

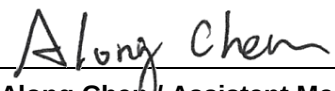
FCC Test Report

FCC ID : 2A8MT-AP6W
Equipment : 802.11ax 2x2 2-Streams Dual Concurrent
Dual radios Wall Plate Access Point
Model No. : AP6W
Brand Name : [A] ALTA
LABS
Applicant : Alta Networks, LLC
Address : 192 N Old Hwy 91, Unit 1 Hurricane, Utah,
United States 84737
Standard : 47 CFR FCC Part 15.247
Received Date : Mar. 11, 2025
Tested Date : Mar. 20 ~ Mar. 26, 2025

We, International Certification Corporation, would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:

Approved by:


Along Chen / Assistant Manager

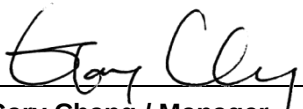

Gary Chang / Manager

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Appendix A. 6dB and Occupied Bandwidth

Appendix B. Conducted Output Power

Appendix C. Power Spectral Density

Appendix D. Unwanted Emissions into Restricted Frequency Bands

Appendix E. Emissions in Non-Restricted Frequency Bands

Appendix F. AC Power Line Conducted Emissions

Release Record

Report No.	Version	Description	Issued Date
FR1D0803-01AE	Rev. 01	Initial issue	Apr. 25, 2025

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emissions	[dBuV]: 0.47MHz 38.13 (Margin -8.45dB) - AV	Pass
15.247(d) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 60.38MHz 38.02 (Margin -1.98dB) - QP	Pass
15.247(b)(3)	Conducted Output Power	Power [dBm]: 8.87	Pass
15.247(a)(2)	6dB Bandwidth	Meet the requirement of limit	Pass
15.247(e)	Power Spectral Density	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information				
Frequency Range (MHz)	Bluetooth Mode	Ch. Freq. (MHz)	Channel Number	Data Rate
2400-2483.5	LE	2402-2480	0-39 [40]	1 Mbps
Note: Bluetooth LE (Low energy) uses GFSK modulation.				

1.1.2 Antenna Details

Ant. No.	Brand	Model	Type	Connector	Gain (dBi)
1	Emplus	BT 7102A0507000	Dipole	UFL	3.9

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12V $\overline{=}$ from AC adapter 54V $\overline{=}$ from POE
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Note: The above power supply is not bundled in market.

1.1.4 Accessories

N/A

1.1.5 Channel List

Frequency band (MHz)				2400~2483.5			
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
37	2402	9	2422	18	2442	28	2462
0	2404	10	2424	19	2444	29	2464
1	2406	38	2426	20	2446	30	2466
2	2408	11	2428	21	2448	31	2468
3	2410	12	2430	22	2450	32	2470
4	2412	13	2432	23	2452	33	2472
5	2414	14	2434	24	2454	34	2474
6	2416	15	2436	25	2456	35	2476
7	2418	16	2438	26	2458	36	2478
8	2420	17	2440	27	2460	39	2480

1.1.6 Test Tool and Duty Cycle

Test Tool	QRCT V4.0, version: 4.0.00195.0	
Modulation Mode	Duty Cycle Of Test Signal (%)	Duty Factor (dB)
BT-LE(1Mbps)	100.00%	0.00

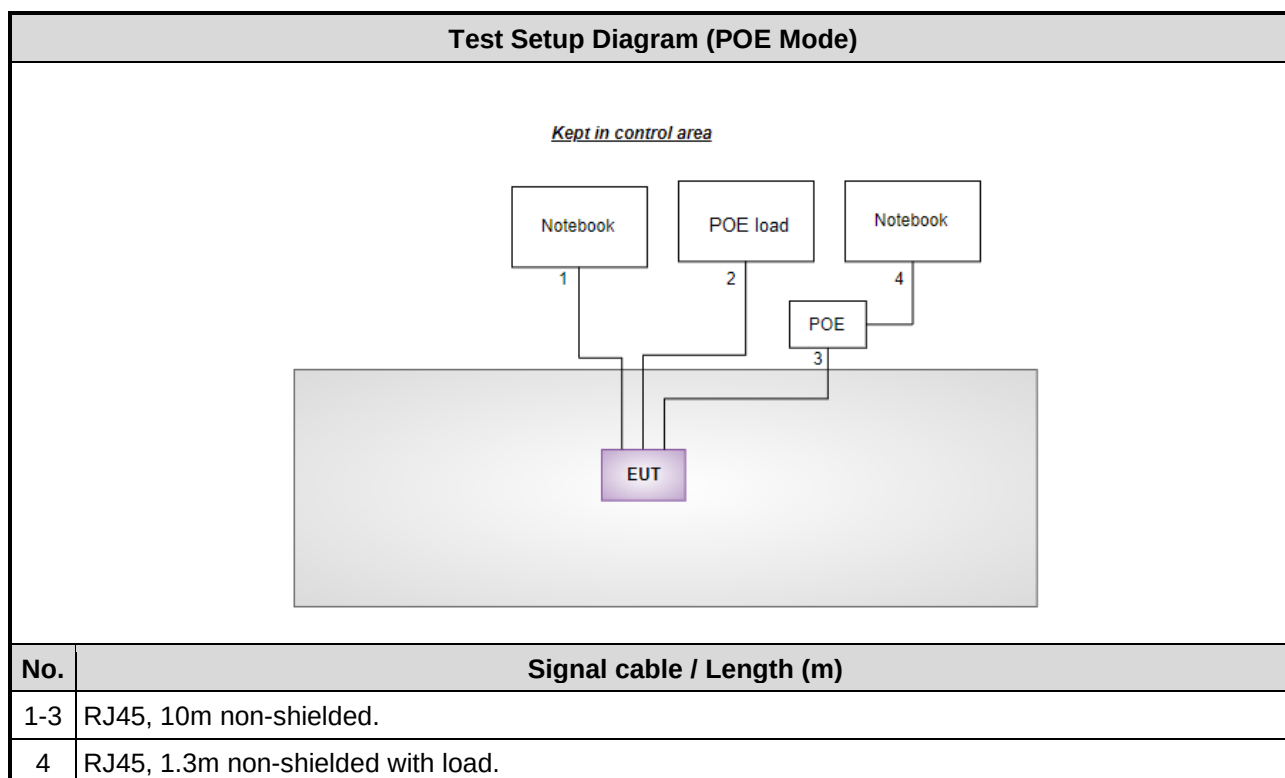
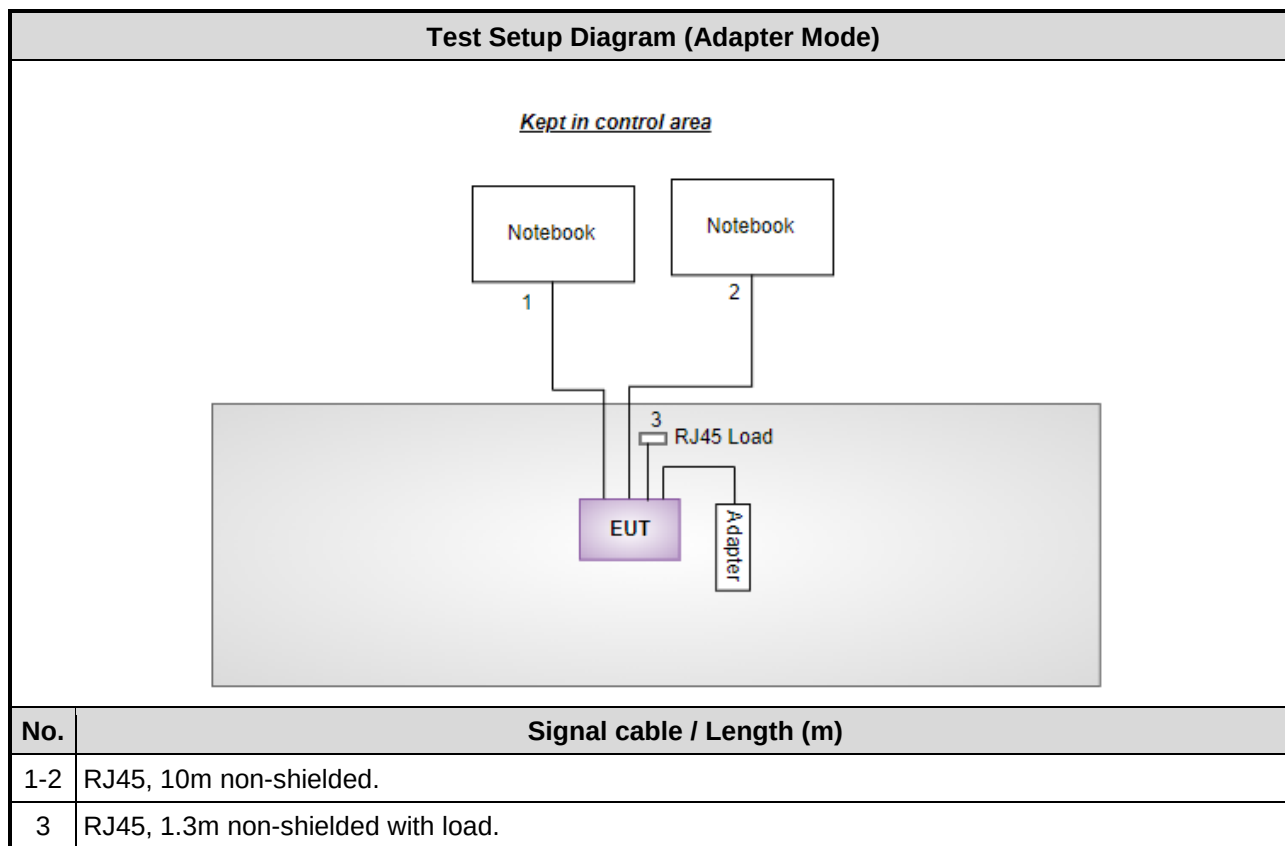
1.1.7 Power Index of Test Tool

Modulation Mode	Test Frequency (MHz)		
	2402	2440	2480
BT-LE(1Mbps)	8	8	8

1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Remarks
1	Laptop	DELL	Latitude E5470	DoC	---
2	Laptop	DELL	Latitude E5470	DoC	---
3	RJ45 Load	ICC	DTSE9	---	---
4	Power Adapter	LEADER	MU18D1120150-A1	---	Remarks: I/P: 100-240V~, 50/60Hz, 0.6A Max. O/P: 12V=1.5A (Provided by applicant.)
5	POE	Engenius	EPA5006GP	---	Remarks: I/P: 100-240V~, 50-60Hz, 0.8A O/P: 54V=0.6A (Provided by applicant.)
6	POE load		AP6W	---	Provided by applicant.

1.3 Test Setup Chart



1.4 Test Equipment List and Calibration Data

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Mar. 20 ~ Mar. 25, 2025				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101657	Mar. 11, 2025	Mar. 10, 2026
Spectrum Analyzer	R&S	FSV40	101498	Nov. 12, 2024	Nov. 11, 2025
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 05, 2024	Nov. 04, 2025
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Aug. 09, 2024	Aug. 08, 2025
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Nov. 28, 2024	Nov. 27, 2025
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 18, 2024	Nov. 17, 2025
Preamplifier	EMC	EMC02325	980225	Jun. 17, 2024	Jun. 16, 2025
Preamplifier	EMC	EMC118A45SE	980898	Jul. 05, 2024	Jul. 04, 2025
Preamplifier	EMC	EMC184045SE	980903	Jul. 30, 2024	Jul. 29, 2025
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 02, 2024	Oct. 01, 2025
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 02, 2024	Oct. 01, 2025
LF cable 11M	EMC	EMCCFD400-NW-N W-11000	200801	Oct. 02, 2024	Oct. 01, 2025
LF cable 1M	EMC	EMCCFD400-NM-N M-1000	160502	Oct. 02, 2024	Oct. 01, 2025
RF Cable	EMC	EMC104-35M-35M- 8000	210920	Oct. 02, 2024	Oct. 01, 2025
RF Cable	EMC	EMC104-35M-35M- 3000	210922	Oct. 02, 2024	Oct. 01, 2025
Attenuator	Pasternack	PE7005-10	10-1	Oct. 02, 2024	Oct. 01, 2025
HIGHPASS FILTER 3.1-18G	WHK	WHK3.1/18G-10SS	39	Oct. 02, 2024	Oct. 01, 2025
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Mar. 26, 2025				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101910	Apr. 18, 2024	Apr. 17, 2025
Power Meter	Anritsu	ML2495A	1241002	Nov. 26, 2024	Nov. 25, 2025
Power Sensor	Anritsu	MA2411B	1207366	Nov. 26, 2024	Nov. 25, 2025
Attenuator	Pasternack	PE7005-10	10-2	Oct. 04, 2024	Oct. 03, 2025
Measurement Software	Sporton	SENSE-15247_DTS	V5.11	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Mar. 25, 2025				
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until
Receiver	R&S	ESR3	101658	Feb. 25, 2025	Feb. 24, 2026
LISN	R&S	ENV216	101579	May 09, 2024	May 08, 2025
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127-666	Mar. 21, 2025	Mar. 20, 2026
RF Cable-CON	EMC	EMCCFD300-BM-B M-6000	50821	Oct. 09, 2024	Oct. 08, 2025
50 ohm terminal	NA	50	01	Jun. 19, 2024	Jun. 18, 2025
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

47 CFR FCC Part 15.247
ANSI C63.10-2013

1.6 Reference Guidance

FCC KDB 558074 D01 15.247 Meas Guidance v05r02

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor ($k=2$)).

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	± 34.130 Hz
Conducted power	± 0.808 dB
Power density	± 0.583 dB
Conducted emission	± 2.715 dB
AC conducted emission	± 2.92 dB
Unwanted Emission ≤ 1 GHz	± 3.41 dB
Unwanted Emission > 1 GHz	± 4.59 dB

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	CO01-WS, 03CH01-WS, TH01-WS
Address of Test Site	No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- ISED#: 10807A
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Test Configuration
AC Power Line Conducted Emissions	BT-LE(1Mbps)	2480	1, 2
Unwanted Emissions ≤ 1GHz	BT-LE(1Mbps)	2480	1, 2
Unwanted Emissions > 1GHz Conducted Output Power 6dB bandwidth Power spectral density	BT-LE(1Mbps)	2402, 2440, 2480	1
NOTE: 1. Test configurations are listed as below: 1) Configuration 1: Adapter mode 2) Configuration 2: POE mode			

3 Transmitter Test Results

3.1 6dB and Occupied Bandwidth

3.1.1 Limit of 6dB Bandwidth

The minimum 6dB bandwidth shall be at least 500 kHz.

3.1.2 Test Procedures

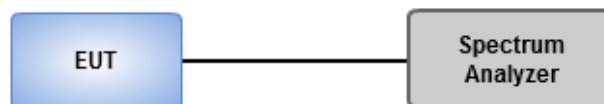
6dB Bandwidth

1. Set resolution bandwidth (RBW) = 100 kHz, Video bandwidth = 300 kHz.
2. Detector = Peak, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6dB relative to the maximum level measured in the fundamental emission.

Occupied Bandwidth

1. Set resolution bandwidth (RBW) = 1% ~ 5 % of OBW, Video bandwidth = 3 x RBW
2. Detector = Sample, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Use the OBW measurement function of spectrum analyzer to measure the occupied bandwidth.

3.1.3 Test Setup



3.1.4 Test Results

Ambient Condition	23°C / 65%	Tested By	Akun Chung
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Refer to Appendix A.

3.2 Conducted Output Power

3.2.1 Limit of Conducted Output Power

Conducted power shall not exceed 1Watt.

Antenna gain $\leq 6\text{dBi}$, no any corresponding reduction is in output power limit.

3.2.2 Test Procedures

A broadband RF power meter is used for output power measurement. The video bandwidth of power meter is greater than DTS bandwidth of EUT. If duty cycle of test signal is not 100 %, trigger and gating function of power meter will be enabled to capture transmission burst for measuring output power.

3.2.3 Test Setup



3.2.4 Test Results

Ambient Condition	23°C / 65%	Tested By	Akun Chung
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Refer to Appendix B.

3.3 Power Spectral Density

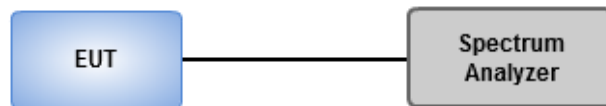
3.3.1 Limit of Power Spectral Density

Power spectral density shall not be greater than 8 dBm in any 3 kHz band.

3.3.2 Test Procedures

1. Set the RBW = 3 kHz, VBW = 10 kHz.
2. Detector = Peak, Sweep time = auto couple.
3. Trace mode = max hold, allow trace to fully stabilize.
4. Use the peak marker function to determine the maximum amplitude level.

3.3.3 Test Setup



3.3.4 Test Results

Ambient Condition	23°C / 65%	Tested By	Akun Chung
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Refer to Appendix C.

3.4 Unwanted Emissions in Restricted Frequency Bands

3.4.1 Limit of Unwanted Emissions in Restricted Frequency Bands

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1:
Quasi-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit

Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

3.4.2 Test Procedures

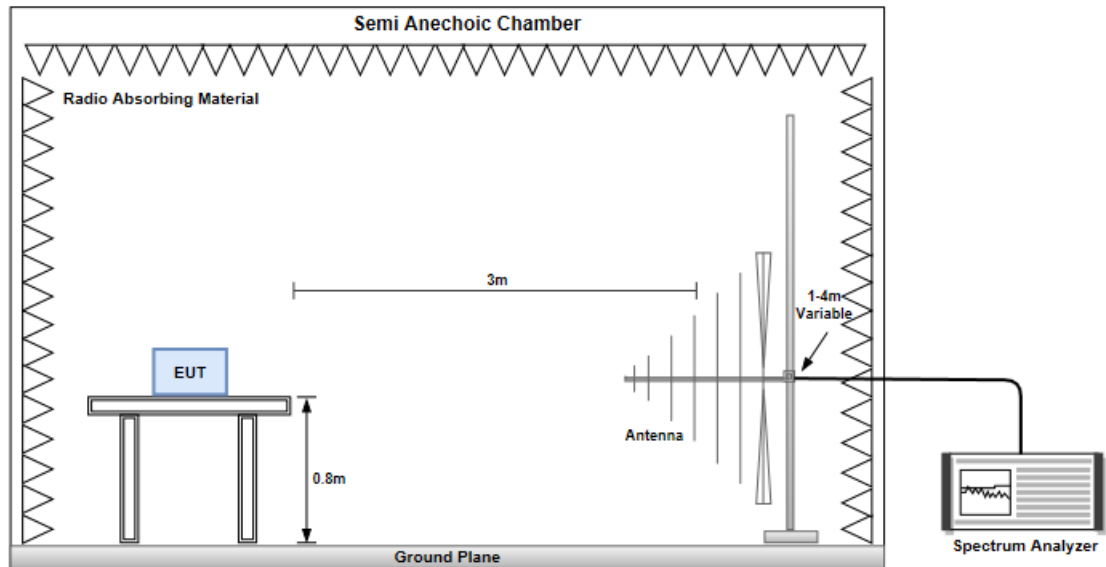
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

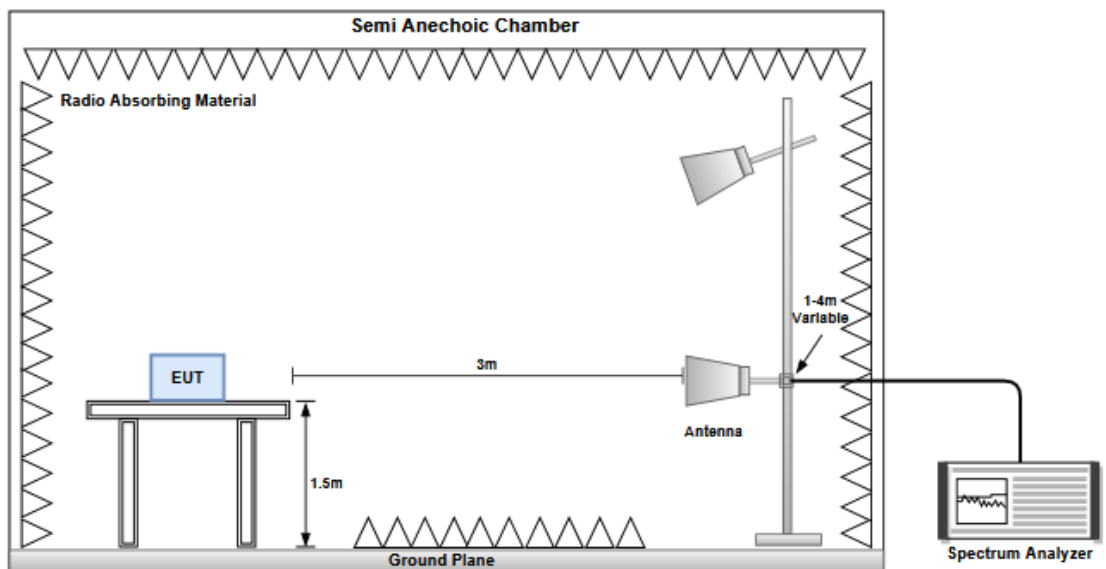
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

3.4.3 Test Setup

Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



3.4.4 Test Results

Refer to Appendix D.

3.5 Emissions in non-restricted Frequency Bands

3.5.1 Emissions in non-restricted frequency bands limit

Peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz.

3.5.2 Test Procedures

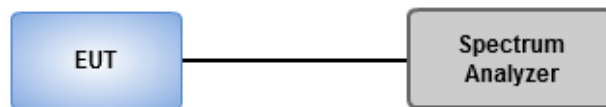
Reference level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Use the peak marker function to determine the maximum PSD level

Emission level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Scan Frequency range is up to 25GHz
4. Use the peak marker function to determine the maximum amplitude level

3.5.3 Test Setup



3.5.4 Test Results

Ambient Condition	23°C / 65%	Tested By	Akun Chung
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Refer to Appendix E.

3.6 AC Power Line Conducted Emissions

3.6.1 Limit of AC Power Line Conducted Emissions

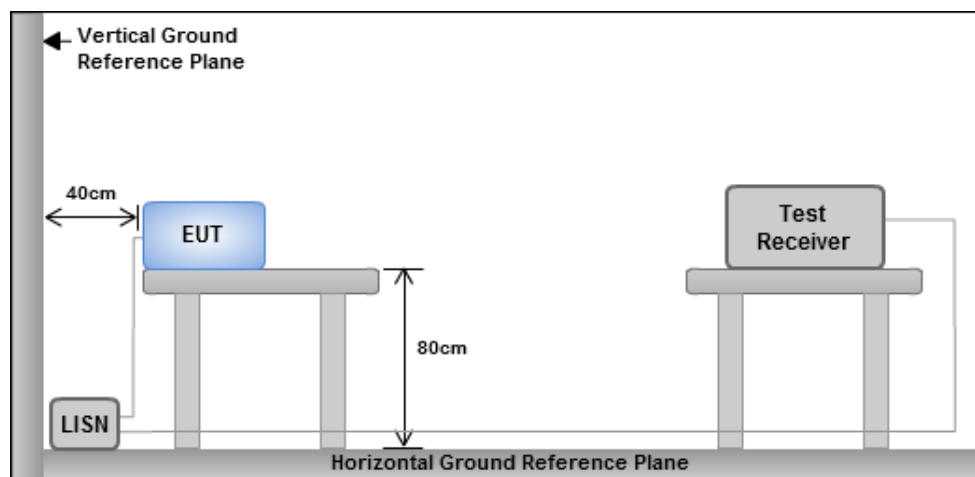
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

3.6.2 Test Procedures

1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V/60Hz

3.6.3 Test Setup



- Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.6.4 Test Results

Refer to Appendix F.

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corporation (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

Linkou

Tel: 886-2-2601-1640

No.30-2, Ding Fwu Tsuen, Lin Kou
District, New Taipei City, Taiwan
(R.O.C.)

Kwei Shan

Tel: 886-3-271-8666

No.3-1, Lane 6, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)
No.2-1, Lane 6, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)

Kwei Shan Site II

Tel: 886-3-271-8640

No.14-1, Lane 19, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)

If you have any suggestion, please feel free to contact us as below information.

Tel: 886-3-271-8666

Fax: 886-3-318-0155

Email: ICC_Service@icertifi.com.tw

==END==

**Summary**

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	738.75k	1.037M	1M04F1D	731.25k	1.034M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;

Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	500k	731.25k	1.034M
2440MHz	Pass	500k	736.25k	1.035M
2480MHz	Pass	500k	738.75k	1.037M

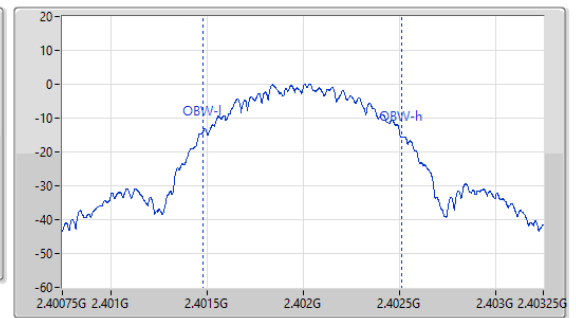
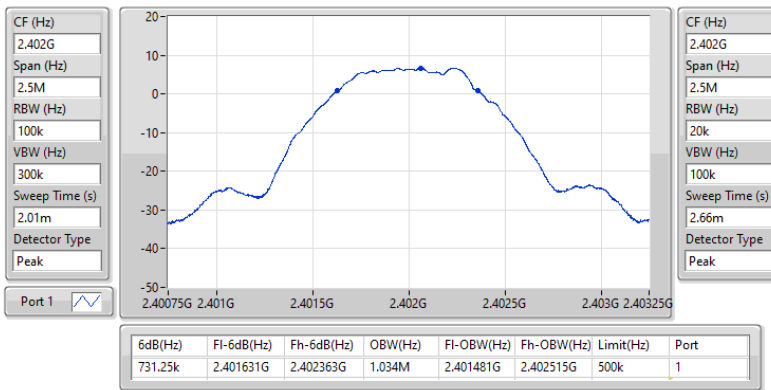
Port X-N dB = Port X 6dB down bandwidth;

Port X-OBW = Port X 99% occupied bandwidth

2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

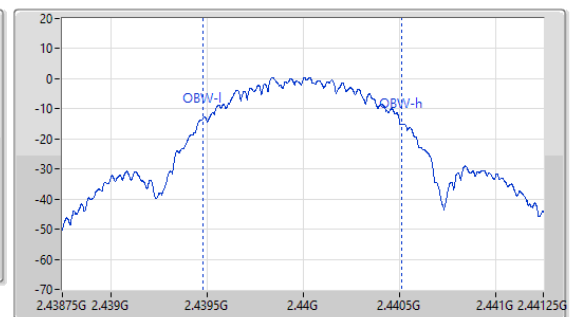
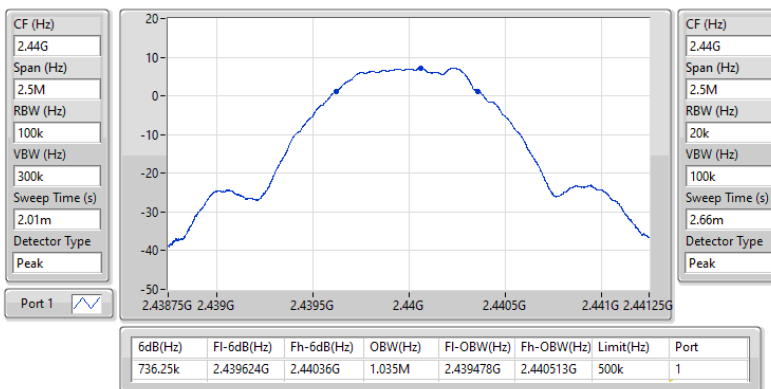
2402MHz



2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

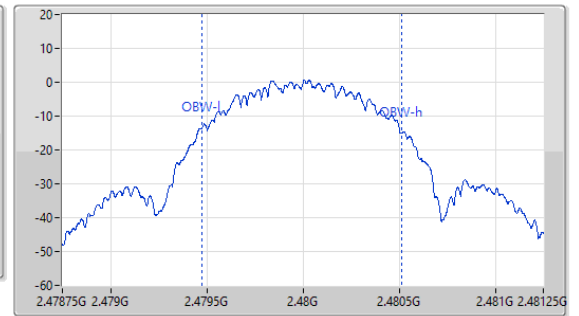
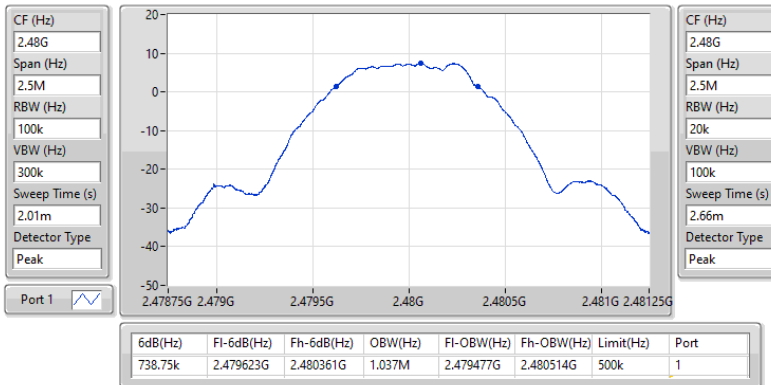
2440MHz



2.4-2.4835GHz_BT-LE(1Mbps)

EBW-DTS

2480MHz





Conducted Output Power (Peak)

Appendix B.1

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	8.87	0.00771

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
BT-LE(1Mbps)	-	-	-	-	-	-
2402MHz	Pass	3.90	8.75	30.00	12.65	36.00
2440MHz	Pass	3.90	8.68	30.00	12.58	36.00
2480MHz	Pass	3.90	8.87	30.00	12.77	36.00



Conducted Output Power (Average)

Appendix B.2

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
BT-LE(1Mbps)	8.75	0.00750

Result

Mode	Result	Antenna Gain (dBi)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
BT-LE(1Mbps)	-	-	-	-	-	-
2402MHz	Pass	3.90	8.61	-	12.51	-
2440MHz	Pass	3.90	8.58	-	12.48	-
2480MHz	Pass	3.90	8.75	-	12.65	-

Note: Average power is for reference only.

**Summary**

Mode	PD (dBm/3kHz)
2.4-2.4835GHz	-
BT-LE(1Mbps)	-8.88

Result

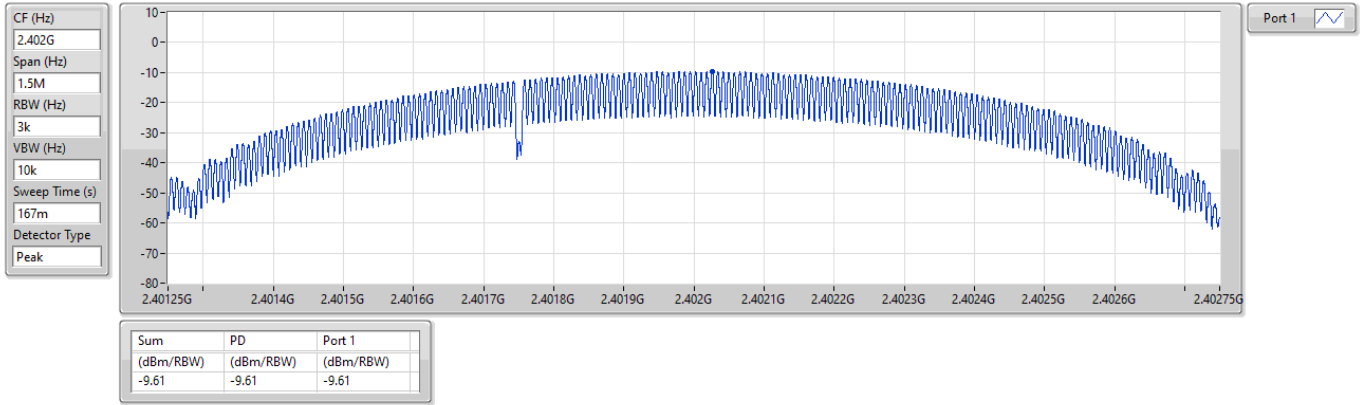
Mode	Result	Antenna Gain (dBi)	Power Density (dBm/3kHz)	Power Density Limit (dBm/3kHz)
BT-LE(1Mbps)	-	-	-	-
2402MHz	Pass	3.90	-9.61	8.00
2440MHz	Pass	3.90	-9.18	8.00
2480MHz	Pass	3.90	-8.88	8.00



2.4-2.4835GHz_BT-LE(1Mbps)

PSD

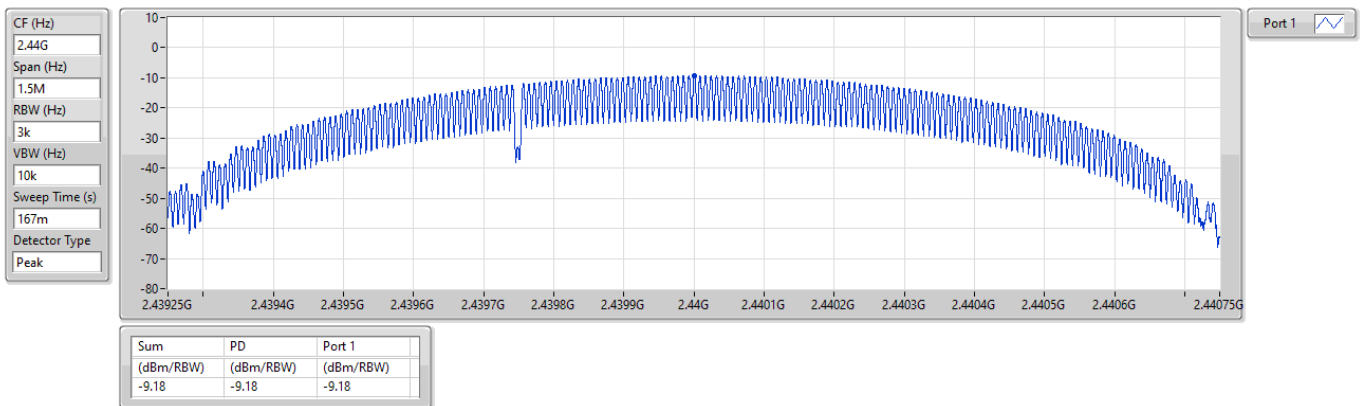
2402MHz



2.4-2.4835GHz_BT-LE(1Mbps)

PSD

2440MHz

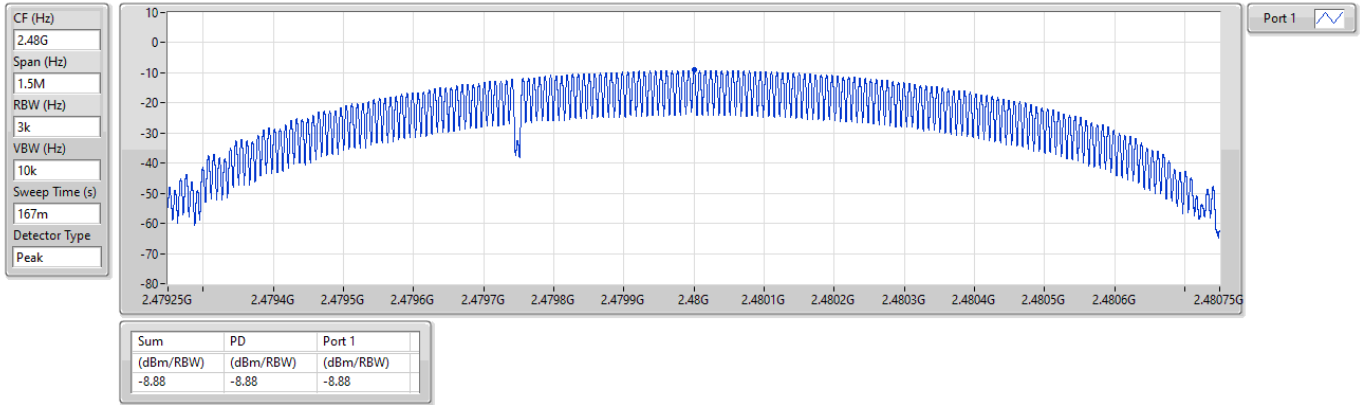




2.4-2.4835GHz_BT-LE(1Mbps)

PSD

2480MHz





Adapter mode

Unwanted Emissions (Below 1GHz)

Modulation	BT-LE (1Mbps)	Test Freq. (MHz)	2480
Polarization	Horizontal		

Test By :Allen Lee

Temperature(°C):24

Humidity(%):63

The graph displays the unwanted emission levels for a BT-LE (1Mbps) adapter in adapter mode. The y-axis represents the Level in dBuV/m, ranging from 0 to 90. The x-axis represents the Frequency in MHz, ranging from 30 to 1000. A red line indicates the Class-B limit, which is 40 dBuV/m from 30 MHz to 200 MHz, 45 dBuV/m from 200 MHz to 900 MHz, and 55 dBuV/m from 900 MHz to 1000 MHz. Six measured peaks are identified and numbered 1 through 6, with their corresponding frequency, emission level, limit, margin, SA reading, and factor listed in the table below.

	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	90.70	26.68	43.50	-16.82	41.15	-14.47	Peak	---	---
2	250.10	31.33	46.00	-14.67	41.11	-9.78	Peak	---	---
3	394.40	36.91	46.00	-9.09	42.50	-5.59	Peak	---	---
4	464.40	39.48	46.00	-6.52	43.38	-3.90	Peak	---	---
5	552.40	34.08	46.00	-11.92	36.47	-2.39	Peak	---	---
6	766.70	36.23	46.00	-9.77	34.12	2.11	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.



Modulation	BT-LE (1Mbps)	Test Freq. (MHz)	2480
Polarization	Vertical		
Test By :Allen Lee Temperature(°C):24 Humidity(%):63			
Level (dBuV/m)			



POE mode

Unwanted Emissions (Below 1GHz)

Modulation	BT-LE (1Mbps)	Test Freq. (MHz)	2480																																																																						
Polarization	Horizontal																																																																								
Test By :Allen Lee Temperature(°C):24 Humidity(%):63																																																																									
Level (dBuV/m) Frequency (MHz) <table><tr><th></th><th>Freq. MHz</th><th>Emission level dBuV/m</th><th>Limit dBuV/m</th><th>Margin dB</th><th>SA reading dBuV</th><th>Factor dB/m</th><th>Remark</th><th>ANT High cm</th><th>Turn Table deg</th></tr><tr><td>1</td><td>62.30</td><td>26.94</td><td>40.00</td><td>-13.06</td><td>36.43</td><td>-9.49</td><td>Peak</td><td>---</td><td>---</td></tr><tr><td>2</td><td>150.00</td><td>30.42</td><td>43.50</td><td>-13.08</td><td>39.07</td><td>-8.65</td><td>Peak</td><td>---</td><td>---</td></tr><tr><td>3</td><td>175.35</td><td>29.69</td><td>43.50</td><td>-13.81</td><td>39.27</td><td>-9.58</td><td>Peak</td><td>---</td><td>---</td></tr><tr><td>4</td><td>394.58</td><td>36.13</td><td>46.00</td><td>-9.87</td><td>41.72</td><td>-5.59</td><td>Peak</td><td>---</td><td>---</td></tr><tr><td>5</td><td>462.55</td><td>40.32</td><td>46.00</td><td>-5.68</td><td>44.26</td><td>-3.94</td><td>Peak</td><td>---</td><td>---</td></tr><tr><td>6</td><td>499.77</td><td>36.85</td><td>46.00</td><td>-9.15</td><td>40.21</td><td>-3.36</td><td>Peak</td><td>---</td><td>---</td></tr></table>					Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg	1	62.30	26.94	40.00	-13.06	36.43	-9.49	Peak	---	---	2	150.00	30.42	43.50	-13.08	39.07	-8.65	Peak	---	---	3	175.35	29.69	43.50	-13.81	39.27	-9.58	Peak	---	---	4	394.58	36.13	46.00	-9.87	41.72	-5.59	Peak	---	---	5	462.55	40.32	46.00	-5.68	44.26	-3.94	Peak	---	---	6	499.77	36.85	46.00	-9.15	40.21	-3.36	Peak	---	---
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg																																																																
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Modulation	BT-LE (1Mbps)	Test Freq. (MHz)	2480
Polarization	Vertical		
Test By :Allen Lee Temperature(°C):24 Humidity(%):63			
Level (dBuV/m)			

Unwanted Emissions (Above 1GHz)

Modulation	BT-LE (1Mbps)	Test Freq. (MHz)	2402
Polarization	Horizontal		
Test By :Allen Lee Temperature(°C):22 Humidity(%):63			
Level (dBUV/m)			



Modulation	BT-LE (1Mbps)	Test Freq. (MHz)	2402
Polarization	Vertical		
Test By :Allen Lee Temperature(°C):22 Humidity(%):63			
Level (dBUV/m)			



Modulation	BT-LE (1Mbps)	Test Freq. (MHz)	2440
Polarization	Horizontal		
Test By :Allen Lee Temperature(°C):22 Humidity(%):63			
Level (dBuV/m)			



Modulation	BT-LE (1Mbps)	Test Freq. (MHz)	2440
Polarization	Vertical		
Test By :Allen Lee Temperature(°C):22 Humidity(%):63			
Level (dBuV/m) <			



Modulation	BT-LE (1Mbps)	Test Freq. (MHz)	2480
Polarization	Horizontal		
Test By :Allen Lee Temperature(°C):22 Humidity(%):63			
Level (dBUV/m)			



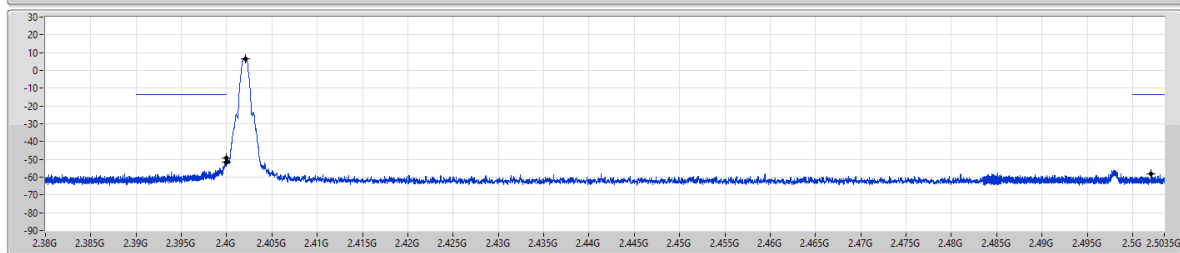
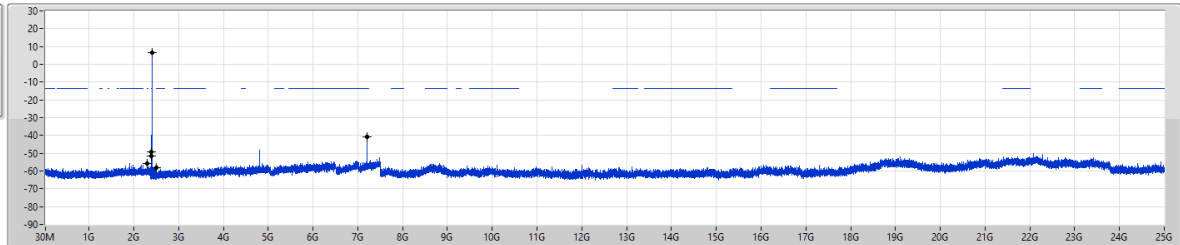
Modulation	BT-LE (1Mbps)		Test Freq. (MHz)		2480																																																																																											
Polarization	Vertical																																																																																															
Test By :Allen Lee Temperature(°C):22 Humidity(%):63																																																																																																
Level (dBuV/m) <table><tr><th></th><th>Freq.</th><th>Emission</th><th>Limit</th><th>Margin</th><th>SA</th><th>Factor</th><th>Remark</th><th>ANT</th><th>Turn</th></tr><tr><th></th><th>MHz</th><th>level</th><th>dBuV/m</th><th>dB</th><th>reading</th><th>dB/m</th><th></th><th>High</th><th>Table</th></tr><tr><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>cm</th><th>deg</th></tr><tr><td>1</td><td>2483.50</td><td>37.69</td><td>54.00</td><td>-16.31</td><td>42.46</td><td>-4.77</td><td>Average</td><td>120</td><td>352</td></tr><tr><td>2</td><td>2483.50</td><td>50.79</td><td>74.00</td><td>-23.21</td><td>55.56</td><td>-4.77</td><td>Peak</td><td>120</td><td>352</td></tr><tr><td>3</td><td>4960.00</td><td>41.01</td><td>54.00</td><td>-12.99</td><td>41.33</td><td>-0.32</td><td>Average</td><td>243</td><td>1</td></tr><tr><td>4</td><td>4960.00</td><td>48.96</td><td>74.00</td><td>-25.04</td><td>49.28</td><td>-0.32</td><td>Peak</td><td>243</td><td>1</td></tr><tr><td>5</td><td>7440.00</td><td>46.32</td><td>54.00</td><td>-7.68</td><td>40.92</td><td>5.40</td><td>Average</td><td>216</td><td>64</td></tr><tr><td>6</td><td>7440.00</td><td>56.11</td><td>74.00</td><td>-17.89</td><td>50.71</td><td>5.40</td><td>Peak</td><td>216</td><td>64</td></tr></table>								Freq.	Emission	Limit	Margin	SA	Factor	Remark	ANT	Turn		MHz	level	dBuV/m	dB	reading	dB/m		High	Table									cm	deg	1	2483.50	37.69	54.00	-16.31	42.46	-4.77	Average	120	352	2	2483.50	50.79	74.00	-23.21	55.56	-4.77	Peak	120	352	3	4960.00	41.01	54.00	-12.99	41.33	-0.32	Average	243	1	4	4960.00	48.96	74.00	-25.04	49.28	-0.32	Peak	243	1	5	7440.00	46.32	54.00	-7.68	40.92	5.40	Average	216	64	6	7440.00	56.11	74.00	-17.89	50.71	5.40	Peak	216	64
	Freq.	Emission	Limit	Margin	SA	Factor	Remark	ANT	Turn																																																																																							
	MHz	level	dBuV/m	dB	reading	dB/m		High	Table																																																																																							
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1	2483.50	37.69	54.00	-16.31	42.46	-4.77	Average	120	352																																																																																							
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2.4-2.4835GHz_BT-LE(1Mbps)

CSEndB-DTS

2402MHz

RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak



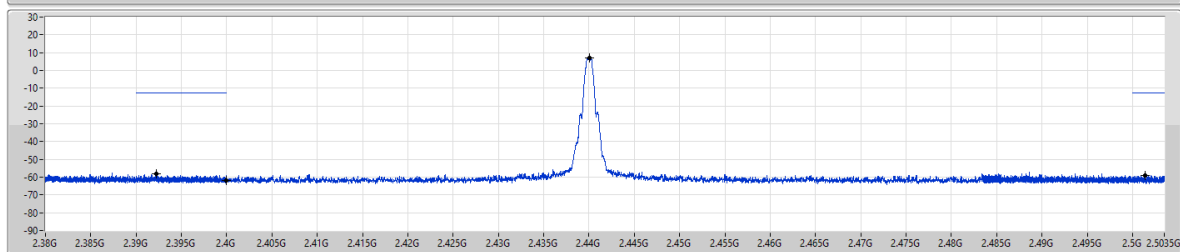
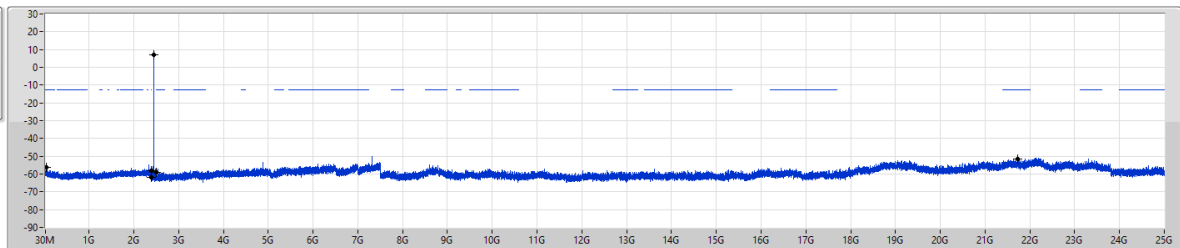
Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40207G	6.64	-13.36	2.30627G	-56.01	2.39999G	-49.45	2.4G	-51.35	2.502G	-58.30	2.20667G	-40.60	1

2.4-2.4835GHz_BT-LE(1Mbps)

CSEndB-DTS

2440MHz

RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44006G	7.17	-12.83	57.32M	-56.20	2.39225G	-58.14	2.4G	-61.83	2.50137G	-59.02	21.7359G	-51.48	1



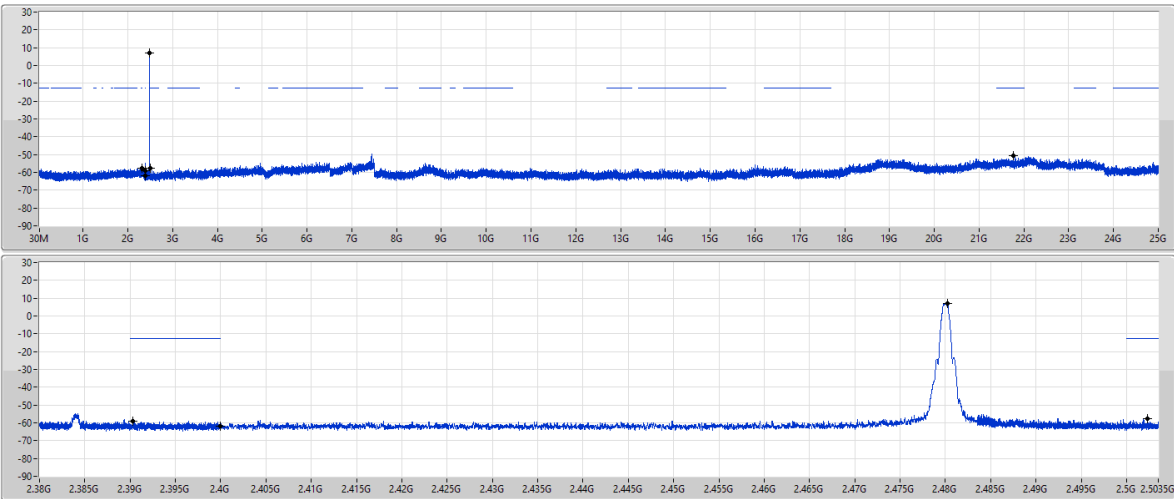
2.4-2.4835GHz_BT-LE(1Mbps)

CSEndB-DTS

2480MHz

RBW (Hz)
100k
VBW (Hz)
300k
Detector
Peak

Port 1



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.48024G	7.25	-12.75	2.30979G	-57.58	2.39029G	-59.08	2.4G	-62.01	2.50228G	-57.85	2.175699G	-50.56	1



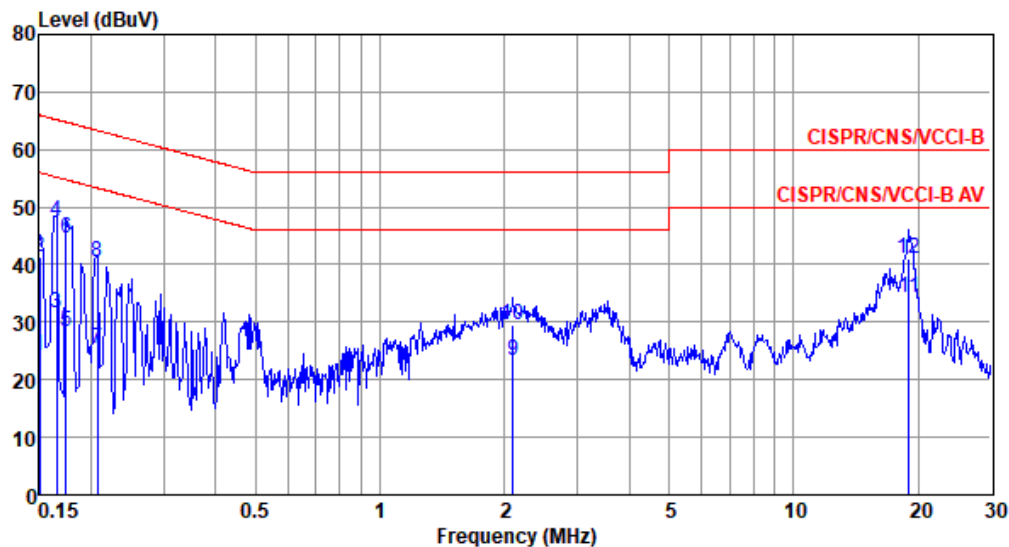
Adapter mode

Modulation	BT-LE(1Mbps)	Test Freq. (MHz)	2480
Power Phase	Line		

Test by : Sean Yu

Temperature: 26°C

Humidity: 61%



	Freq	Level	Limit	Over	Read	Factor	Cable	Aux	
	MHz	dBuA	Line	Limit	Level		loss		Remark
			dBuA	dB	dBuA	dB	dB	dB	
1	0.15	24.15	56.00	-31.85	14.21	9.65	0.08	0.21	Average
2	0.15	41.31	66.00	-24.69	31.37	9.65	0.08	0.21	QP
3	0.17	31.66	55.21	-23.55	21.70	9.65	0.08	0.23	Average
4	0.17	47.46	65.21	-17.75	37.50	9.65	0.08	0.23	QP
5	0.17	28.29	54.77	-26.48	18.32	9.65	0.08	0.24	Average
6	0.17	44.69	64.77	-20.08	34.72	9.65	0.08	0.24	QP
7	0.21	25.26	53.32	-28.06	15.27	9.65	0.08	0.26	Average
8	0.21	40.39	63.32	-22.93	30.40	9.65	0.08	0.26	QP
9	2.10	23.46	46.00	-22.54	13.20	9.66	0.17	0.43	Average
10	2.10	29.43	56.00	-26.57	19.17	9.66	0.17	0.43	QP
11	19.02	34.30	50.00	-15.70	23.44	9.68	0.55	0.63	Average
12	19.02	41.06	60.00	-18.94	30.20	9.68	0.55	0.63	QP

Note 1: Level (dBUV) = Read Level (dBUV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).

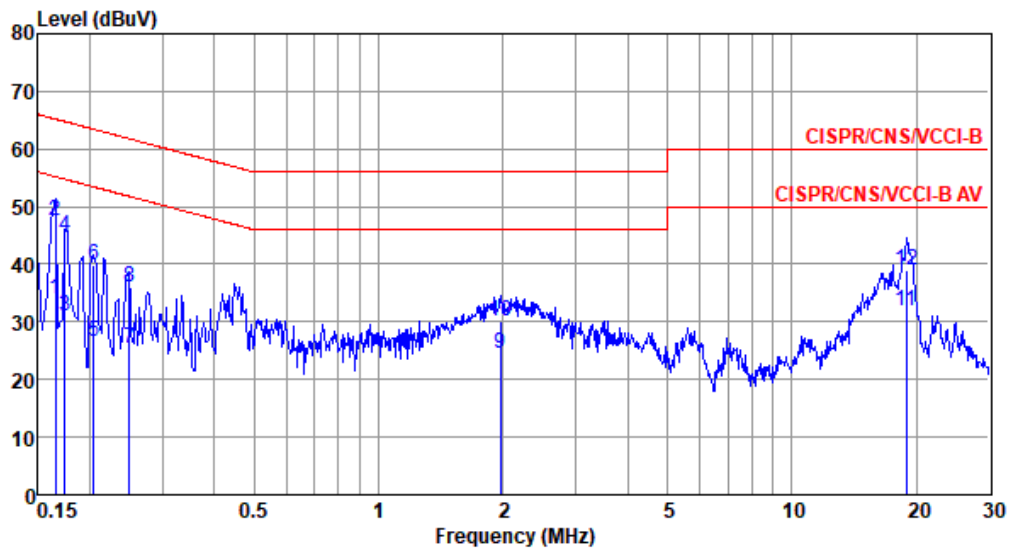
2: Over Limit (dB) = Level (dBUV) - Limit Line (dBUV).

Modulation	BT-LE(1Mbps)	Test Freq. (MHz)	2480
Power Phase	Neutral		

Test by : Sean Yu

Temperature: 26°C

Humidity: 61%



	Freq	Level	Limit	Over	Read	Factor	Cable	Aux	Remark
	MHz	dBuA	Line	Limit	Level		loss		
			dBuA	dB	dBuA	dB	dB	dB	
1	0.17	33.97	55.21	-21.24	24.07	9.66	0.08	0.16	Average
2	0.17	47.61	65.21	-17.60	37.71	9.66	0.08	0.16	QP
3	0.17	30.88	54.77	-23.89	20.98	9.65	0.08	0.17	Average
4	0.17	44.89	64.77	-19.88	34.99	9.65	0.08	0.17	QP
5	0.20	26.67	53.45	-26.78	16.74	9.65	0.08	0.20	Average
6	0.20	39.83	63.45	-23.62	29.90	9.65	0.08	0.20	QP
7	0.25	25.37	51.78	-26.41	15.42	9.65	0.08	0.22	Average
8	0.25	36.06	61.78	-25.72	26.11	9.65	0.08	0.22	QP
9	1.97	24.65	46.00	-21.35	14.40	9.66	0.17	0.42	Average
10	1.97	30.18	56.00	-25.82	19.93	9.66	0.17	0.42	QP
11	18.92	32.01	50.00	-17.99	21.02	9.82	0.54	0.63	Average
12	18.92	38.83	60.00	-21.17	27.84	9.82	0.54	0.63	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).

2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).



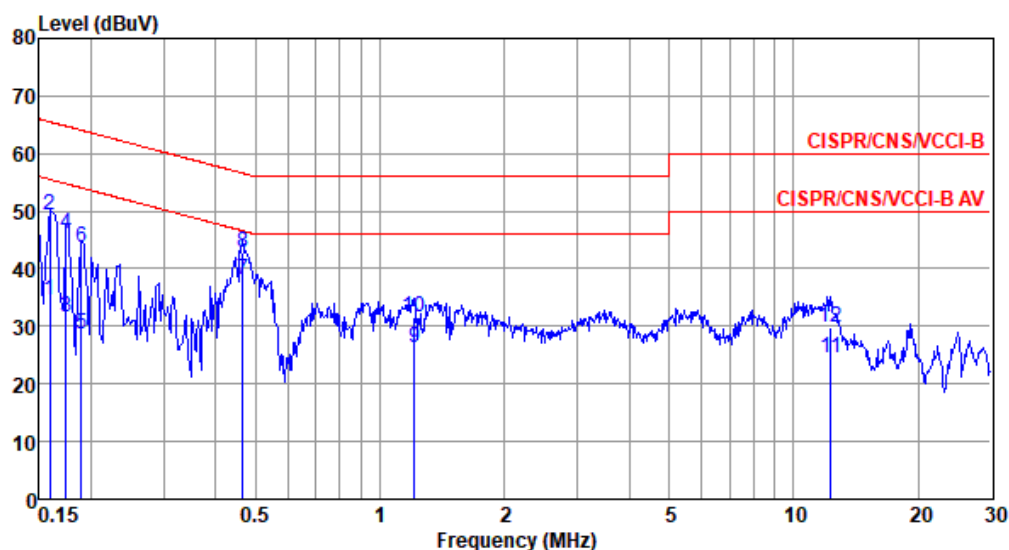
POE mode

Modulation	BT-LE(1Mbps)	Test Freq. (MHz)	2480
Power Phase	Line		

Test by : Sean Yu

Temperature: 26°C

Humidity: 61%



	Freq MHz	Level dBUA	Limit Line dBUA	Over Limit dB	Read Level dBUA	Factor dB	Cable loss dB	Aux dB	Remark
1	0.16	34.53	55.52	-20.99	24.58	9.65	0.08	0.22	Average
2	0.16	49.24	65.52	-16.28	39.29	9.65	0.08	0.22	QP
3	0.17	31.50	54.77	-23.27	21.53	9.65	0.08	0.24	Average
4	0.17	45.94	64.77	-18.83	35.97	9.65	0.08	0.24	QP
5	0.19	28.73	54.06	-25.33	18.75	9.65	0.08	0.25	Average
6	0.19	43.68	64.06	-20.38	33.70	9.65	0.08	0.25	QP
7	0.47	38.13	46.58	-8.45	28.07	9.64	0.09	0.33	Average
8	0.47	42.86	56.58	-13.72	32.80	9.64	0.09	0.33	QP
9	1.21	26.41	46.00	-19.59	16.23	9.65	0.12	0.41	Average
10	1.21	31.73	56.00	-24.27	21.55	9.65	0.12	0.41	QP
11	12.32	24.42	50.00	-25.58	13.84	9.70	0.37	0.51	Average
12	12.32	29.75	60.00	-30.25	19.17	9.70	0.37	0.51	QP

Note 1: Level (dBUV) = Read Level (dBUV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).

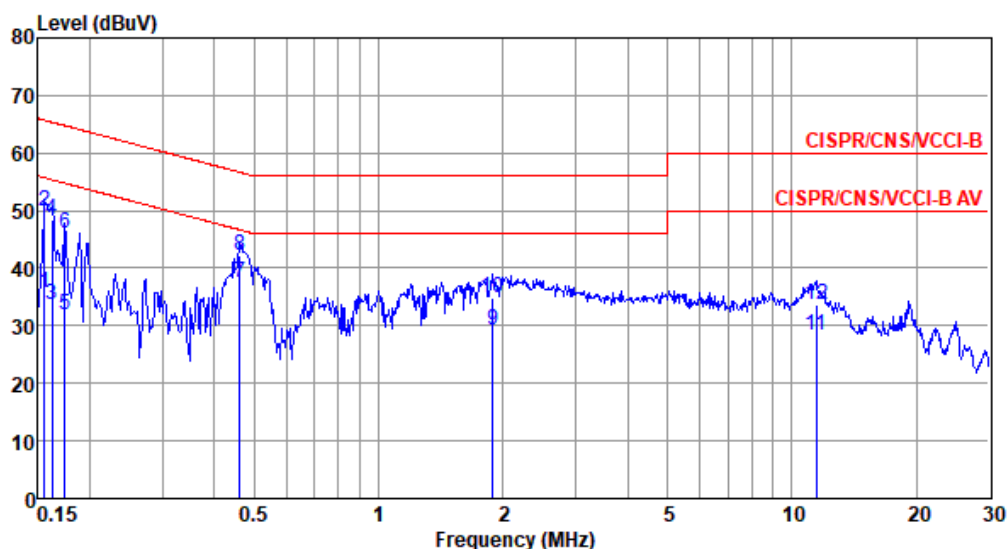
2: Over Limit (dB) = Level (dBUV) - Limit Line (dBUV).

Modulation	BT-LE(1Mbps)	Test Freq. (MHz)	2480
Power Phase	Neutral		

Test by : Sean Yu

Temperature: 26°C

Humidity: 61%



	Freq	Level	Limit	Over	Read	Factor	Cable	Aux	Remark
	MHz	dBuA	dBuA	dB	dBuA	dB	loss	dB	
1	0.16	35.79	55.69	-19.90	25.90	9.66	0.08	0.15	Average
2	0.16	49.87	65.69	-15.82	39.98	9.66	0.08	0.15	QP
3	0.16	33.55	55.34	-21.79	23.65	9.66	0.08	0.16	Average
4	0.16	48.52	65.34	-16.82	38.62	9.66	0.08	0.16	QP
5	0.17	31.99	54.77	-22.78	22.09	9.65	0.08	0.17	Average
6	0.17	46.15	64.77	-18.62	36.25	9.65	0.08	0.17	QP
7	0.46	37.48	46.67	-9.19	27.48	9.64	0.09	0.27	Average
8	0.46	42.23	56.67	-14.44	32.23	9.64	0.09	0.27	QP
9	1.89	29.23	46.00	-16.77	19.00	9.66	0.16	0.41	Average
10	1.89	34.89	56.00	-21.11	24.66	9.66	0.16	0.41	QP
11	11.44	28.36	50.00	-21.64	17.71	9.76	0.34	0.55	Average
12	11.44	33.65	60.00	-26.35	23.00	9.76	0.34	0.55	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).

2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).