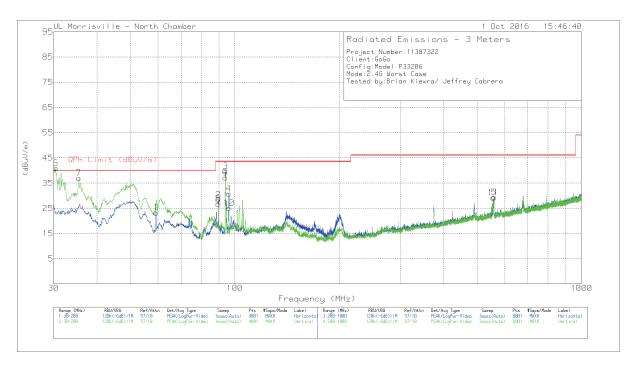
Pk - Peak detector Rev 9.5 20 Sep 2016

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DATE: 2016-10-25

IC: 8014A-ACWAP

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)



Marker	Frequency	Meter	Det	AT0074 AF	Amp/Cbl (dB)	Corrected	QPk Limit	Margin	Azimuth	Height	Polarity
	(MHz)	Reading		(dB/m)		Reading	(dBuV/m)	(dB)	(Degs)	(cm)	
		(dBuV)				(dBuV/m)					
6	30.3084	36.44	Qp	25.8	-31.8	30.44	40	-9.56	120	104	V
7	35.4742	38.33	Qp	21.8	-31.7	28.43	40	-11.57	9	104	V
1	59.2825	42.92	Pk	11.8	-31.4	23.32	40	-16.68	0-360	199	Н
2	89.67	47.78	Pk	11.7	-31.1	28.38	43.52	-15.14	0-360	298	Н
8	89.7125	46.22	Pk	11.7	-31.1	26.82	43.52	-16.7	0-360	102	V
3	93.9083	56.05	Qp	12.5	-31.1	37.45	43.52	-6.07	271	198	Н
9	93.9625	55.72	Pk	12.5	-31.1	37.12	43.52	-6.4	0-360	102	V
4	96.045	48.72	Pk	13.1	-31	30.82	43.52	-12.7	0-360	298	Н
10	96.0875	42.98	Pk	13.1	-31	25.08	43.52	-18.44	0-360	102	V
11	556.6	35.22	Pk	22.7	-28.7	29.22	46.02	-16.8	0-360	202	V
5	559	35.28	Pk	22.8	-28.7	29.38	46.02	-16.64	0-360	199	Н

Pk - Peak detector

Qp - Quasi-Peak detector

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a) RSS-Gen 7.2.2

Frequency of Emission (MHz)	Conducted I	Limit (dBuV)
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

This testing was deemed not applicable because the EUT is supplied via an aircraft's APU (auxiliary power unit) and not via direct or indirect connection to the public utility (AC) power line.