Duty cycle

Regarding to KDB 789033 D02 v01r04, the maximum duty cycles of all modes were investigated and set the spectrum analyzer as below.

Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value. Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100.

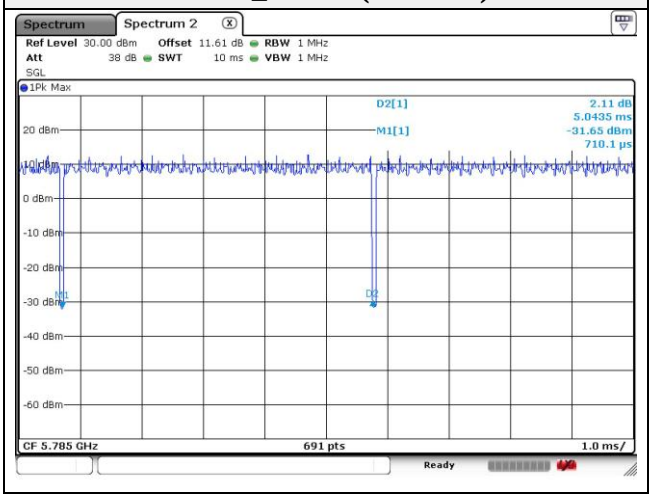
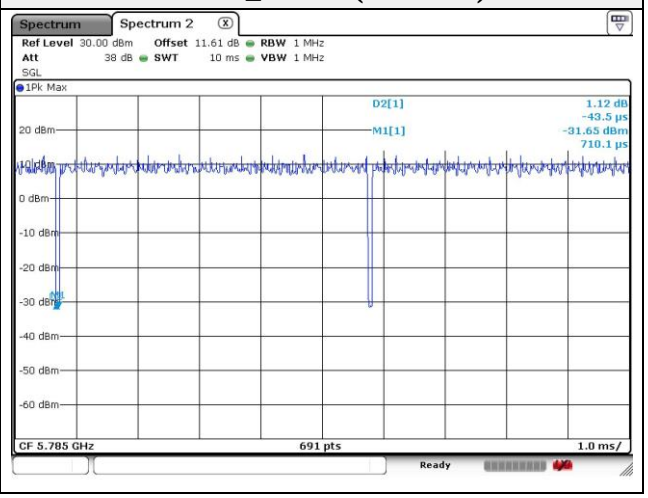
For the band 5.725-5.850 ㎓

Test mode	T_{on} time (㎳)	Period (㎳)	Duty cycle (Linear)	Duty cycle (%)	Duty cycle correction factor(㏈)
802.11n_VHT20	5.0435	0.043	0.99	99%	-
802.11n_VHT40	2.4638	0.043	0.98	98%	-
802.11n_VHT80	1.1594	0.052	0.96	96%	0.18

Note:

Duty cycle (Linear) = T_{on} time/Period

DCF(Duty cycle correction factor (㏈)) = 10log(1/duty cycle)

UNII-3_VHT20(On Time)	UNII-3_VHT20(Off Time)
	

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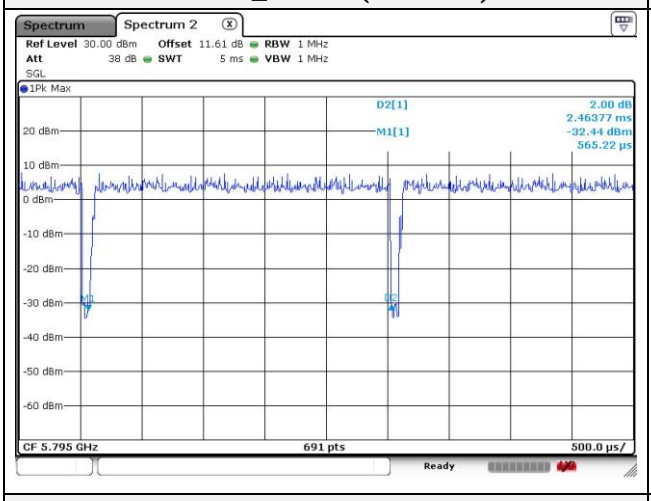
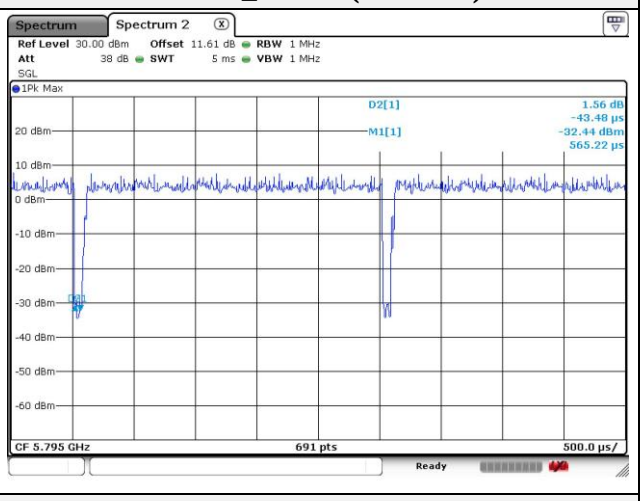
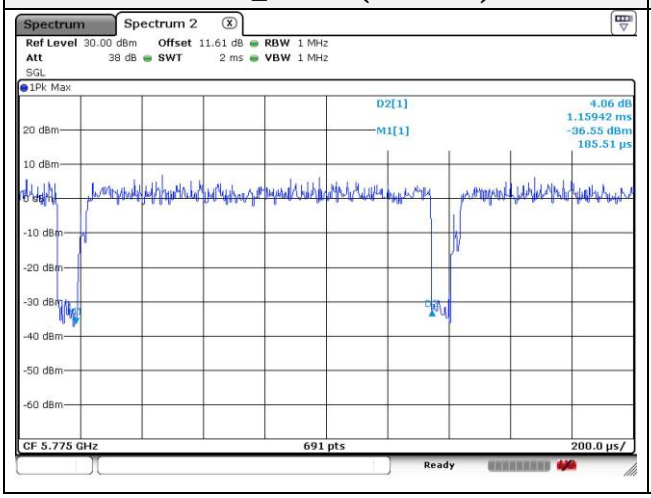
UNII-3_VHT40(On Time)



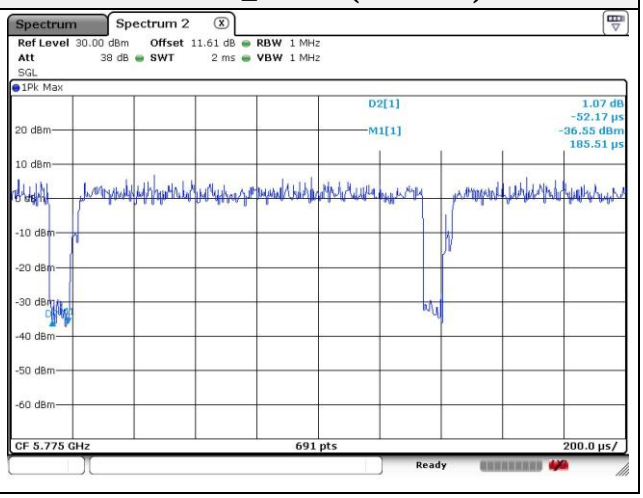
UNII-3_VHT40(Off Time)



UNII-3_VHT80(On Time)



UNII-3_VHT80(Off Time)



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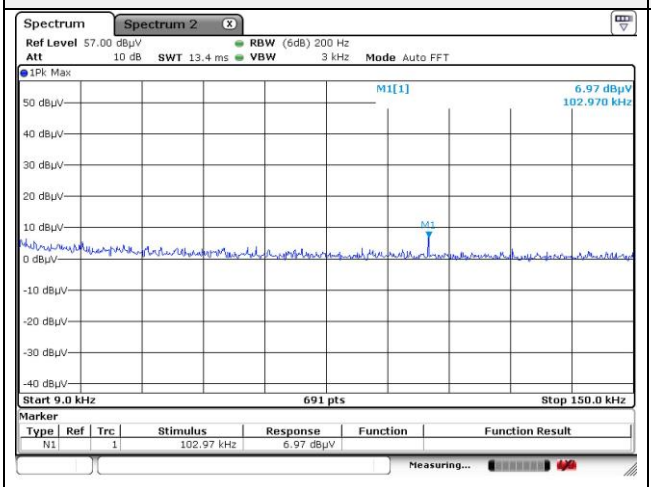
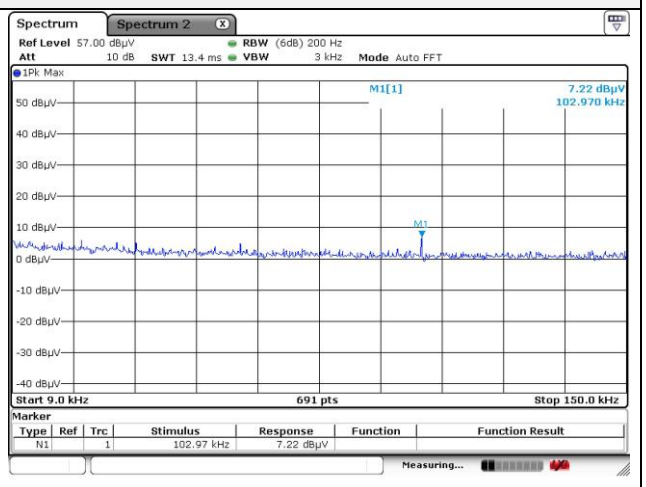
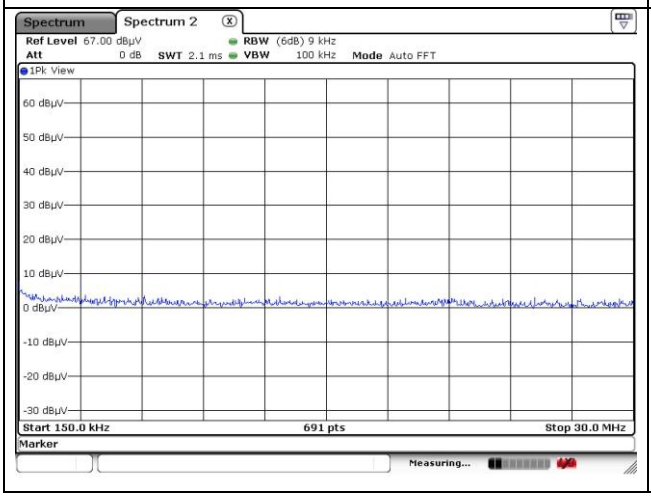
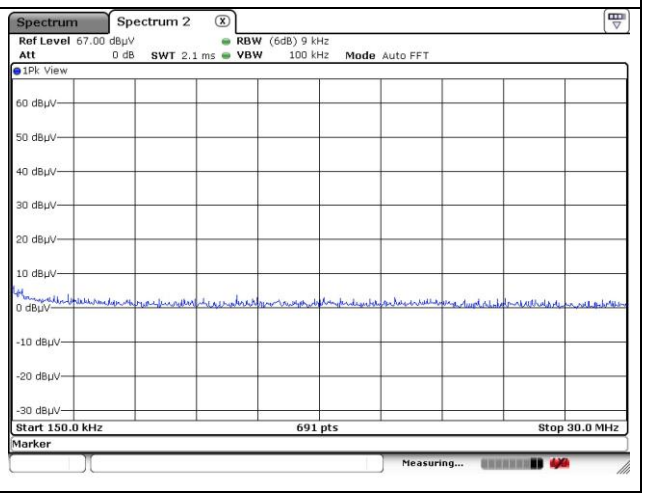
Test results (Below 30 ㎒) – Worst case (Module 1)

Mode: UNII-3

Distance of measurement: 3 meter

Channel: 151

Frequency (㎒)	Level (dBμV)	Ant. Pol. (H/V)	CF (dB)	F_d (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
No spurious emissions were detected within 20 dB of the limit							

Horizontal	Vertical
	
	

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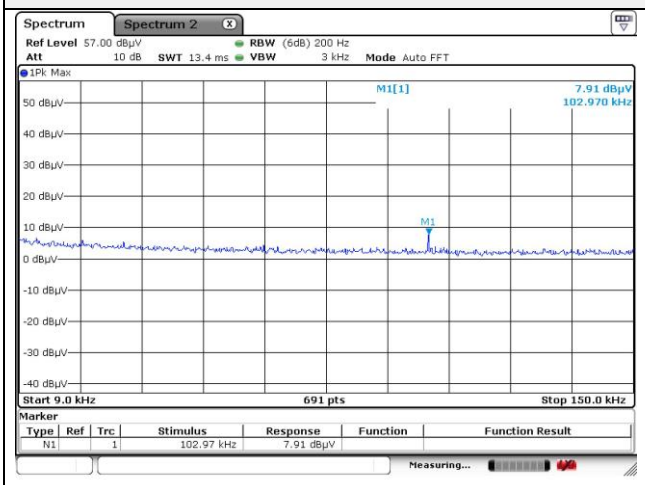
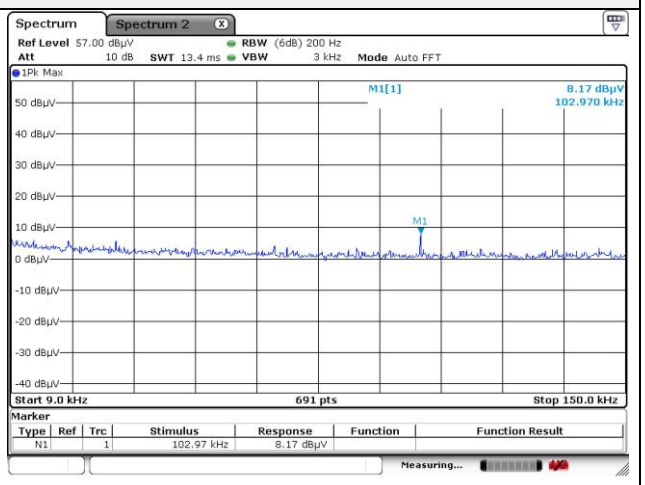
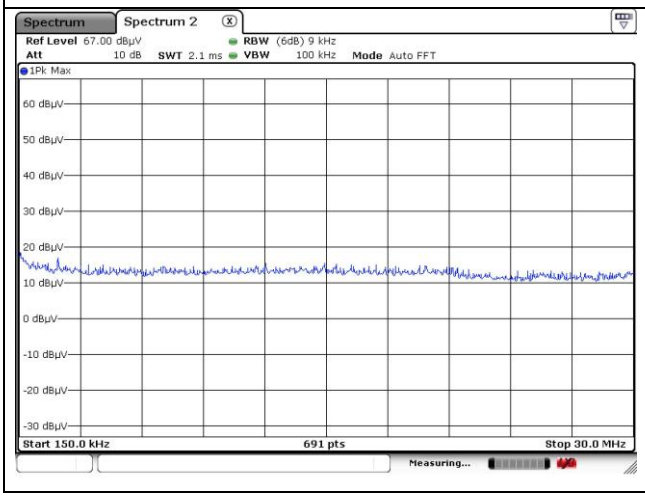
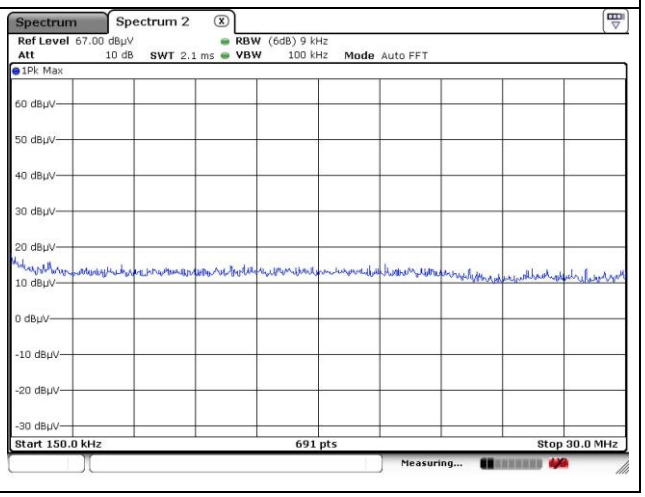
Test results (Below 30 ㎒) – Worst case (Module 2)

Mode: UNII-3

Distance of measurement: 3 meter

Channel: 157

Frequency (㎒)	Level (dBμV)	Ant. Pol. (H/V)	CF (dB)	F_d (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
No spurious emissions were detected within 20 dB of the limit							

Horizontal	Vertical
	
	

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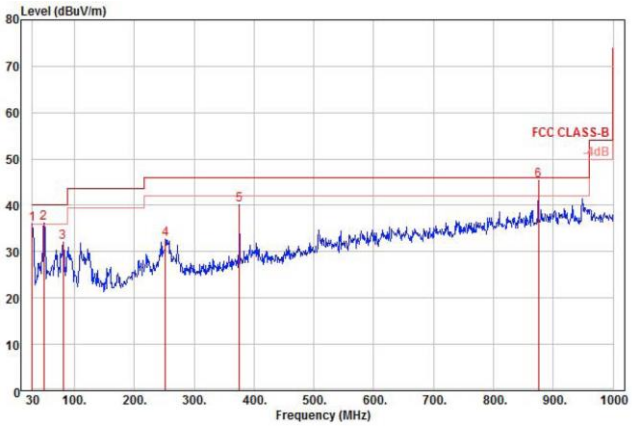
Test results (Below 1 000 ㎒) – Worst case (Module 1)

Mode: UNII-3

Distance of measurement: 3 meter

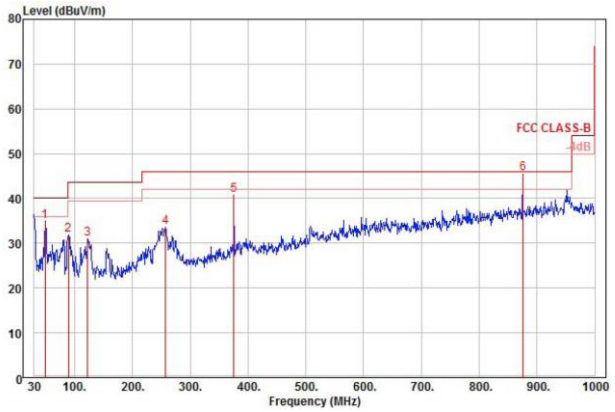
Channel: 149

Horizontal



	Freq	Level	Read Level	Ant Factor	Cable Loss	Preamp Factor	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV/m	dBuV	dB/m	dB	dB	dBuV/m	dB		
1	30.00	35.86	25.02	10.38	0.46	0.00	40.00	-4.14		horizontal
2 !	49.40	36.25	21.67	13.92	0.66	0.00	40.00	-3.75		horizontal
3	81.41	31.97	23.66	7.43	0.88	0.00	40.00	-8.03		horizontal
4	252.13	32.78	18.80	12.38	1.60	0.00	46.00	-13.22		horizontal
5	375.32	40.04	22.90	15.13	2.01	0.00	46.00	-5.96		horizontal
6 pp	875.84	45.37	20.32	21.82	3.23	0.00	46.00	-0.63		horizontal

Vertical



	Freq	Level	Read Level	Ant Factor	Cable Loss	Preamp Factor	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV/m	dBuV	dB/m	dB	dB	dBuV/m	dB		
1	49.40	34.96	20.38	13.92	0.66	0.00	40.00	-5.04		vertical
2	89.17	31.72	21.36	9.45	0.91	0.00	43.50	-11.78		vertical
3	122.15	31.06	20.24	9.74	1.08	0.00	43.50	-12.44		vertical
4	256.98	33.59	19.47	12.49	1.63	0.00	46.00	-12.41		vertical
5	375.32	40.70	23.56	15.13	2.01	0.00	46.00	-5.30		vertical
6 pp	875.84	45.82	21.07	21.82	3.23	0.00	46.00	-0.18		vertical

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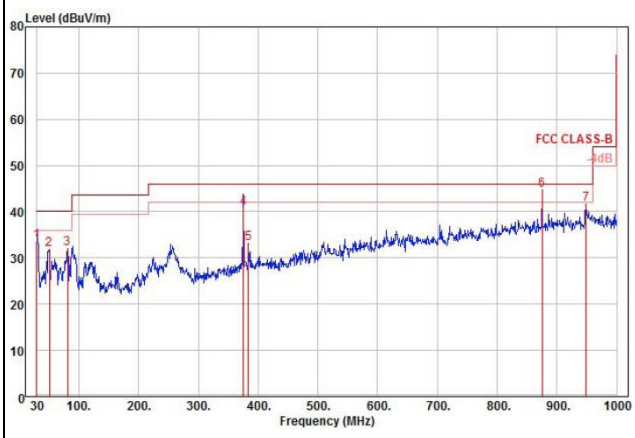
Test results (Below 1 000 ㎒) – Worst case (Module 2)

Mode: UNII-3

Distance of measurement: 3 meter

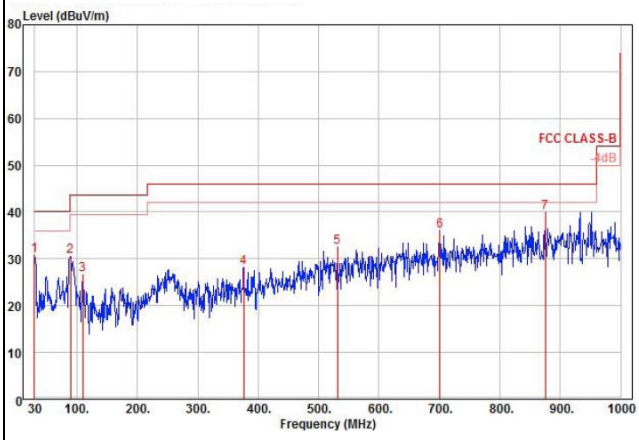
Channel: 149

Horizontal



	Freq	Level	Read Level	Ant Factor	Cable Loss	Preamp Factor	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV/m	dBuV	dB/m	dB	dB	dBuV/m	dB		
1	30.00	33.67	22.83	10.38	0.46	0.00	40.00	-6.33		horizontal
2	50.37	31.88	17.32	13.90	0.66	0.00	40.00	-8.12		horizontal
3	81.41	32.13	23.82	7.43	0.88	0.00	40.00	-7.87		horizontal
4	375.32	40.80	23.66	15.13	2.01	0.00	46.00	-5.20		horizontal
5	384.05	33.23	15.86	15.33	2.04	0.00	46.00	-12.77		horizontal
6 pp	875.84	44.59	19.54	21.82	3.23	0.00	46.00	-1.41		horizontal
7	948.59	41.55	15.89	22.35	3.31	0.00	46.00	-4.45		horizontal

Vertical



	Freq	Level	Read Level	Ant Factor	Cable Loss	Preamp Factor	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV/m	dBuV	dB/m	dB	dB	dBuV/m	dB		
1	30.00	30.81	19.97	10.38	0.46	0.00	40.00	-9.19		vertical
2	89.17	30.56	20.20	9.45	0.91	0.00	43.50	-12.94		vertical
3	109.54	26.62	14.76	10.82	1.04	0.00	43.50	-16.88		vertical
4	376.29	28.18	11.02	15.15	2.01	0.00	46.00	-17.82		vertical
5	531.49	32.40	12.12	17.79	2.49	0.00	46.00	-13.60		vertical
6	701.24	35.98	13.53	19.71	2.74	0.00	46.00	-10.02		vertical
7 pp	875.84	39.88	14.83	21.82	3.23	0.00	46.00	-6.12		vertical

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Mode: UNII-3(VHT20)_Module 1

Distance of measurement: 3 meter

Channel: 149

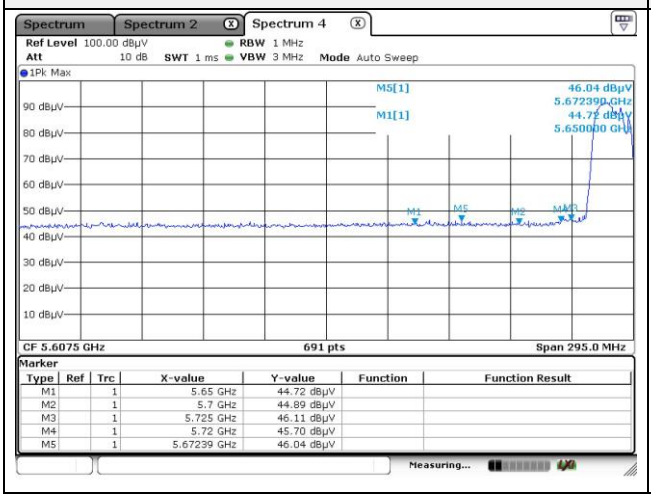
- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1625.90	46.83	Peak	H	-4.74	-	42.09	74.00	31.91
1075.98	46.11	Peak	H	-8.65	-	37.46	74.00	36.54
1625.90	45.79	Peak	V	-4.74	-	41.05	74.00	32.95
1249.60	43.71	Peak	V	-7.54	-	36.17	74.00	37.83

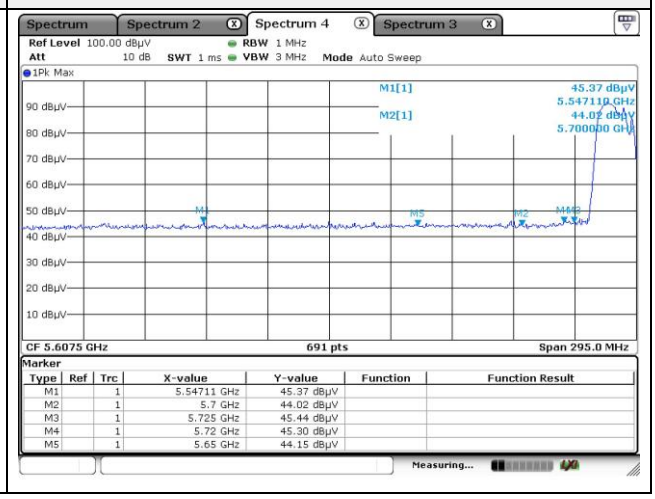
- **Band edge**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5725.00	46.11	Peak	H	10.87	-	56.98	122.20	65.22
5672.39	46.04	Peak	H	10.43	-	56.47	84.77	28.30
5725.00	45.44	Peak	V	10.87	-	56.31	122.20	65.89
5720.00	45.30	Peak	V	10.83	-	56.13	110.80	54.67

Restricted band // Horizontal // Peak



Restricted band // Vertical // Peak



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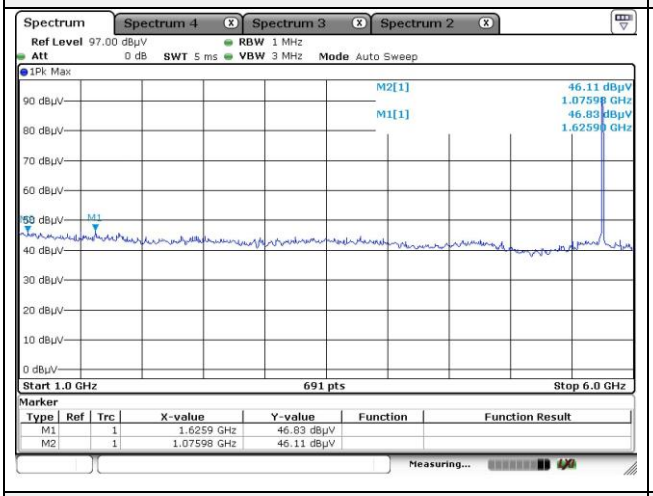
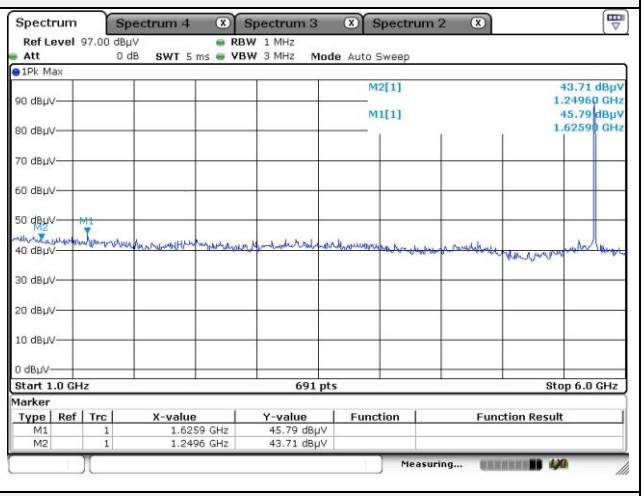
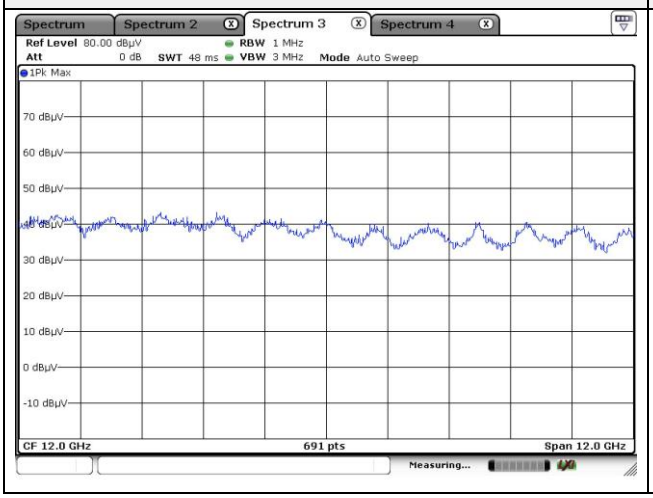
Horizontal // Peak for 1 ㎓ to 6 ㎓



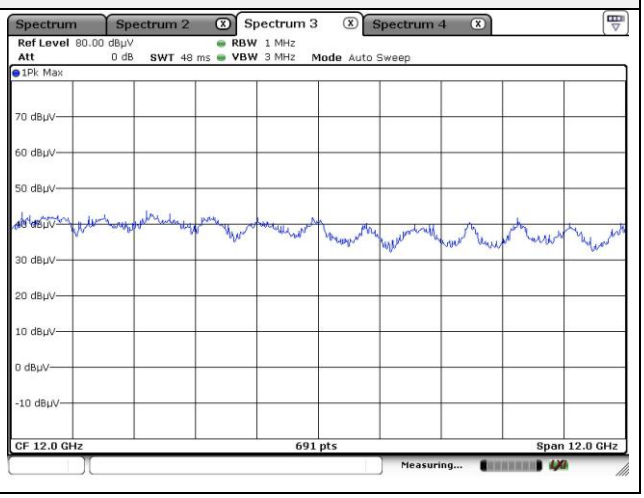
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



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Mode: UNII-3(VHT20)_Module 1

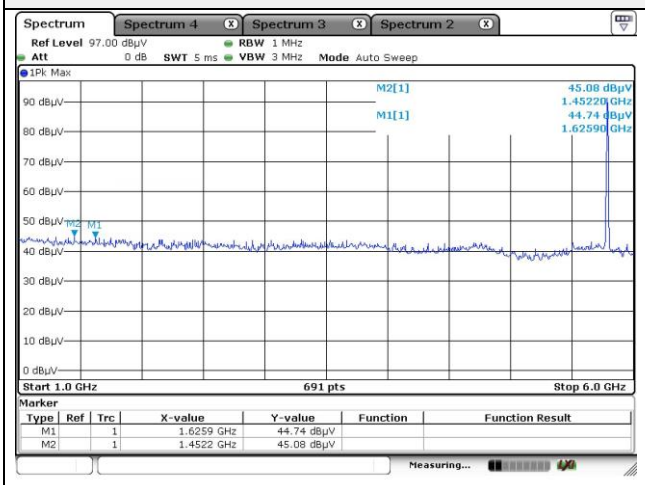
Distance of measurement: 3 meter

Channel: 157

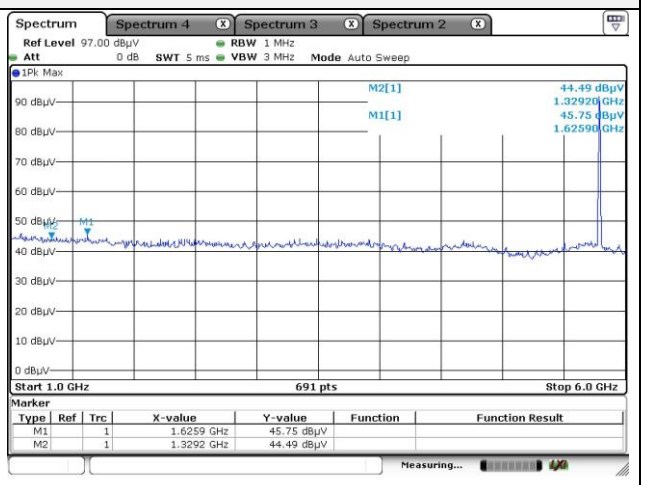
- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1625.90	44.74	Peak	H	-4.74	-	40.00	74.00	34.00
1452.20	45.08	Peak	H	-6.26	-	38.82	74.00	35.18
1625.90	45.75	Peak	V	-4.74	-	41.01	74.00	32.99
1329.20	44.49	Peak	V	-7.03	-	37.46	74.00	36.54

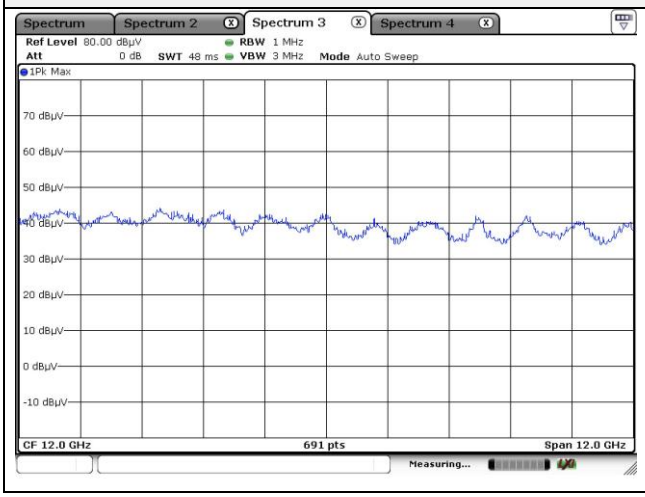
Horizontal // Peak for 1 GHz to 6 GHz



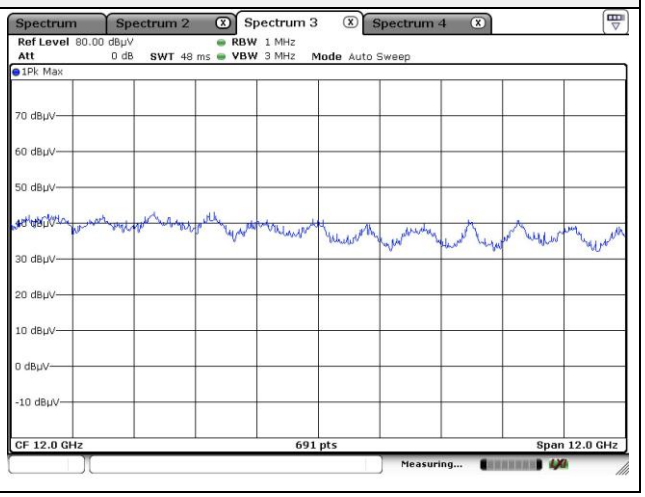
Vertical // Peak for 1 GHz to 6 GHz



Horizontal // Peak for 6 GHz to 18 GHz



Vertical // Peak for 6 GHz to 18 GHz



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Mode: UNII-3(VHT20) _Module 1

Distance of measurement: 3 meter

Channel: 165

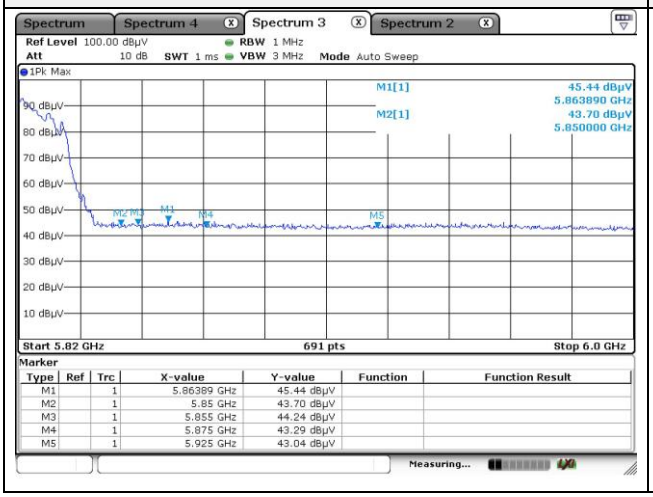
- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1625.90	46.83	Peak	H	-4.74	-	42.09	74.00	31.91
1401.60	44.30	Peak	H	-6.57	-	37.73	74.00	36.27
1625.90	45.41	Peak	V	-4.74	-	40.67	74.00	33.33
1618.70	50.97	Peak	V	-4.81	-	46.16	74.00	27.84

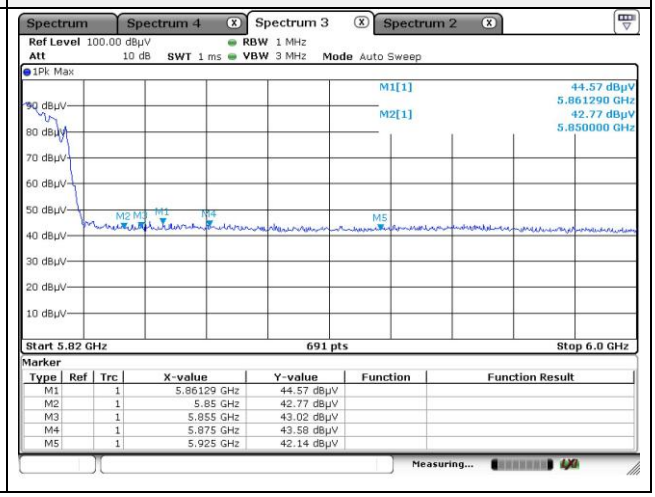
- **Band edge**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5863.89	45.44	Peak	H	11.85	-	57.29	108.31	51.02
5855.00	44.24	Peak	H	11.80	-	56.04	110.80	54.76
5861.29	44.57	Peak	V	11.84	-	56.41	109.04	52.63
5875.00	43.58	Peak	V	11.91	-	55.49	105.20	49.71

Restricted band // Horizontal // Peak



Restricted band // Vertical // Peak



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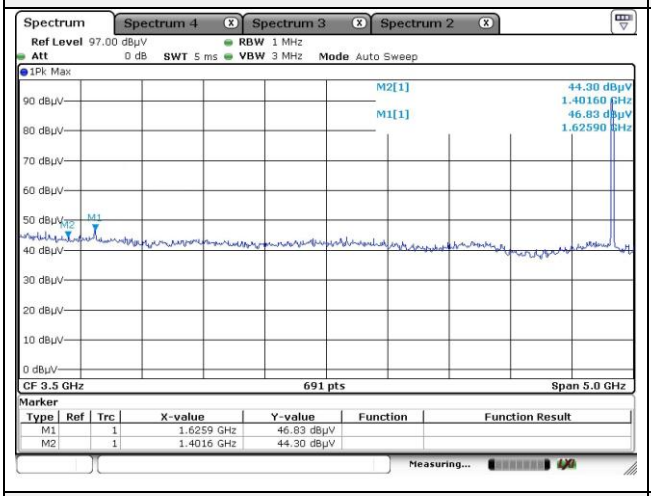
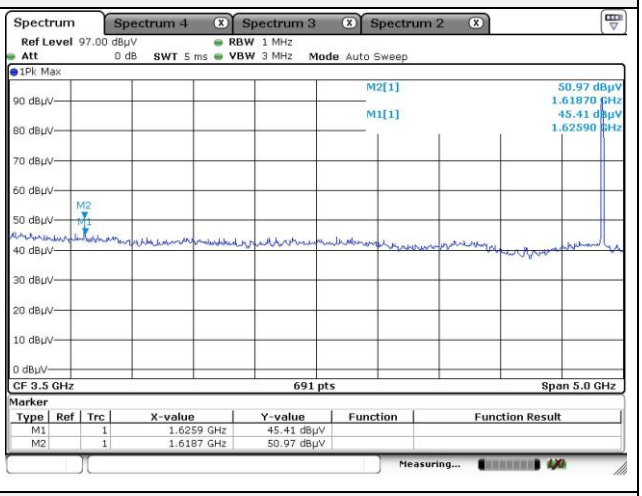
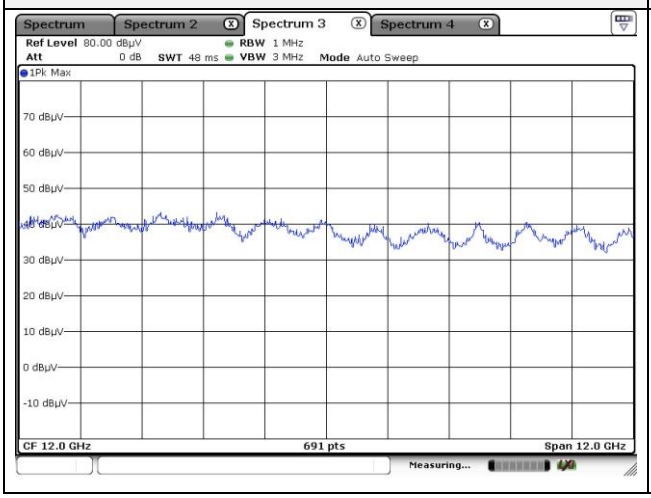
Horizontal // Peak for 1 ㎓ to 6 ㎓



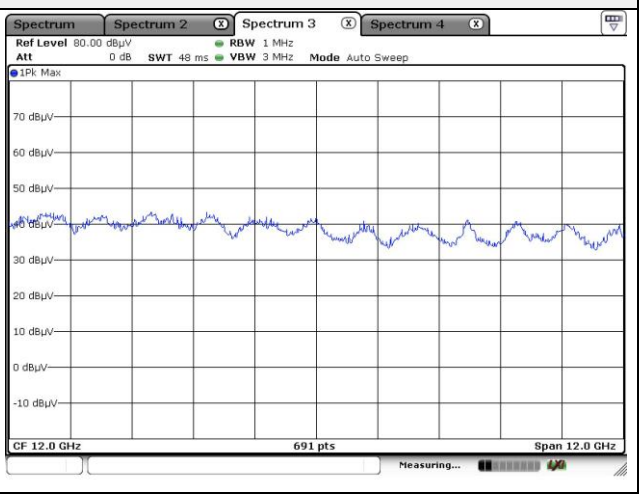
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



Note.

1. No spurious emission were detected above 6 ㎓.

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The test results in the report only apply to the tested sample.

Mode: UNII-3(VHT40) _Module 1

Distance of measurement: 3 meter

Channel: 151

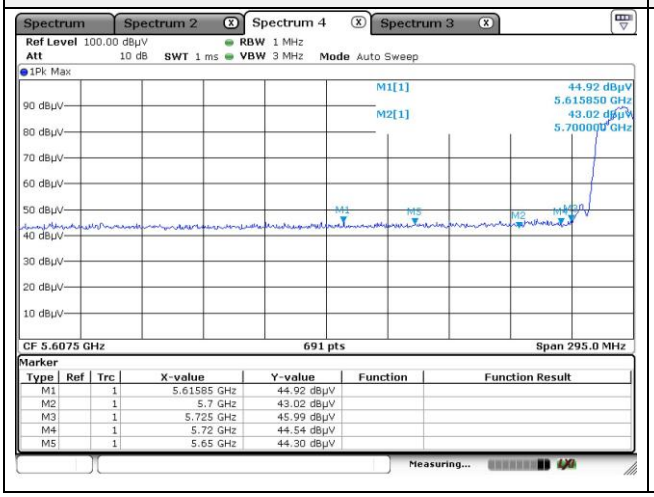
- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1141.10	46.93	Peak	H	-8.24	-	38.69	74.00	35.31
1199.00	46.39	Peak	H	-7.86	-	38.53	74.00	35.47
1625.90	46.61	Peak	V	-4.74	-	41.87	74.00	32.13
1452.20	45.19	Peak	V	-6.26	-	38.93	74.00	35.07
1141.10	46.93	Peak	H	-8.24	-	38.69	74.00	35.31

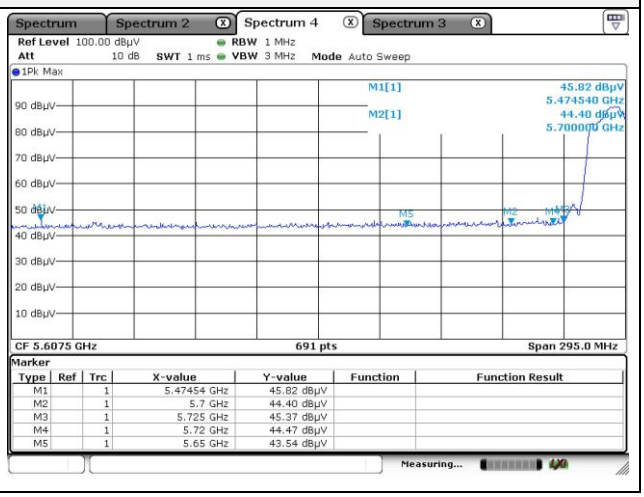
- **Band edge**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5615.85	44.92	Peak	H	9.96	-	54.88	68.20	13.32
5725.00	45.99	Peak	H	10.87	-	56.86	122.20	65.34
5474.54	45.82	Peak	V	9.10	-	54.92	68.20	13.28
5725.00	45.37	Peak	V	10.87	-	56.24	122.20	65.96

Restricted band // Horizontal // Peak



Restricted band // Vertical // Peak



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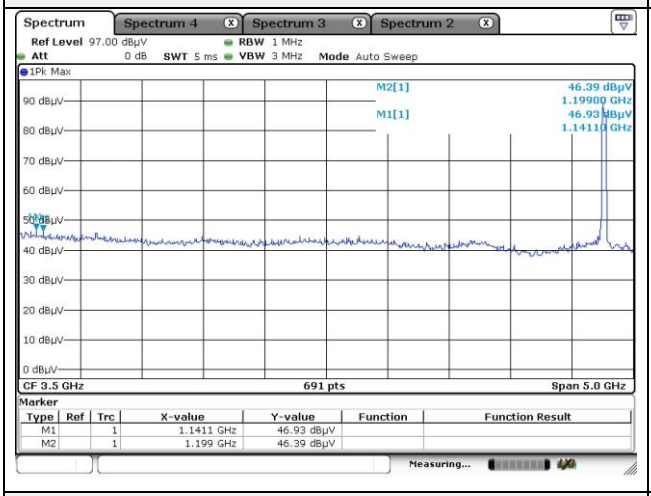
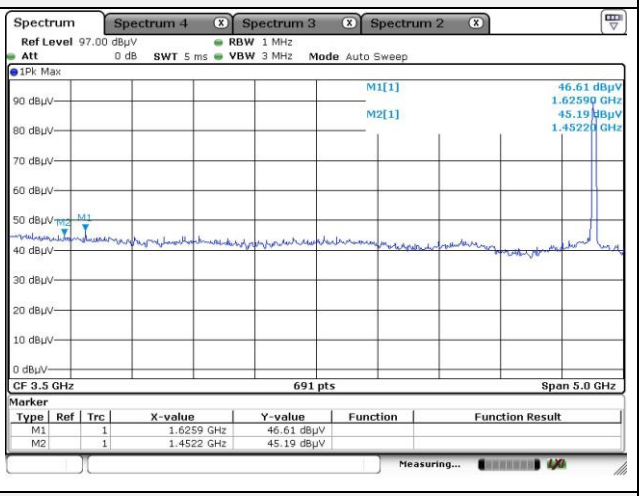
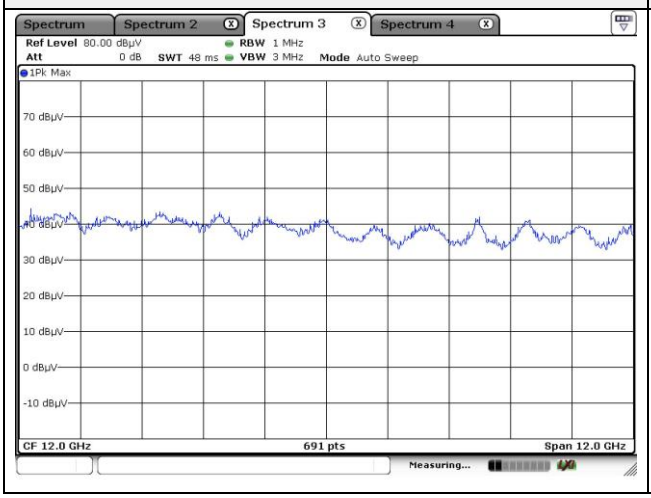
Horizontal // Peak for 1 ㎓ to 6 ㎓



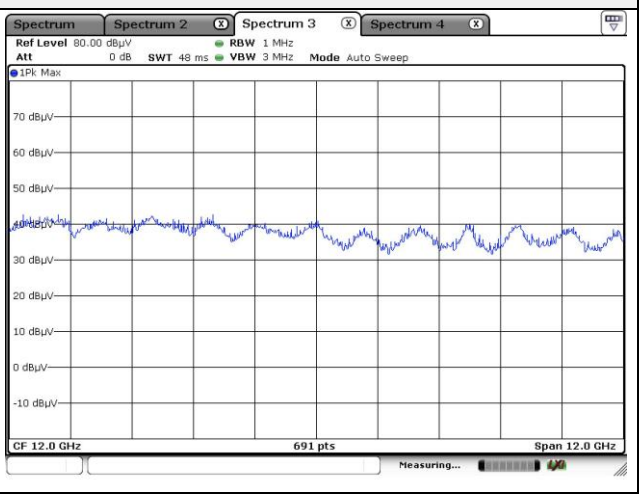
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



Note.

1. No spurious emission were detected above 6 ㎓.

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The test results in the report only apply to the tested sample.

Mode: UNII-3(VHT40) _Module 1

Distance of measurement: 3 meter

Channel: 159

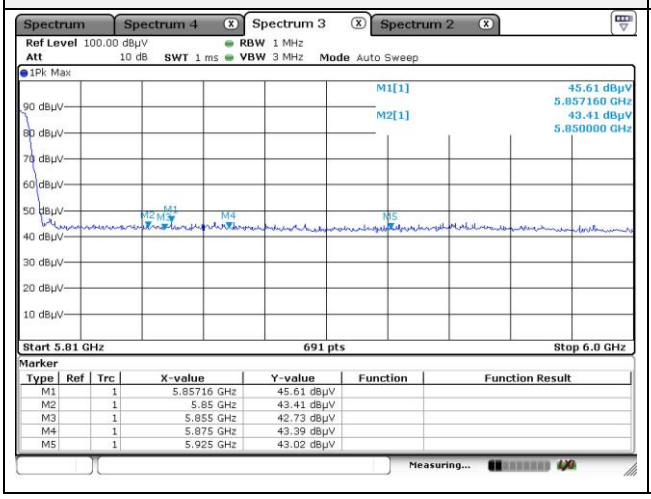
- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1604.20	44.10	Peak	H	-4.95	-	39.15	74.00	34.85
1300.30	44.63	Peak	H	-7.22	-	37.41	74.00	36.59
1604.20	48.52	Peak	V	-4.95	-	43.57	74.00	30.43
2038.40	44.86	Peak	V	-0.89	-	43.97	74.00	30.03

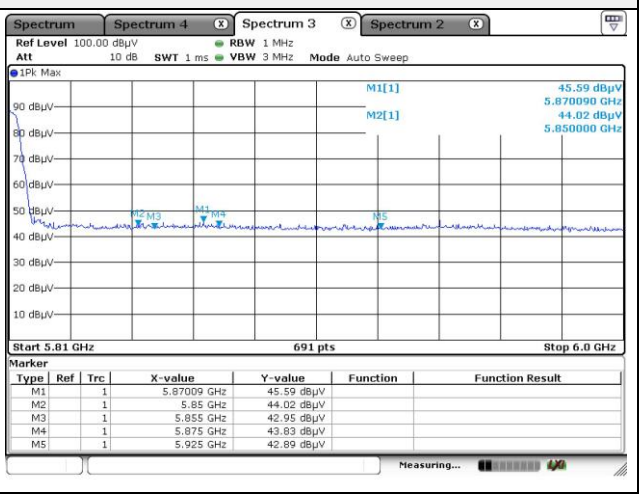
- **Band edge**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5857.16	45.61	Peak	H	11.81	-	57.42	110.20	52.78
5850.00	43.41	Peak	H	11.78	-	55.19	122.20	67.02
5870.09	45.59	Peak	V	11.89	-	57.48	106.57	49.09
5850.00	44.02	Peak	V	11.78	-	55.80	122.20	66.41

Restricted band // Horizontal // Peak



Restricted band // Vertical // Peak



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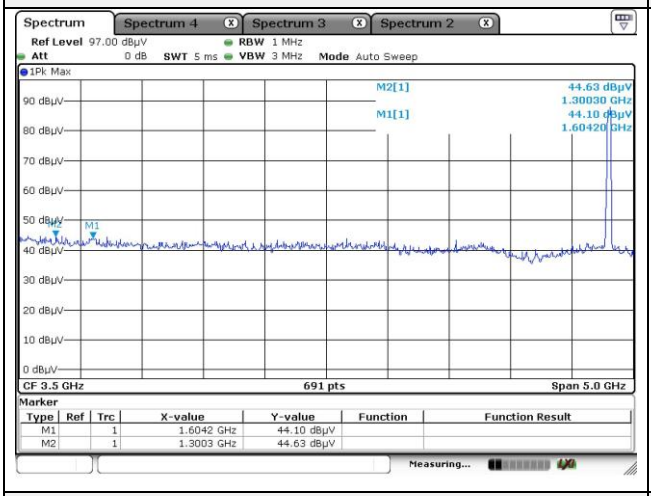
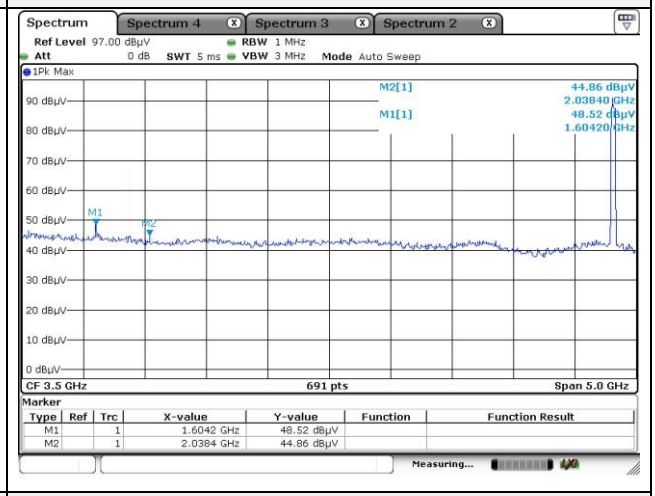
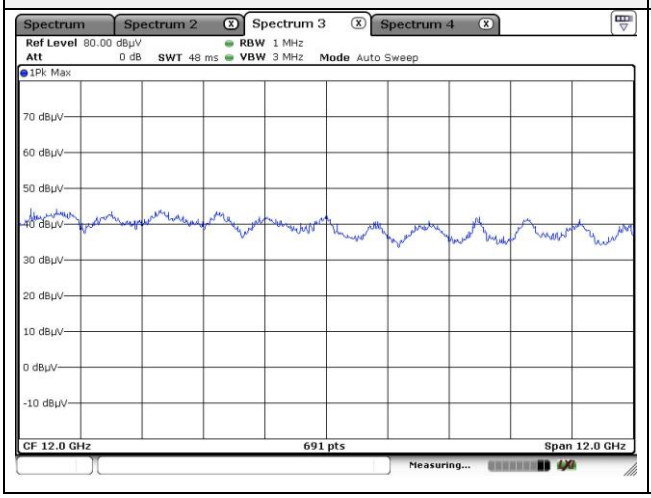
Horizontal // Peak for 1 ㎓ to 6 ㎓



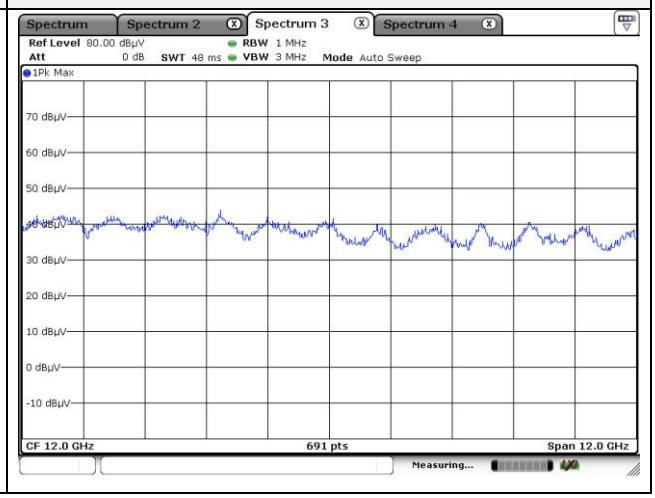
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



Note.

1. No spurious emission were detected above 6 ㎓.

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The test results in the report only apply to the tested sample.

Mode: UNII-3(VHT80) _Module 1

Distance of measurement: 3 meter

Channel: 155

- **Spurious**

Frequency (㎒)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1625.90	46.54	Peak	H	-4.74	0.18	41.98	74.00	32.38
2262.70	43.78	Peak	H	-0.46	0.18	43.50	74.00	30.86
1625.90	45.94	Peak	V	-4.74	0.18	41.38	74.00	32.98
1293.10	44.92	Peak	V	-7.26	0.18	41.98	74.00	32.38

- **Band edge // Below 5725 ㎒**

Frequency (㎒)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5609.87	45.53	Peak	H	9.91	0.18	55.62	68.20	12.58
5720.00	44.62	Peak	H	10.83	0.18	55.63	110.80	55.17
5632.50	46.32	Peak	V	10.10	0.18	56.60	68.20	11.60
5725.00	45.27	Peak	V	10.87	0.18	56.32	122.20	65.88

- **Band edge // Above 5850 ㎒**

Frequency (㎒)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5865.69	45.35	Peak	H	11.86	0.18	57.39	107.81	50.42
5855.00	43.23	Peak	H	11.80	0.18	55.21	110.80	55.59
5859.91	44.66	Peak	V	11.83	0.18	56.67	109.43	52.76
5875.00	43.60	Peak	V	11.91	0.18	55.69	105.20	49.51

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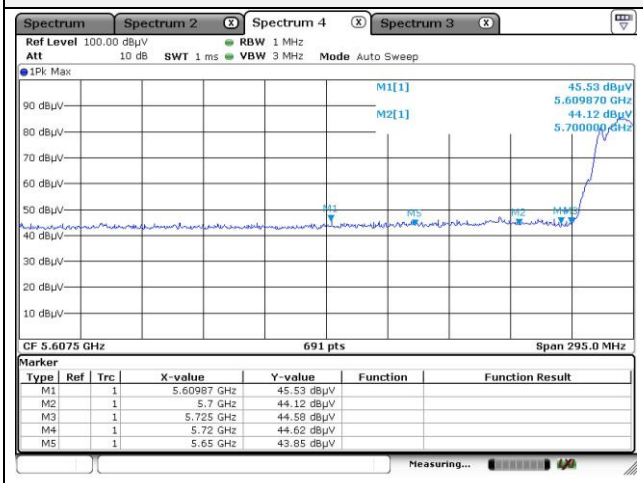
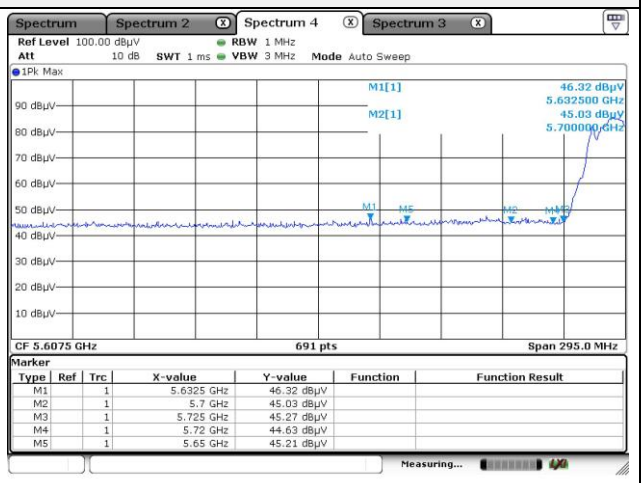
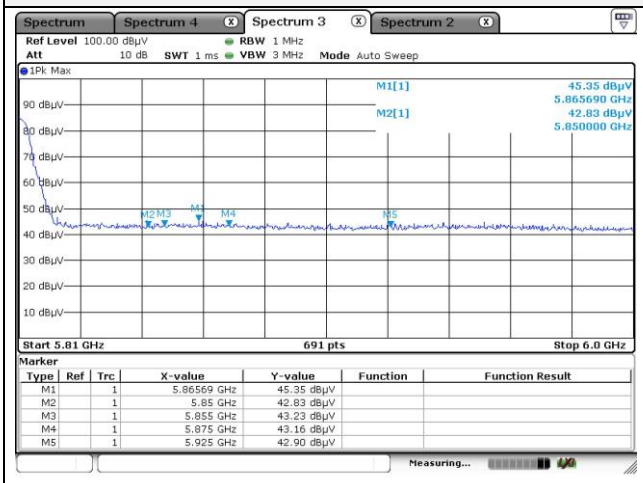
Restricted band // Horizontal // Peak // Below 5725 ㎒



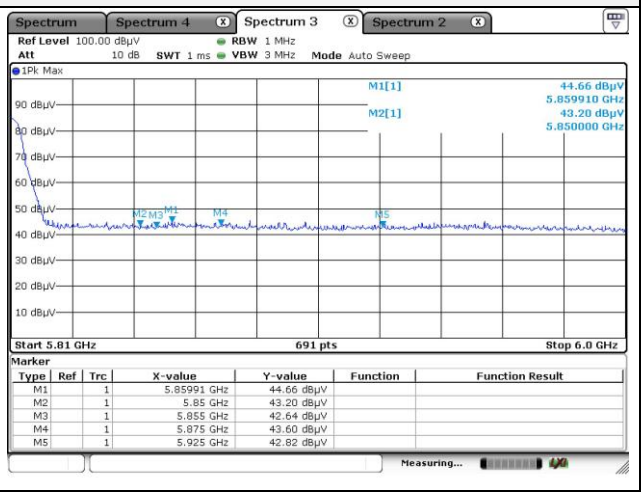
Restricted band // Vertical // Peak // Below 5725 ㎒



Restricted band // Horizontal // Peak // Below 5850 ㎒



Restricted band // Vertical // Peak // Below 5850 ㎒



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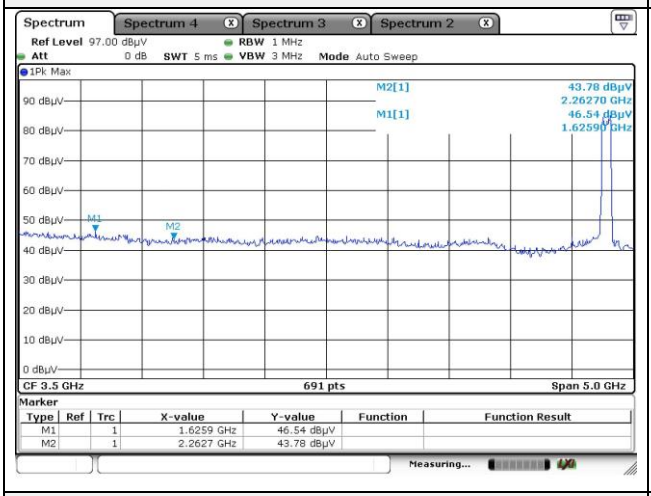
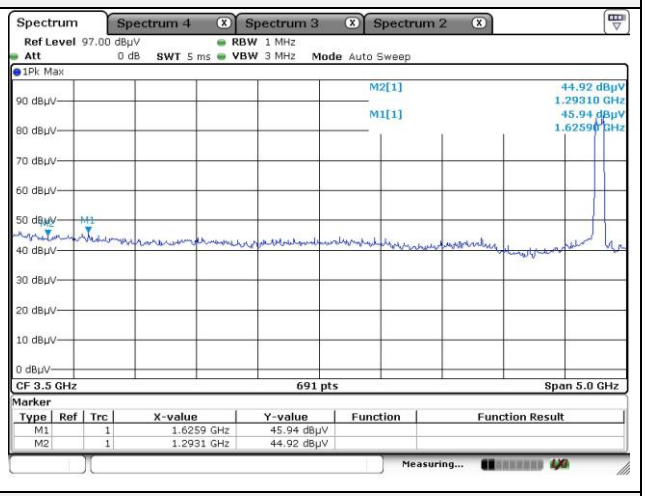
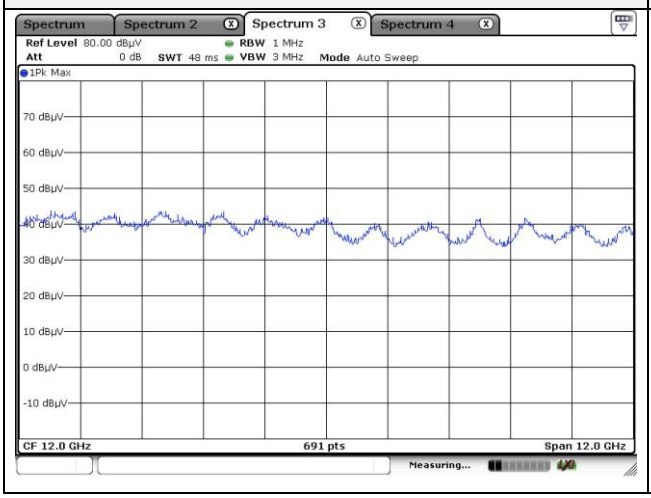
Horizontal // Peak for 1 ㎓ to 6 ㎓



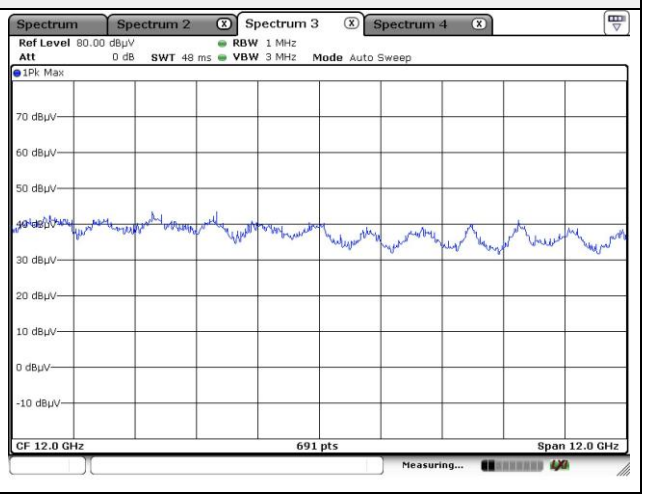
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



Note.

1. No spurious emission were detected above 6 ㎓.

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The test results in the report only apply to the tested sample.

Mode: UNII-3(VHT20)_Module 2

Distance of measurement: 3 meter

Channel: 149

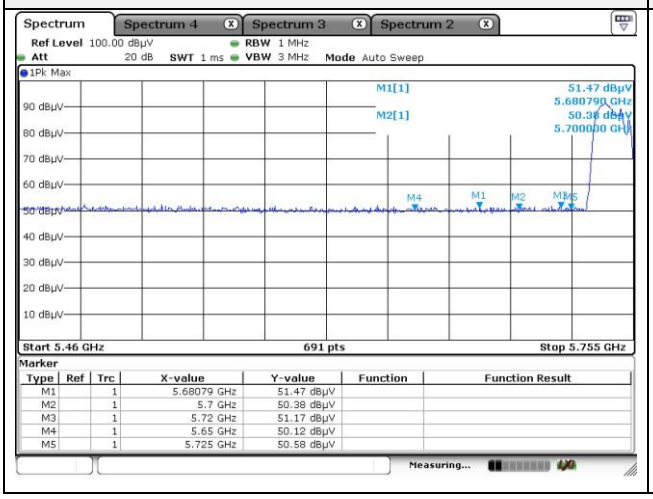
- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1625.90	44.53	Peak	H	-4.74	-	39.79	74.00	34.21
1249.60	42.77	Peak	H	-7.54	-	35.23	74.00	38.77
1625.90	45.46	Peak	V	-4.74	-	40.72	74.00	33.28
1408.80	45.72	Peak	V	-6.52	-	39.20	74.00	34.80

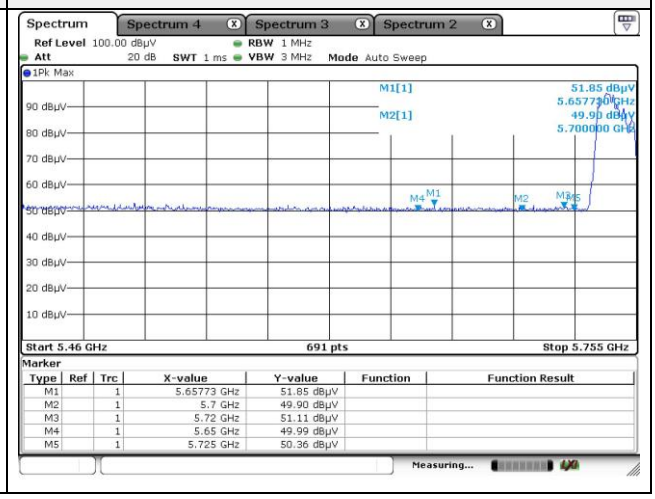
- **Band edge**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5680.79	51.47	Peak	H	10.50	-	61.97	90.98	29.01
5720.00	51.17	Peak	H	10.83	-	62.00	110.80	48.80
5657.73	51.85	Peak	V	10.31	-	62.16	73.92	11.76
5720.00	51.11	Peak	V	10.83	-	61.94	110.80	48.86

Restricted band // Horizontal // Peak



Restricted band // Vertical // Peak



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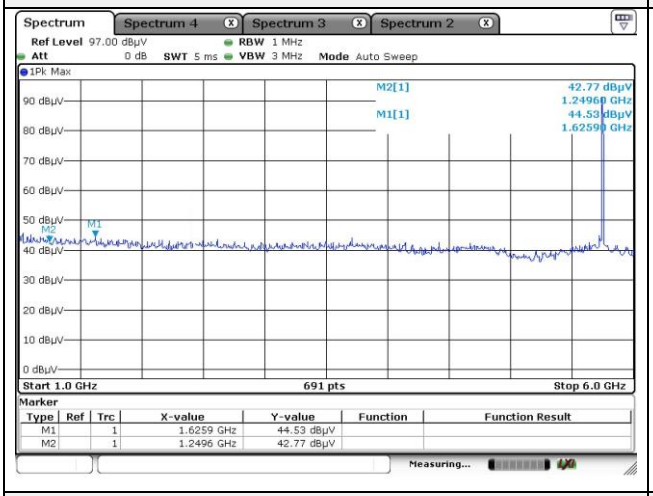
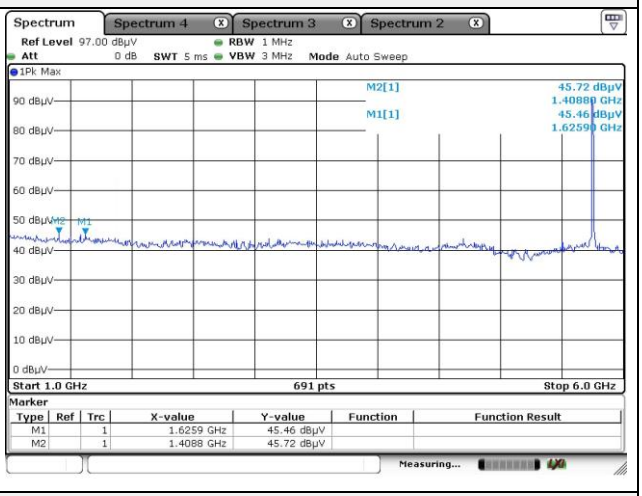
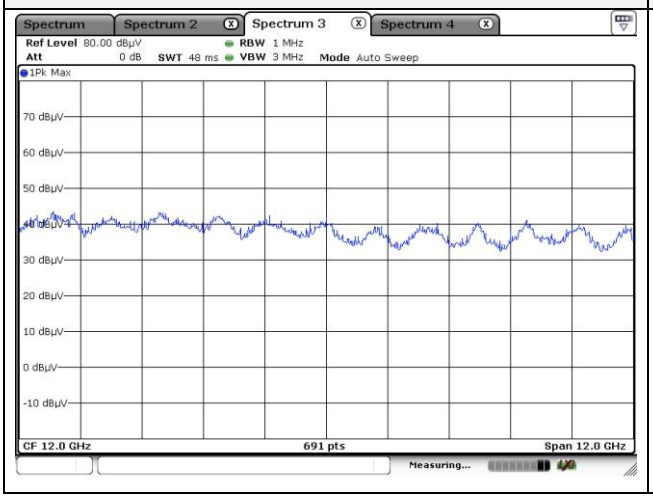
Horizontal // Peak for 1 ㎓ to 6 ㎓



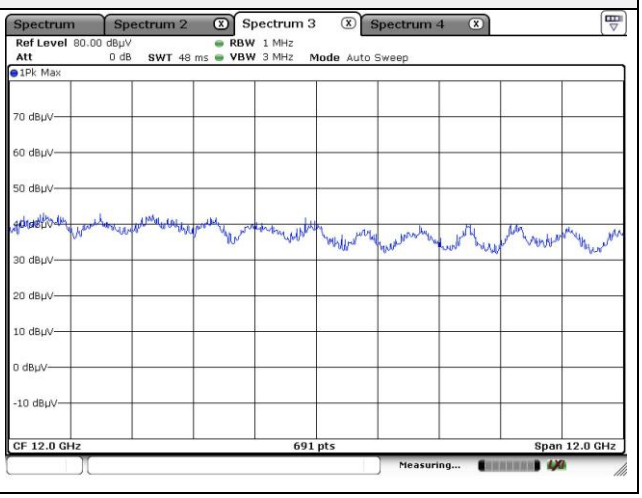
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



Note.

1. No spurious emission were detected above 6 ㎓.
2. Average test was not performed because peak result is lower than the average limit.

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The test results in the report only apply to the tested sample.

Mode: UNII-3(VHT20)_Module 2

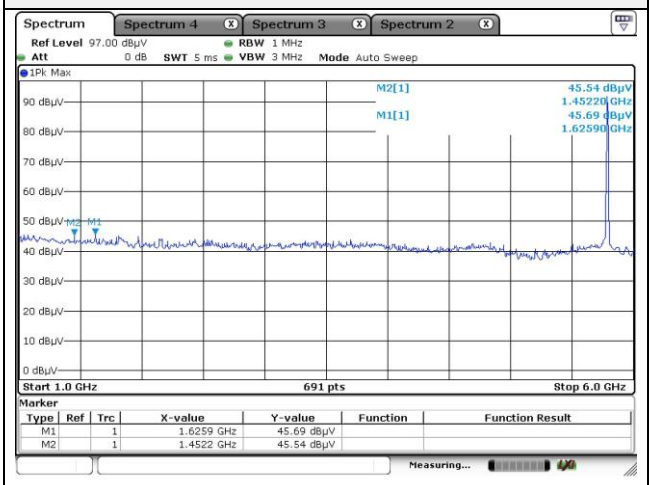
Distance of measurement: 3 meter

Channel: 157

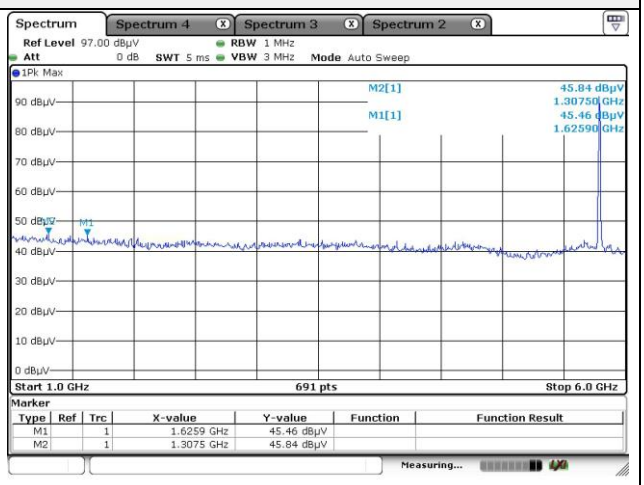
- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1625.90	45.69	Peak	H	-4.74	-	40.95	74.00	33.05
1452.20	45.54	Peak	H	-6.26	-	39.28	74.00	34.72
1625.90	45.46	Peak	V	-4.74	-	40.72	74.00	33.28
1307.50	45.84	Peak	V	-7.17	-	38.67	74.00	35.33

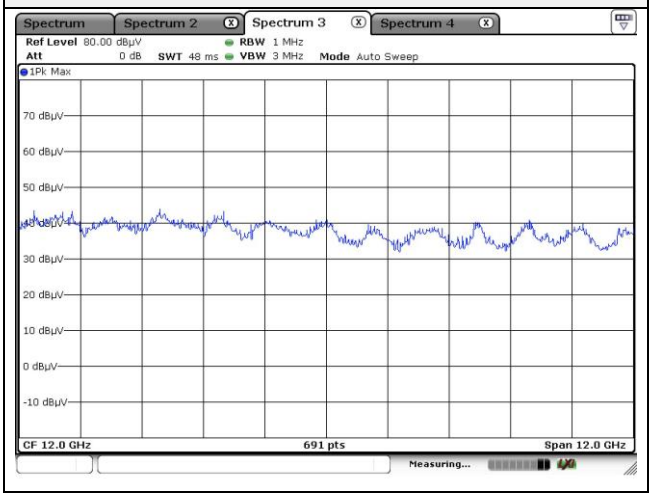
Horizontal // Peak for 1 GHz to 6 GHz



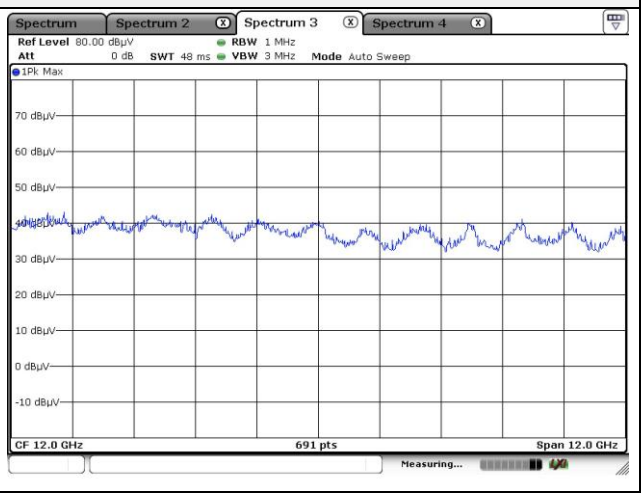
Vertical // Peak for 1 GHz to 6 GHz



Horizontal // Peak for 6 GHz to 18 GHz



Vertical // Peak for 6 GHz to 18 GHz



Note.

1. Average test was not performed because peak result is lower than the average limit.

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The test results in the report only apply to the tested sample.

Mode: UNII-3(VHT20) _Module 2

Distance of measurement: 3 meter

Channel: 165

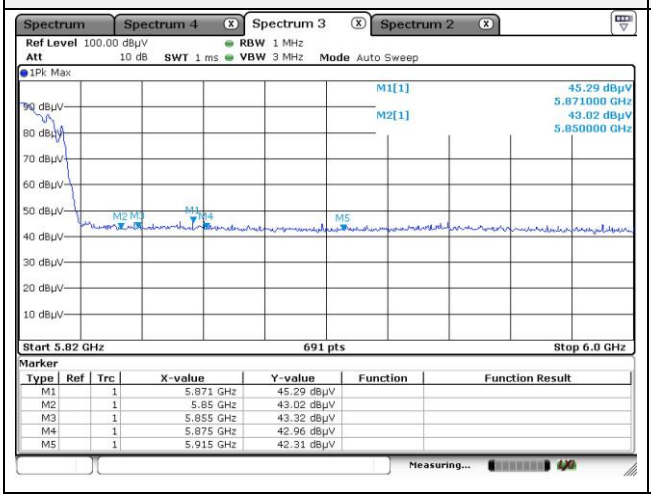
- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1618.70	46.40	Peak	H	-4.81	-	41.59	74.00	32.41
1256.90	43.28	Peak	H	-7.49	-	35.79	74.00	38.21
1618.70	44.90	Peak	V	-4.81	-	40.09	74.00	33.91
1452.20	45.12	Peak	V	-6.26	-	38.86	74.00	35.14

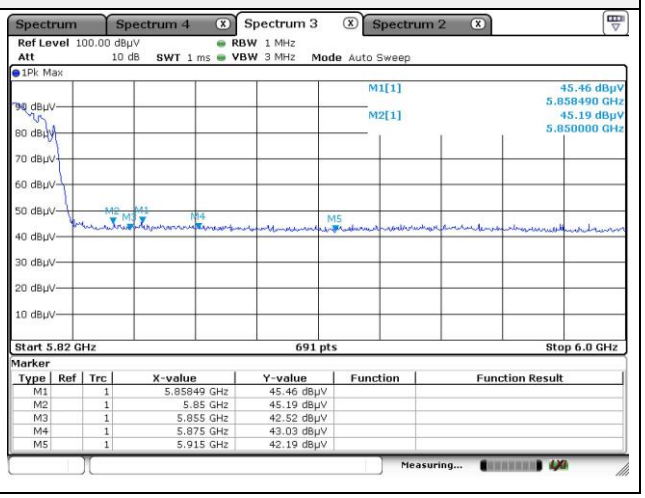
- **Band edge**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5871.00	45.29	Peak	H	11.89	-	57.18	106.32	49.14
5855.00	43.32	Peak	H	11.80	-	55.12	110.80	55.68
5858.49	45.46	Peak	V	11.82	-	57.28	109.82	52.54
5850.00	45.19	Peak	V	11.78	-	56.97	122.20	65.24

Restricted band // Horizontal // Peak



Restricted band // Vertical // Peak



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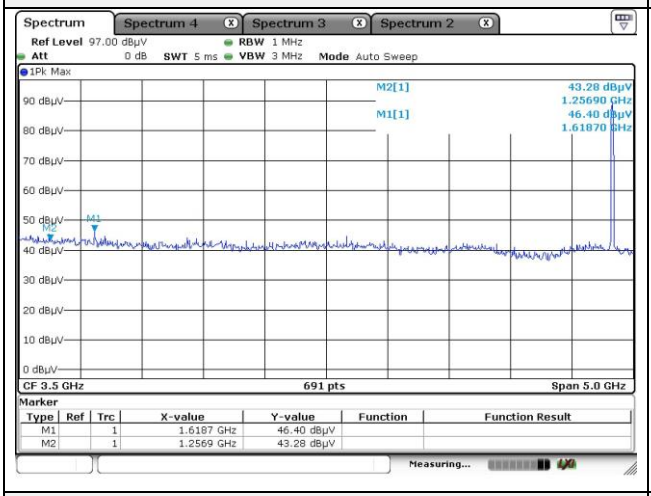
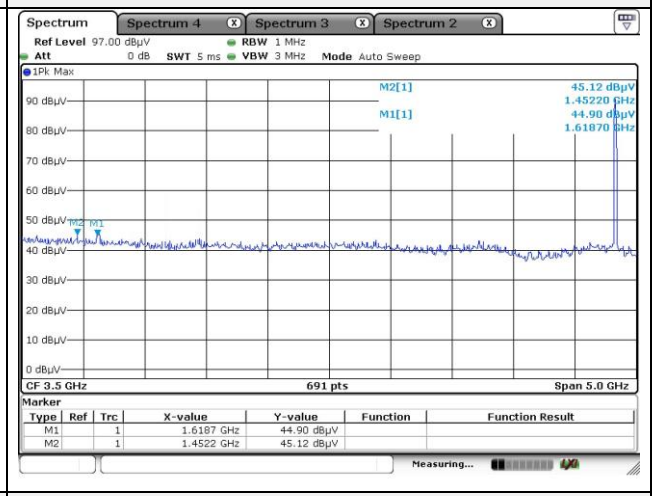
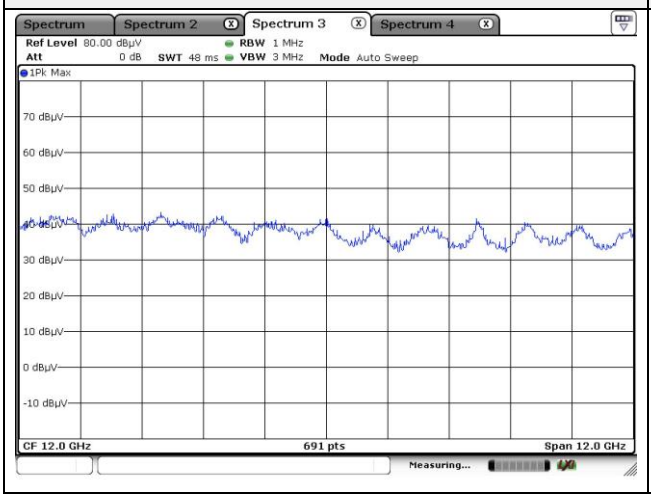
Horizontal // Peak for 1 ㎓ to 6 ㎓



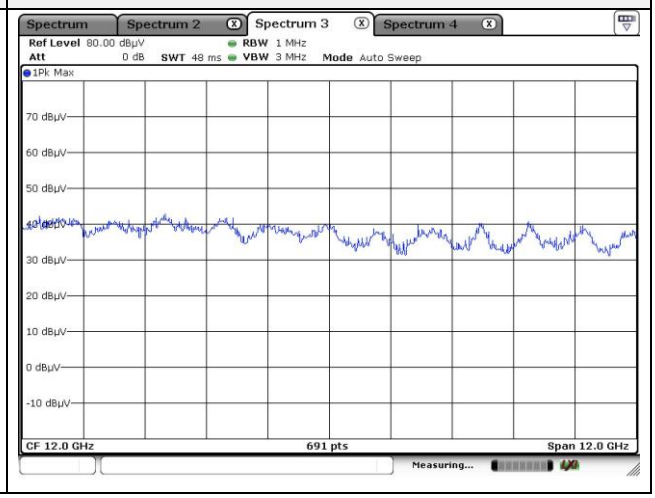
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



Note.

1. No spurious emission were detected above 6 ㎓.

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Mode: UNII-3(VHT40) _Module 2

Distance of measurement: 3 meter

Channel: 151

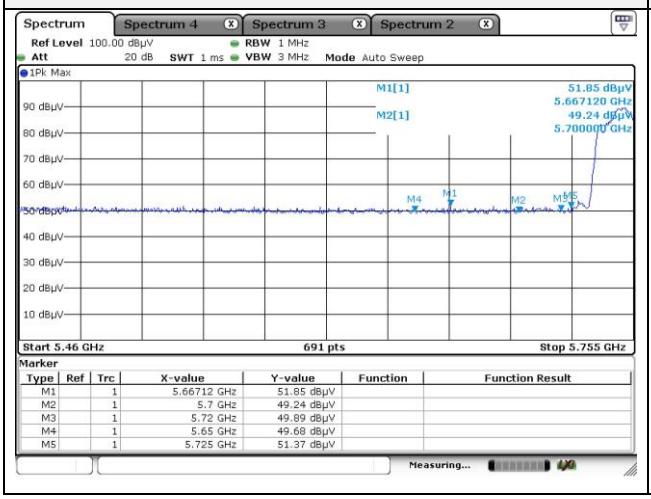
- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1625.90	45.85	Peak	H	-4.74	-	41.11	74.00	32.89
1285.80	45.82	Peak	H	-7.31	-	38.51	74.00	35.49
1625.90	46.00	Peak	V	-4.74	-	41.26	74.00	32.74
1546.30	47.00	Peak	V	-5.52	-	41.48	74.00	32.52

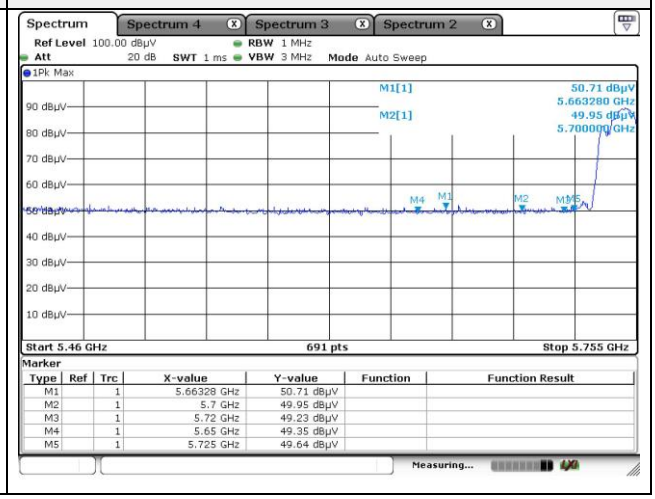
- **Band edge**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5667.12	51.85	Peak	H	10.39	-	62.24	80.87	18.63
5725.00	51.37	Peak	H	10.87	-	62.24	122.20	59.96
5662.38	50.71	Peak	V	10.35	-	61.06	77.36	16.30
5700.00	49.95	Peak	V	10.67	-	60.62	105.20	44.59

Restricted band // Horizontal // Peak



Restricted band // Vertical // Peak



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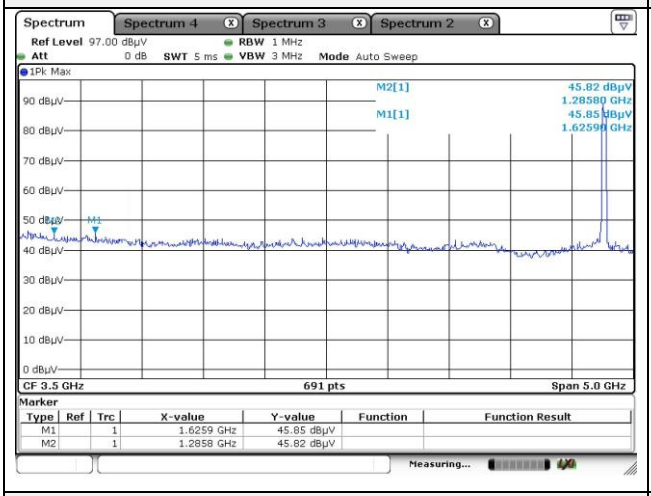
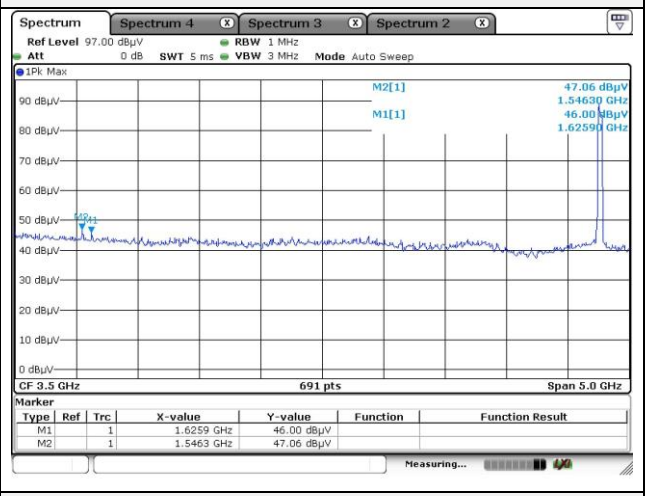
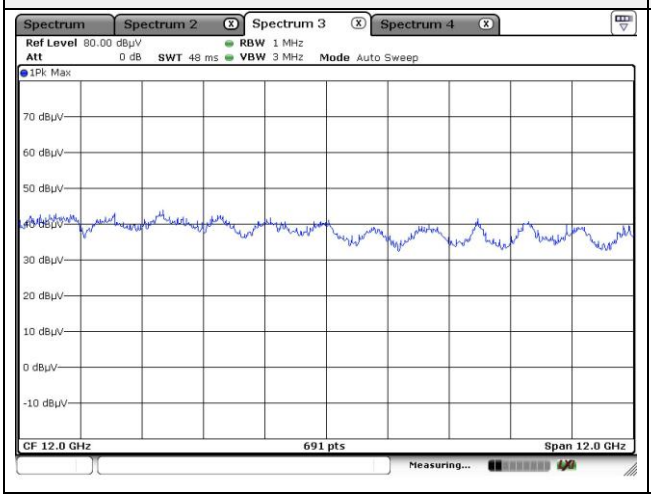
Horizontal // Peak for 1 ㎓ to 6 ㎓



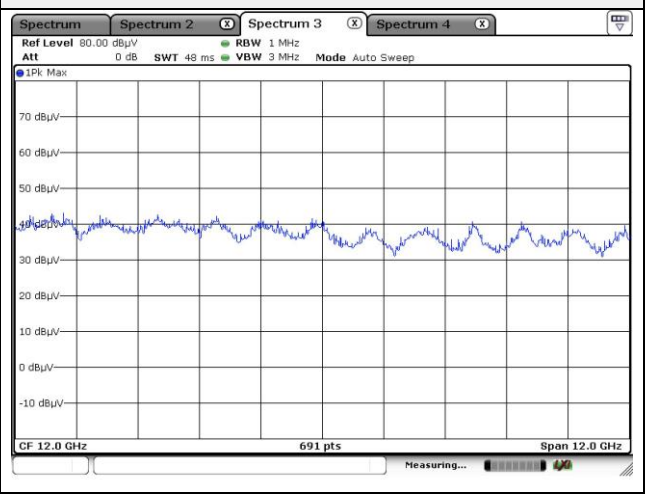
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



Note.

1. No spurious emission were detected above 6 ㎓.

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Mode: UNII-3(VHT40) _Module 2

Distance of measurement: 3 meter

Channel: 159

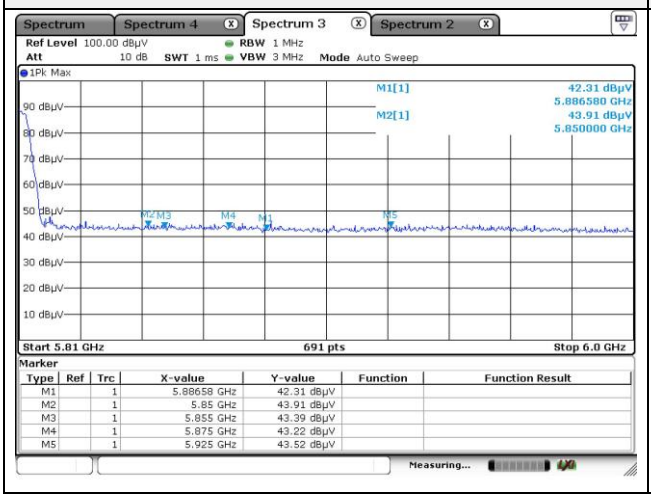
- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1604.20	46.49	Peak	H	-4.95	-	41.54	74.00	32.46
1459.50	45.48	Peak	H	-6.22	-	39.26	74.00	34.74
1604.20	46.17	Peak	V	-4.95	-	41.22	74.00	32.78
1459.50	42.85	Peak	V	-6.22	-	41.54	74.00	32.46

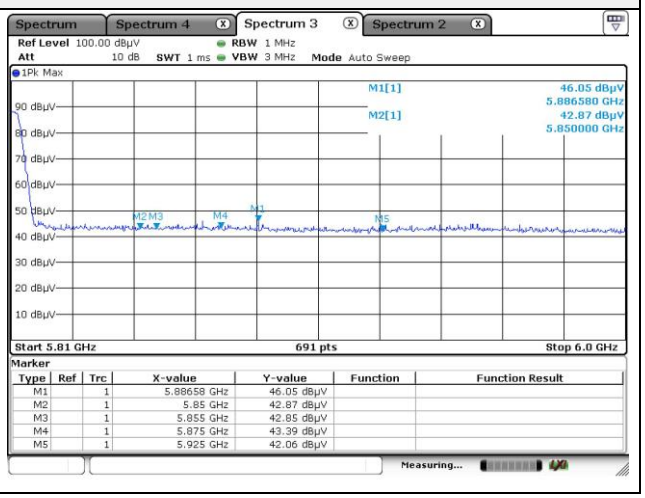
- **Band edge**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5850.00	43.91	Peak	H	11.78	-	55.69	122.20	66.52
5925.00	43.52	Peak	H	12.19	-	55.71	68.20	12.49
5886.58	46.05	Peak	V	11.98	-	58.03	95.68	37.65
5875.00	43.39	Peak	V	11.91	-	55.30	105.20	49.90

Restricted band // Horizontal // Peak



Restricted band // Vertical // Peak



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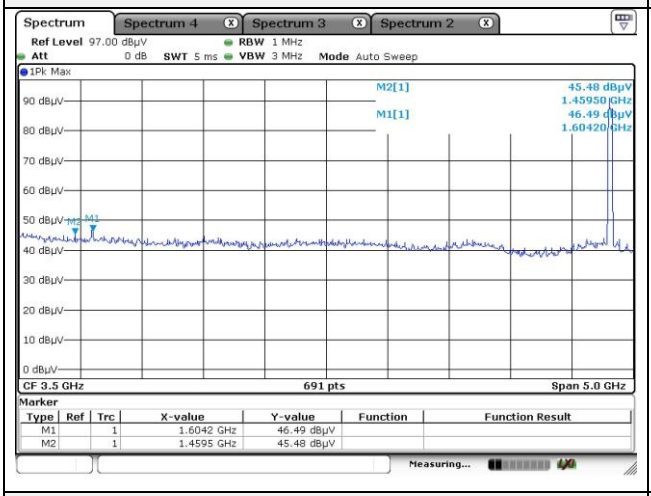
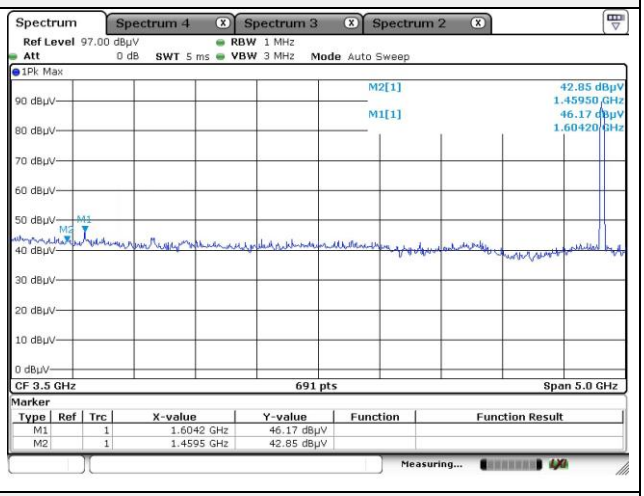
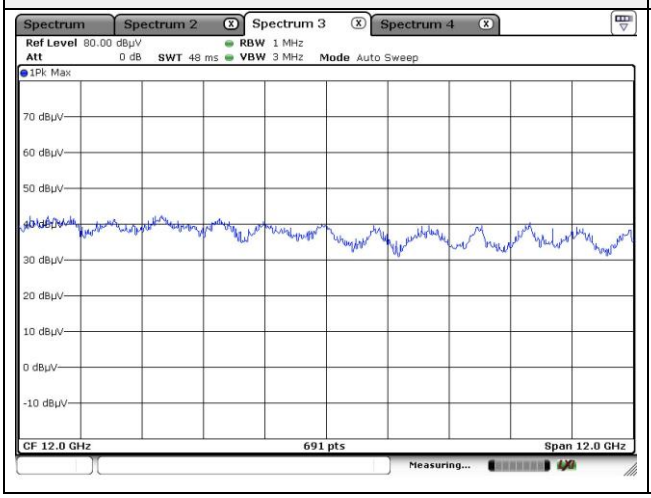
Horizontal // Peak for 1 ㎓ to 6 ㎓



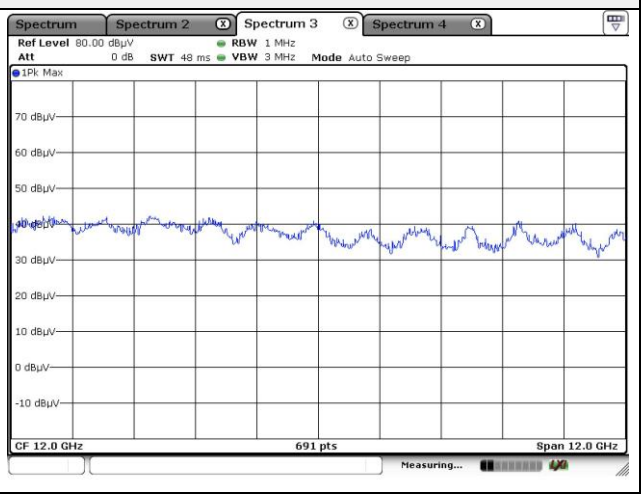
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



Note.

1. No spurious emission were detected above 6 ㎓.

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Mode: UNII-3(VHT80) _Module 1

Distance of measurement: 3 meter

Channel: 155

- **Spurious**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
1625.90	46.51	Peak	H	-4.74	0.18	46.69	74.00	27.67
3666.40	44.68	Peak	H	2.49	0.18	44.86	74.00	29.50
1625.90	46.51	Peak	V	-4.74	0.18	46.69	74.00	27.67
2617.20	44.39	Peak	V	0.41	0.18	44.57	74.00	29.79

- **Band edge // Below 5725 MHz**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5665.84	51.22	Peak	H	10.38	0.18	61.78	79.92	18.14
5725.00	50.50	Peak	H	10.87	0.18	61.55	122.20	60.65
5674.95	50.96	Peak	V	10.46	0.18	61.60	86.66	25.06
5700.00	50.48	Peak	V	10.67	0.18	61.33	105.20	43.88

- **Band edge // Above 5850 MHz**

Frequency (MHz)	Level (dBμV)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5892.08	44.51	Peak	H	12.01	0.18	56.70	91.16	34.46
5875.00	42.71	Peak	H	11.91	0.18	54.80	105.20	50.40
5870.36	45.11	Peak	V	11.89	0.18	57.18	106.50	49.32
5850.00	43.25	Peak	V	11.78	0.18	55.21	122.20	67.00

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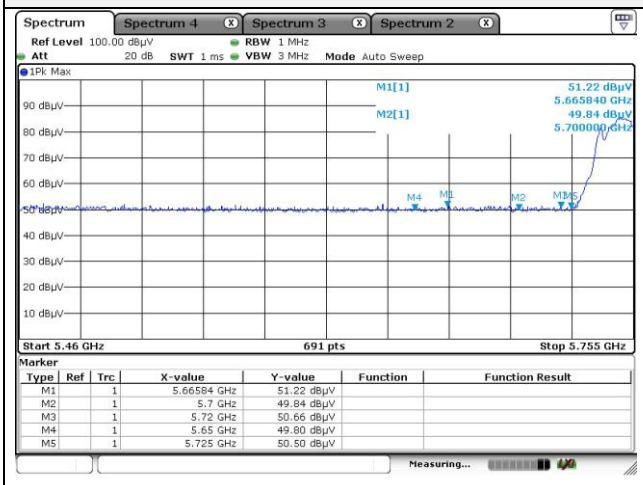
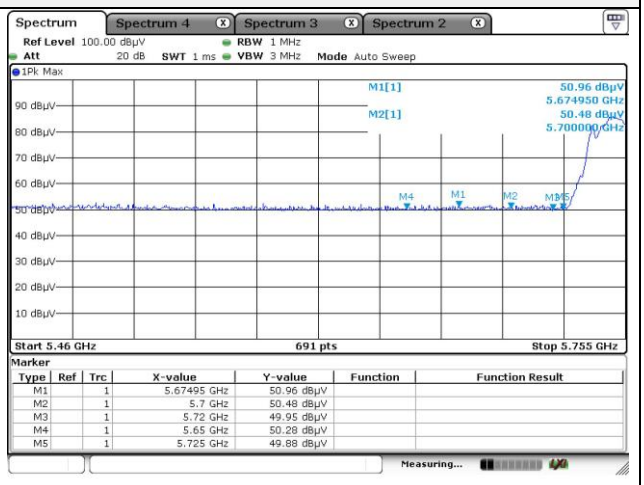
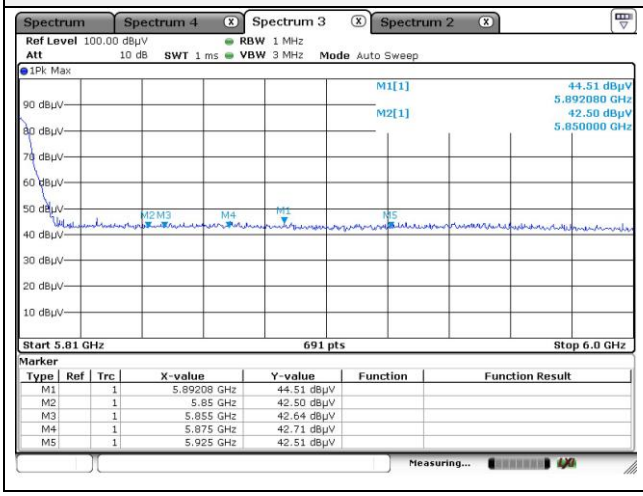
Restricted band // Horizontal // Peak // Below 5725 ㎒



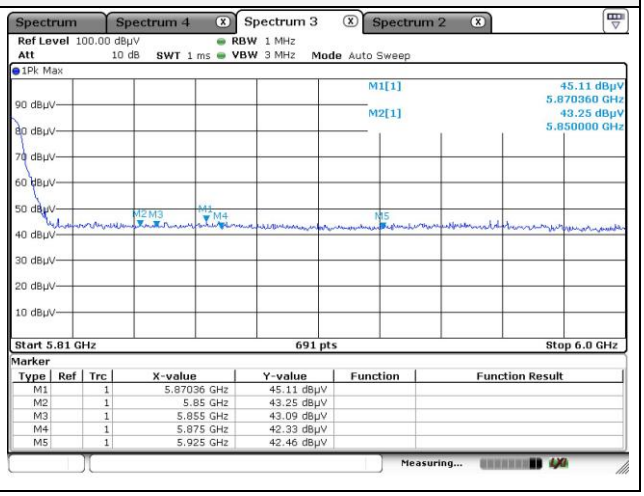
Restricted band // Vertical // Peak // Below 5725 ㎒



Restricted band // Horizontal // Peak // Below 5850 ㎒



Restricted band // Vertical // Peak // Below 5850 ㎒



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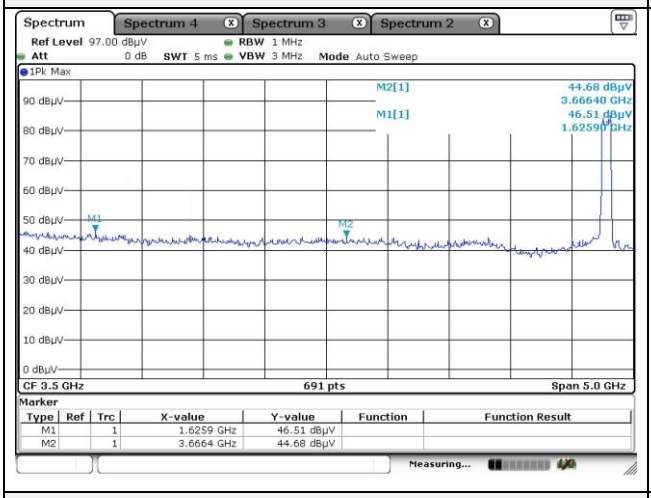
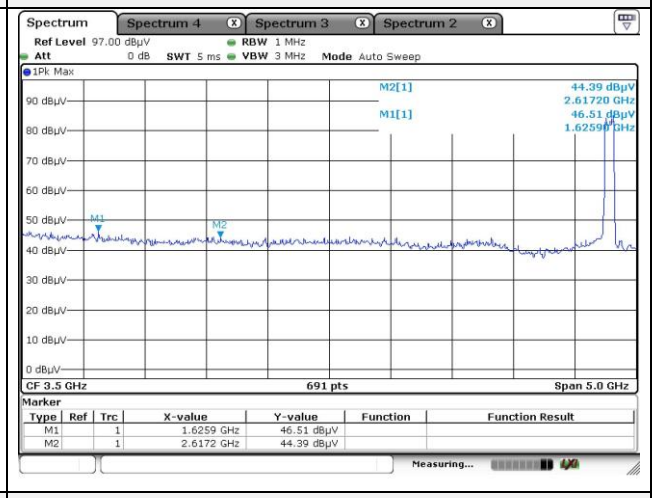
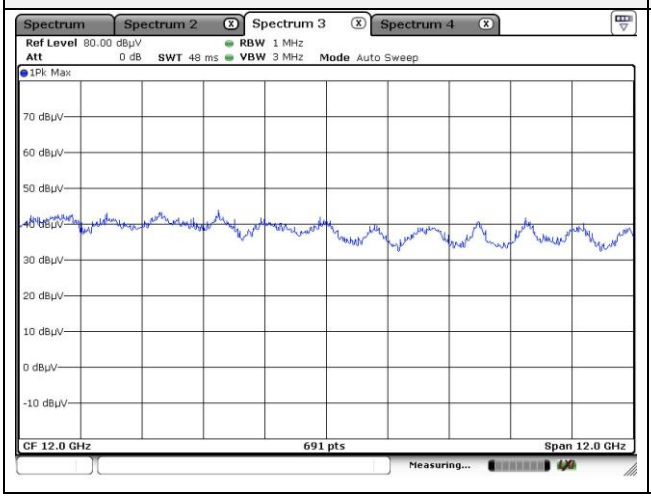
Horizontal // Peak for 1 ㎓ to 6 ㎓



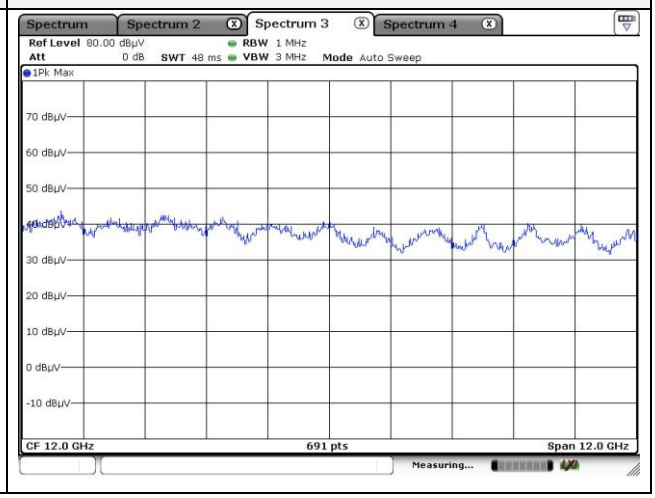
Vertical // Peak for 1 ㎓ to 6 ㎓



Horizontal // Peak for 6 ㎓ to 18 ㎓



Vertical // Peak for 6 ㎓ to 18 ㎓



Note.

1. No spurious emission were detected above 6 ㎓.

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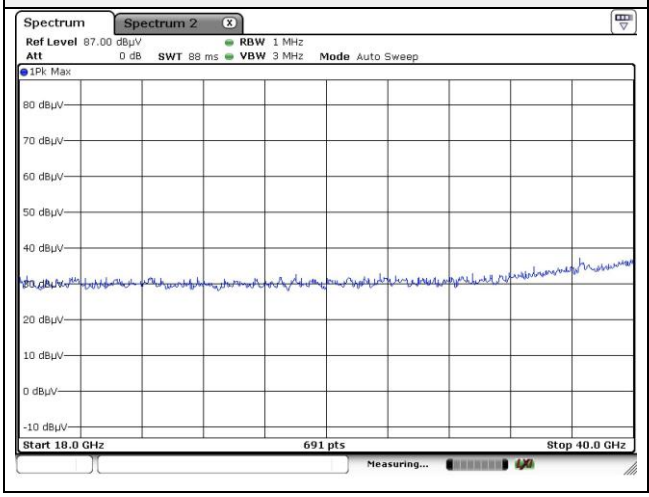
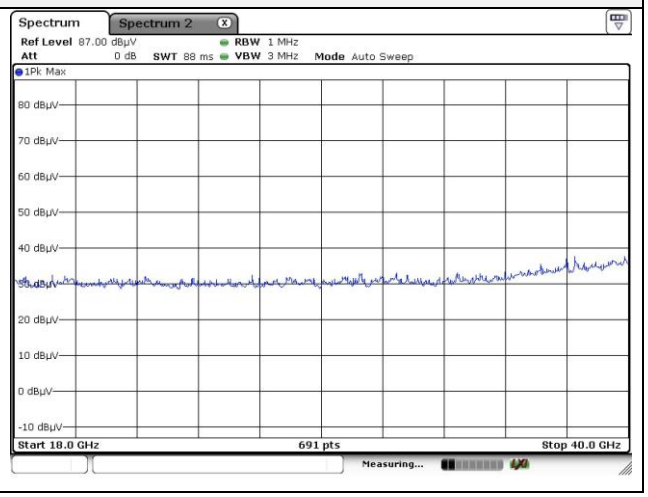
Test results (18 ㎓ to 40 ㎓) – Worst case

Mode: UNII-3(VHT80) _Module 1

Distance of measurement: 3 meter

Channel: 157

Horizontal	Vertical
	

Note.

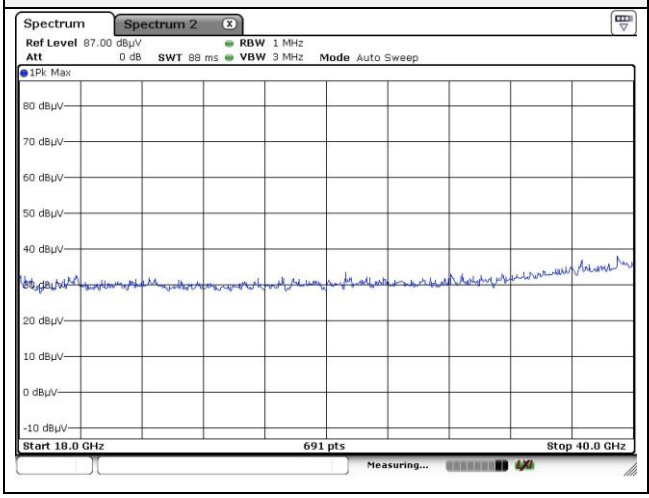
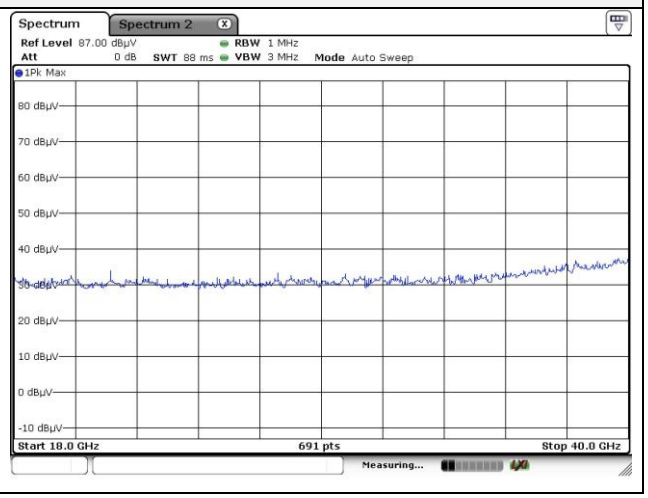
1. No spurious emission were detected above 18 ㎓.

Test results (18 ㎓ to 40 ㎓) – Worst case

Mode: UNII-3(VHT80) _Module 2

Distance of measurement: 3 meter

Channel: 157

Horizontal	Vertical
	

Note.

1. No spurious emission were detected above 18 ㎓.

3.7. AC conducted emissions

Limit

According to 15.207(a), for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 ㎑ to 30 ㎒, shall not exceed the limits in the following table, as measured using a 50uH/50 ohm line impedance stabilization network (LISN). Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequencies ranges.

Frequency of Emission (㎒)	Conducted limit (dBμV/m)	
	Quasi-peak	Average
0.15 – 0.50	66 - 56*	56 - 46*
0.50 – 5.00	56	46
5.00 – 30.0	60	50

Note:

1. All AC line conducted spurious emission are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and the appropriate frequencies. All data rates and modes were investigated for conducted spurious emission. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section.
3. Both Cable loss and LISN factor are included in measurement level(QP Level or AV Level).

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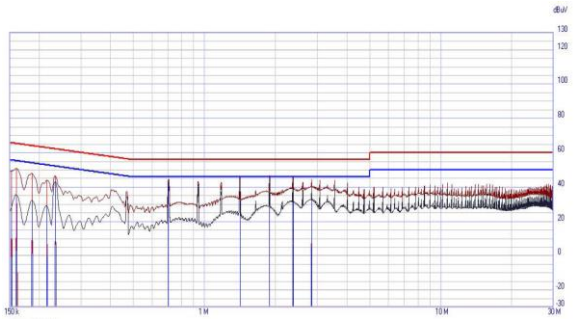
The test results in the report only apply to the tested sample.

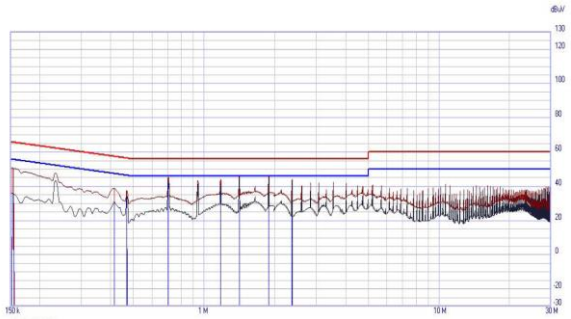
Test results

Hot Line_Module 1



	Frequency [MHz]	QPeak [dBuV]	Limit FCC qp-b [dBuV]	Delta [dB]	C-Avg [dBuV]	Limit FCC av-b [dBuV]	Delta [dB]	Factor CABLELOSS.. [dB]	Factor 3LISN_L1(.. [dB]
1	0.152045	49.49	65.93	-16.44	28.44	55.85	-27.41	0.09	0.08
2	0.160225	50.95	65.49	-14.54	35.38	55.42	-20.04	0.09	0.07
3	0.18681	47.92	64.21	-16.29	32.30	54.15	-21.85	0.08	0.07
4	0.21544	44.07	63.02	-18.95	29.16	52.98	-23.82	0.07	0.07
5	0.233845	46.45	62.34	-15.89	43.12	52.30	-9.18	0.07	0.07
6	0.704195	44.30	56.00	-11.70	42.57	46.04	-3.47	0.10	0.09
7	1.415855	46.10	56.00	-9.90	43.99	46.04	-2.05	0.12	0.11
8	1.88416	46.92	56.00	-9.08	44.16	46.04	-1.88	0.13	0.12
9	2.35451	46.17	56.00	-9.83	42.65	46.04	-3.39	0.13	0.13
10	2.364735	46.17	56.00	-9.83	42.65	46.04	-3.39	0.13	0.13
11	2.83304	44.38	56.00	-11.62	39.69	46.04	-6.35	0.14	0.14

Neutral Line_Module 1



	Frequency [MHz]	QPeak [dBuV]	Limit FCC qp-b [dBuV]	Delta [dB]	C-Avg [dBuV]	Limit FCC av-b [dBuV]	Delta [dB]	Factor CABLELOSS.. [dB]	Factor 3LISN_L2(.. [dB]
1	0.152045	50.75	65.93	-15.18	35.99	55.85	-19.86	0.09	0.09
2	0.15409	50.54	65.82	-15.28	35.51	55.74	-20.23	0.09	0.09
3	0.413805	38.91	57.58	-18.67	30.79	47.60	-16.81	0.09	0.08
4	0.46902	37.41	56.53	-19.12	34.11	46.57	-12.46	0.09	0.08
5	0.704195	45.22	56.00	-10.78	42.75	46.04	-3.29	0.10	0.09
6	1.17659	43.82	56.00	-12.18	40.26	46.04	-5.78	0.11	0.10
7	1.415855	46.20	56.00	-9.80	43.83	46.04	-2.21	0.12	0.11
8	1.88416	46.44	56.00	-9.56	44.06	46.04	-1.98	0.13	0.12
9	2.35451	44.10	56.00	-11.90	42.43	46.04	-3.61	0.13	0.13
10	2.364735	44.10	56.00	-11.90	42.43	46.04	-3.61	0.13	0.13

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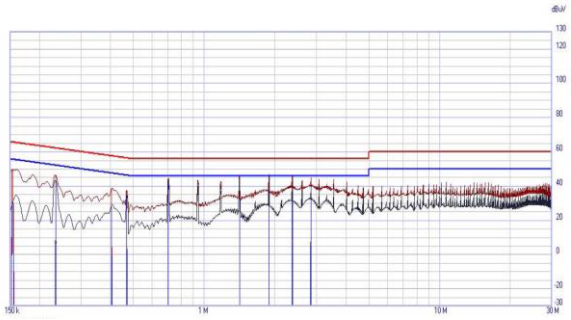
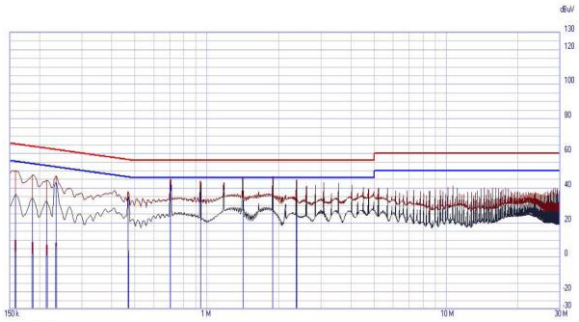
Hot Line_Module 2



	Frequency [MHz]	QPeak [dBuV]	Limit FCC qp-b [dBuV]	Delta [dB]	C-Avg [dBuV]	Limit FCC av-b [dBuV]	Delta [dB]	Factor CABLELOSS.. [dB]	Factor 3LISN_L1(.. [dB]
1	0.152045	49.70	65.93	-16.23	28.90	55.85	-26.95	0.09	0.08
2	0.15409	49.65	65.82	-16.17	31.36	55.74	-24.38	0.09	0.08
3	0.233845	46.37	62.34	-15.97	43.26	52.30	-9.04	0.07	0.07
4	0.40358	38.67	57.79	-19.12	28.50	47.81	-19.31	0.09	0.08
5	0.46902	37.47	56.53	-19.06	34.55	46.57	-12.02	0.09	0.08
6	0.704195	44.38	56.00	-11.62	42.69	46.04	-3.35	0.10	0.09
7	1.415855	46.01	56.00	-9.99	44.04	46.04	-2.00	0.12	0.11
8	1.88416	46.95	56.00	-9.05	44.16	46.04	-1.88	0.13	0.12
9	2.35451	46.30	56.00	-9.70	42.75	46.04	-3.29	0.13	0.13
10	2.364735	46.30	56.00	-9.70	42.75	46.04	-3.29	0.13	0.13
11	2.83304	44.77	56.00	-11.23	39.78	46.04	-6.26	0.14	0.14

Neutral Line_Module 2



	Frequency [MHz]	QPeak [dBuV]	Limit FCC qp-b [dBuV]	Delta [dB]	C-Avg [dBuV]	Limit FCC av-b [dBuV]	Delta [dB]	Factor CABLELOSS.. [dB]	Factor 3LISN_L2(.. [dB]
1	0.15818	49.94	65.60	-15.66	36.25	55.52	-19.27	0.09	0.09
2	0.18681	47.39	64.21	-16.82	34.07	54.15	-20.08	0.08	0.08
3	0.213395	44.27	63.10	-18.83	32.32	53.06	-20.74	0.07	0.08
4	0.233845	46.80	62.34	-15.54	43.20	52.30	-9.10	0.07	0.08
5	0.46902	37.80	56.53	-18.73	34.73	46.57	-11.84	0.09	0.08
6	0.704195	44.99	56.00	-11.01	42.80	46.04	-3.24	0.10	0.09
7	0.941415	43.98	56.00	-12.02	41.66	46.04	-4.38	0.11	0.09
8	1.415855	46.29	56.00	-9.71	44.08	46.04	-1.96	0.12	0.11
9	1.88416	46.78	56.00	-9.22	44.23	46.04	-1.81	0.13	0.12
10	2.35451	44.80	56.00	-11.20	42.50	46.04	-3.54	0.13	0.13
11	2.364735	44.80	56.00	-11.20	42.50	46.04	-3.54	0.13	0.13

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Appendix A. Measurement equipment

Equipment	Manufacturer	Model	Serial No.	Calibration interval	Calibration due.
Spectrum Analyzer	R&S	FSV40	101002	1 year	2017.07.06
Signal Generator	ANRITSU	68369B	992113	1 year	2018.02.20
Power Meter	Anritsu	ML2495A	1438001	1 year	2018.01.23
Pluse Power Sensor	Anritsu	MA2411B	1339205	1 year	2018.01.23
Loop antenna	SCHWARZBECK	FMZB1513	225	2 years	2019.05.10
Trilog-broadband antenna	SCHWARZBECK	VULB 9163	9168-714	2 years	2018.11.28
Horn Antenna	A.H	SAS-571	414	2 years	2019.02.15
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170550	2 years	2019.02.15
Preamplifier	SCHWARZBECK	BBV-9718	9718-246	1 year	2017.10.14
Preamplifier	HP	8449B	3008A00538	1 year	2017.07.05
Broadband Amplifier	SCHWARZBECK	BBV-9721	PS9721-003	1 year	2018.01.23
Low Pass Filter	Wainwright Instrument	WHNK6.0/26.5G-6SS	1	1 year	2017.07.05
High Pass Filter	WAINWRIGHT INSTRUMENT	WHJS3000-10TT	1	1 year	2017.07.04
Attenuator	Keysight	8493C	82506	1 year	2018.01.23
EMI Test Receiver	R&S	ESU26	100552	1 year	2018.04.19
Temperature & Humidity Chamber	Daehan Engineering	DH-1000	DH1000060628	1 year	2018.01.20
EMI Receiver	NARDA	9010F	020WW31006	1 year	2018.03.24
LISN	SCHWARZBECK	NSLK8126	8126157	1 year	2018.03.24

Peripheral devices

Device	Manufacturer	Model No.	Serial No.
Notebook Computer	Hewlett-Packard Company	15-B113TU	5CD242B016

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