



# FCC TEST REPORT(15.407)

**REPORT NO.:** RF120113E07C-1

**MODEL NO.:** FXA2000-G

**FCC ID:** PQRFXA2000-G

**RECEIVED:** Jan. 13, 2012

**TESTED:** Apr. 17, 2012 & Nov. 27 to Dec. 22, 2012

**ISSUED:** Jan. 09, 2013

**APPLICANT:** Contec Co., Ltd.

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**ISSUED BY:** Bureau Veritas Consumer Products Services  
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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF120113E07C-1	Original release	Jan. 09, 2013

## 1. CERTIFICATION

**PRODUCT:** IEEE802.11n/a/b/g Wireless LAN (Access point / Station)  
**BRAND NAME:** CONTEC  
**MODEL NO.:** FXA2000-G  
**TEST SAMPLE:** ENGINEERING SAMPLE  
**APPLICANT:** Contec Co., Ltd.  
**TESTED:** Apr. 17, 2012 & Nov. 27 to Dec. 22, 2012  
**STANDARDS:** FCC Part 15, Subpart E (Section 15.407)  
ANSI C63.10-2009

The above equipment (Model: FXA2000-G) 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:** Jan. 09, 2013  
( Midoli Peng, Specialist )

**APPROVED BY** : May Chen, **DATE:** Jan. 09, 2013  
( May Chen, Deputy Manager )

## 2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

For 5GHz, 5150~5250MHz, 5150~5350GHz, 5470~5600GHz & 5650~5725GHz

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 -11.12dB at 20.25781MHz
15.407(b/1/2/3)(b)(6)	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -0.6dB at 5725.0MHz
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 U.FL not a standard connector.

**NOTE:** The EUT was operating in 2400 ~ 2483.5MHz, 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 2400 ~ 2483.5MHz 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) - Chamber H	5.69 dB
Radiated emissions (1GHz -6GHz) - Chamber H	3.84 dB
Radiated emissions (6GHz -18GHz) - Chamber H	4.09 dB
Radiated emissions (18GHz -40GHz) - Chamber H	4.24 dB
Radiated emissions (30MHz-1GHz) - Chamber G	5.59 dB
Radiated emissions (1GHz -6GHz) - Chamber G	3.56 dB
Radiated emissions (6GHz -18GHz) - Chamber G	4.10 dB
Radiated emissions (18GHz -40GHz) - Chamber G	4.24 dB



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### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

<b>PRODUCT</b>	IEEE802.11n/a/b/g Wireless LAN (Access point / Station)
<b>MODEL NO.</b>	FXA2000-G
<b>POWER SUPPLY</b>	DC 5V from power adapter or DC 12V from power adapter(DC power) or DC 48V from POE
<b>MODULATION TYPE</b>	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
<b>MODULATION TECHNOLOGY</b>	DSSS, OFDM
<b>TRANSFER RATE</b>	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n: up to 300Mbps
<b>OPERATING FREQUENCY</b>	<b>For 15.407</b> 802.11a: 5.18 ~ 5.24GHz, 5.26 ~ 5.32GHz, 5.5~5.58GHz & 5.66~5.7GHz
	<b>For 15.247</b> 802.11b & 802.11g: 2.412 ~ 2.462GHz 802.11a: 5.745 ~ 5.825GHz
<b>NUMBER OF CHANNEL</b>	<b>For 15.407</b> 16 for 802.11a, 802.11n (HT20) 7 for 802.11n (HT40)
	<b>For 15.247(2.4GHz)</b> 11 for 802.11b, 802.11g, 802.11n (HT20) 7 for 802.11n (HT40)
	<b>For 15.247(5GHz)</b> 5 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40)



<b>MAXIMUM OUTPUT POWER</b>	<b>For 15.407</b> 802.11a: 67.840mW 802.11n (HT20): 56.170mW 802.11n (HT40): 57.660mW <b>For 15.247 (2.4GHz)</b> 802.11b: 120.640mW 802.11g: 597.433mW 802.11n (HT20): 480.912mW 802.11n (HT40): 209.426mW <b>For 15.247 (5GHz)</b> 802.11a: 339.648mW 802.11n (HT20): 321.691mW 802.11n (HT40): 347.652mW
<b>ANTENNA TYPE</b>	Please see NOTE
<b>DATA CABLE</b>	NA
<b>I/O PORTS</b>	Refer to user's manual
<b>ASSOCIATED DEVICES</b>	Adapter x 1 Adapter(DC power) x 1 POE x 1

**NOTE:**

- There are 2.4GHz and 5GHz WLAN technology used for the EUT. The test report of EUT listed as below table:

Function	Report No.
WLAN	RF120113E07C (15.247) RF120113E07C-1(15.407) RF120113E07C-2(DFS)

- The EUT is 2 \* 2 MIMO without 802.11n beam forming function.

MODULATION MODE	Tx/Rx FUNCTION
<b>802.11a</b>	2Tx/2Rx
<b>802.11b</b>	2Tx/2Rx
<b>802.11g</b>	2Tx/2Rx
<b>802.11n (HT20)</b>	2Tx/2Rx
<b>802.11n (HT40)</b>	2Tx/2Rx



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3. The EUT must be supplied with a power adapter or POE as below :

Adapter 1		
Brand	Model No.	Spec.
Sino-American	SA115B-05U	Input: 100-240V, 0.4A, 50-60Hz AC input cable (unshielded, 1.8m) Output: 5V, 2A, 10W DC output cable (unshielded, 1.9m)
Adapter 2(DC POWER)		
Brand	Model No.	Spec.
ENG	3A-124DA12	AC Input : 100-240V, 0.3A, 50-60Hz AC input cable(unshielded ,1.9m) DC Output : 12V, 1.0A 10W DC output cable(unshielded ,1.9m)
POE		
Brand	Model No.	Spec.
CONTEC	POW-CB50AF	AC Input : 100-125V, 0.5A, 50/60Hz DC Output : 48V, 10.35A DC output cable(unshielded ,1.8m)
For radiated emissions test, the EUT was pre-tested with above Adapter 1, Adapter 2 & POE, the worst case was found in Adapter 1. Therefore only the test data of the Adapter 1 was recorded in this report.		

4. The antenna provided to the EUT, please refer to the following table:

Transmitter Circuit	Brand	Model	Antenna Type	Peak Gain(dBi) (Exclude cable loss)	Net Gain (dBi) (Include cable loss)	Connector Type	Cable Length (cm)	Cable Loss (dB)
Chain (0) & Chain (1)	FDK	AN1523	chip	2.4GHz: 2	2.4GHz: 0.6	U.FL	16	1.4
				5GHz :1	5GHz :-0.4			

- 2.4GHz and 5GHz technology cannot transmit at same time.
- When the EUT operating in 802.11n, the software operation, which is defined by manufacturer, MCS (Modulation and Coding Schemes) from 0 to 15.
- 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.



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### 3.2 DESCRIPTION OF TEST MODES

#### Operated in 5150MHz ~ 5350MHz bands:

Eight channels are provided for 802.11a and 802.11n (20MHz):

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

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

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



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

Eight channels are provided for 802.11a and 802.11n (20MHz):

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

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

CHANNEL	FREQUENCY
102	5510 MHz
110	5550 MHz
134	5670 MHz



### 3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	PLC	RE < 1G	RE ≥ 1G	APCM	
Mode 1	√	-	-	-	With adapter 1
Mode 2	√				With adapter 2(DC POWER)
Mode 3	√	√	√	√	With POE

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

**NOTE:** 1 "-" means no effect.

**NOTE:** 2. The EUT had been pre-tested on the positioned of each 2 axis. The radiated emission worst case was found when positioned on **Y-plane**

#### **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	132	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	132	OFDM	BPSK	6



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**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
For 5 GHz 802.11n (20MHz)	36 to 140	36, 40, 48, 52, 60, 64, 100, 116, 132, 140	OFDM	BPSK	6.5
For 5 GHz 802.11n (40MHz)	38 to 134	38, 46, 54, 62, 102, 110, 134	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	36 to 140	36, 40, 48, 52, 60, 64, 100, 116, 132, 140	OFDM	BPSK	6
For 5 GHz 802.11n (20MHz)	36 to 140	36, 40, 48, 52, 60, 64, 100, 116, 132, 140	OFDM	BPSK	6.5
For 5 GHz 802.11n (40MHz)	38 to 134	38, 46, 54, 62, 102, 110, 134	OFDM	BPSK	13.5

**TEST CONDITION:**

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
PLC	22deg. C, 68%RH	120Vac, 60Hz	Timmy Hu
RE<1G	22deg. C, 71%RH	120Vac, 60Hz	Robert Cheng
RE <sup>3</sup> 1G	28deg. C, 75%RH	120Vac, 60Hz	Evan Huang
	23deg. C, 65%RH	120Vac, 60Hz	Amos Chuang
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**

**662911 D01 Multiple Transmitter Output**

**ANSI C63.10-2009**

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



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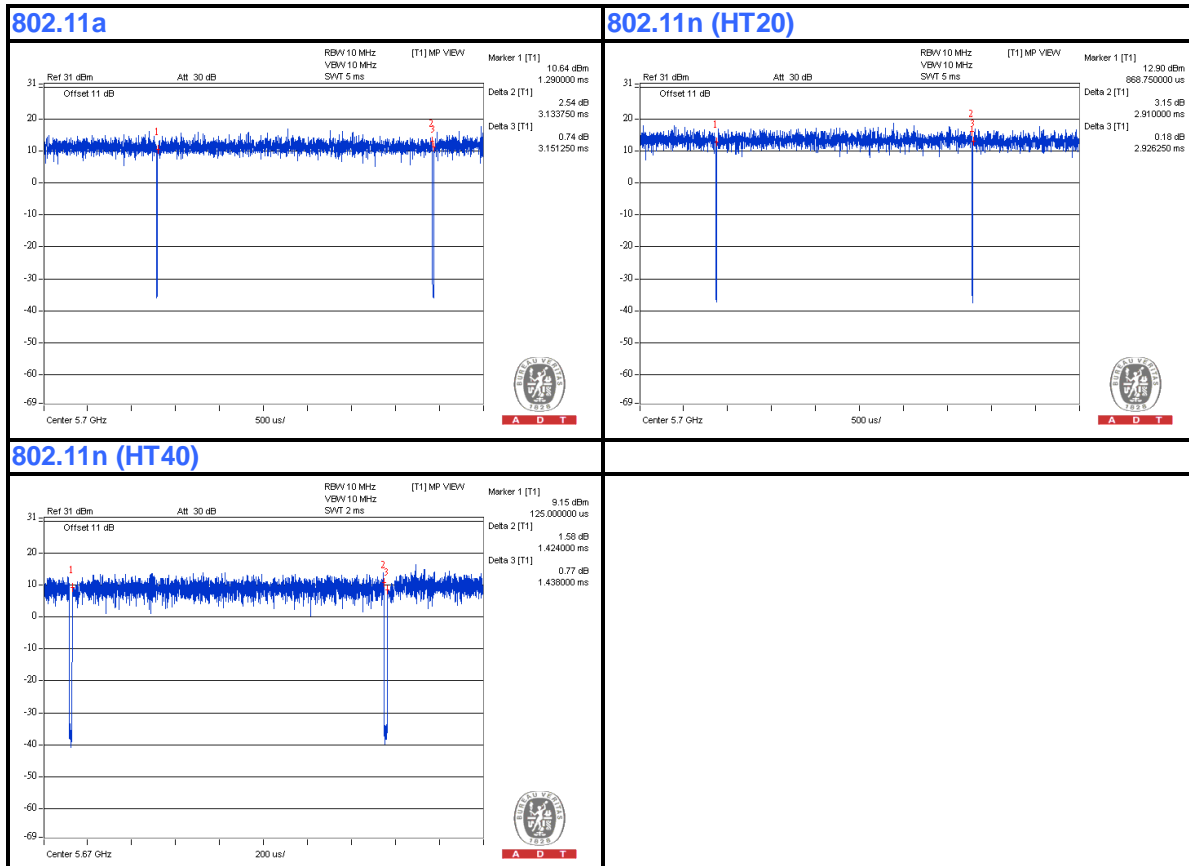
### 3.4 DUTY CYCLE OF TEST SIGNAL

Duty cycle of test signal is 100 % > 98 %, duty factor is not required.

**802.11a:** Duty cycle = 3.1334 ms/3.151 ms = 0.994

**802.11n (HT20):** Duty cycle = 2.91 ms/2.926 ms = 0.995

**802.11n (HT40):** Duty cycle = 1.424 ms/1.438 ms = 0.990







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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.

For Conducted emission test					
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP32LA	HSLB32S	FCC DoC

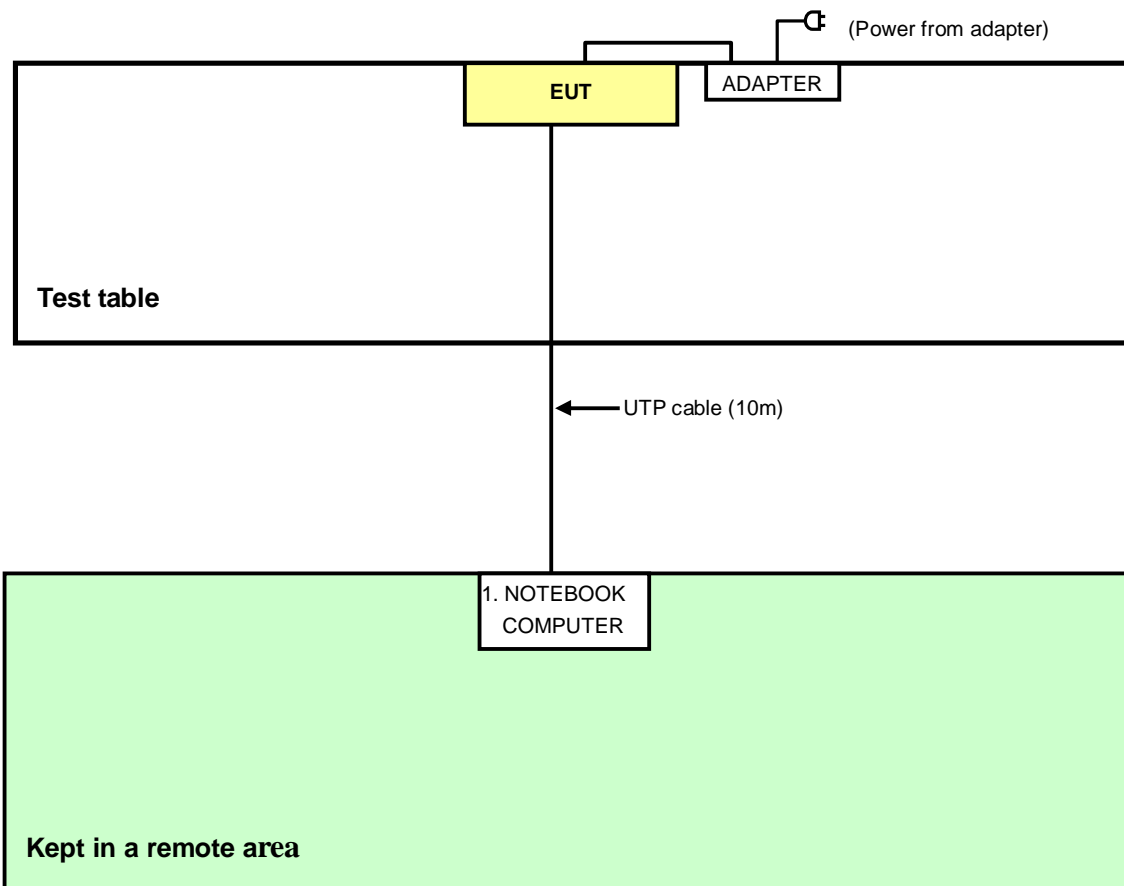
For other test items					
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP32LA	FSLB32S	FCC DoC

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	UTP cable, 10m

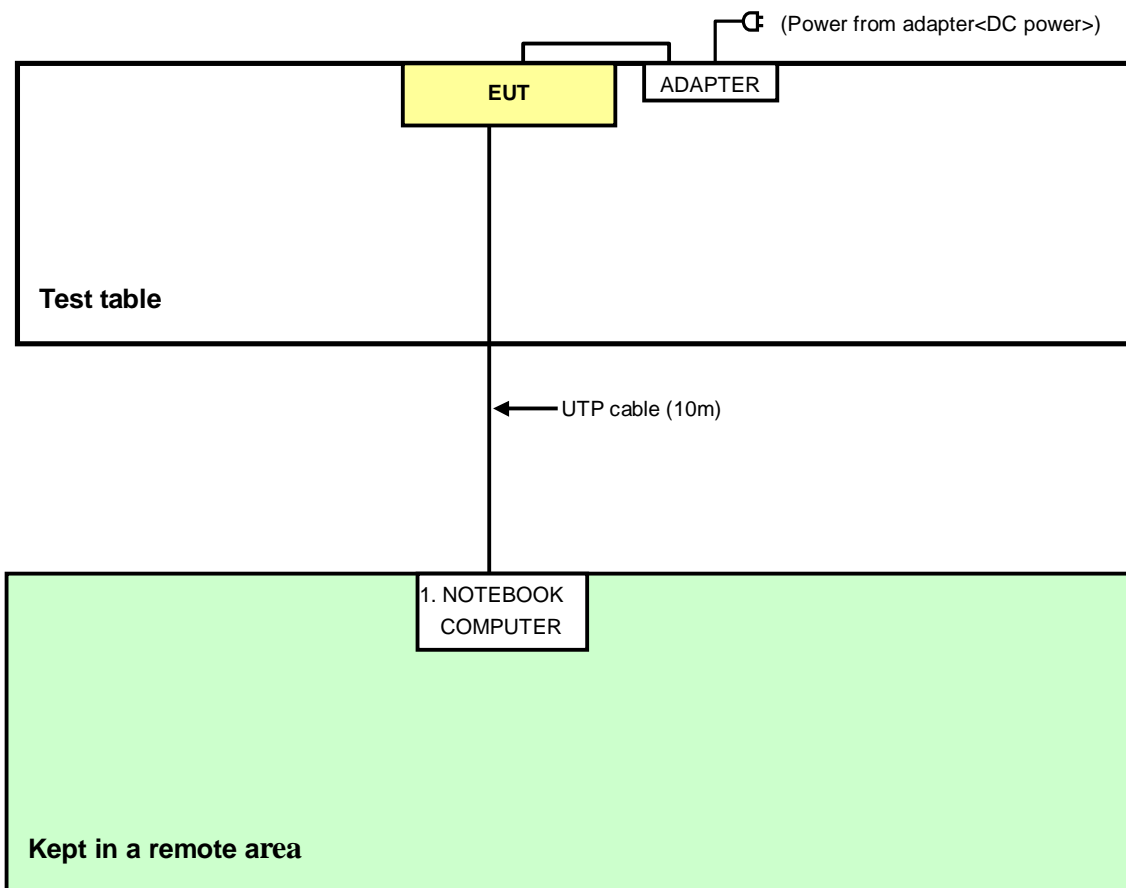
Note: The power cords of the above support units were unshielded (1.8m).

### 3.6 CONFIGURATION OF SYSTEM UNDER TEST

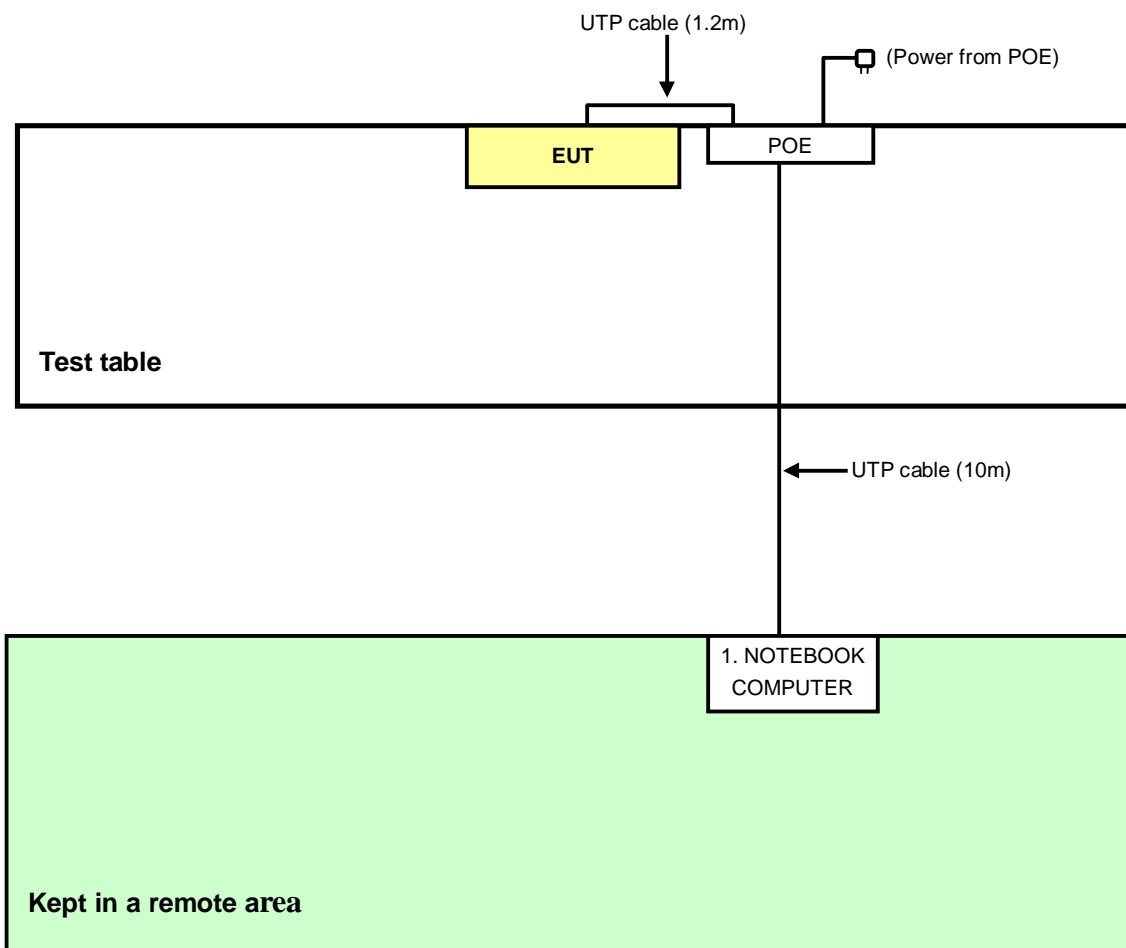
For test mode 1:



For test mode 2:



For test mode 3:





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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 $\mu$ 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	100287	Feb. 29, 2012	Feb. 28, 2013
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK 8127	8127-523	Sep. 19, 2012	Sep. 20, 2013
Line-Impedance Stabilization Network (for Peripheral) ROHDE & SCHWARZ	ESH3-Z5	848773/004	Oct. 29, 2012	Oct. 28, 2013
RF Cable (JYEBAO)	5DFB	COACAB-002	Aug. 05, 2012	Aug. 04, 2013
50 ohms Terminator	50	3	Oct. 23, 2012	Oct. 22, 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. A.
3. The VCCI Con A Registration No. is C-817.
4. Tested Date: Nov. 27, 2012



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#### 4.1.3 TEST PROCEDURES

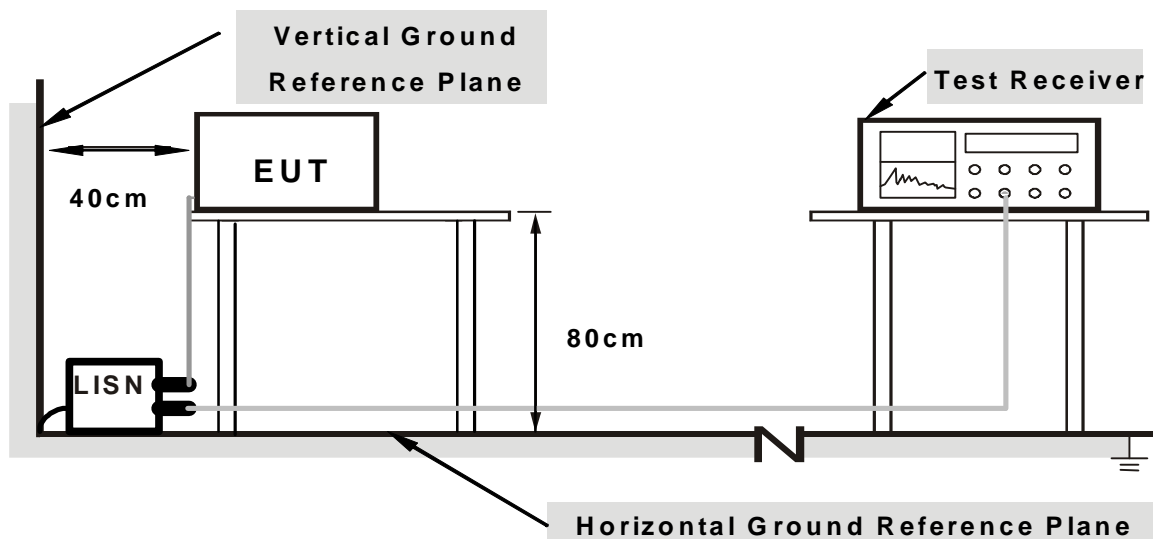
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN.
- b. The two LISNs provide 50 ohm/ 50uH of coupling 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:** 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.

#### 4.1.6 EUT OPERATING CONDITIONS

1. Turn on the power of EUT.
2. The communication partner run test program “art.exe” to enable EUT under transmission/receiving condition continuously at specific channel frequency.

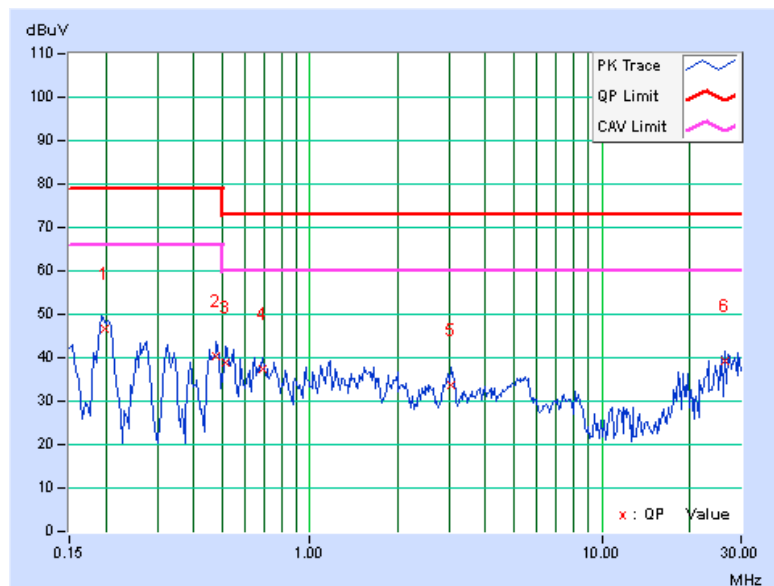
### 4.1.7 TEST RESULTS (MODE 1)

<b>PHASE</b>	Line (L)	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP) / Average (AV)
--------------	----------	--------------------------	--------------------------------

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor (dB)	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. [dB (uV)]	AV. [dB (uV)]	Q.P. (dB)	AV. (dB)
	1	0.19772	0.12	46.41	37.00	46.53	37.12	79.00	66.00	-32.47
2	0.47813	0.16	40.13	37.61	40.29	37.77	79.00	66.00	-38.71	-28.23
3	0.51328	0.17	38.89	35.75	39.06	35.92	73.00	60.00	-33.94	-24.08
4	0.68516	0.17	37.09	33.91	37.26	34.08	73.00	60.00	-35.74	-25.92
5	3.04688	0.25	33.38	29.40	33.63	29.65	73.00	60.00	-39.37	-30.35
6	26.54688	1.10	38.19	35.74	39.29	36.84	73.00	60.00	-33.71	-23.16

**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.



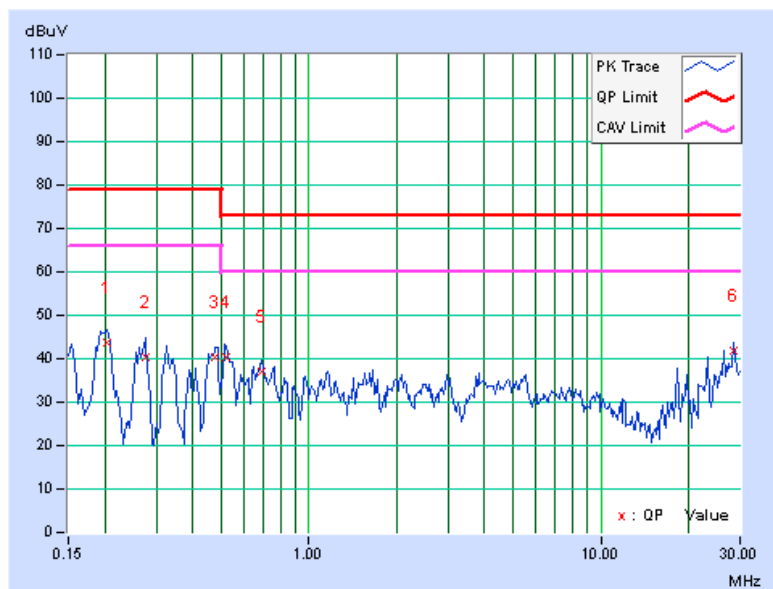


<b>PHASE</b>	Neutral (N)	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20469	0.10	43.62	37.02	43.72	37.12	79.00	66.00	-35.28	-28.88
2	0.27500	0.12	40.13	33.33	40.25	33.45	79.00	66.00	-38.75	-32.55
3	0.47813	0.15	40.13	37.38	40.28	37.53	79.00	66.00	-38.72	-28.47
4	0.52109	0.15	40.28	37.80	40.43	37.95	73.00	60.00	-32.57	-22.05
5	0.68516	0.16	36.99	33.75	37.15	33.91	73.00	60.00	-35.85	-26.09
6	28.68359	0.79	40.91	39.00	41.70	39.79	73.00	60.00	-31.30	-20.21

**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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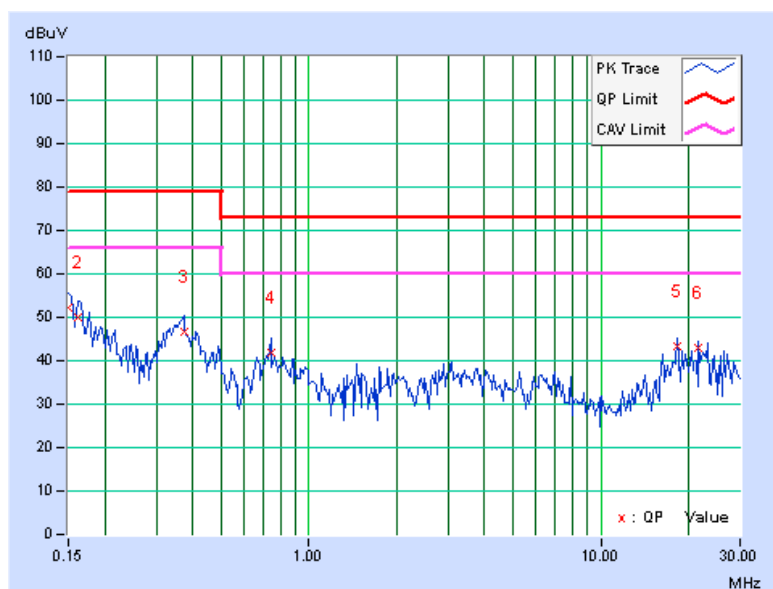
### 4.1.8 TEST RESULTS (MODE 2)

<b>PHASE</b>	Line (L)	<b>DETECTOR FUNCTION</b>	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	0.11	51.99	38.65	52.10	38.76	79.00	66.00	-26.90	-27.24
2	0.16172	0.11	49.72	34.33	49.83	34.44	79.00	66.00	-29.17	-31.56
3	0.37266	0.15	46.58	43.65	46.73	43.80	79.00	66.00	-32.27	-22.20
4	0.73984	0.18	41.69	41.63	41.87	41.81	73.00	60.00	-31.13	-18.19
5	18.24219	0.85	42.58	40.25	43.43	41.10	73.00	60.00	-29.57	-18.90
6	21.66406	0.96	42.16	40.23	43.12	41.19	73.00	60.00	-29.88	-18.81

**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.

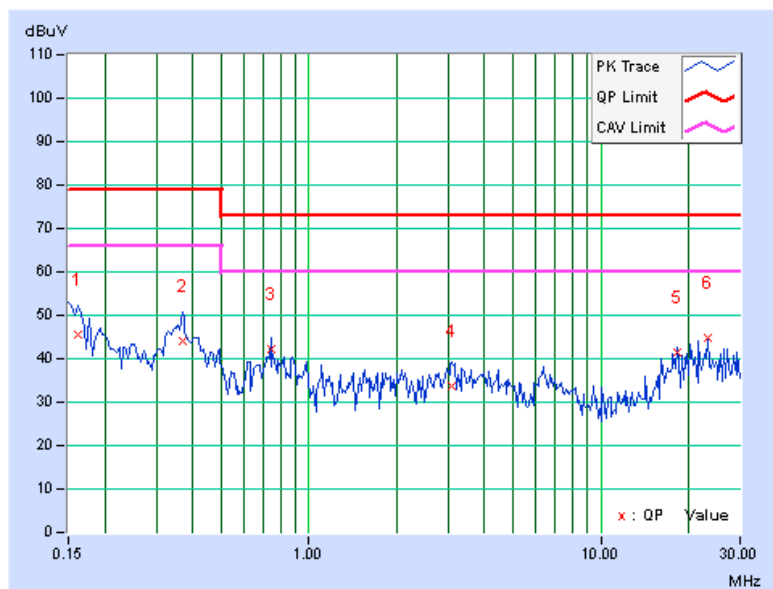


PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	0.09	45.58	30.90	45.67	30.99	79.00	66.00	-33.33	-35.01
2	0.36875	0.14	44.10	42.65	44.24	42.79	79.00	66.00	-34.76	-23.21
3	0.73984	0.16	42.05	41.08	42.21	41.24	73.00	60.00	-30.79	-18.76
4	3.09766	0.23	33.63	24.67	33.86	24.90	73.00	60.00	-39.14	-35.10
5	18.30469	0.57	41.03	38.72	41.60	39.29	73.00	60.00	-31.40	-20.71
6	23.12891	0.68	44.11	42.24	44.79	42.92	73.00	60.00	-28.21	-17.08

**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.



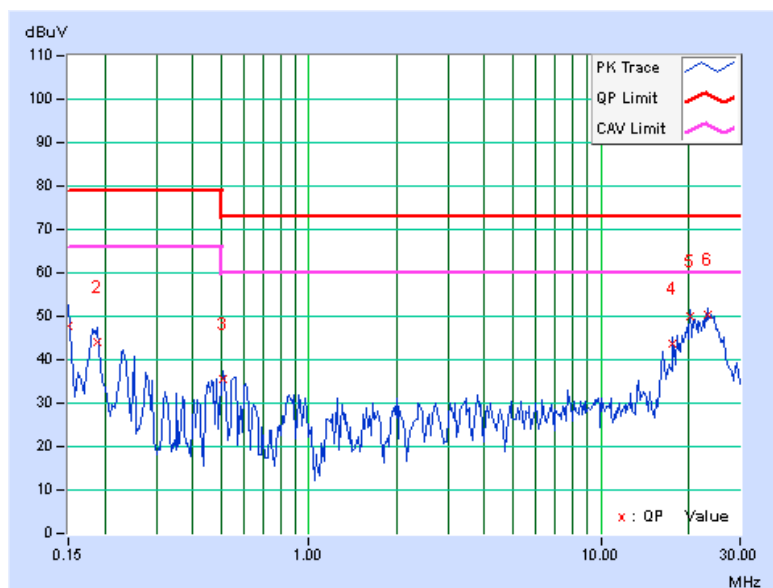
### 4.1.9 TEST RESULTS (MODE 3)

<b>PHASE</b>	Line (L)	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.11	47.50	22.46	47.61	22.57	79.00	66.00	-31.39	-43.43
2	0.18906	0.12	44.11	35.96	44.23	36.08	79.00	66.00	-34.77	-29.92
3	0.50938	0.17	35.45	35.33	35.62	35.50	73.00	60.00	-37.38	-24.50
4	17.69531	0.83	42.99	41.81	43.82	42.64	73.00	60.00	-29.18	-17.36
<b>5</b>	<b>20.25781</b>	<b>0.92</b>	<b>48.94</b>	<b>47.96</b>	<b>49.86</b>	<b>48.88</b>	<b>73.00</b>	<b>60.00</b>	<b>-23.14</b>	<b>-11.12</b>
6	23.12891	1.01	49.38	46.97	50.39	47.98	73.00	60.00	-22.61	-12.02

#### 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.

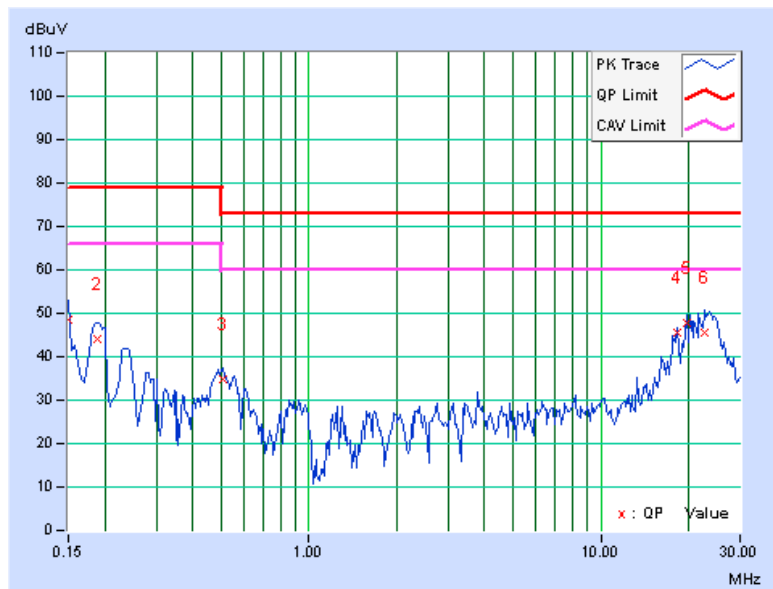


PHASE	Neutral (N)	DETECTOR FUNCTION	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
			1	0.15000	0.09	48.41	26.51	48.50	26.60	79.00
2	0.18906	0.10	44.02	34.82	44.12	34.92	79.00	66.00	-34.88	-31.08
3	0.50547	0.15	34.54	32.31	34.69	32.46	73.00	60.00	-38.31	-27.54
4	18.24219	0.57	44.98	44.04	45.55	44.61	73.00	60.00	-27.45	-15.39
5	19.71094	0.60	47.00	46.11	47.60	46.71	73.00	60.00	-25.40	-13.29
6	22.82031	0.67	45.00	40.58	45.67	41.25	73.00	60.00	-27.33	-18.75

**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.



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#### 4.2.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

APPLICABLE TO	LIMIT	
	FIELD STRENGTH AT 3m (dB $\mu$ V/m)	
	PK	AV
	74	54
√	EIRP LIMIT (dBm)	EQUIVALENT FIELD STRENGTH AT 3m (dB $\mu$ V/m)
	PK	PK
	-27	68.3

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

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



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### 4.2.3 TEST INSTRUMENTS

For Below 1GHz test & Above 1GHz(11a) test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer Agilent	E4446A	MY48250254	July 09, 2012	July 08, 2013
Pre-Selector Agilent	N9039A	MY46520311	July 09, 2012	July 08, 2013
Signal Generator Agilent	N5181A	MY49060517	July 09, 2012	July 08, 2013
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	Apr. 09, 2012	Apr. 08, 2013
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. 26, 2011	Dec. 25, 2012
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.
- 7 Tested Date: Nov. 29 to Dec. 09, 2012





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**For Above 1GHz(HT20, HT40) test:**

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Agilent Spectrum Analyzer	E4446A	MY48250253	Aug. 29, 2011	Aug. 28, 2012
Agilent Pre-Selector	N9039A	MY46520310	Aug. 29, 2011	Aug. 28, 2012
Agilent Signal Generator	N5181A	MY49060347	July 25, 2011	July 24, 2012
Mini-Circuits Pre-Amplifier	ZFL-1000VH2B	AMP-ZFL-04	Nov. 15, 2011	Nov. 14, 2012
Agilent Pre-Amplifier	8449B	3008A02465	Feb. 27, 2012	Feb. 26, 2013
SPACEK LABS	SLKKa-48-6	9K16	Nov. 15, 2011	Nov. 14, 2012
SCHWARZBECK Trilog Broadband Antenna	VULB 9168	9168-361	Apr. 06, 2012	Apr. 05, 2013
AISI Horn_Antenna	AIH.8018	0000220091110	Nov. 23, 2011	Nov. 22, 2012
SCHWARZBECK Horn_Antenna	BBHA 9170	9170-424	Oct. 07, 2011	Oct. 06, 2012
RF Cable	NA	RF104-205 RF104-207 RF104-202	Dec. 27, 2011	Dec. 26, 2012
RF Cable	NA	CHHCAB_001	Oct. 08, 2011	Oct. 07, 2012
Software	ADT_Radiated_V8.7.05	NA	NA	NA
CT Antenna Tower & Turn Table	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: Apr. 17, 2012

#### 4.2.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The 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.

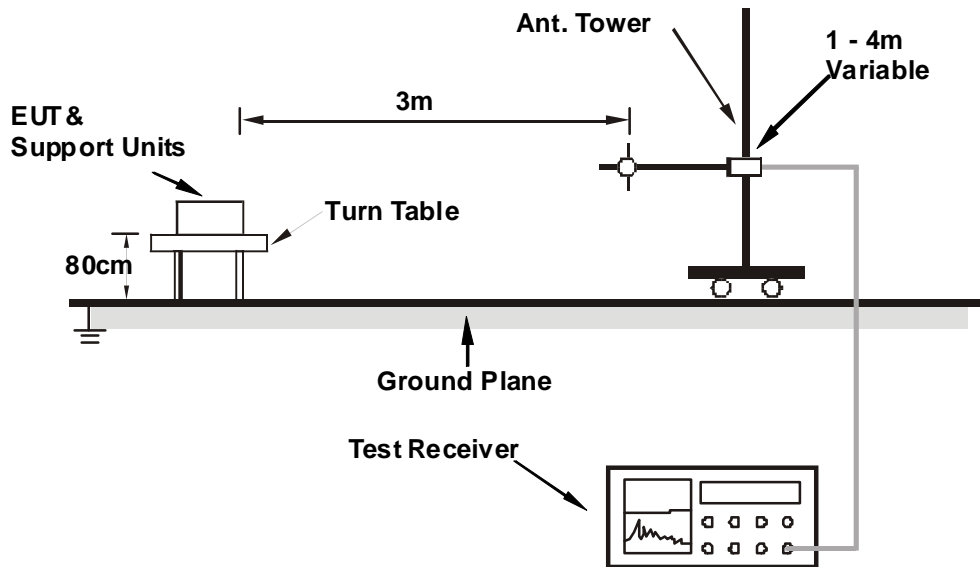
**NOTE:**

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

<b>CHANNEL</b>	TX Channel 132	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	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	104.26	39.7 QP	43.5	-3.9	2.00 H	314	29.20	10.45
2	148.00	34.8 QP	43.5	-8.7	2.00 H	92	19.97	14.79
3	240.00	35.0 QP	46.0	-11.0	1.50 H	270	22.10	12.91
4	445.65	24.3 QP	46.0	-21.7	2.00 H	27	5.30	19.03
5	677.00	42.6 QP	46.0	-3.4	1.00 H	343	18.94	23.66
6	849.00	39.5 QP	46.0	-6.6	1.00 H	5	12.72	26.73

#### 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	104.12	38.4 QP	43.5	-5.1	1.00 V	292	27.94	10.43
2	154.00	31.9 QP	43.5	-11.6	1.00 V	209	17.21	14.73
3	250.60	34.8 QP	46.0	-11.2	1.50 V	356	21.43	13.37
4	518.00	25.7 QP	46.0	-20.3	1.00 V	173	4.93	20.81
5	621.00	26.9 QP	46.0	-19.1	2.00 V	285	3.95	22.92
6	751.00	34.0 QP	46.0	-12.0	1.50 V	198	9.03	24.93

#### 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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



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ABOVE 1GHz DATA

802.11a

<b>CHANNEL</b>	TX Channel 36	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	59.8 PK	74.0	-14.2	1.08 H	179	19.25	40.55
2	5150.00	47.2 AV	54.0	-6.8	1.08 H	179	6.65	40.55
3	*5180.00	105.6 PK			1.08 H	179	64.92	40.68
4	*5180.00	96.3 AV			1.08 H	179	55.62	40.68
5	#10360.00	55.6 PK	68.3	-12.7	1.07 H	149	7.78	47.82
6	15540.00	62.0 PK	74.0	-12.0	1.02 H	247	8.73	53.27
7	15540.00	50.6 AV	54.0	-3.4	1.02 H	247	-2.67	53.27

**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	59.3 PK	74.0	-14.7	1.21 V	118	18.75	40.55
2	5150.00	46.4 AV	54.0	-7.6	1.21 V	118	5.85	40.55
3	*5180.00	101.6 PK			1.21 V	118	60.92	40.68
4	*5180.00	91.5 AV			1.21 V	118	50.82	40.68
5	#10360.00	55.9 PK	68.3	-12.4	1.00 V	234	8.08	47.82
6	15540.00	62.2 PK	74.0	-11.8	1.05 V	36	8.93	53.27
7	15540.00	50.9 AV	54.0	-3.1	1.05 V	36	-2.37	53.27

**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).
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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<b>CHANNEL</b>	TX Channel 40	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	105.7 PK			1.09 H	182	64.93	40.77
2	*5200.00	96.3 AV			1.09 H	182	55.53	40.77
3	#10400.00	55.8 PK	68.3	-12.5	1.16 H	143	8.44	47.36
4	15600.00	62.3 PK	74.0	-11.7	1.00 H	264	9.31	52.99
5	15600.00	50.7 AV	54.0	-3.3	1.00 H	264	-2.29	52.99

**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	101.5 PK			1.21 V	112	60.73	40.77
2	*5200.00	91.5 AV			1.21 V	112	50.73	40.77
3	#10400.00	55.6 PK	68.3	-12.7	1.05 V	224	8.24	47.36
4	15600.00	61.6 PK	74.0	-12.4	1.04 V	14	8.61	52.99
5	15600.00	50.3 AV	54.0	-3.7	1.04 V	14	-2.69	52.99

**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).
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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<b>CHANNEL</b>	TX Channel 48	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	105.8 PK			1.08 H	178	64.91	40.89
2	*5240.00	96.5 AV			1.08 H	178	55.61	40.89
3	#10480.00	56.4 PK	68.3	-11.9	1.08 H	141	8.75	47.65
4	15720.00	61.9 PK	74.0	-12.1	1.05 H	255	9.31	52.59
5	15720.00	50.3 AV	54.0	-3.7	1.05 H	255	-2.29	52.59

**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	*5240.00	101.1 PK			1.23 V	113	60.21	40.89
2	*5240.00	91.4 AV			1.23 V	113	50.51	40.89
3	#10480.00	56.2 PK	68.3	-12.1	1.00 V	222	8.55	47.65
4	15720.00	62.1 PK	74.0	-11.9	1.00 V	17	9.51	52.59
5	15720.00	50.7 AV	54.0	-3.3	1.00 V	17	-1.89	52.59

**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).
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.

<b>CHANNEL</b>	TX Channel 52	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	183	65.84	40.96
2	*5260.00	97.3 AV			1.09 H	183	56.34	40.96
3	#10520.00	55.6 PK	68.3	-12.7	1.16 H	163	7.87	47.73
4	15780.00	61.9 PK	74.0	-12.1	1.00 H	244	9.36	52.54
5	15780.00	50.5 AV	54.0	-3.5	1.00 H	244	-2.04	52.54

**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	101.8 PK			1.22 V	111	60.84	40.96
2	*5260.00	92.1 AV			1.22 V	111	51.14	40.96
3	#10520.00	55.8 PK	68.3	-12.5	1.05 V	241	8.07	47.73
4	15780.00	62.6 PK	74.0	-11.4	1.05 V	24	10.06	52.54
5	15780.00	50.8 AV	54.0	-3.2	1.05 V	24	-1.74	52.54

**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).
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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<b>CHANNEL</b>	TX Channel 60	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	108.5 PK			1.04 H	203	67.42	41.08
2	*5300.00	98.6 AV			1.04 H	203	57.52	41.08
3	10600.00	55.9 PK	74.0	-18.1	1.12 H	153	8.14	47.76
4	10600.00	44.6 AV	54.0	-9.4	1.12 H	153	-3.16	47.76
5	15900.00	62.4 PK	74.0	-11.6	1.00 H	253	9.46	52.94
6	15900.00	50.7 AV	54.0	-3.3	1.00 H	253	-2.24	52.94

**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	102.1 PK			1.11 V	129	61.02	41.08
2	*5300.00	93.1 AV			1.11 V	129	52.02	41.08
3	10600.00	55.6 PK	74.0	-18.4	1.00 V	234	7.84	47.76
4	10600.00	44.5 AV	54.0	-9.5	1.00 V	234	-3.26	47.76
5	15900.00	62.1 PK	74.0	-11.9	1.00 V	27	9.16	52.94
6	15900.00	50.5 AV	54.0	-3.5	1.00 V	27	-2.44	52.94

**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).
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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<b>CHANNEL</b>	TX Channel 64	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	108.1 PK			1.05 H	205	66.99	41.11
2	*5320.00	98.5 AV			1.05 H	205	57.39	41.11
3	5350.00	60.7 PK	74.0	-13.3	1.05 H	205	19.55	41.15
4	5350.00	48.6 AV	54.0	-5.4	1.05 H	205	7.45	41.15
5	10640.00	55.7 PK	74.0	-18.3	1.06 H	147	7.82	47.88
6	10640.00	44.6 AV	54.0	-9.4	1.06 H	147	-3.28	47.88
7	15960.00	61.9 PK	74.0	-12.1	1.02 H	267	9.13	52.77
8	15960.00	50.4 AV	54.0	-3.6	1.02 H	267	-2.37	52.77

**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	101.5 PK			1.09 V	127	60.39	41.11
2	*5320.00	93.3 AV			1.09 V	127	52.19	41.11
3	5350.00	56.3 PK	74.0	-17.7	1.09 V	127	15.15	41.15
4	5350.00	44.6 AV	54.0	-9.4	1.09 V	127	3.45	41.15
5	10640.00	55.8 PK	74.0	-18.2	1.00 V	233	7.92	47.88
6	10640.00	44.7 AV	54.0	-9.3	1.00 V	233	-3.18	47.88
7	15960.00	62.3 PK	74.0	-11.7	1.00 V	21	9.53	52.77
8	15960.00	50.3 AV	54.0	-3.7	1.00 V	21	-2.47	52.77

**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).
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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<b>CHANNEL</b>	TX Channel 100	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	61.4 PK	74.0	-12.6	1.12 H	148	19.89	41.51
2	5460.00	48.0 AV	54.0	-6.0	1.12 H	148	6.49	41.51
3	#5470.00	66.5 PK	68.3	-1.8	1.12 H	148	24.94	41.56
4	*5500.00	110.3 PK			1.12 H	148	68.60	41.70
5	*5500.00	101.8 AV			1.12 H	148	60.10	41.70
6	11000.00	57.2 PK	74.0	-16.8	1.19 H	152	8.23	48.97
7	11000.00	45.2 AV	54.0	-8.8	1.19 H	152	-3.77	48.97
8	#16500.00	66.3 PK	68.3	-2.0	1.00 H	251	11.91	54.39

**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	58.6 PK	74.0	-15.4	1.06 V	22	17.09	41.51
2	5460.00	47.7 AV	54.0	-6.3	1.06 V	22	6.19	41.51
3	#5470.00	59.3 PK	68.3	-9.0	1.06 V	22	17.74	41.56
4	*5500.00	104.5 PK			1.06 V	22	62.80	41.70
5	*5500.00	95.3 AV			1.06 V	22	53.60	41.70
6	11000.00	58.0 PK	74.0	-16.0	1.01 V	236	9.03	48.97
7	11000.00	46.1 AV	54.0	-7.9	1.01 V	236	-2.87	48.97
8	#16500.00	63.3 PK	68.3	-5.0	1.00 V	25	8.91	54.39

**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).
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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<b>CHANNEL</b>	TX Channel 116	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	101.9 PK			1.16 H	131	59.99	41.91
2	*5580.00	101.6 AV			1.16 H	131	59.69	41.91
3	11160.00	57.8 PK	74.0	-16.2	1.16 H	141	9.07	48.73
4	11160.00	46.0 AV	54.0	-8.0	1.16 H	141	-2.73	48.73
5	#16740.00	66.1 PK	68.3	-2.2	1.00 H	252	11.65	54.45

**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	104.8 PK			1.06 V	35	62.89	41.91
2	*5580.00	95.5 AV			1.06 V	35	53.59	41.91
3	11160.00	58.3 PK	74.0	-15.7	1.00 V	246	9.57	48.73
4	11160.00	46.2 AV	54.0	-7.8	1.00 V	246	-2.53	48.73
5	#16740.00	63.2 PK	68.3	-5.1	1.00 V	23	8.75	54.45

**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).
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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<b>CHANNEL</b>	TX Channel 132	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	110.1 PK			1.18 H	133	67.94	42.16
2	*5660.00	101.3 AV			1.18 H	133	59.14	42.16
3	11320.00	57.3 PK	74.0	-16.7	1.11 H	154	8.23	49.07
4	11320.00	45.6 AV	54.0	-8.4	1.11 H	154	-3.47	49.07
5	#16980.00	65.9 PK	68.3	-2.4	1.00 H	252	10.61	55.29

**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	104.3 PK			1.00 V	38	62.14	42.16
2	*5660.00	95.4 AV			1.00 V	38	53.24	42.16
3	11320.00	57.5 PK	74.0	-16.5	1.00 V	260	8.43	49.07
4	11320.00	45.3 AV	54.0	-8.7	1.00 V	260	-3.77	49.07
5	#16980.00	63.3 PK	68.3	-5.0	1.00 V	21	8.01	55.29

**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).
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.



<b>CHANNEL</b>	TX Channel 140	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	106.3 PK			1.19 H	135	64.00	42.30
2	*5700.00	98.3 AV			1.19 H	135	56.00	42.30
3	#5725.00	62.3 PK	68.3	-6.0	1.19 H	135	19.96	42.34
4	11400.00	57.7 PK	74.0	-16.3	1.15 H	156	8.82	48.88
5	11400.00	45.7 AV	54.0	-8.3	1.15 H	156	-3.18	48.88
6	#17100.00	66.2 PK	68.3	-2.1	1.00 H	253	10.70	55.50

**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	102.5 PK			1.00 V	28	60.20	42.30
2	*5700.00	93.3 AV			1.00 V	28	51.00	42.30
3	#5725.00	59.3 PK	68.3	-9.0	1.00 V	28	16.96	42.34
4	11400.00	57.9 PK	74.0	-16.1	1.00 V	255	9.02	48.88
5	11400.00	45.8 AV	54.0	-8.2	1.00 V	255	-3.08	48.88
6	#17100.00	63.1 PK	68.3	-5.2	1.00 V	19	7.60	55.50

**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).
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 (20MHz)

<b>CHANNEL</b>	TX Channel 36	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	59.1 PK	74.0	-14.9	1.63 H	277	17.12	41.98
2	5150.00	47.3 AV	54.0	-6.7	1.63 H	277	5.32	41.98
3	*5180.00	106.8 PK			1.60 H	281	64.73	42.07
4	*5180.00	97.3 AV			1.60 H	281	55.23	42.07
5	#10360.00	58.8 PK	68.3	-9.5	1.17 H	277	10.01	48.79
6	15540.00	63.1 PK	74.0	-10.9	1.35 H	150	8.73	54.37
7	15540.00	50.5 AV	54.0	-3.5	1.35 H	150	-3.87	54.37

**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	5062.20	56.7 PK	74.0	-17.3	1.00 V	220	14.93	41.77
2	5062.20	43.6 AV	54.0	-10.4	1.00 V	220	1.83	41.77
3	*5180.00	96.2 PK			1.00 V	220	54.13	42.07
4	*5180.00	85.9 AV			1.00 V	220	43.83	42.07
5	#10360.00	57.7 PK	68.3	-10.6	1.10 V	16	8.91	48.79
6	15540.00	62.3 PK	74.0	-11.7	1.28 V	170	7.93	54.37
7	15540.00	50.2 AV	54.0	-3.8	1.28 V	170	-4.17	54.37

**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).
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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<b>CHANNEL</b>	TX Channel 40	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	106.9 PK			1.54 H	280	64.77	42.13
2	*5200.00	97.6 AV			1.54 H	280	55.47	42.13
3	#10400.00	59.0 PK	68.3	-9.3	1.12 H	263	10.53	48.47
4	15600.00	62.0 PK	74.0	-12.0	1.33 H	154	7.62	54.38
5	15600.00	50.3 AV	54.0	-3.7	1.33 H	154	-4.08	54.38

**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	96.4 PK			1.00 V	210	54.27	42.13
2	*5200.00	85.8 AV			1.00 V	210	43.67	42.13
3	#10400.00	58.2 PK	68.3	-10.1	1.13 V	11	9.73	48.47
4	15600.00	61.7 PK	74.0	-12.3	1.22 V	155	7.32	54.38
5	15600.00	49.9 AV	54.0	-4.1	1.22 V	155	-4.48	54.38

**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).
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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<b>CHANNEL</b>	TX Channel 48	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	106.7 PK			1.58 H	283	64.52	42.18
2	*5240.00	97.6 AV			1.58 H	283	55.42	42.18
3	#10480.00	59.3 PK	68.3	-9.0	1.14 H	282	10.37	48.93
4	15720.00	63.1 PK	74.0	-10.9	1.35 H	140	9.17	53.93
5	15720.00	50.5 AV	54.0	-3.5	1.35 H	140	-3.43	53.93

**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	96.5 PK			1.06 V	200	54.32	42.18
2	*5240.00	86.2 AV			1.06 V	200	44.02	42.18
3	#10480.00	58.5 PK	68.3	-9.8	1.12 V	25	9.57	48.93
4	15720.00	62.5 PK	74.0	-11.5	1.26 V	149	8.57	53.93
5	15720.00	50.2 AV	54.0	-3.8	1.26 V	149	-3.73	53.93

**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).
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

<b>CHANNEL</b>	TX Channel 52	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	107.7 PK			1.62 H	74	65.50	42.20
2	*5260.00	98.4 AV			1.62 H	74	56.20	42.20
3	#10520.00	58.7 PK	68.3	-9.6	1.16 H	287	9.71	48.99
4	15780.00	62.5 PK	74.0	-11.5	1.38 H	140	8.38	54.12
5	15780.00	50.5 AV	54.0	-3.5	1.38 H	140	-3.62	54.12

**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	*5260.00	96.1 PK			1.09 V	200	53.90	42.20
2	*5260.00	85.7 AV			1.09 V	200	43.50	42.20
3	#10520.00	58.1 PK	68.3	-10.2	1.07 V	30	9.11	48.99
4	15780.00	61.9 PK	74.0	-12.1	1.32 V	146	7.78	54.12
5	15780.00	49.9 AV	54.0	-4.1	1.32 V	146	-4.22	54.12

**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).
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

<b>CHANNEL</b>	TX Channel 60	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	107.2 PK			1.61 H	59	64.95	42.25
2	*5300.00	98.1 AV			1.61 H	59	55.85	42.25
3	10600.00	58.2 PK	74.0	-15.8	1.18 H	303	9.39	48.81
4	10600.00	46.7 AV	54.0	-7.3	1.18 H	303	-2.11	48.81
5	15900.00	62.3 PK	74.0	-11.7	1.42 H	146	8.16	54.14
6	15900.00	50.5 AV	54.0	-3.5	1.42 H	146	-3.64	54.14

**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	96.5 PK			1.07 V	208	54.25	42.25
2	*5300.00	86.0 AV			1.07 V	208	43.75	42.25
3	10600.00	58.2 PK	74.0	-15.8	1.19 V	17	9.39	48.81
4	10600.00	46.4 AV	54.0	-7.6	1.19 V	17	-2.41	48.81
5	15900.00	62.0 PK	74.0	-12.0	1.24 V	188	7.86	54.14
6	15900.00	50.2 AV	54.0	-3.8	1.24 V	188	-3.94	54.14

**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).
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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<b>CHANNEL</b>	TX Channel 64	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	106.5 PK			1.60 H	66	64.24	42.26
2	*5320.00	97.6 AV			1.60 H	66	55.34	42.26
3	5350.00	55.9 PK	74.0	-18.1	1.00 H	37	13.62	42.28
4	5350.00	45.4 AV	54.0	-8.6	1.00 H	37	3.12	42.28
5	10640.00	58.9 PK	74.0	-15.1	1.15 H	312	9.95	48.95
6	10640.00	47.1 AV	54.0	-6.9	1.15 H	312	-1.85	48.95
7	15960.00	62.4 PK	74.0	-11.6	1.39 H	155	8.28	54.12
8	15960.00	50.3 AV	54.0	-3.7	1.39 H	155	-3.82	54.12

**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	*5320.00	96.4 PK			1.00 V	215	54.14	42.26
2	*5320.00	85.9 AV			1.00 V	215	43.64	42.26
3	5350.00	56.5 PK	74.0	-17.5	1.00 V	214	14.22	42.28
4	5350.00	44.5 AV	54.0	-9.5	1.00 V	214	2.22	42.28
5	10640.00	58.6 PK	74.0	-15.4	1.23 V	24	9.65	48.95
6	10640.00	46.6 AV	54.0	-7.4	1.23 V	24	-2.35	48.95
7	15960.00	61.8 PK	74.0	-12.2	1.19 V	198	7.68	54.12
8	15960.00	49.9 AV	54.0	-4.1	1.19 V	198	-4.22	54.12

**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).
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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<b>CHANNEL</b>	TX Channel 100	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	59.8 PK	74.0	-14.2	1.59 H	117	17.29	42.51
2	5460.00	47.7 AV	54.0	-6.3	1.59 H	117	5.19	42.51
3	#5470.00	67.0 PK	68.3	-1.3	1.58 H	64	24.46	42.54
4	*5500.00	108.9 PK			1.57 H	128	66.26	42.64
5	*5500.00	98.6 AV			1.57 H	128	55.96	42.64
6	11000.00	58.9 PK	74.0	-15.1	1.13 H	301	9.52	49.38
7	11000.00	47.4 AV	54.0	-6.6	1.13 H	301	-1.98	49.38
8	#16500.00	64.1 PK	68.3	-4.2	1.44 H	149	8.55	55.55

**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	57.7 PK	74.0	-16.3	1.05 V	205	15.19	42.51
2	5460.00	44.9 AV	54.0	-9.1	1.05 V	205	2.39	42.51
3	#5470.00	63.1 PK	68.3	-5.2	1.05 V	205	20.56	42.54
4	*5500.00	96.4 PK			1.05 V	205	53.76	42.64
5	*5500.00	86.0 AV			1.05 V	205	43.36	42.64
6	11000.00	58.8 PK	74.0	-15.2	1.25 V	9	9.42	49.38
7	11000.00	46.5 AV	54.0	-7.5	1.25 V	9	-2.88	49.38
8	#16500.00	63.9 PK	68.3	-4.4	1.18 V	204	8.35	55.55

**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).
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.



<b>CHANNEL</b>	TX Channel 116	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	107.7 PK			1.43 H	260	64.88	42.82
2	*5580.00	98.9 AV			1.43 H	260	56.08	42.82
3	11160.00	59.0 PK	74.0	-15.0	1.17 H	290	9.83	49.17
4	11160.00	47.2 AV	54.0	-6.8	1.17 H	290	-1.97	49.17
5	#16740.00	64.4 PK	68.3	-3.9	1.40 H	137	8.71	55.69

**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	98.4 PK			1.00 V	220	55.58	42.82
2	*5580.00	87.8 AV			1.00 V	220	44.98	42.82
3	11160.00	58.7 PK	74.0	-15.3	1.17 V	20	9.53	49.17
4	11160.00	46.6 AV	54.0	-7.4	1.17 V	20	-2.57	49.17
5	#16740.00	63.4 PK	68.3	-4.9	1.12 V	205	7.71	55.69

**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).
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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<b>CHANNEL</b>	TX Channel 132	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	108.3 PK			1.49 H	263	65.42	42.88
2	*5660.00	99.2 AV			1.49 H	263	56.32	42.88
3	11320.00	59.0 PK	74.0	-15.0	1.13 H	291	9.49	49.51
4	11320.00	47.0 AV	54.0	-7.0	1.13 H	291	-2.51	49.51
5	#16980.00	64.7 PK	68.3	-3.6	1.42 H	147	8.28	56.42

**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	96.8 PK			1.04 V	217	53.92	42.88
2	*5660.00	86.4 AV			1.04 V	217	43.52	42.88
3	11320.00	58.2 PK	74.0	-15.8	1.23 V	16	8.69	49.51
4	11320.00	46.4 AV	54.0	-7.6	1.23 V	16	-3.11	49.51
5	#16980.00	63.2 PK	68.3	-5.1	1.07 V	210	6.78	56.42

**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).
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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<b>CHANNEL</b>	TX Channel 140	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	108.4 PK			1.50 H	264	65.50	42.90
2	*5700.00	99.4 AV			1.50 H	264	56.50	42.90
3	#5725.00	67.7 PK	68.3	-0.6	1.51 H	283	24.77	42.93
4	11400.00	58.8 PK	74.0	-15.2	1.17 H	276	9.43	49.37
5	11400.00	46.9 AV	54.0	-7.1	1.17 H	276	-2.47	49.37
6	#17100.00	64.9 PK	68.3	-3.4	1.38 H	144	8.52	56.38

**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	96.9 PK			1.01 V	208	54.00	42.90
2	*5700.00	86.7 AV			1.01 V	208	43.80	42.90
3	#5725.00	64.3 PK	68.3	-4.0	1.01 V	208	21.37	42.93
4	11400.00	58.3 PK	74.0	-15.7	1.18 V	30	8.93	49.37
5	11400.00	45.8 AV	54.0	-8.2	1.18 V	30	-3.57	49.37
6	#17100.00	62.7 PK	68.3	-5.6	1.05 V	225	6.32	56.38

**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).
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 (40MHz)

<b>CHANNEL</b>	TX Channel 38	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	62.9 PK	74.0	-11.1	1.00 H	285	20.92	41.98
2	5150.00	50.9 AV	54.0	-3.1	1.00 H	285	8.92	41.98
3	*5190.00	104.4 PK			1.02 H	283	62.30	42.10
4	*5190.00	94.9 AV			1.02 H	283	52.80	42.10
5	#10380.00	59.1 PK	68.3	-9.2	1.14 H	297	10.47	48.63
6	15570.00	62.1 PK	74.0	-11.9	1.31 H	139	7.72	54.38
7	15570.00	50.4 AV	54.0	-3.6	1.31 H	139	-3.98	54.38

**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	57.3 PK	74.0	-16.7	1.00 V	212	15.32	41.98
2	5150.00	44.9 AV	54.0	-9.1	1.00 V	212	2.92	41.98
3	*5190.00	95.5 PK			1.00 V	212	53.40	42.10
4	*5190.00	85.3 AV			1.00 V	212	43.20	42.10
5	#10380.00	57.3 PK	68.3	-11.0	1.15 V	41	8.67	48.63
6	15570.00	61.8 PK	74.0	-12.2	1.08 V	230	7.42	54.38
7	15570.00	50.8 AV	54.0	-3.2	1.08 V	230	-3.58	54.38

**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).
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

<b>CHANNEL</b>	TX Channel 46	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	104.7 PK			1.62 H	64	62.53	42.17
2	*5230.00	95.2 AV			1.62 H	64	53.03	42.17
3	#10460.00	59.7 PK	68.3	-8.6	1.16 H	282	10.89	48.81
4	15690.00	62.5 PK	74.0	-11.5	1.37 H	126	8.59	53.91
5	15690.00	50.6 AV	54.0	-3.4	1.37 H	126	-3.31	53.91

**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	95.3 PK			1.01 V	224	53.13	42.17
2	*5230.00	85.3 AV			1.01 V	224	43.13	42.17
3	#10460.00	56.9 PK	68.3	-11.4	1.17 V	32	8.09	48.81
4	15690.00	62.3 PK	74.0	-11.7	1.09 V	236	8.39	53.91
5	15690.00	51.0 AV	54.0	-3.0	1.09 V	236	-2.91	53.91

**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).
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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<b>CHANNEL</b>	TX Channel 54	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	104.8 PK			1.59 H	65	62.59	42.21
2	*5270.00	95.3 AV			1.59 H	65	53.09	42.21
3	#10540.00	59.6 PK	68.3	-8.7	1.12 H	270	10.65	48.95
4	15810.00	62.3 PK	74.0	-11.7	1.37 H	142	8.11	54.19
5	15810.00	50.5 AV	54.0	-3.5	1.37 H	142	-3.69	54.19

**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	95.3 PK			1.01 V	231	53.09	42.21
2	*5270.00	85.3 AV			1.01 V	231	43.09	42.21
3	#10540.00	57.1 PK	68.3	-11.2	1.14 V	31	8.15	48.95
4	15810.00	62.2 PK	74.0	-11.8	1.12 V	243	8.01	54.19
5	15810.00	51.0 AV	54.0	-3.0	1.12 V	243	-3.19	54.19

**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).
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.



<b>CHANNEL</b>	TX Channel 62	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	105.0 PK			1.62 H	70	62.74	42.26
2	*5310.00	95.6 AV			1.62 H	70	53.34	42.26
3	5350.00	63.9 PK	74.0	-10.1	1.59 H	69	21.62	42.28
4	5350.00	51.4 AV	54.0	-2.6	1.59 H	69	9.12	42.28
5	10620.00	59.1 PK	74.0	-14.9	1.17 H	263	10.22	48.88
6	10620.00	46.4 AV	54.0	-7.6	1.17 H	263	-2.48	48.88
7	15930.00	63.1 PK	74.0	-10.9	1.33 H	157	8.97	54.13
8	15930.00	50.3 AV	54.0	-3.7	1.33 H	157	-3.83	54.13

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	94.5 PK			1.00 V	210	52.24	42.26
2	*5310.00	85.0 AV			1.00 V	210	42.74	42.26
3	5350.00	56.7 PK	74.0	-17.3	1.01 V	205	14.42	42.28
4	5350.00	45.3 AV	54.0	-8.7	1.01 V	205	3.02	42.28
5	10620.00	56.7 PK	74.0	-17.3	1.16 V	17	7.82	48.88
6	10620.00	45.3 AV	54.0	-8.7	1.16 V	17	-3.58	48.88
7	15930.00	61.6 PK	74.0	-12.4	1.10 V	257	7.47	54.13
8	15930.00	50.5 AV	54.0	-3.5	1.10 V	257	-3.63	54.13

**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).
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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<b>CHANNEL</b>	TX Channel 102	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	60.5 PK	74.0	-13.5	1.57 H	68	17.99	42.51
2	5460.00	48.7 AV	54.0	-5.3	1.57 H	68	6.19	42.51
3	#5470.00	66.6 PK	68.3	-1.7	1.57 H	77	24.06	42.54
4	*5510.00	104.3 PK			1.56 H	64	61.64	42.66
5	*5510.00	93.5 AV			1.56 H	64	50.84	42.66
6	11020.00	57.0 PK	74.0	-17.0	1.25 H	254	7.66	49.34
7	11020.00	45.3 AV	54.0	-8.7	1.25 H	254	-4.04	49.34
8	#16530.00	62.7 PK	68.3	-5.6	1.32 H	163	6.86	55.84

**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	58.3 PK	74.0	-15.7	1.00 V	207	15.79	42.51
2	5460.00	47.1 AV	54.0	-6.9	1.00 V	207	4.59	42.51
3	#5470.00	63.9 PK	68.3	-4.4	1.00 V	207	21.36	42.54
4	*5510.00	94.4 PK			1.00 V	207	51.74	42.66
5	*5510.00	84.7 AV			1.00 V	207	42.04	42.66
6	11020.00	56.8 PK	74.0	-17.2	1.22 V	33	7.46	49.34
7	11020.00	44.7 AV	54.0	-9.3	1.22 V	33	-4.64	49.34
8	#16530.00	61.6 PK	68.3	-6.7	1.06 V	261	5.76	55.84

**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).
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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<b>CHANNEL</b>	TX Channel 110	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	105.5 PK			1.57 H	57	62.75	42.75
2	*5550.00	96.7 AV			1.57 H	57	53.95	42.75
3	11100.00	57.5 PK	74.0	-16.5	1.22 H	249	8.31	49.19
4	11100.00	45.6 AV	54.0	-8.4	1.22 H	249	-3.59	49.19
5	#16650.00	63.3 PK	68.3	-5.0	1.31 H	178	7.18	56.12

**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	*5550.00	99.3 PK			1.01 V	216	56.55	42.75
2	*5550.00	88.1 AV			1.01 V	216	45.35	42.75
3	11100.00	56.4 PK	74.0	-17.6	1.19 V	26	7.21	49.19
4	11100.00	44.6 AV	54.0	-9.4	1.19 V	26	-4.59	49.19
5	#16650.00	61.5 PK	68.3	-6.8	1.14 V	255	5.38	56.12

**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).
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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<b>CHANNEL</b>	TX Channel 134	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	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	105.8 PK			1.54 H	65	62.91	42.89
2	*5670.00	96.8 AV			1.54 H	65	53.91	42.89
3	#5725.00	66.5 PK	68.3	-1.8	1.51 H	66	23.57	42.93
4	11340.00	59.3 PK	74.0	-14.7	1.17 H	254	9.82	49.48
5	11340.00	46.4 AV	54.0	-7.6	1.17 H	254	-3.08	49.48
6	#17010.00	63.4 PK	68.3	-4.9	1.33 H	176	6.88	56.52

**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	98.6 PK			1.01 V	212	55.71	42.89
2	*5670.00	87.4 AV			1.01 V	212	44.51	42.89
3	#5725.00	64.3 PK	68.3	-4.0	1.00 V	210	21.37	42.93
4	11340.00	56.4 PK	74.0	-17.6	1.21 V	16	6.92	49.48
5	11340.00	44.7 AV	54.0	-9.3	1.21 V	16	-4.78	49.48
6	#17010.00	62.1 PK	68.3	-6.2	1.11 V	245	5.58	56.52

**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).
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 emission bandwidth in MHz.

Per KDB 662911 D01 Multiple Transmitter Output v01r02 Method of conducted output power measurement on IEEE 802.11 devices,

- Array Gain = 0 dB (i.e., no array gain) for NANT ≤ 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 ≥ 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	ML2495A	0824006	May 10, 2012	May 09, 2013
Power Sensor	MA2411B	0738172	May 10, 2012	May 09, 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 : Dec. 22, 2012

##### 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 : Dec. 22, 2012



### 4.3.3 TEST PROCEDURE

#### FOR POWER OUTPUT MEASUREMENT

An average power sensor was used on the output port of the EUT. A power meter was used to read the response of the average power sensor. Record the power level.

#### FOR 26dB OCCUPIED BANDWIDTH

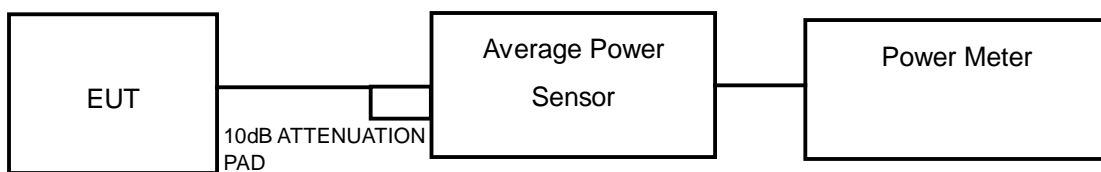
- 1) Set RBW = approximately 1% of the emission bandwidth.
- 2) Set the VBW > RBW.
- 3) Detector = Peak.
- 4) Trace mode = max hold.
- 5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat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

### 4.3.4 DEVIATION FROM TEST STANDARD

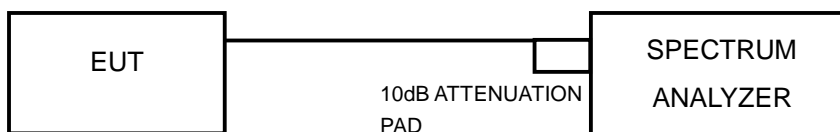
No deviation

### 4.3.5 TEST SETUP

#### FOR POWER OUTPUT MEASUREMENT



#### FOR 26dB OCCUPIED BANDWIDTH





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#### 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

CHAN.	CHAN. FREQ. (MHz)	AVERAGE POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
36	5180	10.7	11.3	25.239	14.02	17	PASS
40	5200	10.3	11.4	24.519	13.90	17	PASS
48	5240	11.0	11.4	26.393	14.21	17	PASS
52	5260	10.4	11.5	25.090	14.00	24	PASS
60	5300	11.1	11.7	27.673	14.42	24	PASS
64	5320	11.6	12.3	31.436	14.97	24	PASS
100	5500	14.2	13.2	47.196	16.74	24	PASS
116	5580	15.1	14.2	58.662	17.68	24	PASS
132	5660	15.5	15.1	67.840	18.31	24	PASS
140	5700	10.3	10.2	21.186	13.26	24	PASS



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**802.11n (HT20)**

CHAN.	CHAN. FREQ. (MHz)	AVERAGE POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
36	5180	11.0	10.4	23.554	13.72	17	PASS
40	5200	11.1	10.4	23.847	13.77	17	PASS
48	5240	11.3	10.8	25.513	14.07	17	PASS
52	5260	10.9	11.4	26.107	14.17	24	PASS
60	5300	11.4	11.5	27.929	14.46	24	PASS
64	5320	11.7	11.8	29.927	14.76	24	PASS
100	5500	13.9	13.7	47.989	16.81	24	PASS
116	5580	15.0	13.9	56.170	17.50	24	PASS
132	5660	14.0	13.8	49.107	16.91	24	PASS
140	5700	12.1	12.6	34.415	15.37	24	PASS

**802.11n (HT40)**

CHAN.	CHAN. FREQ. (MHz)	AVERAGE POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
38	5190	10.8	10.9	24.326	13.86	17	PASS
46	5230	10.7	10.8	23.772	13.76	17	PASS
54	5270	11.0	10.8	24.612	13.91	24	PASS
62	5310	11.3	11.1	26.372	14.21	24	PASS
102	5510	11.0	10.5	23.809	13.77	24	PASS
110	5550	13.9	15.2	57.660	17.61	24	PASS
134	5670	13.5	13.2	43.280	16.36	24	PASS



**26dB BANDWIDTH:**

**802.11a**

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	
		CHAIN 0	CHAIN 1
36	5180	22.78	20.57
40	5200	22.88	20.48
48	5240	21.76	20.46
52	5260	21.50	21.30
60	5300	20.67	21.22
64	5320	20.83	21.06
100	5500	20.80	21.17
116	5580	21.23	21.49
132	5660	22.48	21.78
140	5700	21.80	21.69

**802.11n (HT20)**

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	
		CHAIN 0	CHAIN 1
36	5180	21.87	22.14
40	5200	20.90	22.49
48	5240	22.23	20.84
52	5260	22.58	21.16
60	5300	21.47	20.41
64	5320	22.01	20.14
100	5500	22.31	20.92
116	5580	21.93	22.87
132	5660	23.25	22.89
140	5700	21.86	22.38



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802.11n (HT40)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	
		CHAIN 0	CHAIN 1
38	5190	51.60	51.34
46	5230	52.81	52.92
54	5270	52.71	50.52
62	5310	52.24	51.49
102	5510	52.97	53.10
110	5550	53.88	58.01
134	5670	50.79	59.90

#### 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 : Dec. 22, 2012

##### 4.4.3 TEST PROCEDURES

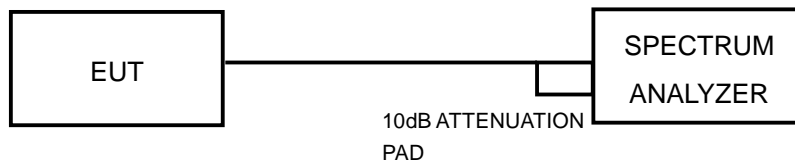
Using method SA-1

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 30 KHz, Set VBW  $\geq$  1 MHz, Detector = RMS
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to “free run”.
- 5) Trace average at least 100 traces in power averaging mode.
- 6) 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

CHAN.	CHAN. FREQ. (MHz)	PSD (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1			
36	5180	-3.22	-3.91	-0.54	4	PASS
40	5200	-2.31	-3.88	-0.01	4	PASS
48	5240	-2.63	-3.21	0.10	4	PASS
52	5260	-2.75	-3.26	0.01	11	PASS
60	5300	-2.33	-2.97	0.37	11	PASS
64	5320	-1.82	-1.95	1.13	11	PASS
100	5500	-0.12	-0.78	2.57	11	PASS
116	5580	0.85	-0.39	3.28	11	PASS
132	5660	1.19	0.59	3.91	11	PASS
140	5700	-3.86	-3.40	-0.61	11	PASS

- Note:** 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain =  $-0.4\text{dBi} + 10\log(2) = 2.61\text{dBi} < 6\text{dBi}$  , so the power density limit shall not be reduced.

**802.11n (HT20)**

CHAN.	CHAN. FREQ. (MHz)	PSD (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1			
36	5180	-3.14	-3.47	-0.29	4	PASS
40	5200	-2.83	-3.44	-0.11	4	PASS
48	5240	-3.05	-3.45	-0.24	4	PASS
52	5260	-3.74	-2.72	-0.19	11	PASS
60	5300	-2.73	-2.64	0.33	11	PASS
64	5320	-2.36	-2.13	0.77	11	PASS
100	5500	-0.52	-0.34	2.58	11	PASS
116	5580	0.90	-0.67	3.20	11	PASS
132	5660	-0.35	-0.46	2.61	11	PASS
140	5700	-2.03	-1.14	1.45	11	PASS

**Note:** 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

2. Directional gain =  $-0.4\text{dBi} + 10\log(2) = 2.61\text{dBi} < 6\text{dBi}$  , so the power density limit shall not be reduced.



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802.11n (HT40)

CHAN.	CHAN. FREQ. (MHz)	PSD (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1			
38	5190	-6.49	-6.54	-3.50	4	PASS
46	5230	-6.51	-6.69	-3.59	4	PASS
54	5270	-6.11	-6.65	-3.36	11	PASS
62	5310	-5.86	-6.27	-3.05	11	PASS
102	5510	-6.25	-7.29	-3.73	11	PASS
110	5550	-3.26	-2.08	0.38	11	PASS
134	5670	-3.55	-4.62	-1.04	11	PASS

- Note:** 1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain =  $-0.4\text{dBi} + 10\log(2) = 2.61\text{dBi} < 6\text{dBi}$  , so the power density limit shall not be reduced.

## 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 : Dec. 22, 2012

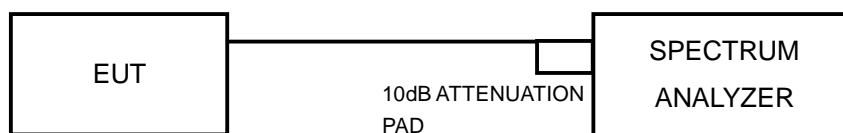
### 4.5.3 TEST PROCEDURE

- 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

CHAN.	CHAN. FREQ. (MHz)	PEAK VALUE (dBm)		PPSD (dBm)		PEAK EXCURSION (dB)		LIMIT (dB)	PASS/ FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1		
36	5180	6.39	6.26	-3.22	-3.91	9.61	10.17	13	PASS
40	5200	6.86	6.53	-2.31	-3.88	9.17	10.41	13	PASS
48	5240	6.56	6.81	-2.63	-3.21	9.19	10.02	13	PASS
52	5260	7.03	7.14	-2.75	-3.26	9.78	10.40	13	PASS
60	5300	6.75	7.32	-2.33	-2.97	9.08	10.29	13	PASS
64	5320	7.52	8.53	-1.82	-1.95	9.34	10.48	13	PASS
100	5500	9.32	9.66	-0.12	-0.78	9.44	10.44	13	PASS
116	5580	10.36	10.05	0.85	-0.39	9.51	10.44	13	PASS
132	5660	10.43	11.02	1.19	0.59	9.24	10.43	13	PASS
140	5700	6.43	6.86	-3.86	-3.40	10.29	10.26	13	PASS



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### 802.11n (HT20)

CHAN.	CHAN. FREQ. (MHz)	PEAK VALUE (dBm)		PPSD (dBm)		PEAK EXCURSION (dB)		LIMIT (dB)	PASS/ FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1		
36	5180	6.78	7.12	-3.14	-3.47	9.92	10.59	13	PASS
40	5200	6.96	7.25	-2.83	-3.44	9.79	10.69	13	PASS
48	5240	7.48	7.14	-3.05	-3.45	10.53	10.59	13	PASS
52	5260	6.38	7.94	-3.74	-2.72	10.12	10.66	13	PASS
60	5300	7.58	7.84	-2.73	-2.64	10.31	10.48	13	PASS
64	5320	7.97	8.70	-2.36	-2.13	10.33	10.83	13	PASS
100	5500	9.20	9.82	-0.52	-0.34	9.72	10.16	13	PASS
116	5580	11.00	9.62	0.90	-0.67	10.10	10.29	13	PASS
132	5660	9.82	10.08	-0.35	-0.46	10.17	10.54	13	PASS
140	5700	7.34	9.58	-2.03	-1.14	9.37	10.72	13	PASS

### 802.11n (HT40)

CHAN.	CHAN. FREQ. (MHz)	PEAK VALUE (dBm)		PPSD (dBm)		PEAK EXCURSION (dB)		LIMIT (dB)	PASS/ FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1		
38	5190	3.47	3.28	-6.49	-6.54	9.96	9.82	13	PASS
46	5230	3.85	2.69	-6.51	-6.69	10.36	9.38	13	PASS
54	5270	3.88	2.91	-6.11	-6.65	9.99	9.56	13	PASS
62	5310	3.84	3.38	-5.86	-6.27	9.70	9.65	13	PASS
102	5510	4.23	2.50	-6.25	-7.29	10.48	9.79	13	PASS
110	5550	6.63	7.84	-3.26	-2.08	9.89	9.92	13	PASS
134	5670	7.09	5.03	-3.55	-4.62	10.64	9.65	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

**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 : Dec. 22, 2012

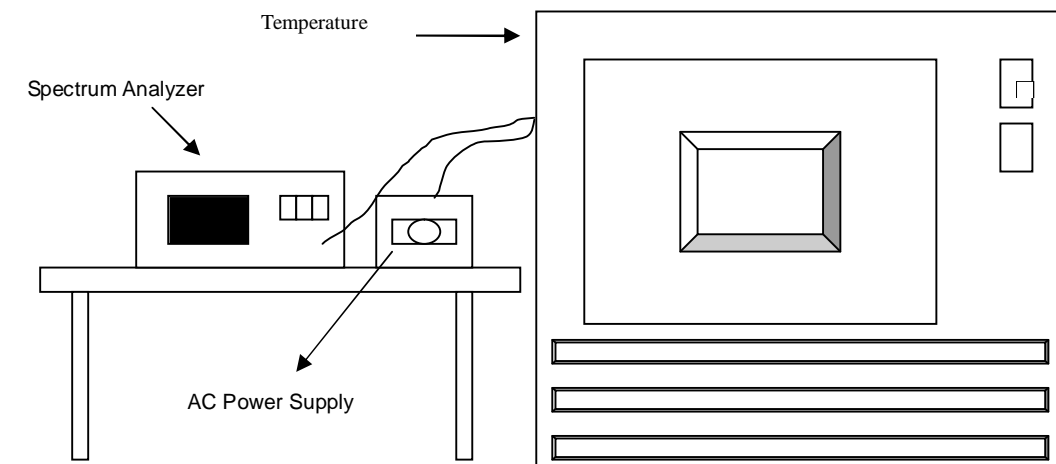
### 4.6.3 TEST PROCEDURE

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)	ppm	(MHz)	ppm	(MHz)	ppm	(MHz)	ppm
50	120	5319.9926	-1.3910	5319.996	-0.7519	5319.9937	-1.1842	5319.9947	-0.9962
40	120	5320.0146	2.7444	5320.0109	2.0489	5320.015	2.8195	5320.0079	1.4850
30	120	5320.0191	3.5902	5320.0198	3.7218	5320.0229	4.3045	5320.0241	4.5301
20	120	5319.9973	-0.5075	5319.9978	-0.4135	5320.0051	0.9586	5320.0049	0.9211
10	120	5319.9749	-4.7180	5319.9743	-4.8308	5319.9818	-3.4211	5319.983	-3.1955
0	120	5319.985	-2.8195	5319.9884	-2.1805	5319.9817	-3.4398	5319.9852	-2.7820
-10	120	5320.0159	2.9887	5320.0179	3.3647	5320.0166	3.1203	5320.0151	2.8383
-20	120	5320.0291	5.4699	5320.0289	5.4323	5320.0197	3.7030	5320.0202	3.7970
-30	120	5319.9973	-0.5075	5319.9951	-0.9211	5319.9924	-1.4286	5319.9915	-1.5977

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)	ppm	(MHz)	ppm	(MHz)	ppm	(MHz)	ppm
20	138	5319.9976	-0.4511	5319.9971	-0.5451	5320.005	0.9398	5320.0051	0.9586
	120	5319.9973	-0.5075	5319.9978	-0.4135	5320.0051	0.9586	5320.0049	0.9211
	102	5319.9971	-0.5451	5319.9988	-0.2256	5320.0056	1.0526	5320.0051	0.9586



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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.

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**Web Site:** [www.bureauveritas-adt.com](http://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.

**--- END ---**