

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-P25100019-5

FCC ID: M72-EDV250

Product: Poly Edge V250

Brand: HP

Model No.: PVAN-EDGE-V250

Received Date: 2025/9/26

Test Date: 2025/12/17 ~ 2025/12/18

Issued Date: 2025/12/24

Applicant: HP Inc.

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

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FCC Registration / 788550 / TW0003

Designation Number:

Approved by:

Jeremy Lin

Date:

2025/12/24

Jeremy Lin / Project Engineer

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Prepared by : Polly Chien / Specialist

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Release Control Record

Issue No.	Description	Date Issued
RFBEDV-WTW-P25100019-5	Original release.	2025/12/24

1 Certificate

Product: Poly Edge V250

Brand: HP

Test Model: PVAN-EDGE-V250

Sample Status: Engineering sample

Applicant: HP Inc.

Test Date: 2025/12/17 ~ 2025/12/18

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 -4.6 dB at 624.61 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 -1.8 dB at 17355.00 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	2.44 dB
	30 MHz ~ 1 GHz	2.95 dB
Radiated Spurious Emissions above 1GHz	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 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	
Brand	HP	
Test Model	PVAN-EDGE-V250	
Modulation Technology	BT-EDR	FHSS
	BT-LE	DTS
	WLAN	DSSS, OFDM, OFDMA
Operating Frequency	BT	2402 ~ 2480 MHz
	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	2.91	2.4 GHz ~ 2.4835 GHz	PCB	ipex(MHF)
				2.49	5.15 GHz ~ 5.25 GHz	PCB	ipex(MHF)
				2.85	5.25 GHz ~ 5.35 GHz	PCB	ipex(MHF)
				2.90	5.47 GHz ~ 5.725 GHz	PCB	ipex(MHF)
				2.56	5.725 GHz ~ 5.85 GHz	PCB	ipex(MHF)

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

2. The EUT incorporates a SISO function:

2.4 GHz Band		
Modulation Mode	TX & RX Configuration	
802.11b	1TX	1RX
802.11g	1TX	1RX
802.11n (HT20)	1TX	1RX
802.11ax (HE20)	1TX	1RX

Note: The modulation and bandwidth are similar for 802.11n mode for 20 MHz, 802.11ax mode for 20 MHz. Therefore, the investigated worst case is the representative mode in test report.

5 GHz Band		
Modulation Mode	TX & RX Configuration	
802.11a	1TX	1RX
802.11n (HT20)	1TX	1RX
802.11ac (VHT20)	1TX	1RX
802.11ax (HE20)	1TX	1RX

Note: The modulation and bandwidth are similar for 802.11n mode for 20 MHz, 802.11ac mode for 20 MHz, 802.11ax mode for 20 MHz. Therefore, the investigated worst case is the representative mode in test report.

3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. The EUT can be powered by following ways: Adapter (S018-1A050300VU) / USB Adapter (TPN-DA20) / PoE Injector (POE-S48G2). Pre-scan these ways 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: Adapter (S018-1A050300VU) 2. Worst Condition: Lying

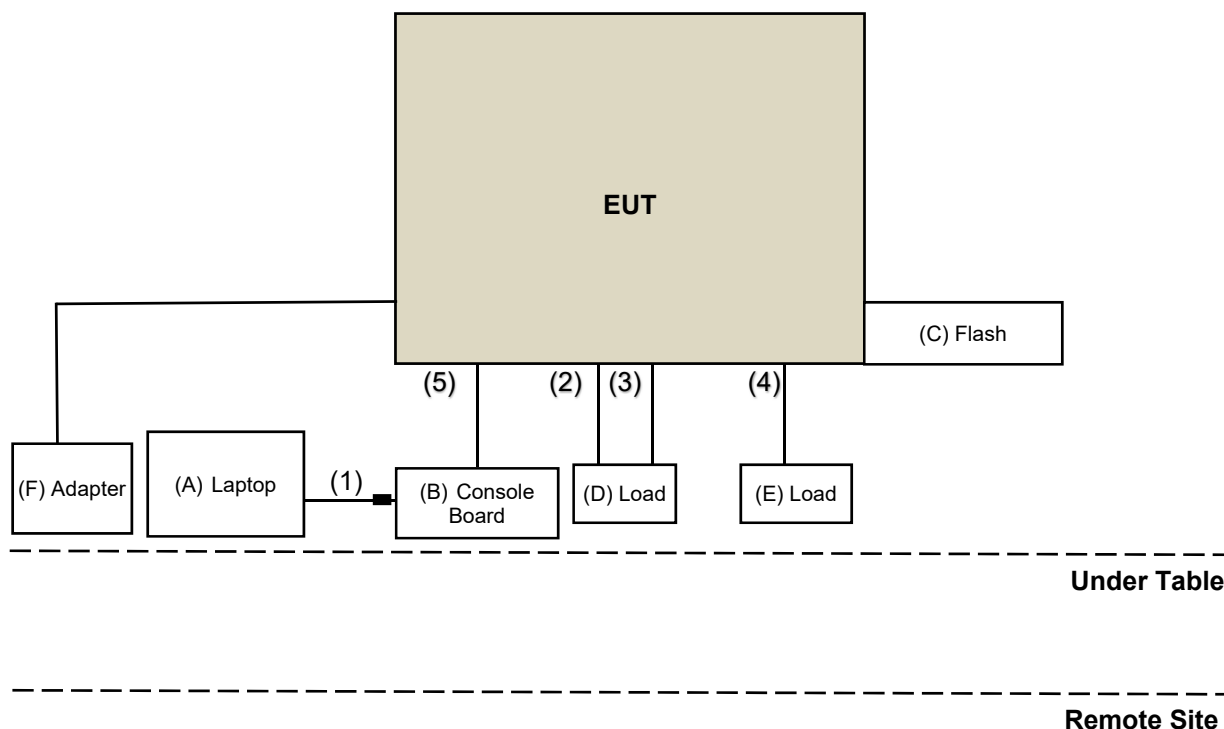
Following channel(s) was (were) selected for the final test as listed below:

Test Item	Combination	Mode	Tested Channel
Unwanted Emissions below 1 GHz	1	802.11g	6
		8DPSK	0
	2	8DPSK	0
		802.11a	157
Unwanted Emissions above 1 GHz	1	802.11g	6
		8DPSK	0
	2	8DPSK	0
		802.11a	157
Conducted Out of Band Emissions	1	802.11g	6
		8DPSK	0
	2	8DPSK	0
		802.11a	157

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	Load	N/A	N/A	N/A	N/A	Provided by Lab
E	Load	N/A	N/A	N/A	N/A	Provided by Lab
F	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	N	1	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
5	Console Cable	1	0.2	N	0	Supplied by applicant

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 Max-Full	MFA-440H	AT93021705	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-472	2025/9/16	2026/9/15
Loop Antenna TESEQ	HLA 6121	45745	2025/9/1	2026/8/31
MXE EMI Receiver Agilent	N9038A	MY51210203	2025/8/27	2026/8/26
Preamplifier EMCI	EMC 330H	980112	2025/9/21	2026/9/20
	EMC001340	980201	2025/9/21	2026/9/20
RF Coaxial Cable Woken	8D-FB	Cable-Ch10-01	2025/9/21	2026/9/20
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MG-7802	N/A	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2025/12/17

4.2 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna Tower & Turn Max-Full	MFA-440H	AT93021705	N/A	N/A
Boresight antenna tower fixture BV	BAF-02	7	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-969	2025/11/9	2026/11/8
	BBHA 9170	148	2025/11/9	2026/11/8
MXE EMI Receiver Agilent	N9038A	MY51210203	2025/8/27	2026/8/26
Preamplifier EMCI	EMC 184045	980116	2025/9/21	2026/9/20
	EMC118A45SE	980809	2025/4/24	2026/4/23
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
	EMC104-SM-SM- 8000+3000	171005	2025/9/21	2026/9/20
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	EMC104-SM-SM- 1000(140807)	2025/9/21	2026/9/20
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table Max-Full	MFT-201SS	N/A	N/A	N/A
Turn Table Controller Max-Full	MG-7802	N/A	N/A	N/A

Notes:

1. The test was performed in HY - 966 chamber 5.
2. Tested Date: 2025/12/17

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: 2025/12/18

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:

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

5.3 Conducted Out of Band Emissions

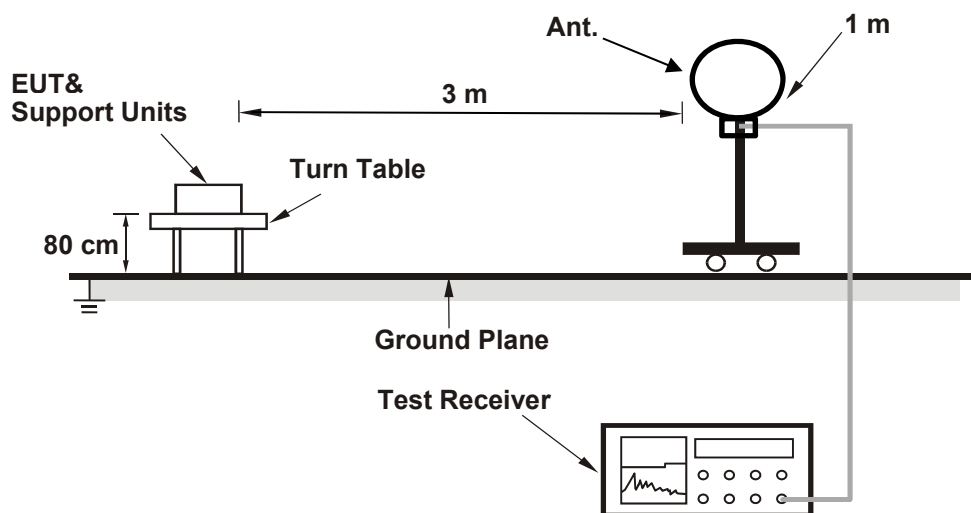
Below 30 dB of the highest emission level of operating band (in 100 kHz Resolution Bandwidth).

6 Test Arrangements

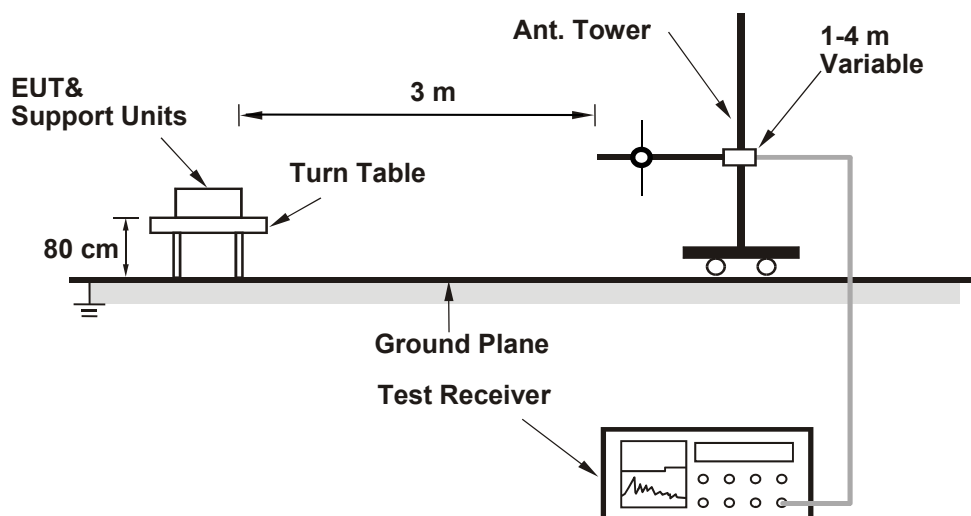
6.1 Unwanted Emissions below 1 GHz

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

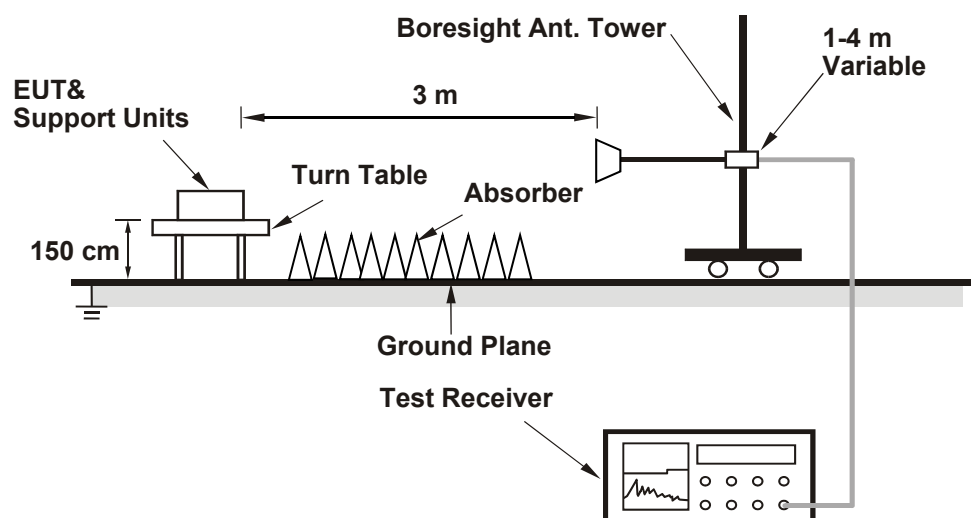
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the 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

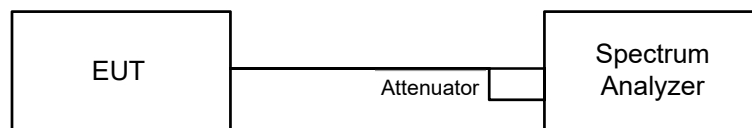
- The EUT was placed on the top of a rotating table 1.5 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top 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

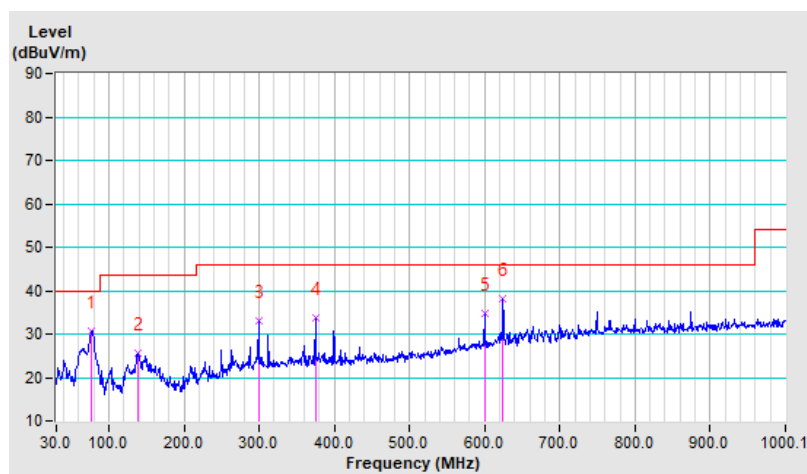
7.1 Unwanted Emissions below 1 GHz

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	22 °C, 65% RH
Tested By	Thomas Cheng		

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	77.53	30.7 QP	40.0	-9.3	1.00 H	163	47.2	-16.5
2	138.64	25.6 QP	43.5	-17.9	1.00 H	203	38.2	-12.6
3	299.66	32.9 QP	46.0	-13.1	1.50 H	8	44.6	-11.7
4	375.32	33.8 QP	46.0	-12.2	1.50 H	234	43.6	-9.8
5	600.36	34.8 QP	46.0	-11.2	2.00 H	150	39.4	-4.6
6	624.61	38.1 QP	46.0	-7.9	1.50 H	2	42.0	-3.9

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 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.

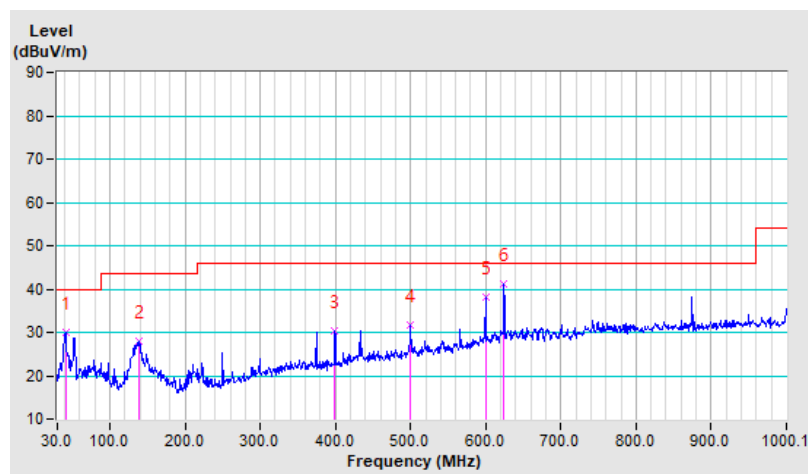


Combination	1		
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65% RH
Tested By	Thomas Cheng		

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	41.64	29.9 QP	40.0	-10.1	1.00 V	215	42.1	-12.2
2	139.61	28.1 QP	43.5	-15.4	1.00 V	279	40.7	-12.6
3	399.57	30.4 QP	46.0	-15.6	1.00 V	195	39.5	-9.1
4	500.45	31.8 QP	46.0	-14.2	1.00 V	197	38.1	-6.3
5	600.36	38.0 QP	46.0	-8.0	1.00 V	266	42.6	-4.6
6	624.61	41.1 QP	46.0	-4.9	2.00 V	188	45.0	-3.9

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 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.

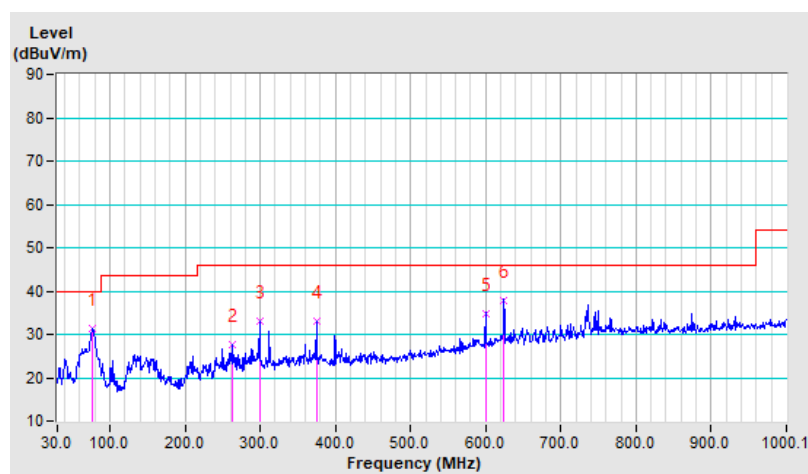


Combination	2		
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65% RH
Tested By	Thomas Cheng		

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	77.53	31.2 QP	40.0	-8.8	1.00 H	4	47.7	-16.5
2	263.77	27.6 QP	46.0	-18.4	1.00 H	200	40.5	-12.9
3	299.66	33.2 QP	46.0	-12.8	1.50 H	167	44.9	-11.7
4	375.32	33.0 QP	46.0	-13.0	1.50 H	230	42.8	-9.8
5	600.36	34.9 QP	46.0	-11.1	2.00 H	151	39.5	-4.6
6	624.61	37.9 QP	46.0	-8.1	1.00 H	6	41.8	-3.9

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 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.

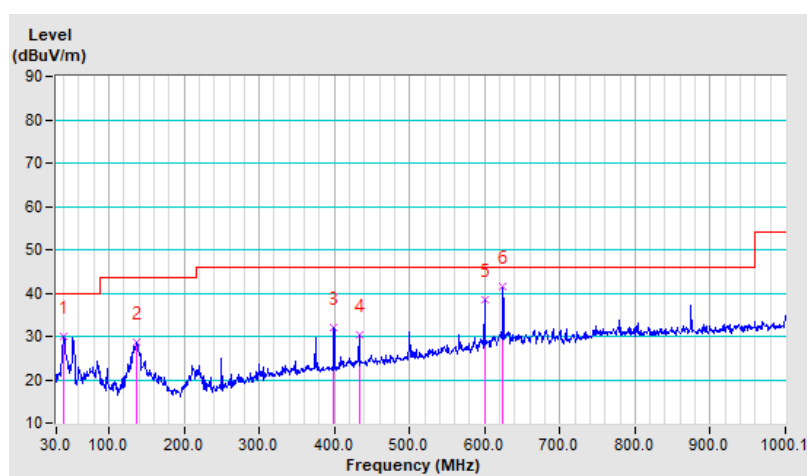


Combination	2		
Frequency Range	30 MHz ~ 1 GHz	Detector Function & Bandwidth	QP: RB=120 kHz, DET=Quasi-Peak
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65% RH
Tested By	Thomas Cheng		

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	40.67	30.1 QP	40.0	-9.9	1.00 V	258	42.4	-12.3
2	137.67	28.6 QP	43.5	-14.9	1.00 V	273	41.2	-12.6
3	399.57	31.9 QP	46.0	-14.1	1.00 V	188	41.0	-9.1
4	433.52	30.4 QP	46.0	-15.6	1.50 V	98	38.4	-8.0
5	600.36	38.6 QP	46.0	-7.4	1.00 V	220	43.2	-4.6
6	624.61	41.4 QP	46.0	-4.6	2.00 V	147	45.3	-3.9

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 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=1 kHz, DET=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 65% RH
Tested By	Thomas Cheng		

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	62.1 PK	74.0	-11.9	1.33 H	45	25.8	36.3
2	2390.00	48.8 AV	54.0	-5.2	1.33 H	45	12.5	36.3
3	*2402.00	101.9 PK			1.33 H	45	65.6	36.3
4	*2402.00	77.5 AV			1.33 H	45	41.2	36.3
5	*2437.00	114.6 PK			1.35 H	158	78.4	36.2
6	*2437.00	104.3 AV			1.35 H	158	68.1	36.2
7	4804.00	53.6 PK	74.0	-20.4	1.88 H	255	41.3	12.3
8	4804.00	29.2 AV	54.0	-24.8	1.88 H	255	16.9	12.3
9	4874.00	55.0 PK	74.0	-19.0	2.34 H	166	42.4	12.6
10	4874.00	41.1 AV	54.0	-12.9	2.34 H	166	28.5	12.6

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	62.0 PK	74.0	-12.0	1.28 V	179	25.7	36.3
2	2390.00	48.6 AV	54.0	-5.4	1.28 V	179	12.3	36.3
3	*2402.00	101.6 PK			1.28 V	179	65.4	36.2
4	*2402.00	77.2 AV			1.28 V	179	41.0	36.2
5	*2437.00	111.3 PK			1.15 V	178	75.1	36.2
6	*2437.00	99.8 AV			1.15 V	178	63.6	36.2
7	4804.00	53.3 PK	74.0	-20.7	2.77 V	128	41.1	12.2
8	4804.00	28.9 AV	54.0	-25.1	2.77 V	128	16.7	12.2
9	4874.00	54.8 PK	74.0	-19.2	1.15 V	166	42.2	12.6
10	4874.00	40.7 AV	54.0	-13.3	1.15 V	166	28.1	12.6

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	22 °C, 65% RH
Tested By	Thomas Cheng		

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	62.0 PK	74.0	-12.0	1.32 H	46	25.7	36.3
2	2390.00	48.8 AV	54.0	-5.2	1.32 H	46	12.5	36.3
3	*2402.00	101.8 PK			1.32 H	46	65.5	36.3
4	*2402.00	77.4 AV			1.32 H	46	41.1	36.3
5	4804.00	53.7 PK	74.0	-20.3	1.89 H	255	41.4	12.3
6	4804.00	29.3 AV	54.0	-24.7	1.89 H	255	17.0	12.3
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	61.9 PK	74.0	-12.1	1.28 V	180	25.6	36.3
2	2390.00	48.6 AV	54.0	-5.4	1.28 V	180	12.3	36.3
3	*2402.00	101.6 PK			1.28 V	180	65.3	36.3
4	*2402.00	77.2 AV			1.28 V	180	40.9	36.3
5	4804.00	53.5 PK	74.0	-20.5	2.79 V	127	41.2	12.3
6	4804.00	29.1 AV	54.0	-24.9	2.79 V	127	16.8	12.3

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=RMS
Input Power	120 Vac, 60 Hz	Environmental Conditions	22 °C, 63% RH
Tested By	Thomas Cheng		

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	#5602.00	59.7 PK	68.2	-8.5	2.76 H	334	53.0	6.7
2	*5785.00	115.0 PK			2.76 H	334	72.6	42.4
3	*5785.00	104.9 AV			2.76 H	334	62.5	42.4
4	#5976.00	60.0 PK	68.2	-8.2	2.76 H	334	52.6	7.4
5	11570.00	61.4 PK	74.0	-12.6	2.91 H	64	49.6	11.8
6	11570.00	48.0 AV	54.0	-6.0	2.91 H	64	36.2	11.8
7	17355.00	65.6 PK	68.2	-2.6	2.40 H	68	53.6	12.0
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	#5642.80	59.3 PK	68.2	-8.9	1.93 V	158	52.6	6.7
2	*5785.00	113.4 PK			1.93 V	158	70.7	42.7
3	*5785.00	103.3 AV			1.93 V	158	60.6	42.7
4	#5935.60	59.8 PK	68.2	-8.4	1.93 V	158	52.6	7.2
5	11570.00	61.6 PK	74.0	-12.4	2.06 V	295	49.6	12.0
6	11570.00	48.2 AV	54.0	-5.8	2.06 V	295	36.2	12.0
7	17355.0	66.4 PK	68.2	-1.8	2.62 V	193	54.7	11.7

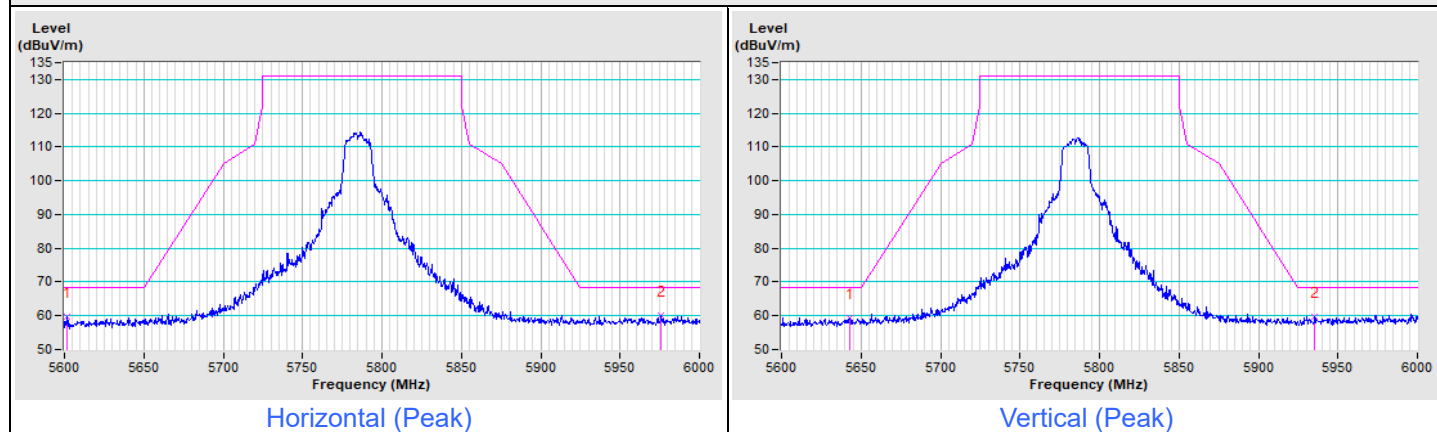
Remarks:

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.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.
6. " # ": The radiated frequency is out of the restricted band.

Plot of Band Edge

Frequency Range	5.6 GHz ~ 6 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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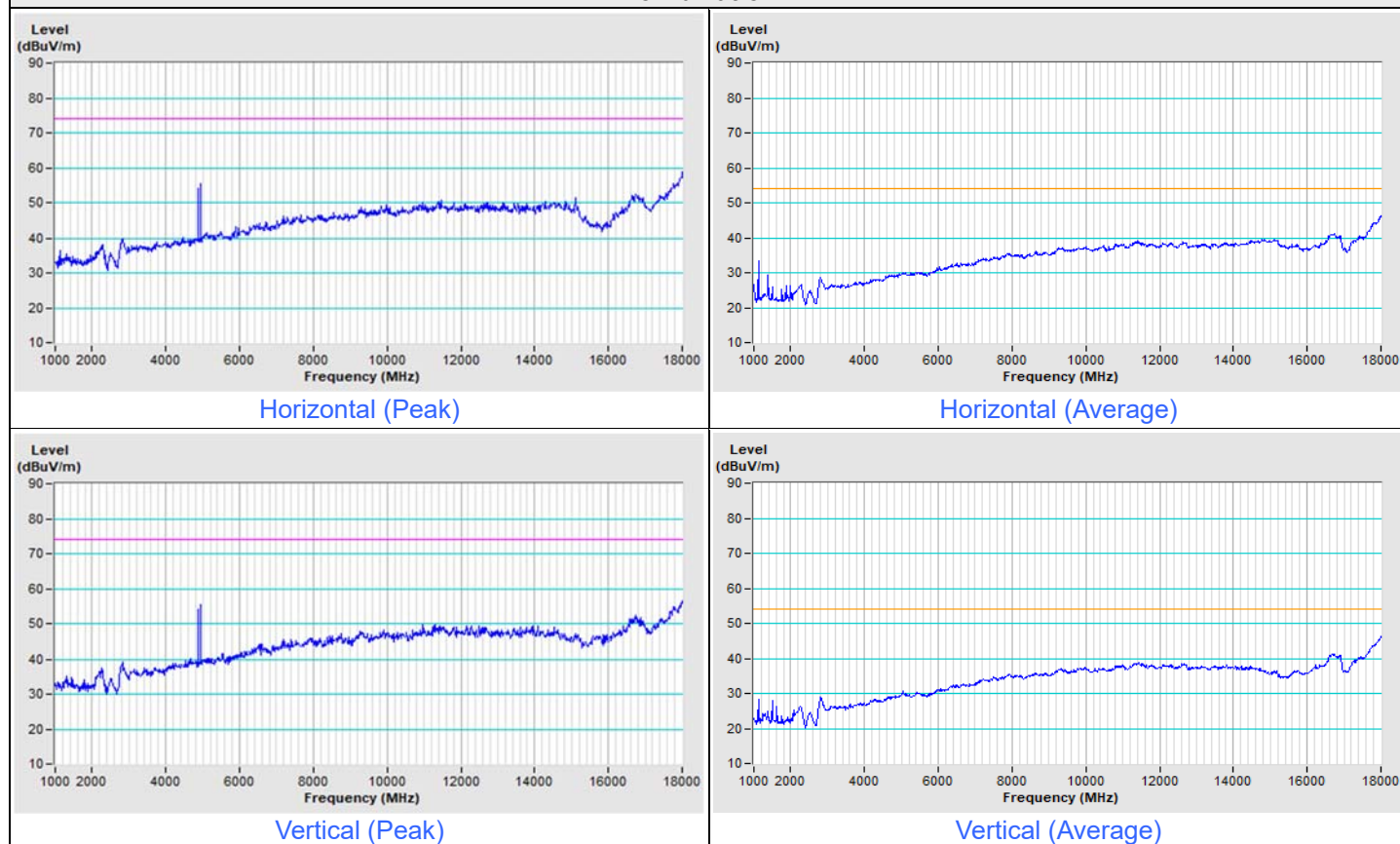
Combination 2



Plot of Other emissions

Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak AV: RB=1 MHz, VB=2 kHz, DET=Peak
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Combination 1

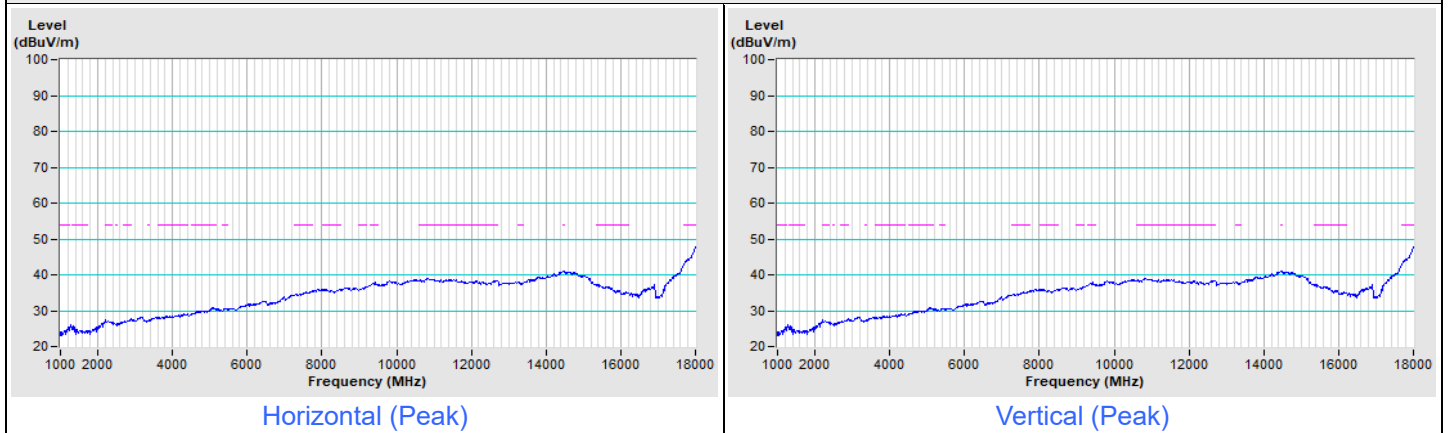


Notes:

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.

Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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Combination 2

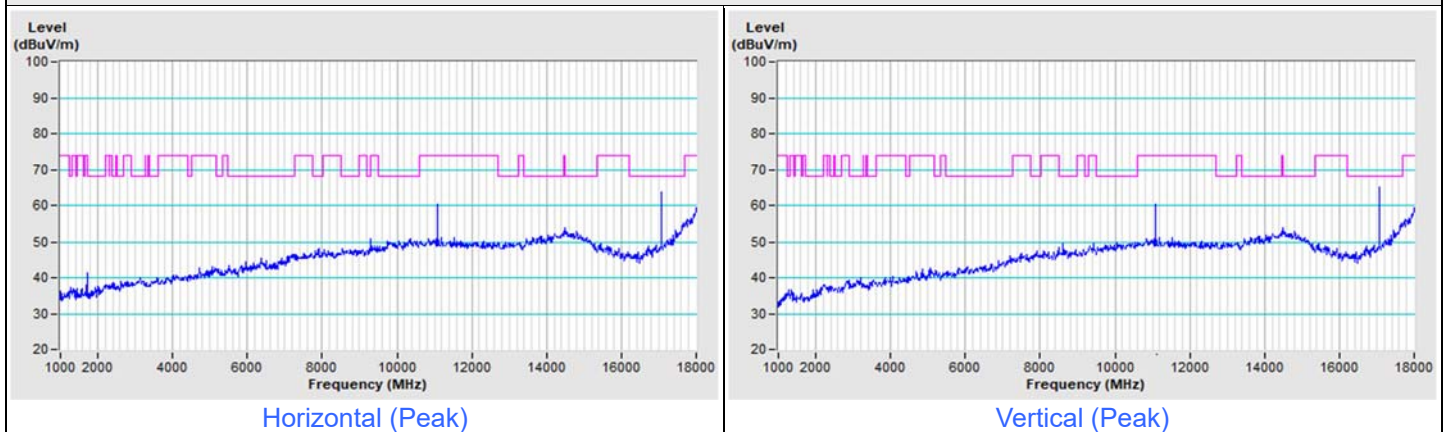


Notes:

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.

Frequency Range	1 GHz ~ 18 GHz	Detector Function & Bandwidth	PK: RB=1 MHz, VB=3 MHz, DET=Peak
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Combination 2



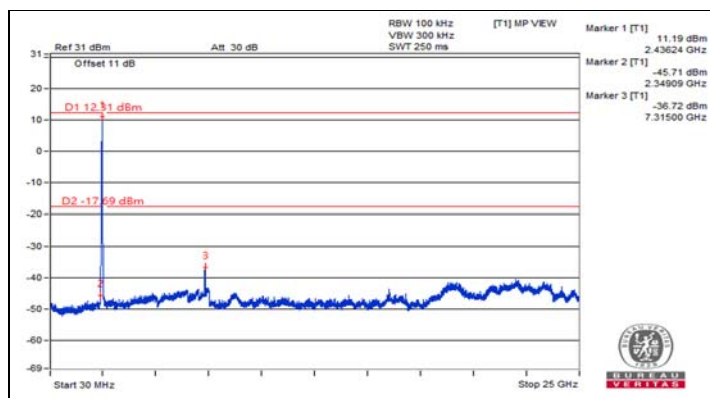
Notes:

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.

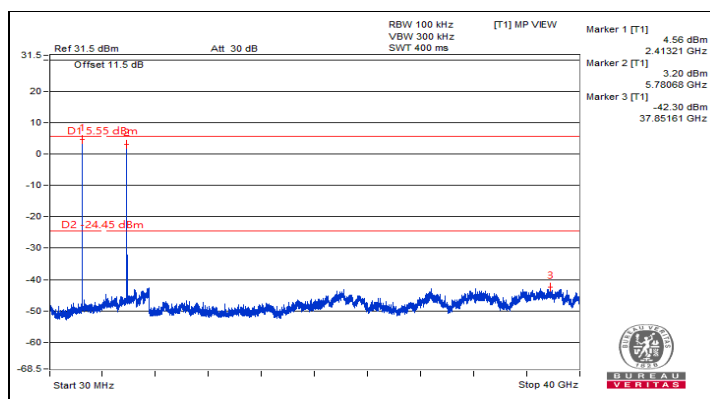
7.3 Conducted Out of Band Emissions

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	23°C, 65% RH	Tested By:	Match Tsui
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Combination 1



Combination 2



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:

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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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