

FCC TEST REPORT

(15.407)

REPORT NO.: RF140820C01-1
MODEL NO.: MR32-HW
FCC ID: UDX-60031010
RECEIVED: Aug. 04, 2014
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APPLICANT: Cisco Systems, Inc.

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

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF140820C01-1	Original release	Sep. 17, 2014

1. CERTIFICATION

PRODUCT: Wireless 802.11 abgn/ac AP

MODEL: MR32-HW

BRAND: Cisco

APPLICANT: Cisco Systems, Inc.

TESTED: Aug. 04 ~ Sep. 16, 2014

TEST SAMPLE: ENGINEERING SAMPLE

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

ANSI C63.10-2009

The above equipment (model: MR32-HW) 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 : Celine Chou , **DATE :** Sep. 17, 2014
Celine Chou / Specialist

APPROVED BY : Ken Liu , **DATE :** Sep. 17, 2014
Ken Liu / Senior Manager

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 Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -7.56dB at 0.15000MHz.
15.407(b)(1/2/3/4/6)	Radiated Emissions & Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -1.0dB at 5150.00MHz, 11570.00MHz, 5714.00MHz
15.407(a)(1/2/3)	Max Average Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(e)	6dB bandwidth	PASS	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Antenna connector is IPEX not a standard connector.

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.86 dB
	200MHz ~ 1000MHz	3.87 dB
	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

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

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Wireless 802.11 abgn/ac AP
MODEL NO.	MR32-HW
POWER SUPPLY	12Vdc (Adapter) 55Vdc (POE)
MODULATION TYPE	256QAM, 64QAM, 16QAM, QPSK, BPSK
MODULATION TECHNOLOGY	OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 300.0Mbps 802.11ac: up to 866.6Mbps
OPERATING FREQUENCY	5180 ~ 5240MHz, 5745 ~ 5825MHz
NUMBER OF CHANNEL	5180 ~ 5240MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80) 5745 ~ 5825MHz: 5 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80)
OUTPUT POWER	1TX (Radio 2): 334.965mW for 5180 ~ 5240MHz 2TX (Radio 2): 663.219mW for 5180 ~ 5240MHz 1TX (Radio 3): 52.602mW for 5180 ~ 5240MHz 1TX (Radio 2): 171.791mW for 5745 ~ 5825MHz 2TX (Radio 2): 335.433mW for 5745 ~ 5825MHz 1TX (Radio 3): 123.595mW for 5745 ~ 5825MHz
ANTENNA TYPE	Refer to note
ANTENNA CONNECTOR	Refer to note
DATA CABLE	NA
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	NA

NOTE:

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

BAND	MODULATION MODE	TX FUNCTION	REMARK
2.4GHz	802.11b	1TX	Radio 3
		1TX / 2TX	Radio 1
	802.11g	1TX	Radio 3
		1TX / 2TX	Radio 1
	802.11n (20MHz)	1TX	Radio 3
		1TX / 2TX	Radio 1
5GHz	802.11a	1TX	Radio 3
		1TX / 2TX	Radio 2
	802.11n (HT20)	1TX	Radio 3
		1TX / 2TX	Radio 2
	802.11n (HT40)	1TX	Radio 3
		1TX / 2TX	Radio 2
	802.11ac (VHT80)	1TX / 2TX	Radio 2

* 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)

2. There are 6 antennas for the EUT.

NO.	TYPE	GAIN(dBi)			CONNECTOR	REMARK
		2.4GHz	5GHz BAND 1	5GHz BAND 4		
1	PIFA	5.05	-	-	IPEX	WLAN (Radio 1)
2	PIFA	4.50	-	-	IPEX	
3	PIFA	-	5.31	5.60	IPEX	WLAN (Radio 2)
4	PIFA	-	5.07	5.12	IPEX	
5	PIFA	2.38	4.22	3.22	IPEX	WLAN (Radio 3)
6	PIFA	0.67	-	-	IPEX	BT (Radio 4)

3. The EUT consumes power from the following adapter and POE. (for supply unit only)

ADAPTER	
BRAND	Powertron Electronics Corp.
MODEL	PA1024-120HEB200
INPUT POWER	100-240Vac, 50-60Hz, 0.6A
OUTPUT POWER	12Vdc, 2A, 24W Max
POWER LINE	1.5m cable with one core attached on adapter

POE	
BRAND	CISCO
MODEL	PD-9001GR/AT/AC
INPUT POWER	100-240Vac, 50/60Hz, 0.67A
OUTPUT POWER	55Vdc, 0.6A

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

3.2 DESCRIPTION OF TEST MODES

FOR 5180 ~ 5240MHz

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

CHANNEL	FREQUENCY
42	5210MHz

FOR 5745 ~ 5825MHz

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

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

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

CHANNEL	FREQUENCY
155	5775MHz

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE \geq 1G	RE<1G	PLC	APCM	
A	√	√	√	√	Powered by adapter
B	-	√	√	-	Powered by POE

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

NOTE:

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane**.
2. "-" means no effect.

RADIATED EMISSION TEST (ABOVE 1GHz):

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	REMARK
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0	1TX / 2TX (Radio 2)
			36 to 48	36, 40, 48	OFDM	BPSK	6.0	1TX (Radio 3)
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	BPSK	7.2	1TX (Radio 2)
			36 to 48	36, 40, 48	OFDM	BPSK	14.4	2TX (Radio 2)
			36 to 48	36, 40, 48	OFDM	BPSK	7.2	1TX (Radio 3)
			38 to 46	38, 46	OFDM	BPSK	15.0	1TX (Radio 2)
	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	30.0	2TX (Radio 2)
			38 to 46	38, 46	OFDM	BPSK	15.0	1TX (Radio 3)
			42	42	OFDM	BPSK	32.5	1TX (Radio 2)
	802.11ac (VHT80)		42	42	OFDM	BPSK	65.0	2TX (Radio 2)
		5745-5825	802.11a	149 to 165	149, 157, 165	OFDM	BPSK	6.0
	149 to 165			149, 157, 165	OFDM	BPSK	6.0	1TX (Radio 3)
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	7.2	1TX (Radio 2)
			149 to 165	149, 157, 165	OFDM	BPSK	14.4	2TX (Radio 2)
			149 to 165	149, 157, 165	OFDM	BPSK	7.2	1TX (Radio 3)
			151 to 159	151, 159	OFDM	BPSK	15.0	1TX (Radio 2)
	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	30.0	2TX (Radio 2)
			151 to 159	151, 159	OFDM	BPSK	15.0	1TX (Radio 3)
			155	155	OFDM	BPSK	32.5	1TX (Radio 2)
	802.11ac (VHT80)		155	155	OFDM	BPSK	65.0	2TX (Radio 2)

RADIATED EMISSION TEST (BELOW 1GHz):

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	REMARK
A, B	802.11a	5180-5240	36 to 48	36	OFDM	BPSK	6.0	1TX / 2TX (Radio 2)
			36 to 48		OFDM	BPSK	6.0	1TX (Radio 3)
	802.11a	5745-5825	149 to 165		OFDM	BPSK	6.0	1TX / 2TX (Radio 2)
			149 to 165		OFDM	BPSK	6.0	1TX (Radio 3)

POWER LINE CONDUCTED EMISSION TEST:

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	REMARK
A, B	802.11a	5180-5240	36 to 48	36	OFDM	BPSK	6.0	1TX / 2TX (Radio 2)
			36 to 48		OFDM	BPSK	6.0	1TX (Radio 3)
	802.11a	5745-5825	149 to 165		OFDM	BPSK	6.0	1TX / 2TX (Radio 2)
			149 to 165		OFDM	BPSK	6.0	1TX (Radio 3)

ANTENNA PORT CONDUCTED MEASUREMENT:

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

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	REMARK
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0	1TX / 2TX (Radio 2)
			36 to 48	36, 40, 48	OFDM	BPSK	6.0	1TX (Radio 3)
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	BPSK	7.2	1TX (Radio 2)
			36 to 48	36, 40, 48	OFDM	BPSK	14.4	2TX (Radio 2)
			36 to 48	36, 40, 48	OFDM	BPSK	7.2	1TX (Radio 3)
			38 to 46	38, 46	OFDM	BPSK	15.0	1TX (Radio 2)
	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	30.0	2TX (Radio 2)
			38 to 46	38, 46	OFDM	BPSK	15.0	1TX (Radio 3)
			42	42	OFDM	BPSK	32.5	1TX (Radio 2)
	802.11ac (VHT80)		42	42	OFDM	BPSK	65.0	2TX (Radio 2)
		5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0	1TX / 2TX (Radio 2)
	149 to 165		149, 157, 165	OFDM	BPSK	6.0	1TX (Radio 3)	
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	7.2	1TX (Radio 2)
			149 to 165	149, 157, 165	OFDM	BPSK	14.4	2TX (Radio 2)
			149 to 165	149, 157, 165	OFDM	BPSK	7.2	1TX (Radio 3)
			151 to 159	151, 159	OFDM	BPSK	15.0	1TX (Radio 2)
	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	30.0	2TX (Radio 2)
			151 to 159	151, 159	OFDM	BPSK	15.0	1TX (Radio 3)
			155	155	OFDM	BPSK	32.5	1TX (Radio 2)
	802.11ac (VHT80)		155	155	OFDM	BPSK	65.0	2TX (Radio 2)

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE>1G	24deg. C, 69%RH 22deg. C, 71%RH	120Vac, 60Hz	Nick Hsu
RE<1G	21deg. C, 71%RH 23deg. C, 72%RH 21deg. C, 73%RH	120Vac, 60Hz 55Vdc	Nick Hsu
PLC	22deg. C, 72%RH	120Vac, 60Hz 55Vdc	Nick Hsu
APCM	25deg. C, 60%RH	120Vac, 60Hz	Nick Hsu

3.3 DUTY CYCLE OF TEST SIGNAL

For U-NII-1 Band:

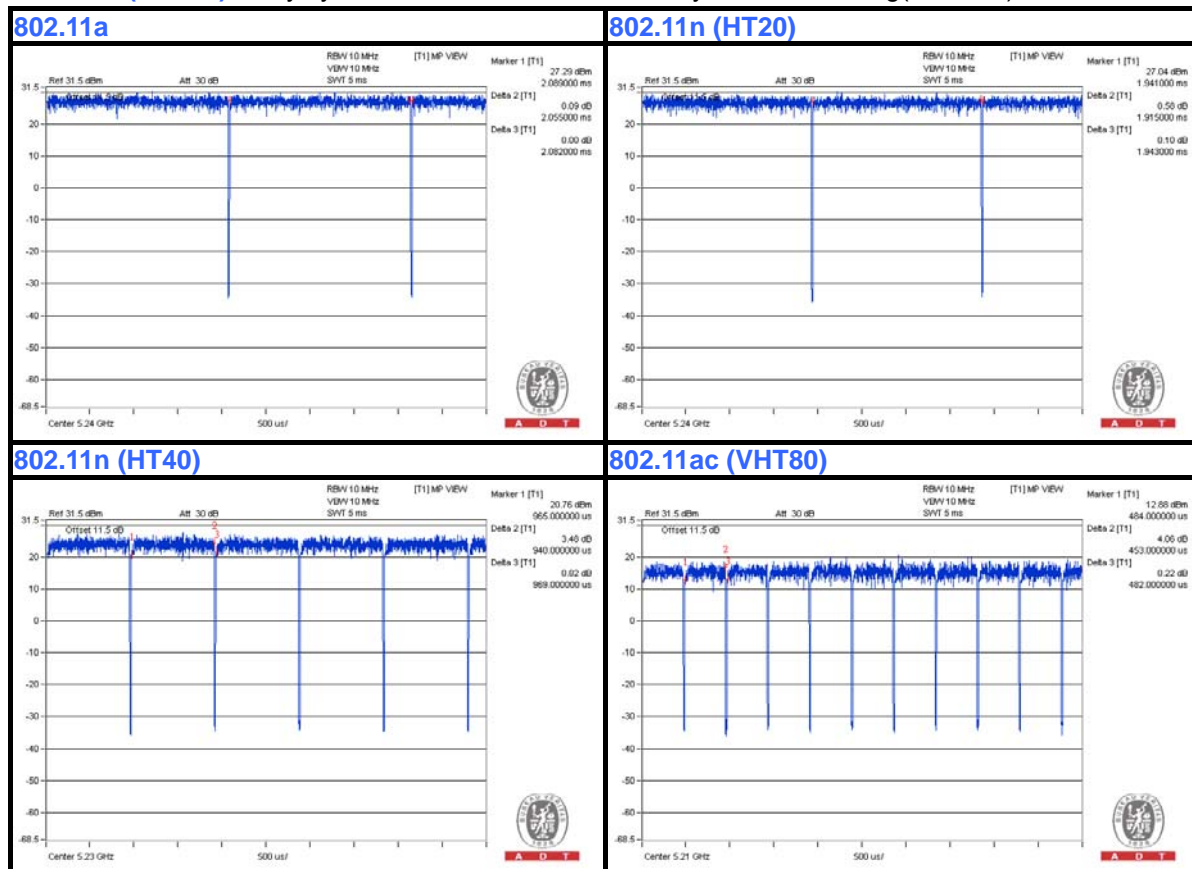
1TX (Radio 2)

802.11a, 802.11n (HT20): Duty cycle of test signal is > 98 %, duty factor is not required.

802.11n (HT40), 802.11ac (VHT80): Duty cycle is < 98%, duty factor shall be considered.

802.11n (HT40): Duty cycle = $0.940/0.969 = 0.970$, Duty factor = $10 * \log(1/0.970) = 0.13$

802.11ac (VHT80): Duty cycle = $0.453/0.482 = 0.940$, Duty factor = $10 * \log(1/0.940) = 0.27$



2TX (Radio 2)

802.11a, 802.11n (HT20), 802.11n (HT40): Duty cycle of test signal is > 98 %, duty factor is not required.

802.11ac (VHT80): Duty cycle is < 98%, duty factor shall be considered.

802.11ac (VHT80): Duty cycle = $0.454/0.479 = 0.948$, Duty factor = $10 * \log(1/0.948) = 0.23$



1TX (Radio 3)

802.11a, 802.11n (HT20), 802.11n (HT40): Duty cycle is < 98%, duty factor shall be considered.

802.11a: Duty cycle = $0.052/0.070 = 0.743$, Duty factor = $10 * \log(1/0.743) = 1.29$

802.11n (HT20): Duty cycle = $0.051/0.069 = 0.739$, Duty factor = $10 * \log(1/0.739) = 1.31$

802.11n (HT40): Duty cycle = $0.053/0.070 = 0.757$, Duty factor = $10 * \log(1/0.757) = 1.21$





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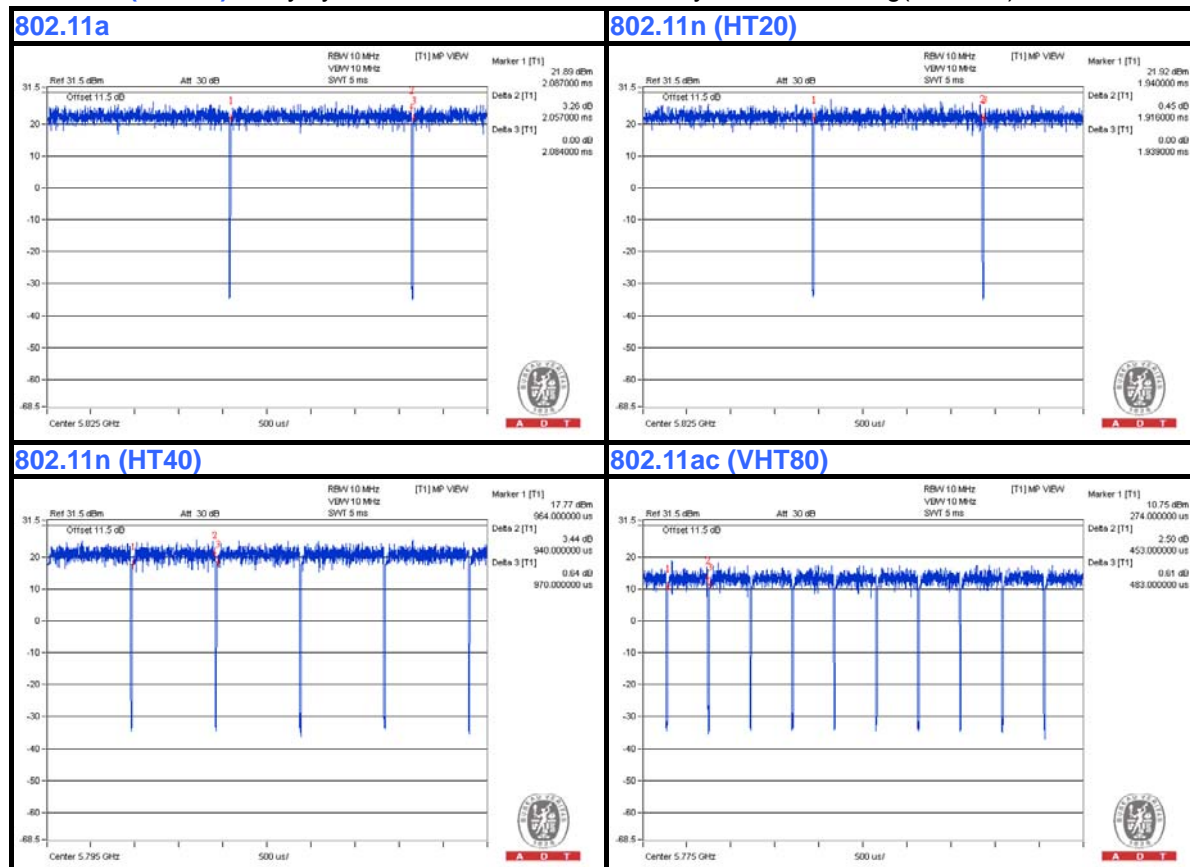
For U-NII-3 Band:

1TX (Radio 2)

802.11a, 802.11n (HT20): Duty cycle of test signal is > 98 %, duty factor is not required.

802.11n (HT40): Duty cycle = $0.940/0.970 = 0.969$, Duty factor = $10 * \log(1/0.969) = 0.14$

802.11ac (VHT80): Duty cycle = $0.453/0.483 = 0.938$, Duty factor = $10 * \log(1/0.938) = 0.28$



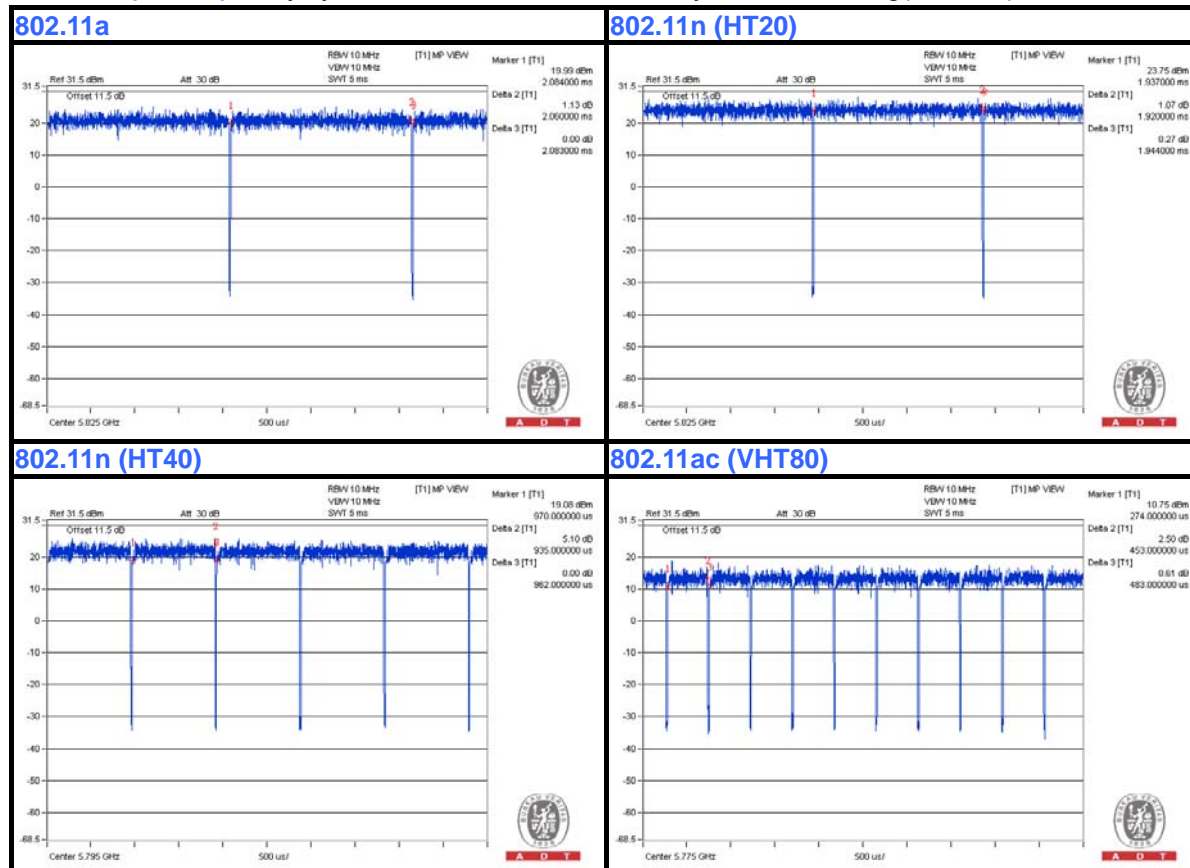
2TX (Radio 2)

802.11a, 802.11n (HT20): Duty cycle of test signal is > 98 %, duty factor is not required.

802.11n (HT40), 802.11ac (VHT80): Duty cycle is < 98%, duty factor shall be considered.

802.11n (HT40): Duty cycle = $0.935/0.962 = 0.972$, Duty factor = $10 * \log(1/0.972) = 0.12$

802.11ac (VHT80): Duty cycle = $0.453/0.483 = 0.938$, Duty factor = $10 * \log(1/0.938) = 0.28$

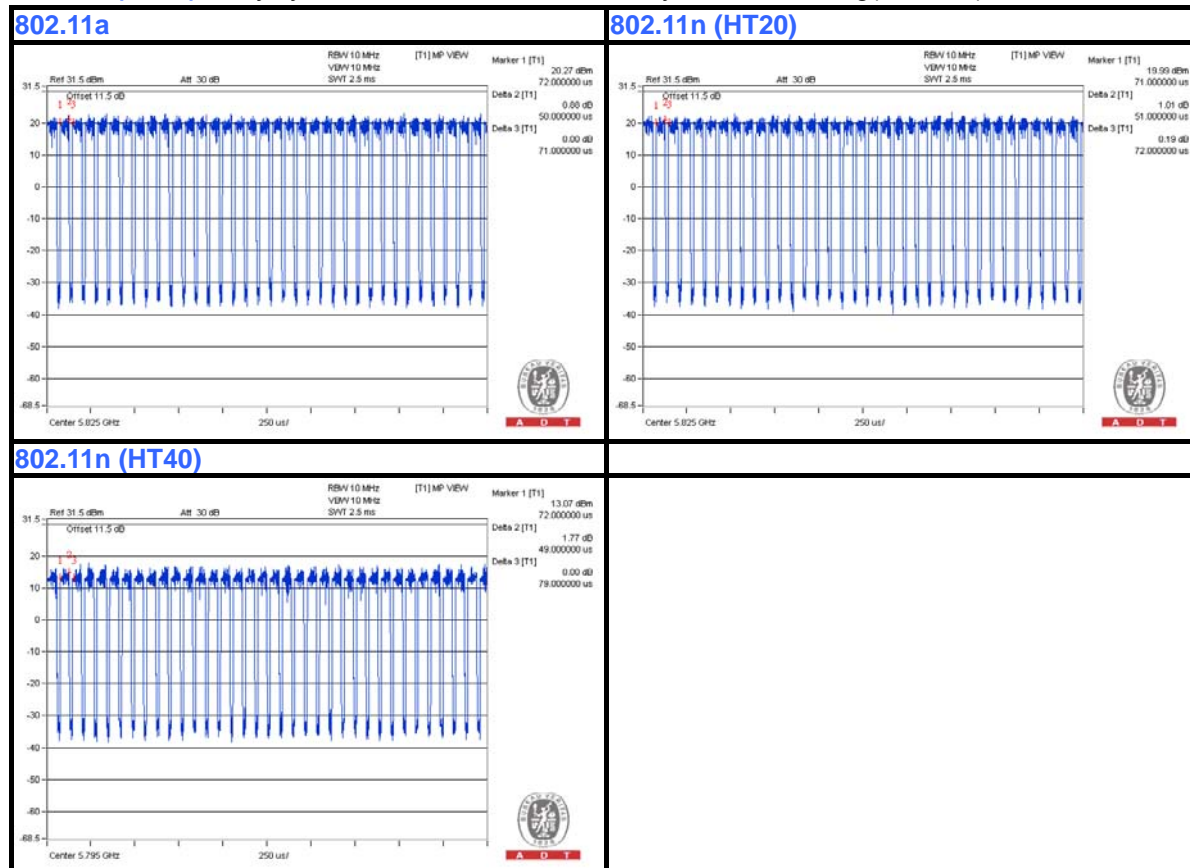


1TX (Radio 3)

802.11a: Duty cycle = $0.050/0.071 = 0.704$, Duty factor = $10 * \log(1/0.704) = 1.52$

802.11n (HT20): Duty cycle = $0.051/0.072 = 0.708$, Duty factor = $10 * \log(1/0.708) = 1.50$

802.11n (HT40): Duty cycle = $0.049/0.079 = 0.620$, Duty factor = $10 * \log(1/0.620) = 2.07$



3.4 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	DELL	E5410	1HC2XM1	FCC Doc Approved
2	POE	CISCO	PD-9001GR/AT/AC	NA	NA
3	ADAPTER	Powertron Electronics Corp.	PA1024-120HEB200	NA	NA

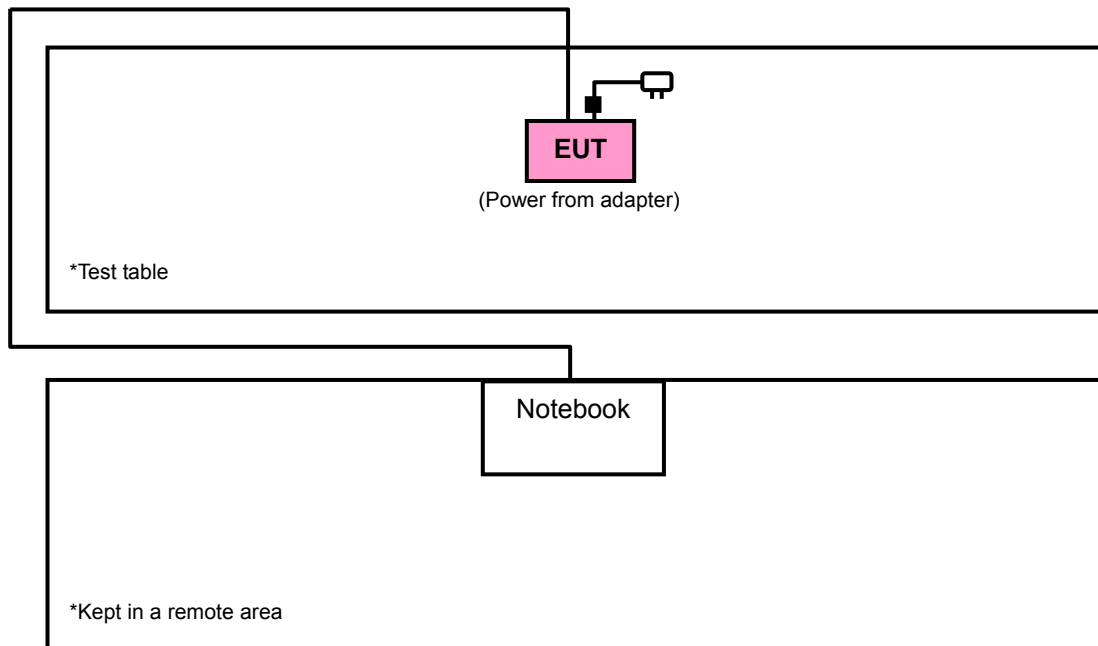
NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	10m LAN cable for test mode A, 1.8m LAN cable for test mode B
2	10m LAN cable
3	NA

NOTE:

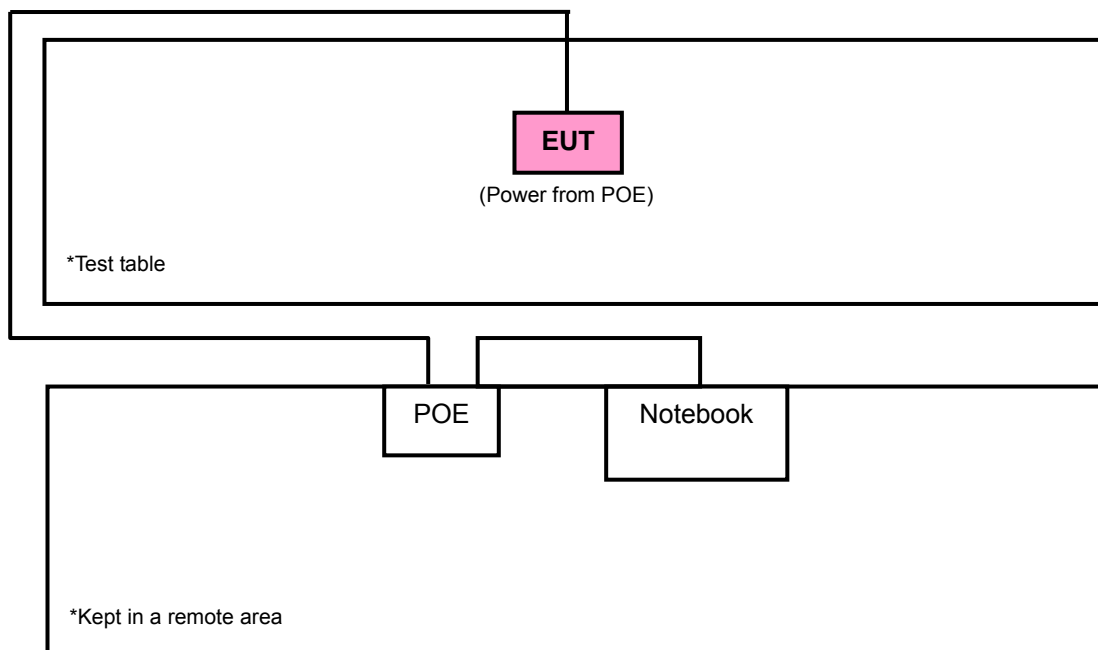
1. All power cords of the above support units are non-shielded (1.8 m).
2. Item 1 acted as a communication partner to transfer data.
3. Items 2-3 were provided by the manufacturer.

3.4.1 CONFIGURATION OF SYSTEM UNDER TEST

TEST MODE A



TEST MODE B



3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

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

FCC Part 15, Subpart E (15.407)

789033 D02 General UNII Test Procedures New Rules v01

662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2009

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

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

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

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

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

4.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

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

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

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

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

4.1.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100187	Jan. 02, 2014	Jan. 01, 2015
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Mar. 03, 2014	Mar. 02, 2015
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Feb. 26, 2014	Feb. 25, 2015
HORN Antenna SCHWARZBECK	9120D	209	Sep. 12, 2013 Sep. 12, 2014	Sep. 11, 2014 Sep. 11, 2015
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Feb. 17, 2014	Feb. 16, 2015
Preamplifier Agilent	8447D	2944A10633	Oct. 07, 2013	Oct. 06, 2014
Preamplifier Agilent	8449B	3008A01964	Aug. 26, 2013 Aug. 26, 2014	Aug. 25, 2014 Aug. 25, 2015
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	214378/4	Aug. 26, 2013 Aug. 26, 2014	Aug. 25, 2014 Aug. 25, 2015
RF signal cable HUBER+SUHNNER	SUCOFLEX 106	12738/6 +309224/4	Aug. 26, 2013 Aug. 26, 2014	Aug. 25, 2014 Aug. 25, 2015
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA	NA
Turn Table BV ADT	TT100	TT93021703	NA	NA
Turn Table Controller BV ADT	SC100	SC93021703	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 18, 2013	Oct. 17, 2014
High Speed Peak Power Meter	ML2495A	0824011	Jul. 26, 2014	Jul. 25, 2015
Power Sensor	MA2411B	0738171	Jul. 26, 2014	Jul. 25, 2015
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 09, 2014	Jun. 08, 2015

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 3.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 988962.
5. The IC Site Registration No. is IC 7450F-3.

4.1.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

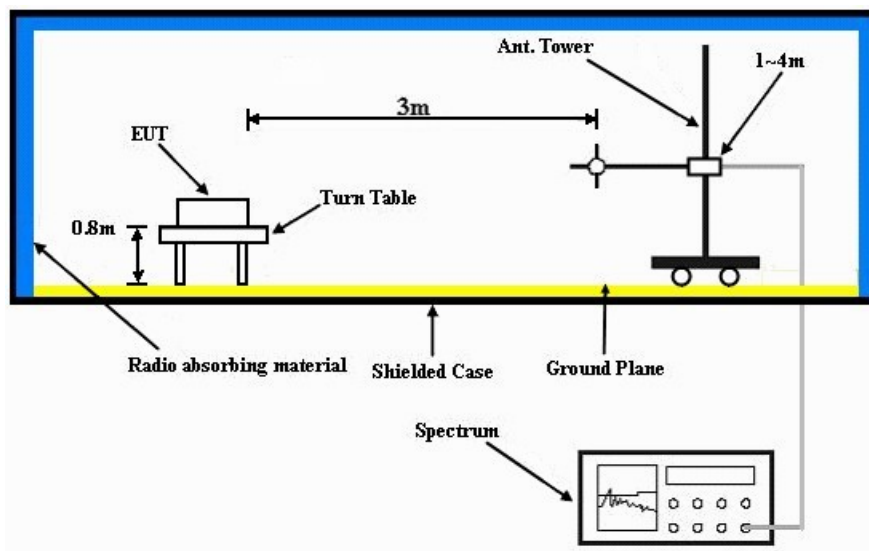
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz(Duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.5 DEVIATION FROM TEST STANDARD

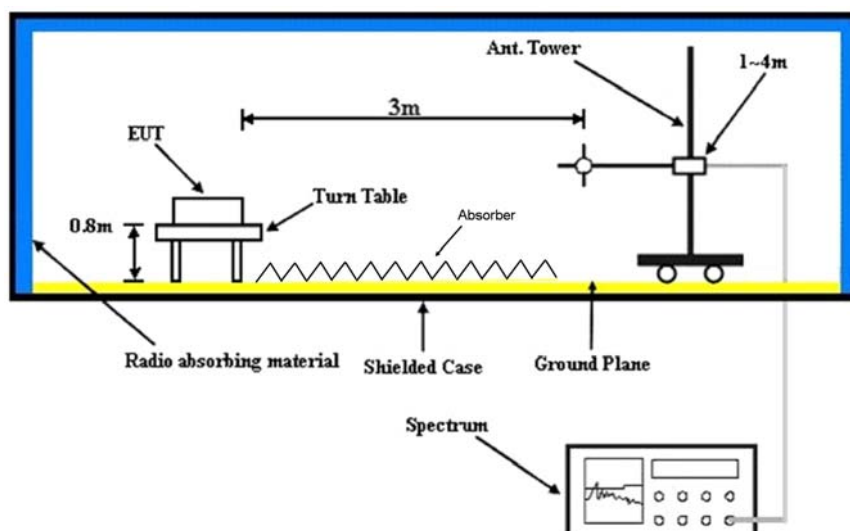
No deviation.

4.1.6 TEST SETUP

Frequency range 30MHz~1GHz



Frequency range above 1GHz



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

4.1.7 EUT OPERATING CONDITION

- a. Placed the EUT on the testing table.
- b. Prepared notebooks to act as communication partner and placed it outside of testing area.
- c. The communication partner connected with EUT via a RJ45 cable and run a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
- d. The communication partner sent data to EUT by command "PING".

4.1.8 TEST RESULTS

ABOVE 1GHz DATA :

1TX (Radio 2)

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	70.5 PK	74.0	-3.5	1.00 H	289	65.40	5.10
2	5150.00	52.7 AV	54.0	-1.3	1.00 H	289	47.60	5.10
3	*5180.00	115.7 PK			1.11 H	291	78.00	37.70
4	*5180.00	104.7 AV			1.11 H	291	67.00	37.70
5	#10360.00	61.6 PK	74.0	-12.4	1.26 H	79	43.30	18.30
6	#10360.00	48.8 AV	54.0	-5.2	1.26 H	79	30.50	18.30
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	69.1 PK	74.0	-4.9	1.43 V	334	64.00	5.10
2	5150.00	51.8 AV	54.0	-2.2	1.43 V	334	46.70	5.10
3	*5180.00	114.5 PK			1.41 V	338	76.80	37.70
4	*5180.00	103.5 AV			1.41 V	338	65.80	37.70
5	#10360.00	62.4 PK	74.0	-11.6	1.31 V	299	44.10	18.30
6	#10360.00	48.7 AV	54.0	-5.3	1.31 V	299	30.40	18.30

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.

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	5150.00	62.0 PK	74.0	-12.0	1.00 H	289	56.90	5.10
2	5150.00	47.2 AV	54.0	-6.8	1.00 H	289	42.10	5.10
3	*5200.00	116.8 PK			1.09 H	292	79.00	37.80
4	*5200.00	106.0 AV			1.09 H	292	68.20	37.80
5	#10400.00	62.1 PK	74.0	-11.9	1.16 H	266	43.40	18.70
6	#10400.00	49.0 AV	54.0	-5.0	1.16 H	266	30.30	18.70
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	63.5 PK	74.0	-10.5	1.00 V	342	58.40	5.10
2	5150.00	48.5 AV	54.0	-5.5	1.00 V	342	43.40	5.10
3	*5200.00	116.7 PK			1.19 V	340	78.90	37.80
4	*5200.00	105.6 AV			1.19 V	340	67.80	37.80
5	#10400.00	61.3 PK	74.0	-12.7	1.09 V	289	42.60	18.70
6	#10400.00	47.5 AV	54.0	-6.5	1.09 V	289	28.80	18.70

REMARKS:

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

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	117.3 PK			1.00 H	297	79.40	37.90
2	*5240.00	106.4 AV			1.00 H	297	68.50	37.90
3	5350.00	61.8 PK	74.0	-12.2	1.06 H	293	56.40	5.40
4	5350.00	47.9 AV	54.0	-6.1	1.06 H	293	42.50	5.40
5	5400.00	62.4 PK	74.0	-11.6	1.10 H	284	57.00	5.40
6	5400.00	50.8 AV	54.0	-3.2	1.10 H	284	45.40	5.40
7	#10480.00	61.8 PK	74.0	-12.2	1.25 H	323	42.30	19.50
8	#10480.00	49.3 AV	54.0	-4.7	1.25 H	323	29.80	19.50
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	*5240.00	117.7 PK			1.53 V	348	79.80	37.90
2	*5240.00	106.8 AV			1.53 V	348	68.90	37.90
3	5350.00	57.6 PK	74.0	-16.4	1.20 V	302	52.20	5.40
4	5350.00	45.8 AV	54.0	-8.2	1.20 V	302	40.40	5.40
5	5400.00	60.9 PK	74.0	-13.1	1.22 V	299	55.50	5.40
6	5400.00	48.5 AV	54.0	-5.5	1.22 V	299	43.10	5.40
7	#10480.00	60.9 PK	74.0	-13.1	1.05 V	302	41.40	19.50
8	#10480.00	48.3 AV	54.0	-5.7	1.05 V	302	28.80	19.50

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)
– 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 149	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	#5714.00	65.5 PK	74.0	-8.5	1.10 H	289	59.50	6.00
2	#5714.00	50.2 AV	54.0	-3.8	1.10 H	289	44.20	6.00
3	#5722.00	76.9 PK	78.2	-1.3	1.28 H	291	70.90	6.00
4	#5725.00	59.2 PK	78.2	-19.0	1.28 H	297	53.20	6.00
5	*5745.00	112.1 PK			1.17 H	288	73.60	38.50
6	*5745.00	101.1 AV			1.17 H	288	62.60	38.50
7	11490.00	65.5 PK	74.0	-8.5	1.18 H	297	45.10	20.40
8	11490.00	51.7 AV	54.0	-2.3	1.18 H	297	31.30	20.40
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	#5714.00	64.8 PK	74.0	-9.2	1.08 V	335	58.80	6.00
2	#5714.00	49.6 AV	54.0	-4.4	1.08 V	335	43.60	6.00
3	#5722.00	75.0 PK	78.2	-3.2	1.60 V	338	69.00	6.00
4	#5725.00	60.1 PK	78.2	-18.1	1.06 V	354	54.10	6.00
5	*5745.00	113.0 PK			1.06 V	352	74.50	38.50
6	*5745.00	101.8 AV			1.06 V	352	63.30	38.50
7	11490.00	63.5 PK	74.0	-10.5	1.17 V	265	43.10	20.40
8	11490.00	51.0 AV	54.0	-3.0	1.17 V	265	30.60	20.40

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 157	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	*5785.00	113.1 PK			1.49 H	290	74.50	38.60
2	*5785.00	102.2 AV			1.49 H	290	63.60	38.60
3	11570.00	66.5 PK	74.0	-7.5	1.29 H	288	46.10	20.40
4	11570.00	52.9 AV	54.0	-1.1	1.29 H	288	32.50	20.40
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	*5785.00	113.2 PK			1.47 V	355	74.60	38.60
2	*5785.00	102.3 AV			1.47 V	355	63.70	38.60
3	11570.00	64.6 PK	74.0	-9.4	1.15 V	336	44.20	20.40
4	11570.00	51.0 AV	54.0	-3.0	1.15 V	336	30.60	20.40

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.

CHANNEL	TX Channel 165	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	*5825.00	110.7 PK			1.65 H	285	72.00	38.70
2	*5825.00	100.0 AV			1.65 H	285	61.30	38.70
3	#5850.00	52.7 PK	78.2	-25.5	1.15 H	292	46.50	6.20
4	#5853.00	65.4 PK	78.2	-12.8	1.27 H	295	59.00	6.40
5	#5861.00	61.0 PK	74.0	-13.0	1.23 H	292	54.60	6.40
6	#5861.00	48.2 AV	54.0	-5.8	1.23 H	292	41.80	6.40
7	11650.00	66.0 PK	74.0	-8.0	1.14 H	290	45.70	20.30
8	11650.00	52.8 AV	54.0	-1.2	1.14 H	290	32.50	20.30
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	*5825.00	106.6 PK			1.19 V	289	67.90	38.70
2	*5825.00	96.0 AV			1.19 V	289	57.30	38.70
3	#5850.00	49.7 PK	78.2	-28.5	1.18 V	288	43.50	6.20
4	#5853.00	62.8 PK	78.2	-15.4	1.19 V	291	56.40	6.40
5	#5861.00	59.4 PK	74.0	-14.6	1.16 V	288	53.00	6.40
6	#5861.00	46.7 AV	54.0	-7.3	1.16 V	288	40.30	6.40
7	11650.00	63.9 PK	74.0	-10.1	1.10 V	335	43.60	20.30
8	11650.00	50.3 AV	54.0	-3.7	1.10 V	335	30.00	20.30

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.

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	69.4 PK	74.0	-4.6	1.10 H	287	64.30	5.10
2	5150.00	53.0 AV	54.0	-1.0	1.10 H	287	47.90	5.10
3	*5180.00	115.5 PK			1.10 H	287	77.80	37.70
4	*5180.00	104.0 AV			1.10 H	287	66.30	37.70
5	#10360.00	61.5 PK	74.0	-12.5	1.17 H	304	43.20	18.30
6	#10360.00	48.4 AV	54.0	-5.6	1.17 H	304	30.10	18.30
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	69.4 PK	74.0	-4.6	1.00 V	341	64.30	5.10
2	5150.00	51.4 AV	54.0	-2.6	1.00 V	341	46.30	5.10
3	*5180.00	117.8 PK			1.09 V	337	80.10	37.70
4	*5180.00	102.8 AV			1.09 V	337	65.10	37.70
5	#10360.00	60.4 PK	74.0	-13.6	1.15 V	295	42.10	18.30
6	#10360.00	47.4 AV	54.0	-6.6	1.15 V	295	29.10	18.30

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.

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	5150.00	64.5 PK	74.0	-9.5	1.08 H	286	59.40	5.10
2	5150.00	49.1 AV	54.0	-4.9	1.08 H	286	44.00	5.10
3	*5200.00	117.4 PK			1.08 H	286	79.60	37.80
4	*5200.00	105.9 AV			1.08 H	286	68.10	37.80
5	#10400.00	61.8 PK	74.0	-12.2	1.18 H	312	43.10	18.70
6	#10400.00	48.9 AV	54.0	-5.1	1.18 H	312	30.20	18.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	66.4 PK	74.0	-7.6	1.09 V	338	61.30	5.10
2	5150.00	48.8 AV	54.0	-5.2	1.09 V	338	43.70	5.10
3	*5200.00	120.1 PK			1.08 V	338	82.30	37.80
4	*5200.00	105.4 AV			1.08 V	338	67.60	37.80
5	#10400.00	60.6 PK	74.0	-13.4	1.02 V	322	41.90	18.70
6	#10400.00	47.9 AV	54.0	-6.1	1.02 V	322	29.20	18.70

REMARKS:

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

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	117.5 PK			1.00 H	296	79.60	37.90
2	*5240.00	106.2 AV			1.00 H	296	68.30	37.90
3	5350.00	60.2 PK	74.0	-13.8	1.00 H	308	54.80	5.40
4	5350.00	47.8 AV	54.0	-6.2	1.00 H	308	42.40	5.40
5	5400.00	62.4 PK	74.0	-11.6	1.02 H	300	57.00	5.40
6	5400.00	50.3 AV	54.0	-3.7	1.02 H	300	44.90	5.40
7	#10480.00	62.0 PK	74.0	-12.0	1.16 H	155	42.50	19.50
8	#10480.00	49.1 AV	54.0	-4.9	1.16 H	155	29.60	19.50
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	*5240.00	116.0 PK			1.15 V	308	78.10	37.90
2	*5240.00	102.8 AV			1.15 V	308	64.90	37.90
3	5350.00	57.9 PK	74.0	-16.1	1.10 V	300	52.50	5.40
4	5350.00	45.9 AV	54.0	-8.1	1.10 V	300	40.50	5.40
5	5400.00	60.4 PK	74.0	-13.6	1.12 V	298	55.00	5.40
6	5400.00	48.0 AV	54.0	-6.0	1.12 V	298	42.60	5.40
7	#10480.00	61.3 PK	74.0	-12.7	1.10 V	295	41.80	19.50
8	#10480.00	48.2 AV	54.0	-5.8	1.10 V	295	28.70	19.50

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)
– 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 149	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	#5714.00	66.3 PK	74.0	-7.7	1.53 H	288	60.30	6.00
2	#5714.00	49.1 AV	54.0	-4.9	1.53 H	288	43.10	6.00
3	#5722.00	76.9 PK	78.2	-1.3	1.28 H	291	70.90	6.00
4	#5725.00	59.9 PK	78.2	-18.3	1.49 H	283	53.90	6.00
5	*5745.00	111.5 PK			1.49 H	294	73.00	38.50
6	*5745.00	100.0 AV			1.49 H	294	61.50	38.50
7	11490.00	64.0 PK	74.0	-10.0	1.22 H	285	43.60	20.40
8	11490.00	51.5 AV	54.0	-2.5	1.22 H	285	31.10	20.40
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	#5714.00	65.7 PK	74.0	-8.3	1.08 V	6	59.70	6.00
2	#5714.00	49.4 AV	54.0	-4.6	1.08 V	6	43.40	6.00
3	#5722.00	76.8 PK	78.2	-1.4	1.17 V	20	70.80	6.00
4	#5725.00	58.8 PK	78.2	-19.4	1.06 V	10	52.80	6.00
5	*5745.00	109.4 PK			1.07 V	30	70.90	38.50
6	*5745.00	98.3 AV			1.07 V	30	59.80	38.50
7	11490.00	63.3 PK	74.0	-10.7	1.44 V	348	42.90	20.40
8	11490.00	50.6 AV	54.0	-3.4	1.44 V	348	30.20	20.40

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 157	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	*5785.00	113.6 PK			1.50 H	291	75.00	38.60
2	*5785.00	101.7 AV			1.50 H	291	63.10	38.60
3	11570.00	66.4 PK	74.0	-7.6	1.19 H	289	46.00	20.40
4	11570.00	52.9 AV	54.0	-1.1	1.19 H	289	32.50	20.40
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	*5785.00	113.4 PK			1.15 V	12	74.80	38.60
2	*5785.00	102.1 AV			1.15 V	12	63.50	38.60
3	11570.00	63.5 PK	74.0	-10.5	1.16 V	15	43.10	20.40
4	11570.00	50.7 AV	54.0	-3.3	1.16 V	15	30.30	20.40

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.

CHANNEL	TX Channel 165	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	*5825.00	111.9 PK			1.59 H	296	73.20	38.70
2	*5825.00	100.5 AV			1.59 H	296	61.80	38.70
3	#5850.00	52.7 PK	78.2	-25.5	1.73 H	298	46.50	6.20
4	#5853.00	69.6 PK	78.2	-8.6	1.36 H	297	63.20	6.40
5	#5861.00	63.8 PK	74.0	-10.2	1.59 H	293	57.40	6.40
6	#5861.00	48.4 AV	54.0	-5.6	1.59 H	293	42.00	6.40
7	11650.00	65.8 PK	74.0	-8.2	1.00 H	285	45.50	20.30
8	11650.00	52.5 AV	54.0	-1.5	1.00 H	285	32.20	20.30
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	*5825.00	111.8 PK			1.46 V	3	73.10	38.70
2	*5825.00	100.7 AV			1.46 V	3	62.00	38.70
3	#5850.00	54.0 PK	78.2	-24.2	1.46 V	1	47.80	6.20
4	#5853.00	70.7 PK	78.2	-7.5	1.45 V	5	64.30	6.40
5	#5861.00	62.1 PK	74.0	-11.9	1.23 V	15	55.70	6.40
6	#5861.00	48.0 AV	54.0	-6.0	1.23 V	15	41.60	6.40
7	11650.00	62.6 PK	74.0	-11.4	1.04 V	21	42.30	20.30
8	11650.00	50.6 AV	54.0	-3.4	1.04 V	21	30.30	20.30

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.

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	71.3 PK	74.0	-2.7	1.00 H	293	66.20	5.10
2	5150.00	52.5 AV	54.0	-1.5	1.00 H	293	47.40	5.10
3	*5190.00	109.7 PK			1.00 H	293	71.90	37.80
4	*5190.00	98.3 AV			1.00 H	293	60.50	37.80
5	#10380.00	62.3 PK	74.0	-11.7	1.13 H	310	43.90	18.40
6	#10380.00	48.5 AV	54.0	-5.5	1.13 H	310	30.10	18.40
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	72.2 PK	74.0	-1.8	1.00 V	343	67.10	5.10
2	5150.00	51.9 AV	54.0	-2.1	1.00 V	343	46.80	5.10
3	*5190.00	108.8 PK			1.42 V	344	71.00	37.80
4	*5190.00	97.5 AV			1.42 V	344	59.70	37.80
5	#10380.00	60.3 PK	74.0	-13.7	1.32 V	322	41.90	18.40
6	#10380.00	47.2 AV	54.0	-6.8	1.32 V	322	28.80	18.40

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	66.9 PK	74.0	-7.1	1.08 H	286	61.80	5.10
2	5150.00	51.4 AV	54.0	-2.6	1.08 H	286	46.30	5.10
3	*5230.00	114.7 PK			1.08 H	285	76.80	37.90
4	*5230.00	103.2 AV			1.08 H	285	65.30	37.90
5	5350.00	62.2 PK	74.0	-11.8	1.07 H	295	56.80	5.40
6	5350.00	48.2 AV	54.0	-5.8	1.07 H	295	42.80	5.40
7	5380.00	61.7 PK	74.0	-12.3	1.10 H	289	56.30	5.40
8	5380.00	50.2 AV	54.0	-3.8	1.10 H	289	44.80	5.40
9	#10460.00	62.7 PK	74.0	-11.3	1.07 H	299	43.50	19.20
10	#10460.00	48.9 AV	54.0	-5.1	1.07 H	299	29.70	19.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	66.0 PK	74.0	-8.0	1.19 V	344	60.90	5.10
2	5150.00	50.3 AV	54.0	-3.7	1.19 V	344	45.20	5.10
3	*5230.00	113.8 PK			1.28 V	314	75.90	37.90
4	*5230.00	101.7 AV			1.28 V	314	63.80	37.90
5	5350.00	59.1 PK	74.0	-14.9	1.28 V	330	53.70	5.40
6	5350.00	47.4 AV	54.0	-6.6	1.28 V	330	42.00	5.40
7	5380.00	61.4 PK	74.0	-12.6	1.37 V	342	56.00	5.40
8	5380.00	49.4 AV	54.0	-4.6	1.37 V	342	44.00	5.40
9	#10460.00	60.2 PK	74.0	-13.8	1.16 V	269	41.00	19.20
10	#10460.00	47.7 AV	54.0	-6.3	1.16 V	269	28.50	19.20

REMARKS:

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

CHANNEL	TX Channel 151	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	#5714.00	72.9 PK	74.0	-1.1	1.11 H	292	66.90	6.00
2	#5714.00	51.9 AV	54.0	-2.1	1.11 H	292	45.90	6.00
3	#5722.00	76.8 PK	78.2	-1.4	1.19 H	291	70.80	6.00
4	#5725.00	57.5 PK	78.2	-20.7	1.29 H	290	51.50	6.00
5	*5755.00	107.6 PK			1.29 H	290	69.00	38.60
6	*5755.00	96.7 AV			1.29 H	290	58.10	38.60
7	11510.00	64.0 PK	74.0	-10.0	1.17 H	289	43.60	20.40
8	11510.00	51.1 AV	54.0	-2.9	1.17 H	289	30.70	20.40
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	#5714.00	70.8 PK	74.0	-3.2	1.08 V	18	64.80	6.00
2	#5714.00	51.5 AV	54.0	-2.5	1.08 V	18	45.50	6.00
3	#5722.00	76.6 PK	78.2	-1.6	1.16 V	6	70.60	6.00
4	#5725.00	58.8 PK	78.2	-19.4	1.06 V	357	52.80	6.00
5	*5755.00	108.4 PK			1.27 V	10	69.80	38.60
6	*5755.00	97.2 AV			1.27 V	10	58.60	38.60
7	11510.00	63.7 PK	74.0	-10.3	1.36 V	18	43.30	20.40
8	11510.00	50.5 AV	54.0	-3.5	1.36 V	18	30.10	20.40

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 159	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	*5795.00	110.2 PK			1.28 H	288	71.60	38.60
2	*5795.00	98.6 AV			1.28 H	288	60.00	38.60
3	#5850.00	53.2 PK	78.2	-25.0	1.27 H	294	47.00	6.20
4	#5853.00	70.1 PK	78.2	-8.1	1.26 H	297	63.70	6.40
5	#5861.00	66.5 PK	74.0	-7.5	1.16 H	292	60.10	6.40
6	#5861.00	50.5 AV	54.0	-3.5	1.16 H	292	44.10	6.40
7	11590.00	66.3 PK	74.0	-7.7	1.20 H	288	45.90	20.40
8	11590.00	52.5 AV	54.0	-1.5	1.20 H	288	32.10	20.40
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	*5795.00	109.7 PK			1.06 V	13	71.10	38.60
2	*5795.00	98.4 AV			1.06 V	13	59.80	38.60
3	#5850.00	53.6 PK	78.2	-24.6	1.45 V	360	47.40	6.20
4	#5853.00	69.2 PK	78.2	-9.0	1.45 V	1	62.80	6.40
5	#5861.00	67.7 PK	74.0	-6.3	1.34 V	2	61.30	6.40
6	#5861.00	50.4 AV	54.0	-3.6	1.34 V	2	44.00	6.40
7	11590.00	63.5 PK	74.0	-10.5	1.20 V	340	43.10	20.40
8	11590.00	50.8 AV	54.0	-3.2	1.20 V	340	30.40	20.40

REMARKS:

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

802.11ac (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	72.5 PK	74.0	-1.5	1.10 H	284	67.40	5.10
2	5150.00	52.7 AV	54.0	-1.3	1.10 H	284	47.60	5.10
3	*5210.00	106.4 PK			1.00 H	295	68.60	37.80
4	*5210.00	94.1 AV			1.00 H	295	56.30	37.80
5	5350.00	59.0 PK	74.0	-15.0	1.13 H	306	53.60	5.40
6	5350.00	46.1 AV	54.0	-7.9	1.13 H	306	40.70	5.40
7	#10420.00	62.0 PK	74.0	-12.0	1.05 H	302	43.20	18.80
8	#10420.00	48.6 AV	54.0	-5.4	1.05 H	302	29.80	18.80
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	72.2 PK	74.0	-1.8	1.32 V	344	67.10	5.10
2	5150.00	51.5 AV	54.0	-2.5	1.32 V	344	46.40	5.10
3	*5210.00	104.6 PK			1.28 V	315	66.80	37.80
4	*5210.00	92.8 AV			1.28 V	315	55.00	37.80
5	5350.00	58.5 PK	74.0	-15.5	1.35 V	312	53.10	5.40
6	5350.00	45.5 AV	54.0	-8.5	1.35 V	312	40.10	5.40
7	#10420.00	60.4 PK	74.0	-13.6	1.17 V	318	41.60	18.80
8	#10420.00	47.9 AV	54.0	-6.1	1.17 V	318	29.10	18.80

REMARKS:

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

CHANNEL	TX Channel 155	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	#5714.00	72.8 PK	74.0	-1.2	1.19 H	291	66.80	6.00
2	#5714.00	52.4 AV	54.0	-1.6	1.19 H	291	46.40	6.00
3	#5722.00	72.7 PK	78.2	-5.5	1.29 H	291	66.70	6.00
4	#5725.00	53.9 PK	78.2	-24.3	1.18 H	289	47.90	6.00
5	*5775.00	103.4 PK			1.29 H	287	64.80	38.60
6	*5775.00	92.1 AV			1.29 H	287	53.50	38.60
7	#5850.00	49.2 PK	78.2	-29.0	1.25 H	295	43.00	6.20
8	#5853.00	66.1 PK	78.2	-12.1	1.27 H	294	59.70	6.40
9	#5861.00	62.9 PK	74.0	-11.1	1.26 H	291	56.50	6.40
10	#5861.00	48.7 AV	54.0	-5.3	1.26 H	291	42.30	6.40
11	11550.00	63.3 PK	74.0	-10.7	1.22 H	268	42.90	20.40
12	11550.00	50.4 AV	54.0	-3.6	1.22 H	268	30.00	20.40
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	#5714.00	69.5 PK	74.0	-4.5	1.08 V	19	63.50	6.00
2	#5714.00	50.4 AV	54.0	-3.6	1.08 V	19	44.40	6.00
3	#5722.00	73.0 PK	78.2	-5.2	1.28 V	8	67.00	6.00
4	#5725.00	55.2 PK	78.2	-23.0	1.17 V	2	49.20	6.00
5	*5775.00	104.2 PK			1.59 V	360	65.60	38.60
6	*5775.00	92.3 AV			1.59 V	360	53.70	38.60
7	#5850.00	50.2 PK	78.2	-28.0	1.44 V	3	44.00	6.20
8	#5853.00	65.2 PK	78.2	-13.0	1.46 V	9	58.80	6.40
9	#5861.00	60.9 PK	74.0	-13.1	1.24 V	24	54.50	6.40
10	#5861.00	48.1 AV	54.0	-5.9	1.24 V	24	41.70	6.40
11	11550.00	63.1 PK	74.0	-10.9	1.42 V	24	42.70	20.40
12	11550.00	50.3 AV	54.0	-3.7	1.42 V	24	29.90	20.40

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.

2TX (Radio 2)

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	72.9 PK	74.0	-1.1	1.00 H	59	67.80	5.10
2	5150.00	52.4 AV	54.0	-1.6	1.00 H	59	47.30	5.10
3	*5180.00	118.6 PK			1.04 H	49	80.90	37.70
4	*5180.00	108.2 AV			1.04 H	49	70.50	37.70
5	5380.00	61.1 PK	74.0	-12.9	1.05 H	45	55.70	5.40
6	5380.00	50.1 AV	54.0	-3.9	1.05 H	45	44.70	5.40
7	#10360.00	60.5 PK	74.0	-13.5	1.38 H	163	42.20	18.30
8	#10360.00	46.4 AV	54.0	-7.6	1.38 H	163	28.10	18.30
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	71.3 PK	74.0	-2.7	1.00 V	0	66.20	5.10
2	5150.00	52.2 AV	54.0	-1.8	1.00 V	0	47.10	5.10
3	*5180.00	119.4 PK			1.19 V	343	81.70	37.70
4	*5180.00	109.0 AV			1.19 V	343	71.30	37.70
5	5380.00	59.1 PK	74.0	-14.9	1.00 V	0	53.70	5.40
6	5380.00	46.6 AV	54.0	-7.4	1.00 V	0	41.20	5.40
7	#10360.00	60.1 PK	74.0	-13.9	1.09 V	121	41.80	18.30
8	#10360.00	46.4 AV	54.0	-7.6	1.09 V	121	28.10	18.30

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.

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	119.8 PK			1.04 H	58	82.00	37.80
2	*5200.00	109.2 AV			1.04 H	58	71.40	37.80
3	5360.00	64.2 PK	74.0	-9.8	1.03 H	58	58.80	5.40
4	5360.00	52.2 AV	54.0	-1.8	1.03 H	58	46.80	5.40
5	#10400.00	60.4 PK	74.0	-13.6	1.19 H	118	41.70	18.70
6	#10400.00	47.3 AV	54.0	-6.7	1.19 H	118	28.60	18.70
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	120.4 PK			1.01 V	296	82.60	37.80
2	*5200.00	109.7 AV			1.01 V	296	71.90	37.80
3	5360.00	60.4 PK	74.0	-13.6	1.12 V	296	55.00	5.40
4	5360.00	48.5 AV	54.0	-5.5	1.12 V	296	43.10	5.40
5	#10400.00	60.4 PK	74.0	-13.6	1.23 V	282	41.70	18.70
6	#10400.00	46.8 AV	54.0	-7.2	1.23 V	282	28.10	18.70

REMARKS:

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

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	118.1 PK			1.00 H	47	80.20	37.90
2	*5240.00	107.6 AV			1.00 H	47	69.70	37.90
3	5350.00	62.3 PK	74.0	-11.7	1.04 H	58	56.90	5.40
4	5350.00	49.8 AV	54.0	-4.2	1.04 H	58	44.40	5.40
5	5400.00	64.3 PK	74.0	-9.7	1.01 H	56	58.90	5.40
6	5400.00	52.3 AV	54.0	-1.7	1.01 H	56	46.90	5.40
7	#10480.00	61.2 PK	74.0	-12.8	1.19 H	72	41.70	19.50
8	#10480.00	47.5 AV	54.0	-6.5	1.19 H	72	28.00	19.50
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	*5240.00	119.0 PK			1.17 V	335	81.10	37.90
2	*5240.00	108.5 AV			1.17 V	335	70.60	37.90
3	5350.00	60.6 PK	74.0	-13.4	1.02 V	333	55.20	5.40
4	5350.00	48.9 AV	54.0	-5.1	1.02 V	333	43.50	5.40
5	5400.00	62.7 PK	74.0	-11.3	1.04 V	342	57.30	5.40
6	5400.00	52.1 AV	54.0	-1.9	1.04 V	342	46.70	5.40
7	#10480.00	60.6 PK	74.0	-13.4	1.08 V	310	41.10	19.50
8	#10480.00	47.9 AV	54.0	-6.1	1.08 V	310	28.40	19.50

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)
– 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 149	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	#5714.00	65.5 PK	74.0	-8.5	1.02 H	45	59.50	6.00
2	#5714.00	50.5 AV	54.0	-3.5	1.02 H	45	44.50	6.00
3	#5722.00	71.2 PK	78.2	-7.0	1.00 H	27	65.20	6.00
4	#5725.00	49.3 PK	78.2	-28.9	1.05 H	54	43.30	6.00
5	*5745.00	115.0 PK			1.00 H	46	76.50	38.50
6	*5745.00	104.7 AV			1.00 H	46	66.20	38.50
7	11490.00	66.1 PK	74.0	-7.9	1.23 H	55	45.70	20.40
8	11490.00	52.6 AV	54.0	-1.4	1.23 H	55	32.20	20.40
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	#5714.00	60.6 PK	74.0	-13.4	1.01 V	289	54.60	6.00
2	#5714.00	47.0 AV	54.0	-7.0	1.01 V	289	41.00	6.00
3	#5722.00	71.6 PK	78.2	-6.6	1.02 V	286	65.60	6.00
4	#5725.00	56.4 PK	78.2	-21.8	1.03 V	286	50.40	6.00
5	*5745.00	116.5 PK			1.06 V	335	78.00	38.50
6	*5745.00	106.2 AV			1.06 V	335	67.70	38.50
7	11490.00	62.3 PK	74.0	-11.7	1.22 V	346	41.90	20.40
8	11490.00	49.4 AV	54.0	-4.6	1.22 V	346	29.00	20.40

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 157	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	*5785.00	113.0 PK			1.06 H	50	74.40	38.60
2	*5785.00	102.8 AV			1.06 H	50	64.20	38.60
3	11570.00	66.7 PK	74.0	-7.3	1.24 H	53	46.30	20.40
4	11570.00	53.0 AV	54.0	-1.0	1.24 H	53	32.60	20.40
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	*5785.00	115.0 PK			1.15 V	324	76.40	38.60
2	*5785.00	104.5 AV			1.15 V	324	65.90	38.60
3	11570.00	64.0 PK	74.0	-10.0	1.04 V	331	43.60	20.40
4	11570.00	50.5 AV	54.0	-3.5	1.04 V	331	30.10	20.40

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.

CHANNEL	TX Channel 165	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	*5825.00	112.3 PK			1.16 H	23	73.60	38.70
2	*5825.00	102.1 AV			1.16 H	23	63.40	38.70
3	#5850.00	52.3 PK	78.2	-25.9	1.00 H	49	46.10	6.20
4	#5853.00	65.1 PK	78.2	-13.1	1.00 H	30	58.70	6.40
5	#5861.00	59.5 PK	74.0	-14.5	1.16 H	64	53.10	6.40
6	#5861.00	47.5 AV	54.0	-6.5	1.16 H	64	41.10	6.40
7	11650.00	66.5 PK	74.0	-7.5	1.20 H	50	46.20	20.30
8	11650.00	52.8 AV	54.0	-1.2	1.20 H	50	32.50	20.30
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	*5825.00	109.4 PK			1.00 V	56	70.70	38.70
2	*5825.00	99.1 AV			1.00 V	56	60.40	38.70
3	#5850.00	55.1 PK	78.2	-23.1	1.03 V	336	48.90	6.20
4	#5853.00	62.9 PK	78.2	-15.3	1.05 V	39	56.50	6.40
5	#5861.00	58.8 PK	74.0	-15.2	1.09 V	52	52.40	6.40
6	#5861.00	44.7 AV	54.0	-9.3	1.09 V	52	38.30	6.40
7	11650.00	62.6 PK	74.0	-11.4	1.14 V	329	42.30	20.30
8	11650.00	50.1 AV	54.0	-3.9	1.14 V	329	29.80	20.30

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.

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	69.5 PK	74.0	-4.5	1.00 H	44	64.40	5.10
2	5150.00	52.4 AV	54.0	-1.6	1.00 H	44	47.30	5.10
3	*5180.00	117.5 PK			1.00 H	44	79.80	37.70
4	*5180.00	106.0 AV			1.00 H	44	68.30	37.70
5	5380.00	60.8 PK	74.0	-13.2	1.01 H	54	55.40	5.40
6	5380.00	48.2 AV	54.0	-5.8	1.01 H	54	42.80	5.40
7	#10360.00	59.9 PK	74.0	-14.1	1.21 H	92	41.60	18.30
8	#10360.00	46.8 AV	54.0	-7.2	1.21 H	92	28.50	18.30
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	68.0 PK	74.0	-6.0	1.09 V	352	62.90	5.10
2	5150.00	50.9 AV	54.0	-3.1	1.09 V	352	45.80	5.10
3	*5180.00	117.1 PK			1.08 V	355	79.40	37.70
4	*5180.00	104.2 AV			1.08 V	355	66.50	37.70
5	5380.00	58.3 PK	74.0	-15.7	1.08 V	282	52.90	5.40
6	5380.00	45.8 AV	54.0	-8.2	1.08 V	282	40.40	5.40
7	#10360.00	59.7 PK	74.0	-14.3	1.03 V	284	41.40	18.30
8	#10360.00	47.3 AV	54.0	-6.7	1.03 V	284	29.00	18.30

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.

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	118.7 PK			1.00 H	43	80.90	37.80
2	*5200.00	107.0 AV			1.00 H	43	69.20	37.80
3	5360.00	64.5 PK	74.0	-9.5	1.00 H	61	59.10	5.40
4	5360.00	52.5 AV	54.0	-1.5	1.00 H	61	47.10	5.40
5	#10400.00	60.6 PK	74.0	-13.4	1.22 H	56	41.90	18.70
6	#10400.00	47.1 AV	54.0	-6.9	1.22 H	56	28.40	18.70
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	118.4 PK			1.17 V	343	80.60	37.80
2	*5200.00	105.3 AV			1.17 V	343	67.50	37.80
3	5360.00	60.2 PK	74.0	-13.8	1.14 V	315	54.80	5.40
4	5360.00	49.0 AV	54.0	-5.0	1.14 V	315	43.60	5.40
5	#10400.00	60.0 PK	74.0	-14.0	1.05 V	303	41.30	18.70
6	#10400.00	47.3 AV	54.0	-6.7	1.05 V	303	28.60	18.70

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 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	118.1 PK			1.05 H	58	80.20	37.90
2	*5240.00	106.1 AV			1.05 H	58	68.20	37.90
3	5350.00	61.5 PK	74.0	-12.5	1.00 H	50	56.10	5.40
4	5350.00	49.8 AV	54.0	-4.2	1.00 H	50	44.40	5.40
5	5400.00	63.9 PK	74.0	-10.1	1.02 H	55	58.50	5.40
6	5400.00	52.2 AV	54.0	-1.8	1.02 H	55	46.80	5.40
7	#10480.00	60.7 PK	74.0	-13.3	1.15 H	100	41.20	19.50
8	#10480.00	47.7 AV	54.0	-6.3	1.15 H	100	28.20	19.50
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	*5240.00	112.2 PK			1.02 V	42	74.30	37.90
2	*5240.00	98.6 AV			1.02 V	42	60.70	37.90
3	5350.00	58.9 PK	74.0	-15.1	1.06 V	356	53.50	5.40
4	5350.00	46.2 AV	54.0	-7.8	1.06 V	356	40.80	5.40
5	5400.00	61.1 PK	74.0	-12.9	1.02 V	2	55.70	5.40
6	5400.00	50.5 AV	54.0	-3.5	1.02 V	2	45.10	5.40
7	#10480.00	59.9 PK	74.0	-14.1	1.10 V	300	40.40	19.50
8	#10480.00	47.3 AV	54.0	-6.7	1.10 V	300	27.80	19.50

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)
– 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 149	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	#5714.00	67.2 PK	74.0	-6.8	1.00 H	36	61.20	6.00
2	#5714.00	49.0 AV	54.0	-5.0	1.00 H	36	43.00	6.00
3	#5722.00	77.0 PK	78.2	-1.2	1.00 H	32	71.00	6.00
4	#5725.00	59.9 PK	78.2	-18.3	1.00 H	37	53.90	6.00
5	*5745.00	112.5 PK			1.00 H	36	74.00	38.50
6	*5745.00	100.8 AV			1.00 H	36	62.30	38.50
7	11490.00	63.8 PK	74.0	-10.2	1.13 H	56	43.40	20.40
8	11490.00	50.5 AV	54.0	-3.5	1.13 H	56	30.10	20.40
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	#5714.00	70.1 PK	74.0	-3.9	1.06 V	332	64.10	6.00
2	#5714.00	49.3 AV	54.0	-4.7	1.06 V	332	43.30	6.00
3	#5722.00	76.5 PK	78.2	-1.7	1.02 V	354	70.50	6.00
4	#5725.00	61.1 PK	78.2	-17.1	1.06 V	360	55.10	6.00
5	*5745.00	114.9 PK			1.05 V	347	76.40	38.50
6	*5745.00	102.1 AV			1.05 V	347	63.60	38.50
7	11490.00	60.4 PK	74.0	-13.6	1.10 V	293	40.00	20.40
8	11490.00	48.3 AV	54.0	-5.7	1.10 V	293	27.90	20.40

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 157	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	*5785.00	115.3 PK			1.00 H	37	76.70	38.60
2	*5785.00	103.4 AV			1.00 H	37	64.80	38.60
3	11570.00	64.1 PK	74.0	-9.9	1.35 H	65	43.70	20.40
4	11570.00	52.6 AV	54.0	-1.4	1.35 H	65	32.20	20.40
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	*5785.00	118.3 PK			1.05 V	360	79.70	38.60
2	*5785.00	104.8 AV			1.05 V	360	66.20	38.60
3	11570.00	61.4 PK	74.0	-12.6	1.02 V	302	41.00	20.40
4	11570.00	49.5 AV	54.0	-4.5	1.02 V	302	29.10	20.40

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.

CHANNEL	TX Channel 165	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	*5825.00	114.2 PK			1.00 H	38	75.50	38.70
2	*5825.00	101.8 AV			1.00 H	38	63.10	38.70
3	#5850.00	57.8 PK	78.2	-20.4	1.06 H	33	51.60	6.20
4	#5853.00	72.5 PK	78.2	-5.7	1.05 H	35	66.10	6.40
5	#5861.00	70.9 PK	74.0	-3.1	1.06 H	34	64.50	6.40
6	#5861.00	49.8 AV	54.0	-4.2	1.06 H	34	43.40	6.40
7	11650.00	64.0 PK	74.0	-10.0	1.07 H	73	43.70	20.30
8	11650.00	52.3 AV	54.0	-1.7	1.07 H	73	32.00	20.30
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	*5825.00	117.9 PK			1.14 V	1	79.20	38.70
2	*5825.00	105.0 AV			1.14 V	1	66.30	38.70
3	#5850.00	51.4 PK	78.2	-26.8	1.00 V	284	45.20	6.20
4	#5853.00	66.7 PK	78.2	-11.5	1.00 V	281	60.30	6.40
5	#5861.00	60.6 PK	74.0	-13.4	1.00 V	279	54.20	6.40
6	#5861.00	47.1 AV	54.0	-6.9	1.00 V	279	40.70	6.40
7	11650.00	60.7 PK	74.0	-13.3	1.09 V	127	40.40	20.30
8	11650.00	48.0 AV	54.0	-6.0	1.09 V	127	27.70	20.30

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.

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	72.1 PK	74.0	-1.9	1.00 H	47	67.00	5.10
2	5150.00	52.6 AV	54.0	-1.4	1.00 H	47	47.50	5.10
3	*5190.00	112.7 PK			1.00 H	42	74.90	37.80
4	*5190.00	100.8 AV			1.00 H	42	63.00	37.80
5	#10380.00	60.5 PK	74.0	-13.5	1.16 H	67	42.10	18.40
6	#10380.00	47.3 AV	54.0	-6.7	1.16 H	67	28.90	18.40
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	70.8 PK	74.0	-3.2	1.08 V	351	65.70	5.10
2	5150.00	51.6 AV	54.0	-2.4	1.08 V	351	46.50	5.10
3	*5190.00	108.7 PK			1.06 V	8	70.90	37.80
4	*5190.00	96.5 AV			1.06 V	8	58.70	37.80
5	#10380.00	60.0 PK	74.0	-14.0	1.12 V	309	41.60	18.40
6	#10380.00	47.0 AV	54.0	-7.0	1.12 V	309	28.60	18.40

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	68.2 PK	74.0	-5.8	1.00 H	45	63.10	5.10
2	5150.00	53.0 AV	54.0	-1.0	1.00 H	45	47.90	5.10
3	*5230.00	117.9 PK			1.00 H	39	80.00	37.90
4	*5230.00	105.9 AV			1.00 H	39	68.00	37.90
5	5350.00	62.4 PK	74.0	-11.6	1.01 H	58	57.00	5.40
6	5350.00	49.9 AV	54.0	-4.1	1.01 H	58	44.50	5.40
7	#10460.00	60.4 PK	74.0	-13.6	1.11 H	80	41.20	19.20
8	#10460.00	47.2 AV	54.0	-6.8	1.11 H	80	28.00	19.20
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	67.2 PK	74.0	-6.8	1.08 V	6	62.10	5.10
2	5150.00	51.3 AV	54.0	-2.7	1.08 V	6	46.20	5.10
3	*5230.00	116.4 PK			1.17 V	0	78.50	37.90
4	*5230.00	103.1 AV			1.17 V	0	65.20	37.90
5	5350.00	61.2 PK	74.0	-12.8	4.00 V	5	55.80	5.40
6	5350.00	48.9 AV	54.0	-5.1	4.00 V	5	43.50	5.40
7	#10460.00	59.9 PK	74.0	-14.1	1.12 V	291	40.70	19.20
8	#10460.00	47.2 AV	54.0	-6.8	1.12 V	291	28.00	19.20

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 151	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	#5714.00	73.0 PK	74.0	-1.0	1.00 H	35	67.00	6.00
2	#5714.00	52.7 AV	54.0	-1.3	1.00 H	35	46.70	6.00
3	#5722.00	71.0 PK	78.2	-7.2	1.00 H	34	65.00	6.00
4	#5725.00	56.0 PK	78.2	-22.2	1.00 H	37	50.00	6.00
5	*5755.00	107.4 PK			1.00 H	36	68.80	38.60
6	*5755.00	95.8 AV			1.00 H	36	57.20	38.60
7	11510.00	63.4 PK	74.0	-10.6	1.18 H	72	43.00	20.40
8	11510.00	50.1 AV	54.0	-3.9	1.18 H	72	29.70	20.40
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	#5714.00	70.0 PK	74.0	-4.0	1.07 V	330	64.00	6.00
2	#5714.00	51.0 AV	54.0	-3.0	1.07 V	330	45.00	6.00
3	#5722.00	74.5 PK	78.2	-3.7	1.07 V	344	68.50	6.00
4	#5725.00	61.4 PK	78.2	-16.8	1.07 V	360	55.40	6.00
5	*5755.00	109.1 PK			1.17 V	328	70.50	38.60
6	*5755.00	96.9 AV			1.17 V	328	58.30	38.60
7	11510.00	61.2 PK	74.0	-12.8	1.06 V	271	40.80	20.40
8	11510.00	48.3 AV	54.0	-5.7	1.06 V	271	27.90	20.40

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 159	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	*5795.00	111.7 PK			1.08 H	36	73.10	38.60
2	*5795.00	99.7 AV			1.08 H	36	61.10	38.60
3	#5850.00	56.8 PK	78.2	-21.4	1.06 H	34	50.60	6.20
4	#5853.00	73.3 PK	78.2	-4.9	1.00 H	30	66.90	6.40
5	#5861.00	71.8 PK	74.0	-2.2	1.07 H	37	65.40	6.40
6	#5861.00	52.3 AV	54.0	-1.7	1.07 H	37	45.90	6.40
7	11590.00	66.2 PK	74.0	-7.8	1.18 H	48	45.80	20.40
8	11590.00	51.8 AV	54.0	-2.2	1.18 H	48	31.40	20.40
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	*5795.00	116.7 PK			1.15 V	360	78.10	38.60
2	*5795.00	103.4 AV			1.15 V	360	64.80	38.60
3	#5850.00	57.7 PK	78.2	-20.5	1.33 V	6	51.50	6.20
4	#5853.00	71.3 PK	78.2	-6.9	1.29 V	36	64.90	6.40
5	#5861.00	71.4 PK	74.0	-2.6	1.32 V	31	65.00	6.40
6	#5861.00	51.5 AV	54.0	-2.5	1.32 V	31	45.10	6.40
7	11590.00	61.5 PK	74.0	-12.5	1.25 V	34	41.10	20.40
8	11590.00	49.5 AV	54.0	-4.5	1.25 V	34	29.10	20.40

REMARKS:

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

802.11ac (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	72.4 PK	74.0	-1.6	1.00 H	48	67.30	5.10
2	5150.00	52.5 AV	54.0	-1.5	1.00 H	48	47.40	5.10
3	*5210.00	110.4 PK			1.00 H	43	72.60	37.80
4	*5210.00	96.9 AV			1.00 H	43	59.10	37.80
5	#10420.00	60.5 PK	74.0	-13.5	1.09 H	125	41.70	18.80
6	#10420.00	47.3 AV	54.0	-6.7	1.09 H	125	28.50	18.80
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	70.3 PK	74.0	-3.7	1.09 V	354	65.20	5.10
2	5150.00	50.9 AV	54.0	-3.1	1.09 V	354	45.80	5.10
3	*5210.00	109.3 PK			1.06 V	348	71.50	37.80
4	*5210.00	94.5 AV			1.06 V	348	56.70	37.80
5	#10420.00	61.0 PK	74.0	-13.0	1.10 V	299	42.20	18.80
6	#10420.00	47.7 AV	54.0	-6.3	1.10 V	299	28.90	18.80

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 155	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	#5714.00	70.8 PK	74.0	-3.2	1.00 H	37	64.80	6.00
2	#5714.00	52.5 AV	54.0	-1.5	1.00 H	37	46.50	6.00
3	#5722.00	73.4 PK	78.2	-4.8	1.00 H	34	67.40	6.00
4	#5725.00	57.1 PK	78.2	-21.1	1.00 H	34	51.10	6.00
5	*5775.00	106.4 PK			1.09 H	49	67.80	38.60
6	*5775.00	92.8 AV			1.09 H	49	54.20	38.60
7	#5850.00	50.4 PK	78.2	-27.8	1.06 H	31	44.20	6.20
8	#5853.00	66.4 PK	78.2	-11.8	1.06 H	29	60.00	6.40
9	#5861.00	67.1 PK	74.0	-6.9	1.07 H	34	60.70	6.40
10	#5861.00	48.9 AV	54.0	-5.1	1.07 H	34	42.50	6.40
11	11550.00	63.0 PK	74.0	-11.0	1.24 H	93	42.60	20.40
12	11550.00	50.3 AV	54.0	-3.7	1.24 H	93	29.90	20.40
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	#5714.00	70.4 PK	74.0	-3.6	1.07 V	331	64.40	6.00
2	#5714.00	52.4 AV	54.0	-1.6	1.07 V	331	46.40	6.00
3	#5722.00	72.8 PK	78.2	-5.4	1.16 V	343	66.80	6.00
4	#5725.00	55.2 PK	78.2	-23.0	1.07 V	334	49.20	6.00
5	*5775.00	106.7 PK			1.06 V	326	68.10	38.60
6	*5775.00	93.1 AV			1.06 V	326	54.50	38.60
7	#5850.00	47.7 PK	78.2	-30.5	1.25 V	324	41.50	6.20
8	#5853.00	67.7 PK	78.2	-10.5	1.03 V	357	61.30	6.40
9	#5861.00	65.8 PK	74.0	-8.2	1.04 V	347	59.40	6.40
10	#5861.00	48.7 AV	54.0	-5.3	1.04 V	347	42.30	6.40
11	11550.00	61.1 PK	74.0	-12.9	1.16 V	254	40.70	20.40
12	11550.00	48.9 AV	54.0	-5.1	1.16 V	254	28.50	20.40

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.

1TX (Radio 3)

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	65.9 PK	74.0	-8.1	1.04 H	308	60.80	5.10
2	5150.00	46.8 AV	54.0	-7.2	1.04 H	308	41.70	5.10
3	*5180.00	105.7 PK			1.02 H	88	68.00	37.70
4	*5180.00	84.2 AV			1.02 H	88	46.50	37.70
5	#10360.00	58.9 PK	74.0	-15.1	1.13 H	26	40.60	18.30
6	#10360.00	46.2 AV	54.0	-7.8	1.13 H	26	27.90	18.30
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	72.5 PK	74.0	-1.5	1.15 V	301	67.40	5.10
2	5150.00	50.9 AV	54.0	-3.1	1.15 V	301	45.80	5.10
3	*5180.00	113.0 PK			1.14 V	306	75.30	37.70
4	*5180.00	90.0 AV			1.14 V	306	52.30	37.70
5	#10360.00	59.0 PK	74.0	-15.0	1.23 V	300	40.70	18.30
6	#10360.00	46.5 AV	54.0	-7.5	1.23 V	300	28.20	18.30

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.

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	105.7 PK			1.00 H	185	67.90	37.80
2	*5200.00	84.5 AV			1.00 H	185	46.70	37.80
3	#10400.00	59.6 PK	74.0	-14.4	1.10 H	151	40.90	18.70
4	#10400.00	47.1 AV	54.0	-6.9	1.10 H	151	28.40	18.70
5	15600.00	64.0 PK	74.0	-10.0	1.17 H	304	44.90	19.10
6	15600.00	50.4 AV	54.0	-3.6	1.17 H	304	31.30	19.10
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	*5200.00	114.3 PK			1.01 V	298	76.50	37.80
2	*5200.00	91.4 AV			1.01 V	298	53.60	37.80
3	#10400.00	60.2 PK	74.0	-13.8	1.03 V	353	41.50	18.70
4	#10400.00	46.7 AV	54.0	-7.3	1.03 V	353	28.00	18.70
5	15600.00	65.9 PK	74.0	-8.1	1.00 V	187	46.80	19.10
6	15600.00	52.2 AV	54.0	-1.8	1.00 V	187	33.10	19.10

REMARKS:

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

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	106.3 PK			1.00 H	163	68.40	37.90
2	*5240.00	85.8 AV			1.00 H	163	47.90	37.90
3	5350.00	56.1 PK	74.0	-17.9	1.01 H	203	50.70	5.40
4	5350.00	43.3 AV	54.0	-10.7	1.01 H	203	37.90	5.40
5	#10480.00	59.6 PK	74.0	-14.4	1.15 H	80	40.10	19.50
6	#10480.00	46.7 AV	54.0	-7.3	1.15 H	80	27.20	19.50
7	15720.00	64.6 PK	74.0	-9.4	1.32 H	322	45.60	19.00
8	15720.00	51.4 AV	54.0	-2.6	1.32 H	322	32.40	19.00
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	112.1 PK			1.22 V	17	74.20	37.90
2	*5240.00	90.8 AV			1.22 V	17	52.90	37.90
3	5350.00	56.4 PK	74.0	-17.6	1.19 V	224	51.00	5.40
4	5350.00	43.9 AV	54.0	-10.1	1.19 V	224	38.50	5.40
5	#10480.00	59.8 PK	74.0	-14.2	1.11 V	90	40.30	19.50
6	#10480.00	46.9 AV	54.0	-7.1	1.11 V	90	27.40	19.50
7	15720.00	66.1 PK	74.0	-7.9	1.16 V	204	47.10	19.00
8	15720.00	52.2 AV	54.0	-1.8	1.16 V	204	33.20	19.00

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 149	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	#5714.00	67.3 PK	74.0	-6.7	1.11 H	334	61.30	6.00
2	#5714.00	48.4 AV	54.0	-5.6	1.11 H	334	42.40	6.00
3	#5722.00	72.7 PK	78.2	-5.5	1.12 H	333	66.70	6.00
4	#5725.00	74.9 PK	78.2	-3.3	1.04 H	331	68.90	6.00
5	*5745.00	107.3 PK			1.36 H	332	68.80	38.50
6	*5745.00	86.2 AV			1.36 H	332	47.70	38.50
7	11490.00	61.5 PK	74.0	-12.5	1.19 H	284	41.10	20.40
8	11490.00	49.4 AV	54.0	-4.6	1.19 H	284	29.00	20.40
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	#5714.00	71.0 PK	74.0	-3.0	1.37 V	301	65.00	6.00
2	#5714.00	50.3 AV	54.0	-3.7	1.37 V	301	44.30	6.00
3	#5722.00	76.5 PK	78.2	-1.7	1.38 V	296	70.50	6.00
4	#5725.00	63.1 PK	78.2	-15.1	1.37 V	297	57.10	6.00
5	*5745.00	109.2 PK			1.42 V	295	70.70	38.50
6	*5745.00	88.2 AV			1.42 V	295	49.70	38.50
7	11490.00	62.1 PK	74.0	-11.9	1.42 V	270	41.70	20.40
8	11490.00	49.8 AV	54.0	-4.2	1.42 V	270	29.40	20.40

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 157	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	*5785.00	110.7 PK			1.24 H	335	72.10	38.60
2	*5785.00	88.9 AV			1.24 H	335	50.30	38.60
3	11570.00	62.4 PK	74.0	-11.6	1.13 H	301	42.00	20.40
4	11570.00	49.4 AV	54.0	-4.6	1.13 H	301	29.00	20.40
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	*5785.00	113.2 PK			1.66 V	292	74.60	38.60
2	*5785.00	91.5 AV			1.66 V	292	52.90	38.60
3	11570.00	62.1 PK	74.0	-11.9	1.53 V	264	41.70	20.40
4	11570.00	49.5 AV	54.0	-4.5	1.53 V	264	29.10	20.40

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.

CHANNEL	TX Channel 165	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	*5825.00	108.7 PK			1.42 H	348	70.00	38.70
2	*5825.00	86.8 AV			1.42 H	348	48.10	38.70
3	#5850.00	54.0 PK	78.2	-24.2	1.57 H	336	47.80	6.20
4	#5853.00	70.8 PK	78.2	-7.4	1.00 H	333	64.40	6.40
5	#5861.00	65.3 PK	74.0	-8.7	1.56 H	331	58.90	6.40
6	#5861.00	46.5 AV	54.0	-7.5	1.56 H	331	40.10	6.40
7	11650.00	61.8 PK	74.0	-12.2	1.29 H	290	41.50	20.30
8	11650.00	48.9 AV	54.0	-5.1	1.29 H	290	28.60	20.30
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	*5825.00	113.3 PK			1.02 V	335	74.60	38.70
2	*5825.00	91.6 AV			1.02 V	335	52.90	38.70
3	#5850.00	57.7 PK	78.2	-20.5	1.23 V	340	51.50	6.20
4	#5853.00	76.9 PK	78.2	-1.3	1.23 V	348	70.50	6.40
5	#5861.00	70.7 PK	74.0	-3.3	1.35 V	332	64.30	6.40
6	#5861.00	49.1 AV	54.0	-4.9	1.35 V	332	42.70	6.40
7	11650.00	61.9 PK	74.0	-12.1	1.10 V	287	41.60	20.30
8	11650.00	48.8 AV	54.0	-5.2	1.10 V	287	28.50	20.30

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.

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	62.4 PK	74.0	-11.6	1.00 H	165	57.30	5.10
2	5150.00	46.1 AV	54.0	-7.9	1.00 H	165	41.00	5.10
3	*5180.00	105.5 PK			1.06 H	211	67.80	37.70
4	*5180.00	84.5 AV			1.06 H	211	46.80	37.70
5	#10360.00	60.0 PK	74.0	-14.0	1.14 H	282	41.70	18.30
6	#10360.00	46.6 AV	54.0	-7.4	1.14 H	282	28.30	18.30
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	72.4 PK	74.0	-1.6	1.14 V	301	67.30	5.10
2	5150.00	51.0 AV	54.0	-3.0	1.14 V	301	45.90	5.10
3	*5180.00	113.0 PK			1.00 V	20	75.30	37.70
4	*5180.00	90.3 AV			1.00 V	20	52.60	37.70
5	#10360.00	60.0 PK	74.0	-14.0	1.19 V	104	41.70	18.30
6	#10360.00	46.7 AV	54.0	-7.3	1.19 V	104	28.40	18.30

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.

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	104.5 PK			1.00 H	334	66.70	37.80
2	*5200.00	83.9 AV			1.00 H	334	46.10	37.80
3	#10400.00	60.0 PK	74.0	-14.0	1.13 H	252	41.30	18.70
4	#10400.00	47.2 AV	54.0	-6.8	1.13 H	252	28.50	18.70
5	15600.00	64.8 PK	74.0	-9.2	1.12 H	304	45.70	19.10
6	15600.00	50.8 AV	54.0	-3.2	1.12 H	304	31.70	19.10
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	*5200.00	112.6 PK			1.00 V	23	74.80	37.80
2	*5200.00	90.5 AV			1.00 V	23	52.70	37.80
3	#10400.00	59.8 PK	74.0	-14.2	1.12 V	292	41.10	18.70
4	#10400.00	47.3 AV	54.0	-6.7	1.12 V	292	28.60	18.70
5	15600.00	67.1 PK	74.0	-6.9	1.00 V	187	48.00	19.10
6	15600.00	52.9 AV	54.0	-1.1	1.00 V	187	33.80	19.10

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.

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	103.1 PK			1.56 H	309	65.20	37.90
2	*5240.00	83.2 AV			1.56 H	309	45.30	37.90
3	5350.00	56.2 PK	74.0	-17.8	1.13 H	288	50.80	5.40
4	5350.00	43.9 AV	54.0	-10.1	1.13 H	288	38.50	5.40
5	#10480.00	58.5 PK	74.0	-15.5	1.41 H	219	39.00	19.50
6	#10480.00	46.4 AV	54.0	-7.6	1.41 H	219	26.90	19.50
7	15720.00	63.5 PK	74.0	-10.5	1.11 H	29	44.50	19.00
8	15720.00	50.0 AV	54.0	-4.0	1.11 H	29	31.00	19.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	113.2 PK			1.01 V	345	75.30	37.90
2	*5240.00	91.4 AV			1.01 V	345	53.50	37.90
3	5350.00	57.1 PK	74.0	-16.9	1.19 V	33	51.70	5.40
4	5350.00	44.7 AV	54.0	-9.3	1.19 V	33	39.30	5.40
5	#10480.00	60.1 PK	74.0	-13.9	1.10 V	230	40.60	19.50
6	#10480.00	47.4 AV	54.0	-6.6	1.10 V	230	27.90	19.50
7	15720.00	65.6 PK	74.0	-8.4	1.00 V	182	46.60	19.00
8	15720.00	52.2 AV	54.0	-1.8	1.00 V	182	33.20	19.00

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 149	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	#5714.00	68.6 PK	74.0	-5.4	1.14 H	331	62.60	6.00
2	#5714.00	48.1 AV	54.0	-5.9	1.14 H	331	42.10	6.00
3	#5722.00	71.7 PK	78.2	-6.5	1.12 H	335	65.70	6.00
4	#5725.00	58.1 PK	78.2	-20.1	1.11 H	329	52.10	6.00
5	*5745.00	106.3 PK			1.12 H	337	67.80	38.50
6	*5745.00	85.6 AV			1.12 H	337	47.10	38.50
7	11490.00	61.3 PK	74.0	-12.7	1.07 H	282	40.90	20.40
8	11490.00	48.7 AV	54.0	-5.3	1.07 H	282	28.30	20.40
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	#5714.00	70.8 PK	74.0	-3.2	1.13 V	297	64.80	6.00
2	#5714.00	50.1 AV	54.0	-3.9	1.13 V	297	44.10	6.00
3	#5722.00	76.4 PK	78.2	-1.8	1.00 V	297	70.40	6.00
4	#5725.00	61.4 PK	78.2	-16.8	1.37 V	298	55.40	6.00
5	*5745.00	111.8 PK			1.02 V	341	73.30	38.50
6	*5745.00	90.2 AV			1.02 V	341	51.70	38.50
7	11490.00	62.4 PK	74.0	-11.6	1.12 V	292	42.00	20.40
8	11490.00	49.0 AV	54.0	-5.0	1.12 V	292	28.60	20.40

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 157	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	*5785.00	109.7 PK			1.01 H	330	71.10	38.60
2	*5785.00	89.0 AV			1.01 H	330	50.40	38.60
3	11570.00	62.4 PK	74.0	-11.6	1.09 H	259	42.00	20.40
4	11570.00	49.3 AV	54.0	-4.7	1.09 H	259	28.90	20.40
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	*5785.00	114.4 PK			1.00 V	298	75.80	38.60
2	*5785.00	92.1 AV			1.00 V	298	53.50	38.60
3	11570.00	62.7 PK	74.0	-11.3	1.21 V	315	42.30	20.40
4	11570.00	49.3 AV	54.0	-4.7	1.21 V	315	28.90	20.40

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.

CHANNEL	TX Channel 165	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	*5825.00	107.1 PK			1.10 H	332	68.40	38.70
2	*5825.00	86.7 AV			1.10 H	332	48.00	38.70
3	#5850.00	53.8 PK	78.2	-24.4	1.22 H	335	47.60	6.20
4	#5853.00	70.4 PK	78.2	-7.8	1.23 H	332	64.00	6.40
5	#5861.00	64.5 PK	74.0	-9.5	1.42 H	331	58.10	6.40
6	#5861.00	46.7 AV	54.0	-7.3	1.42 H	331	40.30	6.40
7	11650.00	61.6 PK	74.0	-12.4	1.22 H	234	41.30	20.30
8	11650.00	48.8 AV	54.0	-5.2	1.22 H	234	28.50	20.30
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	*5825.00	113.5 PK			1.02 V	339	74.80	38.70
2	*5825.00	91.7 AV			1.02 V	339	53.00	38.70
3	#5850.00	58.4 PK	78.2	-19.8	1.23 V	331	52.20	6.20
4	#5853.00	76.5 PK	78.2	-1.7	1.47 V	329	70.10	6.40
5	#5861.00	68.3 PK	74.0	-5.7	1.45 V	337	61.90	6.40
6	#5861.00	49.0 AV	54.0	-5.0	1.45 V	337	42.60	6.40
7	11650.00	61.4 PK	74.0	-12.6	1.10 V	230	41.10	20.30
8	11650.00	48.6 AV	54.0	-5.4	1.10 V	230	28.30	20.30

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.

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	63.7 PK	74.0	-10.3	1.00 H	189	58.60	5.10
2	5150.00	45.2 AV	54.0	-8.8	1.00 H	189	40.10	5.10
3	*5190.00	95.2 PK			1.01 H	310	57.40	37.80
4	*5190.00	78.4 AV			1.01 H	310	40.60	37.80
5	#10380.00	60.7 PK	74.0	-13.3	1.09 H	215	42.30	18.40
6	#10380.00	47.5 AV	54.0	-6.5	1.09 H	215	29.10	18.40
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	72.2 PK	74.0	-1.8	1.00 V	20	67.10	5.10
2	5150.00	51.7 AV	54.0	-2.3	1.00 V	20	46.60	5.10
3	*5190.00	104.2 PK			1.00 V	21	66.40	37.80
4	*5190.00	84.8 AV			1.00 V	21	47.00	37.80
5	#10380.00	59.8 PK	74.0	-14.2	1.28 V	88	41.40	18.40
6	#10380.00	46.6 AV	54.0	-7.4	1.28 V	88	28.20	18.40

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.8 PK	74.0	-13.2	1.00 H	314	55.70	5.10
2	5150.00	46.6 AV	54.0	-7.4	1.00 H	314	41.50	5.10
3	*5230.00	101.1 PK			1.20 H	335	63.20	37.90
4	*5230.00	81.8 AV			1.20 H	335	43.90	37.90
5	5350.00	47.3 PK	74.0	-26.7	1.16 H	222	41.90	5.40
6	5350.00	34.6 AV	54.0	-19.4	1.16 H	222	29.20	5.40
7	#10460.00	59.7 PK	74.0	-14.3	1.13 H	211	40.50	19.20
8	#10460.00	47.2 AV	54.0	-6.8	1.13 H	211	28.00	19.20
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	72.5 PK	74.0	-1.5	1.00 V	19	67.40	5.10
2	5150.00	50.6 AV	54.0	-3.4	1.00 V	19	45.50	5.10
3	*5230.00	109.3 PK			1.00 V	12	71.40	37.90
4	*5230.00	88.8 AV			1.00 V	12	50.90	37.90
5	5350.00	63.8 PK	74.0	-10.2	1.00 V	0	58.40	5.40
6	5350.00	46.8 AV	54.0	-7.2	1.00 V	0	41.40	5.40
7	#10460.00	60.2 PK	74.0	-13.8	1.09 V	252	41.00	19.20
8	#10460.00	46.9 AV	54.0	-7.1	1.09 V	252	27.70	19.20

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 151	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	#5714.00	64.5 PK	74.0	-9.5	1.12 H	328	58.50	6.00
2	#5714.00	47.8 AV	54.0	-6.2	1.12 H	328	41.80	6.00
3	#5722.00	72.2 PK	78.2	-6.0	1.12 H	332	66.20	6.00
4	#5725.00	53.9 PK	78.2	-24.3	1.10 H	331	47.90	6.00
5	*5755.00	97.4 PK			1.14 H	334	58.80	38.60
6	*5755.00	80.2 AV			1.14 H	334	41.60	38.60
7	11510.00	61.9 PK	74.0	-12.1	1.08 H	268	41.50	20.40
8	11510.00	48.9 AV	54.0	-5.1	1.08 H	268	28.50	20.40
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	#5714.00	68.7 PK	74.0	-5.3	1.38 V	299	62.70	6.00
2	#5714.00	50.4 AV	54.0	-3.6	1.38 V	299	44.40	6.00
3	#5722.00	76.9 PK	78.2	-1.3	1.37 V	290	70.90	6.00
4	#5725.00	56.4 PK	78.2	-21.8	1.27 V	301	50.40	6.00
5	*5755.00	102.1 PK			1.15 V	345	63.50	38.60
6	*5755.00	83.7 AV			1.15 V	345	45.10	38.60
7	11530.00	62.2 PK	74.0	-11.8	1.06 V	289	41.70	20.50
8	11530.00	49.0 AV	54.0	-5.0	1.06 V	289	28.50	20.50

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)
– 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 159	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	*5795.00	102.5 PK			1.22 H	334	63.90	38.60
2	*5795.00	84.3 AV			1.22 H	334	45.70	38.60
3	#5850.00	52.7 PK	78.2	-25.5	1.21 H	334	46.50	6.20
4	#5853.00	68.6 PK	78.2	-9.6	1.35 H	332	62.20	6.40
5	#5861.00	64.7 PK	74.0	-9.3	1.47 H	335	58.30	6.40
6	#5861.00	47.4 AV	54.0	-6.6	1.47 H	335	41.00	6.40
7	11590.00	61.8 PK	74.0	-12.2	1.10 H	356	41.40	20.40
8	11590.00	49.2 AV	54.0	-4.8	1.10 H	356	28.80	20.40
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	*5795.00	108.2 PK			1.02 V	341	69.60	38.60
2	*5795.00	88.4 AV			1.02 V	341	49.80	38.60
3	#5850.00	56.7 PK	78.2	-21.5	1.34 V	340	50.50	6.20
4	#5853.00	76.5 PK	78.2	-1.7	1.00 V	298	70.10	6.40
5	#5861.00	69.6 PK	74.0	-4.4	1.36 V	335	63.20	6.40
6	#5861.00	49.7 AV	54.0	-4.3	1.36 V	335	43.30	6.40
7	11590.00	62.0 PK	74.0	-12.0	1.09 V	299	41.60	20.40
8	11590.00	41.1 AV	54.0	-12.9	1.09 V	299	20.70	20.40

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.

BELOW 1GHz WORST-CASE DATA

802.11a

1TX (Radio 2)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		
TEST MODE	A		

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	57.12	32.9 QP	40.0	-7.1	2.02 H	209	47.50	-14.60
2	152.39	35.3 QP	43.5	-8.2	1.96 H	84	49.10	-13.80
3	216.55	33.7 QP	46.0	-12.3	1.01 H	88	49.90	-16.20
4	401.26	34.7 QP	46.0	-11.3	1.01 H	232	45.00	-10.30
5	500.42	39.2 QP	46.0	-6.8	2.02 H	217	47.50	-8.30
6	799.84	39.4 QP	46.0	-6.6	1.01 H	124	41.50	-2.10
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	45.45	33.4 QP	40.0	-6.6	1.00 V	312	48.10	-14.70
2	150.45	38.2 QP	43.5	-5.3	1.00 V	337	52.00	-13.80
3	208.77	30.4 QP	43.5	-13.1	1.00 V	13	46.90	-16.50
4	401.26	34.3 QP	46.0	-11.7	1.50 V	193	44.60	-10.30
5	500.42	40.9 QP	46.0	-5.1	1.00 V	196	49.20	-8.30
6	899.00	33.7 QP	46.0	-12.3	2.00 V	144	34.20	-0.50

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)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		
TEST MODE	B		

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	78.51	33.7 QP	40.0	-6.3	1.99 H	221	52.00	-18.30
2	129.06	34.2 QP	43.5	-9.3	1.49 H	225	49.50	-15.30
3	210.37	39.3 QP	43.5	-4.2	1.19 H	107	55.60	-16.30
4	333.21	34.4 QP	46.0	-11.6	1.00 H	115	46.00	-11.60
5	500.42	30.6 QP	46.0	-15.4	1.49 H	122	38.90	-8.30
6	799.84	31.8 QP	46.0	-14.2	1.49 H	147	33.90	-2.10
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	35.36	35.0 QP	40.0	-5.0	1.00 V	261	50.60	-15.60
2	49.34	37.6 QP	40.0	-2.4	1.49 V	16	52.10	-14.50
3	72.67	36.9 QP	40.0	-3.1	1.99 V	152	53.80	-16.90
4	127.11	34.0 QP	43.5	-9.5	1.99 V	7	49.60	-15.60
5	210.72	35.3 QP	43.5	-8.2	1.00 V	328	51.60	-16.30
6	350.71	38.4 QP	46.0	-7.6	1.49 V	158	49.80	-11.40

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

2TX (Radio 2)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		
TEST MODE	A		

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	64.90	34.1 QP	40.0	-5.9	1.50 H	24	49.40	-15.30
2	97.95	28.5 QP	43.5	-15.0	1.99 H	84	47.50	-19.00
3	181.55	35.3 QP	43.5	-8.2	1.50 H	87	50.70	-15.40
4	239.88	39.7 QP	46.0	-6.3	1.50 H	202	54.40	-14.70
5	399.31	33.5 QP	46.0	-12.5	1.00 H	147	43.90	-10.40
6	799.84	37.5 QP	46.0	-8.5	1.00 H	192	39.60	-2.10
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	47.40	36.5 QP	40.0	-3.5	1.01 V	21	51.10	-14.60
2	165.71	40.9 QP	43.5	-2.6	1.00 V	77	54.80	-13.90
3	243.77	41.3 QP	46.0	-4.7	1.01 V	179	55.80	-14.50
4	399.31	33.9 QP	46.0	-12.1	1.50 V	161	44.30	-10.40
5	500.42	33.1 QP	46.0	-12.9	1.01 V	16	41.40	-8.30
6	799.84	33.5 QP	46.0	-12.5	2.00 V	161	35.60	-2.10

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

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		
TEST MODE	B		

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	57.12	32.1 QP	40.0	-7.9	1.99 H	267	46.70	-14.60
2	78.51	32.1 QP	40.0	-7.9	1.99 H	231	50.40	-18.30
3	129.06	37.0 QP	43.5	-6.5	1.50 H	226	52.30	-15.30
4	208.49	42.0 QP	43.5	-1.5	1.00 H	97	58.50	-16.50
5	331.26	32.7 QP	46.0	-13.3	1.00 H	110	44.30	-11.60
6	500.42	30.3 QP	46.0	-15.7	1.50 H	115	38.60	-8.30
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	45.45	36.9 QP	40.0	-3.1	1.03 V	24	51.60	-14.70
2	156.28	34.7 QP	43.5	-8.8	1.03 V	99	48.40	-13.70
3	208.77	37.0 QP	43.5	-6.5	1.49 V	339	53.50	-16.50
4	354.60	35.4 QP	46.0	-10.6	2.00 V	152	46.70	-11.30
5	403.20	35.5 QP	46.0	-10.5	1.03 V	163	45.90	-10.40
6	500.42	31.9 QP	46.0	-14.1	1.03 V	194	40.20	-8.30

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

1TX (Radio 3)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		
TEST MODE	A		

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	57.12	33.1 QP	40.0	-6.9	2.01 H	301	47.70	-14.60
2	150.45	38.4 QP	43.5	-5.1	1.12 H	77	52.20	-13.80
3	218.50	33.1 QP	46.0	-12.9	1.00 H	84	49.30	-16.20
4	401.26	34.9 QP	46.0	-11.1	1.00 H	73	45.20	-10.30
5	500.42	38.9 QP	46.0	-7.1	1.51 H	208	47.20	-8.30
6	799.84	38.7 QP	46.0	-7.3	1.00 H	120	40.80	-2.10
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	45.45	36.7 QP	40.0	-3.3	1.00 V	274	51.40	-14.70
2	150.45	37.7 QP	43.5	-5.8	1.99 V	181	51.50	-13.80
3	210.72	30.1 QP	43.5	-13.4	1.00 V	7	46.40	-16.30
4	401.26	34.6 QP	46.0	-11.4	1.00 V	200	44.90	-10.30
5	500.42	40.4 QP	46.0	-5.6	1.00 V	188	48.70	-8.30
6	799.84	33.9 QP	46.0	-12.1	1.50 V	190	36.00	-2.10

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

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		
TEST MODE	B		

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	78.51	32.7 QP	40.0	-7.3	2.00 H	262	51.00	-18.30
2	127.11	33.6 QP	43.5	-9.9	2.00 H	227	49.20	-15.60
3	162.11	35.0 QP	43.5	-8.5	1.50 H	91	48.80	-13.80
4	193.22	38.8 QP	43.5	-4.7	1.50 H	133	55.20	-16.40
5	208.77	40.5 QP	43.5	-3.0	1.50 H	105	57.00	-16.50
6	331.26	32.0 QP	46.0	-14.0	1.00 H	100	43.60	-11.60
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	33.79	38.1 QP	40.0	-1.9	1.00 V	302	53.80	-15.70
2	49.34	37.1 QP	40.0	-2.9	1.00 V	343	51.60	-14.50
3	70.73	37.0 QP	40.0	-3.0	1.49 V	192	53.20	-16.20
4	169.89	32.2 QP	43.5	-11.3	1.00 V	79	46.10	-13.90
5	210.72	33.0 QP	43.5	-10.5	1.00 V	4	49.30	-16.30
6	358.48	32.1 QP	46.0	-13.9	1.00 V	154	43.40	-11.30
7	500.42	31.1 QP	46.0	-14.9	1.00 V	115	39.40	-8.30

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

4.2 CONDUCTED EMISSION MEASUREMENT

4.2.1 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 0.50MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100288	Apr. 24, 2014	Apr. 23, 2015
RF signal cable Woken	5D-FB	Cable-HYCO2-0 1	Dec. 27, 2013	Dec. 26, 2014
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Dec. 23, 2013	Dec. 22, 2014
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Jul. 10, 2014	Jul. 09, 2015
Software ADT	BV ADT_Conc_ V7.3.7.3	NA	NA	NA

- NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 2. The test was performed in HwaYa Shielded Room 2.
 3. The VCCI Site Registration No. is C-2047.

4.2.3 TEST PROCEDURES

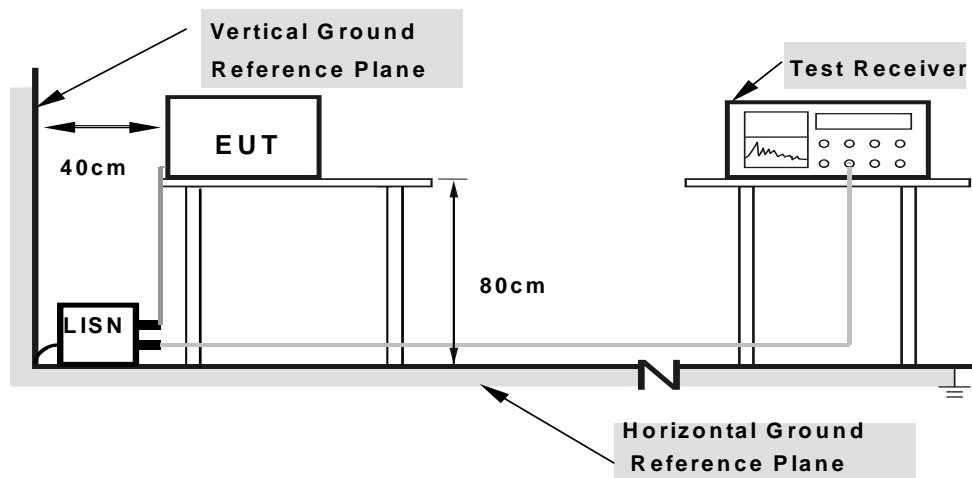
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



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

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

4.2.6 EUT OPERATING CONDITIONS

Same as 4.1.7.

4.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA : 802.11a

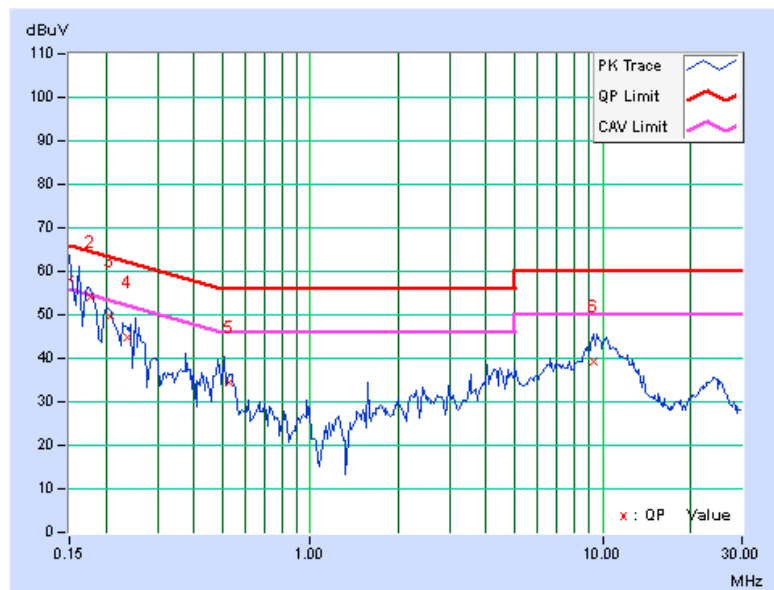
1TX (Radio 2)

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	A		

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	0.21	57.89	46.92	58.10	47.13	66.00	56.00	-7.90	-8.87
2	0.17734	0.23	53.76	43.54	53.99	43.77	64.61	54.61	-10.62	-10.84
3	0.20587	0.24	49.34	38.83	49.58	39.07	63.37	53.37	-13.79	-14.30
4	0.23719	0.24	44.57	34.66	44.81	34.90	62.19	52.19	-17.39	-17.30
5	0.52850	0.24	34.21	28.87	34.45	29.11	56.00	46.00	-21.55	-16.89
6	9.28906	0.50	38.69	32.81	39.19	33.31	60.00	50.00	-20.81	-16.69

REMARKS:

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

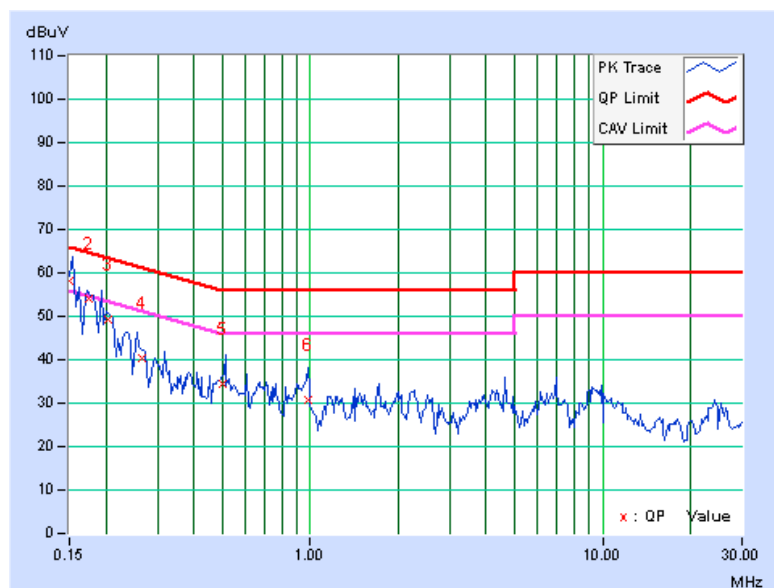


PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	A		

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	0.23	57.93	46.64	58.16	46.87	66.00	56.00	-7.84	-9.13
2	0.17472	0.23	53.66	42.07	53.89	42.30	64.73	54.73	-10.84	-12.43
3	0.20469	0.24	48.96	37.27	49.20	37.51	63.42	53.42	-14.22	-15.91
4	0.26437	0.26	40.16	30.07	40.42	30.33	61.29	51.29	-20.87	-20.96
5	0.50311	0.30	34.21	28.55	34.51	28.85	56.00	46.00	-21.49	-17.15
6	0.97813	0.29	30.33	22.95	30.62	23.24	56.00	46.00	-25.38	-22.76

REMARKS:

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

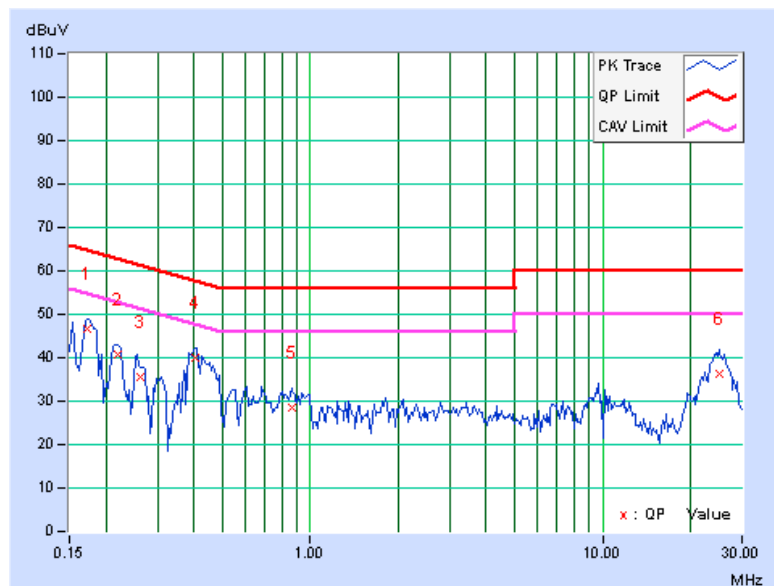


PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	B		

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	0.17345	0.27	46.40	37.24	46.67	37.51	64.79	54.79	-18.12	-17.28
2	0.21903	0.28	40.45	33.48	40.73	33.76	62.86	52.86	-22.12	-19.09
3	0.26310	0.29	35.23	27.39	35.52	27.68	61.33	51.33	-25.82	-23.66
4	0.40391	0.30	39.63	29.72	39.93	30.02	57.77	47.77	-17.84	-17.75
5	0.86094	0.33	28.24	15.16	28.57	15.49	56.00	46.00	-27.43	-30.51
6	24.95703	0.54	35.77	30.30	36.31	30.84	60.00	50.00	-23.69	-19.16

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

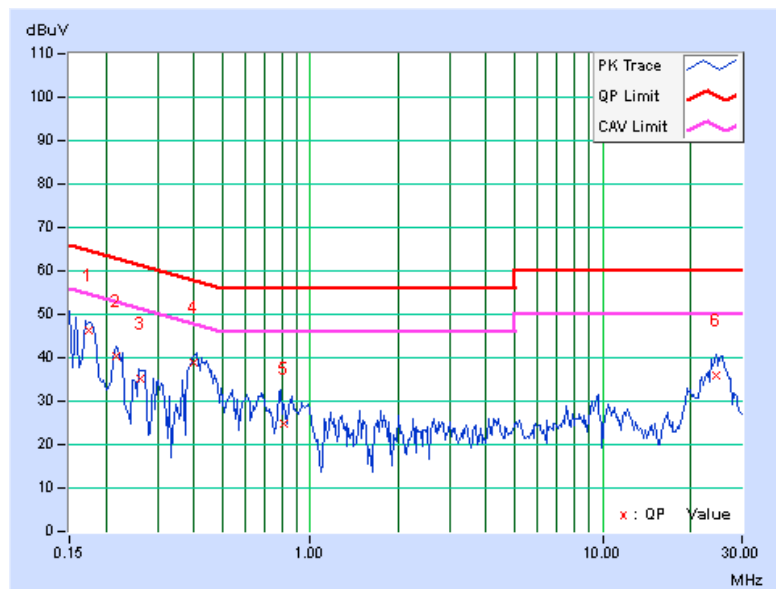


PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	B		

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	0.17462	0.27	46.04	36.91	46.31	37.18	64.74	54.74	-18.43	-17.56
2	0.21769	0.28	39.95	32.55	40.23	32.83	62.91	52.91	-22.67	-20.07
3	0.26219	0.29	34.78	26.45	35.07	26.74	61.36	51.36	-26.30	-24.63
4	0.40131	0.30	38.75	31.39	39.05	31.69	57.83	47.83	-18.78	-16.14
5	0.81550	0.33	24.48	9.01	24.81	9.34	56.00	46.00	-31.19	-36.66
6	24.41797	0.57	35.32	29.89	35.89	30.46	60.00	50.00	-24.11	-19.54

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



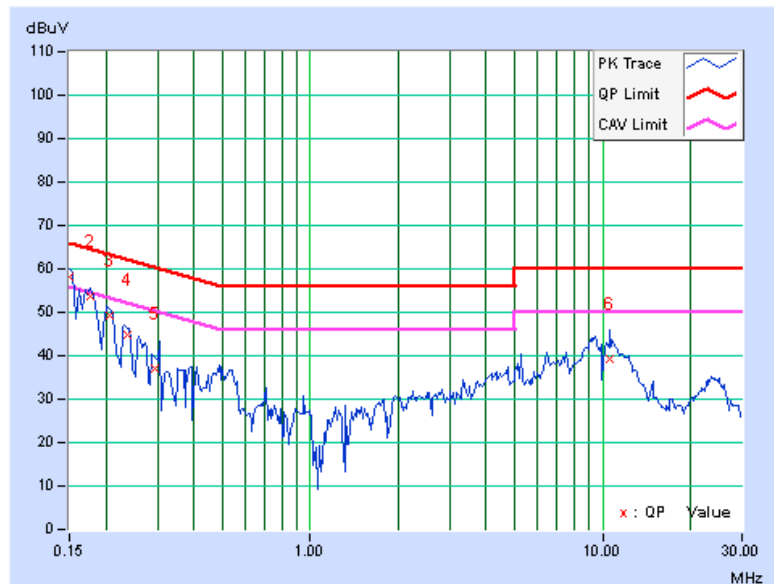
2TX (Radio 2)

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	A		

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	0.21	57.95	46.37	58.16	46.58	66.00	56.00	-7.84	-9.42
2	0.17734	0.23	53.48	43.30	53.71	43.53	64.61	54.61	-10.90	-11.08
3	0.20587	0.24	48.92	38.55	49.16	38.79	63.37	53.37	-14.21	-14.58
4	0.23585	0.24	44.51	34.68	44.75	34.92	62.24	52.24	-17.49	-17.32
5	0.29583	0.23	36.76	25.68	36.99	25.91	60.36	50.36	-23.37	-24.45
6	10.60156	0.52	38.91	33.06	39.43	33.58	60.00	50.00	-20.57	-16.42

REMARKS:

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

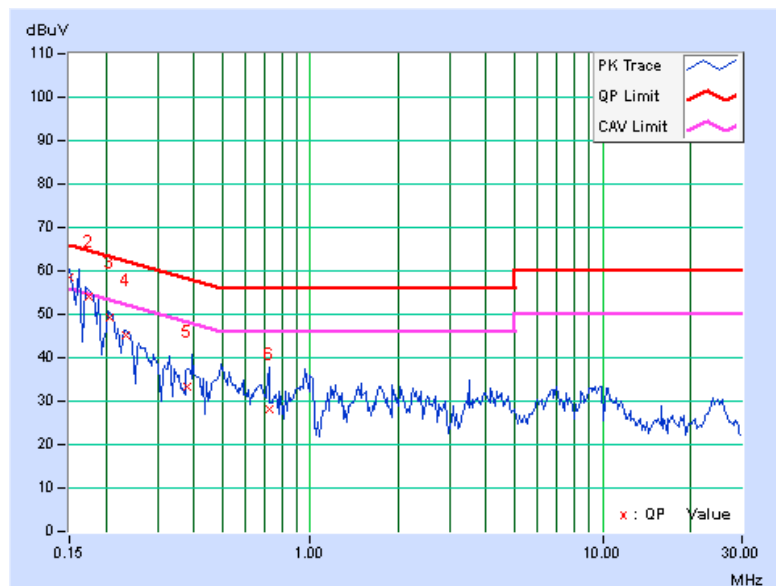


PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	A		

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	0.23	58.21	46.54	58.44	46.77	66.00	56.00	-7.56	-9.23
2	0.17462	0.23	53.74	41.91	53.97	42.14	64.74	54.74	-10.77	-12.60
3	0.20597	0.24	49.10	37.82	49.34	38.06	63.37	53.37	-14.02	-15.30
4	0.23460	0.25	45.05	33.54	45.30	33.79	62.29	52.29	-16.98	-18.49
5	0.38120	0.29	32.88	27.34	33.17	27.63	58.25	48.25	-25.08	-20.62
6	0.72422	0.29	27.81	20.83	28.10	21.12	56.00	46.00	-27.90	-24.88

REMARKS:

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

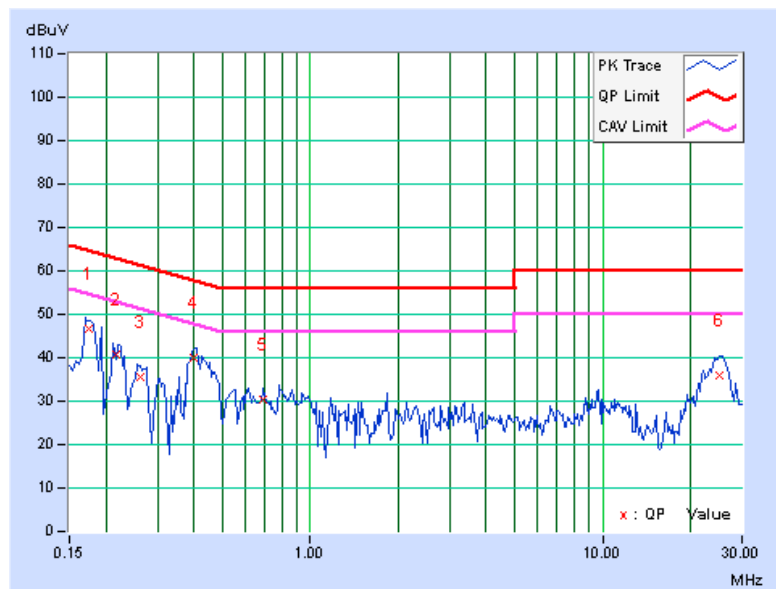


PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	B		

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	0.17462	0.27	46.38	37.71	46.65	37.98	64.74	54.74	-18.09	-16.76
2	0.21776	0.28	40.53	33.44	40.81	33.72	62.90	52.90	-22.09	-19.18
3	0.26183	0.29	35.39	27.57	35.68	27.86	61.37	51.37	-25.70	-23.52
4	0.40069	0.30	39.77	32.57	40.07	32.87	57.84	47.84	-17.77	-14.97
5	0.68906	0.32	29.91	20.81	30.23	21.13	56.00	46.00	-25.77	-24.87
6	25.19922	0.53	35.31	29.97	35.84	30.50	60.00	50.00	-24.16	-19.50

REMARKS:

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

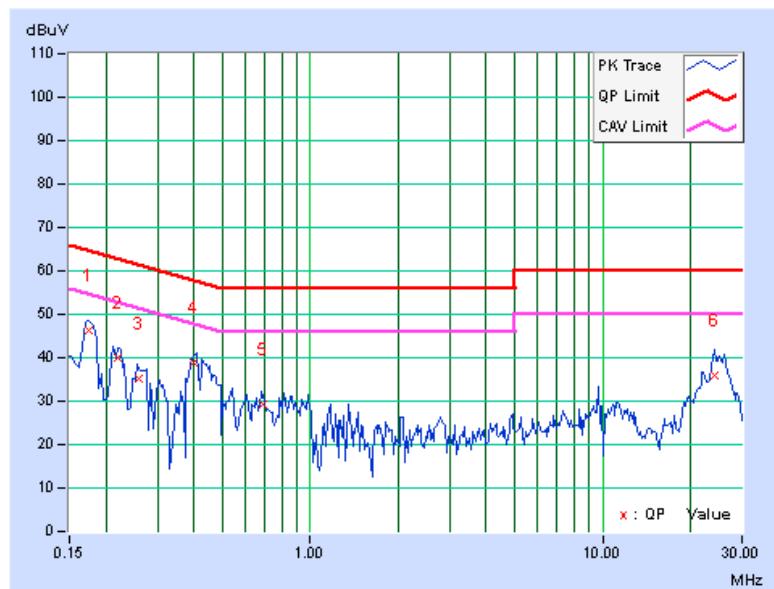


PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	B		

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	0.17479	0.27	46.04	37.22	46.31	37.49	64.73	54.73	-18.42	-17.24
2	0.21903	0.28	39.89	32.73	40.17	33.01	62.86	52.86	-22.68	-19.84
3	0.26056	0.29	34.96	26.25	35.25	26.54	61.41	51.41	-26.17	-24.88
4	0.40044	0.30	38.73	31.73	39.03	32.03	57.84	47.84	-18.81	-15.81
5	0.68988	0.32	29.01	20.12	29.33	20.44	56.00	46.00	-26.67	-25.56
6	24.22656	0.58	35.37	29.71	35.95	30.29	60.00	50.00	-24.05	-19.71

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



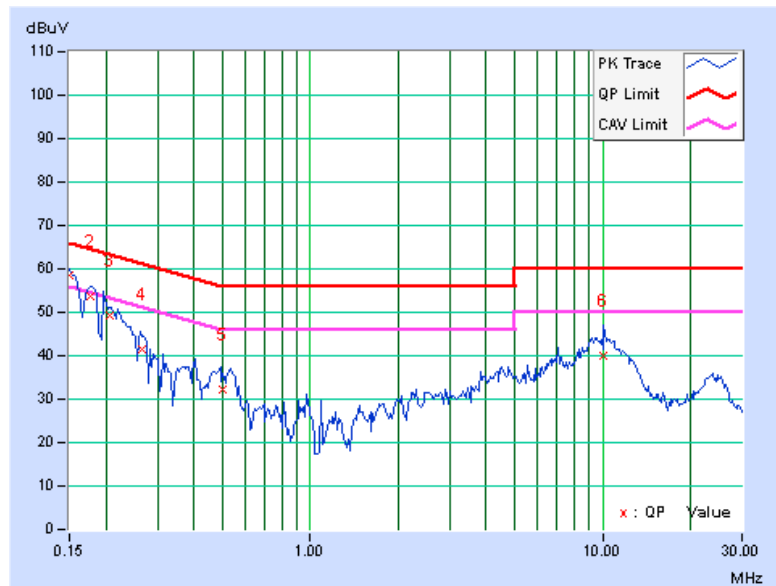
1TX (Radio 3)

PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	A		

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	0.21	58.15	46.52	58.36	46.73	66.00	56.00	-7.64	-9.27
2	0.17734	0.23	53.64	43.38	53.87	43.61	64.61	54.61	-10.74	-11.00
3	0.20725	0.24	48.88	38.18	49.12	38.42	63.31	53.31	-14.20	-14.90
4	0.26456	0.23	41.16	30.69	41.39	30.92	61.29	51.29	-19.89	-20.36
5	0.50011	0.23	32.02	25.03	32.25	25.26	56.00	46.00	-23.75	-20.74
6	10.12109	0.51	39.65	34.11	40.16	34.62	60.00	50.00	-19.84	-15.38

REMARKS:

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

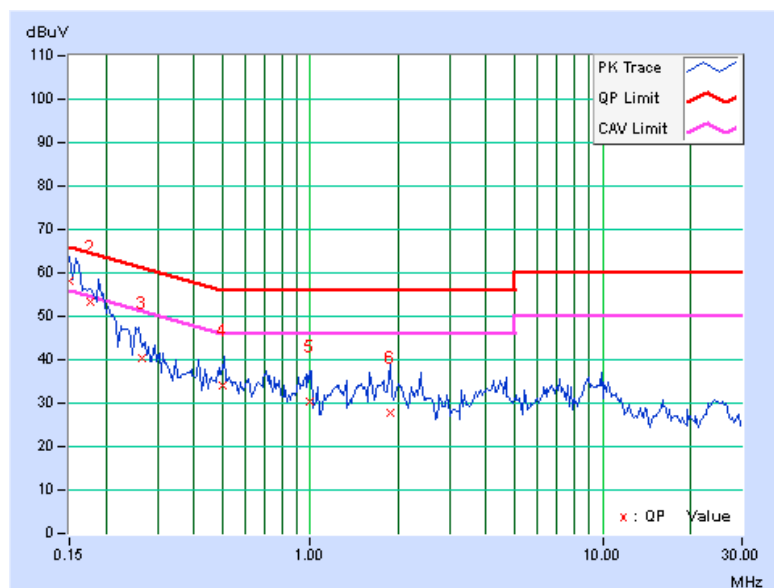


PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	A		

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	0.23	57.79	46.27	58.02	46.50	66.00	56.00	-7.98	-9.50
2	0.17638	0.23	53.28	42.76	53.51	42.99	64.65	54.65	-11.14	-11.66
3	0.26573	0.26	40.02	29.61	40.28	29.87	61.25	51.25	-20.97	-21.38
4	0.50187	0.30	33.93	28.79	34.23	29.09	56.00	46.00	-21.77	-16.91
5	0.99375	0.29	30.01	23.37	30.30	23.66	56.00	46.00	-25.70	-22.34
6	1.88281	0.38	27.43	21.05	27.81	21.43	56.00	46.00	-28.19	-24.57

REMARKS:

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

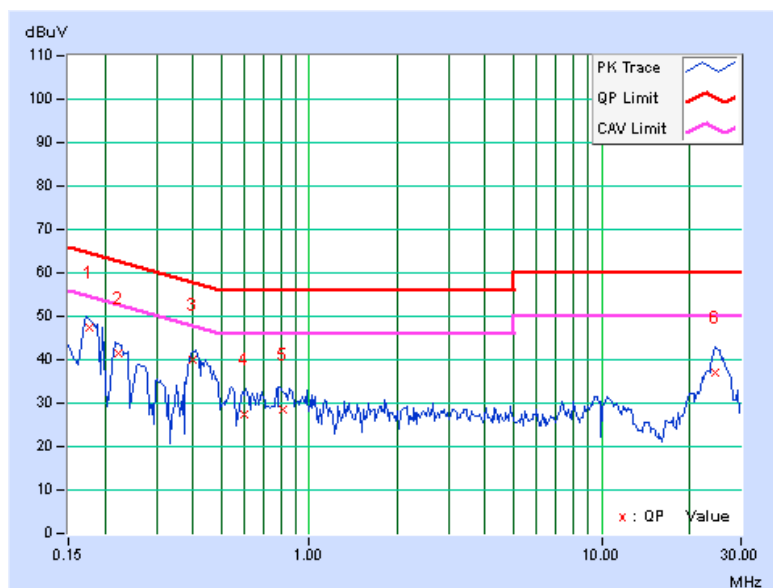


PHASE	Line 1	6dB BANDWIDTH	9kHz
TEST MODE	B		

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	0.17599	0.27	47.30	38.18	47.57	38.45	64.67	54.67	-17.10	-16.22
2	0.22150	0.28	41.11	33.36	41.39	33.64	62.76	52.76	-21.37	-19.12
3	0.40079	0.30	39.71	34.54	40.01	34.84	57.84	47.84	-17.83	-13.00
4	0.59803	0.31	27.07	11.20	27.38	11.51	56.00	46.00	-28.62	-34.49
5	0.81759	0.33	28.06	16.29	28.39	16.62	56.00	46.00	-27.61	-29.38
6	24.49609	0.54	36.32	30.75	36.86	31.29	60.00	50.00	-23.14	-18.71

REMARKS:

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

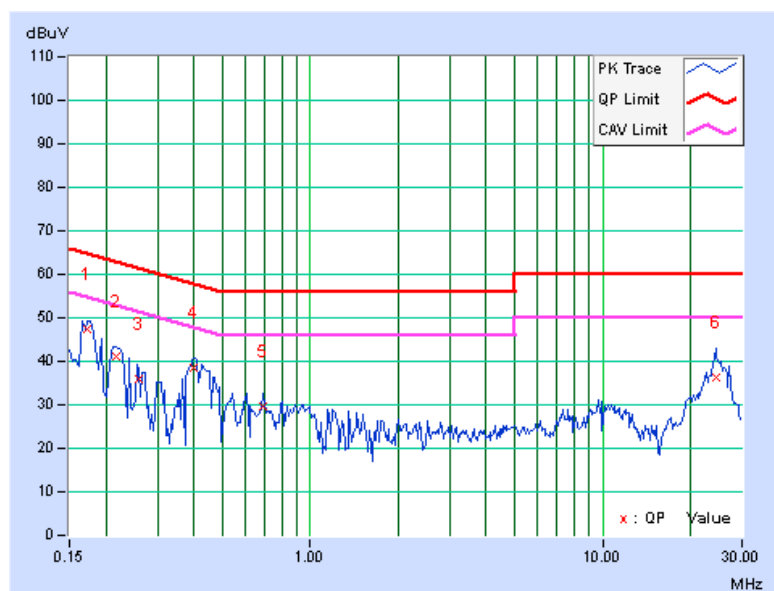


PHASE	Line 2	6dB BANDWIDTH	9kHz
TEST MODE	B		

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	0.17352	0.27	47.14	37.89	47.41	38.16	64.79	54.79	-17.38	-16.63
2	0.21641	0.28	40.81	32.83	41.09	33.11	62.96	52.96	-21.86	-19.84
3	0.26056	0.29	35.61	26.95	35.90	27.24	61.41	51.41	-25.52	-24.18
4	0.39903	0.30	38.26	31.36	38.56	31.66	57.87	47.87	-19.31	-16.21
5	0.68898	0.32	29.15	20.95	29.47	21.27	56.00	46.00	-26.53	-24.73
6	24.50781	0.57	35.58	30.16	36.15	30.73	60.00	50.00	-23.85	-19.27

REMARKS:

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



4.3 TRANSMIT POWER MEASUREMENT

4.3.1 LIMITS OF TRANSMIT POWER MEASUREMENT

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

*B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 D01 Multiple Transmitter Output v02r01 Method of conducted output power measurement on IEEE 802.11 devices,

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

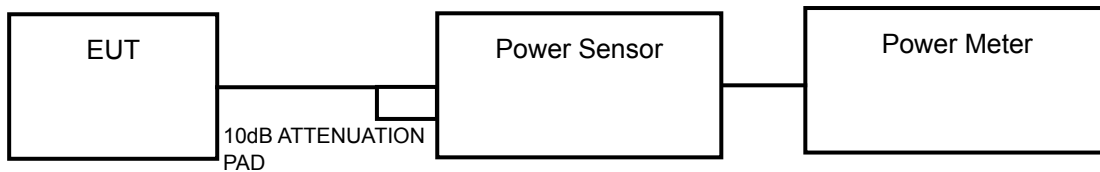
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

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

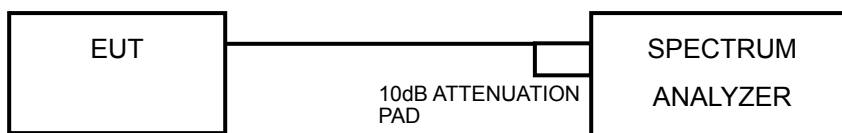
For power measurements on all other devices: Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

4.3.2 TEST SETUP

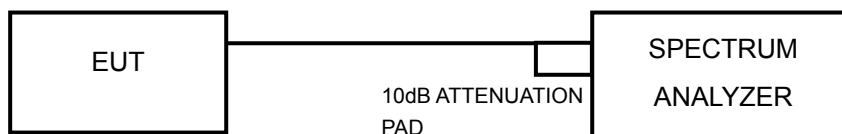
For 802.11a, 802.11n (HT20), 802.11n (HT40)



For 802.11ac (VHT80)



FOR OCCUPIED BANDWIDTH



4.3.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.3.4 TEST PROCEDURE

FOR AVERAGE POWER MEASUREMENT

For 802.11a, 802.11n (HT20), 802.11n (HT40)

789033 D02 General UNII Test Procedures New Rules v01 / E / 3 / b)

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 802.11ac (VHT80)

789033 D02 General UNII Test Procedures New Rules v01 / E / 2 / f)

- 1) Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- 2) Set sweep trigger to “free run”.
- 3) Set RBW = 1 MHz.
- 4) Set VBW \geq 3 MHz
- 5) Number of points in sweep \geq 2 Span / RBW.
- 6) Sweep time \leq (number of points in sweep) * T
- 7) Detector = RMS.
- 8) Trace mode = max hold.
- 9) Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.

FOR OCCUPIED BANDWIDTH

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 kHz RBW and 300 kHz VBW. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

4.3.5 DEVIATION FROM TEST STANDARD

No deviation.

4.3.6 EUT OPERATING CONDITIONS

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

4.3.7 TEST RESULTS

POWER OUTPUT:

1TX (Radio 2)

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	MAXIMUM CONDUCTED POWER (mW)	MAXIMUM CONDUCTED POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	215.774	23.34	30	PASS
40	5200	304.089	24.83	30	PASS
48	5240	307.610	24.88	30	PASS
149	5745	152.405	21.83	30	PASS
157	5785	162.181	22.10	30	PASS
165	5825	115.080	20.61	30	PASS

802.11n (HT20)

CHANNEL	CHANNEL FREQUENCY (MHz)	MAXIMUM CONDUCTED POWER (mW)	MAXIMUM CONDUCTED POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	186.638	22.71	30	PASS
40	5200	305.492	24.85	30	PASS
48	5240	306.902	24.87	30	PASS
149	5745	117.490	20.70	30	PASS
157	5785	161.436	22.08	30	PASS
165	5825	113.501	20.55	30	PASS

802.11n (HT40)

CHANNEL	CHANNEL FREQUENCY (MHz)	MAXIMUM CONDUCTED POWER (mW)	MAXIMUM CONDUCTED POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	109.648	20.40	30	PASS
46	5230	334.965	25.25	30	PASS
151	5755	102.802	20.12	30	PASS
159	5795	171.791	22.35	30	PASS

802.11ac (VHT80)

CHANNEL	CHANNEL FREQUENCY (MHz)	MAXIMUM CONDUCTED POWER (mW)	MAXIMUM CONDUCTED POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
42	5210	100.000	20.00	30	PASS
155	5775	74.645	18.73	30	PASS



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2TX (Radio 2)**802.11a**

CHAN.	FREQ. (MHz)	MAXIMUM CONDUCTED POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
36	5180	22.56	22.95	377.544	25.77	30	PASS
40	5200	22.67	23.21	394.338	25.96	30	PASS
48	5240	21.50	22.22	307.979	24.89	30	PASS
149	5745	20.68	19.77	211.792	23.26	30	PASS
157	5785	20.33	19.22	191.455	22.82	30	PASS
165	5825	19.19	18.43	152.648	21.84	30	PASS

802.11n (HT20)

CHAN.	FREQ. (MHz)	MAXIMUM CONDUCTED POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
36	5180	22.16	22.58	345.571	25.39	30	PASS
40	5200	23.51	23.85	467.049	26.69	30	PASS
48	5240	22.37	22.89	367.120	25.65	30	PASS
149	5745	20.50	19.22	195.762	22.92	30	PASS
157	5785	22.65	21.80	335.433	25.26	30	PASS
165	5825	22.32	21.81	322.313	25.08	30	PASS

802.11n (HT40)

CHAN.	FREQ. (MHz)	MAXIMUM CONDUCTED POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
38	5190	19.44	20.40	197.55	22.96	30	PASS
46	5230	25.10	25.31	663.219	28.22	30	PASS
151	5755	18.38	17.70	127.749	21.06	30	PASS
159	5795	22.35	21.81	323.496	25.10	30	PASS

802.11ac (VHT80)

CHAN.	FREQ. (MHz)	MAXIMUM CONDUCTED POWER (dBm)		TOTAL POWER (mW)	TOTAL POWER (dBm)	POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1				
42	5210	19.10	19.79	176.563	22.47	30	PASS
155	5775	18.15	17.95	127.686	21.06	30	PASS

1TX (Radio 3)

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	MAXIMUM CONDUCTED POWER (mW)	MAXIMUM CONDUCTED POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	47.206	16.74	30	PASS
40	5200	47.098	16.73	30	PASS
48	5240	52.602	17.21	30	PASS
149	5745	47.534	16.77	30	PASS
157	5785	123.595	20.92	30	PASS
165	5825	65.464	18.16	30	PASS

802.11n (HT20)

CHANNEL	CHANNEL FREQUENCY (MHz)	MAXIMUM CONDUCTED POWER (mW)	MAXIMUM CONDUCTED POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
36	5180	45.920	16.62	30	PASS
40	5200	46.774	16.70	30	PASS
48	5240	50.003	16.99	30	PASS
149	5745	46.452	16.67	30	PASS
157	5785	111.686	20.48	30	PASS
165	5825	66.374	18.22	30	PASS

802.11n (HT40)

CHANNEL	CHANNEL FREQUENCY (MHz)	MAXIMUM CONDUCTED POWER (mW)	MAXIMUM CONDUCTED POWER (dBm)	POWER LIMIT (dBm)	PASS/FAIL
38	5190	11.858	10.74	30	PASS
46	5230	48.417	16.85	30	PASS
151	5755	13.062	11.16	30	PASS
159	5795	44.463	16.48	30	PASS

26dB BANDWIDTH:

1TX (Radio 2)

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	23.42	PASS
40	5200	34.15	PASS
48	5240	35.14	PASS

802.11n (HT20)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	29.10	PASS
40	5200	41.03	PASS
48	5240	37.77	PASS

802.11n (HT40)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
38	5190	43.56	PASS
46	5230	86.53	PASS

802.11ac (VHT80)

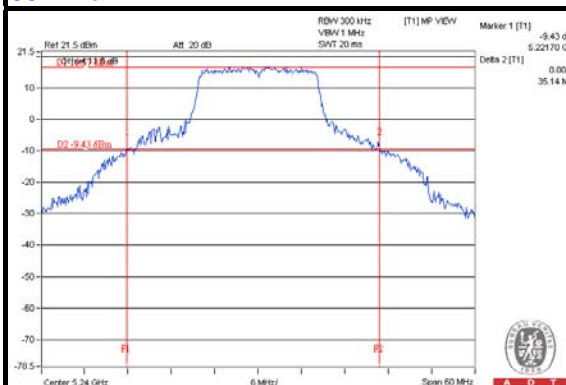
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
42	5210	83.15	PASS



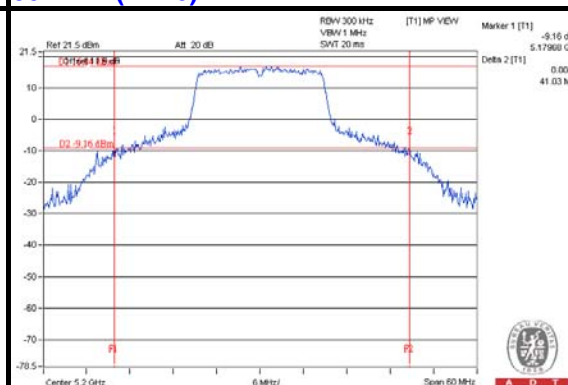
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SPECTRUM PLOT OF WORST VALUE

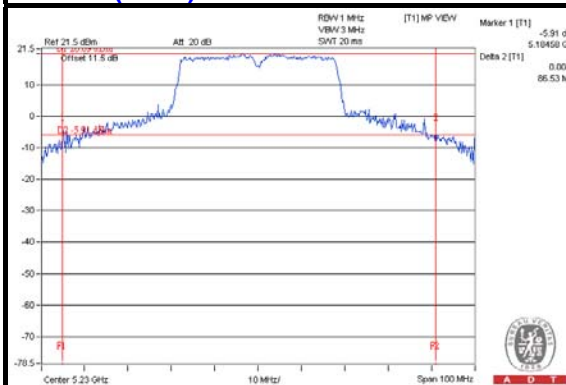
802.11a



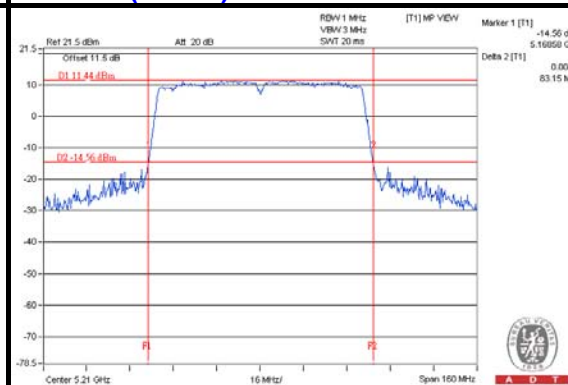
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



2TX (Radio 2)

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
36	5180	20.83	26.13	PASS
40	5200	29.25	26.83	PASS
48	5240	20.47	20.38	PASS

802.11n (HT20)

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
36	5180	28.34	27.52	PASS
40	5200	33.55	32.44	PASS
48	5240	26.17	25.69	PASS

802.11n (HT40)

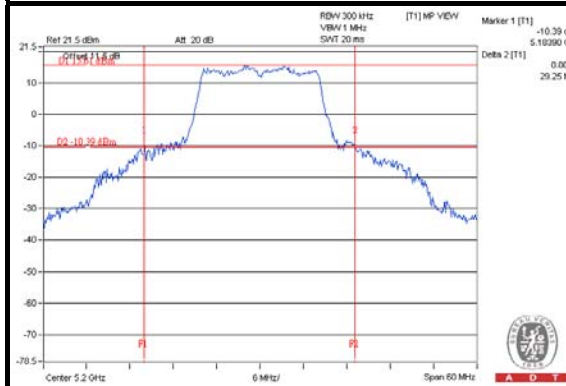
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
38	5190	41.53	41.12	PASS
46	5230	85.52	88.28	PASS

802.11ac (VHT80)

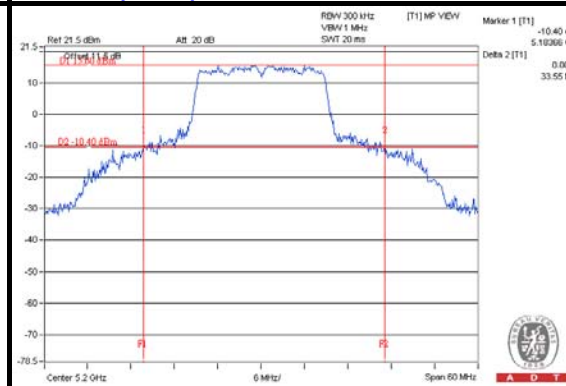
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)		PASS / FAIL
		CHAIN 0	CHAIN 1	
42	5210	83.18	82.17	PASS

SPECTRUM PLOT OF WORST VALUE

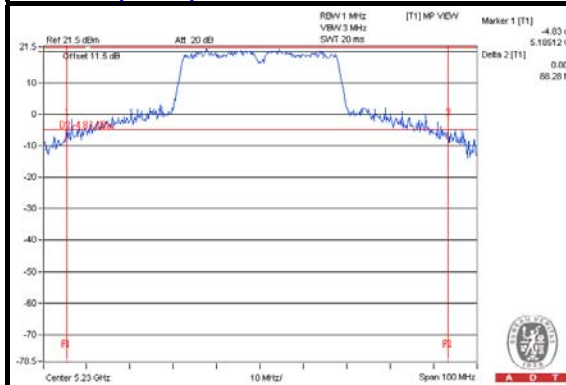
802.11a



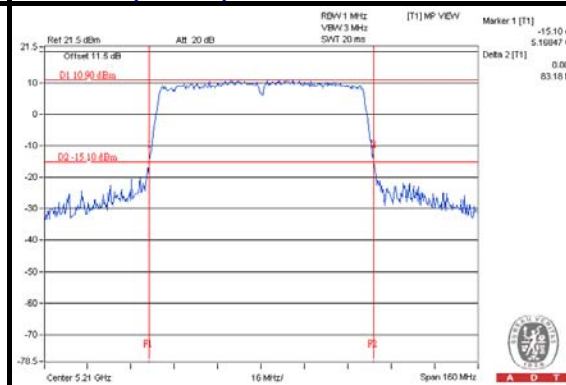
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



1TX (Radio 3)

802.11a

CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	33.54	PASS
40	5200	29.33	PASS
48	5240	33.05	PASS

802.11n (HT20)

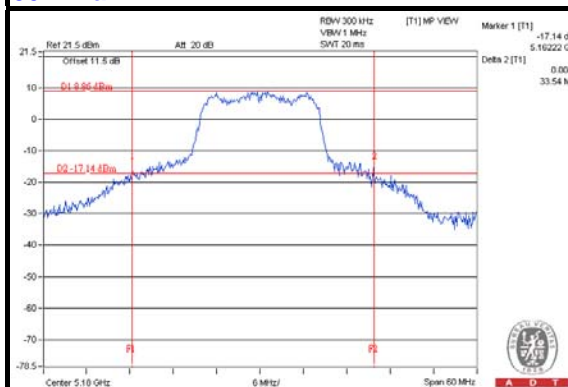
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
36	5180	31.50	PASS
40	5200	29.94	PASS
48	5240	31.54	PASS

802.11n (HT40)

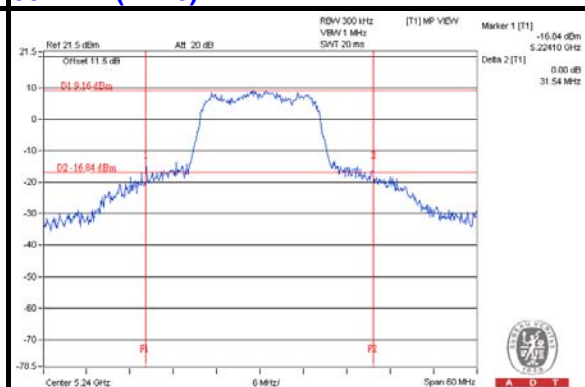
CHANNEL	CHANNEL FREQUENCY (MHz)	26dBc BANDWIDTH (MHz)	PASS / FAIL
38	5190	74.11	PASS
46	5230	92.45	PASS

SPECTRUM PLOT OF WORST VALUE

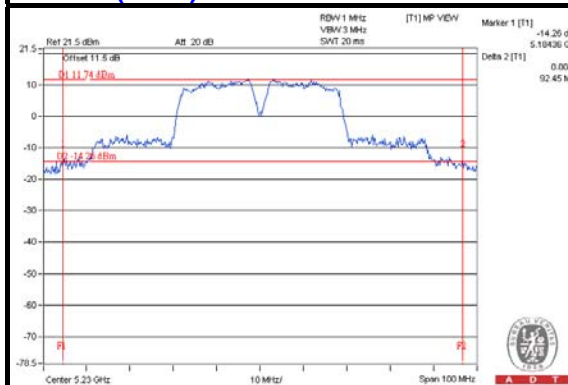
802.11a



802.11n (HT20)



802.11n (HT40)





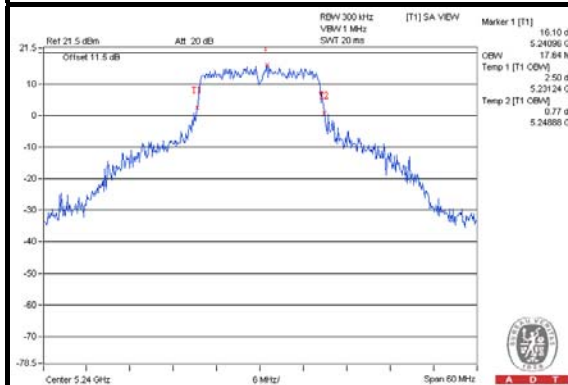
A D T

OCCUPIED BANDWIDTH:

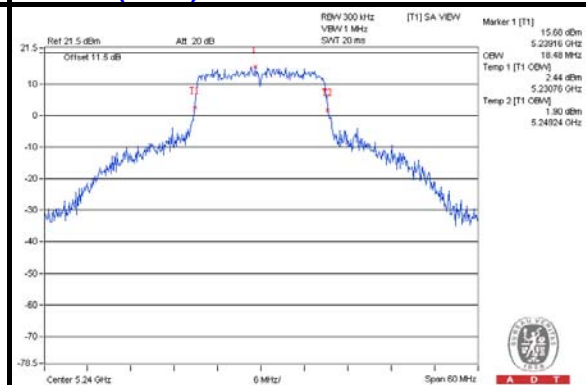
1TX (Radio 2)

SPECTRUM PLOT OF WORST VALUE

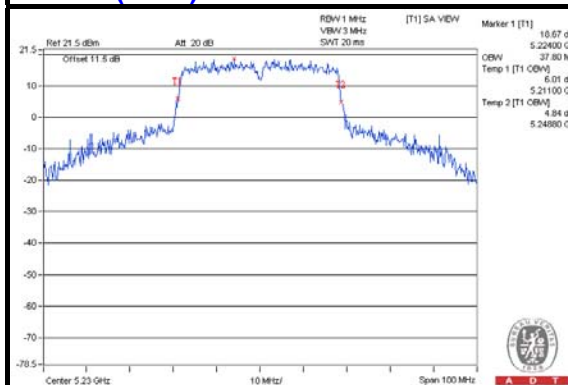
802.11a



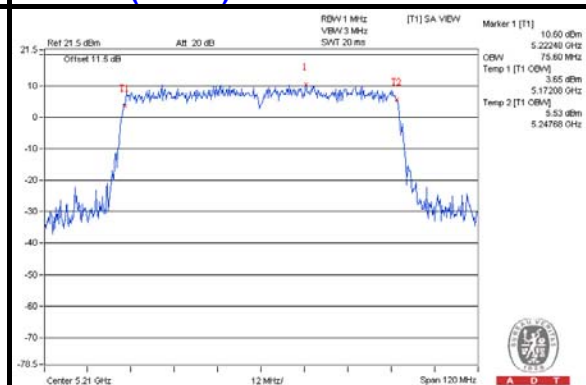
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)





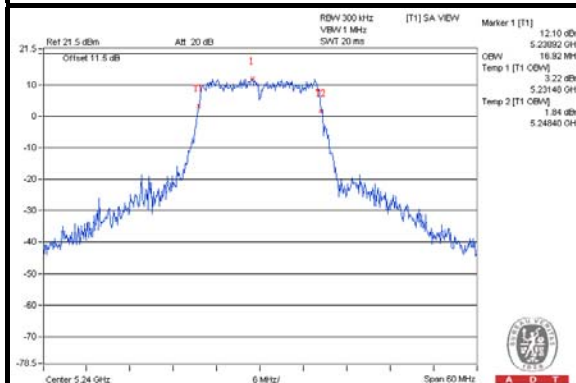
A D T

2TX (Radio 2)

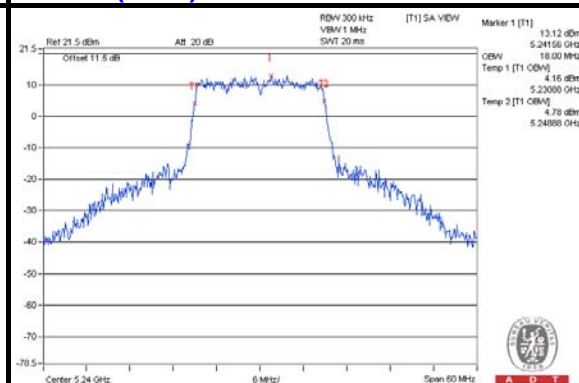
SPECTRUM PLOT OF WORST VALUE

Chain 0

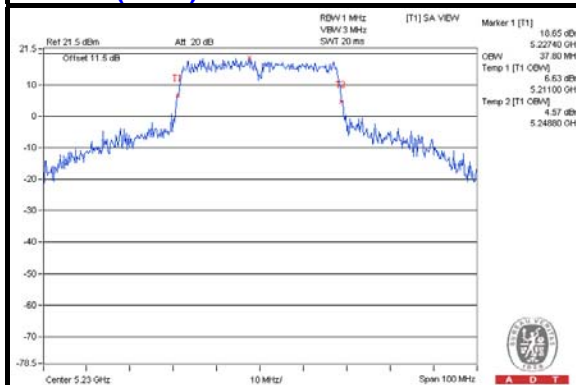
802.11a



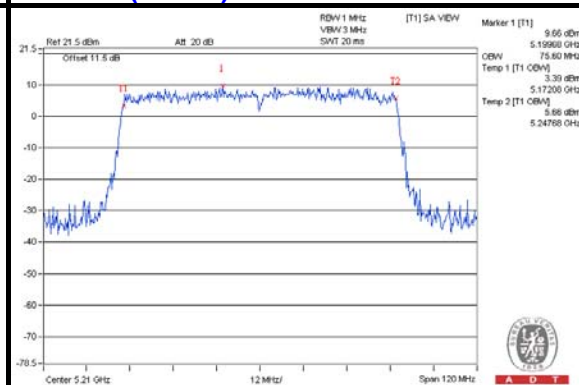
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

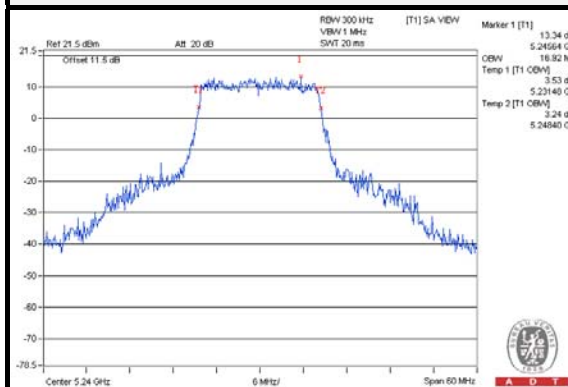




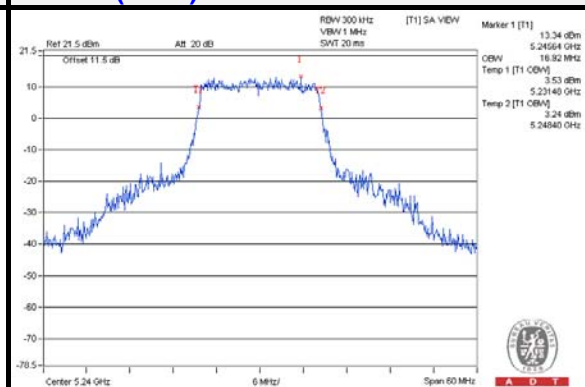
A D T

Chain 1

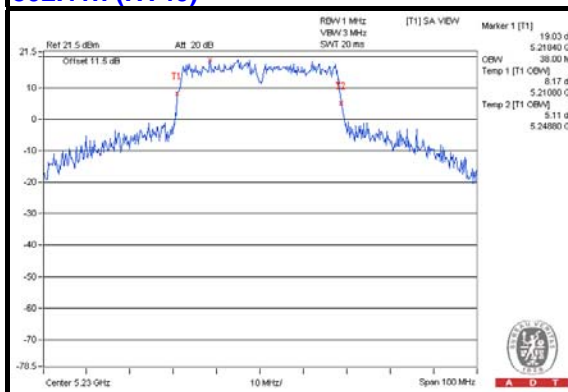
802.11a



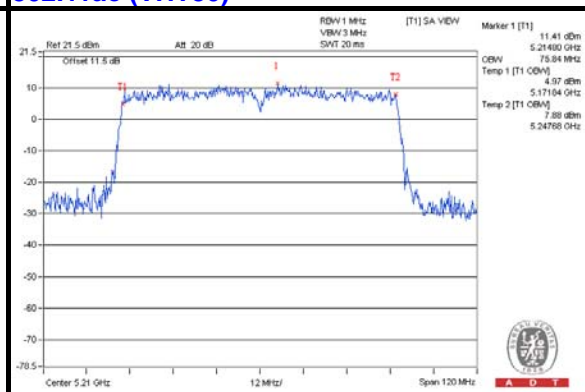
802.11n (HT20)



802.11n (HT40)



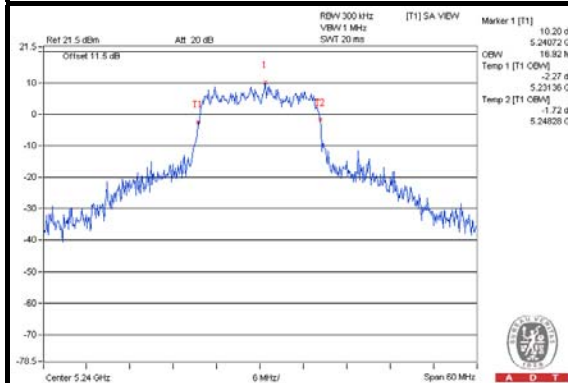
802.11ac (VHT80)



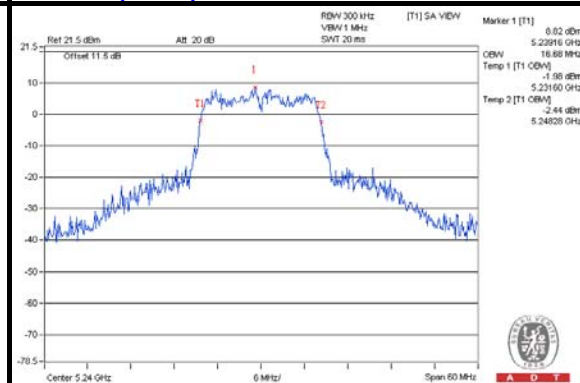
1TX (Radio 3)

SPECTRUM PLOT OF WORST VALUE

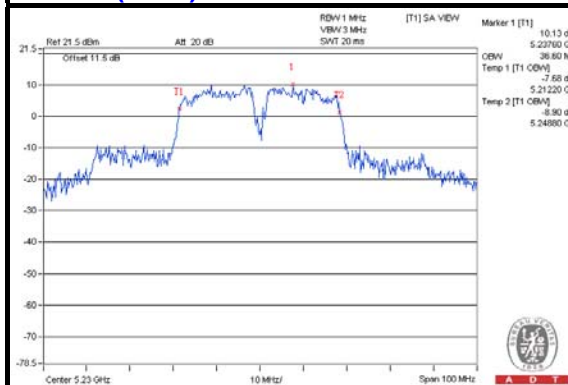
802.11a



802.11n (HT20)



802.11n (HT40)



4.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

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

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.4.4 TEST PROCEDURES

For U-NII-1 band:

Without duty factor:

Using method SA-2

- 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

With duty factor:

- 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 and add $10 \log (1/\text{duty cycle})$

For U-NII-3 band:

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 300 kHz, Set VBW \geq 3 RBW, Detector = RMS
- 3) Sweep time = auto, trigger set to “free run”.
- 4) Trace average at least 100 traces in power averaging mode.
- 5) Record the max value and add $10 \log (1/\text{duty cycle})$
- 6) Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $\text{BWCF} = 10\log(500 \text{ kHz}/300\text{kHz})$

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

Same as 4.3.6.

4.4.7 TEST RESULTS

For U-NII-1 band

1TX (Radio 2)

802.11a

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	10.60	17	PASS
40	5200	12.57	17	PASS
48	5240	12.63	17	PASS

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	PSD (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	9.70	17	PASS
40	5200	12.34	17	PASS
48	5240	12.32	17	PASS

802.11n (HT40)

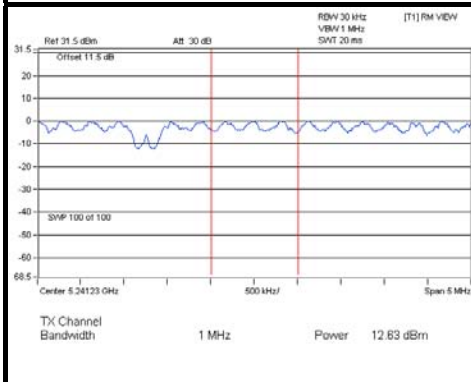
CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
38	5190	4.89	0.13	5.02	17	PASS
46	5230	8.75	0.13	8.88	17	PASS

802.11ac (VHT80)

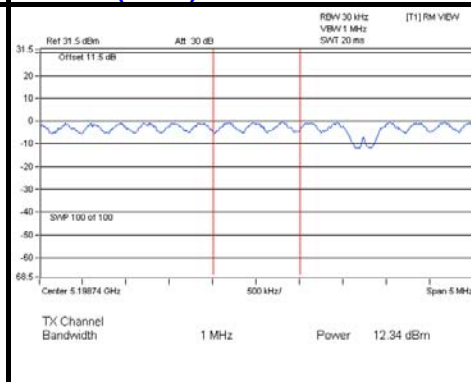
CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
42	5210	1.04	0.27	1.31	17	PASS

SPECTRUM PLOT OF WORST VALUE

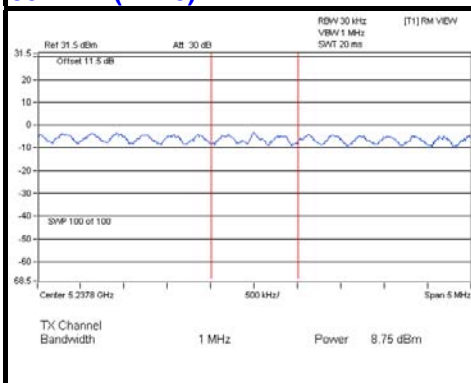
802.11a



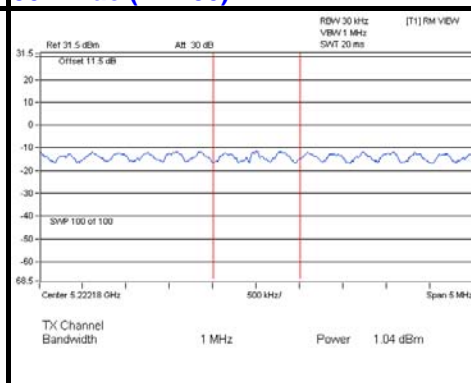
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



2TX (Radio 2)

802.11a

CHAN.	CHAN. FREQ. (MHz)	PSD (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1			
36	5180	10.46	11.13	13.82	14.80	PASS
40	5200	10.71	11.62	14.20	14.80	PASS
48	5240	10.03	10.55	13.31	14.80	PASS

NOTE:

- 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.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 8.20 > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (8.20 - 6) = 14.80\text{dBm}$.

802.11n (HT20)

CHAN.	CHAN. FREQ. (MHz)	PSD (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1			
36	5180	9.90	10.29	13.11	14.80	PASS
40	5200	11.10	11.83	14.49	14.80	PASS
48	5240	9.98	10.77	13.40	14.80	PASS

NOTE:

- 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.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 8.20 > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (8.20 - 6) = 14.80\text{dBm}$.

802.11n (HT40)

CHAN.	CHAN. FREQ. (MHz)	PSD (dBm)		TOTAL POWER DENSITY (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1			
38	5190	4.21	5.04	7.66	14.80	PASS
46	5230	9.70	9.74	12.73	14.80	PASS

NOTE:

- 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.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 8.20 > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (8.20 - 6) = 14.80\text{dBm}$.

802.11ac (VHT80)

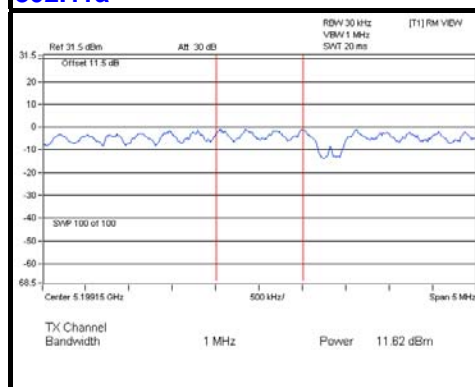
CHAN.	FREQ. (MHz)	PSD (dBm)		TOTAL PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	TOTAL PSD WITH DUTY FACTOR (dBm)	MAX. LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1					
42	5210	0.53	1.52	4.07	0.23	4.30	14.80	PASS

NOTE:

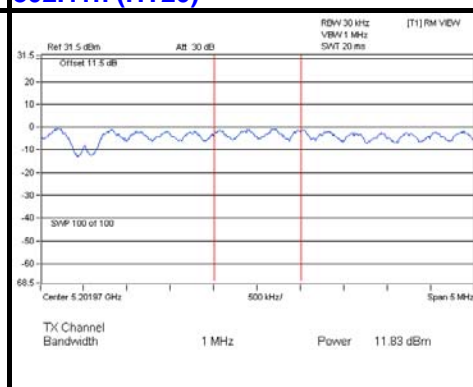
- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 8.20 > 6\text{dBi}$, so the power density limit shall be reduced to $17 - (8.20 - 6) = 14.80\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

SPECTRUM PLOT OF WORST VALUE

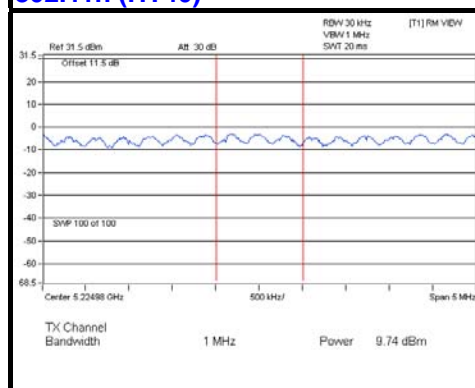
802.11a



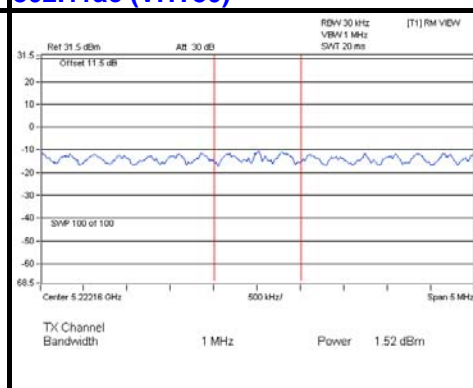
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



1TX (Radio 3)

802.11a

CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	3.95	1.29	5.24	17	PASS
40	5200	3.97	1.29	5.26	17	PASS
48	5240	5.07	1.29	6.36	17	PASS

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

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	3.70	1.31	5.01	17	PASS
40	5200	3.96	1.31	5.27	17	PASS
48	5240	4.09	1.31	5.40	17	PASS

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

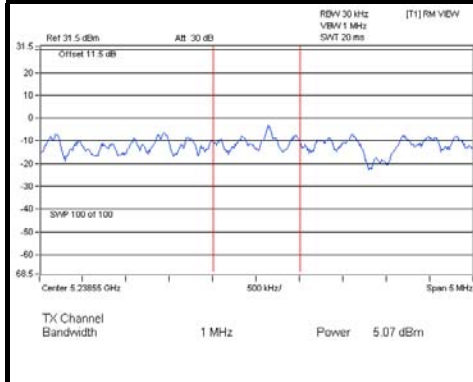
802.11n (HT40)

CHANNEL	FREQUENCY (MHz)	PSD W/O DUTY FACTOR (dBm)	DUTY FACTOR	PSD WITH DUTY FACTOR (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
38	5190	-4.94	1.21	-3.73	17	PASS
46	5230	0.54	1.21	1.75	17	PASS

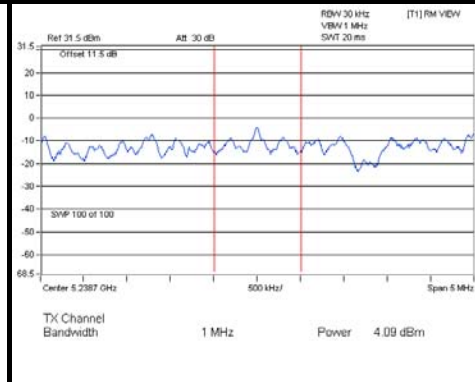
NOTE: Refer to section 3.3 for duty cycle spectrum plot.

SPECTRUM PLOT OF WORST VALUE

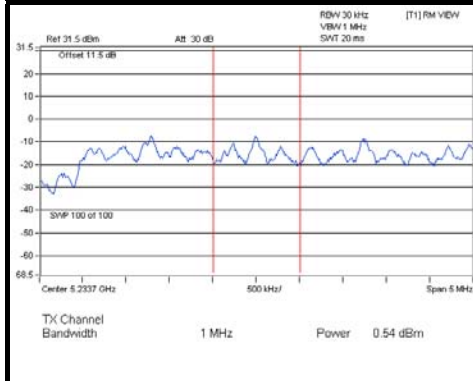
802.11a



802.11n (HT20)



802.11n (HT40)



For U-NII-3 band

1TX (Radio 2)

802.11a

Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	PASS /FAIL
149	5745	0.94	3.16	30	PASS
157	5785	0.92	3.14	30	PASS
165	5825	-0.62	1.60	30	PASS

802.11n (HT20)

Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	PASS /FAIL
149	5745	-0.69	1.53	30	PASS
157	5785	0.66	2.88	30	PASS
165	5825	-1.21	1.01	30	PASS

802.11n (HT40)

Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Duty Factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	PASS /FAIL
151	5755	-4.46	-2.24	0.14	-2.10	30	PASS
159	5795	-2.56	-0.34	0.14	-0.20	30	PASS

802.11ac (VHT80)

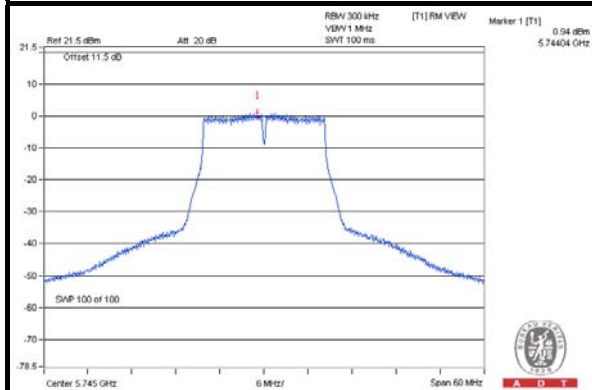
Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Duty Factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	PASS /FAIL
155	5775	-8.89	-6.67	0.28	-6.39	30	PASS



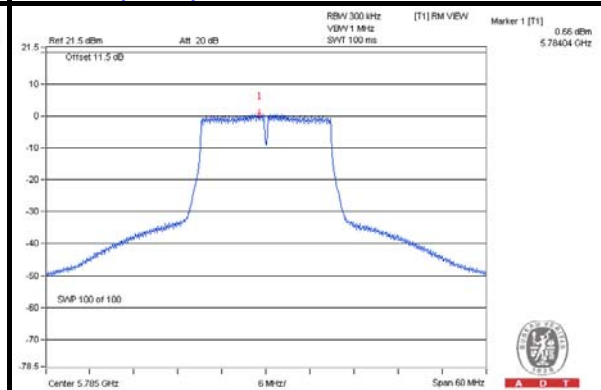
A D T

SPECTRUM PLOT OF WORST VALUE

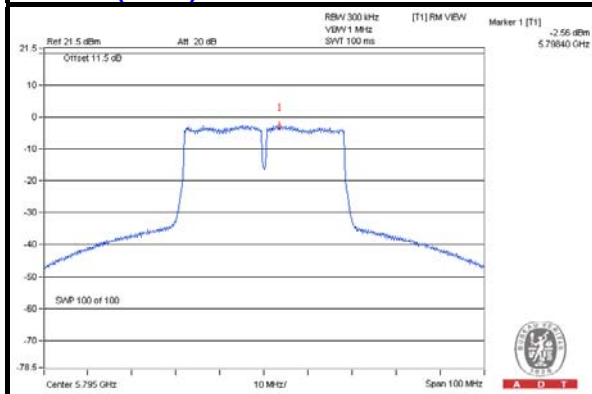
802.11a



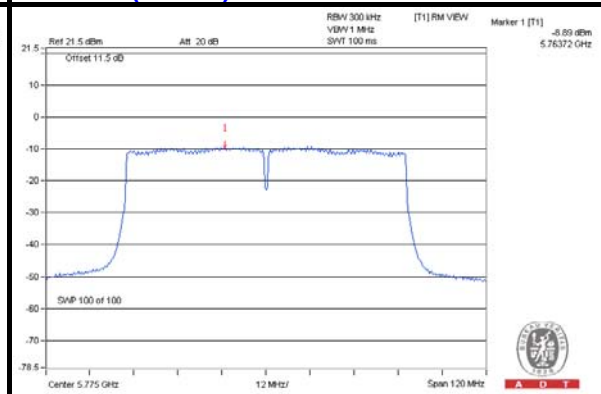
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



2TX (Radio 2)

802.11a

TX chain	Channel	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	10 log (N=2) dB	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	PASS /FAIL
0	149	5745	0.53	2.75	3.01	5.76	27.63	PASS
	157	5785	-0.64	1.58	3.01	4.59	27.63	PASS
	165	5825	-2.18	0.04	3.01	3.05	27.63	PASS
1	149	5745	-0.65	1.57	3.01	4.58	27.63	PASS
	157	5785	-1.58	0.64	3.01	3.65	27.63	PASS
	165	5825	-3.03	-0.81	3.01	2.20	27.63	PASS

NOTE: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 8.37 > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (8.37 - 6) = 27.63\text{dBm}$.

802.11n (HT20)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	10 log (N=2) dB	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	PASS /FAIL
0	149	5745	-0.69	1.53	3.01	4.54	27.63	PASS
	157	5785	1.34	3.56	3.01	6.57	27.63	PASS
	165	5825	1.00	3.22	3.01	6.23	27.63	PASS
1	149	5745	-1.73	0.49	3.01	3.50	27.63	PASS
	157	5785	0.56	2.78	3.01	5.79	27.63	PASS
	165	5825	0.25	2.47	3.01	5.48	27.63	PASS

NOTE: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 8.37 > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (8.37 - 6) = 27.63\text{dBm}$.

802.11n (HT40)

TX chain	Channel	Freq. (MHz)	PSD (dBm/300 kHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Duty Factor	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	PASS /FAIL
0	151	5755	-5.94	-3.72	3.01	0.12	-0.59	27.63	PASS
	159	5795	-3.21	-0.99	3.01	0.12	1.90	27.63	PASS
1	151	5755	-7.23	-5.01	3.01	0.12	-1.88	27.63	PASS
	159	5795	-4.34	-2.12	3.01	0.12	3.02	27.63	PASS

NOTE:

- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 8.37 > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (8.37 - 6) = 27.63\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

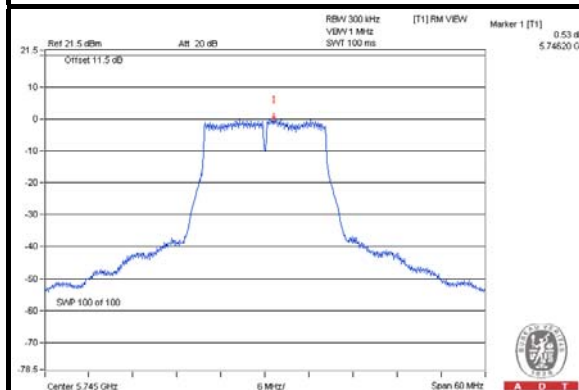
TX chain	Channel	Freq. (MHz)	PSD (dBm/300 kHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Duty Factor	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	PASS /FAIL
0	42	5210	-9.55	-7.33	3.01	0.28	-4.04	27.63	PASS
1	42	5210	-10.08	-7.86	3.01	0.28	-4.57	27.63	PASS

NOTE:

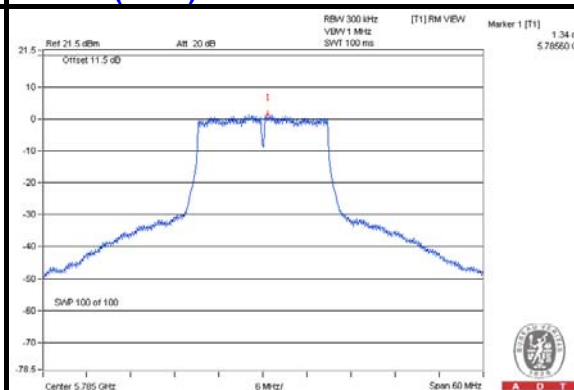
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 8.37 > 6\text{dBi}$, so the power density limit shall be reduced to $30 - (8.37 - 6) = 27.63\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

SPECTRUM PLOT OF WORST VALUE

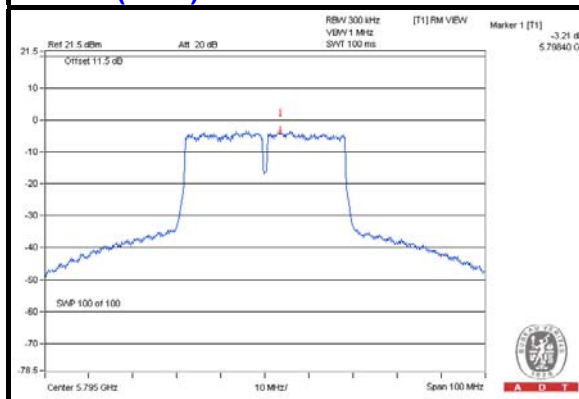
802.11a



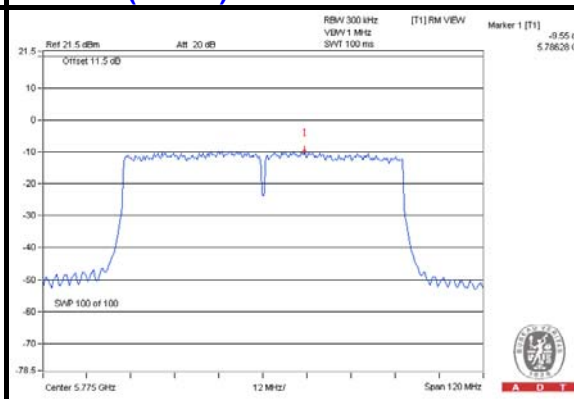
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



1TX (Radio 3)

802.11a

Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Duty Factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	PASS /FAIL
149	5745	-2.28	-0.06	1.52	1.46	30	PASS
157	5785	1.50	3.72	1.52	5.24	30	PASS
165	5825	-1.37	0.85	1.52	2.37	30	PASS

802.11n (HT20)

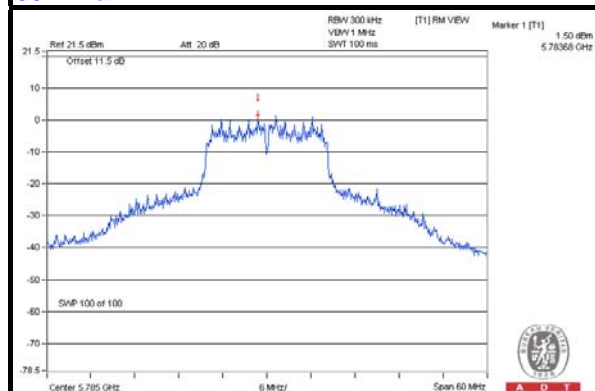
Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Duty Factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	PASS /FAIL
149	5745	-2.28	-0.06	1.50	1.44	30	PASS
157	5785	1.50	3.72	1.50	5.22	30	PASS
165	5825	-1.46	0.76	1.50	2.26	30	PASS

802.11n (HT40)

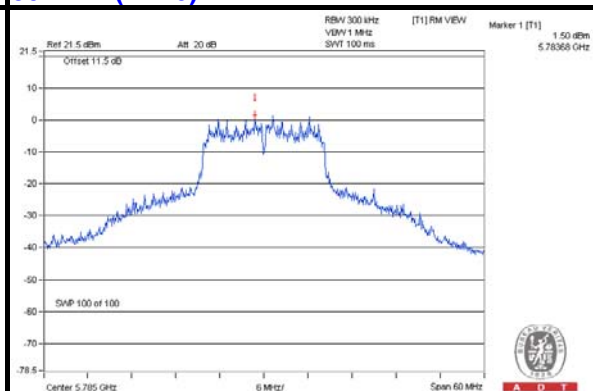
Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Duty Factor	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	PASS /FAIL
151	5755	-12.33	-10.11	2.07	-8.04	30	PASS
159	5795	-6.41	-4.19	2.07	-2.12	30	PASS

SPECTRUM PLOT OF WORST VALUE

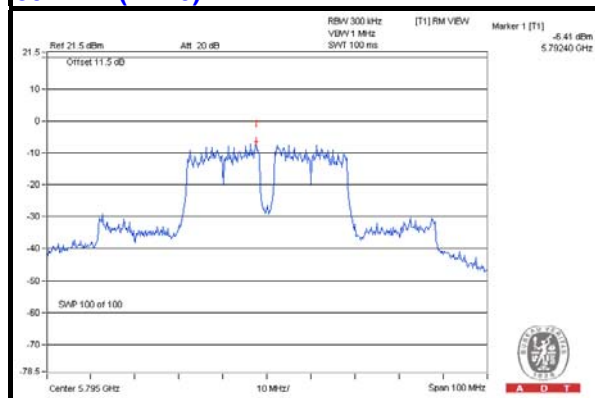
802.11a



802.11n (HT20)



802.11n (HT40)

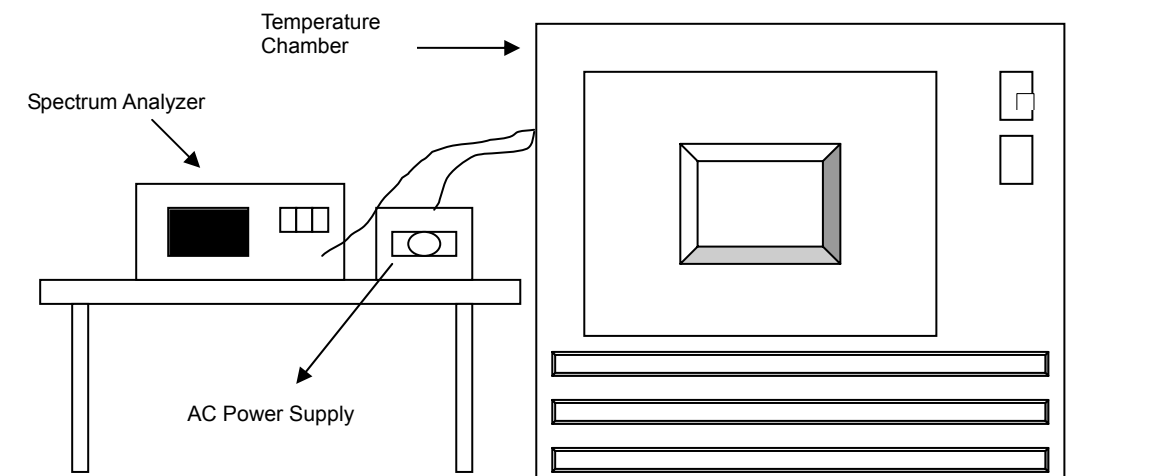


4.5 FREQUENCY STABILITY

4.5.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

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

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.3 to get information of above instrument.

4.5.4 TEST PROCEDURE

- a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- b. Turn the EUT on and couple its output to a spectrum analyzer.
- c. Turn the EUT off and set the chamber to the highest temperature specified.
- d. 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.
- e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- f. 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.

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITION

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

4.5.7 TEST RESULTS

1TX (Radio 2)

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5240MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	5240.0070	0.00013	5240.0072	0.00014	5240.0040	0.00008	5240.0045	0.00009
40	120	5239.9820	-0.00034	5239.9832	-0.00032	5239.9818	-0.00035	5239.9845	-0.00030
30	120	5240.0021	0.00004	5240.0026	0.00005	5240.0005	0.00001	5239.9991	-0.00002
20	120	5240.0208	0.00040	5240.0217	0.00041	5240.0221	0.00042	5240.0195	0.00037
10	120	5239.9798	-0.00039	5239.9806	-0.00037	5239.9783	-0.00041	5239.9780	-0.00042
0	120	5239.9940	-0.00011	5239.9967	-0.00006	5239.9929	-0.00014	5239.9964	-0.00007
-10	120	5240.0079	0.00015	5240.0076	0.00015	5240.0049	0.00009	5240.0091	0.00017
-20	120	5239.9835	-0.00031	5239.9814	-0.00035	5239.9838	-0.00031	5239.9804	-0.00037
-30	120	5240.0068	0.00013	5240.0085	0.00016	5240.0085	0.00016	5240.0070	0.00013

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5240MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5240.0199	0.00038	5240.0223	0.00043	5240.0212	0.00040	5240.0203	0.00039
	120	5240.0208	0.00040	5240.0217	0.00041	5240.0221	0.00042	5240.0195	0.00037
	102	5240.0215	0.00041	5240.0219	0.00042	5240.0218	0.00042	5240.0198	0.00038

2TX (Radio 2)

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5240MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	5239.9887	-0.00022	5239.9882	-0.00023	5239.9924	-0.00015	5239.9922	-0.00015
40	120	5240.0257	0.00049	5240.0234	0.00045	5240.0207	0.00040	5240.0218	0.00042
30	120	5240.0239	0.00046	5240.0282	0.00054	5240.0263	0.00050	5240.0278	0.00053
20	120	5239.9780	-0.00042	5239.9797	-0.00039	5239.9775	-0.00043	5239.9787	-0.00041
10	120	5240.0175	0.00033	5240.0137	0.00026	5240.0145	0.00028	5240.0174	0.00033
0	120	5239.9904	-0.00018	5239.9897	-0.00020	5239.9886	-0.00022	5239.9917	-0.00016
-10	120	5240.0056	0.00011	5240.0064	0.00012	5240.0056	0.00011	5240.0055	0.00010
-20	120	5239.9777	-0.00043	5239.9754	-0.00047	5239.9765	-0.00045	5239.9738	-0.00050
-30	120	5239.9827	-0.00033	5239.9850	-0.00029	5239.9830	-0.00032	5239.9848	-0.00029

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5240MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5239.9774	-0.00043	5239.9799	-0.00038	5239.9783	-0.00041	5239.9796	-0.00039
	120	5239.9780	-0.00042	5239.9797	-0.00039	5239.9775	-0.00043	5239.9787	-0.00041
	102	5239.9783	-0.00041	5239.9801	-0.00038	5239.9773	-0.00043	5239.9796	-0.00039

1TX (Radio 3)

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5240MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	5240.0096	0.00018	5240.0071	0.00014	5240.006	0.00011	5240.0073	0.00014
40	120	5240.0108	0.00021	5240.0108	0.00021	5240.0099	0.00019	5240.0101	0.00019
30	120	5239.9895	-0.00020	5239.9852	-0.00028	5239.9866	-0.00026	5239.9868	-0.00025
20	120	5239.9773	-0.00043	5239.9806	-0.00037	5239.9810	-0.00036	5239.9776	-0.00043
10	120	5240.0244	0.00047	5240.0223	0.00043	5240.0229	0.00044	5240.0262	0.00050
0	120	5239.9721	-0.00053	5239.9728	-0.00052	5239.9718	-0.00054	5239.9716	-0.00054
-10	120	5239.9873	-0.00024	5239.986	-0.00027	5239.9857	-0.00027	5239.9848	-0.00029
-20	120	5239.9942	-0.00011	5239.9904	-0.00018	5239.9893	-0.00020	5239.9904	-0.00018
-30	120	5240.0043	0.00008	5240.0054	0.00010	5240.0016	0.00003	5240.0028	0.00005

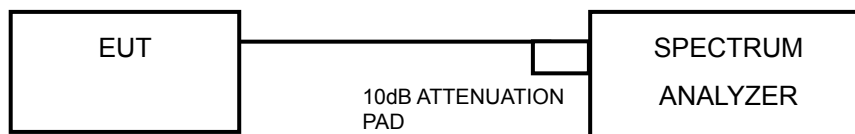
FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5240MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5239.9774	-0.00043	5239.9816	-0.00035	5239.9816	-0.00035	5239.9773	-0.00043
	120	5239.9773	-0.00043	5239.9806	-0.00037	5239.9810	-0.00036	5239.9776	-0.00043
	102	5239.9771	-0.00044	5239.9804	-0.00037	5239.9814	-0.00035	5239.9785	-0.00041

4.6 6dB BANDWIDTH MEASUREMENT

4.6.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.6.2 TEST SETUP



4.6.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.6.4 TEST PROCEDURE

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

4.6.5 DEVIATION FROM TEST STANDARD

No deviation.

4.6.6 EUT OPERATING CONDITIONS

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

4.6.7 TEST RESULTS

1TX (Radio 2)

802.11a

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

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	17.69	0.5	PASS
157	5785	17.67	0.5	PASS
165	5825	17.65	0.5	PASS

802.11n (HT40)

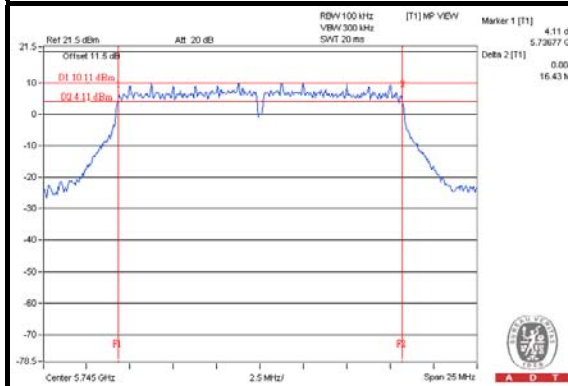
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
151	5755	36.48	0.5	PASS
159	5795	36.46	0.5	PASS

802.11ac (VHT80)

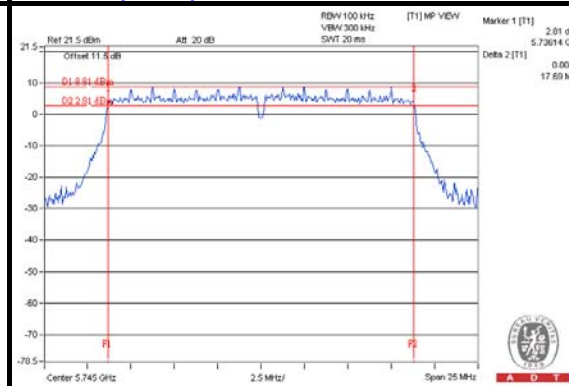
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
42	5210	75.97	0.5	PASS

SPECTRUM PLOT OF WORST VALUE

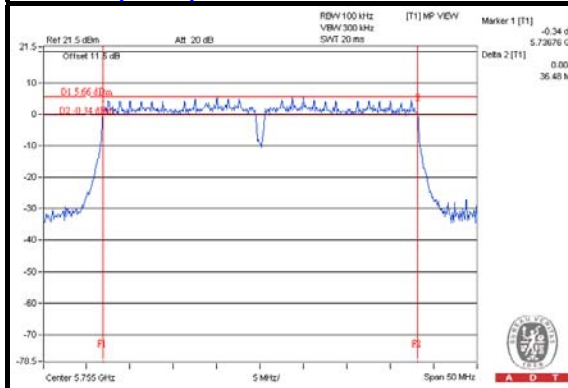
802.11a



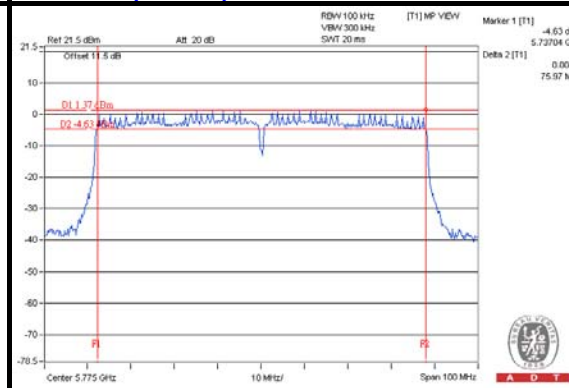
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



2TX (Radio 2)

802.11a

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
149	5745	16.43	16.48	0.5	PASS
157	5785	16.41	16.46	0.5	PASS
165	5825	16.43	16.43	0.5	PASS

802.11n (HT20)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
149	5745	17.65	17.69	0.5	PASS
157	5785	17.64	17.67	0.5	PASS
165	5825	17.65	17.68	0.5	PASS

802.11n (HT40)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
151	5755	36.47	36.48	0.5	PASS
159	5795	36.47	36.46	0.5	PASS

802.11ac (VHT80)

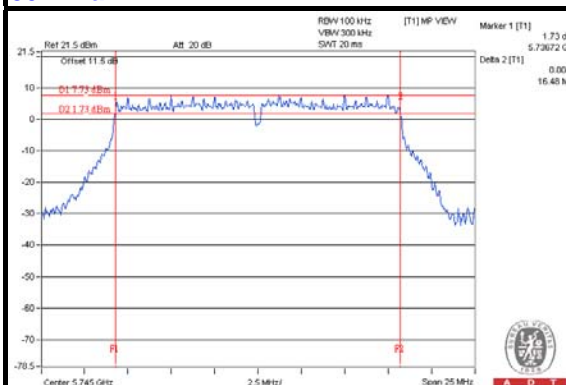
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
42	5210	75.72	76.49	0.5	PASS



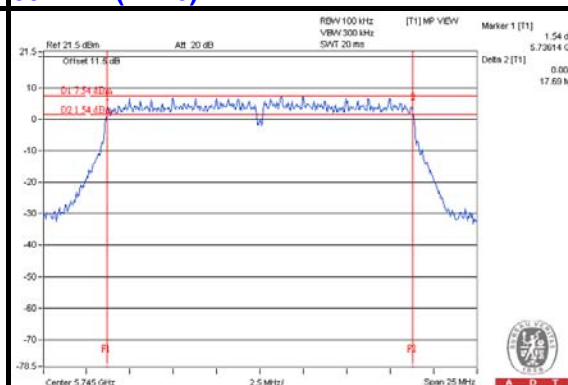
A D T

SPECTRUM PLOT OF WORST VALUE

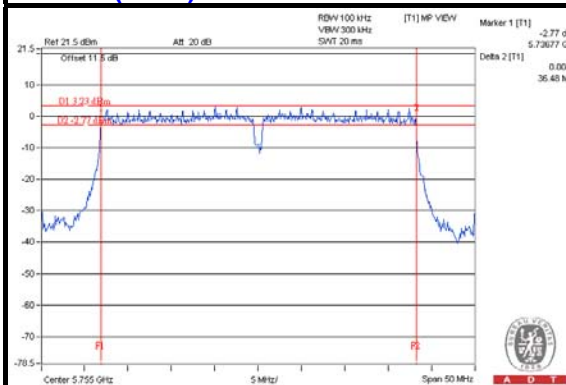
802.11a



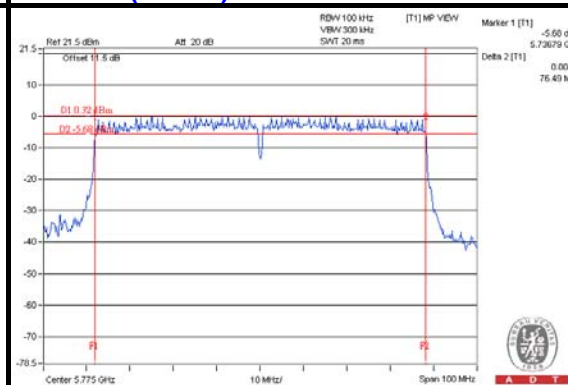
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



1TX (Radio 3)

802.11a

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	15.20	0.5	PASS
157	5785	15.19	0.5	PASS
165	5825	15.20	0.5	PASS

802.11n (HT20)

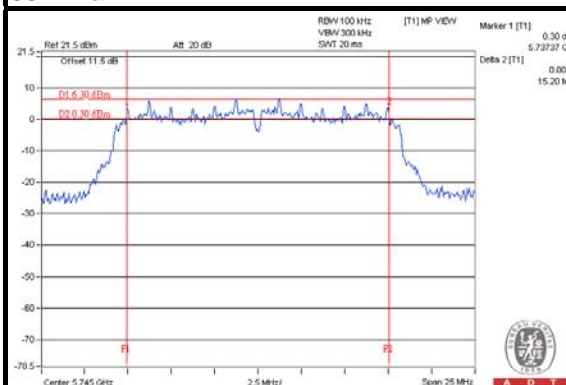
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
149	5745	15.20	0.5	PASS
157	5785	15.19	0.5	PASS
165	5825	15.20	0.5	PASS

802.11n (HT40)

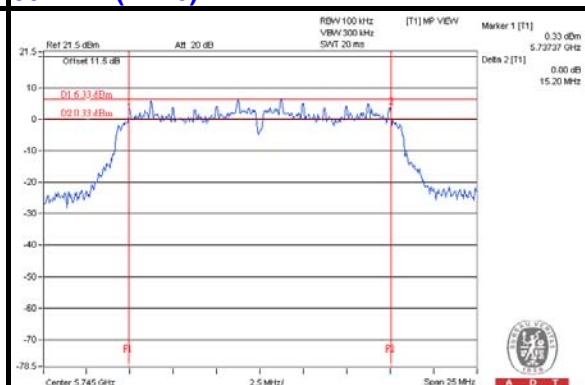
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
151	5755	36.37	0.5	PASS
159	5795	36.34	0.5	PASS

SPECTRUM PLOT OF WORST VALUE

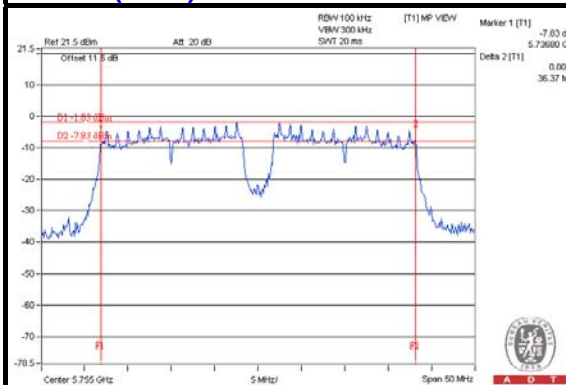
802.11a



802.11n (HT20)



802.11n (HT40)



5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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

6. INFORMATION ON THE TESTING LABORATORIES

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

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

Linko EMC/RF Lab:

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab:

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety 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.

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---