

FCC TEST REPORT

Product : Smart Security Light
Trade mark : N/A
Model/Type reference : SPL06-07A1W1-BKT-K1,
SPL06-07A1W1-BKT-M1,
SPL06-07A1W1-ORB-M1,
SPL08-07A1W1-BKT-M1,
SPL06-07A1W1-ORB-M1,
SPL09-05A1W1-BKT-M1
Serial number : N/A
Ratings : AC 120V, 60Hz
FCC ID : 2AD7D-SPLX
Report number : EED32H000644-1
Date : May 30, 2015
Regulations : See below

Test Standards	Results
☒ 47 CFR FCC Part 15 Subpart C 15.247: 2014	PASS

Prepared for:

Shenzhen Jiawei Photovoltaic Lighting Co., Ltd.
No. 1,2,3,4, Xinfu Industry Zone, Central Community, Pingdi Road,
Longgang District, Shenzhen City, Guangdong Province, P.R.China

Prepared by:

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Date: May 30, 2015



Jimmy Li
Lab manager

Check No.: 1996241329

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N/A means not applicable.

1. CERTIFICATION INFORMATION

Applicant: Shenzhen Jiawei Photovoltaic Lighting Co., Ltd.
No. 1,2,3,4, Xinfu Industry Zone, Central Community, Pingdi Road, Longgang District, Shenzhen City, Guangdong Province, P.R.China

Manufacturer: Shenzhen Jiawei Photovoltaic Lighting Co., Ltd. Gaoqiao Subsidiary
No. 4, Fugao East Road, Gaoqiao Community, Pingdi Road, Longgang District, Shenzhen City, Guangdong Province, P.R.China

Equipment authorization: Certification

FCC ID: 2AD7D-SPLX

Product: Smart Security Light

Model/Type reference: SPL06-07A1W1-BKT-K1,
SPL06-07A1W1-BKT-M1,
SPL06-07A1W1-ORB-M1,
SPL08-07A1W1-BKT-M1,
SPL06-07A1W1-ORB-M1,
SPL09-05A1W1-BKT-M1

Trade Name: N/A

Serial Number: N/A

Report Number: EED32H000644-1

Sample Received Date: Jan. 10, 2015

Sample tested Date: Jan. 10, 2015 to Feb. 10, 2015

The above equipment was tested by Centre Testing International (Shenzhen) Corporation for compliance with the requirements set forth in the FCC Rules and Regulations Part 15, Subpart C and the measurement procedure according to ANSI C63.4:2009.

Original FCC ID 2AD7D-SPLXX, Original model number SPL06-07A1W1-BKT-K1, SPL06-07A1W1-BKT-M1, SPL06-07A1W1-ORB-M1, SPL08-07A1W1-BKT-M1, SPL06-07A1W1-ORB-M1, SPL09-05A1W1-BKT-M1 and new FCC ID 2AD7D-SPLX, new model numbers SPL06-07A1W1-BKT-K1, SPL06-07A1W1-BKT-M1, SPL06-07A1W1-ORB-M1, SPL08-07A1W1-BKT-M1, SPL06-07A1W1-ORB-M1, SPL09-05A1W1-BKT-M1 are electrically identical, only FCC ID is different, so data of report EED32H000644-1 for new FCC ID 2AD7D-SPLX are from report EED32H000022-1 for FCC ID 2AD7D-SPLXX.

2. TEST SUMMARY

No.	Test Item	Rule	Result
1	6dB Bandwidth	15.247(a)(2)	PASS
2	Peak Output Power	15.247(b)(3)	PASS
3	Power Spectral Density	15.247(e)	PASS
4	Bandedge Emission	15.247(d)	PASS
5	Spurious RF Conducted Emission	15.247(d)	PASS
6	Radiated Emission	15.247(d)	PASS
7	Conducted Emission	15.207	PASS
8	Antenna requirements	15.203	PASS (See Notes)

Notes: The product uses an internal integral antenna which in accordance with Section 15.203 is considered sufficient to comply with the provisions of this section.

3. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Value (dB)
Conducted disturbance	3.0
Radiated disturbance	4.9

4. PRODUCT INFORMATION

Model difference: All models are same except outer color. The test model is SPL06-07A1W1-BKT-K1 and the test results are applicable to the others.

Items	Description
Rating	AC 120V, 60Hz
Transmit Data Rate	IEEE 802.11b: 1Mbps, 2Mbps, 5.5Mbps, 11Mbps IEEE 802.11g: 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps IEEE 802.11n HT20: MCS0, MCS1, MCS2, MCS3, MCS4, MCS5, MCS6, MCS7
Type of Modulation	IEEE 802.11b: DSSS (CCK, QPSK, BPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK, BPSK)
Antenna Type	Integral antenna
Connector	fixed on board
Gain	4dBi

Technical Specification of WiFi module (802.11b/g/n)

Item	Description		
	IEEE 802.11b	IEEE 802.11g	IEEE 802.11n
Operating Frequency band	2412-2462MHz for 802.11b/g/nHT20		
Channel Number	11	11	11
Channel Bandwidth (MHz)	20	20	20

Technical Specification of Carrier Frequency

Frequency Band	Channel No.	Frequency	Channel No.	Frequency	Channel No.	Frequency
2412-2462MHz (802.11b/g/n)	1	2412 MHz	6	2437 MHz	11	2462 MHz
	2	2417 MHz	7	2442 MHz	--	--
	3	2422 MHz	8	2447 MHz	--	--
	4	2427 MHz	9	2452 MHz	--	--
	5	2432 MHz	10	2457 MHz	--	--

5. SYSTEM TEST CONFIGURATION

For emissions testing, the equipment under test (EUT) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables were manipulated to produce worst case emissions. It was powered by 120V AC input adaptor. Only the worst case data were recorded in this test report.

The signal is maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters. Radiated emissions are taken at three meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance.

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance. Analyzer resolution is 100 kHz or greater for frequencies below 1000 MHz. The resolution is 1 MHz or greater for frequencies above 1000 MHz. The spurious emissions more than 20 dB below the permissible value are not reported.

Radiated emission measurement were performed the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

6. TEST EQUIPMENT LIST

Equipment	Manufacturer	Model Number	Serial Number	Due Date
3M Chamber & Accessory Equipment	TDK	SAC-3	---	06/01/2016
Receiver	R&S	ESCI	100435	07/08/2015
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	618	06/17/2015
Multi device Controller	matur	NCD/070/10711112	---	N/A
Horn Antenna	ETS-LINGREN	3117	00057407	07/07/2015
Microwave Preamplifier	Agilent	8449B	3008A02425	03/19/2016
Spectrum Analyzer	R&S	FSP40	100416	07/06/2015
Receiver	R&S	ESCI	100009	07/19/2015
LISN	R&S	ENV216	100098	07/19/2015

7. SUPPORT EQUIPMENT LIST

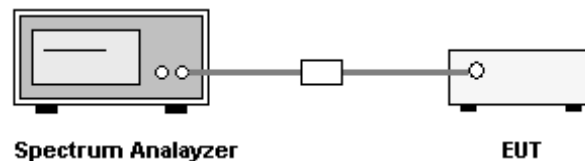
No.	Device Type	Brand	Model	Series No.	Certification Type
1.	---	---	---	---	---
2.	---	---	---	---	---

8. 6DB BANDWIDTH MEASUREMENT

8.1. LIMITS

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

8.2. BLOCK DIAGRAM OF TEST SETUP



8.3. TEST PROCEDURE

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Set spectrum analyzer's RBW and VBW to applicable value with Peak in Max Hold.
3. A PEAK output reading was taken, a DISPLAY line was drawn 6 dB lower than PEAK level.
4. The 6dB bandwidth was determined from where the channel output spectrum intersected the display line.

8.4. TEST RESULT

The test data of worst case are below:

802.11b, 1Mbps

Frequency (MHz)	Measured Value (MHz)	Result
2412	10.02	PASS
2437	10.02	PASS
2462	10.42	PASS

802.11g, 6Mbps

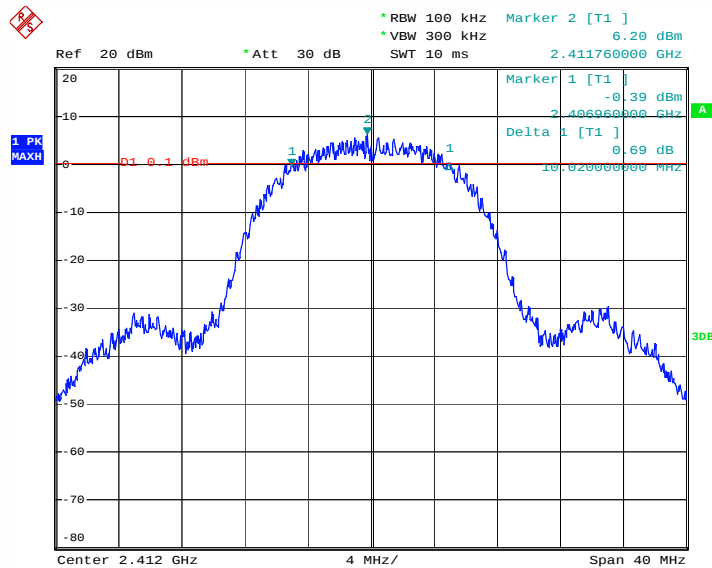
Frequency (MHz)	Measured Value (MHz)	Result
2412	16.30	PASS
2437	16.24	PASS
2462	16.30	PASS

802.11n HT20, MSC0

Frequency (MHz)	Measured Value (MHz)	Result
2412	17.50	PASS
2437	17.52	PASS
2462	17.50	PASS

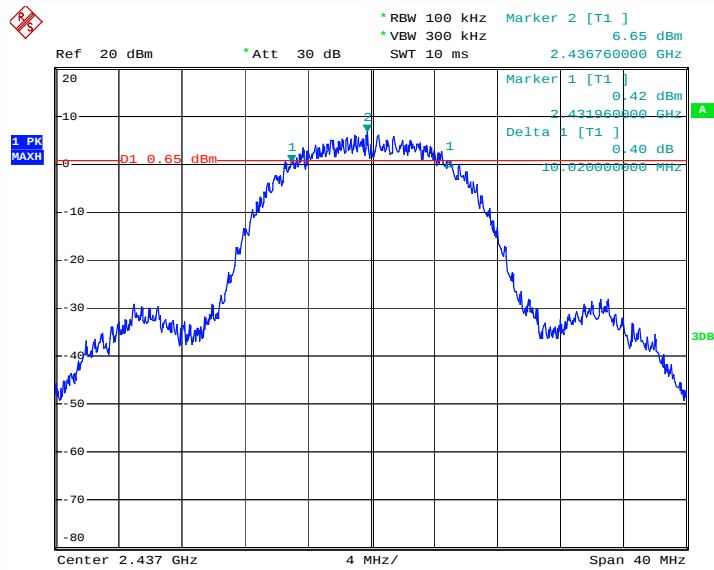
Please see the following plots (worst case):

802.11b, 1Mbps:



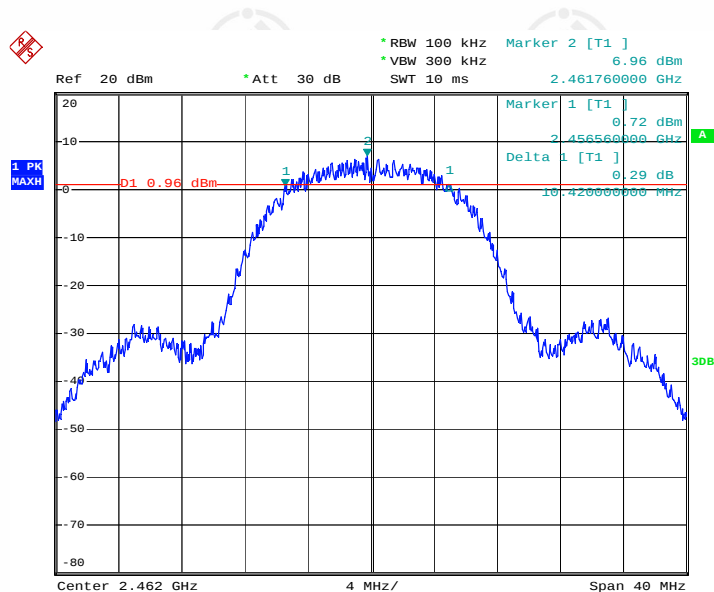
Date: 5.FEB.2015 11:16:54

Low channel



Date: 5.FEB.2015 11:19:24

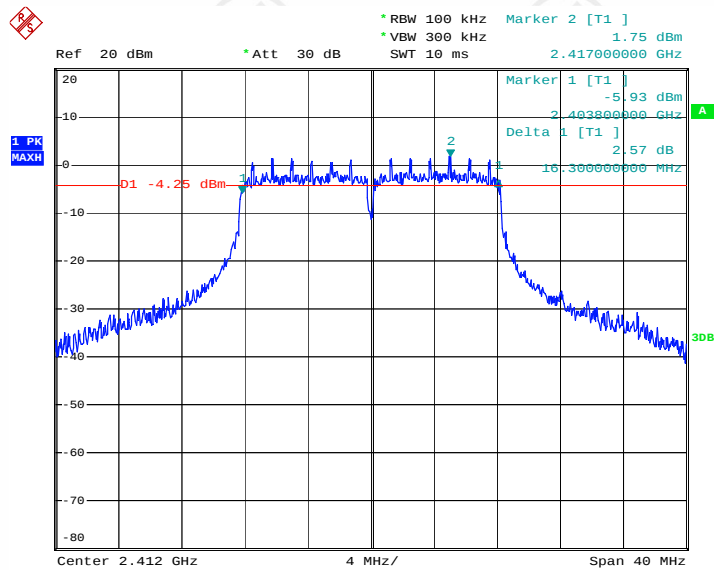
Middle channel



Date: 5.FEB.2015 11:22:18

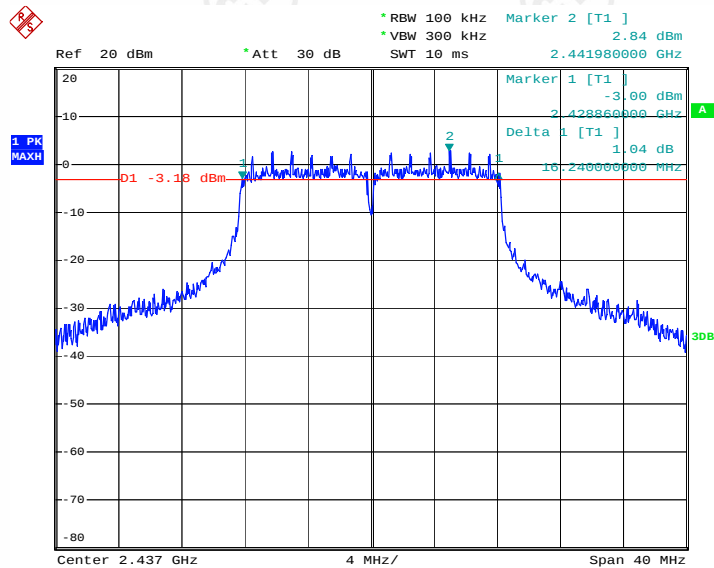
High channel

802.11g, 6Mbps:



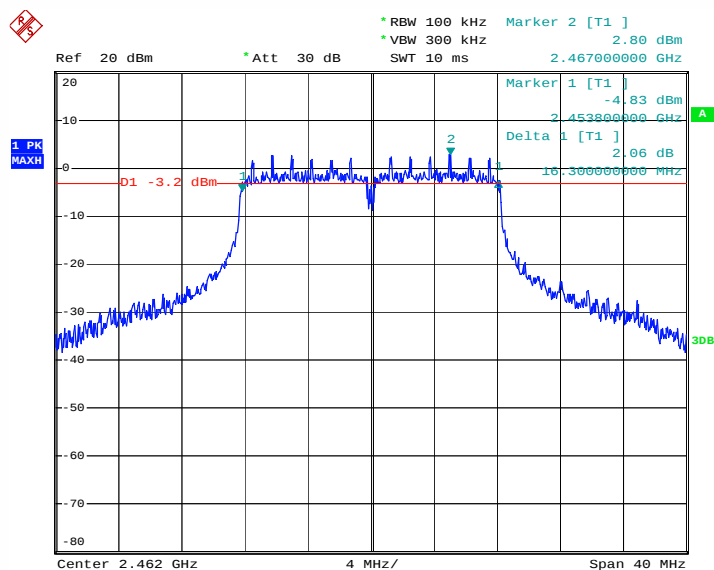
Date: 5.FEB.2015 13:11:35

Low channel



Date: 5.FEB.2015 13:13:59

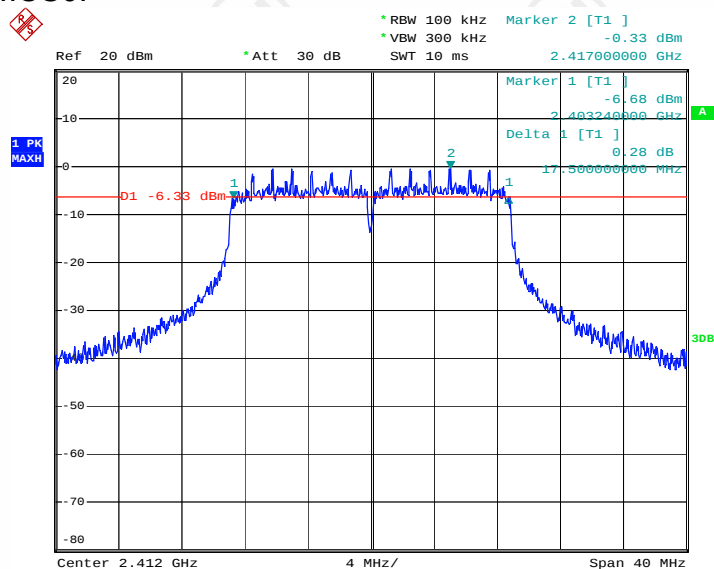
Middle channel



Date: 5.FEB.2015 13:15:34

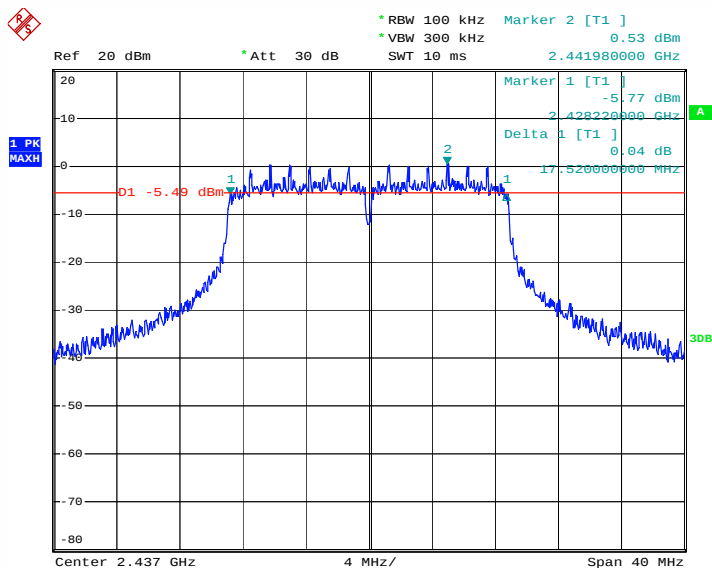
High channel

802.11n HT20, MCS0:



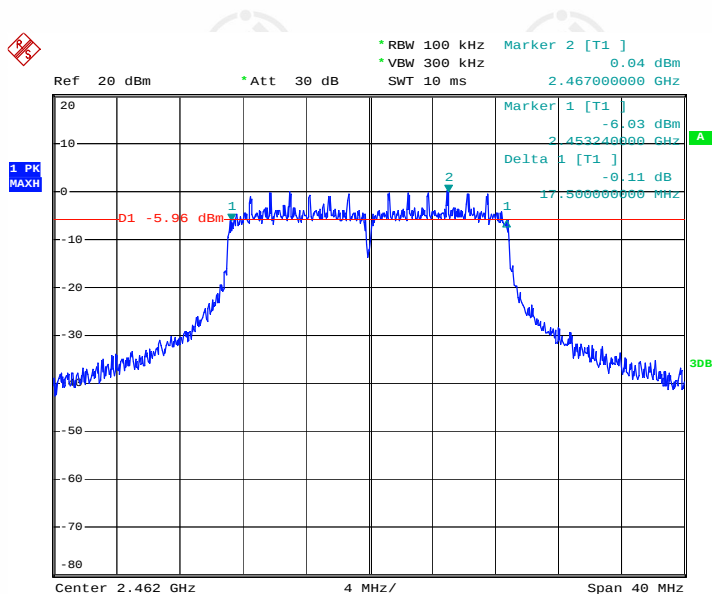
Date: 5.FEB.2015 13:44:17

Low channel



Date: 5.FEB.2015 14:21:33

Middle channel



Date: 5.FEB.2015 14:23:12

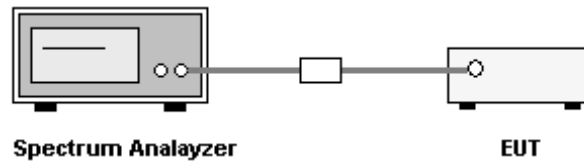
High channel

9. POWER SPECTRAL DENSITY

9.1. LIMITS

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

9.2. BLOCK DIAGRAM OF TEST SETUP



9.3. TEST PROCEDURE

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Set spectrum analyzer's RBW and VBW to applicable and set span wide enough to capture the whole plot, record the frequency of the max emission in the plot.
3. Set the frequency as center frequency, and set RBW = 3 kHz, VBW >RBW, sweep= (SPAN/3 kHz) with Peak detector in Max Hold mode.
4. Read the output peak data from the spectrum analyzer directly.

9.4. TEST RESULT

The test data of worst case are below:

802.11b, 1Mbps

Frequency (MHz)	Measured Value (dBm)	Result
2412	-8.01	PASS
2437	-7.74	PASS
2462	-7.26	PASS

802.11g, 6Mbps

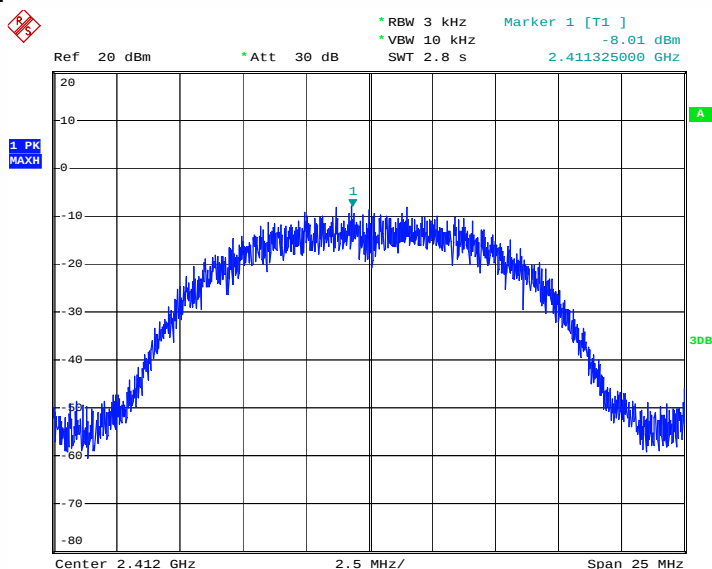
Frequency (MHz)	Measured Value (MHz)	Result
2412	-12.92	PASS
2437	-13.91	PASS
2462	-13.73	PASS

802.11n HT20, MSC0

Frequency (MHz)	Measured Value (MHz)	Result
2412	-16.67	PASS
2437	-15.53	PASS
2462	-15.23	PASS

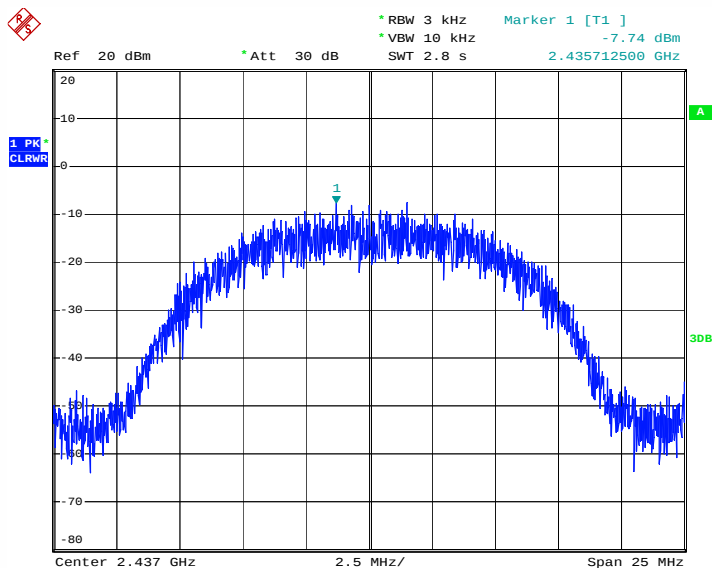
Please see the following plots (worst case):

802.11b, 1Mbps:



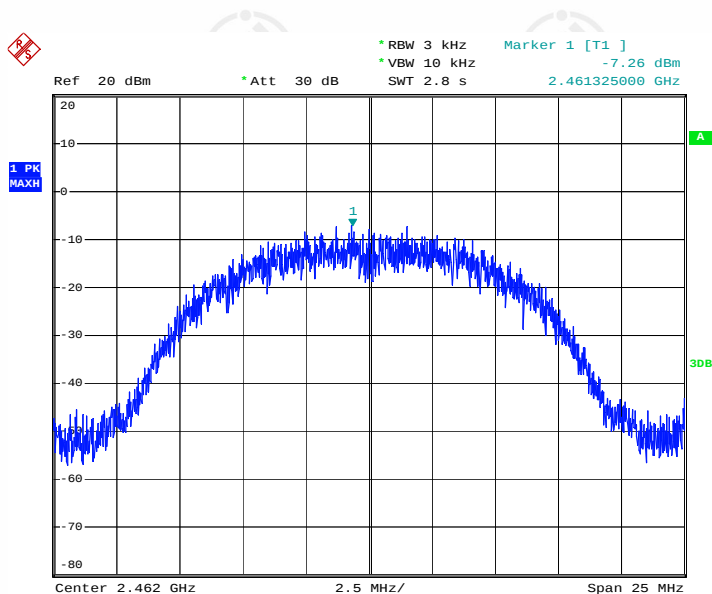
Date: 5.FEB.2015 11:40:18

Low channel



Date: 5.FEB.2015 11:41:54

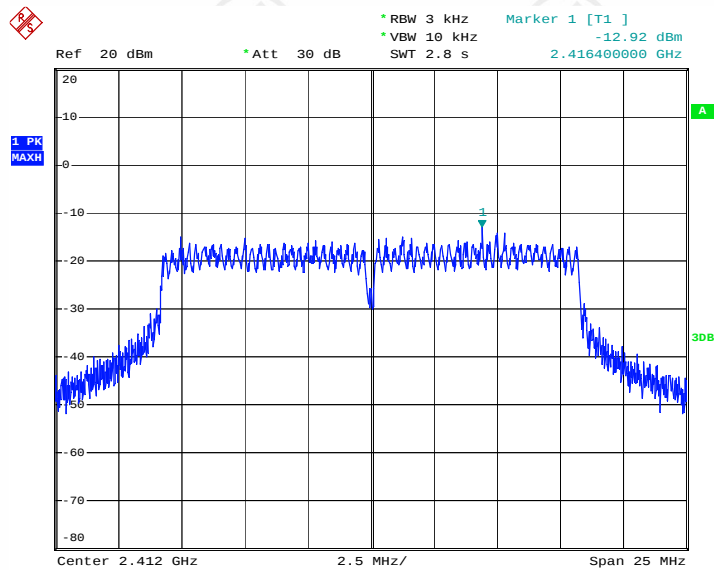
Middle channel



Date: 5.FEB.2015 11:42:48

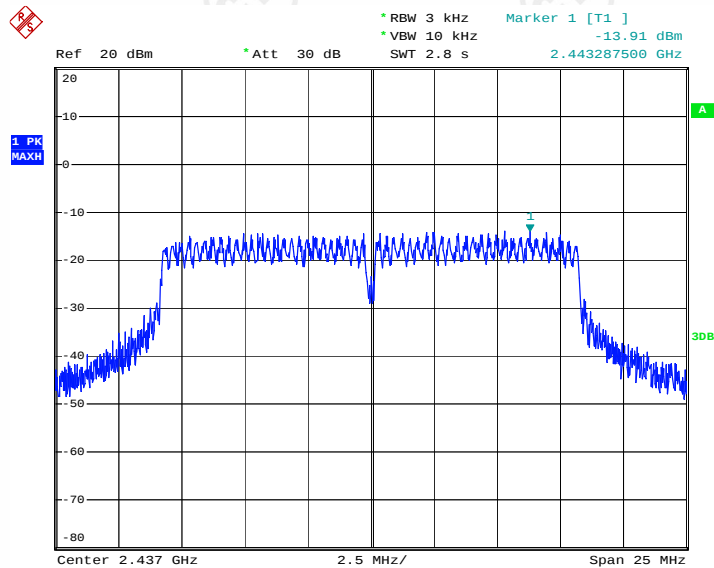
High channel

802.11g, 6Mbps:



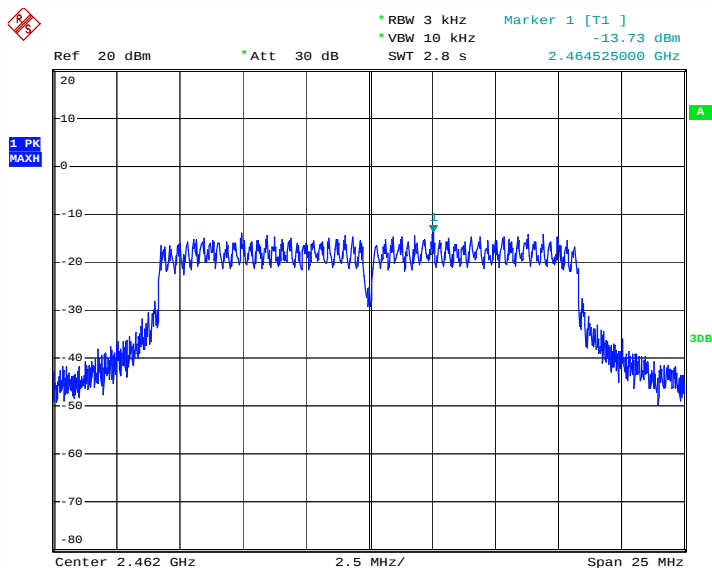
Date: 5.FEB.2015 11:44:26

Low channel



Date: 5.FEB.2015 11:47:18

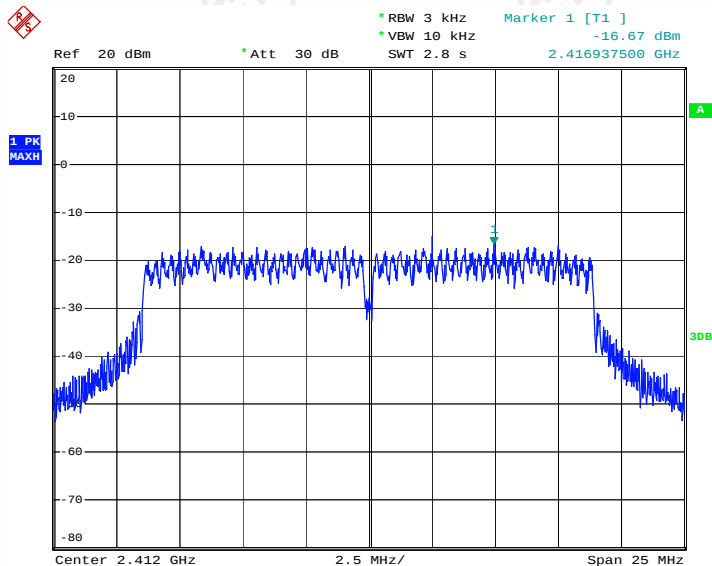
Middle channel



Date: 5.FEB.2015 11:43:37

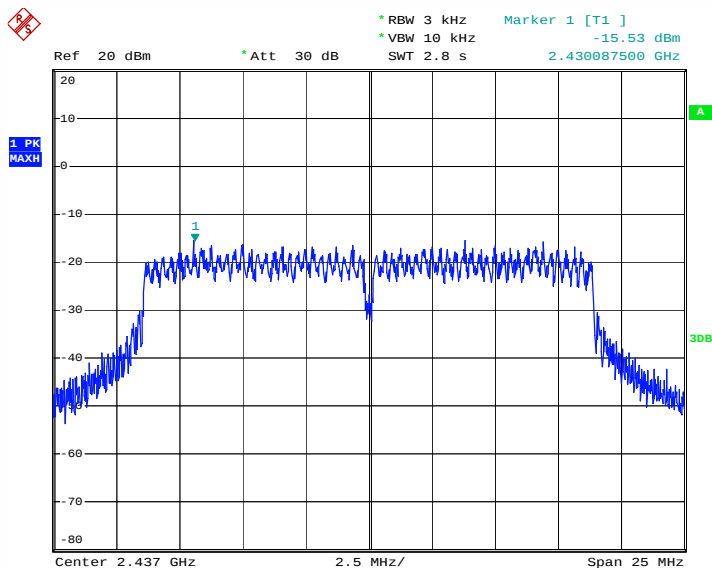
High channel

802.11n HT20, MCS0:



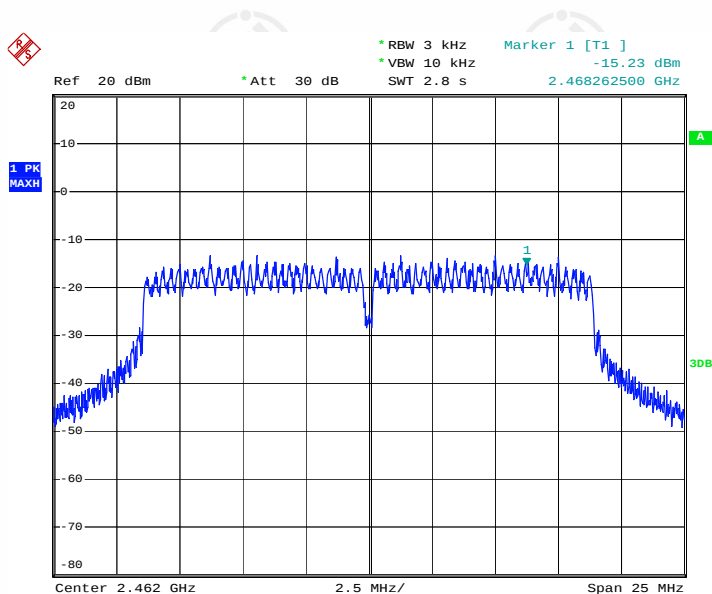
Date: 5.FEB.2015 11:48:35

Low channel



Date: 5.FEB.2015 11:49:36

Middle channel



Date: 5.FEB.2015 12:57:38

High channel

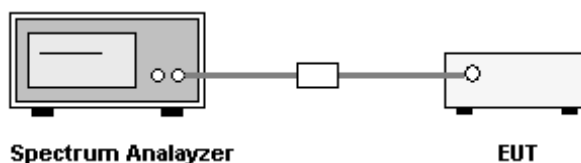
10. MAXIMUM PEAK CONDUCTED OUTPUT POWER MEASUREMENT

10.1. LIMITS

The maximum peak conducted output power of the intentional radiator shall not exceed the following:

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt (30dBm).

10.2. BLOCK DIAGRAM OF TEST SETUP



10.3. TEST PROCEDURE

1. The transmitter output is connected to the Spectrum analyzer. The Spectrum analyzer is set to the peak power detection.
2. Set spectrum analyzer's RBW and VBW to applicable and set span wide enough to capture the whole plot, record the frequency of the max emission in the plot.
3. Set the frequency as center frequency, and set RBW = 1 MHz, VBW >RBW, sweep= auto with Peak detector in Max Hold mode.

10.4. TEST RESULT

802.11b:

Frequency (MHz)	Data rate (Mbps)	Result (dBm)	Limit (dBm)
Low Channel: 2412	1	19.06	30
	5.5	20.15	30
	11	21.26	30
Middle Channel: 2437	1	19.31	30
	5.5	20.71	30
	11	21.78	30
High Channel: 2462	1	19.46	30
	5.5	20.95	30
	11	22.14	30

802.11g:

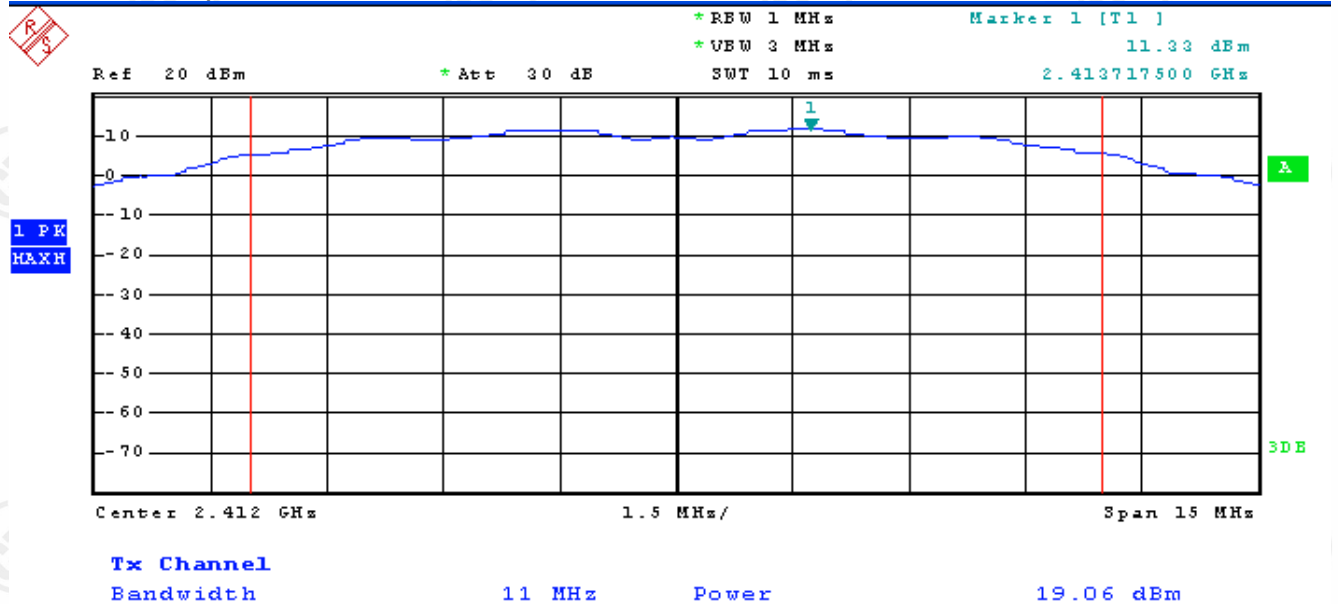
Frequency (MHz)	Data rate (Mbps)	Result (dBm)	Limit (dBm)
Low Channel: 2412	6	20.72	30
	18	20.14	30
	54	20.21	30
Middle Channel: 2437	6	21.80	30
	18	21.37	30
	54	21.40	30
High Channel: 2462	6	21.83	30
	18	21.37	30
	54	20.87	30

802.11n HT20:

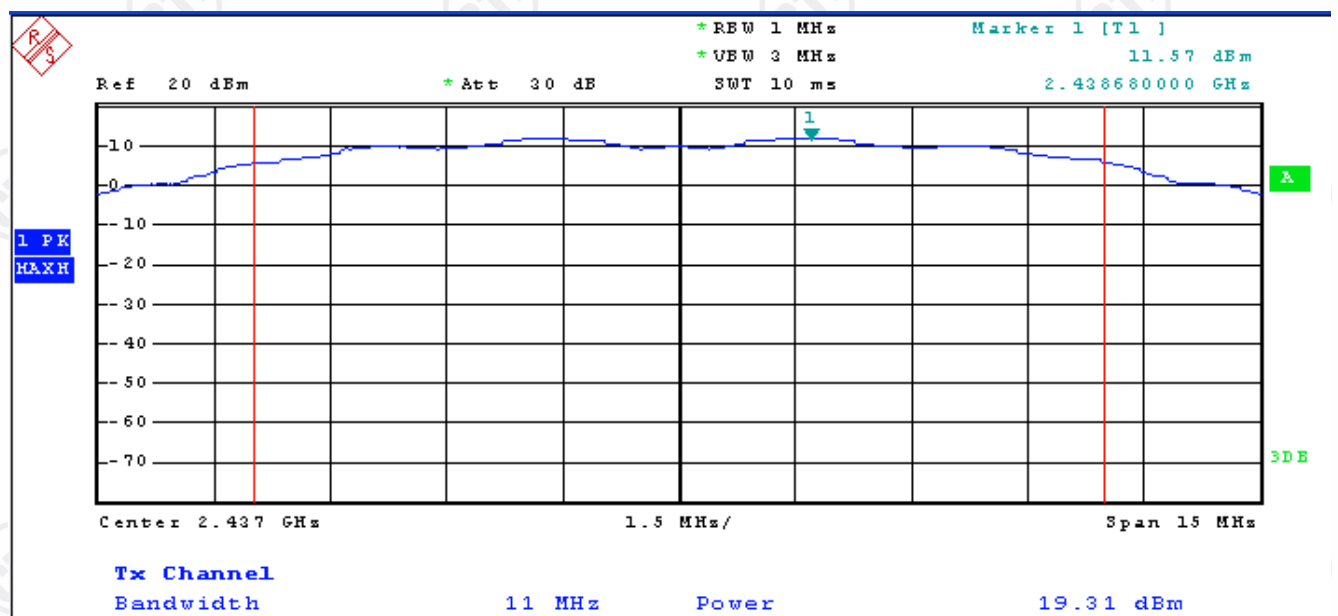
Frequency (MHz)	Data rate (Mbps)	Result (dBm)	Limit (dBm)
Low Channel: 2412	MCS0	19.54	30
	MCS3	18.15	30
	MCS7	17.88	30
Middle Channel: 2437	MCS0	19.82	30
	MCS3	18.88	30
	MCS7	18.78	30
High Channel: 2462	MCS0	19.72	30
	MCS3	18.34	30
	MCS7	18.88	30

Please see the following plots (Typical example)

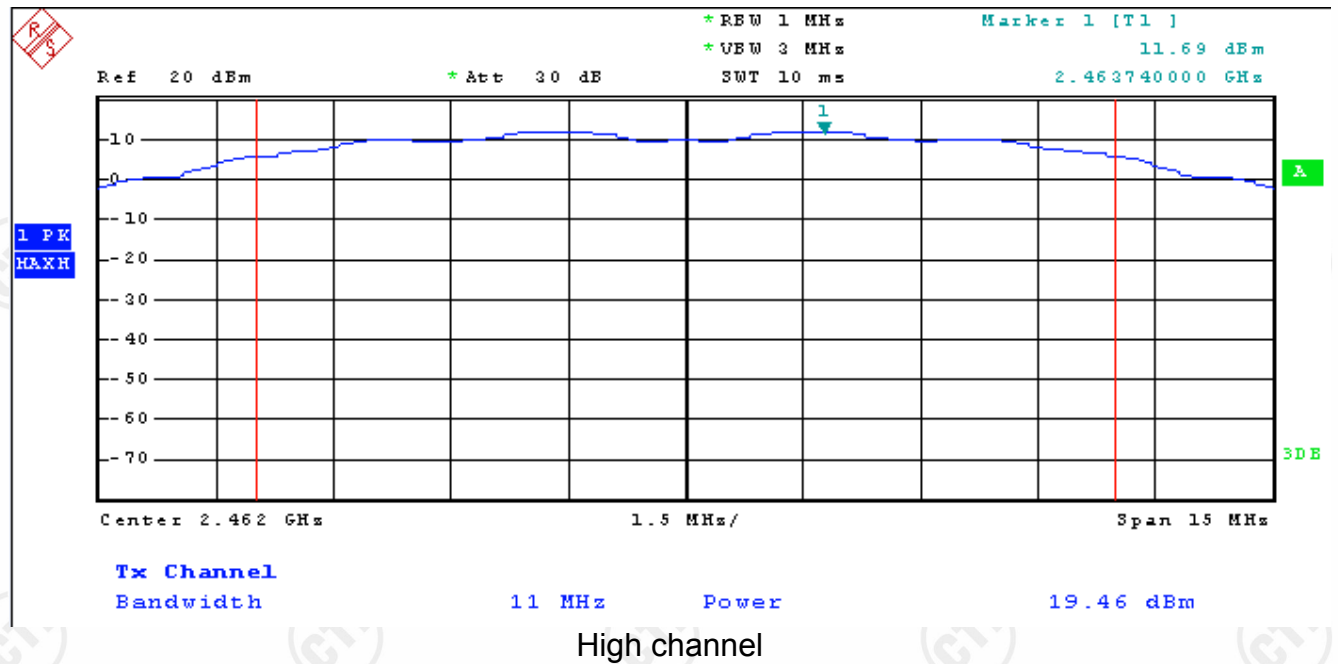
802.11b, 1Mbps:



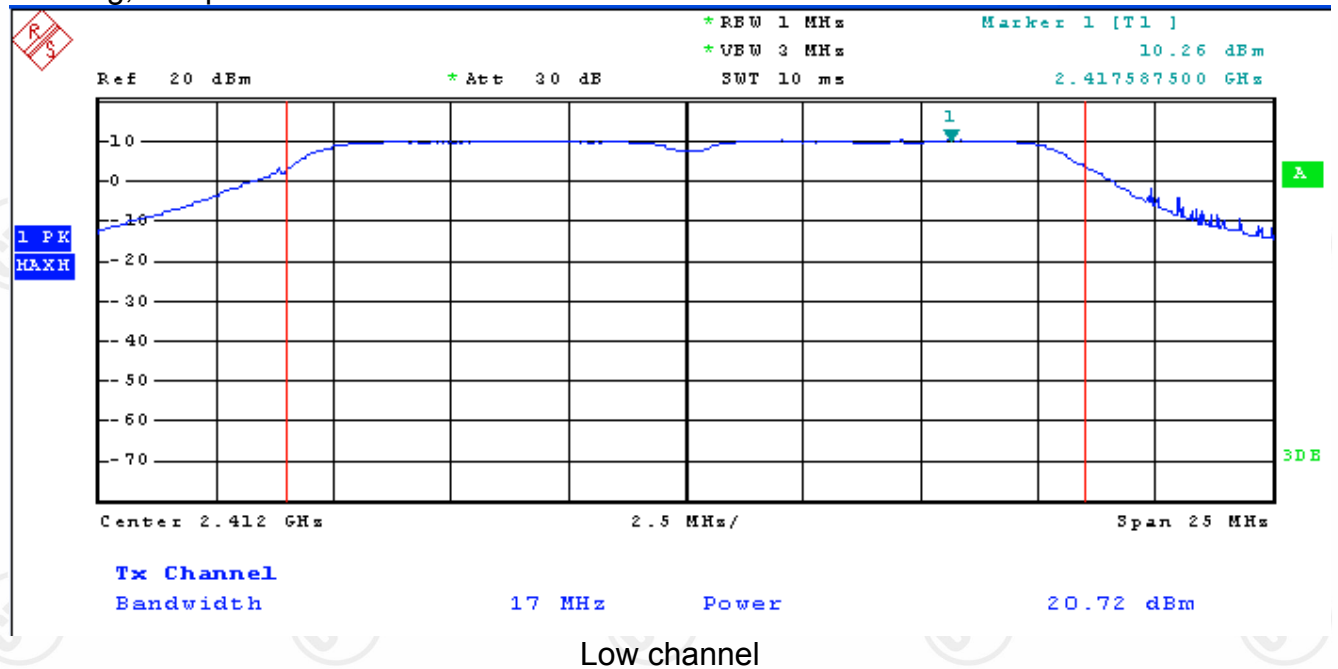
Low channel

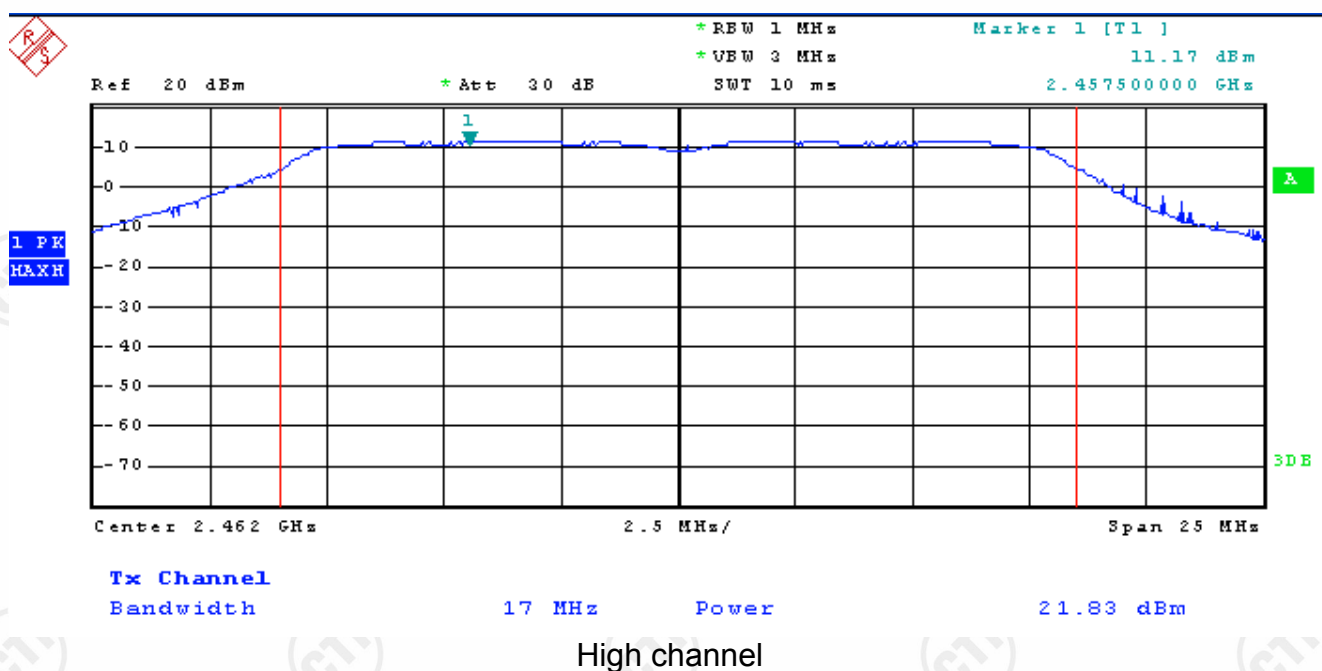
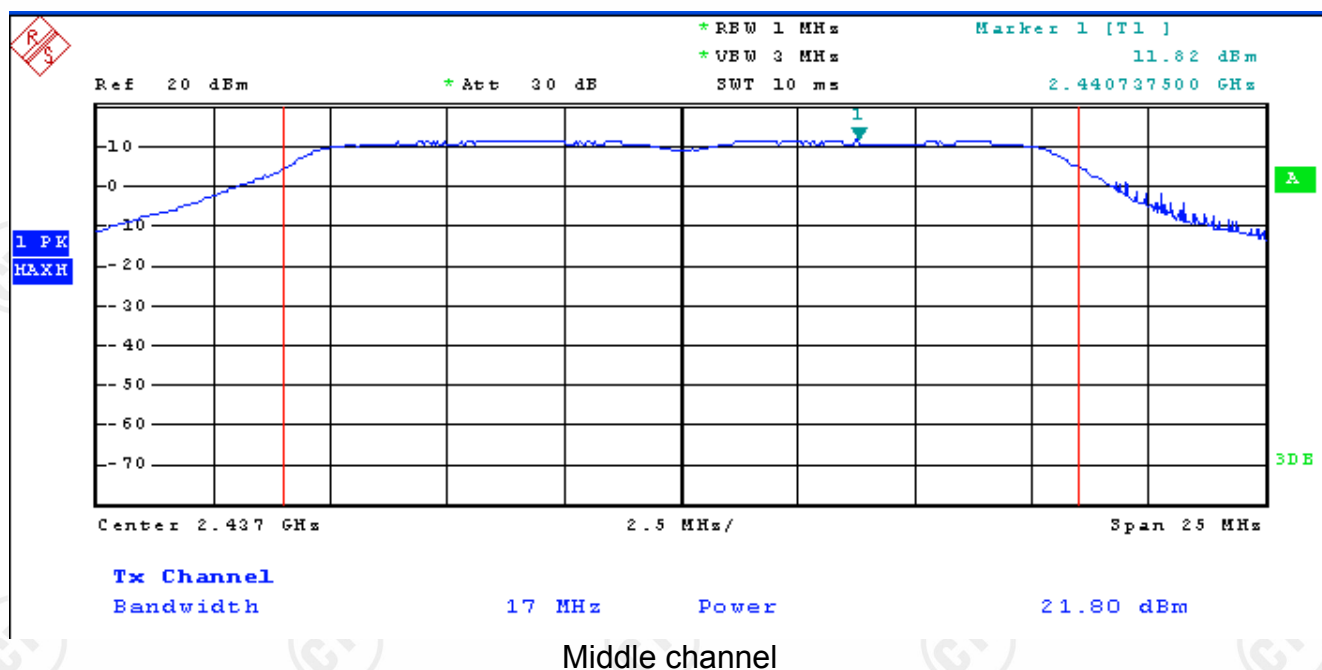


Middle channel

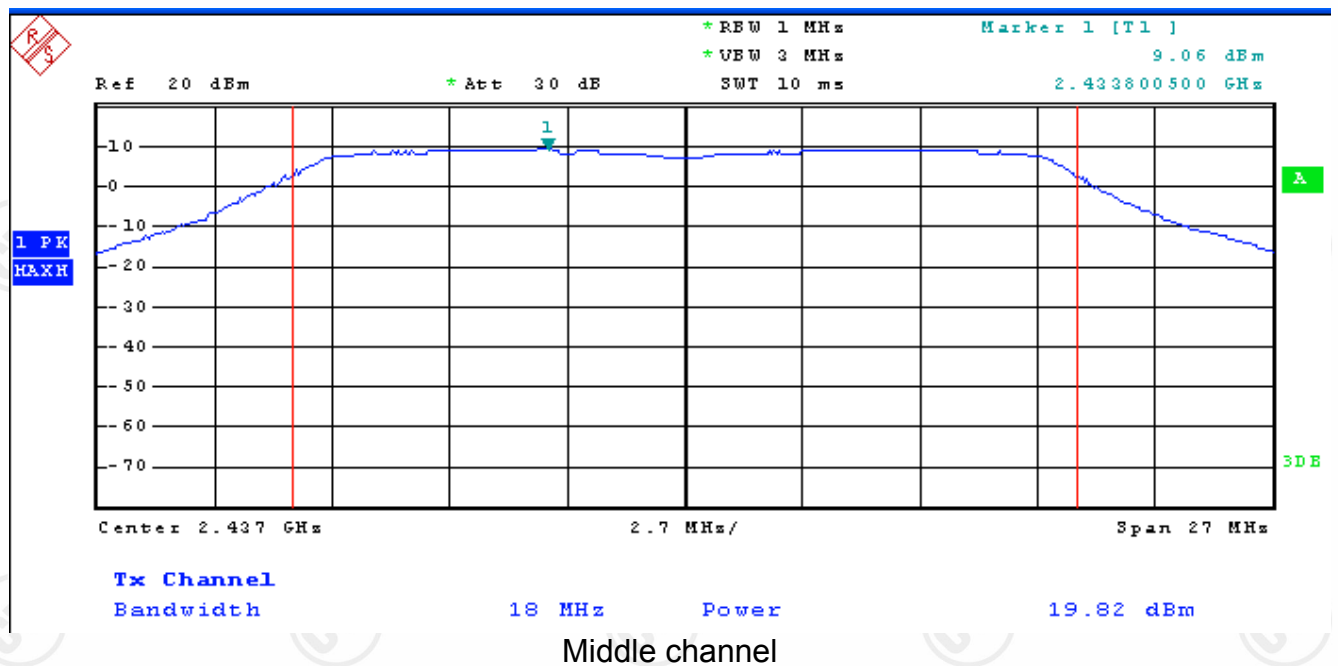
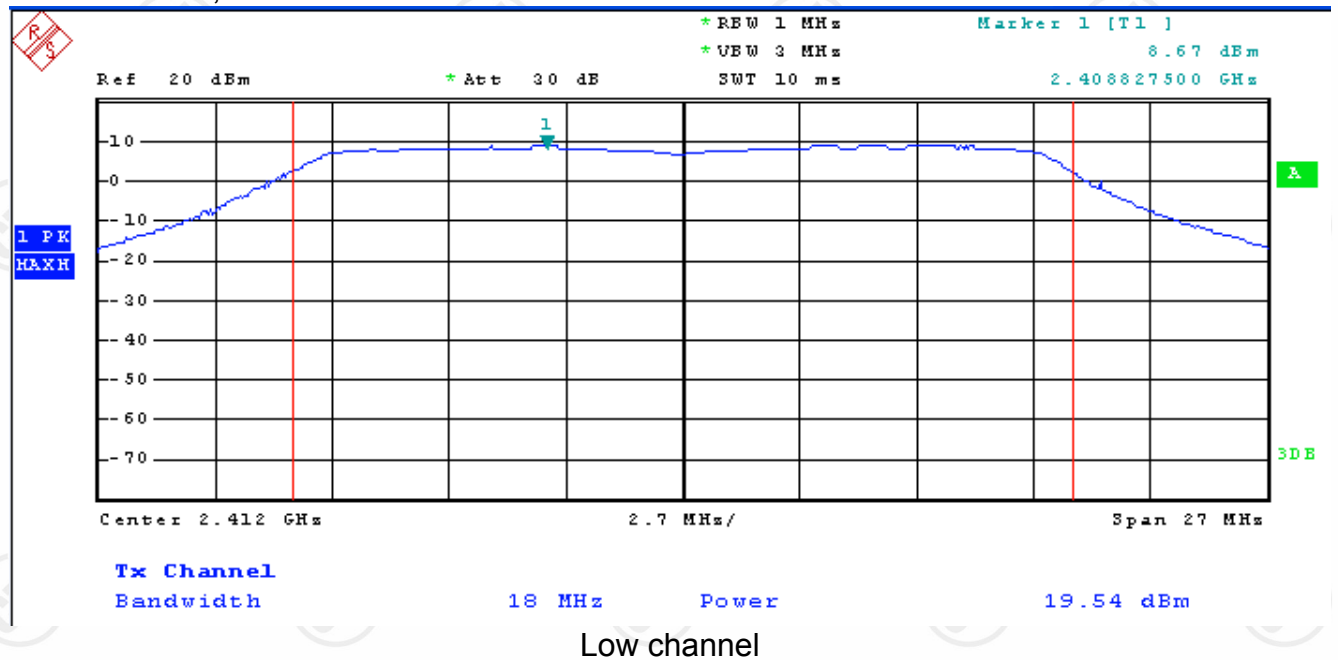


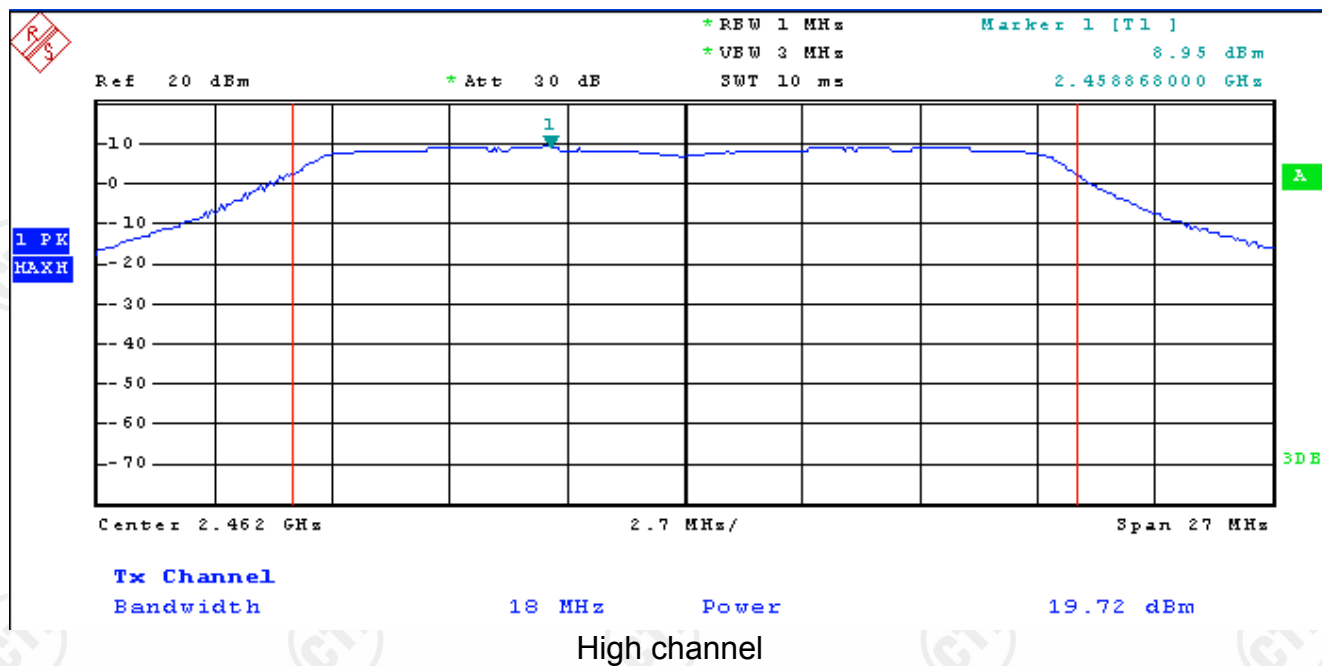
802.11g, 6Mbps:





802.11n HT20, MCS0:



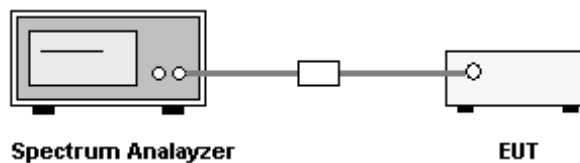


11. BAND EDGE EMISSION MEASUREMENT

11.1. LIMITS

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. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

11.2. BLOCK DIAGRAM OF TEST SETUP



11.3. TEST PROCEDURE

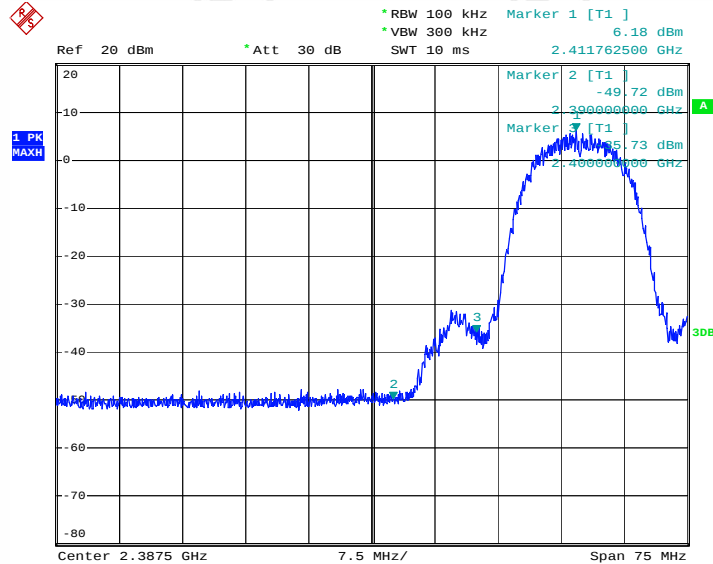
- Set to the maximum power setting and enable the EUT transmit continuously.
- Set RBW = 100 kHz, VBW = 300 kHz ($\geq$ RBW). Band edge emissions must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.
- Enable hopping function of the EUT and then repeat step a and b.
- Measure and record the results in the test report.

11.4. TEST RESULT

Worst case data attached.---please see the following plots.

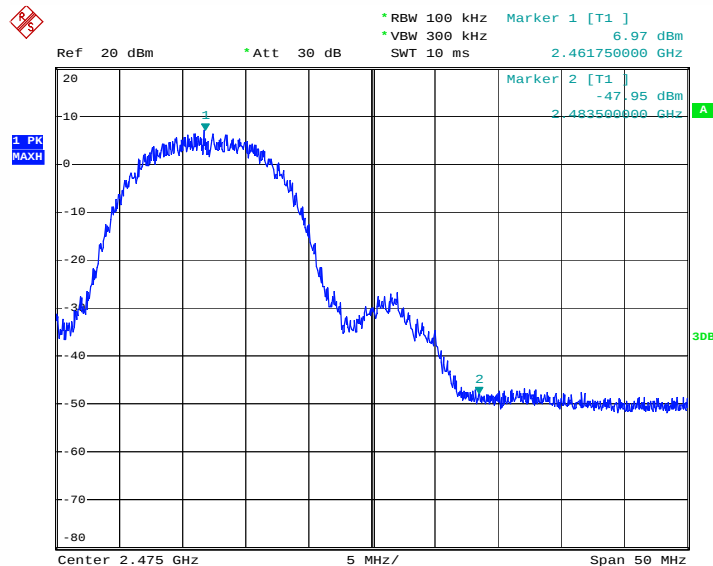
802.11b 1Mbps:

2412MHz:



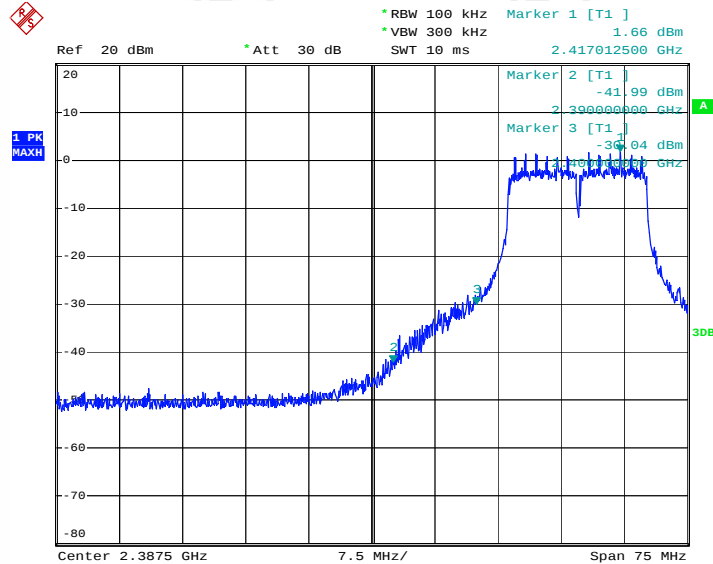
Date: 5.FEB.2015 11:31:33

2462MHz:



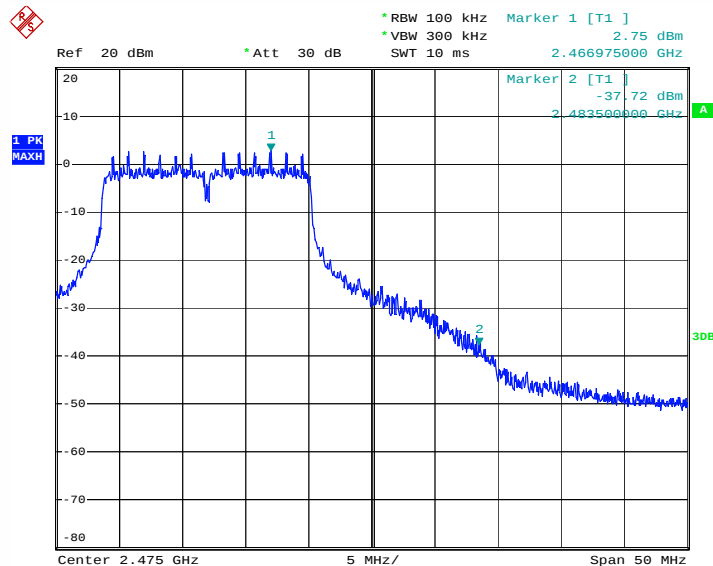
Date: 5.FEB.2015 11:33:09

802.11g, 6Mbps:
2412MHz:



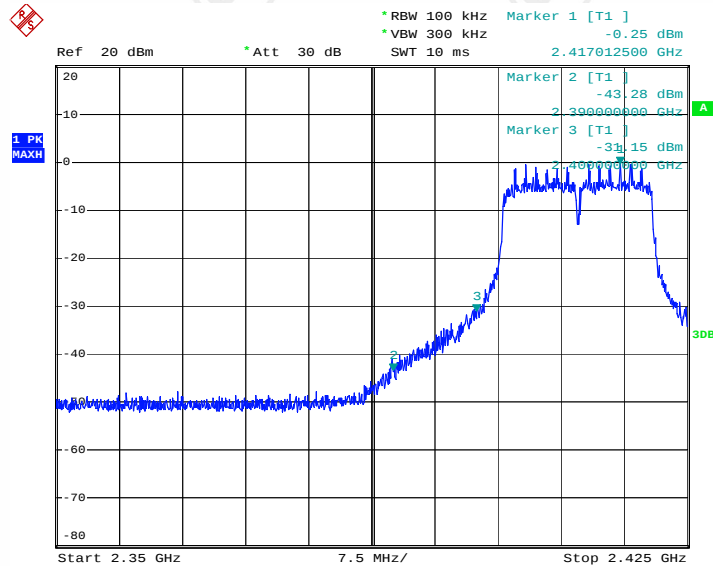
Date: 5.FEB.2015 13:20:29

2462MHz:



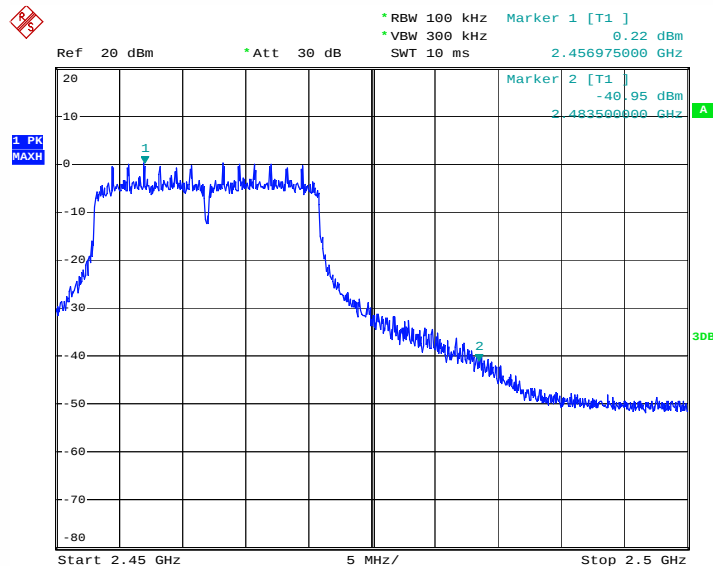
Date: 5.FEB.2015 13:22:38

802.11n HT20, MCS0:
2412MHz:



Date: 5.FEB.2015 13:42:24

2462MHz:



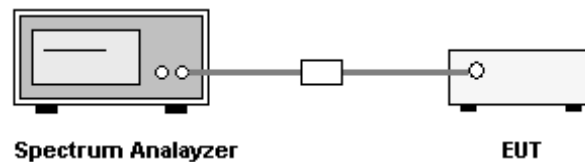
Date: 5.FEB.2015 13:40:56

12. SPURIOUS RF CONDUCTED EMISSIONS MEASUREMENT

12.1. LIMITS

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.

12.2. BLOCK DIAGRAM OF TEST SETUP



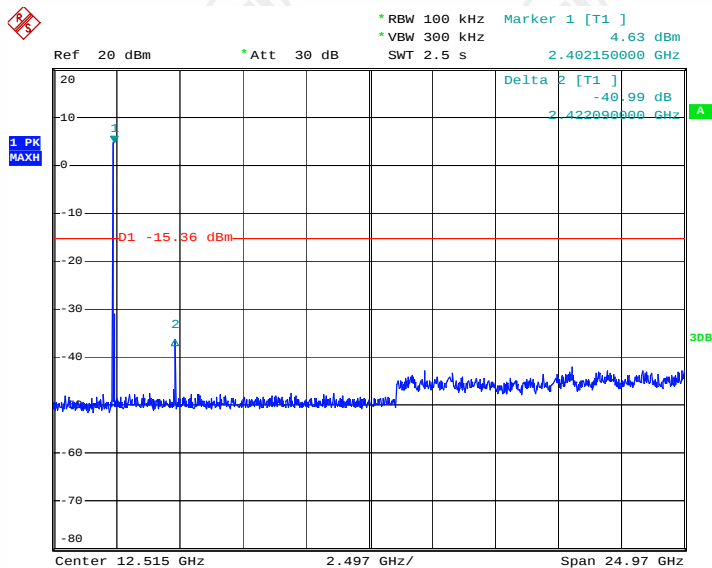
12.3. TEST PROCEDURE

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Set spectrum analyzer's RBW and VBW to applicable value with Peak in Max Hold.
3. Record the peak level of the in-band emission and all spurious emissions from the lowest frequency generated in the product up through the 10th harmonic.

12.4. TEST RESULT

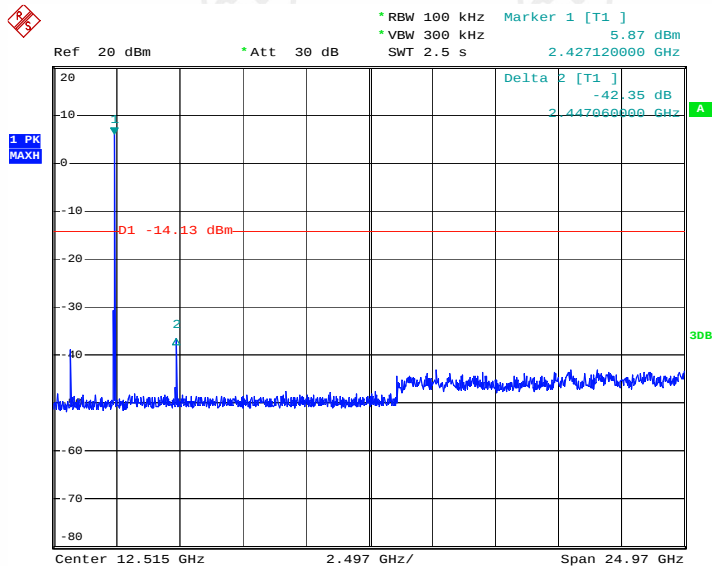
Worst case data---Please see the following plots.

802.11b, 1Mbps:



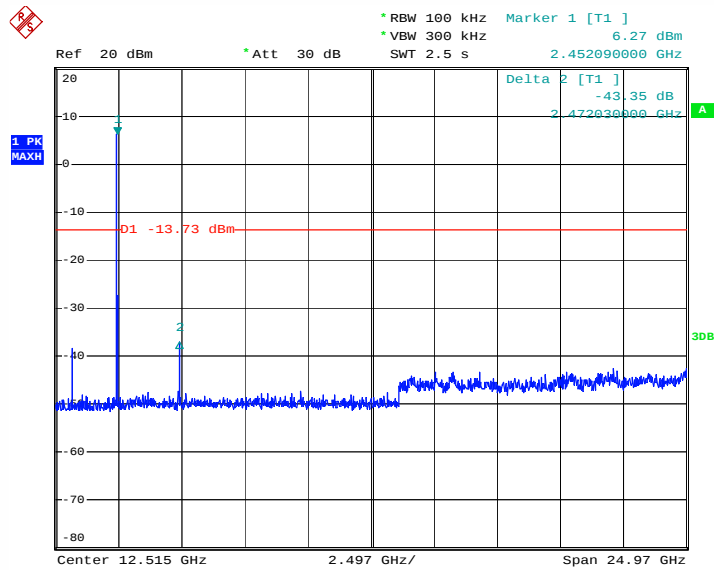
Date: 5.FEB.2015 11:38:10

Low channel



Date: 5.FEB.2015 11:36:12

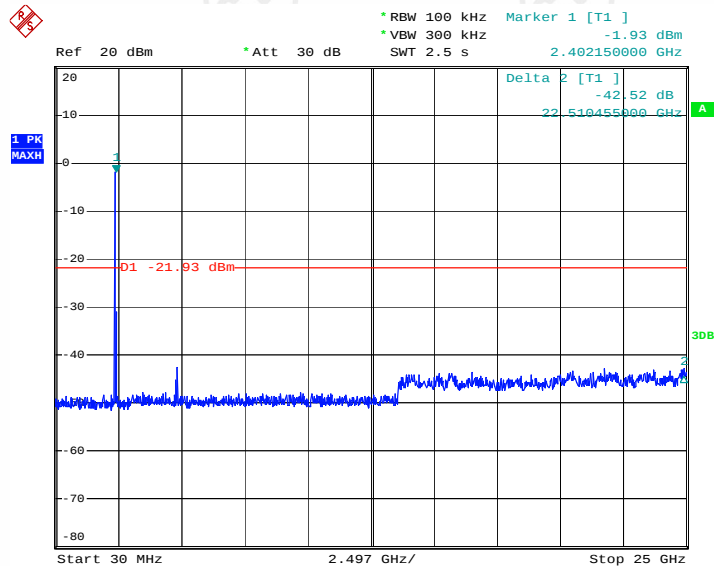
Middle channel



Date: 5.FEB.2015 11:34:44

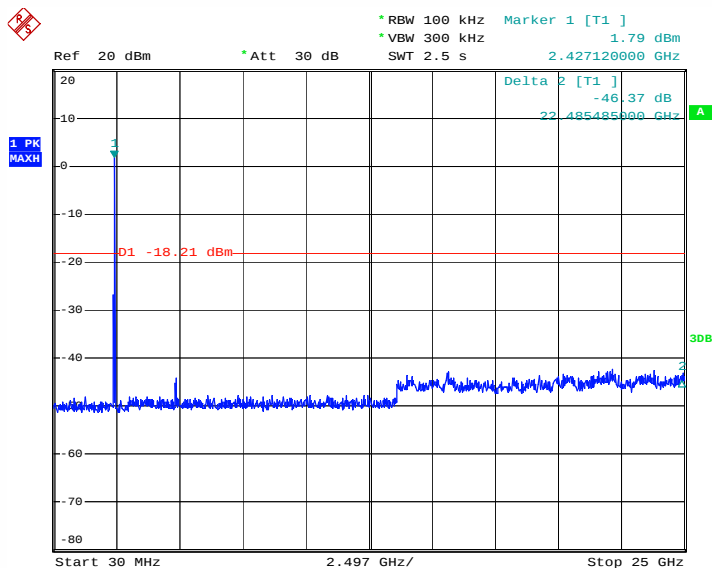
High channel

802.11g, 6Mbps:



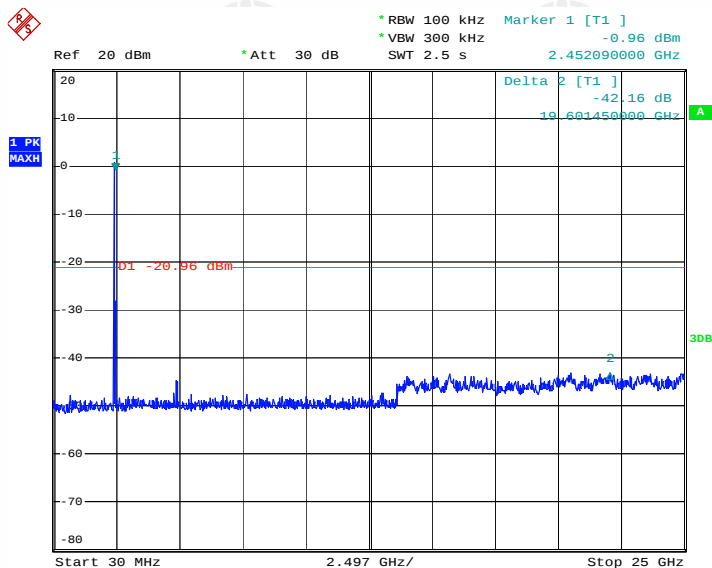
Date: 5.FEB.2015 13:29:16

Low channel



Date: 5.FEB.2015 13:27:17

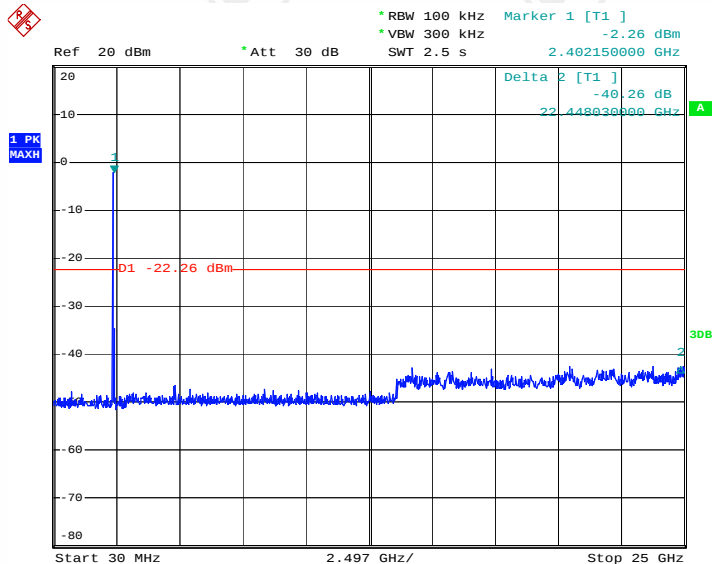
Middle channel



Date: 5.FEB.2015 13:31:04

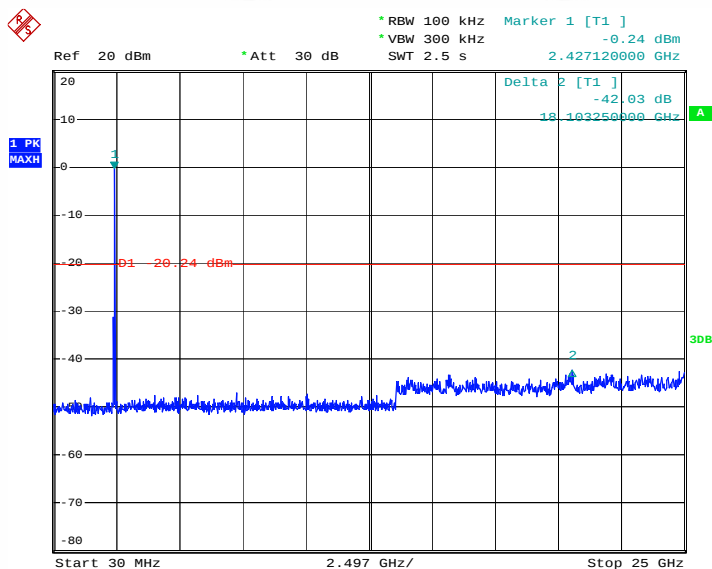
High channel

802.11n HT20, MCS0:



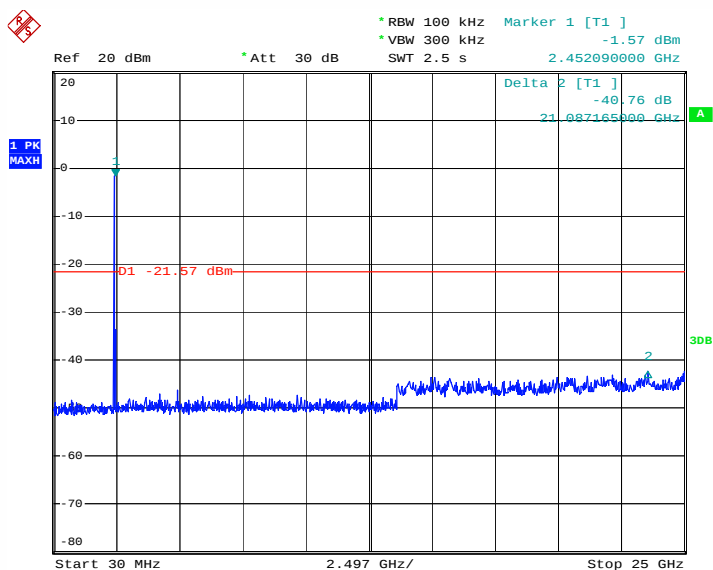
Date: 5.FEB.2015 13:34:18

Low channel



Date: 5.FEB.2015 13:38:22

Middle channel



Date: 5.FEB.2015 13:35:55

High channel

13. RADIATED EMISSIONS MEASUREMENT

13.1. LIMITS

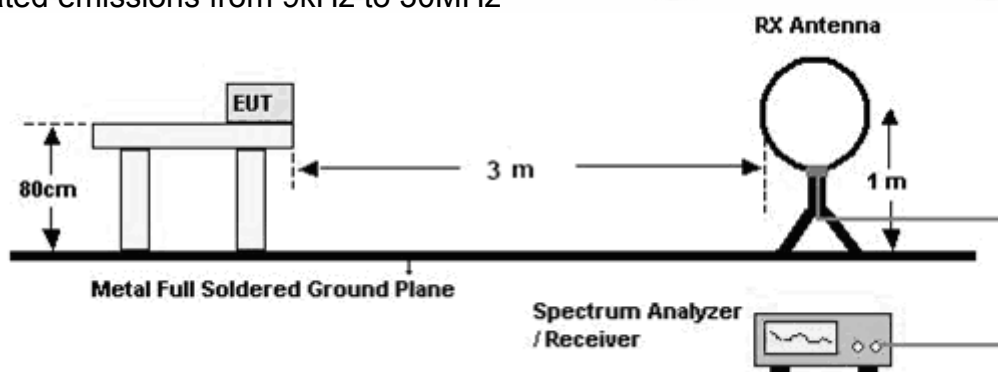
The field strength of any emissions, which appear outside of operating frequency band and restricted band specified on 15.205(a), shall not exceed the general radiated emission limits as below.

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Distance (m)
0.009-0.490	$2400/F(\text{kHz})$	300
0.490-1.705	$24000/F(\text{kHz})$	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

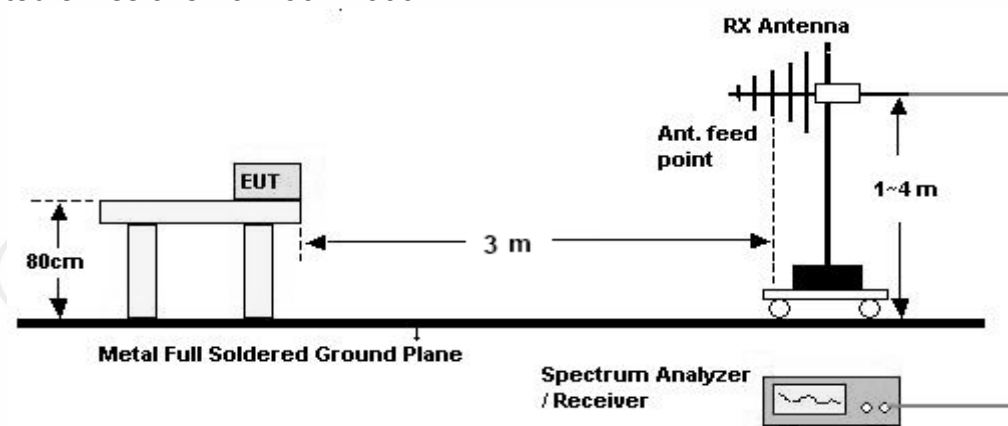
Note: the tighter limit applies at the band edges.

13.2. BLOCK DIAGRAM OF TEST SETUP

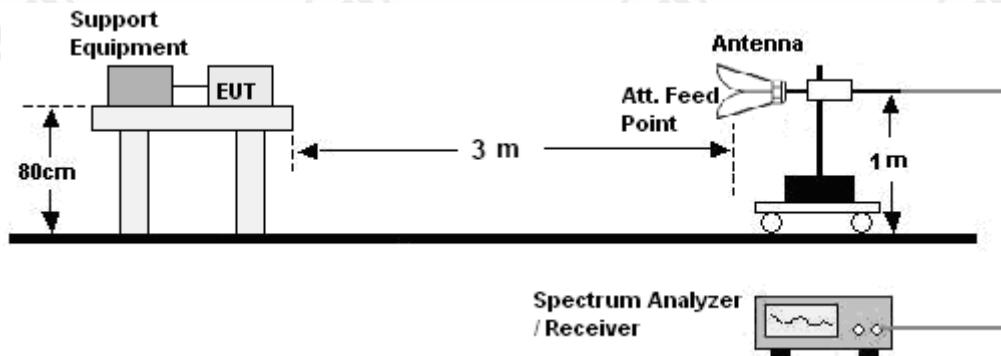
For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30 - 1000MHz



For radiated emissions from 1GHz to 25GHz



13.3. TEST PROCEDURE

Below 30MHz:

- The product is placed on a turntable 0.8 meters above the ground in the chamber, 1 meter away from the antenna (loop antenna). The maximum values of the field strength are recorded by adjusting the polarizations of the test antenna and rotating the turntable.
- For each suspected emission, the product was arranged to its worst case and then turn table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test frequency analyzer system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

30MHz ~ 1GHz:

- The Product was placed on the non-conductive turntable 0.8m above the ground at a chamber.
- Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 100 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
- For each frequency whose maximum record was higher or close to limit, measure its QP value (120 kHz RBW): vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

Above 1GHz:

- The EUT was placed on the non-conductive turntable 0.8 m above the ground at a chamber.
- Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 1MHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.

13.4. TEST RESULT

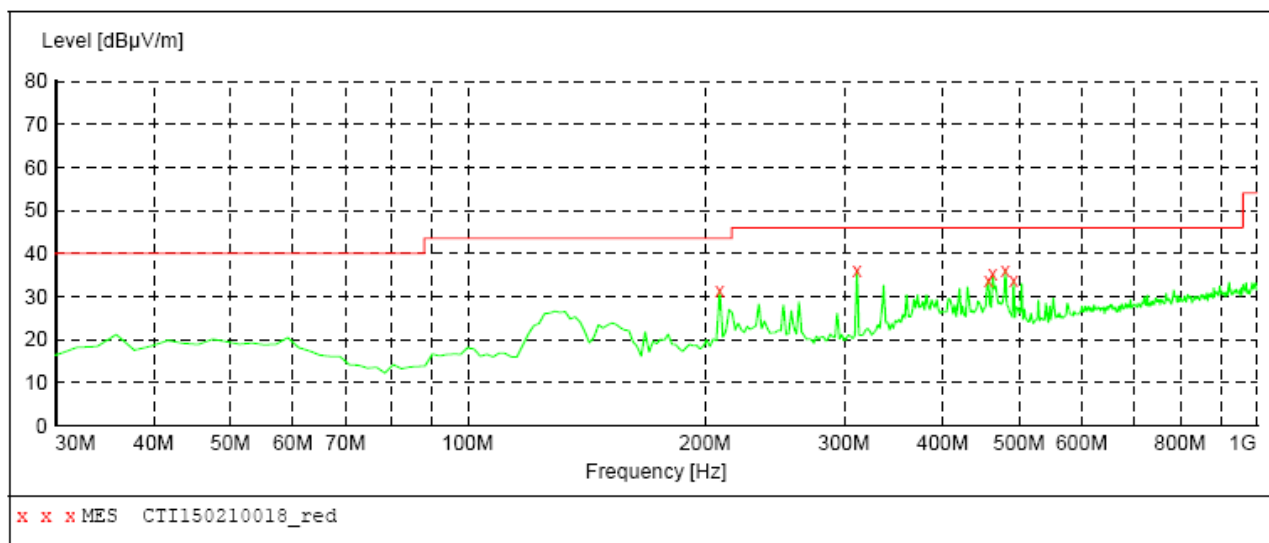
Below 30MHz:

No emissions were found higher than the background below 30MHz and background is lower than the limit, so it deems to compliance with the limit without recorded.

30MHz ~ 1GHz:

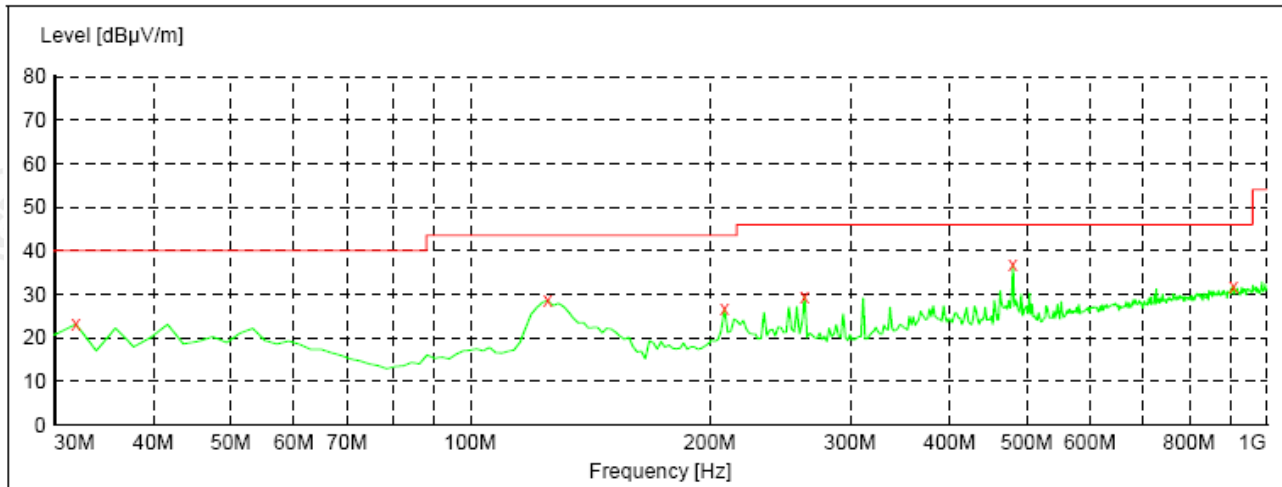
The test data of low channel, middle channel and high channel in IEEE 802.11b/g/n are almost same in frequency bands 30MHz to 1GHz and the data of low channel in IEEE 802.11b of 1Mbps are chosen as representative in below:

H:



Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
208.480000	31.40	13.6	43.5	12.1	QP	100.0	10.00	HORIZONTAL
311.300000	36.10	16.2	46.0	9.9	QP	100.0	299.00	HORIZONTAL
456.800000	33.90	19.2	46.0	12.1	QP	100.0	216.00	HORIZONTAL
462.620000	35.20	19.4	46.0	10.8	QP	200.0	358.00	HORIZONTAL
480.080000	36.10	19.8	46.0	9.9	QP	200.0	358.00	HORIZONTAL
491.720000	33.60	20.0	46.0	12.4	QP	200.0	358.00	HORIZONTAL

V:



x x x MES CTI150210020_red

Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
31.940000	23.10	11.9	40.0	16.9	QP	100.0	39.00	VERTICAL
125.060000	28.50	11.0	43.5	15.0	QP	100.0	10.00	VERTICAL
208.480000	26.60	13.6	43.5	16.9	QP	200.0	68.00	VERTICAL
262.800000	29.60	14.7	46.0	16.4	QP	200.0	12.00	VERTICAL
480.080000	36.70	19.8	46.0	9.3	QP	100.0	299.00	VERTICAL
908.820000	31.90	26.3	46.0	14.1	QP	100.0	341.00	VERTICAL

Above 1GHz:

The test data of worst case are below:

IEEE 802.11b, 1Mbps:

Frequency (MHz)	Measurement (dBuV/m)	Limit (dBuV/m)	Detector Type	Antenna (H/V)	Result (P/F)
Low channel (2412MHz)					
2390.0	35.26	74	PK	H	P
2400.0	50.25	74	PK	H	P
4824.0	44.36	74	PK	H	P
2390.0	35.69	74	PK	V	P
2400.0	50.98	74	PK	V	P
4824.0	45.29	74	PK	V	P
Middle channel (2437MHz)					
4874.0	44.36	74	PK	H	P
4874.0	46.19	74	PK	V	P
High channel (2462MHz)					
2483.5	42.96	74	PK	H	P
4924.0	44.15	74	PK	H	P
2483.5	43.14	74	PK	V	P
4924.0	45.22	74	PK	V	P

IEEE 802.11g, 6Mbps:

Frequency (MHz)	Measurement (dBuV/m)	Limit (dBuV/m)	Detector Type	Antenna (H/V)	Result (P/F)
Low channel (2412MHz)					
2390.0	35.12	74	PK	H	P
2400.0	49.62	74	PK	H	P
4824.0	42.33	74	PK	H	P
2390.0	36.12	74	PK	V	P
2400.0	50.01	74	PK	V	P
4824.0	43.66	74	PK	V	P
Middle channel (2437MHz)					
4874.0	41.69	74	PK	H	P
4874.0	42.96	74	PK	V	P
High channel (2462MHz)					
2483.5	42.66	74	PK	H	P
4924.0	42.96	74	PK	H	P
2483.5	43.12	74	PK	V	P
4924.0	44.17	74	PK	V	P

IEEE 802.11n HT20, MCS0:

Frequency (MHz)	Measurement (dBuV/m)	Limit (dBuV/m)	Detector Type	Antenna (H/V)	Result (P/F)
Low channel (2412MHz)					
2390.0	35.63	74	PK	H	P
2400.0	50.12	74	PK	H	P
4824.0	40.96	74	PK	H	P
2390.0	36.01	74	PK	V	P
2400.0	50.67	74	PK	V	P
4824.0	42.33	74	PK	V	P
Middle channel (2437MHz)					
4874.0	42.67	74	PK	H	P
4874.0	43.15	74	PK	V	P
High channel (2462MHz)					
2483.5	41.96	74	PK	H	P
4924.0	42.36	74	PK	H	P
2483.5	43.87	74	PK	V	P
4924.0	43.01	74	PK	V	P

Remark:

1. The above tables show that the frequencies peak data are all below the average limit, so the average data of these frequencies are deemed to fulfill the average limits and not reported.
2. No emission found from 18GHz to 25GHz.
3. All outside of operating frequency band and restricted band specified are below 15.209.

14. CONDUCTED EMISSION TEST

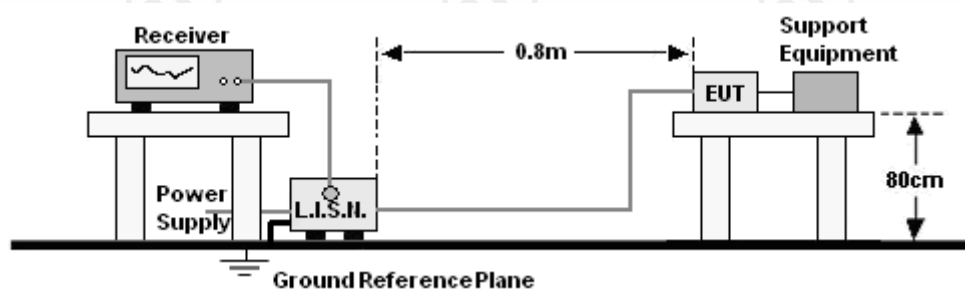
14.1. LIMITS

Limits for Class B digital devices

Frequency range (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50

- NOTE:** 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz.

14.2. BLOCK DIAGRAM OF TEST SETUP



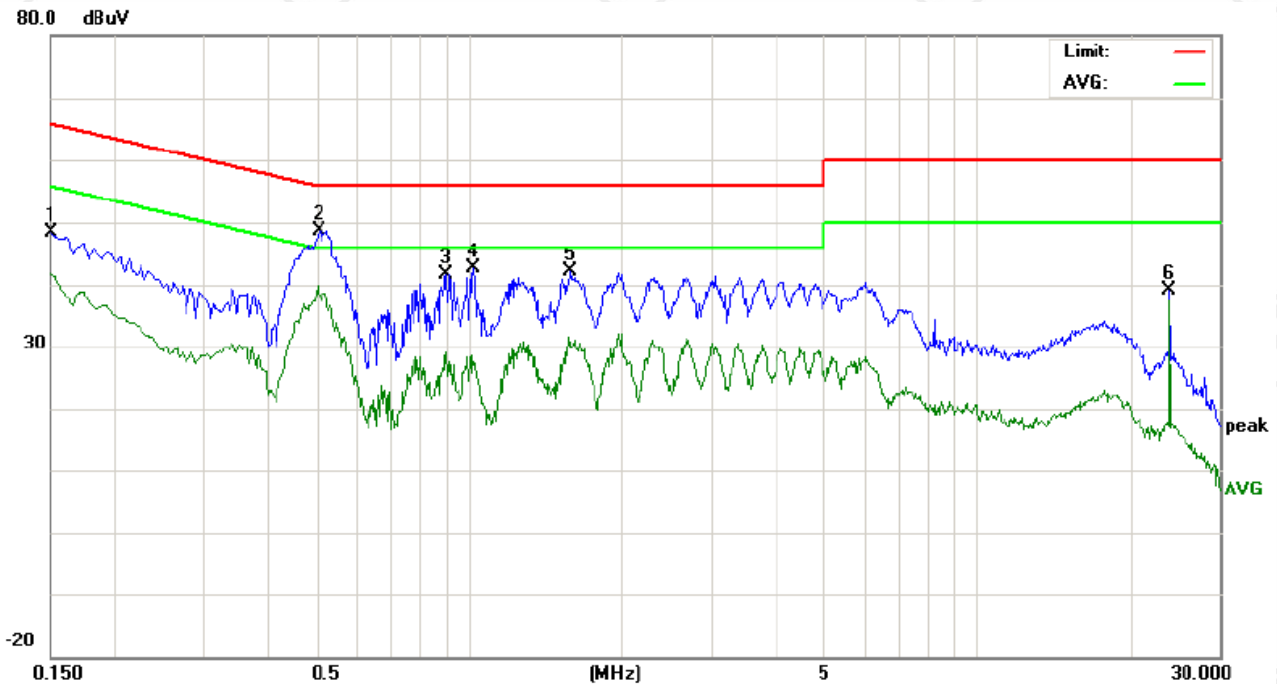
14.3. PROCEDURE OF CONDUCTED EMISSION TEST

- The Product was placed on a nonconductive table above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

14.4. GRAPHS AND DATA

Product : Smart Security Light **Model/Type reference** : SPL06-07A1W1-BKT-K1
Power : AC 120V, 60Hz **Temperature** : 21℃
Mode : WIFI **Humidity** : 52%

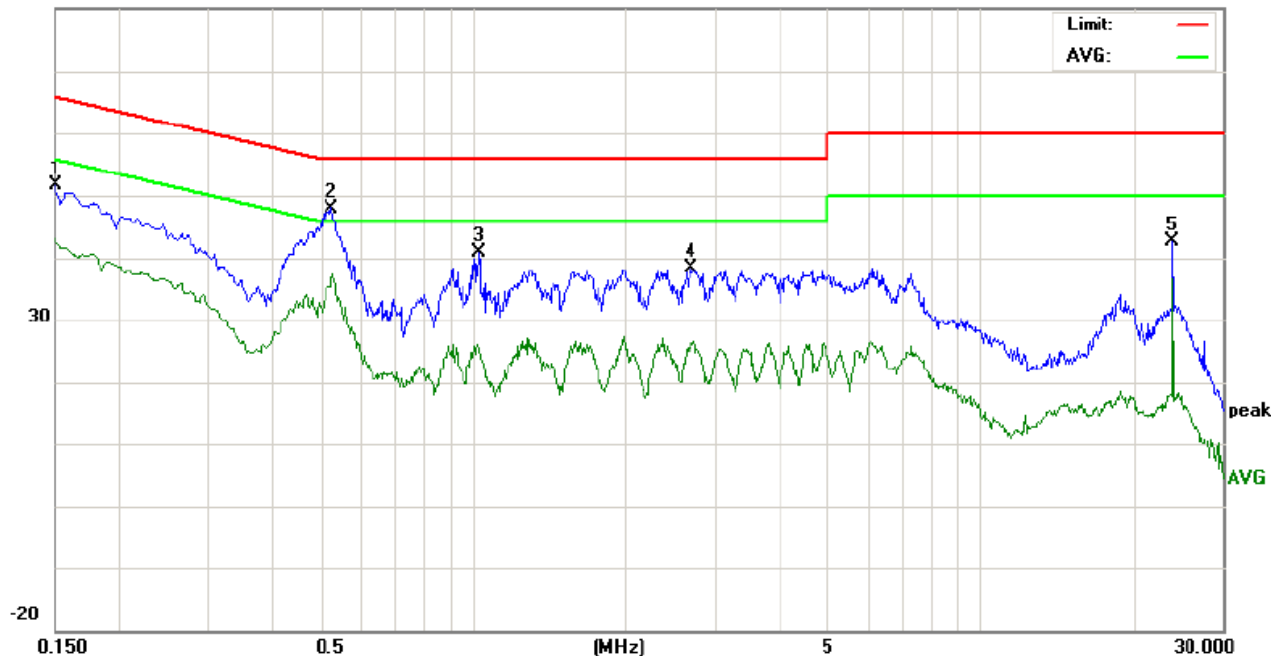
L:



No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1500	38.52		31.97	9.90	48.42		41.87	65.99	55.99	-17.57	-14.12	P	
2	0.5100	38.75		28.33	9.90	48.65		38.23	56.00	46.00	-7.35	-7.77	P	
3	0.9020	31.82		19.20	9.90	41.72		29.10	56.00	46.00	-14.28	-16.90	P	
4	1.0260	32.65		17.22	9.90	42.55		27.12	56.00	46.00	-13.45	-18.88	P	
5	1.5900	32.11		21.05	9.90	42.01		30.95	56.00	46.00	-13.99	-15.05	P	
6	23.9780	28.92		27.02	10.32	39.24		37.34	60.00	50.00	-20.76	-12.66	P	

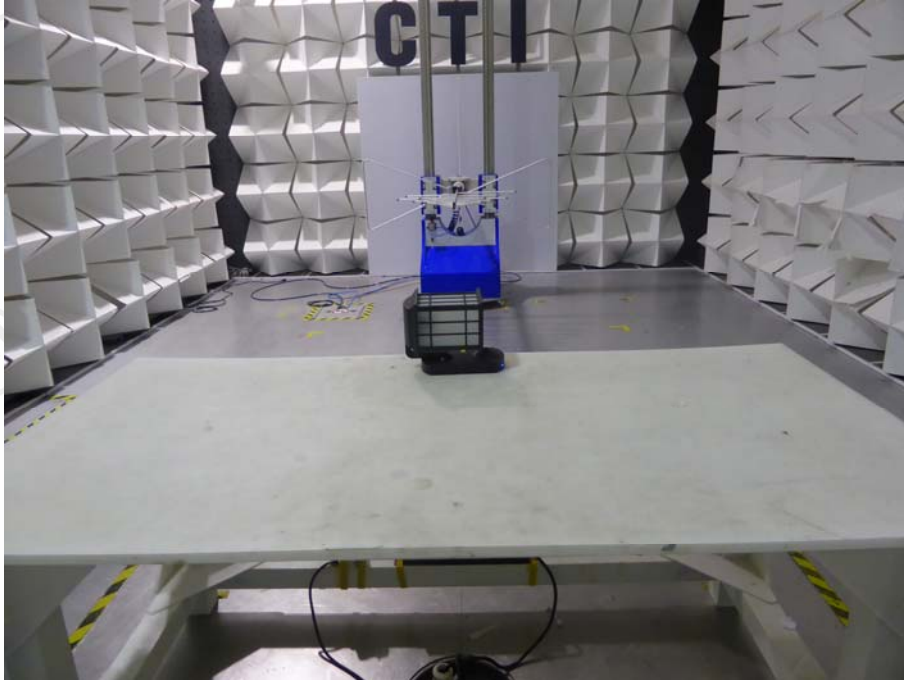
N:

80.0 dBuV

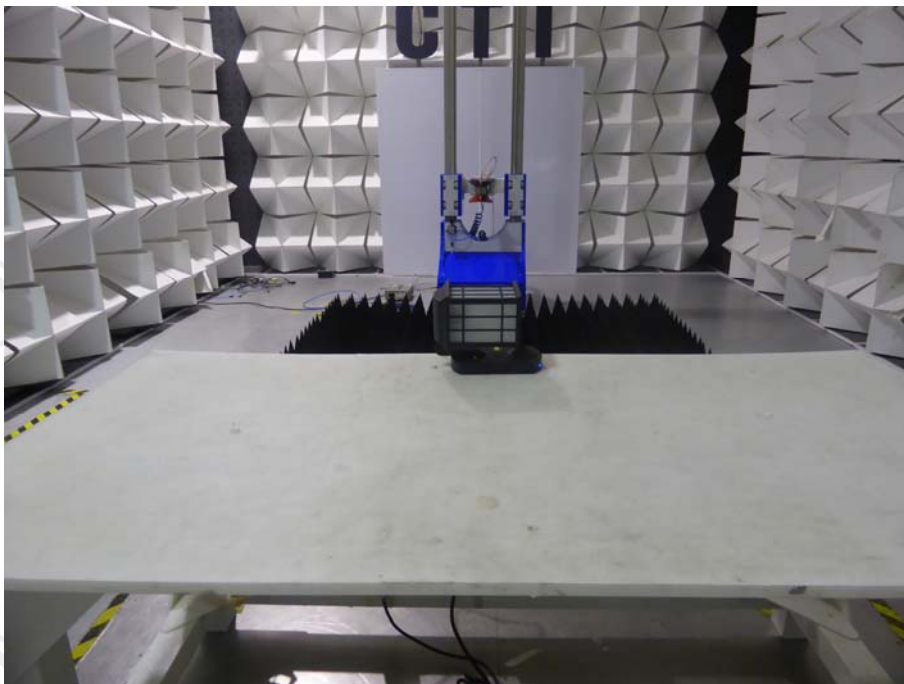


No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1500	41.60		33.17	9.90	51.50		43.07	65.99	55.99	-14.49	-12.92	P	
2	0.5299	36.84		27.38	9.90	46.74		37.28	56.00	46.00	-9.26	-8.72	P	
3	1.0260	27.15		16.12	9.90	37.05		26.02	56.00	46.00	-18.95	-19.98	P	
4	2.6980	28.37		15.72	9.90	38.27		25.62	56.00	46.00	-17.73	-20.38	P	
5	23.9780	32.31		26.18	10.32	42.63		36.50	60.00	50.00	-17.37	-13.50	P	

APPENDIX 1 PHOTOGRAPHS OF TEST SETUP



TEST SETUP OF RADIATED EMISSION (30MHz-1GHz)



TEST SETUP OF RADIATED EMISSION (above 1GHz)

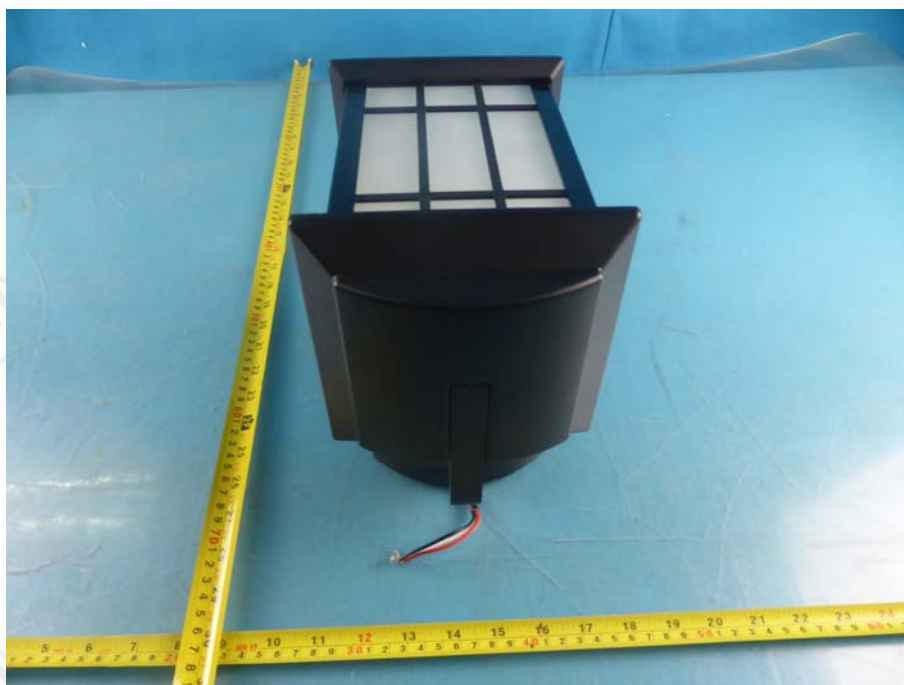


TEST SETUP OF CONDUCTED EMISSION

APPENDIX 2 EXTERNAL PHOTOGRAPHS OF PRODUCT



External View of product-1



External View of product-2



External View of product-3



External View of product-4



External View of product-5



External View of product-6

APPENDIX 3 INTERNAL PHOTOGRAPHS OF PRODUCT



Internal View of product-1



Internal View of product-2



Internal View of product-3



Internal View of product-4



Internal View of product-5



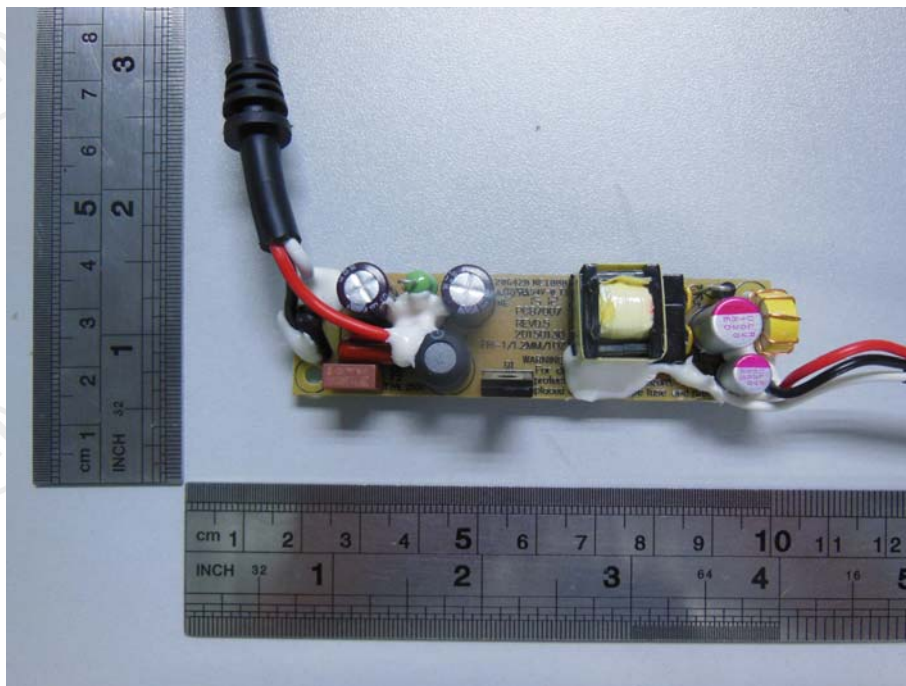
Internal View of product-6



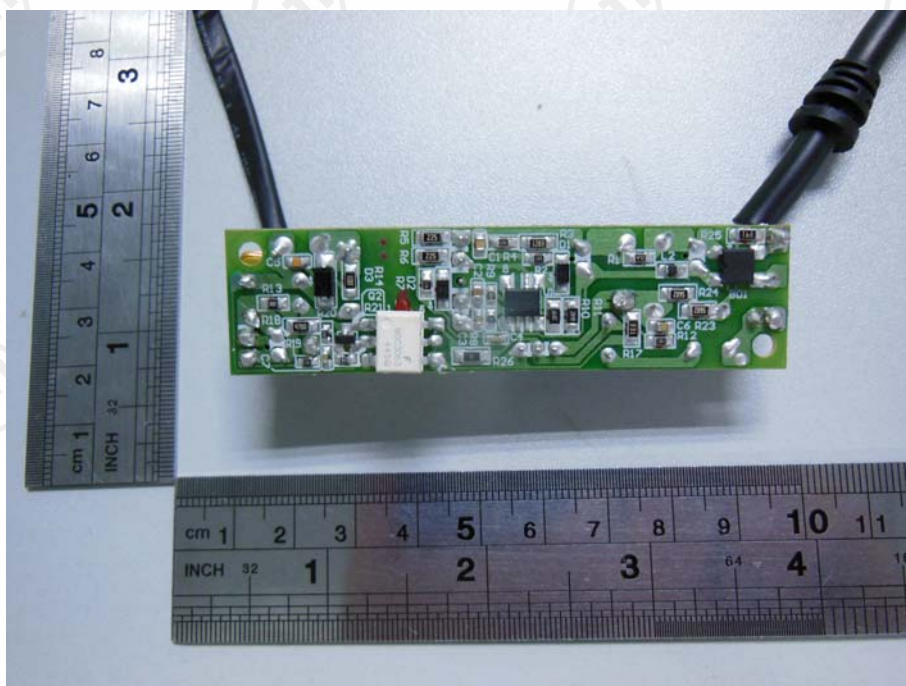
Internal View of product-7



Internal View of product-8



Internal View of product-9



Internal View of product-10

*** End of Report ***

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