FCC Test Report (WLAN)

Report No.:	RF140212E04S-1
FCC ID:	PPD-AR5B22
Test Model:	AR5B22
Received Date:	Sep. 16, 2015
Test Date:	Oct. 15 to 21, 2015
Issued Date:	Oct. 26, 2015
Applicant:	Qualcomm Atheros, Inc.
Address:	1700 Technology Drive, San Jose, CA 95110
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.
Test Location (1):	No. 81-1, Lu Liao Keng, 9th Ling,Wu Lung Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.
Test Location (2):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.
Test Location (3):	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.

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Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RF140212E04S-1	Original release.	Oct. 26, 2015

1 Certificate of Conformity

Product:	PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Brand:	Atheros
Test Model:	AR5B22
Sample Status:	R&D SAMPLE
Applicant:	Qualcomm Atheros, Inc.
Test Date:	Oct. 15 to 21, 2015
Standards:	47 CFR FCC Part 15, Subpart E (Section 15.407) ANSI C63.10: 2013

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

Prepared by : _____ , **Date:** Oct. 26, 2015

Midoli Peng / Specialist

Approved by : _____ , **Date:** Oct. 26, 2015

May Chen / Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (SECTION 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b) (1/2/3/4/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -4.2dB at 199.92MHz.
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.

NOTE: 1. This report is prepared for FCC Class II change. (Upgrade the standard to section 15.407 under new rule for U-NII-3 band)

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expended Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.31 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	3.40 dB
	6GHz ~ 18GHz	3.73 dB
	18GHz ~ 40GHz	4.11 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	PCIE 802.11a/b/g/n 2.4GHz/5GHz + USB BT 4.0 card
Brand	Atheros
Test Model	AR5B22
Status of EUT	R&D SAMPLE
Power Supply Rating	3.3Vdc from host equipment
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	DSSS,OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n : up to 300Mbps
Operating Frequency	For 15.407 5.18 ~ 5.24GHz, 5.26 ~ 5.32GHz, 5.50 ~ 5.60GHz & 5.65 ~ 5.72GHz, 5.745 ~ 5.825GHz
	For 15.247 2.412 ~ 2.462GHz
Number of Channel	For 15.407 21 for 802.11a, 802.11n (HT20) 9 for 802.11n (HT40)
	For 15.247 11 for 802.11b/g, 802.11n (HT20) 7 for 802.11n (HT40)
Output Power	802.11a: 36.672mW 802.11n (HT20): 52.982mW 802.11n (HT40): 52.443mW
Antenna Type	See item 3.2
Antenna Connector	See item 3.2
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. This report is prepared for FCC Class II change. The difference compared with the Report No.: RF 110907E02S-1 design is as the following:
   - ◆ Upgrade the standard to section 15.407 under new rule for U-NII-3 band
2. According to above conditions, all test items of U-NII-3 band test item need to be performed, except for AC power conducted emission test item. And all data was verified to meet the requirements.
3. There are Bluetooth technology and WLAN technology used for the EUT.
4. The device has three configurations (working mode)
   a. WLAN only (2x2 MIMO)
   b. BT+WLAN (2x2 MIMO) with reduced power on WLAN
   c. BT+WLAN (1x1 mode on a/b/g only, chain 0 is used for BT and chain 1 is used for WLAN)
5. This device support the power back off (For WLAN only mode.) for WLAN/BT coexist mode. The WiFi output power will reduce 5dB from Maximum power for WLAN and BT simultaneously transmission.

6. The EUT incorporates a 2T2R function.

MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11a	6 ~ 54Mbps	1TX / 2TX	1RX / 2RX
802.11b	1 ~ 11Mbps	1TX / 2TX	1RX / 2RX
802.11g	6 ~ 54Mbps	1TX / 2TX	1RX / 2RX
802.11n (HT20)	MCS 0~7	2TX	2RX
	MCS 8~15	2TX	2RX
802.11n (HT40)	MCS 0~7	2TX	2RX
	MCS 8~15	2TX	2RX
Note: All of modulation mode support beamforming function except 802.11a/b/g modulation mode.			

7. 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 Antenna

The antenna gain was declared by client; please refer to the following table:

Ant. No.	Brand	Model	Ant. Type	2.4GHz Gain with cable loss (dBi)	5GHz Gain with cable loss (dBi)	2.4GHz Cable Loss (dB)	5GHz Cable Loss (dB)	Connector Type	Cable Length (mm)
1&2	WNC	81.EBJ15.005	PIFA	3.62	5.15~5.35GHz: 3.08	1.15	5.15~5.35GHz: 1.70	IPEX	300
					5.47~5.725GHz: 4.76		5.47~5.725GHz: 1.74		
					5.725~5.85GHz: 4.76		5.725~5.85GHz: 1.79		

Note: 1. Above antenna gains of antenna are Total (H+V).

3.3 Description of Test Modes

FOR 5745 ~ 5825MHz:

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

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

2 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

3.3.1 Test Mode Applicability and Tested Channel Detail

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

Where **UE≥1G:** Unwanted Emission above 1GHz **UE<1G:** Unwanted Emission below 1GHz
APCM: Antenna Port Conducted Measurement

Unwanted 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.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	DATA RATE (Mbps)
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6
802.11n (HT20)		149 to 165	149, 157, 165	OFDM	6.5
802.11n (HT40)		151 to 159	151, 159	OFDM	13.5

Unwanted 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.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	DATA RATE (Mbps)
802.11n (HT40)	5745-5825	151 to 159	159	OFDM	13.5

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.

MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	DATA RATE (Mbps)
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6
802.11n (HT20)		149 to 165	149, 157, 165	OFDM	6.5
802.11n (HT40)		151 to 159	151, 159	OFDM	13.5

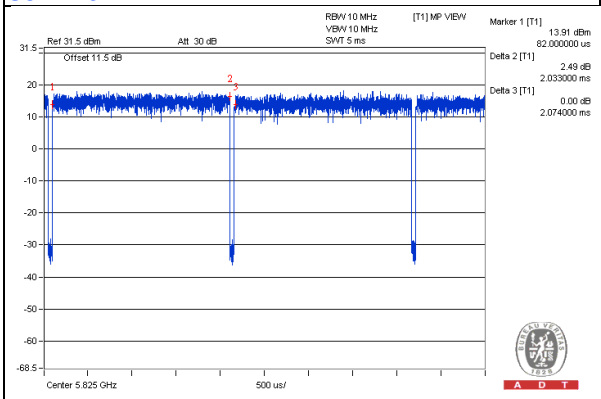
Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
UE≥1G	25deg. C, 65%RH	120Vac, 60Hz	Alex Ku
UE<1G	24deg. C, 71%RH	120Vac, 60Hz	Alex Ku
APCM	25deg. C, 60%RH	120Vac, 60Hz	Gary Cheng

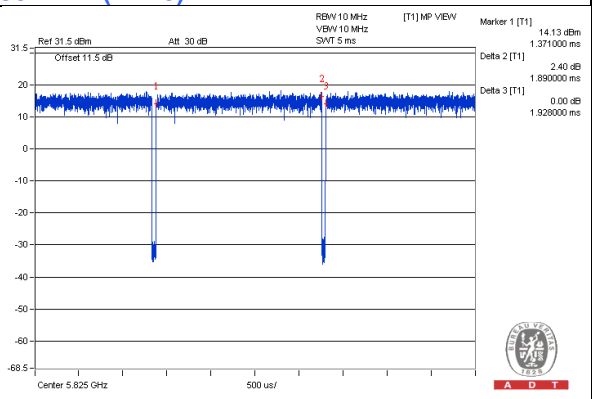
3.4 Duty Cycle of Test Signal

If duty cycle of test signal is ≥ 98 %, duty factor is not required.
If duty cycle of test signal is < 98%, duty factor shall be considered.
802.11a: Duty cycle = 2.033 ms/2.074 ms = 0.98
802.11n (HT20): Duty cycle = 1.89 ms/1.928 ms = 0.98
802.11n (HT40): Duty cycle = 1.027 ms/1.076 ms = 0.954, Duty factor = 10 * log(1/0.954) = 0.20

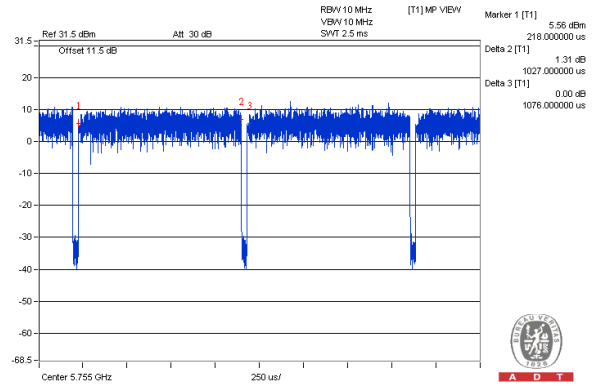
802.11a



802.11n (HT20)



802.11n (HT40)



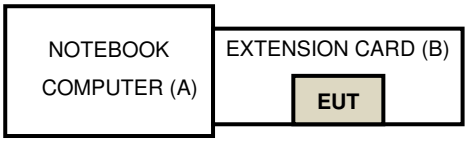
3.5 Description of Support Units

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

No.	Product	Brand	Model No.	Serial No.	FCC ID	Remark
A	NOTEBOOK COMPUTER	DELL	PP32LA	FSLB32S	FCC DoC	Provided by Lab
B	EXTENSION CARD	Qualcomm Atheros	NA	NA	NA	Supplied by Client

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

3.5.1 Configuration of System under Test



3.6 General Description of Applied Standards

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

FCC Part 15, Subpart E (15.407)
789033 D02 General UNII Test Procedures New Rules v01
662911 D01 Multiple Transmitter Output v02r01
644545 D03 Guidance for IEEE 802.11ac v01
ANSI C63.10-2013

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

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

4 Test Types and Results

4.1 Transmit Power Measurment

4.1.1 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 ≦ 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)

Note: *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.

4.1.2 Test Setup

4.1.3 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Power meter Anritsu	ML2495A	1014008	Apr. 28, 2015	Apr. 27, 2016
Power sensor Anritsu	MA2411B	0917122	Apr. 28, 2015	Apr. 27, 2016

NOTE: 1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: Oct. 20, 2015

4.1.4 Test Procedures

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.

4.1.5 Deviation from Test Standard

No deviation.

4.1.6 EUT Operating Conditions

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

4.1.7 Test Results

For 1TX

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
149	5745	16.293	12.12	30	Pass
157	5785	30.903	14.90	30	Pass
165	5825	27.797	14.44	30	Pass

For 2TX

802.11a

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	9.88	9.31	18.258	12.61	30	Pass
157	5785	13.10	12.11	36.672	15.64	30	Pass
165	5825	12.85	12.33	36.375	15.61	30	Pass

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
149	5745	8.56	7.90	13.344	11.25	30	Pass
157	5785	14.32	14.14	52.982	17.24	30	Pass
165	5825	13.00	12.38	37.251	15.71	30	Pass

802.11n (HT40)

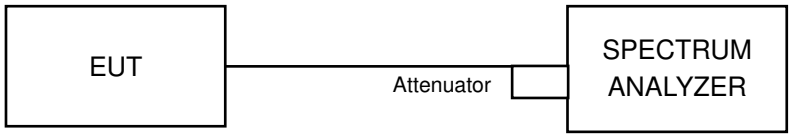
Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
151	5755	7.68	7.00	10.873	10.36	30	Pass
159	5795	14.68	13.63	52.443	17.20	30	Pass

4.2 Peak Power Spectral Density Measurement

4.2.1 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	
		Mobile and Portable client device	11dBm/ MHz
U-NII-2A			11dBm/ MHz
U-NII-2C			11dBm/ MHz
U-NII-3	√		30dBm/ MHz

4.2.2 Test Setup



4.2.3 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSP40	100060	May 08, 2015	May 07, 2016

NOTE: 1. The test was performed in Oven room B.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: Oct. 20, 2015

4.2.4 Test Procedures

For 802.11a / 802.11n (HT20)

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

For 802.11n (HT40)

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

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Conditions

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

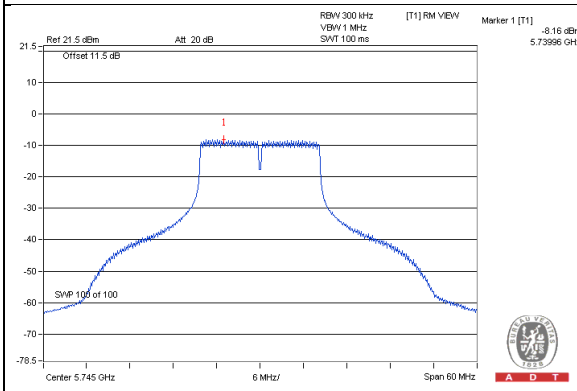
4.2.7 Test Results

For 1TX

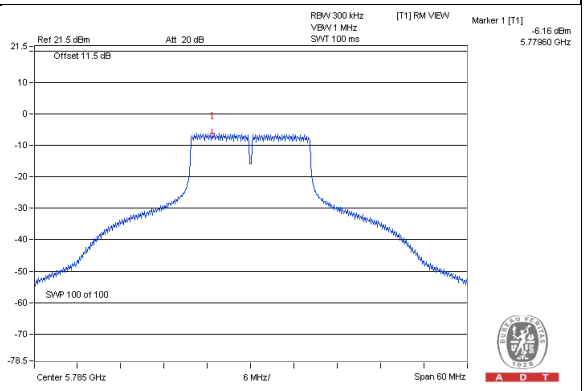
802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
149	5745	-8.16	-5.94	30	Pass
157	5785	-6.16	-3.94	30	Pass
165	5825	-7.19	-4.97	30	Pass

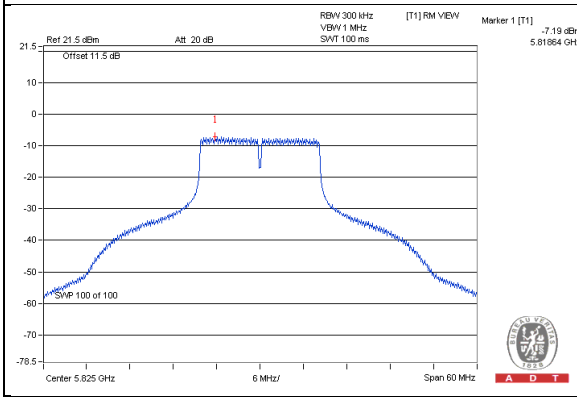
CH149



CH157



CH165



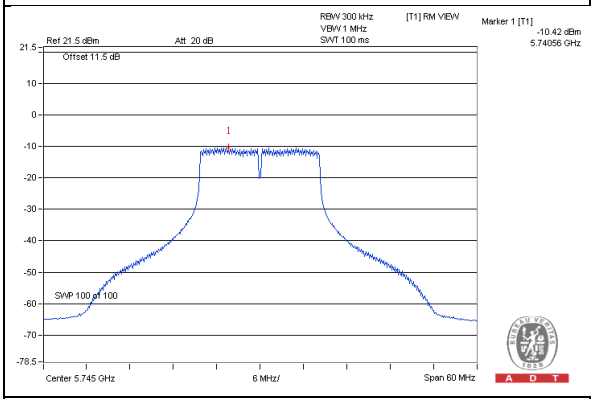
For 2TX

802.11a

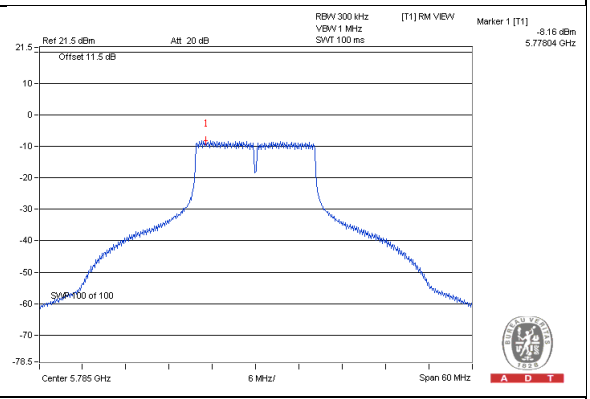
TX chain	Chan.	Chan. Freq. (MHz)	PSD		10 log (N=2) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)				
0	149	5745	-10.42	-8.20	3.01	-5.19	28.23	Pass
	157	5785	-8.16	-5.94	3.01	-2.93	28.23	Pass
	165	5825	-8.87	-6.65	3.01	-3.64	28.23	Pass
1	149	5745	-11.84	-9.62	3.01	-6.61	28.23	Pass
	157	5785	-8.93	-6.71	3.01	-3.70	28.23	Pass
	165	5825	-9.57	-7.35	3.01	-4.34	28.23	Pass

NOTE: 1. Directional gain = 4.76dBi + 10log(2) = 7.77dBi > 6dB, so the power density limit shall be reduced to 30-(7.77-6) = 28.23dBm.

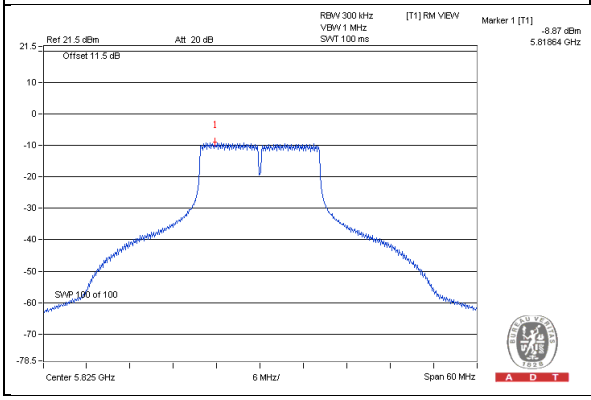
Chain 0 / CH149



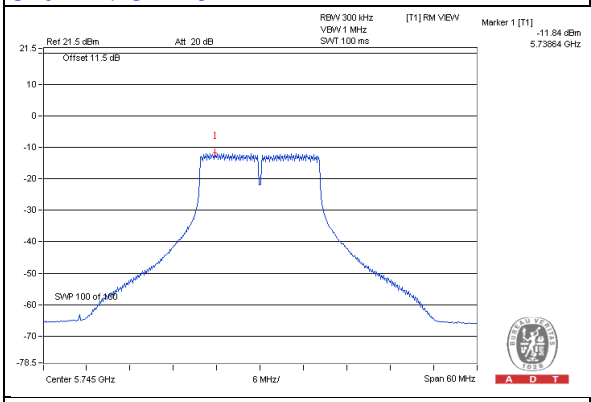
Chain 0 / CH157



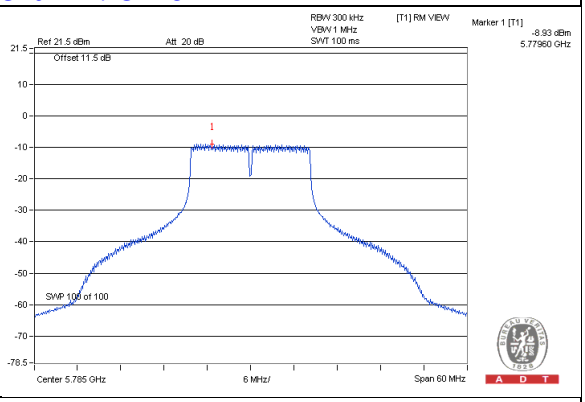
Chain 0 / CH165



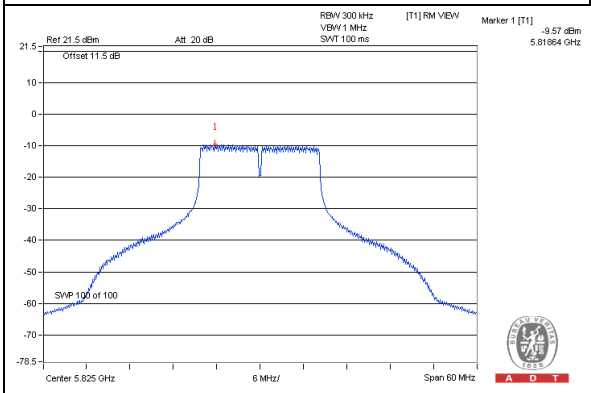
Chain 1 / CH149



Chain 1 / CH157



Chain 1 / CH165

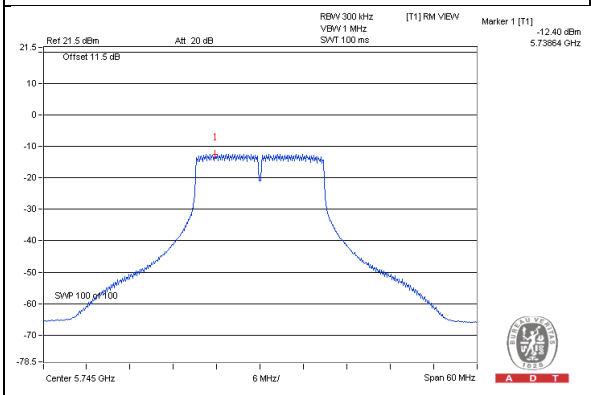


802.11n (HT20)

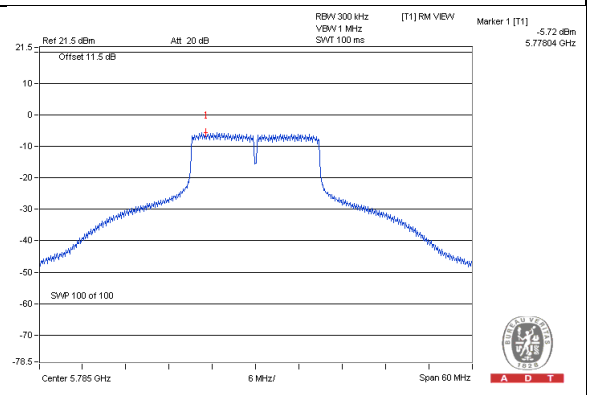
TX chain	Chan.	Chan. Freq. (MHz)	PSD		10 log (N=2) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)				
0	149	5745	-12.40	-10.18	3.01	-7.17	28.23	Pass
	157	5785	-5.72	-3.50	3.01	-0.49	28.23	Pass
	165	5825	-8.66	-6.44	3.01	-3.43	28.23	Pass
1	149	5745	-13.60	-11.38	3.01	-8.37	28.23	Pass
	157	5785	-6.35	-4.13	3.01	-1.12	28.23	Pass
	165	5825	-9.54	-7.32	3.01	-4.31	28.23	Pass

NOTE: 1. Directional gain = 4.76dBi + 10log(2) = 7.77dBi > 6dB, so the power density limit shall be reduced to 30-(7.77-6) = 28.23dBm.

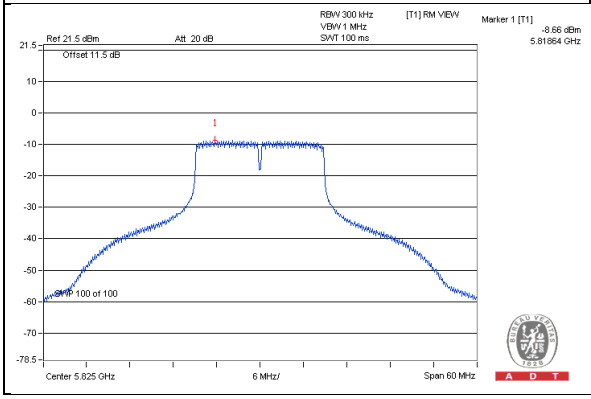
Chain 0 / CH149



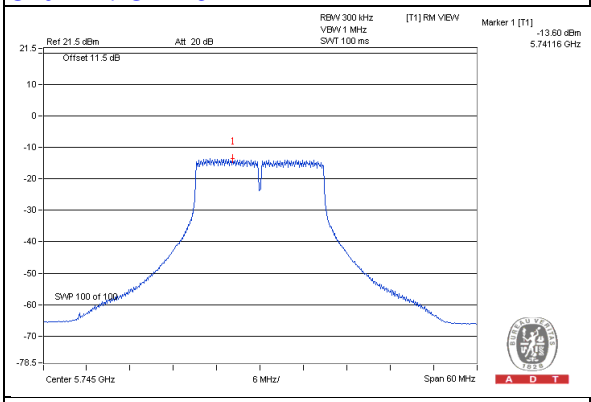
Chain 0 / CH157



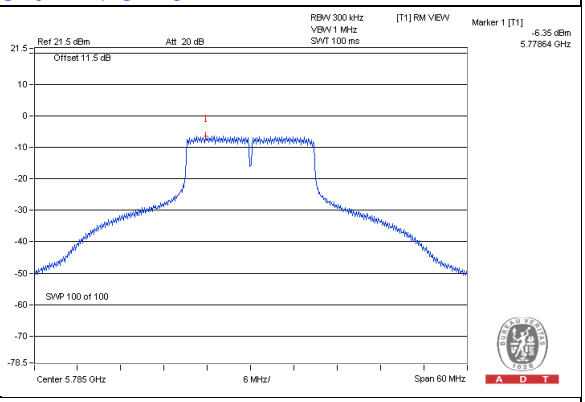
Chain 0 / CH165



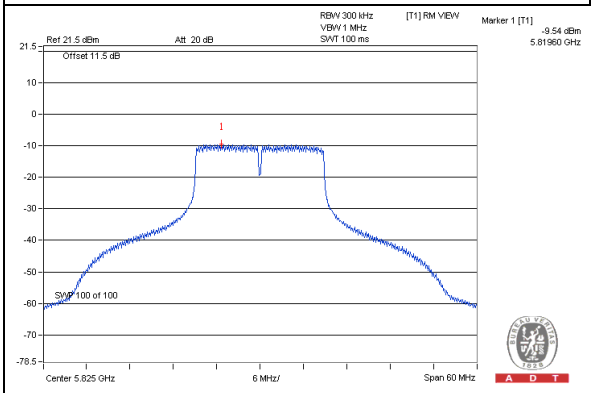
Chain 1 / CH149



Chain 1 / CH157



Chain 1 / CH165



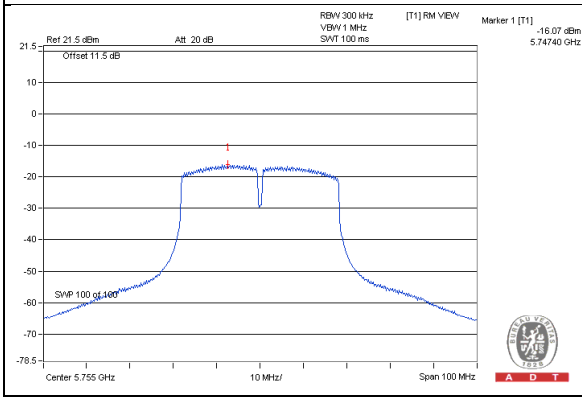
802.11n (HT40)

TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	151	5745	-16.07	-13.85	3.01	0.2	-10.64	28.23	Pass
	159	5785	-9.89	-7.67	3.01	0.2	-4.46	28.23	
1	151	5745	-17.52	-15.30	3.01	0.2	-12.09	28.23	Pass
	159	5785	-10.99	-8.77	3.01	0.2	-5.56	28.23	

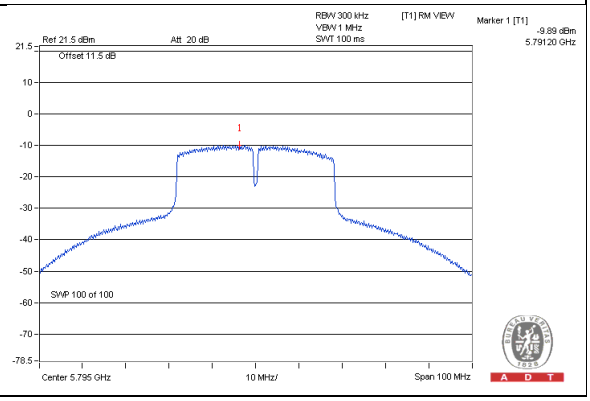
NOTE: 1. 5725~5850MHz: Directional gain = 4.76dBi + 10log(2) = 7.77dBi > 6dB, so the power density limit shall be reduced to 30-(7.77-6) = 28.23dBm.

2. Refer to section 3.4 for duty cycle spectrum plot.

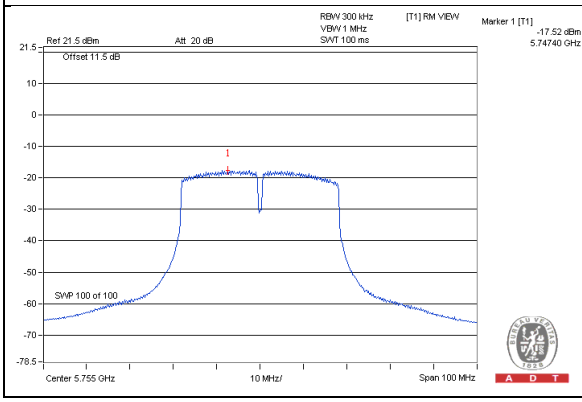
Chain 0 / CH151



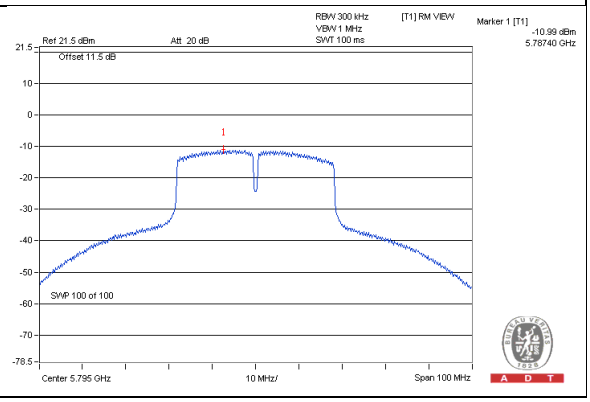
Chain 0 / CH159



Chain 1 / CH151



Chain 1 / CH159

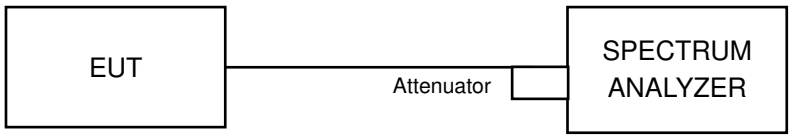


4.3 6dB Bandwidth Measurment

4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.3.2 Test Setup



4.3.3 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSP40	100060	May 08, 2015	May 07, 2016

NOTE: 1. The test was performed in Oven room B.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: Oct. 20, 2015

4.3.4 Test Procedures

MEASUREMENT PROCEDURE REF

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

4.3.5 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 lowest, middle and highest channel frequencies individually.

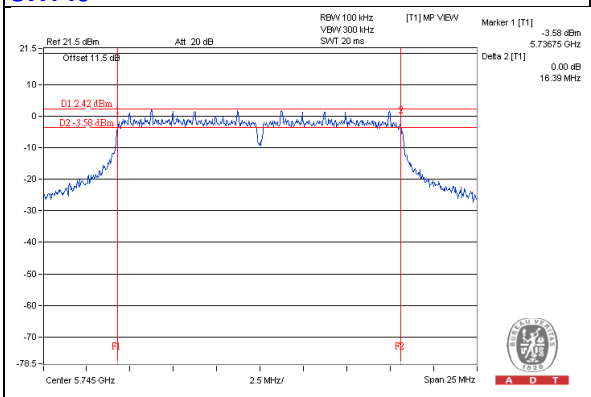
4.3.7 Test Results

For 1TX

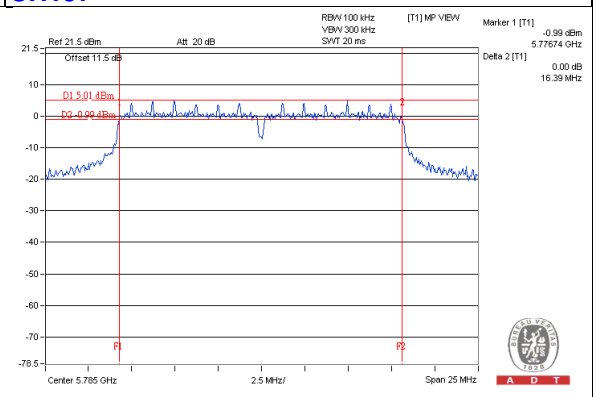
802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.39	0.5	Pass
157	5785	16.39	0.5	Pass
165	5825	16.40	0.5	Pass

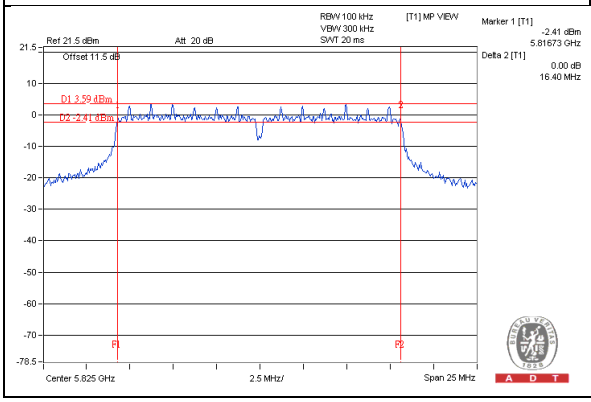
CH149



CH157



CH165

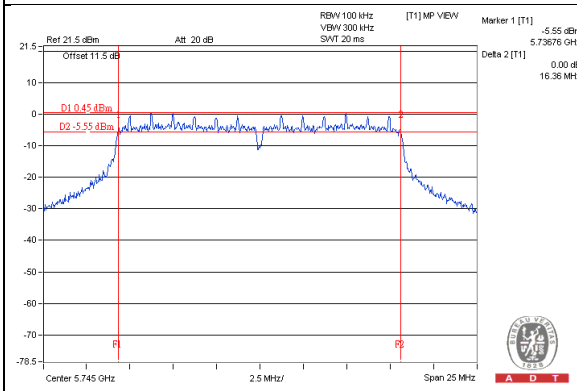


For 2TX

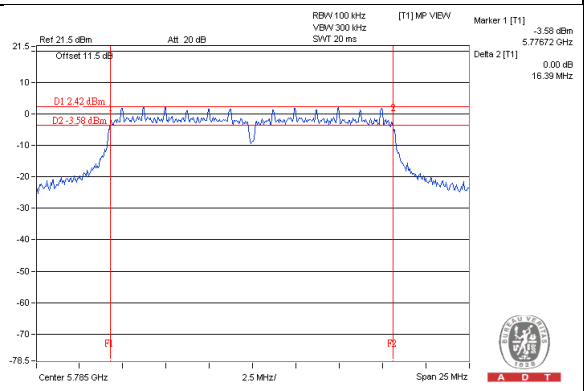
802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	16.36	16.39	0.5	Pass
157	5785	16.39	16.41	0.5	Pass
165	5825	16.40	16.39	0.5	Pass

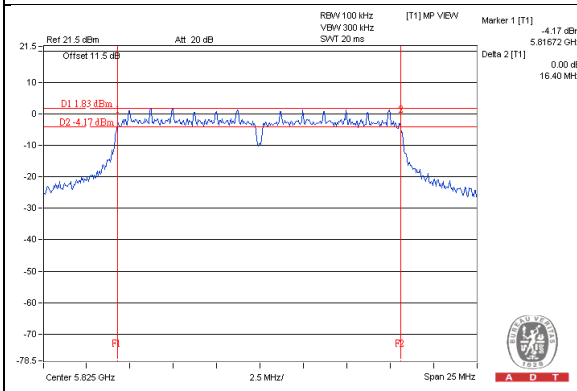
Chain 0 / CH149



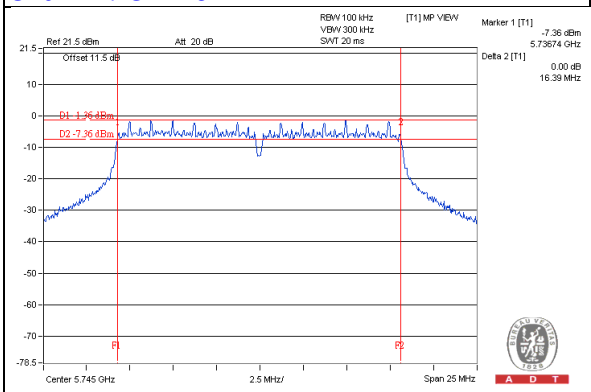
Chain 0 / CH157



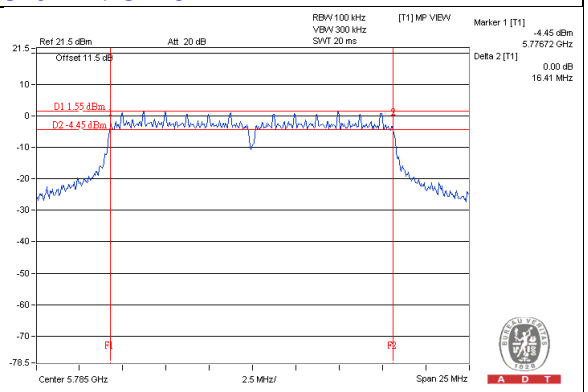
Chain 0 / CH165



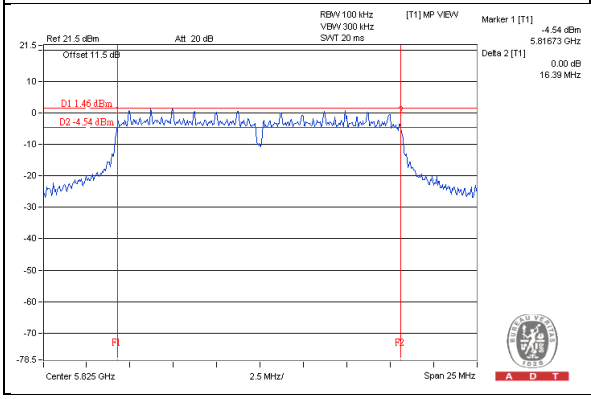
Chain 1 / CH149



Chain 1 / CH157



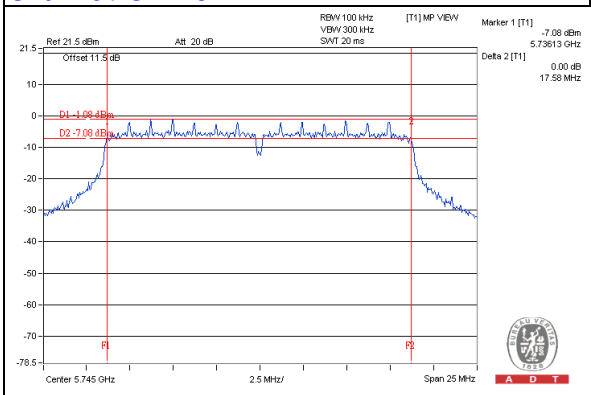
Chain 1 / CH165



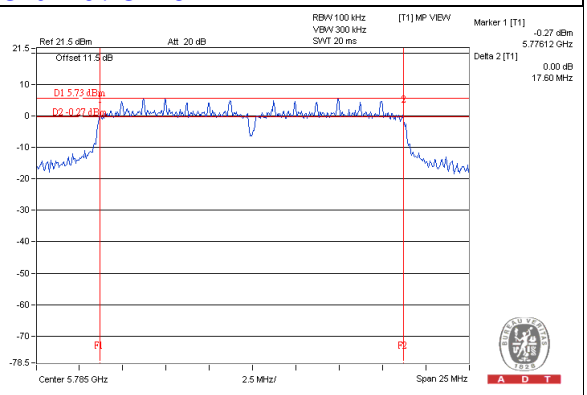
802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.58	17.64	0.5	Pass
157	5785	17.60	17.59	0.5	Pass
165	5825	17.35	17.60	0.5	Pass

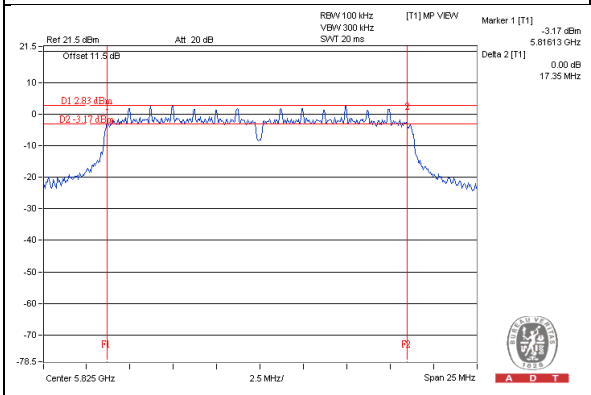
Chain 0 / CH149



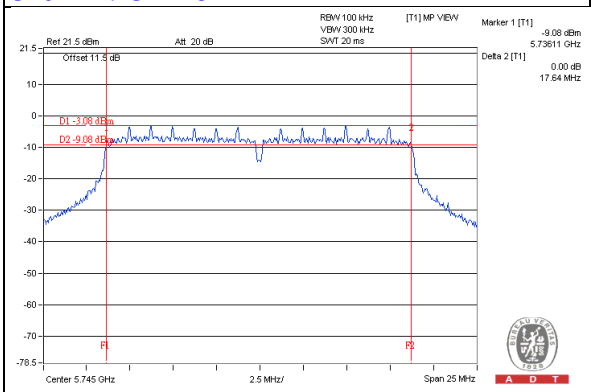
Chain 0 / CH157



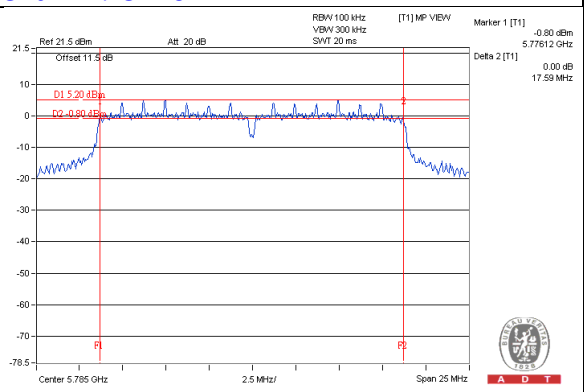
Chain 0 / CH165



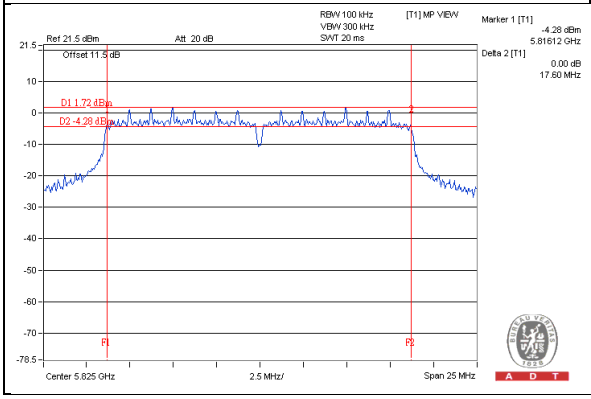
Chain 1 / CH149



Chain 1 / CH157



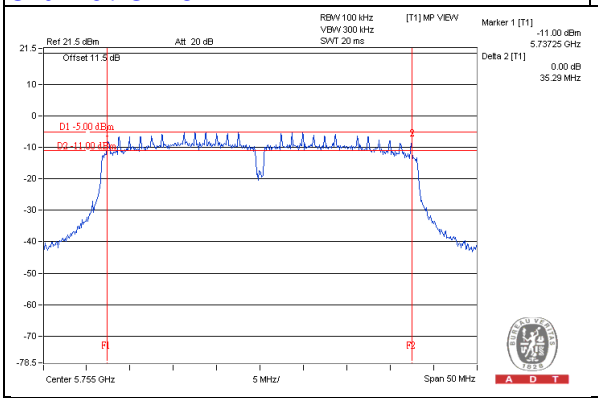
Chain 1 / CH165



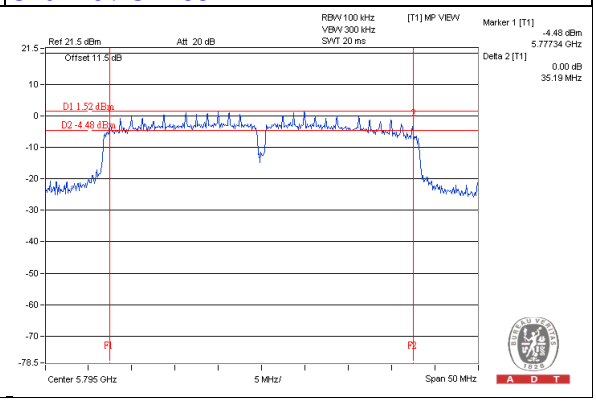
802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.29	35.31	0.5	Pass
159	5795	35.19	35.17	0.5	Pass

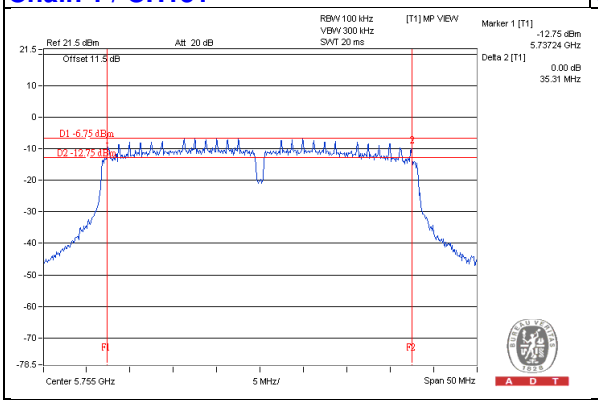
Chain 0 / CH151



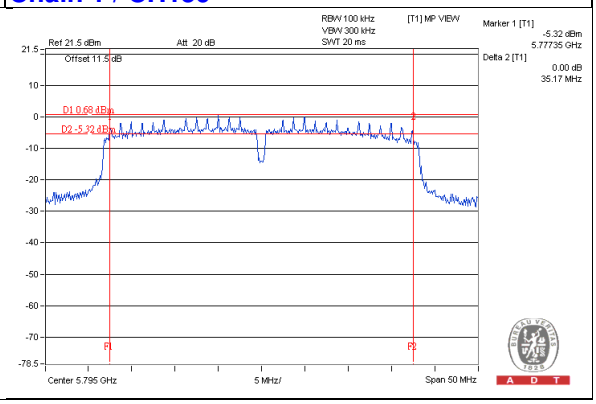
Chain 0 / CH159



Chain 1 / CH151



Chain 1 / CH159



4.4 Unwanted Emission (Radiated Versus Conducted)

4.4.1 Limits of Unwanted Emission 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.

Limits of Unwanted Emission out of the Restricted Bands

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

NOTE: [*1] beyond 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:

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

4.4.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	Aug. 12, 2015	Aug. 11, 2016
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-07	May 08, 2015	May 07, 2016
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	138	Feb. 03, 2015	Feb. 02, 2016
RF Cable	8D	966-3-1 966-3-2 966-3-3	Apr. 03, 2015	Apr. 02, 2016
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Feb. 05, 2015	Feb. 04, 2016
Pre-Amplifier Agilent	8449B	3008A02465	Apr. 06, 2015	Apr. 05, 2016
RF Cable	EMC104-SM-SM-2000 EMC104-SM-SM-5000 EMC104-SM-SM-5000	150317 150321 150322	Mar. 31, 2015	Mar. 30, 2016
Spectrum Analyzer R&S	FSV40	100964	June 26, 2015	June 25, 2016
Pre-Amplifier EMCI	EMC184045	980143	Jan. 16, 2015	Jan. 15, 2016
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Feb. 05, 2015	Feb. 04, 2016
RF Cable	SUCOFLEX104	329751/4 RF104-204	Dec. 11, 2014	Dec. 10, 2015
Software	ADT_Radiated_V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	NA	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna, preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in 966 Chamber No. 3.
4. The FCC Site Registration No. is 147459
6. The CANADA Site Registration No. is 20331-1
8. Tested Date: Oct. 15 to 21, 2015

4.4.3 Test Procedures

Following FCC KDB 789033 D02 General UNII Test Procedures:
Radiated versus Conducted Measurements.
The unwanted emission limits in both the restricted and non-restricted bands are based on antenna-port conducted measurements in conjunction with cabinet emissions tests are permitted to demonstrate compliance.
The following steps was performed:

a. Cabinet emissions measurements. Radiated measurement was performed to ensure that cabinet emissions are below the emission limits. For the cabinet-emission measurements the antenna was replaced by a termination matching the nominal impedance of the antenna.

b. Conducted tests was performed using equipment that matches the nominal impedance of the antenna assembly used with the EUT

c. EIRP calculation. A value representative of an upper bound on out-of-band antenna gain (in dBi) shall be added to the measured antenna-port conducted emission power to compute EIRP within the specified measurement bandwidth. (For emissions in the restricted bands, additional calculations are required to convert EIRP to field strength at the specified distance.) The upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands or 2 dBi, whichever is greater

d. EIRP adjustments for multiple outputs. (Follow the procedures specified in FCC KDB Publication 662911)

e. For all of Radiation emission test

e-1. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at a 3 meters chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

e-2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

e-3. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

e-4. 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-5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

e-6. 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 (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor (10 log(1/duty cycle)).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

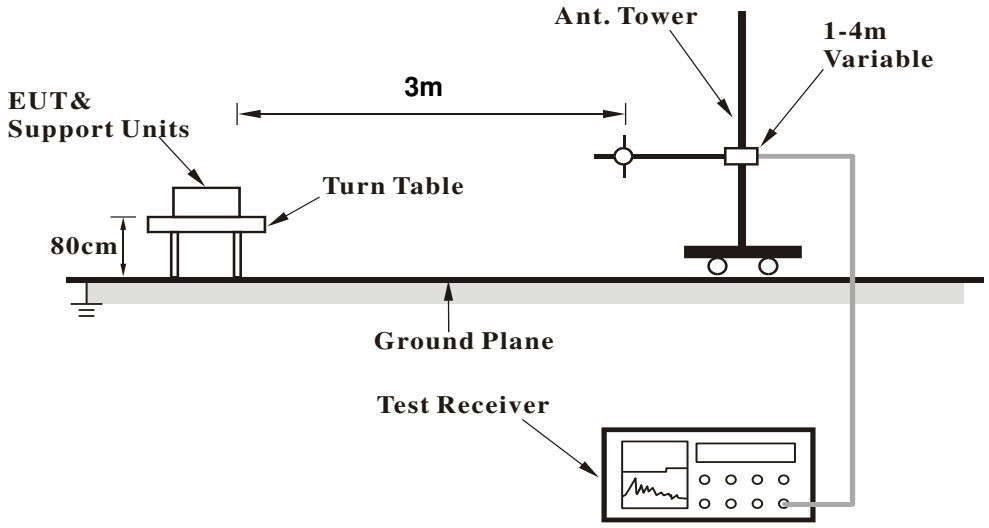
4.4.4 Deviation from Test Standard

No deviation.

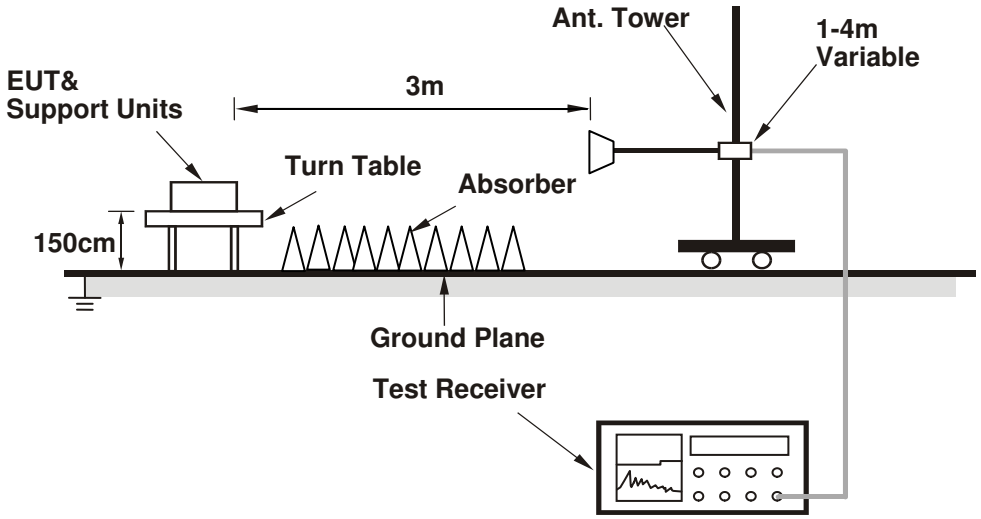
4.4.5 Test Setup

For radiated configuration:

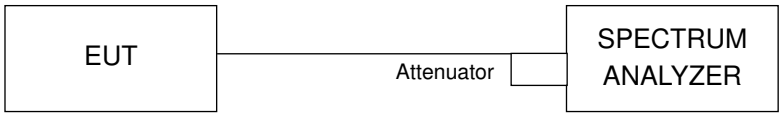
<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



For conducted configuration:



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

4.4.6 EUT Operating Conditions

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

4.4.7 Test Results (Radiated Measurement)

Radiated versus Conducted Measurement	
☐ Conducted measurement	☒ Radiated measurement
For Radiated measurement: The level of unwanted emissions was measured when radiated by the cabinet or structure of the equipment with the antenna connector(s) terminated by a specified load (cabinet radiation) For Conducted measurement: The level of unwanted emissions was measured as their power in a specified load (conducted spurious emissions).	

Radiated test was done with 50ohm terminator on antenna port

For 1TX

Above 1GHz Data

802.11a

CHANNEL	TX Channel 149	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	11490.00	46.9 PK	74.0	-27.1	1.24 H	27	33.39	13.51
2	11490.00	35.7 AV	54.0	-18.3	1.24 H	27	22.19	13.51
3	#17235.00	54.6 PK	74.0	-19.4	1.20 H	34	33.88	20.72
4	#17235.00	41.5 AV	54.0	-12.5	1.20 H	34	20.78	20.72
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	11490.00	48.1 PK	74.0	-25.9	1.67 V	24	34.59	13.51
2	11490.00	37.8 AV	54.0	-16.2	1.67 V	24	24.29	13.51
3	#17235.00	54.7 PK	74.0	-19.3	1.76 V	0	33.98	20.72
4	#17235.00	41.7 AV	54.0	-12.3	1.76 V	0	20.98	20.72

REMARKS:

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

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	11570.00	47.3 PK	74.0	-26.7	1.21 H	22	33.94	13.36
2	11570.00	35.8 AV	54.0	-18.2	1.21 H	22	22.44	13.36
3	#17355.00	55.3 PK	74.0	-18.7	1.19 H	50	34.12	21.18
4	#17355.00	42.0 AV	54.0	-12.0	1.19 H	50	20.82	21.18
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	11570.00	47.8 PK	74.0	-26.2	1.72 V	18	34.44	13.36
2	11570.00	37.7 AV	54.0	-16.3	1.72 V	18	24.34	13.36
3	#17355.00	54.3 PK	74.0	-19.7	1.81 V	5	33.12	21.18
4	#17355.00	41.2 AV	54.0	-12.8	1.81 V	5	20.02	21.18

REMARKS:

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	11650.00	46.9 PK	74.0	-27.1	1.22 H	26	33.64	13.26
2	11650.00	36.0 AV	54.0	-18.0	1.22 H	26	22.74	13.26
3	#17475.00	54.1 PK	74.0	-19.9	1.16 H	36	32.08	22.02
4	#17475.00	41.1 AV	54.0	-12.9	1.16 H	36	19.08	22.02
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	11650.00	48.6 PK	74.0	-25.4	1.63 V	29	35.34	13.26
2	11650.00	38.2 AV	54.0	-15.8	1.63 V	29	24.94	13.26
3	#17475.00	54.8 PK	74.0	-19.2	1.81 V	0	32.78	22.02
4	#17475.00	42.0 AV	54.0	-12.0	1.81 V	0	19.98	22.02

REMARKS:

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

For 2TX

Above 1GHz Data

802.11a

CHANNEL	TX Channel 149	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	11490.00	47.5 PK	74.0	-26.5	1.26 H	24	33.99	13.51
2	11490.00	36.2 AV	54.0	-17.8	1.26 H	24	22.69	13.51
3	#17235.00	54.2 PK	74.0	-19.8	1.25 H	25	33.48	20.72
4	#17235.00	41.4 AV	54.0	-12.6	1.25 H	25	20.68	20.72
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	11490.00	48.3 PK	74.0	-25.7	1.65 V	12	34.79	13.51
2	11490.00	38.2 AV	54.0	-15.8	1.65 V	12	24.69	13.51
3	#17235.00	54.2 PK	74.0	-19.8	1.72 V	4	33.48	20.72
4	#17235.00	41.2 AV	54.0	-12.8	1.72 V	4	20.48	20.72

REMARKS:

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

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	11570.00	46.8 PK	74.0	-27.2	1.21 H	30	33.44	13.36
2	11570.00	35.7 AV	54.0	-18.3	1.21 H	30	22.34	13.36
3	#17355.00	54.5 PK	74.0	-19.5	1.21 H	14	33.32	21.18
4	#17355.00	41.8 AV	54.0	-12.2	1.21 H	14	20.62	21.18
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	11570.00	48.8 PK	74.0	-25.2	1.66 V	12	35.44	13.36
2	11570.00	38.7 AV	54.0	-15.3	1.66 V	12	25.34	13.36
3	#17355.00	54.8 PK	74.0	-19.2	1.73 V	19	33.62	21.18
4	#17355.00	41.6 AV	54.0	-12.4	1.73 V	19	20.42	21.18

REMARKS:

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	11650.00	47.4 PK	74.0	-26.6	1.26 H	8	34.14	13.26
2	11650.00	36.3 AV	54.0	-17.7	1.26 H	8	23.04	13.26
3	#17475.00	54.5 PK	74.0	-19.5	1.27 H	40	32.48	22.02
4	**#17475.00**	**41.8 AV**	**54.0**	**-12.2**	**1.27 H**	**40**	**19.78**	**22.02**
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	11650.00	48.6 PK	74.0	-25.4	1.60 V	23	35.34	13.26
2	11650.00	38.7 AV	54.0	-15.3	1.60 V	23	25.44	13.26
3	#17475.00	54.8 PK	74.0	-19.2	1.68 V	14	32.78	22.02
4	#17475.00	41.6 AV	54.0	-12.4	1.68 V	14	19.58	22.02

REMARKS:

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

802.11n (HT20)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	11490.00	47.4 PK	74.0	-26.6	1.31 H	35	33.89	13.51
2	11490.00	36.3 AV	54.0	-17.7	1.31 H	35	22.79	13.51
3	#17235.00	54.0 PK	74.0	-20.0	1.23 H	41	33.28	20.72
4	#17235.00	41.2 AV	54.0	-12.8	1.23 H	41	20.48	20.72
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	11490.00	48.7 PK	74.0	-25.3	1.71 V	6	35.19	13.51
2	11490.00	38.9 AV	54.0	-15.1	1.71 V	6	25.39	13.51
3	#17235.00	54.5 PK	74.0	-19.5	1.77 V	31	33.78	20.72
4	#17235.00	41.3 AV	54.0	-12.7	1.77 V	31	20.58	20.72

REMARKS:

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

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	11570.00	47.2 PK	74.0	-26.8	1.22 H	19	33.84	13.36
2	11570.00	36.2 AV	54.0	-17.8	1.22 H	19	22.84	13.36
3	#17355.00	53.9 PK	74.0	-20.1	1.30 H	33	32.72	21.18
4	#17355.00	41.3 AV	54.0	-12.7	1.30 H	33	20.12	21.18
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	11570.00	48.5 PK	74.0	-25.5	1.69 V	17	35.14	13.36
2	11570.00	38.6 AV	54.0	-15.4	1.69 V	17	25.24	13.36
3	#17355.00	54.5 PK	74.0	-19.5	1.73 V	30	33.32	21.18
4	#17355.00	41.6 AV	54.0	-12.4	1.73 V	30	20.42	21.18

REMARKS:

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	11650.00	47.3 PK	74.0	-26.7	1.28 H	30	34.04	13.26
2	11650.00	35.8 AV	54.0	-18.2	1.28 H	30	22.54	13.26
3	#17475.00	54.5 PK	74.0	-19.5	1.27 H	38	32.48	22.02
4	#17475.00	41.8 AV	54.0	-12.2	1.27 H	38	19.78	22.02
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	11650.00	48.2 PK	74.0	-25.8	1.67 V	22	34.94	13.26
2	11650.00	38.3 AV	54.0	-15.7	1.67 V	22	25.04	13.26
3	#17475.00	54.7 PK	74.0	-19.3	1.68 V	24	32.68	22.02
4	#17475.00	41.7 AV	54.0	-12.3	1.68 V	24	19.68	22.02

REMARKS:

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

802.11n (HT40)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	11510.00	46.9 PK	74.0	-27.1	1.25 H	8	33.42	13.48
2	11510.00	35.8 AV	54.0	-18.2	1.25 H	8	22.32	13.48
3	#17265.00	54.5 PK	74.0	-19.5	1.23 H	37	33.75	20.75
4	#17265.00	41.5 AV	54.0	-12.5	1.23 H	37	20.75	20.75
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	11510.00	48.5 PK	74.0	-25.5	1.70 V	9	35.02	13.48
2	11510.00	38.6 AV	54.0	-15.4	1.70 V	9	25.12	13.48
3	#17265.00	54.8 PK	74.0	-19.2	1.77 V	16	34.05	20.75
4	#17265.00	41.5 AV	54.0	-12.5	1.77 V	16	20.75	20.75

REMARKS:

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

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	11590.00	46.9 PK	74.0	-27.1	1.22 H	17	33.59	13.31
2	11590.00	35.7 AV	54.0	-18.3	1.22 H	17	22.39	13.31
3	#17385.00	53.6 PK	74.0	-20.4	1.24 H	37	32.20	21.40
4	#17385.00	41.0 AV	54.0	-13.0	1.24 H	37	19.60	21.40
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	11590.00	48.5 PK	74.0	-25.5	1.70 V	22	35.19	13.31
2	11590.00	38.5 AV	54.0	-15.5	1.70 V	22	25.19	13.31
3	#17385.00	54.9 PK	74.0	-19.1	1.69 V	29	33.50	21.40
4	#17385.00	41.6 AV	54.0	-12.4	1.69 V	29	20.20	21.40

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. " # ": The radiated frequency is out of the restricted band.

For 2TX

Below 1GHz Data

802.11n (HT40)

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	99.62	33.3 QP	43.5	-10.2	2.00 H	335	57.99	-24.67
2	**199.92**	**39.3 QP**	**43.5**	**-4.2**	**1.50 H**	**124**	**62.61**	**-23.32**
3	232.41	38.0 QP	46.0	-8.0	1.50 H	66	60.25	-22.22
4	298.76	40.0 QP	46.0	-6.1	1.00 H	360	59.17	-19.22
5	373.43	36.5 QP	46.0	-9.5	1.00 H	173	53.91	-17.39
6	622.57	38.5 QP	46.0	-7.5	1.50 H	329	49.85	-11.35
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	109.42	31.8 QP	43.5	-11.7	1.00 V	25	54.85	-23.06
2	166.02	33.6 QP	43.5	-9.9	1.00 V	14	54.06	-20.49
3	298.81	30.7 QP	46.0	-15.3	1.00 V	83	49.96	-19.22
4	625.05	33.2 QP	46.0	-12.8	1.50 V	60	44.51	-11.30
5	663.85	33.3 QP	46.0	-12.7	1.50 V	133	44.30	-10.96
6	699.81	39.1 QP	46.0	-7.0	1.00 V	68	49.57	-10.52

REMARKS:

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

4.4.8 Test Results (Conducted Measurement)

Radiated versus Conducted Measurement	
☒ Conducted measurement	☐ Radiated measurement

For Radiated measurement:

The level of unwanted emissions was measured when radiated by the cabinet or structure of the equipment with the antenna connector(s) terminated by a specified load (cabinet radiation)

For Conducted measurement:

The level of unwanted emissions was measured as their power in a specified load (conducted spurious emissions).

Conducted Measurement Factor
a. The composite gain will be used when signal support the correlated signal. (Composite gain = 4.76dBi + 10log(2) = 7.77dBi)
b. For the out of band spurious the gain for the specific band may have been used rather than the highest gain across all bands.
c. For the band edge the gain for the specific band may have been used.
d. In restricted bands below 1000 MHz, add upper bound on ground plane reflection: For f = 30 – 1000 MHz, add 4.7 dB.
Note: The conducted emission test was considered some factor to compute test result.

For 1TX

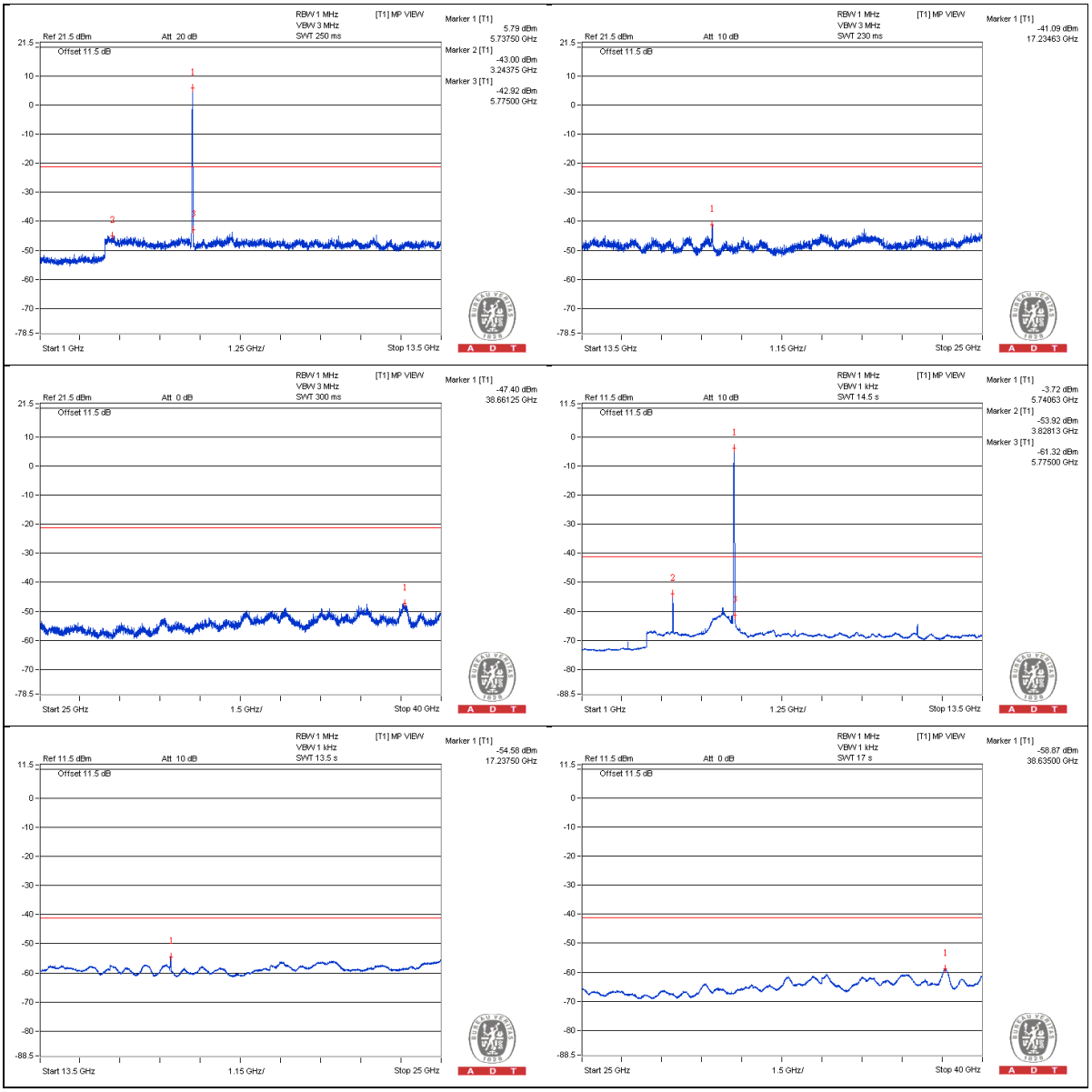
Above 1GHz Data

802.11a - Channel 149

Conducted spurious emission table

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	3828.125 PK	54.54	74	-19.46	-45.48	4.76	-40.72
2	3828.125 AV	46.1	54	-7.9	-53.92	4.76	-49.16
3	7659.375 PK	51.74	74	-22.26	-48.28	4.76	-43.52
4	7659.375 AV	33.47	54	-20.53	-66.55	4.76	-61.79
5	11490.625 PK	52.72	74	-21.28	-47.3	4.76	-42.54
6	11490.625 AV	35.46	54	-18.54	-64.56	4.76	-59.8
7	17234.625 PK	58.93	68.2	-9.27	-41.09	4.76	-36.33

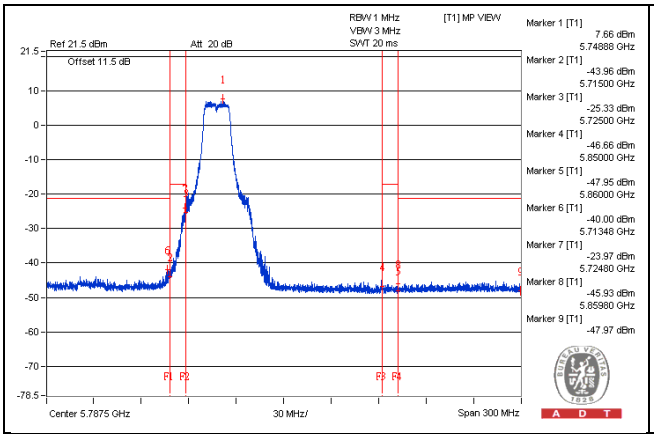
Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

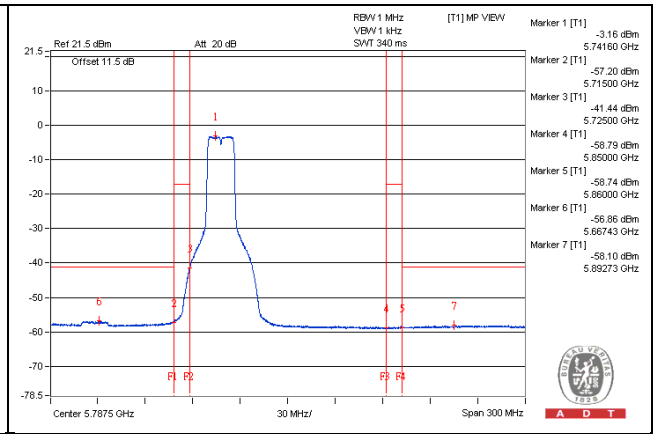

RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
5.79 dBm
5.73750 GHz
Marker 2 [T1]
-43.00 dBm
3.24375 GHz
Marker 3 [T1]
-42.92 dBm
5.77500 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-41.09 dBm
17.23463 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-47.40 dBm
38.66125 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz
RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-3.72 dBm
5.74063 GHz
Marker 2 [T1]
-53.92 dBm
3.82813 GHz
Marker 3 [T1]
-61.32 dBm
5.77500 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-54.58 dBm
17.23750 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.87 dBm
38.63500 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

Bandedge table

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	5713.48 PK	60.02	74	-13.98	-40	4.76	-35.24
2	5667.43 AV	43.16	54	-10.84	-56.86	4.76	-52.1
3	5724.8 PK	76.05	78.2	-2.15	-23.97	4.76	-19.21
4	5859.8 PK	54.09	78.2	-24.11	-45.93	4.76	-41.17
5	5937.5 PK	52.05	74	-21.95	-47.97	4.76	-43.21
6	5892.73 AV	41.92	54	-12.08	-58.1	4.76	-53.34

Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.



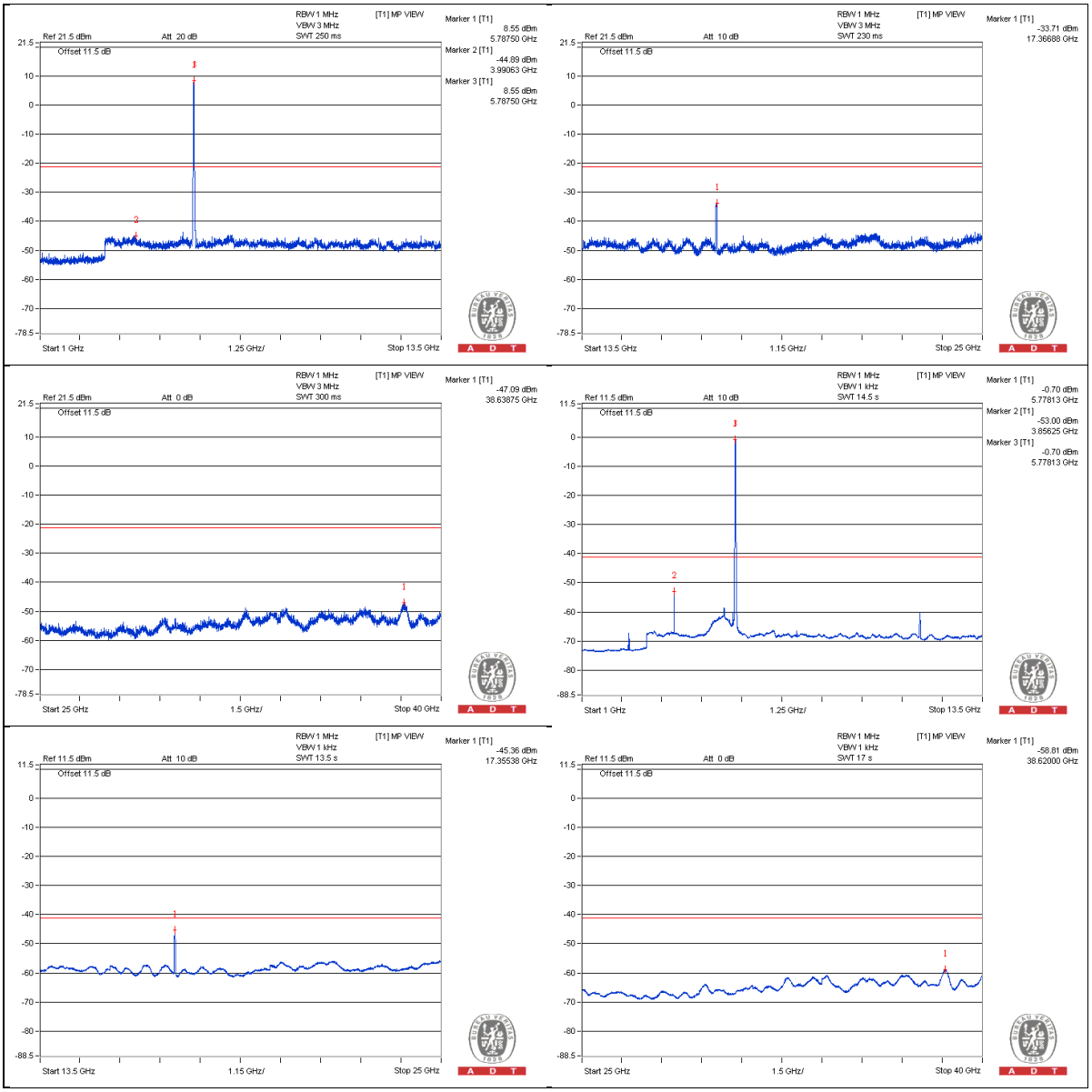


802.11a - Channel 157

Conducted spurious emission table

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	3856.25 PK	54.01	74	-19.99	-46.01	4.76	-41.25
2	3856.25 AV	47.02	54	-6.98	-53	4.76	-48.24
3	7712.5 PK	50.41	74	-23.59	-49.61	4.76	-44.85
4	7712.5 AV	33.5	54	-20.5	-66.52	4.76	-61.76
5	11571.875 PK	54.2	74	-19.8	-45.82	4.76	-41.06
6	11571.875 AV	39.91	54	-14.09	-60.11	4.76	-55.35

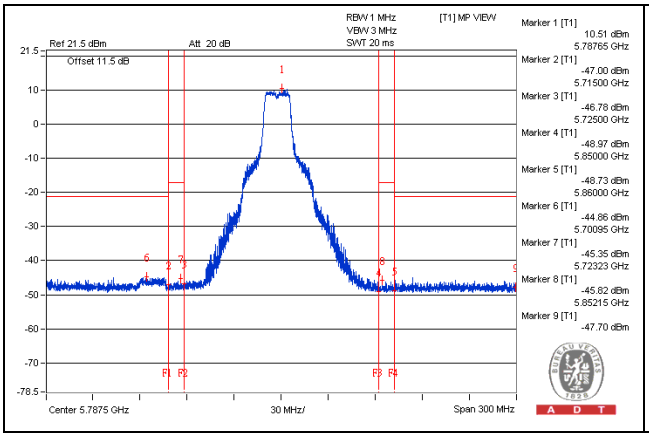
Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

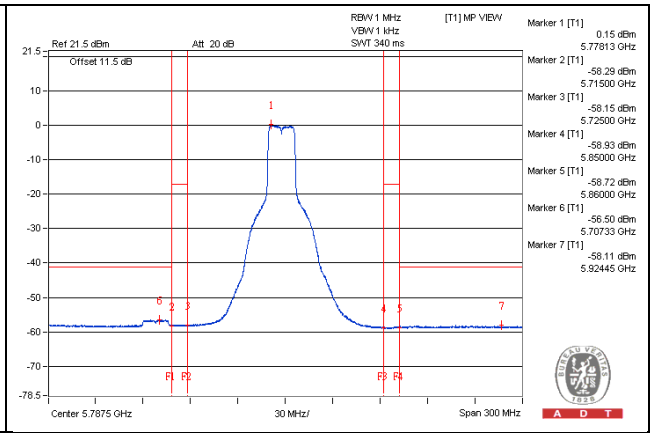

RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
8.55 dBm
5.78750 GHz
Marker 2 [T1]
-44.89 dBm
3.99063 GHz
Marker 3 [T1]
8.55 dBm
5.78750 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-33.71 dBm
17.36688 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-47.09 dBm
38.63875 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz
RBW 1 kHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-0.70 dBm
5.77813 GHz
Marker 2 [T1]
-53.00 dBm
3.85625 GHz
Marker 3 [T1]
-0.70 dBm
5.77813 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 kHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-45.36 dBm
17.35538 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 kHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.81 dBm
38.62000 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

Bandedge table

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	5700.95 PK	55.16	74	-18.84	-44.86	4.76	-40.1
2	5707.33 AV	43.52	54	-10.48	-56.5	4.76	-51.74
3	5723.23 PK	54.67	78.2	-23.53	-45.35	4.76	-40.59
4	5852.15 PK	54.2	78.2	-24	-45.82	4.76	-41.06
5	5937.5 PK	52.32	74	-21.68	-47.7	4.76	-42.94
6	5924.45 AV	41.91	54	-12.09	-58.11	4.76	-53.35

Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.



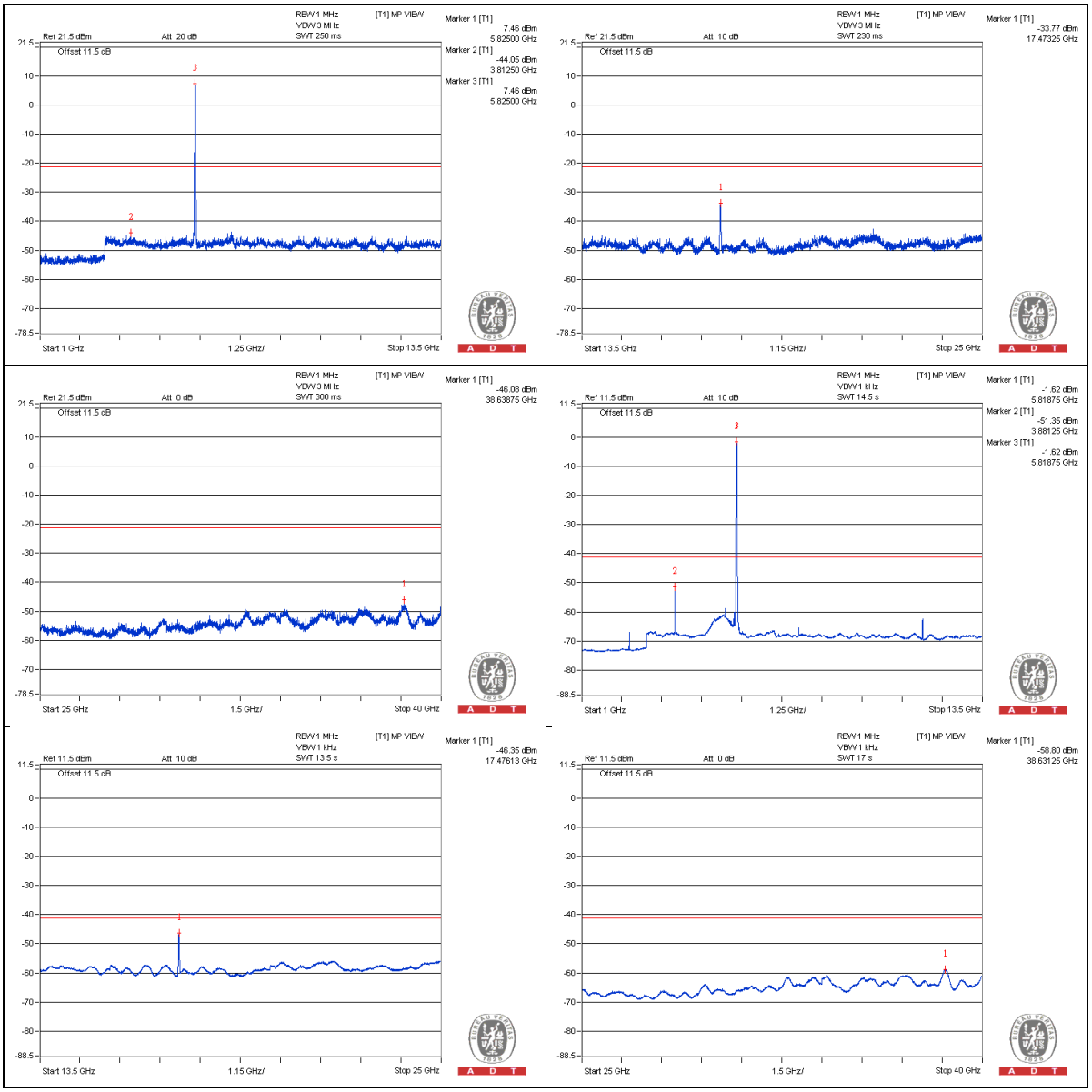


802.11a - Channel 165

Conducted spurious emission table

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	3884.375 PK	54.35	74	-19.65	-45.67	4.76	-40.91
2	3884.375 AV	43.46	54	-10.54	-56.56	4.76	-51.8
3	7765.625 PK	51.68	74	-22.32	-48.34	4.76	-43.58
4	7765.625 AV	34.53	54	-19.47	-65.49	4.76	-60.73
5	11650 PK	52.06	74	-21.94	-47.96	4.76	-43.2
6	11650 AV	37.7	54	-16.3	-62.32	4.76	-57.56
7	17473.25 PK	66.25	68.2	-1.95	-33.77	4.76	-29.01

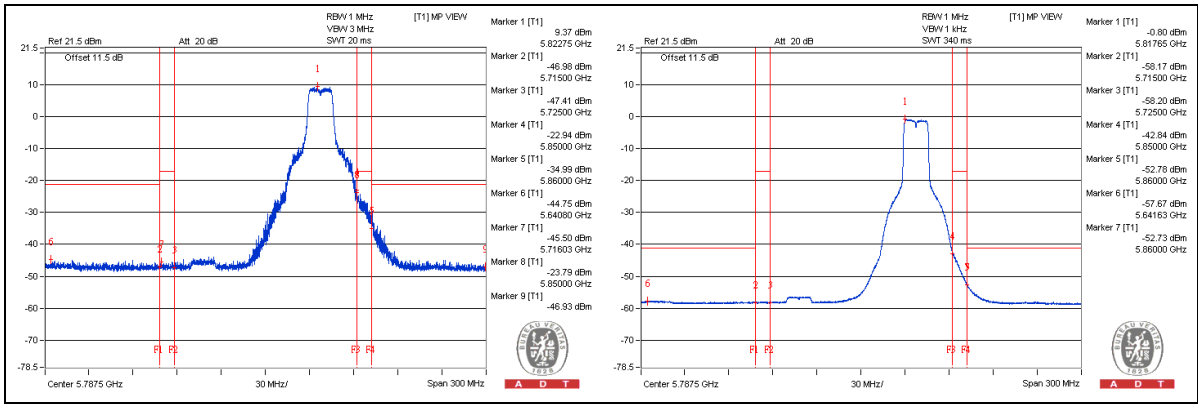
Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.


RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
7.46 dBm
5.82500 GHz
Marker 2 [T1]
-44.05 dBm
3.81250 GHz
Marker 3 [T1]
7.46 dBm
5.82500 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-33.77 dBm
17.47325 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-46.08 dBm
38.63875 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz
RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-1.62 dBm
5.81875 GHz
Marker 2 [T1]
-51.35 dBm
3.88125 GHz
Marker 3 [T1]
-1.62 dBm
5.81875 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-46.35 dBm
17.47613 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.80 dBm
38.63125 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

Bandedge table

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)	Correction Factor (dB)	EIRP Level (dBm)
1	5640.8 PK	55.27	74	-18.73	-44.75	4.76	-39.99
2	5641.63 AV	42.35	54	-11.65	-57.67	4.76	-52.91
3	5716.03 PK	54.52	78.2	-23.68	-45.5	4.76	-40.74
4	5850 PK	76.23	78.2	-1.97	-23.79	4.76	-19.03
5	5937.5 PK	53.09	74	-20.91	-46.93	4.76	-42.17
6	5860 AV	47.29	54	-6.71	-52.73	4.76	-47.97

Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.



For 2TX

Above 1GHz Data

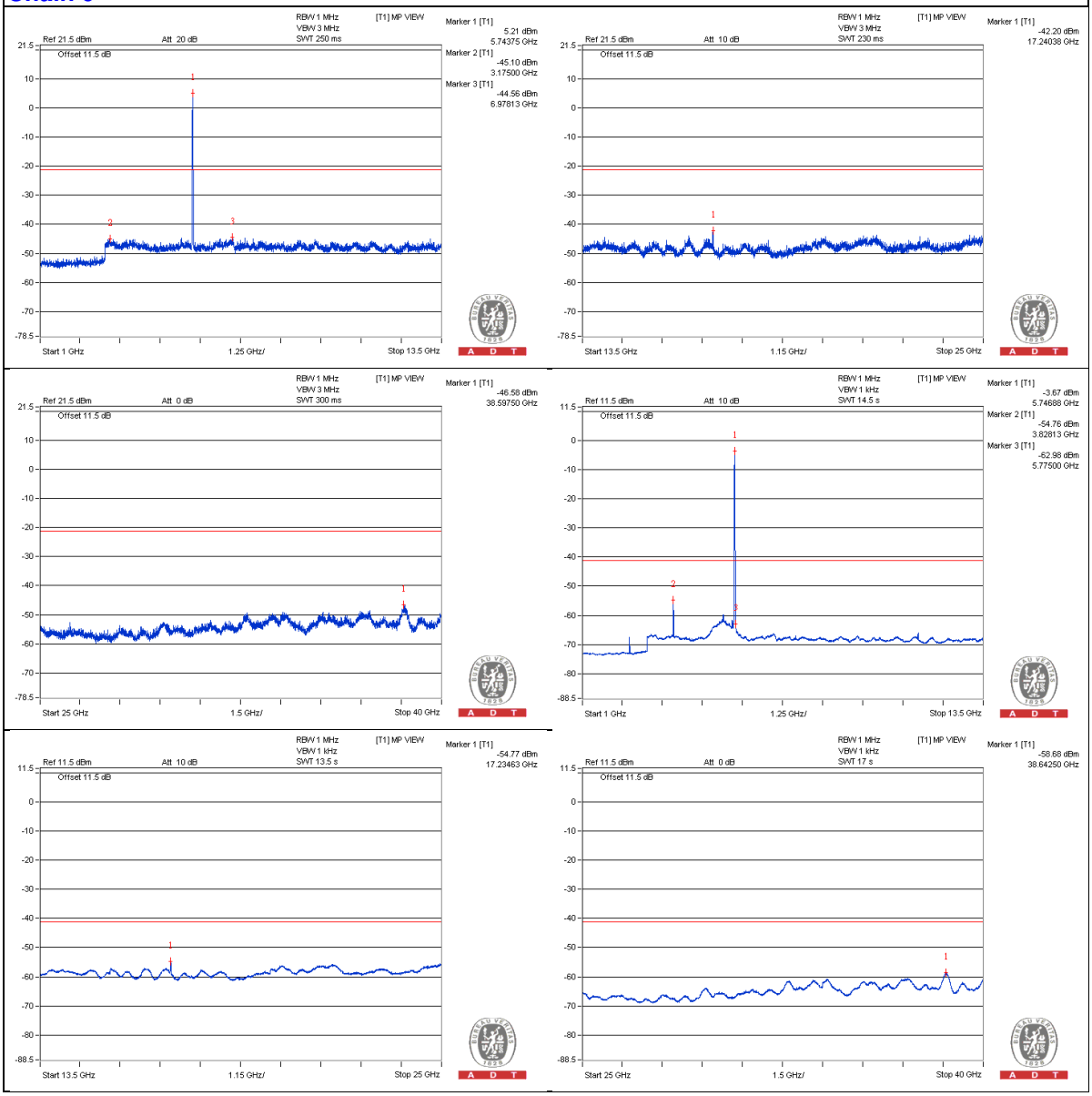
802.11a - Channel 149

Conducted spurious emission table

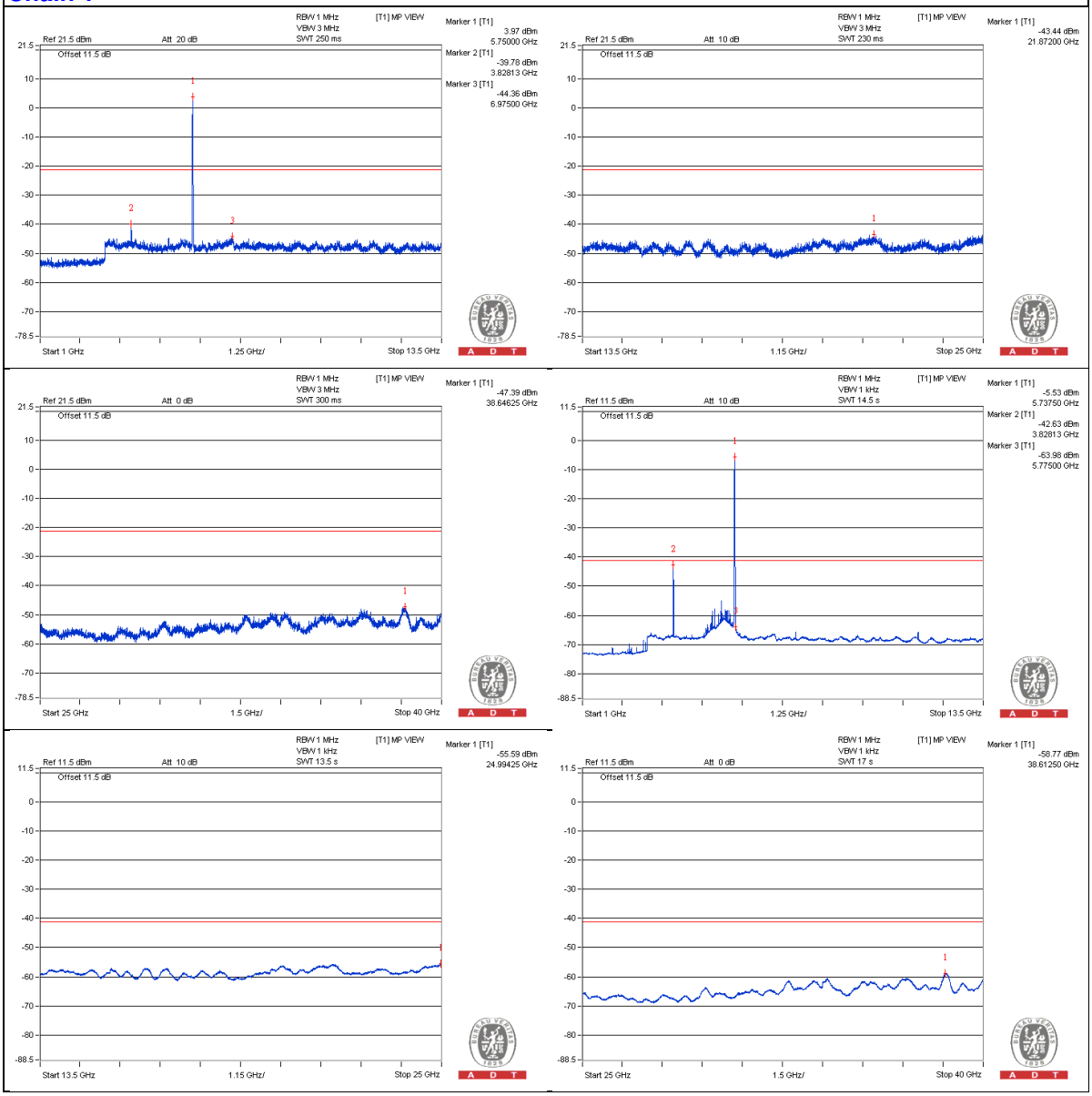
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	3828.125 PK	64.21	74	-9.79	-45.87	-39.78	7.77	-31.05
2	3828.125 AV	60.66	54	*6.66	-54.76	-42.63	7.77	-34.6
3	7659.375 PK	59.29	74	-14.71	-47.01	-46.5	7.77	-35.97
4	7659.375 AV	39.75	54	-14.25	-66.9	-65.75	7.77	-55.51
5	11490.625 PK	57.9	74	-16.1	-47.81	-48.49	7.77	-37.36
6	11490.625 AV	40.25	54	-13.75	-65.88	-65.71	7.77	-55.01

Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.
* The unwanted emission was verified and the test result was passed by radiated measurement.
(Please refer APPENDIX A)

Chain 0


RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
5.21 dBm
5.74375 GHz
Marker 2 [T1]
-45.10 dBm
3.17500 GHz
Marker 3 [T1]
-44.56 dBm
6.97813 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-42.20 dBm
17.24038 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-46.58 dBm
38.59750 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz
RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-3.67 dBm
5.74688 GHz
Marker 2 [T1]
-54.76 dBm
3.82813 GHz
Marker 3 [T1]
-62.98 dBm
5.77500 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-54.77 dBm
17.23463 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.68 dBm
38.64250 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

Chain 1

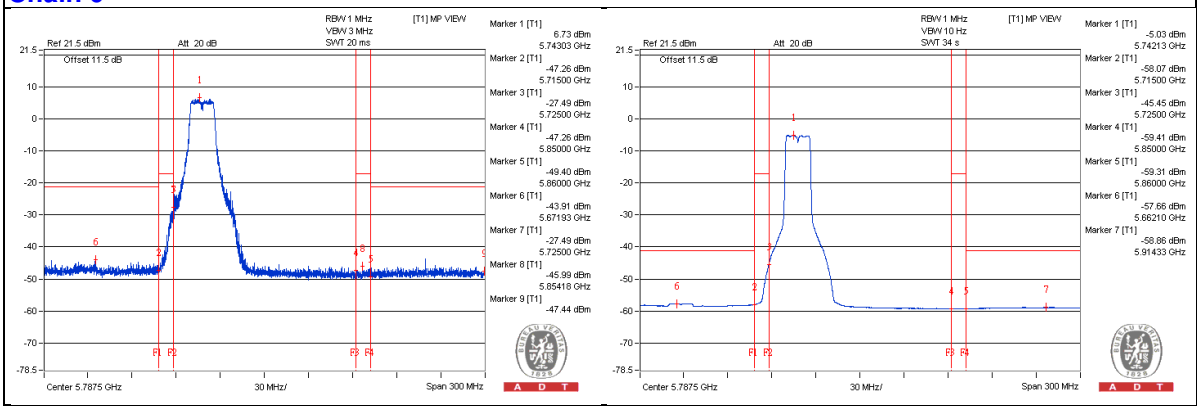

RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Marker 1 [T1]
3.97 dBm
5.75000 GHz
Marker 2 [T1]
-39.78 dBm
3.82813 GHz
Marker 3 [T1]
-44.36 dBm
6.97500 GHz
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Marker 1 [T1]
-43.44 dBm
21.87200 GHz
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Marker 1 [T1]
-47.39 dBm
38.64625 GHz
Start 25 GHz
1.5 GHz/
Stop 40 GHz
RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Marker 1 [T1]
-5.53 dBm
5.73750 GHz
Marker 2 [T1]
-42.63 dBm
3.82813 GHz
Marker 3 [T1]
-63.98 dBm
5.77500 GHz
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Marker 1 [T1]
-55.59 dBm
24.99425 GHz
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Marker 1 [T1]
-58.77 dBm
38.61250 GHz
Start 25 GHz
1.5 GHz/
Stop 40 GHz

Bandedge table

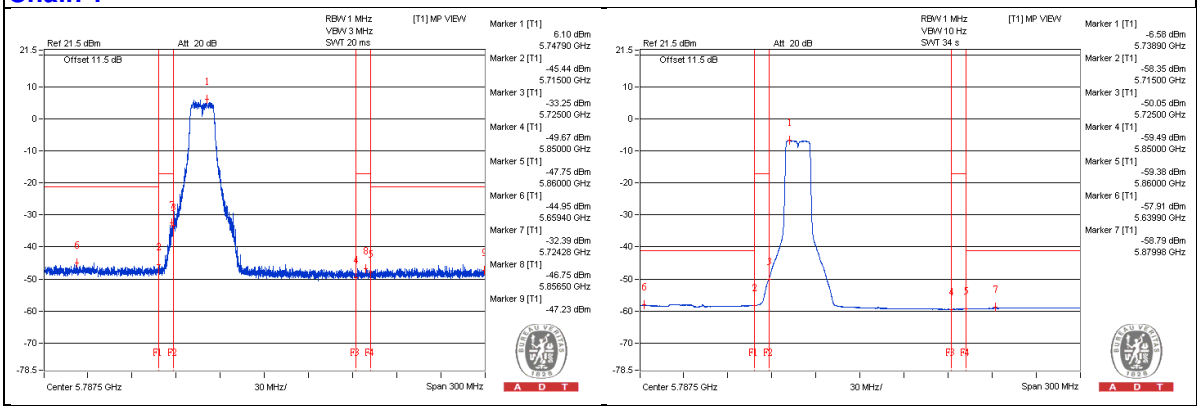
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	5658.65 PK	59.98	74	-14.02	-45.34	-46.92	7.77	-35.28
2	5658.65 AV	48.19	54	-5.81	-57.7	-58	7.77	-47.07
3	5724.95 PK	76.23	78.2	-1.97	-27.5	-35.07	7.77	-19.03
4	5854.175 PK	58.81	78.2	-19.39	-45.99	-48.97	7.77	-36.45
5	5919.575 PK	58.81	74	-15.19	-46.49	-48.12	7.77	-36.45
6	5919.95 AV	47.09	54	-6.91	-58.92	-58.99	7.77	-48.17

Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

Chain 0



Chain 1



802.11a - Channel 157

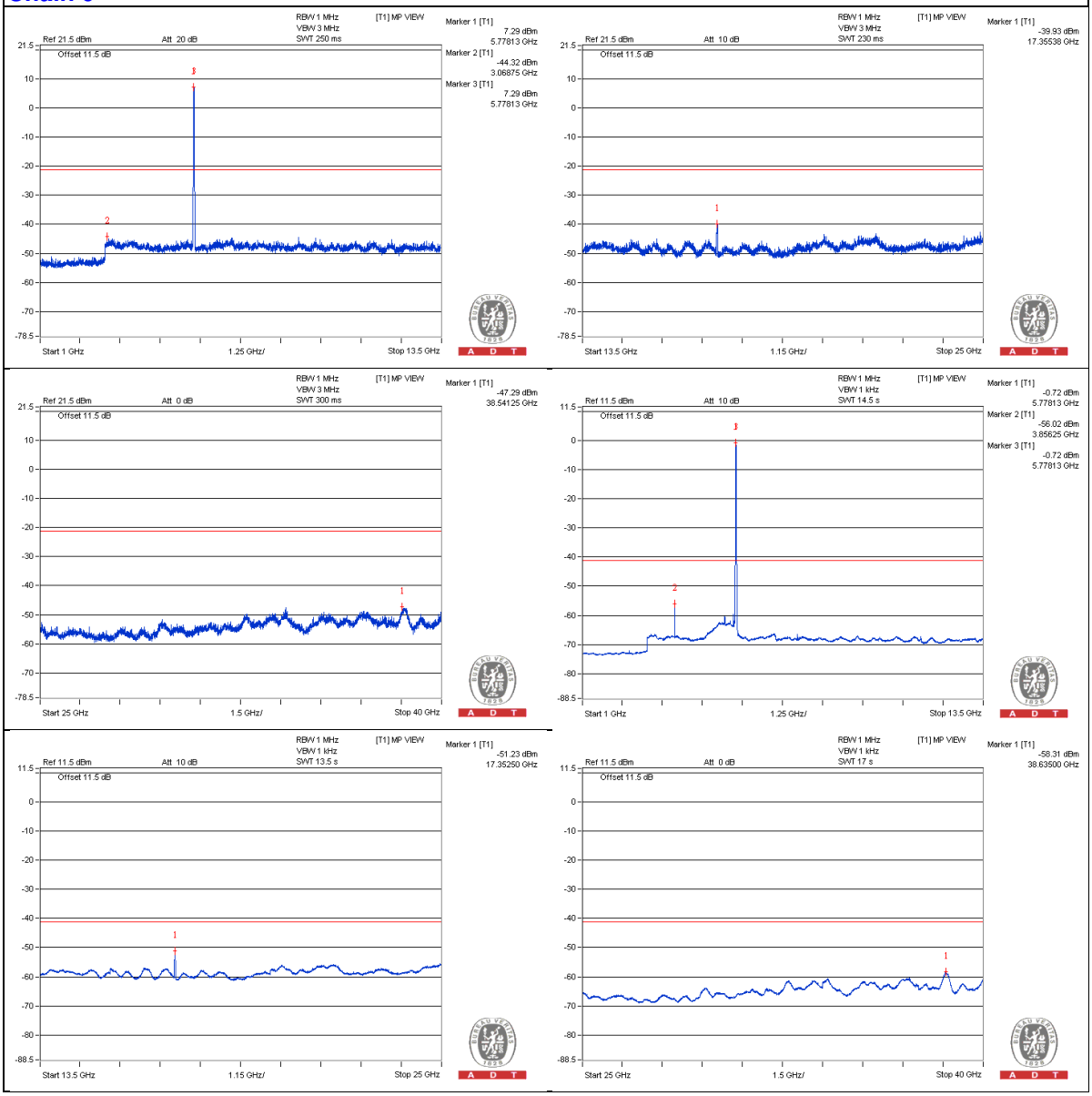
Conducted spurious emission table

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	3856.25 PK	64.89	74	-9.11	-45.66	-38.99	7.77	-30.37
2	3856.25 AV	60.97	54	*6.97	-56.02	-42.24	7.77	-34.29
3	7712.5 PK	59.03	74	-14.97	-46.31	-47.84	7.77	-36.23
4	7712.5 AV	39.18	54	-14.82	-66.54	-67.2	7.77	-56.08
5	11571.875 PK	57.41	74	-16.59	-49.59	-47.85	7.77	-37.85
6	11571.875 AV	41.46	54	-12.54	-67.32	-62.91	7.77	-53.8
7	17355.375 PK	63.59	68.2	-4.61	-39.93	-49.12	7.77	-31.67

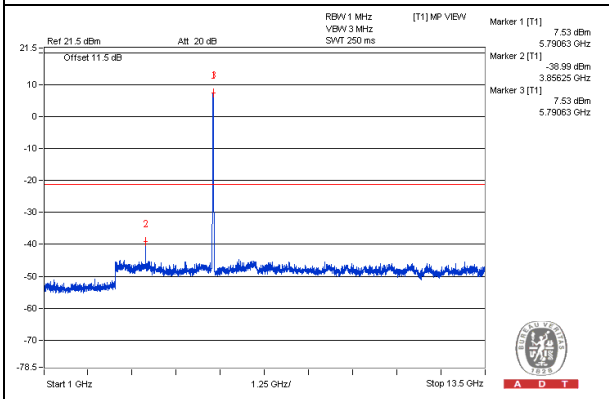
Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

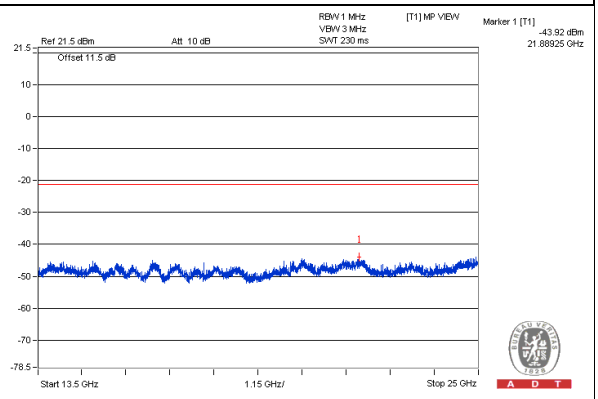
* The unwanted emission was verified and the test result was passed by radiated measurement.
(Please refer APPENDIX A)

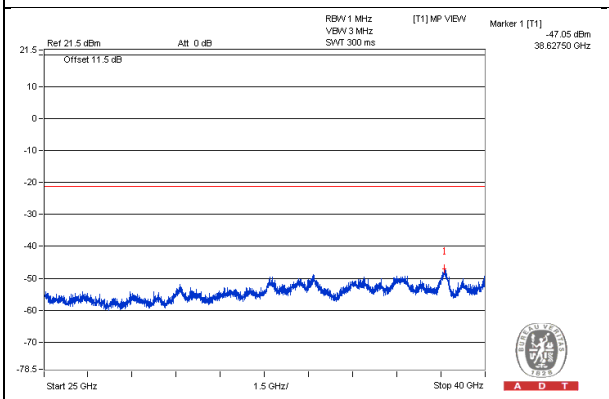
Chain 0

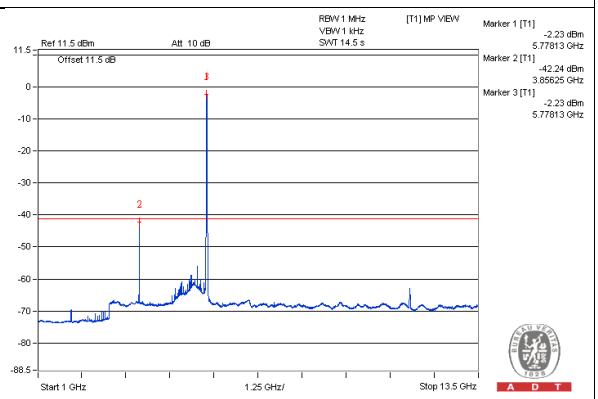

RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
7.29 dBm
5.77813 GHz
Marker 2 [T1]
-44.32 dBm
3.06875 GHz
Marker 3 [T1]
7.29 dBm
5.77813 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-39.93 dBm
17.35538 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-47.29 dBm
38.54125 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz
RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-0.72 dBm
5.77813 GHz
Marker 2 [T1]
-56.02 dBm
3.85625 GHz
Marker 3 [T1]
-0.72 dBm
5.77813 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-51.23 dBm
17.35250 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.31 dBm
38.63500 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

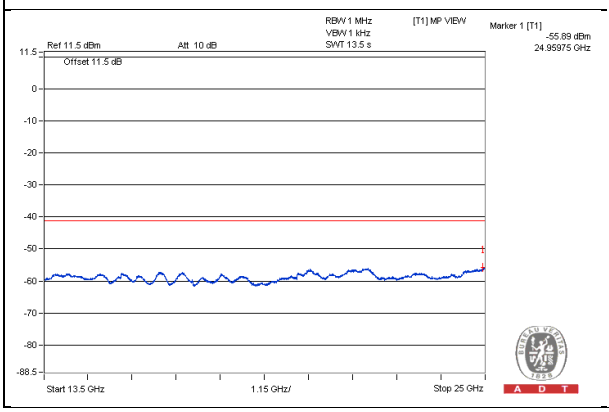
Chain 1

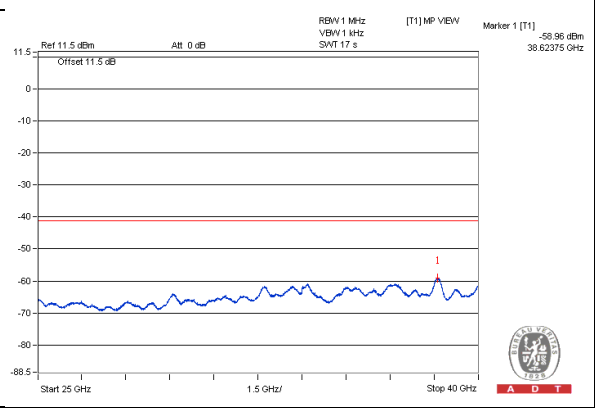

RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
7.53 dBm
5.79063 GHz
Marker 2 [T1]
-38.99 dBm
3.85625 GHz
Marker 3 [T1]
7.53 dBm
5.79063 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz


RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-43.92 dBm
21.88925 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz


RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-47.05 dBm
38.62750 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz


RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-2.23 dBm
5.77813 GHz
Marker 2 [T1]
-42.24 dBm
3.85625 GHz
Marker 3 [T1]
-2.23 dBm
5.77813 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz


RBW 1 MHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-55.89 dBm
24.95975 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz

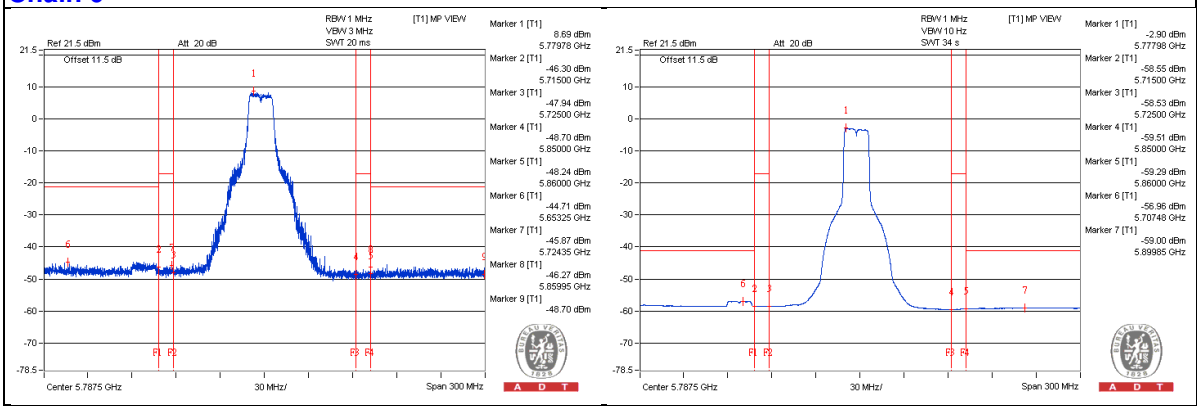

RBW 1 MHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.96 dBm
38.62375 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

Bandedge table

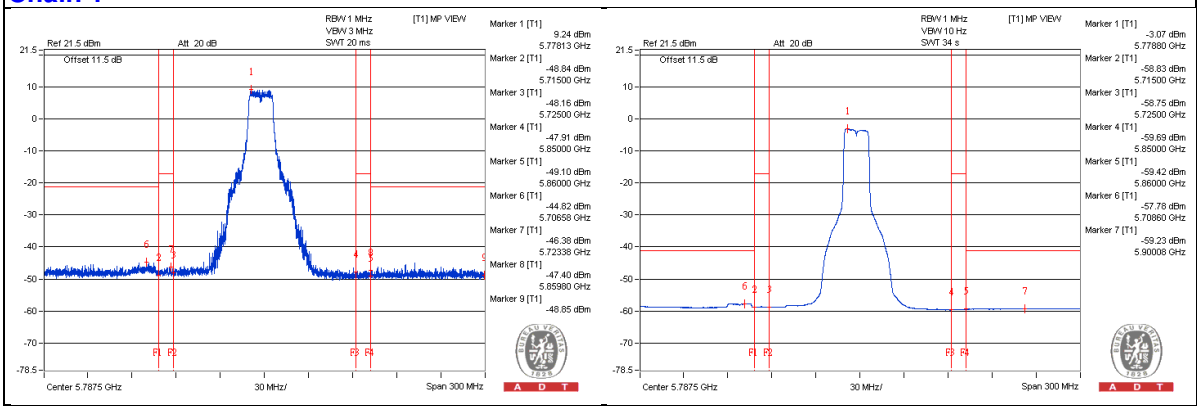
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	5708.075 PK	60.35	74	-13.65	-45.97	-45.42	7.77	-34.91
2	5707.475 AV	48.67	54	-5.33	-56.96	-57.83	7.77	-46.59
3	5722.925 PK	59.53	78.2	-18.67	-46.24	-46.8	7.77	-35.73
4	5859.95 PK	58.76	78.2	-19.44	-46.27	-48.61	7.77	-36.5
5	5889.95 PK	59.76	74	-14.24	-48.19	-44.96	7.77	-35.5
6	5900 AV	46.91	54	-7.09	-59.02	-59.24	7.77	-48.35

Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

Chain 0



Chain 1



802.11a - Channel 165

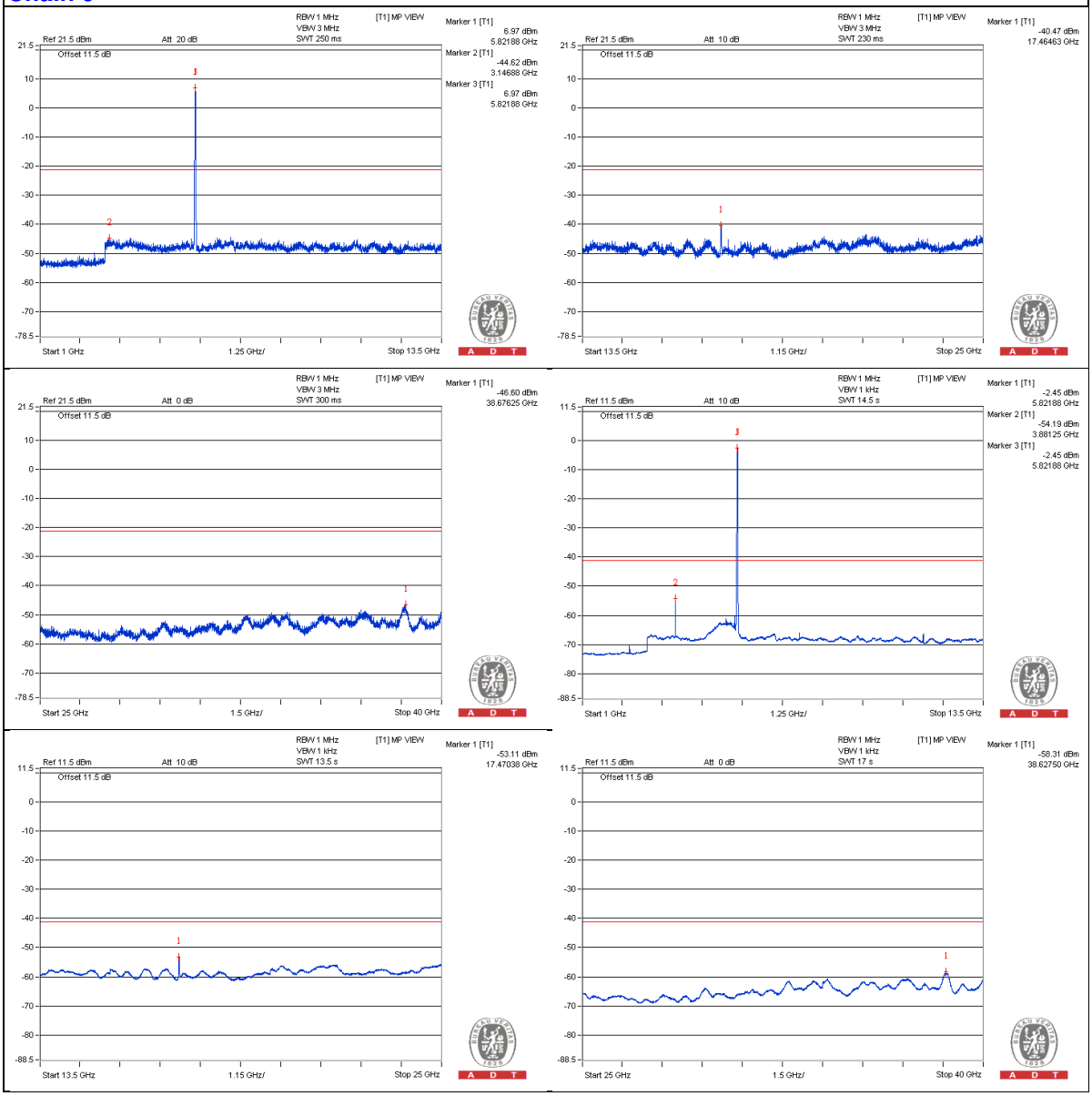
Conducted spurious emission table

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	3884.375 PK	65.16	74	-8.84	-45.54	-38.68	7.77	-30.1
2	3884.375 AV	59.05	54	*5.05	-57.42	-44.18	7.77	-36.21
3	7765.625 PK	58.28	74	-15.72	-48.25	-47.32	7.77	-36.98
4	7765.625 AV	39.7	54	-14.3	-65.9	-66.82	7.77	-55.56
5	11650 PK	58.03	74	-15.97	-47.96	-48.06	7.77	-37.23
6	11650 AV	41.29	54	-12.71	-66.27	-63.63	7.77	-53.97
7	17473.25 PK	62.89	68.2	-5.31	-40.72	-49.2	7.77	-32.37

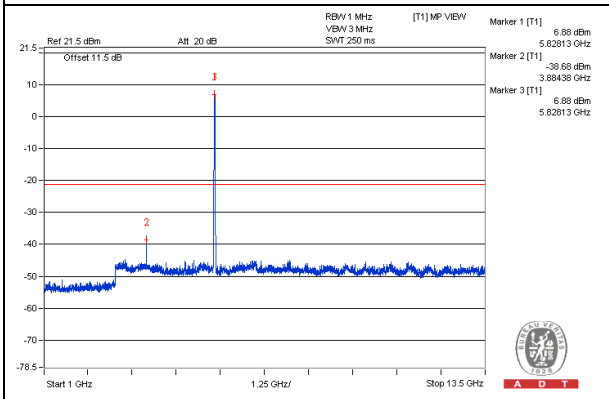
Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

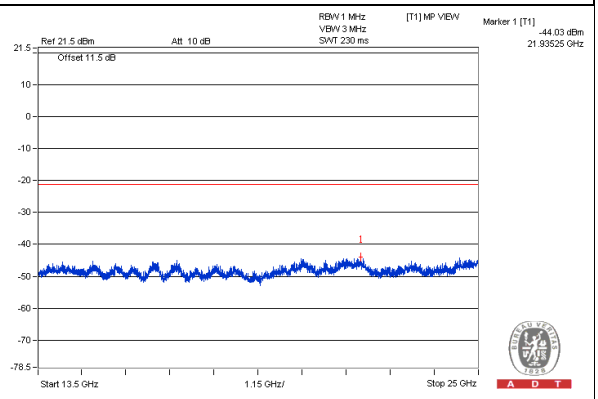
* The unwanted emission was verified and the test result was passed by radiated measurement.
(Please refer APPENDIX A)

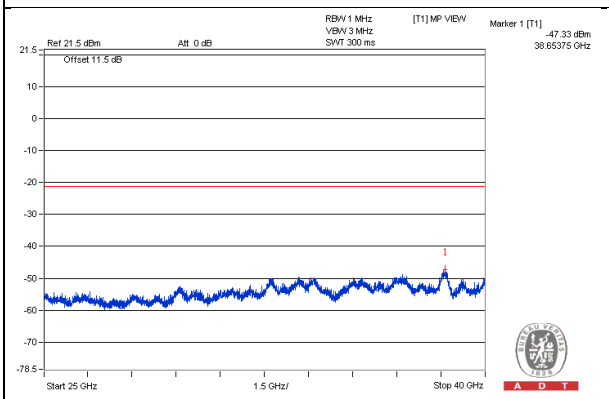
Chain 0

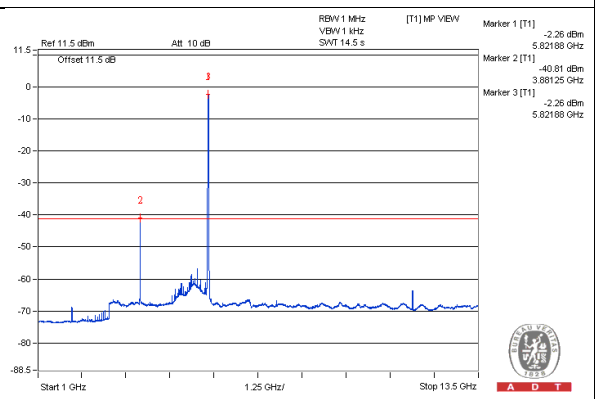

RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
6.97 dBm
5.82188 GHz
Marker 2 [T1]
-44.62 dBm
3.14688 GHz
Marker 3 [T1]
6.97 dBm
5.82188 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-40.47 dBm
17.46463 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-46.60 dBm
38.67625 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz
RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-2.45 dBm
5.82188 GHz
Marker 2 [T1]
-54.19 dBm
3.88125 GHz
Marker 3 [T1]
-2.45 dBm
5.82188 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 kHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-53.11 dBm
17.47038 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 kHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.31 dBm
38.62750 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

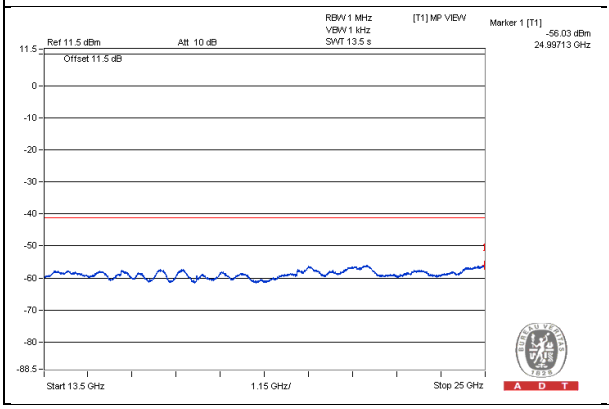
Chain 1

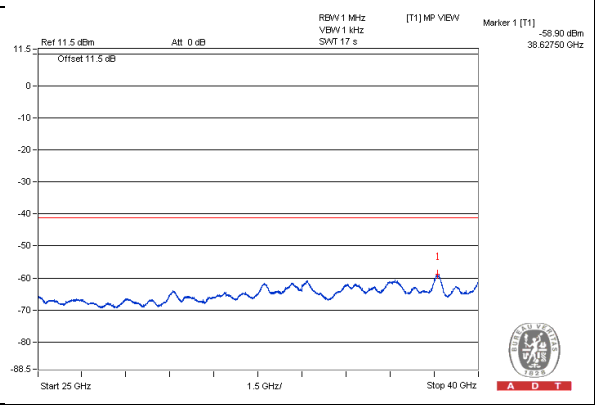

RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
6.88 dBm
5.82813 GHz
Marker 2 [T1]
-38.68 dBm
3.88438 GHz
Marker 3 [T1]
6.88 dBm
5.82813 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz


RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-44.03 dBm
21.93525 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz


RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-47.33 dBm
38.65375 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz


RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-2.26 dBm
5.82188 GHz
Marker 2 [T1]
-40.81 dBm
3.88125 GHz
Marker 3 [T1]
-2.26 dBm
5.82188 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz


RBW 1 MHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-56.03 dBm
24.99713 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz

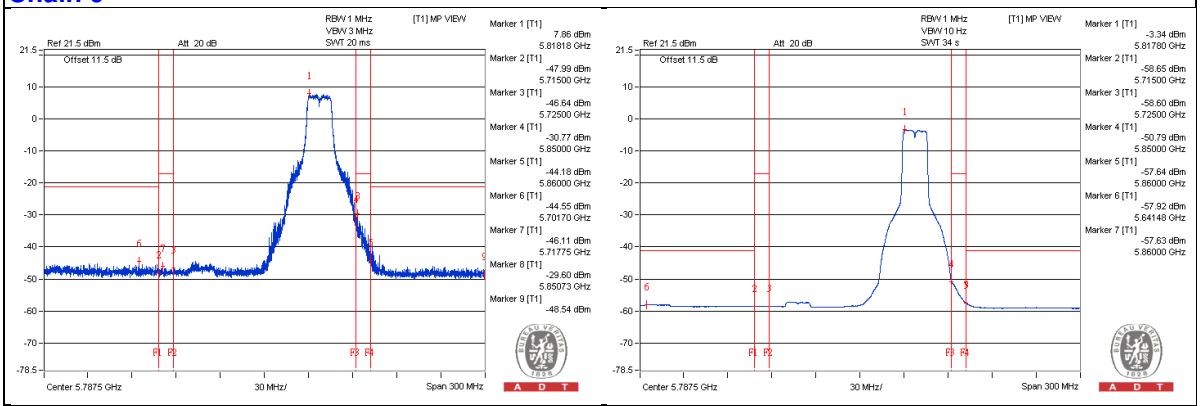

RBW 1 MHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.90 dBm
38.62750 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

Bandedge table

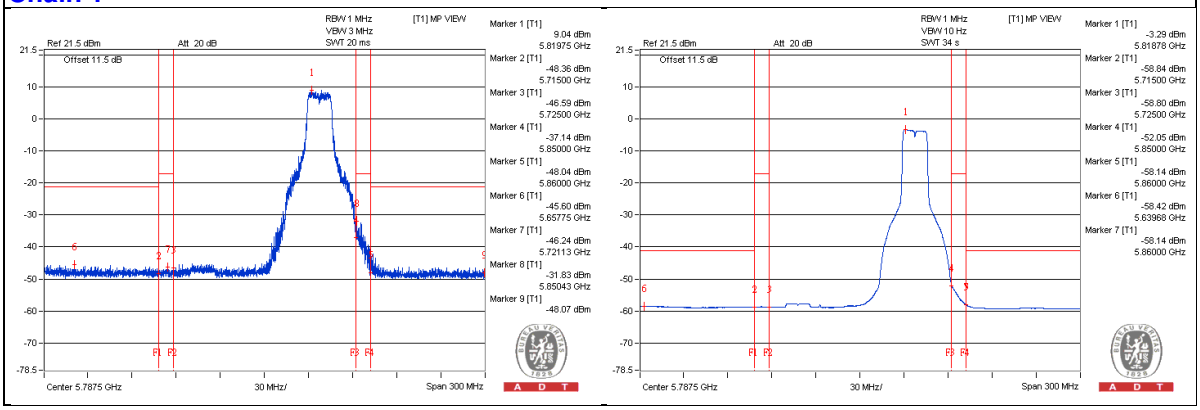
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	5641.325 PK	59.28	74	-14.72	-48.01	-45.79	7.77	-35.98
2	5641.55 AV	47.83	54	-6.17	-57.92	-58.53	7.77	-47.43
3	5719.475 PK	58.97	78.2	-19.23	-46.86	-47.3	7.77	-36.29
4	5850.275 PK	74.5	78.2	-3.7	-30.88	-32.33	7.77	-20.76
5	5860.7 PK	63.94	74	-10.06	-39.69	-47.96	7.77	-31.32
6	5860.025 AV	48.16	54	-5.84	-57.64	-58.14	7.77	-47.1

Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

Chain 0



Chain 1



802.11n (HT20) - Channel 149

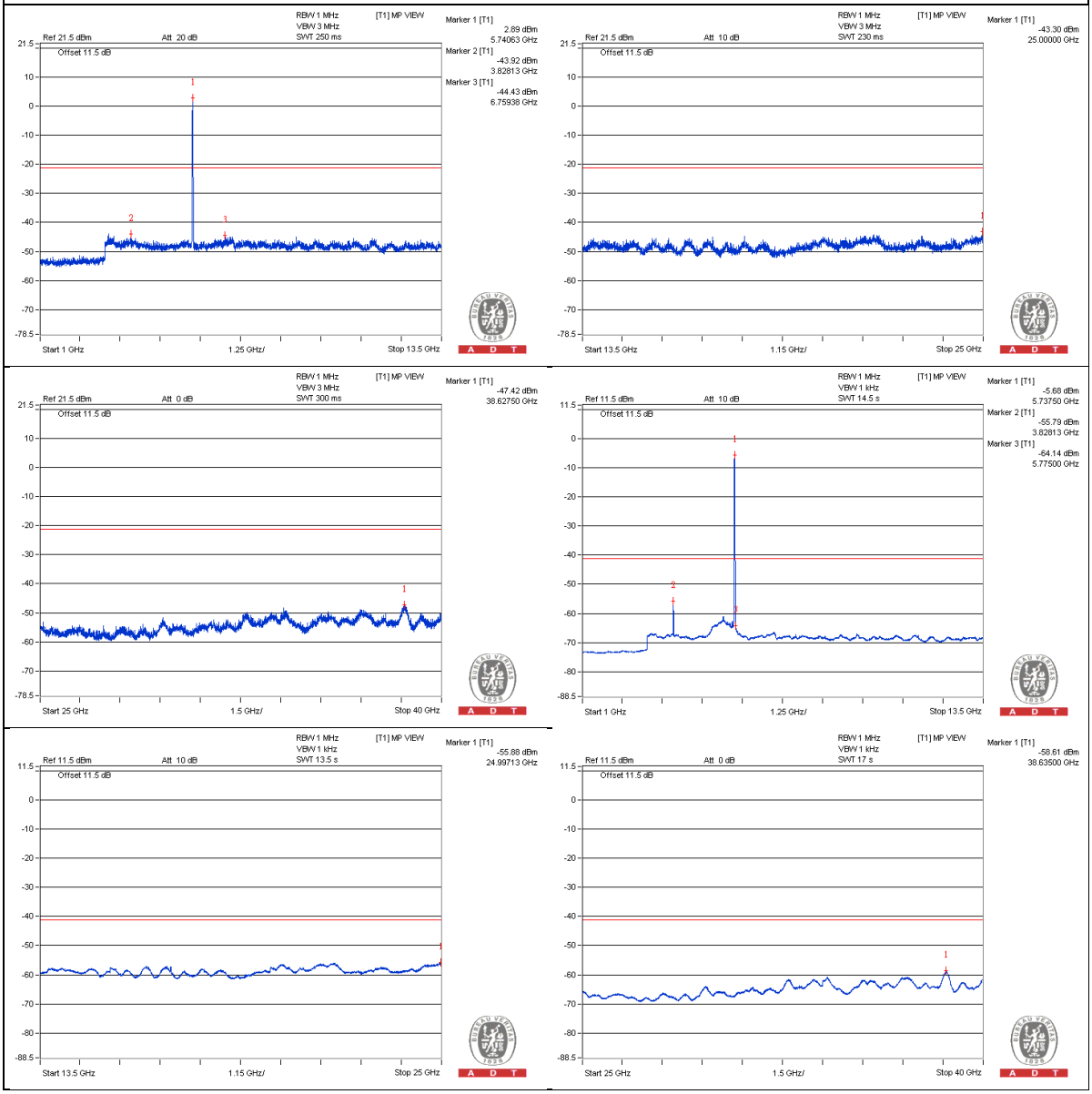
Conducted spurious emission table

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	3828.125 PK	65.17	74	-8.83	-43.92	-39.1	7.77	-30.09
2	3828.125 AV	59.63	54	*5.63	-55.79	-43.66	7.77	-35.63
3	7659.375 PK	59.01	74	-14.99	-46.32	-47.87	7.77	-36.25
4	7659.375 AV	39.75	54	-14.25	-67.36	-65.44	7.77	-55.51
5	11490.625 PK	58.04	74	-15.96	-48.2	-47.8	7.77	-37.22
6	11490.625 AV	38.8	54	-15.2	-67.69	-66.84	7.77	-56.46
7	17234.625 PK	59.42	68.2	-8.78	-45.4	-48.32	7.77	-35.84

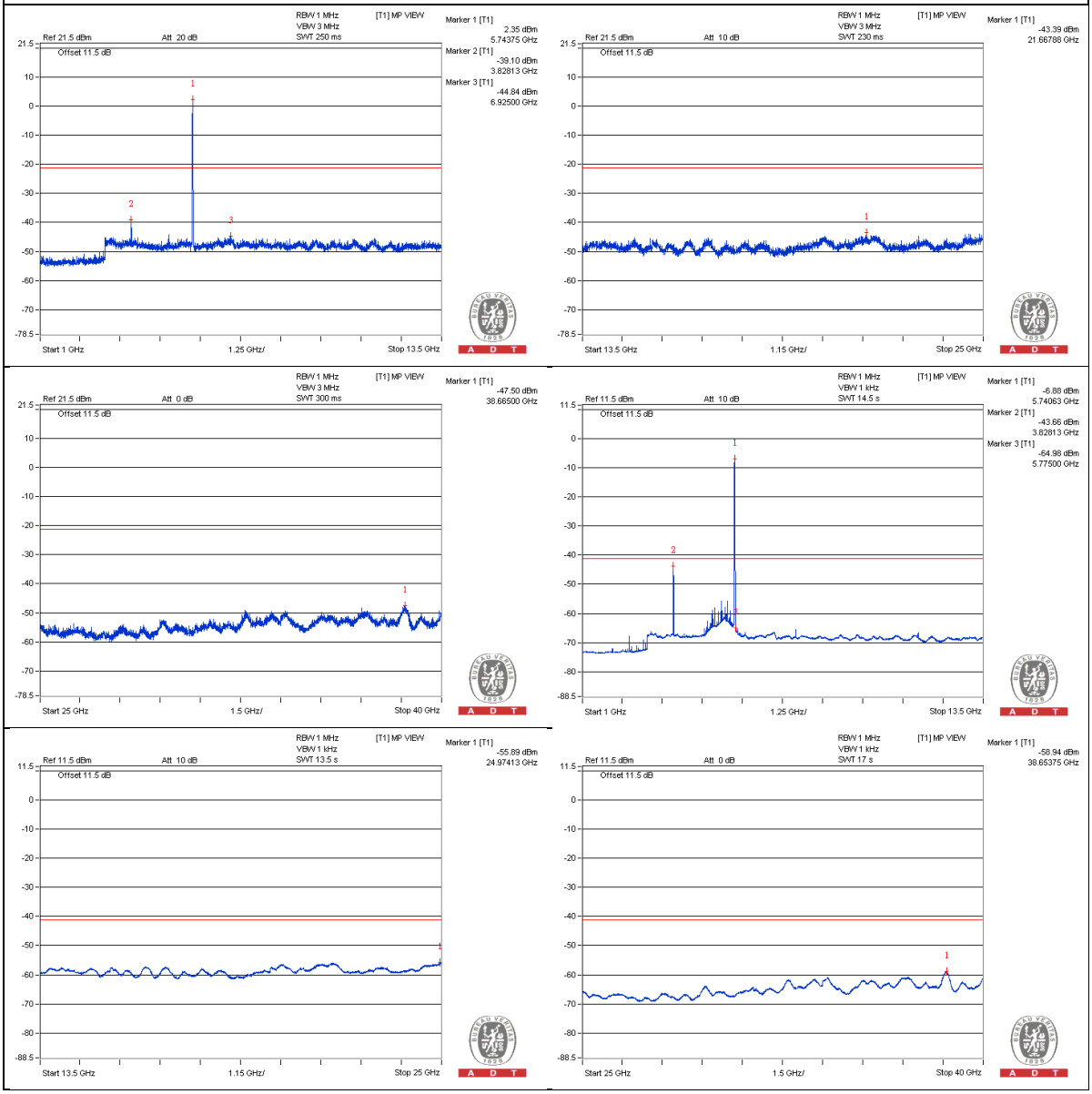
Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

* The unwanted emission was verified and the test result was passed by radiated measurement.
(Please refer APPENDIX A)

Chain 0


RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
2.89 dBm
5.74063 GHz
Marker 2 [T1]
-43.92 dBm
3.82813 GHz
Marker 3 [T1]
-44.43 dBm
6.75938 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-43.30 dBm
25.00000 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-47.42 dBm
38.62750 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz
RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-5.68 dBm
5.73750 GHz
Marker 2 [T1]
-55.79 dBm
3.82813 GHz
Marker 3 [T1]
-64.14 dBm
5.77500 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-55.88 dBm
24.99713 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.61 dBm
38.63500 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

Chain 1

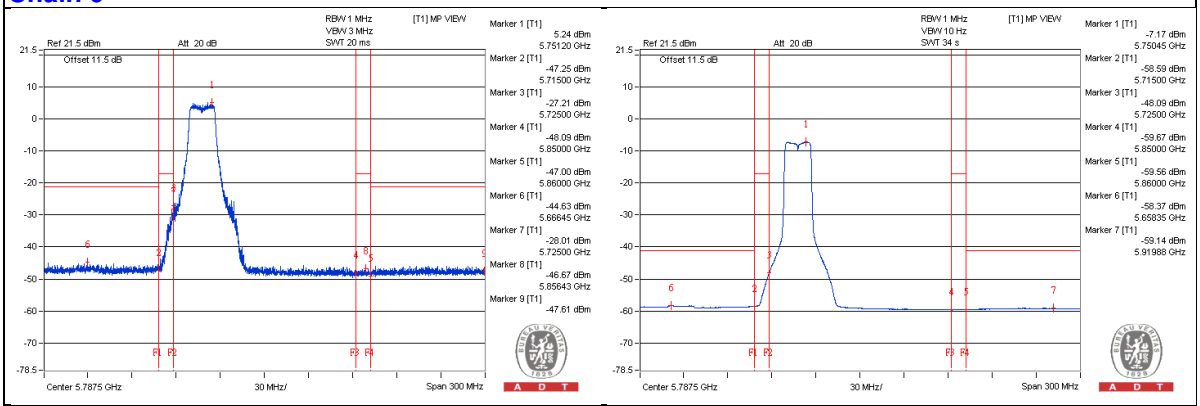

RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
2.35 dBm
5.74375 GHz
Marker 2 [T1]
-39.10 dBm
3.82813 GHz
Marker 3 [T1]
-44.84 dBm
6.92500 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-43.39 dBm
21.66788 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-47.50 dBm
38.66500 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz
RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-6.88 dBm
5.74063 GHz
Marker 2 [T1]
-43.66 dBm
3.82813 GHz
Marker 3 [T1]
-64.98 dBm
5.77500 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-55.89 dBm
24.97413 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.94 dBm
38.65375 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

Bandedge table

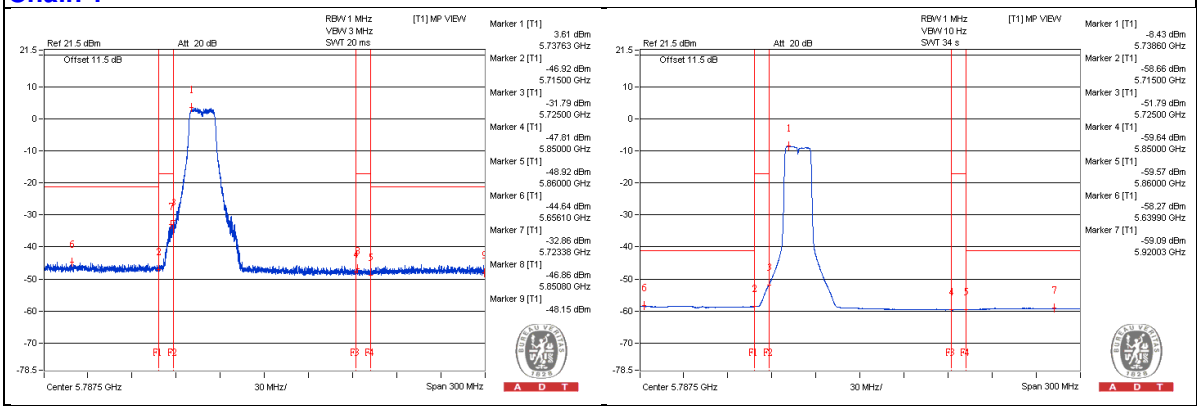
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	5659.325 PK	59.94	74	-14.06	-46.03	-46.17	7.77	-35.32
2	5658.35 AV	47.61	54	-6.39	-58.37	-58.49	7.77	-47.65
3	5724.35 PK	76.19	78.2	-2.01	-28.04	-33.03	7.77	-19.07
4	5856.425 PK	58.94	78.2	-19.26	-46.67	-47.58	7.77	-36.32
5	5920.1 PK	58.98	74	-15.02	-47.89	-46.36	7.77	-36.28
6	5920.025 AV	46.92	54	-7.08	-59.15	-59.09	7.77	-48.34

Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

Chain 0



Chain 1



802.11n (HT20) - Channel 157

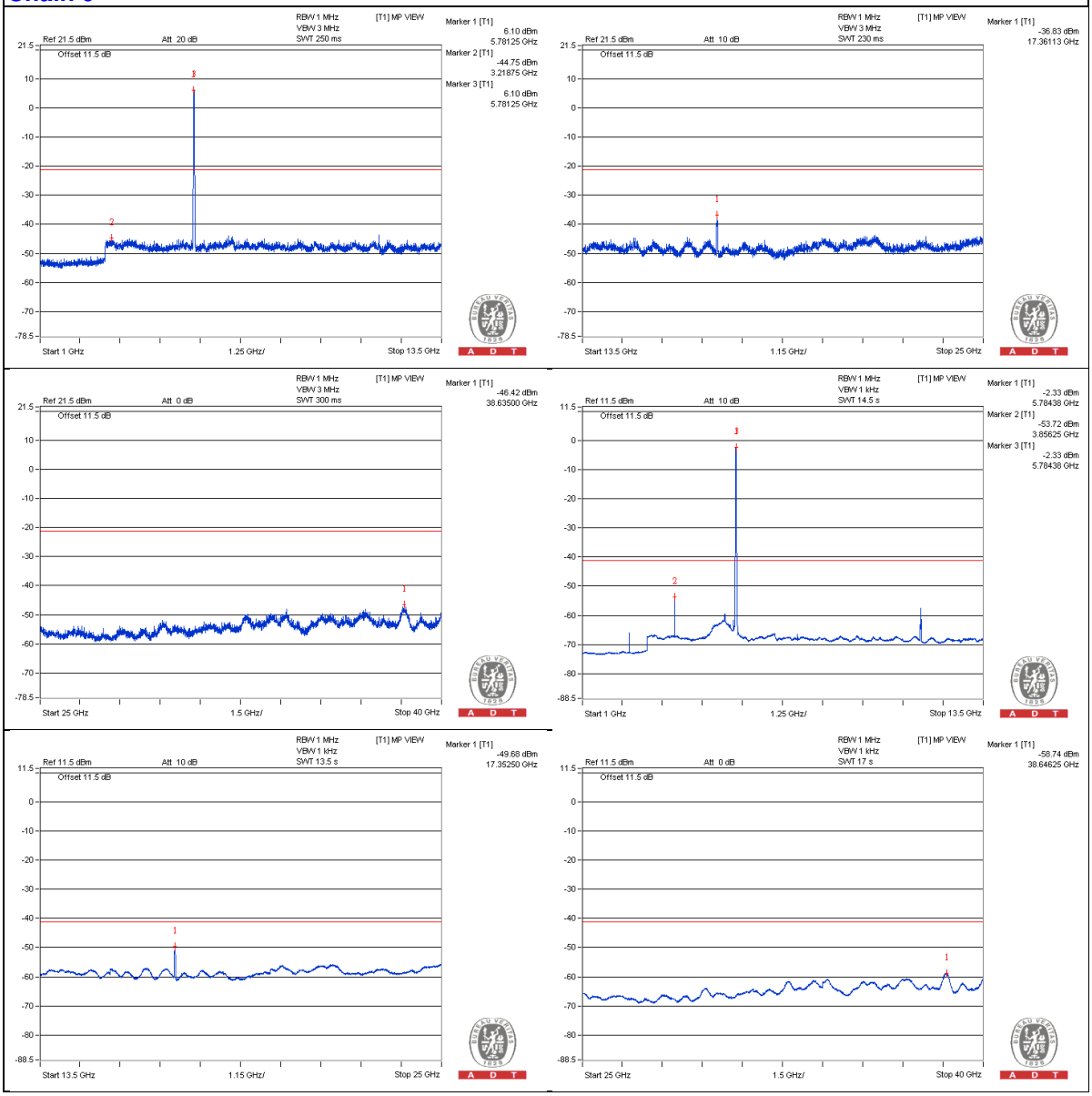
Conducted spurious emission table

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	3856.25 PK	64.55	74	-9.45	-45.66	-39.4	7.77	-30.71
2	3856.25 AV	61.08	54	*7.08	-53.72	-42.25	7.77	-34.18
3	7712.5 PK	58.54	74	-15.46	-46.87	-48.23	7.77	-36.72
4	7712.5 AV	39.1	54	-14.9	-66.46	-67.48	7.77	-56.16
5	11571.875 PK	61.31	74	-12.69	-43.83	-45.87	7.77	-33.95
6	11571.875 AV	47.8	54	-6.2	-57.51	-59.12	7.77	-47.46
7	17355.375 PK	66.05	68.2	-2.15	-37.25	-49.21	7.77	-29.21

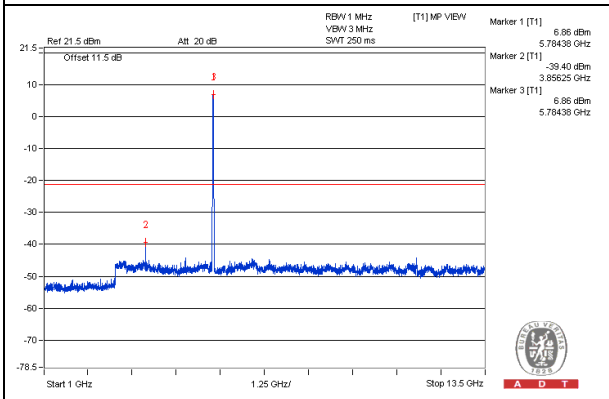
Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

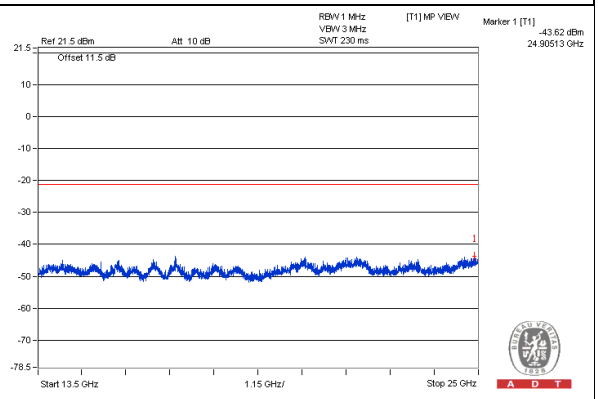
* The unwanted emission was verified and the test result was passed by radiated measurement.
(Please refer APPENDIX A)

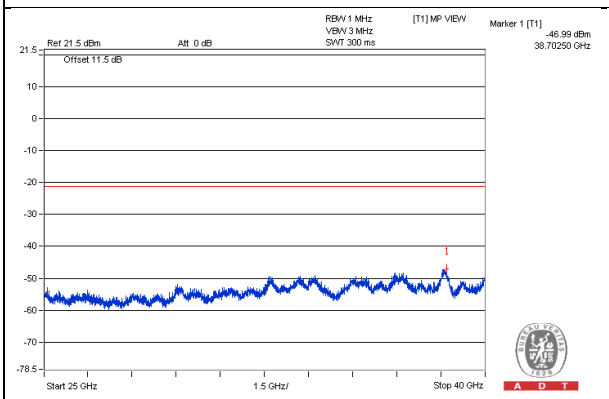
Chain 0

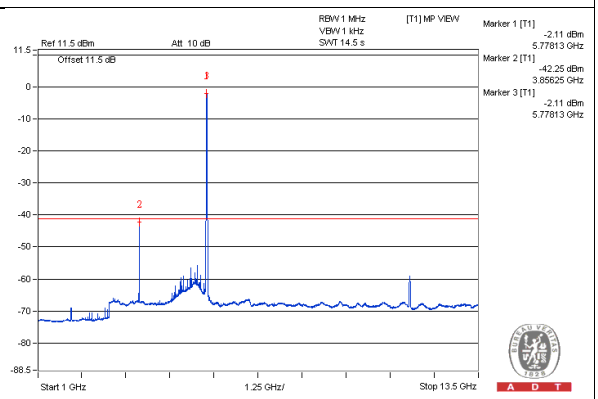

RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
6.10 dBm
5.78125 GHz
Marker 2 [T1]
-44.75 dBm
3.21875 GHz
Marker 3 [T1]
6.10 dBm
5.78125 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-36.83 dBm
17.36113 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-46.42 dBm
38.63500 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz
RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-2.33 dBm
5.78438 GHz
Marker 2 [T1]
-53.72 dBm
3.85625 GHz
Marker 3 [T1]
-2.33 dBm
5.78438 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 kHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-49.68 dBm
17.35250 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 kHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.74 dBm
38.64625 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

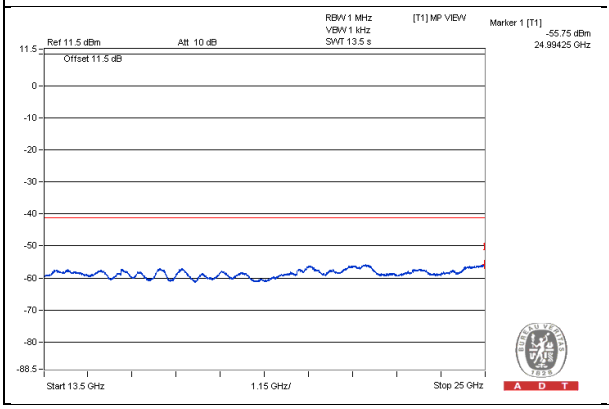
Chain 1

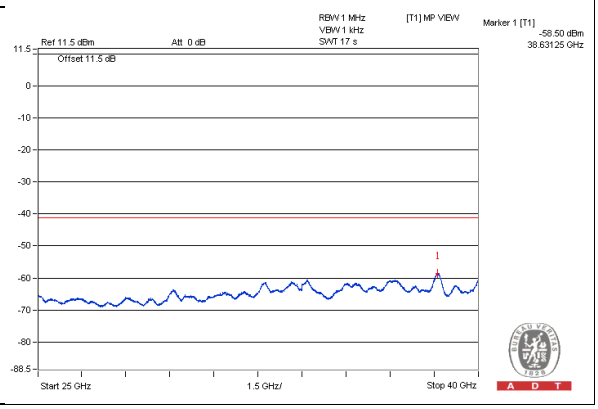

RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
6.86 dBm
5.78438 GHz
Marker 2 [T1]
-39.40 dBm
3.85625 GHz
Marker 3 [T1]
6.86 dBm
5.78438 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz


RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-43.62 dBm
24.90513 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz


RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-46.99 dBm
38.70250 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz


RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-2.11 dBm
5.77813 GHz
Marker 2 [T1]
-42.25 dBm
3.85625 GHz
Marker 3 [T1]
-2.11 dBm
5.77813 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz


RBW 1 MHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-55.75 dBm
24.99425 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz

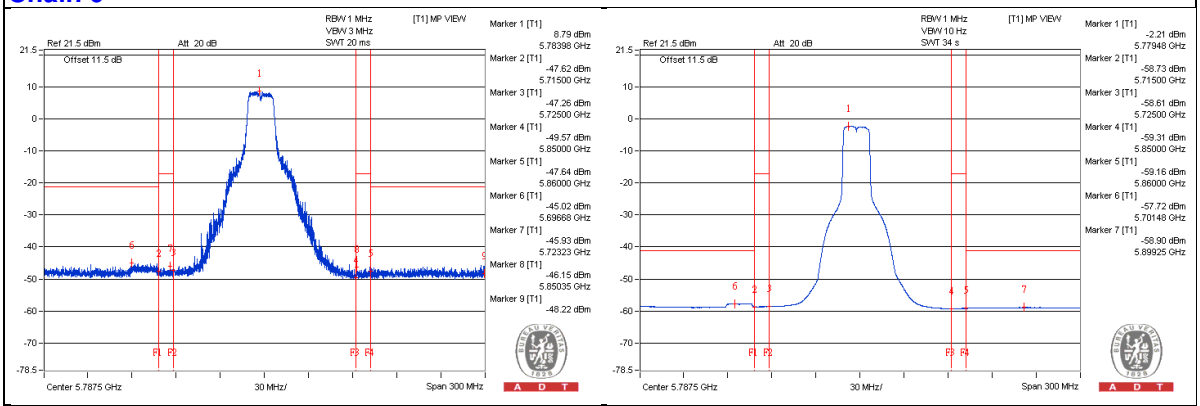

RBW 1 MHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.50 dBm
38.63125 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

Bandedge table

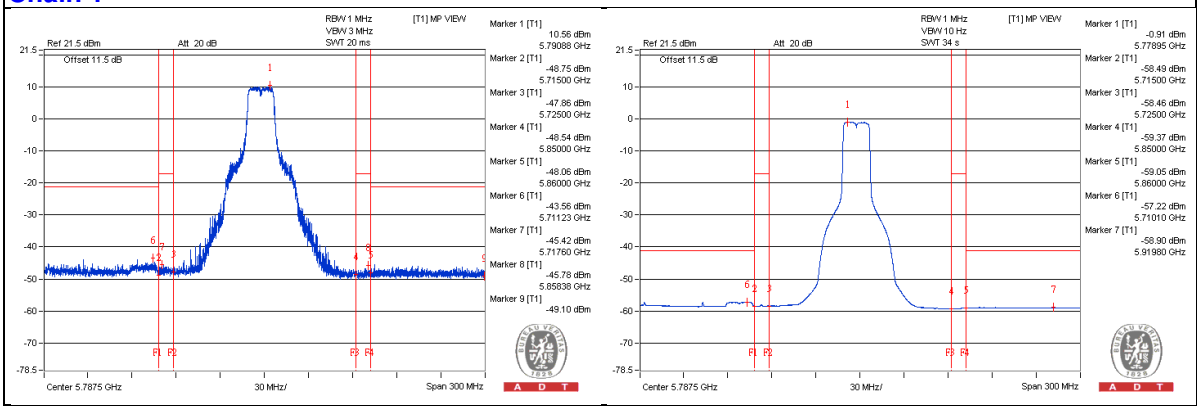
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	5698.925 PK	60.35	74	-13.65	-45.23	-46.2	7.77	-34.91
2	5698.475 AV	48.5	54	-5.5	-57.74	-57.35	7.77	-46.76
3	5718.35 PK	59.88	78.2	-18.32	-46.55	-45.81	7.77	-35.38
4	5858.375 PK	58.99	78.2	-19.21	-48.86	-45.78	7.77	-36.27
5	5901.125 PK	58.62	74	-15.38	-46.53	-48.53	7.77	-36.64
6	5900.525 AV	47.1	54	-6.9	-58.91	-58.98	7.77	-48.16

Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

Chain 0



Chain 1



802.11n (HT20) - Channel 165

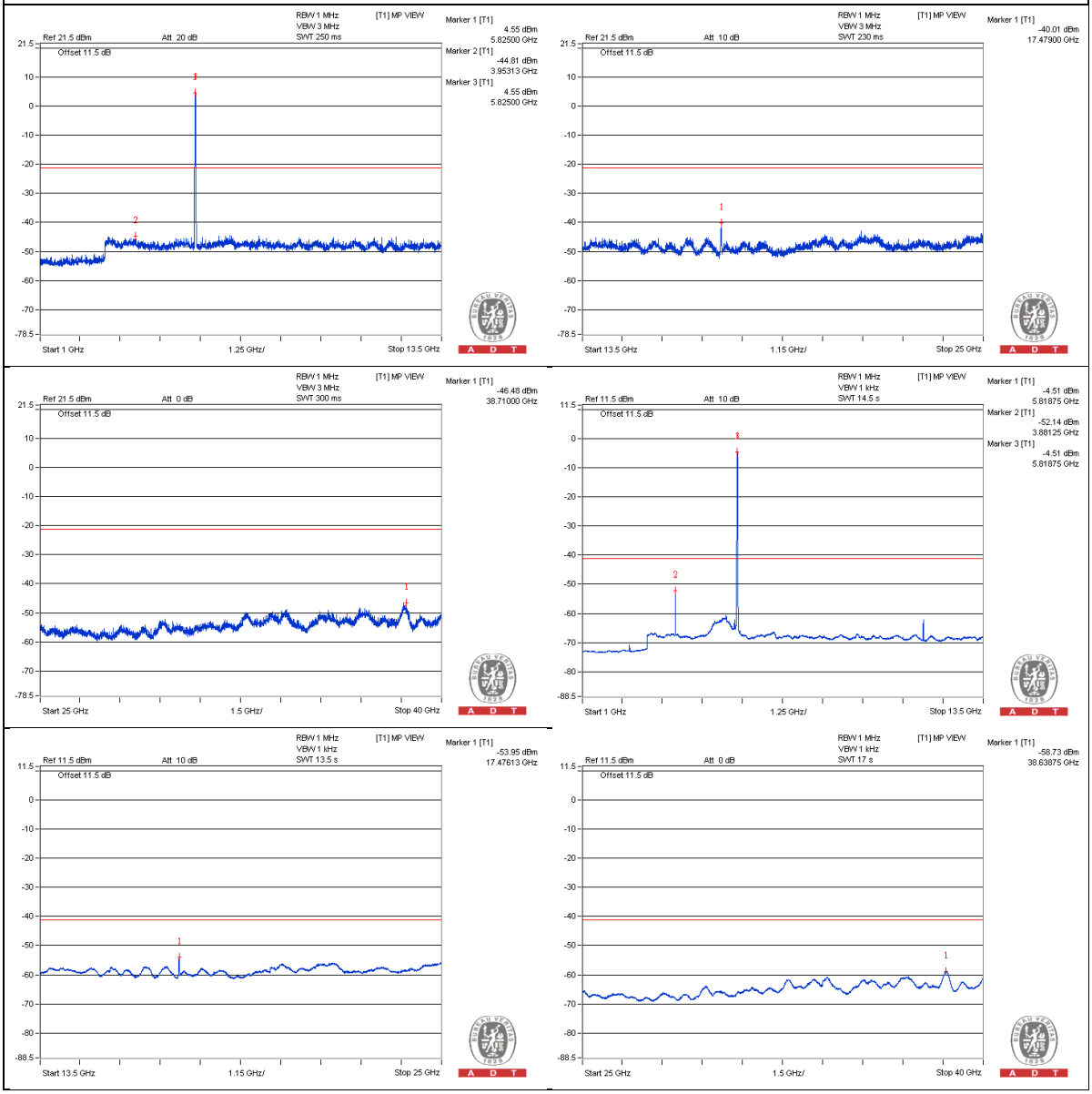
Conducted spurious emission table

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	3884.375 PK	65.2	74	-8.8	-45.66	-38.61	7.77	-38.99
2	3884.375 AV	59.15	54	*5.15	-55.41	-44.2	7.77	-49.33
3	7765.625 PK	57.47	74	-16.53	-49.23	-47.99	7.77	-39.04
4	7765.625 AV	38.37	54	-15.63	-67.63	-67.72	7.77	-58.97
5	11650 PK	58.63	74	-15.37	-46.34	-48.84	7.77	-39.12
6	11650 AV	41.89	54	-12.11	-62.51	-66.81	7.77	-54.58
7	17476.125 PK	61.15	68.2	-7.05	-42.56	-50.25	7.77	-39.32

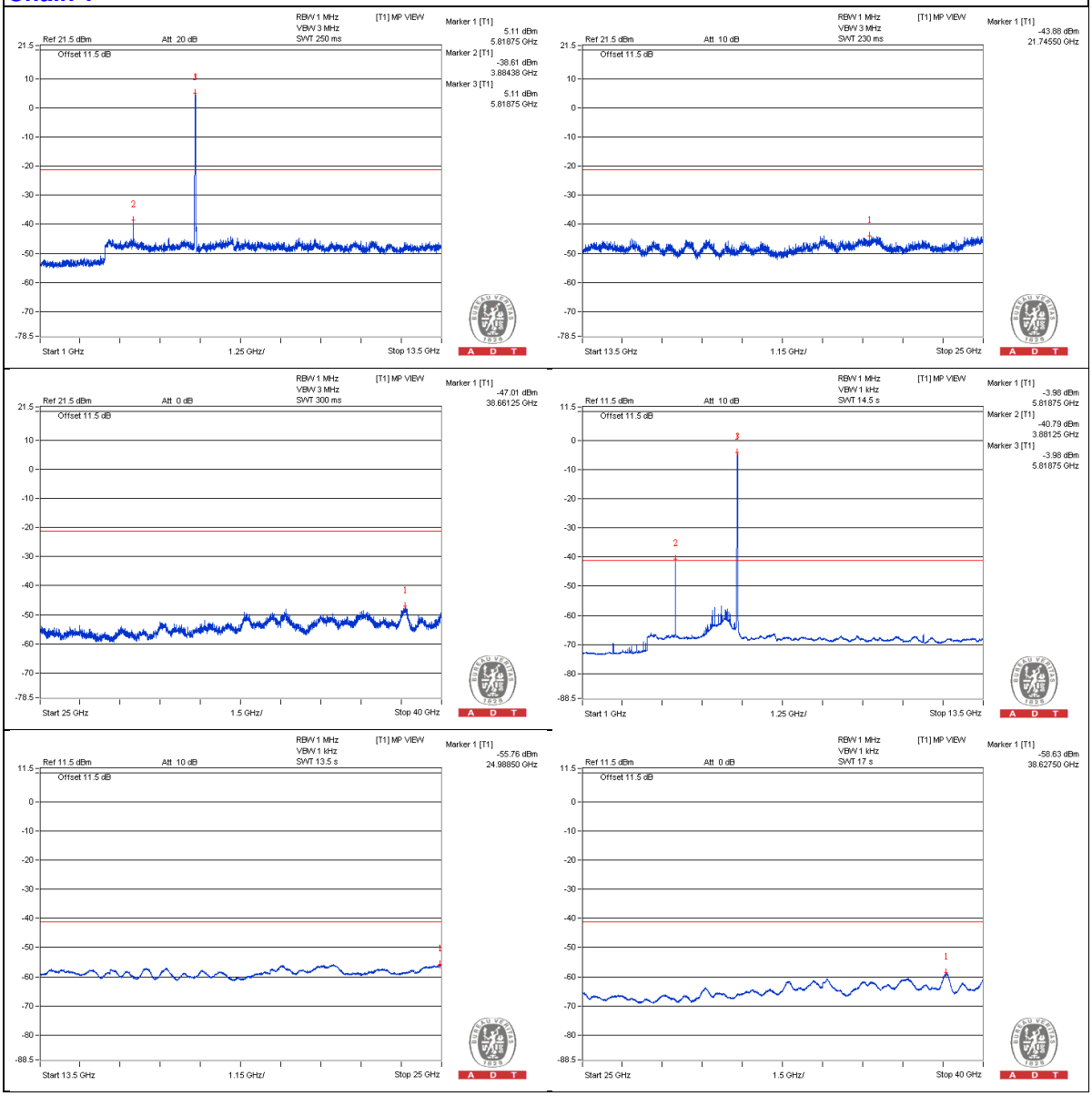
Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

* The unwanted emission was verified and the test result was passed by radiated measurement.
(Please refer APPENDIX A)

Chain 0


RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
4.55 dBm
5.82500 GHz
Marker 2 [T1]
-44.81 dBm
3.95313 GHz
Marker 3 [T1]
4.55 dBm
5.82500 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-40.01 dBm
17.47900 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-46.48 dBm
38.71000 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz
RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-4.51 dBm
5.81875 GHz
Marker 2 [T1]
-52.14 dBm
3.88125 GHz
Marker 3 [T1]
-4.51 dBm
5.81875 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-53.95 dBm
17.47613 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.73 dBm
38.63875 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

Chain 1

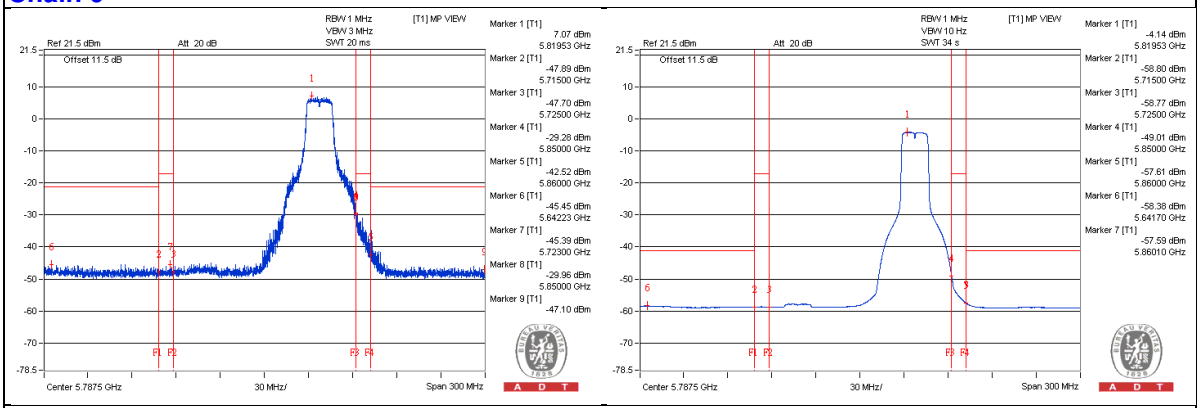

RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
5.11 dBm
5.81875 GHz
Marker 2 [T1]
-38.61 dBm
3.88438 GHz
Marker 3 [T1]
5.11 dBm
5.81875 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-43.88 dBm
21.74550 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-47.01 dBm
38.66125 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz
RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-3.98 dBm
5.81875 GHz
Marker 2 [T1]
-40.79 dBm
3.88125 GHz
Marker 3 [T1]
-3.98 dBm
5.81875 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-55.76 dBm
24.98850 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.63 dBm
38.62750 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

Bandedge table

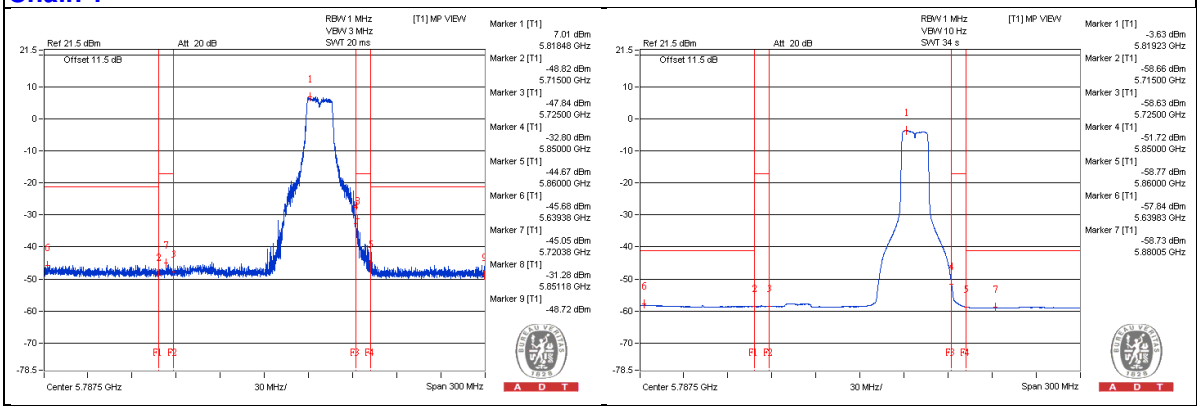
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	5642.225 PK	59.4	74	-14.6	-45.45	-48.3	7.77	-35.86
2	5641.7 AV	47.73	54	-6.27	-58.38	-58.25	7.77	-47.53
3	5723 PK	59.74	78.2	-18.46	-45.39	-47.45	7.77	-35.52
4	5850.875 PK	74.4	78.2	-3.8	-29.54	-35.88	7.77	-20.86
5	5860.1 PK	70.42	74	-3.58	-32.89	-44.58	7.77	-24.84
6	5860.1 AV	47.9	54	-6.1	-57.59	-58.77	7.77	-47.36

Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

Chain 0



Chain 1



802.11n (HT40) - Channel 151

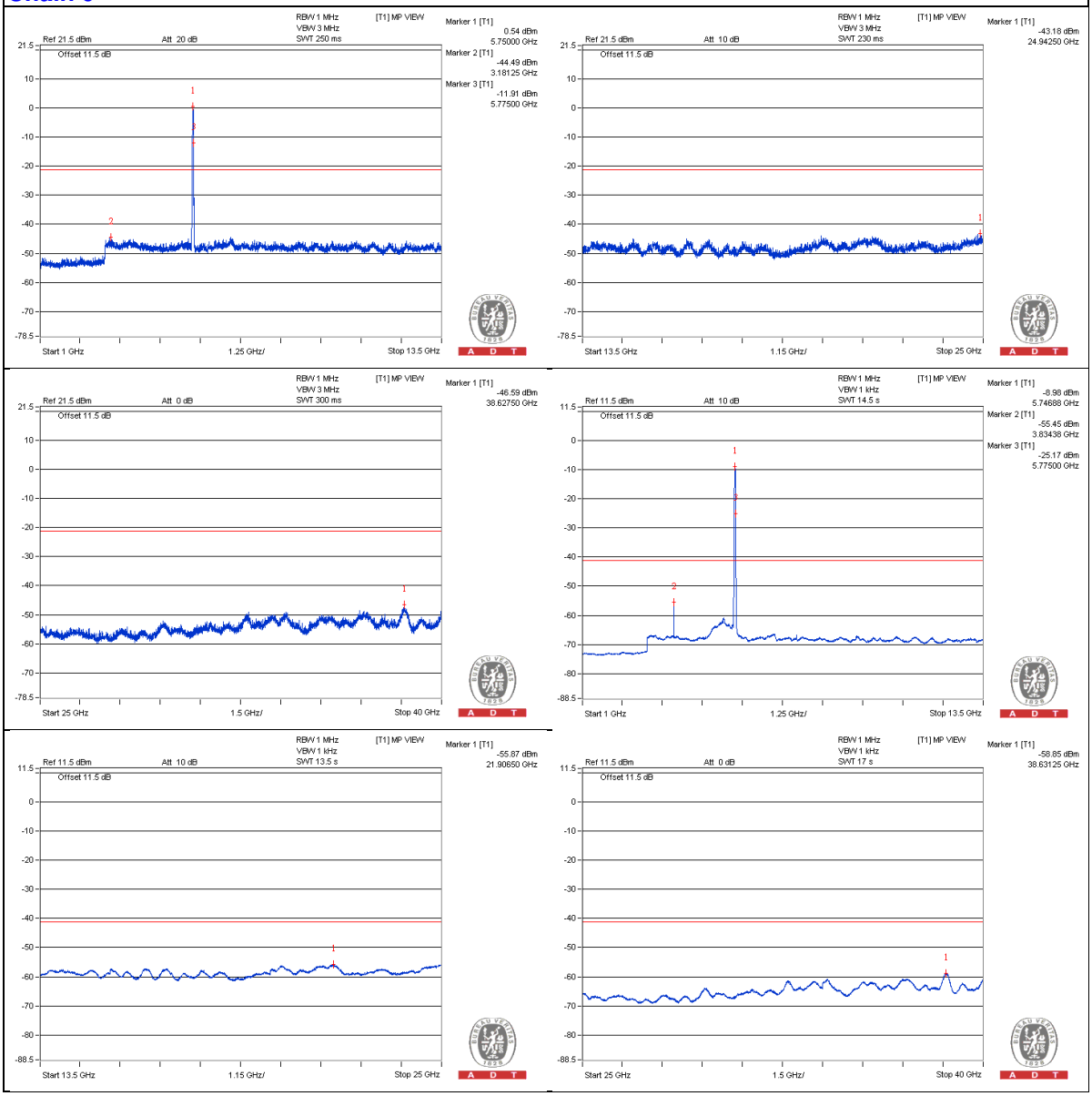
Conducted spurious emission table

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	3837.5 PK	64.15	74	-9.85	-46.77	-39.65	7.77	-31.11
2	3837.5 AV	59.74	54	*5.74	-56.1	-43.52	7.77	-35.52
3	7671.875 PK	58.58	74	-15.42	-48.54	-46.59	7.77	-36.68
4	7671.875 AV	39.71	54	-14.29	-66.93	-65.8	7.77	-55.55
5	11509.375 PK	57.98	74	-16.02	-47.97	-48.16	7.77	-37.28
6	11509.375 AV	37.9	54	-16.1	-68.51	-67.8	7.77	-57.36
7	17266.25 PK	57.82	68.2	-10.38	-47.64	-48.89	7.77	-37.44

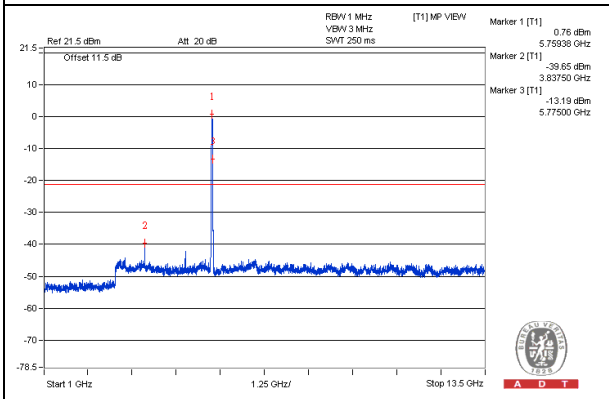
Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

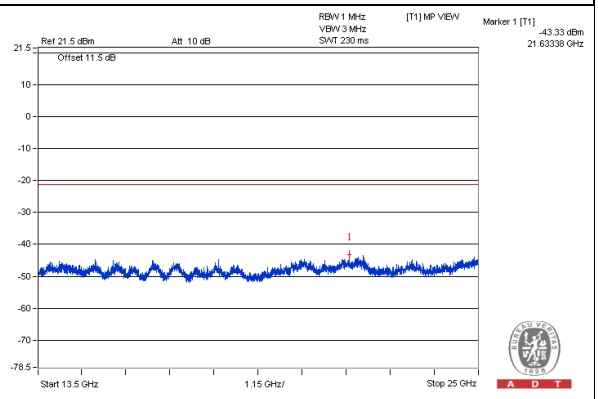
* The unwanted emission was verified and the test result was passed by radiated measurement.
(Please refer APPENDIX A)

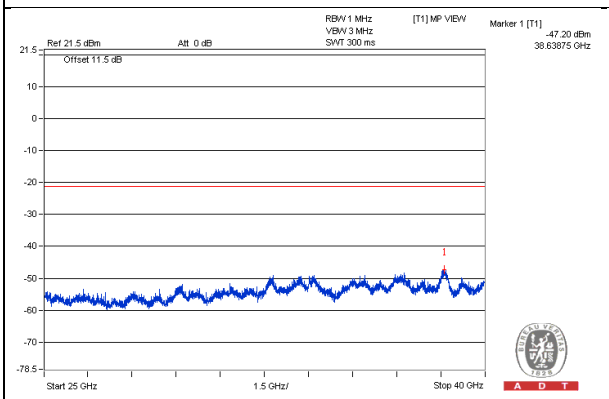
Chain 0

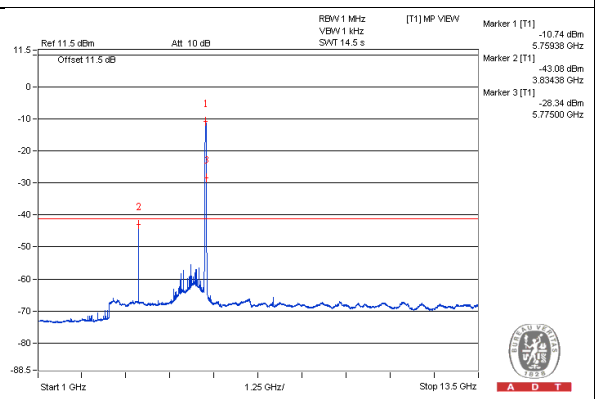

RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
0.54 dBm
5.75000 GHz
Marker 2 [T1]
-44.49 dBm
3.18125 GHz
Marker 3 [T1]
-11.91 dBm
5.77500 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-43.18 dBm
24.94250 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-46.59 dBm
38.62750 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz
RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-8.98 dBm
5.74688 GHz
Marker 2 [T1]
-55.45 dBm
3.83438 GHz
Marker 3 [T1]
-25.17 dBm
5.77500 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-55.87 dBm
21.90650 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.85 dBm
38.63125 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

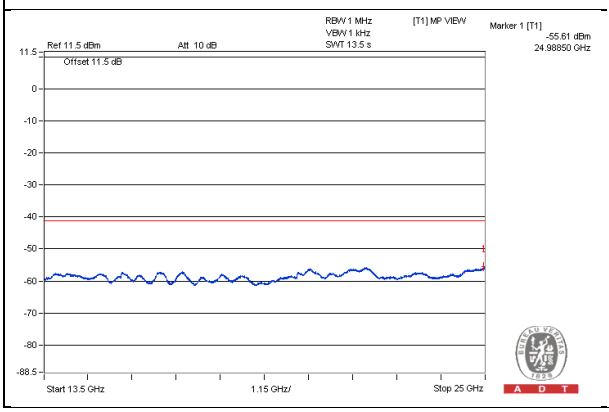
Chain 1

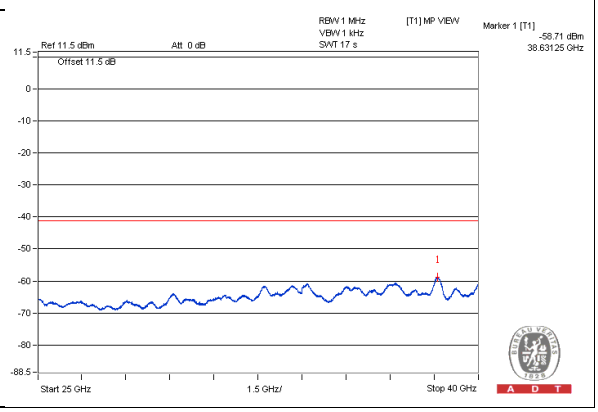

RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
0.76 dBm
5.75938 GHz
Marker 2 [T1]
-39.65 dBm
3.83750 GHz
Marker 3 [T1]
-13.19 dBm
5.77500 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz


RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-43.33 dBm
21.63338 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz


RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-47.20 dBm
38.63875 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz


RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-10.74 dBm
5.75938 GHz
Marker 2 [T1]
-43.08 dBm
3.83438 GHz
Marker 3 [T1]
-28.34 dBm
5.77500 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz


RBW 1 MHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-55.61 dBm
24.98850 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz

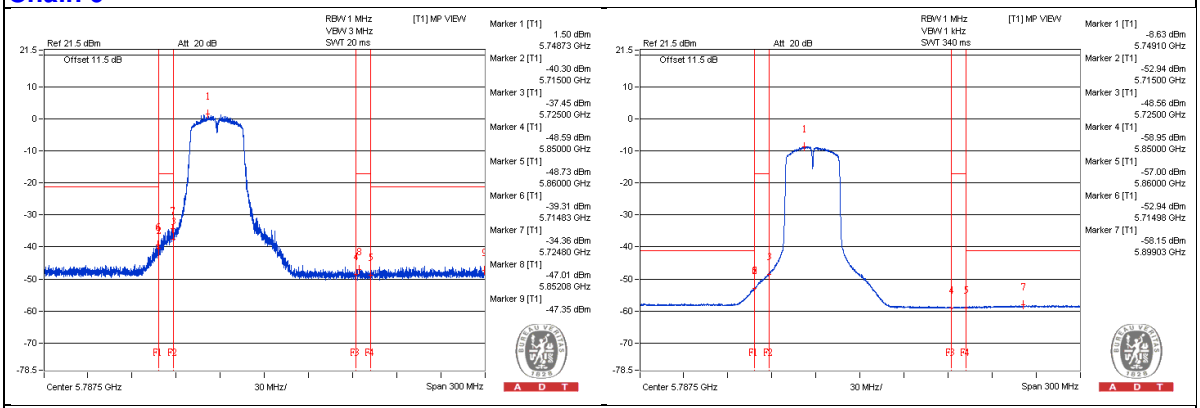

RBW 1 MHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.71 dBm
38.63125 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

Bandedge table

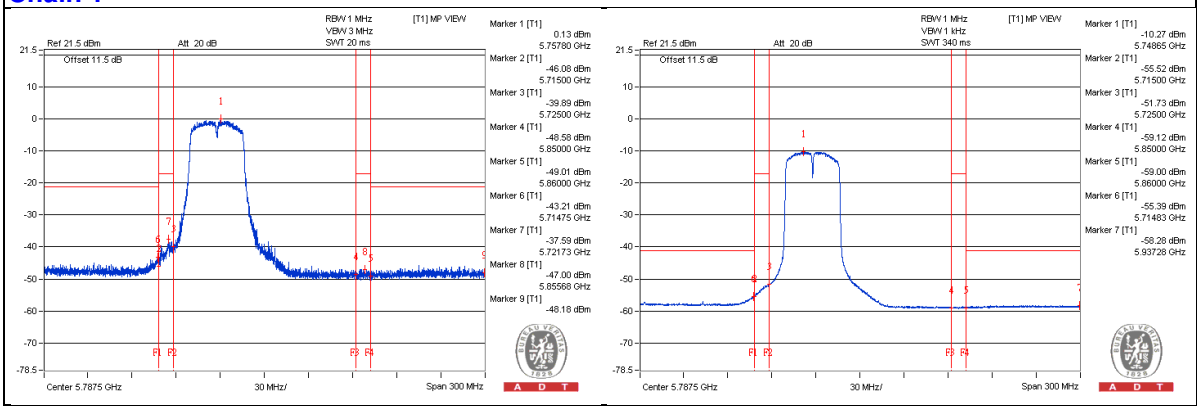
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	5714.75 PK	65.07	74	-8.93	-39.5	-43.21	7.77	-30.19
2	5714.975 AV	52	54	-2	-52.94	-55.52	7.77	-43.26
3	5721.65 PK	69.84	78.2	-8.36	-34.42	-39.25	7.77	-25.42
4	5852.6 PK	58.6	78.2	-19.6	-47.91	-47.01	7.77	-36.66
5	5900.825 PK	58.68	74	-15.32	-47.03	-47.71	7.77	-36.58
6	5899.1 AV	47.75	54	-6.25	-58.18	-58.4	7.77	-47.51

Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

Chain 0



Chain 1



802.11n (HT40) - Channel 159

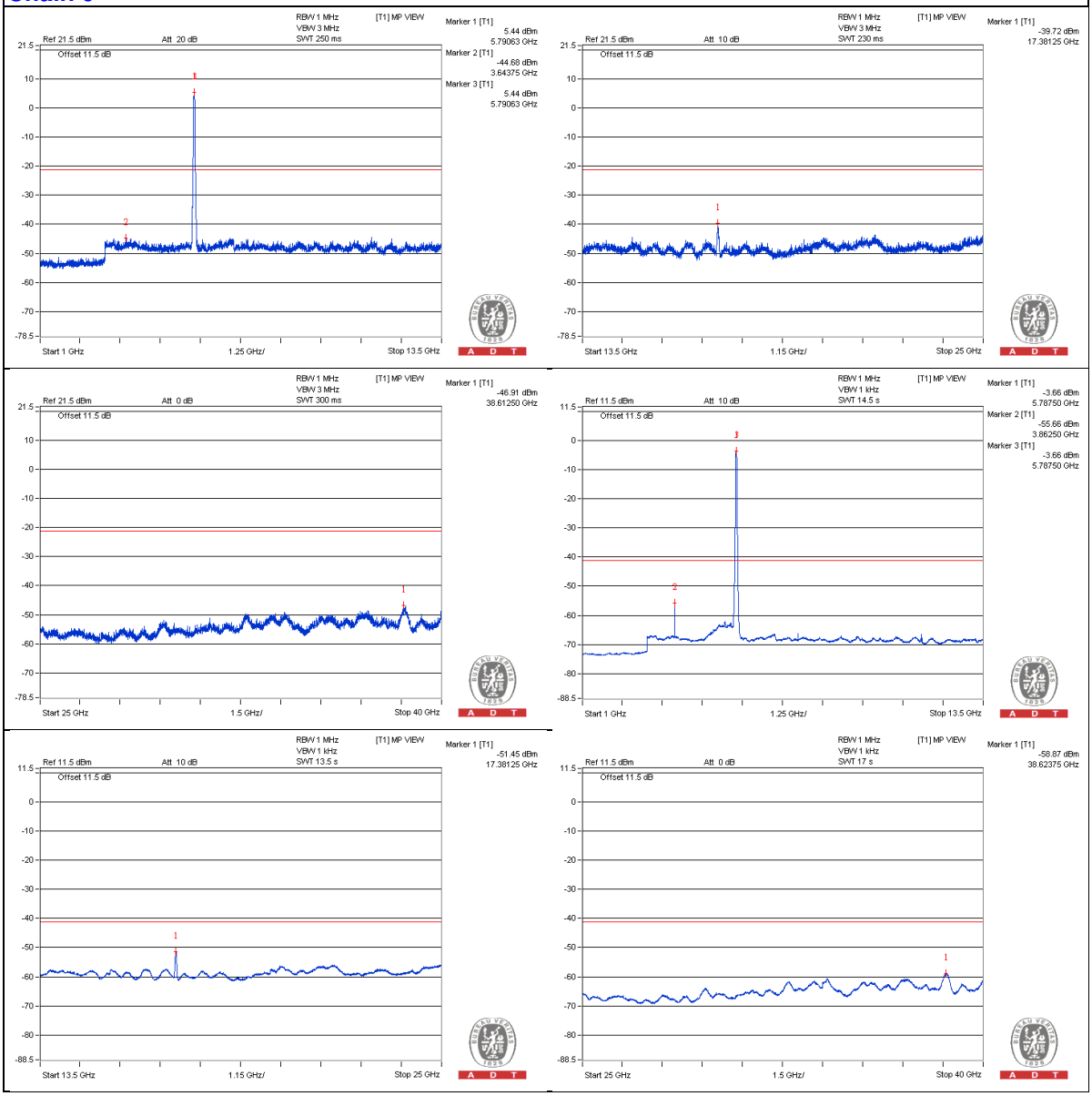
Conducted spurious emission table

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	3862.5 PK	65.07	74	-8.93	-46.46	-38.62	7.77	-30.19
2	3862.5 AV	60.61	54	*6.61	-55.66	-42.63	7.77	-34.65
3	7728.125 PK	57.82	74	-16.18	-47.97	-48.49	7.77	-37.44
4	7728.125 AV	39.42	54	-14.58	-66.12	-67.19	7.77	-55.84
5	11590.625 PK	57.98	74	-16.02	-49.62	-46.92	7.77	-37.28
6	11590.625 AV	42.32	54	-11.68	-66.61	-62	7.77	-52.94
7	17384.125 PK	62.28	68.2	-5.92	-41.33	-49.77	7.77	-32.98

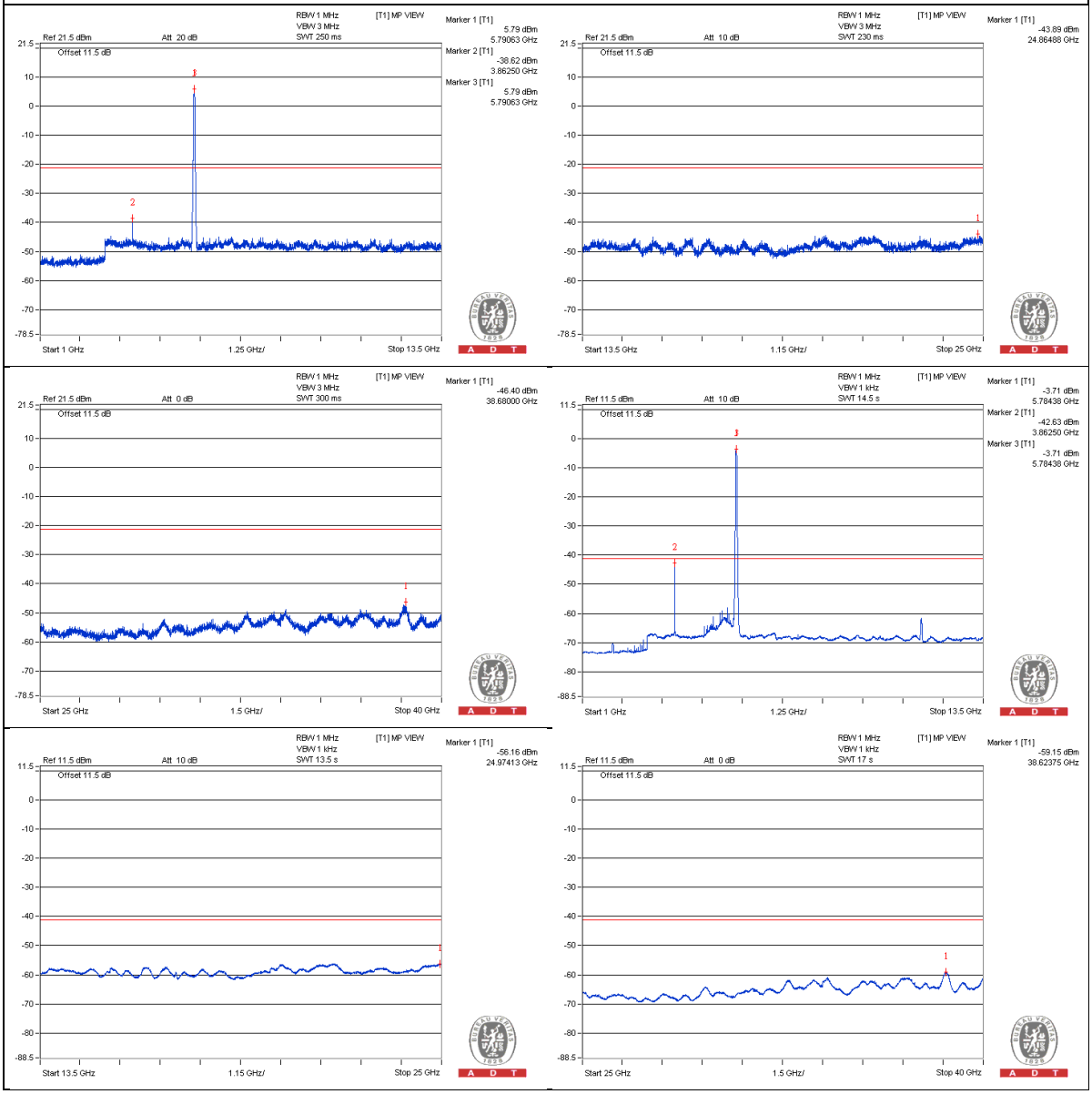
Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

* The unwanted emission was verified and the test result was passed by radiated measurement. (Please refer APPENDIX A)

Chain 0


RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
5.44 dBm
5.79063 GHz
Marker 2 [T1]
-44.68 dBm
3.64375 GHz
Marker 3 [T1]
5.44 dBm
5.79063 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-39.72 dBm
17.38125 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-46.91 dBm
38.61250 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz
RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-3.66 dBm
5.78750 GHz
Marker 2 [T1]
-55.66 dBm
3.86250 GHz
Marker 3 [T1]
-3.66 dBm
5.78750 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 kHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-51.45 dBm
17.38125 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-58.87 dBm
38.62375 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

Chain 1

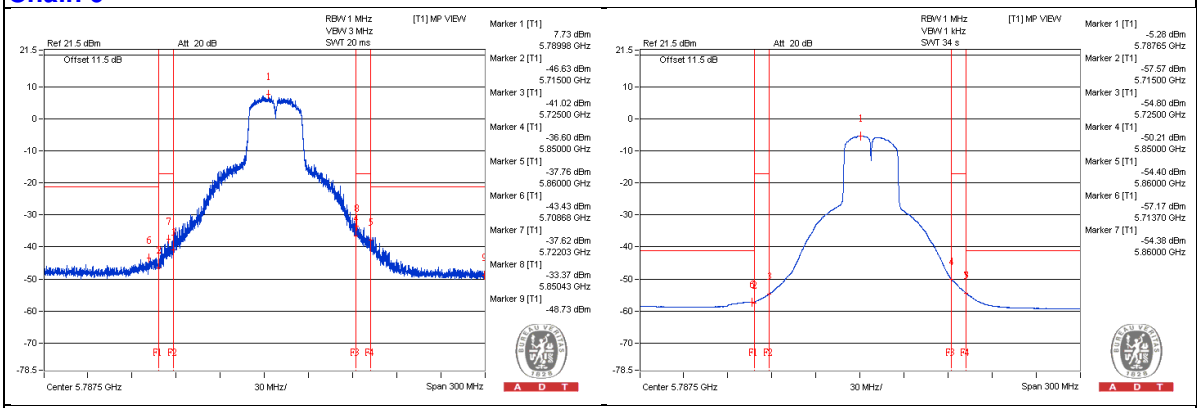

RBW 1 MHz
VBW 3 MHz
SWT 250 ms
[T1] MP VIEW
Marker 1 [T1]
5.79 dBm
5.79063 GHz
Marker 2 [T1]
-38.62 dBm
3.86250 GHz
Marker 3 [T1]
5.79 dBm
5.79063 GHz
Ref 21.5 dBm
Att 20 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 MHz
VBW 3 MHz
SWT 230 ms
[T1] MP VIEW
Marker 1 [T1]
-43.89 dBm
24.86488 GHz
Ref 21.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 MHz
VBW 3 MHz
SWT 300 ms
[T1] MP VIEW
Marker 1 [T1]
-46.40 dBm
38.68000 GHz
Ref 21.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz
RBW 1 MHz
VBW 1 kHz
SWT 14.5 s
[T1] MP VIEW
Marker 1 [T1]
-3.71 dBm
5.78438 GHz
Marker 2 [T1]
-42.63 dBm
3.86250 GHz
Marker 3 [T1]
-3.71 dBm
5.78438 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 1 GHz
1.25 GHz/
Stop 13.5 GHz
RBW 1 kHz
VBW 1 kHz
SWT 13.5 s
[T1] MP VIEW
Marker 1 [T1]
-56.16 dBm
24.97413 GHz
Ref 11.5 dBm
Att 10 dB
Offset 11.5 dB
Start 13.5 GHz
1.15 GHz/
Stop 25 GHz
RBW 1 kHz
VBW 1 kHz
SWT 17 s
[T1] MP VIEW
Marker 1 [T1]
-59.15 dBm
38.62375 GHz
Ref 11.5 dBm
Att 0 dB
Offset 11.5 dB
Start 25 GHz
1.5 GHz/
Stop 40 GHz

Bandedge table

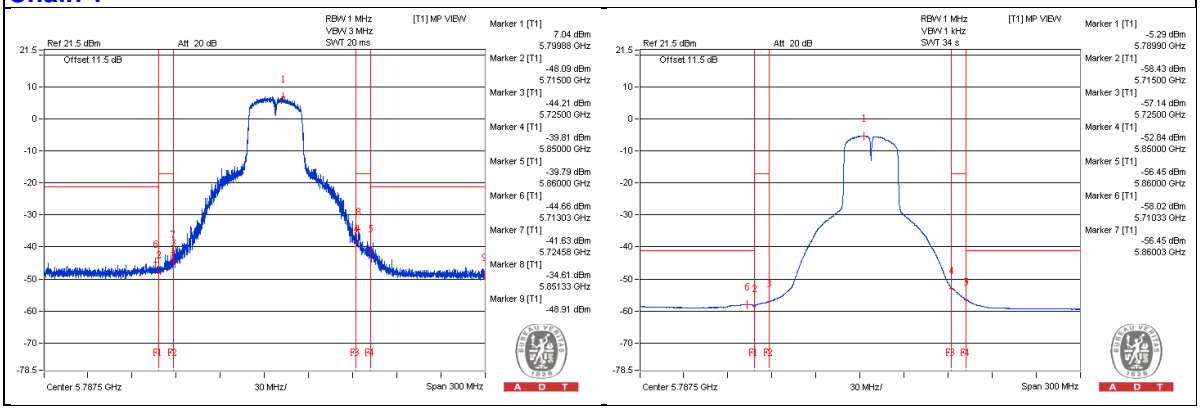
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	5713.025 PK	61.17	74	-12.83	-45.1	-44.66	7.77	-34.09
2	5712.725 AV	48.44	54	-5.56	-57.19	-58.06	7.77	-46.82
3	5722.025 PK	65.89	78.2	-12.31	-37.62	-46.96	7.77	-29.37
4	5850.425 PK	71.53	78.2	-6.67	-33.37	-36.07	7.77	-23.73
5	5860.025 PK	67.38	74	-6.62	-37.76	-39.79	7.77	-27.88
6	5860.025 AV	50.74	54	-3.26	-54.4	-56.45	7.77	-44.52

Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.

Chain 0



Chain 1



Below 1GHz Data

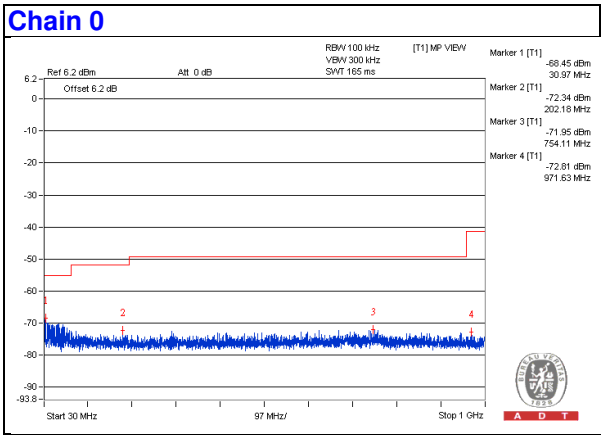
802.11n (HT40) - Channel 159

Conducted spurious emission table

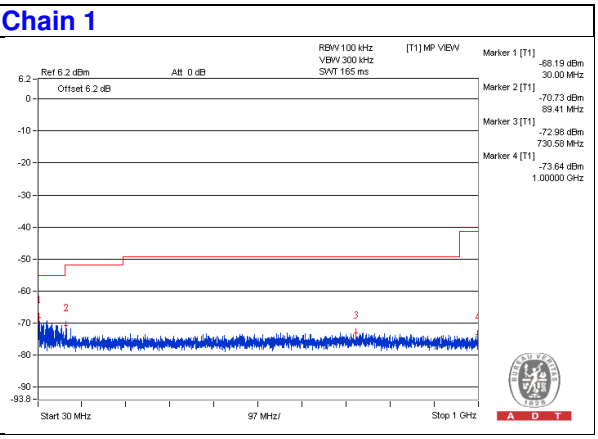
No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw Value (dBm)		Correction Factor (dB)	EIRP Level (dBm)
					Chain0	Chain1		
1	30	36.88	40	-3.12	-70.42	-68.19	7.77	-58.38
2	89.4125	34.27	43.5	-9.23	-73.15	-70.73	7.77	-60.99
3	312.9975	31.85	46	-14.15	-73.43	-75.11	7.77	-63.41
4	579.99	32.43	46	-13.57	-74.16	-73.12	7.77	-62.83
5	744.6475	33.19	46	-12.81	-72.22	-73.59	7.77	-62.07
6	860.805	32.01	46	-13.99	-73.19	-75.08	7.77	-63.25

Note :
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8
d = measurement distance in 3 meters.
Emission levels include upper bound on ground plane reflection (4.7dB) for below 1GHz emission.

Chain 0



Chain 1

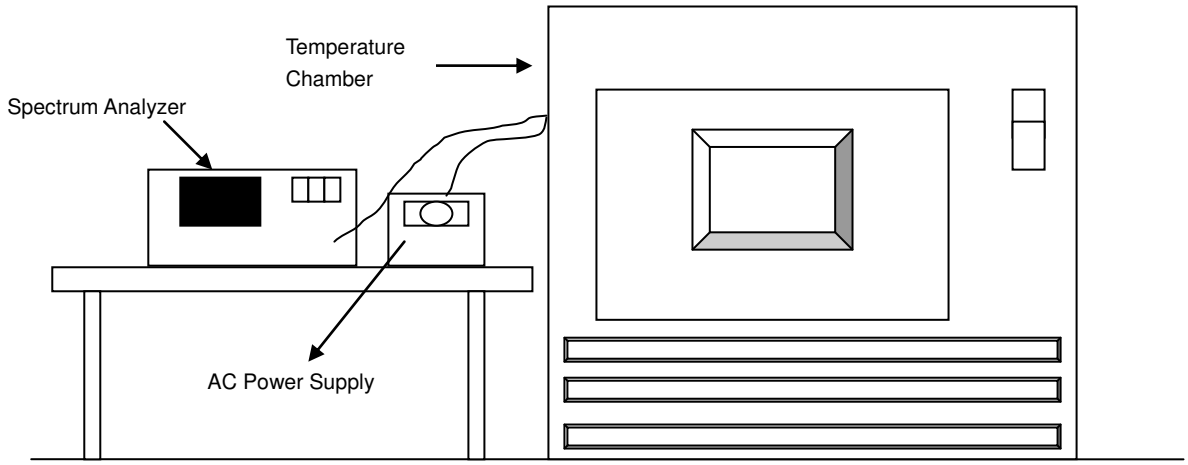


4.5 Frequency Stability Measurement

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

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
SPECTRUM ANALYZER R&S	FSP 40	100060	May 08, 2015	May 07, 2016
Temperature & Humidity Chamber GIANTFORCE	GTH-150-40-SP-AR	MAA0812-008	Jan. 12, 2015	Jan. 11, 2016

NOTE: 1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: Oct. 20, 2015

4.5.4 Test Procedures

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 Conditions

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

4.5.7 Test Results

Frequemcy Stability Versus Temp.									
Operating Frequency: 5825MHz									
Temp. (℃)	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	5824.9737	-0.00045	5824.9759	-0.00041	5824.9729	-0.00047	5824.9703	-0.00051
40	120	5824.9971	-0.00005	5824.998	-0.00003	5824.9998	0.00000	5824.9992	-0.00001
30	120	5825.0116	0.00020	5825.0124	0.00021	5825.0112	0.00019	5825.0138	0.00024
20	120	5825.003	0.00005	5825.0008	0.00001	5825.0028	0.00005	5825.0031	0.00005
10	120	5825.0254	0.00044	5825.0265	0.00045	5825.0237	0.00041	5825.0241	0.00041
0	120	5824.9917	-0.00014	5824.9899	-0.00017	5824.9897	-0.00018	5824.9909	-0.00016
-10	120	5824.9749	-0.00043	5824.9793	-0.00036	5824.9746	-0.00044	5824.9778	-0.00038
-20	120	5824.982	-0.00031	5824.9809	-0.00033	5824.9811	-0.00032	5824.9817	-0.00031
-30	120	5824.9819	-0.00031	5824.9795	-0.00035	5824.9813	-0.00032	5824.9805	-0.00033

Frequemcy Stability Versus Temp.									
Operating Frequency: 5825MHz									
Temp. (℃)	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	5825.0039	0.00007	5825.0007	0.00001	5825.0033	0.00006	5825.0025	0.00004
	120	5825.003	0.00005	5825.0008	0.00001	5825.0028	0.00005	5825.0031	0.00005
	102	5825.0026	0.00004	5825.001	0.00002	5825.0019	0.00003	5825.0022	0.00004

5 Pictures of Test Arrangements

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

6 Appendix A – Radiated Emission Measurement

6.1.1 Limits of Radiated Emission 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.

6.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	Aug. 12, 2015	Aug. 11, 2016
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Feb. 05, 2015	Feb. 04, 2016
Pre-Amplifier Agilent	8449B	3008A02465	Apr. 06, 2015	Apr. 05, 2016
RF Cable	EMC104-SM-SM-2000 EMC104-SM-SM-5000 EMC104-SM-SM-5000	150317 150321 150322	Mar. 31, 2015	Mar. 30, 2016
Spectrum Analyzer R&S	FSV40	100964	June 26, 2015	June 25, 2016
Pre-Amplifier EMCI	EMC184045	980143	Jan. 16, 2015	Jan. 15, 2016
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Feb. 05, 2015	Feb. 04, 2016
RF Cable	SUCOFLEX104	329751/4 RF104-204	Dec. 11, 2014	Dec. 10, 2015
Software	ADT_Radiated_V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	NA	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 3.
3. The FCC Site Registration No. is 147459
4. The CANADA Site Registration No. is 20331-1
5. Tested Date: Oct. 21, 2015

6.1.3 Test Procedures

a. The EUT was placed on the top of a rotating table1.5 meters (for above 1GHz) above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

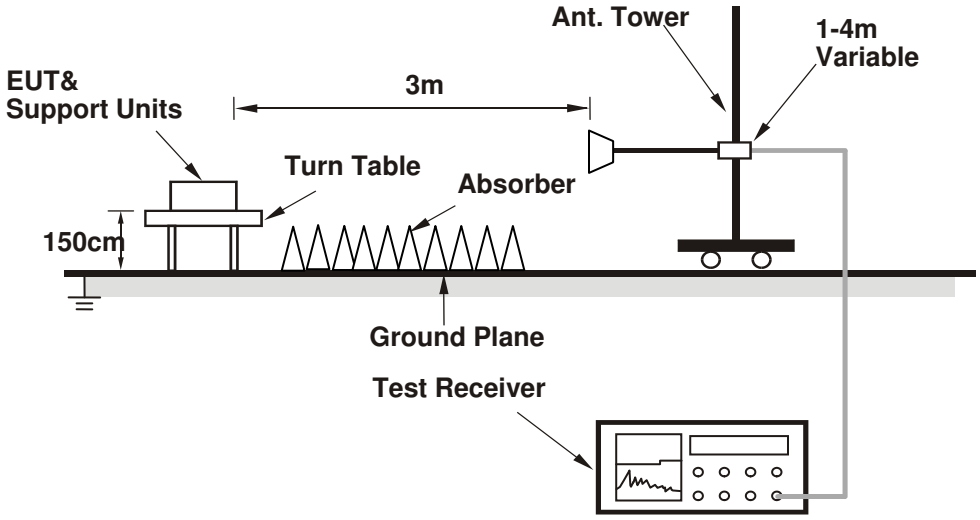
NOTE:

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

6.1.4 Deviation from Test Standard

No deviation

6.1.5 Test Setup



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

6.1.6 EUT Operating Conditions

Same as 4.4.6.

6.1.7 Test Results

The EUT's antenna had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane.**

802.11a

CHANNEL	TX Channel 149	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	3825.00	45.5 PK	74.0	-28.5	1.70 H	38	46.38	-0.88
2	3825.00	41.0 AV	54.0	-13.0	1.70 H	38	41.88	-0.88
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	3825.00	42.4 PK	74.0	-31.6	1.94 V	193	43.28	-0.88
2	3825.00	36.9 AV	54.0	-17.1	1.94 V	193	37.78	-0.88

REMARKS:

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

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	3856.00	48.7 PK	74.0	-25.3	1.48 H	353	49.53	-0.83
2	3856.00	46.2 AV	54.0	-7.8	1.48 H	353	47.03	-0.83
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	3856.00	44.5 PK	74.0	-29.5	1.94 V	186	45.33	-0.83
2	3856.00	39.6 AV	54.0	-14.4	1.94 V	186	40.43	-0.83

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 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	3884.00	50.1 PK	74.0	-23.9	1.69 H	350	50.88	-0.78
2	3884.00	47.8 AV	54.0	-6.2	1.69 H	350	48.58	-0.78
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	3884.00	45.1 PK	74.0	-28.9	1.65 V	8	45.88	-0.78
2	3884.00	41.5 AV	54.0	-12.5	1.65 V	8	42.28	-0.78

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

802.11n (HT20)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	3828.00	46.6 PK	74.0	-27.4	1.76 H	355	47.47	-0.87
2	3828.00	43.4 AV	54.0	-10.6	1.76 H	355	44.27	-0.87
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3828.00	42.3 PK	74.0	-31.7	2.01 V	316	43.17	-0.87
2	3828.00	37.2 AV	54.0	-16.8	2.01 V	316	38.07	-0.87

REMARKS:

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

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	3856.00	48.2 PK	74.0	-25.8	2.18 H	322	49.03	-0.83
2	3856.00	45.0 AV	54.0	-9.0	2.18 H	322	45.83	-0.83
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	3856.00	44.8 PK	74.0	-29.2	2.27 V	71	45.63	-0.83
2	3856.00	40.4 AV	54.0	-13.6	2.27 V	71	41.23	-0.83

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 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	3884.00	48.3 PK	74.0	-25.7	2.13 H	338	49.08	-0.78
2	3884.00	44.9 AV	54.0	-9.1	2.13 H	338	45.68	-0.78
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	3884.00	44.5 PK	74.0	-29.5	2.27 V	68	45.28	-0.78
2	3884.00	40.4 AV	54.0	-13.6	2.27 V	68	41.18	-0.78

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

802.11n (HT40)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	3837.00	46.0 PK	74.0	-28.0	1.77 H	162	46.86	-0.86
2	3837.00	42.3 AV	54.0	-11.7	1.77 H	162	43.16	-0.86
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3837.00	43.0 PK	74.0	-31.0	1.92 V	316	43.86	-0.86
2	3837.00	37.4 AV	54.0	-16.6	1.92 V	316	38.26	-0.86

REMARKS:

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

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	3862.00	49.0 PK	74.0	-25.0	1.53 H	349	49.83	-0.83
2	3862.00	46.3 AV	54.0	-7.7	1.53 H	349	47.13	-0.83
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	3862.00	44.3 PK	74.0	-29.7	1.94 V	67	45.13	-0.83
2	3862.00	40.1 AV	54.0	-13.9	1.94 V	67	40.93	-0.83

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

7 Appendix B– Information on the Testing Laboratories

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

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

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