FCC Test Report
(WLAN)

Report No.:	RFBIDE-WTW-P20090710-3
FCC ID:	C3K1944
Test Model:	1944
Received Date:	Jul. 30, 2020
Test Date:	Oct. 15 to 27, 2020
Issued Date:	Nov. 6, 2020
Applicant:	MICROSOFT CORPORATION
Address:	ONE MICROSOFT WAY REDMOND, WA 98052-6399, U.S.A
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
FCC Registration / Designation Number:	198487 / TW2021

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RFBIDE-WTW-P20090710-3	Original release.	Nov. 6, 2020

1 Certificate of Conformity

Product:	Headset
Brand:	XBOX
Test Model:	1944
Sample Status:	DV3.5
Applicant:	MICROSOFT CORPORATION
Test Date:	Oct. 15 to 27, 2020
Standard:	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 RF characteristics under the conditions specified in this report.

Prepared by : Annie Chang , **Date:** Nov. 6, 2020

Annie Chang / Senior Specialist

Approved by : Rex. Lai , **Date:** Nov. 6, 2020

Rex Lai / Associate Technical 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)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -17.29dB at 0.77500MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -5.19dB at 5150.00MHz.
15.407(a) (1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
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	No antenna connector is used.

Note:
1. For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE test plots were recorded in report 4.1.7.
2. For U-NII-1 band compliance with rule 15.407(b) of the band-edge items, the test plots were recorded in report 4.1.7. Test Procedures refer to report 4.1.3.
3. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	3.00 dB
Conducted Emissions	9kHz ~ 40GHz	2.63 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	2.61 dB
	30MHz ~ 1GHz	5.43 dB
Radiated Emissions above 1 GHz	Above 1GHz	5.42 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Headset
Brand	XBOX
Test Model	1944
Test software Version	ART2-GUI V2.3
Status of EUT	DV3.5
Power Supply Rating	3.83Vdc from Battery or 5Vdc from USB port
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 54Mbps
Operating Frequency	5180~5240MHz, 5260~5320MHz, 5500~5700MHz, 5745~5825MHz
Number of Channel	5180~5240MHz: 4 5260~5320MHz: 4 5500~5700MHz: 8 5745~5825MHz: 5
Output Power	5180~5240MHz: 8.892mW 5260~5320MHz: 8.872mW 5500~5700MHz: 8.872mW 5745~5825MHz: 8.892mW
Antenna Type	Refer to note as below
Antenna Connector	N/A
Accessory Device	N/A
Data Cable Supplied	Shielded USB Type C cable (0.5m)

Note:

1. The EUT provides 1 completed transmitter and 1 receiver.

Modulation Mode	TX Function
802.11a	1TX
802.11n (20MHz)	1TX

2. 2.4GHz & 5GHz technologies cannot transmit at same time.
   WLAN & BT technologies can transmit at same time.

3. The emission of the simultaneous operation (BT and WLAN) has been evaluated and no non-compliance was found.

4. The EUT used antennas listed as below:

Antenna Type	Antenna Connector	Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)	Frequency (MHz)	Gain (dBi)
Monopole	N/A	5150	2.01	5430	1.95	5710	2.16
		5170	1.70	5450	2.21	5730	2.35
		5190	1.66	5470	1.99	5750	2.52
		5210	1.50	5490	2.03	5770	2.55
		5230	1.17	5510	2.03	5790	**2.61**
		5250	1.12	5530	2.08	5810	2.59
		5270	0.88	5550	2.25	5830	2.46
		5290	0.63	5570	2.25	5850	2.37
		5310	0.74	5590	2.17		
		5330	1.00	5610	2.28		
		5350	1.35	5630	2.32		
		5370	1.52	5650	2.27		
		5390	1.54	5670	2.25		
		5410	1.85	5690	2.14		

* The maximum antenna gain is chosen for final test.

5. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

6. For Radiated Emissions test, following modes were pre-tested:
   - ◆ Operating Mode (EUT + Battery)
   - ◆ Operating + Charging Mode (EUT + Adapter)
   - ◆ Operating + Charging Mode (EUT + Notebook)

   The worst emission level was found when the EUT was tested under **Operating + Charging Mode (EUT + Notebook)** mode, therefore, only its test data was recorded in this report.

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

3.2 Description of Test Modes

5180~5240MHz:

4 channels are provided for 802.11a, 802.11n (20MHz):

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

5260~5320MHz:

4 channels are provided for 802.11a, 802.11n (20MHz):

Channel	Frequency	Channel	Frequency
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

5500~5700MHz:

8 channels are provided for 802.11a, 802.11n (20MHz):

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

5745~5825MHz:

5 channels are provided for 802.11a, 802.11n (20MHz):

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

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To				Description
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Operating + Charging Mode (EUT + Notebook)
B	-	-	√	-	Operating + Charging Mode (EUT + Adapter)

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

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

Radiated Emission Test (Above 1GHz):

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	6.5
	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	6.5
	802.11a	5500-5700	100 to 140	100, 116, 132, 140	OFDM	6.0
	802.11n (20MHz)		100 to 140	100, 116, 132, 140	OFDM	6.5
	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	6.5

Radiated Emission Test (Below 1GHz):

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	52	OFDM	6.0
	802.11a	5260-5320	52 to 64		OFDM	6.0
	802.11a	5500-5700	100 to 140		OFDM	6.0
	802.11a	5745-5825	149 to 165		OFDM	6.0

Power Line Conducted Emission Test:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	52	OFDM	6.0
	802.11a	5260-5320	52 to 64		OFDM	6.0
	802.11a	5500-5700	100 to 140		OFDM	6.0
	802.11a	5745-5825	149 to 165		OFDM	6.0

Antenna Port Conducted Measurement:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	6.5
	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11n (20MHz)		52 to 64	52, 60, 64	OFDM	6.5
	802.11a	5500-5700	100 to 140	100, 116, 132, 140	OFDM	6.0
	802.11n (20MHz)		100 to 140	100, 116, 132, 140	OFDM	6.5
	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	6.5

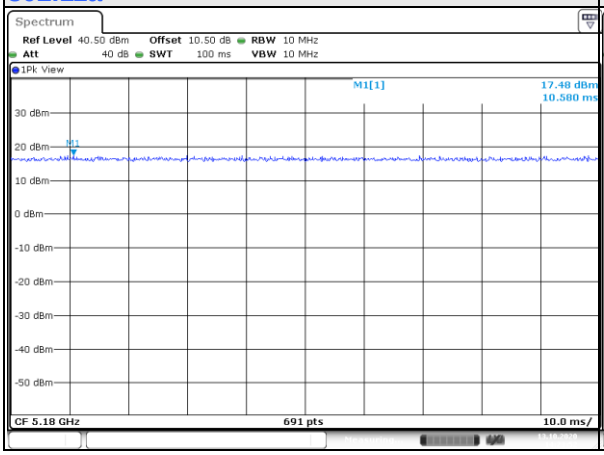
Test Condition:

Applicable To	EUT Configure Mode	Environmental Conditions	Input Power	Tested By
RE≥1G	A	25deg. C, 67%RH	120Vac, 60Hz (System)	Dalen Dai
RE<1G	A	21deg. C, 74%RH	120Vac, 60Hz (System)	Ian Chang
PLC	A	25deg. C, 75%RH	120Vac, 60Hz (System)	Ian Chang
	B	25deg. C, 75%RH	120Vac, 60Hz (Adapter)	Ian Chang
APCM	A	25deg. C, 76%RH	120Vac, 60Hz (System)	Pirar Hiseh

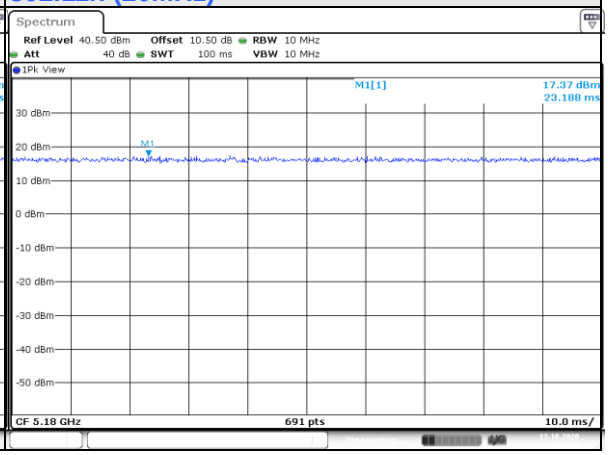
3.3 Duty Cycle of Test Signal

Duty cycle of test signal is 100 %

802.11a



802.11n (20MHz)



3.4 Description of Support Units

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

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook PC	ASUS	PU401L	E9NXBC002007372	N/A	Provided by Lab
	Notebook PC <Above 18GHz used>	DELL	E5430	BJLQBW1	N/A	Provided by Lab
B.	Adapter	APPLE	A1385	N/A	N/A	Provided by Lab

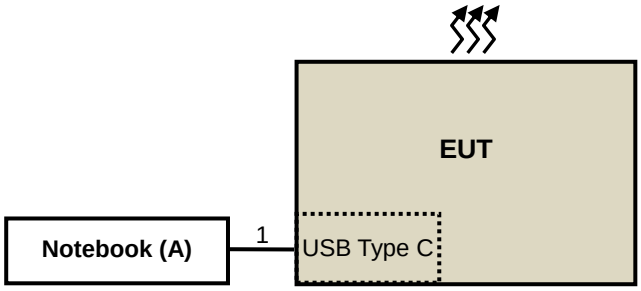
Note: All power cords of the above support units are non-shielded (1.8m).

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Type C cable	1	0.5	Y	0	Supplied by client

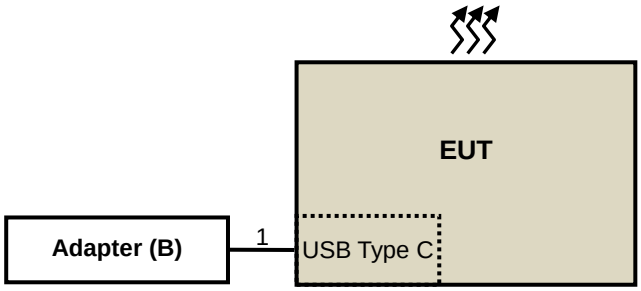
Note: The core(s) is(are) originally attached to the cable(s).

3.4.1 Configuration of System under Test

Mode A:



Mode B:



3.5 General Description of Applied Standard and references

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

Test standard:
FCC Part 15, Subpart E (15.407)
ANSI C63.10:2013

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

References Test Guidance:
KDB 789033 D02 General UNII Test Procedure New Rules v02r01

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

NOTE:

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

Limits of unwanted emission out of the restricted bands

Applicable To			Limit	
789033 D02 General UNII Test Procedure New Rules v02r01			Field Strength at 3m	
			PK:74 (dBμV/m)	AV:54 (dBμV/m)
Frequency Band	Applicable To		EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)		PK:-27 (dBm/MHz)	PK:68.2(dBμV/m)
5250~5350 MHz	15.407(b)(2)			
5470~5725 MHz	15.407(b)(3)			
5725~5850 MHz	☒	15.407(b)(4)(i)	PK:-27 (dBm/MHz) *1 PK:10 (dBm/MHz) *2 PK:15.6 (dBm/MHz) *3 PK:27 (dBm/MHz) *4	PK: 68.2(dBμV/m) *1 PK:105.2 (dBμV/m) *2 PK: 110.8(dBμV/m) *3 PK:122.2 (dBμV/m) *4
	☐	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	

*1 beyond 75 MHz or more above of the band edge.

*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Note:

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).

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
HP Preamplifier	8447D	2432A03504	Feb. 19, 2020	Feb. 18, 2021
HP Preamplifier	8449B	3008A01201	Feb. 20, 2020	Feb. 19, 2021
MITEQ Preamplifier	AMF-6F-260400-33-8P	892164	Feb. 19, 2020	Feb. 18, 2021
Agilent TEST RECEIVER	N9038A	MY51210129	Mar. 18, 2020	Mar. 17, 2021
Schwarzbeck Antenna	VULB 9168	139	Nov. 7, 2019	Nov. 6, 2020
Schwarzbeck Antenna	VHBA 9123	480	Jun. 3, 2019	Jun. 2, 2021
Schwarzbeck Horn Antenna	BBHA-9170	212	Nov. 24, 2019	Nov. 23, 2020
Schwarzbeck Horn Antenna	BBHA 9120-D1	D130	Nov. 24, 2019	Nov. 23, 2020
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	Radiated_V7.6.15.9.5	NA	NA	NA
SUHNER RF cable With 4dB PAD	SF102	Cable-CH6-01	Jul. 9, 2020	Jul. 8, 2021
EMEC RF cable With 3/4dB PAD	EM102-KMKM	01	Aug. 21, 2020	Aug. 20, 2021
KEYSIGHT MIMO Powermeasurement Test set	U2021XA	U2021XA-001	Jun. 16, 2020	Jun. 15, 2021
KEYSIGHT Spectrum Analyzer	N9030A	MY54490260	Jul. 22, 2020	Jul. 21, 2021
Loop Antenna EMCI	LPA600	270	Aug. 23, 2019	Aug. 22, 2021
EMCO Horn Antenna	3115	00028257	Nov. 24, 2019	Nov. 23, 2020
Highpass filter Wainwright Instruments	WHK 3.1/18G-10SS	SN 8	NA	NA
ROHDE & SCHWARZ Spectrum Analyzer	FSV40	101042	Sep. 8, 2020	Sep. 7, 2021
Anritsu Power Sensor	MA2411B	0738404	Apr. 13, 2020	Apr. 12, 2021
Anritsu Power Meter	ML2495A	0842014	Apr. 13, 2020	Apr. 12, 2021
Temperature & Humidity Chamber	MHU-225AU	920409	May 22, 2020	May 21, 2021
DIGITAL POWER METER IDRC	CP-240	240515	Sep. 10, 2020	Sep. 9, 2021
AC Power Source ExTech	CFW-105	E000603	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Chamber No. 6.

4.1.3 Test Procedure

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters 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. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

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

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

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

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

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

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

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

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.

2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.

   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. (802.11a: RBW = 1MHz, VBW = 10Hz; 802.11n (20MHz): RBW = 1MHz, VBW = 10Hz)

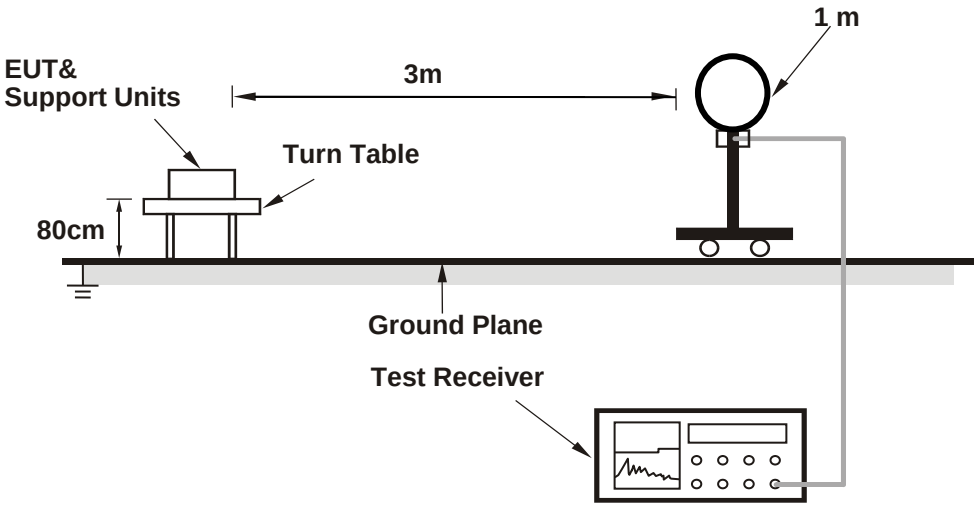
3. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

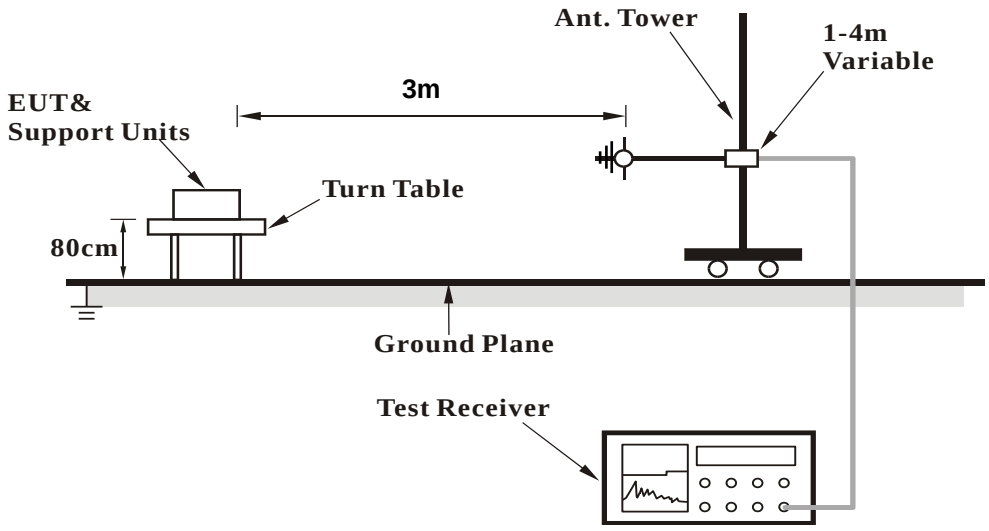
No deviation.

4.1.5 Test Setup

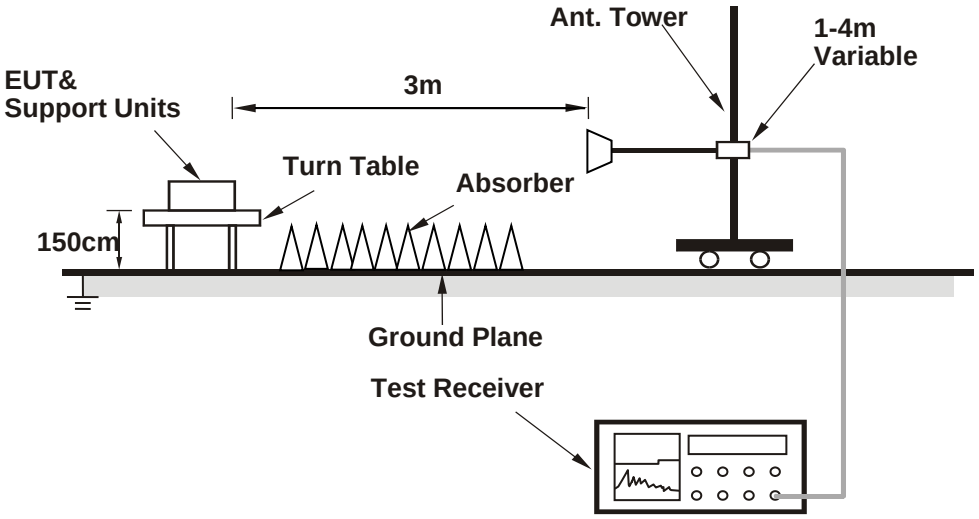
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Condition

Connected the EUT to Notebook.

Set the EUT under transmission condition continuously at specific channel frequency continuously.

4.1.7 Test Results

Mode A

Above 1GHz Data:

RF Mode	TX 802.11a	**Channel**	CH 36：5180 MHz
Frequency Range	1GHz ~ 40GHz	**Detector Function**	Peak (PK) Average (AV)

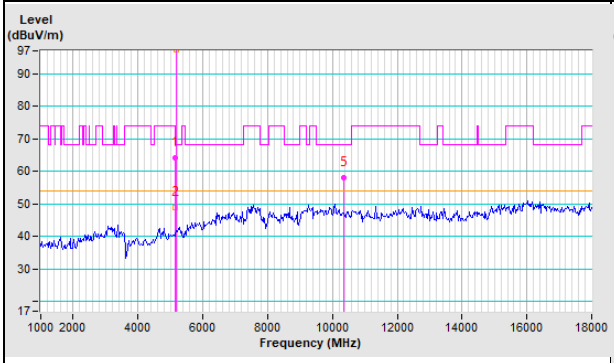
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	5150.00	64.15 PK	74.00	-9.85	3.39 H	105	66.56	-2.41
2	**5150.00**	**48.81 AV**	**54.00**	**-5.19**	**3.39 H**	**105**	**51.22**	**-2.41**
3	*5180.00	106.54 PK			3.39 H	105	108.90	-2.36
4	*5180.00	97.17 AV			3.39 H	105	99.53	-2.36
5	#10360.00	57.95 PK	68.20	-10.25	1.31 H	224	56.43	1.52

Remarks:

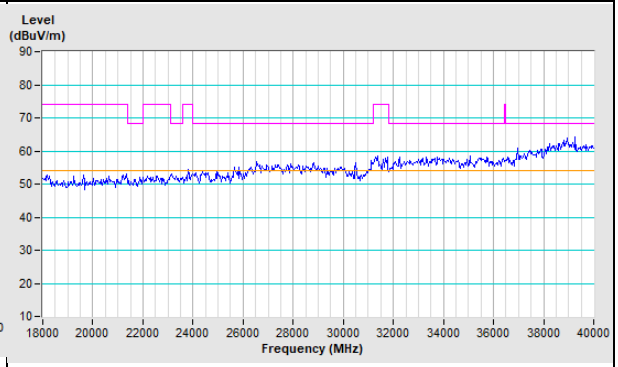
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

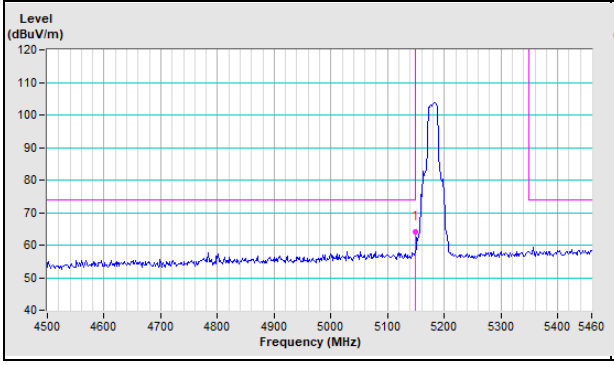


For 18-40GHz

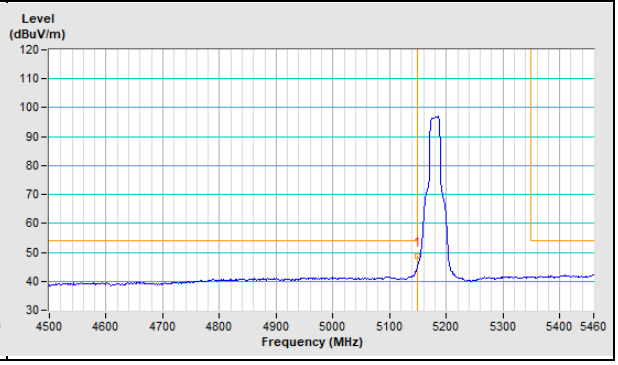


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11a	Channel	CH 36：5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

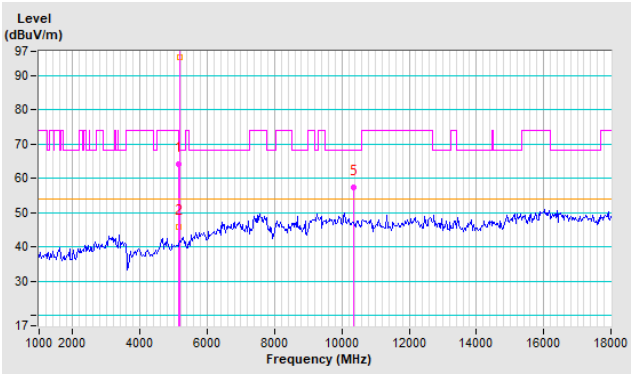
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	64.14 PK	74.00	-9.86	1.00 V	0	66.55	-2.41
2	5150.00	45.83 AV	54.00	-8.17	1.00 V	0	48.24	-2.41
3	*5180.00	103.94 PK			1.00 V	0	106.30	-2.36
4	*5180.00	95.25 AV			1.00 V	0	97.61	-2.36
5	#10360.00	57.47 PK	68.20	-10.73	1.67 V	312	55.95	1.52

Remarks:

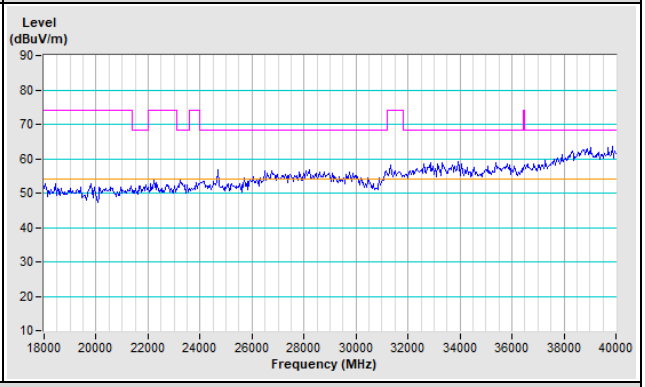
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

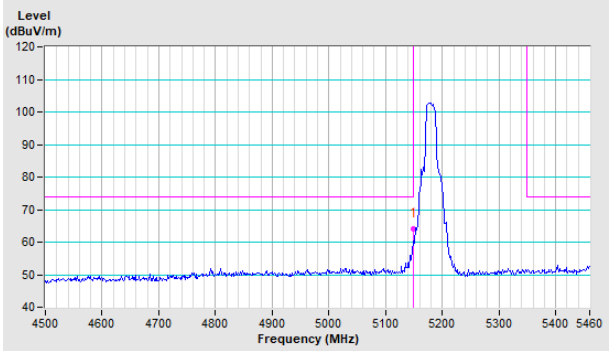


For 18-40GHz

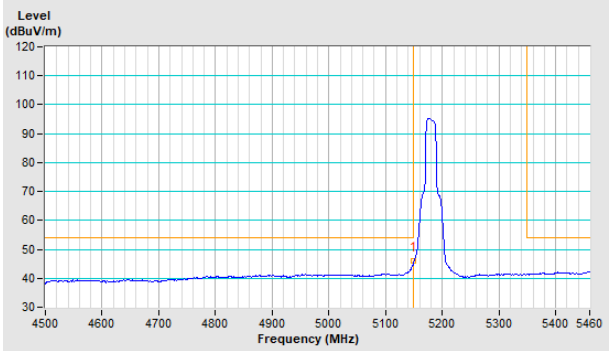


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11a	Channel	CH 40：5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

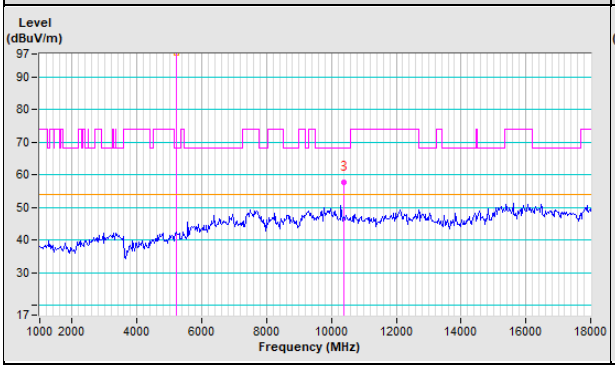
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	106.63 PK			3.37 H	108	108.96	-2.33
2	*5200.00	97.26 AV			3.37 H	108	99.59	-2.33
3	#10400.00	57.81 PK	68.20	-10.39	1.34 H	227	56.27	1.54

Remarks:

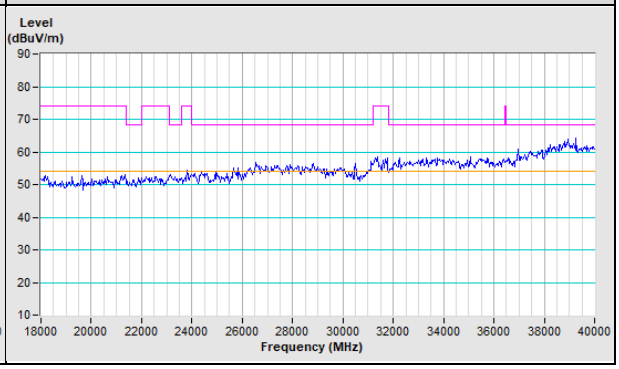
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11a	Channel	CH 40：5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

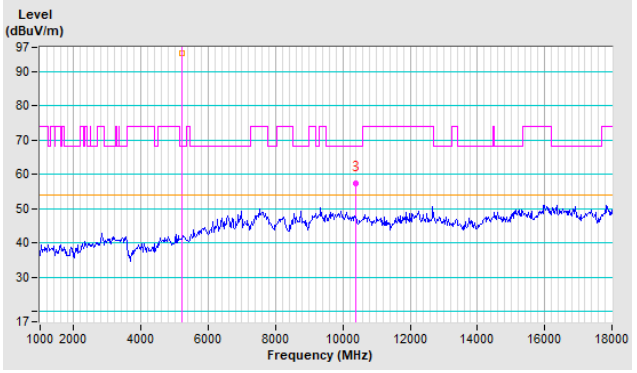
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	103.90 PK			1.00 V	358	106.23	-2.33
2	*5200.00	95.18 AV			1.00 V	358	97.51	-2.33
3	#10400.00	57.39 PK	68.20	-10.81	1.70 V	316	55.85	1.54

Remarks:

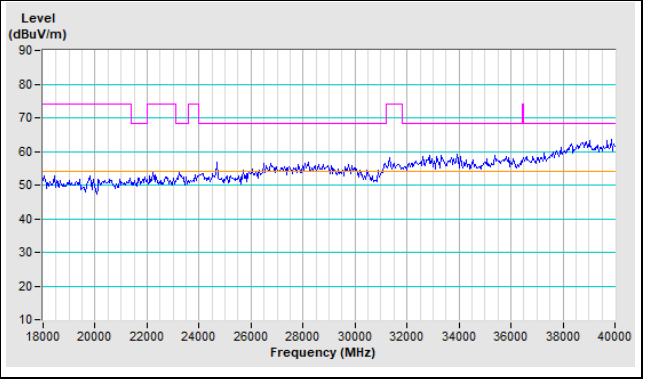
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11a	Channel	CH 48：5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

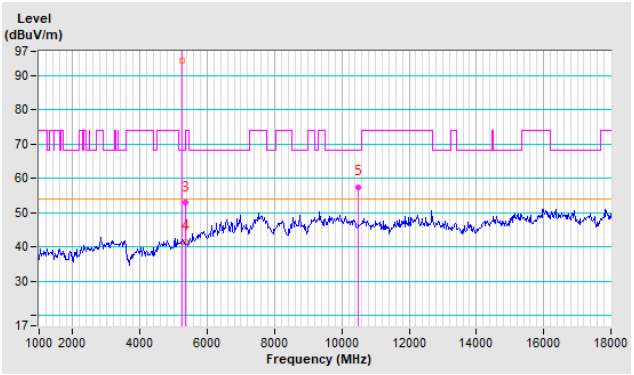
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	103.88 PK			3.37 H	278	106.14	-2.26
2	*5240.00	94.42 AV			3.37 H	278	96.68	-2.26
3	5350.00	52.83 PK	74.00	-21.17	3.37 H	278	54.67	-1.84
4	5350.00	41.50 AV	54.00	-12.50	3.37 H	278	43.34	-1.84
5	#10480.00	57.32 PK	68.20	-10.88	1.33 H	225	54.43	2.89

Remarks:

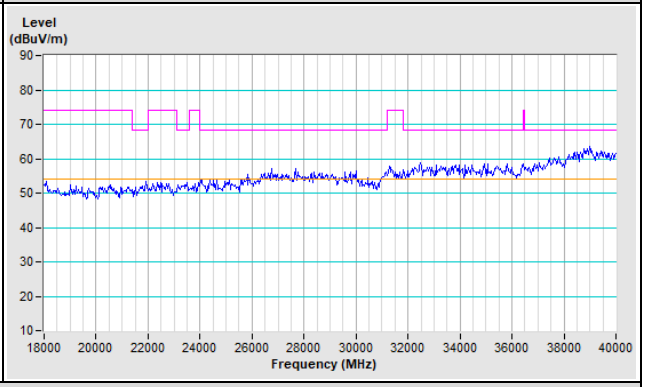
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

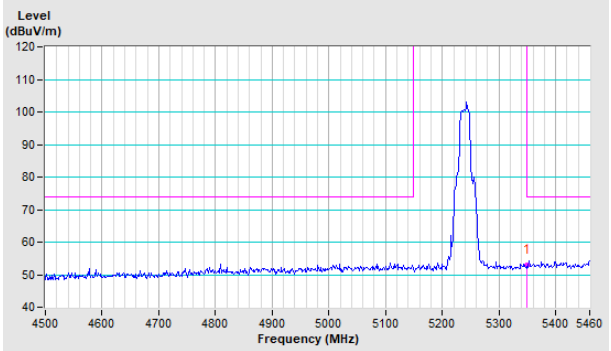


For 18-40GHz

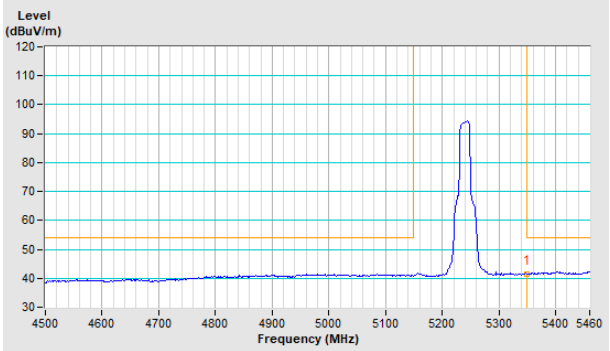


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11a	Channel	CH 48：5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

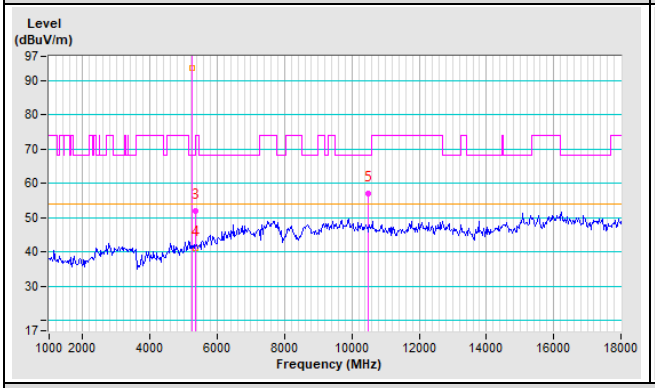
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	102.48 PK			1.00 V	351	104.74	-2.26
2	*5240.00	93.53 AV			1.00 V	351	95.79	-2.26
3	5350.00	52.01 PK	74.00	-21.99	1.00 V	351	53.85	-1.84
4	5350.00	41.18 AV	54.00	-12.82	1.00 V	351	43.02	-1.84
5	#10480.00	56.92 PK	68.20	-11.28	1.37 V	221	54.03	2.89

Remarks:

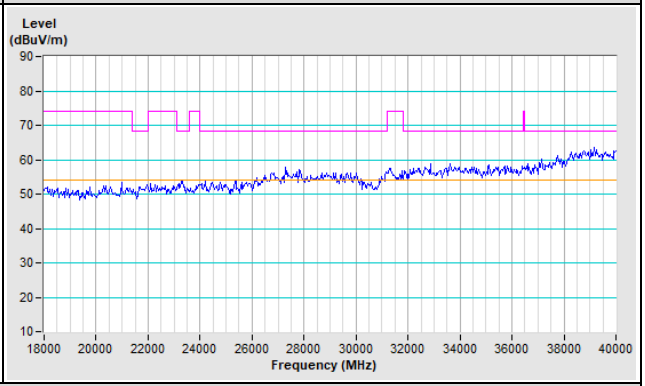
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

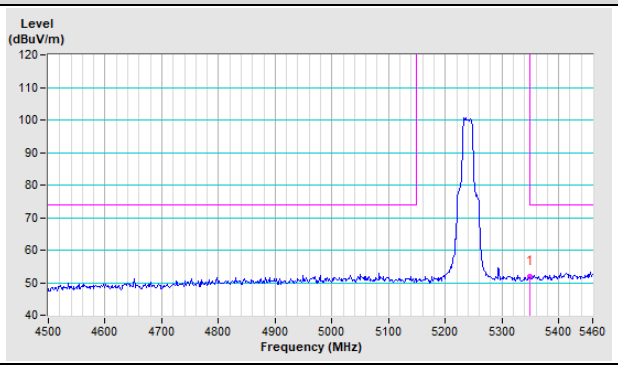


For 18-40GHz

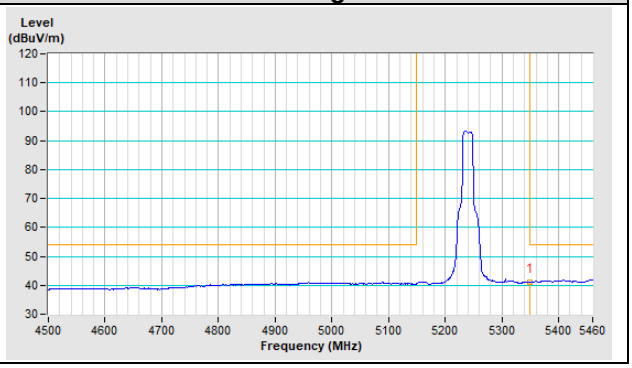


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11a	Channel	CH 52：5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

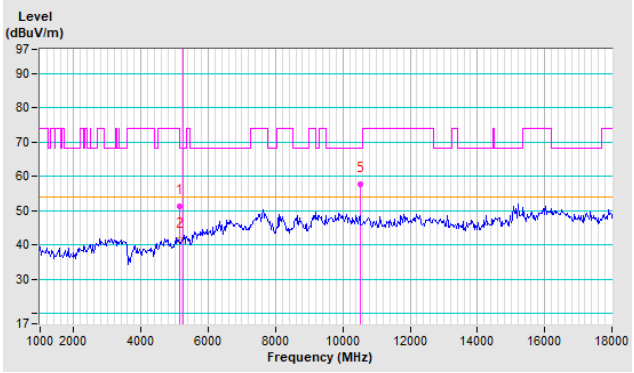
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	51.35 PK	74.00	-22.65	2.30 H	92	53.76	-2.41
2	5150.00	41.53 AV	54.00	-12.47	2.30 H	92	43.94	-2.41
3	*5260.00	108.00 PK			2.30 H	92	110.22	-2.22
4	*5260.00	98.85 AV			2.30 H	92	101.07	-2.22
5	#10520.00	57.60 PK	68.20	-10.60	1.62 H	230	54.67	2.93

Remarks:

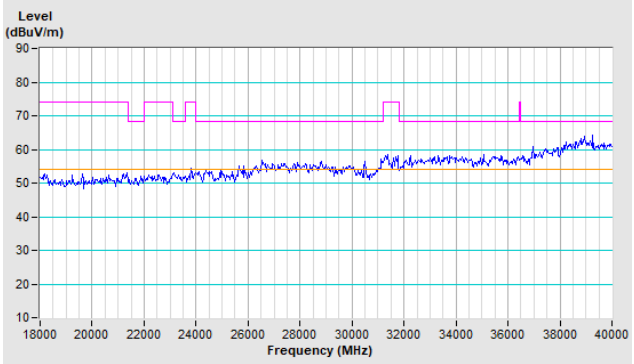
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

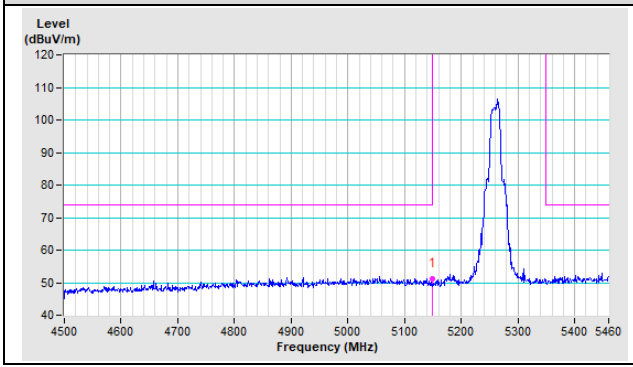


For 18-40GHz

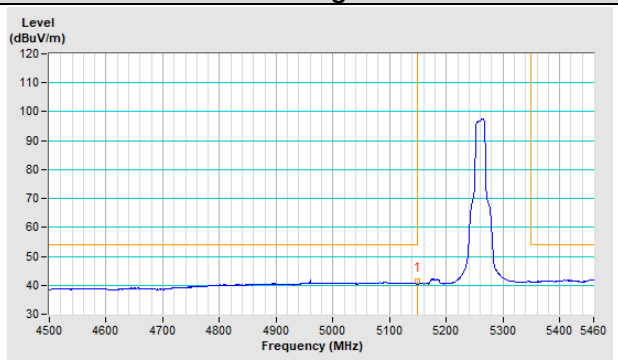


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11a	Channel	CH 52：5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

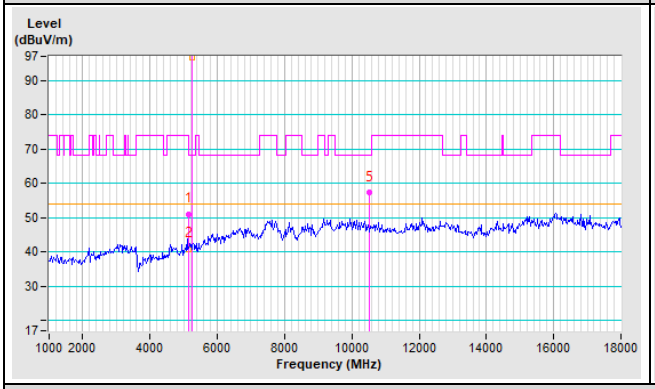
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	50.84 PK	74.00	-23.16	1.02 V	357	53.25	-2.41
2	5150.00	40.69 AV	54.00	-13.31	1.02 V	357	43.10	-2.41
3	*5260.00	105.75 PK			1.02 V	357	107.97	-2.22
4	*5260.00	96.60 AV			1.02 V	357	98.82	-2.22
5	#10520.00	57.23 PK	68.20	-10.97	2.30 V	92	54.30	2.93

Remarks:

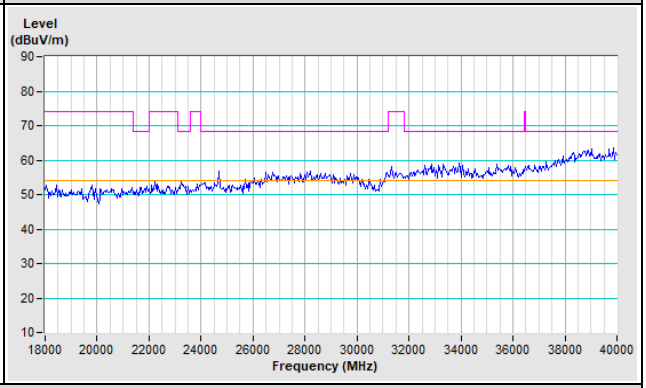
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

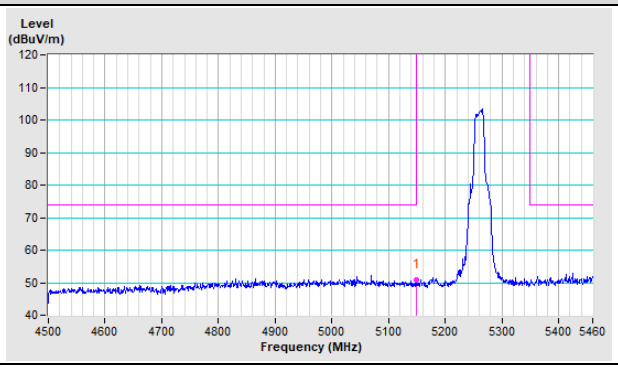


For 18-40GHz

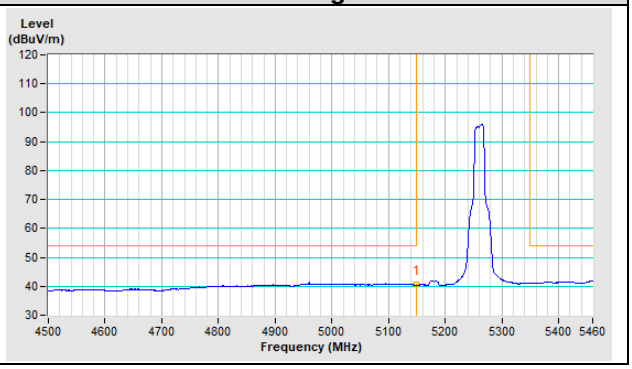


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11a	Channel	CH 60：5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

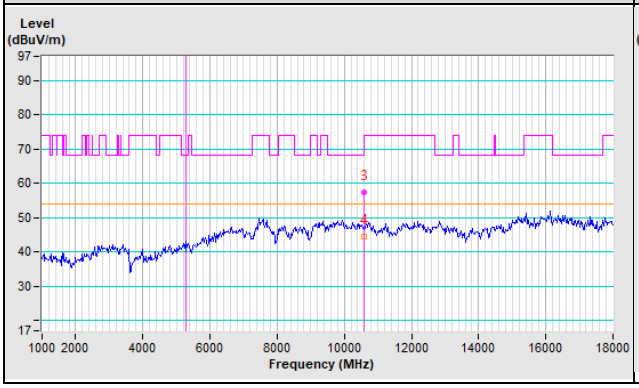
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	107.24 PK			2.39 H	89	109.35	-2.11
2	*5300.00	97.91 AV			2.39 H	89	100.02	-2.11
3	10600.00	57.40 PK	74.00	-16.60	1.84 H	231	55.64	1.76
4	10600.00	44.51 AV	54.00	-9.49	1.84 H	231	42.75	1.76

Remarks:

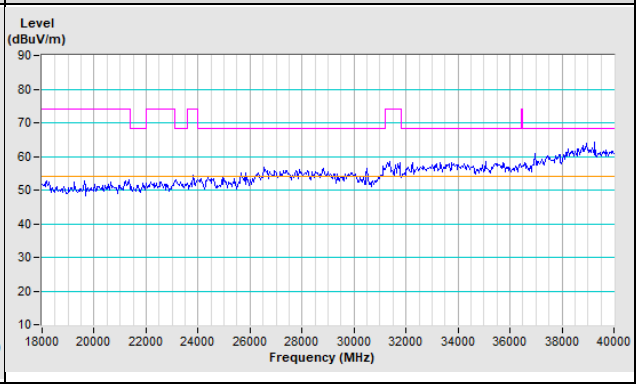
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11a	Channel	CH 60：5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

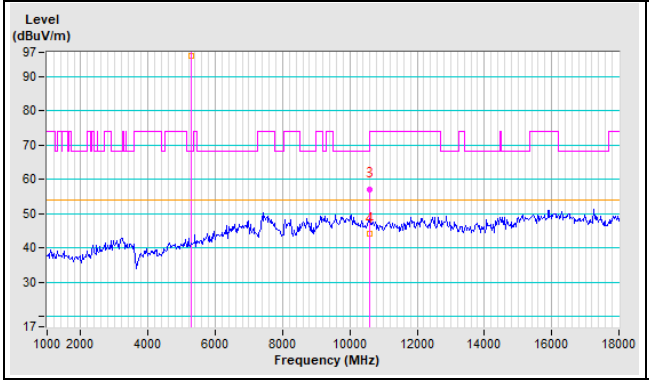
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	104.85 PK			1.06 V	354	106.96	-2.11
2	*5300.00	96.03 AV			1.06 V	354	98.14	-2.11
3	10600.00	56.95 PK	74.00	-17.05	1.64 V	215	55.19	1.76
4	10600.00	44.02 AV	54.00	-9.98	1.64 V	215	42.26	1.76

Remarks:

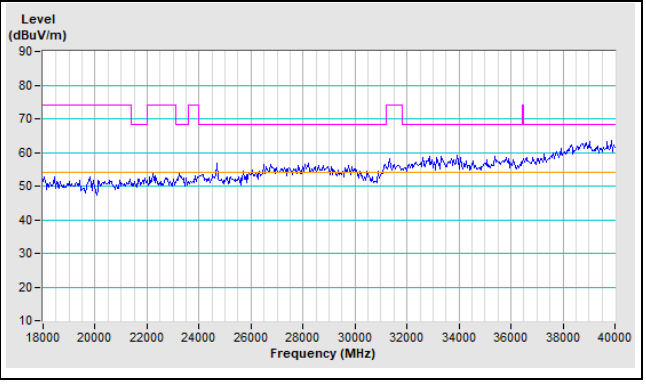
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11a	Channel	CH 64：5320 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

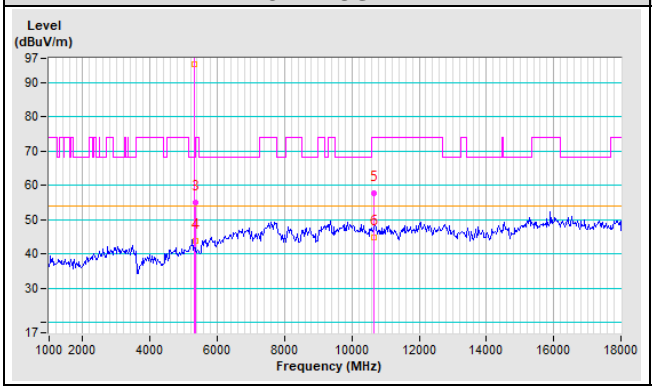
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	104.65 PK			2.25 H	87	106.65	-2.00
2	*5320.00	95.30 AV			2.25 H	87	97.30	-2.00
3	5350.00	55.02 PK	74.00	-18.98	2.25 H	87	56.86	-1.84
4	5350.00	43.85 AV	54.00	-10.15	2.25 H	87	45.69	-1.84
5	10640.00	57.77 PK	74.00	-16.23	1.84 H	215	55.94	1.83
6	10640.00	44.72 AV	54.00	-9.28	1.84 H	215	42.89	1.83

Remarks:

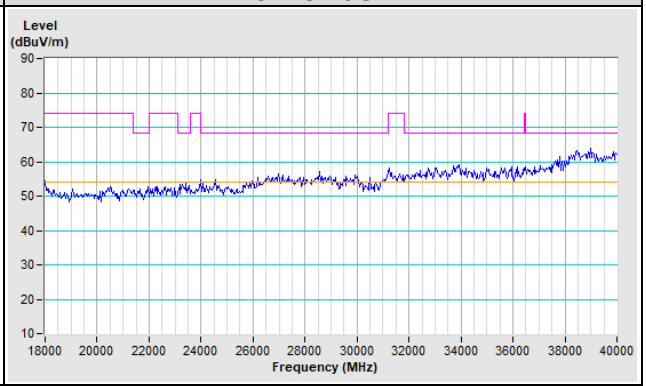
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz

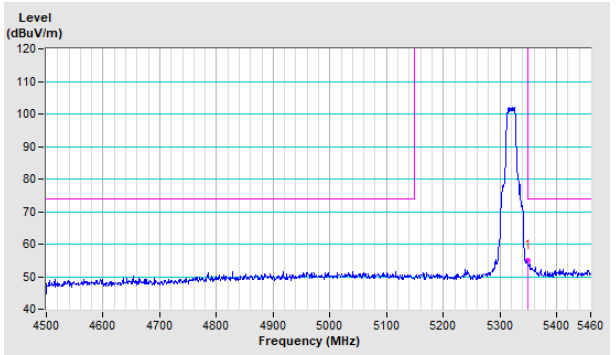


For 18-40GHz

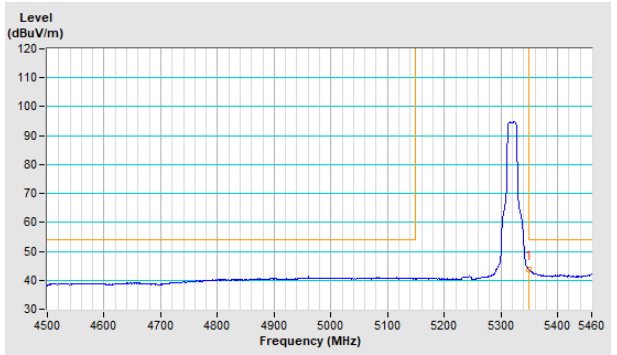


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11a	Channel	CH 64：5320 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

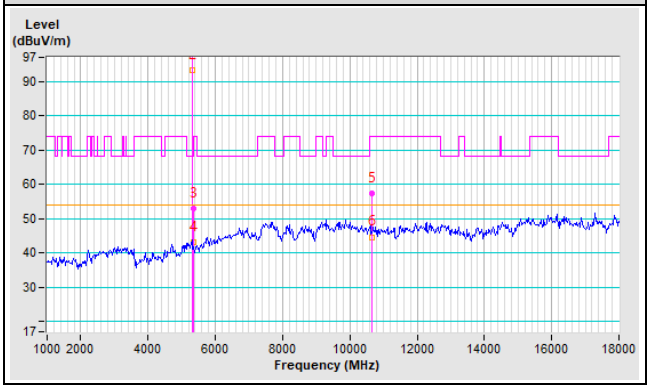
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	103.33 PK			1.08 V	2	105.33	-2.00
2	*5320.00	93.14 AV			1.08 V	2	95.14	-2.00
3	5350.00	52.84 PK	74.00	-21.16	1.08 V	2	54.68	-1.84
4	5350.00	42.97 AV	54.00	-11.03	1.08 V	2	44.81	-1.84
5	10640.00	57.25 PK	74.00	-16.75	1.25 V	321	55.42	1.83
6	10640.00	44.40 AV	54.00	-9.60	1.25 V	321	42.57	1.83

Remarks:

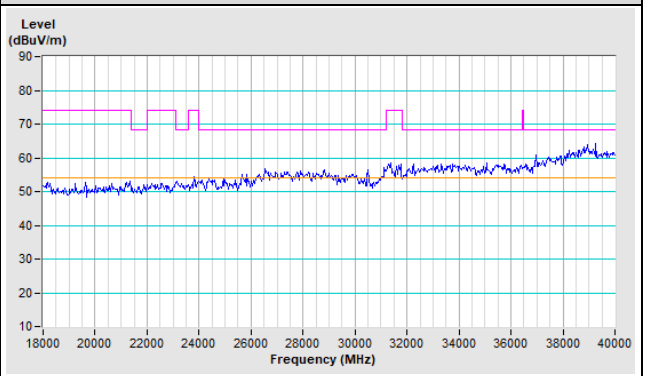
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz

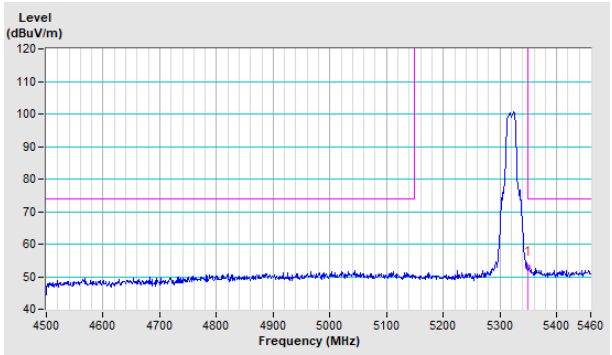


For 18-40GHz

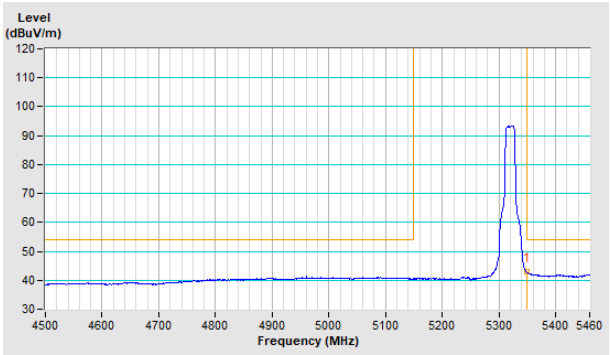


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11a	Channel	CH 100：5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

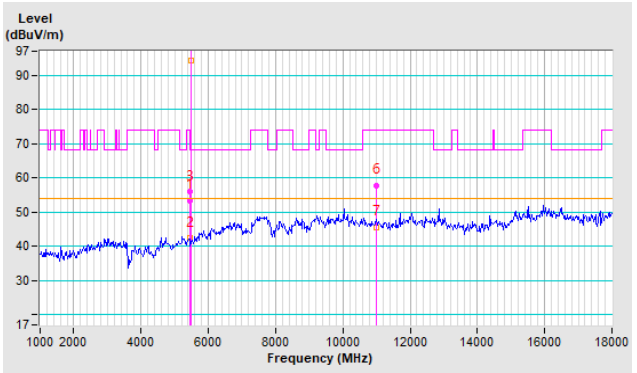
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	53.28 PK	74.00	-20.72	2.19 H	91	54.82	-1.54
2	5460.00	42.29 AV	54.00	-11.71	2.19 H	91	43.83	-1.54
3	#5470.00	55.87 PK	68.20	-12.33	2.19 H	91	57.40	-1.53
4	*5500.00	103.47 PK			2.19 H	91	104.96	-1.49
5	*5500.00	94.39 AV			2.19 H	91	95.88	-1.49
6	11000.00	57.62 PK	74.00	-16.38	1.36 H	295	53.10	4.52
7	11000.00	45.45 AV	54.00	-8.55	1.36 H	295	40.93	4.52

Remarks:

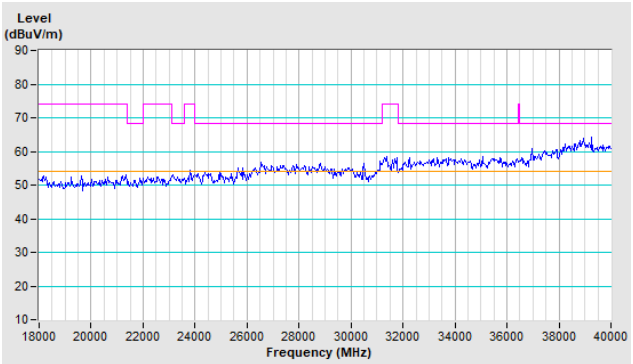
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

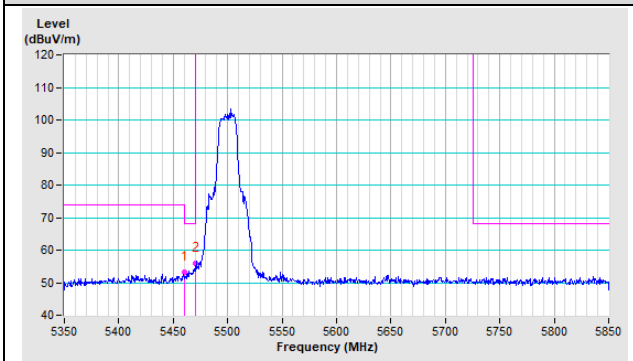


For 18-40GHz

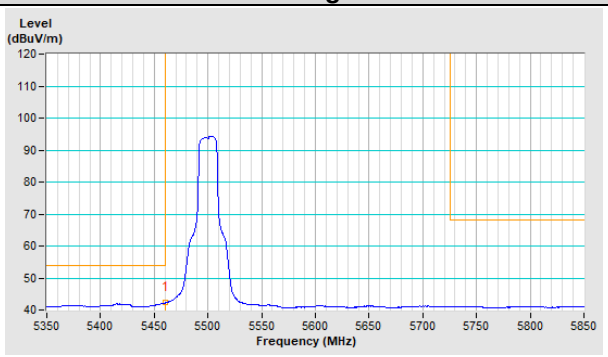


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11a	Channel	CH 100：5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

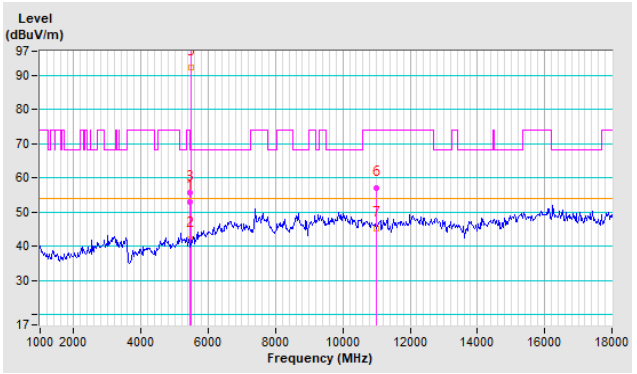
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	52.93 PK	74.00	-21.07	1.02 V	354	54.47	-1.54
2	5460.00	42.04 AV	54.00	-11.96	1.02 V	354	43.58	-1.54
3	#5470.00	55.61 PK	68.20	-12.59	1.02 V	354	57.14	-1.53
4	*5500.00	101.40 PK			1.02 V	354	102.89	-1.49
5	*5500.00	92.32 AV			1.02 V	354	93.81	-1.49
6	11000.00	56.99 PK	74.00	-17.01	2.10 V	234	52.47	4.52
7	11000.00	45.09 AV	54.00	-8.91	2.10 V	234	40.57	4.52

Remarks:

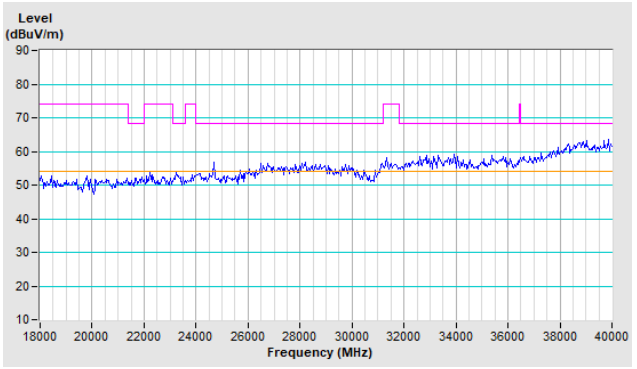
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

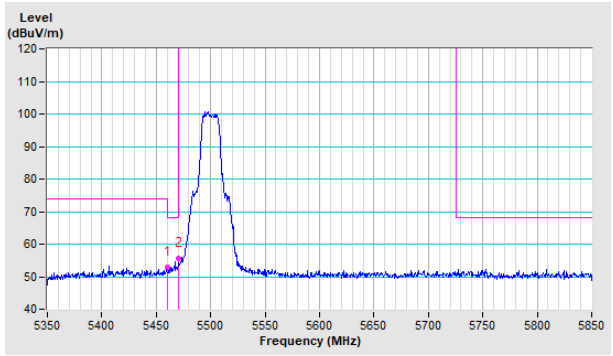


For 18-40GHz

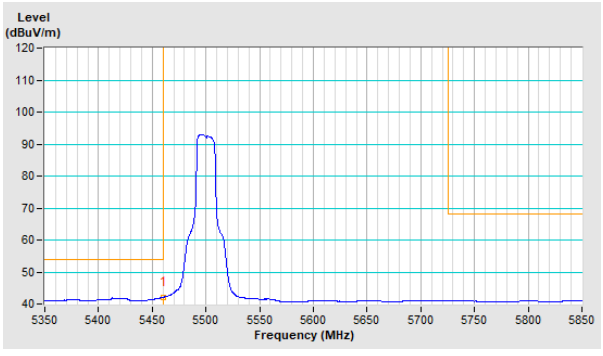


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11a	Channel	CH 116：5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

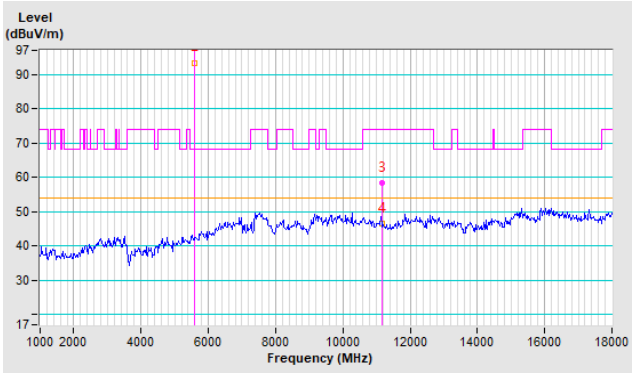
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	102.45 PK			2.31 H	86	103.89	-1.44
2	*5580.00	93.26 AV			2.31 H	86	94.70	-1.44
3	11160.00	58.22 PK	74.00	-15.78	1.58 H	65	55.61	2.61
4	11160.00	46.37 AV	54.00	-7.63	1.58 H	65	43.76	2.61

Remarks:

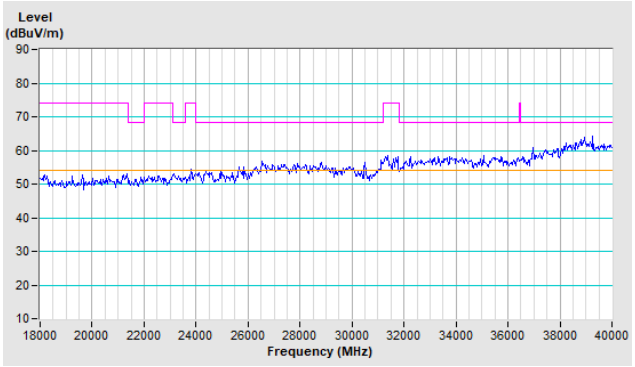
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11a	Channel	CH 116：5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

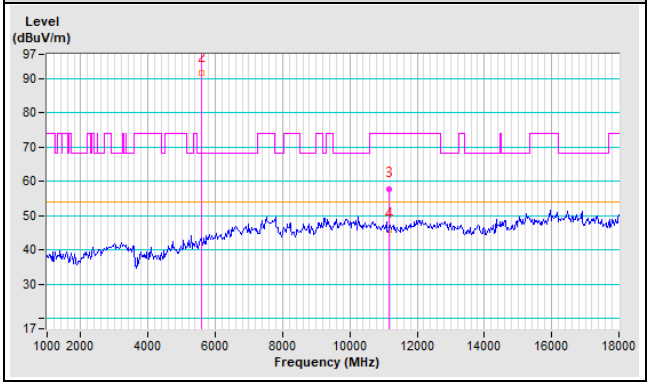
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	100.32 PK			1.05 V	3	101.76	-1.44
2	*5580.00	91.44 AV			1.05 V	3	92.88	-1.44
3	11160.00	57.84 PK	74.00	-16.16	1.15 V	241	55.23	2.61
4	11160.00	45.95 AV	54.00	-8.05	1.15 V	241	43.34	2.61

Remarks:

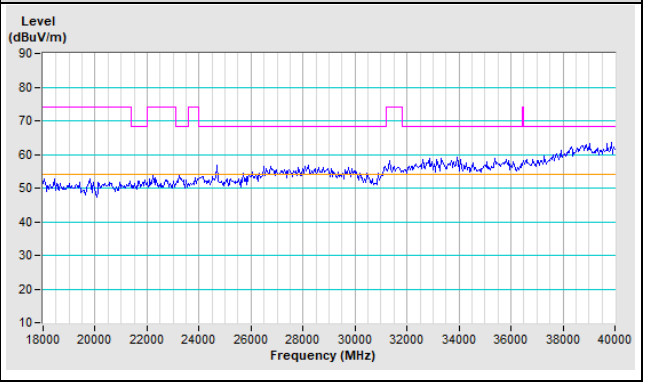
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11a	Channel	CH 132：5660 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

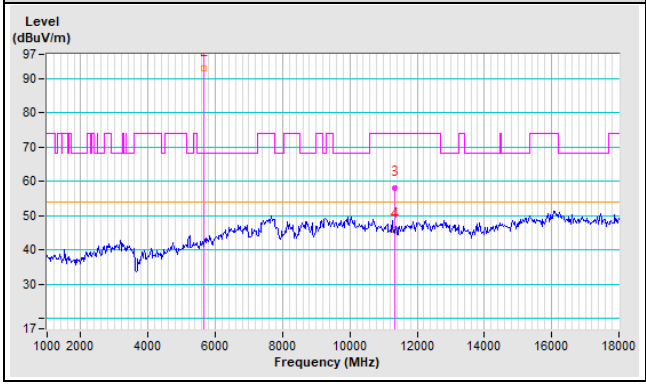
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5660.00	102.10 PK			2.28 H	84	103.73	-1.63
2	*5660.00	92.99 AV			2.28 H	84	94.62	-1.63
3	11320.00	58.11 PK	74.00	-15.89	1.45 H	241	55.42	2.69
4	11320.00	45.98 AV	54.00	-8.02	1.45 H	241	43.29	2.69

Remarks:

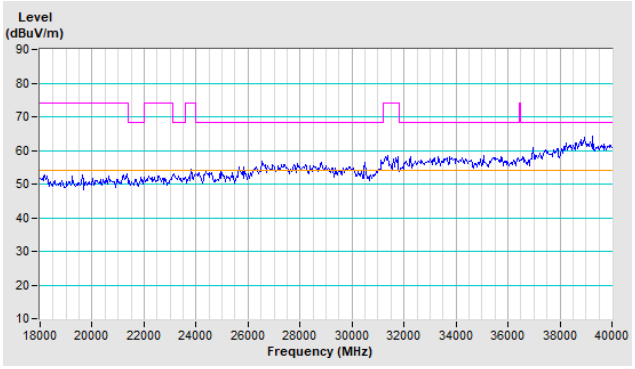
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11a	Channel	CH 132：5660 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

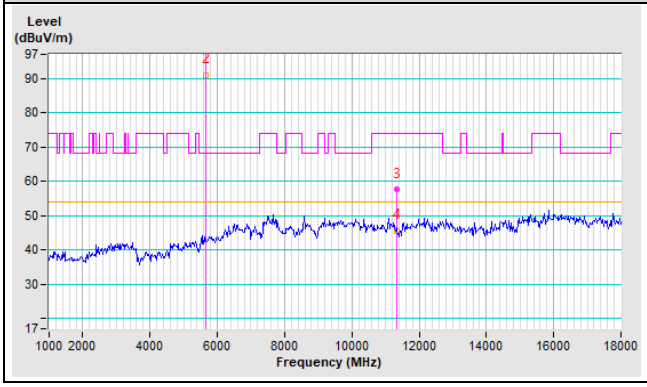
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5660.00	100.12 PK			1.07 V	352	101.75	-1.63
2	*5660.00	91.00 AV			1.07 V	352	92.63	-1.63
3	11320.00	57.55 PK	74.00	-16.45	2.18 V	208	54.86	2.69
4	11320.00	45.53 AV	54.00	-8.47	2.18 V	208	42.84	2.69

Remarks:

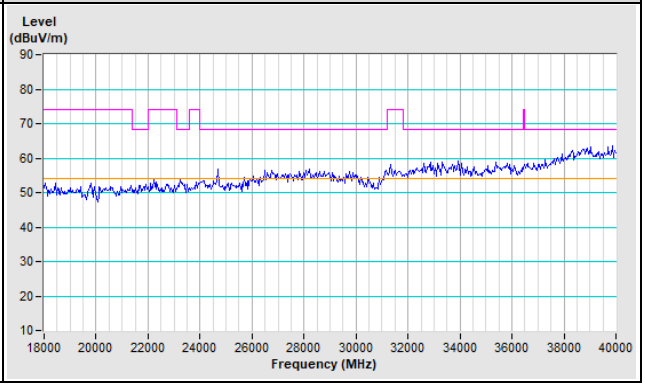
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11a	Channel	CH 140：5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

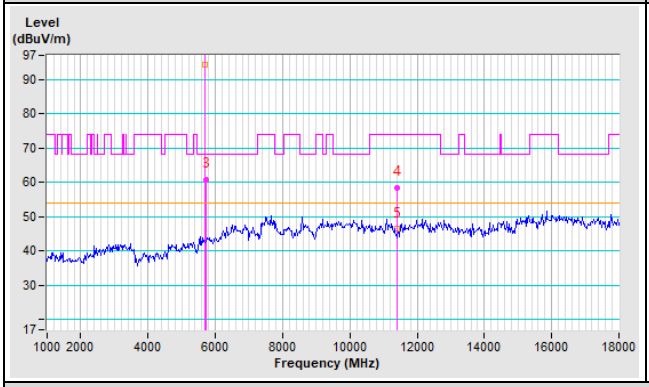
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	103.46 PK			2.08 H	98	105.27	-1.81
2	*5700.00	94.32 AV			2.08 H	98	96.13	-1.81
3	#5725.00	60.76 PK	68.20	-7.44	2.08 H	98	62.63	-1.87
4	11400.00	58.51 PK	74.00	-15.49	1.61 H	230	55.72	2.79
5	11400.00	46.33 AV	54.00	-7.67	1.61 H	230	43.54	2.79

Remarks:

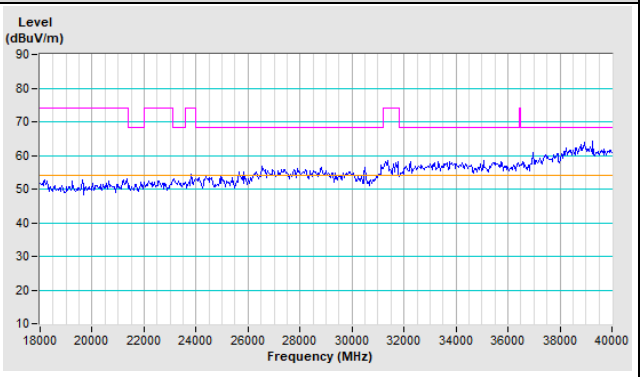
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

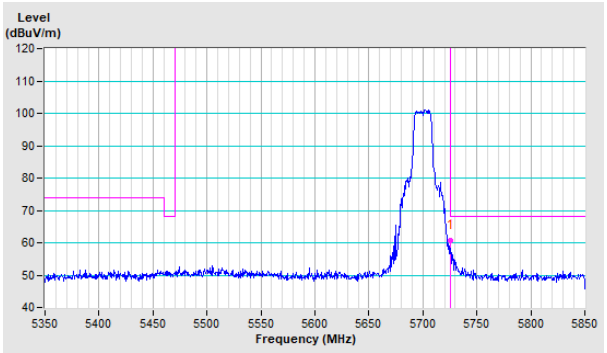


For 18-40GHz



Band Edge Measurement

Peak



RF Mode	TX 802.11a	Channel	CH 140：5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

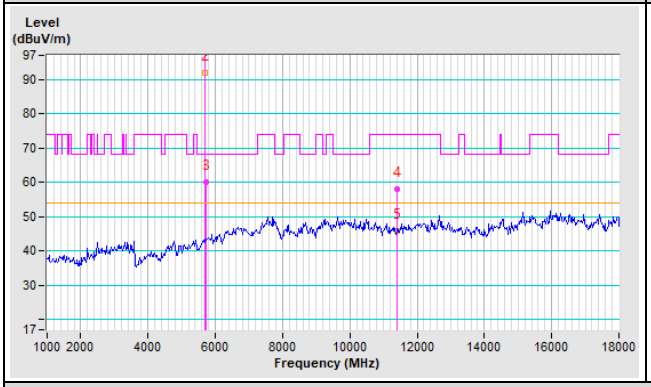
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	101.19 PK			1.06 V	3	103.00	-1.81
2	*5700.00	91.88 AV			1.06 V	3	93.69	-1.81
3	#5725.00	60.15 PK	68.20	-8.05	1.06 V	3	62.02	-1.87
4	11400.00	57.99 PK	74.00	-16.01	2.17 V	145	55.20	2.79
5	11400.00	45.94 AV	54.00	-8.06	2.17 V	145	43.15	2.79

Remarks:

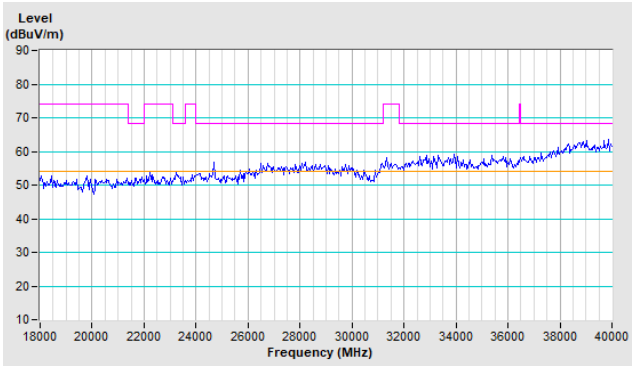
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

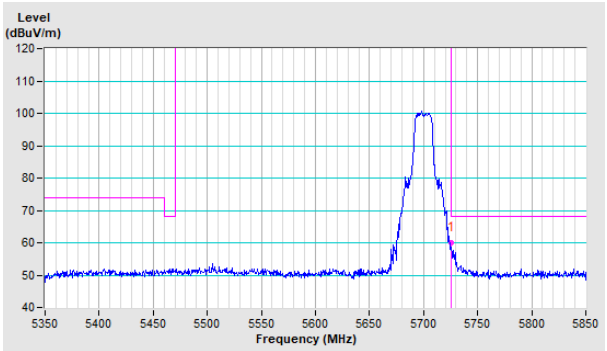


For 18-40GHz



Band Edge Measurement

Peak



RF Mode	TX 802.11a	Channel	CH 149：5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

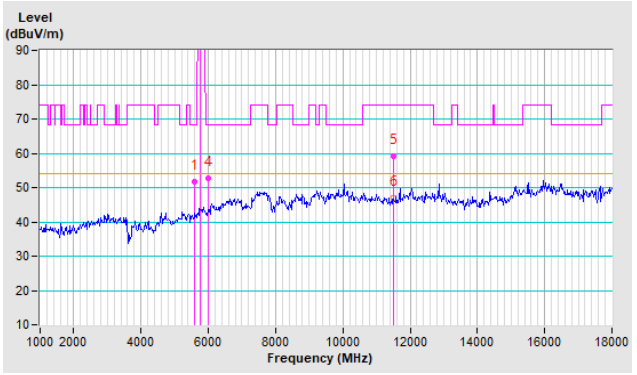
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5598.50	51.67 PK	68.20	-16.53	1.72 H	83	40.93	10.74
2	*5745.00	103.79 PK			1.72 H	83	93.26	10.53
3	*5745.00	93.92 AV			1.72 H	83	83.39	10.53
4	#6007.44	52.84 PK	68.20	-15.36	1.72 H	83	42.05	10.79
5	11490.00	59.14 PK	74.00	-14.86	1.27 H	145	40.84	18.30
6	11490.00	47.04 AV	54.00	-6.96	1.27 H	145	28.74	18.30

Remarks:

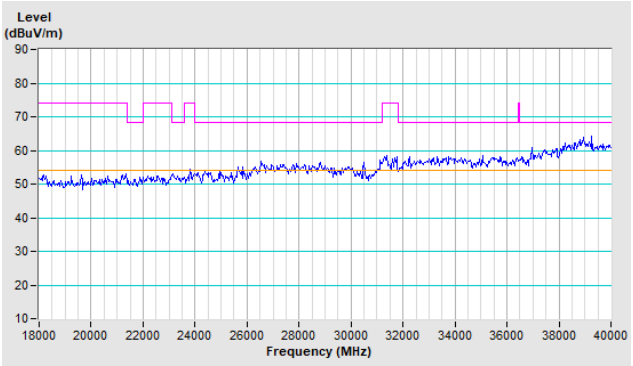
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

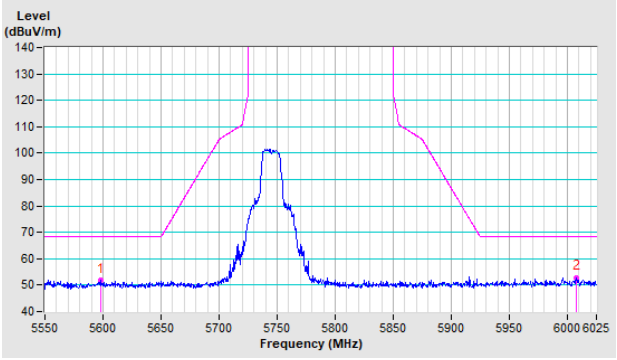
For 1-18GHz



For 18-40GHz



Radiated Out of Band Emission (OOBE)



RF Mode	TX 802.11a	Channel	CH 149：5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

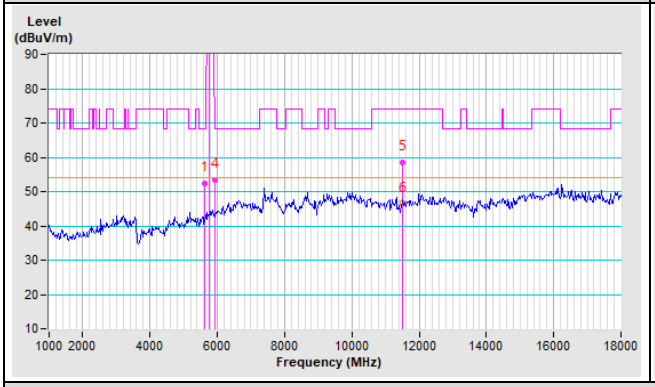
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5624.80	52.37 PK	68.20	-15.83	1.03 V	352	41.64	10.73
2	*5745.00	101.99 PK			1.03 V	352	91.46	10.53
3	*5745.00	91.79 AV			1.03 V	352	81.26	10.53
4	#5927.46	53.31 PK	68.20	-14.89	1.03 V	352	42.86	10.45
5	11490.00	58.53 PK	74.00	-15.47	2.31 V	269	40.23	18.30
6	11490.00	46.46 AV	54.00	-7.54	2.31 V	269	28.16	18.30

Remarks:

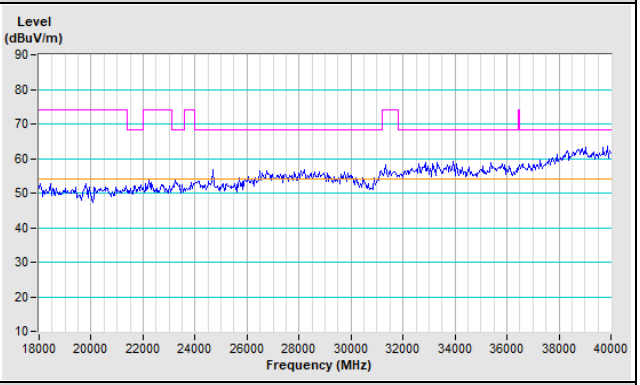
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

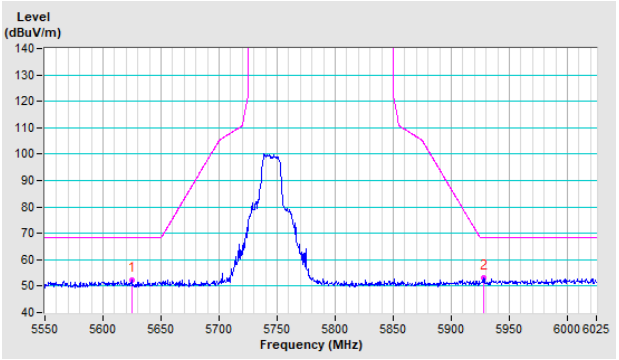
For 1-18GHz



For 18-40GHz



Radiated Out of Band Emission (OOBE)



RF Mode	TX 802.11a	Channel	CH 157：5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

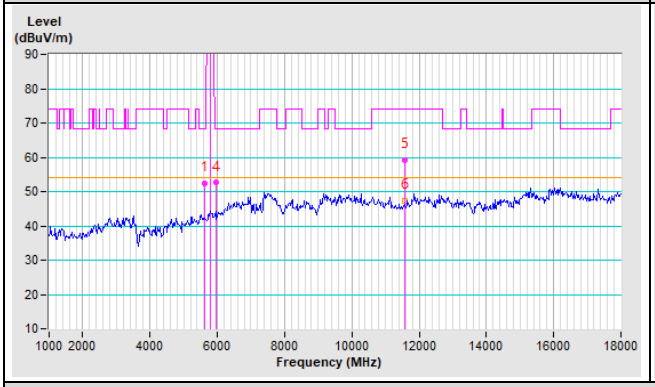
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5609.60	52.47 PK	68.20	-15.73	1.68 H	91	41.74	10.73
2	*5785.00	103.34 PK			1.68 H	91	92.89	10.45
3	*5785.00	93.19 AV			1.68 H	91	82.74	10.45
4	#5961.59	52.62 PK	68.20	-15.58	1.68 H	91	42.00	10.62
5	11570.00	59.16 PK	74.00	-14.84	2.20 H	156	40.63	18.53
6	11570.00	47.39 AV	54.00	-6.61	2.20 H	156	28.86	18.53

Remarks:

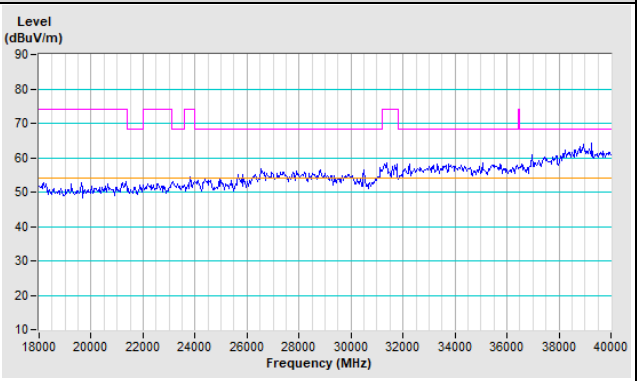
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

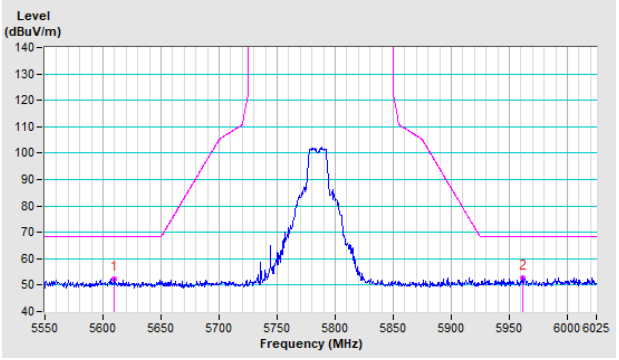
For 1-18GHz



For 18-40GHz



Radiated Out of Band Emission (OOBE)



RF Mode	TX 802.11a	Channel	CH 157：5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

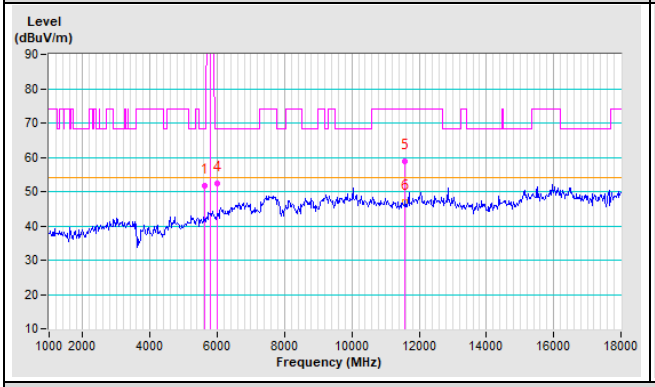
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5625.41	51.75 PK	68.20	-16.45	1.00 V	358	41.02	10.73
2	*5785.00	101.33 PK			1.00 V	358	90.88	10.45
3	*5785.00	91.14 AV			1.00 V	358	80.69	10.45
4	#6003.51	52.35 PK	68.20	-15.85	1.00 V	358	41.55	10.80
5	11570.00	58.75 PK	74.00	-15.25	1.94 V	284	40.22	18.53
6	11570.00	46.92 AV	54.00	-7.08	1.94 V	284	28.39	18.53

Remarks:

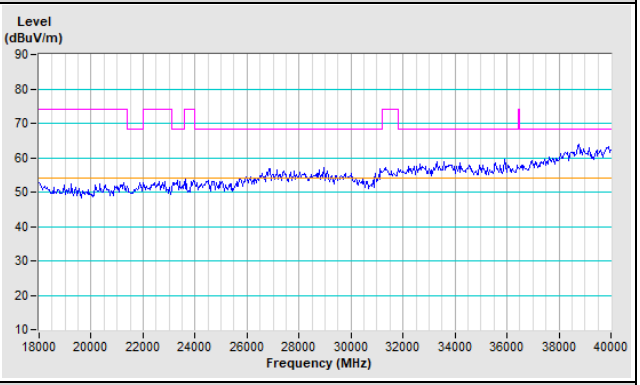
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

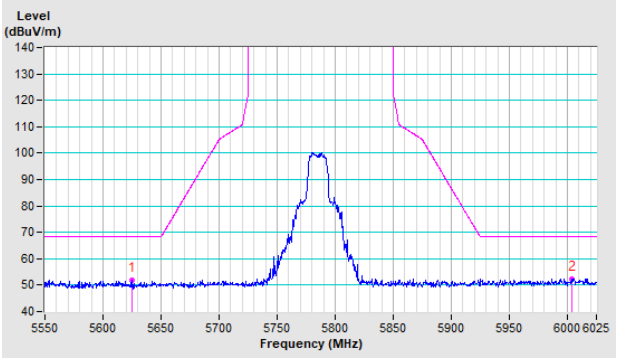
For 1-18GHz



For 18-40GHz



Radiated Out of Band Emission (OOBE)



RF Mode	TX 802.11a	Channel	CH 165：5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

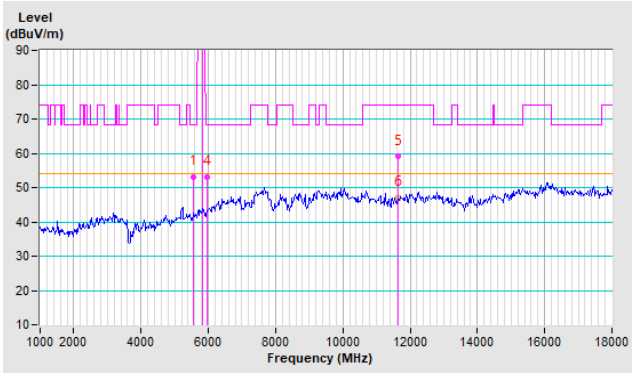
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5569.17	53.13 PK	68.20	-15.07	1.53 H	86	42.12	11.01
2	*5825.00	103.57 PK			1.53 H	86	93.16	10.41
3	*5825.00	93.85 AV			1.53 H	86	83.44	10.41
4	#5965.17	53.22 PK	68.20	-14.98	1.53 H	86	42.58	10.64
5	11650.00	59.04 PK	74.00	-14.96	1.47 H	157	40.74	18.30
6	11650.00	46.88 AV	54.00	-7.12	1.47 H	157	28.58	18.30

Remarks:

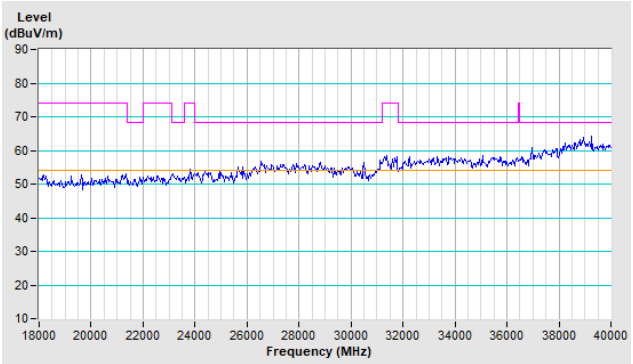
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

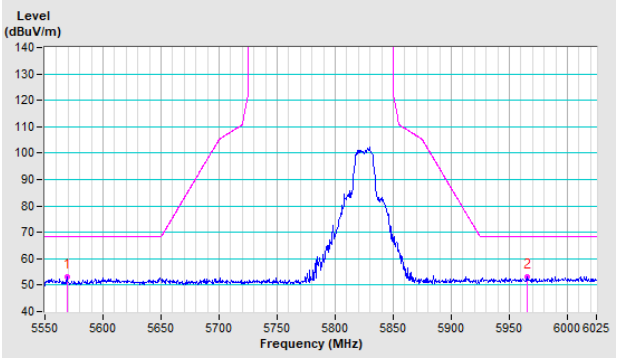
For 1-18GHz



For 18-40GHz



Radiated Out of Band Emission (OOBE)



RF Mode	TX 802.11a	Channel	CH 165：5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

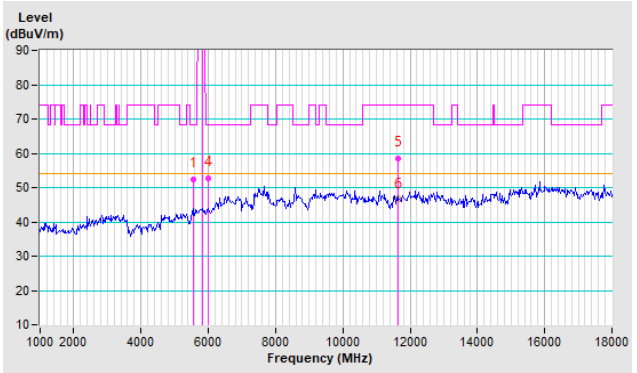
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5559.90	52.49 PK	68.20	-15.71	1.06 V	4	41.41	11.08
2	*5825.00	101.85 PK			1.06 V	4	91.44	10.41
3	*5825.00	91.70 AV			1.06 V	4	81.29	10.41
4	#6007.70	52.68 PK	68.20	-15.52	1.06 V	4	41.89	10.79
5	11650.00	58.46 PK	74.00	-15.54	2.15 V	271	40.16	18.30
6	11650.00	46.52 AV	54.00	-7.48	2.15 V	271	28.22	18.30

Remarks:

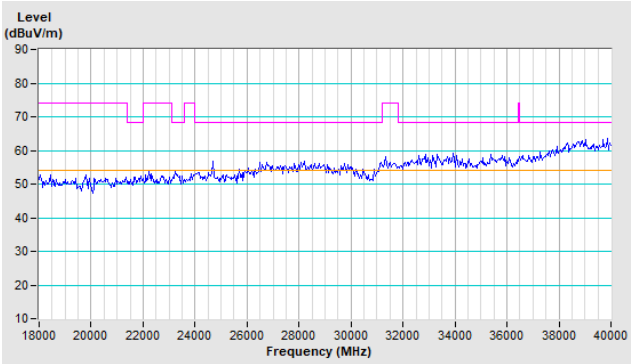
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

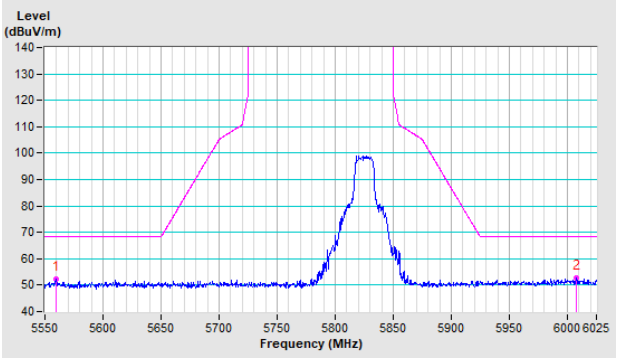
For 1-18GHz



For 18-40GHz



Radiated Out of Band Emission (OOBE)



RF Mode	TX 802.11n (20MHz)	Channel	CH 36：5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

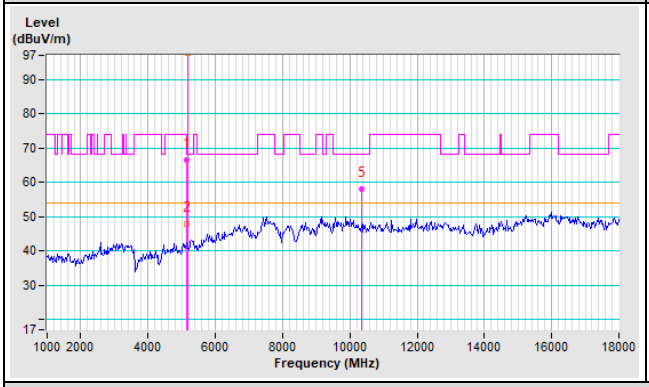
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	66.54 PK	74.00	-7.46	2.80 H	109	68.95	-2.41
2	5150.00	47.98 AV	54.00	-6.02	2.80 H	109	50.39	-2.41
3	*5180.00	106.53 PK			2.80 H	109	108.89	-2.36
4	*5180.00	97.52 AV			2.80 H	109	99.88	-2.36
5	#10360.00	57.98 PK	68.20	-10.22	1.29 H	221	56.46	1.52

Remarks:

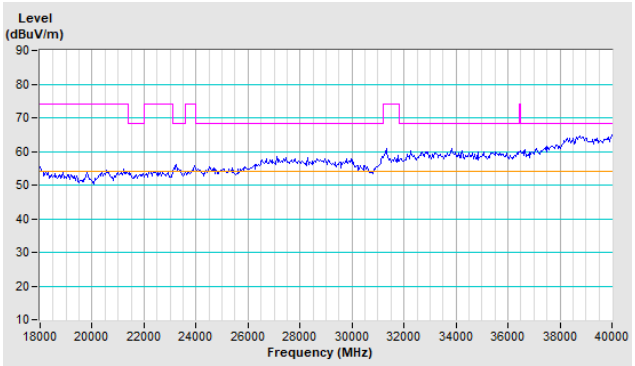
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

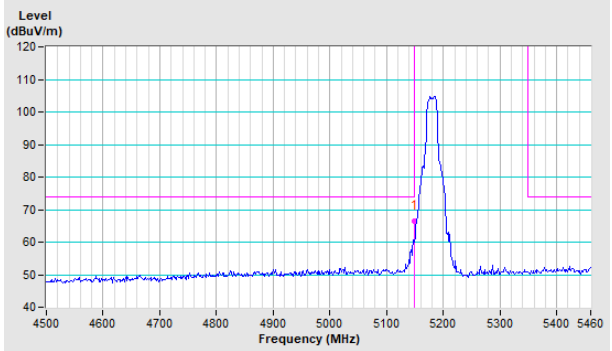


For 18-40GHz

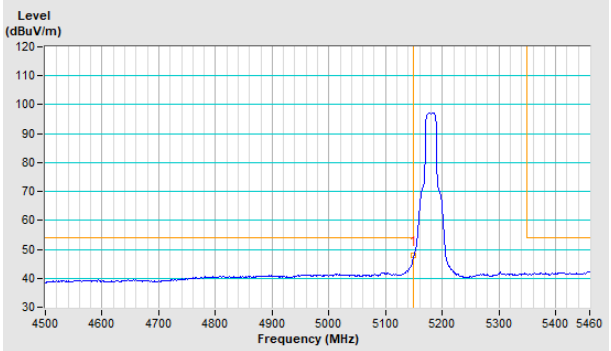


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11n (20MHz)	Channel	CH 36：5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

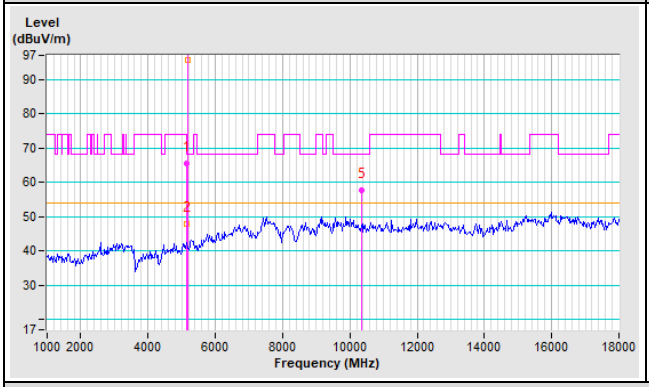
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	65.63 PK	74.00	-8.37	1.00 V	4	68.04	-2.41
2	5150.00	47.78 AV	54.00	-6.22	1.00 V	4	50.19	-2.41
3	*5180.00	104.36 PK			1.00 V	4	106.72	-2.36
4	*5180.00	95.74 AV			1.00 V	4	98.10	-2.36
5	#10360.00	57.63 PK	68.20	-10.57	1.62 V	319	56.11	1.52

Remarks:

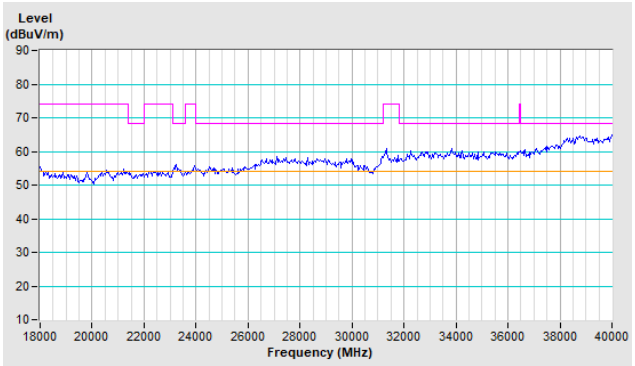
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

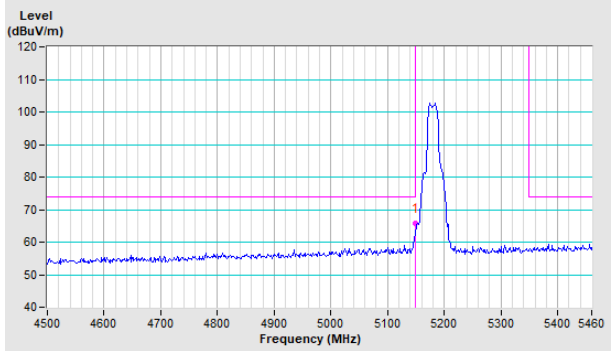


For 18-40GHz

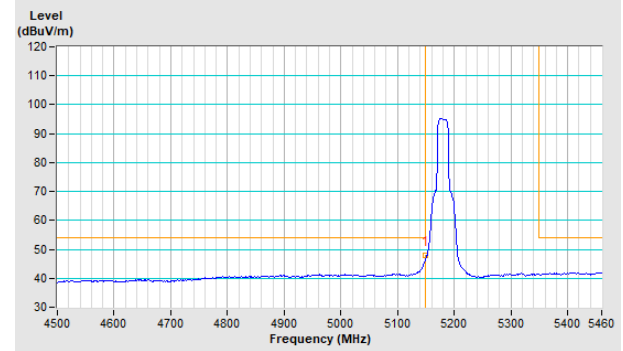


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11n (20MHz)	Channel	CH 40：5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

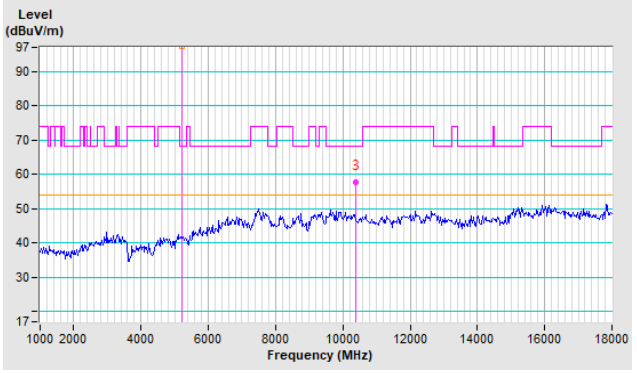
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	106.21 PK			2.77 H	107	108.54	-2.33
2	*5200.00	97.18 AV			2.77 H	107	99.51	-2.33
3	#10400.00	57.73 PK	68.20	-10.47	1.33 H	227	56.19	1.54

Remarks:

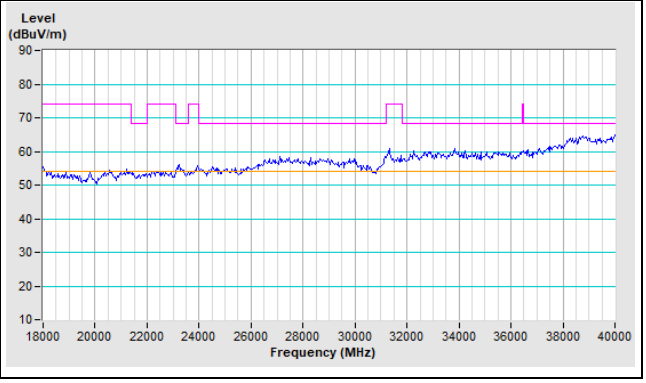
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11n (20MHz)	Channel	CH 40：5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

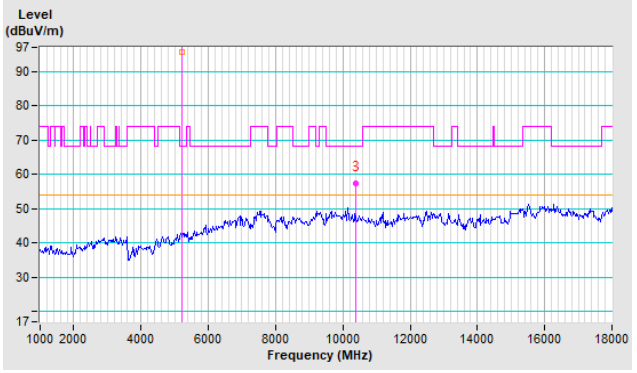
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5200.00	104.19 PK			1.00 V	358	106.52	-2.33
2	*5200.00	95.50 AV			1.00 V	358	97.83	-2.33
3	#10400.00	57.49 PK	68.20	-10.71	1.67 V	315	55.95	1.54

Remarks:

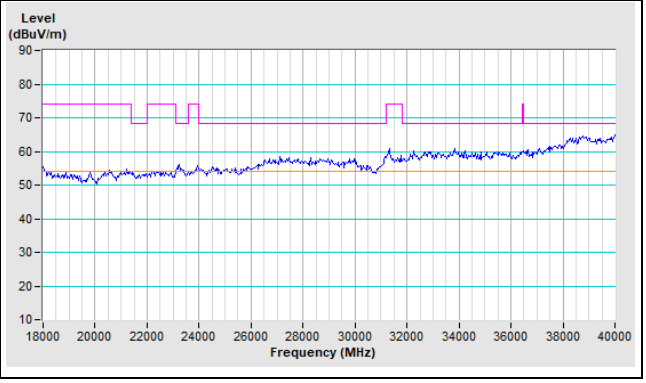
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11n (20MHz)	Channel	CH 48：5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

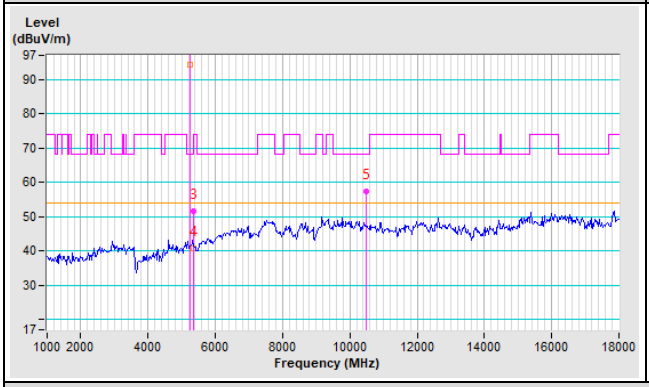
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	103.19 PK			2.72 H	272	105.45	-2.26
2	*5240.00	94.27 AV			2.72 H	272	96.53	-2.26
3	5350.00	51.52 PK	74.00	-22.48	2.72 H	272	53.36	-1.84
4	5350.00	40.88 AV	54.00	-13.12	2.72 H	272	42.72	-1.84
5	#10480.00	57.35 PK	68.20	-10.85	1.36 H	232	54.46	2.89

Remarks:

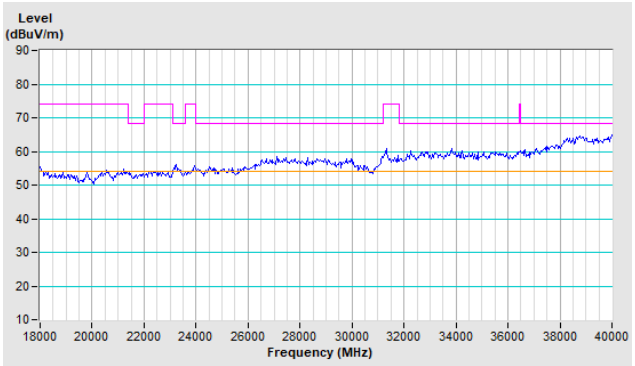
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

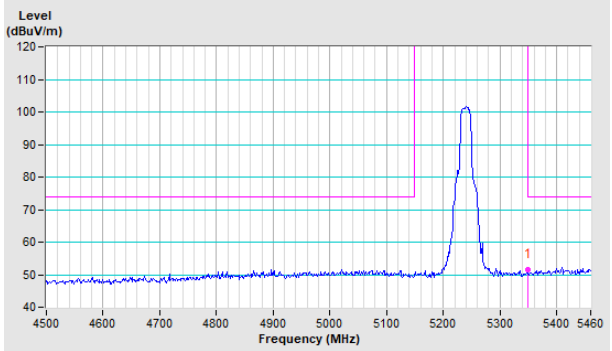


For 18-40GHz

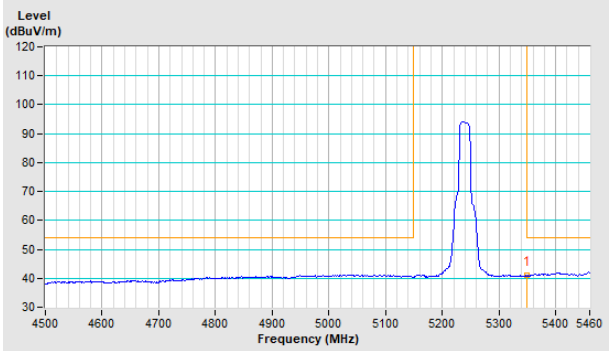


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11n (20MHz)	Channel	CH 48：5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

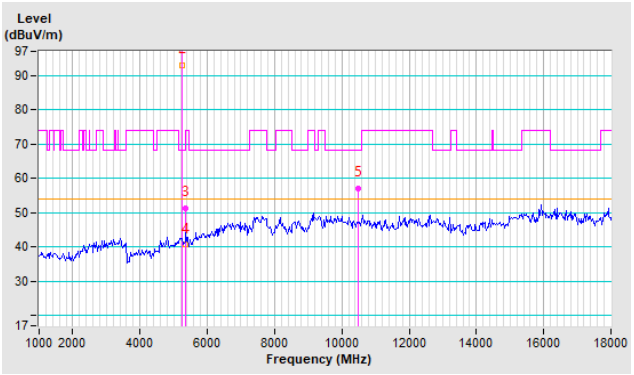
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5240.00	101.78 PK			1.00 V	351	104.04	-2.26
2	*5240.00	92.91 AV			1.00 V	351	95.17	-2.26
3	5350.00	51.34 PK	74.00	-22.66	1.00 V	351	53.18	-1.84
4	5350.00	40.62 AV	54.00	-13.38	1.00 V	351	42.46	-1.84
5	#10480.00	57.12 PK	68.20	-11.08	1.60 V	317	54.23	2.89

Remarks:

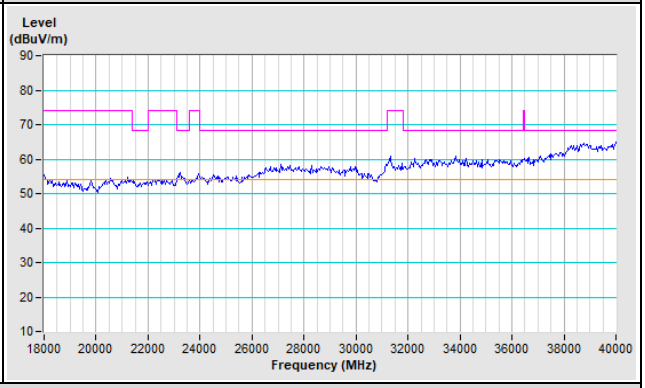
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

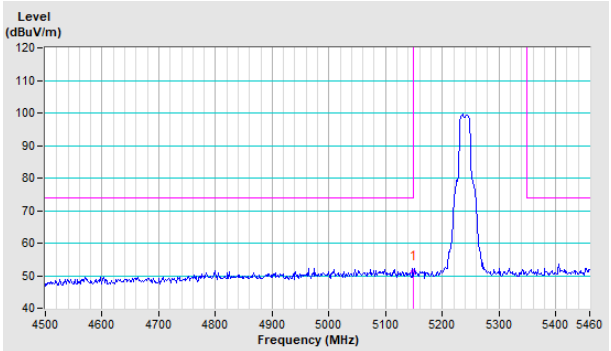


For 18-40GHz

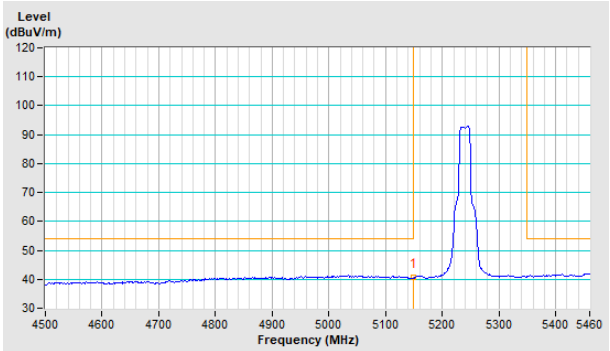


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11n (20MHz)	Channel	CH 52：5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

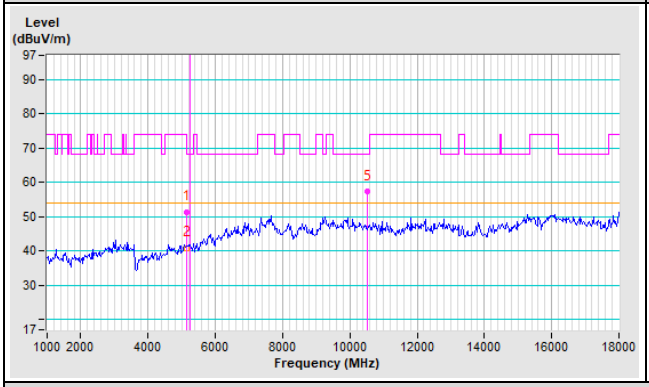
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	51.30 PK	74.00	-22.70	2.03 H	91	53.71	-2.41
2	5150.00	40.78 AV	54.00	-13.22	2.03 H	91	43.19	-2.41
3	*5260.00	106.90 PK			2.03 H	91	109.12	-2.22
4	*5260.00	98.03 AV			2.03 H	91	100.25	-2.22
5	#10520.00	57.20 PK	68.20	-11.00	1.68 H	255	54.27	2.93

Remarks:

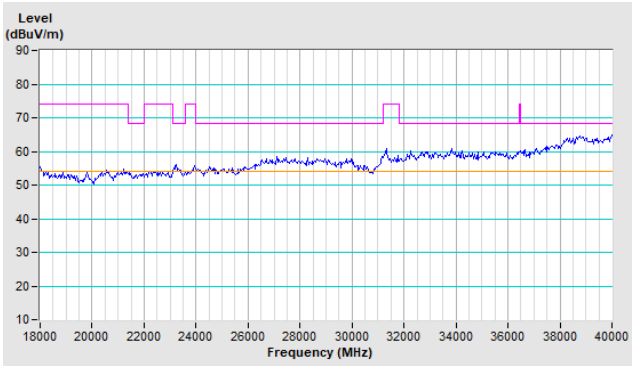
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

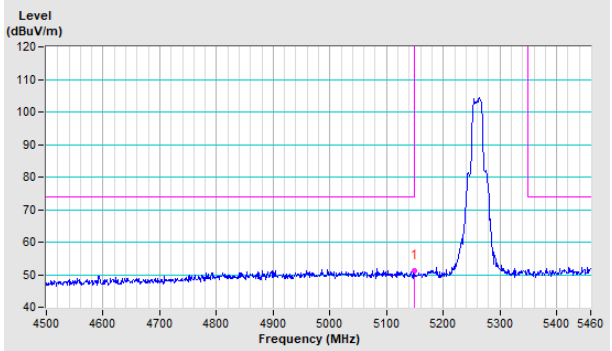


For 18-40GHz

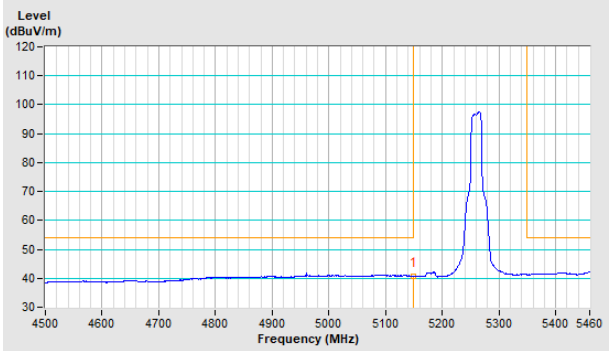


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11n (20MHz)	Channel	CH 52：5260 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

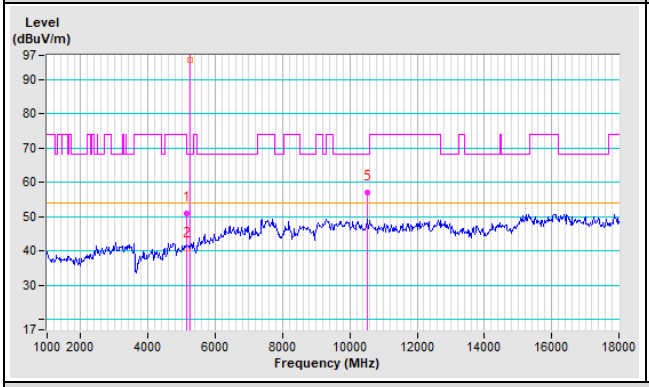
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	50.84 PK	74.00	-23.16	1.06 V	354	53.25	-2.41
2	5150.00	40.60 AV	54.00	-13.40	1.06 V	354	43.01	-2.41
3	*5260.00	104.65 PK			1.06 V	354	106.87	-2.22
4	*5260.00	95.80 AV			1.06 V	354	98.02	-2.22
5	#10520.00	56.93 PK	68.20	-11.27	1.49 V	222	54.00	2.93

Remarks:

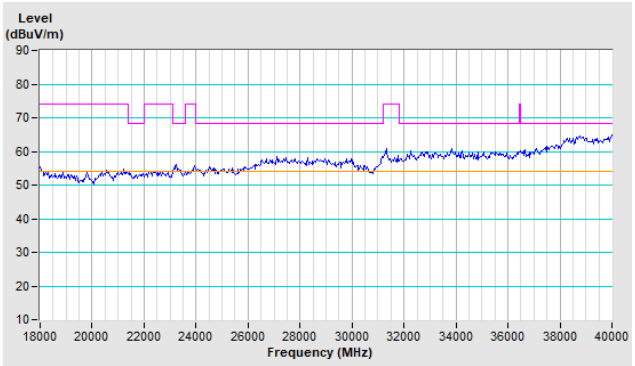
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

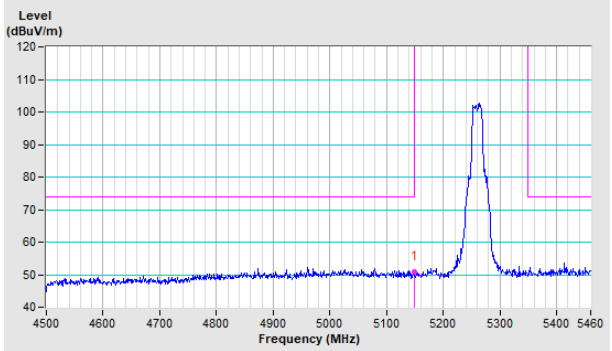


For 18-40GHz

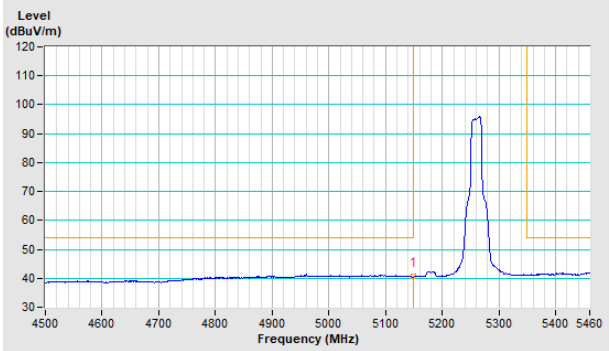


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11n (20MHz)	Channel	CH 60：5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

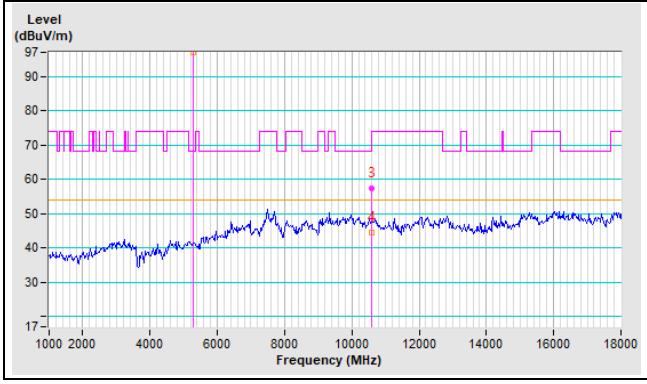
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	106.63 PK			2.18 H	96	108.74	-2.11
2	*5300.00	97.12 AV			2.18 H	96	99.23	-2.11
3	10600.00	57.21 PK	74.00	-16.79	1.58 H	254	55.45	1.76
4	10600.00	44.37 AV	54.00	-9.63	1.58 H	254	42.61	1.76

Remarks:

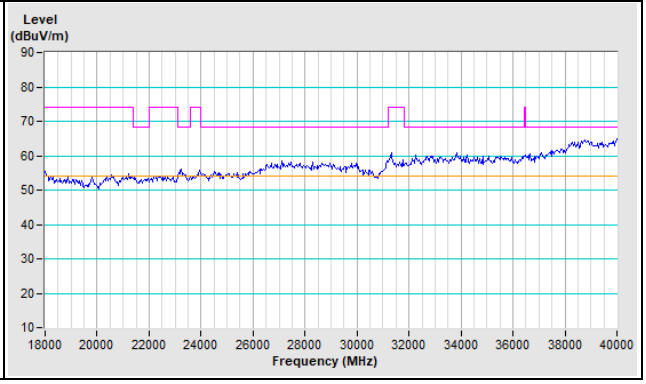
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11n (20MHz)	Channel	CH 60：5300 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

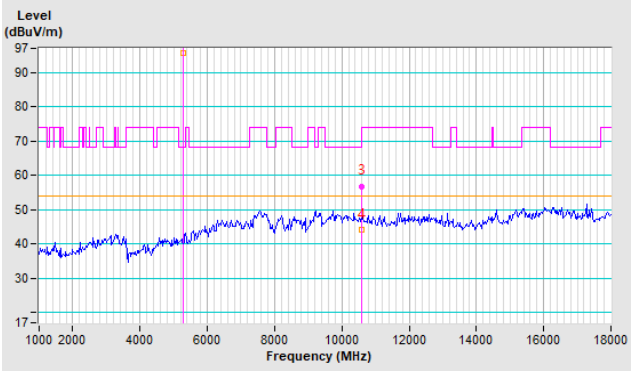
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5300.00	104.70 PK			1.00 V	1	106.81	-2.11
2	*5300.00	95.63 AV			1.00 V	1	97.74	-2.11
3	10600.00	56.75 PK	74.00	-17.25	2.21 V	151	54.99	1.76
4	10600.00	43.99 AV	54.00	-10.01	2.21 V	151	42.23	1.76

Remarks:

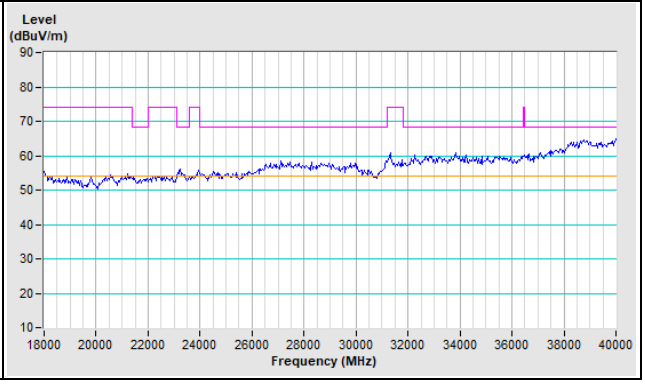
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11n (20MHz)	Channel	CH 64：5320 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

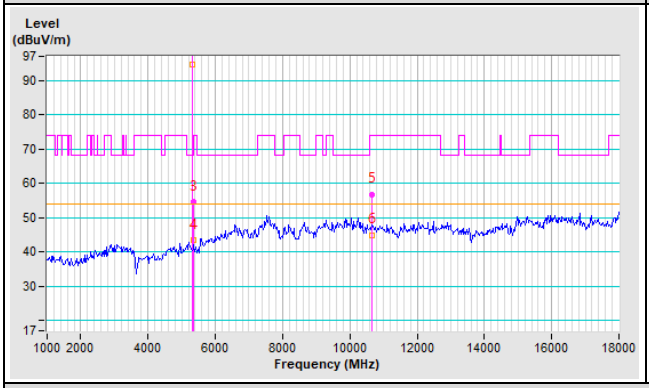
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	103.32 PK			2.38 H	85	105.32	-2.00
2	*5320.00	94.65 AV			2.38 H	85	96.65	-2.00
3	5350.00	54.50 PK	74.00	-19.50	2.38 H	85	56.34	-1.84
4	5350.00	43.30 AV	54.00	-10.70	2.38 H	85	45.14	-1.84
5	10640.00	56.69 PK	74.00	-17.31	1.85 H	269	54.86	1.83
6	10640.00	44.72 AV	54.00	-9.28	1.85 H	269	42.89	1.83

Remarks:

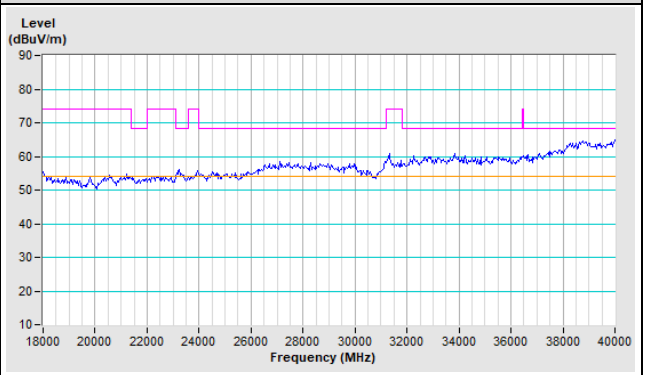
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz

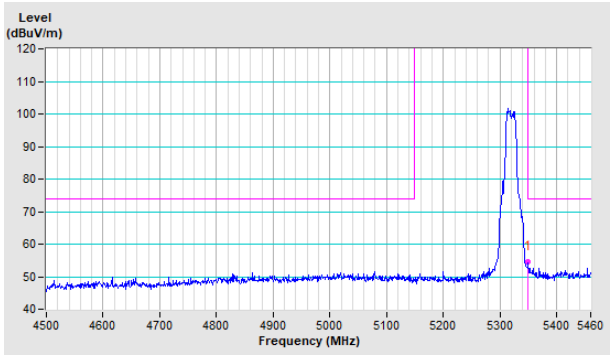


For 18-40GHz

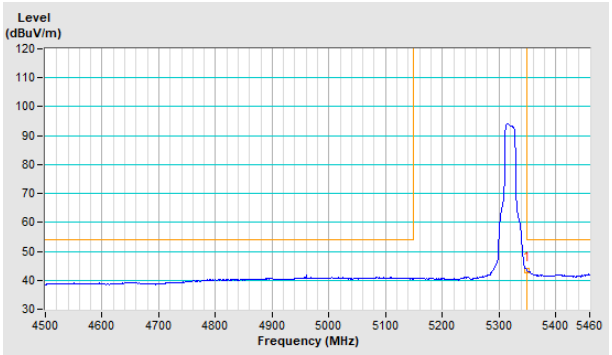


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11n (20MHz)	Channel	CH 64：5320 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

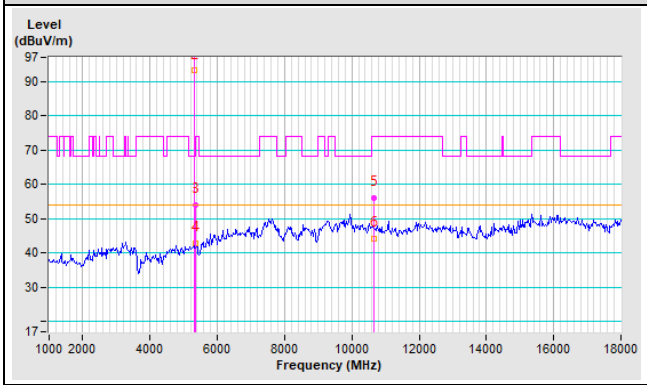
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5320.00	101.62 PK			1.03 V	359	103.62	-2.00
2	*5320.00	93.18 AV			1.03 V	359	95.18	-2.00
3	5350.00	54.10 PK	74.00	-19.90	1.03 V	359	55.94	-1.84
4	5350.00	42.84 AV	54.00	-11.16	1.03 V	359	44.68	-1.84
5	10640.00	56.10 PK	74.00	-17.90	1.88 V	88	54.27	1.83
6	10640.00	44.14 AV	54.00	-9.86	1.88 V	88	42.31	1.83

Remarks:

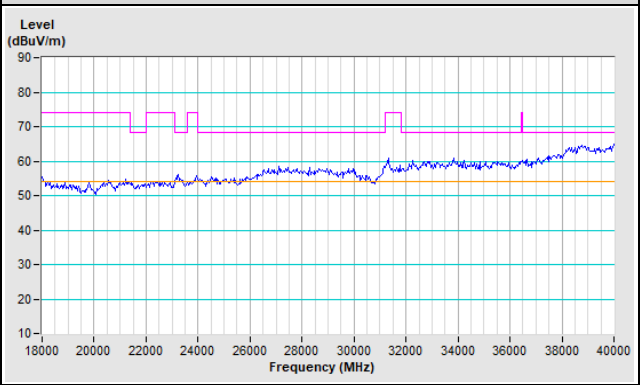
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz

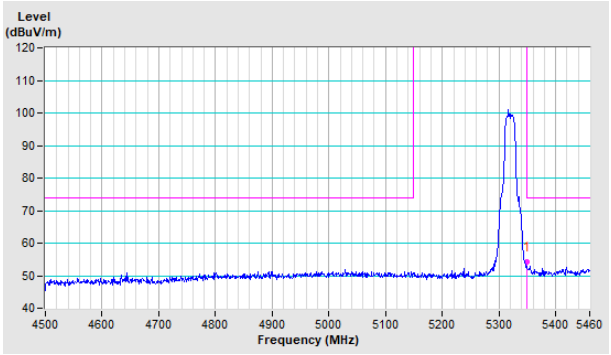


For 18-40GHz

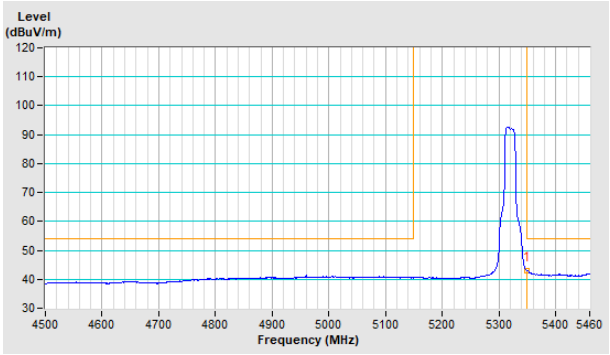


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11n (20MHz)	Channel	CH 100：5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

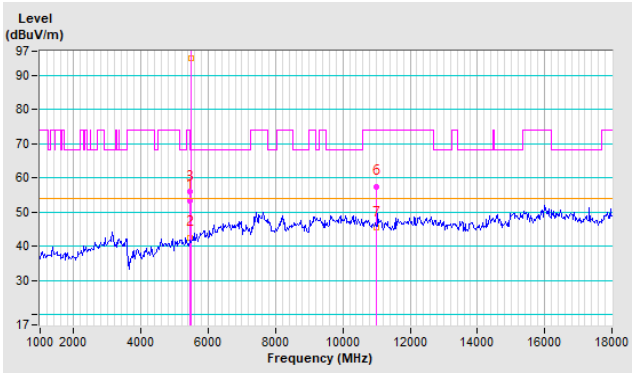
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	53.34 PK	74.00	-20.66	2.55 H	83	54.88	-1.54
2	5460.00	42.35 AV	54.00	-11.65	2.55 H	83	43.89	-1.54
3	#5470.00	55.88 PK	68.20	-12.32	2.55 H	83	57.41	-1.53
4	*5500.00	104.03 PK			2.55 H	83	105.52	-1.49
5	*5500.00	94.96 AV			2.55 H	83	96.45	-1.49
6	11000.00	57.41 PK	74.00	-16.59	1.95 H	284	52.89	4.52
7	11000.00	45.35 AV	54.00	-8.65	1.95 H	284	40.83	4.52

Remarks:

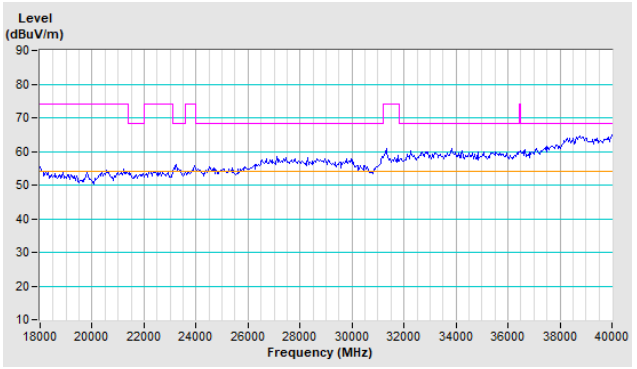
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

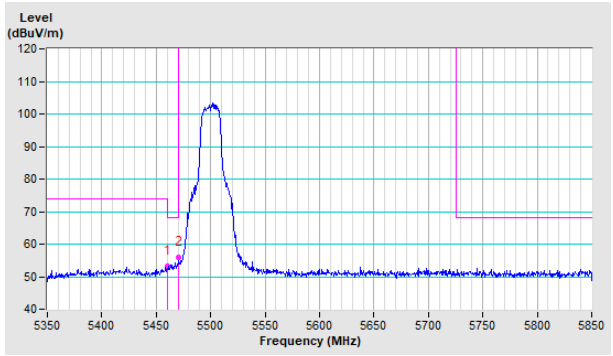


For 18-40GHz

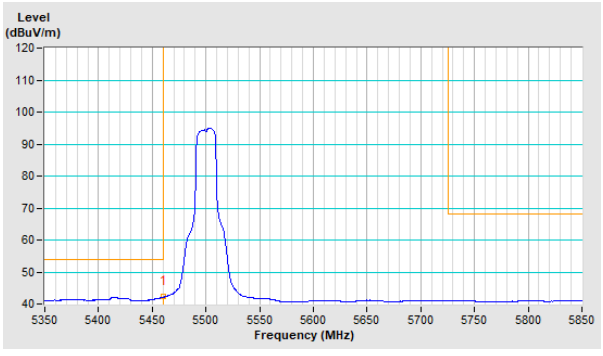


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11n (20MHz)	Channel	CH 100：5500 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

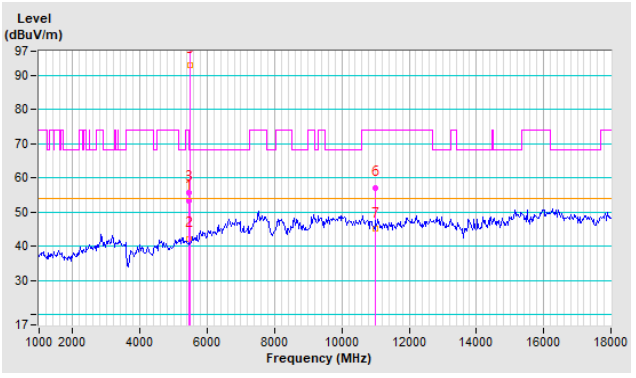
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5460.00	53.12 PK	74.00	-20.88	1.00 V	357	54.66	-1.54
2	5460.00	42.03 AV	54.00	-11.97	1.00 V	357	43.57	-1.54
3	#5470.00	55.66 PK	68.20	-12.54	1.00 V	357	57.19	-1.53
4	*5500.00	102.13 PK			1.00 V	357	103.62	-1.49
5	*5500.00	93.02 AV			1.00 V	357	94.51	-1.49
6	11000.00	56.99 PK	74.00	-17.01	2.20 V	321	52.47	4.52
7	11000.00	44.97 AV	54.00	-9.03	2.20 V	321	40.45	4.52

Remarks:

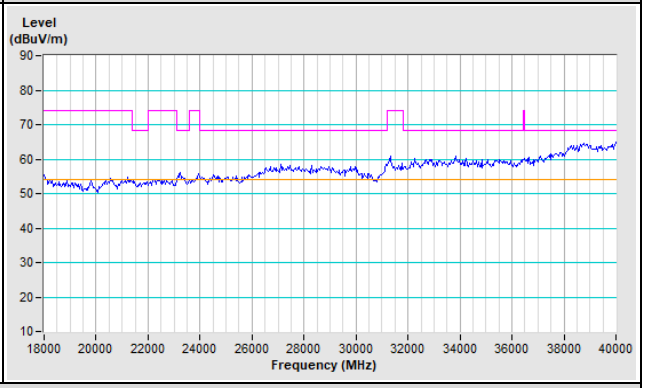
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

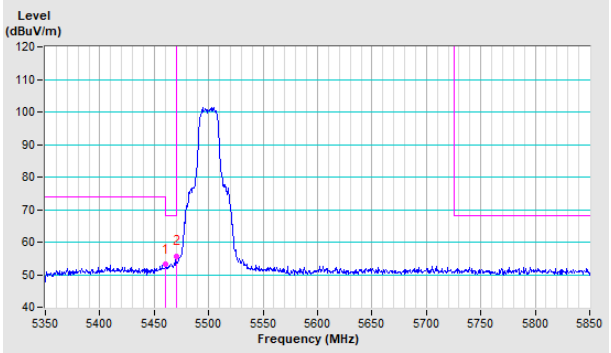


For 18-40GHz

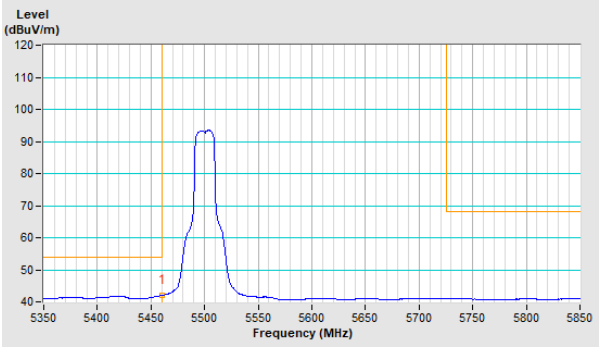


Band Edge Measurement

Peak



Average



RF Mode	TX 802.11n (20MHz)	Channel	CH 116：5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

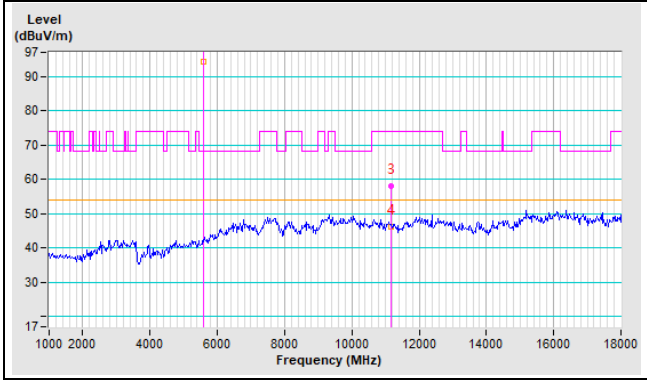
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	103.10 PK			3.46 H	92	104.54	-1.44
2	*5580.00	94.20 AV			3.46 H	92	95.64	-1.44
3	11160.00	57.95 PK	74.00	-16.05	1.87 H	41	55.34	2.61
4	11160.00	46.07 AV	54.00	-7.93	1.87 H	41	43.46	2.61

Remarks:

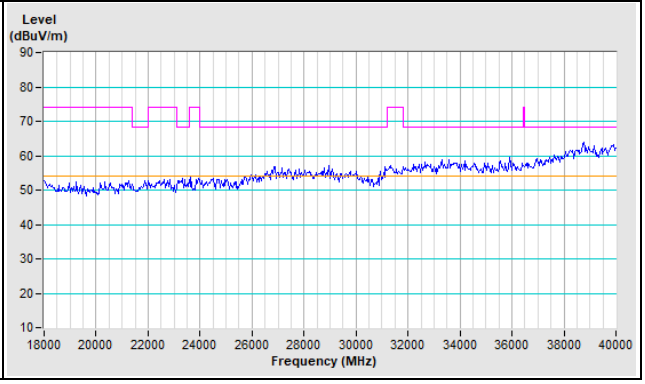
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11n (20MHz)	Channel	CH 116：5580 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

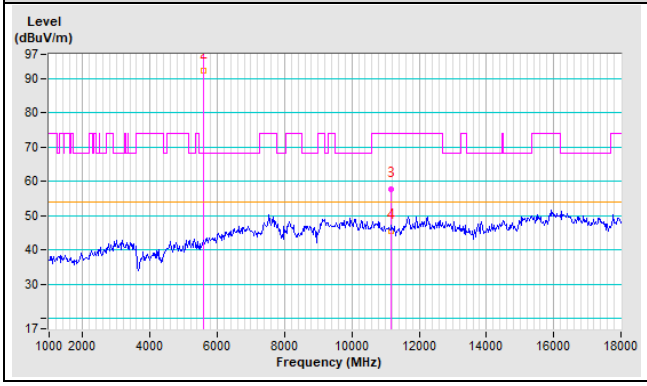
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5580.00	101.25 PK			1.00 V	357	102.69	-1.44
2	*5580.00	92.19 AV			1.00 V	357	93.63	-1.44
3	11160.00	57.75 PK	74.00	-16.25	1.87 V	149	55.14	2.61
4	11160.00	45.54 AV	54.00	-8.46	1.87 V	149	42.93	2.61

Remarks:

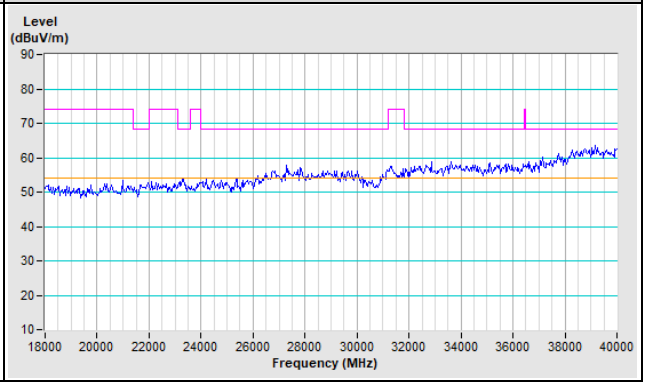
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11n (20MHz)	Channel	CH 132：5660 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

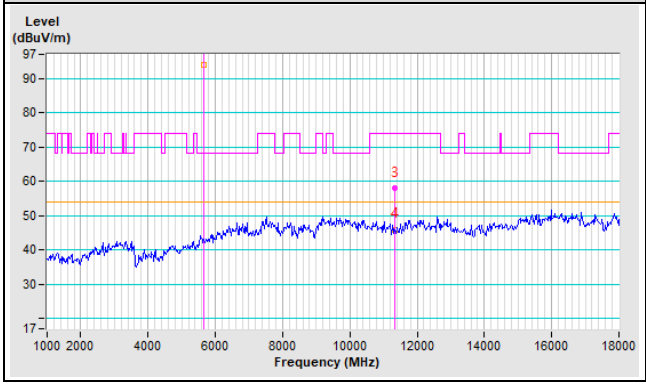
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5660.00	103.18 PK			2.47 H	88	104.81	-1.63
2	*5660.00	94.00 AV			2.47 H	88	95.63	-1.63
3	11320.00	57.89 PK	74.00	-16.11	1.63 H	269	55.20	2.69
4	11320.00	45.98 AV	54.00	-8.02	1.63 H	269	43.29	2.69

Remarks:

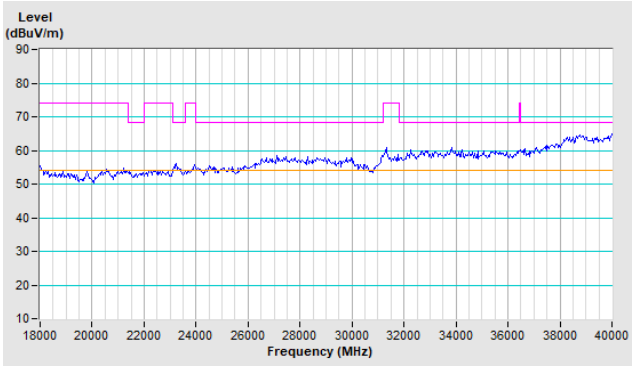
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11n (20MHz)	Channel	CH 132：5660 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

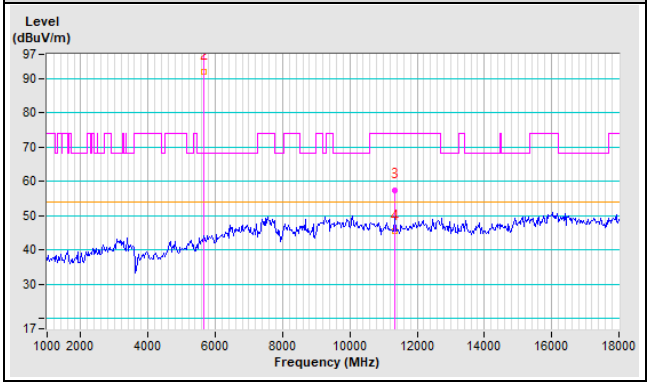
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5660.00	101.58 PK			1.05 V	355	103.21	-1.63
2	*5660.00	91.97 AV			1.05 V	355	93.60	-1.63
3	11320.00	57.35 PK	74.00	-16.65	1.88 V	177	54.66	2.69
4	11320.00	45.33 AV	54.00	-8.67	1.88 V	177	42.64	2.69

Remarks:

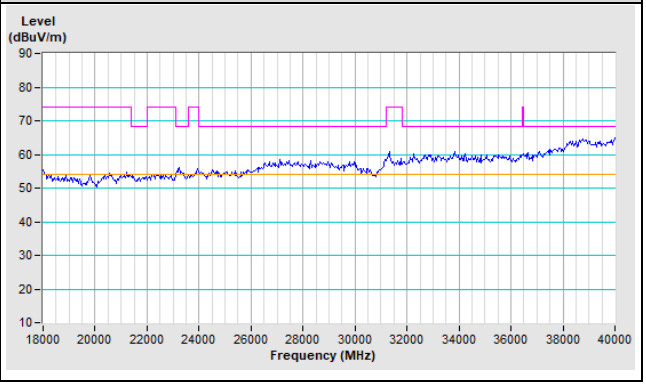
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Test Plot

For 1-18GHz



For 18-40GHz



RF Mode	TX 802.11n (20MHz)	Channel	CH 140：5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

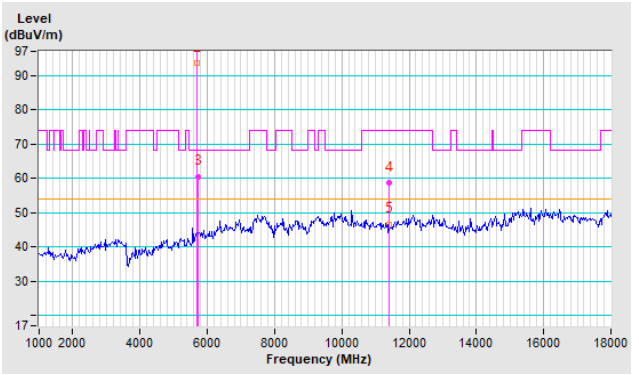
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	102.46 PK			2.53 H	75	104.27	-1.81
2	*5700.00	93.51 AV			2.53 H	75	95.32	-1.81
3	#5725.00	60.45 PK	68.20	-7.75	2.53 H	75	62.32	-1.87
4	11400.00	58.54 PK	74.00	-15.46	1.55 H	352	55.75	2.79
5	11400.00	46.64 AV	54.00	-7.36	1.55 H	352	43.85	2.79

Remarks:

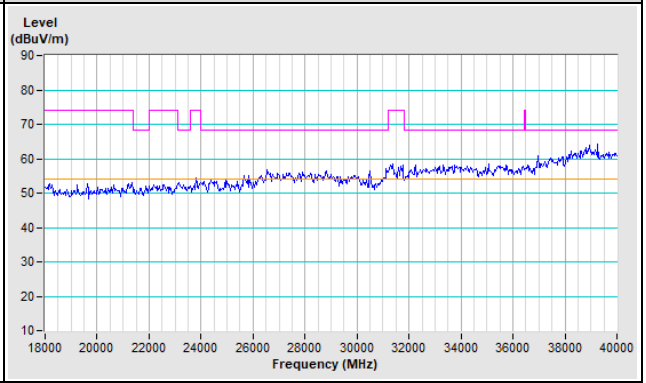
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

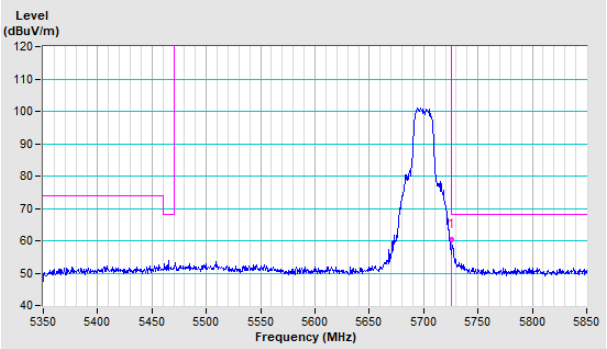


For 18-40GHz



Band Edge Measurement

Peak



RF Mode	TX 802.11n (20MHz)	Channel	CH 140：5700 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

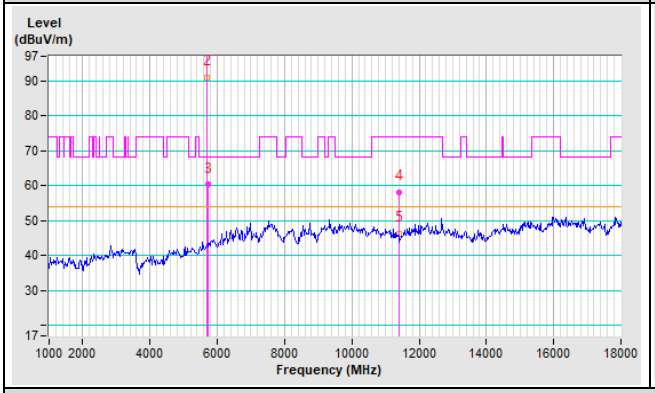
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*5700.00	100.43 PK			1.04 V	2	102.24	-1.81
2	*5700.00	90.87 AV			1.04 V	2	92.68	-1.81
3	#5725.00	60.25 PK	68.20	-7.95	1.04 V	2	62.12	-1.87
4	11400.00	58.17 PK	74.00	-15.83	2.25 V	194	55.38	2.79
5	11400.00	46.12 AV	54.00	-7.88	2.25 V	194	43.33	2.79

Remarks:

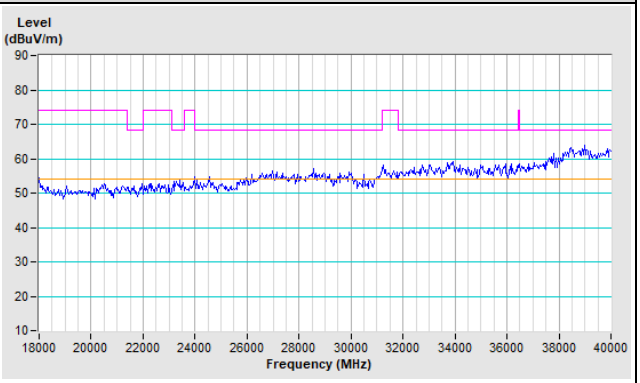
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

For 1-18GHz

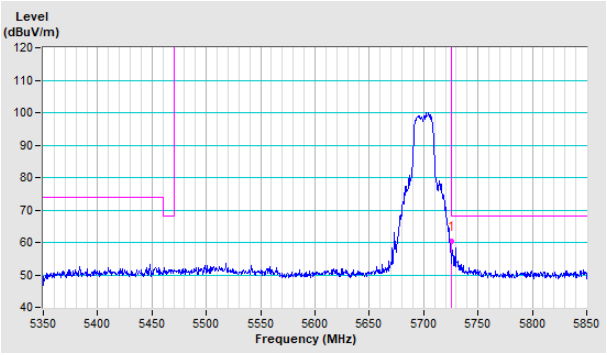


For 18-40GHz



Band Edge Measurement

Peak



RF Mode	TX 802.11n (20MHz)	Channel	CH 149：5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

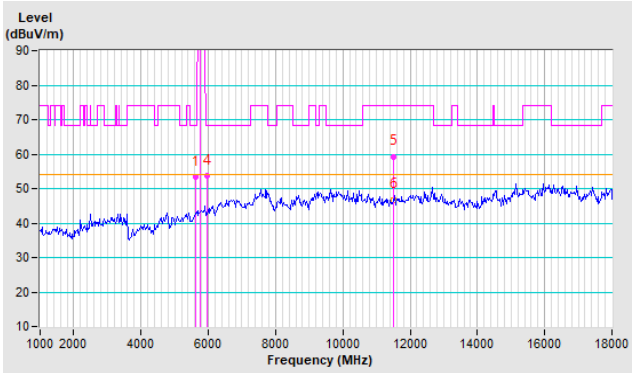
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5613.59	53.29 PK	68.20	-14.91	1.72 H	86	42.56	10.73
2	*5745.00	104.18 PK			1.72 H	86	93.65	10.53
3	*5745.00	93.90 AV			1.72 H	86	83.37	10.53
4	#5978.88	53.62 PK	68.20	-14.58	1.72 H	86	42.92	10.70
5	11490.00	59.14 PK	74.00	-14.86	1.89 H	56	40.84	18.30
6	11490.00	46.76 AV	54.00	-7.24	1.89 H	56	28.46	18.30

Remarks:

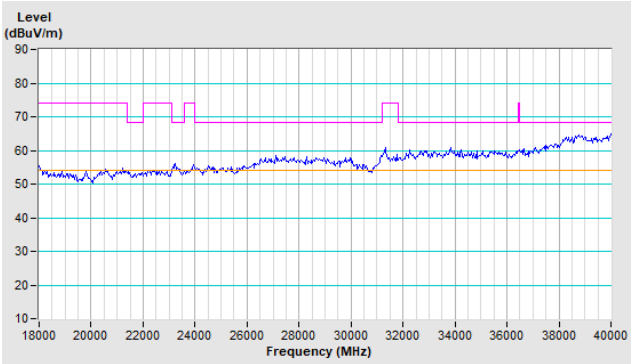
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

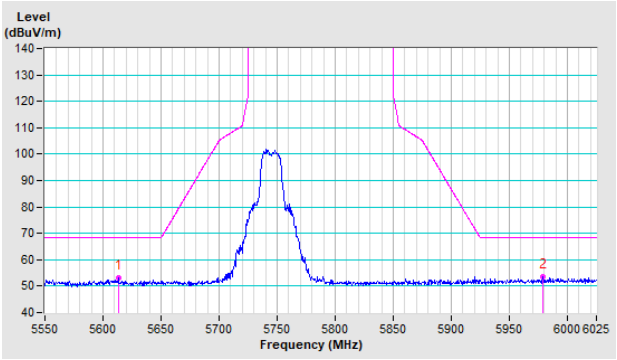
For 1-18GHz



For 18-40GHz



Radiated Out of Band Emission (OOBE)



RF Mode	TX 802.11n (20MHz)	Channel	CH 149：5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

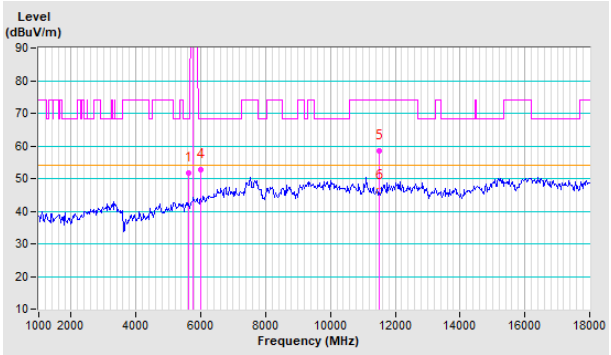
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5616.23	51.85 PK	68.20	-16.35	1.03 V	356	41.12	10.73
2	*5745.00	101.55 PK			1.03 V	356	91.02	10.53
3	*5745.00	91.70 AV			1.03 V	356	81.17	10.53
4	#5994.46	52.76 PK	68.20	-15.44	1.03 V	356	41.98	10.78
5	11490.00	58.53 PK	74.00	-15.47	2.36 V	298	40.23	18.30
6	11490.00	46.39 AV	54.00	-7.61	2.36 V	298	28.09	18.30

Remarks:

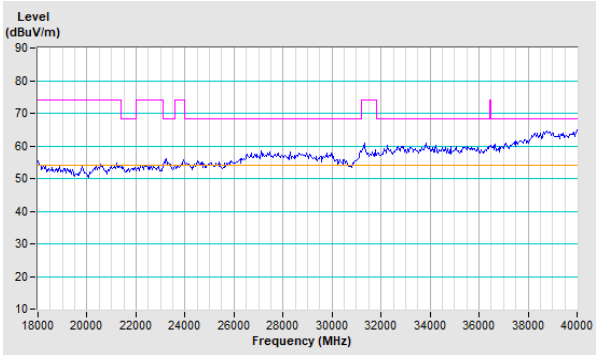
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

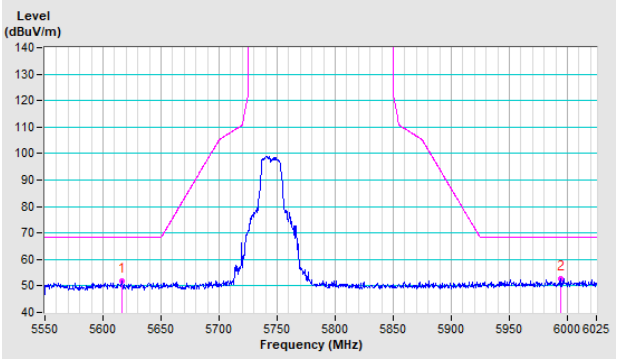
For 1-18GHz



For 18-40GHz



Radiated Out of Band Emission (OOBE)



RF Mode	TX 802.11n (20MHz)	Channel	CH 157：5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

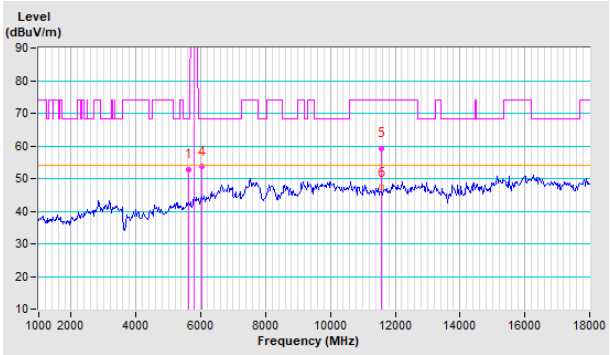
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5613.36	52.75 PK	68.20	-15.45	1.46 H	87	42.02	10.73
2	*5785.00	103.34 PK			1.46 H	87	92.89	10.45
3	*5785.00	93.13 AV			1.46 H	87	82.68	10.45
4	#6022.27	53.61 PK	68.20	-14.59	1.46 H	87	42.83	10.78
5	11570.00	59.19 PK	74.00	-14.81	1.57 H	264	40.66	18.53
6	11570.00	47.20 AV	54.00	-6.80	1.57 H	264	28.67	18.53

Remarks:

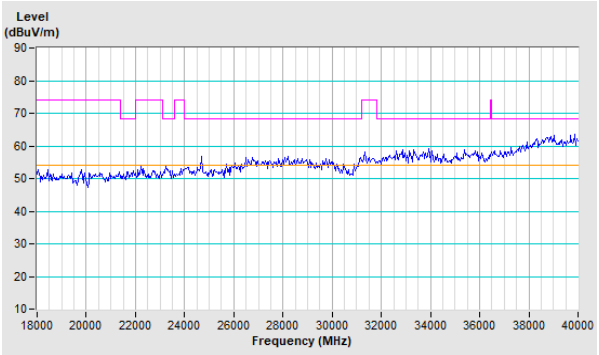
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

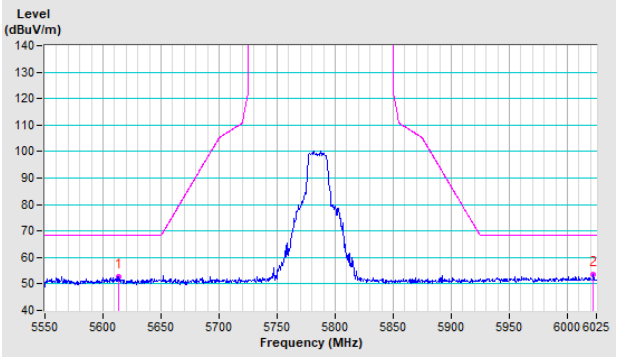
For 1-18GHz



For 18-40GHz



Radiated Out of Band Emission (OOBE)



RF Mode	TX 802.11n (20MHz)	Channel	CH 157：5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

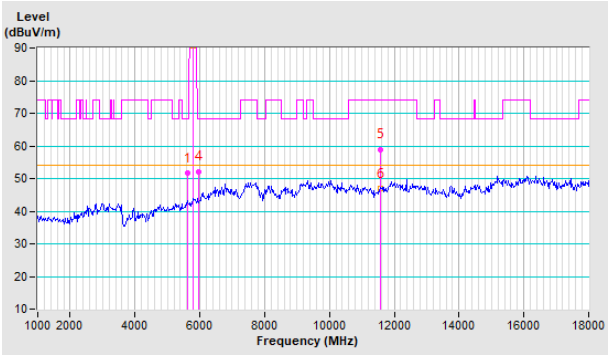
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5622.03	51.56 PK	68.20	-16.64	1.00 V	2	40.83	10.73
2	*5785.00	100.68 PK			1.00 V	2	90.23	10.45
3	*5785.00	90.62 AV			1.00 V	2	80.17	10.45
4	#5953.01	52.10 PK	68.20	-16.10	1.00 V	2	41.53	10.57
5	11570.00	58.89 PK	74.00	-15.11	2.25 V	294	40.36	18.53
6	11570.00	46.82 AV	54.00	-7.18	2.25 V	294	28.29	18.53

Remarks:

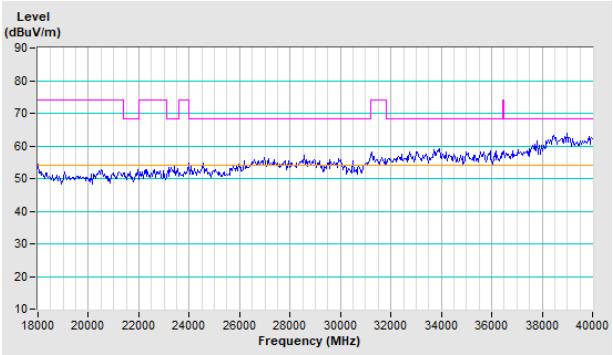
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

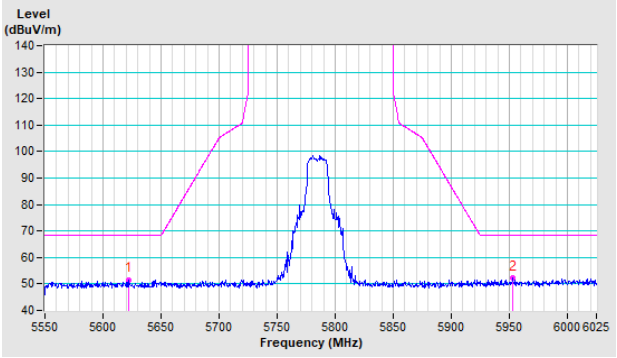
For 1-18GHz



For 18-40GHz



Radiated Out of Band Emission (OOBE)



RF Mode	TX 802.11n (20MHz)	Channel	CH 165：5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

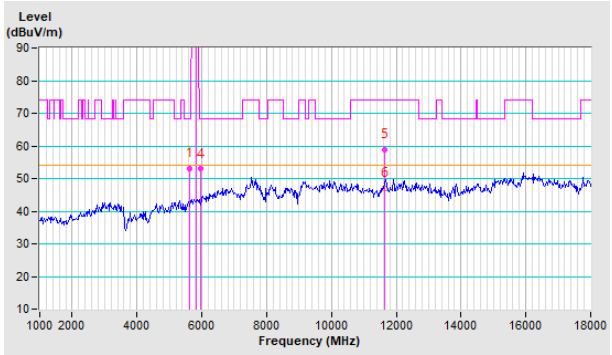
Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5617.81	52.97 PK	68.20	-15.23	1.76 H	82	42.24	10.73
2	*5825.00	103.07 PK			1.76 H	82	92.66	10.41
3	*5825.00	92.75 AV			1.76 H	82	82.34	10.41
4	#5980.98	52.94 PK	68.20	-15.26	1.76 H	82	42.23	10.71
5	11650.00	58.85 PK	74.00	-15.15	1.77 H	145	40.55	18.30
6	11650.00	46.92 AV	54.00	-7.08	1.77 H	145	28.62	18.30

Remarks:

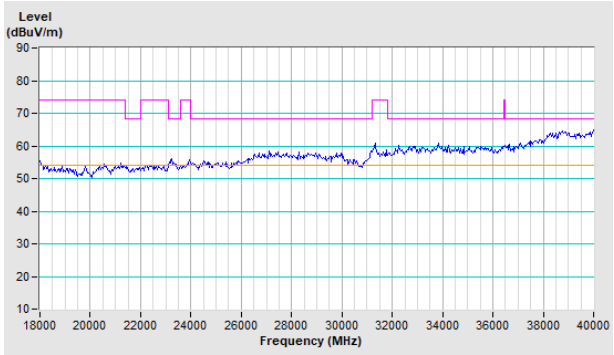
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

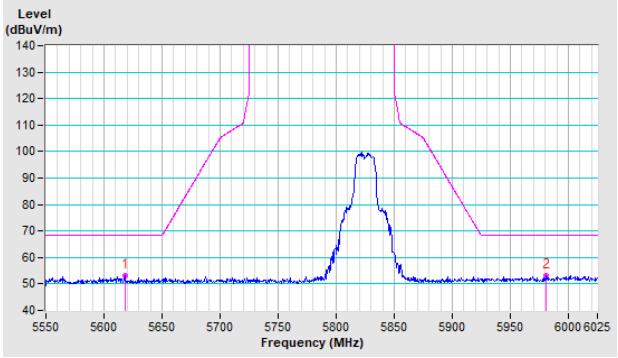
For 1-18GHz



For 18-40GHz



Radiated Out of Band Emission (OOBE)



RF Mode	TX 802.11n (20MHz)	Channel	CH 165：5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

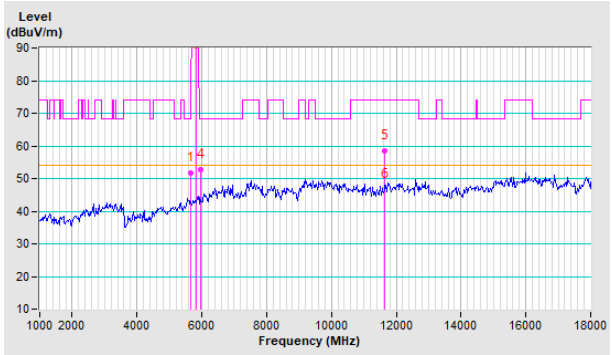
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5641.38	51.86 PK	68.20	-16.34	1.00 V	355	41.13	10.73
2	*5825.00	100.52 PK			1.00 V	355	90.11	10.41
3	*5825.00	90.60 AV			1.00 V	355	80.19	10.41
4	#5963.55	52.72 PK	68.20	-15.48	1.00 V	355	42.09	10.63
5	11650.00	58.52 PK	74.00	-15.48	2.05 V	163	40.22	18.30
6	11650.00	46.62 AV	54.00	-7.38	2.05 V	163	28.32	18.30

Remarks:

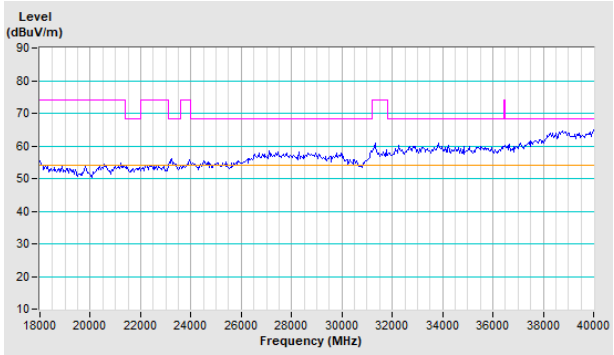
1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.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

Test Plot

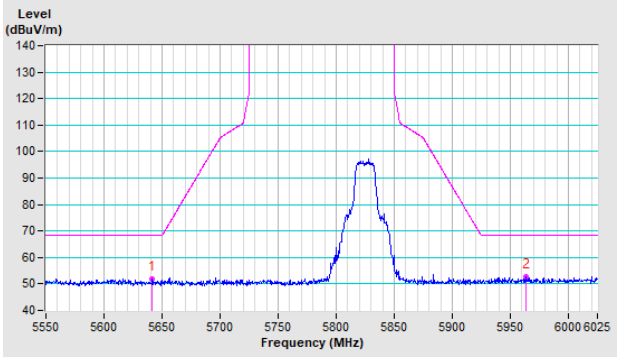
For 1-18GHz



For 18-40GHz



Radiated Out of Band Emission (OOBE)



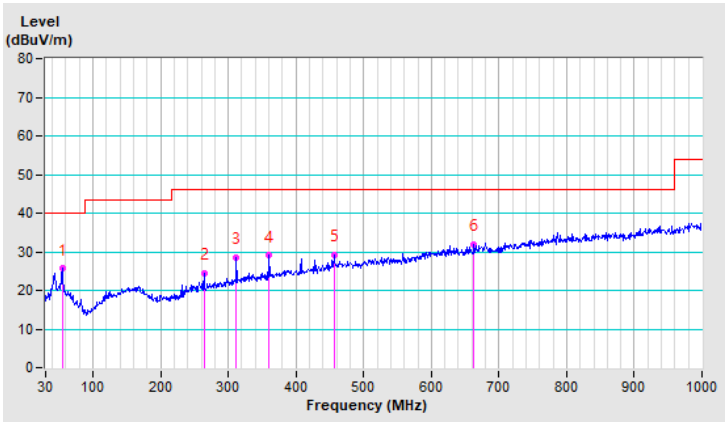
Below 1GHz Data:

RF Mode	TX 802.11a	Channel	CH 52：5260 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	54.73	25.65 QP	40.00	-14.35	2.20 H	124	32.75	-7.10
2	263.96	24.37 QP	46.00	-21.63	2.14 H	298	30.12	-5.75
3	312.03	28.48 QP	46.00	-17.52	1.90 H	136	32.35	-3.87
4	360.04	29.00 QP	46.00	-17.00	2.38 H	300	32.09	-3.09
5	456.02	29.10 QP	46.00	-16.90	1.46 H	259	29.64	-0.54
6	663.17	31.86 QP	46.00	-14.14	1.18 H	245	28.52	3.34

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

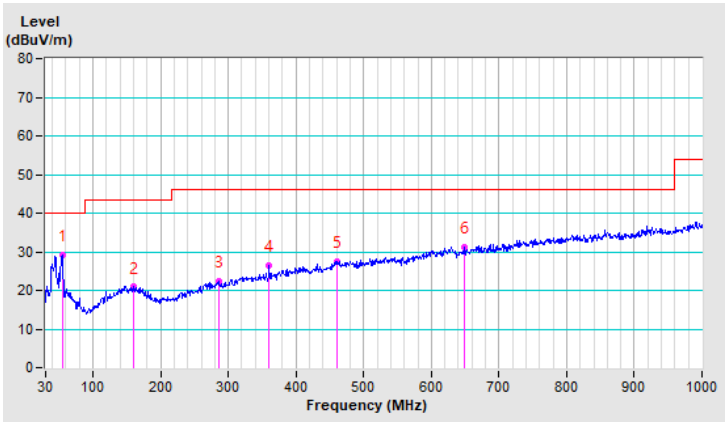


RF Mode	TX 802.11a	Channel	CH 52：5260 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	54.78	29.21 QP	40.00	-10.79	1.60 V	60	36.30	-7.09
2	159.25	20.87 QP	43.50	-22.63	1.00 V	9	27.13	-6.26
3	285.50	22.38 QP	46.00	-23.62	1.14 V	360	27.07	-4.69
4	360.04	26.52 QP	46.00	-19.48	1.07 V	288	29.61	-3.09
5	461.55	27.49 QP	46.00	-18.51	1.21 V	14	27.91	-0.42
6	648.04	31.31 QP	46.00	-14.69	1.34 V	310	28.17	3.14

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

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

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
ROHDE & SCHWARZ TEST RECEIVER	ESCS30	100276	Apr. 16, 2020	Apr. 15, 2021
SCHWARZBECK Artificial Mains Network (for EUT)	NSLK 8128	8128-244	Nov. 11, 2019	Nov. 10, 2020
LISN With Adapter (for EUT)	AD10	C05Ada-001	Nov. 11, 2019	Nov. 10, 2020
ROHDE & SCHWARZ Artificial Mains Network (for peripheral)	ESH3-Z5	100220	Nov. 18, 2019	Nov. 17, 2020
Software	Cond_V7.3.7.4	NA	NA	NA
RF cable (JYEBAO) With 10dB PAD	5D-FB	Cable-C05.01	Jan. 30, 2020	Jan. 29, 2021
LYNICS Terminator (For R&S LISN)	0900510	E1-01-305	Feb. 17, 2020	Feb. 16, 2021

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. 5. (Conduction 5)
3. The VCCI Site Registration No. C-11093.

4.2.3 Test Procedure

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

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

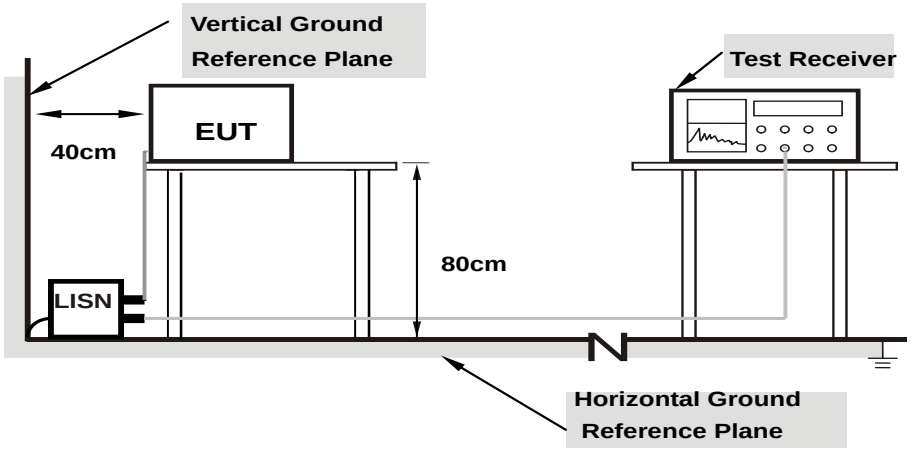
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Condition

Connected the EUT to Adapter or Notebook.

Set the EUT under transmission condition continuously at specific channel frequency continuously.

4.2.7 Test Results

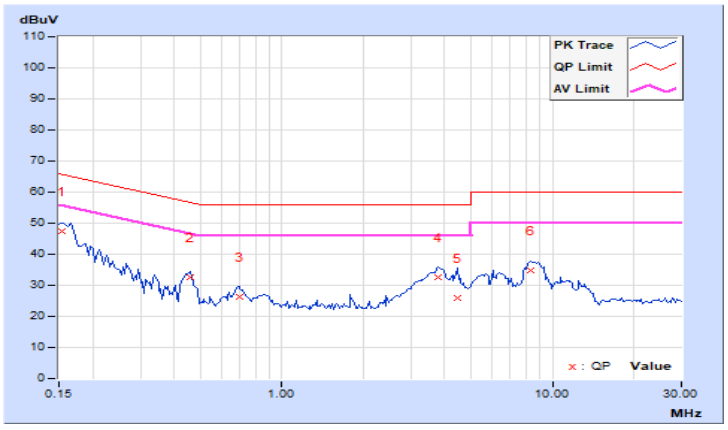
Mode A

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	9.91	37.54	19.90	47.45	29.81	65.79	55.79	-18.34	-25.98
2	0.45859	9.93	22.76	16.92	32.69	26.85	56.72	46.72	-24.03	-19.87
3	0.69688	9.95	16.41	10.99	26.36	20.94	56.00	46.00	-29.64	-25.06
4	3.77344	10.14	22.32	13.88	32.46	24.02	56.00	46.00	-23.54	-21.98
5	4.44922	10.19	15.92	4.33	26.11	14.52	56.00	46.00	-29.89	-31.48
6	8.27344	10.40	24.58	17.94	34.98	28.34	60.00	50.00	-25.02	-21.66

REMARKS:

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

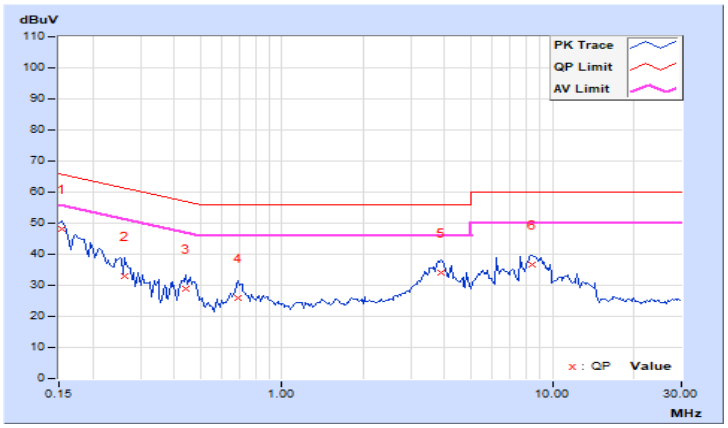


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	9.93	38.15	20.74	48.08	30.67	65.79	55.79	-17.71	-25.12
2	0.26328	9.94	23.20	10.33	33.14	20.27	61.33	51.33	-28.19	-31.06
3	0.44297	9.96	19.01	7.84	28.97	17.80	57.01	47.01	-28.04	-29.21
4	0.69297	9.98	15.81	9.40	25.79	19.38	56.00	46.00	-30.21	-26.62
5	3.87500	10.16	23.98	14.79	34.14	24.95	56.00	46.00	-21.86	-21.05
6	8.41797	10.42	26.17	20.02	36.59	30.44	60.00	50.00	-23.41	-19.56

REMARKS:

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



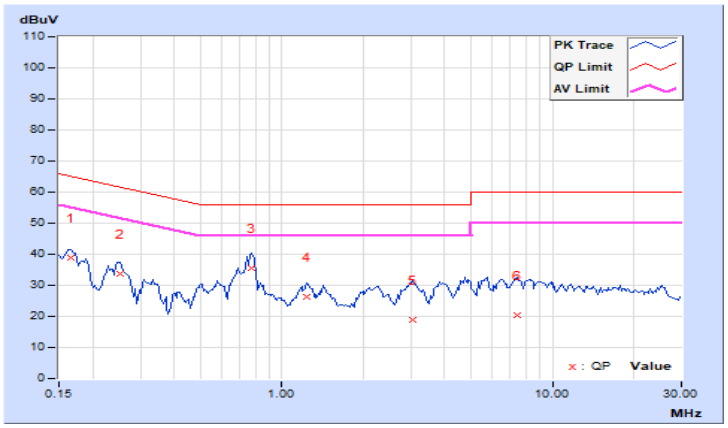
Mode B

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	9.91	28.95	8.41	38.86	18.32	65.18	55.18	-26.32	-36.86
2	0.25156	9.92	23.73	7.24	33.65	17.16	61.71	51.71	-28.06	-34.55
3	**0.77500**	**9.96**	**25.52**	**18.75**	**35.48**	**28.71**	**56.00**	**46.00**	**-20.52**	**-17.29**
4	1.24219	9.99	16.26	9.09	26.25	19.08	56.00	46.00	-29.75	-26.92
5	3.03516	10.09	8.75	2.36	18.84	12.45	56.00	46.00	-37.16	-33.55
6	7.43359	10.35	10.15	3.67	20.50	14.02	60.00	50.00	-39.50	-35.98

Remarks:

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

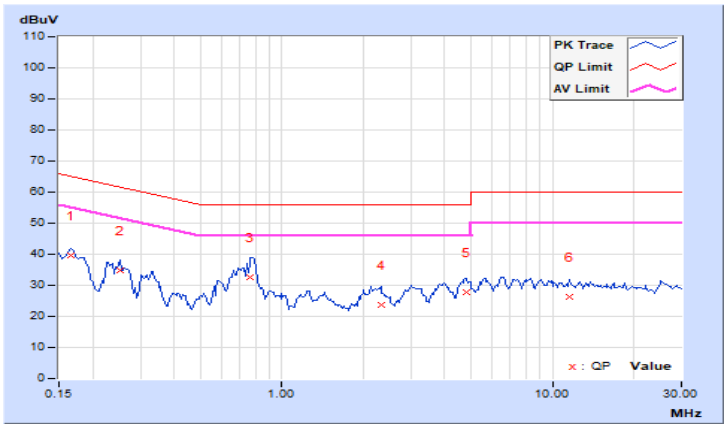


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	9.93	29.60	10.63	39.53	20.56	65.18	55.18	-25.65	-34.62
2	0.25156	9.94	24.74	6.11	34.68	16.05	61.71	51.71	-27.03	-35.66
3	0.76719	9.98	22.63	14.89	32.61	24.87	56.00	46.00	-23.39	-21.13
4	2.32031	10.07	13.54	7.86	23.61	17.93	56.00	46.00	-32.39	-28.07
5	4.81250	10.22	17.52	11.87	27.74	22.09	56.00	46.00	-28.26	-23.91
6	11.60547	10.62	15.81	9.53	26.43	20.15	60.00	50.00	-33.57	-29.85

Remarks:

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



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

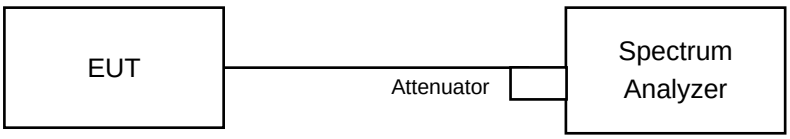
Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Client device	250mW (24 dBm)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

*B is the 26 dB emission bandwidth in megahertz

4.3.2 Test Setup

For Power Output Measurement

For 26dB Occupied Bandwidth



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

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

For 26dB Occupied Bandwidth

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Condition

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 Result

Mode A

Power Output:

802.11a

Channel	Channel Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass/Fail
36	5180	**8.892**	9.49	24	Pass
40	5200	8.872	9.48	24	Pass
48	5240	8.810	9.45	24	Pass
52	5260	8.551	9.32	24	Pass
60	5300	8.570	9.33	24	Pass
64	5320	8.610	9.35	24	Pass
100	5500	8.750	9.42	24	Pass
116	5580	8.810	9.45	24	Pass
132	5660	8.750	9.42	24	Pass
140	5700	8.770	9.43	24	Pass
149	5745	8.851	9.47	30	Pass
157	5785	**8.892**	9.49	30	Pass
165	5825	8.810	9.45	30	Pass

NOTE:

For U-NII-2A, U-NII-2C Band:

1. 11dBm + 10log(25.82) = 25.12 dBm > 24dBm.
2. 11dBm + 10log(25.39) = 25.05 dBm > 24dBm.
3. 11dBm + 10log(25.33) = 25.04 dBm > 24dBm.
4. 11dBm + 10log(22.34) = 24.49 dBm > 24dBm.
5. 11dBm + 10log(22.31) = 24.48 dBm > 24dBm.
6. 11dBm + 10log(27.14) = 25.34 dBm > 24dBm.
7. 11dBm + 10log(28.64) = 25.57 dBm > 24dBm.

802.11n (20MHz)

Channel	Channel Frequency (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass/Fail
36	5180	8.770	9.43	24	Pass
40	5200	8.730	9.41	24	Pass
48	5240	8.872	9.48	24	Pass
52	5260	8.670	9.38	24	Pass
60	5300	**8.872**	9.48	24	Pass
64	5320	8.831	9.46	24	Pass
100	5500	8.650	9.37	24	Pass
116	5580	**8.872**	9.48	24	Pass
132	5660	8.630	9.36	24	Pass
140	5700	8.851	9.47	24	Pass
149	5745	8.851	9.47	30	Pass
157	5785	8.750	9.42	30	Pass
165	5825	8.790	9.44	30	Pass

NOTE:

For U-NII-2A, U-NII-2C Band:

1. 11dBm + 10log(26.01) = 25.15 dBm > 24dBm.
2. 11dBm + 10log(26.16) = 25.18 dBm > 24dBm.
3. 11dBm + 10log(24.86) = 24.96 dBm > 24dBm.
4. 11dBm + 10log(24.12) = 24.82 dBm > 24dBm.
5. 11dBm + 10log(23.47) = 24.71 dBm > 24dBm.
6. 11dBm + 10log(28.51) = 25.55 dBm > 24dBm.
7. 11dBm + 10log(29.71) = 25.73 dBm > 24dBm.

Mode A

26dB Bandwidth:

802.11a

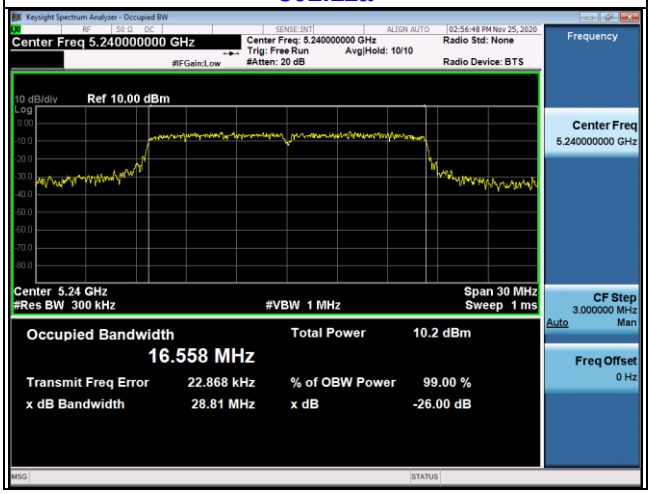
Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	28.54
40	5200	28.73
48	5240	28.81
52	5260	25.82
60	5300	25.39
64	5320	25.33
100	5500	22.34
116	5580	22.31
132	5660	27.14
140	5700	28.64

802.11n (20MHz)

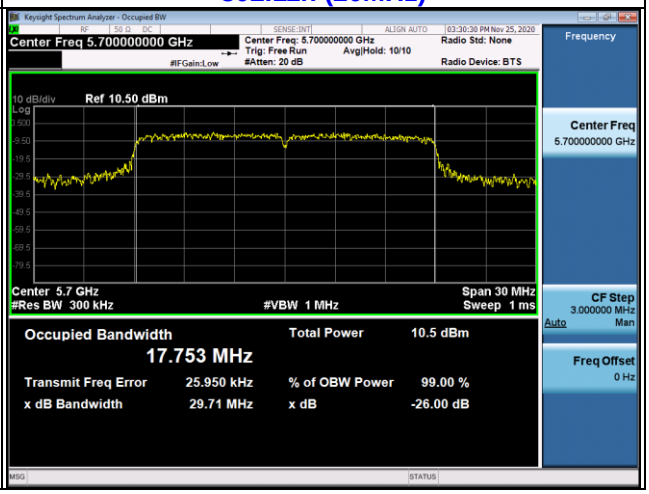
Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	29.54
40	5200	28.55
48	5240	28.73
52	5260	26.01
60	5300	26.16
64	5320	24.86
100	5500	24.12
116	5580	23.47
132	5660	28.51
140	5700	29.71

Spectrum Plot of Worst Value

802.11a

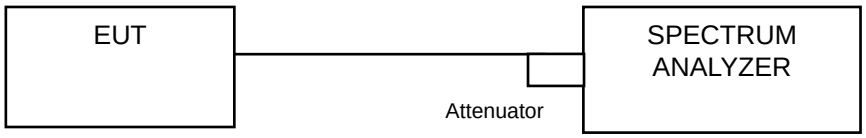


802.11n (20MHz)



4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.3.3 to get information of above instrument.

4.4.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to Peak. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission. Settings for span is 60MHz.

4.4.4 Test Results

Mode A

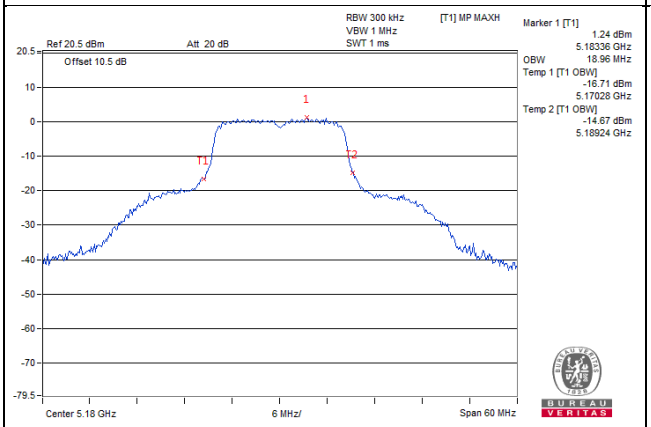
Occupied Bandwidth:

802.11a

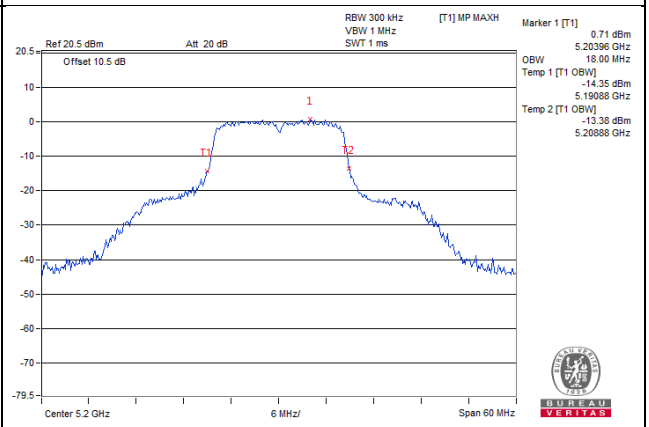
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.96
40	5200	18.00
48	5240	18.00
52	5260	17.76
60	5300	17.88
64	5320	17.64
100	5500	17.28
116	5580	17.52
132	5660	18.24
140	5700	18.72
149	5745	24.09
157	5785	25.10
165	5825	24.90

Spectrum Plot of Worst Value

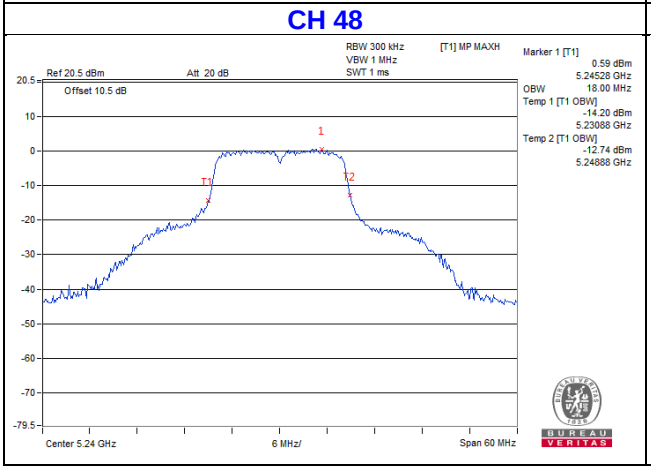
CH 36



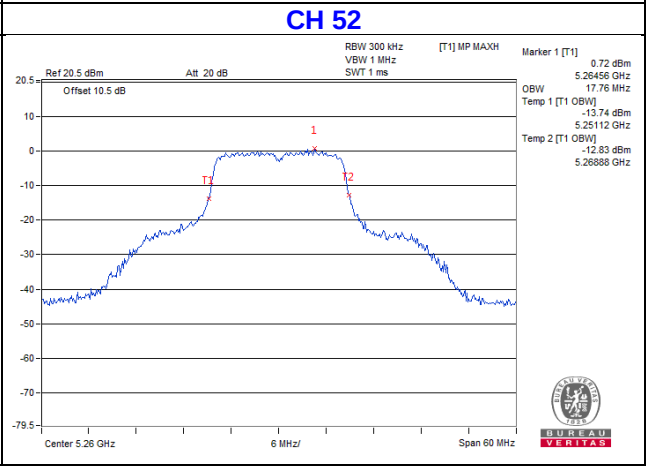
CH 40



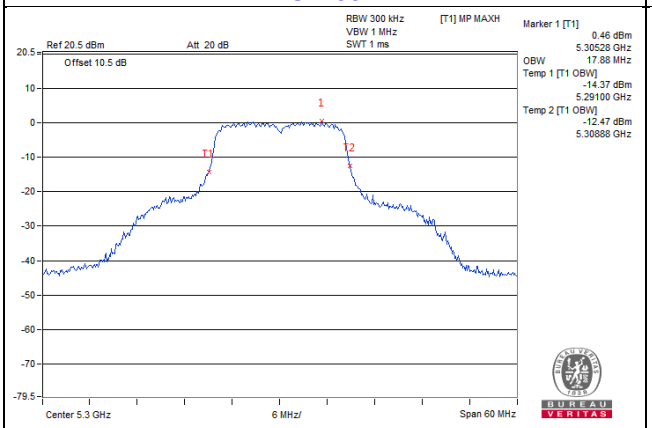
CH 48



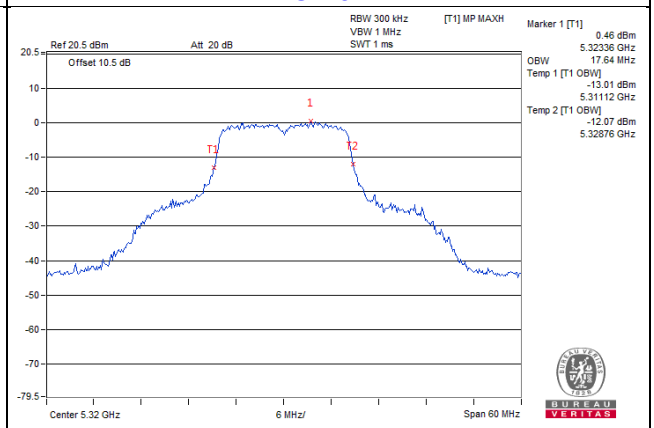
CH 52



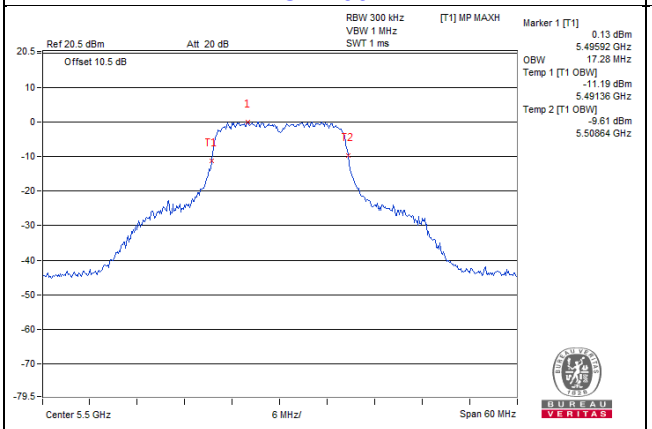
CH 60



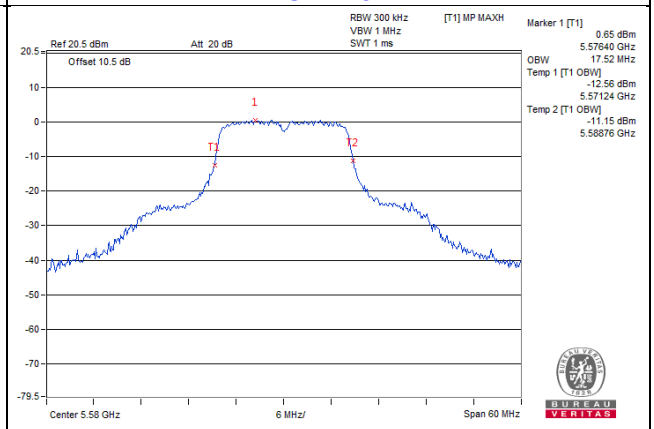
CH 64



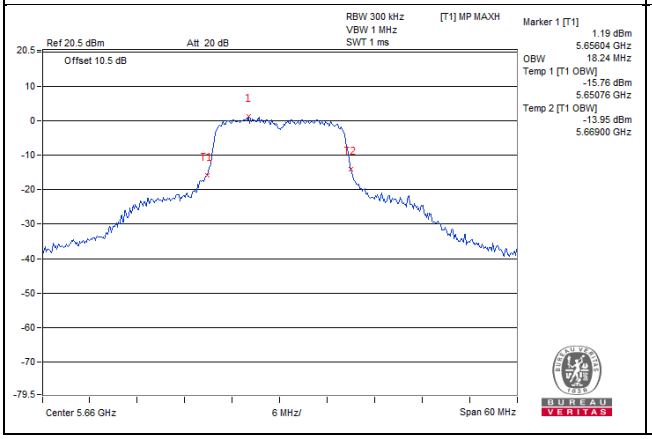
CH 100



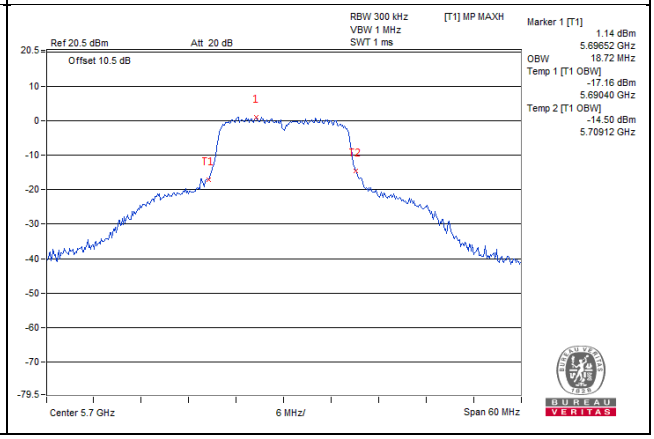
CH 116



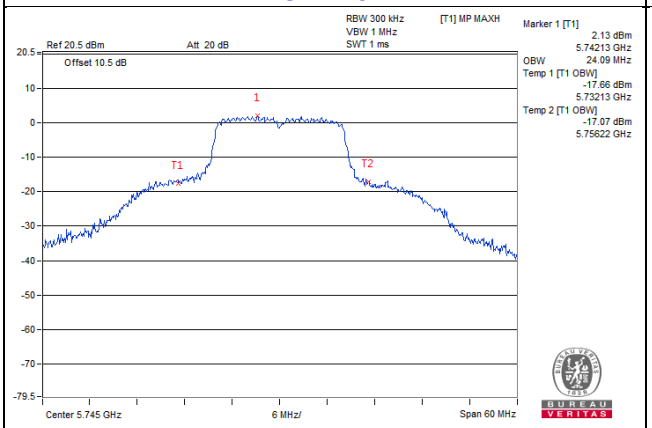
CH 132



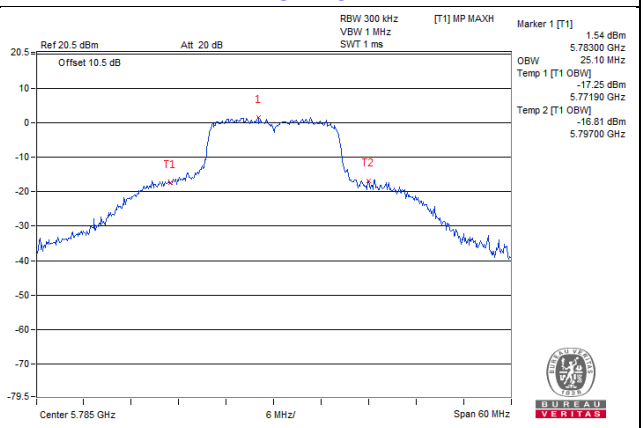
CH 140



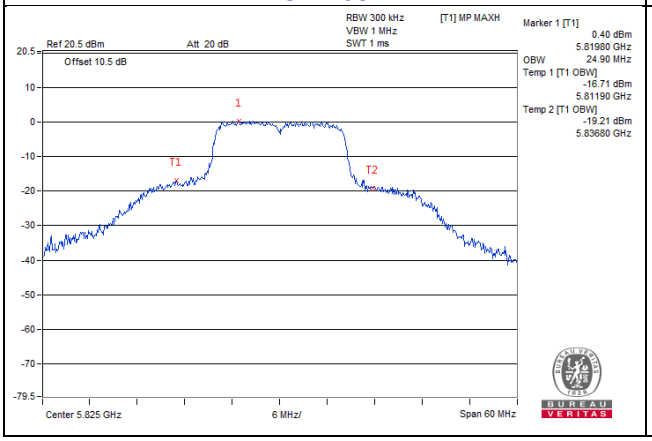
CH 149



CH 157



CH 165

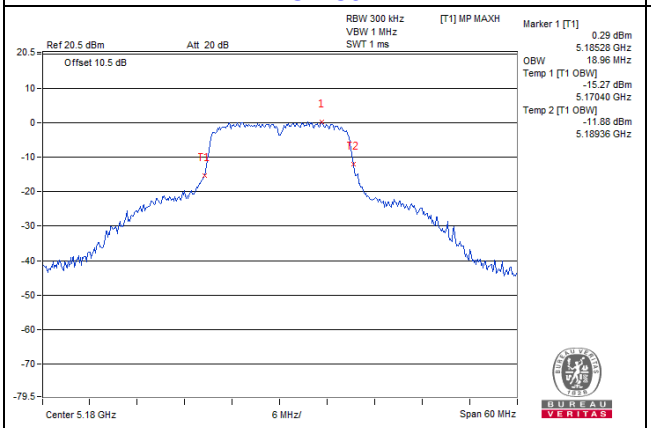


802.11n (20MHz)

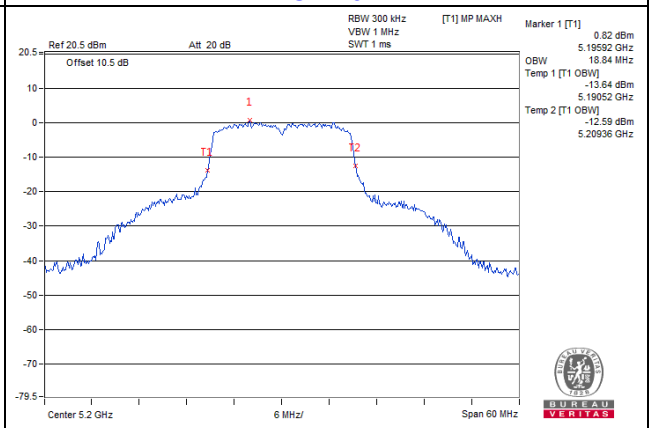
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.96
40	5200	18.84
48	5240	18.84
52	5260	18.60
60	5300	18.60
64	5320	18.48
100	5500	18.36
116	5580	18.48
132	5660	18.96
140	5700	19.32
149	5745	22.26
157	5785	24.60
165	5825	25.80

Spectrum Plot of Worst Value

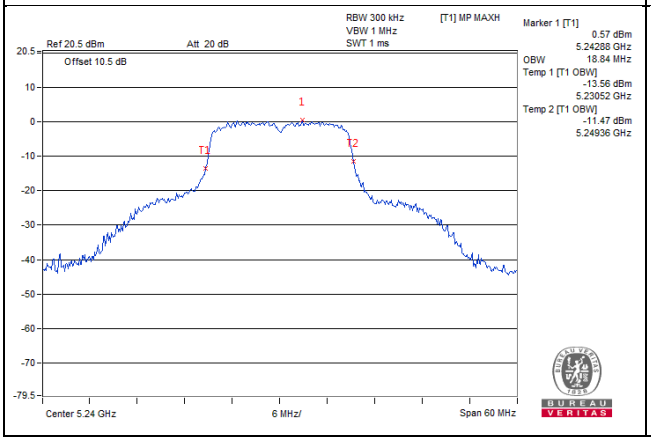
CH 36



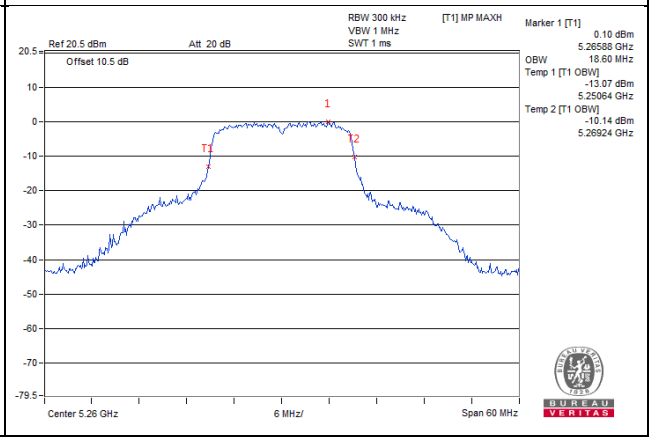
CH 40



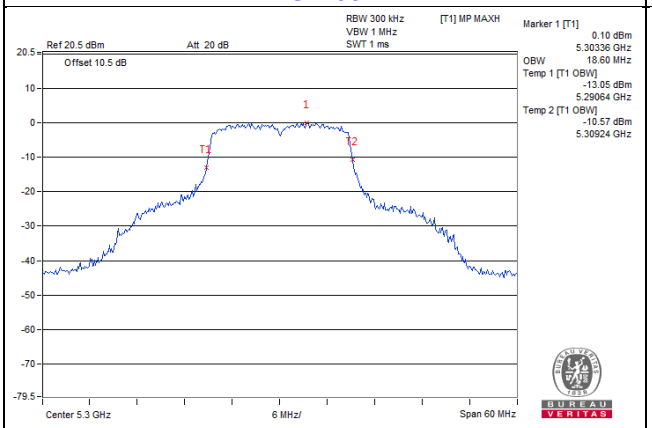
CH 48



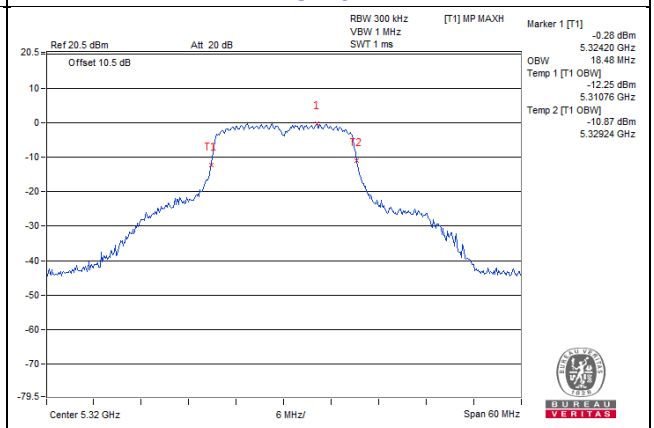
CH 52



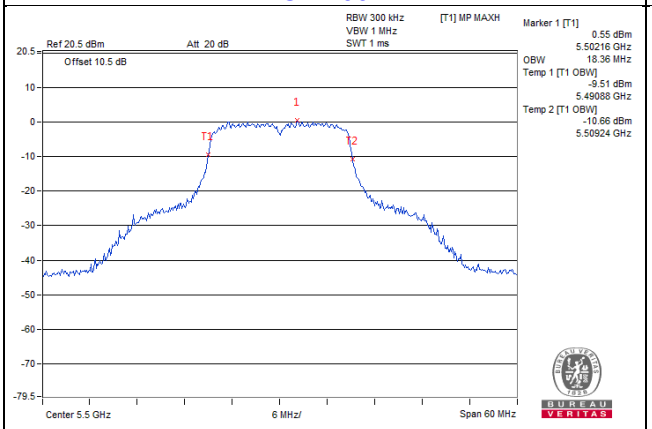
CH 60



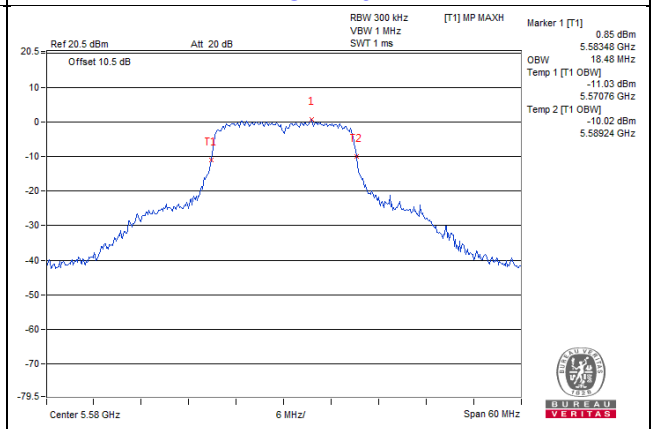
CH 64



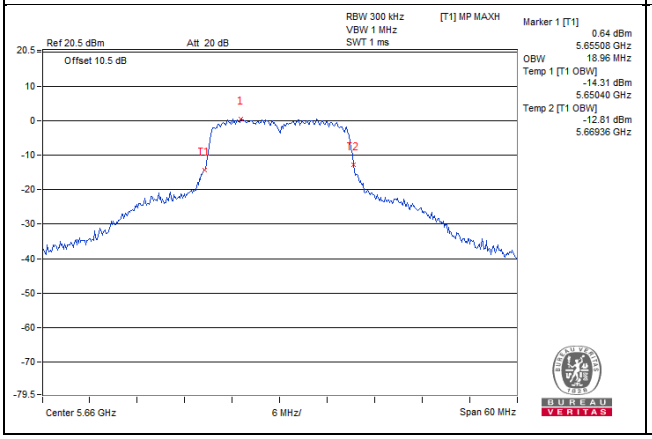
CH 100



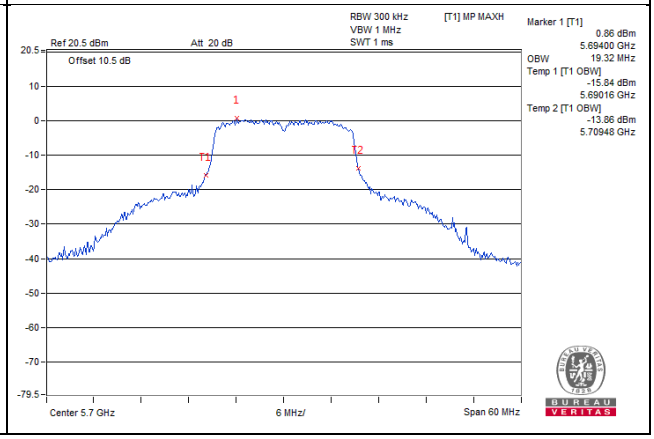
CH 116



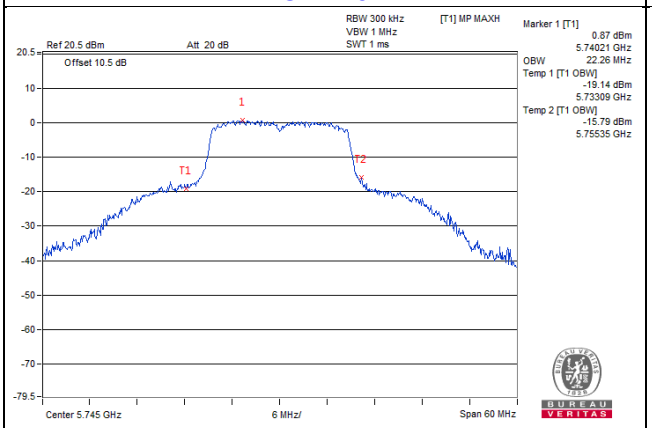
CH 132



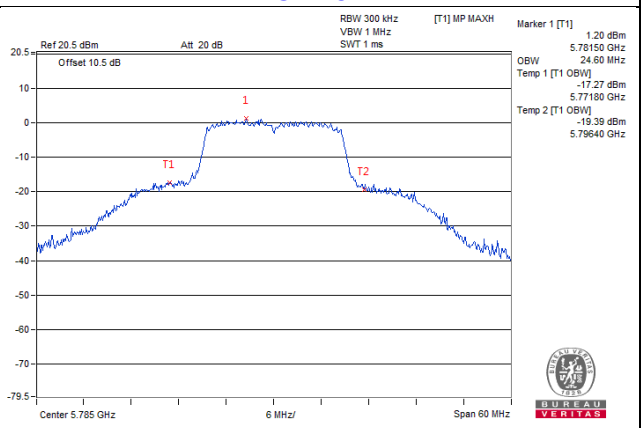
CH 140



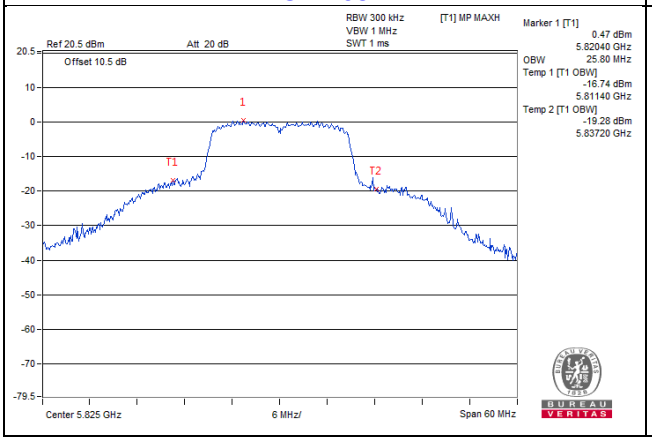
CH 149



CH 157



CH 165

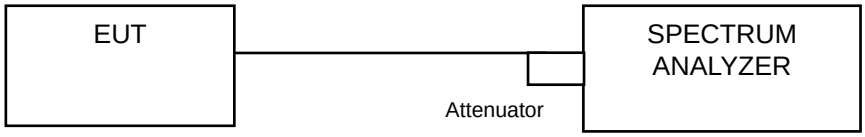


4.5 Peak Power Spectral Density Measurement

4.5.1 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	
	√	Client device	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

For U-NII-1, U-NII-2A, U-NII-2C band:

Using method SA-1

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

For U-NII-3 band:

1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
2) Set RBW = 500 kHz, Set VBW ≥ 3 RBW, Detector = RMS
3) Sweep time = auto, trigger set to “free run”.
4) Trace average at least 100 traces in power averaging mode.
5) Record the max value and add 10 log (1/duty cycle)

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6.

4.5.7 Test Results

Mode A

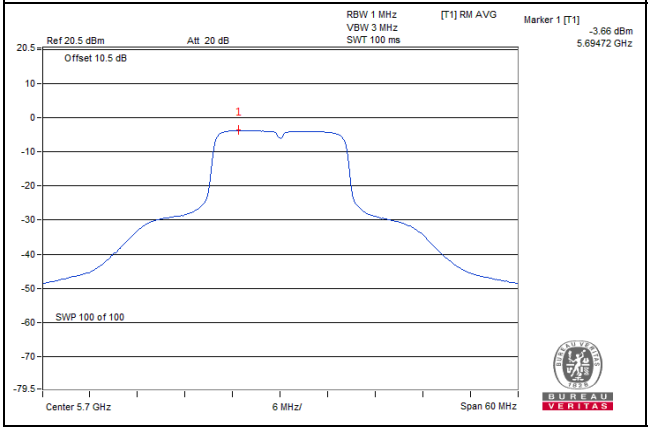
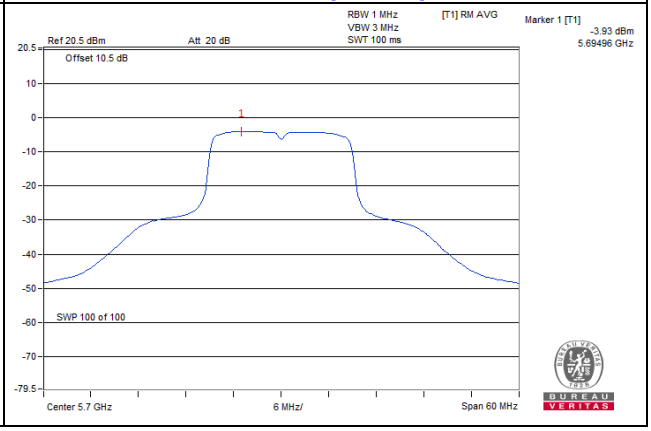
For U-NII-1, U-NII-2A, U-NII-2C:

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
36	5180	-3.85	11	Pass
40	5200	-4.02	11	Pass
48	5240	-4.19	11	Pass
52	5260	-4.43	11	Pass
60	5300	-4.42	11	Pass
64	5320	-4.73	11	Pass
100	5500	-4.50	11	Pass
116	5580	-3.87	11	Pass
132	5660	-3.88	11	Pass
140	5700	-3.66	11	Pass

802.11n (20MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
36	5180	-4.28	11	Pass
40	5200	-4.34	11	Pass
48	5240	-4.47	11	Pass
52	5260	-4.73	11	Pass
60	5300	-4.73	11	Pass
64	5320	-5.04	11	Pass
100	5500	-4.77	11	Pass
116	5580	-4.13	11	Pass
132	5660	-4.13	11	Pass
140	5700	-3.93	11	Pass

Spectrum Plot of Worst Value	
802.11a	**802.11n (20MHz)**
	

Mode A

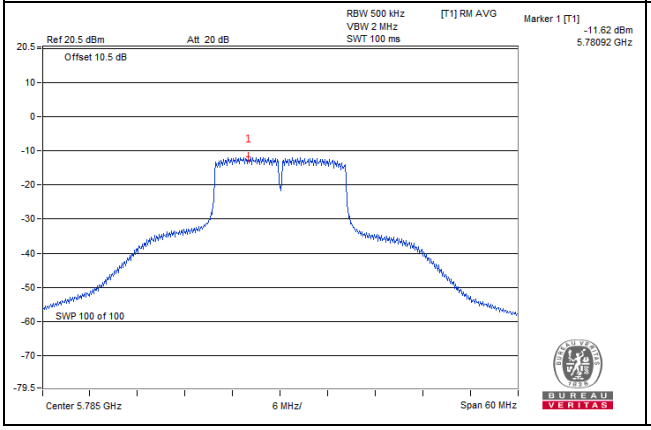
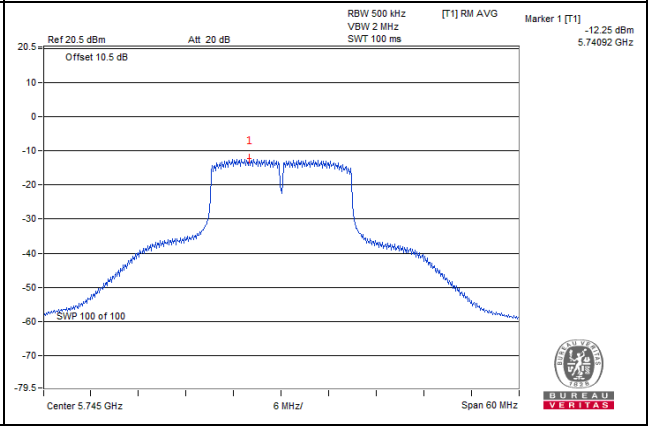
For U-NII-3:

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
149	5745	-11.90	30	Pass
157	5785	-11.62	30	Pass
165	5825	-12.25	30	Pass

802.11n (20MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
149	5745	-12.25	30	Pass
157	5785	-12.50	30	Pass
165	5825	-12.65	30	Pass

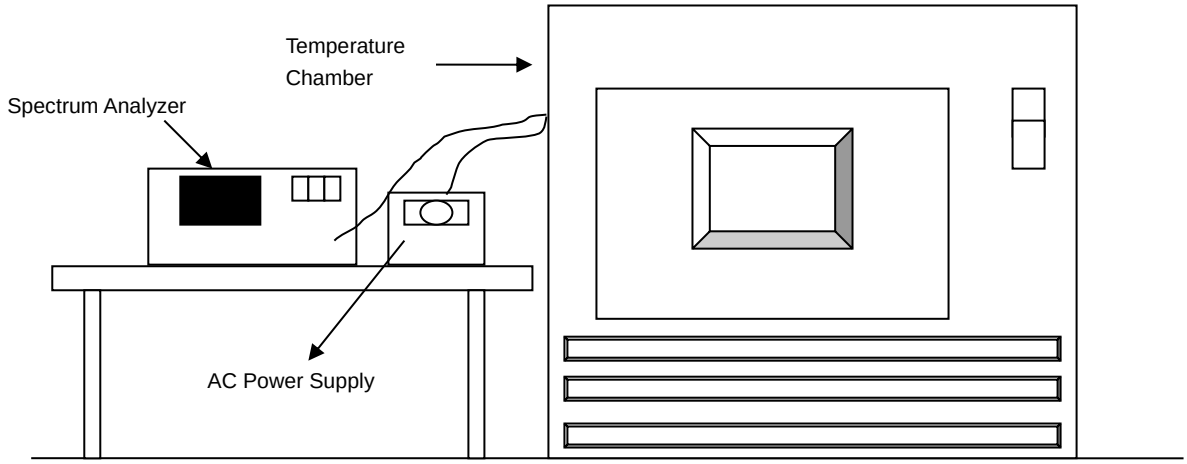
Spectrum Plot of Worst Value	
802.11a	**802.11n (20MHz)**
	

4.6 Frequency Stability Measurement

4.6.1 Limits of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
e. Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed..
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.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

Mode A

Frequency Stability Versus Temp.										
Operating Frequency: 5180 MHz										
TEMP. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute		Pass /Fail
		Measured Frequency (MHz)	ppm	Measured Frequency (MHz)	ppm	Measured Frequency (MHz)	ppm	Measured Frequency (MHz)	ppm	
50	120	5179.9954	-0.888	5179.997	-0.5792	5179.9977	-0.444	5179.9941	-1.139	Pass
40	120	5179.9931	-1.332	5179.9897	-1.9884	5179.9922	-1.5058	5179.9885	-2.2201	Pass
30	120	5179.9929	-1.3707	5179.9947	-1.0232	5179.9951	-0.9459	5179.9941	-1.139	Pass
20	120	5180.0205	3.9575	5180.0189	3.6486	5180.0206	3.9768	5180.0235	4.5367	Pass
10	120	5180.0063	1.2162	5180.0051	0.9846	5180.0064	1.2355	5180.0042	0.8108	Pass
0	120	5180.0117	2.2587	5180.0139	2.6834	5180.0163	3.1467	5180.0146	2.8185	Pass
-10	120	5180.0174	3.3591	5180.0203	3.9189	5180.0186	3.5907	5180.0202	3.8996	Pass
-20	120	5179.9996	-0.0772	5179.9993	-0.1351	5179.9985	-0.2896	5179.9992	-0.1544	Pass
-30	120	5179.9834	-3.2046	5179.9841	-3.0695	5179.9844	-3.0116	5179.9862	-2.6641	Pass

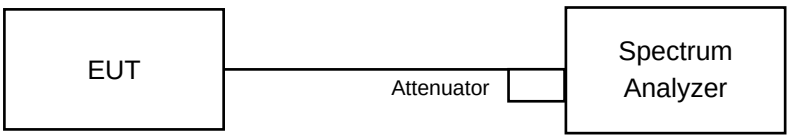
Frequency Stability Versus Voltage										
Operating Frequency: 5180 MHz										
TEMP. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute		Pass /Fail
		Measured Frequency (MHz)	ppm	Measured Frequency (MHz)	ppm	Measured Frequency (MHz)	ppm	Measured Frequency (MHz)	ppm	
20	138	5180.0203	3.9189	5180.0195	3.7645	5180.0205	3.9575	5180.0240	4.6332	Pass
	120	5180.0205	3.9575	5180.0189	3.6486	5180.0206	3.9768	5180.0235	4.5367	Pass
	102	5180.0208	4.0154	5180.0193	3.7259	5180.0198	3.8224	5180.0241	4.6525	Pass

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

Mode A

802.11a

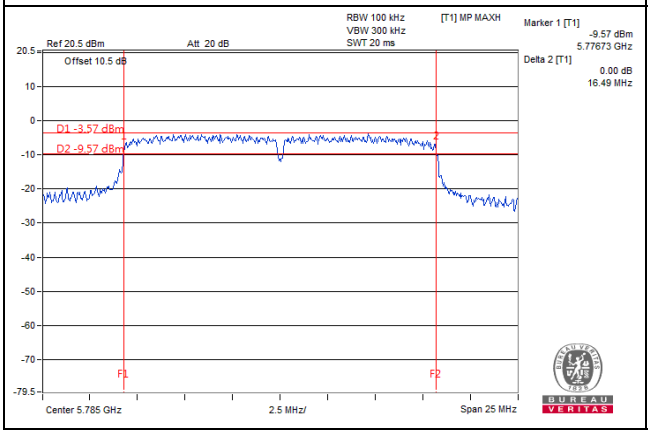
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.55	0.5	PASS
157	5785	16.49	0.5	PASS
165	5825	16.53	0.5	PASS

802.11n (20MHz)

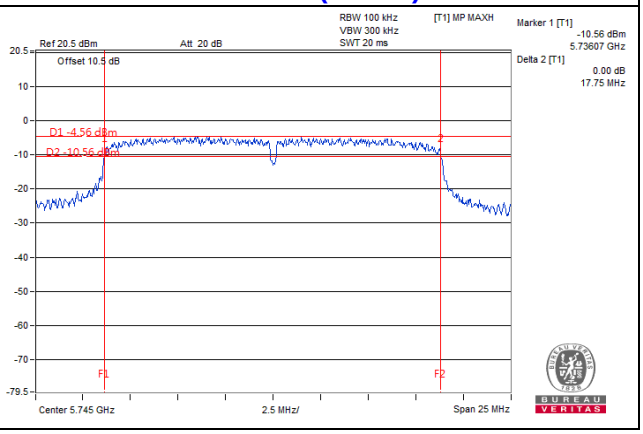
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.75	0.5	PASS
157	5785	17.77	0.5	PASS
165	5825	17.76	0.5	PASS

Spectrum Plot of Worst Value

802.11a



802.11n (20MHz)



5 Pictures of Test Arrangements

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

Appendix – Information of 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 FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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

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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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