

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)
47 CFR FCC Part 15, Subpart E (Section 15.407)

Report No.: RFBEDV-WTW-P25100403-5

FCC ID: M72-EDV250P

Product: Poly Edge V250 Plus

Brand: HP

Model No.: PVAN-EDGE-V250P

Received Date: 2025/10/20

Test Date: 2025/12/16 ~ 2025/12/17

Issued Date: 2026/1/9

Applicant: HP Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 788550 / TW0003

Designation Number:

Approved by: _____

Jeremy Lin

Date: _____

2026/1/9

Jeremy Lin / Project Engineer

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Prepared by : Lena Wang / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBEDV-WTW-P25100403-5	Original release.	2026/1/9

1 Certificate

Product: Poly Edge V250 Plus

Brand: HP

Test Model: PVAN-EDGE-V250P

Sample Status: Engineering sample

Applicant: HP Inc.

Test Date: 2025/12/16 ~ 2025/12/17

Standard: 47 CFR FCC Part 15, Subpart C (Section 15.247)
47 CFR FCC Part 15, Subpart E (Section 15.407)

Measurement procedure: ANSI C63.10-2020

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

Standard / Clause	Test Item	Result	Remark
15.205 /15.209 /15.247(d) 15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -1.4 dB at 179.38 MHz and 156.1 MHz
15.205 /15.209 /15.247(d) 15.407(b)(1/2/3/4(i)/10) 15.407(b)(5/10)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -1.2 dB at 2483.5 MHz
15.247(d)	Conducted Out of Band Emissions	Pass	Meet the requirement of limit.

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:

Parameter	Specification	Uncertainty (±)
Radiated Spurious Emissions below 1GHz	9 kHz ~ 30 MHz	3.59 dB
	30 MHz ~ 1 GHz	3.6 dB
Radiated Spurious Emissions above 1GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 dB
Conducted Out of Band Emissions	9 kHz ~ 40 GHz	2.79 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 of EUT

Product	Poly Edge V250 Plus	
Brand	HP	
Test Model	PVAN-EDGE-V250P	
Modulation Technology	BT-EDR	FHSS
	BT-LE	DTS
	WLAN	DSSS, OFDM, OFDMA
Operating Frequency	BT	2.402 GHz ~ 2.480 GHz
	WLAN	2.412 GHz ~ 2.462 GHz 5.18 GHz ~ 5.24 GHz 5.26 GHz ~ 5.32 GHz 5.50 GHz ~ 5.72 GHz 5.745 GHz ~ 5.825 GHz

Note:

1. The EUT uses following accessories.

Item	Brand	Model	Specification
RJ-45 Cable	EXCELTEK	PO02008	1.5m
Coil Cable	EXCELTEK	PE0003	570mm

2. The EUT uses following support units.

Item	Brand	Model	Specification
USB Adapter	HP	TPN-DA20	AC Input power: 100-240Vac, 50-60Hz, 1.7A DC Output power: 5.0Vdc, 3.0A or 9.0Vdc, 3.0A or 12.0Vdc, 5.0A or 15.0Vdc, 4.33A or 20.0Vdc, 3.25A DC Output Cable: 1.73m without core
Adapter	Mass Power	S018-1A050300VU	AC Input power: 100-240Vac, 50/60Hz, 0.6A DC Output power: 5Vdc, 3A DC Output Cable: 1.5m non-shielded cable without core
PoE Injector	CERIO	POE-S48G2	48Vdc
Adapter for POE	L.T.E	LTE36ES-S5-1	AC Input power: 100-240Vac, 50/60Hz, 0.75A DC Output power: 48Vdc, 0.75A DC Output Cable: 1.85m non-shielded cable without core
Console Board	PEGATRON	REVLON_CONSOLE_BOARD Rev : 1.00	-
Console Cable	XINYA	H2530-04SVB-060/030	0.2M

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

4. Simultaneously transmission combination.

Combination	Technology	
1	WLAN (2.4 GHz)	Bluetooth
2	WLAN (5 GHz)	Bluetooth

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

5. 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 Net Gain(dBi)	Frequency range	Antenna Type	Connector Type
1	0	PEGATRON	NA	2.52	2.4 GHz	PCB	ipex(MHF)
				2.83	2.45 GHz	PCB	ipex(MHF)
				2.90	2.48 GHz	PCB	ipex(MHF)
				2.66	5.15 GHz	PCB	ipex(MHF)
				2.91	5.35 GHz	PCB	ipex(MHF)
				2.80	5.47 GHzzz	PCB	ipex(MHF)
				2.84	5.725 GHz	PCB	ipex(MHF)
				2.79	5.85 GHz	PCB	ipex(MHF)

*Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. The AC Adapter has the following models: AC adapter(S018-1A050300VU) / USB Adapter (TPN-DA20) / PoE mode(POE-S48G2). Pre-scan these models of AC Adapters and find the worst case as a representative test condition. 2. EUT can be used in the following ways: Lying/ Wall Mount. Pre-scan these ways and find the worst case as a representative test condition.
Worst Case:	1. Worst Condition:AC adapter(S018-1A050300VU) 2. Worst Condition: Lying

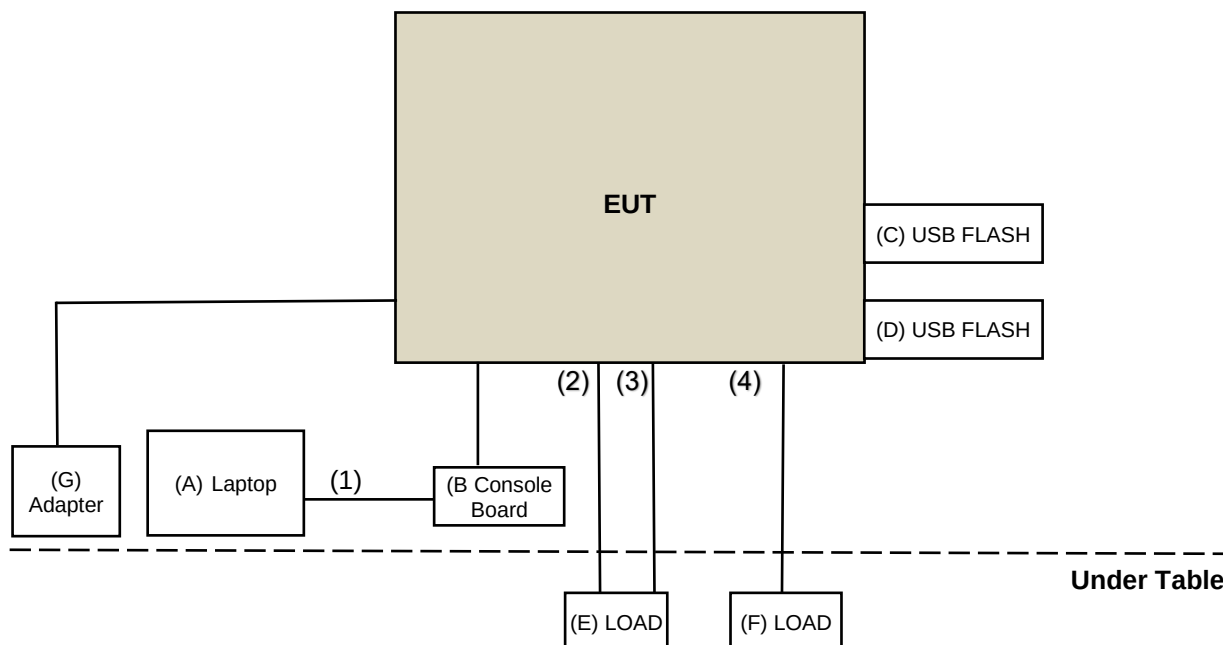
Following channel(s) was (were) selected for the final test as listed below:

Test Item	Combination	Mode	Tested Channel
Unwanted Emissions below 1 GHz	1	802.11ax (HE20)	6
		8DPSK	0
	2	8DPSK	0
		802.11a	116
Unwanted Emissions above 1 GHz	1	802.11ax (HE20)	6
		8DPSK	0
	2	8DPSK	0
		802.11a	116
Conducted Out of Band Emissions	1	802.11ax (HE20)	6
		8DPSK	0

3.4 Test Program Used and Operation Descriptions

Controlling software Tera Term V4.106 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.5 Connection Diagram of EUT and Peripheral Devices



3.6 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	Lenovo	X260 4G	PC0ECUAT	N/A	Provided by Lab
B	Console Board	PEGATRON	REVLON_CONSOLE_BOARD Rev : 1.00	N/A	N/A	Supplied by applicant
C	FLASH	SanDisk	SDDDC3-032G	N/A	N/A	Provided by Lab
D	FLASH	SanDisk	SDDDC3-032G	N/A	N/A	Provided by Lab
E	LOAD	BV	LP04	N/A	N/A	Provided by Lab
F	LOAD	BV	LP04	N/A	N/A	Provided by Lab
G	Adapter	Mass Power	S018-1A050300VU	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	USB Cable	1	1.5	N	0	Provided by Lab
2	RJ45 Cable	1	1.5	N	0	Provided by Lab
3	RJ45 Cable	1	1.5	N	0	Accessory of the EUT
4	Coil Cable	1	0.57	N	0	Accessory of the EUT

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 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn BV ADT	AT100	AT93021705	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-160	2025/9/16	2026/9/15
Loop Antenna TESEQ	HLA 6121	45745	2025/9/1	2026/8/31
Preamplifier Agilent	8447D	2944A10638	2025/4/27	2026/4/26
Preamplifier EMCI	EMC001340	980201	2025/9/21	2026/9/20
RF Coaxial Cable Woken	8D-FB	Cable-CH9-01	2025/4/27	2026/4/26
Signal & Spectrum Analyzer R&S	FSW43	101866	2025/3/25	2026/3/24
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	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 4.
2. Tested Date: 2025/12/16

4.2 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn BV ADT	AT100	AT93021705	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	5	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-1169	2025/11/9	2026/11/8
	BBHA 9170	9170-480	2025/11/9	2026/11/8
		BBHA9170243	2025/11/9	2026/11/8
Preamplifier Agilent	8449B	3008A02367	2025/1/5	2026/1/4
Preamplifier EMCI	EMC 184045	980116	2025/9/21	2026/9/20
RF Coaxial Cable EMCI	EMC102-KM-KM-600	150928	2025/6/30	2026/6/29
	EMC102-KM-KM-3000	150929	2025/6/30	2026/6/29
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	2025/1/5	2026/1/4
RF Coaxial Cable HUBER+SUHNER&EMCI	SUCOFLEX 104& EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	2025/1/5	2026/1/4
Signal & Spectrum Analyzer R&S	FSW43	101866	2025/3/25	2026/3/24
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	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 4.
2. Tested Date: 2025/12/16

4.3 Conducted Out of Band Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	00800A1K01A-10	00800A1K01A-10-01	2025/5/23	2026/5/22
Signal & Spectrum Analyzer R&S	FSV3044	101504	2025/6/18	2026/6/17
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2025/12/17

5 Limits of Test Items

5.1 Unwanted Emissions below 1 GHz

For FCC 15.247:

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).

For FCC 15.407:

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

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).

5.2 Unwanted Emissions above 1 GHz

For FCC 15.247:

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.

For FCC 15.407 transmitters operating in the 5.150-5.850 GHz band:

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

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.

Limits of unwanted emission out of the restricted bands

Applicable To	Limit	
789033 D02 General UNII Test Procedure New Rules v02r01	Field Strength at 3 m	
	PK: 74 (dBμV/m)	AV: 54 (dBμV/m)

Applicable To	EIRP Limit	Equivalent Field Strength at 3 m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m) *
15.407(b)(2)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m) *
15.407(b)(3)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m) *
15.407(b)(4)(i)	PK: -27 (dBm/MHz) ^{*1} PK: 10 (dBm/MHz) ^{*2} PK: 15.6 (dBm/MHz) ^{*3} PK: 27 (dBm/MHz) ^{*4}	PK: 68.2 (dBμV/m) ^{*1} PK: 105.2 (dBμV/m) ^{*2} PK: 110.8 (dBμV/m) ^{*3} PK: 122.2 (dBμV/m) ^{*4}

^{*1} beyond 75 MHz or more above of the band edge.

^{*2} below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

^{*3} below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

^{*4} from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where } P \text{ is the eirp (Watts).}$$

5.3 Conducted Out of Band Emissions

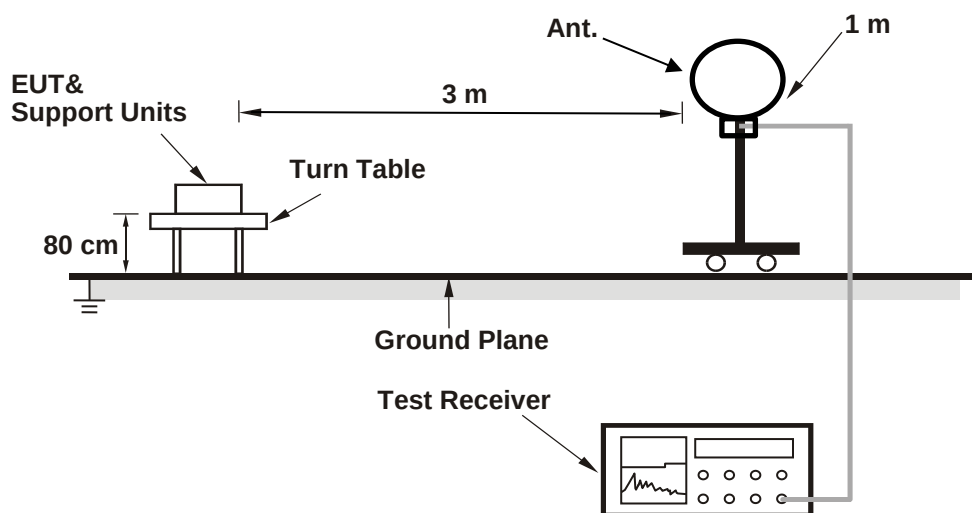
Below 30 dB of the highest emission level of operating band (in 100 kHz Resolution Bandwidth).

6 Test Arrangements

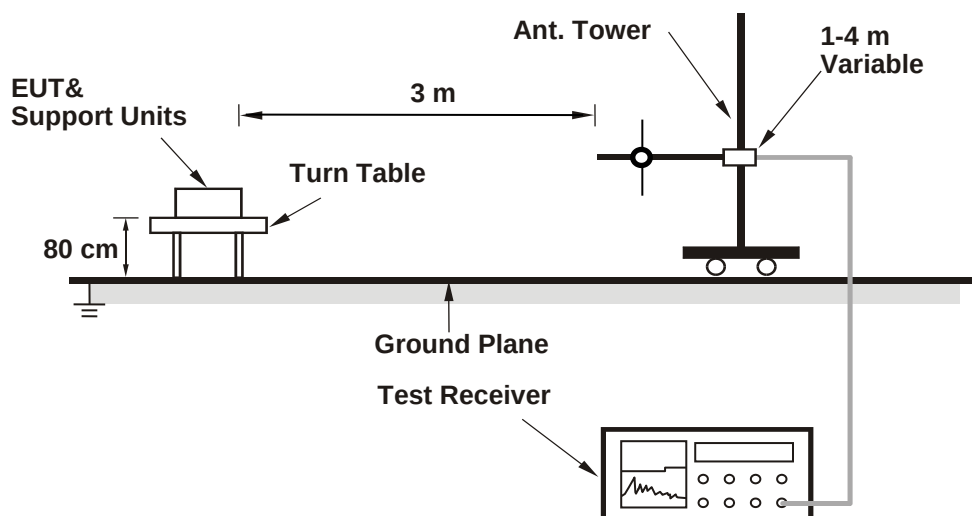
6.1 Unwanted Emissions below 1 GHz

6.1.1 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).

6.1.2 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, 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

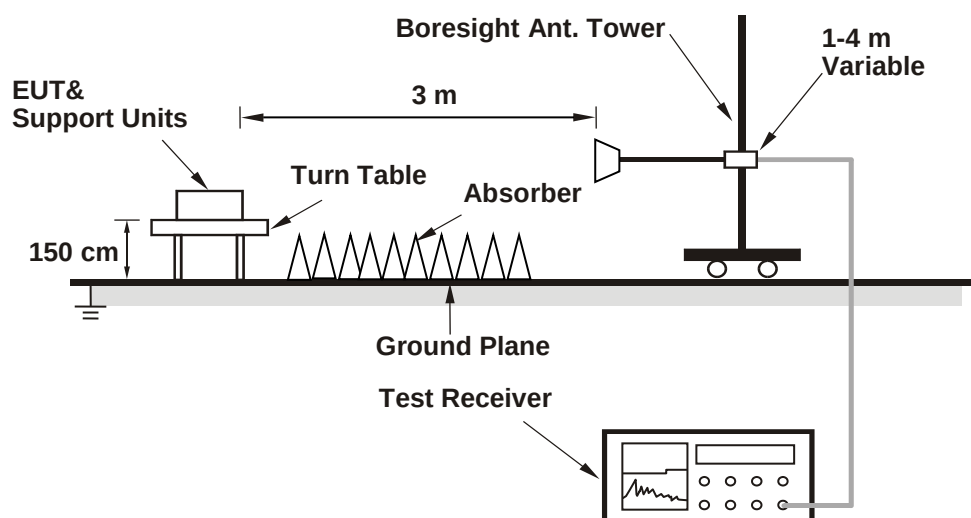
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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.
2. All modes of operation were investigated and the worst-case emissions are reported.

6.2 Unwanted Emissions above 1 GHz

6.2.1 Test Setup



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

6.2.2 Test Procedure

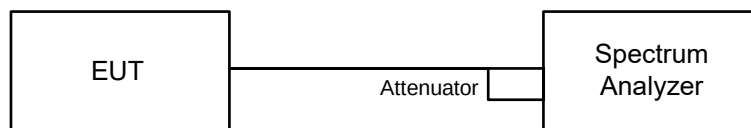
- The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top 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 system 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.
- All modes of operation were investigated and the worst-case emissions are reported.

6.3 Conducted Out of Band Emissions

6.3.1 Test Setup



6.3.2 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.

7 Test Results of Test Item

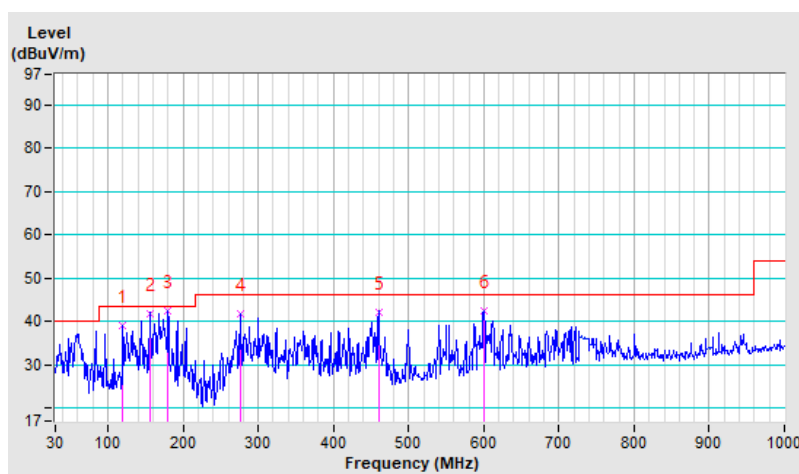
7.1 Unwanted Emissions below 1 GHz

Combination	1		
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, 67% RH
Tested By	Rex Wang		

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	119.24	38.8 QP	43.5	-4.7	1.50 H	248	49.5	-10.7
2	155.13	41.9 QP	43.5	-1.6	1.99 H	140	50.0	-8.1
3	179.38	42.1 QP	43.5	-1.4	1.00 H	6	51.5	-9.4
4	275.41	41.5 QP	46.0	-4.5	1.00 H	127	48.7	-7.2
5	460.68	42.0 QP	46.0	-4.0	1.99 H	154	45.0	-3.0
6	600.36	42.3 QP	46.0	-3.7	1.50 H	155	42.7	-0.4

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.

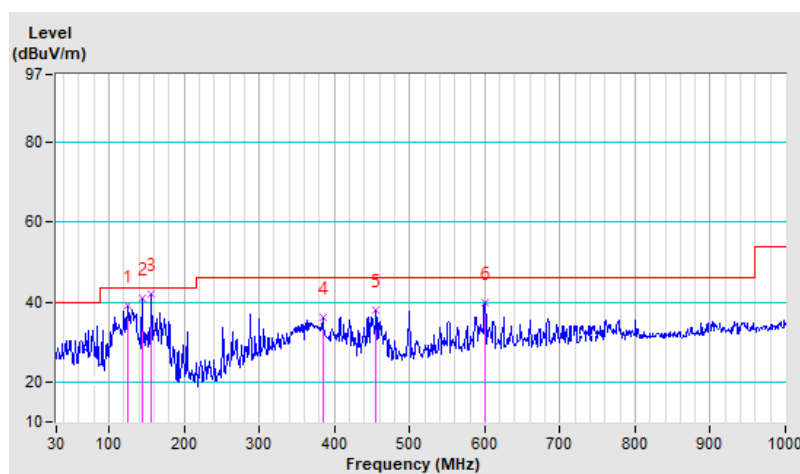


Combination	1		
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Rex Wang		

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	124.09	38.7 QP	43.5	-4.8	1.01 V	131	49.1	-10.4
2	143.49	41.0 QP	43.5	-2.5	1.51 V	345	49.6	-8.6
3	156.1	42.1 QP	43.5	-1.4	1.01 V	51	50.2	-8.1
4	384.05	36.1 QP	46.0	-9.9	2.00 V	197	40.8	-4.7
5	455.83	38.0 QP	46.0	-8.0	1.01 V	155	41.1	-3.1
6	600.36	39.6 QP	46.0	-6.4	1.01 V	48	40.0	-0.4

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.

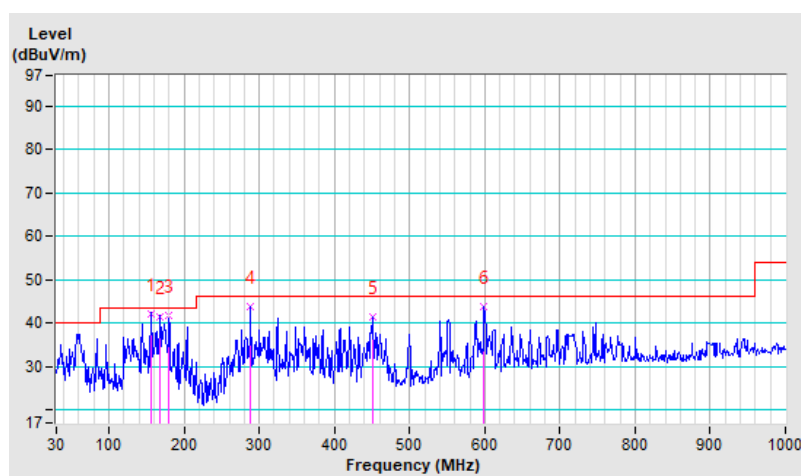


Combination	2		
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Rex Wang		

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	155.13	41.9 QP	43.5	-1.6	1.50 H	122	50.0	-8.1
2	167.74	41.5 QP	43.5	-2.0	1.01 H	294	49.8	-8.3
3	179.38	41.6 QP	43.5	-1.9	1.50 H	151	51.0	-9.4
4	288.02	43.7 QP	46.0	-2.3	1.01 H	164	50.5	-6.8
5	450.01	41.3 QP	46.0	-4.7	2.00 H	187	44.4	-3.1
6	599.39	43.8 QP	46.0	-2.2	1.50 H	183	44.2	-0.4

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.

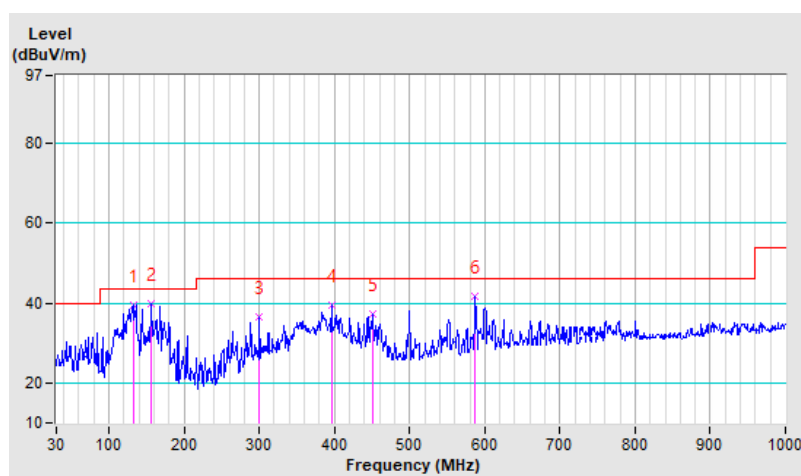


Combination	2		
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 67% RH
Tested By	Rex Wang		

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	131.85	39.2 QP	43.5	-4.3	1.00 V	4	48.8	-9.6
2	156.1	39.9 QP	43.5	-3.6	1.00 V	351	48.0	-8.1
3	299.66	36.4 QP	46.0	-9.6	2.00 V	6	43.0	-6.6
4	395.69	39.4 QP	46.0	-6.6	1.00 V	170	43.9	-4.5
5	450.01	37.2 QP	46.0	-8.8	1.50 V	216	40.3	-3.1
6	587.75	41.5 QP	46.0	-4.5	1.00 V	72	42.2	-0.7

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.



7.2 Unwanted Emissions above 1 GHz

Combination	1		
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=10 Hz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76% RH
Tested By	Rex Wang		

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	58.5 PK	74.0	-15.5	1.55 H	233	25.2	33.3
2	2390	47.1 AV	54.0	-6.9	1.55 H	233	13.8	33.3
3	*2402	101.9 PK			1.55 H	233	68.5	33.4
4	*2402	77.5 AV			1.55 H	233	44.1	33.4
5	*2437	115.7 PK			1.24 H	235	82.4	33.3
6	*2437	103.6 AV			1.24 H	235	70.3	33.3
7	2483.5	66.6 PK	74.0	-7.4	1.24 H	235	33.4	33.2
8	2483.5	52.5 AV	54.0	-1.5	1.24 H	235	19.3	33.2
9	4804	46.0 PK	74.0	-28.0	1.41 H	150	41.0	5.0
10	4804	21.6 AV	54.0	-32.4	1.41 H	150	16.6	5.0
11	4874	50.3 PK	74.0	-23.7	1.94 H	50	45.4	4.9
12	4874	37.2 AV	54.0	-16.8	1.94 H	50	32.3	4.9
13	7311	63.5 PK	74.0	-10.5	1.27 H	211	52.6	10.9
14	7311	50.5 AV	54.0	-3.5	1.27 H	211	39.6	10.9
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	58.3 PK	74.0	-15.7	1.17 V	155	25.0	33.3
2	2390	46.9 AV	54.0	-7.1	1.17 V	155	13.6	33.3
3	*2402	105.2 PK			1.17 V	155	71.8	33.4
4	*2402	80.8 AV			1.17 V	155	47.4	33.4
5	*2437	116.7 PK			2.33 V	314	83.4	33.3
6	*2437	104.9 AV			2.33 V	314	71.6	33.3
7	2483.5	66.8 PK	74.0	-7.2	2.33 V	314	33.6	33.2
8	2483.5	52.8 AV	54.0	-1.2	2.33 V	314	19.6	33.2
9	4804	46.3 PK	74.0	-27.7	1.77 V	130	41.3	5.0
10	4804	21.9 AV	54.0	-32.1	1.77 V	130	16.9	5.0
11	4874	49.5 PK	74.0	-24.5	2.35 V	200	44.6	4.9
12	4874	37.0 AV	54.0	-17.0	2.35 V	200	32.1	4.9
13	7311	63.3 PK	74.0	-10.7	1.99 V	150	52.4	10.9
14	7311	50.3 AV	54.0	-3.7	1.99 V	150	39.4	10.9

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.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:

$$20 \log(\text{Duty cycle}) = 20 \log((3 \text{ ms}) * (1+1)) / 100 \text{ ms} = -24.4 \text{ dB}$$

Combination	2		
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=3 MHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76% RH
Tested By	Rex Wang		

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	58.4 PK	74.0	-15.6	1.52 H	237	25.1	33.3
2	2390	46.9 AV	54.0	-7.1	1.52 H	237	13.6	33.3
3	*2402	102.2 PK			1.52 H	237	68.8	33.4
4	*2402	77.8 AV			1.52 H	237	44.4	33.4
5	4804	46.0 PK	74.0	-28.0	1.36 H	155	41.0	5.0
6	4804	21.6 AV	54.0	-32.4	1.36 H	155	16.6	5.0
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	58.6 PK	74.0	-15.4	1.10 V	164	25.3	33.3
2	2390	47.1 AV	54.0	-6.9	1.10 V	164	13.8	33.3
3	*2402	105.0 PK			1.10 V	164	71.6	33.4
4	*2402	80.6 AV			1.10 V	164	47.2	33.4
5	4804	46.3 PK	74.0	-27.7	1.66 V	124	41.3	5.0
6	4804	21.9 AV	54.0	-32.1	1.66 V	124	16.9	5.0

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.
6. The average value of fundamental and harmonic frequency is: Average = Peak value + 20 log(Duty cycle) Where the duty cycle correction factor is calculated from following formula:

$$20 \log(\text{Duty cycle}) = 20 \log((3 \text{ ms}) * (1+1)) / 100 \text{ ms} = -24.4 \text{ dB}$$

Combination	2		
Frequency Range	1 GHz ~ 40 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=1 kHz, DET=Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	23 °C, 76% RH
Tested By	Rex Wang		

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	*5580	112.2 PK			1.04 H	244	72.0	40.2
2	*5580	101.8 AV			1.04 H	244	61.6	40.2
3	11160	58.9 PK	74.0	-15.1	1.45 H	166	42.2	16.7
4	11160	45.9 AV	54.0	-8.1	1.45 H	166	29.2	16.7
5	#16740	63.5 PK	68.2	-4.7	1.24 H	156	41.5	22.0
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	*5580	114.2 PK			2.50 V	167	74.0	40.2
2	*5580	103.8 AV			2.50 V	167	63.6	40.2
3	11160	59.2 PK	74.0	-14.8	1.64 V	155	42.5	16.7
4	11160	46.4 AV	54.0	-7.6	1.64 V	155	29.7	16.7
5	#16740	64.2 PK	68.2	-4.0	2.45 V	180	42.2	22.0

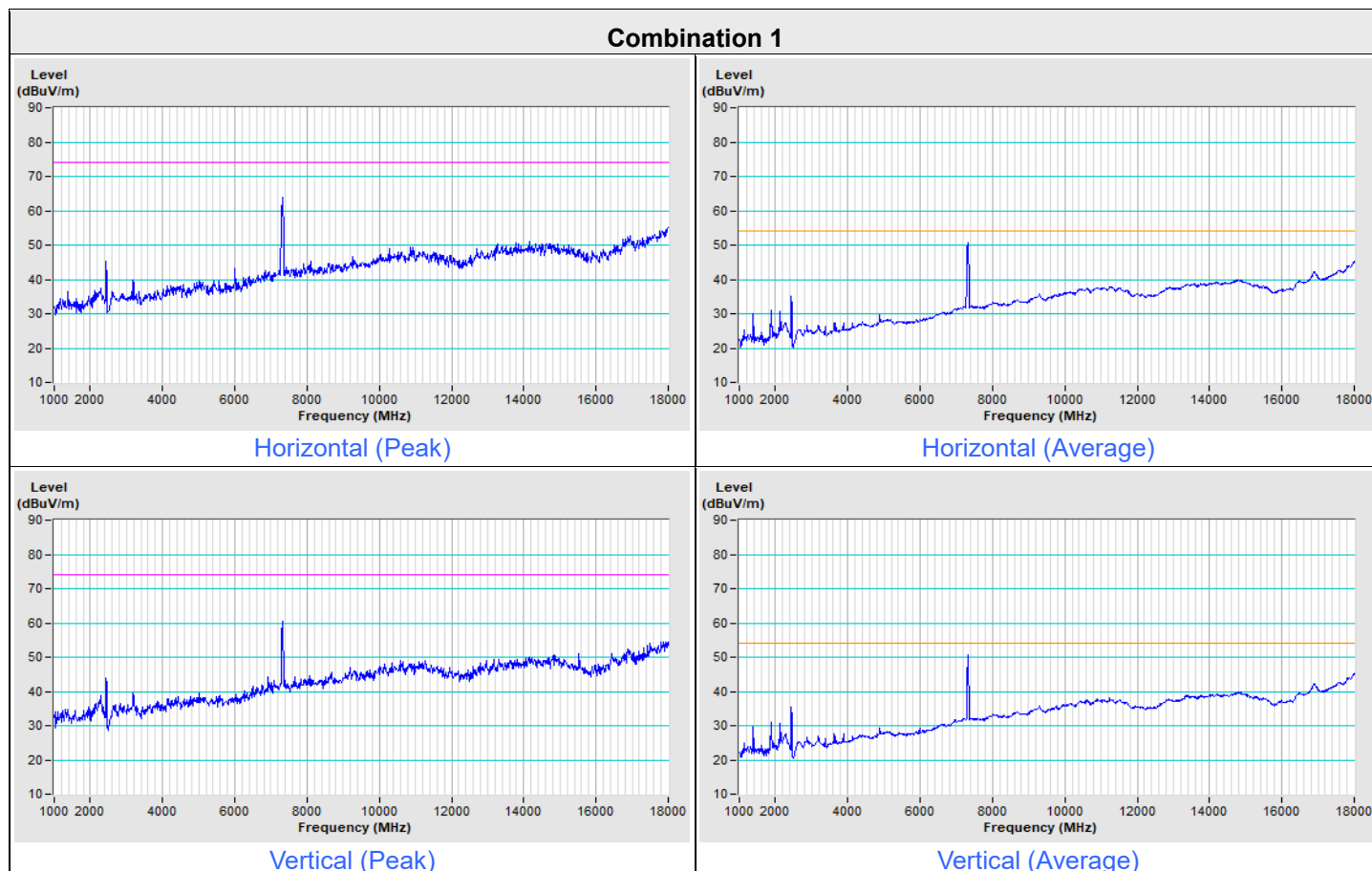
Remarks:

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.
6. " # ": The radiated frequency is out of the restricted band.

Plot of Other emissions

Combination 1

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
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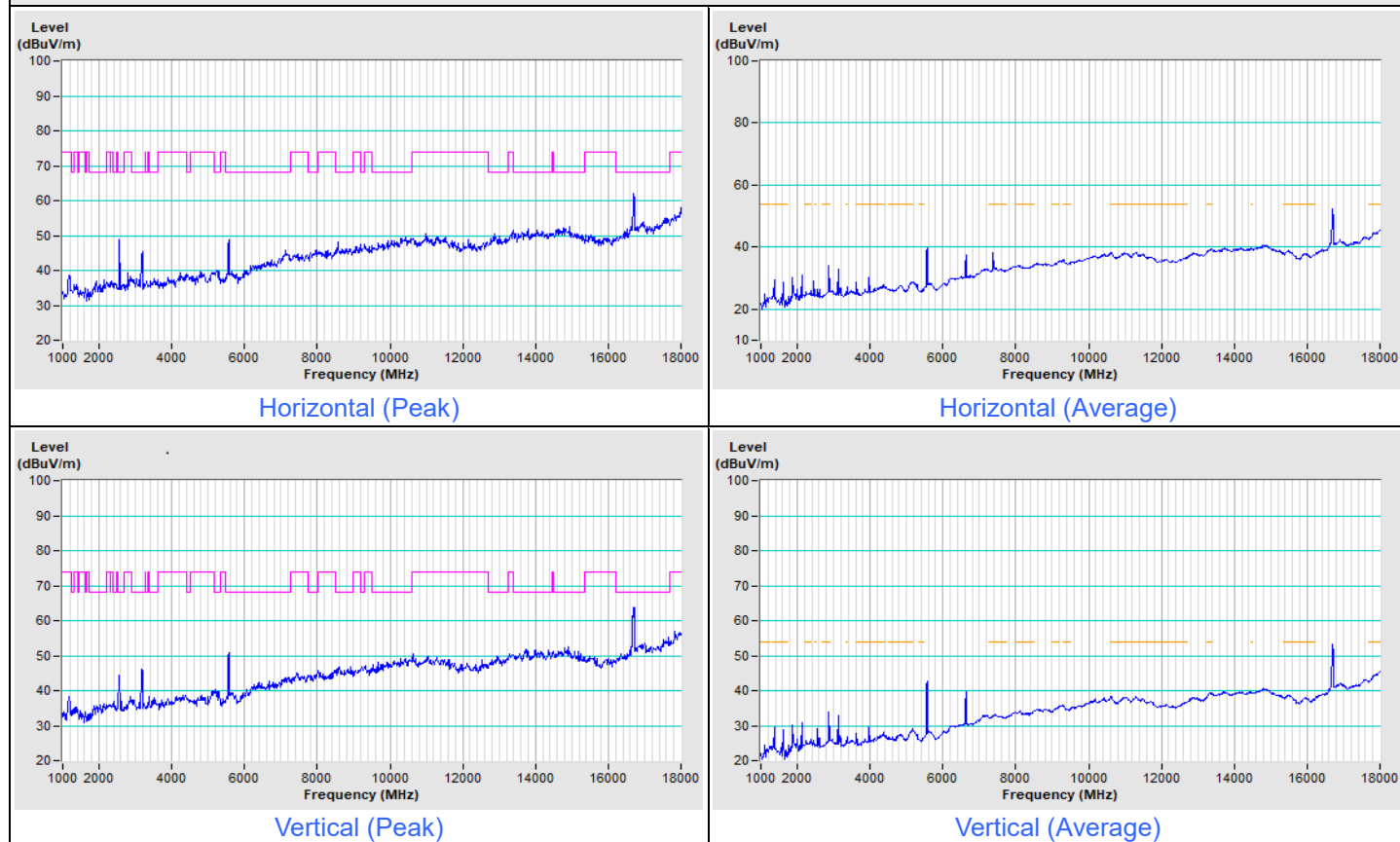
Notes:

- 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.
- The frequency range 18 GHz ~ 25 GHz: After investigation, no any emissions were found to exist, therefore they are not recorded in this report.

Combination 2

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
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Combination 2

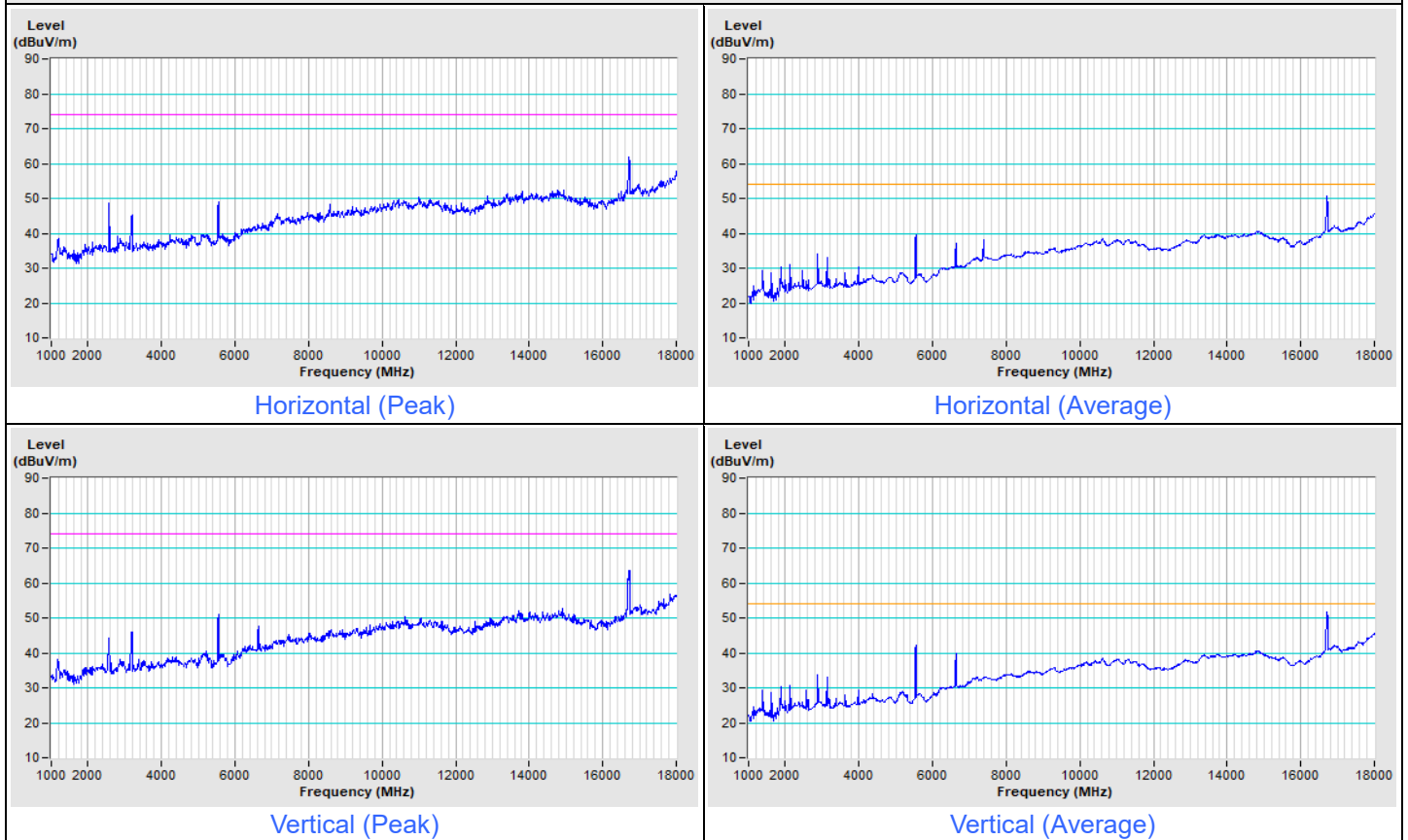


Notes:

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 ~ 40 GHz: After investigation, no any emissions were found to exist, therefore they are not recorded in this report.

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
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Combination 2



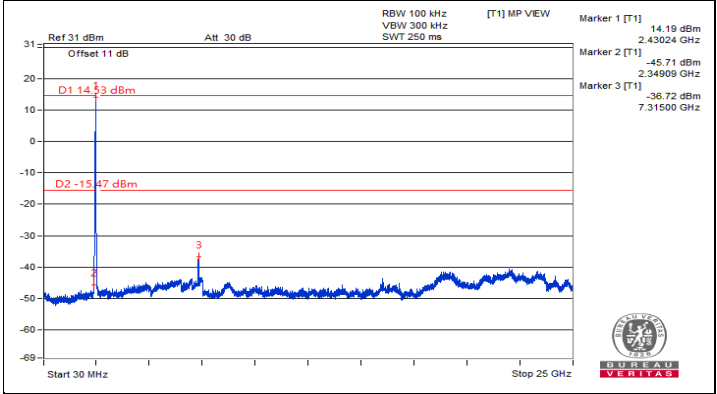
Notes:

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.

7.3 Conducted Out of Band Emissions

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 65% RH	Tested By:	Chris Lin
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Combination 1



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.

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

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