FCC TEST REPORT (15.407)

REPORT NO.:	RF131213C05-5
MODEL NO.:	T00D
FCC ID:	MSQT00D
RECEIVED:	Dec. 13, 2013
TESTED:	Dec. 23, 2013 ~ Feb. 20, 2014
ISSUED:	Feb. 27, 2014

APPLICANT:	ASUSTek COMPUTER INC.
ADDRESS:	4F, No. 150, LI-TE Rd., PEITOU, TAIPEI 112, TAIWAN

ISSUED BY:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
LAB ADDRESS:	No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C)
TEST LOCATION:	No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF131213C05-5	Original release	Feb. 27, 2014

1. CERTIFICATION

PRODUCT:	PadFone X
MODEL NO.:	T00D
BRAND:	ASUS
APPLICANT:	ASUSTek COMPUTER INC.
TESTED:	Dec. 23, 2013 ~ Feb. 20, 2014
TEST SAMPLE:	ENGINEERING SAMPLE
STANDARDS:	**FCC Part 15, Subpart E (Section 15.407)**
	ANSI C63.10-2009

The above equipment (model: T00D) 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 : Evonne Liu , **DATE :** Feb. 27, 2014

Evonne Liu / Specialist

APPROVED BY : Sam Chen , **DATE :** Feb. 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 -7.33dB at 13.55859MHz.
15.407(b/1/2/3)(b)(6)	Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -2.1dB at 5350MHz.
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	PadFone X
MODEL NO.	T00D
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	34.119mW for 5180 ~ 5240MHz 32.285mW for 5260 ~ 5320MHz 34.914mW for 5500 ~ 5700MHz
ANTENNA TYPE	PIFA antenna with 1.2dBi gain (5180 ~ 5240MHz) PIFA antenna with 1dBi gain (5260 ~ 5320MHz) PIFA antenna with 1.5dBi 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
AC Adapter 1	ASUS	AD897320	I/P: 100-240Vac, 50-60Hz, 0.3A O/P: 5Vdc, 2A
AC Adapter 2	ASUS	W12-010N3A	I/P: 100-240Vac, 50-60Hz, 0.3A O/P: 5Vdc, 2A
Li-ion Battery	ASUS	C11P1322	Rating: 3.8Vdc, 8.7Wh
Earphone 1	ASUS	OBOPRO2	1.27m cable
Earphone 2	ASUS	WW	1.25m cable
Earphone 3	ASUS	CHM-125STS02001	1.15m cable
USB cable 1	ASUS	AA780300	0.85m cable
USB cable 2	ASUS	L65U2008-CS-B	0.95m cable
USB cable 3	ASUS	CUHD003B-Y05-EF	0.95m cable
LCD Panel	SHARP	LS050T1SX04	--
Front Camera 1	AZWAVE	AM-2F024	--
Front Camera 2	Chicony	CCFD21220003871LH	--
Rear Camera	LARVIEW	CBAA0-010A	--
WLAN / BT Module	QUALCOMM	WIRELESS IC 79BWLNSP	--
PadFone X Station	ASUS	T00DP	--
Battery for PadFone X Station	ASUS	C11P1323	3.8Vdc, 19Wh

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 configurations of the device listed as below.

   SKU 1 (PadFone X): Phone (with Front Camera 1) + AC Adapter 2 + Earphone 2 + USB cable 2

   SKU 2 (PadFone X Station):
   Phone (with Front Camera 1) + Pad + AC Adapter 2 + Earphone 2 + USB cable 2

   SKU 3 (PadFone X): Phone (with Front Camera 2) + AC Adapter 2 + Earphone 2 + USB cable 2

   SKU 4 (PadFone X Station):
   Phone (with Front Camera 2) + Pad + AC Adapter 2 + Earphone 2 + USB cable 2

4. 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

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	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

FOR 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≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	SKU 1 (PadFone X)
B	√	√	-	-	SKU 2 (PadFone X Station)
C	√	√	-	-	SKU 3 (PadFone X)
D	√	√	-	-	SKU 4 (PadFone X Station)

Where **RE≥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/Z-plane** for Mode A and **X/Z-plane** for Mode B and **X/Y/Z-plane** for Mode C, D**.**

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, 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
B, C, D	802.11ac (80MHz)	5180-5240	42	42	OFDM	BPSK	V0
	802.11n (40MHz)	5260-5320	54 to 62	62	OFDM	BPSK	MCS0
	802.11n (20MHz)	5500-5700	100 to 140	100	OFDM	BPSK	MCS0

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	802.11n (40MHz)	5180-5240	38 to 46	46	OFDM	BPSK	MCS0
	802.11n (20MHz)	5260-5320	52 to 64	52	OFDM	BPSK	MCS0
	802.11n (20MHz)	5500-5700	100 to 140	140	OFDM	BPSK	MCS0
B, C, D	802.11ac (80MHz)	5180-5240	42	42	OFDM	BPSK	V0
	802.11n (40MHz)	5260-5320	54 to 62	62	OFDM	BPSK	MCS0
	802.11n (20MHz)	5500-5700	100 to 140	100	OFDM	BPSK	MCS0

POWER LINE CONDUCTED EMISSION TEST:

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
A	802.11n (40MHz)	5180-5240	38 to 46	46	OFDM	BPSK	MCS0
	802.11n (20MHz)	5260-5320	52 to 64	52	OFDM	BPSK	MCS0
	802.11n (20MHz)	5500-5700	100 to 140	140	OFDM	BPSK	MCS0

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)
A	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)
A	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

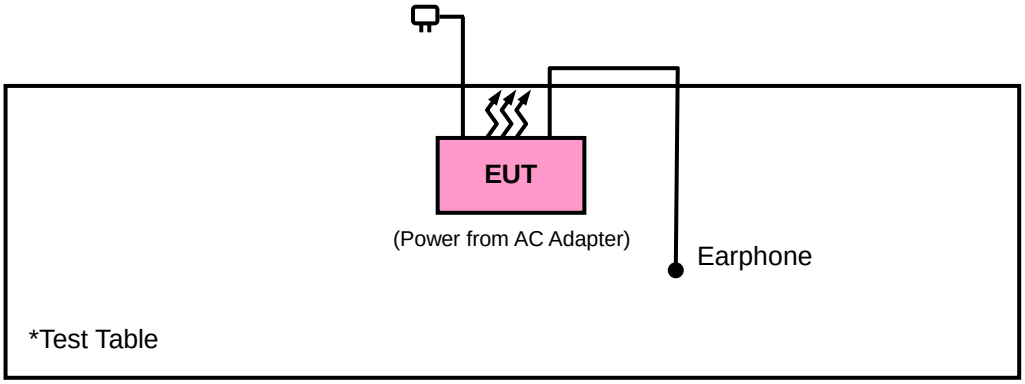
TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 65%RH	120Vac, 60Hz	Kay Wu / Anson Lin
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Kay Wu / Anson Lin
PLC	25deg. C, 65%RH	120Vac, 60Hz	Johnson Liao
APCM	25deg. C, 65%RH	120Vac, 60Hz	Demon Lin

3.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units.

3.3.1 CONFIGURATION OF SYSTEM UNDER TEST



3.4 DUTY CYCLE TEST SIGNAL

MODULATION TYPE: BPSK

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

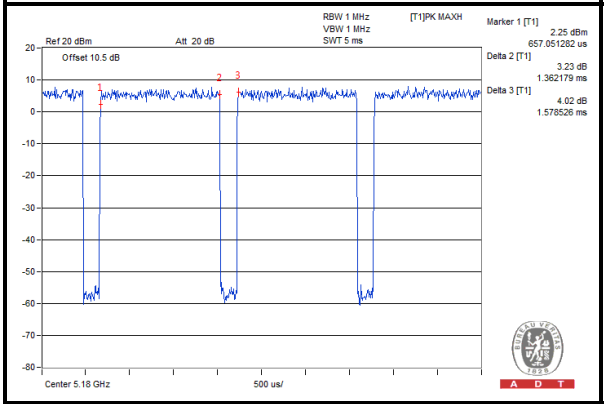
802.11a: Duty cycle = 1.362/1.579 = 0.862, Duty factor = 10 * log(1/0.862) = 0.64

802.11n (20MHz): Duty cycle = 1.266/1.482 = 0.854, Duty factor = 10 * log(1/0.854) = 0.69

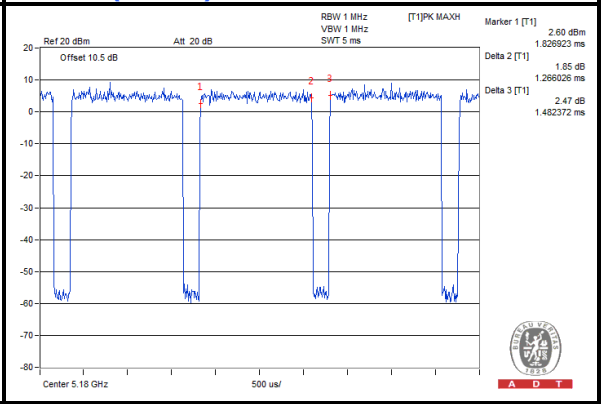
802.11n (40MHz): Duty cycle = 606/843 = 0.719, Duty factor = 10 * log(1/0.719) = 1.43

802.11ac (80MHz): Duty cycle = 250/450 = 0.555, Duty factor = 10 * log(1/0.555) = 2.56

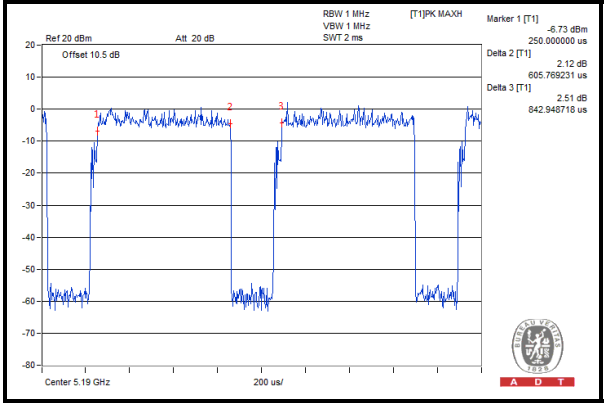
802.11a



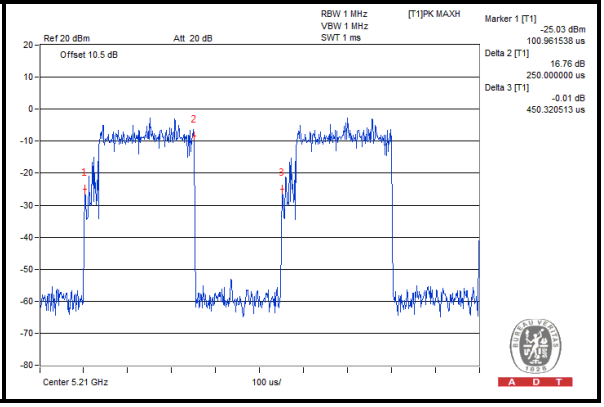
802.11n (20MHz)



802.11n (40MHz)



802.11ac (80MHz)



MODULATION TYPE: QPSK

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

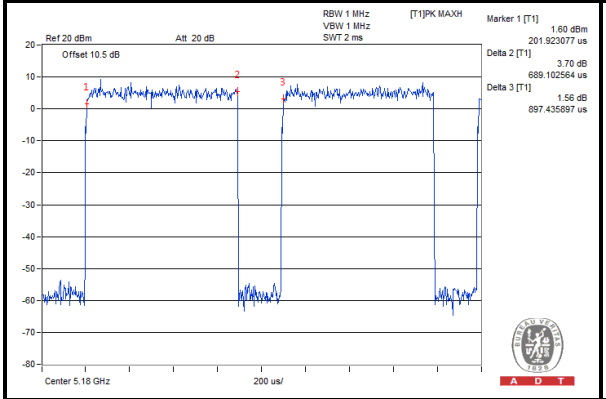
802.11a: Duty cycle = 689/897 = 0.768, Duty factor = 10 * log(1/0.768) = 1.15

802.11n (20MHz): Duty cycle = 654/859 = 0.761, Duty factor = 10 * log(1/0.761) = 1.19

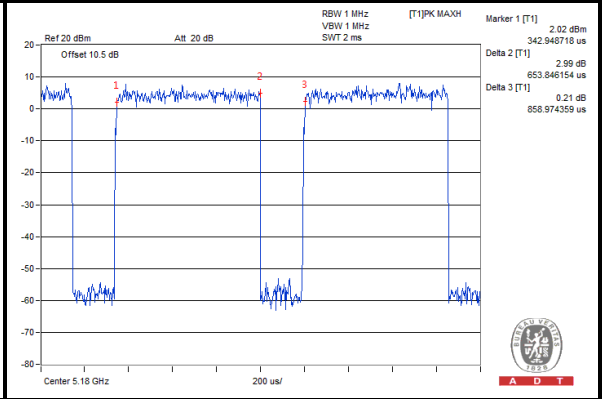
802.11n (40MHz): Duty cycle = 301/538 = 0.560, Duty factor = 10 * log(1/0.560) = 2.52

802.11ac (80MHz): Duty cycle = 144/346 = 0.417, Duty factor = 10 * log(1/0.417) = 3.8

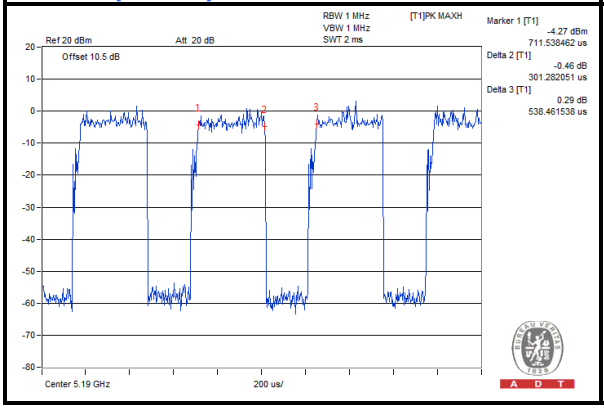
802.11a



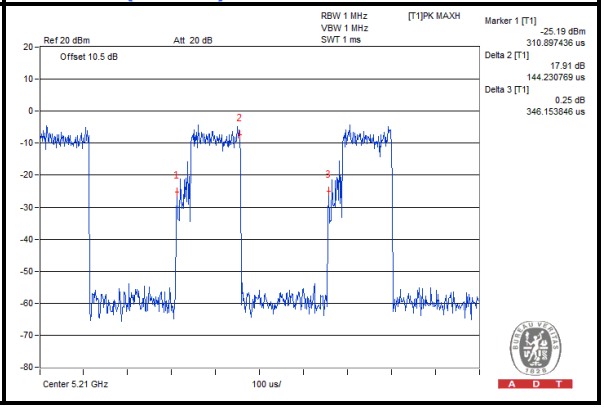
802.11n (20MHz)



802.11n (40MHz)



802.11ac (80MHz)



MODULATION TYPE: 16QAM

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

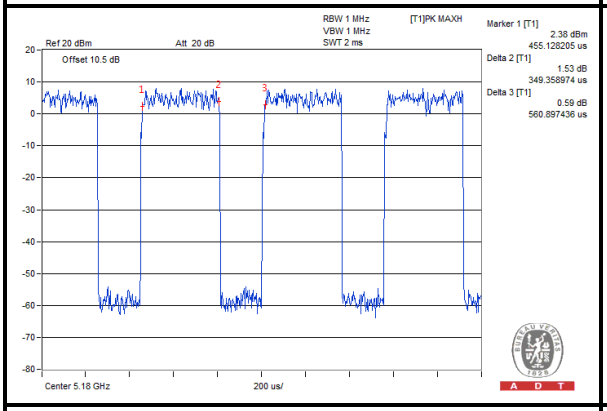
802.11a: Duty cycle = 349/561 = 0.623, Duty factor = 10 * log(1/0.623) = 2.06

802.11n (20MHz): Duty cycle = 343/551 = 0.622, Duty factor = 10 * log(1/0.622) = 2.06

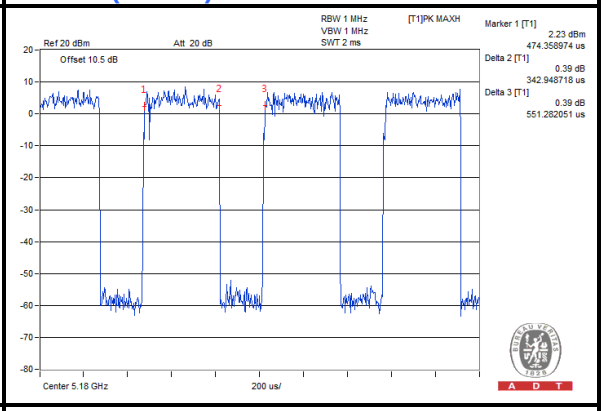
802.11n (40MHz): Duty cycle = 189/389 = 0.486, Duty factor = 10 * log(1/0.486) = 3.14

802.11ac (80MHz): Duty cycle = 93/295 = 0.315, Duty factor = 10 * log(1/0.315) = 5.01

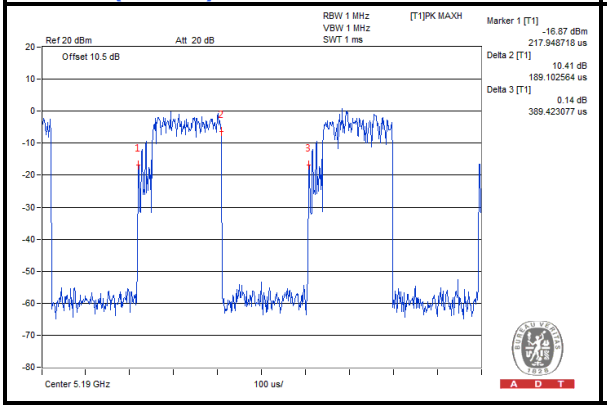
802.11a



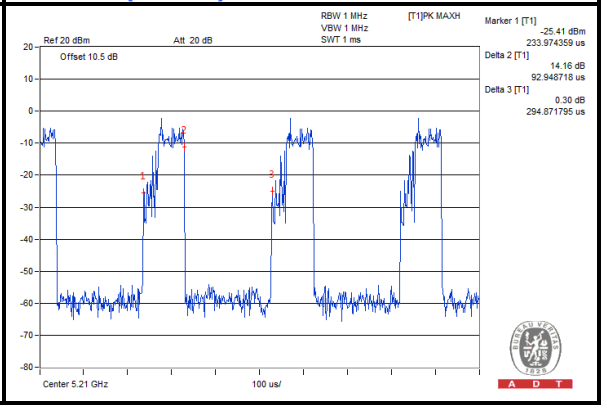
802.11n (20MHz)



802.11n (40MHz)



802.11ac (80MHz)



MODULATION TYPE: 64QAM

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

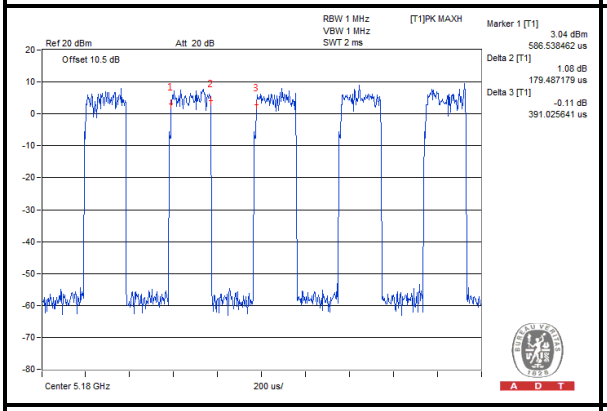
802.11a: Duty cycle = 179/391 = 0.459, Duty factor = 10 * log(1/0.459) = 3.38

802.11n (20MHz): Duty cycle = 183/393 = 0.465, Duty factor = 10 * log(1/0.465) = 3.32

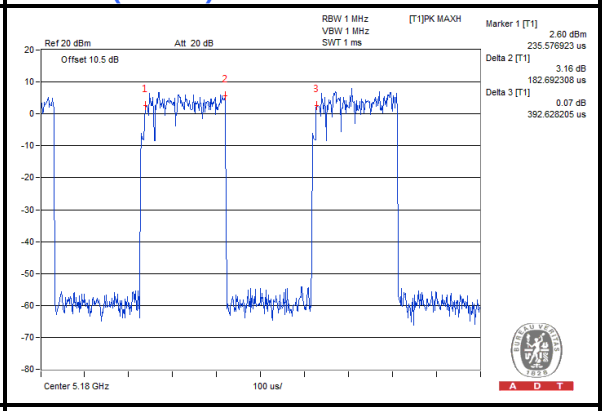
802.11n (40MHz): Duty cycle = 111/312 = 0.357, Duty factor = 10 * log(1/0.357) = 4.47

802.11ac (80MHz): Duty cycle = 69/269 = 0.256, Duty factor = 10 * log(1/0.256) = 5.92

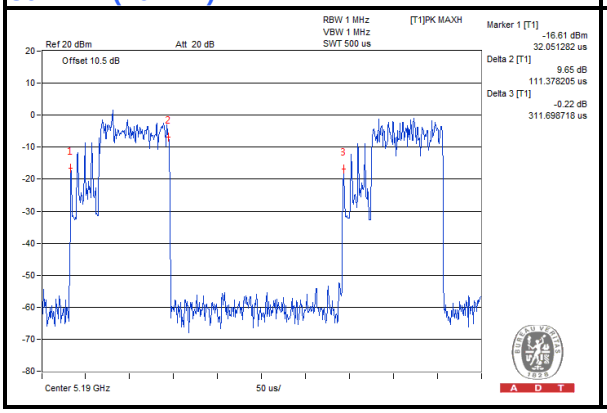
802.11a



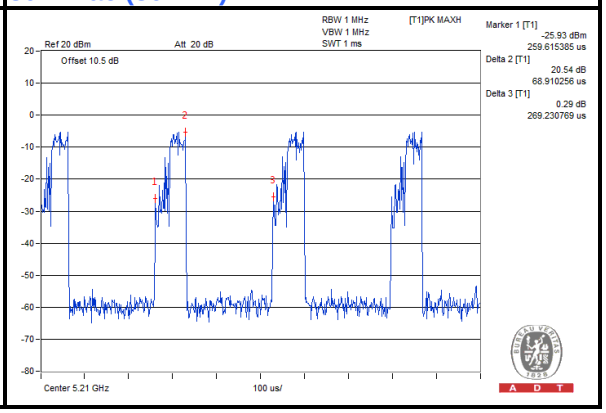
802.11n (20MHz)



802.11n (40MHz)



802.11ac (80MHz)

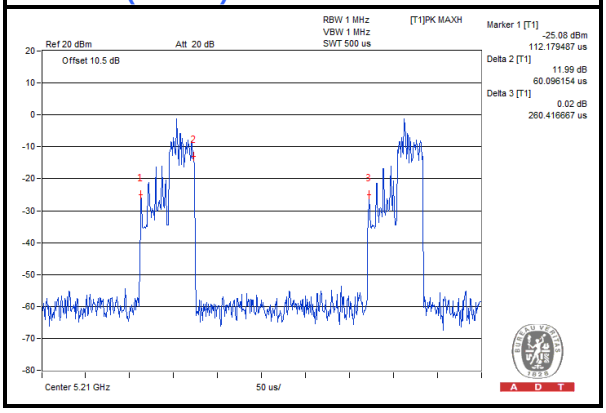


MODULATION TYPE: 256QAM

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

802.11ac (80MHz): Duty cycle = 60/260 = 0.230, Duty factor = 10 * log(1/0.230) = 6.37

802.11ac (80MHz)



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)

ANSI C63.10-2009

KDB 789033 D01 General UNII Test Procedures v01r03

KDB644545 D01 v01r02

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:

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

4.1.3 TEST INSTRUMENTS

Test Date: Dec. 23, 2013 ~ Feb. 20, 2014

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100744	Apr. 15, 2013	Apr. 14, 2014
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 21, 2013	Dec. 20, 2014
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Mar. 25, 2013	Mar. 24, 2014
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-405	Feb. 21, 2013	Feb. 20, 2014
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 18, 2013	Dec. 17, 2014
Preamplifier EMCI	EMC0126545	980076	Feb. 27, 2013	Feb. 26, 2014
Preamplifier EMCI	EMC 330H	980071	Feb. 27, 2013	Feb. 26, 2014
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:

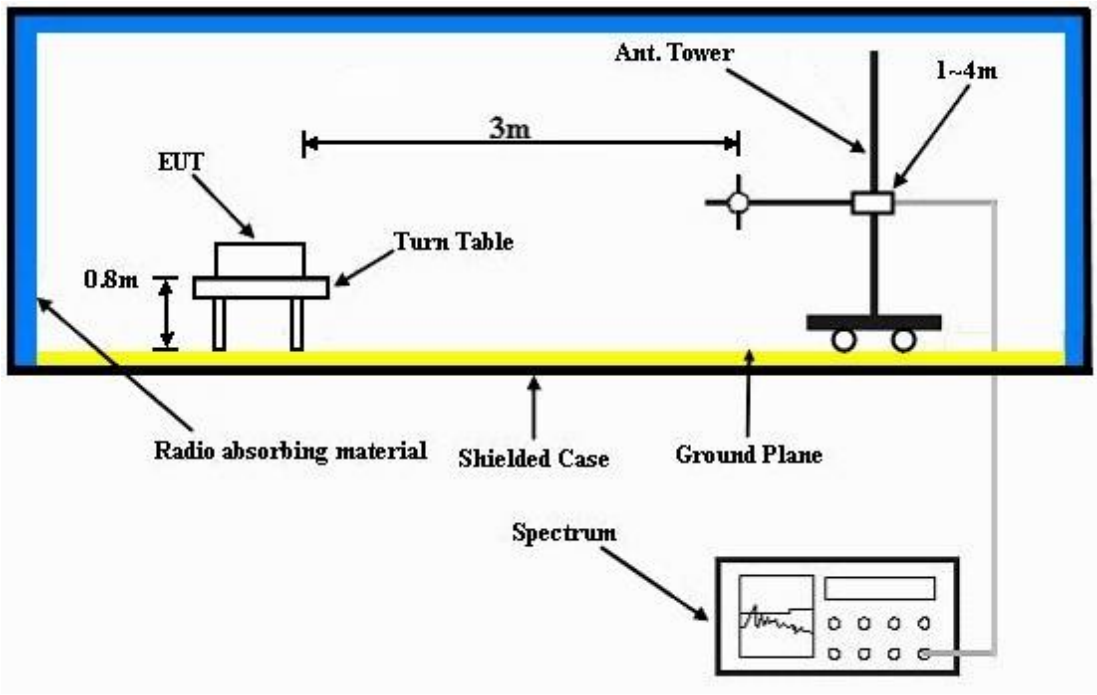
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency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

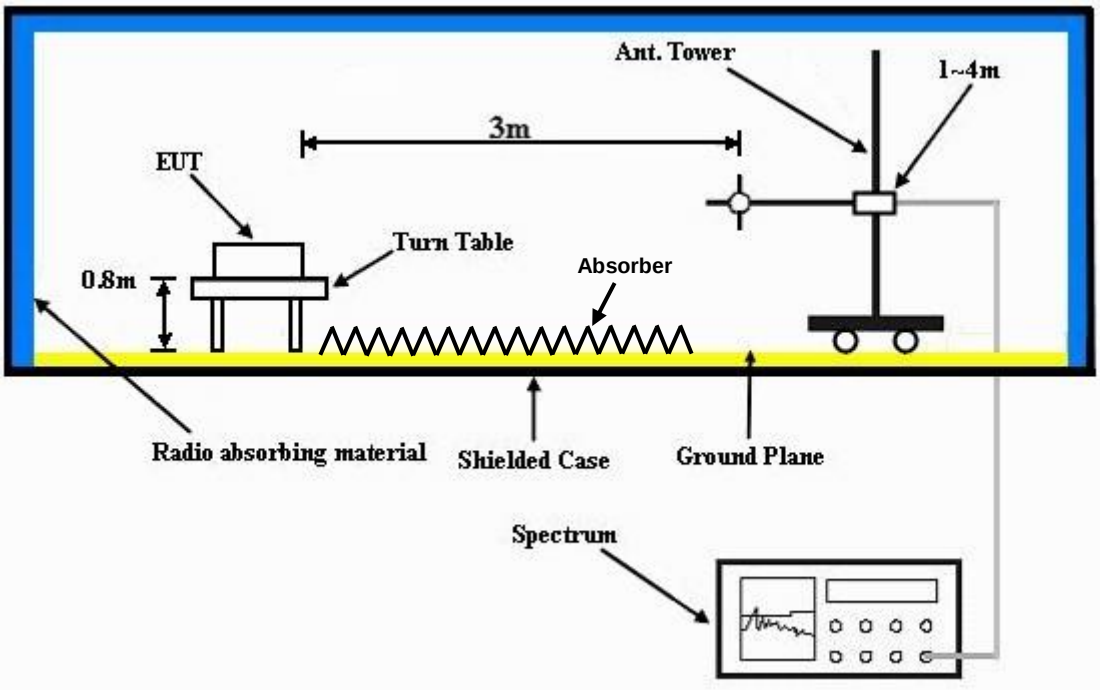
No deviation.

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

a. Placed the EUT on a testing table.

b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.

4.1.8 TEST RESULTS

Mode A

ABOVE 1GHz WORST-CASE DATA

802.11a

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

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**
5006	39.53	31.12	54	-14.47	34.41	7.97	33.97	125	249	Average
5006	59.05	50.64	74	-14.95	34.41	7.97	33.97	125	249	Peak
5180	91.43	82.8			34.47	8.16	34	125	249	Average
5180	100.54	91.91			34.47	8.16	34	125	249	Peak
5396	37.68	28.78	54	-16.32	34.5	8.44	34.04	125	249	Average
5396	60.74	51.84	74	-13.26	34.5	8.44	34.04	125	249	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**
5054	38.51	30.06	54	-15.49	34.43	8	33.98	100	272	Average
5054	59.28	50.83	74	-14.72	34.43	8	33.98	100	272	Peak
5180	87.35	78.72			34.47	8.16	34	100	272	Average
5180	96.86	88.23			34.47	8.16	34	100	272	Peak
5444	37.71	28.77	54	-16.29	34.5	8.48	34.04	100	272	Average
5444	60.66	51.72	74	-13.34	34.5	8.48	34.04	100	272	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5180MHz: Fundamental frequency.

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

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
5142	37.53	28.93	54	-16.47	34.46	8.13	33.99	100	249	Average
5142	59.38	50.78	74	-14.62	34.46	8.13	33.99	100	249	Peak
5220	91.42	82.71			34.49	8.22	34	100	249	Average
5220	100.75	92.04			34.49	8.22	34	100	249	Peak
5440	37.81	28.87	54	-16.19	34.5	8.48	34.04	100	249	Average
5440	58.69	49.75	74	-15.31	34.5	8.48	34.04	100	249	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	37.38	28.85	54	-16.62	34.45	8.07	33.99	100	271	Average
5106	58.7	50.17	74	-15.3	34.45	8.07	33.99	100	271	Peak
5220	87.49	78.78			34.49	8.22	34	100	271	Average
5220	96.81	88.1			34.49	8.22	34	100	271	Peak
5452	37.8	28.84	54	-16.2	34.5	8.51	34.05	100	271	Average
5452	59.52	50.56	74	-14.48	34.5	8.51	34.05	100	271	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5220MHz: Fundamental frequency.

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

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
5114	37.47	28.91	54	-16.53	34.45	8.1	33.99	100	249	Average
5114	59.25	50.69	74	-14.75	34.45	8.1	33.99	100	249	Peak
5240	91.13	82.39			34.49	8.26	34.01	100	249	Average
5240	100.24	91.5			34.49	8.26	34.01	100	249	Peak
5360	37.69	28.84	54	-16.31	34.5	8.38	34.03	100	249	Average
5360	59.16	50.31	74	-14.84	34.5	8.38	34.03	100	249	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
5148	37.52	28.93	54	-16.48	34.46	8.13	34	100	272	Average
5148	59.35	50.76	74	-14.65	34.46	8.13	34	100	272	Peak
5240	87.89	79.15			34.49	8.26	34.01	100	272	Average
5240	96.93	88.19			34.49	8.26	34.01	100	272	Peak
5458	37.78	28.82	54	-16.22	34.5	8.51	34.05	100	272	Average
5458	59.28	50.32	74	-14.72	34.5	8.51	34.05	100	272	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5240MHz: Fundamental frequency.

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

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
5104	37.36	28.84	54	-16.64	34.44	8.07	33.99	100	5	Average
5104	60.02	51.5	74	-13.98	34.44	8.07	33.99	100	5	Peak
5260	90.8	82.05			34.5	8.26	34.01	100	5	Average
5260	99.96	91.21			34.5	8.26	34.01	100	5	Peak
5448	37.82	28.85	54	-16.18	34.5	8.51	34.04	100	5	Average
5448	58.81	49.84	74	-15.19	34.5	8.51	34.04	100	5	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
5108	37.56	29	54	-16.44	34.45	8.1	33.99	114	280	Average
5108	59.8	51.24	74	-14.2	34.45	8.1	33.99	114	280	Peak
5260	93.07	84.32			34.5	8.26	34.01	114	280	Average
5260	102.35	93.6			34.5	8.26	34.01	114	280	Peak
5386	37.62	28.75	54	-16.38	34.5	8.41	34.04	114	280	Average
5386	59.48	50.61	74	-14.52	34.5	8.41	34.04	114	280	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5260MHz: Fundamental frequency.

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

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
5018	37.4	28.99	54	-16.6	34.41	7.97	33.97	112	279	Average
5018	59.1	50.69	74	-14.9	34.41	7.97	33.97	112	279	Peak
5300	95	86.2			34.5	8.32	34.02	112	279	Average
5300	104.37	95.57			34.5	8.32	34.02	112	279	Peak
5402	42.04	33.14	54	-11.96	34.5	8.44	34.04	112	279	Average
5402	59.11	50.21	74	-14.89	34.5	8.44	34.04	112	279	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
5052	37.34	28.9	54	-16.66	34.42	8	33.98	100	4	Average
5052	58.91	50.47	74	-15.09	34.42	8	33.98	100	4	Peak
5300	92.57	83.77			34.5	8.32	34.02	100	4	Average
5300	101.32	92.52			34.5	8.32	34.02	100	4	Peak
5450	39.41	30.45	54	-14.59	34.5	8.51	34.05	100	4	Average
5450	59.48	50.52	74	-14.52	34.5	8.51	34.05	100	4	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5300MHz: Fundamental frequency.

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

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
5090	37.57	29.04	54	-16.43	34.44	8.07	33.98	111	280	Average
5090	58.66	50.13	74	-15.34	34.44	8.07	33.98	111	280	Peak
5320	94.01	85.18			34.5	8.35	34.02	111	280	Average
5320	103.53	94.7			34.5	8.35	34.02	111	280	Peak
5440	41.25	32.31	54	-12.75	34.5	8.48	34.04	111	280	Average
5440	59.71	50.77	74	-14.29	34.5	8.48	34.04	111	280	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
5118	37.4	28.84	54	-16.6	34.45	8.1	33.99	100	3	Average
5118	58.61	50.05	74	-15.39	34.45	8.1	33.99	100	3	Peak
5320	91.48	82.65			34.5	8.35	34.02	100	3	Average
5320	100.9	92.07			34.5	8.35	34.02	100	3	Peak
5444	39.45	30.51	54	-14.55	34.5	8.48	34.04	100	3	Average
5444	59.3	50.36	74	-14.7	34.5	8.48	34.04	100	3	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5320MHz: Fundamental frequency.

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

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	42.86	33.89	54	-11.14	34.5	8.51	34.04	118	284	Average
5448	59.11	50.14	74	-14.89	34.5	8.51	34.04	118	284	Peak
5470	57.05	48.09	68.3	-11.25	34.5	8.51	34.05	118	284	Peak
5500	95.21	86.19			34.5	8.57	34.05	118	284	Average
5500	104.74	95.72			34.5	8.57	34.05	118	284	Peak
5725	57.83	48.62	68.3	-10.47	34.67	8.65	34.11	118	284	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
5452	40.98	32.02	54	-13.02	34.5	8.51	34.05	112	246	Average
5452	59.71	50.75	74	-14.29	34.5	8.51	34.05	112	246	Peak
5470	58.62	49.66	68.3	-9.68	34.5	8.51	34.05	112	246	Peak
5500	92.79	83.77			34.5	8.57	34.05	112	246	Average
5500	102.32	93.3			34.5	8.57	34.05	112	246	Peak
5725	57.62	48.41	68.3	-10.68	34.67	8.65	34.11	112	246	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5500MHz: Fundamental frequency.
3. 5470MHz & 5725MHz: Out of restricted band

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

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
5452	37.87	28.91	54	-16.13	34.5	8.51	34.05	113	294	Average
5452	59.2	50.24	74	-14.8	34.5	8.51	34.05	113	294	Peak
5470	58.08	49.12	68.3	-10.22	34.5	8.51	34.05	113	294	Peak
5580	94.95	85.86			34.57	8.6	34.08	113	294	Average
5580	104.46	95.37			34.57	8.6	34.08	113	294	Peak
5725	57.42	48.21	68.3	-10.88	34.67	8.65	34.11	113	294	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	37.9	28.94	54	-16.1	34.5	8.51	34.05	111	247	Average
5460	59.09	50.13	74	-14.91	34.5	8.51	34.05	111	247	Peak
5470	58.1	49.14	68.3	-10.2	34.5	8.51	34.05	111	247	Peak
5580	92.76	83.67			34.57	8.6	34.08	111	247	Average
5580	102.66	93.57			34.57	8.6	34.08	111	247	Peak
5725	58.06	48.85	68.3	-10.24	34.67	8.65	34.11	111	247	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5580MHz: Fundamental frequency.
3. 5470MHz & 5725MHz: Out of restricted band

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

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
5410	37.84	28.94	54	-16.16	34.5	8.44	34.04	113	282	Average
5410	59.48	50.58	74	-14.52	34.5	8.44	34.04	113	282	Peak
5470	57.09	48.13	68.3	-11.21	34.5	8.51	34.05	113	282	Peak
5700	95.8	86.6			34.66	8.64	34.1	113	282	Average
5700	105.08	95.88			34.66	8.64	34.1	113	282	Peak
5725	58.99	49.78	68.3	-9.31	34.67	8.65	34.11	113	282	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
5350	37.74	28.89	54	-16.26	34.5	8.38	34.03	100	244	Average
5350	59.22	50.37	74	-14.78	34.5	8.38	34.03	100	244	Peak
5470	57.39	48.43	68.3	-10.91	34.5	8.51	34.05	100	244	Peak
5700	92.52	83.32			34.66	8.64	34.1	100	244	Average
5700	102.02	92.82			34.66	8.64	34.1	100	244	Peak
5725	59.91	50.7	68.3	-8.39	34.67	8.65	34.11	100	244	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5700MHz: Fundamental frequency.
3. 5470MHz & 5725MHz: Out of restricted band

802.11n (20MHz)

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

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	41.1	32.65	54	-12.9	34.43	8	33.98	129	250	Average
5054	58.9	50.45	74	-15.1	34.43	8	33.98	129	250	Peak
5180	91.44	82.81			34.47	8.16	34	129	250	Average
5180	100.29	91.66			34.47	8.16	34	129	250	Peak
5380	37.75	28.88	54	-16.25	34.5	8.41	34.04	129	250	Average
5380	59	50.13	74	-15	34.5	8.41	34.04	129	250	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
5062	38.03	29.55	54	-15.97	34.43	8.03	33.98	100	51	Average
5062	59.36	50.88	74	-14.64	34.43	8.03	33.98	100	51	Peak
5180	87.22	78.59			34.47	8.16	34	100	51	Average
5180	96.31	87.68			34.47	8.16	34	100	51	Peak
5458	37.74	28.78	54	-16.26	34.5	8.51	34.05	100	51	Average
5458	59.33	50.37	74	-14.67	34.5	8.51	34.05	100	51	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5180MHz: Fundamental frequency.

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

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
5064	37.49	29.01	54	-16.51	34.43	8.03	33.98	100	248	Average
5064	59.17	50.69	74	-14.83	34.43	8.03	33.98	100	248	Peak
5220	90.91	82.2			34.49	8.22	34	100	248	Average
5220	100.39	91.68			34.49	8.22	34	100	248	Peak
5438	37.92	28.98	54	-16.08	34.5	8.48	34.04	100	248	Average
5438	59.17	50.23	74	-14.83	34.5	8.48	34.04	100	248	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
5044	37.37	28.93	54	-16.63	34.42	8	33.98	100	52	Average
5044	59.74	51.3	74	-14.26	34.42	8	33.98	100	52	Peak
5220	87.57	78.86			34.49	8.22	34	100	52	Average
5220	96.66	87.95			34.49	8.22	34	100	52	Peak
5354	37.65	28.8	54	-16.35	34.5	8.38	34.03	100	52	Average
5354	59.68	50.83	74	-14.32	34.5	8.38	34.03	100	52	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5220MHz: Fundamental frequency.

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

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	37.38	28.9	54	-16.62	34.43	8.03	33.98	100	258	Average
5068	58.87	50.39	74	-15.13	34.43	8.03	33.98	100	258	Peak
5240	90.48	81.74			34.49	8.26	34.01	100	258	Average
5240	100.08	91.34			34.49	8.26	34.01	100	258	Peak
5372	37.77	28.89	54	-16.23	34.5	8.41	34.03	100	258	Average
5372	59.39	50.51	74	-14.61	34.5	8.41	34.03	100	258	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
5088	37.52	29	54	-16.48	34.43	8.07	33.98	100	50	Average
5088	60.36	51.84	74	-13.64	34.43	8.07	33.98	100	50	Peak
5240	88.16	79.42			34.49	8.26	34.01	100	50	Average
5240	97.97	89.23			34.49	8.26	34.01	100	50	Peak
5424	37.87	28.93	54	-16.13	34.5	8.48	34.04	100	50	Average
5424	60.22	51.28	74	-13.78	34.5	8.48	34.04	100	50	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5240MHz: Fundamental frequency.

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

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
5076	37.42	28.94	54	-16.58	34.43	8.03	33.98	115	280	Average
5076	59.35	50.87	74	-14.65	34.43	8.03	33.98	115	280	Peak
5260	92.46	83.71			34.5	8.26	34.01	115	280	Average
5260	101.6	92.85			34.5	8.26	34.01	115	280	Peak
5394	37.73	28.83	54	-16.27	34.5	8.44	34.04	115	280	Average
5394	59.5	50.6	74	-14.5	34.5	8.44	34.04	115	280	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	37.24	28.8	54	-16.76	34.41	8	33.97	100	4	Average
5032	59	50.56	74	-15	34.41	8	33.97	100	4	Peak
5260	90.36	81.61			34.5	8.26	34.01	100	4	Average
5260	99.23	90.48			34.5	8.26	34.01	100	4	Peak
5388	37.66	28.79	54	-16.34	34.5	8.41	34.04	100	4	Average
5388	60.07	51.2	74	-13.93	34.5	8.41	34.04	100	4	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5260MHz: Fundamental frequency.

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

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
5018	37.51	29.1	54	-16.49	34.41	7.97	33.97	111	279	Average
5018	59.12	50.71	74	-14.88	34.41	7.97	33.97	111	279	Peak
5300	94.8	86			34.5	8.32	34.02	111	279	Average
5300	103.98	95.18			34.5	8.32	34.02	111	279	Peak
5434	42.6	33.66	54	-11.4	34.5	8.48	34.04	111	279	Average
5434	59.8	50.86	74	-14.2	34.5	8.48	34.04	111	279	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
5102	37.47	28.95	54	-16.53	34.44	8.07	33.99	100	3	Average
5102	59.47	50.95	74	-14.53	34.44	8.07	33.99	100	3	Peak
5300	92.42	83.62			34.5	8.32	34.02	100	3	Average
5300	101.94	93.14			34.5	8.32	34.02	100	3	Peak
5436	40.1	31.16	54	-13.9	34.5	8.48	34.04	100	3	Average
5436	59.2	50.26	74	-14.8	34.5	8.48	34.04	100	3	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5300MHz: Fundamental frequency.

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

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
5046	37.34	28.9	54	-16.66	34.42	8	33.98	112	280	Average
5046	58.81	50.37	74	-15.19	34.42	8	33.98	112	280	Peak
5320	93.35	84.52			34.5	8.35	34.02	112	280	Average
5320	102.44	93.61			34.5	8.35	34.02	112	280	Peak
5390	41.67	32.8	54	-12.33	34.5	8.41	34.04	112	280	Average
5390	59.44	50.57	74	-14.56	34.5	8.41	34.04	112	280	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
5140	37.42	28.83	54	-16.58	34.45	8.13	33.99	100	2	Average
5140	59.48	50.89	74	-14.52	34.45	8.13	33.99	100	2	Peak
5320	91.04	82.21			34.5	8.35	34.02	100	2	Average
5320	100.13	91.3			34.5	8.35	34.02	100	2	Peak
5420	39.59	30.65	54	-14.41	34.5	8.48	34.04	100	2	Average
5420	60.24	51.3	74	-13.76	34.5	8.48	34.04	100	2	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5320MHz: Fundamental frequency.

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

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
5432	43.3	34.36	54	-10.7	34.5	8.48	34.04	105	291	Average
5432	59.79	50.85	74	-14.21	34.5	8.48	34.04	105	291	Peak
5470	58.13	49.17	68.3	-10.17	34.5	8.51	34.05	105	291	Peak
5500	94.79	85.77			34.5	8.57	34.05	105	291	Average
5500	104.12	95.1			34.5	8.57	34.05	105	291	Peak
5725	57.72	48.51	68.3	-10.58	34.67	8.65	34.11	105	291	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
5400	41.48	32.58	54	-12.52	34.5	8.44	34.04	112	246	Average
5400	60.12	51.22	74	-13.88	34.5	8.44	34.04	112	246	Peak
5470	59.49	50.53	68.3	-8.81	34.5	8.51	34.05	112	246	Peak
5500	92.33	83.31			34.5	8.57	34.05	112	246	Average
5500	103.12	94.1			34.5	8.57	34.05	112	246	Peak
5725	60.39	51.18	68.3	-7.91	34.67	8.65	34.11	112	246	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5500MHz: Fundamental frequency.
3. 5470MHz & 5725MHz: Out of restricted band

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

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
5372	37.88	29	54	-16.12	34.5	8.41	34.03	115	295	Average
5372	59.34	50.46	74	-14.66	34.5	8.41	34.03	115	295	Peak
5470	57.89	48.93	68.3	-10.41	34.5	8.51	34.05	115	295	Peak
5580	94.27	85.18			34.57	8.6	34.08	115	295	Average
5580	103.96	94.87			34.57	8.6	34.08	115	295	Peak
5725	58.6	49.39	68.3	-9.7	34.67	8.65	34.11	115	295	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
5452	37.89	28.93	54	-16.11	34.5	8.51	34.05	111	245	Average
5452	59.36	50.4	74	-14.64	34.5	8.51	34.05	111	245	Peak
5470	57.36	48.4	68.3	-10.94	34.5	8.51	34.05	111	245	Peak
5580	92.44	83.35			34.57	8.6	34.08	111	245	Average
5580	102.37	93.28			34.57	8.6	34.08	111	245	Peak
5725	58.24	49.03	68.3	-10.06	34.67	8.65	34.11	111	245	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5580MHz: Fundamental frequency.
3. 5470MHz & 5725MHz: Out of restricted band

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

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	37.99	29.05	54	-16.01	34.5	8.48	34.04	113	283	Average
5440	59.67	50.73	74	-14.33	34.5	8.48	34.04	113	283	Peak
5470	57.16	48.2	68.3	-11.14	34.5	8.51	34.05	113	283	Peak
5700	95.1	85.9			34.66	8.64	34.1	113	283	Average
5700	104.39	95.19			34.66	8.64	34.1	113	283	Peak
5725	58.7	49.49	68.3	-9.6	34.67	8.65	34.11	113	283	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**
5372	37.71	28.83	54	-16.29	34.5	8.41	34.03	100	245	Average
5372	59.27	50.39	74	-14.73	34.5	8.41	34.03	100	245	Peak
5470	58.12	49.16	68.3	-10.18	34.5	8.51	34.05	100	245	Peak
5700	92.04	82.84			34.66	8.64	34.1	100	245	Average
5700	101.13	91.93			34.66	8.64	34.1	100	245	Peak
5725	58.55	49.34	68.3	-9.75	34.67	8.65	34.11	100	245	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5700MHz: Fundamental frequency.
3. 5470MHz & 5725MHz: Out of restricted band

802.11n (40MHz)

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

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	38.65	30.24	54	-15.35	34.41	7.97	33.97	100	250	Average
5024	59.45	51.04	74	-14.55	34.41	7.97	33.97	100	250	Peak
5190	88.33	79.67			34.47	8.19	34	100	250	Average
5190	97.72	89.06			34.47	8.19	34	100	250	Peak
5354	38.19	29.34	54	-15.81	34.5	8.38	34.03	100	250	Average
5354	60.38	51.53	74	-13.62	34.5	8.38	34.03	100	250	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
5100	37.87	29.35	54	-16.13	34.44	8.07	33.99	100	51	Average
5100	59.65	51.13	74	-14.35	34.44	8.07	33.99	100	51	Peak
5190	84.39	75.73			34.47	8.19	34	100	51	Average
5190	93.69	85.03			34.47	8.19	34	100	51	Peak
5414	38.14	29.24	54	-15.86	34.5	8.44	34.04	100	51	Average
5414	60.06	51.16	74	-13.94	34.5	8.44	34.04	100	51	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5190MHz: Fundamental frequency.

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

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
5122	38.02	29.46	54	-15.98	34.45	8.1	33.99	100	258	Average
5122	59.36	50.8	74	-14.64	34.45	8.1	33.99	100	258	Peak
5230	88.08	79.38			34.49	8.22	34.01	100	258	Average
5230	97.38	88.68			34.49	8.22	34.01	100	258	Peak
5418	37.72	28.82	54	-16.28	34.5	8.44	34.04	100	258	Average
5418	59.13	50.23	74	-14.87	34.5	8.44	34.04	100	258	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
5064	37.31	28.83	54	-16.69	34.43	8.03	33.98	100	51	Average
5064	59.47	50.99	74	-14.53	34.43	8.03	33.98	100	51	Peak
5230	85.22	76.52			34.49	8.22	34.01	100	51	Average
5230	94.89	86.19			34.49	8.22	34.01	100	51	Peak
5436	37.79	28.85	54	-16.21	34.5	8.48	34.04	100	51	Average
5436	59.63	50.69	74	-14.37	34.5	8.48	34.04	100	51	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5230MHz: Fundamental frequency.

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

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
5014	37.76	29.35	54	-16.24	34.41	7.97	33.97	114	281	Average
5014	58.75	50.34	74	-15.25	34.41	7.97	33.97	114	281	Peak
5270	90.95	82.17			34.5	8.29	34.01	114	281	Average
5270	99.78	91			34.5	8.29	34.01	114	281	Peak
5456	38.89	29.93	54	-15.11	34.5	8.51	34.05	114	281	Average
5456	59.34	50.38	74	-14.66	34.5	8.51	34.05	114	281	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	37.56	63.54	54	-16.44	0	8	33.98	100	3	Average
5048	59.12	85.1	74	-14.88	0	8	33.98	100	3	Peak
5270	88.55	114.27			0	8.29	34.01	100	3	Average
5270	97.64	123.36			0	8.29	34.01	100	3	Peak
5440	38.6	64.16	54	-15.4	0	8.48	34.04	100	3	Average
5440	59.89	85.45	74	-14.11	0	8.48	34.04	100	3	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5270MHz: Fundamental frequency.

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

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
5098	38.02	29.5	54	-15.98	34.44	8.07	33.99	113	280	Average
5098	59.06	50.54	74	-14.94	34.44	8.07	33.99	113	280	Peak
5310	91.58	82.78			34.5	8.32	34.02	113	280	Average
5310	100.67	91.87			34.5	8.32	34.02	113	280	Peak
5350	39.66	30.81	54	-14.34	34.5	8.38	34.03	113	280	Average
5350	59.57	50.72	74	-14.43	34.5	8.38	34.03	113	280	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
5072	37.77	29.29	54	-16.23	34.43	8.03	33.98	100	3	Average
5072	59.39	50.91	74	-14.61	34.43	8.03	33.98	100	3	Peak
5310	89.54	80.74			34.5	8.32	34.02	100	3	Average
5310	98.46	89.66			34.5	8.32	34.02	100	3	Peak
5444	38.61	29.67	54	-15.39	34.5	8.48	34.04	100	3	Average
5444	59.49	50.55	74	-14.51	34.5	8.48	34.04	100	3	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5310MHz: Fundamental frequency.

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

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
5442	40.66	31.72	54	-13.34	34.5	8.48	34.04	107	283	Average
5442	59.96	51.02	74	-14.04	34.5	8.48	34.04	107	283	Peak
5470	58.85	49.89	68.3	-9.45	34.5	8.51	34.05	107	283	Peak
5510	93.03	84.01			34.51	8.57	34.06	107	283	Average
5510	102.16	93.14			34.51	8.57	34.06	107	283	Peak
5725	58.63	49.42	68.3	-9.67	34.67	8.65	34.11	107	283	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
5398	38.38	29.48	54	-15.62	34.5	8.44	34.04	100	292	Average
5398	60.57	51.67	74	-13.43	34.5	8.44	34.04	100	292	Peak
5470	58.23	49.27	68.3	-10.07	34.5	8.51	34.05	100	292	Peak
5510	88.93	79.91			34.51	8.57	34.06	100	292	Average
5510	100.18	91.16			34.51	8.57	34.06	100	292	Peak
5725	59.48	50.27	68.3	-8.82	34.67	8.65	34.11	100	292	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5510MHz: Fundamental frequency.
3. 5470MHz & 5725MHz: Out of restricted band

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

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	44.53	35.56	54	-9.47	34.5	8.51	34.04	109	80	Average
5448	59.21	50.24	74	-14.79	34.5	8.51	34.04	109	80	Peak
5470	57.27	48.31	68.3	-11.03	34.5	8.51	34.05	109	80	Peak
5550	99.66	90.6			34.54	8.59	34.07	109	80	Average
5550	107.52	98.46			34.54	8.59	34.07	109	80	Peak
5725	57.97	48.76	68.3	-10.33	34.67	8.65	34.11	109	80	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
5402	45.46	36.56	54	-8.54	34.5	8.44	34.04	102	206	Average
5402	59.87	50.97	74	-14.13	34.5	8.44	34.04	102	206	Peak
5470	55.93	46.97	68.3	-12.37	34.5	8.51	34.05	102	206	Peak
5550	96.9	87.84			34.54	8.59	34.07	102	206	Average
5550	103.84	94.78			34.54	8.59	34.07	102	206	Peak
5725	56.98	47.77	68.3	-11.32	34.67	8.65	34.11	102	206	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5550MHz: Fundamental frequency.
3. 5470MHz & 5725MHz: Out of restricted band

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

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
5378	45.43	36.56	54	-8.57	34.5	8.41	34.04	108	81	Average
5378	58.77	49.9	74	-15.23	34.5	8.41	34.04	108	81	Peak
5470	57.59	48.63	68.3	-10.71	34.5	8.51	34.05	108	81	Peak
5670	98.83	89.67			34.63	8.63	34.1	108	81	Average
5670	106.72	97.56			34.63	8.63	34.1	108	81	Peak
5725	58.69	49.48	68.3	-9.61	34.67	8.65	34.11	108	81	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
5432	45.2	36.26	54	-8.8	34.5	8.48	34.04	102	248	Average
5432	58.72	49.78	74	-15.28	34.5	8.48	34.04	102	248	Peak
5470	58.88	49.92	68.3	-9.42	34.5	8.51	34.05	102	248	Peak
5670	94.83	85.67			34.63	8.63	34.1	102	248	Average
5670	101.67	92.51			34.63	8.63	34.1	102	248	Peak
5725	56.67	47.46	68.3	-11.63	34.67	8.65	34.11	102	248	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5670MHz: Fundamental frequency.
3. 5470MHz & 5725MHz: Out of restricted band

802.11ac (80MHz)

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

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
5106	40.78	32.25	54	-13.22	34.45	8.07	33.99	100	251	Average
5106	59.2	50.67	74	-14.8	34.45	8.07	33.99	100	251	Peak
5210	85.88	77.2			34.49	8.19	34	100	251	Average
5210	94.4	85.72			34.49	8.19	34	100	251	Peak
5428	39.13	30.19	54	-14.87	34.5	8.48	34.04	100	251	Average
5428	59.47	50.53	74	-14.53	34.5	8.48	34.04	100	251	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
5028	39.1	30.69	54	-14.9	34.41	7.97	33.97	100	50	Average
5028	59.21	50.8	74	-14.79	34.41	7.97	33.97	100	50	Peak
5210	82.71	74.03			34.49	8.19	34	100	50	Average
5210	91.84	83.16			34.49	8.19	34	100	50	Peak
5350	38.87	30.02	54	-15.13	34.5	8.38	34.03	100	50	Average
5350	59.29	50.44	74	-14.71	34.5	8.38	34.03	100	50	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5210MHz: Fundamental frequency.

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

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
5002	38.66	30.29	54	-15.34	34.4	7.94	33.97	114	280	Average
5002	59.17	50.8	74	-14.83	34.4	7.94	33.97	114	280	Peak
5290	89.84	81.04			34.5	8.32	34.02	114	280	Average
5290	98.32	89.52			34.5	8.32	34.02	114	280	Peak
5350	41.75	32.9	54	-12.25	34.5	8.38	34.03	114	280	Average
5350	59.44	50.59	74	-14.56	34.5	8.38	34.03	114	280	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
5010	38.51	30.1	54	-15.49	34.41	7.97	33.97	100	4	Average
5010	58.93	50.52	74	-15.07	34.41	7.97	33.97	100	4	Peak
5290	87.79	78.99			34.5	8.32	34.02	100	4	Average
5290	96.7	87.9			34.5	8.32	34.02	100	4	Peak
5430	40.21	31.27	54	-13.79	34.5	8.48	34.04	100	4	Average
5430	58.96	50.02	74	-15.04	34.5	8.48	34.04	100	4	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5290MHz: Fundamental frequency.

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

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
5458	42.71	33.75	54	-11.29	34.5	8.51	34.05	116	284	Average
5458	60.27	51.31	74	-13.73	34.5	8.51	34.05	116	284	Peak
5470	60.15	51.19	68.3	-8.15	34.5	8.51	34.05	116	284	Peak
5530	89.34	80.3			34.53	8.58	34.07	116	284	Average
5530	99.66	90.62			34.53	8.58	34.07	116	284	Peak
5725	58.33	49.12	68.3	-9.97	34.67	8.65	34.11	116	284	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	40.61	31.65	54	-13.39	34.5	8.51	34.05	111	247	Average
5460	59.31	50.35	74	-14.69	34.5	8.51	34.05	111	247	Peak
5470	59.56	50.6	68.3	-8.74	34.5	8.51	34.05	111	247	Peak
5530	87.62	78.58			34.53	8.58	34.07	111	247	Average
5530	97.21	88.17			34.53	8.58	34.07	111	247	Peak
5725	59.22	50.01	68.3	-9.08	34.67	8.65	34.11	111	247	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5530MHz: Fundamental frequency.
3. 5470MHz & 5725MHz: Out of restricted band

BELOW 1GHz WORST-CASE DATA:

Band 1

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 46	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
66.99	17.6	41.19	40	-22.4	7.73	0.9	32.22	156	221	Peak
96.15	26.39	47.77	43.5	-17.11	9.38	1.28	32.04	124	51	Peak
117.75	19.05	41.19	43.5	-24.45	8.83	1.28	32.25	102	320	Peak
374.2	20.71	34.29	46	-25.29	16.3	2.26	32.14	156	216	Peak
492.5	19.83	30.32	46	-26.17	18.98	2.63	32.1	155	220	Peak
614.3	25.33	32.97	46	-20.67	21.67	2.87	32.18	107	55	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
47.28	21.48	44.15	40	-18.52	8.65	0.9	32.22	156	265	Peak
61.05	24.84	49.23	40	-15.16	6.94	0.9	32.23	158	220	Peak
91.29	33.55	55.19	43.5	-9.95	9.02	1.11	31.77	125	209	Peak
400.1	19.03	30.81	46	-26.97	18.1	2.34	32.22	155	225	Peak
526.8	21.98	30.77	46	-24.02	20.66	2.7	32.15	152	229	Peak
626.9	23.95	31.09	46	-22.05	22.1	2.93	32.17	175	62	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value

Band 2

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
66.45	20.9	44.58	40	-19.1	7.64	0.9	32.22	156	225	Peak
96.69	34.49	55.89	43.5	-9.01	9.42	1.28	32.1	105	115	Peak
147.18	22.06	42.89	43.5	-21.44	9.92	1.52	32.27	199	332	Peak
400.1	20.93	32.71	46	-25.07	18.1	2.34	32.22	125	165	Peak
527.5	21.34	30.13	46	-24.66	20.66	2.7	32.15	107	105	Peak
630.4	26.72	33.86	46	-19.28	22.1	2.93	32.17	162	38	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
47.28	20.99	43.66	40	-19.01	8.65	0.9	32.22	132	62	Peak
65.1	22.54	46.36	40	-17.46	7.5	0.9	32.22	162	223	Peak
94.53	32.92	54.54	43.5	-10.58	9.26	1.11	31.99	107	19	Peak
393.8	21.15	33.37	46	-24.85	17.65	2.34	32.21	163	206	Peak
498.8	21.34	31.81	46	-24.66	19	2.63	32.1	199	203	Peak
585.6	22.27	31.17	46	-23.73	20.48	2.82	32.2	171	201	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value

Band 3

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

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
59.97	21.75	46.28	40	-18.25	6.8	0.9	32.23	166	325	Peak
96.15	34.85	56.23	43.5	-8.65	9.38	1.28	32.04	106	265	Peak
143.67	22.77	44.05	43.5	-20.73	9.61	1.38	32.27	174	158	Peak
400.1	20.34	32.12	46	-25.66	18.1	2.34	32.22	132	265	Peak
491.8	19.88	30.38	46	-26.12	18.97	2.63	32.1	105	206	Peak
556.2	21.56	30.75	46	-24.44	20.25	2.76	32.2	185	203	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
47.28	21.54	44.21	40	-18.46	8.65	0.9	32.22	132	216	Peak
62.13	26.82	51.07	40	-13.18	7.08	0.9	32.23	109	226	Peak
94.8	33.33	54.91	43.5	-10.17	9.3	1.11	31.99	171	201	Peak
396.6	20.63	32.56	46	-25.37	17.95	2.34	32.22	136	223	Peak
535.2	22.31	31.26	46	-23.69	20.52	2.7	32.17	109	28	Peak
727.7	25.37	30.93	46	-20.63	23.4	3.16	32.12	108	236	Peak

REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value

Mode B

ABOVE 1GHz WORST-CASE DATA

Band 1

802.11ac (80MHz)

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

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
5142	46.52	37.92	54	-7.48	34.46	8.13	33.99	100	281	Average
5142	61.11	52.51	74	-12.89	34.46	8.13	33.99	100	281	Peak
5210	92.61	83.93			34.49	8.19	34	100	281	Average
5210	102.37	93.69			34.49	8.19	34	100	281	Peak
5454	38.99	30.03	54	-15.01	34.5	8.51	34.05	100	281	Average
5454	59.85	50.89	74	-14.15	34.5	8.51	34.05	100	281	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	43.81	35.22	54	-10.19	34.46	8.13	34	100	193	Average
5150	60.02	51.43	74	-13.98	34.46	8.13	34	100	193	Peak
5210	89.1	80.42			34.49	8.19	34	100	193	Average
5210	98.66	89.98			34.49	8.19	34	100	193	Peak
5432	39.01	30.07	54	-14.99	34.5	8.48	34.04	100	193	Average
5432	59.15	50.21	74	-14.85	34.5	8.48	34.04	100	193	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5210MHz: Fundamental frequency.

BELOW 1GHz WORST-CASE DATA:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 42	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
90.48	29.08	50.74	43.5	-14.42	8.94	1.11	31.71	100	25	Peak
122.61	25.66	47.69	43.5	-17.84	8.83	1.38	32.24	400	132	Peak
177.96	25.02	45.36	43.5	-18.48	10.29	1.61	32.24	400	198	Peak
466.6	22.96	33.9	46	-23.04	18.63	2.56	32.13	100	184	Peak
671	26.21	32.1	46	-19.79	23.18	3.05	32.12	100	188	Peak
734	26.3	31.94	46	-19.7	23.33	3.16	32.13	100	312	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
30.81	30.52	44.85	40	-9.48	17.19	0.74	32.26	158	200	Peak
71.58	30.11	53.07	40	-9.89	8.15	1.11	32.22	100	155	Peak
81.57	28.87	51.45	40	-11.13	8.47	1.11	32.16	132	86	Peak
400.1	20.38	32.16	46	-25.62	18.1	2.34	32.22	100	133	Peak
549.9	21.15	30.29	46	-24.85	20.3	2.76	32.2	100	199	Peak
801.2	25.75	29.88	46	-20.25	24.6	3.32	32.05	100	185	Peak

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

Margin value = Emission level – Limit value

ABOVE 1GHz WORST-CASE DATA

Band 2

802.11n (40MHz)

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

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
5102	38.01	29.49	54	-15.99	34.44	8.07	33.99	100	284	Average
5102	60.22	51.7	74	-13.78	34.44	8.07	33.99	100	284	Peak
5310	94.57	85.77			34.5	8.32	34.02	100	284	Average
5310	103.88	95.08			34.5	8.32	34.02	100	284	Peak
5350	43.67	34.82	54	-10.33	34.5	8.38	34.03	100	284	Average
5350	61.97	53.12	74	-12.03	34.5	8.38	34.03	100	284	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
5014	38.02	29.61	54	-15.98	34.41	7.97	33.97	100	197	Average
5014	60.1	51.69	74	-13.9	34.41	7.97	33.97	100	197	Peak
5310	91.95	83.15			34.5	8.32	34.02	100	197	Average
5310	101.41	92.61			34.5	8.32	34.02	100	197	Peak
5350	42.7	33.85	54	-11.3	34.5	8.38	34.03	100	197	Average
5350	60.88	52.03	74	-13.12	34.5	8.38	34.03	100	197	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5310MHz: Fundamental frequency.

BELOW 1GHz WORST-CASE DATA:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
30.81	22.56	36.89	40	-17.44	17.19	0.74	32.26	123	0	Peak
91.83	30.66	52.31	43.5	-12.84	9.06	1.11	31.82	152	158	Peak
178.23	25.74	46.04	43.5	-17.76	10.33	1.61	32.24	132	285	Peak
467.3	22.46	33.4	46	-23.54	18.63	2.56	32.13	100	166	Peak
558.3	22.88	32.09	46	-23.12	20.23	2.76	32.2	100	188	Peak
735.4	25.55	31.19	46	-20.45	23.33	3.16	32.13	100	195	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
31.35	30.94	45.64	40	-9.06	16.82	0.74	32.26	122	220	Peak
71.31	28.39	51.36	40	-11.61	8.14	1.11	32.22	105	58	Peak
172.56	17.96	38.57	43.5	-25.54	10.11	1.52	32.24	321	123	Peak
468.7	23.01	33.95	46	-22.99	18.63	2.56	32.13	100	133	Peak
599.6	23.94	32.16	46	-22.06	21.1	2.87	32.19	100	75	Peak
780.9	25.86	31	46	-20.14	23.68	3.27	32.09	100	88	Peak

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

Margin value = Emission level – Limit value

ABOVE 1GHz WORST-CASE DATA

Band 3

802.11n (20MHz)

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

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	42.77	33.8	54	-11.23	34.5	8.51	34.04	111	234	Average
5448	59.55	50.58	74	-14.45	34.5	8.51	34.04	111	234	Peak
5470	58.63	49.67	68.3	-9.67	34.5	8.51	34.05	111	234	Peak
5500	91.55	82.53			34.5	8.57	34.05	111	234	Average
5500	100.98	91.96			34.5	8.57	34.05	111	234	Peak
5725	58.26	49.05	68.3	-10.04	34.67	8.65	34.11	111	234	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
5450	45.03	36.07	54	-8.97	34.5	8.51	34.05	102	18	Average
5450	60.27	51.31	74	-13.73	34.5	8.51	34.05	102	18	Peak
5470	58.65	49.69	68.3	-9.65	34.5	8.51	34.05	102	18	Peak
5500	96.42	87.4			34.5	8.57	34.05	102	18	Average
5500	105.93	96.91			34.5	8.57	34.05	102	18	Peak
5725	58.87	49.66	68.3	-9.43	34.67	8.65	34.11	102	18	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5500MHz: Fundamental frequency.

BELOW 1GHz WORST-CASE DATA:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
93.45	29.61	51.2	43.5	-13.89	9.18	1.11	31.88	166	58	Peak
179.31	25.34	45.61	43.5	-18.16	10.36	1.61	32.24	252	127	Peak
268.95	24.72	41.35	46	-21.28	13.54	1.94	32.11	124	41	Peak
400.1	20.87	32.65	46	-25.13	18.1	2.34	32.22	100	122	Peak
465.9	23.52	34.55	46	-22.48	18.54	2.56	32.13	152	41	Peak
780.2	25.56	30.7	46	-20.44	23.68	3.27	32.09	100	352	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
31.35	30.16	44.86	40	-9.84	16.82	0.74	32.26	100	133	Peak
71.58	29.4	52.36	40	-10.6	8.15	1.11	32.22	105	58	Peak
84	27.5	49.79	40	-12.5	8.61	1.11	32.01	162	284	Peak
472.9	20.66	31.41	46	-25.34	18.81	2.56	32.12	100	111	Peak
599.6	25.1	33.32	46	-20.9	21.1	2.87	32.19	100	198	Peak
806.8	25.93	30.25	46	-20.07	24.38	3.32	32.02	133	0	Peak

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

Margin value = Emission level – Limit value

Mode C

ABOVE 1GHz WORST-CASE DATA

Band 1

802.11ac (80MHz)

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

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	45.86	44.39	54	-8.14	33.48	5.26	37.27	100	248	Average
5068	62.14	60.67	74	-11.86	33.48	5.26	37.27	100	248	Peak
5210	81.81	80.19			33.66	5.32	37.36	100	248	Average
5210	90.73	89.11			33.66	5.32	37.36	100	248	Peak
5460	41.76	39.46	54	-12.24	33.94	5.44	37.08	100	248	Average
5460	62.89	60.59	74	-11.11	33.94	5.44	37.08	100	248	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	47.23	45.68	54	-6.77	33.58	5.29	37.32	100	132	Average
5150	62.54	60.99	74	-11.46	33.58	5.29	37.32	100	132	Peak
5210	84.32	82.7			33.66	5.32	37.36	100	132	Average
5210	93.14	91.52			33.66	5.32	37.36	100	132	Peak
5458	41.87	39.57	54	-12.13	33.94	5.44	37.08	100	132	Average
5458	61.63	59.33	74	-12.37	33.94	5.44	37.08	100	132	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5210MHz: Fundamental frequency.

BELOW 1GHz WORST-CASE DATA:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 42	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
96.69	18.5	40.58	43.5	-25	8.83	1.05	31.96	100	89	Peak
192	17.39	37.61	43.5	-26.11	9.91	1.56	31.69	100	164	Peak
273.81	19.9	37.75	46	-26.1	12.17	1.93	31.95	100	205	Peak
388.9	19.19	33.77	46	-26.81	15.07	2.38	32.03	100	204	Peak
603.8	23.43	32.85	46	-22.57	19.66	3.1	32.18	100	137	Peak
922.3	28.22	32.56	46	-17.78	23.64	4.02	32	100	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
37.56	31.62	48.77	40	-8.38	13.24	0.63	31.02	100	136	Peak
139.89	17.28	35.29	43.5	-26.22	12.34	1.29	31.64	100	65	Peak
262.74	15.24	33.41	46	-30.76	11.85	1.88	31.9	100	85	Peak
451.9	19.84	32.83	46	-26.16	16.37	2.62	31.98	100	286	Peak
654.2	24.48	32.94	46	-21.52	20.27	3.26	31.99	100	145	Peak
901.3	27.68	32.2	46	-18.32	23.52	3.97	32.01	100	138	Peak

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

Margin value = Emission level – Limit value

ABOVE 1GHz WORST-CASE DATA

Band 2

802.11n (40MHz)

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

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
5114	41.63	40.09	54	-12.37	33.54	5.28	37.28	100	114	Average
5114	61.71	60.17	74	-12.29	33.54	5.28	37.28	100	114	Peak
5310	88.86	86.9			33.78	5.37	37.19	100	114	Average
5310	97.86	95.9			33.78	5.37	37.19	100	114	Peak
5350	52.24	50.21	54	-1.76	33.82	5.39	37.18	100	114	Average
5350	68.42	66.39	74	-5.58	33.82	5.39	37.18	100	114	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	40.11	38.56	54	-13.89	33.56	5.29	37.3	100	213	Average
5138	62.43	60.88	74	-11.57	33.56	5.29	37.3	100	213	Peak
5310	86.57	84.61			33.78	5.37	37.19	100	213	Average
5310	95.84	93.88			33.78	5.37	37.19	100	213	Peak
5350	51.96	49.93	54	-2.04	33.82	5.39	37.18	100	213	Average
5350	68.55	66.52	74	-5.45	33.82	5.39	37.18	100	213	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5310MHz: Fundamental frequency.

BELOW 1GHz WORST-CASE DATA:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
50.79	20.22	37.79	40	-19.78	12.97	0.77	31.31	100	130	Peak
146.37	18.9	36.61	43.5	-24.6	12.58	1.33	31.62	100	290	Peak
267.87	18.02	36.11	46	-27.98	12	1.9	31.99	100	283	Peak
465.9	20.38	33.01	46	-25.62	16.64	2.67	31.94	100	243	Peak
674.5	24.65	32.64	46	-21.35	20.5	3.33	31.82	100	157	Peak
919.5	28.78	33.15	46	-17.22	23.62	4.01	32	100	285	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
43.23	27.72	44.53	40	-12.28	13.59	0.71	31.11	100	196	Peak
96.69	20.04	42.12	43.5	-23.46	8.83	1.05	31.96	100	276	Peak
193.35	14.41	34.71	43.5	-29.09	9.84	1.56	31.7	100	308	Peak
435.8	20.04	33.44	46	-25.96	16.04	2.56	32	100	52	Peak
629.7	23.53	32.53	46	-22.47	19.96	3.18	32.14	100	224	Peak
916.7	28.3	32.72	46	-17.7	23.6	4	32.02	100	160	Peak

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

Margin value = Emission level – Limit value

ABOVE 1GHz WORST-CASE DATA

Band 3

802.11n (20MHz)

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

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
5458	46.4	44.1	54	-7.6	33.94	5.44	37.08	122	115	Average
5458	62.26	59.96	74	-11.74	33.94	5.44	37.08	122	115	Peak
5470	60.35	58.02	68.3	-7.95	33.96	5.45	37.08	122	115	Peak
5500	93.55	91.12			34	5.46	37.03	122	115	Average
5500	103.93	101.5			34	5.46	37.03	122	115	Peak
5725	61.67	59.51	68.3	-6.63	34	5.59	37.43	122	115	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
5418	42.81	40.67	54	-11.19	33.9	5.42	37.18	100	7	Average
5418	62.56	60.42	74	-11.44	33.9	5.42	37.18	100	7	Peak
5470	60.46	58.13	68.3	-7.84	33.96	5.45	37.08	100	7	Peak
5500	91.34	88.91			34	5.46	37.03	100	7	Average
5500	101.18	98.75			34	5.46	37.03	100	7	Peak
5725	61.63	59.47	68.3	-6.67	34	5.59	37.43	100	7	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5500MHz: Fundamental frequency.
3. 5470MHz & 5725MHz: Out of restricted band

BELOW 1GHz WORST-CASE DATA:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
50.52	19.24	36.81	40	-20.76	12.97	0.77	31.31	100	182	Peak
142.32	18.89	36.77	43.5	-24.61	12.44	1.31	31.63	100	207	Peak
262.74	18.58	36.75	46	-27.42	11.85	1.88	31.9	100	313	Peak
428.8	19.93	33.5	46	-26.07	15.91	2.53	32.01	100	335	Peak
623.4	23.81	32.92	46	-22.19	19.89	3.16	32.16	100	246	Peak
909.7	27.72	32.22	46	-18.28	23.56	3.99	32.05	100	189	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
37.56	29.32	46.47	40	-10.68	13.24	0.63	31.02	100	235	Peak
96.15	19.22	41.37	43.5	-24.28	8.76	1.05	31.96	100	142	Peak
224.94	14.28	33.92	46	-31.72	10.42	1.72	31.78	100	306	Peak
497.4	20.98	32.6	46	-25.02	17.27	2.77	31.66	100	297	Peak
652.1	23.98	32.51	46	-22.02	20.23	3.25	32.01	100	208	Peak
904.8	28.45	32.96	46	-17.55	23.54	3.98	32.03	100	133	Peak

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

Margin value = Emission level – Limit value

Mode D

ABOVE 1GHz WORST-CASE DATA

Band 1

802.11ac (80MHz)

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

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	40.78	41.49	54	-13.22	31.32	5.29	37.32	100	106	Average
5148	56.02	56.73	74	-17.98	31.32	5.29	37.32	100	106	Peak
5210	85.23	85.9			31.37	5.32	37.36	100	106	Average
5210	94.37	95.04			31.37	5.32	37.36	100	106	Peak
5414	38.67	38.9	54	-15.33	31.53	5.42	37.18	100	106	Average
5414	53.3	53.53	74	-20.7	31.53	5.42	37.18	100	106	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	40.82	41.53	54	-13.18	31.32	5.29	37.32	108	173	Average
5150	53.33	54.04	74	-20.67	31.32	5.29	37.32	108	173	Peak
5210	84.49	85.16			31.37	5.32	37.36	108	173	Average
5210	93.88	94.55			31.37	5.32	37.36	108	173	Peak
5408	38.72	38.97	54	-15.28	31.52	5.41	37.18	108	173	Average
5408	53.73	53.98	74	-20.27	31.52	5.41	37.18	108	173	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5210MHz: Fundamental frequency.

BELOW 1GHz WORST-CASE DATA:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 42	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
56.46	17.64	35.83	40	-22.36	12.35	0.8	31.34	100	116	Peak
156.36	15.44	33.12	43.5	-28.06	12.72	1.37	31.77	100	158	Peak
241.14	14.71	33.61	46	-31.29	11.11	1.8	31.81	100	291	Peak
494.6	21.05	32.78	46	-24.95	17.21	2.76	31.7	100	272	Peak
675.2	25.46	33.44	46	-20.54	20.51	3.34	31.83	100	160	Peak
916	28.45	32.87	46	-17.55	23.6	4	32.02	100	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
43.23	22.84	39.65	40	-17.16	13.59	0.71	31.11	100	184	Peak
144.21	15.91	33.71	43.5	-27.59	12.51	1.32	31.63	100	231	Peak
239.25	14.11	33.07	46	-31.89	11.03	1.79	31.78	100	166	Peak
416.9	20.42	34.28	46	-25.58	15.68	2.49	32.03	100	124	Peak
664	24.08	32.28	46	-21.92	20.39	3.3	31.89	100	304	Peak
902	27.77	32.3	46	-18.23	23.52	3.97	32.02	100	150	Peak

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

Margin value = Emission level – Limit value

ABOVE 1GHz WORST-CASE DATA

Band 2

802.11n (40MHz)

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

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	37.84	38.56	54	-16.16	31.29	5.27	37.28	100	157	Average
5108	52.81	53.53	74	-21.19	31.29	5.27	37.28	100	157	Peak
5310	80.03	80.4			31.45	5.37	37.19	100	157	Average
5310	88.41	88.78			31.45	5.37	37.19	100	157	Peak
5398	38.11	38.36	54	-15.89	31.52	5.41	37.18	100	157	Average
5398	53.31	53.56	74	-20.69	31.52	5.41	37.18	100	157	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
5072	37.84	38.58	54	-16.16	31.27	5.26	37.27	100	311	Average
5072	54.3	55.04	74	-19.7	31.27	5.26	37.27	100	311	Peak
5310	87.2	87.57			31.45	5.37	37.19	100	311	Average
5310	96.34	96.71			31.45	5.37	37.19	100	311	Peak
5400	38.22	38.47	54	-15.78	31.52	5.41	37.18	100	311	Average
5400	53.53	53.78	74	-20.47	31.52	5.41	37.18	100	311	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5310MHz: Fundamental frequency.

BELOW 1GHz WORST-CASE DATA:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
43.5	19.23	36.04	40	-20.77	13.59	0.71	31.11	100	118	Peak
190.38	15.87	35.94	43.5	-27.63	10.05	1.55	31.67	100	174	Peak
250.86	14.6	33.18	46	-31.4	11.51	1.84	31.93	100	105	Peak
384	23.96	38.63	46	-22.04	14.96	2.36	31.99	100	150	Peak
646.5	25.44	34.08	46	-20.56	20.17	3.23	32.04	100	134	Peak
918.8	28.09	32.48	46	-17.91	23.61	4.01	32.01	100	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
56.19	19.28	37.47	40	-20.72	12.35	0.8	31.34	100	122	Peak
161.76	15.01	32.92	43.5	-28.49	12.54	1.4	31.85	100	315	Peak
275.7	15.94	33.7	46	-30.06	12.22	1.94	31.92	100	160	Peak
479.9	21.59	33.8	46	-24.41	16.93	2.71	31.85	100	230	Peak
639.5	24.37	33.18	46	-21.63	20.08	3.21	32.1	100	155	Peak
862.8	28.41	33.44	46	-17.59	23.04	3.86	31.93	100	184	Peak

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

Margin value = Emission level – Limit value

ABOVE 1GHz WORST-CASE DATA

Band 3

802.11n (20MHz)

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

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	41.59	41.72	54	-12.41	31.56	5.44	37.13	100	152	Average
5448	54.31	54.44	74	-19.69	31.56	5.44	37.13	100	152	Peak
5470	50.21	50.27	68.3	-18.09	31.57	5.45	37.08	100	152	Peak
5500	89.22	89.19			31.6	5.46	37.03	100	152	Average
5500	98.89	98.86			31.6	5.46	37.03	100	152	Peak
5725	51.89	51.77	68.3	-16.41	31.96	5.59	37.43	100	152	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	39.97	40.1	54	-14.03	31.56	5.44	37.13	103	226	Average
5448	53.13	53.26	74	-20.87	31.56	5.44	37.13	103	226	Peak
5470	51.66	51.72	68.3	-16.64	31.57	5.45	37.08	103	226	Peak
5500	87.5	87.47			31.6	5.46	37.03	103	226	Average
5500	96.63	96.6			31.6	5.46	37.03	103	226	Peak
5725	51.87	51.75	68.3	-16.43	31.96	5.59	37.43	103	226	Peak

REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5500MHz: Fundamental frequency.

BELOW 1GHz WORST-CASE DATA:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Kay Wu

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
56.19	17.67	35.86	40	-22.33	12.35	0.8	31.34	100	137	Peak
144.75	17.11	34.91	43.5	-26.39	12.51	1.32	31.63	100	169	Peak
241.41	14.78	33.68	46	-31.22	11.11	1.8	31.81	100	223	Peak
419	22.32	36.15	46	-23.68	15.71	2.5	32.04	100	256	Peak
644.4	24.77	33.47	46	-21.23	20.14	3.22	32.06	100	107	Peak
918.8	27.96	32.35	46	-18.04	23.61	4.01	32.01	100	121	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
31.62	26.21	44.44	40	-13.79	12.3	0.58	31.11	100	360	Peak
141.78	16.06	33.98	43.5	-27.44	12.41	1.3	31.63	100	131	Peak
275.7	15.14	32.9	46	-30.86	12.22	1.94	31.92	100	54	Peak
512.8	21.54	32.68	46	-24.46	17.62	2.82	31.58	100	41	Peak
659.1	25.22	33.56	46	-20.78	20.33	3.28	31.95	100	92	Peak
880.3	27.61	32.42	46	-18.39	23.26	3.91	31.98	100	167	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	Nov. 17, 2013	Nov. 16, 2014
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

a. 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.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

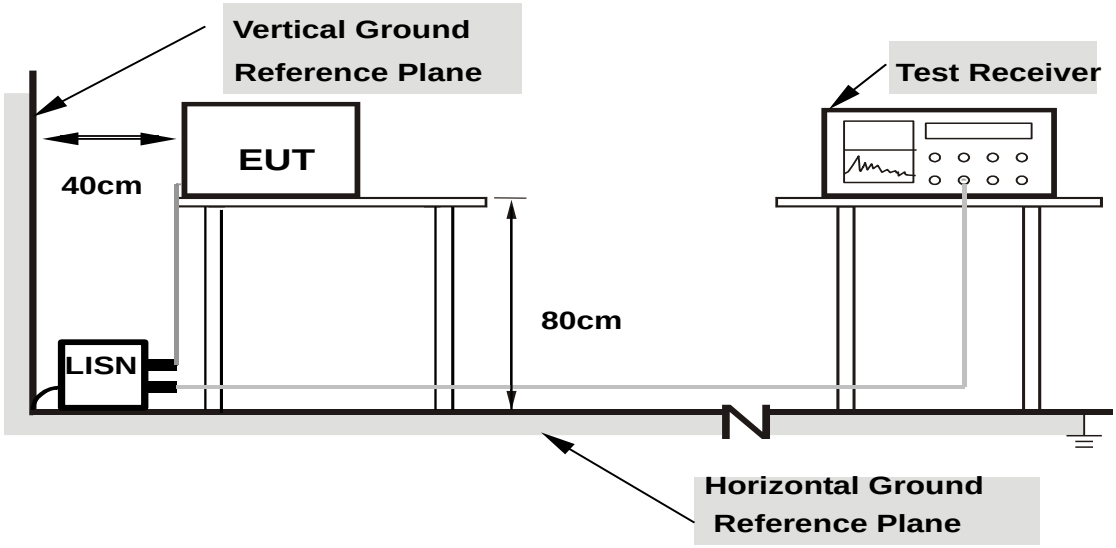
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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: 1.Support units were connected to second LISN.
2.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

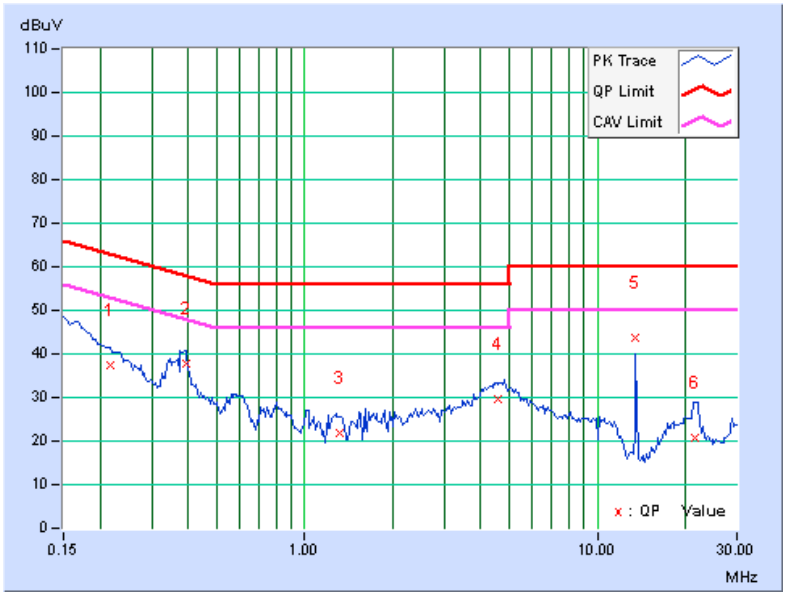
CONDUCTED WORST-CASE DATA：

PHASE	Line 1	6dB BANDWIDTH	9kHz

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.21641	0.17	37.33	24.71	37.50	24.88	62.96	52.96	-25.45	-28.07
2	0.39219	0.21	37.48	34.04	37.69	34.25	58.02	48.02	-20.33	-13.77
3	1.32422	0.27	21.58	17.72	21.85	17.99	56.00	46.00	-34.15	-28.01
4	4.56641	0.38	29.17	19.08	29.55	19.46	56.00	46.00	-26.45	-26.54
5	13.55859	0.50	43.33	36.69	43.83	37.19	60.00	50.00	-16.17	-12.81
6	21.61719	0.63	20.20	12.94	20.83	13.57	60.00	50.00	-39.17	-36.43

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

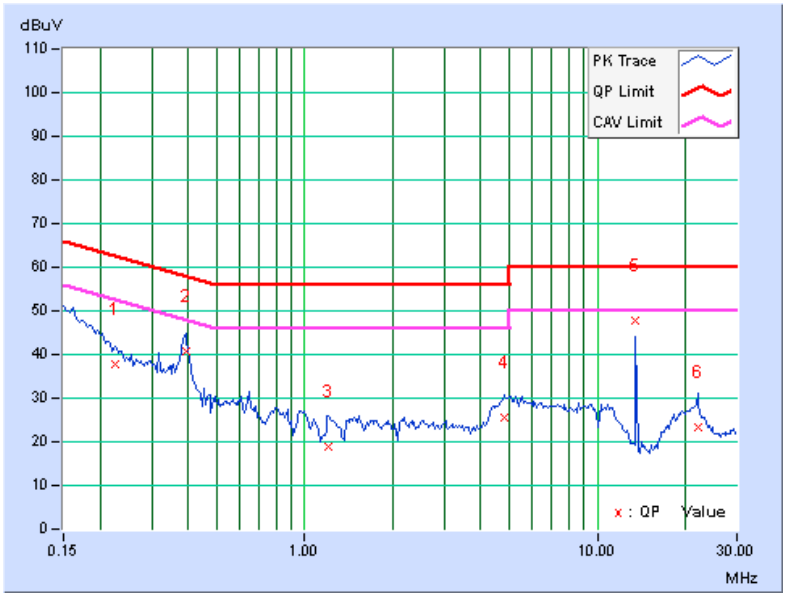


PHASE	Line 2	6dB BANDWIDTH	9kHz

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.22422	0.19	37.77	25.02	37.96	25.21	62.66	52.66	-24.70	-27.45
2	0.39219	0.25	40.34	36.91	40.59	37.16	58.02	48.02	-17.43	-10.86
3	1.20703	0.24	18.83	17.27	19.07	17.51	56.00	46.00	-36.93	-28.49
4	4.81250	0.40	25.33	19.34	25.73	19.74	56.00	46.00	-30.27	-26.26
5	**13.55859**	**0.57**	**47.32**	**42.10**	**47.89**	**42.67**	**60.00**	**50.00**	**-12.11**	**-7.33**
6	22.08594	0.71	22.45	15.17	23.16	15.88	60.00	50.00	-36.84	-34.12

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

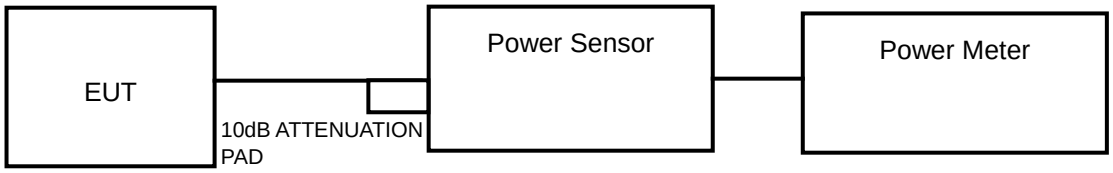
4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

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

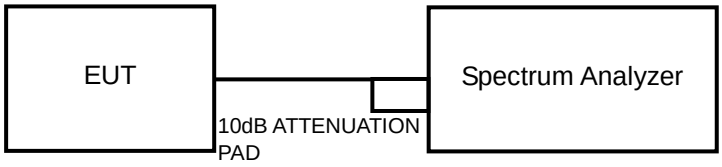
NOTE: Where B is the 26dB emission bandwidth in MHz.

4.3.2 TEST SETUP

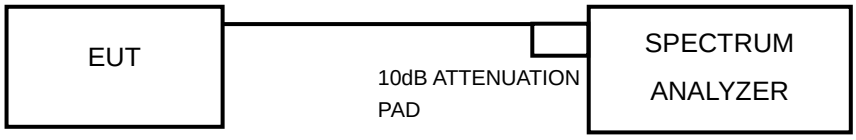
FOR POWER OUTPUT MEASUREMENT



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	32.810	15.16	17	PASS
44	5220	32.211	15.08	17	PASS
48	5240	33.497	15.25	17	PASS
52	5260	32.285	15.09	24	PASS
60	5300	32.211	15.08	24	PASS
64	5320	31.117	14.93	24	PASS
100	5500	32.810	15.16	24	PASS
116	5580	33.963	15.31	24	PASS
140	5700	34.041	15.32	24	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	33.806	15.29	17	PASS
44	5220	34.119	15.33	17	PASS
48	5240	33.651	15.27	17	PASS
52	5260	31.189	14.94	24	PASS
60	5300	31.915	15.04	24	PASS
64	5320	31.261	14.95	24	PASS
100	5500	33.037	15.19	24	PASS
116	5580	33.189	15.21	24	PASS
140	5700	34.914	15.43	24	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	25.704	14.10	17	PASS
46	5230	26.424	14.22	17	PASS
54	5270	25.351	14.04	24	PASS
62	5310	25.645	14.09	24	PASS
102	5510	26.485	14.23	24	PASS
110	5550	25.293	14.03	24	PASS
134	5670	26.730	14.27	24	PASS

802.11ac (80MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
42	5210	19.679	12.94	17	PASS
58	5290	20.654	13.15	24	PASS
106	5530	19.498	12.90	24	PASS

26dB BANDWIDTH: 802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	23.62	PASS
44	5220	22.46	PASS
48	5240	22.93	PASS
52	5260	22.56	PASS
60	5300	22.84	PASS
64	5320	23.07	PASS
100	5500	22.53	PASS
116	5580	22.98	PASS
140	5700	23.61	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	23.41	PASS
44	5220	22.82	PASS
48	5240	23.61	PASS
52	5260	22.95	PASS
60	5300	22.91	PASS
64	5320	23.57	PASS
100	5500	23.23	PASS
116	5580	23.06	PASS
140	5700	23.13	PASS

802.11n (40MHz)

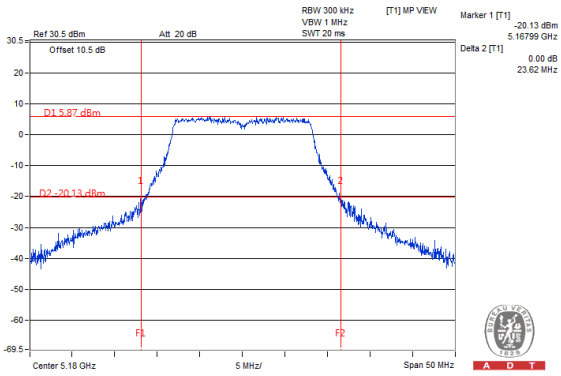
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
38	5190	45.87	PASS
46	5230	45.47	PASS
54	5270	46.54	PASS
62	5310	46.41	PASS
102	5510	46.27	PASS
110	5550	45.69	PASS
134	5670	45.74	PASS

802.11ac (80MHz)

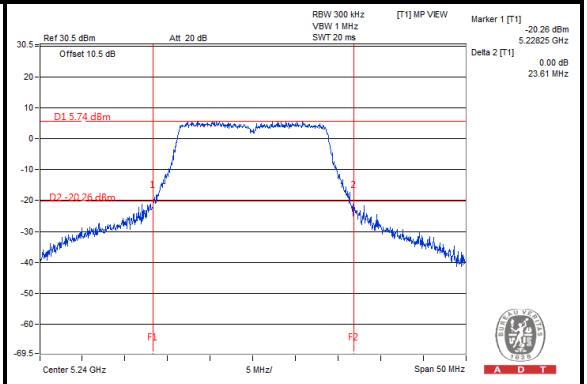
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
42	5210	83.84	PASS
58	5290	83.81	PASS
106	5530	83.92	PASS

SPECTRUM PLOT OF WORST VALUE

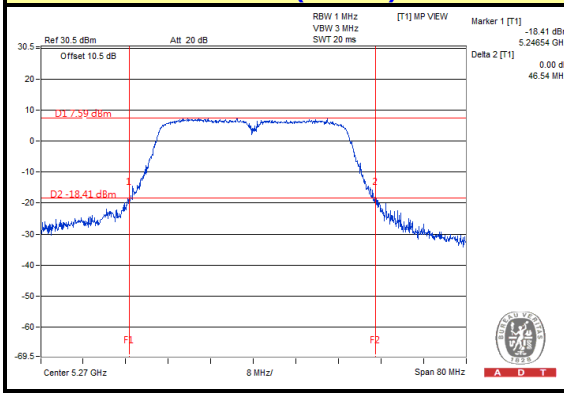
802.11a



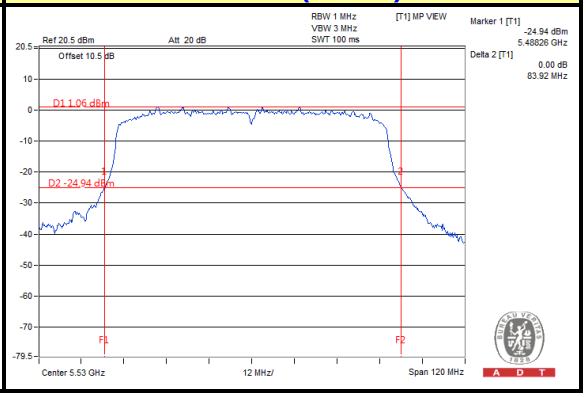
802.11n (20MHz)



802.11n (40MHz)



802.11ac (80MHz)

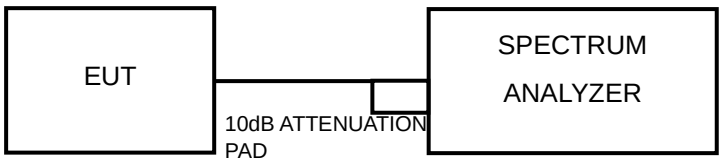


4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

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 ≥ 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 ≥ 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 W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	2.07	0.64	2.71	4	PASS
44	5220	2.01	0.64	2.65	4	PASS
48	5240	2.04	0.64	2.68	4	PASS
52	5260	1.67	0.64	2.31	11	PASS
60	5300	1.77	0.64	2.41	11	PASS
64	5320	1.77	0.64	2.41	11	PASS
100	5500	2.32	0.64	2.96	11	PASS
116	5580	3.00	0.64	3.64	11	PASS
140	5700	3.13	0.64	3.77	11	PASS

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

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	2.26	0.69	2.95	4	PASS
44	5220	2.15	0.69	2.84	4	PASS
48	5240	1.95	0.69	2.64	4	PASS
52	5260	1.68	0.69	2.37	11	PASS
60	5300	1.69	0.69	2.38	11	PASS
64	5320	1.71	0.69	2.40	11	PASS
100	5500	1.89	0.69	2.58	11	PASS
116	5580	2.54	0.69	3.23	11	PASS
140	5700	2.49	0.69	3.18	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	-2.16	1.43	-0.73	4	PASS
46	5230	-2.15	1.43	-0.72	4	PASS
54	5270	-2.81	1.43	-1.38	11	PASS
62	5310	-2.71	1.43	-1.28	11	PASS
102	5510	-2.67	1.43	-1.24	11	PASS
110	5550	-2.39	1.43	-0.96	11	PASS
134	5670	-2.06	1.43	-0.63	11	PASS

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

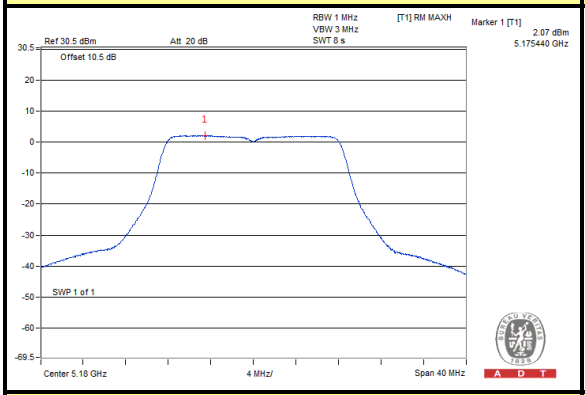
802.11ac (80MHz)

CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
42	5210	-7.91	2.56	-5.35	4	PASS
58	5290	-7.48	2.56	-4.92	11	PASS
106	5530	-7.43	2.56	-4.87	11	PASS

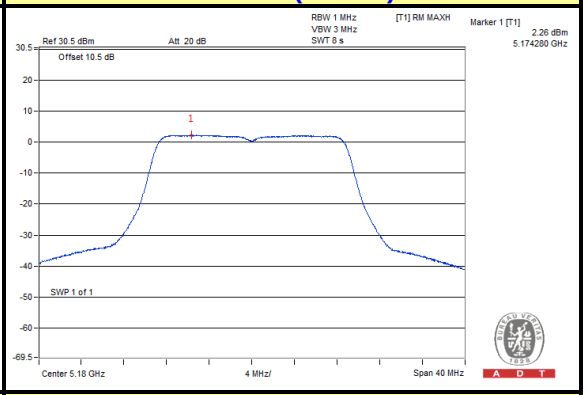
NOTE: Refer to section 3.3 for duty cycle spectrum plot.

SPECTRUM PLOT OF WORST VALUE

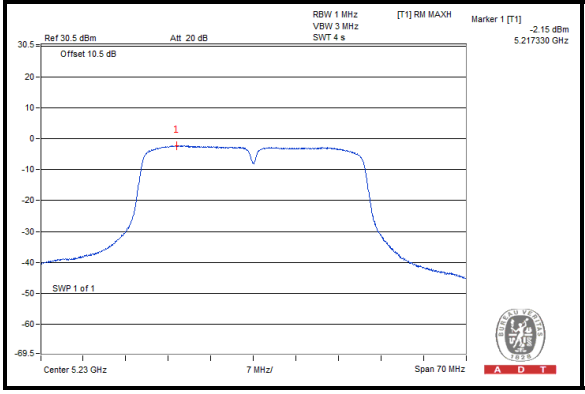
802.11a



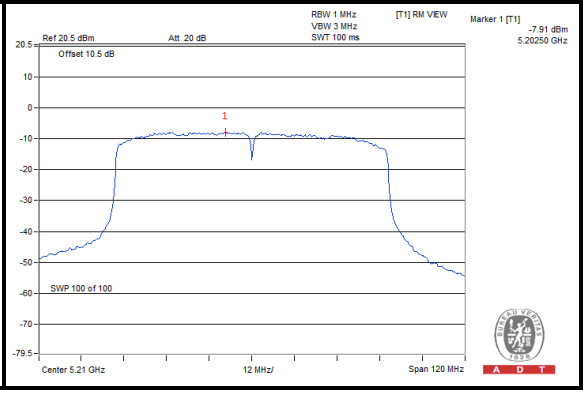
802.11n (20MHz)



802.11n (40MHz)



802.11ac (80MHz)

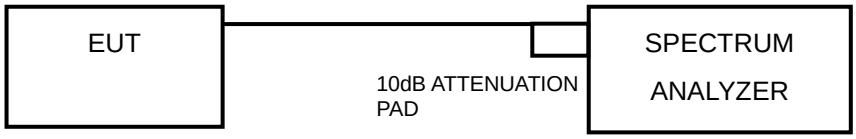


4.5 PEAK POWER EXCURSION MEASUREMENT

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

a. Set the RBW = 1 kHz, VBW ≥ 3 MHz, Detector = peak.

b. Trace mode = max-hold. Allow the sweeps to continue until the trace stabilizes.

c. Use the peak search function to find the peak of the spectrum.

d. Measure the PPSD.

e. 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.

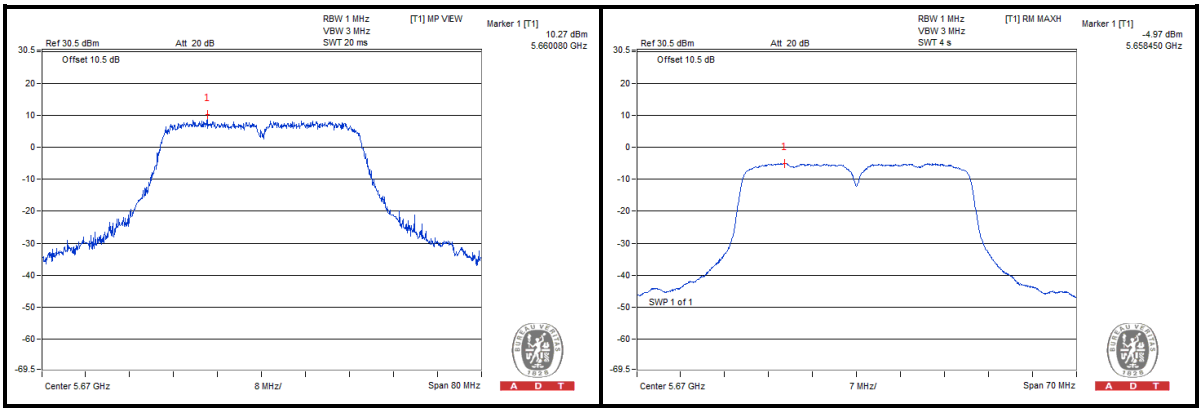
4.5.6 EUT OPERATING CONDITION

Same as Item 4.3.6

4.5.7 TEST RESULTS

MODULATION MODE	MODULATION TYPE	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	12.90	3.13	3.77	9.13	13	PASS
	QPSK		13.53	2.65	3.80	9.73	13	PASS
	16QAM		13.84	1.89	3.95	9.89	13	PASS
	64QAM		13.97	0.71	4.09	9.88	13	PASS
802.11n (20MHz)	BPSK	5700	13.23	2.49	3.18	10.05	13	PASS
	QPSK		13.27	2.13	3.32	9.95	13	PASS
	16QAM		13.20	1.22	3.28	9.92	13	PASS
	64QAM		13.48	0.21	3.53	9.95	13	PASS
802.11n (40MHz)	BPSK	5670	8.36	-2.06	-0.63	8.99	13	PASS
	QPSK		9.01	-2.85	-0.33	9.34	13	PASS
	16QAM		9.75	-3.71	-0.57	10.32	13	PASS
	64QAM		10.27	-4.97	-0.50	10.77	13	PASS
802.11ac (80MHz)	BPSK	5290	1.22	-7.48	-4.92	6.14	13	PASS
	QPSK		1.18	-7.46	-3.66	4.84	13	PASS
	16QAM		0.68	-7.26	-2.25	2.93	13	PASS
	64QAM		0.81	-7.04	-1.12	1.93	13	PASS
	256QAM		1.47	-7.12	-0.75	2.22	13	PASS

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

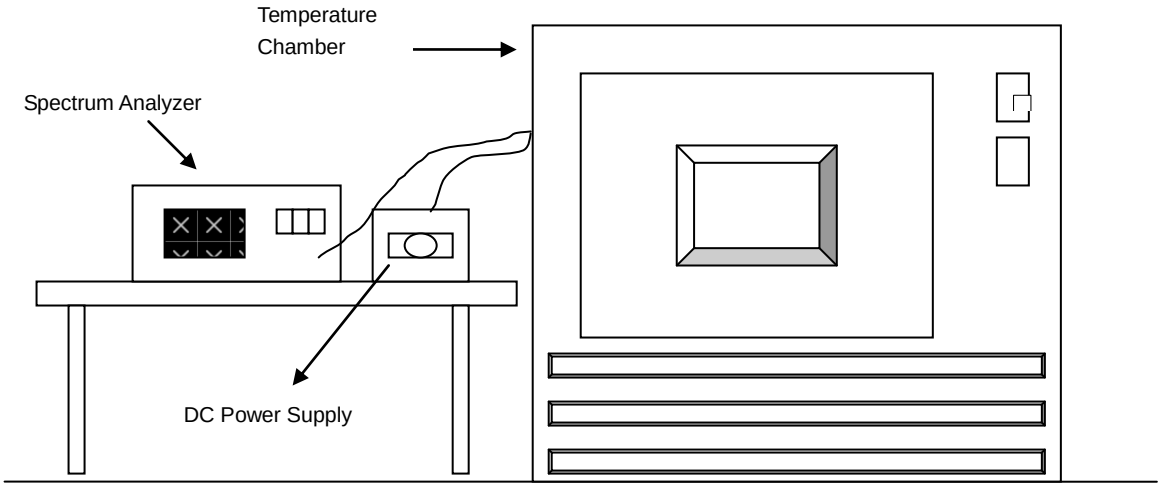


4.6 FREQUENCY STABILITY

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

FREQUEMCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5320MHz									
TEMP. (℃)	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)
50	3.8	5320.041048	7.716	5320.040883	7.685	5320.041338	7.770	5320.041473	7.796
40	3.8	5320.041569	7.814	5320.041941	7.884	5320.042339	7.958	5320.041803	7.858
30	3.8	5320.042749	8.036	5320.042855	8.055	5320.042773	8.040	5320.043388	8.156
20	3.8	5320.044893	8.439	5320.045211	8.498	5320.045230	8.502	5320.045149	8.487
10	3.8	5320.045879	8.624	5320.045626	8.576	5320.045343	8.523	5320.045742	8.598
0	3.8	5320.044160	8.301	5320.043816	8.236	5320.043941	8.260	5320.044152	8.299
-10	3.8	5320.042670	8.021	5320.042276	7.947	5320.042864	8.057	5320.043021	8.087
-20	3.8	5320.041774	7.852	5320.042391	7.968	5320.041797	7.857	5320.041825	7.862
-30	3.8	5320.041295	7.762	5320.041068	7.720	5320.040942	7.696	5320.040941	7.696

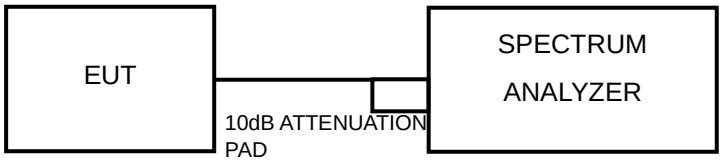
FREQUEMCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5320MHz									
TEMP. (℃)	POWER SUPPLY (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	3.6	5320.044586	8.381	5320.045032	8.465	5320.045108	8.479	5320.044483	8.361
	3.8	5320.044893	8.439	5320.045211	8.498	5320.045230	8.502	5320.045149	8.487
	4.20	5320.046389	8.720	5320.046030	8.652	5320.046337	8.710	5320.046456	8.732

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

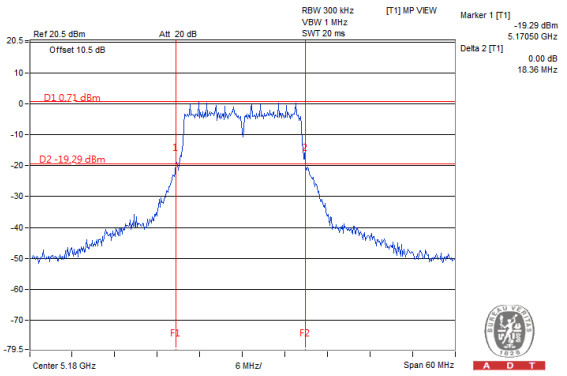
Emission bandwidth

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%.

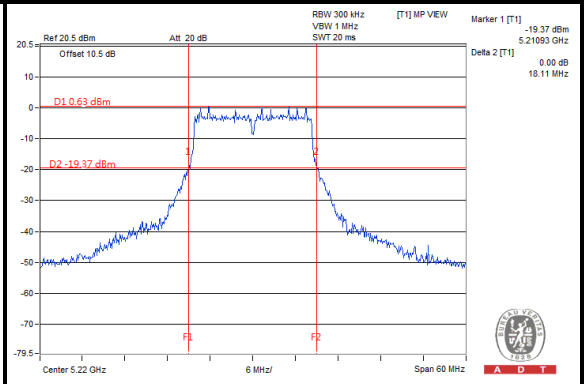
4.7.5 TEST RESULTS

802.11a

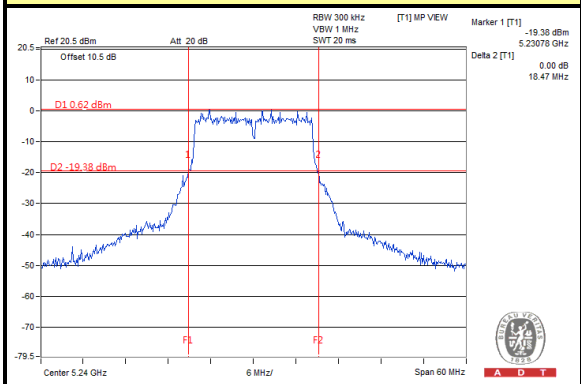
5180MHz



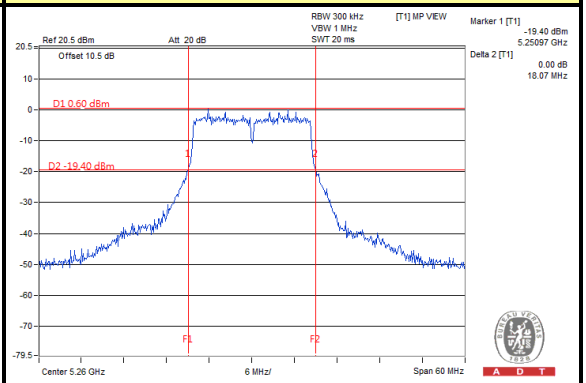
5220MHz



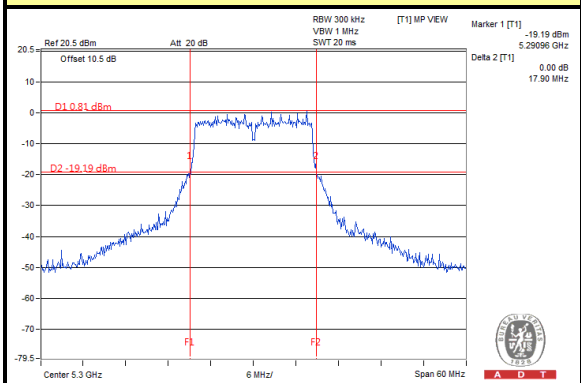
5240MHz



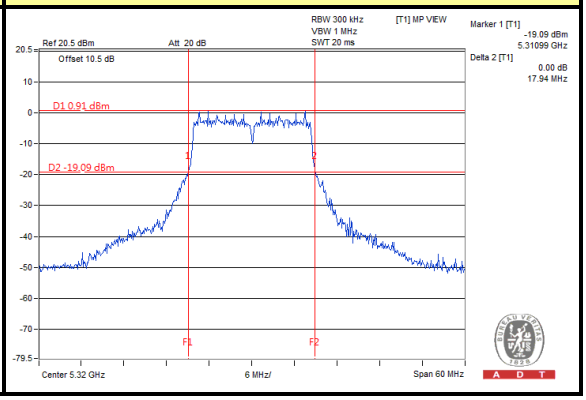
5260MHz



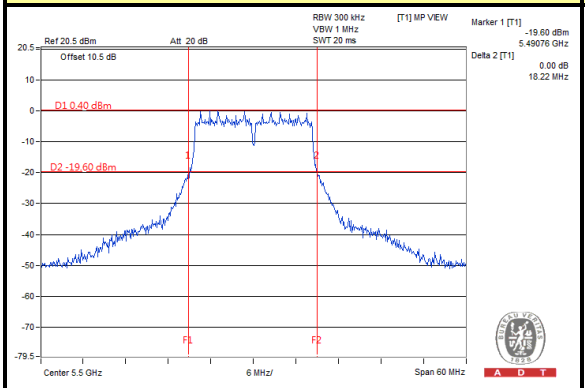
5300MHz



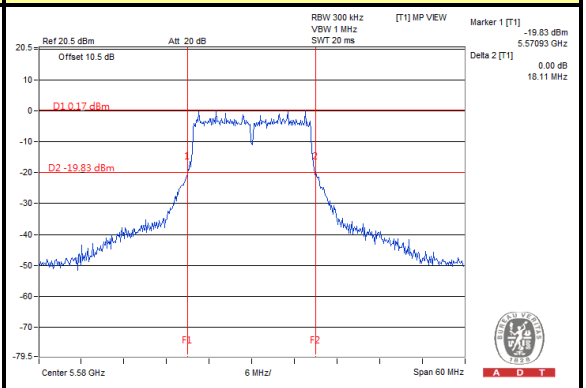
5320MHz



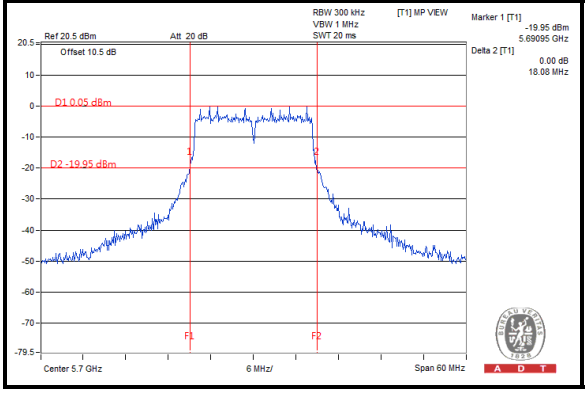
5500MHz



5580MHz

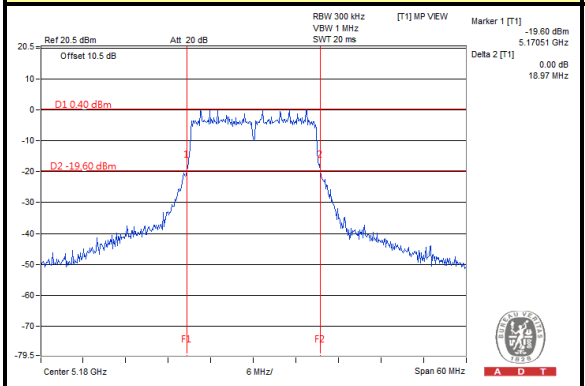


5700MHz

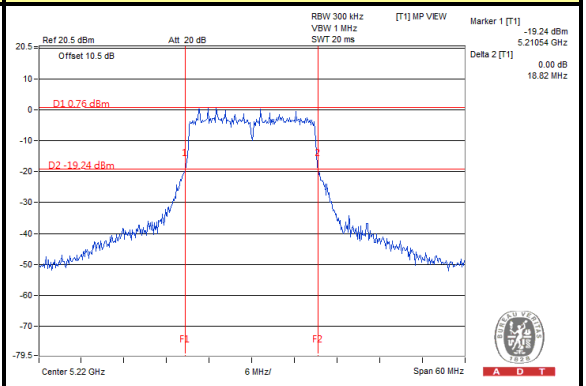


802.11n (20MHz)

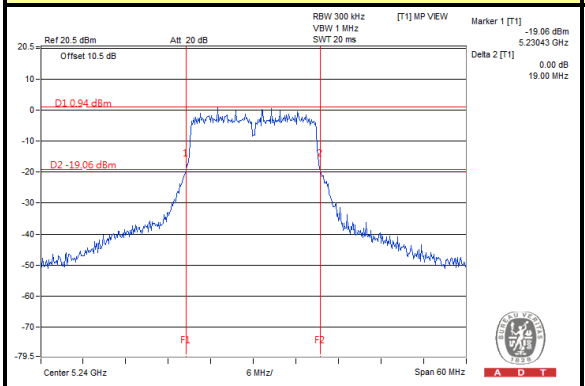
5180MHz



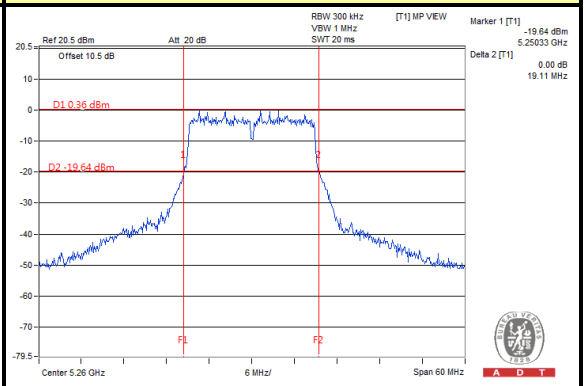
5220MHz



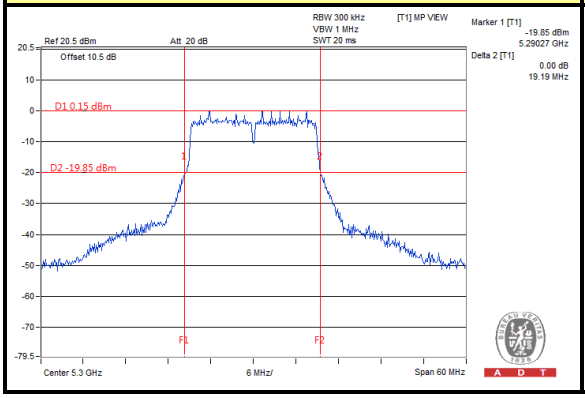
5240MHz



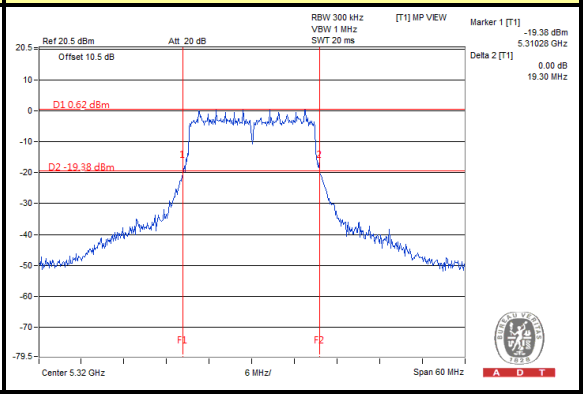
5260MHz



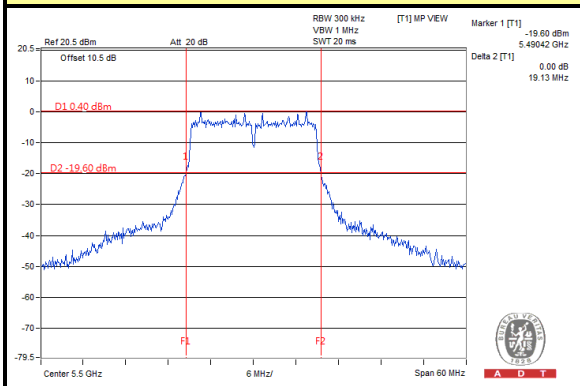
5300MHz



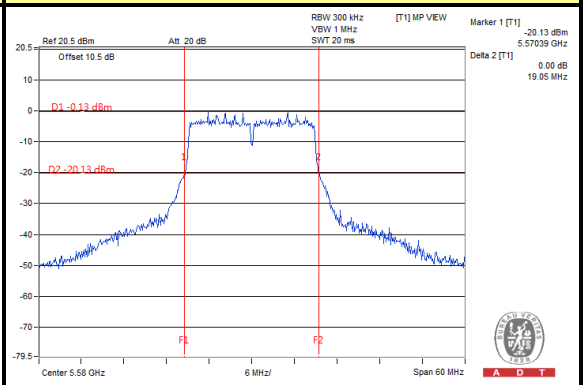
5320MHz



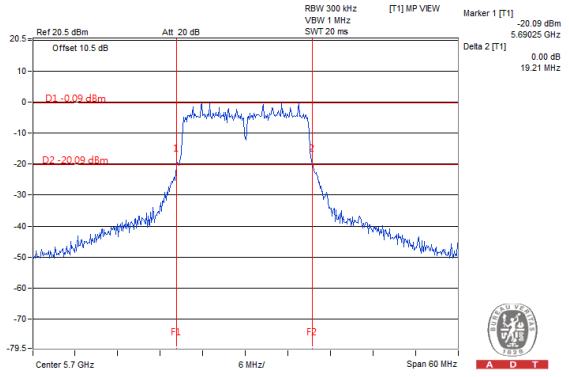
5500MHz



5580MHz

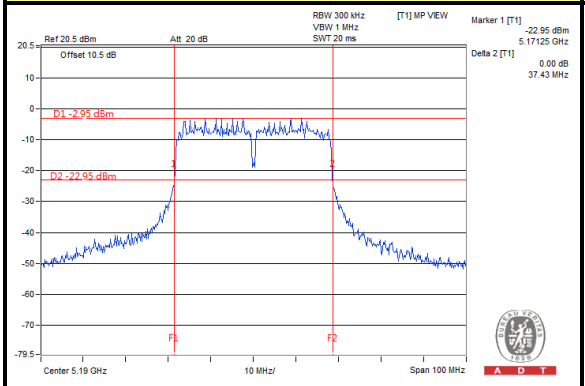


5700MHz

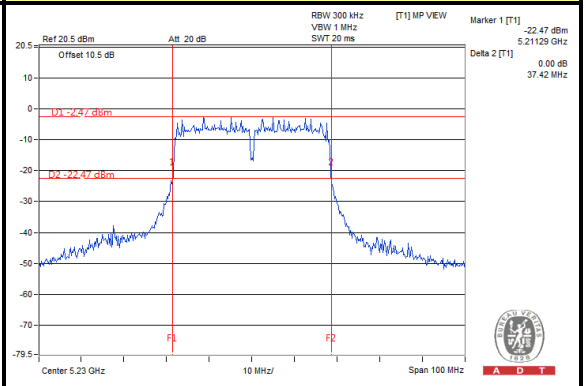


802.11n (40MHz)

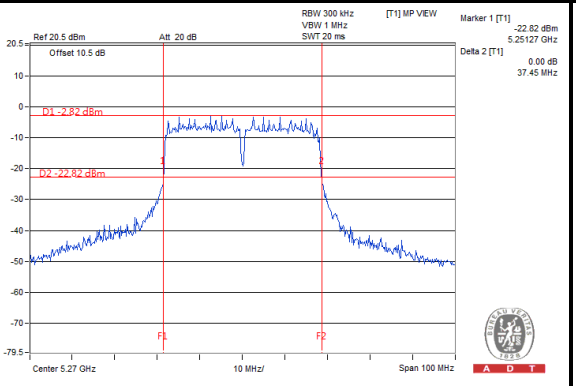
5190MHz



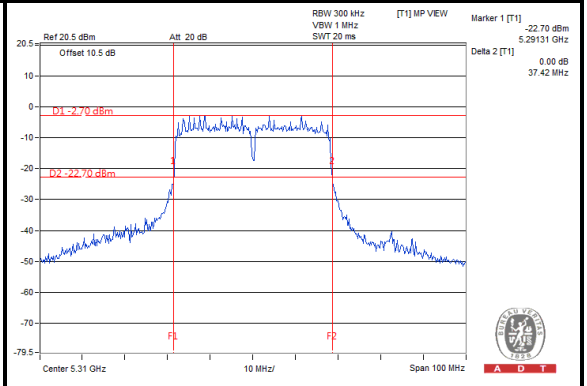
5230MHz



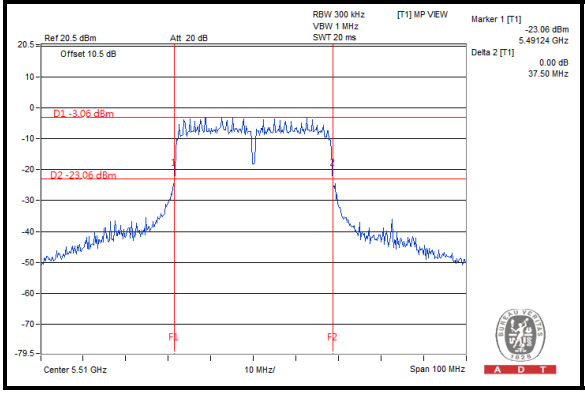
5270MHz



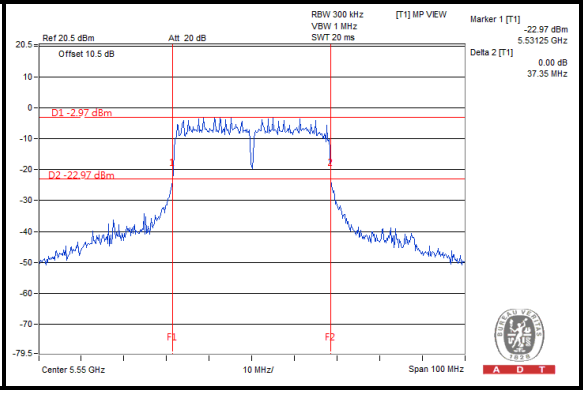
5310MHz

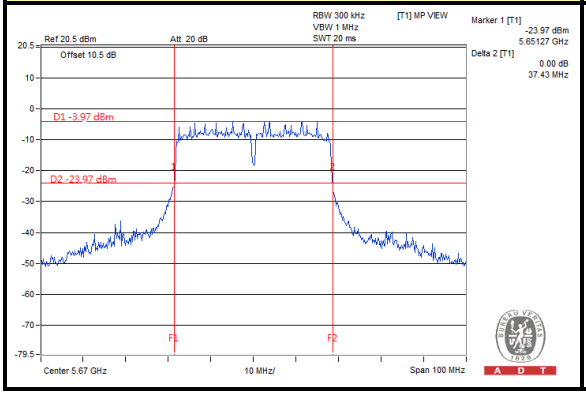


5510MHz



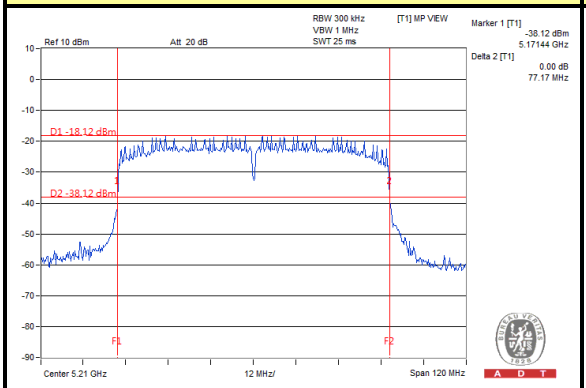
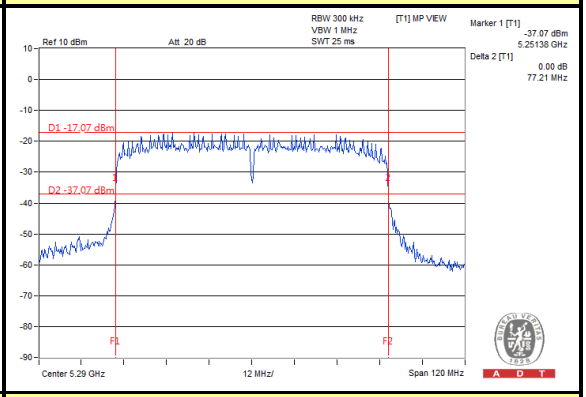
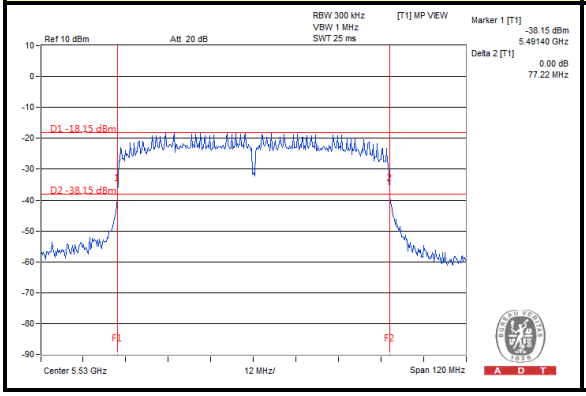
5550MHz



5670MHz	
	

RBW 300 kHz
VBW 1 MHz
SWT 20 ms
[T1] MP VIEW
Marker 1 [T1]
-23.97 dBm
5.65127 GHz
Delta 2 [T1]
0.00 dB
37.43 MHz
Ref 20.5 dBm
Att 20 dB
Offset 10.5 dB
D1 -3.97 dBm
D2 -23.97 dBm
20.5
10
0
-10
-20
-30
-40
-50
-60
-70
-79.5
F1
F2
Center 5.67 GHz
10 MHz/
Span 100 MHz

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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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 any modifications are made to the EUT by the lab during the test.

---END---