

FCC TEST REPORT (15.407)

REPORT NO.: RF140502C06-4 R1

MODEL NO.: KYY24

FCC ID: JOYKYY24

RECEIVED: May 02, 2014

TESTED: May 14, 2014 ~ May 25, 2014

ISSUED: Jun. 27, 2014

APPLICANT: Kyocera Corporation c/o Kyocera Communications, Inc.

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ISSUED BY: Bureau Veritas Consumer Products Services
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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF140502C06-4	Original release	Jun. 11, 2014
RF140502C06-4 R1	Revise Battery model name	Jun. 27, 2014

1. CERTIFICATION

PRODUCT: Mobile Phone

MODEL NO.: KYY24

BRAND: TORQUE G01

APPLICANT: Kyocera Corporation c/o Kyocera Communications, Inc.

TESTED: May 14, 2014 ~ May 25, 2014

TEST SAMPLE: Identical Prototype

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

ANSI C63.10-2009

The above equipment (model: KYY24) 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 : Vera Huang , **DATE :** Jun. 27, 2014
Vera Huang / Specialist

APPROVED BY : Sam chen , **DATE :** Jun. 27, 2014
Sam Chen / Senior Project Engineer

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 -6.49dB at 13.56250MHz.
15.407(b)(1/2/3)(b)(6)	Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -2.46dB at 5725MHz.
15.407(a)(1/2)	Peak 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	2.93 dB
	200MHz ~1000MHz	2.95 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.	KYY24
POWER SUPPLY	5.0Vdc (adapter or host equipment) 3.8Vdc (Li-ion battery)
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 MCS7 802.11ac: up to V9
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	19.77mW for 5180 ~ 5240MHz 32.89mW for 5260 ~ 5320MHz 31.48mW for 5500 ~ 5700MHz
ANTENNA TYPE	Monopole antenna with 0dBi gain (5180 ~ 5240MHz) Monopole antenna with 0dBi gain (5260 ~ 5320MHz) Monopole antenna with 0dBi gain (5500 ~ 5700MHz)
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:

1. The EUT contains following accessory devices.

ITEM	BRAND	MODEL	SPECIFICATION
Battery	KYOCERA	5AAXBTO81JAA-	3.8Vdc, 3000mAh
Earphone	HOSIDEN	HDH0261	1.5m cable

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

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

3. The above EUT information is declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

WLAN 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	5210 MHz

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

WLAN 5500 ~ 5700MHz

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

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

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

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

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	
-	√	√	√	√	-

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 **Z-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)
-	802.11a	5180-5240	36 to 48	36, 44, 48	OFDM	BPSK	6.0
	802.11n (20MHz)		36 to 48	36, 44, 48	OFDM	BPSK	MCS0
	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
	802.11ac (80MHz)		42	42	OFDM	BPSK	V0
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	MCS0
	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	MCS0
	802.11ac (80MHz)		58	58	OFDM	BPSK	V0
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	MCS0
	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	MCS0
	802.11ac (80MHz)		106	106	OFDM	BPSK	V0

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)
-	802.11a	5500-5700	100 to 140	140	OFDM	BPSK	6.0

POWER LINE CONDUCTED EMISSION TEST:

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5500-5700	100 to 140	140	OFDM	BPSK	6.0

BANDEDGE MEASUREMENT:

☒ 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)
-	802.11a	5180-5240	36 to 48	36, 48	OFDM	BPSK	6.0
	802.11n (20MHz)		36 to 48	36, 48	OFDM	BPSK	MCS0
	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
	802.11ac (80MHz)		42	42	OFDM	BPSK	V0
-	802.11a	5260-5320	52 to 64	52, 64	OFDM	BPSK	6.0
	802.11n (20MHz)		52 to 64	52, 64	OFDM	BPSK	MCS0
	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	MCS0
	802.11ac (80MHz)		58	58	OFDM	BPSK	V0
-	802.11a	5500-5700	100 to 140	100, 140	OFDM	BPSK	6.0
	802.11n (20MHz)		100 to 140	100, 140	OFDM	BPSK	MCS0
	802.11n (40MHz)		102 to 134	102, 134	OFDM	BPSK	MCS0
	802.11ac (80MHz)		106	106	OFDM	BPSK	V0

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)
-	802.11a	5180-5240	36 to 48	36, 44, 48	OFDM	BPSK	6.0
	802.11n (20MHz)		36 to 48	36, 44, 48	OFDM	BPSK	MCS0
	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
	802.11ac (80MHz)		42	42	OFDM	BPSK	V0
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	MCS0
	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	MCS0
	802.11ac (80MHz)		58	58	OFDM	BPSK	V0
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	MCS0
	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	MCS0
	802.11ac (80MHz)		106	106	OFDM	BPSK	V0

Test CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 65%RH	120Vac, 60Hz	Harry Hsueh
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Harry Hsueh
PLC	25deg. C, 65%RH	120Vac, 60Hz	Peter Weng
APCM	25deg. C, 65%RH	120Vac, 60Hz	Howard Kao

3.3 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.

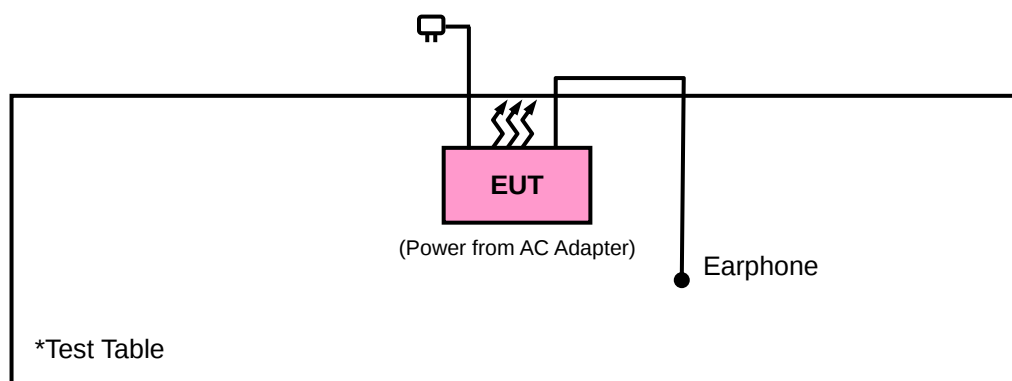
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Adapter	KDDI(MITSUMI)	0301PQA	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A

NOTE:

1. All power cords of the above support units are non shielded (1.8m).
2. Item 1 was provided by client.

3.3.1 CONFIGURATION OF SYSTEM UNDER TEST





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3.4 DUTY CYCLE TEST SIGNAL

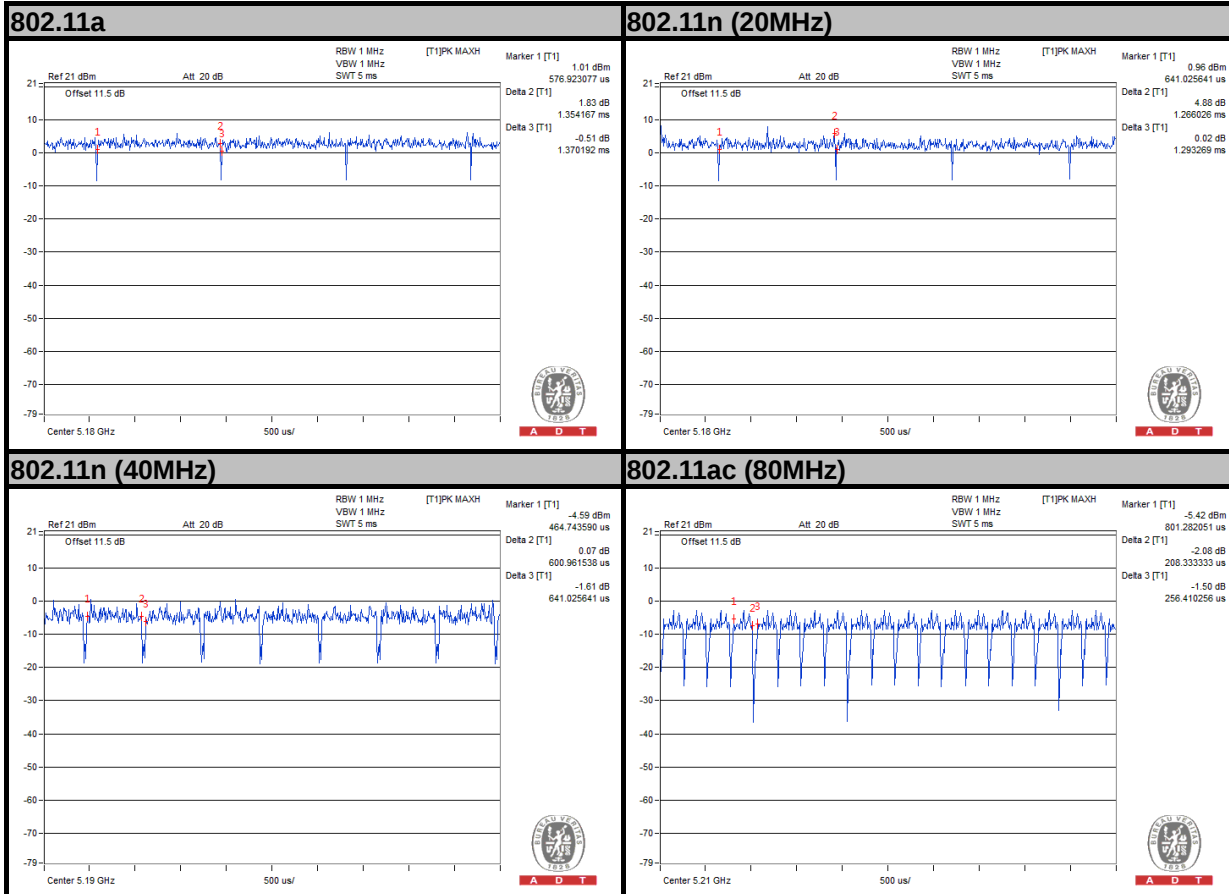
MODULATION TYPE: BPSK

802.11a: Duty cycle of test signal is > 98 %, duty factor is not required.

802.11n (20MHz): Duty cycle = $1.266/1.293 = 0.979$, Duty factor = $10 * \log(1/0.979) = 0.09$

802.11n (40MHz): Duty cycle = $601/641 = 0.938$, Duty factor = $10 * \log(1/0.938) = 0.28$

802.11ac (80MHz): Duty cycle = $208/256 = 0.813$, Duty factor = $10 * \log(1/0.813) = 0.90$





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MODULATION TYPE: QPSK

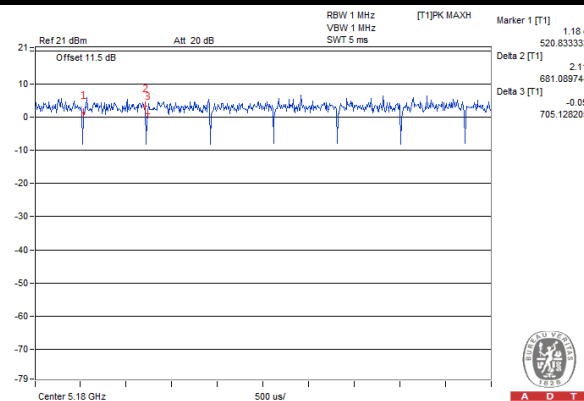
802.11a: Duty cycle = $681/705 = 0.966$, Duty factor = $10 * \log(1/0.966) = 0.15$

802.11n (20MHz): Duty cycle = $649/668 = 0.972$, Duty factor = $10 * \log(1/0.972) = 0.12$

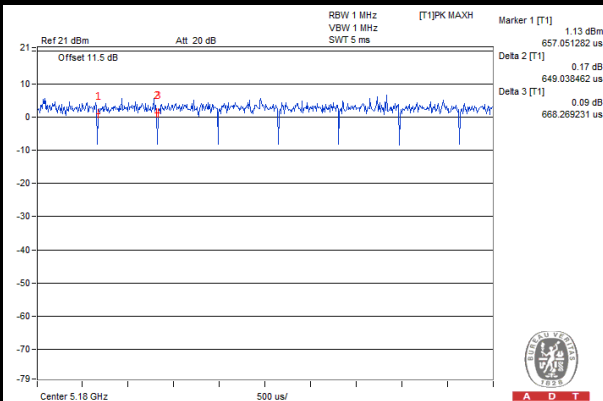
802.11n (40MHz): Duty cycle = $304/344 = 0.884$, Duty factor = $10 * \log(1/0.884) = 0.54$

802.11ac (80MHz): Duty cycle = $112/155 = 0.723$, Duty factor = $10 * \log(1/0.723) = 1.41$

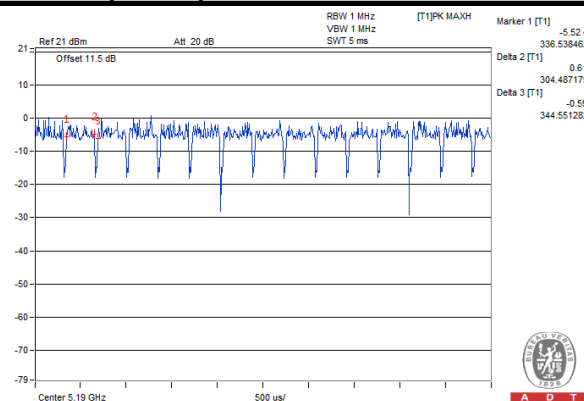
802.11a



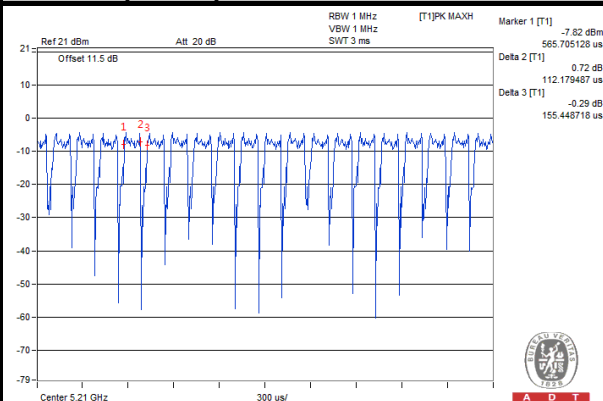
802.11n (20MHz)



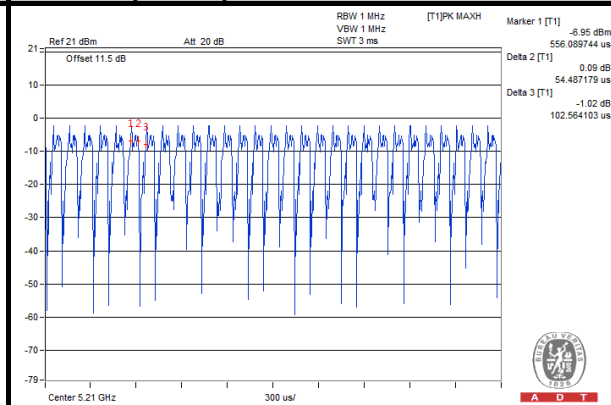
802.11n (40MHz)



802.11ac (80MHz)



802.11ac (80MHz): Duty cycle = $54/102 = 0.529$, Duty factor = $10 * \log(1/0.529) = 2.77$





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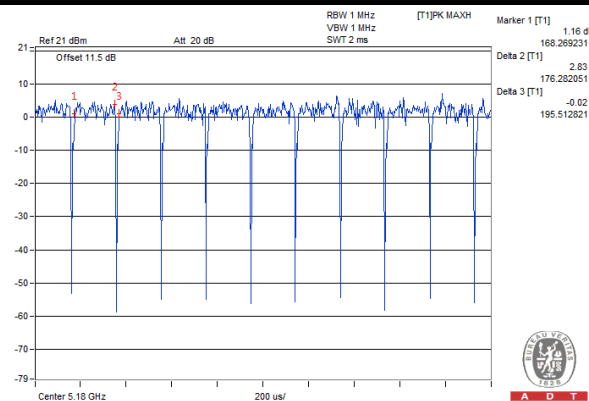
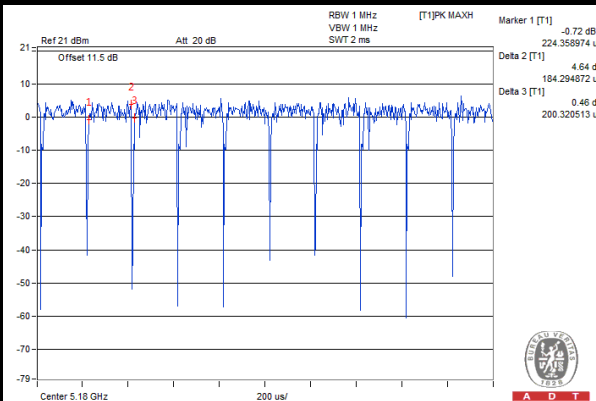
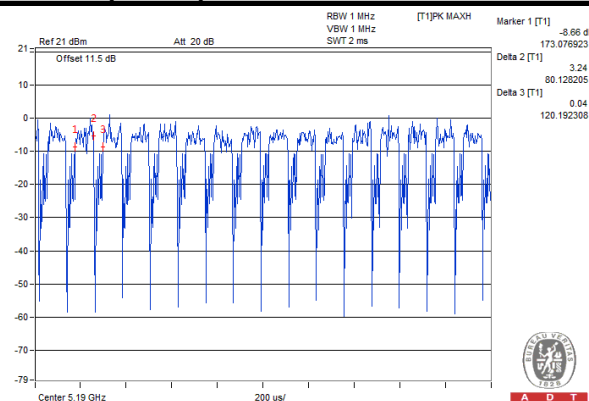
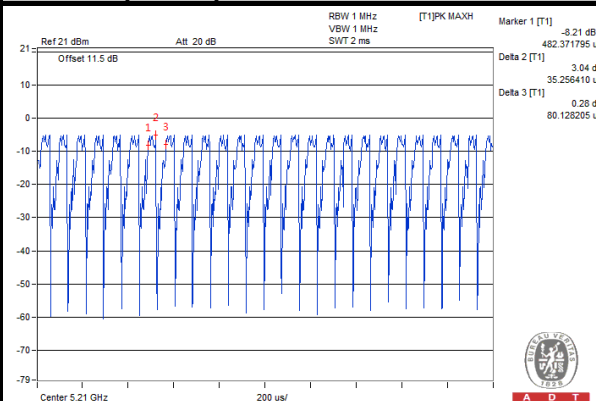
MODULATION TYPE: 64QAM

802.11a: Duty cycle = $176/195 = 0.903$, Duty factor = $10 * \log(1/0.903) = 0.44$

802.11n (20MHz): Duty cycle = $184/200 = 0.92$, Duty factor = $10 * \log(1/0.92) = 0.36$

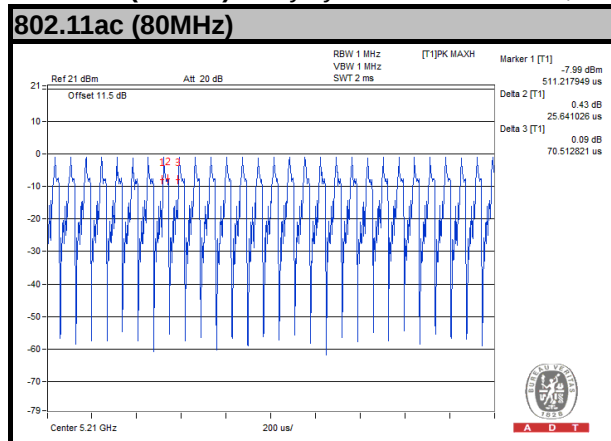
802.11n (40MHz): Duty cycle = $80/120 = 0.667$, Duty factor = $10 * \log(1/0.667) = 1.76$

802.11ac (80MHz): Duty cycle = $35/80 = 0.438$, Duty factor = $10 * \log(1/0.438) = 3.59$

802.11a**802.11n (20MHz)****802.11n (40MHz)****802.11ac (80MHz)**

MODULATION TYPE: 256QAM

802.11ac (80MHz): Duty cycle = $25/70 = 0.357$, Duty factor = $10 * \log(1/0.357) = 4.47$



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)

KDB 789033 D01 General UNII Test Procedures v01r03

ANSI C63.10-2009

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

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:

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

4.1.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100412	Sep. 13, 2013	Sep. 12, 2014
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 21, 2013	Dec. 20, 2014
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Feb. 27, 2014	Feb. 26, 2015
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D- 209	Sep. 12, 2013	Sep. 11, 2014
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 18, 2013	Dec. 17, 2014
Loop Antenna	HFH2-Z2	100070	Mar. 06, 2014	Mar. 05, 2016
Preamplifier EMCI	EMC 012645	980115	Dec. 26, 2013	Dec. 25, 2014
Preamplifier EMCI	EMC 184045	980116	Jan. 13, 2014	Jan. 12, 2015
Preamplifier EMCI	EMC 330H	980112	Dec. 27, 2013	Dec. 26, 2014
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309219/4	Oct. 18, 2013	Oct. 17, 2014
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250130/4	Oct. 18, 2013	Oct. 17, 2014
RF signal cable Worken	RG-213	NA	Nov. 07, 2013	Nov. 06, 2014
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA
Power Meter	ML2495A	1232002	Aug. 23, 2013	Aug. 22, 2014
Power Sensor	MA2411B	1207325	Aug. 23, 2013	Aug. 22, 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 calibration interval of the loop antenna is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in HwaYa Chamber 10.
4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
5. The FCC Site Registration No. is 690701.
6. The IC Site Registration No. is IC 7450F-10.

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 meters 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:

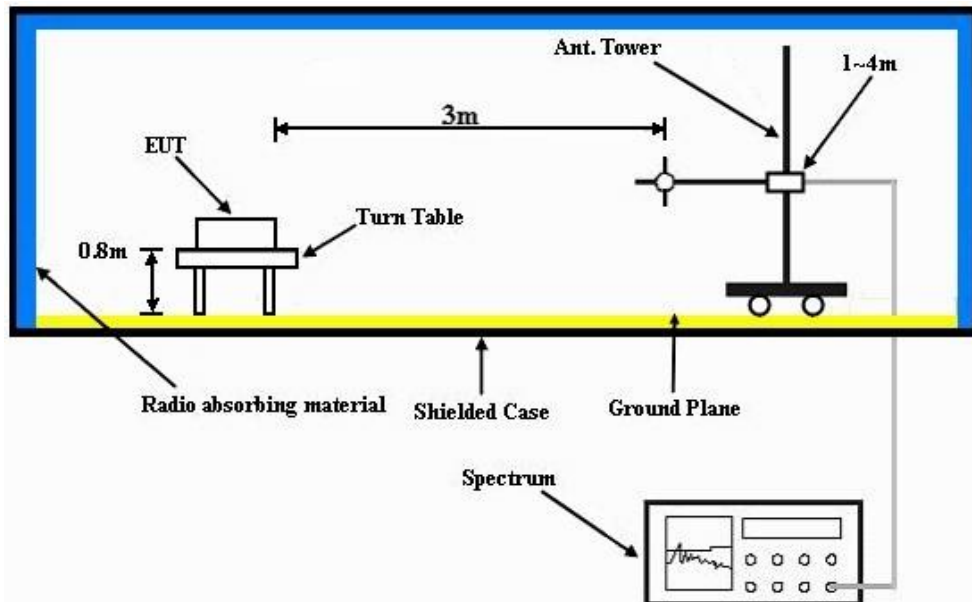
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency 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

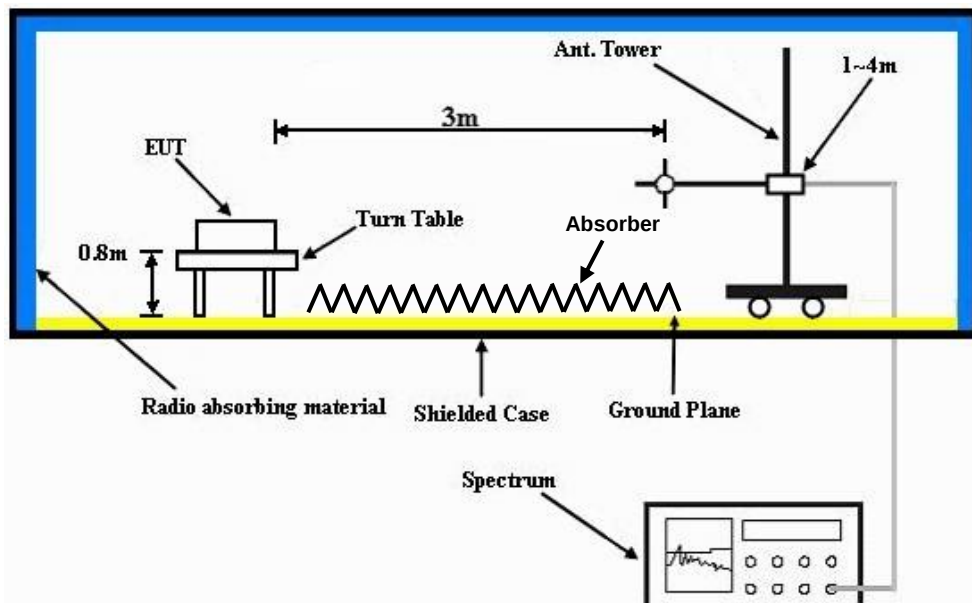
No deviation.

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 CONDITIONS

- Placed the EUT on a testing table.
- Use the software to control the EUT under transmission condition continuously at specific channel frequency.

4.1.8 TEST RESULTS

ABOVE 1GHz WORST-CASE DATA

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5148	46.77	38.52	54	-7.23	34.12	8.13	34	102	128	Average
5148	58.56	50.31	74	-15.44	34.12	8.13	34	102	128	Peak
5180	93.43	85.12			34.15	8.16	34	102	128	Average
5180	102.41	94.1			34.15	8.16	34	102	128	Peak
5352	44.8	36.17	54	-9.2	34.28	8.38	34.03	102	128	Average
5352	58.35	49.72	74	-15.65	34.28	8.38	34.03	102	128	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5128	45.44	37.22	54	-8.56	34.11	8.1	33.99	109	171	Average
5128	58.68	50.46	74	-15.32	34.11	8.1	33.99	109	171	Peak
5180	98.66	90.35			34.15	8.16	34	109	171	Average
5180	107.6	99.29			34.15	8.16	34	109	171	Peak
5458	44.39	35.57	54	-9.61	34.36	8.51	34.05	109	171	Average
5458	58.7	49.88	74	-15.3	34.36	8.51	34.05	109	171	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5180MHz: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 44	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Harry Hsueh

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5024	44.56	36.53	54	-9.44	34.03	7.97	33.97	102	128	Average
5024	57.99	49.96	74	-16.01	34.03	7.97	33.97	102	128	Peak
5220	94.52	86.13			34.17	8.22	34	102	128	Average
5220	103.26	94.87			34.17	8.22	34	102	128	Peak
5456	44.39	35.57	54	-9.61	34.36	8.51	34.05	102	128	Average
5456	58.67	49.85	74	-15.33	34.36	8.51	34.05	102	128	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5090	43.71	35.54	54	-10.29	34.08	8.07	33.98	109	171	Average
5090	58.13	49.96	74	-15.87	34.08	8.07	33.98	109	171	Peak
5220	99.05	90.66			34.17	8.22	34	109	171	Average
5220	107.82	99.43			34.17	8.22	34	109	171	Peak
5396	44.89	36.17	54	-9.11	34.32	8.44	34.04	109	171	Average
5396	57.68	48.96	74	-16.32	34.32	8.44	34.04	109	171	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5220MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5050	44.61	36.55	54	-9.39	34.04	8	33.98	101	127	Average
5050	58.1	50.04	74	-15.9	34.04	8	33.98	101	127	Peak
5240	93.68	85.24			34.19	8.26	34.01	101	127	Average
5240	102.65	94.21			34.19	8.26	34.01	101	127	Peak
5392	44.28	35.6	54	-9.72	34.31	8.41	34.04	101	127	Average
5392	57.69	49.01	74	-16.31	34.31	8.41	34.04	101	127	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5082	44.66	36.5	54	-9.34	34.07	8.07	33.98	108	166	Average
5082	57.5	49.34	74	-16.5	34.07	8.07	33.98	108	166	Peak
5240	98.81	90.37			34.19	8.26	34.01	108	166	Average
5240	107.11	98.67			34.19	8.26	34.01	108	166	Peak
5408	44	35.28	54	-10	34.32	8.44	34.04	108	166	Average
5408	58.13	49.41	74	-15.87	34.32	8.44	34.04	108	166	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5240MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5148	44.78	36.53	54	-9.22	34.12	8.13	34	102	128	Average
5148	57.25	49	74	-16.75	34.12	8.13	34	102	128	Peak
5260	95.15	86.69			34.21	8.26	34.01	102	128	Average
5260	104.31	95.85			34.21	8.26	34.01	102	128	Peak
5364	44.2	35.56	54	-9.8	34.29	8.38	34.03	102	128	Average
5364	57.73	49.09	74	-16.27	34.29	8.38	34.03	102	128	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5038	44.57	36.5	54	-9.43	34.04	8	33.97	109	171	Average
5038	57.83	49.76	74	-16.17	34.04	8	33.97	109	171	Peak
5260	101.33	92.87			34.21	8.26	34.01	109	171	Average
5260	109.18	100.72			34.21	8.26	34.01	109	171	Peak
5430	44.35	35.56	54	-9.65	34.35	8.48	34.04	109	171	Average
5430	57.75	48.96	74	-16.25	34.35	8.48	34.04	109	171	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5260MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5130	44.35	36.13	54	-9.65	34.11	8.1	33.99	100	127	Average
5130	58.34	50.12	74	-15.66	34.11	8.1	33.99	100	127	Peak
5300	95.79	87.25			34.24	8.32	34.02	100	127	Average
5300	104.2	95.66			34.24	8.32	34.02	100	127	Peak
5456	44.39	35.57	54	-9.61	34.36	8.51	34.05	100	127	Average
5456	59.03	50.21	74	-14.97	34.36	8.51	34.05	100	127	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5048	44.57	36.51	54	-9.43	34.04	8	33.98	109	171	Average
5048	57.55	49.49	74	-16.45	34.04	8	33.98	109	171	Peak
5300	99.25	90.71			34.24	8.32	34.02	109	171	Average
5300	108.15	99.61			34.24	8.32	34.02	109	171	Peak
5402	47.29	38.57	54	-6.71	34.32	8.44	34.04	109	171	Average
5402	59.1	50.38	74	-14.9	34.32	8.44	34.04	109	171	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5300MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5134	44.8	36.55	54	-9.2	34.11	8.13	33.99	100	102	Average
5134	57.48	49.23	74	-16.52	34.11	8.13	33.99	100	102	Peak
5320	96.24	87.66			34.25	8.35	34.02	100	102	Average
5320	104.64	96.06			34.25	8.35	34.02	100	102	Peak
5350	47.23	38.6	54	-6.77	34.28	8.38	34.03	100	102	Average
5350	59.58	50.95	74	-14.42	34.28	8.38	34.03	100	102	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5120	43.72	35.52	54	-10.28	34.09	8.1	33.99	105	181	Average
5120	57.33	49.13	74	-16.67	34.09	8.1	33.99	105	181	Peak
5320	100.27	91.69			34.25	8.35	34.02	105	181	Average
5320	109.9	101.32			34.25	8.35	34.02	105	181	Peak
5350	50.23	41.6	54	-3.77	34.28	8.38	34.03	105	181	Average
5350	61.86	53.23	74	-12.14	34.28	8.38	34.03	105	181	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5320MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5440	46.35	37.56	54	-7.65	34.35	8.48	34.04	107	118	Average
5440	57.43	48.64	74	-16.57	34.35	8.48	34.04	107	118	Peak
5470	58.39	49.56	68.3	-9.91	34.37	8.51	34.05	107	118	Peak
5500	99.31	90.39			34.4	8.57	34.05	107	118	Average
5500	106.49	97.57			34.4	8.57	34.05	107	118	Peak
5725	55.19	46.03	68.3	-13.11	34.62	8.65	34.11	107	118	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5448	45.39	36.56	54	-8.61	34.36	8.51	34.04	101	183	Average
5448	58.28	49.45	74	-15.72	34.36	8.51	34.04	101	183	Peak
5470	58.75	49.92	68.3	-9.55	34.37	8.51	34.05	101	183	Peak
5500	101.54	92.62			34.4	8.57	34.05	101	183	Average
5500	108.82	99.9			34.4	8.57	34.05	101	183	Peak
5725	55.51	46.35	68.3	-12.79	34.62	8.65	34.11	101	183	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5500MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5456	45.39	36.57	54	-8.61	34.36	8.51	34.05	105	120	Average
5456	59.06	50.24	74	-14.94	34.36	8.51	34.05	105	120	Peak
5470	58.38	49.55	68.3	-9.92	34.37	8.51	34.05	105	120	Peak
5580	100.85	91.86			34.47	8.6	34.08	105	120	Average
5580	107.67	98.68			34.47	8.6	34.08	105	120	Peak
5725	55.28	46.12	68.3	-13.02	34.62	8.65	34.11	105	120	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5448	44.99	36.16	54	-9.01	34.36	8.51	34.04	100	164	Average
5448	57.51	48.68	74	-16.49	34.36	8.51	34.04	100	164	Peak
5470	54.51	45.68	68.3	-13.79	34.37	8.51	34.05	100	164	Peak
5580	101.93	92.94			34.47	8.6	34.08	100	164	Average
5580	109.64	100.65			34.47	8.6	34.08	100	164	Peak
5725	55.74	46.58	68.3	-12.56	34.62	8.65	34.11	100	164	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5580MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5440	44.98	36.19	54	-9.02	34.35	8.48	34.04	104	120	Average
5440	58.65	49.86	74	-15.35	34.35	8.48	34.04	104	120	Peak
5470	56.11	47.28	68.3	-12.19	34.37	8.51	34.05	104	120	Peak
5700	99.55	90.42			34.59	8.64	34.1	104	120	Average
5700	106.63	97.5			34.59	8.64	34.1	104	120	Peak
5725	63.54	54.38	68.3	-4.76	34.62	8.65	34.11	104	120	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5422	44.33	35.56	54	-9.67	34.33	8.48	34.04	100	158	Average
5422	57.7	48.93	74	-16.3	34.33	8.48	34.04	100	158	Peak
5470	55.24	46.41	68.3	-13.06	34.37	8.51	34.05	100	158	Peak
5700	101.8	92.67			34.59	8.64	34.1	100	158	Average
5700	108.55	99.42			34.59	8.64	34.1	100	158	Peak
5725	65.84	56.68	68.3	-2.46	34.62	8.65	34.11	100	158	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5700MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band

802.11n (20MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5124	43.73	35.51	54	-10.27	34.11	8.1	33.99	101	127	Average
5124	58.11	49.89	74	-15.89	34.11	8.1	33.99	101	127	Peak
5180	93.43	85.12			34.15	8.16	34	101	127	Average
5180	102.5	94.19			34.15	8.16	34	101	127	Peak
5358	43.99	35.36	54	-10.01	34.28	8.38	34.03	101	127	Average
5358	58.07	49.44	74	-15.93	34.28	8.38	34.03	101	127	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5138	44.36	36.11	54	-9.64	34.11	8.13	33.99	109	171	Average
5138	57.82	49.57	74	-16.18	34.11	8.13	33.99	109	171	Peak
5180	98.54	90.23			34.15	8.16	34	109	171	Average
5180	107.38	99.07			34.15	8.16	34	109	171	Peak
5460	44.22	35.4	54	-9.78	34.36	8.51	34.05	109	171	Average
5460	57.88	49.06	74	-16.12	34.36	8.51	34.05	109	171	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5180MHz: Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 44	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Harry Hsueh

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5108	43.72	35.52	54	-10.28	34.09	8.1	33.99	101	127	Average
5108	57.11	48.91	74	-16.89	34.09	8.1	33.99	101	127	Peak
5220	93.72	85.33			34.17	8.22	34	101	127	Average
5220	102.79	94.4			34.17	8.22	34	101	127	Peak
5352	44.02	35.39	54	-9.98	34.28	8.38	34.03	101	127	Average
5352	58.22	49.59	74	-15.78	34.28	8.38	34.03	101	127	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5066	43.44	35.34	54	-10.56	34.05	8.03	33.98	109	171	Average
5066	57.1	49	74	-16.9	34.05	8.03	33.98	109	171	Peak
5220	98.92	90.53			34.17	8.22	34	109	171	Average
5220	107.57	99.18			34.17	8.22	34	109	171	Peak
5350	44.28	35.65	54	-9.72	34.28	8.38	34.03	109	171	Average
5350	58.01	49.38	74	-15.99	34.28	8.38	34.03	109	171	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5220MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5116	44.72	36.52	54	-9.28	34.09	8.1	33.99	101	127	Average
5116	56.86	48.66	74	-17.14	34.09	8.1	33.99	101	127	Peak
5240	94.91	86.47			34.19	8.26	34.01	101	127	Average
5240	103.73	95.29			34.19	8.26	34.01	101	127	Peak
5422	44.96	36.19	54	-9.04	34.33	8.48	34.04	101	127	Average
5422	57.48	48.71	74	-16.52	34.33	8.48	34.04	101	127	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5040	43.57	35.5	54	-10.43	34.04	8	33.97	109	171	Average
5040	57.59	49.52	74	-16.41	34.04	8	33.97	109	171	Peak
5240	98.66	90.22			34.19	8.26	34.01	109	171	Average
5240	107.37	98.93			34.19	8.26	34.01	109	171	Peak
5386	44.25	35.57	54	-9.75	34.31	8.41	34.04	109	171	Average
5386	58.37	49.69	74	-15.63	34.31	8.41	34.04	109	171	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5240MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5132	44.73	36.51	54	-9.27	34.11	8.1	33.99	109	171	Average
5132	57.65	49.43	74	-16.35	34.11	8.1	33.99	109	171	Peak
5260	100.33	91.87			34.21	8.26	34.01	109	171	Average
5260	109.94	101.48			34.21	8.26	34.01	109	171	Peak
5422	44.33	35.56	54	-9.67	34.33	8.48	34.04	109	171	Average
5422	57.49	48.72	74	-16.51	34.33	8.48	34.04	109	171	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5106	44.3	36.13	54	-9.7	34.09	8.07	33.99	100	127	Average
5106	57.55	49.38	74	-16.45	34.09	8.07	33.99	100	127	Peak
5260	96.03	87.57			34.21	8.26	34.01	100	127	Average
5260	104.66	96.2			34.21	8.26	34.01	100	127	Peak
5392	44.86	36.18	54	-9.14	34.31	8.41	34.04	100	127	Average
5392	58.1	49.42	74	-15.9	34.31	8.41	34.04	100	127	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5260MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5060	43.61	35.51	54	-10.39	34.05	8.03	33.98	100	151	Average
5060	58.38	50.28	74	-15.62	34.05	8.03	33.98	100	151	Peak
5300	95.91	87.37			34.24	8.32	34.02	100	151	Average
5300	104.5	95.96			34.24	8.32	34.02	100	151	Peak
5378	45.25	36.57	54	-8.75	34.31	8.41	34.04	100	151	Average
5378	58.34	49.66	74	-15.66	34.31	8.41	34.04	100	151	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5078	44.25	36.13	54	-9.75	34.07	8.03	33.98	104	179	Average
5078	57.04	48.92	74	-16.96	34.07	8.03	33.98	104	179	Peak
5300	100.79	92.25			34.24	8.32	34.02	104	179	Average
5300	109.08	100.54			34.24	8.32	34.02	104	179	Peak
5356	45.23	36.6	54	-8.77	34.28	8.38	34.03	104	179	Average
5356	57.83	49.2	74	-16.17	34.28	8.38	34.03	104	179	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5300MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5068	44.31	36.21	54	-9.69	34.05	8.03	33.98	100	102	Average
5068	57.45	49.35	74	-16.55	34.05	8.03	33.98	100	102	Peak
5320	94.84	86.26			34.25	8.35	34.02	100	102	Average
5320	103.72	95.14			34.25	8.35	34.02	100	102	Peak
5350	50.23	41.6	54	-3.77	34.28	8.38	34.03	100	102	Average
5350	62.09	53.46	74	-11.91	34.28	8.38	34.03	100	102	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5046	44.61	36.55	54	-9.39	34.04	8	33.98	104	189	Average
5046	57.52	49.46	74	-16.48	34.04	8	33.98	104	189	Peak
5320	100.46	91.88			34.25	8.35	34.02	104	189	Average
5320	109.33	100.75			34.25	8.35	34.02	104	189	Peak
5350	47.43	38.8	54	-6.57	34.28	8.38	34.03	104	189	Average
5350	65.71	57.08	74	-8.29	34.28	8.38	34.03	104	189	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5320MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5448	45.39	36.56	54	-8.61	34.36	8.51	34.04	103	130	Average
5448	57.39	48.56	74	-16.61	34.36	8.51	34.04	103	130	Peak
5470	58.58	49.75	68.3	-9.72	34.37	8.51	34.05	103	130	Peak
5500	98.5	89.58			34.4	8.57	34.05	103	130	Average
5500	105.25	96.33			34.4	8.57	34.05	103	130	Peak
5725	56.73	47.57	68.3	-11.57	34.62	8.65	34.11	103	130	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5448	46.43	37.6	54	-7.57	34.36	8.51	34.04	102	163	Average
5448	59.05	50.22	74	-14.95	34.36	8.51	34.04	102	163	Peak
5470	61.83	53	68.3	-6.47	34.37	8.51	34.05	102	163	Peak
5500	101.5	92.58			34.4	8.57	34.05	102	163	Average
5500	107.93	99.01			34.4	8.57	34.05	102	163	Peak
5725	56.11	46.95	68.3	-12.19	34.62	8.65	34.11	102	163	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5500MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5406	44.29	35.57	54	-9.71	34.32	8.44	34.04	103	130	Average
5406	57.72	49	74	-16.28	34.32	8.44	34.04	103	130	Peak
5470	56.93	48.1	68.3	-11.37	34.37	8.51	34.05	103	130	Peak
5580	98.93	89.94			34.47	8.6	34.08	103	130	Average
5580	106.23	97.24			34.47	8.6	34.08	103	130	Peak
5725	56.61	47.45	68.3	-11.69	34.62	8.65	34.11	103	130	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5442	45.35	36.56	54	-8.65	34.35	8.48	34.04	101	164	Average
5442	57.46	48.67	74	-16.54	34.35	8.48	34.04	101	164	Peak
5470	56.67	47.84	68.3	-11.63	34.37	8.51	34.05	101	164	Peak
5580	101.59	92.6			34.47	8.6	34.08	101	164	Average
5580	109.6	100.61			34.47	8.6	34.08	101	164	Peak
5725	56.67	47.51	68.3	-11.63	34.62	8.65	34.11	101	164	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5580MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5454	45.01	36.19	54	-8.99	34.36	8.51	34.05	104	120	Average
5454	57.31	48.49	74	-16.69	34.36	8.51	34.05	104	120	Peak
5470	56.81	47.98	68.3	-11.49	34.37	8.51	34.05	104	120	Peak
5700	97.8	88.67			34.59	8.64	34.1	104	120	Average
5700	105.07	95.94			34.59	8.64	34.1	104	120	Peak
5725	59.77	50.61	68.3	-8.53	34.62	8.65	34.11	104	120	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5436	45.35	36.56	54	-8.65	34.35	8.48	34.04	107	166	Average
5436	58.43	49.64	74	-15.57	34.35	8.48	34.04	107	166	Peak
5470	56	47.17	68.3	-12.3	34.37	8.51	34.05	107	166	Peak
5700	100.76	91.63			34.59	8.64	34.1	107	166	Average
5700	107.91	98.78			34.59	8.64	34.1	107	166	Peak
5725	60.41	51.25	68.3	-7.89	34.62	8.65	34.11	107	166	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5700MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band

802.11n (40MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5054	44.46	36.4	54	-9.54	34.04	8	33.98	101	127	Average
5054	56.71	48.65	74	-17.29	34.04	8	33.98	101	127	Peak
5190	89.91	81.57			34.15	8.19	34	101	127	Average
5190	98.82	90.48			34.15	8.19	34	101	127	Peak
5460	44.39	35.57	54	-9.61	34.36	8.51	34.05	101	127	Average
5460	59.05	50.23	74	-14.95	34.36	8.51	34.05	101	127	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5116	43.72	35.52	54	-10.28	34.09	8.1	33.99	108	179	Average
5116	57.91	49.71	74	-16.09	34.09	8.1	33.99	108	179	Peak
5190	94.69	86.35			34.15	8.19	34	108	179	Average
5190	103.24	94.9			34.15	8.19	34	108	179	Peak
5438	44.15	35.36	54	-9.85	34.35	8.48	34.04	108	179	Average
5438	58.58	49.79	74	-15.42	34.35	8.48	34.04	108	179	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5190MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5040	44.57	36.5	54	-9.43	34.04	8	33.97	101	127	Average
5040	58.1	50.03	74	-15.9	34.04	8	33.97	101	127	Peak
5230	90.03	81.63			34.19	8.22	34.01	101	127	Average
5230	99.24	90.84			34.19	8.22	34.01	101	127	Peak
5424	44.92	36.15	54	-9.08	34.33	8.48	34.04	101	127	Average
5424	58.61	49.84	74	-15.39	34.33	8.48	34.04	101	127	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5032	44.15	36.09	54	-9.85	34.03	8	33.97	109	171	Average
5032	57.72	49.66	74	-16.28	34.03	8	33.97	109	171	Peak
5230	94.64	86.24			34.19	8.22	34.01	109	171	Average
5230	103.74	95.34			34.19	8.22	34.01	109	171	Peak
5364	45.2	36.56	54	-8.8	34.29	8.38	34.03	109	171	Average
5364	58.21	49.57	74	-15.79	34.29	8.38	34.03	109	171	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5230MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5072	44.63	36.51	54	-9.37	34.07	8.03	33.98	104	103	Average
5072	57.19	49.07	74	-16.81	34.07	8.03	33.98	104	103	Peak
5270	90.23	81.74			34.21	8.29	34.01	104	103	Average
5270	99.34	90.85			34.21	8.29	34.01	104	103	Peak
5442	44.35	35.56	54	-9.65	34.35	8.48	34.04	104	103	Average
5442	58.48	49.69	74	-15.52	34.35	8.48	34.04	104	103	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5104	44.66	36.5	54	-9.34	34.08	8.07	33.99	107	172	Average
5104	57.24	49.08	74	-16.76	34.08	8.07	33.99	107	172	Peak
5270	95.73	87.24			34.21	8.29	34.01	107	172	Average
5270	104.32	95.83			34.21	8.29	34.01	107	172	Peak
5350	44.19	35.56	54	-9.81	34.28	8.38	34.03	107	172	Average
5350	58.57	49.94	74	-15.43	34.28	8.38	34.03	107	172	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5270MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5086	43.69	35.53	54	-10.31	34.07	8.07	33.98	104	103	Average
5086	58.97	50.81	74	-15.03	34.07	8.07	33.98	104	103	Peak
5310	90.14	81.59			34.25	8.32	34.02	104	103	Average
5310	99.17	90.62			34.25	8.32	34.02	104	103	Peak
5450	46.1	37.28	54	-7.9	34.36	8.51	34.05	104	103	Average
5450	59.27	50.45	74	-14.73	34.36	8.51	34.05	104	103	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5086	44.66	36.5	54	-9.34	34.07	8.07	33.98	106	171	Average
5086	56.8	48.64	74	-17.2	34.07	8.07	33.98	106	171	Peak
5310	94.81	86.26			34.25	8.32	34.02	106	171	Average
5310	103.93	95.38			34.25	8.32	34.02	106	171	Peak
5350	45.23	36.6	54	-8.77	34.28	8.38	34.03	106	171	Average
5350	58.26	49.63	74	-15.74	34.28	8.38	34.03	106	171	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5310MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5440	46.35	37.56	54	-7.65	34.35	8.48	34.04	103	129	Average
5440	57.39	48.6	74	-16.61	34.35	8.48	34.04	103	129	Peak
5470	57.09	48.26	68.3	-11.21	34.37	8.51	34.05	103	129	Peak
5510	93.5	84.59			34.4	8.57	34.06	103	129	Average
5510	100.05	91.14			34.4	8.57	34.06	103	129	Peak
5725	56.08	46.92	68.3	-12.22	34.62	8.65	34.11	103	129	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5456	46.43	37.61	54	-7.57	34.36	8.51	34.05	102	169	Average
5456	57.78	48.96	74	-16.22	34.36	8.51	34.05	102	169	Peak
5470	58.6	49.77	68.3	-9.7	34.37	8.51	34.05	102	169	Peak
5510	96.09	87.18			34.4	8.57	34.06	102	169	Average
5510	103.36	94.45			34.4	8.57	34.06	102	169	Peak
5725	56.04	46.88	68.3	-12.26	34.62	8.65	34.11	102	169	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5510MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5416	44.92	36.19	54	-9.08	34.33	8.44	34.04	103	129	Average
5416	57.77	49.04	74	-16.23	34.33	8.44	34.04	103	129	Peak
5470	56.51	47.68	68.3	-11.79	34.37	8.51	34.05	103	129	Peak
5550	92.61	83.64			34.45	8.59	34.07	103	129	Average
5550	100.42	91.45			34.45	8.59	34.07	103	129	Peak
5725	55.47	46.31	68.3	-12.83	34.62	8.65	34.11	103	129	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5358	44.81	36.18	54	-9.19	34.28	8.38	34.03	100	169	Average
5358	58.04	49.41	74	-15.96	34.28	8.38	34.03	100	169	Peak
5470	56.04	47.21	68.3	-12.26	34.37	8.51	34.05	100	169	Peak
5550	96.17	87.2			34.45	8.59	34.07	100	169	Average
5550	104.27	95.3			34.45	8.59	34.07	100	169	Peak
5725	57.32	48.16	68.3	-10.98	34.62	8.65	34.11	100	169	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5550MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5422	44.95	36.18	54	-9.05	34.33	8.48	34.04	104	120	Average
5422	57.74	48.97	74	-16.26	34.33	8.48	34.04	104	120	Peak
5470	56.54	47.71	68.3	-11.76	34.37	8.51	34.05	104	120	Peak
5670	92.33	83.23			34.57	8.63	34.1	104	120	Average
5670	101.48	92.38			34.57	8.63	34.1	104	120	Peak
5725	57.73	48.57	68.3	-10.57	34.62	8.65	34.11	104	120	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5458	45.38	36.56	54	-8.62	34.36	8.51	34.05	109	165	Average
5458	58.68	49.86	74	-15.32	34.36	8.51	34.05	109	165	Peak
5470	56.4	47.57	68.3	-11.9	34.37	8.51	34.05	109	165	Peak
5670	95.44	86.34			34.57	8.63	34.1	109	165	Average
5670	103.37	94.27			34.57	8.63	34.1	109	165	Peak
5725	57.17	48.01	68.3	-11.13	34.62	8.65	34.11	109	165	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5670MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band

802.11ac (80MHz)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	46.78	38.53	54	-7.22	34.12	8.13	34	101	127	Average
5150	58.04	49.79	74	-15.96	34.12	8.13	34	101	127	Peak
5210	88.89	80.53			34.17	8.19	34	101	127	Average
5210	97.04	88.68			34.17	8.19	34	101	127	Peak
5364	45.19	36.55	54	-8.81	34.29	8.38	34.03	101	127	Average
5364	57.48	48.84	74	-16.52	34.29	8.38	34.03	101	127	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5150	49.84	41.59	54	-4.16	34.12	8.13	34	109	185	Average
5150	64.61	56.36	74	-9.39	34.12	8.13	34	109	185	Peak
5210	92.2	83.84			34.17	8.19	34	109	185	Average
5210	102.18	93.82			34.17	8.19	34	109	185	Peak
5380	44.84	36.16	54	-9.16	34.31	8.41	34.04	109	185	Average
5380	59.11	50.43	74	-14.89	34.31	8.41	34.04	109	185	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5210MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5028	44.52	36.49	54	-9.48	34.03	7.97	33.97	104	102	Average
5028	58.42	50.39	74	-15.58	34.03	7.97	33.97	104	102	Peak
5290	88.11	79.58			34.23	8.32	34.02	104	102	Average
5290	97.72	89.19			34.23	8.32	34.02	104	102	Peak
5350	48.23	39.6	54	-5.77	34.28	8.38	34.03	104	102	Average
5350	56.65	48.02	74	-17.35	34.28	8.38	34.03	104	102	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5032	44.56	36.5	54	-9.44	34.03	8	33.97	106	171	Average
5032	57.49	49.43	74	-16.51	34.03	8	33.97	106	171	Peak
5290	93.11	84.58			34.23	8.32	34.02	106	171	Average
5290	102.41	93.88			34.23	8.32	34.02	106	171	Peak
5350	49.84	41.21	54	-4.16	34.28	8.38	34.03	106	171	Average
5350	61.84	53.21	74	-12.16	34.28	8.38	34.03	106	171	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5290MHz: Fundamental frequency.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	45.01	36.19	54	-8.99	34.36	8.51	34.05	104	120	Average
5460	58.46	49.64	74	-15.54	34.36	8.51	34.05	104	120	Peak
5470	56.96	48.13	68.3	-11.34	34.37	8.51	34.05	104	120	Peak
5530	90.23	81.3			34.42	8.58	34.07	104	120	Average
5530	98.81	89.88			34.42	8.58	34.07	104	120	Peak
5725	55.59	46.43	68.3	-12.71	34.62	8.65	34.11	104	120	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5460	47.39	38.57	54	-6.61	34.36	8.51	34.05	101	174	Average
5460	59.58	50.76	74	-14.42	34.36	8.51	34.05	101	174	Peak
5470	61.27	52.44	68.3	-7.03	34.37	8.51	34.05	101	174	Peak
5530	93.57	84.64			34.42	8.58	34.07	101	174	Average
5530	102.05	93.12			34.42	8.58	34.07	101	174	Peak
5725	56.79	47.63	68.3	-11.51	34.62	8.65	34.11	101	174	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5530MHz: Fundamental frequency.
- 5470MHz & 5725MHz: Out of restricted band

BELOW 1GHz WORST-CASE DATA:

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Quasi-peak (QP)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Harry Hsueh

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
95.07	28.66	50.07	43.5	-14.84	9.3	1.28	31.99	155	145	Peak
138.81	18.69	40.29	43.5	-24.81	9.29	1.38	32.27	102	165	Peak
182.55	24.49	44.72	43.5	-19.01	10.4	1.61	32.24	114	155	Peak
400.1	21.7	33.48	46	-24.3	18.1	2.34	32.22	132	165	Peak
534.5	21.41	30.36	46	-24.59	20.52	2.7	32.17	156	256	Peak
647.9	23.45	30.51	46	-22.55	22.1	2.99	32.15	115	154	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
47.82	26.53	49.37	40	-13.47	8.48	0.9	32.22	132	165	Peak
89.67	25.24	46.94	43.5	-18.26	8.9	1.11	31.71	155	102	Peak
140.16	13.24	34.77	43.5	-30.26	9.36	1.38	32.27	165	226	Peak
400.1	24.35	36.13	46	-21.65	18.1	2.34	32.22	156	235	Peak
479.9	24.41	35.05	46	-21.59	18.92	2.56	32.12	166	256	Peak
638.8	23.17	30.3	46	-22.83	22.1	2.93	32.16	145	251	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

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 (dBμV)	
	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	100288	Apr. 24, 2014	Apr. 23, 2015
RF signal cable Woken	5D-FB	Cable-HYCO2-01	Dec. 27, 2013	Dec. 26, 2014
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Dec. 23, 2013	Dec. 22, 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 2.
 3. The VCCI Site Registration No. is C-2047.

4.2.3 TEST PROCEDURES

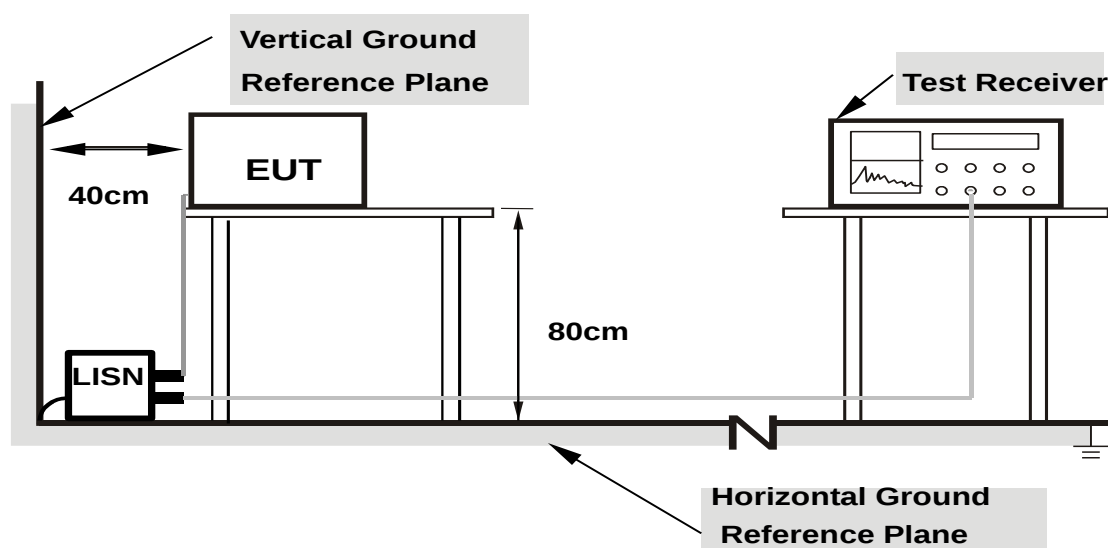
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance 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 section 4.1.6.

4.2.7 TEST RESULTS

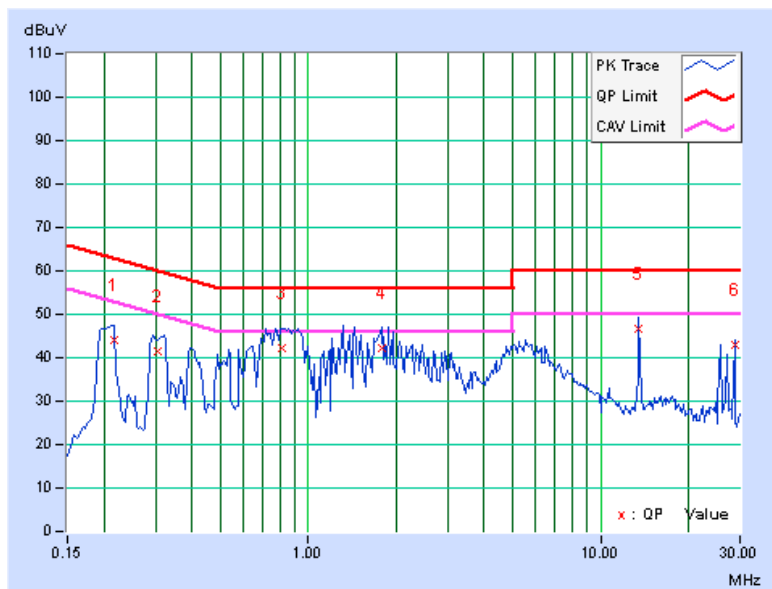
CONDUCTED WORST-CASE DATA :

PHASE	Line 1	6dB BANDWIDTH	9kHz
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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	0.21641	0.28	43.62	29.13	43.90	29.41	62.96	52.96	-19.05	-23.54
2	0.30625	0.29	41.34	29.44	41.63	29.73	60.07	50.07	-18.44	-20.34
3	0.81016	0.33	41.89	24.90	42.22	25.23	56.00	46.00	-13.78	-20.77
4	1.78516	0.36	41.73	28.39	42.09	28.75	56.00	46.00	-13.91	-17.25
5	13.55469	0.52	46.17	42.08	46.69	42.60	60.00	50.00	-13.31	-7.40
6	28.79688	0.46	42.34	39.45	42.80	39.91	60.00	50.00	-17.20	-10.09

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

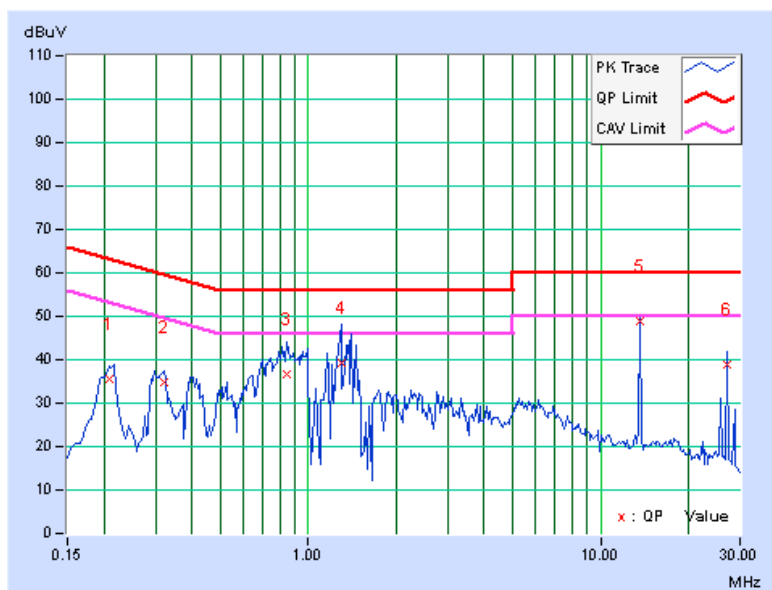


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20859	0.28	35.15	28.03	35.43	28.31	63.26	53.26	-27.83	-24.95
2	0.32188	0.29	34.65	21.59	34.94	21.88	59.66	49.66	-24.72	-27.78
3	0.84141	0.33	36.28	20.87	36.61	21.20	56.00	46.00	-19.39	-24.80
4	1.29688	0.35	38.79	23.36	39.14	23.71	56.00	46.00	-16.86	-22.29
5	13.56250	0.55	48.24	42.96	48.79	43.51	60.00	50.00	-11.21	-6.49
6	27.12109	0.52	38.45	35.38	38.97	35.90	60.00	50.00	-21.03	-14.10

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

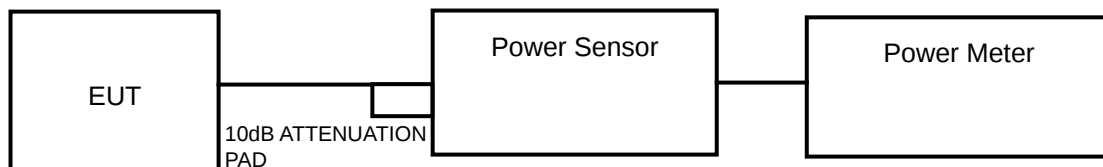
4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

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

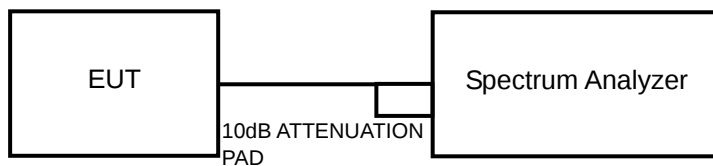
NOTE: Where B is the 26dB emission bandwidth in MHz.

4.3.2 TEST SETUP

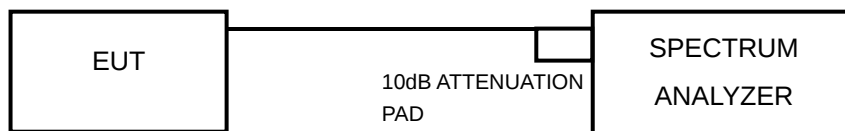
FOR POWER OUTPUT MEASUREMENT



or



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

<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.

<802.11ac (80MHz)>

Method SA-1 is used to perform output power measurement, trigger and gating function of spectrum analyzer is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

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	18.49	12.67	17	PASS
44	5220	19.01	12.79	17	PASS
48	5240	18.66	12.71	17	PASS
52	5260	31.41	14.97	24	PASS
60	5300	31.33	14.96	24	PASS
64	5320	32.28	15.09	24	PASS
100	5500	17.18	12.35	24	PASS
116	5580	29.79	14.74	24	PASS
140	5700	16.94	12.29	24	PASS

NOTE:

For 5180~5240MHz:

1. $4\text{dBm} + 10\log(23.73) = 17.75\text{dBm} > 17\text{dBm}$.
2. $4\text{dBm} + 10\log(22.59) = 17.54\text{dBm} > 17\text{dBm}$.
3. $4\text{dBm} + 10\log(22.70) = 17.56\text{dBm} > 17\text{dBm}$.

For 5260~5700MHz:

1. $11\text{dBm} + 10\log(22.56) = 24.53\text{dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(22.65) = 24.55\text{dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(22.69) = 24.56\text{dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(22.96) = 24.61\text{dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(22.62) = 24.54\text{dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(22.30) = 24.48\text{dBm} > 24\text{dBm}$.

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	19.32	12.86	17	PASS
44	5220	19.77	12.96	17	PASS
48	5240	19.36	12.87	17	PASS
52	5260	31.48	14.98	24	PASS
60	5300	31.77	15.02	24	PASS
64	5320	32.89	15.17	24	PASS
100	5500	17.14	12.34	24	PASS
116	5580	31.48	14.98	24	PASS
140	5700	17.06	12.32	24	PASS

NOTE:

For 5180~5240MHz:

1. $4\text{dBm} + 10\log(23.00) = 17.62\text{dBm} > 17\text{dBm}$.
2. $4\text{dBm} + 10\log(22.93) = 17.60\text{dBm} > 17\text{dBm}$.
3. $4\text{dBm} + 10\log(23.01) = 17.62\text{dBm} > 17\text{dBm}$.

For 5260~5700MHz:

1. $11\text{dBm} + 10\log(24.28) = 24.85\text{dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(22.67) = 24.55\text{dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(22.68) = 24.56\text{dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(22.92) = 24.60\text{dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(22.97) = 24.61\text{dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(23.99) = 24.80\text{dBm} > 24\text{dBm}$.

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	13.43	11.28	17	PASS
46	5230	13.55	11.32	17	PASS
54	5270	13.61	11.34	24	PASS
62	5310	15.00	11.76	24	PASS
102	5510	14.83	11.71	24	PASS
110	5550	14.89	11.73	24	PASS
134	5670	14.00	11.46	24	PASS

NOTE:

For 5180~5240MHz:

1. $4\text{dBm} + 10\log(45.59) = 20.59\text{dBm} > 17\text{dBm}$.
2. $4\text{dBm} + 10\log(45.85) = 20.61\text{dBm} > 17\text{dBm}$.

For 5260~5700MHz:

1. $11\text{dBm} + 10\log(46.32) = 27.66\text{dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(45.13) = 27.54\text{dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(45.57) = 27.59\text{dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(45.86) = 27.61\text{dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(46.50) = 27.67\text{dBm} > 24\text{dBm}$.

802.11ac (80MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
42	5210	10.72	10.30	17	PASS
58	5290	12.05	10.81	24	PASS
106	5530	13.96	11.45	24	PASS

NOTE:

For 5180~5240MHz:

1. $4\text{dBm} + 10\log(83.26) = 23.20\text{dBm} > 17\text{dBm}$.

For 5260~5700MHz:

1. $11\text{dBm} + 10\log(82.42) = 30.16\text{dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(83.07) = 30.19\text{dBm} > 24\text{dBm}$.



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26dB BANDWIDTH**802.11a**

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	23.73	PASS
44	5220	22.59	PASS
48	5240	22.70	PASS
52	5260	22.56	PASS
60	5300	22.65	PASS
64	5320	22.69	PASS
100	5500	22.96	PASS
116	5580	22.62	PASS
140	5700	22.30	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	23.00	PASS
44	5220	22.93	PASS
48	5240	23.01	PASS
52	5260	24.28	PASS
60	5300	22.67	PASS
64	5320	22.68	PASS
100	5500	22.92	PASS
116	5580	22.97	PASS
140	5700	23.99	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
38	5190	45.59	PASS
46	5230	45.85	PASS
54	5270	46.32	PASS
62	5310	45.13	PASS
102	5510	45.57	PASS
110	5550	45.86	PASS
134	5670	46.50	PASS



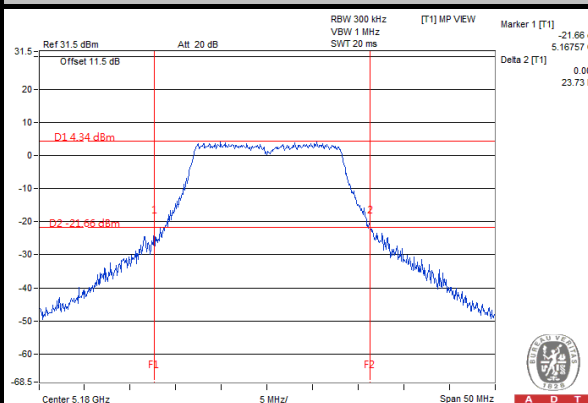
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802.11ac (80MHz)

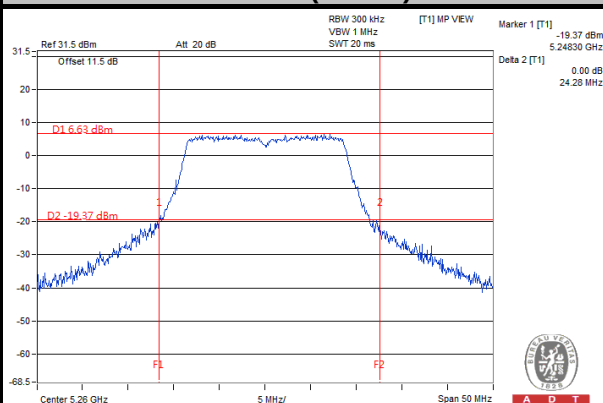
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
42	5210	83.26	PASS
58	5290	82.42	PASS
106	5530	83.07	PASS

SPECTRUM PLOT OF WORST VALUE

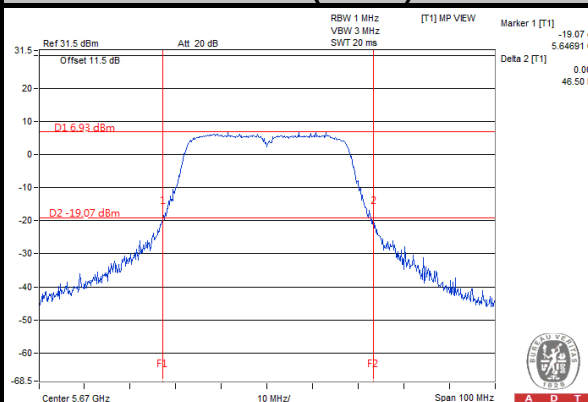
802.11a



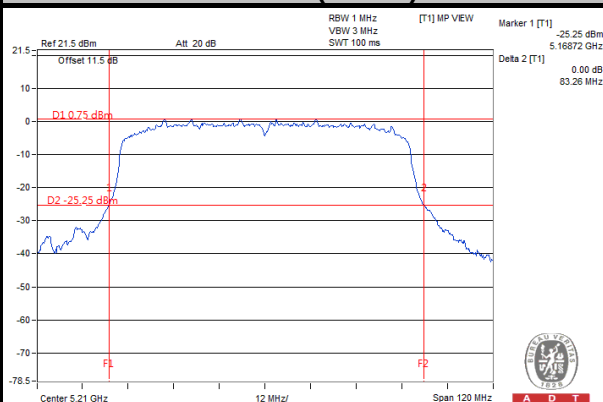
802.11n (20MHz)



802.11n (40MHz)



802.11ac (80MHz)

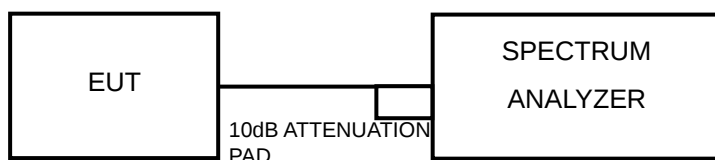


4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

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-2 alternative

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 1 MHz, Set VBW $\geq$ 3 MHz, Detector = RMS
- 3) Sweep time = 4second.
- 4) Perform a single sweep.
- 5) Record the max value and add 10 log (1/duty cycle)

<802.11ac (80MHz)>

Using method SA-1

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 1 MHz, Set VBW $\geq$ 3 MHz, Detector = RMS
- 3) Sweep time = 4second.
- 4) Perform a single sweep.

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.

4.4.7 TEST RESULTS

802.11a

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	0.78	4	PASS
44	5220	0.92	4	PASS
48	5240	1.05	4	PASS
52	5260	3.35	11	PASS
60	5300	3.76	11	PASS
64	5320	3.90	11	PASS
100	5500	1.54	11	PASS
116	5580	3.80	11	PASS
140	5700	0.67	11	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	0.57	0.09	0.66	4	PASS
44	5220	0.68	0.09	0.77	4	PASS
48	5240	0.72	0.09	0.81	4	PASS
52	5260	3.08	0.09	3.17	11	PASS
60	5300	3.39	0.09	3.48	11	PASS
64	5320	3.56	0.09	3.65	11	PASS
100	5500	1.33	0.09	1.42	11	PASS
116	5580	3.54	0.09	3.63	11	PASS
140	5700	0.40	0.09	0.49	11	PASS

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

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
38	5190	-3.33	0.28	-3.05	4	PASS
46	5230	-3.16	0.28	-2.88	4	PASS
54	5270	-2.94	0.28	-2.66	11	PASS
62	5310	-2.59	0.28	-2.31	11	PASS
102	5510	-2.00	0.28	-1.72	11	PASS
110	5550	-2.18	0.28	-1.90	11	PASS
134	5670	-2.78	0.28	-2.50	11	PASS

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

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	-7.24	0.9	-6.34	4	PASS
58	5290	-6.73	0.9	-5.83	11	PASS
106	5530	-5.90	0.9	-5.00	11	PASS

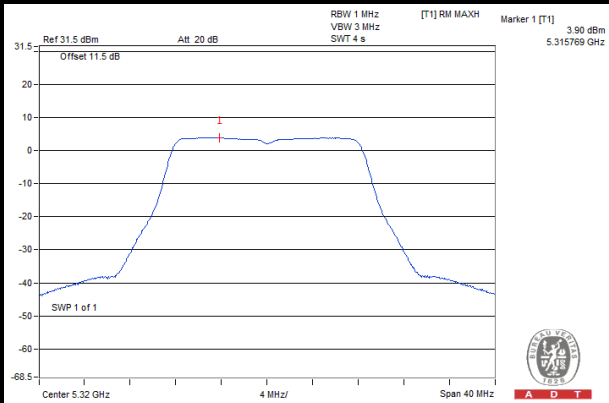
NOTE: Refer to section 3.3 for duty cycle spectrum plot.



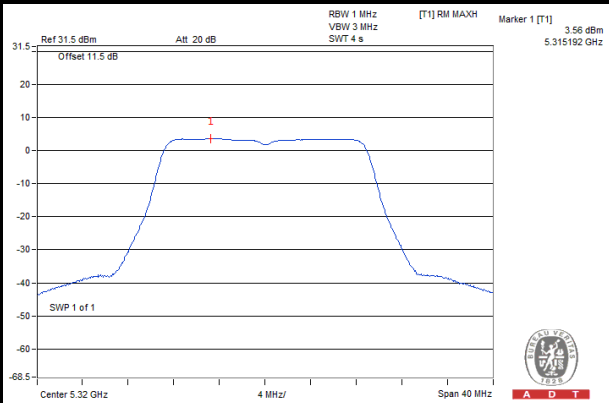
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SPECTRUM PLOT OF WORST VALUE

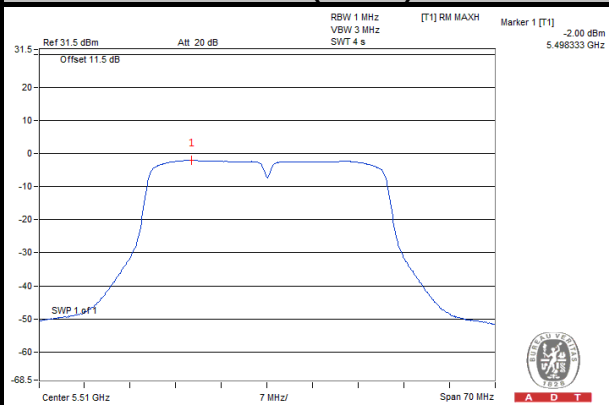
802.11a



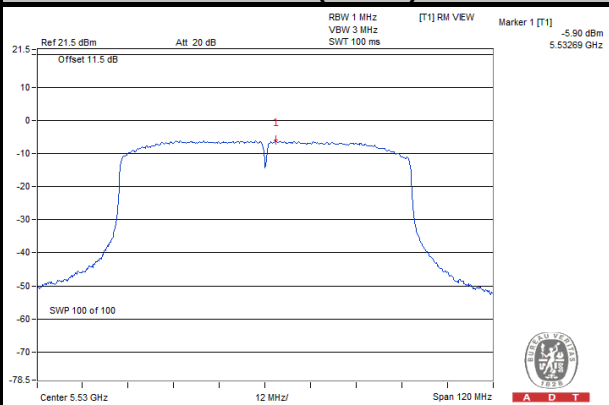
802.11n (20MHz)



802.11n (40MHz)



802.11ac (80MHz)

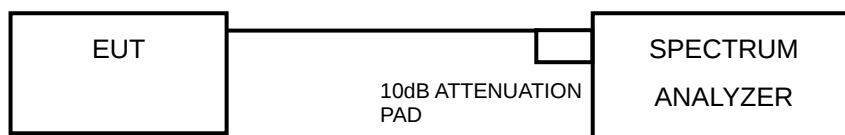


4.5 PEAK POWER EXCURSION MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY 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

- Set the RBW = 1 kHz, VBW $\geq$ 3 MHz, Detector = peak.
 - Trace mode = max-hold. Allow the sweeps to continue until the trace stabilizes.
 - Use the peak search function to find the peak of the spectrum.
 - Measure the PPSD.
 - 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 CONDITION

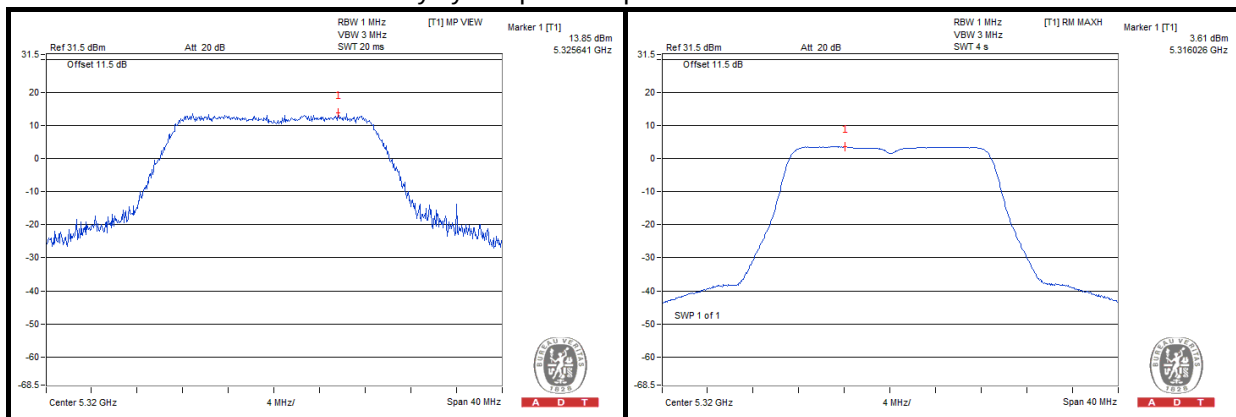
Same as Item 4.3.6.

4.5.7 TEST RESULTS

MODULATION MODE	MODULATION TYPE	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS/ FAIL
802.11a	BPSK	5320	13.20	3.90	9.30	13	PASS
	QPSK		13.60	3.98	9.62	13	PASS
	16QAM		13.86	4.06	9.80	13	PASS
	64QAM		13.47	4.09	9.38	13	PASS

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
802.11n (20MHz)	BPSK	5320	12.70	3.56	3.65	9.05	13	PASS
	QPSK		13.12	3.57	3.70	9.42	13	PASS
	16QAM		13.85	3.61	3.89	9.96	13	PASS
	64QAM		13.46	3.55	3.91	9.55	13	PASS
802.11n (40MHz)	BPSK	5310	6.91	-2.59	-2.31	9.22	13	PASS
	QPSK		7.85	-2.41	-1.87	9.72	13	PASS
	16QAM		7.73	-2.50	-1.51	9.24	13	PASS
	64QAM		7.42	-2.60	-0.84	8.26	13	PASS
802.11ac (80MHz)	BPSK	5530	2.05	-5.90	-5.00	7.05	13	PASS
	QPSK		2.27	-5.95	-4.53	6.80	13	PASS
	16QAM		1.85	-5.91	-3.16	5.01	13	PASS
	64QAM		1.92	-5.79	-3.04	4.96	13	PASS
	256QAM		2.59	-5.99	-2.42	5.01	13	PASS

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

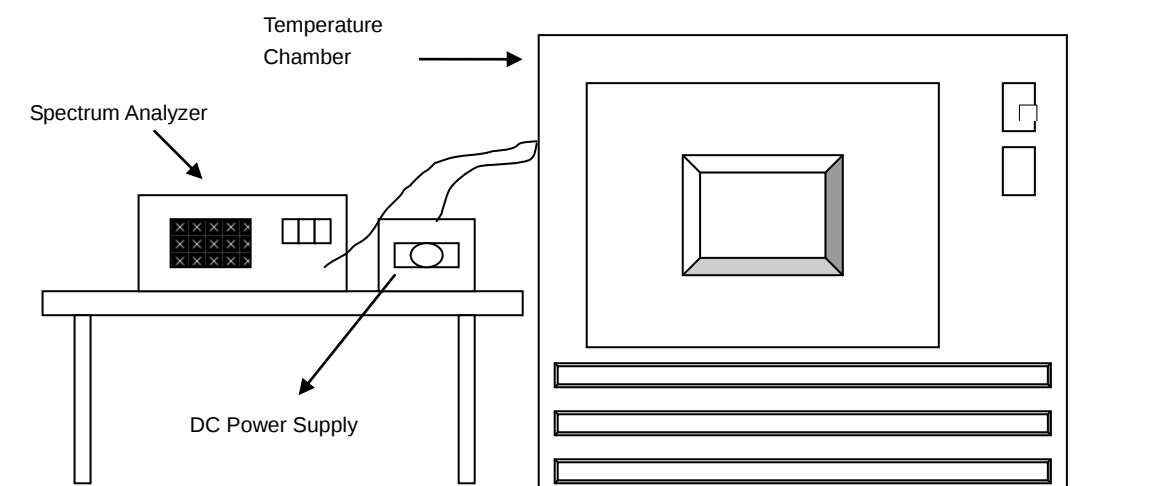


4.6 FREQUENCY STABILITY

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. To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
- b. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
- c. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

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: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
55	3.8	5320.015212	2.859	5320.014897	2.800	5320.015288	2.874	5320.015192	2.856
50	3.8	5320.015847	2.979	5320.015756	2.962	5320.015623	2.937	5320.015786	2.967
40	3.8	5320.015841	2.978	5320.015878	2.985	5320.015915	2.992	5320.015921	2.993
30	3.8	5320.017241	3.241	5320.017042	3.203	5320.017185	3.230	5320.017110	3.216
20	3.8	5320.017950	3.374	5320.018196	3.420	5320.017889	3.363	5320.017964	3.377
10	3.8	5320.019620	3.688	5320.019500	3.665	5320.019674	3.698	5320.019451	3.656
0	3.8	5320.018484	3.474	5320.018055	3.394	5320.017961	3.376	5320.018147	3.411
-10	3.8	5320.016667	3.133	5320.016663	3.132	5320.016538	3.109	5320.016737	3.146

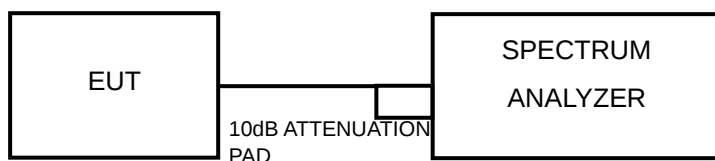
FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	3.4	5320.017306	3.253	5320.017440	3.278	5320.017451	3.280	5320.017658	3.319
	3.8	5320.018470	3.472	5320.018164	3.414	5320.017685	3.324	5320.018032	3.389
	4.2	5320.019138	3.597	5320.019333	3.634	5320.019165	3.602	5320.019561	3.677

4.7 20dBc BANDWIDTH MEASUREMENT

4.7.1 LIMITS OF 20dBc BANDWIDTH MEASUREMENT

20dBc point shall not overlap in 5150~5700MHz.

4.7.2 TEST SETUP



4.7.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.7.4 TEST PROCEDURES

789033 D01 General UNII Test Procedures v01r03

Emission bandwidth

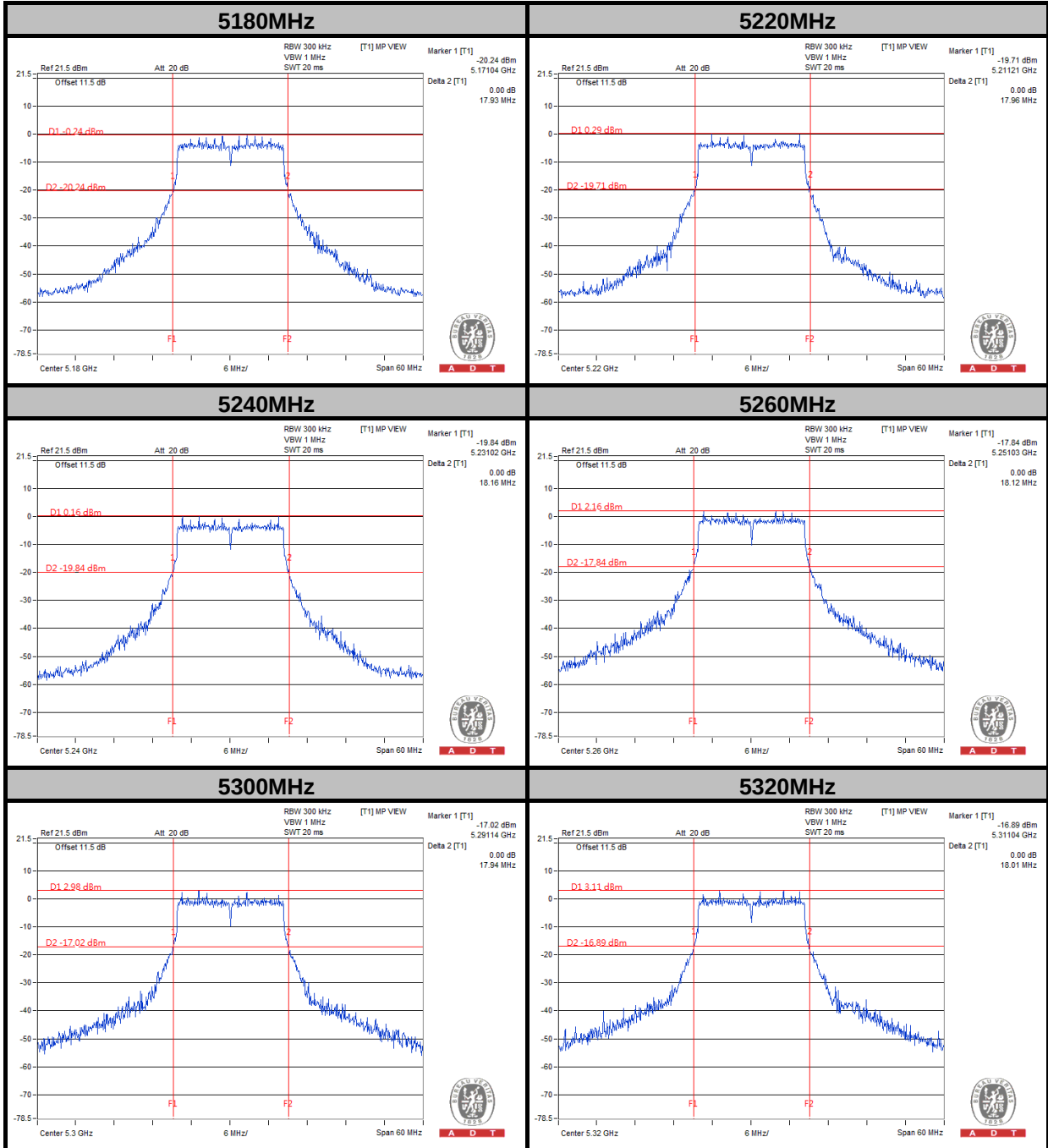
- 1) Set RBW = approximately 1% of the emission bandwidth.
- 2) Set the VBW > RBW.
- 3) Detector = Peak
- 4) Trace mode = max hold.
- 5) Measurement the maximum width of the emission that is 20dB down from the peak of the emission. Compare this with RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.



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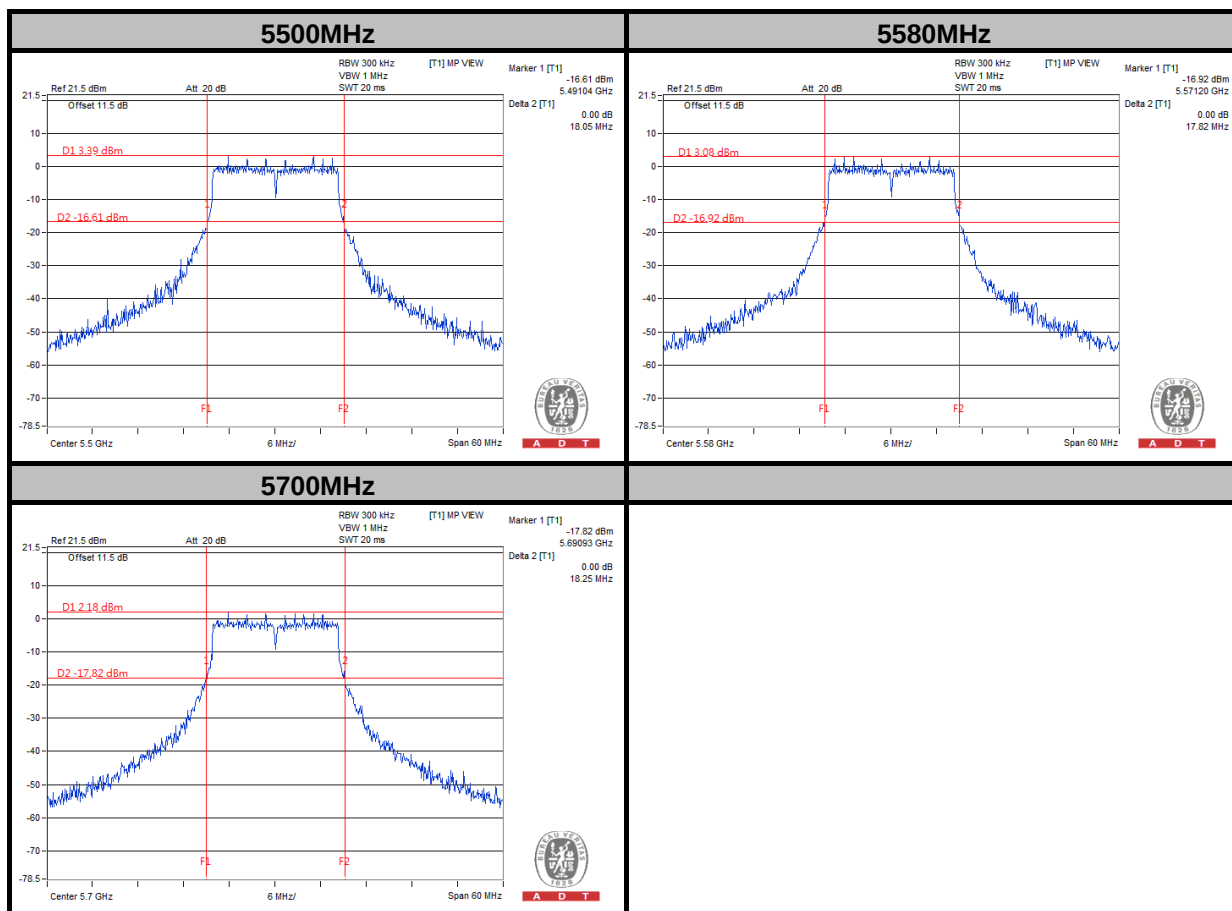
4.7.5 TEST RESULTS

802.11a

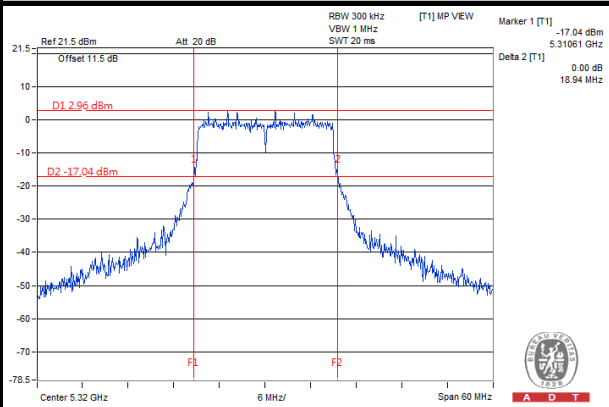




A D T

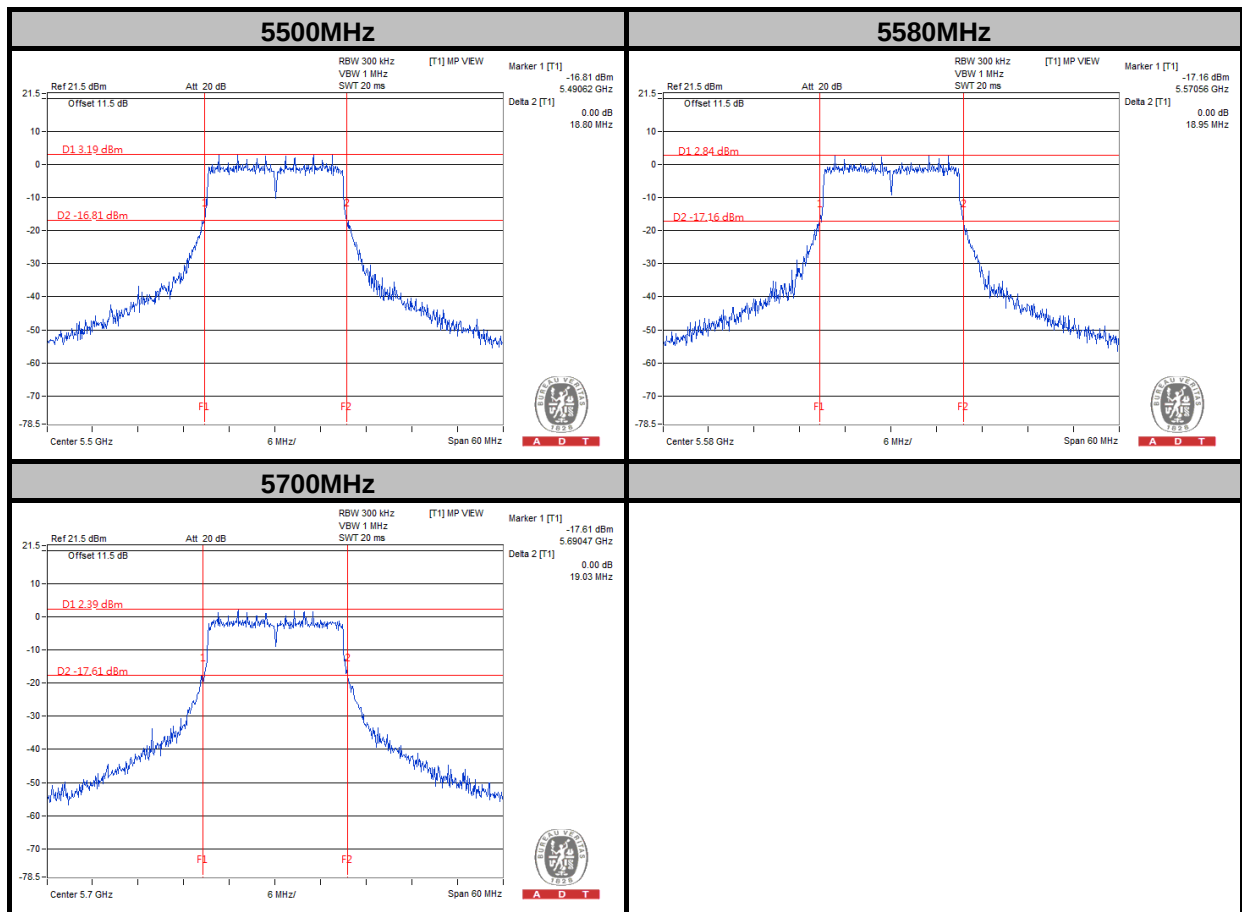


5320MHz





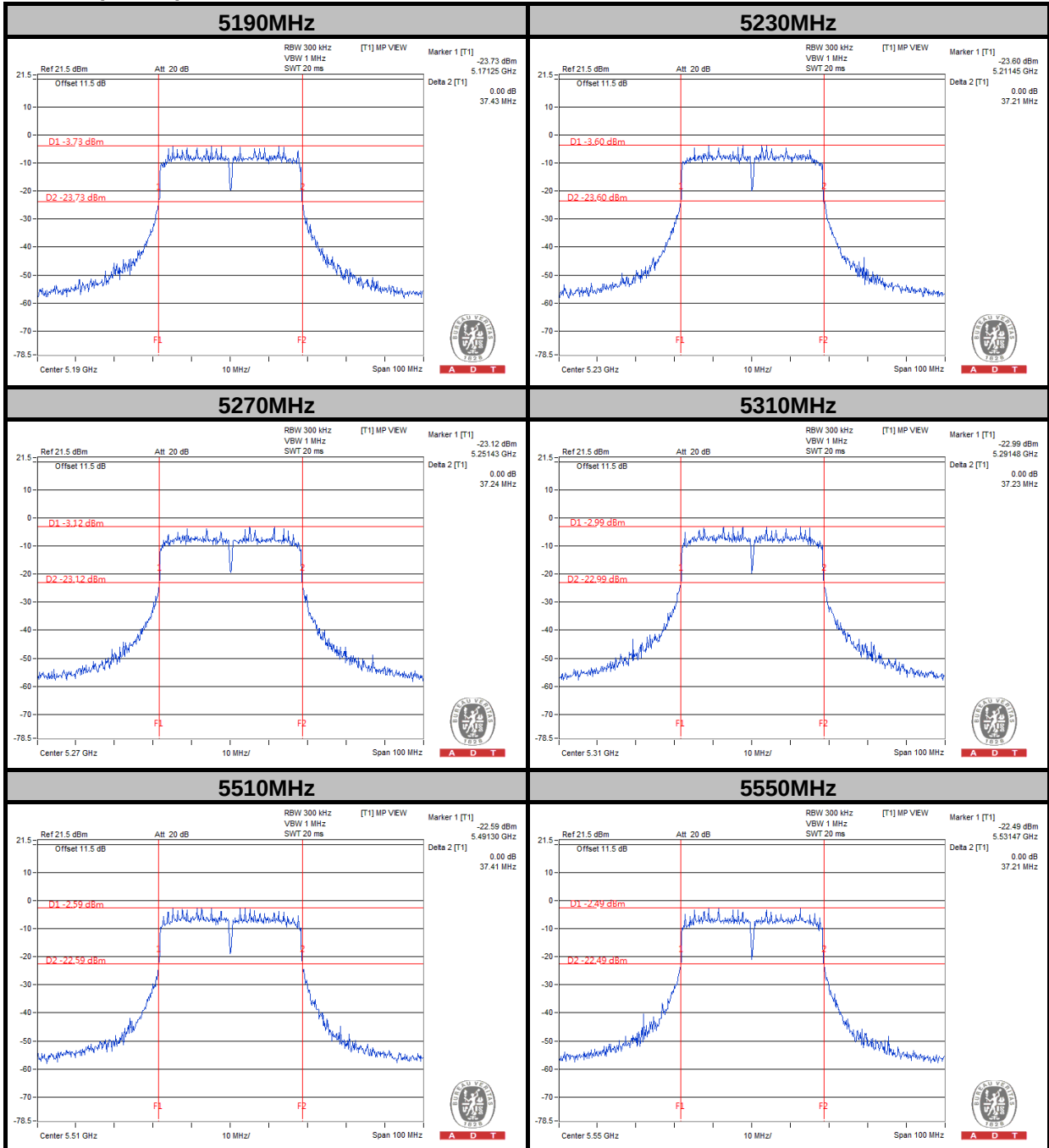
A D T





A D T

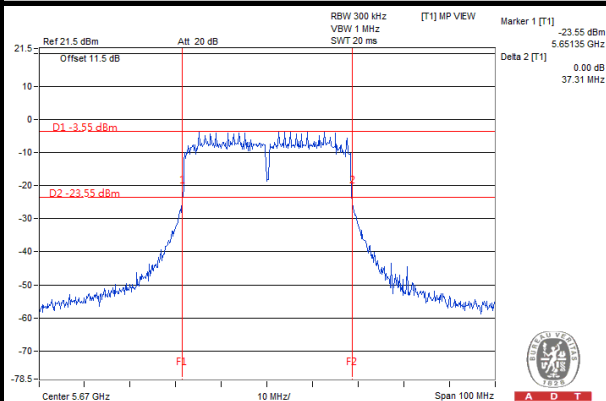
802.11n (40MHz)





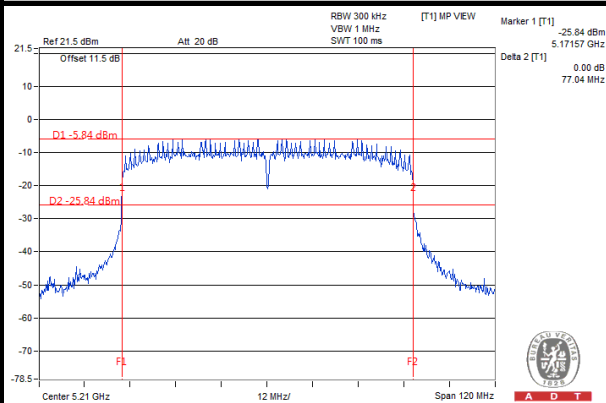
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5670MHz

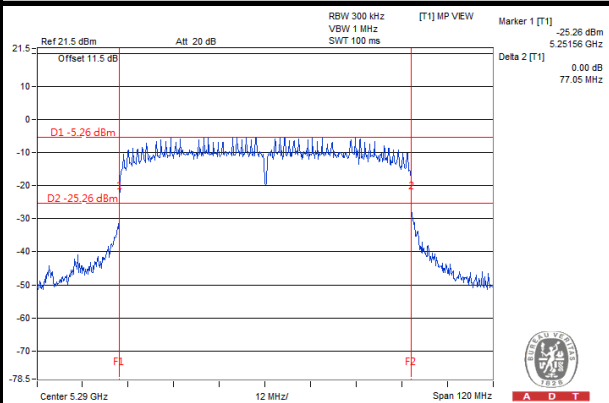


802.11ac (80MHz)

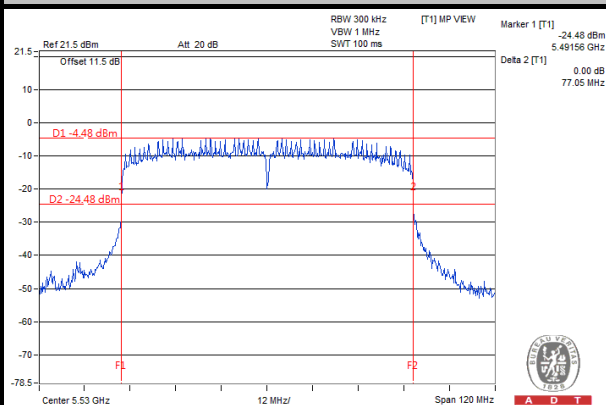
5210MHz



5290MHz



5530MHz



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:

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Web Site: www.bureauveritas-adt.com

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



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

No any modifications are made to the EUT by the lab during the test.

---END---