

FCC TEST REPORT (15.407)

REPORT NO.: RF140116E08-1

COMPLIANCE ID: ADBB-GX13004A

PRODUCT NAME* : DB 6520

**For any other product variant refer to above Compliance ID*

FCC ID: MCLDB6520

RECEIVED: Jan. 16, 2014

TESTED: Jan. 27 to Feb. 27, 2014

ISSUED: May 14, 2014

APPLICANT: Hon Hai PRECISION IND.CO.,LTD

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Industrial Park Taiwan, R.O.C.

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

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R.O.C.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF140116E08-1	Original release	May 14, 2014



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1. CERTIFICATION

2.

COMPLIANCE ID: ADBB-GX13004A**PRODUCT NAME*:** DB 6520**PRODUCT DESCRIPTION:** VDSL/GbE WiFi Data Router**For any other product variant refer to above Compliance ID***BRAND NAME:** ADB**TEST SAMPLE:** ENGINEERING SAMPLE**APPLICANT:** Hon Hai PRECISION IND.CO.,LTD**TESTED:** Jan. 27 to Feb. 27, 2014**STANDARDS:** FCC Part 15, Subpart E (Section 15.407)

ANSI C63.10-2009

The above equipment (Model: DB 6520) 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 : Midoli Peng , **DATE:** May 14, 2014
(Midoli Peng, Specialist)

APPROVED BY : May Chen , **DATE:** May 14, 2014
(May Chen, Manager)

3. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

For 5GHz, 5150~5250MHz Band

APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.407(b)(6)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -17.66dB at 0.150MHz
15.407(b/1/2/3) (b)(6)	Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -0.5dB at 5150.00MHz & 5096.00MHz
15.407(a/1/2)	Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a/1/2)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Antenna connector is I-PEX not a standard connector.

NOTE: 1. For WLAN: The EUT was operating in 2.400 ~ 2.4835GHz, 5.15~5.25GHz and 5.725~5.850GHz frequencies band. This report was recorded the RF parameters including 5.15~5.25GHz. For the 2.400 ~ 2.4835GHz and 5.725~5.850GHz RF parameters was recorded in another test report.

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:

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

Measurement	Value
Conducted emissions	2.98 dB
Radiated emissions (30MHz-1GHz)	5.43 dB
Radiated emissions (1GHz -6GHz)	3.65 dB
Radiated emissions (6GHz -18GHz)	3.88 dB
Radiated emissions (18GHz -40GHz)	4.11 dB

4. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

COMPLIANCE ID:	ADBB-GX13004A
PRODUCT NAME*:	DB 6520
PRODUCT DESCRIPTION:	VDSL/GbE WiFi Data Router
<i>*For any other product variant refer to above Compliance ID</i>	
POWER SUPPLY	DC 12V from power adapter
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS,OFDM
TRANSFER RATE	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n(2.4GHz, HT20): up to 144.44Mbps 802.11n(2.4GHz, HT40): up to 300Mbps 802.11n(5GHz, HT20): up to 216.7Mbps 802.11n(5GHz, HT40): up to 450Mbps
OPERATING FREQUENCY	For 15.407 5GHz: 5.18 ~ 5.24GHz
	For 15.247 2.4GHz: 2.412 ~ 2.462GHz 5GHz: 5.745 ~ 5.825GHz
	For 15.407 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40)
NUMBER OF CHANNEL	For 15.247 (2.4GHz) 11 for 802.11b, 802.11g, 802.11n (HT20) 7 for 802.11n (HT40)
	For 15.247 (5GHz) 5 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40)

MAXIMUM OUTPUT POWER	For 15.407
	1Tx
	802.11a: 44.771mW
	802.11n (HT20): 45.814mW
	802.11n (HT40): 49.091mW
	2Tx
	802.11n (HT20): 40.235mW
	802.11n (HT40): 45.613mW
	3Tx
	802.11a: 42.316mW
	802.11n (HT20): 40.879mW
	802.11n (HT40): 48.168mW
	For 15.247(2.4GHz)
	1Tx
	802.11b: 211.836mW
	802.11g: 171.396mW
	802.11n (HT20): 166.725mW
	802.11n (HT40): 118.577mW
	2Tx
	802.11g: 335.393mW
	802.11n (HT20): 328.496mW
	802.11n (HT40): 200.063mW
	For 15.247(5GHz)
	1Tx
	802.11a: 174.582mW
	802.11n (HT20): 176.604mW
	802.11n (HT40): 146.893mW
	2Tx
	802.11n (HT20): 274.861mW
	802.11n (HT40): 280.831mW
	3Tx
	802.11a: 378.121mW
	802.11n (HT20): 344.956mW
	802.11n (HT40): 221.806mW
ANTENNA TYPE	Please see NOTE
DATA CABLE	NA
I/O PORTS	Refer to user's manual
ASSOCIATED DEVICES	Adapter x1

NOTE:

- 2.4GHz and 5GHz technology can transmit at same time.
- The EUT must be supplied with a power adapter as following table:

Brand	Model No.	Spec.
Ampower Tek	AU36AA-00	Input: 100-240V, 1.2A, 50-60Hz Output: 12V, 3A DC output cable(1.85m, unshielded with one core)

- The antennas provided to the EUT, please refer to the following table:

Transmitter Circuit (Ant. No.)	Brand	Model	Antenna Type	Gain (dBi) (including cable loss)	Diversity Function	Frequency range (GHz to GHz)	Connector Type	Cable Length (mm)
Chain (0) A2	Airgain	M2450DL CM-T1-G 100U	PIFA	3.0	Yes	5.15 to 5.35	I-PEX	100
				5.1		5.47 to 5.85		
Chain (1) A3	Airgain	M2450DL CM-T-G8 5CC20R2	PIFA	2.6	Yes	2.4 to 2.49	I-PEX	85
				2.5		5.15 to 5.35		
				3.8		5.47 to 5.85		
Chain (2) A1	Airgain	M2450DL CM-T1-G 190UR2	PIFA	1.8	Yes	2.4 to 2.49	I-PEX	190
				2.1		5.15 to 5.35		
				3.1		5.47 to 5.85		

Note. : 1. For 2.4GHz<1Tx mode>: Chain (1) was chosen for final test.
2. For 5GHz<1Tx mode>: Chain (0) was chosen for final test.
3. For 5GHz<2Tx mode>: Chain (0) & Chain (1) were chosen for final test.

4. The EUT incorporates a MIMO function without beam forming.

MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11b	1 ~ 11Mbps	1Tx diversity	1Rx diversity
802.11g	6 ~ 54Mbps	1Tx diversity & 2Tx CDD	1Rx diversity & 2Rx
802.11n (HT20) (2.4GHz)	MCS 0~7	1Tx diversity & 2Tx CDD	1Rx diversity & 2Rx
	MCS 8~15	2Tx SDM	2Rx
802.11n (HT40) (2.4GHz)	MCS 0~7	1Tx diversity & 2Tx CDD	1Rx diversity & 2Rx
	MCS 8~15	2Tx SDM	2Rx
802.11a	6 ~ 54Mbps	1Tx diversity & 3Tx CDD	3Rx
802.11n (HT20) (5GHz)	MCS 0~7	1Tx diversity & 3Tx CDD	1Rx diversity & 3Rx
	MCS 8~15	2Tx diversity & 3Tx CDD	2Rx diversity & 3Rx
	MCS 16~23	3Tx SDM	3Rx
802.11n (HT40) (5GHz)	MCS 0~7	1Tx diversity & 3Tx CDD	1Rx diversity & 3Rx
	MCS 8~15	2Tx diversity & 3Tx CDD	2Rx diversity & 3Rx
	MCS 16~23	3Tx SDM	3Rx

5. For 2.4 GHz: When the EUT operating in 802.11n, the software operation, which is defined by manufacturer, MCS (Modulation and Coding Schemes) from 0 to 15.
6. For 5 GHz: When the EUT operating in 802.11n, the software operation, which is defined by manufacturer, MCS (Modulation and Coding Schemes) from 0 to 23.
7. The above EUT information was declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

Operated in 5150 ~ 5250MHz band:

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

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

2 channels are provided for 802.11n (HT40):

CHANNEL	FREQUENCY
38	5190 MHz
46	5230 MHz

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	PLC	RE < 1G	RE ³ 1G	APCM	
-	√	√	√	√	-

Where **PLC**: Power Line Conducted Emission **RE < 1G**: Radiated Emission below 1GHz
RE ³ 1G: Radiated Emission above 1GHz **APCM**: Antenna Port Conducted Measurement

NOTE: The EUT antenna had been pre-tested on the positioned of each 2 axis. The worst case was found when positioned on **X-plane** (for below 1GHz) and **Y-plane** (for above 1GHz).

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11n (HT40) / 3Tx	38 to 46	38	OFDM	BPSK	13.5

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11n (HT40) / 3Tx	38 to 46	38	OFDM	BPSK	13.5

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a / 1Tx	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11n (HT20) / 1Tx	36 to 48	36, 40, 48	OFDM	BPSK	6.5
802.11n (HT40) / 1Tx	38 to 46	38, 46	OFDM	BPSK	13.5
802.11n (HT20) / 2Tx	36 to 48	36, 40, 48	OFDM	BPSK	13
802.11n (HT40) / 2Tx	38 to 46	38, 46	OFDM	BPSK	27
802.11a / 3Tx	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11n (HT20) / 3Tx	36 to 48	36, 40, 48	OFDM	BPSK	6.5
For 5 GHz 802.11n (HT40) / 3Tx	38 to 46	38, 46	OFDM	BPSK	13.5

ANTENNA PORT CONDUCTED MEASUREMENT:

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a / 1Tx	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11n (HT20) / 1Tx	36 to 48	36, 40, 48	OFDM	BPSK	6.5
802.11n (HT40) / 1Tx	38 to 46	38, 46	OFDM	BPSK	13.5
802.11n (HT20) / 2Tx	36 to 48	36, 40, 48	OFDM	BPSK	13
802.11n (HT40) / 2Tx	38 to 46	38, 46	OFDM	BPSK	27
802.11a / 3Tx	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11n (HT20) / 3Tx	36 to 48	36, 40, 48	OFDM	BPSK	6.5
For 5 GHz 802.11n (HT40) / 3Tx	38 to 46	38, 46	OFDM	BPSK	13.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
PLC	19deg. C, 62%RH	120Vac, 60Hz	Sean Huang
RE<1G	22deg. C, 67%RH	120Vac, 60Hz	Andy Ho
RE ³ 1G	23deg. C, 68%RH	120Vac, 60Hz	Andy Ho
APCM	25deg. C, 60%RH	120Vac, 60Hz	Chilin Lee

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart E (15.407)

789033 D01 General UNII Test Procedures v01r03

662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2009

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

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

3.4 DUTY CYCLE OF TEST SIGNAL

If duty cycle of test signal is $\geq 98\%$, duty factor is not required.

If duty cycle of test signal is $< 98\%$, duty factor shall be considered.

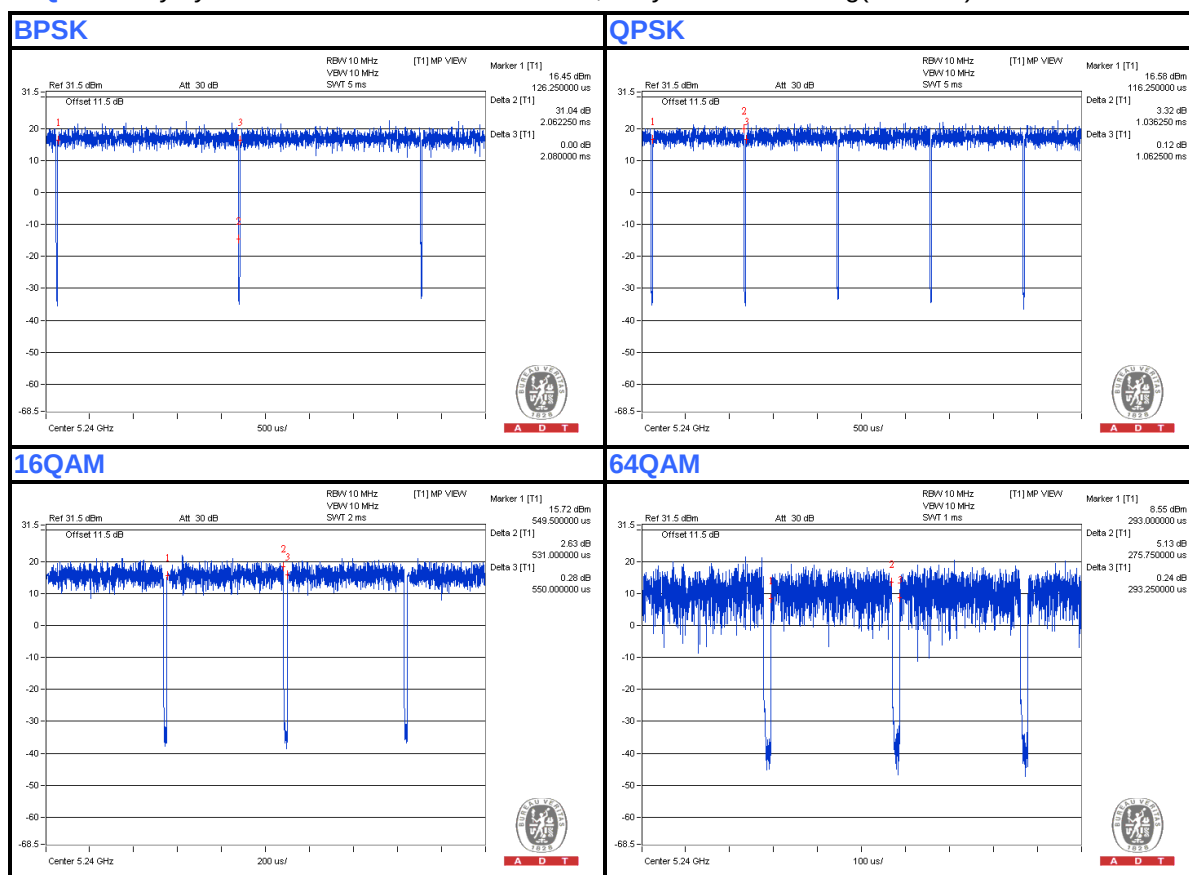
802.11a, 1Tx

BPSK: Duty cycle = $2.062 \text{ ms} / 2.08 \text{ ms} = 0.991$

QPSK: Duty cycle = $1.036 \text{ ms} / 1.062 \text{ ms} = 0.976$, Duty factor = $10 * \log(1/0.976) = 0.11$

16QAM: Duty cycle = $0.531 \text{ ms} / 0.55 \text{ ms} = 0.965$, Duty factor = $10 * \log(1/0.965) = 0.15$

64QAM: Duty cycle = $0.276 \text{ ms} / 0.293 \text{ ms} = 0.942$, Duty factor = $10 * \log(1/0.942) = 0.26$



If duty cycle of test signal is $\geq 98\%$, duty factor is not required.

If duty cycle of test signal is $< 98\%$, duty factor shall be considered.

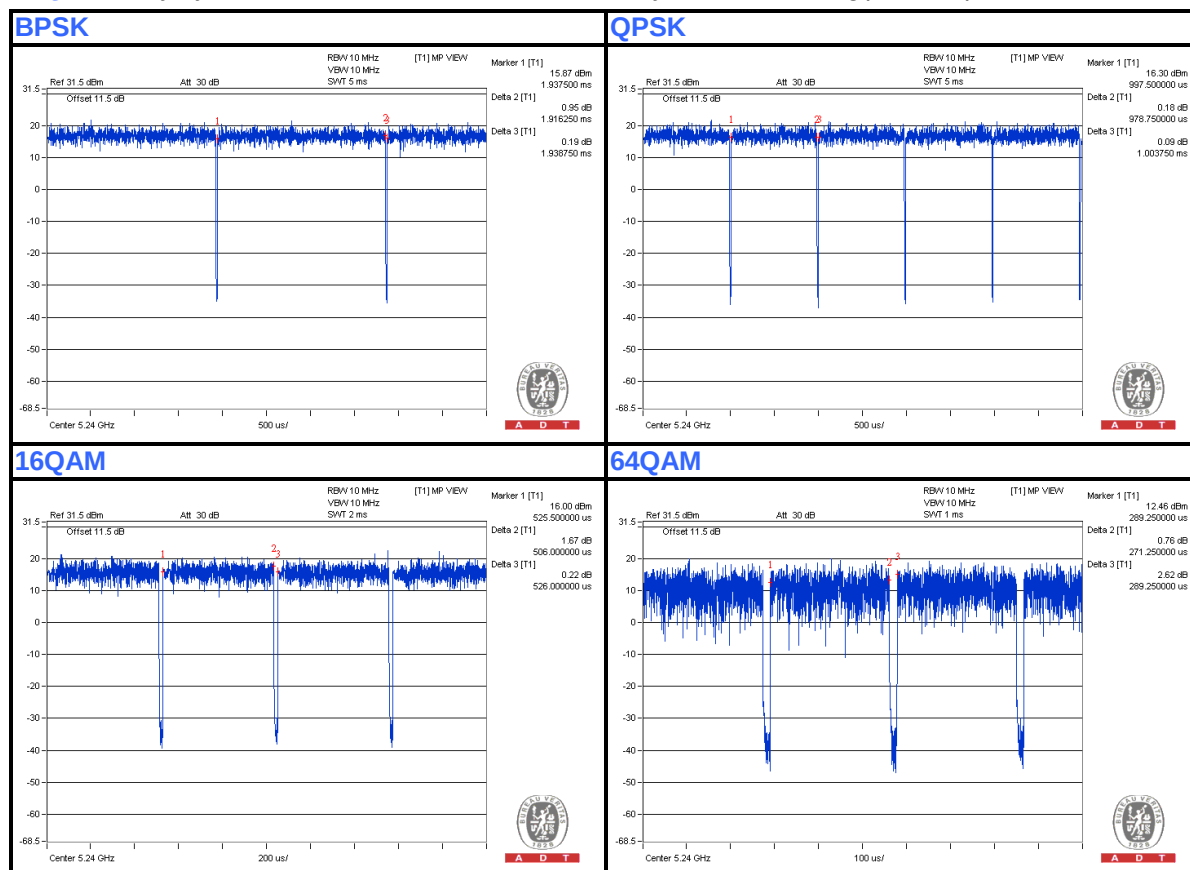
802.11n(HT20), 1Tx

BPSK: Duty cycle = $1.916\text{ms}/1.939\text{ ms} = 0.988$

QPSK: Duty cycle = $0.979\text{ ms}/1.004\text{ ms} = 0.975$, Duty factor = $10 * \log(1/0.975) = 0.11$

16QAM: Duty cycle = $0.506\text{ ms}/0.526\text{ ms} = 0.962$, Duty factor = $10 * \log(1/0.962) = 0.17$

64QAM: Duty cycle = $0.271\text{ ms}/0.289\text{ ms} = 0.938$, Duty factor = $10 * \log(1/0.938) = 0.28$



If duty cycle of test signal is $\geq 98\%$, duty factor is not required.

If duty cycle of test signal is $< 98\%$, duty factor shall be considered.

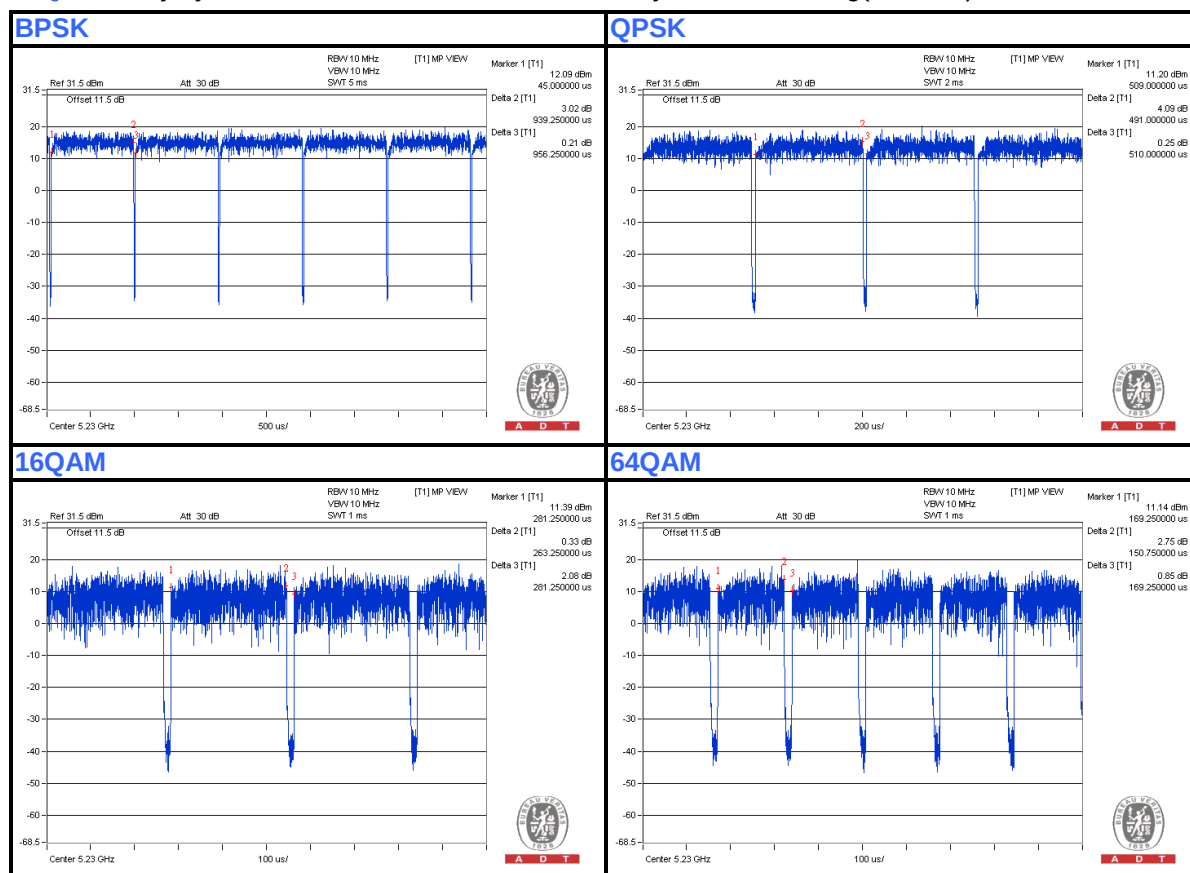
802.11n(HT40), 1Tx

BPSK: Duty cycle = $0.939\text{ms}/0.956\text{ ms} = 0.982$

QPSK: Duty cycle = $0.491\text{ ms}/0.51\text{ ms} = 0.963$, Duty factor = $10 * \log(1/0.963) = 0.16$

16QAM: Duty cycle = $0.263\text{ ms}/0.281\text{ ms} = 0.936$, Duty factor = $10 * \log(1/0.936) = 0.29$

64QAM: Duty cycle = $0.151\text{ ms}/0.169\text{ ms} = 0.893$, Duty factor = $10 * \log(1/0.893) = 0.49$





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3.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

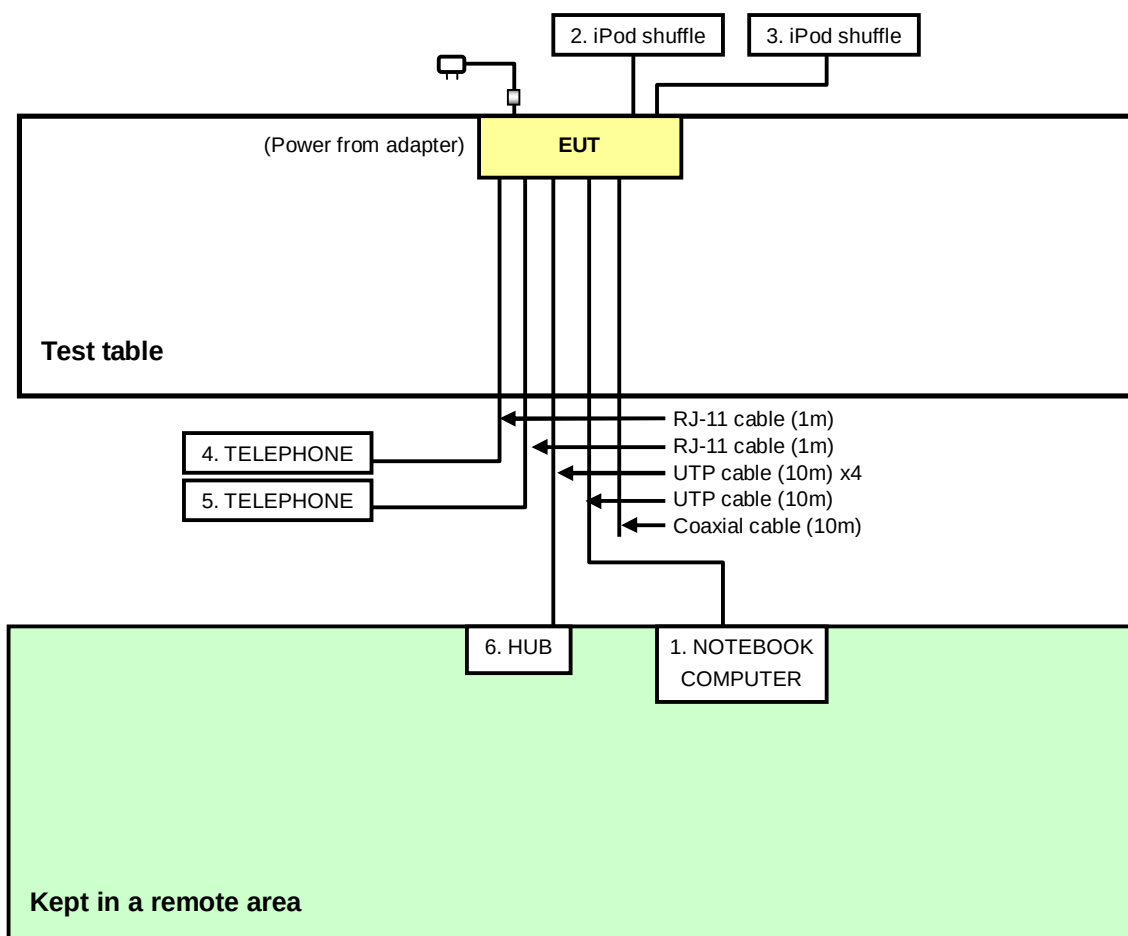
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP32LA	FSLB32S	FCC DoC
2	iPod shuffle	Apple	MC749TA/A	CC4DMFJUDFDM	NA
3	iPod shuffle	Apple	MC749TA/A	CC4DN25WDFDM	NA
4	TELEPHONE	WONDER	WD-303	7C17KA 04011	NA
5	TELEPHONE	WONDER	WD-303	7C17KA 04440	NA
6	HUB	ZyXEL	ES-116P	S060H02000215	FCC DoC

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	UTP Cable, 10m
2	USB Cable, 0.1m
3	USB Cable, 0.1m
4	RJ-11 Cable, 1m
5	RJ-11 Cable, 1m
6	UTP Cable, 10m

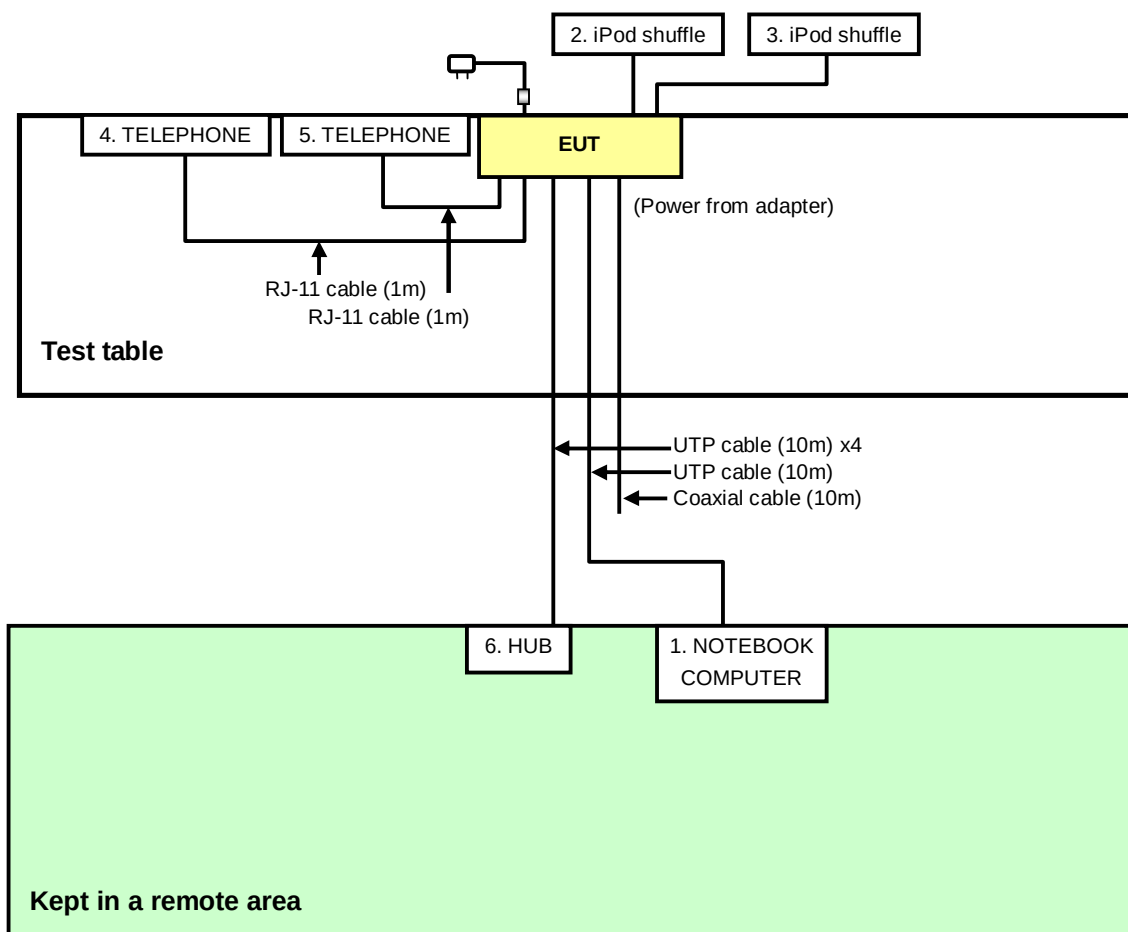
NOTE: All power cords of the above support units are non shielded (1.8m).

3.6 CONFIGURATION OF SYSTEM UNDER TEST

For conducted emission test:



For other test items:



4. TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

NOTE: 1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS 30	100375	Mar. 08, 2013	Mar. 07, 2014
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK8127	8127-522	Sep. 05, 2013	Sep. 04, 2014
Line-Impedance Stabilization Network (for Peripheral)	ENV216	100072	June 06, 2013	June 05, 2014
RF Cable (JYEBAO)	5DFB	COCCAB-001	Mar. 11, 2013	Mar. 10, 2014
50 ohms Terminator	50	EMC-03	Sep. 24, 2013	Sep. 23, 2014
Software ADT	BV ADT_Cond_V7.3.7. 3	NA	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. C.
3. The VCCI Con C Registration No. is C-3611.
4. Tested Date: Jan. 27, 2014

4.1.3 TEST PROCEDURES

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

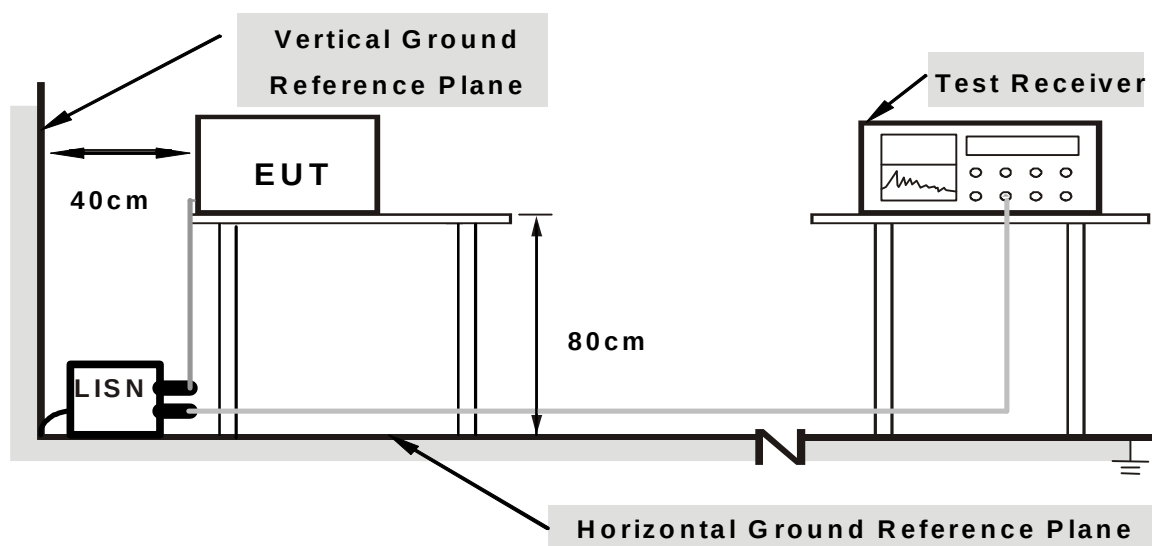
NOTE:

- The resolution bandwidth of test receiver is 9kHz for Quasi-peak detection (QP) & Average detection (AV).

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.



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4.1.6 EUT OPERATING CONDITIONS

1. Place the EUT on testing table.
2. Prepare computer system (support unit 1) to act as communication partner.
3. The communication partner runs test program "Mtool 2.0.1.0" to enable EUT under transmission/receiving condition continuously at specific channel frequency.

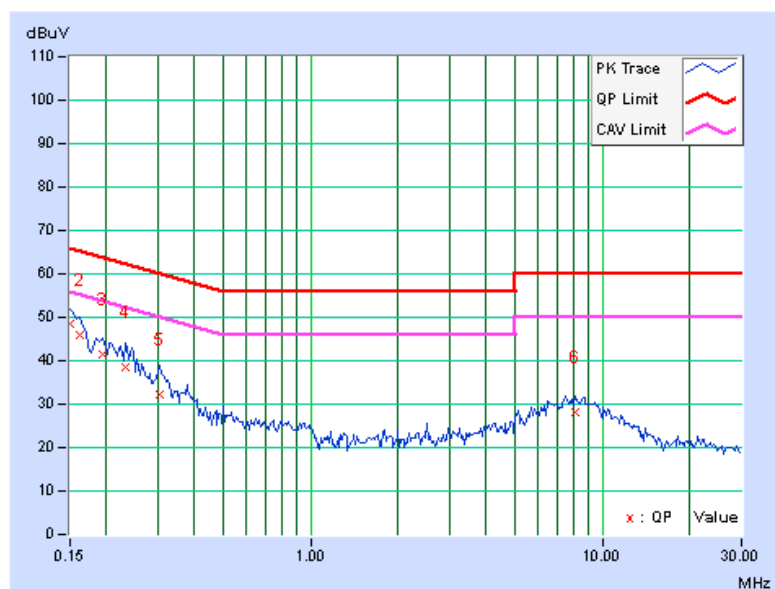
4.1.7 TEST RESULTS

PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)
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	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
No		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.08	48.26	36.08	48.34	36.16	66.00	56.00	-17.66	-19.84
2	0.16172	0.08	45.69	31.78	45.77	31.86	65.38	55.38	-19.60	-23.51
3	0.19297	0.10	41.55	29.32	41.65	29.42	63.91	53.91	-22.26	-24.49
4	0.23203	0.11	38.27	26.09	38.38	26.20	62.38	52.38	-24.00	-26.18
5	0.30234	0.12	32.21	21.28	32.33	21.40	60.18	50.18	-27.85	-28.78
6	8.03516	0.41	27.73	22.36	28.14	22.77	60.00	50.00	-31.86	-27.23

REMARKS:

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

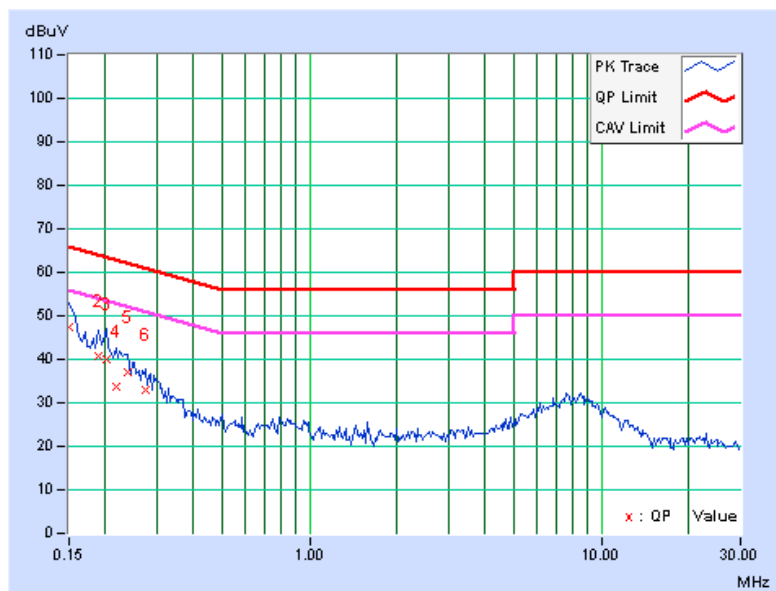


PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.09	47.38	37.03	47.47	37.12	66.00	56.00	-18.53	-18.88
2	0.18906	0.10	40.71	28.94	40.81	29.04	64.08	54.08	-23.27	-25.04
3	0.20078	0.10	39.90	27.67	40.00	27.77	63.58	53.58	-23.58	-25.81
4	0.21641	0.10	33.76	18.12	33.86	18.22	62.96	52.96	-29.09	-34.73
5	0.23984	0.11	36.80	22.84	36.91	22.95	62.10	52.10	-25.19	-29.15
6	0.27500	0.12	32.88	20.55	33.00	20.67	60.97	50.97	-27.97	-30.30

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



4.2 RADIATED EMISSION AND BANDEDGE MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.2.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

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

NOTE:

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

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

4.2.3 TEST INSTRUMENTS

For below 1GHz test

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
MXE EMI Receiver Agilent	N9038A	MY50010156	Jan. 15, 2014	Jan. 14, 2015
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-04	Nov. 13, 2013	Nov. 12, 2014
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Mar. 25, 2013	Mar. 24, 2014
RF Cable	NA	CHHCAB_001	Oct. 06, 2013	Oct. 05, 2014
Spectrum Analyzer R&S	FSV40	100964	July 15, 2013	July 14, 2014
Horn_Antenna AISL	AIH.8018	0000220091110	Dec. 06, 2013	Dec. 05, 2014
Pre-Amplifier Agilent	8449B	3008A01923	Oct. 29, 2013	Oct. 28, 2014
RF Cable	NA	RF104-205 RF104-207 RF104-202	Dec. 12, 2013	Dec. 11, 2014
Spectrum Analyzer Agilent	E4446A	MY48250253	Aug. 28, 2013	Aug. 27, 2014
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Nov. 13, 2013	Nov. 12, 2014
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Oct. 08, 2013	Oct. 07, 2014
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	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 horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in 966 Chamber No. H.
4. The FCC Site Registration No. is 797305.
5. The CANADA Site Registration No. is IC 7450H-3.
6. Tested Date: Feb. 24, 2014

For above 1GHz test

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
MXE EMI Receiver Agilent	N9038A	MY51210105	Jan. 21, 2014	Jan. 20, 2015
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-03	Nov. 13, 2013	Nov. 12, 2014
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-360	Mar. 19, 2013	Mar. 18, 2014
RF Cable	NA	CHGCAB_001	Oct. 05, 2013	Oct. 04, 2014
Spectrum Analyzer R&S	FSV40	100964	July 15, 2013	July 14, 2014
Horn_Antenna AISI	AIH.8018	0000320091110	Nov. 18, 2013	Nov. 17, 2014
Pre-Amplifier Agilent	8449B	3008A02578	June 25, 2013	June 24, 2014
RF Cable	NA	RF104-201 RF104-203 RF104-204	Dec. 12, 2013	Dec. 11, 2014
Spectrum Analyzer Agilent	E4446A	MY48250253	Aug. 28, 2013	Aug. 27, 2014
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Nov. 13, 2013	Nov. 12, 2014
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Oct. 08, 2013	Oct. 07, 2014
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	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 horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
- 3 The test was performed in 966 Chamber No. G.
4. The FCC Site Registration No. is 966073.
- 5 The VCCI Site Registration No. is G-137.
- 6 The CANADA Site Registration No. is IC 7450H-2.
- 7 Tested Date: Feb. 27, 2014

4.2.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters 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 detect 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:

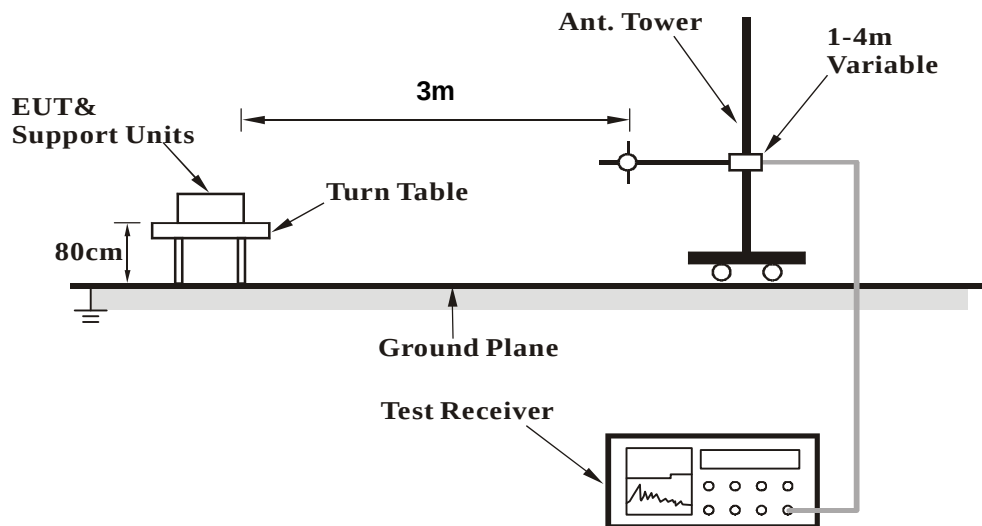
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.2.5 DEVIATION FROM TEST STANDARD

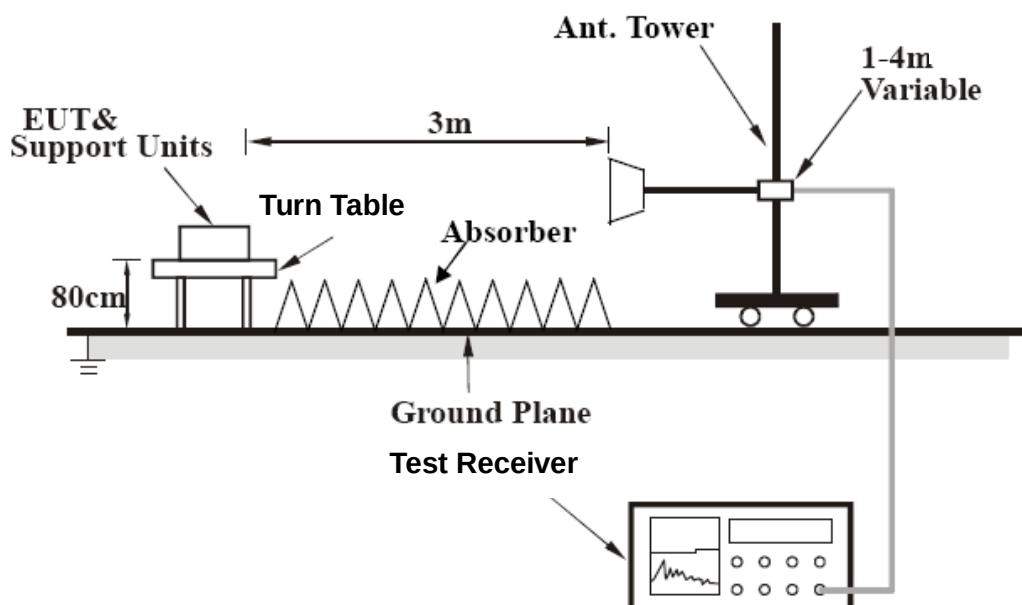
No deviation

4.2.6 TEST SETUP

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.7 EUT OPERATING CONDITION

Same as 4.1.6

4.2.8 TEST RESULTS

BELOW 1GHz WORST-CASE DATA

802.11n (HT40), 3Tx

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	250.00	42.7 QP	46.0	-3.3	1.02 H	224	56.39	-13.67
2	400.01	42.3 QP	46.0	-3.7	1.00 H	336	51.64	-9.36
3	440.02	40.5 QP	46.0	-5.5	1.50 H	277	48.30	-7.81
4	460.00	40.7 QP	46.0	-5.3	1.50 H	286	48.27	-7.60
5	500.01	41.0 QP	46.0	-5.0	1.55 H	287	47.92	-6.91
6	750.03	41.7 QP	46.0	-4.3	1.46 H	92	43.42	-1.68
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	250.00	40.5 QP	46.0	-5.5	1.50 V	224	54.17	-13.67
2	319.98	38.7 QP	46.0	-7.3	1.00 V	228	49.58	-10.86
3	400.01	37.5 QP	46.0	-8.5	2.00 V	86	46.86	-9.36
4	599.97	39.2 QP	46.0	-6.8	1.22 V	247	43.85	-4.63
5	750.03	38.9 QP	46.0	-7.1	1.00 V	102	40.60	-1.68
6	799.99	38.4 QP	46.0	-7.6	1.21 V	254	39.40	-0.97

REMARKS:

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

ABOVE 1GHz WORST-CASE DATA

802.11a, 1Tx

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5103.00	59.5 PK	74.0	-14.5	1.00 H	210	51.28	8.22
2	5103.00	48.3 AV	54.0	-5.7	1.00 H	210	40.08	8.22
3	*5180.00	108.2 PK			1.00 H	212	99.97	8.23
4	*5180.00	96.5 AV			1.00 H	212	88.27	8.23
5	#10360.00	55.0 PK	74.0	-19.0	1.00 H	216	40.12	14.88
6	#10360.00	43.7 AV	54.0	-10.3	1.00 H	216	28.82	14.88
7	15540.00	59.8 PK	74.0	-14.2	1.00 H	220	38.95	20.85
8	15540.00	47.6 AV	54.0	-6.4	1.00 H	220	26.75	20.85

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5103.00	63.3 PK	74.0	-10.7	1.02 V	248	55.08	8.22
2	5103.00	52.6 AV	54.0	-1.4	1.02 V	248	44.38	8.22
3	*5180.00	109.9 PK			1.00 V	250	101.67	8.23
4	*5180.00	100.0 AV			1.00 V	250	91.77	8.23
5	#10360.00	54.8 PK	74.0	-19.2	1.32 V	243	39.92	14.88
6	#10360.00	42.5 AV	54.0	-11.5	1.32 V	243	27.62	14.88
7	15540.00	60.1 PK	74.0	-13.9	1.00 V	205	39.25	20.85
8	15540.00	47.6 AV	54.0	-6.4	1.00 V	205	26.75	20.85

REMARKS:

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

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5112.00	62.0 PK	74.0	-12.0	1.00 H	191	53.77	8.23
2	5112.00	49.2 AV	54.0	-4.8	1.00 H	191	40.97	8.23
3	*5200.00	109.4 PK			1.01 H	207	101.16	8.24
4	*5200.00	96.8 AV			1.01 H	207	88.56	8.24
5	5350.00	55.6 PK	74.0	-18.4	1.00 H	204	46.80	8.80
6	5350.00	43.4 AV	54.0	-10.6	1.00 H	204	34.60	8.80
7	#10400.00	55.3 PK	74.0	-18.7	1.00 H	229	40.07	15.23
8	#10400.00	44.2 AV	54.0	-9.8	1.00 H	229	28.97	15.23
9	15600.00	60.0 PK	74.0	-14.0	1.01 H	232	39.12	20.88
10	15600.00	47.9 AV	54.0	-6.1	1.01 H	232	27.02	20.88
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5112.00	63.8 PK	74.0	-10.2	1.01 V	252	55.57	8.23
2	5112.00	52.8 AV	54.0	-1.2	1.01 V	252	44.57	8.23
3	*5200.00	111.4 PK			1.00 V	247	103.16	8.24
4	*5200.00	100.7 AV			1.00 V	247	92.46	8.24
5	5350.00	56.1 PK	74.0	-17.9	1.00 V	247	47.30	8.80
6	5350.00	43.9 AV	54.0	-10.1	1.00 V	247	35.10	8.80
7	#10400.00	54.2 PK	74.0	-19.8	1.00 V	142	38.97	15.23
8	#10400.00	42.4 AV	54.0	-11.6	1.00 V	142	27.17	15.23
9	15600.00	59.5 PK	74.0	-14.5	1.00 V	204	38.62	20.88
10	15600.00	47.8 AV	54.0	-6.2	1.00 V	204	26.92	20.88

REMARKS:

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



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CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5119.00	57.6 PK	74.0	-16.4	1.05 H	221	49.37	8.23
2	5119.00	46.5 AV	54.0	-7.5	1.05 H	221	38.27	8.23
3	*5240.00	107.9 PK			1.05 H	221	99.50	8.40
4	*5240.00	96.5 AV			1.05 H	221	88.10	8.40
5	5350.00	56.4 PK	74.0	-17.6	1.05 H	221	47.60	8.80
6	5350.00	44.1 AV	54.0	-9.9	1.05 H	221	35.30	8.80
7	#10480.00	55.4 PK	74.0	-18.6	1.00 H	226	40.19	15.21
8	#10480.00	43.5 AV	54.0	-10.5	1.00 H	226	28.29	15.21
9	15720.00	57.3 PK	74.0	-16.7	1.00 H	304	36.43	20.87
10	15720.00	45.1 AV	54.0	-8.9	1.00 H	304	24.23	20.87

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5119.00	57.8 PK	74.0	-16.2	1.00 V	250	49.57	8.23
2	5119.00	46.8 AV	54.0	-7.2	1.00 V	250	38.57	8.23
3	*5240.00	109.6 PK			1.00 V	250	101.20	8.40
4	*5240.00	100.4 AV			1.00 V	250	92.00	8.40
5	5350.00	56.3 PK	74.0	-17.7	1.00 V	250	47.50	8.80
6	5350.00	44.2 AV	54.0	-9.8	1.00 V	250	35.40	8.80
7	#10480.00	55.1 PK	74.0	-18.9	1.07 V	212	39.89	15.21
8	#10480.00	42.5 AV	54.0	-11.5	1.07 V	212	27.29	15.21
9	15720.00	57.0 PK	74.0	-17.0	1.00 V	200	36.13	20.87
10	15720.00	45.0 AV	54.0	-9.0	1.00 V	200	24.13	20.87

REMARKS:

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

802.11n (HT20), 1Tx

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5096.00	62.0 PK	74.0	-12.0	1.07 H	203	53.80	8.20
2	5096.00	49.4 AV	54.0	-4.6	1.07 H	203	41.20	8.20
3	*5180.00	109.4 PK			1.04 H	205	101.17	8.23
4	*5180.00	96.7 AV			1.04 H	205	88.47	8.23
5	#10360.00	55.5 PK	74.0	-18.5	1.01 H	229	40.62	14.88
6	#10360.00	43.5 AV	54.0	-10.5	1.01 H	229	28.62	14.88
7	15540.00	57.5 PK	74.0	-16.5	1.03 H	312	36.65	20.85
8	15540.00	45.4 AV	54.0	-8.6	1.03 H	312	24.55	20.85
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5096.00	64.2 PK	74.0	-9.8	1.13 V	253	56.00	8.20
2	5096.00	53.5 AV	54.0	-0.5	1.13 V	253	45.30	8.20
3	*5180.00	111.5 PK			1.00 V	248	103.27	8.23
4	*5180.00	100.7 AV			1.00 V	248	92.47	8.23
5	#10360.00	55.7 PK	74.0	-18.3	1.30 V	246	40.82	14.88
6	#10360.00	42.9 AV	54.0	-11.1	1.30 V	246	28.02	14.88
7	15540.00	59.8 PK	74.0	-14.2	1.00 V	204	38.95	20.85
8	15540.00	47.6 AV	54.0	-6.4	1.00 V	204	26.75	20.85

REMARKS:

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

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5127.00	61.5 PK	74.0	-12.5	1.03 H	202	53.28	8.22
2	5127.00	48.9 AV	54.0	-5.1	1.03 H	202	40.68	8.22
3	*5200.00	110.3 PK			1.09 H	201	102.06	8.24
4	*5200.00	98.6 AV			1.09 H	201	90.36	8.24
5	#10400.00	56.1 PK	74.0	-17.9	1.03 H	244	40.87	15.23
6	#10400.00	43.8 AV	54.0	-10.2	1.03 H	244	28.57	15.23
7	15600.00	58.0 PK	74.0	-16.0	1.00 H	307	37.12	20.88
8	15600.00	45.7 AV	54.0	-8.3	1.00 H	307	24.82	20.88
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5127.00	63.9 PK	74.0	-10.1	1.10 V	249	55.68	8.22
2	5127.00	53.1 AV	54.0	-0.9	1.10 V	249	44.88	8.22
3	*5200.00	112.1 PK			1.10 V	253	103.86	8.24
4	*5200.00	102.2 AV			1.10 V	253	93.96	8.24
5	#10400.00	55.9 PK	74.0	-18.1	1.30 V	262	40.67	15.23
6	#10400.00	43.1 AV	54.0	-10.9	1.30 V	262	27.87	15.23
7	15600.00	59.6 PK	74.0	-14.4	1.01 V	191	38.72	20.88
8	15600.00	47.5 AV	54.0	-6.5	1.01 V	191	26.62	20.88

REMARKS:

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



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CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5139.00	56.3 PK	74.0	-17.7	1.06 H	204	48.08	8.22
2	5139.00	41.7 AV	54.0	-12.3	1.06 H	204	33.48	8.22
3	*5240.00	109.7 PK			1.07 H	189	101.30	8.40
4	*5240.00	98.1 AV			1.07 H	189	89.70	8.40
5	5350.00	54.7 PK	74.0	-19.3	1.03 H	202	45.90	8.80
6	5350.00	41.5 AV	54.0	-12.5	1.03 H	202	32.70	8.80
7	#10480.00	56.2 PK	74.0	-17.8	1.01 H	257	40.99	15.21
8	#10480.00	43.8 AV	54.0	-10.2	1.01 H	257	28.59	15.21
9	15720.00	58.2 PK	74.0	-15.8	1.00 H	296	37.33	20.87
10	15720.00	46.2 AV	54.0	-7.8	1.00 H	296	25.33	20.87
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5139.00	58.9 PK	74.0	-15.1	1.08 V	249	50.68	8.22
2	5139.00	46.1 AV	54.0	-7.9	1.08 V	249	37.88	8.22
3	*5240.00	111.7 PK			1.08 V	249	103.30	8.40
4	*5240.00	101.8 AV			1.08 V	249	93.40	8.40
5	5350.00	56.5 PK	74.0	-17.5	1.08 V	249	47.70	8.80
6	5350.00	45.2 AV	54.0	-8.8	1.08 V	249	36.40	8.80
7	#10480.00	56.2 PK	74.0	-17.8	1.12 V	240	40.99	15.21
8	#10480.00	43.4 AV	54.0	-10.6	1.12 V	240	28.19	15.21
9	15720.00	59.7 PK	74.0	-14.3	1.00 V	205	38.83	20.87
10	15720.00	47.6 AV	54.0	-6.4	1.00 V	205	26.73	20.87

REMARKS:

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

802.11n (HT40), 1Tx

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	64.0 PK	74.0	-10.0	1.07 H	178	55.77	8.23
2	5150.00	49.2 AV	54.0	-4.8	1.07 H	178	40.97	8.23
3	*5190.00	105.8 PK			1.07 H	178	97.56	8.24
4	*5190.00	92.8 AV			1.07 H	178	84.56	8.24
5	#10380.00	57.0 PK	74.0	-17.0	1.06 H	263	41.94	15.06
6	#10380.00	44.4 AV	54.0	-9.6	1.06 H	263	29.34	15.06
7	15570.00	58.6 PK	74.0	-15.4	1.00 H	309	37.74	20.86
8	15570.00	46.2 AV	54.0	-7.8	1.00 H	309	25.34	20.86
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	66.4 PK	74.0	-7.6	1.08 V	253	58.17	8.23
2	5150.00	53.5 AV	54.0	-0.5	1.08 V	253	45.27	8.23
3	*5190.00	107.4 PK			1.08 V	253	99.16	8.24
4	*5190.00	96.3 AV			1.08 V	253	88.06	8.24
5	#10380.00	54.2 PK	74.0	-19.8	1.00 V	274	39.14	15.06
6	#10380.00	42.0 AV	54.0	-12.0	1.00 V	274	26.94	15.06
7	15570.00	59.3 PK	74.0	-14.7	1.00 V	213	38.44	20.86
8	15570.00	47.2 AV	54.0	-6.8	1.00 V	213	26.34	20.86

REMARKS:

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

CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.3 PK	74.0	-15.7	1.05 H	192	50.07	8.23
2	5150.00	44.2 AV	54.0	-9.8	1.05 H	192	35.97	8.23
3	*5230.00	108.0 PK			1.05 H	192	99.64	8.36
4	*5230.00	96.1 AV			1.05 H	192	87.74	8.36
5	5350.00	55.0 PK	74.0	-19.0	1.05 H	192	46.20	8.80
6	5350.00	41.1 AV	54.0	-12.9	1.05 H	192	32.30	8.80
7	#10460.00	55.9 PK	74.0	-18.1	1.01 H	278	40.69	15.21
8	#10460.00	44.0 AV	54.0	-10.0	1.01 H	278	28.79	15.21
9	15690.00	58.4 PK	74.0	-15.6	1.00 H	310	37.49	20.91
10	15690.00	46.3 AV	54.0	-7.7	1.00 H	310	25.39	20.91
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	59.5 PK	74.0	-14.5	1.09 V	255	51.27	8.23
2	5150.00	47.7 AV	54.0	-6.3	1.09 V	255	39.47	8.23
3	*5230.00	109.9 PK			1.09 V	255	101.54	8.36
4	*5230.00	100.3 AV			1.09 V	255	91.94	8.36
5	5350.00	56.3 PK	74.0	-17.7	1.09 V	255	47.50	8.80
6	5350.00	44.7 AV	54.0	-9.3	1.09 V	255	35.90	8.80
7	#10460.00	54.3 PK	74.0	-19.7	1.00 V	279	39.09	15.21
8	#10460.00	42.0 AV	54.0	-12.0	1.00 V	279	26.79	15.21
9	15690.00	59.0 PK	74.0	-15.0	1.03 V	224	38.09	20.91
10	15690.00	47.1 AV	54.0	-6.9	1.03 V	224	26.19	20.91

REMARKS:

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

802.11n (HT20), 2Tx

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5103.00	63.9 PK	74.0	-10.1	1.05 H	6	55.68	8.22
2	5103.00	52.7 AV	54.0	-1.3	1.05 H	6	44.48	8.22
3	*5180.00	111.1 PK			1.14 H	359	102.87	8.23
4	*5180.00	100.4 AV			1.14 H	359	92.17	8.23
5	#10360.00	54.6 PK	74.0	-19.4	1.00 H	247	39.72	14.88
6	#10360.00	43.2 AV	54.0	-10.8	1.00 H	247	28.32	14.88
7	15540.00	61.4 PK	74.0	-12.6	1.05 H	228	40.55	20.85
8	15540.00	49.1 AV	54.0	-4.9	1.05 H	228	28.25	20.85
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5108.00	64.7 PK	74.0	-9.3	1.01 V	243	56.48	8.22
2	5108.00	53.1 AV	54.0	-0.9	1.01 V	243	44.88	8.22
3	*5180.00	112.2 PK			1.00 V	245	103.97	8.23
4	*5180.00	101.8 AV			1.00 V	245	93.57	8.23
5	#10360.00	56.0 PK	74.0	-18.0	1.00 V	257	41.12	14.88
6	#10360.00	42.7 AV	54.0	-11.3	1.00 V	257	27.82	14.88
7	15540.00	60.4 PK	74.0	-13.6	1.00 V	202	39.55	20.85
8	15540.00	48.4 AV	54.0	-5.6	1.00 V	202	27.55	20.85

REMARKS:

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



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CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5124.00	62.4 PK	74.0	-11.6	1.09 H	7	54.17	8.23
2	5124.00	51.0 AV	54.0	-3.0	1.09 H	7	42.77	8.23
3	*5200.00	110.6 PK			1.07 H	174	102.36	8.24
4	*5200.00	98.7 AV			1.07 H	174	90.46	8.24
5	5350.00	53.1 PK	74.0	-20.9	1.07 H	174	44.30	8.80
6	5350.00	41.1 AV	54.0	-12.9	1.07 H	174	32.30	8.80
7	#10400.00	54.9 PK	74.0	-19.1	1.00 H	252	39.67	15.23
8	#10400.00	43.0 AV	54.0	-11.0	1.00 H	252	27.77	15.23
9	15600.00	61.3 PK	74.0	-12.7	1.00 H	241	40.42	20.88
10	15600.00	48.9 AV	54.0	-5.1	1.00 H	241	28.02	20.88

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5124.00	63.0 PK	74.0	-11.0	1.00 V	237	54.77	8.23
2	5124.00	52.0 AV	54.0	-2.0	1.00 V	237	43.77	8.23
3	*5200.00	111.2 PK			1.00 V	245	102.96	8.24
4	*5200.00	101.3 AV			1.00 V	245	93.06	8.24
5	5350.00	55.9 PK	74.0	-18.1	1.00 V	245	47.10	8.80
6	5350.00	44.0 AV	54.0	-10.0	1.00 V	245	35.20	8.80
7	#10400.00	54.0 PK	74.0	-20.0	1.00 V	106	38.77	15.23
8	#10400.00	42.2 AV	54.0	-11.8	1.00 V	106	26.97	15.23
9	15600.00	60.4 PK	74.0	-13.6	1.00 V	211	39.52	20.88
10	15600.00	47.6 AV	54.0	-6.4	1.00 V	211	26.72	20.88

REMARKS:

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



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CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5120.00	53.4 PK	74.0	-20.6	1.08 H	164	45.17	8.23
2	5120.00	43.5 AV	54.0	-10.5	1.08 H	164	35.27	8.23
3	*5240.00	110.9 PK			1.08 H	164	102.50	8.40
4	*5240.00	99.5 AV			1.08 H	164	91.10	8.40
5	5350.00	53.5 PK	74.0	-20.5	1.08 H	164	44.70	8.80
6	5350.00	41.5 AV	54.0	-12.5	1.08 H	164	32.70	8.80
7	#10480.00	56.0 PK	74.0	-18.0	1.00 H	219	40.79	15.21
8	#10480.00	44.4 AV	54.0	-9.6	1.00 H	219	29.19	15.21
9	15720.00	60.6 PK	74.0	-13.4	1.00 H	176	39.73	20.87
10	15720.00	48.9 AV	54.0	-5.1	1.00 H	176	28.03	20.87
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5120.00	59.1 PK	74.0	-14.9	1.04 V	234	50.87	8.23
2	5120.00	47.5 AV	54.0	-6.5	1.04 V	234	39.27	8.23
3	*5240.00	111.8 PK			1.00 V	257	103.40	8.40
4	*5240.00	101.7 AV			1.00 V	257	93.30	8.40
5	5350.00	56.2 PK	74.0	-17.8	1.00 V	257	47.40	8.80
6	5350.00	44.1 AV	54.0	-9.9	1.00 V	257	35.30	8.80
7	#10480.00	55.4 PK	74.0	-18.6	1.00 V	238	40.19	15.21
8	#10480.00	43.1 AV	54.0	-10.9	1.00 V	238	27.89	15.21
9	15720.00	57.9 PK	74.0	-16.1	1.00 V	39	37.03	20.87
10	15720.00	45.5 AV	54.0	-8.5	1.00 V	39	24.63	20.87

REMARKS:

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

802.11n (HT40), 2Tx

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	68.0 PK	74.0	-6.0	1.00 H	149	59.77	8.23
2	5150.00	53.2 AV	54.0	-0.8	1.00 H	149	44.97	8.23
3	*5190.00	106.6 PK			1.00 H	149	98.36	8.24
4	*5190.00	95.2 AV			1.00 H	149	86.96	8.24
5	#10380.00	55.8 PK	74.0	-18.2	1.00 H	234	40.74	15.06
6	#10380.00	43.9 AV	54.0	-10.1	1.00 H	234	28.84	15.06
7	15570.00	60.7 PK	74.0	-13.3	1.00 H	185	39.84	20.86
8	15570.00	49.3 AV	54.0	-4.7	1.00 H	185	28.44	20.86
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.5 PK	74.0	-8.5	1.12 V	257	57.27	8.23
2	5150.00	53.4 AV	54.0	-0.6	1.12 V	257	45.17	8.23
3	*5190.00	106.8 PK			1.12 V	257	98.56	8.24
4	*5190.00	96.4 AV			1.12 V	257	88.16	8.24
5	#10380.00	55.2 PK	74.0	-18.8	1.03 V	226	40.14	15.06
6	#10380.00	43.0 AV	54.0	-11.0	1.03 V	226	27.94	15.06
7	15570.00	57.2 PK	74.0	-16.8	1.00 V	45	36.34	20.86
8	15570.00	45.1 AV	54.0	-8.9	1.00 V	45	24.24	20.86

REMARKS:

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

CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2496.00	49.4 PK	74.0	-24.6	1.00 H	315	50.62	-1.22
2	2496.00	42.3 AV	54.0	-11.7	1.00 H	315	43.52	-1.22
3	*5230.00	107.9 PK			1.00 H	148	99.54	8.36
4	*5230.00	96.0 AV			1.00 H	148	87.64	8.36
5	5350.00	52.4 PK	74.0	-21.6	1.00 H	148	43.60	8.80
6	5350.00	40.0 AV	54.0	-14.0	1.00 H	148	31.20	8.80
7	#10460.00	55.1 PK	74.0	-18.9	1.00 H	230	39.89	15.21
8	#10460.00	43.7 AV	54.0	-10.3	1.00 H	230	28.49	15.21
9	15690.00	60.2 PK	74.0	-13.8	1.00 H	183	39.29	20.91
10	15690.00	48.8 AV	54.0	-5.2	1.00 H	183	27.89	20.91
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	109.3 PK			1.34 V	257	100.94	8.36
2	*5230.00	99.3 AV			1.34 V	257	90.94	8.36
3	5350.00	57.4 PK	74.0	-16.6	1.34 V	257	48.60	8.80
4	5350.00	43.6 AV	54.0	-10.4	1.34 V	257	34.80	8.80
5	#10460.00	55.2 PK	74.0	-18.8	1.01 V	230	39.99	15.21
6	#10460.00	42.8 AV	54.0	-11.2	1.01 V	230	27.59	15.21
7	15690.00	56.8 PK	74.0	-17.2	1.00 V	53	35.89	20.91
8	15690.00	44.8 AV	54.0	-9.2	1.00 V	53	23.89	20.91

REMARKS:

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

802.11a, 3Tx

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#2400.00	53.7 PK	74.0	-20.3	1.00 H	0	55.35	-1.65
2	#2400.00	50.2 AV	54.0	-3.8	1.00 H	0	51.85	-1.65
3	2496.00	51.5 PK	74.0	-22.5	1.06 H	268	52.72	-1.22
4	2496.00	45.3 AV	54.0	-8.7	1.06 H	268	46.52	-1.22
5	5107.50	60.4 PK	74.0	-13.6	1.00 H	162	52.18	8.22
6	5107.50	50.4 AV	54.0	-3.6	1.00 H	162	42.18	8.22
7	*5180.00	109.4 PK			1.00 H	360	101.17	8.23
8	*5180.00	100.8 AV			1.00 H	360	92.57	8.23
9	#10360.00	55.7 PK	74.0	-18.3	1.03 H	226	40.82	14.88
10	#10360.00	43.8 AV	54.0	-10.2	1.03 H	226	28.92	14.88
11	15540.00	57.1 PK	74.0	-16.9	1.00 H	215	36.25	20.85
12	15540.00	44.2 AV	54.0	-9.8	1.00 H	215	23.35	20.85
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#2400.00	53.7 PK	74.0	-20.3	1.07 V	267	55.35	-1.65
2	#2400.00	50.0 AV	54.0	-4.0	1.07 V	267	51.65	-1.65
3	2496.00	51.5 PK	74.0	-22.5	1.07 V	264	52.72	-1.22
4	2496.00	45.6 AV	54.0	-8.4	1.07 V	264	46.82	-1.22
5	5107.50	64.0 PK	74.0	-10.0	1.13 V	283	55.78	8.22
6	5107.50	53.2 AV	54.0	-0.8	1.13 V	283	44.98	8.22
7	*5180.00	112.4 PK			1.05 V	220	104.17	8.23
8	*5180.00	102.6 AV			1.05 V	220	94.37	8.23
9	#10360.00	55.6 PK	74.0	-18.4	1.00 V	258	40.72	14.88
10	#10360.00	43.4 AV	54.0	-10.6	1.00 V	258	28.52	14.88
11	15540.00	56.9 PK	74.0	-17.1	1.00 V	112	36.05	20.85
12	15540.00	44.0 AV	54.0	-10.0	1.00 V	112	23.15	20.85

REMARKS:

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

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#2400.00	51.5 PK	74.0	-22.5	1.05 H	263	53.15	-1.65
2	#2400.00	48.0 AV	54.0	-6.0	1.05 H	263	49.65	-1.65
3	5118.70	62.0 PK	74.0	-12.0	1.05 H	263	53.78	8.22
4	5118.70	51.2 AV	54.0	-2.8	1.05 H	263	42.98	8.22
5	*5200.00	111.1 PK			1.05 H	263	102.86	8.24
6	*5200.00	102.6 AV			1.05 H	263	94.36	8.24
7	#5274.00	58.1 PK	74.0	-15.9	1.05 H	263	49.58	8.52
8	#5274.00	47.8 AV	54.0	-6.2	1.05 H	263	39.28	8.52
9	#10400.00	55.6 PK	74.0	-18.4	1.20 H	201	40.37	15.23
10	#10400.00	43.6 AV	54.0	-10.4	1.20 H	201	28.37	15.23
11	15600.00	57.2 PK	74.0	-16.8	1.15 H	222	36.32	20.88
12	15600.00	44.1 AV	54.0	-9.9	1.15 H	222	23.22	20.88

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#2400.00	53.3 PK	74.0	-20.7	1.07 V	264	54.95	-1.65
2	#2400.00	49.9 AV	54.0	-4.1	1.07 V	264	51.55	-1.65
3	5118.70	63.9 PK	74.0	-10.1	1.03 V	275	55.68	8.22
4	5118.70	53.2 AV	54.0	-0.8	1.03 V	275	44.98	8.22
5	*5200.00	113.5 PK			1.00 V	250	105.26	8.24
6	*5200.00	104.9 AV			1.00 V	250	96.66	8.24
7	#5274.00	60.3 PK	74.0	-13.7	1.02 V	234	51.78	8.52
8	#5274.00	49.5 AV	54.0	-4.5	1.02 V	234	40.98	8.52
9	#10400.00	55.6 PK	74.0	-18.4	1.00 V	258	40.37	15.23
10	#10400.00	43.4 AV	54.0	-10.6	1.00 V	258	28.17	15.23
11	15600.00	56.9 PK	74.0	-17.1	1.00 V	112	36.02	20.88
12	15600.00	44.0 AV	54.0	-10.0	1.00 V	112	23.12	20.88

REMARKS:

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



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CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	112.7 PK			1.09 H	271	104.30	8.40
2	*5240.00	103.5 AV			1.09 H	271	95.10	8.40
3	5350.00	53.9 PK	74.0	-20.1	1.09 H	271	45.10	8.80
4	5350.00	42.1 AV	54.0	-11.9	1.09 H	271	33.30	8.80
5	#10480.00	59.1 PK	74.0	-14.9	1.66 H	207	43.89	15.21
6	#10480.00	47.1 AV	54.0	-6.9	1.66 H	207	31.89	15.21
7	15720.00	57.7 PK	74.0	-16.3	1.00 H	0	36.83	20.87
8	15720.00	45.7 AV	54.0	-8.3	1.00 H	0	24.83	20.87
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	114.7 PK			1.00 V	252	106.30	8.40
2	*5240.00	105.4 AV			1.00 V	252	97.00	8.40
3	5350.00	56.1 PK	74.0	-17.9	1.00 V	252	47.30	8.80
4	5350.00	44.5 AV	54.0	-9.5	1.00 V	252	35.70	8.80
5	#10480.00	54.8 PK	74.0	-19.2	1.12 V	207	39.59	15.21
6	#10480.00	45.1 AV	54.0	-8.9	1.12 V	207	29.89	15.21
7	15720.00	57.8 PK	74.0	-16.2	1.00 V	311	36.93	20.87
8	15720.00	45.8 AV	54.0	-8.2	1.00 V	311	24.93	20.87

REMARKS:

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

802.11n (HT20), 3Tx

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5100.00	60.9 PK	74.0	-13.1	1.11 H	258	52.68	8.22
2	5100.00	51.0 AV	54.0	-3.0	1.11 H	258	42.78	8.22
3	*5180.00	109.5 PK			1.11 H	258	101.27	8.23
4	*5180.00	100.0 AV			1.11 H	258	91.77	8.23
5	#10360.00	55.5 PK	74.0	-18.5	1.19 H	170	40.62	14.88
6	#10360.00	43.4 AV	54.0	-10.6	1.19 H	170	28.52	14.88
7	15540.00	57.1 PK	74.0	-16.9	1.03 H	201	36.25	20.85
8	15540.00	44.0 AV	54.0	-10.0	1.03 H	201	23.15	20.85
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5100.00	63.3 PK	74.0	-10.7	1.50 V	275	55.08	8.22
2	5100.00	53.4 AV	54.0	-0.6	1.50 V	275	45.18	8.22
3	*5180.00	111.4 PK			1.00 V	250	103.17	8.23
4	*5180.00	102.2 AV			1.00 V	250	93.97	8.23
5	#10360.00	55.6 PK	74.0	-18.4	1.00 V	258	40.72	14.88
6	#10360.00	43.4 AV	54.0	-10.6	1.00 V	258	28.52	14.88
7	15540.00	56.9 PK	74.0	-17.1	1.00 V	112	36.05	20.85
8	15540.00	44.0 AV	54.0	-10.0	1.00 V	112	23.15	20.85

REMARKS:

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

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5120.00	60.3 PK	74.0	-13.7	1.00 H	259	52.07	8.23
2	5120.00	50.9 AV	54.0	-3.1	1.00 H	259	42.67	8.23
3	*5200.00	110.4 PK			1.00 H	259	102.16	8.24
4	*5200.00	101.2 AV			1.00 H	259	92.96	8.24
5	#10400.00	55.9 PK	74.0	-18.1	1.19 H	214	40.67	15.23
6	#10400.00	44.1 AV	54.0	-9.9	1.19 H	214	28.87	15.23
7	15600.00	57.0 PK	74.0	-17.0	1.19 H	228	36.12	20.88
8	15600.00	43.8 AV	54.0	-10.2	1.19 H	228	22.92	20.88
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5120.00	62.7 PK	74.0	-11.3	1.11 V	248	54.47	8.23
2	5120.00	53.1 AV	54.0	-0.9	1.11 V	248	44.87	8.23
3	*5200.00	112.6 PK			1.00 V	249	104.36	8.24
4	*5200.00	103.6 AV			1.00 V	249	95.36	8.24
5	#10400.00	55.6 PK	74.0	-18.4	1.00 V	258	40.37	15.23
6	#10400.00	43.4 AV	54.0	-10.6	1.00 V	258	28.17	15.23
7	15600.00	56.9 PK	74.0	-17.1	1.00 V	112	36.02	20.88
8	15600.00	44.0 AV	54.0	-10.0	1.00 V	112	23.12	20.88

REMARKS:

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



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CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	111.5 PK			1.03 H	275	103.10	8.40
2	*5240.00	103.3 AV			1.03 H	275	94.90	8.40
3	5350.00	54.4 PK	74.0	-19.6	1.03 H	275	45.60	8.80
4	5350.00	42.4 AV	54.0	-11.6	1.03 H	275	33.60	8.80
5	#10480.00	55.0 PK	74.0	-19.0	1.17 H	200	39.79	15.21
6	#10480.00	43.5 AV	54.0	-10.5	1.17 H	200	28.29	15.21
7	15720.00	57.3 PK	74.0	-16.7	1.18 H	198	36.43	20.87
8	15720.00	44.5 AV	54.0	-9.5	1.18 H	198	23.63	20.87

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	113.8 PK			1.10 V	255	105.40	8.40
2	*5240.00	105.2 AV			1.10 V	255	96.80	8.40
3	5350.00	56.8 PK	74.0	-17.2	1.10 V	255	48.00	8.80
4	5350.00	44.9 AV	54.0	-9.1	1.10 V	255	36.10	8.80
5	#10480.00	55.6 PK	74.0	-18.4	1.00 V	258	40.39	15.21
6	#10480.00	43.4 AV	54.0	-10.6	1.00 V	258	28.19	15.21
7	15720.00	56.9 PK	74.0	-17.1	1.00 V	112	36.03	20.87
8	15720.00	44.0 AV	54.0	-10.0	1.00 V	112	23.13	20.87

REMARKS:

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

802.11n (HT40), 3Tx

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5148.00	61.9 PK	74.0	-12.1	1.00 H	250	53.67	8.23
2	5148.00	50.8 AV	54.0	-3.2	1.00 H	250	42.57	8.23
3	*5190.00	104.0 PK			1.00 H	250	95.76	8.24
4	*5190.00	95.1 AV			1.00 H	250	86.86	8.24
5	#10380.00	55.1 PK	74.0	-18.9	1.18 H	165	40.04	15.06
6	#10380.00	43.4 AV	54.0	-10.6	1.18 H	165	28.34	15.06
7	15570.00	57.3 PK	74.0	-16.7	1.10 H	227	36.44	20.86
8	15570.00	44.0 AV	54.0	-10.0	1.10 H	227	23.14	20.86
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5148.00	64.3 PK	74.0	-9.7	1.08 V	248	56.07	8.23
2	5148.00	53.2 AV	54.0	-0.8	1.08 V	248	44.97	8.23
3	*5190.00	106.6 PK			1.08 V	248	98.36	8.24
4	*5190.00	97.7 AV			1.08 V	248	89.46	8.24
5	#10380.00	55.6 PK	74.0	-18.4	1.00 V	258	40.54	15.06
6	#10380.00	43.4 AV	54.0	-10.6	1.00 V	258	28.34	15.06
7	15570.00	56.9 PK	74.0	-17.1	1.00 V	112	36.04	20.86
8	15570.00	44.0 AV	54.0	-10.0	1.00 V	112	23.14	20.86

REMARKS:

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



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CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5148.00	58.3 PK	74.0	-15.7	1.02 H	254	50.07	8.23
2	5148.00	46.1 AV	54.0	-7.9	1.02 H	254	37.87	8.23
3	*5230.00	109.2 PK			1.02 H	254	100.84	8.36
4	*5230.00	99.7 AV			1.02 H	254	91.34	8.36
5	5350.00	54.3 PK	74.0	-19.7	1.02 H	254	45.50	8.80
6	5350.00	41.8 AV	54.0	-12.2	1.02 H	254	33.00	8.80
7	#10460.00	55.4 PK	74.0	-18.6	1.25 H	180	40.19	15.21
8	#10460.00	43.5 AV	54.0	-10.5	1.25 H	180	28.29	15.21
9	15690.00	56.3 PK	74.0	-17.7	1.19 H	214	35.39	20.91
10	15690.00	43.2 AV	54.0	-10.8	1.19 H	214	22.29	20.91

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5148.00	60.8 PK	74.0	-13.2	1.32 V	250	52.57	8.23
2	5148.00	48.6 AV	54.0	-5.4	1.32 V	250	40.37	8.23
3	*5230.00	111.3 PK			1.32 V	250	102.94	8.36
4	*5230.00	101.9 AV			1.32 V	250	93.54	8.36
5	5350.00	56.0 PK	74.0	-18.0	1.32 V	250	47.20	8.80
6	5350.00	43.6 AV	54.0	-10.4	1.32 V	250	34.80	8.80
7	#10460.00	55.6 PK	74.0	-18.4	1.00 V	258	40.39	15.21
8	#10460.00	43.4 AV	54.0	-10.6	1.00 V	258	28.19	15.21
9	15690.00	56.9 PK	74.0	-17.1	1.00 V	112	35.99	20.91
10	15690.00	44.0 AV	54.0	-10.0	1.00 V	112	23.09	20.91

REMARKS:

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

4.3 TRANSMIT POWER MEASUREMENT

4.3.1 LIMITS OF TRANSMIT POWER MEASUREMENT

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

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

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

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

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

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

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

4.3.2 TEST INSTRUMENTS

FOR POWER OUTPUT MEASUREMENT

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Power meter Anritsu	ML2495A	0824006	May 20, 2013	May 19, 2014
Power sensor Anritsu	MA2411B	0738172	May 20, 2013	May 19, 2014

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. Tested date : Feb. 27, 2014

FOR 26dB OCCUPIED BANDWIDTH

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSP 40	100036	Jan. 21, 2014	Jan. 20, 2015

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. Tested date : Feb. 27, 2014

4.3.3 TEST PROCEDURE

FOR POWER OUTPUT MEASUREMENT

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

FOR 26dB OCCUPIED BANDWIDTH

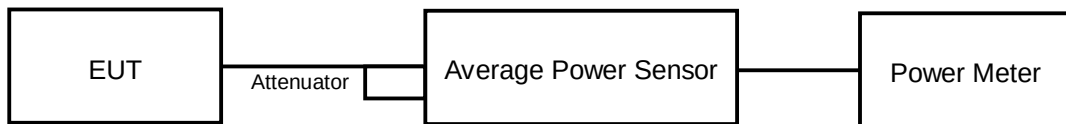
1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement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

4.3.4 DEVIATION FROM TEST STANDARD

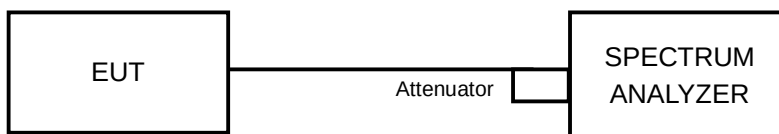
No deviation

4.3.5 TEST SETUP

FOR POWER OUTPUT MEASUREMENT



FOR 26dB OCCUPIED BANDWIDTH



4.3.6 EUT OPERATING CONDITIONS

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

4.3.7 TEST RESULTS

802.11a, 1Tx

POWER OUTPUT:

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	44.157	16.45	17	PASS
40	5200	44.771	16.51	17	PASS
48	5240	44.259	16.46	17	PASS

26dB OCCUPIED BANDWIDTH:

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)
36	5180	27.07
40	5200	26.66
48	5240	27.49

Note: For FCC output power limitation is determined based on 26dBc bandwidth.

Power Limit = 4dBm + 10logB < UNII Band 1>			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
36	5180	27.07	18.32 > 17
40	5200	26.66	18.25 > 17
48	5240	27.49	18.39 > 17



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802.11n(HT20), 1Tx**POWER OUTPUT:**

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	44.978	16.53	17	PASS
40	5200	45.814	16.61	17	PASS
48	5240	35.645	15.52	17	PASS

26dB OCCUPIED BANDWIDTH:

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)
36	5180	27.69
40	5200	26.36
48	5240	26.93

Note: For FCC output power limitation is determined based on 26dBc bandwidth.

Power Limit = 4dBm + 10logB < UNII Band 1>			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
36	5180	27.69	18.42 > 17
40	5200	26.36	18.2 > 17
48	5240	26.93	18.3 > 17



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802.11n(HT40), 1Tx**POWER OUTPUT:**

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	20.230	13.06	17	PASS
46	5230	49.091	16.91	17	PASS

26dB OCCUPIED BANDWIDTH:

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)
38	5190	41.57
46	5230	41.74

Note: For FCC output power limitation is determined based on 26dBc bandwidth.

Power Limit = 4dBm + 10logB < UNII Band 1>			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
38	5190	41.57	20.18 > 17
46	5230	41.74	20.2 > 17

802.11n (HT20), 2Tx

POWER OUTPUT:

CHAN.	CHAN. FREQ. (MHz)	AVERAGE POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
36	5180	13.51	12.44	39.978	16.02	17	PASS
40	5200	13.43	12.25	38.817	15.89	17	PASS
48	5240	13.44	12.59	40.235	16.05	17	PASS

26dB OCCUPIED BANDWIDTH:

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	
		CHAIN 0	CHAIN 1
36	5180	26.60	25.86
40	5200	27.10	26.02
48	5240	27.10	23.67

Note: For FCC output power limitation is determined based on 26dBc bandwidth.

Power Limit = 4dBm + 10logB < UNII Band 1>			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
36	5180	25.86	18.12 > 17
40	5200	26.02	18.15 > 17
48	5240	23.67	17.74 > 17



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802.11n (HT40), 2Tx**POWER OUTPUT:**

CHAN.	CHAN. FREQ. (MHz)	AVERAGE POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
38	5190	12.39	10.92	29.697	14.73	17	PASS
46	5230	14.36	12.63	45.613	16.59	17	PASS

26dB OCCUPIED BANDWIDTH:

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	
		CHAIN 0	CHAIN 1
38	5190	42.12	40.92
46	5230	41.66	40.85

Note: For FCC output power limitation is determined based on 26dBc bandwidth.

Power Limit = 4dBm + 10logB < UNII Band 1>			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
38	5190	40.92	20.11 > 17
46	5230	40.85	20.11 > 17



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802.11a, 3Tx

POWER OUTPUT:

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
36	5180	12.09	10.91	11.40	42.316	16.27	17	PASS
40	5200	12.13	10.87	11.12	41.491	16.18	17	PASS
48	5240	12.03	11.14	10.91	41.292	16.16	17	PASS

26dB OCCUPIED BANDWIDTH:

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)		
		CHAIN 0	CHAIN 1	CHAIN 2
36	5180	20.71	27.44	26.64
40	5200	25.83	23.73	26.61
48	5240	27.01	26.77	26.36

Note: For FCC output power limitation is determined based on 26dBc bandwidth.

Power Limit = 4dBm + 10logB < UNII Band 1>			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
36	5180	20.71	17.16 > 17
40	5200	23.73	17.75 > 17
48	5240	26.36	18.2 > 17



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802.11n(HT20), 3Tx**POWER OUTPUT:**

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
36	5180	12.04	10.42	11.42	40.879	16.12	17	PASS
40	5200	12.10	10.32	11.21	40.196	16.04	17	PASS
48	5240	12.04	10.04	10.56	37.465	15.74	17	PASS

26dB OCCUPIED BANDWIDTH:

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)		
		CHAIN 0	CHAIN 1	CHAIN 2
36	5180	25.90	27.16	26.59
40	5200	26.64	21.06	26.30
48	5240	26.53	26.24	26.34

Note: For FCC output power limitation is determined based on 26dBc bandwidth.

Power Limit = 4dBm + 10logB < UNII Band 1>			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
36	5180	25.90	18.13 > 17
40	5200	21.06	17.23 > 17
48	5240	26.24	18.18 > 17

802.11n(HT40), 3Tx

POWER OUTPUT:

CHANNEL	FREQUENCY (MHz)	AVERAGE POWER (dBm)			TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 2				
38	5190	12.71	11.03	12.26	48.168	16.83	17	PASS
46	5230	12.53	10.87	12.12	46.417	16.67	17	PASS

26dB OCCUPIED BANDWIDTH:

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)		
		CHAIN 0	CHAIN 1	CHAIN 2
38	5190	41.45	41.56	41.28
46	5230	41.92	41.59	41.49

Note: For FCC output power limitation is determined based on 26dBc bandwidth.

Power Limit = 4dBm + 10logB < UNII Band 1>			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Conducted Limit (dBm)
38	5190	41.28	20.15 > 17
46	5230	41.49	20.17 > 17

4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

FREQUENCY BAND	LIMIT
5.15 ~ 5.25GHz	4dBm
5.25 ~ 5.35GHz	11dBm
5.47 ~ 5.725GHz	11dBm
5.725 ~ 5.825GHz	17dBm

4.4.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSP40	100036	Jan. 21, 2014	Jan. 20, 2015

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. Tested date : Feb. 27, 2014

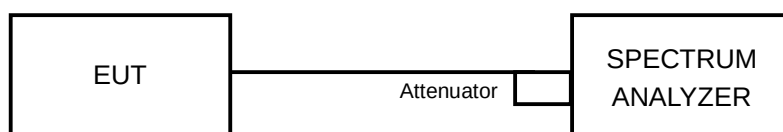
4.4.3 TEST PROCEDURES

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

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

Same as 4.3.6



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4.4.7 TEST RESULTS

802.11a, 1Tx

CHANNEL	CHANNEL FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	1.73	4	PASS
40	5200	1.86	4	PASS
48	5240	1.90	4	PASS

802.11n (HT20), 1Tx

CHANNEL	CHANNEL FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	1.45	4	PASS
40	5200	1.56	4	PASS
48	5240	1.65	4	PASS

802.11n (HT40), 1Tx

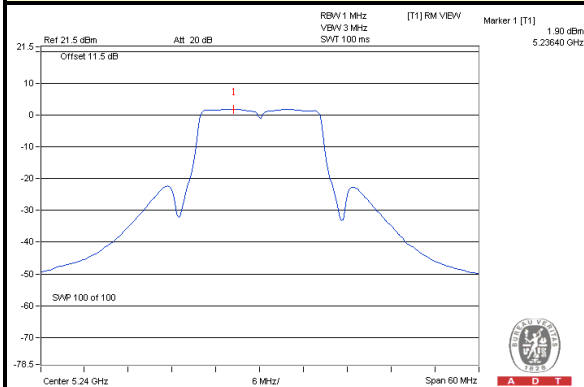
CHANNEL	CHANNEL FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
38	5190	-3.84	4	PASS
46	5230	-0.17	4	PASS



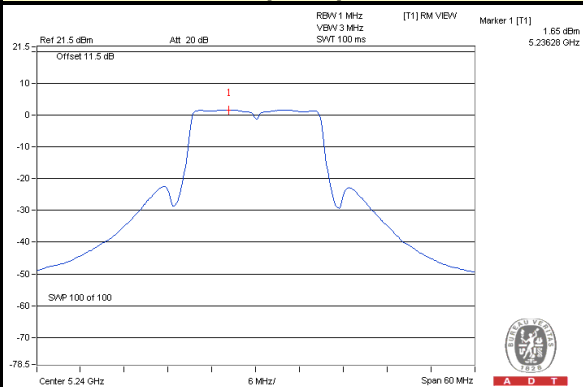
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SPECTRUM PLOT OF WORST VALUE

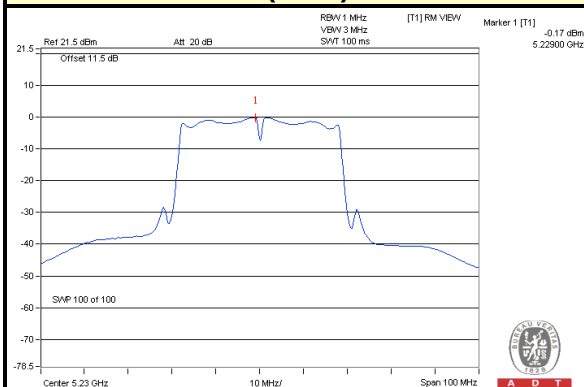
802.11a / CH48



802.11n (HT20) / CH48



802.11n (HT40) / CH46



802.11n (HT20), 2Tx

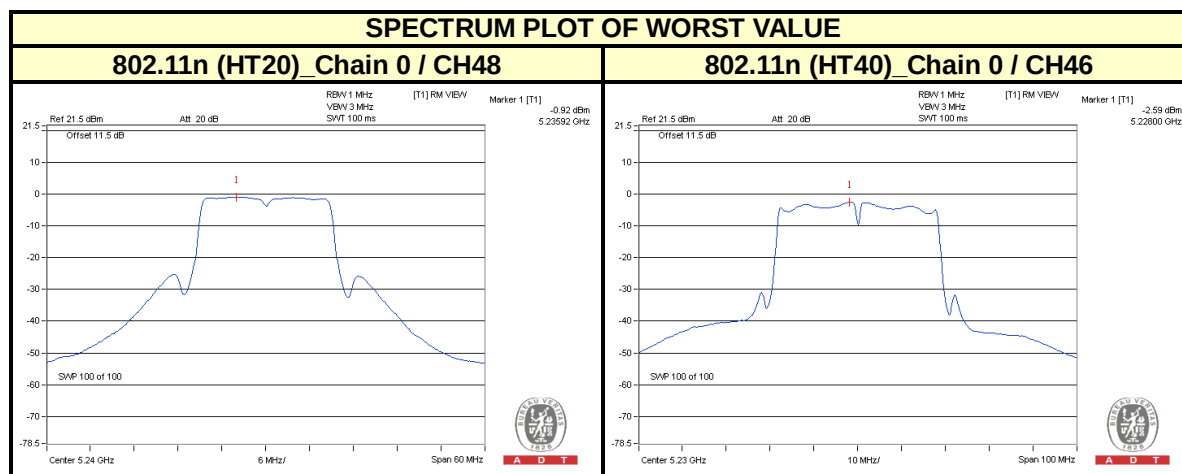
CHAN.	CHANNEL FREQUENCY (MHz)	PSD (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1			
36	5180	-0.97	-2.31	1.42	4	PASS
40	5200	-0.94	-2.30	1.44	4	PASS
48	5240	-0.92	-2.27	1.47	4	PASS

NOTE: 1. Method a) 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.

802.11n (HT40), 2Tx

CHAN.	CHANNEL FREQUENCY (MHz)	PSD (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1			
38	5190	-4.33	-5.54	-1.88	4	PASS
46	5230	-2.64	-3.98	-0.25	4	PASS

NOTE: 1. Method a) 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.



802.11a, 3Tx

CHANNEL	CHANNEL FREQUENCY (MHz)	PSD (dBm)			TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS/FAIL
		CHAIN 0	CHAIN 1	CHAIN 2			
36	5180	-1.85	-3.19	-3.28	2.05	2.69	PASS
40	5200	-1.87	-3.24	-3.43	1.98	2.69	PASS
48	5240	-1.67	-3.07	-2.61	2.36	2.69	PASS

- NOTE:**
- Method a) 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.
 - Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / 3] = 7.31\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $4-(7.31-6) = 2.69\text{dBm}$.

802.11n (HT20), 3Tx

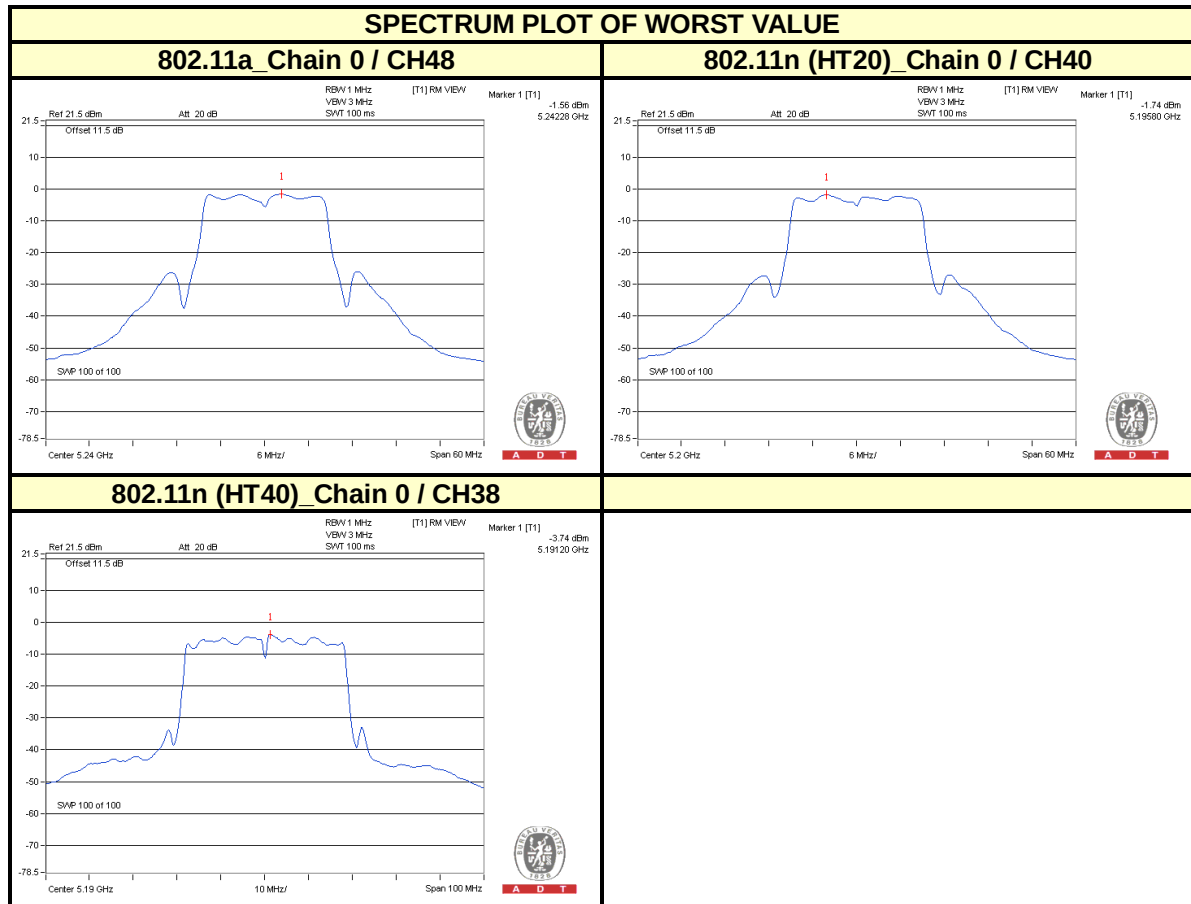
CHANNEL	CHANNEL FREQUENCY (MHz)	PSD (dBm)			TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS/FAIL
		CHAIN 0	CHAIN 1	CHAIN 2			
36	5180	-1.98	-4.22	-3.70	1.58	2.69	PASS
40	5200	-1.81	-3.98	-3.62	1.74	2.69	PASS
48	5240	-2.43	-3.52	-3.21	1.74	2.69	PASS

- NOTE:**
- Method a) 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.
 - Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / 3] = 7.31\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $4-(7.31-6) = 2.69\text{dBm}$.

802.11n (HT40), 3Tx

CHANNEL	CHANNEL FREQUENCY (MHz)	PSD (dBm)			TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS/FAIL
		CHAIN 0	CHAIN 1	CHAIN 2			
38	5190	-3.74	-5.67	-5.56	-0.12	2.69	PASS
46	5230	-4.67	-4.88	-4.78	0.00	2.69	PASS

- NOTE:**
- Method a) 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.
 - Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2 / 3] = 7.31\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $4-(7.31-6) = 2.69\text{dBm}$.



4.5 PEAK POWER EXCURSION MEASUREMENT

4.5.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Shall not exceed 13 dB

4.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSP 40	100036	Jan. 21, 2014	Jan. 20, 2015

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. Tested date : Feb. 27, 2014

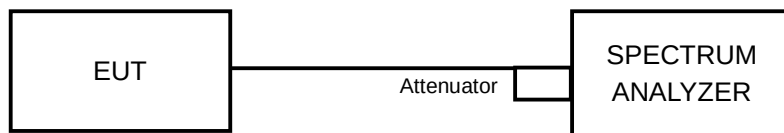
4.5.3 TEST PROCEDURE

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

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITIONS

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

4.5.7 TEST RESULTS

For 1Tx

MODULATION MODE	MODULATION TYPE	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS/ FAIL
802.11a	BPSK	5240	11.36	1.9	9.46	13	PASS
802.11n (HT20)	BPSK	5240	11.3	1.65	9.65	13	PASS
802.11n (HT40)	BPSK	5230	9.51	-0.17	9.68	13	PASS

MODULATION MODE	MODULATION TYPE	CHAN. FREQ. (MHz)	PEAK VALUE (dBm)	PPSD WITHOUT DUTY FACTOR (dBm)	PPSD WITH DUTY FACTOR (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS /FAIL
802.11a	QPSK	5240	11.95	1.92	2.03	9.92	13	PASS
	16QAM		12.06	1.73	1.88	10.18	13	PASS
	64QAM		11.81	1.65	1.91	9.9	13	PASS
802.11n (HT20)	QPSK	5240	11.48	1.57	1.68	9.8	13	PASS
	16QAM		12.2	1.62	1.79	10.41	13	PASS
	64QAM		11.59	1.54	1.82	9.77	13	PASS
802.11n (HT40)	QPSK	5230	9.75	-0.32	-0.16	9.91	13	PASS
	16QAM		10.31	-0.39	-0.1	10.41	13	PASS
	64QAM		10.5	-0.36	0.13	10.37	13	PASS

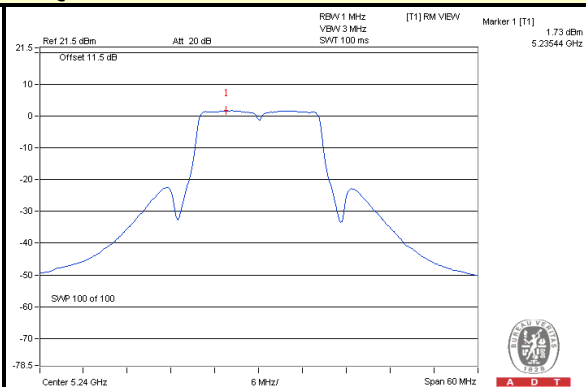
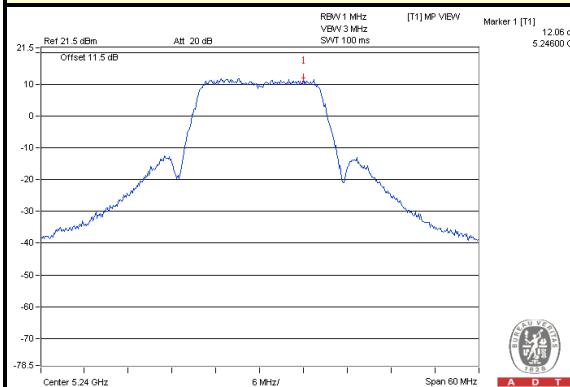
NOTE: 1. Refer to section 3.4 for duty cycle spectrum plot.



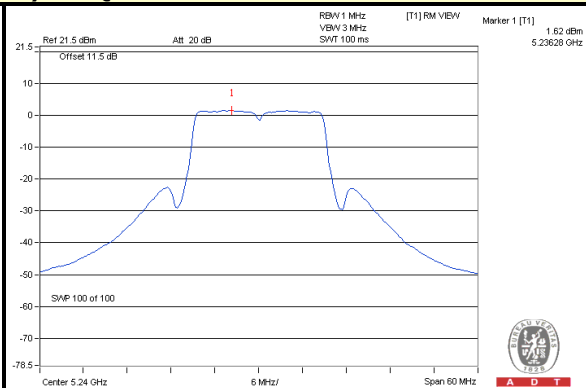
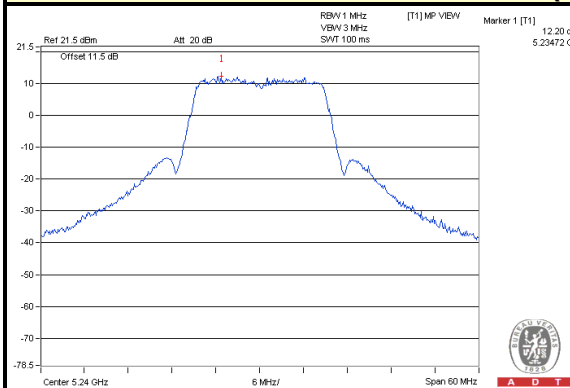
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SPECTRUM PLOT OF WORST VALUE

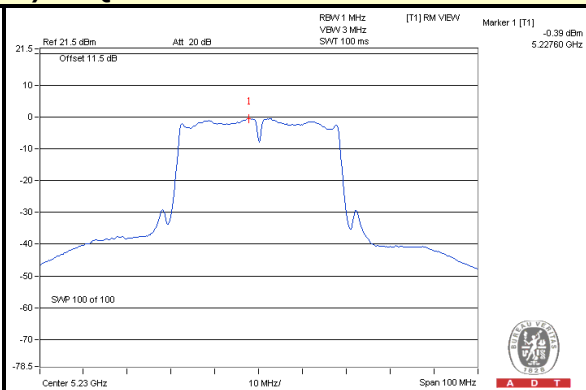
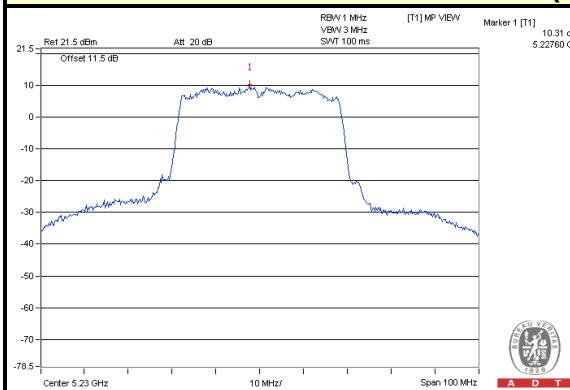
802.11a / 16QAM



802.11n (HT20) / 16QAM



802.11n (HT40) / 16QAM



4.6 FREQUENCY STABILITY

4.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

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

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSP 40	100036	Jan. 21, 2014	Jan. 20, 2015
Temperature & Humidity Chamber GIANTFORCE	GTH-150-40-SP-AR	MAA0812-008	Jan. 13, 2014	Jan. 12, 2015

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. Tested date : Feb. 27, 2014

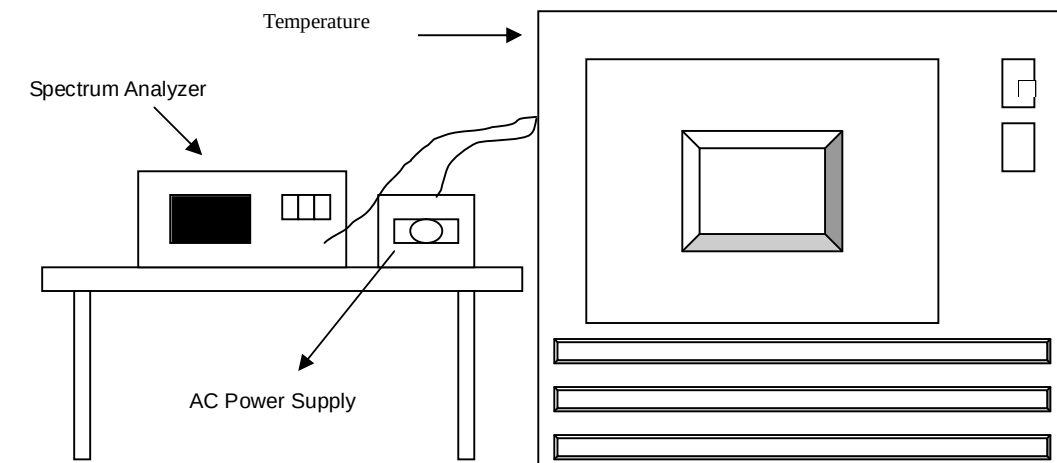
4.6.3 TEST PROCEDURE

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

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 TEST SETUP



4.6.6 EUT OPERATING CONDITION

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



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4.6.7 TEST RESULTS

For 1Tx

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5240MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency	Frequency Drift	Measured Frequency	Frequency Drift	Measured Frequency	Frequency Drift	Measured Frequency	Frequency Drift
		(MHz)	%	(MHz)	%	(MHz)	%	(MHz)	%
50	120	5240.0103	0.00020	5240.0146	0.00028	5240.0168	0.00032	5240.0165	0.00031
40	120	5240.0218	0.00042	5240.021	0.00040	5240.0266	0.00051	5240.0242	0.00046
30	120	5240.02	0.00038	5240.0175	0.00033	5240.0257	0.00049	5240.0175	0.00033
20	120	5240.0067	0.00013	5239.9999	0.00000	5240.0042	0.00008	5240.0082	0.00016
10	120	5239.9926	-0.00014	5239.9951	-0.00009	5239.9896	-0.00020	5239.9913	-0.00017
0	120	5239.9994	-0.00001	5239.9974	-0.00005	5239.9988	-0.00002	5239.9936	-0.00012
-10	120	5239.9803	-0.00038	5239.9787	-0.00041	5239.9797	-0.00039	5239.9797	-0.00039
-20	120	5239.9911	-0.00017	5239.984	-0.00031	5239.9919	-0.00015	5239.9887	-0.00022
-30	120	5240.0194	0.00037	5240.0211	0.00040	5240.0191	0.00036	5240.0175	0.00033

FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5240MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency	Frequency Drift	Measured Frequency	Frequency Drift	Measured Frequency	Frequency Drift	Measured Frequency	Frequency Drift
		(MHz)	%	(MHz)	%	(MHz)	%	(MHz)	%
20	138	5240.0065	0.00012	5240.0006	0.00001	5240.0047	0.00009	5240.0073	0.00014
	120	5240.0067	0.00013	5239.9999	0.00000	5240.0042	0.00008	5240.0082	0.00016
	102	5240.006	0.00011	5240.0006	0.00001	5240.0043	0.00008	5240.0079	0.00015

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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

6. INFORMATION ON THE TESTING LABORATORIES

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

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

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Web Site: www.bureauveritas-adt.com

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



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

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

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