FCC Test Report

Report No.:	RF160303C04-9
FCC ID:	NM82PS6700A
Test Model:	2PS6700A
Received Date:	Mar. 03, 2016
Test Date:	Mar. 14, 2016 ~ Mar. 24, 2016
Issued Date:	Apr. 14, 2016
Applicant:	HTC Corporation
Address:	1F, 6-3 Baoqiang Road, Xindian District, New Taipei City, Taiwan 231
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C)
Test Location (1):	No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.
Test Location (2):	No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan, R.O.C

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Release Control Record

Issue No.	Description	Date Issued
RF160303C04-9	Original Release	Apr. 14, 2016

1 Certificate of Conformity

Product:	Smartphone
Brand:	HTC
Test Model:	2PS6700A
Sample Status:	Production Unit
Applicant:	HTC Corporation
Test Date:	Mar. 14, 2016 ~ Mar. 24, 2016
Standards:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10:2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** Apr. 14, 2016

Ivonne Wu / Supervisor

Approved by : _____ , **Date:** Apr. 14, 2016

Stanley Wu / Assistant Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	**Test Item**	**Result**	**Remarks**
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -19.37 dB at 0.56600 MHz.
15.407(b) (1/2/3/4/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.00 dB at 5460 MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	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)	6 dB 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**	**Expended Uncertainty (k=2) (±)**
Conducted Emissions at mains ports	150 kHz ~ 30 MHz	2.44 dB
Radiated Emissions up to 1 GHz	30 MHz ~ 200 MHz	2.0153 dB
	200 MHz ~1000 MHz	2.0224 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	1.0121 dB
	18 GHz ~ 40 GHz	1.1508 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Smartphone
Brand	HTC
Test Model	2PS6700A
Status of EUT	Production Unit
Power Supply Rating	5.0 Vdc (adapter or host equipment) 3.85 Vdc (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/ 6.0 Mbps 802.11n: up to MCS15 802.11ac: up to V9
Operating Frequency	5180 ~ 5240 MHz, 5260 ~ 5320 MHz, 5500 ~ 5700 MHz, 5745 ~ 5825 MHz
Number of Channel	5180 ~ 5240 MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 1 for 802.11ac (VHT80) 5260 ~ 5320 MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 1 for 802.11ac (VHT80) 5500 ~ 5700 MHz: 11 for 802.11a, 802.11n (HT20) 5 for 802.11n (HT40) 2 for 802.11ac (VHT80) 5745 ~ 5825 MHz: 5 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 1 for 802.11ac (VHT80)
Output Power	40.62 mW for 5180 ~ 5240 MHz 41.31 mW for 5260 ~ 5320 MHz 41.12 mW for 5500 ~ 5700 MHz 41.54 mW for 5745 ~ 5825 MHz
Antenna Type	PIFA antenna with -3.5 dBi gain (5180 ~ 5240 MHz) PIFA antenna with -3 dBi gain (5260 ~ 5320 MHz) PIFA antenna with -3 dBi gain (5500 ~ 5700 MHz) PIFA antenna with -3.5 dBi gain (5745 ~ 5825 MHz)
Antenna Connector	N/A
Accessory Device	Refer to Note as below
Data Cable Supplied	Refer to Note as below

Note:

1. The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

Modulation Mode	Tx Function
802.11a	1TX
802.11n (HT20)	1TX / 2TX
802.11n (HT40)	1TX / 2TX
802.11ac (VHT80)	1TX / 2TX

2. The EUT's accessories list refers to Ext. Pho.
3. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Description of Test Modes

FOR 5180 ~ 5240 MHz

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

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
42	5210

FOR 5260 ~ 5320 MHz

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

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
54	5270	62	5310

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
58	5290

FOR 5500 ~ 5700 MHz

11 channels are provided for 802.11a, 802.11n (HT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	124	5620
104	5520	128	5640
108	5540	132	5660
112	5560	136	5680
116	5580	140	5700
120	5600		

5 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
102	5510	126	5630
110	5550	134	5670
118	5590		

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
106	5530	122	5610

FOR 5745 ~ 5825 MHz:

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

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
155	5775

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE≥1G	RE<1G	PLC	APCM	
A	√	-	-	√	1TX
B	√	√	√	√	2TX

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

NOTE:

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane** for 5180-5240MHz & 5260-5320MHz, **Y-plane** for 1TX and **X-plane** for 2TX for 5500-5700MHz, and **Z-plane** for 1TX and **Y-plane** for 2TX for 5745-5825MHz.
2. "-" means no effect.

Radiated Emission Test (Above 1 GHz):

☒ 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	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	36, 44, 48	OFDM	BPSK	6.0
	802.11n (HT20)		36 to 48	36, 44, 48	OFDM	BPSK	MCS0
	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	MCS0
	802.11ac (VHT80)		42	42	OFDM	BPSK	V0
	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	MCS0
	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	MCS0
	802.11ac (VHT80)		58	58	OFDM	BPSK	V0
	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	BPSK	MCS0
	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	MCS0
	802.11ac (VHT80)		106 to 122	106, 122	OFDM	BPSK	V0
	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	MCS0
	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	MCS0
	802.11ac (VHT80)		155	155	OFDM	BPSK	V0
B	802.11n (HT20)	5180-5240	36 to 48	36, 44, 48	OFDM	BPSK	MCS8
	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	MCS8
	802.11ac (VHT80)		42	42	OFDM	BPSK	V0
	802.11n (HT20)	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	MCS8
	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	MCS8
	802.11ac (VHT80)		58	58	OFDM	BPSK	V0
	802.11n (HT20)	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	MCS0
	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	MCS0
	802.11ac (VHT80)		106 to 122	106, 122	OFDM	BPSK	V0
	802.11n (HT20)	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	MCS0
	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	MCS0
	802.11ac (VHT80)		155	155	OFDM	BPSK	V0

Radiated Emission Test (Below 1 GHz):

☒ 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	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
B	802.11n (HT40)	5180-5240	38 to 46	38	OFDM	BPSK	MCS8
	802.11n (HT40)	5260-5320	54 to 62	62	OFDM	BPSK	MCS8
	802.11ac (VHT80)	5500-5700	106 to 122	106	OFDM	BPSK	V0
	802.11n (HT40)	5745-5825	151 to 159	151	OFDM	BPSK	MCS8

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	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
B	802.11ac	5500-5700	106 to 122	106	OFDM	BPSK	V0

Antenna Port Conducted Measurement:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	36, 44, 48	OFDM	BPSK	6.0
	802.11n (HT20)		36 to 48	36, 44, 48	OFDM	BPSK	MCS0
	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	MCS0
	802.11ac (VHT80)		42	42	OFDM	BPSK	V0
	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	MCS0
	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	MCS0
	802.11ac (VHT80)		58	58	OFDM	BPSK	V0
	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	BPSK	MCS0
	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	MCS0
	802.11ac (VHT80)		106 to 122	106, 122	OFDM	BPSK	V0
	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	MCS0
	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	MCS0
	802.11ac (VHT80)		155	155	OFDM	BPSK	V0
B	802.11n (HT20)	5180-5240	36 to 48	36, 44, 48	OFDM	BPSK	MCS8
	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	MCS8
	802.11ac (VHT80)		42	42	OFDM	BPSK	V0
	802.11n (HT20)	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	MCS8
	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	MCS8
	802.11ac (VHT80)		58	58	OFDM	BPSK	V0
	802.11n (HT20)	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	MCS0
	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	MCS0
	802.11ac (VHT80)		106 to 122	106, 122	OFDM	BPSK	V0
	802.11n (HT20)	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	MCS0
	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	MCS0
	802.11ac (VHT80)		155	155	OFDM	BPSK	V0

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested by
RE≥1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Karl Lee
RE<1G	25 deg. C, 65 % RH	120 Vac, 60 Hz	Karl Lee
PLC	25 deg. C, 65 % RH	120 Vac, 60 Hz	Toby Tian
APCM	25 deg. C, 65 % RH	3.85 Vdc	Wayne Lin

3.3 Duty Cycle of Test Signal

<1TX>

MODULATION TYPE: BPSK

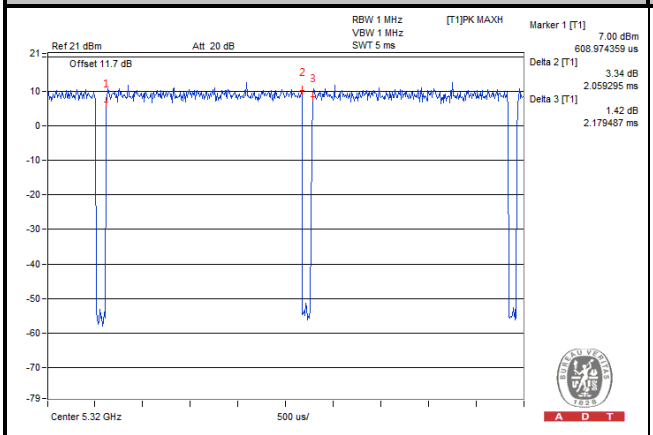
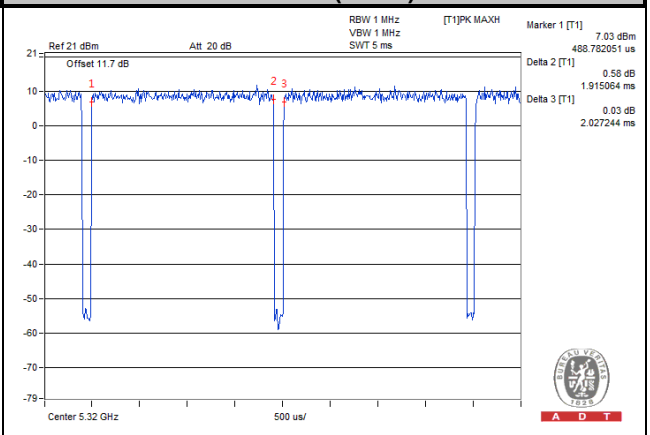
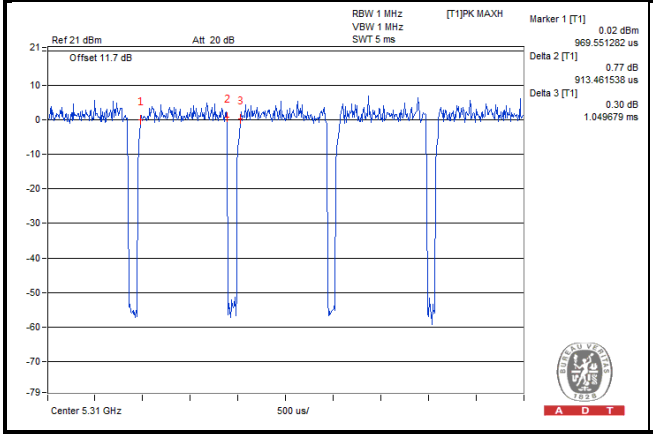
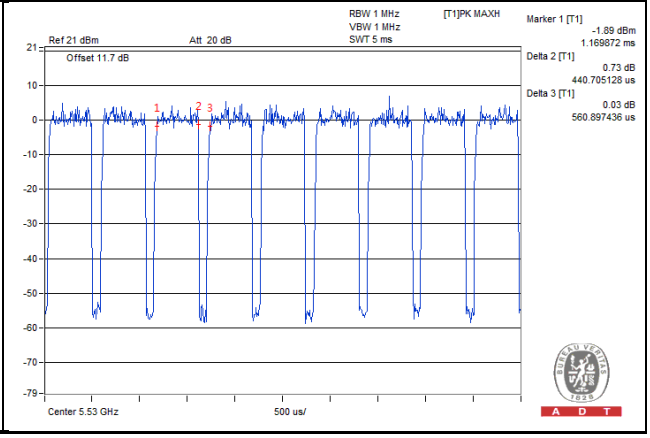
Duty cycle of test signal is < 98 %, duty factor is required.

802.11a: Duty cycle = 2.059/2.179 = 0.945, Duty factor = 10 * log(1/0.945) = 0.25

802.11n (HT20): Duty cycle = 1.915/2.027 = 0.945, Duty factor = 10 * log(1/0.945) = 0.25

802.11n (HT40): Duty cycle = 0.913/1.050 = 0.869, Duty factor = 10 * log(1/0.869) = 0.60

802.11ac (VHT80): Duty cycle = 440.70/560.90 = 0.786, Duty factor = 10 * log(1/0.786) = 1.05

802.11a	802.11n (HT20)
	
802.11n (HT40)	**802.11ac (VHT80)**
	

MODULATION TYPE: QPSK

Duty cycle of test signal is < 98 %, duty factor is required.

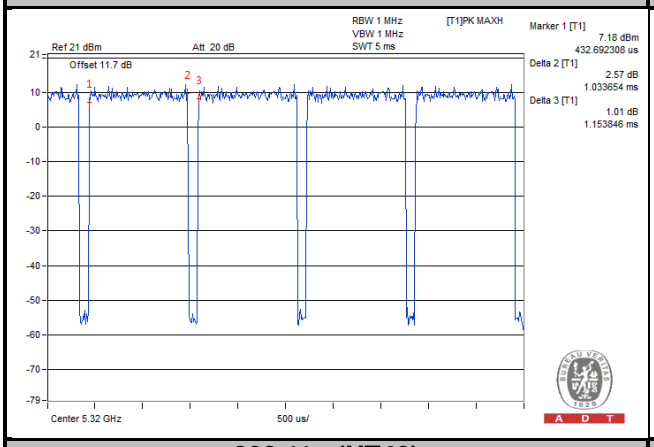
802.11a: Duty cycle = 1.033/1.154 = 0.895, Duty factor = 10 * log(1/0.895) = 0.48

802.11n (HT20): Duty cycle = 0.962/1.082 = 0.889, Duty factor = 10 * log(1/0.889) = 0.51

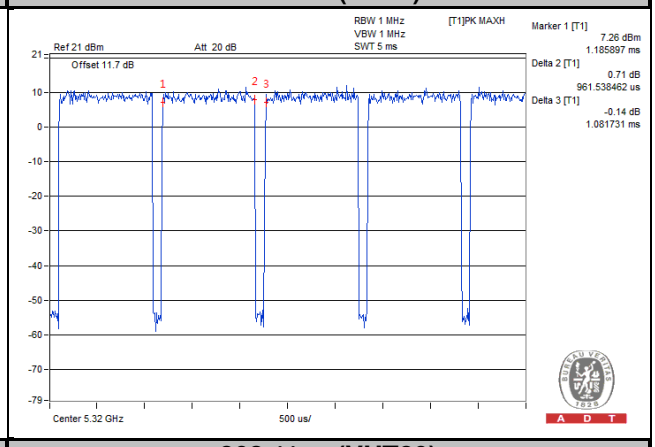
802.11n (HT40): Duty cycle = 451.92/594.55 = 0.760, Duty factor = 10 * log(1/0.760) = 1.19

802.11ac (VHT80): Duty cycle = 216.35/355.77 = 0.608, Duty factor = 10 * log(1/0.608) = 2.16

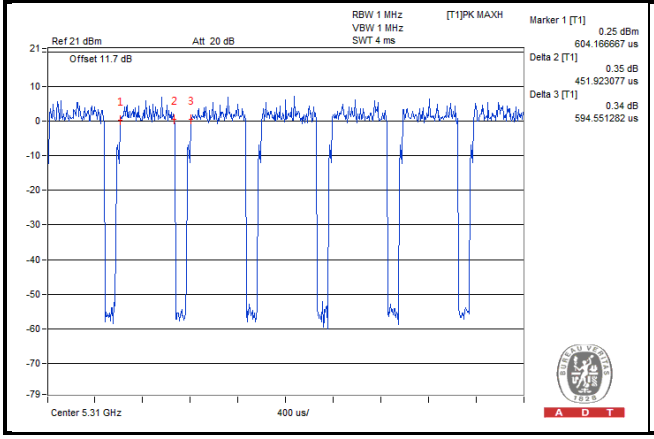
802.11a



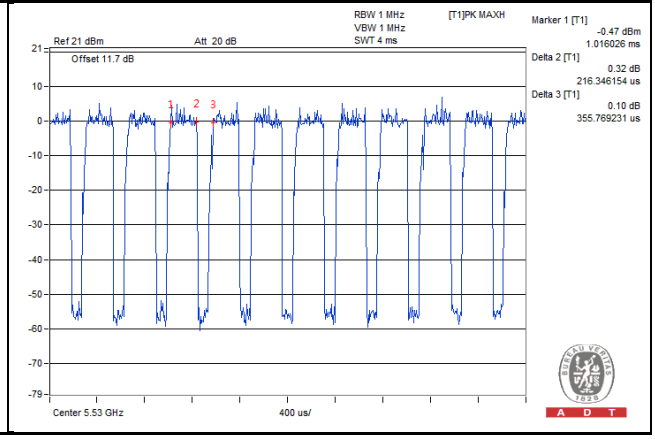
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



MODULATION TYPE: 16QAM

Duty cycle of test signal is < 98 %, duty factor is required.

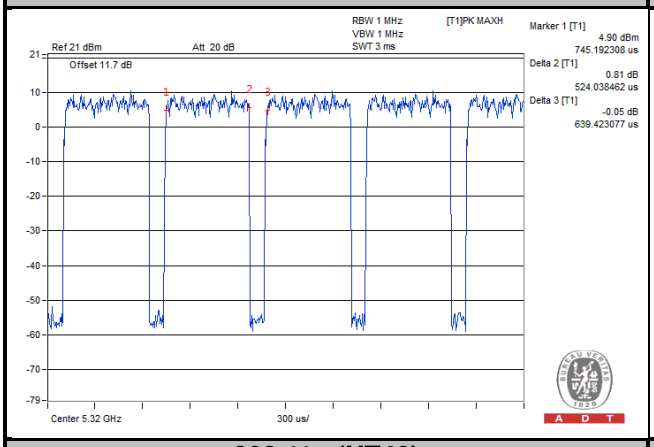
802.11a: Duty cycle = 524.04/639.42 = 0.819, Duty factor = 10 * log(1/0.819) = 0.86

802.11n (HT20): Duty cycle = 500.00/615.38 = 0.812, Duty factor = 10 * log(1/0.812) = 0.90

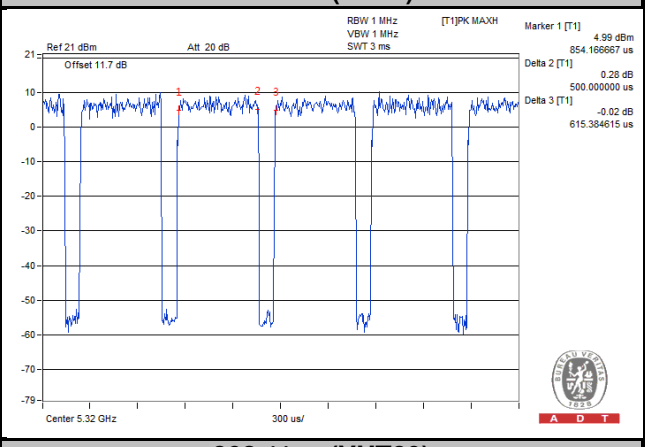
802.11n (HT40): Duty cycle = 225.96/365.38 = 0.618, Duty factor = 10 * log(1/0.618) = 2.09

802.11ac (VHT80): Duty cycle = 125.00/240.38 = 0.520, Duty factor = 10 * log(1/0.520) = 2.84

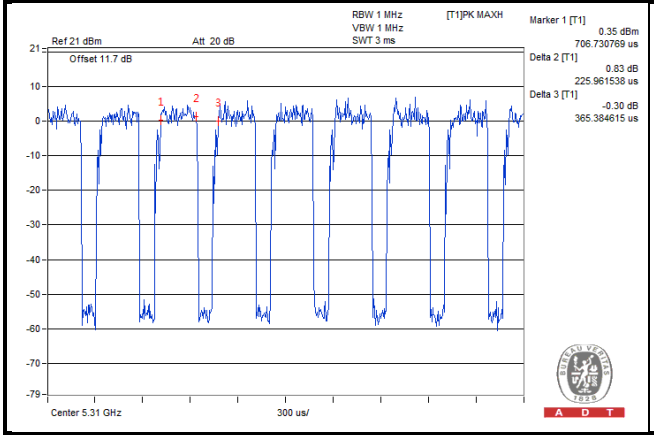
802.11a



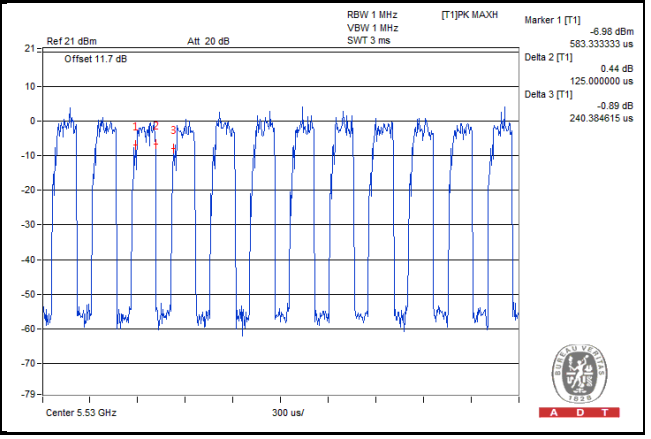
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



MODULATION TYPE: 64QAM

Duty cycle of test signal is < 98 %, duty factor is required.

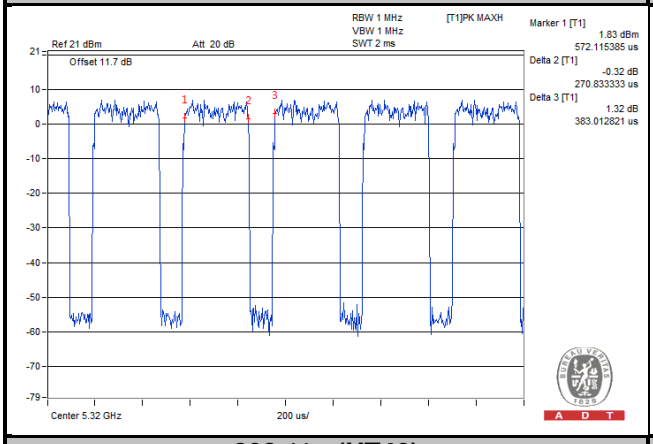
802.11a: Duty cycle = 270.83/383.01 = 0.707, Duty factor = 10 * log(1/0.707) = 1.51

802.11n (HT20): Duty cycle = 262.82/375.00 = 0.701, Duty factor = 10 * log(1/0.701) = 1.54

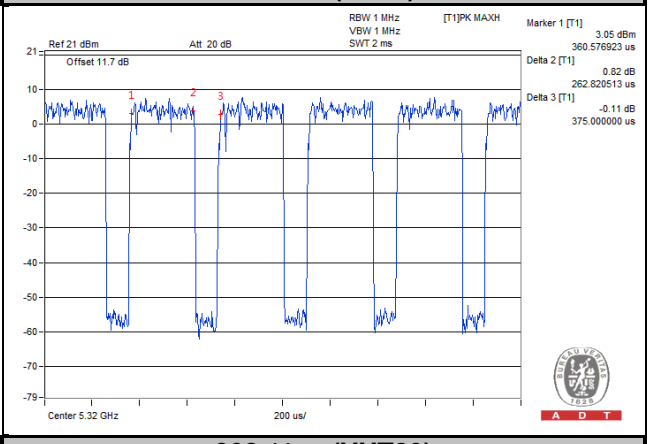
802.11n (HT40): Duty cycle = 120.19/253.21 = 0.475, Duty factor = 10 * log(1/0.475) = 3.24

802.11ac (VHT80): Duty cycle = 73.72/198.72 = 0.372, Duty factor = 10 * log(1/0.372) = 4.29

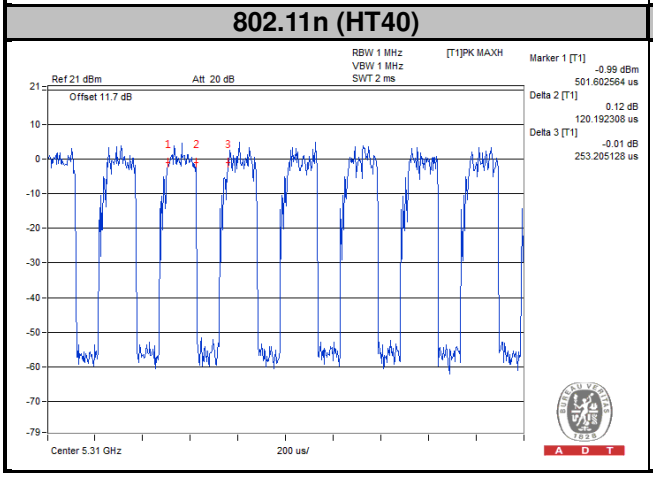
802.11a



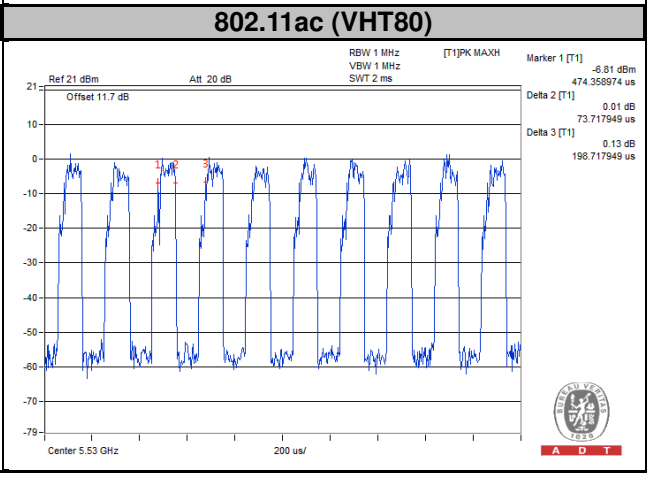
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

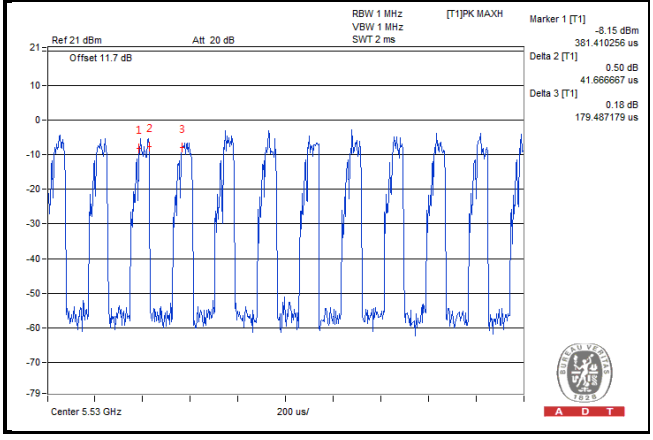


MODULATION TYPE: 256QAM

Duty cycle of test signal is < 98 %, duty factor is required.

802.11ac (VHT80): Duty cycle = 41.67/179.49 = 0.232, Duty factor = 10 * log(1/0.232) = 6.34

802.11ac (VHT80)



<2TX>

MODULATION TYPE: BPSK

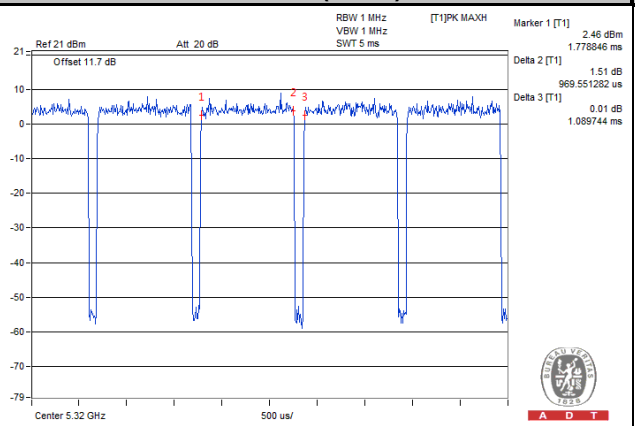
Duty cycle of test signal is < 98 %, duty factor is required.

802.11n (HT20): Duty cycle = 0.969/1.090 = 0.889, Duty factor = 10 * log(1/0.889) = 0.51

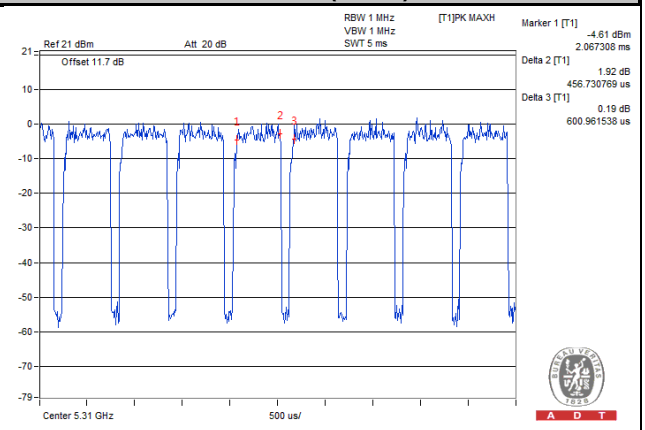
802.11n (HT40): Duty cycle = 456.73/600.96 = 0.760, Duty factor = 10 * log(1/0.760) = 1.19

802.11ac (VHT80): Duty cycle = 208.33/360.58 = 0.578, Duty factor = 10 * log(1/0.578) = 2.38

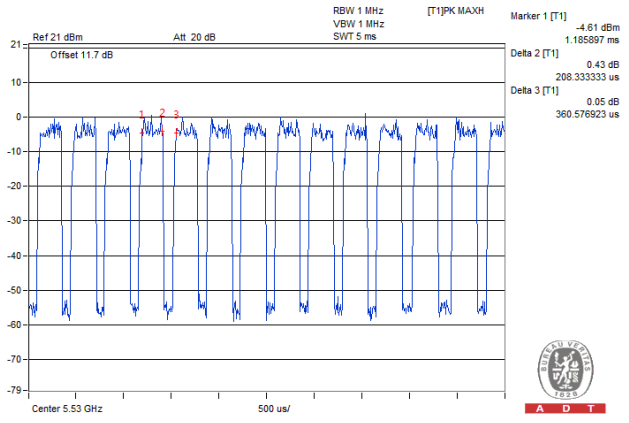
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



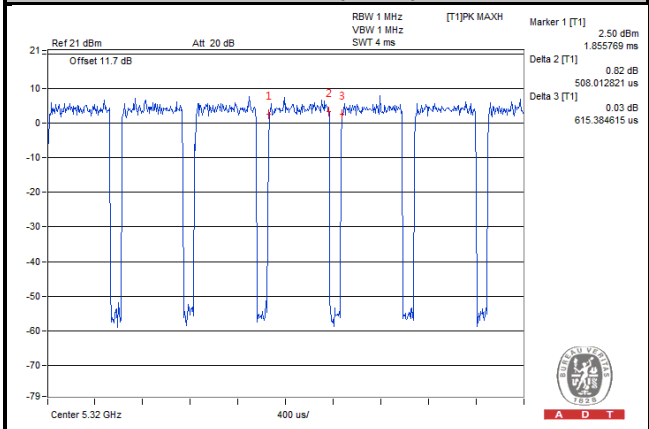
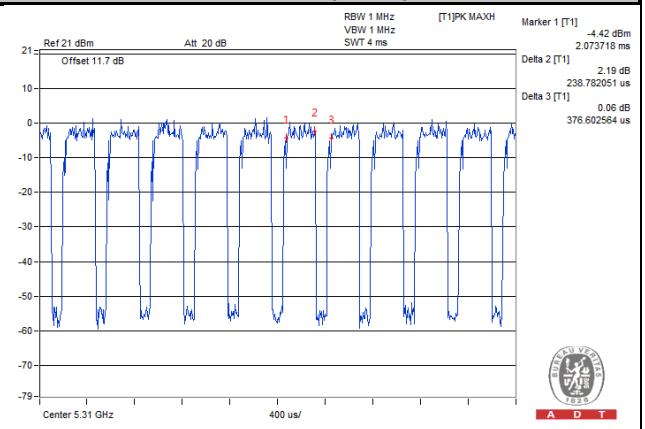
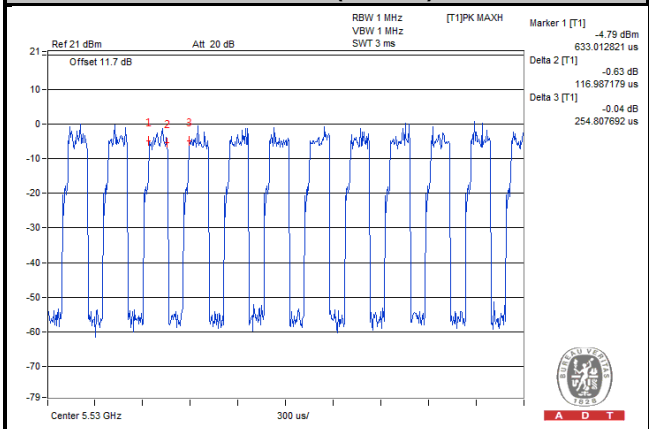
MODULATION TYPE: QPSK

Duty cycle of test signal is < 98 %, duty factor is required.

802.11n (HT20): Duty cycle = 508.01/615.38 = 0.825, Duty factor = 10 * log(1/0.825) = 0.83

802.11n (HT40): Duty cycle = 238.78/376.60 = 0.634, Duty factor = 10 * log(1/0.634) = 1.98

802.11ac (VHT80): Duty cycle = 116.99/254.81 = 0.459, Duty factor = 10 * log(1/0.459) = 3.38

802.11n (HT20)	802.11n (HT40)
	
802.11ac (VHT80)	
	

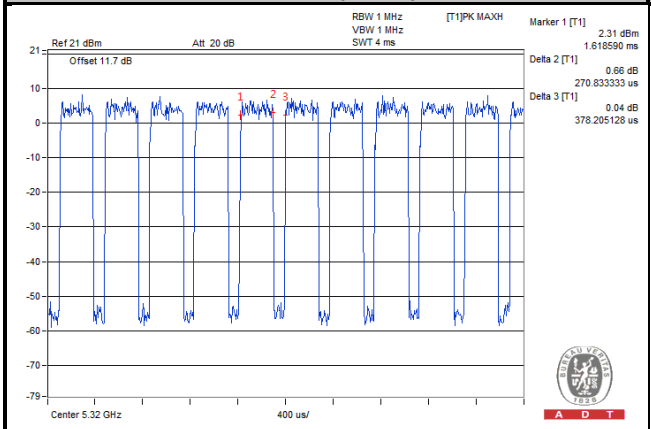
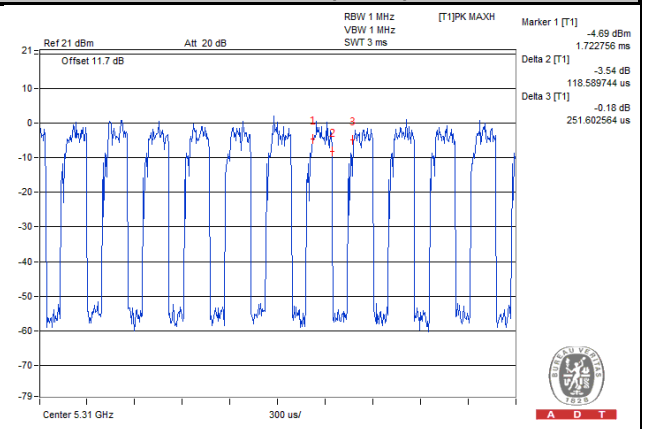
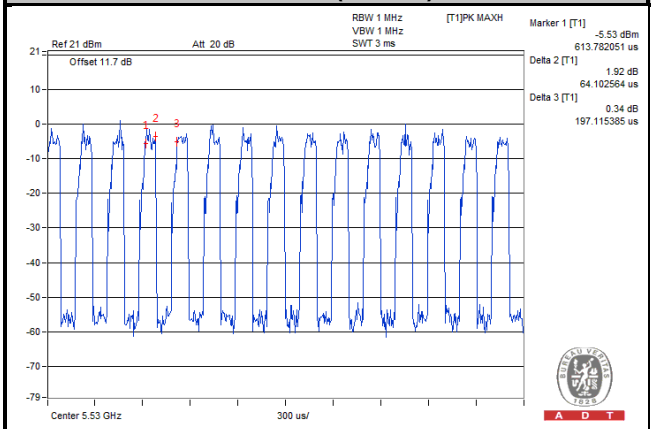
MODULATION TYPE: 16QAM

Duty cycle of test signal is < 98 %, duty factor is required.

802.11n (HT20): Duty cycle = 270.83/378.21 = 0.716, Duty factor = 10 * log(1/0.716) = 1.45

802.11n (HT40): Duty cycle = 118.59/251.60 = 0.471, Duty factor = 10 * log(1/0.471) = 3.27

802.11ac (VHT80): Duty cycle = 64.10/197.12 = 0.325, Duty factor = 10 * log(1/0.325) = 4.88

802.11n (HT20)	802.11n (HT40)
	
802.11ac (VHT80)	
	

MODULATION TYPE: 64QAM

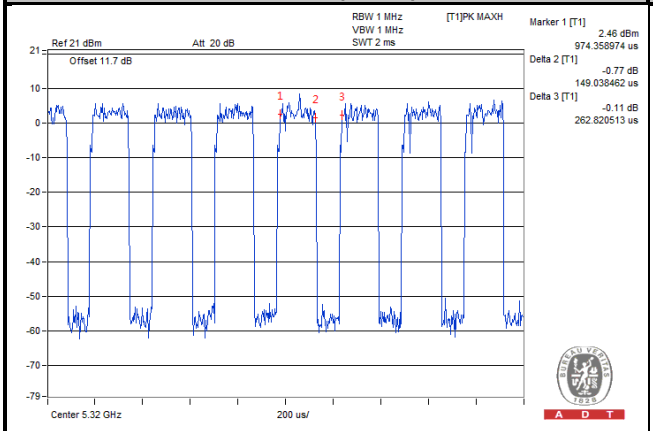
Duty cycle of test signal is < 98 %, duty factor is required.

802.11n (HT20): Duty cycle = 149.04/262.82 = 0.567, Duty factor = 10 * log(1/0.567) = 2.46

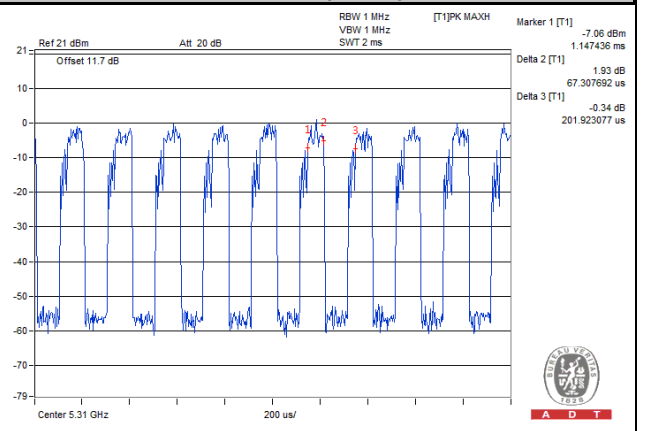
802.11n (HT40): Duty cycle = 67.31/201.92 = 0.333, Duty factor = 10 * log(1/0.333) = 4.77

802.11ac (VHT80): Duty cycle = 38.46/174.68 = 0.220, Duty factor = 10 * log(1/0.220) = 6.57

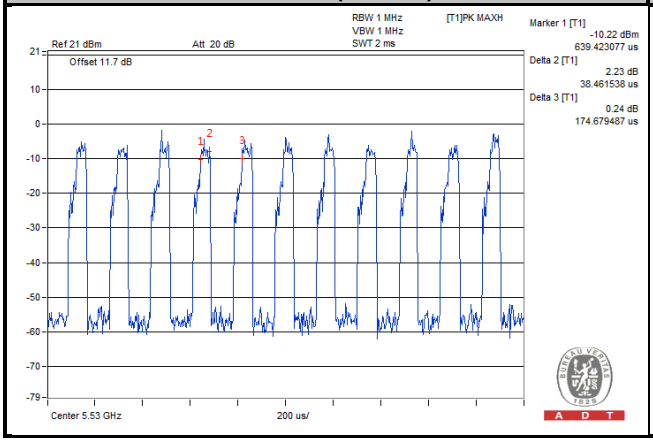
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

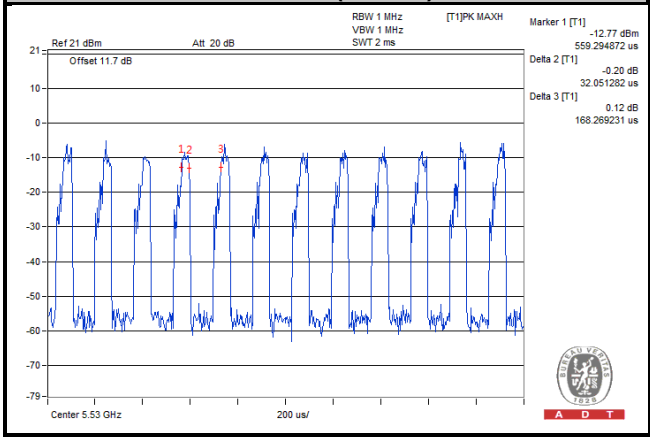


MODULATION TYPE: 256QAM

Duty cycle of test signal is < 98 %, duty factor is required.

802.11ac (VHT80): Duty cycle = 32.05/168.27 = 0.190, Duty factor = 10 * log(1/0.190) = 7.20

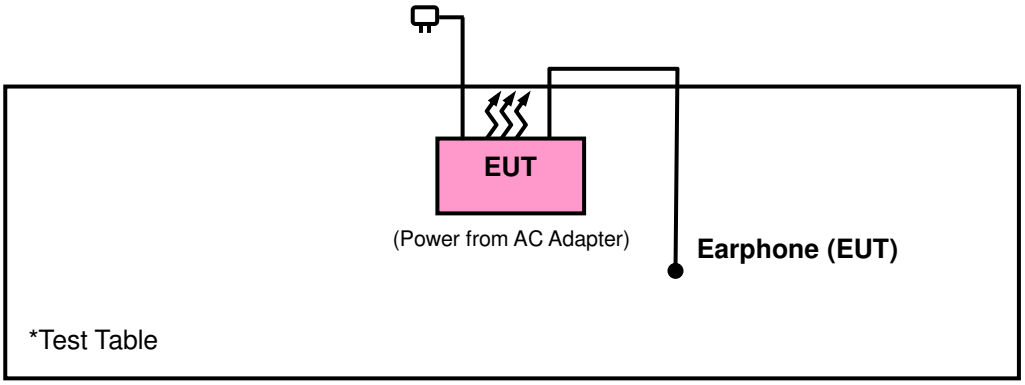
802.11ac (VHT80)



3.4 Description of Support Units

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

3.4.1 Configuration of System under Test



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 v01r02
644545 D01 Guidance for IEEE 802 11ac v01r02
662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10-2013

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. Other emissions shall be at least 20 dB below the highest level of the desired power:

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 1000 MHz, 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 20 dB 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 3 m	
	PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
Applicable To	**EIRP Limit**	**Equivalent Field Strength at 3 m**
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 10 MHz 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:

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

4.1.3 Test Instruments

Description & Manaufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent Technologies	N9038A	MY52260177	May 19, 2015	May 18, 2016
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 17, 2015	Dec. 16, 2016
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Jan. 07, 2016	Jan. 06, 2017
HORN Antenna ETS-Lindgren	3117	00143293	Jan. 04, 2016	Jan. 03, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Jan. 04, 2016	Jan. 03, 2017
Bluetooth Tester	CBT	100980	Apr. 27, 2015	Apr. 26, 2017
Loop Antenna	EM-6879	269	Jul. 31, 2015	Jul. 30, 2016
Agilent Communications Tester-Wireless	8960 Series 10	MY53201073	Jul. 03, 2015	Jul. 02, 2017
Preamplifier Agilent	310N	187226	Jun. 29, 2015	Jun. 28, 2016
Preamplifier Agilent	83017A	MY39501357	Jun. 29, 2015	Jun. 28, 2016
Power Meter Anritsu	ML2495A	1232002	Sep. 21, 2015	Sep. 20, 2016
Power Sensor Anritsu	MA2411B	1207325	Sep. 21, 2015	Sep. 20, 2016
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(RFC-SMS-100-SMS-120+RFC-SMS-100-SMS-400)	Jun. 27, 2015	Jun. 26, 2016
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(RFC-SMS-100-SMS-24)	Jun. 27, 2015	Jun. 26, 2016
Software BV ADT	E3 8.130425b	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Antenna Tower &Turn Table Controller MF	MF-7802	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 HsinTien Chamber 1.
3. The horn antenna and preamplifier (model: 83017A) are used only for the measurement of emission frequency above 1 GHz if tested.
4. The FCC Site Registration No. is 149147.
5. The IC Site Registration No. is IC7450I-1.

4.1.4 Test Procedures

a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1 GHz) / 1.5 meters (for above 1 GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
f. The test-receiver system was set to peak and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

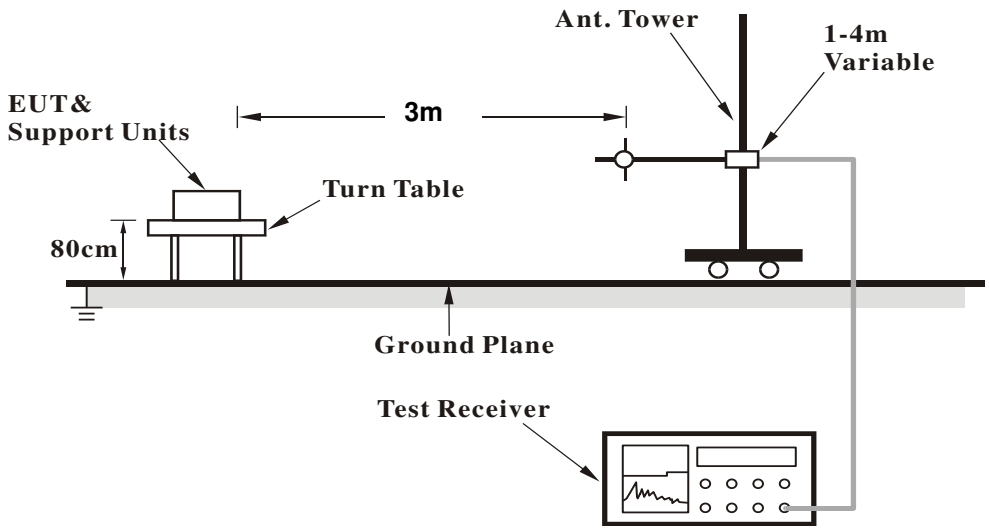
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for RMS Average (Duty cycle < 98 %) for Average detection (AV) at frequency above 1 GHz, then the measurement results was added to a correction factor (10 log(1/duty cycle)).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz (Duty cycle ≥ 98 %) for Average detection (AV) at frequency above 1 GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

4.1.5 Deviation from Test Standard

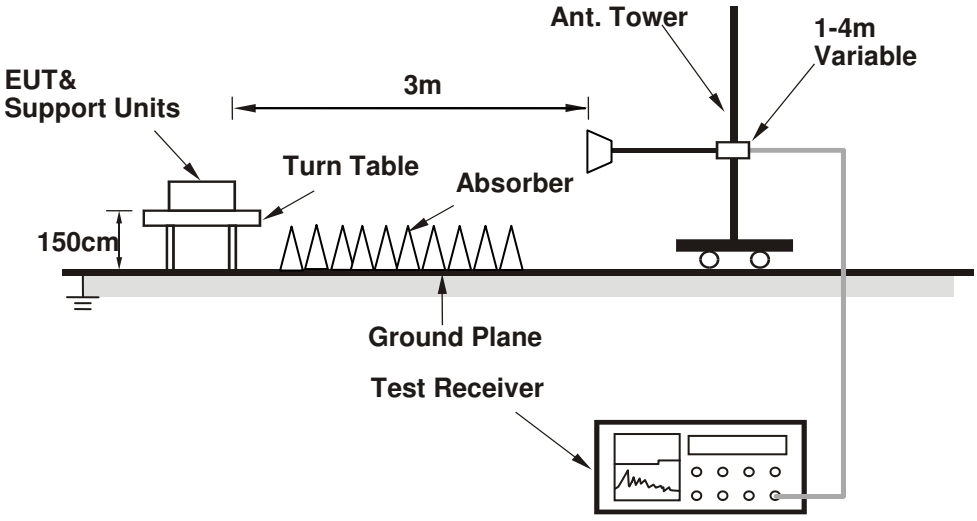
No deviation.

4.1.6 Test Set Up

<Frequency Range below 1 GHz>



<Frequency Range above 1 GHz>



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

4.1.7 EUT Operating Conditions

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

4.1.8 Test Results

ABOVE 1 GHz DATA :

<1TX>

802.11a

EUT Test Condition		Measurement Detail	
Channel	Channel 36	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	46.74	38.49	54	-7.26	34.12	8.13	34	123	287	Average
5150	59.19	50.94	74	-14.81	34.12	8.13	34	123	287	Peak
5180	89.17	80.86			34.15	8.16	34	123	287	Average
5180	96	87.69			34.15	8.16	34	123	287	Peak
5446	42.45	33.62	54	-11.55	34.36	8.51	34.04	123	287	Average
5446	52.82	43.99	74	-21.18	34.36	8.51	34.04	123	287	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	51.29	43.04	54	-2.71	34.12	8.13	34	102	35	Average
5150	65.78	57.53	74	-8.22	34.12	8.13	34	102	35	Peak
5180	93.92	85.61			34.15	8.16	34	102	35	Average
5180	100.83	92.52			34.15	8.16	34	102	35	Peak
5452	42.45	33.63	54	-11.55	34.36	8.51	34.05	102	35	Average
5452	53.25	44.43	74	-20.75	34.36	8.51	34.05	102	35	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 44	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	42.46	34.2	54	-11.54	34.12	8.13	33.99	123	287	Average
5142	52.33	44.07	74	-21.67	34.12	8.13	33.99	123	287	Peak
5220	88.55	80.16			34.17	8.22	34	123	287	Average
5220	96.24	87.85			34.17	8.22	34	123	287	Peak
5390	42.39	33.71	54	-11.61	34.31	8.41	34.04	123	287	Average
5390	53.18	44.5	74	-20.82	34.31	8.41	34.04	123	287	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	43.74	35.49	54	-10.26	34.12	8.13	34	109	17	Average
5150	54.96	46.71	74	-19.04	34.12	8.13	34	109	17	Peak
5220	93.23	84.84			34.17	8.22	34	109	17	Average
5220	100.28	91.89			34.17	8.22	34	109	17	Peak
5442	42.55	33.76	54	-11.45	34.35	8.48	34.04	109	17	Average
5442	53.8	45.01	74	-20.2	34.35	8.48	34.04	109	17	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 48	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	42.21	33.96	54	-11.79	34.12	8.13	34	123	287	Average
5150	52.08	43.83	74	-21.92	34.12	8.13	34	123	287	Peak
5240	89.04	80.6			34.19	8.26	34.01	123	287	Average
5240	96.59	88.15			34.19	8.26	34.01	123	287	Peak
5448	42.59	33.76	54	-11.41	34.36	8.51	34.04	123	287	Average
5448	53.15	44.32	74	-20.85	34.36	8.51	34.04	123	287	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5132	42.15	33.93	54	-11.85	34.11	8.1	33.99	108	2	Average
5132	52.32	44.1	74	-21.68	34.11	8.1	33.99	108	2	Peak
5240	93.49	85.05			34.19	8.26	34.01	108	2	Average
5240	100.85	92.41			34.19	8.26	34.01	108	2	Peak
5448	42.51	33.68	54	-11.49	34.36	8.51	34.04	108	2	Average
5448	53.96	45.13	74	-20.04	34.36	8.51	34.04	108	2	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 52	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	42.25	34.03	54	-11.75	34.11	8.1	33.99	121	288	Average
5126	52.38	44.16	74	-21.62	34.11	8.1	33.99	121	288	Peak
5260	89.02	80.56			34.21	8.26	34.01	121	288	Average
5260	96.12	87.66			34.21	8.26	34.01	121	288	Peak
5424	42.34	33.57	54	-11.66	34.33	8.48	34.04	121	288	Average
5424	53.61	44.84	74	-20.39	34.33	8.48	34.04	121	288	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	41.93	33.83	54	-12.07	34.05	8.03	33.98	108	2	Average
5070	53.26	45.16	74	-20.74	34.05	8.03	33.98	108	2	Peak
5260	94.96	86.5			34.21	8.26	34.01	108	2	Average
5260	101.8	93.34			34.21	8.26	34.01	108	2	Peak
5350	42.37	33.74	54	-11.63	34.28	8.38	34.03	108	2	Average
5350	53.52	44.89	74	-20.48	34.28	8.38	34.03	108	2	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 60	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5114	42.02	33.82	54	-11.98	34.09	8.1	33.99	221	288	Average
5114	52.83	44.63	74	-21.17	34.09	8.1	33.99	221	288	Peak
5300	90.08	81.54			34.24	8.32	34.02	221	288	Average
5300	97.72	89.18			34.24	8.32	34.02	221	288	Peak
5356	45.44	36.81	54	-8.56	34.28	8.38	34.03	221	288	Average
5356	58.16	49.53	74	-15.84	34.28	8.38	34.03	221	288	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5098	42	33.84	54	-12	34.08	8.07	33.99	113	1	Average
5098	53.16	45	74	-20.84	34.08	8.07	33.99	113	1	Peak
5300	94	85.46			34.24	8.32	34.02	113	1	Average
5300	101.08	92.54			34.24	8.32	34.02	113	1	Peak
5350	47.6	38.97	54	-6.4	34.28	8.38	34.03	113	1	Average
5350	59.55	50.92	74	-14.45	34.28	8.38	34.03	113	1	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 64	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5124	42.19	33.97	54	-11.81	34.11	8.1	33.99	221	288	Average
5124	52.06	43.84	74	-21.94	34.11	8.1	33.99	221	288	Peak
5320	89.88	81.3			34.25	8.35	34.02	221	288	Average
5320	96.36	87.78			34.25	8.35	34.02	221	288	Peak
5350	47.25	38.62	54	-6.75	34.28	8.38	34.03	221	288	Average
5350	57.78	49.15	74	-16.22	34.28	8.38	34.03	221	288	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5114	42.1	33.9	54	-11.9	34.09	8.1	33.99	100	2	Average
5114	51.84	43.64	74	-22.16	34.09	8.1	33.99	100	2	Peak
5320	94.25	85.67			34.25	8.35	34.02	100	2	Average
5320	101.13	92.55			34.25	8.35	34.02	100	2	Peak
5352	48.39	39.76	54	-5.61	34.28	8.38	34.03	100	2	Average
5352	59.73	51.1	74	-14.27	34.28	8.38	34.03	100	2	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 100	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5458	45.47	36.65	54	-8.53	34.36	8.51	34.05	221	298	Average
5458	58.31	49.49	74	-15.69	34.36	8.51	34.05	221	298	Peak
5470	64.29	55.46	68.2	-3.91	34.37	8.51	34.05	221	298	Peak
5500	94.17	85.25			34.4	8.57	34.05	221	298	Average
5500	101.43	92.51			34.4	8.57	34.05	221	298	Peak
5725	57.47	48.31	68.2	-10.73	34.62	8.65	34.11	221	298	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	44.57	35.75	54	-9.43	34.36	8.51	34.05	101	48	Average
5452	57.56	48.74	74	-16.44	34.36	8.51	34.05	101	48	Peak
5470	62.79	53.96	68.2	-5.41	34.37	8.51	34.05	101	48	Peak
5500	92.17	83.25			34.4	8.57	34.05	101	48	Average
5500	99.21	90.29			34.4	8.57	34.05	101	48	Peak
5725	55.74	46.58	68.2	-12.46	34.62	8.65	34.11	101	48	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 116	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	42.61	33.79	54	-11.39	34.36	8.51	34.05	221	298	Average
5452	56.56	47.74	74	-17.44	34.36	8.51	34.05	221	298	Peak
5470	55.58	46.75	68.2	-12.62	34.37	8.51	34.05	221	298	Peak
5580	94.07	85.08			34.47	8.6	34.08	221	298	Average
5580	101.58	92.59			34.47	8.6	34.08	221	298	Peak
5725	54.68	45.52	68.2	-13.52	34.62	8.65	34.11	221	298	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	42.81	34.02	54	-11.19	34.35	8.48	34.04	100	48	Average
5442	56.66	47.87	74	-17.34	34.35	8.48	34.04	100	48	Peak
5470	56.19	47.36	68.2	-12.01	34.37	8.51	34.05	100	48	Peak
5580	92.22	83.23			34.47	8.6	34.08	100	48	Average
5580	99.11	90.12			34.47	8.6	34.08	100	48	Peak
5725	55.06	45.9	68.2	-13.14	34.62	8.65	34.11	100	48	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 140	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
5434	42.57	33.78	54	-11.43	34.35	8.48	34.04	221	299	Average
5434	57.76	48.97	74	-16.24	34.35	8.48	34.04	221	299	Peak
5470	56.08	47.25	68.2	-12.12	34.37	8.51	34.05	221	299	Peak
5700	94.43	85.3			34.59	8.64	34.1	221	299	Average
5700	101.38	92.25			34.59	8.64	34.1	221	299	Peak
5725	63.5	54.34	68.2	-4.7	34.62	8.65	34.11	221	299	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	42.62	33.85	54	-11.38	34.33	8.48	34.04	112	52	Average
5424	58.09	49.32	74	-15.91	34.33	8.48	34.04	112	52	Peak
5470	56.46	47.63	68.2	-11.74	34.37	8.51	34.05	112	52	Peak
5700	92.53	83.4			34.59	8.64	34.1	112	52	Average
5700	99.73	90.6			34.59	8.64	34.1	112	52	Peak
5725	60.26	51.1	68.2	-7.94	34.62	8.65	34.11	112	52	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 149	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
*5710	58.23	49.08	68.2	-9.97	34.61	8.65	34.11	102	0	Peak
*5722	65.54	56.38	78.2	-12.66	34.62	8.65	34.11	102	0	Peak
5745	88.3	79.11			34.64	8.66	34.11	102	0	Average
5745	95.98	86.79			34.64	8.66	34.11	102	0	Peak
*5852	57.28	47.98	78.2	-20.92	34.74	8.7	34.14	102	0	Peak
*5870	56.71	47.38	68.2	-11.49	34.76	8.71	34.14	102	0	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
*5712	63.95	54.8	68.2	-4.25	34.61	8.65	34.11	109	358	Peak
*5722	70.83	61.67	78.2	-7.37	34.62	8.65	34.11	109	358	Peak
5745	94.25	85.06			34.64	8.66	34.11	109	358	Average
5745	101.8	92.61			34.64	8.66	34.11	109	358	Peak
*5860	56.64	47.32	78.2	-21.56	34.76	8.7	34.14	109	358	Peak
*5868	55.62	46.29	68.2	-12.58	34.76	8.71	34.14	109	358	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental frequency.
3. *: Out of restricted band

EUT Test Condition		Measurement Detail	
Channel	Channel 157	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	55.87	46.72	68.2	-12.33	34.61	8.65	34.11	102	0	Peak
*5722	55.75	46.59	78.2	-22.45	34.62	8.65	34.11	102	0	Peak
5785	88.81	79.58			34.68	8.68	34.13	102	0	Average
5785	95.5	86.27			34.68	8.68	34.13	102	0	Peak
*5856	56.25	46.93	78.2	-21.95	34.76	8.7	34.14	102	0	Peak
*5868	56.02	46.69	68.2	-12.18	34.76	8.71	34.14	102	0	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
*5712	55.58	46.43	68.2	-12.62	34.61	8.65	34.11	109	358	Peak
*5722	57.01	47.85	78.2	-21.19	34.62	8.65	34.11	109	358	Peak
5785	94.61	85.38			34.68	8.68	34.13	109	358	Average
5785	101.15	91.92			34.68	8.68	34.13	109	358	Peak
*5854	56.04	46.72	78.2	-22.16	34.76	8.7	34.14	109	358	Peak
*5864	56.35	47.02	68.2	-11.85	34.76	8.71	34.14	109	358	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental frequency.
3. *: Out of restricted band

EUT Test Condition		Measurement Detail	
Channel	Channel 165	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
*5712	55.57	46.42	68.2	-12.63	34.61	8.65	34.11	100	360	Peak
*5722	56.57	47.41	78.2	-21.63	34.62	8.65	34.11	100	360	Peak
5825	88.65	79.36			34.73	8.69	34.13	100	360	Average
5825	95.66	86.37			34.73	8.69	34.13	100	360	Peak
*5852	61.68	52.38	78.2	-16.52	34.74	8.7	34.14	100	360	Peak
*5870	57.88	48.55	68.2	-10.32	34.76	8.71	34.14	100	360	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
*5710	56.25	47.1	68.2	-11.95	34.61	8.65	34.11	107	358	Peak
*5718	57.27	48.11	78.2	-20.93	34.62	8.65	34.11	107	358	Peak
5825	94.64	85.35			34.73	8.69	34.13	107	358	Average
5825	101.41	92.12			34.73	8.69	34.13	107	358	Peak
*5852	64.97	55.67	78.2	-13.23	34.74	8.7	34.14	107	358	Peak
*5862	61.98	52.65	68.2	-6.22	34.76	8.71	34.14	107	358	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5825 MHz: Fundamental frequency.
3. *: Out of restricted band

802.11n (HT20)

EUT Test Condition		Measurement Detail	
Channel	Channel 36	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	46.89	38.64	54	-7.11	34.12	8.13	34	123	287	Average
5150	59.95	51.7	74	-14.05	34.12	8.13	34	123	287	Peak
5180	88.95	80.64			34.15	8.16	34	123	287	Average
5180	96.74	88.43			34.15	8.16	34	123	287	Peak
5430	42.39	33.6	54	-11.61	34.35	8.48	34.04	123	287	Average
5430	53.34	44.55	74	-20.66	34.35	8.48	34.04	123	287	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	52.94	44.69	54	-1.06	34.12	8.13	34	102	35	Average
5150	65.71	57.46	74	-8.29	34.12	8.13	34	102	35	Peak
5180	93.07	84.76			34.15	8.16	34	102	35	Average
5180	100.44	92.13			34.15	8.16	34	102	35	Peak
5426	42.6	33.83	54	-11.4	34.33	8.48	34.04	102	35	Average
5426	53.01	44.24	74	-20.99	34.33	8.48	34.04	102	35	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 44	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5104	42.04	33.88	54	-11.96	34.08	8.07	33.99	123	287	Average
5104	52.07	43.91	74	-21.93	34.08	8.07	33.99	123	287	Peak
5220	88.73	80.34			34.17	8.22	34	123	287	Average
5220	96.18	87.79			34.17	8.22	34	123	287	Peak
5446	42.48	33.65	54	-11.52	34.36	8.51	34.04	123	287	Average
5446	53.7	44.87	74	-20.3	34.36	8.51	34.04	123	287	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5148	42.96	34.71	54	-11.04	34.12	8.13	34	109	17	Average
5148	52.92	44.67	74	-21.08	34.12	8.13	34	109	17	Peak
5220	93.59	85.2			34.17	8.22	34	109	17	Average
5220	100.03	91.64			34.17	8.22	34	109	17	Peak
5444	42.45	33.66	54	-11.55	34.35	8.48	34.04	109	17	Average
5444	52.44	43.65	74	-21.56	34.35	8.48	34.04	109	17	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 48	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5122	42	33.8	54	-12	34.09	8.1	33.99	123	287	Average
5122	52.32	44.12	74	-21.68	34.09	8.1	33.99	123	287	Peak
5240	89.64	81.2			34.19	8.26	34.01	123	287	Average
5240	96.51	88.07			34.19	8.26	34.01	123	287	Peak
5438	42.48	33.69	54	-11.52	34.35	8.48	34.04	123	287	Average
5438	53.85	45.06	74	-20.15	34.35	8.48	34.04	123	287	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	42.07	33.82	54	-11.93	34.12	8.13	34	108	2	Average
5146	53.09	44.84	74	-20.91	34.12	8.13	34	108	2	Peak
5240	93.78	85.34			34.19	8.26	34.01	108	2	Average
5240	100.83	92.39			34.19	8.26	34.01	108	2	Peak
5364	42.38	33.74	54	-11.62	34.29	8.38	34.03	108	2	Average
5364	53.46	44.82	74	-20.54	34.29	8.38	34.03	108	2	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 52	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	42.06	33.9	54	-11.94	34.08	8.07	33.99	121	288	Average
5102	52.11	43.95	74	-21.89	34.08	8.07	33.99	121	288	Peak
5260	89.89	81.43			34.21	8.26	34.01	121	288	Average
5260	96.45	87.99			34.21	8.26	34.01	121	288	Peak
5456	42.51	33.69	54	-11.49	34.36	8.51	34.05	121	288	Average
5456	52.8	43.98	74	-21.2	34.36	8.51	34.05	121	288	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5106	42.03	33.86	54	-11.97	34.09	8.07	33.99	108	2	Average
5106	52.4	44.23	74	-21.6	34.09	8.07	33.99	108	2	Peak
5260	94.75	86.29			34.21	8.26	34.01	108	2	Average
5260	101.53	93.07			34.21	8.26	34.01	108	2	Peak
5454	42.5	33.68	54	-11.5	34.36	8.51	34.05	108	2	Average
5454	53.45	44.63	74	-20.55	34.36	8.51	34.05	108	2	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 60	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5106	41.95	33.78	54	-12.05	34.09	8.07	33.99	221	288	Average
5106	52.41	44.24	74	-21.59	34.09	8.07	33.99	221	288	Peak
5300	90.17	81.63			34.24	8.32	34.02	221	288	Average
5300	96.9	88.36			34.24	8.32	34.02	221	288	Peak
5350	46.2	37.57	54	-7.8	34.28	8.38	34.03	221	288	Average
5350	57.9	49.27	74	-16.1	34.28	8.38	34.03	221	288	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
5096	42.15	33.99	54	-11.85	34.08	8.07	33.99	113	1	Average
5096	52.41	44.25	74	-21.59	34.08	8.07	33.99	113	1	Peak
5300	94.73	86.19			34.24	8.32	34.02	113	1	Average
5300	101.15	92.61			34.24	8.32	34.02	113	1	Peak
5350	47.57	38.94	54	-6.43	34.28	8.38	34.03	113	1	Average
5350	59.56	50.93	74	-14.44	34.28	8.38	34.03	113	1	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 64	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	41.91	33.75	54	-12.09	34.07	8.07	33.98	221	288	Average
5088	52.56	44.4	74	-21.44	34.07	8.07	33.98	221	288	Peak
5320	90.87	82.29			34.25	8.35	34.02	221	288	Average
5320	97.41	88.83			34.25	8.35	34.02	221	288	Peak
5350	48.19	39.56	54	-5.81	34.28	8.38	34.03	221	288	Average
5350	60.22	51.59	74	-13.78	34.28	8.38	34.03	221	288	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5040	41.85	33.78	54	-12.15	34.04	8	33.97	100	2	Average
5040	53.04	44.97	74	-20.96	34.04	8	33.97	100	2	Peak
5320	94.2	85.62			34.25	8.35	34.02	100	2	Average
5320	101.16	92.58			34.25	8.35	34.02	100	2	Peak
5352	49.21	40.58	54	-4.79	34.28	8.38	34.03	100	2	Average
5352	62.46	53.83	74	-11.54	34.28	8.38	34.03	100	2	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 100	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5458	46.37	37.55	54	-7.63	34.36	8.51	34.05	221	298	Average
5458	58.75	49.93	74	-15.25	34.36	8.51	34.05	221	298	Peak
5470	67.06	58.23	68.2	-1.14	34.37	8.51	34.05	221	298	Peak
5500	93.25	84.33			34.4	8.57	34.05	221	298	Average
5500	100.87	91.95			34.4	8.57	34.05	221	298	Peak
5725	56.39	47.23	68.2	-11.81	34.62	8.65	34.11	221	298	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	45.52	36.7	54	-8.48	34.36	8.51	34.05	101	48	Average
5460	58.14	49.32	74	-15.86	34.36	8.51	34.05	101	48	Peak
5470	65.8	56.97	68.2	-2.4	34.37	8.51	34.05	101	48	Peak
5500	91.23	82.31			34.4	8.57	34.05	101	48	Average
5500	98.64	89.72			34.4	8.57	34.05	101	48	Peak
5725	54.46	45.3	68.2	-13.74	34.62	8.65	34.11	101	48	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 116	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5456	42.7	33.88	54	-11.3	34.36	8.51	34.05	221	299	Average
5456	56.21	47.39	74	-17.79	34.36	8.51	34.05	221	299	Peak
5470	55.19	46.36	68.2	-13.01	34.37	8.51	34.05	221	299	Peak
5580	93.79	84.8			34.47	8.6	34.08	221	299	Average
5580	100.65	91.66			34.47	8.6	34.08	221	299	Peak
5725	56.34	47.18	68.2	-11.86	34.62	8.65	34.11	221	299	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	42.47	33.68	54	-11.53	34.35	8.48	34.04	101	48	Average
5432	57.08	48.29	74	-16.92	34.35	8.48	34.04	101	48	Peak
5470	55.2	46.37	68.2	-13	34.37	8.51	34.05	101	48	Peak
5580	91.82	82.83			34.47	8.6	34.08	101	48	Average
5580	98.4	89.41			34.47	8.6	34.08	101	48	Peak
5725	56.6	47.44	68.2	-11.6	34.62	8.65	34.11	101	48	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 140	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	42.48	33.65	54	-11.52	34.36	8.51	34.04	221	299	Average
5446	56.85	48.02	74	-17.15	34.36	8.51	34.04	221	299	Peak
5470	54.73	45.9	68.2	-13.47	34.37	8.51	34.05	221	299	Peak
5700	93.78	84.65			34.59	8.64	34.1	221	299	Average
5700	100.08	90.95			34.59	8.64	34.1	221	299	Peak
5725	66.53	57.37	68.2	-1.67	34.62	8.65	34.11	221	299	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
5420	42.61	33.84	54	-11.39	34.33	8.48	34.04	112	52	Average
5420	56.48	47.71	74	-17.52	34.33	8.48	34.04	112	52	Peak
5470	55.49	46.66	68.2	-12.71	34.37	8.51	34.05	112	52	Peak
5700	91.14	82.01			34.59	8.64	34.1	112	52	Average
5700	98.9	89.77			34.59	8.64	34.1	112	52	Peak
5725	61.67	52.51	68.2	-6.53	34.62	8.65	34.11	112	52	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 149	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	59.53	50.38	68.2	-8.67	34.61	8.65	34.11	102	360	Peak
*5724	66.16	57	78.2	-12.04	34.62	8.65	34.11	102	360	Peak
5745	88.05	78.86			34.64	8.66	34.11	102	360	Average
5745	95.64	86.45			34.64	8.66	34.11	102	360	Peak
*5852	56.1	46.8	78.2	-22.1	34.74	8.7	34.14	102	360	Peak
*5870	56.25	46.92	68.2	-11.95	34.76	8.71	34.14	102	360	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
*5712	63.46	54.31	68.2	-4.74	34.61	8.65	34.11	109	358	Peak
*5724	71.16	62	78.2	-7.04	34.62	8.65	34.11	109	358	Peak
5745	94.79	85.6			34.64	8.66	34.11	109	358	Average
5745	101.4	92.21			34.64	8.66	34.11	109	358	Peak
*5852	57.07	47.77	78.2	-21.13	34.74	8.7	34.14	109	358	Peak
*5862	56.39	47.06	68.2	-11.81	34.76	8.71	34.14	109	358	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental frequency.
3. *: Out of restricted band

EUT Test Condition		Measurement Detail	
Channel	Channel 157	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	55.6	46.45	68.2	-12.6	34.61	8.65	34.11	102	360	Peak
*5720	56.53	47.37	78.2	-21.67	34.62	8.65	34.11	102	360	Peak
5785	88.64	79.41			34.68	8.68	34.13	102	360	Average
5785	95.59	86.36			34.68	8.68	34.13	102	360	Peak
*5858	57.23	47.91	78.2	-20.97	34.76	8.7	34.14	102	360	Peak
*5870	56.17	46.84	68.2	-12.03	34.76	8.71	34.14	102	360	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	57.51	48.36	68.2	-10.69	34.61	8.65	34.11	109	358	Peak
*5724	57.04	47.88	78.2	-21.16	34.62	8.65	34.11	109	358	Peak
5785	94.14	84.91			34.68	8.68	34.13	109	358	Average
5785	101.01	91.78			34.68	8.68	34.13	109	358	Peak
*5854	57.11	47.79	78.2	-21.09	34.76	8.7	34.14	109	358	Peak
*5866	56.67	47.34	68.2	-11.53	34.76	8.71	34.14	109	358	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental frequency.
3. *: Out of restricted band

EUT Test Condition		Measurement Detail	
Channel	Channel 165	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
*5708	56.89	47.74	68.2	-11.31	34.61	8.65	34.11	100	360	Peak
*5720	56.48	47.32	78.2	-21.72	34.62	8.65	34.11	100	360	Peak
5825	88.42	79.13			34.73	8.69	34.13	100	360	Average
5825	95.06	85.77			34.73	8.69	34.13	100	360	Peak
*5852	57.65	48.35	78.2	-20.55	34.74	8.7	34.14	100	360	Peak
*5864	57.95	48.62	68.2	-10.25	34.76	8.71	34.14	100	360	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	56.75	47.6	68.2	-11.45	34.61	8.65	34.11	107	358	Peak
*5718	56.16	47	78.2	-22.04	34.62	8.65	34.11	107	358	Peak
5825	94.42	85.13			34.73	8.69	34.13	107	358	Average
5825	101.43	92.14			34.73	8.69	34.13	107	358	Peak
*5852	64.64	55.34	78.2	-13.56	34.74	8.7	34.14	107	358	Peak
*5866	62.4	53.07	68.2	-5.8	34.76	8.71	34.14	107	358	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5825 MHz: Fundamental frequency.
3. *: Out of restricted band

802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 38	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	47.31	39.06	54	-6.69	34.12	8.13	34	123	287	Average
5150	57.28	49.03	74	-16.72	34.12	8.13	34	123	287	Peak
5190	87.03	78.69			34.15	8.19	34	123	287	Average
5190	94.01	85.67			34.15	8.19	34	123	287	Peak
5370	42.68	34.01	54	-11.32	34.29	8.41	34.03	123	287	Average
5370	53.45	44.78	74	-20.55	34.29	8.41	34.03	123	287	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	52.25	44	54	-1.75	34.12	8.13	34	102	35	Average
5146	62.96	54.71	74	-11.04	34.12	8.13	34	102	35	Peak
5190	91.34	83			34.15	8.19	34	102	35	Average
5190	98.44	90.1			34.15	8.19	34	102	35	Peak
5452	42.99	34.17	54	-11.01	34.36	8.51	34.05	102	35	Average
5452	52.86	44.04	74	-21.14	34.36	8.51	34.05	102	35	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 46	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	44.09	35.84	54	-9.91	34.12	8.13	34	123	287	Average
5150	53.98	45.73	74	-20.02	34.12	8.13	34	123	287	Peak
5230	87.24	78.84			34.19	8.22	34.01	123	287	Average
5230	94.06	85.66			34.19	8.22	34.01	123	287	Peak
5456	43.05	34.23	54	-10.95	34.36	8.51	34.05	123	287	Average
5456	53.2	44.38	74	-20.8	34.36	8.51	34.05	123	287	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5148	45.93	37.68	54	-8.07	34.12	8.13	34	108	2	Average
5148	56.52	48.27	74	-17.48	34.12	8.13	34	108	2	Peak
5230	91.43	83.03			34.19	8.22	34.01	108	2	Average
5230	98.2	89.8			34.19	8.22	34.01	108	2	Peak
5432	42.93	34.14	54	-11.07	34.35	8.48	34.04	108	2	Average
5432	52.83	44.04	74	-21.17	34.35	8.48	34.04	108	2	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 54	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	42.42	34.26	54	-11.58	34.07	8.07	33.98	121	288	Average
5084	53.41	45.25	74	-20.59	34.07	8.07	33.98	121	288	Peak
5270	87.12	78.63			34.21	8.29	34.01	121	288	Average
5270	94.05	85.56			34.21	8.29	34.01	121	288	Peak
5350	43.67	35.04	54	-10.33	34.28	8.38	34.03	121	288	Average
5350	53.82	45.19	74	-20.18	34.28	8.38	34.03	121	288	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	42.39	34.29	54	-11.61	34.05	8.03	33.98	108	2	Average
5070	52.67	44.57	74	-21.33	34.05	8.03	33.98	108	2	Peak
5270	91.72	83.23			34.21	8.29	34.01	108	2	Average
5270	98.28	89.79			34.21	8.29	34.01	108	2	Peak
5350	44.22	35.59	54	-9.78	34.28	8.38	34.03	108	2	Average
5350	54.59	45.96	74	-19.41	34.28	8.38	34.03	108	2	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 62	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5132	42.58	34.36	54	-11.42	34.11	8.1	33.99	221	288	Average
5132	52.18	43.96	74	-21.82	34.11	8.1	33.99	221	288	Peak
5310	87.77	79.22			34.25	8.32	34.02	221	288	Average
5310	94.42	85.87			34.25	8.32	34.02	221	288	Peak
5350	49.77	41.14	54	-4.23	34.28	8.38	34.03	221	288	Average
5350	65.18	56.55	74	-8.82	34.28	8.38	34.03	221	288	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	42.43	34.31	54	-11.57	34.07	8.03	33.98	100	2	Average
5074	53.29	45.17	74	-20.71	34.07	8.03	33.98	100	2	Peak
5310	91.3	82.75			34.25	8.32	34.02	100	2	Average
5310	98.63	90.08			34.25	8.32	34.02	100	2	Peak
5350	52.24	43.61	54	-1.76	34.28	8.38	34.03	100	2	Average
5350	67.71	59.08	74	-6.29	34.28	8.38	34.03	100	2	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 102	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5458	48.47	39.65	54	-5.53	34.36	8.51	34.05	228	298	Average
5458	62.48	53.66	74	-11.52	34.36	8.51	34.05	228	298	Peak
5470	67.02	58.19	68.2	-1.18	34.37	8.51	34.05	228	298	Peak
5510	92.15	83.24			34.4	8.57	34.06	228	298	Average
5510	99.17	90.26			34.4	8.57	34.06	228	298	Peak
5725	55.63	46.47	68.2	-12.57	34.62	8.65	34.11	228	298	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5454	47.97	39.15	54	-6.03	34.36	8.51	34.05	101	48	Average
5454	61.58	52.76	74	-12.42	34.36	8.51	34.05	101	48	Peak
5470	66.96	58.13	68.2	-1.24	34.37	8.51	34.05	101	48	Peak
5510	90.07	81.16			34.4	8.57	34.06	101	48	Average
5510	97.53	88.62			34.4	8.57	34.06	101	48	Peak
5725	55.64	46.48	68.2	-12.56	34.62	8.65	34.11	101	48	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 110	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	46.17	37.35	54	-7.83	34.36	8.51	34.05	221	299	Average
5460	58.6	49.78	74	-15.4	34.36	8.51	34.05	221	299	Peak
5470	62.69	53.86	68.2	-5.51	34.37	8.51	34.05	221	299	Peak
5550	92.29	83.32			34.45	8.59	34.07	221	299	Average
5550	99.56	90.59			34.45	8.59	34.07	221	299	Peak
5725	56.15	46.99	68.2	-12.05	34.62	8.65	34.11	221	299	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5456	44.87	36.05	54	-9.13	34.36	8.51	34.05	101	48	Average
5456	57.8	48.98	74	-16.2	34.36	8.51	34.05	101	48	Peak
5470	58.92	50.09	68.2	-9.28	34.37	8.51	34.05	101	48	Peak
5550	90.04	81.07			34.45	8.59	34.07	101	48	Average
5550	97.09	88.12			34.45	8.59	34.07	101	48	Peak
5725	55.77	46.61	68.2	-12.43	34.62	8.65	34.11	101	48	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 134	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
5412	43.14	34.41	54	-10.86	34.33	8.44	34.04	224	299	Average
5412	57.14	48.41	74	-16.86	34.33	8.44	34.04	224	299	Peak
5470	56.66	47.83	68.2	-11.54	34.37	8.51	34.05	224	299	Peak
5670	92.85	83.75			34.57	8.63	34.1	224	299	Average
5670	99.74	90.64			34.57	8.63	34.1	224	299	Peak
5725	62.85	53.69	68.2	-5.35	34.62	8.65	34.11	224	299	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5450	43.16	34.34	54	-10.84	34.36	8.51	34.05	105	54	Average
5450	57.39	48.57	74	-16.61	34.36	8.51	34.05	105	54	Peak
5470	56.21	47.38	68.2	-11.99	34.37	8.51	34.05	105	54	Peak
5670	90.4	81.3			34.57	8.63	34.1	105	54	Average
5670	97.89	88.79			34.57	8.63	34.1	105	54	Peak
5725	59.81	50.65	68.2	-8.39	34.62	8.65	34.11	105	54	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 151	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
*5710	61.06	51.91	68.2	-7.14	34.61	8.65	34.11	102	360	Peak
*5724	63.15	53.99	78.2	-15.05	34.62	8.65	34.11	102	360	Peak
5755	85.54	76.33			34.66	8.66	34.11	102	360	Average
5755	93.02	83.81			34.66	8.66	34.11	102	360	Peak
*5854	56.11	46.79	78.2	-22.09	34.76	8.7	34.14	102	360	Peak
*5868	55.68	46.35	68.2	-12.52	34.76	8.71	34.14	102	360	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
*5712	66.18	57.03	68.2	-2.02	34.61	8.65	34.11	109	358	Peak
*5724	69.01	59.85	78.2	-9.19	34.62	8.65	34.11	109	358	Peak
5755	91.82	82.61			34.66	8.66	34.11	109	358	Average
5755	99.57	90.36			34.66	8.66	34.11	109	358	Peak
*5858	56.21	46.89	78.2	-21.99	34.76	8.7	34.14	109	358	Peak
*5866	55.53	46.2	68.2	-12.67	34.76	8.71	34.14	109	358	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5755 MHz: Fundamental frequency.
3. *: Out of restricted band

EUT Test Condition		Measurement Detail	
Channel	Channel 159	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
*5706	61.95	52.8	68.2	-6.25	34.61	8.65	34.11	102	360	Peak
*5720	64.07	54.91	78.2	-14.13	34.62	8.65	34.11	102	360	Peak
5795	86.21	76.97			34.69	8.68	34.13	102	360	Average
5795	93.21	83.97			34.69	8.68	34.13	102	360	Peak
*5852	63.14	53.84	78.2	-15.06	34.74	8.7	34.14	102	360	Peak
*5862	60.58	51.25	68.2	-7.62	34.76	8.71	34.14	102	360	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
*5712	66.69	57.54	68.2	-1.51	34.61	8.65	34.11	109	358	Peak
*5724	70.3	61.14	78.2	-7.9	34.62	8.65	34.11	109	358	Peak
5795	92.03	82.79			34.69	8.68	34.13	109	358	Average
5795	99.68	90.44			34.69	8.68	34.13	109	358	Peak
*5854	63.74	54.42	78.2	-14.46	34.76	8.7	34.14	109	358	Peak
*5862	62.31	52.98	68.2	-5.89	34.76	8.71	34.14	109	358	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5795 MHz: Fundamental frequency.
3. *: Out of restricted band

802.11ac (VHT80)

EUT Test Condition		Measurement Detail	
Channel	Channel 42	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5148	46.91	38.66	54	-7.09	34.12	8.13	34	123	287	Average
5148	55.75	47.5	74	-18.25	34.12	8.13	34	123	287	Peak
5210	83.82	75.46			34.17	8.19	34	123	287	Average
5210	91.15	82.79			34.17	8.19	34	123	287	Peak
5430	43.22	34.43	54	-10.78	34.35	8.48	34.04	123	287	Average
5430	52.86	44.07	74	-21.14	34.35	8.48	34.04	123	287	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	52.49	44.24	54	-1.51	34.12	8.13	34	109	14	Average
5150	62.29	54.04	74	-11.71	34.12	8.13	34	109	14	Peak
5210	87.31	78.95			34.17	8.19	34	109	14	Average
5210	95.47	87.11			34.17	8.19	34	109	14	Peak
5460	43.16	34.34	54	-10.84	34.36	8.51	34.05	109	14	Average
5460	53.27	44.45	74	-20.73	34.36	8.51	34.05	109	14	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 58	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5048	42.61	34.55	54	-11.39	34.04	8	33.98	221	288	Average
5048	52.32	44.26	74	-21.68	34.04	8	33.98	221	288	Peak
5290	84.55	76.02			34.23	8.32	34.02	221	288	Average
5290	91.3	82.77			34.23	8.32	34.02	221	288	Peak
5350	49.15	40.52	54	-4.85	34.28	8.38	34.03	221	288	Average
5350	59.82	51.19	74	-14.18	34.28	8.38	34.03	221	288	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
5096	42.79	34.63	54	-11.21	34.08	8.07	33.99	113	1	Average
5096	52.54	44.38	74	-21.46	34.08	8.07	33.99	113	1	Peak
5290	88.94	80.41			34.23	8.32	34.02	113	1	Average
5290	95.9	87.37			34.23	8.32	34.02	113	1	Peak
5350	52.26	43.63	54	-1.74	34.28	8.38	34.03	113	1	Average
5350	65.14	56.51	74	-8.86	34.28	8.38	34.03	113	1	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 106	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	52.97	44.15	54	-1.03	34.36	8.51	34.05	229	298	Average
5460	64.05	55.23	74	-9.95	34.36	8.51	34.05	229	298	Peak
5470	66.94	58.11	68.2	-1.26	34.37	8.51	34.05	229	298	Peak
5530	90.11	81.18			34.42	8.58	34.07	229	298	Average
5530	97.46	88.53			34.42	8.58	34.07	229	298	Peak
5725	56.16	47	68.2	-12.04	34.62	8.65	34.11	229	298	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5458	52.32	43.5	54	-1.68	34.36	8.51	34.05	101	48	Average
5458	64.45	55.63	74	-9.55	34.36	8.51	34.05	101	48	Peak
5470	66.33	57.5	68.2	-1.87	34.37	8.51	34.05	101	48	Peak
5530	88.5	79.57			34.42	8.58	34.07	101	48	Average
5530	95.77	86.84			34.42	8.58	34.07	101	48	Peak
5725	55.65	46.49	68.2	-12.55	34.62	8.65	34.11	101	48	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 122	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5456	49.97	41.15	54	-4.03	34.36	8.51	34.05	221	298	Average
5456	62.34	53.52	74	-11.66	34.36	8.51	34.05	221	298	Peak
5470	65.46	56.63	68.2	-2.74	34.37	8.51	34.05	221	298	Peak
5610	90.11	81.08			34.5	8.61	34.08	221	298	Average
5610	97.42	88.39			34.5	8.61	34.08	221	298	Peak
5725	62.89	53.73	68.2	-5.31	34.62	8.65	34.11	221	298	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
5434	46.32	37.53	54	-7.68	34.35	8.48	34.04	126	40	Average
5434	58.16	49.37	74	-15.84	34.35	8.48	34.04	126	40	Peak
5470	59.61	50.78	68.2	-8.59	34.37	8.51	34.05	126	40	Peak
5610	88.21	79.18			34.5	8.61	34.08	126	40	Average
5610	95.11	86.08			34.5	8.61	34.08	126	40	Peak
5725	56.3	47.14	68.2	-11.9	34.62	8.65	34.11	126	40	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5610 MHz: Fundamental frequency.
3. 5470 MHz & 5725 MHz: Out of restricted band

EUT Test Condition		Measurement Detail	
Channel	Channel 155	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
*5712	65.63	56.48	68.2	-2.57	34.61	8.65	34.11	102	0	Peak
*5722	66.77	57.61	78.2	-11.43	34.62	8.65	34.11	102	0	Peak
5775	82.83	73.6			34.68	8.67	34.12	102	0	Average
5775	89.94	80.71			34.68	8.67	34.12	102	0	Peak
*5856	63.55	54.23	78.2	-14.65	34.76	8.7	34.14	102	0	Peak
*5862	60.94	51.61	68.2	-7.26	34.76	8.71	34.14	102	0	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	67.05	57.9	68.2	-1.15	34.61	8.65	34.11	109	358	Peak
*5718	70.72	61.56	78.2	-7.48	34.62	8.65	34.11	109	358	Peak
5775	88.41	79.18			34.68	8.67	34.12	109	358	Average
5775	95.41	86.18			34.68	8.67	34.12	109	358	Peak
*5858	65.34	56.02	78.2	-12.86	34.76	8.7	34.14	109	358	Peak
*5866	61.95	52.62	68.2	-6.25	34.76	8.71	34.14	109	358	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5775 MHz: Fundamental frequency.
3. *: Out of restricted band

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802.11n (HT20)

EUT Test Condition		Measurement Detail	
Channel	Channel 36	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	47.72	39.47	54	-6.28	34.12	8.13	34	108	286	Average
5150	62.39	54.14	74	-11.61	34.12	8.13	34	108	286	Peak
5180	86.87	78.56			34.15	8.16	34	108	286	Average
5180	94.55	86.24			34.15	8.16	34	108	286	Peak
5454	42.53	33.71	54	-11.47	34.36	8.51	34.05	108	286	Average
5454	53.35	44.53	74	-20.65	34.36	8.51	34.05	108	286	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	49.92	41.67	54	-4.08	34.12	8.13	34	102	29	Average
5150	66.81	58.56	74	-7.19	34.12	8.13	34	102	29	Peak
5180	89.45	81.14			34.15	8.16	34	124	0	Average
5180	96.95	88.64			34.15	8.16	34	124	0	Peak
5442	42.45	33.66	54	-11.55	34.35	8.48	34.04	124	0	Average
5442	53.37	44.58	74	-20.63	34.35	8.48	34.04	124	0	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 44	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	42.25	33.99	54	-11.75	34.12	8.13	33.99	108	286	Average
5140	51.74	43.48	74	-22.26	34.12	8.13	33.99	108	286	Peak
5220	88.03	79.64			34.17	8.22	34	108	286	Average
5220	95.61	87.22			34.17	8.22	34	108	286	Peak
5430	42.39	33.6	54	-11.61	34.35	8.48	34.04	108	286	Average
5430	52.39	43.6	74	-21.61	34.35	8.48	34.04	108	286	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	42.12	33.96	54	-11.88	34.08	8.07	33.99	124	0	Average
5102	53.08	44.92	74	-20.92	34.08	8.07	33.99	124	0	Peak
5220	89.96	81.57			34.17	8.22	34	124	0	Average
5220	97.04	88.65			34.17	8.22	34	124	0	Peak
5460	42.72	33.9	54	-11.28	34.36	8.51	34.05	124	0	Average
5460	53.48	44.66	74	-20.52	34.36	8.51	34.05	124	0	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 48	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	42.02	33.77	54	-11.98	34.12	8.13	34	108	286	Average
5150	52.39	44.14	74	-21.61	34.12	8.13	34	108	286	Peak
5240	87.7	79.26			34.19	8.26	34.01	108	286	Average
5240	95.25	86.81			34.19	8.26	34.01	108	286	Peak
5450	42.56	33.74	54	-11.44	34.36	8.51	34.05	108	286	Average
5450	54.34	45.52	74	-19.66	34.36	8.51	34.05	108	286	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
5058	42.03	33.93	54	-11.97	34.05	8.03	33.98	115	0	Average
5058	52.29	44.19	74	-21.71	34.05	8.03	33.98	115	0	Peak
5240	89.77	81.33			34.19	8.26	34.01	115	0	Average
5240	97.37	88.93			34.19	8.26	34.01	115	0	Peak
5438	42.45	33.66	54	-11.55	34.35	8.48	34.04	115	0	Average
5438	54.02	45.23	74	-19.98	34.35	8.48	34.04	115	0	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 52	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
5096	42.25	34.09	54	-11.75	34.08	8.07	33.99	242	313	Average
5096	51.85	43.69	74	-22.15	34.08	8.07	33.99	242	313	Peak
5260	88.6	80.14			34.21	8.26	34.01	242	313	Average
5260	96.87	88.41			34.21	8.26	34.01	242	313	Peak
5460	42.5	33.68	54	-11.5	34.36	8.51	34.05	242	313	Average
5460	53.41	44.59	74	-20.59	34.36	8.51	34.05	242	313	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	41.83	33.71	54	-12.17	34.07	8.03	33.98	100	6	Average
5078	51.87	43.75	74	-22.13	34.07	8.03	33.98	100	6	Peak
5260	91.45	82.99			34.21	8.26	34.01	100	6	Average
5260	99.52	91.06			34.21	8.26	34.01	100	6	Peak
5436	42.29	33.5	54	-11.71	34.35	8.48	34.04	100	6	Average
5436	53.04	44.25	74	-20.96	34.35	8.48	34.04	100	6	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 60	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	41.97	33.72	54	-12.03	34.12	8.13	34	223	313	Average
5150	52.79	44.54	74	-21.21	34.12	8.13	34	223	313	Peak
5300	88.75	80.21			34.24	8.32	34.02	223	313	Average
5300	96.83	88.29			34.24	8.32	34.02	223	313	Peak
5350	43.14	34.51	54	-10.86	34.28	8.38	34.03	196	304	Average
5350	54.81	46.18	74	-19.19	34.28	8.38	34.03	196	304	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	41.68	33.56	54	-12.32	34.07	8.03	33.98	106	10	Average
5078	52.43	44.31	74	-21.57	34.07	8.03	33.98	106	10	Peak
5300	91.83	83.29			34.24	8.32	34.02	106	10	Average
5300	99.38	90.84			34.24	8.32	34.02	106	10	Peak
5350	44.02	35.39	54	-9.98	34.28	8.38	34.03	115	8	Average
5350	55.75	47.12	74	-18.25	34.28	8.38	34.03	115	8	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 64	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	41.86	33.76	54	-12.14	34.05	8.03	33.98	223	313	Average
5062	52.09	43.99	74	-21.91	34.05	8.03	33.98	223	313	Peak
5320	88.72	80.14			34.25	8.35	34.02	223	313	Average
5320	96.25	87.67			34.25	8.35	34.02	223	313	Peak
5350	44.92	36.29	54	-9.08	34.28	8.38	34.03	223	313	Average
5350	60.47	51.84	74	-13.53	34.28	8.38	34.03	223	313	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
5080	41.82	33.7	54	-12.18	34.07	8.03	33.98	106	13	Average
5080	52.55	44.43	74	-21.45	34.07	8.03	33.98	106	13	Peak
5320	92.61	84.03			34.25	8.35	34.02	106	13	Average
5320	99.64	91.06			34.25	8.35	34.02	106	13	Peak
5350	46.08	37.45	54	-7.92	34.28	8.38	34.03	113	13	Average
5350	59.44	50.81	74	-14.56	34.28	8.38	34.03	113	13	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 100	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5440	43.22	34.43	54	-10.78	34.35	8.48	34.04	104	7	Average
5440	54.62	45.83	74	-19.38	34.35	8.48	34.04	104	7	Peak
5470	55.38	46.55	68.2	-12.82	34.37	8.51	34.05	104	7	Peak
5500	87.08	78.16			34.4	8.57	34.05	104	7	Average
5500	95.14	86.22			34.4	8.57	34.05	104	7	Peak
5725	52.62	43.46	68.2	-15.58	34.62	8.65	34.11	104	7	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5454	43.59	34.77	54	-10.41	34.36	8.51	34.05	202	16	Average
5454	55.89	47.07	74	-18.11	34.36	8.51	34.05	202	16	Peak
5470	63.55	54.72	68.2	-4.65	34.37	8.51	34.05	202	13	Peak
5500	88.76	79.84			34.4	8.57	34.05	202	0	Average
5500	97.56	88.64			34.4	8.57	34.05	202	0	Peak
5725	52.03	42.87	68.2	-16.17	34.62	8.65	34.11	202	0	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 116	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	42.35	33.62	54	-11.65	34.33	8.44	34.04	101	7	Average
5416	52.72	43.99	74	-21.28	34.33	8.44	34.04	101	7	Peak
5470	52.64	43.81	68.2	-15.56	34.37	8.51	34.05	101	7	Peak
5580	87.24	78.25			34.47	8.6	34.08	101	7	Average
5580	95.06	86.07			34.47	8.6	34.08	101	7	Peak
5725	51.3	42.14	68.2	-16.9	34.62	8.65	34.11	101	7	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	42.27	33.48	54	-11.73	34.35	8.48	34.04	206	0	Average
5442	52.54	43.75	74	-21.46	34.35	8.48	34.04	206	0	Peak
5470	51.48	42.65	68.2	-16.72	34.37	8.51	34.05	206	0	Peak
5580	88.8	79.81			34.47	8.6	34.08	206	0	Average
5580	97.53	88.54			34.47	8.6	34.08	206	0	Peak
5725	51.57	42.41	68.2	-16.63	34.62	8.65	34.11	206	0	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 140	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	43.15	34.36	54	-10.85	34.35	8.48	34.04	101	7	Average
5430	57.99	49.2	74	-16.01	34.35	8.48	34.04	101	7	Peak
5470	53.94	45.11	68.2	-14.26	34.37	8.51	34.05	101	7	Peak
5700	87.43	78.3			34.59	8.64	34.1	101	7	Average
5700	95.08	85.95			34.59	8.64	34.1	101	7	Peak
5725	66.08	56.92	68.2	-2.12	34.62	8.65	34.11	114	7	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
5434	43.18	34.39	54	-10.82	34.35	8.48	34.04	200	1	Average
5434	57.22	48.43	74	-16.78	34.35	8.48	34.04	200	1	Peak
5470	56.31	47.48	68.2	-11.89	34.37	8.51	34.05	200	1	Peak
5700	88.33	79.2			34.59	8.64	34.1	200	1	Average
5700	97.56	88.43			34.59	8.64	34.1	200	1	Peak
5725	64.25	55.09	68.2	-3.95	34.62	8.65	34.11	200	360	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 149	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	63.92	54.77	68.2	-4.28	34.61	8.65	34.11	219	296	Peak
*5724	71.52	62.36	78.2	-6.68	34.62	8.65	34.11	219	296	Peak
5745	91.1	81.91			34.64	8.66	34.11	218	296	Average
5745	98.09	88.9			34.64	8.66	34.11	218	296	Peak
*5856	56.69	47.37	78.2	-21.51	34.76	8.7	34.14	218	296	Peak
*5866	57.29	47.96	68.2	-10.91	34.76	8.71	34.14	218	296	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	60.91	51.76	68.2	-7.29	34.61	8.65	34.11	104	0	Peak
*5722	67.31	58.15	78.2	-10.89	34.62	8.65	34.11	104	0	Peak
5745	87.15	77.96			34.64	8.66	34.11	104	360	Average
5745	94.93	85.74			34.64	8.66	34.11	104	360	Peak
*5852	56.31	47.01	78.2	-21.89	34.74	8.7	34.14	104	360	Peak
*5862	56.24	46.91	68.2	-11.96	34.76	8.71	34.14	104	360	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5745 MHz: Fundamental frequency.
3. *: Out of restricted band

EUT Test Condition		Measurement Detail	
Channel	Channel 157	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
*5706	55.53	46.38	68.2	-12.67	34.61	8.65	34.11	218	296	Peak
*5722	56.89	47.73	78.2	-21.31	34.62	8.65	34.11	218	296	Peak
5785	91.25	82.02			34.68	8.68	34.13	218	296	Average
5785	98.13	88.9			34.68	8.68	34.13	218	296	Peak
*5860	57.01	47.69	78.2	-21.19	34.76	8.7	34.14	218	296	Peak
*5868	55.17	45.84	68.2	-13.03	34.76	8.71	34.14	218	296	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
*5706	56.33	47.18	68.2	-11.87	34.61	8.65	34.11	104	0	Peak
*5722	57.21	48.05	78.2	-20.99	34.62	8.65	34.11	104	0	Peak
5785	87.48	78.25			34.68	8.68	34.13	104	0	Average
5785	94.51	85.28			34.68	8.68	34.13	104	0	Peak
*5856	56.23	46.91	78.2	-21.97	34.76	8.7	34.14	104	0	Peak
*5864	56.99	47.66	68.2	-11.21	34.76	8.71	34.14	104	0	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5785 MHz: Fundamental frequency.
3. *: Out of restricted band

EUT Test Condition		Measurement Detail	
Channel	Channel 165	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
*5712	56.2	47.05	68.2	-12	34.61	8.65	34.11	218	296	Peak
*5720	57.82	48.66	78.2	-20.38	34.62	8.65	34.11	218	296	Peak
5825	91.01	81.72			34.73	8.69	34.13	218	296	Average
5825	98.29	89			34.73	8.69	34.13	218	296	Peak
*5854	64.64	55.32	78.2	-13.56	34.76	8.7	34.14	225	298	Peak
*5864	58.4	49.07	68.2	-9.8	34.76	8.71	34.14	218	296	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	55.75	46.6	68.2	-12.45	34.61	8.65	34.11	103	360	Peak
*5720	57.23	48.07	78.2	-20.97	34.62	8.65	34.11	103	360	Peak
5825	87.42	78.13			34.73	8.69	34.13	103	360	Average
5825	94.54	85.25			34.73	8.69	34.13	103	360	Peak
*5858	59.14	49.82	78.2	-19.06	34.76	8.7	34.14	103	360	Peak
*5866	56.86	47.53	68.2	-11.34	34.76	8.71	34.14	103	360	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5825 MHz: Fundamental frequency.
3. *: Out of restricted band

802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 38	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5148	50.19	41.94	54	-3.81	34.12	8.13	34	108	286	Average
5148	60.05	51.8	74	-13.95	34.12	8.13	34	108	286	Peak
5190	85.31	76.97			34.15	8.19	34	108	286	Average
5190	93.07	84.73			34.15	8.19	34	108	286	Peak
5456	42.87	34.05	54	-11.13	34.36	8.51	34.05	108	286	Average
5456	53	44.18	74	-21	34.36	8.51	34.05	108	286	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5148	52.99	44.74	54	-1.01	34.12	8.13	34	117	29	Average
5148	64.16	55.91	74	-9.84	34.12	8.13	34	117	29	Peak
5190	87.41	79.07			34.15	8.19	34	124	0	Average
5190	95.38	87.04			34.15	8.19	34	124	0	Peak
5448	42.93	34.1	54	-11.07	34.36	8.51	34.04	124	0	Average
5448	53.26	44.43	74	-20.74	34.36	8.51	34.04	124	0	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 46	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5148	44.44	36.19	54	-9.56	34.12	8.13	34	108	286	Average
5148	54.35	46.1	74	-19.65	34.12	8.13	34	108	286	Peak
5230	86.91	78.51			34.19	8.22	34.01	108	286	Average
5230	93.83	85.43			34.19	8.22	34.01	108	286	Peak
5438	42.73	33.94	54	-11.27	34.35	8.48	34.04	108	286	Average
5438	53.34	44.55	74	-20.66	34.35	8.48	34.04	108	286	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5150	43.51	35.26	54	-10.49	34.12	8.13	34	115	0	Average
5150	52.38	44.13	74	-21.62	34.12	8.13	34	115	0	Peak
5230	88.99	80.59			34.19	8.22	34.01	115	0	Average
5230	95.58	87.18			34.19	8.22	34.01	115	0	Peak
5458	42.89	34.07	54	-11.11	34.36	8.51	34.05	115	0	Average
5458	52.77	43.95	74	-21.23	34.36	8.51	34.05	115	0	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 54	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5128	42.49	34.27	54	-11.51	34.11	8.1	33.99	242	313	Average
5128	52.24	44.02	74	-21.76	34.11	8.1	33.99	242	313	Peak
5270	85.03	76.54			34.21	8.29	34.01	242	313	Average
5270	93.31	84.82			34.21	8.29	34.01	242	313	Peak
5350	44.19	35.56	54	-9.81	34.28	8.38	34.03	242	313	Average
5350	54.21	45.58	74	-19.79	34.28	8.38	34.03	242	313	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
5136	42.59	34.34	54	-11.41	34.11	8.13	33.99	100	12	Average
5136	52.56	44.31	74	-21.44	34.11	8.13	33.99	100	12	Peak
5270	87.94	79.45			34.21	8.29	34.01	100	12	Average
5270	95.58	87.09			34.21	8.29	34.01	100	12	Peak
5350	45.12	36.49	54	-8.88	34.28	8.38	34.03	105	28	Average
5350	56.62	47.99	74	-17.38	34.28	8.38	34.03	105	28	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 62	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	42.12	34.02	54	-11.88	34.05	8.03	33.98	223	313	Average
5062	52.89	44.79	74	-21.11	34.05	8.03	33.98	223	313	Peak
5310	85.36	76.81			34.25	8.32	34.02	223	313	Average
5310	93.19	84.64			34.25	8.32	34.02	223	313	Peak
5350	49.52	40.89	54	-4.48	34.28	8.38	34.03	223	313	Average
5350	63.02	54.39	74	-10.98	34.28	8.38	34.03	223	313	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	42.29	34.13	54	-11.71	34.08	8.07	33.99	106	13	Average
5094	52.1	43.94	74	-21.9	34.08	8.07	33.99	106	13	Peak
5310	87.94	79.39			34.25	8.32	34.02	106	13	Average
5310	95.08	86.53			34.25	8.32	34.02	106	13	Peak
5350	52.06	43.43	54	-1.94	34.28	8.38	34.03	106	345	Average
5350	65.79	57.16	74	-8.21	34.28	8.38	34.03	106	345	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 102	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	46.39	37.57	54	-7.61	34.36	8.51	34.05	104	7	Average
5460	59.09	50.27	74	-14.91	34.36	8.51	34.05	104	7	Peak
5470	61.88	53.05	68.2	-6.32	34.37	8.51	34.05	104	7	Peak
5510	85.93	77.02			34.4	8.57	34.06	104	7	Average
5510	93.51	84.6			34.4	8.57	34.06	104	7	Peak
5725	51.88	42.72	68.2	-16.32	34.62	8.65	34.11	104	7	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	47.34	38.52	54	-6.66	34.36	8.51	34.05	202	0	Average
5460	60	51.18	74	-14	34.36	8.51	34.05	202	0	Peak
5470	67.18	58.35	68.2	-1.02	34.37	8.51	34.05	194	0	Peak
5510	87.8	78.89			34.4	8.57	34.06	202	0	Average
5510	95.69	86.78			34.4	8.57	34.06	202	0	Peak
5725	52.41	43.25	68.2	-15.79	34.62	8.65	34.11	202	0	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 110	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5456	44.37	35.55	54	-9.63	34.36	8.51	34.05	148	7	Average
5456	57.76	48.94	74	-16.24	34.36	8.51	34.05	148	7	Peak
5470	59.88	51.05	68.2	-8.32	34.37	8.51	34.05	148	7	Peak
5550	85.04	76.07			34.45	8.59	34.07	126	7	Average
5550	93.08	84.11			34.45	8.59	34.07	126	7	Peak
5725	55.45	46.29	68.2	-12.75	34.62	8.65	34.11	126	7	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5450	45.47	36.65	54	-8.53	34.36	8.51	34.05	195	360	Average
5450	59.04	50.22	74	-14.96	34.36	8.51	34.05	195	360	Peak
5470	60.42	51.59	68.2	-7.78	34.37	8.51	34.05	195	360	Peak
5550	86.24	77.27			34.45	8.59	34.07	206	0	Average
5550	95.74	86.77			34.45	8.59	34.07	206	0	Peak
5725	56.27	47.11	68.2	-11.93	34.62	8.65	34.11	206	0	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 134	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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	43.38	34.59	54	-10.62	34.35	8.48	34.04	124	6	Average
5436	56.39	47.6	74	-17.61	34.35	8.48	34.04	124	6	Peak
5470	54.81	45.98	68.2	-13.39	34.37	8.51	34.05	124	6	Peak
5670	85	75.9			34.57	8.63	34.1	124	6	Average
5670	93.49	84.39			34.57	8.63	34.1	124	6	Peak
5725	63.57	54.41	68.2	-4.63	34.62	8.65	34.11	113	6	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	43.44	34.65	54	-10.56	34.35	8.48	34.04	195	0	Average
5436	56.87	48.08	74	-17.13	34.35	8.48	34.04	195	0	Peak
5470	55.34	46.51	68.2	-12.86	34.37	8.51	34.05	195	0	Peak
5670	87.7	78.6			34.57	8.63	34.1	195	0	Average
5670	95.5	86.4			34.57	8.63	34.1	195	0	Peak
5725	61.13	51.97	68.2	-7.07	34.62	8.65	34.11	185	358	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 151	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
*5712	67.19	58.04	68.2	-1.01	34.61	8.65	34.11	227	297	Peak
*5724	72.92	63.76	78.2	-5.28	34.62	8.65	34.11	227	297	Peak
5755	89.49	80.28			34.66	8.66	34.11	218	297	Average
5755	97.45	88.24			34.66	8.66	34.11	218	297	Peak
*5860	56.84	47.52	78.2	-21.36	34.76	8.7	34.14	218	297	Peak
*5864	56.39	47.06	68.2	-11.81	34.76	8.71	34.14	218	297	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
*5710	65.51	56.36	68.2	-2.69	34.61	8.65	34.11	124	6	Peak
*5720	68.72	59.56	78.2	-9.48	34.62	8.65	34.11	124	6	Peak
5755	85.32	76.11			34.66	8.66	34.11	104	360	Average
5755	93.45	84.24			34.66	8.66	34.11	104	360	Peak
*5852	55.71	46.41	78.2	-22.49	34.74	8.7	34.14	104	360	Peak
*5862	57.36	48.03	68.2	-10.84	34.76	8.71	34.14	104	360	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5755 MHz: Fundamental frequency.
3. *: Out of restricted band

EUT Test Condition		Measurement Detail	
Channel	Channel 159	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
*5712	58.74	49.59	68.2	-9.46	34.61	8.65	34.11	218	298	Peak
*5724	60.42	51.26	78.2	-17.78	34.62	8.65	34.11	218	298	Peak
5795	89.52	80.28			34.69	8.68	34.13	218	298	Average
5795	97.58	88.34			34.69	8.68	34.13	218	298	Peak
*5852	64.81	55.51	78.2	-13.39	34.74	8.7	34.14	236	298	Peak
*5862	62.76	53.43	68.2	-5.44	34.76	8.71	34.14	236	298	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
*5712	56.47	47.32	68.2	-11.73	34.61	8.65	34.11	104	360	Peak
*5722	58.07	48.91	78.2	-20.13	34.62	8.65	34.11	104	360	Peak
5795	85.17	75.93			34.69	8.68	34.13	104	360	Average
5795	93.1	83.86			34.69	8.68	34.13	104	360	Peak
*5852	58.2	48.9	78.2	-20	34.74	8.7	34.14	104	360	Peak
*5866	56.55	47.22	68.2	-11.65	34.76	8.71	34.14	104	360	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5795 MHz: Fundamental frequency.
3. *: Out of restricted band

802.11ac (VHT80)

EUT Test Condition		Measurement Detail	
Channel	Channel 42	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
5112	48.64	40.44	54	-5.36	34.09	8.1	33.99	108	286	Average
5112	57.14	48.94	74	-16.86	34.09	8.1	33.99	108	286	Peak
5210	82.11	73.75			34.17	8.19	34	108	286	Average
5210	90.63	82.27			34.17	8.19	34	108	286	Peak
5422	43.77	35	54	-10.23	34.33	8.48	34.04	108	286	Average
5422	52.54	43.77	74	-21.46	34.33	8.48	34.04	108	286	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	52.16	43.91	54	-1.84	34.12	8.13	34	103	19	Average
5146	62.36	54.11	74	-11.64	34.12	8.13	34	103	19	Peak
5210	84.97	76.61			34.17	8.19	34	124	0	Average
5210	92.37	84.01			34.17	8.19	34	124	0	Peak
5440	43.52	34.73	54	-10.48	34.35	8.48	34.04	124	0	Average
5440	52.65	43.86	74	-21.35	34.35	8.48	34.04	124	0	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 58	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
5136	46.16	37.91	54	-7.84	34.11	8.13	33.99	223	313	Average
5136	55.76	47.51	74	-18.24	34.11	8.13	33.99	223	313	Peak
5290	83.44	74.91			34.23	8.32	34.02	223	313	Average
5290	91.62	83.09			34.23	8.32	34.02	223	313	Peak
5352	52.66	44.03	54	-1.34	34.28	8.38	34.03	223	313	Average
5352	62.89	54.26	74	-11.11	34.28	8.38	34.03	223	313	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	44.02	35.77	54	-9.98	34.12	8.13	34	106	10	Average
5144	54.42	46.17	74	-19.58	34.12	8.13	34	106	10	Peak
5290	86.1	77.57			34.23	8.32	34.02	106	10	Average
5290	93.91	85.38			34.23	8.32	34.02	106	10	Peak
5352	52.83	44.2	54	-1.17	34.28	8.38	34.03	116	10	Average
5352	65.6	56.97	74	-8.4	34.28	8.38	34.03	116	10	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 106	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5454	51.97	43.15	54	-2.03	34.36	8.51	34.05	177	8	Average
5454	61.95	53.13	74	-12.05	34.36	8.51	34.05	177	8	Peak
5470	64.49	55.66	68.2	-3.71	34.37	8.51	34.05	177	8	Peak
5530	83.23	74.3			34.42	8.58	34.07	179	8	Average
5530	91.94	83.01			34.42	8.58	34.07	179	8	Peak
5725	56.77	47.61	68.2	-11.43	34.62	8.65	34.11	179	8	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	53	44.18	54	-1	34.36	8.51	34.05	230	359	Average
5460	63	54.18	74	-11	34.36	8.51	34.05	230	359	Peak
5470	65.94	57.11	68.2	-2.26	34.37	8.51	34.05	230	359	Peak
5530	85.74	76.81			34.42	8.58	34.07	229	359	Average
5530	93.8	84.87			34.42	8.58	34.07	229	359	Peak
5725	56.11	46.95	68.2	-12.09	34.62	8.65	34.11	229	359	Peak

Remarks:

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

EUT Test Condition		Measurement Detail	
Channel	Channel 122	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5460	47.67	38.85	54	-6.33	34.36	8.51	34.05	180	8	Average
5460	60.28	51.46	74	-13.72	34.36	8.51	34.05	180	8	Peak
5470	63.01	54.18	68.2	-5.19	34.37	8.51	34.05	180	8	Peak
5610	83.36	74.33			34.5	8.61	34.08	182	8	Average
5610	91.2	82.17			34.5	8.61	34.08	182	8	Peak
5725	57.8	48.64	68.2	-10.4	34.62	8.65	34.11	183	8	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
5454	47.97	39.15	54	-6.03	34.36	8.51	34.05	225	1	Average
5454	61.85	53.03	74	-12.15	34.36	8.51	34.05	225	1	Peak
5470	62.74	53.91	68.2	-5.46	34.37	8.51	34.05	225	1	Peak
5610	85.22	76.19			34.5	8.61	34.08	231	0	Average
5610	93.83	84.8			34.5	8.61	34.08	231	0	Peak
5725	59.39	50.23	68.2	-8.81	34.62	8.65	34.11	230	0	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5610 MHz: Fundamental frequency.
3. 5470 MHz & 5725 MHz: Out of restricted band

EUT Test Condition		Measurement Detail	
Channel	Channel 155	**Frequency Range**	1 GHz ~ 40 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
*5706	66.72	57.57	68.2	-1.48	34.61	8.65	34.11	218	299	Peak
*5718	67.54	58.38	78.2	-10.66	34.62	8.65	34.11	218	299	Peak
5775	86.55	77.32			34.68	8.67	34.12	218	296	Average
5775	94.51	85.28			34.68	8.67	34.12	218	296	Peak
*5858	63.52	54.2	78.2	-14.68	34.76	8.7	34.14	218	296	Peak
*5862	60.71	51.38	68.2	-7.49	34.76	8.71	34.14	218	296	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
*5712	61.37	52.22	68.2	-6.83	34.61	8.65	34.11	105	360	Peak
*5724	62.56	53.4	78.2	-15.64	34.62	8.65	34.11	105	360	Peak
5775	82.84	73.61			34.68	8.67	34.12	104	360	Average
5775	90.63	81.4			34.68	8.67	34.12	104	360	Peak
*5854	57.1	47.78	78.2	-21.1	34.76	8.7	34.14	104	360	Peak
*5862	56.28	46.95	68.2	-11.92	34.76	8.71	34.14	104	360	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
   Margin value = Emission level – Limit value
2. 5775 MHz: Fundamental frequency.
3. *: Out of restricted band

9 kHz ~ 30 MHz DATA:

The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

30 MHz ~ 1 GHz WORST-CASE DATA:

802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 38	**Frequency Range**	30 MHz ~ 1 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Quasi-peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
57.54	16.05	40.34	40	-23.95	7.04	0.9	32.23	200	0	Peak
92.64	23.54	45.17	43.5	-19.96	9.14	1.11	31.88	200	0	Peak
150.15	29.04	49.69	43.5	-14.46	10.1	1.52	32.27	200	0	Peak
405	17.71	29.6	46	-28.29	17.99	2.34	32.22	100	0	Peak
598.2	21.21	29.55	46	-24.79	20.98	2.87	32.19	100	0	Peak
701.1	24.2	30.08	46	-21.8	23.1	3.11	32.09	100	0	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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	27.72	42.42	40	-12.28	16.82	0.74	32.26	200	143	Peak
99.12	19.92	41.23	43.5	-23.58	9.62	1.28	32.21	200	143	Peak
156.63	26.54	46.72	43.5	-16.96	10.57	1.52	32.27	200	143	Peak
416.9	17.67	29.65	46	-28.33	17.81	2.41	32.2	100	0	Peak
603.1	21.4	29.48	46	-24.6	21.24	2.87	32.19	100	0	Peak
866.3	24.69	28.54	46	-21.31	24.4	3.44	31.69	100	0	Peak

Remarks:

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

802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 62	**Frequency Range**	30 MHz ~ 1 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Quasi-peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino Level (dBuV/m)**	**Read Level (dBuV)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Factor (dB/m)**	**Cable Loss (dB)**	**Preamp Factor (dB)**	**Antenna Height (cm)**	**Table Angle (Degree)**	**Remark**
93.18	23.98	45.57	43.5	-19.52	9.18	1.11	31.88	118	142	Peak
149.34	29.33	50.04	43.5	-14.17	10.04	1.52	32.27	139	168	Peak
199.83	23.55	43.3	43.5	-19.95	10.9	1.65	32.3	125	147	Peak
409.2	18.22	30.1	46	-27.78	17.92	2.41	32.21	164	119	Peak
653.5	22.33	29.16	46	-23.67	22.32	2.99	32.14	174	112	Peak
798.4	25.32	29.64	46	-20.68	24.42	3.32	32.06	126	184	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
84.54	20.18	42.44	40	-19.82	8.64	1.11	32.01	123	152	Peak
157.17	26.42	46.55	43.5	-17.08	10.62	1.52	32.27	154	212	Peak
223.32	19.64	38.38	46	-26.36	11.81	1.65	32.2	109	164	Peak
397.3	17.5	29.43	46	-28.5	17.95	2.34	32.22	107	116	Peak
585.6	21.28	30.18	46	-24.72	20.48	2.82	32.2	198	114	Peak
807.5	25.41	29.73	46	-20.59	24.38	3.32	32.02	108	164	Peak

Remarks:

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

802.11ac (VHT80)

EUT Test Condition		Measurement Detail	
Channel	Channel 106	**Frequency Range**	30 MHz ~ 1 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Quasi-peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
99.93	24.76	46.08	43.5	-18.74	9.66	1.28	32.26	115	165	Peak
150.42	28.96	49.55	43.5	-14.54	10.16	1.52	32.27	154	169	Peak
209.82	20.85	40.15	43.5	-22.65	11.31	1.65	32.26	175	142	Peak
451.2	18.53	30.18	46	-27.47	18	2.49	32.14	112	194	Peak
679.4	23.78	29.53	46	-22.22	23.31	3.05	32.11	154	106	Peak
841.1	25.58	30.34	46	-20.42	23.7	3.38	31.84	161	274	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
49.98	18.86	42.38	40	-21.14	7.8	0.9	32.22	104	113	Peak
99.39	19.96	41.32	43.5	-23.54	9.62	1.28	32.26	168	213	Peak
157.44	26.41	46.54	43.5	-17.09	10.62	1.52	32.27	106	124	Peak
447.7	17.51	29.2	46	-28.49	17.97	2.49	32.15	159	124	Peak
673.1	23.43	29.1	46	-22.57	23.4	3.05	32.12	164	113	Peak
850.2	25.65	30.2	46	-20.35	23.8	3.44	31.79	185	124	Peak

Remarks:

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

802.11n (HT40)

EUT Test Condition		Measurement Detail	
Channel	Channel 151	**Frequency Range**	30 MHz ~ 1 GHz
Input Power	120 Vac, 60 Hz	**Detector Function**	Peak (PK) Quasi-peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	**Tested By**	Karl Lee

Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	**Emissino 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**
97.23	22.37	43.73	43.5	-21.13	9.46	1.28	32.1	176	145	Peak
146.37	28.46	49.5	43.5	-15.04	9.85	1.38	32.27	131	104	Peak
200.91	22.39	42.08	43.5	-21.11	10.95	1.65	32.29	145	126	Peak
402.9	18.15	30	46	-27.85	18.03	2.34	32.22	151	128	Peak
657	22.56	29.18	46	-23.44	22.53	2.99	32.14	171	263	Peak
873.3	26.09	29.5	46	-19.91	24.8	3.44	31.65	136	120	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	**Emissino 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**
73.47	18.92	41.82	40	-21.08	8.21	1.11	32.22	159	324	Peak
158.52	25.63	45.7	43.5	-17.87	10.68	1.52	32.27	164	125	Peak
209.55	20.56	39.86	43.5	-22.94	11.31	1.65	32.26	136	124	Peak
431.6	17.56	29.54	46	-28.44	17.78	2.41	32.17	153	125	Peak
715.8	24.21	29.94	46	-21.79	23.27	3.11	32.11	161	127	Peak
881	26.31	29.58	46	-19.69	24.84	3.49	31.6	124	119	Peak

Remarks:

1. 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 (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

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 0.50 MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 16, 2015	Nov. 15, 2016
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Dec. 26, 2015	Dec. 25, 2016
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 26, 2016	Feb. 25, 2017
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 24, 2015	Jul. 23, 2016
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

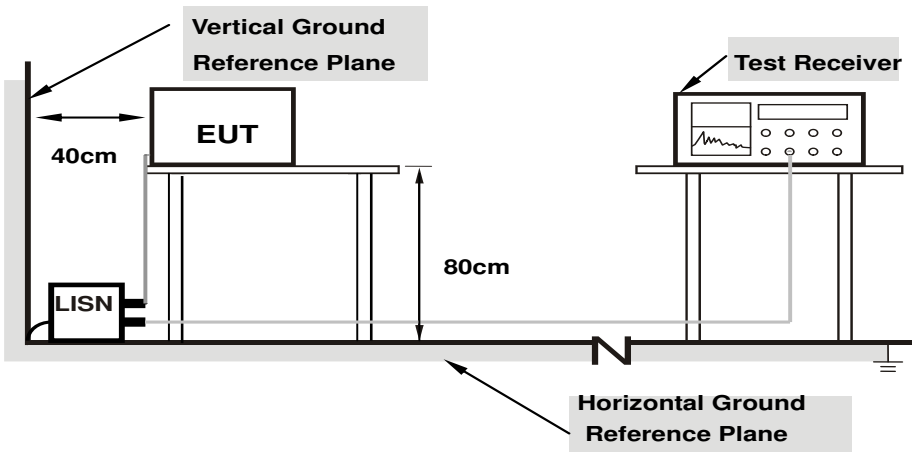
a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

4.2.6 EUT Operating Conditions

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

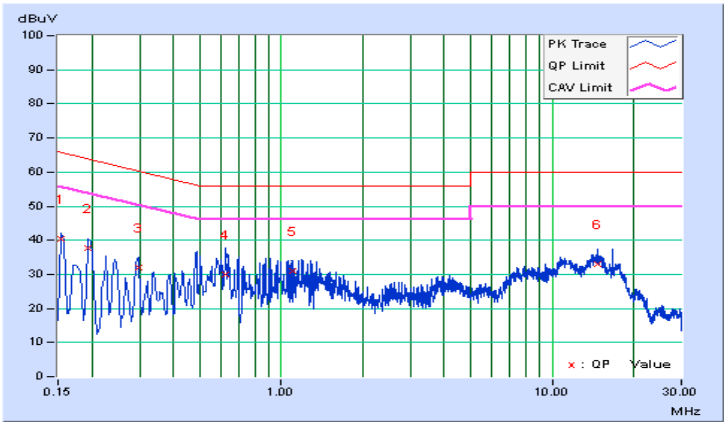
4.2.7 Test Results

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25℃, 65%RH
Tested by	Toby Tian	Test Date	2016/3/24

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15400	10.02	30.34	17.64	40.36	27.66	65.78	55.78	-25.42	-28.12
2	0.19418	10.11	27.45	15.47	37.56	25.58	63.86	53.86	-26.30	-28.28
3	0.29677	10.12	21.98	10.55	32.10	20.67	60.33	50.33	-28.23	-29.66
4	0.62600	10.19	19.71	11.42	29.90	21.61	56.00	46.00	-26.10	-24.39
5	1.09632	10.29	20.82	9.13	31.11	19.42	56.00	46.00	-24.89	-26.58
6	14.71000	10.91	22.13	15.65	33.04	26.56	60.00	50.00	-26.96	-23.44

Remarks:

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

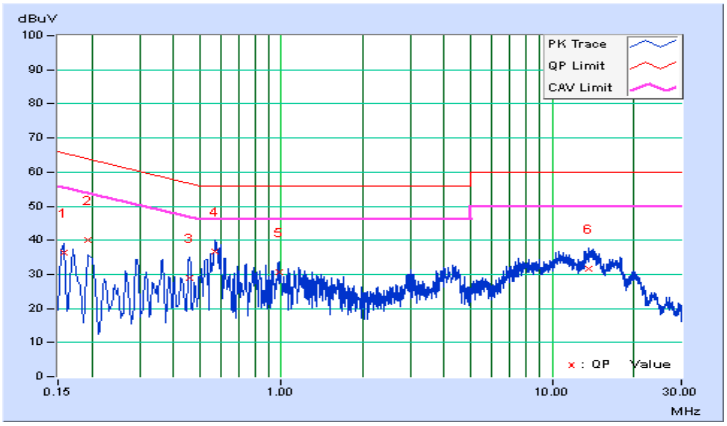


Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25℃, 65%RH
Tested by	Toby Tian	Test Date	2016/3/24

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15770	10.01	26.45	13.15	36.46	23.16	65.58	55.58	-29.12	-32.42
2	0.19418	10.04	29.86	18.52	39.90	28.56	63.86	53.86	-23.96	-25.30
3	0.45716	10.16	18.88	7.41	29.04	17.57	56.74	46.74	-27.71	-29.18
4	0.56600	10.17	26.46	11.90	36.63	22.07	56.00	46.00	-19.37	-23.93
5	0.97890	10.23	20.55	7.58	30.78	17.81	56.00	46.00	-25.22	-28.19
6	13.56200	10.73	20.80	13.82	31.53	24.55	60.00	50.00	-28.47	-25.45

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 Measurment

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 ≦ 125 mW (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	250 mW (24 dBm)
U-NII-2A	√		250 mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	√		250 mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√		1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

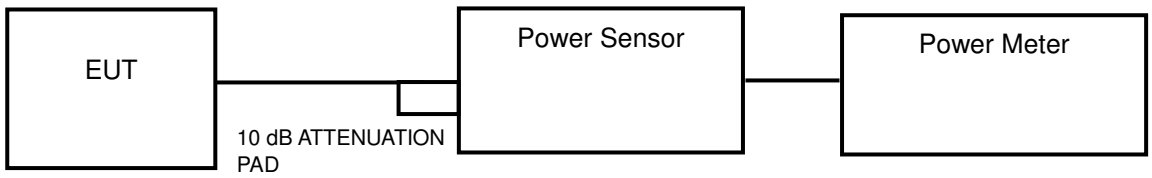
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};

Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20 MHz channel widths with $N_{ANT} \geq 5$.

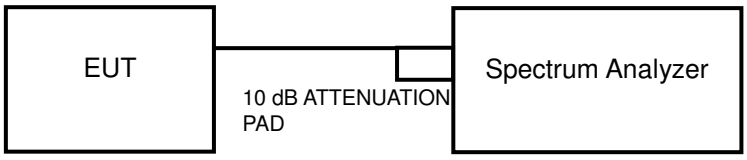
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.3.2 Test Setup

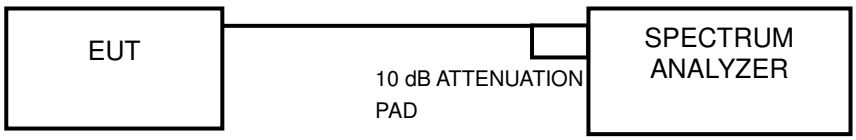
<Power Output Measurement>



or



<26 dB Bandwidth>



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

Average Power Measurement

<802.11a, 802.11n (HT20), 802.11n (HT40)>

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 (VHT80)>

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.

26 dB 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 fromTest Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

Power Output:

<1TX>

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	40.09	16.03	24	Pass
44	5220	40.18	16.04	24	Pass
48	5240	39.81	16.00	24	Pass
52	5260	40.18	16.04	24	Pass
60	5300	41.02	16.13	24	Pass
64	5320	39.99	16.02	24	Pass
100	5500	37.41	15.73	24	Pass
116	5580	38.46	15.85	24	Pass
140	5700	37.84	15.78	24	Pass
149	5745	39.90	16.01	30	Pass
157	5785	40.27	16.05	30	Pass
165	5825	38.64	15.87	30	Pass

NOTE:

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

1. 11 dBm + 10log (40.25) = 27.05 dBm > 24 dBm.
2. 11 dBm + 10log (27.42) = 25.38 dBm > 24 dBm.
3. 11 dBm + 10log (29.67) = 25.72 dBm > 24 dBm.
4. 11 dBm + 10log (25.63) = 25.09 dBm > 24 dBm.
5. 11 dBm + 10log (27.89) = 25.45 dBm > 24 dBm.
6. 11 dBm + 10log (27.87) = 25.45 dBm > 24 dBm.

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	40.27	16.05	24	Pass
44	5220	39.99	16.02	24	Pass
48	5240	40.36	16.06	24	Pass
52	5260	39.99	16.02	24	Pass
60	5300	40.83	16.11	24	Pass
64	5320	40.64	16.09	24	Pass
100	5500	37.07	15.69	24	Pass
116	5580	37.50	15.74	24	Pass
140	5700	36.64	15.64	24	Pass
149	5745	40.55	16.08	30	Pass
157	5785	40.93	16.12	30	Pass
165	5825	39.90	16.01	30	Pass

NOTE:

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

1. 11 dBm + 10log (44.39) = 27.47 dBm > 24 dBm.
2. 11 dBm + 10log (45.17) = 27.55 dBm > 24 dBm.
3. 11 dBm + 10log (46.01) = 27.63 dBm > 24 dBm.
4. 11 dBm + 10log (47.30) = 27.75 dBm > 24 dBm.
5. 11 dBm + 10log (42.48) = 27.28 dBm > 24 dBm.
6. 11 dBm + 10log (45.70) = 27.60 dBm > 24 dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	34.99	15.44	24	Pass
46	5230	34.83	15.42	24	Pass
54	5270	38.11	15.81	24	Pass
62	5310	38.46	15.85	24	Pass
102	5510	40.36	16.06	24	Pass
110	5550	39.81	16.00	24	Pass
134	5670	35.89	15.55	24	Pass
151	5755	37.67	15.76	30	Pass
159	5795	38.37	15.84	30	Pass

NOTE:

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

1. 11 dBm + 10log (89.74) = 30.53 dBm > 24 dBm.
2. 11 dBm + 10log (85.18) = 30.30 dBm > 24 dBm.
3. 11 dBm + 10log (89.16) = 30.50 dBm > 24 dBm.
4. 11 dBm + 10log (90.93) = 30.59 dBm > 24 dBm.
5. 11 dBm + 10log (96.02) = 30.82 dBm > 24 dBm.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	36.14	15.58	24	Pass
58	5290	36.64	15.64	24	Pass
106	5530	39.63	15.98	24	Pass
122	5610	37.33	15.72	24	Pass
155	5775	36.64	15.64	30	Pass

NOTE:

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

1. 11 dBm + 10log (117.51) = 31.70 dBm > 24 dBm.
2. 11 dBm + 10log (123.82) = 31.93 dBm > 24 dBm.
3. 11 dBm + 10log (134.58) = 32.29 dBm > 24 dBm.

<2TX>

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Cunducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	12.92	13.06	39.82	16.00	24	Pass
44	5220	12.89	13.12	39.97	16.02	24	Pass
48	5240	12.94	13.20	40.57	16.08	24	Pass
52	5260	13.00	13.01	39.95	16.02	24	Pass
60	5300	13.13	13.17	41.31	16.16	24	Pass
64	5320	12.95	13.09	40.09	16.03	24	Pass
100	5500	13.19	12.17	37.33	15.72	24	Pass
116	5580	13.18	12.21	37.43	15.73	24	Pass
140	5700	13.06	12.16	36.67	15.64	24	Pass
149	5745	12.91	13.15	40.20	16.04	30	Pass
157	5785	12.94	13.33	41.21	16.15	30	Pass
165	5825	12.86	13.21	40.26	16.05	30	Pass

NOTE:

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

CHAIN 0

1. 11 dBm + 10log (28.37) = 25.53 dBm > 24 dBm.
2. 11 dBm + 10log (27.32) = 25.36 dBm > 24 dBm.
3. 11 dBm + 10log (39.57) = 26.97 dBm > 24 dBm.
4. 11 dBm + 10log (22.25) = 24.47 dBm > 24 dBm.
5. 11 dBm + 10log (22.15) = 24.45 dBm > 24 dBm.
6. 11 dBm + 10log (25.15) = 25.01 dBm > 24 dBm.

CHAIN 1

1. 11 dBm + 10log (22.64) = 24.55 dBm > 24 dBm.
2. 11 dBm + 10log (29.10) = 25.64 dBm > 24 dBm.
3. 11 dBm + 10log (25.19) = 25.01 dBm > 24 dBm.
4. 11 dBm + 10log (22.09) = 24.44 dBm > 24 dBm.
5. 11 dBm + 10log (22.05) = 24.43 dBm > 24 dBm.
6. 11 dBm + 10log (24.74) = 24.93 dBm > 24 dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Cunducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	12.34	13.57	39.89	16.01	24	Pass
46	5230	12.39	13.67	40.62	16.09	24	Pass
54	5270	12.31	13.58	39.83	16.00	24	Pass
62	5310	12.58	13.40	39.99	16.02	24	Pass
102	5510	12.99	13.14	40.51	16.08	24	Pass
110	5550	12.61	12.94	37.92	15.79	24	Pass
134	5670	12.36	12.63	35.54	15.51	24	Pass
151	5755	11.73	13.95	39.72	15.99	30	Pass
159	5795	11.81	13.91	39.77	16.00	30	Pass

NOTE:

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

CHAIN 0

1. 11 dBm + 10log (57.78) = 28.62 dBm > 24 dBm.
2. 11 dBm + 10log (47.40) = 27.76 dBm > 24 dBm.
3. 11 dBm + 10log (81.66) = 30.12 dBm > 24 dBm.
4. 11 dBm + 10log (70.07) = 29.46 dBm > 24 dBm.
5. 11 dBm + 10log (74.42) = 29.72 dBm > 24 dBm.

CHAIN 1

1. 11 dBm + 10log (76.34) = 29.83 dBm > 24 dBm.
2. 11 dBm + 10log (80.16) = 30.04 dBm > 24 dBm.
3. 11 dBm + 10log (71.18) = 29.52 dBm > 24 dBm.
4. 11 dBm + 10log (69.66) = 29.43 dBm > 24 dBm.
5. 11 dBm + 10log (70.91) = 29.51 dBm > 24 dBm.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Cunducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
42	5210	12.03	13.14	36.57	15.63	24	Pass
58	5290	12.86	12.75	38.16	15.82	24	Pass
106	5530	12.91	13.34	41.12	16.14	24	Pass
122	5610	12.46	12.11	33.88	15.30	24	Pass
155	5775	12.17	13.99	41.54	16.18	30	Pass

NOTE:

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

CHAIN 0

1. 11 dBm + 10log (106.98) = 31.29 dBm > 24 dBm.
2. 11 dBm + 10log (110.64) = 31.44 dBm > 24 dBm.
3. 11 dBm + 10log (113.86) = 31.56 dBm > 24 dBm.

CHAIN 1

1. 11 dBm + 10log (102.36) = 31.10 dBm > 24 dBm.
2. 11 dBm + 10log (94.08) = 30.73 dBm > 24 dBm.
3. 11 dBm + 10log (116.31) = 31.66 dBm > 24 dBm.

26 dB Bandwidth:

<1TX>

802.11a

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	Pass / Fail
36	5180	40.45	Pass
44	5220	27.48	Pass
48	5240	24.40	Pass
52	5260	40.25	Pass
60	5300	27.42	Pass
64	5320	29.67	Pass
100	5500	25.63	Pass
116	5580	27.89	Pass
140	5700	27.87	Pass

802.11n (HT20)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	Pass / Fail
36	5180	43.87	Pass
44	5220	44.74	Pass
48	5240	44.80	Pass
52	5260	44.39	Pass
60	5300	45.17	Pass
64	5320	46.01	Pass
100	5500	47.30	Pass
116	5580	42.48	Pass
140	5700	45.70	Pass

802.11n (HT40)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	Pass / Fail
38	5190	88.96	Pass
46	5230	86.68	Pass
54	5270	89.74	Pass
62	5310	85.18	Pass
102	5510	89.16	Pass
110	5550	90.93	Pass
134	5670	96.02	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)	Pass / Fail
42	5210	120.86	Pass
58	5290	117.51	Pass
106	5530	123.82	Pass
122	5610	134.58	Pass

<2TX>

802.11n (HT20)

Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
36	5180	27.03	27.32	Pass
44	5220	27.60	26.86	Pass
48	5240	26.32	41.70	Pass
52	5260	28.37	22.64	Pass
60	5300	27.32	29.10	Pass
64	5320	39.57	25.19	Pass
100	5500	22.25	22.09	Pass
116	5580	22.15	22.05	Pass
140	5700	25.15	24.74	Pass

802.11n (HT40)

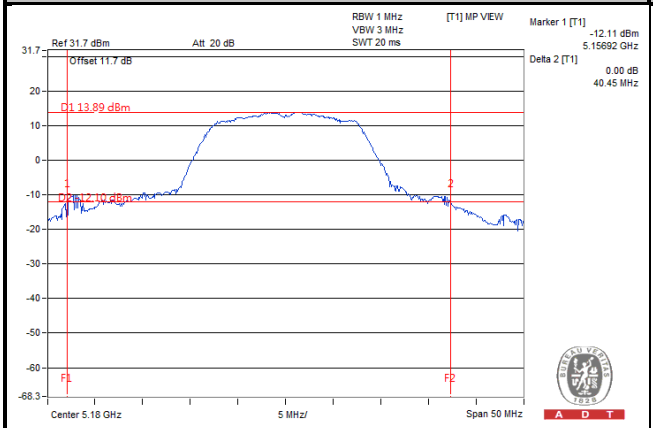
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
38	5190	59.37	80.98	Pass
46	5230	58.00	78.24	Pass
54	5270	57.78	76.34	Pass
62	5310	47.40	80.16	Pass
102	5510	81.66	71.18	Pass
110	5550	70.07	69.66	Pass
134	5670	74.42	70.91	Pass

802.11ac (VHT80)

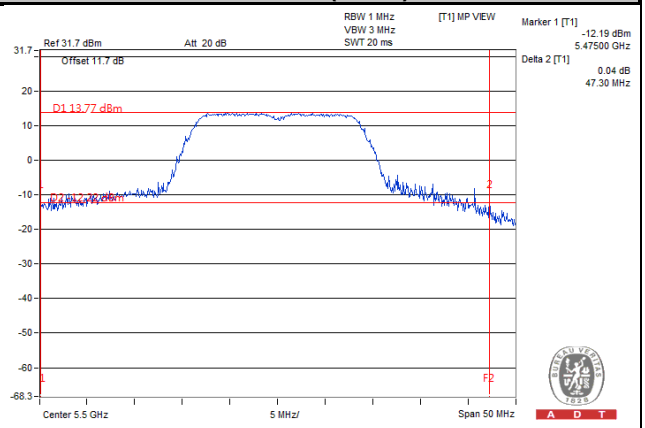
Channel	Frequency (MHz)	26 dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
42	5210	104.17	104.71	Pass
58	5290	106.98	102.36	Pass
106	5530	110.64	94.08	Pass
122	5610	113.86	116.31	Pass

Spectrum Plot of Worst Value

802.11a



802.11n (HT20)



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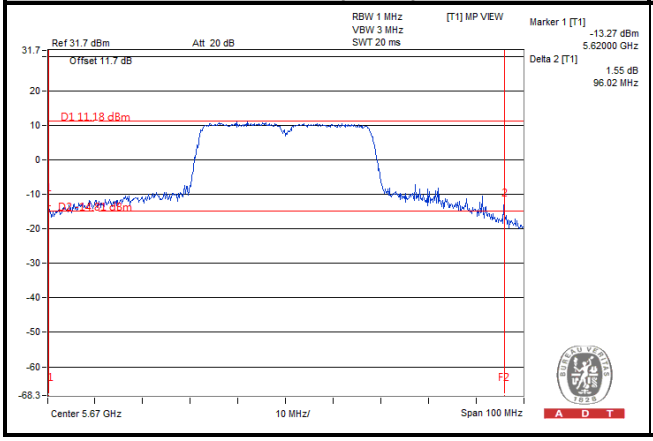
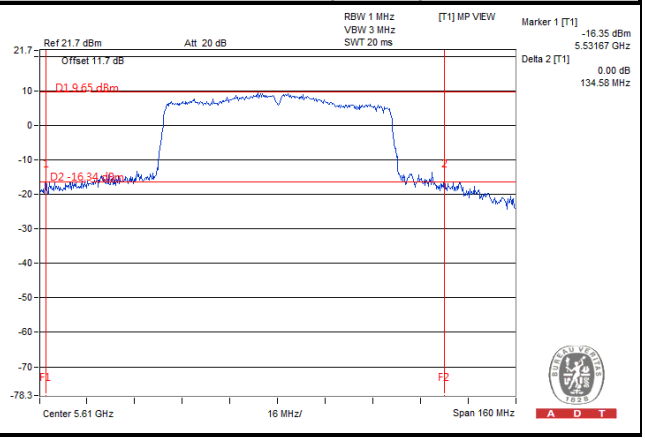


802.11ac (VHT80)

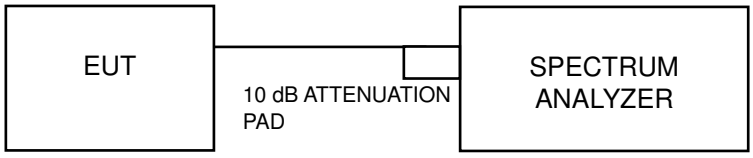


4.4 Peak Power Spectral Density Measurement

4.4.1 Limits of Peak Power Spectral Density Measurement

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	17 dBm/MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Mobile and Portable client device	11 dBm/MHz
U-NII-2A	√		11 dBm/MHz
U-NII-2C	√		11 dBm/MHz
U-NII-3	√		30 dBm/500 kHz

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:

Using method SA-2

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
3. Sweep time = 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)

※For U-NII-3:

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300 kHz)
5. Sweep time = auto, trigger set to “free run”.
6. Trace average at least 100 traces in power averaging mode.
7. 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

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

4.4.7 Test Results

<1TX>

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	5.04	0.25	5.29	11	Pass
44	5220	5.07	0.25	5.32	11	Pass
48	5240	5.16	0.25	5.41	11	Pass
52	5260	5.44	0.25	5.69	11	Pass
60	5300	5.60	0.25	5.85	11	Pass
64	5320	5.85	0.25	6.10	11	Pass
100	5500	5.24	0.25	5.49	11	Pass
116	5580	5.70	0.25	5.95	11	Pass
140	5700	5.84	0.25	6.09	11	Pass

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

802.11n (HT20)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm)	Duty Factor	PSD with Duty Factor (dBm)	Maximum Limit (dBm)	Pass / Fail
36	5180	3.33	0.25	3.58	11	Pass
44	5220	3.26	0.25	3.51	11	Pass
48	5240	3.19	0.25	3.44	11	Pass
52	5260	3.51	0.25	3.76	11	Pass
60	5300	3.39	0.25	3.64	11	Pass
64	5320	3.52	0.25	3.77	11	Pass
100	5500	3.57	0.25	3.82	11	Pass
116	5580	4.06	0.25	4.31	11	Pass
140	5700	3.11	0.25	3.36	11	Pass

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

802.11n (HT40)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm)	Duty Factor	PSD with Duty Factor (dBm)	Maximum Limit (dBm)	Pass / Fail
38	5190	2.74	0.60	3.34	11	Pass
46	5230	2.10	0.60	2.70	11	Pass
54	5270	2.05	0.60	2.65	11	Pass
62	5310	2.53	0.60	3.13	11	Pass
102	5510	2.77	0.60	3.37	11	Pass
110	5550	2.49	0.60	3.09	11	Pass
134	5670	1.90	0.60	2.50	11	Pass

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

802.11ac (VHT80)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm)	Duty Factor	PSD with Duty Factor (dBm)	Maximum Limit (dBm)	Pass / Fail
42	5210	-0.20	1.05	0.85	11	Pass
58	5290	-0.26	1.05	0.79	11	Pass
106	5530	-0.34	1.05	0.71	11	Pass
122	5610	-1.14	1.05	-0.09	11	Pass

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

<2TX>

802.11n (HT20)

Channel	Frequency (MHz)	PSD (dBm)		Total PSD w/o Duty Factor (dBm)	Duty Factor	Total PSD with Duty Factor (dBm)	Maximum Limit (dBm)	Pass / Fail
		Chain 0	Chain 1					
36	5180	0.13	0.85	3.52	0.51	4.02	11	Pass
44	5220	0.01	1.15	3.63	0.51	4.14	11	Pass
48	5240	0.33	1.04	3.71	0.51	4.22	11	Pass
52	5260	0.38	0.57	3.49	0.51	3.99	11	Pass
60	5300	0.12	0.75	3.46	0.51	3.96	11	Pass
64	5320	0.26	0.66	3.47	0.51	3.98	11	Pass
100	5500	0.80	0.83	3.83	0.51	4.33	11	Pass
116	5580	0.52	0.54	3.54	0.51	4.05	11	Pass
140	5700	-0.06	0.33	3.15	0.51	3.66	11	Pass

NOTE:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band:**
   Directional gain = -3.5 dBi + 10log(2) = -0.49 dBi < 6 dBi, so the power density limit no need to be reduced.
   For U-NII-2A, U-NII-2C Band:
   Directional gain = -3 dBi + 10log(2) = 0.01 dBi < 6 dBi, so the power density limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

Channel	Frequency (MHz)	PSD (dBm)		Total PSD w/o Duty Factor (dBm)	Duty Factor	Total PSD with Duty Factor (dBm)	Maximum Limit (dBm)	Pass / Fail
		Chain 0	Chain 1					
38	5190	-0.91	-0.81	2.15	1.19	3.34	11	Pass
46	5230	-0.79	-0.83	2.20	1.19	3.39	11	Pass
54	5270	-1.78	-1.02	1.63	1.19	2.82	11	Pass
62	5310	-1.52	-0.55	2.00	1.19	3.19	11	Pass
102	5510	-0.93	-0.27	2.42	1.19	3.61	11	Pass
110	5550	-1.20	-0.31	2.28	1.19	3.47	11	Pass
134	5670	-0.78	-1.75	1.77	1.19	2.96	11	Pass

NOTE:

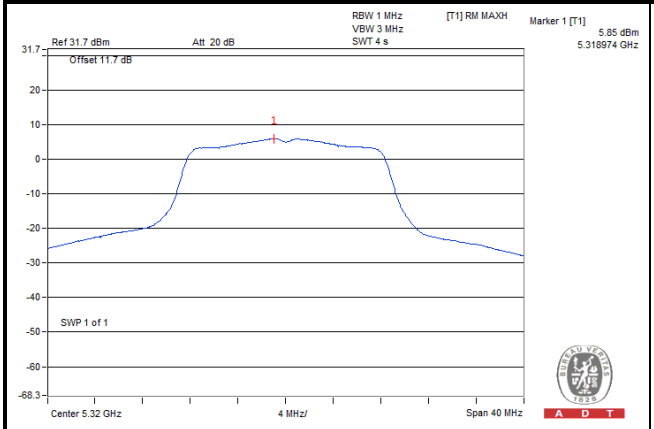
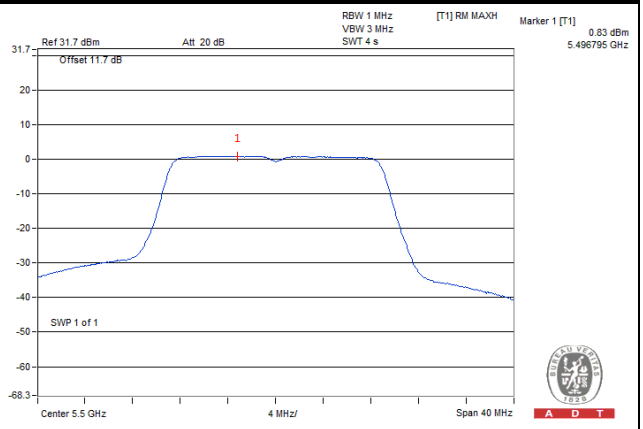
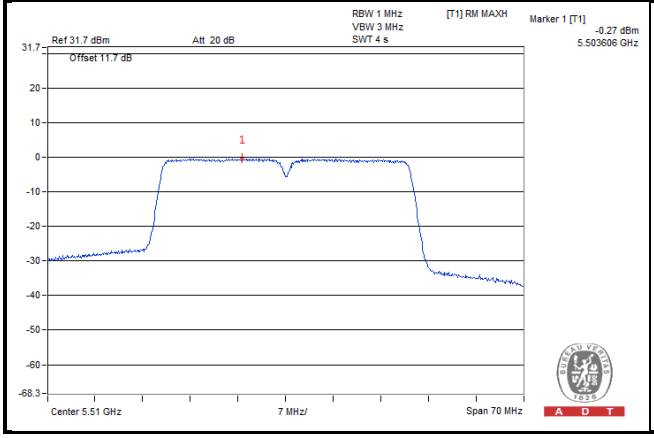
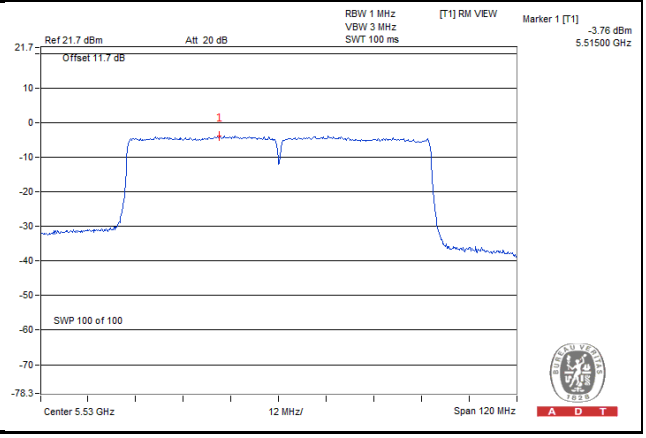
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band:**
   Directional gain = -3.5 dBi + 10log(2) = -0.49 dBi < 6 dBi, so the power density limit no need to be reduced.
   For U-NII-2A, U-NII-2C Band:
   Directional gain = -3 dBi + 10log(2) = 0.01 dBi < 6 dBi, so the power density limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

Channel	Frequency (MHz)	PSD (dBm)		Total PSD w/o Duty Factor (dBm)	Duty Factor	Total PSD with Duty Factor (dBm)	Maximum Limit (dBm)	Pass / Fail
		Chain 0	Chain 1					
42	5210	-5.02	-4.21	-1.59	2.38	0.80	11	Pass
58	5290	-4.38	-4.26	-1.31	2.38	1.07	11	Pass
106	5530	-4.21	-3.76	-0.97	2.38	1.41	11	Pass
122	5610	-4.62	-4.55	-1.57	2.38	0.81	11	Pass

NOTE:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. **For U-NII-1 Band:**
   Directional gain = -3.5 dBi + 10log(2) = -0.49 dBi < 6 dBi, so the power density limit no need to be reduced.
   For U-NII-2A, U-NII-2C Band:
   Directional gain = -3 dBi + 10log(2) = 0.01 dBi < 6 dBi, so the power density limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a	802.11n (HT20)
	
802.11n (HT40)	802.11ac (VHT80)
	

For U-NII-3 Band

<1TX>

802.11a

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm)	Duty Factor	PSD with Duty Factor (dBm)	Limit (dBm/500 kHz)	Pass / Fail
149	5745	2.17	0.25	2.42	30	Pass
157	5785	2.20	0.25	2.45	30	Pass
165	5825	2.51	0.25	2.76	30	Pass

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

802.11n (HT20)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm)	Duty Factor	PSD with Duty Factor (dBm)	Limit (dBm/500 kHz)	Pass / Fail
149	5745	1.86	0.25	2.11	30	Pass
157	5785	1.89	0.25	2.14	30	Pass
165	5825	2.18	0.25	2.43	30	Pass

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

802.11n (HT40)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm)	Duty Factor	PSD with Duty Factor (dBm)	Limit (dBm/500 kHz)	Pass / Fail
151	5755	-0.12	0.60	0.48	30	Pass
159	5795	0.56	0.60	1.16	30	Pass

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

802.11ac (VHT80)

Channel	Frequency (MHz)	PSD w/o Duty Factor (dBm)	Duty Factor	PSD with Duty Factor (dBm)	Limit (dBm/500 kHz)	Pass / Fail
155	5775	-4.35	1.05	-3.30	30	Pass

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

<2TX>

802.11n (HT20)

TX Chain	Channel	Frequency (MHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Total PSD without Duty Factor (dBm/500 kHz)	Duty Factor	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	149	5745	-1.77	3.01	1.24	0.51	1.75	30	Pass
	157	5785	-1.95	3.01	1.06	0.51	1.57	30	Pass
	165	5825	-1.56	3.01	1.45	0.51	1.96	30	Pass
1	149	5745	-1.88	3.01	1.13	0.51	1.64	30	Pass
	157	5785	-1.66	3.01	1.35	0.51	1.86	30	Pass
	165	5825	-1.36	3.01	1.65	0.51	2.16	30	Pass

NOTE:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = -3.5 dBi + 10log(2) = -0.49 dBi < 6 dBi, so the power density limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

TX Chain	Channel	Frequency (MHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Total PSD without Duty Factor (dBm/500 kHz)	Duty Factor	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	151	5755	-6.34	3.01	-3.33	1.19	-2.14	30	Pass
	159	5795	-6.00	3.01	-2.99	1.19	-1.80	30	Pass
1	151	5755	-4.65	3.01	-1.64	1.19	-0.45	30	Pass
	159	5795	-3.92	3.01	-0.91	1.19	0.28	30	Pass

NOTE:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = -3.5 dBi + 10log(2) = -0.49 dBi < 6 dBi, so the power density limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

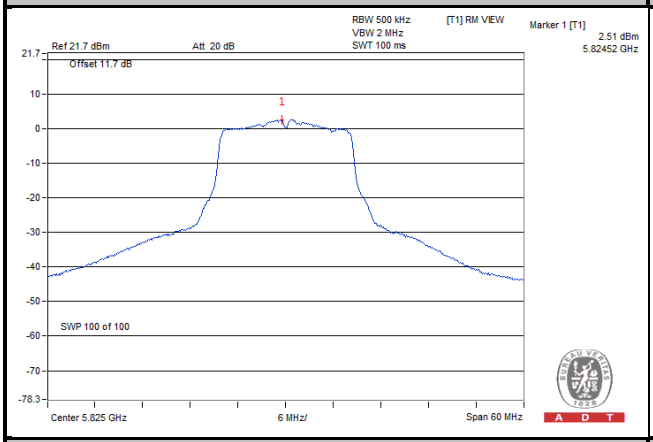
TX Chain	Channel	Frequency (MHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Total PSD without Duty Factor (dBm/500 kHz)	Duty Factor	Total PSD with Duty Factor (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	155	5775	-10.05	3.01	-7.04	2.38	-4.66	30	Pass
1	155	5775	-8.17	3.01	-5.16	2.38	-2.78	30	Pass

NOTE:

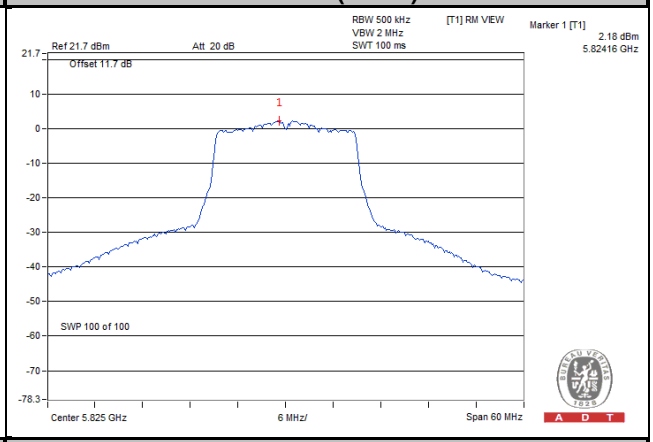
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = -3.5 dBi + 10log(2) = -0.49 dBi < 6 dBi, so the power density limit no need to be reduced.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

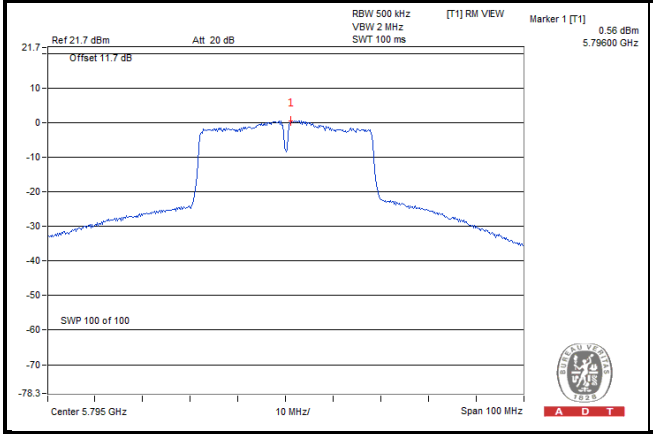
802.11a



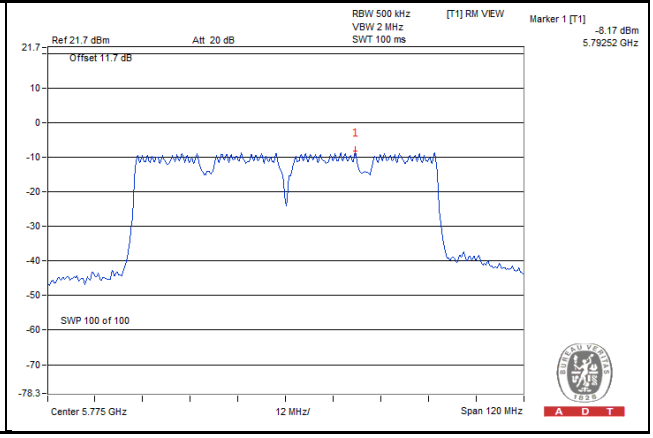
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

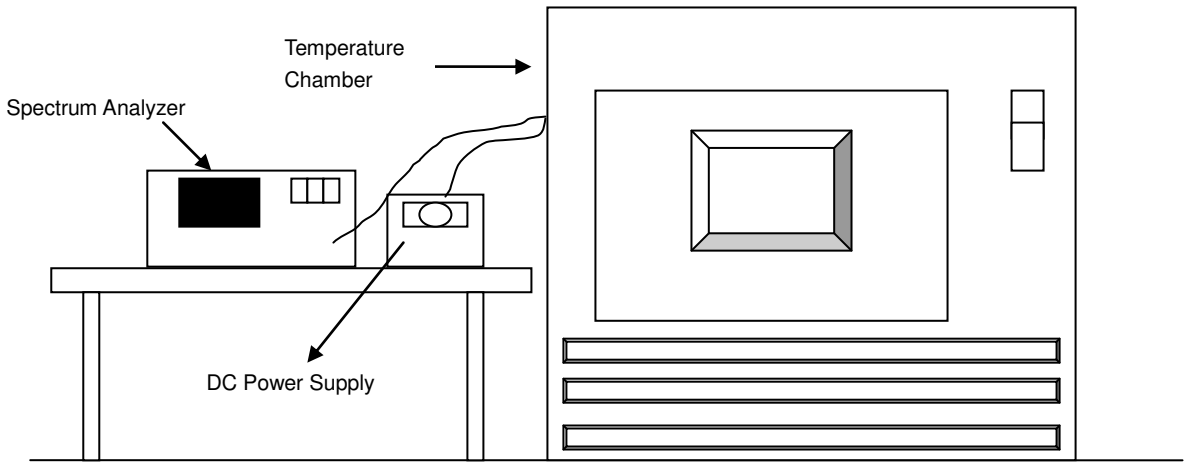


4.5 Frequency Stability

4.5.1 Limit 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 10 dB 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: 5320 MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
55	3.85	5320.016448	3.092	5320.017069	3.208	5320.016463	3.095	5320.016373	3.078
50	3.85	5320.017029	3.201	5320.017159	3.225	5320.017155	3.225	5320.016893	3.175
40	3.85	5320.017035	3.202	5320.017637	3.315	5320.017380	3.267	5320.016945	3.185
30	3.85	5320.018597	3.496	5320.018129	3.408	5320.018526	3.482	5320.018647	3.505
20	3.85	5320.019842	3.730	5320.019638	3.691	5320.019589	3.682	5320.019881	3.737
10	3.85	5320.021310	4.006	5320.020921	3.933	5320.020732	3.897	5320.020752	3.901
0	3.85	5320.019466	3.659	5320.019597	3.684	5320.019790	3.720	5320.019428	3.652
-10	3.85	5320.018106	3.403	5320.017837	3.353	5320.018236	3.428	5320.017986	3.381
-20	3.85	5320.017887	3.362	5320.017577	3.304	5320.017220	3.237	5320.017681	3.323
-30	3.85	5320.016110	3.028	5320.016585	3.117	5320.016355	3.074	5320.016390	3.081

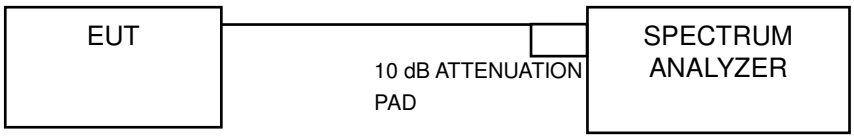
Frequency Stability Versus Temp.									
Operating Frequency: 5320 MHz									
Temp. (℃)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)	Measured Frequency (MHz)	Frequency Drift (ppm)
20	3.6	5320.015312	2.878	5320.015116	2.841	5320.014857	2.793	5320.015038	2.827
	3.85	5320.019842	3.730	5320.019638	3.691	5320.019589	3.682	5320.019881	3.737
	4.4	5320.016807	3.159	5320.016514	3.104	5320.016322	3.068	5320.016924	3.181

4.6 6 dB Bandwidth Measurment

4.6.1 Limits of 6 dB Bandwidth Measurement

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

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

MEASUREMENT PROCEDURE REF

a. Set resolution bandwidth (RBW) = 100 kHz
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. 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 Condition

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

<1TX>

802.11a

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.37	0.5	Pass
157	5785	16.36	0.5	Pass
165	5825	16.36	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.60	0.5	Pass
157	5785	17.60	0.5	Pass
165	5825	17.61	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	36.06	0.5	Pass
159	5795	36.34	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	76.00	0.5	Pass

<2TX>

802.11n (HT20)

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.66	17.67	0.5	Pass
157	5785	17.65	17.66	0.5	Pass
165	5825	17.65	17.64	0.5	Pass

802.11n (HT40)

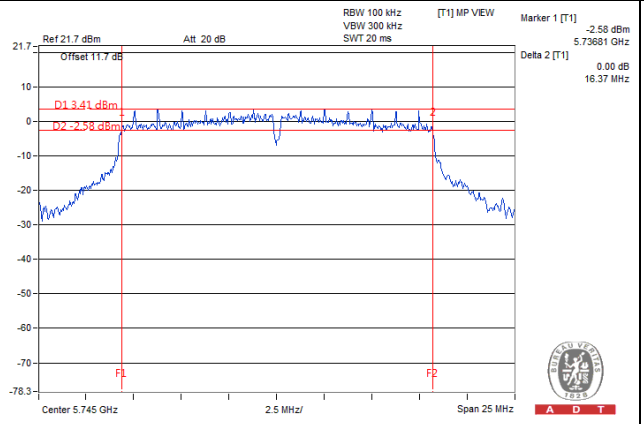
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	36.44	36.45	0.5	Pass
159	5795	36.44	36.41	0.5	Pass

802.11ac (VHT80)

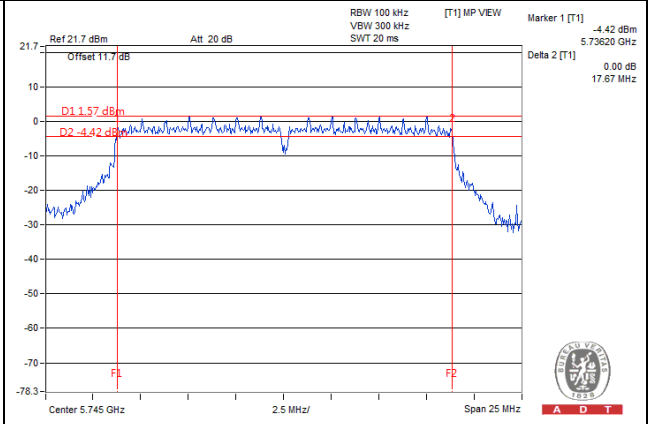
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
155	5775	76.60	76.12	0.5	Pass

Spectrum Plot of Worst Value

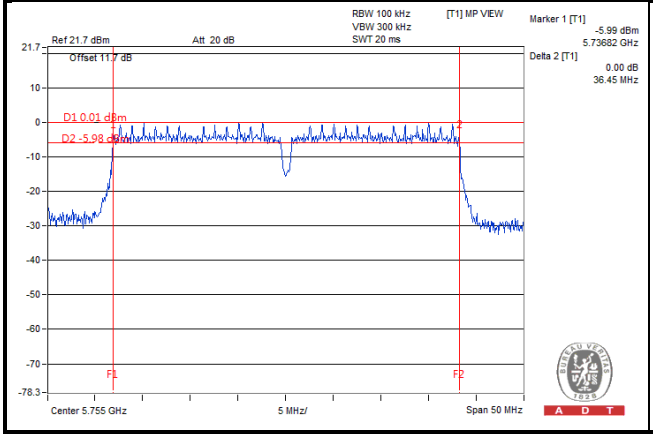
802.11a



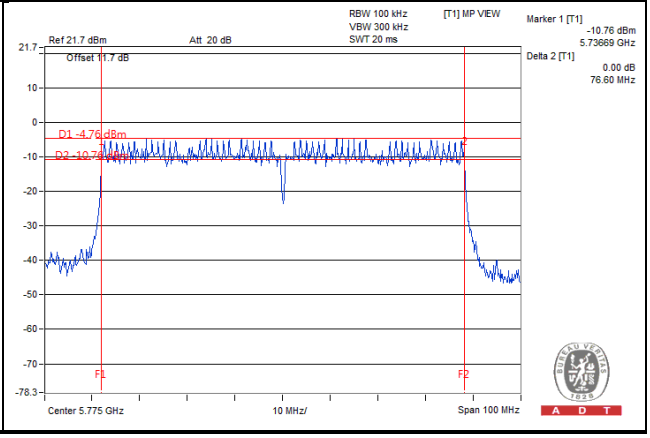
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



5 Pictures of Test Arrangements

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

Appendix – Information on the Testing Laboratories

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

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

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Fax: 886-2-26051924

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Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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

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