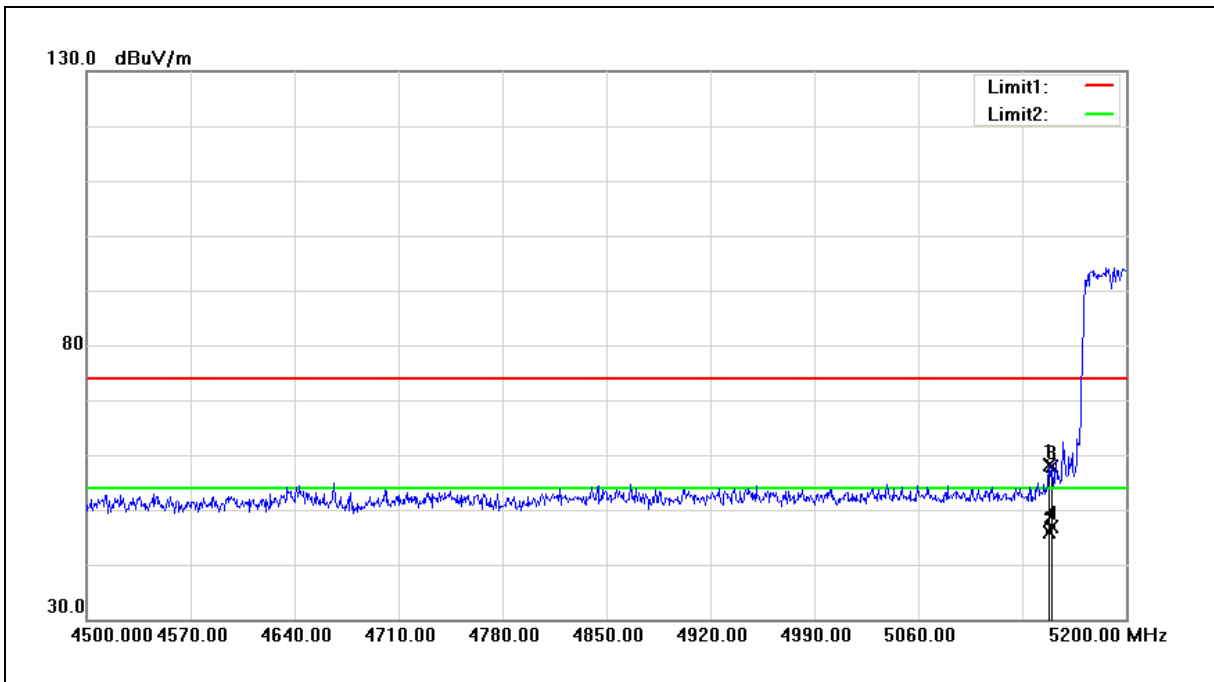




Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	DC 5V
Frequency:	5190MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Horizontal		
Description:	Antenna Model : EDA-1713-25GC1-A14		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5148.200	49.07	8.97	58.04	74.00	-15.96	peak
2	5148.200	36.92	8.97	45.89	54.00	-8.11	AVG
3	5150.000	49.00	8.97	57.97	74.00	-16.03	peak
4	5150.000	37.96	8.97	46.93	54.00	-7.07	AVG

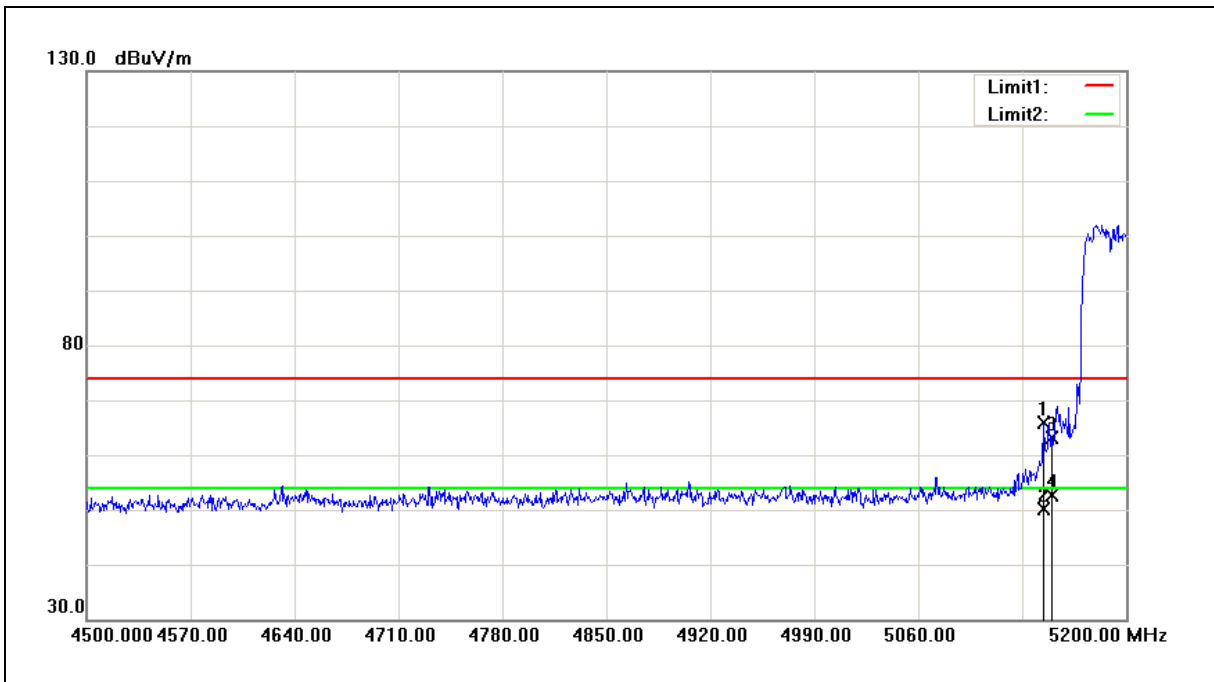
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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.



Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	DC 5V
Frequency:	5190MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Vertical		
Description:	Antenna Model : EDA-1713-25GC1-A14		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5144.000	56.90	8.97	65.87	74.00	-8.13	peak
2	5144.000	41.14	8.97	50.11	54.00	-3.89	AVG
3	5150.000	54.06	8.97	63.03	74.00	-10.97	peak
4	5150.000	43.58	8.97	52.55	54.00	-1.45	AVG

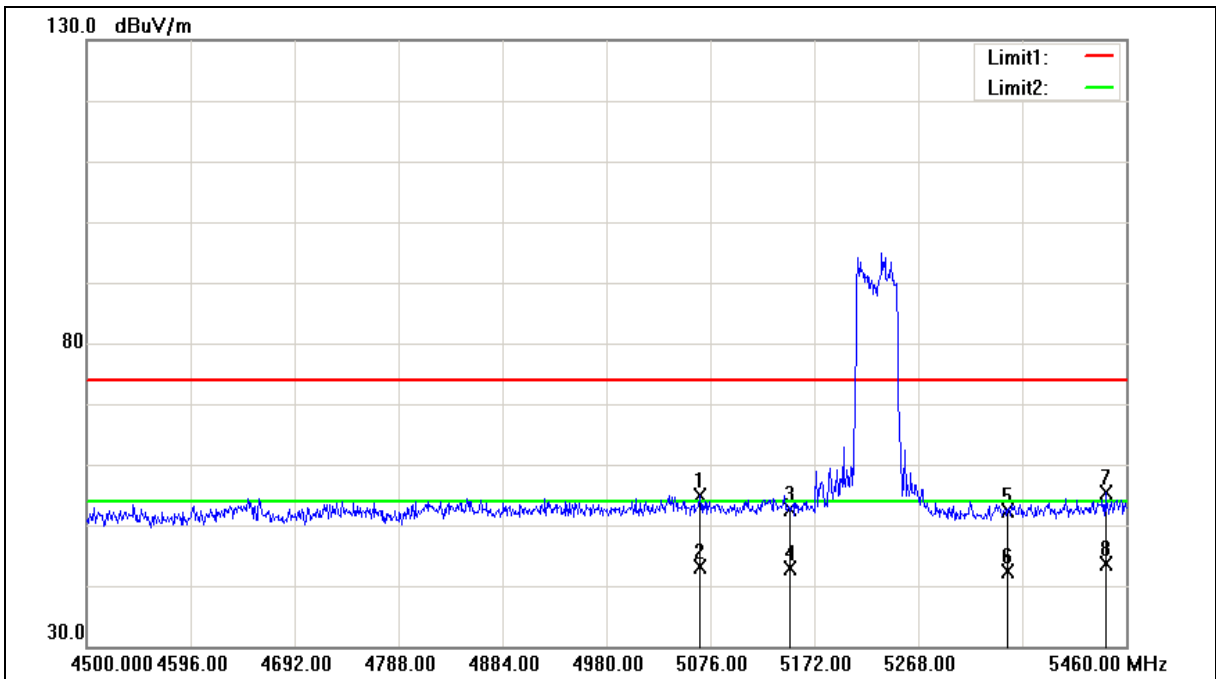
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	DC 5V
Frequency:	5230MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Horizontal		
Description:	Antenna Model : EDA-1713-25GC1-A14		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	DC 5V
Frequency:	5230MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Horizontal		
Description:	Antenna Model : EDA-1713-25GC1-A14		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5066.400	46.01	8.91	54.92	74.00	-19.08	peak
2	5066.400	34.18	8.91	43.09	54.00	-10.91	AVG
3	5150.000	43.64	8.97	52.61	74.00	-21.39	peak
4	5150.000	33.83	8.97	42.80	54.00	-11.20	AVG
5	5350.000	43.19	9.08	52.27	74.00	-21.73	peak
6	5350.000	33.31	9.08	42.39	54.00	-11.61	AVG
7	5440.800	46.19	9.15	55.34	74.00	-18.66	peak
8	5440.800	34.51	9.15	43.66	54.00	-10.34	AVG

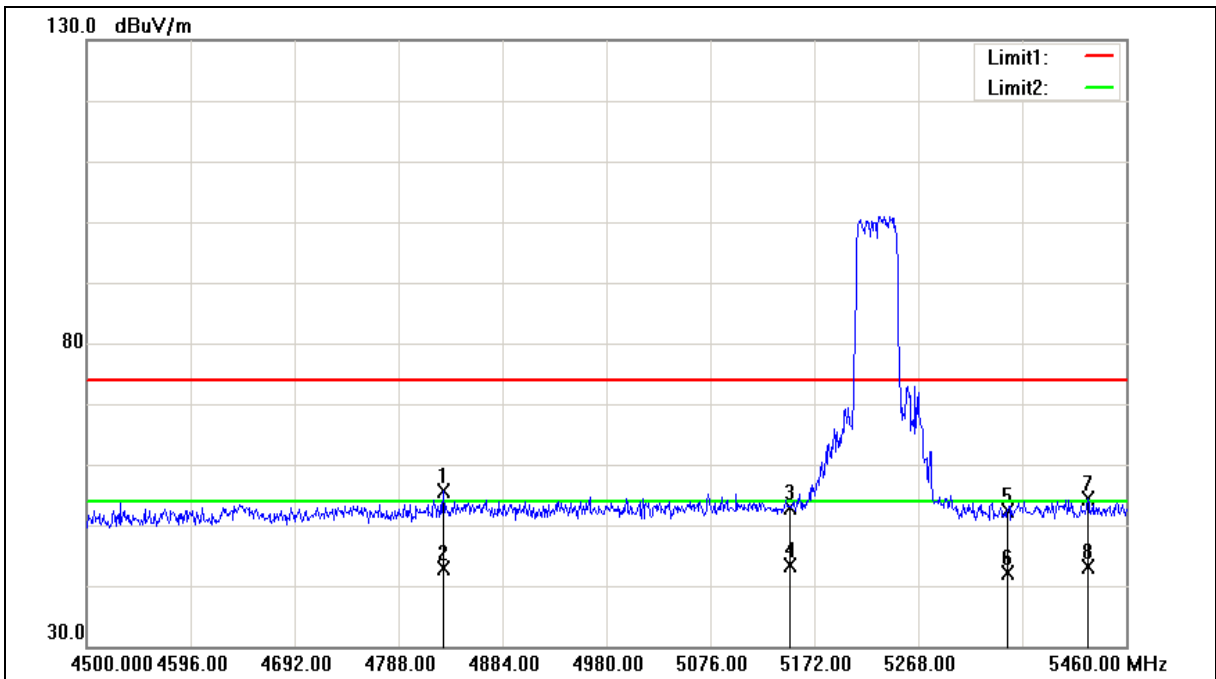
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	DC 5V
Frequency:	5230MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Vertical		
Description:	Antenna Model : EDA-1713-25GC1-A14		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	DC 5V
Frequency:	5230MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Vertical		
Description:	Antenna Model : EDA-1713-25GC1-A14		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4829.280	47.56	8.18	55.74	74.00	-18.26	peak
2	4829.280	34.73	8.18	42.91	54.00	-11.09	AVG
3	5150.000	43.80	8.97	52.77	74.00	-21.23	peak
4	5150.000	34.33	8.97	43.30	54.00	-10.70	AVG
5	5350.000	43.34	9.08	52.42	74.00	-21.58	peak
6	5350.000	33.16	9.08	42.24	54.00	-11.76	AVG
7	5424.480	45.16	9.14	54.30	74.00	-19.70	peak
8	5424.480	33.88	9.14	43.02	54.00	-10.98	AVG

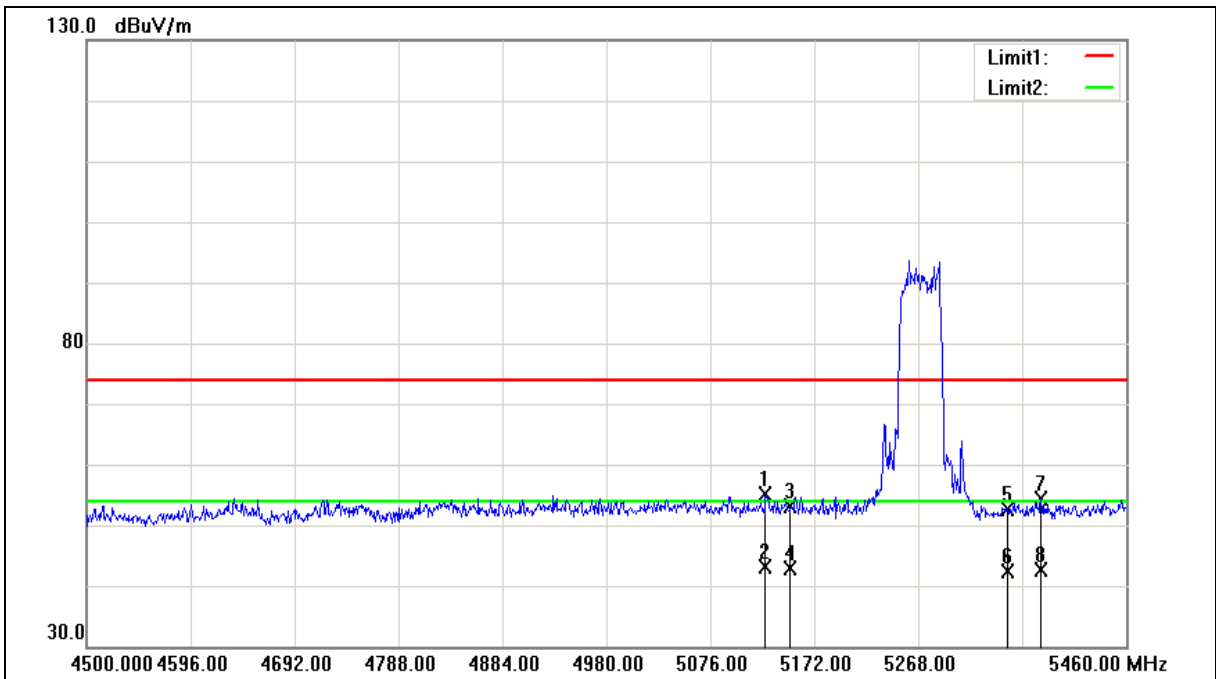
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	DC 5V
Frequency:	5270MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Horizontal		
Description:	Antenna Model : EDA-1713-25GC1-A14		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	DC 5V
Frequency:	5270MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Horizontal		
Description:	Antenna Model : EDA-1713-25GC1-A14		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5126.880	46.13	8.95	55.08	74.00	-18.92	peak
2	5126.880	34.26	8.95	43.21	54.00	-10.79	AVG
3	5150.000	44.08	8.97	53.05	74.00	-20.95	peak
4	5150.000	33.80	8.97	42.77	54.00	-11.23	AVG
5	5350.000	43.44	9.08	52.52	74.00	-21.48	peak
6	5350.000	33.40	9.08	42.48	54.00	-11.52	AVG
7	5381.280	45.27	9.11	54.38	74.00	-19.62	peak
8	5381.280	33.40	9.11	42.51	54.00	-11.49	AVG

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

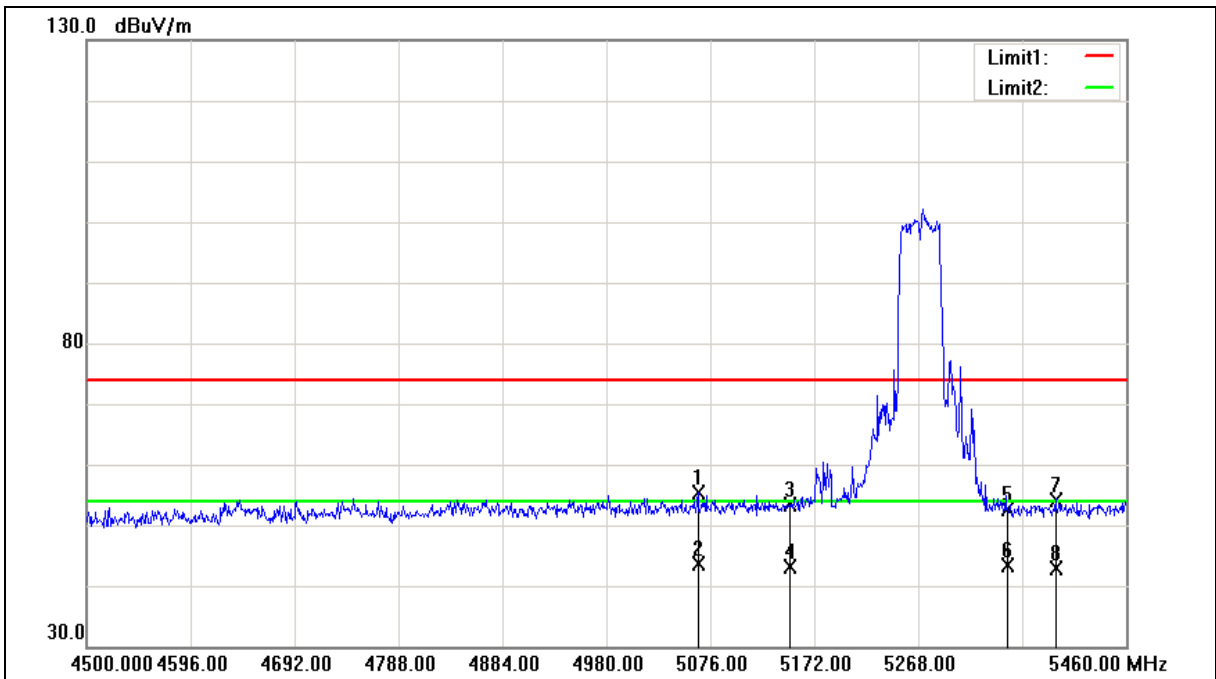
2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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:	DC 5V
Frequency:	5270MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Vertical		
Description:	Antenna Model : EDA-1713-25GC1-A14		





Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	DC 5V
Frequency:	5270MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Vertical		
Description:	Antenna Model : EDA-1713-25GC1-A14		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5064.480	46.36	8.91	55.27	74.00	-18.73	peak
2	5064.480	34.72	8.91	43.63	54.00	-10.37	AVG
3	5150.000	44.52	8.97	53.49	74.00	-20.51	peak
4	5150.000	34.10	8.97	43.07	54.00	-10.93	AVG
5	5350.000	43.67	9.08	52.75	74.00	-21.25	peak
6	5350.000	34.36	9.08	43.44	54.00	-10.56	AVG
7	5394.720	45.13	9.12	54.25	74.00	-19.75	peak
8	5394.720	33.85	9.12	42.97	54.00	-11.03	AVG

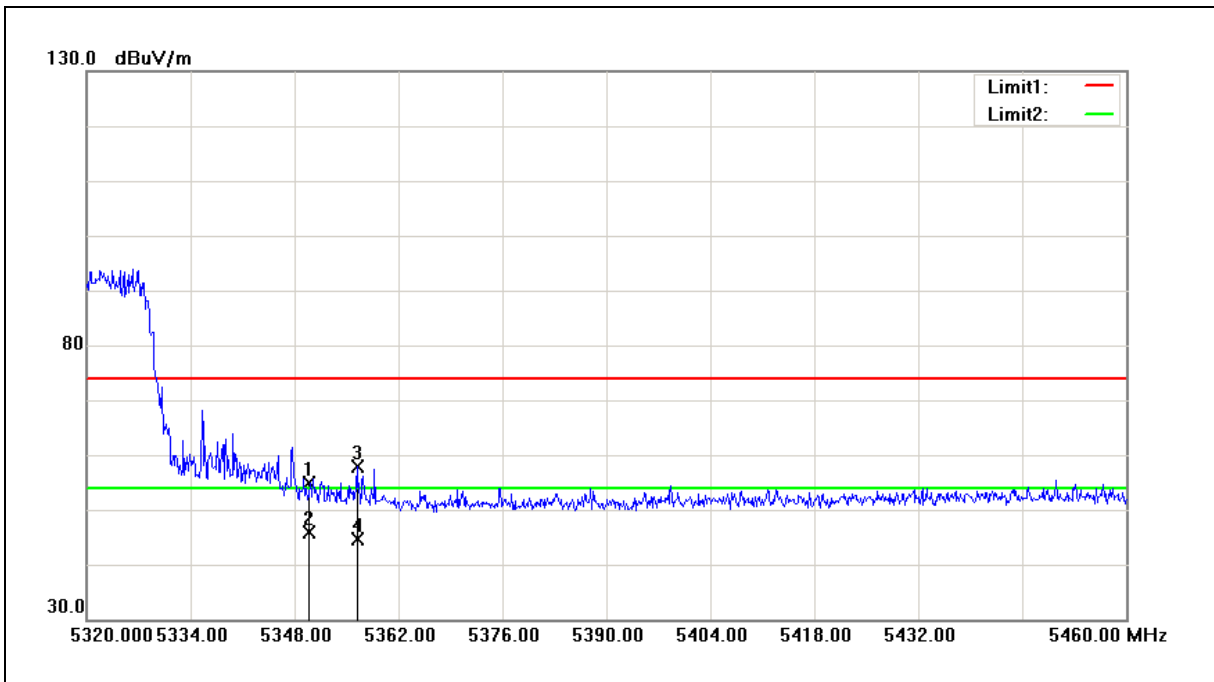
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	DC 5V
Frequency:	5310MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Horizontal		
Description:	Antenna Model : EDA-1713-25GC1-A14		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	45.80	9.08	54.88	74.00	-19.12	peak
2	5350.000	36.91	9.08	45.99	54.00	-8.01	AVG
3	5356.400	48.81	9.08	57.89	74.00	-16.11	peak
4	5356.400	35.53	9.08	44.61	54.00	-9.39	AVG

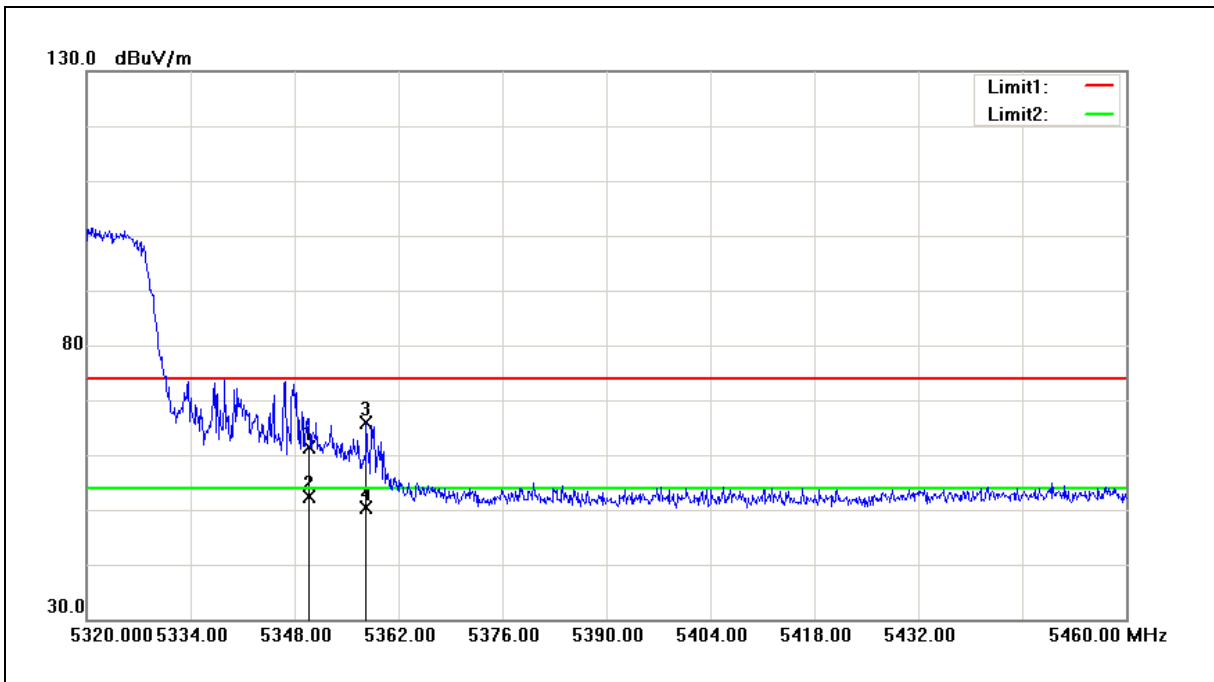
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	DC 5V
Frequency:	5310MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Vertical		
Description:	Antenna Model : EDA-1713-25GC1-A14		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5350.000	52.22	9.08	61.30	74.00	-12.70	peak
2	5350.000	43.32	9.08	52.40	54.00	-1.60	AVG
3	5357.660	56.83	9.08	65.91	74.00	-8.09	peak
4	5357.660	41.31	9.08	50.39	54.00	-3.61	AVG

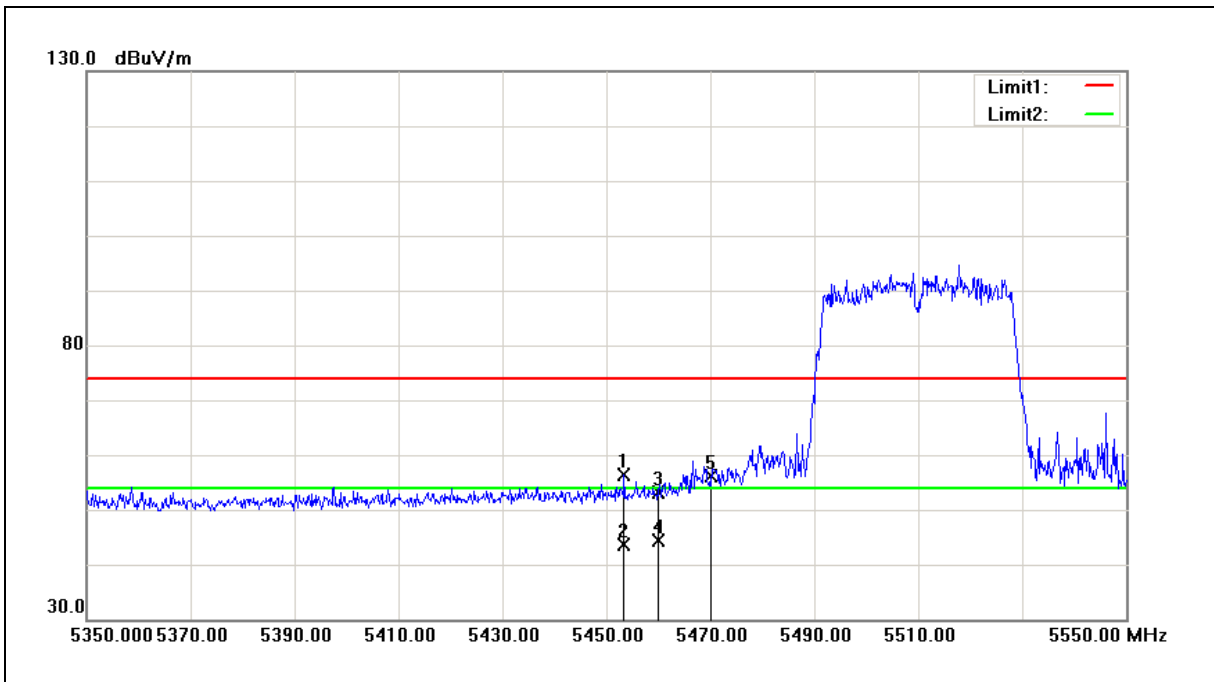
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	DC 5V
Frequency:	5510MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Horizontal		
Description:	Antenna Model : EDA-1713-25GC1-A14		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5453.400	47.32	9.15	56.47	74.00	-17.53	peak
2	5453.400	34.46	9.15	43.61	54.00	-10.39	AVG
3	5460.000	43.95	9.15	53.10	74.00	-20.90	peak
4	5460.000	35.20	9.15	44.35	54.00	-9.65	AVG
5	5470.000	46.86	9.16	56.02	68.20	-12.18	peak

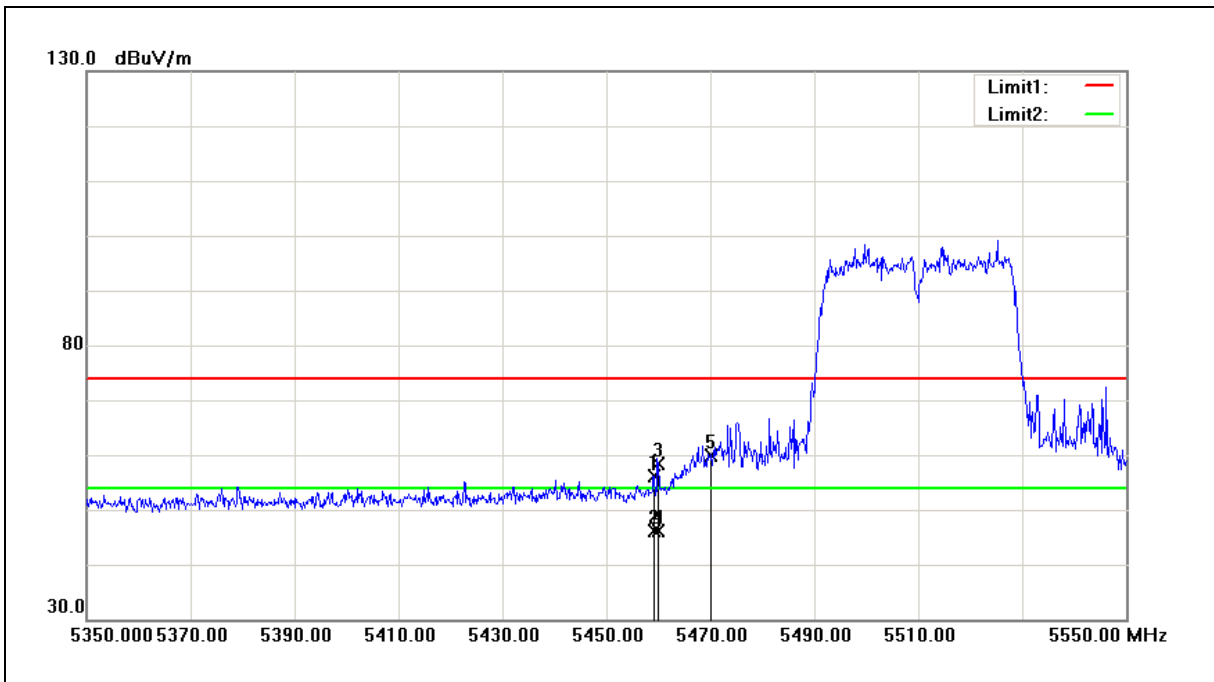
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	DC 5V
Frequency:	5510MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Vertical		
Description:	Antenna Model : EDA-1713-25GC1-A14		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5459.200	47.09	9.15	56.24	74.00	-17.76	peak
2	5459.200	37.07	9.15	46.22	54.00	-7.78	AVG
3	5460.000	49.34	9.15	58.49	74.00	-15.51	peak
4	5460.000	37.01	9.15	46.16	54.00	-7.84	AVG
5	5470.000	50.69	9.16	59.85	68.20	-8.35	peak

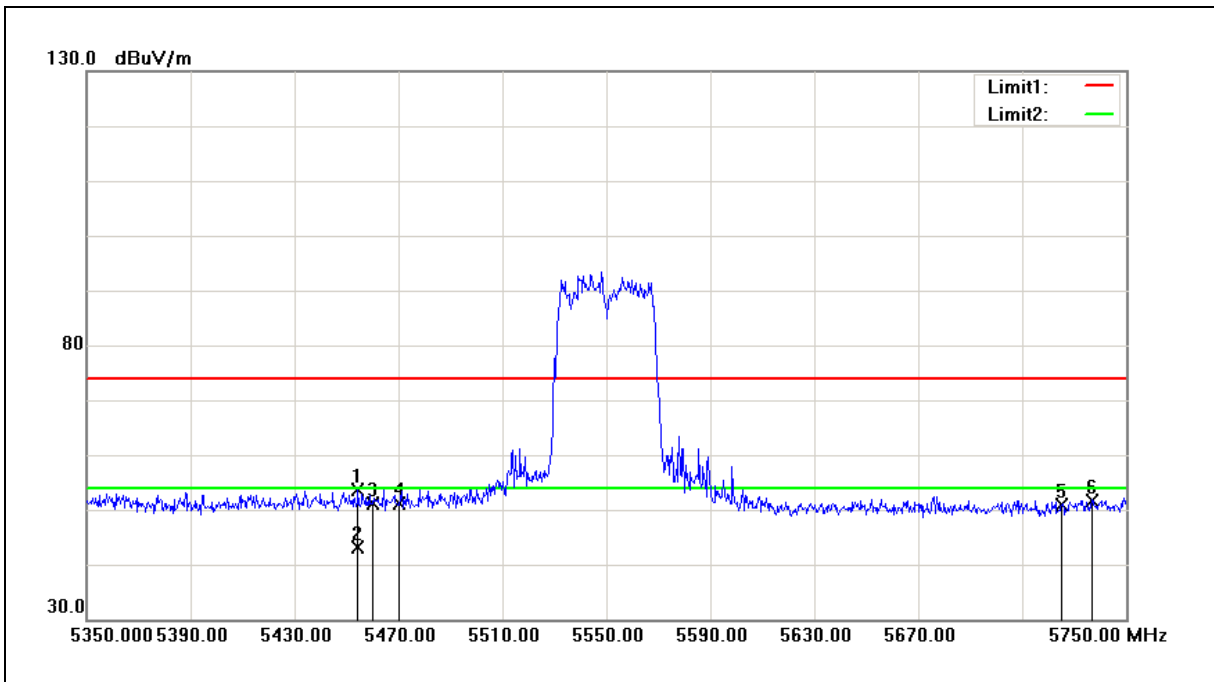
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	DC 5V
Frequency:	5550MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Horizontal		
Description:	Antenna Model : EDA-1713-25GC1-A14		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5454.400	44.41	9.15	53.56	74.00	-20.44	peak
2	5454.400	33.98	9.15	43.13	54.00	-10.87	AVG
3	5460.000	41.86	9.15	51.01	74.00	-22.99	peak
4	5470.000	42.01	9.16	51.17	68.20	-17.03	peak
5	5725.000	41.16	9.70	50.86	68.20	-17.34	peak
6	5736.800	42.02	9.73	51.75	74.00	-22.25	peak

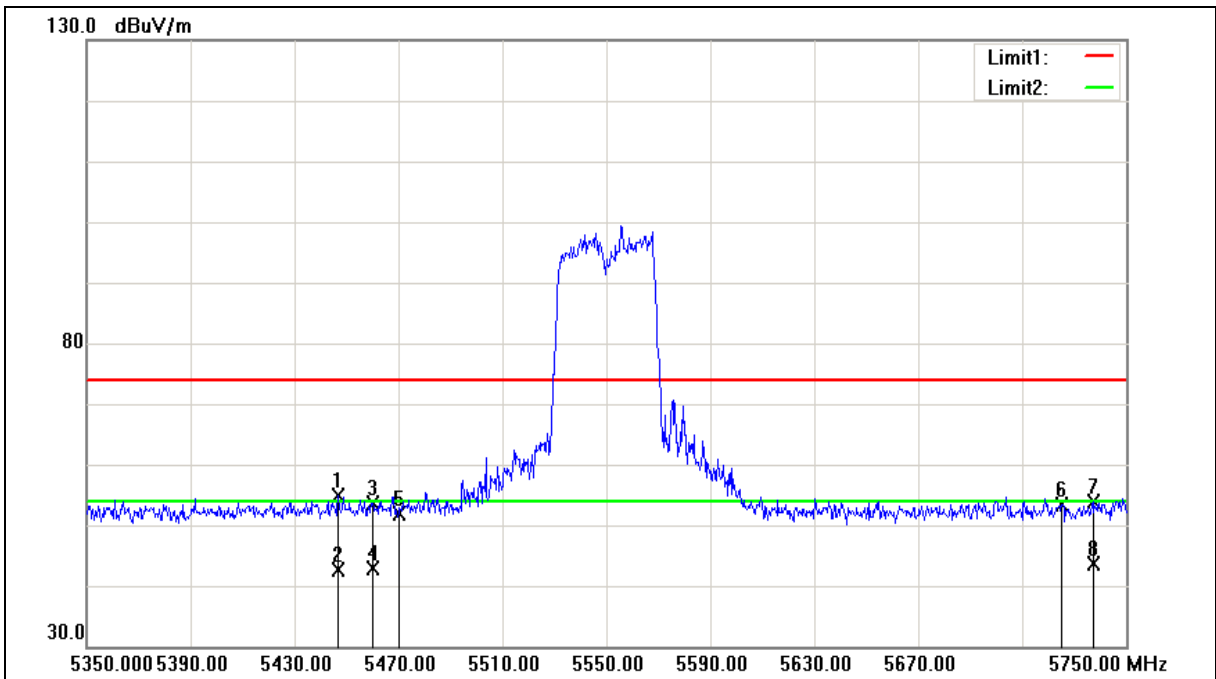
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	DC 5V
Frequency:	5550MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Vertical		
Description:	Antenna Model : EDA-1713-25GC1-A14		







Standard:	FCC Part 15.407	Test Distance:	3m
Test item:	Band edge	Power:	DC 5V
Frequency:	5550MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/12/2017
Ant.Polar.:	Vertical		
Description:	Antenna Model : EDA-1713-25GC1-A14		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5446.800	45.70	9.15	54.85	74.00	-19.15	peak
2	5446.800	33.52	9.15	42.67	54.00	-11.33	AVG
3	5460.000	44.54	9.15	53.69	74.00	-20.31	peak
4	5460.000	33.76	9.15	42.91	54.00	-11.09	AVG
5	5470.000	42.61	9.16	51.77	68.20	-16.43	peak
6	5725.000	43.73	9.70	53.43	68.20	-14.77	peak
7	5737.200	44.16	9.73	53.89	74.00	-20.11	peak
8	5737.200	33.91	9.73	43.64	54.00	-10.36	AVG

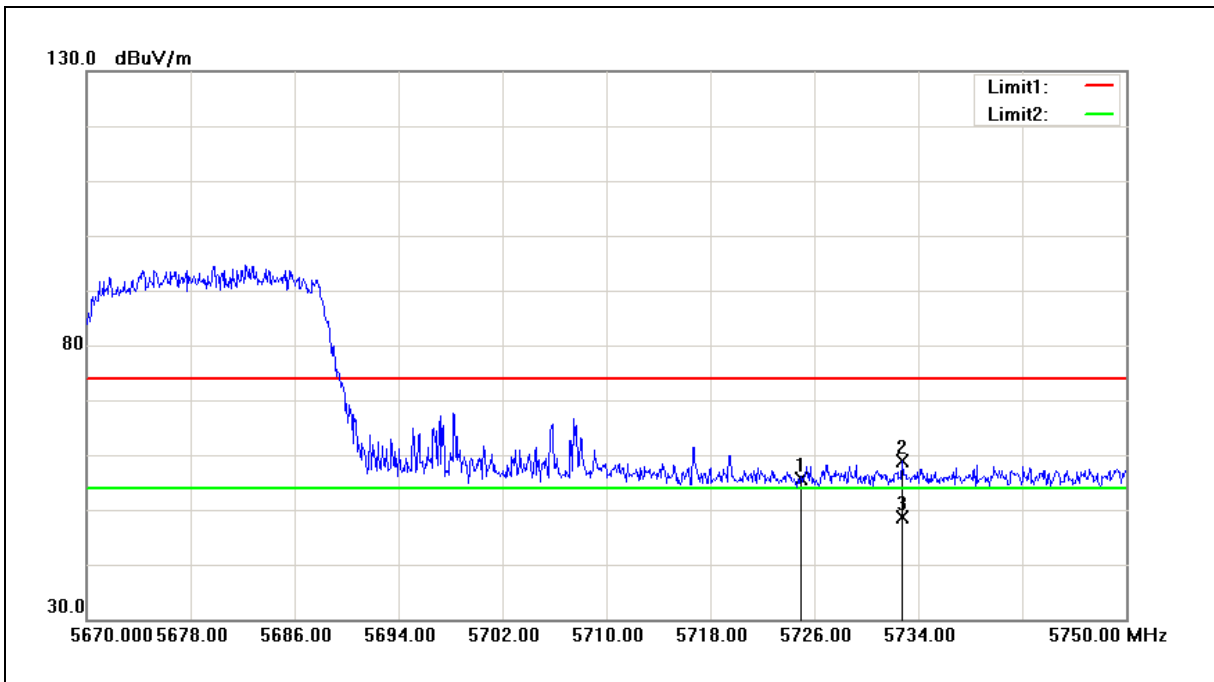
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	DC 5V
Frequency:	5670MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/17/2017
Ant.Polar.:	Horizontal		
Description:	Antenna Model : EDA-1713-25GC1-A14		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5725.000	45.91	9.70	55.61	68.20	-12.59	peak
2	5732.800	49.11	9.71	58.82	74.00	-15.18	peak
3	5732.800	38.89	9.71	48.60	54.00	-5.40	AVG

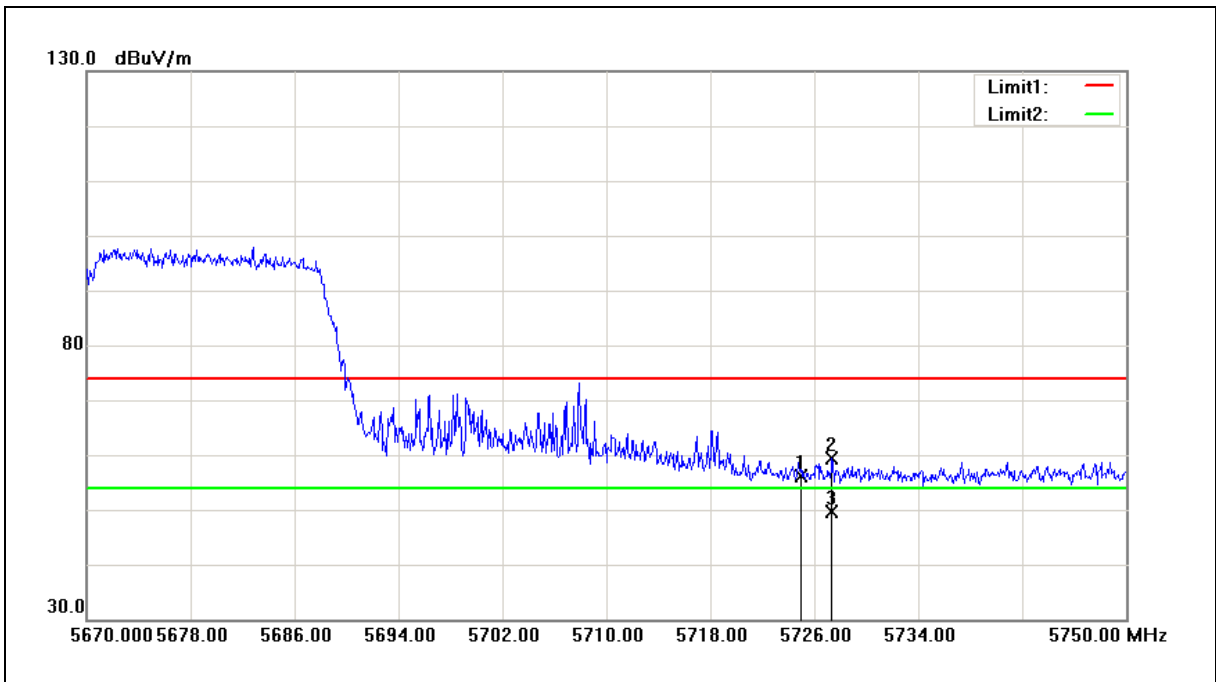
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	DC 5V
Frequency:	5670MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/17/2017
Ant.Polar.:	Vertical		
Description:	Antenna Model : EDA-1713-25GC1-A14		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5725.000	46.45	9.70	56.15	68.20	-12.05	peak
2	5727.360	49.58	9.70	59.28	74.00	-14.72	peak
3	5727.360	39.82	9.70	49.52	54.00	-4.48	AVG

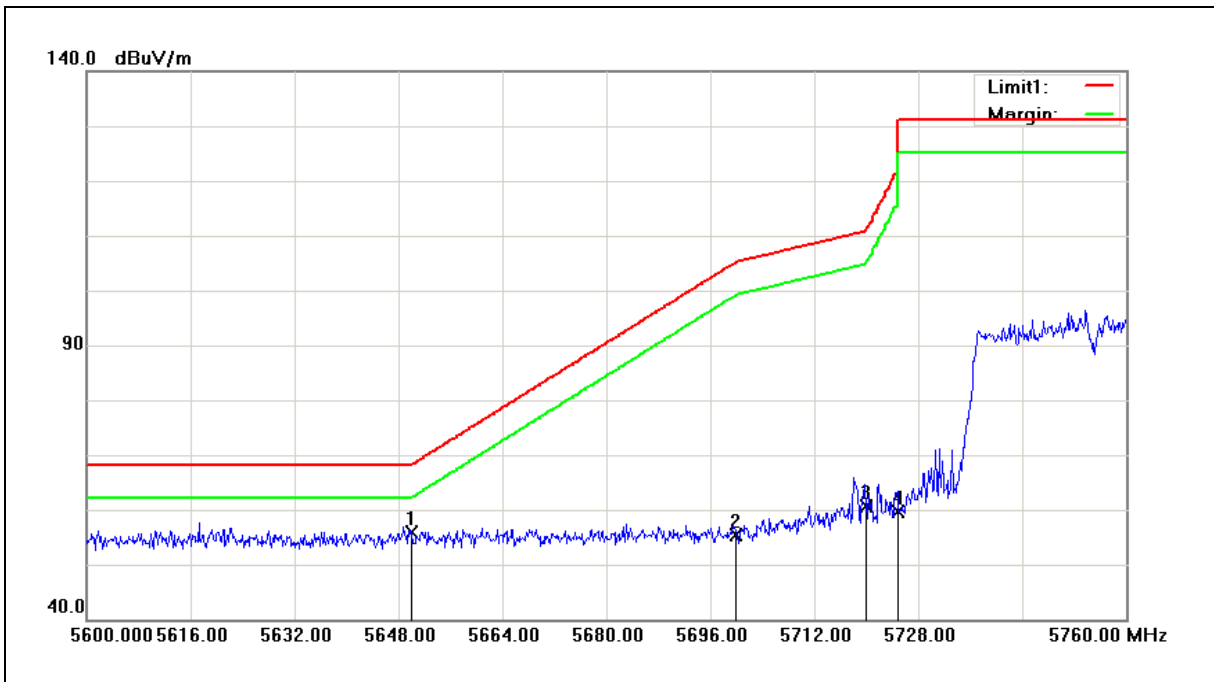
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	DC 5V
Frequency:	5755MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/17/2017
Ant.Polar.:	Horizontal		
Description:	Antenna Model : EDA-1713-25GC1-A14		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.26	9.53	55.79	68.20	-12.41	peak
2	5700.000	45.76	9.64	55.40	105.20	-49.80	peak
3	5720.000	50.89	9.69	60.58	110.80	-50.22	peak
4	5725.000	49.92	9.70	59.62	122.20	-62.58	peak

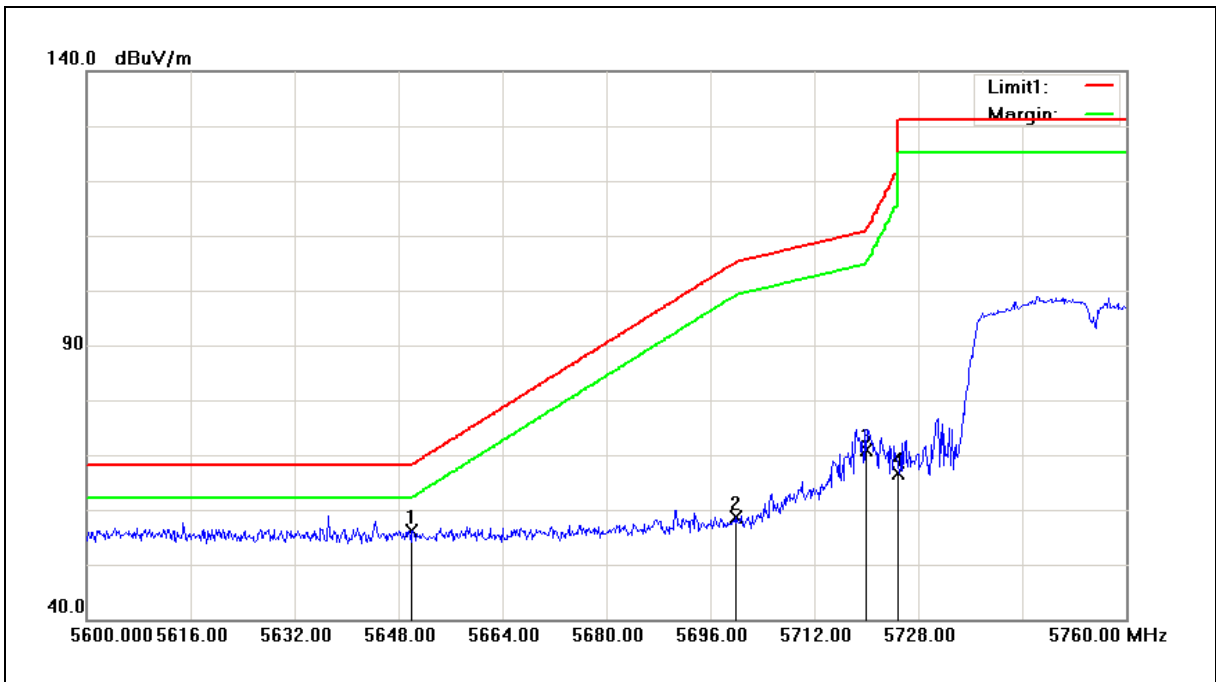
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	DC 5V
Frequency:	5755MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/17/2017
Ant.Polar.:	Vertical		
Description:	Antenna Model : EDA-1713-25GC1-A14		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5650.000	46.70	9.53	56.23	68.20	-11.97	peak
2	5700.000	48.98	9.64	58.62	105.20	-46.58	peak
3	5720.000	61.31	9.69	71.00	110.80	-39.80	peak
4	5725.000	56.97	9.70	66.67	122.20	-55.53	peak

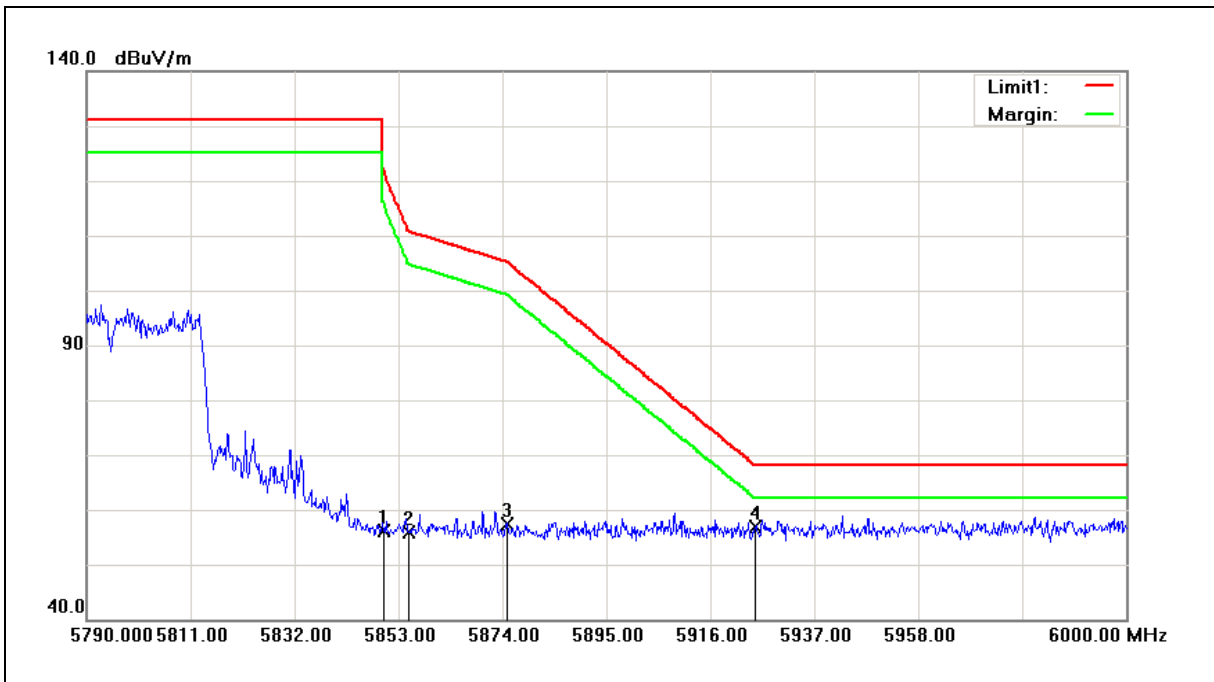
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	DC 5V
Frequency:	5795MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/17/2017
Ant.Polar.:	Horizontal		
Description:	Antenna Model : EDA-1713-25GC1-A14		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5850.000	46.09	9.98	56.07	122.20	-66.13	peak
2	5855.000	45.88	9.99	55.87	110.80	-54.93	peak
3	5875.000	47.46	10.04	57.50	105.20	-47.70	peak
4	5925.000	46.71	10.16	56.87	68.20	-11.33	peak

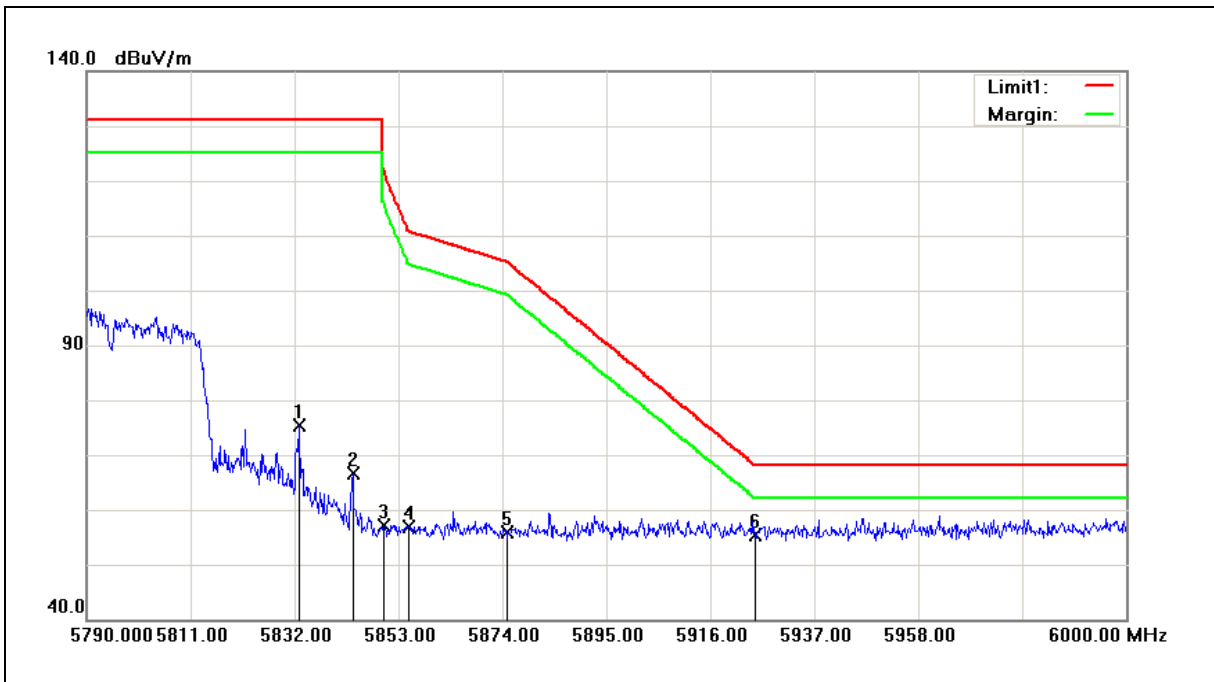
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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:	DC 5V
Frequency:	5795MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	Mode 4	Date:	07/17/2017
Ant.Polar.:	Vertical		
Description:	Antenna Model : EDA-1713-25GC1-A14		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5832.840	65.37	9.94	75.31	131.20	-55.89	peak
2	5843.760	56.61	9.97	66.58	131.20	-64.62	peak
3	5850.000	47.07	9.98	57.05	122.20	-65.15	peak
4	5855.000	46.93	9.99	56.92	110.80	-53.88	peak
5	5875.000	45.81	10.04	55.85	105.20	-49.35	peak
6	5925.000	45.21	10.16	55.37	68.20	-12.83	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.

## 4.2. Maximum Conducted Output Power Measurement

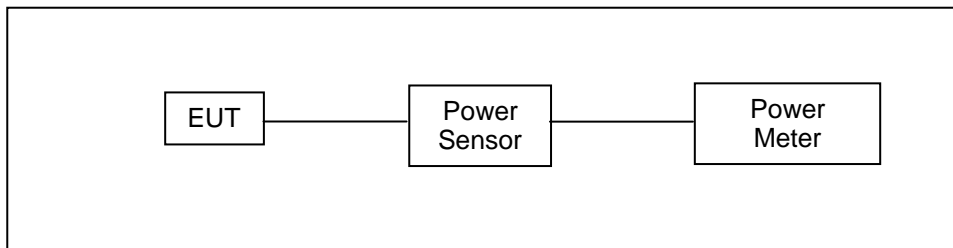
### ■ Limit

Frequency Range (MHz)	FCC Maximum Conducted Output Power Limit
	Client
5.150 ~ 5.250 GHz	The lesser of 250mW (24dBm)
5.250 ~ 5.350 GHz	The lesser of 250mW (24dBm) or 11dBm + 10log (B)
5.470 ~ 5.725 GHz	The lesser of 250mW (24dBm) or 11dBm + 10log (B)
5.725 ~ 5.850 GHz	The lesser of 1W (30dBm)

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

\* Diversity mode : Max. Gain = 6.06 dBi > 6dBi

### ■ 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-1 500	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		FCC Limit (dBm)
		Max. Output Power				
		(dBm)	(W)	(dBm)	(W)	
5180.0	6M	13.50	0.022	13.42	0.022	≤ 23.94
5200.0		13.34	0.022	13.28	0.021	
5220.0		13.38	0.022	13.30	0.021	
5240.0		<b>13.87</b>	<b>0.024</b>	13.81	0.024	
5260.0		13.25	0.021	13.18	0.021	
5280.0		13.28	0.021	13.22	0.021	
5300.0		13.46	0.022	13.44	0.022	
5320.0		<b>13.78</b>	<b>0.024</b>	13.75	0.024	
5500.0		13.12	0.021	13.07	0.020	
5520.0		13.17	0.021	13.15	0.021	
5540.0		<b>13.65</b>	<b>0.023</b>	13.63	0.023	
5560.0		13.09	0.020	13.03	0.020	
5580.0		13.14	0.021	13.10	0.020	
5660.0		13.06	0.020	13.02	0.020	
5680.0		13.17	0.021	13.08	0.020	
5700.0		13.07	0.020	12.97	0.020	
5745.0		13.53	0.023	13.50	0.022	
5765.0		13.57	0.023	13.52	0.022	
5785.0		13.70	0.023	13.63	0.023	
5805.0		13.78	0.024	13.72	0.024	
5825.0	<b>13.82</b>	<b>0.024</b>	13.77	0.024		

Note: 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		ANT-1		FCC Limit (dBm)
		Max. Output Power				
		(dBm)	(W)	(dBm)	(W)	
5180.0	54M	13.44	0.022	13.38	0.022	≤ 23.94
5200.0		13.30	0.021	13.28	0.021	
5220.0		13.36	0.022	13.30	0.021	
5240.0		13.82	0.024	13.72	0.024	
5260.0		13.21	0.021	13.13	0.021	
5280.0		13.24	0.021	13.17	0.021	
5300.0		13.44	0.022	13.42	0.022	
5320.0		13.73	0.024	13.69	0.023	
5500.0		13.10	0.020	13.04	0.020	
5520.0		13.14	0.021	13.08	0.020	
5540.0		13.63	0.023	13.59	0.023	
5560.0		13.06	0.020	13.00	0.020	
5580.0		13.11	0.020	13.08	0.020	
5660.0		13.02	0.020	12.99	0.020	
5680.0		13.13	0.021	13.07	0.020	
5700.0		13.05	0.020	12.94	0.020	
5745.0		13.47	0.022	13.38	0.022	≤ 29.94
5765.0		13.56	0.023	13.48	0.022	
5785.0		13.64	0.023	13.60	0.023	
5805.0		13.75	0.024	13.68	0.023	
5825.0	13.79	0.024	13.69	0.023		

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



Test Item		Maximum Conducted Output Power				FCC Limit (dBm)
Test Mode		Mode 3: IEEE 802.11n 5GHz 20MHz Continuous TX mode				
Frequency (MHz)	Data Rate	ANT-0		ANT-1		
		Max. Output Power				
		(dBm)	(W)	(dBm)	(W)	
5180.0	6.5M	11.58	0.014	11.52	0.014	≤ 23.94
5200.0		11.35	0.014	11.30	0.013	
5220.0		11.51	0.014	11.47	0.014	
5240.0		<b>11.78</b>	<b>0.015</b>	11.68	0.015	
5260.0		11.04	0.013	11.00	0.013	
5280.0		11.15	0.013	11.11	0.013	
5300.0		11.65	0.015	11.59	0.014	
5320.0		<b>11.71</b>	<b>0.015</b>	11.63	0.015	
5500.0		11.10	0.013	11.01	0.013	
5520.0		11.30	0.013	11.22	0.013	
5540.0		11.03	0.013	10.98	0.013	
5560.0		11.55	0.014	11.52	0.014	
5580.0		11.62	0.015	11.58	0.014	
5660.0		<b>11.79</b>	<b>0.015</b>	11.72	0.015	
5680.0		11.44	0.014	11.37	0.014	
5700.0		11.23	0.013	11.13	0.013	
5745.0		11.56	0.014	11.52	0.014	
5765.0		11.86	0.015	11.78	0.015	
5785.0		11.82	0.015	11.75	0.015	
5805.0		11.80	0.015	11.76	0.015	
5825.0	<b>11.94</b>	<b>0.016</b>	11.85	0.015		

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



Test Item		Maximum Conducted Output Power				FCC Limit (dBm)
Test Mode		Mode 3: IEEE 802.11n 5GHz 20MHz Continuous TX mode				
Frequency (MHz)	Data Rate	ANT-0		ANT-1		
		Max. Output Power				
		(dBm)	(W)	(dBm)	(W)	
5180.0	72.2M	11.53	0.014	11.47	0.014	≤ 23.94
5200.0		11.32	0.014	11.22	0.013	
5220.0		11.46	0.014	11.39	0.014	
5240.0		11.76	0.015	11.63	0.015	
5260.0		11.03	0.013	10.98	0.013	
5280.0		11.11	0.013	11.04	0.013	
5300.0		11.61	0.014	11.55	0.014	
5320.0		11.67	0.015	11.61	0.014	
5500.0		11.09	0.013	10.98	0.013	
5520.0		11.24	0.013	11.15	0.013	
5540.0		10.99	0.013	10.97	0.013	
5560.0		11.53	0.014	11.49	0.014	
5580.0		11.59	0.014	11.52	0.014	
5660.0		11.78	0.015	11.69	0.015	
5680.0		11.41	0.014	11.32	0.014	
5700.0		11.18	0.013	11.12	0.013	
5745.0		11.52	0.014	11.43	0.014	
5765.0		11.81	0.015	11.75	0.015	
5785.0		11.79	0.015	11.72	0.015	
5805.0		11.77	0.015	11.73	0.015	
5825.0	11.92	0.016	11.80	0.015		

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



Test Item		Maximum Conducted Output Power					
Test Mode		Mode 4: IEEE 802.11n 5GHz 40MHz Continuous TX mode					
Frequency (MHz)	Data Rate	ANT-0		ANT-0		FCC Limit (dBm)	
		Max. Output Power					
		(dBm)	(W)	(dBm)	(W)		
5190.0	13.5M	9.61	0.009	9.52	0.009	≤ 23.94	
5230.0		<b>11.39</b>	<b>0.014</b>	11.33	0.014		
5270.0		<b>11.66</b>	<b>0.015</b>	11.62	0.015		
5310.0		8.24	0.007	8.18	0.007		
5510.0		10.68	0.012	10.60	0.011		
5550.0		<b>11.69</b>	<b>0.015</b>	11.59	0.014		
5590.0		11.41	0.014	11.37	0.014		
56700.		11.68	0.015	11.60	0.014		
5755.0		11.43	0.014	11.35	0.014		≤ 29.94
5795.0		<b>11.69</b>	<b>0.015</b>	11.63	0.015		
5190.0	150M	9.52	0.009	9.49	0.009	≤ 23.94	
5230.0		11.35	0.014	11.31	0.014		
5270.0		11.64	0.015	11.59	0.014		
5310.0		8.18	0.007	8.12	0.006		
5510.0		10.62	0.012	10.52	0.011		
5550.0		11.68	0.015	11.57	0.014		
5590.0		11.39	0.014	11.32	0.014		
56700.		11.63	0.015	11.56	0.014		
5755.0		11.40	0.014	11.32	0.014		≤ 29.94
5795.0	11.66	0.015	11.53	0.014			

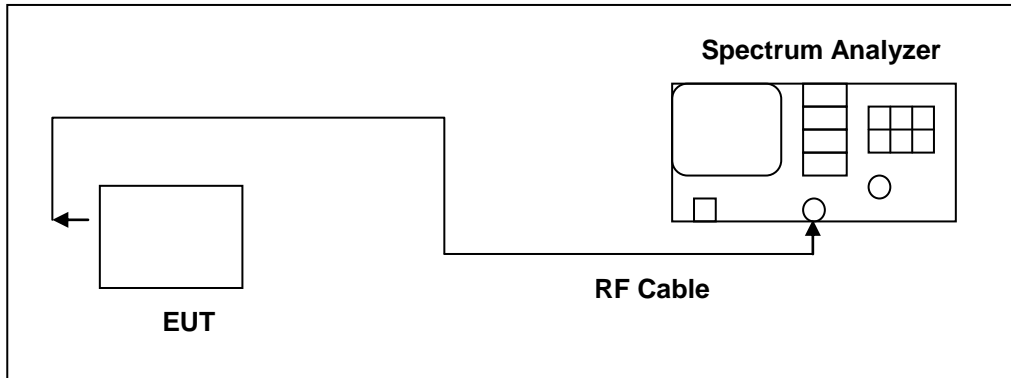
Note: The relevant measured result has the offset with cable loss already.

### 4.3. 26dB RF 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-1 500	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 Measurement
Test Mode	Mode 2: IEEE 802.11a Continuous TX mode
Frequency (MHz)	ANT-0
	26dB Bandwidth (MHz)
5180	23.430
5200	23.470
5240	24.920
5260	24.330
5280	23.070
5320	24.010
5500	20.350
5560	21.200
5700	24.290

Test Item	26dB RF Bandwidth Measurement
Test Mode	Mode 3: IEEE 802.11n 5GHz 20MHz Continuous TX mode
Frequency (MHz)	ANT-0
	26dB Bandwidth (MHz)
5180	20.440
5200	21.230
5240	21.150
5260	20.450
5280	20.280
5320	20.380
5500	20.450
5560	20.520
5700	20.680

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



Test Item	26dB RF Bandwidth Measurement
Test Mode	Mode 4: IEEE 802.11n 5GHz 40MHz Continuous TX mode
Frequency (MHz)	ANT-0
	26dB Bandwidth (MHz)
5190	41.670
5230	47.110
5270	49.270
5310	49.220
5510	41.480
5550	41.470
5670	47.820

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





■ Test Graphs

Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0	
5180 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.18000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.18 GHz #Res BW 300 kHz</p> <p>Span 25 MHz Sweep 1 ms</p> <p>Occupied Bandwidth <b>16.752 MHz</b></p> <p>Total Power 16.0 dBm</p> <p>Transmit Freq Error -18.295 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 23.43 MHz</p> <p>x dB -26.00 dB</p>
5200 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.20000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.2 GHz #Res BW 300 kHz</p> <p>Span 25 MHz Sweep 1 ms</p> <p>Occupied Bandwidth <b>16.753 MHz</b></p> <p>Total Power 16.1 dBm</p> <p>Transmit Freq Error -6.733 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 23.47 MHz</p> <p>x dB -26.00 dB</p>
5240 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.24000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.24 GHz #Res BW 300 kHz</p> <p>Span 25 MHz Sweep 1 ms</p> <p>Occupied Bandwidth <b>16.788 MHz</b></p> <p>Total Power 17.9 dBm</p> <p>Transmit Freq Error 38.628 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 24.92 MHz</p> <p>x dB -26.00 dB</p>



Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0	
5260 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.26000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.26 GHz #Res BW 300 kHz</p> <p>Span 25 MHz Sweep 1 ms</p> <p>Occupied Bandwidth: <b>16.763 MHz</b></p> <p>Total Power: 17.3 dBm</p> <p>Transmit Freq Error: -15.215 kHz</p> <p>OBW Power: 99.00 %</p> <p>x dB Bandwidth: 24.33 MHz</p> <p>x dB: -26.00 dB</p>
5280 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.28000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.28 GHz #Res BW 300 kHz</p> <p>Span 25 MHz Sweep 1 ms</p> <p>Occupied Bandwidth: <b>16.752 MHz</b></p> <p>Total Power: 17.7 dBm</p> <p>Transmit Freq Error: -21.342 kHz</p> <p>OBW Power: 99.00 %</p> <p>x dB Bandwidth: 23.07 MHz</p> <p>x dB: -26.00 dB</p>
5320 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.32000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.32 GHz #Res BW 300 kHz</p> <p>Span 25 MHz Sweep 1 ms</p> <p>Occupied Bandwidth: <b>16.760 MHz</b></p> <p>Total Power: 17.9 dBm</p> <p>Transmit Freq Error: -36.516 kHz</p> <p>OBW Power: 99.00 %</p> <p>x dB Bandwidth: 24.01 MHz</p> <p>x dB: -26.00 dB</p>



Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0	
5500 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.500000000 GHz        Trig: Free Run        #Atten: 20 dB</p> <p>Ref Offset 11.8 dB        Ref 21.80 dBm</p> <p>Center 5.5 GHz        #Res BW 300 kHz        #VBW 1 MHz        Span 25 MHz        Sweep 1 ms</p> <p>Occupied Bandwidth <b>16.742 MHz</b>        Total Power 16.5 dBm        Transmit Freq Error -10.597 kHz        x dB Bandwidth 20.35 MHz</p> <p>OBW Power 99.00 %        x dB -26.00 dB</p> <p>Center Freq 5.500000000 GHz        CF Step 2.500000 MHz        Freq Offset 0 Hz</p>
5560 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.560000000 GHz        Trig: Free Run        #Atten: 20 dB</p> <p>Ref Offset 11.8 dB        Ref 21.80 dBm</p> <p>Center 5.56 GHz        #Res BW 300 kHz        #VBW 1 MHz        Span 25 MHz        Sweep 1 ms</p> <p>Occupied Bandwidth <b>16.696 MHz</b>        Total Power 16.9 dBm        Transmit Freq Error -7.498 kHz        x dB Bandwidth 21.20 MHz</p> <p>OBW Power 99.00 %        x dB -26.00 dB</p> <p>Center Freq 5.560000000 GHz        CF Step 2.500000 MHz        Freq Offset 0 Hz</p>
5700 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.700000000 GHz        Trig: Free Run        #Atten: 20 dB</p> <p>Ref Offset 11.8 dB        Ref 21.80 dBm</p> <p>Center 5.7 GHz        #Res BW 300 kHz        #VBW 1 MHz        Span 25 MHz        Sweep 1 ms</p> <p>Occupied Bandwidth <b>16.691 MHz</b>        Total Power 17.4 dBm        Transmit Freq Error -7.816 kHz        x dB Bandwidth 24.29 MHz</p> <p>OBW Power 99.00 %        x dB -26.00 dB</p> <p>Center Freq 5.700000000 GHz        CF Step 2.500000 MHz        Freq Offset 0 Hz</p>



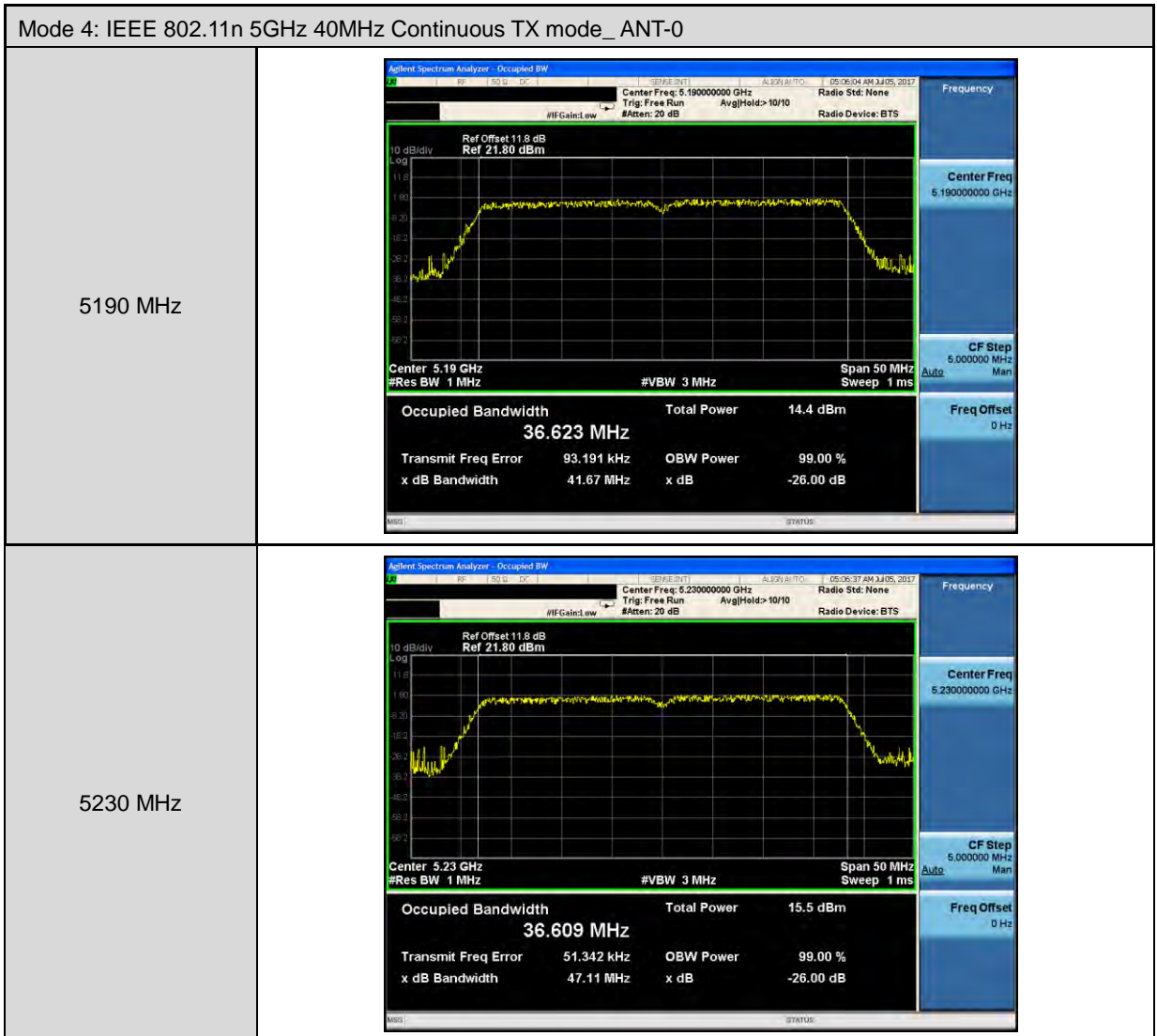
Mode 3: IEEE 802.11n 5GHz 20MHz Continuous TX mode_ ANT-0	
5180 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.18000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.18 GHz #Res BW 300 kHz</p> <p>Span 25 MHz Sweep 1 ms</p> <p>Occupied Bandwidth <b>17.886 MHz</b></p> <p>Total Power 14.2 dBm</p> <p>Transmit Freq Error 32.068 kHz</p> <p>x dB Bandwidth 20.44 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -26.00 dB</p>
5200 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.20000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.2 GHz #Res BW 300 kHz</p> <p>Span 25 MHz Sweep 1 ms</p> <p>Occupied Bandwidth <b>17.885 MHz</b></p> <p>Total Power 15.3 dBm</p> <p>Transmit Freq Error 9.805 kHz</p> <p>x dB Bandwidth 21.23 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -26.00 dB</p>
5240 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.24000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.24 GHz #Res BW 300 kHz</p> <p>Span 25 MHz Sweep 1 ms</p> <p>Occupied Bandwidth <b>17.850 MHz</b></p> <p>Total Power 16.2 dBm</p> <p>Transmit Freq Error 9.466 kHz</p> <p>x dB Bandwidth 21.15 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -26.00 dB</p>



Mode 3: IEEE 802.11n 5GHz 20MHz Continuous TX mode_ ANT-0	
5260 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.26000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.26 GHz #Res BW 300 kHz</p> <p>Span 25 MHz Sweep 1 ms</p> <p>Occupied Bandwidth <b>17.849 MHz</b></p> <p>Total Power 15.6 dBm</p> <p>Transmit Freq Error 8.255 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 20.45 MHz</p> <p>x dB -26.00 dB</p>
5280 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.28000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.28 GHz #Res BW 300 kHz</p> <p>Span 25 MHz Sweep 1 ms</p> <p>Occupied Bandwidth <b>17.868 MHz</b></p> <p>Total Power 15.9 dBm</p> <p>Transmit Freq Error 960 Hz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 20.28 MHz</p> <p>x dB -26.00 dB</p>
5320 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.32000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.32 GHz #Res BW 300 kHz</p> <p>Span 25 MHz Sweep 1 ms</p> <p>Occupied Bandwidth <b>17.900 MHz</b></p> <p>Total Power 16.2 dBm</p> <p>Transmit Freq Error 6.702 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 20.38 MHz</p> <p>x dB -26.00 dB</p>



Mode 3: IEEE 802.11n 5GHz 20MHz Continuous TX mode_ ANT-0																			
5500 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.500000000 GHz          Trig: Free Run AvgHold: &gt;10/10          Radio Std: None          Radio Device: BTS</p> <p>Ref Offset 11.8 dB          Ref 21.80 dBm</p> <p>Center 5.5 GHz          #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>14.9 dBm</td> </tr> <tr> <td><b>17.888 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>7.514 kHz</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>20.45 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	14.9 dBm	<b>17.888 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	7.514 kHz	x dB	-26.00 dB	x dB Bandwidth			20.45 MHz		
Occupied Bandwidth	Total Power	14.9 dBm																	
<b>17.888 MHz</b>																			
Transmit Freq Error	OBW Power	99.00 %																	
7.514 kHz	x dB	-26.00 dB																	
x dB Bandwidth																			
20.45 MHz																			
5560 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.560000000 GHz          Trig: Free Run AvgHold: &gt;10/10          Radio Std: None          Radio Device: BTS</p> <p>Ref Offset 11.8 dB          Ref 21.80 dBm</p> <p>Center 5.56 GHz          #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>15.5 dBm</td> </tr> <tr> <td><b>17.902 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>21.008 kHz</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>20.52 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	15.5 dBm	<b>17.902 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	21.008 kHz	x dB	-26.00 dB	x dB Bandwidth			20.52 MHz		
Occupied Bandwidth	Total Power	15.5 dBm																	
<b>17.902 MHz</b>																			
Transmit Freq Error	OBW Power	99.00 %																	
21.008 kHz	x dB	-26.00 dB																	
x dB Bandwidth																			
20.52 MHz																			
5700 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.700000000 GHz          Trig: Free Run AvgHold: &gt;10/10          Radio Std: None          Radio Device: BTS</p> <p>Ref Offset 11.8 dB          Ref 21.80 dBm</p> <p>Center 5.7 GHz          #Res BW 300 kHz #VBW 1 MHz Span 25 MHz Sweep 1 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>15.5 dBm</td> </tr> <tr> <td><b>17.900 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>625 Hz</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>20.68 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	15.5 dBm	<b>17.900 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	625 Hz	x dB	-26.00 dB	x dB Bandwidth			20.68 MHz		
Occupied Bandwidth	Total Power	15.5 dBm																	
<b>17.900 MHz</b>																			
Transmit Freq Error	OBW Power	99.00 %																	
625 Hz	x dB	-26.00 dB																	
x dB Bandwidth																			
20.68 MHz																			





Mode 4: IEEE 802.11n 5GHz 40MHz Continuous TX mode_ ANT-0	
5270 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.27000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.27 GHz #Res BW 1 MHz</p> <p>Occupied Bandwidth <b>36.587 MHz</b></p> <p>Total Power 17.0 dBm</p> <p>Transmit Freq Error 11.639 kHz</p> <p>x dB Bandwidth 49.27 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -26.00 dB</p>
5310 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.31000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.31 GHz #Res BW 1 MHz</p> <p>Occupied Bandwidth <b>36.629 MHz</b></p> <p>Total Power 16.8 dBm</p> <p>Transmit Freq Error -11.457 kHz</p> <p>x dB Bandwidth 49.22 MHz</p> <p>OBW Power 99.00 %</p> <p>x dB -26.00 dB</p>





Mode 4: IEEE 802.11n 5GHz 40MHz Continuous TX mode_ ANT-0	
5510 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.510000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.51 GHz #Res BW 1 MHz</p> <p>Span 50 MHz #VBW 3 MHz Sweep 1 ms</p> <p>Occupied Bandwidth <b>36.660 MHz</b></p> <p>Total Power 16.2 dBm</p> <p>Transmit Freq Error 38.553 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 41.48 MHz</p> <p>x dB -26.00 dB</p>
5550 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.550000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.55 GHz #Res BW 1 MHz</p> <p>Span 50 MHz #VBW 3 MHz Sweep 1 ms</p> <p>Occupied Bandwidth <b>36.634 MHz</b></p> <p>Total Power 16.5 dBm</p> <p>Transmit Freq Error -4.524 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 41.47 MHz</p> <p>x dB -26.00 dB</p>
5670 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.670000000 GHz</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.67 GHz #Res BW 1 MHz</p> <p>Span 50 MHz #VBW 3 MHz Sweep 1 ms</p> <p>Occupied Bandwidth <b>36.630 MHz</b></p> <p>Total Power 16.4 dBm</p> <p>Transmit Freq Error -49.158 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 47.82 MHz</p> <p>x dB -26.00 dB</p>

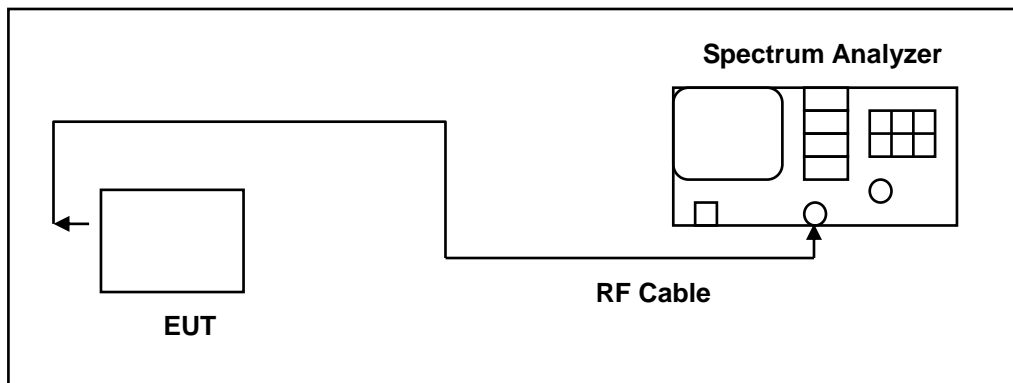
#### 4.4. 6dB RF Bandwidth Measurement

##### ■ 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	
5745	16380	> 500
5785	16340	> 500
5825	16430	> 500

Test Item	6dB RF Bandwidth	
Test Mode	Mode 3: IEEE 802.11n 5GHz 20MHz Continuous TX mode	
Frequency (MHz)	6dB Bandwidth (kHz)	Limit (kHz)
	ANT-0	
5745	17610	> 500
5785	17620	> 500
5825	17610	> 500

Test Item	6dB RF Bandwidth	
Test Mode	Mode 4: IEEE 802.11n 5GHz 40MHz Continuous TX mode	
Frequency (MHz)	6dB Bandwidth (kHz)	Limit (kHz)
	ANT-0	
5755	36370	> 500
5795	36360	> 500



■ Test Graphs

Mode 2: IEEE 802.11a Continuous TX mode_ANT-0																			
5745 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.74500000 GHz Trig: Free Run #IFGain: Low #Atten: 20 dB</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center: 5.745 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 30 MHz Sweep: 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>19.3 dBm</td> </tr> <tr> <td><b>16.490 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-21.198 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>16.38 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	19.3 dBm	<b>16.490 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	-21.198 kHz	x dB	-6.00 dB	x dB Bandwidth			16.38 MHz		
Occupied Bandwidth	Total Power	19.3 dBm																	
<b>16.490 MHz</b>																			
Transmit Freq Error	OBW Power	99.00 %																	
-21.198 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
16.38 MHz																			
5785 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.78500000 GHz Trig: Free Run #IFGain: Low #Atten: 20 dB</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center: 5.785 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 30 MHz Sweep: 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>21.5 dBm</td> </tr> <tr> <td><b>16.964 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-20.689 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>16.34 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	21.5 dBm	<b>16.964 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	-20.689 kHz	x dB	-6.00 dB	x dB Bandwidth			16.34 MHz		
Occupied Bandwidth	Total Power	21.5 dBm																	
<b>16.964 MHz</b>																			
Transmit Freq Error	OBW Power	99.00 %																	
-20.689 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
16.34 MHz																			
5825 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.82500000 GHz Trig: Free Run #IFGain: Low #Atten: 20 dB</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center: 5.825 GHz #Res BW: 100 kHz #VBW: 300 kHz Span: 30 MHz Sweep: 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>18.7 dBm</td> </tr> <tr> <td><b>16.535 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-36.367 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>16.43 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	18.7 dBm	<b>16.535 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	-36.367 kHz	x dB	-6.00 dB	x dB Bandwidth			16.43 MHz		
Occupied Bandwidth	Total Power	18.7 dBm																	
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Transmit Freq Error	OBW Power	99.00 %																	
-36.367 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
16.43 MHz																			



Mode 3: IEEE 802.11n 5GHz 20MHz Continuous TX mode_ANT-0																			
5745 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.74500000 GHz Trig: Free Run #IFGain: Low #Atten: 20 dB</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.745 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>17.5 dBm</td> </tr> <tr> <td><b>17.690 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-18.565 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>17.61 MHz</td> <td></td> <td></td> </tr> </table> <p>Center Freq: 5.74500000 GHz CF Step: 3.000000 MHz Freq Offset: 0 Hz</p>	Occupied Bandwidth	Total Power	17.5 dBm	<b>17.690 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	-18.565 kHz	x dB	-6.00 dB	x dB Bandwidth			17.61 MHz		
Occupied Bandwidth	Total Power	17.5 dBm																	
<b>17.690 MHz</b>																			
Transmit Freq Error	OBW Power	99.00 %																	
-18.565 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
17.61 MHz																			
5785 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.78500000 GHz Trig: Free Run #IFGain: Low #Atten: 20 dB</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.785 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>17.4 dBm</td> </tr> <tr> <td><b>17.698 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-19.725 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>17.62 MHz</td> <td></td> <td></td> </tr> </table> <p>Center Freq: 5.78500000 GHz CF Step: 3.000000 MHz Freq Offset: 0 Hz</p>	Occupied Bandwidth	Total Power	17.4 dBm	<b>17.698 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	-19.725 kHz	x dB	-6.00 dB	x dB Bandwidth			17.62 MHz		
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Transmit Freq Error	OBW Power	99.00 %																	
-19.725 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
17.62 MHz																			
5825 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.82500000 GHz Trig: Free Run #IFGain: Low #Atten: 20 dB</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Center 5.825 GHz #Res BW 100 kHz #VBW 300 kHz Span 30 MHz Sweep 2.933 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>17.3 dBm</td> </tr> <tr> <td><b>17.697 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-30.462 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>17.61 MHz</td> <td></td> <td></td> </tr> </table> <p>Center Freq: 5.82500000 GHz CF Step: 3.000000 MHz Freq Offset: 0 Hz</p>	Occupied Bandwidth	Total Power	17.3 dBm	<b>17.697 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	-30.462 kHz	x dB	-6.00 dB	x dB Bandwidth			17.61 MHz		
Occupied Bandwidth	Total Power	17.3 dBm																	
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Transmit Freq Error	OBW Power	99.00 %																	
-30.462 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
17.61 MHz																			



Mode 4: IEEE 802.11n 5GHz 40MHz Continuous TX mode_ANT-0																			
5755 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.755000000 GHz        Trig: Free Run Avg/Hold: 10/10        #IFGain: Low #Atten: 20 dB        Radio Std: None        Radio Device: BTS</p> <p>Ref Offset 11.8 dB        Ref 21.80 dBm</p> <p>Center: 5.755 GHz #Res BW 100 kHz #VBW 300 kHz Span 50 MHz Sweep 4.8 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>17.9 dBm</td> </tr> <tr> <td><b>36.211 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-15.092 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>36.37 MHz</td> <td></td> <td></td> </tr> </table> <p>Center Freq: 5.75500000 GHz        CF Step: 5.000000 MHz        Freq Offset: 0 Hz</p>	Occupied Bandwidth	Total Power	17.9 dBm	<b>36.211 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	-15.092 kHz	x dB	-6.00 dB	x dB Bandwidth			36.37 MHz		
Occupied Bandwidth	Total Power	17.9 dBm																	
<b>36.211 MHz</b>																			
Transmit Freq Error	OBW Power	99.00 %																	
-15.092 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
36.37 MHz																			
5795 MHz	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 5.795000000 GHz        Trig: Free Run Avg/Hold: 10/10        #IFGain: Low #Atten: 20 dB        Radio Std: None        Radio Device: BTS</p> <p>Ref Offset 11.8 dB        Ref 21.80 dBm</p> <p>Center: 5.795 GHz #Res BW 100 kHz #VBW 300 kHz Span 50 MHz Sweep 4.8 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>17.4 dBm</td> </tr> <tr> <td><b>36.210 MHz</b></td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-27.711 kHz</td> <td>x dB</td> <td>-6.00 dB</td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td></td> </tr> <tr> <td>36.36 MHz</td> <td></td> <td></td> </tr> </table> <p>Center Freq: 5.795000000 GHz        CF Step: 5.000000 MHz        Freq Offset: 0 Hz</p>	Occupied Bandwidth	Total Power	17.4 dBm	<b>36.210 MHz</b>			Transmit Freq Error	OBW Power	99.00 %	-27.711 kHz	x dB	-6.00 dB	x dB Bandwidth			36.36 MHz		
Occupied Bandwidth	Total Power	17.4 dBm																	
<b>36.210 MHz</b>																			
Transmit Freq Error	OBW Power	99.00 %																	
-27.711 kHz	x dB	-6.00 dB																	
x dB Bandwidth																			
36.36 MHz																			

## 4.5. Peak Power Spectral Density Measurement

### ■ Limit

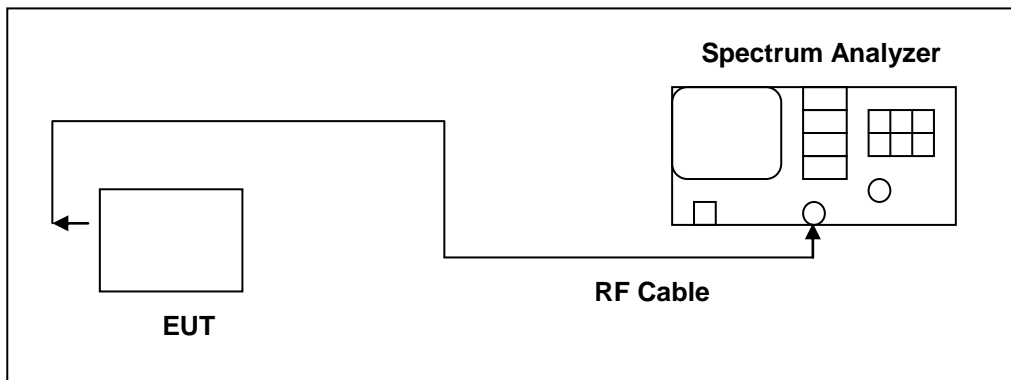
Conducted power spectral density

Frequency Range (MHz)	FCC Limit
	Client
5.150 ~ 5.250 GHz	11 dBm/MHz
5.250 ~ 5.350 GHz	11 dBm/MHz
5.470 ~ 5.725 GHz	11 dBm/MHz
5.725 ~ 5.850 GHz	30 dBm/500KHz

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

\* Diversity mode for ANT-0 : Max. Gain = 6.06 dBi > 6dBi

### ■ Test Setup



### ■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
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**

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	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	1 MHz (5725 ~ 5850MHz use 100 kHz)
VBW	3 MHz (5725 ~ 5850MHz use 300 kHz)
Detector	RMS
Trace	AVERAGE
Sweep Time	Auto
Trace Average	100 times
Note: If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/100\text{kHz})$ to the measured result.	





■ Test Result

Test Item	Conducted power spectral density			
Test Mode	Mode 2: IEEE 802.11a link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	-0.650	0.133	-0.517	< 10.94
5200	-0.512	0.133	-0.379	
5240	1.146	0.133	1.279	
5260	0.829	0.133	0.962	
5280	1.302	0.133	1.435	
5320	1.413	0.133	1.546	
5500	-0.282	0.133	-0.149	
5560	0.293	0.133	0.426	
5700	0.642	0.133	0.775	

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Test Item	Conducted power spectral density			
Test Mode	Mode 2: IEEE 802.11a link mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	-6.74	0.133	0.38	< 29.94
5785	-6.91	0.133	0.21	
5825	-7.08	0.133	0.04	

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10\*Log(500k/100k)



Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11n 5GHz 20MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5180	-2.920	0.142	-2.778	< 10.94
5200	-1.712	0.142	-1.570	
5240	-1.002	0.142	-0.860	
5260	-1.270	0.142	-1.128	
5280	-0.565	0.142	-0.423	
5320	-0.695	0.142	-0.553	
5500	-1.924	0.142	-1.782	
5560	-1.476	0.142	-1.334	
5700	-1.287	0.142	-1.145	

Test Item	Conducted power spectral density			
Test Mode	Mode 3: IEEE 802.11n 5GHz 20MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5745	-8.86	0.142	-1.72	< 29.94
5785	-8.58	0.142	-1.45	
5825	-9.48	0.142	-2.35	

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10\*Log(500k/100k)



Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11n 5GHz 40MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Limit (dBm/MHz)
5190	-6.285	0.310	-5.975	< 10.94
5230	-5.442	0.310	-5.132	
5270	-4.049	0.310	-3.739	
5310	-4.228	0.310	-3.918	
5510	-4.724	0.310	-4.414	
5550	-4.567	0.310	-4.257	
5670	-4.705	0.310	-4.395	

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Test Item	Conducted power spectral density			
Test Mode	Mode 4: IEEE 802.11n 5GHz 40MHz Continuous TX mode			
Frequency (MHz)	ANT-0			
	Measurement (dBm/100KHz)	Duty Factor (dB)	Calculated (dBm/500KHz)	Limit (dBm/500KHz)
5755	-12.06	0.310	-4.76	< 29.94
5795	-11.87	0.310	-4.57	

Note: Method SA-2, Power density = measured result + 10log(1/duty cycle) + Conversion ratio = measured result + duty factor.

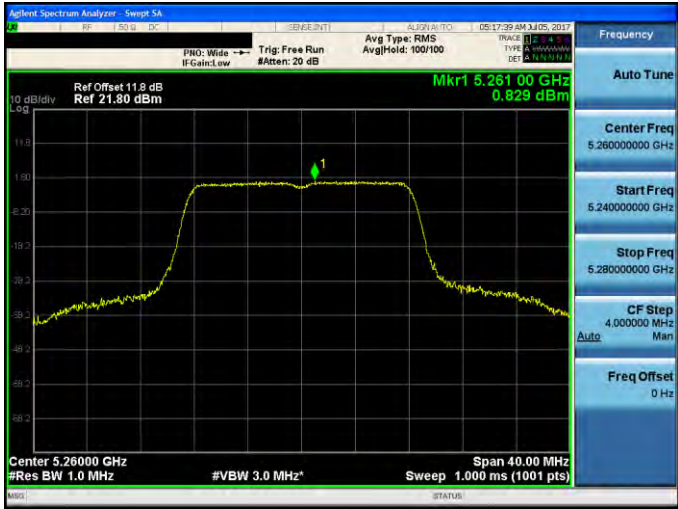
Conversion ratio = 10\*Log(500k/100k)



■ Test Graphs

Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0	
5180 MHz	
5200 MHz	
5240 MHz	



Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0	
5260 MHz	 <p>Agilent Spectrum Analyzer: Swi5p SA Ref Offset 11.8 dB Ref 21.80 dBm Mkr1 5.261 00 GHz 0.829 dBm Center 5.26000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Span 40.00 MHz Sweep 1.000 ms (1001 pts)</p>
5280 MHz	 <p>Agilent Spectrum Analyzer: Swi5p SA Ref Offset 11.8 dB Ref 21.80 dBm Mkr1 5.278 04 GHz 1.302 dBm Center 5.28000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Span 40.00 MHz Sweep 1.000 ms (1001 pts)</p>
5320 MHz	 <p>Agilent Spectrum Analyzer: Swi5p SA Ref Offset 11.8 dB Ref 21.80 dBm Mkr1 5.325 40 GHz 1.413 dBm Center 5.32000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Span 40.00 MHz Sweep 1.000 ms (1001 pts)</p>



Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0	
5500 MHz	<p>Agilent Spectrum Analyzer: Swi5p SA Frequency: 5.50368 GHz Mkr1 5.50368 GHz -0.282 dBm Ref Offset 11.8 dB Ref 21.80 dBm Center 5.50000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 40.00 MHz Sweep 1.000 ms (1001 pts)</p>
5560 MHz	<p>Agilent Spectrum Analyzer: Swi5p SA Frequency: 5.55480 GHz Mkr1 5.55480 GHz 0.293 dBm Ref Offset 11.8 dB Ref 21.80 dBm Center 5.56000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 40.00 MHz Sweep 1.000 ms (1001 pts)</p>
5700 MHz	<p>Agilent Spectrum Analyzer: Swi5p SA Frequency: 5.70376 GHz Mkr1 5.70376 GHz 0.642 dBm Ref Offset 11.8 dB Ref 21.80 dBm Center 5.70000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 40.00 MHz Sweep 1.000 ms (1001 pts)</p>



Mode 2: IEEE 802.11a Continuous TX mode_ ANT-0	
5745 MHz	<p>Agilent Spectrum Analyzer: Sweep SA AL221 A/T/O: 06:59:52 AM 11/05/2017 PNO: Wide IF Gain: Low Trig: Free Run Avg Type: RMS #Atten: 20 dB Avg Hold: 100/100 Mkr1 5.75247 GHz -6.741 dBm Ref Offset 11.8 dB Ref 21.80 dBm 10 dB/div Log Center 5.74500 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz Sweep 3.733 ms (1001 pts) Frequency: Auto Tune Center Freq: 5.74500000 GHz Start Freq: 5.73000000 GHz Stop Freq: 5.76000000 GHz CF Step: 3.000000 MHz (Auto/Man) Freq Offset: 0 Hz</p>
5785 MHz	<p>Agilent Spectrum Analyzer: Sweep SA AL221 A/T/O: 07:00:48 AM 11/05/2017 PNO: Wide IF Gain: Low Trig: Free Run Avg Type: RMS #Atten: 20 dB Avg Hold: 100/100 Mkr1 5.78185 GHz -6.913 dBm Ref Offset 11.8 dB Ref 21.80 dBm 10 dB/div Log Center 5.78500 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz Sweep 3.733 ms (1001 pts) Frequency: Auto Tune Center Freq: 5.78500000 GHz Start Freq: 5.77000000 GHz Stop Freq: 5.80000000 GHz CF Step: 3.000000 MHz (Auto/Man) Freq Offset: 0 Hz</p>
5825 MHz	<p>Agilent Spectrum Analyzer: Sweep SA AL221 A/T/O: 07:02:32 AM 11/05/2017 PNO: Wide IF Gain: Low Trig: Free Run Avg Type: RMS #Atten: 20 dB Avg Hold: 100/100 Mkr1 5.82626 GHz -7.088 dBm Ref Offset 11.8 dB Ref 21.80 dBm 10 dB/div Log Center 5.82500 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz Sweep 3.733 ms (1001 pts) Frequency: Auto Tune Center Freq: 5.82500000 GHz Start Freq: 5.81000000 GHz Stop Freq: 5.84000000 GHz CF Step: 3.000000 MHz (Auto/Man) Freq Offset: 0 Hz</p>



Mode 3: IEEE 802.11n 5GHz 20MHz Continuous TX mode_ ANT-0	
5180 MHz	<p>Agilent Spectrum Analyzer - Swept SA PNO: Wide IF Gain: Low Trig: Free Run #Atten: 20 dB Avg Type: RMS Avg/Hold: 100/100 Ref Offset 11.8 dB Ref 21.80 dBm Mkr1 5.185 24 GHz -2.920 dBm Center 5.180000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 40.00 MHz Sweep 1.000 ms (1001 pts)</p>
5200 MHz	<p>Agilent Spectrum Analyzer - Swept SA PNO: Wide IF Gain: Low Trig: Free Run #Atten: 20 dB Avg Type: RMS Avg/Hold: 100/100 Ref Offset 11.8 dB Ref 21.80 dBm Mkr1 5.203 40 GHz -1.712 dBm Center 5.200000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 40.00 MHz Sweep 1.000 ms (1001 pts)</p>
5240 MHz	<p>Agilent Spectrum Analyzer - Swept SA PNO: Wide IF Gain: Low Trig: Free Run #Atten: 20 dB Avg Type: RMS Avg/Hold: 100/100 Ref Offset 11.8 dB Ref 21.80 dBm Mkr1 5.244 72 GHz -1.002 dBm Center 5.240000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Span 40.00 MHz Sweep 1.000 ms (1001 pts)</p>





Mode 3: IEEE 802.11n 5GHz 20MHz Continuous TX mode_ ANT-0	
5260 MHz	<p>Agilent Spectrum Analyzer: Swiqt SA Frequency: 5.26000000 GHz Center Freq: 5.26000000 GHz Start Freq: 5.24000000 GHz Stop Freq: 5.28000000 GHz CF Step: 4.000000 MHz Freq Offset: 0 Hz Mkr1 5.26136 GHz -1.270 dBm Ref Offset 11.8 dB Ref 21.80 dBm Center 5.26000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Span 40.00 MHz Sweep 1.000 ms (1001 pts)</p>
5280 MHz	<p>Agilent Spectrum Analyzer: Swiqt SA Frequency: 5.28000000 GHz Center Freq: 5.28000000 GHz Start Freq: 5.26000000 GHz Stop Freq: 5.30000000 GHz CF Step: 4.000000 MHz Freq Offset: 0 Hz Mkr1 5.28184 GHz -0.565 dBm Ref Offset 11.8 dB Ref 21.80 dBm Center 5.28000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Span 40.00 MHz Sweep 1.000 ms (1001 pts)</p>
5320 MHz	<p>Agilent Spectrum Analyzer: Swiqt SA Frequency: 5.32000000 GHz Center Freq: 5.32000000 GHz Start Freq: 5.30000000 GHz Stop Freq: 5.34000000 GHz CF Step: 4.000000 MHz Freq Offset: 0 Hz Mkr1 5.31632 GHz -0.695 dBm Ref Offset 11.8 dB Ref 21.80 dBm Center 5.32000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Span 40.00 MHz Sweep 1.000 ms (1001 pts)</p>

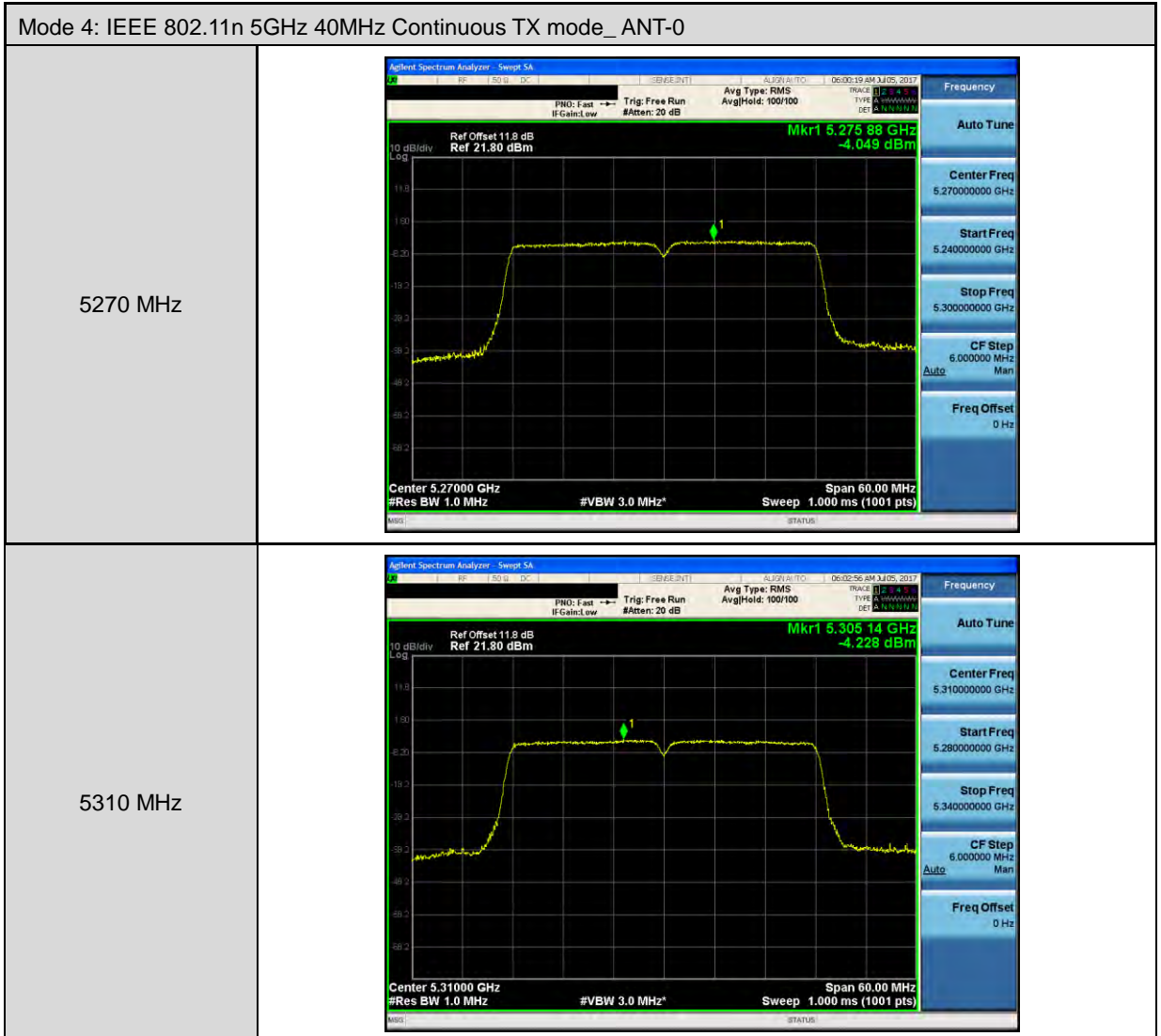


Mode 3: IEEE 802.11n 5GHz 20MHz Continuous TX mode_ ANT-0	
5500 MHz	 <p>Agilent Spectrum Analyzer - Swi5p1 SA</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Mkr1 5.504 48 GHz -1.924 dBm</p> <p>Center 5.50000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts)</p> <p>Span 40.00 MHz</p> <p>Frequency: Auto Tune Center Freq: 5.50000000 GHz Start Freq: 5.48000000 GHz Stop Freq: 5.52000000 GHz CF Step: 4.000000 MHz Freq Offset: 0 Hz</p>
5560 MHz	 <p>Agilent Spectrum Analyzer - Swi5p1 SA</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Mkr1 5.556 48 GHz -1.476 dBm</p> <p>Center 5.56000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts)</p> <p>Span 40.00 MHz</p> <p>Frequency: Auto Tune Center Freq: 5.56000000 GHz Start Freq: 5.54000000 GHz Stop Freq: 5.58000000 GHz CF Step: 4.000000 MHz Freq Offset: 0 Hz</p>
5700 MHz	 <p>Agilent Spectrum Analyzer - Swi5p1 SA</p> <p>Ref Offset 11.8 dB Ref 21.80 dBm</p> <p>Mkr1 5.707 48 GHz -1.287 dBm</p> <p>Center 5.70000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts)</p> <p>Span 40.00 MHz</p> <p>Frequency: Auto Tune Center Freq: 5.70000000 GHz Start Freq: 5.68000000 GHz Stop Freq: 5.72000000 GHz CF Step: 4.000000 MHz Freq Offset: 0 Hz</p>



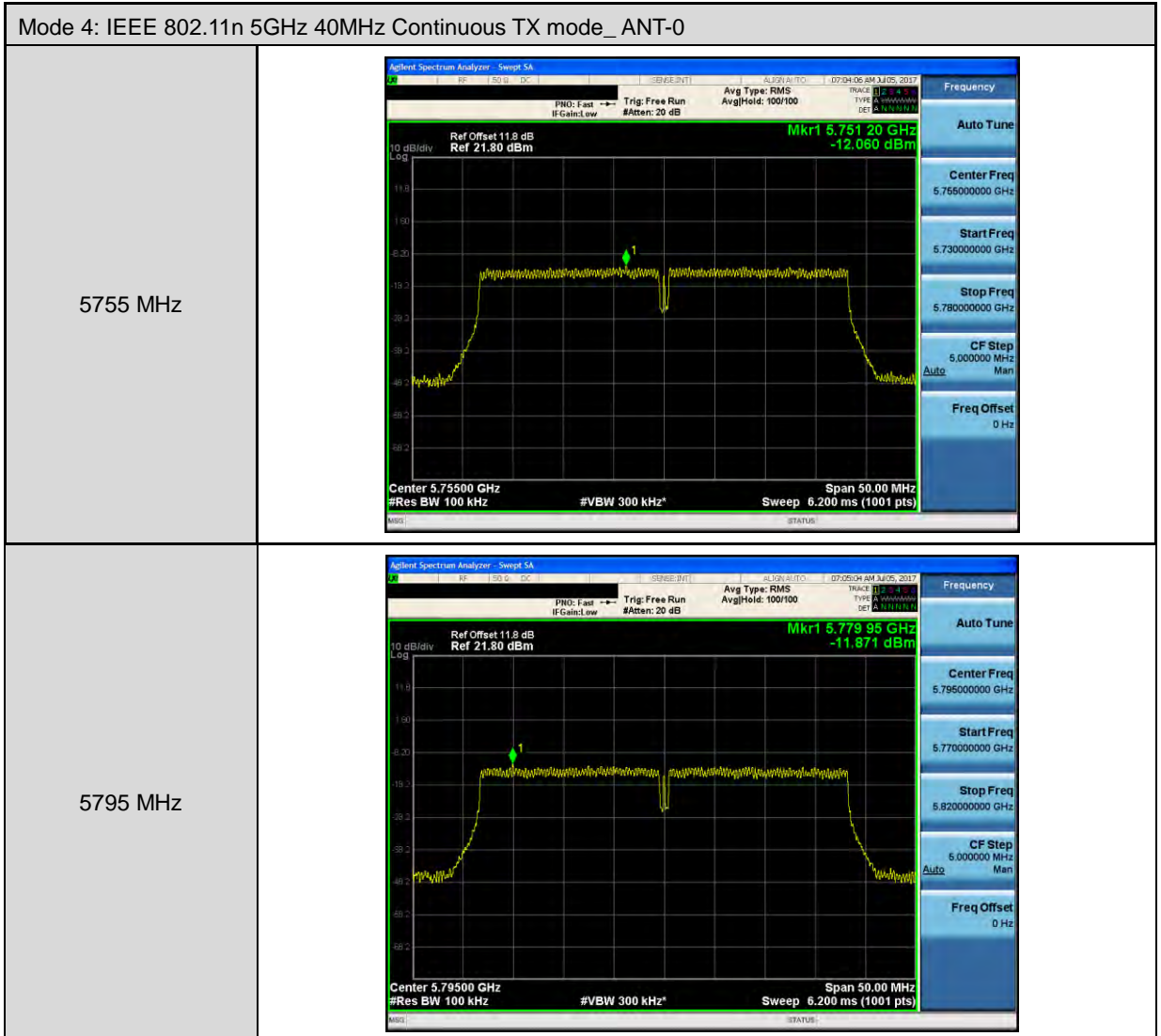
Mode 3: IEEE 802.11n 5GHz 20MHz Continuous TX mode_ ANT-0	
5745 MHz	<p>Agilent Spectrum Analyzer - Swi5p1 SA Ref Offset 11.8 dB Ref 21.80 dBm Mkr1 5.748 75 GHz -8.856 dBm Center 5.74500 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz Sweep 3.733 ms (1001 pts)</p>
5785 MHz	<p>Agilent Spectrum Analyzer - Swi5p1 SA Ref Offset 11.8 dB Ref 21.80 dBm Mkr1 5.779 36 GHz -8.581 dBm Center 5.78500 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz Sweep 3.733 ms (1001 pts)</p>
5825 MHz	<p>Agilent Spectrum Analyzer - Swi5p1 SA Ref Offset 11.8 dB Ref 21.80 dBm Mkr1 5.821 25 GHz -9.482 dBm Center 5.82500 GHz #Res BW 100 kHz #VBW 300 kHz* Span 30.00 MHz Sweep 3.733 ms (1001 pts)</p>







Mode 4: IEEE 802.11n 5GHz 40MHz Continuous TX mode_ ANT-0	
5510 MHz	 <p>Agilent Spectrum Analyzer: Swiqt SA Frequency: 5.51000000 GHz Center Freq: 5.51000000 GHz Start Freq: 5.48000000 GHz Stop Freq: 5.54000000 GHz CF Step: 6.000000 MHz Freq Offset: 0 Hz Mkr1 5.515 40 GHz -4.724 dBm Ref Offset 11.8 dB Ref 21.80 dBm Center 5.51000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Span 60.00 MHz Sweep 1.000 ms (1001 pts)</p>
5550 MHz	 <p>Agilent Spectrum Analyzer: Swiqt SA Frequency: 5.55000000 GHz Center Freq: 5.55000000 GHz Start Freq: 5.52000000 GHz Stop Freq: 5.58000000 GHz CF Step: 6.000000 MHz Freq Offset: 0 Hz Mkr1 5.547 66 GHz -4.567 dBm Ref Offset 11.8 dB Ref 21.80 dBm Center 5.55000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Span 60.00 MHz Sweep 1.000 ms (1001 pts)</p>
5670 MHz	 <p>Agilent Spectrum Analyzer: Swiqt SA Frequency: 5.67000000 GHz Center Freq: 5.67000000 GHz Start Freq: 5.64000000 GHz Stop Freq: 5.70000000 GHz CF Step: 6.000000 MHz Freq Offset: 0 Hz Mkr1 5.665 56 GHz -4.705 dBm Ref Offset 11.8 dB Ref 21.80 dBm Center 5.67000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz* Span 60.00 MHz Sweep 1.000 ms (1001 pts)</p>

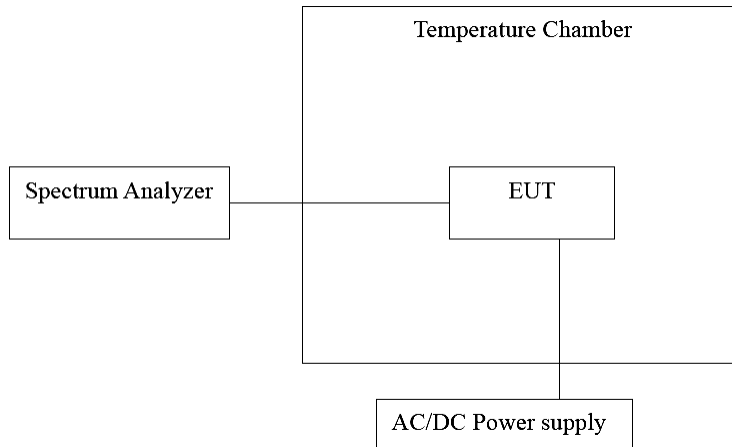


## 4.6. Frequency Stability Measurement

### ■ Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

### ■ Test Setup



### ■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4408B	MY45107753	08/08/2016	1 year
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	04/17/2017	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

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

### ■ Test Procedure

1. The EUT was placed inside the environmental test chamber and powered by nominal AC/DC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.





■ Test Result

Temperature Variations

Test Item	Frequency Stability					
Frequency	Temp. (°C)	Voltage (Vac)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	0	5	5200.0200	20000	3.846	Pass
	10		5199.9920	-8000	-1.538	Pass
	20		5199.9880	-12000	-2.308	Pass
	30		5199.9850	-15000	-2.885	Pass
	40		5199.9820	-18000	-3.462	Pass
5280 MHz	0	5	5280.0210	21000	3.977	Pass
	10		5280.0160	16000	3.030	Pass
	20		5279.9950	-5000	-0.947	Pass
	30		5279.9930	-7000	-1.326	Pass
	40		5279.9890	-11000	-2.083	Pass
5560 MHz	0	5	5560.0230	23000	4.137	Pass
	10		5560.0170	17000	3.058	Pass
	20		5559.9940	-6000	-1.079	Pass
	30		5559.9930	-7000	-1.259	Pass
	40		5559.9900	-10000	-1.799	Pass
5785 MHz	0	5	5785.0210	21000	3.630	Pass
	10		5785.0020	2000	0.346	Pass
	20		5784.9910	-9000	-1.556	Pass
	30		5784.9830	-17000	-2.939	Pass
	40		5784.9750	-25000	-4.322	Pass

Note: The manufacturer's frequency stability specification is better than 20ppm.

**Voltage Variations**

Test Item	Frequency Stability					
Frequency	Temp. (°C)	Voltage (Vdc)	Measured Freq. (MHz)	Delta Freq. (Hz)	Tolerance (ppm)	Result (Pass/Fail)
5200 MHz	20	5.75	5199.9920	-8000	-1.538	Pass
		5.00	5199.9980	-2000	-0.385	Pass
		4.25	5199.9997	-300	-0.058	Pass
5280 MHz	20	5.75	5279.9935	-6500	-1.231	Pass
		5.00	5279.9950	-5000	-0.947	Pass
		4.25	5280.0010	1000	0.189	Pass
5560 MHz	20	5.75	5559.9830	-17000	-3.058	Pass
		5.00	5559.9940	-6000	-1.079	Pass
		4.25	5560.0010	1000	0.180	Pass
5785 MHz	20	5.75	5784.9850	-15000	-2.593	Pass
		5.00	5784.9910	-9000	-1.556	Pass
		4.25	5785.0020	2000	0.346	Pass

Note: The manufacturer's frequency stability specification is better than 20ppm.



## 4.7. Antenna Requirement

### ■ Limit

For intentional device, according to 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And According to 15.407 (a), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### ■ Antenna Connector Construction

See section 2 – antenna information.