



FCC CFR47 PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

**GT-S7273T~802.11 bgn 1x1+ BT4.0 +basic rates +EDR+GSM/WCDMA850/1900MHz
Bar phone**

MODEL NUMBER: GT-S7273T

FCC ID: A3LGTS7273T

REPORT NUMBER: 13I15168-2, REVISION A

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Prepared for

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.
416, MAETAN 3-DONG, YEONGTONG-GU
SUWON-CITY, GYEONGGI-DO, 443-742, SOUTH KOREA

EUT DESCRIPTION: GT-S7273T-802.11 bgn 1x1+ BT4.0 +basic rates
+EDR+GSM/WCDMA850/1900MHz Bar phone

MODEL: GT-S7273T

SERIAL NUMBER: (CONDUCTED) 4D05C26B05D13000
(RADIATED) 4D05E6BE77523000

DATE TESTED: MAY 21-26, 2013.

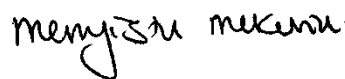
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass

UL CCS tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL CCS based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL CCS By:

Tested By:



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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2009, RSS-GEN Issue 3, and RSS-210 Issue 8.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned}\text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m}\end{aligned}$$

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a bar-style dual SIM cell phone featuring 802.11 bgn 1x1+ BT4.0 +basic rates +EDR+GSM/WCDMA850/1900MHz that is manufactured by Samsung.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

(MHz)		(dBm)	(mW)
2412 - 2462	802.11b	20.11	102.57
2412 - 2462	802.11g	22.19	165.58
2412 - 2462	802.11n HT20	20.91	123.31

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a FPCB antenna, with a maximum gain of 0.51 dBi.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was REV 1.0 and the software was S7273T.010

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that the Z-orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Z-orientation.

Based on the baseline scan, the worst-case data rates were:

802.11b mode: 1 Mbps

802.11g mode: 6 Mbps

802.11n HT20 mode: MCS0

5.1. DESCRIPTION OF TEST SETUP**SUPPORT EQUIPMENT**

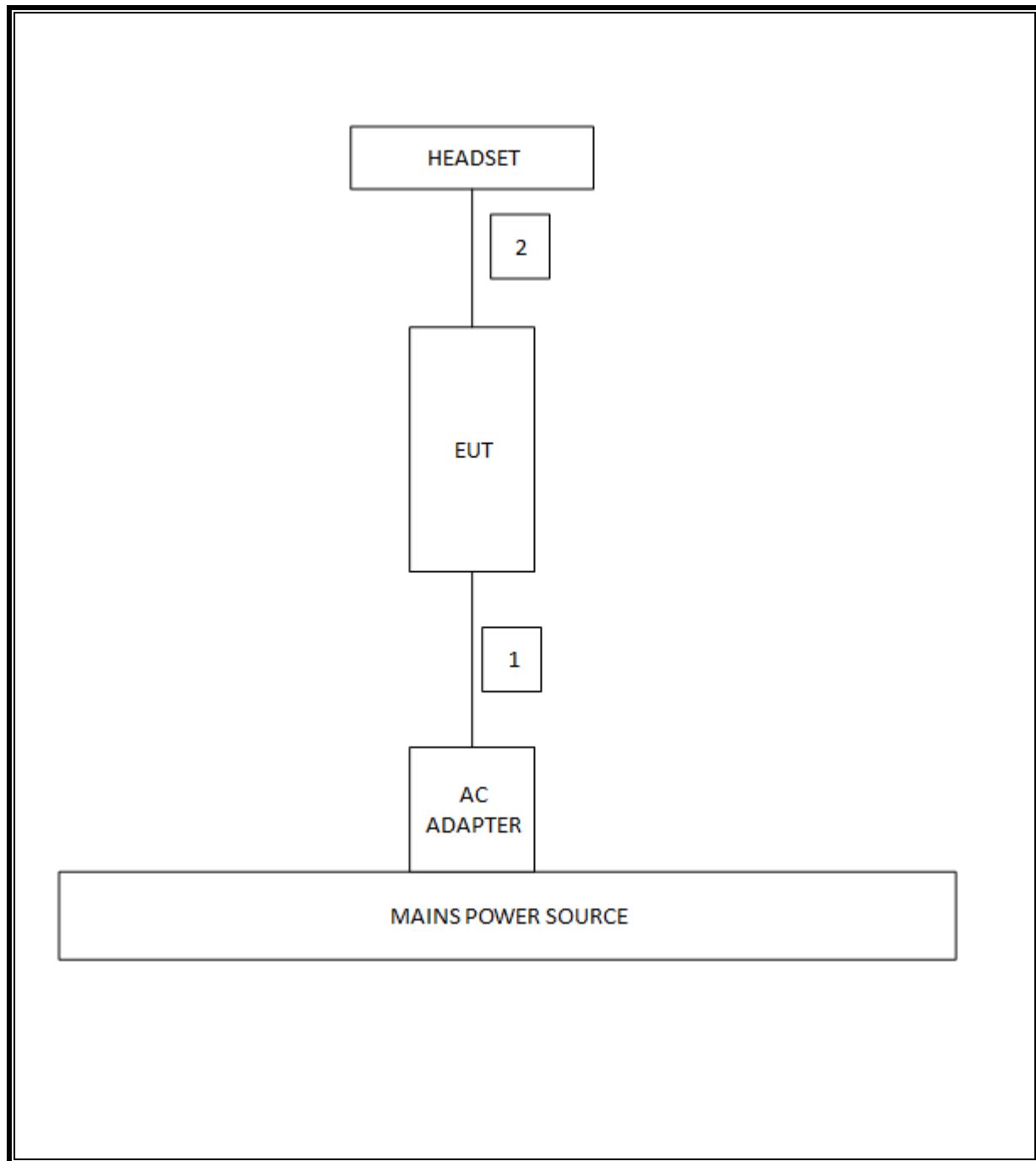
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	Samsung Electronics	ETA0U10BBB	DW2D203DS/7-E	DoC
Headset	Samsung Electronics	N/A	N/A	DoC

I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	USB	Shielded	1.6m	N/A
2	Headset	1	Audio	Shielded	1.5m	N/A

TEST SETUP

The EUT is a stand-alone unit that was tested in the worst case orientation and configuration, where applicable, during the tests. Test software exercised the radio.

SETUP DIAGRAM FOR TESTS

6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Antenna, Horn, 18 GHz	EMCO	3115	C00872	12/11/12	12/11/13
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	C00589	12/17/12	12/17/13
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01012	10/21/12	10/21/13
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C00749	10/19/12	10/19/13
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00558	03/23/13	03/23/14
Reject Filter, 2.4-2.5 GHz	Micro-Tronics	BRC13192	N02683	CNR	CNR
Bilog 30-1000MHz	Sunol	JB1	C01171	02/13/13	02/13/14
Power meter	HP	437B	T226	07/25/12	07/25/13
Power Sensor	HP	8481A	T233	09/24/12	09/24/13
LISN, 30 MHz	FCC	LISN-50/250-25-2	N02625	CNR	CNR
LISN, 10 kHz ~ 30 MHz	Solar	8012-50-R-24-BNC	N02481	05/09/12	05/09/14

7. MEASUREMENT METHODS

KDB 558074 Measurement Procedure PK2 is used for power and PKPSD is used for power spectral density.

Unwanted emissions within Restricted Bands are measured using traditional radiated procedures.

8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

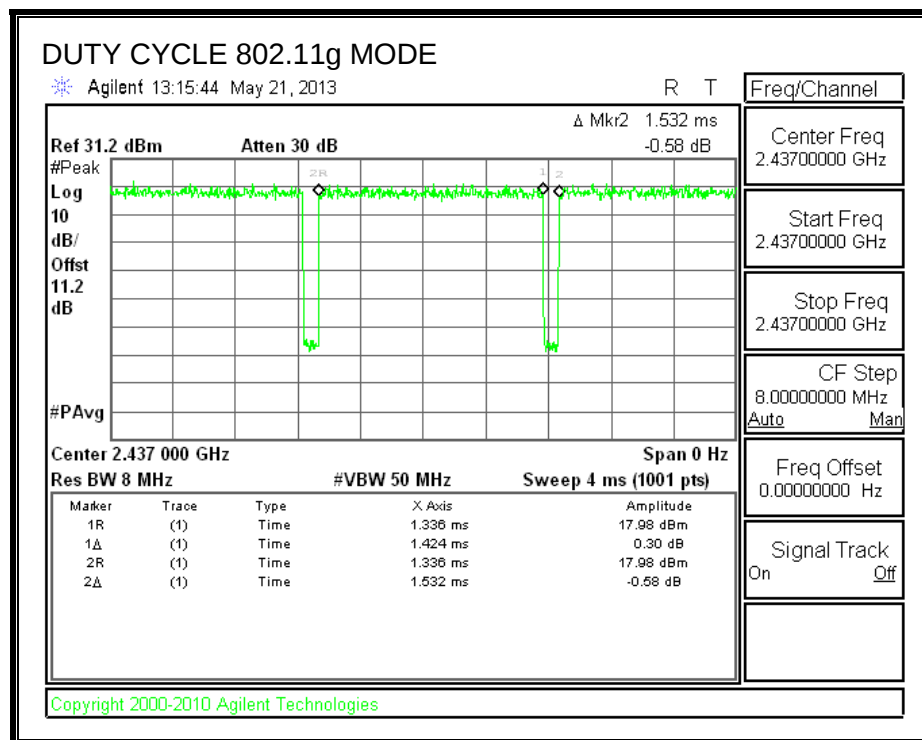
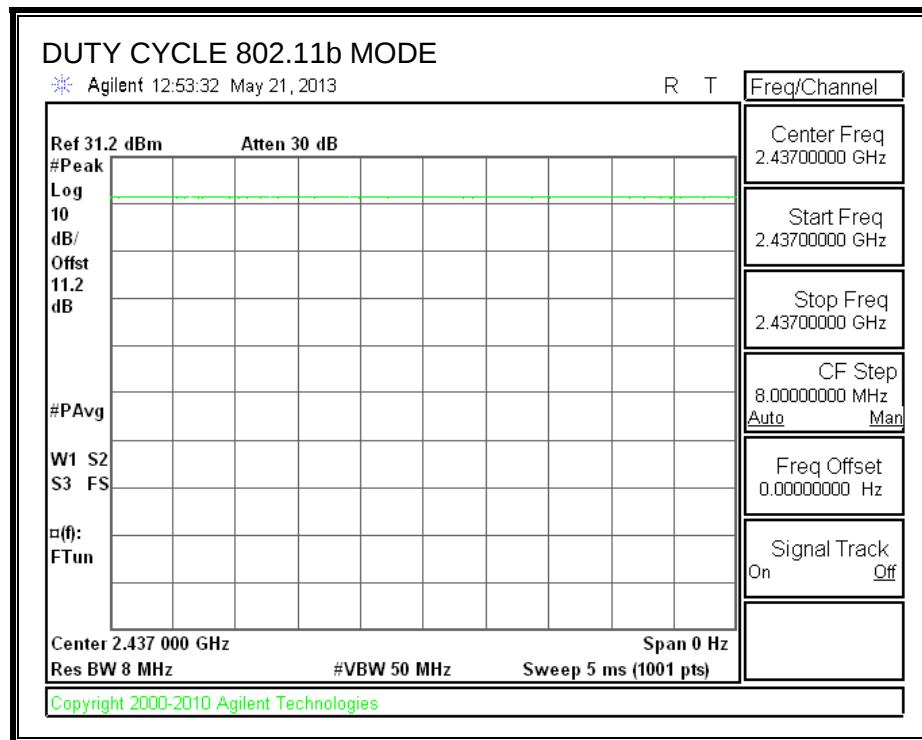
PROCEDURE

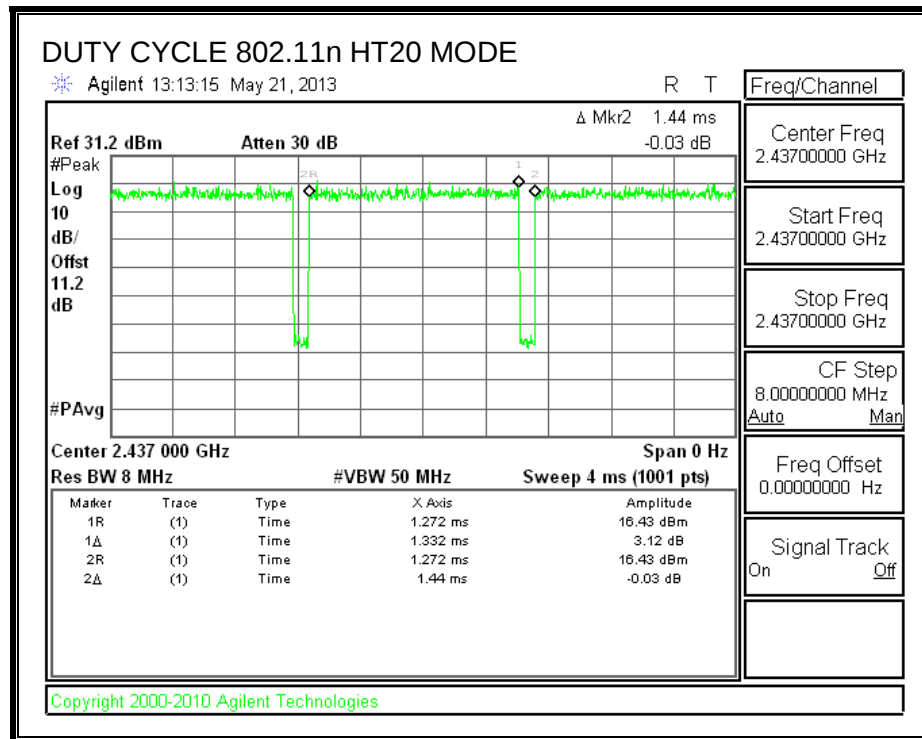
KDB 789033 Zero-Span Spectrum Analyzer Method.

8.1.1. ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
802.11b	1.00	1.00	1.000	100.0%	0.00	0.010
802.11g	1.42	1.53	0.930	93.0%	0.32	0.702
802.11n HT20	1.33	1.44	0.925	92.5%	0.34	0.751

8.1.2. DUTY CYCLE PLOTS





9. ANTENNA PORT TEST RESULTS

9.1. 802.11b MODE IN THE 2.4 GHz BAND

9.1.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

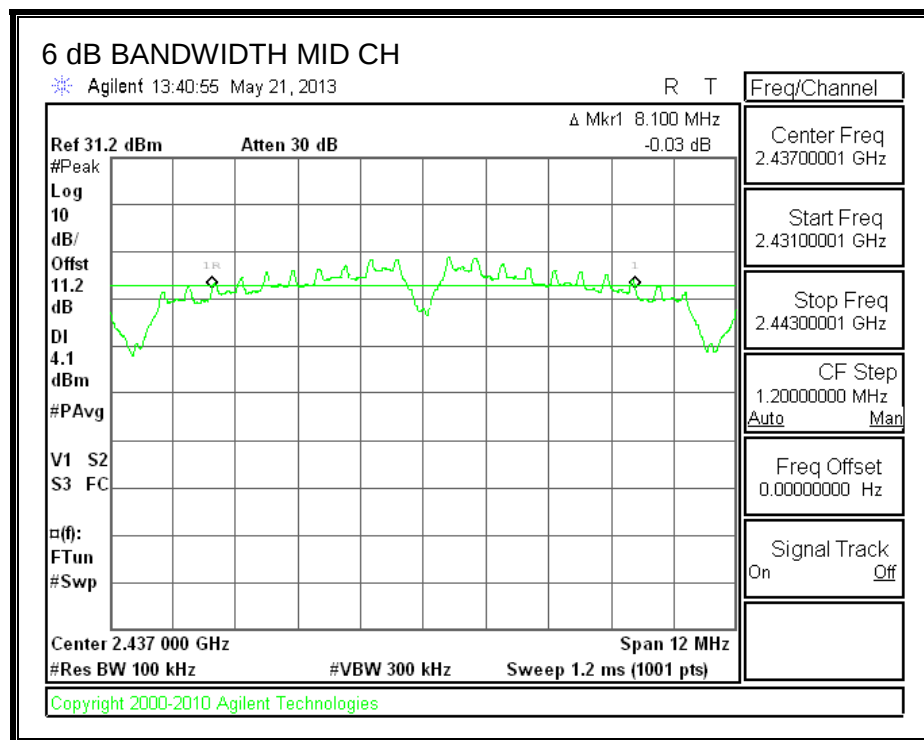
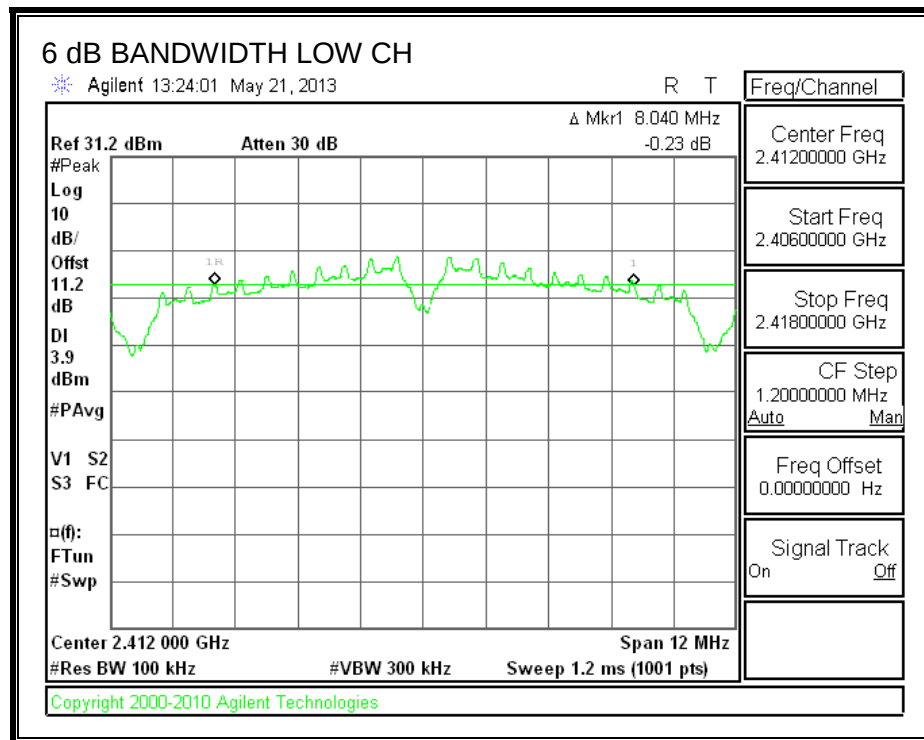
The minimum 6 dB bandwidth shall be at least 500 kHz.

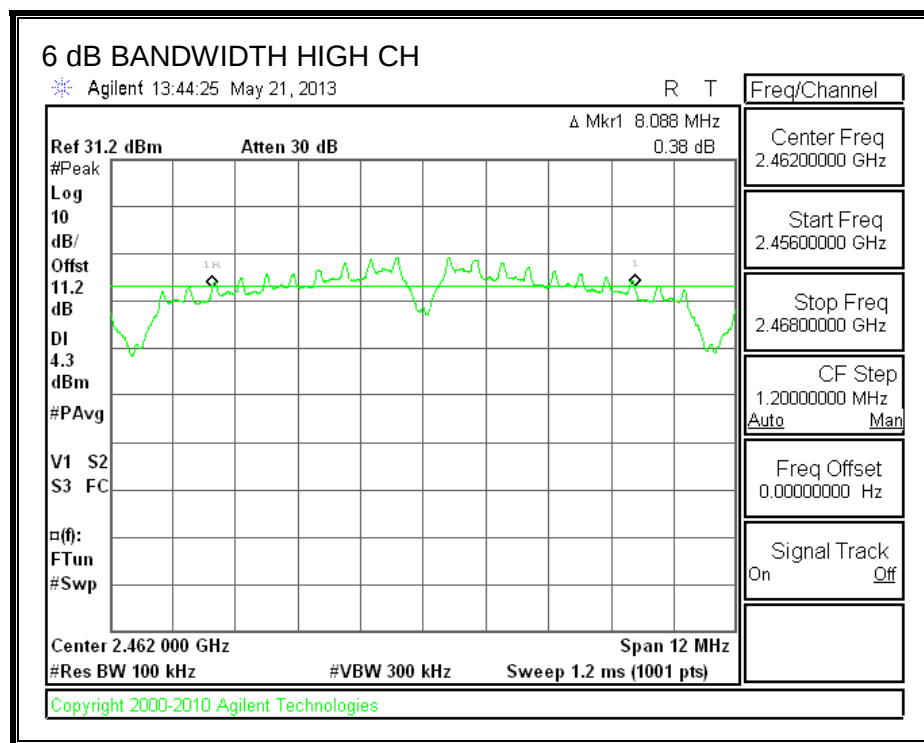
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer with the RBW set between 1% and 5% of the EBW, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	8.040	0.5
Mid	2437	8.100	0.5
High	2462	8.088	0.5

6 dB BANDWIDTH

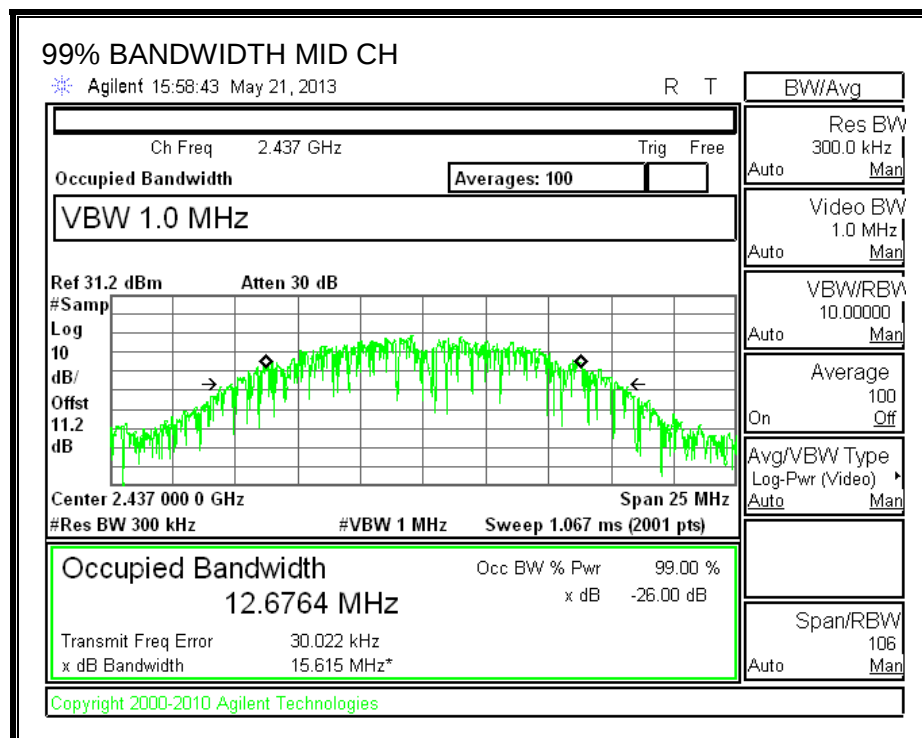
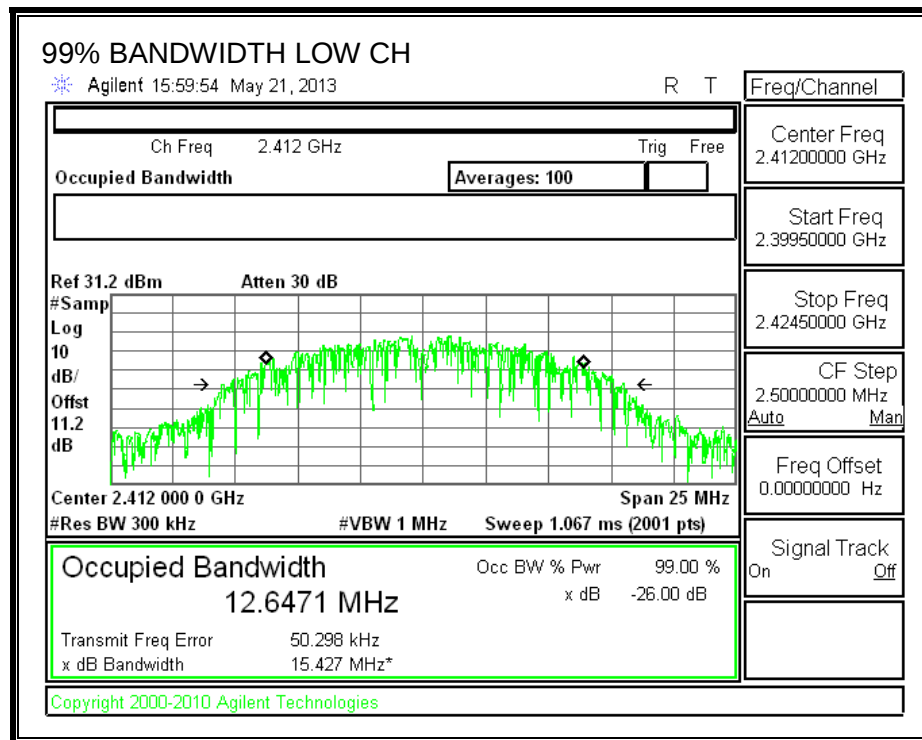


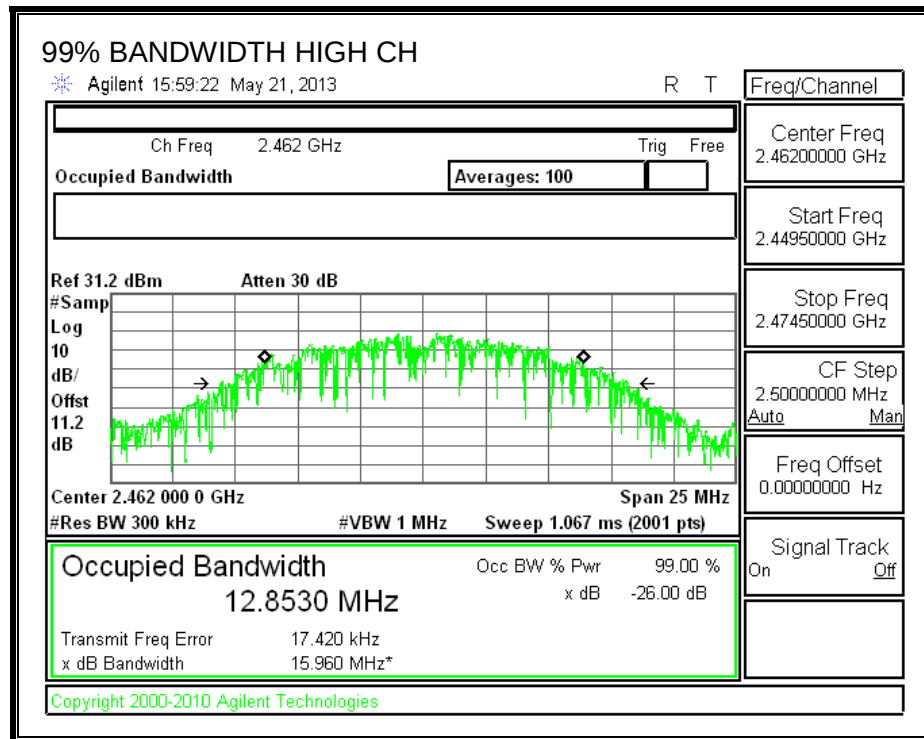
9.1.2. 99% BANDWIDTH**LIMITS**

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	12.6471
Mid	2437	12.6764
High	2462	12.8530

99% BANDWIDTH



9.1.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.2 dB (including 10 dB pad and 1.2 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	2412	16.6
Mid	2437	16.9
High	2462	17.2

9.1.4. OUTPUT POWER**LIMITS**

FCC §15.247

IC RSS-210 A8.4

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

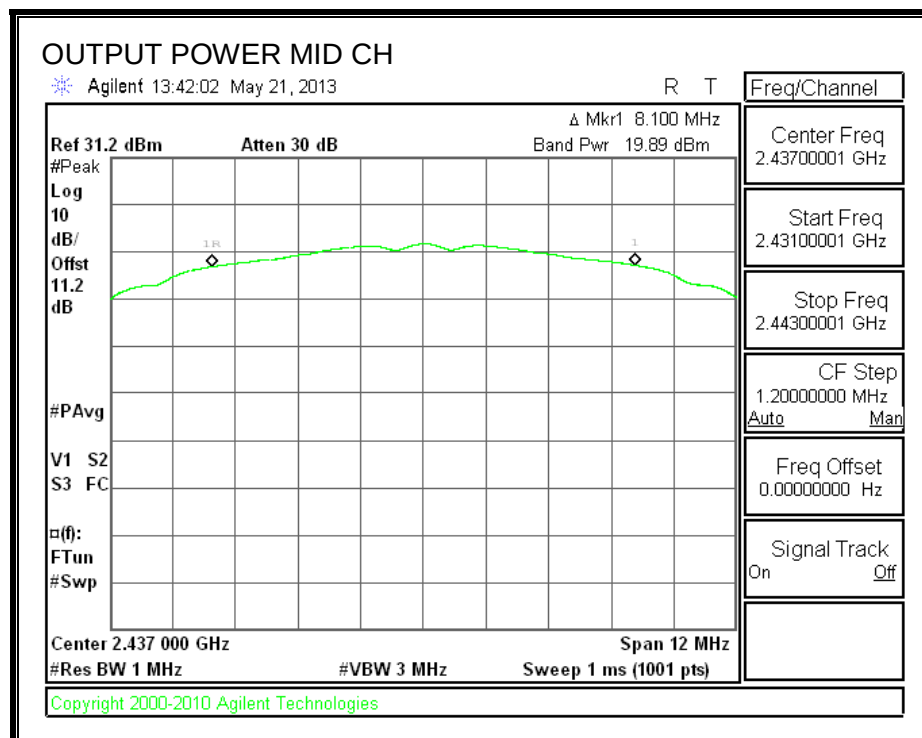
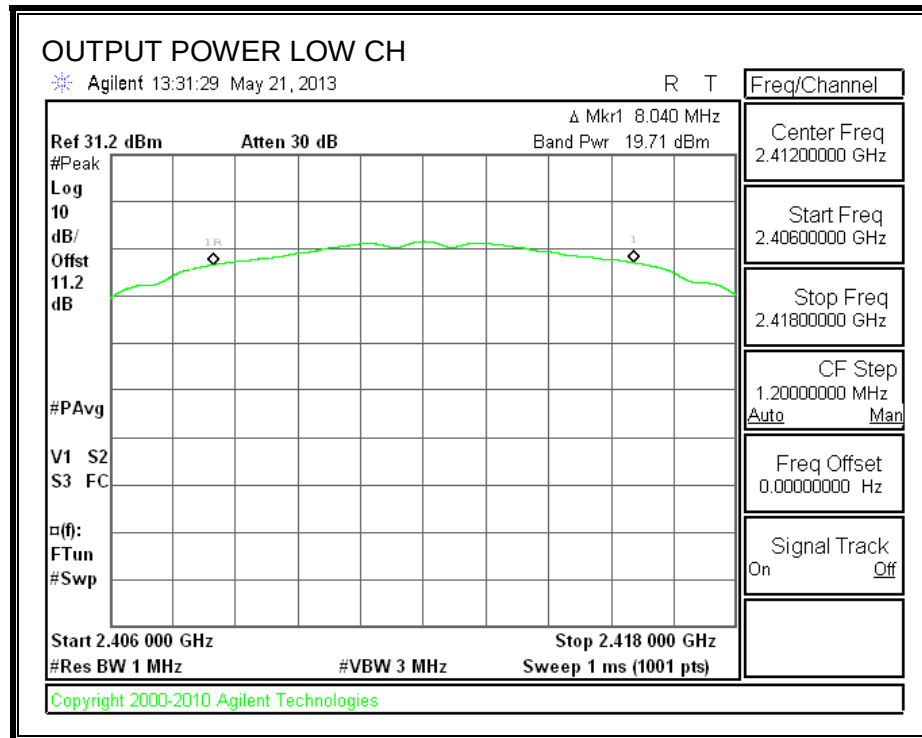
There is only one transmitter output therefore the directional gain is equal to the antenna gain.

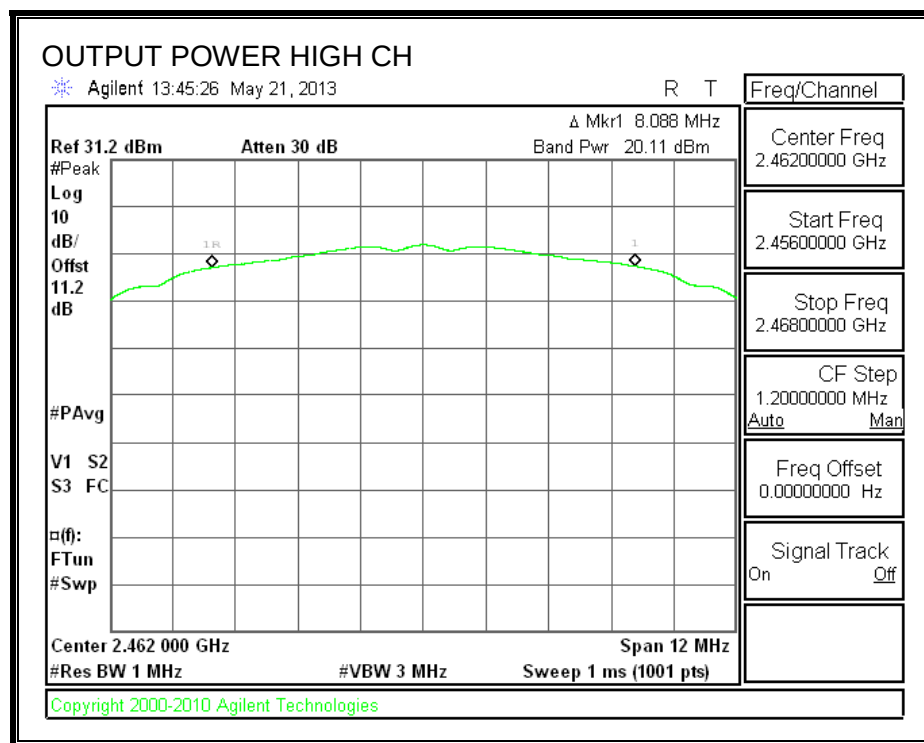
RESULTS**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	0.51	30.00	30	36	30.00
Mid	2437	0.51	30.00	30	36	30.00
High	2462	0.51	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	19.71	19.71	30.00	-10.29
Mid	2437	19.89	19.89	30.00	-10.11
High	2462	20.11	20.11	30.00	-9.89

OUTPUT POWER



9.1.5. PSD

LIMITS

FCC §15.247

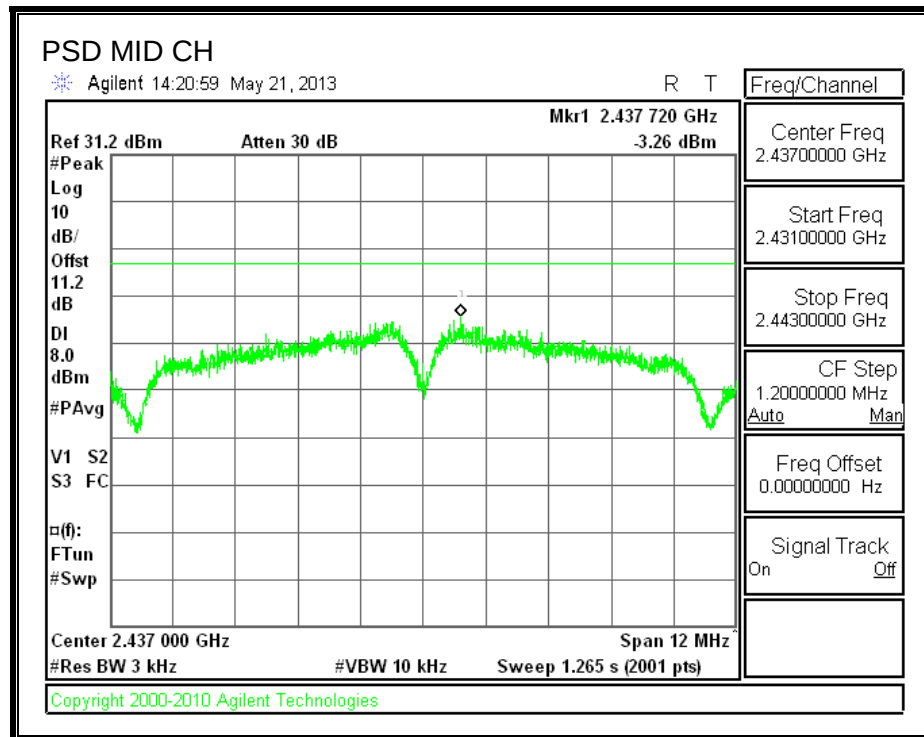
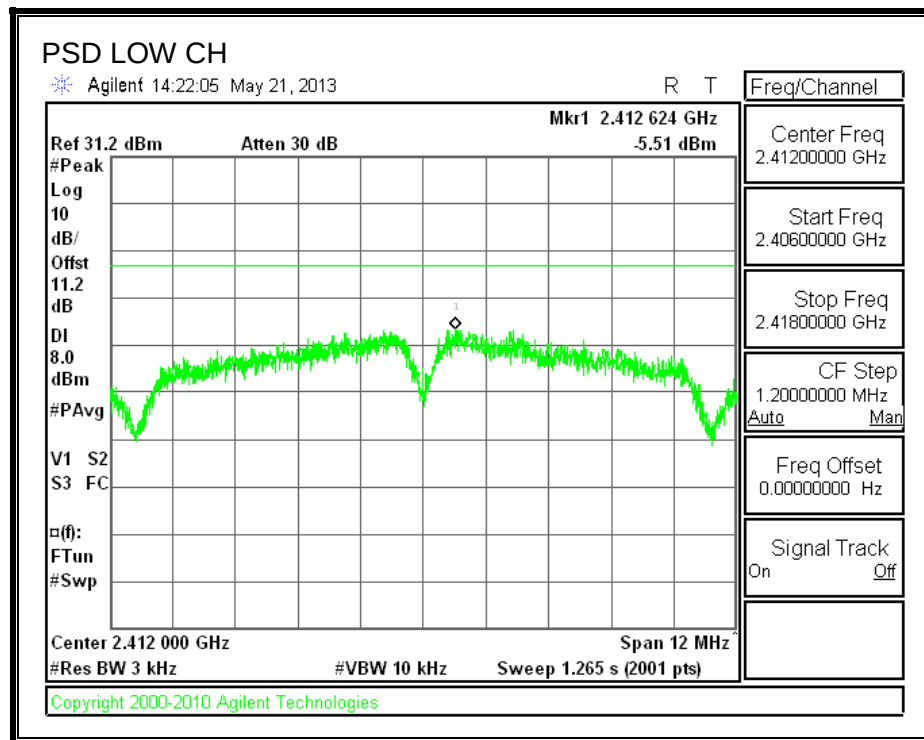
IC RSS-210 A8.2

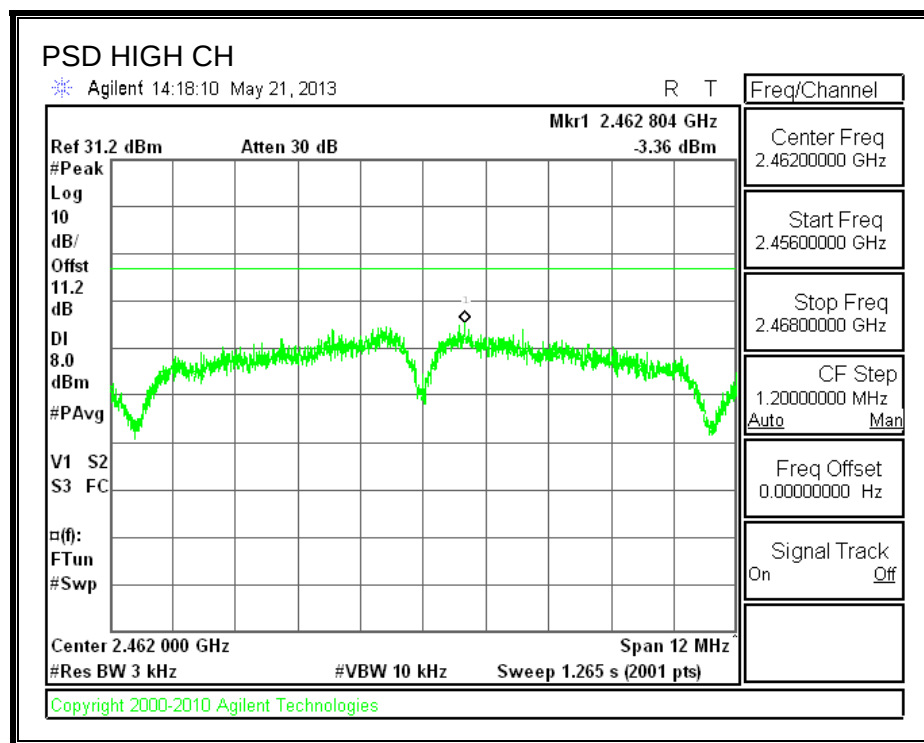
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

RESULTS

PSD Results

Channel	Frequency (MHz)	Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-5.51	8.0	-13.51
Mid	2437	-3.26	8.0	-11.26
High	2462	-3.36	8.0	-11.36

PSD



9.1.6. OUT-OF-BAND EMISSIONS

LIMITS

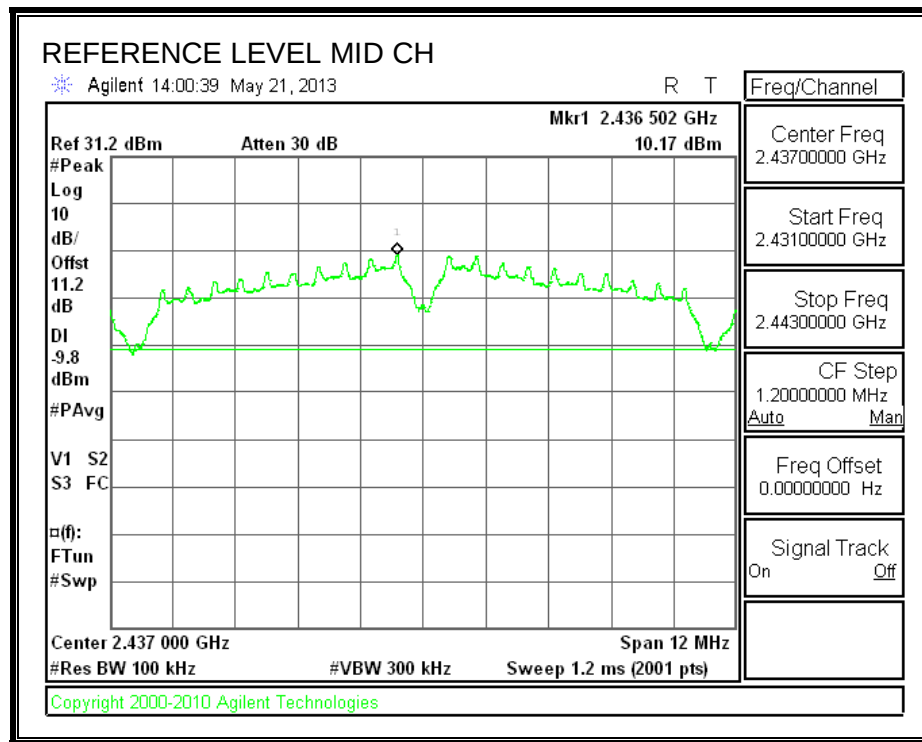
FCC §15.247 (d)

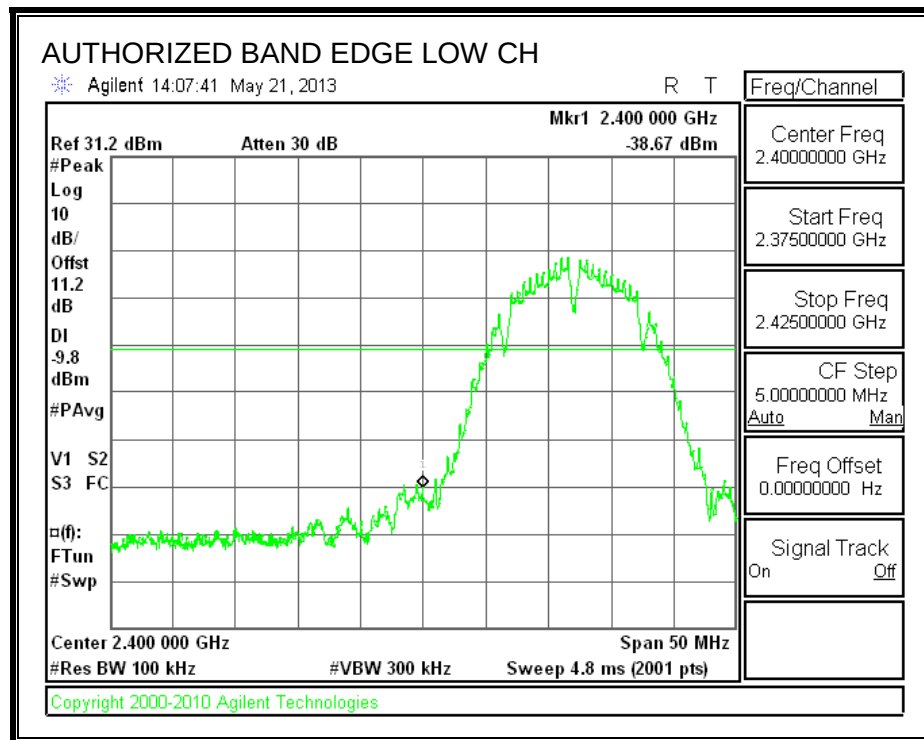
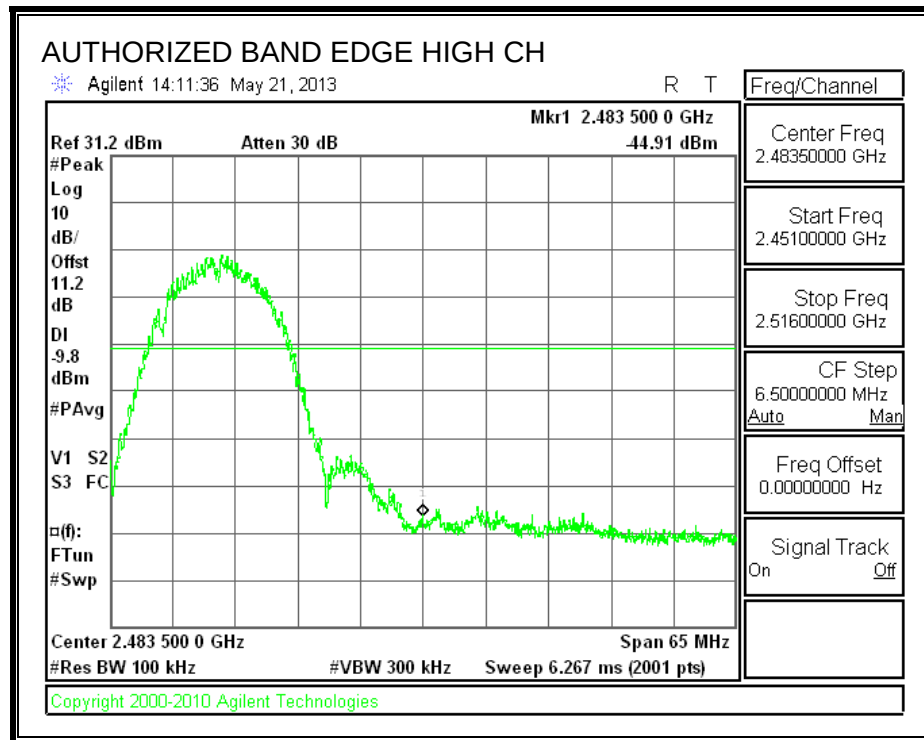
IC RSS-210 A8.5

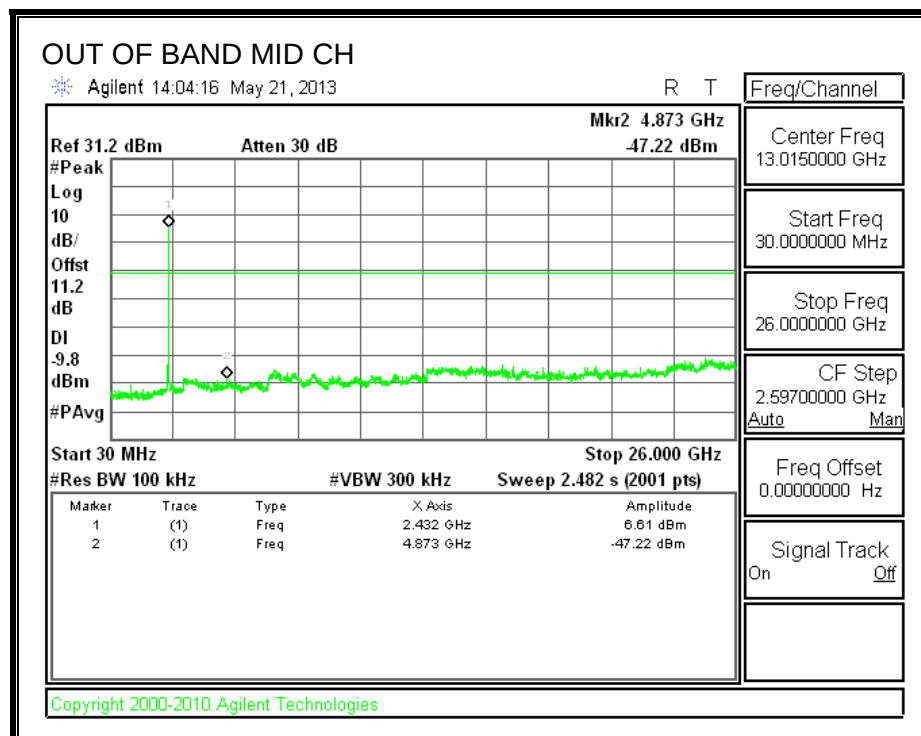
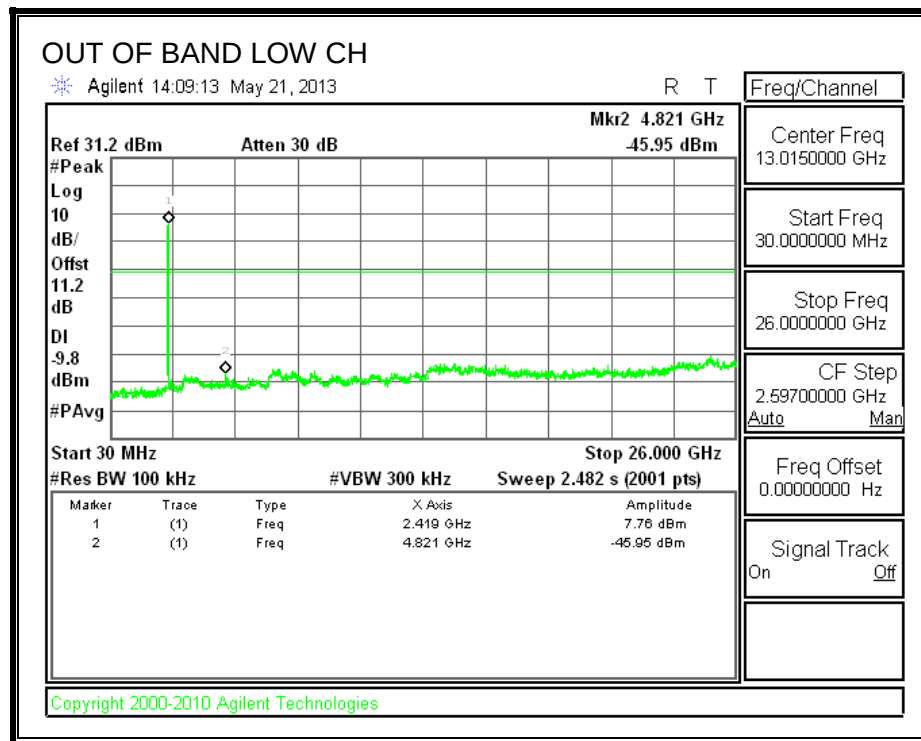
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

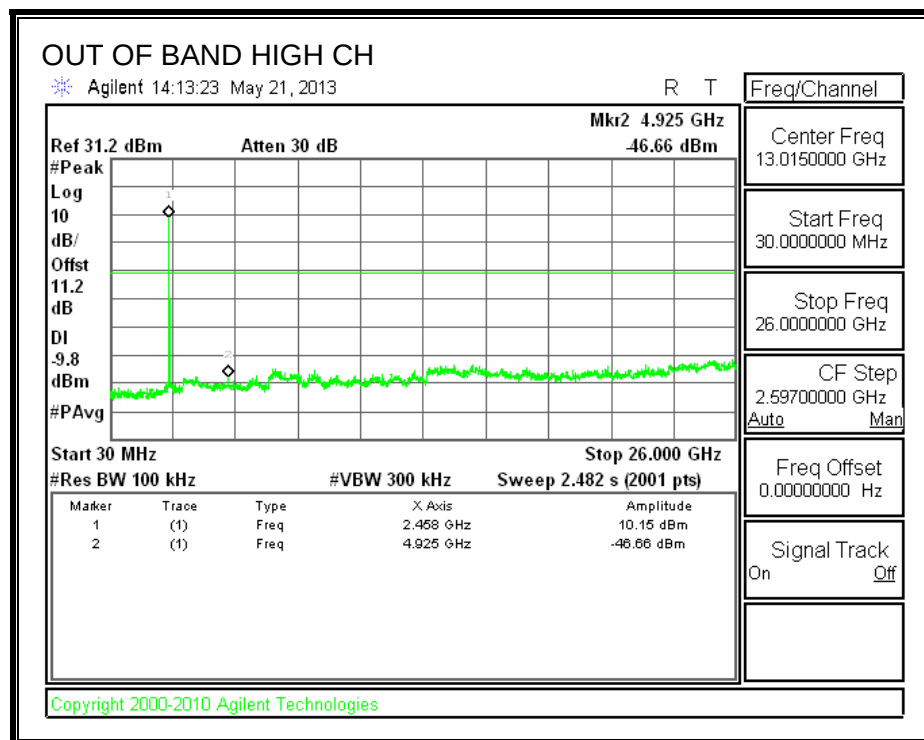
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS**IN-BAND REFERENCE LEVEL**

LOW CHANNEL BANDEDGE**HIGH CHANNEL BANDEDGE**

OUT-OF-BAND EMISSIONS



9.2. 802.11g MODE IN THE 2.4 GHz BAND**9.2.1. 6 dB BANDWIDTH****LIMITS**

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

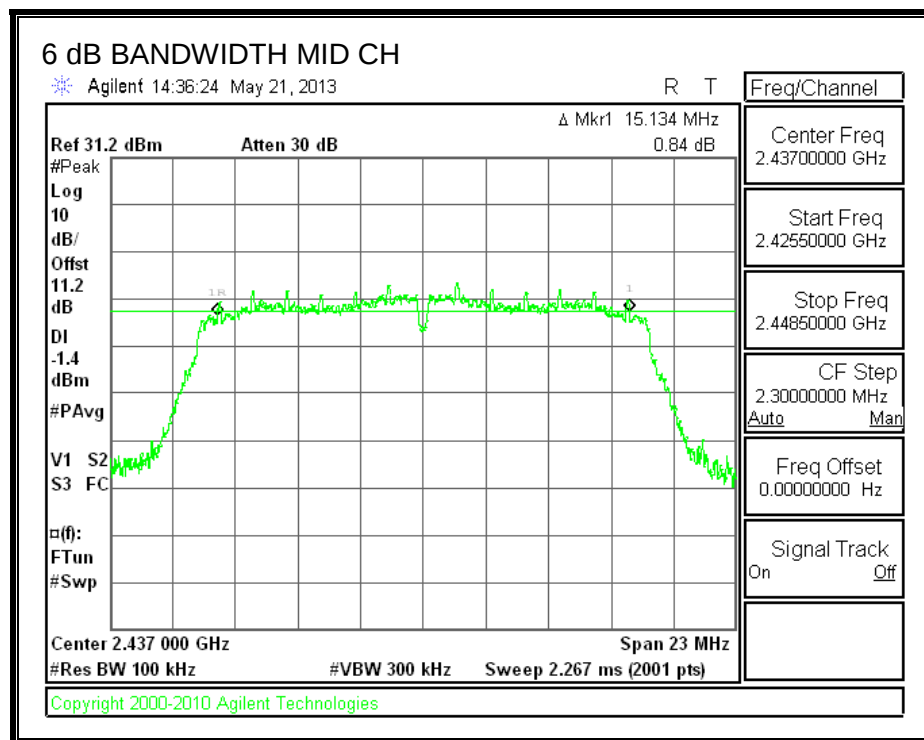
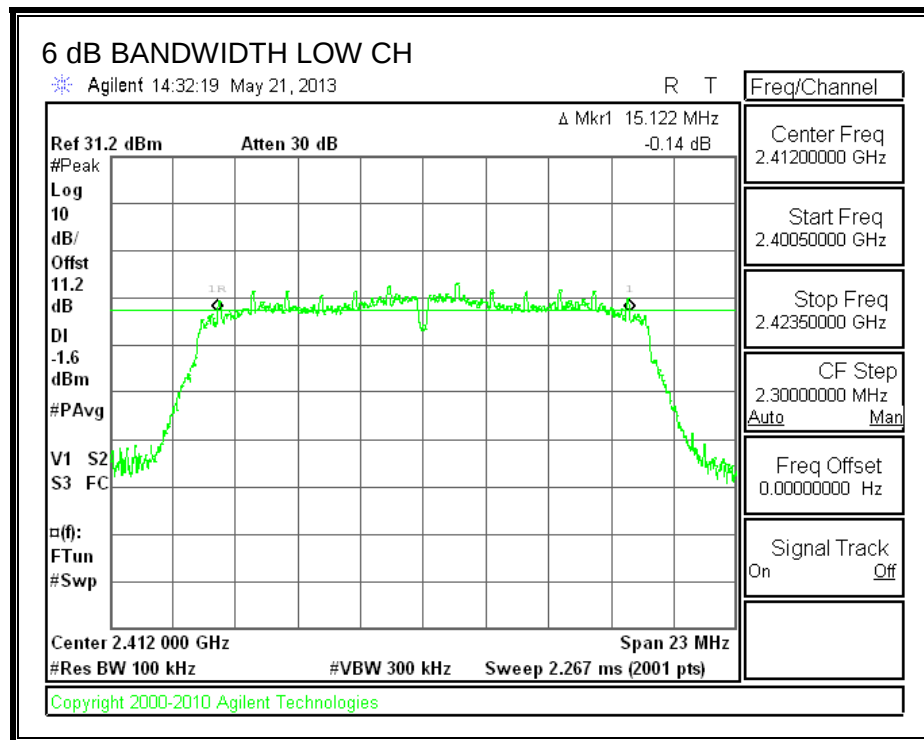
The minimum 6 dB bandwidth shall be at least 500 kHz.

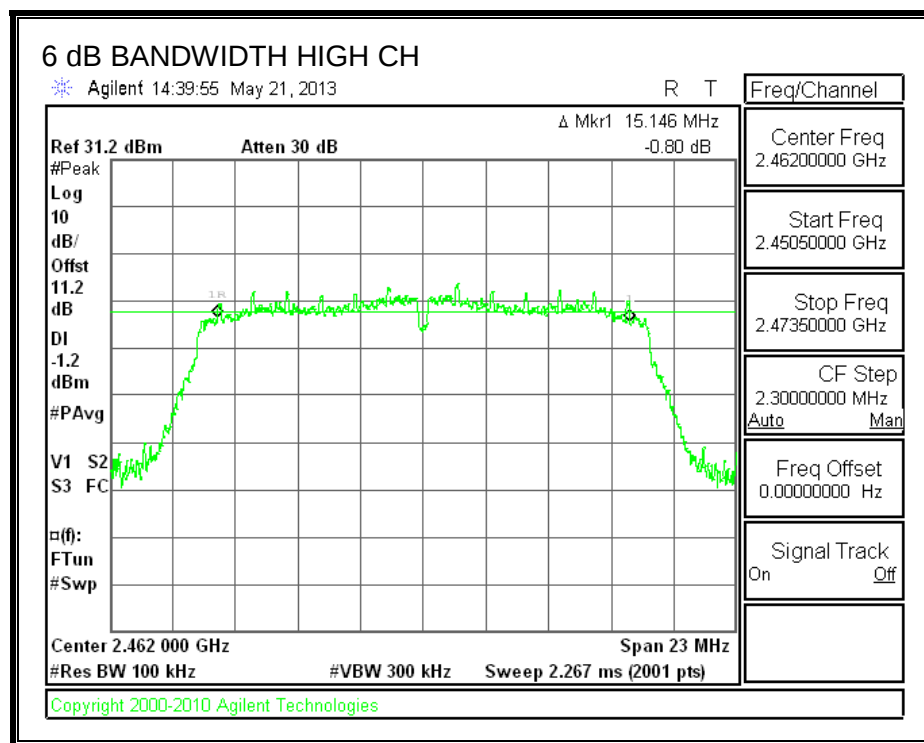
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer with the RBW set between 1% and 5% of the EBW, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	15.122	0.5
Mid	2437	15.134	0.5
High	2462	15.146	0.5

6 dB BANDWIDTH

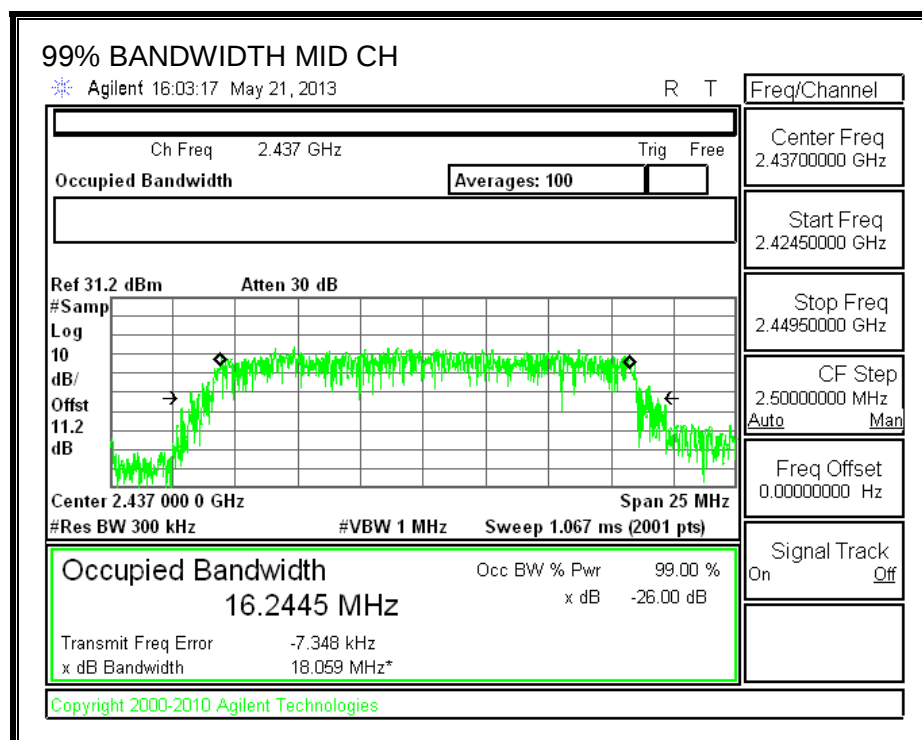
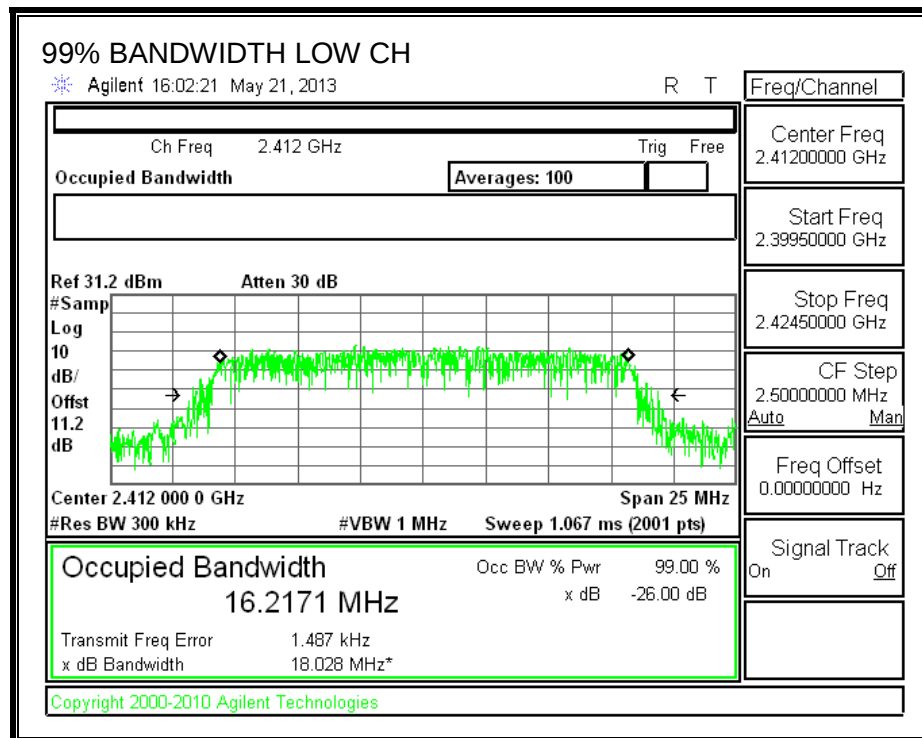


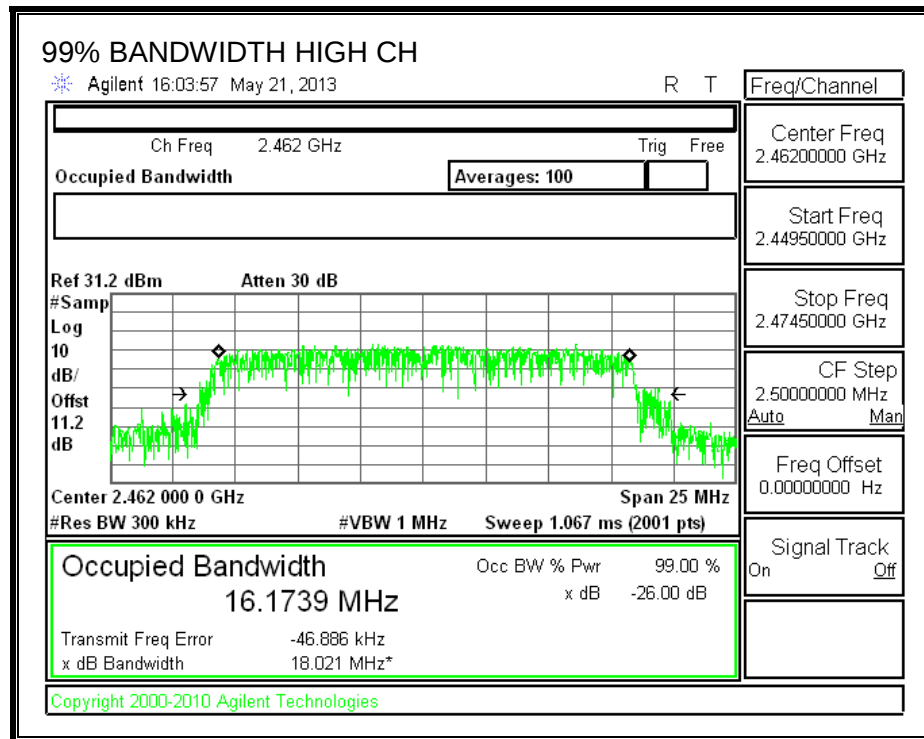
9.2.2. 99% BANDWIDTH**LIMITS**

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.2171
Mid	2437	16.2445
High	2462	16.1739

99% BANDWIDTH



9.2.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.2 dB (including 10 dB pad and 1.2 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	2412	13.4
Mid	2437	13.6
High	2462	13.9

9.2.4. OUTPUT POWER**LIMITS**

FCC §15.247

IC RSS-210 A8.4

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

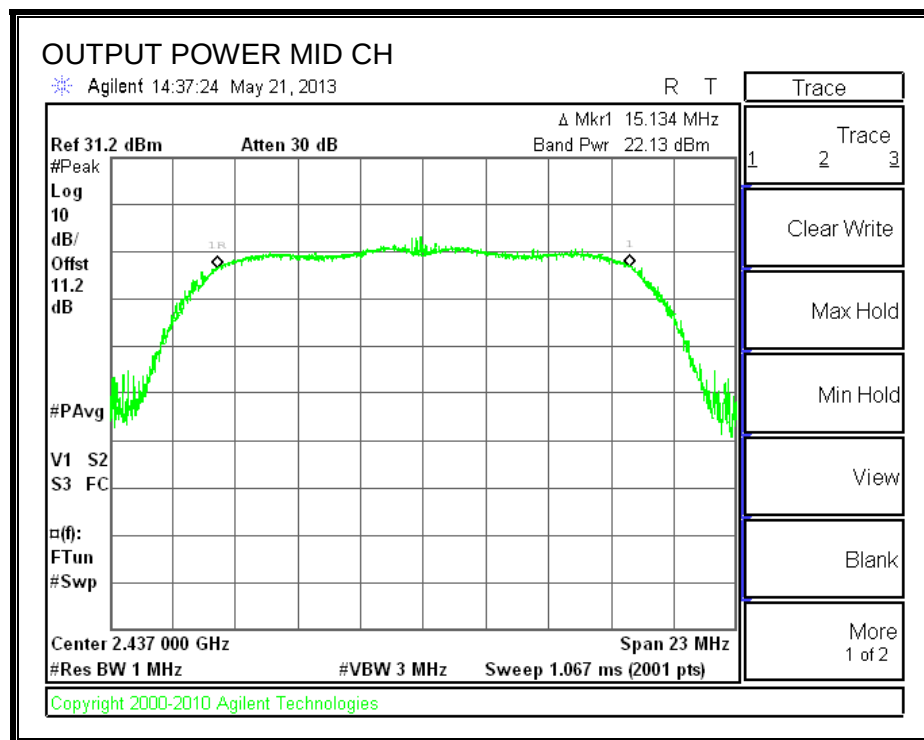
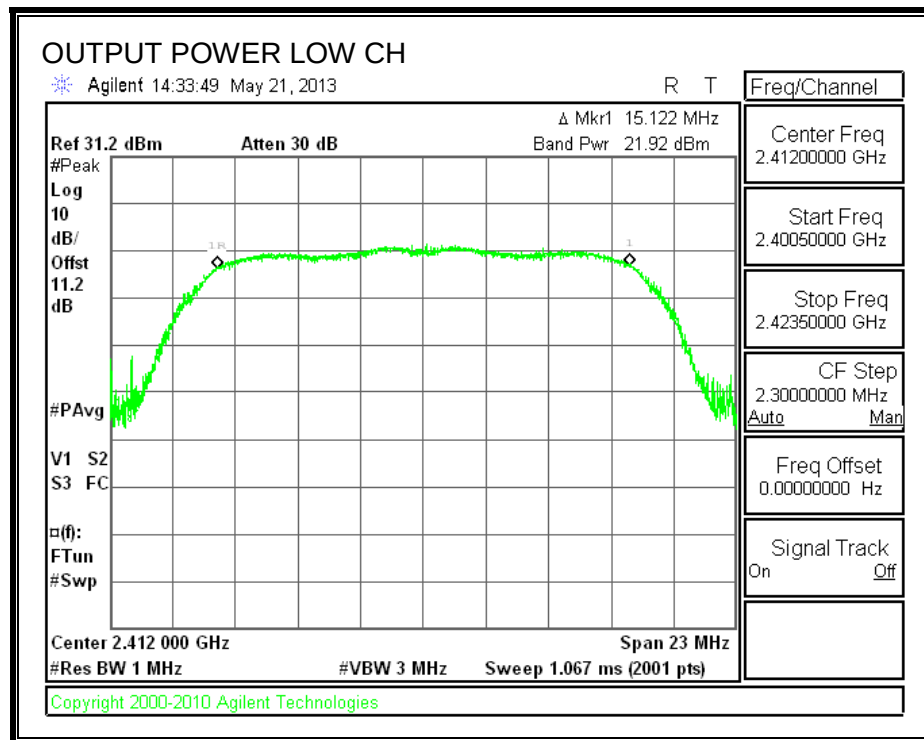
There is only one transmitter output therefore the directional gain is equal to the antenna gain.

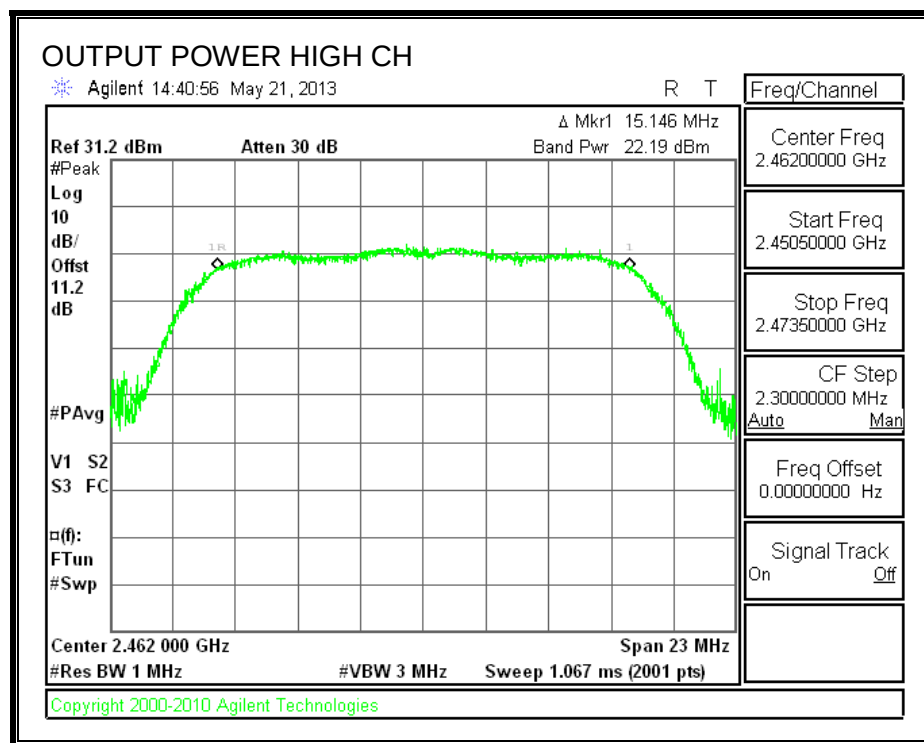
RESULTS**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	0.51	30.00	30	36	30.00
Mid	2437	0.51	30.00	30	36	30.00
High	2462	0.51	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	21.92	21.92	30.00	-8.08
Mid	2437	22.13	22.13	30.00	-7.87
High	2462	22.19	22.19	30.00	-7.81

OUTPUT POWER



9.2.5. PSD

LIMITS

FCC §15.247

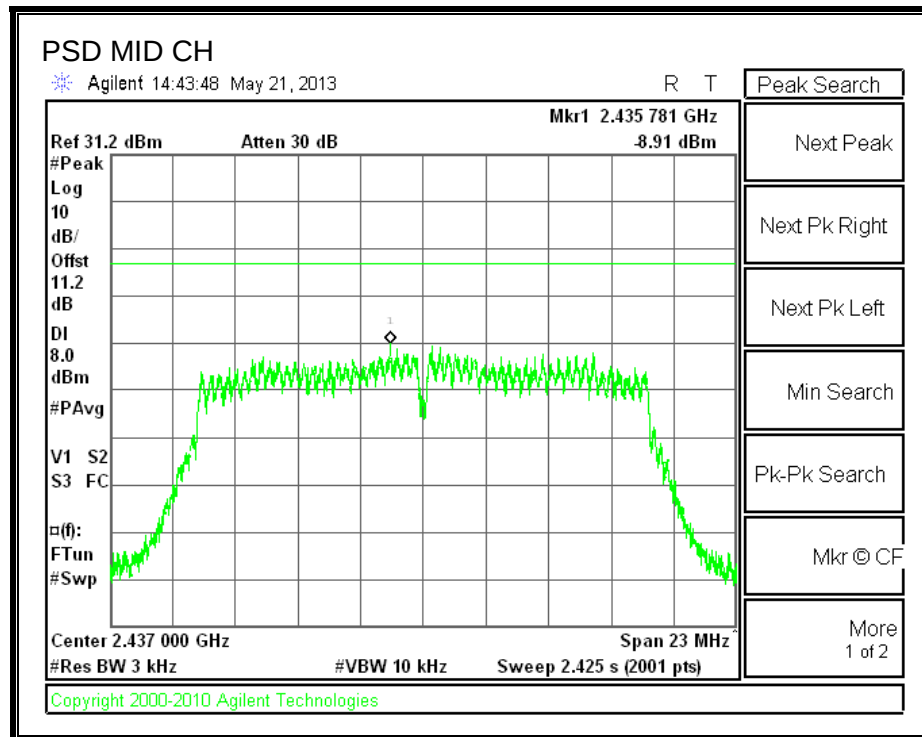
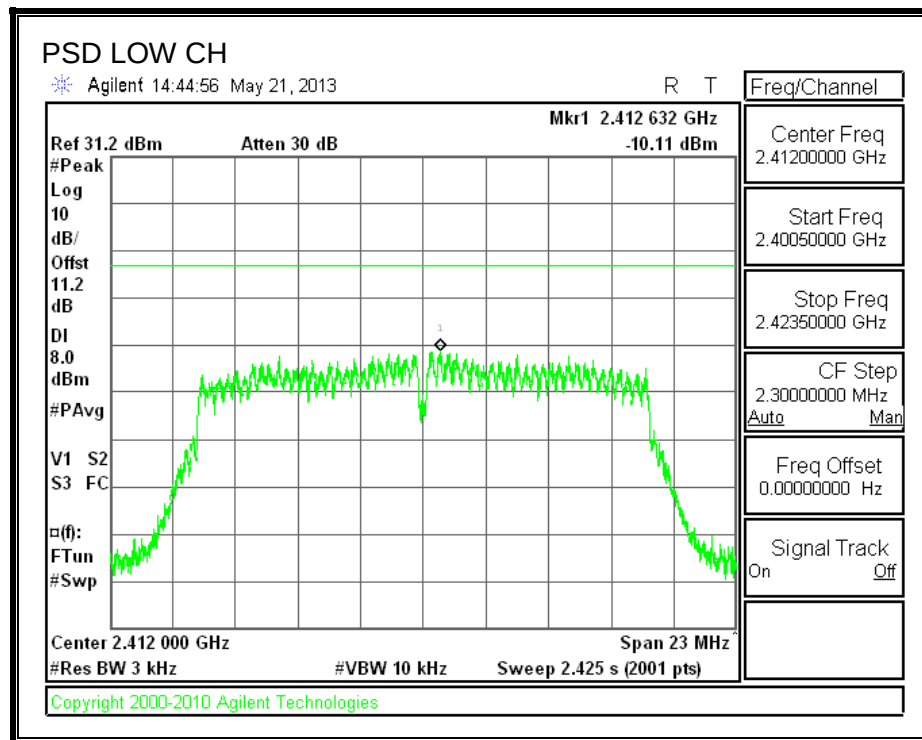
IC RSS-210 A8.2

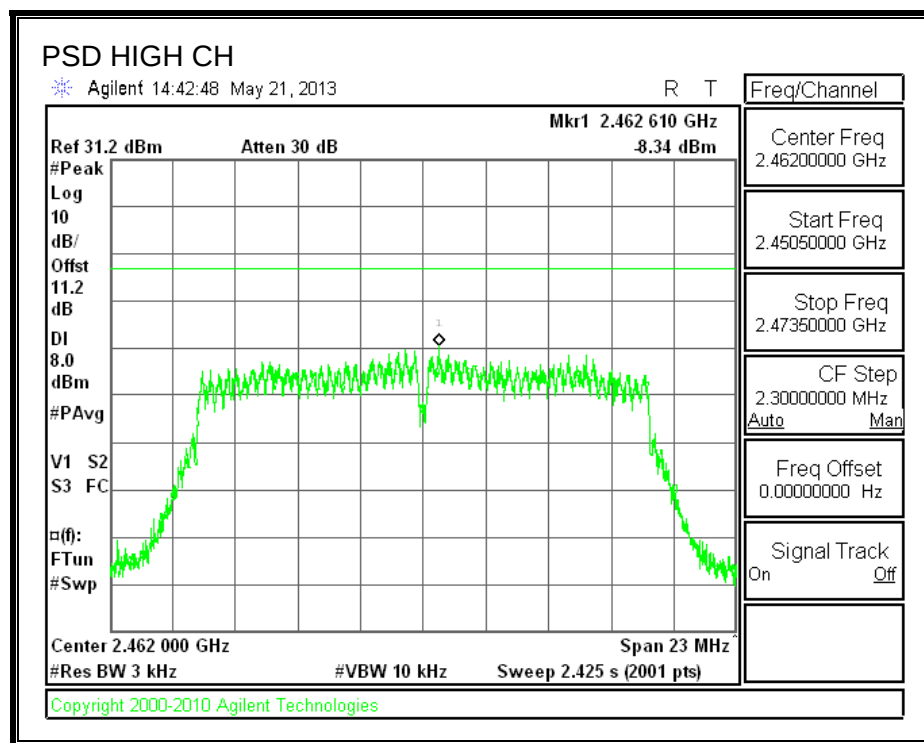
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

RESULTS

PSD Results

Channel	Frequency (MHz)	Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-10.11	8.0	-18.11
Mid	2437	-8.91	8.0	-16.91
High	2462	-8.34	8.0	-16.34

PSD



9.2.6. OUT-OF-BAND EMISSIONS

LIMITS

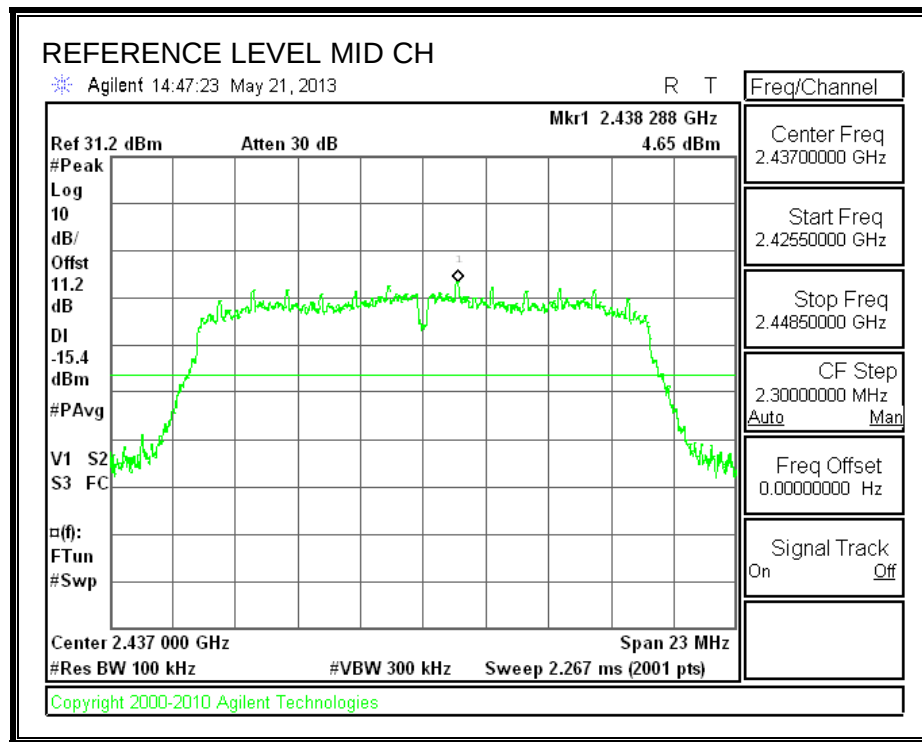
FCC §15.247 (d)

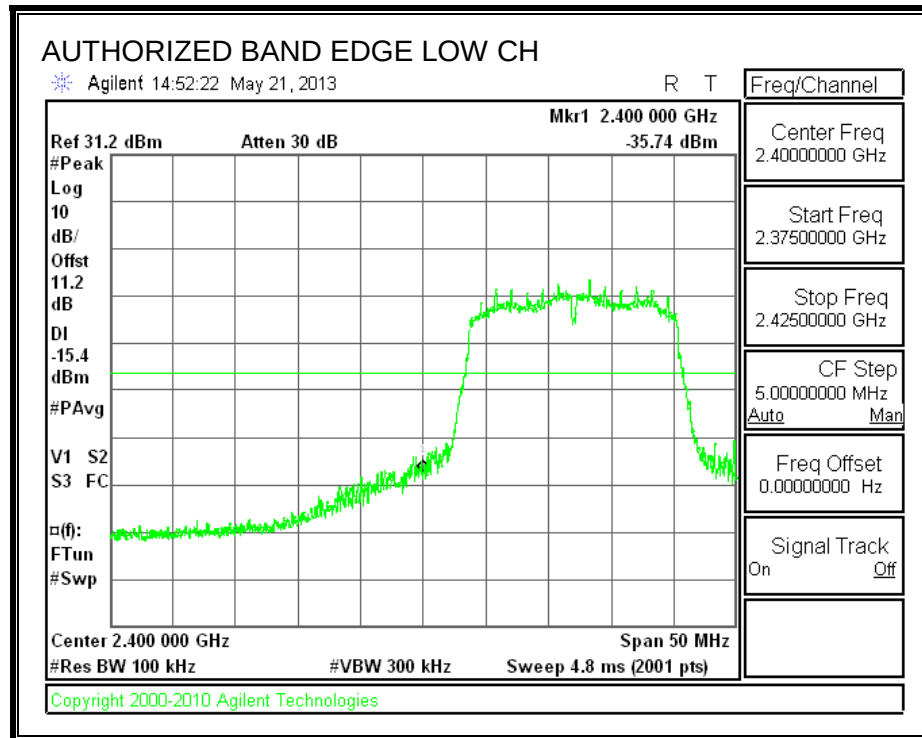
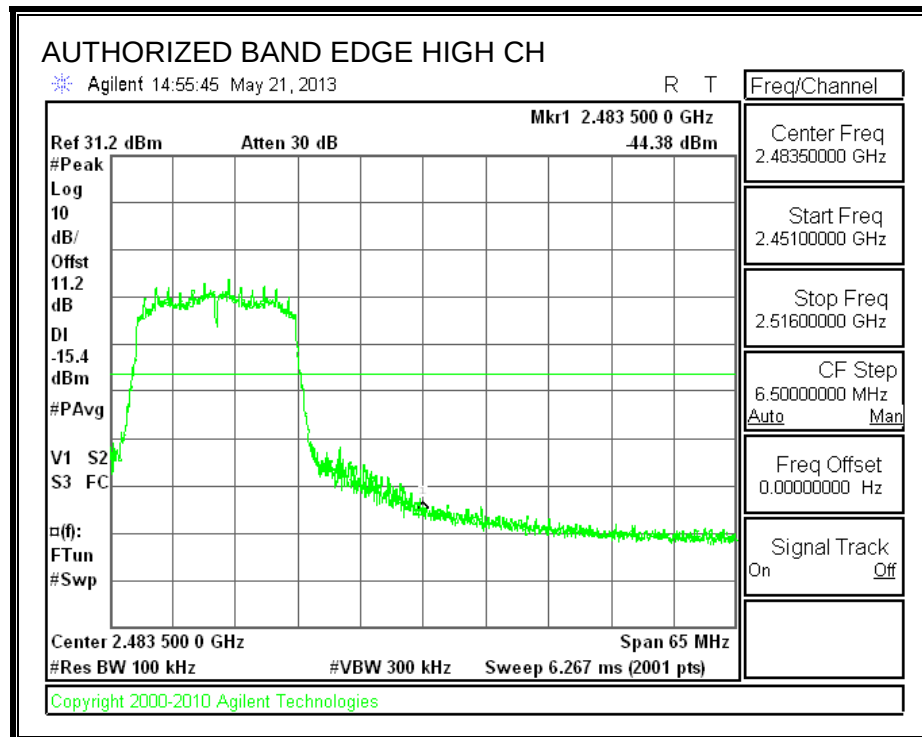
IC RSS-210 A8.5

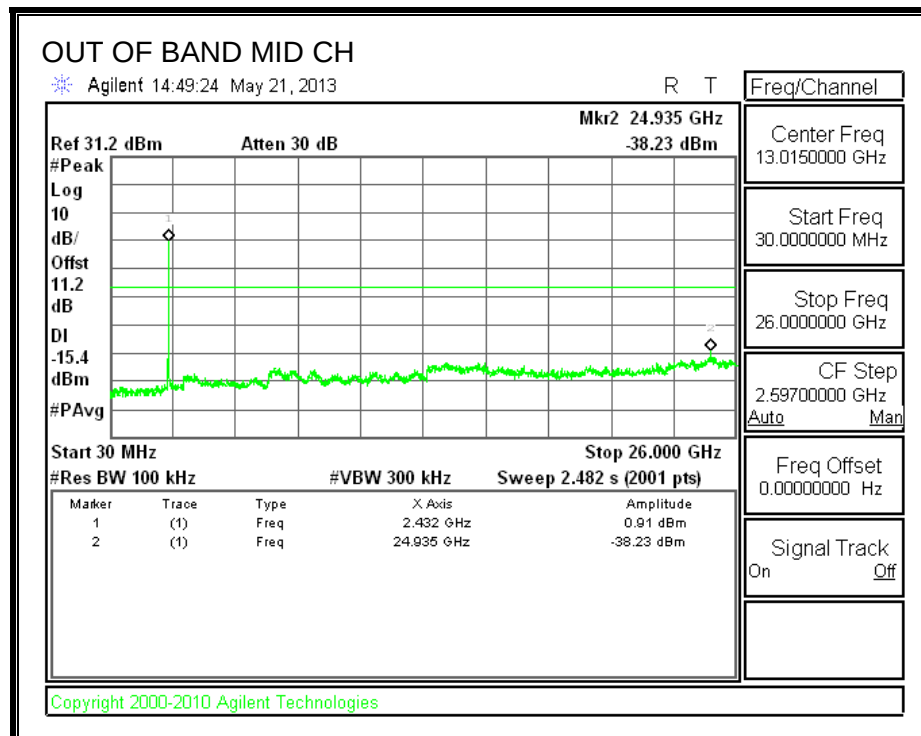
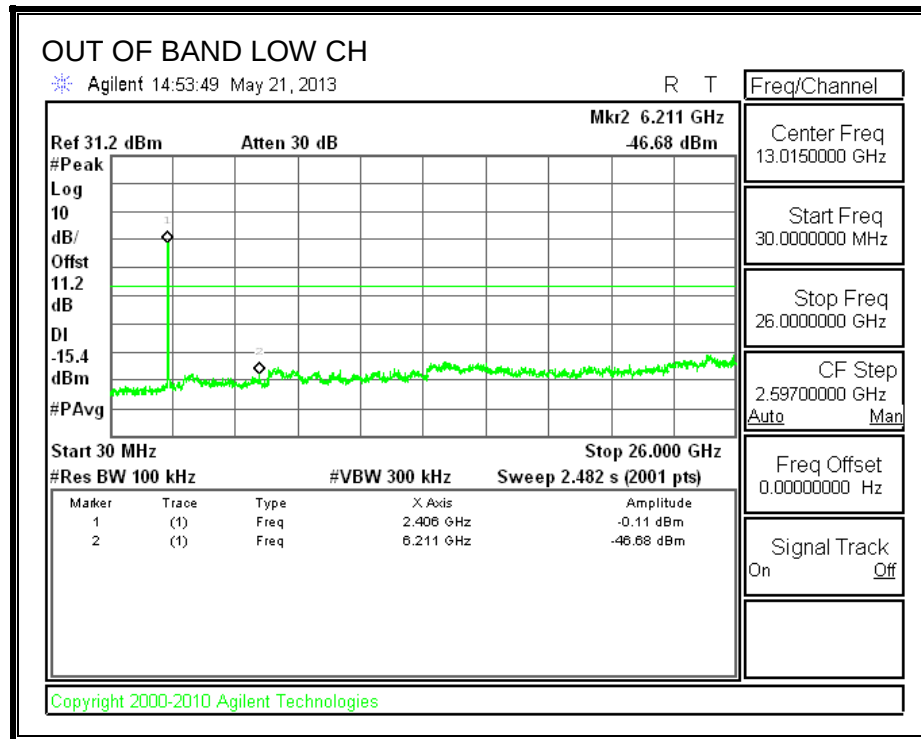
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

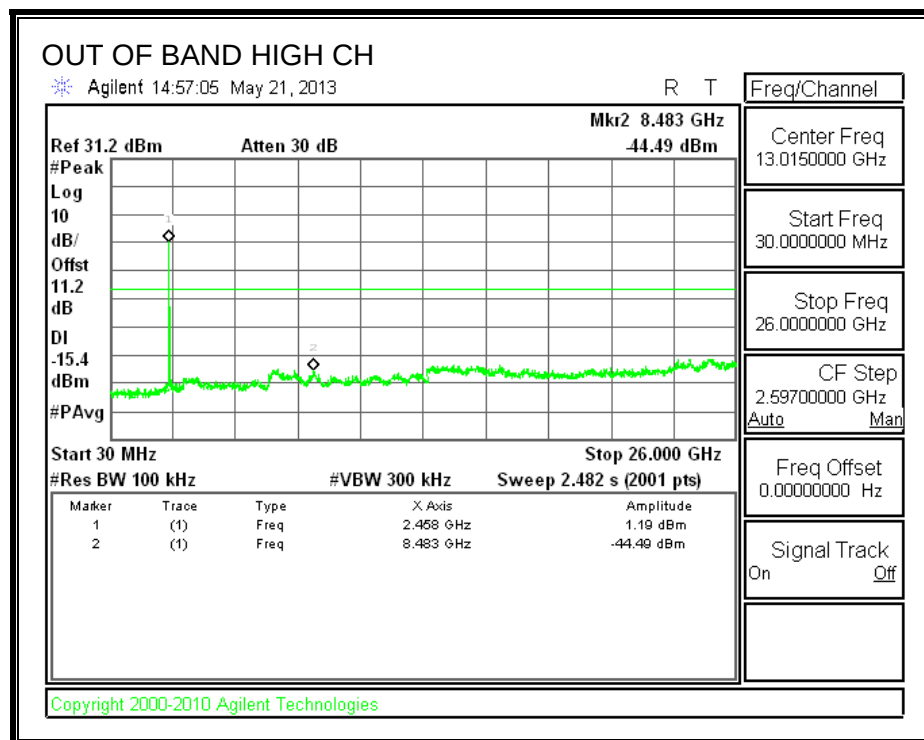
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS**IN-BAND REFERENCE LEVEL**

LOW CHANNEL BANDEDGE**HIGH CHANNEL BANDEDGE**

OUT-OF-BAND EMISSIONS



9.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND**9.3.1. 6 dB BANDWIDTH****LIMITS**

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

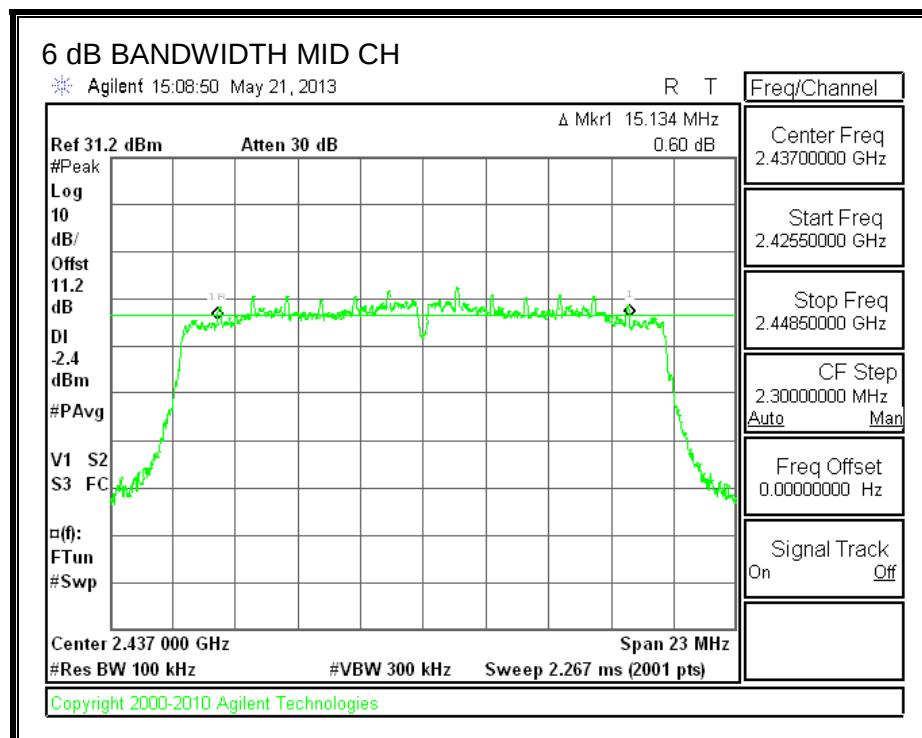
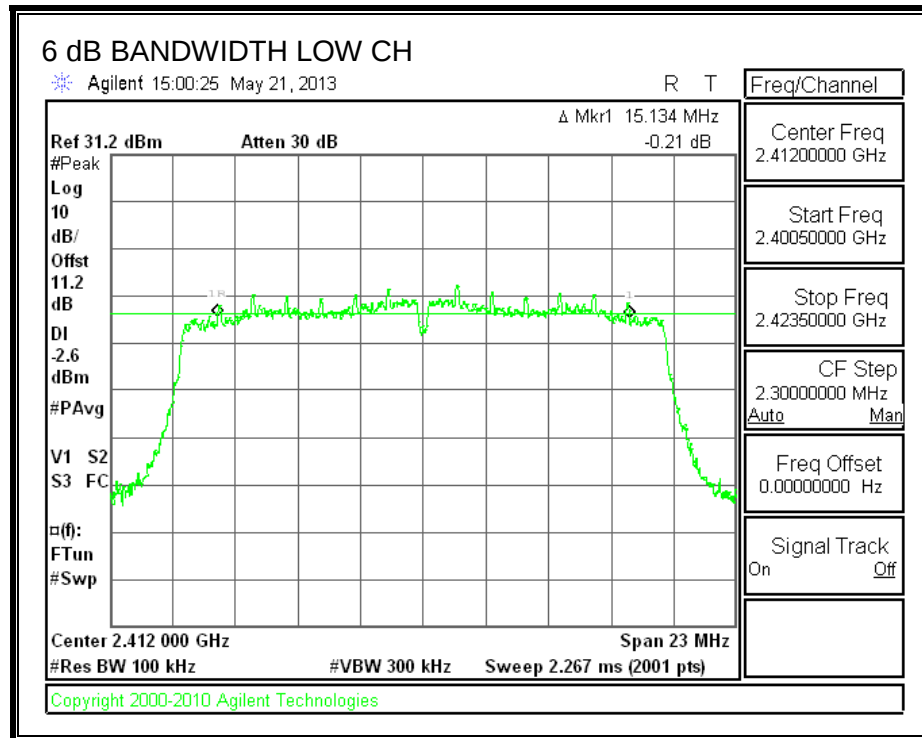
The minimum 6 dB bandwidth shall be at least 500 kHz.

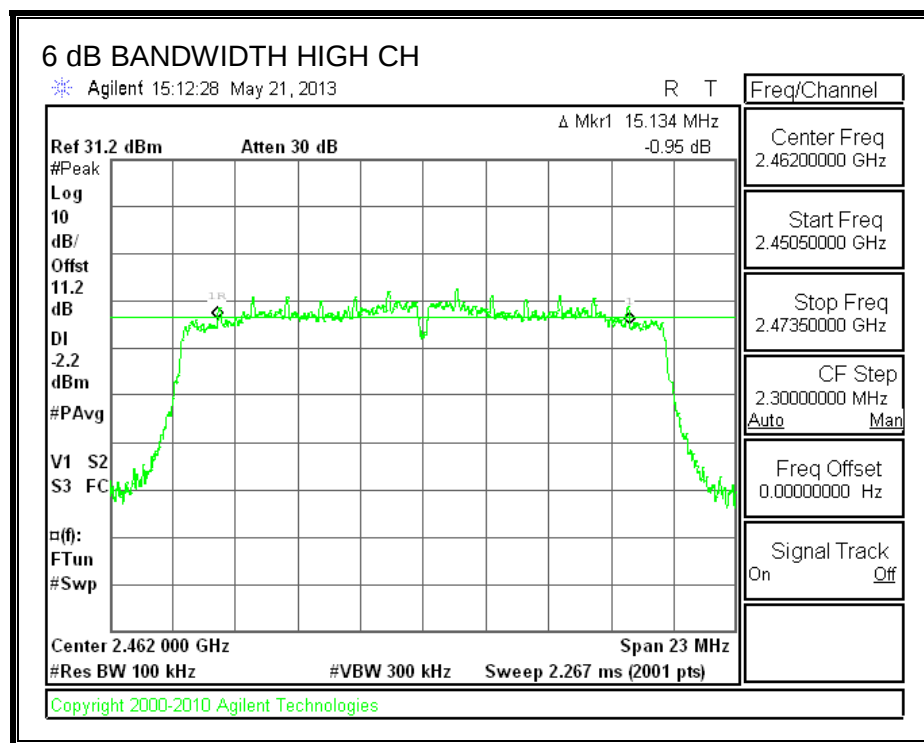
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer with the RBW set between 1% and 5% of the EBW, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	15.134	0.5
Mid	2437	15.134	0.5
High	2462	15.134	0.5

6 dB BANDWIDTH

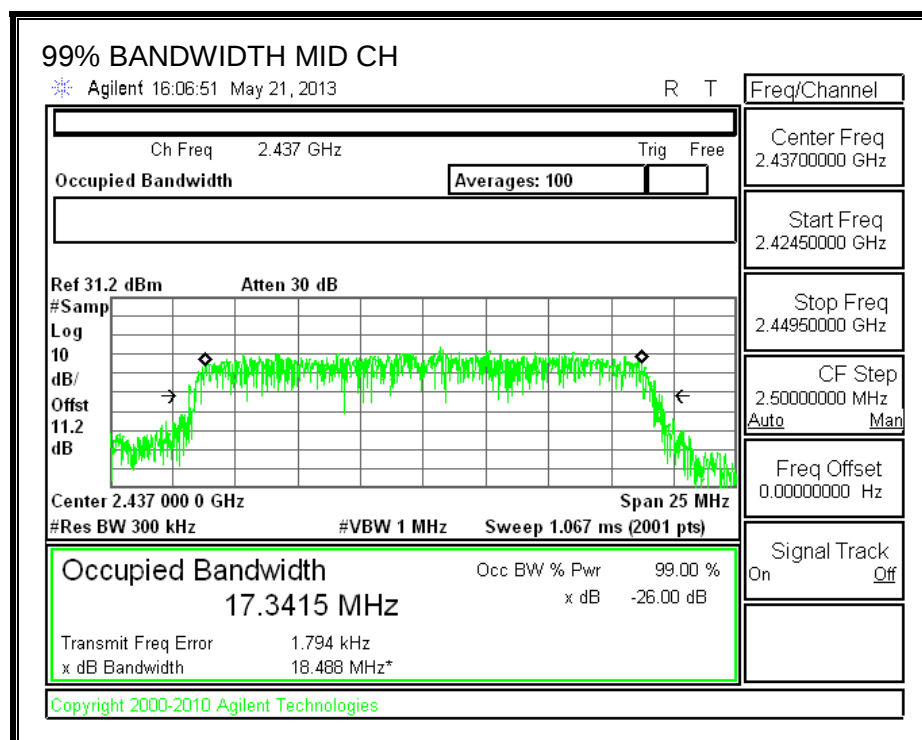
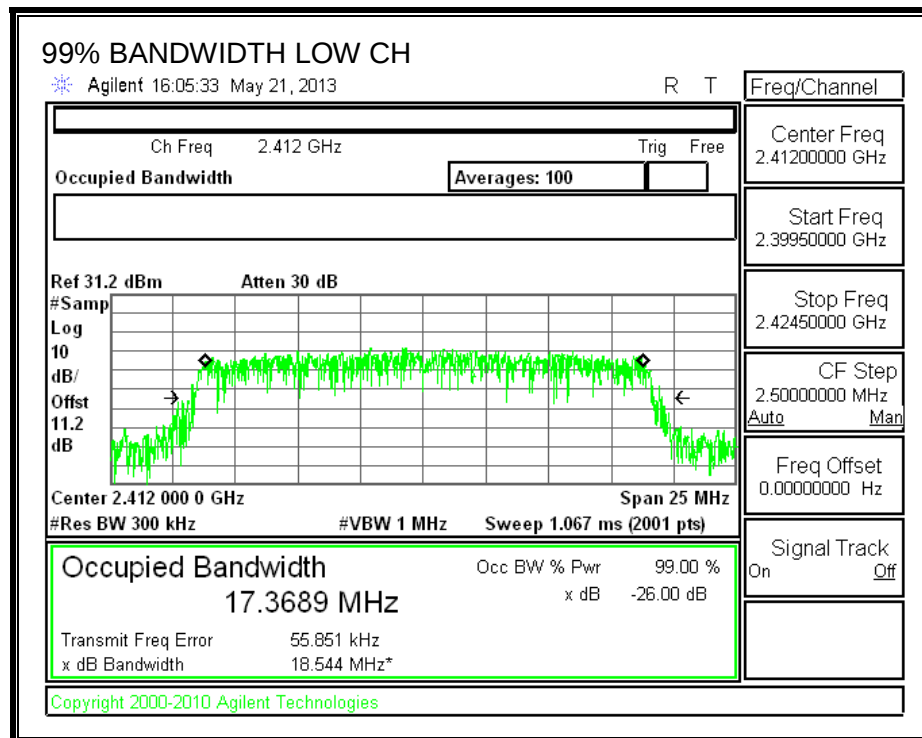


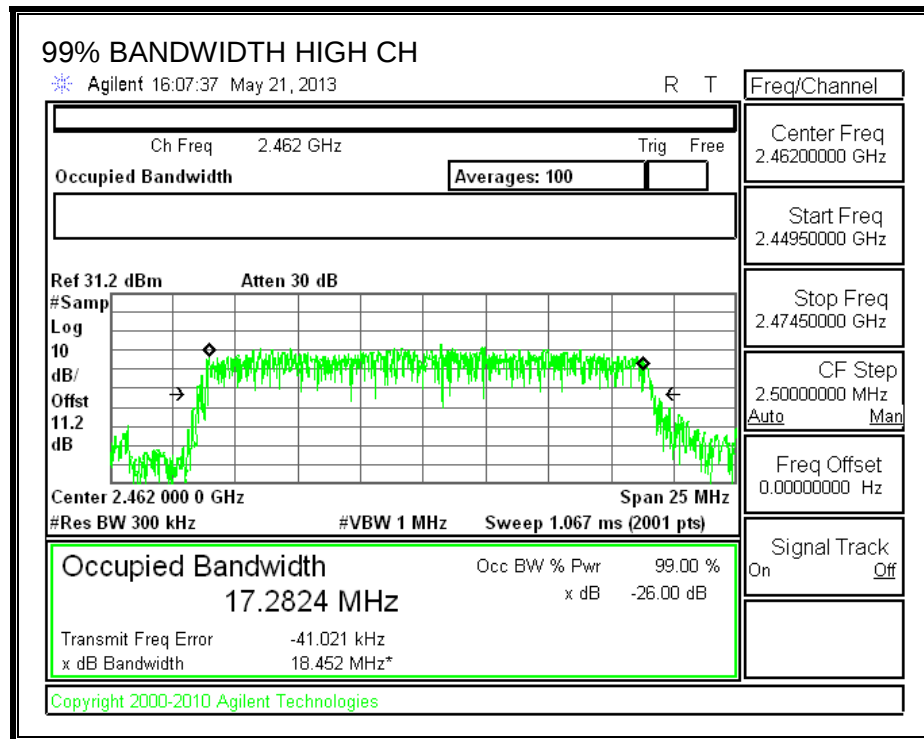
9.3.2. 99% BANDWIDTH**LIMITS**

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.3689
Mid	2437	17.3415
High	2462	17.2824

99% BANDWIDTH



9.3.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.2 dB (including 10 dB pad and 1.2 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

Channel	Frequency (MHz)	Power (dBm)
Low	2412	12.3
Mid	2437	12.5
High	2462	12.7

9.3.4. OUTPUT POWER**LIMITS**

FCC §15.247

IC RSS-210 A8.4

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

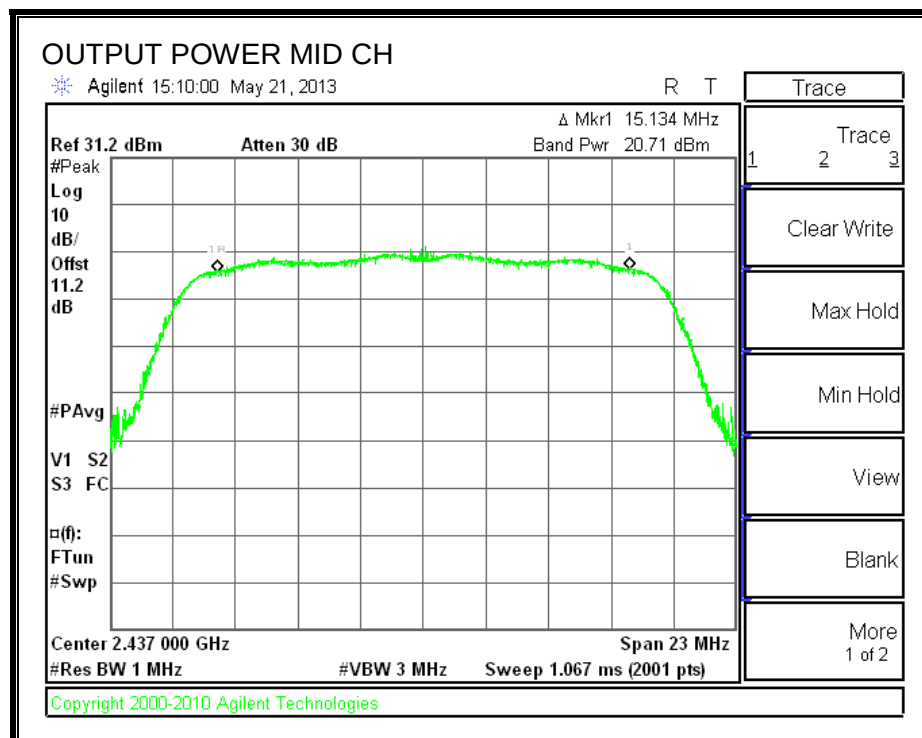
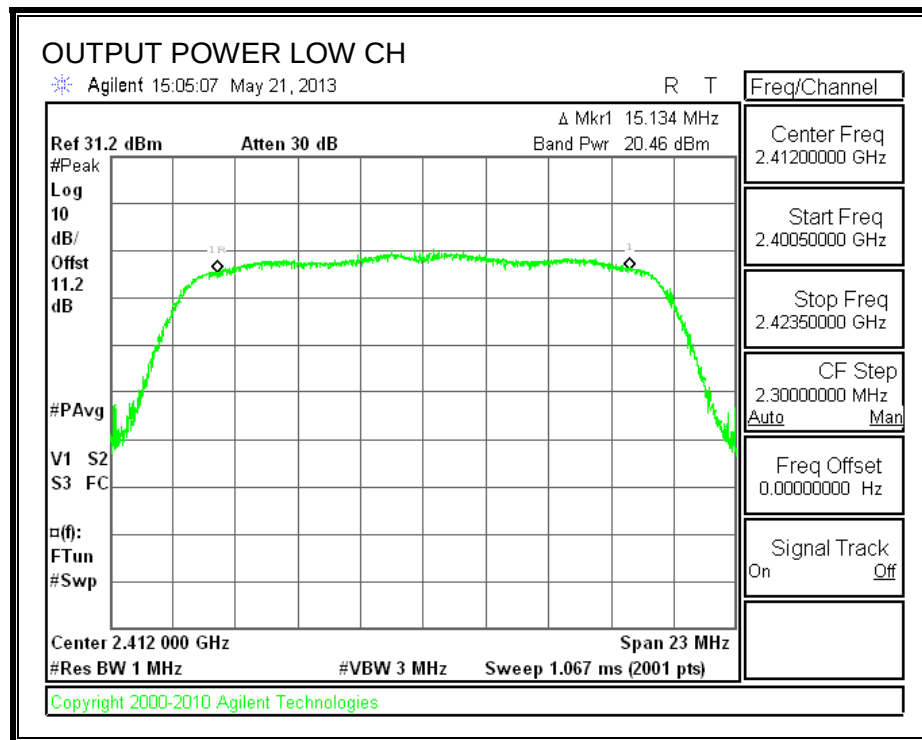
There is only one transmitter output therefore the directional gain is equal to the antenna gain.

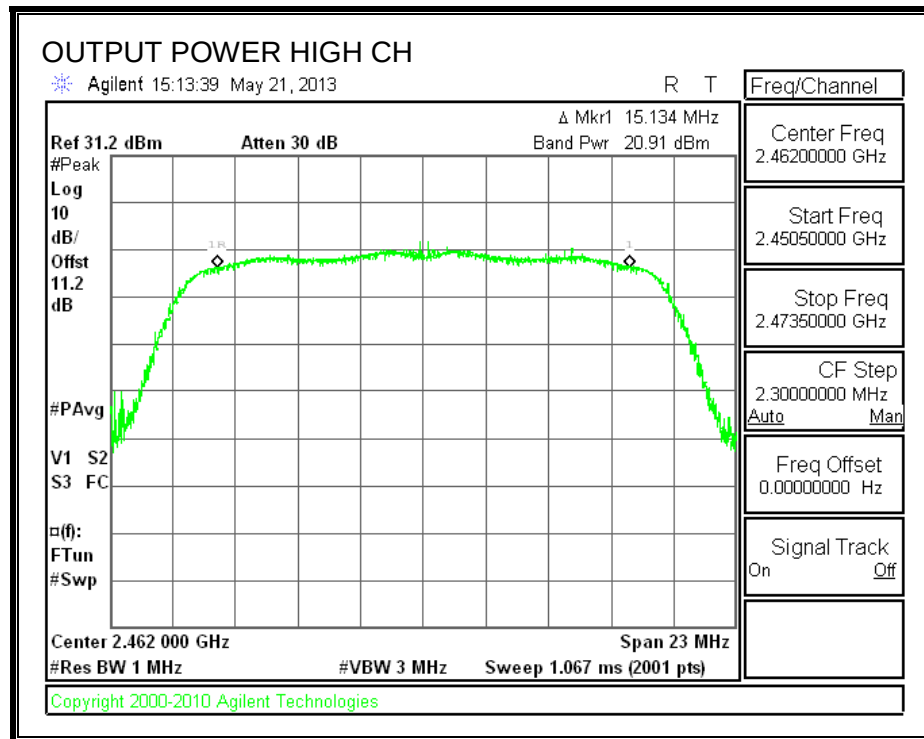
RESULTS**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	0.51	30.00	30	36	30.00
Mid	2437	0.51	30.00	30	36	30.00
High	2462	0.51	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	20.46	20.46	30.00	-9.54
Mid	2437	20.71	20.71	30.00	-9.29
High	2462	20.91	20.91	30.00	-9.09

OUTPUT POWER, Chain 0



9.3.5. PSD

LIMITS

FCC §15.247

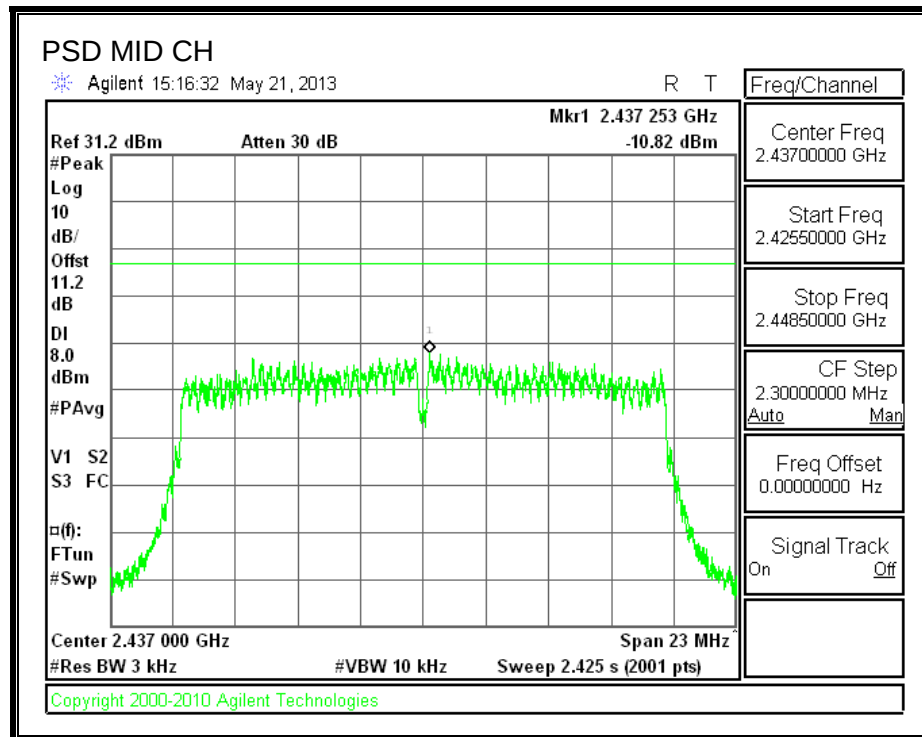
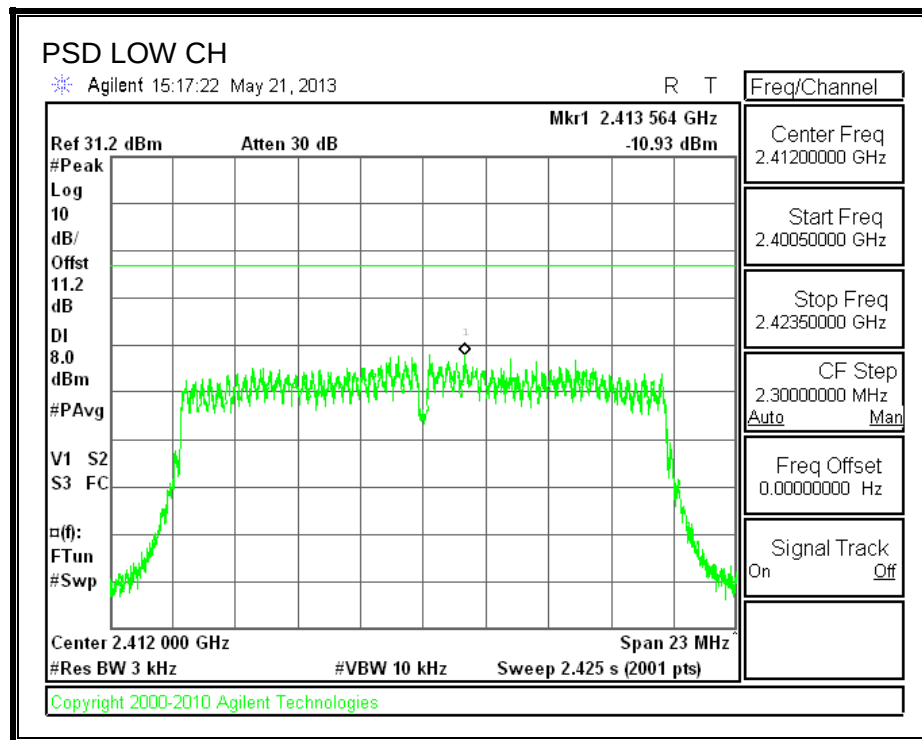
IC RSS-210 A8.2

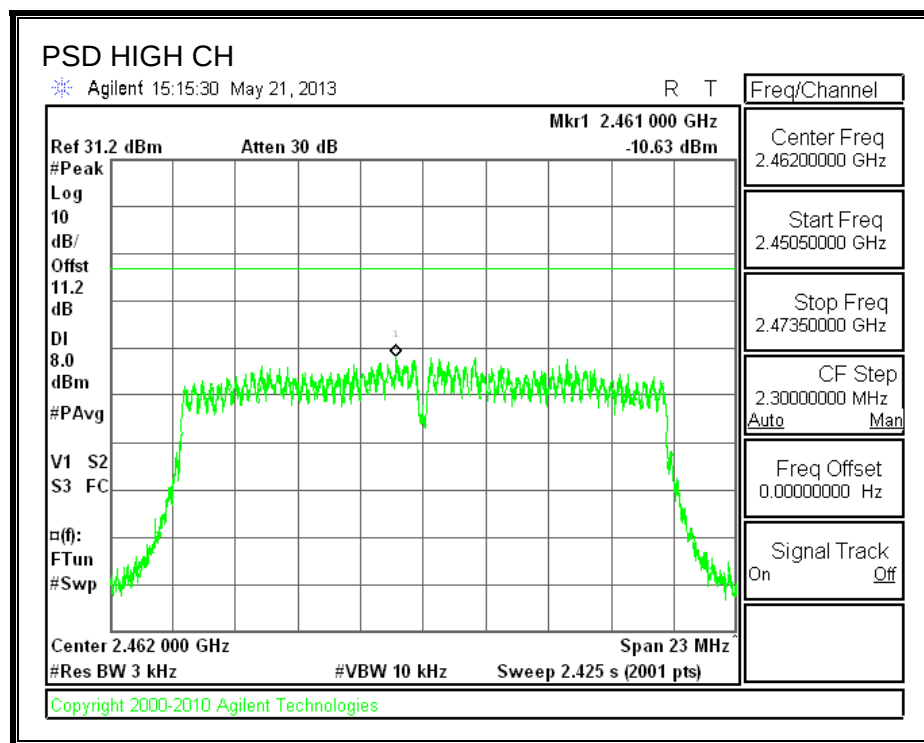
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

RESULTS

PSD Results

Channel	Frequency (MHz)	Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-10.93	8.0	-18.93
Mid	2437	-10.82	8.0	-18.82
High	2462	-10.63	8.0	-18.63

PSD



9.3.6. OUT-OF-BAND EMISSIONS

LIMITS

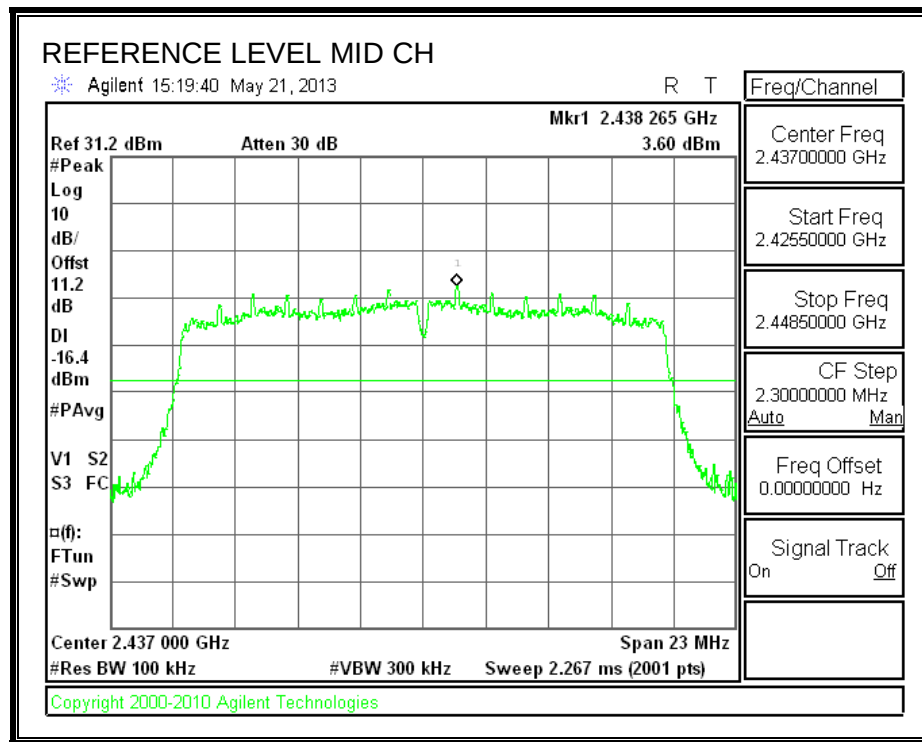
FCC §15.247 (d)

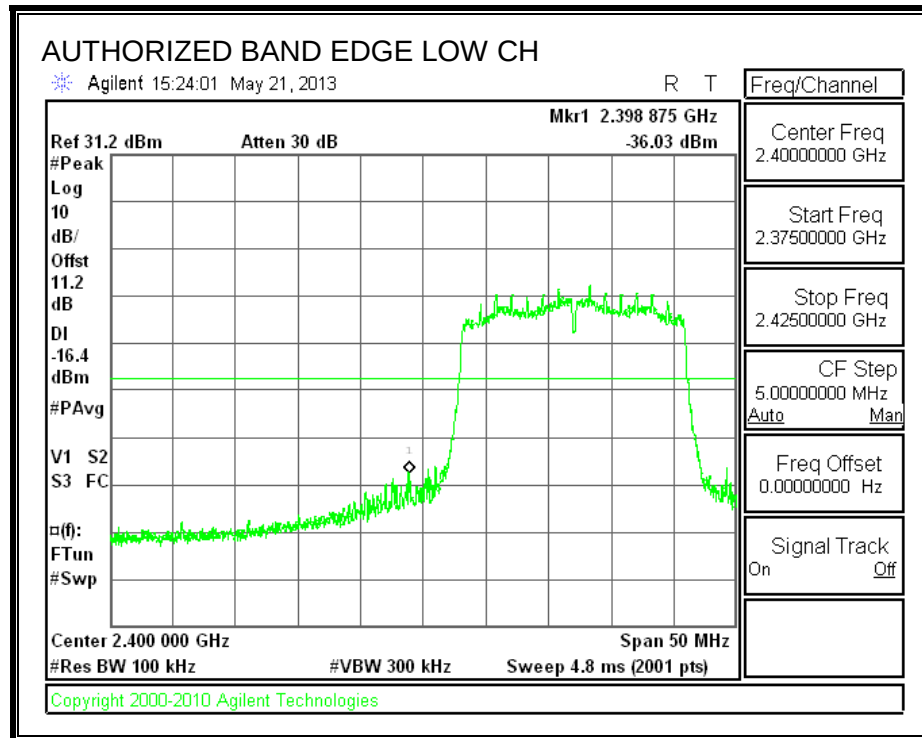
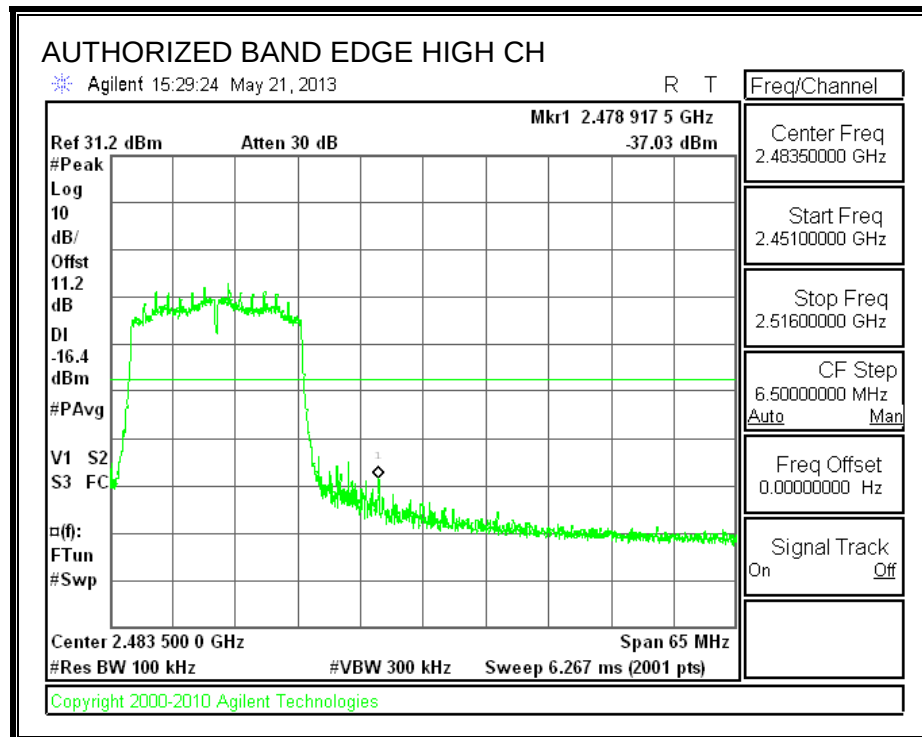
IC RSS-210 A8.5

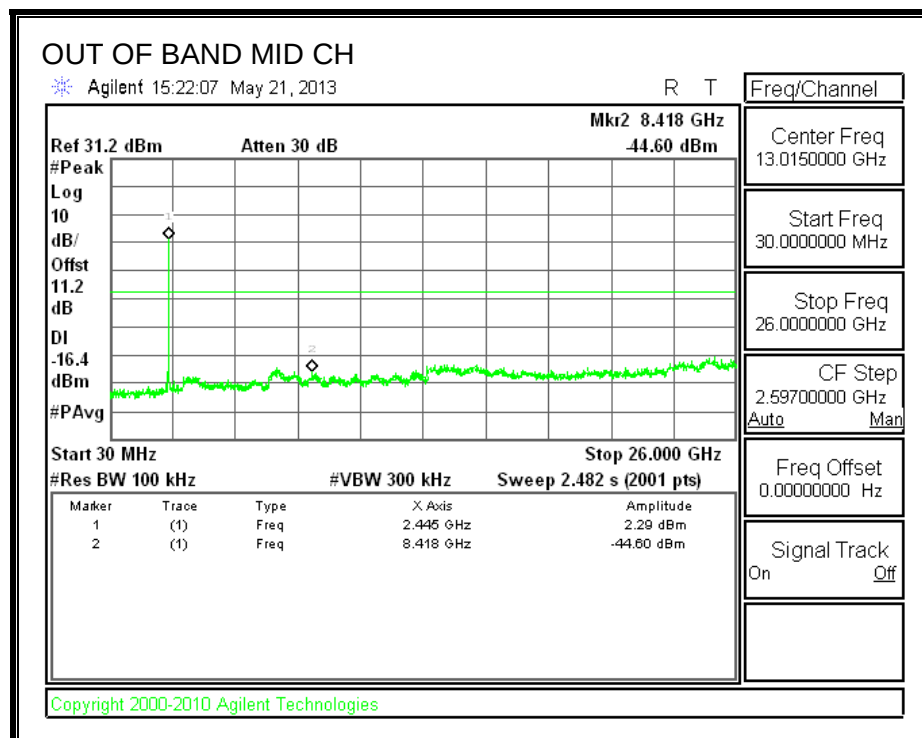
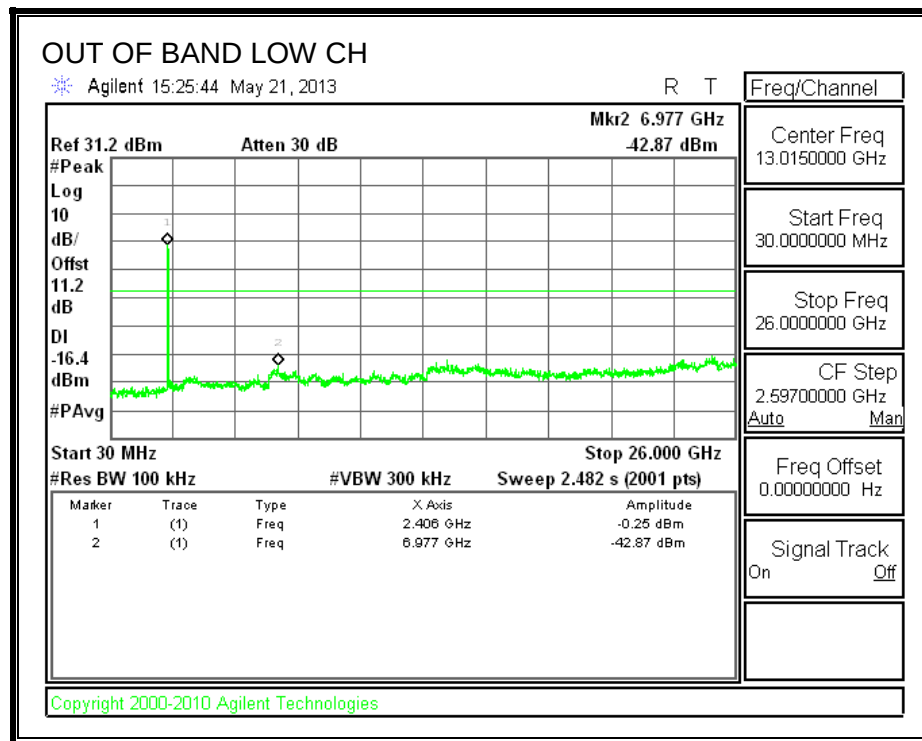
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

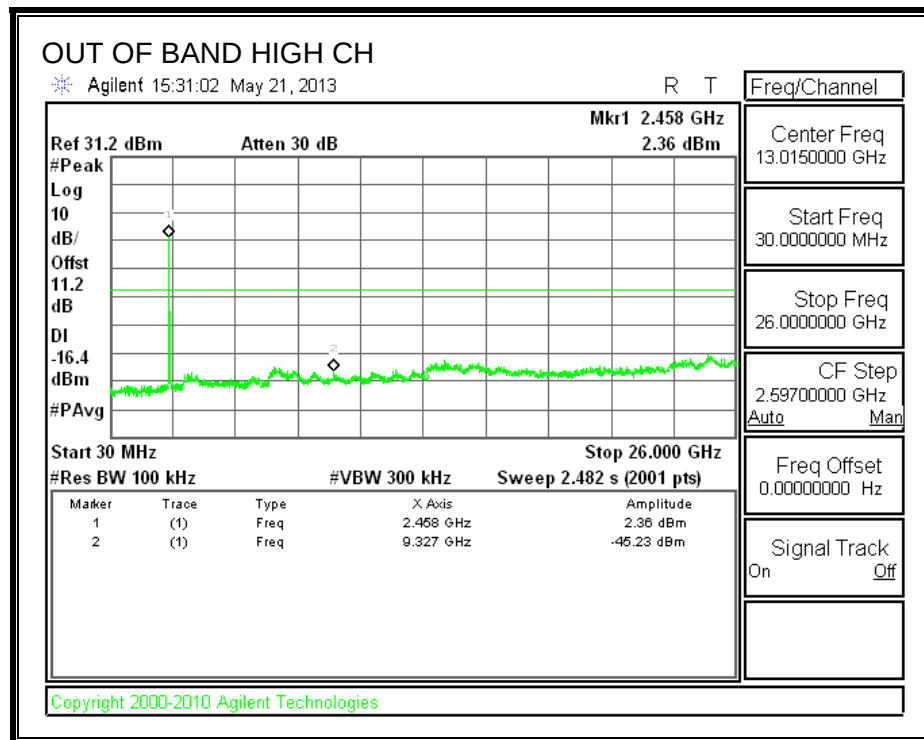
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS**IN-BAND REFERENCE LEVEL**

LOW CHANNEL BANDEDGE**HIGH CHANNEL BANDEDGE**

OUT-OF-BAND EMISSIONS



10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-210 Clause 2.6 (Transmitter)

IC RSS-GEN Clause 6 (Receiver)

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

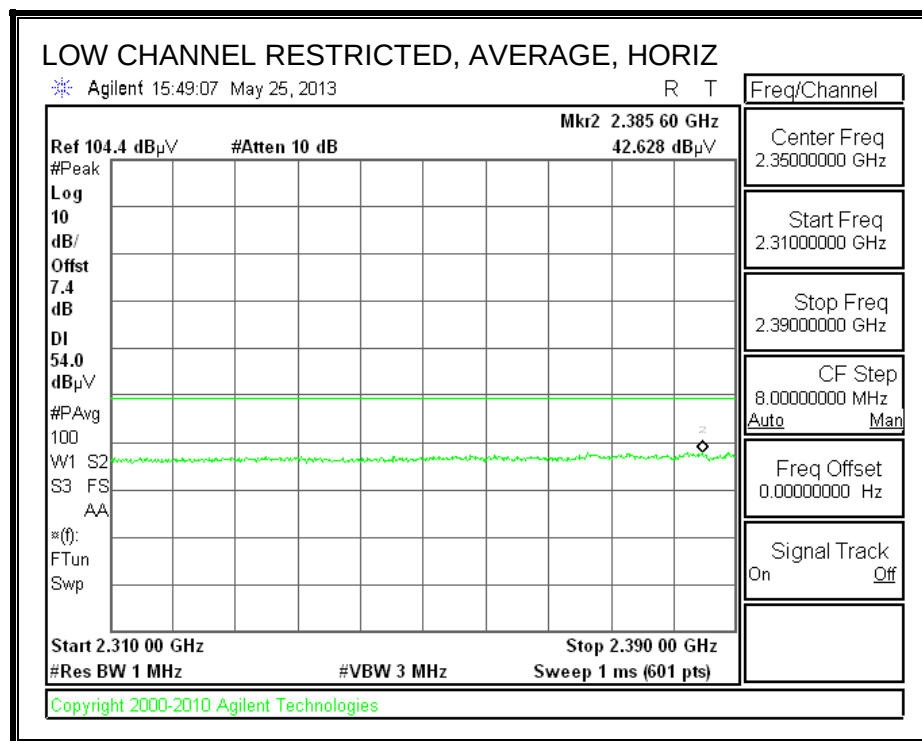
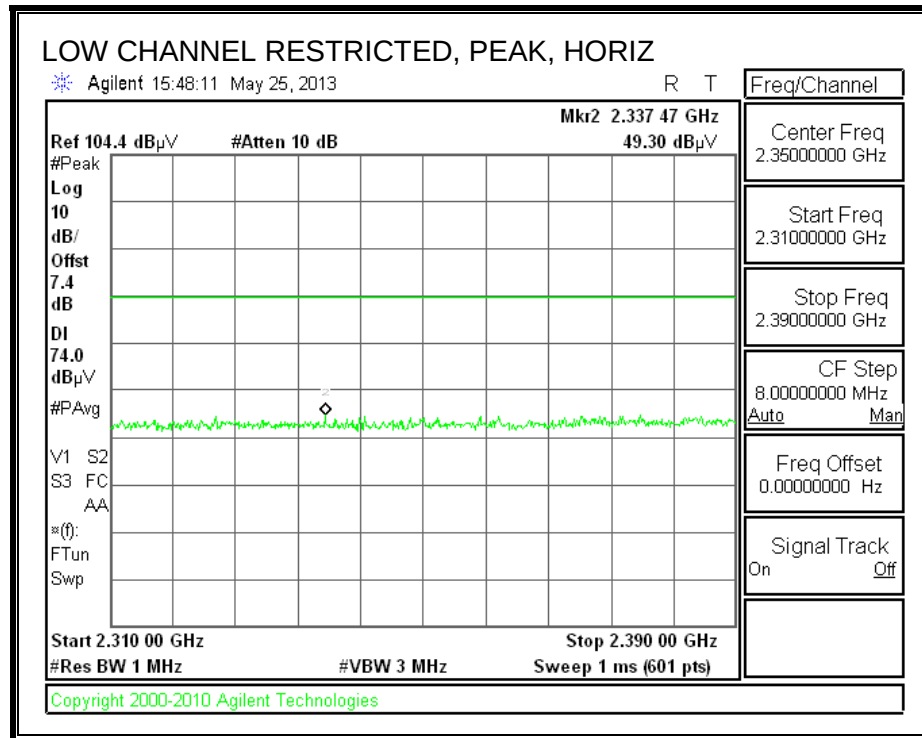
The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters.

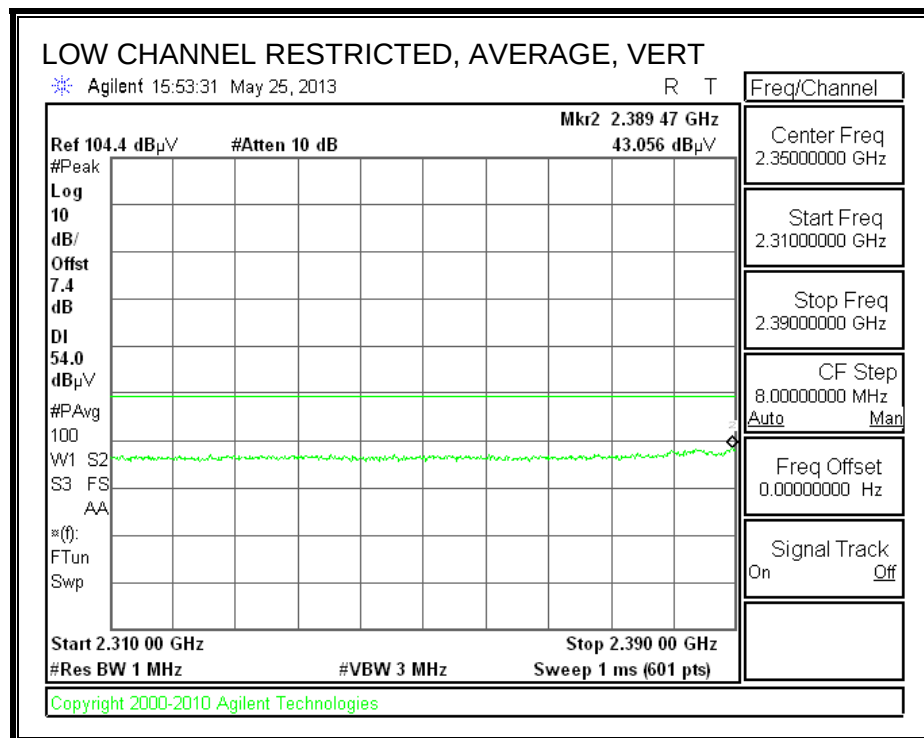
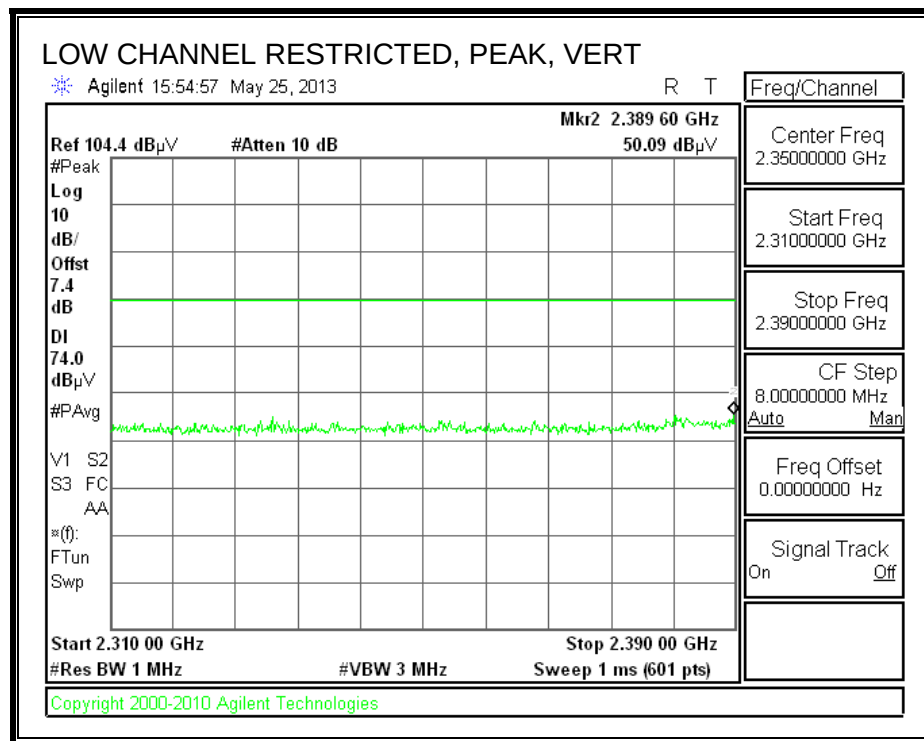
For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

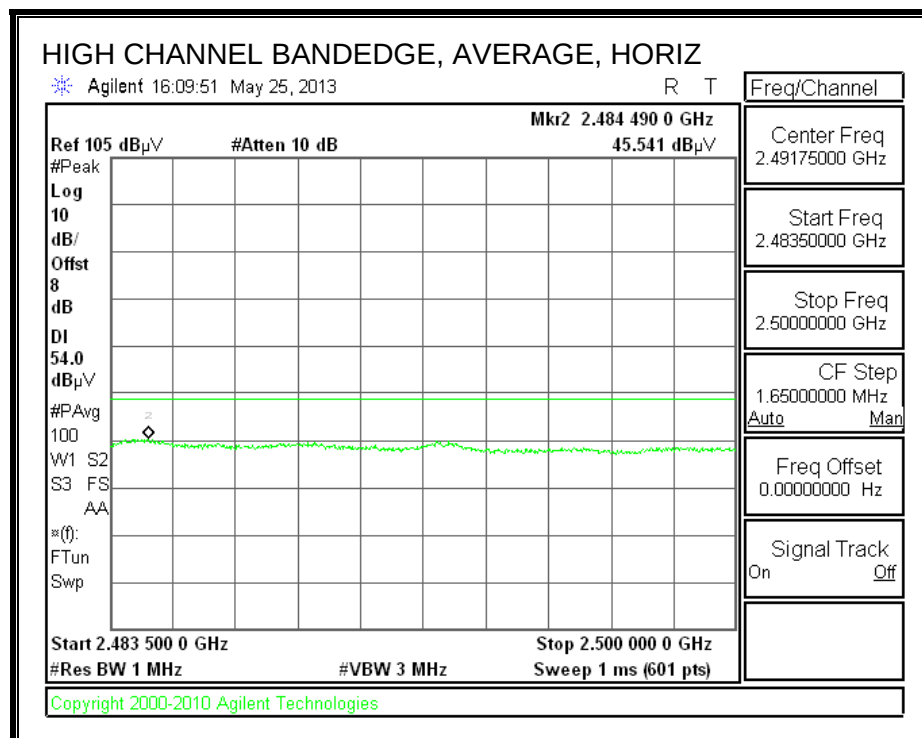
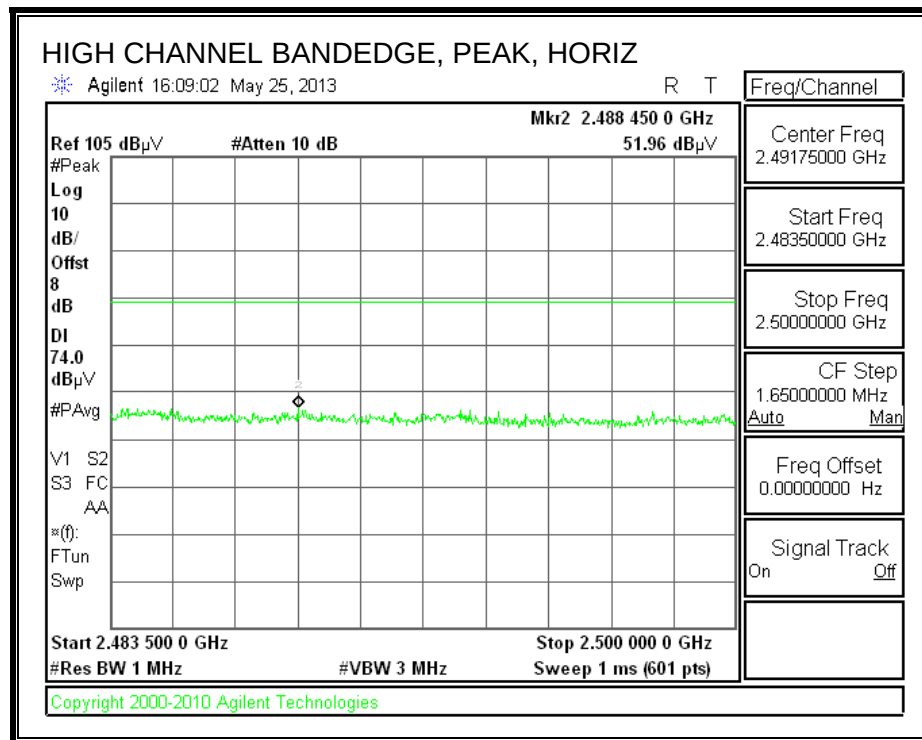
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 1 MHz for peak measurements and as applicable for average measurements.

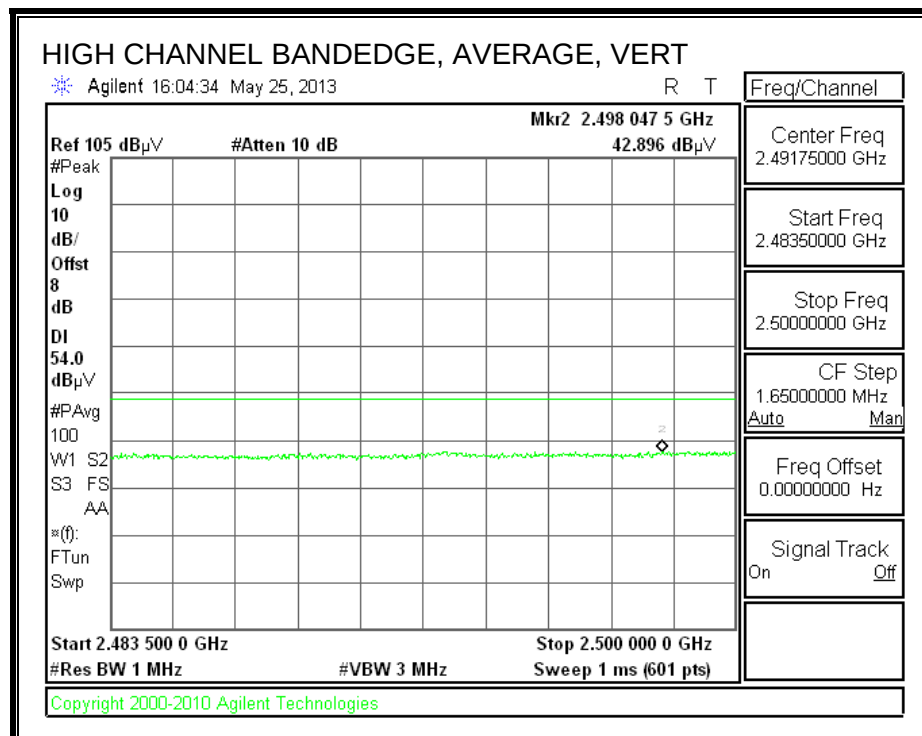
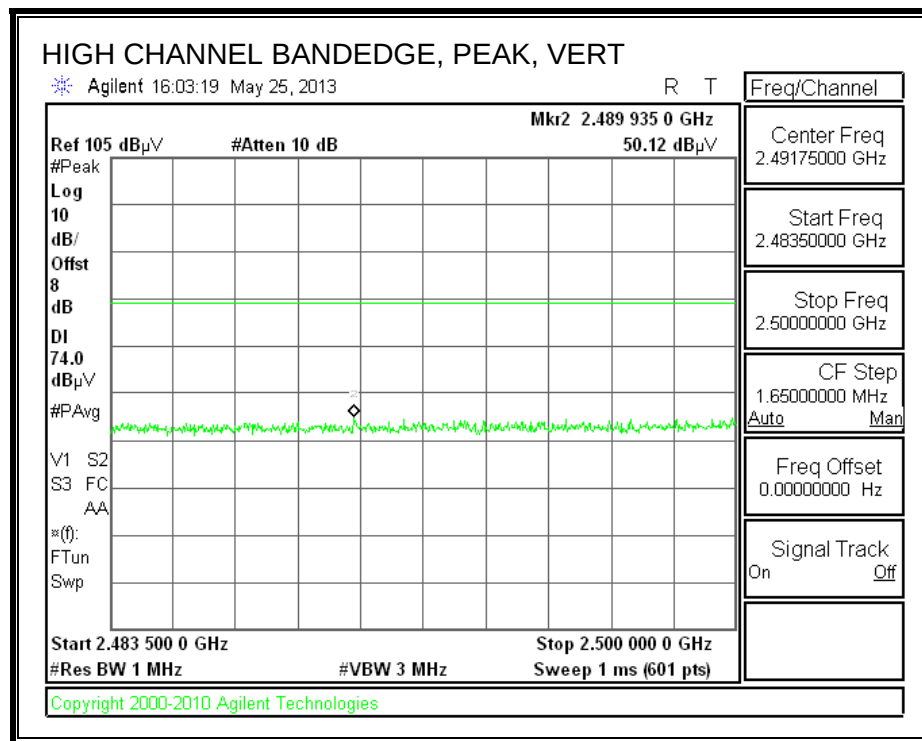
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

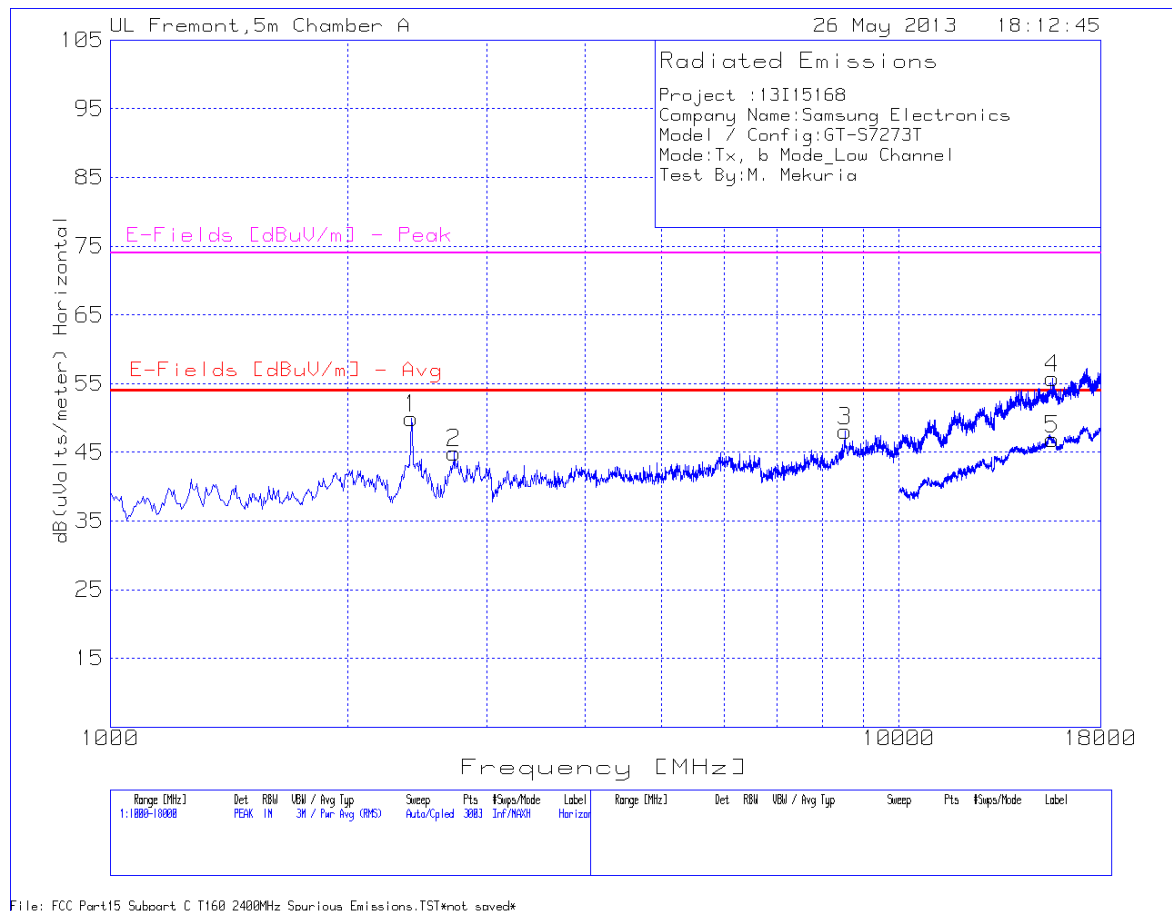
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

10.2. TRANSMITTER ABOVE 1 GHz**10.3. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND****RESTRICTED BANDEDGE (LOW CHANNEL)**



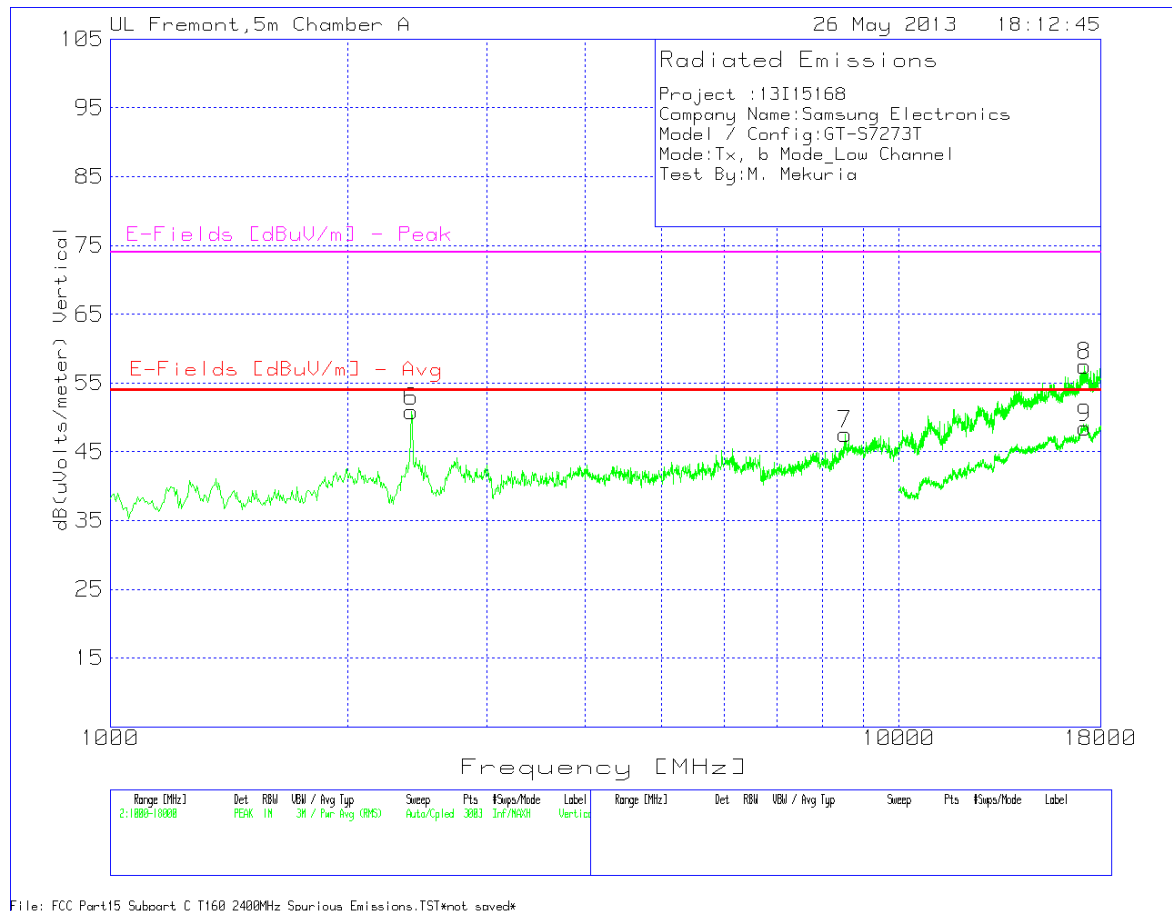
AUTHORIZED BANDEDGE (HIGH CHANNEL)



802.11b MODE IN THE 2.4 GHz HARMONICS AND SPURIOUS EMISSIONS**LOW CHANNEL HORIZONTAL PLOT**

Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

LOW CHANNEL VERTICAL PLOT



Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

LOW CHANNEL HORIZONTAL AND VERTICAL DATA

Project :13I15168

Company Name:Samsung Electronics

Model / Config:GT-S7273T

Mode:Tx, b Mode_Low Channel

Test By:M. Mekuria

Horizontal 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uVolts /meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	2410.06	49.38	PK	32.2	-36.9	4.4	0.9	49.98	53.97	-3.99	74	-24.02	101	Horz
2	2732.85	43.29	PK	32.7	-36.8	4.8	0.9	44.89	53.97	-9.08	74	-29.11	200	Horz
3	8537.31	38.55	PK	35.7	-36	9.5	0.4	48.15	53.97	-5.82	74	-25.85	101	Horz

Vertical 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uVolts /meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
6	2410.06	50.32	PK	32.2	-36.9	4.4	0.9	50.92	53.97	-3.05	74	-23.08	200	Vert
7	8554.3	37.99	PK	35.7	-36	9.5	0.4	47.59	53.97	-6.38	74	-26.41	400	Vert
8	17195.9	36.3	PK	40.9	-34.3	14.1	0.5	57.5	53.97	3.53	74	-16.5	300	Vert

Horizontal 10000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uVolts /meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
5	15641.2	27.94	PK	40.5	-35.1	13.3	0.3	46.94	53.97	-7.03	74	-27.06	200	Horz

Vertical 10000 - 18000MHz

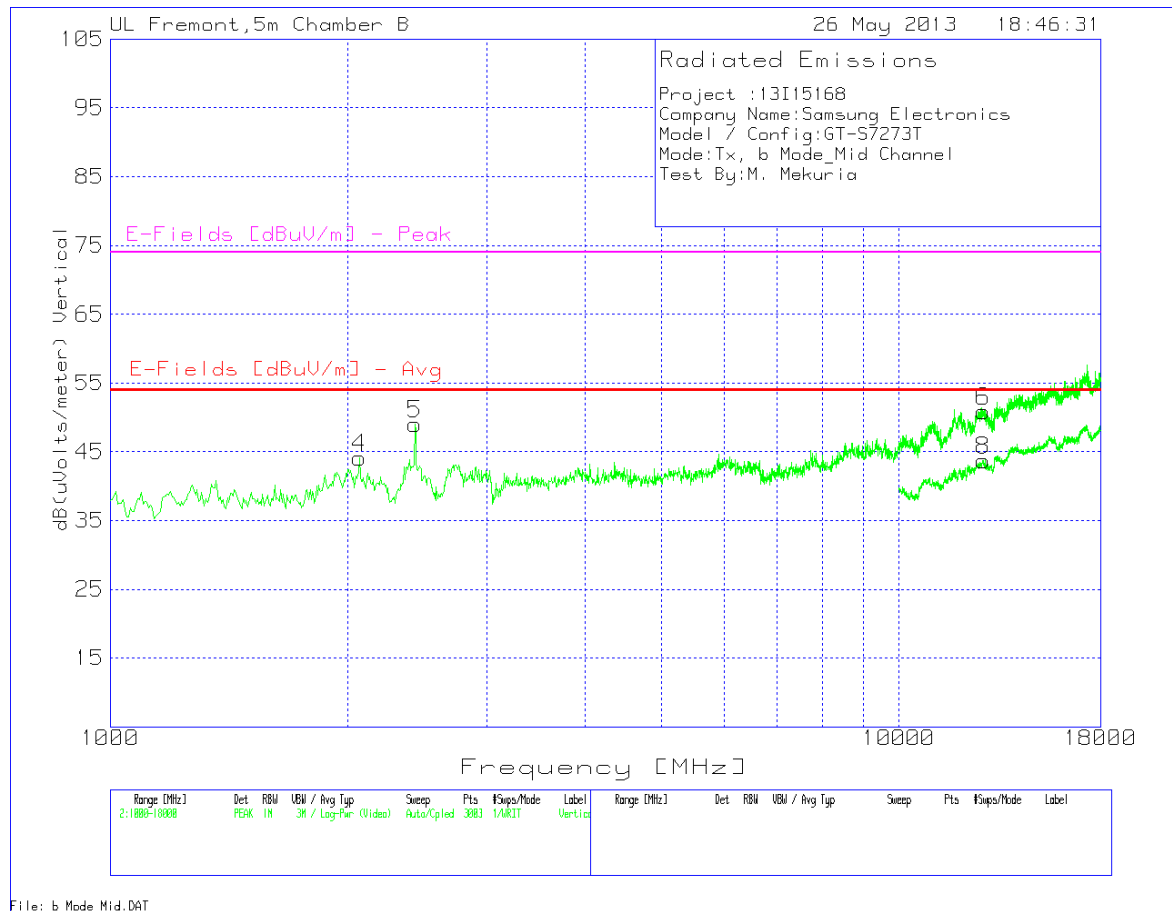
Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uVolts /meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
9	17196.4	27.31	PK	40.9	-34.3	14.1	0.5	48.51	53.97	-5.46	74	-25.49	300	Vert

PK - Peak detector

QP - Quasi-Peak detector

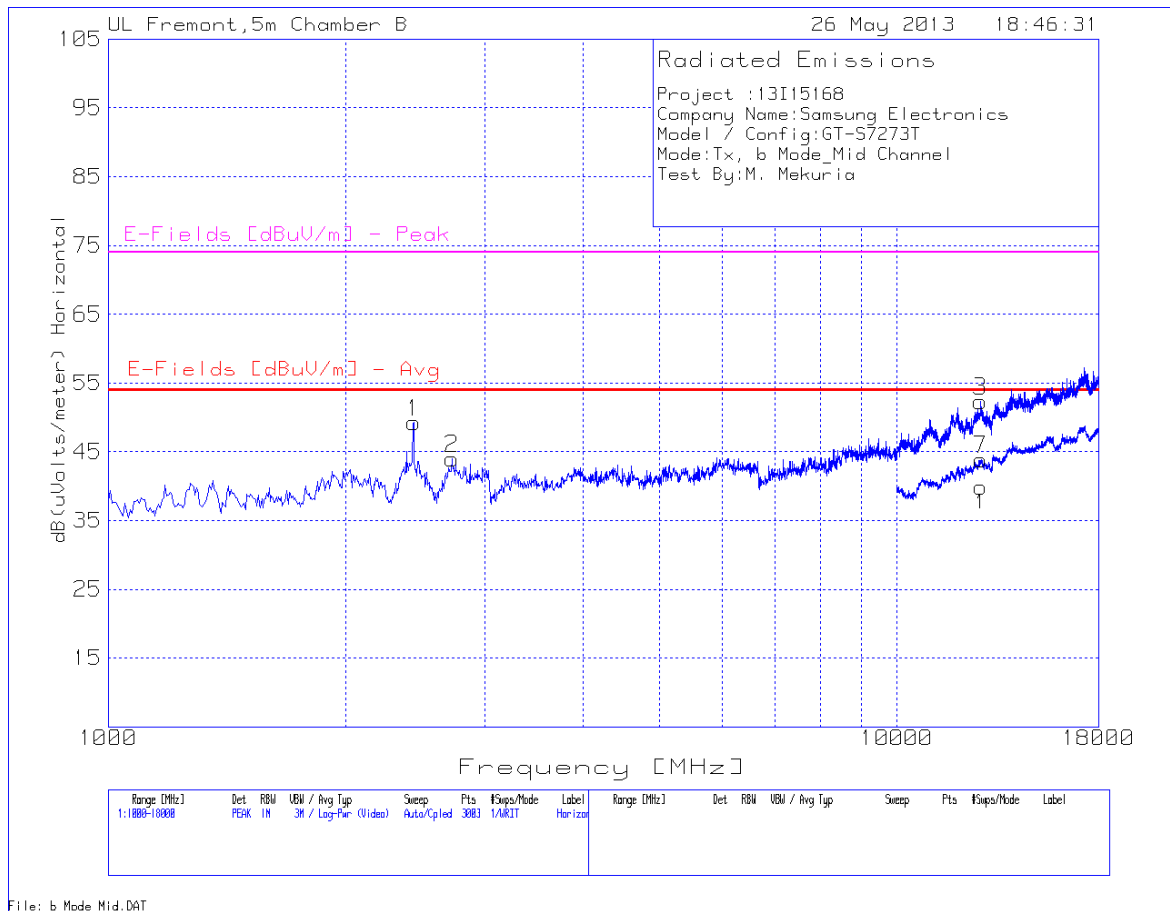
Av - Average detector

MID CHANNEL VERTICAL PLOT



Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

MID CHANNEL HORIZONTAL PLOT



Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

MID CHANNEL HORIZONTAL AND VERTICAL DATA

Model / Config:GT-S7273T

Mode:Tx, b Mode_Mid Channel

Test By:M. Mekuria

Horizontal 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	2438.374	48.42	PK	32.3	-36.9	4.5	0.9	49.22	53.97	-4.75	74	-24.78	200	Vert
2	2727.182	42.36	PK	32.7	-36.8	4.8	0.9	43.96	53.97	-10.01	74	-30.04	101	Vert
3	12773.151	35.5	PK	39.1	-34.5	11.8	0.4	52.3	53.97	-1.67	74	-21.7	200	Vert

Vertical 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
4	2070.286	44.47	PK	31.7	-37	4.1	0.9	44.17	53.97	-9.8	74	-29.83	100	Vert
5	2432.712	48.17	PK	32.3	-36.9	4.5	0.9	48.97	53.97	-5	74	-25.03	200	Vert
6	12807.129	33.83	PK	39.1	-34.4	11.9	0.4	50.83	53.97	-3.14	74	-23.17	100	Vert

Horizontal 10000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
7	12774.613	27.05	PK	39.1	-34.5	11.8	0.4	43.85	53.97	-10.12	74	-30.15	200	Vert

Vertical 10000 - 18000MHz

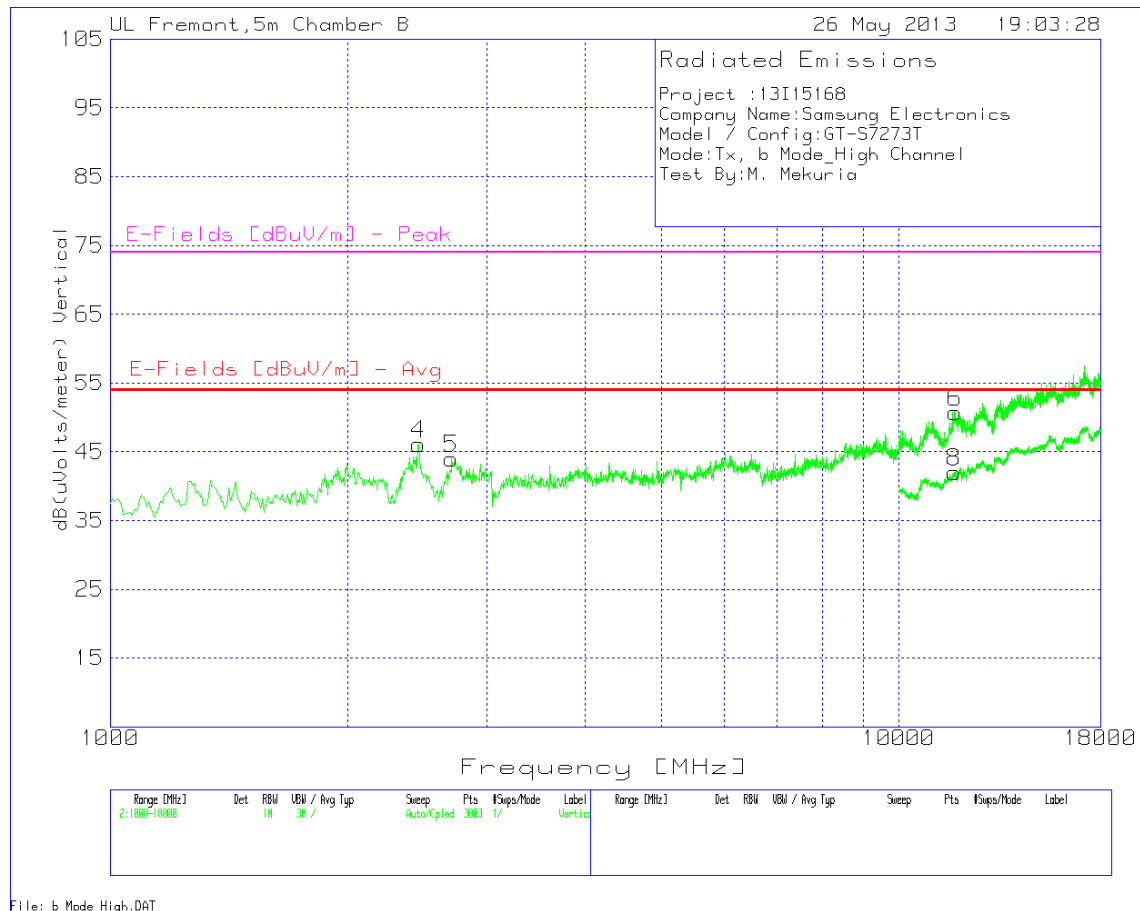
Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
8	12794.603	26.94	PK	39.1	-34.5	11.8	0.4	43.74	53.97	-10.23	74	-30.26	100	Vert

PK - Peak detector

QP - Quasi-Peak detector

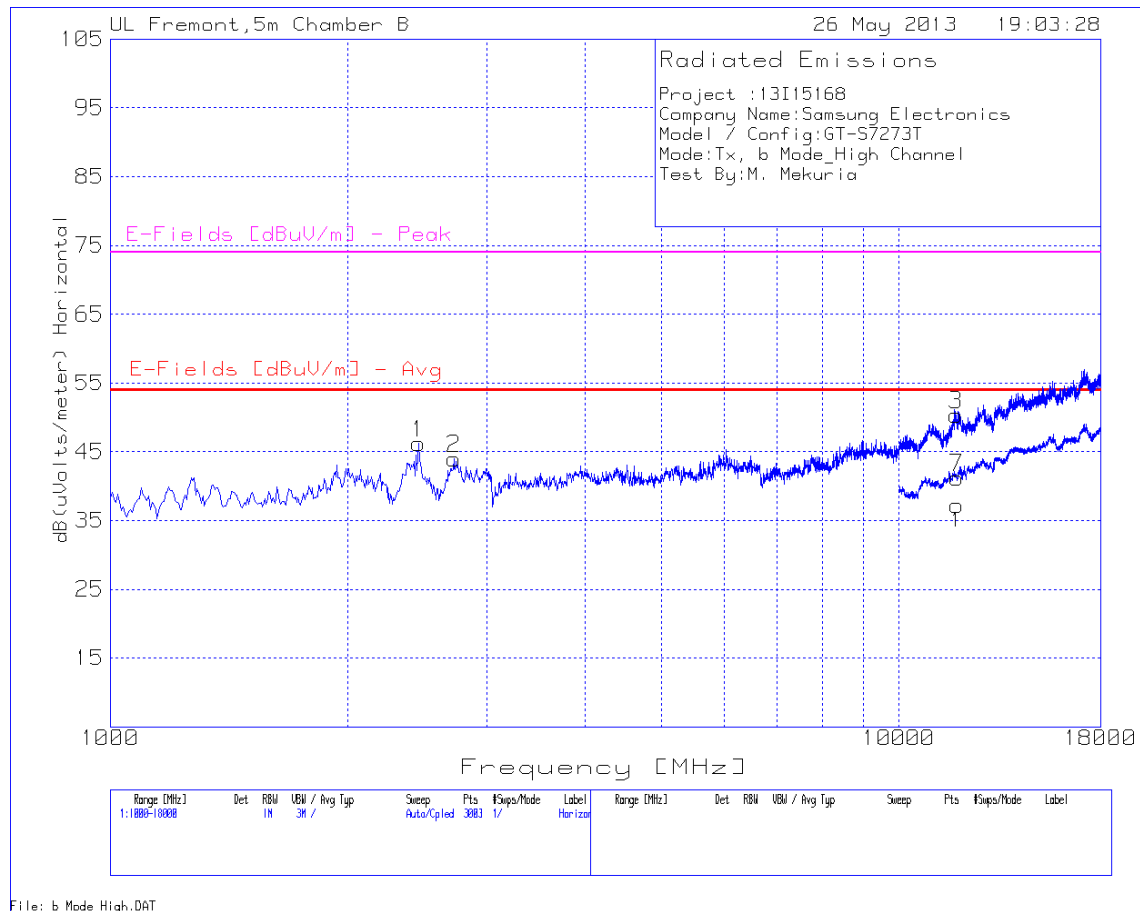
Av - Average detector

HIGH CHANNEL VERTICAL PLOT



Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

HIGH CHANNEL HORIZONTAL PLOT



Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

HIGH CHANNEL HORIZONTAL AND VERTICAL DATA

Project :13I15168

Company Name:Samsung Electronics

Model / Config:GT-S7273T

Mode:Tx, b Mode_High Channel

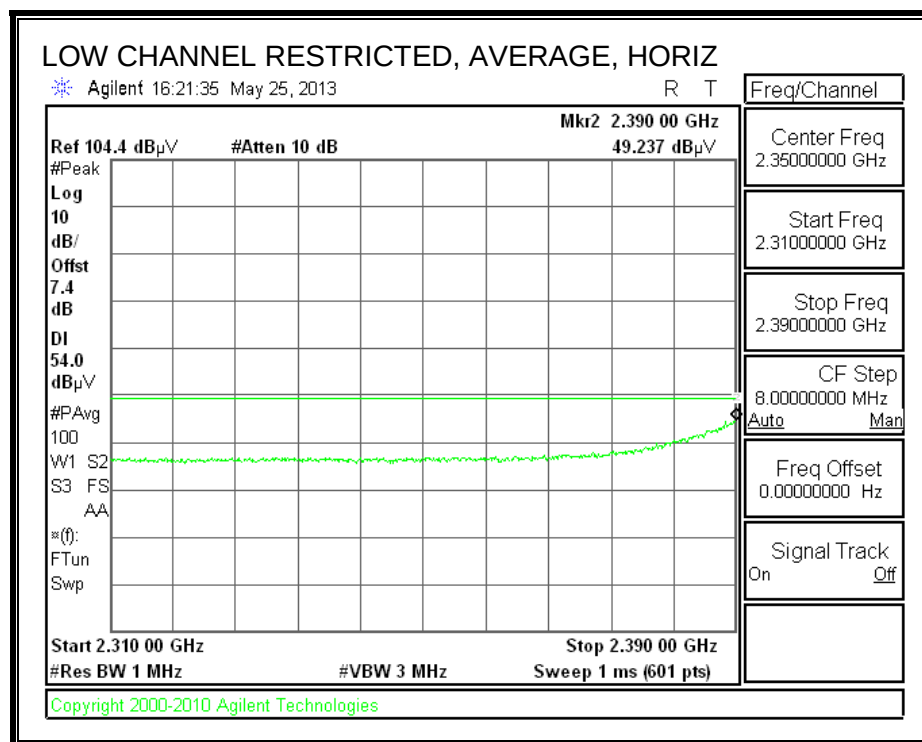
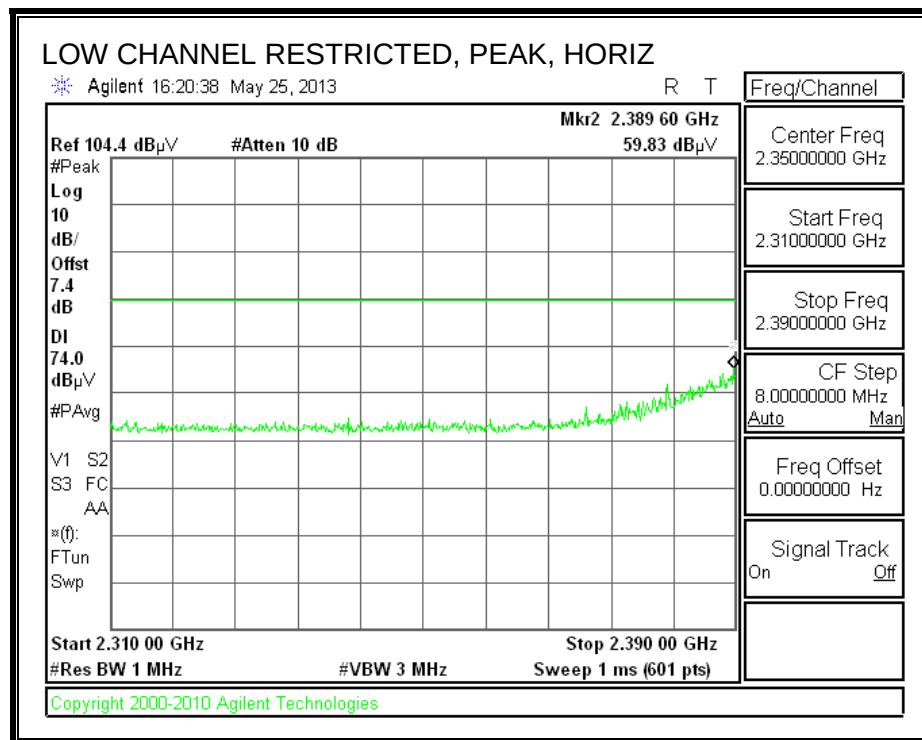
Test By:M. Mekuria

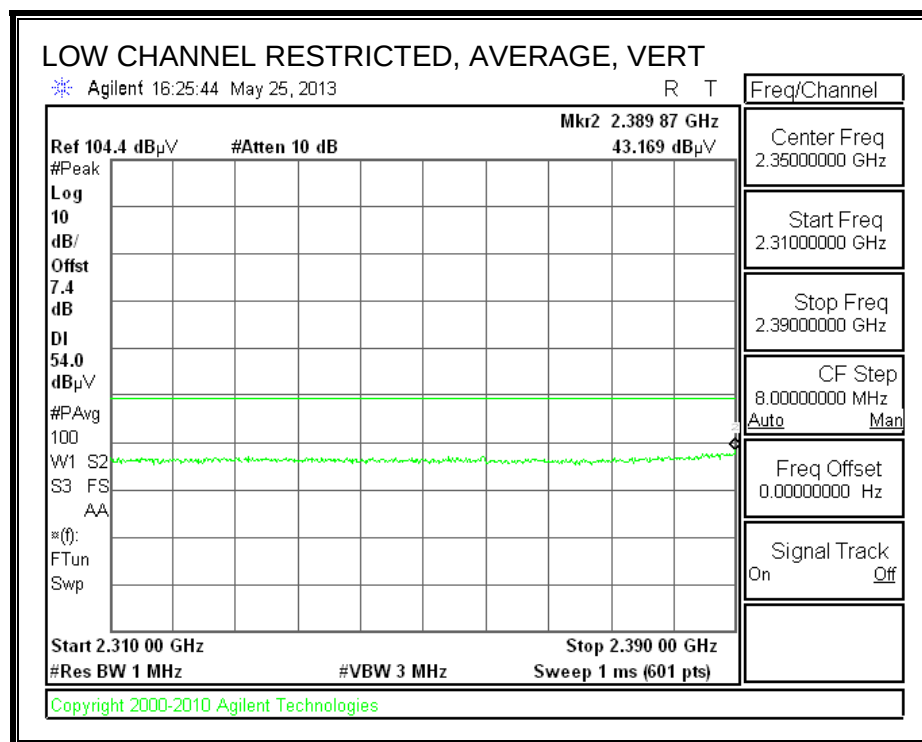
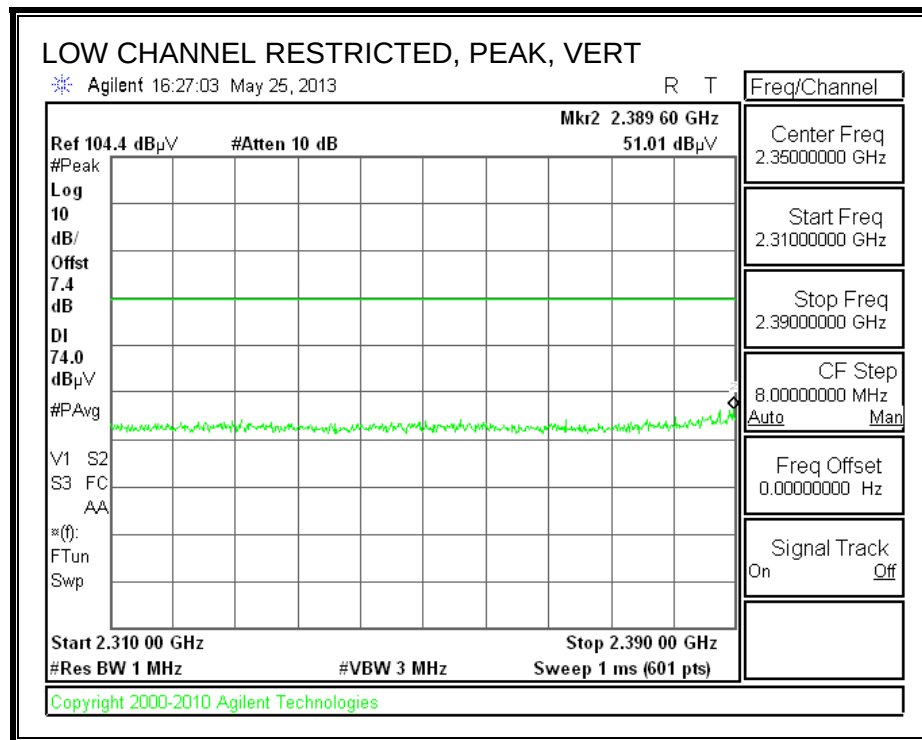
Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/m)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
Horizontal 1000 - 18000MHz														
2	2727.182	42.43	PK	32.7	-36.8	4.8	0.9	44.03	53.97	-9.94	74	-29.97	200	Vert
3	11810.46	35.5	PK	38.6	-35.7	11.3	0.7	50.4	53.97	-3.57	74	-23.6	101	Vert
Vertical 1000 - 18000MHz														
4	2461.026	45.06	PK	32.4	-36.8	4.5	0.9	46.06	53.97	-7.91	74	-27.94	200	Vert
5	2710.193	42.41	PK	32.7	-36.8	4.8	0.9	44.01	53.97	-9.96	74	-29.99	200	Vert
6	11770.819	36	PK	38.6	-35.7	11.3	0.5	50.7	53.97	-3.27	74	-23.3	100	Vert
Horizontal 10000 - 18000MHz														
7	11835.082	26.46	PK	38.6	-35.7	11.4	0.5	41.26	53.97	-12.71	74	-32.74	100	Vert
Vertical 10000 - 18000MHz														
8	11763.118	27.33	PK	38.6	-35.7	11.3	0.5	42.03	53.97	-11.94	74	-31.97	200	Vert

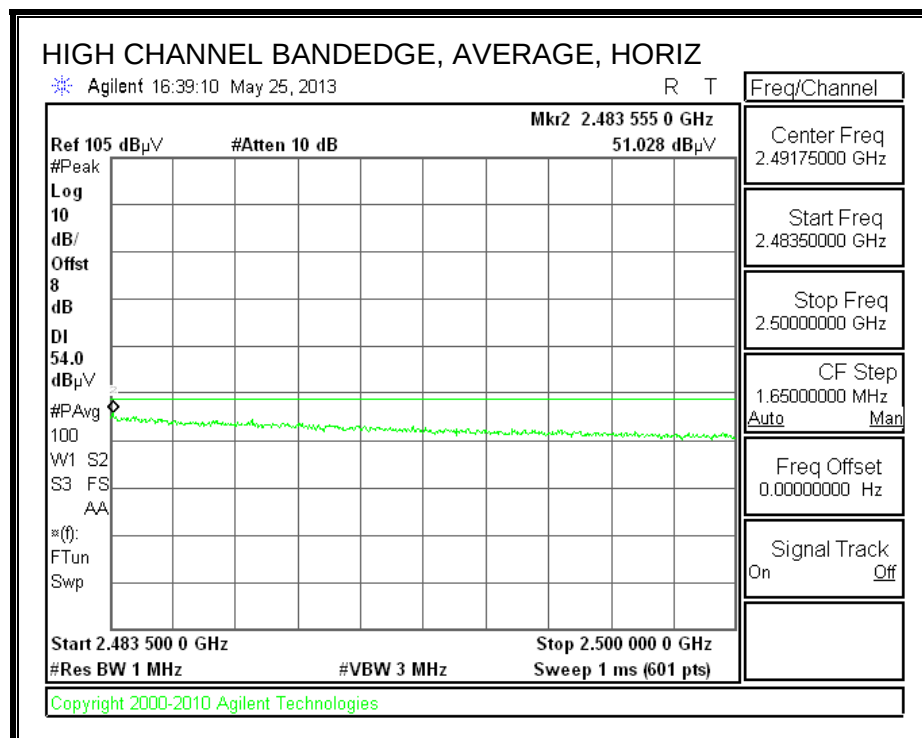
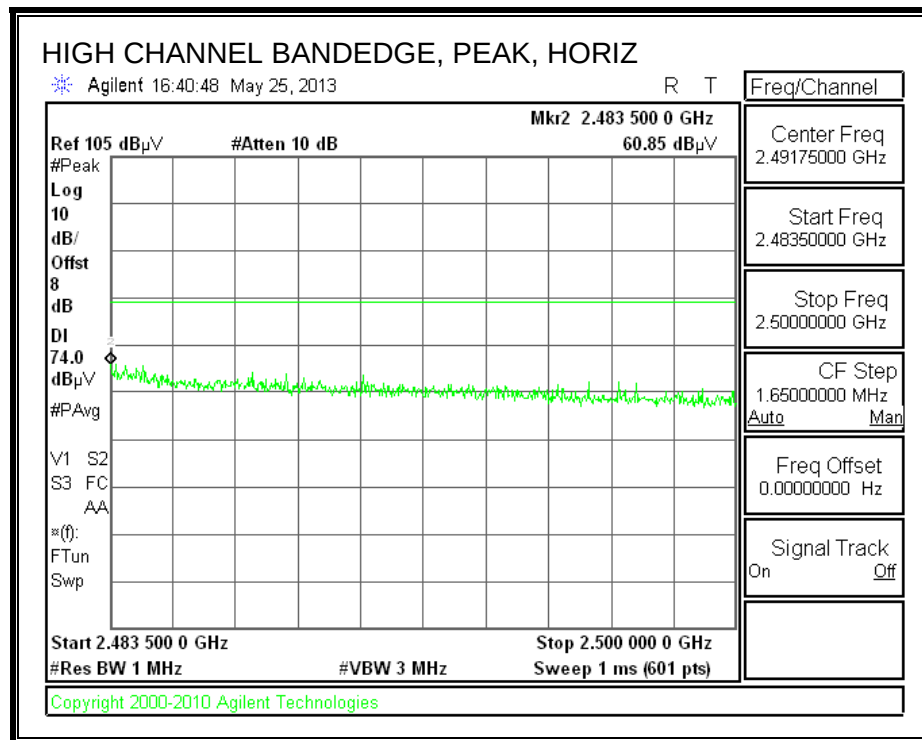
PK - Peak detector

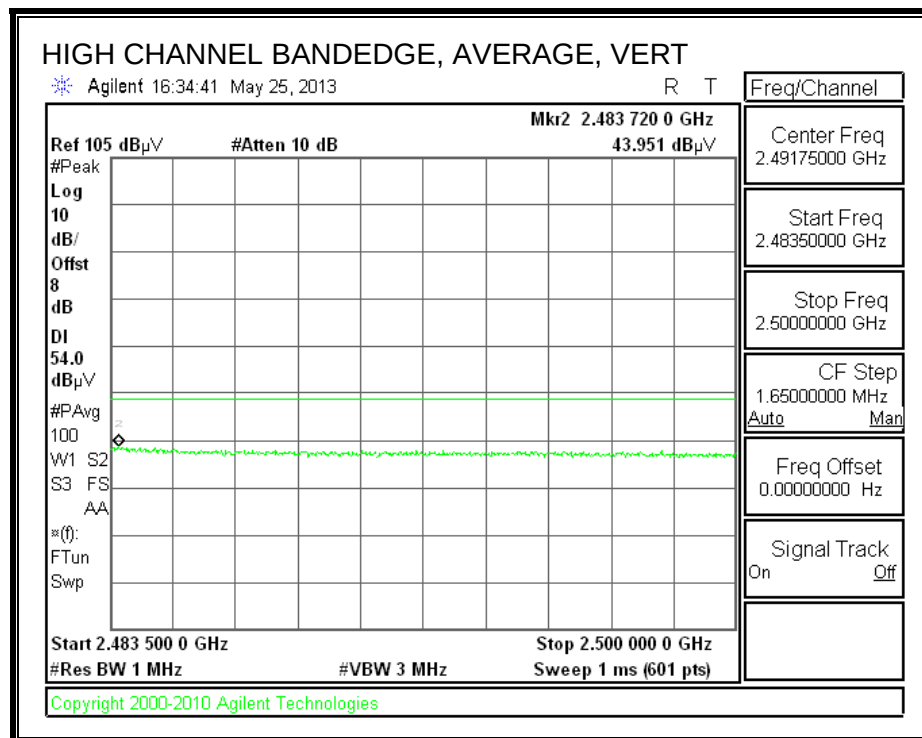
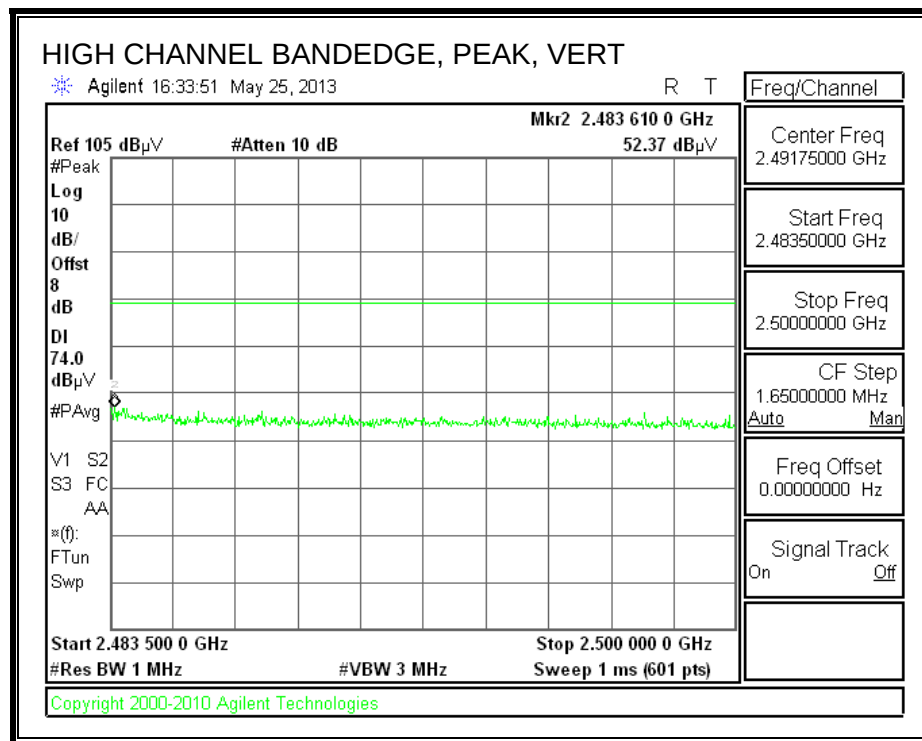
QP - Quasi-Peak detector

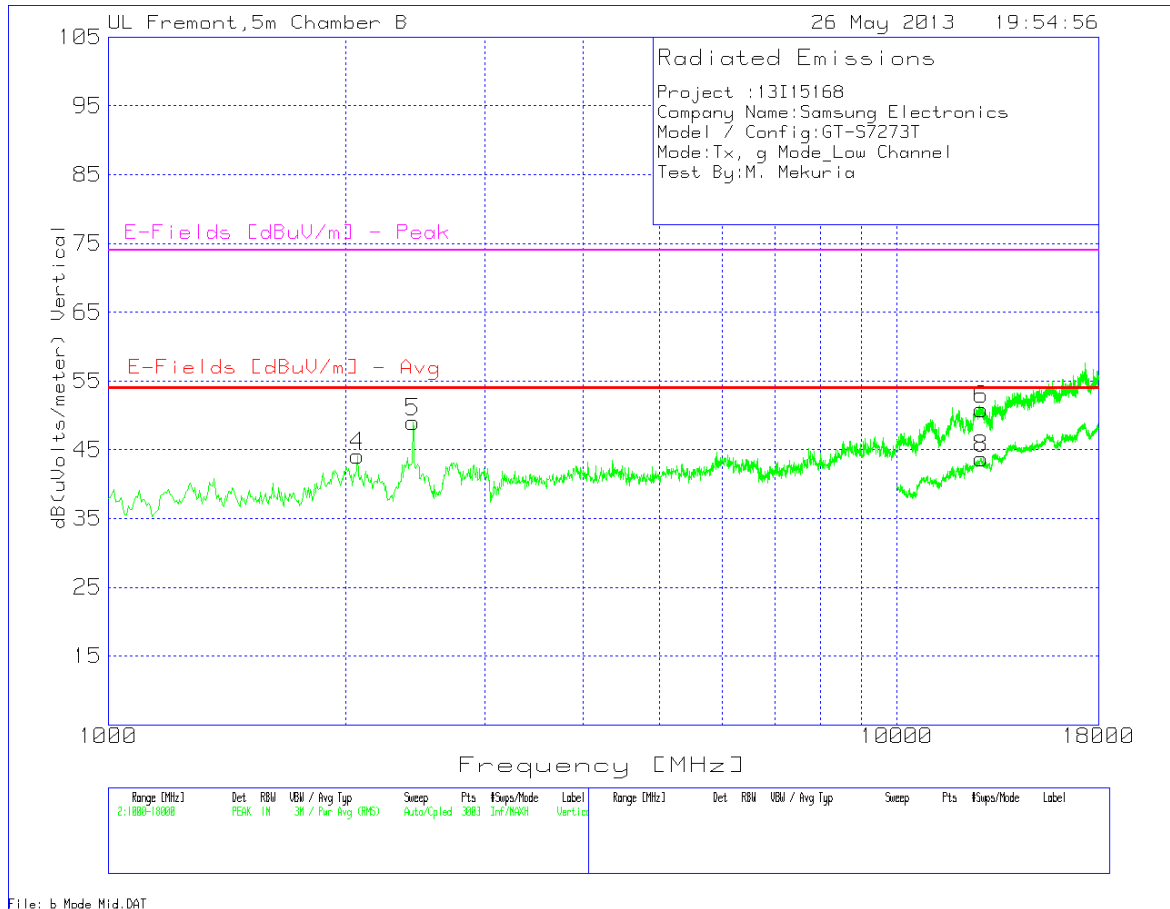
Av - Average detector

10.4. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND**RESTRICTED BANDEDGE (LOW CHANNEL)**



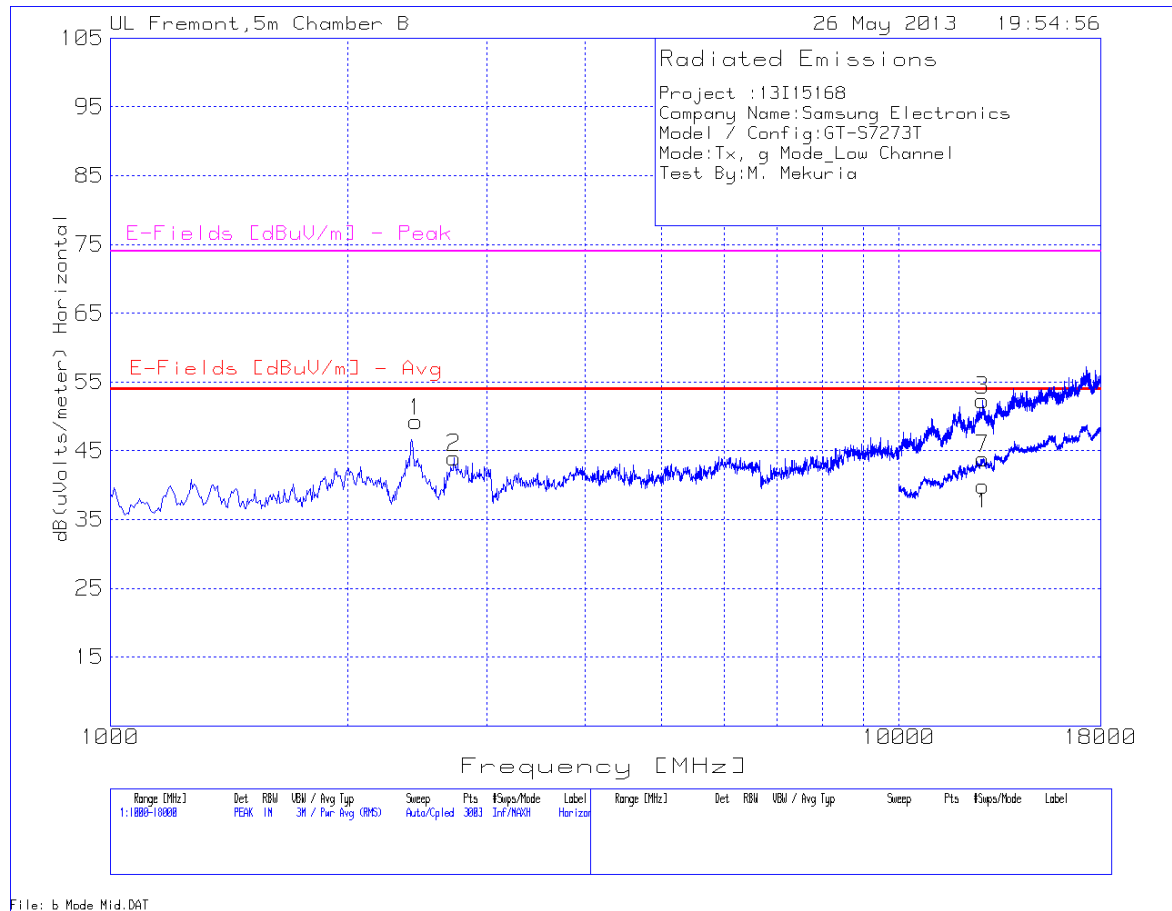
AUTHORIZED BANDEDGE (HIGH CHANNEL)



HARMONICS AND SPURIOUS EMISSIONS**LOW CHANNEL VERTICAL PLOT**

Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

LOW CHANNEL HORIZONTAL PLOT



Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

LOW CHANNEL HORIZONTAL AND VERTICAL DATA

Project :13I15168

Company Name:Samsung Electronics

Model / Config:GT-S7273T

Mode:Tx, g Mode_Low Channel

Test By:M. Mekuria

Horizontal 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	2438.374	48.42	PK	32.3	-36.9	4.5	0.9	49.22	53.97	-4.75	74	-24.78	200	Vert
2	2727.182	42.36	PK	32.7	-36.8	4.8	0.9	43.96	53.97	-10.01	74	-30.04	101	Vert
3	12773.151	35.5	PK	39.1	-34.5	11.8	0.4	52.3	53.97	-1.67	74	-21.7	200	Vert

Vertical 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
4	2070.286	44.47	PK	31.7	-37	4.1	0.9	44.17	53.97	-9.8	74	-29.83	100	Vert
5	2432.712	48.17	PK	32.3	-36.9	4.5	0.9	48.97	53.97	-5	74	-25.03	200	Vert
6	12807.129	33.83	PK	39.1	-34.4	11.9	0.4	50.83	53.97	-3.14	74	-23.17	100	Vert

Horizontal 10000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
7	12774.613	27.05	PK	39.1	-34.5	11.8	0.4	43.85	53.97	-10.12	74	-30.15	200	Vert

Vertical 10000 - 18000MHz

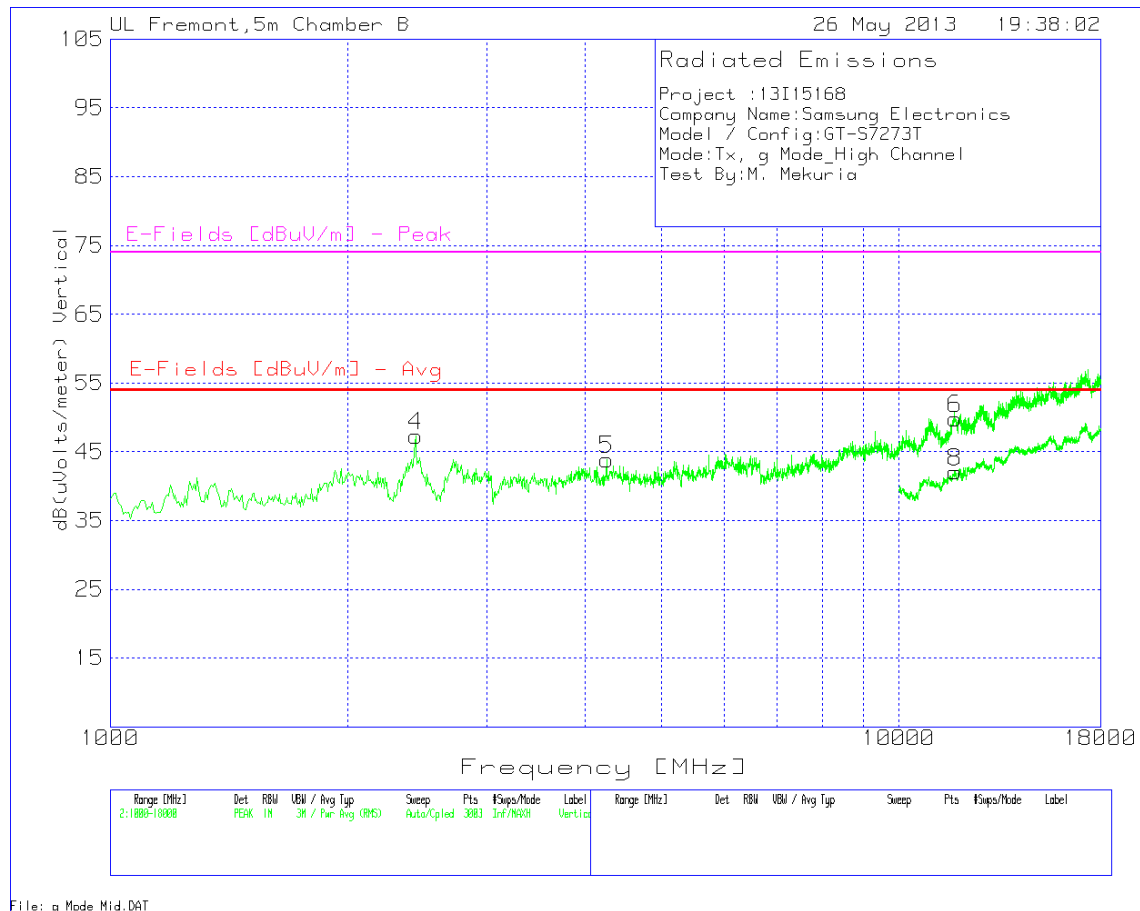
Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
8	12794.603	26.94	PK	39.1	-34.5	11.8	0.4	43.74	53.97	-10.23	74	-30.26	100	Vert

PK - Peak detector

QP - Quasi-Peak detector

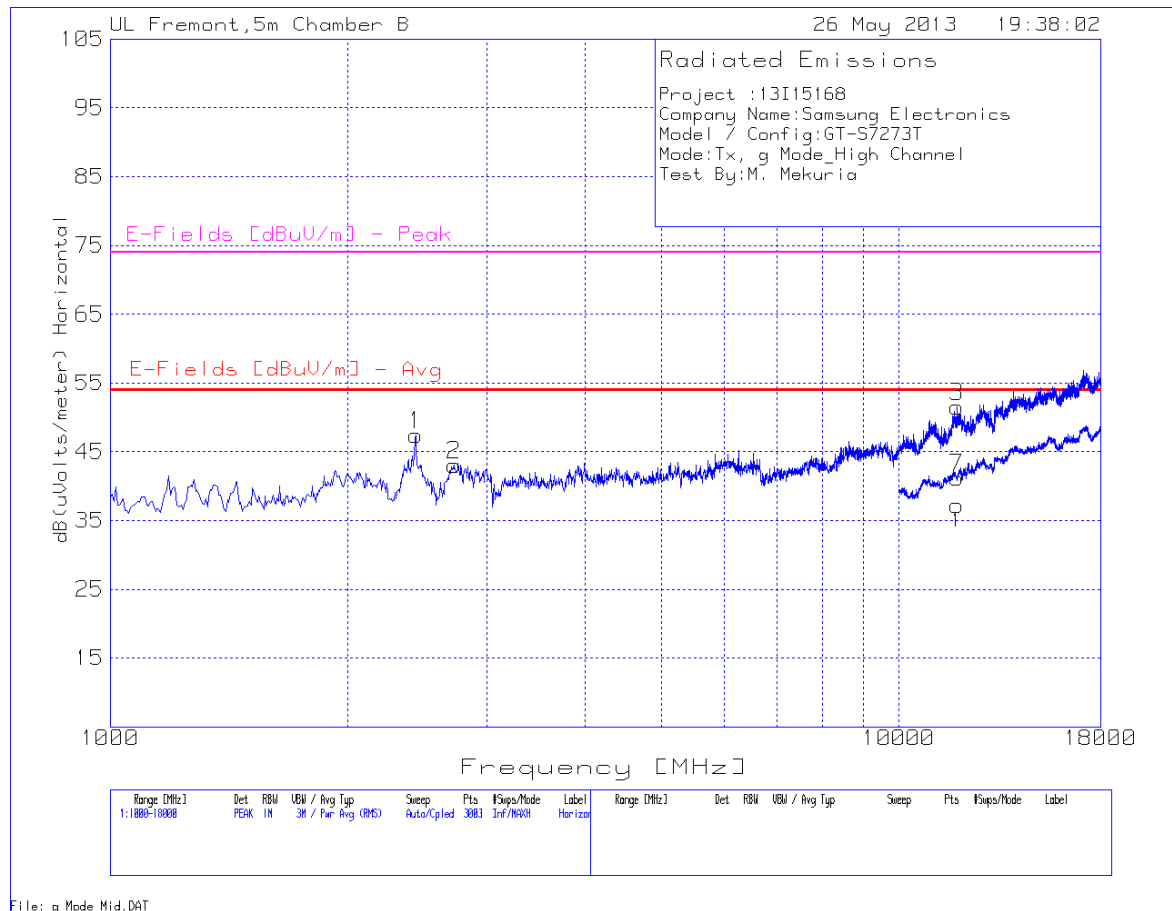
Av - Average detector

MID CHANNEL VERTICAL PLOT



Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

MID CHANNEL HORIZONTAL PLOT



Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

MID CHANNEL HORIZONTAL AND VERTICAL DATA

Project :13I15168

Company Name:Samsung Electronics

Model / Config:GT-S7273T

Mode:Tx, g Mode_High Channel

Test By:M. Mekuria

Horizontal 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	2438.374	46.58	PK	32.3	-36.9	4.5	0.9	47.38	53.97	-6.59	74	-26.62	101	Vert
2	2727.182	41.52	PK	32.7	-36.8	4.8	0.9	43.12	53.97	-10.85	74	-30.88	200	Vert
3	11850.1	36.58	PK	38.7	-35.7	11.4	0.5	51.48	53.97	-2.49	74	-22.52	200	Vert

Vertical 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
4	2438.374	46.51	PK	32.3	-36.9	4.5	0.9	47.31	53.97	-6.66	74	-26.69	200	Vert
5	4261.825	39.7	PK	33.6	-35.9	6.3	0.2	43.9	53.97	-10.07	74	-30.1	200	Vert
6	11776.482	35.03	PK	38.6	-35.7	11.3	0.6	49.83	53.97	-4.14	74	-24.17	100	Vert

Horizontal 10000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
7	11839.08	26.34	PK	38.6	-35.7	11.4	0.6	41.24	53.97	-12.73	74	-32.76	200	Vert

Vertical 10000 - 18000MHz

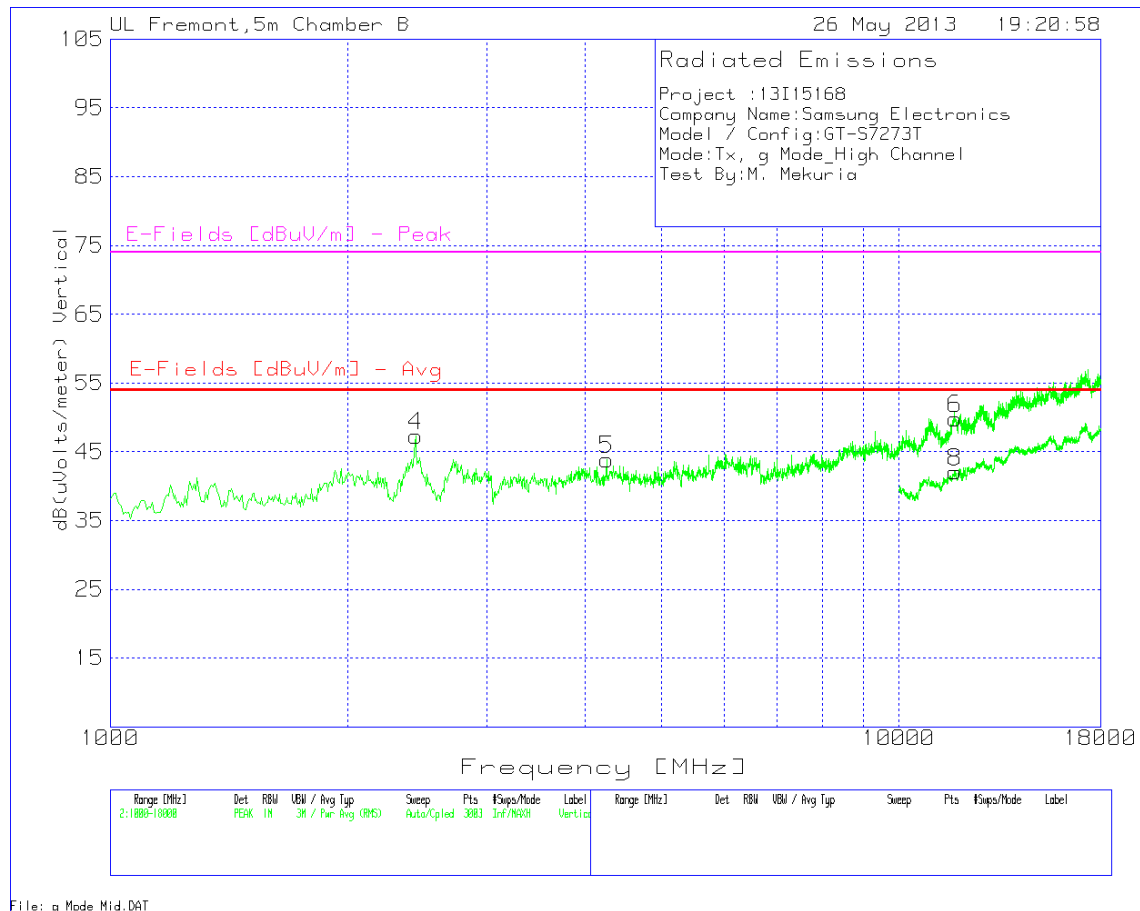
Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
8	11783.108	27.17	PK	38.6	-35.7	11.3	0.7	42.07	53.97	-11.9	74	-31.93	200	Vert

PK - Peak detector

QP - Quasi-Peak detector

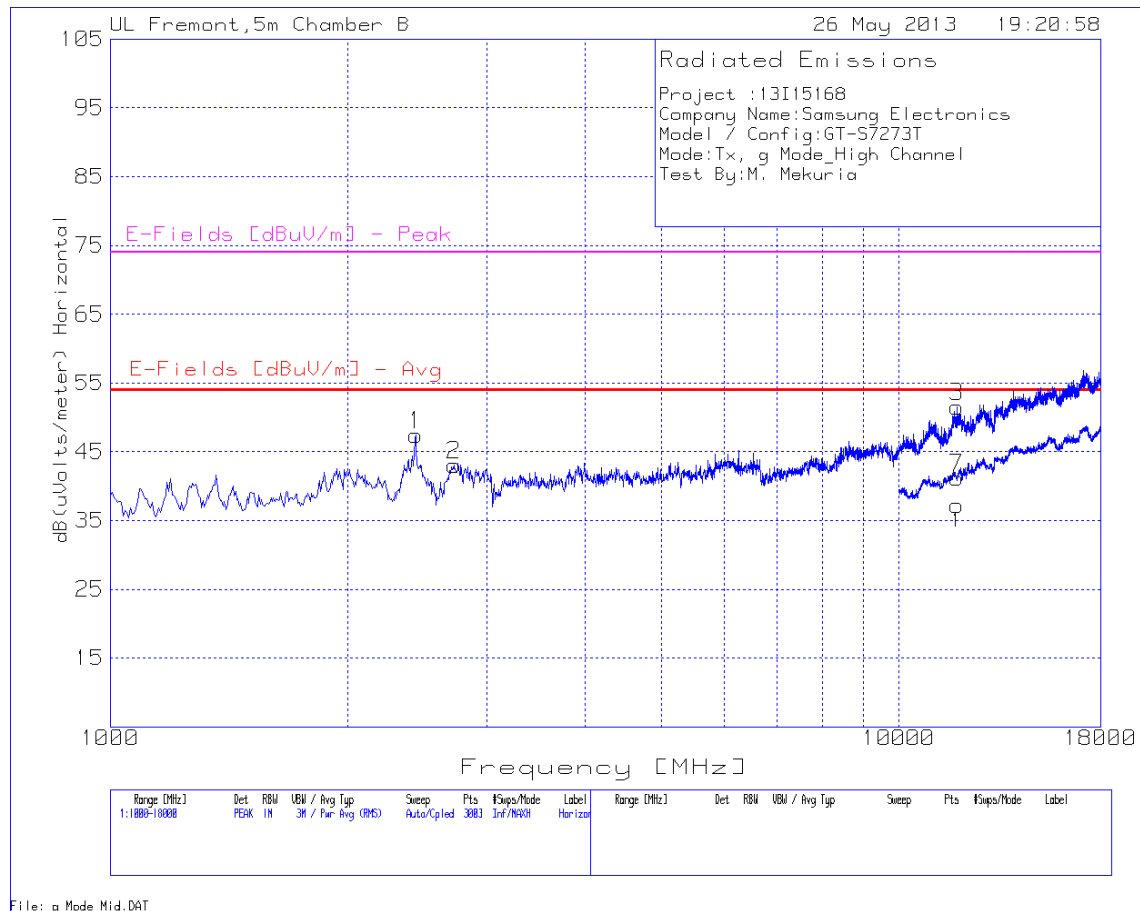
Av - Average detector

HIGH CHANNEL VERTICAL PLOT



Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

HIGH CHANNEL HORIZONTAL PLOT



Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

HIGH CHANNEL HORIZONTAL AND VERTICAL DATA

Project :13I15168

Company Name:Samsung Electronics

Model / Config:GT-S7273T

Mode:Tx, g Mode_High Channel

Test By:M. Mekuria

Horizontal 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	2438.374	46.58	PK	32.3	-36.9	4.5	0.9	47.38	53.97	-6.59	74	-26.62	101	Vert
2	2727.182	41.52	PK	32.7	-36.8	4.8	0.9	43.12	53.97	-10.85	74	-30.88	200	Vert
3	11850.1	36.58	PK	38.7	-35.7	11.4	0.5	51.48	53.97	-2.49	74	-22.52	200	Vert

Vertical 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
4	2438.374	46.51	PK	32.3	-36.9	4.5	0.9	47.31	53.97	-6.66	74	-26.69	200	Vert
5	4261.825	39.7	PK	33.6	-35.9	6.3	0.2	43.9	53.97	-10.07	74	-30.1	200	Vert
6	11776.482	35.03	PK	38.6	-35.7	11.3	0.6	49.83	53.97	-4.14	74	-24.17	100	Vert

Horizontal 10000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
7	11839.08	26.34	PK	38.6	-35.7	11.4	0.6	41.24	53.97	-12.73	74	-32.76	200	Vert

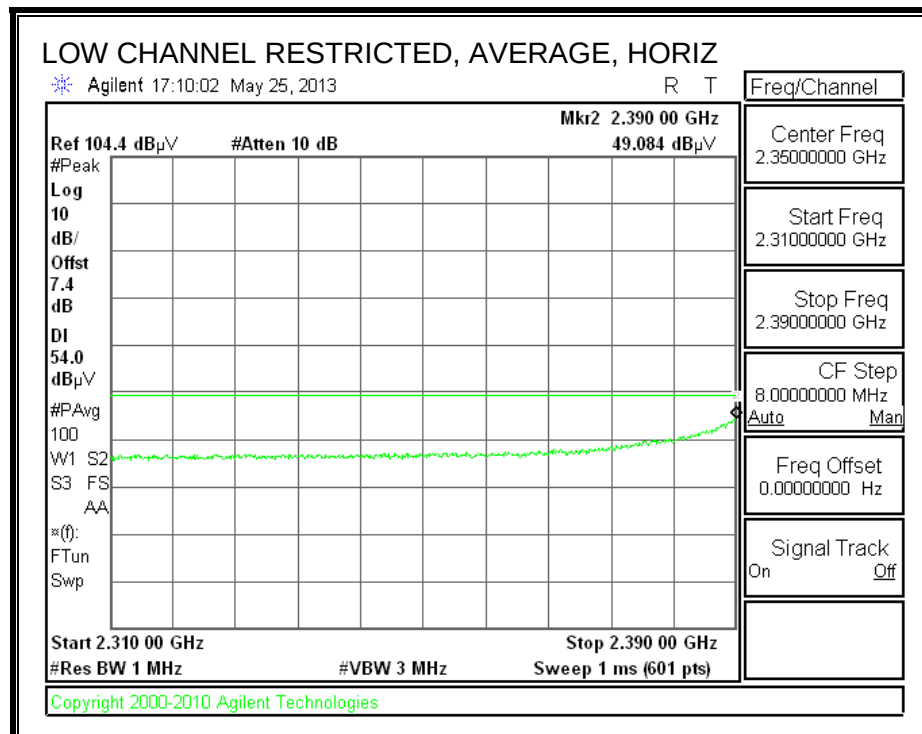
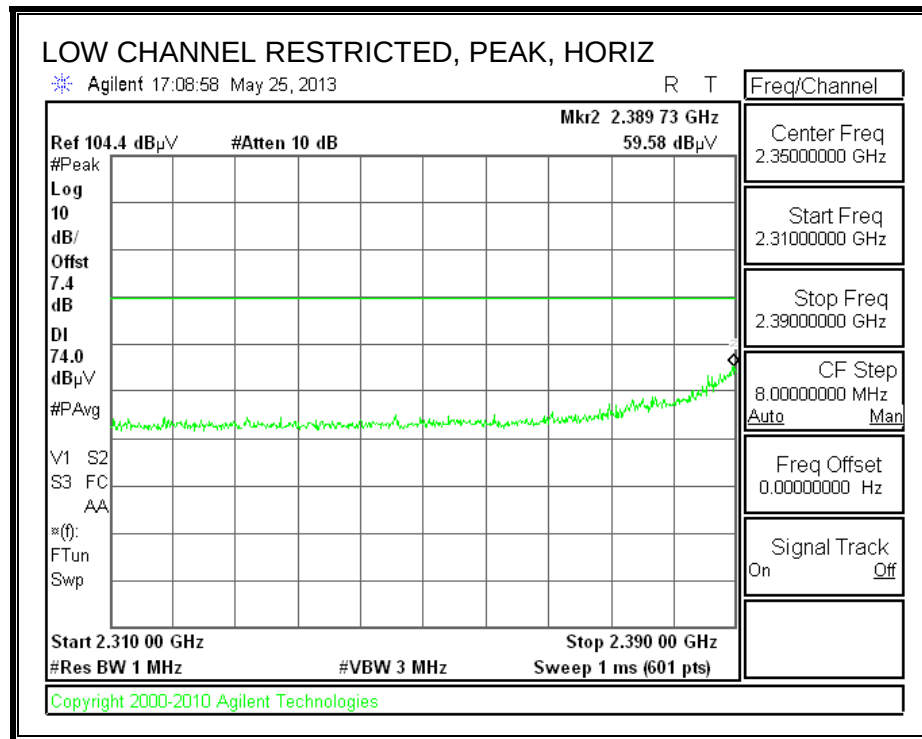
Vertical 10000 - 18000MHz

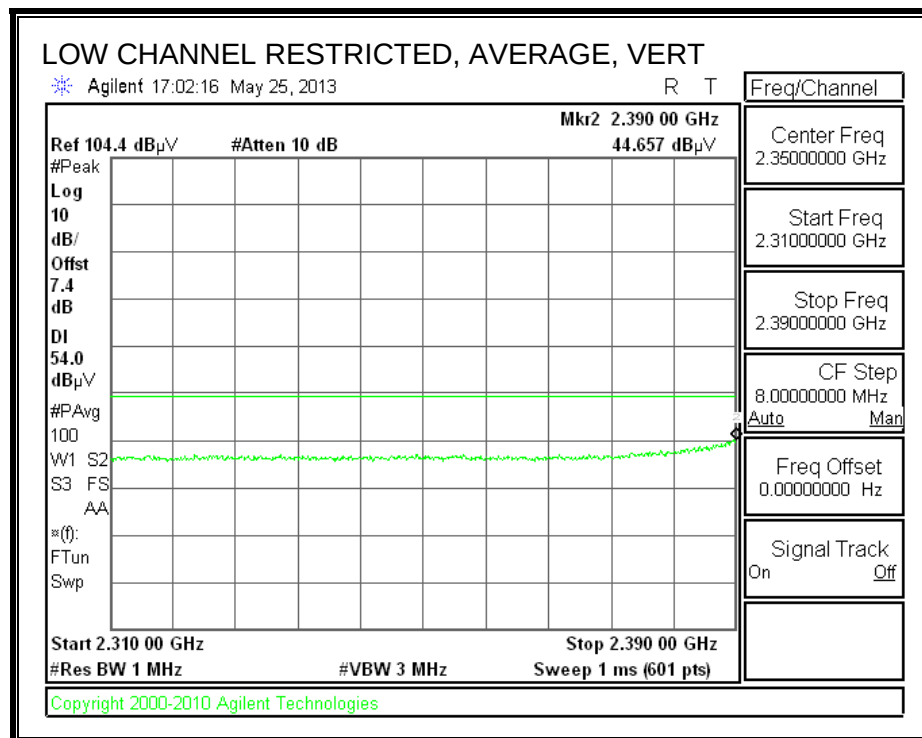
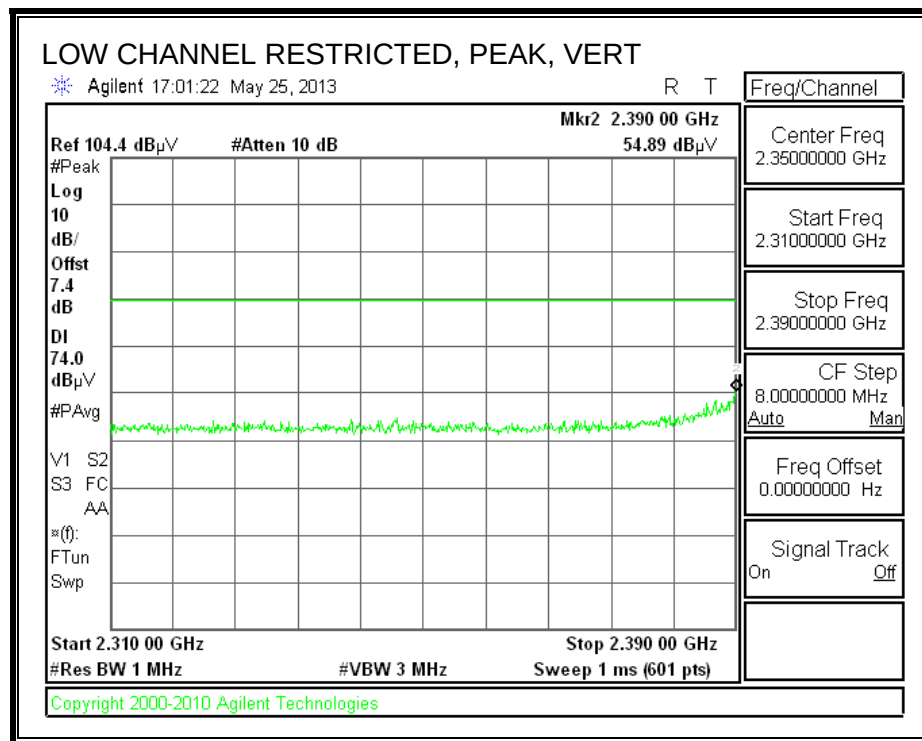
Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
8	11783.108	27.17	PK	38.6	-35.7	11.3	0.7	42.07	53.97	-11.9	74	-31.93	200	Vert

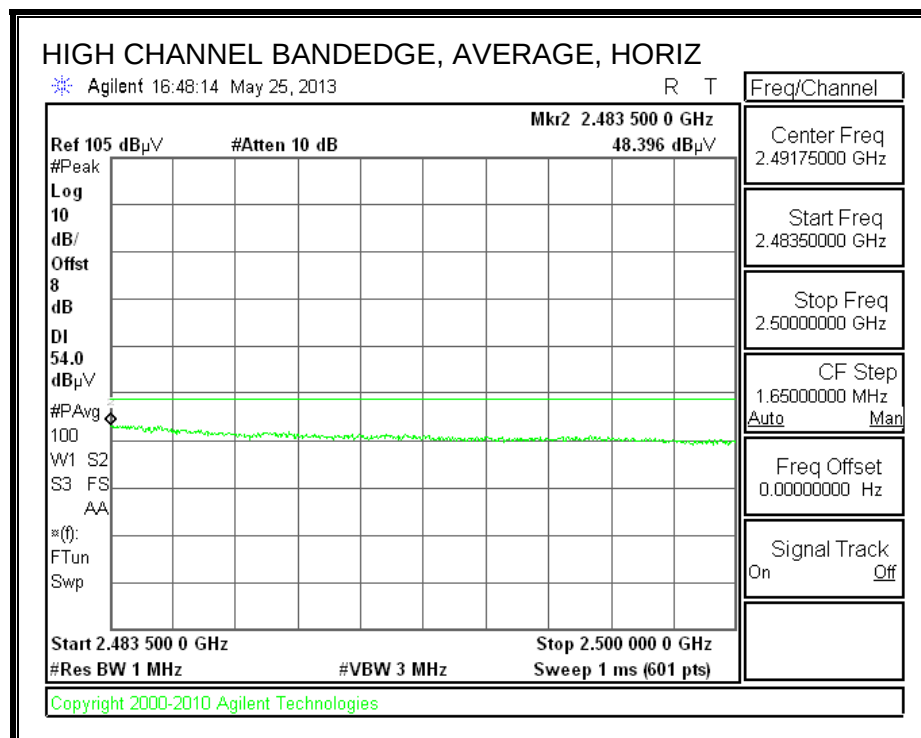
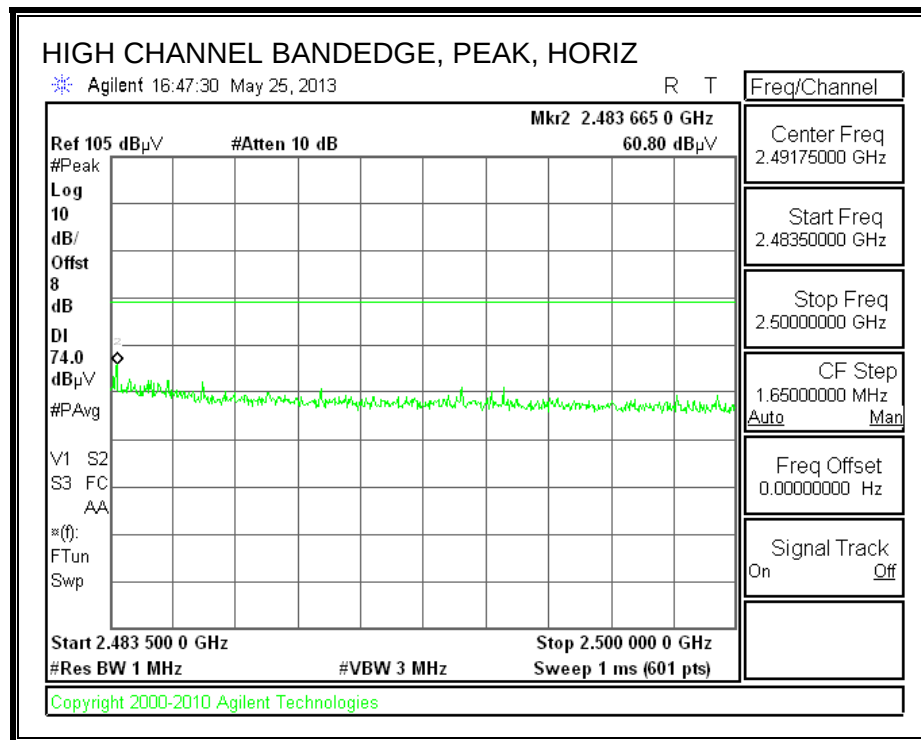
PK - Peak detector

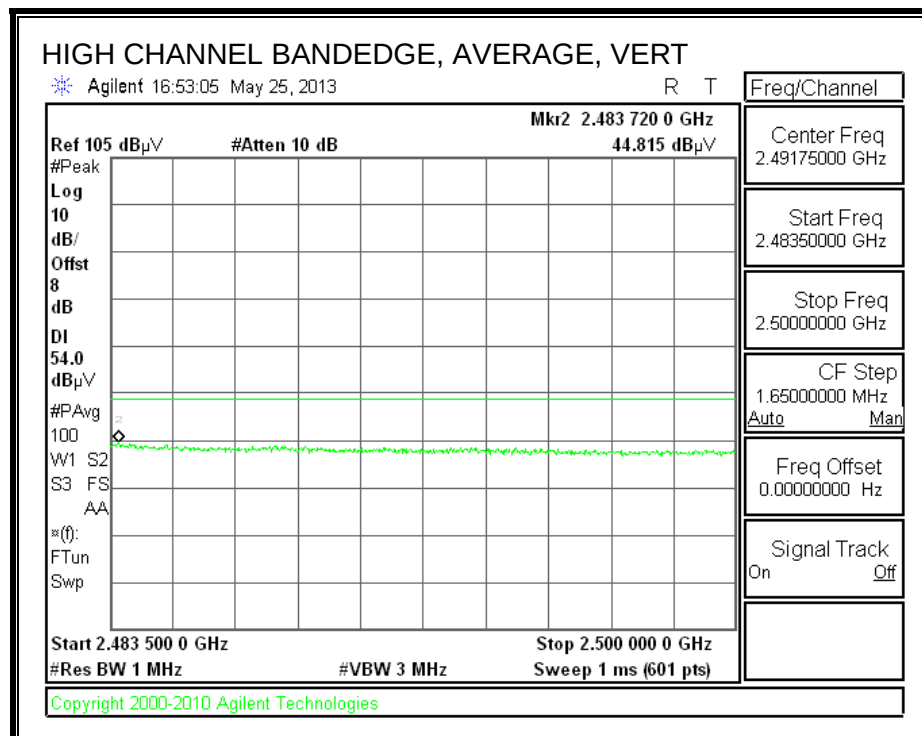
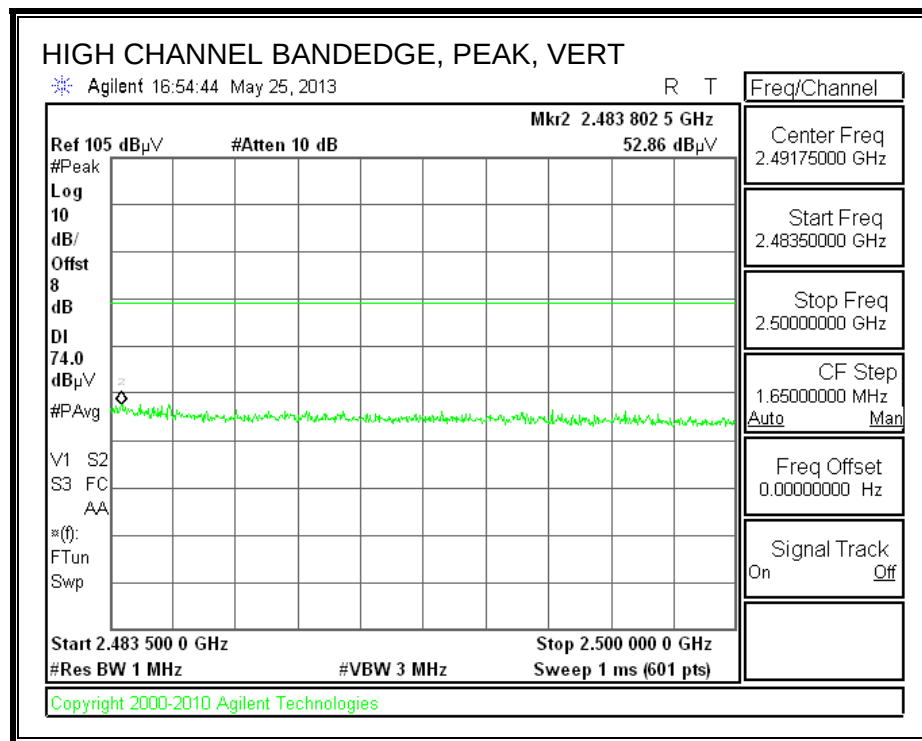
QP - Quasi-Peak detector

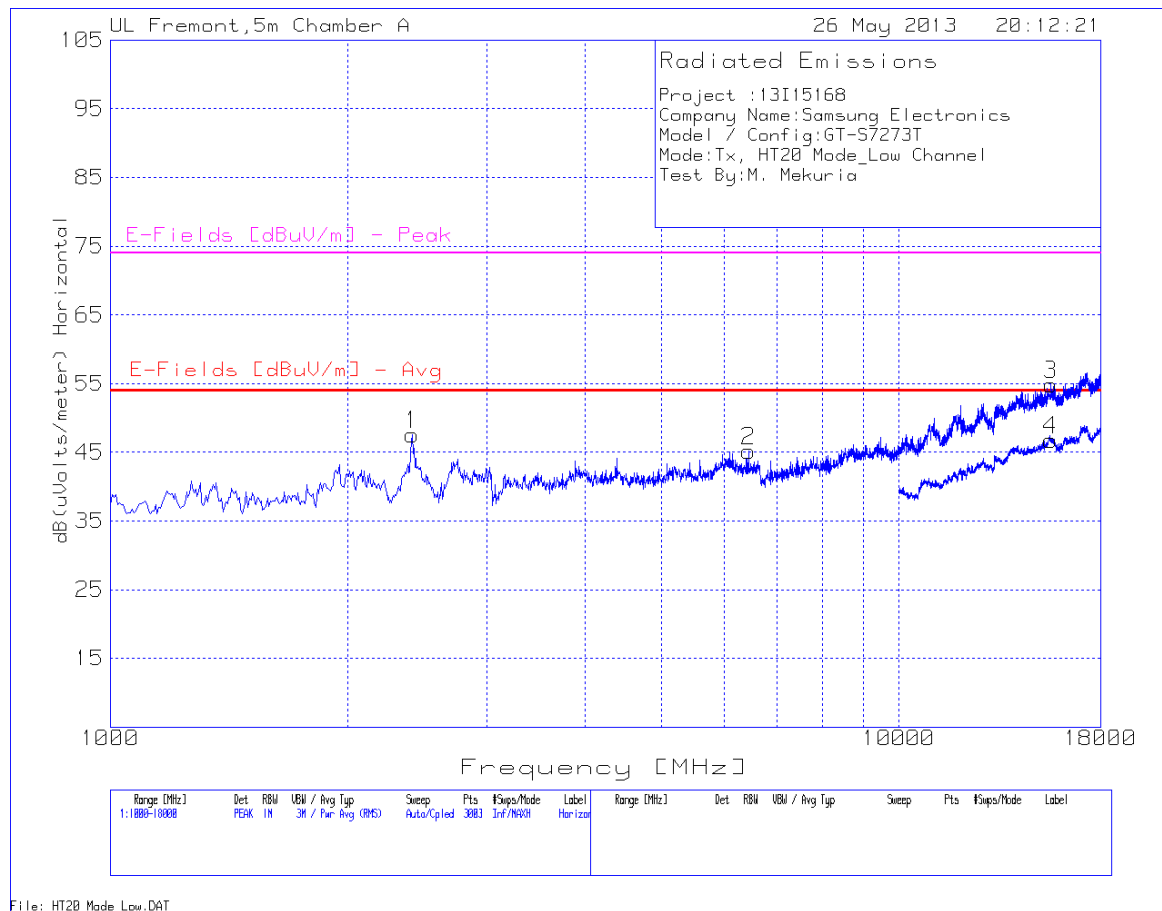
Av - Average detector

10.5. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND**RESTRICTED BANDEGE (LOW CHANNEL)**



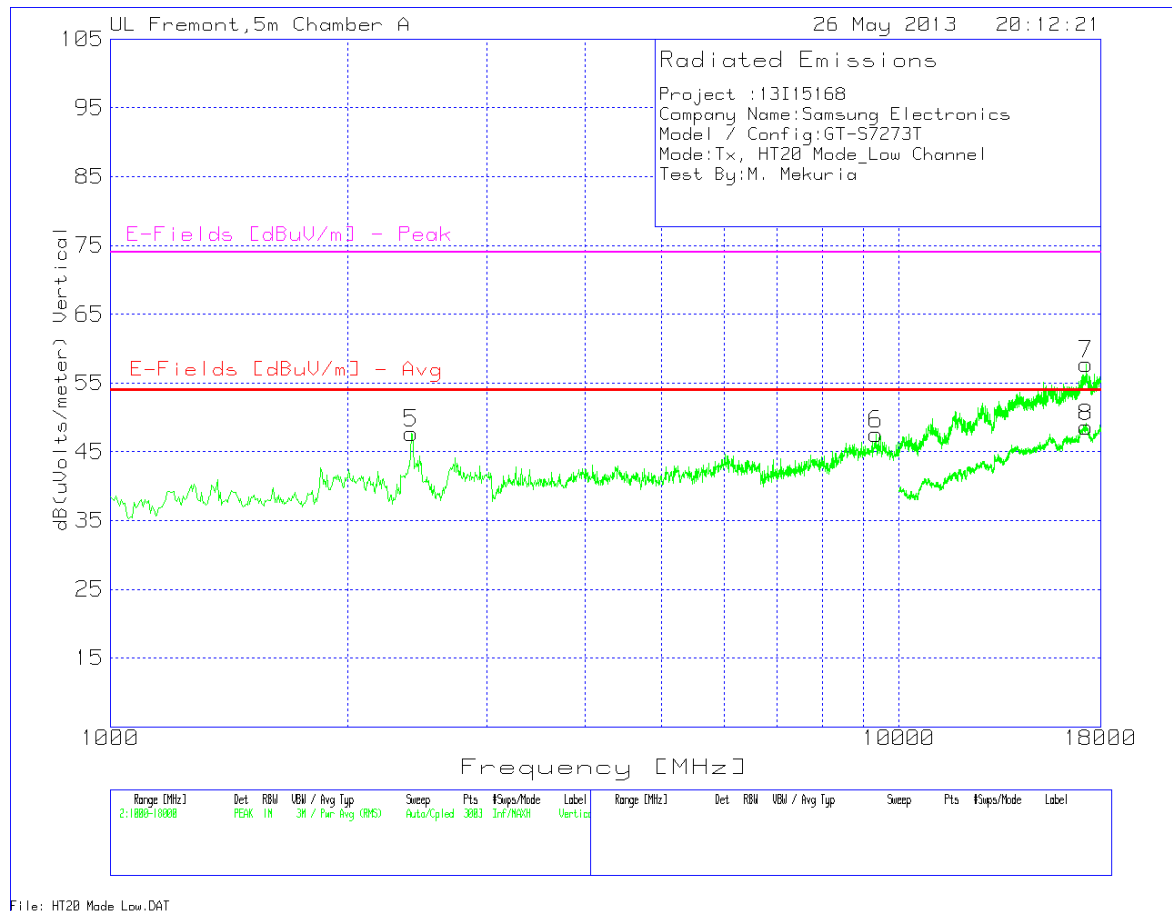
AUTHORIZED BANDEDGE (HIGH CHANNEL)



802.11n HT20 MODE IN THE 2.4 GHz HARMONICS AND SPURIOUS EMISSIONS**LOW CHANNEL HORIZONTAL PLOT**

Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

LOW CHANNEL VERTICAL PLOT



Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

LOW CHANNEL HORIZONTAL AND VERTICAL DATA

Project :13115168

Company Name:Samsung Electronics

Model / Config:GT-S7273T

Mode:Tx, HT20 Mode_Low Channel

Test By:M. Mekuria

Horizontal 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	2415.723	46.83	PK	32.2	-36.9	4.5	0.9	47.53	53.97	-6.44	74	-26.47	200	Vert
2	6442.039	36.91	PK	35.5	-35.6	8.1	0.3	45.21	53.97	-8.76	74	-28.79	101	Vert
3	15587.61	35.7	PK	40.5	-35.1	13.3	0.4	54.8	53.97	0.83	74	-19.2	101	Vert

Vertical 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
5	2410.06	47.07	PK	32.2	-36.9	4.4	0.9	47.67	53.97	-6.3	74	-26.33	200	Vert
6	9358.428	36.86	PK	36.4	-36.2	10	0.5	47.56	53.97	-6.41	74	-26.44	200	Vert
7	17269.49	36.39	PK	41	-34.3	14.1	0.6	57.79	53.97	3.82	74	-16.21	200	Vert

Horizontal 10000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
4	15585.21	27.62	PK	40.5	-35.1	13.3	0.4	46.72	53.97	-7.25	74	-27.28	100	Vert

Vertical 10000 - 18000MHz

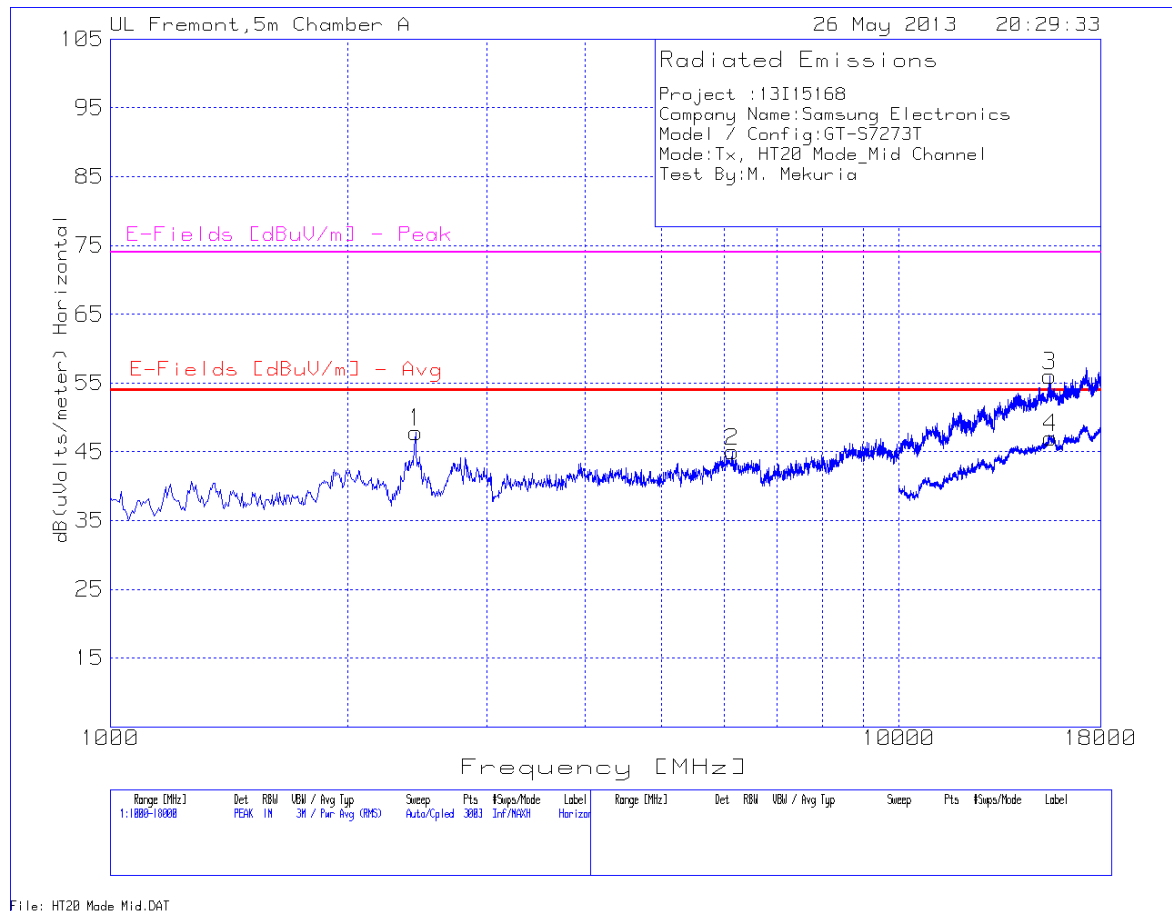
Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
8	17268.37	27.16	PK	41	-34.3	14.1	0.6	48.56	53.97	-5.41	74	-25.44	200	Vert

PK - Peak detector

QP - Quasi-Peak detector

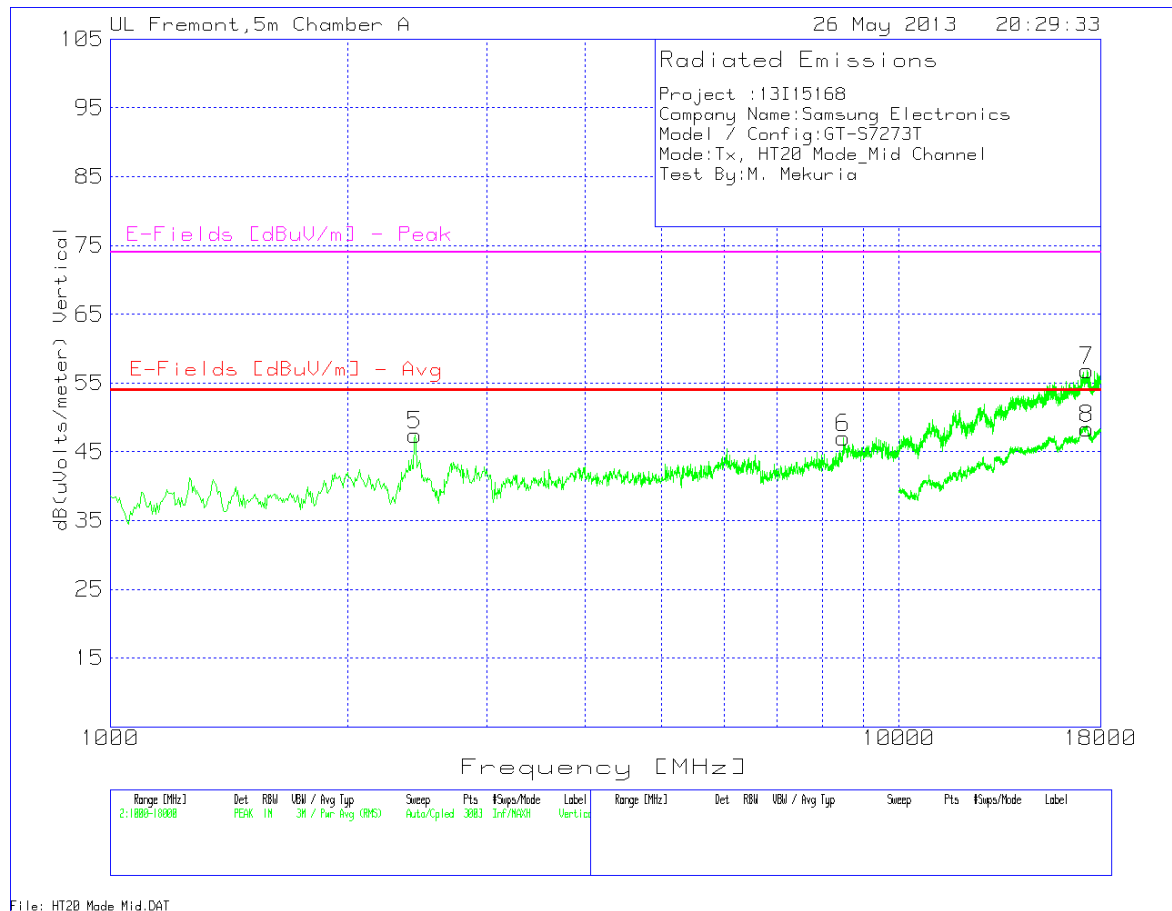
Av - Average detector

MID CHANNEL HORIZONTAL PLOT



Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

MID CHANNEL VERTICAL PLOT



Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

MID CHANNEL HORIZONTAL AND VERTICAL DATA

Project :13I15168

Company Name:Samsung Electronics

Model / Config:GT-S7273T

Mode:Tx, HT20 Mode_Mid Channel

Test By:M. Mekuria

Horizontal 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	2438.374	47.03	PK	32.3	-36.9	4.5	0.9	47.83	53.97	-6.14	74	-26.17	200	Vert
2	6141.905	37.29	PK	35.3	-35.6	7.8	0.2	44.99	53.97	-8.98	74	-29.01	101	Vert
3	15542.31	36.91	PK	40.6	-35.1	13.2	0.4	56.01	53.97	2.04	74	-17.99	200	Vert

Vertical 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
5	2432.712	46.63	PK	32.3	-36.9	4.5	0.9	47.43	53.97	-6.54	74	-26.57	200	Vert
6	8508.994	37.54	PK	35.7	-36	9.5	0.3	47.04	53.97	-6.93	74	-26.96	200	Vert
7	17331.78	35.53	PK	41	-34.4	14.1	0.6	56.83	53.97	2.86	74	-17.17	100	Vert

Horizontal 10000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
4	15549.23	27.92	PK	40.6	-35.1	13.2	0.4	47.02	53.97	-6.95	74	-26.98	200	Vert

Vertical 10000 - 18000MHz

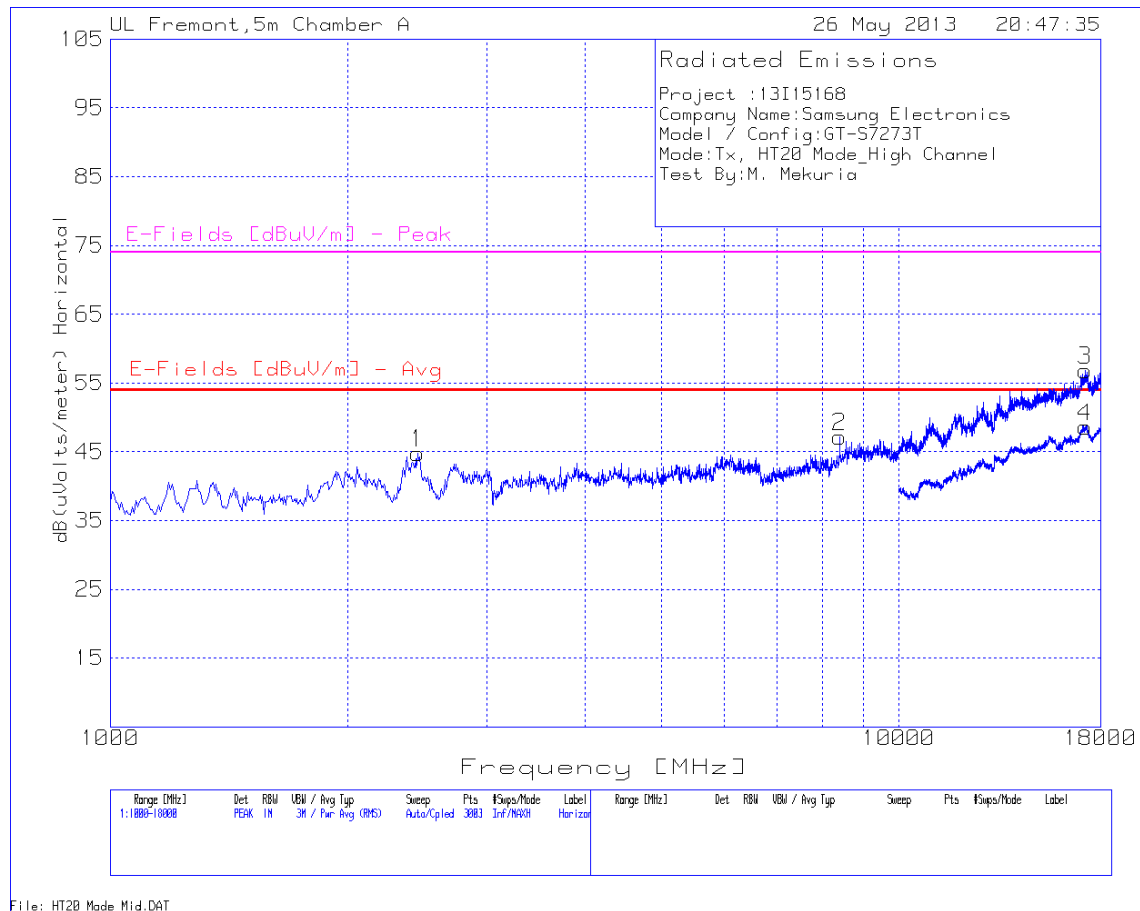
Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
8	17328.34	27.11	PK	41	-34.4	14.1	0.6	48.41	53.97	-5.56	74	-25.59	200	Vert

PK - Peak detector

QP - Quasi-Peak detector

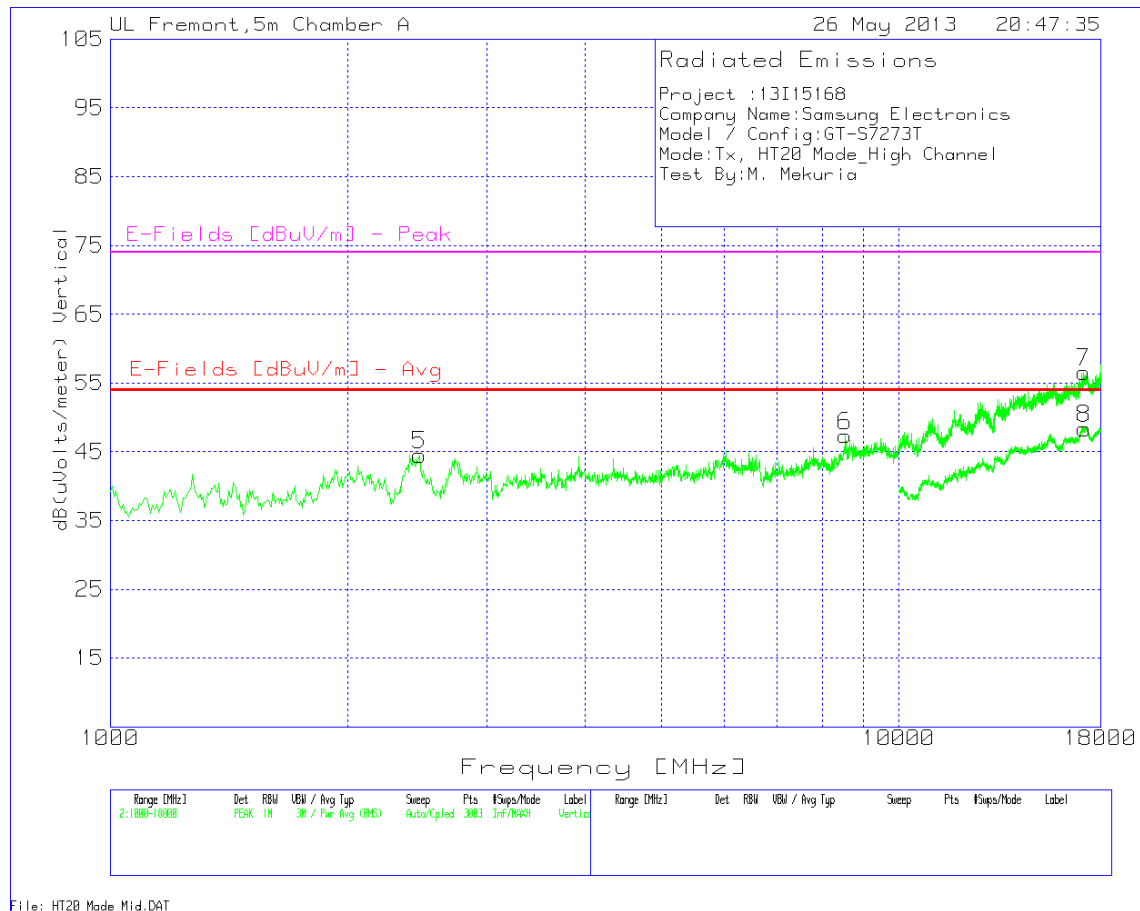
Av - Average detector

HIGH CHANNEL HORIZONTAL PLOT



Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

HIGH CHANNEL VERTICAL PLOT



Second line shown below original line from 1GHz to 18GHz is an average measurement, showing that no noise is present.

HIGH CHANNEL HORIZONTAL AND VERTICAL DATA

Project :13I15168

Company Name:Samsung Electronics

Model / Config:GT-S7273T

Mode:Tx, HT20 Mode_High Channel

Test By:M. Mekuria

Horizontal 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	2455.363	43.84	PK	32.4	-36.8	4.5	0.9	44.84	53.97	-9.13	74	-29.16	200	Vert
2	8407.062	37.78	PK	35.7	-36	9.4	0.3	47.18	53.97	-6.79	74	-26.82	200	Vert
3	17241.17	35.67	PK	40.9	-34.3	14.1	0.5	56.87	53.97	2.9	74	-17.13	200	Vert

Vertical 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
5	2466.689	43.52	PK	32.4	-36.8	4.5	0.9	44.52	53.97	-9.45	74	-29.48	200	Vert
6	8542.971	37.76	PK	35.7	-36	9.5	0.4	47.36	53.97	-6.61	74	-26.64	100	Vert
7	17150.57	35.34	PK	40.9	-34.2	14	0.5	56.54	53.97	2.57	74	-17.46	200	Vert

Horizontal 10000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
4	17240.38	27.36	PK	40.9	-34.3	14.1	0.5	48.56	53.97	-5.41	74	-25.44	100	Vert

Vertical 10000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T136 Ant Factor [dB/m]	T144 Preamp Gain [dB]	Cable Factor [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
8	17164.42	27.07	PK	40.9	-34.2	14.1	0.5	48.37	53.97	-5.6	74	-25.63	200	Vert

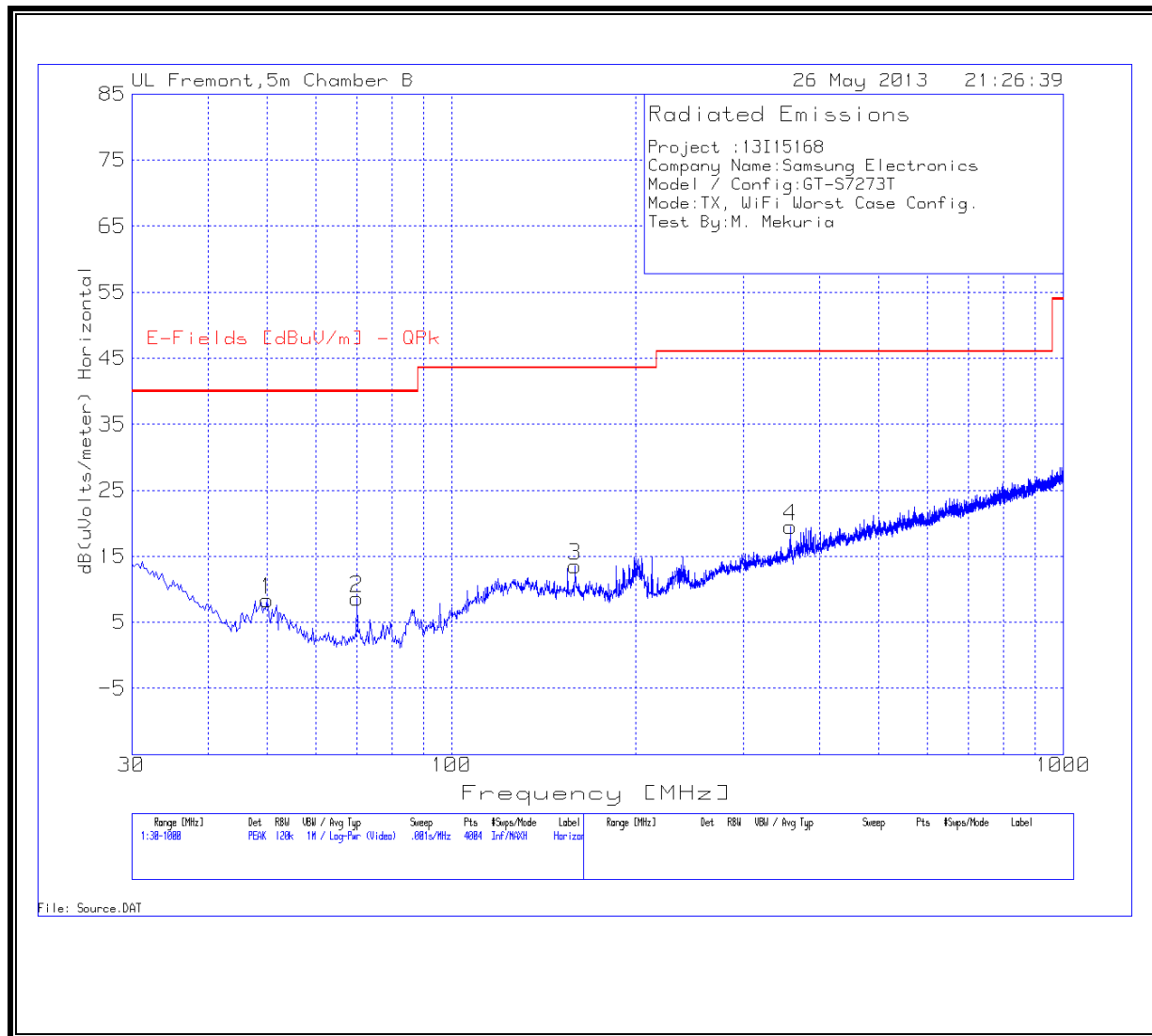
PK - Peak detector

QP - Quasi-Peak detector

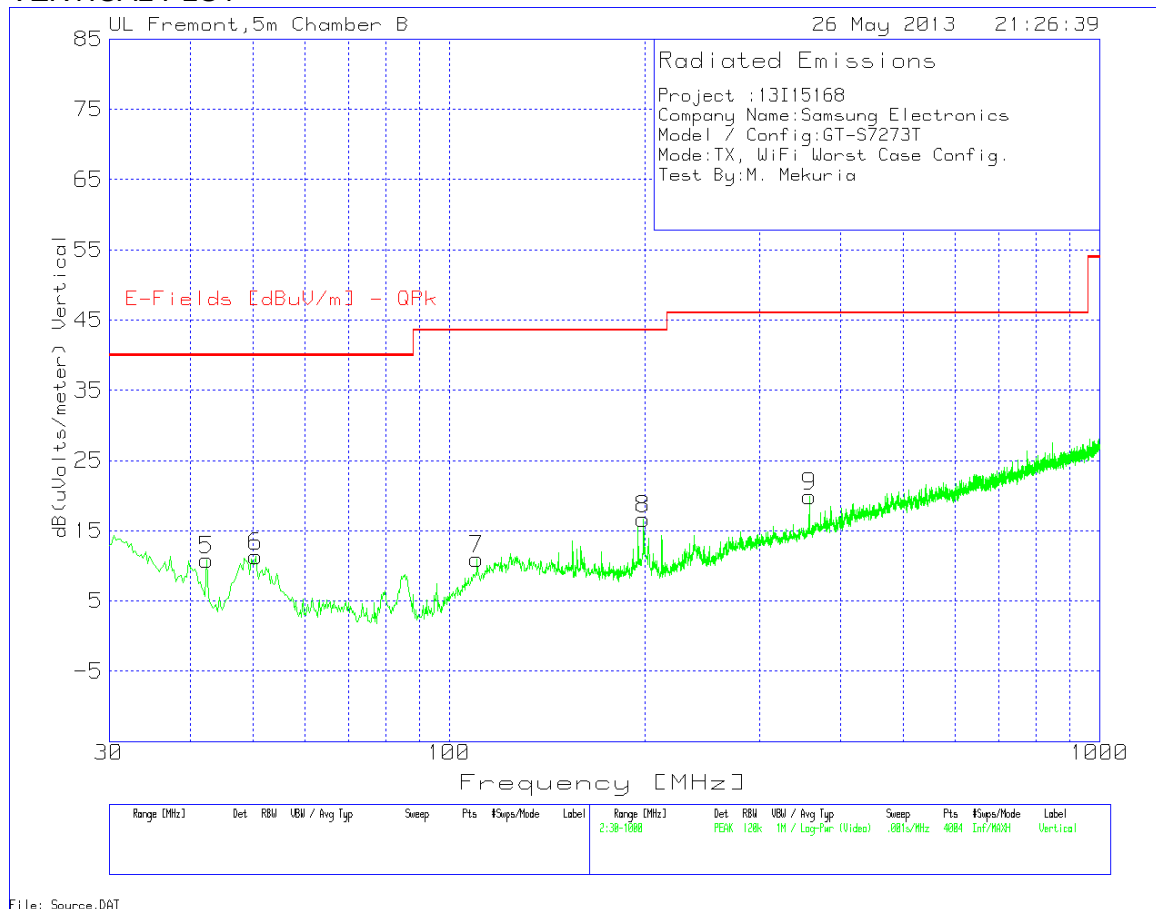
Av - Average detector

10.6. WORST-CASE BELOW 1 GHz

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



VERTICAL PLOT



HORIZONTAL AND VERTICAL DATA

Project :13I15168

Company Name:Samsung Electronics

Model / Config:GT-S7273T

Mode:TX, WiFi Worst Case Config.

Test By:M. Mekuria

Horizontal 30 - 1000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T243 Antenna Factor dB/m	T10 preamp/ Cable loss [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - QPk	Margin (dB)	Height [cm]	Polarity
1	49.8701	29.56	PK	7.7	-28.9	8.36	40	-31.64	400	Horz
2	69.9825	29.41	PK	7.9	-28.7	8.61	40	-31.39	100	Horz
3	159.398	29.07	PK	12.1	-27.6	13.57	43.52	-29.95	100	Horz
4	357.8566	31.25	PK	14.6	-26.3	19.55	46.02	-26.47	200	Horz

Vertical 30 - 1000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T243 Antenna Factor dB/m	T10 preamp/ Cable loss [dB]	dB(uVolts/meter)	E-Fields [dBuV/m] - QPk	Margin (dB)	Height [cm]	Polarity
5	42.3582	28.16	PK	11.7	-29	10.86	40	-29.14	300	Vert
6	50.3547	32.8	PK	7.5	-28.9	11.4	40	-28.6	200	Vert
7	110.4497	26.63	PK	12.6	-28.3	10.93	43.52	-32.59	200	Vert
8	198.8958	31.63	PK	12.3	-27.3	16.63	43.52	-26.89	200	Vert
9	357.8566	31.62	PK	14.6	-26.3	19.92	46.02	-26.1	300	Vert

PK - Peak detector

QP - Quasi-Peak detector

Av - Average detector

11. AC POWER LINE CONDUCTED EMISSIONS**LIMITS**

FCC §15.207 (a)

RSS-Gen 7.2.2

Frequency of Emission (MHz)	Conducted 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**

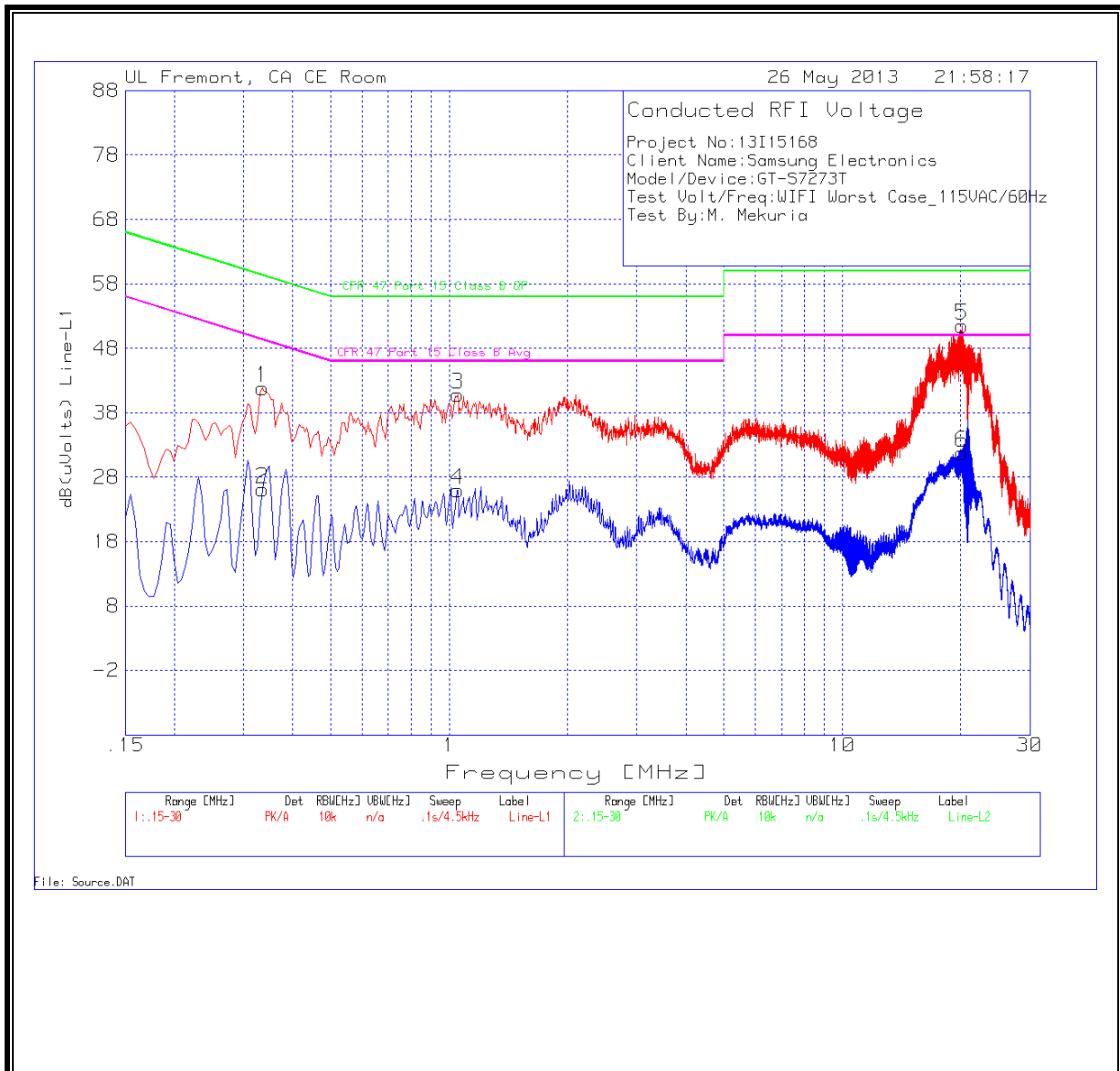
The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

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**6 WORST EMISSIONS**

Project No:13I15168									
Client Name:Samsung Electronics									
Model/Device:GT-S7273T									
Test Volt/Freq:WIFI Worst Case_ 115VAC/60Hz									
Test By:M. Mekuria									
Line-L1 .15 - 30MHz									
Test Frequency	Meter Reading	Detector	T24 IL L1.TXT (dB)	LC Cables 1&3.TXT (dB)	dB(uVolts)	CFR 47 Part 15 Class B QP	Margin	CFR 47 Part 15 Class B Avg	Margin
0.3345	41.8	PK	0.1	0	41.9	59.3	-17.4	-	-
0.3345	26.04	Av	0.1	0	26.14	-	-	49.3	-23.16
1.05	40.68	PK	0.1	0	40.78	56	-15.22	-	-
1.05	25.87	Av	0.1	0	25.97	-	-	46	-20.03
20.1345	50.98	PK	0.3	0.2	51.48	60	-8.52	-	-
20.1345	31.24	Av	0.3	0.2	31.74	-	-	50	-18.26
Line-L2 .15 - 30MHz									
Test Frequency	Meter Reading	Detector	T24 IL L2.TXT (dB)	LC Cables 2&3.TXT (dB)	dB(uVolts)	CFR 47 Part 15 Class B QP	Margin	CFR 47 Part 15 Class B Avg	Margin
0.312	40.21	PK	0.1	0	40.31	59.9	-19.59	-	-
0.312	30.18	Av	0.1	0	30.28	-	-	49.9	-19.62
2.0265	38.3	PK	0.1	0.1	38.5	56	-17.5	-	-
2.0265	23.82	Av	0.1	0.1	24.02	-	-	46	-21.98
19.8555	41.57	PK	0.3	0.2	42.07	60	-17.93	-	-
19.8555	26.37	Av	0.3	0.2	26.87	-	-	50	-23.13
PK - Peak detector									
QP - Quasi-Peak detector									
Av - Average detector									

LINE 1 RESULTS

LINE 2 RESULTS