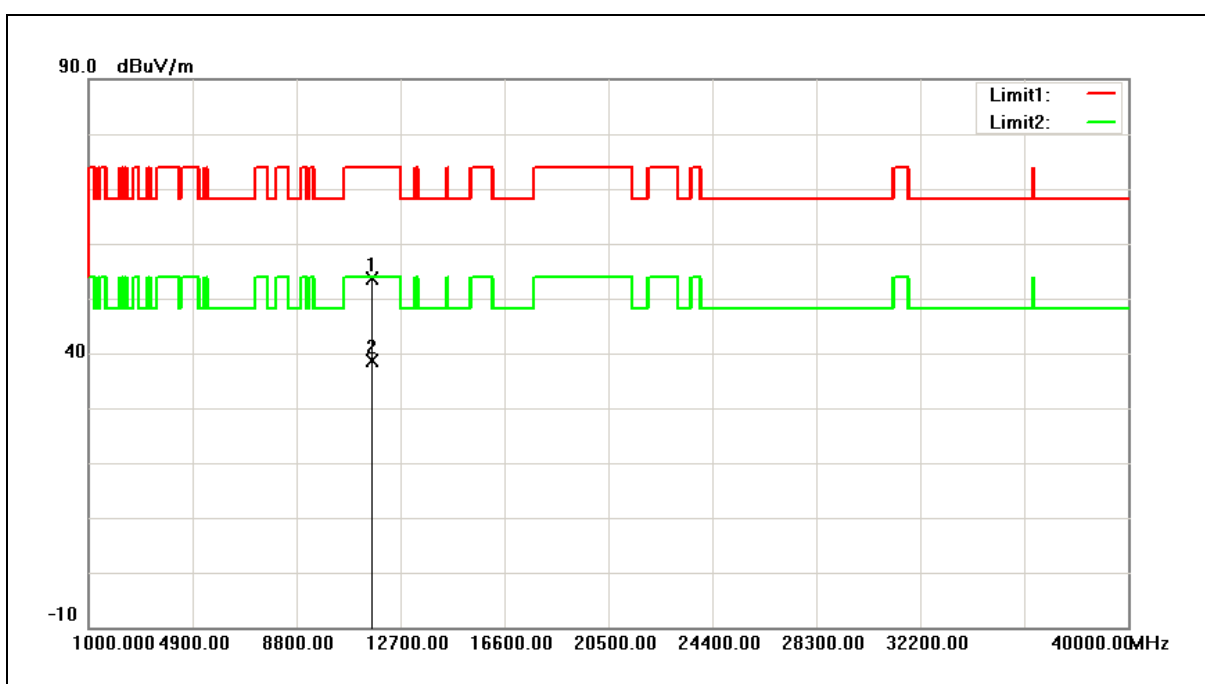


Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5825MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	04/08/2017
Ant.Polar.:	Vertical		



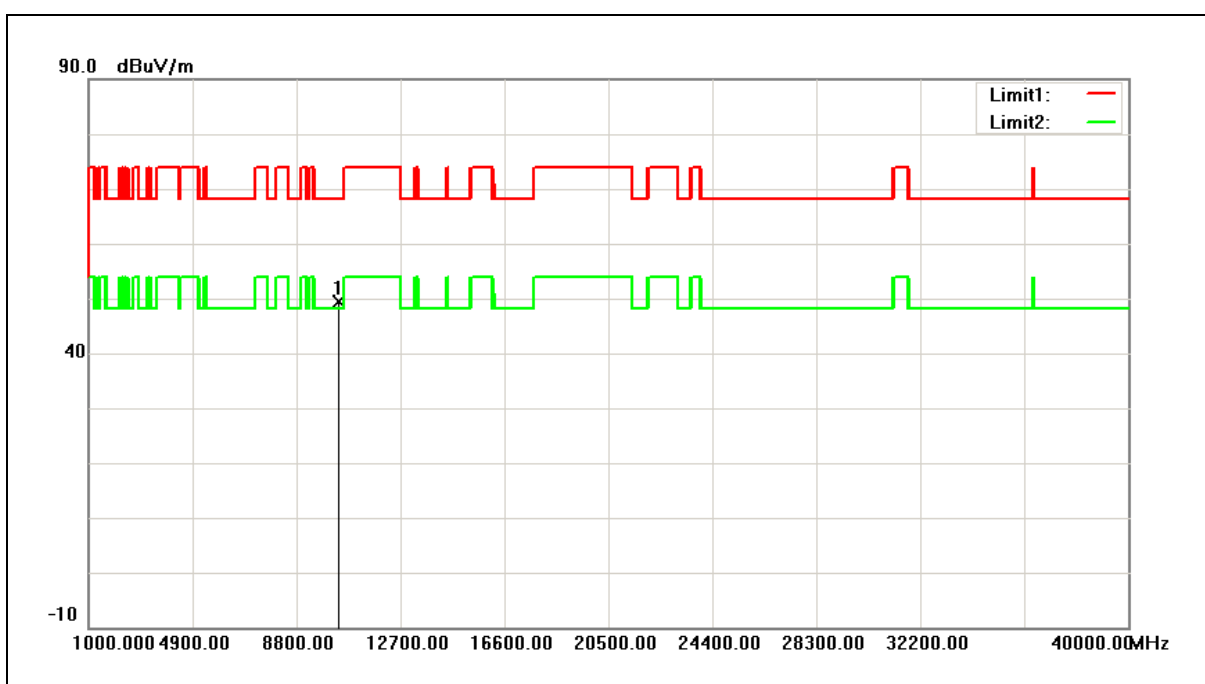
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11650.000	46.55	7.01	53.56	74.00	-20.44	peak
2	11650.000	31.58	7.01	38.59	54.00	-15.41	AVG

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5190MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	04/08/2017
Ant.Polar.:	Horizontal		



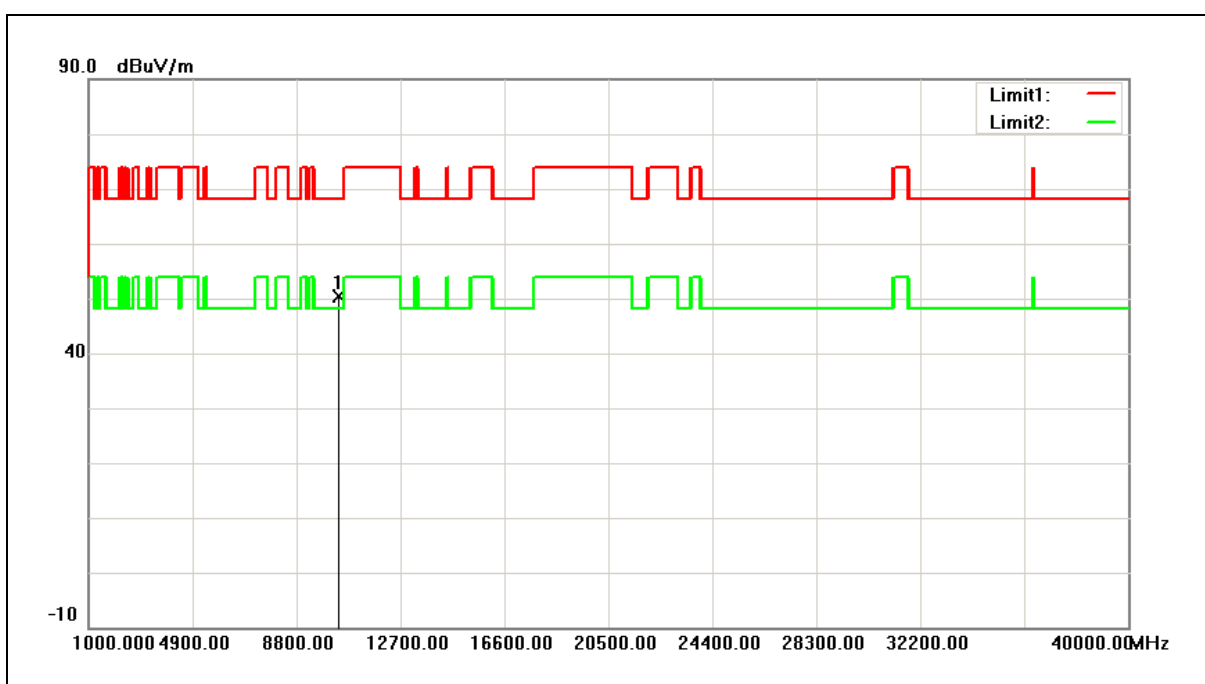
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10380.000	43.94	5.39	49.33	68.20	-18.87	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5190MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	04/08/2017
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10380.000	45.03	5.39	50.42	68.20	-17.78	peak

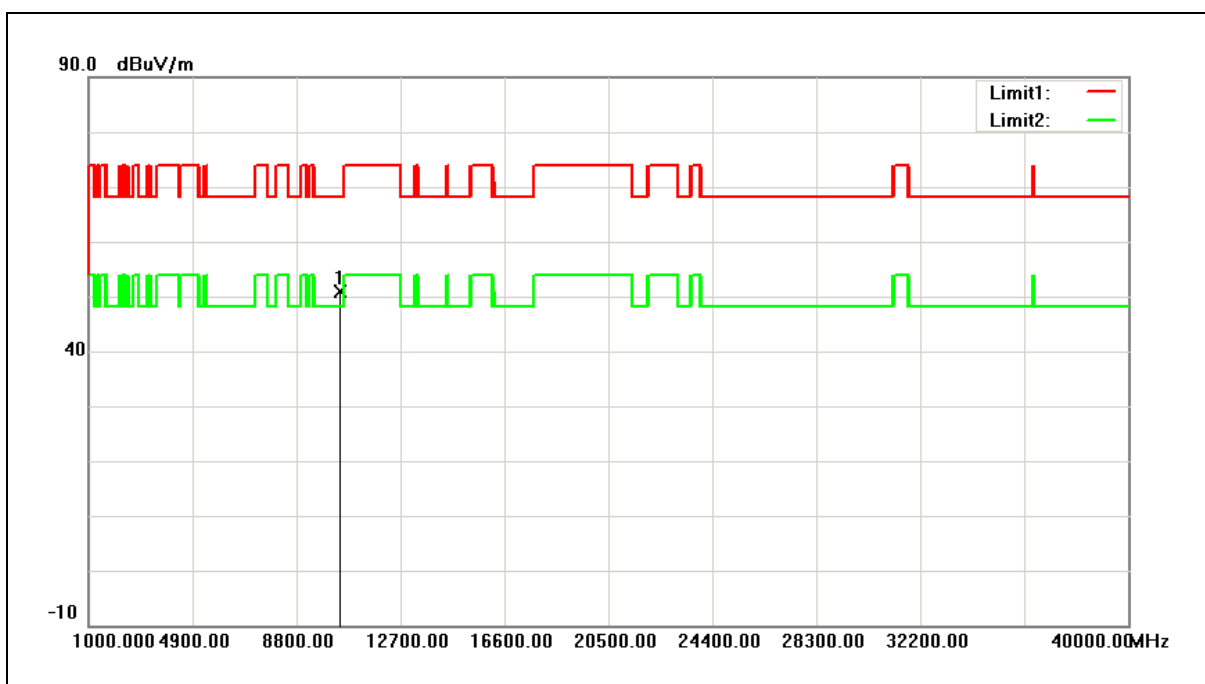
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5230MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	04/08/2017
Ant.Polar.:	Horizontal		



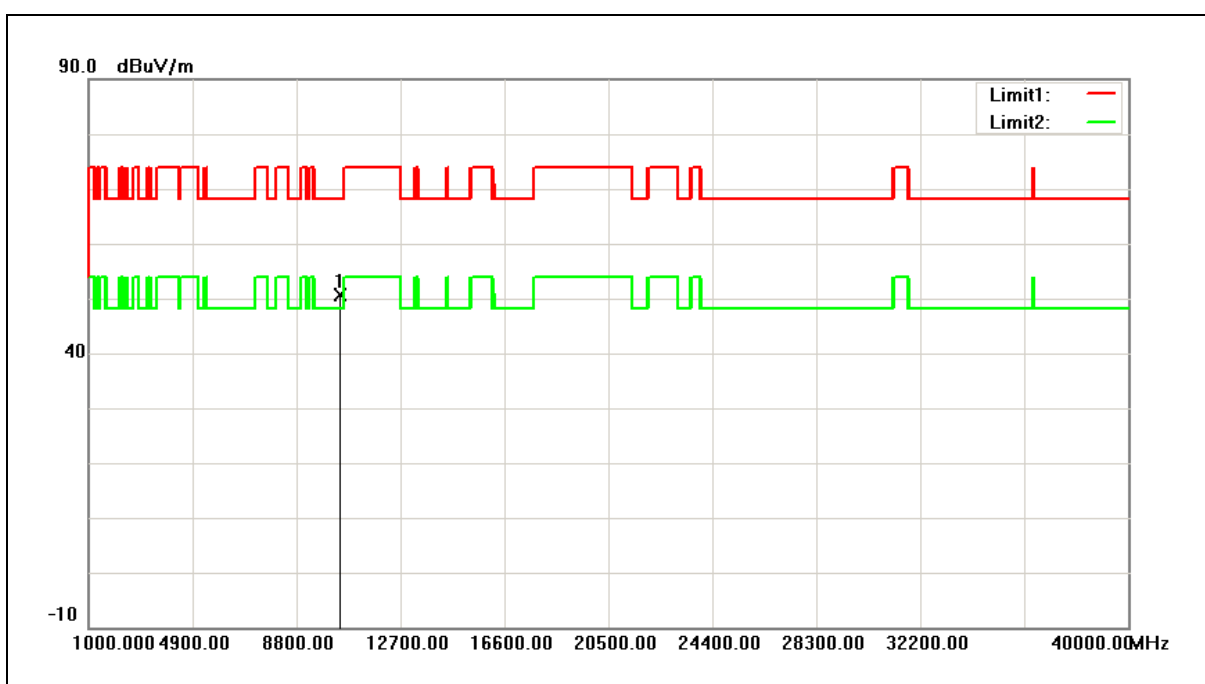
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10460.000	45.35	5.59	50.94	68.20	-17.26	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5230MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	04/08/2017
Ant.Polar.:	Vertical		



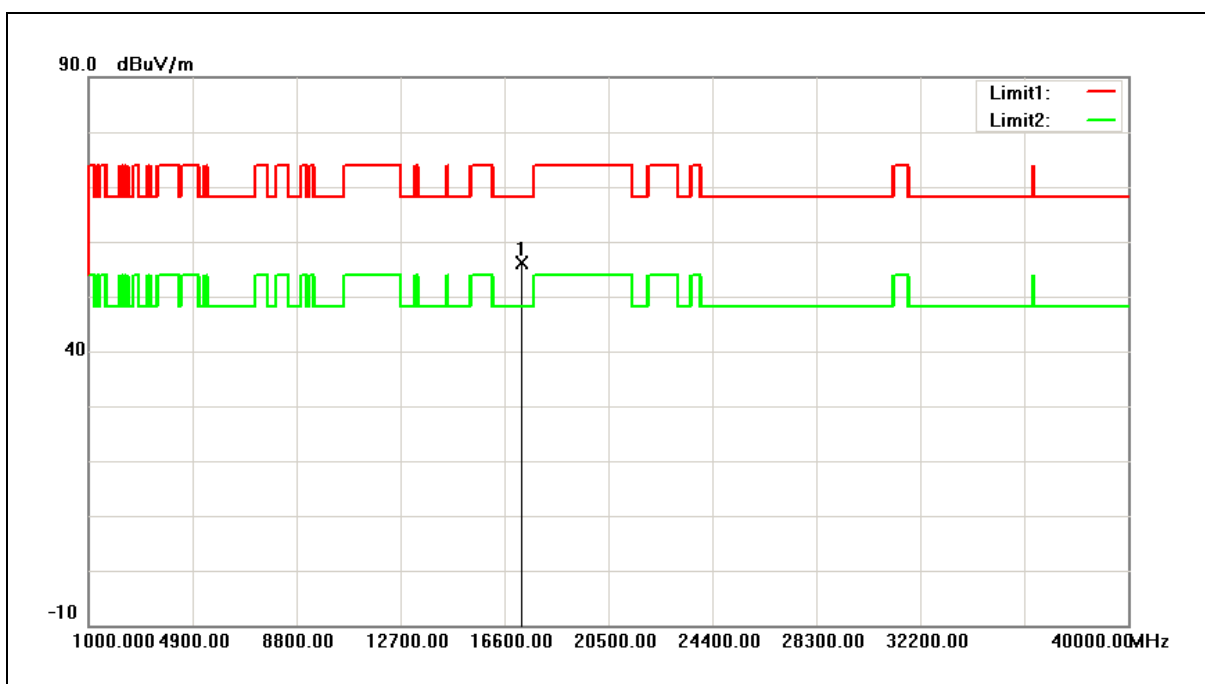
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10460.000	45.14	5.59	50.73	68.20	-17.47	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5755MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	04/08/2017
Ant.Polar.:	Horizontal		



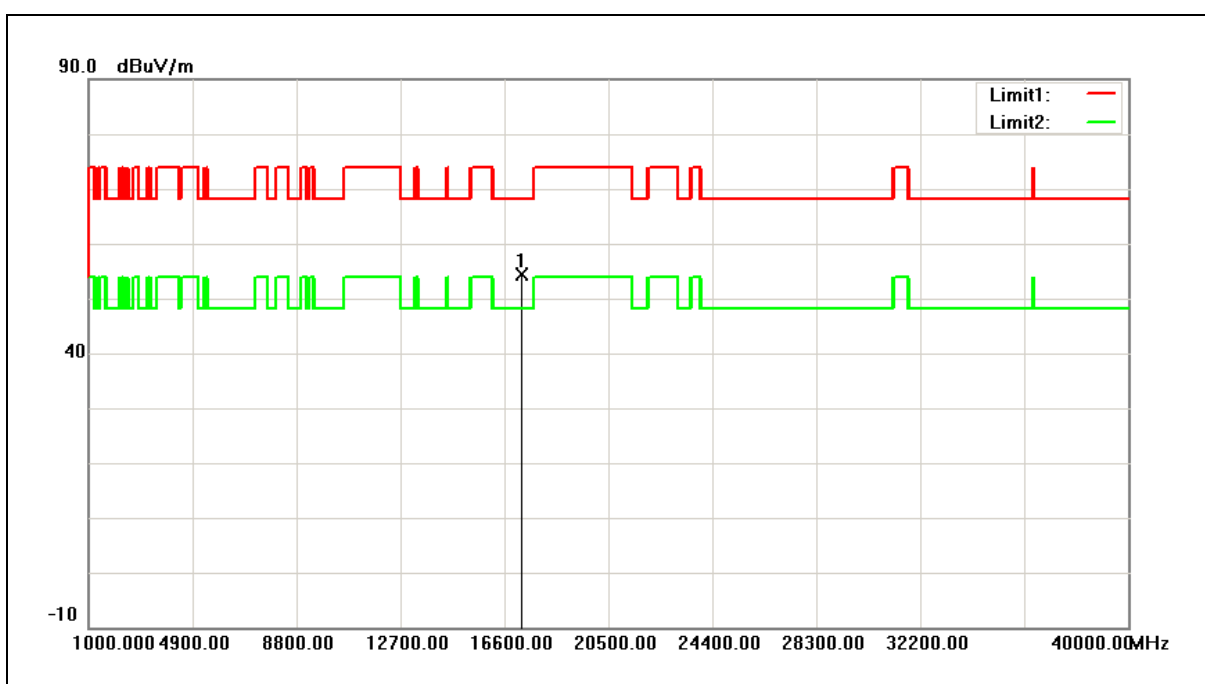
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	17265.000	45.09	11.03	56.12	68.20	-12.08	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5755MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	04/08/2017
Ant.Polar.:	Vertical		



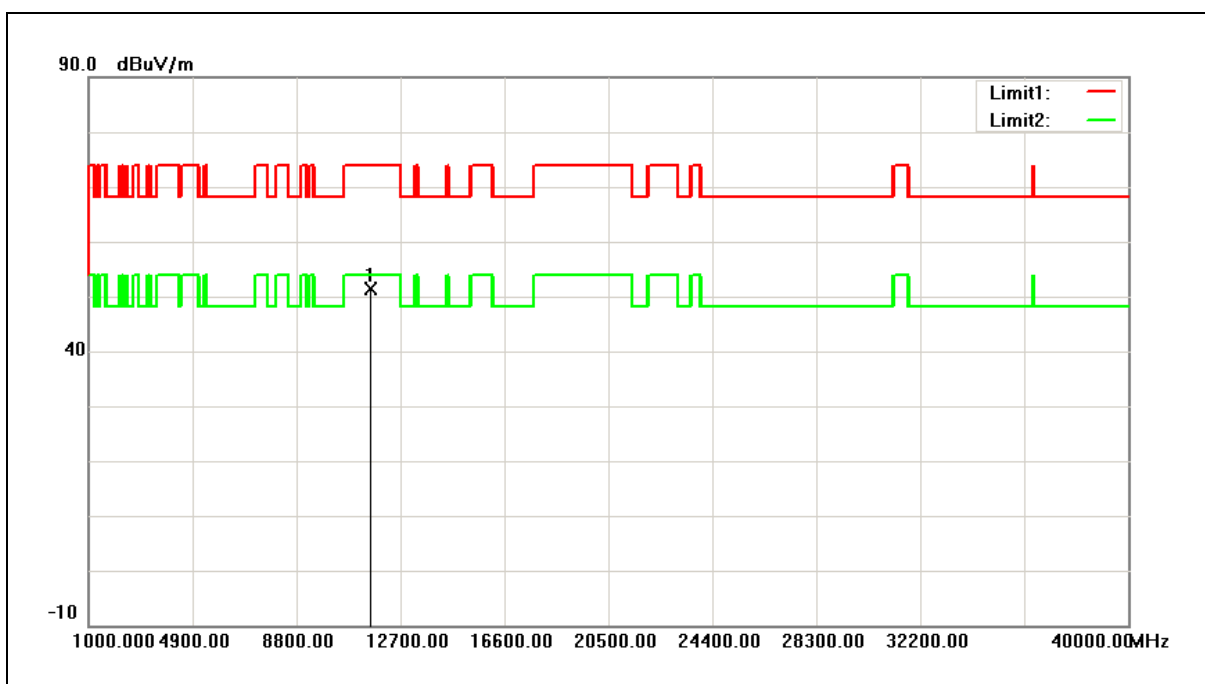
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	17265.000	43.35	11.03	54.38	68.20	-13.82	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5795MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	04/08/2017
Ant.Polar.:	Horizontal		



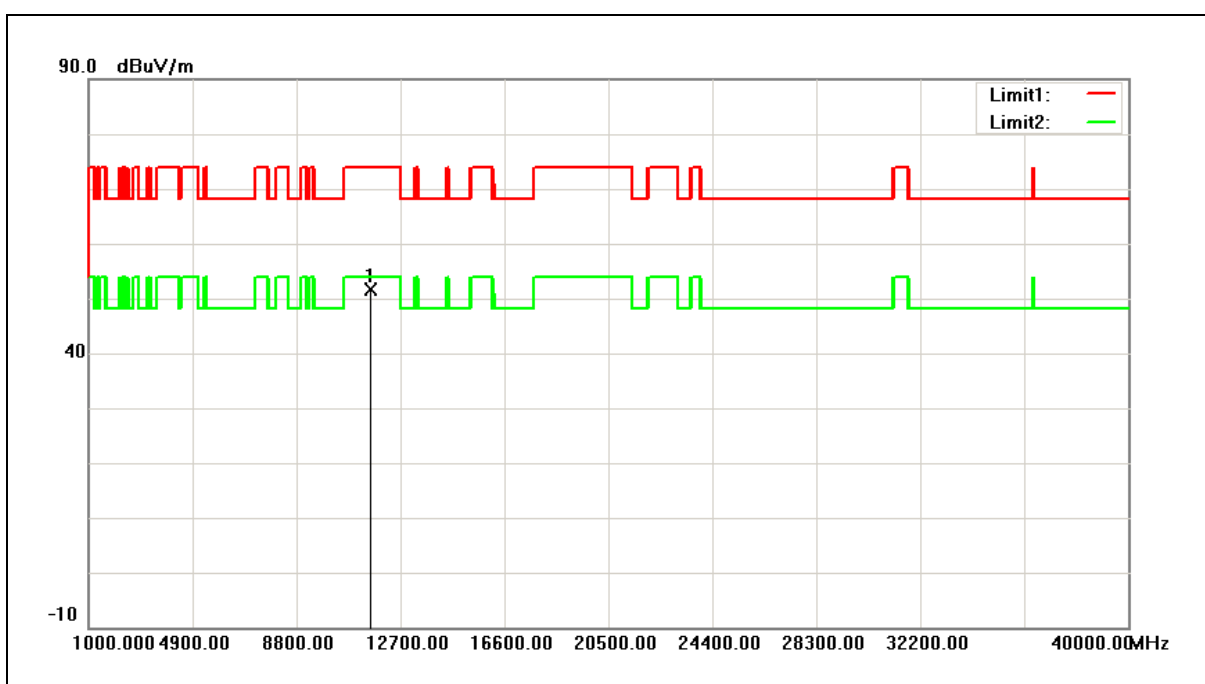
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11590.000	44.43	6.86	51.29	74.00	-22.71	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5795MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	04/08/2017
Ant.Polar.:	Vertical		



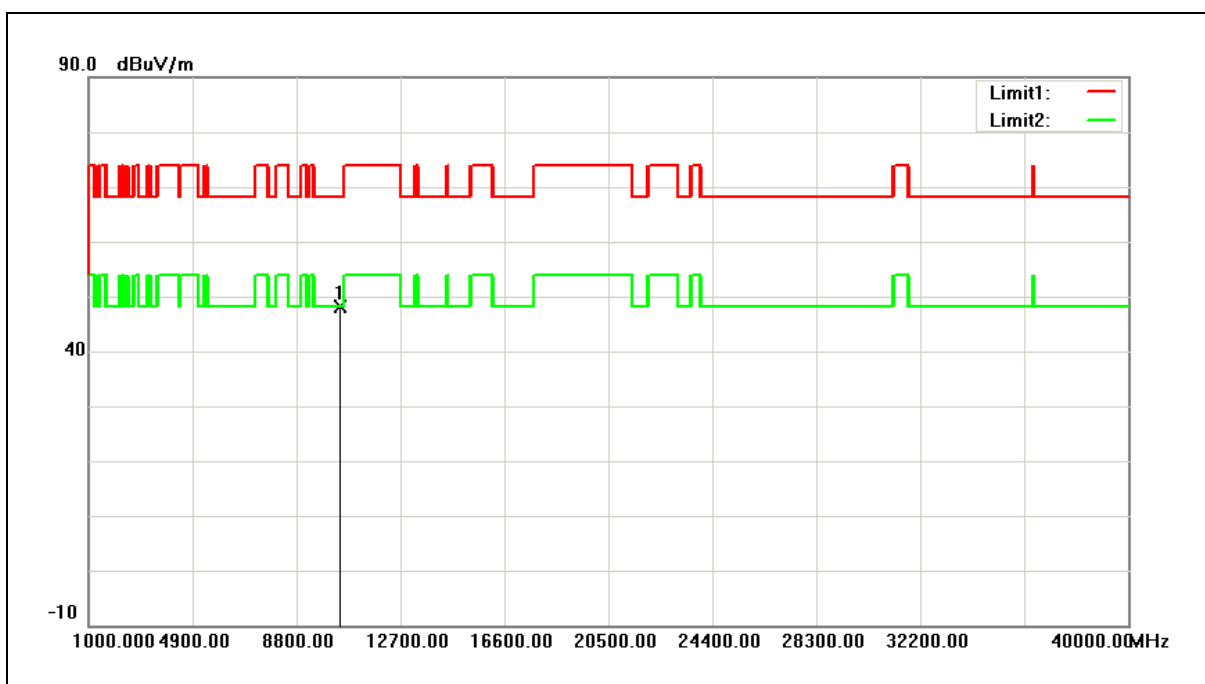
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11590.000	44.85	6.86	51.71	74.00	-22.29	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5210MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	04/08/2017
Ant.Polar.:	Horizontal		



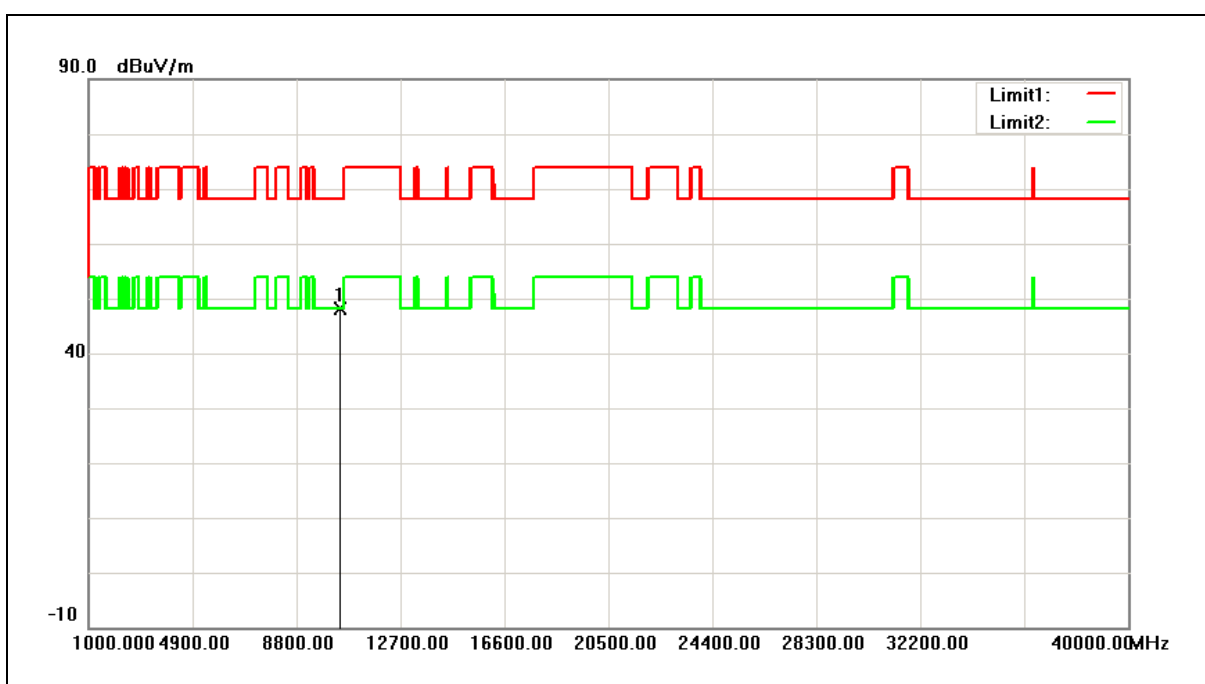
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10420.000	42.56	5.49	48.05	68.20	-20.15	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5210MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	04/08/2017
Ant.Polar.:	Vertical		



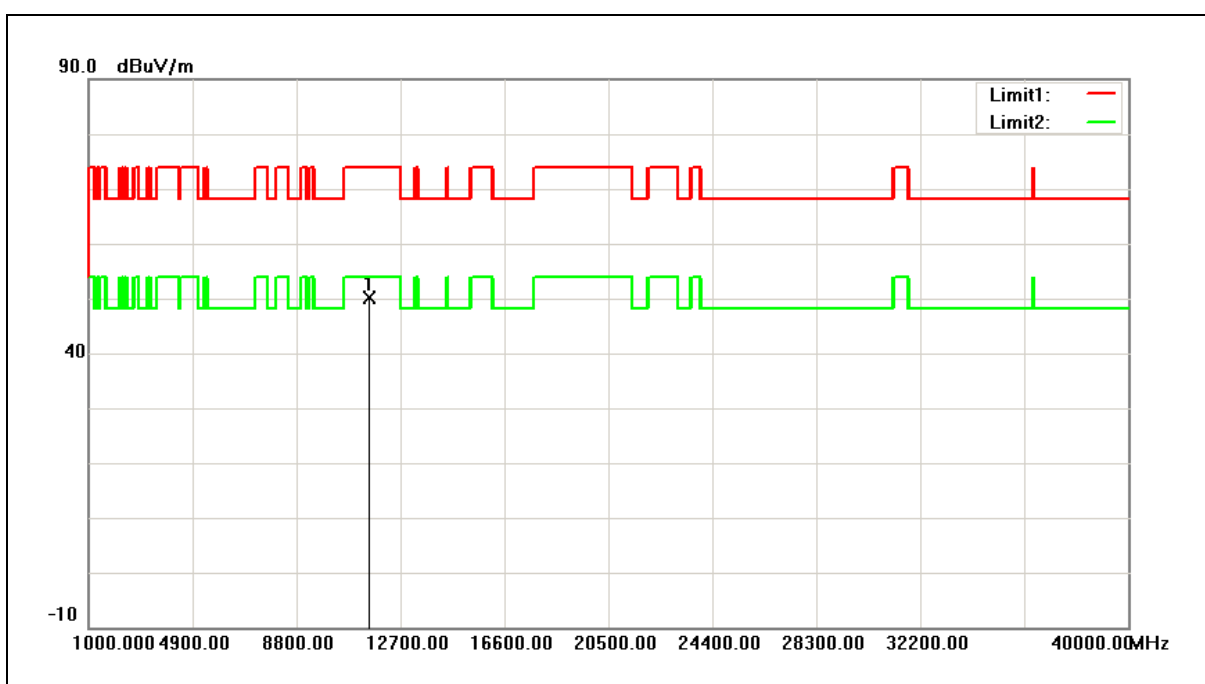
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10420.000	42.72	5.49	48.21	68.20	-19.99	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5775MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	04/08/2017
Ant.Polar.:	Horizontal		



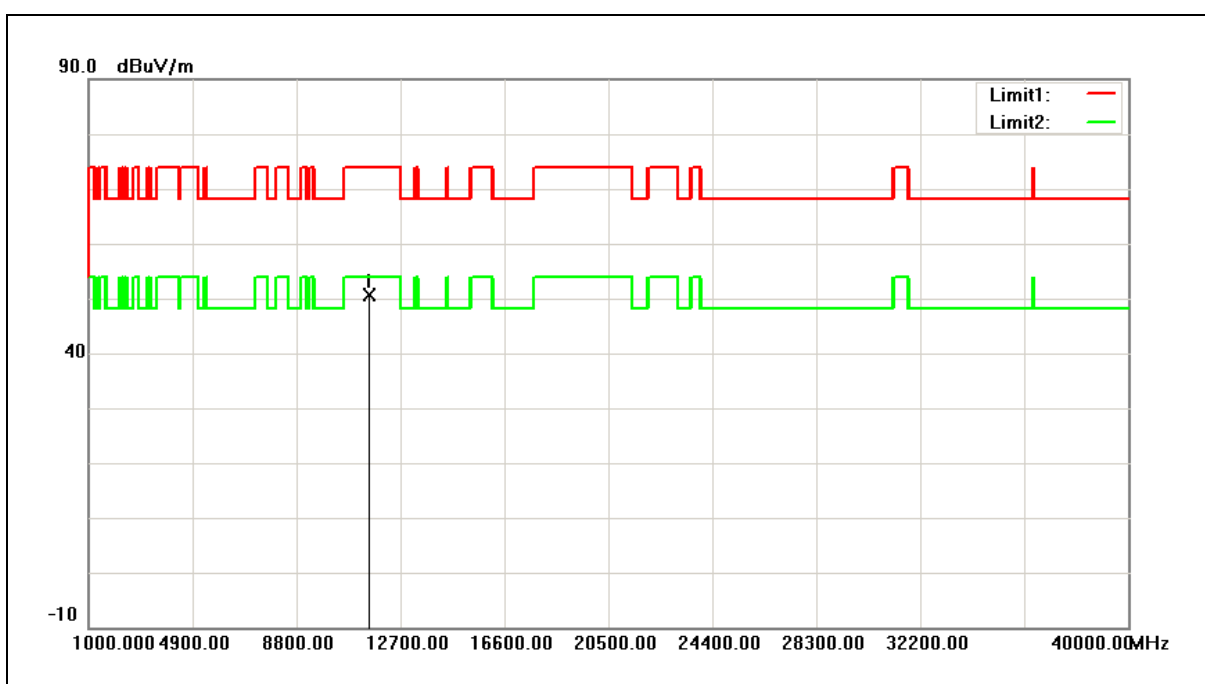
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11550.000	43.30	6.75	50.05	74.00	-23.95	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5775MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	04/08/2017
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11550.000	43.94	6.75	50.69	74.00	-23.31	peak

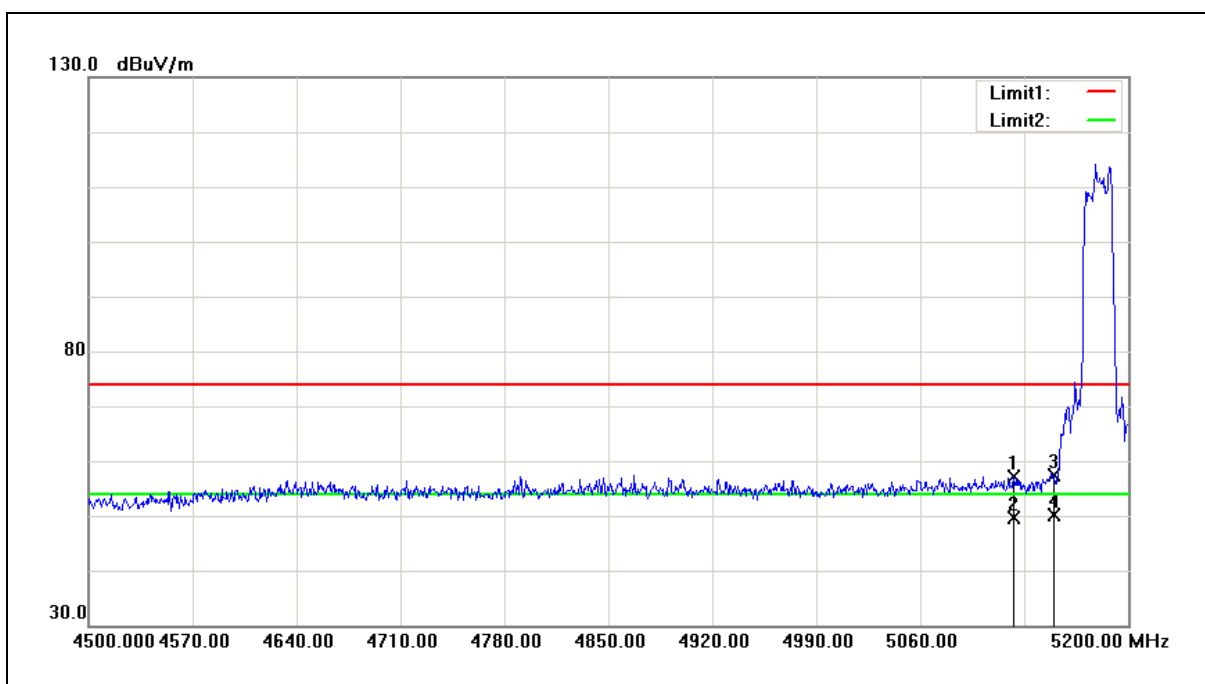
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

**Band Edge**

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5180MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	05/31/2017
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5123.000	49.03	8.21	57.24	74.00	-16.76	peak
2	5123.000	41.33	8.21	49.54	54.00	-4.46	AVG
3	5150.000	49.17	8.25	57.42	74.00	-16.58	peak
4	5150.000	41.97	8.25	50.22	54.00	-3.78	AVG

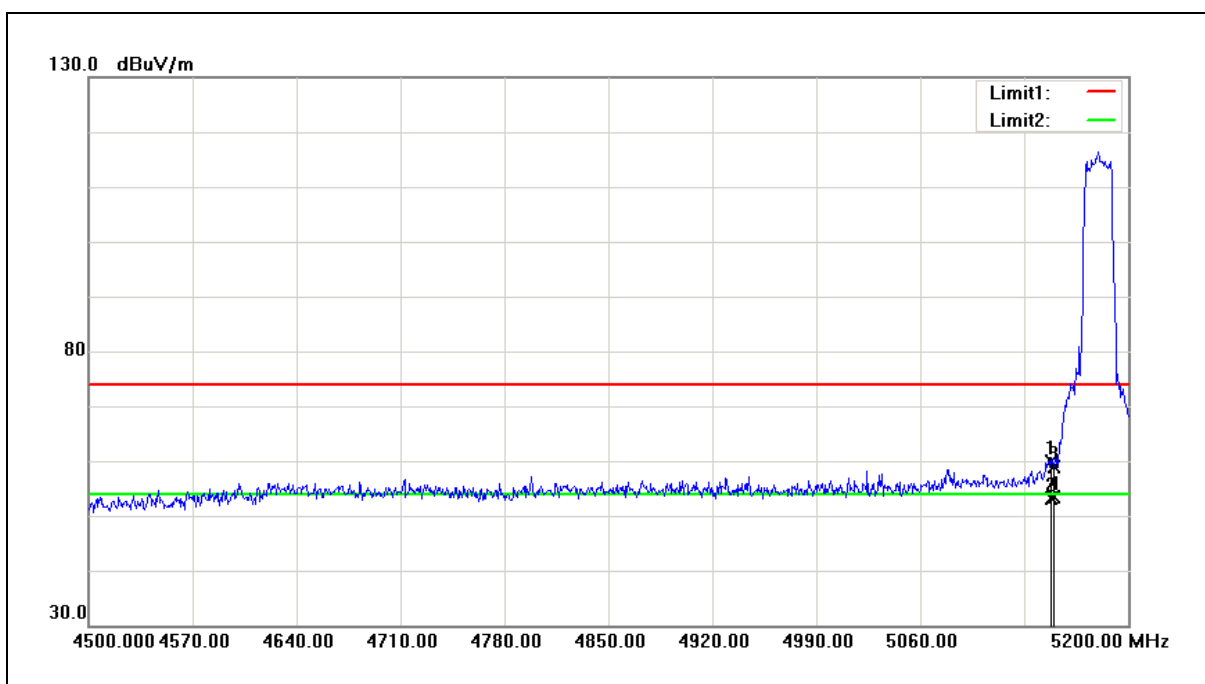
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5180MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	05/31/2017
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5148.200	51.73	8.25	59.98	74.00	-14.02	peak
2	5148.200	44.94	8.25	53.19	54.00	-0.81	AVG
3	5150.000	50.74	8.25	58.99	74.00	-15.01	peak
4	5150.000	45.05	8.25	53.30	54.00	-0.70	AVG

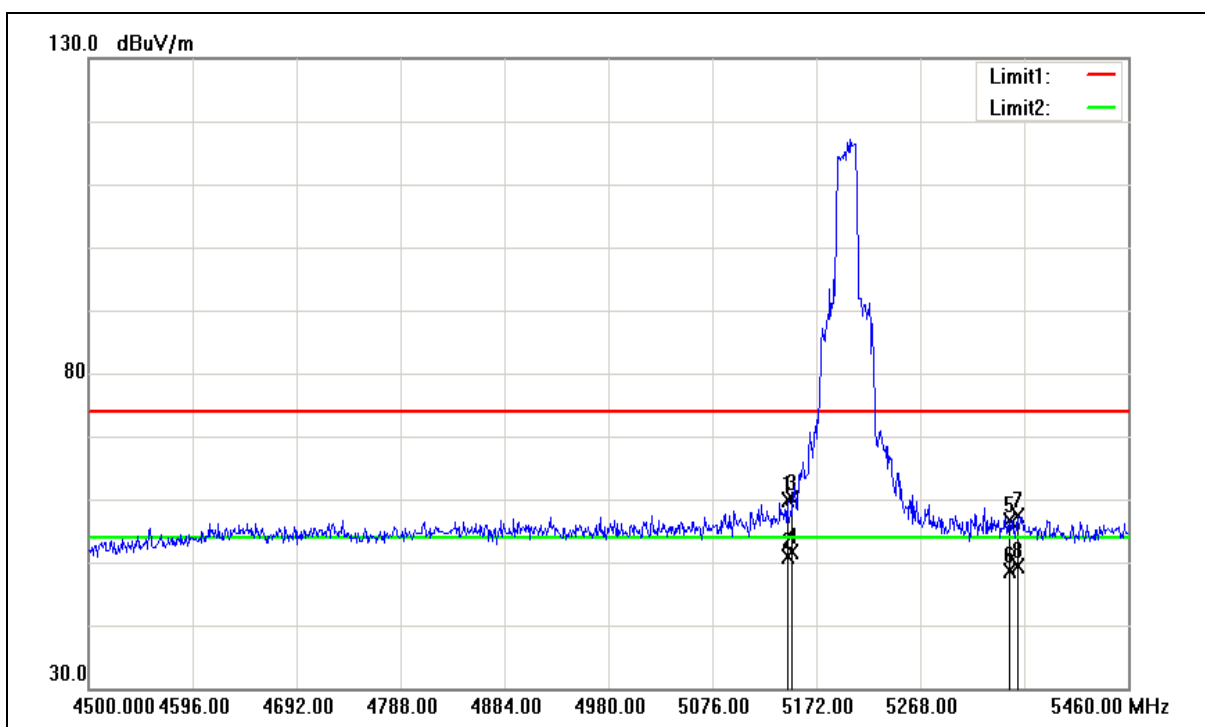
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5200MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	05/31/2017
Ant.Polar.:	Horizontal		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5200MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	05/31/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5145.120	51.53	8.24	59.77	74.00	-14.23	peak
2	5145.120	42.67	8.24	50.91	54.00	-3.09	AVG
3	5150.000	51.89	8.25	60.14	74.00	-13.86	peak
4	5150.000	43.34	8.25	51.59	54.00	-2.41	AVG
5	5350.000	48.12	8.41	56.53	74.00	-17.47	peak
6	5350.000	40.17	8.41	48.58	54.00	-5.42	AVG
7	5358.240	49.06	8.42	57.48	74.00	-16.52	peak
8	5358.240	40.86	8.42	49.28	54.00	-4.72	AVG

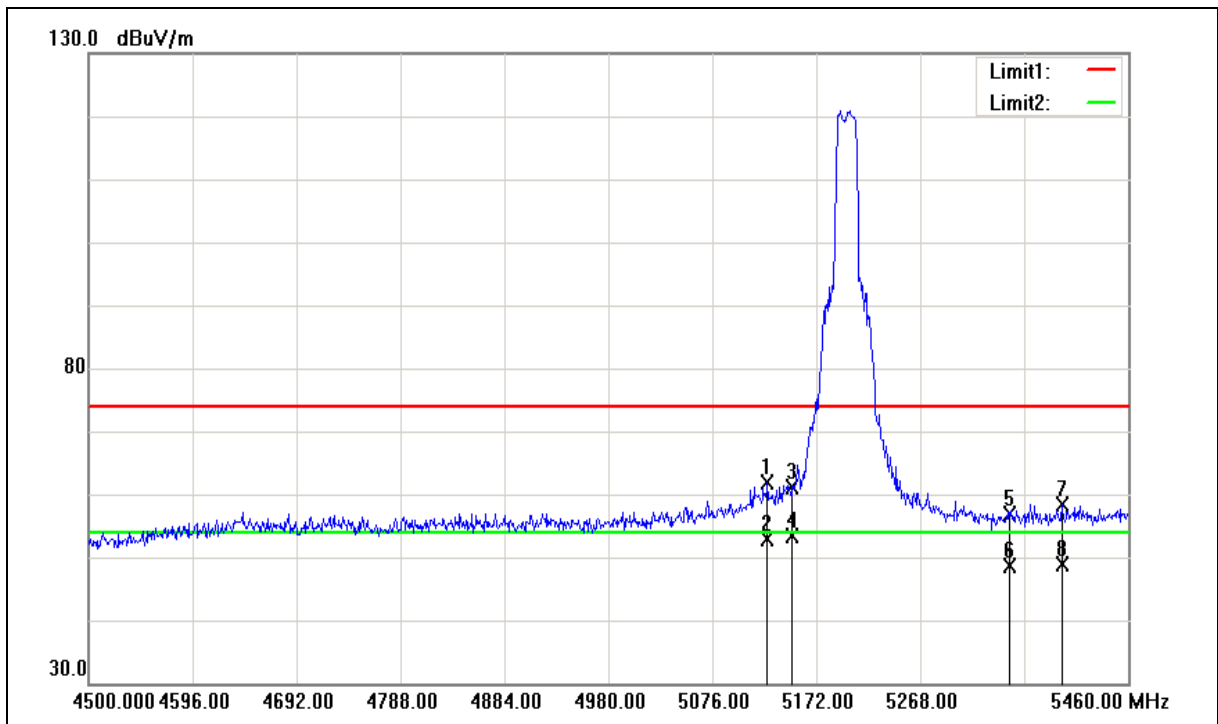
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5200MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	05/31/2017
Ant.Polar.:	Vertical		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5200MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	05/31/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5126.880	53.75	8.23	61.98	74.00	-12.02	peak
2	5126.880	44.75	8.23	52.98	54.00	-1.02	AVG
3	5150.000	52.76	8.25	61.01	74.00	-12.99	peak
4	5150.000	45.12	8.25	53.37	54.00	-0.63	AVG
5	5350.000	48.36	8.41	56.77	74.00	-17.23	peak
6	5350.000	40.13	8.41	48.54	54.00	-5.46	AVG
7	5398.560	50.00	8.47	58.47	74.00	-15.53	peak
8	5398.560	40.35	8.47	48.82	54.00	-5.18	AVG

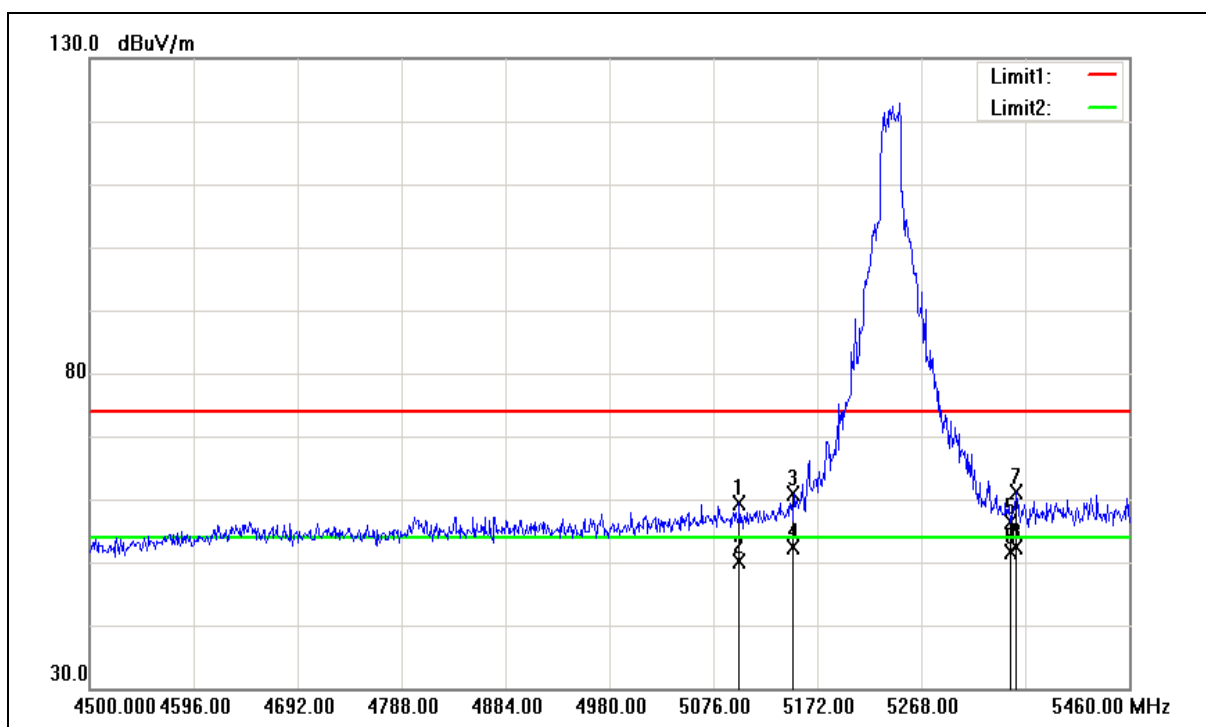
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5240MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	05/31/2017
Ant.Polar.:	Horizontal		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5240MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	05/31/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5100.000	51.30	8.19	59.49	74.00	-14.51	peak
2	5100.000	42.04	8.19	50.23	54.00	-3.77	AVG
3	5150.000	52.59	8.25	60.84	74.00	-13.16	peak
4	5150.000	44.04	8.25	52.29	54.00	-1.71	AVG
5	5350.000	47.98	8.41	56.39	74.00	-17.61	peak
6	5350.000	43.26	8.41	51.67	54.00	-2.33	AVG
7	5355.360	52.64	8.42	61.06	74.00	-12.94	peak
8	5355.360	44.03	8.42	52.45	54.00	-1.55	AVG

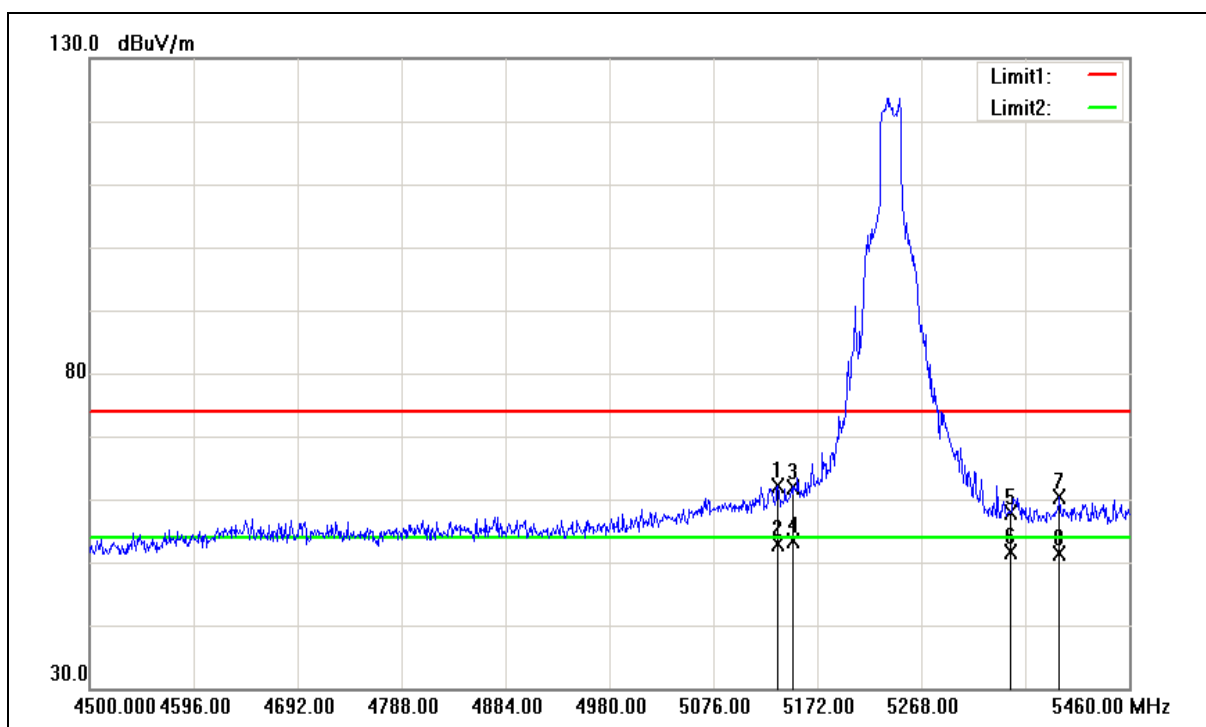
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5240MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	05/31/2017
Ant.Polar.:	Vertical		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5240MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	05/31/2017
Ant.Polar.:	Vertical		

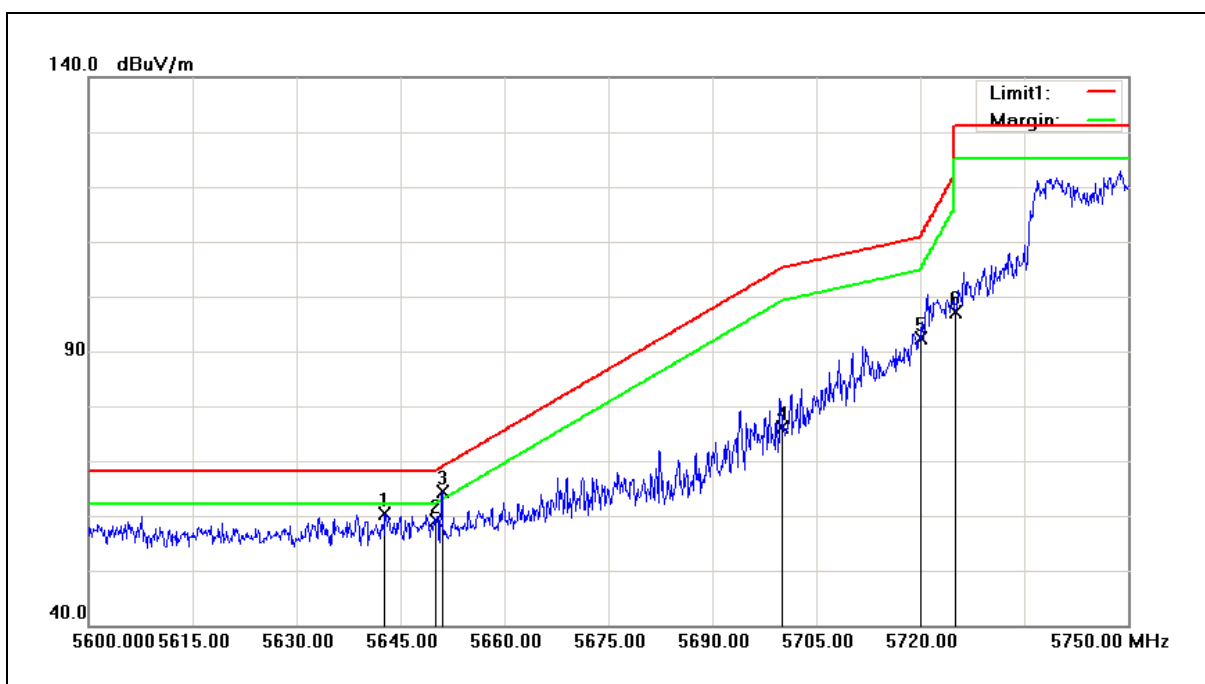
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5135.520	54.00	8.23	62.23	74.00	-11.77	peak
2	5135.520	44.61	8.23	52.84	54.00	-1.16	AVG
3	5150.000	53.67	8.25	61.92	74.00	-12.08	peak
4	5150.000	45.12	8.25	53.37	54.00	-0.63	AVG
5	5350.000	49.43	8.41	57.84	74.00	-16.16	peak
6	5350.000	43.21	8.41	51.62	54.00	-2.38	AVG
7	5395.680	52.02	8.46	60.48	74.00	-13.52	peak
8	5395.680	42.89	8.46	51.35	54.00	-2.65	AVG

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5745MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	06/01/2017
Ant.Polar.:	Horizontal		



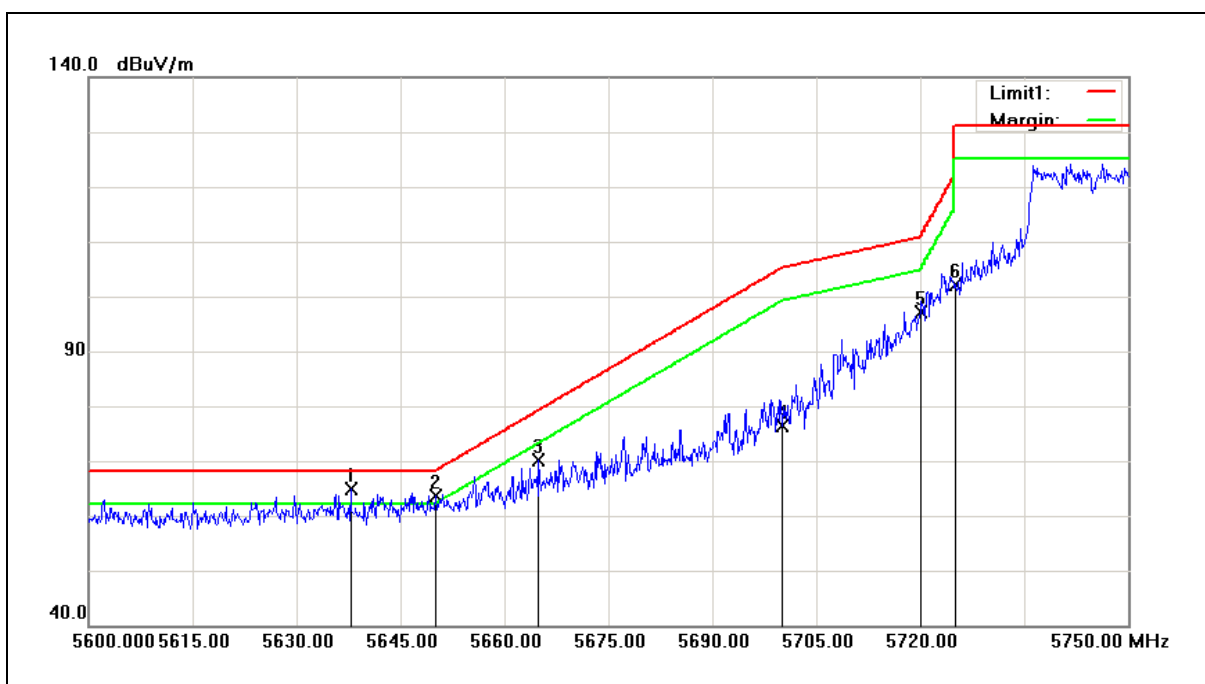
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5642.750	51.38	8.91	60.29	68.20	-7.91	peak
2	5650.000	50.20	8.93	59.13	68.20	-9.07	peak
3	5651.000	55.56	8.93	64.49	68.94	-4.45	peak
4	5700.000	67.10	9.05	76.15	105.20	-29.05	peak
5	5720.000	83.37	9.09	92.46	110.80	-18.34	peak
6	5725.000	88.12	9.11	97.23	122.20	-24.97	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5745MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	06/01/2017
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5637.800	55.98	8.90	64.88	68.20	-3.32	peak
2	5650.000	54.74	8.93	63.67	68.20	-4.53	peak
3	5664.950	61.14	8.96	70.10	79.26	-9.16	peak
4	5700.000	67.45	9.05	76.50	105.20	-28.70	peak
5	5720.000	87.97	9.09	97.06	110.80	-13.74	peak
6	5725.000	92.93	9.11	102.04	122.20	-20.16	peak

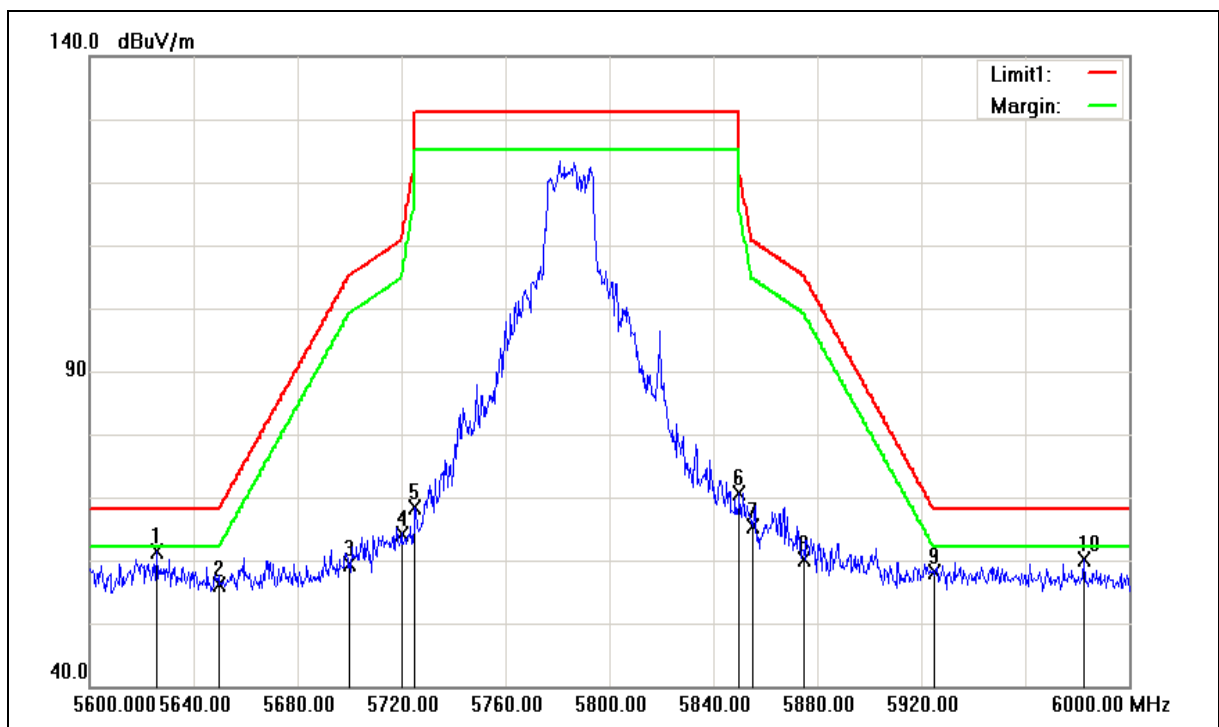
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5785MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	06/01/2017
Ant.Polar.:	Horizontal		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5785MHz	Temp.(°C)/Hum. (%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	06/01/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5625.600	52.61	8.87	61.48	68.20	-6.72	peak
2	5650.000	47.30	8.93	56.23	68.20	-11.97	peak
3	5700.000	50.33	9.05	59.38	105.20	-45.82	peak
4	5720.000	55.16	9.09	64.25	110.80	-46.55	peak
5	5725.000	59.36	9.11	68.47	122.20	-53.73	peak
6	5850.000	61.24	9.41	70.65	122.20	-51.55	peak
7	5855.000	55.89	9.43	65.32	110.80	-45.48	peak
8	5875.000	50.59	9.48	60.07	105.20	-45.13	peak
9	5925.000	48.57	9.61	58.18	68.20	-10.02	peak
10	5982.400	50.40	9.75	60.15	68.20	-8.05	peak

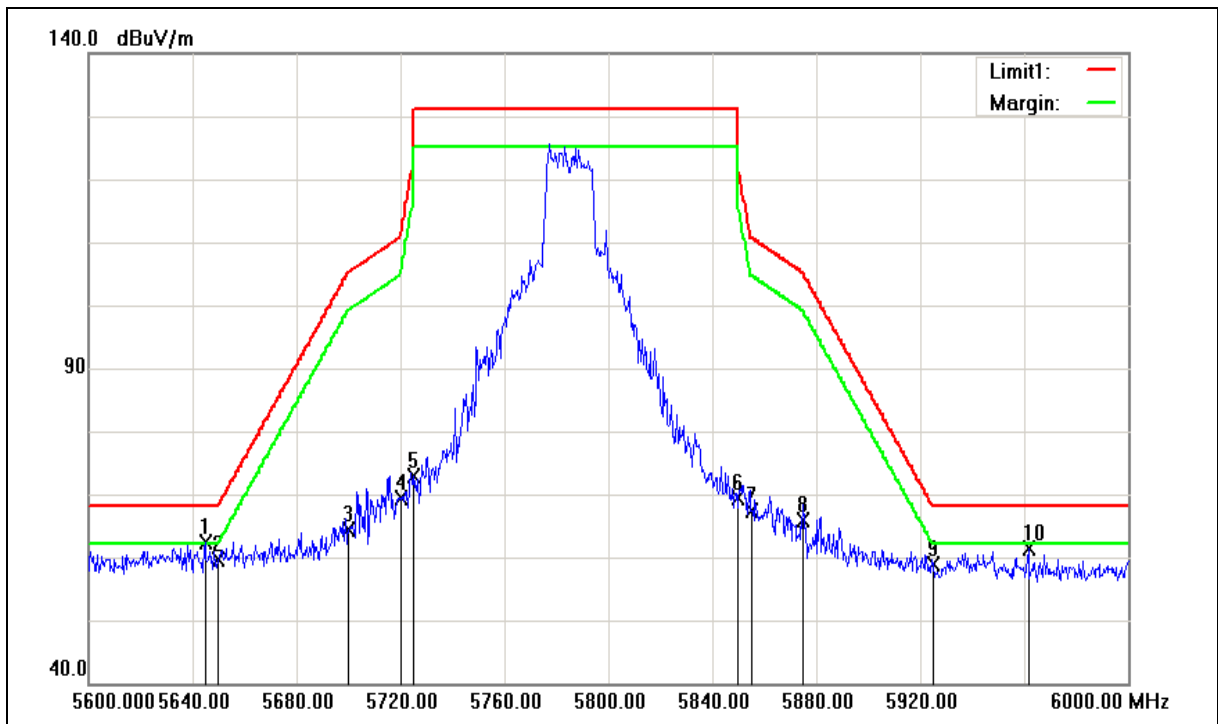
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5785MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	06/01/2017
Ant.Polar.:	Vertical		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5785MHz	Temp.(°C)/Hum. (%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	06/01/2017
Ant.Polar.:	Vertical		

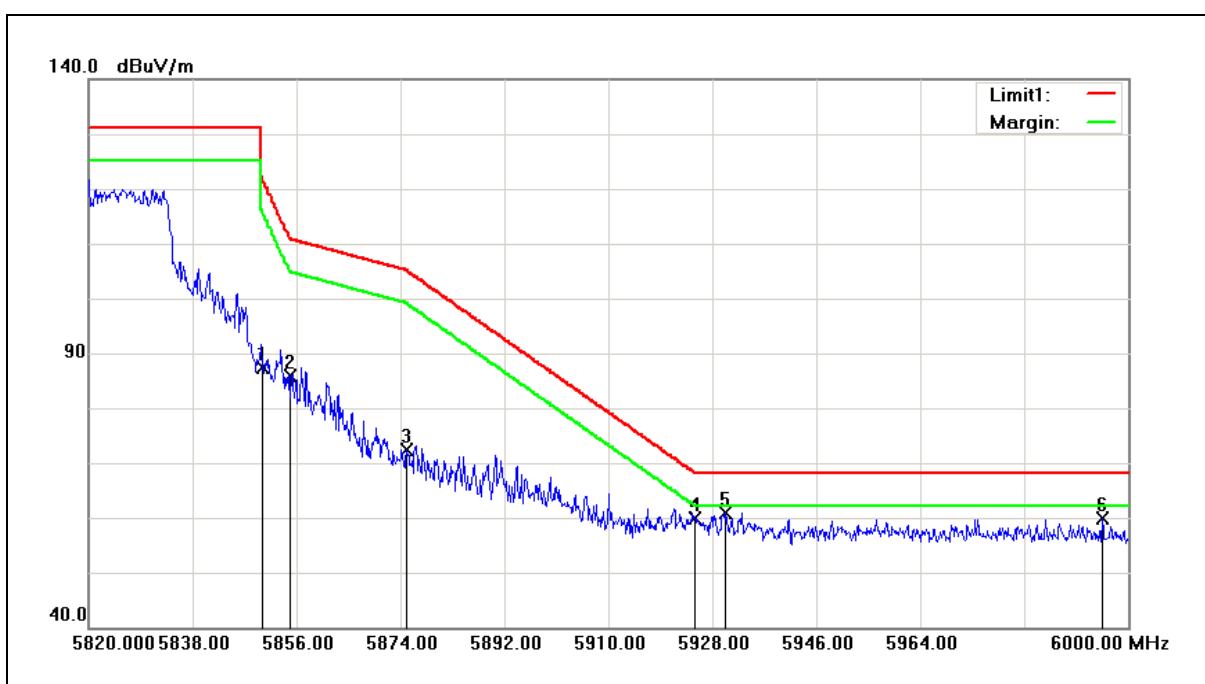
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5644.800	53.57	8.91	62.48	68.20	-5.72	peak
2	5650.000	50.69	8.93	59.62	68.20	-8.58	peak
3	5700.000	55.23	9.05	64.28	105.20	-40.92	peak
4	5720.000	60.25	9.09	69.34	110.80	-41.46	peak
5	5725.000	63.73	9.11	72.84	122.20	-49.36	peak
6	5850.000	59.87	9.41	69.28	122.20	-52.92	peak
7	5855.000	57.83	9.43	67.26	110.80	-43.54	peak
8	5875.000	56.28	9.48	65.76	105.20	-39.44	peak
9	5925.000	49.23	9.61	58.84	68.20	-9.36	peak
10	5961.600	51.60	9.70	61.30	68.20	-6.90	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5825MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	06/01/2017
Ant.Polar.:	Horizontal		



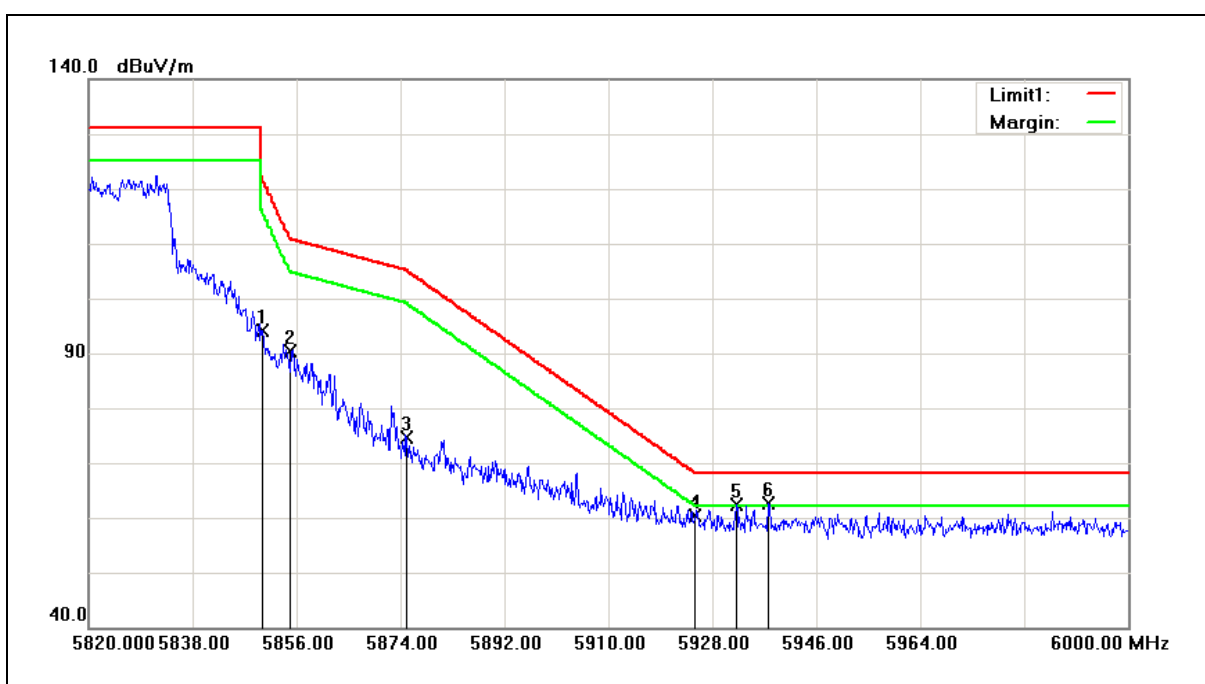
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	77.86	9.41	87.27	122.20	-34.93	peak
2	5855.000	76.33	9.43	85.76	110.80	-25.04	peak
3	5875.000	62.83	9.48	72.31	105.20	-32.89	peak
4	5925.000	50.23	9.61	59.84	68.20	-8.36	peak
5	5930.340	51.35	9.62	60.97	68.20	-7.23	peak
6	5995.500	50.22	9.78	60.00	68.20	-8.20	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5825MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	06/01/2017
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	84.72	9.41	94.13	122.20	-28.07	peak
2	5855.000	80.91	9.43	90.34	110.80	-20.46	peak
3	5875.000	65.24	9.48	74.72	105.20	-30.48	peak
4	5925.000	50.71	9.61	60.32	68.20	-7.88	peak
5	5932.140	52.77	9.62	62.39	68.20	-5.81	peak
6	5937.720	52.88	9.64	62.52	68.20	-5.68	peak

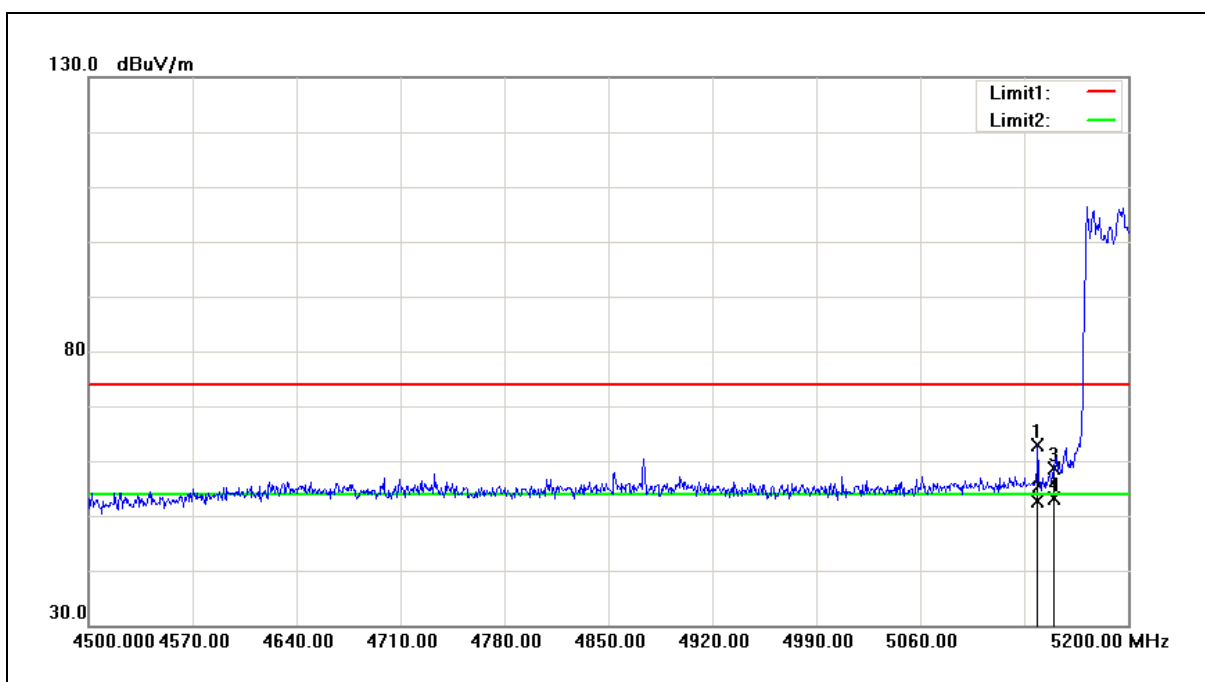
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5190MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	05/31/2017
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5139.100	54.54	8.24	62.78	74.00	-11.22	peak
2	5139.100	44.50	8.24	52.74	54.00	-1.26	AVG
3	5150.000	50.35	8.25	58.60	74.00	-15.40	peak
4	5150.000	44.94	8.25	53.19	54.00	-0.81	AVG

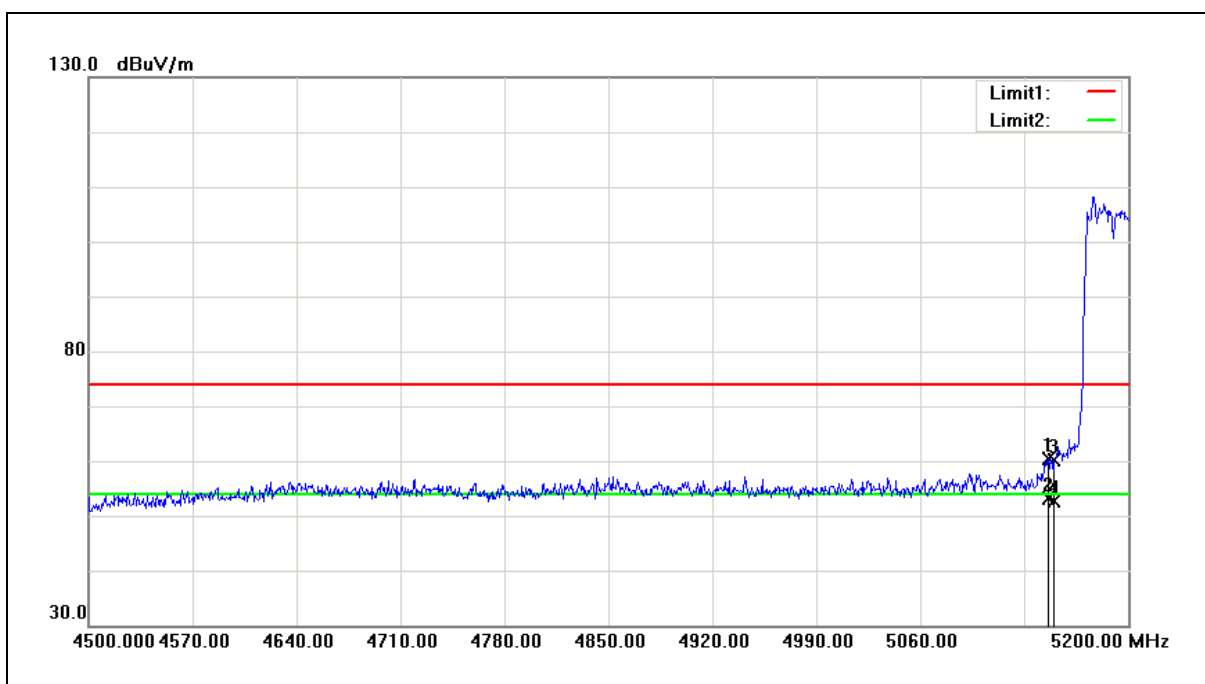
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5190MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	05/31/2017
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5146.100	52.12	8.24	60.36	74.00	-13.64	peak
2	5146.100	45.00	8.24	53.24	54.00	-0.76	AVG
3	5150.000	51.83	8.25	60.08	74.00	-13.92	peak
4	5150.000	44.42	8.25	52.67	54.00	-1.33	AVG

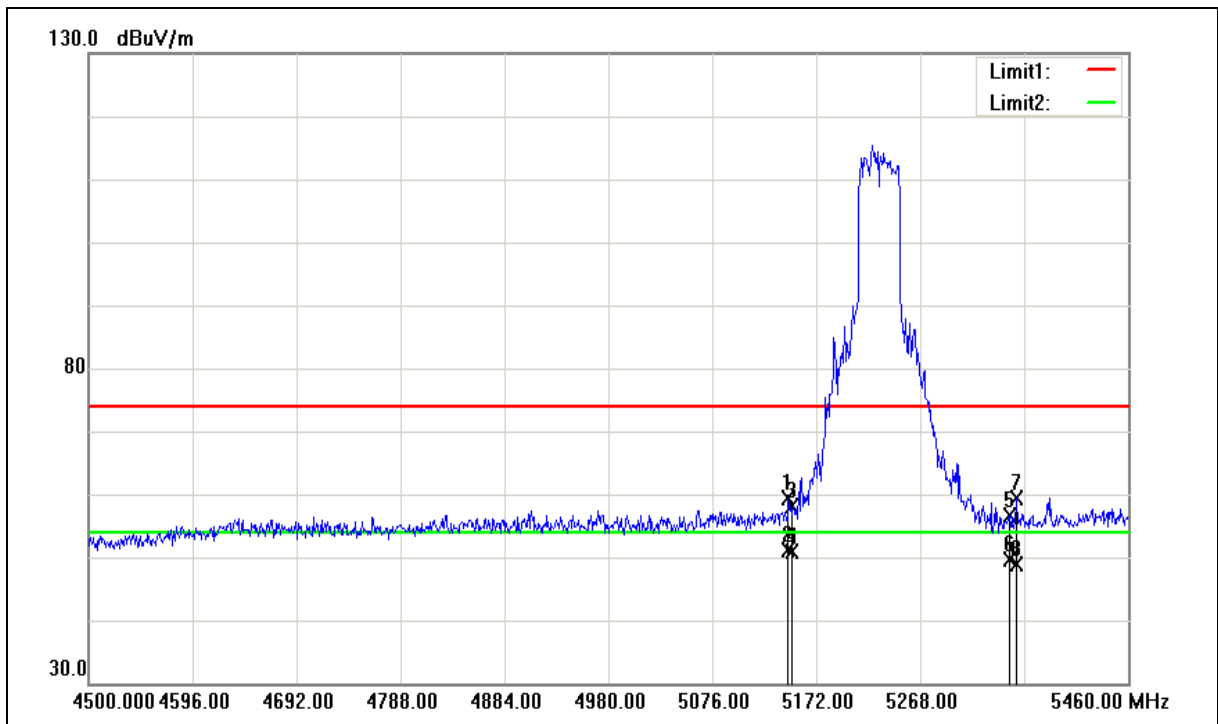
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5230MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	05/31/2017
Ant.Polar.:	Horizontal		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5230MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	05/31/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5146.080	51.16	8.24	59.40	74.00	-14.60	peak
2	5146.080	42.93	8.24	51.17	54.00	-2.83	AVG
3	5150.000	49.92	8.25	58.17	74.00	-15.83	peak
4	5150.000	42.53	8.25	50.78	54.00	-3.22	AVG
5	5350.000	48.29	8.41	56.70	74.00	-17.30	peak
6	5350.000	41.10	8.41	49.51	54.00	-4.49	AVG
7	5357.280	51.02	8.42	59.44	74.00	-14.56	peak
8	5357.280	40.55	8.42	48.97	54.00	-5.03	AVG

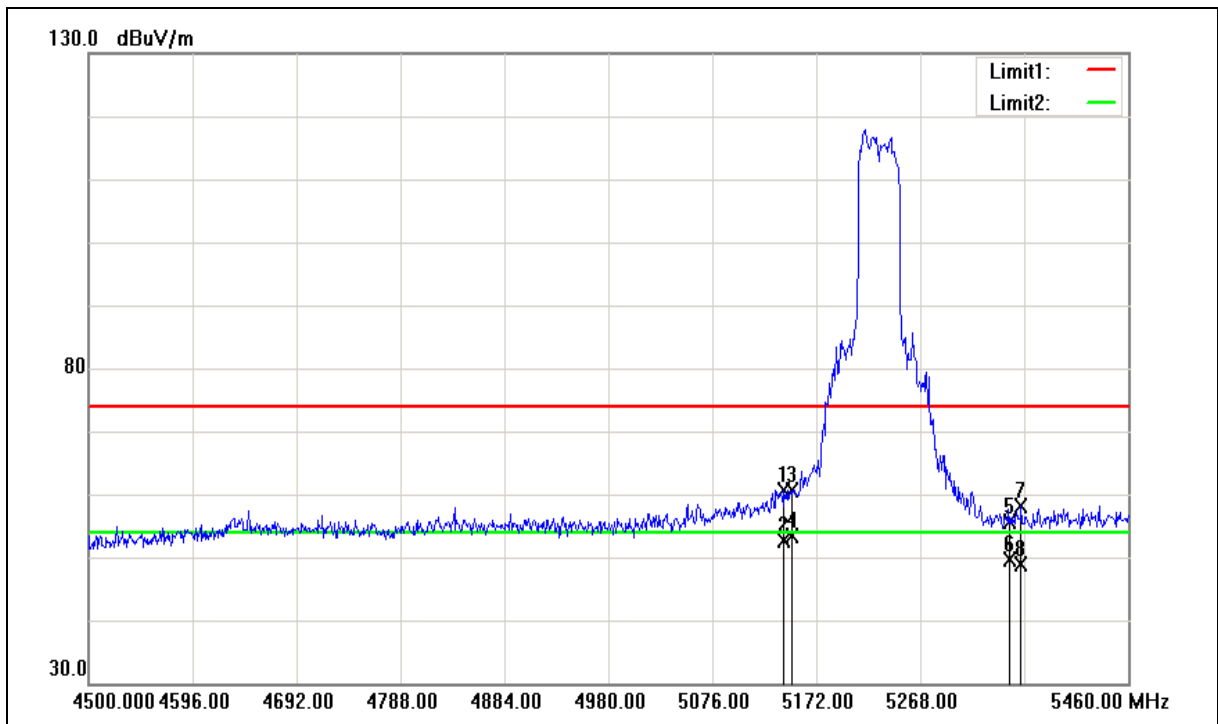
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5230MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	05/31/2017
Ant.Polar.:	Vertical		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5230MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	05/31/2017
Ant.Polar.:	Vertical		

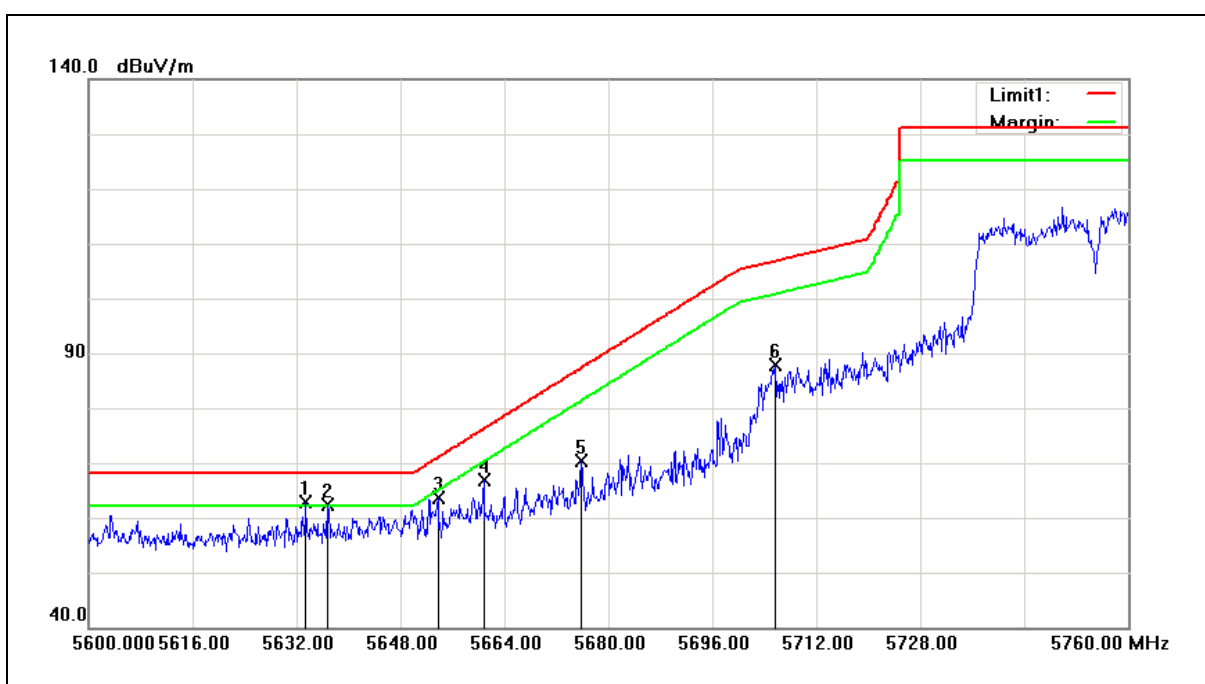
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5142.240	52.43	8.24	60.67	74.00	-13.33	peak
2	5142.240	44.47	8.24	52.71	54.00	-1.29	AVG
3	5150.000	52.31	8.25	60.56	74.00	-13.44	peak
4	5150.000	45.01	8.25	53.26	54.00	-0.74	AVG
5	5350.000	47.14	8.41	55.55	74.00	-18.45	peak
6	5350.000	41.20	8.41	49.61	54.00	-4.39	AVG
7	5361.120	49.74	8.42	58.16	74.00	-15.84	peak
8	5361.120	40.48	8.42	48.90	54.00	-5.10	AVG

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5775MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	06/01/2017
Ant.Polar.:	Horizontal		



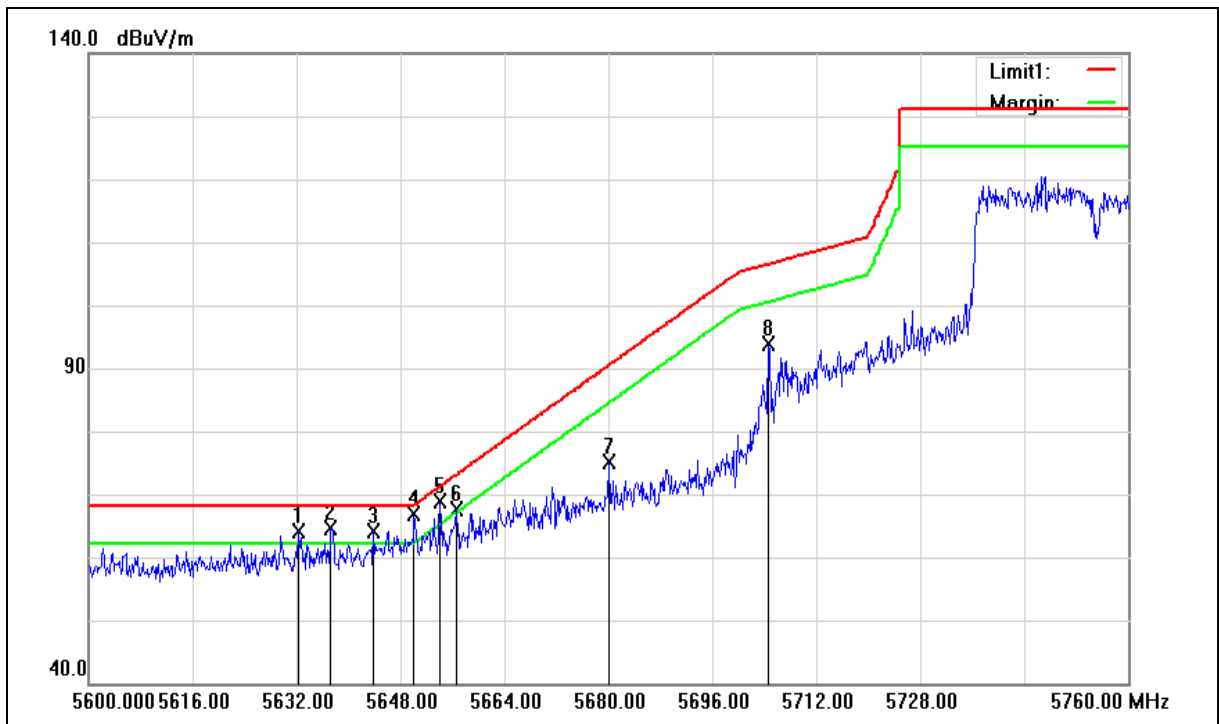
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5633.440	54.00	8.88	62.88	68.20	-5.32	peak
2	5636.800	53.42	8.89	62.31	68.20	-5.89	peak
3	5653.760	54.70	8.94	63.64	70.98	-7.34	peak
4	5660.800	57.87	8.96	66.83	76.19	-9.36	peak
5	5675.840	61.47	8.99	70.46	87.32	-16.86	peak
6	5705.760	78.76	9.06	87.82	106.81	-18.99	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5775MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	06/01/2017
Ant.Polar.:	Vertical		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5775MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	06/01/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5632.320	55.16	8.88	64.04	68.20	-4.16	peak
2	5637.280	55.85	8.90	64.75	68.20	-3.45	peak
3	5643.840	55.29	8.91	64.20	68.20	-4.00	peak
4	5650.080	57.92	8.93	66.85	68.26	-1.41	peak
5	5654.080	60.03	8.94	68.97	71.22	-2.25	peak
6	5656.640	58.67	8.94	67.61	73.11	-5.50	peak
7	5680.160	66.23	9.00	75.23	90.52	-15.29	peak
8	5704.640	84.86	9.06	93.92	106.50	-12.58	peak

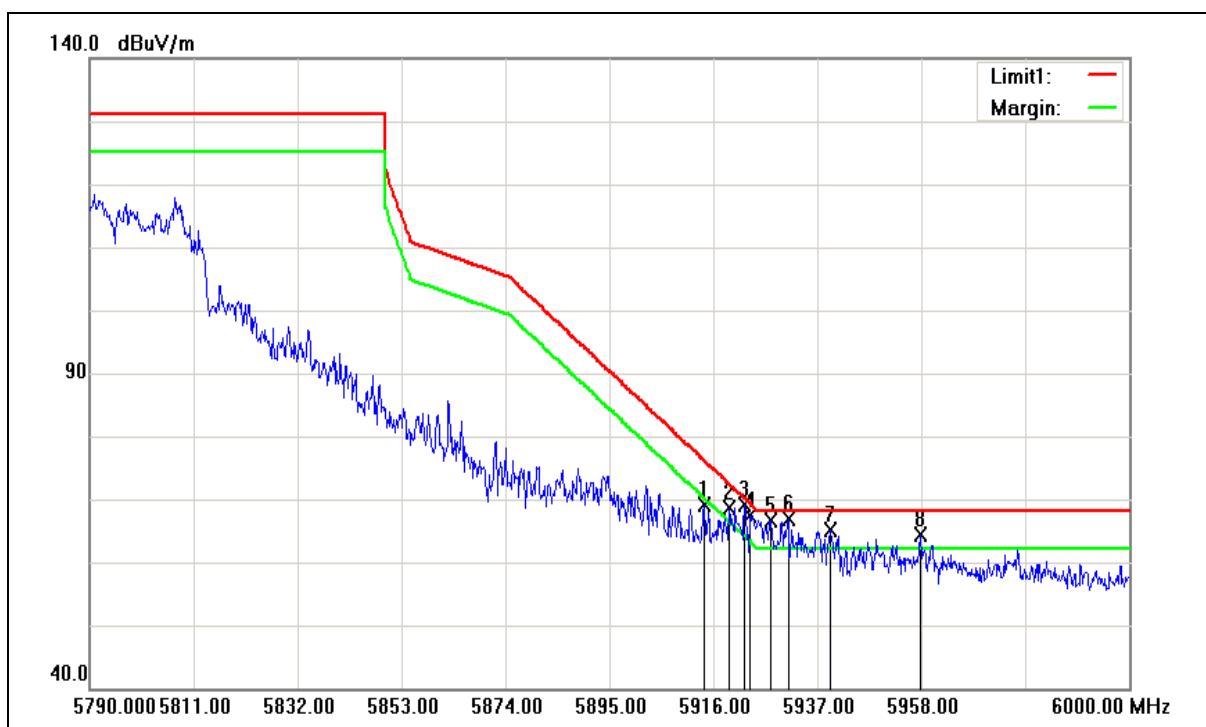
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5795MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	06/01/2017
Ant.Polar.:	Horizontal		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5795MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	06/01/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5914.110	59.53	9.58	69.11	76.26	-7.15	peak
2	5919.150	59.15	9.59	68.74	72.53	-3.79	peak
3	5922.300	59.55	9.60	69.15	70.20	-1.05	peak
4	5923.350	57.82	9.61	67.43	69.42	-1.99	peak
5	5927.550	56.93	9.61	66.54	68.20	-1.66	peak
6	5931.120	57.31	9.62	66.93	68.20	-1.27	peak
7	5939.520	55.38	9.64	65.02	68.20	-3.18	peak
8	5957.790	54.72	9.68	64.40	68.20	-3.80	peak

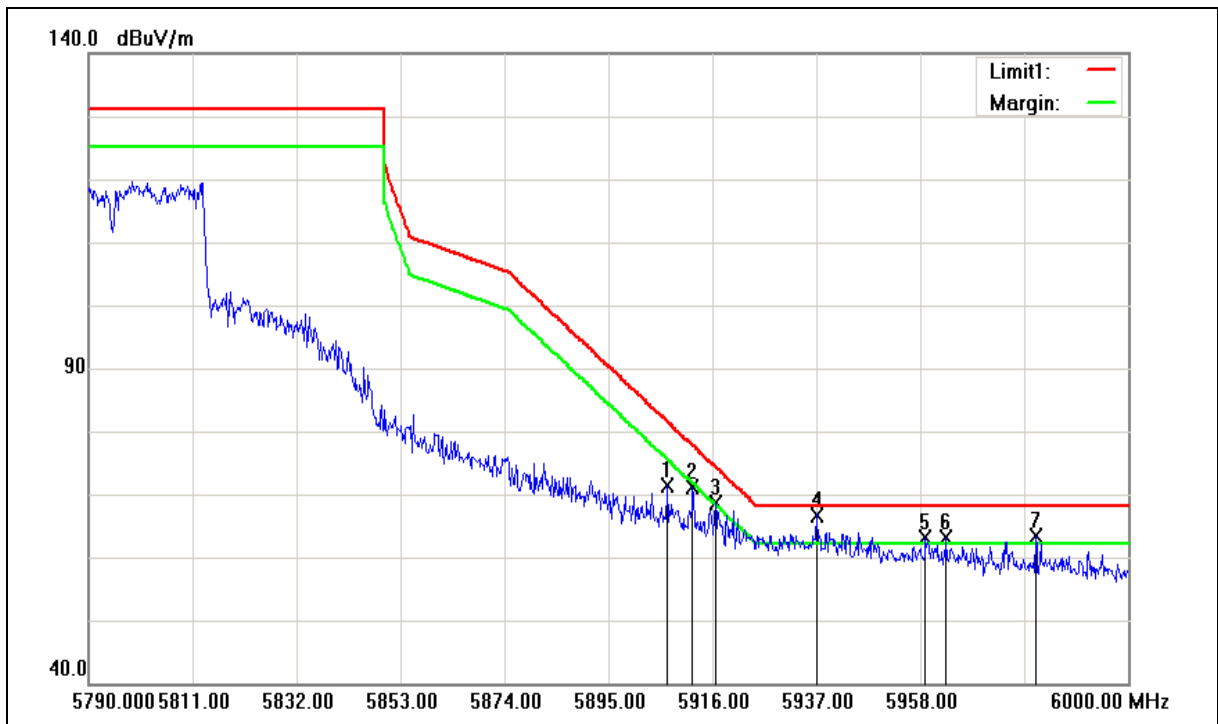
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5795MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	06/01/2017
Ant.Polar.:	Vertical		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5795MHz	Temp.(°C)/Hum. (%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	06/01/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5906.970	61.82	9.56	71.38	81.54	-10.16	peak
2	5912.010	61.52	9.58	71.10	77.81	-6.71	peak
3	5916.630	58.98	9.59	68.57	74.39	-5.82	peak
4	5937.210	57.08	9.64	66.72	68.20	-1.48	peak
5	5959.050	53.43	9.69	63.12	68.20	-5.08	peak
6	5963.250	53.38	9.70	63.08	68.20	-5.12	peak
7	5981.310	53.71	9.74	63.45	68.20	-4.75	peak

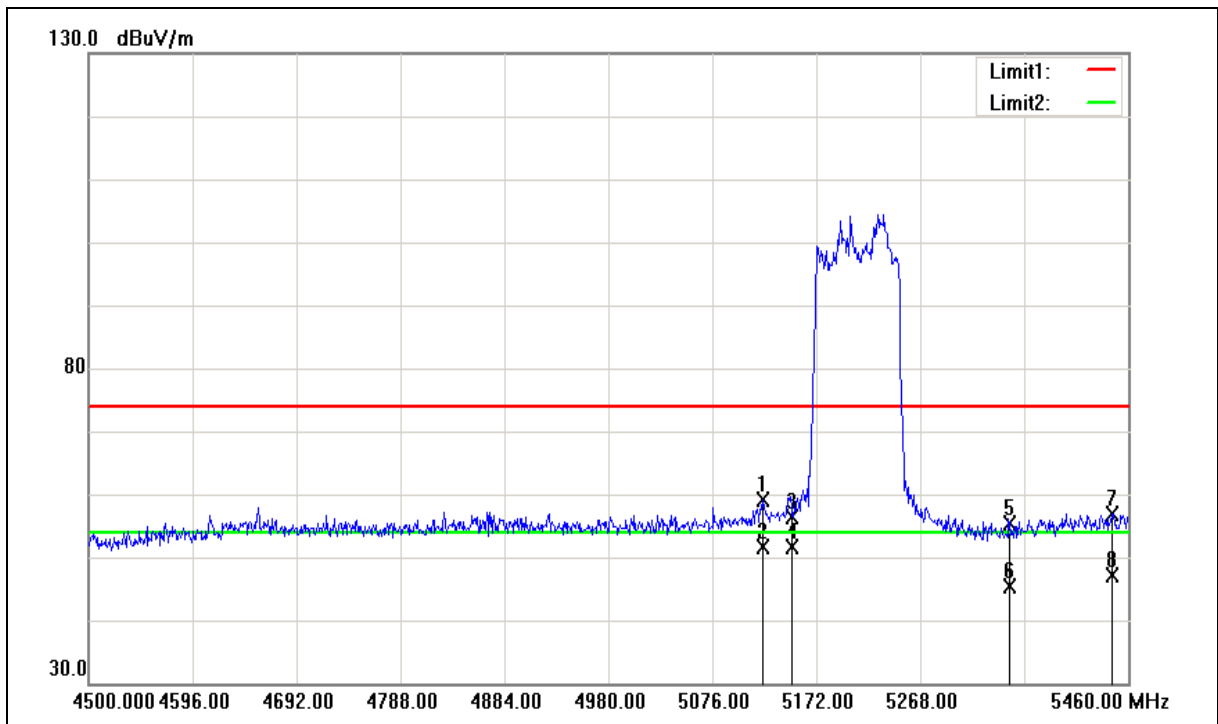
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5210MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	05/31/2017
Ant.Polar.:	Horizontal		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5210MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	05/31/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5122.080	50.97	8.21	59.18	74.00	-14.82	peak
2	5122.080	43.37	8.21	51.58	54.00	-2.42	AVG
3	5150.000	48.21	8.25	56.46	74.00	-17.54	peak
4	5150.000	43.42	8.25	51.67	54.00	-2.33	AVG
5	5350.000	47.08	8.41	55.49	74.00	-18.51	peak
6	5350.000	36.96	8.41	45.37	54.00	-8.63	AVG
7	5445.600	48.45	8.51	56.96	74.00	-17.04	peak
8	5445.600	38.54	8.51	47.05	54.00	-6.95	AVG

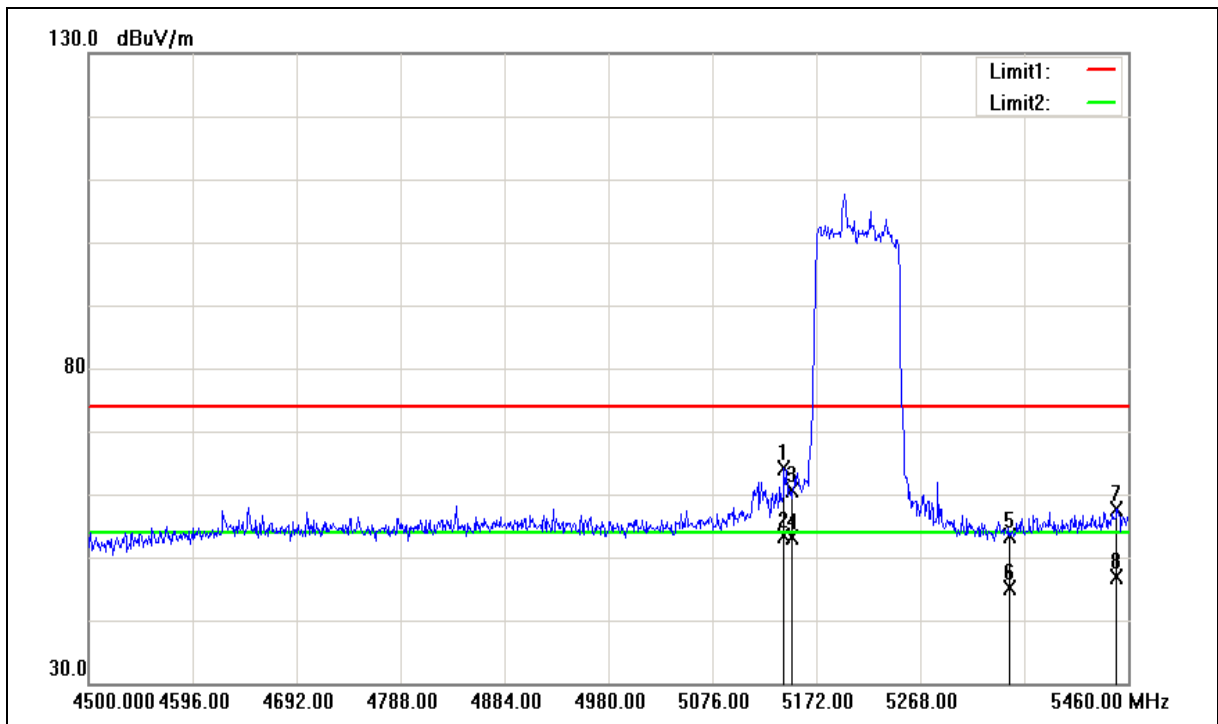
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5210MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	05/31/2017
Ant.Polar.:	Vertical		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5210MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	05/31/2017
Ant.Polar.:	Vertical		

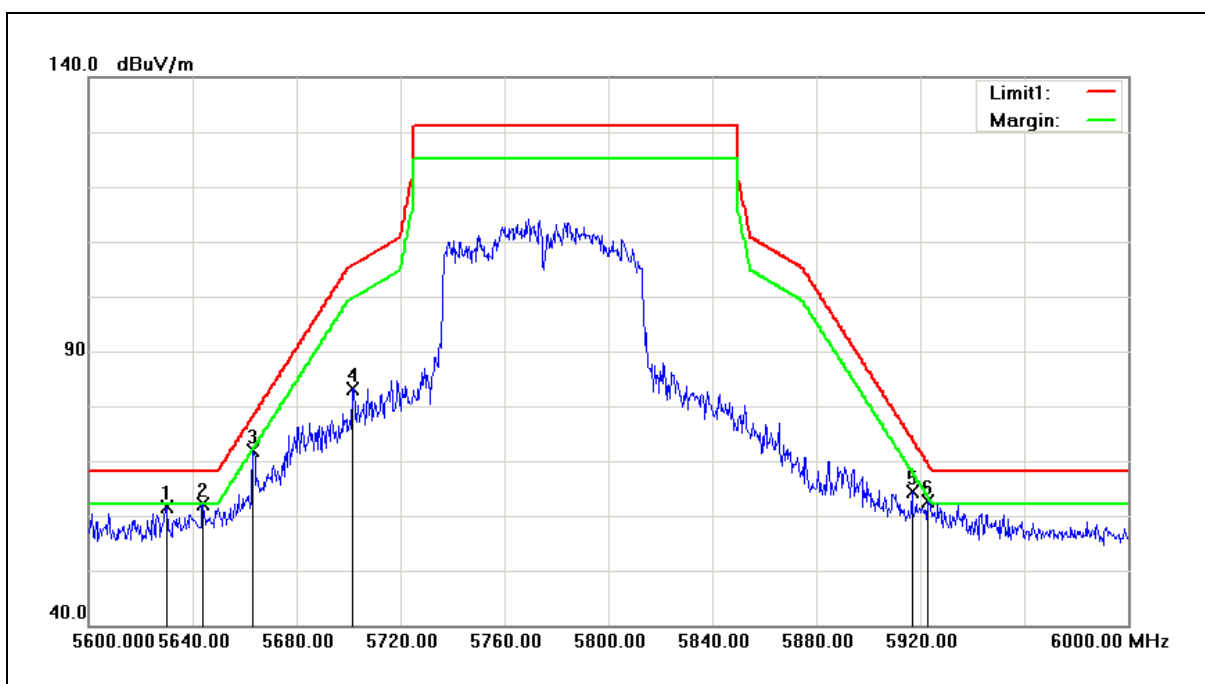
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5142.240	55.94	8.24	64.18	74.00	-9.82	peak
2	5142.240	45.13	8.24	53.37	54.00	-0.63	AVG
3	5150.000	52.32	8.25	60.57	74.00	-13.43	peak
4	5150.000	44.90	8.25	53.15	54.00	-0.85	AVG
5	5350.000	45.03	8.41	53.44	74.00	-20.56	peak
6	5350.000	36.81	8.41	45.22	54.00	-8.78	AVG
7	5449.440	49.16	8.51	57.67	74.00	-16.33	peak
8	5449.440	38.44	8.51	46.95	54.00	-7.05	AVG

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5775MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	06/01/2017
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5630.000	52.85	8.88	61.73	68.20	-6.47	peak
2	5644.000	53.11	8.91	62.02	68.20	-6.18	peak
3	5663.200	62.95	8.96	71.91	77.97	-6.06	peak
4	5701.600	74.19	9.05	83.24	105.65	-22.41	peak
5	5916.800	54.71	9.59	64.30	74.27	-9.97	peak
6	5922.800	52.92	9.61	62.53	69.83	-7.30	peak

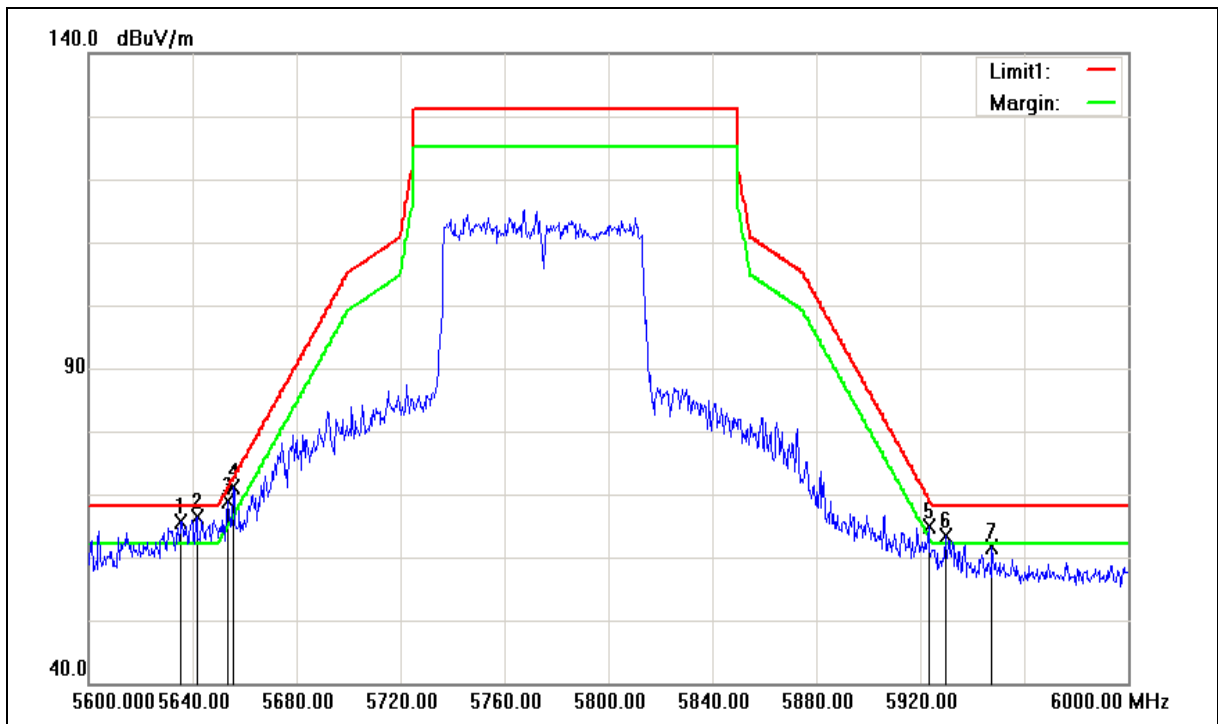
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5775MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	06/01/2017
Ant.Polar.:	Vertical		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	AC 120V/60Hz
Frequency:	5775MHz	Temp.(°C)/Hum. (%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	06/01/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5635.600	56.69	8.89	65.58	68.20	-2.62	peak
2	5641.600	57.47	8.91	66.38	68.20	-1.82	peak
3	5653.600	59.92	8.94	68.86	70.86	-2.00	peak
4	5655.600	62.18	8.94	71.12	72.34	-1.22	peak
5	5923.200	55.25	9.61	64.86	69.53	-4.67	peak
6	5929.600	53.81	9.62	63.43	68.20	-4.77	peak
7	5947.600	52.02	9.67	61.69	68.20	-6.51	peak

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

4.4. Maximum Conducted Output Power Measurement

■ Limit

Frequency Range (MHz)	FCC Maximum Conducted Output Power Limit
	Master
5.150 ~ 5.250 GHz	The lesser of 1W (30dBm)
5.725 ~ 5.850 GHz	The lesser of 1W (30dBm)

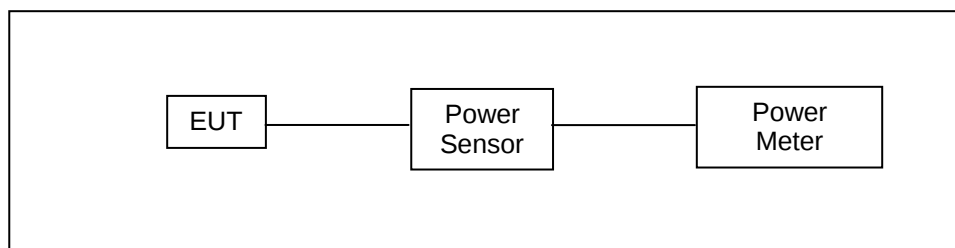
According FCC KDB 662911 D01 v02r01 – for power measurements on IEEE802.11 devices,

* Beamforming on mode : Directional Gain = $10 \cdot \log\{[10^{(G1/20)} + 10^{(G2/20)} + \dots + 10^{(Gn/20)}]^2 / N\} = 7.67$ dBi > 6dBi

* Beamforming on mode power limit shall be reduced = $30 - 1.67 = 28.33$ dBm (5.150 ~ 5.250 GHz)

* Beamforming on mode power limit shall be reduced = $30 - 1.67 = 28.33$ dBm (5.725 ~ 5.850 GHz)

■ Test Setup



■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Power Sensor	Anritsu	MA2411B	1126022	08/29/2016	1 year
Power Meter	Anritsu	ML2495A	1135009	08/29/2016	1 year
Microwave Cable	EMCI	EMC104-SM-SM-1500	140303	02/22/2017	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

Note: N.C.R. = No Calibration Request.

■ Test Procedure

The test is performed in accordance with KDB789033: D02 General UNII Test Procedures New Rules v01r04, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices

Section (E) Maximum Conducted Output Power

3. Measurement using a Power Meter (PM)

b) Method PM-G (Measurement using a gated RF average power meter)

Test Result

Test Item		Maximum Conducted Output Power						
Test Mode		Mode 2: IEEE 802.11a Continuous TX mode						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5180	6M	21.30	0.135	21.04	0.127	21.55	0.143	≤ 30
5200		21.96	0.157	21.49	0.141	22.40	0.174	
5220		21.86	0.153	21.42	0.139	22.43	0.175	
5240		21.85	0.153	21.50	0.141	22.11	0.163	
5745		24.98	0.315	24.67	0.293	25.41	0.348	
5765		24.83	0.304	25.18	0.330	25.34	0.342	≤ 30
5785		24.85	0.305	24.56	0.286	25.32	0.340	
5805		24.84	0.305	24.66	0.292	25.35	0.343	
5825		24.79	0.301	24.63	0.290	25.27	0.337	
5180		54M	21.08	0.128	20.79	0.120	21.46	
5200	21.65		0.146	21.24	0.133	22.05	0.160	
5220	21.72		0.149	21.25	0.133	22.12	0.163	
5240	21.61		0.145	21.34	0.136	21.89	0.155	
5745	24.71		0.296	24.31	0.270	25.09	0.323	
5765	24.58		0.287	24.81	0.303	24.98	0.315	≤ 30
5785	24.63		0.290	24.17	0.261	24.94	0.312	
5805	24.58		0.287	24.27	0.267	25.00	0.316	
5825	24.57		0.286	24.18	0.262	24.99	0.316	

Note:1. The relevant measured result has the offset with cable loss already.



Test Item		Maximum Conducted Output Power		
Test Mode		Mode 2: IEEE 802.11a Continuous TX mode		
Frequency (MHz)	Data Rate	ANT-0+1+2		FCC Limit (dBm)
		Max. Output Power		
		(dBm)	(W)	
5180	6M	26.07	0.405	≤ 30
5200		26.74	0.472	
5220		26.69	0.467	
5240		26.60	0.457	
5745		29.80	0.955	≤ 30
5765		29.89	0.976	
5785		29.69	0.932	
5805		29.73	0.940	
5825		29.68	0.928	
5180	54M	25.89	0.388	≤ 30
5200		26.43	0.440	
5220		26.48	0.445	
5240		26.39	0.436	
5745		29.49	0.888	≤ 30
5765		29.56	0.905	
5785		29.36	0.864	
5805		29.40	0.871	
5825		29.36	0.864	

Note:1. The relevant measured result has the offset with cable loss already.



Test Item		Maximum Conducted Output Power						
Test Mode		Mode 3: IEEE 802.11ac 20MHz Continuous TX mode						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5180	19.5M	20.76	0.119	20.41	0.110	21.02	0.126	≤ 30
5200		22.09	0.162	21.56	0.143	22.35	0.172	
5220		22.02	0.159	21.53	0.142	22.34	0.171	
5240		21.86	0.153	21.68	0.147	22.35	0.172	
5745		25.21	0.332	25.02	0.318	25.43	0.349	≤ 30
5765		25.24	0.334	25.00	0.316	25.41	0.348	
5785		25.26	0.336	24.98	0.315	25.38	0.345	
5805		25.25	0.335	24.97	0.314	25.39	0.346	
5825		25.20	0.331	24.98	0.315	25.40	0.347	
5180	260.1M	20.48	0.112	20.06	0.101	20.69	0.117	≤ 30
5200		21.86	0.153	21.30	0.135	22.02	0.159	
5220		21.83	0.152	21.28	0.134	22.08	0.161	
5240		21.60	0.145	21.42	0.139	22.09	0.162	
5745		25.09	0.323	24.85	0.305	25.27	0.337	≤ 30
5765		25.08	0.322	24.87	0.307	25.29	0.338	
5785		25.14	0.327	24.83	0.304	25.25	0.335	
5805		25.16	0.328	24.84	0.305	25.24	0.334	
5825		25.13	0.326	24.86	0.306	25.27	0.337	

Note:1. The relevant measured result has the offset with cable loss already.



Test Item		Maximum Conducted Output Power		
Test Mode		Mode 3: IEEE 802.11ac 20MHz Continuous TX mode		
Frequency (MHz)	Data Rate	ANT-0+1+2		FCC Limit (dBm)
		Max. Output Power		
		(dBm)	(W)	
5180	19.5M	25.51	0.355	≤ 30
5200		26.78	0.477	
5220		26.75	0.473	
5240		26.74	0.472	
5745		29.99	0.999	≤ 30
5765		29.99	0.998	
5785		29.98	0.996	
5805		29.98	0.995	
5825		29.97	0.993	
5180	260.1M	25.19	0.330	≤ 30
5200		26.51	0.448	
5220		26.51	0.448	
5240		26.48	0.445	
5745		29.84	0.965	≤ 30
5765		29.85	0.967	
5785		29.85	0.966	
5805		29.85	0.967	
5825		29.86	0.969	

Note:1. The relevant measured result has the offset with cable loss already.



Test Item		Maximum Conducted Output Power							
Test Mode		Mode 4: IEEE 802.11ac 40MHz Continuous TX mode							
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		FCC Limit (dBm)	
		Max. Output Power							
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)		
5190	40.5M	15.28	0.034	15.72	0.037	15.32	0.034	≤ 30	
5230		23.37	0.217	23.15	0.207	23.71	0.235		
5755		25.08	0.322	24.90	0.309	25.45	0.351		≤ 30
5795		25.17	0.329	24.79	0.301	25.20	0.331		
5190	600M	15.14	0.033	15.61	0.036	15.13	0.033	≤ 30	
5230		23.30	0.214	22.96	0.198	23.41	0.219		
5755		24.94	0.312	24.74	0.298	25.27	0.337	≤ 30	
5795		25.06	0.321	24.64	0.291	25.07	0.321		

Test Item		Maximum Conducted Output Power					
Test Mode		Mode 4: IEEE 802.11ac 40MHz Continuous TX mode					
Frequency (MHz)	Data Rate	ANT-0+1+2		FCC Limit (dBm)			
		Max. Output Power					
		(dBm)	(W)				
5190	40.5M	20.22	0.105	≤ 30			
5230		28.19	0.659				
5755		29.92	0.982				
5795		29.83	0.961	≤ 30			
5190	600M	20.07	0.102			≤ 30	
5230		28.00	0.631				
5755		29.76	0.946	≤ 30			
5795		29.70	0.933				

Note:1. The relevant measured result has the offset with cable loss already.



Test Item		Maximum Conducted Output Power						
Test Mode		Mode 5: IEEE 802.11ac 80MHz Continuous TX mode						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5210	87.9M	14.30	0.027	14.04	0.025	14.31	0.027	≤ 30
5775		23.65	0.232	23.48	0.223	23.75	0.237	≤ 30
5210	1299.9M	14.10	0.026	13.72	0.024	14.18	0.026	≤ 30
5775		23.11	0.205	23.06	0.202	23.60	0.229	≤ 30

Test Item		Maximum Conducted Output Power			
Test Mode		Mode 5: IEEE 802.11ac 80MHz Continuous TX mode			
Frequency (MHz)	Data Rate	ANT-0+1+2		FCC Limit (dBm)	
		Max. Output Power			
		(dBm)	(W)		
5210	87.9M	18.99	0.079	≤ 30	
5775		28.40	0.692	≤ 30	
5210	1299.9M	18.78	0.075	≤ 30	
5775		28.03	0.636	≤ 30	

Note:1. The relevant measured result has the offset with cable loss already.

Beamforming on

Test Item		Maximum Conducted Output Power						
Test Mode		Mode 3: IEEE 802.11ac 20MHz Continuous TX mode						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5180	19.5M	18.88	0.077	20.18	0.104	19.18	0.083	≤ 28.33
5200		22.26	0.168	22.97	0.198	22.32	0.171	
5220		22.38	0.173	22.98	0.199	22.29	0.169	
5240		22.29	0.169	23.01	0.200	22.25	0.168	
5745		23.21	0.209	23.31	0.214	23.48	0.223	≤ 28.33
5765		23.12	0.205	23.15	0.207	24.25	0.266	
5785		23.38	0.218	23.14	0.206	23.35	0.216	
5805		23.34	0.216	23.04	0.201	23.31	0.214	
5825		23.43	0.220	23.11	0.205	23.44	0.221	
5180	260.1M	18.60	0.072	19.90	0.098	18.90	0.078	≤ 28.33
5200		21.98	0.158	22.69	0.186	22.04	0.160	
5220		22.10	0.162	22.70	0.186	22.01	0.159	
5240		22.01	0.159	22.73	0.187	21.97	0.157	
5745		22.81	0.191	22.95	0.197	23.11	0.205	≤ 28.33
5765		22.75	0.188	22.74	0.188	23.87	0.244	
5785		23.04	0.201	22.77	0.189	23.01	0.200	
5805		23.00	0.200	22.74	0.188	22.98	0.199	
5825		23.07	0.203	22.78	0.190	23.10	0.204	

Note:1. The relevant measured result has the offset with cable loss already.



Test Item		Maximum Conducted Output Power		
Test Mode		Mode 3: IEEE 802.11ac 20MHz Continuous TX mode		
Frequency (MHz)	Data Rate	ANT-0+1+2		FCC Limit (dBm)
		Max. Output Power		
		(dBm)	(W)	
5180	19.5M	24.22	0.264	≤ 28.33
5200		27.30	0.537	
5220		27.33	0.541	
5240		27.30	0.537	
5745		28.11	0.647	≤ 28.33
5765		28.31	0.678	
5785		28.06	0.640	
5805		28.00	0.631	
5825		28.10	0.646	
5180	260.1M	23.94	0.248	≤ 28.33
5200		27.02	0.503	
5220		27.05	0.507	
5240		27.02	0.504	
5745		27.73	0.593	≤ 28.33
5765		27.92	0.620	
5785		27.71	0.591	
5805		27.68	0.586	
5825		27.76	0.597	

Note:1. The relevant measured result has the offset with cable loss already.



Test Item		Maximum Conducted Output Power						
Test Mode		Mode 4: IEEE 802.11ac 40MHz Continuous TX mode						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5190	40.5M	12.25	0.017	13.28	0.021	12.19	0.017	≤ 28.33
5230		22.76	0.189	24.04	0.254	23.18	0.208	
5755		22.96	0.198	23.61	0.230	23.39	0.218	≤ 28.33
5795		22.98	0.199	23.68	0.233	23.46	0.222	
5190	600M	11.83	0.015	12.85	0.019	11.76	0.015	≤ 28.33
5230		22.35	0.172	23.54	0.226	22.72	0.187	
5755		22.50	0.178	23.17	0.207	22.97	0.198	≤ 28.33
5795		22.53	0.179	23.24	0.211	23.05	0.202	

Test Item		Maximum Conducted Output Power			
Test Mode		Mode 4: IEEE 802.11ac 40MHz Continuous TX mode			
Frequency (MHz)	Data Rate	ANT-0+1+2		FCC Limit (dBm)	
		Max. Output Power			
		(dBm)	(W)		
5190	40.5M	17.37	0.055	≤ 28.33	
5230		28.13	0.650		
5755		28.10	0.646	≤ 28.33	
5795		28.15	0.654		
5190	600M	16.95	0.050	≤ 28.33	
5230		27.67	0.585		
5755		27.66	0.583	≤ 28.33	
5795		27.72	0.592		

Note:1. The relevant measured result has the offset with cable loss already.



Test Item		Maximum Conducted Output Power						
Test Mode		Mode 5: IEEE 802.11ac 80MHz Continuous TX mode						
Frequency (MHz)	Data Rate	ANT-0		ANT-1		ANT-2		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5210	87.9M	11.79	0.015	12.87	0.019	11.57	0.014	≤ 28.33
5775		22.64	0.184	23.64	0.231	23.41	0.219	≤ 28.33
5210	1299.9M	11.05	0.013	12.06	0.016	10.85	0.012	≤ 28.33
5775		21.48	0.141	22.66	0.185	22.29	0.169	≤ 28.33

Test Item		Maximum Conducted Output Power		
Test Mode		Mode 5: IEEE 802.11ac 80MHz Continuous TX mode		
Frequency (MHz)	Data Rate	ANT-0+1+2		FCC Limit (dBm)
		Max. Output Power		
		(dBm)	(W)	
5210	87.9M	16.89	0.049	≤ 28.33
5775		28.02	0.634	≤ 28.33
5210	1299.9M	16.12	0.041	≤ 28.33
5775		26.94	0.495	≤ 28.33

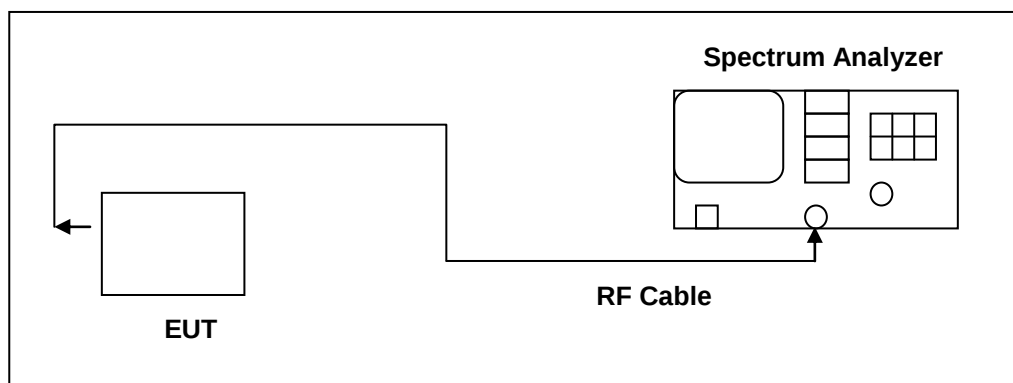
Note:1. The relevant measured result has the offset with cable loss already.

4.5. 26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement

■ Limit

N/A

■ Test Setup



■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/19/2016	1 year
Microwave Cable	EMCI	EMC104-SM-SM-1500	140303	02/22/2017	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

Note: N.C.R. = No Calibration Request.

■ Test Procedure

The test is performed in accordance with KDB789033: D02 General UNII Test Procedures New Rules v01r04, Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	>26dB Bandwidth
RBW	Approximately 1% of the emission bandwidth
VBW	VBW > RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

Test Result

Test Mode	Mode 2: IEEE 802.11a Continuous TX mode		
Frequency (MHz)	Ant-0	Ant-1	Ant-2
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)
5180	20.360	20.470	20.330
5200	20.240	20.190	20.040
5240	20.370	20.140	20.300
Test Item	99% Bandwidth Measurement		
Frequency (MHz)	Ant-0	Ant-1	Ant-2
	99% Bandwidth (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
5180	16.915	16.771	16.843
5200	16.844	16.809	16.755
5240	16.892	16.773	16.781

Test Mode	Mode 3: IEEE 802.11ac 20MHz Continuous TX mode		
Frequency (MHz)	Ant-0	Ant-1	Ant-2
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)
5180	20.610	20.320	20.490
5200	20.590	20.340	20.780
5240	20.800	20.320	20.480
Test Item	99% Bandwidth Measurement		
Frequency (MHz)	Ant-0	Ant-1	Ant-2
	99% Bandwidth (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
5180	17.892	17.788	17.850
5200	17.863	17.813	17.874
5240	17.876	17.803	17.865

Note: The 99% occupied bandwidth not crossed 5250MHz.

Test Mode	Mode 4: IEEE 802.11ac 40MHz Continuous TX mode		
Frequency (MHz)	Ant-0	Ant-1	Ant-2
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)
5190	40.300	40.310	40.180
5230	58.400	54.460	55.680
Test Item	99% Bandwidth Measurement		
Frequency (MHz)	Ant-0	Ant-1	Ant-2
	99% Bandwidth (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
5190	36.502	36.630	36.595
5230	36.806	36.740	36.781

Test Mode	Mode 5: IEEE 802.11ac 80MHz Continuous TX mode		
Frequency (MHz)	Ant-0	Ant-1	Ant-2
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)
5210	82.710	81.660	81.840
Test Item	99% Bandwidth Measurement		
Frequency (MHz)	Ant-0	Ant-1	Ant-2
	99% Bandwidth (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
5210	75.644	75.576	75.704

Note: The 99% occupied bandwidth not crossed 5250MHz.

Beamforming on

Test Mode	Mode 3: IEEE 802.11ac 20MHz Continuous TX mode		
Frequency (MHz)	Ant-0	Ant-1	Ant-2
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)
5180	20.310	20.570	20.240
5200	20.680	20.670	20.450
5240	20.610	20.650	20.250
Test Item	99% Bandwidth Measurement		
Frequency (MHz)	Ant-0	Ant-1	Ant-2
	99% Bandwidth (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
5180	17.862	17.866	17.799
5200	17.944	17.909	17.859
5240	17.869	17.893	17.890

Test Mode	Mode 4: IEEE 802.11ac 40MHz Continuous TX mode		
Frequency (MHz)	Ant-0	Ant-1	Ant-2
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)
5190	40.500	41.400	39.990
5230	43.660	47.670	40.560
Test Item	99% Bandwidth Measurement		
Frequency (MHz)	Ant-0	Ant-1	Ant-2
	99% Bandwidth (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
5180	36.507	36.603	36.616
5200	36.586	36.327	36.493
5240	36.507	36.603	36.616

Note: The 99% occupied bandwidth not crossed 5250MHz.



Test Mode	Mode 5: IEEE 802.11ac 80MHz Continuous TX mode		
Frequency (MHz)	Ant-0	Ant-1	Ant-2
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)
5210	80.920	81.680	81.400
Test Item	99% Bandwidth Measurement		
Frequency (MHz)	Ant-0	Ant-1	Ant-2
	99% Bandwidth (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
5210	75.627	75.492	75.639

Note: The 99% occupied bandwidth not crossed 5250MHz.



■ Test Graphs

Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0

5180 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 16.915 MHz Total Power 27.0 dBm Transmit Freq Error 19.981 kHz OBW Power 99.00 % x dB Bandwidth 20.36 MHz x dB -26.00 dB
5200 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 16.844 MHz Total Power 26.9 dBm Transmit Freq Error 12.399 kHz OBW Power 99.00 % x dB Bandwidth 20.24 MHz x dB -26.00 dB
5240 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 16.892 MHz Total Power 27.4 dBm Transmit Freq Error 4.858 kHz OBW Power 99.00 % x dB Bandwidth 20.37 MHz x dB -26.00 dB



Mode 3: IEEE 802.11ac 20MHz Continuous TX mode_ ANT-0

5180 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 17.892 MHz Total Power 26.8 dBm Transmit Freq Error 14.085 kHz OBW Power 99.00 % x dB Bandwidth 20.61 MHz x dB -26.00 dB
5200 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 17.863 MHz Total Power 27.5 dBm Transmit Freq Error 11.111 kHz OBW Power 99.00 % x dB Bandwidth 20.59 MHz x dB -26.00 dB
5240 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 17.876 MHz Total Power 27.5 dBm Transmit Freq Error -4.353 kHz OBW Power 99.00 % x dB Bandwidth 20.80 MHz x dB -26.00 dB



Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ ANT-0

5190 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.19 GHz #Res BW 1 MHz #VBW 3 MHz Span 60 MHz Sweep 1 ms Occupied Bandwidth 36.502 MHz Total Power 22.5 dBm Transmit Freq Error 22.365 kHz OBW Power 99.00 % x dB Bandwidth 40.30 MHz x dB -26.00 dB Center Freq 5.19000000 GHz CF Step 6.000000 MHz Freq Offset 0 Hz
5230 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.23 GHz #Res BW 1 MHz #VBW 3 MHz Span 60 MHz Sweep 1 ms Occupied Bandwidth 36.806 MHz Total Power 30.2 dBm Transmit Freq Error 7.875 kHz OBW Power 99.00 % x dB Bandwidth 58.40 MHz x dB -26.00 dB Center Freq 5.23000000 GHz CF Step 6.000000 MHz Freq Offset 0 Hz

Mode 5: IEEE 802.11ac 80MHz Continuous TX mode_ ANT-0

5210 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.21 GHz #Res BW 1 MHz #VBW 3 MHz Span 100 MHz Sweep 1 ms Occupied Bandwidth 75.644 MHz Total Power 21.3 dBm Transmit Freq Error 82.115 kHz OBW Power 99.00 % x dB Bandwidth 82.71 MHz x dB -26.00 dB Center Freq 5.21000000 GHz CF Step 10.000000 MHz Freq Offset 0 Hz
----------	--



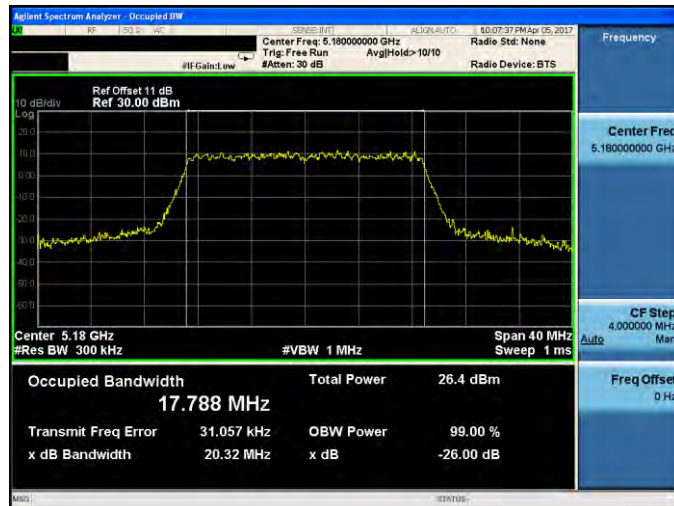
Mode 2: IEEE 802.11a Continuous TX mode_ ANT-1

5180 MHz	Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.180000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None #Atten: 30 dB Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm 10 dB/div Log </
----------	--

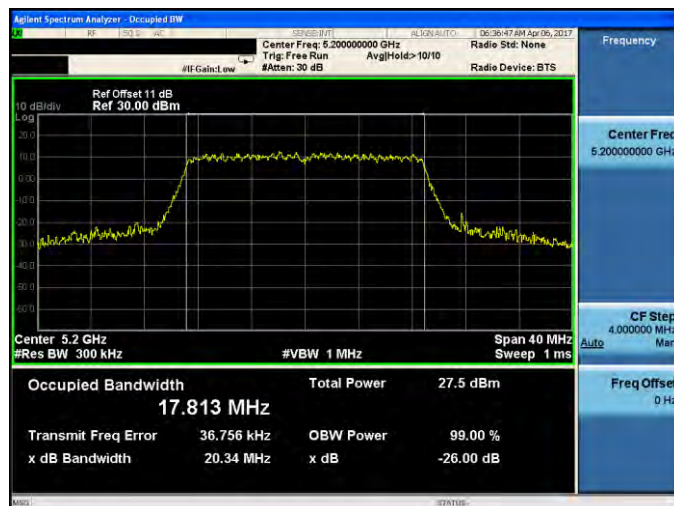


Mode 3: IEEE 802.11ac 20MHz Continuous TX mode_ ANT-1

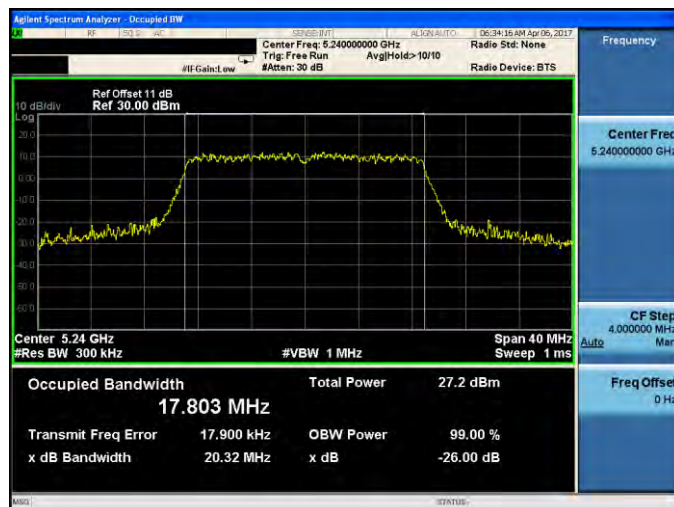
5180 MHz



5200 MHz



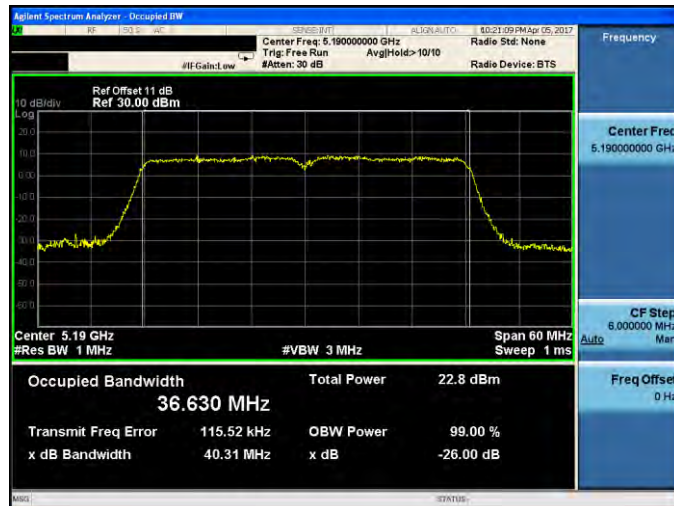
5240 MHz





Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ ANT-1

5190 MHz

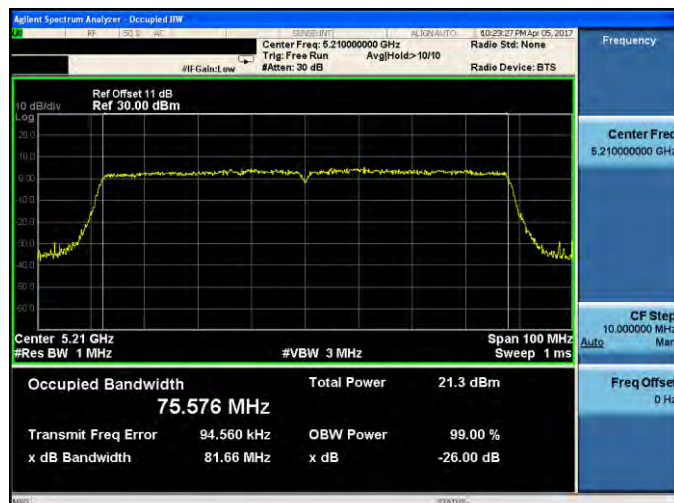


5230 MHz



Mode 5: IEEE 802.11ac 80MHz Continuous TX mode_ ANT-1

5210 MHz





Mode 2: IEEE 802.11a Continuous TX mode_ ANT-2

5180 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 16.843 MHz Total Power 27.7 dBm Transmit Freq Error 93.759 kHz OBW Power 99.00 % x dB Bandwidth 20.33 MHz x dB -26.00 dB
5200 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 16.755 MHz Total Power 27.6 dBm Transmit Freq Error 63.159 kHz OBW Power 99.00 % x dB Bandwidth 20.04 MHz x dB -26.00 dB
5240 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 16.781 MHz Total Power 27.4 dBm Transmit Freq Error 63.180 kHz OBW Power 99.00 % x dB Bandwidth 20.30 MHz x dB -26.00 dB



Mode 3: IEEE 802.11ac 20MHz Continuous TX mode_ ANT-2

5180 MHz



5200 MHz



5240 MHz





Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ ANT-2

5190 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.19 GHz #Res BW 1 MHz Span 60 MHz Sweep 1 ms Occupied Bandwidth 36.595 MHz Total Power 22.9 dBm Transmit Freq Error -2.239 kHz OBW Power 99.00 % x dB Bandwidth 40.18 MHz x dB -26.00 dB
5230 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.23 GHz #Res BW 1 MHz Span 60 MHz Sweep 1 ms Occupied Bandwidth 36.781 MHz Total Power 30.9 dBm Transmit Freq Error 45.919 kHz OBW Power 99.00 % x dB Bandwidth 55.68 MHz x dB -26.00 dB

Mode 5: IEEE 802.11ac 80MHz Continuous TX mode_ ANT-2

5210 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.21 GHz #Res BW 1 MHz Span 100 MHz Sweep 1 ms Occupied Bandwidth 75.704 MHz Total Power 21.5 dBm Transmit Freq Error 104.35 kHz OBW Power 99.00 % x dB Bandwidth 81.84 MHz x dB -26.00 dB
----------	---



Beamforming on

Mode 3: IEEE 802.11ac 20MHz Continuous TX mode_ ANT-0

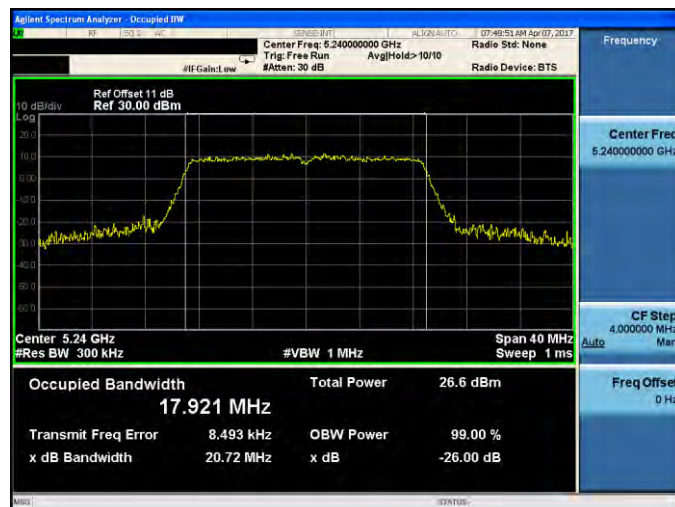
5180 MHz



5200 MHz

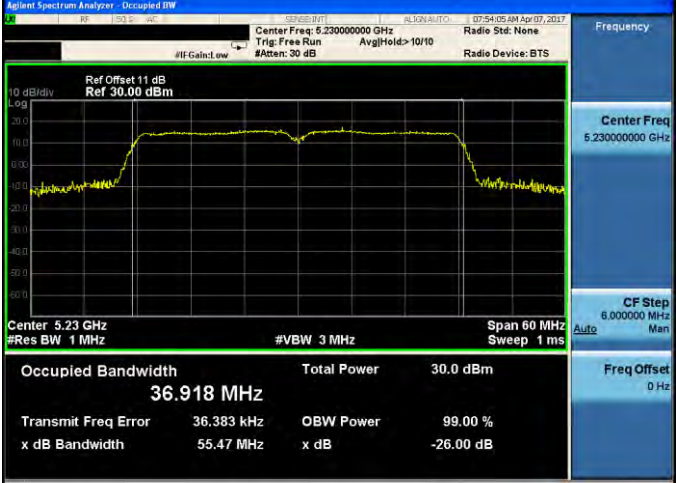


5240 MHz





Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ ANT-0

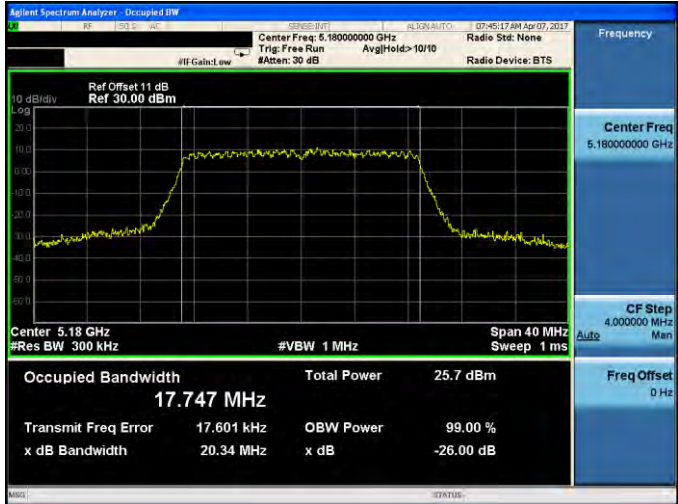
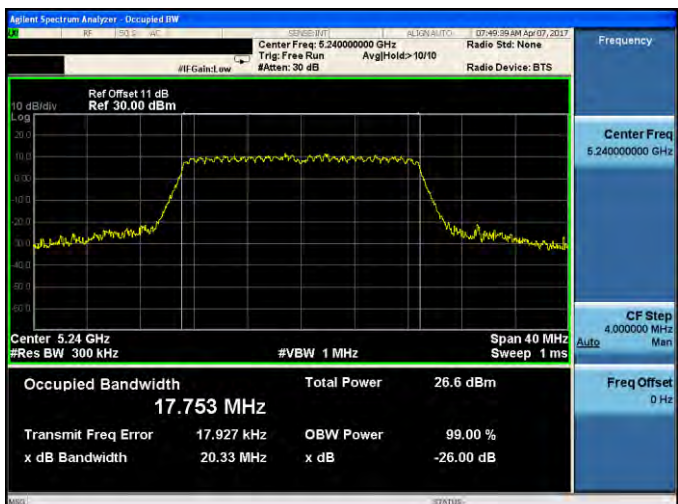
5190 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.19 GHz #Res BW 1 MHz #VBW 3 MHz Span 60 MHz Sweep 1 ms Occupied Bandwidth 36.622 MHz Total Power 21.8 dBm Transmit Freq Error 50.470 kHz OBW Power 99.00 % x dB Bandwidth 40.87 MHz x dB -26.00 dB
5230 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.23 GHz #Res BW 1 MHz #VBW 3 MHz Span 60 MHz Sweep 1 ms Occupied Bandwidth 36.918 MHz Total Power 30.0 dBm Transmit Freq Error 36.383 kHz OBW Power 99.00 % x dB Bandwidth 55.47 MHz x dB -26.00 dB

Mode 5: IEEE 802.11ac 80MHz Continuous TX mode_ ANT-0

5210 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.21 GHz #Res BW 1 MHz #VBW 3 MHz Span 100 MHz Sweep 1 ms Occupied Bandwidth 75.665 MHz Total Power 20.4 dBm Transmit Freq Error 46.415 kHz OBW Power 99.00 % x dB Bandwidth 82.53 MHz x dB -26.00 dB
----------	---



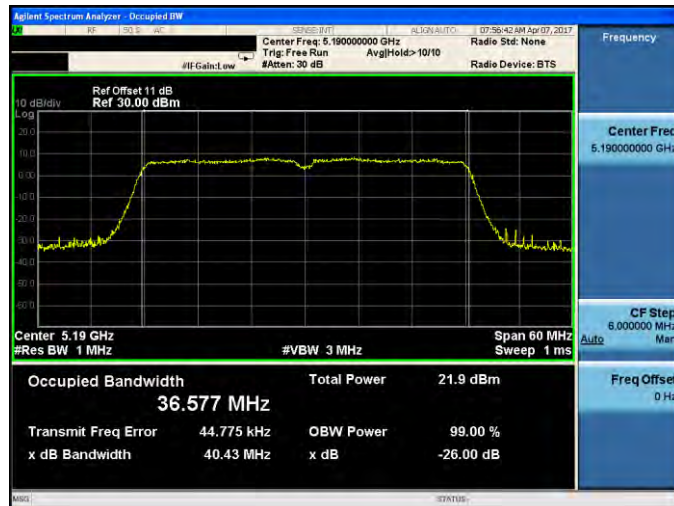
Mode 3: IEEE 802.11ac 20MHz Continuous TX mode_ ANT-1

5180 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.18 GHz #Res BW 300 kHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 17.747 MHz Total Power 25.7 dBm Transmit Freq Error 17.601 kHz OBW Power 99.00 % x dB Bandwidth 20.34 MHz x dB -26.00 dB Center Freq 5.18000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz Radio Device: BTS
5200 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.2 GHz #Res BW 300 kHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 17.789 MHz Total Power 25.9 dBm Transmit Freq Error 23.146 kHz OBW Power 99.00 % x dB Bandwidth 20.38 MHz x dB -26.00 dB Center Freq 5.20000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz Radio Device: BTS
5240 MHz	 Ref Offset 11 dB Ref 30.00 dBm Center 5.24 GHz #Res BW 300 kHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 17.753 MHz Total Power 26.6 dBm Transmit Freq Error 17.927 kHz OBW Power 99.00 % x dB Bandwidth 20.33 MHz x dB -26.00 dB Center Freq 5.24000000 GHz CF Step 4.000000 MHz Freq Offset 0 Hz Radio Device: BTS

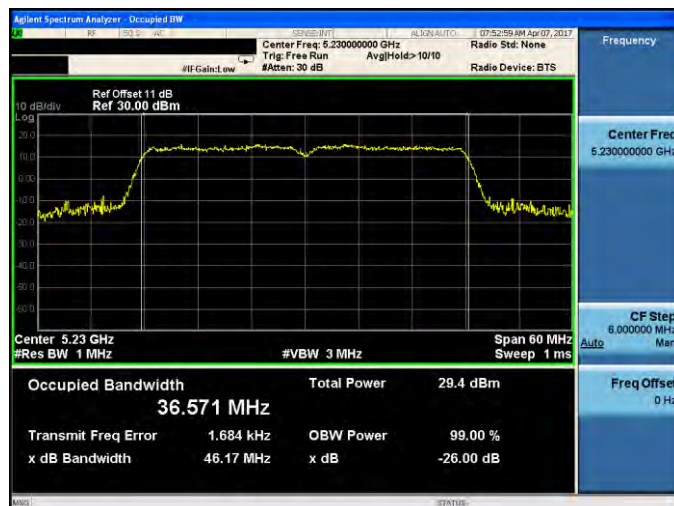


Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ ANT-1

5190 MHz



5230 MHz



Mode 5: IEEE 802.11ac 80MHz Continuous TX mode_ ANT-1

5210 MHz



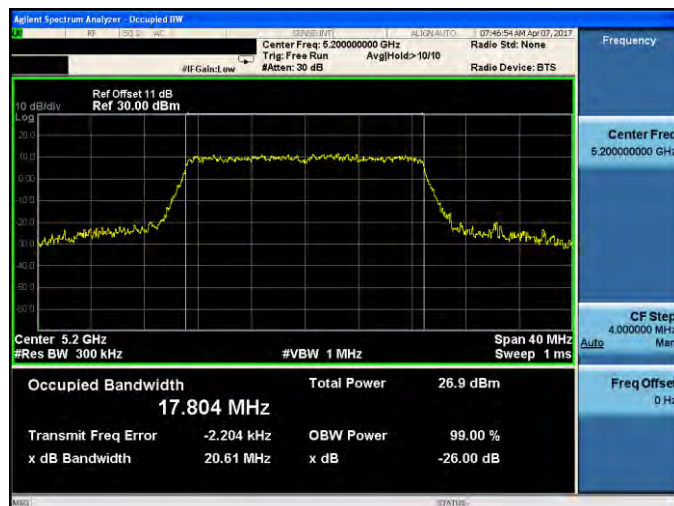


Mode 3: IEEE 802.11ac 20MHz Continuous TX mode_ ANT-2

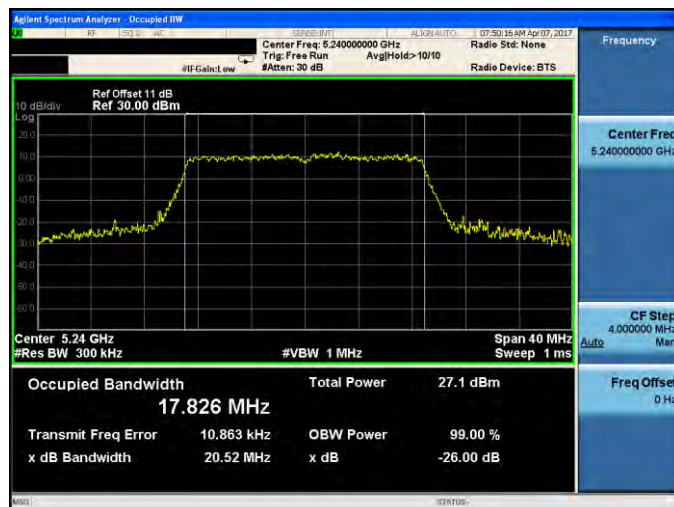
5180 MHz



5200 MHz



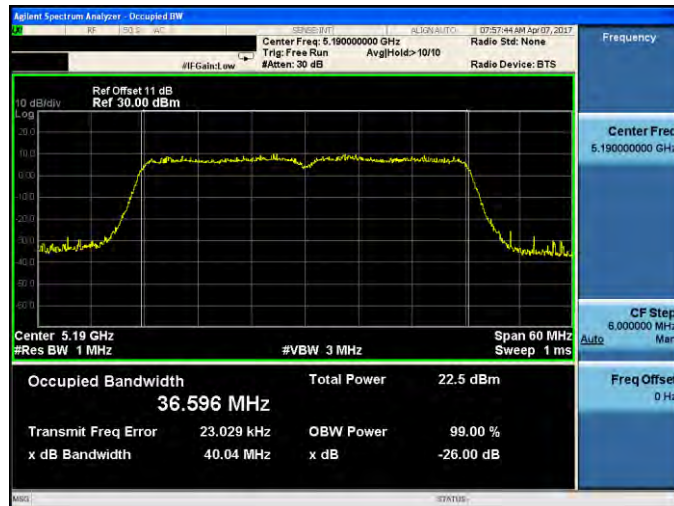
5240 MHz





Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ ANT-2

5190 MHz



5230 MHz



Mode 5: IEEE 802.11ac 80MHz Continuous TX mode_ ANT-2

5210 MHz



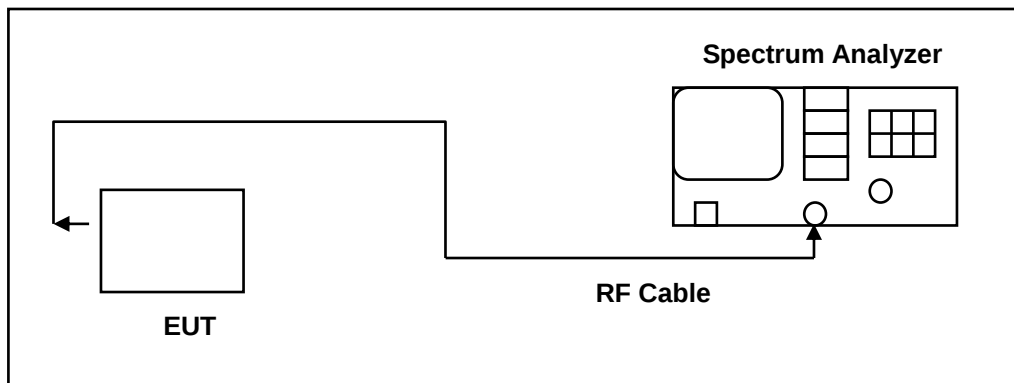
4.6. 6dB RF Bandwidth Measurement

■ Limit

6dB RF Bandwidth

Systems using digital modulation techniques may operate in the 5725~5850MHz bands. The minimum 6 dB band-width shall be at least 500 kHz.

■ Test Setup



■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Spectrum Analyzer	Agilent	E4445A	MY45300744	12/19/2016	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

Note: N.C.R. = No Calibration Request.

■ Test Procedure

6dB RF Bandwidth

The EUT tested to UNII test procedure of KDB789033 D02 for compliance to FCC 47CFR 15.407 requirements. The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RES BW was set to 100 kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A peak output reading was taken, a DISPLAY line was drawn 6 dB lower than peak level. The 6 dB bandwidth was determined from where the channel output spectrum intersected the display line. The test was performed at 3 channels.

Test Result

Test Item	6dB RF Bandwidth			
Test Mode	Mode 2: IEEE 802.11a Continuous TX mode			
Frequency (MHz)	6dB Bandwidth (kHz)			Limit (kHz)
	ANT-0	ANT-1	ANT-2	
5745	16360	16370	16370	> 500
5785	16360	16370	16360	> 500
5825	16360	16370	16360	> 500

Test Item	6dB RF Bandwidth			
Test Mode	Mode 3: IEEE 802.11ac 20MHz Continuous TX mode			
Frequency (MHz)	6dB Bandwidth (kHz)			Limit (kHz)
	ANT-0	ANT-1	ANT-2	
5745	17590	17610	17600	> 500
5785	17580	17630	17590	> 500
5825	17570	17620	17610	> 500

Test Item	6dB RF Bandwidth			
Test Mode	Mode 4: IEEE 802.11ac 40MHz Continuous TX mode			
Frequency (MHz)	6dB Bandwidth (kHz)			Limit (kHz)
	ANT-0	ANT-1	ANT-2	
5755	36350	36420	36360	> 500
5795	36340	36400	36370	> 500

Test Item	6dB RF Bandwidth			
Test Mode	Mode 5: IEEE 802.11ac 80MHz Continuous TX mode			
Frequency (MHz)	6dB Bandwidth (kHz)			Limit (kHz)
	ANT-0	ANT-1	ANT-2	
5775	75660	75960	75580	> 500



Beamforming on

Test Item	6dB RF Bandwidth			
Test Mode	Mode 3: IEEE 802.11ac 20MHz Continuous TX mode			
Frequency (MHz)	6dB Bandwidth (kHz)			Limit (kHz)
	ANT-0	ANT-1	ANT-2	
5745	17620	17170	17300	> 500
5785	17710	17730	17710	> 500
5825	17630	17270	17710	> 500

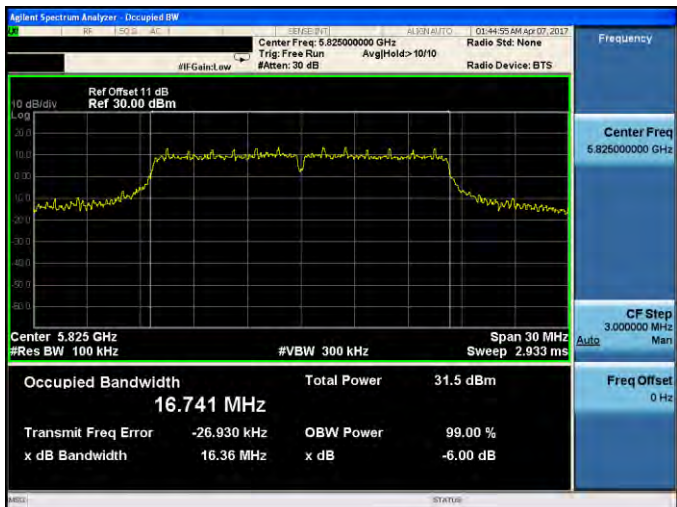
Test Item	6dB RF Bandwidth			
Test Mode	Mode 4: IEEE 802.11ac 40MHz Continuous TX mode			
Frequency (MHz)	6dB Bandwidth (kHz)			Limit (kHz)
	ANT-0	ANT-1	ANT-2	
5755	36400	36400	36550	> 500
5795	36140	36040	36530	> 500

Test Item	6dB RF Bandwidth			
Test Mode	Mode 5: IEEE 802.11ac 80MHz Continuous TX mode			
Frequency (MHz)	6dB Bandwidth (kHz)			Limit (kHz)
	ANT-0	ANT-1	ANT-2	
5775	76350	75680	76350	> 500



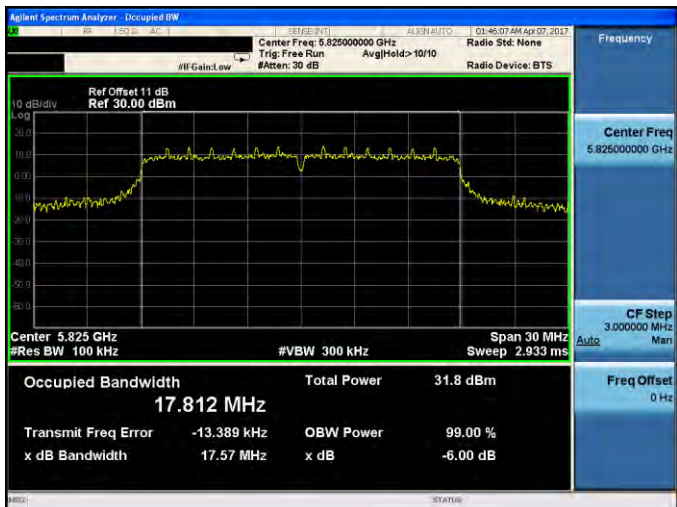
■ Test Graphs

Mode 2: IEEE 802.11a Continuous TX mode_ANT-0

5745 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.74500000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 16.878 MHz Total Power 32.3 dBm Transmit Freq Error -47.124 kHz OBW Power 99.00 % x dB Bandwidth 16.36 MHz x dB -6.00 dB Frequency Center Freq 5.74500000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
5785 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.78500000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.785 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 16.795 MHz Total Power 31.5 dBm Transmit Freq Error -31.339 kHz OBW Power 99.00 % x dB Bandwidth 16.36 MHz x dB -6.00 dB Frequency Center Freq 5.78500000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
5825 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.82500000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.825 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 16.741 MHz Total Power 31.5 dBm Transmit Freq Error -26.930 kHz OBW Power 99.00 % x dB Bandwidth 16.36 MHz x dB -6.00 dB Frequency Center Freq 5.82500000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz

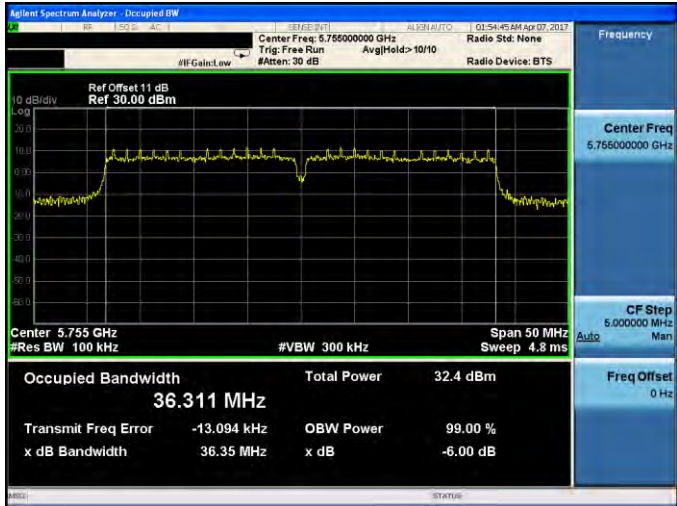
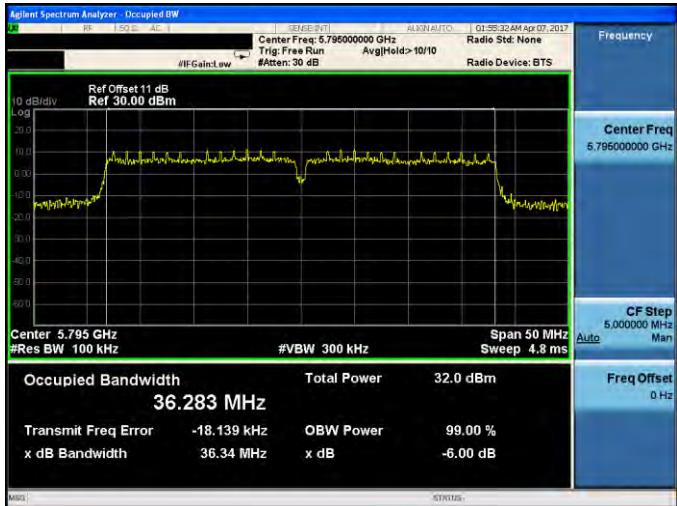


Mode 3: IEEE 802.11ac 20MHz Continuous TX mode_ANT-0

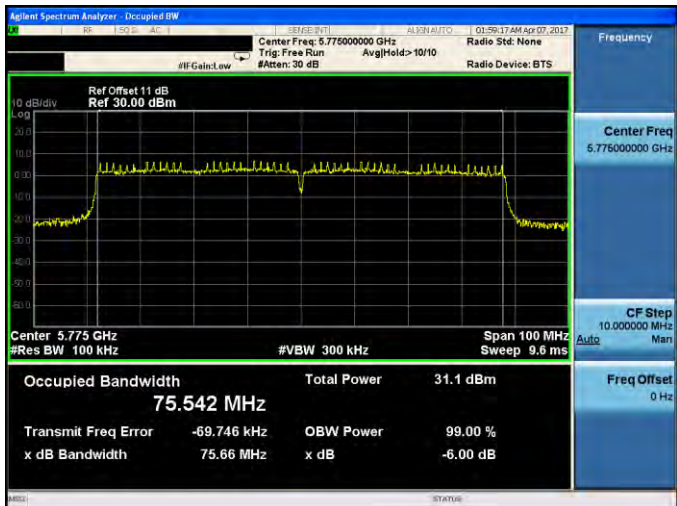
5745 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.745000000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.823 MHz Total Power 31.9 dBm Transmit Freq Error -18.202 kHz OBW Power 99.00 % x dB Bandwidth 17.59 MHz x dB -6.00 dB Frequency Center Freq 5.745000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
5785 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.785000000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.785 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.846 MHz Total Power 32.1 dBm Transmit Freq Error -16.965 kHz OBW Power 99.00 % x dB Bandwidth 17.58 MHz x dB -6.00 dB Frequency Center Freq 5.785000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
5825 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.825000000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.825 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.812 MHz Total Power 31.8 dBm Transmit Freq Error -13.389 kHz OBW Power 99.00 % x dB Bandwidth 17.57 MHz x dB -6.00 dB Frequency Center Freq 5.825000000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz



Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ANT-0

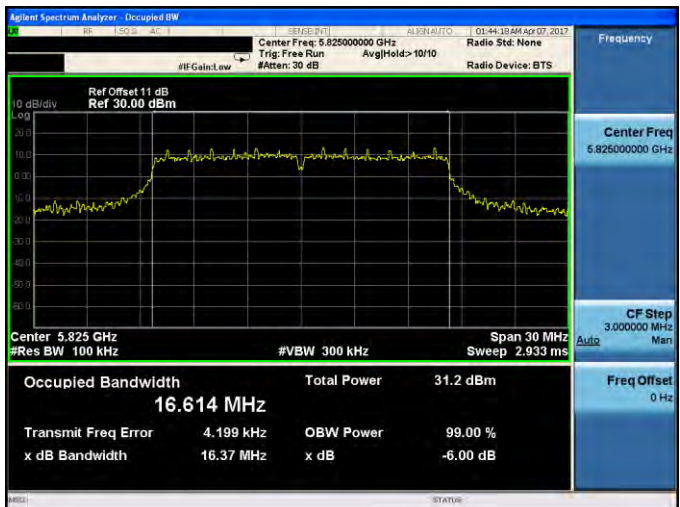
5755 MHz	 Center Freq: 5.755 GHz #Res BW 100 kHz #VBW 300 kHz Span 50 MHz Sweep 4.8 ms Occupied Bandwidth: 36.311 MHz Total Power: 32.4 dBm Transmit Freq Error: -13.094 kHz OBW Power: 99.00 % x dB Bandwidth: 36.35 MHz x dB: -6.00 dB Center Freq: 5.755 GHz CF Step: 5.000000 MHz Freq Offset: 0 Hz
5795 MHz	 Center Freq: 5.795 GHz #Res BW 100 kHz #VBW 300 kHz Span 50 MHz Sweep 4.8 ms Occupied Bandwidth: 36.283 MHz Total Power: 32.0 dBm Transmit Freq Error: -18.139 kHz OBW Power: 99.00 % x dB Bandwidth: 36.34 MHz x dB: -6.00 dB Center Freq: 5.795 GHz CF Step: 5.000000 MHz Freq Offset: 0 Hz

Mode 5: IEEE 802.11ac 80MHz Continuous TX mode_ANT-0

5775 MHz	 Center Freq: 5.775 GHz #Res BW 100 kHz #VBW 300 kHz Span 100 MHz Sweep 9.6 ms Occupied Bandwidth: 75.542 MHz Total Power: 31.1 dBm Transmit Freq Error: -69.746 kHz OBW Power: 99.00 % x dB Bandwidth: 75.66 MHz x dB: -6.00 dB Center Freq: 5.775 GHz CF Step: 10.000000 MHz Freq Offset: 0 Hz
----------	---

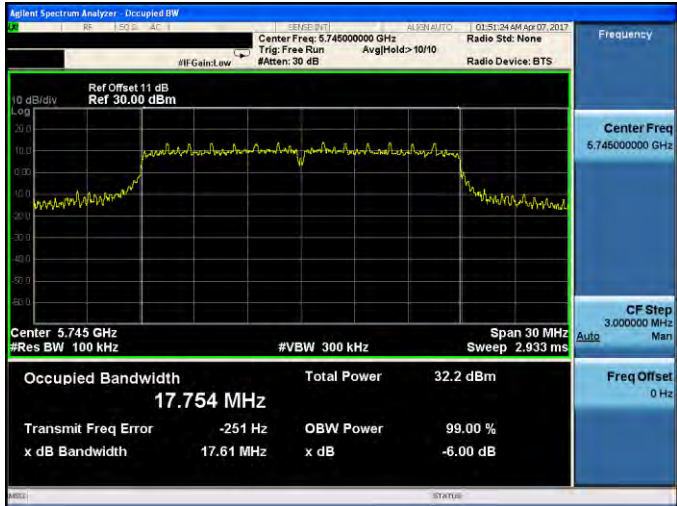
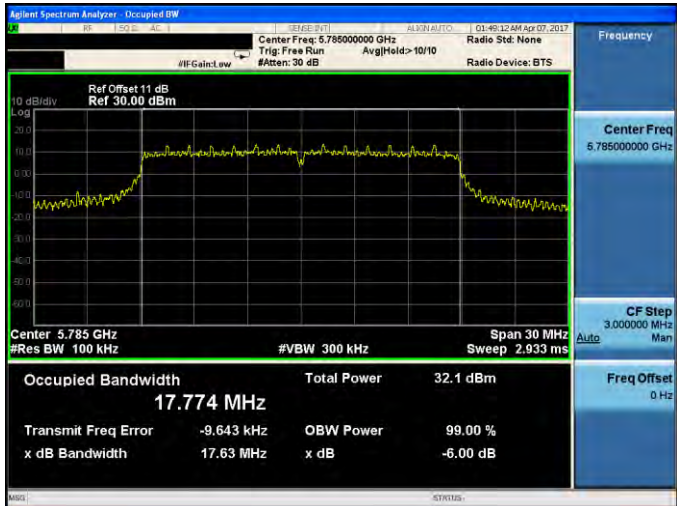
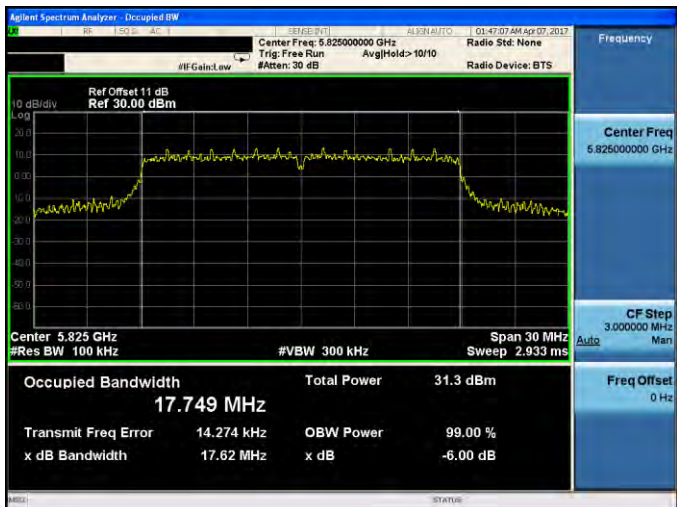


Mode 2: IEEE 802.11a Continuous TX mode_ANT-1

5745 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.74500000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 16.588 MHz Total Power 31.8 dBm Transmit Freq Error -9.334 kHz OBW Power 99.00 % x dB Bandwidth 16.37 MHz x dB -6.00 dB Frequency Center Freq 5.74500000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
5785 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.78500000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.785 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 16.628 MHz Total Power 31.3 dBm Transmit Freq Error -9.779 kHz OBW Power 99.00 % x dB Bandwidth 16.37 MHz x dB -6.00 dB Frequency Center Freq 5.78500000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
5825 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.82500000 GHz Trig: Free Run #IFGain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.825 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 16.614 MHz Total Power 31.2 dBm Transmit Freq Error 4.199 kHz OBW Power 99.00 % x dB Bandwidth 16.37 MHz x dB -6.00 dB Frequency Center Freq 5.82500000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz



Mode 3: IEEE 802.11ac 20MHz Continuous TX mode_ANT-1

5745 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.74500000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.754 MHz Total Power 32.2 dBm Transmit Freq Error -251 Hz OBW Power 99.00 % x dB Bandwidth 17.61 MHz x dB -6.00 dB Frequency Center Freq 5.74500000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
5785 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.78500000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.785 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.774 MHz Total Power 32.1 dBm Transmit Freq Error -9.643 kHz OBW Power 99.00 % x dB Bandwidth 17.63 MHz x dB -6.00 dB Frequency Center Freq 5.78500000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz
5825 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.82500000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB Radio Std: None Radio Device: BTS Ref Offset 11 dB Ref 30.00 dBm Center 5.825 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.749 MHz Total Power 31.3 dBm Transmit Freq Error 14.274 kHz OBW Power 99.00 % x dB Bandwidth 17.62 MHz x dB -6.00 dB Frequency Center Freq 5.82500000 GHz CF Step 3.000000 MHz Auto Man Freq Offset 0 Hz