

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)

Report No.: RFBBQZ-WTW-P26050063-7

FCC ID: PY325300650

Product: Orbi 11BE WiFi 7 Tri-band Router & Orbi 11BE WiFi 7 Tri-band Satellite
(refer to item 3.1 for more details)

Brand: NETGEAR

Model No.: RBE781

Series Model: RBE780 (refer to item 3.1 for more details)

Received Date: 2026/5/5

Test Date: 2026/6/13 ~ 2026/7/30

Issued Date: 2026/8/18

Applicant and Manufacturer: NETGEAR, INC.

Address: 3553 North First Street, San Jose, CA 95134, USA

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City 244, Taiwan

Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 333, Taiwan

FCC Registration / 788550 / TW0003

Designation Number:

Approved by:

Jeremy Lin

Date:

2026/8/18

Jeremy Lin / Project Engineer

This test report consists of 44 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The test results in the report only apply to the tested sample. The test results in this report are traceable to the national or international standards.

Prepared by : Vera Huang / Specialist



This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/>, and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

Table of Contents

Release Control Record	4
1 Certificate.....	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Supplementary Information	6
3 General Information	7
3.1 General Description.....	7
3.2 Antenna Description of EUT.....	8
3.3 Channel List.....	9
3.4 Test Mode Applicability and Tested Channel Detail.....	9
3.5 Duty Cycle of Test Signal.....	10
3.6 Test Program Used and Operation Descriptions	11
3.7 Connection Diagram of EUT and Peripheral Devices	11
3.8 Configuration of Peripheral Devices and Cable Connections	11
4 Test Instruments	12
4.1 RF Output Power.....	12
4.2 Power Spectral Density	12
4.3 6 dB Bandwidth	12
4.4 Conducted Out of Band Emissions	12
4.5 AC Power Conducted Emissions	13
4.6 Unwanted Emissions below 1 GHz	14
4.7 Unwanted Emissions above 1 GHz.....	15
5 Limits of Test Items.....	16
5.1 RF Output Power.....	16
5.2 Power Spectral Density	16
5.3 6 dB Bandwidth	16
5.4 Conducted Out of Band Emissions	16
5.5 AC Power Conducted Emissions	16
5.6 Unwanted Emissions below 1 GHz	17
5.7 Unwanted Emissions above 1 GHz.....	17
6 Test Arrangements.....	18
6.1 RF Output Power.....	18
6.1.1 Test Setup	18
6.1.2 Test Procedure.....	18
6.2 Power Spectral Density	18
6.2.1 Test Setup	18
6.2.2 Test Procedure.....	18
6.3 6 dB Bandwidth	19
6.3.1 Test Setup	19
6.3.2 Test Procedure.....	19
6.4 Conducted Out of Band Emissions	20
6.4.1 Test Setup	20
6.4.2 Test Procedure.....	20
6.5 AC Power Conducted Emissions	21
6.5.1 Test Setup	21
6.5.2 Test Procedure.....	21
6.6 Unwanted Emissions below 1 GHz	22
6.6.1 Test Setup	22
6.6.2 Test Procedure.....	23
6.7 Unwanted Emissions above 1 GHz.....	24
6.7.1 Test Setup	24
6.7.2 Test Procedure.....	24
7 Test Results of Test Item	25

7.1	RF Output Power.....	25
7.2	Power Spectral Density	26
7.3	6 dB Bandwidth	27
7.4	Conducted Out of Band Emissions	28
7.5	AC Power Conducted Emissions	29
7.6	Unwanted Emissions below 1 GHz	33
7.7	Unwanted Emissions above 1 GHz.....	37
8	Pictures of Test Arrangements	43
9	Information of the Testing Laboratories	44

Release Control Record

Issue No.	Description	Date Issued
RFBBQZ-WTW-P26050063-7	Original Release	2026/8/18

1 Certificate

Product: Orbi 11BE WiFi 7 Tri-band Router & Orbi 11BE WiFi 7 Tri-band Satellite
(refer to item 3.1 for more details)

Brand: NETGEAR

Test Model: RBE781

Series Model: RBE780 (refer to item 3.1 for more details)

Sample Status: Engineering sample

Applicant and Manufacturer: NETGEAR, INC.

Test Date: 2026/6/13 ~ 2026/7/30

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)

Measurement procedure: ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024
KDB 558074 D01 15.247 Meas Guidance v05r02

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
Standard / Clause	Test Item	Result	Remark
15.247(b)	RF Output Power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.247(a)(2)	6 dB Bandwidth	Pass	Meet the requirement of limit.
15.247(d)	Conducted Out of Band Emissions	Pass	Meet the requirement of limit.
15.207	AC Power Conducted Emissions	Pass	Minimum passing margin is -16.76 dB at 0.27800 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -9.30 dB at 268.99 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.2 dB at 2483.50 MHz
15.203	Antenna Requirement	Pass	Antenna connector is ipex(MHF) not a standard connector.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Specification	Expanded Uncertainty (k=2) (±)
RF Output Power	-	1.371 dB
Power Spectral Density	-	1.017 dB
6 dB Bandwidth	-	206.5 Hz
Conducted Out of Band Emissions	9 kHz ~ 40 GHz	2.79 dB
AC Power Conducted Emissions	9 kHz ~ 30 MHz	3.23 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1 GHz	3.64 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description

Product	Orbi 11BE WiFi 7 Tri-band Router & Orbi 11BE WiFi 7 Tri-band Satellite
Brand	NETGEAR
Test Model	RBE781
Series Model	RBE780
Model Difference	Refer to note
Status of EUT	Engineering sample
Power Supply Rating	12Vdc from Adapter
Modulation Type	O-QPSK
Modulation Technology	DTS
Transfer Rate	250kb/s
Operating Frequency	2.405 GHz ~ 2.48 GHz
Number of Channel	16
Output Power	116.681 mW (20.67 dBm)

Note:

1. All models are listed as below.

Product Description	Model	Difference
Orbi 11BE WiFi 7 Tri-band Router	RBE781	DFS mode: Master mode Four 2.5G Ethernet ports (1WAN+3LAN)
Orbi 11BE WiFi 7 Tri-band Satellite	RBE780	DFS mode: Mesh mode Two 2.5G Ethernet ports (2LAN)

2. The EUT uses following accessories.

AC Adapter 1	Brand	NETGEAR
	Model	ADS-40FPC-12 12030E
	Part Number	332-11771-01
	AC Input	100-240V 50/60Hz 1.0A
	DC Output	12.0V 2.5A 30.0W
	DC Output Cable	1.81M / 0 core
	Manufacturer	Vietnam Honor High Tech Company Limited
AC Adapter 2	Brand	NETGEAR
	Model	2AED030FC
	Part Number	332-11774-01
	AC Input	100-240V 50/60Hz 1.0A
	DC Output	12.0V 2.5A 30.0W
	DC Output Cable	1.83M / 0 core
	Manufacturer	CWT
RJ45 Cable	Brand	NETGEAR
	Model	-
	Part Number	-
	Signal Line	1.97m non-shielded and without core

3. There are WLAN (2.4 GHz, 5 GHz, 6 GHz), Bluetooth, and Threads technology used for the EUT.

4. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna No.	RF Chain No.	Brand	Model	Antenna Gain (dBi)	Frequency range	Antenna Type	Connector Type
1	0	Galtronics	02129140-08099-2	2.68	2.4~2.4835GHz	Monopole	ipex(MHF)
				2.49	5.15~5.25GHz		
				3.13	5.25~5.35GHz		
				4.25	5.47~5.725GHz		
				4.58	5.725~5.85GHz		
				4.58	5.850~5.895GHz		
2	1	Galtronics	02129140-08099-1	3.4	2.4~2.4835GHz	Monopole	ipex(MHF)
				3.77	5.15~5.25GHz		
				3.84	5.25~5.35GHz		
				3.72	5.47~5.725GHz		
				3.78	5.725~5.85GHz		
				4.12	5.850~5.895GHz		
3	0	Galtronics	02129475-08099-7	3.85	5.925~6.425GHz	Monopole	ipex(MHF)
				4.63	6.425~6.525GHz		
				4.63	6.525~6.875GHz		
				3.67	6.875~7.125GHz		
4	1	Galtronics	02129475-08099-4	5.84	5.925~6.425GHz	Monopole	ipex(MHF)
				5.84	6.425~6.525GHz		
				5.79	6.525~6.875GHz		
				4.05	6.875~7.125GHz		
5	2	Galtronics	02129475-08099-6	3.42	5.925~6.425GHz	Monopole	ipex(MHF)
				3.54	6.425~6.525GHz		
				4.45	6.525~6.875GHz		
				3.67	6.875~7.125GHz		
6	3	Galtronics	02129475-08099-8	4.4	5.925~6.425GHz	Monopole	ipex(MHF)
				4.87	6.425~6.525GHz		
				5.03	6.525~6.875GHz		
				6	6.875~7.125GHz		
7	0	Galtronics	02102073-08099-3	2.43	2.4~2.4835GHz	Alford Loop	ipex(MHF)

Frequency range (GHz)	Directional Gain (dBi)
2.4~2.4835	4.91
5.15 ~ 5.25	5.39
5.25 ~ 5.35	5.9
5.47 ~ 5.725	5.49
5.725 ~ 5.85	5.75
5.850 ~ 5.895	5.75

Frequency range (GHz)	Directional Gain (dBi)			
	Antenna 3 + 5	Antenna 3 + 6	Antenna 4 + 5	Antenna 4 + 6
5.925~6.425	4.7	5.76	4.84	5.12
6.425~6.525	4.95	5.8	4.77	5.98
6.525~6.875	5.41	5.8	4.48	5.98
6.875~7.125	4.51	5.1	3.93	5.68

* The detailed antenna information, please refer to RBE781, RBE780 Directional Gain Measurement data.

3.3 Channel List

16 channels are provided to this EUT:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
11	2405 MHz	15	2425 MHz	19	2445 MHz	23	2465 MHz
12	2410 MHz	16	2430 MHz	20	2450 MHz	24	2470 MHz
13	2415 MHz	17	2435 MHz	21	2455 MHz	25	2475 MHz
14	2420 MHz	18	2440 MHz	22	2460 MHz	26	2480 MHz

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. EUT has the following AC Adapter: AC Adapter 1 / AC Adapter 2. Pre-scan these AC Adapters and find the worst case as a representative test condition. 2. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
Worst Case:	Adapter Worst Condition: AC Adapter 1

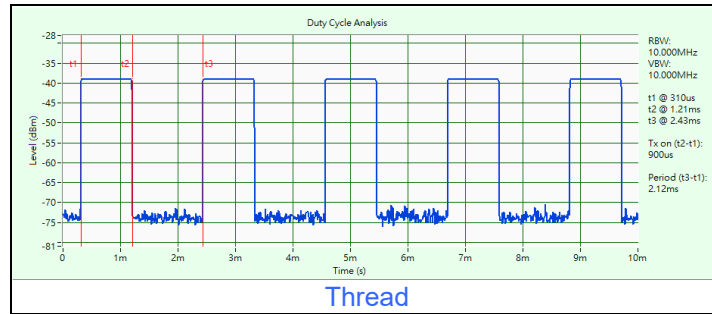
The EUT is designed to be positioned on the Y-axis only.

Following channel(s) was (were) selected for the final test as listed below:

Test Item	EUT Configure Mode	Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	A	Thread	11, 18, 26	O-QPSK	250kb/s
Power Spectral Density	A	Thread	11, 18, 26	O-QPSK	250kb/s
6 dB Bandwidth	A	Thread	11, 18, 26	O-QPSK	250kb/s
Conducted Out of Band Emissions	A	Thread	11, 18, 26	O-QPSK	250kb/s
AC Power Conducted Emissions	A, B	Thread	18	O-QPSK	250kb/s
Unwanted Emissions below 1 GHz	A, B	Thread	18	O-QPSK	250kb/s
Unwanted Emissions above 1 GHz	A	Thread	11, 18, 26	O-QPSK	250kb/s
EUT Configure Mode:	A	EUT model: RBE781			
	B	EUT model: RBE780			

3.5 Duty Cycle of Test Signal

Thread: Duty cycle = $0.9 \text{ ms} / 2.12 \text{ ms} \times 100\% = 42.5\%$, duty factor = $10 * \log (1/\text{Duty cycle}) = 3.72 \text{ dB}$

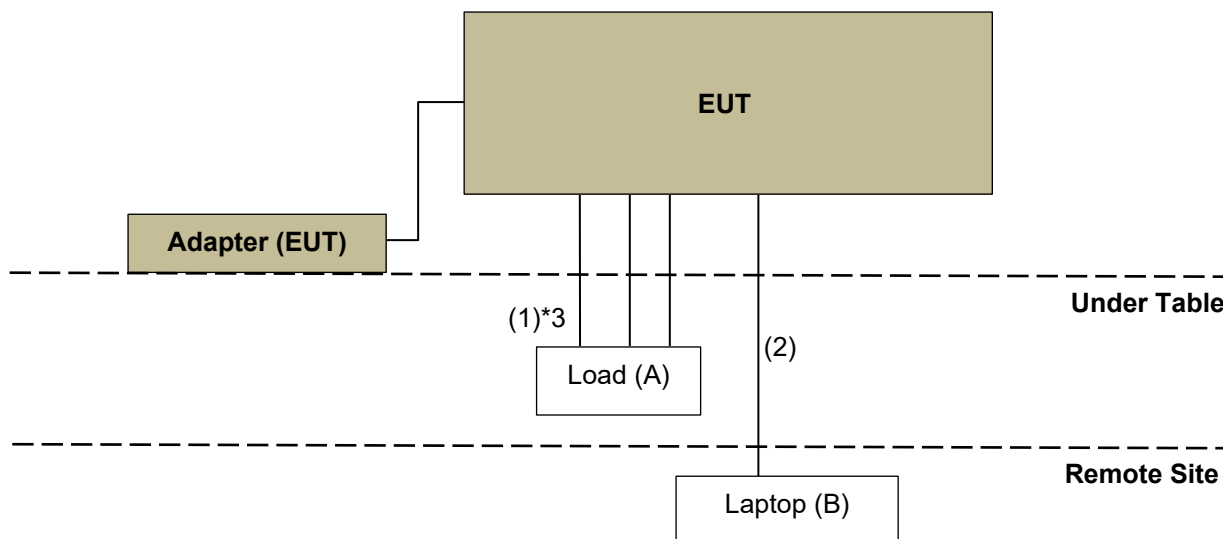


3.6 Test Program Used and Operation Descriptions

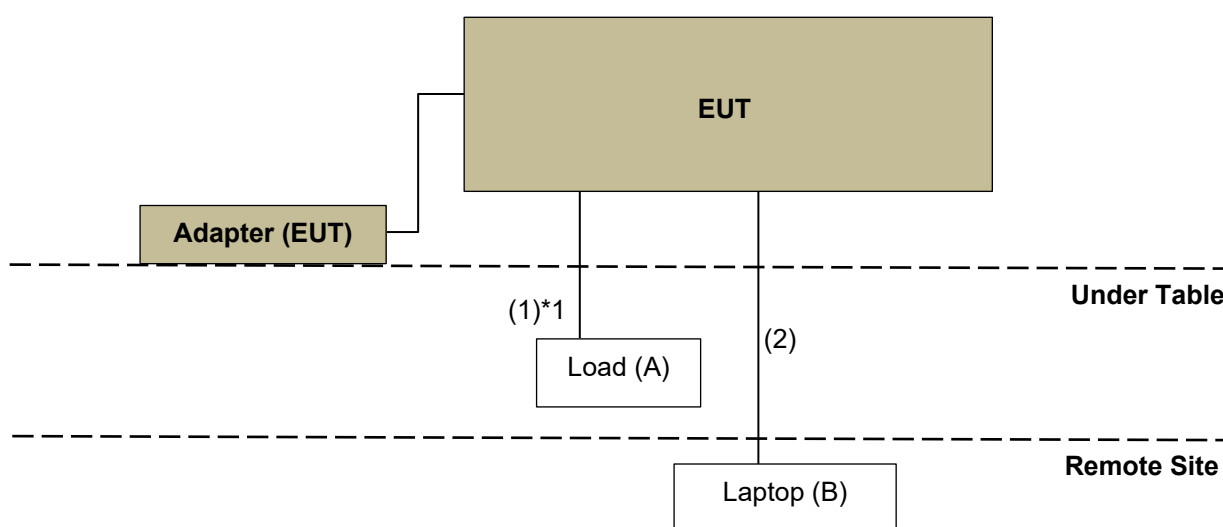
Controlling software QSPR Version 5.0-00202 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices

Mode A



Mode B



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Load	N/A	N/A	N/A	N/A	Provided by Lab
B	Laptop	DELL	E5430	2RL3YW1	N/A	Provided by Lab (for RF Setup)

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	LAN Cable	3	1.5	No	0	Provided by Lab
2	RJ45 Cable	1	1.97	No	0	Accessory of EUT (for RF Setup)

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2026/5/21	2027/5/20
Peak Power Analyzer Keysight	8990B	MY51000485	2026/1/23	2027/1/22
USB Power Sensor Anritsu	MA24408A	12994	2025/12/5	2026/12/4
Wideband Power Sensor Keysight	N1923A	MY58020002	2026/1/26	2027/1/25
		MY58140009	2026/1/26	2027/1/25

Notes:

1. The test was performed in HY - Oven room(Hwaya).
2. Tested Date: 2026/7/30

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2026/5/21	2027/5/20
Signal & Spectrum Analyzer R&S	FSV3044	101505	2026/6/15	2027/6/14
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in HY - Oven room(Hwaya).
2. Tested Date: 2026/7/30

4.3 6 dB Bandwidth

Refer to section 4.2 to get the tested date and information of the instruments.

4.4 Conducted Out of Band Emissions

Refer to section 4.2 to get the tested date and information of the instruments.

4.5 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance	E1-011279	04	2025/12/4	2026/12/3
	E1-011280	05	2025/12/4	2026/12/3
	E1-011311	09	2025/12/4	2026/12/3
DC LISN Schwarzbeck	NNBM 8126G	8126G-069	2025/11/3	2026/11/2
Diode Pulse Limiter Schwarzbeck	VTSD 9561 F-N	01445	2026/4/18	2027/4/17
EMI Test Receiver R&S	ESCI	100613	2025/11/27	2026/11/26
Extension Power Line EMCI	EMCI-EXP-EU-US	023	2026/3/6	2027/3/5
LISN R&S	ENV216	101826	2026/3/6	2027/3/5
	ESH3-Z5	100311	2025/8/28	2026/8/27
RF Coaxial Cable Woken	5D-FB	Cable-cond1-01	2026/1/3	2027/1/2
Software BVADT	BVADT_Conc_ V7.4.1.0	N/A	N/A	N/A
V-LISN Schwarzbeck	NNBL 8226-2	8226-142	2025/8/27	2026/8/26

Notes:

1. The test was performed in HY - Conduction 1.
2. Tested Date: 2026/7/9

4.6 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-155	2025/9/16	2026/9/15
EMI Test Receiver R&S	ESR3	102782	2025/12/8	2026/12/7
Loop Antenna TESEQ	HLA 6121	45745	2025/9/1	2026/8/31
Preamplifier Agilent	8447D	2944A10631	2026/4/18	2027/4/17
RF Coaxial Cable Woken	8D-FB	Cable-CH4-01	2026/6/26	2027/6/25
Signal & Spectrum Analyzer R&S	FSW43	101582	2026/5/2	2027/5/1
Software BV ADT	ADT_Radiated_ V7.7.1.1.1	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3(Hwaya).
2. Tested Date: 2026/7/9

4.7 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower inn-co GmbH	MA 4000	010303	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
EMI Test Receiver R&S	ESR3	102782	2025/12/8	2026/12/7
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-408	2025/11/9	2026/11/8
	BBHA 9170	9170-480	2025/11/9	2026/11/8
		BBHA9170241	2025/10/28	2026/10/27
		BBHA9170243	2025/11/9	2026/11/8
Preamplifier EMCI	EMC 184045	980116	2025/9/21	2026/9/20
Preamplifier Keysight	83017A	MY53270295	2026/4/18	2027/4/17
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2025/6/30 2026/6/26	2026/6/29 2027/6/25
	EMC102-KM-KM-3000	150929	2025/6/30 2026/6/26	2026/6/29 2027/6/25
RF Coaxial Cable HUBER+SUHNER	EMC104-SM-SM-10000	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-4)	2026/4/18	2027/4/17
	SUCOFLEX 104	Cable-CH4-03(250724)	2026/4/18	2027/4/17
Signal & Spectrum Analyzer R&S	FSW43	101582	2026/5/2	2027/5/1
Software BV ADT	ADT_Radiated_ V7.7.1.1.1	N/A	N/A	N/A
Turn Table BV ADT	TT100	TT93021705	N/A	N/A
Turn Table Controller BV ADT	SC100	SC93021705	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 3(Hwaya).
2. Tested Date: 2026/6/13 ~ 2026/7/25

5 Limits of Test Items

5.1 RF Output Power

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30 dBm)

5.2 Power Spectral Density

The maximum of power spectral density measurement is 8 dBm in any 3 kHz.

5.3 6 dB Bandwidth

The minimum of 6 dB bandwidth measurement is 0.5 MHz.

5.4 Conducted Out of Band Emissions

Below 20 dB of the highest emission level of operating band (in 100 kHz Resolution Bandwidth).

5.5 AC Power Conducted Emissions

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Notes:

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

5.6 Unwanted Emissions below 1 GHz

Radiated emissions up to 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

5.7 Unwanted Emissions above 1 GHz

Radiated emissions above 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

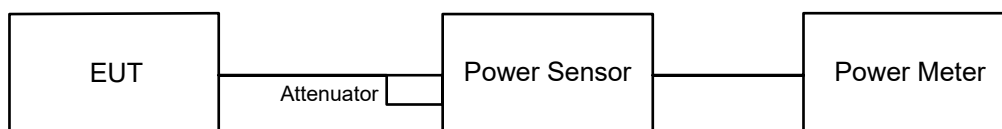
Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, 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.

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup



Note: The correction factor has already been compensated by the instrument.

6.1.2 Test Procedure

Peak Power:

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

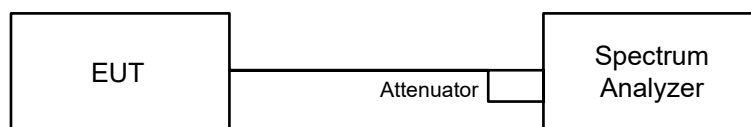
The power meter video bandwidth is greater than or equal to the DTS bandwidth and use a fast responding diode detector.

Average Power:

Average power sensor was used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

6.2 Power Spectral Density

6.2.1 Test Setup



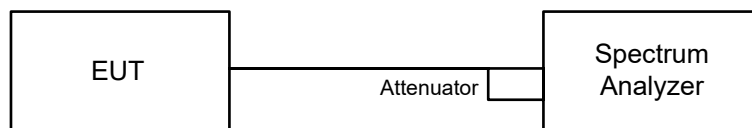
Note: The correction factor has already been compensated by the instrument.

6.2.2 Test Procedure

- Set analyzer center frequency to DTS channel center frequency.
- Set the span > 1.5 times the DTS bandwidth.
- Set the RBW to: 3 kHz.
- Set the VBW $\geq 3 \times$ RBW.
- Detector = peak.
- Sweep time = No faster than coupled (auto) time.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level within the RBW.

6.3 6 dB Bandwidth

6.3.1 Test Setup



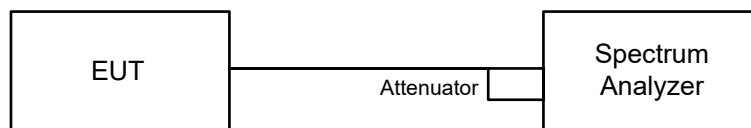
Note: The correction factor has already been compensated by the instrument.

6.3.2 Test Procedure

- 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 $\geq [3 \times \text{RBW}]$.
- 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.

6.4 Conducted Out of Band Emissions

6.4.1 Test Setup



Note: The correction factor has already been compensated by the instrument.

6.4.2 Test Procedure

MEASUREMENT PROCEDURE REF

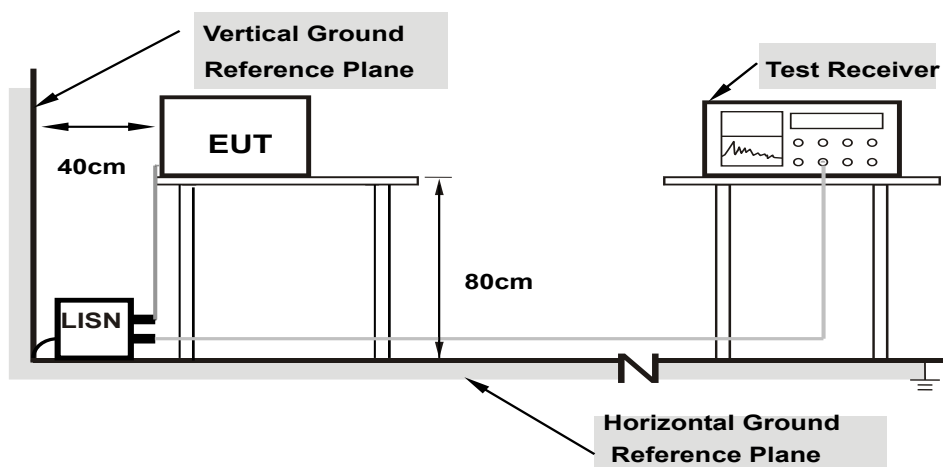
- Set instrument center frequency to DTS channel center frequency.
- Set the span to ≥ 1.5 times the DTS bandwidth.
- Set the RBW = 100 kHz.
- Set the VBW ≥ 300 kHz.
- Detector = peak.
- Sweep time = No faster than coupled (auto) time.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum PSD level.

MEASUREMENT PROCEDURE OOB

- Set the center frequency and span to encompass frequency range to be measured. Note that the frequency range might need to be divided into multiple frequency ranges to retain frequency resolution.
- Set RBW = 100 kHz.
- Set VBW ≥ 300 kHz.
- Detector = peak.
- Sweep = No faster than coupled (auto) time.
- Trace Mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level.

6.5 AC Power Conducted Emissions

6.5.1 Test Setup



Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.5.2 Test Procedure

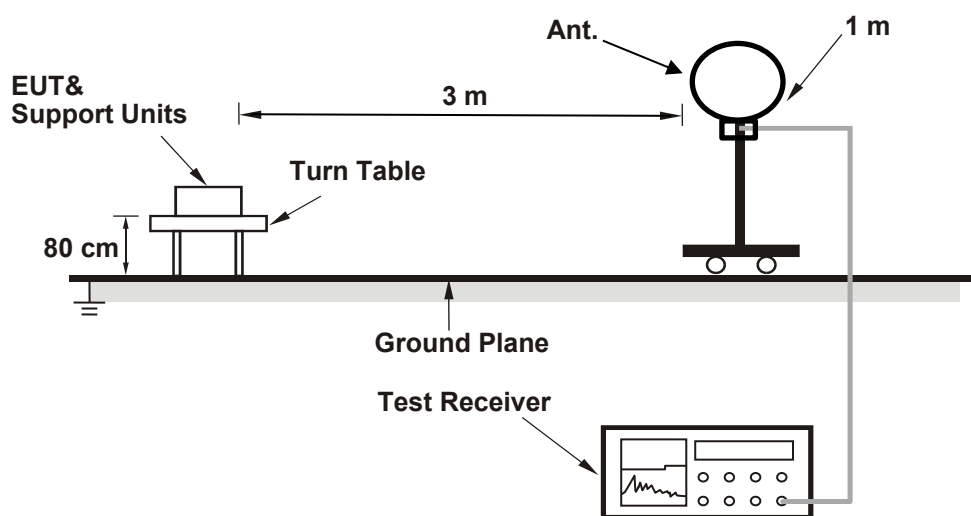
- Exploratory ac power-line conducted emission measurements: The EUT shall be operated on the mid channel and in the mode with highest output power unless the fundamental operates in the AC power-line emission test range then the EUT shall be operated in the range of typical modes of operation.
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz-30 MHz.

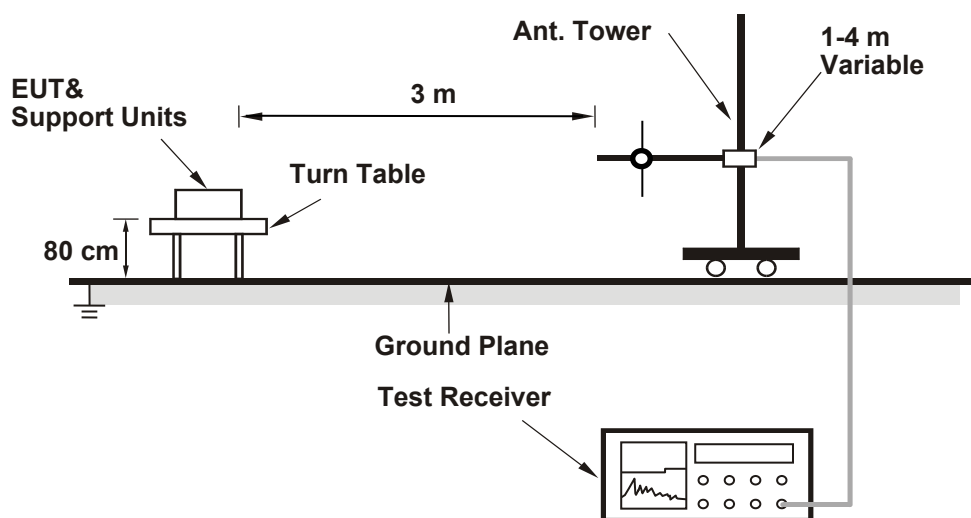
6.6 Unwanted Emissions below 1 GHz

6.6.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.6.2 Test Procedure

For Radiated emission below 30 MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- 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. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case 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 Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode (however, peak detector measurements may be used to determine compliance with QP requirements), except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated emission above 30 MHz

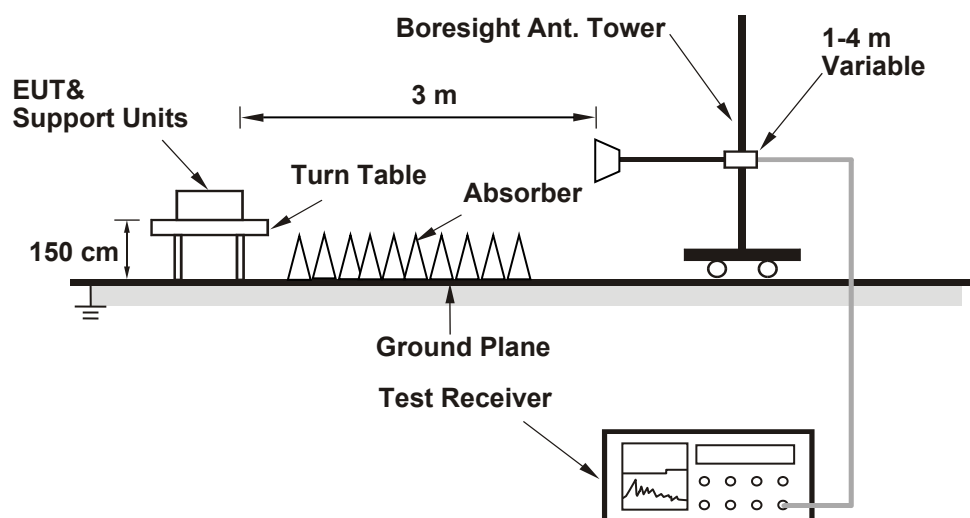
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna 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 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 Quasi-peak(QP) detect function, Average(AV) detect function, Peak(PK) detect function and specified bandwidth with maximum hold mode when the test frequencies less than or equal to 1 GHz.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz (however, peak detector measurements may be used to determine compliance with QP requirements).
2. All modes of operation were investigated and the worst-case emissions are reported.

6.7 Unwanted Emissions above 1 GHz

6.7.1 Test Setup



For the actual test configuration, please refer to the attached file (Test Setup Photo).

6.7.2 Test Procedure

- The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The height of antenna 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.
- 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 and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver/spectrum analyzer was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Notes:

- The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) and Average detection (AV) at frequency above 1 GHz.
- For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10 Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1 GHz.
- All modes of operation were investigated and the worst-case emissions are reported.

7 Test Results of Test Item

7.1 RF Output Power

Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin
---------------------------	--------------	------------	-----------

Thread

For Peak Power

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
11	2405	113.501	20.55	30	Pass
18	2440	116.681	20.67	30	Pass
26	2480	58.345	17.66	30	Pass

Note: The antenna gain is 2.43 dBi <= 6 dBi, so the output power limit shall not be reduced.

For Average Power

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
11	2405	83.946	19.24
18	2440	85.704	19.33
26	2480	43.351	16.37

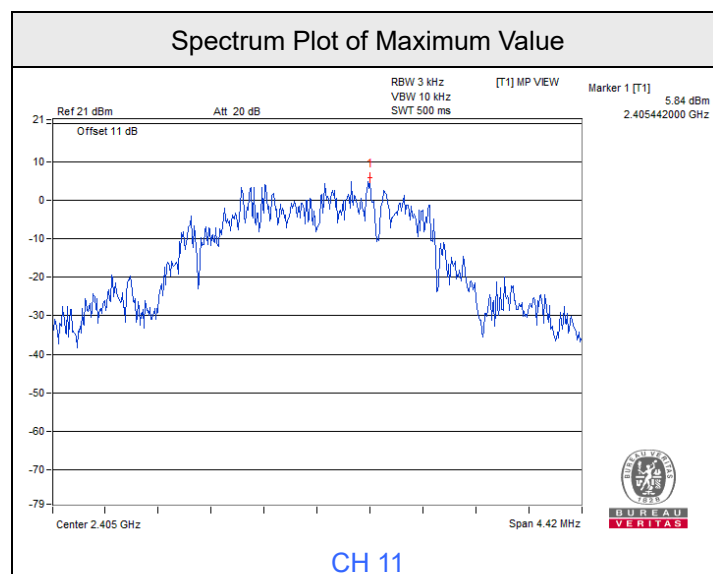
7.2 Power Spectral Density

Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin
---------------------------	--------------	------------	-----------

Thread

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
11	2405	5.84	8	Pass
18	2440	5.61	8	Pass
26	2480	2.11	8	Pass

Note: The antenna gain is 2.43 dBi $\leq$ 6 dBi, so the power density limit shall not be reduced.

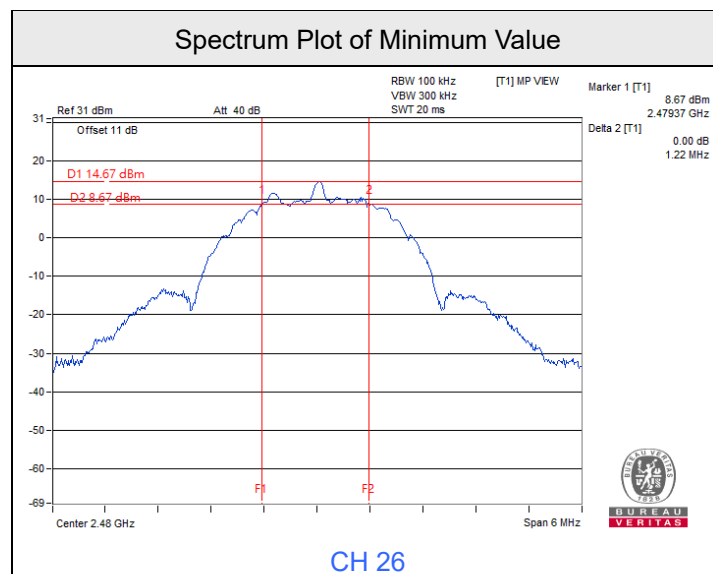


7.3 6 dB Bandwidth

Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin
---------------------------	--------------	------------	-----------

Thread

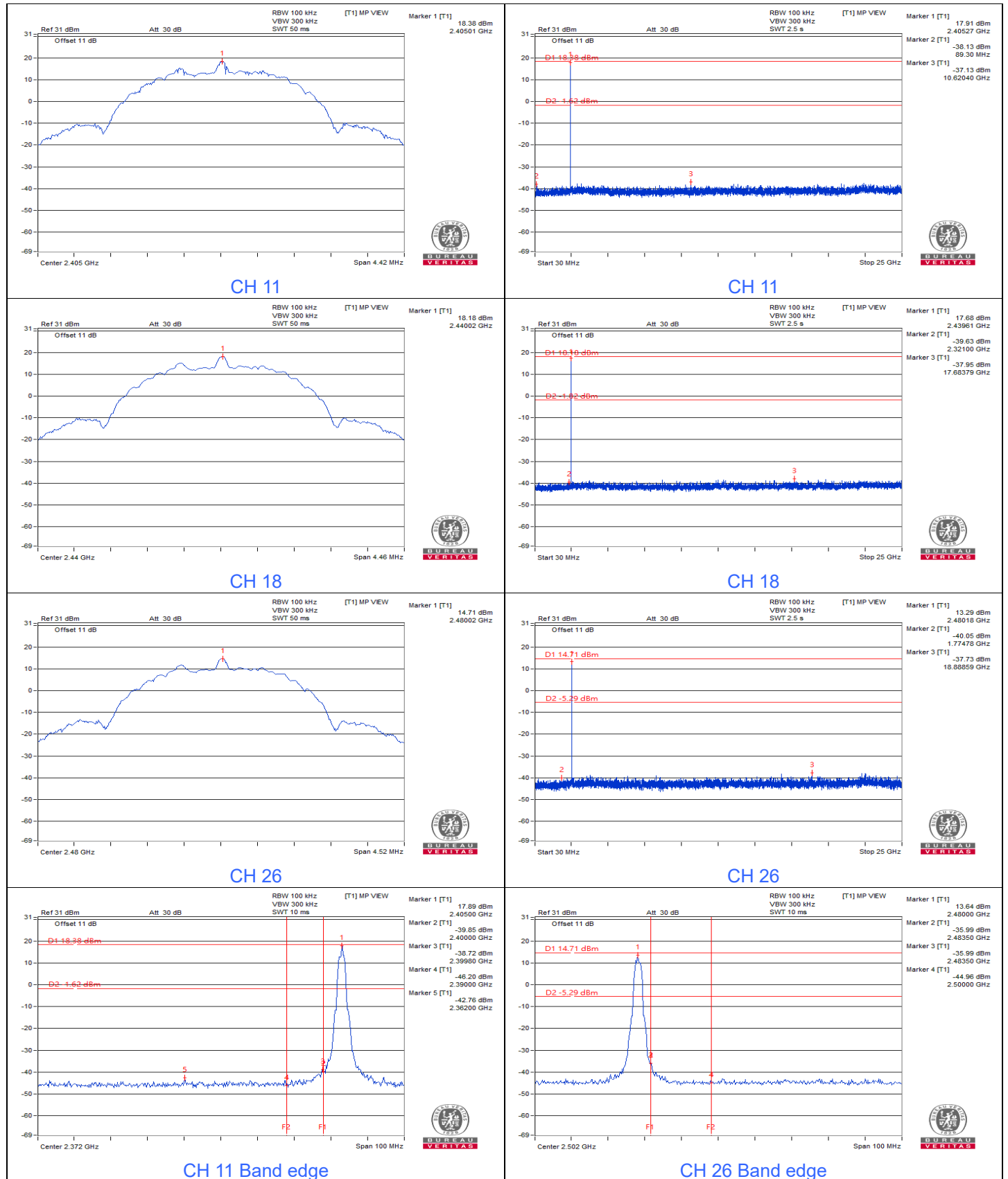
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
11	2405	1.25	0.5	Pass
18	2440	1.26	0.5	Pass
26	2480	1.22	0.5	Pass



7.4 Conducted Out of Band Emissions

Environmental Conditions:	25°C, 60% RH	Tested By:	Wayne Lin
---------------------------	--------------	------------	-----------

Thread



7.5 AC Power Conducted Emissions

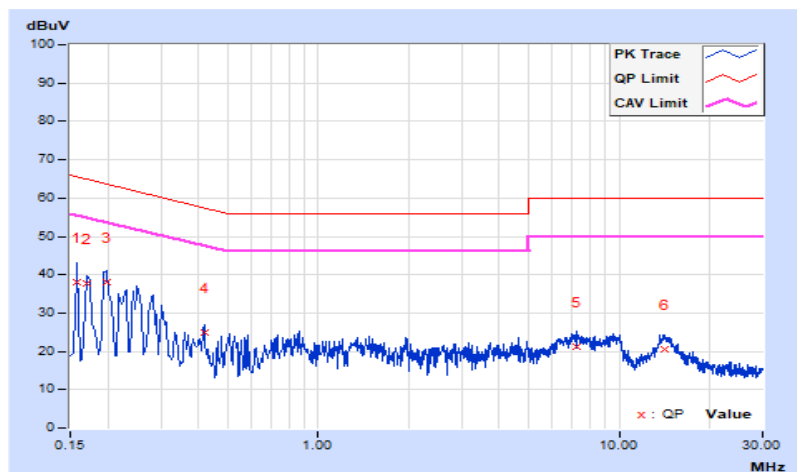
Mode A

RF Mode	Thread	Channel	CH 18 : 2440 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 68% RH
Tested By	Luis Lee		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15800	9.78	28.31	9.47	38.09	19.25	65.57	55.57	-27.48	-36.32
2	0.17000	9.77	28.04	17.06	37.81	26.83	64.96	54.96	-27.15	-28.13
3	0.19728	9.76	28.19	14.72	37.95	24.48	63.72	53.72	-25.77	-29.24
4	0.41800	9.78	15.30	7.48	25.08	17.26	57.49	47.49	-32.41	-30.23
5	7.25400	9.94	11.24	4.08	21.18	14.02	60.00	50.00	-38.82	-35.98
6	14.10200	10.02	10.60	5.29	20.62	15.31	60.00	50.00	-39.38	-34.69

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

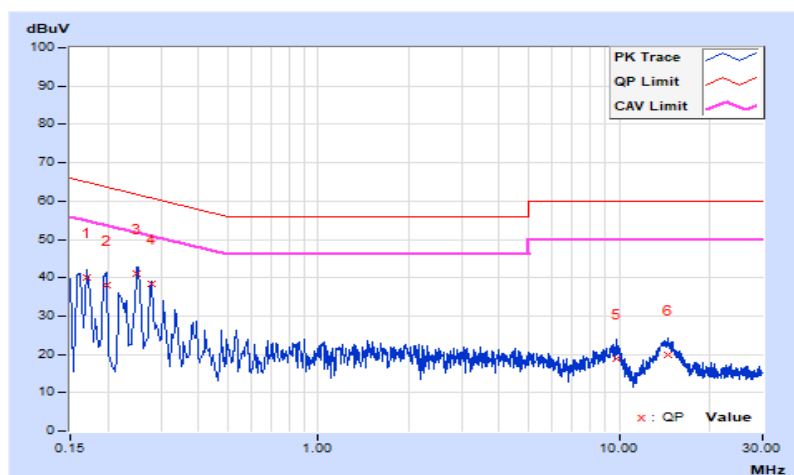


RF Mode	Thread	Channel	CH 18 : 2440 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 68% RH
Tested By	Luis Lee		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17000	9.78	30.36	18.07	40.14	27.85	64.96	54.96	-24.82	-27.11
2	0.19728	9.76	28.34	16.31	38.10	26.07	63.72	53.72	-25.62	-27.65
3	0.25007	9.77	31.27	23.90	41.04	33.67	61.75	51.75	-20.71	-18.08
4	0.27800	9.77	28.73	24.35	38.50	34.12	60.88	50.88	-22.38	-16.76
5	9.76600	10.01	8.70	2.36	18.71	12.37	60.00	50.00	-41.29	-37.63
6	14.50600	10.14	9.79	4.37	19.93	14.51	60.00	50.00	-40.07	-35.49

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



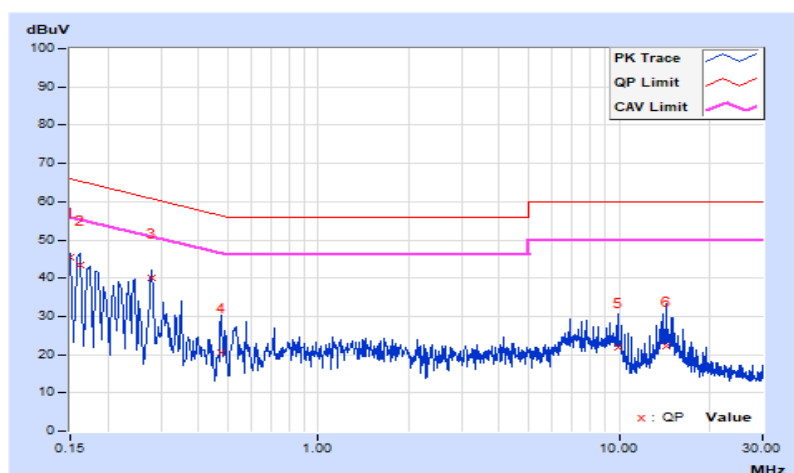
Mode B

RF Mode	Thread	Channel	CH 18 : 2440 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 68% RH
Tested By	Luis Lee		

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.78	35.72	20.28	45.50	30.06	66.00	56.00	-20.50	-25.94
2	0.16148	9.78	33.55	17.29	43.33	27.07	65.39	55.39	-22.06	-28.32
3	0.27800	9.77	30.37	18.88	40.14	28.65	60.88	50.88	-20.74	-22.23
4	0.47800	9.78	10.66	-2.36	20.44	7.42	56.37	46.37	-35.93	-38.95
5	9.87800	9.97	11.97	4.81	21.94	14.78	60.00	50.00	-38.06	-35.22
6	14.34600	10.03	12.06	5.84	22.09	15.87	60.00	50.00	-37.91	-34.13

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

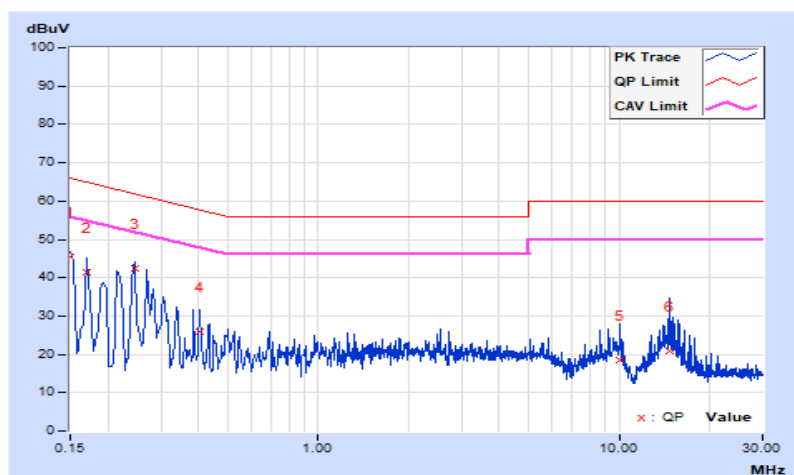


RF Mode	Thread	Channel	CH 18 : 2440 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 68% RH
Tested By	Luis Lee		

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.79	35.77	20.47	45.56	30.26	66.00	56.00	-20.44	-25.74
2	0.17000	9.78	31.60	12.64	41.38	22.42	64.96	54.96	-23.58	-32.54
3	0.24600	9.77	32.58	24.59	42.35	34.36	61.89	51.89	-19.54	-17.53
4	0.40600	9.79	16.20	5.84	25.99	15.63	57.73	47.73	-31.74	-32.10
5	10.07800	10.01	8.42	1.04	18.43	11.05	60.00	50.00	-41.57	-38.95
6	14.81800	10.14	10.90	4.58	21.04	14.72	60.00	50.00	-38.96	-35.28

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



7.6 Unwanted Emissions below 1 GHz

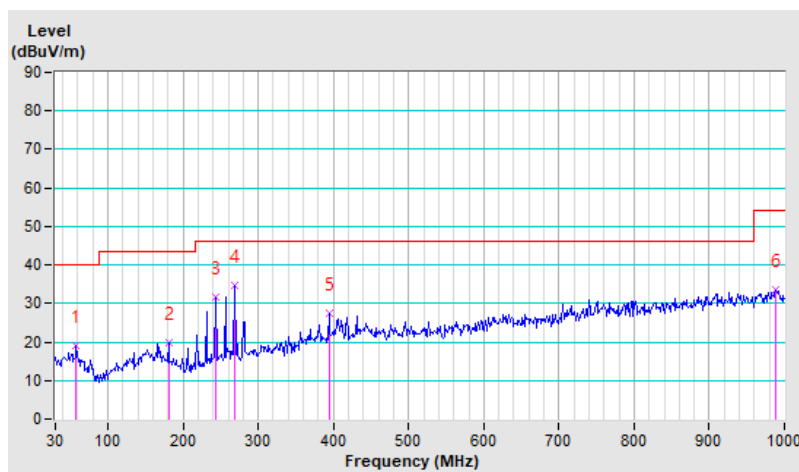
Mode A

RF Mode	Thread	Channel	CH 18 : 2440 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 68% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	58.12	19.11 QP	40.00	-20.89	1.00 H	191	28.30	-9.19
2	180.42	19.71 QP	43.50	-23.79	1.50 H	345	29.71	-10.00
3	243.68	31.69 QP	46.00	-14.31	1.00 H	248	41.23	-9.54
4	268.99	34.89 QP	46.00	-11.11	1.00 H	139	43.19	-8.30
5	394.10	27.56 QP	46.00	-18.44	2.00 H	194	33.20	-5.64
6	988.75	33.46 QP	54.00	-20.54	1.50 H	254	26.70	6.76

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

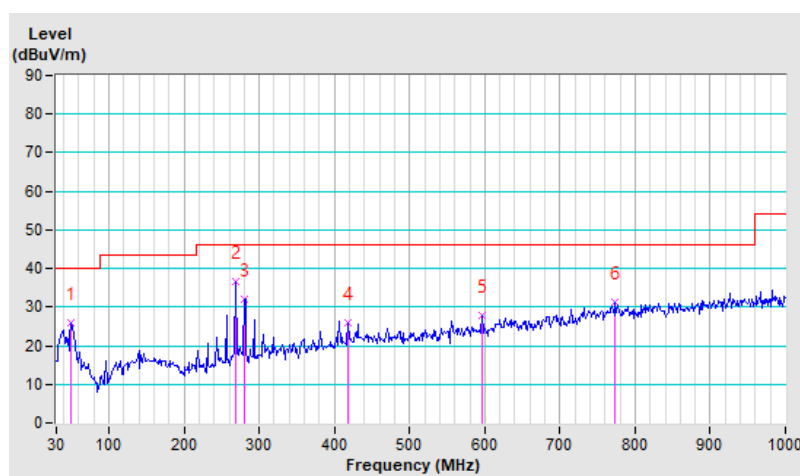


RF Mode	Thread	Channel	CH 18 : 2440 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 68% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	49.68	26.07 QP	40.00	-13.93	1.00 V	279	34.80	-8.73
2	268.99	36.70 QP	46.00	-9.30	2.00 V	283	45.00	-8.30
3	280.23	32.10 QP	46.00	-13.90	1.00 V	321	39.95	-7.85
4	418.00	25.77 QP	46.00	-20.23	2.00 V	148	31.01	-5.24
5	596.54	28.02 QP	46.00	-17.98	1.00 V	296	29.24	-1.22
6	773.67	31.19 QP	46.00	-14.81	2.00 V	54	28.25	2.94

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



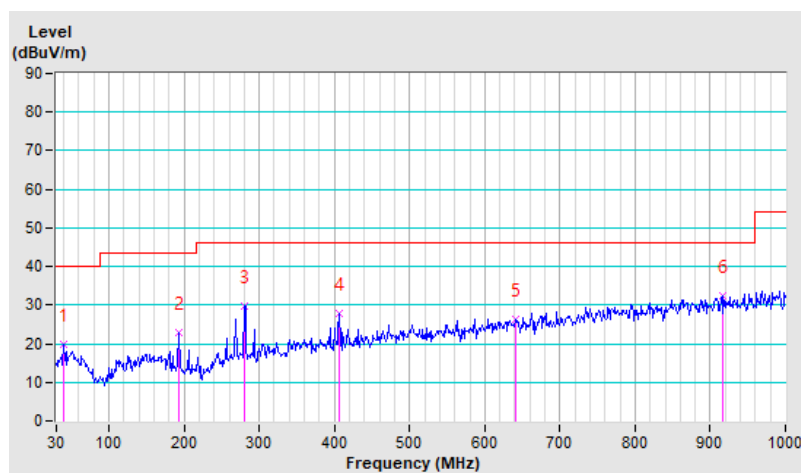
Mode B

RF Mode	Thread	Channel	CH 18 : 2440 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 68% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	39.84	19.79 QP	40.00	-20.21	1.00 H	179	29.14	-9.35
2	193.07	22.78 QP	43.50	-20.72	2.00 H	186	34.13	-11.35
3	280.23	29.71 QP	46.00	-16.29	2.00 H	139	37.56	-7.85
4	406.75	27.94 QP	46.00	-18.06	1.50 H	77	33.46	-5.52
5	641.52	26.45 QP	46.00	-19.55	1.00 H	352	26.64	-0.19
6	915.65	32.44 QP	46.00	-13.56	2.00 H	319	26.68	5.76

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.

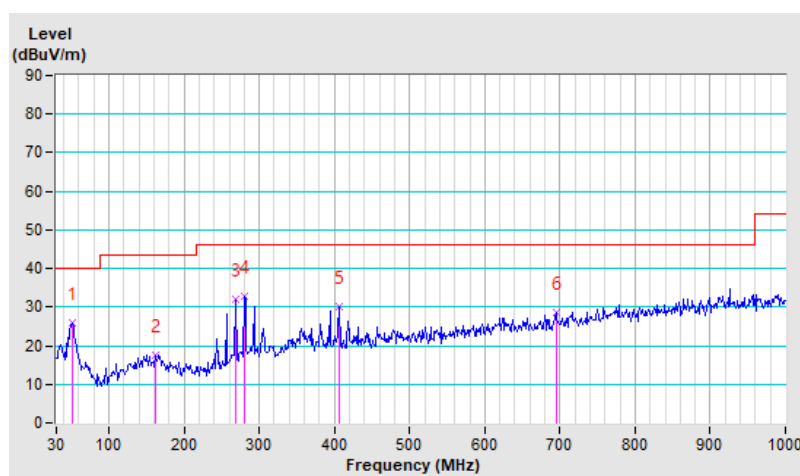


RF Mode	Thread	Channel	CH 18 : 2440 MHz
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 68% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	51.09	25.75 QP	40.00	-14.25	1.00 V	135	34.44	-8.69
2	162.14	17.54 QP	43.50	-25.96	1.00 V	203	26.04	-8.50
3	268.99	32.05 QP	46.00	-13.95	1.50 V	88	40.35	-8.30
4	280.23	32.64 QP	46.00	-13.36	2.00 V	1	40.49	-7.85
5	406.75	30.08 QP	46.00	-15.92	1.50 V	149	35.60	-5.52
6	694.94	28.59 QP	46.00	-17.41	1.50 V	200	27.79	0.80

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The frequency range 9 kHz ~ 30 MHz: all emissions are more than 20 dB below the limit, therefore do not be recorded in this report.



7.7 Unwanted Emissions above 1 GHz

RF Mode	Thread	Channel	CH 11 : 2405 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 61% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	58.9 PK	74.0	-15.1	2.01 H	83	25.5	33.4
2	2390.00	45.9 AV	54.0	-8.1	2.01 H	83	12.5	33.4
3	*2405.00	112.5 PK			2.01 H	83	79.1	33.4
4	*2405.00	108.4 AV			2.01 H	83	75.0	33.4
5	4810.00	49.0 PK	74.0	-25.0	1.62 H	35	38.2	10.8
6	4810.00	37.2 AV	54.0	-16.8	1.62 H	35	26.4	10.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	57.9 PK	74.0	-16.1	2.24 V	224	24.5	33.4
2	2390.00	44.9 AV	54.0	-9.1	2.24 V	224	11.5	33.4
3	*2405.00	109.4 PK			2.24 V	224	76.0	33.4
4	*2405.00	105.0 AV			2.24 V	224	71.6	33.4
5	4810.00	49.8 PK	74.0	-24.2	2.06 V	22	39.0	10.8
6	4810.00	38.1 AV	54.0	-15.9	2.06 V	22	27.3	10.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	Thread	Channel	CH 18 : 2440 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 61% RH
Tested By	Edison Lee		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2440.00	112.6 PK			1.97 H	147	79.0	33.6
2	*2440.00	108.3 AV			1.97 H	147	74.7	33.6
3	4880.00	48.3 PK	74.0	-25.7	1.63 H	32	37.5	10.8
4	4880.00	36.9 AV	54.0	-17.1	1.63 H	32	26.1	10.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2440.00	108.4 PK			2.32 V	220	74.8	33.6
2	*2440.00	104.4 AV			2.32 V	220	70.8	33.6
3	4880.00	49.6 PK	74.0	-24.4	2.32 V	38	38.8	10.8
4	4880.00	37.8 AV	54.0	-16.2	2.32 V	38	27.0	10.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * " : Fundamental frequency, the limit was restricted at the RF Output Power.

RF Mode	Thread	Channel	CH 26 : 2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	25 °C, 61% RH
Tested By	Edison Lee		

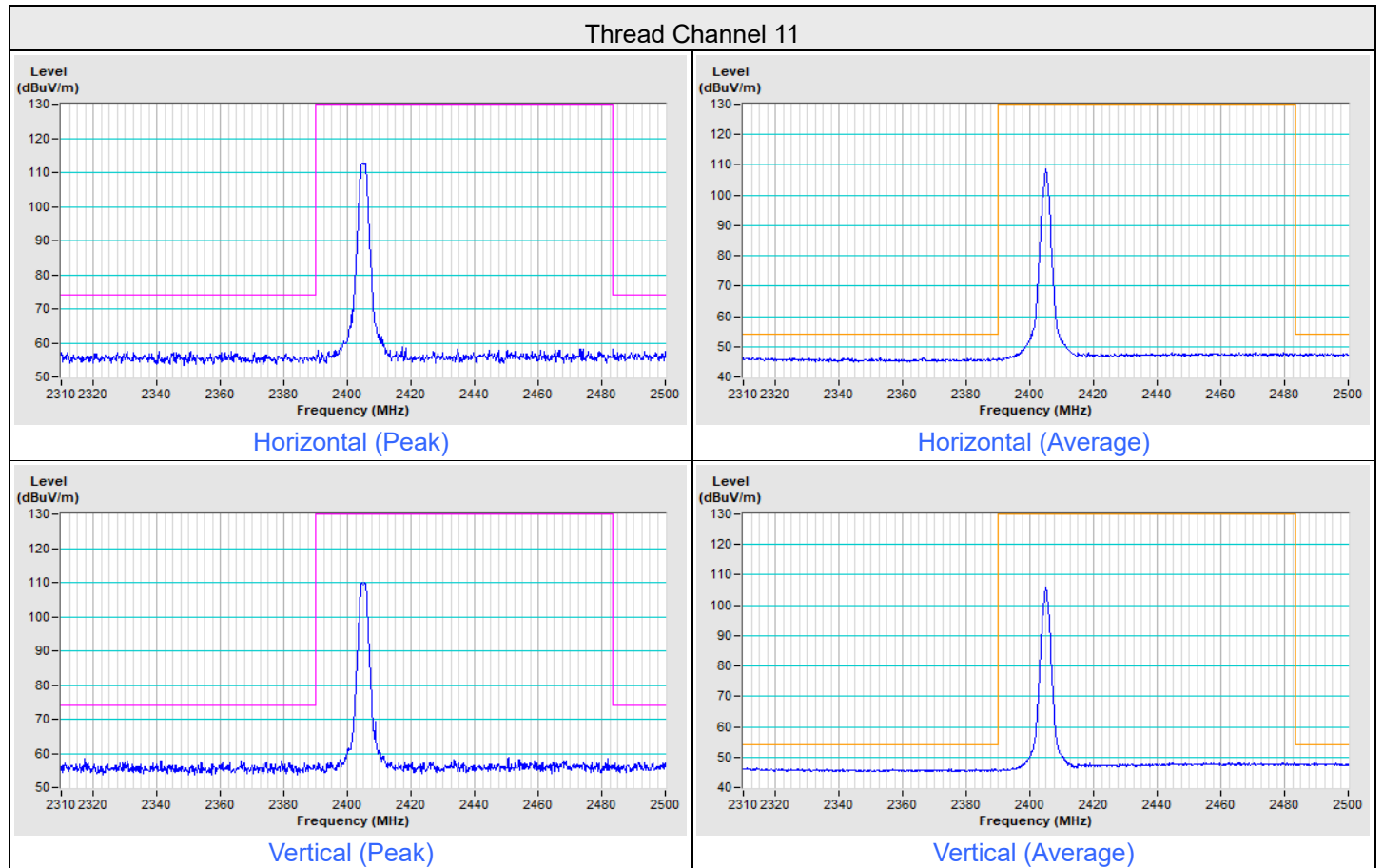
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	108.0 PK			2.02 H	161	74.4	33.6
2	*2480.00	103.9 AV			2.02 H	161	70.3	33.6
3	2483.50	67.0 PK	74.0	-7.0	2.02 H	161	33.5	33.5
4	2483.50	53.8 AV	54.0	-0.2	2.02 H	161	20.3	33.5
5	4960.00	46.8 PK	74.0	-27.2	1.79 H	30	36.0	10.8
6	4960.00	35.3 AV	54.0	-18.7	1.79 H	30	24.5	10.8
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	106.0 PK			1.90 V	227	72.4	33.6
2	*2480.00	102.4 AV			1.90 V	227	68.8	33.6
3	2483.50	66.1 PK	74.0	-7.9	1.91 V	227	32.6	33.5
4	2483.50	52.4 AV	54.0	-1.6	1.91 V	227	18.9	33.5
5	4960.00	47.3 PK	74.0	-26.7	2.23 V	34	36.5	10.8
6	4960.00	35.8 AV	54.0	-18.2	2.23 V	34	25.0	10.8

Remarks:

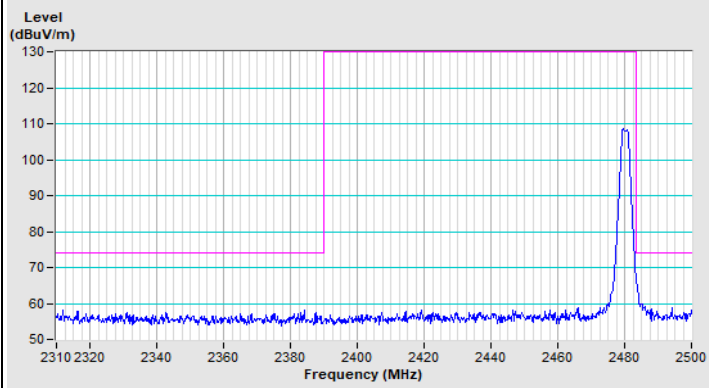
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

Plot of Band Edge

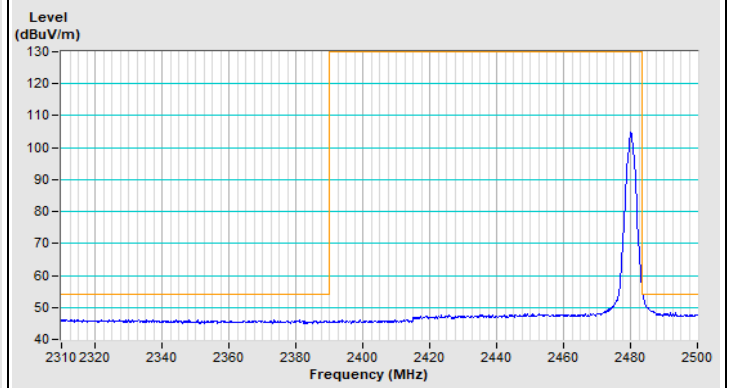
Frequency Range	2.31 GHz ~ 2.5 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
-----------------	--------------------	-------------------------------	--



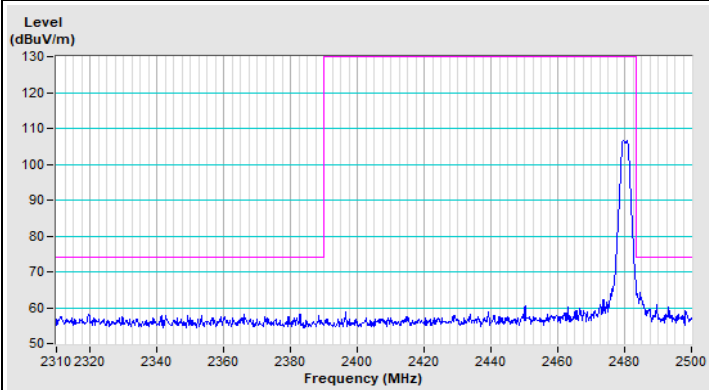
Thread Channel 26



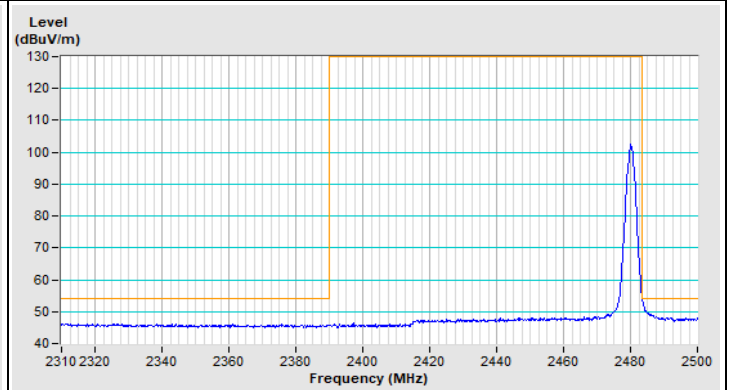
Horizontal (Peak)



Horizontal (Average)



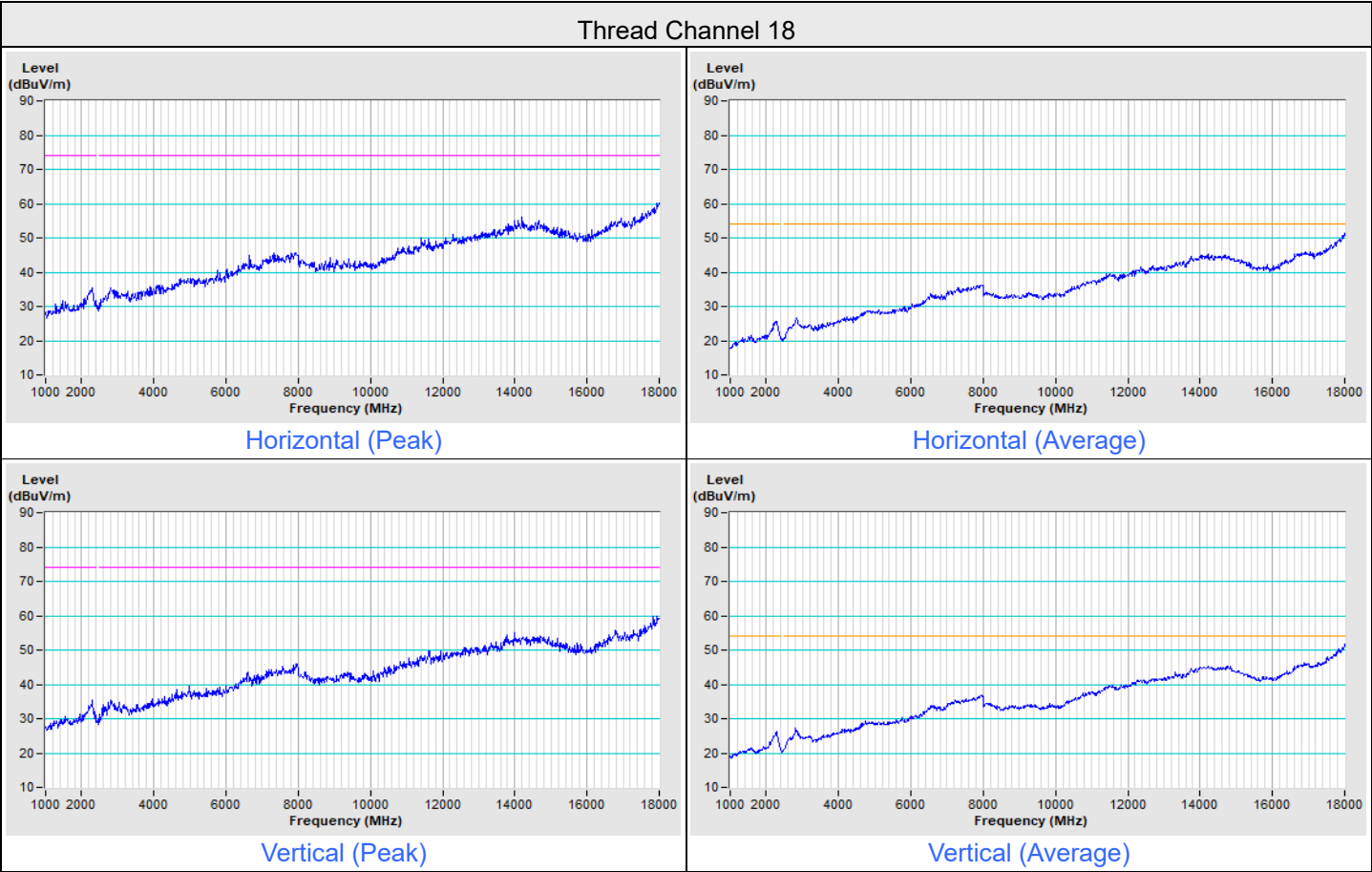
Vertical (Peak)



Vertical (Average)

Plot of Other Emission

Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
-----------------	----------------	-------------------------------	---



- Notes:
1. For radiated emission test data, complete spectral plots shall be presented in the report only for the worst-case scenarios of each mode within each operating frequency band.
 2. The frequency range 18 GHz ~ 25 GHz: After investigation, no any emissions were found to exist, therefore they are not recorded in this report.

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Lin Kou EMC/RF Lab

Tel: 886-(0)2-26052180

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-(0)3-6668565 (SIP)

Tel: 886-(0)3-5120595 (WD)

Hwa Ya EMC/RF/Safety/SAR Lab & Wenming EMC/RF Lab

Tel: 886-(0)3-3183232

Email: service.adt@bureauveritas.com

Web Site: <http://ee.bureauveritas.com.tw>

The address and road map of all our labs can be found in our web site also.

--- END ---