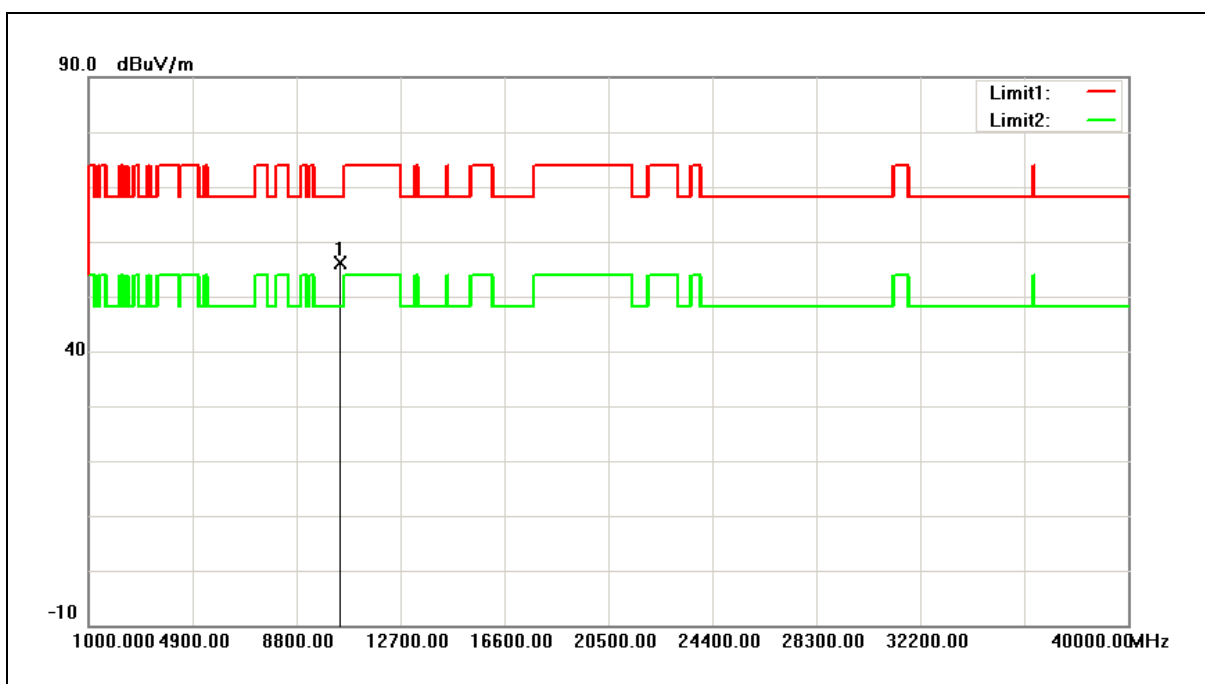




Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5230MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	08/05/2017
Ant.Polar.:	Vertical		



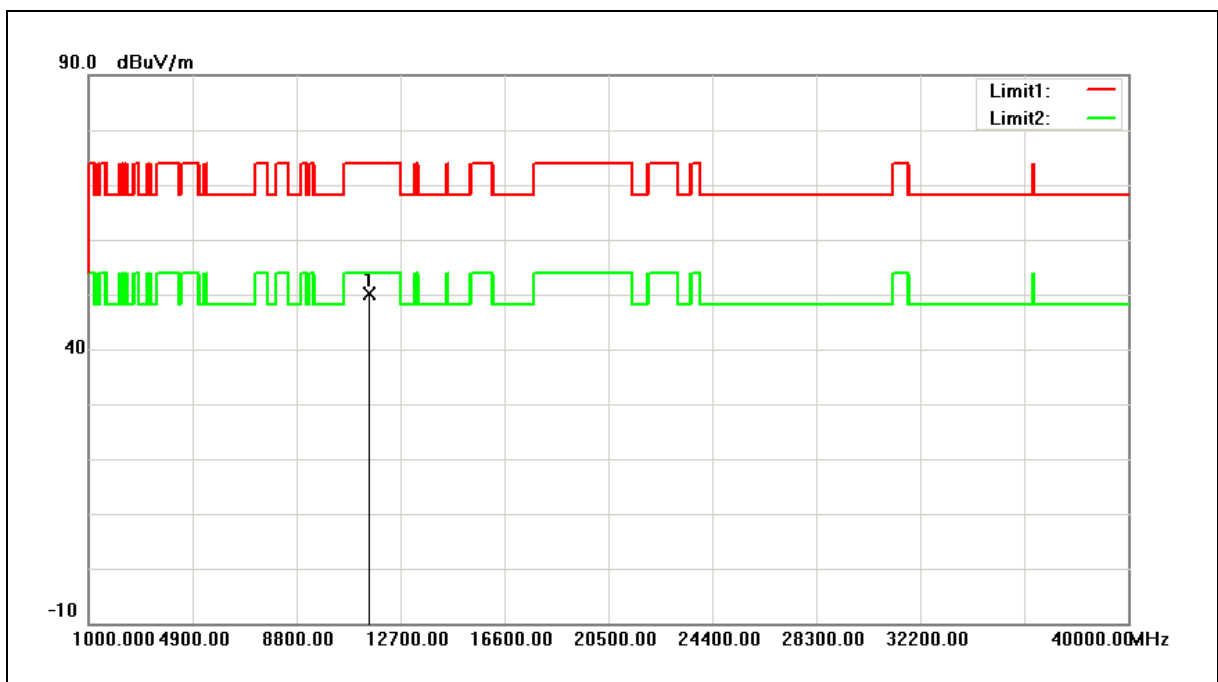
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10460.000	49.38	6.70	56.08	68.20	-12.12	peak

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:	08/05/2017
Ant.Polar.:	Horizontal		



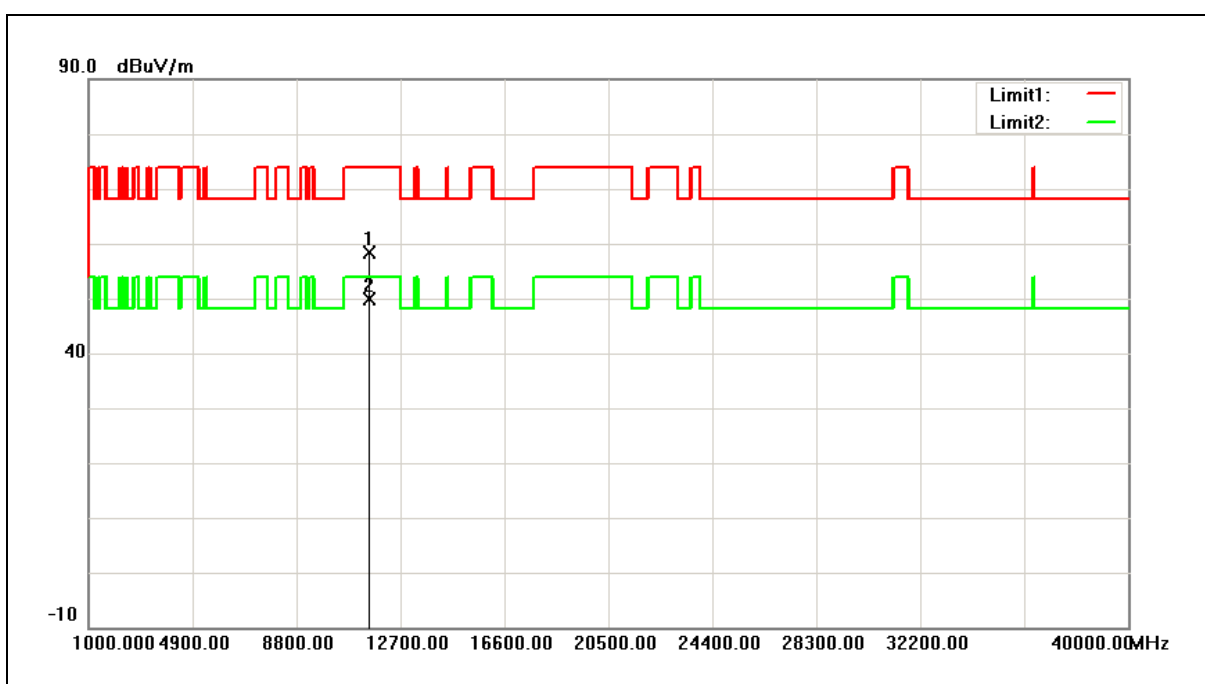
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11510.000	42.46	7.56	50.02	74.00	-23.98	peak

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:	08/05/2017
Ant.Polar.:	Vertical		



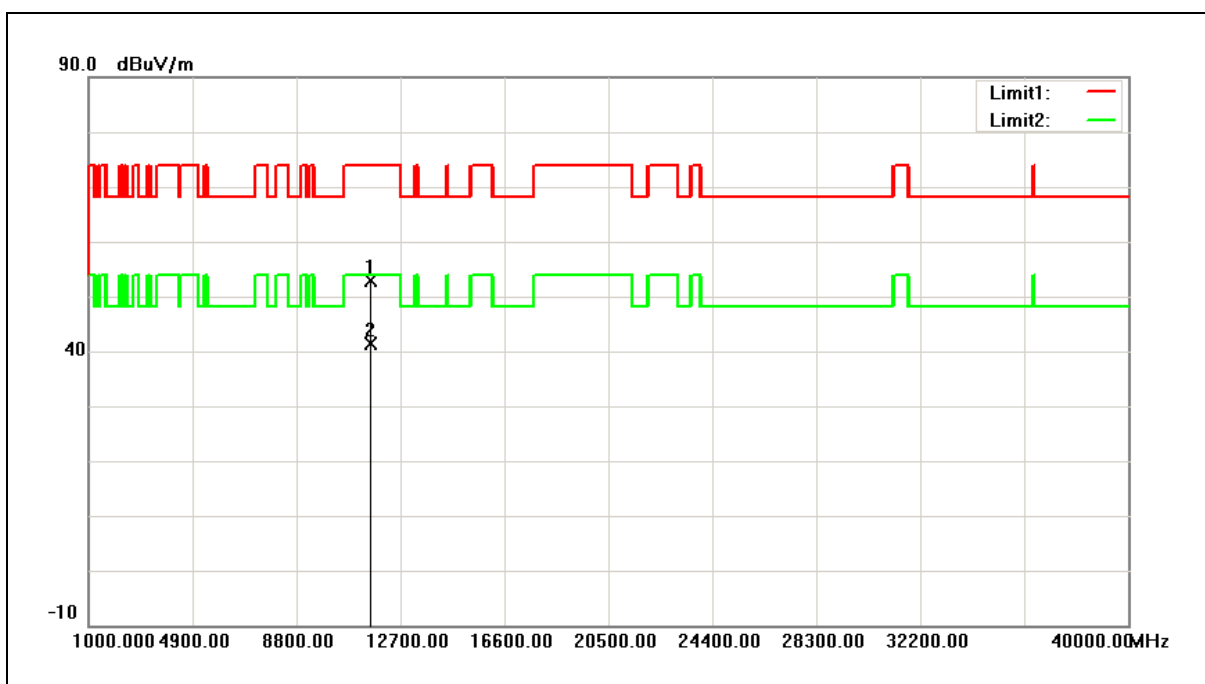
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11510.000	50.82	7.56	58.38	74.00	-15.62	peak
2	11510.000	42.44	7.56	50.00	54.00	-4.00	AVG

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:	5795MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	08/05/2017
Ant.Polar.:	Horizontal		



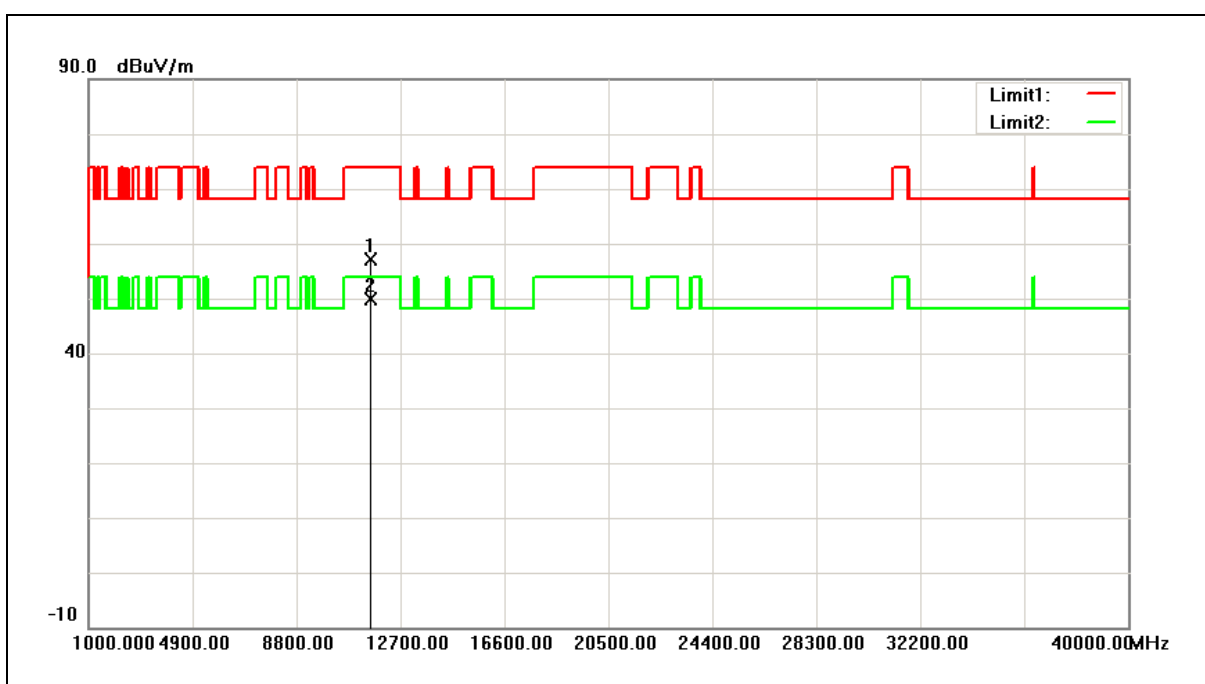
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11590.000	45.35	7.41	52.76	74.00	-21.24	peak
2	11590.000	33.87	7.41	41.28	54.00	-12.72	AVG

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:	Harmonic	Power:	AC 120V/60Hz
Frequency:	5795MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	08/05/2017
Ant.Polar.:	Vertical		



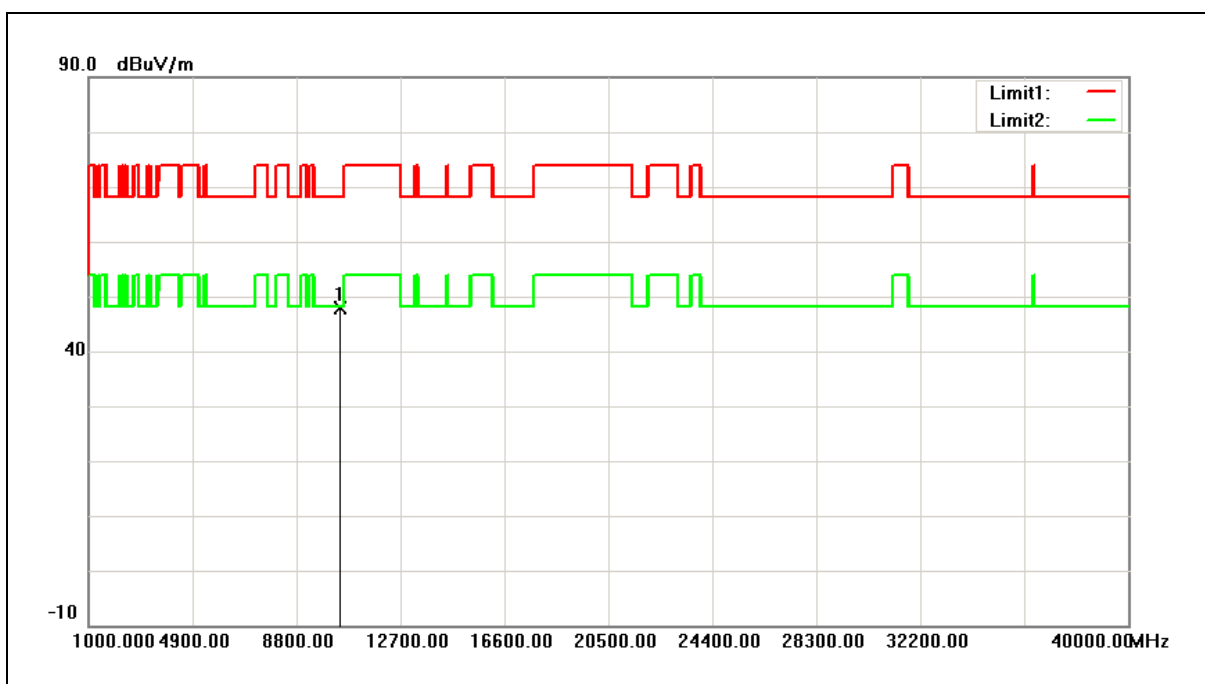
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11590.000	49.71	7.41	57.12	74.00	-16.88	peak
2	11590.000	42.46	7.41	49.87	54.00	-4.13	AVG

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:	5210MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 5	Date:	08/05/2017
Ant.Polar.:	Horizontal		



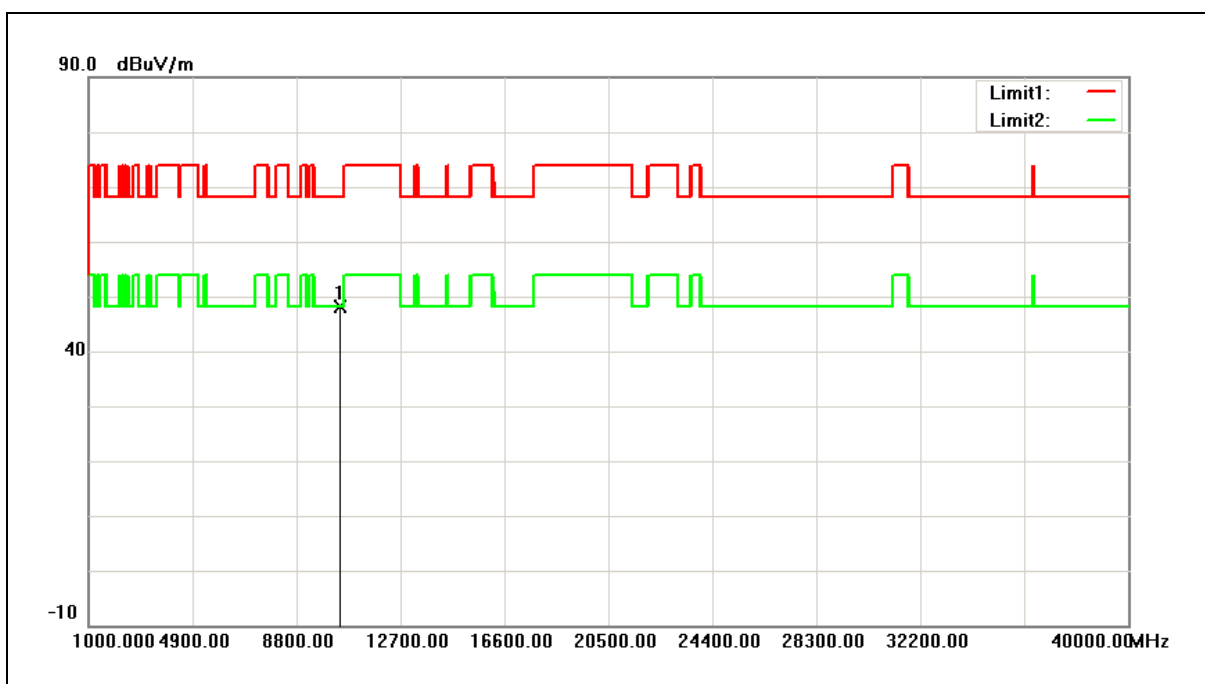
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10420.000	39.68	6.60	46.28	68.20	-21.92	peak

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:	08/05/2017
Ant.Polar.:	Vertical		



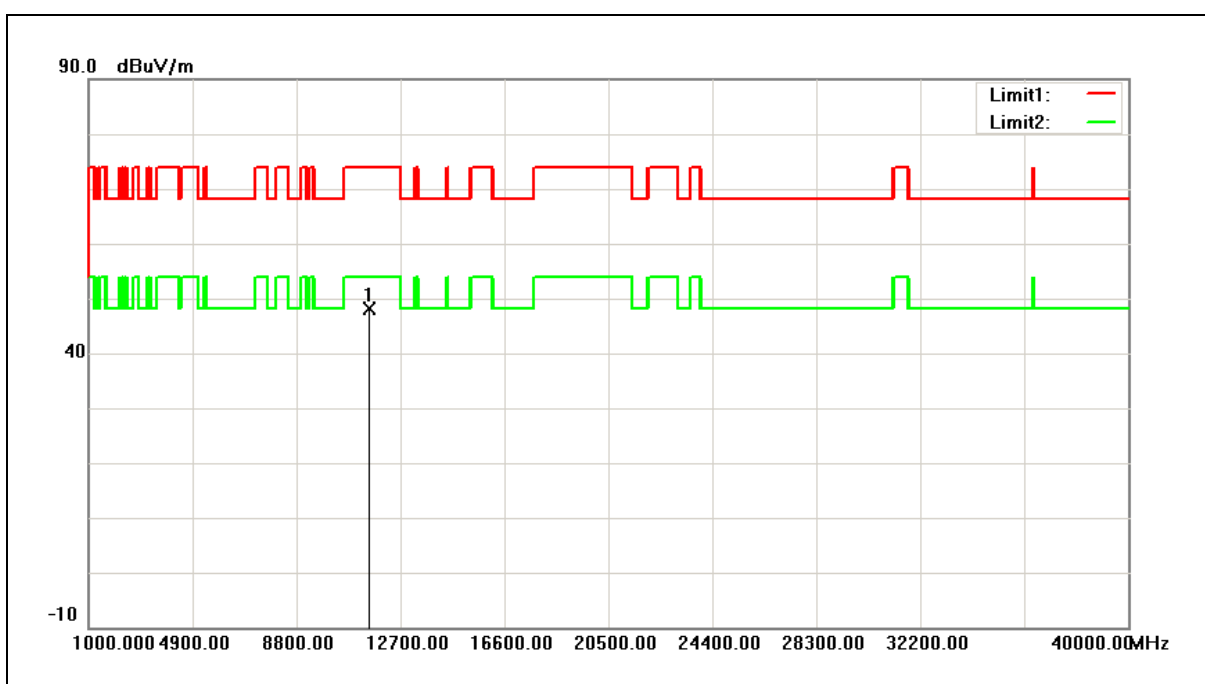
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	10420.000	41.59	6.60	48.19	68.20	-20.01	peak

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:	08/05/2017
Ant.Polar.:	Horizontal		



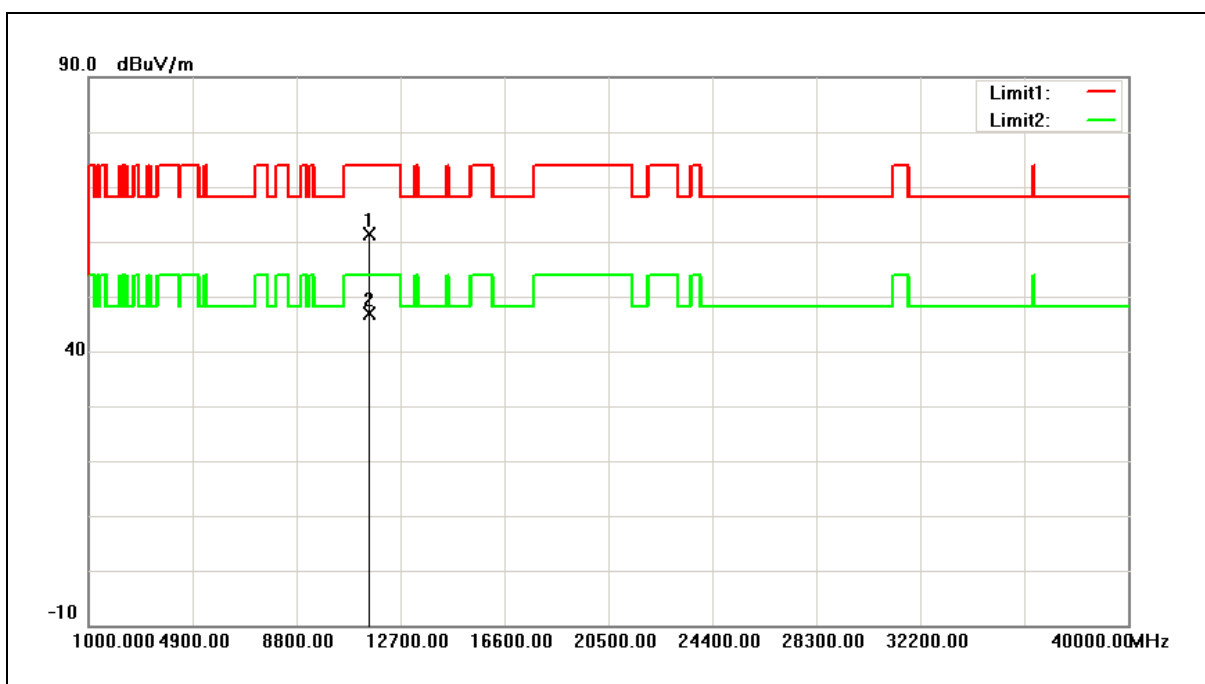
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11550.000	40.59	7.48	48.07	74.00	-25.93	peak

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:	08/05/2017
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	11550.000	53.93	7.48	61.41	74.00	-12.59	peak
2	11550.000	39.45	7.48	46.93	54.00	-7.07	AVG

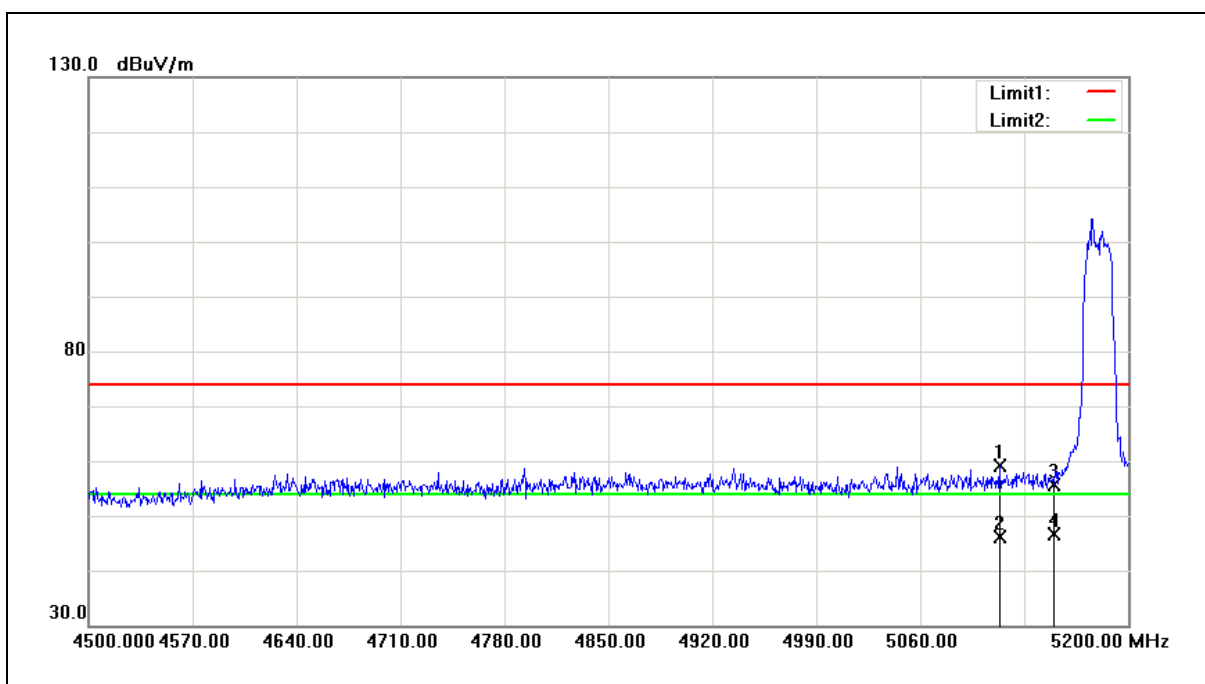
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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.

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:	08/04/2017
Ant.Polar.:	Horizontal		



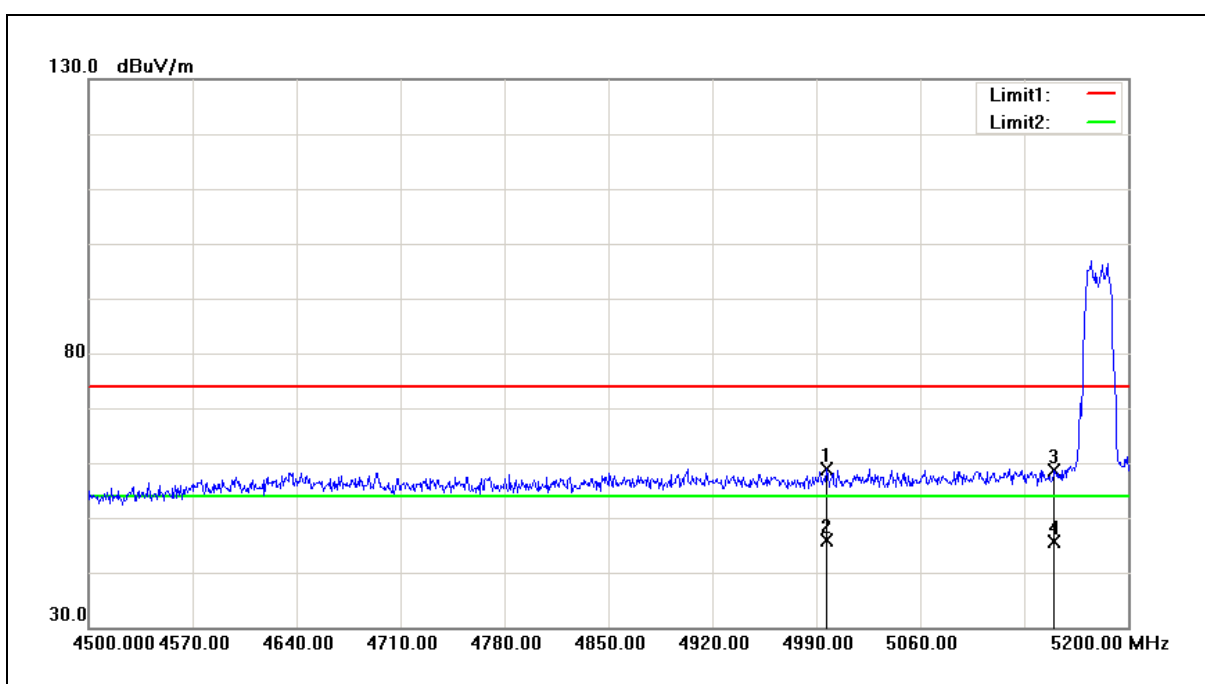
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5113.200	50.17	9.06	59.23	74.00	-14.77	peak
2	5113.200	37.02	9.06	46.08	54.00	-7.92	AVG
3	5150.000	46.50	9.10	55.60	74.00	-18.40	peak
4	5150.000	37.41	9.10	46.51	54.00	-7.49	AVG

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:	08/04/2017
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4997.000	50.01	8.96	58.97	74.00	-15.03	peak
2	4997.000	36.96	8.96	45.92	54.00	-8.08	AVG
3	5150.000	49.41	9.10	58.51	74.00	-15.49	peak
4	5150.000	36.58	9.10	45.68	54.00	-8.32	AVG

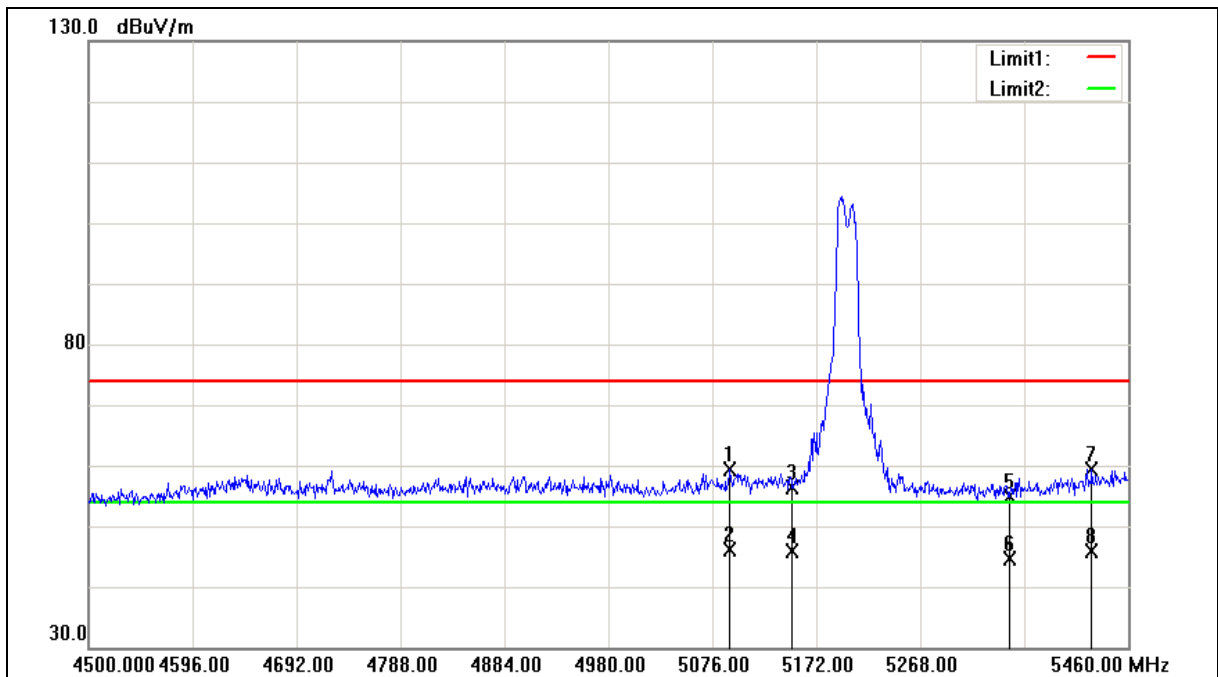
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	08/04/2017
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:	08/04/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5092.320	50.38	9.05	59.43	74.00	-14.57	peak
2	5092.320	36.97	9.05	46.02	54.00	-7.98	AVG
3	5150.000	47.37	9.10	56.47	74.00	-17.53	peak
4	5150.000	36.79	9.10	45.89	54.00	-8.11	AVG
5	5350.000	45.74	9.25	54.99	74.00	-19.01	peak
6	5350.000	35.43	9.25	44.68	54.00	-9.32	AVG
7	5426.400	50.02	9.33	59.35	74.00	-14.65	peak
8	5426.400	36.49	9.33	45.82	54.00	-8.18	AVG

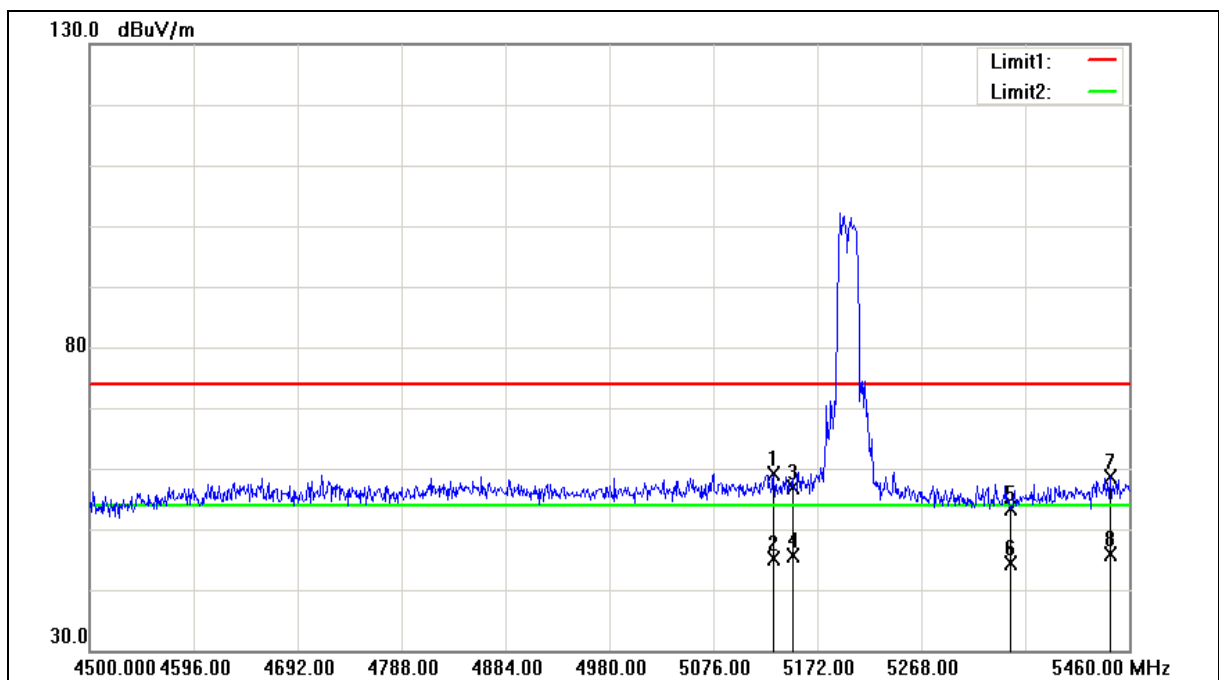
Note:1. Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	5200MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 3	Date:	08/04/2017
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:	08/04/2017
Ant.Polar.:	Vertical		

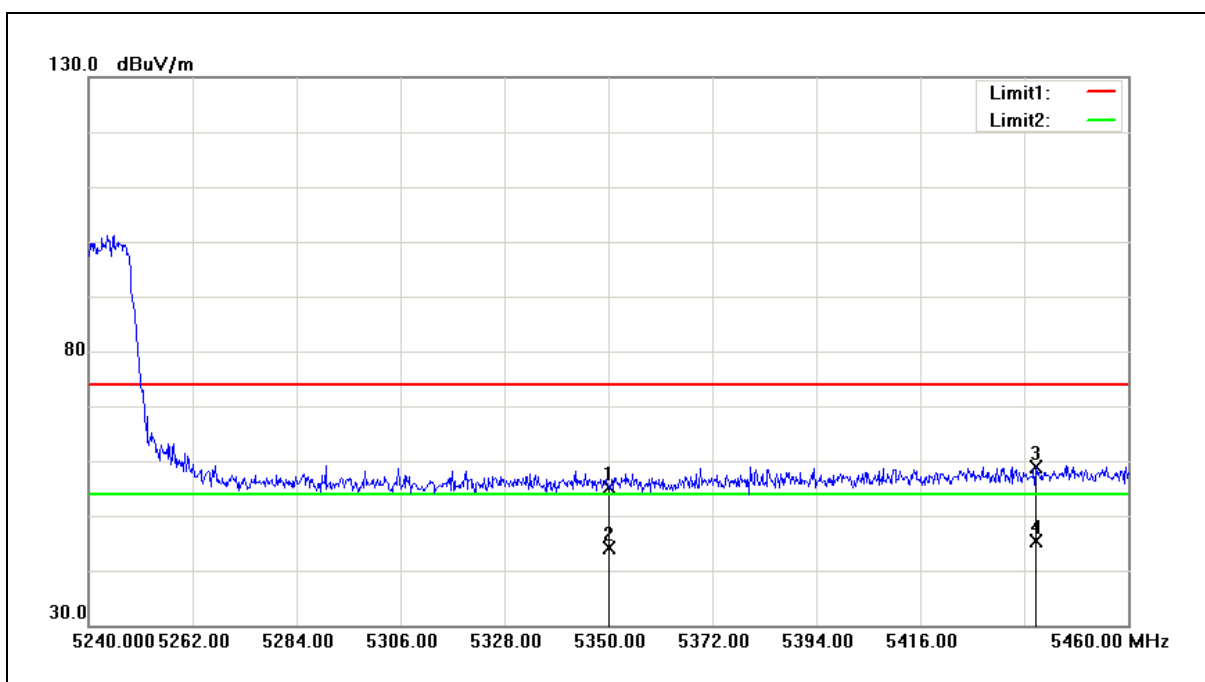
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5131.680	50.14	9.08	59.22	74.00	-14.78	peak
2	5131.680	36.00	9.08	45.08	54.00	-8.92	AVG
3	5150.000	47.77	9.10	56.87	74.00	-17.13	peak
4	5150.000	36.47	9.10	45.57	54.00	-8.43	AVG
5	5350.000	44.18	9.25	53.43	74.00	-20.57	peak
6	5350.000	35.13	9.25	44.38	54.00	-9.62	AVG
7	5442.720	49.24	9.34	58.58	74.00	-15.42	peak
8	5442.720	36.62	9.34	45.96	54.00	-8.04	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:	08/04/2017
Ant.Polar.:	Horizontal		



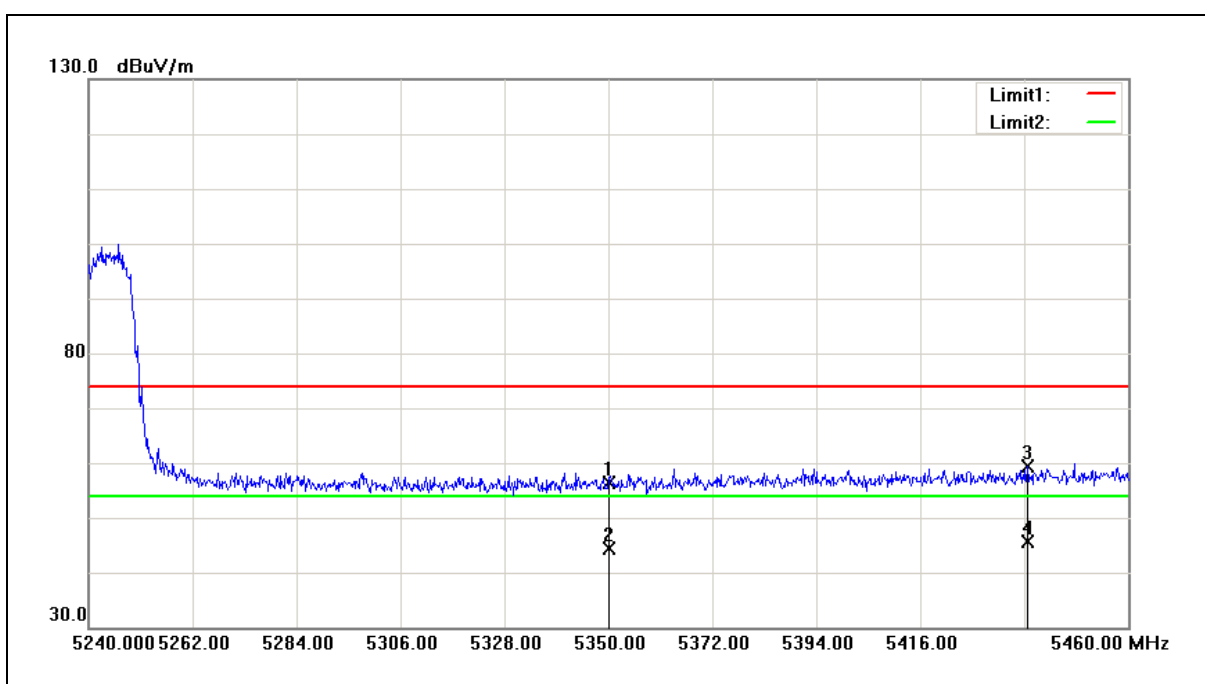
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	45.78	9.25	55.03	74.00	-18.97	peak
2	5350.000	34.88	9.25	44.13	54.00	-9.87	AVG
3	5440.420	49.63	9.33	58.96	74.00	-15.04	peak
4	5440.420	36.14	9.33	45.47	54.00	-8.53	AVG

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:	08/04/2017
Ant.Polar.:	Vertical		



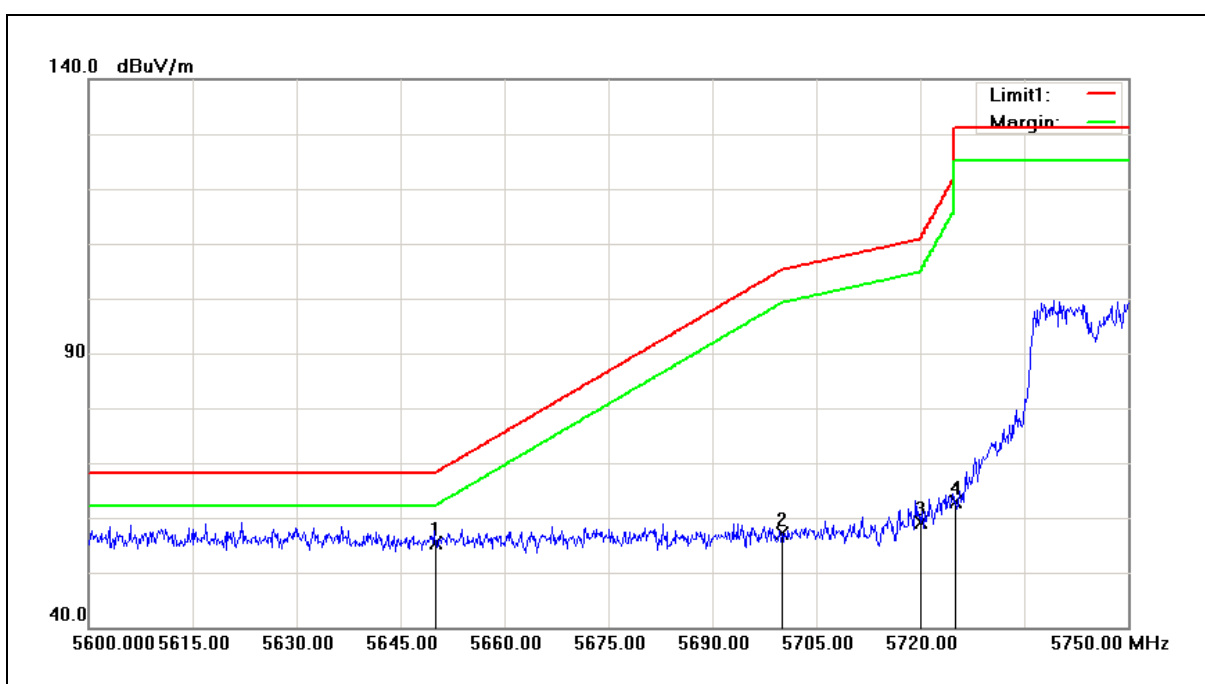
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	47.18	9.25	56.43	74.00	-17.57	peak
2	5350.000	35.09	9.25	44.34	54.00	-9.66	AVG
3	5438.660	50.15	9.33	59.48	74.00	-14.52	peak
4	5438.660	36.29	9.33	45.62	54.00	-8.38	AVG

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:	08/04/2017
Ant.Polar.:	Horizontal		



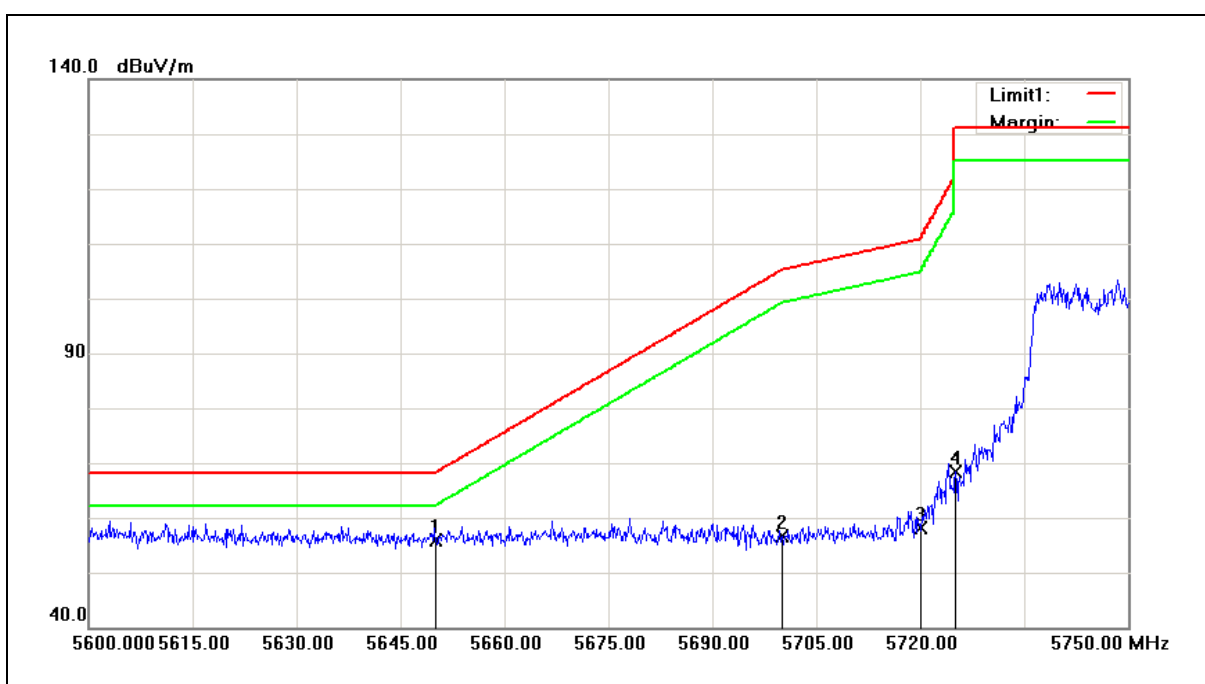
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	45.74	9.70	55.44	68.20	-12.76	peak
2	5700.000	47.22	9.80	57.02	105.20	-48.18	peak
3	5720.000	49.35	9.85	59.20	110.80	-51.60	peak
4	5725.000	52.92	9.86	62.78	122.20	-59.42	peak

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:	08/04/2017
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.24	9.70	55.94	68.20	-12.26	peak
2	5700.000	46.72	9.80	56.52	105.20	-48.68	peak
3	5720.000	48.35	9.85	58.20	110.80	-52.60	peak
4	5725.000	58.42	9.86	68.28	122.20	-53.92	peak

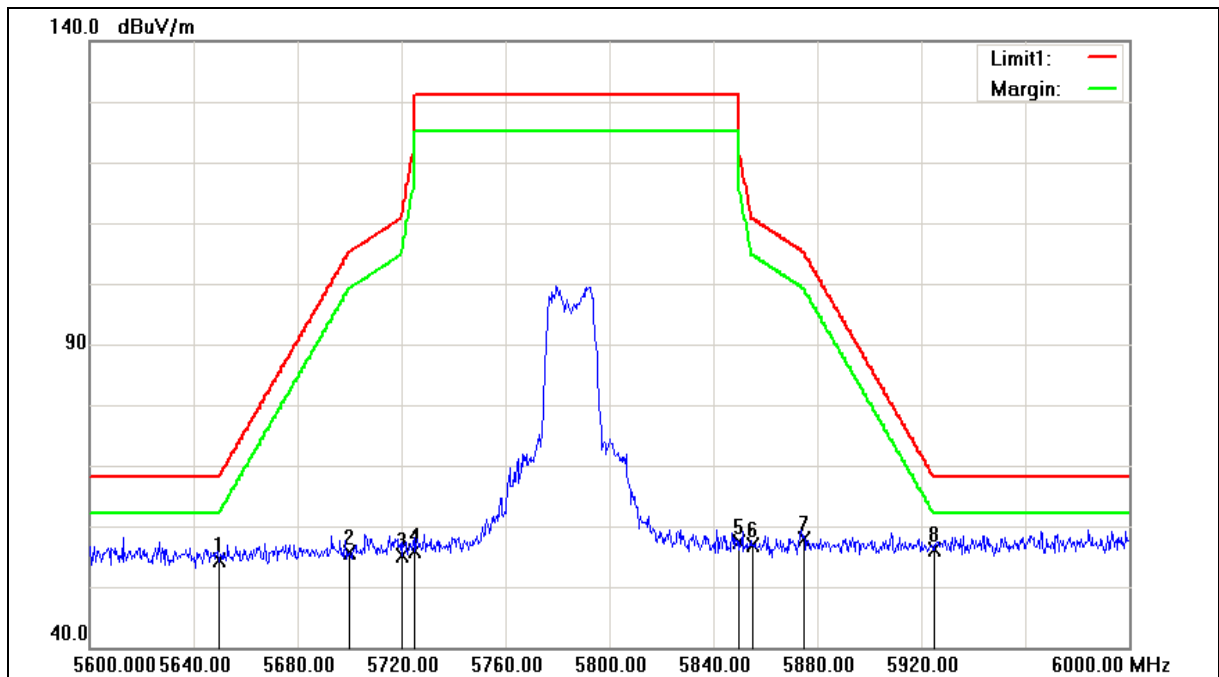
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	08/04/2017
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:	08/04/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	44.71	9.70	54.41	68.20	-13.79	peak
2	5700.000	45.84	9.80	55.64	105.20	-49.56	peak
3	5720.000	45.20	9.85	55.05	110.80	-55.75	peak
4	5725.000	45.96	9.86	55.82	122.20	-66.38	peak
5	5850.000	47.19	10.11	57.30	122.20	-64.90	peak
6	5855.000	46.71	10.12	56.83	110.80	-53.97	peak
7	5875.000	47.72	10.17	57.89	105.20	-47.31	peak
8	5925.000	45.85	10.28	56.13	68.20	-12.07	peak

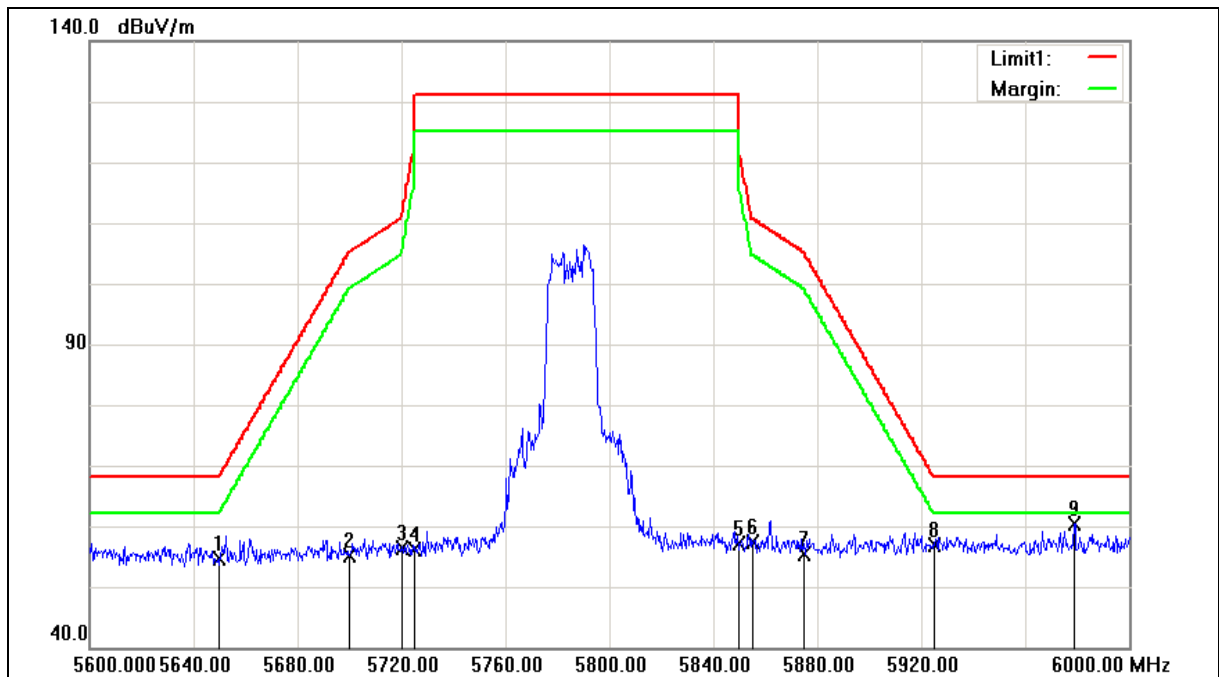
Note:1. Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	08/04/2017
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:	08/04/2017
Ant.Polar.:	Vertical		

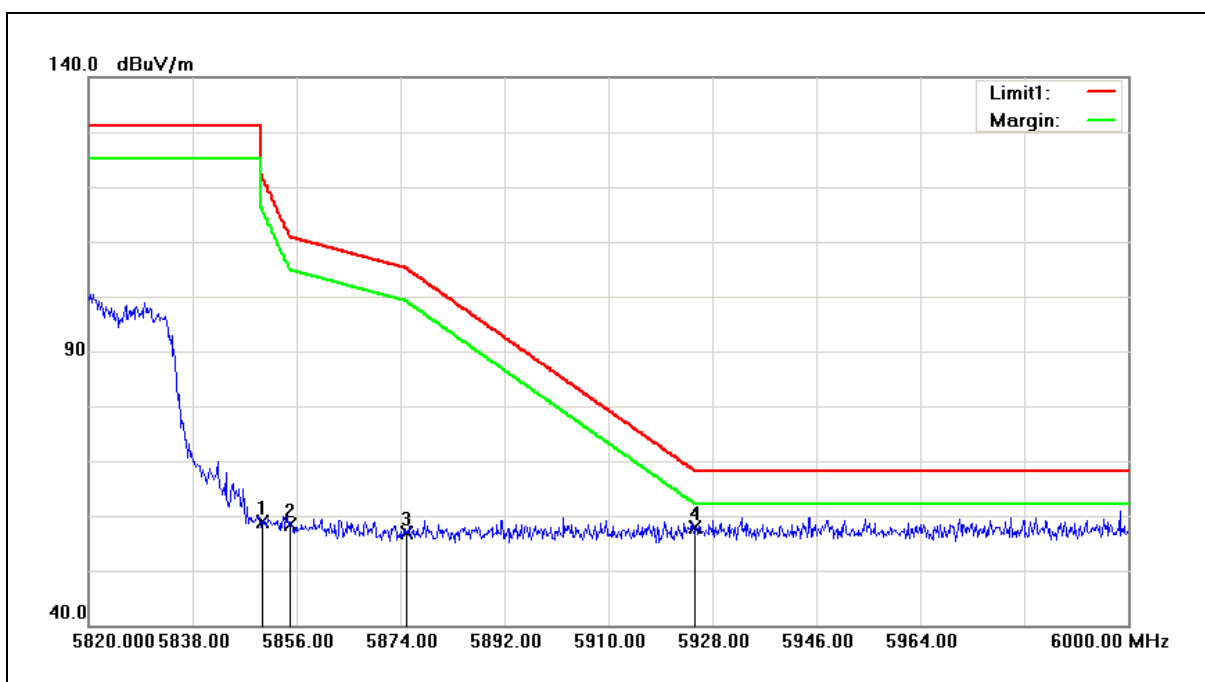
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	45.04	9.70	54.74	68.20	-13.46	peak
2	5700.000	45.23	9.80	55.03	105.20	-50.17	peak
3	5720.000	46.59	9.85	56.44	110.80	-54.36	peak
4	5725.000	46.23	9.86	56.09	122.20	-66.11	peak
5	5850.000	46.94	10.11	57.05	122.20	-65.15	peak
6	5855.000	47.15	10.12	57.27	110.80	-53.53	peak
7	5875.000	45.22	10.17	55.39	105.20	-49.81	peak
8	5925.000	46.49	10.28	56.77	68.20	-11.43	peak
9	5978.800	49.97	10.39	60.36	68.20	-7.84	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:	08/04/2017
Ant.Polar.:	Horizontal		



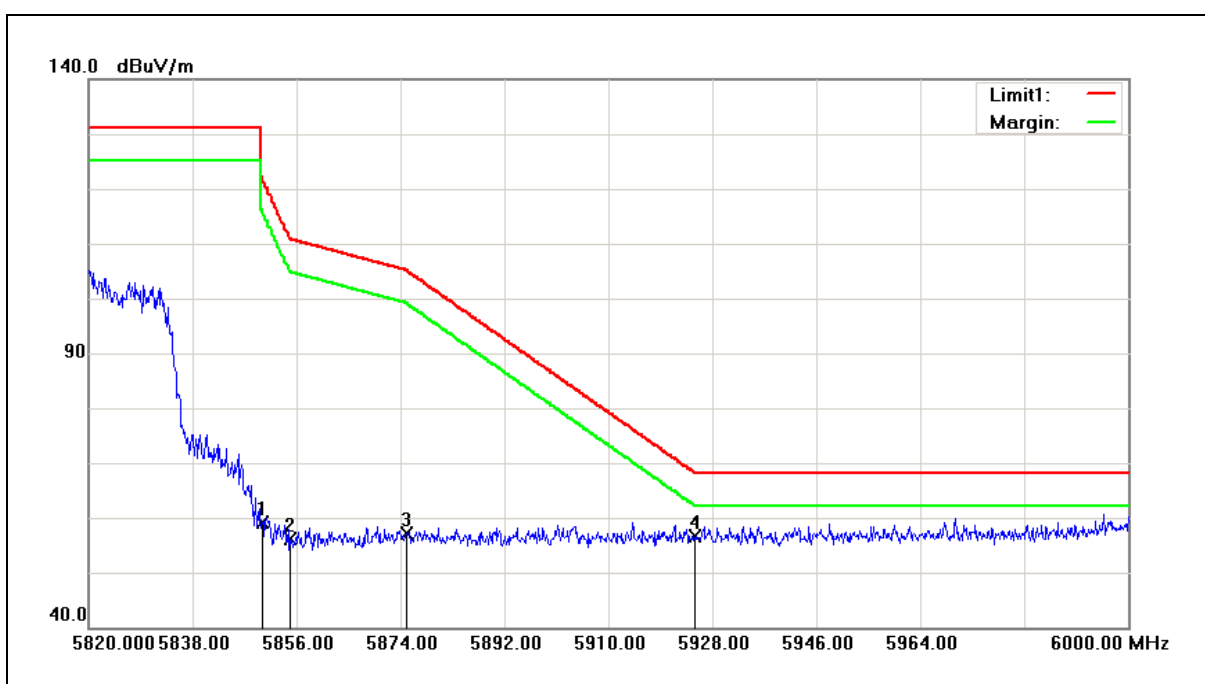
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	48.89	10.11	59.00	122.20	-63.20	peak
2	5855.000	48.21	10.12	58.33	110.80	-52.47	peak
3	5875.000	46.67	10.17	56.84	105.20	-48.36	peak
4	5925.000	47.48	10.28	57.76	68.20	-10.44	peak

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:	08/04/2017
Ant.Polar.:	Vertical		



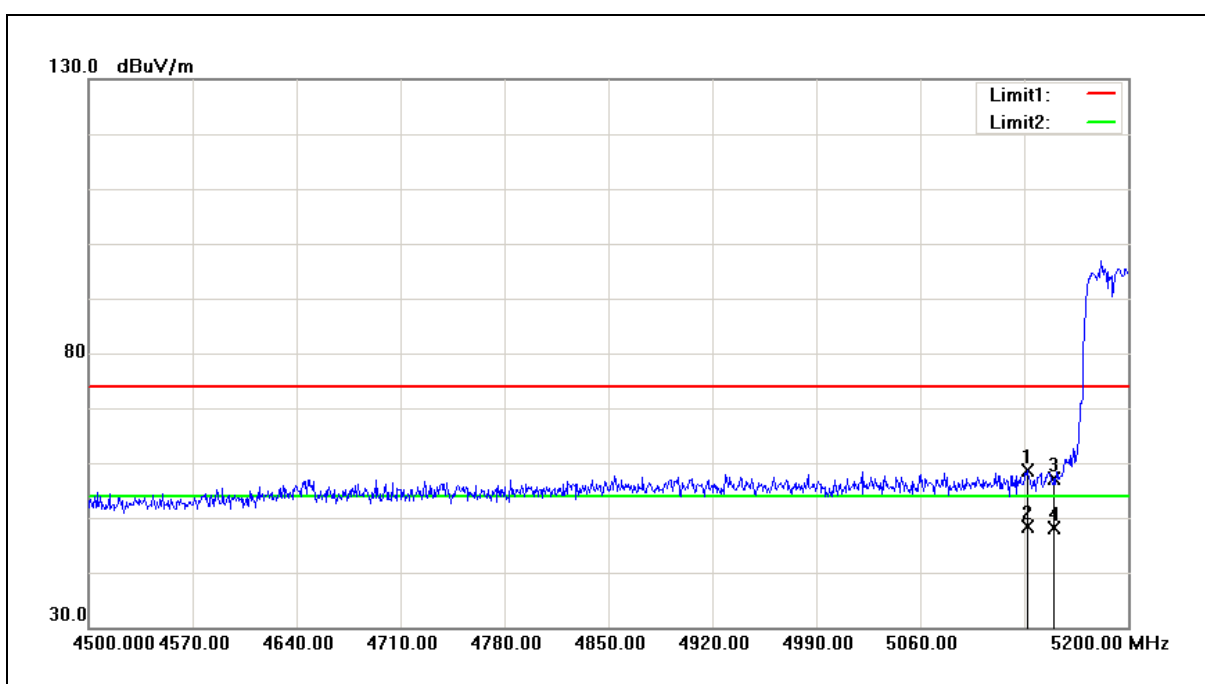
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	48.98	10.11	59.09	122.20	-63.11	peak
2	5855.000	45.90	10.12	56.02	110.80	-54.78	peak
3	5875.000	46.98	10.17	57.15	105.20	-48.05	peak
4	5925.000	46.38	10.28	56.66	68.20	-11.54	peak

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:	08/04/2017
Ant.Polar.:	Horizontal		



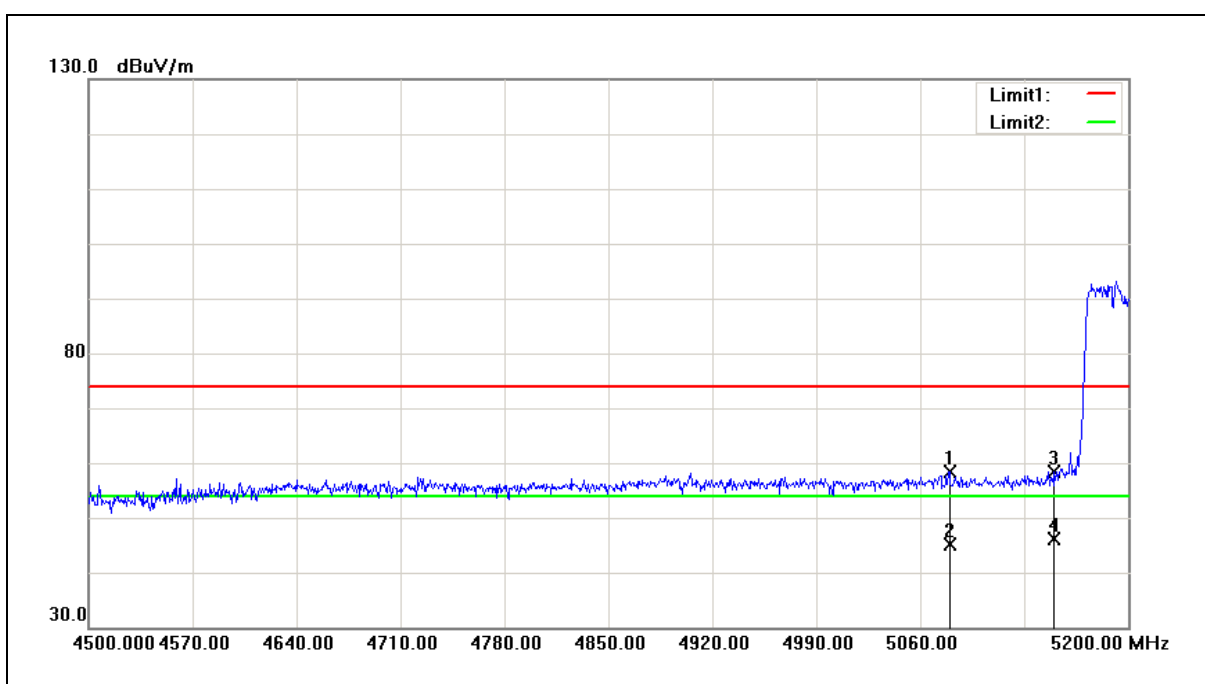
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5132.100	49.54	9.08	58.62	74.00	-15.38	peak
2	5132.100	39.25	9.08	48.33	54.00	-5.67	AVG
3	5150.000	48.08	9.10	57.18	74.00	-16.82	peak
4	5150.000	39.02	9.10	48.12	54.00	-5.88	AVG

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:	08/04/2017
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5079.600	49.37	9.03	58.40	74.00	-15.60	peak
2	5079.600	36.15	9.03	45.18	54.00	-8.82	AVG
3	5150.000	49.18	9.10	58.28	74.00	-15.72	peak
4	5150.000	37.11	9.10	46.21	54.00	-7.79	AVG

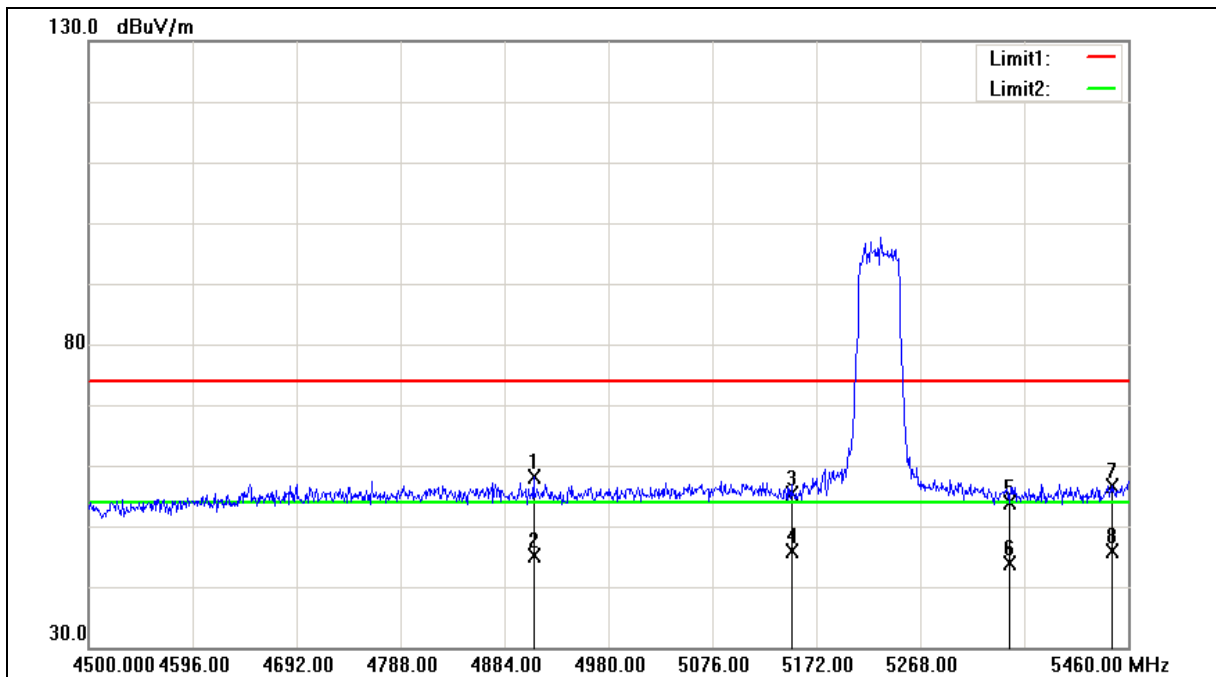
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	08/04/2017
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:	08/04/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4910.880	49.61	8.60	58.21	74.00	-15.79	peak
2	4910.880	36.58	8.60	45.18	54.00	-8.82	AVG
3	5150.000	46.29	9.10	55.39	74.00	-18.61	peak
4	5150.000	36.78	9.10	45.88	54.00	-8.12	AVG
5	5350.000	44.73	9.25	53.98	74.00	-20.02	peak
6	5350.000	34.67	9.25	43.92	54.00	-10.08	AVG
7	5445.600	47.30	9.34	56.64	74.00	-17.36	peak
8	5445.600	36.45	9.34	45.79	54.00	-8.21	AVG

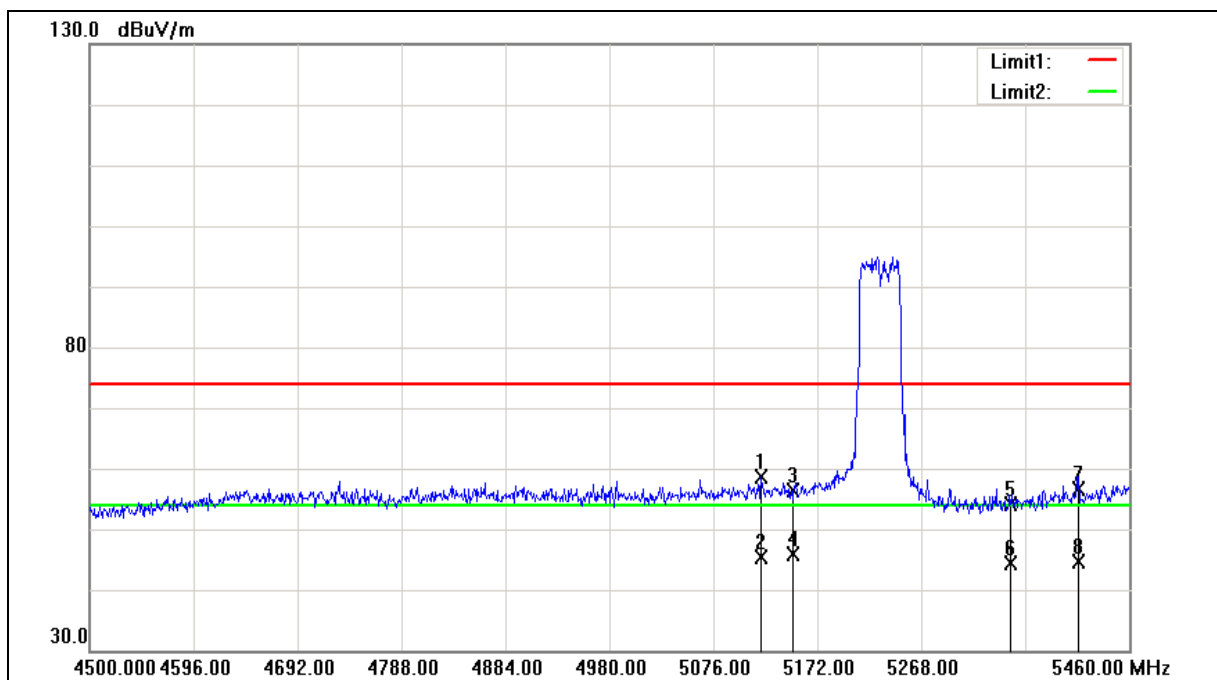
Note:1. Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	08/04/2017
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:	08/04/2017
Ant.Polar.:	Vertical		

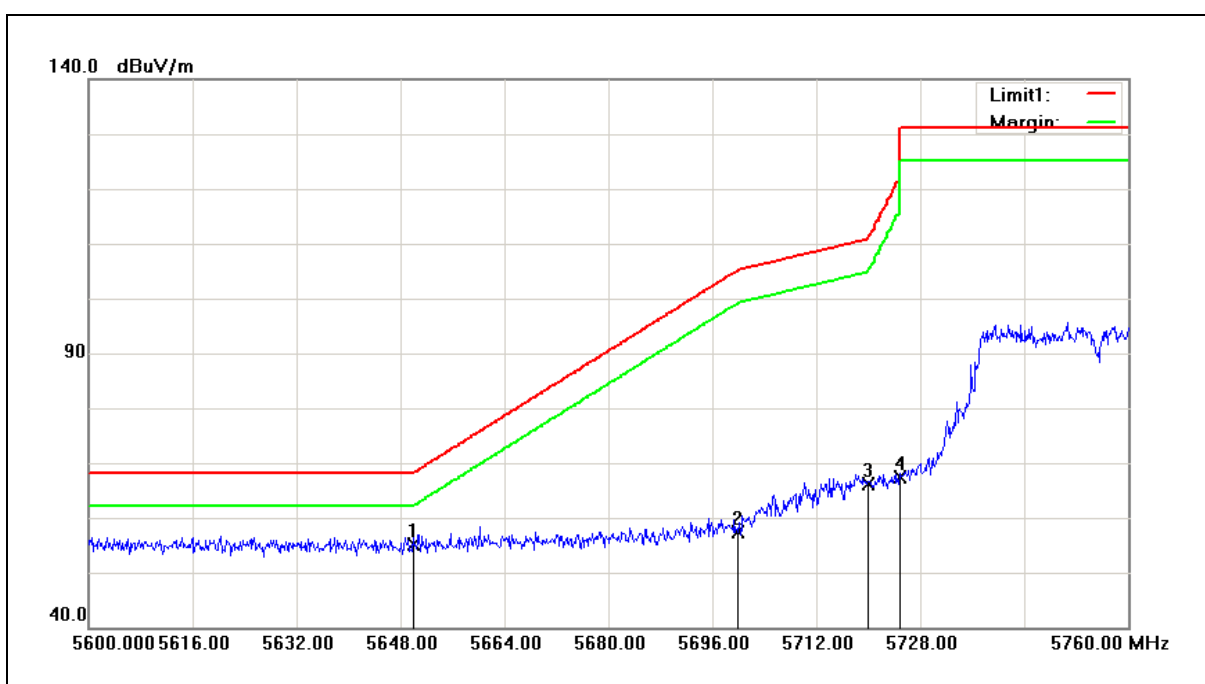
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5120.160	49.58	9.06	58.64	74.00	-15.36	peak
2	5120.160	36.22	9.06	45.28	54.00	-8.72	AVG
3	5150.000	47.23	9.10	56.33	74.00	-17.67	peak
4	5150.000	36.71	9.10	45.81	54.00	-8.19	AVG
5	5350.000	44.92	9.25	54.17	74.00	-19.83	peak
6	5350.000	35.04	9.25	44.29	54.00	-9.71	AVG
7	5412.960	47.37	9.31	56.68	74.00	-17.32	peak
8	5412.960	35.26	9.31	44.57	54.00	-9.43	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:	5755MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	08/04/2017
Ant.Polar.:	Horizontal		



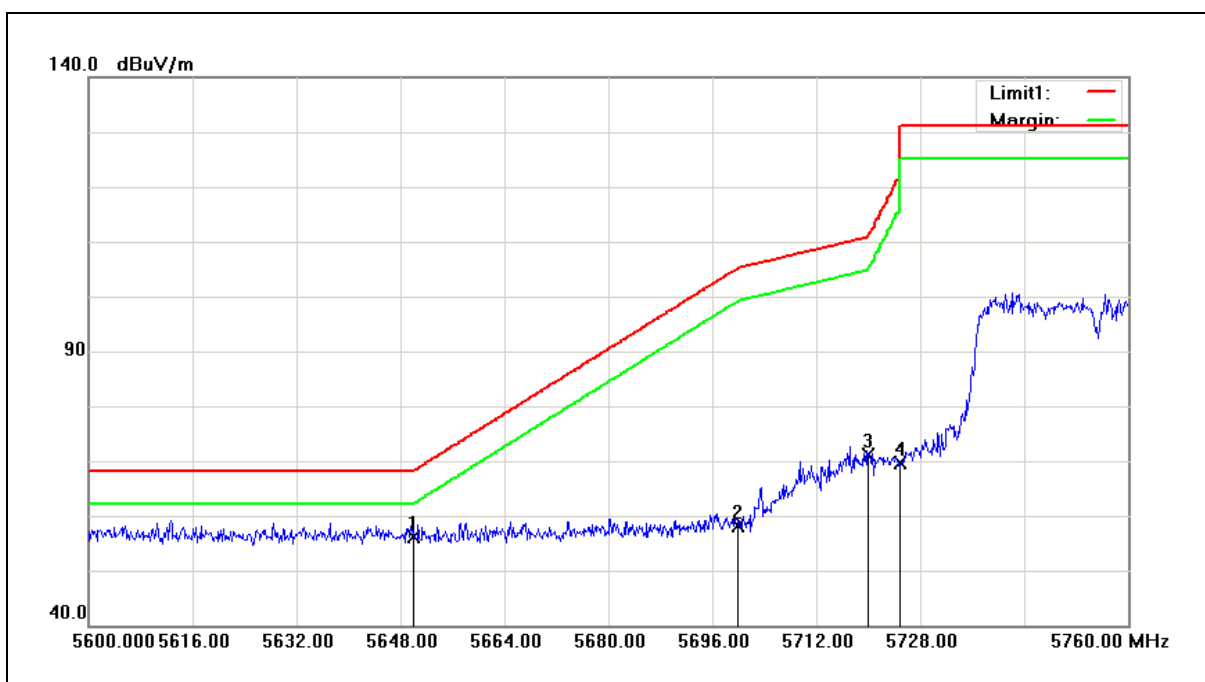
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	45.52	9.70	55.22	68.20	-12.98	peak
2	5700.000	47.49	9.80	57.29	105.20	-47.91	peak
3	5720.000	56.39	9.85	66.24	110.80	-44.56	peak
4	5725.000	57.64	9.86	67.50	122.20	-54.70	peak

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:	5755MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	08/04/2017
Ant.Polar.:	Vertical		



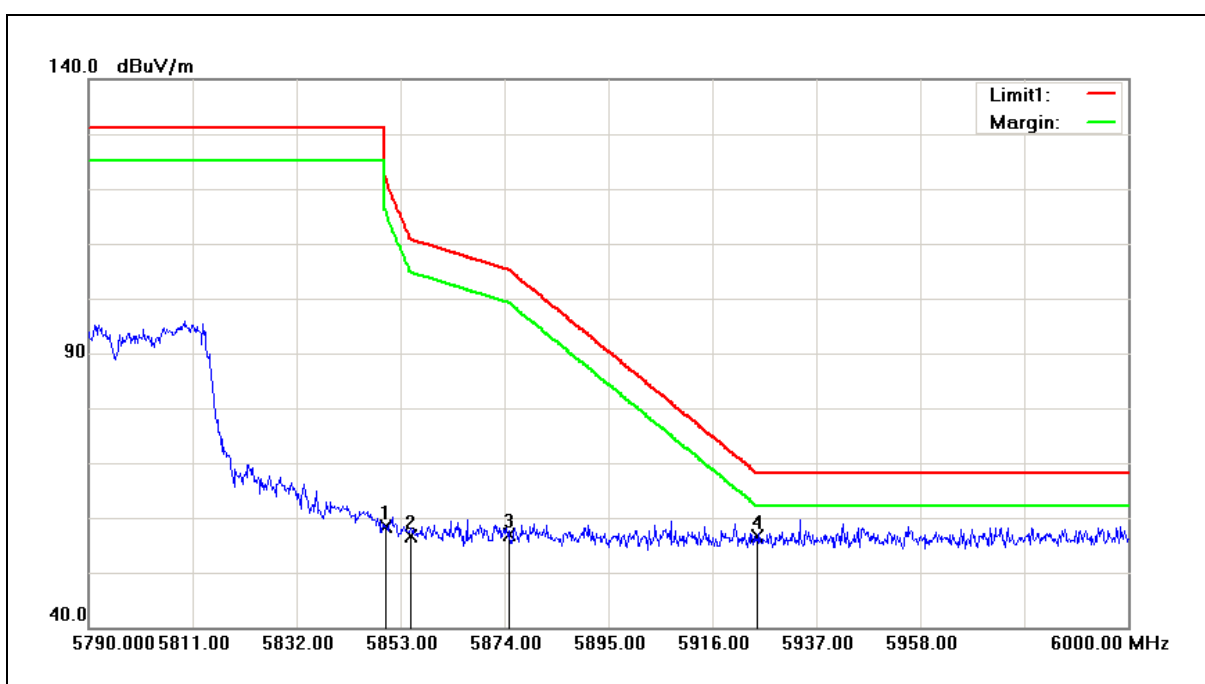
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.51	9.70	56.21	68.20	-11.99	peak
2	5700.000	48.35	9.80	58.15	105.20	-47.05	peak
3	5720.000	61.19	9.85	71.04	110.80	-39.76	peak
4	5725.000	59.77	9.86	69.63	122.20	-52.57	peak

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:	08/04/2017
Ant.Polar.:	Horizontal		



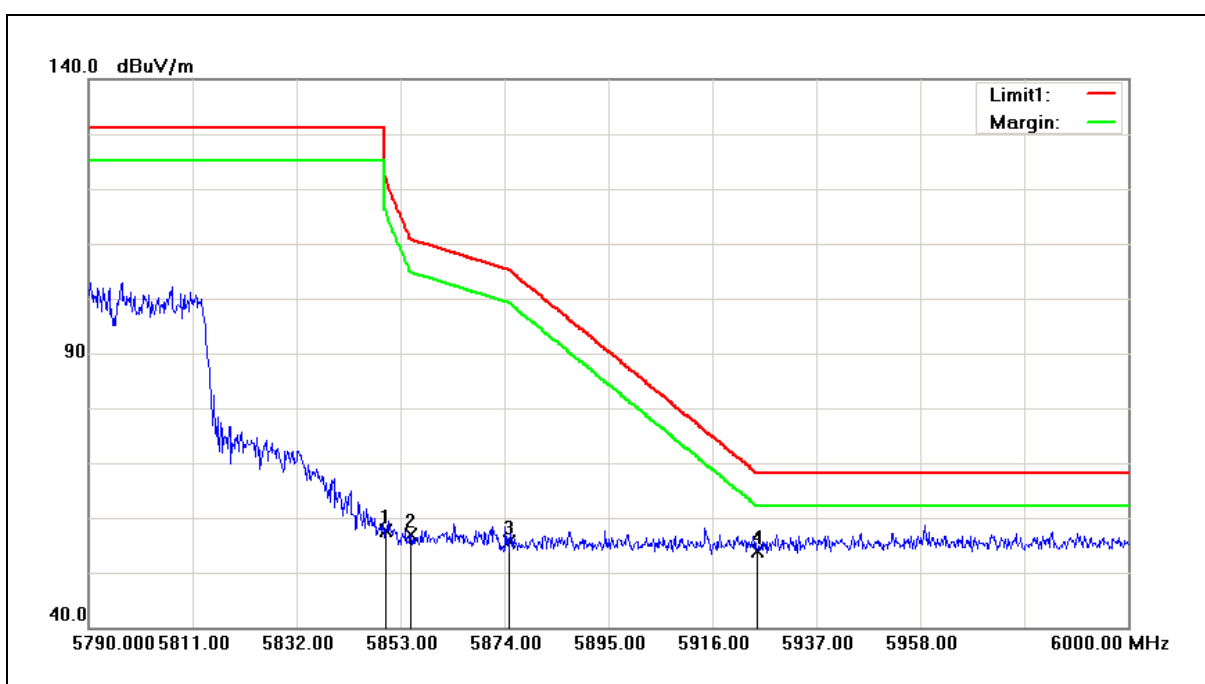
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	48.27	10.11	58.38	122.20	-63.82	peak
2	5855.000	46.55	10.12	56.67	110.80	-54.13	peak
3	5875.000	46.67	10.17	56.84	105.20	-48.36	peak
4	5925.000	46.40	10.28	56.68	68.20	-11.52	peak

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:	08/04/2017
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	47.55	10.11	57.66	122.20	-64.54	peak
2	5855.000	46.80	10.12	56.92	110.80	-53.88	peak
3	5875.000	45.57	10.17	55.74	105.20	-49.46	peak
4	5925.000	43.64	10.28	53.92	68.20	-14.28	peak

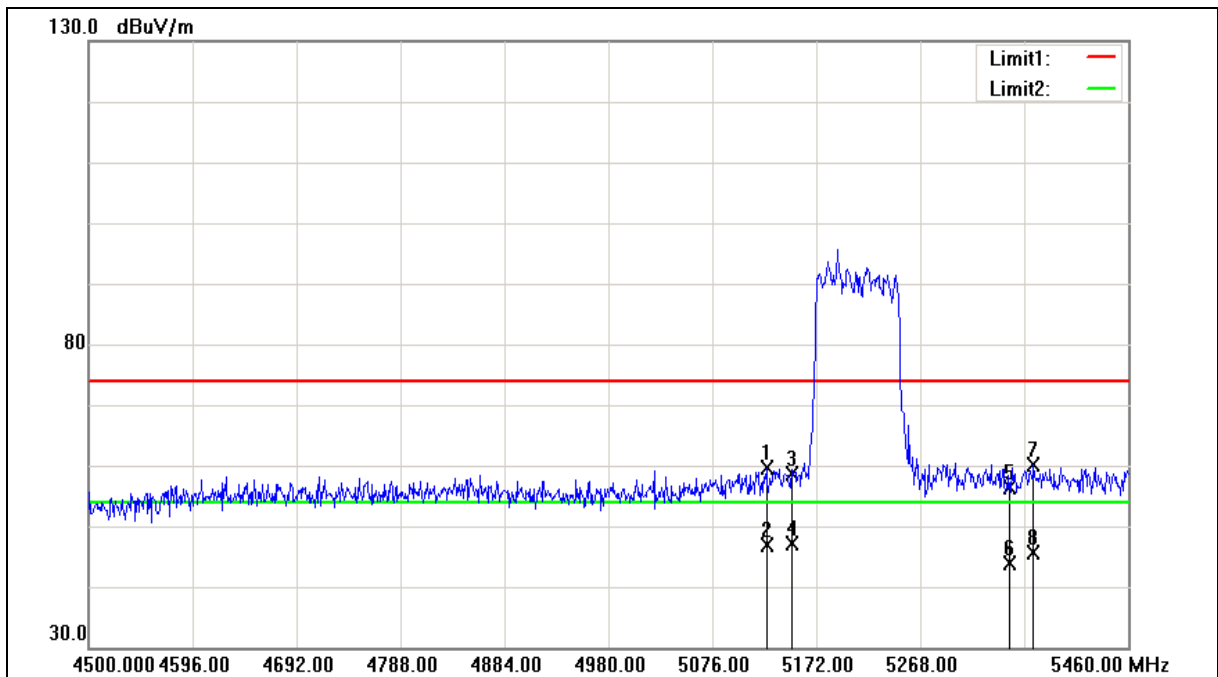
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	08/04/2017
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:	08/04/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5125.920	50.54	9.08	59.62	74.00	-14.38	peak
2	5125.920	37.75	9.08	46.83	54.00	-7.17	AVG
3	5150.000	49.48	9.10	58.58	74.00	-15.42	peak
4	5150.000	38.08	9.10	47.18	54.00	-6.82	AVG
5	5350.000	47.07	9.25	56.32	74.00	-17.68	peak
6	5350.000	34.51	9.25	43.76	54.00	-10.24	AVG
7	5372.640	50.80	9.27	60.07	74.00	-13.93	peak
8	5372.640	36.34	9.27	45.61	54.00	-8.39	AVG

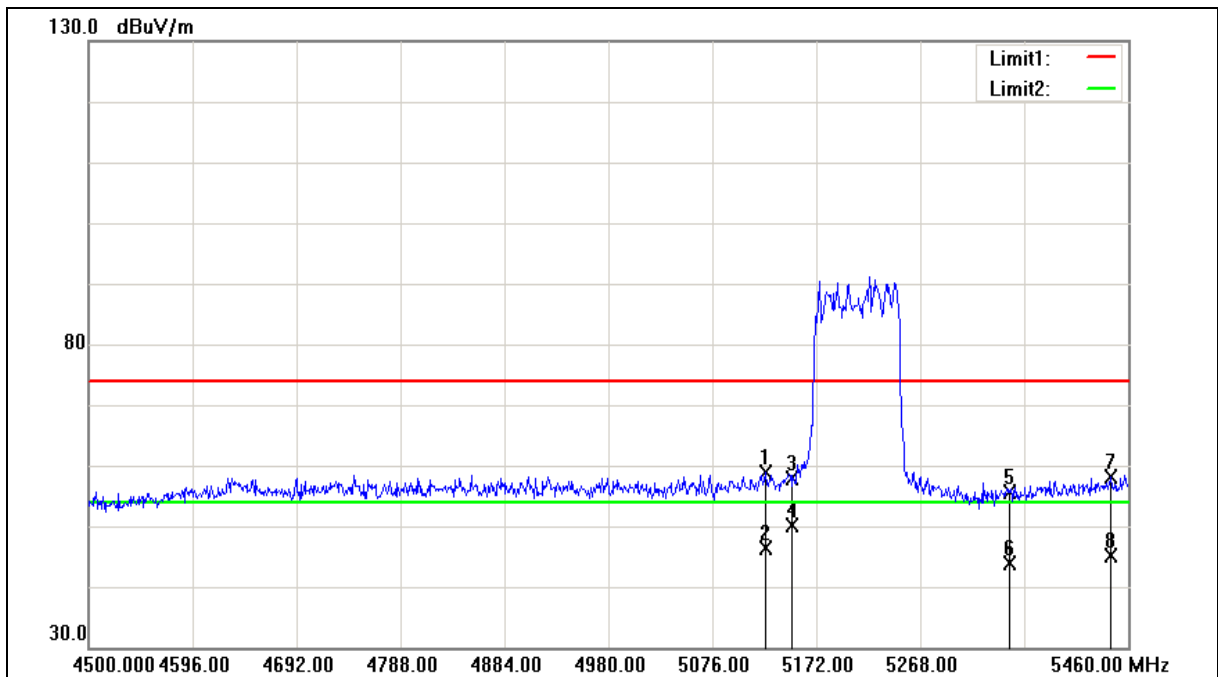
Note:1. Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	08/04/2017
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:	08/04/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5124.960	49.72	9.06	58.78	74.00	-15.22	peak
2	5124.960	37.26	9.06	46.32	54.00	-7.68	AVG
3	5150.000	48.67	9.10	57.77	74.00	-16.23	peak
4	5150.000	40.96	9.10	50.06	54.00	-3.94	AVG
5	5350.000	46.35	9.25	55.60	74.00	-18.40	peak
6	5350.000	34.71	9.25	43.96	54.00	-10.04	AVG
7	5443.680	48.75	9.34	58.09	74.00	-15.91	peak
8	5443.680	35.83	9.34	45.17	54.00	-8.83	AVG

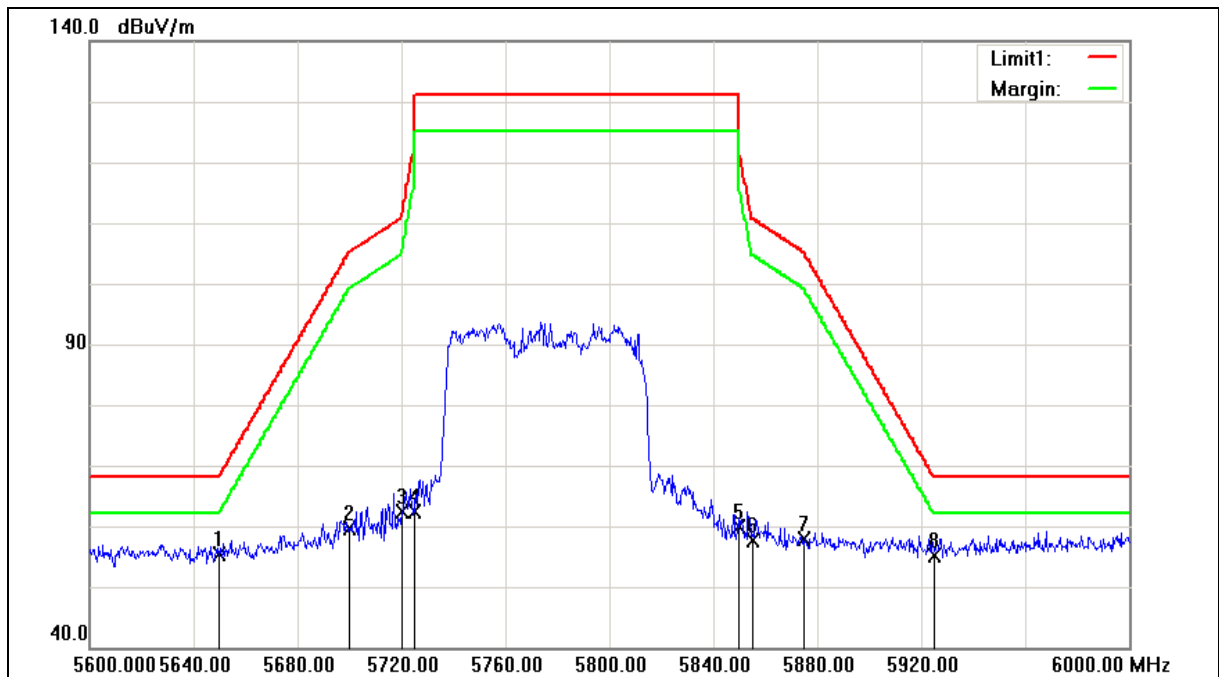
Note:1. Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	08/04/2017
Ant.Polar.:	Horizontal		





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:	08/04/2017
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	45.62	9.70	55.32	68.20	-12.88	peak
2	5700.000	49.85	9.80	59.65	105.20	-45.55	peak
3	5720.000	52.52	9.85	62.37	110.80	-48.43	peak
4	5725.000	52.42	9.86	62.28	122.20	-59.92	peak
5	5850.000	49.70	10.11	59.81	122.20	-62.39	peak
6	5855.000	47.50	10.12	57.62	110.80	-53.18	peak
7	5875.000	47.81	10.17	57.98	105.20	-47.22	peak
8	5925.000	44.82	10.28	55.10	68.20	-13.10	peak

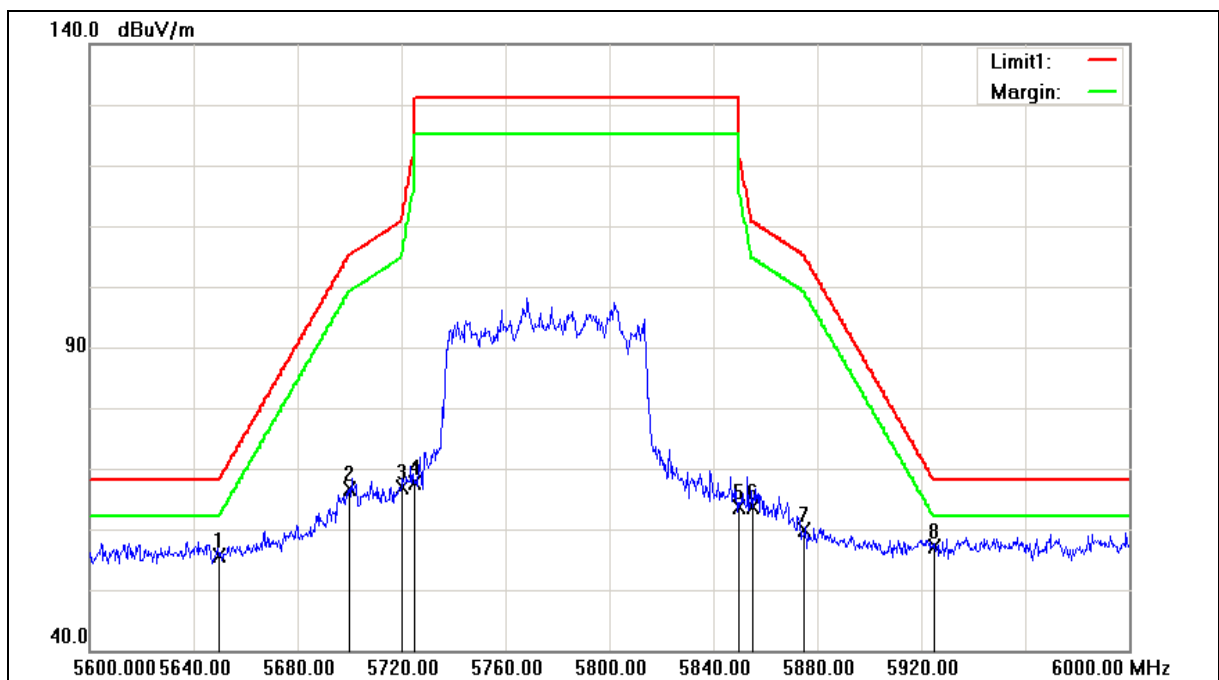
Note:1. Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	08/04/2017
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:	08/04/2017
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	45.92	9.70	55.62	68.20	-12.58	peak
2	5700.000	56.78	9.80	66.58	105.20	-38.62	peak
3	5720.000	57.06	9.85	66.91	110.80	-43.89	peak
4	5725.000	57.81	9.86	67.67	122.20	-54.53	peak
5	5850.000	53.43	10.11	63.54	122.20	-58.66	peak
6	5855.000	53.51	10.12	63.63	110.80	-47.17	peak
7	5875.000	49.65	10.17	59.82	105.20	-45.38	peak
8	5925.000	46.95	10.28	57.23	68.20	-10.97	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.

4.4. Maximum Conducted Output Power Measurement

■ Limit

Frequency Range (MHz)	FCC Maximum Conducted Output Power Limit
	Client
5.150 ~ 5.250 GHz	The lesser of 250mW (24dBm)
5.725 ~ 5.850 GHz	The lesser of 1W (30dBm)

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

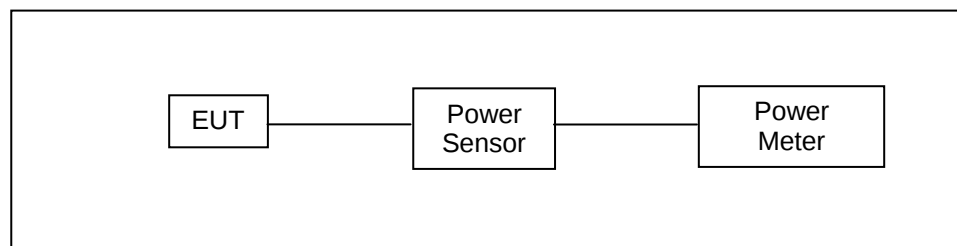
- * SISO mode for ANT-0 : Max. Gain = 2.74 dBi < 6dBi
- * CDD/BF mode : Directional Gain = $G_{ANT} = 10 \cdot \log\{[10^{(G1/20)} + 10^{(G2/20)} + \dots + 10^{(Gn/20)}]^2 / N_{ANT}\}$
= 5.91 dBi < 6dBi (5.150 ~ 5.250 GHz)
- * CDD/BF mode : Directional Gain = $G_{ANT} = 10 \cdot \log\{[10^{(G1/20)} + 10^{(G2/20)} + \dots + 10^{(Gn/20)}]^2 / N_{ANT}\}$
= 6.11 dBi > 6dBi (5.725 ~ 5.850 GHz)

CDD mode power limit shall be reduced = 24 - 0 = 24 dBm (5.150 ~ 5.250 GHz)

CDD mode power limit shall be reduced = 30 - 0 = 30 dBm (5.725 ~ 5.850 GHz)

BF mode power limit shall be reduced = 30 - 0.11 = 29.89 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		FCC Limit (dBm)
		Max. Output Power		
		(dBm)	(W)	
5180	6M	13.35	0.022	≤ 24
5200		13.89	0.024	
5220		14.10	0.026	
5240		13.67	0.023	
5745		13.37	0.022	≤ 30
5765		13.56	0.023	
5785		13.80	0.024	
5805		13.92	0.025	
5825		13.51	0.022	
5180	54M	13.10	0.020	≤ 24
5200		13.62	0.023	
5220		13.85	0.024	
5240		13.37	0.022	
5745		13.04	0.020	≤ 30
5765		13.23	0.021	
5785		13.43	0.022	
5805		13.67	0.023	
5825		13.28	0.021	

Note: 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-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5180	13M	11.00	0.013	11.33	0.014	14.18	0.026	≤ 24
5200		11.17	0.013	11.40	0.014	14.30	0.027	
5220		11.60	0.014	11.28	0.013	14.45	0.028	
5240		11.49	0.014	11.20	0.013	14.36	0.027	
5745		11.32	0.014	13.06	0.020	15.29	0.034	≤ 30
5765		11.69	0.015	13.15	0.021	15.49	0.035	
5785		11.34	0.014	13.07	0.020	15.30	0.034	
5805		11.21	0.013	13.33	0.022	15.41	0.035	
5825		11.46	0.014	13.02	0.020	15.32	0.034	
5180	173.4M	10.72	0.012	11.07	0.013	13.91	0.025	≤ 24
5200		10.93	0.012	11.18	0.013	14.07	0.026	
5220		11.31	0.014	11.00	0.013	14.17	0.026	
5240		11.17	0.013	10.88	0.012	14.04	0.025	
5745		11.11	0.013	12.79	0.019	15.04	0.032	≤ 30
5765		11.43	0.014	12.82	0.019	15.19	0.033	
5785		11.07	0.013	12.79	0.019	15.02	0.032	
5805		11.01	0.013	13.08	0.020	15.18	0.033	
5825		11.13	0.013	12.81	0.019	15.06	0.032	

Note: 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-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5190	27M	11.47	0.014	11.06	0.013	14.28	0.027	≤ 24
5230		11.49	0.014	11.12	0.013	14.32	0.027	
5755		11.58	0.014	13.25	0.021	15.51	0.036	≤ 30
5795		11.33	0.014	13.13	0.021	15.33	0.034	
5190	400M	11.22	0.013	10.77	0.012	14.01	0.025	≤ 24
5230		11.25	0.013	10.95	0.012	14.11	0.026	
5755		11.27	0.013	12.93	0.020	15.19	0.033	≤ 30
5755		11.12	0.013	12.84	0.019	15.07	0.032	

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-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5210	58.6M	11.34	0.014	11.55	0.014	14.46	0.028	≤ 24
5775		11.53	0.014	13.03	0.020	15.35	0.034	≤ 30
5210	866.6M	11.07	0.013	11.17	0.013	14.13	0.026	≤ 24
5775		11.17	0.013	12.71	0.019	15.02	0.032	≤ 30

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

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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-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5180	13M	8.85	0.008	9.11	0.008	11.99	0.016	≤ 24
5200		9.03	0.008	9.33	0.009	12.19	0.017	
5220		9.46	0.009	9.08	0.008	12.28	0.017	
5240		9.22	0.008	9.04	0.008	12.14	0.016	
5745		9.06	0.008	10.98	0.013	13.14	0.021	≤ 29.89
5765		9.25	0.008	11.06	0.013	13.26	0.021	
5785		9.10	0.008	10.87	0.012	13.08	0.020	
5805		9.07	0.008	11.14	0.013	13.24	0.021	
5825		9.12	0.008	10.80	0.012	13.05	0.020	
5180	173.4M	8.58	0.007	8.91	0.008	11.76	0.015	≤ 24
5200		8.82	0.008	9.06	0.008	11.95	0.016	
5220		9.22	0.008	8.73	0.007	11.99	0.016	
5240		9.00	0.008	8.78	0.008	11.90	0.015	
5745		8.83	0.008	10.72	0.012	12.89	0.019	≤ 29.89
5765		9.02	0.008	10.79	0.012	13.00	0.020	
5785		8.75	0.007	10.59	0.011	12.78	0.019	
5805		8.80	0.008	10.96	0.012	13.02	0.020	
5825		8.97	0.008	10.55	0.011	12.84	0.019	

Note: 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-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5190	27M	9.35	0.009	8.84	0.008	12.11	0.016	≤ 24
5230		9.33	0.009	9.09	0.008	12.22	0.017	
5755		9.21	0.008	11.10	0.013	13.27	0.021	≤ 29.89
5795		9.10	0.008	10.97	0.013	13.15	0.021	
5190	400M	9.12	0.008	8.59	0.007	11.87	0.015	≤ 24
5230		9.09	0.008	8.82	0.008	11.97	0.016	
5755		8.97	0.008	10.77	0.012	12.97	0.020	≤ 29.89
5755		8.76	0.008	10.67	0.012	12.83	0.019	

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-0+1		FCC Limit (dBm)
		Max. Output Power						
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	
5210	58.6M	9.16	0.008	9.27	0.008	12.23	0.017	≤ 24
5775		9.13	0.008	10.88	0.012	13.10	0.020	≤ 29.89
5210	866.6M	8.95	0.008	9.02	0.008	12.00	0.016	≤ 24
5775		8.90	0.008	10.55	0.011	12.81	0.019	≤ 29.89

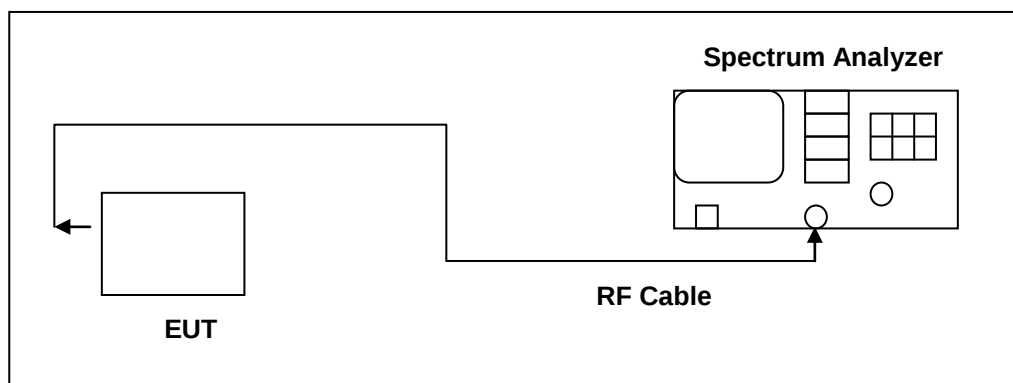
Note: The relevant measured result has the offset with cable loss already.

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 Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement	
Test Mode	Mode 2: IEEE 802.11a Continuous TX mode	
Frequency (MHz)	ANT-0	
	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
5180	20.730	16.677
5200	20.590	16.642
5240	20.780	16.665

Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement			
Test Mode	Mode 3: IEEE 802.11ac 20MHz Continuous TX mode			
Frequency (MHz)	ANT-0	ANT-1	ANT-0	ANT-1
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
5180	21.280	20.950	17.724	17.674
5200	21.030	21.220	17.749	17.686
5240	21.130	20.860	17.716	17.684

Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement			
Test Mode	Mode 4: IEEE 802.11ac 40MHz Continuous TX mode			
Frequency (MHz)	ANT-0	ANT-1	ANT-0	ANT-1
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
5190	43.260	43.330	36.729	36.551
5230	43.120	42.900	36.526	36.572

Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement			
Test Mode	Mode 5: IEEE 802.11ac 80MHz Continuous TX mode			
Frequency (MHz)	ANT-0	ANT-1	ANT-0	ANT-1
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
5210	83.000	85.730	75.552	75.553

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



Beamforming on

Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement			
Test Mode	Mode 3: IEEE 802.11ac 20MHz Continuous TX mode			
Frequency (MHz)	ANT-0	ANT-1	ANT-0	ANT-1
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
5180	21.110	21.040	17.734	17.701
5200	21.220	20.950	17.734	17.675
5240	21.190	21.340	17.727	17.696

Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement			
Test Mode	Mode 4: IEEE 802.11ac 40MHz Continuous TX mode			
Frequency (MHz)	ANT-0	ANT-1	ANT-0	ANT-1
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
5190	43.330	43.680	36.658	36.579
5230	43.750	43.240	36.622	36.704

Test Item	26dB RF Bandwidth & 99 % Occupied Bandwidth Measurement			
Test Mode	Mode 5: IEEE 802.11ac 80MHz Continuous TX mode			
Frequency (MHz)	ANT-0	ANT-1	ANT-0	ANT-1
	26dB Bandwidth (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
5210	83.220	82.380	75.498	75.505

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



■ Test Graphs

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

5180 MHz	Ref Offset 13 dB Ref 20.00 dBm Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 16.677 MHz Total Power 19.3 dBm Transmit Freq Error -49.350 kHz OBW Power 99.00 % x dB Bandwidth 20.73 MHz x dB -26.00 dB
5200 MHz	Ref Offset 13 dB Ref 20.00 dBm Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 16.642 MHz Total Power 19.7 dBm Transmit Freq Error -38.781 kHz OBW Power 99.00 % x dB Bandwidth 20.59 MHz x dB -26.00 dB
5240 MHz	Ref Offset 13 dB Ref 20.00 dBm Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 16.665 MHz Total Power 20.3 dBm Transmit Freq Error -41.038 kHz OBW Power 99.00 % x dB Bandwidth 20.78 MHz x dB -26.00 dB



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

5180 MHz	 Ref Offset 13 dB Ref 20.00 dBm Center 5.18 GHz #Res BW 300 kHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 17.724 MHz Total Power 16.1 dBm Transmit Freq Error 6.778 kHz OBW Power 99.00 % x dB Bandwidth 21.28 MHz x dB -26.00 dB
5200 MHz	 Ref Offset 13 dB Ref 20.00 dBm Center 5.2 GHz #Res BW 300 kHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 17.749 MHz Total Power 15.8 dBm Transmit Freq Error 48.174 kHz OBW Power 99.00 % x dB Bandwidth 21.03 MHz x dB -26.00 dB
5240 MHz	 Ref Offset 13 dB Ref 20.00 dBm Center 5.24 GHz #Res BW 300 kHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 17.716 MHz Total Power 16.4 dBm Transmit Freq Error 2.749 kHz OBW Power 99.00 % x dB Bandwidth 21.13 MHz x dB -26.00 dB



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

5190 MHz



5230 MHz



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

5210 MHz





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

5180 MHz	 Ref Offset 13 dB Ref 20.00 dBm Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 17.674 MHz Total Power 17.4 dBm Transmit Freq Error 40.766 kHz OBW Power 99.00 % x dB Bandwidth 20.95 MHz x dB -26.00 dB
5200 MHz	 Ref Offset 13 dB Ref 20.00 dBm Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 17.686 MHz Total Power 17.4 dBm Transmit Freq Error 76.519 kHz OBW Power 99.00 % x dB Bandwidth 21.22 MHz x dB -26.00 dB
5240 MHz	 Ref Offset 13 dB Ref 20.00 dBm Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 17.684 MHz Total Power 17.8 dBm Transmit Freq Error 40.047 kHz OBW Power 99.00 % x dB Bandwidth 20.86 MHz x dB -26.00 dB



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





Beamforming on

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

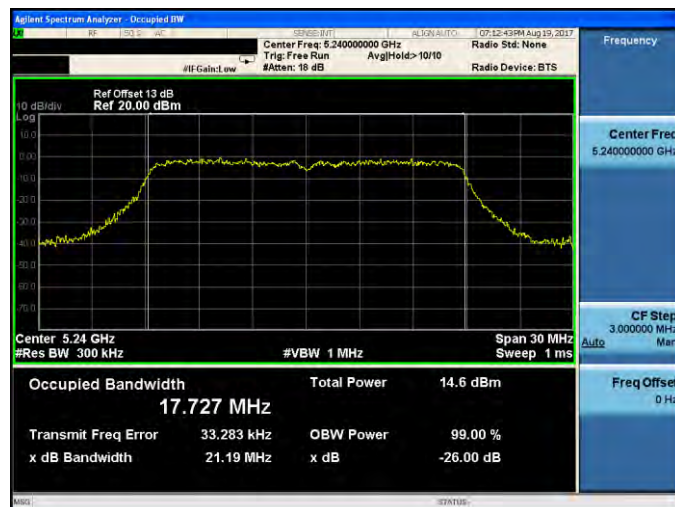
5180 MHz



5200 MHz



5240 MHz





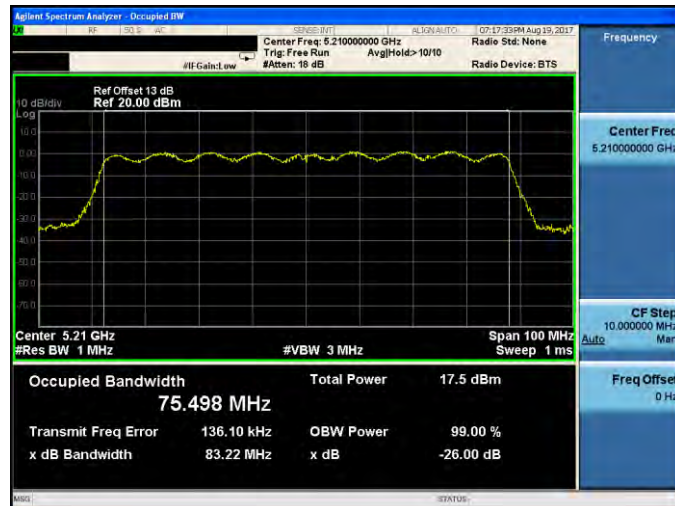
Mode 4: IEEE 802.11ac 40MHz Continuous TX mode_ ANT-0





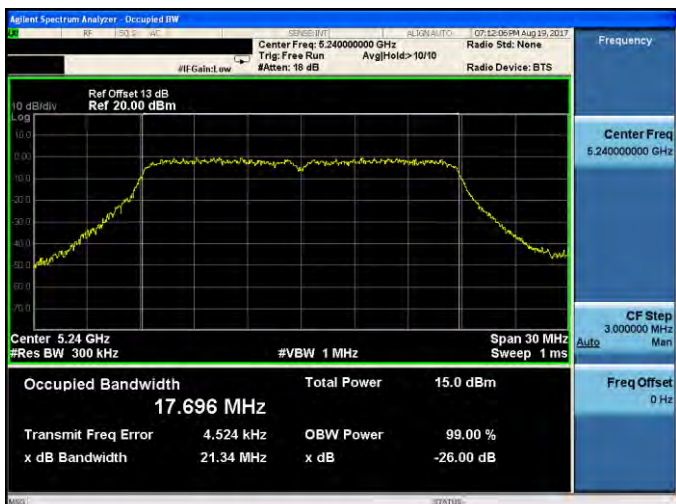
Mode 5: IEEE 802.11ac 80MHz Continuous TX mode_ ANT-0

5210 MHz





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

5180 MHz	 Ref Offset 13 dB Ref 20.00 dBm Center 5.18 GHz #Res BW 300 kHz #VBW 1 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 17.701 MHz Total Power 12.3 dBm Transmit Freq Error -8.890 kHz OBW Power 99.00 % x dB Bandwidth 21.04 MHz x dB -26.00 dB Radio Device: BTS
5200 MHz	 Ref Offset 13 dB Ref 20.00 dBm Center 5.2 GHz #Res BW 300 kHz #VBW 1 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 17.675 MHz Total Power 14.6 dBm Transmit Freq Error 31.896 kHz OBW Power 99.00 % x dB Bandwidth 20.95 MHz x dB -26.00 dB Radio Device: BTS
5240 MHz	 Ref Offset 13 dB Ref 20.00 dBm Center 5.24 GHz #Res BW 300 kHz #VBW 1 MHz Span 30 MHz Sweep 1 ms Occupied Bandwidth 17.696 MHz Total Power 15.0 dBm Transmit Freq Error 4.524 kHz OBW Power 99.00 % x dB Bandwidth 21.34 MHz x dB -26.00 dB Radio Device: BTS



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

5190 MHz	 Ref Offset 13 dB Ref 20.00 dBm Center 5.19 GHz #Res BW 1 MHz Span 50 MHz Sweep 1 ms Occupied Bandwidth 36.579 MHz Total Power 15.3 dBm Transmit Freq Error -28.044 kHz OBW Power 99.00 % x dB Bandwidth 43.68 MHz x dB -26.00 dB Center Freq 5.19000000 GHz CF Step 5.000000 MHz Freq Offset 0 Hz
5230 MHz	 Ref Offset 13 dB Ref 20.00 dBm Center 5.23 GHz #Res BW 1 MHz Span 50 MHz Sweep 1 ms Occupied Bandwidth 36.704 MHz Total Power 15.5 dBm Transmit Freq Error 46.140 kHz OBW Power 99.00 % x dB Bandwidth 43.24 MHz x dB -26.00 dB Center Freq 5.23000000 GHz CF Step 5.000000 MHz Freq Offset 0 Hz



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

5210 MHz



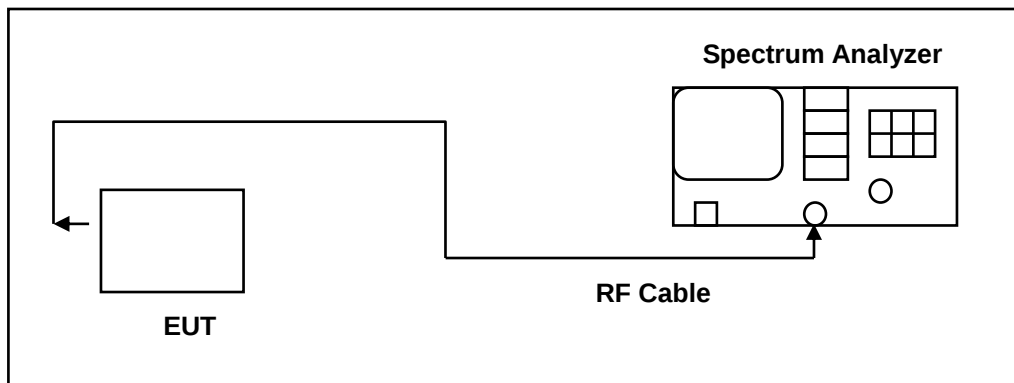
4.6. 6dB RF Bandwidth Measurement

■ 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 v01r04 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)	
	ANT-0	
5745	16500	> 500
5785	16530	> 500
5825	16490	> 500

Test Item	6dB RF Bandwidth	
Test Mode	Mode 3: IEEE 802.11ac 20MHz Continuous TX mode	
Frequency (MHz)	6dB Bandwidth (kHz)	
	ANT-0	ANT-1
5745	17690	17670
5785	17680	17690
5825	17660	17710

Test Item	6dB RF Bandwidth	
Test Mode	Mode 4: IEEE 802.11ac 40MHz Continuous TX mode	
Frequency (MHz)	6dB Bandwidth (kHz)	
	ANT-0	ANT-1
5755	36490	36450
5795	36490	36460

Test Item	6dB RF Bandwidth	
Test Mode	Mode 5: IEEE 802.11ac 80MHz Continuous TX mode	
Frequency (MHz)	6dB Bandwidth (kHz)	
	ANT-0	ANT-1
5775	76320	76390



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	
5745	17700	17640	> 500
5785	17670	17700	> 500
5825	17690	17690	> 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	
5755	36480	36490	> 500
5795	36490	36490	> 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	
5775	76340	76410	> 500



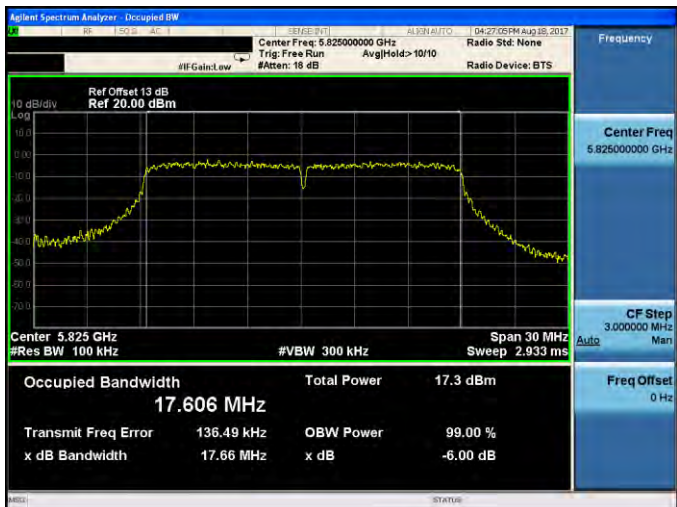
■ Test Graphs

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 #Att: 18 dB Radio Std: None Radio Device: BTS Ref Offset 13 dB Ref 20.00 dBm Center 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 16.439 MHz Total Power 20.6 dBm Transmit Freq Error 74.550 kHz OBW Power 99.00 % x dB Bandwidth 16.50 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 #Att: 18 dB Radio Std: None Radio Device: BTS Ref Offset 13 dB Ref 20.00 dBm Center 5.785 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 16.466 MHz Total Power 20.6 dBm Transmit Freq Error 46.770 kHz OBW Power 99.00 % x dB Bandwidth 16.53 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 #Att: 18 dB Radio Std: None Radio Device: BTS Ref Offset 13 dB Ref 20.00 dBm Center 5.825 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 16.423 MHz Total Power 19.9 dBm Transmit Freq Error 188.38 kHz OBW Power 99.00 % x dB Bandwidth 16.49 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

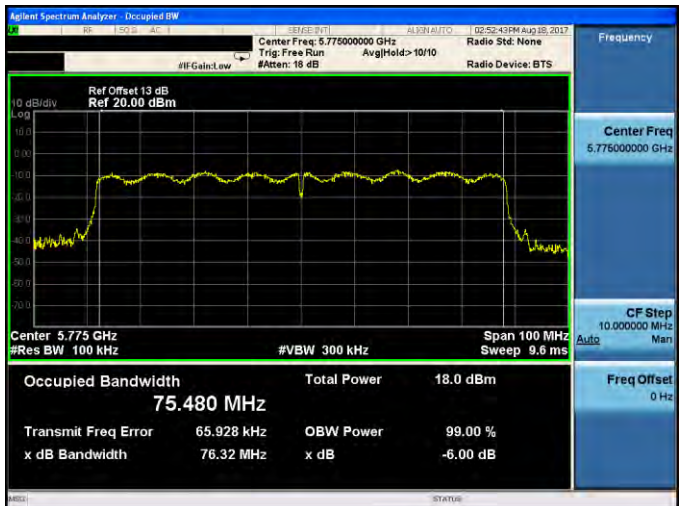
5745 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.74500000 GHz Trig: Free Run Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 13 dB Ref 20.00 dBm Center 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.614 MHz Total Power 17.2 dBm Transmit Freq Error 121.70 kHz OBW Power 99.00 % x dB Bandwidth 17.69 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 Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 13 dB Ref 20.00 dBm Center 5.785 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.600 MHz Total Power 16.6 dBm Transmit Freq Error 149.37 kHz OBW Power 99.00 % x dB Bandwidth 17.68 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 Ave/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 13 dB Ref 20.00 dBm Center 5.825 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms Occupied Bandwidth 17.606 MHz Total Power 17.3 dBm Transmit Freq Error 136.49 kHz OBW Power 99.00 % x dB Bandwidth 17.66 MHz x dB -6.00 dB Frequency Center Freq 5.82500000 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	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.75500000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 13 dB Ref 20.00 dBm Center 5.755 GHz #Res BW 100 kHz #VBW 300 kHz Span 50 MHz Sweep 4.8 ms Occupied Bandwidth 36.120 MHz Total Power 18.1 dBm Transmit Freq Error 173.56 kHz OBW Power 99.00 % x dB Bandwidth 36.49 MHz x dB -6.00 dB Frequency Center Freq 5.75500000 GHz CF Step 5.000000 MHz Auto Man Freq Offset 0 Hz
5795 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.79500000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 13 dB Ref 20.00 dBm Center 5.795 GHz #Res BW 100 kHz #VBW 300 kHz Span 50 MHz Sweep 4.8 ms Occupied Bandwidth 36.105 MHz Total Power 19.3 dBm Transmit Freq Error 67.678 kHz OBW Power 99.00 % x dB Bandwidth 36.49 MHz x dB -6.00 dB Frequency Center Freq 5.79500000 GHz CF Step 5.000000 MHz Auto Man Freq Offset 0 Hz

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

5775 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 5.77500000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 13 dB Ref 20.00 dBm Center 5.775 GHz #Res BW 100 kHz #VBW 300 kHz Span 100 MHz Sweep 9.6 ms Occupied Bandwidth 75.480 MHz Total Power 18.0 dBm Transmit Freq Error 65.928 kHz OBW Power 99.00 % x dB Bandwidth 76.32 MHz x dB -6.00 dB Frequency Center Freq 5.77500000 GHz CF Step 10.000000 MHz Auto Man Freq Offset 0 Hz
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