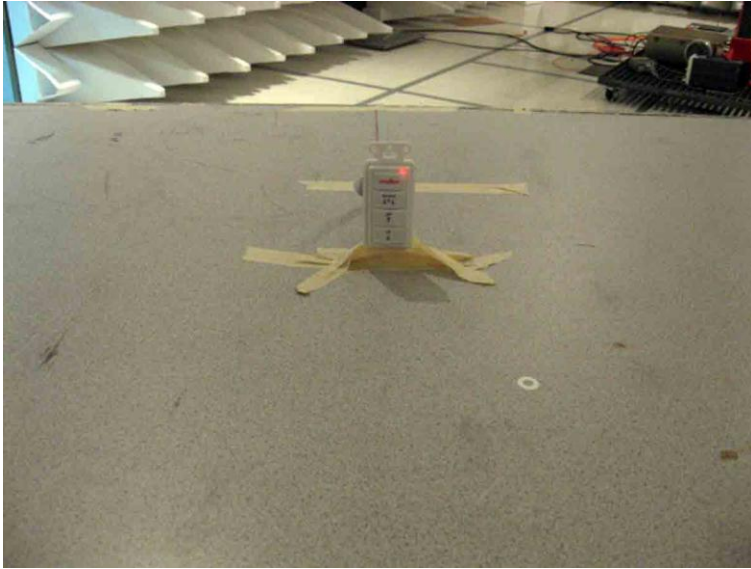




X Axis



Y Axis



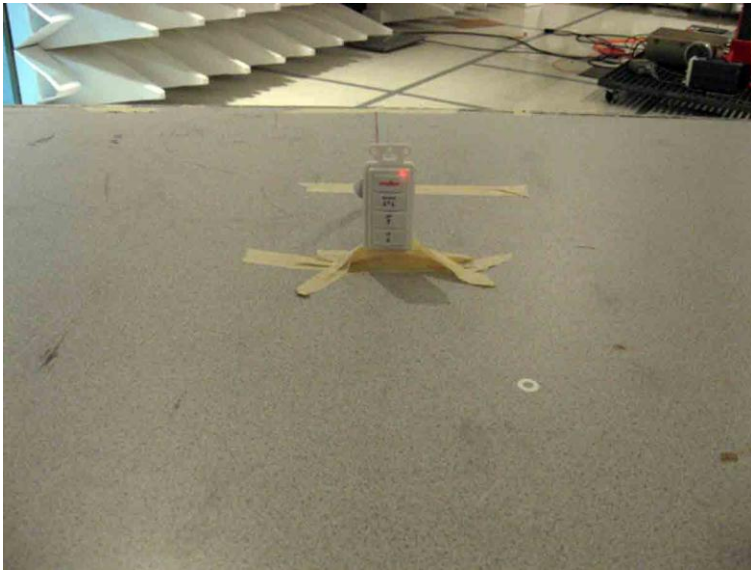
Z Axis



X Axis



Y Axis



Z Axis

## 15.249(d) Radiated Spurious Emissions

### Test Data Sheets

Test Location: CKC Laboratories, Inc • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Enlighted, Inc**  
 Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**  
 Work Order #: **93965** Date: 1/18/2013  
 Test Type: **Radiated Scan** Time: 16:31:18  
 Equipment: **Enlighted Wireless Switch** Sequence#: 49  
 Manufacturer: Enlighted Inc Tested By: Hieu Song Nguyenpham  
 Model: WS-1-00  
 S/N: None

***Test Equipment:***

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T2	ANP05440	Cable		3/7/2011	3/7/2013
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013
T3	AN00432	Loop Antenna	6502	3/31/2011	3/31/2013

***Equipment Under Test (\* = EUT):***

Function	Manufacturer	Model #	S/N
Enlighted Wireless Switch*	Enlighted Inc	WS-1-00	None

***Support Devices:***

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	Lenovo	92P1156	11S92P1156ZDXN17B5G G
Laptop	Lenovo	T420	None

***Test Conditions / Notes:***

Radiated Spurious Emission

Frequency Range: 9kHz to 30MHz

Transmitter operating frequency: 2.4GHz

Number of Channel: 16

Low Frequency: 2.405GHz

High Frequency: 2.480GHz

Software: Enlighted software

Temperature: 20.3° C

Humidity: 30%

Atmospheric Pressure: 101.9kPa

RBW=VBW= 200Hz from 9kHz to 150kHz  
 RBW=VBW=9kHz from 150kHz to 30MHz

Note: The EUT is a battery device. It is placed on 80cm table and at the center of the turning table.

Low- Channel

Ext Attn: 0 dB

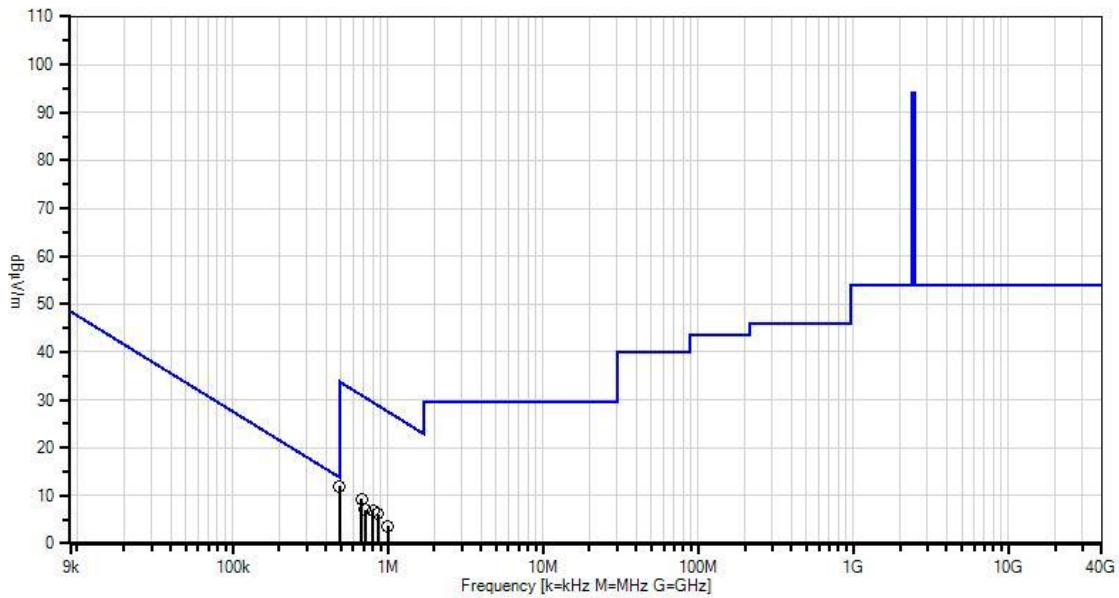
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB $\mu$ V	T1 dB	T2 dB	T3 dB	Dist dB	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	681.038k	37.7	+0.1	+0.0	+11.5	-40.0	9.3	30.9	-21.6	Perpe
2	490.784k	40.7	+0.1	+0.0	+11.1	-40.0	11.9	33.8	-21.9	Perpe
3	804.390k	35.4	+0.1	+0.0	+11.4	-40.0	6.9	29.5	-22.6	Paral
4	869.201k	34.5	+0.1	+0.1	+11.4	-40.0	6.1	28.8	-22.7	Perpe
5	712.399k	35.5	+0.1	+0.0	+11.5	-40.0	7.1	30.5	-23.4	Paral
6	1.003M	32.1	+0.1	+0.0	+11.5	-40.0	3.7	27.5	-23.8	Paral

CKC Laboratories, Inc Date: 1/18/2013 Time: 16:31:18 Enlighted , Inc WO#: 93965  
 Test Distance: 3 Meters Sequence#: 49



- Readings
- × QP Readings
- ▼ Ambient
- Peak Readings
- \* Average Readings
- 1 - 15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)

Test Location: CKC Laboratories, Inc • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Enlighted, Inc**

Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**

Work Order #: **93965**

Date: 1/18/2013

Test Type: **Radiated Scan**

Time: 15:03:33

Equipment: **Enlighted Wireless Switch**

Sequence#: 40

Manufacturer: Enlighted Inc

Tested By: Hieu Song Nguyenpham

Model: WS-1-00

S/N: None

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN00730	Preamp		1/31/2011	1/31/2013
T2	AN00852	Biconilog Antenna	CBL 6111C	11/28/2012	11/28/2014
T3	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T4	ANP01183	Cable	CNT-195	10/24/2011	10/24/2013
T5	ANP05440	Cable		3/7/2011	3/7/2013
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Enlighted Wireless Switch*	Enlighted Inc	WS-1-00	None

**Support Devices:**

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	Lenovo	92P1156	11S92P1156ZDXN17B5GG
Laptop	Lenovo	T420	None

**Test Conditions / Notes:**

Radiated Spurious Emission

Frequency Range: 30MHz to 1000MHz

Transmitter operating frequency: 2.4GHz

Number of Channel: 16

Low Frequency: 2.405GHz

High Frequency: 2.480GHz

Enlighted software

Temperature: 20.3° C

Humidity: 30%

Atmospheric Pressure: 101.9kPa

RBW=VBW= 120kHz

Note: The EUT is a battery device. It is placed on 80cm table and at the center of the turning table.

Low- Channel



Ext Attn: 0 dB

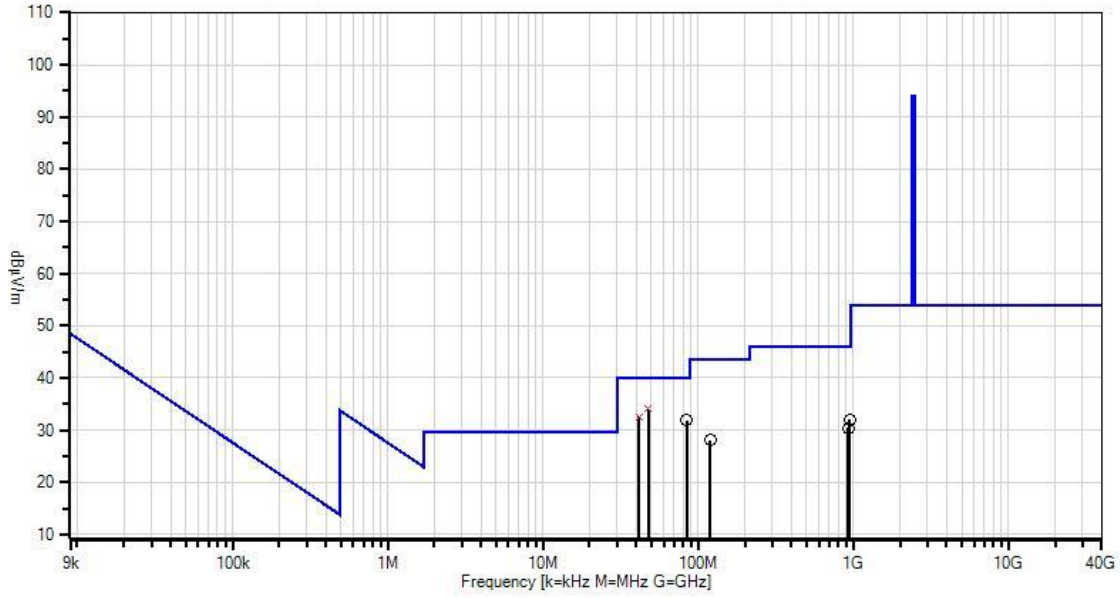
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB $\mu$ V	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	47.992M QP	50.8	-27.5 +0.4	+9.6	+0.6	+0.1	+0.0	34.0	40.0	-6.0	Vert
^	47.992M	53.7	-27.5 +0.4	+9.6	+0.6	+0.1	+0.0	36.9	40.0	-3.1	Vert
^	47.992M	53.3	-27.5 +0.4	+9.6	+0.6	+0.1	+0.0	36.5	40.0	-3.5	Vert
4	41.517M QP	46.4	-27.5 +0.3	+12.6	+0.6	+0.1	+0.0	32.5	40.0	-7.5	Vert
^	41.517M	52.1	-27.5 +0.3	+12.6	+0.6	+0.1	+0.0	38.2	40.0	-1.8	Vert
^	41.517M	51.2	-27.5 +0.3	+12.6	+0.6	+0.1	+0.0	37.3	40.0	-2.7	Vert
7	84.171M	49.7	-27.5 +0.5	+8.2	+0.9	+0.1	+0.0	31.9	40.0	-8.1	Vert
8	951.226M	29.7	-27.7 +2.0	+23.5	+3.5	+1.0	+0.0	32.0	46.0	-14.0	Horiz
9	120.213M	42.3	-27.4 +0.6	+11.3	+1.1	+0.2	+0.0	28.1	43.5	-15.4	Horiz
10	925.377M	28.9	-27.6 +1.9	+22.7	+3.5	+1.0	+0.0	30.4	46.0	-15.6	Horiz

CKC Laboratories, Inc Date: 1/18/2013 Time: 15:03:33 Enlighted , Inc WO#: 93965  
Test Distance: 3 Meters Sequence#: 40



Test Location: CKC Laboratories, Inc • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Enlighted, Inc**  
Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**  
Work Order #: **93965** Date: 1/17/2013  
Test Type: **Radiated Scan** Time: 16:21:05  
Equipment: **Enlighted Wireless Switch** Sequence#: 13  
Manufacturer: Enlighted Inc Tested By: Hieu Song Nguyenpham  
Model: WS-1-00  
S/N: None

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	10/19/2011	10/19/2013
T2	AN03302	Cable	32026-29094K- 29094K-72TC	3/21/2012	3/21/2014
T3	ANP01210	Cable	FSJ1P-50A-4A	3/15/2011	3/15/2013
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013
T4	AN03309	High Pass Filter	11SH10- 3000/T10000-O/O	6/12/2012	6/12/2014
T5	AN03114	Preamp	AMF-7D- 00101800-30-10P	5/13/2011	5/13/2013
T6	ANP05843	Cable	32022-2-29094K- 48TC	8/7/2012	8/7/2014

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Enlighted Wireless Switch*	Enlighted Inc	WS-1-00	None

**Support Devices:**

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	Lenovo	92P1156	11S92P1156ZDXN17B5GG
Laptop	Lenovo	T420	None

**Test Conditions / Notes:**

Radiated Spurious and Harmonic Emission

Frequency Range: 1000-12000MHz

Transmitter operating frequency: 2.4GHz

Number of Channel: 16

Low Frequency: 2.405GHz

High Frequency: 2.480GHz

Enlighted Software

Temperature: 19.9° C

Humidity: 28%

Atmospheric Pressure: 102.1kPa

RBW=VBW= 1MHz

Note: The EUT is a battery device. It is placed on 80cm table and at the center of the turning table.

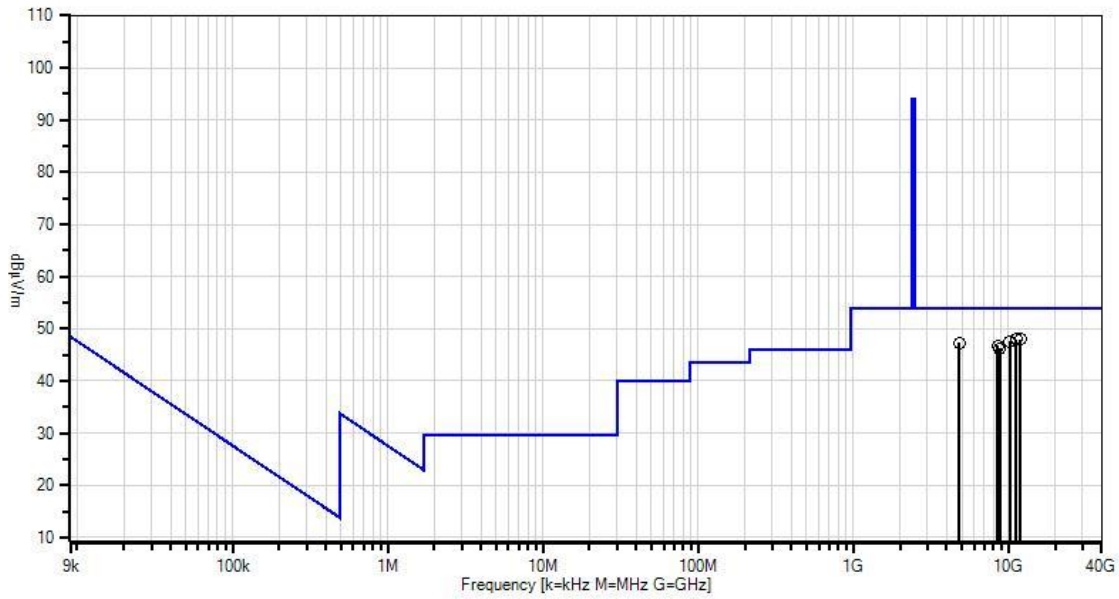
Low- Channel

Ext Attn: 0 dB

**Measurement Data:** Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dB $\mu$ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	11992.064 M	53.2	+38.6 -55.9	+2.4 +2.2	+7.1	+0.3	+0.0	47.9	54.0	-6.1	Vert
2	11200.448 M	55.3	+38.3 -57.1	+2.3 +2.1	+6.8	+0.2	+0.0	47.9	54.0	-6.1	Horiz
3	10236.229 M	57.1	+38.1 -58.5	+2.3 +2.0	+6.5	+0.1	+0.0	47.6	54.0	-6.4	Horiz
4	4811.810M	67.0	+32.0 -58.9	+1.5 +1.3	+4.2	+0.2	+0.0	47.3	54.0	-6.7	Vert
5	8513.508M	56.5	+36.7 -56.3	+2.1 +1.6	+5.8	+0.3	+0.0	46.7	54.0	-7.3	Horiz
6	8838.833M	56.1	+37.0 -56.7	+2.1 +1.5	+5.9	+0.3	+0.0	46.2	54.0	-7.8	Vert

CKC Laboratories, Inc Date: 1/17/2013 Time: 16:21:05 Enlighted, Inc WO#: 93965  
Test Distance: 3 Meters Sequence#: 13



Readings  
 x QP Readings  
 ▼ Ambient  
 ○ Peak Readings  
 \* Average Readings  
 — 1 - 15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)

Test Location: CKC Laboratories, Inc • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Enlighted, Inc**

Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**

Work Order #: **93965**

Date: 1/18/2013

Test Type: **Radiated Scan**

Time: 09:56:54

Equipment: **Enlighted Wireless Switch**

Sequence#: 22

Manufacturer: Enlighted Inc

Tested By: Hieu Song Nguyenpham

Model: WS-1-00

S/N: None

***Test Equipment:***

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP00928	Cable	various	2/10/2012	2/10/2014
T2	ANP05843	Cable	32022-2-29094K-48TC	8/7/2012	8/7/2014
T3	ANP06127	Cable	32022-29094K-29094K-132TC	9/7/2011	9/7/2013
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013
T4	AN02741	Active Horn Antenna	AMFW-5F-12001800-20-10P	12/18/2012	12/18/2014

***Equipment Under Test (\* = EUT):***

Function	Manufacturer	Model #	S/N
Enlighted Wireless Switch*	Enlighted Inc	WS-1-00	None

***Support Devices:***

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	Lenovo	92P1156	11S92P1156ZDXN17B5GG
Laptop	Lenovo	T420	None

***Test Conditions / Notes:***

<p>Radiated Spurious and Harmonic Emission</p> <p>Frequency Range: 12000MHz to 18000MHz</p> <p>Transmitter operating frequency: 2.4GHz</p> <p>Number of Channel: 16</p> <p>Low Frequency: 2.405GHz</p> <p>High Frequency: 2.480GHz</p> <p>Enlighted Software</p> <p>Temperature: 20.3° C</p> <p>Humidity: 30%</p> <p>Atmospheric Pressure: 101.9kPa</p> <p>RBW=VBW= 1MHz</p> <p>Note: The EUT is a battery device. It is placed on 80cm table and at the center of the turning table.</p> <p>Low- Channel</p>
---

Ext Attn: 0 dB

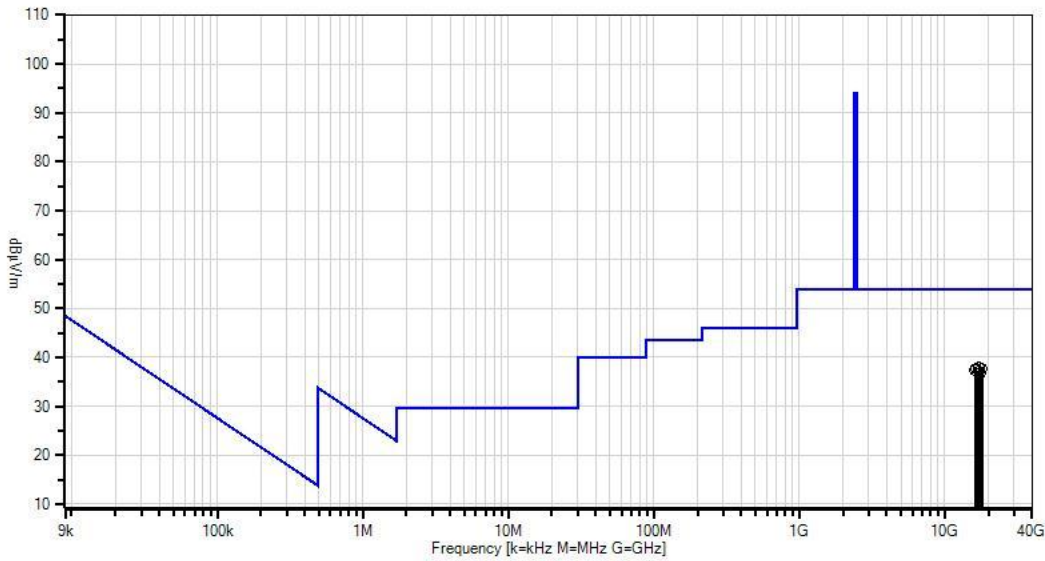
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	17234.845 M	43.4	+0.8	+2.6	+3.7	-12.5	+0.0	38.0	54.0	-16.0	Vert
2	16433.429 M	42.0	+0.9	+2.6	+3.6	-11.4	+0.0	37.7	54.0	-16.3	Horiz
3	17975.125 M	40.7	+0.8	+2.7	+3.7	-10.3	+0.0	37.6	54.0	-16.4	Horiz
4	16297.293 M	41.5	+1.0	+2.6	+3.6	-11.3	+0.0	37.4	54.0	-16.6	Vert
5	17155.245 M	42.7	+0.9	+2.6	+3.7	-12.7	+0.0	37.2	54.0	-16.8	Vert
6	17592.050 M	41.2	+0.8	+2.7	+3.7	-11.6	+0.0	36.8	54.0	-17.2	Horiz

CKC Laboratories, Inc Date: 1/18/2013 Time: 09:56:54 Enlighted, Inc WO#: 93965  
Test Distance: 3 Meters Sequence#: 22



— Readings  
 × QP Readings  
 ▼ Ambient  
 ○ Peak Readings  
 \* Average Readings  
 — 1 - 15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)

Test Location: CKC Laboratories, Inc • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Enlighted, Inc**

Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**

Work Order #: **93965**

Date: 1/18/2013

Test Type: **Radiated Scan**

Time: 11:31:29

Equipment: **Enlighted Wireless Switch**

Sequence#: 31

Manufacturer: Enlighted Inc

Tested By: Hieu Song Nguyenpham

Model: WS-1-00

S/N: None

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP05843	Cable	32022-2-29094K-48TC	8/7/2012	8/7/2014
T2	ANP06127	Cable	32022-29094K-29094K-132TC	9/7/2011	9/7/2013
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013
T3	ANP00929	Cable	various	2/16/2012	2/16/2014
T4	AN02742	Active Horn Antenna	AMFW-5F-18002650-20-10P	12/17/2012	12/17/2014

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Enlighted Wireless Switch*	Enlighted Inc	WS-1-00	None

**Support Devices:**

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	Lenovo	92P1156	11S92P1156ZDXN17B5GG
Laptop	Lenovo	T420	None

**Test Conditions / Notes:**

Radiated Spurious and Harmonic Emission

Frequency Range: 18000MHz to 25000MHz

Transmitter operating frequency: 2.4GHz

Number of Channel: 16

Low Frequency: 2.405GHz

High Frequency: 2.480GHz

Enlighted software

Temperature: 20.3° C

Humidity: 30%

Atmospheric Pressure: 101.9kPa

RBW=VBW= 1MHz

Note: The EUT is a battery device. It is placed on 80cm table and at the center of the turning table.

Low- Channel

Ext Attn: 0 dB

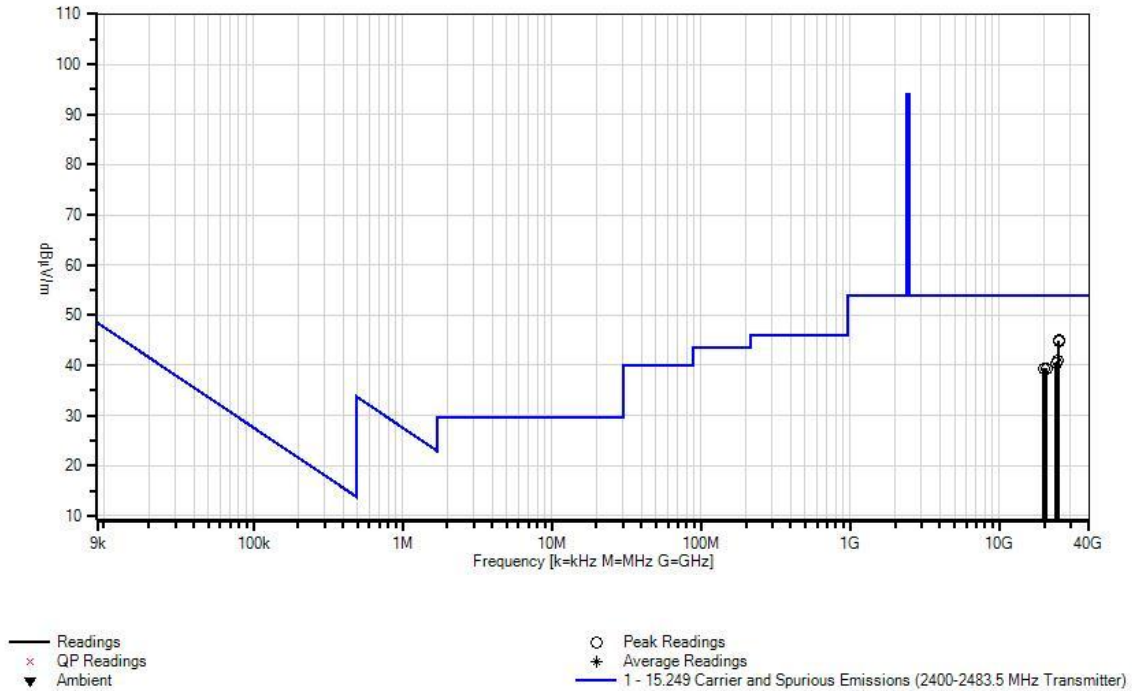
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	24982.108 M	46.8	+3.1	+4.4	+2.9	-12.3	+0.0	44.9	54.0	-9.1	Horiz
2	24897.618 M	46.4	+3.3	+4.4	+2.9	-12.3	+0.0	44.7	54.0	-9.3	Vert
3	24587.490 M	43.0	+3.4	+4.4	+2.9	-12.8	+0.0	40.9	54.0	-13.1	Horiz
4	23994.989 M	43.9	+3.1	+4.4	+3.0	-14.0	+0.0	40.4	54.0	-13.6	Vert
5	19927.926 M	42.7	+2.9	+4.0	+3.2	-13.4	+0.0	39.4	54.0	-14.6	Vert
6	20646.644 M	43.6	+2.8	+4.0	+3.1	-14.1	+0.0	39.4	54.0	-14.6	Horiz

CKC Laboratories, Inc Date: 1/18/2013 Time: 11:31:29 Enlighted, Inc WO#: 93965  
Test Distance: 3 Meters Sequence#: 31





Test Location: CKC Laboratories, Inc • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Enlighted, Inc**

Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**

Work Order #: **93965**

Date: 1/18/2013

Test Type: **Radiated Scan**

Time: 15:40:06

Equipment: **Enlighted Wireless Switch**

Sequence#: 43

Manufacturer: Enlighted Inc

Tested By: Hieu Song Nguyenpham

Model: WS-1-00

S/N: None

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T2	ANP05440	Cable		3/7/2011	3/7/2013
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013
T3	AN00432	Loop Antenna	6502	3/31/2011	3/31/2013

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Enlighted Wireless Switch*	Enlighted Inc	WS-1-00	None

**Support Devices:**

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	Lenovo	92P1156	11S92P1156ZDXN17B5GG
Laptop	Lenovo	T420	None

**Test Conditions / Notes:**

Radiated Spurious Emission

Frequency Range: 9kHz to 30MHz

Transmitter operating frequency: 2.4GHz

Number of Channel: 16

Low Frequency: 2.405GHz

High Frequency: 2.480GHz

Enlighted software

Temperature: 20.3° C

Humidity: 30%

Atmospheric Pressure: 101.9kPa

RBW=VBW= 200Hz from 9kHz to 150kHz

RBW=VBW=9kHz from 150kHz to 30MHz

Note: The EUT is a battery device. It is placed on 80cm table and at the center of the turning table.

Middle- Channel

Ext Attn: 0 dB

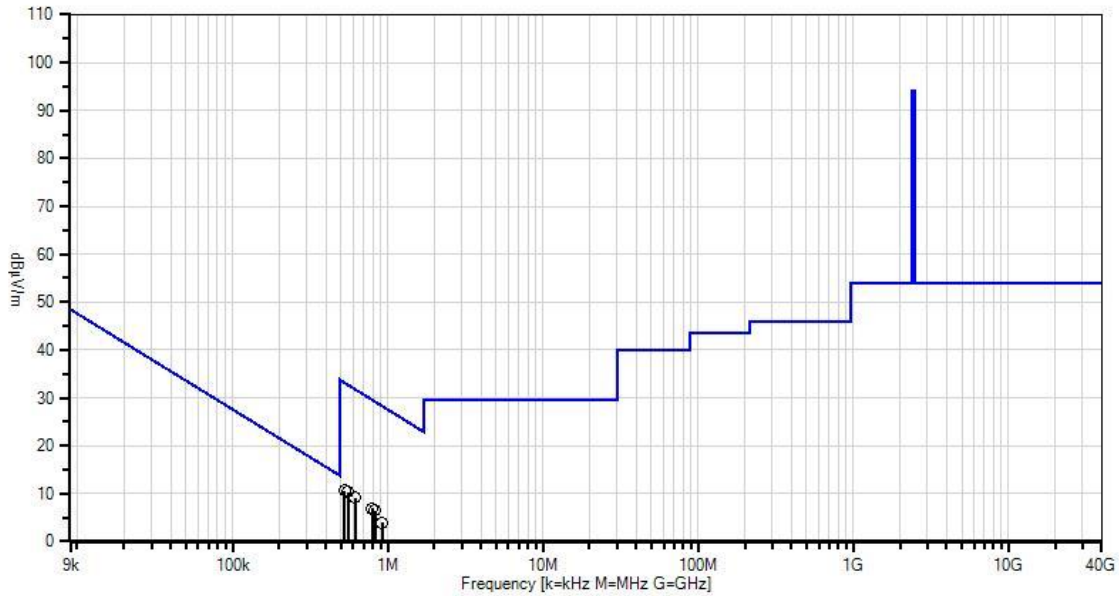
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB $\mu$ V	T1 dB	T2 dB	T3 dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	557.687k	39.1	+0.1	+0.0	+11.2	-40.0	10.4	32.7	-22.3	Perpe
2	528.417k	39.3	+0.1	+0.0	+11.2	-40.0	10.6	33.1	-22.5	Perpe
3	618.317k	37.8	+0.1	+0.0	+11.3	-40.0	9.2	31.8	-22.6	Paral
4	798.118k	35.4	+0.1	+0.0	+11.4	-40.0	6.9	29.5	-22.6	Paral
5	833.660k	35.0	+0.1	+0.0	+11.4	-40.0	6.5	29.2	-22.7	Perpe
6	917.288k	32.5	+0.1	+0.0	+11.4	-40.0	4.0	28.3	-24.3	Paral

CKC Laboratories, Inc Date: 1/18/2013 Time: 15:40:06 Enlighted, Inc WO#: 93965  
 Test Distance: 3 Meters Sequence#: 43



- Readings
- × QP Readings
- ▼ Ambient
- Peak Readings
- \* Average Readings
- 1 - 15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)

Test Location: CKC Laboratories, Inc • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Enlighted, Inc**

Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**

Work Order #: **93965**

Date: 1/18/2013

Test Type: **Radiated Scan**

Time: 13:53:36

Equipment: **Enlighted Wireless Switch**

Sequence#: 34

Manufacturer: Enlighted Inc

Tested By: Hieu Song Nguyenpham

Model: WS-1-00

S/N: None

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN00730	Preamp		1/31/2011	1/31/2013
T2	AN00852	Biconilog Antenna	CBL 6111C	11/28/2012	11/28/2014
T3	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T4	ANP01183	Cable	CNT-195	10/24/2011	10/24/2013
T5	ANP05440	Cable		3/7/2011	3/7/2013
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Enlighted Wireless Switch*	Enlighted Inc	WS-1-00	None

**Support Devices:**

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	Lenovo	92P1156	11S92P1156ZDXN17B5GG
Laptop	Lenovo	T420	None

**Test Conditions / Notes:**

Radiated Spurious Emission

Frequency Range: 30MHz to 1000MHz

Transmitter operating frequency: 2.4GHz

Number of Channel: 16

Low Frequency: 2.405GHz

High Frequency: 2.480GHz

Enlighted software

Temperature: 20.3° C

Humidity: 30%

Atmospheric Pressure: 101.9kPa

RBW=VBW= 120kHz

Note: The EUT is a battery device. It is placed on 80cm table and at the center of the turning table.

Middle- Channel

Ext Attn: 0 dB

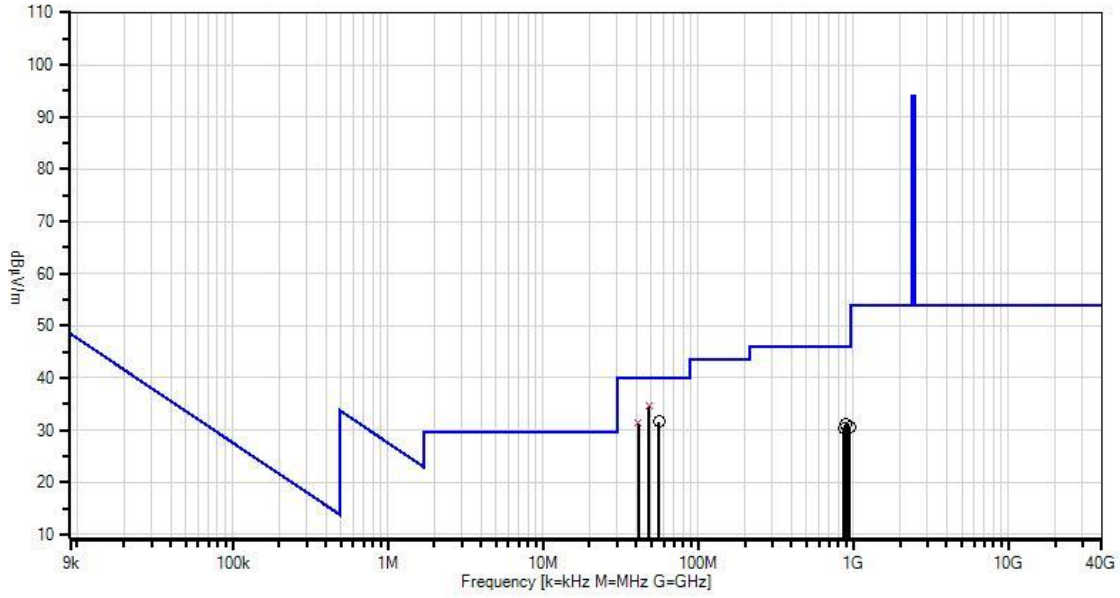
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB $\mu$ V	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	48.117M QP	51.4	-27.5 +0.4	+9.6	+0.6	+0.1	+0.0	34.6	40.0	-5.4	Vert
^	48.117M	54.2	-27.5 +0.4	+9.6	+0.6	+0.1	+0.0	37.4	40.0	-2.6	Vert
^	48.117M	53.8	-27.5 +0.4	+9.6	+0.6	+0.1	+0.0	37.0	40.0	-3.0	Vert
4	56.220M	51.0	-27.5 +0.4	+6.8	+0.7	+0.2	+0.0	31.6	40.0	-8.4	Vert
5	41.139M QP	45.0	-27.5 +0.3	+12.8	+0.6	+0.1	+0.0	31.3	40.0	-8.7	Vert
^	41.139M	50.9	-27.5 +0.3	+12.8	+0.6	+0.1	+0.0	37.2	40.0	-2.8	Vert
^	41.139M	50.6	-27.5 +0.3	+12.8	+0.6	+0.1	+0.0	36.9	40.0	-3.1	Vert
8	903.395M	29.1	-27.4 +1.9	+23.0	+3.4	+1.0	+0.0	31.0	46.0	-15.0	Horiz
9	946.530M	28.3	-27.7 +2.0	+23.5	+3.5	+1.0	+0.0	30.6	46.0	-15.4	Horiz
10	874.806M	28.5	-27.3 +1.9	+22.9	+3.4	+0.9	+0.0	30.3	46.0	-15.7	Horiz

CKC Laboratories, Inc Date: 1/18/2013 Time: 13:53:36 Enlighted , Inc WO#: 93965  
Test Distance: 3 Meters Sequence#: 34



Readings  
x QP Readings  
▼ Ambient  
○ Peak Readings  
\* Average Readings  
— 1 - 15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)

Test Location: CKC Laboratories, Inc • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Enlighted, Inc**

Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**

Work Order #: **93965**

Date: 1/17/2013

Test Type: **Radiated Scan**

Time: 15:14:07

Equipment: **Enlighted Wireless Switch**

Sequence#: 7

Manufacturer: Enlighted Inc

Tested By: Hieu Song Nguyenpham

Model: WS-1-00

S/N: None

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	10/19/2011	10/19/2013
T2	AN03302	Cable	32026-29094K- 29094K-72TC	3/21/2012	3/21/2014
T3	ANP01210	Cable	FSJ1P-50A-4A	3/15/2011	3/15/2013
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013
T4	AN03309	High Pass Filter	11SH10- 3000/T10000-O/O	6/12/2012	6/12/2014
T5	AN03114	Preamp	AMF-7D- 00101800-30-10P	5/13/2011	5/13/2013
T6	ANP05843	Cable	32022-2-29094K- 48TC	8/7/2012	8/7/2014

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Enlighted Wireless Switch*	Enlighted Inc	WS-1-00	None

**Support Devices:**

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	Lenovo	92P1156	11S92P1156ZDXN17B5GG
Laptop	Lenovo	T420	None

**Test Conditions / Notes:**

Radiated Spurious and Harmonic Emission

Frequency Range: 1000-12000MHz

Transmitter operating frequency: 2.4GHz

Number of Channel: 16

Low Frequency: 2.405GHz

High Frequency: 2.480GHz

Enlighted Software

Temperature: 19.9° C

Humidity: 28%

Atmospheric Pressure: 102.1kPa

RBW=VBW= 1MHz

Note: The EUT is a battery device. It is placed on 80cm table and at the center of the turning table.

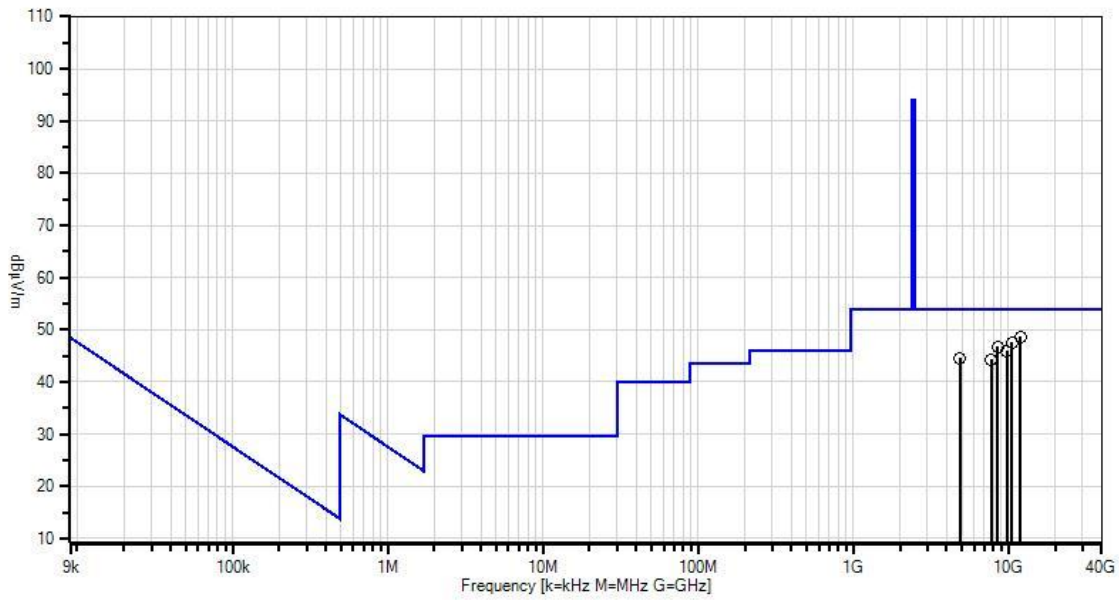
Middle- Channel

Ext Attn: 0 dB

**Measurement Data:** Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dB $\mu$ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	11986.112 M	54.0	+38.6 -56.0	+2.4 +2.2	+7.1	+0.3	+0.0	48.6	54.0	-5.4	Vert
2	10470.463 M	56.7	+38.4 -58.6	+2.3 +1.9	+6.7	+0.1	+0.0	47.5	54.0	-6.5	Horiz
3	8501.496M	56.8	+36.7 -56.4	+2.0 +1.6	+5.8	+0.3	+0.0	46.8	54.0	-7.2	Horiz
4	9760.754M	57.8	+36.3 -58.7	+2.3 +1.7	+6.3	+0.2	+0.0	45.9	54.0	-8.1	Horiz
5	4881.880M	64.2	+32.1 -59.0	+1.5 +1.3	+4.2	+0.3	+0.0	44.6	54.0	-9.4	Vert
6	7780.776M	57.8	+35.9 -58.6	+2.0 +1.5	+5.5	+0.2	+0.0	44.3	54.0	-9.7	Vert

CKC Laboratories, Inc Date: 1/17/2013 Time: 15:14:07 Enlighted, Inc WO#: 93965  
Test Distance: 3 Meters Sequence#: 7



— Readings  
× QP Readings  
▼ Ambient

○ Peak Readings  
\* Average Readings  
— 1 - 15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)

Test Location: CKC Laboratories, Inc • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Enlighted, Inc**

Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**

Work Order #: **93965**

Date: 1/18/2013

Test Type: **Radiated Scan**

Time: 09:11:37

Equipment: **Enlighted Wireless Switch**

Sequence#: 16

Manufacturer: Enlighted Inc

Tested By: Hieu Song Nguyenpham

Model: WS-1-00

S/N: None

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP00928	Cable	various	2/10/2012	2/10/2014
T2	ANP05843	Cable	32022-2-29094K-48TC	8/7/2012	8/7/2014
T3	ANP06127	Cable	32022-29094K-29094K-132TC	9/7/2011	9/7/2013
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013
T4	AN02741	Active Horn Antenna	AMFW-5F-12001800-20-10P	12/18/2012	12/18/2014

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Enlighted Wireless Switch*	Enlighted Inc	WS-1-00	None

**Support Devices:**

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	Lenovo	92P1156	11S92P1156ZDXN17B5GG
Laptop	Lenovo	T420	None

**Test Conditions / Notes:**

Radiated Spurious and Harmonic Emission

Frequency Range: 12000MHz to 18000MHz

Transmitter operating frequency: 2.4GHz

Number of Channel: 16

Low Frequency: 2.405GHz

High Frequency: 2.480GHz

Enlighted Software

Temperature: 20.3° C

Humidity: 30%

Atmospheric Pressure: 101.9kPa

RBW=VBW= 1MHz

Note: The EUT is a battery device. It is placed on 80cm table and at the center of the turning table.

Middle- Channel

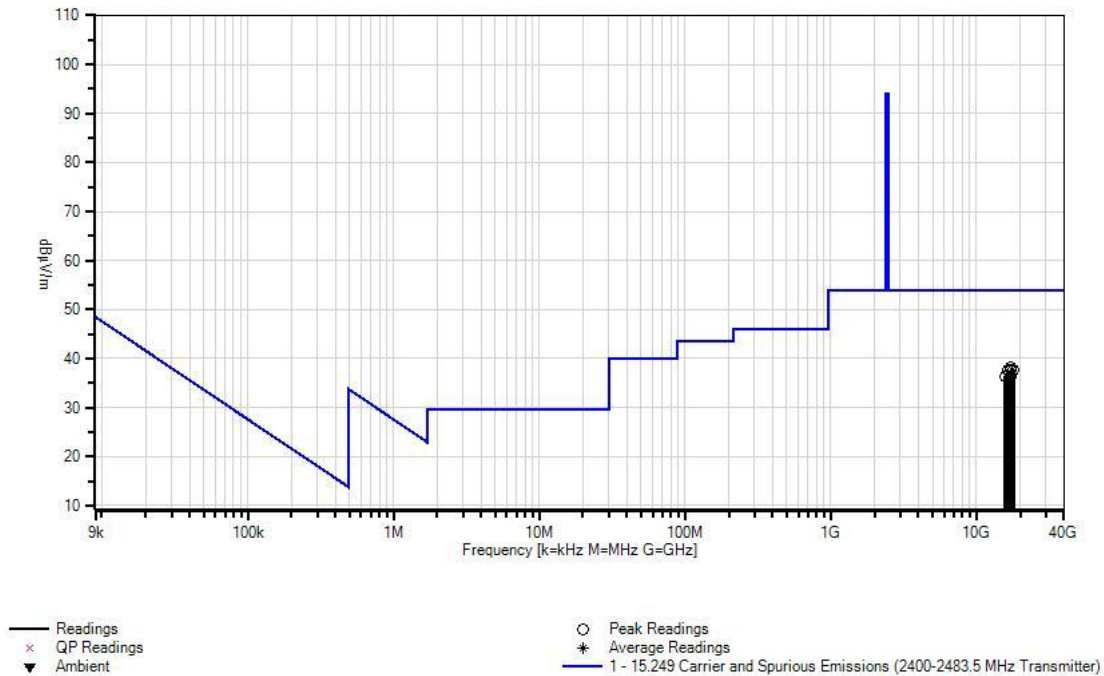


Ext Attn: 0 dB

**Measurement Data:** Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dB $\mu$ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	17306.485 M	43.3	+0.8	+2.6	+3.7	-12.3	+0.0	38.1	54.0	-15.9	Vert
2	17977.115 M	40.7	+0.8	+2.7	+3.7	-10.3	+0.0	37.6	54.0	-16.4	Vert
3	17167.185 M	43.1	+0.8	+2.6	+3.7	-12.6	+0.0	37.6	54.0	-16.4	Vert
4	16389.385 M	41.6	+0.9	+2.6	+3.6	-11.1	+0.0	37.6	54.0	-16.4	Horiz
5	15738.735 M	42.5	+1.0	+2.5	+3.5	-13.1	+0.0	36.4	54.0	-17.6	Horiz
6	17058.730 M	42.0	+0.9	+2.6	+3.7	-12.8	+0.0	36.4	54.0	-17.6	Horiz

CKC Laboratories, Inc Date: 1/18/2013 Time: 09:11:37 Enlighted, Inc WO#: 93965  
Test Distance: 3 Meters Sequence#: 16



Test Location: CKC Laboratories, Inc • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Enlighted, Inc**

Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**

Work Order #: **93965**

Date: 1/18/2013

Test Type: **Radiated Scan**

Time: 10:35:28

Equipment: **Enlighted Wireless Switch**

Sequence#: 25

Manufacturer: Enlighted Inc

Tested By: Hieu Song Nguyenpham

Model: WS-1-00

S/N: None

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP05843	Cable	32022-2-29094K-48TC	8/7/2012	8/7/2014
T2	ANP06127	Cable	32022-29094K-29094K-132TC	9/7/2011	9/7/2013
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013
T3	ANP00929	Cable	various	2/16/2012	2/16/2014
T4	AN02742	Active Horn Antenna	AMFW-5F-18002650-20-10P	12/17/2012	12/17/2014

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Enlighted Wireless Switch*	Enlighted Inc	WS-1-00	None

**Support Devices:**

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	Lenovo	92P1156	11S92P1156ZDXN17B5GG
Laptop	Lenovo	T420	None

**Test Conditions / Notes:**

Radiated Spurious and Harmonic Emission

Frequency Range: 18000MHz to 25000MHz

Transmitter operating frequency: 2.4GHz

Number of Channel: 16

Low Frequency: 2.405GHz

High Frequency: 2.480GHz

Enlighted Software

Temperature: 20.3° C

Humidity: 30%

Atmospheric Pressure: 101.9kPa

RBW=VBW= 1MHz

Note: The EUT is a battery device. It is placed on 80cm table and at the center of the turning table.

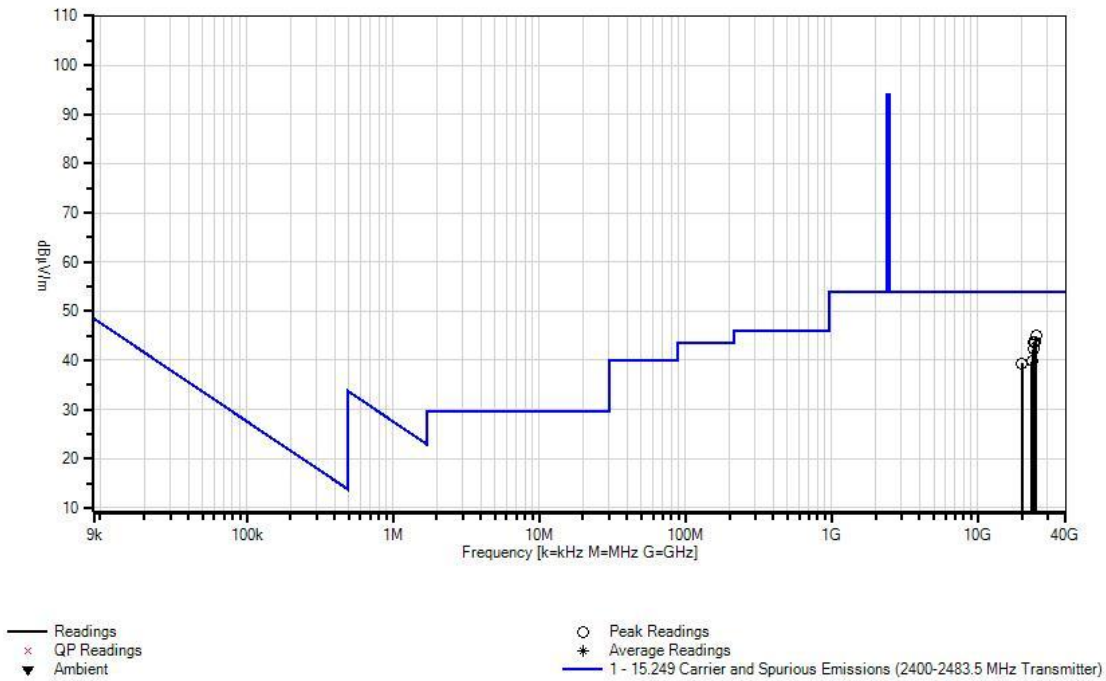
Middle- Channel

Ext Attn: 0 dB

**Measurement Data:** Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	24956.264 M	46.8	+3.2	+4.4	+2.9	-12.3	+0.0	45.0	54.0	-9.0	Vert
2	24336.008 M	46.7	+3.0	+4.4	+2.9	-13.2	+0.0	43.8	54.0	-10.2	Horiz
3	24812.134 M	45.3	+3.4	+4.4	+2.9	-12.4	+0.0	43.6	54.0	-10.4	Horiz
4	24039.796 M	45.7	+3.1	+4.4	+2.9	-13.9	+0.0	42.2	54.0	-11.8	Vert
5	23563.558 M	44.2	+3.2	+4.4	+3.0	-15.0	+0.0	39.8	54.0	-14.2	Vert
6	19930.929 M	42.6	+2.9	+4.0	+3.2	-13.4	+0.0	39.3	54.0	-14.7	Horiz

CKC Laboratories, Inc Date: 1/18/2013 Time: 10:35:28 Enlighted, Inc WO#: 93965  
Test Distance: 3 Meters Sequence#: 25



Test Location: CKC Laboratories, Inc • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Enlighted, Inc**

Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**

Work Order #: **93965**

Date: 1/18/2013

Test Type: **Radiated Scan**

Time: 16:08:15

Equipment: **Enlighted Wireless Switch**

Sequence#: 46

Manufacturer: Enlighted Inc

Tested By: Hieu Song Nguyenpham

Model: WS-1-00

S/N: None

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T2	ANP05440	Cable		3/7/2011	3/7/2013
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013
T3	AN00432	Loop Antenna	6502	3/31/2011	3/31/2013

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Enlighted Wireless Switch*	Enlighted Inc	WS-1-00	None

**Support Devices:**

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	Lenovo	92P1156	11S92P1156ZDXN17B5GG
Laptop	Lenovo	T420	None

**Test Conditions / Notes:**

Radiated Spurious Emission

Frequency Range: 9kHz to 30MHz

Transmitter operating frequency: 2.4GHz

Number of Channel: 16

Low Frequency: 2.405GHz

High Frequency: 2.480GHz

Enlighted software

Temperature: 20.3° C

Humidity: 30%

Atmospheric Pressure: 101.9kPa

RBW=VBW= 200Hz from 9kHz to 150kHz

RBW=VBW=9kHz from 150kHz to 30MHz

Note: The EUT is a battery device. It is placed on 80cm table and at the center of the turning table.

High- Channel.

Ext Attn: 0 dB

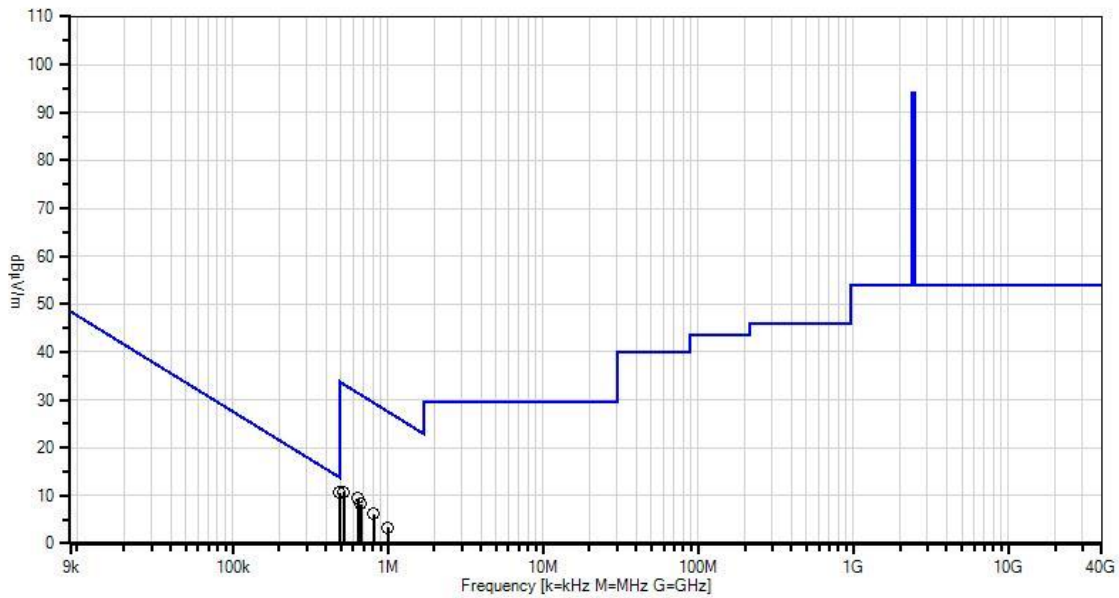
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB $\mu$ V	T1 dB	T2 dB	T3 dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	641.315k	38.0	+0.1	+0.0	+11.4	-40.0	9.5	31.4	-21.9	Paral
2	522.145k	39.6	+0.1	+0.0	+11.1	-40.0	10.8	33.2	-22.4	Perpe
3	674.766k	36.6	+0.1	+0.0	+11.5	-40.0	8.2	31.0	-22.8	Perpe
4	490.784k	39.5	+0.1	+0.0	+11.1	-40.0	10.7	33.8	-23.1	Perpe
5	812.753k	34.6	+0.1	+0.0	+11.4	-40.0	6.1	29.4	-23.3	Paral
6	1.003M	31.7	+0.1	+0.0	+11.5	-40.0	3.3	27.5	-24.2	Paral

CKC Laboratories, Inc Date: 1/18/2013 Time: 16:08:15 Enlighted, Inc WO#: 93965  
 Test Distance: 3 Meters Sequence#: 46



- Readings
- × QP Readings
- ▼ Ambient
- Peak Readings
- \* Average Readings
- 1 - 15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)

Test Location: CKC Laboratories, Inc • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Enlighted, Inc**

Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**

Work Order #: **93965**

Date: 1/18/2013

Test Type: **Radiated Scan**

Time: 14:29:24

Equipment: **Enlighted Wireless Switch**

Sequence#: 37

Manufacturer: Enlighted Inc

Tested By: Hieu Song Nguyenpham

Model: WS-1-00

S/N: None

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN00730	Preamp		1/31/2011	1/31/2013
T2	AN00852	Biconilog Antenna	CBL 6111C	11/28/2012	11/28/2014
T3	ANP00880	Cable	RG214U	7/30/2012	7/30/2014
T4	ANP01183	Cable	CNT-195	10/24/2011	10/24/2013
T5	ANP05440	Cable		3/7/2011	3/7/2013
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Enlighted Wireless Switch*	Enlighted Inc	WS-1-00	None

**Support Devices:**

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	Lenovo	92P1156	11S92P1156ZDXN17B5GG
Laptop	Lenovo	T420	None

**Test Conditions / Notes:**

Radiated Spurious Emission

Frequency Range: 30MHz to 1000MHz

Transmitter operating frequency: 2.4GHz

Number of Channel: 16

Low Frequency: 2.405GHz

High Frequency: 2.480GHz

Enlighted software

Temperature: 20.3° C

Humidity: 30%

Atmospheric Pressure: 101.9kPa

RBW=VBW= 120kHz

Note: The EUT is a battery device. It is placed on 80cm table and at the center of the turning table.

High- Channel

Ext Attn: 0 dB

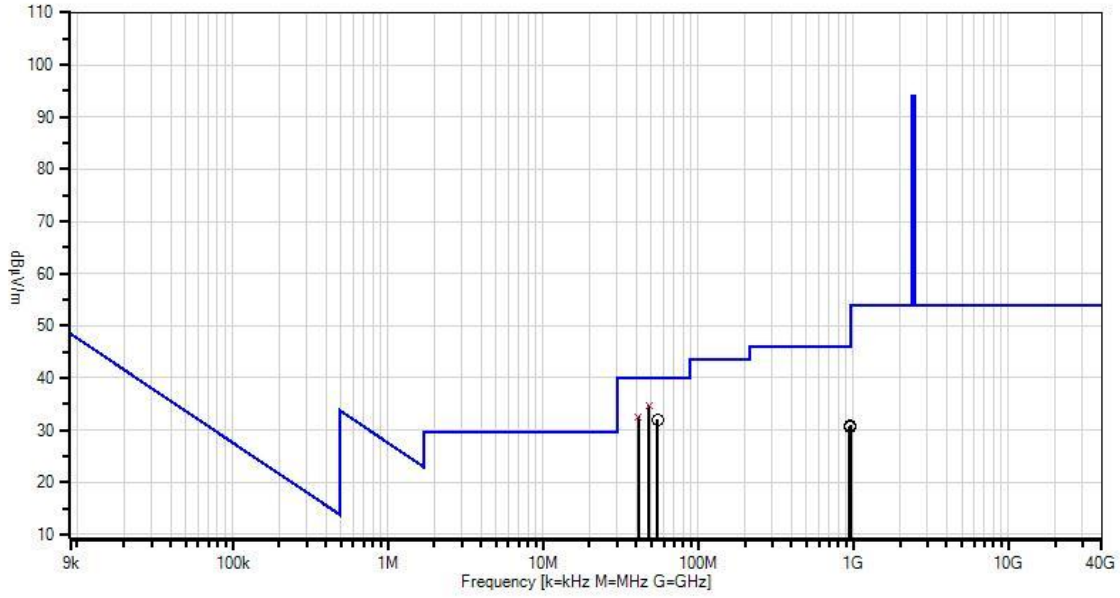
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB $\mu$ V	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	48.114M QP	51.5	-27.5 +0.4	+9.6	+0.6	+0.1	+0.0	34.7	40.0	-5.3	Vert
^	48.114M	54.5	-27.5 +0.4	+9.6	+0.6	+0.1	+0.0	37.7	40.0	-2.3	Vert
^	48.114M	53.5	-27.5 +0.4	+9.6	+0.6	+0.1	+0.0	36.7	40.0	-3.3	Vert
4	41.400M QP	46.4	-27.5 +0.3	+12.6	+0.6	+0.1	+0.0	32.5	40.0	-7.5	Vert
^	41.400M	51.6	-27.5 +0.3	+12.6	+0.6	+0.1	+0.0	37.7	40.0	-2.3	Vert
^	41.400M	51.2	-27.5 +0.3	+12.6	+0.6	+0.1	+0.0	37.3	40.0	-2.7	Vert
7	54.756M	50.9	-27.5 +0.4	+7.3	+0.7	+0.2	+0.0	32.0	40.0	-8.0	Vert
8	956.798M	28.6	-27.7 +2.0	+23.5	+3.5	+1.0	+0.0	30.9	46.0	-15.1	Horiz
9	951.664M	28.4	-27.7 +2.0	+23.5	+3.5	+1.0	+0.0	30.7	46.0	-15.3	Horiz
10	957.424M	28.2	-27.7 +2.0	+23.5	+3.5	+1.0	+0.0	30.5	46.0	-15.5	Horiz

CKC Laboratories, Inc Date: 1/18/2013 Time: 14:29:24 Enlighted , Inc WO#: 93965  
Test Distance: 3 Meters Sequence#: 37



Readings  
x QP Readings  
v Ambient  
o Peak Readings  
\* Average Readings  
1 - 15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)



Test Location: CKC Laboratories, Inc • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Enlighted, Inc**

Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**

Work Order #: **93965**

Date: 1/17/2013

Test Type: **Radiated Scan**

Time: 15:51:37

Equipment: **Enlighted Wireless Switch**

Sequence#: 10

Manufacturer: Enlighted Inc

Tested By: Hieu Song Nguyenpham

Model: WS-1-00

S/N: None

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN01467	Horn Antenna-ANSI C63.5 Calibration	3115	10/19/2011	10/19/2013
T2	AN03302	Cable	32026-29094K- 29094K-72TC	3/21/2012	3/21/2014
T3	ANP01210	Cable	FSJ1P-50A-4A	3/15/2011	3/15/2013
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013
T4	AN03309	High Pass Filter	11SH10- 3000/T10000-O/O	6/12/2012	6/12/2014
T5	AN03114	Preamp	AMF-7D- 00101800-30-10P	5/13/2011	5/13/2013
T6	ANP05843	Cable	32022-2-29094K- 48TC	8/7/2012	8/7/2014

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Enlighted Wireless Switch*	Enlighted Inc	WS-1-00	None

**Support Devices:**

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	Lenovo	92P1156	11S92P1156ZDXN17B5GG
Laptop	Lenovo	T420	None

**Test Conditions / Notes:**

Radiated Spurious and Harmonic Emission

Frequency Range: 1000-12000MHz

Transmitter operating frequency: 2.4GHz

Number of Channel: 16

Low Frequency: 2.405GHz

High Frequency: 2.480GHz

Enlighted Software

Temperature: 19.9° C

Humidity: 28%

Atmospheric Pressure: 102.1kPa

RBW=VBW= 1MHz

Note: The EUT is a battery device. It is placed on 80cm table and at the center of the turning table.

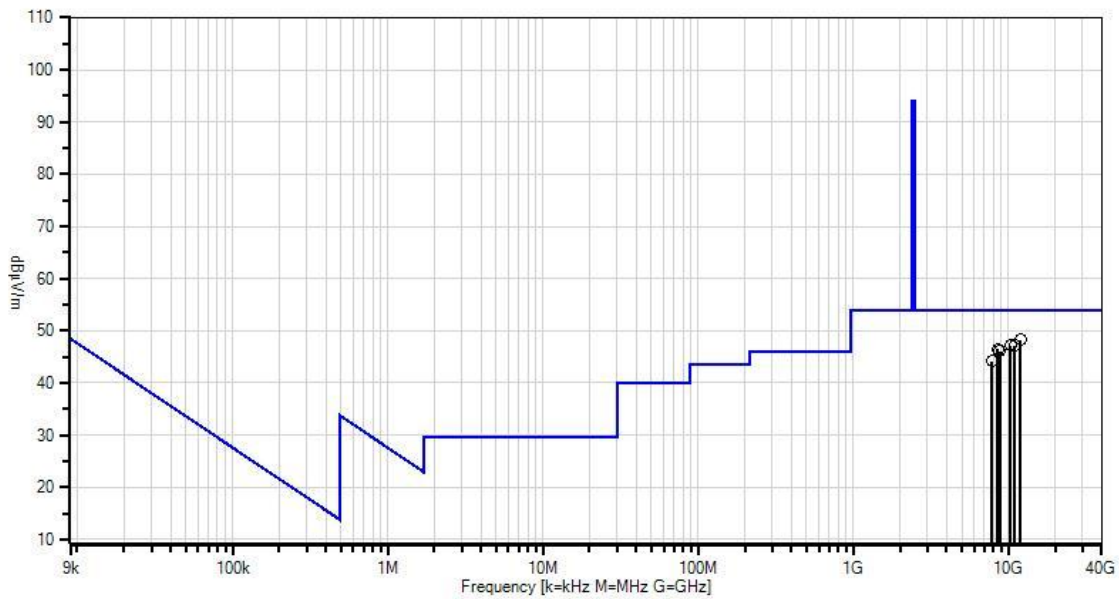
High- Channel

Ext Attn: 0 dB

**Measurement Data:** Reading listed by margin. Test Distance: 3 Meters

#	Freq MHz	Rdng dB $\mu$ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	11982.144 M	53.7	+38.6 -56.0	+2.4 +2.2	+7.1	+0.3	+0.0	48.3	54.0	-5.7	Horiz
2	10994.987 M	55.5	+38.3 -58.0	+2.3 +2.1	+6.8	+0.2	+0.0	47.2	54.0	-6.8	Vert
3	10301.294 M	56.6	+38.2 -58.6	+2.3 +2.0	+6.5	+0.1	+0.0	47.1	54.0	-6.9	Horiz
4	8564.559M	56.4	+36.8 -56.6	+2.1 +1.6	+5.8	+0.3	+0.0	46.4	54.0	-7.6	Horiz
5	8764.759M	55.6	+36.9 -56.3	+2.1 +1.5	+5.9	+0.3	+0.0	46.0	54.0	-8.0	Vert
6	7806.802M	57.7	+35.9 -58.6	+2.0 +1.5	+5.5	+0.2	+0.0	44.2	54.0	-9.8	Vert

CKC Laboratories, Inc Date: 1/17/2013 Time: 15:51:37 Enlighted, Inc WO#: 93965  
Test Distance: 3 Meters Sequence#: 10



Readings  
x QP Readings  
▼ Ambient  
○ Peak Readings  
\* Average Readings  
— 1 - 15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)

Test Location: CKC Laboratories, Inc • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Enlighted, Inc**

Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**

Work Order #: **93965**

Date: 1/18/2013

Test Type: **Radiated Scan**

Time: 09:37:37

Equipment: **Enlighted Wireless Switch**

Sequence#: 19

Manufacturer: Enlighted Inc

Tested By: Hieu Song Nguyenpham

Model: WS-1-00

S/N: None

**Test Equipment:**

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP00928	Cable	various	2/10/2012	2/10/2014
T2	ANP05843	Cable	32022-2-29094K-48TC	8/7/2012	8/7/2014
T3	ANP06127	Cable	32022-29094K-29094K-132TC	9/7/2011	9/7/2013
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013
T4	AN02741	Active Horn Antenna	AMFW-5F-12001800-20-10P	12/18/2012	12/18/2014

**Equipment Under Test (\* = EUT):**

Function	Manufacturer	Model #	S/N
Enlighted Wireless Switch*	Enlighted Inc	WS-1-00	None

**Support Devices:**

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	Lenovo	92P1156	11S92P1156ZDXN17B5G G
Laptop	Lenovo	T420	None

**Test Conditions / Notes:**

Radiated Spurious and Harmonic Emission

Frequency Range: 12000MHz to 18000MHz

Transmitter operating frequency: 2.4GHz

Number of Channel: 16

Low Frequency: 2.405GHz

High Frequency: 2.480GHz

Enlighted Software

Temperature: 20.3° C

Humidity: 30%

Atmospheric Pressure: 101.9kPa

RBW=VBW= 1MHz

Note: The EUT is a battery device. It is placed on 80cm table and at the center of the turning table.

High- Channel

Ext Attn: 0 dB

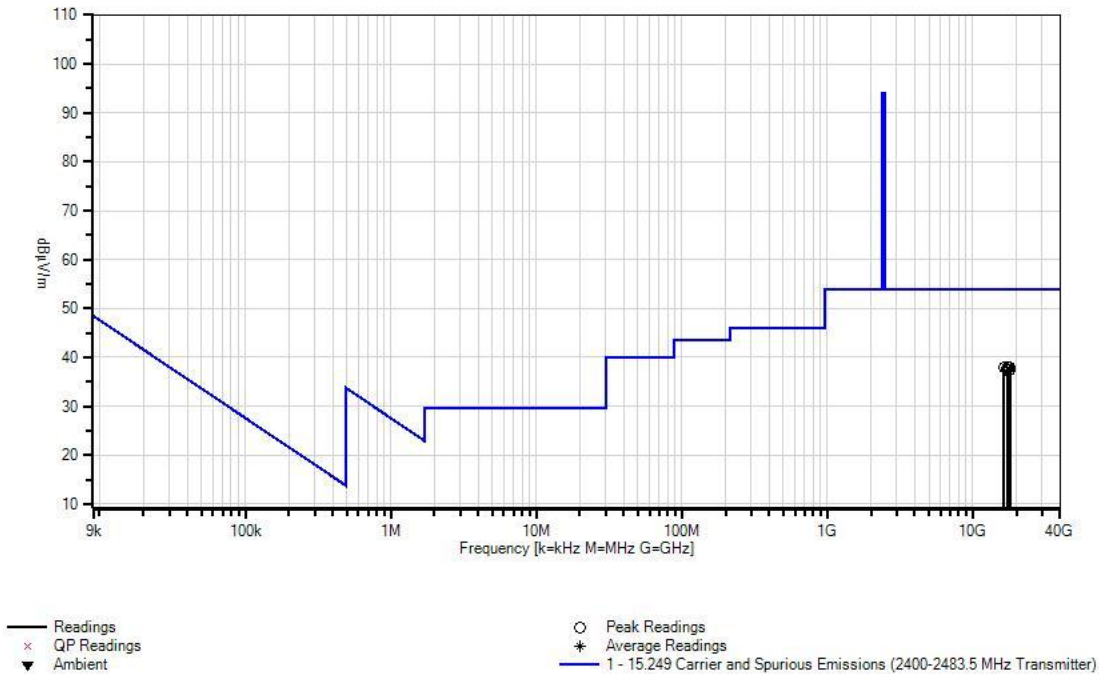
**Measurement Data:**

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB $\mu$ V	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dB $\mu$ V/m	Spec dB $\mu$ V/m	Margin dB	Polar Ant
1	17402.005 M	43.1	+0.8	+2.6	+3.7	-12.2	+0.0	38.0	54.0	-16.0	Vert
2	16437.433 M	42.3	+0.9	+2.6	+3.6	-11.4	+0.0	38.0	54.0	-16.0	Horiz
3	17974.130 M	41.0	+0.8	+2.7	+3.7	-10.3	+0.0	37.9	54.0	-16.1	Vert
4	17372.155 M	42.8	+0.8	+2.6	+3.7	-12.2	+0.0	37.7	54.0	-16.3	Vert
5	17204.995 M	43.0	+0.8	+2.6	+3.7	-12.6	+0.0	37.5	54.0	-16.5	Horiz
6	17776.125 M	41.1	+0.8	+2.7	+3.7	-11.0	+0.0	37.3	54.0	-16.7	Horiz

CKC Laboratories, Inc Date: 1/18/2013 Time: 09:37:37 Enlighted, Inc WO#: 93965  
Test Distance: 3 Meters Sequence#: 19



Test Location: CKC Laboratories, Inc • 1120 Fulton Places • Fremont, CA 94539 • (510) 249-1170

Customer: **Enlighted, Inc**

Specification: **15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)**

Work Order #: **93965**

Date: 1/18/2013

Test Type: **Radiated Scan**

Time: 11:05:29

Equipment: **Enlighted Wireless Switch**

Sequence#: 28

Manufacturer: Enlighted Inc

Tested By: Hieu Song Nguyenpham

Model: WS-1-00

S/N: None

***Test Equipment:***

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP05843	Cable	32022-2-29094K-48TC	8/7/2012	8/7/2014
T2	ANP06127	Cable	32022-29094K-29094K-132TC	9/7/2011	9/7/2013
	AN02668	Spectrum Analyzer	E4446A	2/23/2011	2/23/2013
T3	ANP00929	Cable	various	2/16/2012	2/16/2014
T4	AN02742	Active Horn Antenna	AMFW-5F-18002650-20-10P	12/17/2012	12/17/2014

***Equipment Under Test (\* = EUT):***

Function	Manufacturer	Model #	S/N
Enlighted Wireless Switch*	Enlighted Inc	WS-1-00	None

***Support Devices:***

Function	Manufacturer	Model #	S/N
AC/DC Power Adapter	Lenovo	92P1156	11S92P1156ZDXN17B5GG
Laptop	Lenovo	T420	None

***Test Conditions / Notes:***

<p>Radiated Spurious and Harmonic Emission</p> <p>Frequency Range: 18000MHz to 25000MHz</p> <p>Transmitter operating frequency: 2.4GHz</p> <p>Number of Channel: 16</p> <p>Low Frequency: 2.405GHz</p> <p>High Frequency: 2.480GHz</p> <p>Enlighted Software</p> <p>Temperature: 20.3° C</p> <p>Humidity: 30%</p> <p>Atmospheric Pressure: 101.9kPa</p> <p>RBW=VBW= 1MHz</p> <p>Note: The EUT is a battery device. It is placed on 80cm table and at the center of the turning table.</p> <p>High- Channel</p>
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Ext Attn: 0 dB

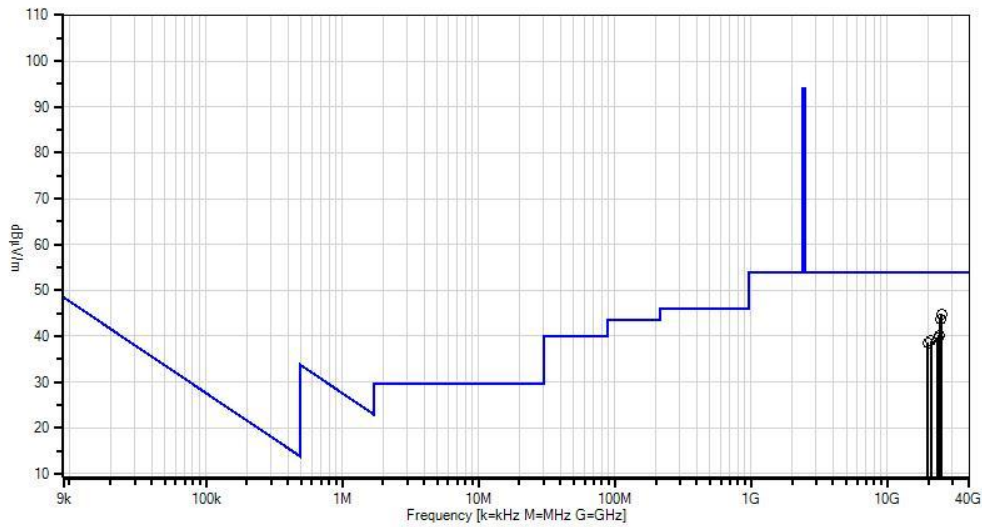
**Measurement Data:**

Reading listed by margin.

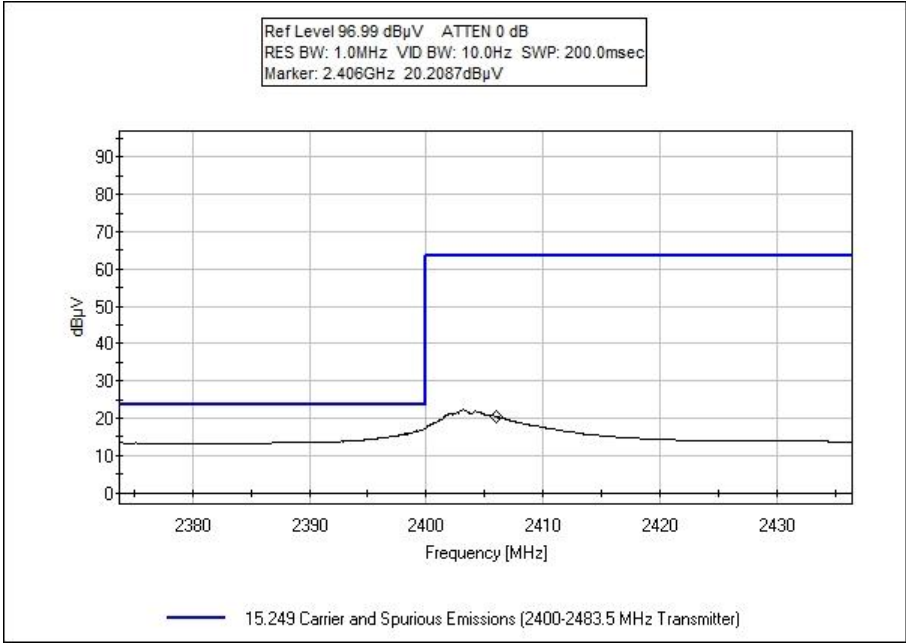
Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	24960.240 M	46.6	+3.2	+4.4	+2.9	-12.3	+0.0	44.8	54.0	-9.2	Horiz
2	24370.798 M	46.6	+3.0	+4.4	+2.9	-13.2	+0.0	43.7	54.0	-10.3	Vert
3	23961.956 M	43.8	+3.1	+4.4	+3.0	-14.1	+0.0	40.2	54.0	-13.8	Horiz
4	23530.525 M	44.2	+3.2	+4.3	+3.0	-15.1	+0.0	39.6	54.0	-14.4	Vert
5	20800.798 M	43.3	+2.8	+4.1	+3.1	-14.4	+0.0	38.9	54.0	-15.1	Horiz
6	19910.909 M	41.9	+2.9	+3.9	+3.2	-13.4	+0.0	38.5	54.0	-15.5	Vert

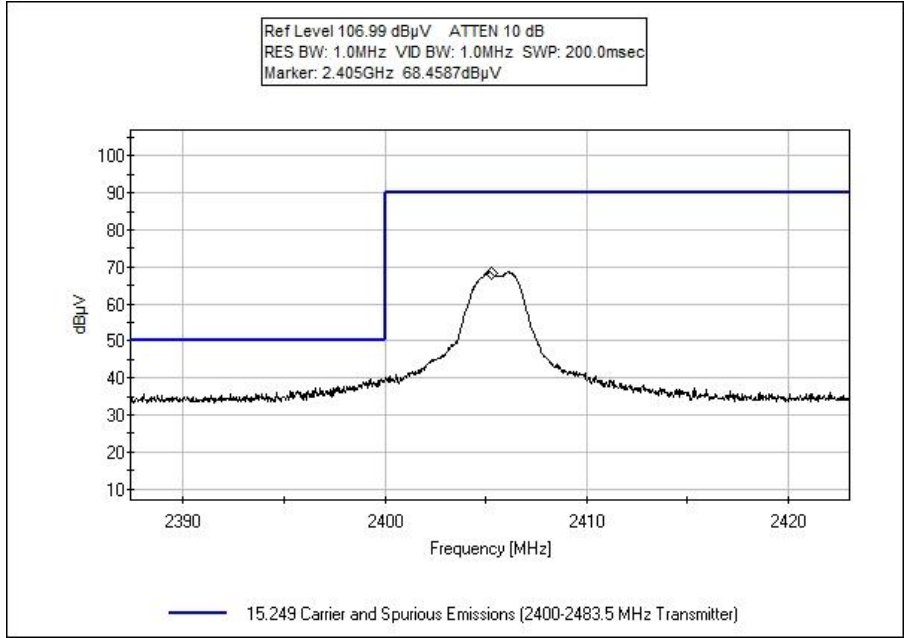
CKC Laboratories, Inc Date: 1/18/2013 Time: 11:05:29 Enlighted, Inc WO#: 93965  
Test Distance: 3 Meters Sequence#: 28



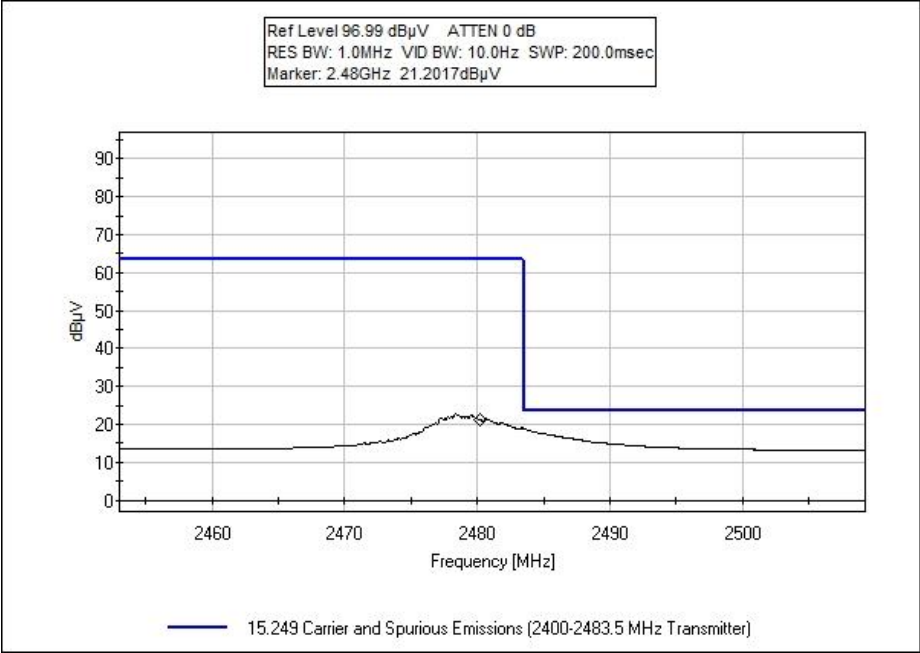
— Readings  
 × QP Readings  
 ▼ Ambient  
 ○ Peak Readings  
 \* Average Readings  
 — 1 - 15.249 Carrier and Spurious Emissions (2400-2483.5 MHz Transmitter)



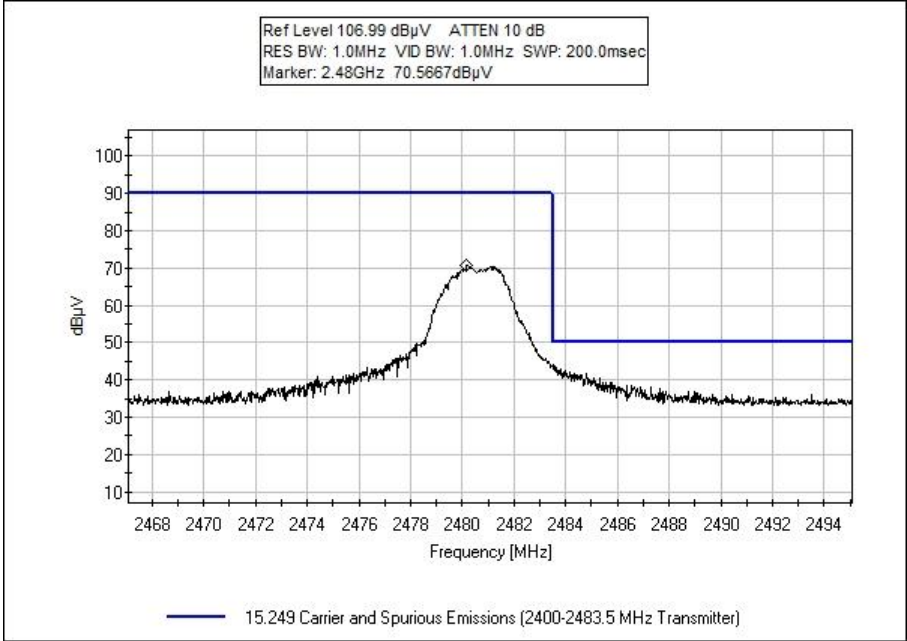
Low Channel Bandedge



Low Channel Bandedge



High Channel Bandedge



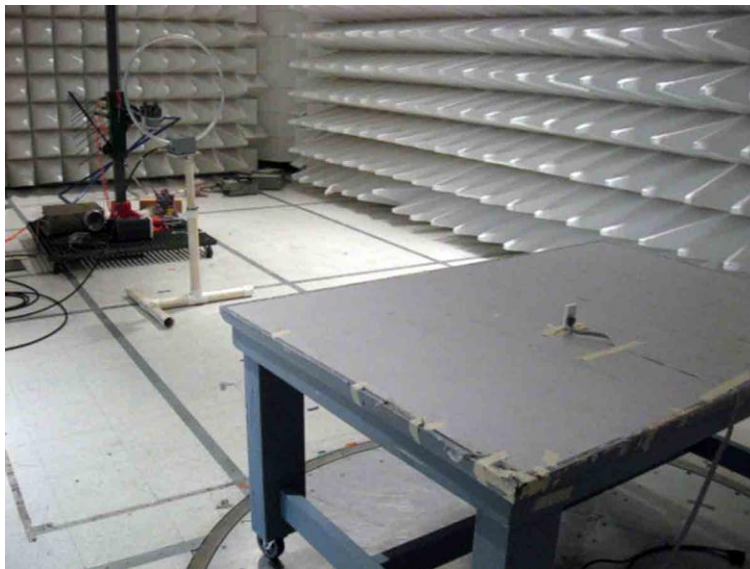
High Channel Bandedge



**Test Setup Photos**



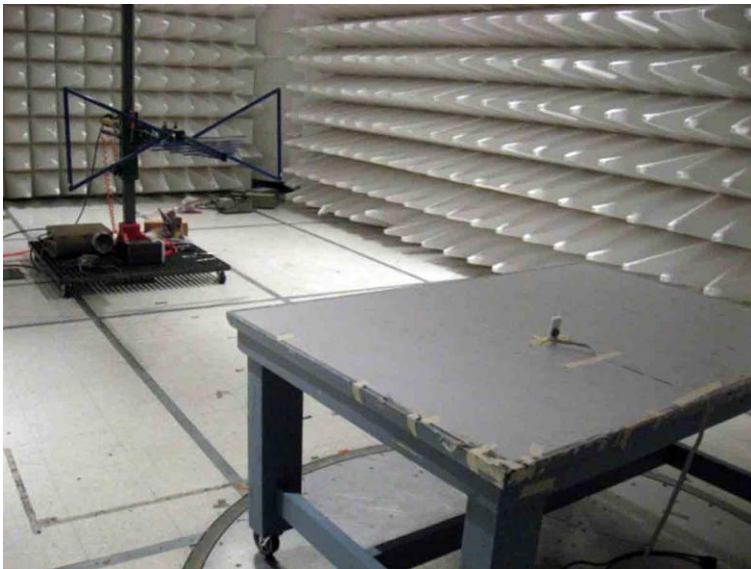
9kHz to 30MHz



9kHz to 30MHz



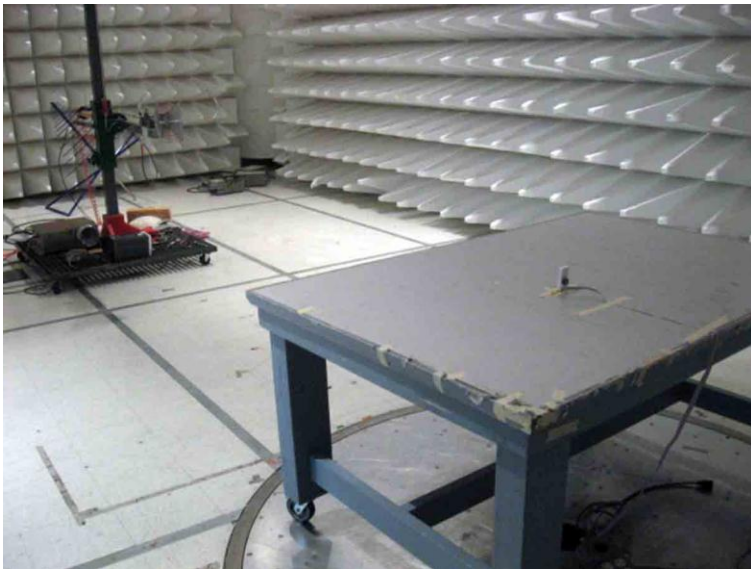
30MHz to 1GHz



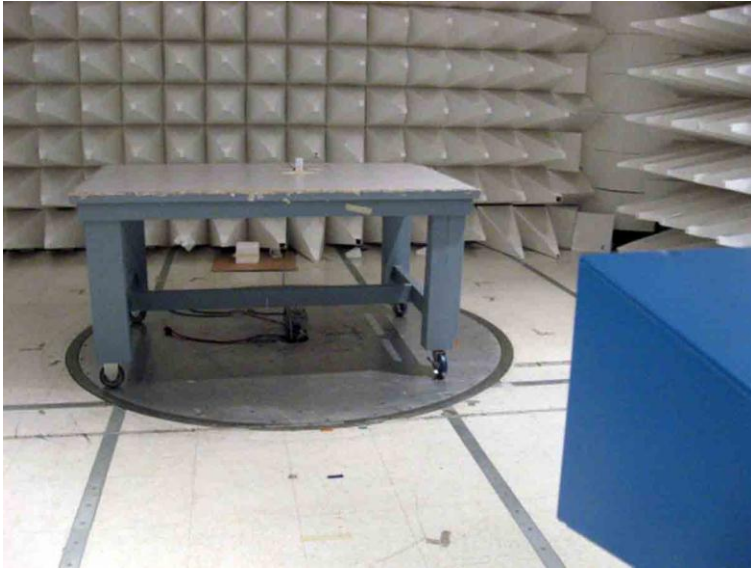
30MHz to 1GHz



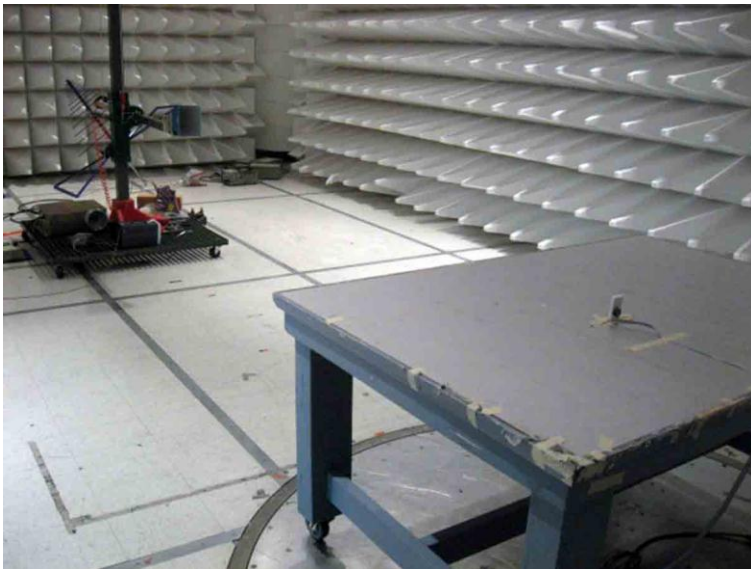
1GHz to 12GHz



1GHz to 12GHz



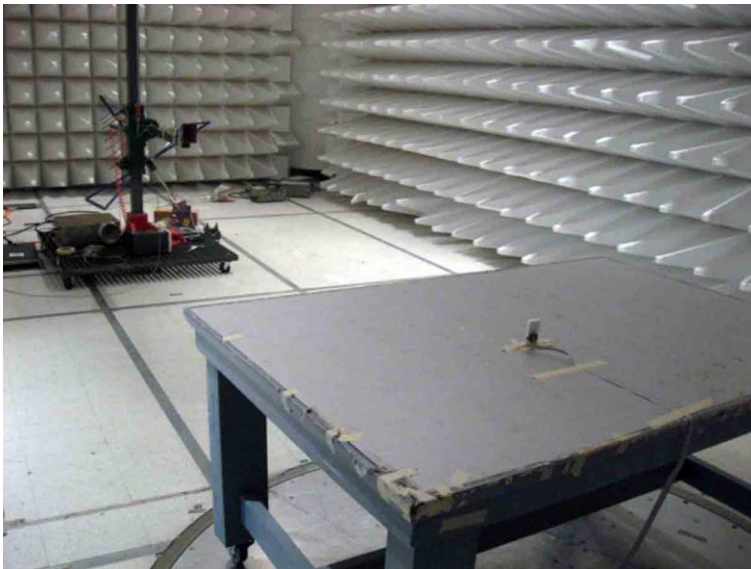
12GHz to 18GHz



12GHz to 18GHz



18GHz to 25GHz



18GHz to 25GHz