

Partial FCC Test Report

Report No.: RF170927C20C

FCC ID: B94-8265D2WB

Test Model: TPN-Q200

Received Date: Oct. 27, 2017

Test Date: Jan. 11, 2018

Issued Date: Jan. 22, 2018

Applicant: HP Inc.

Address: 3390 East Harmony Road, Fort Collins, Colorado 80528, United States

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

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

(R.O.C)

Test Location (1): No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan

Hsien 333, Taiwan, R.O.C.

Test Location (2): B2F, No.215, Sec. 3, Beixin Rd. Xindian Dist. New Taipei City, R.O.C.

Taiwan

FCC Registration /

427177 / TW0011

Designation Number:





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Release Control Record

Issue No.	Description	Date Issued
RF170927C20C	Original Release	Jan. 22, 2018

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1 Certificate of Conformity

Product: Notebook Computer

Brand: HP

Test Model: TPN-Q200

Sample Status: Production Unit

Applicant: HP Inc.

Test Date: Jan. 11, 2018

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

ANSI C63.10:2013

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.

Prepared by :		8	, Date:	Jan. 22, 2018	
	Vera Hu	ang / Specialist			

Dylan Chiou / Project Engineer

Vera Huang

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2 Summary of Test Results

	47 CFR FCC Part 15, Subpart C (Section 15.247)							
FCC Clause	Test Item	Result	Remarks					
15.207	AC Power Conducted Emission	N/A	Refer to Note					
15.247(a)(1) (iii)	I NUMBER OF DODDING Frequency USEG		Refer to Note					
15.247(a)(1) Dwell Time on Each Channel		N/A	Refer to Note					
15.247(a)(1)	Hopping Channel Separation Spectrum Bandwidth of a Frequency Hopping Sequence Spread Spectrum System	N/A	Refer to Note					
15.247(b)	15.247(b) Maximum Peak Output Power		Meet the requirement of limit.					
	Occupied Bandwidth Measurement		Refer to Note					
15.205 & 209	15.205 & 209 Radiated Emissions		Meet the requirement of limit. Minimum passing margin is -1.72 dB at 92.1 MHz.					
15.247(d) Band Edge Measurement		N/A	Refer to Note					
15.247(d) Antenna Port Emission		N/A	Refer to Note					
15.203	Antenna Requirement	N/A	Refer to Note					

Note:

Only test items for Radiated Emissions and Maximum Peak Output Power tests were performed for this report. For other test data, please refer to Intel Report No.: 160321-02.TR05 for module (Brand: Intel, Model: 8265D2W).

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT:

The listed uncertainties are the worst case uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.

Measurement	Frequency	Expended Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150 kHz ~ 30 MHz	2.44 dB
Radiated Emissions up to 1 GHz	30 MHz ~ 200 MHz	2.0153 dB
Hadiated Emissions up to 1 GHZ	200 MHz ~1000 MHz	2.0224 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	1.0121 dB
naulateu Emissions above 1 GHZ	18 GHz ~ 40 GHz	1.1508 dB

2.2 Modification Record

There were no modifications required for compliance.

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General Information 3

3.1 **General Description of EUT**

Product	Notebook Computer
Brand	HP
Test Model	TPN-Q200
Status of EUT	Production Unit
Power Supply Rating	5 Vdc or 9 Vdc or 10 Vdc (adapter)
Modulation Type	GFSK, π/4-DQPSK, 8DPSK
Transfer Rate	1/2/3 Mbps
Operating Frequency	2402 ~ 2480 MHz
Number of Channel	79
Antenna Type	Refer to Note as below
Antenna Connector	N/A
Accessory Device	Refer to Note as below
Data Cable Supplied	N/A

Note:

1. The EUT contains following accessory devices.

Product	Brand	Model	Description
Adapter	hp		I/P: 100-240 Vac, 50/60 Hz, 1.8 A O/P: 5 Vdc, 3 A or 9 Vdc, 3 A or 10 Vdc, 5 A 1.76m shielded cable w/o core

2. The antenna information is listed as below.

					Antenr	na Gain	
Antenna Type	Mode	Manufacturer	Parts Number	WLAN 2.4 GHz / Bluetooth	WLAN 5.15~5.35 GHz	WLAN 5.47~5.725 GHz	WLAN 5.725~5.850 GHz
DIEA	NB Mode	WNC	WLAN Main Antenna: DQ6415GB200 WLAN Aux Antenna: DQ6415GB200	2.48	2.39	-0.16	-1.17
PIFA	Tablet Mode	WNC	WLAN Main Antenna: DQ6415GB200 WLAN Aux Antenna: DQ6415GB200	1.21	2.38	1.45	0.82

3. 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.

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Description of Test Modes 3.2

79 channels are provided to this EUT:

Channel	Freq. (MHz)						
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461		

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3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure	Applica	able To	Decariation
Mode	RE≥1G	RE<1G	Description
=	V	V	-

Where

RE≥1**G**: Radiated Emission above 1 GHz

RE<1G: Radiated Emission below 1 GHz

Note:

- 1. For Radiated emission test, pre-tested GFSK, π /4-DQPSK, 8DPSK modulation type and found GFSK was the worse, therefore chosen for the final test and presented in the test report.
- 2. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane**.
- 3. "-" means no effect.

Radiated Emission Test (Above 1 GHz):

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).

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

EUT Configure Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Packet Type
-	0 to 78	0, 39, 78	FHSS	GFSK	DH5

Radiated Emission Test (Below 1 GHz):

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).

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

EUT Configure Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Packet Type
-	0 to 78	78	FHSS	GFSK	DH5

Test Condition:

1001 001101110111				
Applicable To	Environmental Conditions	Input Power	Tested by	
RE≥1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Karl Lee	
RE<1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Karl Lee	

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Description of Support Units 3.3

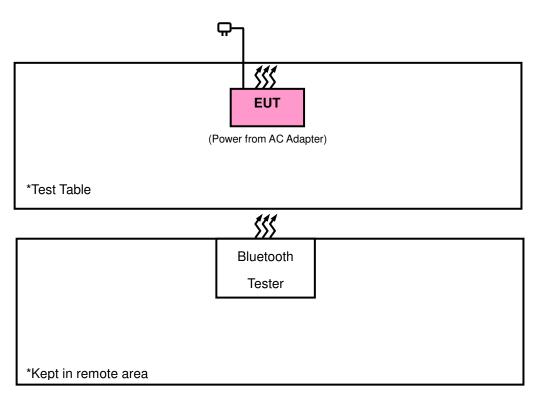
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Product	Brand	Model No.	Serial No.	FCC ID
1.	Bluetooth Tester	R&S	CBT	100980	N/A

No.	Signal Cable Description Of The Above Support Units
1.	N/A

- 1. All power cords of the above support units are non-shielded (1.8m).
- 2. Item 1 acted as communication partner to transfer data.

3.3.1 Configuration of System under Test



General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C (15.247) FCC Public Notice DA 00-705

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

Note: The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

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4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions 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

Note:

- 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.

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4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent Technologies	N9038A	MY52260177	Jul. 05, 2017	Jul. 04, 2018
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Jan. 11, 2018	Jan. 10, 2019
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Dec. 06, 2017	Dec. 05, 2018
HORN Antenna ETS-Lindgren	3117	00143293	Jun. 26, 2017	Jun. 25, 2018
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 01, 2017	Nov. 30, 2018
Fixed Attenuator Mini-Circuits	BW-N10W5+	NA	Jul. 07, 2017	Jul. 06, 2018
Bluetooth Tester	CBT	100980	Jun. 28, 2017	Jun. 27, 2019
Loop Antenna	EM-6879	269	Aug. 11, 2017	Aug. 10, 2018
Preamplifier Agilent	310N	187226	Jun. 23, 2017	Jun. 22, 2018
Preamplifier Agilent	83017A	MY39501357	Jun. 23, 2017	Jun. 22, 2018
Power Meter Anritsu	ML2495A	1012010	Aug. 15, 2017	Aug. 14, 2018
Power Sensor Anritsu	MA2411B	1315050	Aug. 15, 2017	Aug. 14, 2018
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(R FC-SMS-100-SM S-120+RFC-SMS -100-SMS-400)	Jun. 26, 2017	Jun. 25, 2018
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(R FC-SMS-100-SM S-24)	Jun. 26, 2017	Jun. 25, 2018
Software BV ADT	E3 8.130425b	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Antenna Tower &Turn Table Controller MF	MF-7802	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

- 2. The test was performed in HsinTien Chamber 1.
- 3. The horn antenna and preamplifier (model: 83017A) are used only for the measurement of emission frequency above 1 GHz if tested.
- 4. The IC Site Registration No. is IC7450I-1.

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4.1.3 Test Procedures

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1 GHz) / 1.5 meters (for above 1 GHz) 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 detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detected 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.

Note:

- 1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz & 360 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
- 2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1/T for Average (Duty cycle < 98 %) detection at frequency above 1 GHz.
- 4. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz (Duty cycle ≥ 98 %) for Average detection (AV) at frequency above 1 GHz.
- 5. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

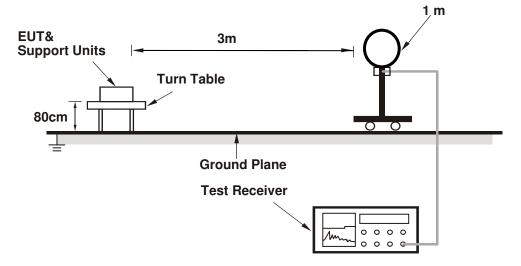
No deviation.

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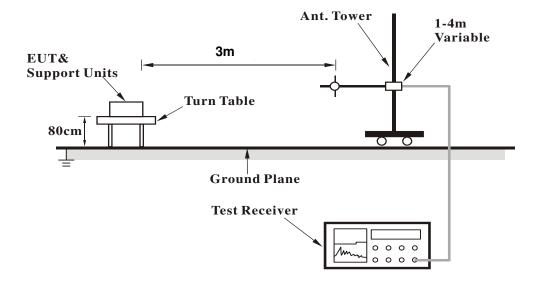


4.1.5 Test Set Up

<Radiated emission below 30 MHz>

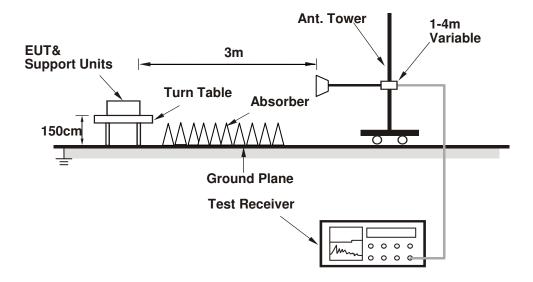


<Frequency Range below 1 GHz>





<Frequency Range above 1 GHz>



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

4.1.6 EUT Operating Conditions

Set the EUT under transmission condition continuously at specific channel frequency.



4.1.7 Test Results

Above 1 GHz Data:

GFSK

EUT Test Condition		Measurement Detail		
Channel	Channel 0	Frequency Range	1 GHz ~ 25 GHz	
Input Power	120 Vac, 60 Hz	LINGTOCTOR FUNCTION	Peak (PK) Average (AV)	
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Karl Lee	

	Antenna Polarity & Test Distance: Horizontal at 3 m									
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.65	40.53	38.82	54	-13.47	31.8	5.4	35.49	155	360	Average
2389.65	51.87	50.16	74	-22.13	31.8	5.4	35.49	155	360	Peak
2402	91.41	89.68			31.8	5.4	35.47	155	360	Average
2402	92.73	91			31.8	5.4	35.47	155	360	Peak
4804	38.56	30.47	54	-15.44	33.96	8.25	34.12	125	168	Average
4804	48.43	40.34	74	-25.57	33.96	8.25	34.12	125	168	Peak
		Δ	ntenna P	olarity &	Test Dista	ance: Vert	ical at 3 r	n		
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2322.06	44.12	42.61	54	-9.88	31.73	5.3	35.52	140	348	Average
2322.06	51.88	50.37	74	-22.12	31.73	5.3	35.52	140	348	Peak
2402	103.85	102.12			31.8	5.4	35.47	140	348	Average
2402	104.69	102.96		·	31.8	5.4	35.47	140	348	Peak
4804	37.29	29.2	54	-16.71	33.96	8.25	34.12	195	146	Average
4804	47.59	39.5	74	-26.41	33.96	8.25	34.12	195	146	Peak

Remarks:

- 1. Emission Level = Read Level + Antenna Factor + Cable Loss Preamp Factor Margin value = Emission level - Limit value
- 2. 2402 MHz: Fundamental frequency.

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EUT Test Condition		Measurement Detail		
Channel	Channel 39	Frequency Range	1 GHz ~ 25 GHz	
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)	
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Karl Lee	

	Antenna Polarity & Test Distance: Horizontal at 3 m									
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2381.07	40.29	38.6	54	-13.71	31.78	5.4	35.49	193	98	Average
2381.07	51.78	50.09	74	-22.22	31.78	5.4	35.49	193	98	Peak
2441	93.34	91.47			31.85	5.46	35.44	193	98	Average
2441	95.94	94.07			31.85	5.46	35.44	193	98	Peak
2492.28	41	38.98	54	-13	31.9	5.53	35.41	193	98	Average
2492.28	52.2	50.18	74	-21.8	31.9	5.53	35.41	193	98	Peak
		Δ	ntenna P	olarity &	Test Dista	ance: Vert	ical at 3 r	n		
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.11	40.67	38.96	54	-13.33	31.8	5.4	35.49	104	176	Average
2389.11	52.46	50.75	74	-21.54	31.8	5.4	35.49	104	176	Peak

31.85

31.85

31.88

31.88

5.46

5.46

5.53

5.53

35.44

35.44

35.42

35.42

104

104

104

104

176

176

176

176

Average

Peak

Average

Peak

2487.2 Remarks:

2441

2441

2487.2

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor Margin value = Emission level - Limit value

-13

-21.45

54

74

2. 2441 MHz: Fundamental frequency.

100.61

103.32

39.01

50.56

102.48

105.19

41

52.55

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EUT Test Condition		Measurement Detail		
Channel	Channel 78	Frequency Range	1 GHz ~ 25 GHz	
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)	
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Karl Lee	

			_							
	Antenna Polarity & Test Distance: Horizontal at 3 m									
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2480	91.64	89.68			31.88	5.5	35.42	154	83	Average
2480	92.91	90.95			31.88	5.5	35.42	154	83	Peak
2498.44	41	38.98	54	-13	31.9	5.53	35.41	154	83	Average
2498.44	52.56	50.54	74	-21.44	31.9	5.53	35.41	154	83	Peak
4960	38.64	30.37	54	-15.36	33.99	8.29	34.01	108	249	Average
4960	48.87	40.6	74	-25.13	33.99	8.29	34.01	108	249	Peak
		A	ntenna P	olarity &	Test Dista	ance: Vert	ical at 3 r	n		
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2480	105.5	103.54			31.88	5.5	35.42	140	348	Average
2480	106.12	104.16			31.88	5.5	35.42	140	348	Peak
2483.52	44.25	42.29	54	-9.75	31.88	5.5	35.42	140	348	Average
2483.52	59.34	57.38	74	-14.66	31.88	5.5	35.42	140	348	Peak
4960	38.49	30.22	54	-15.51	33.99	8.29	34.01	173	123	Average
4960	48.29	40.02	74	-25.71	33.99	8.29	34.01	173	123	Peak

Remarks:

- 1. Emission Level = Read Level + Antenna Factor + Cable Loss Preamp Factor Margin value = Emission level - Limit value
- 2. 2480 MHz: Fundamental frequency.

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9 kHz ~ 30 MHz Data:

The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

30 MHz ~ 1 GHz Worst-Case Data:

EUT Test Condition		Measurement Detail		
Channel	Channel 78	Frequency Range	30 MHz ~ 1 GHz	
Input Power	120 Vac, 60 Hz	Detector Function	Peak (PK) Quasi-peak (QP)	
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Karl Lee	

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
39.72	31.77	49.85	40	-8.23	13.41	0.74	32.23	132	225	Peak
92.1	41.78	61.57	43.5	-1.72	10.92	1.11	31.82	190	187	Peak
182.55	37.64	58.35	43.5	-5.86	9.92	1.61	32.24	145	110	Peak
339.2	26.28	42.12	46	-19.72	14.05	2.19	32.08	174	188	Peak
686.4	21.05	31.07	46	-24.95	19.03	3.05	32.1	163	312	Peak
891.5	26.35	33	46	-19.65	21.4	3.49	31.54	195	245	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
44.31	36.6	53.63	40	-3.4	14.29	0.9	32.22	134	155	Peak
93.99	28.7	48.13	43.5	-14.8	11.39	1.11	31.93	169	342	Peak
198.21	36.59	56.25	43.5	-6.91	11.02	1.61	32.29	101	117	Peak
324.5	23.95	40.29	46	-22.05	13.65	2.11	32.1	131	174	Peak
573.7	19.85	31.69	46	-26.15	17.54	2.82	32.2	198	125	Peak
852.3	22.25	29.53	46	-23.75	21.06	3.44	31.78	142	166	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor Margin value = Emission level - Limit value

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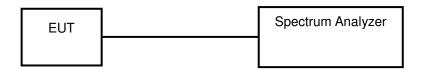


4.2 Maximum Output Power

4.2.1 Limits of Maximum Output Power Measurement

The Maximum Output Power Measurement is 125 mW.

4.2.2 Test Setup



4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.2.4 Test Procedure

- a. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- b. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
- c. The center frequency of the spectrum analyzer is set to the fundamental frequency and using 3 MHz RBW and 10 MHz VBW.
- d. Measure the captured power within the band and recording the plot.
- e. Repeat above procedures until all frequencies required were complete.

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Condition

The software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.

4.2.7 Test Results

Channel	Freq. (MHz)	C	Output Powe (mW)	r	C	Power Limit	Pass / Fail		
		GFSK	π/4-DQPSK	8DPSK	GFSK	π/4-DQPSK	8DPSK	(mW)	Fall
0	2402	11.803	7.112	5.445	10.72	8.52	7.36	125	Pass
39	2441	11.940	7.534	5.808	10.77	8.77	7.64	125	Pass
78	2480	12.303	6.823	5.420	10.90	8.34	7.34	125	Pass

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5 I	Pictures of Test Arrangements				
Please refer to the attached file (Test Setup Photo).					



Appendix - Information on 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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