

Report on the RF Testing of:

KYOCERA Corporation
Mobile Phone, Model: EB1207
FCC ID: JOYEB1207



In accordance with FCC Part15 Subpart C

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Document Number: JPD-TR-24131-0

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EXECUTIVE SUMMARY – Result: Complied

A sample of this product was tested and the result above was confirmed in accordance with FCC Part15 Subpart C.



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1 Summary of Test

1.1 Modification history of the test report

Document Number	Modification History	Issue Date
JPD-TR-24131-0	First Issue	Refer to the cover page

1.2 Standards

CFR47 FCC Part 15 Subpart C

1.3 Test methods

ANSI C63.10-2013
KDB 558074 D01 15.247 Meas Guidance v05r02

1.4 Deviation from standards

None

1.5 List of applied test(s) of the EUT

Test item section	Test item	Condition	Result	Remark
15.247(a)(2)	DTS Bandwidth / Occupied Bandwidth (99%)	Conducted	PASS	*
15.247(b)(3)	Maximum conducted (average) output power	Conducted	PASS	*
15.247(d)	Band Edge Compliance of RF Conducted Emissions	Conducted	PASS	*
15.247(d) 15.205 15.209	Spurious Emissions	Conducted	PASS	*
		Radiated	PASS	*
15.247(d) 15.205 15.209	Restricted Bands of Operation	Radiated	PASS	*
15.247(e)	Transmitter Power Spectral Density	Conducted	PASS	*
15.207	AC Power Line Conducted Emissions	Conducted	PASS	*

1.6 Test information

The only difference with EB1190EM (FCC ID: JOYPC9699) is that EB1207 does not have a Cellular component.

Therefore, this measurement data is the same as that of EB1190EM.

*: Spot check tests were performed. Only the worst case was tested.

1.7 Test set up

Table-top

1.8 Test period

1-May-2024 - 29-June-2024, 24-July-2024, 6-August-2024 - 9-August-2024

2 Equipment Under Test

All information in this chapter was provided by the applicant.

2.1 EUT information

Applicant	KYOCERA Corporation Yokohama Office 2-1-1 Kagahara, Tsuzuki-ku Yokohama-shi, Kanagawa, Japan Phone: +81-45-943-6253 Fax: +81-45-943-6314
Equipment Under Test (EUT)	Mobile Phone
Model number	EB1190EM, EB1207
Serial number	353343640002991, 353343640002918, 353343640002926, SRA3, SAR2, Radiated added
Trade name	Kyocera
Number of sample(s)	6
EUT condition	Pre-Production
Power rating	Battery: DC 3.87 V
Size	(W) 73.0 mm × (D) 157.0 mm × (H) 11.43 mm
Environment	Indoor and Outdoor use
Terminal limitation	-20 °C to 60 °C
Hardware Version	DMT1
Software Version	0.151BX.0025.a
Firmware Version	Not applicable
RF Specification	
Protocol	IEEE802.11b, IEEE802.11g, IEEE802.11n (HT20), IEEE802.11ac (VHT20)
Frequency range	IEEE802.11b /11g /11n (HT20) /11ac (VHT20): 2412 MHz-2462 MHz
Number of RF Channels	11 Channels
Modulation type	IEEE802.11b: DSSS (DBPSK, DQPSK, CCK) IEEE802.11g / 11n (HT20) / 11ac (VHT20): OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
Data rate	IEEE802.11b: 1, 2, 5.5, 11Mbps IEEE802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps IEEE802.11n (HT20 LGI): 6.5, 13, 19.5, 26, 39, 52, 58.5, 65Mbps IEEE802.11n (HT20 SGI): 7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65, 72.2Mbps IEEE802.11ac (VHT20 LGI): 6.5, 13, 19.5, 26, 39, 52, 58.5, 65, 78Mbps IEEE802.11ac (VHT20 SGI): 7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65, 72.2, 86.6Mbps

Channel separation	5 MHz
Conducted power	37.411 mW (IEEE802.11b) 196.336 mW (IEEE802.11g) 220.8 mW (IEEE802.11n: HT20) 216.272 mW (IEEE802.11ac: VHT20)
Antenna type	Internal antenna
Antenna gain	0.2 dBi

2.2 Modification to the EUT

The table below details modifications made to the EUT during the test project.

Modification State	Description of Modification	Modification fitted by	Date of Modification
Model: EB1190EM, EB1207 Serial Number: 353343640002991, 353343640002918, 353343640002926, SAR3, SAR2, Radiated added			
0	As supplied by the applicant	Not Applicable	Not Applicable

2.3 Variation of family model(s)

2.3.1 List of family model(s)

Not applicable

2.3.2 Reason for selection of EUT

Not applicable

2.4 Operating channels and frequencies

Channel	Frequency [MHz]
1	2412
2	2417
3	2422
4	2427
5	2432
6	2437
7	2442
8	2447
9	2452
10	2457
11	2462

2.5 Description of test mode

The EUT had been tested under operating condition.
There are three channels have been tested as following:

Tested Channel [11b, 11g, 11n(HT20) , 11ac(VHT20)]	Frequency [MHz]
Low	2412
Middle	2437
High	2462

The pre-test has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates.

Tested Channel	Modulation Type	Data Rate
Low, Middle, High	IEEE802.11b: DSSS	1Mbps
Low, Middle, High	IEEE802.11g: OFDM	6Mbps
Low, Middle, High	IEEE802.11n (HT20 LGI): OFDM	MCS0 (6.5Mbps)
Low, Middle, High	IEEE802.11ac (VHT20): OFDM	MCS0 (6.5Mbps)

The field strength of spurious emissions was measured at each position of all three axis X, Y and Z to compare the level, and the maximum noise.

The worst emission was found in X-axis and the worst case recorded.

Pre-scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports.

2.6 Operating flow

- Tx mode

- i) Test program setup to the Software
- ii) Select a Test mode
[IEEE802.11b, IEEE802.11g, IEEE802.11n (HT20)], IEEE802.11ac (VHT20)
Operating frequency: Channel Low: 2412MHz, Channel Middle: 2437MHz, Channel High: 2462MHz
- iii) Start test mode

- Rx mode

- i) Test program setup to the Software
- ii) Select a Test mode
[IEEE802.11b, IEEE802.11g, IEEE802.11n (HT20)], IEEE802.11ac (VHT20)
Operating frequency: Channel Low: 2412MHz, Channel Middle: 2437MHz, Channel High: 2462MHz
- iii) Start test mode

3 Configuration of Equipment

Numbers assigned to equipment on the diagram in “3.3 System configuration” correspond to the list in “3.1 Equipment used” and “3.2 Cable(s) used”.

This test configuration is based on the manufacture’s instruction.

Cabling and setup(s) were taken into consideration and test data was taken under worse case condition.

3.1 Equipment used

No.	Equipment	Company	Model No.	Serial No.	FCC ID/DoC	Comment
1	Mobile Phone	KYOCERA	EB1190EM	353343640002991, 353343640002918, 353343640002926	JOYPC9699	EUT
	Mobile Phone	KYOCERA	EB1207	SAR3, SAR2, Radiated added	JOYEB1207	EUT (Tested)
2	AC Adapter	KDDI	0602PQA	N/A	N/A	*

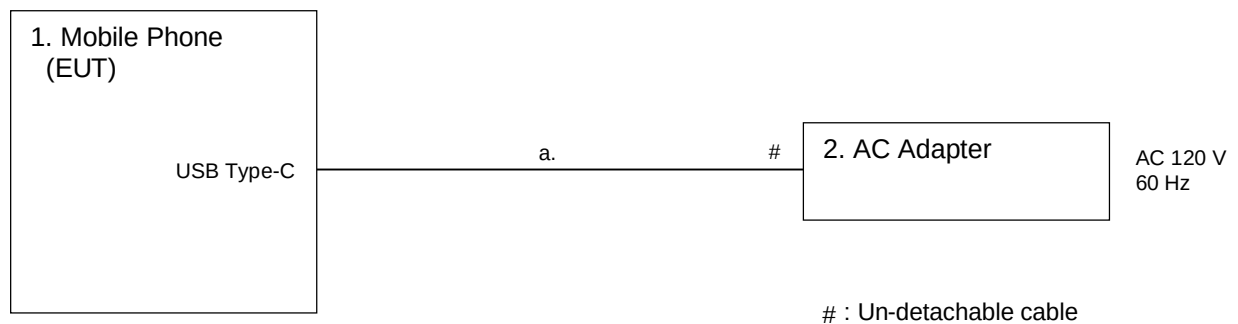
*:AC power line Conducted Emission Test.

3.2 Cable(s) used

No.	Equipment	Length[m]	Shield	Connector	Comment
a	USB cable (for AC Adapter)	1.5	No	Plastic	*

*:AC power line Conducted Emission Test.

3.3 System configuration



4 Test Result

4.1 DTS Bandwidth / Occupied Bandwidth (99%)

4.1.1 Measurement procedure

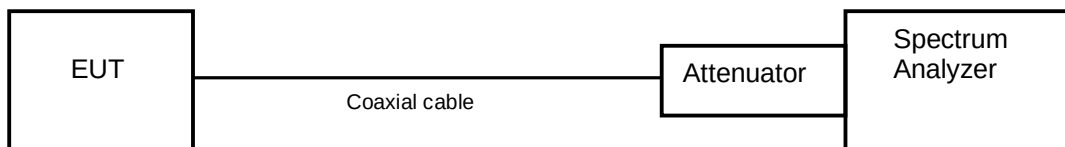
[FCC 15.247(a)(2), KDB 558074 D01 v05r02, Section 8.2]

The bandwidth at 6dB down from the highest in band spectral density is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency.

The spectrum analyzer is set to;

- a) RBW = 100kHz.
- b) VBW $\geq 3 \times$ RBW.
- c) Sweep time = auto-couple.
- d) Detector = peak.
- e) Trace mode = max hold.

- Test configuration



4.1.2 Limit

The minimum permissible 6 dB bandwidth is 500 kHz.

4.1.3 Measurement result

Date : 1-May-2024
 Temperature : 21.3 [°C]
 Humidity : 45.3 [%]
 Test place : Shielded room No.4

Test engineer : Kazunori Saito

Date : 26-June-2024
 Temperature : 24.5 [°C]
 Humidity : 50.8 [%]
 Test place : Shielded room No.4

Test engineer : Kazunori Saito

Date : 6-August-2024
 Temperature : 23.0 [°C]
 Humidity : 54.3 [%]
 Test place : Shielded room No.4

Test engineer : Kazunori Saito

EB1190EM

Channel	DTS Bandwidth [MHz]			
	IEEE802.11b	IEEE802.11g	IEEE802.11n (HT20)	IEEE802.11ac (VHT20)
Low	8.553	15.376	15.943	15.964
Middle	8.095	15.317	15.172	15.160
High	8.068	15.153	15.151	15.484

EB1207

Channel	DTS Bandwidth [MHz]			
	IEEE802.11b	IEEE802.11g	IEEE802.11n (HT20)	IEEE802.11ac (VHT20)
Low	-	-	15.499	-
Middle	-	-	15.162	-
High	-	-	15.153	-

EB1190EM

Channel	Occupied Bandwidth (99%) [MHz]			
	IEEE802.11b	IEEE802.11g	IEEE802.11n (HT20)	IEEE802.11ac (VHT20)
Low	12.820	16.377	17.544	17.538
Middle	12.805	16.351	17.531	17.527
High	12.484	16.324	17.481	17.500

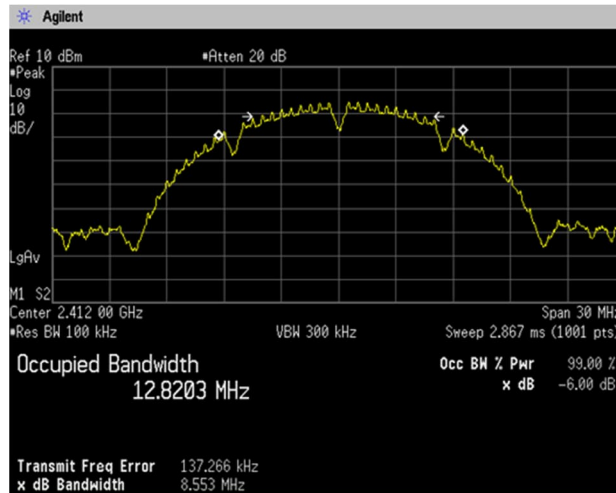
EB1207

Channel	Occupied Bandwidth (99%) [MHz]			
	IEEE802.11b	IEEE802.11g	IEEE802.11n (HT20)	IEEE802.11ac (VHT20)
Low	-	-	17.536	-
Middle	-	-	17.549	-
High	-	-	17.499	-

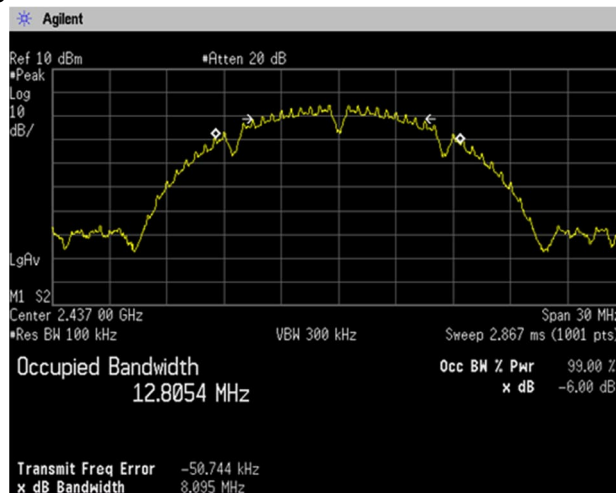
4.1.4 Trace data

EB1190EM [IEEE802.11b]

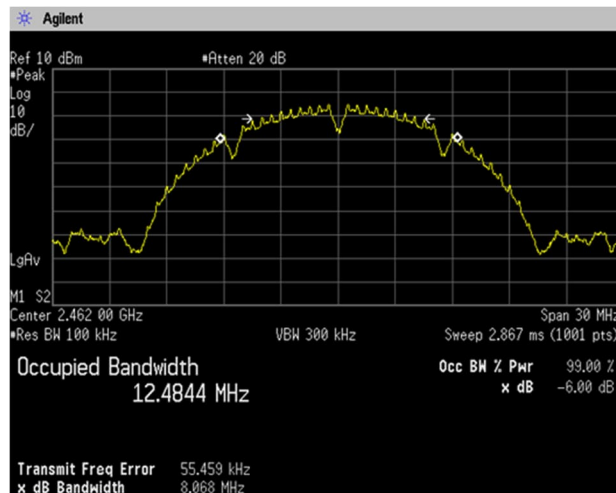
Channel Low



Channel Middle

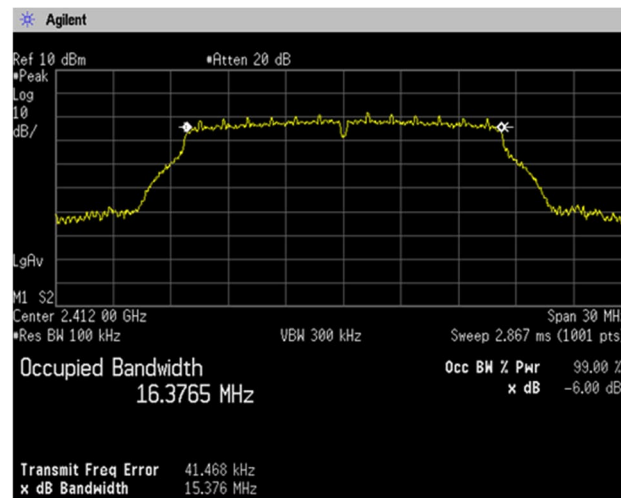


Channel High

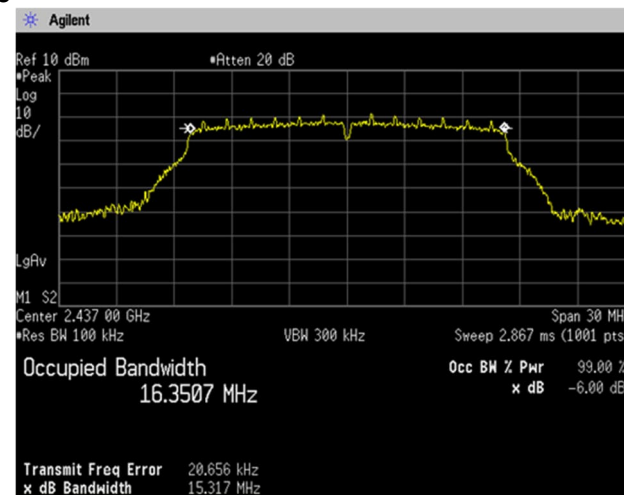


EB1190EM [IEEE802.11g]

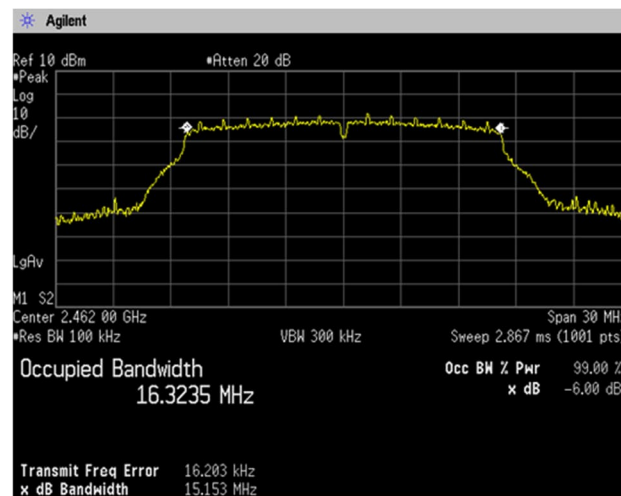
Channel Low

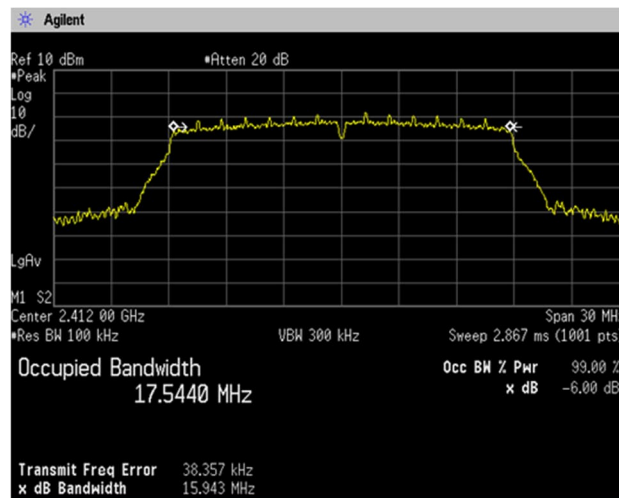
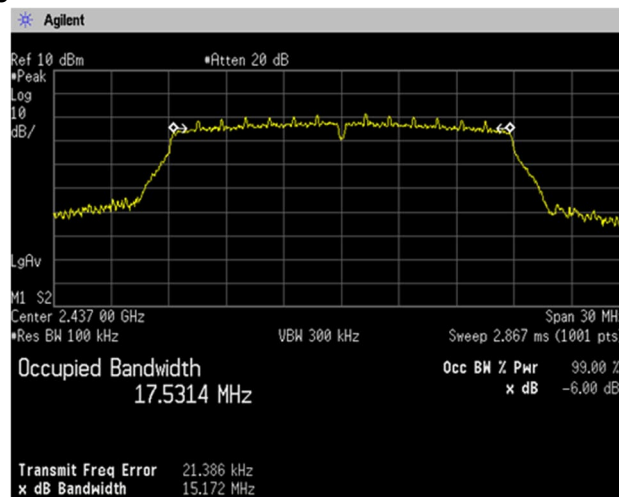
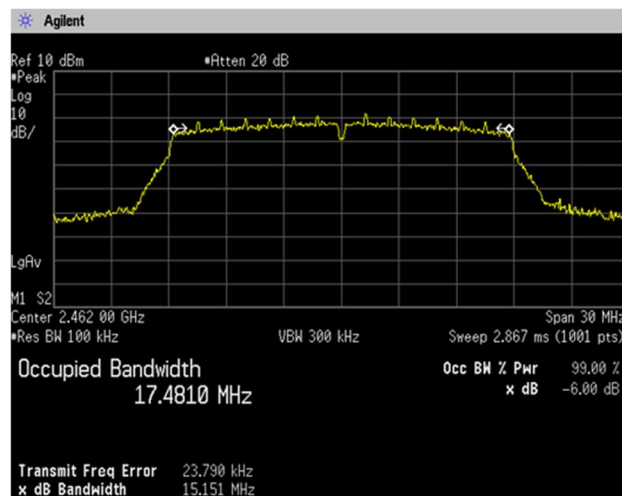


Channel Middle



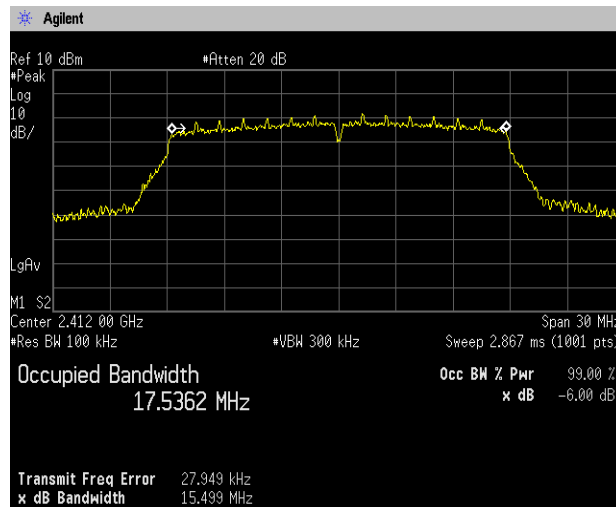
Channel High



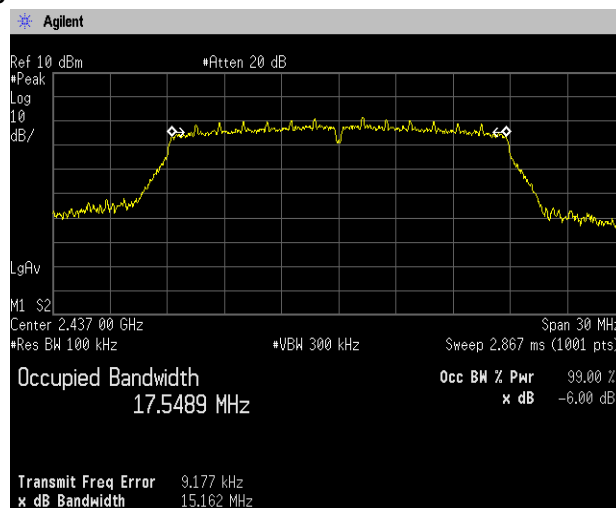
EB1190EM [IEEE802.11n (HT20)]**Channel Low****Channel Middle****Channel High**

EB1207 [IEEE802.11n (HT20)]

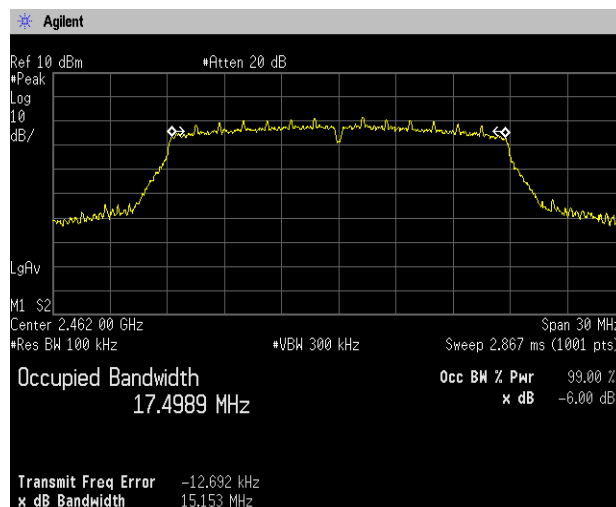
Channel Low

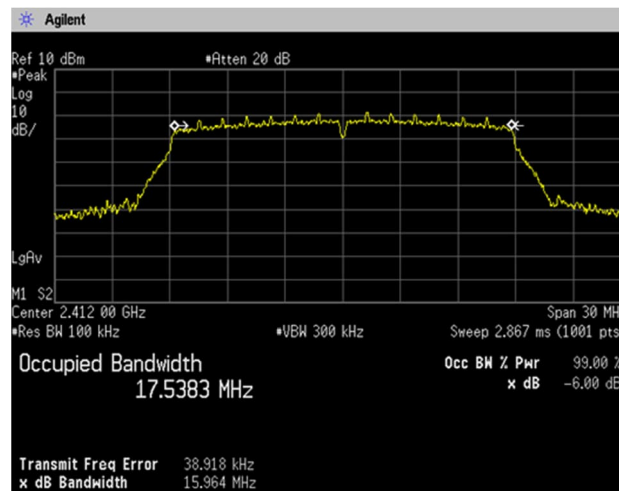
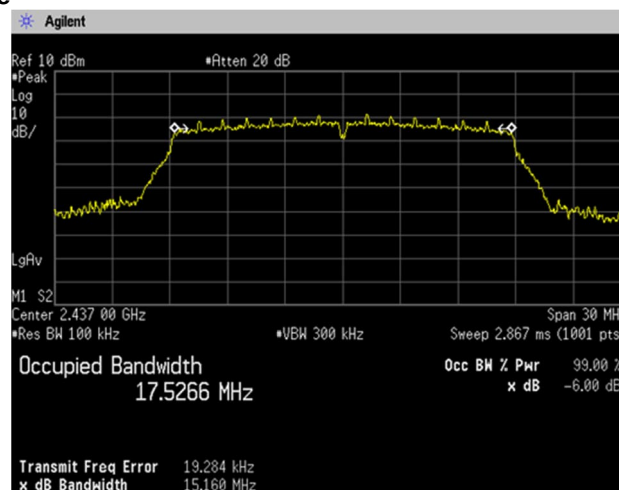
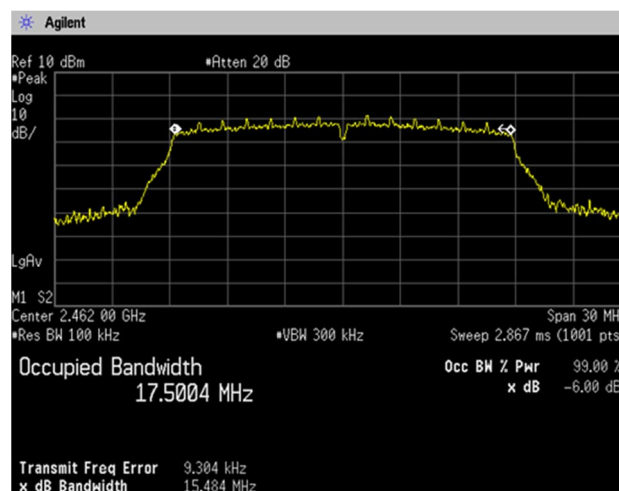


Channel Middle



Channel High



EB1190EM [IEEE802.11ac (VHT20)]**Channel Low****Channel Middle****Channel High**

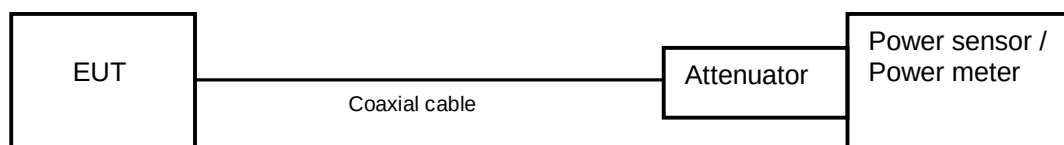
4.2 Maximum Conducted Output Power

4.2.1 Measurement procedure

[FCC 15.247(b)(3), KDB 558074 D01 v05r02, Section 8.3.1.3]

The peak power is measured with a power sensor connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency.

- Test configuration



4.2.2 Limit

1 W (1000 mW) or less

4.2.3 Measurement result

Date : 1-May-2024
 Temperature : 21.3 [°C]
 Humidity : 45.3 [%]
 Test place : Shielded room No.4

Test engineer : Kazunori Saito

Date : 26-June-2024
 Temperature : 24.5 [°C]
 Humidity : 50.8 [%]
 Test place : Shielded room No.4

Test engineer : Kazunori Saito

Date : 24-July-2024
 Temperature : 23.1 [°C]
 Humidity : 56.9 [%]
 Test place : Shielded room No.3

Test engineer : Kazunori Saito

EB1190EM
[IEEE802.11b]
Battery Full

Channel	Center Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Peak Output Power (mW)	Limit (mW)	Result
Low	2412	5.12	10.52	15.64	36.644	≤ 1000	PASS
Middle	2437	5.00	10.52	15.52	35.645	≤ 1000	PASS
High	2462	5.21	10.52	15.73	37.411	≤ 1000	PASS

[IEEE802.11g]
Battery Full

Channel	Center Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Peak Output Power (mW)	Limit (mW)	Result
Low	2412	12.09	10.52	22.61	182.390	≤ 1000	PASS
Middle	2437	12.41	10.52	22.93	196.336	≤ 1000	PASS
High	2462	12.18	10.52	22.70	186.209	≤ 1000	PASS

Calculation;

Reading (dBm) + Factor (dB) = Level (dBm)

$10\log P = \text{Level (dBm)}$

$P = 10^{(\text{Maximum Peak Output Power} / 10)} \text{ (mW)}$

[IEEE802.11n (HT20)]**Battery Full**

Channel	Center Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Peak Output Power (mW)	Limit (mW)	Result
Low	2412	12.88	10.52	23.40	218.776	≤ 1000	PASS
Middle	2437	12.71	10.52	23.23	210.378	≤ 1000	PASS
High	2462	12.50	10.52	23.02	200.447	≤ 1000	PASS

EB1207**[IEEE802.11n (HT20)]****Battery Full**

Channel	Center Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Peak Output Power (mW)	Limit (mW)	Result
Low	2412	12.92	10.52	23.44	220.800	≤ 1000	PASS
Middle	2437	12.50	10.52	23.02	200.447	≤ 1000	PASS
High	2462	12.32	10.52	22.84	192.309	≤ 1000	PASS

[IEEE802.11n (HT20)]

Channel	EB1190EM Level (dBm)	EB1207 Level (dBm)	Difference value (dBm)	Result Within ± 3 dBm
Low	23.40	23.44	-0.04	PASS
Middle	23.23	23.02	0.21	PASS
High	23.02	22.84	0.18	PASS

[IEEE802.11ac (VHT20)]**Battery Full**

Channel	Center Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Peak Output Power (mW)	Limit (mW)	Result
Low	2412	12.45	10.52	22.97	198.153	≤ 1000	PASS
Middle	2437	12.83	10.52	23.35	216.272	≤ 1000	PASS
High	2462	12.34	10.52	22.86	193.197	≤ 1000	PASS

Calculation;

Reading (dBm) + Factor (dB) = Level (dBm)

 $10\log P = \text{Level (dBm)}$ $P = 10^{(\text{Maximum Peak Output Power} / 10)} \text{ (mW)}$

4.3 Band Edge Compliance of RF Conducted Emissions

4.3.1 Measurement procedure

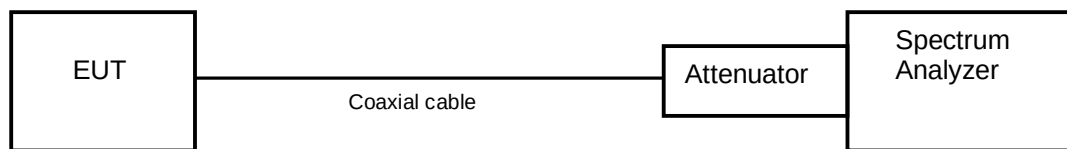
[FCC 15.247(d), KDB 558074 D01 v05r02, Section 8.5]

The Band Edge is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency.

The spectrum analyzer is set to;

- a) Span = Arbitrary setting. (Setting suitable for measurement.)
- b) RBW = 100kHz.
- c) VBW $\geq 3 \times$ RBW
- d) Sweep time = auto-couple.
- e) Detector = peak.
- f) Trace mode = max hold.

- Test configuration



4.3.2 Limit

In any 100 kHz bandwidth outside the frequency band the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

4.3.3 Measurement result

Date : 1-May-2024
 Temperature : 21.3 [°C]
 Humidity : 45.3 [%]
 Test place : Shielded room No.4

Test engineer : Kazunori Saito

Date : 26-June-2024
 Temperature : 24.5 [°C]
 Humidity : 50.8 [%]
 Test place : Shielded room No.4

Test engineer : Kazunori Saito

Date : 6-August-2024
 Temperature : 23.0 [°C]
 Humidity : 54.3 [%]
 Test place : Shielded room No.4

Test engineer : Kazunori Saito

EB1190EM [IEEE802.11b]

Channel	Frequency (MHz)	RF Power Level (dBm)	Band-edge Frequency (MHz)	Band-edge Level (dBm)	Difference Level (dBm)	Limit (dBm)	Result
Low	2412	-6.54	2399.36	-58.47	51.93	At least 20dB below from peak of RF	PASS
High	2462	-6.56	2487.02	-67.89	61.33	At least 20dB below from peak of RF	PASS

EB1190EM [IEEE802.11g]

Channel	Frequency (MHz)	RF Power Level (dBm)	Band-edge Frequency (MHz)	Band-edge Level (dBm)	Difference Level (dBm)	Limit (dBm)	Result
Low	2412	-9.45	2399.76	-53.06	43.61	At least 20dB below from peak of RF	PASS
High	2462	-9.62	2483.90	-62.86	53.24	At least 20dB below from peak of RF	PASS

EB1190EM [IEEE802.11n (HT20)]

Channel	Frequency (MHz)	RF Power Level (dBm)	Band-edge Frequency (MHz)	Band-edge Level (dBm)	Difference Level (dBm)	Limit (dBm)	Result
Low	2412	-9.62	2399.76	-51.32	41.70	At least 20dB below from peak of RF	PASS
High	2462	-9.59	2483.90	-61.51	51.92	At least 20dB below from peak of RF	PASS

EB1207 [IEEE802.11n (HT20)]

Channel	Frequency (MHz)	RF Power Level (dBm)	Band-edge Frequency (MHz)	Band-edge Level (dBm)	Difference Level (dBm)	Limit (dBm)	Result
Low	2412	-8.35	2399.76	-47.55	39.20	At least 20dB below from peak of RF	PASS
High	2462	-8.45	2483.82	-59.54	51.09	At least 20dB below from peak of RF	PASS

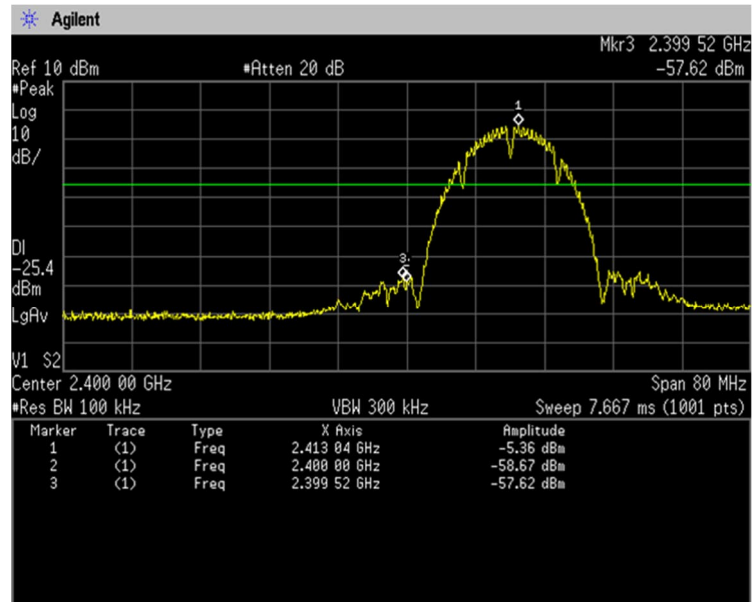
EB1190EM [IEEE802.11ac (VHT20)]

Channel	Frequency (MHz)	RF Power Level (dBm)	Band-edge Frequency (MHz)	Band-edge Level (dBm)	Difference Level (dBm)	Limit (dBm)	Result
Low	2412	-8.63	2399.84	-49.53	40.90	At least 20dB below from peak of RF	PASS
High	2462	-8.40	2483.66	-58.69	50.29	At least 20dB below from peak of RF	PASS

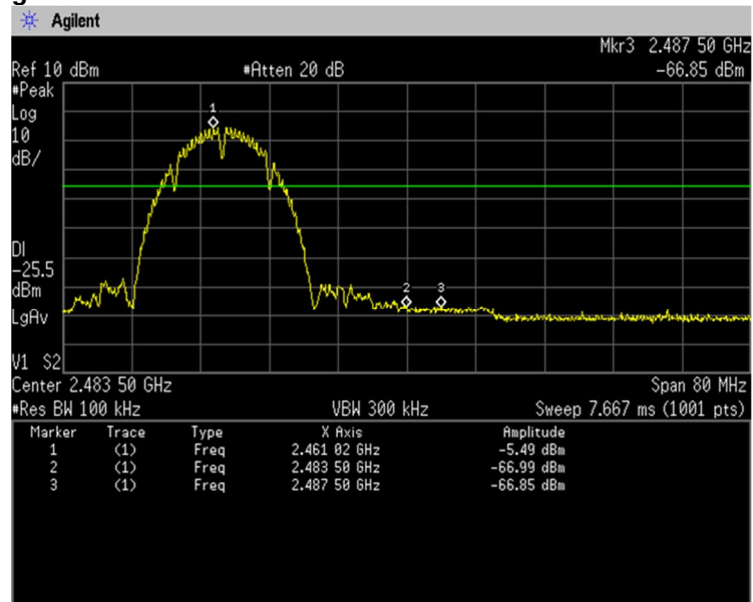
4.3.4 Trace data

EB1190EM [IEEE802.11b]

Channel Low

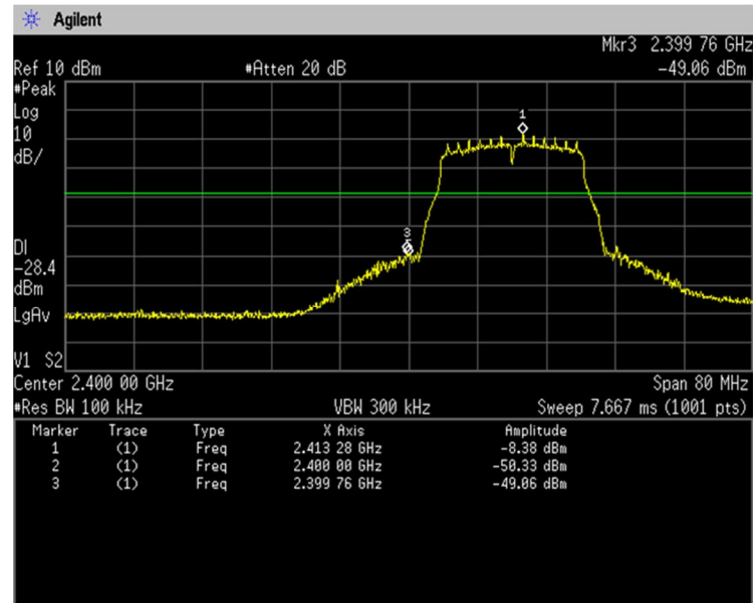


Channel High

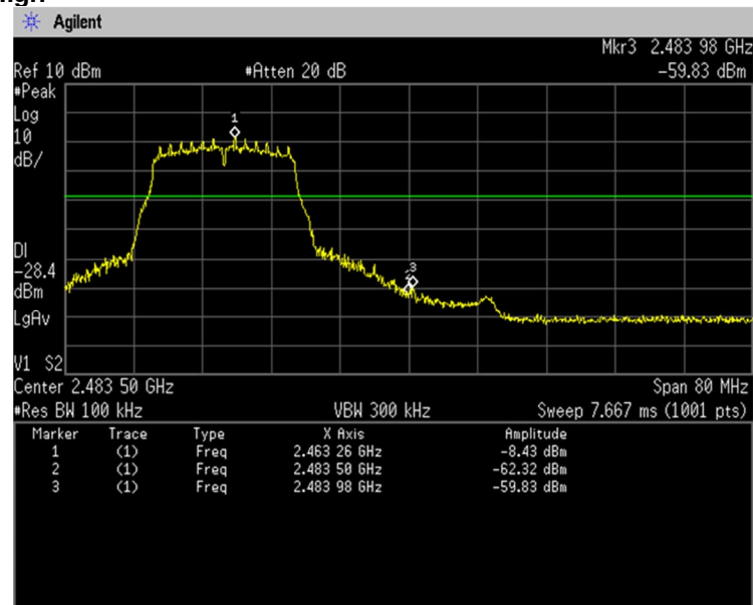


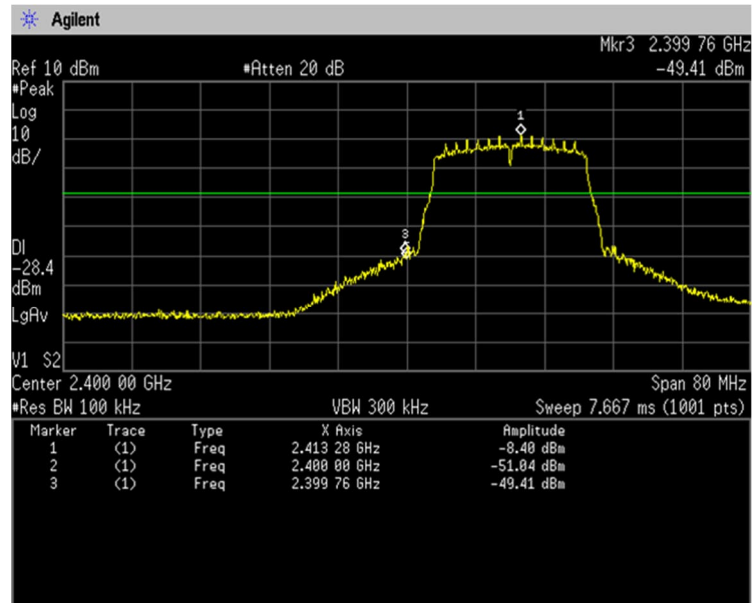
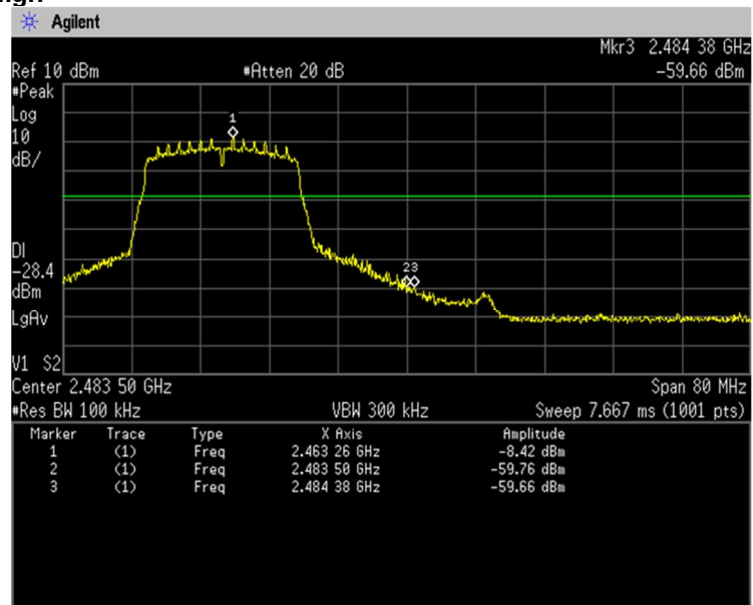
EB1190EM [IEEE802.11g]

Channel Low



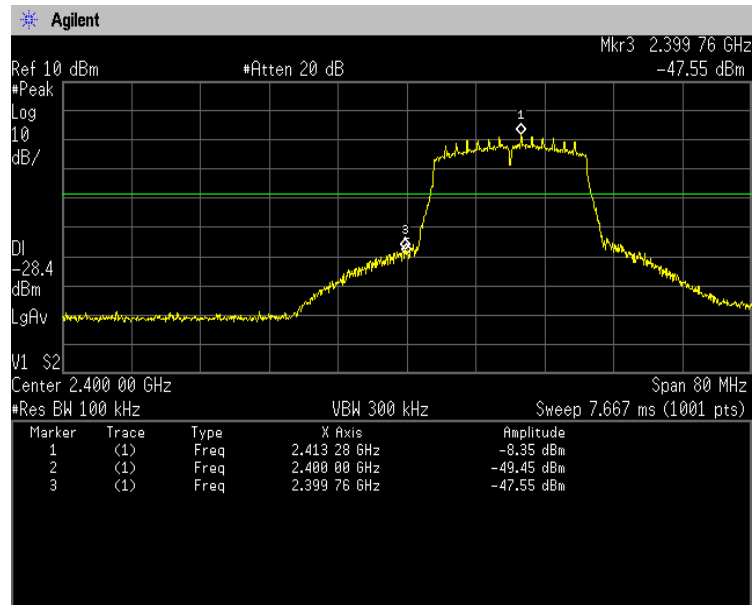
Channel High



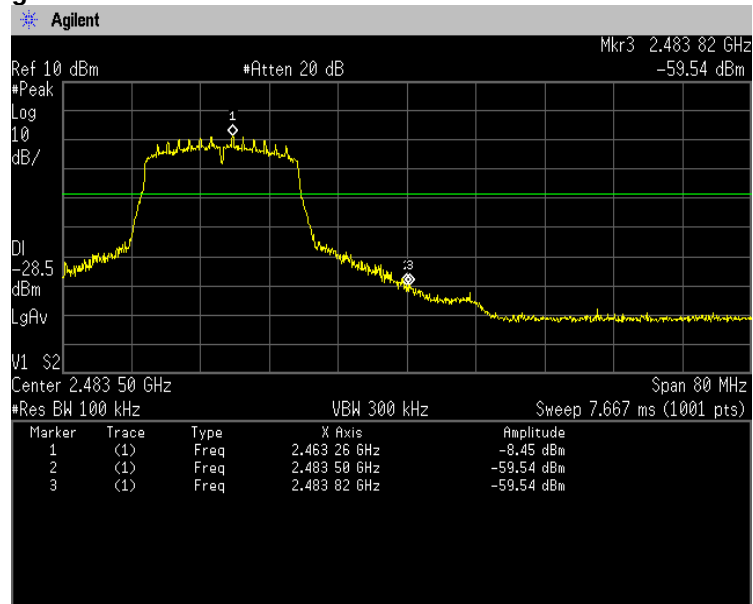
EB1190EM [IEEE802.11n (HT20)]**Channel Low****Channel High**

EB1207 [IEEE802.11n (HT20)]

Channel Low



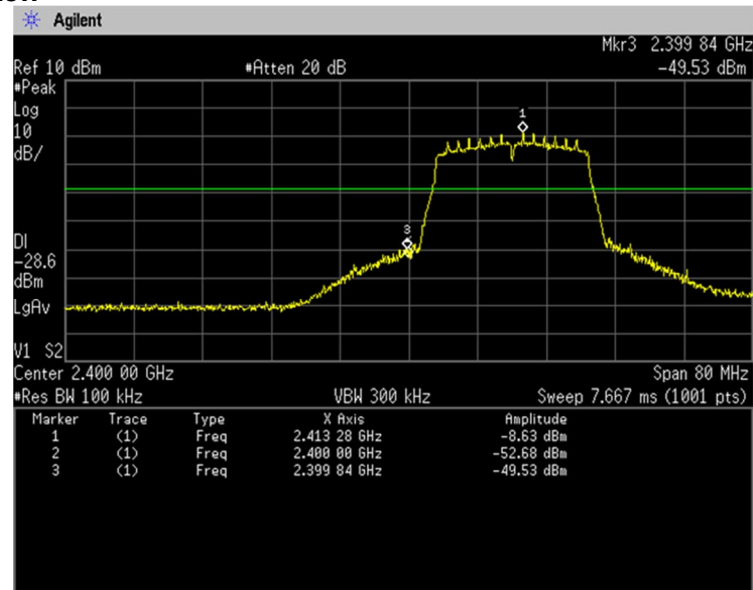
Channel High



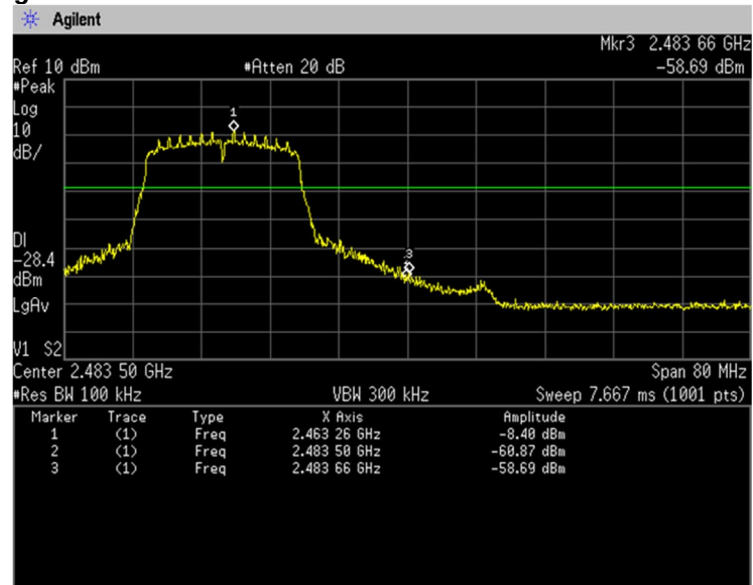
Comparison of the charts of EB1190EM and EB1207 showed that the difference in test results was less than 3 dB.

EB1190EM [IEEE802.11ac (VHT20)]

Channel Low



Channel High



4.4 Spurious emissions - Conducted -

4.4.1 Measurement procedure

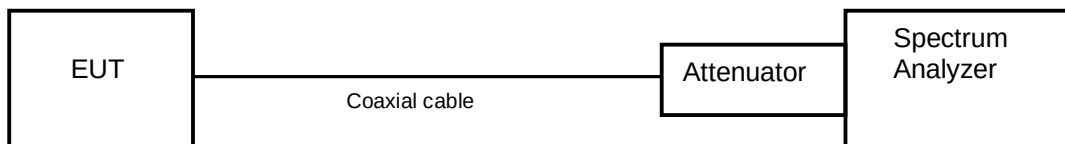
[FCC 15.247(d), KDB 558074 D01 v05r02, Section 8.5]

The spurious emissions (Conducted) are measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency.

The spectrum analyzer is set to;

- a) Span = wide enough to fully capture the emission being measured.
- b) RBW = 100 kHz.
- c) VBW $\geq$ RBW.
- d) Sweep time = auto-couple.
- e) Detector = peak.
- f) Trace mode = max hold.

- Test configuration



4.4.2 Limit

In any 100 kHz bandwidth outside the frequency band the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

4.4.3 Measurement result

Date	: 1-May-2024		
Temperature	: 21.3 [°C]		
Humidity	: 45.3 [%]	Test engineer	:
Test place	: Shielded room No.4		<u>Kazunori Saito</u>
Date	: 26-June-2024		
Temperature	: 24.5 [°C]		
Humidity	: 50.8 [%]	Test engineer	:
Test place	: Shielded room No.4		<u>Kazunori Saito</u>
Date	: 24-July-2024		
Temperature	: 23.1 [°C]		
Humidity	: 56.9 [%]	Test engineer	:
Test place	: Shielded room No.3		<u>Kazunori Saito</u>

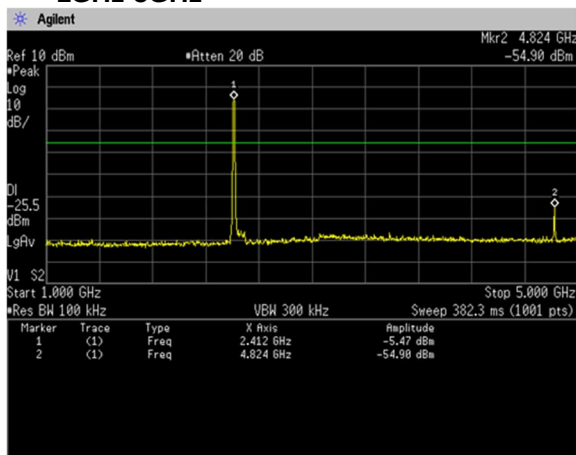
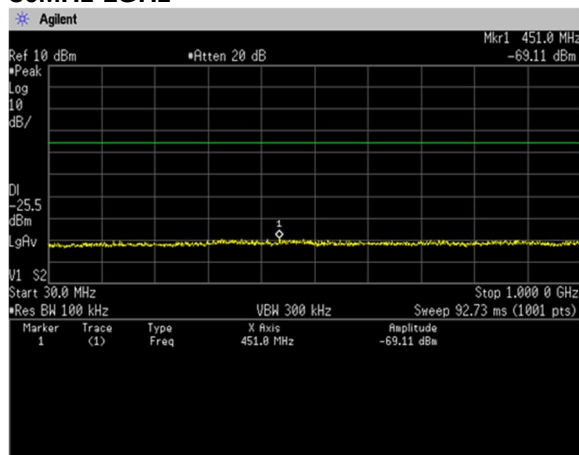
[IEEE802.11b、IEEE802.11g、IEEE802.11n (HT20)、IEEE802.11ac (VHT20)]

Channel	Frequency [MHz]	Limit [dB]	Results Chart	Result
Low	2412	At least 20dB below from peak of RF	See the trace Data	PASS
Middle	2437	At least 20dB below from peak of RF	See the trace Data	PASS
High	2462	At least 20dB below from peak of RF	See the trace Data	PASS

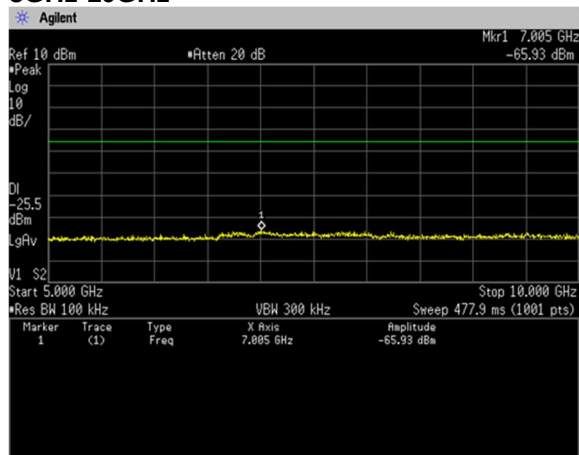
4.4.4 Trace data

EB1190EM
[IEEE802.11b]
Channel Low
30MHz-1GHz

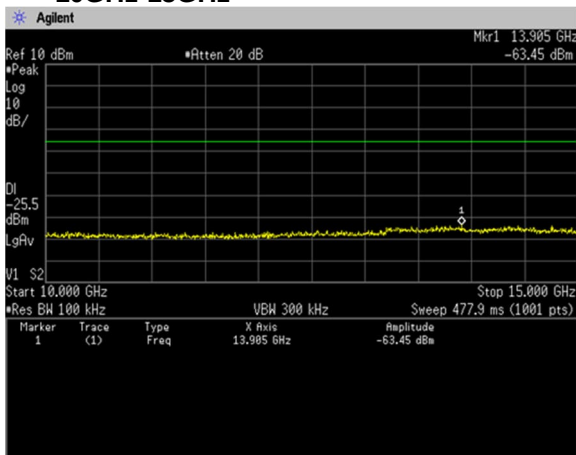
1GHz-5GHz



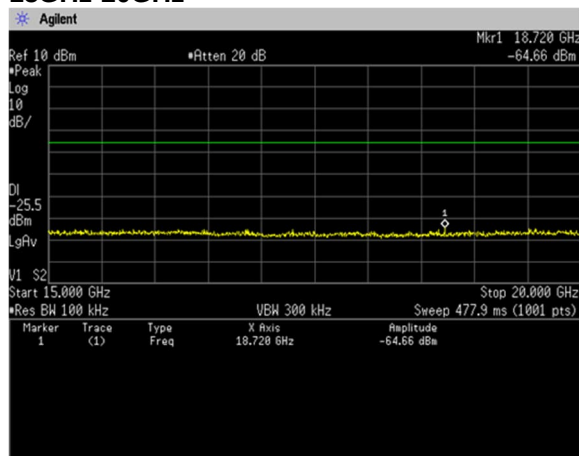
5GHz-10GHz



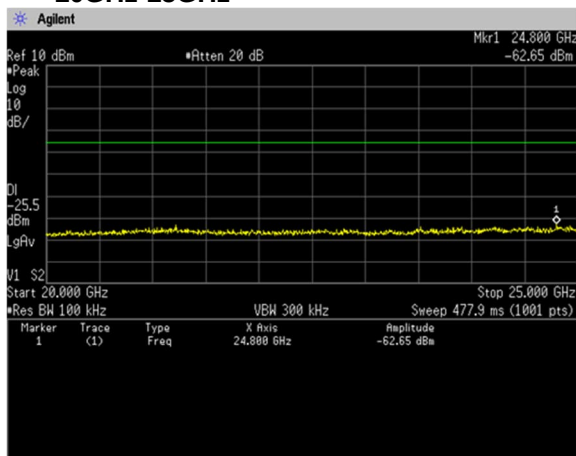
10GHz-15GHz



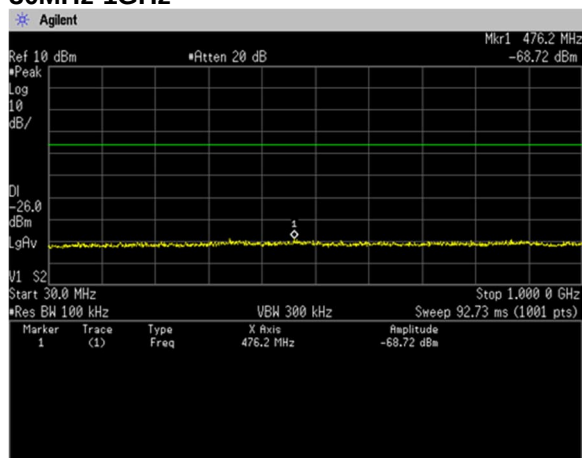
15GHz-20GHz



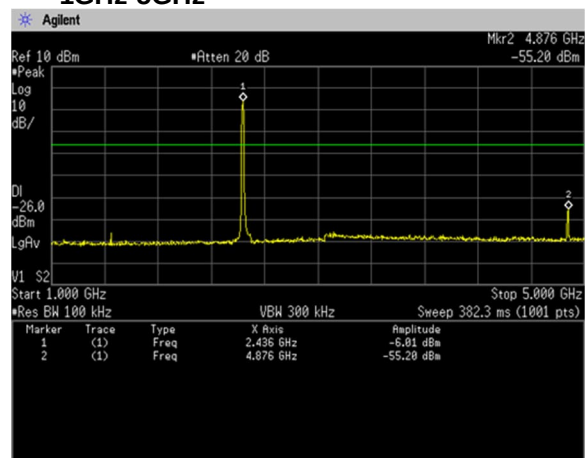
20GHz-25GHz



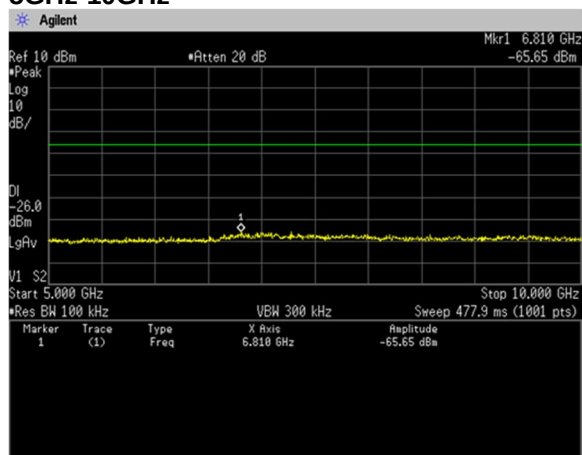
Channel Middle 30MHz-1GHz



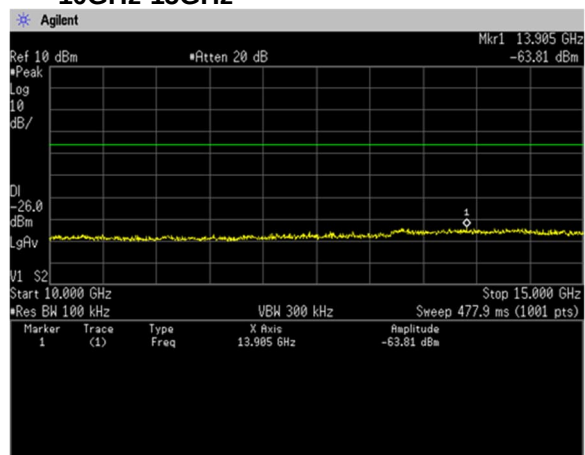
1GHz-5GHz



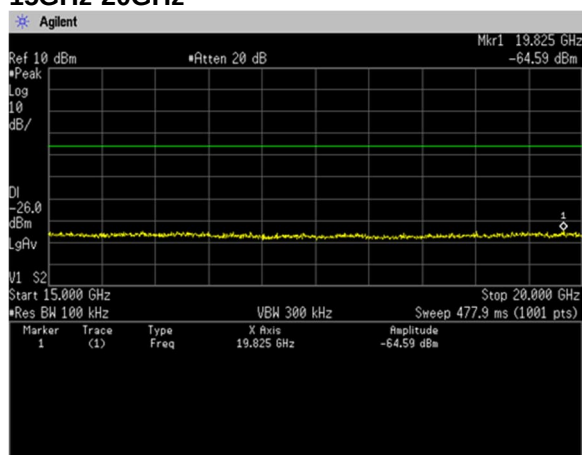
5GHz-10GHz



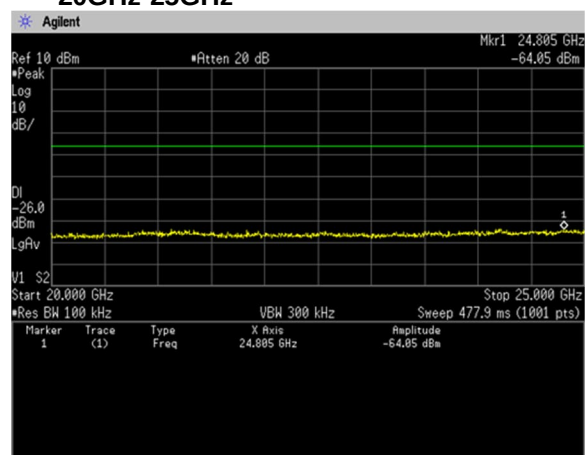
10GHz-15GHz



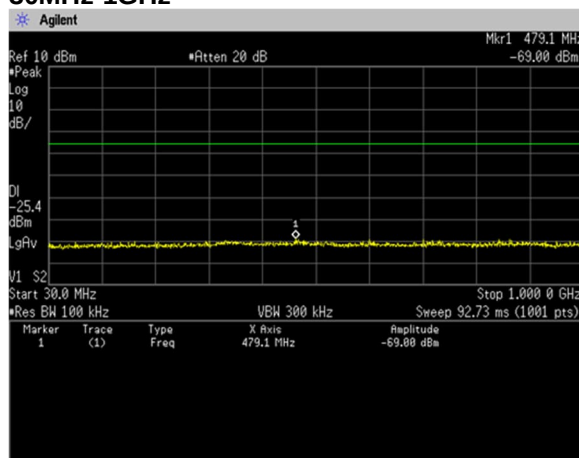
15GHz-20GHz



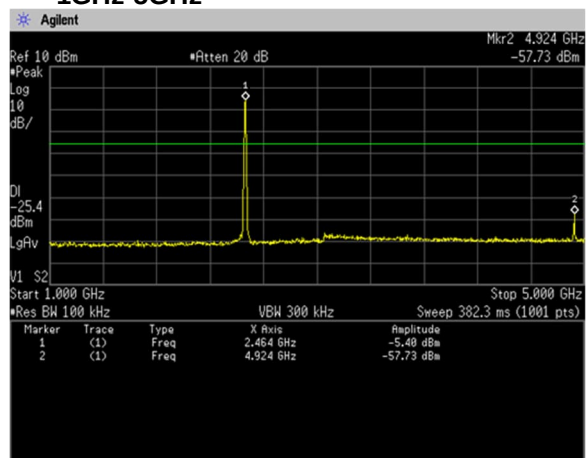
20GHz-25GHz



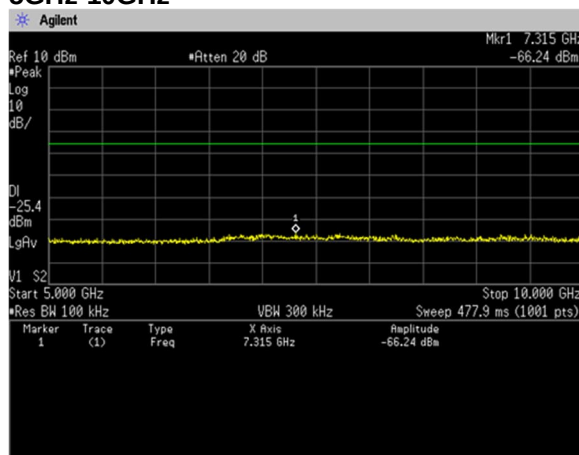
Channel High 30MHz-1GHz



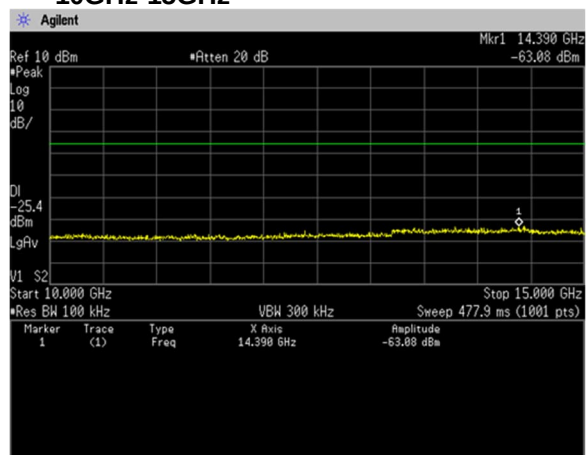
1GHz-5GHz



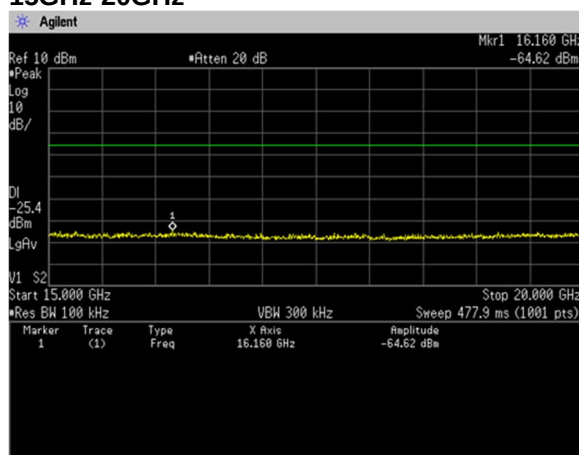
5GHz-10GHz



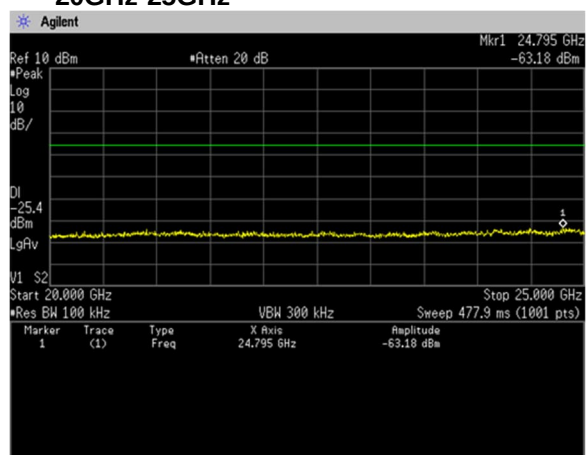
10GHz-15GHz



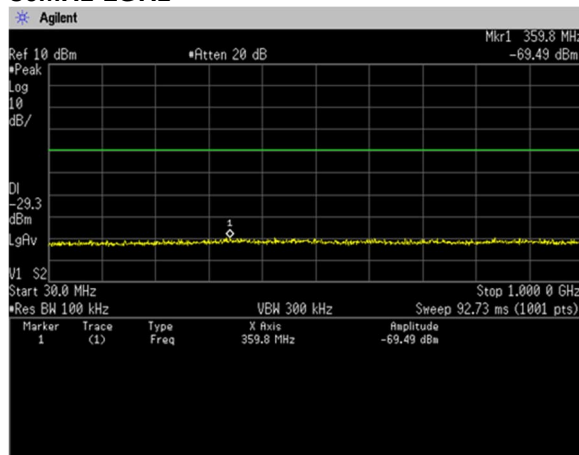
15GHz-20GHz



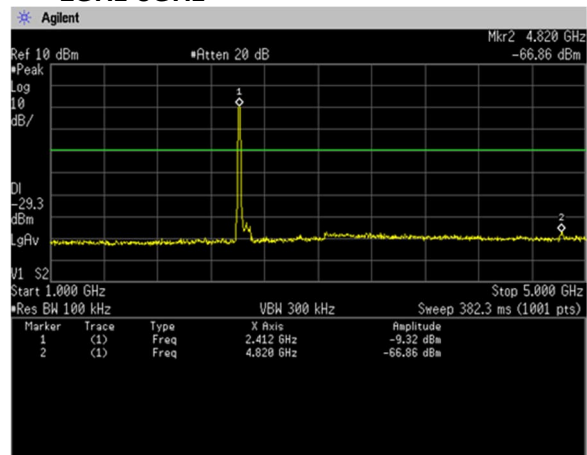
20GHz-25GHz



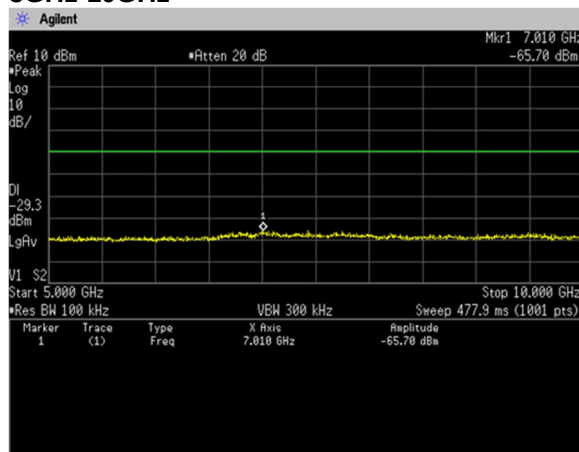
EB1190EM
[IEEE802.11g]
Channel Low
30MHz-1GHz



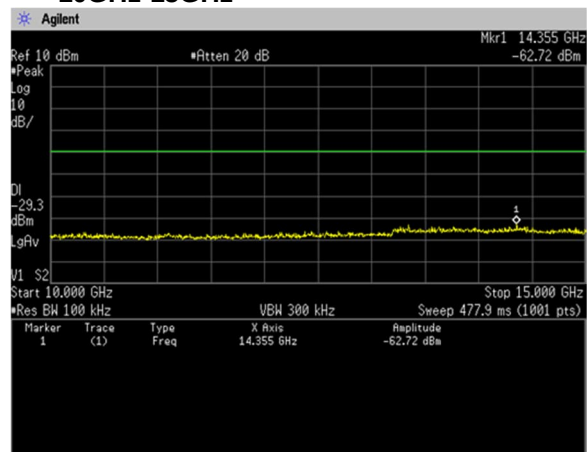
1GHz-5GHz



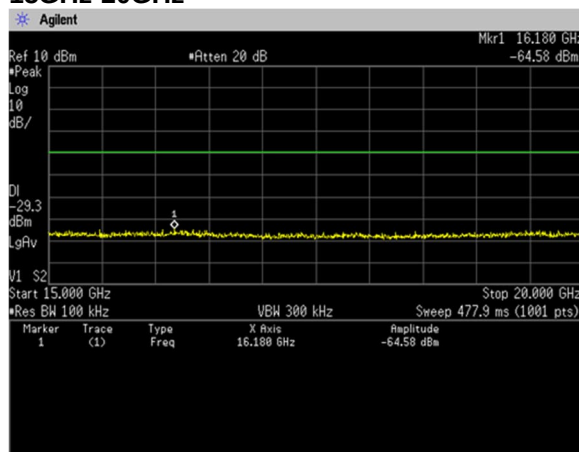
5GHz-10GHz



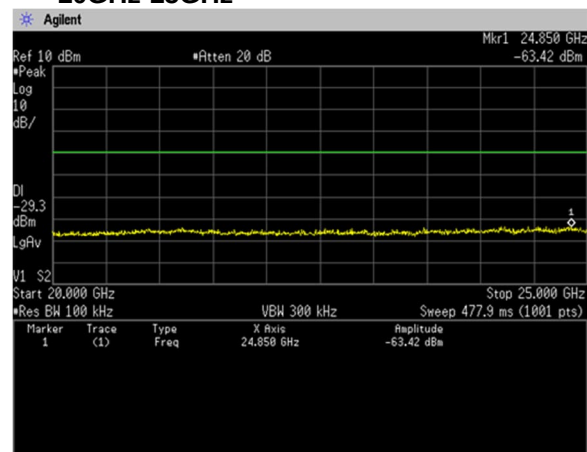
10GHz-15GHz



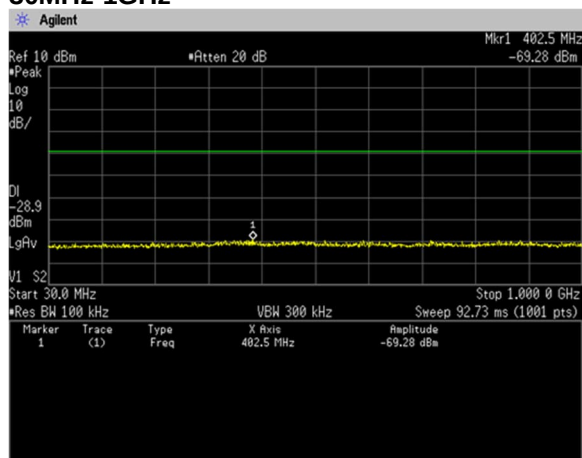
15GHz-20GHz



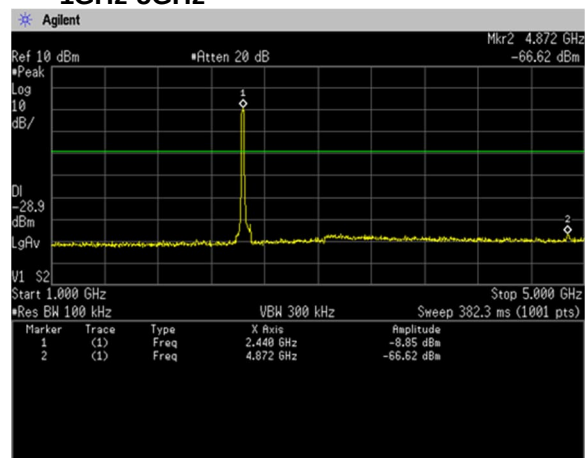
20GHz-25GHz



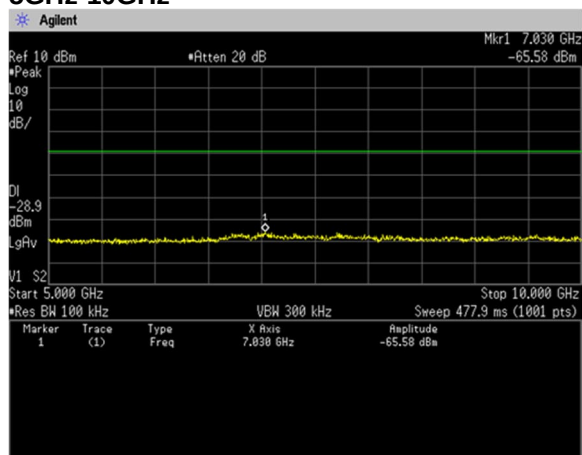
Channel Middle 30MHz-1GHz



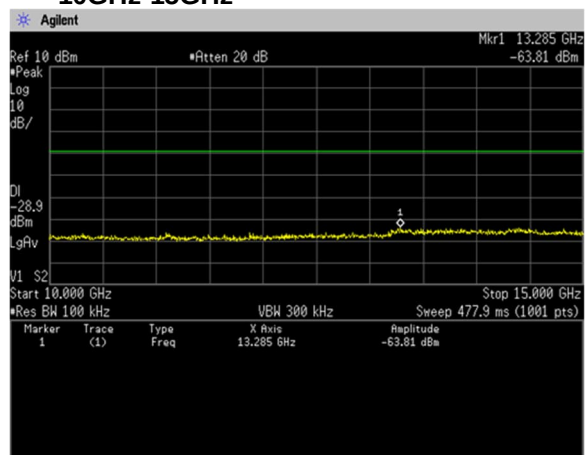
1GHz-5GHz



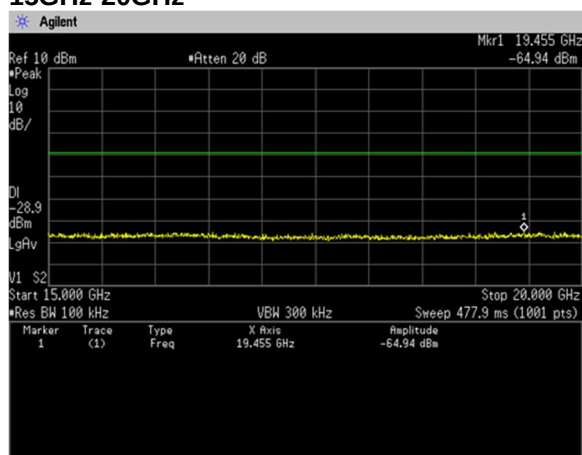
5GHz-10GHz



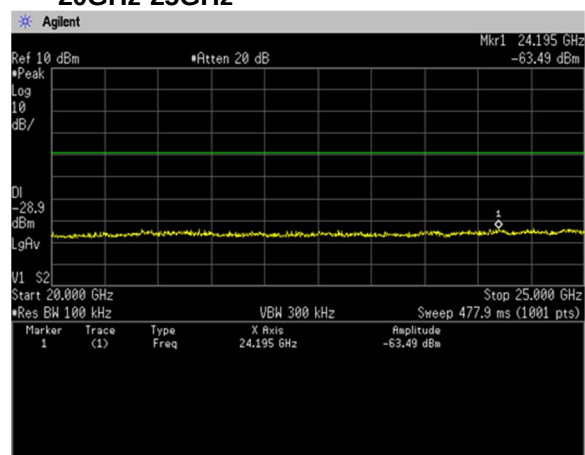
10GHz-15GHz



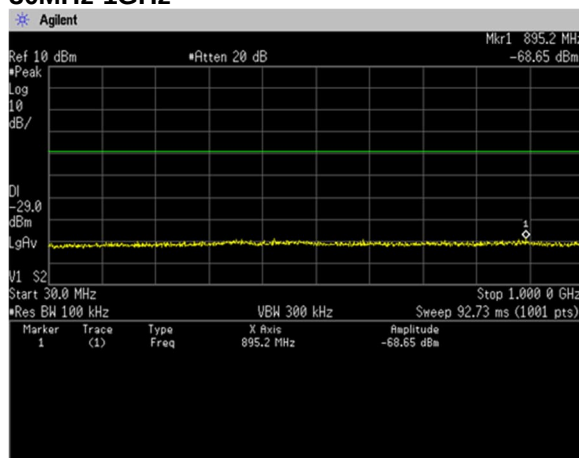
15GHz-20GHz



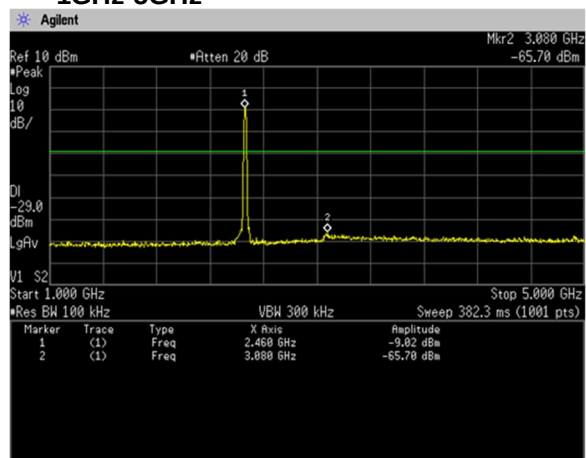
20GHz-25GHz



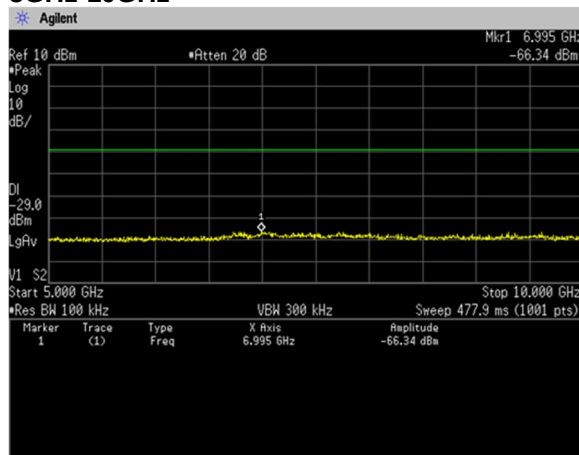
Channel High 30MHz-1GHz



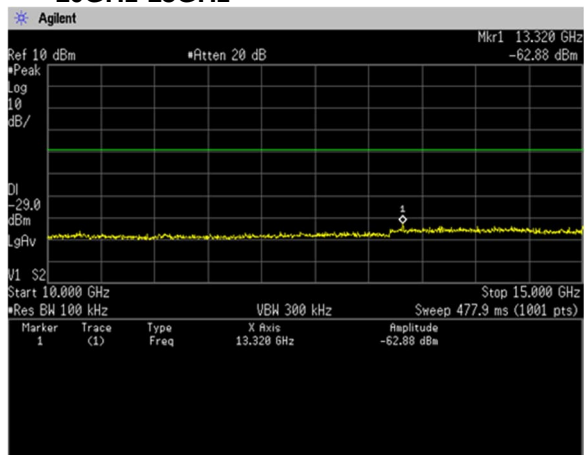
1GHz-5GHz



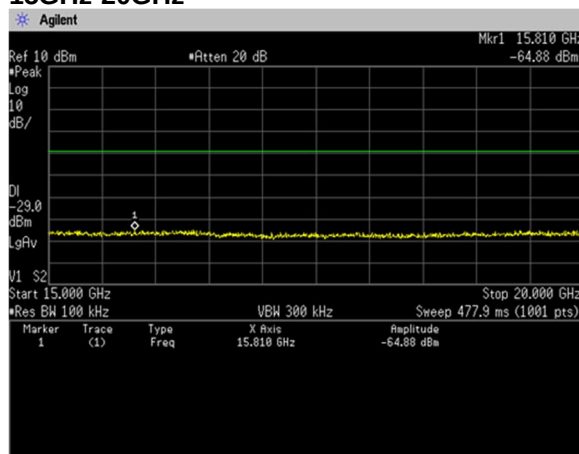
5GHz-10GHz



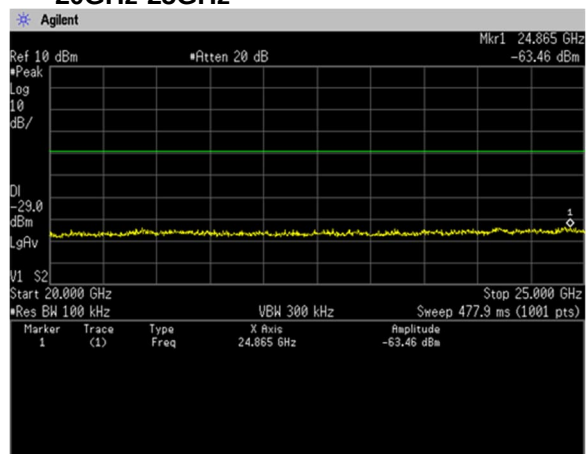
10GHz-15GHz



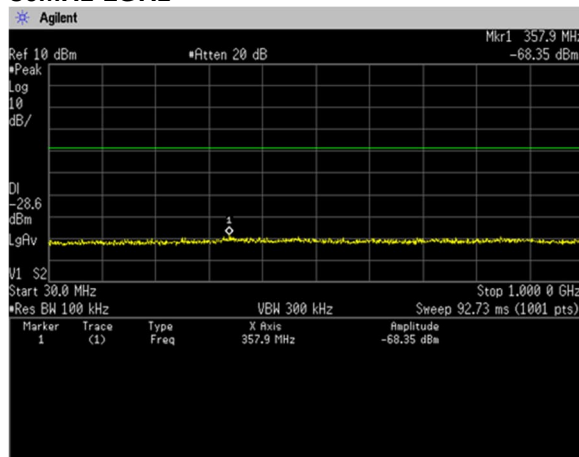
15GHz-20GHz



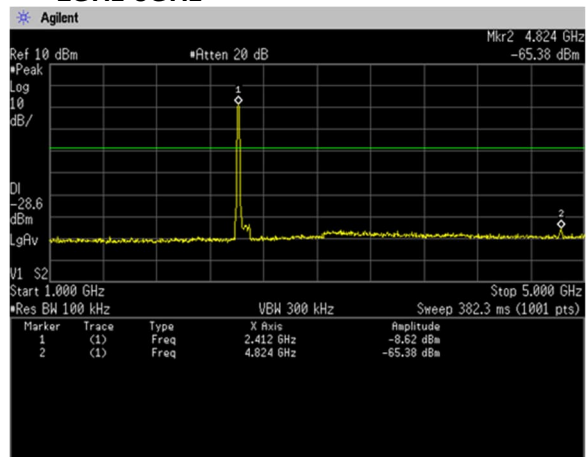
20GHz-25GHz



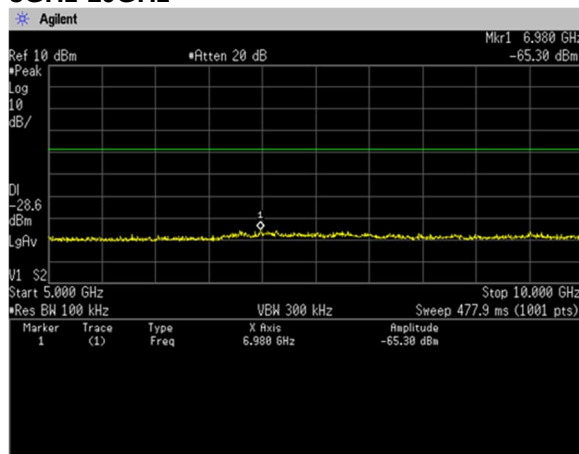
EB1190EM
[IEEE802.11n (HT20)]
Channel Low
30MHz-1GHz



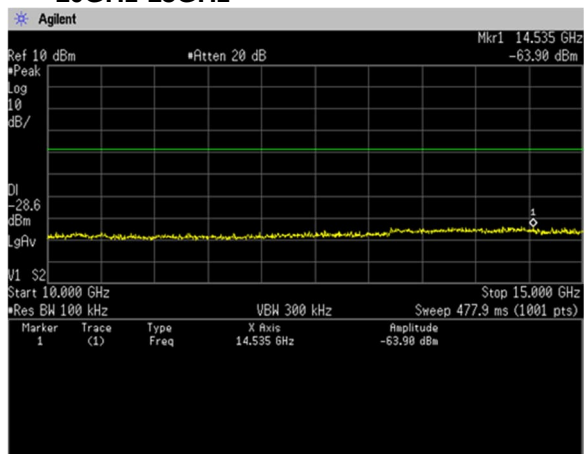
1GHz-5GHz



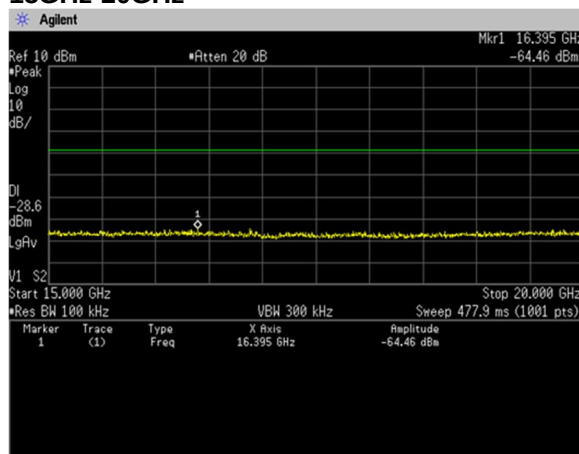
5GHz-10GHz



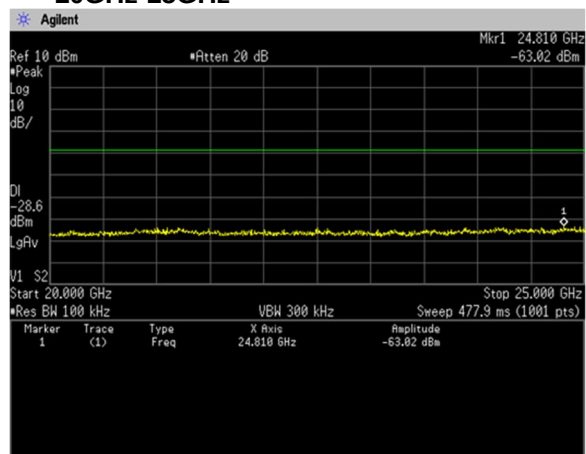
10GHz-15GHz



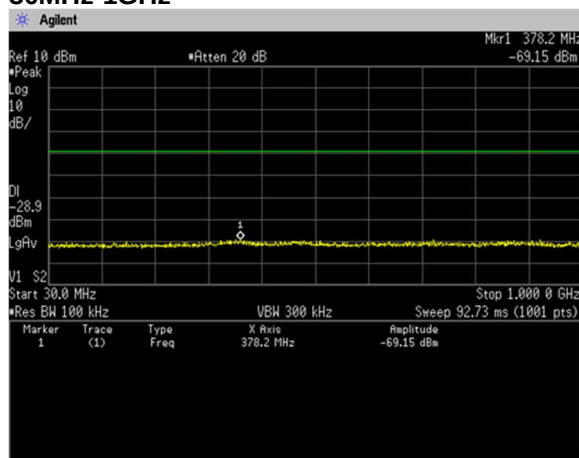
15GHz-20GHz



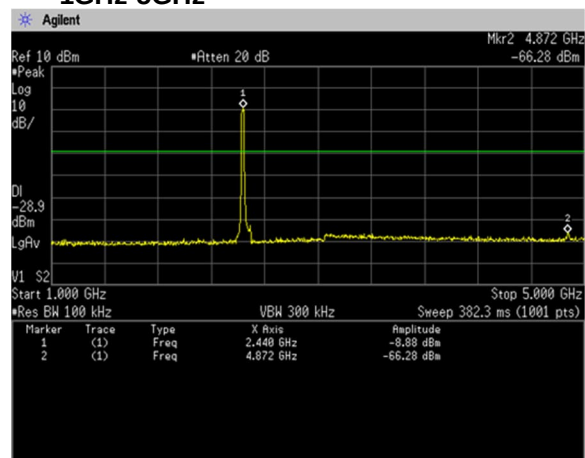
20GHz-25GHz



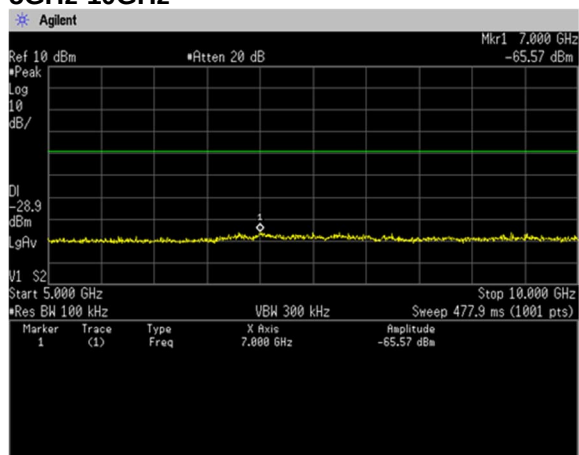
Channel Middle 30MHz-1GHz



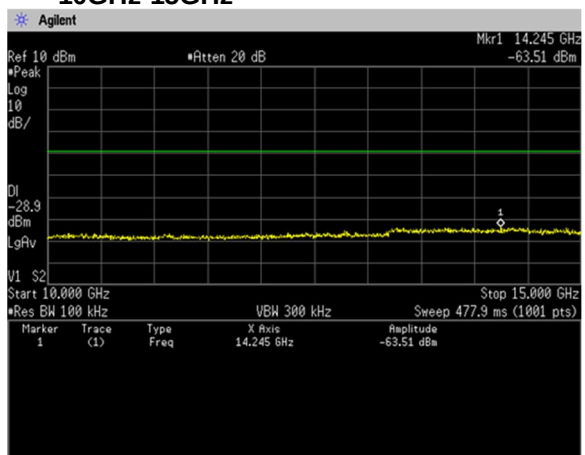
1GHz-5GHz



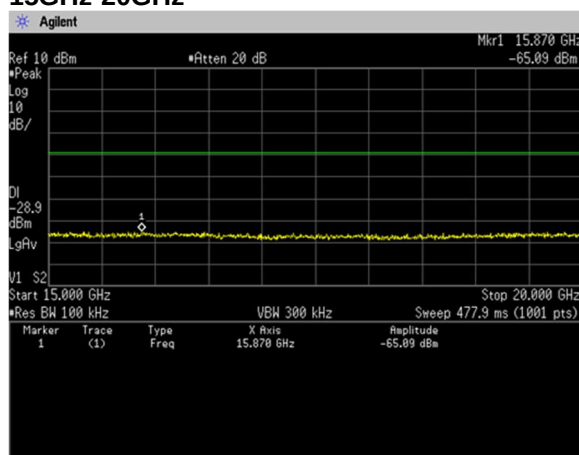
5GHz-10GHz



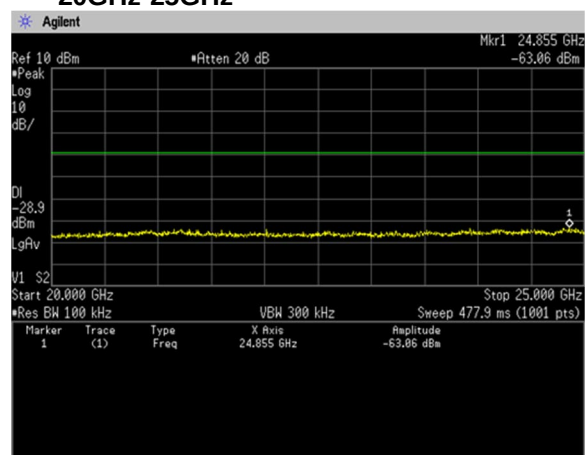
10GHz-15GHz



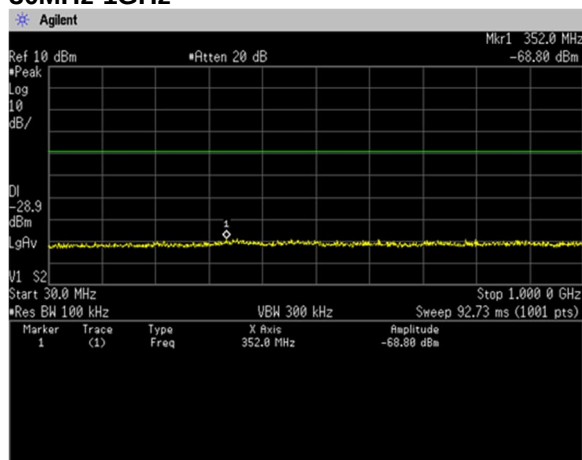
15GHz-20GHz



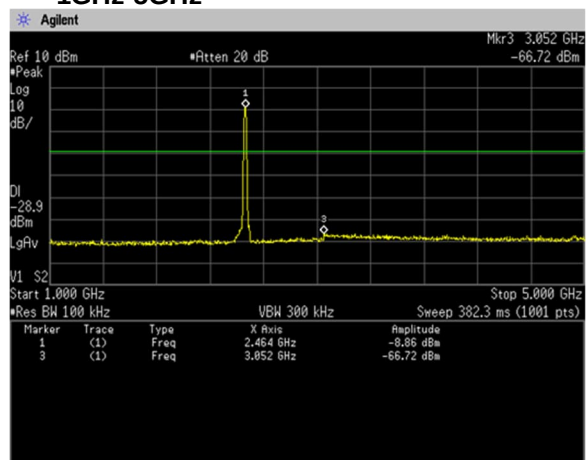
20GHz-25GHz



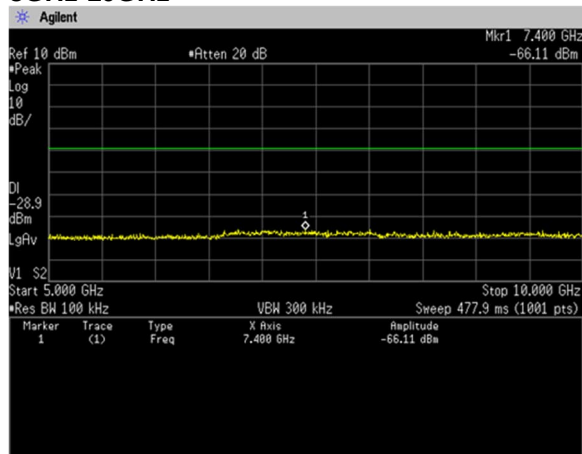
Channel High 30MHz-1GHz



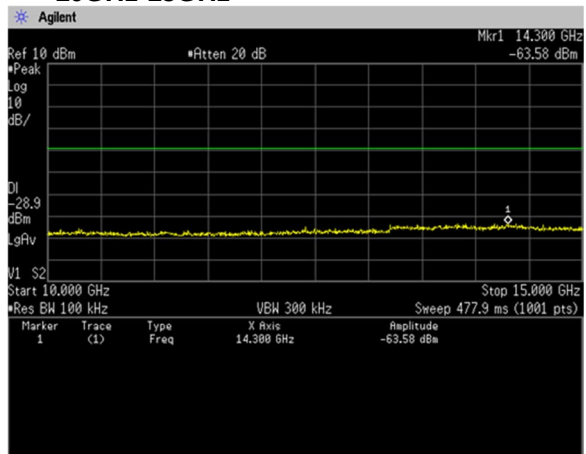
1GHz-5GHz



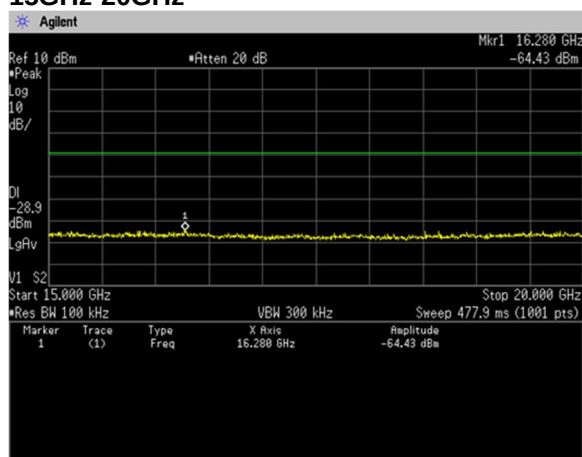
5GHz-10GHz



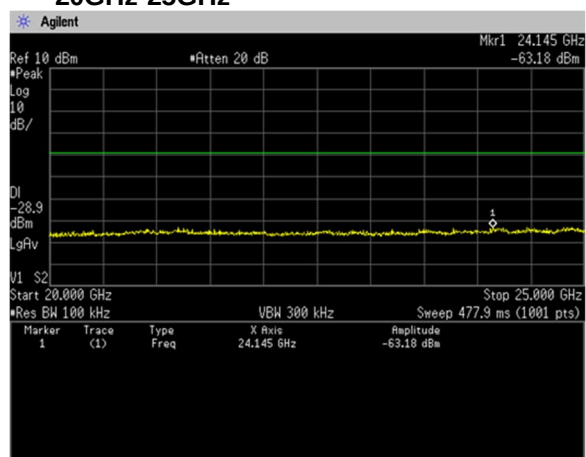
10GHz-15GHz

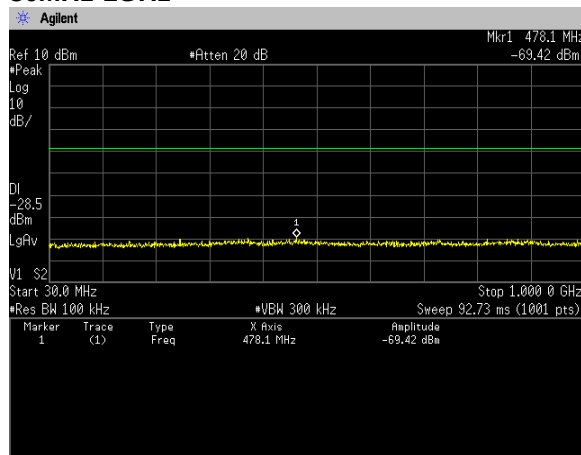
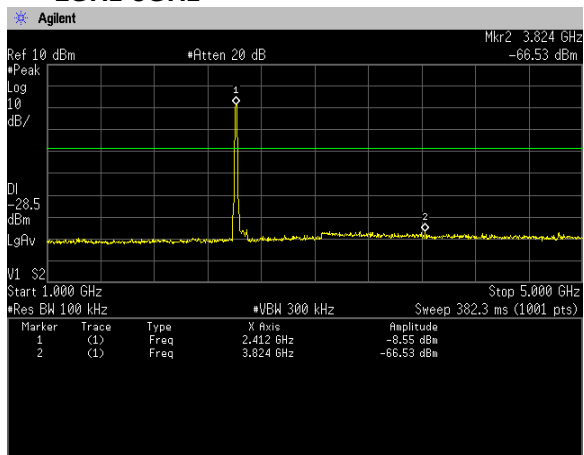
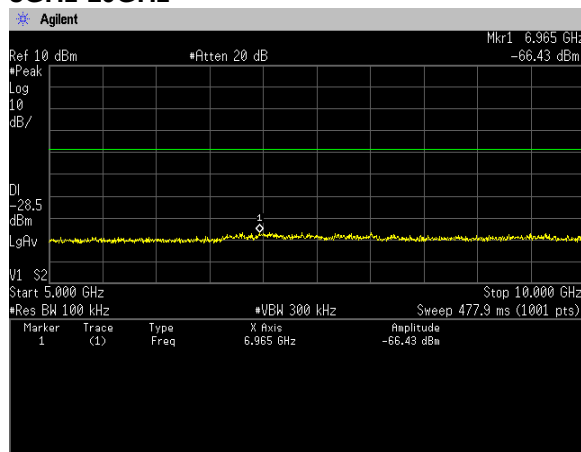
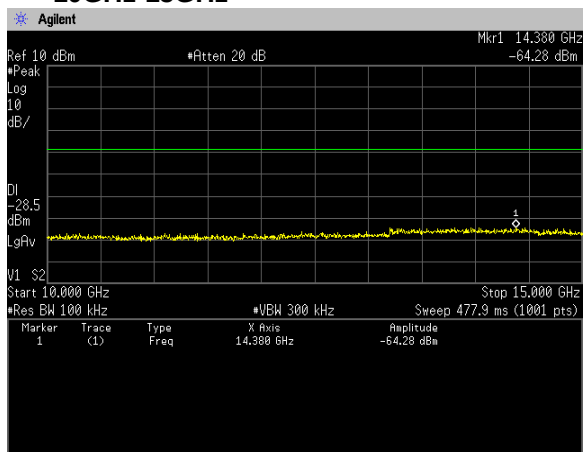
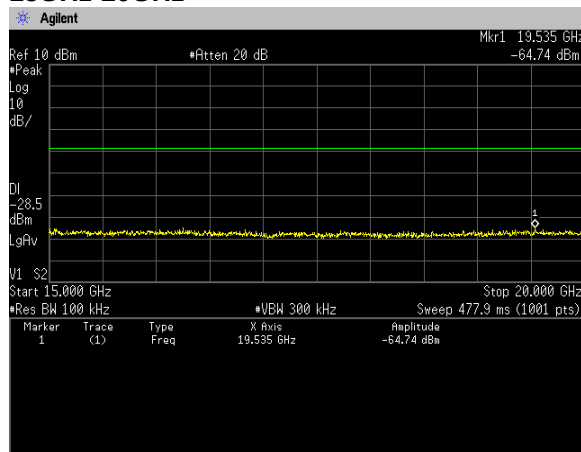
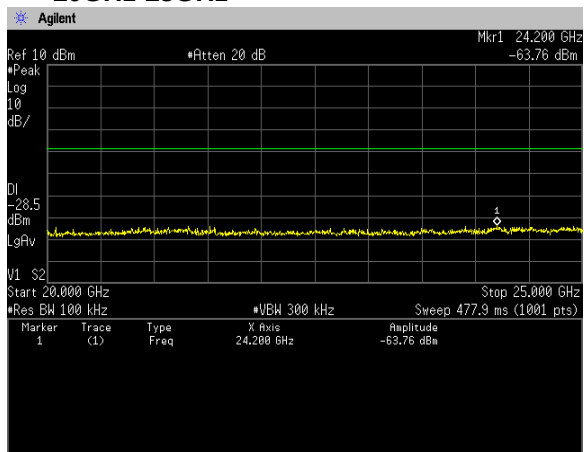


15GHz-20GHz

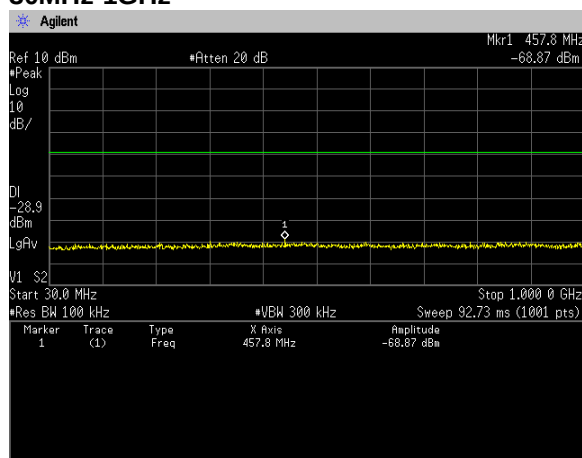


20GHz-25GHz

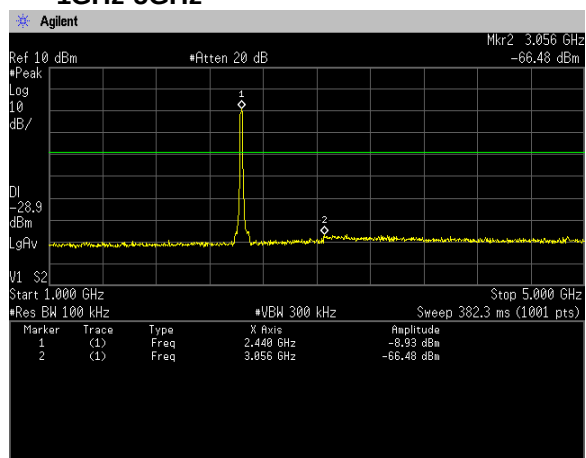


EB1207**[IEEE802.11n (HT20)]****Channel Low****30MHz-1GHz****1GHz-5GHz****5GHz-10GHz****10GHz-15GHz****15GHz-20GHz****20GHz-25GHz**

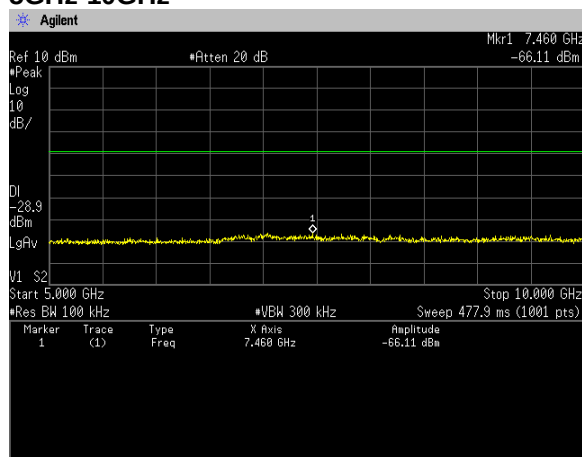
Channel Middle 30MHz-1GHz



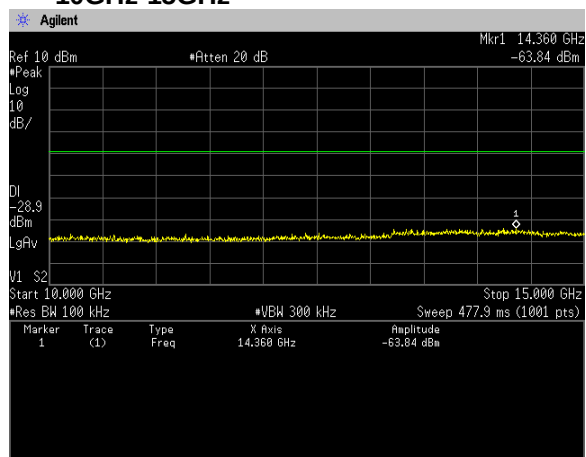
1GHz-5GHz



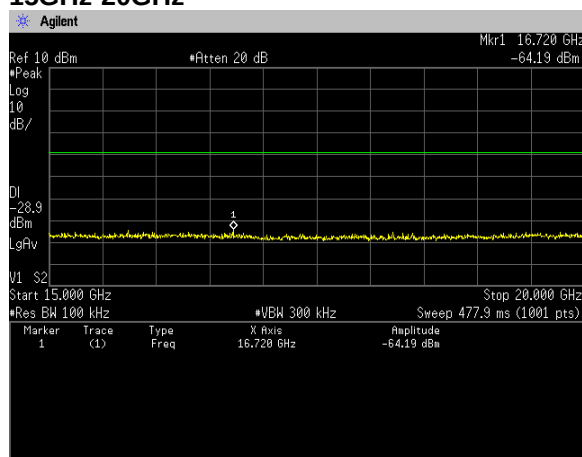
5GHz-10GHz



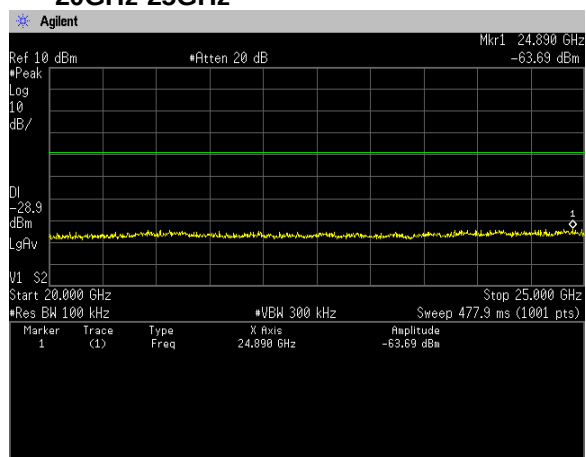
10GHz-15GHz



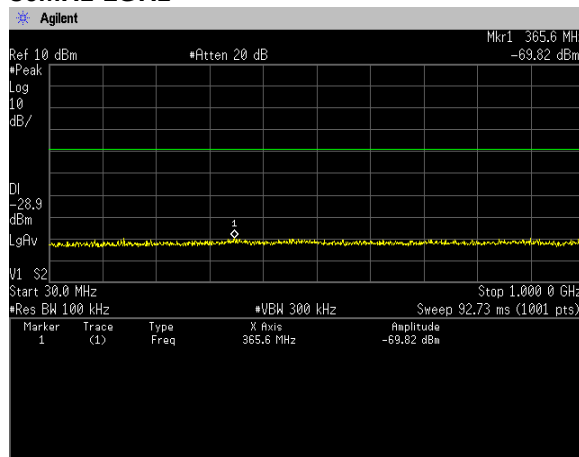
15GHz-20GHz



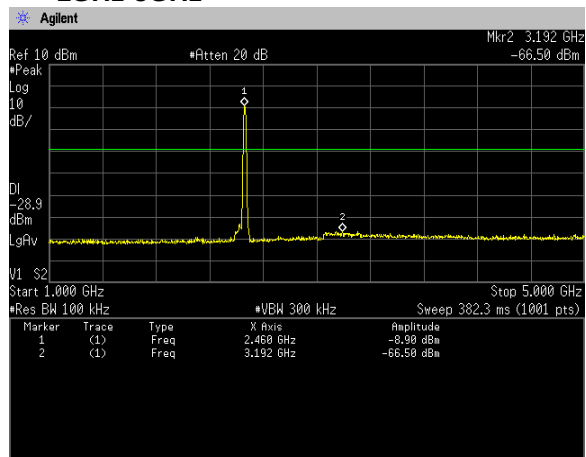
20GHz-25GHz



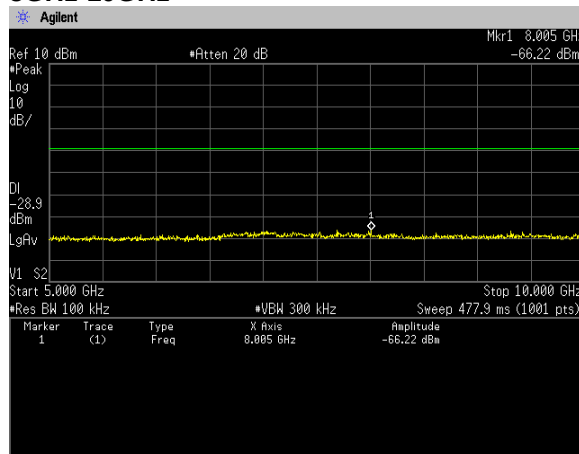
Channel High 30MHz-1GHz



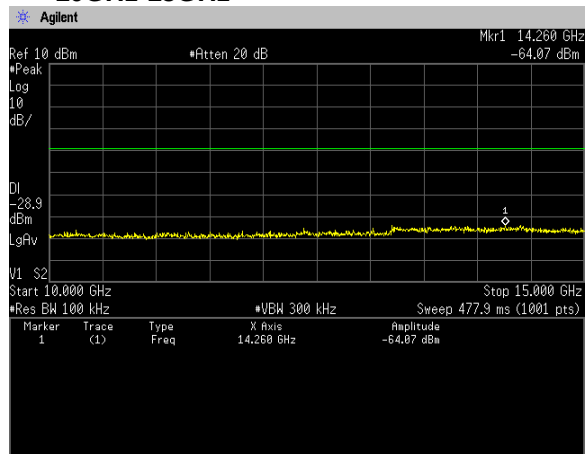
1GHz-5GHz



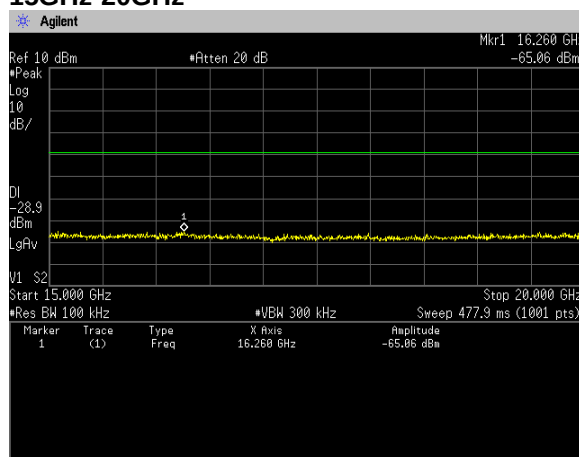
5GHz-10GHz



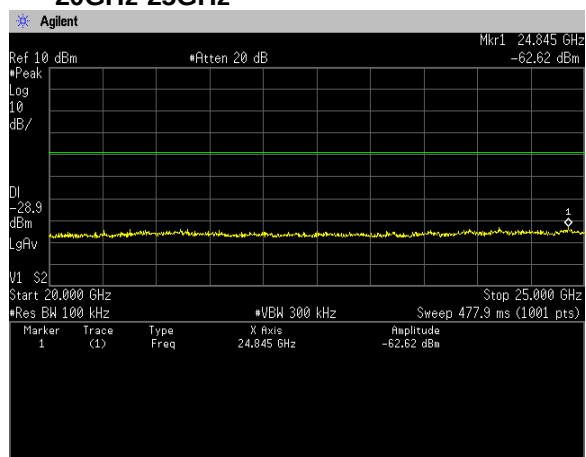
10GHz-15GHz



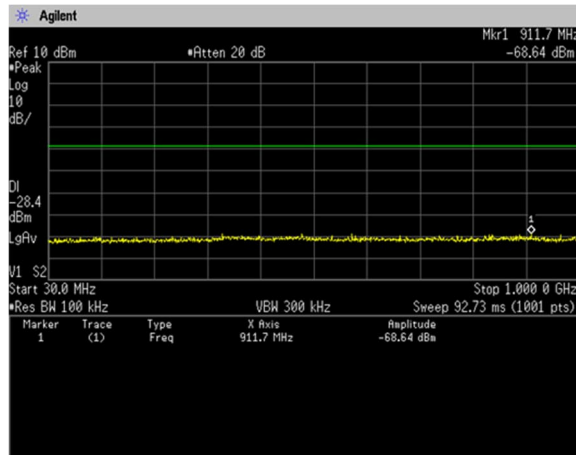
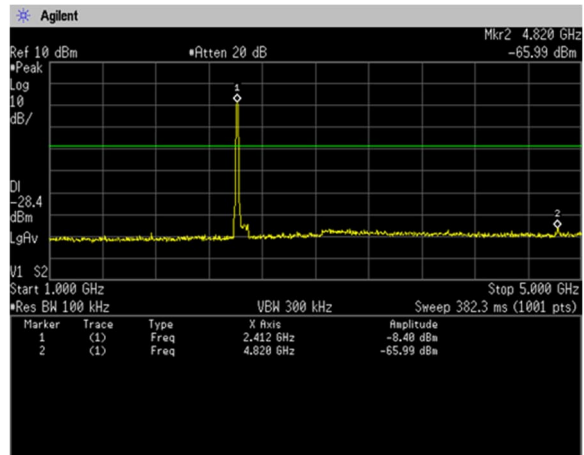
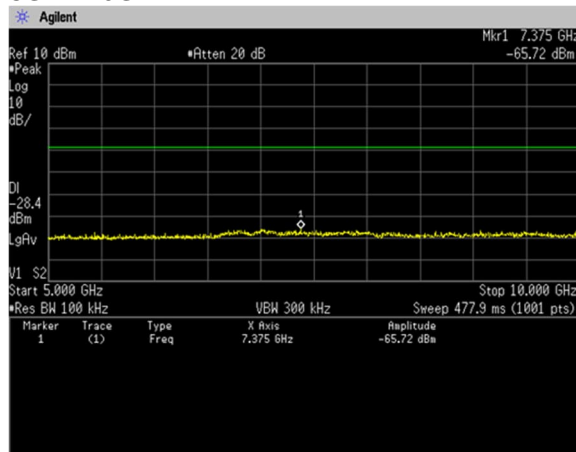
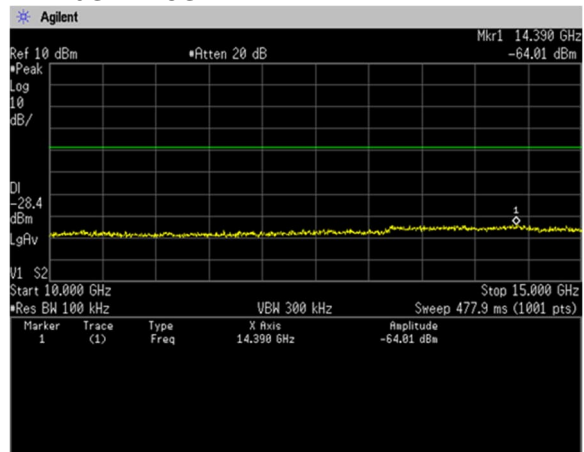
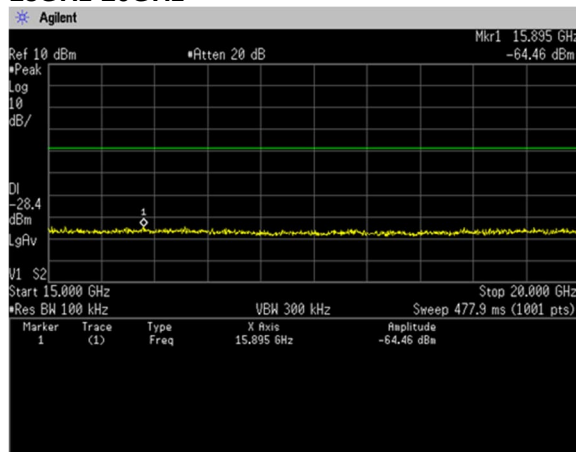
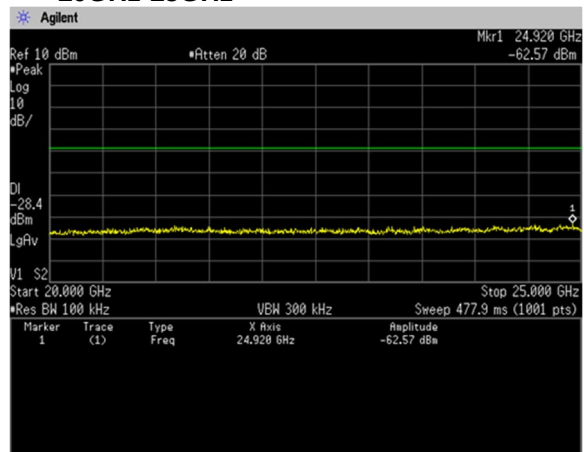
15GHz-20GHz



20GHz-25GHz

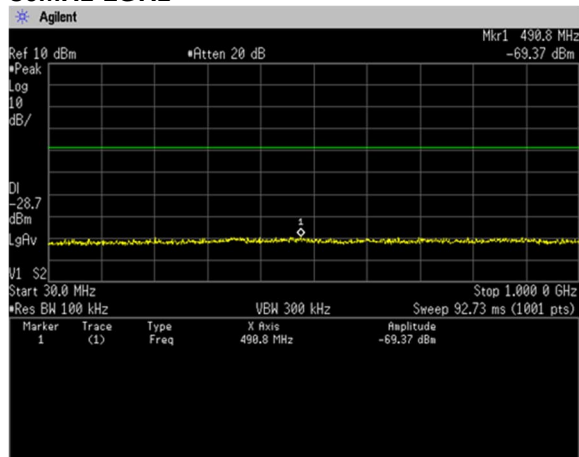


Comparison of the charts of EB1190EM and EB1207 Agilent showed that the difference in test results was less than 3 dB.

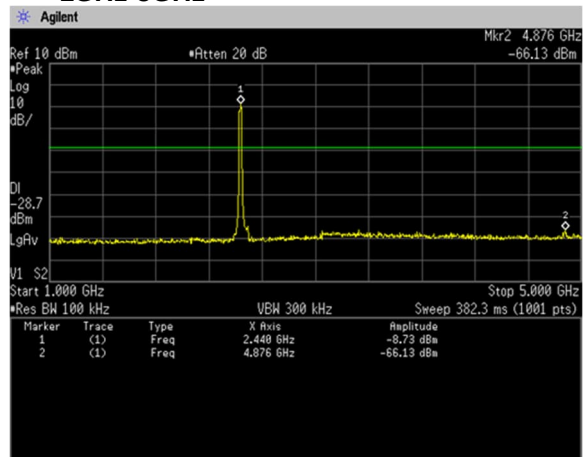
EB1190EM**[IEEE802.11ac (VHT20)]****Channel Low****30MHz-1GHz****1GHz-5GHz****5GHz-10GHz****10GHz-15GHz****15GHz-20GHz****20GHz-25GHz**

Channel Middle

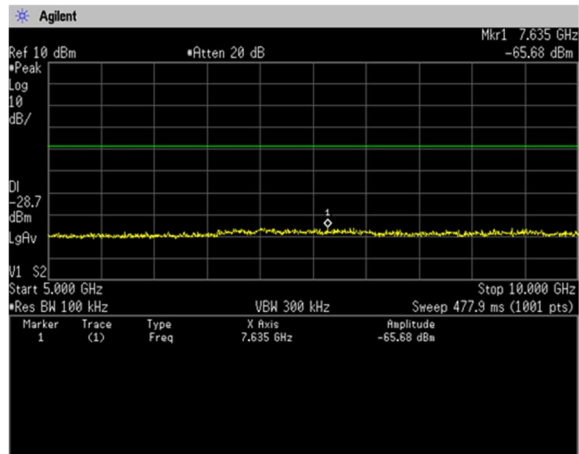
30MHz-1GHz



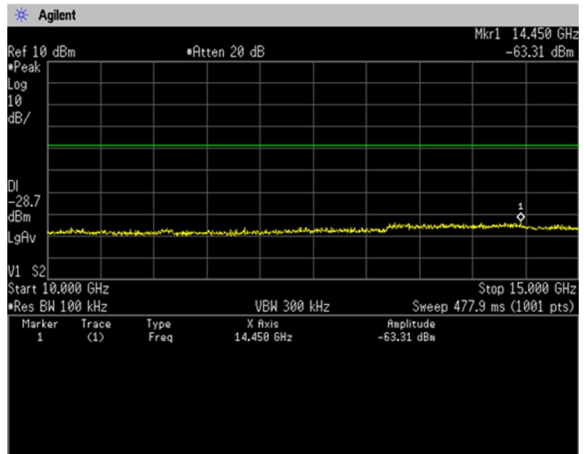
1GHz-5GHz



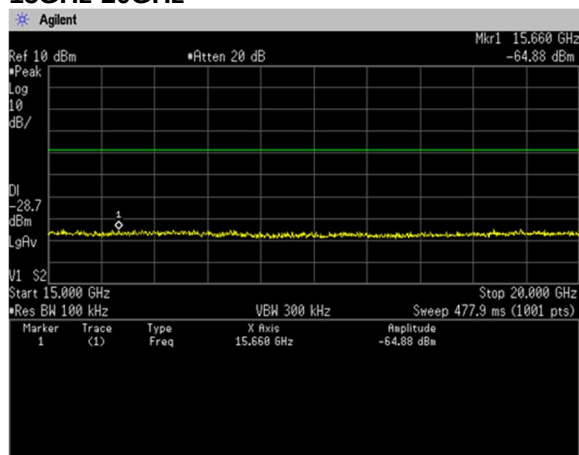
5GHz-10GHz



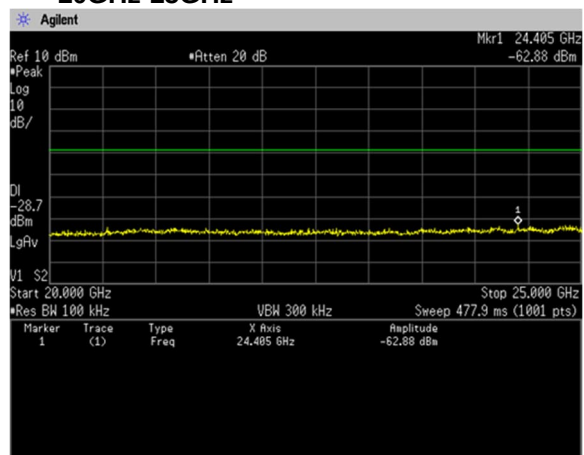
10GHz-15GHz



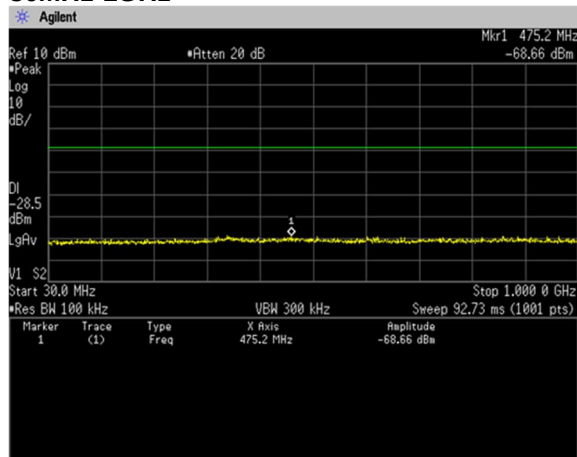
15GHz-20GHz



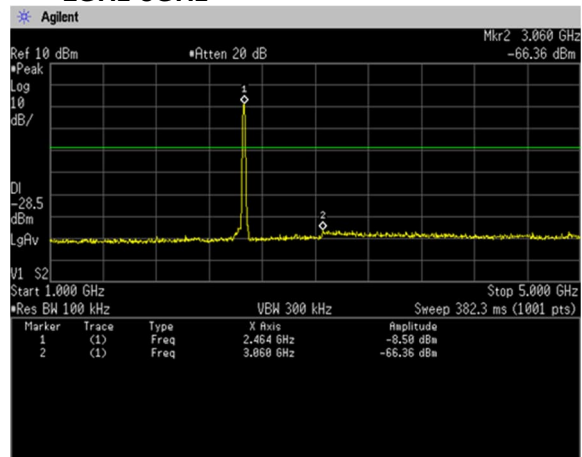
20GHz-25GHz



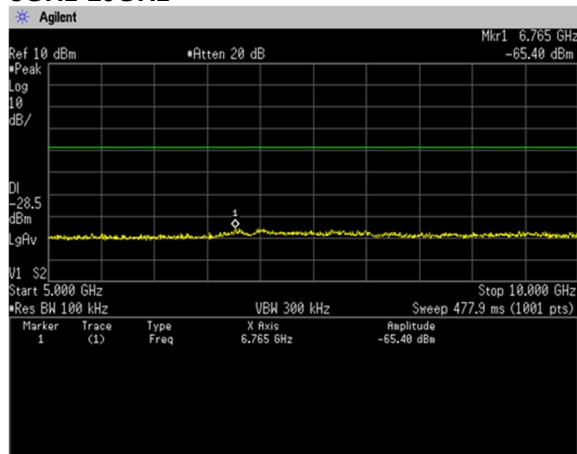
Channel High 30MHz-1GHz



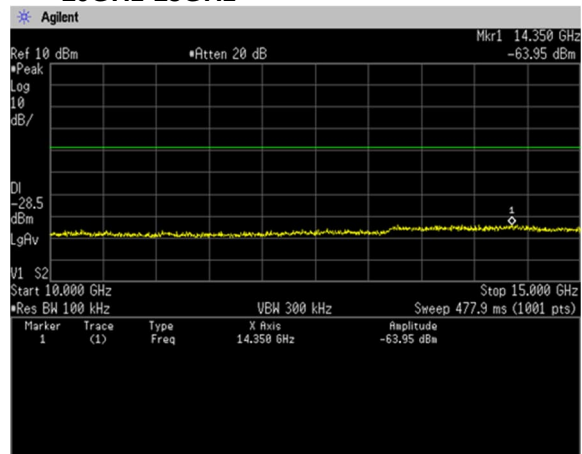
1GHz-5GHz



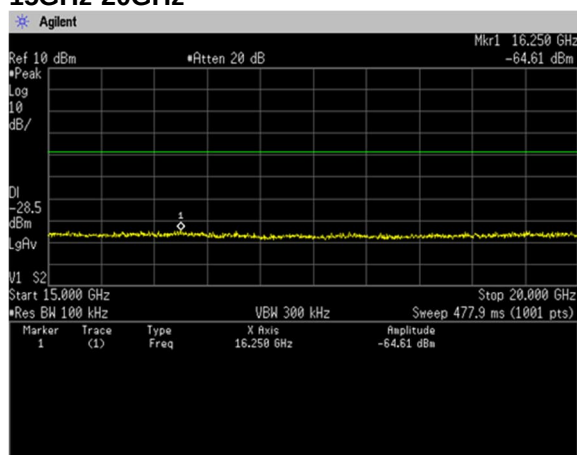
5GHz-10GHz



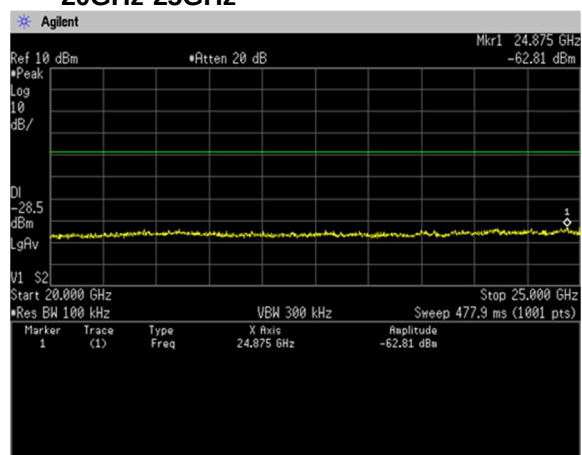
10GHz-15GHz



15GHz-20GHz



20GHz-25GHz



4.5 Spurious Emissions - Radiated -

4.5.1 Measurement procedure

[FCC 15.247(d), 15.205, 15.209, KDB 558074 D01 v05r02, Section 8.6]

Test was applied by following conditions.

Test method	: ANSI C63.10
Frequency range	: 9 kHz to 25 GHz
Test place	: 3m Semi-anechoic chamber, 10m Semi-anechoic chamber No.1
EUT was placed on	: Styrofoam table / (W) 1.0 × (D) 0.8 × (H) 0.8 m (below 1 GHz) Styrofoam table / (W) 0.6 × (D) 0.6 × (H) 1.5 m (above 1 GHz)
Antenna distance	: 3 m
Test receiver setting	Below 1 GHz
- Detector	: Average (9 kHz-90 kHz, 110 kHz-490 kHz), Quasi-peak
- Bandwidth	: 200 Hz, 120 kHz
Spectrum analyzer setting	Above 1 GHz
- Peak	: RBW=1 MHz, VBW=3 MHz, Span=0 Hz, Sweep=auto
- Average	: 11b: RBW=1 MHz, VBW=3 kHz, Span=0 Hz, Sweep=auto 11g, 11n, 11ac: RBW=1 MHz, VBW=1 kHz, Span=0 Hz, Sweep=auto Display mode=Linear

Average Measurement Setting [VBW]

mode	Duty Cycle (%)	Ton [μs]	Toff [μs]	1/Ton (kHz)	Determined VBW Setting
11b	97.16	0.992	0.029	1.008	3kHz
11g	97.48	1.391	0.036	0.719	1kHz
11n(HT20)	97.20	1.286	0.037	0.778	1kHz
11ac(VHT20)	97.33	1.312	0.036	0.762	1kHz

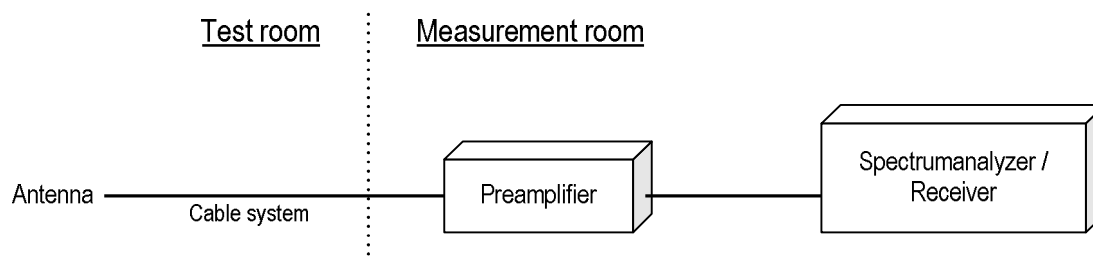
Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open area test site.

Therefore, sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 937606.

Radiated emission measurements are performed at 3m distance with the broadband antenna (Loop antenna, Biconical antenna, Log periodic antenna and Double ridged guide antenna). The antenna is positioned both the horizontal and vertical planes of polarization and height is varied 1m to 4m and stopped at height producing the maximum emission. As for the Loop antenna, it is positioned with its plane vertical, and the center of the Loop antenna is 1m above the ground plane.

The EUT is Placed on a turntable, which is 0.8m/1.5m above ground plane. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. The test results represent the worst cases emission for each emission with manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation. Sufficient time for the EUT, support equipment, and test equipment are allowed for them to warm up to their normal operating condition.

- Test configuration



4.5.2 Calculation method

[9 kHz to 150 kHz]

Emission level = Reading + (Ant factor + Cable system loss)

Margin = Limit – Emission level

[150 kHz to 25 GHz]

Emission level = Reading + (Ant factor + Cable system loss - Amp. Gain)

Margin = Limit – Emission level

Example:

Limit @ 4824.0 MHz: 74.0 dBuV/m (Peak Limit)

S.A Reading = 49.5 dBuV Cable system loss = 8.4 dB

Result = 49.5 + 8.4 = 45.1 dBuV/m

Margin = 74.0 - 45.1 = 16.1 dB

4.5.3 Limit

Frequency [MHz]	Field strength		Distance [m]
	[uV/m]	[dBuV/m]	
0.009-0.490	2400 / F [kHz]	20logE [uV/m]	300
0.490-1.705	24000 / F [kHz]	20logE [uV/m]	30
1.705-30	30	29.5	30
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Note:

1. The lower limit shall apply at the transition frequencies.
2. Emission level [dBuV/m] = 20log Emission [uV/m]
3. As shown in 15.35(b), for frequencies above 1000 MHz, 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 20 dB under any condition modulation.

4.5.4 Test data

Date	: 2-May-2024		
Temperature	: 21.6 [°C]		
Humidity	: 36.2 [%]	Test engineer	:
Test place	: 3m Semi-anechoic chamber		<u>Chiaki Kanno</u>
Date	: 16-May-2024		
Temperature	: 21.6 [°C]		
Humidity	: 47.4 [%]	Test engineer	:
Test place	: 3m Semi-anechoic chamber		<u>Chiaki Kanno</u>
Date	: 29-June-2024		
Temperature	: 20.1 [°C]		
Humidity	: 58.3 [%]	Test engineer	:
Test place	: 10m Semi-anechoic chamber		<u>Taiki Watanabe</u>
Date	: 8-August-2024		
Temperature	: 21.1 [°C]		
Humidity	: 59.4 [%]	Test engineer	:
Test place	: 3m Semi-anechoic chamber		<u>Tadahiro Seino</u>
Date	: 9-August-2024		
Temperature	: 21.9 [°C]		
Humidity	: 58.8 [%]	Test engineer	:
Test place	: 3m Semi-anechoic chamber		<u>Tadahiro Seino</u>

4.5.4.1 Transmission mode

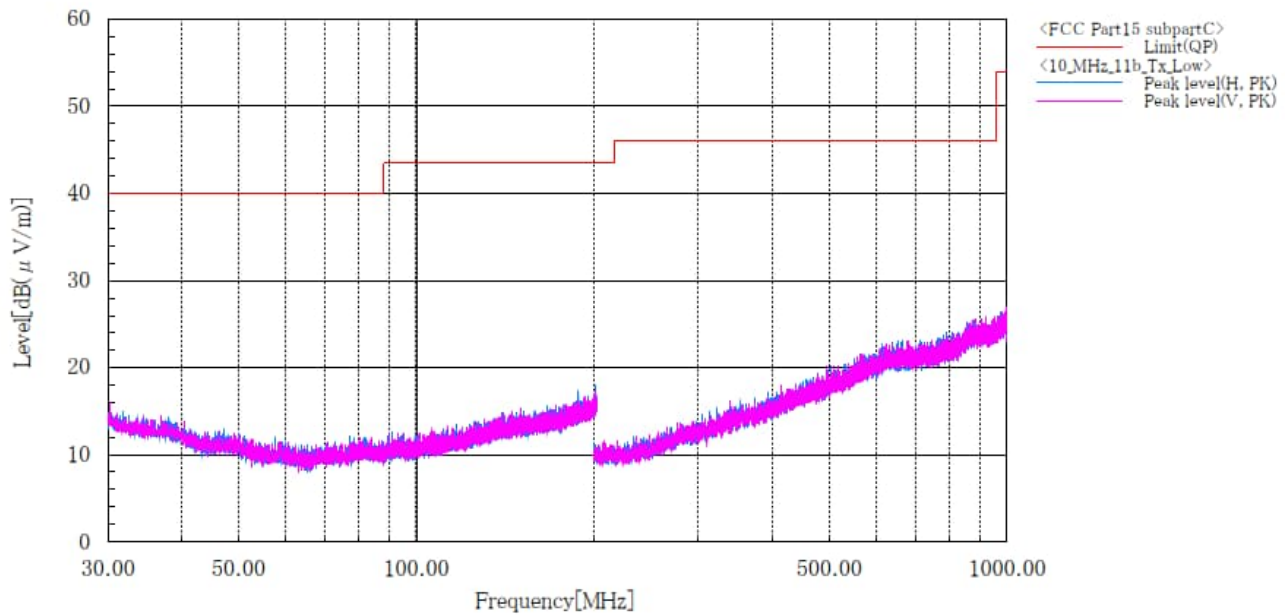
EB1190EM [11b]

Channel Low

BELOW 1GHz

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : WLAN_11b_Tx_CH:Low

Sheet No. : 10
 Standard : FCC Part15 subpart C
 Operator : C.Kanno
 Temp,Hum,Atm : 21.6 [°C], 47.4 [%]
 Note1 :



Final Result

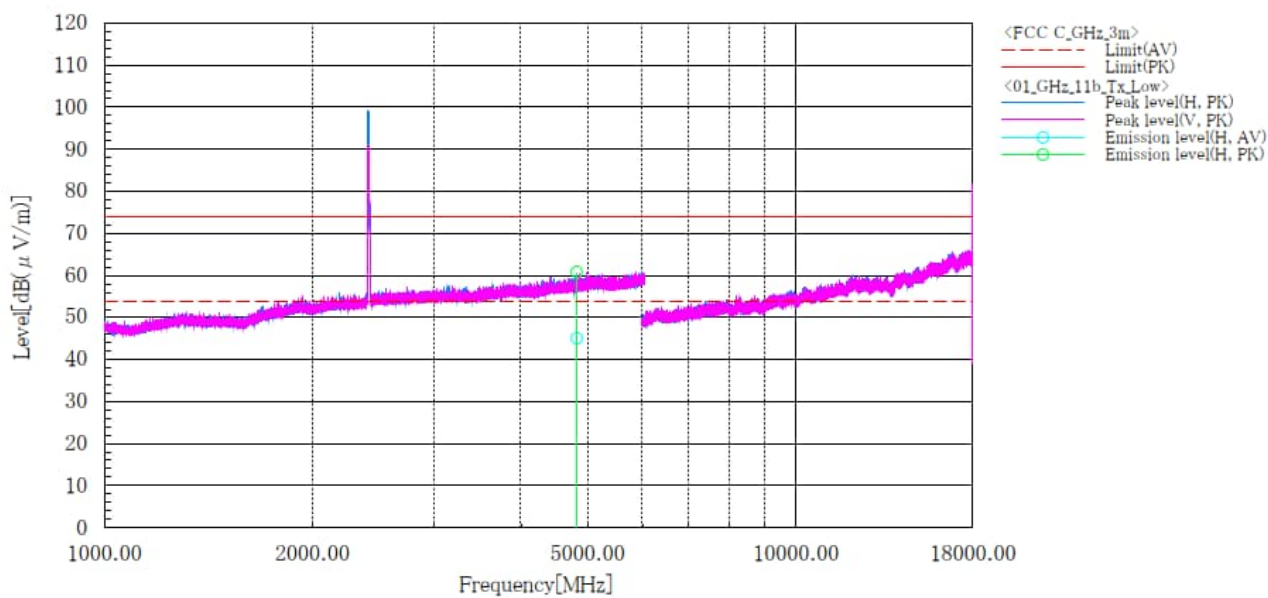
Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

EB1190EM [11b] **Channel Low** **ABOVE 1GHz**

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : WLAN 11b_Tx

Sheet No. : 01
 Standard : FCC Part.15 subpart C
 Operator : C.Kanno
 Temp,Hum,Atm : 21.6 [°C], 36.2 [%]
 Note1 : CH:1 (2412MHz)



Final Result

No.	Frequency	Pol	Reading	Reading	c. f	Result	Result	Limit	Limit	Margin	Margin	Height	Angle
	[MHz]		AV [dB(μV)]	PK [dB(μV)]	[dB(1/m)]	AV [dB(μV/m)]	PK [dB(μV/m)]	AV [dB(μV/m)]	PK [dB(μV/m)]	AV [dB]	PK [dB]	[cm]	[deg]
1	4824.000	H	32.2	47.9	12.9	45.1	60.8	54.0	74.0	8.9	13.2	170.0	159.0

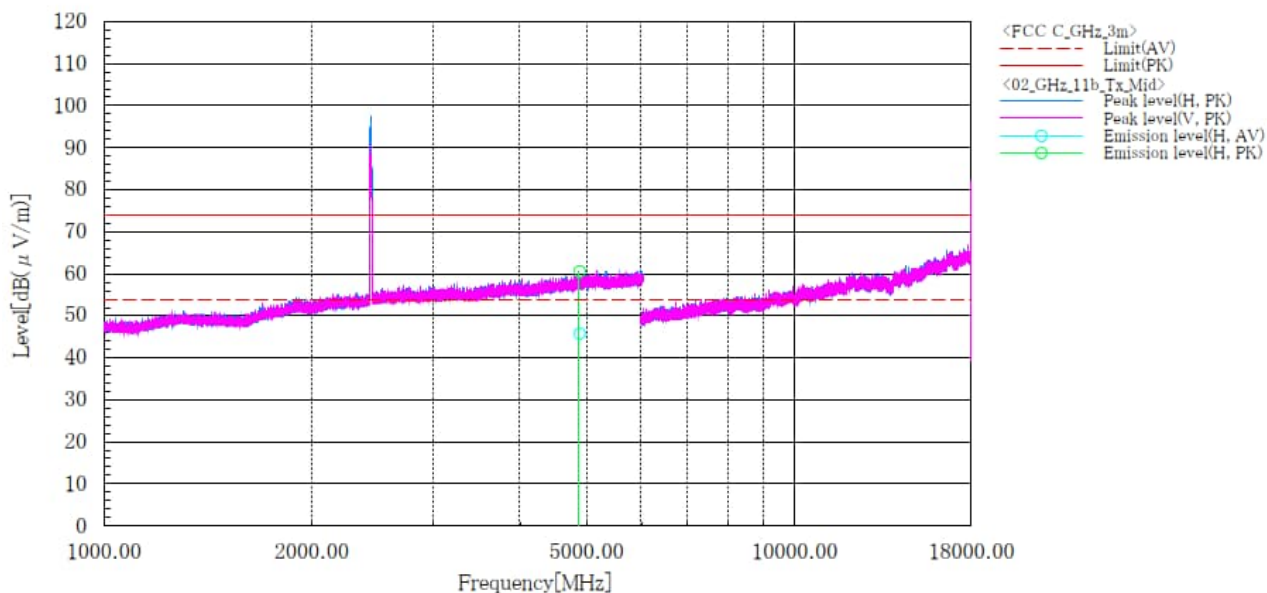
Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

EB1190EM [11b] **Channel Middle** **ABOVE 1GHz**

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : WLAN 11b_Tx

Sheet No. : 02
 Standard : FCC Part.15 subpart C
 Operator : C.Kanno
 Temp,Hum,Atm : 21.6 [°C], 36.2 [%]
 Note1 : CH:6 (2437MHz)



Final Result

No.	Frequency	Pol	Reading	Reading	c. f	Result	Result	Limit	Limit	Margin	Margin	Height	Angle
	[MHz]		AV	PK		AV	PK	AV	PK	AV	PK		
			[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[deg]
1	4874.000	H	32.8	47.7	13.0	45.8	60.7	54.0	74.0	8.2	13.3	154.0	241.0

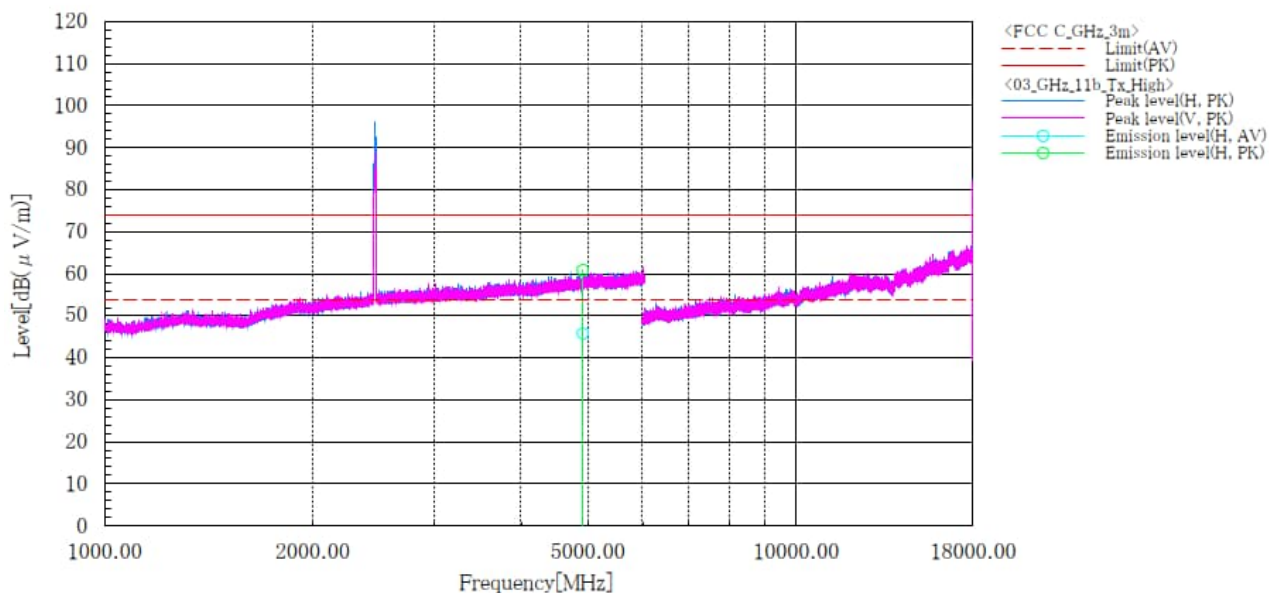
Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

EB1190EM [11b] **Channel High** **ABOVE 1GHz**

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : WLAN 11b_Tx

Sheet No. : 03
 Standard : FCC Part.15 subpart C
 Operator : C.Kanno
 Temp,Hum,Atm : 21.6 [°C], 36.2 [%]
 Note1 : CH:11 (2462MHz)



Final Result

No.	Frequency	Pol	Reading AV	Reading PK	c. f	Result AV	Result PK	Limit AV	Limit PK	Margin AV	Margin PK	Height	Angle
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[deg]
1	4924.000	H	32.8	47.8	13.1	45.9	60.9	54.0	74.0	8.1	13.1	176.0	290.0

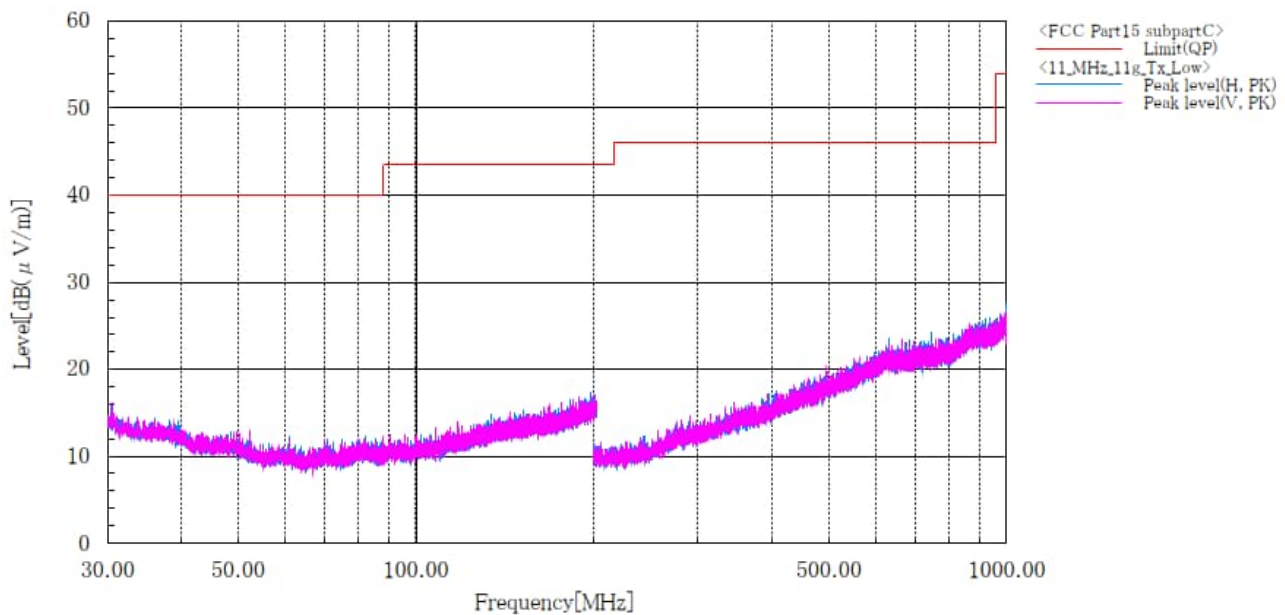
Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

**EB1190EM [11g]
Channel Low
BELOW 1GHz**

Company name : KYOCERA Corporation
EUT : Mobile Phone
Model No. : EB1190EM
Serial No. : N/A
Test mode : WLAN_11g_Tx_CH:Low

Sheet No. : 11
Standard : FCC Part15 subpart C
Operator : C.Kanno
Temp,Hum,Atm : 21.6 [°C], 47.4 [%]
Note1 :



Final Result

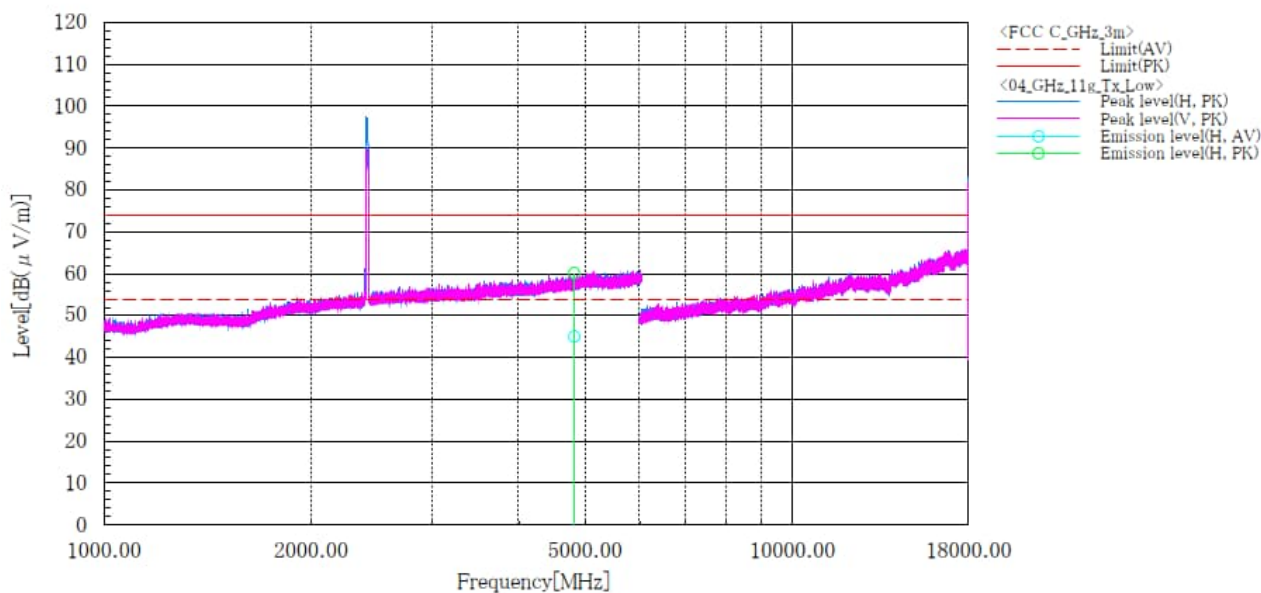
Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable - Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

EB1190EM [11g] **Channel Low** **ABOVE 1GHz**

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : WLAN 11g_Tx

Sheet No. : 04
 Standard : FCC Part.15 subpart C
 Operator : C.Kanno
 Temp,Hum,Atm : 21.6 [°C], 36.2 [%]
 Note1 : CH:1 (2412MHz)



Final Result

No.	Frequency	Pol	Reading AV	Reading PK	c. f	Result AV	Result PK	Limit AV	Limit PK	Margin AV	Margin PK	Height	Angle
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[deg]
1	4824.000	H	32.1	47.3	12.9	45.0	60.2	54.0	74.0	9.0	13.8	164.0	156.0

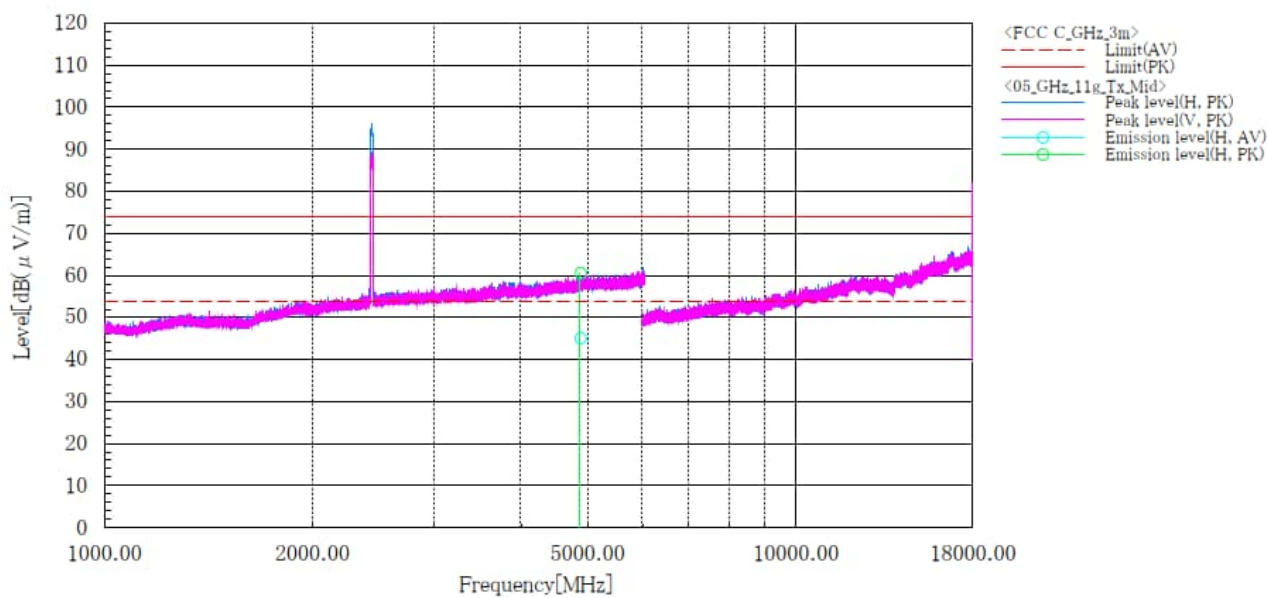
Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

EB1190EM [11g] **Channel Middle** **ABOVE 1GHz**

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : WLAN 11g_Tx

Sheet No. : 05
 Standard : FCC Part.15 subpart C
 Operator : C.Kanno
 Temp,Hum,Atm : 21.6 [°C], 36.2 [%]
 Note1 : CH:6 (2437MHz)



Final Result

No.	Frequency	Pol	Reading	Reading	c. f	Result	Result	Limit	Limit	Margin	Margin	Height	Angle
	[MHz]		AV	PK		AV	PK	AV	PK	AV	PK		
			[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[deg]
1	4874.000	H	32.1	47.6	13.0	45.1	60.6	54.0	74.0	8.9	13.4	169.0	246.0

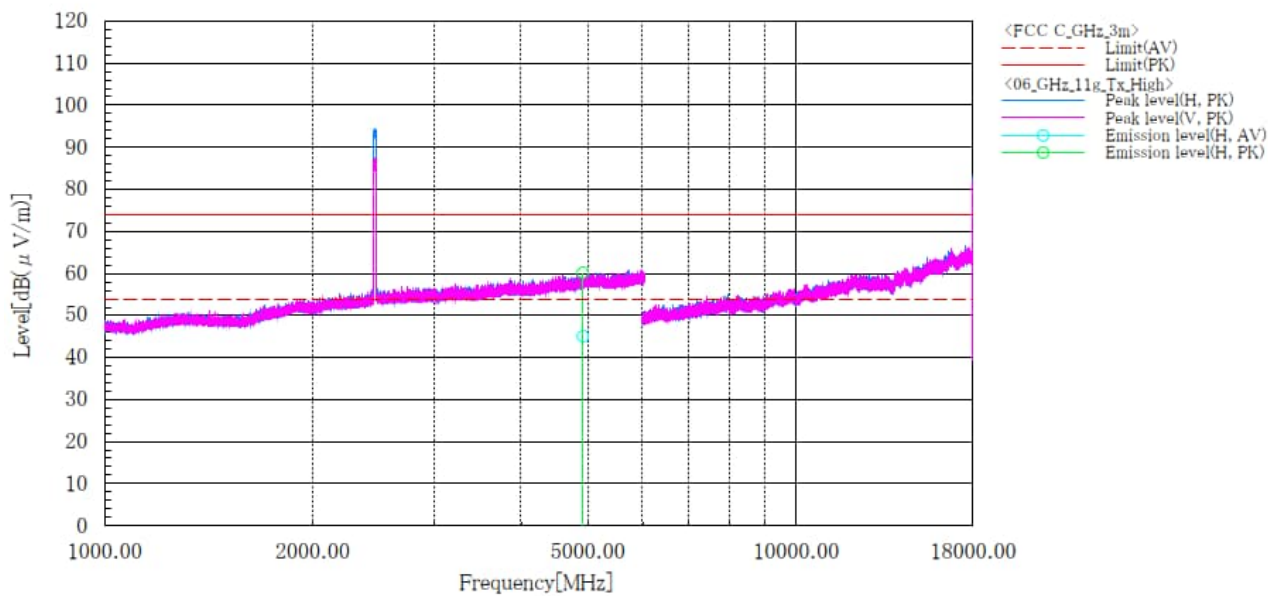
Note:

- Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
- No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

EB1190EM [11g] **Channel High** **ABOVE 1GHz**

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : WLAN 11g_Tx

Sheet No. : 06
 Standard : FCC Part.15 subpart C
 Operator : C.Kanno
 Temp,Hum,Atm : 21.6 [°C], 36.2 [%]
 Note1 : CH:11 (2462MHz)



Final Result

No.	Frequency	Pol	Reading AV	Reading PK	c. f	Result AV	Result PK	Limit AV	Limit PK	Margin AV	Margin PK	Height	Angle
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[deg]
1	4924.000	H	32.0	47.1	13.1	45.1	60.2	54.0	74.0	8.9	13.8	161.0	230.0

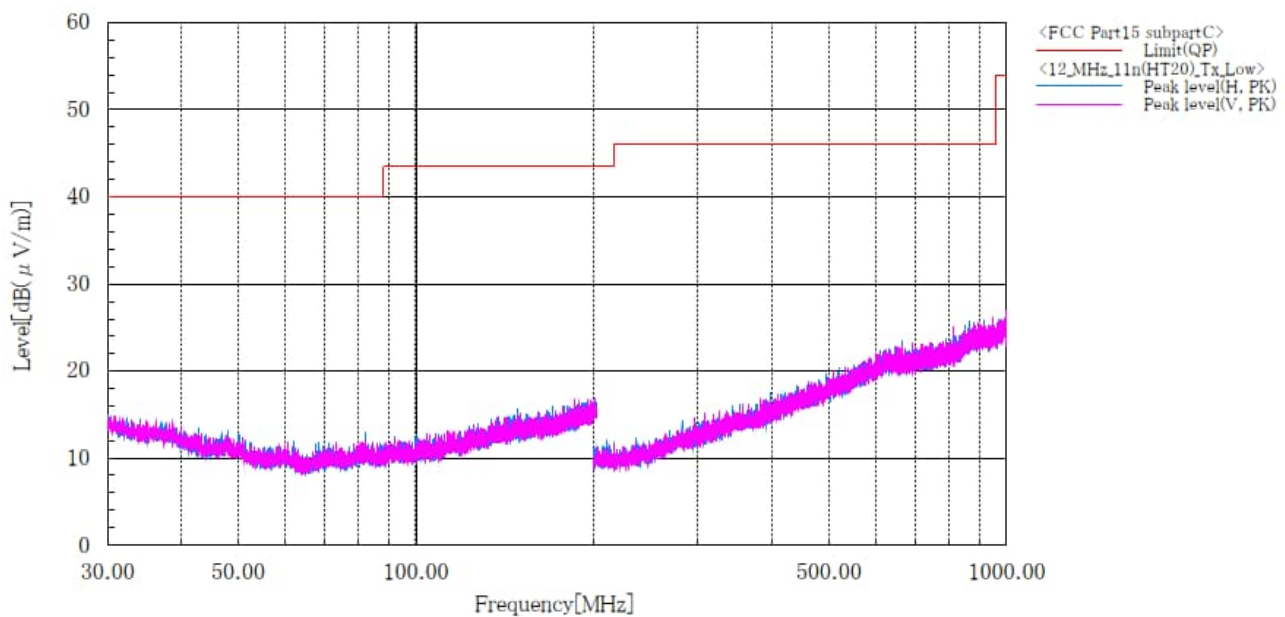
Note:

- Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable - Amp)]
- No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

EB1190EM [11n(HT20)]
Channel Low
BELOW 1GHz

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : WLAN_11n(HT20)_Tx_CH:Low

Sheet No. : 12
 Standard : FCC Part15 subpart C
 Operator : C.Kanno
 Temp,Hum,Atm : 21.6 [°C], 47.4 [%]
 Note1 :



Final Result

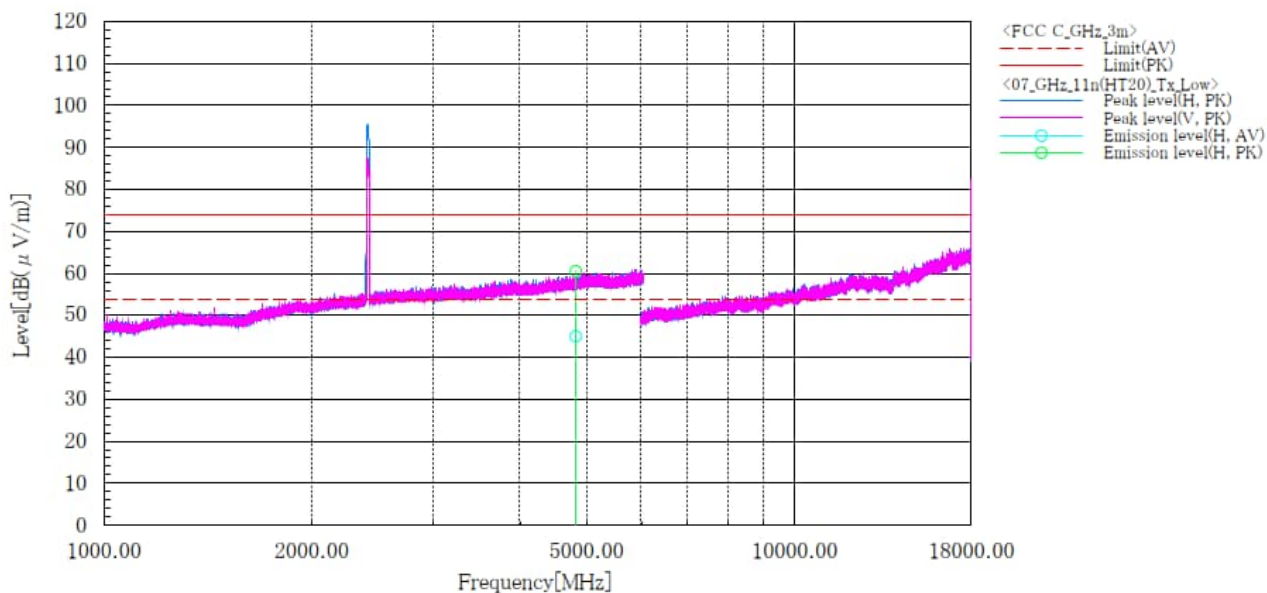
Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable - Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

EB1190EM [11n(HT20)]**Channel Low
ABOVE 1GHz**

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : WLAN 11n(HT20)_Tx

Sheet No. : 07
 Standard : FCC Part.15 subpart C
 Operator : C.Kanno
 Temp,Hum,Atm : 21.6 [°C], 36.2 [%]
 Note1 : CH:1 (2412MHz)

**Final Result**

No.	Frequency	Pol	Reading AV	Reading PK	c. f	Result AV	Result PK	Limit AV	Limit PK	Margin AV	Margin PK	Height	Angle
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[deg]
1	4824.000	H	32.1	47.6	12.9	45.0	60.5	54.0	74.0	9.0	13.5	170.0	162.0

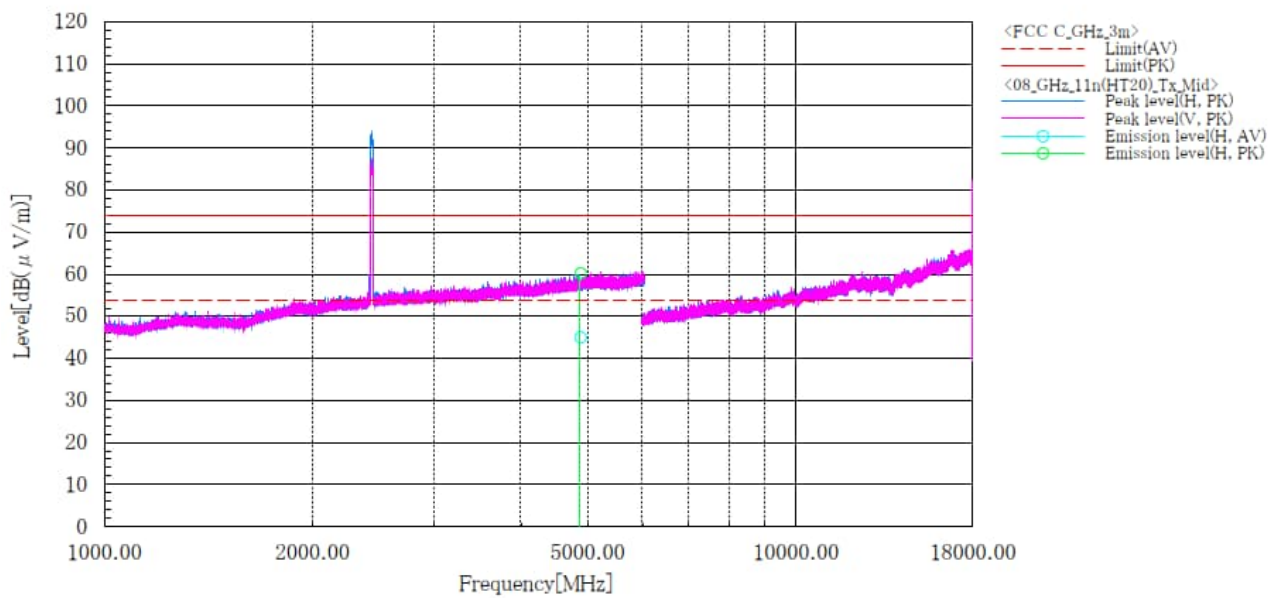
Note:

- Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
- No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

EB1190EM [11n(HT20)]**Channel Middle****ABOVE 1GHz**

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : WLAN 11n(HT20)_Tx

Sheet No. : 08
 Standard : FCC Part.15 subpart C
 Operator : C.Kanno
 Temp.,Hum.,Atm : 21.6 [°C], 36.2 [%]
 Note1 : CH:6 (2437MHz)

**Final Result**

No.	Frequency	Pol	Reading AV	Reading PK	c. f	Result AV	Result PK	Limit AV	Limit PK	Margin AV	Margin PK	Height	Angle
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[deg]
1	4874.000	H	32.0	47.3	13.0	45.0	60.3	54.0	74.0	9.0	13.7	163.0	237.0

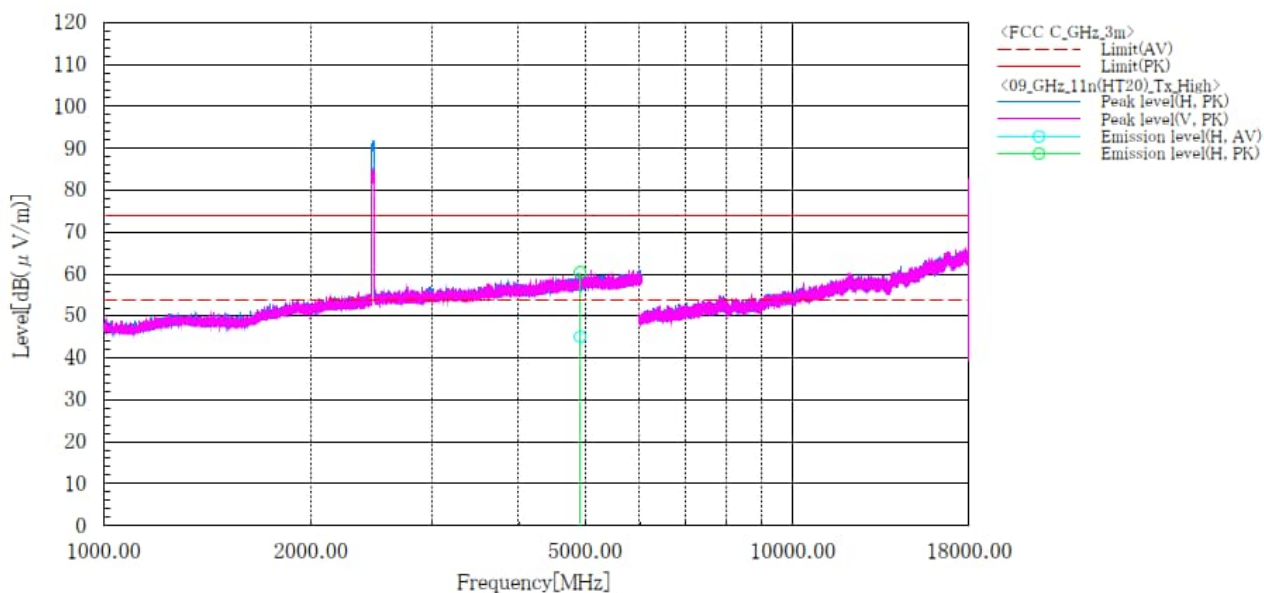
Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

EB1190EM [11n(HT20)]**Channel High
ABOVE 1GHz**

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1190EM
 Serial No. : N/A
 Test mode : WLAN 11n(HT20)_Tx

Sheet No. : 09
 Standard : FCC Part.15 subpart C
 Operator : C.Kanno
 Temp,Hum,Atm : 21.6 [°C], 36.2 [%]
 Note1 : CH:11 (2462MHz)

**Final Result**

No.	Frequency	Pol	Reading AV	Reading PK	c. f	Result AV	Result PK	Limit AV	Limit PK	Margin AV	Margin PK	Height	Angle
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[deg]
1	4924.000	H	32.0	47.3	13.1	45.1	60.4	54.0	74.0	8.9	13.6	169.0	293.0

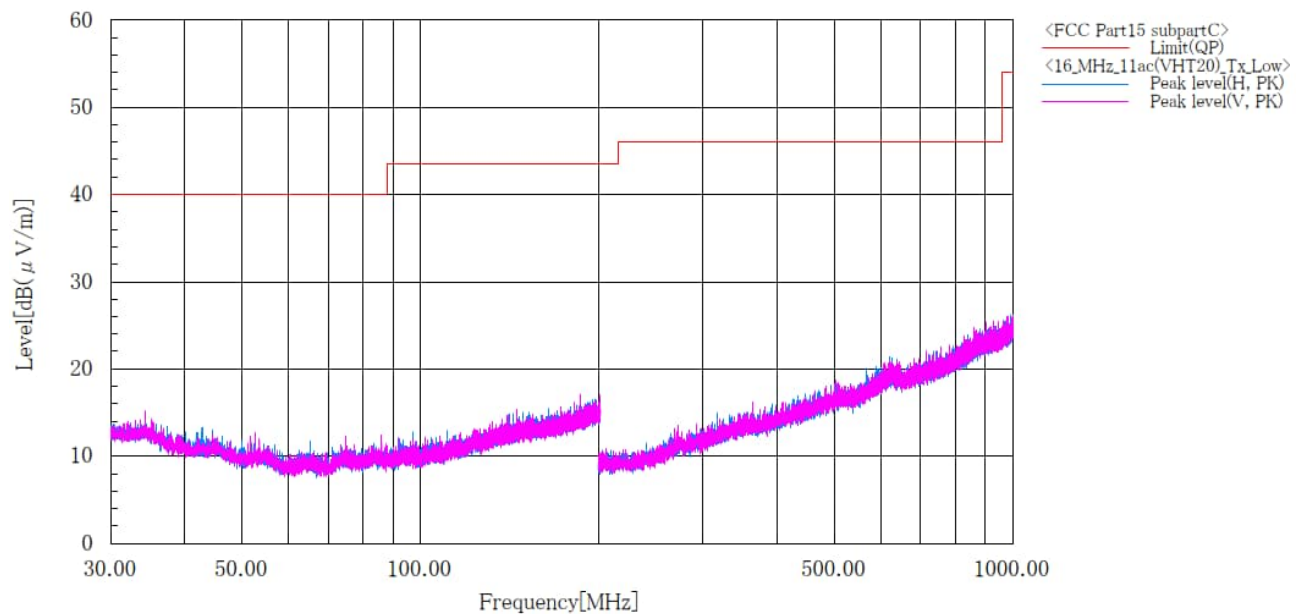
Note:

- Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
- No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

EB1190EM [11ac(VHT20)]**Channel Low
BELOW 1GHz**

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : PC9699
 Serial No. : N/A
 Test mode : WLAN 11ac(VHT20)_Tx

Sheet No. : 16
 Standard : FCC Part15 subpart C
 Operator : T.Watanabe
 Temp,Hum,Atm : 20.1 [°C], 58.3 [%]
 Note1 : CH:1 (2412MHz)

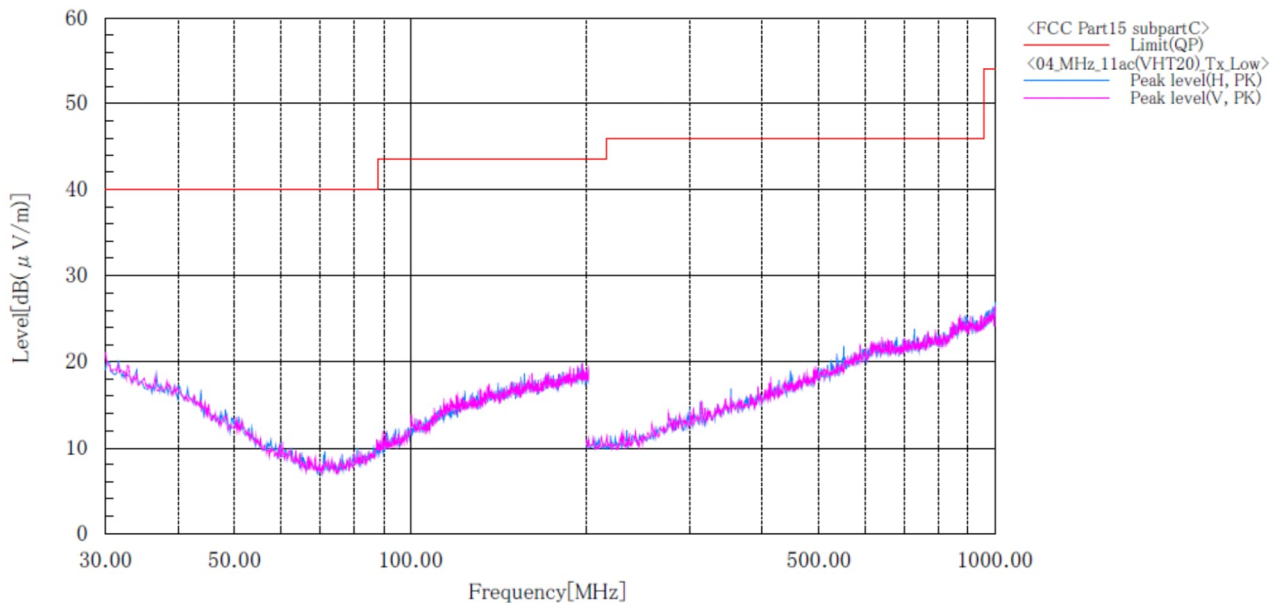
**Final Result****Note:**

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable - Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

EB1207 [11ac(VHT20)]
Channel Low
BELOW 1GHz

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1207
 Serial No. : N/A
 Test mode : WLAN_11ac(VHT20)_Tx_CH:Low

Sheet No. : 04
 Standard : FCC Part15 subpart C
 Operator : T.Seino
 Temp,Hum,Atm : 21.9 [° C], 58.8 [%]
 Note1 :



Final Result

Note:

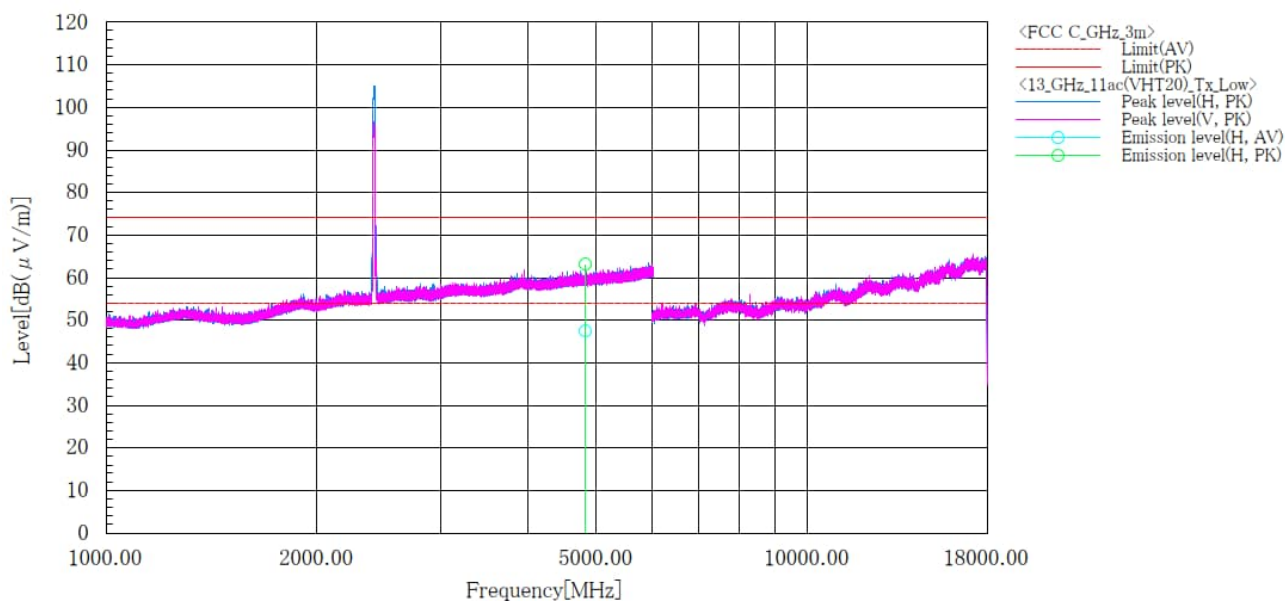
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

Comparison of the charts of EB1190EM and EB1207 showed that the difference in test results was less than 3 dB.

EB1190EM [11ac(VHT20)]**Channel Low
ABOVE 1GHz**

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : PC9699
 Serial No. : N/A
 Test mode : WLAN 11ac(VHT20)_Tx

Sheet No. : 13
 Standard : FCC Part.15 subpart C
 Operator : T.Watanabe
 Temp,Hum,Atm : 20.1 [°C], 58.3 [%]
 Note1 : CH:1 (2412MHz)

**Final Result**

No.	Frequency [MHz]	Pol	Reading AV [dB(μV)]	Reading PK [dB(μV)]	c.f [dB(1/m)]	Result AV [dB(μV/m)]	Result PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Limit PK [dB(μV/m)]	Margin AV [dB]	Margin PK [dB]	Height [cm]	Angle [deg]
1	4824.000	H	32.5	48.2	14.9	47.4	63.1	54.0	74.0	6.6	10.9	146.0	199.0

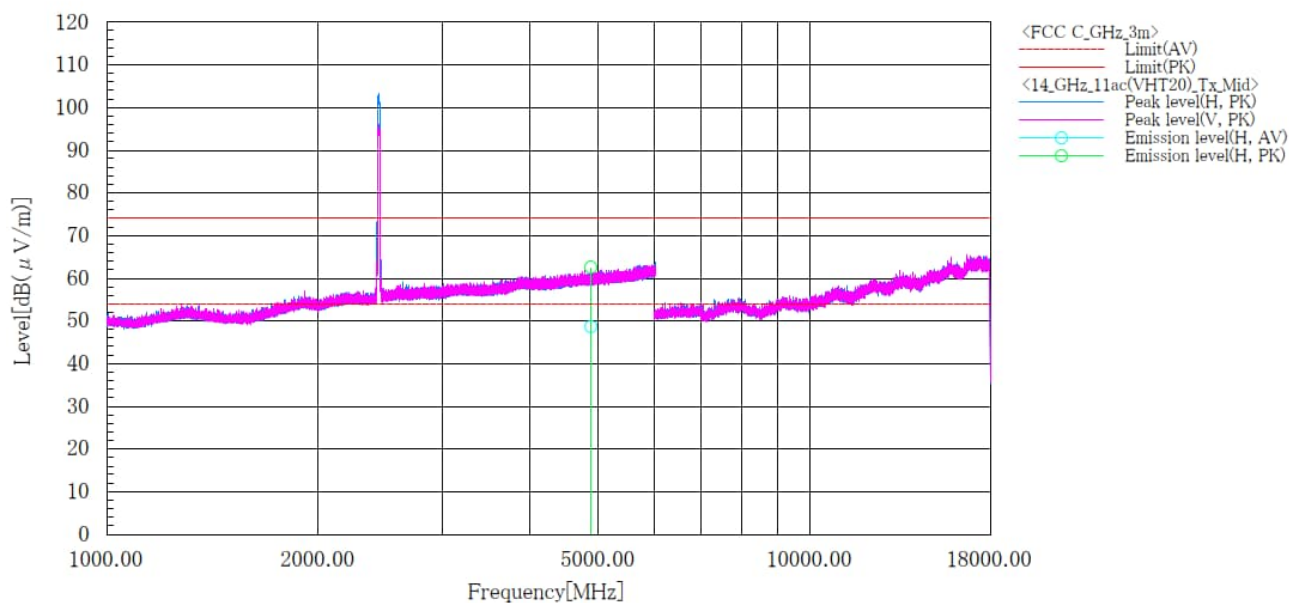
Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

EB1190EM [11ac(VHT20)]**Channel Middle****ABOVE 1GHz**

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : PC9699
 Serial No. : N/A
 Test mode : WLAN 11ac(VHT20)_Tx

Sheet No. : 14
 Standard : FCC Part.15 subpart C
 Operator : T.Watanabe
 Temp,Hum,Atm : 20.1 [°C], 58.3 [%]
 Note1 : CH:6 (2437MHz)



Final Result

No.	Frequency	Pol	Reading AV	Reading PK	c. f	Result AV	Result PK	Limit AV	Limit PK	Margin AV	Margin PK	Height	Angle
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[deg]
1	4874.000	H	33.7	47.5	15.0	48.7	62.5	54.0	74.0	5.3	11.5	142.0	262.0

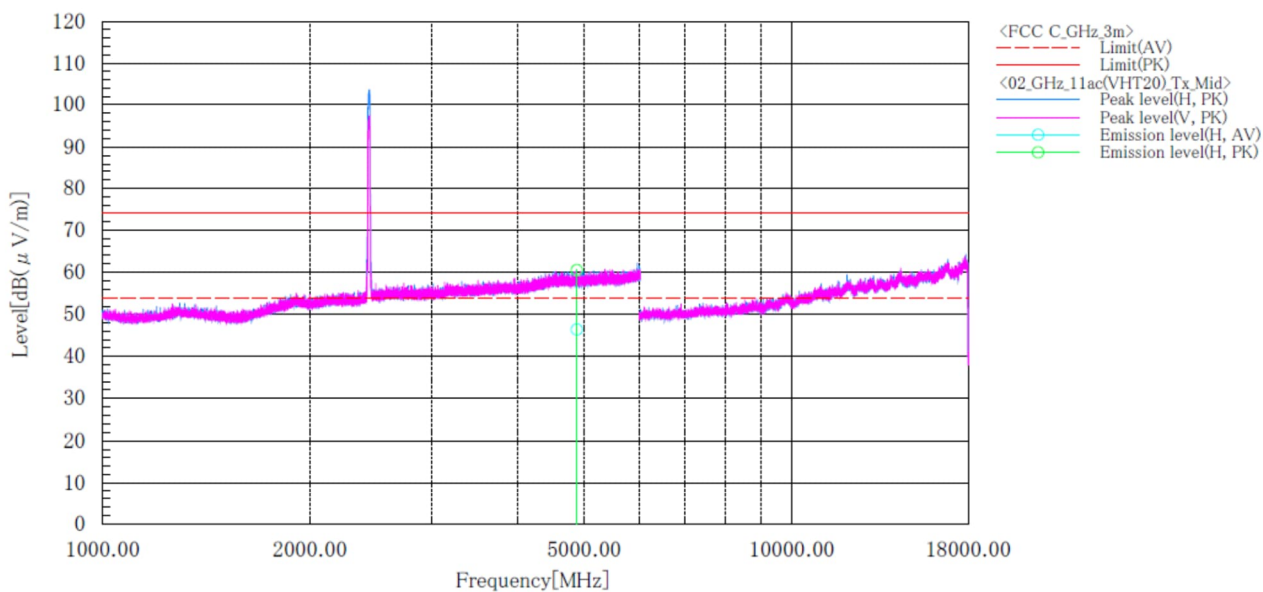
Note:

- Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
- No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

EB1207 [11ac(VHT20)]**Channel Middle****ABOVE 1GHz**

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : EB1207
 Serial No. : N/A
 Test mode : WLAN 11ac(VHT20)_Tx

Sheet No. : 02
 Standard : FCC Part.15 subpart C
 Operator : T.Seino
 Temp,Hum,Atm : 21.1 [° C], 59.4 [%]
 Note1 : CH:6 (2437MHz)

**Final Result**

No.	Frequency	Pol	Reading AV	Reading PK	c. f	Result AV	Result PK	Limit AV	Limit PK	Margin AV	Margin PK	Height	Angle
	[MHz]		[dB(μV)]	[dB(μV)]	[dB(1/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB(μV/m)]	[dB]	[dB]	[cm]	[deg]
1	4874.000	H	33.4	47.6	13.0	46.4	60.6	54.0	74.0	7.6	13.4	142.0	161.0

Note:

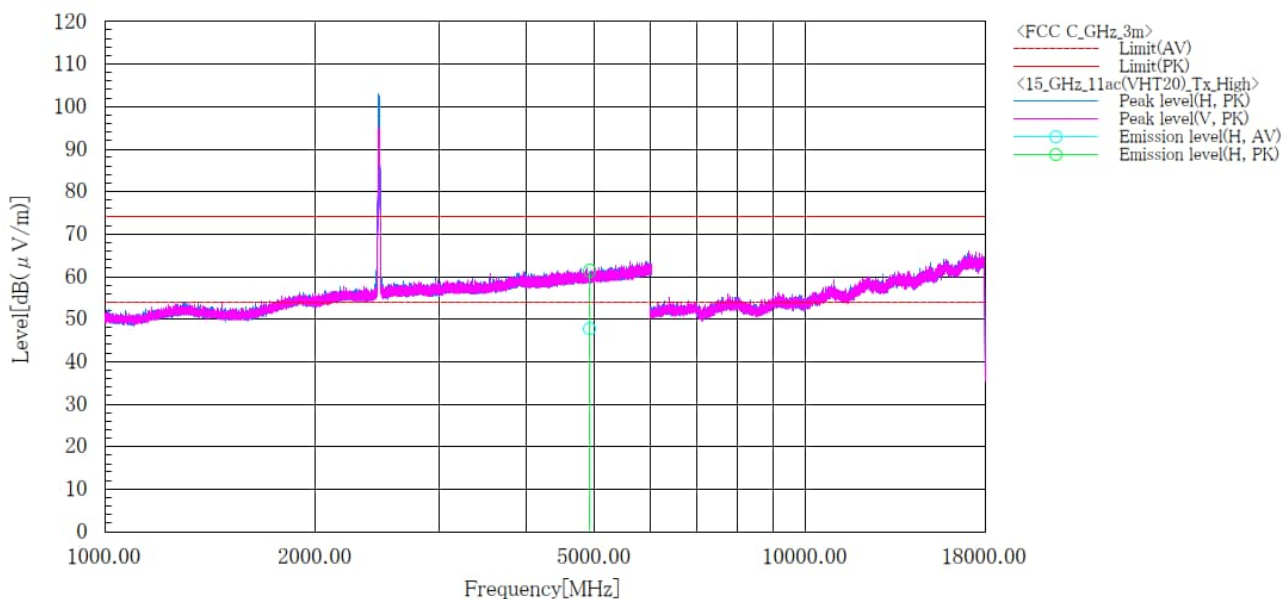
1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

Comparison of the charts of EB1190EM and EB1207 showed that the difference in test results was less than 3 dB.

EB1190EM [11ac(VHT20)]**Channel High
ABOVE 1GHz**

Company name : KYOCERA Corporation
 EUT : Mobile Phone
 Model No. : PC9699
 Serial No. : N/A
 Test mode : WLAN 11ac(VHT20)_Tx

Sheet No. : 15
 Standard : FCC Part.15 subpart C
 Operator : T.Watanabe
 Temp,Hum,Atm : 20.1 [°C], 58.3 [%]
 Note1 : CH:11 (2462MHz)



Final Result

No.	Frequency [MHz]	Pol	Reading AV [dB(μV)]	Reading PK [dB(μV)]	c.f [dB(1/m)]	Result AV [dB(μV/m)]	Result PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Limit PK [dB(μV/m)]	Margin AV [dB]	Margin PK [dB]	Height [cm]	Angle [deg]
1	4924.000	H	32.6	46.3	15.1	47.7	61.4	54.0	74.0	6.3	12.6	112.0	258.0

Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable – Amp)]
2. No emission were detected in frequency range 18GHz to 25GHz at the 3 meters distance.

4.6 Restricted Band of Operation

4.6.1 Measurement procedure

[FCC 15.247(d), 15.205, 15.209, KDB 558074 D01 v05r02, Section 8.6]

Test was applied by following conditions.

Test method	:	ANSI C63.10
Test place	:	3m Semi-anechoic chamber, 10m Semi-anechoic chamber No.1
EUT was placed on	:	Styrofoam table / (W) 1.0 × (D) 0.8 × (H) 0.8 m (below 1 GHz) Styrofoam table / (W) 0.6 × (D) 0.6 × (H) 1.5 m (above 1 GHz)
Antenna distance	:	3m
Spectrum analyzer setting	:	
- Peak	:	RBW=1 MHz, VBW=3 MHz, Span=Arbitrary setting, Sweep=auto
- Average	:	11b: RBW=1 MHz, VBW=3 kHz, Span= Arbitrary setting, Sweep=auto 11g, 11n, 11ac : RBW=1 MHz, VBW=1 kHz, Span= Arbitrary setting, Sweep=auto Display mode=Linear

Average Measurement Setting [VBW]

mode	Duty Cycle (%)	Ton [μs]	Toff [μs]	1/Ton (kHz)	Determined VBW Setting
11b	97.16	0.992	0.029	1.008	3kHz
11g	97.48	1.391	0.036	0.719	1kHz
11n(HT20)	97.20	1.286	0.037	0.778	1kHz
11ac(VHT20)	97.33	1.312	0.036	0.762	1kHz

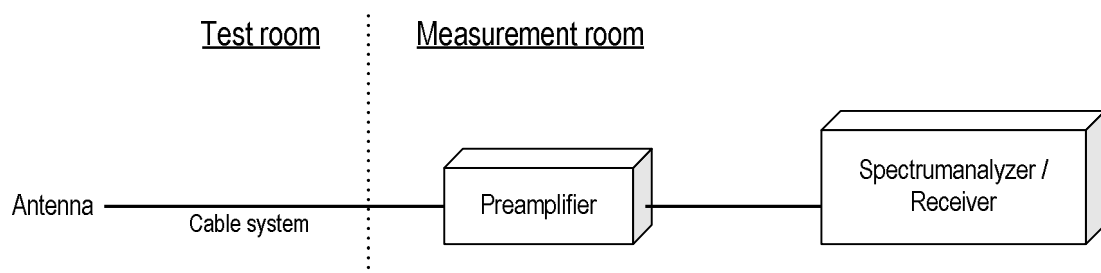
Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open area test site.

Therefore, sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 937606.

Radiated emission measurements are performed at 3m distance with the broadband antenna (Double ridged guide antenna). The antenna is positioned both the horizontal and vertical planes of polarization and height is varied 1m to 4m and stopped at height producing the maximum emission.

The EUT is Placed on a turntable, which is 0.8m/1.5m above ground plane. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. The test results represent the worst-case emission for each emission with manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation. Sufficient time for the EUT, support equipment, and test equipment are allowed for them to warm up to their normal operating condition.

- Test configuration



4.6.2 Limit

Emission at the boundary of the restricted band provided by 15.205 shall be lower than 15.209 limit.

4.6.3 Measurement Result

[IEEE802.11b, IEEE802.11g, IEEE802.11n (HT20)]

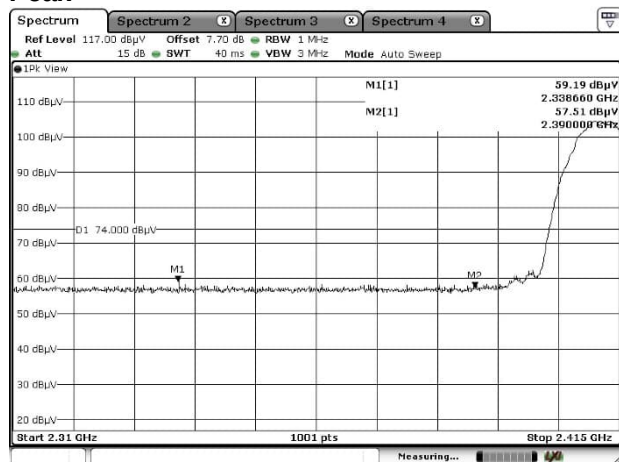
Channel	Frequency [MHz]	Results Chart	Result
Low	2412	See the Trace Data	Pass
High	2462	See the Trace Data	Pass

4.6.4 Test data

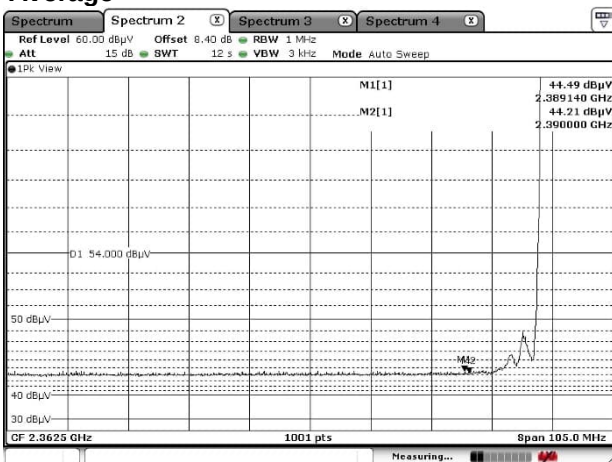
Date	: 9-May-2024		
Temperature	: 22.1 [°C]		
Humidity	: 32.1 [%]	Test engineer	:
Test place	: 3m Semi-anechoic chamber		<u>Chiaki Kanno</u>
Date	: 29-June-2024		
Temperature	: 20.1 [°C]		
Humidity	: 58.3 [%]	Test engineer	:
Test place	: 10m Semi-anechoic chamber		<u>Taiki Watanabe</u>
Date	: 8-August-2024		
Temperature	: 21.1 [°C]		
Humidity	: 59.4 [%]	Test engineer	:
Test place	: 3m Semi-anechoic chamber		<u>Tadahiro Seino</u>

EB1190EM [IEEE802.11b]

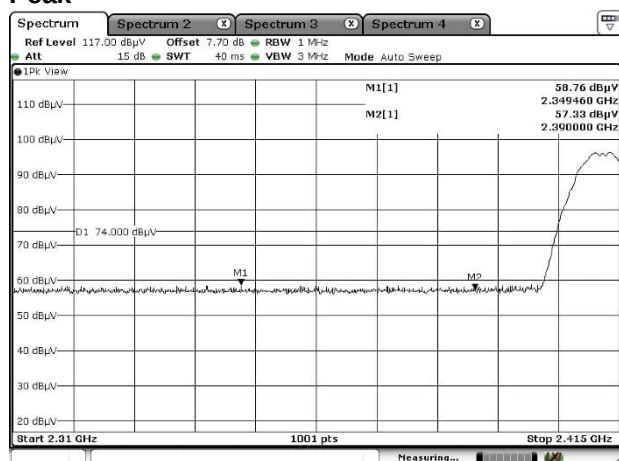
Channel Low Horizontal Peak



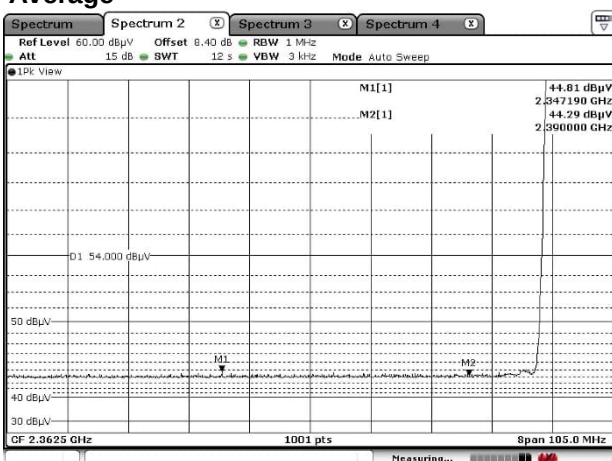
Average



Vertical Peak

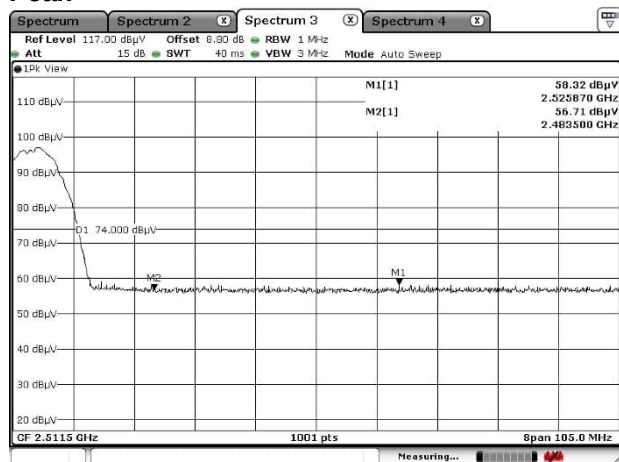


Average

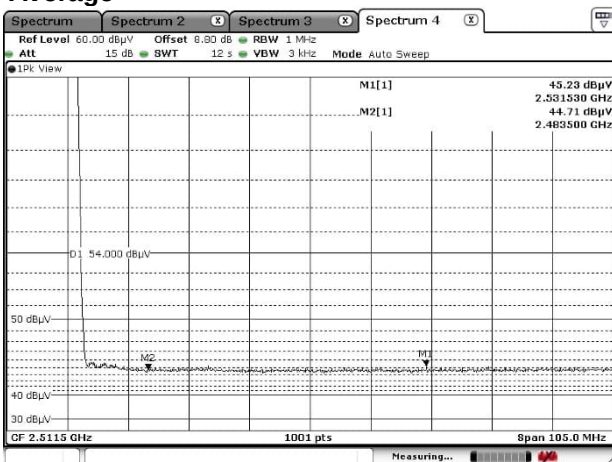


EB1190EM [IEEE802.11b]

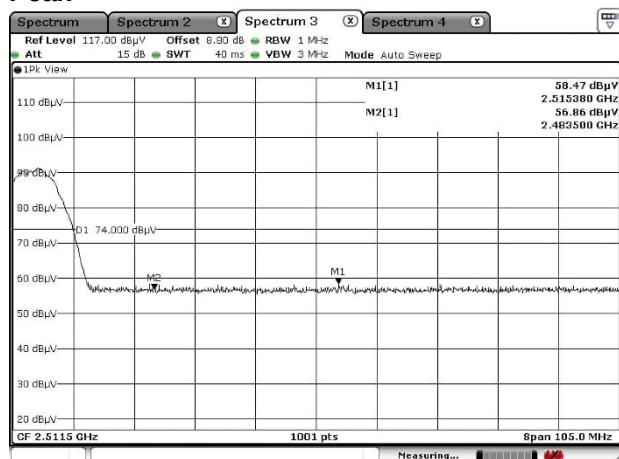
Channel High
Horizontal
Peak



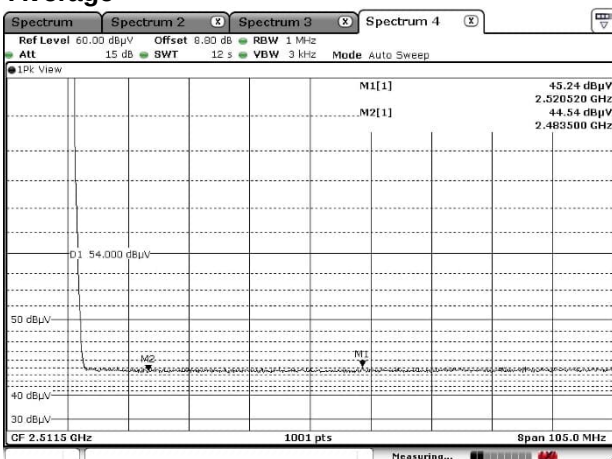
Average



Vertical
Peak

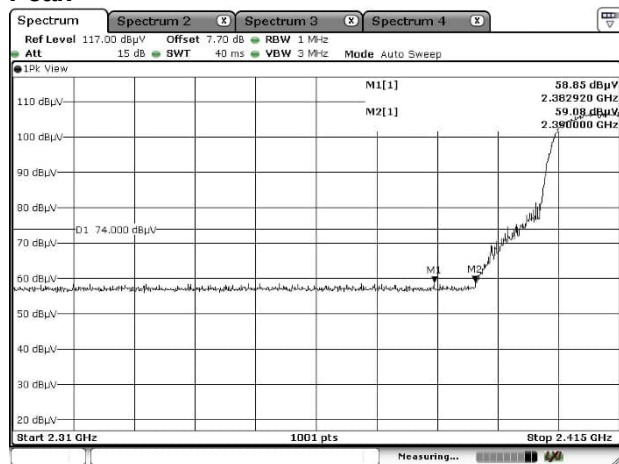


Average

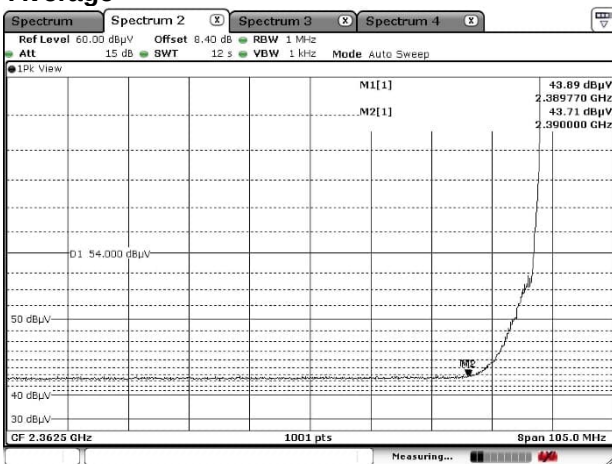


EB1190EM [IEEE802.11g]

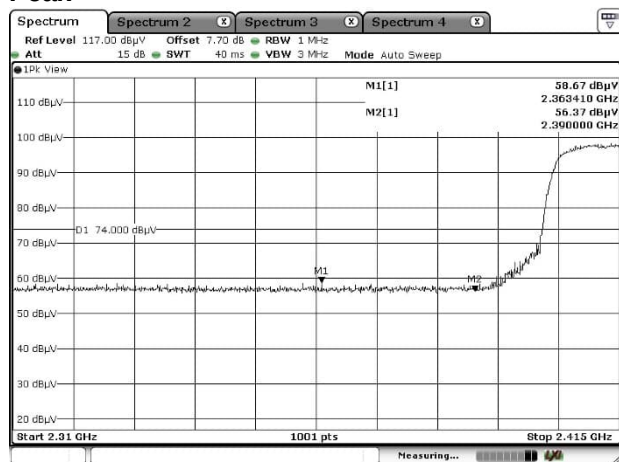
Channel Low Horizontal Peak



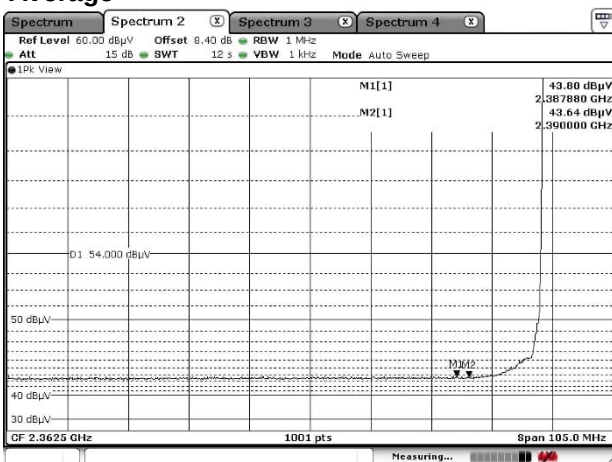
Average



Vertical Peak

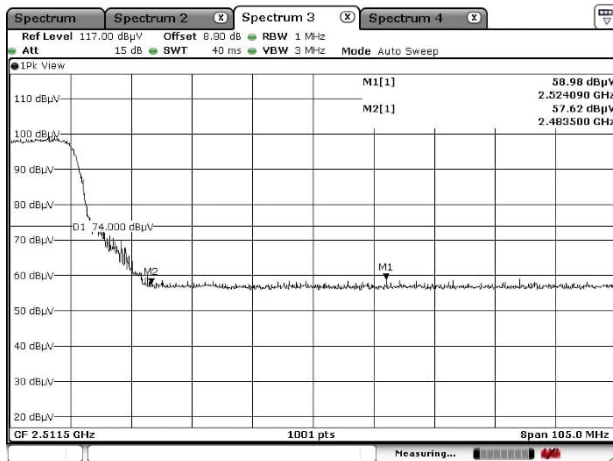


Average

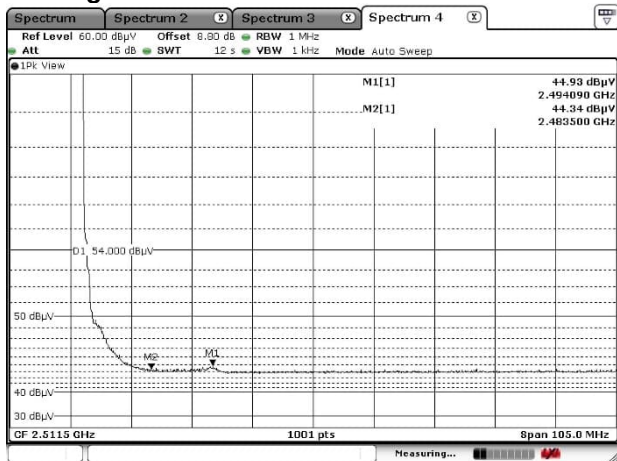


EB1190EM [IEEE802.11g]

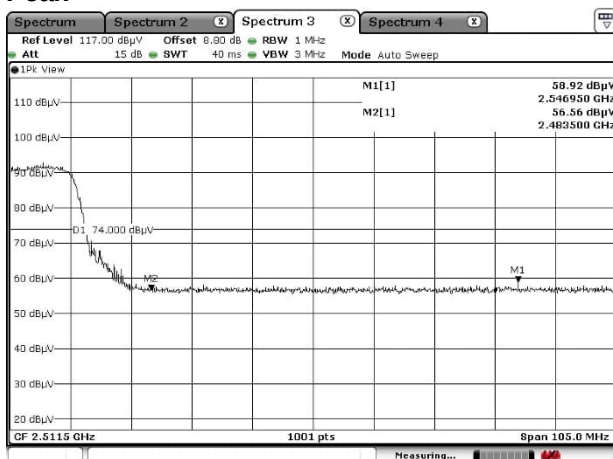
Channel High
Horizontal
Peak



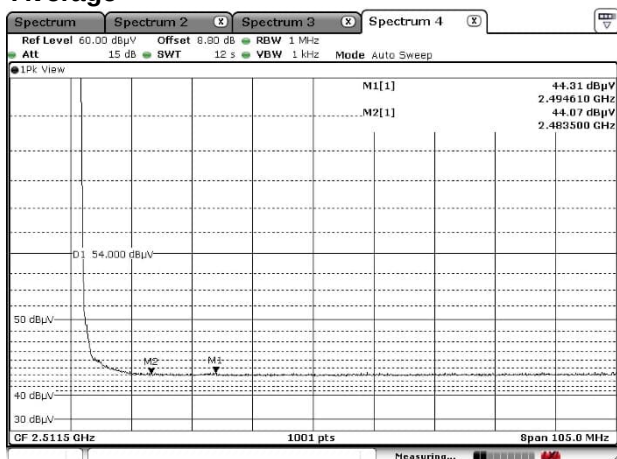
Average



Vertical
Peak

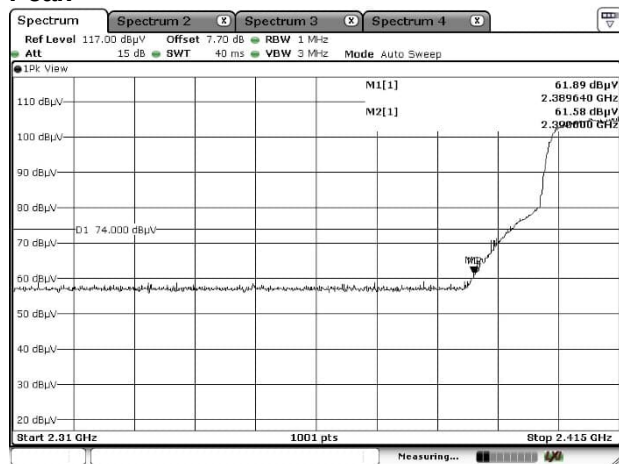


Average

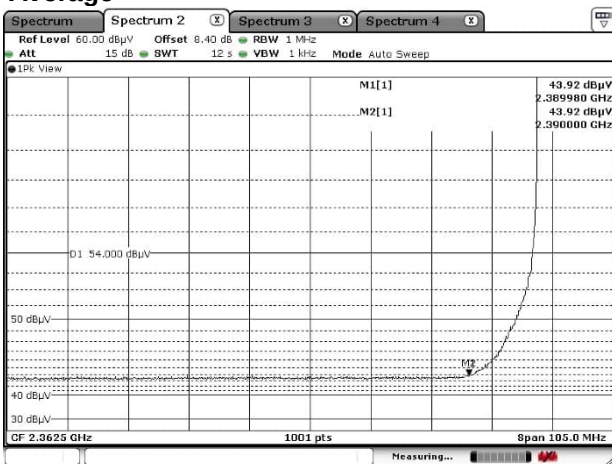


EB1190EM [IEEE802.11n (HT20)]

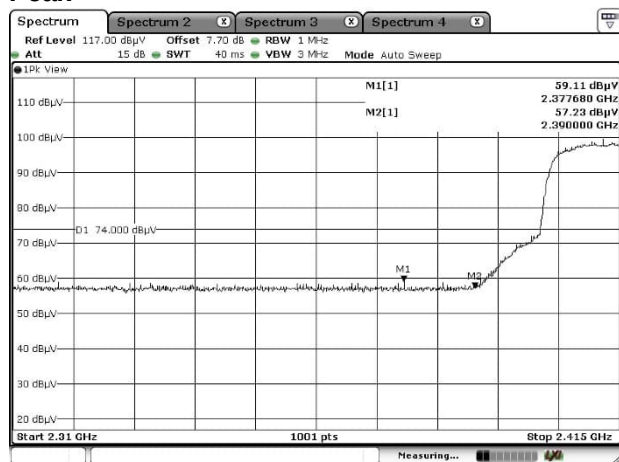
Channel Low Horizontal Peak



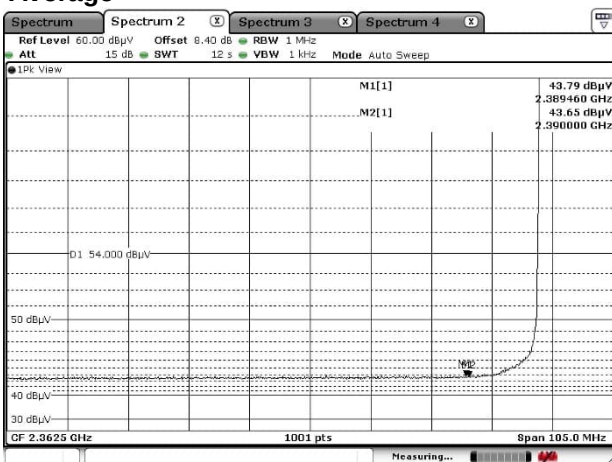
Average



Vertical Peak

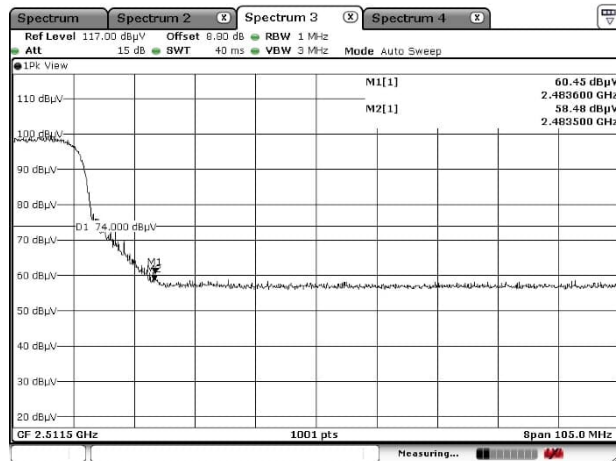


Average

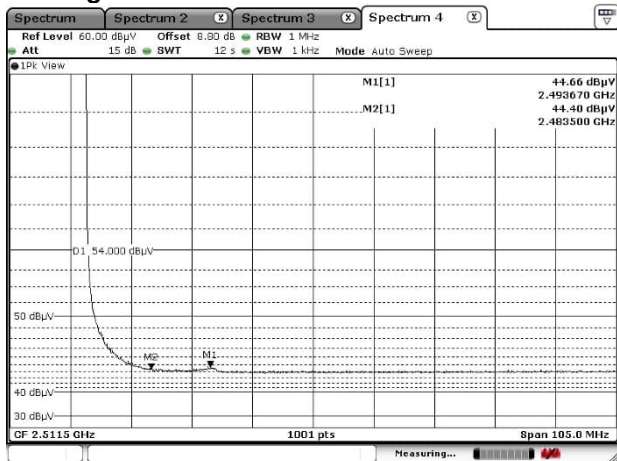


EB1190EM [IEEE802.11n (HT20)]

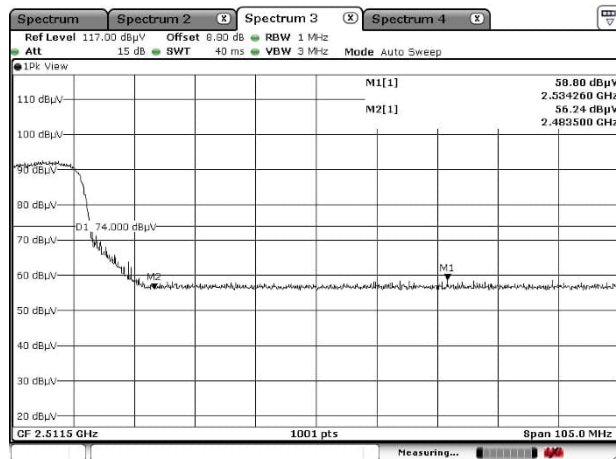
Channel High
Horizontal
Peak



Average



Vertical
Peak



Average

