



# **PERMISSIVE CHANGE TEST REPORT**

**Report Number. :** 12229356D

**Applicant :** Philips Lighting North America Corporation  
10275 W. Higgins Rd.  
Rosemont, IL 60018

**Model :** SNS400

**FCC ID :** 2AF2N-SNS200

**ISED ID :** 20659-SNS200

**EUT Description :** Ceiling Luminaire Mounted Light Sensor with 2.4GHz radio

**Test Standard(s) :** FCC 47 CFR PART 15 SUBPART C  
ISED RSS-247 ISSUE 2

**Date Of Issue:**  
2018-06-29

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## REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
1.0	2018-06-29	Original Issue	BM

## TABLE OF CONTENTS

<b>REPORT REVISION HISTORY .....</b>	<b>2</b>
<b>TABLE OF CONTENTS .....</b>	<b>3</b>
<b>1. ATTESTATION OF TEST RESULTS.....</b>	<b>4</b>
<b>2. TEST METHODOLOGY .....</b>	<b>5</b>
<b>3. FACILITIES AND ACCREDITATION.....</b>	<b>5</b>
<b>4. CALIBRATION AND UNCERTAINTY .....</b>	<b>6</b>
4.1. MEASURING INSTRUMENT CALIBRATION .....	6
4.2. SAMPLE CALCULATION.....	6
4.3. MEASUREMENT UNCERTAINTY .....	6
<b>5. EQUIPMENT UNDER TEST .....</b>	<b>7</b>
5.1. EUT DESCRIPTION.....	7
5.2. MAXIMUM OUTPUT POWER.....	7
5.3. DESCRIPTION OF AVAILABLE ANTENNAS .....	7
5.4. SOFTWARE AND FIRMWARE .....	7
5.5. WORST-CASE CONFIGURATION AND MODE.....	7
5.6. DESCRIPTION OF TEST SETUP.....	8
<b>6. MEASUREMENT METHOD .....</b>	<b>10</b>
<b>7. TEST AND MEASUREMENT EQUIPMENT .....</b>	<b>11</b>
<b>8. ANTENNA PORT TEST RESULTS .....</b>	<b>12</b>
8.1. ON TIME AND DUTY CYCLE .....	12
<b>9. RADIATED TEST RESULTS .....</b>	<b>13</b>
9.1. LIMITS AND PROCEDURE .....	13
9.2. TRANSMITTER 1GHz – 25GHz.....	14
9.2.1. Low Channel .....	14
9.2.2. Middle Channel .....	18
9.2.3. High Channel.....	20
<b>10. SETUP PHOTOS .....</b>	<b>24</b>

## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** Philips Lighting North America

**EUT DESCRIPTION:** ceiling luminaire mounted light sensor with 2.4GHz radio

**MODEL:** SNS400

**SERIAL NUMBER:** see section 5.6

**DATE TESTED:** 2018-04-17 TO 2018-04-17

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Compliant
ISED RSS-247 Issue 2	Compliant
ISED RSS-GEN Issue 5	Compliant

UL LLC 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 LLC 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 LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC 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, or any agency of the U.S. government.

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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 C63.10-2013, RSS-GEN Issue 5, and RSS-247 Issue 2.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 333 Pfingsten Road, Northbrook, Illinois, USA.

333 Pfingsten Road	
<input checked="" type="checkbox"/>	Chamber 10m (ISED:2180A-1)

UL LLC is accredited by NVLAP, Laboratory Code 1004141-0. The full scope of accreditation can be viewed at <https://www.nist.gov/nvlap>.

## 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:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + \*Path Factor (dB)

Example: 28.9dBuV/m = 36.5 dBuV + 18.7 dB/m + (– 27.5) dB

\*Path factor may include cable, preamp and attenuators. Positive path factor indicates losses only and negative path factor indicates gain (preamp).

### 4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.84 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	3.15 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	5.36 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.32 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.45 dB

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

## 5. EQUIPMENT UNDER TEST

### 5.1. EUT DESCRIPTION

The EUT is a ceiling luminaire mounted light sensor with 2.4GHz ZigBee type radio. All the hardware in SNS400 is electronically identical to hardware in SNS201.

### 5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Frequency Range	Mode	Output Power (dBm)	Output Power (mW)
2405 - 2475	TX	1.420	1.39

\* power measurements are from the original model SNS201 (UL Test Report # 12229356A)

### 5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an Inverted F PCB antenna, with a maximum gain of 0.7dBi.

### 5.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was: FCC Mode V0.30

The test utility software used during testing was: none

### 5.5. WORST-CASE CONFIGURATION AND MODE

Radiated Spurious Emissions between 1GHz to 25GHz were performed with the EUT set to transmit at the intended power setting on low, middle and high channels.

The EUT is Luminaire mounted only therefore all radiated spurious emissions were conducted in single orientation.

## 5.6. DESCRIPTION OF TEST SETUP

### EUT and SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufactu	Model	Serial Number	FCC ID
EUT - Antenna Port	Philips	SNS400	-	2AF2N-SNS200

### I/O CABLES

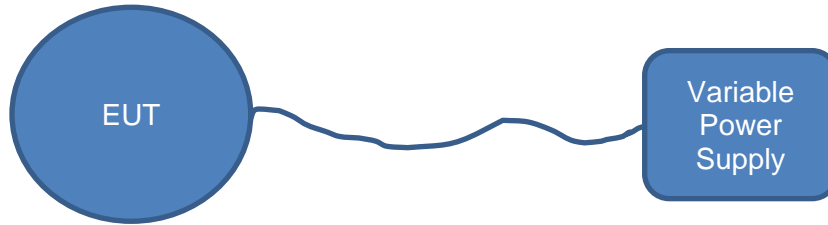
I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Input	1	Wire	solid	30cm	-

### TEST SETUP

Frequencies and modes of operation are varied by setting the initial input voltage to pre-defined level. Once mode is set the voltage is raised to 20VDC.



**SETUP DIAGRAM FOR RADIATED TESTS**



## 6. MEASUREMENT METHOD

Out-of-band emissions in restricted bands: ANSI C63.10, section 11.12.1

Band-edge: ANSI C63.10, section 11.12.1

## 7. TEST AND MEASUREMENT EQUIPMENT

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

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due Date
Antenna Array	UL	BOMS	EMC4276	01/16/2018	01/31/2019
EMI Test Receiver	Rohde & Schwarz	ESU	EMC4323	12/20/2017	12/31/2018
Spectrum Analyzer	Agilent	N9030A (PXA)	EMC4360	12/28/2017	12/31/2018
EMI Test Receiver	Rohde & Schwarz	ESR	EMC4377	12/23/2017	12/31/2018
Transient Limiter	Electro-Metrics	EM7600-2	EMC4224	N/A	N/A
High Pass Filter	Solar Electronics	2803-150	EMC4327	N/A	N/A
Attenuator	HP	8494B	2831A00838	N/A	N/A
LISN - L1	Solar	8602-50-TS-50-N	EMC4066	12/29/2017	12/31/2018
LISN - L2	Solar	8602-50-TS-50-N	EMC4064	12/29/2017	12/31/2018

## 8. ANTENNA PORT TEST RESULTS

### 8.1. ON TIME AND DUTY CYCLE

#### LIMITS

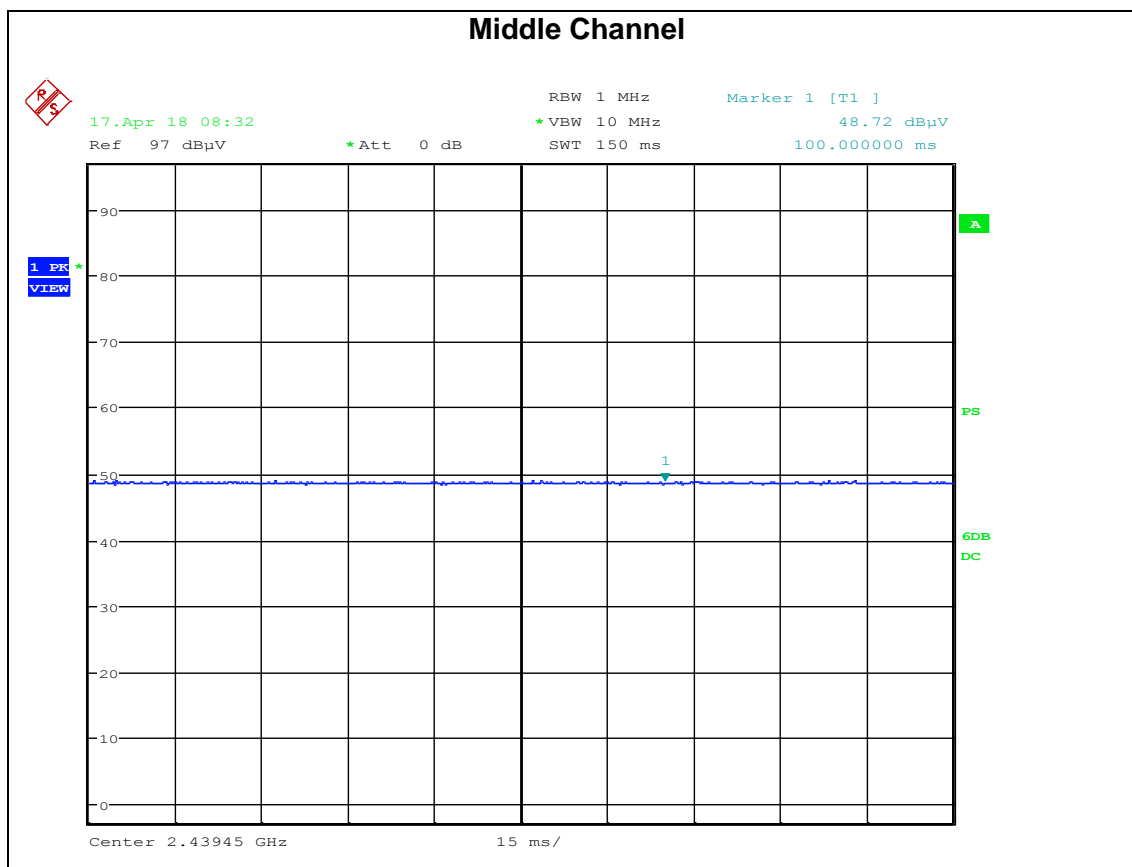
None; for reporting purposes only.

#### PROCEDURE

#### 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/B Minimum VBW (kHz)
TX Mode	100.000	100.000	1.000	100.00%	0.00	0.010

#### DUTY CYCLE PLOT



## 9. RADIATED TEST RESULTS

### 9.1. LIMITS AND PROCEDURE

#### LIMITS

FCC §15.205 and §15.209

RSS-GEN, Section 8.9 and 8.10.

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 measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters for frequencies 9kHz-30MHz and 1GHz-25GHz. For frequencies 30MHz-1GHz the antenna distance is 10m. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

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 final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements. The particular averaging method used for this test program was RMS.

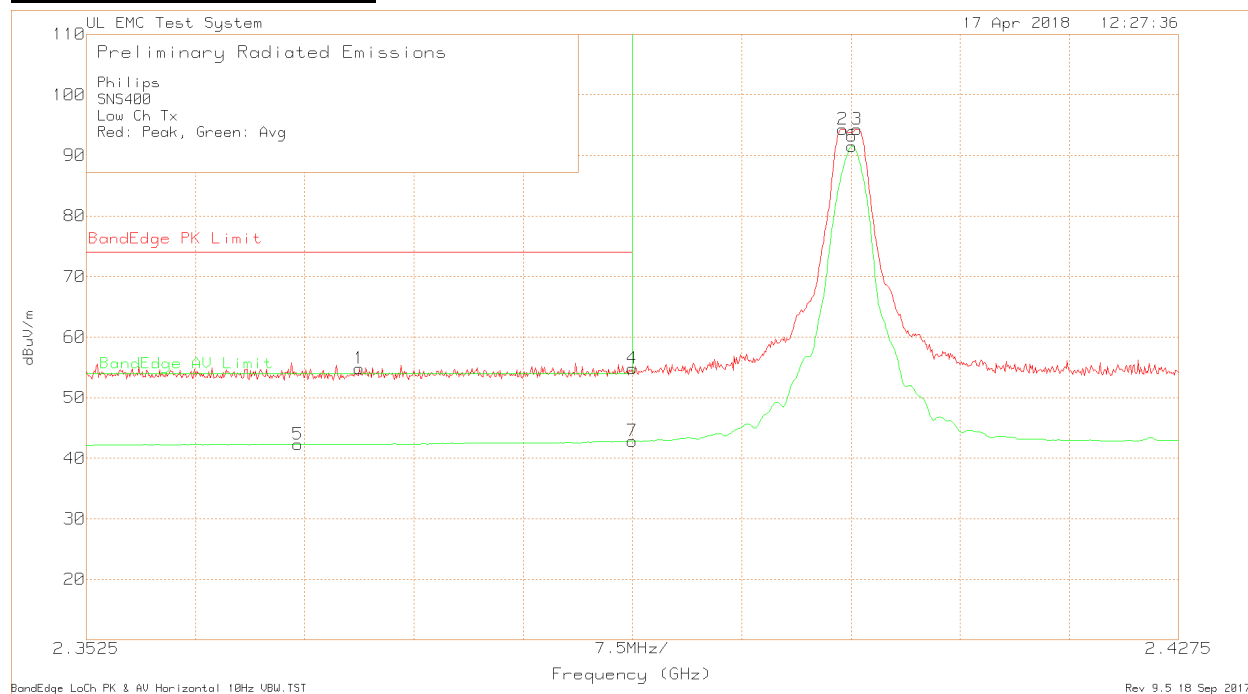
The spectrum from 30MHz to 25 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. For frequencies 9kHz-30MHz random channels was used.

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. For frequencies 9kHz-30MHz no height scan was conducted.

## 9.2. TRANSMITTER 1GHz – 25GHz

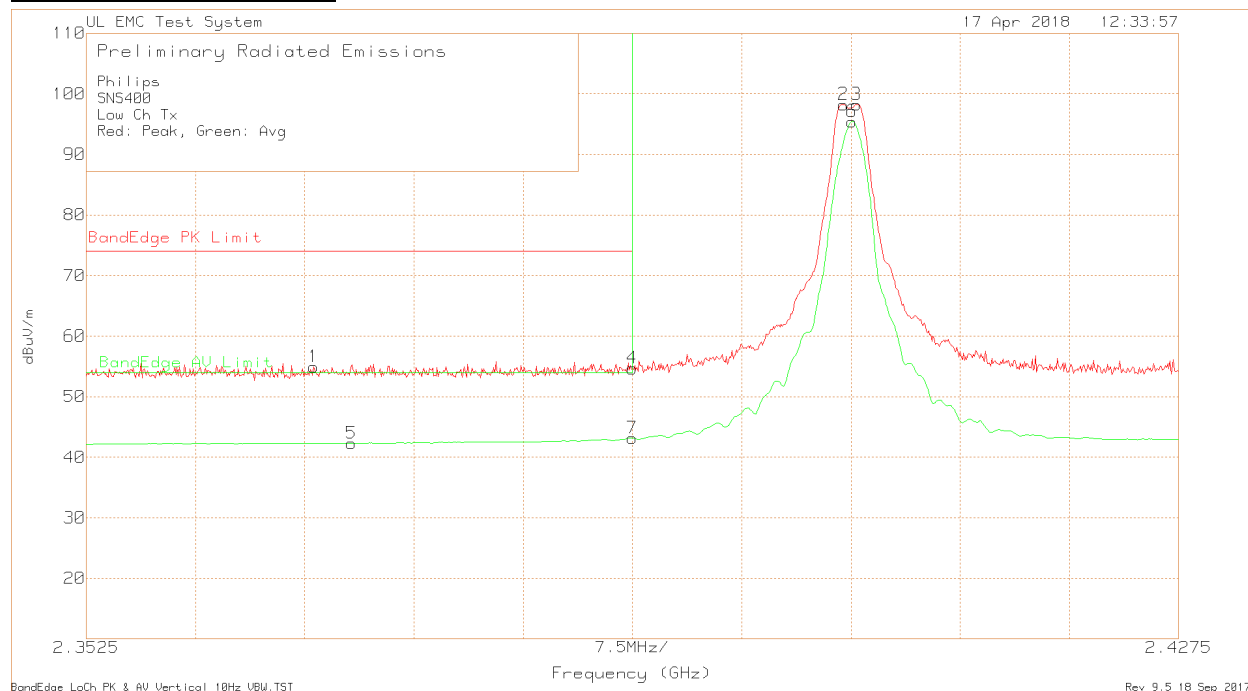
### 9.2.1. Low Channel

#### Band Edge Data – Horizontal



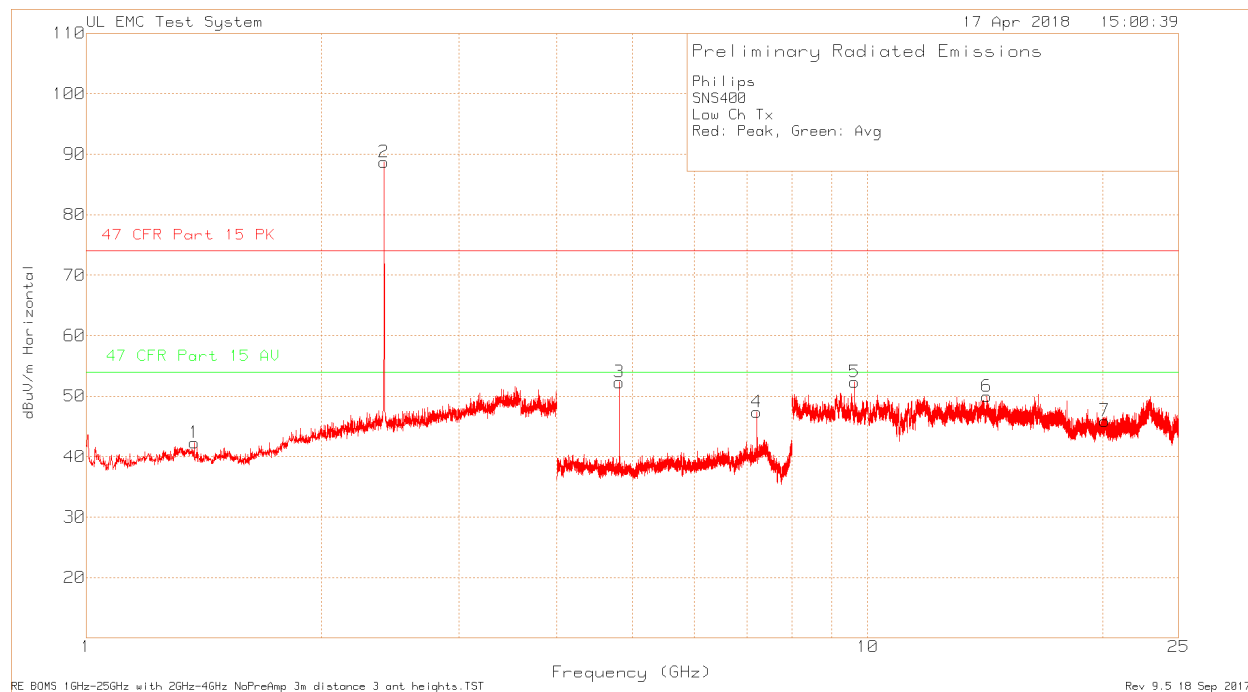
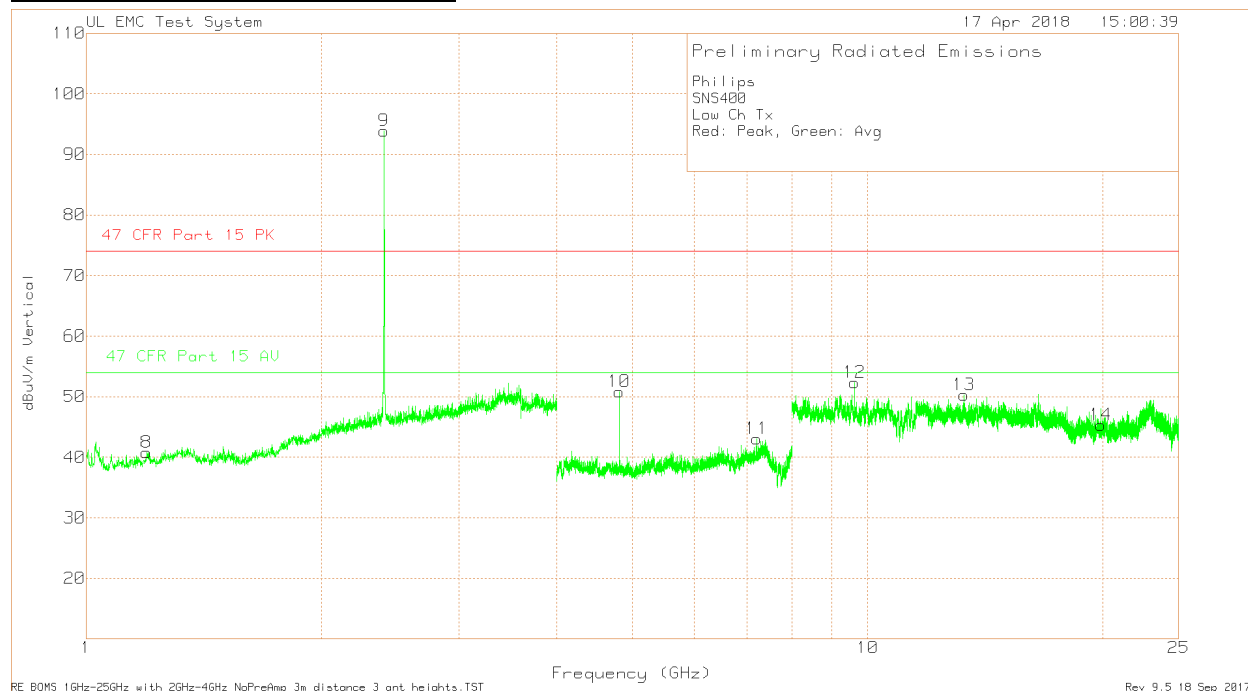
Philips														
SNS400														
Low Ch Tx														
Marker No.	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	Peak Limit dBuV/m	Margin (dB)	Average Limit dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity	
1	2.3713	28.39	Pk	21.8	4.64	54.83	74	-19.17	-	-	231	140	H	
2	2.4044	67.81	Pk	21.8	4.68	94.29	-	-	-	-	231	140	H	
3	2.4054	67.79	Pk	21.8	4.68	94.27	-	-	-	-	231	140	H	
4	2.39	28.22	Pk	21.8	4.79	54.81	74	-19.19	-	-	231	140	H	
5	2.3671	15.87	Av	21.8	4.64	42.31	-	-	54	-11.69	231	140	H	
6	2.4051	65	Av	21.8	4.68	91.48	-	-	-	-	231	140	H	
7	2.39	16.25	Av	21.8	4.79	42.84	-	-	54	-11.16	231	140	H	
Pk - Peak detector														
Av - Average Detector														

# **Band Edge Data - Vertical**



Philips														
SNS400														
Low Ch Tx														
Marker No.	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	Peak Limit dBuV/m	Margin (dB)	Average Limit dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity	
1	2.3681	28.48	Pk	21.8	4.63	54.91	74	-19.09	-	-	190	140	V	
2	2.4045	71.75	Pk	21.8	4.68	98.23	-	-	-	-	190	140	V	
3	2.4054	71.74	Pk	21.8	4.68	98.22	-	-	-	-	190	140	V	
4	2.39	28.07	Pk	21.8	4.79	54.66	74	-19.34	-	-	190	140	V	
5	2.3707	15.87	Av	21.8	4.64	42.31	-	-	54	-11.69	190	140	V	
6	2.4051	68.95	Av	21.8	4.68	95.43	-	-	-	-	190	140	V	
7	2.39	16.54	Av	21.8	4.79	43.13	-	-	54	-10.87	190	140	V	
Pk - Peak detector														
Av - Average Limit														

# **Spurious Emissions 1GHz – 25GHz**



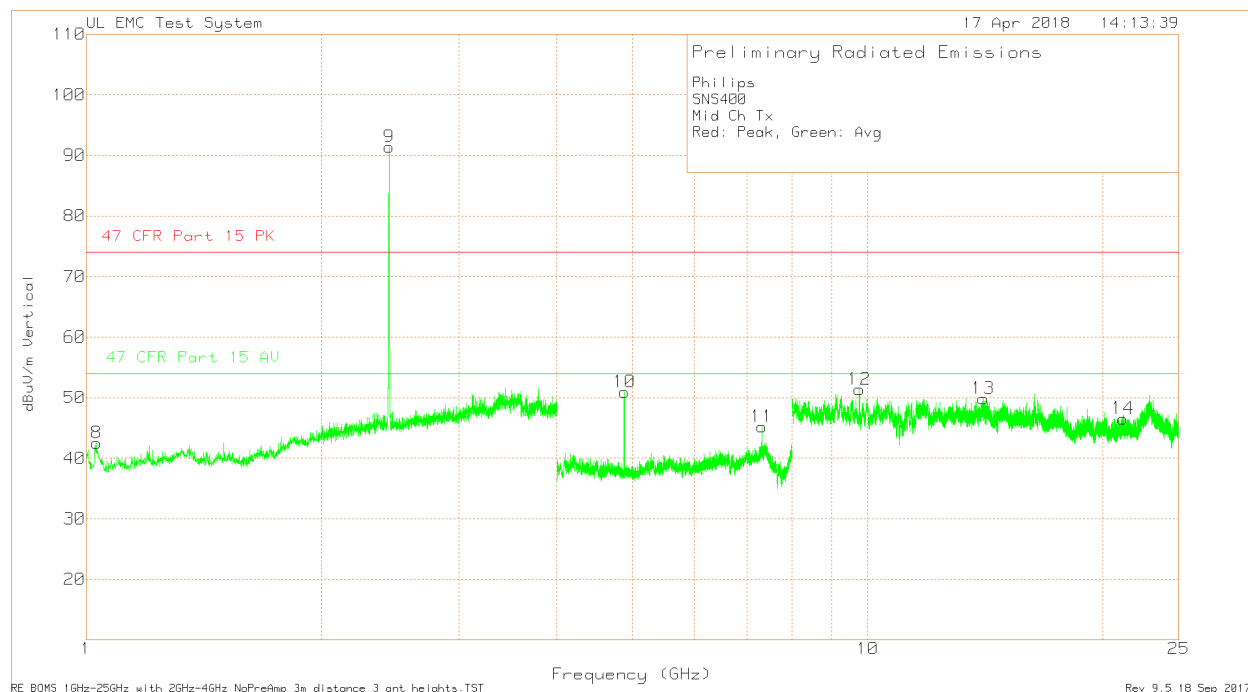
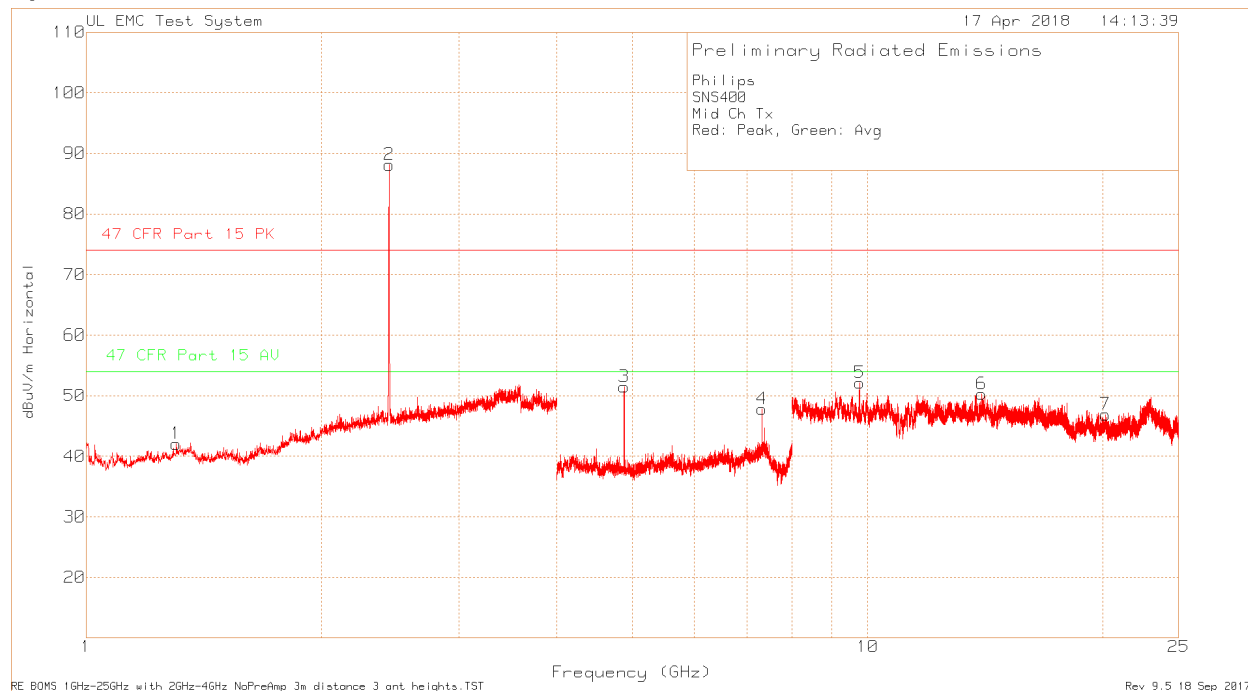
\* Last line in title block in above plots should say RED: Horizontal GRN: Vertical



Philips													
SNS400													
Low Ch Tx													
Trace MArkers													
Marker No.	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	Peak Limit dBuV/m	Margin (dB)	Average Limit dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
1	1.375	68.49	Pk	28.7	-54.9	42.29	74	-31.71	54	-11.71	0-360	201	H
2	2.405	62.2	Pk	21.8	4.68	88.68	74	14.68	54	34.68	0-360	200	H
3	4.811	76.03	Pk	27.7	-51.45	52.28	74	-21.72	54	-1.72	0-360	100	H
4	7.214	63.89	Pk	29.8	-46.34	47.35	74	-26.65	54	-6.65	0-360	150	H
5	9.618	65.41	Pk	36.4	-49.47	52.34	74	-21.66	54	-1.66	0-360	150	H
6	14.201	52.32	Pk	39.9	-42.28	49.94	74	-24.06	54	-4.06	0-360	200	H
7	20.1	55.36	Pk	40.2	-49.68	45.88	74	-28.12	54	-8.12	0-360	150	H
8	1.194	68.64	Pk	28	-55.84	40.8	74	-33.2	54	-13.2	0-360	200	V
9	2.405	67.39	Pk	21.8	4.68	93.87	74	19.87	54	39.87	0-360	149	V
10	4.809	74.6	Pk	27.7	-51.46	50.84	74	-23.16	54	-3.16	0-360	200	V
11	7.217	59.57	Pk	29.8	-46.35	43.02	74	-30.98	54	-10.98	0-360	150	V
12	9.622	65.28	Pk	36.4	-49.33	52.35	74	-21.65	54	-1.65	0-360	199	V
13	13.278	54.93	Pk	39.8	-44.47	50.26	74	-23.74	54	-3.74	0-360	150	V
14	19.883	55.87	Pk	40.2	-50.75	45.32	74	-28.68	54	-8.68	0-360	149	V
Radiated Emission Data													
	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	Peak Limit dBuV/m	Margin (dB)	Average Limit dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
	4.8088	76.6	Pk	27.7	-51.46	52.84	74	-21.16	-	-	360	101	H
	4.8108	70.34	Av	27.7	-51.45	46.59	-	-	54	-7.41	360	101	H
	9.6179	66.63	Pk	36.4	-49.49	53.54	74	-20.46	-	-	71	100	H
	9.6217	57.89	Av	36.4	-49.33	44.96	-	-	54	-9.04	71	100	H
	3.495	17.22	Avg	23.5	5.53	46.25	-	-	54	-7.75	87	200	V
	4.8088	75.32	Pk	27.7	-51.46	51.56	74	-22.44	-	-	358	200	V
	4.8108	68.99	Av	27.7	-51.45	45.24	-	-	54	-8.76	358	200	V
	9.618	66.33	Pk	36.4	-49.47	53.26	74	-20.74	-	-	87	200	V
	9.6217	57.13	Av	36.4	-49.33	44.2	-	-	54	-9.8	87	200	V
Pk - Peak detector													
Avg - Video < Resolution bandwidth Log IF													
Av - Average detection													

## 9.2.2. Middle Channel

### Spurious Emissions 1GHz – 25GHz

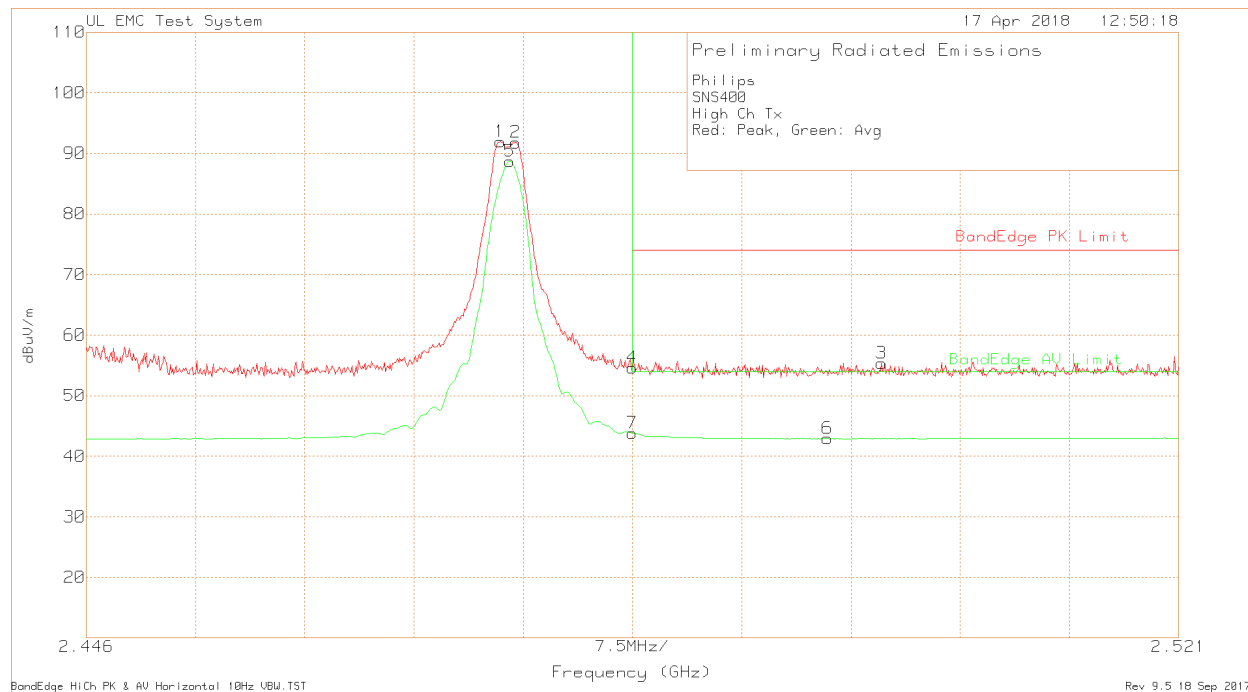


\* Last line in title block in above plots should say RED: Horizontal GRN: Vertical

Philips													
SNS400													
Mid Ch Tx													
Trace MArkers													
Marker No.	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	Peak Limit dBuV/m	Margin (dB)	Average Limit dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
1	1.304	68.53	Pk	29.1	-55.6	42.03	74	-31.97	54	-11.97	0-360	100	H
2	2.44	61.6	Pk	21.9	4.61	88.11	74	14.11	54	34.11	0-360	100	H
3	4.879	74.58	Pk	27.7	-50.81	51.47	74	-22.53	54	-2.53	0-360	100	H
4	7.322	63.2	Pk	30.6	-46.01	47.79	74	-26.21	54	-6.21	0-360	100	H
5	9.762	65.01	Pk	36.4	-49.31	52.1	74	-21.9	54	-1.9	0-360	100	H
6	13.989	53.29	Pk	39.9	-42.89	50.3	74	-23.7	54	-3.7	0-360	100	H
7	20.15	56.27	Pk	40.2	-49.59	46.88	74	-27.12	54	-7.12	0-360	150	H
8	1.03	71.56	Pk	26.9	-55.98	42.48	74	-31.52	54	-11.52	0-360	200	V
9	2.44	64.87	Pk	21.9	4.61	91.38	74	17.38	54	37.38	0-360	200	V
10	4.881	74.01	Pk	27.7	-50.78	50.93	74	-23.07	54	-3.07	0-360	200	V
11	7.322	60.6	Pk	30.6	-46.01	45.19	74	-28.81	54	-8.81	0-360	100	V
12	9.758	64.23	Pk	36.4	-49.26	51.37	74	-22.63	54	-2.63	0-360	100	V
13	14.057	52.86	Pk	39.9	-42.93	49.83	74	-24.17	54	-4.17	0-360	150	V
14	21.233	53.53	Pk	40.2	-47.2	46.53	74	-27.47	54	-7.47	0-360	200	V
Radiated Emission Data													
	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	Peak Limit dBuV/m	Margin (dB)	Average Limit dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
	4.8809	75.15	Pk	27.7	-50.79	52.06	74	-21.94	-	-	18	100	H
	4.8809	69.06	Av	27.7	-50.79	45.97	-	-	54	-8.03	18	100	H
	7.3185	64.47	Pk	30.6	-46.01	49.06	74	-24.94	-	-	328	100	H
	7.3212	55.92	Av	30.6	-46.01	40.51	-	-	54	-13.49	328	100	H
	9.7575	65.29	Pk	36.4	-49.26	52.43	74	-21.57	-	-	75	100	H
	9.7618	56.76	Av	36.4	-49.3	43.86	-	-	54	-10.14	75	100	H
	4.8789	74.31	Pk	27.7	-50.81	51.2	74	-22.8	-	-	359	166	V
	4.8808	68.18	Av	27.7	-50.79	45.09	-	-	54	-8.91	359	166	V
	7.3183	62.03	Pk	30.6	-46.01	46.62	74	-27.38	-	-	340	100	V
	7.3212	53.32	Av	30.6	-46.01	37.91	-	-	54	-16.09	340	100	V
	9.7617	64.54	Pk	36.4	-49.3	51.64	74	-22.36	-	-	85	201	V
	9.7618	54.73	Av	36.4	-49.3	41.83	-	-	54	-12.17	85	201	V
Pk - Peak detector													
Av - Average detection													

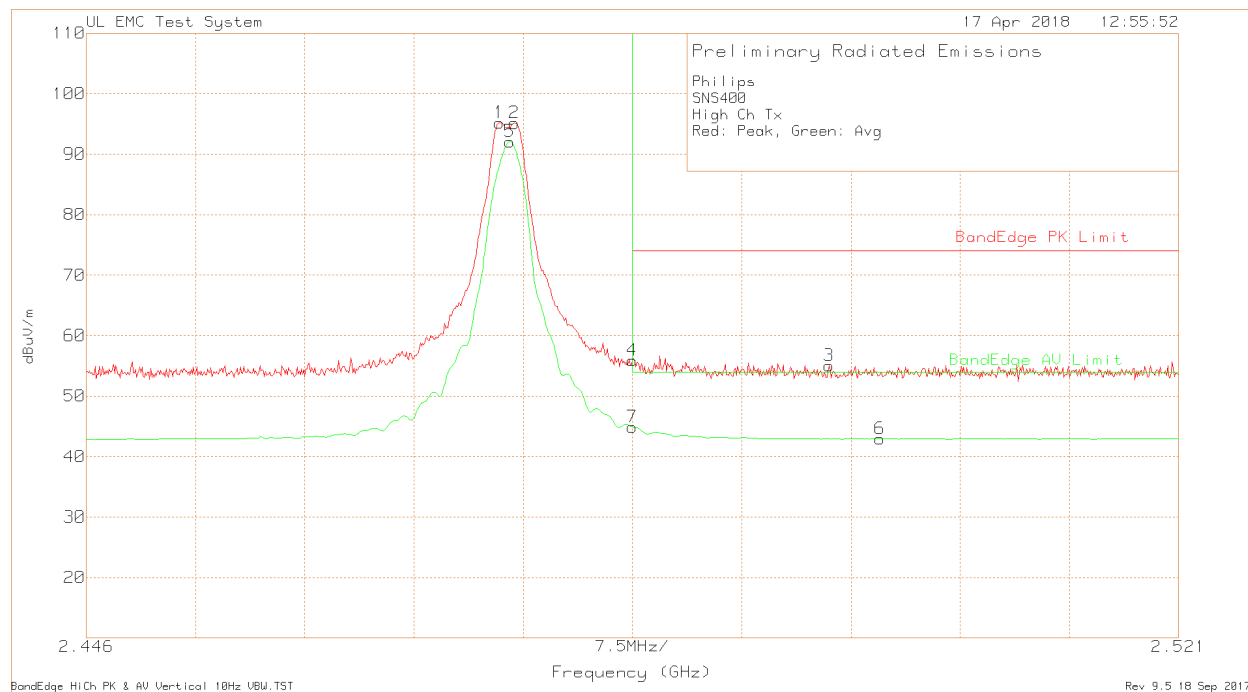
## 9.2.3. High Channel

### Band Edge Data – Horizontal



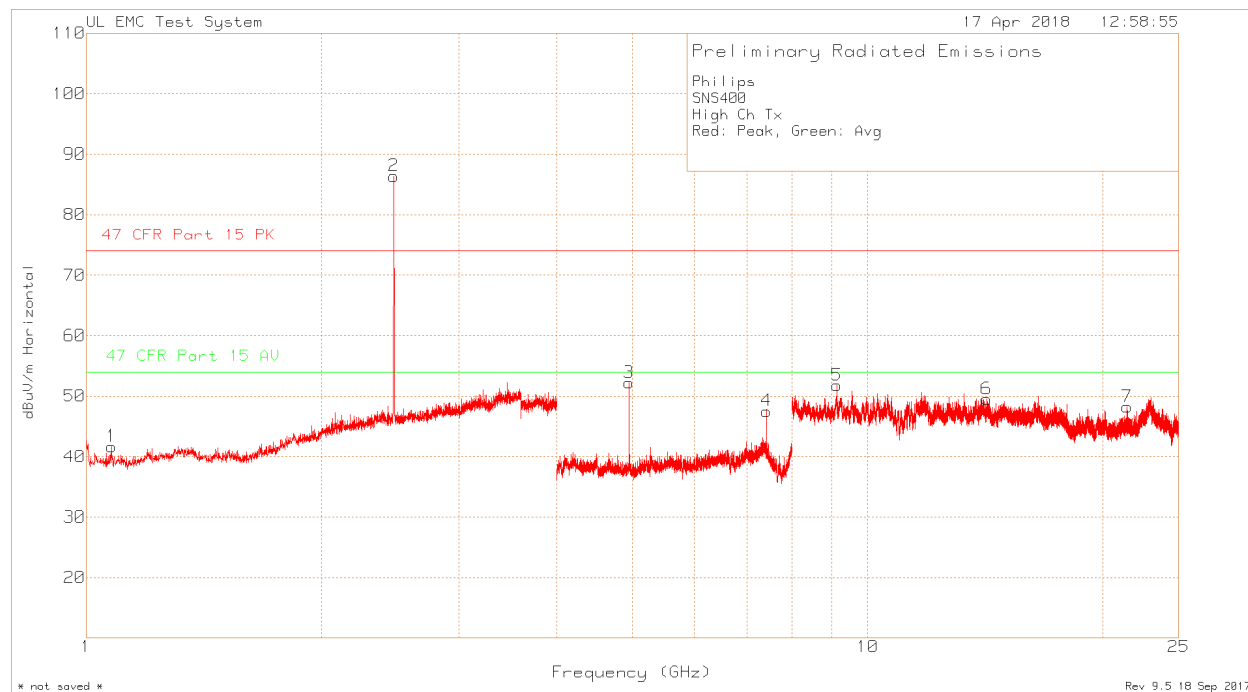
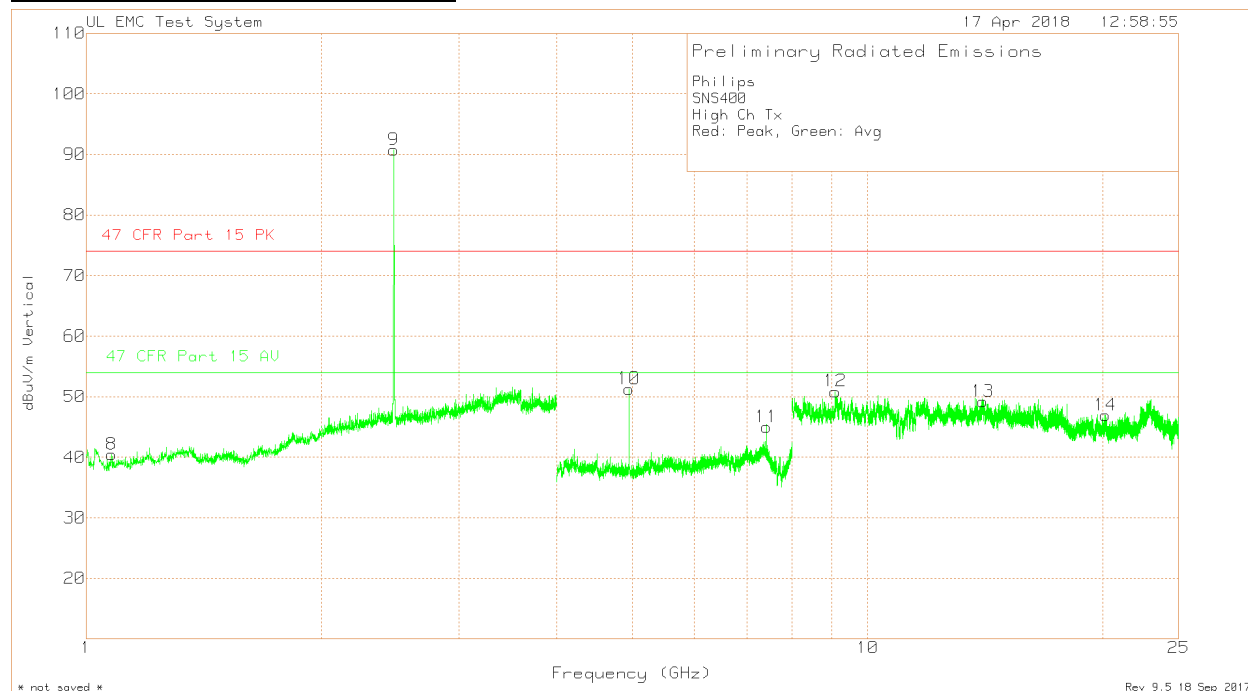
Philips														
SNS400														
High Ch Tx														
Marker No.	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	Peak Limit dBuV/m	Margin (dB)	Average Limit dBuV/m	Margin (dB)	Azimuth [Degr]	Height [cm]	Polarity	
1	2.4744	65.41	Pk	22	4.49	91.9	-	-	-	-	232	135	H	
2	2.4755	65.3	Pk	22	4.48	91.78	-	-	-	-	232	135	H	
3	2.5006	28.8	Pk	22.1	4.42	55.32	74	-18.68	-	-	232	135	H	
4	2.4835	28.03	Pk	22.1	4.44	54.57	74	-19.43	-	-	232	135	H	
5	2.4751	62.23	Av	22	4.48	88.71	-	-	-	-	232	135	H	
6	2.4969	16.39	Av	22.1	4.41	42.9	-	-	54	-11.1	232	135	H	
7	2.4835	17.26	Av	22.1	4.44	43.8	-	-	54	-10.2	232	135	H	
Pk - Peak detector														
Av - Average Measurement														

# **Band Edge Data Vertical**



Philips													
SNS400													
High Ch Tx													
Marker No.	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	Peak Limit dBuV/m	Margin (dB)	Average Limit dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
1	2.4744	68.71	Pk	22	4.49	95.2	-	-	-	-	199	137	V
2	2.4754	68.65	Pk	22	4.48	95.13	-	-	-	-	199	137	V
3	2.497	28.52	Pk	22.1	4.41	55.03	74	-18.97	-	-	199	137	V
4	2.4835	29.35	Pk	22.1	4.44	55.89	74	-18.11	-	-	199	137	V
5	2.4751	65.59	Av	22	4.48	92.07	-	-	-	-	199	137	V
6	2.5005	16.4	Av	22.1	4.42	42.92	-	-	54	-11.08	199	137	V
7	2.4835	18.31	Av	22.1	4.44	44.85	-	-	54	-9.15	199	137	V
Pk - Peak detector													
Av - Average Detector													

### Spurious Emissions 1GHz – 25GHz

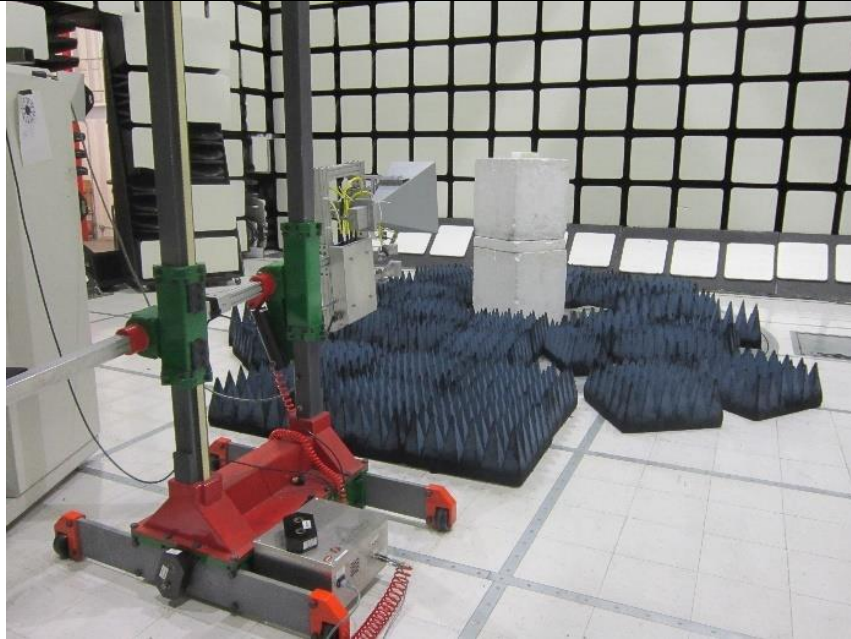


\* Last line in title block in above plots should say RED: Horizontal GRN: Vertical

Philips													
SNS400													
High Ch Tx													
Red: Peak, Green: Avg													
Trace MArkers													
Marker No.	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	Peak Limit dBuV/m	Margin (dB)	Average Limit dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
1	1.077	70.7	Pk	27.1	-56.13	41.67	74	-32.33	54	-12.33	0-360	150	H
2	2.475	59.9	Pk	22	4.48	86.38	74	12.38	54	32.38	0-360	100	H
3	4.951	74.39	Pk	27.8	-49.99	52.2	74	-21.8	54	-1.8	0-360	100	H
4	7.427	63.83	Pk	30.8	-47.11	47.52	74	-26.48	54	-6.48	0-360	150	H
5	9.135	63.3	Pk	36.3	-47.85	51.75	74	-22.25	54	-2.25	0-360	200	H
6	14.193	51.96	Pk	39.9	-42.32	49.54	74	-24.46	54	-4.46	0-360	149	H
7	21.485	54.51	Pk	40.3	-46.57	48.24	74	-25.76	54	-5.76	0-360	100	H
8	1.078	69.49	Pk	27.2	-56.25	40.44	74	-33.56	54	-13.56	0-360	100	V
9	2.475	64.29	Pk	22	4.48	90.77	74	16.77	54	36.77	0-360	100	V
10	4.951	73.47	Pk	27.8	-49.99	51.28	74	-22.72	54	-2.72	0-360	200	V
11	7.427	61.31	Pk	30.8	-47.11	45	74	-29	54	-9	0-360	100	V
12	9.088	62.71	Pk	36.2	-48.04	50.87	74	-23.13	54	-3.13	0-360	100	V
13	14.038	52.2	Pk	39.9	-42.88	49.22	74	-24.78	54	-4.78	0-360	150	V
14	20.142	56.6	Pk	40.2	-49.86	46.94	74	-27.06	54	-7.06	0-360	150	V
Radiated Emission Data													
	Test Frequency (GHz)	Meter Reading (dBuV)	Detector	Antenna Factor dB/m	Path Factor dB	Level dBuV/m	Peak Limit dBuV/m	Margin (dB)	Average Limit dBuV/m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
	4.9509	74.49	Pk	27.8	-49.99	52.3	74	-21.7	-	-	14	100	H
	4.9509	68.66	Av	27.8	-49.99	46.47	-	-	54	-7.53	14	100	H
	7.4265	64.5	Pk	30.8	-47.11	48.19	74	-25.81	-	-	335	144	H
	7.4262	56.18	Av	30.8	-47.11	39.87	-	-	54	-14.13	335	144	H
	3.5001	17.22	Avg	23.5	5.52	46.24	-	-	54	-7.76	360	100	V
	4.9489	73.22	Pk	27.8	-50	51.02	74	-22.98	-	-	0	198	V
	4.9509	67.56	Avg	27.8	-49.99	45.37	-	-	54	-8.63	0	198	V
	7.4261	61.88	Pk	30.8	-47.11	45.57	74	-28.43	-	-	360	100	V
	7.4262	52.36	Av	30.8	-47.11	36.05	-	-	54	-17.95	360	100	V
Pk - Peak detector													
Avg - Video < Resolution bandwidth Log IF													
Av - Average detection													

## 10. SETUP PHOTOS

### RADIATED RF MEASUREMENT SETUP



1GHz - 25GHz



1GHz – 25GHz closeup

**END OF REPORT**