

TEST REPORT

CERTIFICATE OF CONFORMITY

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

Report No.: RFBZB-WTW-P22040187A-1

FCC ID: RFH-TRN3800T

Product: TABLET PC

Brand: Terason

Model No.: TRN-TABLET3

Received Date: 2022/4/11

Test Date: 2022/10/31 ~ 2022/11/7

Issued Date: 2022/11/19

Applicant: IEI Integration Corp.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 198487 / TW2021

Designation Number:

Approved by: Jeremy Lin , **Date:** 2022/11/19
Jeremy Lin / Project Engineer

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Prepared by : Jessica Cheng / Senior Specialist



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Table of Contents

Release Control Record	3
1 Certificate	4
2 Summary of Test Results	5
2.1 Measurement Uncertainty	5
2.2 Supplementary Information	5
3 General Information	6
3.1 General Description of EUT	6
3.2 Antenna Description of EUT	7
3.3 Channel List	8
3.4 Test Mode Applicability and Tested Channel Detail	10
3.5 Test Program Used and Operation Descriptions	11
3.6 Connection Diagram of EUT and Peripheral Devices	11
3.7 Configuration of Peripheral Devices and Cable Connections	11
4 Test Instruments	12
4.1 RF Output Power	12
4.2 AC Power Conducted Emissions	13
4.3 Unwanted Emissions below 1 GHz	14
5 Limits of Test Items	15
5.1 RF Output Power	15
5.2 AC Power Conducted Emissions	15
5.3 Unwanted Emissions below 1 GHz	15
6 Test Arrangements	16
6.1 RF Output Power	16
6.1.1 Test Setup	16
6.1.2 Test Procedure	16
6.2 AC Power Conducted Emissions	16
6.2.1 Test Setup	16
6.2.2 Test Procedure	16
6.3 Unwanted Emissions below 1 GHz	17
6.3.1 Test Setup	17
6.3.2 Test Procedure	18
7 Test Results of Test Item	19
7.1 RF Output Power	19
7.2 AC Power Conducted Emissions	22
7.3 Unwanted Emissions below 1 GHz	24
8 Pictures of Test Arrangements	26
9 Information of the Testing Laboratories	27



Release Control Record

Issue No.	Description	Date Issued
RFBDZB-WTW-P22040187A-1	Original release.	2022/11/19

1 Certificate

Product: TABLET PC
Brand: Terason
Test Model: TRN-TABLET3
Sample Status: Engineering sample
Applicant: IEI Integration Corp.
Test Date: 2022/10/31 ~ 2022/11/7
Standard: 47 CFR FCC Part 15, Subpart E (Section 15.407)
Measurement procedure: ANSI C63.10-2013
KDB 789033 D02 General UNII Test Procedure New Rules v02r01

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 E (Section 15.407)			
Clause	Test Item	Result	Remark
15.407(a)(1/2/3)	RF Output Power	Pass	Meet the requirement of limit.
15.407(b)(9)	AC Power Conducted Emissions	Pass	Minimum passing margin is -3.99 dB at 0.33359 MHz
15.407(b)(9)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -10.0 dB at 161.92 MHz

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 (±)
AC Power Conducted Emissions	150 kHz ~ 30 MHz	3.00 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	2.38 dB
	30 MHz ~ 1 GHz	5.62 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	TABLET PC
Brand	Terason
Test Model	TRN-TABLET3
Status of EUT	Engineering sample
Power Supply Rating	19Vdc from adapter
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 150Mbps 802.11ac: up to 433.3Mbps
Operating Frequency	5180~5240MHz, 5260~5320MHz, 5500~5700MHz, 5745~5825MHz
Number of Channel	5180~5240MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5260~5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5500~5700MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 8 802.11n (HT40), 802.11ac (VHT40): 3 802.11ac (VHT80): 1 5745~5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1
Output Power	5.18 GHz ~ 5.24 GHz : 20.045 mW (13.02 dBm) 5.26 GHz ~ 5.32 GHz : 20.749 mW (13.17 dBm) 5.5 GHz ~ 5.7 GHz : 20.845 mW (13.19 dBm) 5.745 GHz ~ 5.825 GHz : 21.232 mW (13.27 dBm)
EUT Category	Client device

Note:

1. This report is prepared for FCC class II permissive change. This report is issued as a supplementary report to BV CPS report no. RF181116D02-2. The difference compared with original report is listed as below, therefore only Conducted Emission and Unwanted Emissions below 1 GHz, Output Power tests were performed for this addendum.

- Adding one battery.
- Change brand from iEi to Terason.

2. The EUT uses following accessories.

Battery 1 (Original)		
Brand	Model	Specification
Terason	TUS3200T	Power Rating : 10.8V/6500mAh/70.2Wh Charging limit voltage 12.6V
Battery 2 (Additional)		
Brand	Model	Specification
Terason	TUS3800	Power Rating : 10.8V/6500mAh/70.2Wh Charging limit voltage 12.6V
AC Adapter 1		
Brand	Model	Specification
Darfon	EM12501E	AC Input : 100-240Vac, 3.5-2.5A, 50-60Hz DC Output : 19V/10.52A Non-shielded AC (3-Pin) cable (1.8m) Non-shielded DC cable (1.1m) with two ferrite cores

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna Type	Gain (dBi)	Connector Type
PIFA	2	N/A

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

2. The EUT incorporates a SISO function:

Modulation Mode	TX & RX Configuration	
802.11a	1TX	1RX
802.11n (HT20)	1TX	1RX
802.11n (HT40)	1TX	1RX
802.11ac (VHT20)	1TX	1RX
802.11ac (VHT40)	1TX	1RX
802.11ac (VHT80)	1TX	1RX

Note: The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and 802.11ac mode for 20MHz (40MHz), therefore investigated worst case to representative mode in test report.

3.3 Channel List

5180~5240MHz:

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210MHz

5260~5320MHz:

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290MHz

5500–5700MHz:

8 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
100	5500 MHz	116	5580 MHz
104	5520 MHz	132	5660 MHz
108	5540 MHz	136	5680 MHz
112	5560 MHz	140	5700 MHz

3 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
102	5510 MHz	134	5670 MHz
110	5550 MHz		

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
106	5530 MHz

5745–5825MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency	Channel	Frequency
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz		

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775MHz

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. For Unwanted Emission below 1 GHz has (EUT Operating Mode+powered from Adapter) / (EUT Operating Mode+powered from Battery) of power supply. Pre-scan these modes and find the worst case as a representative test condition.
Worst Case:	1. For Unwanted Emission below 1 GHz EUT Operating Mode+powered from Adapter is the worst case of power supply.

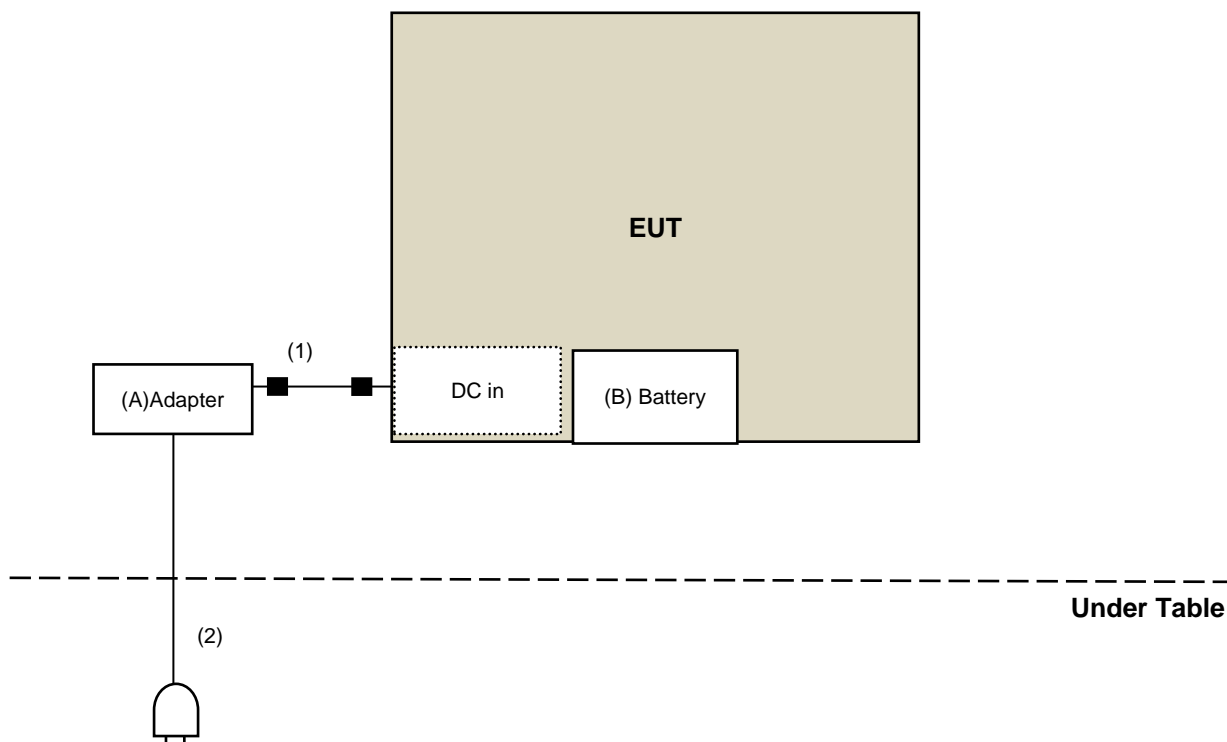
Following channel(s) was (were) selected for the final test as listed below:

Test Item	Mode	Signal Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power	802.11a	CDD	36, 40, 48, 52, 60, 64, 100, 116, 132, 140, 149, 157, 165	BPSK	6Mb/s
	802.11n (HT20)	CDD	36, 40, 48, 52, 60, 64, 100, 116, 132, 140, 149, 157, 165	BPSK	MCS0
	802.11n (HT40)	CDD	38, 46, 54, 62, 102, 110, 134, 151, 159	BPSK	MCS0
	802.11ac (VHT80)	CDD	42, 58, 106, 155	BPSK	MCS0
AC Power Conducted Emissions	802.11a	CDD	165	BPSK	6Mb/s
Unwanted Emissions below 1 GHz	802.11a	CDD	165	BPSK	6Mb/s

3.5 Test Program Used and Operation Descriptions

Controlling software (Win7_MP_Kit_RTL11ac_8821AE_PCIE_v0.03_20150903) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.6 Connection Diagram of EUT and Peripheral Devices



3.7 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Adapter	Darfon	EM12501E	N/A	N/A	Supplied by applicant
B	Battery	terason	TUS3800	N/A	N/A	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	DC Cable	1	1.1	N	2	Supplied by applicant
2	AC Power core	1	1.8	N	0	Wonderful-D/CSA SVT 18AWGX3C E77975 / By Lab

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
MIMO Powermeasurement Test set (4X4) KEYSIGHT	U2021XA	U2021XA_001	2022/6/13	2023/6/12
MXG Vector Signal Generator KEYSIGHT	N5182B	MY53052658	2022/5/9	2023/5/8
Power Meter Anritsu	ML2495A	1232003	2022/1/9	2023/1/8
Power Sensor Anritsu	MA2411B	1207333	2022/1/9	2023/1/8
Spectrum Analyzer KEYSIGHT	N9030A	MY54490260	2022/7/14	2023/7/13
Spectrum Analyzer R&S	FSV40	101042	2022/9/5	2023/9/4
		101544	2022/5/9	2023/5/8
Temperature & Humidity Chamber TERCHY	MHU-225AU	920409	2022/6/27	2023/6/26
Voltage Meter FLUKE	179	89610322	2022/10/3	2023/10/2

Notes:

1. The test was performed in LK - Oven
2. Tested Date: 2022/11/7

4.2 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal LYNICS	0900510	E1-011285	2022/9/19	2023/9/18
		E1-011286	2022/9/19	2023/9/18
50 Ohms Terminator LYNICS	0900510	E1-01-305	2022/2/9	2023/2/8
Attenuator STI	STI02-2200-10	NO.4	2022/9/2	2023/9/1
DC LISN R&S	ESH3-Z6	100219	2022/8/2	2023/8/1
		844950/018	2022/8/2	2023/8/1
DC LISN Schwarzbeck	NNLK 8121	8121-808	2022/4/29	2023/4/28
High Voltage Probe Schwarzbeck	TK9420	00982	2021/12/24	2022/12/23
Isolation Transformer Erika Fiedler	D-65396	017	2022/9/8	2023/9/7
LISN R&S	ENV216	101196	2022/5/24	2023/5/23
	ESH3-Z5	100220	2021/11/25	2022/11/24
LISN Schwarzbeck	NNLK 8121	8121-731	2022/5/26	2023/5/25
		8121-00759	2022/8/18	2023/8/17
	NNLK8129	8129229	2022/6/8	2023/6/7
	NSLK 8128	8128-244	2021/11/11	2022/11/10
RF Coaxial Cable Commate	5D-FB	Cable-CO5-01	2022/1/28	2023/1/27
Software BVADT	Cond_V7.3.7.4	N/A	N/A	N/A
Test Receiver R&S	ESR3	102412	2022/1/22	2023/1/21

Notes:

1. The test was performed in Linkou Conduction 5.
2. Tested Date: 2022/11/7

4.3 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
* LOOP ANTENNA EMCI	LPA600	270	2021/9/2	2023/9/1
Bi_Log Antenna Schwarzbeck	VULB 9168	137	2022/10/21	2023/10/20
Coupling/Dcoupling Network Schwarzbeck	CDNE-M2	00097	2022/6/1	2023/5/31
	CDNE-M3	00091	2022/6/1	2023/5/31
Pre_Amplifier EMCI	EMC001340	980269	2022/6/28	2023/6/27
Pre_Amplifier HP	8447D	2432A03504	2022/2/17	2023/2/16
RF Coaxial Cable Pacific	8D-FB	Cable-CH6-02	2022/6/30	2023/6/29
Software BVADT	Radiated_V7.7.1.1.1	N/A	N/A	N/A
	Radiated_V8.7.08	N/A	N/A	N/A
Spectrum Analyzer R&S	FSV40	101544	2022/5/9	2023/5/8
Test Receiver Agilent	N9038A	MY51210129	2022/4/8	2023/4/7
		MY51210137	2022/6/9	2023/6/8
Tower ADT	AT100	0306	N/A	N/A
Turn Table ADT	TT100	0306	N/A	N/A

Notes:

- * The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA
- The test was performed in Linkou 966 Chamber 6 (CH 6).
- Tested Date: 2022/10/31

5 Limits of Test Items

5.1 RF Output Power

Operation Band	EUT Category	Limit
U-NII-1	Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p \leq 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
	Fixed point-to-point Access Point	1 Watt (30 dBm)
	Indoor Access Point	1 Watt (30 dBm)
	Mobile and Portable client device	250mW (24 dBm)

Operation Band	Limit
U-NII-2A	250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

5.2 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.

5.3 Unwanted Emissions below 1 GHz

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

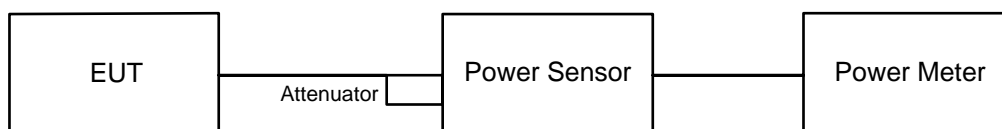
Notes:

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

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup

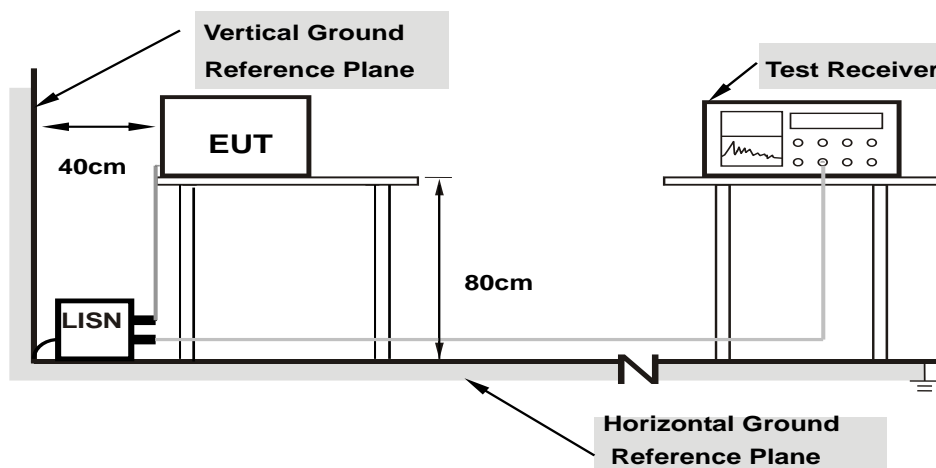


6.1.2 Test Procedure

Method PM is 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 and set the detector to average. Duty factor is not added to measured value.

6.2 AC Power Conducted Emissions

6.2.1 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).

6.2.2 Test Procedure

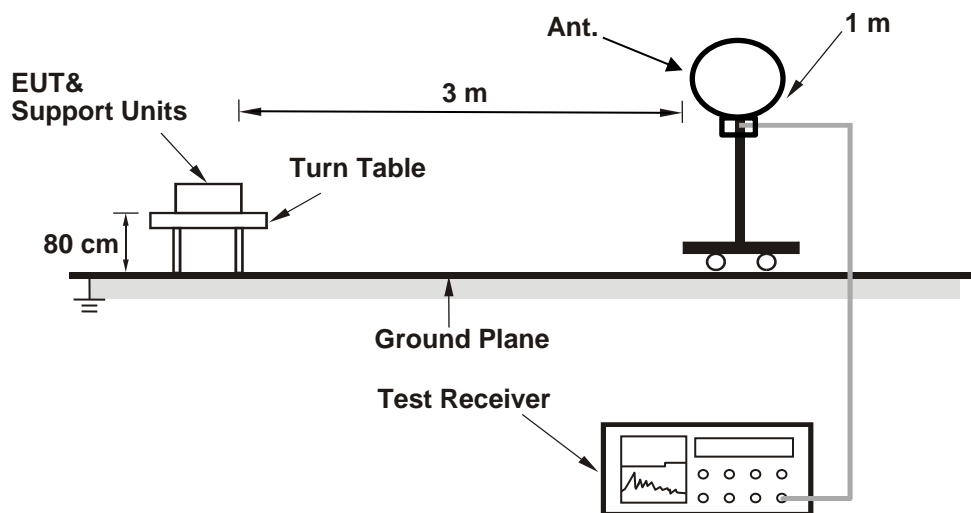
- The EUT was placed on a 0.8 meter to the top of table and placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The 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.

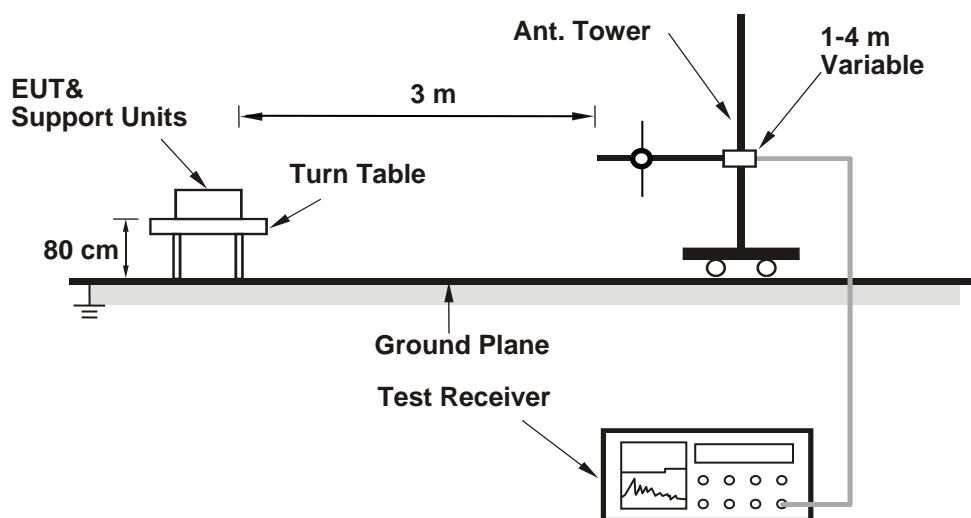
6.3 Unwanted Emissions below 1 GHz

6.3.1 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).

6.3.2 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 detect function and specified bandwidth with maximum hold mode when the test frequency is below 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.

7 Test Results of Test Item

7.1 RF Output Power

Input Power:	120 Vac, 60 Hz	Environmental Conditions:	25°C, 76% RH	Tested By:	Dalen Dai
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802.11a

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	17.865	12.52	24	Pass
40	5200	19.543	12.91	24	Pass
48	5240	20.045	13.02	24	Pass
52	5260	20.559	13.13	24	Pass
60	5300	20.324	13.08	24	Pass
64	5320	20.749	13.17	24	Pass
100	5500	20.045	13.02	24	Pass
116	5580	20.845	13.19	24	Pass
132	5660	20.464	13.11	24	Pass
140	5700	20.045	13.02	24	Pass
149	5745	20.989	13.22	30	Pass
157	5785	20.606	13.14	30	Pass
165	5825	21.232	13.27	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
36	5180	15.959	12.03	24	Pass
40	5200	16.106	12.07	24	Pass
48	5240	16.069	12.06	24	Pass
52	5260	16.293	12.12	24	Pass
60	5300	16.634	12.21	24	Pass
64	5320	16.444	12.16	24	Pass
100	5500	16.558	12.19	24	Pass
116	5580	16.482	12.17	24	Pass
132	5660	16.444	12.16	24	Pass
140	5700	16.368	12.14	24	Pass
149	5745	16.711	12.23	30	Pass
157	5785	16.331	12.13	30	Pass
165	5825	16.634	12.21	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
38	5190	15.922	12.02	24	Pass
46	5230	16.293	12.12	24	Pass
54	5270	16.558	12.19	24	Pass
62	5310	16.293	12.12	24	Pass
102	5510	16.331	12.13	24	Pass
110	5550	16.634	12.21	24	Pass
134	5670	16.596	12.20	24	Pass
151	5755	16.558	12.19	30	Pass
159	5795	16.144	12.08	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.

802.11ac (VHT80)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Power Limit (dBm)	Test Result
42	5210	16.52	12.18	24	Pass
58	5290	16.106	12.07	24	Pass
106	5530	16.634	12.21	24	Pass
155	5775	16.634	12.21	30	Pass

Notes:

1. For U-NII-1, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.
2. For U-NII-2A, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.
3. For U-NII-2C, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.
4. For U-NII-3, the antenna gain is 2 dBi < 6 dBi, so the output power limit shall not be reduced.

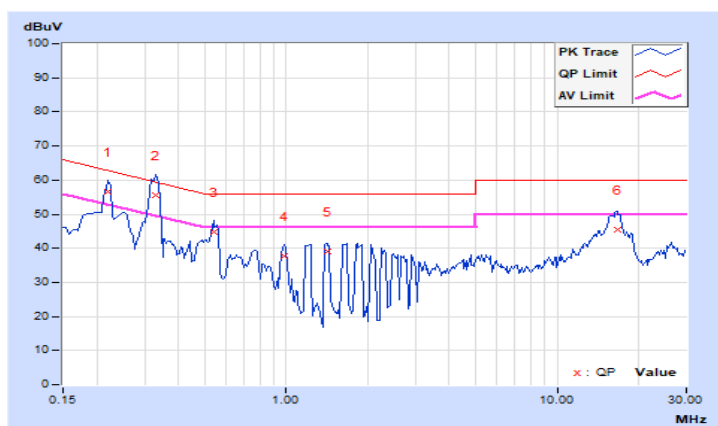
7.2 AC Power Conducted Emissions

RF Mode	802.11a	Channel	CH 165 : 5825 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	25°C, 75% RH
Tested By	Ian Chang		

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	0.22031	9.92	46.57	32.83	56.49	42.75	62.81	52.81	-6.32	-10.06
2	0.32969	9.92	45.53	35.17	55.45	45.09	59.46	49.46	-4.01	-4.37
3	0.54063	9.93	34.83	27.71	44.76	37.64	56.00	46.00	-11.24	-8.36
4	0.98594	9.95	27.90	16.28	37.85	26.23	56.00	46.00	-18.15	-19.77
5	1.41797	9.96	28.99	14.70	38.95	24.66	56.00	46.00	-17.05	-21.34
6	16.73438	10.38	35.06	26.74	45.44	37.12	60.00	50.00	-14.56	-12.88

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

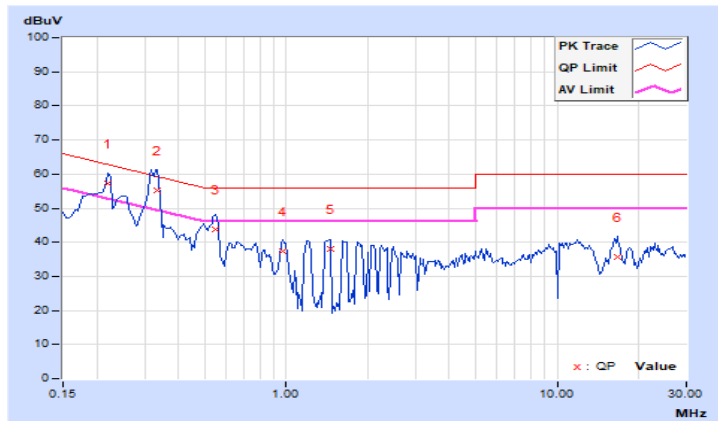


RF Mode	802.11a	Channel	CH 165 : 5825 MHz
Frequency Range	150 kHz ~ 30 MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Ian Chang		

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	0.22031	9.93	47.15	34.07	57.08	44.00	62.81	52.81	-5.73	-8.81
2	0.33359	9.93	45.44	35.32	55.37	45.25	59.36	49.36	-3.99	-4.11
3	0.54844	9.93	33.84	25.91	43.77	35.84	56.00	46.00	-12.23	-10.16
4	0.97422	9.95	27.43	16.10	37.38	26.05	56.00	46.00	-18.62	-19.95
5	1.45313	9.96	28.20	13.36	38.16	23.32	56.00	46.00	-17.84	-22.68
6	16.71875	10.38	25.31	16.65	35.69	27.03	60.00	50.00	-24.31	-22.97

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



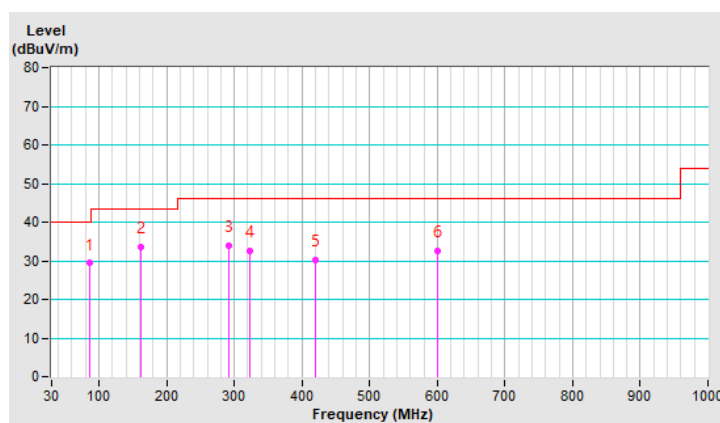
7.3 Unwanted Emissions below 1 GHz

RF Mode	802.11a	Channel	CH 165 : 5825 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 71% RH
Tested By	Ian Chang		

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	86.26	29.3 QP	40.0	-10.7	4.00 H	322	43.4	-14.1
2	161.92	33.5 QP	43.5	-10.0	2.22 H	125	41.5	-8.0
3	290.93	33.9 QP	46.0	-12.1	2.49 H	153	40.1	-6.2
4	321.97	32.6 QP	46.0	-13.4	2.72 H	175	37.7	-5.1
5	418.97	30.3 QP	46.0	-15.7	3.02 H	205	33.4	-3.1
6	600.36	32.6 QP	46.0	-13.4	3.57 H	260	31.5	1.1

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 emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

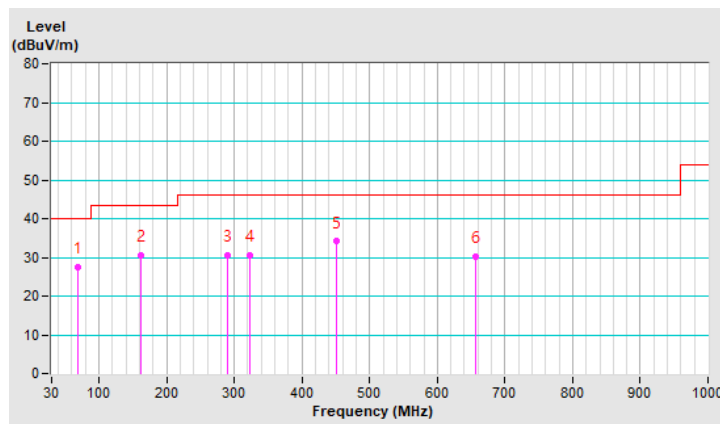


RF Mode	802.11a	Channel	CH 165 : 5825 MHz
Frequency Range	9 kHz ~ 1 GHz	Detector Function & Bandwidth	(QP) RB = 120kHz
Input Power	120 Vac, 60 Hz	Environmental Conditions	24°C, 71% RH
Tested By	Ian Chang		

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	67.83	27.6 QP	40.0	-12.4	3.07 V	283	37.9	-10.3
2	160.95	30.6 QP	43.5	-12.9	1.16 V	95	38.5	-7.9
3	289.96	30.6 QP	46.0	-15.4	1.63 V	141	36.8	-6.2
4	322.94	30.6 QP	46.0	-15.4	1.44 V	122	35.6	-5.0
5	450.98	34.1 QP	46.0	-11.9	1.00 V	65	36.3	-2.2
6	656.62	30.1 QP	46.0	-15.9	2.52 V	229	27.8	2.3

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 of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be 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:

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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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