



FCC TEST REPORT (15.407)

REPORT NO.: RF130614E11-1

MODEL NO.: DWA-171

FCC ID: KA2WA171B1

RECEIVED: June 14, 2013

TESTED: June 22 to 25, 2013

ISSUED: July 29, 2013

APPLICANT: D-Link Corporation

ADDRESS: No.289, Sinhu 3rd Rd., Neihu District, Taipei
City 114, Taiwan, R.O.C

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

LAB ADDRESS : No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan,
R.O.C.

TEST LOCATION (1): No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan,
R.O.C.

TEST LOCATION (2): No. 49, Ln. 206, Wende Rd., Shangshan Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan,
R.O.C.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF130614E11-1	Original release	July 29, 2013



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1. CERTIFICATION

PRODUCT: Wireless AC Dual Band USB Adapter
BRAND NAME: D-Link
MODEL NO.: DWA-171
TEST SAMPLE: ENGINEERING SAMPLE
APPLICANT: D-Link Corporation
TESTED: June 22 to 25, 2013
STANDARDS: **FCC Part 15, Subpart E (Section 15.407)**
ANSI C63.10-2009

The above equipment (Model: DWA-171) 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:** July 29, 2013
(Midoli Peng, Specialist)

APPROVED BY : , **DATE:** July 29, 2013
(May Chen, Manager)



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2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.407(b)(6)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -21.50dB at 0.35703MHz
15.407(b/1/2/3) (b)(5)	Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -1.0dB at 5150.00MHz & 5725.0MHz.
15.407(a/1/2/3)	Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a/1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	No antenna connector is used.

NOTE:

1. The EUT was operating in 2.400 ~ 2.4835GHz, 5.15~5.35GHz, 5.47~5.6GHz & 5.65~5.725GHz and 5.725~5.850GHz frequencies band. This report was recorded the RF parameters including 5.15~5.35GHz, 5.47~5.6GHz & 5.65~5.725GHz. For the 2.400 ~ 2.4835GHz and 5.725~5.850GHz RF parameters was recorded in another test report.



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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)	5.63 dB
Radiated emissions (1GHz -6GHz)	3.73 dB
Radiated emissions (6GHz -18GHz)	3.90 dB
Radiated emissions (18GHz -40GHz)	4.11 dB



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3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Wireless AC Dual Band USB Adapter
MODEL NO.	DWA-171
POWER SUPPLY	DC 5V from host equipment
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode only.
MODULATION TECHNOLOGY	DSSS,OFDM
TRANSFER RATE	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n: up to 150Mbps 802.11ac: up to 433.3Mbps
OPERATING FREQUENCY	For 15.407 5GHz: 5.18 ~ 5.24GHz, 5.26 ~ 5.32GHz, 5.50 ~ 5.58GHz & 5.66GHz ~ 5.70GHz
	For 15.247 2.4GHz: 2.412 ~ 2.462GHz 5GHz: 5.745 ~ 5.825GHz
NUMBER OF CHANNEL	For 15.407 16 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 7 for 802.11n (HT40), 802.11ac (VHT40) 3 for 802.11ac (VHT80)
	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), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80)

MAXIMUM OUTPUT POWER	For 15.407 802.11a: 29.376mW 802.11n (HT20): 28.379mW 802.11n (HT40): 28.314mW 802.11ac (VHT80): 21.979mW For 15.247 (2.4GHz) 802.11b: 120.226mW 802.11g: 146.893mW 802.11n (HT20): 132.739mW 802.11n (HT40): 255.859mW For 15.247 (5GHz) 802.11a: 73.621mW 802.11n (HT20): 78.705mW 802.11n (HT40): 74.989mW 802.11ac (VHT80): 71.779mW
ANTENNA TYPE	Please see NOTE
DATA CABLE	NA
I/O PORTS	Refer to user's manual
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT is a 2.4GHz & 5GHz WLAN device.
2. 2.4GHz and 5GHz technology can't transmit at same time.
3. The antennas provided to the EUT, please refer to the following table:

Antenna Type	Connector	Antenna Gain (dB)	Frequency range (MHz to MHz)
Loop	NA	-0.13	2400~2500
Loop	NA	0.77	5150~5250
Loop	NA	1.33	5250~5350
Loop	NA	1.97	5470~5725
Loop	NA	2.06	5725~5850



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

MODULATION MODE	TX/RX FUNCTION
802.11b	1TX/1RX
802.11g	1TX/1RX
802.11a	1TX/1RX
802.11n (HT20)	1TX/1RX
802.11n (HT40)	1TX/1RX
802.11ac (VHT20)	1TX/1RX
802.11ac (VHT40)	1TX/1RX
802.11ac (VHT80)	1TX/1RX

Note: The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and 802.11ac mode for 20MHz (40MHz), therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

5. When the EUT operating in 802.11n, the software operation, which is defined by manufacturer, MCS (Modulation and Coding Schemes) from 0 to 7.
6. When the EUT operating in 802.11ac, the software operation, which is defined by manufacturer, MCS (Modulation and Coding Schemes) from 0 to 9.
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 ~ 5350MHz band:

8 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180 MHz	52	5260 MHz
40	5200 MHz	56	5280 MHz
44	5220 MHz	60	5300 MHz
48	5240 MHz	64	5320 MHz

4 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

CHANNEL	FREQUENCY
38	5190 MHz
46	5230 MHz
54	5270 MHz
62	5310 MHz

2 channels are provided for 802.11ac (VHT80):

CHANNEL	FREQUENCY
42	5210 MHz
58	5290 MHz

Operated in 5470MHz ~ 5600MHz & 5650MHz ~ 5725MHz bands:

8 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

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

3 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

CHANNEL	FREQUENCY
102	5510 MHz
110	5550 MHz
134	5670 MHz

1 channel is provided for 802.11ac (VHT80):

CHANNEL	FREQUENCY
106	5530 MHz

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

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

Where **PLC**: Power Line Conducted Emission

RE < 1G: Radiated Emission below 1GHz

RE ≥ 1G: Radiated Emission above 1GHz

APCM: Antenna Port Conducted Measurement

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)
802.11a	36 to 140	116	OFDM	BPSK	6

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)
802.11a	36 to 140	116	OFDM	BPSK	6



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	36 to 140	36, 40, 48, 52, 60, 64, 100, 116, 132, 140	OFDM	BPSK	6
802.11n (HT20)	36 to 140	36, 40, 48, 52, 60, 64, 100, 116, 132, 140	OFDM	BPSK	6.5
802.11n (HT40)	38 to 134	38, 46, 54, 62, 102, 110, 134	OFDM	BPSK	13.5
802.11ac (VHT80)	42 to 106	42, 58, 106	OFDM	BPSK	29.3

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	36 to 140	36, 40, 48, 52, 60, 64, 100, 116, 132, 140	OFDM	BPSK	6
802.11n (HT20)	36 to 140	36, 40, 48, 52, 60, 64, 100, 116, 132, 140	OFDM	BPSK	6.5
802.11n (HT40)	38 to 134	38, 46, 54, 62, 102, 110, 134	OFDM	BPSK	13.5
802.11ac (VHT80)	42 to 106	42, 58, 106	OFDM	BPSK	29.3

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
PLC	27deg. C, 68%RH	120Vac, 60Hz	Anderson Chen
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Nelson Teng
RE ³ 1G	30deg. C, 70%RH	120Vac, 60Hz	Tim Ho
APCM	25deg. C, 60%RH	120Vac, 60Hz	James Chan



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 v01 r03

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

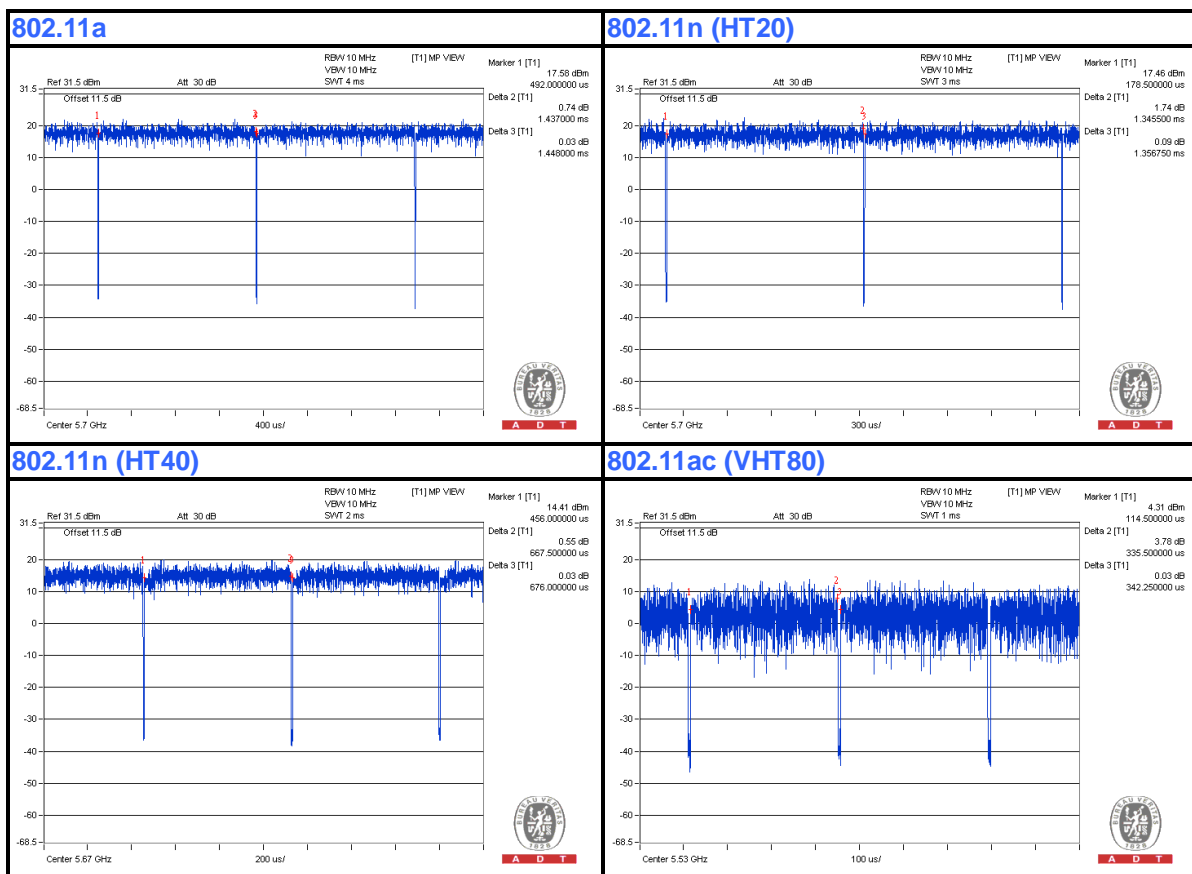
Duty cycle of test signal is > 98 %, duty factor is not required.

802.11a: Duty cycle = 1.437 ms/1.448 ms = 0.992

802.11n (HT20): Duty cycle = 1.346 ms/1.357 ms = 0.992

802.11n (HT40): Duty cycle = 667 us/676 us = 0.987

802.11ac (VHT80): Duty cycle = 335 us/342 us = 0.980





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3.5 DESCRIPTION OF SUPPORT UNITS

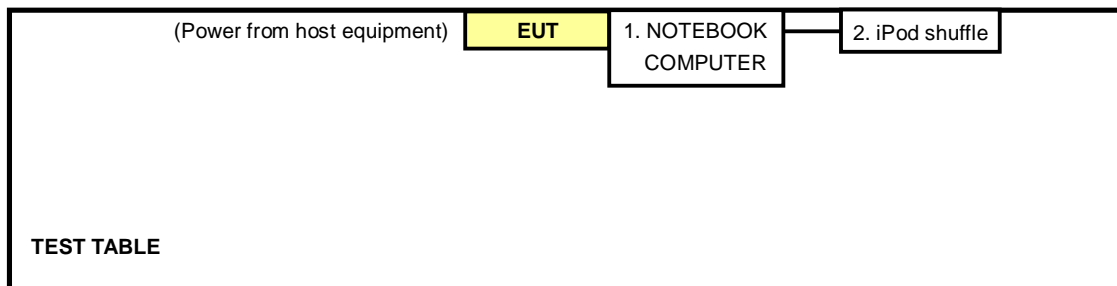
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP32LA	FSLB32S	FCC DoC
2	iPod shuffle	Apple	MC749TA/A	CC4DMFJUDFD M	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	USB cable, 0.1m

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

3.6 CONFIGURATION OF SYSTEM UNDER TEST





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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	ESCS 30	100375	Mar. 08, 2013	Mar. 07, 2014
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK8127	8127-522	Sep. 06, 2012	Sep. 05, 2013
Line-Impedance Stabilization Network (for Peripheral)	ENV216	100072	June 07, 2013	June 06, 2014
RF Cable (JYEBAO)	5DFB	COCCAB-001	Mar. 11, 2013	Mar. 10, 2014
50 ohms Terminator	50	EMC-3	Sep. 25, 2012	Sep. 24, 2013
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: June 25, 2013

4.1.3 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.
- b. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- c. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- d. The frequency range from 150kHz to 30MHz was searched. Emission level under (Limit – 20dB) was not recorded.

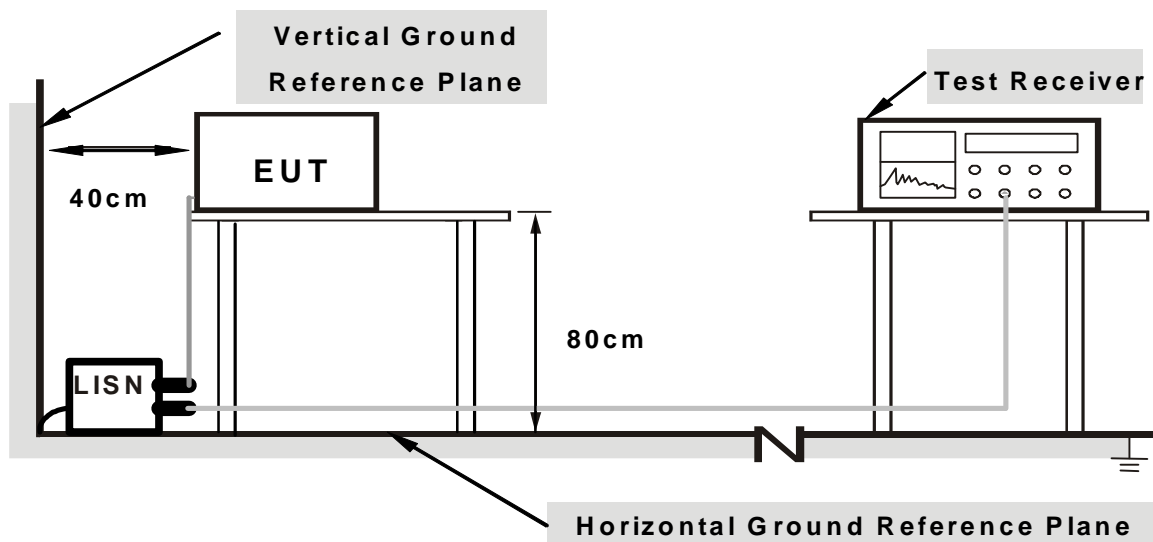
NOTE:

1. 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. Connect the EUT with the support unit 1 (Notebook Computer) which is placed on a testing table.
2. The communication partner run test program “MT76xxU.exe” to enable EUT under transmission/receiving condition continuously at specific channel frequency.

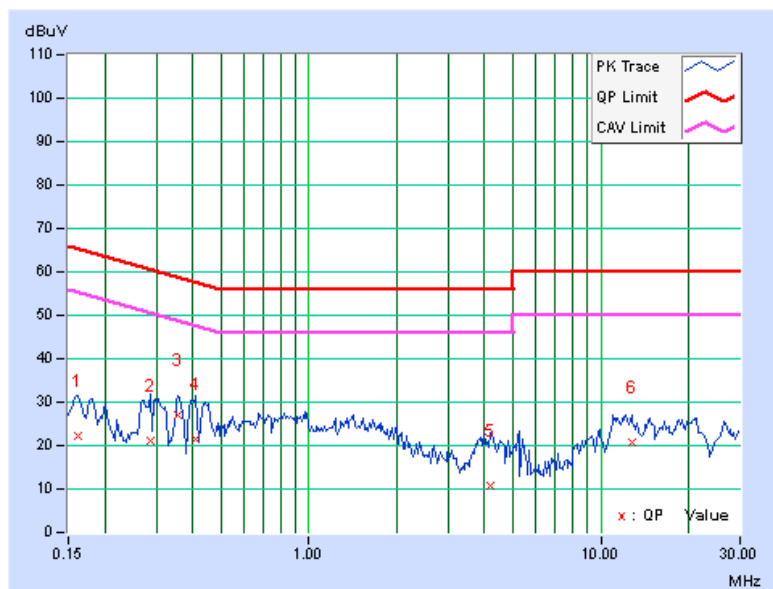
4.1.7 TEST RESULTS

PHASE	Line (L)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)
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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	0.16172	0.12	22.24	22.09	22.36	22.21	65.38
2	0.28672	0.16	20.87	15.80	21.03	15.96	60.62	50.62	-39.59	-34.66
3	0.35703	0.17	26.96	21.59	27.13	21.76	58.80	48.80	-31.67	-27.04
4	0.41172	0.18	21.15	18.54	21.33	18.72	57.61	47.61	-36.28	-28.89
5	4.18750	0.37	10.31	4.28	10.68	4.65	56.00	46.00	-45.32	-41.35
6	12.72656	0.78	19.80	14.15	20.58	14.93	60.00	50.00	-39.42	-35.07

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

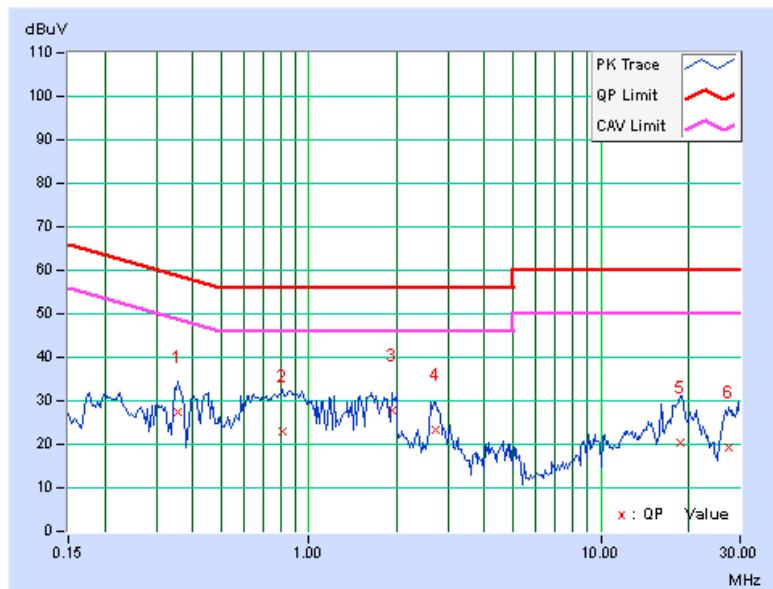


PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
	1	0.35703	0.16	27.16	27.14	27.32	27.30	58.80	48.80	-31.48
2	0.81406	0.19	22.61	19.74	22.80	19.93	56.00	46.00	-33.20	-26.07
3	1.92578	0.26	27.65	19.93	27.91	20.19	56.00	46.00	-28.09	-25.81
4	2.71875	0.29	22.99	15.24	23.28	15.53	56.00	46.00	-32.72	-30.47
5	18.80859	0.70	19.62	13.20	20.32	13.90	60.00	50.00	-39.68	-36.10
6	27.37109	0.90	18.47	15.47	19.37	16.37	60.00	50.00	-40.63	-33.63

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





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4.2 RADIATED EMISSION AND BANDEGE MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION AND BANDEGE 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.

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:

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



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4.2.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer Agilent	E4446A	MY48250253	Sep. 03, 2012	Sep. 02, 2013
MXE EMI Receiver Agilent	N9038A	MY51210105	Jan. 29, 2013	Jan. 28, 2014
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-03	Nov. 14, 2012	Nov. 13, 2013
Pre-Amplifier Agilent	8449B	3008A02578	June 26, 2012	June 25, 2013
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Nov. 14, 2012	Nov. 13, 2013
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-360	Mar. 19, 2013	Mar. 18, 2014
Horn_Antenna AISI	AIH.8018	0000320091110	Nov. 19, 2012	Nov. 18, 2013
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Oct. 12, 2012	Oct. 11, 2013
RF Cable	NA	RF104-201 RF104-203 RF104-204	Dec. 25, 2012	Dec. 24, 2013
RF Cable	NA	CHGCAB_001	Oct. 06, 2012	Oct. 05, 2013
Software	ADT_Radiated _V8.7.05	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.
- 8 Tested Date: June 22 to 24, 2013

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.

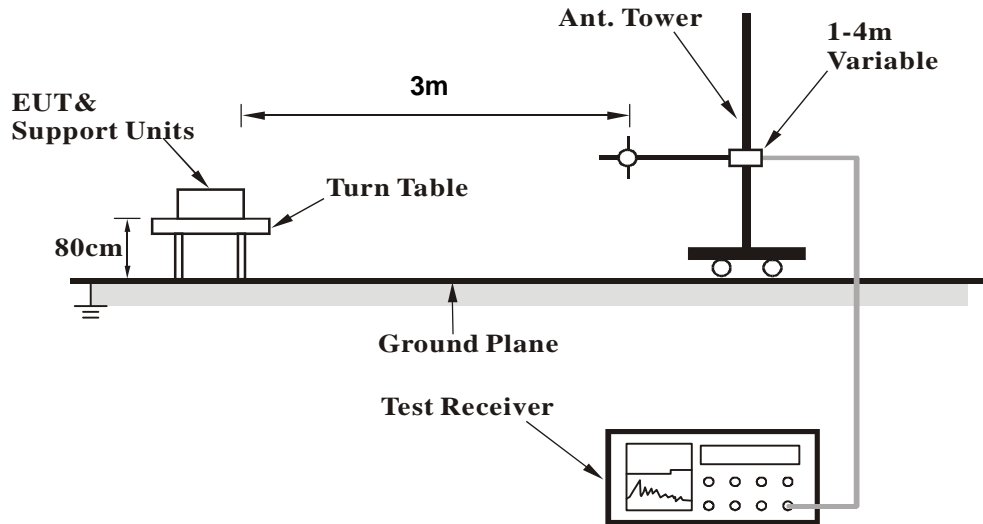
NOTE:

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 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.
4. 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



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

802.11a

CHANNEL	TX Channel 116	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	97.46	32.3 QP	43.5	-11.2	2.00 H	119	51.30	-18.98
2	140.73	34.8 QP	43.5	-8.7	1.75 H	241	48.63	-13.84
3	274.15	34.5 QP	46.0	-11.5	1.50 H	264	48.11	-13.65
4	719.96	33.1 QP	46.0	-13.0	1.00 H	225	36.78	-3.73
5	747.70	34.3 QP	46.0	-11.7	1.00 H	337	36.91	-2.58
6	849.31	34.5 QP	46.0	-11.5	1.00 H	154	35.89	-1.35

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	92.76	38.9 QP	43.5	-4.6	1.25 V	124	57.92	-19.02
2	144.31	31.3 QP	43.5	-12.2	1.00 V	294	44.53	-13.27
3	399.72	26.5 QP	46.0	-19.5	1.50 V	43	36.77	-10.25
4	748.28	29.3 QP	46.0	-16.7	1.50 V	289	31.85	-2.56
5	847.95	32.3 QP	46.0	-13.7	1.25 V	248	33.67	-1.35
6	902.56	33.1 QP	46.0	-12.9	1.25 V	349	33.39	-0.29

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 DATA

802.11a

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	5150.00	64.5 PK	74.0	-9.5	1.40 H	113	23.65	40.85
2	5150.00	53.0 AV	54.0	-1.0	1.40 H	113	12.15	40.85
3	*5180.00	104.9 PK			1.40 H	113	63.92	40.98
4	*5180.00	95.4 AV			1.40 H	113	54.42	40.98
5	#10360.00	52.8 PK	74.0	-21.2	1.15 H	21	4.89	47.91
6	#10360.00	42.5 AV	54.0	-11.5	1.15 H	21	-5.41	47.91
7	15540.00	56.3 PK	74.0	-17.7	1.00 H	122	3.00	53.30
8	15540.00	45.0 AV	54.0	-9.0	1.00 H	122	-8.30	53.30

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	60.6 PK	74.0	-13.4	1.69 V	111	19.75	40.85
2	5150.00	50.3 AV	54.0	-3.7	1.69 V	111	9.45	40.85
3	*5180.00	97.4 PK			1.69 V	111	56.42	40.98
4	*5180.00	89.2 AV			1.69 V	111	48.22	40.98
5	#10360.00	53.2 PK	74.0	-20.8	1.00 V	156	5.29	47.91
6	#10360.00	43.1 AV	54.0	-10.9	1.00 V	156	-4.81	47.91
7	15540.00	55.3 PK	74.0	-18.7	1.00 V	59	2.00	53.30
8	15540.00	45.1 AV	54.0	-8.9	1.00 V	59	-8.20	53.30

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 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	*5200.00	107.6 PK			1.01 H	176	66.53	41.07
2	*5200.00	99.1 AV			1.01 H	176	58.03	41.07
3	#10400.00	55.4 PK	74.0	-18.6	1.21 H	26	7.94	47.46
4	#10400.00	44.5 AV	54.0	-9.5	1.21 H	26	-2.96	47.46
5	15600.00	56.9 PK	74.0	-17.1	1.06 H	124	3.85	53.05
6	15600.00	45.2 AV	54.0	-8.8	1.06 H	124	-7.85	53.05

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	*5200.00	107.6 PK			1.01 V	176	66.53	41.07
2	*5200.00	99.1 AV			1.01 V	176	58.03	41.07
3	#10400.00	55.4 PK	74.0	-18.6	1.21 V	26	7.94	47.46
4	#10400.00	44.5 AV	54.0	-9.5	1.21 V	26	-2.96	47.46
5	15600.00	55.6 PK	74.0	-18.4	1.00 V	262	2.55	53.05
6	15600.00	45.2 AV	54.0	-8.8	1.06 V	124	-7.85	53.05

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	107.3 PK			1.00 H	179	66.10	41.20
2	*5240.00	98.8 AV			1.00 H	179	57.60	41.20
3	#10480.00	55.6 PK	74.0	-18.4	1.17 H	35	7.85	47.75
4	#10480.00	44.7 AV	54.0	-9.3	1.17 H	35	-3.05	47.75
5	15720.00	56.6 PK	74.0	-17.4	1.03 H	119	3.89	52.71
6	15720.00	45.0 AV	54.0	-9.0	1.03 H	119	-7.71	52.71

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	96.8 PK			1.67 V	102	55.60	41.20
2	*5240.00	88.8 AV			1.67 V	102	47.60	41.20
3	#10480.00	57.0 PK	74.0	-17.0	1.02 V	346	9.25	47.75
4	#10480.00	45.7 AV	54.0	-8.3	1.02 V	346	-2.05	47.75
5	15720.00	55.1 PK	74.0	-18.9	1.00 V	270	2.39	52.71
6	15720.00	45.3 AV	54.0	-8.7	1.00 V	270	-7.41	52.71

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 52	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	*5260.00	108.1 PK			1.02 H	173	66.85	41.25
2	*5260.00	99.7 AV			1.02 H	173	58.45	41.25
3	#10520.00	57.5 PK	74.0	-16.5	1.27 H	41	9.67	47.83
4	#10520.00	46.3 AV	54.0	-7.7	1.27 H	41	-1.53	47.83
5	15780.00	58.3 PK	74.0	-15.7	1.07 H	124	5.58	52.72
6	15780.00	46.8 AV	54.0	-7.2	1.07 H	124	-5.92	52.72

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	*5260.00	97.9 PK			1.71 V	121	56.65	41.25
2	*5260.00	89.7 AV			1.71 V	121	48.45	41.25
3	#10520.00	57.9 PK	74.0	-16.1	1.02 V	331	10.07	47.83
4	#10520.00	46.2 AV	54.0	-7.8	1.02 V	331	-1.63	47.83
5	15780.00	55.8 PK	74.0	-18.2	1.00 V	276	3.08	52.72
6	15780.00	45.7 AV	54.0	-8.3	1.00 V	276	-7.02	52.72

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 60	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	*5300.00	107.8 PK			1.00 H	176	66.42	41.38
2	*5300.00	99.8 AV			1.00 H	176	58.42	41.38
3	10600.00	57.6 PK	74.0	-16.4	1.32 H	53	9.74	47.86
4	10600.00	46.2 AV	54.0	-7.8	1.32 H	53	-1.66	47.86
5	15900.00	58.1 PK	74.0	-15.9	1.04 H	115	4.92	53.18
6	15900.00	46.5 AV	54.0	-7.5	1.04 H	115	-6.68	53.18

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	*5300.00	97.7 PK			1.75 V	114	56.32	41.38
2	*5300.00	89.4 AV			1.75 V	114	48.02	41.38
3	10600.00	57.5 PK	74.0	-16.5	1.03 V	316	9.64	47.86
4	10600.00	45.8 AV	54.0	-8.2	1.03 V	316	-2.06	47.86
5	15900.00	56.4 PK	74.0	-17.6	1.00 V	269	3.22	53.18
6	15900.00	46.0 AV	54.0	-8.0	1.00 V	269	-7.18	53.18

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.



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CHANNEL	TX Channel 64	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	*5320.00	106.7 PK			1.49 H	184	65.29	41.41
2	*5320.00	98.6 AV			1.49 H	184	57.19	41.41
3	5350.00	66.8 PK	74.0	-7.2	1.49 H	184	25.35	41.45
4	5350.00	52.8 AV	54.0	-1.2	1.49 H	184	11.35	41.45
5	10640.00	57.1 PK	74.0	-16.9	1.27 H	52	9.12	47.98
6	10640.00	45.9 AV	54.0	-8.1	1.27 H	52	-2.08	47.98
7	15960.00	57.8 PK	74.0	-16.2	1.01 H	119	4.75	53.05
8	15960.00	46.1 AV	54.0	-7.9	1.01 H	119	-6.95	53.05

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	*5320.00	106.7 PK			1.49 V	184	99.15	7.55
2	*5320.00	98.6 AV			1.49 V	184	91.05	7.55
3	5350.00	64.6 PK	74.0	-9.4	1.67 V	108	57.16	7.44
4	5350.00	52.8 AV	54.0	-1.2	1.49 V	184	45.36	7.44
5	10640.00	53.0 PK	74.0	-21.0	1.00 V	164	38.45	14.55
6	10640.00	43.2 AV	54.0	-10.8	1.00 V	164	28.65	14.55
7	15960.00	54.7 PK	74.0	-19.3	1.01 V	60	35.44	19.26
8	15960.00	44.7 AV	54.0	-9.3	1.01 V	60	25.44	19.26

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.



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CHANNEL	TX Channel 100	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	5460.00	63.6 PK	74.0	-10.4	1.38 H	186	21.80	41.80
2	5460.00	49.1 AV	54.0	-4.9	1.38 H	186	7.30	41.80
3	#5470.00	67.9 PK	74.0	-6.1	1.38 H	186	26.04	41.86
4	#5470.00	52.9 AV	54.0	-1.1	1.38 H	186	11.04	41.86
5	*5500.00	105.8 PK			1.38 H	186	63.80	42.00
6	*5500.00	97.6 AV			1.38 H	186	55.60	42.00
7	11000.00	56.0 PK	74.0	-18.0	1.17 H	41	6.93	49.07
8	11000.00	44.9 AV	54.0	-9.1	1.17 H	41	-4.17	49.07
9	#16500.00	56.7 PK	74.0	-17.3	1.00 H	114	2.11	54.59
10	#16500.00	44.8 AV	54.0	-9.2	1.00 H	114	-9.79	54.59

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	5460.00	63.5 PK	74.0	-10.5	1.71 V	119	21.70	41.80
2	5460.00	49.3 AV	54.0	-4.7	1.71 V	119	7.50	41.80
3	#5470.00	63.2 PK	74.0	-10.8	1.71 V	119	21.34	41.86
4	#5470.00	50.3 AV	54.0	-3.7	1.71 V	119	8.44	41.86
5	*5500.00	97.8 PK			1.71 V	119	55.80	42.00
6	*5500.00	89.5 AV			1.71 V	119	47.50	42.00
7	11000.00	53.6 PK	74.0	-20.4	1.02 V	143	4.53	49.07
8	11000.00	43.5 AV	54.0	-10.5	1.02 V	143	-5.57	49.07
9	#16500.00	58.1 PK	74.0	-15.9	1.00 V	58	3.51	54.59
10	#16500.00	47.2 AV	54.0	-6.8	1.00 V	58	-7.39	54.59

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.



A D T

CHANNEL	TX Channel 116	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	*5580.00	106.6 PK			1.00 H	164	64.39	42.21
2	*5580.00	98.7 AV			1.00 H	164	56.49	42.21
3	11160.00	57.0 PK	74.0	-17.0	1.30 H	60	8.18	48.82
4	11160.00	45.6 AV	54.0	-8.4	1.30 H	60	-3.22	48.82
5	#16740.00	57.5 PK	74.0	-16.5	1.00 H	120	3.18	54.32
6	#16740.00	45.8 AV	54.0	-8.2	1.00 H	120	-8.52	54.32

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	*5580.00	97.6 PK			1.76 V	106	55.39	42.21
2	*5580.00	89.3 AV			1.76 V	106	47.09	42.21
3	11160.00	54.2 PK	74.0	-19.8	1.35 V	82	5.38	48.82
4	11160.00	43.6 AV	54.0	-10.4	1.35 V	82	-5.22	48.82
5	#16740.00	59.5 PK	74.0	-14.5	1.16 V	52	5.18	54.32
6	#16740.00	48.3 AV	54.0	-5.7	1.16 V	52	-6.02	54.32

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.



A D T

CHANNEL	TX Channel 132	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	*5660.00	107.5 PK			1.04 H	172	65.04	42.46
2	*5660.00	99.0 AV			1.04 H	172	56.54	42.46
3	11320.00	57.6 PK	74.0	-16.4	1.22 H	43	8.43	49.17
4	11320.00	46.2 AV	54.0	-7.8	1.22 H	43	-2.97	49.17
5	#16980.00	58.3 PK	74.0	-15.7	1.05 H	115	3.48	54.82
6	#16980.00	46.5 AV	54.0	-7.5	1.05 H	115	-8.32	54.82

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	*5660.00	97.6 PK			1.77 V	109	55.14	42.46
2	*5660.00	89.3 AV			1.77 V	109	46.84	42.46
3	11320.00	54.7 PK	74.0	-19.3	1.31 V	72	5.53	49.17
4	11320.00	43.9 AV	54.0	-10.1	1.31 V	72	-5.27	49.17
5	#16980.00	59.6 PK	74.0	-14.4	1.11 V	41	4.78	54.82
6	#16980.00	48.5 AV	54.0	-5.5	1.11 V	41	-6.32	54.82

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.



A D T

CHANNEL	TX Channel 140	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	*5700.00	103.1 PK			1.34 H	132	60.50	42.60
2	*5700.00	94.7 AV			1.34 H	132	52.10	42.60
3	#5725.00	66.9 PK	74.0	-7.1	1.34 H	132	24.26	42.64
4	#5725.00	53.0 AV	54.0	-1.0	1.34 H	132	10.36	42.64
5	11400.00	55.2 PK	74.0	-18.8	1.24 H	39	6.22	48.98
6	11400.00	44.4 AV	54.0	-9.6	1.24 H	39	-4.58	48.98
7	#17100.00	56.7 PK	74.0	-17.3	1.01 H	132	1.60	55.10
8	#17100.00	45.1 AV	54.0	-8.9	1.01 H	132	-10.00	55.10

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	*5700.00	93.2 PK			1.71 V	97	50.60	42.60
2	*5700.00	84.7 AV			1.71 V	97	42.10	42.60
3	#5725.00	58.6 PK	74.0	-15.4	1.71 V	97	15.96	42.64
4	#5725.00	47.5 AV	54.0	-6.5	1.71 V	97	4.86	42.64
5	11400.00	52.3 PK	74.0	-21.7	1.29 V	75	3.32	48.98
6	11400.00	41.6 AV	54.0	-12.4	1.29 V	75	-7.38	48.98
7	#17100.00	59.3 PK	74.0	-14.7	1.16 V	52	4.20	55.10
8	#17100.00	48.3 AV	54.0	-5.7	1.16 V	52	-6.80	55.10

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.



A D T

802.11n (HT20)

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	5150.00	66.3 PK	74.0	-7.7	1.19 H	131	25.45	40.85
2	5150.00	52.9 AV	54.0	-1.1	1.19 H	131	12.05	40.85
3	*5180.00	102.7 PK			1.19 H	131	61.72	40.98
4	*5180.00	94.6 AV			1.19 H	131	53.62	40.98
5	#10360.00	55.9 PK	74.0	-18.1	1.25 H	14	7.99	47.91
6	#10360.00	44.8 AV	54.0	-9.2	1.25 H	14	-3.11	47.91
7	15540.00	56.5 PK	74.0	-17.5	1.09 H	108	3.20	53.30
8	15540.00	44.9 AV	54.0	-9.1	1.09 H	108	-8.40	53.30

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	61.1 PK	74.0	-12.9	1.72 V	123	20.25	40.85
2	5150.00	50.6 AV	54.0	-3.4	1.72 V	123	9.75	40.85
3	*5180.00	97.4 PK			1.78 V	118	56.42	40.98
4	*5180.00	88.8 AV			1.78 V	118	47.82	40.98
5	#10360.00	51.6 PK	74.0	-22.4	1.02 V	159	3.69	47.91
6	#10360.00	41.9 AV	54.0	-12.1	1.02 V	159	-6.01	47.91
7	15540.00	55.6 PK	74.0	-18.4	1.00 V	61	2.30	53.30
8	15540.00	45.3 AV	54.0	-8.7	1.00 V	61	-8.00	53.30

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.



A D T

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	*5200.00	105.9 PK			1.01 H	174	64.83	41.07
2	*5200.00	98.4 AV			1.01 H	174	57.33	41.07
3	#10400.00	55.3 PK	74.0	-18.7	1.08 H	28	7.84	47.46
4	#10400.00	44.7 AV	54.0	-9.3	1.08 H	28	-2.76	47.46
5	15600.00	57.0 PK	74.0	-17.0	1.11 H	139	3.95	53.05
6	15600.00	45.3 AV	54.0	-8.7	1.11 H	139	-7.75	53.05

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	*5200.00	97.6 PK			1.76 V	92	56.53	41.07
2	*5200.00	89.5 AV			1.76 V	92	48.43	41.07
3	#10400.00	51.4 PK	74.0	-22.6	1.07 V	158	3.94	47.46
4	#10400.00	41.6 AV	54.0	-12.4	1.07 V	158	-5.86	47.46
5	15600.00	55.4 PK	74.0	-18.6	1.00 V	47	2.35	53.05
6	15600.00	45.3 AV	54.0	-8.7	1.00 V	47	-7.75	53.05

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.



A D T

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	106.4 PK			1.05 H	163	65.20	41.20
2	*5240.00	98.7 AV			1.05 H	163	57.50	41.20
3	#10480.00	55.4 PK	74.0	-18.6	1.26 H	31	7.65	47.75
4	#10480.00	44.6 AV	54.0	-9.4	1.26 H	31	-3.15	47.75
5	15720.00	56.5 PK	74.0	-17.5	1.00 H	136	3.79	52.71
6	15720.00	45.0 AV	54.0	-9.0	1.00 H	136	-7.71	52.71

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	97.7 PK			1.82 V	106	56.50	41.20
2	*5240.00	89.3 AV			1.82 V	106	48.10	41.20
3	#10480.00	51.7 PK	74.0	-22.3	1.13 V	161	3.95	47.75
4	#10480.00	42.0 AV	54.0	-12.0	1.13 V	161	-5.75	47.75
5	15720.00	55.4 PK	74.0	-18.6	1.05 V	32	2.69	52.71
6	15720.00	45.3 AV	54.0	-8.7	1.05 V	32	-7.41	52.71

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 52	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	*5260.00	106.8 PK			1.09 H	168	65.55	41.25
2	*5260.00	99.2 AV			1.09 H	168	57.95	41.25
3	#10520.00	57.7 PK	74.0	-16.3	1.24 H	33	9.87	47.83
4	#10520.00	46.6 AV	54.0	-7.4	1.24 H	33	-1.23	47.83
5	15780.00	58.2 PK	74.0	-15.8	1.11 H	136	5.48	52.72
6	15780.00	46.9 AV	54.0	-7.1	1.11 H	136	-5.82	52.72

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	*5260.00	97.8 PK			1.71 V	92	56.55	41.25
2	*5260.00	89.7 AV			1.71 V	92	48.45	41.25
3	#10520.00	51.7 PK	74.0	-22.3	1.07 V	172	3.87	47.83
4	#10520.00	41.7 AV	54.0	-12.3	1.07 V	172	-6.13	47.83
5	15780.00	55.6 PK	74.0	-18.4	1.01 V	56	2.88	52.72
6	15780.00	45.7 AV	54.0	-8.3	1.01 V	56	-7.02	52.72

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 60	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	*5300.00	106.3 PK			1.06 H	150	64.92	41.38
2	*5300.00	98.4 AV			1.06 H	150	57.02	41.38
3	10600.00	56.8 PK	74.0	-17.2	1.23 H	32	8.94	47.86
4	10600.00	45.8 AV	54.0	-8.2	1.23 H	32	-2.06	47.86
5	15900.00	58.5 PK	74.0	-15.5	1.10 H	123	5.32	53.18
6	15900.00	47.2 AV	54.0	-6.8	1.10 H	123	-5.98	53.18

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	*5300.00	97.9 PK			1.73 V	118	56.52	41.38
2	*5300.00	89.3 AV			1.73 V	118	47.92	41.38
3	10600.00	51.9 PK	74.0	-22.1	1.03 V	158	4.04	47.86
4	10600.00	42.0 AV	54.0	-12.0	1.03 V	158	-5.86	47.86
5	15900.00	57.5 PK	74.0	-16.5	1.00 V	76	4.32	53.18
6	15900.00	46.0 AV	54.0	-8.0	1.00 V	76	-7.18	53.18

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.



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CHANNEL	TX Channel 64	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	*5320.00	105.1 PK			1.43 H	183	63.69	41.41
2	*5320.00	97.6 AV			1.43 H	183	56.19	41.41
3	5350.00	69.1 PK	74.0	-4.9	1.43 H	183	27.65	41.45
4	5350.00	52.9 AV	54.0	-1.1	1.43 H	183	11.45	41.45
5	10640.00	57.3 PK	74.0	-16.7	1.28 H	34	9.32	47.98
6	10640.00	46.0 AV	54.0	-8.0	1.28 H	34	-1.98	47.98
7	15960.00	58.0 PK	74.0	-16.0	1.02 H	126	4.95	53.05
8	15960.00	46.8 AV	54.0	-7.2	1.02 H	126	-6.25	53.05

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	*5320.00	97.7 PK			1.70 V	101	56.29	41.41
2	*5320.00	89.3 AV			1.70 V	101	47.89	41.41
3	5350.00	64.3 PK	74.0	-9.7	1.72 V	117	22.85	41.45
4	5350.00	49.1 AV	54.0	-4.9	1.72 V	117	7.65	41.45
5	10640.00	51.7 PK	74.0	-22.3	1.06 V	154	3.72	47.98
6	10640.00	42.1 AV	54.0	-11.9	1.06 V	154	-5.88	47.98
7	15960.00	56.9 PK	74.0	-17.1	1.01 V	64	3.85	53.05
8	15960.00	45.7 AV	54.0	-8.3	1.01 V	64	-7.35	53.05

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.



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CHANNEL	TX Channel 100	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	5460.00	64.7 PK	74.0	-9.3	1.37 H	186	22.90	41.80
2	5460.00	49.0 AV	54.0	-5.0	1.37 H	186	7.20	41.80
3	#5470.00	66.5 PK	74.0	-7.5	1.37 H	186	24.64	41.86
4	#5470.00	52.7 AV	54.0	-1.3	1.37 H	186	10.84	41.86
5	*5500.00	103.9 PK			1.37 H	186	61.90	42.00
6	*5500.00	97.2 AV			1.37 H	186	55.20	42.00
7	11000.00	57.0 PK	74.0	-17.0	1.24 H	38	7.93	49.07
8	11000.00	45.9 AV	54.0	-8.1	1.24 H	38	-3.17	49.07
9	#16500.00	58.7 PK	74.0	-15.3	1.07 H	120	4.11	54.59
10	#16500.00	47.2 AV	54.0	-6.8	1.07 H	120	-7.39	54.59

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	5460.00	63.9 PK	74.0	-10.1	1.71 V	115	22.10	41.80
2	5460.00	49.4 AV	54.0	-4.6	1.71 V	115	7.60	41.80
3	#5470.00	63.6 PK	74.0	-10.4	1.68 V	122	21.74	41.86
4	#5470.00	50.6 AV	54.0	-3.4	1.68 V	122	8.74	41.86
5	*5500.00	97.4 PK			1.80 V	110	55.40	42.00
6	*5500.00	89.1 AV			1.80 V	110	47.10	42.00
7	11000.00	51.5 PK	74.0	-22.5	1.00 V	211	2.43	49.07
8	11000.00	41.8 AV	54.0	-12.2	1.00 V	211	-7.27	49.07
9	#16500.00	57.9 PK	74.0	-16.1	1.00 V	62	3.31	54.59
10	#16500.00	47.1 AV	54.0	-6.9	1.00 V	62	-7.49	54.59

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.



A D T

CHANNEL	TX Channel 116	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	*5580.00	107.4 PK			1.02 H	159	65.19	42.21
2	*5580.00	99.1 AV			1.02 H	159	56.89	42.21
3	11160.00	58.1 PK	74.0	-15.9	1.21 H	46	9.28	48.82
4	11160.00	46.8 AV	54.0	-7.2	1.21 H	46	-2.02	48.82
5	#16740.00	58.2 PK	74.0	-15.8	1.09 H	125	3.88	54.32
6	#16740.00	46.9 AV	54.0	-7.1	1.09 H	125	-7.42	54.32

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	*5580.00	98.0 PK			1.81 V	104	55.79	42.21
2	*5580.00	89.4 AV			1.81 V	104	47.19	42.21
3	11160.00	55.1 PK	74.0	-18.9	1.29 V	87	6.28	48.82
4	11160.00	44.1 AV	54.0	-9.9	1.29 V	87	-4.72	48.82
5	#16740.00	59.6 PK	74.0	-14.4	1.06 V	35	5.28	54.32
6	#16740.00	48.7 AV	54.0	-5.3	1.06 V	35	-5.62	54.32

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.



A D T

CHANNEL	TX Channel 132	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	*5660.00	106.9 PK			1.04 H	172	64.44	42.46
2	*5660.00	98.7 AV			1.04 H	172	56.24	42.46
3	11320.00	57.6 PK	74.0	-16.4	1.25 H	25	8.43	49.17
4	11320.00	46.4 AV	54.0	-7.6	1.25 H	25	-2.77	49.17
5	#16980.00	57.6 PK	74.0	-16.4	1.09 H	122	2.78	54.82
6	#16980.00	46.3 AV	54.0	-7.7	1.09 H	122	-8.52	54.82

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	*5660.00	97.4 PK			1.75 V	105	54.94	42.46
2	*5660.00	88.9 AV			1.75 V	105	46.44	42.46
3	11320.00	54.3 PK	74.0	-19.7	1.36 V	62	5.13	49.17
4	11320.00	43.5 AV	54.0	-10.5	1.36 V	62	-5.67	49.17
5	#16980.00	59.8 PK	74.0	-14.2	1.16 V	55	4.98	54.82
6	#16980.00	48.7 AV	54.0	-5.3	1.16 V	55	-6.12	54.82

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 140	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	*5700.00	101.3 PK			1.35 H	180	58.70	42.60
2	*5700.00	93.2 AV			1.35 H	180	50.60	42.60
3	#5725.00	68.3 PK	74.0	-5.7	1.35 H	180	25.66	42.64
4	#5725.00	52.5 AV	54.0	-1.5	1.35 H	180	9.86	42.64
5	11400.00	55.1 PK	74.0	-18.9	1.18 H	44	6.12	48.98
6	11400.00	44.3 AV	54.0	-9.7	1.18 H	44	-4.68	48.98
7	#17100.00	55.9 PK	74.0	-18.1	1.03 H	139	0.80	55.10
8	#17100.00	44.6 AV	54.0	-9.4	1.03 H	139	-10.50	55.10

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	*5700.00	93.1 PK			1.74 V	122	50.50	42.60
2	*5700.00	84.6 AV			1.74 V	122	42.00	42.60
3	#5725.00	58.4 PK	74.0	-15.6	1.66 V	103	15.76	42.64
4	#5725.00	47.3 AV	54.0	-6.7	1.66 V	103	4.66	42.64
5	11400.00	52.5 PK	74.0	-21.5	1.26 V	67	3.52	48.98
6	11400.00	42.0 AV	54.0	-12.0	1.26 V	67	-6.98	48.98
7	#17100.00	59.2 PK	74.0	-14.8	1.12 V	48	4.10	55.10
8	#17100.00	48.1 AV	54.0	-5.9	1.12 V	48	-7.00	55.10

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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802.11n (HT40)

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	67.8 PK	74.0	-6.2	1.47 H	129	26.95	40.85
2	5150.00	52.3 AV	54.0	-1.7	1.47 H	129	11.45	40.85
3	*5190.00	97.5 PK			1.47 H	130	56.47	41.03
4	*5190.00	89.3 AV			1.47 H	130	48.27	41.03
5	#10380.00	56.9 PK	74.0	-17.1	1.20 H	49	9.21	47.69
6	#10380.00	45.6 AV	54.0	-8.4	1.20 H	49	-2.09	47.69
7	15570.00	58.3 PK	74.0	-15.7	1.07 H	131	5.13	53.17
8	15570.00	46.8 AV	54.0	-7.2	1.07 H	131	-6.37	53.17

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	60.1 PK	74.0	-13.9	1.75 V	129	19.25	40.85
2	5150.00	50.1 AV	54.0	-3.9	1.75 V	129	9.25	40.85
3	*5190.00	93.2 PK			1.75 V	129	52.17	41.03
4	*5190.00	84.7 AV			1.75 V	129	43.67	41.03
5	#10380.00	55.3 PK	74.0	-18.7	1.24 V	101	7.61	47.69
6	#10380.00	44.5 AV	54.0	-9.5	1.24 V	101	-3.19	47.69
7	15570.00	59.0 PK	74.0	-15.0	1.10 V	48	5.83	53.17
8	15570.00	48.2 AV	54.0	-5.8	1.10 V	48	-4.97	53.17

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	*5230.00	97.4 PK			1.46 H	128	56.24	41.16
2	*5230.00	89.6 AV			1.46 H	128	48.44	41.16
3	#10460.00	57.2 PK	74.0	-16.8	1.26 H	47	9.53	47.67
4	#10460.00	46.1 AV	54.0	-7.9	1.26 H	47	-1.57	47.67
5	15690.00	58.7 PK	74.0	-15.3	1.02 H	114	5.95	52.75
6	15690.00	47.1 AV	54.0	-6.9	1.02 H	114	-5.65	52.75

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	94.1 PK			1.76 V	145	52.94	41.16
2	*5230.00	85.5 AV			1.76 V	145	44.34	41.16
3	#10460.00	54.6 PK	74.0	-19.4	1.30 V	104	6.93	47.67
4	#10460.00	44.0 AV	54.0	-10.0	1.30 V	104	-3.67	47.67
5	15690.00	59.3 PK	74.0	-14.7	1.07 V	47	6.55	52.75
6	15690.00	48.5 AV	54.0	-5.5	1.07 V	47	-4.25	52.75

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 54	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	*5270.00	100.5 PK			1.42 H	175	59.21	41.29
2	*5270.00	96.7 AV			1.42 H	175	55.41	41.29
3	#10540.00	57.1 PK	74.0	-16.9	1.19 H	34	9.26	47.84
4	#10540.00	45.9 AV	54.0	-8.1	1.19 H	34	-1.94	47.84
5	15810.00	58.4 PK	74.0	-15.6	1.01 H	114	5.65	52.75
6	15810.00	47.0 AV	54.0	-7.0	1.01 H	114	-5.75	52.75

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	*5270.00	99.0 PK			1.77 V	138	57.71	41.29
2	*5270.00	90.5 AV			1.77 V	138	49.21	41.29
3	#10540.00	55.1 PK	74.0	-18.9	1.20 V	110	7.26	47.84
4	#10540.00	44.3 AV	54.0	-9.7	1.20 V	110	-3.54	47.84
5	15810.00	59.0 PK	74.0	-15.0	1.14 V	61	6.25	52.75
6	15810.00	48.0 AV	54.0	-6.0	1.14 V	61	-4.75	52.75

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 62	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	*5310.00	100.5 PK			1.44 H	183	59.11	41.39
2	*5310.00	95.9 AV			1.44 H	183	54.51	41.39
3	5350.00	71.4 PK	74.0	-2.6	1.44 H	183	29.95	41.45
4	5350.00	52.6 AV	54.0	-1.4	1.44 H	183	11.15	41.45
5	10620.00	57.1 PK	74.0	-16.9	1.29 H	42	9.18	47.92
6	10620.00	45.8 AV	54.0	-8.2	1.29 H	42	-2.12	47.92
7	15930.00	58.7 PK	74.0	-15.3	1.09 H	122	5.58	53.12
8	15930.00	47.5 AV	54.0	-6.5	1.09 H	122	-5.62	53.12

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	*5310.00	94.4 PK			1.72 V	147	53.01	41.39
2	*5310.00	85.8 AV			1.72 V	147	44.41	41.39
3	5350.00	65.0 PK	74.0	-9.0	1.72 V	147	23.55	41.45
4	5350.00	49.8 AV	54.0	-4.2	1.72 V	147	8.35	41.45
5	10620.00	54.8 PK	74.0	-19.2	1.25 V	102	6.88	47.92
6	10620.00	44.4 AV	54.0	-9.6	1.25 V	102	-3.52	47.92
7	15930.00	59.8 PK	74.0	-14.2	1.06 V	60	6.68	53.12
8	15930.00	48.8 AV	54.0	-5.2	1.06 V	60	-4.32	53.12

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.



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CHANNEL	TX Channel 102	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	5460.00	62.8 PK	74.0	-11.2	1.39 H	186	21.00	41.80
2	5460.00	48.1 AV	54.0	-5.9	1.39 H	186	6.30	41.80
3	#5470.00	66.7 PK	74.0	-7.3	1.39 H	186	24.84	41.86
4	#5470.00	52.8 AV	54.0	-1.2	1.39 H	186	10.94	41.86
5	*5510.00	98.9 PK			1.39 H	186	56.88	42.02
6	*5510.00	90.6 AV			1.39 H	186	48.58	42.02
7	11020.00	56.5 PK	74.0	-17.5	1.22 H	36	7.47	49.03
8	11020.00	45.4 AV	54.0	-8.6	1.22 H	36	-3.63	49.03
9	#16530.00	58.7 PK	74.0	-15.3	1.12 H	113	3.82	54.88
10	#16530.00	47.4 AV	54.0	-6.6	1.12 H	113	-7.48	54.88

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	5460.00	59.8 PK	74.0	-14.2	1.72 V	121	18.00	41.80
2	5460.00	49.9 AV	54.0	-4.1	1.72 V	121	8.10	41.80
3	#5470.00	64.8 PK	74.0	-9.2	1.72 V	121	22.94	41.86
4	#5470.00	49.7 AV	54.0	-4.3	1.72 V	121	7.84	41.86
5	*5510.00	93.5 PK			1.72 V	121	51.48	42.02
6	*5510.00	85.1 AV			1.72 V	121	43.08	42.02
7	11020.00	55.2 PK	74.0	-18.8	1.19 V	108	6.17	49.03
8	11020.00	44.4 AV	54.0	-9.6	1.19 V	108	-4.63	49.03
9	#16530.00	59.1 PK	74.0	-14.9	1.12 V	51	4.22	54.88
10	#16530.00	48.2 AV	54.0	-5.8	1.12 V	51	-6.68	54.88

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 110	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	*5550.00	100.8 PK			1.38 H	188	58.67	42.13
2	*5550.00	97.0 AV			1.38 H	188	54.87	42.13
3	11100.00	57.0 PK	74.0	-17.0	1.24 H	51	8.09	48.91
4	11100.00	46.2 AV	54.0	-7.8	1.24 H	51	-2.71	48.91
5	#16650.00	59.2 PK	74.0	-14.8	1.06 H	121	4.17	55.03
6	#16650.00	47.5 AV	54.0	-6.5	1.06 H	121	-7.53	55.03

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	*5550.00	99.4 PK			1.82 V	147	57.27	42.13
2	*5550.00	90.6 AV			1.82 V	147	48.47	42.13
3	11100.00	54.7 PK	74.0	-19.3	1.18 V	97	5.79	48.91
4	11100.00	44.0 AV	54.0	-10.0	1.18 V	97	-4.91	48.91
5	#16650.00	59.0 PK	74.0	-15.0	1.11 V	67	3.97	55.03
6	#16650.00	48.0 AV	54.0	-6.0	1.11 V	67	-7.03	55.03

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.



A D T

CHANNEL	TX Channel 134	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	*5670.00	100.0 PK			1.38 H	175	57.51	42.49
2	*5670.00	92.0 AV			1.38 H	175	49.51	42.49
3	#5725.00	65.4 PK	74.0	-8.6	1.38 H	175	22.76	42.64
4	#5725.00	52.5 AV	54.0	-1.5	1.38 H	175	9.86	42.64
5	11340.00	56.3 PK	74.0	-17.7	1.25 H	32	7.17	49.13
6	11340.00	45.4 AV	54.0	-8.6	1.25 H	32	-3.73	49.13
7	#17010.00	58.8 PK	74.0	-15.2	1.09 H	110	3.95	54.85
8	#17010.00	47.3 AV	54.0	-6.7	1.09 H	110	-7.55	54.85

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	*5670.00	94.2 PK			1.70 V	134	51.71	42.49
2	*5670.00	85.4 AV			1.70 V	134	42.91	42.49
3	#5725.00	59.2 PK	74.0	-14.8	1.70 V	134	16.56	42.64
4	#5725.00	48.2 AV	54.0	-5.8	1.70 V	134	5.56	42.64
5	11340.00	56.3 PK	74.0	-17.7	1.25 V	32	7.17	49.13
6	11340.00	45.4 AV	54.0	-8.6	1.25 V	32	-3.73	49.13
7	#17010.00	58.8 PK	74.0	-15.2	1.09 V	110	3.95	54.85
8	#17010.00	47.3 AV	54.0	-6.7	1.09 V	110	-7.55	54.85

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.



A D T

802.11ac(VHT80)

CHANNEL	TX Channel 42	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	65.1 PK	74.0	-8.9	1.42 H	118	24.25	40.85
2	5150.00	52.5 AV	54.0	-1.5	1.42 H	118	11.65	40.85
3	*5210.00	94.1 PK			1.42 H	118	53.00	41.10
4	*5210.00	85.1 AV			1.42 H	118	44.00	41.10
5	#10420.00	57.0 PK	74.0	-17.0	1.21 H	51	9.47	47.53
6	#10420.00	46.1 AV	54.0	-7.9	1.21 H	51	-1.43	47.53
7	15630.00	58.7 PK	74.0	-15.3	1.07 H	132	5.75	52.95
8	15630.00	47.0 AV	54.0	-7.0	1.07 H	132	-5.95	52.95

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	61.0 PK	74.0	-13.0	1.68 V	122	86.46	-25.46
2	5150.00	50.6 AV	54.0	-3.4	1.68 V	122	76.06	-25.46
3	*5210.00	90.5 PK			1.68 V	122	115.80	-25.30
4	*5210.00	81.4 AV			1.68 V	122	106.70	-25.30
5	#10420.00	53.7 PK	74.0	-20.3	1.39 V	70	75.95	-22.25
6	#10420.00	43.1 AV	54.0	-10.9	1.39 V	70	65.35	-22.25
7	15630.00	59.8 PK	74.0	-14.2	1.11 V	66	77.82	-18.02
8	15630.00	48.7 AV	54.0	-5.3	1.11 V	66	66.72	-18.02

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.



A D T

CHANNEL	TX Channel 58	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	*5290.00	95.8 PK			1.44 H	184	54.45	41.35
2	*5290.00	87.7 AV			1.44 H	184	46.35	41.35
3	5350.00	65.8 PK	74.0	-8.2	1.44 H	184	24.35	41.45
4	5350.00	52.9 AV	54.0	-1.1	1.44 H	184	11.45	41.45
5	#10580.00	56.5 PK	74.0	-17.5	1.25 H	53	8.65	47.85
6	#10580.00	45.6 AV	54.0	-8.4	1.25 H	53	-2.25	47.85
7	15870.00	58.6 PK	74.0	-15.4	1.11 H	115	5.57	53.03
8	15870.00	46.9 AV	54.0	-7.1	1.11 H	115	-6.13	53.03

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	*5290.00	90.3 PK			1.63 V	125	115.52	-25.22
2	*5290.00	81.4 AV			1.63 V	125	106.62	-25.22
3	5350.00	60.8 PK	74.0	-13.2	1.63 V	125	86.03	-25.23
4	5350.00	50.3 AV	54.0	-3.7	1.63 V	125	75.53	-25.23
5	#10580.00	54.8 PK	74.0	-19.2	1.31 V	75	76.39	-21.59
6	#10580.00	43.9 AV	54.0	-10.1	1.31 V	75	65.49	-21.59
7	15870.00	59.0 PK	74.0	-15.0	1.17 V	45	76.99	-17.99
8	15870.00	48.2 AV	54.0	-5.8	1.17 V	45	66.19	-17.99

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 106	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	#5470.00	64.0 PK	74.0	-10.0	1.39 H	175	22.14	41.86
2	#5470.00	52.8 AV	54.0	-1.2	1.39 H	175	10.94	41.86
3	*5530.00	97.3 PK			1.39 H	175	55.22	42.08
4	*5530.00	89.3 AV			1.39 H	175	47.22	42.08
5	#5725.00	55.1 PK	74.0	-18.9	1.39 H	175	12.46	42.64
6	#5725.00	43.0 AV	54.0	-11.0	1.39 H	175	0.36	42.64
7	11060.00	57.2 PK	74.0	-16.8	1.22 H	36	8.23	48.97
8	11060.00	46.0 AV	54.0	-8.0	1.22 H	36	-2.97	48.97
9	#16590.00	58.4 PK	74.0	-15.6	1.11 H	121	2.94	55.46
10	#16590.00	47.0 AV	54.0	-7.0	1.11 H	121	-8.46	55.46

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	#5470.00	61.2 PK	74.0	-12.8	1.64 V	134	86.34	-25.14
2	#5470.00	50.9 AV	54.0	-3.1	1.64 V	134	76.04	-25.14
3	*5530.00	90.4 PK			1.64 V	134	115.47	-25.07
4	*5530.00	81.5 AV			1.64 V	134	106.57	-25.07
5	#5725.00	54.6 PK	74.0	-19.4	1.64 V	134	79.61	-25.01
6	#5725.00	42.7 AV	54.0	-11.3	1.64 V	134	67.71	-25.01
7	11060.00	54.6 PK	74.0	-19.4	1.31 V	65	75.42	-20.82
8	11060.00	43.6 AV	54.0	-10.4	1.31 V	65	64.42	-20.82
9	#16590.00	59.2 PK	74.0	-14.8	1.14 V	60	75.74	-16.54
10	#16590.00	48.3 AV	54.0	-5.7	1.14 V	60	64.84	-16.54

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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4.3 TRANSMIT POWER MEASUREMENT

4.3.1 LIMITS OF TRANSMIT POWER MEASUREMENT

Frequency Band	Limit
5.15 – 5.25GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.25 – 5.35GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.47 – 5.725GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.725 – 5.825GHz	The lesser of 1W (30dBm) or 17dBm + 10logB

NOTE: Where B is the 26dB bandwidth in MHz for RSS-210 Annex 9.

4.3.2 TEST INSTRUMENTS

FOR POWER OUTPUT MEASUREMENT

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Power Meter	ML2495A	1014008	Apr. 23, 2013	Apr. 22, 2014
Power Sensor	MA2411B	0917122	Apr. 23, 2013	Apr. 22, 2014

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. Tested date : June 24, 2013

FOR 26dB OCCUPIED BANDWIDTH

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S Spectrum Analyzer	FSP40	100037	Nov. 01, 2012	Oct. 31, 2013

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 : June 24, 2013

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

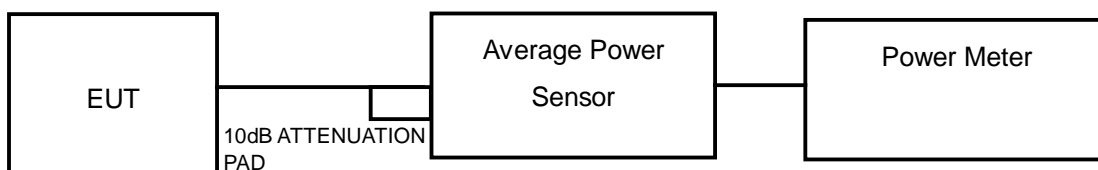
- 1) Set RBW = approximately 1% of the emission bandwidth.
- 2) Set the VBW > RBW.
- 3) Detector = Peak.
- 4) Trace mode = max hold.
- 5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat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

4.3.4 DEVIATION FROM TEST STANDARD

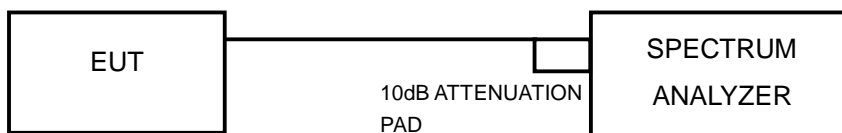
No deviation

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.



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4.3.7 TEST RESULTS

POWER OUTPUT:

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	22.080	13.44	17	PASS
40	5200	22.594	13.54	17	PASS
48	5240	22.699	13.56	17	PASS
52	5260	19.724	12.95	24	PASS
60	5300	22.646	13.55	24	PASS
64	5320	23.388	13.69	24	PASS
100	5500	21.038	13.23	24	PASS
116	5580	29.376	14.68	24	PASS
132	5660	13.677	11.36	24	PASS
140	5700	13.335	11.25	24	PASS

26dB OCCUPIED BANDWIDTH:

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)
36	5180	24.81
40	5200	24.79
48	5240	24.78
52	5260	41.18
60	5300	42.02
64	5320	35.78
100	5500	33.61
116	5580	49.82
132	5660	37.59
140	5700	25.71



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

Power Limit = $4\text{dBm} + 10\log B$ < Band 1 >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Limit (dBm)
36	5180	24.81	17.94 > 17
40	5200	24.79	17.94 > 17
48	5240	24.78	17.94 > 17
Power Limit = $11\text{dBm} + 10\log B$ < Band 2~3 >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Limit (dBm)
52	5260	41.18	27.14 > 24
60	5300	42.02	27.23 > 24
64	5320	35.78	26.53 > 24
100	5500	33.61	26.26 > 24
116	5580	49.82	27.97 > 24
132	5660	37.59	26.75 > 24
140	5700	25.71	25.1 > 24



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POWER OUTPUT:

802.11n (HT20)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	13.996	11.46	17	PASS
40	5200	14.191	11.52	17	PASS
48	5240	14.256	11.54	17	PASS
52	5260	13.552	11.32	24	PASS
60	5300	14.488	11.61	24	PASS
64	5320	14.723	11.68	24	PASS
100	5500	26.792	14.28	24	PASS
116	5580	27.290	14.36	24	PASS
132	5660	28.379	14.53	24	PASS
140	5700	27.797	14.44	24	PASS

26dB OCCUPIED BANDWIDTH:

802.11n (HT20)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)
36	5180	27.69
40	5200	27.51
48	5240	27.54
52	5260	43.81
60	5300	43.65
64	5320	38.46
100	5500	38.35
116	5580	49.67
132	5660	44.26
140	5700	26.25



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

Power Limit = 4dBm + 10logB < Band 1>			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Limit (dBm)
36	5180	27.69	18.42 > 17
40	5200	27.51	18.39 > 17
48	5240	27.54	18.39 > 17
Power Limit = 11dBm + 10logB < Band 2~3>			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Limit (dBm)
52	5260	43.81	27.41 > 24
60	5300	43.65	27.39 > 24
64	5320	38.46	26.85 > 24
100	5500	38.35	26.83 > 24
116	5580	49.67	27.96 > 24
132	5660	44.26	27.46 > 24
140	5700	26.25	25.19 > 24



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POWER OUTPUT:

802.11n (HT40)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	14.093	11.49	17	PASS
46	5230	14.028	11.47	17	PASS
54	5270	10.544	10.23	24	PASS
62	5310	11.858	10.74	24	PASS
102	5510	28.314	14.52	24	PASS
110	5550	27.861	14.45	24	PASS
134	5670	28.249	14.51	24	PASS

26dB OCCUPIED BANDWIDTH:

802.11n (HT40)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)
38	5190	42.28
46	5230	78.29
54	5270	92.72
62	5310	54.80
102	5510	47.50
110	5550	97.77
134	5670	75.92



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

Power Limit = 4dBm + 10logB < Band 1>			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Limit (dBm)
38	5190	42.28	20.26 > 17
46	5230	78.29	22.93 > 17
Power Limit = 11dBm + 10logB < Band 2~3>			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Limit (dBm)
54	5270	92.72	30.67 > 24
62	5310	54.80	28.38 > 24
102	5510	47.50	27.76 > 24
110	5550	97.77	30.9 > 24
134	5670	75.92	29.8 > 24



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POWER OUTPUT:

802.11ac (VHT80)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (mW)	AVERAGE POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
42	5210	14.355	11.57	17	PASS
58	5290	14.191	11.52	24	PASS
106	5530	21.979	13.42	24	PASS

26dB OCCUPIED BANDWIDTH:

802.11ac (VHT80)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)
42	5210	82.72
58	5290	82.78
106	5530	82.89

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

Power Limit = 4dBm + 10logB < Band 1 >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Limit (dBm)
42	5210	82.72	23.17 > 17
Power Limit = 11dBm + 10logB < Band 2~3 >			
Channel Number	Freq.(MHz)	Min. B(MHz)	Determined Limit (dBm)
58	5290	82.78	30.17 > 24
106	5530	82.89	30.18 > 24

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
R&S Spectrum Analyzer	FSP40	100037	Nov. 01, 2012	Oct. 31, 2013

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 : June 24, 2013

4.4.3 TEST PROCEDURES

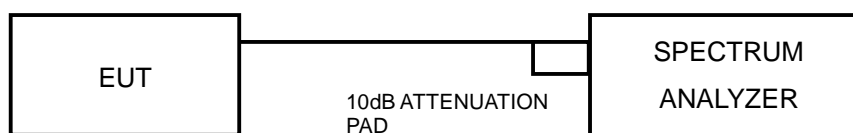
Using method SA-1

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





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4.4.6 EUT OPERATING CONDITIONS

Same as 4.3.6



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4.4.7 TEST RESULTS

802.11a

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	3.48	4	PASS
40	5200	3.67	4	PASS
48	5240	3.60	4	PASS
52	5260	9.11	11	PASS
60	5300	8.89	11	PASS
64	5320	6.95	11	PASS
100	5500	6.04	11	PASS
116	5580	9.31	11	PASS
132	5660	6.21	11	PASS
140	5700	2.92	11	PASS

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	3.66	4	PASS
40	5200	3.79	4	PASS
48	5240	3.66	4	PASS
52	5260	7.88	11	PASS
60	5300	7.60	11	PASS
64	5320	6.16	11	PASS
100	5500	5.09	11	PASS
116	5580	8.56	11	PASS
132	5660	6.88	11	PASS
140	5700	2.72	11	PASS



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802.11n (HT40)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
38	5190	-0.92	4	PASS
46	5230	2.59	4	PASS
54	5270	4.53	11	PASS
62	5310	0.14	11	PASS
102	5510	-0.70	11	PASS
110	5550	4.92	11	PASS
134	5670	1.22	11	PASS

802.11ac (VHT80)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
42	5210	-5.68	4	PASS
58	5290	-4.33	11	PASS
106	5530	-4.85	11	PASS

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
R&S Spectrum Analyzer	FSP40	100037	Nov. 01, 2012	Oct. 31, 2013

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 : June 24, 2013

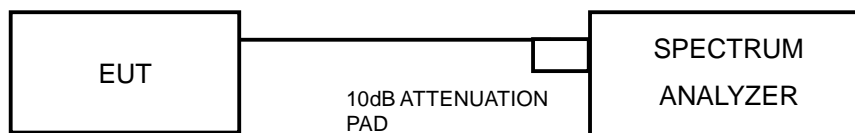
4.5.3 TEST PROCEDURE

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.



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4.5.7 TEST RESULTS

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS/FAIL
36	5180	12.08	3.48	8.60	13	PASS
40	5200	12.34	3.67	8.67	13	PASS
48	5240	12.30	3.60	8.70	13	PASS
52	5260	17.12	9.11	8.01	13	PASS
60	5300	17.12	8.89	8.23	13	PASS
64	5320	15.07	6.95	8.12	13	PASS
100	5500	14.34	6.04	8.30	13	PASS
116	5580	18.01	9.31	8.70	13	PASS
132	5660	14.52	6.21	8.31	13	PASS
140	5700	11.49	2.92	8.57	13	PASS

802.11n (HT20)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS/FAIL
36	5180	11.51	3.66	7.85	13	PASS
40	5200	11.81	3.79	8.02	13	PASS
48	5240	11.57	3.66	7.91	13	PASS
52	5260	16.01	7.88	8.13	13	PASS
60	5300	15.66	7.60	8.06	13	PASS
64	5320	14.01	6.16	7.85	13	PASS
100	5500	12.91	5.09	7.82	13	PASS
116	5580	16.77	8.56	8.21	13	PASS
132	5660	14.93	6.88	8.05	13	PASS
140	5700	10.53	2.72	7.81	13	PASS



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802.11n (HT40)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS/FAIL
38	5190	7.23	-0.92	8.15	13	PASS
46	5230	10.87	2.59	8.28	13	PASS
54	5270	12.48	4.53	7.95	13	PASS
62	5310	8.21	0.14	8.07	13	PASS
102	5510	8.05	-0.70	8.75	13	PASS
110	5550	13.22	4.92	8.30	13	PASS
134	5670	9.58	1.22	8.36	13	PASS

802.11ac (VHT80)

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK VALUE (dBm)	PPSD (dBm)	PEAK EXCURSION (dB)	LIMIT (dB)	PASS/FAIL
42	5210	2.99	-5.68	8.67	13	PASS
58	5290	4.26	-4.33	8.59	13	PASS
106	5530	3.90	-4.85	8.75	13	PASS

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
R&S Spectrum Analyzer	FSP40	100037	Nov. 01, 2012	Oct. 31, 2013
Temperature & Humidity Chamber GIANTFORCE	GTH-150-40-S P-AR	MAA0812-008	Jan. 17, 2013	Jan. 16, 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 : June 24, 2013

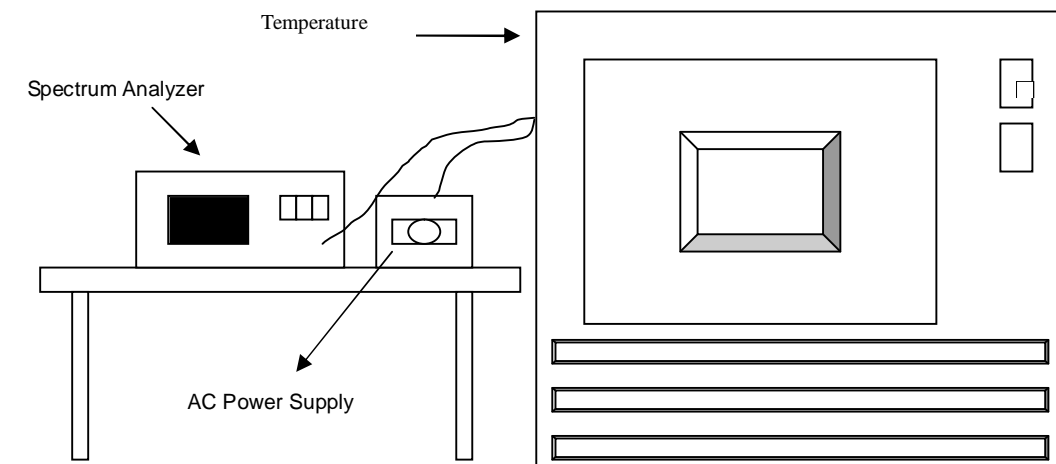
4.6.3 TEST PROCEDURE

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

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5320MHz									
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	5320.0088	0.00017	5320.0102	0.00019	5320.0101	0.00019	5320.018	0.00034
40	120	5319.9873	-0.00024	5319.9797	-0.00038	5319.9839	-0.00030	5319.9886	-0.00021
30	120	5319.9699	-0.00057	5319.9712	-0.00054	5319.9774	-0.00042	5319.976	-0.00045
20	120	5320.0012	0.00002	5320.0062	0.00012	5319.9975	-0.00005	5320.002	0.00004
10	120	5319.9821	-0.00034	5319.9829	-0.00032	5319.981	-0.00036	5319.9797	-0.00038
0	120	5320.001	0.00002	5320.0084	0.00016	5320.0034	0.00006	5320.0057	0.00011
-10	120	5319.9909	-0.00017	5319.9897	-0.00019	5319.9911	-0.00017	5319.9949	-0.00010
-20	120	5319.9927	-0.00014	5319.9934	-0.00012	5319.9923	-0.00014	5319.9933	-0.00013
-30	120	5320.0195	0.00037	5320.0252	0.00047	5320.0268	0.00050	5320.0194	0.00036

FREQUENCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5320MHz									
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	5320.0012	0.00002	5320.0067	0.00013	5319.998	-0.00004	5320.0015	0.00003
	120	5320.0012	0.00002	5320.0062	0.00012	5319.9975	-0.00005	5320.002	0.00004
	102	5320.0007	0.00001	5320.0065	0.00012	5319.9972	-0.00005	5320.0027	0.00005



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5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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





6. INFORMATION ON THE TESTING LABORATORIES

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

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

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26052943

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety/Telecom Lab:

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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



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

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

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