



FCC TEST REPORT (15.407)

REPORT NO.: RF130909C03-5

MODEL NO.: FJL22

FCC ID: YUW-FJL22

RECEIVED: Sep. 10, 2013

TESTED: Sep. 15 ~ Oct. 04, 2013

ISSUED: Oct. 08, 2013

APPLICANT: Fujitsu Mobile Communications Ltd.

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ISSUED BY: Bureau Veritas Consumer Products Services
(H.K.) Ltd., Taoyuan Branch

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TABLE OF CONTENTS

RELEASE CONTROL RECORD.....	4
1. CERTIFICATION.....	5
2. SUMMARY OF TEST RESULTS.....	6
2.1 MEASUREMENT UNCERTAINTY.....	6
3. GENERAL INFORMATION.....	7
3.1 GENERAL DESCRIPTION OF EUT.....	7
3.2 DESCRIPTION OF TEST MODES.....	9
3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL.....	11
3.3 DUTY CYCLE OF TEST SIGNAL.....	13
3.4 DESCRIPTION OF SUPPORT UNITS.....	17
3.4.1 CONFIGURATION OF SYSTEM UNDER TEST.....	17
3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS.....	18
4. TEST TYPES AND RESULTS.....	19
4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT.....	19
4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT.....	19
4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS.....	19
4.1.3 TEST INSTRUMENTS.....	20
4.1.4 TEST PROCEDURES.....	21
4.1.5 DEVIATION FROM TEST STANDARD.....	21
4.1.6 TEST SETUP.....	22
4.1.7 EUT OPERATING CONDITION.....	23
4.1.8 TEST RESULTS.....	24
4.2 CONDUCTED EMISSION MEASUREMENT.....	58
4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT.....	58
4.2.2 TEST INSTRUMENTS.....	58
4.2.3 TEST PROCEDURES.....	59
4.2.4 DEVIATION FROM TEST STANDARD.....	59
4.2.5 TEST SETUP.....	59
4.2.6 EUT OPERATING CONDITIONS.....	59
4.2.7 TEST RESULTS.....	60
4.3 PEAK TRANSMIT POWER MEASUREMENT.....	72
4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT.....	72
4.3.2 TEST SETUP.....	72
4.3.3 TEST INSTRUMENTS.....	73
4.3.4 TEST PROCEDURE.....	73
4.3.5 DEVIATION FROM TEST STANDARD.....	74
4.3.6 EUT OPERATING CONDITIONS.....	74
4.3.7 TEST RESULTS.....	75
4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT.....	80
4.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT.....	80
4.4.2 TEST SETUP.....	80
4.4.3 TEST INSTRUMENTS.....	80
4.4.4 TEST PROCEDURES.....	81
4.4.5 DEVIATION FROM TEST STANDARD.....	81
4.4.6 EUT OPERATING CONDITIONS.....	81
4.4.7 TEST RESULTS.....	82
4.5 PEAK POWER EXCURSION MEASUREMENT.....	84



4.5.1	LIMITS OF PEAK POWER EXCURSION MEASUREMENT	84
4.5.2	TEST SETUP	84
4.5.3	TEST INSTRUMENTS.....	84
4.5.4	TEST PROCEDURE.....	84
4.5.5	DEVIATION FROM TEST STANDARD	84
4.5.6	EUT OPERATING CONDITIONS	84
4.5.7	TEST RESULTS	85
4.6	FREQUENCY STABILITY	86
4.6.1	LIMITS OF FREQUENCY STABILITY MEASUREMENT.....	86
4.6.2	TEST SETUP.....	86
4.6.3	TEST INSTRUMENTS.....	86
4.6.4	TEST PROCEDURE.....	87
4.6.5	DEVIATION FROM TEST STANDARD	87
4.6.6	EUT OPERATING CONDITION	87
4.6.7	TEST RESULTS	88
5.	PHOTOGRAPHS OF THE TEST CONFIGURATION	89
6.	INFORMATION ON THE TESTING LABORATORIES.....	90
7.	APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB	91



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF130909C03-5	Original release	Oct. 08, 2013



1. CERTIFICATION

PRODUCT: Mobile Phone

MODEL: FJL22

BRAND: FUJITSU

APPLICANT: Fujitsu Mobile Communications Ltd.

TESTED: Sep. 15 ~ Oct. 04, 2013

TEST SAMPLE: ENGINEERING SAMPLE

STANDARDS: FCC Part 15, Subpart E (Section 15.407)

ANSI C63.10-2009

The above equipment (model: FJL22) 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 EMC characteristics under the conditions specified in this report.

PREPARED BY :  , **DATE :** Oct. 08, 2013
Pettie Chen / Senior Specialist

APPROVED BY :  , **DATE :** Oct. 08, 2013
Ken Liu / Senior Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.407(b)(6)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -9.18dB at 0.51719MHz.
15.407(b/1/2/3) (b)(6)	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -2.3dB at 11400.00, 11340.00MHz.
15.407(a/1/2)	Max Average Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a/1/2)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	No antenna connector is used.

2.1 MEASUREMENT UNCERTAINTY

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

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.34 dB
	200MHz ~1000MHz	3.35 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Mobile Phone
MODEL NO.	FJL22
POWER SUPPLY	3.75Vdc (Battery) 5.0Vdc (Adapter or host equipment) 12.0Vdc (Cradle)
MODULATION TYPE	256QAM, 64QAM, 16QAM, QPSK, BPSK
MODULATION TECHNOLOGY	OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 150Mbps 802.11ac: up to 433.3Mbps
OPERATING FREQUENCY	5180 ~ 5240MHz, 5260 ~ 5320MHz & 5500 ~ 5700MHz
NUMBER OF CHANNEL	5180 ~ 5240MHz: 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 1 for 802.11ac (80MHz) 5260 ~ 5320MHz: 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 1 for 802.11ac (80MHz) 5500 ~ 5700MHz: 8 for 802.11a, 802.11n (20MHz) 3 for 802.11n (40MHz) 1 for 802.11ac (80MHz)
OUTPUT POWER	26.485mW for 5180 ~ 5240MHz 27.861mW for 5260 ~ 5320MHz 26.669mW for 5500 ~ 5700MHz
ANTENNA TYPE	$\lambda/4$ Monopole antenna with -4.18dBi gain
ANTENNA CONNECTOR	NA
DATA CABLE	Refer to Note as below
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Refer to Note as below

NOTE:

- The EUT contains the following accessories.

No.	Product	Brand	Model	Description
1	Battery	Fujitsu limited	CA54310-0053	Rating: 3.75V, 2600mA Type: Li-ion
2	Cradle	KDDI CORPORATION	FJL22PUA	Input: 12.0Vdc, 1500mA Output: 12.0Vdc, 1500mA
3	Adapter (for cradle)	KDDI CORPORATION	FJL22PQA	Input: 100-240Vac, 1000mA Output: 12.0Vdc, 3000mA DC: 1.1m non-shielded with one core AC: 1.0m non-shielded without core



2. The EUT uses following support unit.

No.	Product	Brand	Model	Description
1	Adapter	NTT docomo	AC Adaptor 04	Input: 100-240Vac, 0.22A, 50-60Hz Output: 5.0V, 1.8A 1.05m DC cable with 2 cores

3. The EUT provides one completed transmitter and one receiver.

MODULATION MODE	TX FUNCTION
802.11a	1TX
802.11n (20MHz)	1TX
802.11n (40MHz)	1TX
802.11ac (80MHz)	1TX

4. SW version is R30.2e.

5. HW version is V2.1.0.

6. IMEI Code: 357612050016808

7. IEEE 802.11ac is still draft version

8. 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 DESCRIPTION OF TEST MODES

FOR 5180 ~ 5240MHz

4 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY
42	5210MHz

FOR 5260 ~ 5320MHz

4 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

2 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY
58	5290MHz



FOR 5500 ~ 5700MHz

8 channels are provided for 802.11a, 802.11n (20MHz):

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 (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
102	5510 MHz	134	5670 MHz
110	5550 MHz		

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY
106	5530MHz

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE \geq 1G	RE<1G	PLC	APCM	
A	√	√	√	√	Power from adapter
B	-	√	√	-	Power from cradle
C	-	√	√	-	Power from host equipment

Where **RE \geq 1G**: Radiated Emission above 1GHz **RE<1G**: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM**: Antenna Port Conducted Measurement

NOTE:
The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane**.

RADIATED EMISSION TEST (ABOVE 1GHz):

- 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	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
A	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	7.2
A	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	15.0
A	802.11ac (80MHz)		42	42	OFDM	BPSK	32.5
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
A	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	7.2
A	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	15.0
A	802.11ac (80MHz)		58	58	OFDM	BPSK	32.5
A	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
A	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	7.2
A	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	15.0
A	802.11ac (80MHz)		106	106	OFDM	BPSK	32.5

RADIATED EMISSION TEST (BELOW 1GHz):

- 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	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B, C	802.11a	5180-5320	36 to 64	60	OFDM	BPSK	6.0
A, B, C	802.11a	5500-5700	100 to 140	100	OFDM	BPSK	6.0



POWER LINE CONDUCTED EMISSION TEST:

- 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	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A, B, C	802.11a	5180-5320	36 to 64	60	OFDM	BPSK	6.0
A, B, C	802.11a	5500-5700	100 to 140	100	OFDM	BPSK	6.0

ANTENNA PORT CONDUCTED MEASUREMENT:

- This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- 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	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
A	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	7.2
A	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	15.0
A	802.11ac (80MHz)		42	42	OFDM	BPSK	32.5
A	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
A	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	7.2
A	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	15.0
A	802.11ac (80MHz)		58	58	OFDM	BPSK	32.5
A	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
A	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	7.2
A	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	15.0
A	802.11ac (80MHz)		106	106	OFDM	BPSK	32.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
RE≥1G	25deg. C, 65%RH	120Vac, 60Hz	Chris Lin
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Chris Lin
PLC	25deg. C, 65%RH	120Vac, 60Hz	Jones Chang
APCM	25deg. C, 60%RH	120Vac, 60Hz	Jun Wu



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3.3 DUTY CYCLE OF TEST SIGNAL

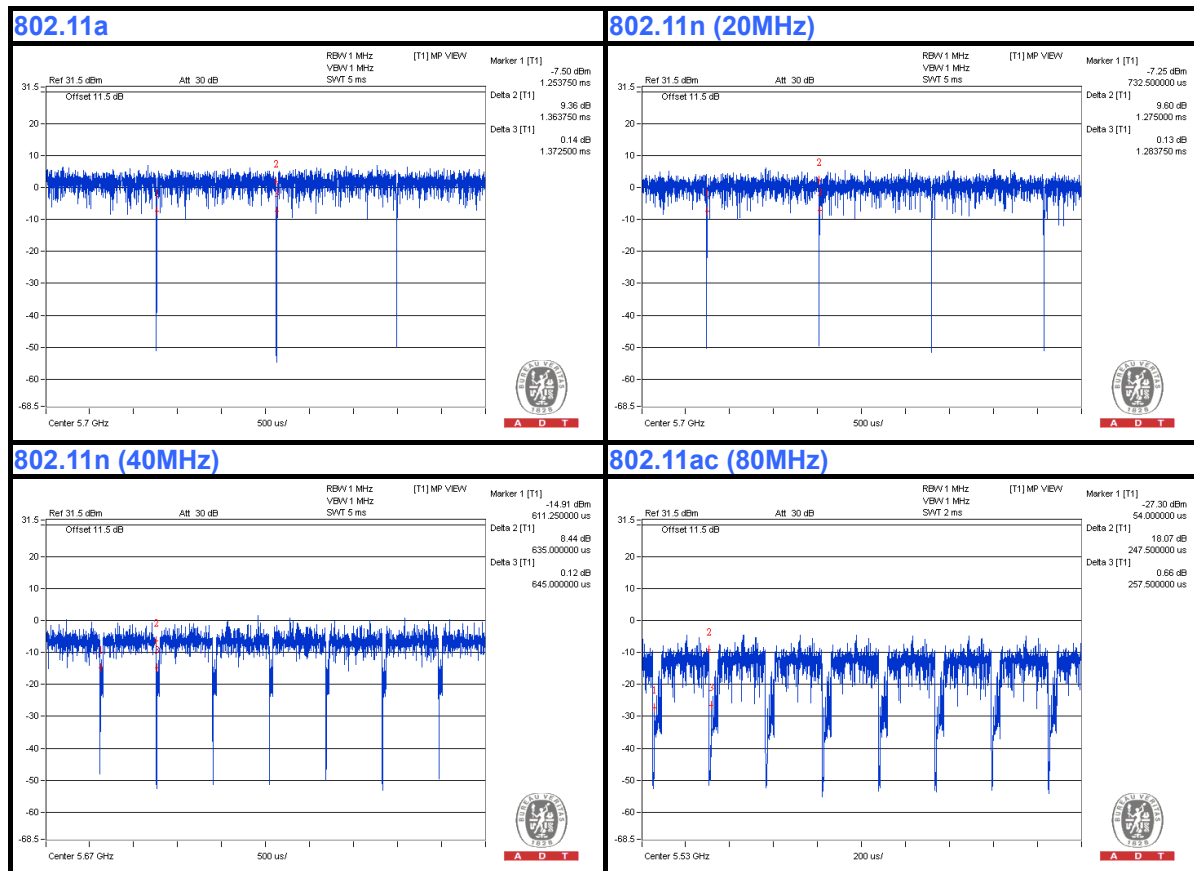
MODULATION TYPE: BPSK

802.11a, 802.11n (20MHz), 802.11n (40MHz):

Duty cycle of test signal is > 98 %, duty factor is not required.

If duty cycle is < 98%, duty factor shall be considered.

802.11ac (80MHz): Duty cycle = $0.248/0.258 = 0.961$, Duty factor = $10 * \log(1/0.961) = 0.17$



MODULATION TYPE: QPSK

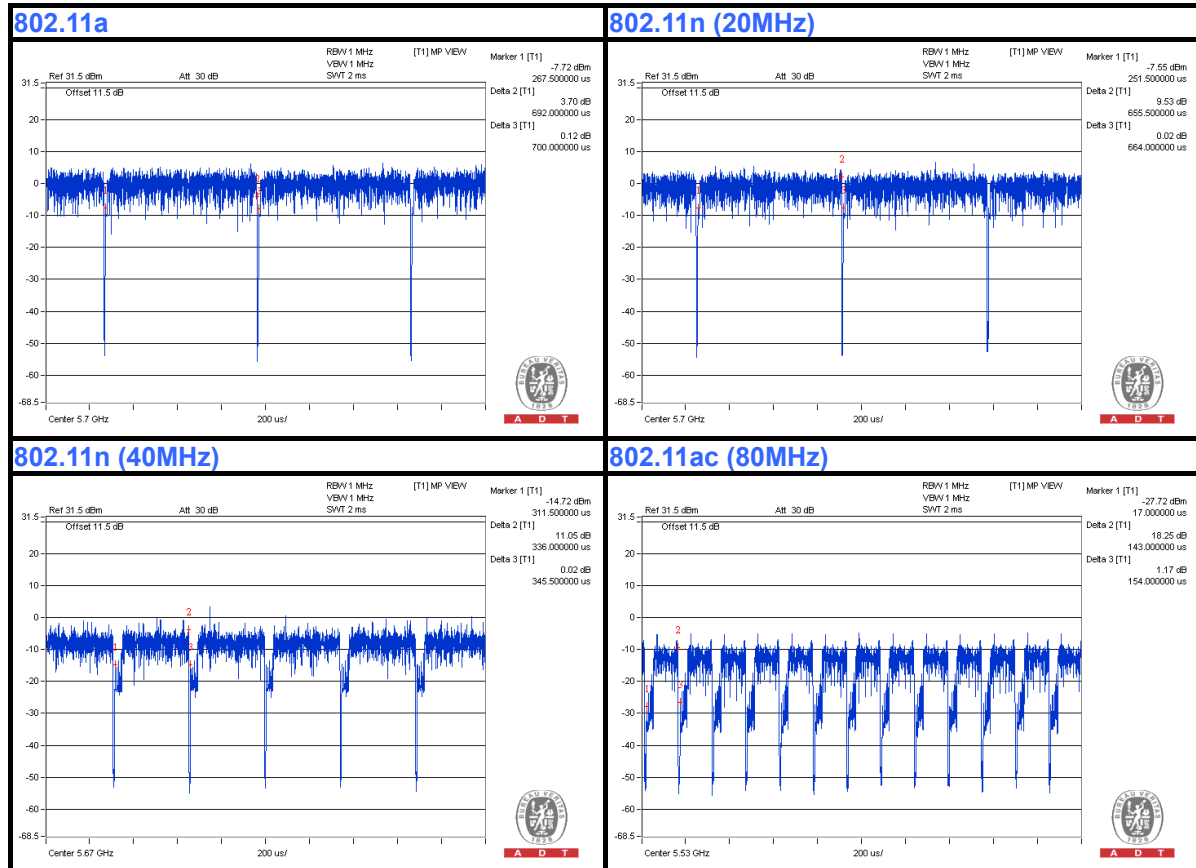
802.11a, 802.11n (20MHz):

Duty cycle of test signal is > 98 %, duty factor is not required.

If duty cycle is < 98%, duty factor shall be considered.

802.11n (40MHz): Duty cycle = 0.336/0.345 = 0.974, Duty factor = $10 * \log(1/0.974) = 0.11$

802.11ac (80MHz): Duty cycle = 0.143/0.154 = 0.929, Duty factor = $10 * \log(1/0.929) = 0.32$





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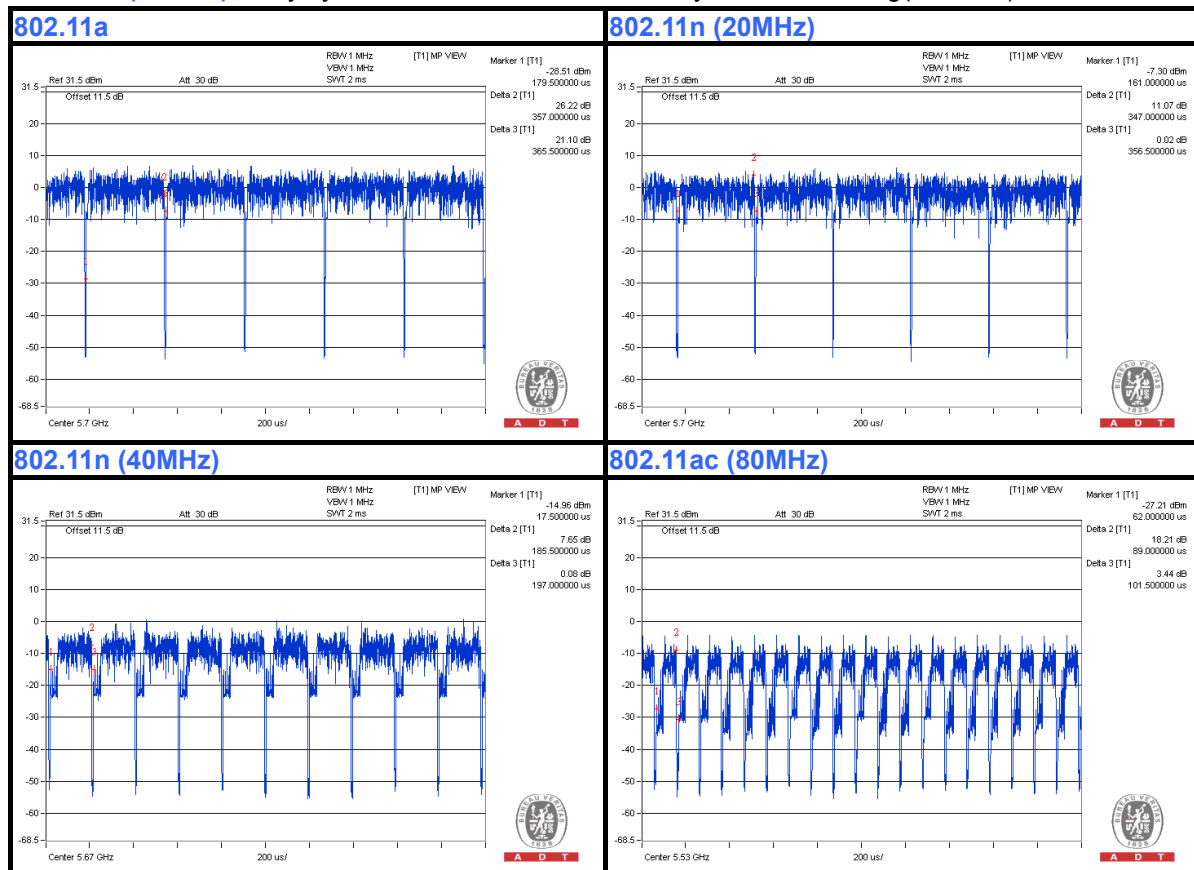
MODULATION TYPE: 16QAM

802.11a: Duty cycle = $0.357/0.366 = 0.975$, Duty factor = $10 * \log(1/0.975) = 0.11$

802.11n (20MHz): Duty cycle = $0.347/0.357 = 0.972$, Duty factor = $10 * \log(1/0.972) = 0.12$

802.11n (40MHz): Duty cycle = $0.186/0.197 = 0.944$, Duty factor = $10 * \log(1/0.944) = 0.25$

802.11ac (80MHz): Duty cycle = $0.089/0.102 = 0.873$, Duty factor = $10 * \log(1/0.873) = 0.59$





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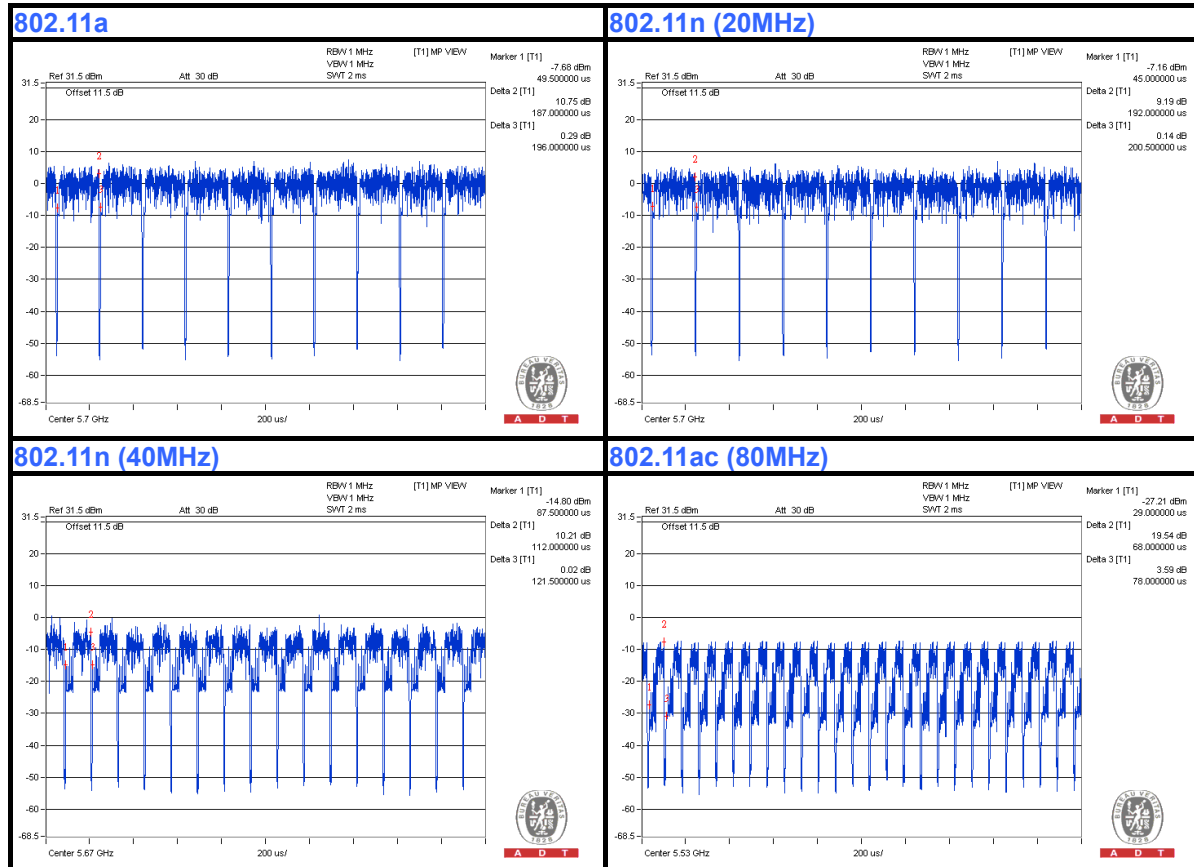
MODULATION TYPE: 64QAM

802.11a: Duty cycle = 0.187/0.196 = 0.954, Duty factor = $10 * \log(1/0.954) = 0.20$

802.11n (20MHz): Duty cycle = 0.192/0.201 = 0.955, Duty factor = $10 * \log(1/0.955) = 0.20$

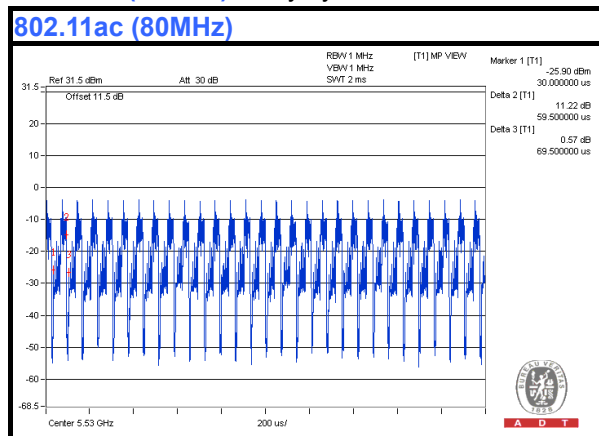
802.11n (40MHz): Duty cycle = 0.112/0.122 = 0.918, Duty factor = $10 * \log(1/0.918) = 0.37$

802.11ac (80MHz): Duty cycle = 0.068/0.078 = 0.872, Duty factor = $10 * \log(1/0.872) = 0.68$



MODULATION TYPE: 256QAM

802.11ac (80MHz): Duty cycle = 0.059/0.07 = 0.855, Duty factor = $10 * \log(1/0.855) = 0.68$



3.4 DESCRIPTION OF SUPPORT UNITS

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	Adapter	NTT docomo	AC Adaptor 04	NA	NA
2	Notebook	DELL	E5410	6RP2YM1	FCC DoC approved

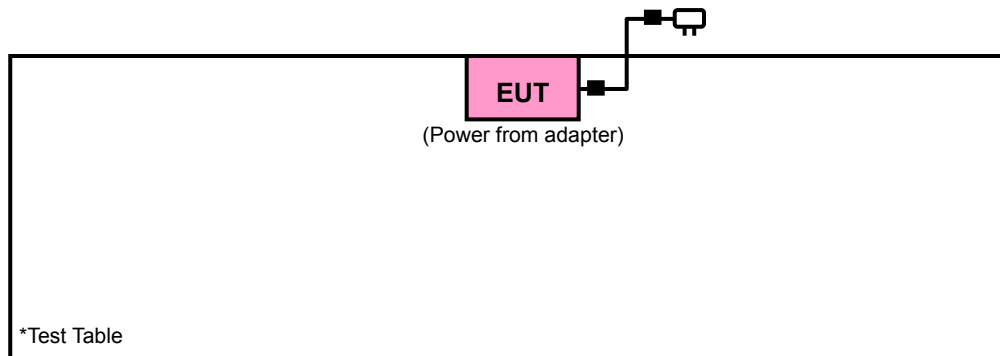
NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.8m USB cable

NOTE:

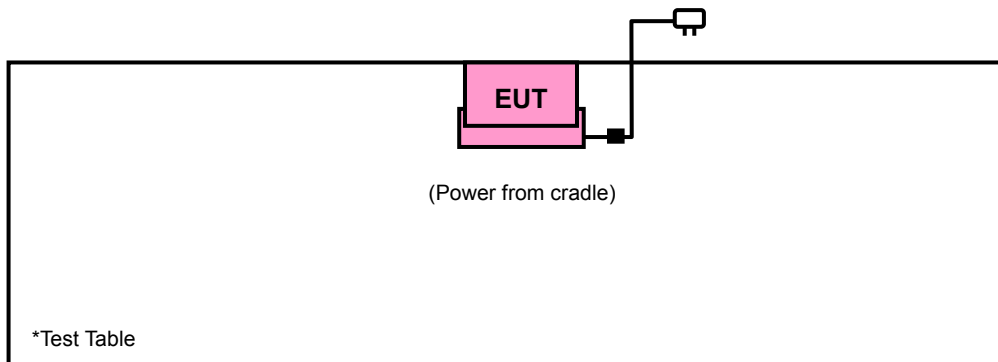
1. For item 1: 1.05m DC cable with 2 cores.
2. Item 1 is provided by the client.

3.4.1 CONFIGURATION OF SYSTEM UNDER TEST

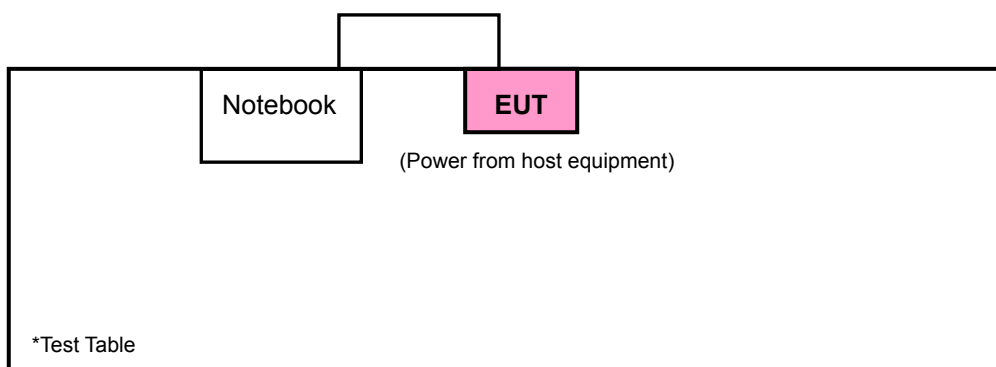
Test Mode A



Test Mode B



Test Mode C



3.5 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 E (15.407)

789033 D01 General UNII Test Procedures v01 r03

662911 D01 Multiple Transmitter Output v02

ANSI C63.10-2009

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

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

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:

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 1000MHz, 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 20dB under any condition of modulation.

4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

APPLICABLE TO	LIMIT	
√	FIELD STRENGTH AT 3m (dBμV/m)	
	PK	AV
	74	54
	EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH AT 3m (dBμV/m)
	PK	PK
	-27	68.3

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

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



4.1.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 25, 2012	Dec. 24, 2013
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Jan. 31, 2013	Jan. 30, 2014
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Mar. 20, 2013	Mar. 19, 2014
HORN Antenna SCHWARZBECK	BBHA 9120 D	209	Sep. 12, 2013	Sep. 11, 2014
HORN Antenna SCHWARZBECK	BBHA 9170	148	Jul. 15, 2013	Jul. 14, 2014
Preamplifier Agilent	8447D	2944A10633	Oct. 25, 2012	Oct. 24, 2013
Preamplifier Agilent	8449B	3008A01964	Oct. 25, 2012	Oct. 24, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250723/4	Aug. 23, 2013	Aug. 22, 2014
RF signal cable HUBER+SUHNNER	SUCOFLEX 106	12738/6+309224/ 4	Aug. 23, 2013	Aug. 22, 2014
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA	NA
Turn Table BV ADT	TT100	TT93021703	NA	NA
Turn Table Controller BV ADT	SC100	SC93021703	NA	NA
Turn Table Controller BV ADT	SC100.	SC93021704	NA	NA
High Speed Peak Power Meter	ML2495A	0824011	Jul. 29, 2013	Jul. 28, 2014
Power Sensor	MA2411B	0738171	Jul. 29, 2013	Jul. 28, 2014
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 10, 2013	Jun. 09, 2014

- 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 HwaYa Chamber 4.
 3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 4. The FCC Site Registration No. is 460141.
 5. The IC Site Registration No. is IC7450F-4.

4.1.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. 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 antenna is a broadband antenna, and its height 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 Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

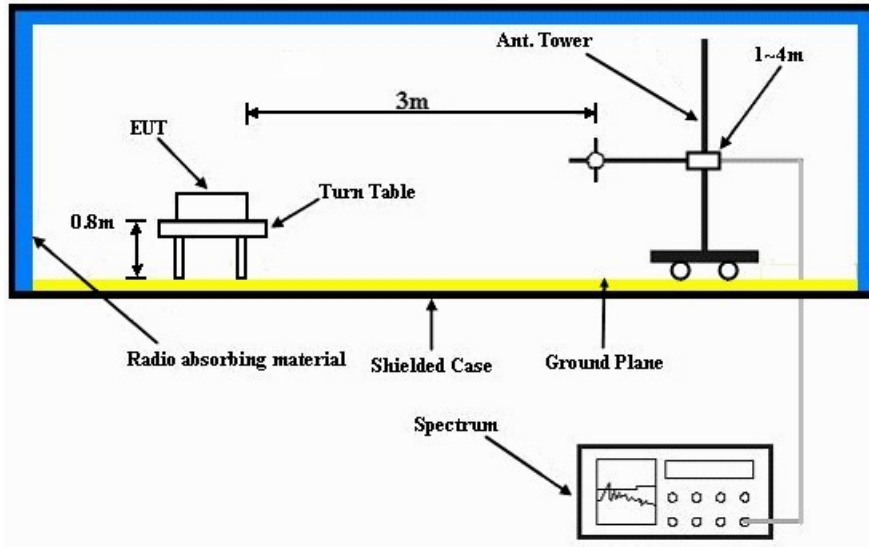
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution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

4.1.5 DEVIATION FROM TEST STANDARD

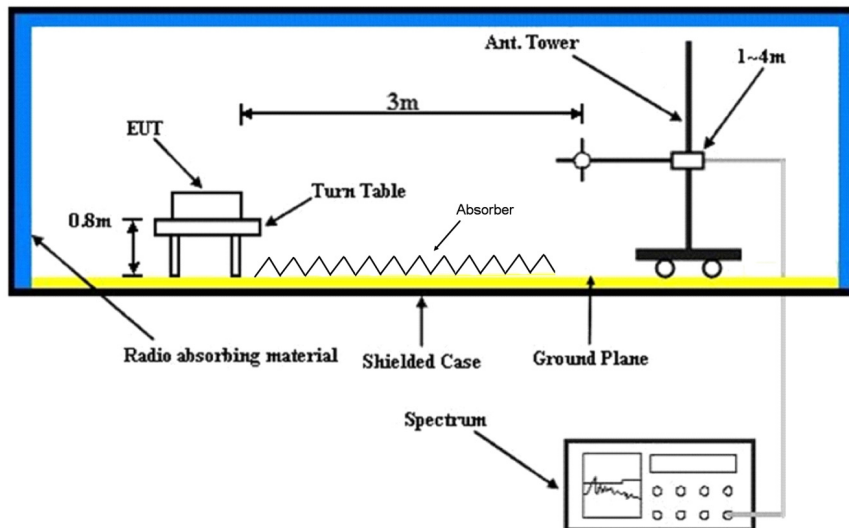
No deviation.

4.1.6 TEST SETUP

Frequency range 30MHz~1GHz



Frequency range above 1GHz



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

4.1.7 EUT OPERATING CONDITION

Test Mode A

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

Test Mode B

- a. Plugged the EUT into the cradle and placed them on the test table.
- b. Set the EUT under transmission condition continuously at specific channel frequency.

Test Mode C

- a. Connected the EUT with the notebook via a USB cable.
- b. Set the EUT under charging condition.

4.1.8 TEST RESULTS

ABOVE 1GHz DATA :

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.6 PK	74.0	-17.4	1.02 H	145	51.20	5.40
2	5150.00	42.6 AV	54.0	-11.4	1.02 H	145	37.20	5.40
3	*5180.00	101.4 PK			1.00 H	140	63.40	38.00
4	*5180.00	90.6 AV			1.00 H	140	52.60	38.00
5	#10360.00	63.9 PK	74.0	-10.1	1.15 H	96	45.90	18.00
6	#10360.00	48.1 AV	54.0	-5.9	1.15 H	96	30.10	18.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.9 PK	74.0	-16.1	1.02 V	190	52.50	5.40
2	5150.00	43.9 AV	54.0	-10.1	1.02 V	190	38.50	5.40
3	*5180.00	102.4 PK			1.12 V	171	64.40	38.00
4	*5180.00	92.1 AV			1.12 V	171	54.10	38.00
5	#10360.00	60.3 PK	74.0	-13.7	1.17 V	209	42.30	18.00
6	#10360.00	46.9 AV	54.0	-7.1	1.17 V	209	28.90	18.00

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	101.8 PK			1.12 H	137	63.80	38.00
2	*5200.00	91.5 AV			1.12 H	137	53.50	38.00
3	#10400.00	60.5 PK	74.0	-13.5	1.11 H	201	42.10	18.40
4	#10400.00	47.5 AV	54.0	-6.5	1.11 H	201	29.10	18.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	102.3 PK			1.00 V	181	64.30	38.00
2	*5200.00	92.3 AV			1.00 V	181	54.30	38.00
3	#10400.00	64.1 PK	74.0	-9.9	1.58 V	96	45.70	18.40
4	#10400.00	48.5 AV	54.0	-5.5	1.58 V	96	30.10	18.40

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	102.0 PK			1.00 H	142	63.90	38.10
2	*5240.00	91.7 AV			1.00 H	142	53.60	38.10
3	5350.00	57.0 PK	74.0	-17.0	1.02 H	145	51.30	5.70
4	5350.00	42.8 AV	54.0	-11.2	1.02 H	145	37.10	5.70
5	#10480.00	61.4 PK	74.0	-12.6	1.33 H	206	42.50	18.90
6	#10480.00	47.3 AV	54.0	-6.7	1.33 H	206	28.40	18.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	102.2 PK			1.00 V	178	64.10	38.10
2	*5240.00	92.7 AV			1.00 V	178	54.60	38.10
3	5350.00	58.2 PK	74.0	-15.8	1.00 V	180	52.50	5.70
4	5350.00	45.1 AV	54.0	-8.9	1.00 V	180	39.40	5.70
5	#10480.00	65.4 PK	74.0	-8.6	1.47 V	222	46.50	18.90
6	#10480.00	49.4 AV	54.0	-4.6	1.47 V	222	30.50	18.90

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.0 PK	74.0	-17.0	1.02 H	140	51.60	5.40
2	5150.00	43.2 AV	54.0	-10.8	1.02 H	140	37.80	5.40
3	*5260.00	102.6 PK			1.00 H	137	64.40	38.20
4	*5260.00	92.2 AV			1.00 H	137	54.00	38.20
5	#10520.00	60.7 PK	74.0	-13.3	1.18 H	96	42.00	18.70
6	#10520.00	47.1 AV	54.0	-6.9	1.18 H	96	28.40	18.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.9 PK	74.0	-16.1	1.15 V	50	52.50	5.40
2	5150.00	45.6 AV	54.0	-8.4	1.15 V	50	40.20	5.40
3	*5260.00	103.8 PK			1.13 V	47	65.60	38.20
4	*5260.00	93.4 AV			1.13 V	47	55.20	38.20
5	#10520.00	64.5 PK	74.0	-9.5	1.47 V	95	45.80	18.70
6	#10520.00	49.7 AV	54.0	-4.3	1.47 V	95	31.00	18.70

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	103.2 PK			1.00 H	150	65.00	38.20
2	*5300.00	91.9 AV			1.00 H	150	53.70	38.20
3	10600.00	60.8 PK	74.0	-13.2	1.36 H	155	42.60	18.20
4	10600.00	48.3 AV	54.0	-5.7	1.36 H	155	30.10	18.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	104.9 PK			1.11 V	47	66.70	38.20
2	*5300.00	93.1 AV			1.11 V	47	54.90	38.20
3	10600.00	64.1 PK	74.0	-9.9	1.48 V	65	45.90	18.20
4	10600.00	50.8 AV	54.0	-3.2	1.48 V	65	32.60	18.20

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	101.9 PK			1.00 H	137	63.70	38.20
2	*5320.00	91.4 AV			1.00 H	137	53.20	38.20
3	5350.00	57.3 PK	74.0	-16.7	1.01 H	140	51.60	5.70
4	5350.00	44.4 AV	54.0	-9.6	1.01 H	140	38.70	5.70
5	10640.00	59.9 PK	74.0	-14.1	1.02 H	159	41.90	18.00
6	10640.00	47.4 AV	54.0	-6.6	1.02 H	159	29.40	18.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	103.3 PK			1.00 V	358	65.10	38.20
2	*5320.00	93.4 AV			1.00 V	358	55.20	38.20
3	5350.00	59.1 PK	74.0	-14.9	1.01 V	360	53.40	5.70
4	5350.00	46.7 AV	54.0	-7.3	1.01 V	360	41.00	5.70
5	10640.00	63.9 PK	74.0	-10.1	1.09 V	224	45.90	18.00
6	10640.00	49.2 AV	54.0	-4.8	1.09 V	224	31.20	18.00

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.6 PK	74.0	-16.4	1.35 H	160	51.70	5.90
2	5460.00	45.3 AV	54.0	-8.7	1.35 H	160	39.40	5.90
3	#5470.00	59.7 PK	74.0	-14.3	1.35 H	160	53.70	6.00
4	#5470.00	46.1 AV	54.0	-7.9	1.35 H	160	40.10	6.00
5	*5500.00	96.3 PK			1.31 H	154	57.70	38.60
6	*5500.00	85.2 AV			1.31 H	154	46.60	38.60
7	11000.00	61.2 PK	74.0	-12.8	1.62 H	360	42.50	18.70
8	11000.00	48.8 AV	54.0	-5.2	1.62 H	360	30.10	18.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.9 PK	74.0	-17.1	1.02 V	355	51.00	5.90
2	5460.00	44.5 AV	54.0	-9.5	1.02 V	355	38.60	5.90
3	#5470.00	59.4 PK	74.0	-14.6	1.02 V	355	53.40	6.00
4	#5470.00	46.1 AV	54.0	-7.9	1.02 V	355	40.10	6.00
5	*5500.00	99.1 PK			1.00 V	351	60.50	38.60
6	*5500.00	89.8 AV			1.00 V	351	51.20	38.60
7	11000.00	65.2 PK	74.0	-8.8	1.08 V	123	46.50	18.70
8	11000.00	50.8 AV	54.0	-3.2	1.08 V	123	32.10	18.70

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	97.2 PK			1.12 H	308	58.60	38.60
2	*5580.00	86.6 AV			1.12 H	308	48.00	38.60
3	11160.00	61.4 PK	74.0	-12.6	1.23 H	227	42.60	18.80
4	11160.00	49.0 AV	54.0	-5.0	1.23 H	227	30.20	18.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	98.9 PK			1.01 V	179	60.30	38.60
2	*5580.00	89.3 AV			1.01 V	179	50.70	38.60
3	11160.00	65.5 PK	74.0	-8.5	1.29 V	64	46.70	18.80
4	11160.00	50.2 AV	54.0	-3.8	1.29 V	64	31.40	18.80

REMARKS:

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	95.8 PK			1.00 H	305	57.00	38.80
2	*5700.00	85.6 AV			1.00 H	305	46.80	38.80
3	#5725.00	57.9 PK	74.0	-16.1	1.10 H	310	51.50	6.40
4	#5725.00	44.8 AV	54.0	-9.2	1.10 H	310	38.40	6.40
5	11400.00	61.2 PK	74.0	-12.8	1.15 H	74	41.80	19.40
6	11400.00	50.4 AV	54.0	-3.6	1.15 H	74	31.00	19.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	97.5 PK			1.00 V	168	58.70	38.80
2	*5700.00	86.9 AV			1.00 V	168	48.10	38.80
3	#5725.00	58.8 PK	74.0	-15.2	1.02 V	170	52.40	6.40
4	#5725.00	46.9 AV	54.0	-7.1	1.02 V	170	40.50	6.40
5	11400.00	65.9 PK	74.0	-8.1	1.39 V	127	46.50	19.40
6	11400.00	51.7 AV	54.0	-2.3	1.39 V	127	32.30	19.40

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. “#“:The radiated frequency is out the restricted band.



802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.7 PK	74.0	-18.3	1.18 H	145	50.30	5.40
2	5150.00	43.0 AV	54.0	-11.0	1.18 H	145	37.60	5.40
3	*5180.00	99.0 PK			1.16 H	143	61.00	38.00
4	*5180.00	89.1 AV			1.16 H	143	51.10	38.00
5	#10360.00	60.2 PK	74.0	-13.8	1.22 H	309	42.20	18.00
6	#10360.00	46.6 AV	54.0	-7.4	1.22 H	309	28.60	18.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.7 PK	74.0	-16.3	1.01 V	175	52.30	5.40
2	5150.00	45.5 AV	54.0	-8.5	1.01 V	175	40.10	5.40
3	*5180.00	101.8 PK			1.00 V	171	63.80	38.00
4	*5180.00	90.8 AV			1.00 V	171	52.80	38.00
5	#10360.00	63.7 PK	74.0	-10.3	1.28 V	55	45.70	18.00
6	#10360.00	48.1 AV	54.0	-5.9	1.28 V	55	30.10	18.00

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level - Limit value
5. " * " : Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 40	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	99.7 PK			1.13 H	138	61.70	38.00
2	*5200.00	89.8 AV			1.13 H	138	51.80	38.00
3	#10400.00	59.9 PK	74.0	-14.1	1.02 H	85	41.50	18.40
4	#10400.00	47.8 AV	54.0	-6.2	1.02 H	85	29.40	18.40

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	101.0 PK			1.00 V	184	63.00	38.00
2	*5200.00	90.8 AV			1.00 V	184	52.80	38.00
3	#10400.00	64.9 PK	74.0	-9.1	1.05 V	224	46.50	18.40
4	#10400.00	50.1 AV	54.0	-3.9	1.05 V	224	31.70	18.40

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	99.8 PK			1.00 H	143	61.70	38.10
2	*5240.00	89.9 AV			1.00 H	143	51.80	38.10
3	5350.00	56.5 PK	74.0	-17.5	1.01 H	145	50.80	5.70
4	5350.00	43.2 AV	54.0	-10.8	1.01 H	145	37.50	5.70
5	#10480.00	61.0 PK	74.0	-13.0	1.33 H	109	42.10	18.90
6	#10480.00	46.5 AV	54.0	-7.5	1.33 H	109	27.60	18.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	101.8 PK			1.00 V	175	63.70	38.10
2	*5240.00	90.4 AV			1.00 V	175	52.30	38.10
3	5350.00	58.8 PK	74.0	-15.2	1.02 V	172	53.10	5.70
4	5350.00	47.2 AV	54.0	-6.8	1.02 V	172	41.50	5.70
5	#10480.00	65.8 PK	74.0	-8.2	1.05 V	236	46.90	18.90
6	#10480.00	49.5 AV	54.0	-4.5	1.05 V	236	30.60	18.90

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.6 PK	74.0	-17.4	1.28 H	135	51.20	5.40
2	5150.00	43.8 AV	54.0	-10.2	1.28 H	135	38.40	5.40
3	*5260.00	101.3 PK			1.26 H	133	63.10	38.20
4	*5260.00	90.5 AV			1.26 H	133	52.30	38.20
5	#10520.00	61.5 PK	74.0	-12.5	1.06 H	54	42.80	18.70
6	#10520.00	47.3 AV	54.0	-6.7	1.06 H	54	28.60	18.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.4 PK	74.0	-15.6	1.15 V	50	53.00	5.40
2	5150.00	45.7 AV	54.0	-8.3	1.15 V	50	40.30	5.40
3	*5260.00	102.5 PK			1.13 V	47	64.30	38.20
4	*5260.00	92.3 AV			1.13 V	47	54.10	38.20
5	#10520.00	64.4 PK	74.0	-9.6	1.48 V	12	45.70	18.70
6	#10520.00	51.0 AV	54.0	-3.0	1.48 V	12	32.30	18.70

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	100.9 PK			1.00 H	312	62.70	38.20
2	*5300.00	90.1 AV			1.00 H	312	51.90	38.20
3	10600.00	59.5 PK	74.0	-14.5	1.36 H	85	41.30	18.20
4	10600.00	46.9 AV	54.0	-7.1	1.36 H	85	28.70	18.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	102.7 PK			1.00 V	45	64.50	38.20
2	*5300.00	92.5 AV			1.00 V	45	54.30	38.20
3	10600.00	65.2 PK	74.0	-8.8	1.03 V	58	47.00	18.20
4	10600.00	50.6 AV	54.0	-3.4	1.03 V	58	32.40	18.20

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	100.8 PK			1.26 H	134	62.60	38.20
2	*5320.00	89.3 AV			1.26 H	134	51.10	38.20
3	5350.00	56.9 PK	74.0	-17.1	1.28 H	136	51.20	5.70
4	5350.00	43.9 AV	54.0	-10.1	1.28 H	136	38.20	5.70
5	10640.00	60.5 PK	74.0	-13.5	1.23 H	147	42.50	18.00
6	10640.00	47.6 AV	54.0	-6.4	1.23 H	147	29.60	18.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	102.4 PK			1.00 V	358	64.20	38.20
2	*5320.00	91.7 AV			1.00 V	358	53.50	38.20
3	5350.00	59.1 PK	74.0	-14.9	1.02 V	360	53.40	5.70
4	5350.00	46.0 AV	54.0	-8.0	1.02 V	360	40.30	5.70
5	10640.00	64.5 PK	74.0	-9.5	1.05 V	62	46.50	18.00
6	10640.00	50.3 AV	54.0	-3.7	1.05 V	62	32.30	18.00

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * ”: Fundamental frequency.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.9 PK	74.0	-17.1	1.05 H	300	51.00	5.90
2	5460.00	45.3 AV	54.0	-8.7	1.05 H	300	39.40	5.90
3	#5470.00	58.7 PK	74.0	-15.3	1.05 H	300	52.70	6.00
4	#5470.00	38.5 AV	54.0	-15.5	1.05 H	300	32.50	6.00
5	*5500.00	96.0 PK			1.02 H	298	57.40	38.60
6	*5500.00	86.9 AV			1.02 H	298	48.30	38.60
7	11000.00	60.9 PK	74.0	-13.1	1.04 H	69	42.20	18.70
8	11000.00	47.4 AV	54.0	-6.6	1.04 H	69	28.70	18.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.3 PK	74.0	-16.7	1.05 V	10	51.40	5.90
2	5460.00	45.0 AV	54.0	-9.0	1.05 V	10	39.10	5.90
3	#5470.00	59.4 PK	74.0	-14.6	1.05 V	10	53.40	6.00
4	#5470.00	46.3 AV	54.0	-7.7	1.05 V	10	40.30	6.00
5	*5500.00	98.7 PK			1.00 V	0	60.10	38.60
6	*5500.00	89.0 AV			1.00 V	0	50.40	38.60
7	11000.00	63.8 PK	74.0	-10.2	1.05 V	88	45.10	18.70
8	11000.00	50.2 AV	54.0	-3.8	1.05 V	88	31.50	18.70

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	96.0 PK			1.11 H	307	57.40	38.60
2	*5580.00	86.6 AV			1.11 H	307	48.00	38.60
3	11160.00	61.0 PK	74.0	-13.0	1.23 H	307	42.20	18.80
4	11160.00	48.2 AV	54.0	-5.8	1.23 H	307	29.40	18.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	97.7 PK			1.00 V	144	59.10	38.60
2	*5580.00	86.7 AV			1.00 V	144	48.10	38.60
3	11160.00	64.7 PK	74.0	-9.3	1.08 V	74	45.90	18.80
4	11160.00	51.0 AV	54.0	-3.0	1.08 V	74	32.20	18.80

REMARKS:

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	95.8 PK			1.40 H	111	57.00	38.80
2	*5700.00	85.9 AV			1.40 H	111	47.10	38.80
3	#5725.00	59.0 PK	74.0	-15.0	1.42 H	113	52.60	6.40
4	#5725.00	46.7 AV	54.0	-7.3	1.42 H	113	40.30	6.40
5	11400.00	66.2 PK	74.0	-7.8	1.02 H	55	46.80	19.40
6	11400.00	51.4 AV	54.0	-2.6	1.02 H	55	32.00	19.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	97.1 PK			1.00 V	306	58.30	38.80
2	*5700.00	87.2 AV			1.00 V	306	48.40	38.80
3	#5725.00	57.4 PK	74.0	-16.6	1.05 V	310	51.00	6.40
4	#5725.00	43.8 AV	54.0	-10.2	1.05 V	310	37.40	6.40
5	11400.00	61.5 PK	74.0	-12.5	1.48 V	159	42.10	19.40
6	11400.00	48.8 AV	54.0	-5.2	1.48 V	159	29.40	19.40

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. “#“:The radiated frequency is out the restricted band.



802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 38	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.1 PK	74.0	-15.9	1.25 H	153	52.70	5.40
2	5150.00	44.8 AV	54.0	-9.2	1.25 H	153	39.40	5.40
3	*5190.00	97.8 PK			1.27 H	151	59.80	38.00
4	*5190.00	86.1 AV			1.27 H	151	48.10	38.00
5	#10380.00	60.7 PK	74.0	-13.3	1.02 H	66	42.50	18.20
6	#10380.00	46.9 AV	54.0	-7.1	1.02 H	66	28.70	18.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.6 PK	74.0	-13.4	1.05 V	46	55.20	5.40
2	5150.00	46.0 AV	54.0	-8.0	1.05 V	46	40.60	5.40
3	*5190.00	101.4 PK			1.02 V	45	63.40	38.00
4	*5190.00	89.6 AV			1.02 V	45	51.60	38.00
5	#10380.00	63.8 PK	74.0	-10.2	1.02 V	85	45.60	18.20
6	#10380.00	49.6 AV	54.0	-4.4	1.02 V	85	31.40	18.20

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 46	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	97.3 PK			1.26 H	139	59.20	38.10
2	*5230.00	87.9 AV			1.26 H	139	49.80	38.10
3	5350.00	57.4 PK	74.0	-16.6	1.28 H	141	51.70	5.70
4	5350.00	44.4 AV	54.0	-9.6	1.28 H	141	38.70	5.70
5	#10460.00	60.9 PK	74.0	-13.1	1.13 H	208	42.20	18.70
6	#10460.00	47.7 AV	54.0	-6.3	1.13 H	208	29.00	18.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	100.0 PK			1.00 V	45	61.90	38.10
2	*5230.00	89.2 AV			1.00 V	45	51.10	38.10
3	5350.00	58.8 PK	74.0	-15.2	1.01 V	46	53.10	5.70
4	5350.00	46.3 AV	54.0	-7.7	1.01 V	46	40.60	5.70
5	#10460.00	64.6 PK	74.0	-9.4	1.26 V	147	45.90	18.70
6	#10460.00	50.0 AV	54.0	-4.0	1.26 V	147	31.30	18.70

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 54	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.1 PK	74.0	-15.9	1.04 H	135	52.70	5.40
2	5150.00	43.9 AV	54.0	-10.1	1.04 H	135	38.50	5.40
3	*5270.00	98.8 PK			1.02 H	131	60.60	38.20
4	*5270.00	87.5 AV			1.02 H	131	49.30	38.20
5	#10540.00	60.1 PK	74.0	-13.9	1.52 H	97	41.50	18.60
6	#10540.00	48.7 AV	54.0	-5.3	1.52 H	97	30.10	18.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.9 PK	74.0	-16.1	1.10 V	50	52.50	5.40
2	5150.00	45.6 AV	54.0	-8.4	1.10 V	50	40.20	5.40
3	*5270.00	99.6 PK			1.00 V	45	61.40	38.20
4	*5270.00	89.2 AV			1.00 V	45	51.00	38.20
5	#10540.00	64.2 PK	74.0	-9.8	1.08 V	47	45.60	18.60
6	#10540.00	50.7 AV	54.0	-3.3	1.08 V	47	32.10	18.60

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	98.7 PK			1.00 H	142	60.50	38.20
2	*5310.00	88.7 AV			1.00 H	142	50.50	38.20
3	5350.00	56.9 PK	74.0	-17.1	1.02 H	145	51.20	5.70
4	5350.00	44.8 AV	54.0	-9.2	1.02 H	145	39.10	5.70
5	10620.00	60.4 PK	74.0	-13.6	1.07 H	41	42.30	18.10
6	10620.00	48.6 AV	54.0	-5.4	1.07 H	41	30.50	18.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	99.4 PK			1.00 V	47	61.20	38.20
2	*5310.00	88.6 AV			1.00 V	47	50.40	38.20
3	5350.00	59.1 PK	74.0	-14.9	1.02 V	50	53.40	5.70
4	5350.00	46.3 AV	54.0	-7.7	1.02 V	50	40.60	5.70
5	10620.00	64.6 PK	74.0	-9.4	1.47 V	85	46.50	18.10
6	10620.00	50.7 AV	54.0	-3.3	1.47 V	85	32.60	18.10

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 102	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.0 PK	74.0	-17.0	1.05 H	302	51.10	5.90
2	5460.00	45.3 AV	54.0	-8.7	1.05 H	302	39.40	5.90
3	#5470.00	59.0 PK	74.0	-15.0	1.05 H	302	53.00	6.00
4	#5470.00	46.1 AV	54.0	-7.9	1.05 H	302	40.10	6.00
5	*5510.00	93.3 PK			1.01 H	299	54.70	38.60
6	*5510.00	82.2 AV			1.01 H	299	43.60	38.60
7	11020.00	60.9 PK	74.0	-13.1	1.47 H	95	42.10	18.80
8	11020.00	49.0 AV	54.0	-5.0	1.47 H	95	30.20	18.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.1 PK	74.0	-16.9	1.15 V	12	51.20	5.90
2	5460.00	44.5 AV	54.0	-9.5	1.15 V	12	38.60	5.90
3	#5470.00	59.6 PK	74.0	-14.4	1.15 V	12	53.60	6.00
4	#5470.00	46.2 AV	54.0	-7.8	1.15 V	12	40.20	6.00
5	*5510.00	95.3 PK			1.10 V	9	56.70	38.60
6	*5510.00	84.2 AV			1.10 V	9	45.60	38.60
7	11020.00	65.2 PK	74.0	-8.8	1.32 V	58	46.40	18.80
8	11020.00	50.8 AV	54.0	-3.2	1.32 V	58	32.00	18.80

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 110	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	93.3 PK			1.00 H	115	54.70	38.58
2	*5550.00	83.0 AV			1.00 H	115	44.40	38.58
3	11100.00	62.3 PK	74.0	-11.7	1.55 H	147	43.58	18.74
4	11100.00	48.4 AV	54.0	-5.6	1.55 H	147	29.69	18.74
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	93.0 PK			1.01 V	181	54.40	38.60
2	*5550.00	82.7 AV			1.01 V	181	44.10	38.60
3	11100.00	65.2 PK	74.0	-8.8	1.02 V	332	46.40	18.80
4	11100.00	51.1 AV	54.0	-2.9	1.02 V	332	32.30	18.80

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 134	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	92.7 PK			1.00 H	111	54.00	38.70
2	*5670.00	82.0 AV			1.00 H	111	43.30	38.70
3	#5725.00	57.6 PK	74.0	-16.4	1.05 H	115	51.20	6.40
4	#5725.00	45.1 AV	54.0	-8.9	1.05 H	115	38.70	6.40
5	11340.00	65.0 PK	74.0	-9.0	1.55 H	223	45.80	19.20
6	11340.00	49.2 AV	54.0	-4.8	1.55 H	223	30.00	19.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	92.2 PK			1.00 V	181	53.50	38.70
2	*5670.00	81.6 AV			1.00 V	181	42.90	38.70
3	#5725.00	60.0 PK	74.0	-14.0	1.02 V	185	53.60	6.40
4	#5725.00	46.9 AV	54.0	-7.1	1.02 V	185	40.50	6.40
5	11340.00	65.0 PK	74.0	-9.0	1.12 V	157	45.80	19.20
6	11340.00	51.7 AV	54.0	-2.3	1.12 V	157	32.50	19.20

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ * “: Fundamental frequency.
6. “#“:The radiated frequency is out the restricted band.



802.11ac (80MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 42	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.6 PK	74.0	-17.4	1.01 H	149	51.20	5.40
2	5150.00	43.2 AV	54.0	-10.8	1.01 H	149	37.80	5.40
3	*5210.00	93.9 PK			1.00 H	145	55.90	38.00
4	*5210.00	83.8 AV			1.00 H	145	45.80	38.00
5	#10420.00	61.0 PK	74.0	-13.0	1.14 H	204	42.50	18.50
6	#10420.00	47.9 AV	54.0	-6.1	1.14 H	204	29.40	18.50

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.5 PK	74.0	-15.5	1.00 V	50	53.10	5.40
2	5150.00	46.1 AV	54.0	-7.9	1.00 V	50	40.70	5.40
3	*5210.00	95.1 PK			1.00 V	47	57.10	38.00
4	*5210.00	84.9 AV			1.00 V	47	46.90	38.00
5	#10420.00	65.0 PK	74.0	-9.0	1.32 V	85	46.50	18.50
6	#10420.00	49.0 AV	54.0	-5.0	1.32 V	85	30.50	18.50

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. "#":The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 58	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	95.7 PK			1.00 H	133	57.50	38.20
2	*5290.00	84.9 AV			1.00 H	133	46.70	38.20
3	5350.00	56.7 PK	74.0	-17.3	1.01 H	135	51.00	5.70
4	5350.00	44.2 AV	54.0	-9.8	1.01 H	135	38.50	5.70
5	#10580.00	60.9 PK	74.0	-13.1	1.04 H	85	42.50	18.40
6	#10580.00	48.5 AV	54.0	-5.5	1.04 H	85	30.10	18.40
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	95.8 PK			1.00 V	45	57.60	38.20
2	*5290.00	85.1 AV			1.00 V	45	46.90	38.20
3	5350.00	58.0 PK	74.0	-16.0	1.01 V	48	52.30	5.70
4	5350.00	46.0 AV	54.0	-8.0	1.01 V	48	40.30	5.70
5	#10580.00	64.9 PK	74.0	-9.1	1.28 V	56	46.50	18.40
6	#10580.00	50.8 AV	54.0	-3.2	1.28 V	56	32.40	18.40

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 106	FREQUENCY RANGE	1 ~ 40GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.9 PK	74.0	-17.1	1.15 H	300	51.00	5.90
2	5460.00	44.3 AV	54.0	-9.7	1.15 H	300	38.40	5.90
3	#5470.00	59.6 PK	74.0	-14.4	1.15 H	300	53.60	6.00
4	#5470.00	46.2 AV	54.0	-7.8	1.15 H	300	40.20	6.00
5	*5530.00	89.3 PK			1.12 H	298	50.80	38.50
6	*5530.00	78.5 AV			1.12 H	298	40.00	38.50
7	11060.00	61.6 PK	74.0	-12.4	1.48 H	96	42.90	18.70
8	11060.00	49.4 AV	54.0	-4.6	1.48 H	96	30.70	18.70

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.6 PK	74.0	-15.4	1.36 V	2	52.70	5.90
2	5460.00	45.8 AV	54.0	-8.2	1.36 V	2	39.90	5.90
3	#5470.00	60.4 PK	74.0	-13.6	1.36 V	2	54.40	6.00
4	#5470.00	46.2 AV	54.0	-7.8	1.36 V	2	40.20	6.00
5	*5530.00	91.2 PK			1.35 V	1	52.70	38.50
6	*5530.00	80.1 AV			1.35 V	1	41.60	38.50
7	11060.00	65.2 PK	74.0	-8.8	1.02 V	85	46.50	18.70
8	11060.00	51.0 AV	54.0	-3.0	1.02 V	85	32.30	18.70

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. “ * “: Fundamental frequency.
6. “#”:The radiated frequency is out the restricted band.

BELOW 1GHz WORST-CASE DATA : 802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	57.07	26.3 QP	40.0	-13.7	1.25 H	219	40.90	-14.60
2	111.40	17.3 QP	43.5	-26.2	1.00 H	31	34.20	-16.90
3	322.90	16.8 QP	46.0	-29.2	1.50 H	348	28.40	-11.60
4	547.99	21.1 QP	46.0	-24.9	1.00 H	216	28.60	-7.50
5	709.04	23.8 QP	46.0	-22.2	1.50 H	218	28.20	-4.40
6	862.33	27.1 QP	46.0	-18.9	1.25 H	176	28.30	-1.20

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	57.07	25.8 QP	40.0	-14.2	1.25 V	138	40.40	-14.60
2	286.03	15.3 QP	46.0	-30.7	1.00 V	26	27.90	-12.60
3	416.04	18.7 QP	46.0	-27.3	1.50 V	42	28.80	-10.10
4	522.76	20.5 QP	46.0	-25.5	1.25 V	19	28.50	-8.00
5	710.98	23.9 QP	46.0	-22.1	1.00 V	290	28.30	-4.40
6	901.14	27.8 QP	46.0	-18.2	1.50 V	275	28.20	-0.40

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	57.07	28.4 QP	40.0	-11.6	1.25 H	55	43.00	-14.60
2	256.93	26.3 QP	46.0	-19.7	1.00 H	5	40.20	-13.90
3	433.50	20.0 QP	46.0	-26.0	1.50 H	350	29.50	-9.50
4	676.05	24.0 QP	46.0	-22.0	1.00 H	357	28.80	-4.80
5	844.87	38.6 QP	46.0	-7.4	1.25 H	150	40.20	-1.60
6	916.66	28.8 QP	46.0	-17.2	1.50 H	294	28.90	-0.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	39.60	36.5 QP	40.0	-3.5	1.25 V	1	51.70	-15.20
2	70.65	34.5 QP	40.0	-5.5	1.00 V	184	50.10	-15.60
3	93.93	24.8 QP	43.5	-18.7	1.00 V	139	44.00	-19.20
4	802.18	26.2 QP	46.0	-19.8	1.50 V	8	28.40	-2.20
5	842.93	39.9 QP	46.0	-6.1	1.25 V	87	41.50	-1.60
6	926.36	30.0 QP	46.0	-16.0	1.50 V	13	29.80	0.20

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



A D T

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin
TEST MODE	C		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	74.53	32.4 QP	40.0	-7.6	1.25 H	179	49.40	-17.00
2	198.71	36.5 QP	43.5	-7.0	1.00 H	105	53.00	-16.50
3	264.69	40.0 QP	46.0	-6.0	1.50 H	102	53.50	-13.50
4	386.93	28.8 QP	46.0	-17.2	1.00 H	334	39.40	-10.60
5	600.38	30.6 QP	46.0	-15.4	1.25 H	41	36.80	-6.20
6	749.79	28.8 QP	46.0	-17.2	1.00 H	10	31.90	-3.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	57.07	28.3 QP	40.0	-11.7	1.25 V	285	42.90	-14.60
2	165.73	31.3 QP	43.5	-12.2	1.00 V	45	45.60	-14.30
3	266.63	32.8 QP	46.0	-13.2	1.50 V	352	46.20	-13.40
4	379.17	26.6 QP	46.0	-19.4	1.00 V	152	37.20	-10.60
5	499.48	28.8 QP	46.0	-17.2	1.50 V	156	37.10	-8.30
6	901.14	30.9 QP	46.0	-15.1	1.25 V	127	31.30	-0.40

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	57.07	27.7 QP	40.0	-12.3	1.25 H	322	42.30	-14.60
2	171.55	15.7 QP	43.5	-27.8	1.00 H	12	29.80	-14.10
3	392.75	18.0 QP	46.0	-28.0	1.50 H	238	28.60	-10.60
4	522.76	21.1 QP	46.0	-24.9	1.00 H	322	29.10	-8.00
5	689.64	23.7 QP	46.0	-22.3	1.25 H	186	28.30	-4.60
6	881.74	28.0 QP	46.0	-18.0	1.50 H	258	29.00	-1.00

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	37.66	27.8 QP	40.0	-12.2	1.25 V	232	42.90	-15.10
2	315.14	16.0 QP	46.0	-30.0	1.50 V	104	27.90	-11.90
3	441.26	18.7 QP	46.0	-27.3	1.00 V	39	28.10	-9.40
4	534.40	21.4 QP	46.0	-24.6	1.50 V	195	29.10	-7.70
5	784.72	25.5 QP	46.0	-20.5	1.00 V	41	27.80	-2.30
6	959.35	28.5 QP	46.0	-17.5	1.25 V	167	27.70	0.80

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	57.07	28.7 QP	40.0	-11.3	1.25 H	258	43.30	-14.60
2	214.24	21.2 QP	43.5	-22.3	1.50 H	336	37.50	-16.30
3	262.75	21.5 QP	46.0	-24.5	1.00 H	302	35.10	-13.60
4	503.36	19.6 QP	46.0	-26.4	1.25 H	216	27.80	-8.20
5	683.81	23.1 QP	46.0	-22.9	1.00 H	264	27.90	-4.80
6	844.87	31.8 QP	46.0	-14.2	1.50 H	36	33.40	-1.60

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	37.66	33.7 QP	40.0	-6.3	1.25 V	1	48.80	-15.10
2	70.65	34.1 QP	40.0	-5.9	1.00 V	179	49.70	-15.60
3	91.99	24.5 QP	43.5	-19.0	1.50 V	157	44.00	-19.50
4	743.97	24.1 QP	46.0	-21.9	1.00 V	60	27.50	-3.40
5	844.87	36.6 QP	46.0	-9.4	1.50 V	124	38.20	-1.60
6	924.42	27.6 QP	46.0	-18.4	1.25 V	114	27.40	0.20

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Chris Lin
TEST MODE	C		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	74.53	29.8 QP	40.0	-10.2	1.25 H	165	46.80	-17.00
2	198.71	36.5 QP	43.5	-7.0	1.00 H	96	53.00	-16.50
3	264.69	39.7 QP	46.0	-6.3	1.50 H	252	53.20	-13.50
4	373.35	30.0 QP	46.0	-16.0	1.50 H	346	40.90	-10.90
5	600.38	31.0 QP	46.0	-15.0	1.00 H	33	37.20	-6.20
6	844.87	32.2 QP	46.0	-13.8	1.25 H	195	33.80	-1.60
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	72.59	29.7 QP	40.0	-10.3	1.25 V	154	45.90	-16.20
2	165.73	31.5 QP	43.5	-12.0	1.00 V	34	45.80	-14.30
3	264.69	32.6 QP	46.0	-13.4	1.50 V	342	46.10	-13.50
4	497.54	32.8 QP	46.0	-13.2	1.00 V	205	41.20	-8.40
5	600.38	32.8 QP	46.0	-13.2	1.50 V	266	39.00	-6.20
6	844.87	37.5 QP	46.0	-8.5	1.50 V	332	39.10	-1.60

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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

- NOTE:** 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 0.50MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100289	Nov. 16, 2012	Nov. 15, 2013
RF signal cable Woken	5D-FB	Cable-HYC01-01	Dec. 28, 2012	Dec. 27, 2013
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 04, 2013	Feb. 03, 2014
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Jul. 08, 2013	Jul. 07, 2014
Software ADT	BV ADT_Cond_ V7.3.7.3	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 HwaYa Shielded Room 1.
 3. The VCCI Site Registration No. is C-2040.

4.2.3 TEST PROCEDURES

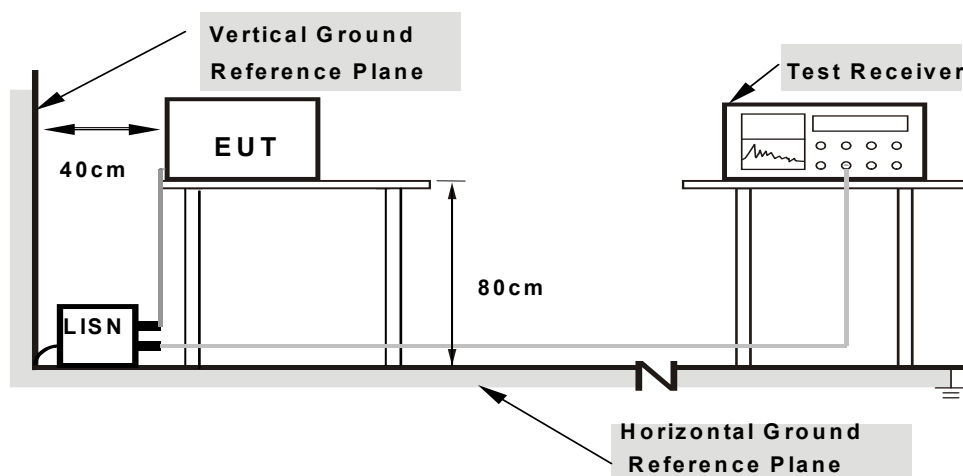
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



- Note:**
- Support units were connected to second LISN.
 - Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.6.

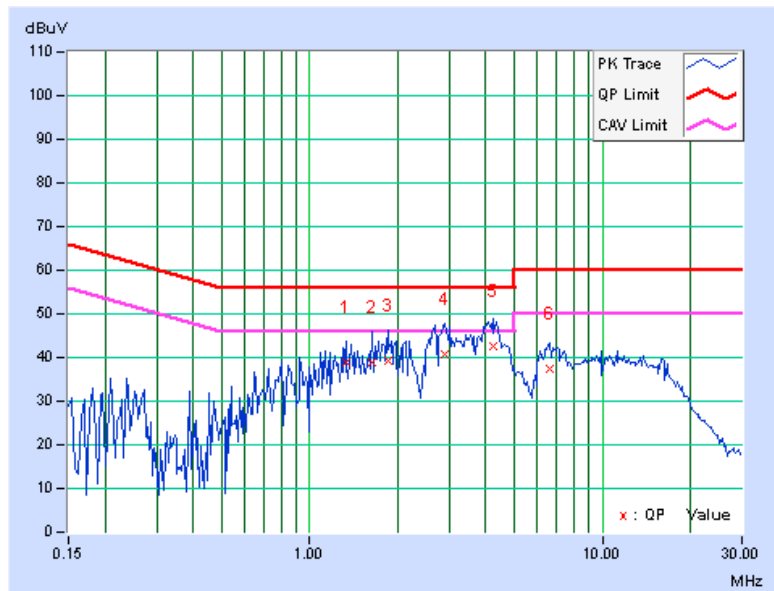
4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA : 802.11a

PHASE	Line 1	6dB BANDWIDTH	9kHz
CHANNEL	Channel 60	TEST MODE	A

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	1.33203	0.26	38.77	27.89	39.03	28.15	56.00	46.00	-16.97	-17.85
2	1.63281	0.28	38.77	29.00	39.05	29.28	56.00	46.00	-16.95	-16.72
3	1.85547	0.28	38.89	29.65	39.17	29.93	56.00	46.00	-16.83	-16.07
4	2.90625	0.34	40.44	29.03	40.78	29.37	56.00	46.00	-15.22	-16.63
5	4.21484	0.41	42.31	29.29	42.72	29.70	56.00	46.00	-13.28	-16.30
6	6.58203	0.54	36.79	30.79	37.33	31.33	60.00	50.00	-22.67	-18.67

- 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.

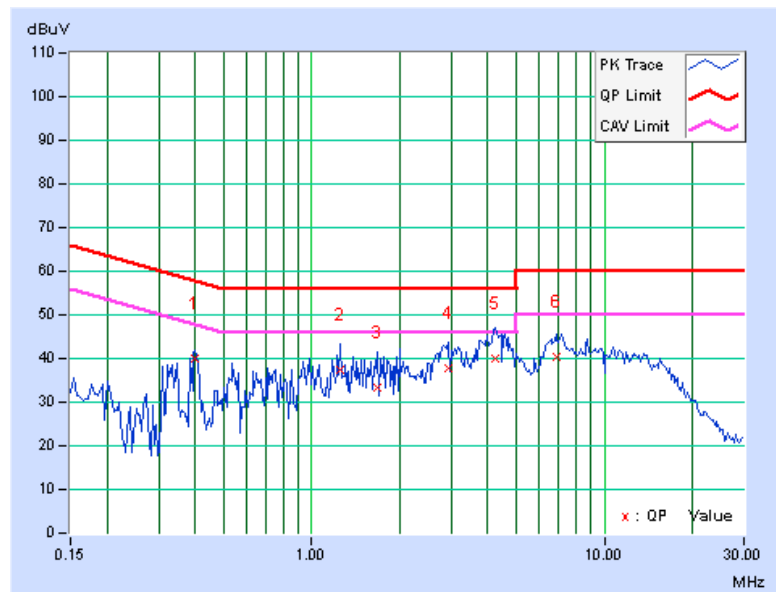




PHASE	Line 2	6dB BANDWIDTH	9kHz
CHANNEL	Channel 60	TEST MODE	A

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.40000	0.24	39.83	34.39	40.07	34.63	57.85	47.85	-17.78	-13.22
2	1.25391	0.26	37.17	26.42	37.43	26.68	56.00	46.00	-18.57	-19.32
3	1.68750	0.27	32.93	23.77	33.20	24.04	56.00	46.00	-22.80	-21.96
4	2.94922	0.33	37.54	26.14	37.87	26.47	56.00	46.00	-18.13	-19.53
5	4.25781	0.39	39.71	26.90	40.10	27.29	56.00	46.00	-15.90	-18.71
6	6.83203	0.48	39.83	34.72	40.31	35.20	60.00	50.00	-19.69	-14.80

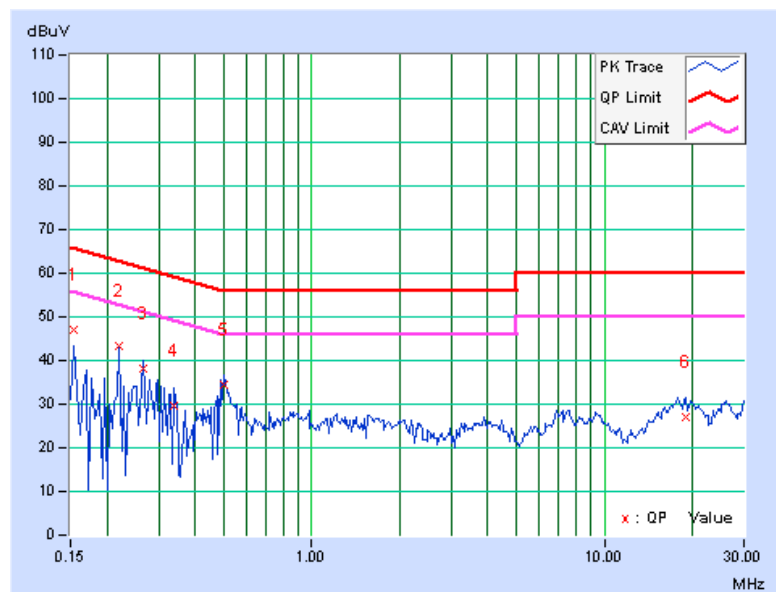
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. The emission levels of other frequencies were very low against the limit.
 3. Margin value = Emission level - Limit value
 4. Correction factor = Insertion loss + Cable loss
 5. Emission Level = Correction Factor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



PHASE	Line 1	6dB BANDWIDTH	9kHz
CHANNEL	Channel 60	TEST MODE	B

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	0.16	46.78	29.52	46.94	29.68	65.79	55.79	-18.85	-26.11
2	0.22031	0.17	43.20	28.65	43.37	28.82	62.81	52.81	-19.44	-23.99
3	0.26719	0.18	38.06	23.13	38.24	23.31	61.20	51.20	-22.96	-27.89
4	0.33750	0.21	29.40	13.74	29.61	13.95	59.26	49.26	-29.66	-35.32
5	0.50156	0.23	34.05	22.79	34.28	23.02	56.00	46.00	-21.72	-22.98
6	18.87109	1.17	25.75	20.39	26.92	21.56	60.00	50.00	-33.08	-28.44

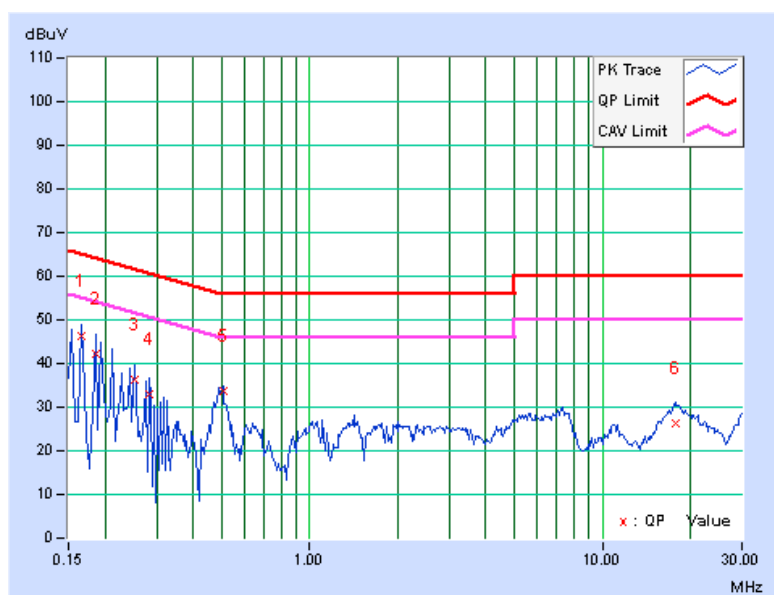
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. The emission levels of other frequencies were very low against the limit.
 3. Margin value = Emission level - Limit value
 4. Correction factor = Insertion loss + Cable loss
 5. Emission Level = Correction Factor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



PHASE	Line 2	6dB BANDWIDTH	9kHz
CHANNEL	Channel 60	TEST MODE	B

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	0.17	46.11	25.98	46.28	26.15	65.18	55.18	-18.90	-29.03
2	0.18516	0.17	42.19	24.59	42.36	24.76	64.25	54.25	-21.89	-29.49
3	0.25156	0.19	36.29	22.73	36.48	22.92	61.71	51.71	-25.23	-28.79
4	0.28281	0.20	32.90	16.94	33.10	17.14	60.73	50.73	-27.63	-33.59
5	0.50547	0.24	33.38	24.43	33.62	24.67	56.00	46.00	-22.38	-21.33
6	17.72656	0.85	25.51	19.75	26.36	20.60	60.00	50.00	-33.64	-29.40

- 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.

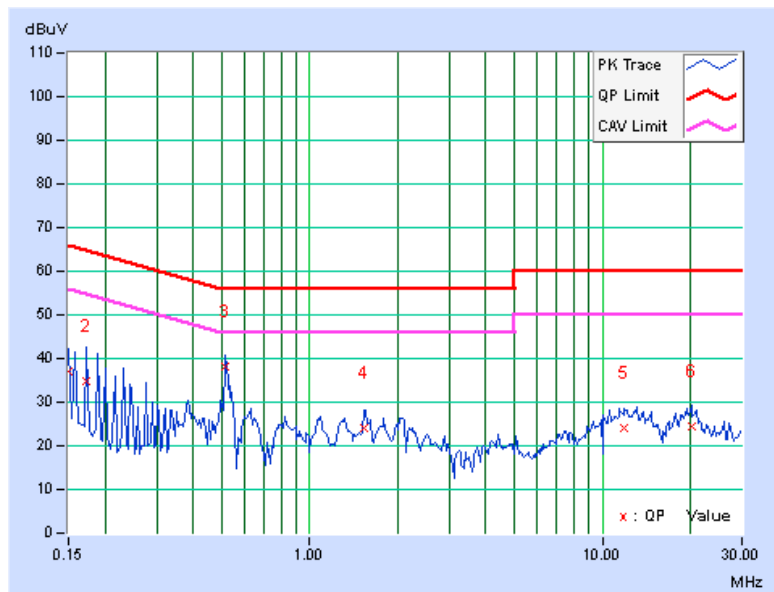




PHASE	Line 1	6dB BANDWIDTH	9kHz
CHANNEL	Channel 60	TEST MODE	C

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.16	36.83	23.15	36.99	23.31	66.00	56.00	-29.01	-32.69
2	0.17344	0.16	34.48	17.71	34.64	17.87	64.79	54.79	-30.16	-36.93
3	0.51719	0.23	38.00	36.43	38.23	36.66	56.00	46.00	-17.77	-9.34
4	1.52734	0.27	23.85	22.09	24.12	22.36	56.00	46.00	-31.88	-23.64
5	11.87500	0.81	23.29	17.55	24.10	18.36	60.00	50.00	-35.90	-31.64
6	20.14453	1.24	23.04	17.78	24.28	19.02	60.00	50.00	-35.72	-30.98

- 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.



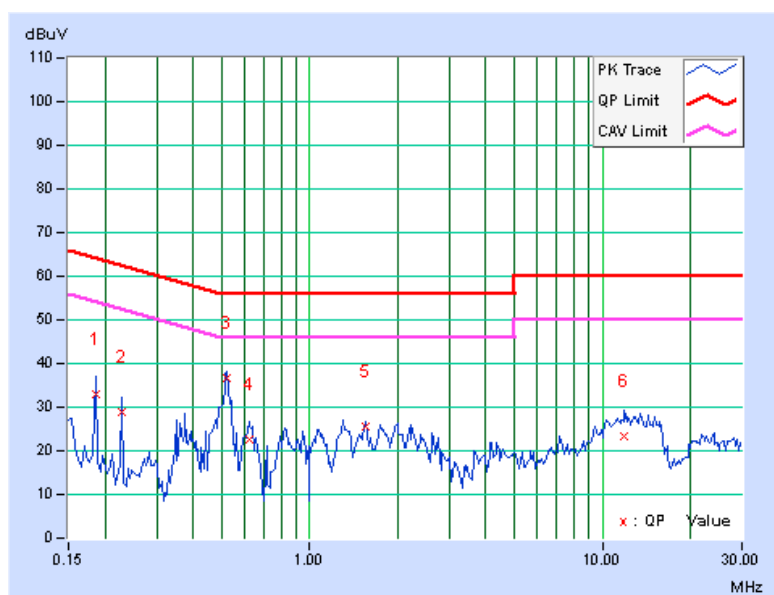


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PHASE	Line 2	6dB BANDWIDTH	9kHz
CHANNEL	Channel 60	TEST MODE	C

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18516	0.17	32.72	14.81	32.89	14.98	64.25	54.25	-31.36	-39.27
2	0.22812	0.18	28.74	13.67	28.92	13.85	62.52	52.52	-33.60	-38.67
3	0.52109	0.24	36.33	35.41	36.57	35.65	56.00	46.00	-19.43	-10.35
4	0.61875	0.24	22.34	17.43	22.58	17.67	56.00	46.00	-33.42	-28.33
5	1.55469	0.27	25.36	22.83	25.63	23.10	56.00	46.00	-30.37	-22.90
6	11.94141	0.66	22.69	16.86	23.35	17.52	60.00	50.00	-36.65	-32.48

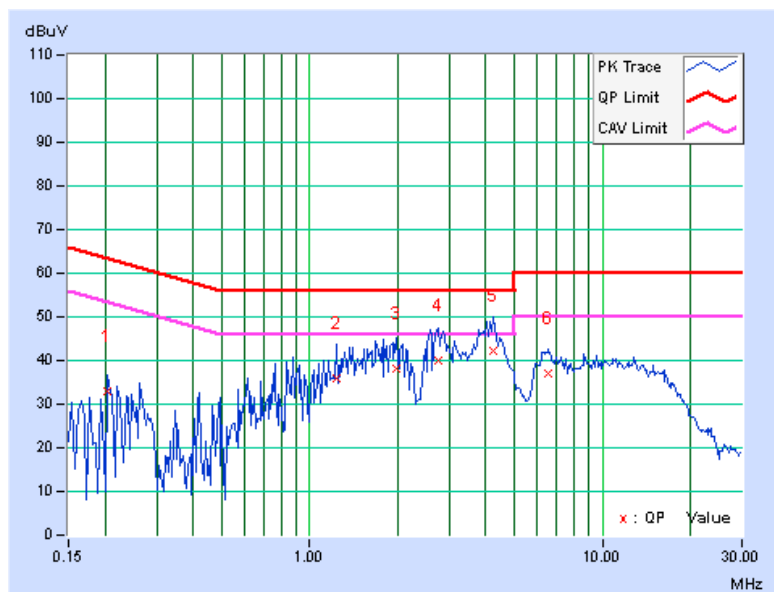
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. The emission levels of other frequencies were very low against the limit.
 3. Margin value = Emission level - Limit value
 4. Correction factor = Insertion loss + Cable loss
 5. Emission Level = Correction Factor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



PHASE	Line 1	6dB BANDWIDTH	9kHz
CHANNEL	Channel 100	TEST MODE	A

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20469	0.16	32.69	23.42	32.85	23.58	63.42	53.42	-30.57	-29.84
2	1.24219	0.26	35.60	27.00	35.86	27.26	56.00	46.00	-20.14	-18.74
3	1.97266	0.29	37.84	28.29	38.13	28.58	56.00	46.00	-17.87	-17.42
4	2.75781	0.33	39.64	28.29	39.97	28.62	56.00	46.00	-16.03	-17.38
5	4.24609	0.41	41.76	29.27	42.17	29.68	56.00	46.00	-13.83	-16.32
6	6.55859	0.54	36.53	30.75	37.07	31.29	60.00	50.00	-22.93	-18.71

- 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 Value + Reading Value.



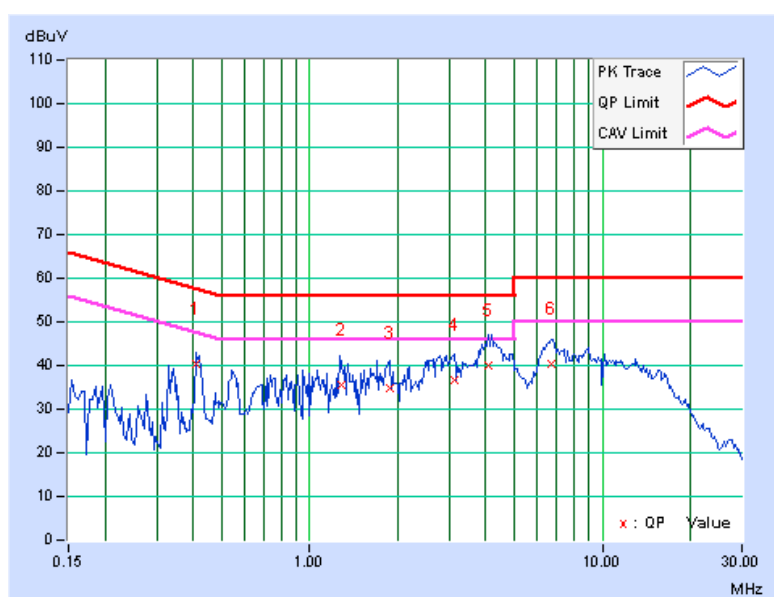


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PHASE	Line 2	6dB BANDWIDTH	9kHz
CHANNEL	Channel 100	TEST MODE	A

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.40781	0.24	40.15	33.25	40.39	33.49	57.69	47.69	-17.30	-14.20
2	1.27953	0.26	35.22	23.97	35.48	24.23	56.00	46.00	-20.52	-21.77
3	1.87500	0.28	34.45	24.20	34.73	24.48	56.00	46.00	-21.27	-21.52
4	3.10938	0.34	36.17	26.43	36.51	26.77	56.00	46.00	-19.49	-19.23
5	4.09766	0.38	39.46	26.81	39.84	27.19	56.00	46.00	-16.16	-18.81
6	6.67578	0.48	39.99	34.88	40.47	35.36	60.00	50.00	-19.53	-14.64

- 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 Value + Reading Value.



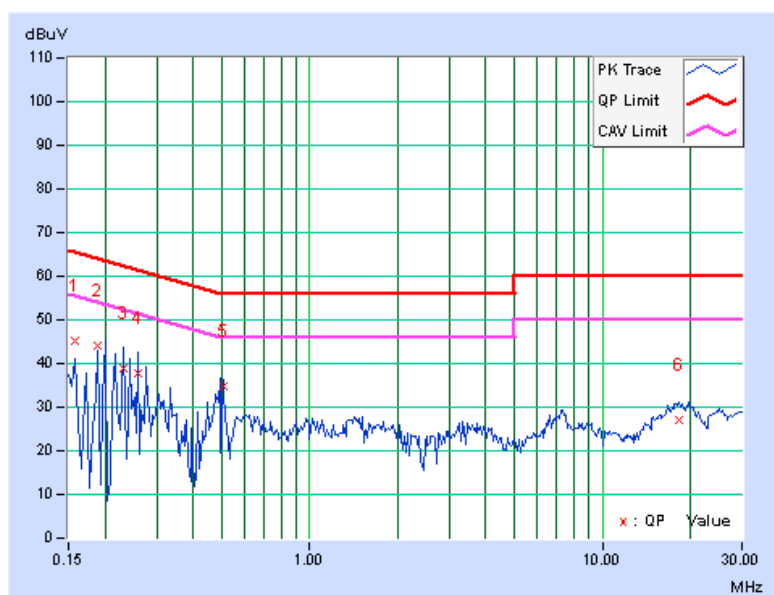


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PHASE	Line 1	6dB BANDWIDTH	9kHz
CHANNEL	Channel 100	TEST MODE	B

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	0.16	44.85	26.93	45.01	27.09	65.58	55.58	-20.57	-28.49
2	0.18906	0.16	43.88	27.67	44.04	27.83	64.08	54.08	-20.04	-26.25
3	0.23203	0.17	38.80	22.08	38.97	22.25	62.38	52.38	-23.41	-30.13
4	0.25938	0.18	37.45	22.54	37.63	22.72	61.45	51.45	-23.82	-28.73
5	0.50547	0.23	34.57	25.01	34.80	25.24	56.00	46.00	-21.20	-20.76
6	18.32813	1.14	25.74	20.00	26.88	21.14	60.00	50.00	-33.12	-28.86

- 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 Value + Reading Value.

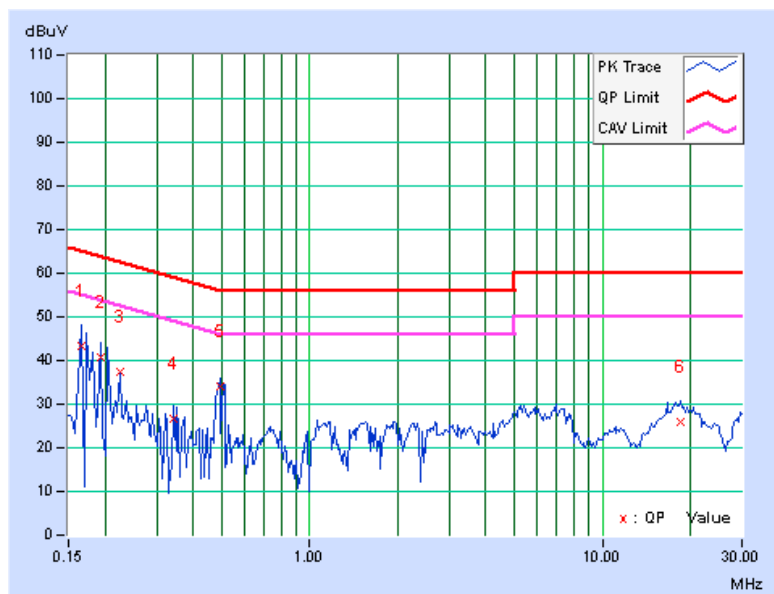




PHASE	Line 2	6dB BANDWIDTH	9kHz
CHANNEL	Channel 100	TEST MODE	B

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	0.17	43.24	24.43	43.41	24.60	65.18	55.18	-21.77	-30.58
2	0.19297	0.17	40.55	23.99	40.72	24.16	63.91	53.91	-23.19	-29.75
3	0.22422	0.18	37.14	22.42	37.32	22.60	62.66	52.66	-25.34	-30.06
4	0.34141	0.22	26.40	13.16	26.62	13.38	59.17	49.17	-32.55	-35.79
5	0.49375	0.24	33.89	25.39	34.13	25.63	56.10	46.10	-21.97	-20.47
6	18.41797	0.88	25.01	18.62	25.89	19.50	60.00	50.00	-34.11	-30.50

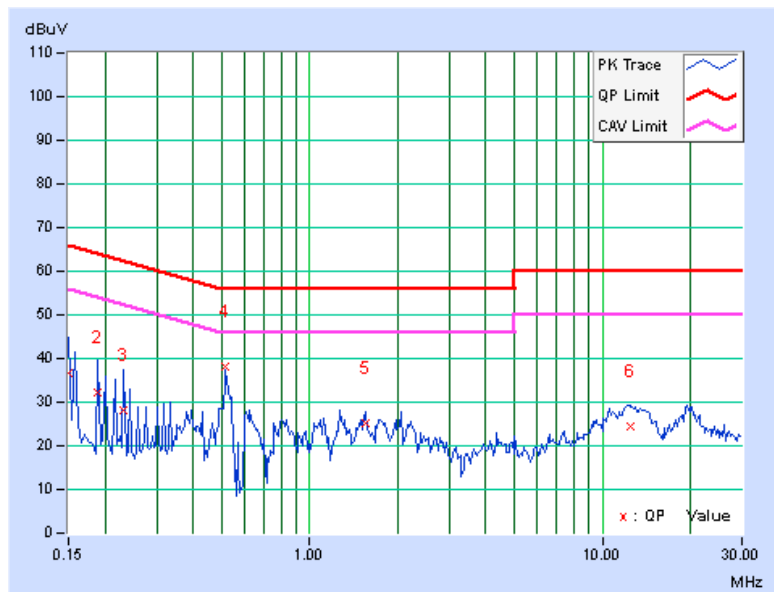
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. The emission levels of other frequencies were very low against the limit.
 3. Margin value = Emission level - Limit value
 4. Correction factor = Insertion loss + Cable loss
 5. Emission Level = Correction Factor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



PHASE	Line 1	6dB BANDWIDTH	9kHz
CHANNEL	Channel 100	TEST MODE	C

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.16	36.67	22.89	36.83	23.05	66.00	56.00	-29.17	-32.95
2	0.18906	0.16	31.93	16.85	32.09	17.01	64.08	54.08	-31.99	-37.07
3	0.23203	0.17	27.99	14.88	28.16	15.05	62.38	52.38	-34.22	-37.33
4	0.51719	0.23	38.00	36.59	38.23	36.82	56.00	46.00	-17.77	-9.18
5	1.55078	0.27	25.06	22.51	25.33	22.78	56.00	46.00	-30.67	-23.22
6	12.50391	0.85	23.60	17.66	24.45	18.51	60.00	50.00	-35.55	-31.49

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



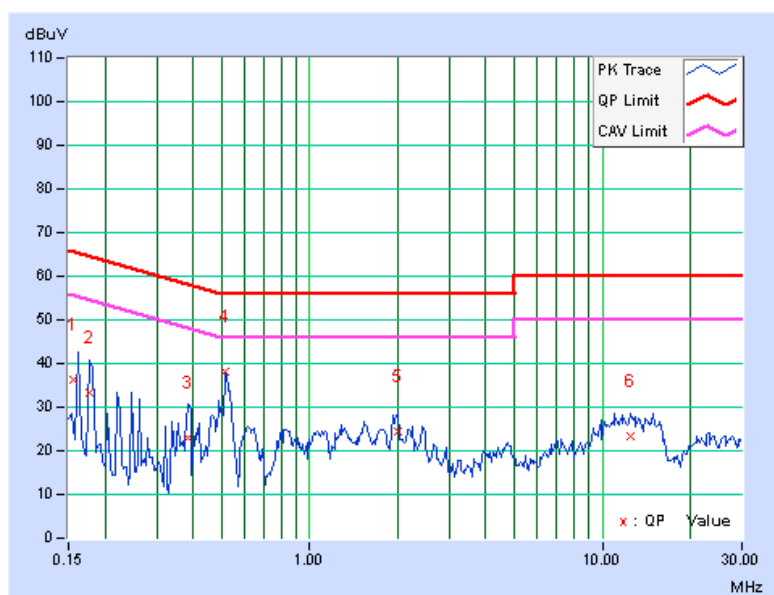


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PHASE	Line 2	6dB BANDWIDTH	9kHz
CHANNEL	Channel 100	TEST MODE	C

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15536	0.17	36.05	21.53	36.22	21.70	65.71	55.71	-29.49	-34.01
2	0.17734	0.17	33.29	13.85	33.46	14.02	64.61	54.61	-31.15	-40.59
3	0.38438	0.23	22.81	17.52	23.04	17.75	58.18	48.18	-35.14	-30.43
4	0.51719	0.24	37.76	35.81	38.00	36.05	56.00	46.00	-18.00	-9.95
5	2.01172	0.28	24.05	17.76	24.33	18.04	56.00	46.00	-31.67	-27.96
6	12.46094	0.68	22.58	16.16	23.26	16.84	60.00	50.00	-36.74	-33.16

- 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.



4.3 PEAK TRANSMIT POWER MEASUREMENT

4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

FREQUENCY BAND	LIMIT
5.150 ~ 5.250GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.250 ~ 5.350GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.470 ~ 5.725GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB

NOTE: Where B is the 26dB emission bandwidth in MHz.

Per KDB 662911 D01 Multiple Transmitter Output v02 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 4;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any NANT;

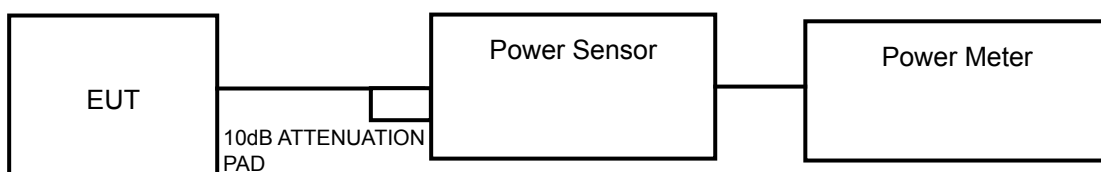
Array Gain = 5 log(NANT/NSS) dB or 3 dB, whichever is less for 20-MHz channel widths with NANT ≥ 5.

For power measurements on all other devices: Array Gain = 10 log(NANT/NSS) dB.

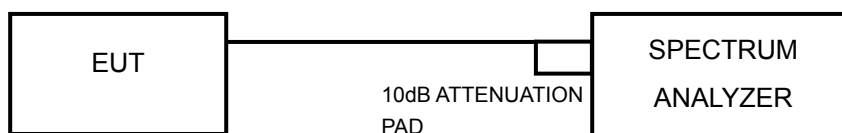
4.3.2 TEST SETUP

FOR POWER OUTPUT MEASUREMENT

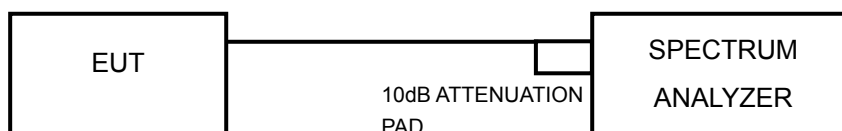
For 802.11a, 802.11n (20MHz), 802.11n (40MHz)



For 802.11ac (80MHz)



FOR 26dB BANDWIDTH



4.3.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.3.4 TEST PROCEDURE

FOR AVERAGE POWER MEASUREMENT

For 802.11a, 802.11n (20MHz), 802.11n (40MHz)

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. Duty factor is not added to measured value.

For 802.11ac (80MHz)

- 1) Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- 2) Set sweep trigger to “free run”.
- 3) Set RBW = 1 MHz.
- 4) Set VBW \geq 3 MHz
- 5) Number of points in sweep \geq 2 Span / RBW.
- 6) Sweep time \leq (number of points in sweep) * T
- 7) Detector = RMS.
- 8) Trace mode = max hold.
- 9) Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.

FOR 26dB BANDWIDTH

- 1) Set RBW = approximately 1% of the emission bandwidth.
- 2) Set the VBW > RBW.
- 3) Detector = Peak.
- 4) Trace mode = max hold.
- 5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

4.3.5 DEVIATION FROM TEST STANDARD

No deviation.

4.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

4.3.7 TEST RESULTS

POWER OUTPUT:

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	26.485	14.23	17	PASS
40	5200	25.410	14.05	17	PASS
48	5240	26.062	14.16	17	PASS
52	5260	25.882	14.13	23.98	PASS
60	5300	27.861	14.45	24	PASS
64	5320	26.546	14.24	24	PASS
100	5500	26.669	14.26	24	PASS
116	5580	26.182	14.18	24	PASS
140	5700	26.303	14.20	24	PASS

NOTE:

For 5180~5240MHz:

1. $4\text{dBm} + 10\log(20.24) = 17.06\text{dBm} > 17\text{dBm}$.
2. $4\text{dBm} + 10\log(20.89) = 17.20\text{dBm} > 17\text{dBm}$.
3. $4\text{dBm} + 10\log(19.94) = 17.00\text{dBm} > 17\text{dBm}$.

For 5260~5700MHz:

1. $11\text{dBm} + 10\log(19.88) = 23.98\text{dBm} < 24\text{dBm}$.
2. $11\text{dBm} + 10\log(20.51) = 24.12\text{dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(21.09) = 24.24\text{dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(20.24) = 24.06\text{dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(20.70) = 24.16\text{dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(20.28) = 24.07\text{dBm} > 24\text{dBm}$.



802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	21.979	13.42	17	PASS
40	5200	21.330	13.29	17	PASS
48	5240	21.380	13.30	17	PASS
52	5260	22.029	13.43	24	PASS
60	5300	21.429	13.31	24	PASS
64	5320	21.330	13.29	24	PASS
100	5500	22.646	13.55	24	PASS
116	5580	22.439	13.51	24	PASS
140	5700	22.336	13.49	24	PASS

NOTE:

For 5180~5240MHz:

1. $4\text{dBm} + 10\log(20.66) = 17.15\text{dBm} > 17\text{dBm}$.
2. $4\text{dBm} + 10\log(20.62) = 17.14\text{dBm} > 17\text{dBm}$.
3. $4\text{dBm} + 10\log(20.72) = 17.16\text{dBm} > 17\text{dBm}$.

For 5260~5700MHz:

1. $11\text{dBm} + 10\log(21.10) = 24.24\text{dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(20.59) = 24.14\text{dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(20.61) = 24.14\text{dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(20.95) = 24.21\text{dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(20.62) = 24.14\text{dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(20.77) = 24.17\text{dBm} > 24\text{dBm}$.



802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	19.861	12.98	17	PASS
46	5230	19.770	12.96	17	PASS
54	5270	19.275	12.85	24	PASS
62	5310	18.621	12.70	24	PASS
102	5510	16.788	12.25	24	PASS
110	5550	16.634	12.21	24	PASS
134	5670	18.197	12.60	24	PASS

NOTE:

For 5190~5230MHz:

- 1. $4\text{dBm} + 10\log(45.02) = 20.53\text{dBm} > 17\text{dBm}$.
- 2. $4\text{dBm} + 10\log(44.18) = 20.45\text{dBm} > 17\text{dBm}$.

For 5270~5670MHz:

- 1. $11\text{dBm} + 10\log(43.99) = 27.43\text{dBm} > 24\text{dBm}$.
- 2. $11\text{dBm} + 10\log(45.11) = 27.54\text{dBm} > 24\text{dBm}$.
- 3. $11\text{dBm} + 10\log(44.77) = 27.51\text{dBm} > 24\text{dBm}$.
- 4. $11\text{dBm} + 10\log(45.30) = 27.56\text{dBm} > 24\text{dBm}$.
- 5. $11\text{dBm} + 10\log(45.40) = 27.57\text{dBm} > 24\text{dBm}$.

802.11ac (80MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
42	5210	13.900	11.43	17	PASS
58	5290	14.060	11.48	24	PASS
106	5530	11.830	10.73	24	PASS

NOTE:

For 5180~5240MHz:

- 1. $4\text{dBm} + 10\log(83.67) = 23.23\text{dBm} > 17\text{dBm}$.

For 5260~5700MHz:

- 1. $11\text{dBm} + 10\log(83.61) = 30.22\text{dBm} > 24\text{dBm}$.
- 2. $11\text{dBm} + 10\log(83.91) = 30.24\text{dBm} > 24\text{dBm}$.



26dB BANDWIDTH:

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	20.24	PASS
40	5200	20.89	PASS
48	5240	19.94	PASS
52	5260	19.88	PASS
60	5300	20.51	PASS
64	5320	21.09	PASS
100	5500	20.24	PASS
116	5580	20.70	PASS
140	5700	20.28	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	20.66	PASS
40	5200	20.62	PASS
48	5240	20.72	PASS
52	5260	21.10	PASS
60	5300	20.59	PASS
64	5320	20.61	PASS
100	5500	20.95	PASS
116	5580	20.62	PASS
140	5700	20.77	PASS



802.11n (40MHz)

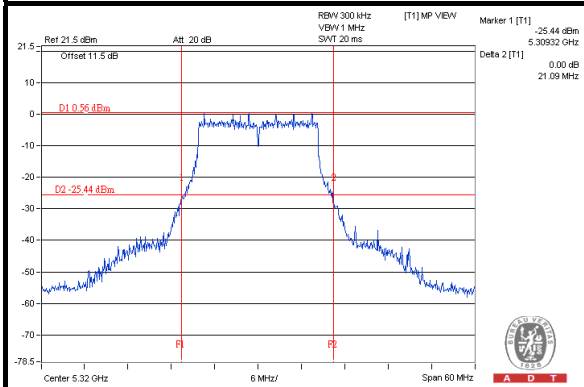
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
38	5190	45.02	PASS
46	5230	44.18	PASS
54	5270	43.99	PASS
62	5310	45.11	PASS
102	5510	44.77	PASS
110	5550	45.30	PASS
134	5670	45.40	PASS

802.11ac (80MHz)

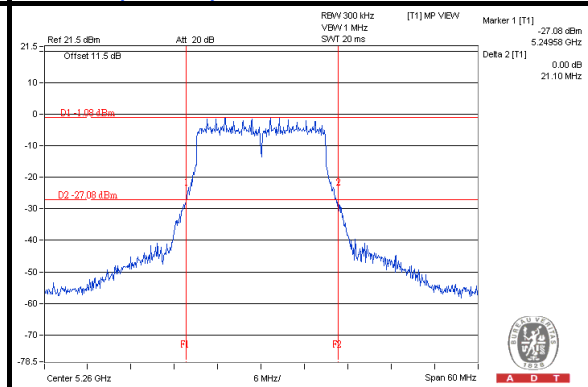
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
42	5210	83.67	PASS
58	5290	83.61	PASS
106	5530	83.91	PASS

SPECTRUM PLOT OF WORST VALUE

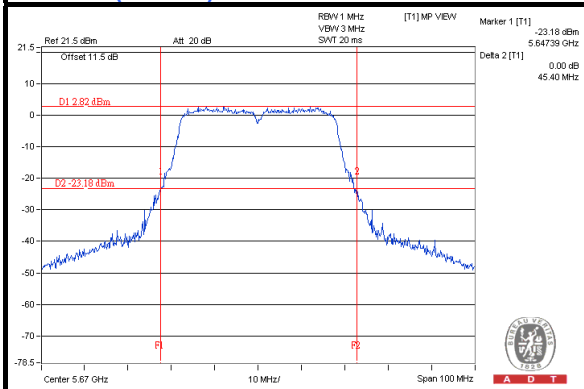
802.11a



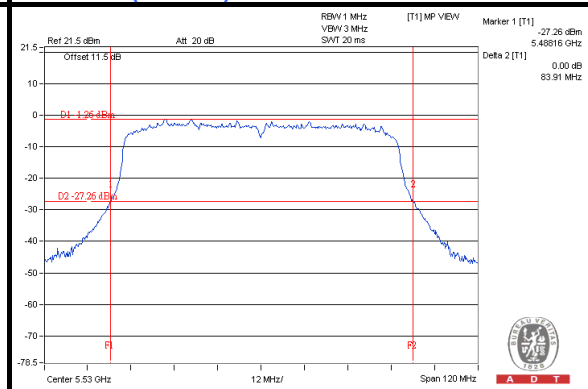
802.11n (20MHz)



802.11n (40MHz)



802.11ac (80MHz)

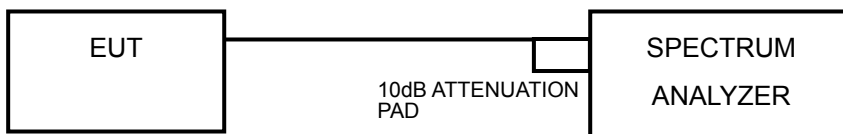


4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

FREQUENCY BAND	LIMIT
5.150 ~ 5.250GHz	4dBm
5.250 ~ 5.350GHz	11dBm
5.470 ~ 5.725GHz	11dBm

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.4.4 TEST PROCEDURES

802.11a, 802.11n (20MHz), 802.11n (40MHz):

Using method SA-1

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 30 KHz, Set VBW \geq 1 MHz, Detector = RMS
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to "free run".
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Record the max value

802.11ac (80MHz):

Using method SA-2

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 30 KHz, Set VBW \geq 1 MHz, Detector = RMS
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to "free run".
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Record the max value and add $10 \log (1/\text{duty cycle})$

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

Same as 4.3.6.



4.4.7 TEST RESULTS

802.11a

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	-1.07	4	PASS
40	5200	-0.98	4	PASS
48	5240	-0.54	4	PASS
52	5260	-0.33	11	PASS
60	5300	0.07	11	PASS
64	5320	0.41	11	PASS
100	5500	0.41	11	PASS
116	5580	-0.11	11	PASS
140	5700	-0.33	11	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	-2.04	4	PASS
40	5200	-2.03	4	PASS
48	5240	-1.96	4	PASS
52	5260	-1.66	11	PASS
60	5300	-1.42	11	PASS
64	5320	-1.19	11	PASS
100	5500	-0.91	11	PASS
116	5580	-1.12	11	PASS
140	5700	-1.47	11	PASS

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
38	5190	-5.72	4	PASS
46	5230	-4.70	4	PASS
54	5270	-4.67	11	PASS
62	5310	-4.32	11	PASS
102	5510	-4.62	11	PASS
110	5550	-4.80	11	PASS
134	5670	-5.05	11	PASS



802.11ac(80MHz)

CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
42	5210	-9.43	0.17	-9.26	4	PASS
58	5290	-9.29	0.17	-9.12	11	PASS
106	5530	-9.65	0.17	-9.48	11	PASS

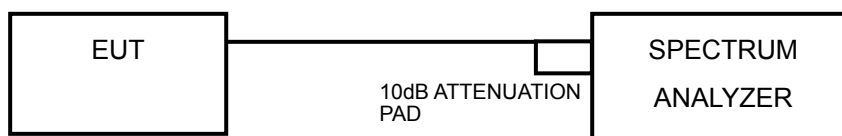
NOTE: Refer to section 3.3 for duty cycle spectrum plot.

4.5 PEAK POWER EXCURSION MEASUREMENT

4.5.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Shall not exceed 13 dB.

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.5.4 TEST PROCEDURE

- 1) Set RBW = 1 MHz, VBW \geq 3 MHz, Detector = peak.
- 2) Trace mode = max-hold. Allow the sweeps to continue until the trace stabilizes.
- 3) Use the peak search function to find the peak of the spectrum.
- 4) Measure the PPSD.
- 5) Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.
Find the worst channel and modulation mode as above test procedure, and follow KDB 789033 D01 General UNII Test Procedures v01r03 and repeat step 1 to 5 for final testing of each modulation mode on a single channel (all modulation types) in a single operating band to compliance with the peak excursion requirement.

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITIONS

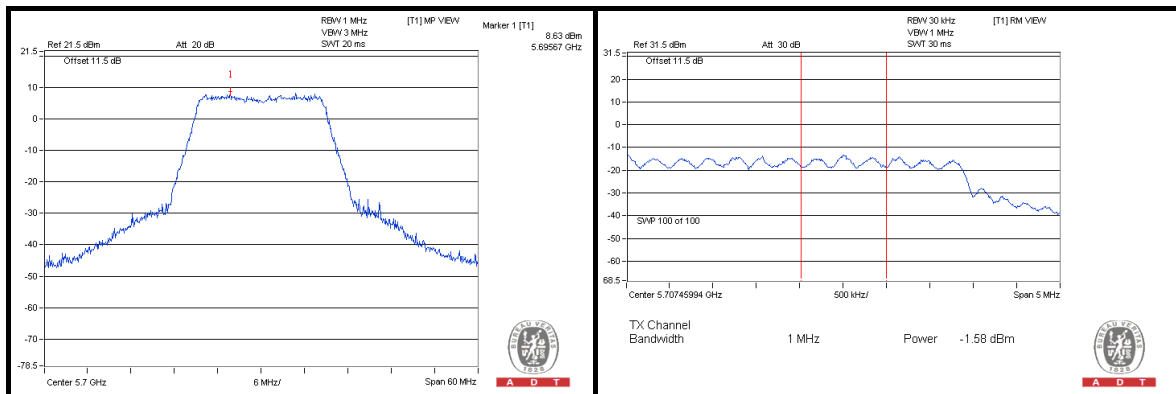
Same as 4.2.6



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4.5.7 TEST RESULTS

MODULATION MODE	MODULATION TYPE	CHAN. FREQ. (MHz)	PEAK VALUE (dBm)	PPSD WITHOUT DUTY FACTOR (dBm)	PPSD WITH DUTY FACTOR (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS /FAIL
802.11a	BPSK	5700	8.59	-0.33	-0.33	8.92	13	PASS
	QPSK		8.55	-0.65	-0.65	9.20	13	PASS
	16QAM		9.42	-0.62	-0.51	9.93	13	PASS
	64QAM		9.32	-0.72	-0.52	9.84	13	PASS
802.11n (20MHz)	BPSK	5700	7.46	-1.47	-1.47	8.93	13	PASS
	QPSK		7.88	-1.64	-1.64	9.52	13	PASS
	16QAM		8.63	-1.58	-1.46	10.09	13	PASS
	64QAM		8.37	-1.61	-1.41	9.78	13	PASS
802.11n (40MHz)	BPSK	5670	3.50	-5.05	-5.05	8.55	13	PASS
	QPSK		4.01	-5.13	-5.02	9.03	13	PASS
	16QAM		4.63	-5.29	-5.04	9.67	13	PASS
	64QAM		4.26	-5.55	-5.18	9.44	13	PASS
802.11ac (80MHz)	BPSK	5530	-0.93	-9.65	-9.48	8.55	13	PASS
	QPSK		-1.27	-9.93	-9.61	8.34	13	PASS
	16QAM		-2.20	-9.90	-9.31	7.11	13	PASS
	64QAM		-1.83	-9.15	-8.55	6.72	13	PASS
	256QAM		-0.90	-9.58	-8.90	8.00	13	PASS

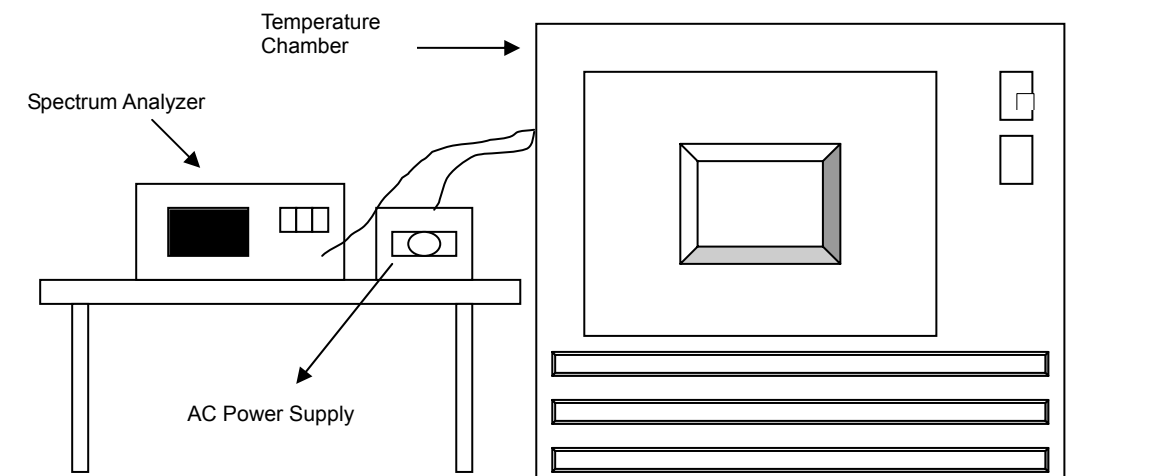


4.6 FREQUENCY STABILITY

4.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency of the carrier signal shall be maintained within band of operation

4.6.2 TEST SETUP



4.6.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.6.4 TEST PROCEDURE

- a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- b. Turn the EUT on and couple its output to a spectrum analyzer.
- c. Turn the EUT off and set the chamber to the highest temperature specified.
- d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.5 DEVIATION FROM TEST STANDARD

No deviation.

4.6.6 EUT OPERATING CONDITION

Set the EUT transmit at un-modulation mode to test frequency stability.



4.6.7 TEST RESULTS

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5200MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
55	120	5199.9755	-0.00047	5199.9769	-0.00044	5199.9768	-0.00045	5199.9792	-0.00040
50	120	5200.0258	0.00050	5200.0247	0.00047	5200.0262	0.00050	5200.0235	0.00045
40	120	5200.0162	0.00031	5200.0208	0.00040	5200.0199	0.00038	5200.0235	0.00045
30	120	5200.0066	0.00013	5199.9999	0.00000	5200.0006	0.00001	5200.0066	0.00013
20	120	5199.9863	-0.00026	5199.9805	-0.00038	5199.9853	-0.00028	5199.9847	-0.00029
10	120	5199.9721	-0.00054	5199.9798	-0.00039	5199.9703	-0.00057	5199.9758	-0.00047
0	120	5200.0100	0.00019	5200.0171	0.00033	5200.0180	0.00035	5200.0163	0.00031
-10	120	5200.0040	0.00008	5200.0001	0.00000	5200.0045	0.00009	5200.0042	0.00008

FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5200MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5199.9870	-0.00025	5199.9806	-0.00037	5199.9852	-0.00028	5199.9854	-0.00028
	120	5199.9863	-0.00026	5199.9805	-0.00038	5199.9853	-0.00028	5199.9847	-0.00029
	102	5199.9855	-0.00028	5199.9809	-0.00037	5199.9853	-0.00028	5199.9857	-0.00027



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5. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



6. 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 accredited and approved according to ISO/IEC 17025.

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

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

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Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

7. APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

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