FCC Test Report

Report No.	:	**1812C50102512501**
Applicant	:	**Shenzhen Qianyan Technology LTD**
Address	:	**No.3301, Block C, Section 1, Chuangzhi Yuncheng Building, Liuxian Avenue, Xili Community, Xili Street, Nanshan District, Shenzhen, 518000, China**
Product Name	:	**Govee Strip Light with Cover**
Report Date	:	**2025-06-25**

Shenzhen Anbotek Compliance Laboratory Limited

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TEST REPORT

Applicant	:	Shenzhen Qianyan Technology LTD
Manufacturer	:	Shenzhen Qianyan Technology LTD
Product Name	:	Govee Strip Light with Cover
Model No.	:	H80B5
Trade Mark	:	Govee
Rating(s)	:	Input: 24V⎓2A
Test Standard(s)	**:**	**FCC Part15 Subpart C, Section 15.247**
Test Method(s)	**:**	**ANSI C63.10: 2020, KDB 558074 D01 15.247 Meas Guidance v05r02**

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC Part 15 Subpart C requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt	2025-03-20
Date of Test	2025-03-20 to 2025-04-07
Prepared By	(Cecilia Chen)
Approved & Authorized Signer	(Kingkong Jin)

Revision History

Report Version	Description	Issued Date
R00	Original Issue.	2025-06-25

1. General Information

1.1. Client Information

Applicant	:	Shenzhen Qianyan Technology LTD
Address	:	No.3301, Block C, Section 1, Chuangzhi Yuncheng Building, Liuxian Avenue, Xili Community, Xili Street, Nanshan District, Shenzhen, 518000, China
Manufacturer	:	Shenzhen Qianyan Technology LTD
Address	:	No.3301, Block C, Section 1, Chuangzhi Yuncheng Building, Liuxian Avenue, Xili Community, Xili Street, Nanshan District, Shenzhen, 518000, China

1.2. Description of Device (EUT)

Product Name	:	Govee Strip Light with Cover
Model No.	:	H80B5
Trade Mark	:	Govee
Test Power Supply	:	AC 120V, 60Hz for Adapter
Test Sample No.	:	H80B5_5m: 1-3-1(Normal Sample), 1-3-2(Engineering Sample) H80B5_10m: 1-3-3(Normal Sample)
Adapter	:	Manufacturer: Dong Guan Royal Intelligent Co, Ltd Model: BI48G-240200-AdU Input: 100-240V, 50/60Hz, 1.4A Output: 24V⎓2A
RF Specification		
Operation Mode	:	☒ BT BLE
Support Rate	:	☒ 1Mbps ☐ 2Mbps
Operation Frequency	:	2402~2480MHz
Number of Channel	:	40 Channels
Modulation Type	:	GFSK
Antenna Type	:	PCB Antenna
Antenna Gain(Peak)	:	2.45dBi

Remark:
1) All of the RF specification are provided by customer.
2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
3) The product has two light strip length specifications (5m and 10m), and the differences will not not affect RF, so we prepare both specifications for EMC test. And prepare "Light Strip Length: 5m" for RF test only.

1.3. Auxiliary Equipment Used During Test

Description	Rating(s)
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1.4. Description of Test Configuration

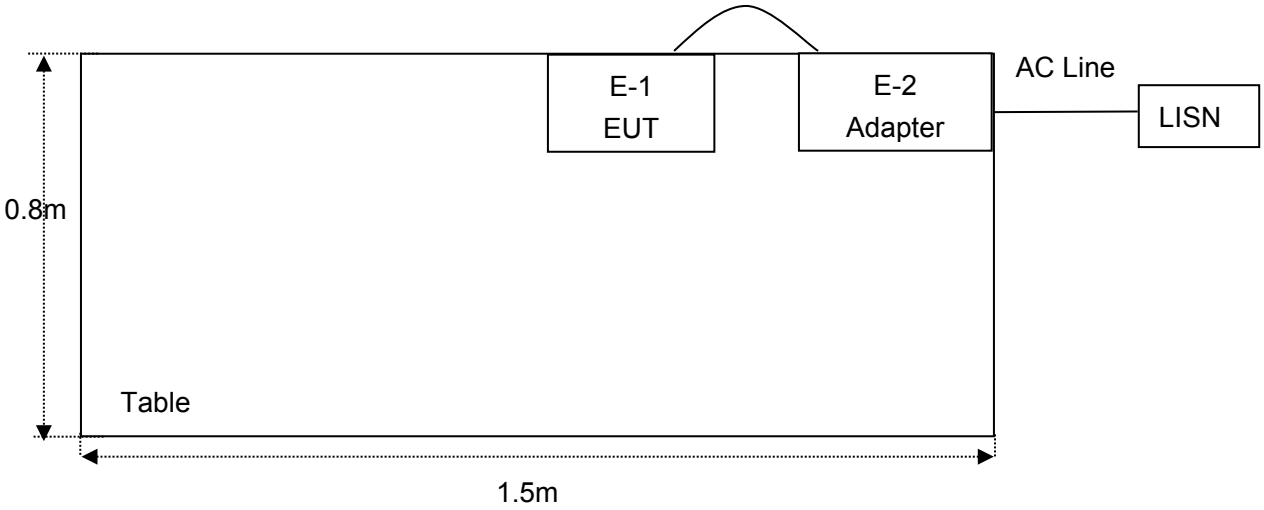
Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
00	**2402**	09	2420	18	2438	27	2456	36	2474
01	2404	10	2422	**19**	**2440**	28	2458	37	2476
02	2406	11	2424	20	2442	29	2460	38	2478
03	2408	12	2426	21	2444	30	2462	**39**	**2480**
04	2410	13	2428	22	2446	31	2464		
05	2412	14	2430	23	2448	32	2466		
06	2414	15	2432	24	2450	33	2468		
07	2416	16	2434	25	2452	34	2470		
08	2418	17	2436	26	2454	35	2472		

Note:

1. The engineering test program was provided and the EUT was programmed to be in continuously transmitting mode.
2. EUT was tested with channel 0, 19 and 39.

1.5. Description Of Test Setup

CE



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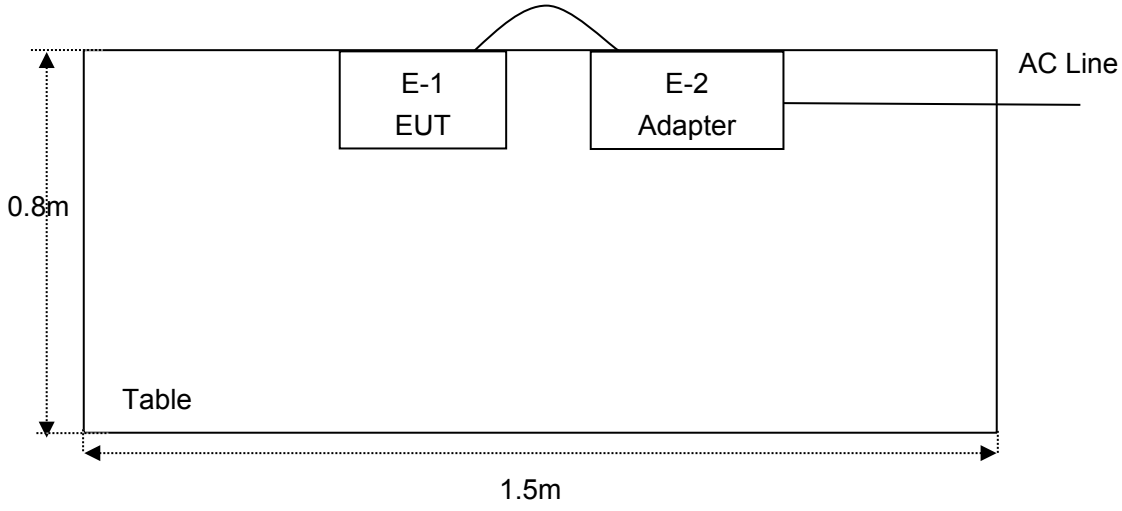


1.6. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	100055	2024-09-09	1 Year
2.	Three Phase V-type Artificial Power Network	CYBERTEK	EM5040DT	E215040DT001	2025-01-13	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	2025-01-13	1 Year
4.	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	2025-01-14	1 Year
5.	MXA Spectrum Analysis	Agilent	N9020A	MY51170037	2024-09-09	1 Year
6.	EMI Preamplifier	SKET Electronic	LNPA-0118G-45	SKET-PA-002	2025-01-13	1 Year
7.	Double Ridged Horn Antenna	SCHWARZBECK	BBHA 9120D	02555	2022-10-16	3 Year
8.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	345	2022-10-23	3 Year
9.	Loop Antenna(9K-30M)	Schwarzbeck	FMZB1519B	00053	2024-09-12	1 Year
10.	Horn Antenna	A-INFO	LB-180400-KF	J211060628	2024-01-22	3 Year
11.	Pre-amplifier	SONOMA	310N	186860	2025-01-14	1 Year
12.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A
13.	MXA Spectrum Analysis	KEYSIGHT	N9020A	MY53280032	2024-09-09	1 Year
14.	MXG RF Vector Signal Generator	Agilent	N5182A	MY47420647	2025-01-14	1 Year
15.	Signal Generator	Agilent	E4421B	MY41000743	2025-02-21	1 Year
16.	DC Power Supply	IVYTECH	IV3605	1804D360510	2024-09-09	1 Year
17.	Constant Temperature Humidity Chamber	ZHONGJIAN	ZJ-KHWS80B	N/A	2024-10-14	1 Year
18.	Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102150	2024-05-06	1 Year

1.7. Measurement Uncertainty

Parameter	Uncertainty
Conducted emissions (AMN 150kHz~30MHz)	3.8dB
Occupied Bandwidth	925Hz
Conducted Output Power	0.76dB
Power Spectral Density	0.76dB
Conducted Spurious Emission	1.24dB
Radiated spurious emissions (Below 30MHz)	3.53dB
Radiated spurious emissions (30MHz~1GHz)	Horizontal: 3.92dB; Vertical: 4.52dB
Radiated spurious emissions (above 1GHz)	1G-6GHz: 4.78dB; 6G-18GHz: 4.88dB 18G-40GHz: 5.68dB
The measurement uncertainty and decision risk evaluated according to AB/WI-RF-F-032. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

1.8. Additional Instructions

Power level setup in software: Bluetooth RF Test Tool Version: 5.2.2.59
Operation Band:

Mode	Channel(MHz)	Power level	Transmitting type
BLE_1M	2402	default	data pack TX
BLE_1M	2440	default	data pack TX
BLE_1M	2480	default	data pack TX

1.9. Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 279531

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 279531.

Test Location

Shenzhen Anbotek Compliance Laboratory Limited.
Sogood Industrial Zone Laboratory & 1/F. of Building D, Sogood Science and Technology Park, Sanwei Community, Hangcheng Subdistrict, Bao'an District, Shenzhen, Guangdong, China.

1.10. Disclaimer

1. The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
2. The test report is invalid if there is any evidence and/or falsification.
3. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
4. This document may not be altered or revised in any way unless done so by Anbotek and all revisions are duly noted in the revisions section.
5. Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
6. The authenticity of the information provided by the customer is the responsibility of the customer and the laboratory is not responsible for its authenticity.
7. The data in this report will be synchronized with the corresponding national market supervision and management departments and cross-border e-commerce platforms as required by regulatory agencies.

The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

2. Summary of Test Results

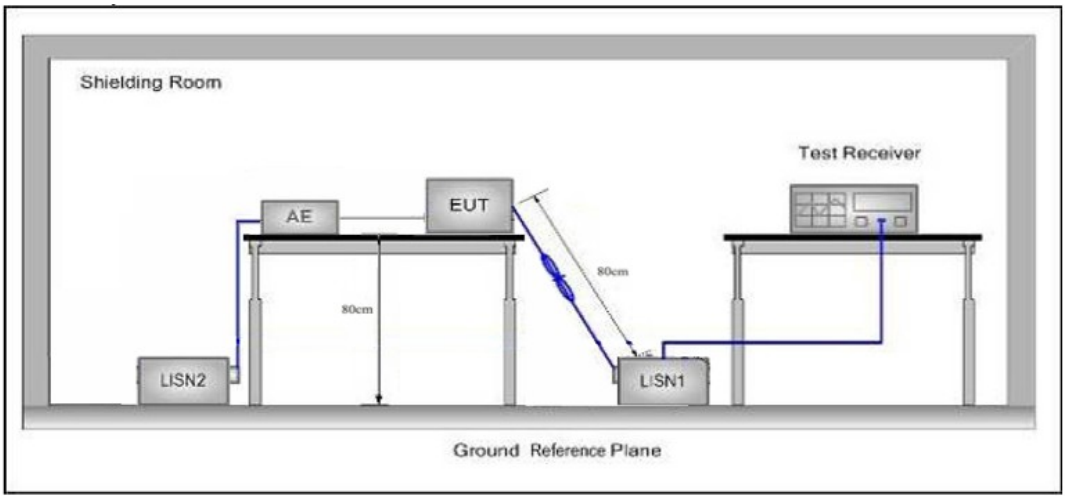
Standard Section	Test Item	Result
15.203/15.247(c)	Antenna Requirement	PASS
15.207	Conducted Emission	PASS
15.205/15.209	Radiated Spurious Emission and Band Edge	PASS
15.247(b)(3)	Maximum Conducted Output Power	PASS
15.247(a)(2)	6dB Bandwidth	PASS
N/A	99% Occupied Bandwidth	Report only
15.247(e)	Maximum Power Spectral Density	PASS
15.247(d)	Conducted Spurious Emission and Band Edge	PASS
Remark: “N/A” is an abbreviation for Not Applicable.		

3. Conducted Emission Test

3.1. Test Standard and Limit

Test Standard	FCC Part15 Section 15.207		
Test Limit	Frequency	Maximum RF Line Voltage (dBuV)	
		Quasi-peak Level	Average Level
	150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
	500kHz~5MHz	56	46
	5MHz~30MHz	60	50
Remark:(1) *Decreasing linearly with logarithm of the frequency. (2) The lower limit shall apply at the transition frequency.			

3.2. Test Setup



3.3. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.10: 2020 on Conducted Emission Measurement.

The bandwidth of test receiver (ESCI) set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

3.4. Test Data

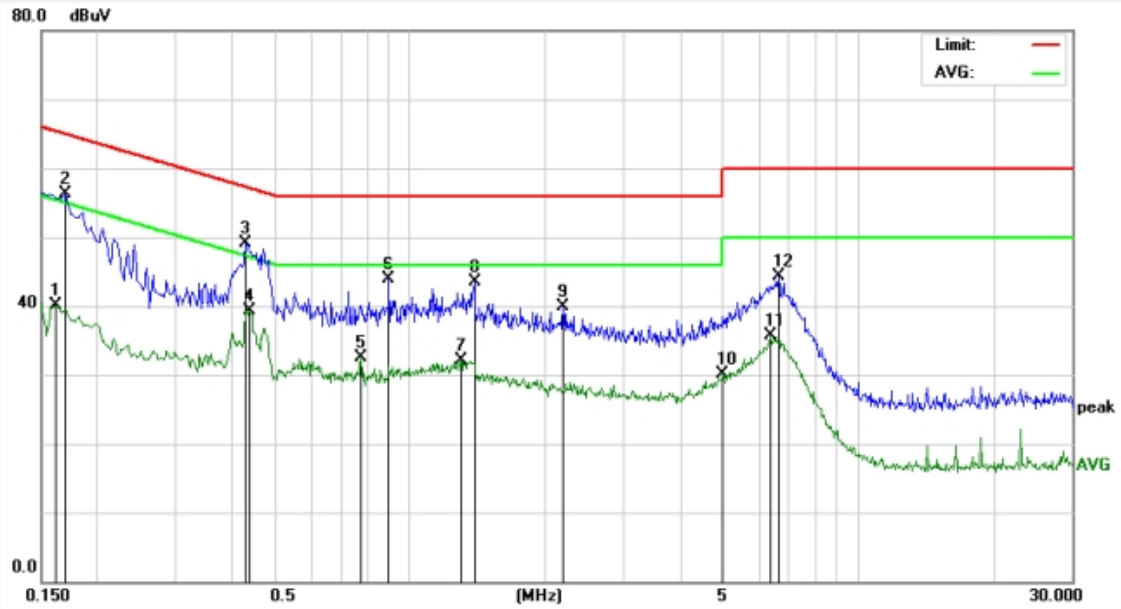
During the test, pre-scan all modes, only the worst case is recorded in the report.

Please to see the following pages.

Conducted Emission Test Data

Test Site:	1# Shielded Room
Operating Condition:	2402MHz
Test Specification:	AC 120V, 60Hz for Adapter
Comment:	Live Line
Temp.(℃)/Hum.(%RH):	22.1℃/50%RH

For Light Strip Length: 5m

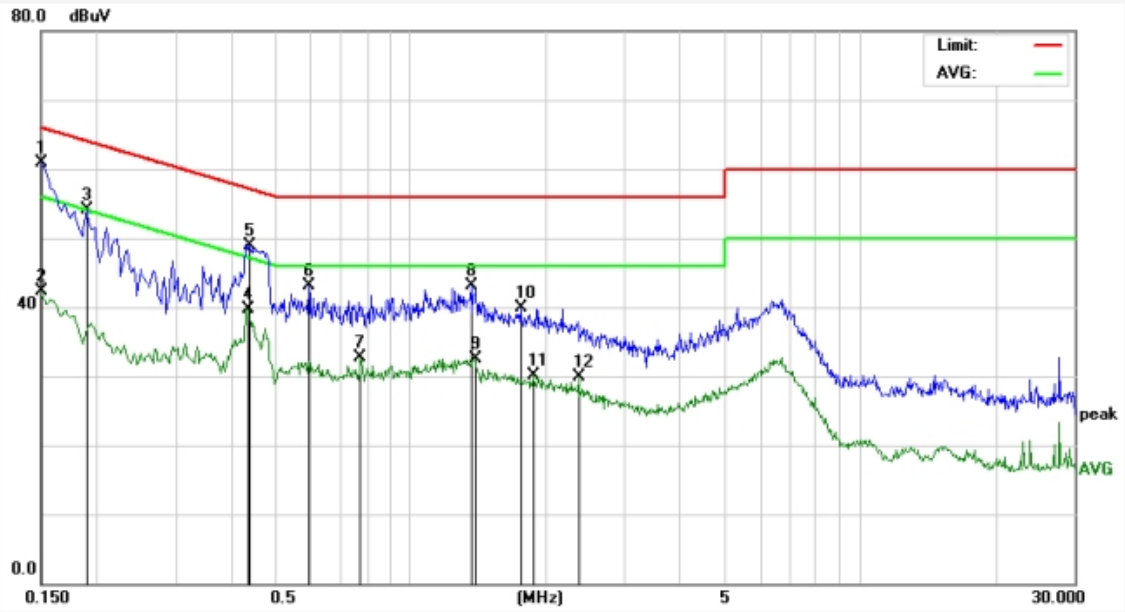


No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1620	22.36	17.83	40.19	55.36	-15.17	AVG	
2	0.1700	38.43	17.83	56.26	64.96	-8.70	QP	
3	0.4300	31.31	17.82	49.13	57.25	-8.12	QP	
4	0.4380	21.45	17.83	39.28	47.10	-7.82	AVG	
5	0.7780	14.73	17.87	32.60	46.00	-13.40	AVG	
6	0.8980	26.00	17.86	43.86	56.00	-12.14	QP	
7	1.2980	14.30	17.86	32.16	46.00	-13.84	AVG	
8	1.3900	25.63	17.86	43.49	56.00	-12.51	QP	
9	2.1980	21.97	17.85	39.82	56.00	-16.18	QP	
10	4.9940	12.15	17.86	30.01	46.00	-15.99	AVG	
11	6.3780	17.84	17.89	35.73	50.00	-14.27	AVG	
12	6.6540	26.46	17.89	44.35	60.00	-15.65	QP	

Conducted Emission Test Data

Test Site:	1# Shielded Room
Operating Condition:	2402MHz
Test Specification:	AC 120V, 60Hz for Adapter
Comment:	Neutral Line
Temp.(℃)/Hum.(%RH):	22.1℃/50%RH

For Light Strip Length: 5m



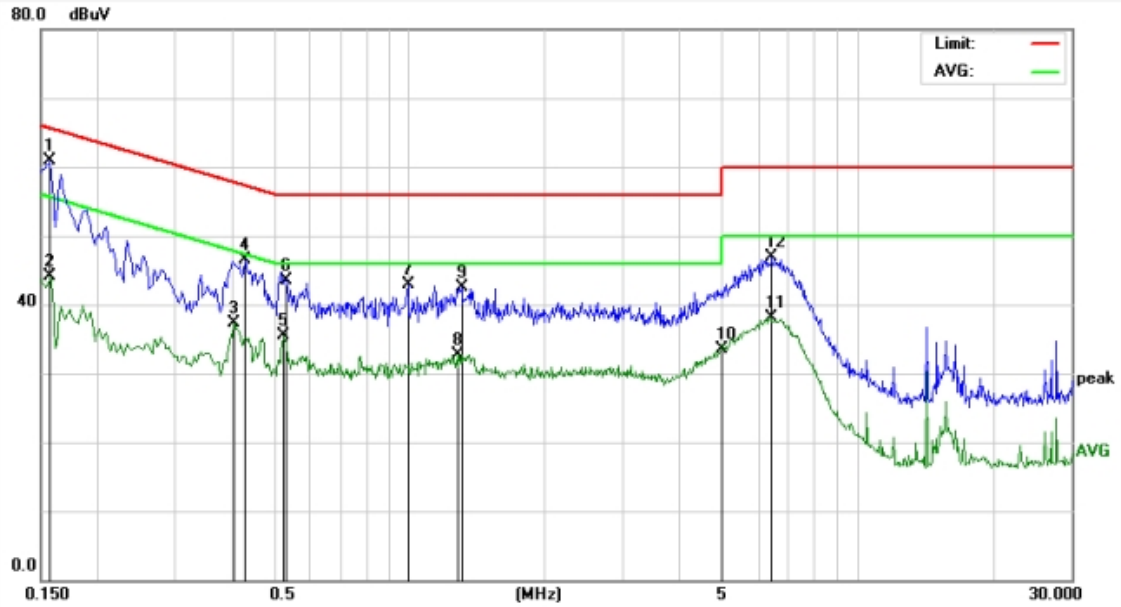
No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1500	43.09	17.82	60.91	65.99	-5.08	QP	
2	0.1500	24.46	17.82	42.28	55.99	-13.71	AVG	
3	0.1900	36.31	17.82	54.13	64.03	-9.90	QP	
4	0.4340	21.98	17.82	39.80	47.18	-7.38	AVG	
5	0.4380	31.11	17.83	48.94	57.10	-8.16	QP	
6	0.5940	25.19	17.86	43.05	56.00	-12.95	QP	
7	0.7740	14.83	17.87	32.70	46.00	-13.30	AVG	
8	1.3619	25.27	17.86	43.13	56.00	-12.87	QP	
9	1.3900	14.56	17.86	32.42	46.00	-13.58	AVG	
10	1.7540	21.99	17.86	39.85	56.00	-16.15	QP	
11	1.8740	12.27	17.85	30.12	46.00	-15.88	AVG	
12	2.3660	12.13	17.85	29.98	46.00	-16.02	AVG	

Note:
1. Only record the worst data in the report.
2. Result(dBμV) = Reading(dBμV) + Factor(dB);
   Over Limit(dB) = Result(dBμV) - Limit(dBμV)

Conducted Emission Test Data

Test Site:	1# Shielded Room
Operating Condition:	2402MHz
Test Specification:	AC 120V, 60Hz for Adapter
Comment:	Live Line
Temp.(℃)/Hum.(%RH):	22.1℃/50%RH

For Light Strip Length: 10m

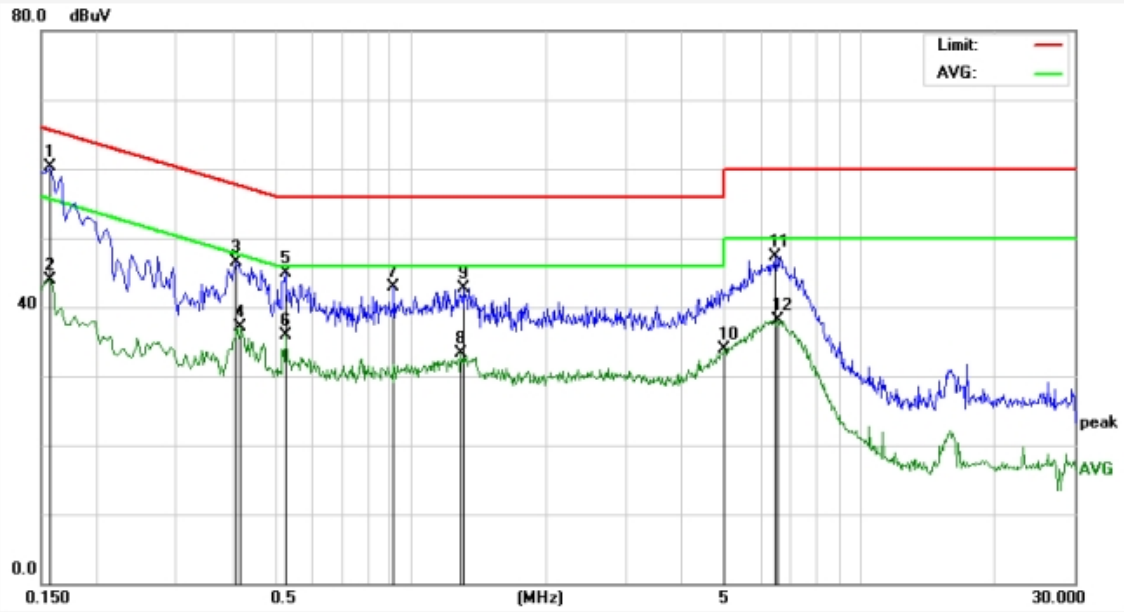


No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1580	43.15	17.83	60.98	65.56	-4.58	QP	
2	0.1580	26.19	17.83	44.02	55.56	-11.54	AVG	
3	0.4060	19.43	17.81	37.24	47.73	-10.49	AVG	
4	0.4300	28.77	17.82	46.59	57.25	-10.66	QP	
5	0.5220	17.62	17.86	35.48	46.00	-10.52	AVG	
6	0.5299	25.74	17.86	43.60	56.00	-12.40	QP	
7	0.9900	25.00	17.86	42.86	56.00	-13.14	QP	
8	1.2820	14.94	17.86	32.80	46.00	-13.20	AVG	
9	1.3060	24.67	17.86	42.53	56.00	-13.47	QP	
10	4.9780	15.63	17.86	33.49	46.00	-12.51	AVG	
11	6.3900	20.22	17.89	38.11	50.00	-11.89	AVG	
12	6.4460	29.11	17.89	47.00	60.00	-13.00	QP	

Conducted Emission Test Data

Test Site:	1# Shielded Room
Operating Condition:	2402MHz
Test Specification:	AC 120V, 60Hz for Adapter
Comment:	Neutral Line
Temp.(℃)/Hum.(%RH):	22.1℃/50%RH

For Light Strip Length: 10m



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1580	42.50	17.83	60.33	65.56	-5.23	QP	
2	0.1580	26.16	17.83	43.99	55.56	-11.57	AVG	
3	0.4100	28.66	17.81	46.47	57.65	-11.18	QP	
4	0.4180	19.28	17.82	37.10	47.49	-10.39	AVG	
5	0.5260	27.01	17.86	44.87	56.00	-11.13	QP	
6	0.5260	18.13	17.86	35.99	46.00	-10.01	AVG	
7	0.9140	25.14	17.86	43.00	56.00	-13.00	QP	
8	1.2900	15.35	17.86	33.21	46.00	-12.79	AVG	
9	1.3140	24.85	17.86	42.71	56.00	-13.29	QP	
10	4.9980	15.98	17.86	33.84	46.00	-12.16	AVG	
11	6.4860	29.40	17.89	47.29	60.00	-12.71	QP	
12	6.4940	20.30	17.89	38.19	50.00	-11.81	AVG	

Note:
1. Only record the worst data in the report.
2. Result(dBμV) = Reading(dBμV) + Factor(dB);
   Over Limit(dB) = Result(dBμV) - Limit(dBμV)

4. Radiated Spurious Emission and Band Edge Test

4.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.209 and 15.205				
Test Limit	Frequency (MHz)	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~1000MHz	500	54.0	Quasi-peak	3
	Above 1000MHz	500	54.0	Average	3
		-	74.0	Peak	3

Remark:
(1)The lower limit shall apply at the transition frequency.
(2) 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.

4.2. Test Setup

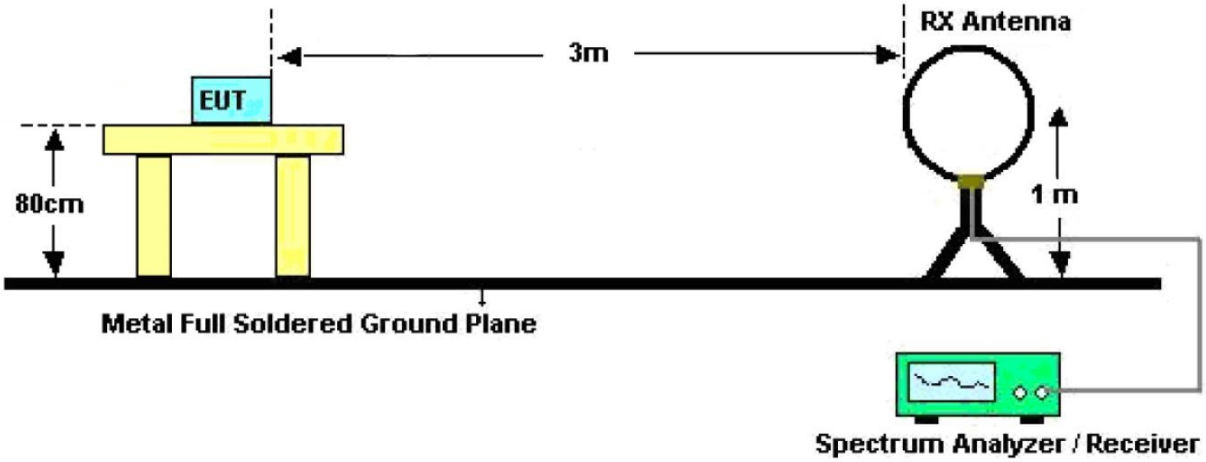


Figure 1. Below 30MHz

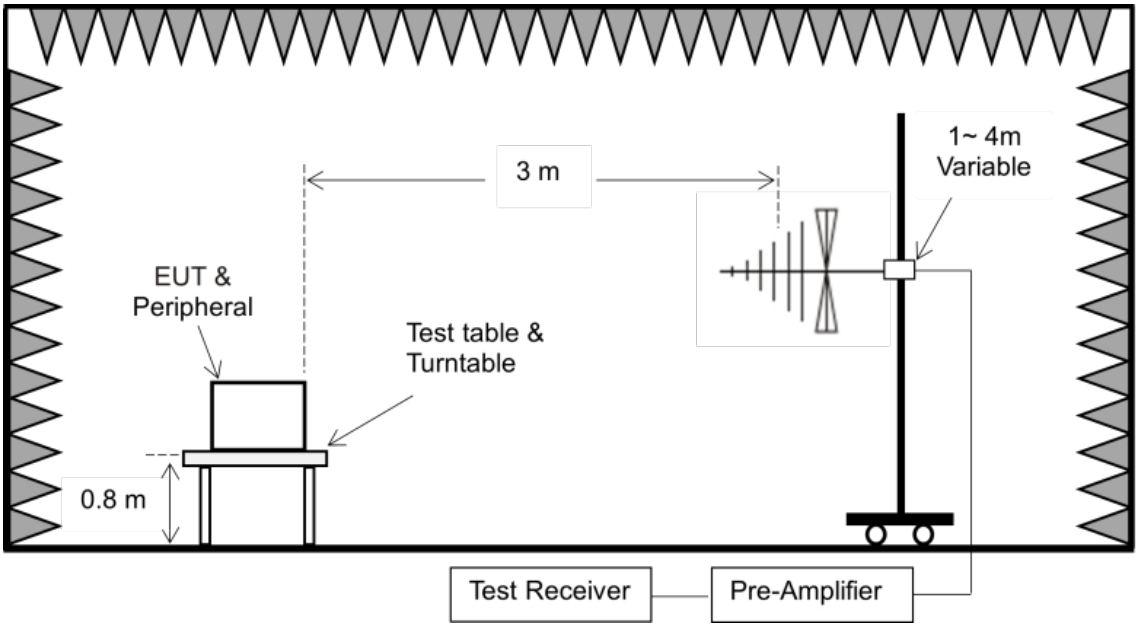


Figure 2. 30MHz to 1GHz

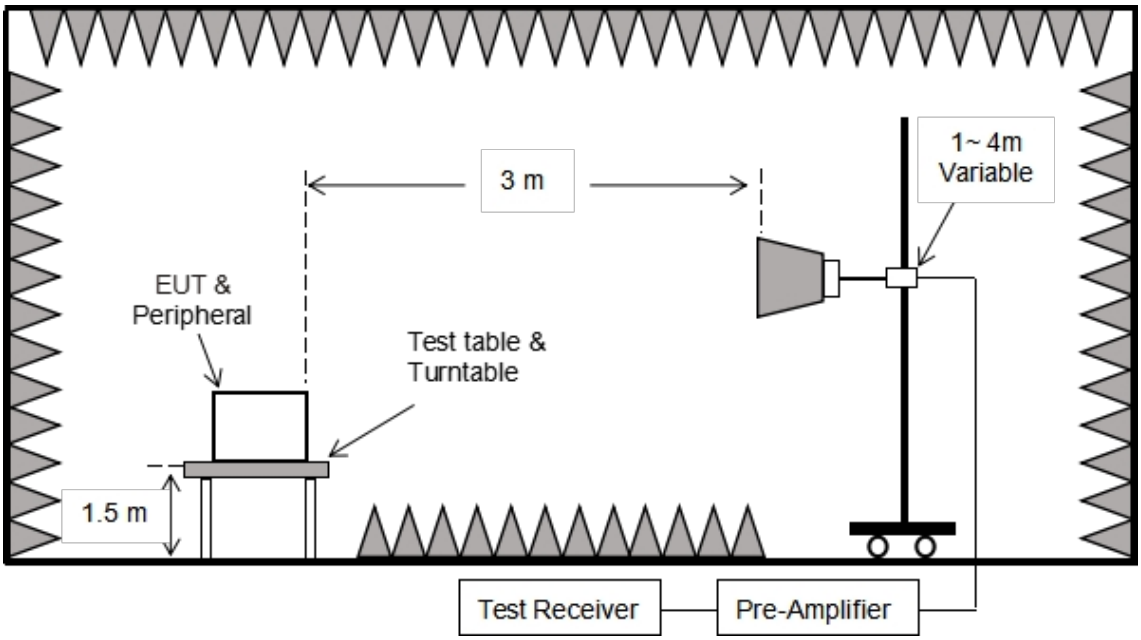


Figure 3. Above 1 GHz

4.3. Test Procedure

For below 1GHz: The EUT is placed on a turntable, which is 0.1m above the ground plane.

For above 1GHz: The EUT is placed on a turntable, which is 1.5m above the ground plane.

The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Rotated the EUT through three orthogonal axes to determine the maximum emissions, both horizontal and vertical polarization of the antenna are set on test. The EUT is tested in 9*6*6 Chamber. The device is evaluated in xyz orientation.

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.

For 9kHz to 150kHz, Set the spectrum analyzer as:

RBW = 200Hz, VBW =1kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 150kHz to 30MHz, Set the spectrum analyzer as:

RBW = 9KHz, VBW =30kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 30MHz to 1000MHz, Set the spectrum analyzer as:

RBW = 100kHz, VBW =300kHz,Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For above 1GHz,Set the spectrum analyzer as:

RBW =1MHz, VBW =3MHz, Detector= Peak, Trace mode= Max hold, Sweep- auto couple.

For average measurement:

–VBW=3*RBW, Detector= RMS, When duty cycle is no less than 98 percent

–VBW=3*RBW, Detector= RMS, When duty cycle is less than 98 percent and dutycycle is constant, average=peak level+correction factor(20log(dutycycle)).

–VBW≥1/T, when duty cycle is less than 98 percent and dutycycle is not constant, where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation, so refer to this clause duty cycle result.

4.4. Test Data

PASS

During the test, Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the X-axis is the worst case.

The test results of 9kHz-30MHz was attenuated more than 20dB below the permissible limits, so the results don't record in the report.

During the test, pre-scan all modes, only the worst case is recorded in the report.

Test Results (30~1000MHz)

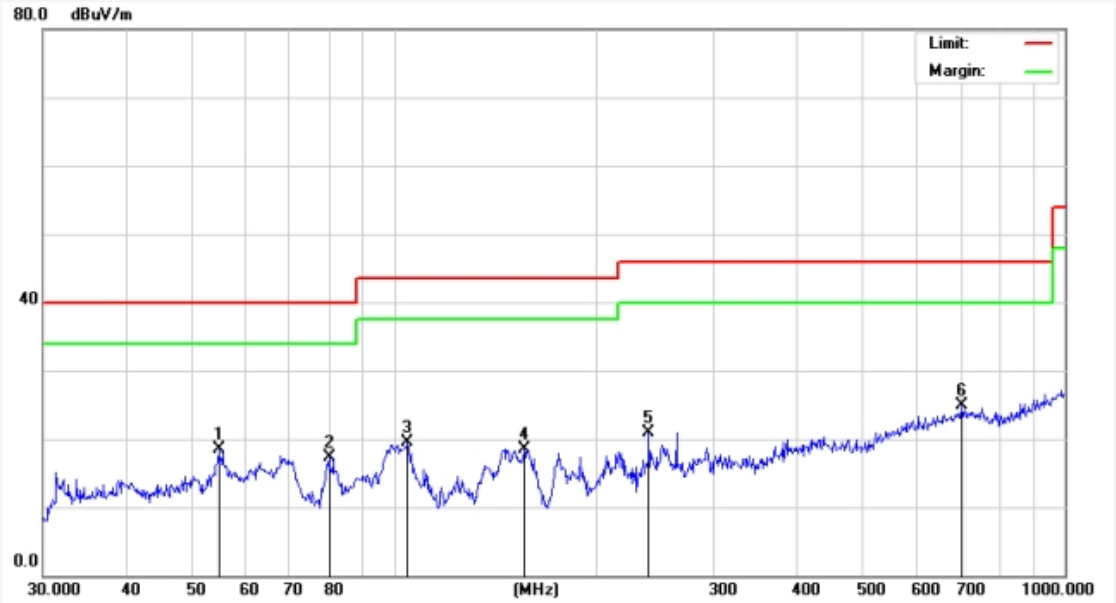
Test Mode: 2402MHz

Power Source: AC 120V, 60Hz for Adapter

Polarization: Horizontal

Temp.(℃)/Hum.(%RH): 25.1℃/55%RH

For Light Strip Length: 5m



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector			Remark
1	54.8348	36.29	-17.71	18.58	40.00	-21.42	QP			
2	80.0806	40.19	-22.79	17.40	40.00	-22.60	QP			
3	104.9033	38.41	-18.84	19.57	43.50	-23.93	QP			
4	156.4578	40.99	-22.43	18.56	43.50	-24.94	QP			
5	239.9874	39.64	-18.71	20.93	46.00	-25.07	QP			
6	701.7610	33.79	-8.88	24.91	46.00	-21.09	QP			

Test Results (30~1000MHz)

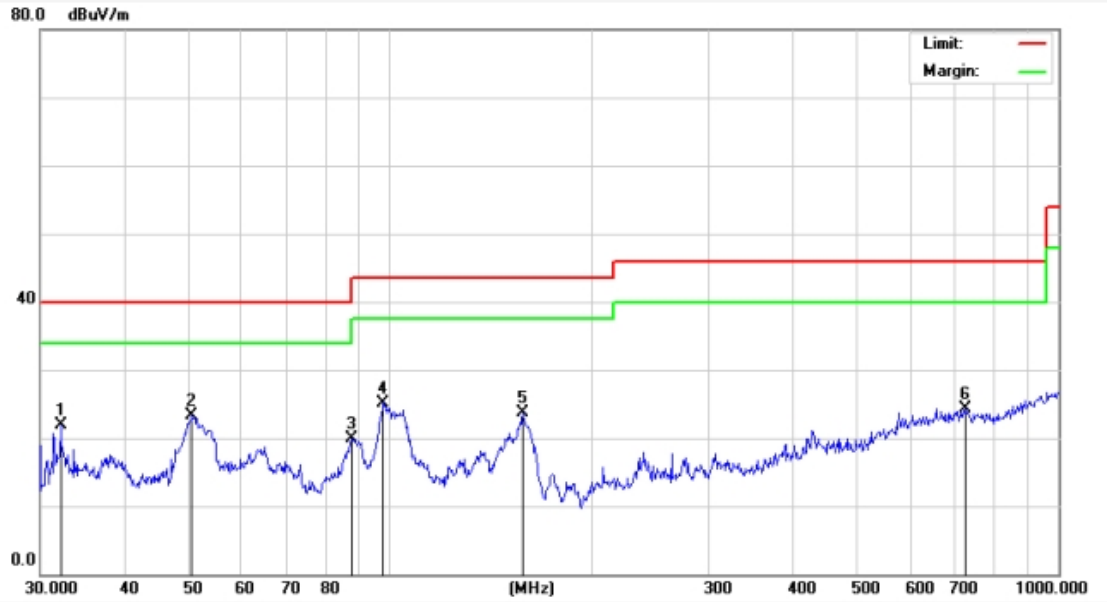
Test Mode: 2402MHz

Power Source: AC 120V, 60Hz for Adapter

Polarization: Vertical

Temp.(℃)/Hum.(%RH): 25.1℃/55%RH

For Light Strip Length: 5m



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector			Remark
1	32.1795	41.22	-19.36	21.86	40.00	-18.14	QP			
2	50.5860	40.65	-17.35	23.30	40.00	-16.70	QP			
3	87.7248	40.54	-20.57	19.97	40.00	-20.03	QP			
4	97.7983	43.96	-18.85	25.11	43.50	-18.39	QP			
5	158.1123	45.83	-22.13	23.70	43.50	-19.80	QP			
6	724.2611	33.02	-8.63	24.39	46.00	-21.61	QP			

Note:
1. Only record the worst data in the report.
2. Result(dBμV/m) = Reading(dBμV) + Factor(dB/m);
   Over Limit(dB) = Result(dBμV/m) - Limit(dBμV/m)

Test Results (30~1000MHz)

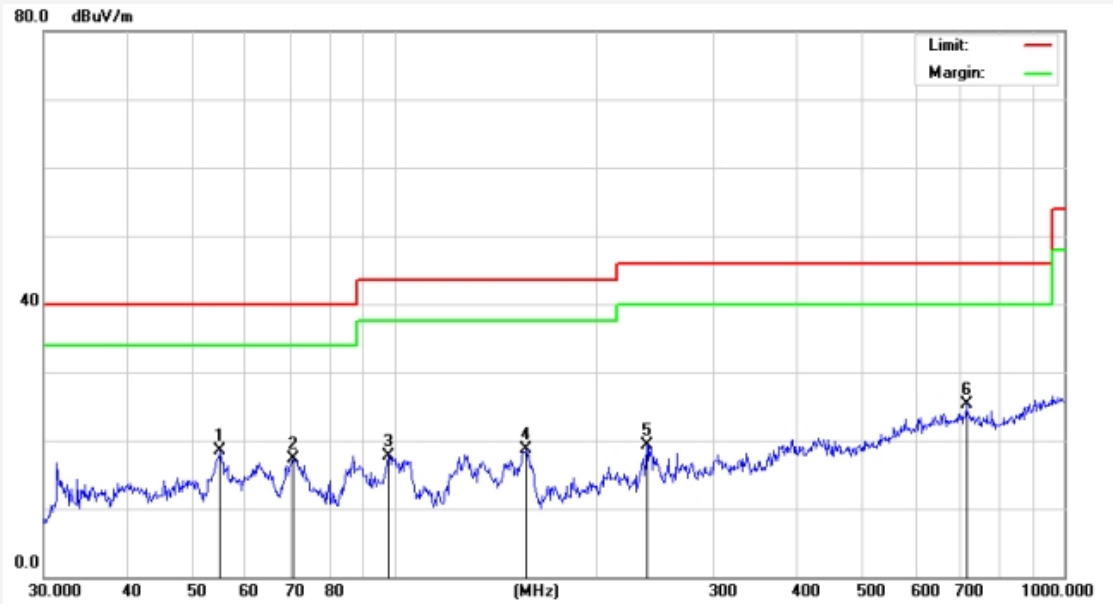
Test Mode: 2402MHz

Power Source: AC 120V, 60Hz for Adapter

Polarization: Horizontal

Temp.(℃)/Hum.(%RH): 25.1℃/55%RH

For Light Strip Length: 10m



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector			Remark
1	55.0274	36.24	-17.73	18.51	40.00	-21.49	QP			
2	70.8315	39.65	-22.34	17.31	40.00	-22.69	QP			
3	98.1419	36.43	-18.81	17.62	43.50	-25.88	QP			
4	157.5588	41.19	-22.39	18.80	43.50	-24.70	QP			
5	238.3102	38.09	-18.76	19.33	46.00	-26.67	QP			
6	714.1734	33.99	-8.74	25.25	46.00	-20.75	QP			

Test Results (30~1000MHz)

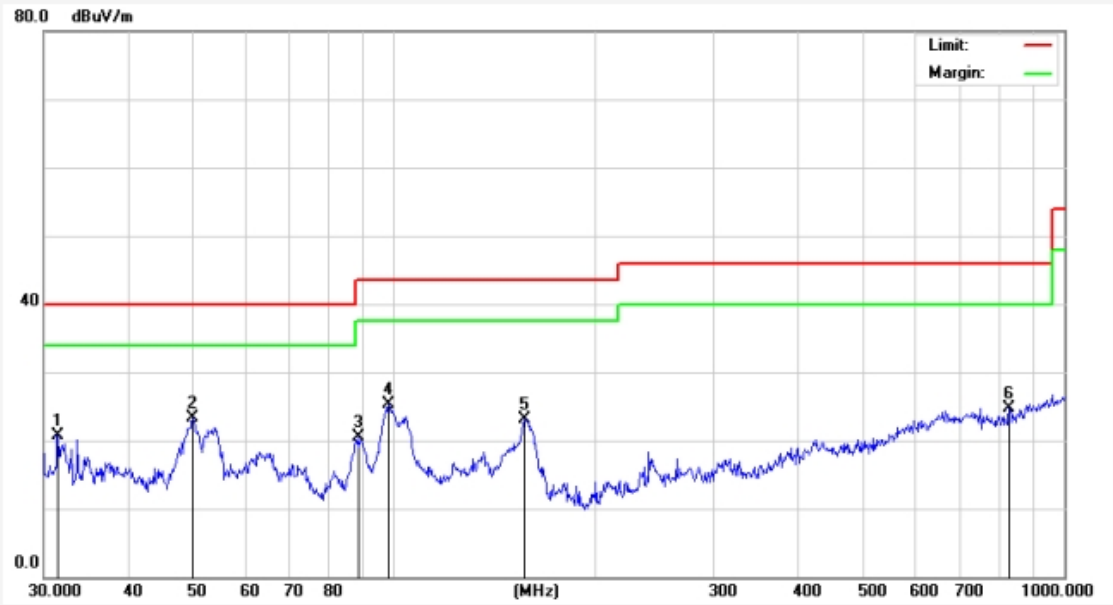
Test Mode: 2402MHz

Power Source: AC 120V, 60Hz for Adapter

Polarization: Vertical

Temp.(℃)/Hum.(%RH): 25.1℃/55%RH

For Light Strip Length: 10m



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector			Remark
1	31.5094	40.37	-19.59	20.78	40.00	-19.22	QP			
2	50.0566	40.57	-17.29	23.28	40.00	-16.72	QP			
3	88.3421	40.77	-20.30	20.47	43.50	-23.03	QP			
4	98.1419	44.14	-18.81	25.33	43.50	-18.17	QP			
5	156.4577	45.40	-22.20	23.20	43.50	-20.30	QP			
6	827.4933	33.01	-8.27	24.74	46.00	-21.26	QP			

Note:
1. Only record the worst data in the report.
2. Result(dBμV/m) = Reading(dBμV) + Factor(dB/m);
   Over Limit(dB) = Result(dBμV/m) - Limit(dBμV/m)

Test Results (1GHz-25GHz)

Test Mode: CH00			Test channel: Lowest			
Peak value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
4804.00	30.88	15.27	46.15	74.00	-27.85	Vertical
7206.00	30.53	18.09	48.62	74.00	-25.38	Vertical
9608.00	32.22	23.76	55.98	74.00	-18.02	Vertical
12010.00	*			74.00		Vertical
14412.00	*			74.00		Vertical
4804.00	30.34	15.27	45.61	74.00	-28.39	Horizontal
7206.00	31.96	18.09	50.05	74.00	-23.95	Horizontal
9608.00	29.15	23.76	52.91	74.00	-21.09	Horizontal
12010.00	*			74.00		Horizontal
14412.00	*			74.00		Horizontal
Average value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
4804.00	19.15	15.27	34.42	54.00	-19.58	Vertical
7206.00	19.58	18.09	37.67	54.00	-16.33	Vertical
9608.00	21.69	23.76	45.45	54.00	-8.55	Vertical
12010.00	*			54.00		Vertical
14412.00	*			54.00		Vertical
4804.00	18.67	15.27	33.94	54.00	-20.06	Horizontal
7206.00	20.99	18.09	39.08	54.00	-14.92	Horizontal
9608.00	18.66	23.76	42.42	54.00	-11.58	Horizontal
12010.00	*			54.00		Horizontal
14412.00	*			54.00		Horizontal

Test Results (1GHz-25GHz)

Test Mode: CH19			Test channel: Middle			
Peak value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
4880.00	30.43	15.42	45.85	74.00	-28.15	Vertical
7320.00	30.50	18.02	48.52	74.00	-25.48	Vertical
9760.00	31.72	23.80	55.52	74.00	-18.48	Vertical
12200.00	*			74.00		Vertical
14640.00	*			74.00		Vertical
4880.00	30.15	15.42	45.57	74.00	-28.43	Horizontal
7320.00	31.83	18.02	49.85	74.00	-24.15	Horizontal
9760.00	28.87	23.80	52.67	74.00	-21.33	Horizontal
12200.00	*			74.00		Horizontal
14640.00	*			74.00		Horizontal
Average value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
4880.00	19.24	15.42	34.66	54.00	-19.34	polarization
7320.00	19.44	18.02	37.46	54.00	-16.54	Vertical
9760.00	21.54	23.80	45.34	54.00	-8.66	Vertical
12200.00	*			54.00		Vertical
14640.00	*			54.00		Vertical
4880.00	18.78	15.42	34.20	54.00	-19.80	Vertical
7320.00	21.34	18.02	39.36	54.00	-14.64	Horizontal
9760.00	18.96	23.80	42.76	54.00	-11.24	Horizontal
12200.00	*			54.00		Horizontal
14640.00	*			54.00		Horizontal

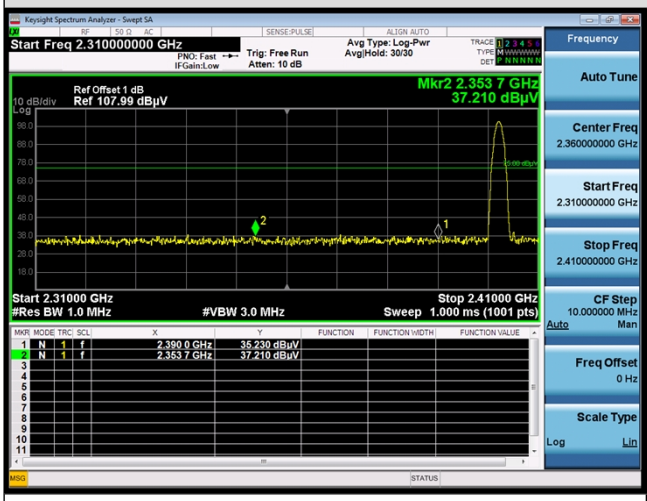
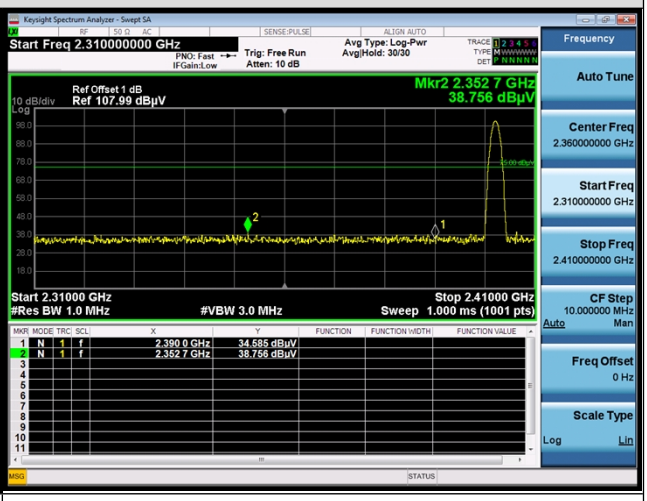
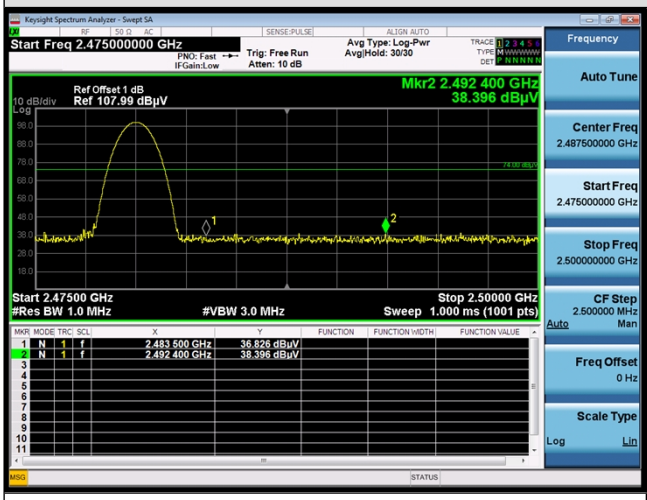
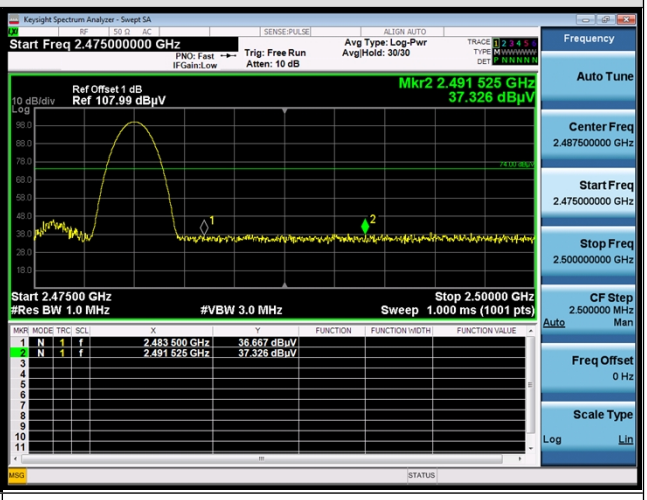
Test Results (1GHz-25GHz)

Test Mode: CH39			Test channel: Highest			
Peak value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
4960.00	30.56	15.58	46.14	74.00	-27.86	Vertical
7440.00	30.66	17.93	48.59	74.00	-25.41	Vertical
9920.00	32.42	23.83	56.25	74.00	-17.75	Vertical
12400.00	*			74.00		Vertical
14880.00	*			74.00		Vertical
4960.00	30.29	15.58	45.87	74.00	-28.13	Horizontal
7440.00	32.04	17.93	49.97	74.00	-24.03	Horizontal
9920.00	29.25	23.83	53.08	74.00	-20.92	Horizontal
12400.00	*			74.00		Horizontal
14880.00	*			74.00		Horizontal
Average value:						
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	polarization
4960.00	20.36	15.58	35.94	54.00	-18.06	Vertical
7440.00	20.71	17.93	38.64	54.00	-15.36	Vertical
9920.00	22.19	23.83	46.02	54.00	-7.98	Vertical
12400.00	*			54.00		Vertical
14880.00	*			54.00		Vertical
4960.00	19.96	15.58	35.54	54.00	-18.46	Horizontal
7440.00	22.14	17.93	40.07	54.00	-13.93	Horizontal
9920.00	19.11	23.83	42.94	54.00	-11.06	Horizontal
12400.00	*			54.00		Horizontal
14880.00	*			54.00		Horizontal

Remark:

1. Only record the worst data (Light Strip Length: 5m) in the report.
2. Result =Reading + Factor
3. "*" means the test results were attenuated more than 20dB below the permissible limits, so the results don't record in the report.

Radiated Band Edge:

Test Mode: Lowest (CH00)	
	
Peak Value(Vertical)	Peak Value(Horizontal)
Test Mode: Highest (CH39)	
	
Peak Value(Vertical)	Peak Value(Horizontal)

Remark: When the PK measure result value is less than the AVG limit value, the AV measure result values test not applicable.

Additional test for duty cycle.

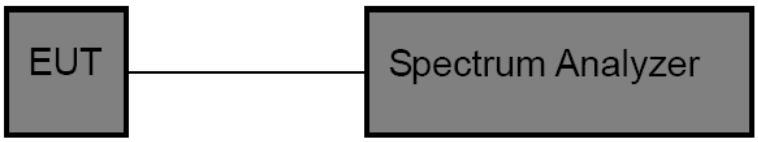
Please refer to Appendix G of the Appendix Test Data.

5. Maximum Conducted Output Power Test

5.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.247 (b)(3)
Test Limit	1W (30dBm)

5.2. Test Setup



5.3. Test Procedure

This procedure shall be used when the measurement instrument has available a resolution bandwidth that is greater than the DTS bandwidth.

1. Set the RBW ≥DTS bandwidth.
2. Set the VBW≥3*RBW.
3. Set the span≥ 3*RBW.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use peak marker function to determine the peak amplitude level.

5.4. Test Data

Pass.

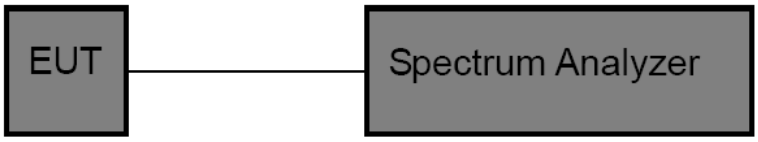
Please refer to Appendix C of the Appendix Test Data.

6. 6dB Bandwidth and 99% Occupied Bandwidth Test

6.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.247 (a)(2)
Test Limit	≥500kHz

6.2. Test Setup



6.3. Test Procedure

1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as:

6dB Bandwidth:

a) Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
b) Set the VBW ≥ [3 × RBW].
c) Detector = peak.
d) Trace mode = max-hold.
e) Sweep = No faster than coupled (auto) time.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “−6 dB down amplitude”. If a marker is below this “−6 dB down amplitude” value, then it shall be as close as possible to this value.

99% Occupied Bandwidth:

RBW=1~5% OBW, VBW=3*RBW, Sweep Time= Auto, Detector= Peak, Trace= Max hold

6.4. Test Data

Pass

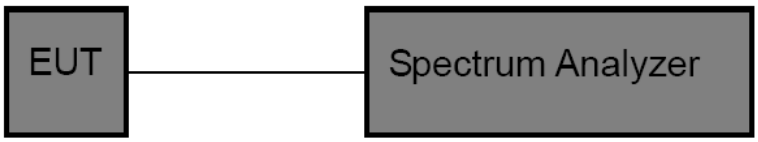
Please refer to Appendix A & Appendix B of the Appendix Test Data.

7. Maximum Power Spectral Density Test

7.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.247 (e)
Test Limit	8dBm/3kHz

7.2. Test Setup



7.3. Test Procedure

1. Place the EUT on the table and set it in transmitting mode. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set the spectrum analyzer as RBW = 3kHz, VBW ≥ 3*RBW, Span = 1.5xDTS BW
3. Record the max. reading.
4. Repeat the above procedure until the measurements for all frequencies are completed.

7.4. Test Data

Pass

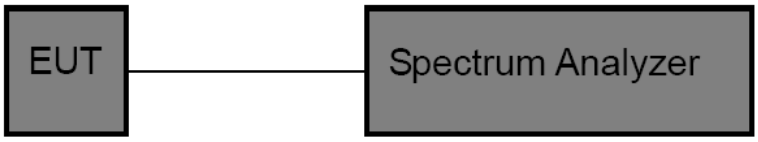
Please refer to Appendix D of the Appendix Test Data.

8. Conducted Spurious Emission Band Edge Test

8.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.247 (d)
Test Limit	In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, 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).

8.2. Test Setup



8.3. Test Procedure

Using the following spectrum analyzer setting:
1. Set the RBW = 100kHz.
2. Set the VBW = 300kHz.
3. Sweep time = auto couple.
4. Detector function = peak.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.

8.4. Test Data

Pass

Please refer to Appendix E & Appendix F of the Appendix Test Data.

9. Antenna Requirement

9.1. Test Standard and Requirement

Test Standard	FCC Part15 Section 15.203 /247(c)
Requirement	1) 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. 2) 15.247(c) (1)(i) requirement: Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

9.2. Antenna Connected Construction

The antenna is a PCB Antenna which permanently attached, and the best case gain of the antenna is 2.45dBi. It complies with the standard requirement.

APPENDIX I -- TEST SETUP PHOTOGRAPH

Please refer to separated files Appendix I -- Test Setup Photograph_RF

APPENDIX II -- EXTERNAL PHOTOGRAPH

Please refer to separated files Appendix II -- External Photograph

APPENDIX III -- INTERNAL PHOTOGRAPH

Please refer to separated files Appendix III -- Internal Photograph

---------- End of Report ----------