TEST REPORT

Product	:	LED Floodlight
Trade mark	:	N/A
Model/Type reference	:	LAW25E,LAW10E
Test Model No.	:	LAW25E
Serial Number	:	N/A
Report Number	:	EED32N81243702
FCC ID	:	2AT7E-LAW25E
Date of Issue	:	Apr. 07, 2022
Test Standards	:	47 CFR Part 15 Subpart C
Test result	:	PASS

Prepared for:

Shen Zhen Shi Zhi Hui Duo Ke Ji You Xian Gong Si
Qian Wan yi lu 1 hao A dong 201 shi, qian hai shen gang he zuo qu, shen zhen,guang dong, China 518000

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2 Version

Version No.	Date	Description
00	Apr. 07, 2022	Original

3 Test Summary

Test Item	Test Requirement	Result
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203/15.247 (c)	PASS
AC Power Line Conducted Emission	47 CFR Part 15 Subpart C Section 15.207	PASS
DTS Bandwidth	47 CFR Part 15 Subpart C Section 15.247 (a)(2)	Note
Maximum Conducted Output Power	47 CFR Part 15 Subpart C Section 15.247 (b)(3)	Note
Maximum Power Spectral Density	47 CFR Part 15 Subpart C Section 15.247 (e)	Note
Band edge measurements	47 CFR Part 15 Subpart C Section 15.247(d)	Note
Conducted Spurious Emissions	47 CFR Part 15 Subpart C Section 15.247(d)	Note
Radiated Spurious Emission & Restricted bands	47 CFR Part 15 Subpart C Section 15.205/15.209	PASS

Remark:

1.Note:Refer to the report of 709502102915-00,
This test report (Ref. No.:EED32N81243701) is only valid with the original test report (Ref. No.: 709502102915-00).
Review this report and original report,the module without changes in circuit and product function, therefore in this report the Radiated Spurious Emission were retested and shown the data in this report, other tests data please refer to original report No.709502102915-00.

2.Company Name and Address shown on Report, the sample(s) and sample Information were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.

3.Model No.:LAW25E,LAW10E
Only the model LAW25E was tested.Their electrical circuit design, layout, components used and internal wiring are identical,all use the same linear constant current IC, the same auxiliary power supply, the same WiFi module and the same antenna. The only difference is the difference in the number of linear ICs and LED chips. The greater the power, the more ICs and LED chips used, and the larger the size of the aluminum subst rate is different.

4 General Information

4.1 Client Information

Applicant:	Shen Zhen Shi Zhi Hui Duo Ke Ji You Xian Gong Si
Address of Applicant:	Qian Wan yi lu 1 hao A dong 201 shi, qian hai shen gang he zuo qu, shen zhen,guang dong, China 518000
Manufacturer:	Shen Zhen Shi Zhi Hui Duo Ke Ji You Xian Gong Si
Address of Manufacturer:	Qian Wan yi lu 1 hao A dong 201 shi, qian hai shen gang he zuo qu, shen zhen,guang dong, China 518000
Factory:	Shen Zhen Shi Zhi Hui Duo Ke Ji You Xian Gong Si
Address of Factory:	Qian Wan yi lu 1 hao A dong 201 shi, qian hai shen gang he zuo qu, shen zhen,guang dong, China 518000

4.2 General Description of EUT

Product Name:	LED Floodlight
Model No.:	LAW25E, LAW10E
Test Model No.:	LAW25E
Trade mark:	N/A
Product Type:	☐ Mobile ☐ Portable ☒ Fix Location
Operation Frequency:	IEEE 802.11b/g/n(HT20 and HT40): 2412MHz to 2462MHz
Modulation Type:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20 and HT40) : OFDM (64QAM, 16QAM,QPSK,BPSK)
Number of Channel:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels IEEE 802.11n HT40: 7 Channels
Channel Separation:	5MHz
Antenna Type:	PCB antenna
Antenna Gain:	5dBi
Power Supply:	AC 100-120V~60Hz
Test Voltage:	AC 110V
Sample Received Date:	Feb. 24, 2022
Sample tested Date:	Feb. 25, 2022 to Mar. 31, 2022

Operation Frequency each of channel (802.11b/g/n HT20)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

Operation Frequency each of channel (802.11n HT40)					
Channel	Frequency	Channel	Frequency	Channel	Frequency
3	2422MHz	6	2437MHz	9	2452MHz
4	2427MHz	7	2442MHz		
5	2432MHz	8	2447MHz		

Note:
In section 15.31(m), regards to the operating frequency range over 10 MHz, the lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

802.11b/g/n (HT20)

Channel	Frequency
The lowest channel	2412MHz
The middle channel	2437MHz
The highest channel	2462MHz

802.11n (HT40)

Channel	Frequency
The lowest channel	2422MHz
The middle channel	2437MHz
The highest channel	2452MHz

4.3 Test Configuration

EUT Test Software Settings:	
Software:	Wifi Test Tool v1.6.0
EUT Power Grade:	Default
Use test software to set the lowest frequency, the middle frequency and the highest frequency keep transmitting of the EUT.	
Test Mode:	
We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:	
Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.	
Mode	Data rate
802.11b	1Mbps
802.11g	6Mbps
802.11n(HT20)	6.5Mbps
802.11n(HT40)	13.5Mbps
According to ANSI C63.10 standards, the test results are both the “worst case” and “worst setup” 1Mbps for 802.11b, 6Mbps for 802.11g, 6.5Mbps for 802.11n(HT20) and 6.5Mbps for 802.11n(HT40).	

4.4 Test Environment

Operating Environment:	
Radiated Spurious Emissions:	
Temperature:	22~25.0 °C
Humidity:	50~55 % RH
Atmospheric Pressure:	1010mbar
Conducted Emissions:	
Temperature:	22~25.0 °C
Humidity:	50~55 % RH
Atmospheric Pressure:	1010mbar

4.5 Description of Support Units

The EUT has been tested with associated equipment below.

Associated equipment name		Manufacture	model	S/N serial number	Supplied by	Certification
AE1	Netbook	DELL	Latitude 3490	/	CTI	FCC&CE
AE2	Phone	XIAOMI	MI 6X	/	CTI	FCC&CE

4.6 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd
Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China
Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385
No tests were sub-contracted.
FCC Designation No.: CN1164

4.7 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.46dB (30MHz-1GHz)
		0.55dB (1GHz-18GHz)
3	Radiated Spurious emission test	3.3dB (9kHz-30MHz)
		4.3dB (30MHz-1GHz)
		4.5dB (1GHz-18GHz)
		3.4dB (18GHz-40GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	3.8%
7	DC power voltages	0.026%

5 Equipment List

Conducted disturbance Test					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Receiver	R&S	ESCI	100435	04-15-2021	04-14-2022
Temperature/ Humidity Indicator	Defu	TH128	/	---	---
LISN	R&S	ENV216	100098	03-04-2021 03-01-2022	03-03-2022 02-28-2023
Barometer	changchun	DYM3	1188	---	---

3M Semi-anechoic Chamber (2)- Radiated disturbance Test					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Due Date
3M Chamber & Accessory Equipment	TDK	SAC-3	---	05/24/2019	05/23/2022
Receiver	R&S	ESCI7	100938-003	10/14/2021	10/13/2022
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	9163-618	05/23/2019	05/22/2022
Multi device Controller	maturo	NCD/070/10711112	---	---	---
Horn Antenna	ETS-LINGREN	BBHA 9120D	9120D-1869	04/15/2021	04/14/2024
Spectrum Analyzer	R&S	FSP40	100416	04/29/2021	04/28/2022
Microwave Preamplifier	Agilent	8449B	3008A02425	06/23/2021	06/22/2022

3M full-anechoic Chamber					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. Date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
RSE Automatic test software	JS Tonscend	JS36-RSE	10166	---	---
Receiver	Keysight	N9038A	MY57290136	03-04-2021 03-01-2022	03-03-2022 02-28-2023
Spectrum Analyzer	Keysight	N9020B	MY57111112	03-04-2021 02-23-2022	03-03-2022 02-22-2023
Spectrum Analyzer	Keysight	N9030B	MY57140871	03-04-2021 02-23-2022	03-03-2022 02-22-2023
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	9163-1148	04-28-2021	04-27-2024
Horn Antenna	Schwarzbeck	BBHA 9170	9170-832	04-15-2021	04-14-2024
Horn Antenna	ETS-LINDGREN	3117	57407	07-04-2021	07-03-2024
Preamplifier	EMCI	EMC184055SE	980597	05-20-2021	05-19-2022
Preamplifier	EMCI	EMC001330	980563	04-15-2021	04-14-2022
Preamplifier	JS Tonscend	980380	EMC051845SE	12-24-2021	12-23-2022
Communication test set	R&S	CMW500	102898	12-24-2021	12-23-2022
Temperature/ Humidity Indicator	biaozhi	GM1360	EE1186631	04-16-2021	04-15-2022
Fully Anechoic Chamber	TDK	FAC-3	---	01-09-2021	01-08-2024
Cable line	Times	SFT205-NMSM-2.50M	394812-0001	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0002	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0003	---	---
Cable line	Times	SFT205-NMSM-2.50M	393495-0001	---	---
Cable line	Times	EMC104-NMNM-1000	SN160710	---	---
Cable line	Times	SFT205-NMSM-3.00M	394813-0001	---	---
Cable line	Times	SFT205-NMNM-1.50M	381964-0001	---	---
Cable line	Times	SFT205-NMSM-7.00M	394815-0001	---	---
Cable line	Times	HF160-KMKM-3.00M	393493-0001	---	---

6 Test results and Measurement Data

6.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C Section 15.203 /247(c)
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. 15.247(b) (4) requirement: The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.	
EUT Antenna:	Please see Internal photos
The antenna is Internal antenna. The best case gain of the antenna is 5dBi.	

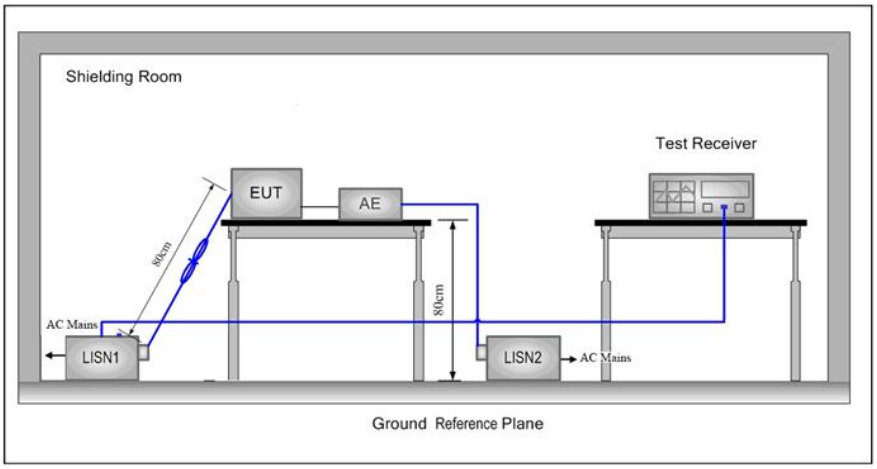
6.2 AC Power Line Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.207
Test Method:	ANSI C63.10: 2013
Test Frequency Range:	150kHz to 30MHz
Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto
Limit:	

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

* Decreases with the logarithm of the frequency.

Test Setup:



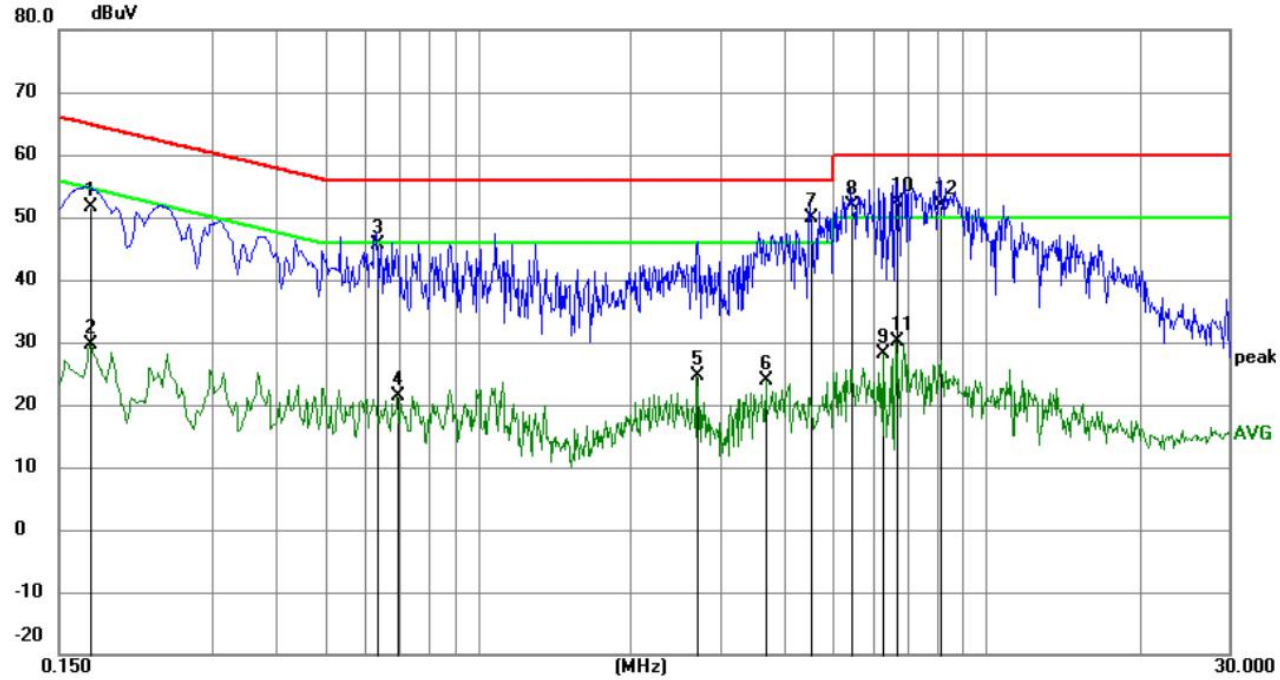
Test Procedure:

1) The mains terminal disturbance voltage test was conducted in a shielded room.
2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.
4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.

Test Mode:	All modes were tested, only the worst case was recorded in the report.
Test Voltage:	AC 120V/60Hz
Test Results:	Pass

Measurement Data

Live line:

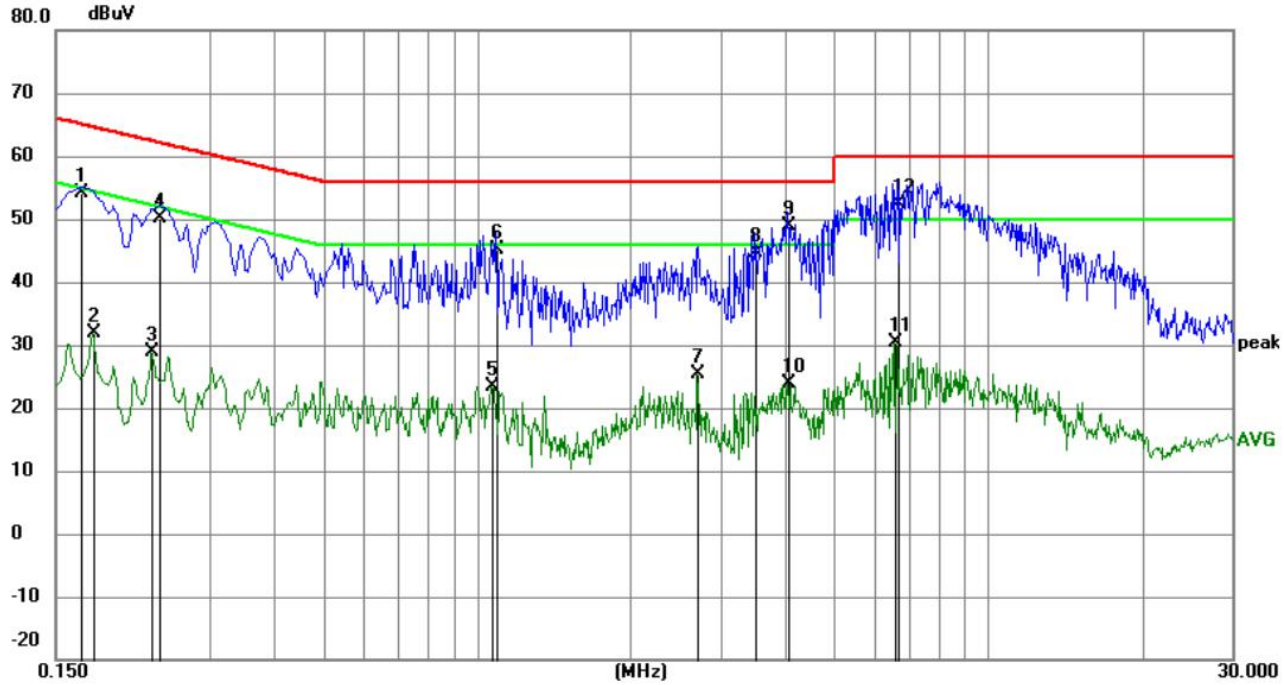


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1725	41.68	9.87	51.55	64.84	-13.29	QP	
2		0.1725	19.86	9.87	29.73	54.84	-25.11	AVG	
3		0.6315	35.68	10.01	45.69	56.00	-10.31	QP	
4		0.6945	11.53	9.89	21.42	46.00	-24.58	AVG	
5		2.7060	14.72	9.79	24.51	46.00	-21.49	AVG	
6		3.6915	14.09	9.78	23.87	46.00	-22.13	AVG	
7	*	4.5150	40.11	9.78	49.89	56.00	-6.11	QP	
8		5.4375	42.18	9.78	51.96	60.00	-8.04	QP	
9		6.2790	18.45	9.79	28.24	50.00	-21.76	AVG	
10		6.6435	42.57	9.79	52.36	60.00	-7.64	QP	
11		6.6435	20.41	9.79	30.20	50.00	-19.80	AVG	
12		8.1465	42.20	9.79	51.99	60.00	-8.01	QP	

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

Neutral line:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1680	44.34	9.87	54.21	65.06	-10.85	QP	
2		0.1770	22.01	9.87	31.88	54.63	-22.75	AVG	
3		0.2310	18.99	9.93	28.92	52.41	-23.49	AVG	
4		0.2400	40.06	9.95	50.01	62.10	-12.09	QP	
5		1.0680	13.54	9.83	23.37	46.00	-22.63	AVG	
6		1.0905	35.38	9.83	45.21	56.00	-10.79	QP	
7		2.7060	15.67	9.79	25.46	46.00	-20.54	AVG	
8		3.5025	34.85	9.78	44.63	56.00	-11.37	QP	
9	*	4.0515	39.18	9.78	48.96	56.00	-7.04	QP	
10		4.0515	14.16	9.78	23.94	46.00	-22.06	AVG	
11		6.5715	20.66	9.79	30.45	50.00	-19.55	AVG	
12		6.6390	42.57	9.79	52.36	60.00	-7.64	QP	

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

6.3 Radiated Spurious Emission & Restricted bands

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205
Test Method:	ANSI C63.10 2013
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)
Receiver Setup:	

Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
30MHz-1GHz	Quasi-peak	100 kHz	300kHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10kHz	Average

Limit:

Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	54.0	Average	3

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

Test Setup:	

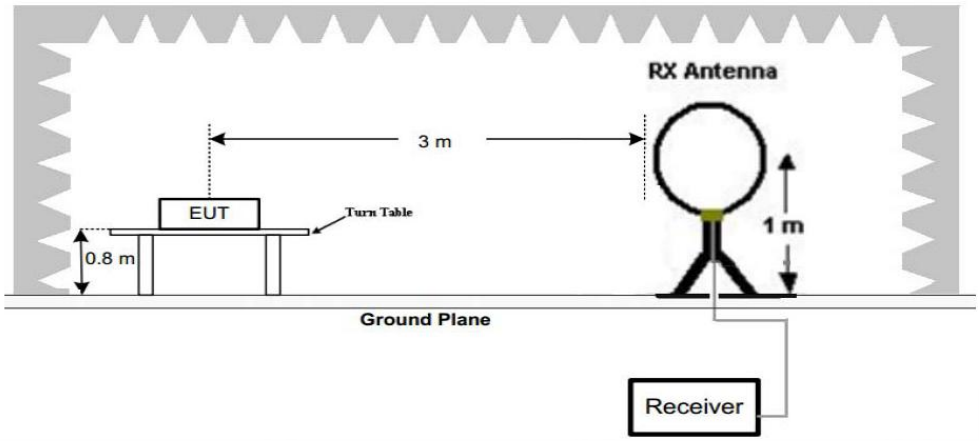


Figure 1. Below 30MHz

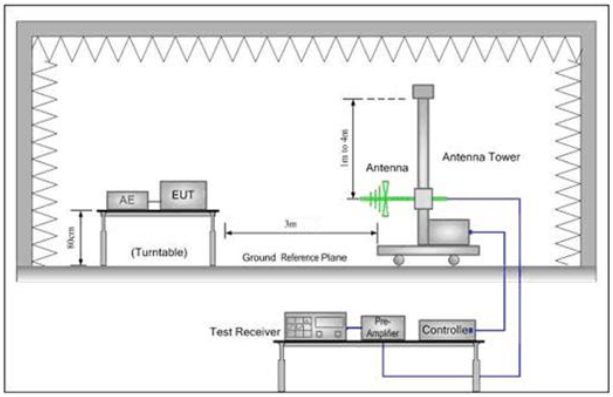


Figure 2. 30MHz to 1GHz

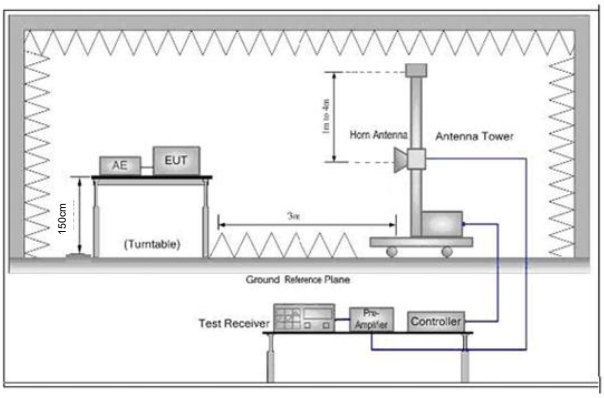


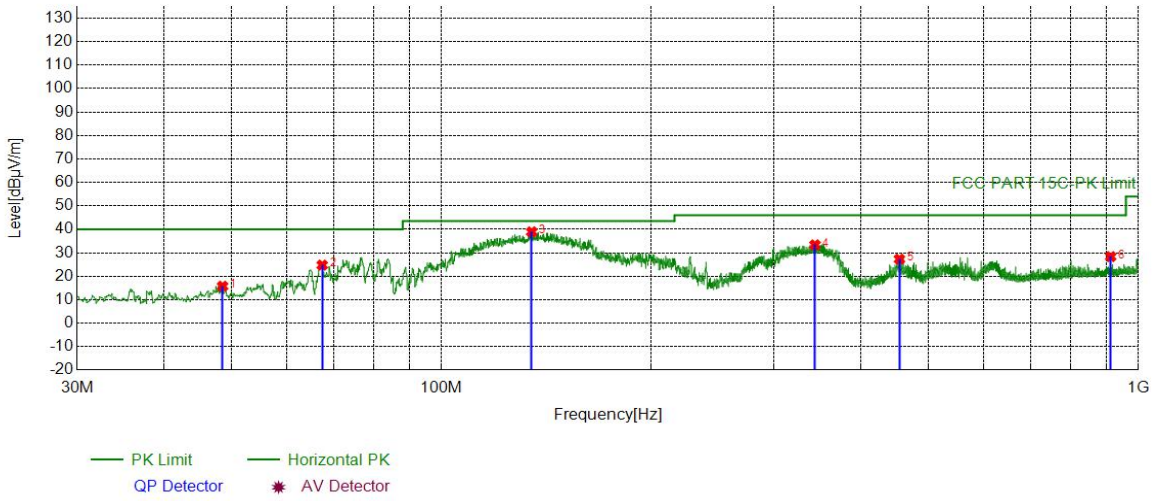
Figure 3. Above 1 GHz

Test Procedure:	a. 1) Below 1G: The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2) Above 1G: The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. Note: For the radiated emission test above 1GHz: Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel (2402MHz),the middle channel (2440MHz),the Highest channel (2480MHz) h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete.
Test Mode:	Refer to clause 5.3
Test Results:	Pass

Radiated Spurious Emission below 1GHz:

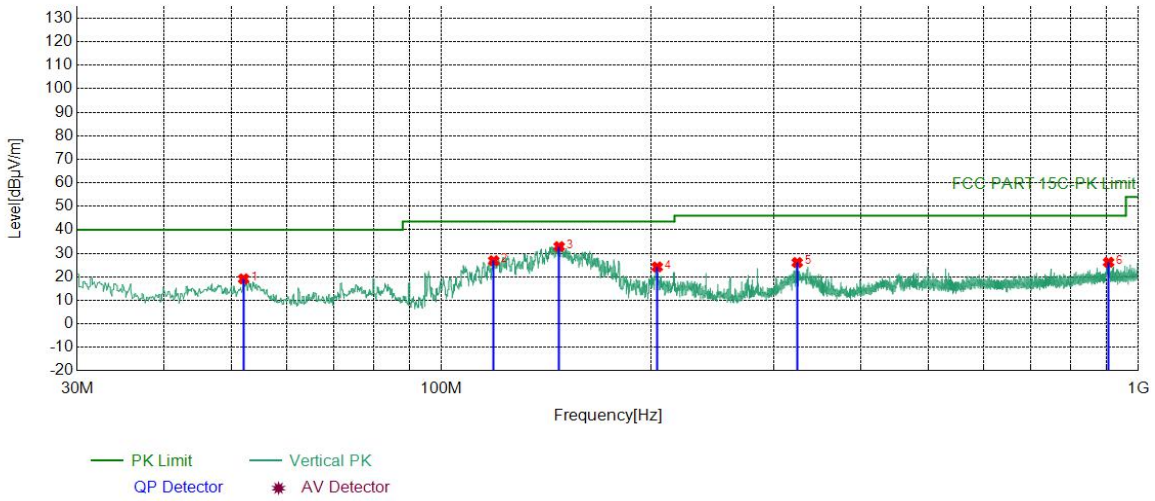
During the test, the Radiates Emission from 30MHz to 1GHz was performed in all modes, only the worst case lowest channel of 1Mbps for 802.11b was recorded in the report.

Test Graph



NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	48.5289	-17.17	32.94	15.77	40.00	24.23	PASS	Horizontal	Peak
2	67.4457	-20.21	44.97	24.76	40.00	15.24	PASS	Horizontal	Peak
3	134.7705	-21.79	60.74	38.95	43.50	4.55	PASS	Horizontal	Peak
4	343.6324	-14.28	47.65	33.37	46.00	12.63	PASS	Horizontal	Peak
5	454.2234	-11.65	38.96	27.31	46.00	18.69	PASS	Horizontal	Peak
6	913.0793	-4.87	33.25	28.38	46.00	17.62	PASS	Horizontal	Peak

Test Graph



NO	Freq. [MHz]	Factor [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity	Remark
1	52.0212	-17.44	36.56	19.12	40.00	20.88	PASS	Vertical	Peak
2	118.8609	-19.88	46.73	26.85	43.50	16.65	PASS	Vertical	Peak
3	147.5758	-21.73	54.59	32.86	43.50	10.64	PASS	Vertical	Peak
4	204.0354	-17.74	41.95	24.21	43.50	19.29	PASS	Vertical	Peak
5	324.0364	-14.85	40.92	26.07	46.00	19.93	PASS	Vertical	Peak
6	906.5797	-4.93	31.12	26.19	46.00	19.81	PASS	Vertical	Peak

Radiated Spurious Emission above 1GHz:

Mode:			802.11 b Transmitting			Channel:		2412MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1062.4062	0.89	44.91	45.80	74.00	28.20	PASS	H	PK
2	1779.4779	3.21	41.64	44.85	74.00	29.15	PASS	H	PK
3	3494.0329	-20.03	58.32	38.29	74.00	35.71	PASS	H	PK
4	7152.2768	-11.72	53.56	41.84	74.00	32.16	PASS	H	PK
5	11184.5456	-6.39	52.82	46.43	74.00	27.57	PASS	H	PK
6	14397.7599	1.18	48.54	49.72	74.00	24.28	PASS	H	PK
7	1088.0088	0.86	43.60	44.46	74.00	29.54	PASS	V	PK
8	1740.2740	3.08	41.57	44.65	74.00	29.35	PASS	V	PK
9	2059.7060	4.75	41.06	45.81	74.00	28.19	PASS	V	PK
10	3321.0214	-19.88	57.60	37.72	74.00	36.28	PASS	V	PK
11	6636.2424	-12.70	55.46	42.76	74.00	31.24	PASS	V	PK
12	12436.6291	-4.74	52.03	47.29	74.00	26.71	PASS	V	PK

Mode:			802.11 b Transmitting			Channel:		2437MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1108.2108	0.85	43.09	43.94	74.00	30.06	PASS	H	PK
2	1586.0586	2.18	40.94	43.12	74.00	30.88	PASS	H	PK
3	3250.0167	-20.07	58.23	38.16	74.00	35.84	PASS	H	PK
4	6252.2168	-13.06	54.50	41.44	74.00	32.56	PASS	H	PK
5	10350.4900	-6.37	51.19	44.82	74.00	29.18	PASS	H	PK
6	16415.8944	-0.11	51.41	51.30	74.00	22.70	PASS	H	PK
7	1066.8067	0.88	44.96	45.84	74.00	28.16	PASS	V	PK
8	1835.6836	3.55	40.92	44.47	74.00	29.53	PASS	V	PK
9	4734.1156	-16.46	54.88	38.42	74.00	35.58	PASS	V	PK
10	5875.1917	-13.60	53.86	40.26	74.00	33.74	PASS	V	PK
11	10308.4872	-6.44	51.69	45.25	74.00	28.75	PASS	V	PK
12	16274.8850	1.52	49.94	51.46	74.00	22.54	PASS	V	PK

Mode:			802.11 b Transmitting			Channel:		2462MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1057.2057	0.89	42.80	43.69	74.00	30.31	PASS	H	PK
2	1526.6527	1.69	41.26	42.95	74.00	31.05	PASS	H	PK
3	3467.0311	-20.08	57.38	37.30	74.00	36.70	PASS	H	PK
4	7104.2736	-11.59	53.41	41.82	74.00	32.18	PASS	H	PK
5	13743.7162	-1.71	50.33	48.62	74.00	25.38	PASS	H	PK
6	16909.9273	3.05	49.17	52.22	74.00	21.78	PASS	H	PK
7	1065.0065	0.88	43.66	44.54	74.00	29.46	PASS	V	PK
8	1655.0655	2.65	41.99	44.64	74.00	29.36	PASS	V	PK
9	3799.0533	-19.25	56.74	37.49	74.00	36.51	PASS	V	PK
10	6391.2261	-12.87	56.66	43.79	74.00	30.21	PASS	V	PK
11	12789.6526	-4.25	51.43	47.18	74.00	26.82	PASS	V	PK
12	16262.8842	1.42	49.83	51.25	74.00	22.75	PASS	V	PK

Mode:			802.11 g Transmitting			Channel:		2412MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1031.2031	0.92	43.27	44.19	74.00	29.81	PASS	H	PK
2	1747.4747	3.10	41.58	44.68	74.00	29.32	PASS	H	PK
3	4250.0833	-17.62	57.55	39.93	74.00	34.07	PASS	H	PK
4	7786.3191	-11.33	53.97	42.64	74.00	31.36	PASS	H	PK
5	13282.6855	-3.40	50.54	47.14	74.00	26.86	PASS	H	PK
6	16491.8995	1.59	50.11	51.70	74.00	22.30	PASS	H	PK
7	1063.4063	0.89	47.08	47.97	74.00	26.03	PASS	V	PK
8	1854.2854	3.69	40.73	44.42	74.00	29.58	PASS	V	PK
9	5339.1559	-14.70	55.44	40.74	74.00	33.26	PASS	V	PK
10	6661.2441	-12.62	57.83	45.21	74.00	28.79	PASS	V	PK
11	10803.5202	-6.23	51.61	45.38	74.00	28.62	PASS	V	PK
12	16649.9100	2.06	49.50	51.56	74.00	22.44	PASS	V	PK

Mode:			802.11 g Transmitting			Channel:		2437MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1072.0072	0.88	43.84	44.72	74.00	29.28	PASS	H	PK
2	1843.8844	3.61	41.33	44.94	74.00	29.06	PASS	H	PK
3	6111.2074	-13.16	53.74	40.58	74.00	33.42	PASS	H	PK
4	9314.4210	-7.96	53.10	45.14	74.00	28.86	PASS	H	PK
5	12050.6034	-5.56	52.59	47.03	74.00	26.97	PASS	H	PK
6	16909.9273	3.05	47.93	50.98	74.00	23.02	PASS	H	PK
7	1146.8147	0.83	43.12	43.95	74.00	30.05	PASS	V	PK
8	1598.8599	2.28	43.64	45.92	74.00	28.08	PASS	V	PK
9	4269.0846	-17.47	58.48	41.01	74.00	32.99	PASS	V	PK
10	6388.2259	-12.87	56.65	43.78	74.00	30.22	PASS	V	PK
11	12014.6010	-5.34	51.74	46.40	74.00	27.60	PASS	V	PK
12	16268.8846	1.47	50.08	51.55	74.00	22.45	PASS	V	PK

Mode:			802.11 g Transmitting			Channel:		2462MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1063.2063	0.89	44.08	44.97	74.00	29.03	PASS	H	PK
2	1656.0656	2.65	42.96	45.61	74.00	28.39	PASS	H	PK
3	4392.0928	-17.06	55.90	38.84	74.00	35.16	PASS	H	PK
4	6739.2493	-12.45	53.34	40.89	74.00	33.11	PASS	H	PK
5	13769.7180	-1.67	49.94	48.27	74.00	25.73	PASS	H	PK
6	16255.8837	1.36	50.22	51.58	74.00	22.42	PASS	H	PK
7	1063.2063	0.89	44.65	45.54	74.00	28.46	PASS	V	PK
8	3853.0569	-19.17	57.02	37.85	74.00	36.15	PASS	V	PK
9	6390.2260	-12.87	54.76	41.89	74.00	32.11	PASS	V	PK
10	10326.4884	-6.41	51.64	45.23	74.00	28.77	PASS	V	PK
11	13712.7142	-1.75	50.58	48.83	74.00	25.17	PASS	V	PK
12	16512.9009	1.71	50.00	51.71	74.00	22.29	PASS	V	PK

Mode:			802.11 n(HT20) Transmitting			Channel:		2412MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1104.0104	0.85	44.35	45.20	74.00	28.80	PASS	H	PK
2	4251.0834	-17.62	57.38	39.76	74.00	34.24	PASS	H	PK
3	6893.2596	-11.87	53.28	41.41	74.00	32.59	PASS	H	PK
4	10697.5132	-6.47	51.37	44.90	74.00	29.10	PASS	H	PK
5	13745.7164	-1.71	50.58	48.87	74.00	25.13	PASS	H	PK
6	17293.9529	3.98	47.97	51.95	74.00	22.05	PASS	H	PK
7	1063.2063	0.89	43.70	44.59	74.00	29.41	PASS	V	PK
8	1411.8412	1.40	42.05	43.45	74.00	30.55	PASS	V	PK
9	5332.1555	-14.72	57.25	42.53	74.00	31.47	PASS	V	PK
10	8500.3667	-10.55	54.37	43.82	74.00	30.18	PASS	V	PK
11	13669.7113	-1.73	50.31	48.58	74.00	25.42	PASS	V	PK
12	17327.9552	3.61	47.97	51.58	74.00	22.42	PASS	V	PK

Mode:			802.11 n(HT20) Transmitting			Channel:		2437MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1101.2101	0.85	43.44	44.29	74.00	29.71	PASS	H	PK
2	1834.2834	3.54	41.74	45.28	74.00	28.72	PASS	H	PK
3	4821.1214	-16.22	55.92	39.70	74.00	34.30	PASS	H	PK
4	9175.4117	-8.08	52.00	43.92	74.00	30.08	PASS	H	PK
5	14400.7601	1.21	48.44	49.65	74.00	24.35	PASS	H	PK
6	16264.8843	1.44	49.99	51.43	74.00	22.57	PASS	H	PK
7	1044.0044	0.91	43.57	44.48	74.00	29.52	PASS	V	PK
8	1635.0635	2.52	42.06	44.58	74.00	29.42	PASS	V	PK
9	4248.0832	-17.64	57.32	39.68	74.00	34.32	PASS	V	PK
10	8512.3675	-10.53	55.59	45.06	74.00	28.94	PASS	V	PK
11	13732.7155	-1.72	50.11	48.39	74.00	25.61	PASS	V	PK
12	17278.9519	3.78	47.40	51.18	74.00	22.82	PASS	V	PK

Mode:			802.11 n(HT20) Transmitting			Channel:		2462MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1093.4093	0.86	43.53	44.39	74.00	29.61	PASS	H	PK
2	1765.6766	3.16	42.24	45.40	74.00	28.60	PASS	H	PK
3	4440.0960	-17.01	55.49	38.48	74.00	35.52	PASS	H	PK
4	7576.3051	-11.19	53.36	42.17	74.00	31.83	PASS	H	PK
5	10803.5202	-6.23	51.22	44.99	74.00	29.01	PASS	H	PK
6	16252.8835	1.33	50.26	51.59	74.00	22.41	PASS	H	PK
7	1065.2065	0.88	44.35	45.23	74.00	28.77	PASS	V	PK
8	1524.0524	1.67	41.32	42.99	74.00	31.01	PASS	V	PK
9	4267.0845	-17.49	57.70	40.21	74.00	33.79	PASS	V	PK
10	6332.2221	-12.90	55.34	42.44	74.00	31.56	PASS	V	PK
11	9847.4565	-7.23	53.04	45.81	74.00	28.19	PASS	V	PK
12	16273.8849	1.51	50.23	51.74	74.00	22.26	PASS	V	PK

Mode:			802.11 n(HT40) Transmitting			Channel:		2422MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1088.0088	0.86	43.07	43.93	74.00	30.07	PASS	H	PK
2	1695.6696	2.91	41.36	44.27	74.00	29.73	PASS	H	PK
3	4898.1265	-16.20	55.38	39.18	74.00	34.82	PASS	H	PK
4	10245.4830	-6.83	51.80	44.97	74.00	29.03	PASS	H	PK
5	14395.7597	1.15	48.30	49.45	74.00	24.55	PASS	H	PK
6	16350.8901	0.61	50.97	51.58	74.00	22.42	PASS	H	PK
7	1062.8063	0.89	45.31	46.20	74.00	27.80	PASS	V	PK
8	1855.2855	3.69	41.06	44.75	74.00	29.25	PASS	V	PK
9	4649.1099	-16.64	59.42	42.78	74.00	31.22	PASS	V	PK
10	9145.4097	-8.32	52.26	43.94	74.00	30.06	PASS	V	PK
11	14396.7598	1.17	48.43	49.60	74.00	24.40	PASS	V	PK
12	16266.8845	1.45	49.15	50.60	74.00	23.40	PASS	V	PK

Mode:			802.11 n(HT40) Transmitting			Channel:		2437MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1057.8058	0.89	43.12	44.01	74.00	29.99	PASS	H	PK
2	1661.2661	2.69	41.28	43.97	74.00	30.03	PASS	H	PK
3	2127.9128	4.58	42.75	47.33	74.00	26.67	PASS	H	PK
4	6324.2216	-12.91	54.78	41.87	74.00	32.13	PASS	H	PK
5	10374.4916	-6.33	51.31	44.98	74.00	29.02	PASS	H	PK
6	16279.8853	1.56	49.54	51.10	74.00	22.90	PASS	H	PK
7	1178.0178	0.81	43.73	44.54	74.00	29.46	PASS	V	PK
8	1767.4767	3.17	41.57	44.74	74.00	29.26	PASS	V	PK
9	4249.0833	-17.63	57.27	39.64	74.00	34.36	PASS	V	PK
10	7736.3158	-11.16	53.78	42.62	74.00	31.38	PASS	V	PK
11	13759.7173	-1.69	50.34	48.65	74.00	25.35	PASS	V	PK
12	16341.8895	0.81	50.91	51.72	74.00	22.28	PASS	V	PK

Mode:			802.11 n(HT40) Transmitting			Channel:		2452MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1367.2367	1.28	43.24	44.52	74.00	29.48	PASS	H	PK
2	1827.8828	3.49	42.51	46.00	74.00	28.00	PASS	H	PK
3	4265.0843	-17.51	56.97	39.46	74.00	34.54	PASS	H	PK
4	9257.4172	-7.92	52.08	44.16	74.00	29.84	PASS	H	PK
5	14323.7549	-0.05	49.68	49.63	74.00	24.37	PASS	H	PK
6	17297.9532	4.03	47.48	51.51	74.00	22.49	PASS	H	PK
7	1064.8065	0.89	44.54	45.43	74.00	28.57	PASS	V	PK
8	1647.8648	2.60	40.98	43.58	74.00	30.42	PASS	V	PK
9	4272.0848	-17.45	57.31	39.86	74.00	34.14	PASS	V	PK
10	6262.2175	-13.03	54.14	41.11	74.00	32.89	PASS	V	PK
11	9275.4184	-7.93	51.91	43.98	74.00	30.02	PASS	V	PK
12	16447.8965	0.60	50.56	51.16	74.00	22.84	PASS	V	PK

Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

   Final Test Level =Receiver Reading + Factor

   Factor=Antenna Factor + Cable Factor – Preamplifier Factor

2) Scan from 9kHz to 25GHz, the disturbance above 10GHz and below 30MHz was very low. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the peak measurements were shown in the report.