

FCC TEST REPORT (15.407)

REPORT NO.: RF140711C26-7
MODEL NO.: E6560
FCC ID: V65E6560
RECEIVED: Jul. 11, 2014
TESTED: Aug. 06, 2014 ~ Aug. 14, 2014
ISSUED: Aug. 22, 2014

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

ADDRESS: 9520 Town Center Drive, Suite #200, San Diego,
CA 92121

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
RF140711C26-7	Original release	Aug. 22, 2014

1. CERTIFICATION

PRODUCT: PDA Phone

MODEL NO.: E6560

BRAND: Kyocera

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

TESTED: Aug. 06, 2014 ~ Aug. 14, 2014

TEST SAMPLE: Identical Prototype

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

ANSI C63.10-2009

The above equipment (model: E6560) 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 : Ivonne Wu , **DATE** : Aug. 22, 2014
Ivonne Wu / Supervisor

APPROVED BY : Sam Chen , **DATE** : Aug. 22, 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 -0.65dB at 2.40384MHz.
15.407(b)(1/2/3) (b)(6)	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -4.26dB at 31.08MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(e)	6dB bandwidth	PASS	Meet the requirement of limit. (U-NII-3 Band only)
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	PDA Phone
MODEL NO.	E6560
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) 5745 ~ 5825MHz: 5 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 1 for 802.11ac (80MHz)
OUTPUT POWER	22.59mW for 5180 ~ 5240MHz 23.12mW for 5260 ~ 5320MHz 22.44mW for 5500 ~ 5700MHz 23.88mW for 5745 ~ 5825MHz
ANTENNA TYPE	Monopole antenna with -1.0dBi gain
ANTENNA CONNECTOR	NA
DATA CABLE	Refer to Note as below
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Refer to Note as below

NOTE:

1. The EUT contains following accessory devices.

ITEM	BRAND	MODEL	SPECIFICATION
Adapter	Salom	SCP-44ADT	I/P: 100-240Vac, 50/60Hz, 250mA O/P: 5Vdc, 1500mA
Battery	Kyocera	SCP-60LBPS	3.8Vdc, 3100mAh
Earphone	GALIEN	HF-HB04D	0.8m non-shielded cable w/o core
USB Cable	JCTC	SCP-17SDC	1m shielded cable w/o core

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

3.2 DESCRIPTION OF TEST MODES

WLAN 5180 ~ 5240MHz

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

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

CHANNEL	FREQUENCY
42	5210 MHz

FOR 5260 ~ 5320MHz

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

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

CHANNEL	FREQUENCY
58	5290MHz

WLAN 5500 ~ 5700MHz

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

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

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

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

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

CHANNEL	FREQUENCY
106	5530MHz

FOR 5.0GHz (5745 ~ 5825MHz):

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz		

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

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

CHANNEL	FREQUENCY
155	5775MHz

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz

RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

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

RADIATED EMISSION TEST (ABOVE 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36, 44, 48	OFDM	BPSK	6.0
	802.11n (20MHz)		36 to 48	36, 44, 48	OFDM	BPSK	MCS0
	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
	802.11ac (80MHz)		42	42	OFDM	BPSK	V0
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	MCS0
	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	MCS0
	802.11ac (80MHz)		58	58	OFDM	BPSK	V0
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	MCS0
	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	MCS0
	802.11ac (80MHz)		106	106	OFDM	BPSK	V0
-	802.11a	5745-5825	149 to 161	149, 157, 165	OFDM	BPSK	6.0
	802.11n (20MHz)		149 to 161	149, 157, 165	OFDM	BPSK	MCS0
	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	MCS0
	802.11ac (80MHz)		155	155	OFDM	BPSK	V0

RADIATED EMISSION TEST (BELOW 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11ac (80MHz)	5180-5240	42	42	OFDM	BPSK	V0
-	802.11n (20MHz)	5260-5320	52 to 64	60	OFDM	BPSK	MCS0
-	802.11n (20MHz)	5500-5700	100 to 140	140	OFDM	BPSK	MCS0
-	802.11ac (80MHz)	5745-5825	155	155	OFDM	BPSK	V0

POWER LINE CONDUCTED EMISSION TEST:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11ac (80MHz)	5180-5240	42	42	OFDM	BPSK	V0

BANDEDGE MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36, 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
-	802.11a	5745-5825	149 to 161	149, 157, 165	OFDM	BPSK	6.0
	802.11n (20MHz)		149 to 161	149, 157, 165	OFDM	BPSK	MCS0
	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	MCS0
	802.11ac (80MHz)		155	155	OFDM	BPSK	V0

ANTENNA PORT CONDUCTED MEASUREMENT:

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36, 44, 48	OFDM	BPSK	6.0
	802.11n (20MHz)		36 to 48	36, 44, 48	OFDM	BPSK	MCS0
	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
	802.11ac (80MHz)		42	42	OFDM	BPSK	V0
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	MCS0
	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	MCS0
	802.11ac (80MHz)		58	58	OFDM	BPSK	V0
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	MCS0
	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	MCS0
	802.11ac (80MHz)		106	106	OFDM	BPSK	V0
-	802.11a	5745-5825	149 to 161	149, 157, 165	OFDM	BPSK	6.0
	802.11n (20MHz)		149 to 161	149, 157, 165	OFDM	BPSK	MCS0
	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	MCS0
	802.11ac (80MHz)		155	155	OFDM	BPSK	V0

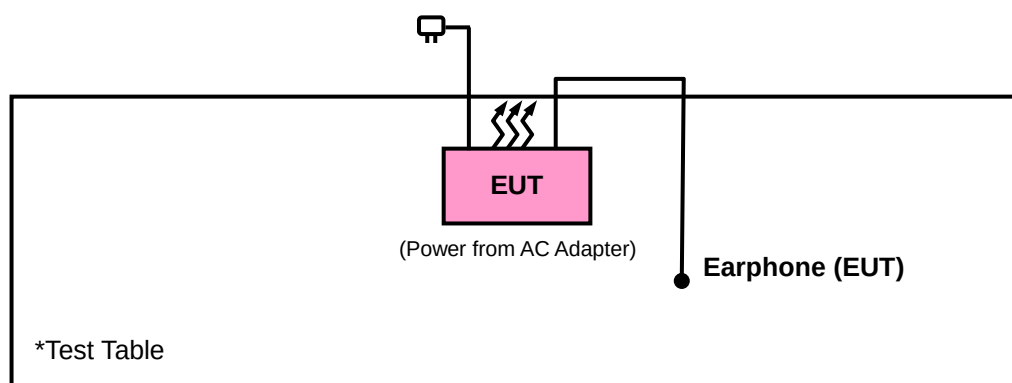
Test CONDITION:

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

3.3 DESCRIPTION OF SUPPORT UNITS

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

3.3.1 CONFIGURATION OF SYSTEM UNDER TEST



3.4 DUTY CYCLE TEST SIGNAL

MODULATION TYPE: BPSK

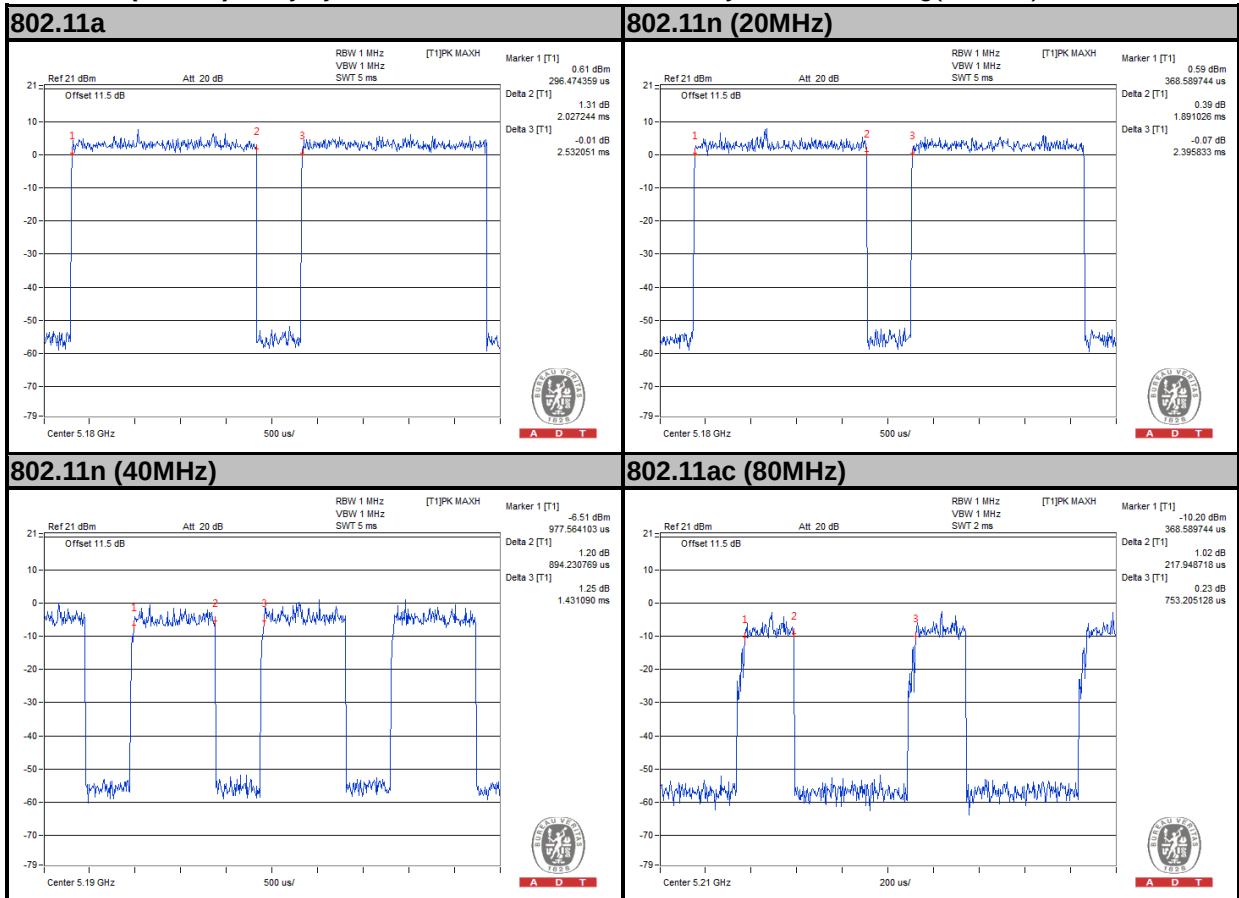
If duty cycle is < 98%, duty factor shall be considered.

802.11a: Duty cycle = $2.027/2.532 = 0.800$, Duty factor = $10 * \log(1/0.800) = 0.97$

802.11n (20MHz): Duty cycle = $1.891/2.396 = 0.789$, Duty factor = $10 * \log(1/0.789) = 1.03$

802.11n (40MHz): Duty cycle = $894.23/1431.09 = 0.625$, Duty factor = $10 * \log(1/0.625) = 2.04$

802.11ac (80MHz): Duty cycle = $217.95/753.20 = 0.289$, Duty factor = $10 * \log(1/0.289) = 5.39$



3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart E (15.407)

789033 D02 General UNII Test Procedures New Rules v01

ANSI C63.10-2009

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

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

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	
789033 D02 General UNII Test Procedures New Rules v01	FIELD STRENGTH AT 3m	
	PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
APPLICABLE TO	EIRP LIMIT	EQUIVALENT FIELD STRENGTH AT 3m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2 (dBμV/m)
15.407(b)(2)		
15.407(b)(3)		
15.407(b)(4)	PK: -27 (dBm/MHz) ^{*1} PK: -17 (dBm/MHz) ^{*2}	PK: 68.2 (dBμV/m) ^{*1} PK: 78.2 (dBμV/m) ^{*2}

NOTE: ^{*1} beyond 10MHz of the band edge ^{*2} within 10 MHz of band edge

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

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

4.1.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100744	Apr. 15, 2014	Apr. 14, 2015
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 21, 2013	Dec. 20, 2014
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Feb. 27, 2014	Feb. 26, 2015
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-969	Feb. 19, 2014	Feb. 18, 2015
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 18, 2013	Dec. 17, 2014
Loop Antenna	HFH2-Z2	100070	Mar. 06, 2014	Mar. 05, 2016
Preamplifier EMCI	EMC 012645	980115	Dec. 26, 2013	Dec. 25, 2014
Preamplifier EMCI	EMC 184045	980116	Jan. 13, 2014	Jan. 12, 2015
Preamplifier EMCI	EMC 330H	980112	Dec. 27, 2013	Dec. 26, 2014
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309219/4 2950114	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:

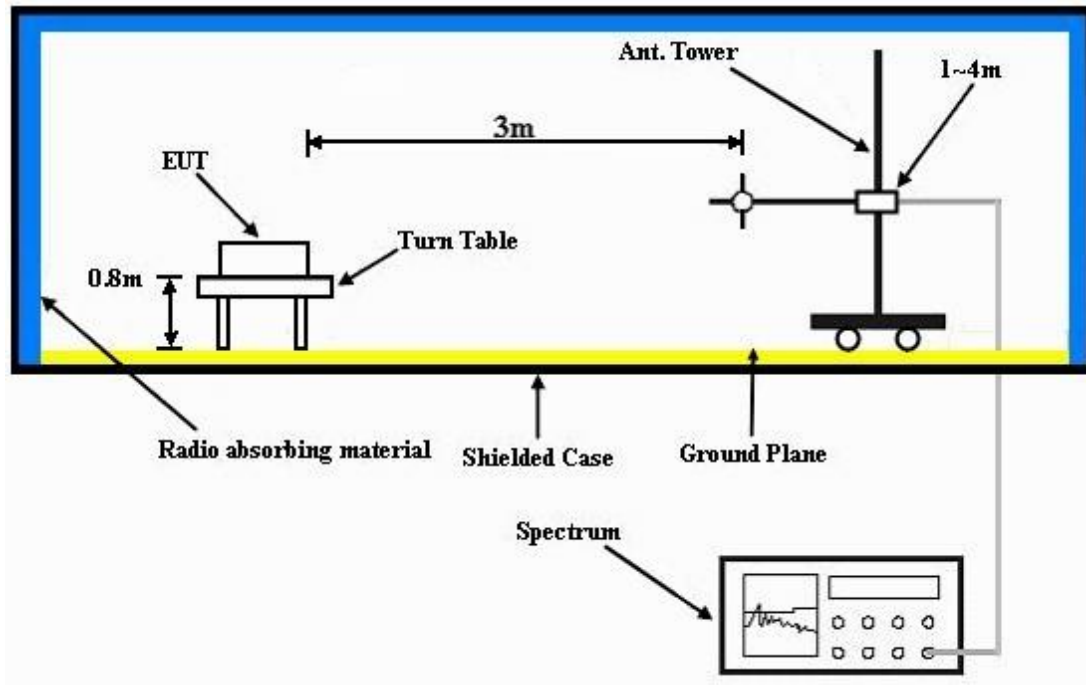
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency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

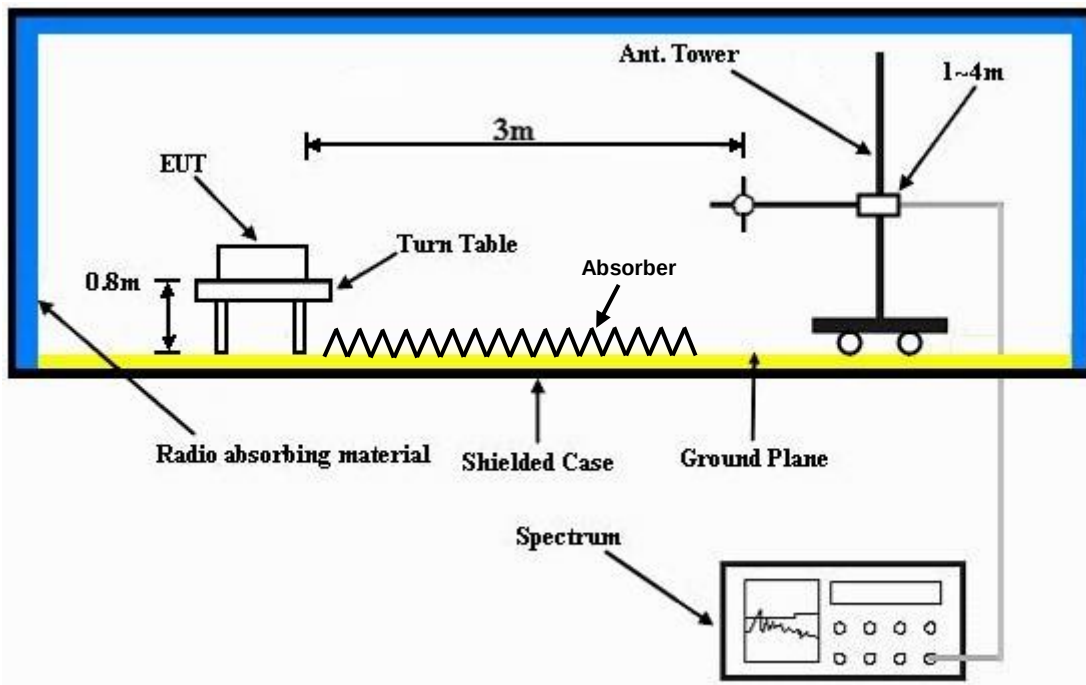
No deviation.

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).



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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

ABOVE 1GHz WORST-CASE DATA

802.11a

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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	41.91	42.69	54	-12.09	31.21	5.24	37.23	100	219	Average
5014	59.26	60.04	74	-14.74	31.21	5.24	37.23	100	219	Peak
5180	93.97	94.65			31.35	5.31	37.34	100	219	Average
5180	103.33	104.01			31.35	5.31	37.34	100	219	Peak
5422	37.71	37.94	54	-16.29	31.53	5.42	37.18	100	219	Average
5422	59.01	59.24	74	-14.99	31.53	5.42	37.18	100	219	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	38.74	39.46	54	-15.26	31.29	5.27	37.28	102	6	Average
5108	59.09	59.81	74	-14.91	31.29	5.27	37.28	102	6	Peak
5180	88.5	89.18			31.35	5.31	37.34	102	6	Average
5180	97.49	98.17			31.35	5.31	37.34	102	6	Peak
5418	37.57	37.8	54	-16.43	31.53	5.42	37.18	102	6	Average
5418	59.18	59.41	74	-14.82	31.53	5.42	37.18	102	6	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 44	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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	37.88	38.62	54	-16.12	31.25	5.26	37.25	100	220	Average
5064	59.66	60.4	74	-14.34	31.25	5.26	37.25	100	220	Peak
5220	94.59	95.25			31.37	5.33	37.36	100	220	Average
5220	103.58	104.24			31.37	5.33	37.36	100	220	Peak
5426	37.53	37.71	54	-16.47	31.53	5.42	37.13	100	220	Average
5426	59.42	59.6	74	-14.58	31.53	5.42	37.13	100	220	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
5144	37.29	38	54	-16.71	31.32	5.29	37.32	105	12	Average
5144	59.15	59.86	74	-14.85	31.32	5.29	37.32	105	12	Peak
5220	89.48	90.14			31.37	5.33	37.36	105	12	Average
5220	98.58	99.24			31.37	5.33	37.36	105	12	Peak
5426	37.52	37.7	54	-16.48	31.53	5.42	37.13	105	12	Average
5426	58.78	58.96	74	-15.22	31.53	5.42	37.13	105	12	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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	37.64	38.43	54	-16.36	31.21	5.24	37.24	102	214	Average
5018	58.83	59.62	74	-15.17	31.21	5.24	37.24	102	214	Peak
5240	89.32	89.91			31.39	5.34	37.32	102	214	Average
5240	103.44	104.03			31.39	5.34	37.32	102	214	Peak
5364	37.76	38.05	54	-16.24	31.49	5.4	37.18	102	214	Average
5364	58.41	58.7	74	-15.59	31.49	5.4	37.18	102	214	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	37.32	38.03	54	-16.68	31.32	5.29	37.32	100	8	Average
5150	59.65	60.36	74	-14.35	31.32	5.29	37.32	100	8	Peak
5240	88.17	88.76			31.39	5.34	37.32	100	8	Average
5240	97.98	98.57			31.39	5.34	37.32	100	8	Peak
5458	37.63	37.71	54	-16.37	31.56	5.44	37.08	100	8	Average
5458	59.18	59.26	74	-14.82	31.56	5.44	37.08	100	8	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5070	37.35	38.11	54	-16.65	31.25	5.26	37.27	104	223	Average
5070	59.2	59.96	74	-14.8	31.25	5.26	37.27	104	223	Peak
5260	93.73	94.25			31.41	5.34	37.27	104	223	Average
5260	102.96	103.48			31.41	5.34	37.27	104	223	Peak
5450	37.97	38.05	54	-16.03	31.56	5.44	37.08	104	223	Average
5450	59.12	59.2	74	-14.88	31.56	5.44	37.08	104	223	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	37.16	37.92	54	-16.84	31.24	5.25	37.25	100	3	Average
5044	59.13	59.89	74	-14.87	31.24	5.25	37.25	100	3	Peak
5260	88.23	88.75			31.41	5.34	37.27	100	3	Average
5260	98.11	98.63			31.41	5.34	37.27	100	3	Peak
5412	37.47	37.71	54	-16.53	31.53	5.41	37.18	100	3	Average
5412	60.29	60.53	74	-13.71	31.53	5.41	37.18	100	3	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5072	37.36	38.1	54	-16.64	31.27	5.26	37.27	109	227	Average
5072	61.93	62.67	74	-12.07	31.27	5.26	37.27	109	227	Peak
5300	94.12	94.5			31.44	5.37	37.19	109	227	Average
5300	103	103.38			31.44	5.37	37.19	109	227	Peak
5450	40.94	41.02	54	-13.06	31.56	5.44	37.08	109	227	Average
5450	60.86	60.94	74	-13.14	31.56	5.44	37.08	109	227	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
5024	37.12	37.89	54	-16.88	31.23	5.24	37.24	102	6	Average
5024	58.9	59.67	74	-15.1	31.23	5.24	37.24	102	6	Peak
5300	88.58	88.96			31.44	5.37	37.19	102	6	Average
5300	98.32	98.7			31.44	5.37	37.19	102	6	Peak
5448	37.86	37.99	54	-16.14	31.56	5.44	37.13	102	6	Average
5448	60.12	60.25	74	-13.88	31.56	5.44	37.13	102	6	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5144	37.45	38.16	54	-16.55	31.32	5.29	37.32	102	215	Average
5144	59.6	60.31	74	-14.4	31.32	5.29	37.32	102	215	Peak
5320	94.72	95.08			31.45	5.38	37.19	102	215	Average
5320	103.39	103.75			31.45	5.38	37.19	102	215	Peak
5444	41.38	41.52	54	-12.62	31.55	5.44	37.13	102	215	Average
5444	59.08	59.22	74	-14.92	31.55	5.44	37.13	102	215	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
5042	37.02	37.78	54	-16.98	31.24	5.25	37.25	100	4	Average
5042	59.9	60.66	74	-14.1	31.24	5.25	37.25	100	4	Peak
5320	88.25	88.61			31.45	5.38	37.19	100	4	Average
5320	97.31	97.67			31.45	5.38	37.19	100	4	Peak
5434	38.11	38.27	54	-15.89	31.55	5.42	37.13	100	4	Average
5434	59.65	59.81	74	-14.35	31.55	5.42	37.13	100	4	Peak

REMARKS:

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5460	43.59	45.36	54	-10.41	31.56	5.44	38.77	103	200	Average
5460	57.1	58.87	74	-16.9	31.56	5.44	38.77	103	200	Peak
*5470	57.25	59	68.3	-11.05	31.57	5.45	38.77	103	200	Peak
5500	94.87	96.57			31.6	5.46	38.76	103	200	Average
5500	104.49	106.19			31.6	5.46	38.76	103	200	Peak
*5725	58.82	60.15	68.3	-9.48	31.96	5.59	38.88	103	200	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5436	38.68	38.84	54	-15.32	31.55	5.42	37.13	101	301	Average
5436	58.65	58.81	74	-15.35	31.55	5.42	37.13	101	301	Peak
*5470	57.27	57.33	68.3	-11.03	31.57	5.45	37.08	101	301	Peak
5500	87.57	87.54			31.6	5.46	37.03	101	301	Average
5500	96.94	96.91			31.6	5.46	37.03	101	301	Peak
*5725	57.56	57.44	68.3	-10.74	31.96	5.59	37.43	101	301	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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	37.86	37.94	54	-16.14	31.56	5.44	37.08	104	205	Average
5452	59.91	59.99	74	-14.09	31.56	5.44	37.08	104	205	Peak
*5470	57.83	57.89	68.3	-10.47	31.57	5.45	37.08	104	205	Peak
5580	94.55	94.5			31.71	5.5	37.16	104	205	Average
5580	104.01	103.96			31.71	5.5	37.16	104	205	Peak
*5725	57.64	57.52	68.3	-10.66	31.96	5.59	37.43	104	205	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
5424	37.63	37.86	54	-16.37	31.53	5.42	37.18	114	230	Average
5424	59.29	59.52	74	-14.71	31.53	5.42	37.18	114	230	Peak
*5470	58.4	58.46	68.3	-9.9	31.57	5.45	37.08	114	230	Peak
5580	87.88	87.83			31.71	5.5	37.16	114	230	Average
5580	97	96.95			31.71	5.5	37.16	114	230	Peak
*5725	58.24	58.12	68.3	-10.06	31.96	5.59	37.43	114	230	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5460	37.61	37.69	54	-16.39	31.56	5.44	37.08	100	189	Average
5460	57.29	57.37	74	-16.71	31.56	5.44	37.08	100	189	Peak
*5470	57.99	58.05	68.3	-10.31	31.57	5.45	37.08	100	189	Peak
5700	93.93	93.86			31.9	5.57	37.4	100	189	Average
5700	104.24	104.17			31.9	5.57	37.4	100	189	Peak
*5725	57.77	57.65	68.3	-10.53	31.96	5.59	37.43	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
5460	37.56	37.64	54	-16.44	31.56	5.44	37.08	110	284	Average
5460	59.25	59.33	74	-14.75	31.56	5.44	37.08	110	284	Peak
*5470	57.48	57.54	68.3	-10.82	31.57	5.45	37.08	110	284	Peak
5700	87.64	87.57			31.9	5.57	37.4	110	284	Average
5700	97.5	97.43			31.9	5.57	37.4	110	284	Peak
*5725	58.59	58.47	68.3	-9.71	31.96	5.59	37.43	110	284	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
*5714	59.29	59.2	68.3	-9.01	31.93	5.59	37.43	100	196	Peak
*5725	58.72	58.6	78.3	-19.58	31.96	5.59	37.43	100	196	Peak
5745	94.5	94.38			31.99	5.6	37.47	100	196	Average
5745	102.8	102.68			31.99	5.6	37.47	100	196	Peak
*5850	58.35	58.05	78.3	-19.95	32.15	5.66	37.51	100	196	Peak
*5861	57.32	56.98	68.3	-10.98	32.18	5.66	37.5	100	196	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
*5714	58.3	58.21	68.3	-10	31.93	5.59	37.43	102	173	Peak
*5725	57.31	57.19	78.3	-20.99	31.96	5.59	37.43	102	173	Peak
5745	87.15	87.03			31.99	5.6	37.47	102	173	Average
5745	96.19	96.07			31.99	5.6	37.47	102	173	Peak
*5850	59.07	58.77	78.3	-19.23	32.15	5.66	37.51	102	173	Peak
*5861	59.96	59.62	68.3	-8.34	32.18	5.66	37.5	102	173	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5745MHz: Fundamental frequency.
- *: Out of restricted band

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
*5714	57.68	57.59	68.3	-10.62	31.93	5.59	37.43	100	202	Peak
*5725	57.1	56.98	78.3	-21.2	31.96	5.59	37.43	100	202	Peak
5785	93.92	93.8			32.04	5.62	37.54	100	202	Average
5785	103.17	103.05			32.04	5.62	37.54	100	202	Peak
*5850	58.72	58.42	78.3	-19.58	32.15	5.66	37.51	100	202	Peak
*5861	58.05	57.71	68.3	-10.25	32.18	5.66	37.5	100	202	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
*5714	58.77	58.68	68.3	-9.53	31.93	5.59	37.43	102	173	Peak
*5725	56.69	56.57	78.3	-21.61	31.96	5.59	37.43	102	173	Peak
5785	88.93	88.81			32.04	5.62	37.54	102	173	Average
5785	97.28	97.16			32.04	5.62	37.54	102	173	Peak
*5850	57.15	56.85	78.3	-21.15	32.15	5.66	37.51	102	173	Peak
*5861	59.22	58.88	68.3	-9.08	32.18	5.66	37.5	102	173	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5785MHz: Fundamental frequency.
- *: Out of restricted band

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
*5714	59.45	59.36	68.3	-8.85	31.93	5.59	37.43	100	189	Peak
*5725	57.92	57.8	78.3	-20.38	31.96	5.59	37.43	100	189	Peak
5825	94.42	94.19			32.12	5.64	37.53	100	189	Average
5825	102.8	102.57			32.12	5.64	37.53	100	189	Peak
*5850	57.12	56.82	78.3	-21.18	32.15	5.66	37.51	100	189	Peak
*5861	57.42	57.08	68.3	-10.88	32.18	5.66	37.5	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
*5714	57.82	57.73	68.3	-10.48	31.93	5.59	37.43	101	178	Peak
*5725	59.2	59.08	78.3	-19.1	31.96	5.59	37.43	101	178	Peak
5825	90.04	89.81			32.12	5.64	37.53	101	178	Average
5825	98.15	97.92			32.12	5.64	37.53	101	178	Peak
*5850	58.27	57.97	78.3	-20.03	32.15	5.66	37.51	101	178	Peak
*5861	57.93	57.59	68.3	-10.37	32.18	5.66	37.5	101	178	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5825MHz: Fundamental frequency.
- *: Out of restricted band

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 36	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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	42.61	43.38	54	-11.39	31.23	5.24	37.24	100	223	Average
5024	59.09	59.86	74	-14.91	31.23	5.24	37.24	100	223	Peak
5180	93.99	94.67			31.35	5.31	37.34	100	223	Average
5180	103.31	103.99			31.35	5.31	37.34	100	223	Peak
5370	37.38	37.67	54	-16.62	31.49	5.4	37.18	100	223	Average
5370	59.15	59.44	74	-14.85	31.49	5.4	37.18	100	223	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
5084	38.81	39.55	54	-15.19	31.27	5.26	37.27	102	7	Average
5084	59.54	60.28	74	-14.46	31.27	5.26	37.27	102	7	Peak
5180	88.13	88.81			31.35	5.31	37.34	102	7	Average
5180	97.49	98.17			31.35	5.31	37.34	102	7	Peak
5394	37.44	37.7	54	-16.56	31.51	5.41	37.18	102	7	Average
5394	59.05	59.31	74	-14.95	31.51	5.41	37.18	102	7	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 44	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5044	37.93	38.69	54	-16.07	31.24	5.25	37.25	100	218	Average
5044	58.41	59.17	74	-15.59	31.24	5.25	37.25	100	218	Peak
5220	94.18	94.84			31.37	5.33	37.36	100	218	Average
5220	103.85	104.51			31.37	5.33	37.36	100	218	Peak
5410	37.69	37.94	54	-16.31	31.52	5.41	37.18	100	218	Average
5410	58.86	59.11	74	-15.14	31.52	5.41	37.18	100	218	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
5092	37.02	37.74	54	-16.98	31.28	5.27	37.27	100	9	Average
5092	59.22	59.94	74	-14.78	31.28	5.27	37.27	100	9	Peak
5220	88.95	89.61			31.37	5.33	37.36	100	9	Average
5220	98.2	98.86			31.37	5.33	37.36	100	9	Peak
5444	37.46	37.6	54	-16.54	31.55	5.44	37.13	100	9	Average
5444	59.8	59.94	74	-14.2	31.55	5.44	37.13	100	9	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 48	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5050	37.78	38.54	54	-16.22	31.24	5.25	37.25	101	224	Average
5050	59.14	59.9	74	-14.86	31.24	5.25	37.25	101	224	Peak
5240	94.61	95.2			31.39	5.34	37.32	101	224	Average
5240	103.92	104.51			31.39	5.34	37.32	101	224	Peak
5368	37.64	37.93	54	-16.36	31.49	5.4	37.18	101	224	Average
5368	59.52	59.81	74	-14.48	31.49	5.4	37.18	101	224	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5078	37.25	37.99	54	-16.75	31.27	5.26	37.27	100	9	Average
5078	58.76	59.5	74	-15.24	31.27	5.26	37.27	100	9	Peak
5240	88.03	88.62			31.39	5.34	37.32	100	9	Average
5240	97.72	98.31			31.39	5.34	37.32	100	9	Peak
5380	37.48	37.75	54	-16.52	31.51	5.4	37.18	100	9	Average
5380	59.35	59.62	74	-14.65	31.51	5.4	37.18	100	9	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 52	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5056	37.26	38.01	54	-16.74	31.25	5.25	37.25	100	229	Average
5056	59.32	60.07	74	-14.68	31.25	5.25	37.25	100	229	Peak
5260	93.7	94.22			31.41	5.34	37.27	100	229	Average
5260	102.92	103.44			31.41	5.34	37.27	100	229	Peak
5422	37.61	37.84	54	-16.39	31.53	5.42	37.18	100	229	Average
5422	59.51	59.74	74	-14.49	31.53	5.42	37.18	100	229	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	37.46	38.15	54	-16.54	31.32	5.29	37.3	102	10	Average
5140	59.77	60.46	74	-14.23	31.32	5.29	37.3	102	10	Peak
5260	88.26	88.78			31.41	5.34	37.27	102	10	Average
5260	97.34	97.86			31.41	5.34	37.27	102	10	Peak
5416	37.54	37.77	54	-16.46	31.53	5.42	37.18	102	10	Average
5416	59.35	59.58	74	-14.65	31.53	5.42	37.18	102	10	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5088	37.9	38.63	54	-16.1	31.27	5.27	37.27	102	218	Average
5088	58.34	59.07	74	-15.66	31.27	5.27	37.27	102	218	Peak
5300	94.77	95.15			31.44	5.37	37.19	102	218	Average
5300	103.75	104.13			31.44	5.37	37.19	102	218	Peak
5356	41.94	42.25	54	-12.06	31.48	5.39	37.18	102	218	Average
5356	59.08	59.39	74	-14.92	31.48	5.39	37.18	102	218	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
5074	37.16	37.9	54	-16.84	31.27	5.26	37.27	101	2	Average
5074	59.29	60.03	74	-14.71	31.27	5.26	37.27	101	2	Peak
5300	88.06	88.44			31.44	5.37	37.19	101	2	Average
5300	97.69	98.07			31.44	5.37	37.19	101	2	Peak
5460	37.89	37.97	54	-16.11	31.56	5.44	37.08	101	2	Average
5460	59.7	59.78	74	-14.3	31.56	5.44	37.08	101	2	Peak

REMARKS:

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 64	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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	39.94	54	-16.47	31.32	5.29	39.02	103	225	Average
5142	59.03	61.44	74	-14.97	31.32	5.29	39.02	103	225	Peak
5320	94.08	96.09			31.45	5.38	38.84	103	225	Average
5320	103.26	105.27			31.45	5.38	38.84	103	225	Peak
5416	41.7	43.54	54	-12.3	31.53	5.42	38.79	103	225	Average
5416	60.25	62.09	74	-13.75	31.53	5.42	38.79	103	225	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5082	37.26	38	54	-16.74	31.27	5.26	37.27	102	4	Average
5082	59.3	60.04	74	-14.7	31.27	5.26	37.27	102	4	Peak
5320	88.4	88.76			31.45	5.38	37.19	102	4	Average
5320	97.56	97.92			31.45	5.38	37.19	102	4	Peak
5454	38.09	38.17	54	-15.91	31.56	5.44	37.08	102	4	Average
5454	59.84	59.92	74	-14.16	31.56	5.44	37.08	102	4	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 100	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5444	44.2	44.34	54	-9.8	31.55	5.44	37.13	103	201	Average
5444	59.84	59.98	74	-14.16	31.55	5.44	37.13	103	201	Peak
*5470	56.89	56.95	68.3	-11.41	31.57	5.45	37.08	103	201	Peak
5500	93.71	93.68			31.6	5.46	37.03	103	201	Average
5500	104.19	104.16			31.6	5.46	37.03	103	201	Peak
*5725	58.43	58.31	68.3	-9.87	31.96	5.59	37.43	103	201	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
5430	38.76	38.92	54	-15.24	31.55	5.42	37.13	149	308	Average
5430	59.24	59.4	74	-14.76	31.55	5.42	37.13	149	308	Peak
*5470	58.36	58.42	68.3	-9.94	31.57	5.45	37.08	149	308	Peak
5500	87.54	87.51			31.6	5.46	37.03	149	308	Average
5500	97.15	97.12			31.6	5.46	37.03	149	308	Peak
*5725	59.24	59.12	68.3	-9.06	31.96	5.59	37.43	149	308	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 116	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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	38.09	38.23	54	-15.91	31.55	5.44	37.13	103	201	Average
5442	59.4	59.54	74	-14.6	31.55	5.44	37.13	103	201	Peak
*5470	57.24	57.3	68.3	-11.06	31.57	5.45	37.08	103	201	Peak
5580	95.33	95.28			31.71	5.5	37.16	103	201	Average
5580	104.25	104.2			31.71	5.5	37.16	103	201	Peak
*5725	58.31	58.19	68.3	-9.99	31.96	5.59	37.43	103	201	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
5421	37.46	37.69	54	-16.54	31.53	5.42	37.18	149	309	Average
5421	60.1	60.33	74	-13.9	31.53	5.42	37.18	149	309	Peak
*5470	57.75	57.81	68.3	-10.55	31.57	5.45	37.08	149	309	Peak
5580	87.03	86.98			31.71	5.5	37.16	149	309	Average
5580	97.62	97.57			31.71	5.5	37.16	149	309	Peak
*5725	58.04	57.92	68.3	-10.26	31.96	5.59	37.43	149	309	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5416	37.45	37.68	54	-16.55	31.53	5.42	37.18	100	176	Average
5416	58.39	58.62	74	-15.61	31.53	5.42	37.18	100	176	Peak
*5470	55.35	55.41	68.3	-12.95	31.57	5.45	37.08	100	176	Peak
5700	94.74	94.67			31.9	5.57	37.4	100	176	Average
5700	103.77	103.7			31.9	5.57	37.4	100	176	Peak
*5725	57.04	56.92	68.3	-11.26	31.96	5.59	37.43	100	176	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
5438	37.47	37.61	54	-16.53	31.55	5.44	37.13	131	308	Average
5438	58.86	59	74	-15.14	31.55	5.44	37.13	131	308	Peak
*5470	59.7	59.76	68.3	-8.6	31.57	5.45	37.08	131	308	Peak
5700	88.08	88.01			31.9	5.57	37.4	131	308	Average
5700	97.03	96.96			31.9	5.57	37.4	131	308	Peak
*5725	58.98	58.86	68.3	-9.32	31.96	5.59	37.43	131	308	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 149	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
*5714	59.54	59.45	68.3	-8.76	31.93	5.59	37.43	100	186	Peak
*5725	58.47	58.35	78.3	-19.83	31.96	5.59	37.43	100	186	Peak
5745	94.51	94.39			31.99	5.6	37.47	100	186	Average
5745	103.51	103.39			31.99	5.6	37.47	100	186	Peak
*5850	59.02	58.72	78.3	-19.28	32.15	5.66	37.51	100	186	Peak
*5861	58.77	58.43	68.3	-9.53	32.18	5.66	37.5	100	186	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
*5714	58.48	58.39	68.3	-9.82	31.93	5.59	37.43	102	184	Peak
*5725	58.96	58.84	78.3	-19.34	31.96	5.59	37.43	102	184	Peak
5745	88.14	88.02			31.99	5.6	37.47	102	184	Average
5745	97.46	97.34			31.99	5.6	37.47	102	184	Peak
*5850	58.76	58.46	78.3	-19.54	32.15	5.66	37.51	102	184	Peak
*5861	59.8	59.46	68.3	-8.5	32.18	5.66	37.5	102	184	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5745MHz: Fundamental frequency.
- *: Out of restricted band



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 157	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
*5714	58.99	58.9	68.3	-9.31	31.93	5.59	37.43	100	205	Peak
*5725	58.33	58.21	78.3	-19.97	31.96	5.59	37.43	100	205	Peak
5785	94.23	94.11			32.04	5.62	37.54	100	205	Average
5785	103.37	103.25			32.04	5.62	37.54	100	205	Peak
*5850	59.24	58.94	78.3	-19.06	32.15	5.66	37.51	100	205	Peak
*5861	57.98	57.64	68.3	-10.32	32.18	5.66	37.5	100	205	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
*5714	59.13	59.04	68.3	-9.17	31.93	5.59	37.43	101	175	Peak
*5725	56.41	56.29	78.3	-21.89	31.96	5.59	37.43	101	175	Peak
5785	88.28	88.16			32.04	5.62	37.54	101	175	Average
5785	98.77	98.65			32.04	5.62	37.54	101	175	Peak
*5850	58.44	58.14	78.3	-19.86	32.15	5.66	37.51	101	175	Peak
*5861	58.36	58.02	68.3	-9.94	32.18	5.66	37.5	101	175	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5785MHz: Fundamental frequency.
- *: Out of restricted band

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 165	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
*5714	57.77	57.68	68.3	-10.53	31.93	5.59	37.43	107	197	Peak
*5725	57.08	56.96	78.3	-21.22	31.96	5.59	37.43	107	197	Peak
5825	94.66	94.43			32.12	5.64	37.53	107	197	Average
5825	103.96	103.73			32.12	5.64	37.53	107	197	Peak
*5850	59.57	59.27	78.3	-18.73	32.15	5.66	37.51	107	197	Peak
*5861	60.32	59.98	68.3	-7.98	32.18	5.66	37.5	107	197	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
*5714	57.14	57.05	68.3	-11.16	31.93	5.59	37.43	100	176	Peak
*5725	57.54	57.42	78.3	-20.76	31.96	5.59	37.43	100	176	Peak
5825	88.81	88.58			32.12	5.64	37.53	100	176	Average
5825	97.87	97.64			32.12	5.64	37.53	100	176	Peak
*5850	57.98	57.68	78.3	-20.32	32.15	5.66	37.51	100	176	Peak
*5861	58.02	57.68	68.3	-10.28	32.18	5.66	37.5	100	176	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5825MHz: Fundamental frequency.
- *: Out of restricted band

802.11n (40MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 38	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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	41.03	41.76	54	-12.97	31.28	5.27	37.28	110	191	Average
5102	59.56	60.29	74	-14.44	31.28	5.27	37.28	110	191	Peak
5190	90.81	91.48			31.35	5.32	37.34	110	191	Average
5190	100.07	100.74			31.35	5.32	37.34	110	191	Peak
5446	37.59	37.72	54	-16.41	31.56	5.44	37.13	110	191	Average
5446	59.73	59.86	74	-14.27	31.56	5.44	37.13	110	191	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
5126	38.38	39.09	54	-15.62	31.31	5.28	37.3	103	7	Average
5126	59.31	60.02	74	-14.69	31.31	5.28	37.3	103	7	Peak
5190	84.23	84.9			31.35	5.32	37.34	103	7	Average
5190	93.81	94.48			31.35	5.32	37.34	103	7	Peak
5448	37.65	37.78	54	-16.35	31.56	5.44	37.13	103	7	Average
5448	59.45	59.58	74	-14.55	31.56	5.44	37.13	103	7	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 46	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5120	39.18	39.91	54	-14.82	31.29	5.28	37.3	110	192	Average
5120	59.87	60.6	74	-14.13	31.29	5.28	37.3	110	192	Peak
5230	90.64	91.24			31.39	5.33	37.32	110	192	Average
5230	99.57	100.17			31.39	5.33	37.32	110	192	Peak
5436	37.63	37.79	54	-16.37	31.55	5.42	37.13	110	192	Average
5436	59.54	59.7	74	-14.46	31.55	5.42	37.13	110	192	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
5074	37.71	38.45	54	-16.29	31.27	5.26	37.27	102	11	Average
5074	58.68	59.42	74	-15.32	31.27	5.26	37.27	102	11	Peak
5230	83.94	84.54			31.39	5.33	37.32	102	11	Average
5230	93.38	93.98			31.39	5.33	37.32	102	11	Peak
5398	37.52	37.77	54	-16.48	31.52	5.41	37.18	102	11	Average
5398	59.41	59.66	74	-14.59	31.52	5.41	37.18	102	11	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 54	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5062	36.86	37.61	54	-17.14	31.25	5.25	37.25	100	217	Average
5062	57.84	58.59	74	-16.16	31.25	5.25	37.25	100	217	Peak
5270	87.85	88.36			31.41	5.35	37.27	100	217	Average
5270	97.27	97.78			31.41	5.35	37.27	100	217	Peak
5376	37.26	37.55	54	-16.74	31.49	5.4	37.18	100	217	Average
5376	59.67	59.96	74	-14.33	31.49	5.4	37.18	100	217	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
5116	36.59	37.3	54	-17.41	31.29	5.28	37.28	100	13	Average
5116	58.78	59.49	74	-15.22	31.29	5.28	37.28	100	13	Peak
5270	84.92	85.43			31.41	5.35	37.27	100	13	Average
5270	93.82	94.33			31.41	5.35	37.27	100	13	Peak
5380	37.28	37.55	54	-16.72	31.51	5.4	37.18	100	13	Average
5380	58.5	58.77	74	-15.5	31.51	5.4	37.18	100	13	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 62	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5094	37.35	38.08	54	-16.65	31.28	5.27	37.28	105	221	Average
5094	59.22	59.95	74	-14.78	31.28	5.27	37.28	105	221	Peak
5310	89.88	90.25			31.45	5.37	37.19	105	221	Average
5310	99.36	99.73			31.45	5.37	37.19	105	221	Peak
5458	38.11	38.19	54	-15.89	31.56	5.44	37.08	105	221	Average
5458	59.75	59.83	74	-14.25	31.56	5.44	37.08	105	221	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	37.1	37.88	54	-16.9	31.21	5.24	37.23	103	6	Average
5014	59.42	60.2	74	-14.58	31.21	5.24	37.23	103	6	Peak
5310	84.56	84.93			31.45	5.37	37.19	103	6	Average
5310	93.47	93.84			31.45	5.37	37.19	103	6	Peak
5438	37.51	37.65	54	-16.49	31.55	5.44	37.13	103	6	Average
5438	59.01	59.15	74	-14.99	31.55	5.44	37.13	103	6	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 102	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5438	38.87	39.01	54	-15.13	31.55	5.44	37.13	100	197	Average
5438	59.26	59.4	74	-14.74	31.55	5.44	37.13	100	197	Peak
*5470	58.66	58.72	68.3	-9.64	31.57	5.45	37.08	100	197	Peak
5510	90.66	90.66			31.6	5.46	37.06	100	197	Average
5510	100.42	100.42			31.6	5.46	37.06	100	197	Peak
*5725	58.04	57.92	68.3	-10.26	31.96	5.59	37.43	100	197	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	37.58	37.71	54	-16.42	31.56	5.44	37.13	134	304	Average
5448	59.02	59.15	74	-14.98	31.56	5.44	37.13	134	304	Peak
*5470	58.04	58.1	68.3	-10.26	31.57	5.45	37.08	134	304	Peak
5510	83.78	83.78			31.6	5.46	37.06	134	304	Average
5510	93.21	93.21			31.6	5.46	37.06	134	304	Peak
*5725	58.89	58.77	68.3	-9.41	31.96	5.59	37.43	134	304	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 110	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5408	39.58	39.83	54	-14.42	31.52	5.41	37.18	101	193	Average
5408	59.03	59.28	74	-14.97	31.52	5.41	37.18	101	193	Peak
*5470	59.58	59.64	68.3	-8.72	31.57	5.45	37.08	101	193	Peak
5550	91.19	91.11			31.68	5.49	37.09	101	193	Average
5550	100.46	100.38			31.68	5.49	37.09	101	193	Peak
*5725	58.29	58.17	68.3	-10.01	31.96	5.59	37.43	101	193	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	37.49	37.65	54	-16.51	31.55	5.42	37.13	135	305	Average
5432	59.47	59.63	74	-14.53	31.55	5.42	37.13	135	305	Peak
*5470	58.06	58.12	68.3	-10.24	31.57	5.45	37.08	135	305	Peak
5550	83.31	83.23			31.68	5.49	37.09	135	305	Average
5550	92.47	92.39			31.68	5.49	37.09	135	305	Peak
*5725	57.61	57.49	68.3	-10.69	31.96	5.59	37.43	135	305	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 134	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5428	39.57	39.75	54	-14.43	31.53	5.42	37.13	100	193	Average
5428	58.48	58.66	74	-15.52	31.53	5.42	37.13	100	193	Peak
*5470	57.52	57.58	68.3	-10.78	31.57	5.45	37.08	100	193	Peak
5670	92.96	92.86			31.88	5.56	37.34	100	193	Average
5670	100.7	100.6			31.88	5.56	37.34	100	193	Peak
*5725	57.3	57.18	68.3	-11	31.96	5.59	37.43	100	193	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	39.6	39.68	54	-14.4	31.56	5.44	37.08	143	310	Average
5460	58.59	58.67	74	-15.41	31.56	5.44	37.08	143	310	Peak
*5470	57.88	57.94	68.3	-10.42	31.57	5.45	37.08	143	310	Peak
5670	83.93	83.83			31.88	5.56	37.34	143	310	Average
5670	93.73	93.63			31.88	5.56	37.34	143	310	Peak
*5725	58.93	58.81	68.3	-9.37	31.96	5.59	37.43	143	310	Peak

REMARKS:

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 151	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
*5714	57.33	57.24	68.3	-10.97	31.93	5.59	37.43	100	190	Peak
*5725	57.67	57.55	78.3	-20.63	31.96	5.59	37.43	100	190	Peak
5755	89.3	89.16			32.01	5.6	37.47	100	190	Average
5755	99.73	99.59			32.01	5.6	37.47	100	190	Peak
*5850	57.65	57.35	78.3	-20.65	32.15	5.66	37.51	100	190	Peak
*5861	57.72	57.38	68.3	-10.58	32.18	5.66	37.5	100	190	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
*5714	57.07	56.98	68.3	-11.23	31.93	5.59	37.43	112	171	Peak
*5725	58.9	58.78	78.3	-19.4	31.96	5.59	37.43	112	171	Peak
5755	83.77	83.63			32.01	5.6	37.47	112	171	Average
5755	91.54	91.4			32.01	5.6	37.47	112	171	Peak
*5850	57.84	57.54	78.3	-20.46	32.15	5.66	37.51	112	171	Peak
*5861	58.22	57.88	68.3	-10.08	32.18	5.66	37.5	112	171	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5755MHz: Fundamental frequency.
- *: Out of restricted band

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 159	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
*5714	56.93	56.84	68.3	-11.37	31.93	5.59	37.43	101	193	Peak
*5725	57.78	57.66	78.3	-20.52	31.96	5.59	37.43	101	193	Peak
5795	90.01	89.85			32.07	5.63	37.54	101	193	Average
5795	99.6	99.44			32.07	5.63	37.54	101	193	Peak
*5850	58.79	58.49	78.3	-19.51	32.15	5.66	37.51	101	193	Peak
*5861	58.48	58.14	68.3	-9.82	32.18	5.66	37.5	101	193	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
*5714	58.86	58.77	68.3	-9.44	31.93	5.59	37.43	111	173	Peak
*5725	58.06	57.94	78.3	-20.24	31.96	5.59	37.43	111	173	Peak
5795	84.63	84.47			32.07	5.63	37.54	111	173	Average
5795	93.02	92.86			32.07	5.63	37.54	111	173	Peak
*5850	58.94	58.64	78.3	-19.36	32.15	5.66	37.51	111	173	Peak
*5861	59.19	58.85	68.3	-9.11	32.18	5.66	37.5	111	173	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5795MHz: Fundamental frequency.
- *: Out of restricted band

802.11ac (80MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 42	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5146	44.37	45.08	54	-9.63	31.32	5.29	37.32	100	216	Average
5146	59.73	60.44	74	-14.27	31.32	5.29	37.32	100	216	Peak
5210	85.85	86.52			31.37	5.32	37.36	100	216	Average
5210	97.21	97.88			31.37	5.32	37.36	100	216	Peak
5396	38.07	38.32	54	-15.93	31.52	5.41	37.18	100	216	Average
5396	59.56	59.81	74	-14.44	31.52	5.41	37.18	100	216	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
5126	41.33	42.04	54	-12.67	31.31	5.28	37.3	103	8	Average
5126	59.08	59.79	74	-14.92	31.31	5.28	37.3	103	8	Peak
5210	81.01	81.68			31.37	5.32	37.36	103	8	Average
5210	90.93	91.6			31.37	5.32	37.36	103	8	Peak
5380	38.31	38.58	54	-15.69	31.51	5.4	37.18	103	8	Average
5380	58.53	58.8	74	-15.47	31.51	5.4	37.18	103	8	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 58	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5110	38.09	38.81	54	-15.91	31.29	5.27	37.28	104	222	Average
5110	60	60.72	74	-14	31.29	5.27	37.28	104	222	Peak
5290	86.11	86.54			31.43	5.37	37.23	104	222	Average
5290	97.37	97.8			31.43	5.37	37.23	104	222	Peak
5390	38.61	38.87	54	-15.39	31.51	5.41	37.18	104	222	Average
5390	60.55	60.81	74	-13.45	31.51	5.41	37.18	104	222	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
5146	37.6	38.31	54	-16.4	31.32	5.29	37.32	100	355	Average
5146	59.24	59.95	74	-14.76	31.32	5.29	37.32	100	355	Peak
5290	80.11	80.54			31.43	5.37	37.23	100	355	Average
5290	90.73	91.16			31.43	5.37	37.23	100	355	Peak
5348	37.72	38.03	54	-16.28	31.48	5.39	37.18	100	355	Average
5348	59.36	59.67	74	-14.64	31.48	5.39	37.18	100	355	Peak

REMARKS:

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

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 106	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
5428	39.14	39.32	54	-14.86	31.53	5.42	37.13	100	203	Average
5428	58.84	59.02	74	-15.16	31.53	5.42	37.13	100	203	Peak
*5470	57.01	57.07	68.3	-11.29	31.57	5.45	37.08	100	203	Peak
5530	86.04	86.03			31.63	5.47	37.09	100	203	Average
5530	98.66	98.65			31.63	5.47	37.09	100	203	Peak
*5725	58.35	58.23	68.3	-9.95	31.96	5.59	37.43	100	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
5446	38.11	38.24	54	-15.89	31.56	5.44	37.13	100	301	Average
5446	58.79	58.92	74	-15.21	31.56	5.44	37.13	100	301	Peak
*5470	58.2	58.26	68.3	-10.1	31.57	5.45	37.08	100	301	Peak
5530	78.67	78.66			31.63	5.47	37.09	100	301	Average
5530	88.4	88.39			31.63	5.47	37.09	100	301	Peak
*5725	57.37	57.25	68.3	-10.93	31.96	5.59	37.43	100	301	Peak

REMARKS:

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



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 155	FREQUENCY RANGE	1GHz ~ 40GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
*5714	63.3	63.21	68.3	-5	31.93	5.59	37.43	100	194	Peak
*5725	65.37	65.25	78.3	-12.93	31.96	5.59	37.43	100	194	Peak
5775	95.33	95.17			32.04	5.62	37.5	100	194	Average
5775	102.51	102.35			32.04	5.62	37.5	100	194	Peak
*5850	57.85	57.55	78.3	-16.15	32.15	5.66	37.51	100	194	Peak
*5861	58.67	58.33	68.3	-15.33	32.18	5.66	37.5	100	194	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
*5714	59.03	58.94	68.3	-9.27	31.93	5.59	37.43	100	166	Peak
*5725	59.09	58.97	78.3	-19.21	31.96	5.59	37.43	100	166	Peak
5775	86.34	86.18			32.04	5.62	37.5	100	166	Average
5775	94.14	93.98			32.04	5.62	37.5	100	166	Peak
*5850	60.52	60.22	78.3	-17.78	32.15	5.66	37.51	100	166	Peak
*5861	59.19	58.85	68.3	-9.11	32.18	5.66	37.5	100	166	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 5775MHz: Fundamental frequency.
- *: Out of restricted band

BELOW 1GHz WORST-CASE DATA:

802.11ac (80MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 42	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
152.58	33.1	50.7	43.5	-10.4	12.71	1.35	31.66	135	206	Peak
173.64	33.27	52.2	43.5	-10.23	11.38	1.46	31.77	134	31	Peak
183.09	33.97	53.72	43.5	-9.53	10.53	1.51	31.79	138	36	Peak
511.4	22.53	33.73	46	-23.47	17.57	2.82	31.59	128	256	Peak
566	23.66	33.9	46	-22.34	18.84	2.99	32.07	100	311	Peak
631.1	25.86	34.82	46	-20.14	19.99	3.18	32.13	104	109	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
31.08	35.74	54.15	40	-4.26	12.14	0.57	31.12	117	119	Peak
38.1	35.58	52.73	40	-4.42	13.24	0.63	31.02	124	3	Peak
175.26	29.14	48.27	43.5	-14.36	11.19	1.47	31.79	100	117	Peak
496.7	23.03	34.68	46	-22.97	17.25	2.77	31.67	128	256	Peak
605.2	24.65	34.05	46	-21.35	19.67	3.1	32.17	113	276	Peak
650	25.53	34.1	46	-20.47	20.21	3.24	32.02	130	193	Peak

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

Margin value = Emission level – Limit value

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 60	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
152.85	32.65	50.26	43.5	-10.85	12.72	1.36	31.69	112	8	Peak
180.93	36.8	56.44	43.5	-6.7	10.67	1.51	31.82	136	147	Peak
230.34	34.59	54.04	46	-11.41	10.66	1.74	31.85	124	220	Peak
524.7	23.21	34.1	46	-22.79	17.88	2.86	31.63	101	121	Peak
622	24.03	33.17	46	-21.97	19.87	3.15	32.16	137	263	Peak
740.3	25.9	32.45	46	-20.1	21.38	3.55	31.48	106	317	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
30.54	33.31	51.72	40	-6.69	12.14	0.57	31.12	140	39	Peak
54.57	31.47	49.45	40	-8.53	12.56	0.79	31.33	100	115	Peak
179.58	31.75	51.25	43.5	-11.75	10.83	1.5	31.83	119	227	Peak
694.1	25.18	32.84	46	-20.82	20.75	3.41	31.82	137	163	Peak
753.6	26.91	33.11	46	-19.09	21.57	3.58	31.35	139	210	Peak
786.5	27.91	33.62	46	-18.09	22.04	3.66	31.41	114	265	Peak

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

Margin value = Emission level – Limit value

802.11n (20MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 140	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
152.31	31.75	49.35	43.5	-11.75	12.71	1.35	31.66	117	232	Peak
179.58	35.72	55.22	43.5	-7.78	10.83	1.5	31.83	129	318	Peak
186.6	32.79	52.67	43.5	-10.71	10.33	1.53	31.74	137	336	Peak
622	24.03	33.17	46	-21.97	19.87	3.15	32.16	122	176	Peak
706.7	25.76	33.15	46	-20.24	20.92	3.45	31.76	120	91	Peak
754.3	26.83	33.03	46	-19.17	21.59	3.58	31.37	126	19	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
30.27	32.22	50.81	40	-7.78	11.98	0.57	31.14	119	32	Peak
37.02	31.17	48.49	40	-8.83	13.09	0.62	31.03	130	356	Peak
56.19	30.29	48.48	40	-9.71	12.35	0.8	31.34	127	23	Peak
518.4	23.2	34.18	46	-22.8	17.75	2.84	31.57	127	323	Peak
645.8	24.84	33.5	46	-21.16	20.16	3.23	32.05	134	69	Peak
682.2	25.52	33.4	46	-20.48	20.6	3.36	31.84	101	290	Peak

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

Margin value = Emission level – Limit value

802.11ac (80MHz)

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 155	FREQUENCY RANGE	30MHz ~ 1GHz
INPUT POWER	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Gavin 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
152.85	30.55	48.16	43.5	-12.95	12.72	1.36	31.69	101	331	Peak
177.15	33.94	53.25	43.5	-9.56	11.01	1.49	31.81	140	93	Peak
181.74	34.28	53.92	43.5	-9.22	10.67	1.51	31.82	103	77	Peak
590.5	22.49	32.19	46	-23.51	19.39	3.06	32.15	107	205	Peak
667.5	23.97	32.09	46	-22.03	20.42	3.31	31.85	136	152	Peak
729.1	25.76	32.61	46	-20.24	21.23	3.52	31.6	121	244	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	31.14	49.55	40	-8.86	12.14	0.57	31.12	127	54	Peak
55.38	30.98	49.06	40	-9.02	12.45	0.8	31.33	123	253	Peak
183.09	30.17	49.92	43.5	-13.33	10.53	1.51	31.79	138	245	Peak
526.8	20.88	31.73	46	-25.12	17.93	2.87	31.65	122	229	Peak
631.8	23.37	32.33	46	-22.63	19.99	3.18	32.13	105	192	Peak
724.2	25.64	32.61	46	-20.36	21.16	3.5	31.63	124	128	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	100289	Nov. 29, 2013	Nov. 28, 2014
RF signal cable Woken	5D-FB	Cable-HYC01-01	Dec. 27, 2013	Dec. 26, 2014
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 13, 2014	Feb. 12, 2015
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 21, 2014	Jul. 20, 2015
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Shielded Room 1.
 3. The VCCI Site Registration No. is C-2040.

4.2.3 TEST PROCEDURES

- 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.

4.2.7 TEST RESULTS

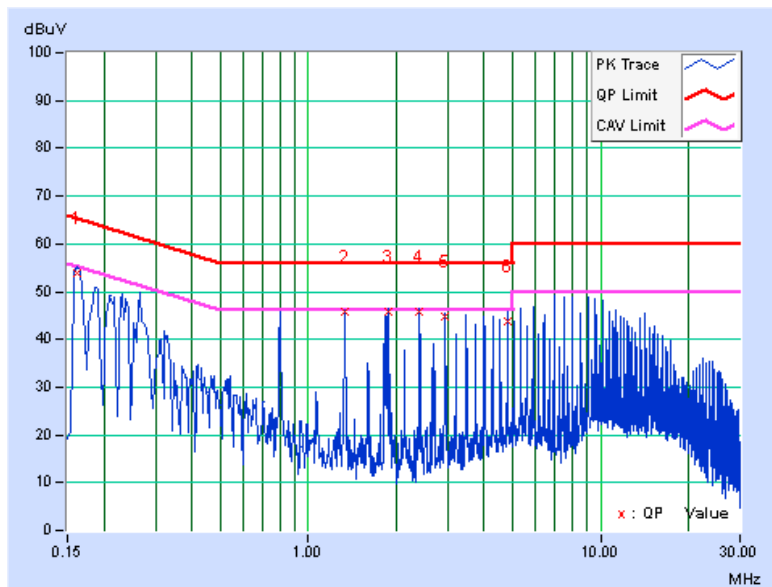
CONDUCTED WORST-CASE DATA :

PHASE	Line 1	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16190	0.08	53.77	39.84	53.85	39.92	65.37	55.37	-11.52	-15.45
2	1.33400	0.12	45.58	41.45	45.70	41.57	56.00	46.00	-10.30	-4.43
3	1.87000	0.14	45.62	41.50	45.76	41.64	56.00	46.00	-10.24	-4.36
4	2.40384	0.17	45.48	41.30	45.65	41.47	56.00	46.00	-10.35	-4.53
5	2.93800	0.19	44.69	40.23	44.88	40.42	56.00	46.00	-11.12	-5.58
6	4.81000	0.27	43.52	36.03	43.79	36.30	56.00	46.00	-12.21	-9.70

REMARKS:

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

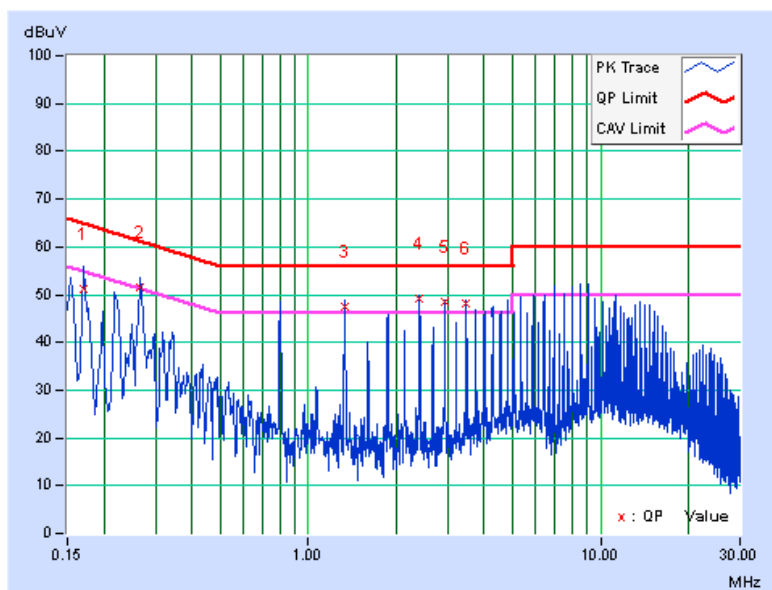


PHASE	Line 2	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17000	0.05	51.08	35.17	51.13	35.22	64.96	54.96	-13.83	-19.74
2	0.26600	0.06	51.54	48.18	51.60	48.24	61.24	51.24	-9.65	-3.01
3	1.33800	0.11	47.39	43.23	47.50	43.34	56.00	46.00	-8.50	-2.66
4	2.40384	0.15	48.87	45.20	49.02	45.35	56.00	46.00	-6.98	-0.65
5	2.93673	0.17	48.22	44.68	48.39	44.85	56.00	46.00	-7.61	-1.15
6	3.47000	0.19	47.85	44.01	48.04	44.20	56.00	46.00	-7.96	-1.80

REMARKS:

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



4.3 TRANSMIT POWER MEASUREMENT

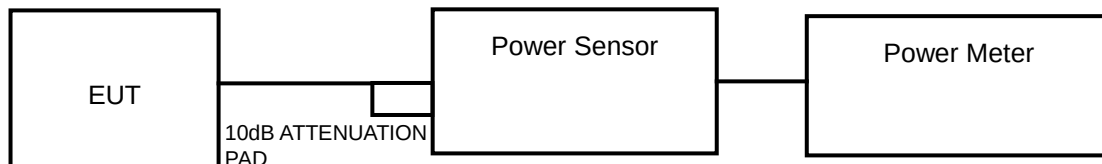
4.3.1 LIMITS OF TRANSMIT POWER MEASUREMENT

OPERATION BAND	EUT CATEGORY		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client device	250mW (24 dBm)
U-NII-2A	√	---	250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	√	---	250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√	---	1 Watt (30 dBm)

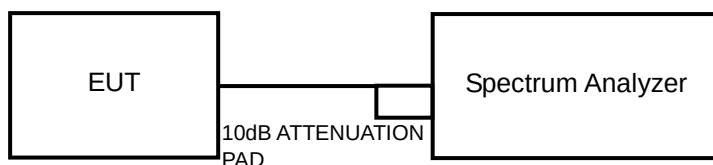
NOTE: Where B is the 26dB emission bandwidth in MHz.

4.3.2 TEST SETUP

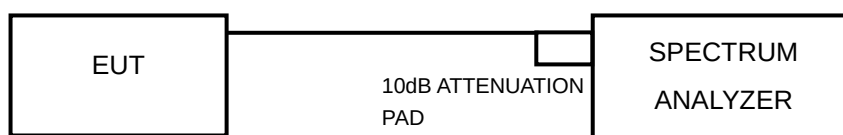
FOR POWER OUTPUT MEASUREMENT



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)	MAX. CONDUCTED POWER (mW)	MAX. CONDUCTED POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	21.13	13.25	24	PASS
44	5220	22.59	13.54	24	PASS
48	5240	22.13	13.45	24	PASS
52	5260	22.65	13.55	24	PASS
60	5300	22.44	13.51	24	PASS
64	5320	21.63	13.35	24	PASS
100	5500	21.48	13.32	24	PASS
116	5580	20.99	13.22	24	PASS
140	5700	16.41	12.15	24	PASS
149	5745	16.11	12.07	30	PASS
157	5785	23.88	13.78	30	PASS
165	5825	22.08	13.44	30	PASS

NOTE:

For U-NII-2A, U-NII-2C Band:

1. $11\text{dBm} + 10\log(22.75) = 24.57\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(22.60) = 24.54\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(22.74) = 24.57\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(22.42) = 24.51\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(22.59) = 24.54\text{ dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(22.91) = 24.60\text{ dBm} > 24\text{dBm}$.

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	MAX. CONDUCTED POWER (mW)	MAX. CONDUCTED POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	19.54	12.91	24	PASS
44	5220	21.93	13.41	24	PASS
48	5240	21.68	13.36	24	PASS
52	5260	23.12	13.64	24	PASS
60	5300	22.44	13.51	24	PASS
64	5320	20.65	13.15	24	PASS
100	5500	22.44	13.51	24	PASS
116	5580	22.08	13.44	24	PASS
140	5700	16.56	12.19	24	PASS
149	5745	16.94	12.29	30	PASS
157	5785	23.77	13.76	30	PASS
165	5825	21.93	13.41	30	PASS

NOTE:

For U-NII-2A, U-NII-2C Band:

1. $11\text{dBm} + 10\log(22.73) = 24.57\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(23.13) = 24.64\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(22.88) = 24.59\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(22.85) = 24.59\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(22.71) = 24.56\text{ dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(22.52) = 24.53\text{ dBm} > 24\text{dBm}$.

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	MAX. CONDUCTED POWER (mW)	MAX. CONDUCTED POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	16.11	12.07	24	PASS
46	5230	16.63	12.21	24	PASS
54	5270	17.70	12.48	24	PASS
62	5310	16.56	12.19	24	PASS
102	5510	18.16	12.59	24	PASS
110	5550	17.54	12.44	24	PASS
134	5670	15.92	12.02	24	PASS
151	5755	13.15	11.19	30	PASS
159	5795	17.18	12.35	30	PASS

NOTE:

For U-NII-2A, U-NII-2C Band:

1. $11\text{dBm} + 10\log(46.12) = 27.64\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(46.32) = 27.66\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(46.48) = 27.67\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(45.78) = 27.61\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(45.14) = 27.55\text{ dBm} > 24\text{dBm}$.

802.11ac (80MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	MAX. CONDUCTED POWER (mW)	MAX. CONDUCTED POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
42	5210	14.55	11.63	24	PASS
58	5290	15.21	11.82	24	PASS
106	5530	14.29	11.55	24	PASS
155	5775	15.00	11.76	30	PASS

NOTE:

For U-NII-2A, U-NII-2C Band:

1. $11\text{dBm} + 10\log(83.98) = 30.24\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(83.81) = 30.23\text{ dBm} > 24\text{dBm}$.

26dB BANDWIDTH

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
52	5260	22.75	PASS
60	5300	22.60	PASS
64	5320	22.74	PASS
100	5500	22.42	PASS
116	5580	22.59	PASS
140	5700	22.91	PASS

802.11n (20MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
52	5260	22.73	PASS
60	5300	23.13	PASS
64	5320	22.88	PASS
100	5500	22.85	PASS
116	5580	22.71	PASS
140	5700	22.52	PASS

802.11n (40MHz)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
54	5270	46.12	PASS
62	5310	46.32	PASS
102	5510	46.48	PASS
110	5550	45.78	PASS
134	5670	45.14	PASS

802.11ac (80MHz)

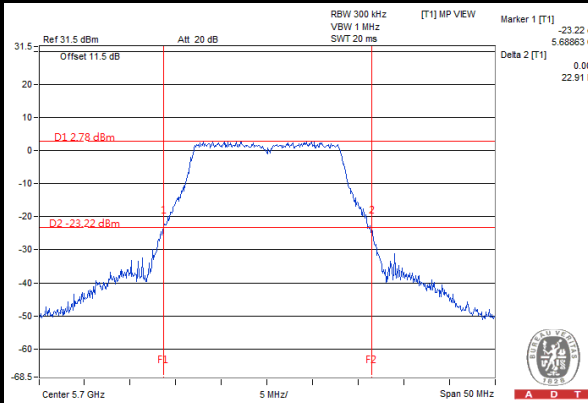
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
58	5290	83.98	PASS
106	5530	83.81	PASS



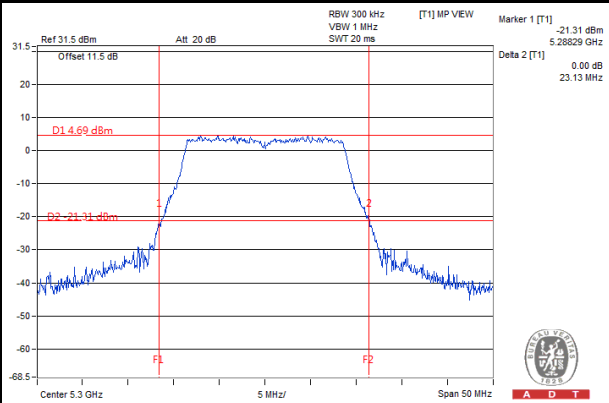
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SPECTRUM PLOT OF WORST VALUE

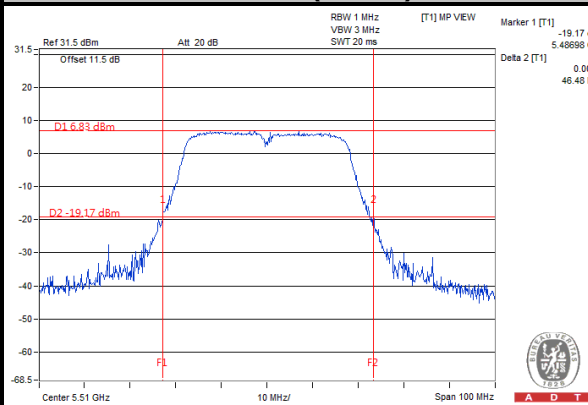
802.11a



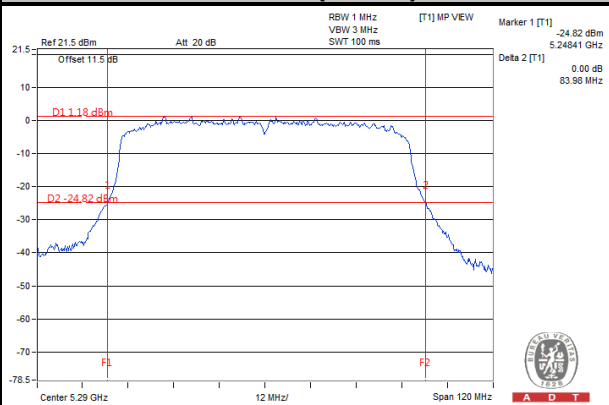
802.11n (20MHz)



802.11n (40MHz)



802.11ac (80MHz)

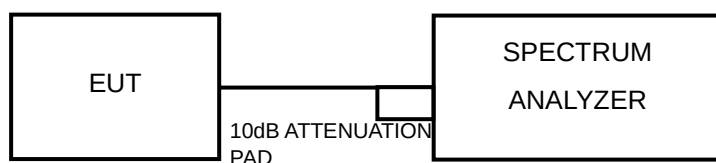


4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Mobile and Portable client device	11dBm/ MHz
U-NII-2A	√	---	11dBm/ MHz
U-NII-2C	√	---	11dBm/ MHz
U-NII-3	√	---	30dBm/ MHz

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

For U-NII-1, U-NII-2A, U-NII-2C band:

<802.11a, 802.11n (20MHz), 802.11n (40MHz), 802.11ac (80MHz)>

Using method SA-2 alternative

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

For U-NII-3 band:

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 500 kHz, Set VBW $\geq$ 3 RBW, Detector = RMS
- 3) Sweep time = auto, trigger set to "free run".
- 4) Trace average at least 100 traces in power averaging mode.
- 5) Record the max value and add 10 log (1/duty cycle)

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	0.02	0.97	0.99	11	PASS
44	5220	0.59	0.97	1.56	11	PASS
48	5240	0.37	0.97	1.34	11	PASS
52	5260	0.68	0.97	1.65	11	PASS
60	5300	0.73	0.97	1.70	11	PASS
64	5320	0.82	0.97	1.79	11	PASS
100	5500	1.27	0.97	2.24	11	PASS
116	5580	1.40	0.97	2.37	11	PASS
140	5700	-1.01	0.97	-0.04	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	0.05	1.03	1.08	11	PASS
44	5220	0.08	1.03	1.11	11	PASS
48	5240	0.16	1.03	1.19	11	PASS
52	5260	0.35	1.03	1.38	11	PASS
60	5300	0.64	1.03	1.67	11	PASS
64	5320	0.34	1.03	1.37	11	PASS
100	5500	1.07	1.03	2.10	11	PASS
116	5580	0.81	1.03	1.84	11	PASS
140	5700	-0.93	1.03	0.10	11	PASS

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



A D T

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	-4.76	2.04	-2.72	11	PASS
46	5230	-4.84	2.04	-2.80	11	PASS
54	5270	-4.21	2.04	-2.17	11	PASS
62	5310	-4.32	2.04	-2.28	11	PASS
102	5510	-3.89	2.04	-1.85	11	PASS
110	5550	-3.84	2.04	-1.80	11	PASS
134	5670	-4.55	2.04	-2.51	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	-7.01	5.39	-1.62	11	PASS
58	5290	-6.97	5.39	-1.58	11	PASS
106	5530	-7.01	5.39	-1.62	11	PASS

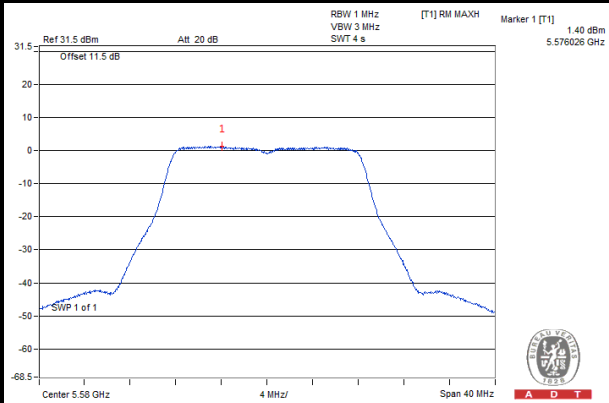
NOTE: Refer to section 3.3 for duty cycle spectrum plot.



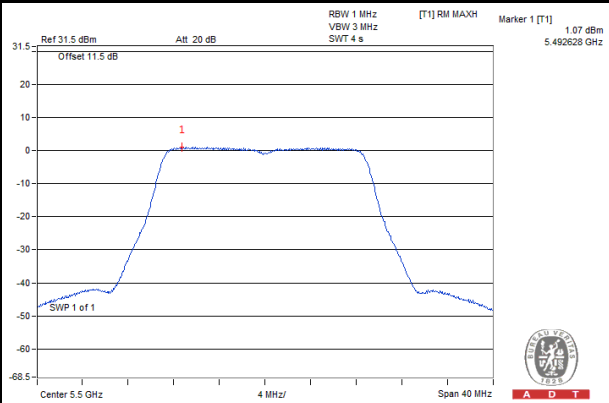
A D T

SPECTRUM PLOT OF WORST VALUE

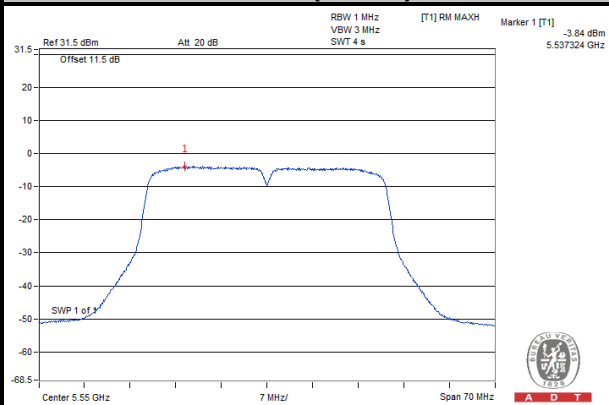
802.11a



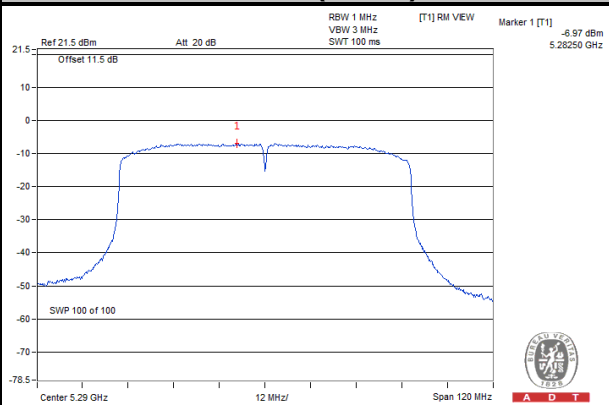
802.11n (20MHz)



802.11n (40MHz)



802.11ac (80MHz)



**A D T****For U-NII-3 Band****802.11a**

CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
149	5745	-9.24	0.97	-8.27	30	PASS
157	5785	-7.62	0.97	-6.65	30	PASS
165	5825	-4.15	0.97	-3.18	30	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
149	5745	-9.54	1.03	-8.51	30	PASS
157	5785	-7.13	1.03	-6.10	30	PASS
165	5825	-4.57	1.03	-3.54	30	PASS

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
151	5755	-15.87	2.04	-13.83	30	PASS
159	5795	-17.02	2.04	-14.98	30	PASS

802.11ac (80MHz)

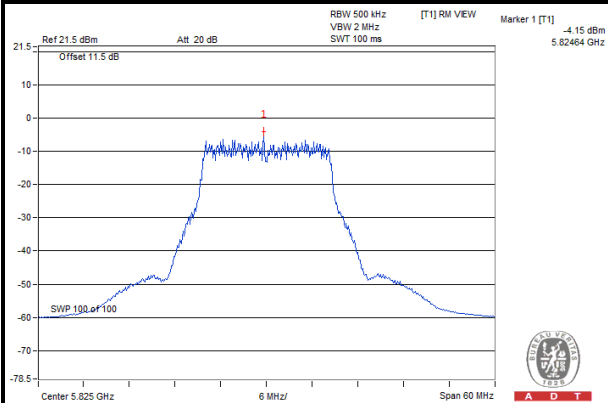
CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
155	5775	-23.55	5.39	-18.16	30	PASS



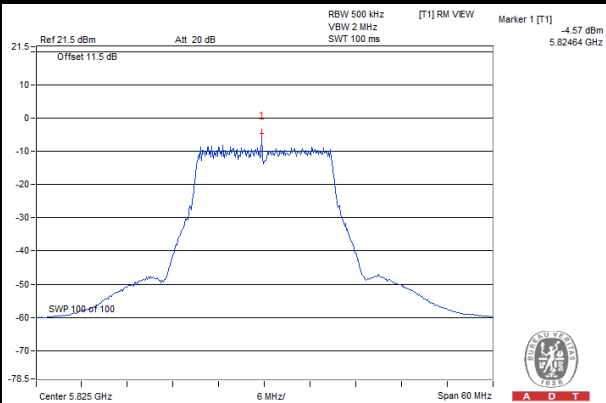
A D T

SPECTRUM PLOT OF WORST VALUE

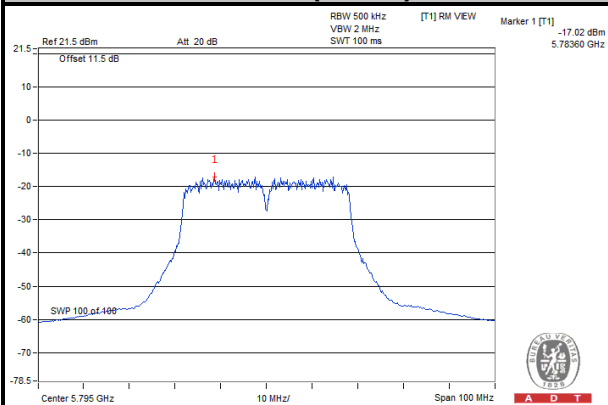
802.11a



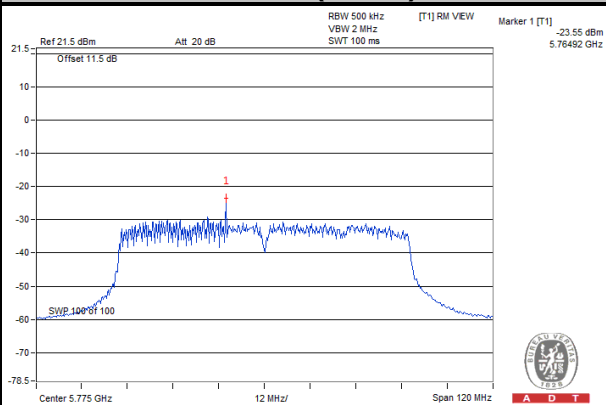
802.11n (20MHz)



802.11n (40MHz)



802.11ac (80MHz)

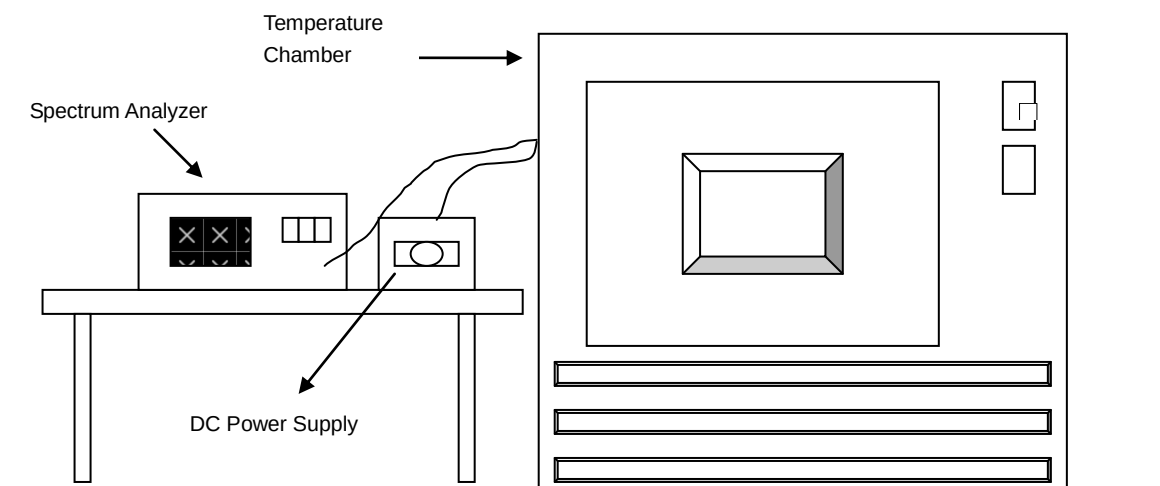


4.5 FREQUENCY STABILITY

4.5.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

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

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. 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.

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITION

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

4.5.7 TEST RESULTS

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
50	3.8	5320.041566	7.813	5320.041806	7.858	5320.041665	7.832	5320.041925	7.881
40	3.8	5320.042054	7.905	5320.041935	7.883	5320.042096	7.913	5320.041898	7.876
30	3.8	5320.043297	8.139	5320.043303	8.140	5320.043354	8.149	5320.043082	8.098
20	3.8	5320.043975	8.266	5320.044108	8.291	5320.044224	8.313	5320.043881	8.248
10	3.8	5320.045881	8.624	5320.045761	8.602	5320.045652	8.581	5320.045725	8.595
0	3.8	5320.044051	8.280	5320.044078	8.285	5320.044454	8.356	5320.043948	8.261
-10	3.8	5320.042663	8.019	5320.042155	7.924	5320.042605	8.008	5320.042307	7.952
-20	3.8	5320.042308	7.953	5320.041931	7.882	5320.042123	7.918	5320.042259	7.943
-30	3.8	5320.041330	7.769	5320.040899	7.688	5320.040734	7.657	5320.040766	7.663

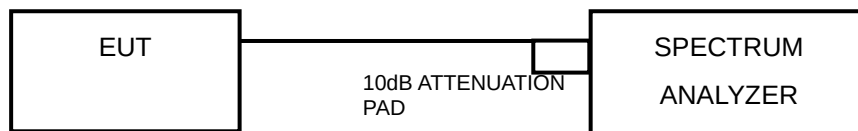
FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5320MHz									
TEMP. (°C)	POWER SUPPLY (Vdc)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	3.4	5320.043932	8.258	5320.043631	8.201	5320.043896	8.251	5320.043921	8.256
	3.8	5320.044090	8.288	5320.044355	8.337	5320.043962	8.264	5320.044369	8.340
	4.35	5320.045352	8.525	5320.045363	8.527	5320.045506	8.554	5320.045082	8.474

4.6 6dB BANDWIDTH MEASUREMENT

4.6.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

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

- Set resolution bandwidth (RBW) = 100kHz
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

4.6.5 DEVIATION FROM TEST STANDARD

No deviation.

4.6.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.6.7 TEST RESULTS

802.11a

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	16.43	0.5	PASS
157	5785	16.43	0.5	PASS
165	5825	16.41	0.5	PASS

802.11n (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	17.67	0.5	PASS
157	5785	17.65	0.5	PASS
165	5825	17.66	0.5	PASS

802.11n (40MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
151	5755	35.39	0.5	PASS
159	5795	35.47	0.5	PASS

802.11ac (80MHz)

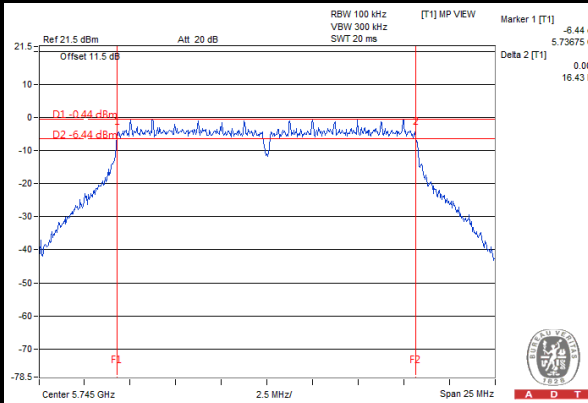
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
155	5775	75.41	0.5	PASS



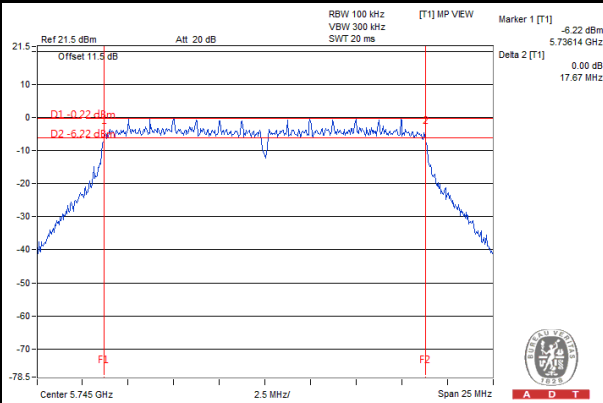
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SPECTRUM PLOT OF WORST VALUE

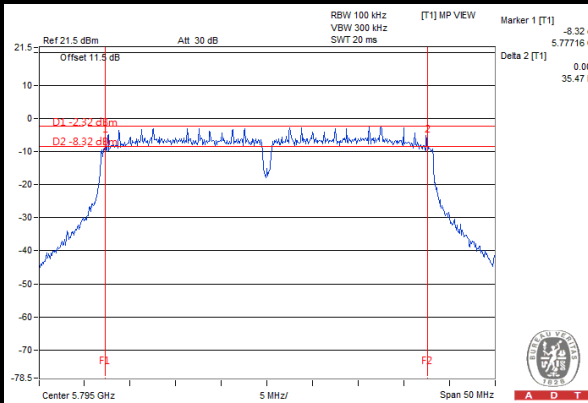
802.11a



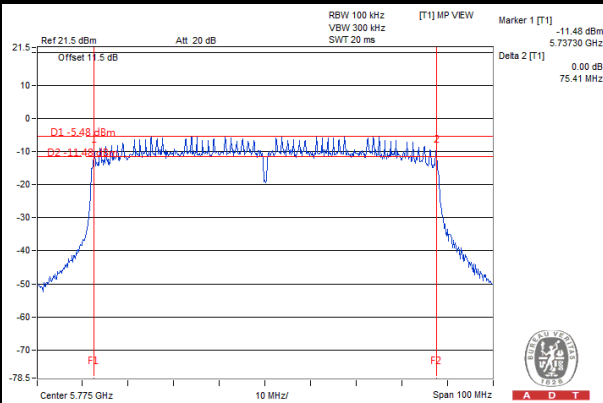
802.11n (20MHz)



802.11n (40MHz)



802.11ac (80MHz)





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5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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

6. INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

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

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Telecom Lab:

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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



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

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

---END---