

Test Mode:	802.11ac-VHT80	Test Site:	AC1
Test Channel:	42	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	7115.8	35.3	7.6	42.9	68.2	-25.3	Peak	Horizontal
	8339.4	34.8	8.0	42.8	74.0	-31.2	Peak	Horizontal
*	9974.6	33.4	11.4	44.8	68.2	-23.4	Peak	Horizontal
	13348.2	35.3	13.5	48.8	74.0	-25.2	Peak	Horizontal
*	6992.4	34.7	6.8	41.5	68.2	-26.7	Peak	Vertical
*	8979.3	33.6	9.0	42.6	68.2	-25.6	Peak	Vertical
	11038.5	35.9	12.9	48.8	74.0	-25.2	Peak	Vertical
	13369.5	35.8	13.7	49.5	74.0	-24.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Test Mode:	802.11ac-VHT80	Test Site:	AC1
Test Channel:	155	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	6694.5	34.8	5.8	40.6	68.2	-27.6	Peak	Horizontal
	9147.6	34.5	9.8	44.3	74.0	-29.7	Peak	Horizontal
	11550.0	34.5	12.7	47.2	54.0	-6.8	Average	Horizontal
	11574.0	44.9	12.6	57.5	74.0	-16.5	Peak	Horizontal
*	17320.0	38.8	16.7	55.5	68.2	-12.7	Peak	Horizontal
*	7006.9	34.5	6.9	41.4	68.2	-26.8	Peak	Vertical
	9114.7	34.5	9.5	44.0	74.0	-30.0	Peak	Vertical
	11548.5	45.0	12.7	57.7	74.0	-16.3	Peak	Vertical
	11550.3	33.3	12.7	46.0	54.0	-8.0	Average	Vertical
*	17320.0	44.9	16.7	61.6	68.2	-6.6	Peak	Vertical

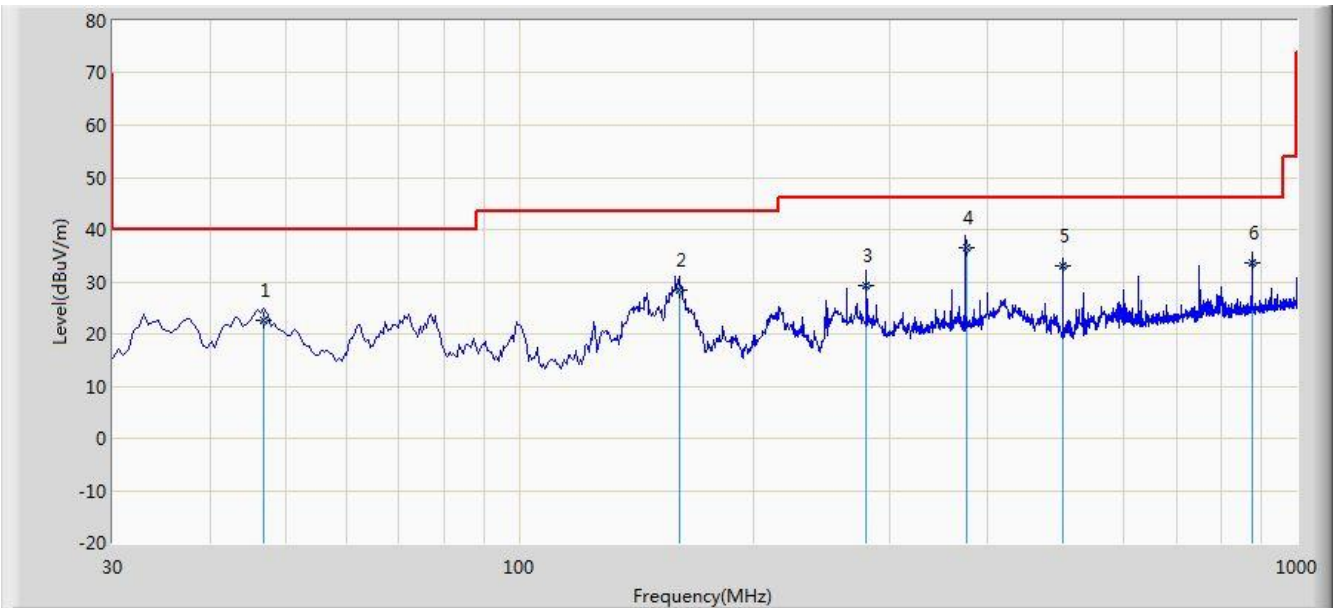
Note 1: “*” is not in restricted band, its limit is -27dBm/MHz or -17dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The worst case of Radiated Emission below 1GHz:

Site: AC1	Time: 2016/12/19 - 17:14
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: VULB 9168 _20-2000MHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Note: There is the worst case within frequency range 30MHz~1GHz.	

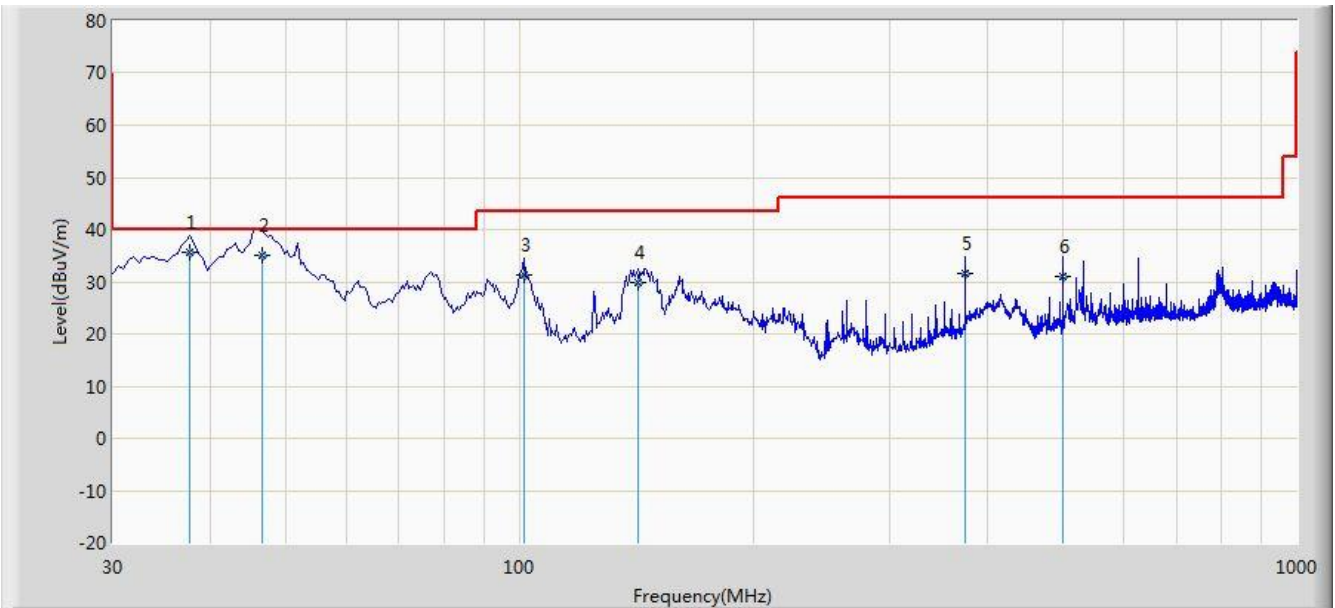


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			46.975	22.663	8.534	-17.337	40.000	14.129	QP
2			160.465	28.390	13.254	-15.110	43.500	15.136	QP
3			279.775	29.212	15.410	-16.788	46.000	13.802	QP
4		*	375.835	36.446	20.424	-9.554	46.000	16.022	QP
5			499.965	33.006	14.524	-12.994	46.000	18.482	QP
6			875.355	33.534	9.524	-12.466	46.000	24.010	QP

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/12/19 - 17:17
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: VULB 9168 _20-2000MHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Note: There is the worst case within frequency range 30MHz~1GHz.	

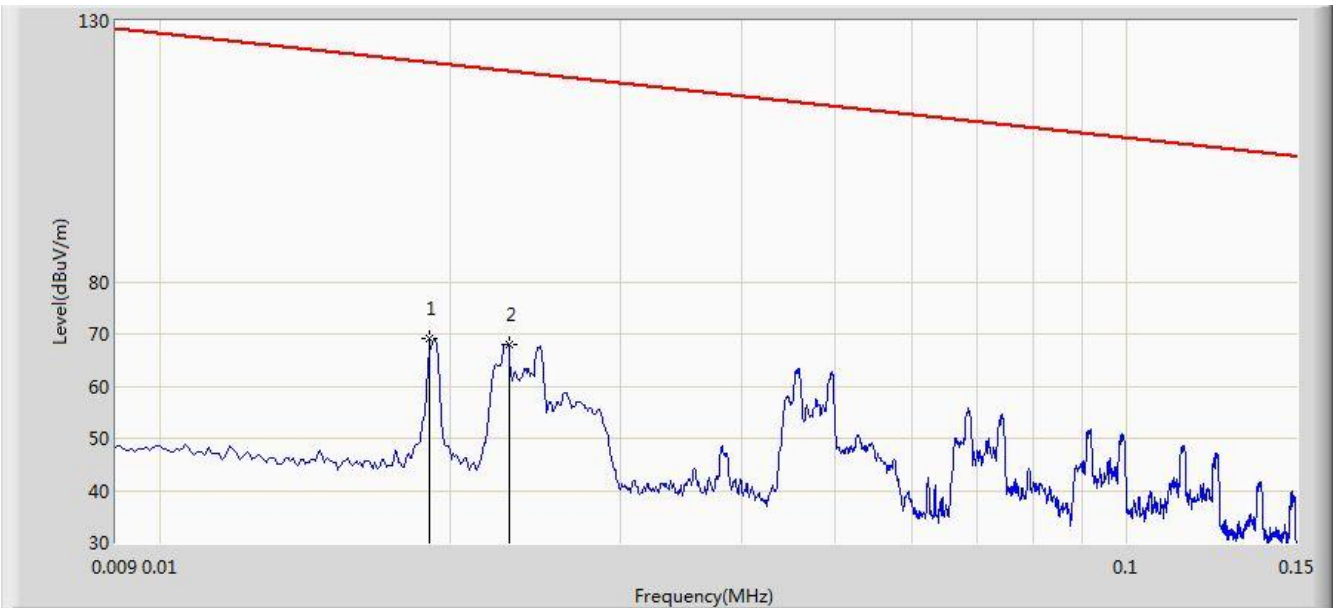


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	37.760	35.755	21.524	-4.245	40.000	14.231	QP
2			46.640	34.935	20.800	-5.065	40.000	14.135	QP
3			101.295	31.317	20.224	-12.183	43.500	11.093	QP
4			142.035	29.868	15.240	-13.632	43.500	14.628	QP
5			374.835	31.524	15.524	-14.476	46.000	16.000	QP
6			499.965	31.006	12.524	-14.994	46.000	18.482	QP

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/12/19 - 18:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: FMZB1519_0.009-30MHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Note: There is the worst test data within frequency range 9kHz~30MHz.	

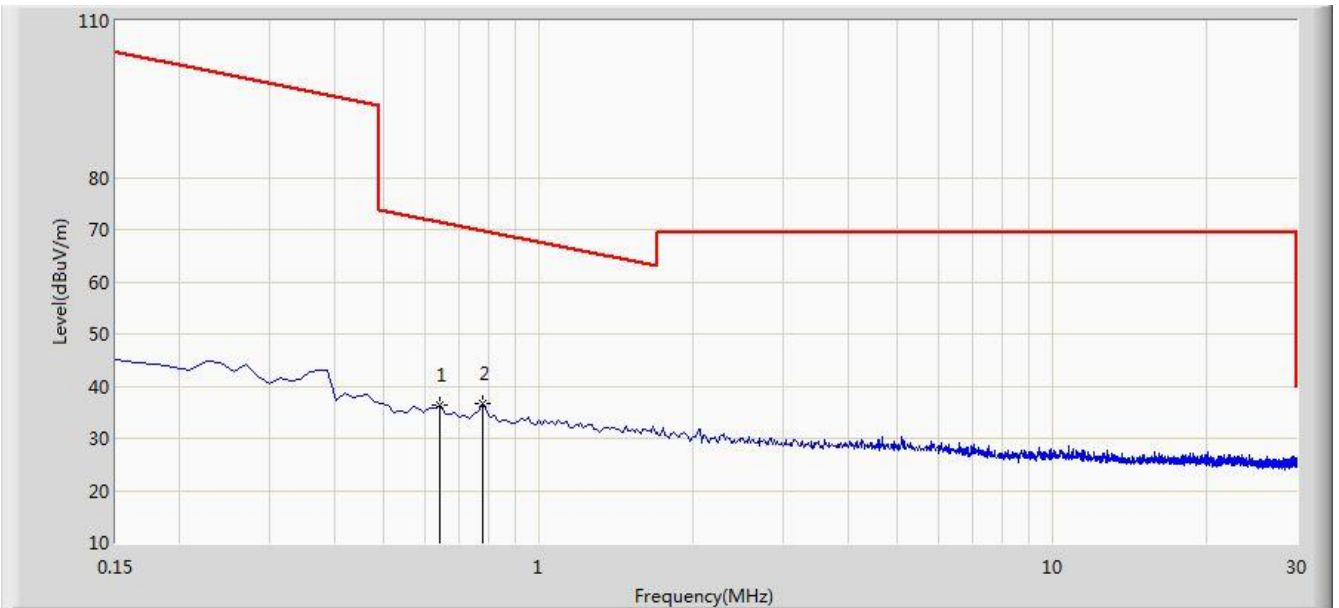


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			0.019	68.998	47.704	-53.016	122.013	21.294	PK
2		*	0.023	68.056	46.860	-52.299	120.355	21.196	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/12/19 - 18:38
Limit: FCC_Part15.209_RE(3m)	Engineer: Jone Zhang
Probe: FMZB1519_0.009-30MHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Note: There is the worst test data within frequency range 9kHz~30MHz.	

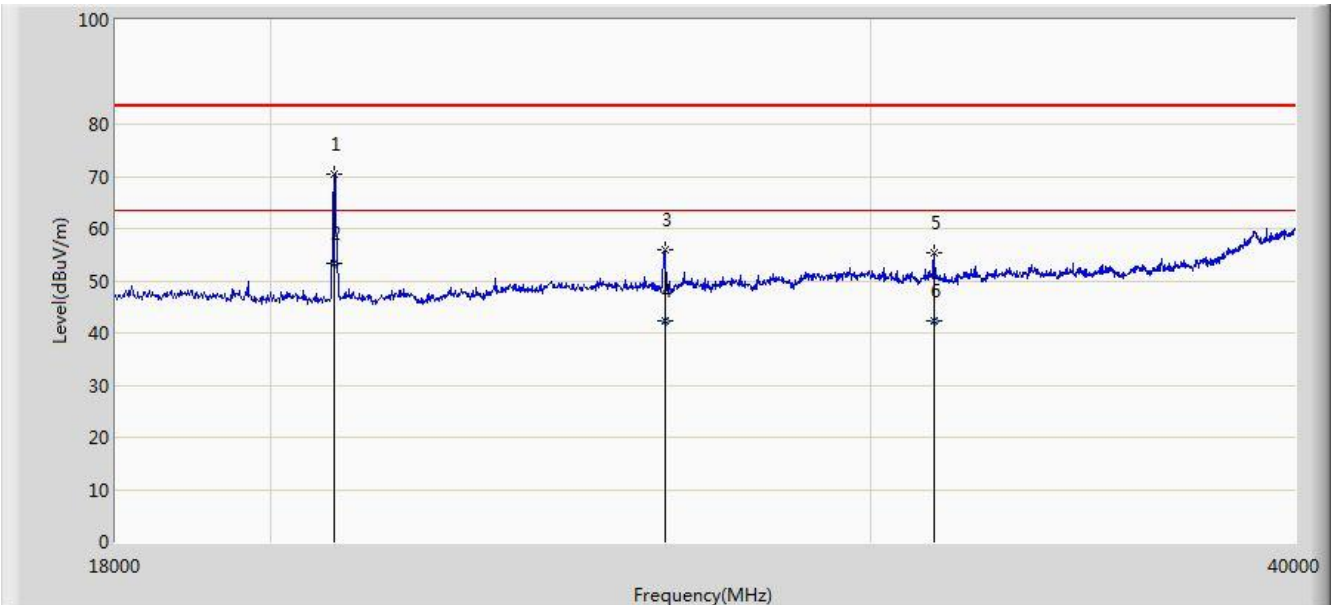


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			0.643	36.473	15.943	-34.974	71.446	20.529	PK
2		*	0.777	36.644	16.076	-33.163	69.807	20.568	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/12/11 - 17:57
Limit: FCC_Part15.407_RE(1m)	Engineer: Jone Zhang
Probe: BBHA9170_18-40GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Note: There is the worst data within frequency range 18GHz~40GHz.	

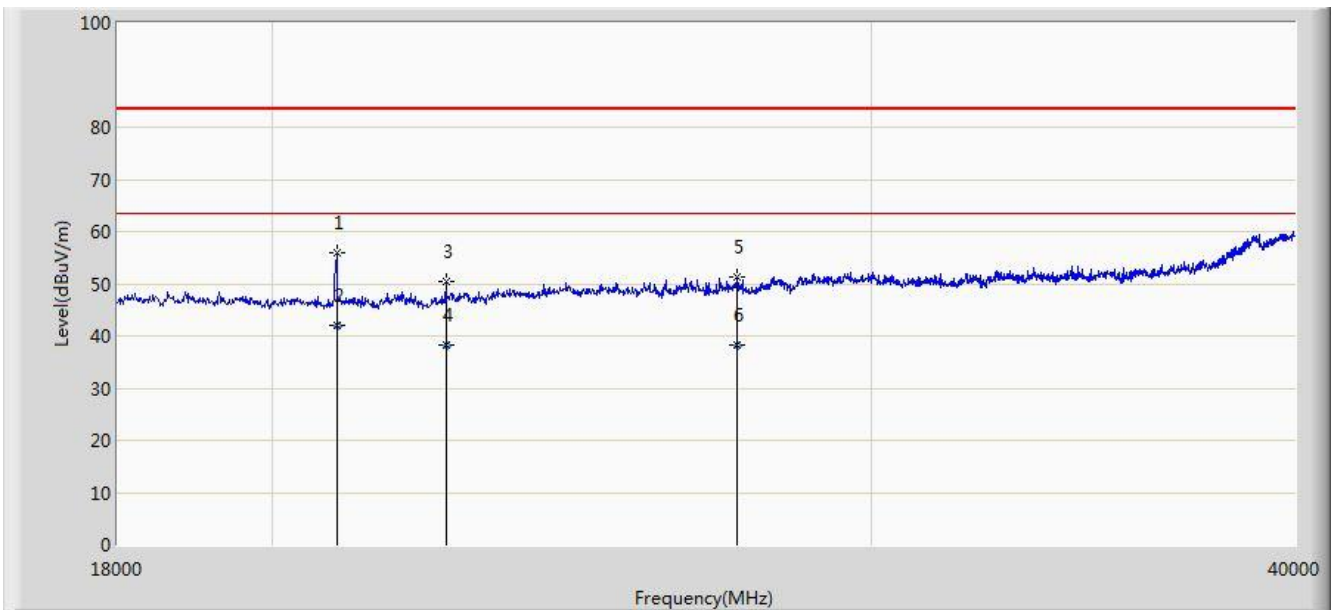


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			20871.000	70.567	62.902	-12.933	83.500	7.665	PK
2		*	20871.800	53.444	45.780	-10.056	63.500	7.664	AV
3			26107.000	56.031	44.993	-27.469	83.500	11.038	PK
4			26107.291	42.332	31.293	-21.168	63.500	11.038	AV
5			31321.000	55.256	42.847	-28.244	83.500	12.408	PK
6			31321.232	42.458	30.049	-21.042	63.500	12.409	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Site: AC1	Time: 2016/12/11 - 17:57
Limit: FCC_Part15.407_RE(1m)	Engineer: Jone Zhang
Probe: BBHA9170_18-40GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Note: There is the worst data within frequency range 18GHz~40GHz.	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			20893.000	55.864	48.237	-27.636	83.500	7.627	PK
2		*	20893.120	41.919	34.292	-21.581	63.500	7.627	AV
3			22499.000	50.500	42.364	-33.000	83.500	8.136	PK
4			22499.102	38.156	30.019	-25.344	63.500	8.137	AV
5			27416.000	51.269	39.393	-32.231	83.500	11.876	PK
6			27416.129	38.269	26.393	-25.231	63.500	11.876	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Limit@1m = 20*Log(500uV/m) + 20*Log(3m/1m) = 63.5dBμV/m (Average detector), and 83.5dBμV/m (Peak detector).

7.9. Radiated Restricted Band Edge Measurement

7.9.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.25 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41	--	--	--

For 15.407(b) requirement:

For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

Refer to KDB 789033 D02v01r03 G2)c), as specified in § 15.407(b), emissions above 1000 MHz

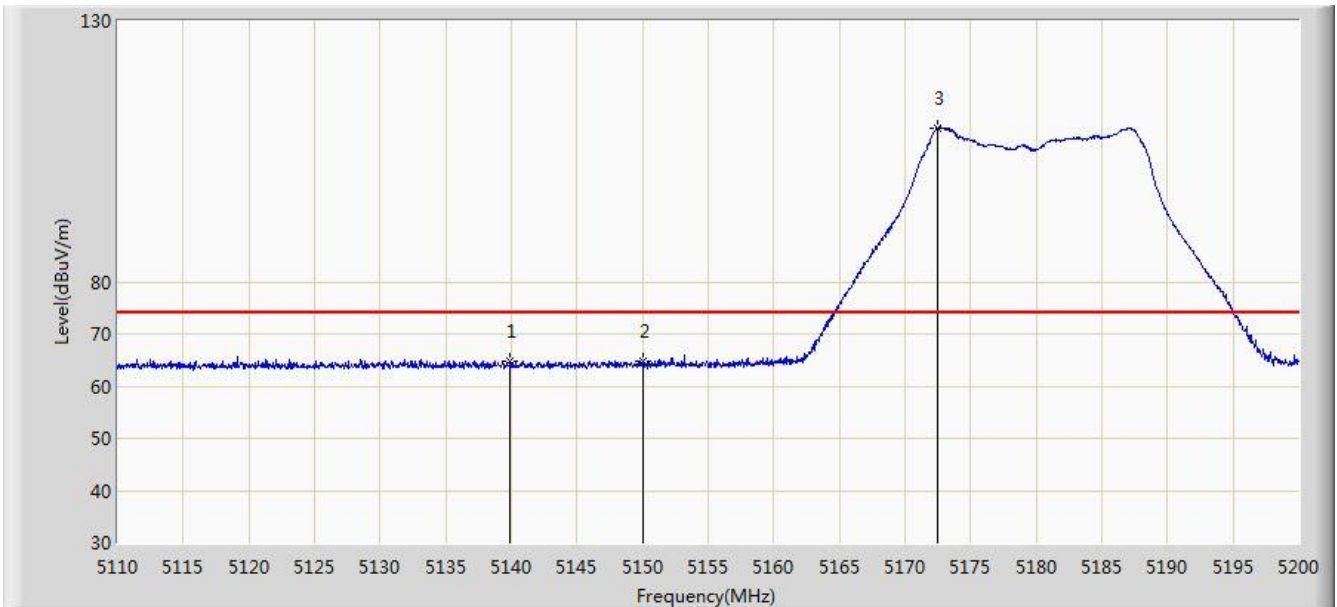
that are outside of the restricted bands are subject to a maximum emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in § 15.407(b)(4)). However, an out-of-band emission that complies with both the peak and average limits of § 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz maximum emission limit.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

7.9.2.Test Result

Site: AC1	Time: 2016/11/30 - 10:27
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5180MHz, Ant 0+1+2+3	

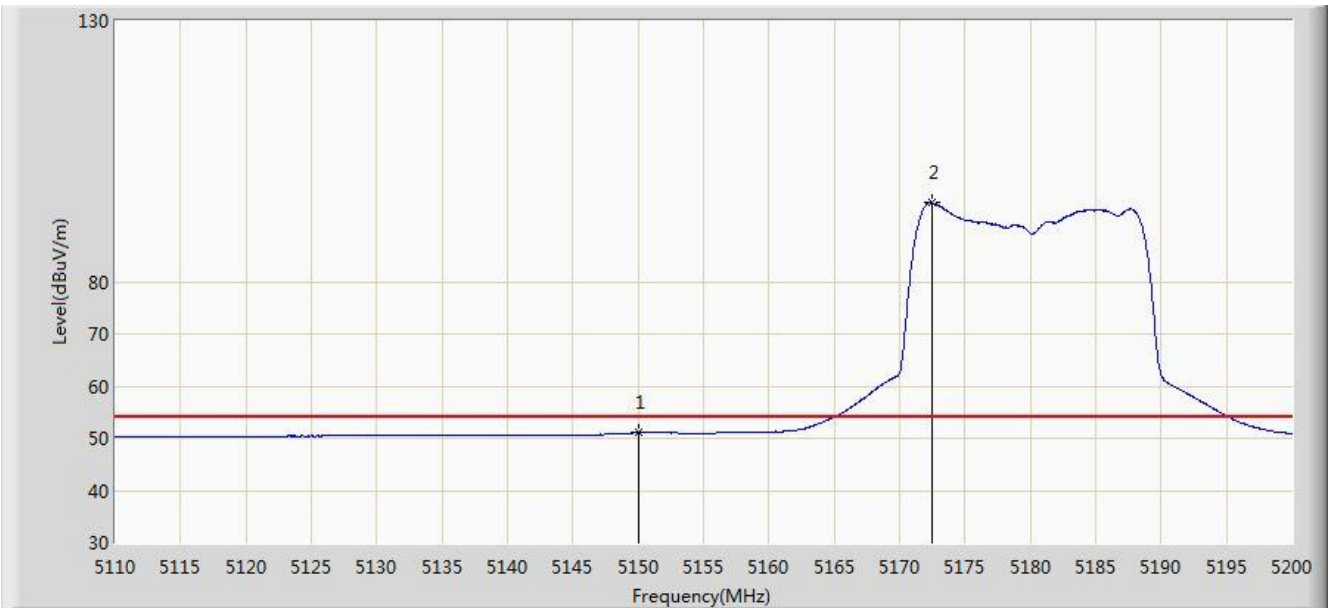


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5139.925	64.645	27.177	-9.355	74.000	37.467	PK
2			5150.000	64.805	27.353	-9.195	74.000	37.452	PK
3		*	5172.505	109.473	72.082	N/A	N/A	37.391	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 10:37
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5180MHz, Ant 0+1+2+3	

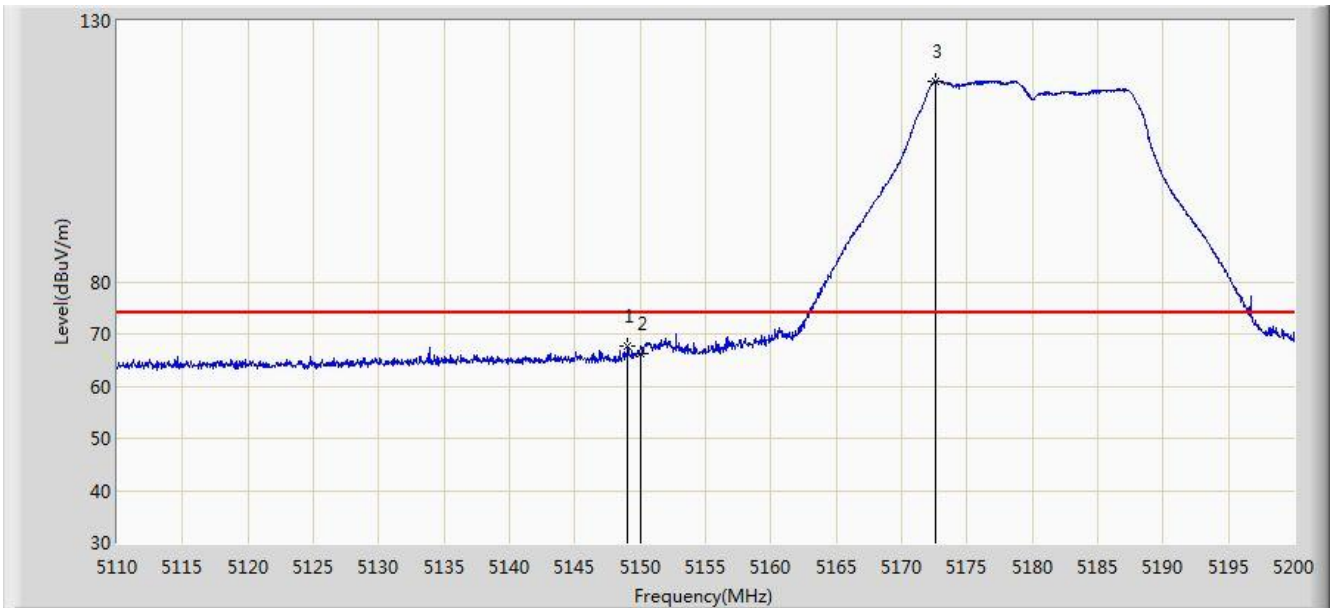


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	51.079	13.627	-2.921	54.000	37.452	AV
2		*	5172.505	95.144	57.753	N/A	N/A	37.391	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 10:21
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5180MHz, Ant 0+1+2+3	

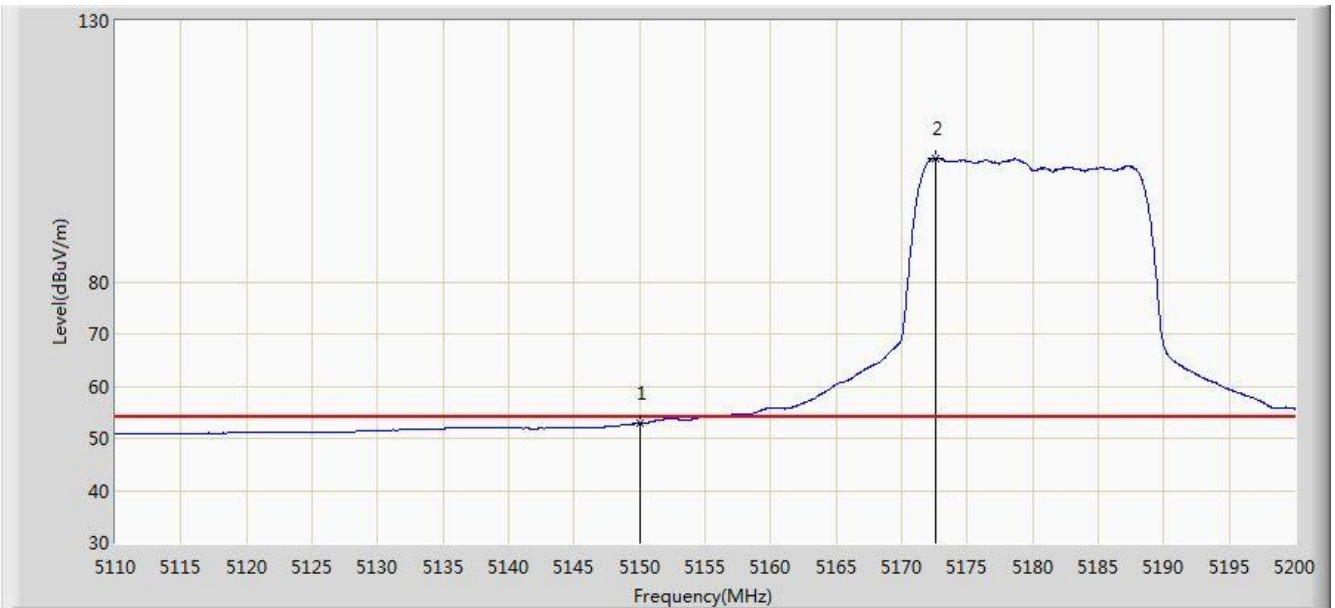


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5149.060	67.749	30.296	-6.251	74.000	37.453	PK
2			5150.000	66.269	28.817	-7.731	74.000	37.452	PK
3		*	5172.550	118.357	80.966	N/A	N/A	37.391	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 10:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5180MHz, Ant 0+1+2+3	

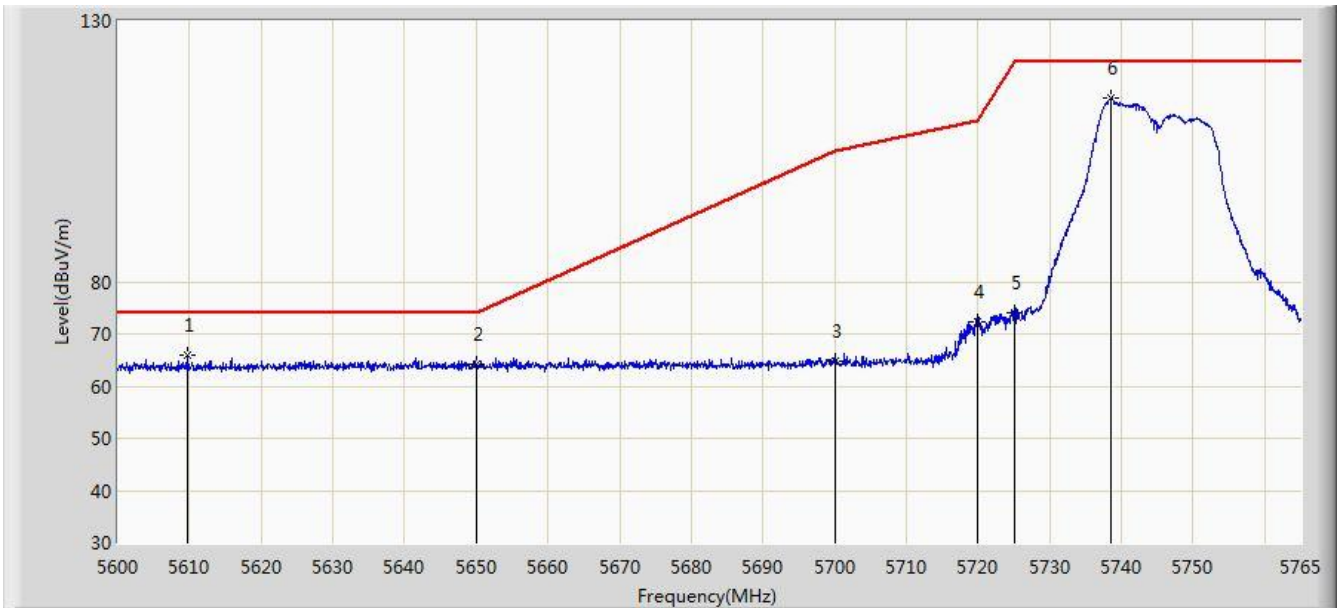


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	52.881	15.429	-1.119	54.000	37.452	AV
2		*	5172.640	103.645	66.255	N/A	N/A	37.390	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 10:44
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5745MHz, Ant 0+1+2+3	

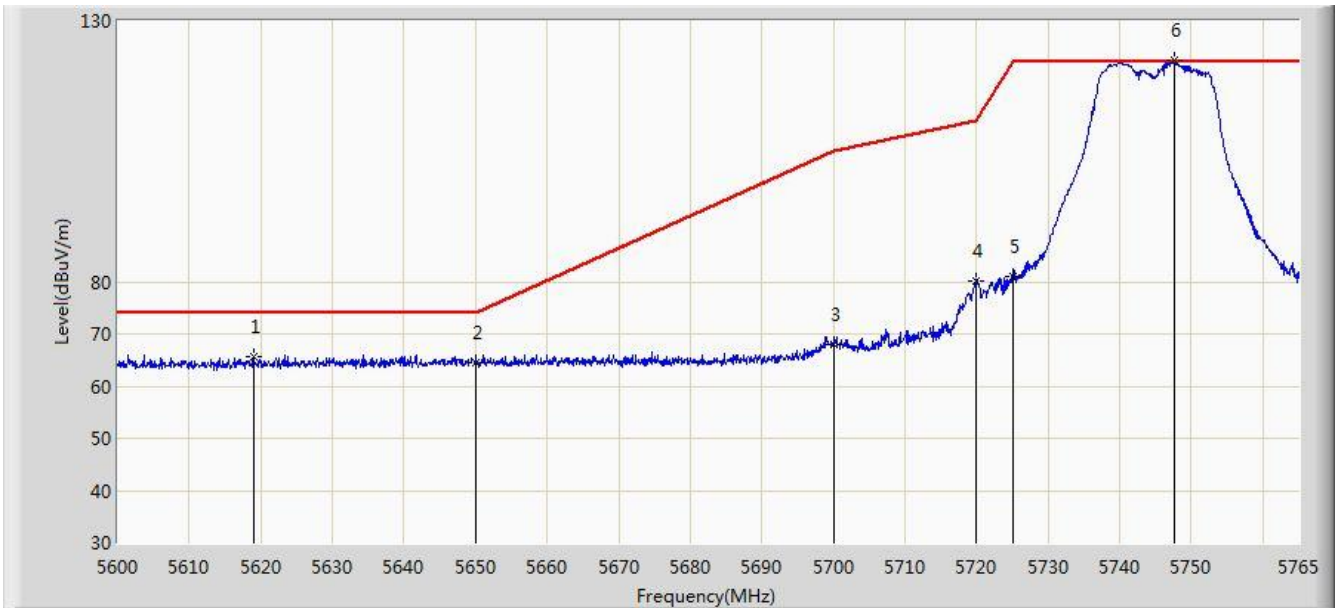


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5609.652	65.884	28.166	-8.116	74.000	37.718	PK
2			5650.000	64.074	26.287	-9.926	74.000	37.787	PK
3			5700.000	64.862	26.970	-40.338	105.200	37.892	PK
4			5720.000	72.417	34.448	-38.383	110.800	37.970	PK
5			5725.000	74.099	36.109	-48.101	122.200	37.990	PK
6		*	5738.600	115.085	77.039	N/A	N/A	38.046	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 11:21
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5745MHz, Ant 0+1+2+3	

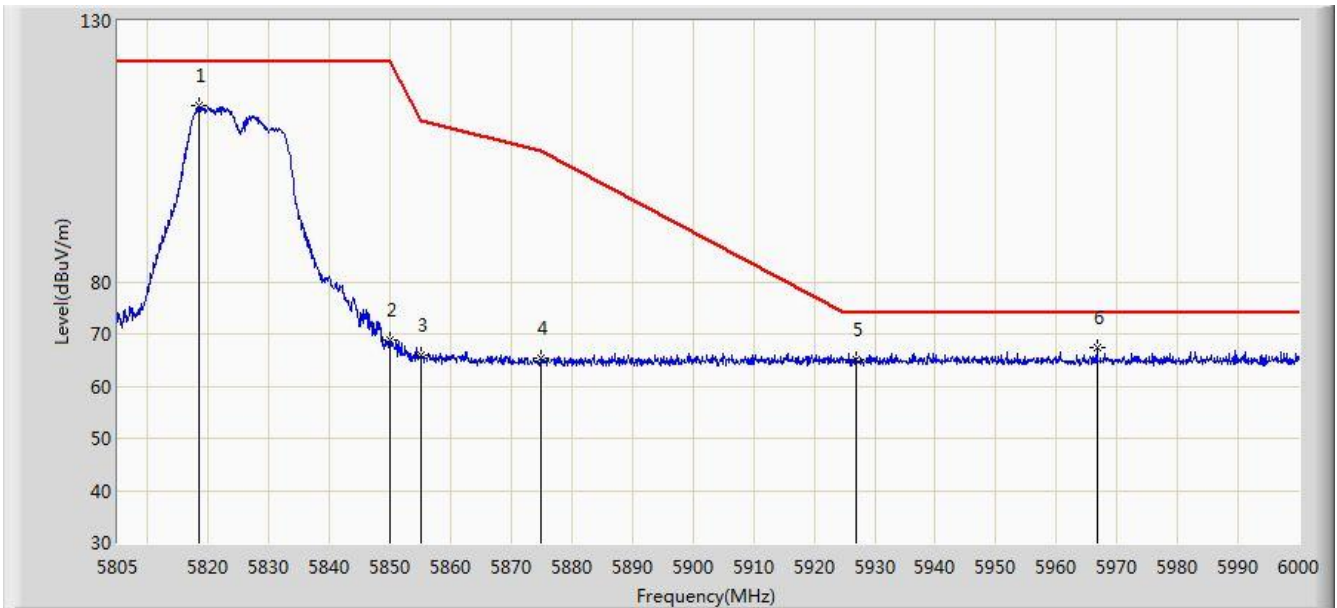


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5618.975	65.657	27.924	-8.343	74.000	37.733	PK
2			5650.000	64.539	26.752	-9.461	74.000	37.787	PK
3			5700.000	68.101	30.209	-37.099	105.200	37.892	PK
4			5720.000	80.200	42.231	-30.600	110.800	37.970	PK
5			5725.000	80.886	42.896	-41.314	122.200	37.990	PK
6		*	5747.675	122.580	84.495	N/A	N/A	38.084	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 11:23
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5825MHz, Ant 0+1+2+3	

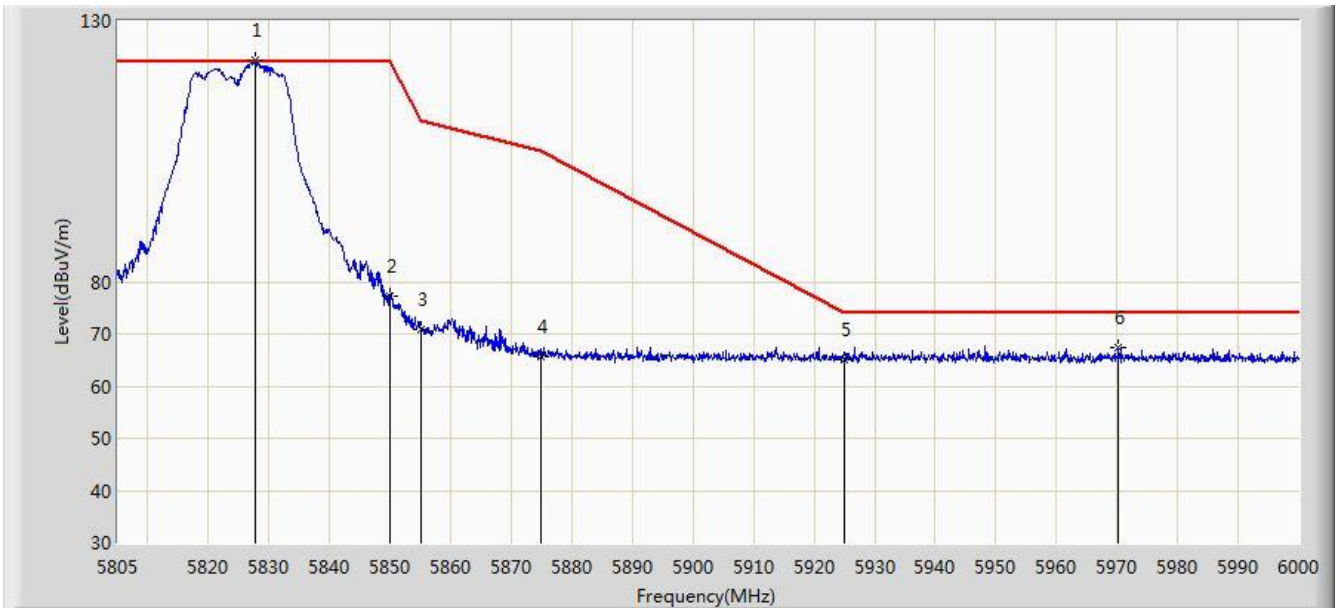


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5818.553	113.702	75.373	N/A	N/A	38.329	PK
2			5850.000	68.704	30.251	-53.496	122.200	38.454	PK
3			5855.000	65.865	27.400	-44.935	110.800	38.465	PK
4			5875.000	65.313	26.816	-39.887	105.200	38.497	PK
5			5927.000	65.176	26.642	-8.824	74.000	38.533	PK
6		*	5966.655	67.247	28.718	-6.753	74.000	38.528	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 11:26
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at channel 5825MHz, Ant 0+1+2+3	

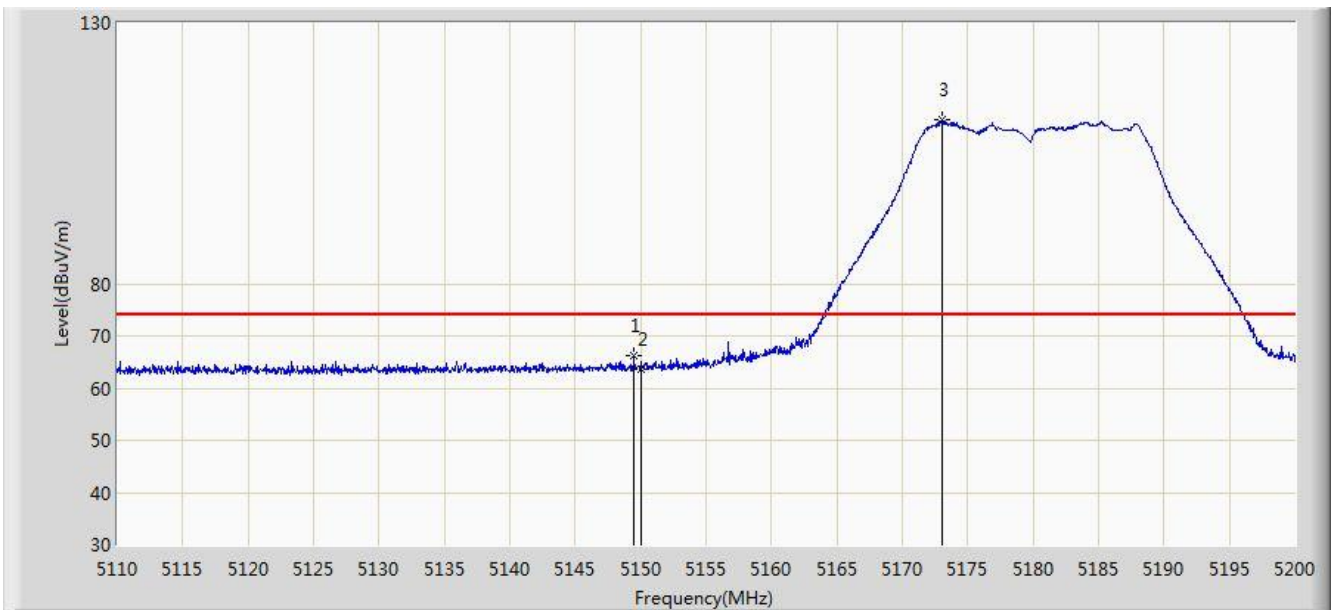


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5827.620	122.322	83.956	N/A	N/A	38.367	PK
2			5850.000	77.320	38.867	-44.880	122.200	38.454	PK
3			5855.000	70.891	32.426	-39.909	110.800	38.465	PK
4			5875.000	65.776	27.279	-39.424	105.200	38.497	PK
5			5925.000	65.195	26.662	-8.805	74.000	38.533	PK
6			5970.263	67.274	28.738	-6.726	74.000	38.536	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 11:44
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5810MHz, Ant 0+1+2+3	

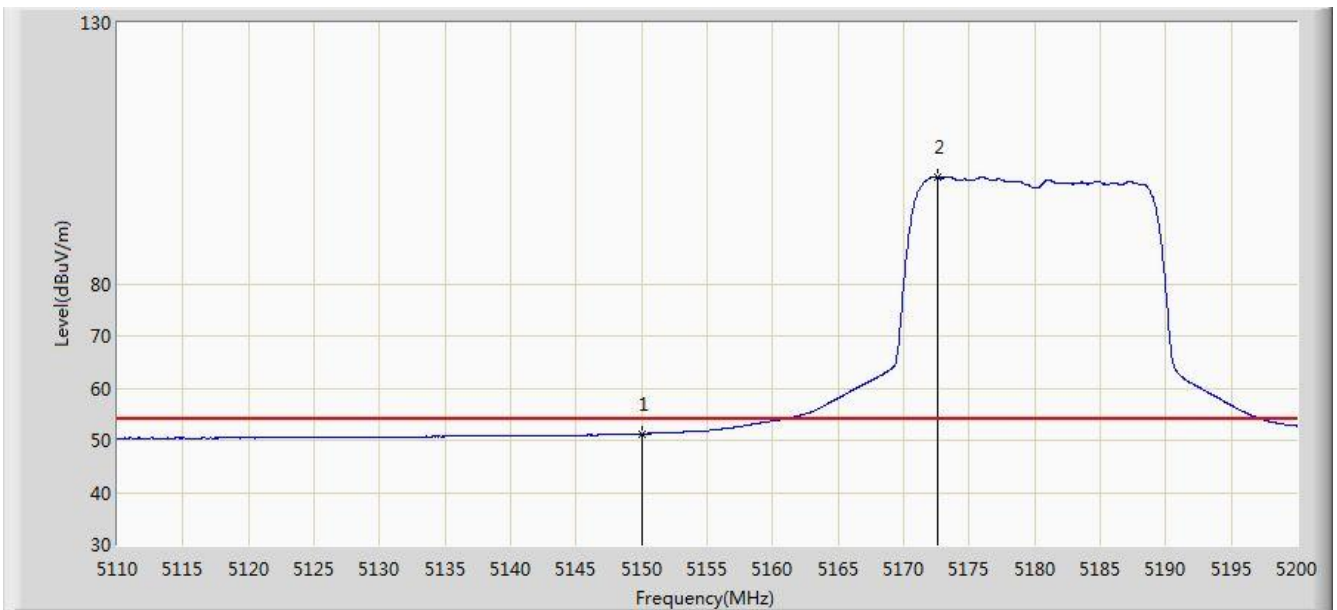


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5149.465	66.298	28.845	-7.702	74.000	37.453	PK
2			5150.000	63.766	26.314	-10.234	74.000	37.452	PK
3		*	5173.000	111.323	73.933	N/A	N/A	37.389	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 11:47
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5810MHz, Ant 0+1+2+3	

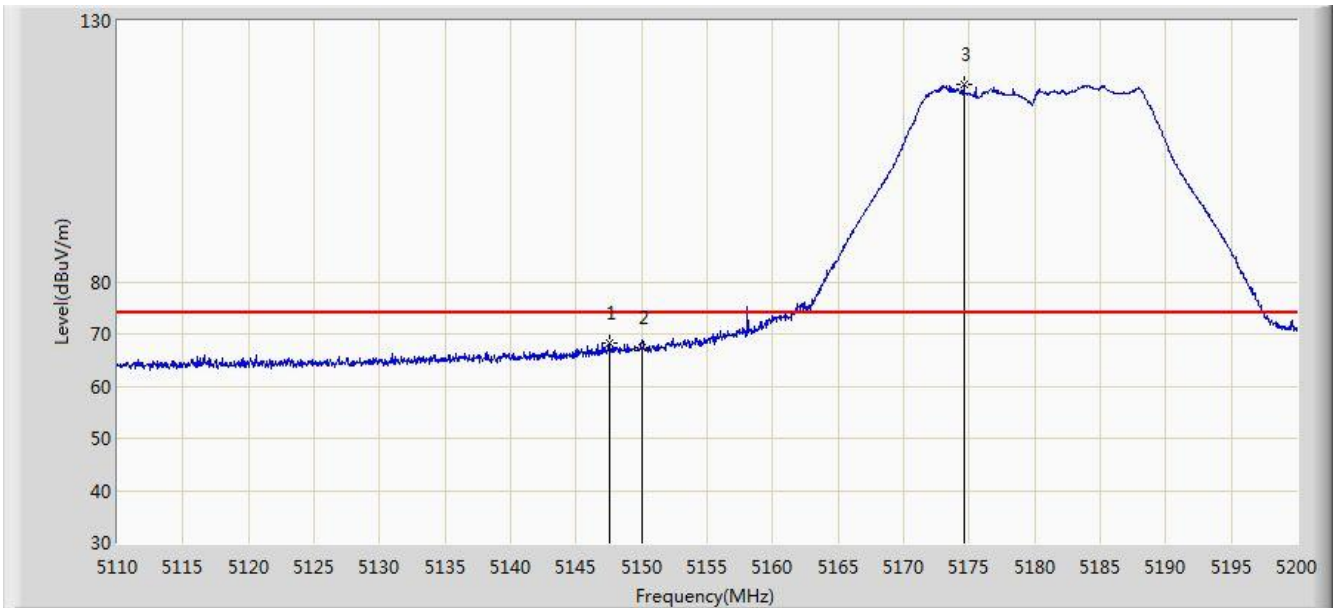


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	51.227	13.775	-2.773	54.000	37.452	AV
2		*	5172.640	100.364	62.974	N/A	N/A	37.390	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 11:39
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5810MHz, Ant 0+1+2+3	

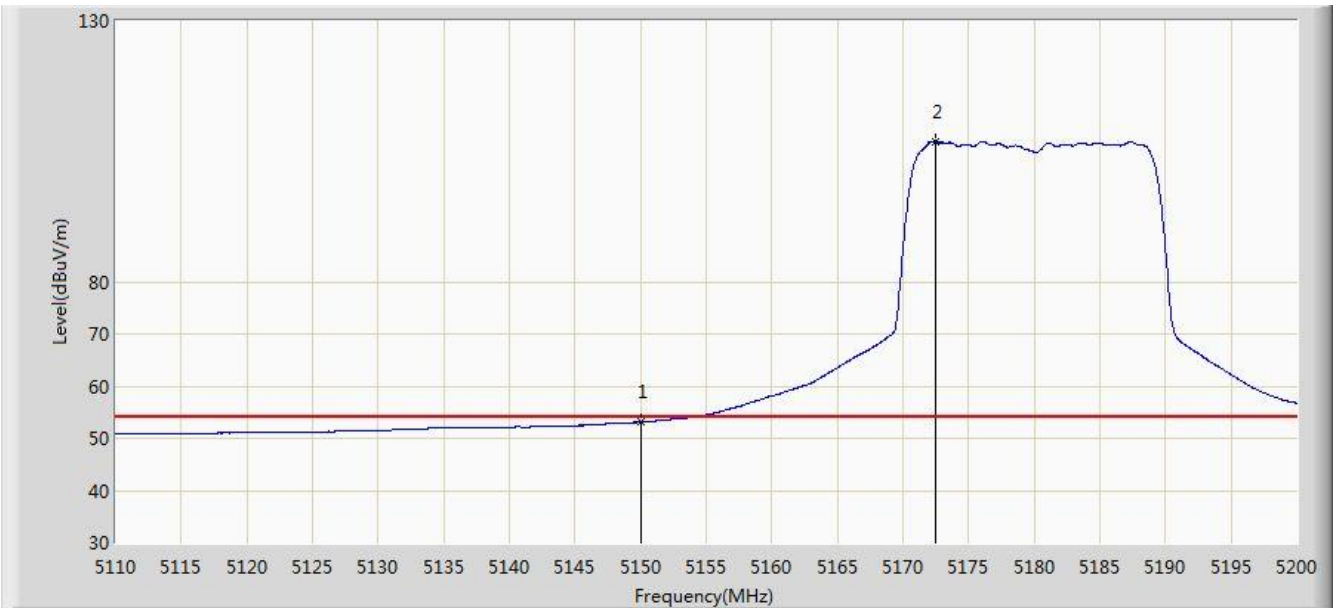


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5147.530	68.389	30.933	-5.611	74.000	37.455	PK
2			5150.000	67.374	29.922	-6.626	74.000	37.452	PK
3		*	5174.575	117.746	80.360	N/A	N/A	37.386	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 11:37
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5810MHz, Ant 0+1+2+3	

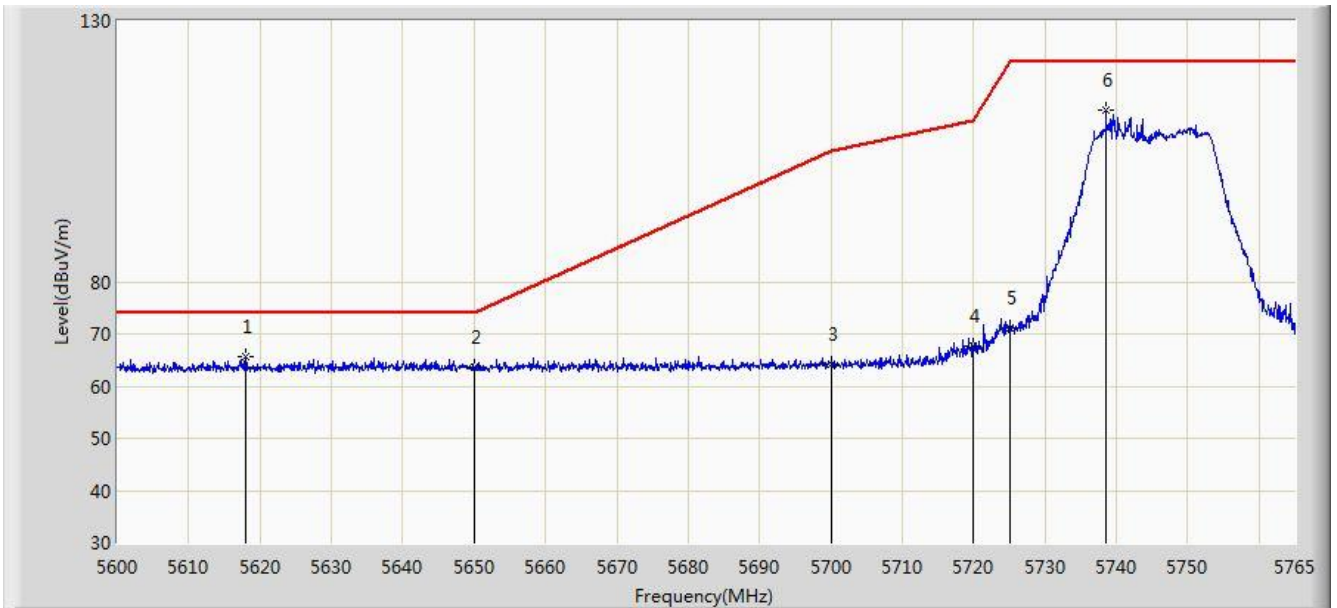


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	53.123	15.671	-0.877	54.000	37.452	AV
2		*	5172.505	106.893	69.502	N/A	N/A	37.391	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 11:51
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5745MHz, Ant 0+1+2+3	

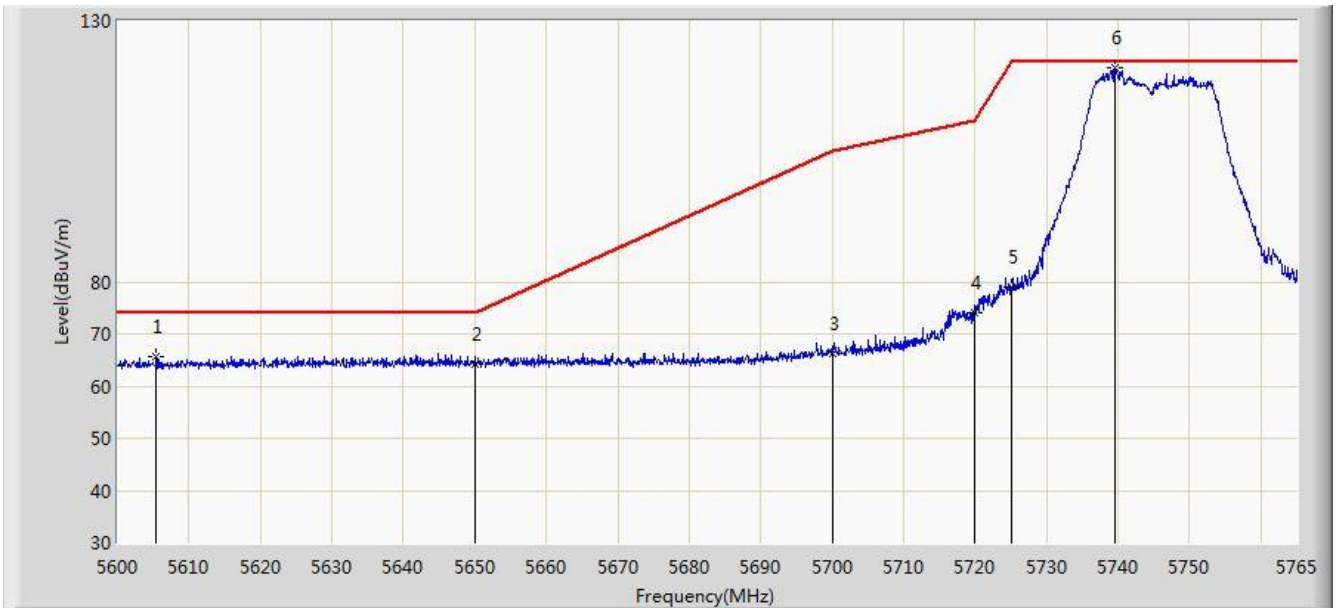


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5618.067	65.702	27.971	-8.298	74.000	37.731	PK
2			5650.000	63.693	25.906	-10.307	74.000	37.787	PK
3			5700.000	64.340	26.448	-40.860	105.200	37.892	PK
4			5720.000	67.609	29.640	-43.191	110.800	37.970	PK
5			5725.000	71.215	33.225	-50.985	122.200	37.990	PK
6			5738.518	112.928	74.883	N/A	N/A	38.046	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 11:53
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5745MHz, Ant 0+1+2+3	

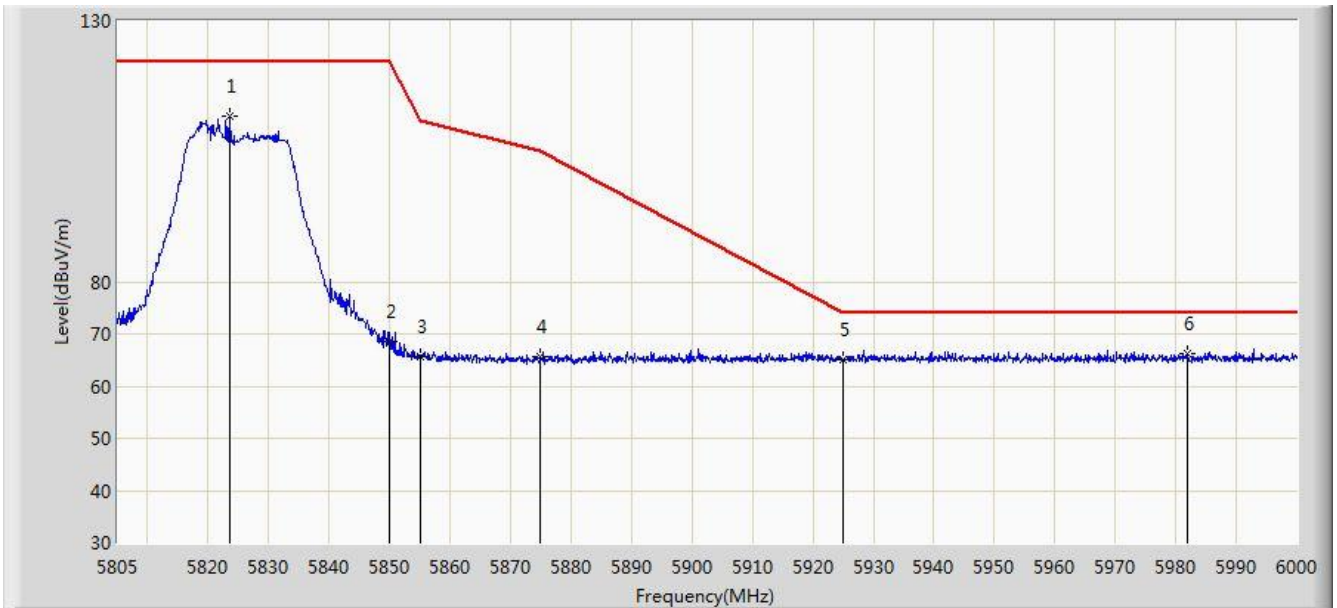


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5605.445	65.693	27.980	-8.307	74.000	37.713	PK
2			5650.000	64.271	26.484	-9.729	74.000	37.787	PK
3			5700.000	66.194	28.302	-39.006	105.200	37.892	PK
4			5720.000	74.176	36.207	-36.624	110.800	37.970	PK
5			5725.000	79.077	41.087	-43.123	122.200	37.990	PK
6		*	5739.507	120.977	82.928	N/A	N/A	38.049	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 11:57
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5825MHz, Ant 0+1+2+3	

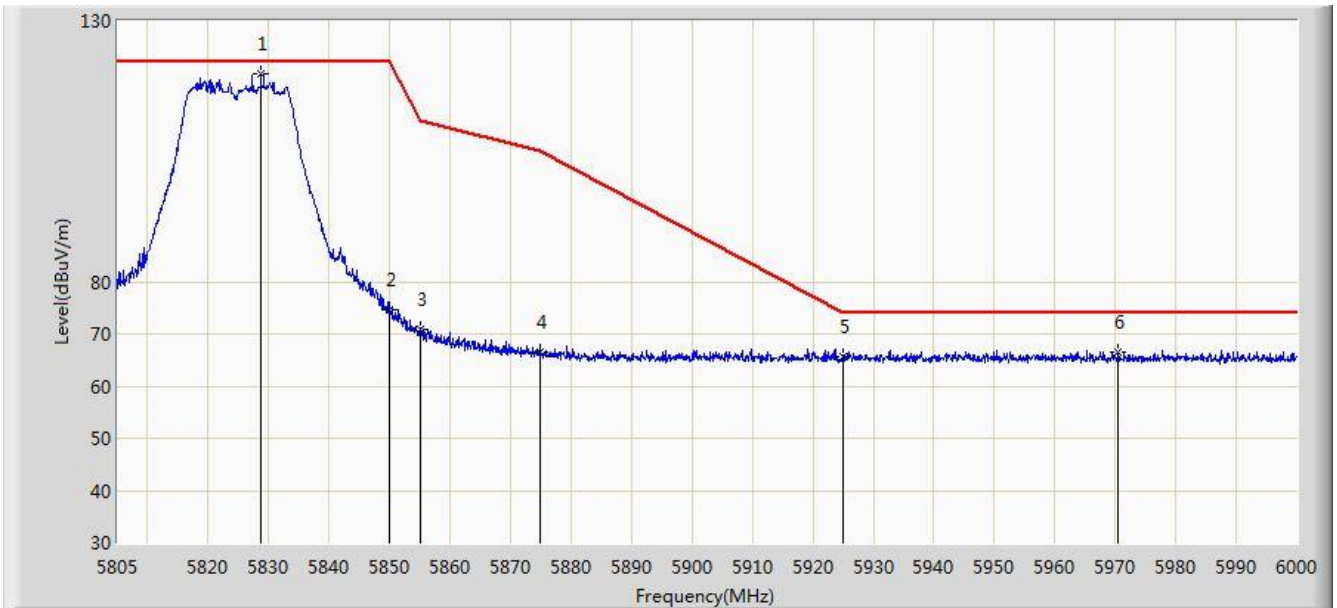


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5823.525	111.832	73.483	N/A	N/A	38.350	PK
2			5850.000	68.629	30.176	-53.571	122.200	38.454	PK
3			5855.000	65.654	27.189	-45.146	110.800	38.465	PK
4			5875.000	65.753	27.256	-39.447	105.200	38.497	PK
5			5925.000	65.108	26.575	-8.892	74.000	38.533	PK
6		*	5981.962	66.326	27.767	-7.674	74.000	38.559	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 12:00
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at channel 5825MHz, Ant 0+1+2+3	

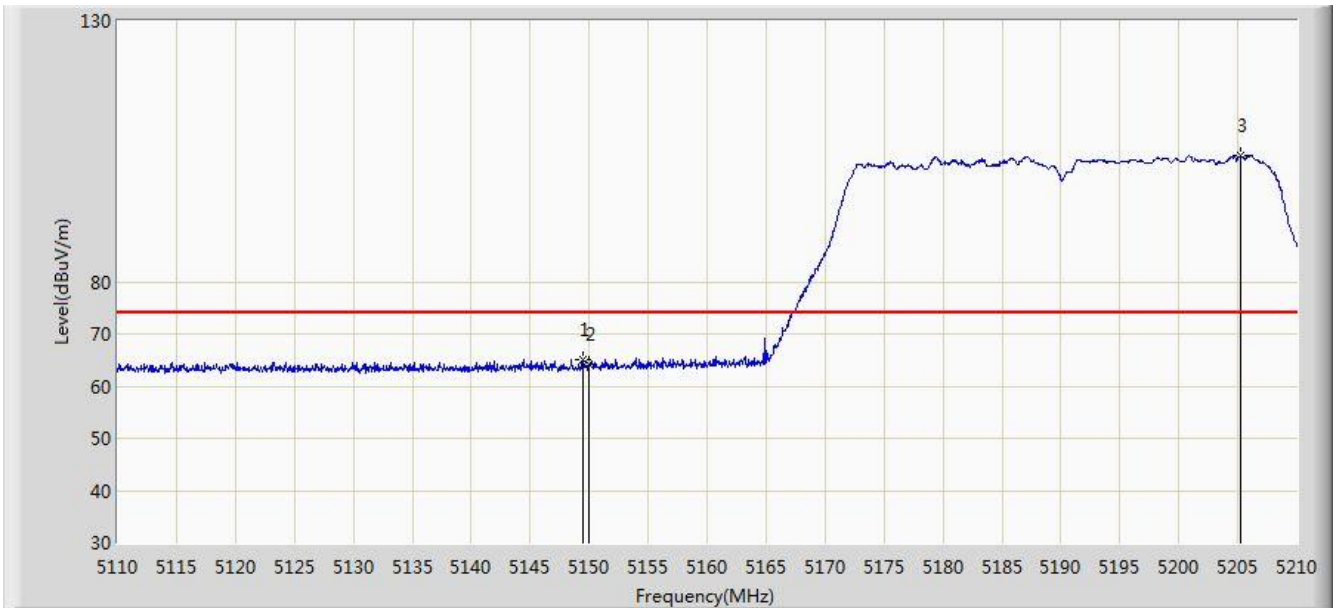


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5828.692	119.938	81.567	N/A	N/A	38.371	PK
2			5850.000	74.524	36.071	-47.676	122.200	38.454	PK
3			5855.000	70.902	32.437	-39.898	110.800	38.465	PK
4			5875.000	66.396	27.899	-38.804	105.200	38.497	PK
5			5925.000	65.610	27.077	-8.390	74.000	38.533	PK
6			5970.458	66.567	28.031	-7.433	74.000	38.536	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 13:50
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5190MHz, Ant 0+1+2+3	

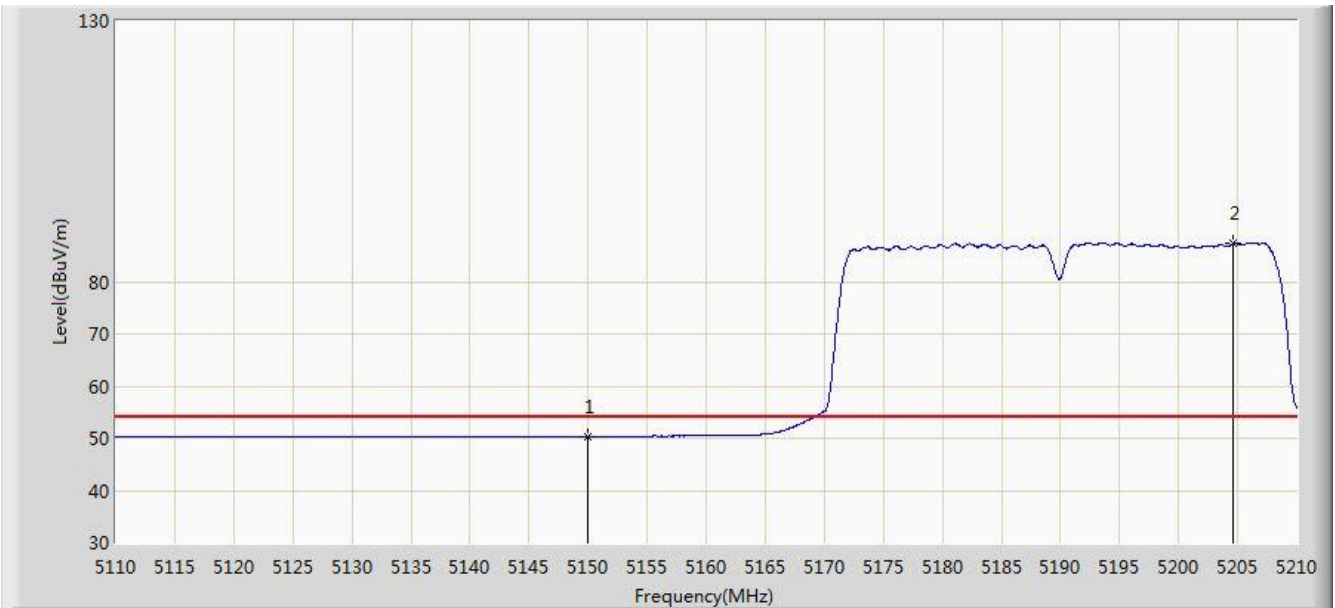


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5149.450	65.012	27.559	-8.988	74.000	37.453	PK
2			5150.000	64.208	26.756	-9.792	74.000	37.452	PK
3		*	5205.250	104.214	66.908	N/A	N/A	37.307	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 13:55
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5190MHz, Ant 0+1+2+3	

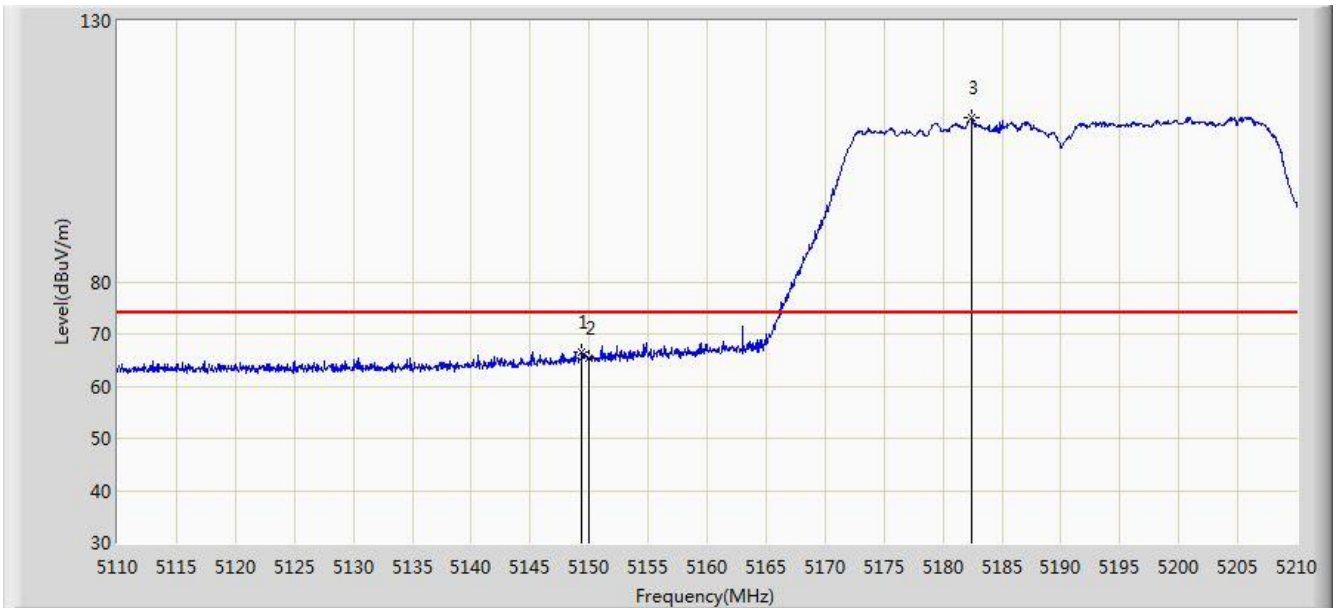


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	50.326	12.874	-3.674	54.000	37.452	AV
2		*	5204.650	87.315	50.007	N/A	N/A	37.309	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 13:45
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5190MHz, Ant 0+1+2+3	

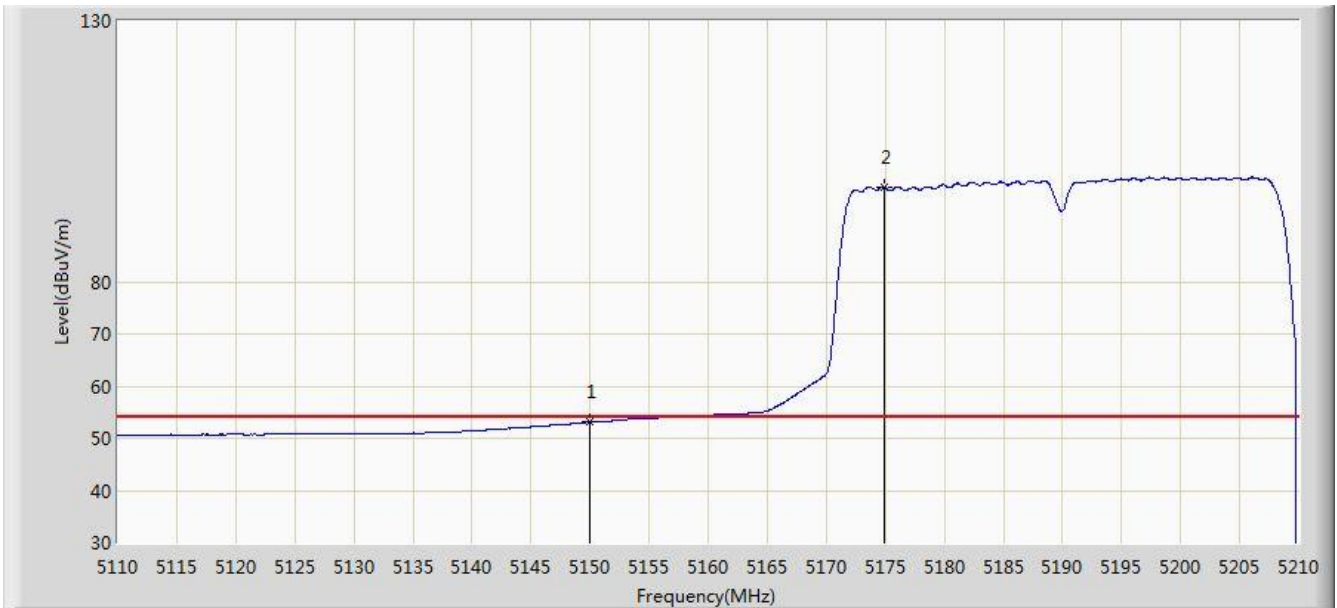


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5149.350	66.453	29.000	-7.547	74.000	37.453	PK
2			5150.000	65.241	27.789	-8.759	74.000	37.452	PK
3		*	5182.400	111.424	74.056	N/A	N/A	37.368	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 13:48
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5190MHz, Ant 0+1+2+3	

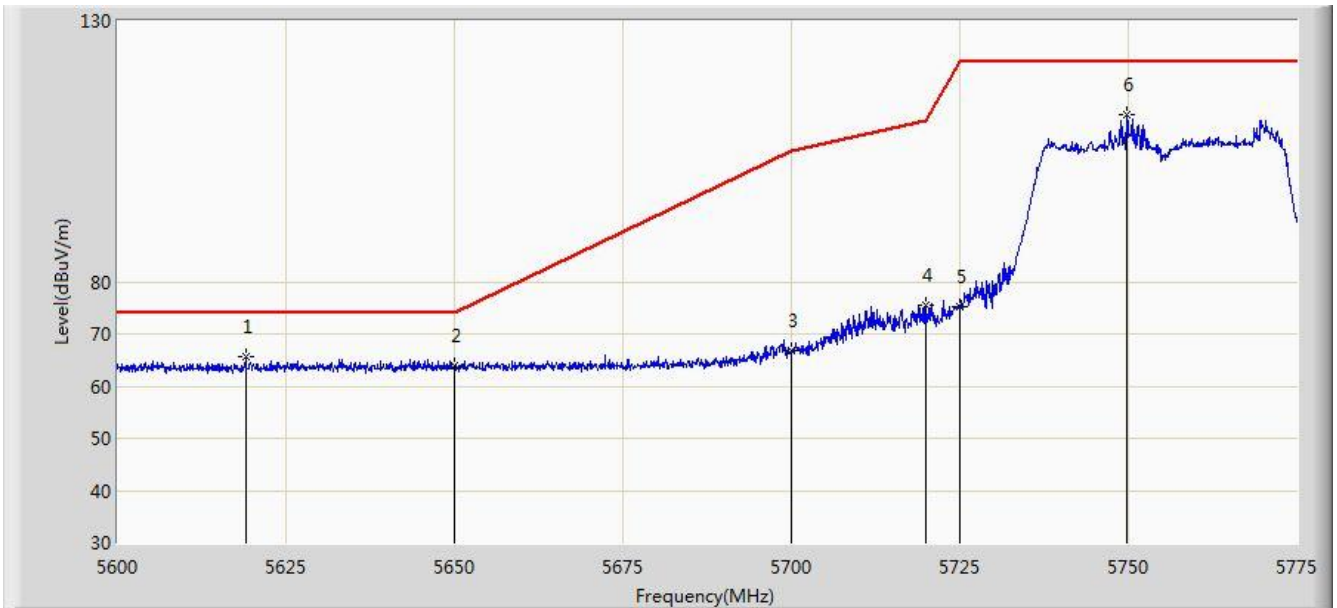


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	53.143	15.691	-0.857	54.000	37.452	AV
2		*	5174.950	98.073	60.688	N/A	N/A	37.385	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 13:59
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5755MHz, Ant 0+1+2+3	

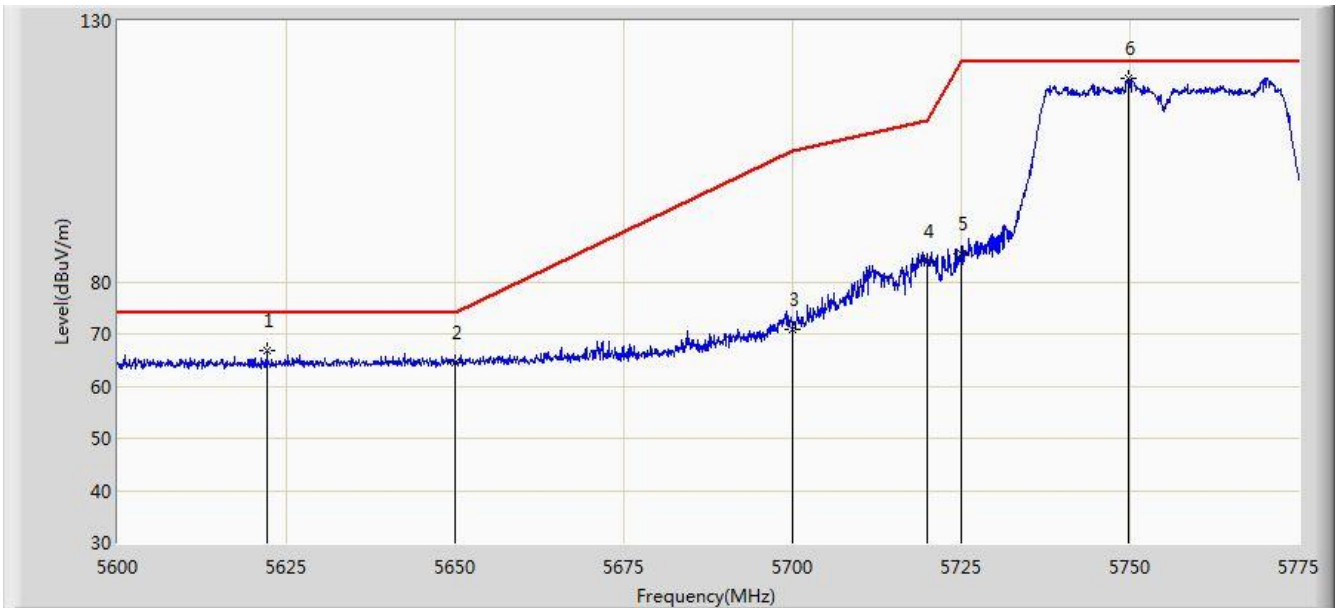


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5619.075	65.655	27.922	-8.345	74.000	37.733	PK
2			5650.000	63.860	26.073	-10.140	74.000	37.787	PK
3			5700.000	66.720	28.828	-38.480	105.200	37.892	PK
4			5720.000	75.458	37.489	-35.342	110.800	37.970	PK
5			5725.000	75.249	37.259	-46.951	122.200	37.990	PK
6			5749.712	111.906	73.812	N/A	N/A	38.094	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:03
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5755MHz, Ant 0+1+2+3	

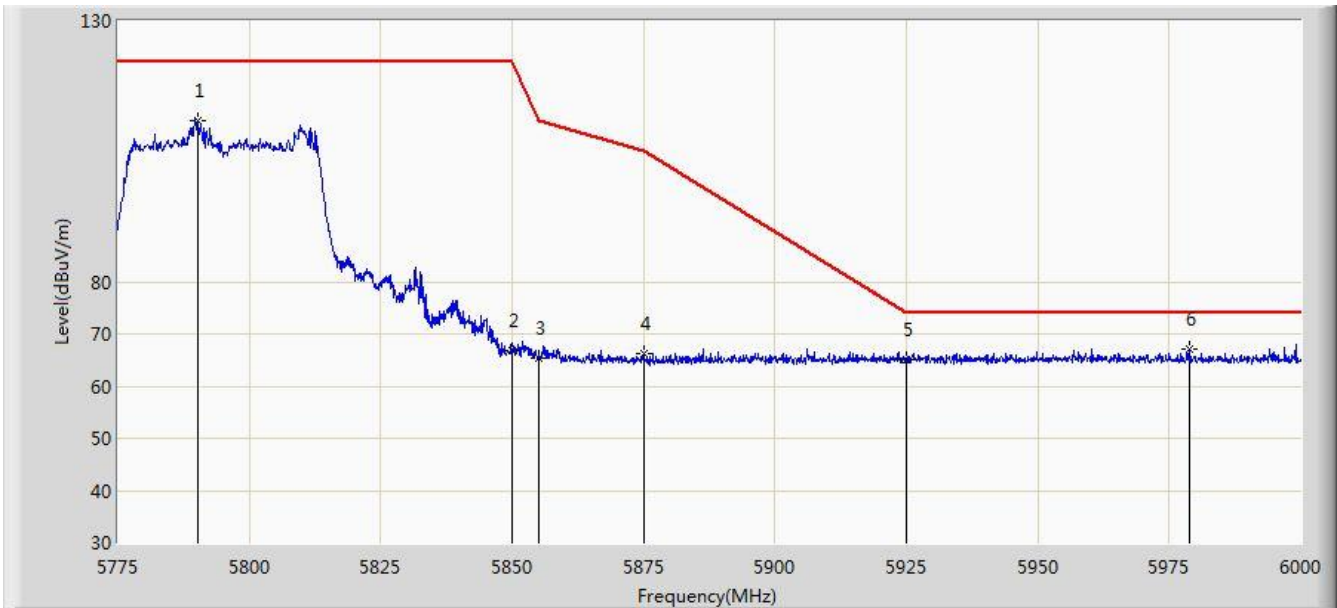


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5622.050	66.856	29.118	-7.144	74.000	37.739	PK
2			5650.000	64.615	26.828	-9.385	74.000	37.787	PK
3			5700.000	71.009	33.117	-34.191	105.200	37.892	PK
4			5720.000	83.903	45.934	-26.897	110.800	37.970	PK
5			5725.000	85.261	47.271	-36.939	122.200	37.990	PK
6		*	5749.888	119.085	80.990	N/A	N/A	38.095	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:06
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5795MHz, Ant 0+1+2+3	

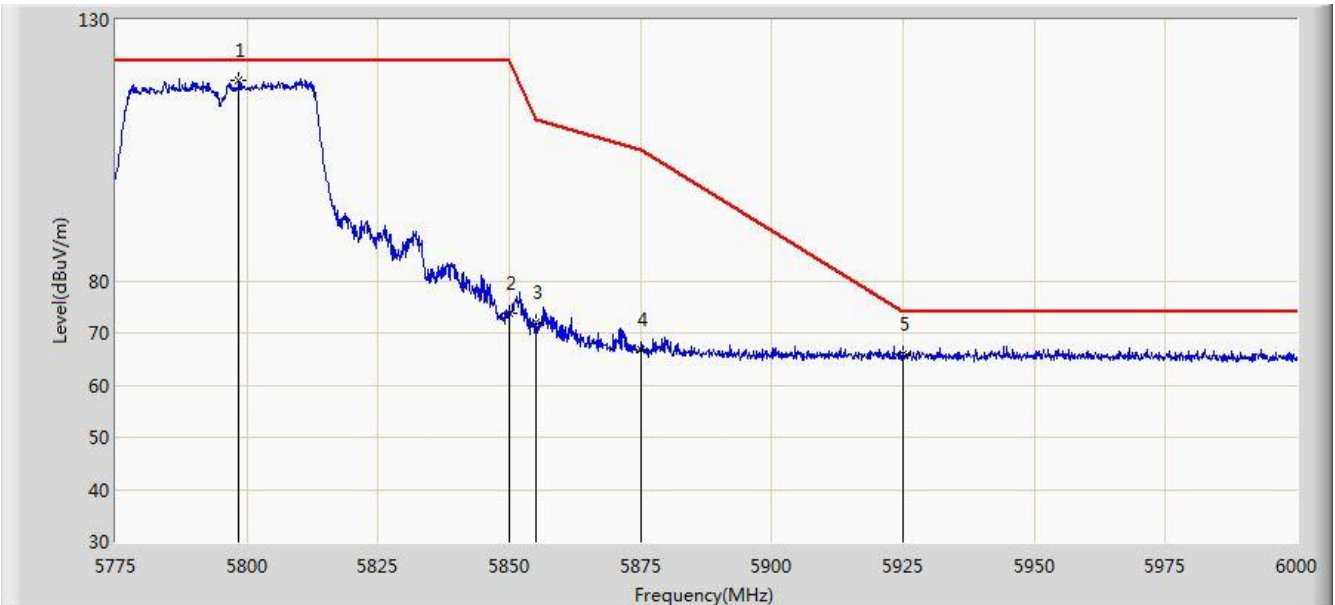


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5790.300	110.989	72.757	N/A	N/A	38.232	PK
2			5850.000	66.681	28.228	-55.519	122.200	38.454	PK
3			5855.000	65.409	26.944	-45.391	110.800	38.465	PK
4			5875.000	66.101	27.604	-39.099	105.200	38.497	PK
5			5925.000	64.994	26.461	-9.006	74.000	38.533	PK
6		*	5978.962	66.985	28.432	-7.015	74.000	38.553	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:06
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 5795MHz, Ant 0+1+2+3	

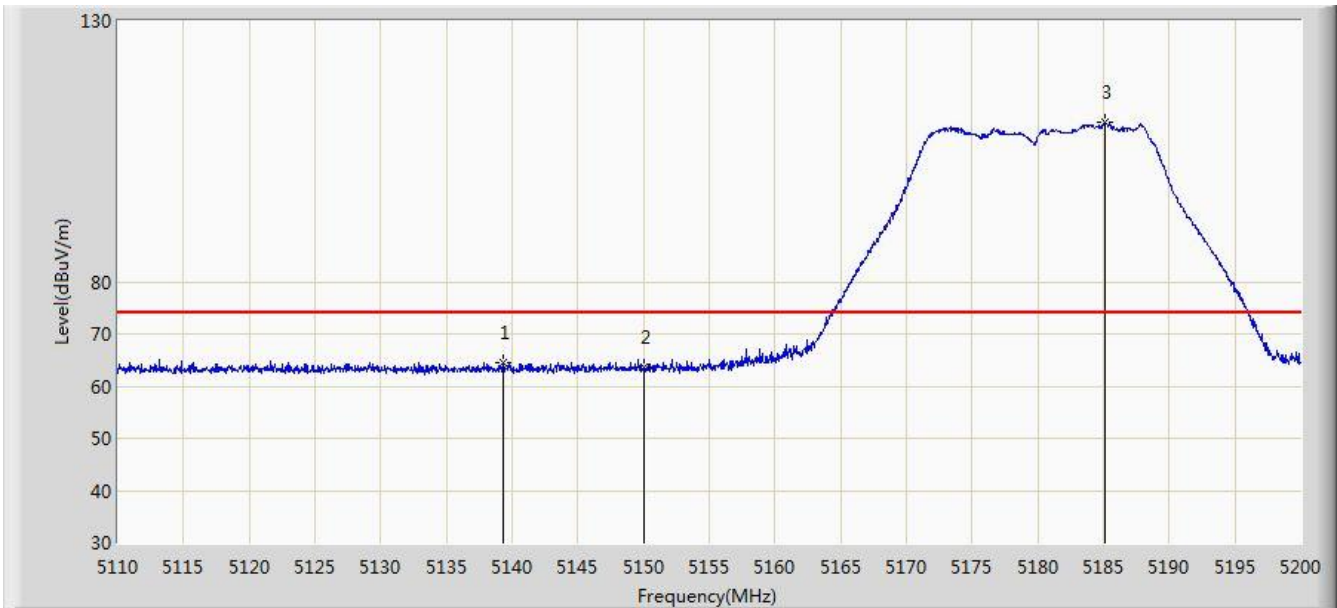


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	5798.400	118.503	80.244	N/A	N/A	38.259	PK
2			5850.000	73.786	35.333	-48.414	122.200	38.454	PK
3			5855.000	72.054	33.589	-38.746	110.800	38.465	PK
4			5875.000	66.911	28.414	-38.289	105.200	38.497	PK
5			5925.000	65.862	27.329	-8.138	74.000	38.533	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:15
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5180MHz, Ant 0+1+2+3	

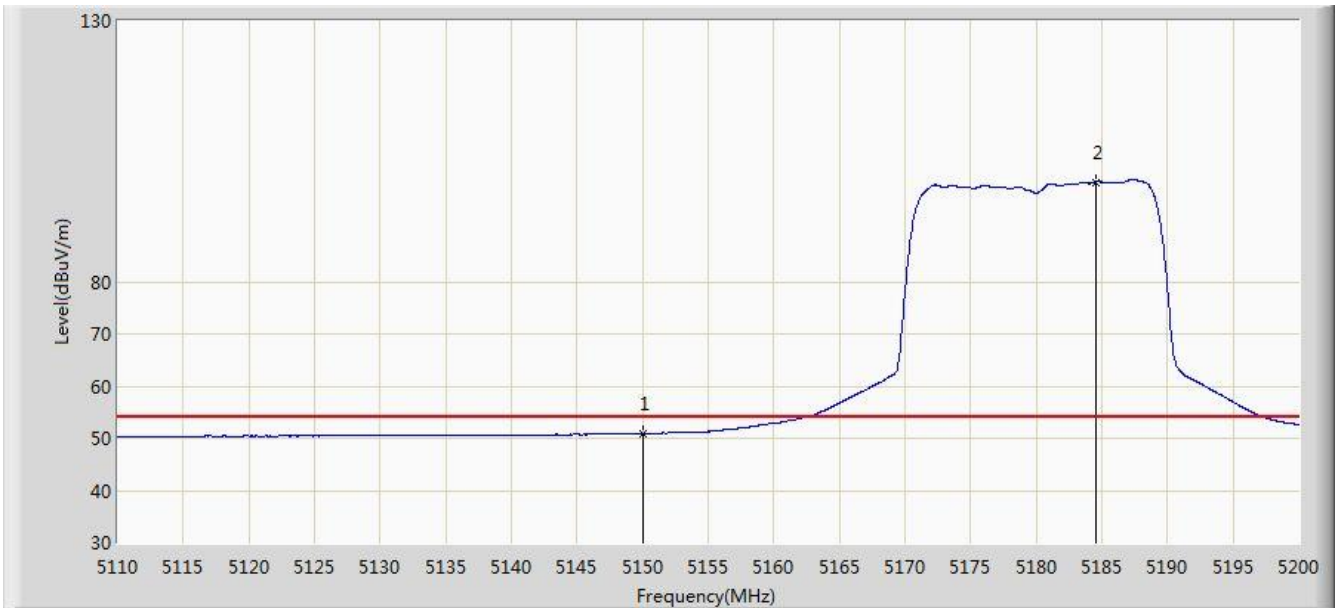


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5139.340	64.464	26.995	-9.536	74.000	37.469	PK
2			5150.000	63.703	26.251	-10.297	74.000	37.452	PK
3		*	5185.060	110.454	73.093	N/A	N/A	37.362	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:17
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5180MHz, Ant 0+1+2+3	

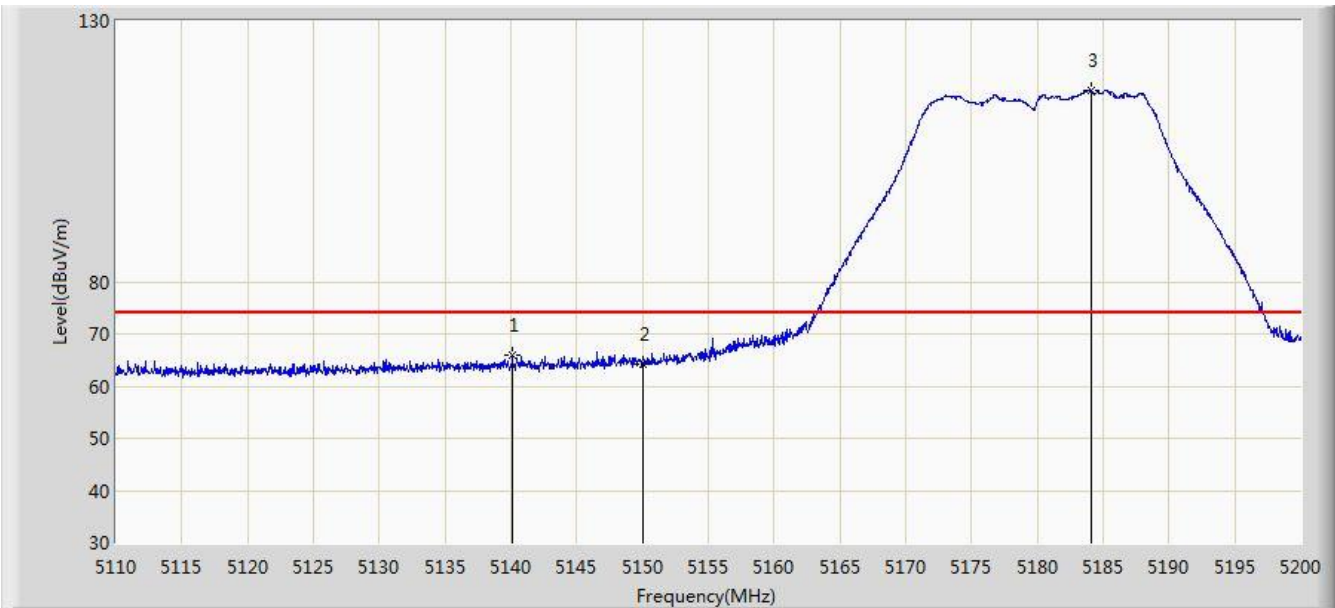


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	50.884	13.432	-3.116	54.000	37.452	AV
2		*	5184.520	99.107	61.744	N/A	N/A	37.363	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:14
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5180MHz, Ant 0+1+2+3	

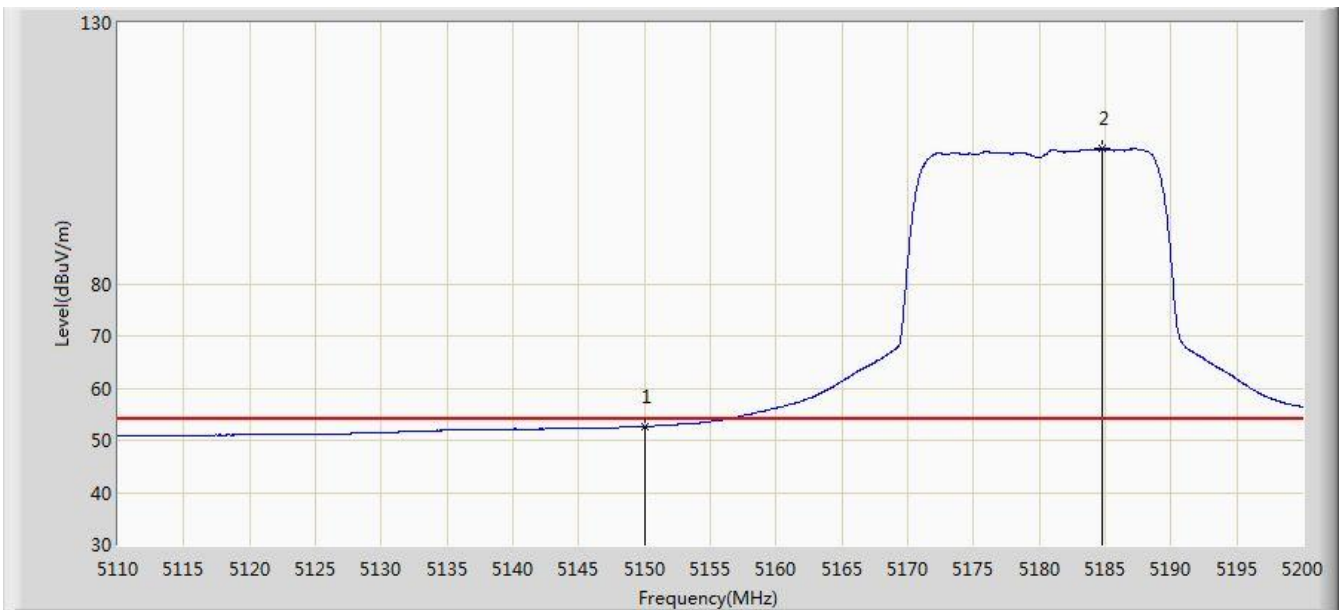


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5140.105	65.999	28.532	-8.001	74.000	37.467	PK
2			5150.000	64.223	26.771	-9.777	74.000	37.452	PK
3		*	5184.115	116.531	79.167	N/A	N/A	37.364	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:13
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5180MHz, Ant 0+1+2+3	

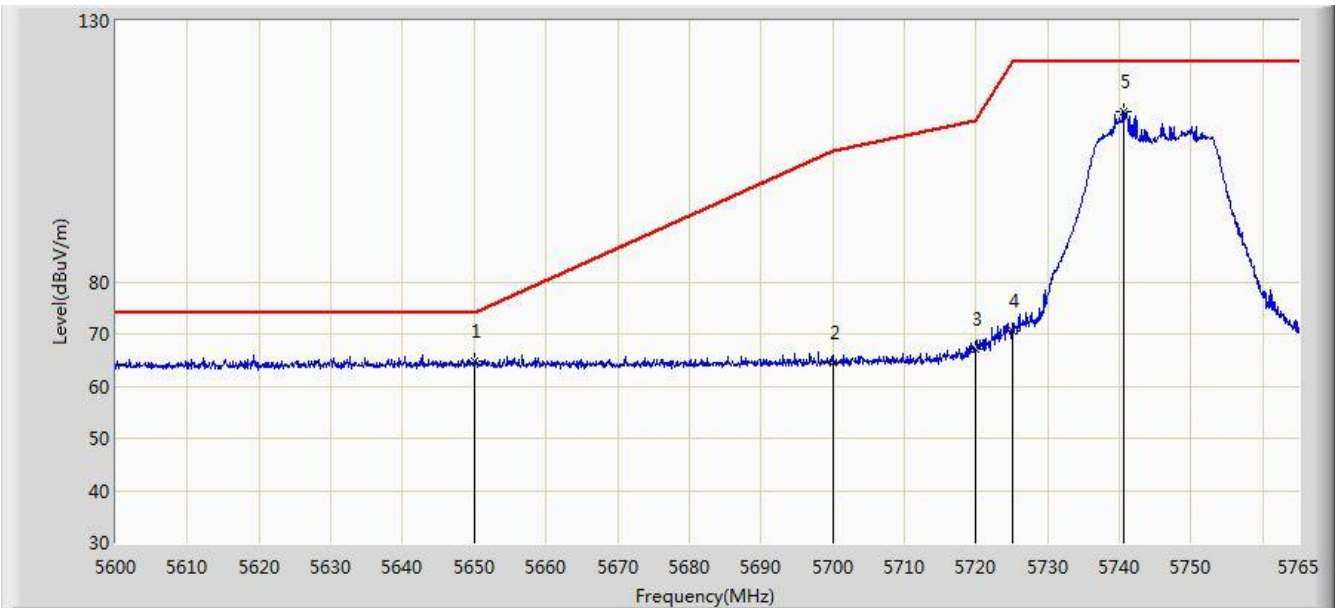


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	52.642	15.190	-1.358	54.000	37.452	AV
2		*	5184.745	105.939	68.577	N/A	N/A	37.362	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:21
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5745MHz, Ant 0+1+2+3	

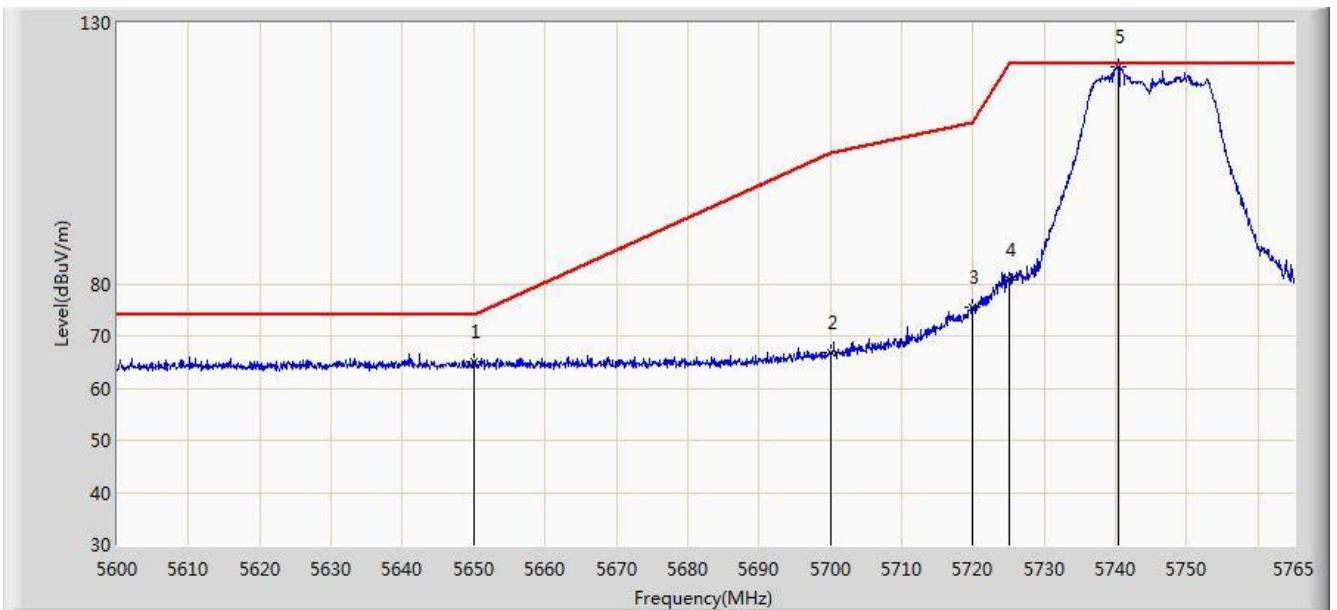


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5650.000	64.702	26.915	-9.298	74.000	37.787	PK
2			5700.000	64.499	26.607	-40.701	105.200	37.892	PK
3			5720.000	67.235	29.266	-43.565	110.800	37.970	PK
4			5725.000	70.671	32.681	-51.529	122.200	37.990	PK
5			5740.580	112.749	74.696	N/A	N/A	38.053	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:18
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5745MHz, Ant 0+1+2+3	

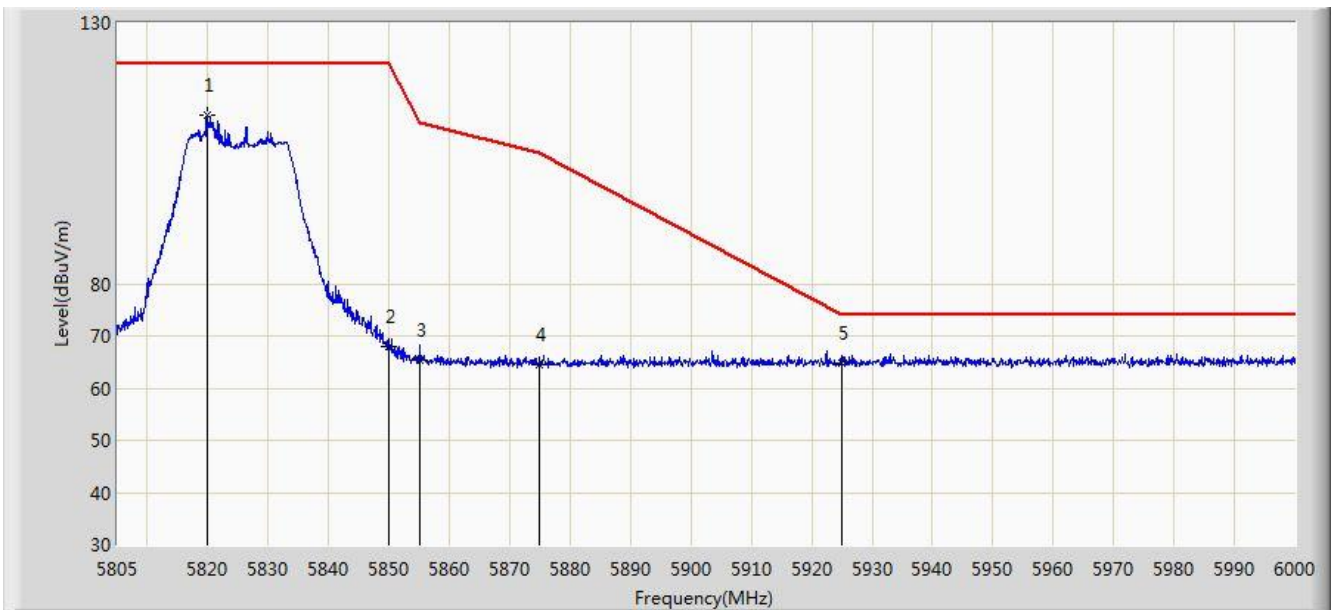


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5650.000	64.945	27.158	-9.055	74.000	37.787	PK
2			5700.000	66.815	28.923	-38.385	105.200	37.892	PK
3			5720.000	75.368	37.399	-35.432	110.800	37.970	PK
4			5725.000	80.642	42.652	-41.558	122.200	37.990	PK
5		*	5740.498	121.570	83.517	N/A	N/A	38.053	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:28
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5825MHz, Ant 0+1+2+3	

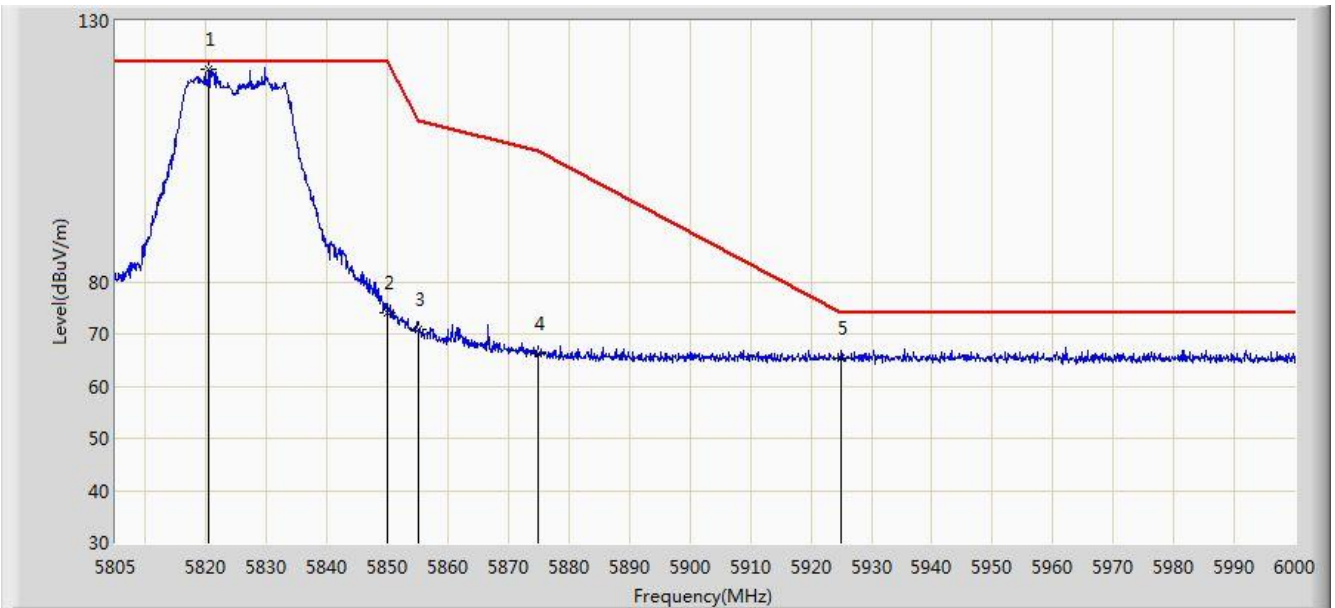


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5819.917	112.184	73.850	N/A	N/A	38.335	PK
2			5850.000	68.115	29.662	-54.085	122.200	38.454	PK
3			5855.000	65.326	26.861	-45.474	110.800	38.465	PK
4			5875.000	64.561	26.064	-40.639	105.200	38.497	PK
5		*	5925.000	64.653	26.120	-9.347	74.000	38.533	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:26
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT20 at channel 5825MHz, Ant 0+1+2+3	

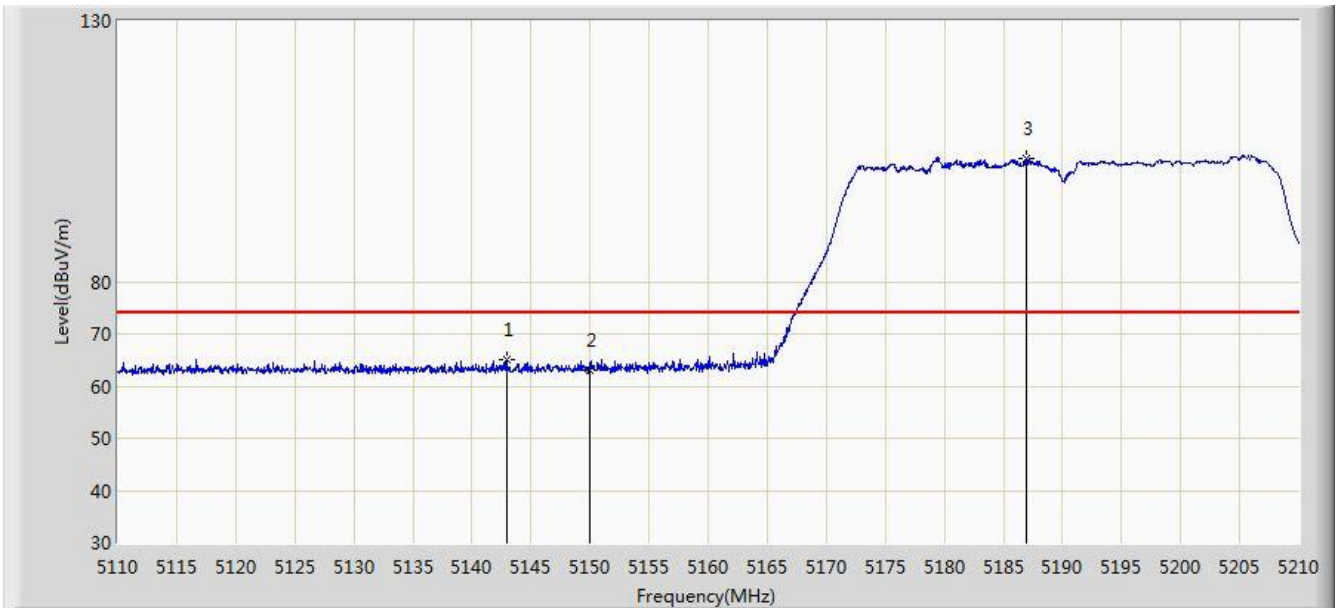


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5820.405	120.671	82.334	N/A	N/A	38.336	PK
2			5850.000	74.152	35.699	-48.048	122.200	38.454	PK
3			5855.000	70.850	32.385	-39.950	110.800	38.465	PK
4			5875.000	66.342	27.845	-38.858	105.200	38.497	PK
5			5925.000	65.436	26.903	-8.564	74.000	38.533	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5190MHz, Ant 0+1+2+3	

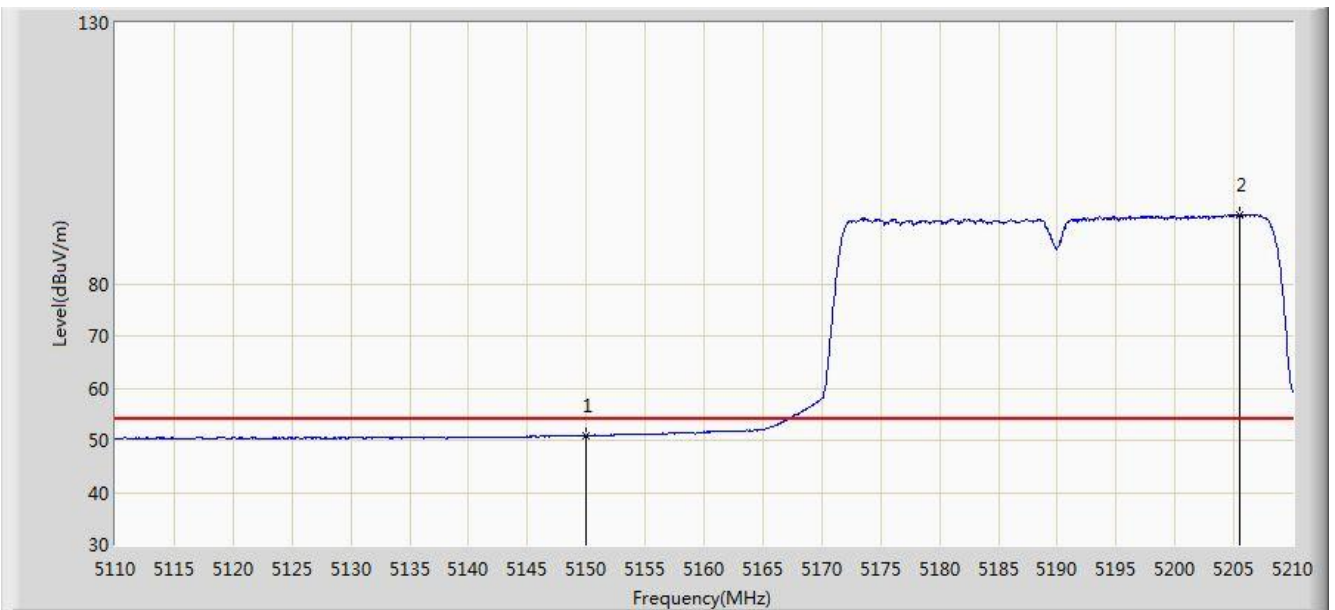


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5142.900	65.012	27.549	-8.988	74.000	37.463	PK
2			5150.000	63.072	25.620	-10.928	74.000	37.452	PK
3		*	5187.000	103.647	66.291	N/A	N/A	37.356	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:38
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5190MHz, Ant 0+1+2+3	

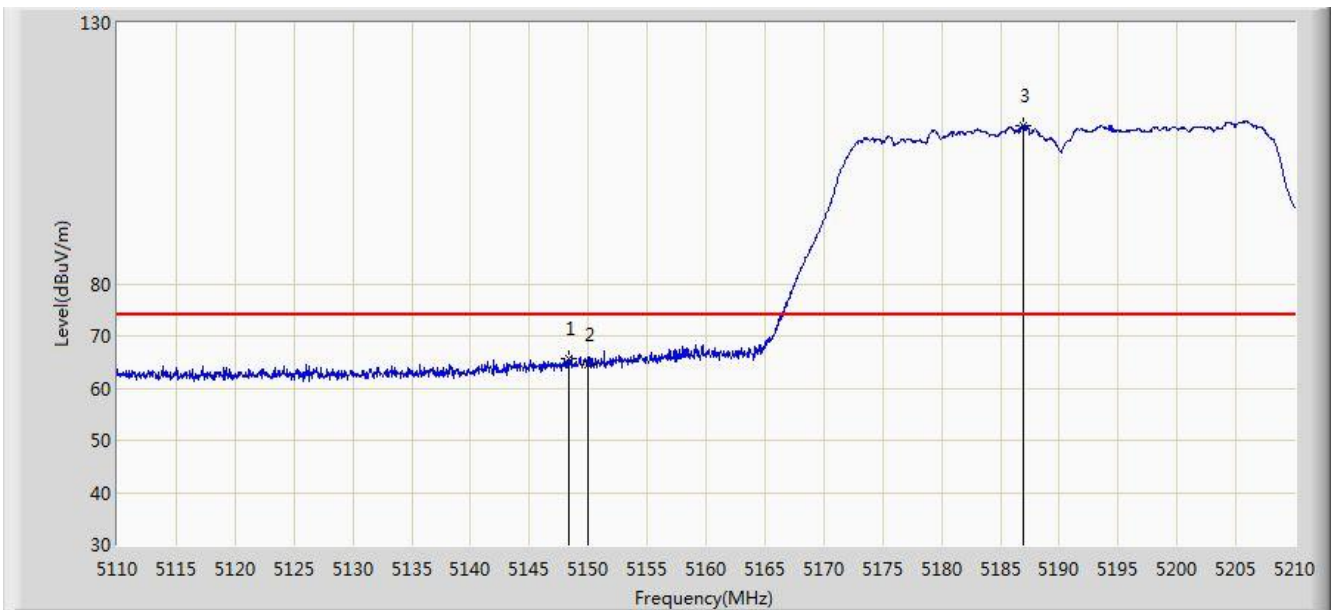


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	50.850	13.398	-3.150	54.000	37.452	AV
2		*	5205.450	93.235	55.930	N/A	N/A	37.305	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5190MHz, Ant 0+1+2+3	

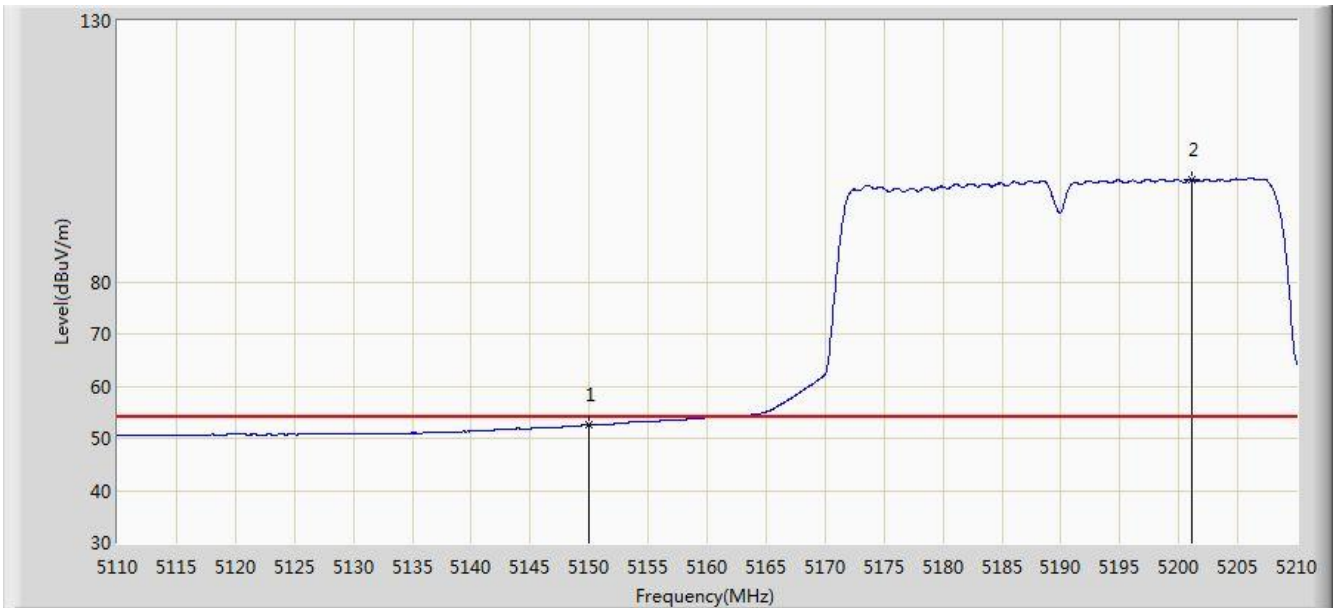


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5148.350	65.622	28.168	-8.378	74.000	37.454	PK
2			5150.000	64.434	26.982	-9.566	74.000	37.452	PK
3		*	5186.950	110.300	72.943	N/A	N/A	37.356	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:35
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5190MHz, Ant 0+1+2+3	

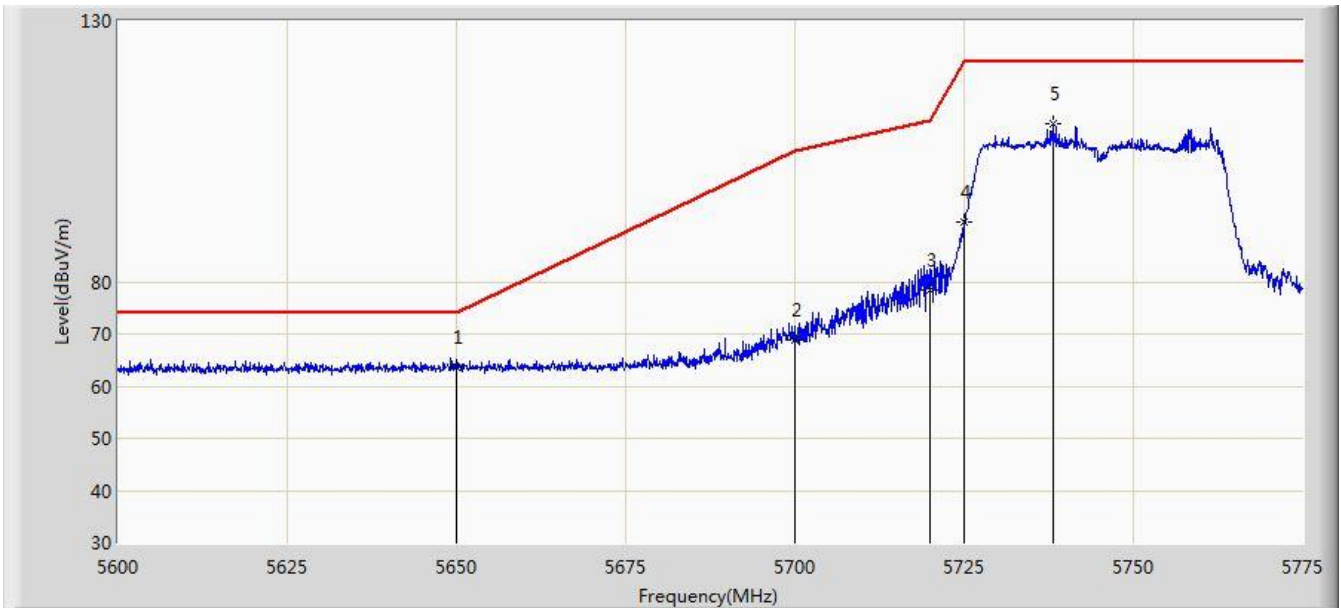


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	52.597	15.145	-1.403	54.000	37.452	AV
2		*	5201.100	99.564	62.244	N/A	N/A	37.321	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:41
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5755MHz, Ant 0+1+2+3	

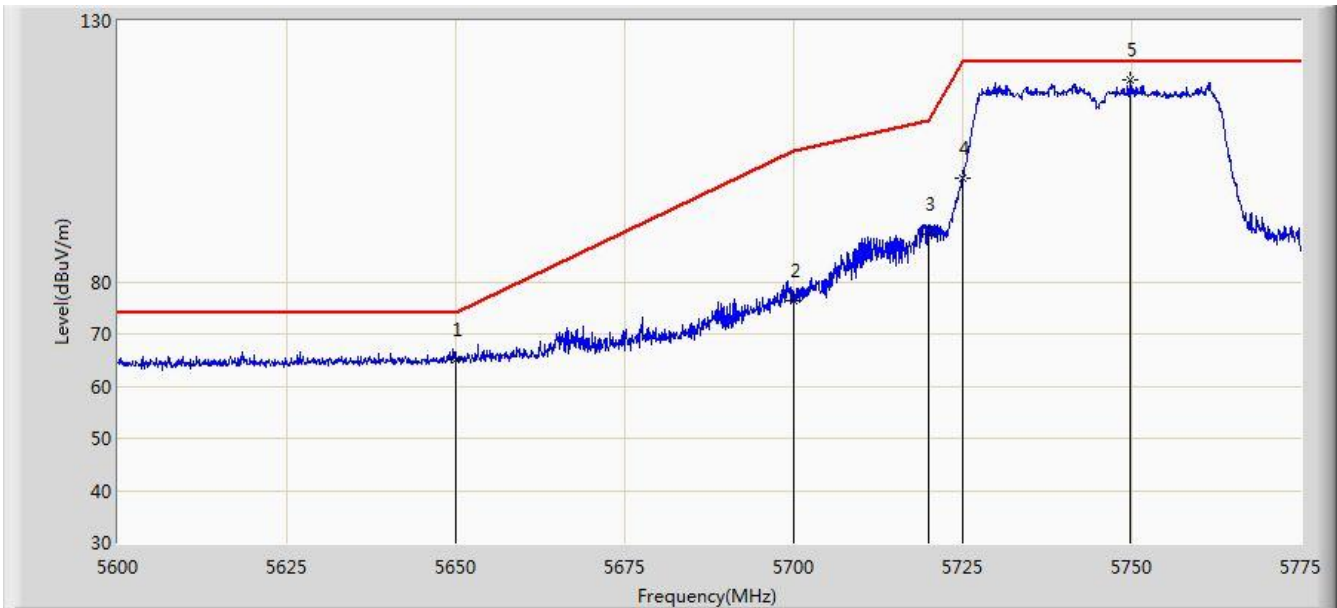


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5650.000	63.544	25.757	-10.456	74.000	37.787	PK
2			5700.000	68.968	31.076	-36.232	105.200	37.892	PK
3			5720.000	78.274	40.305	-32.526	110.800	37.970	PK
4			5725.000	91.467	53.477	-30.733	122.200	37.990	PK
5			5738.075	110.393	72.349	N/A	N/A	38.044	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:39
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5755MHz, Ant 0+1+2+3	

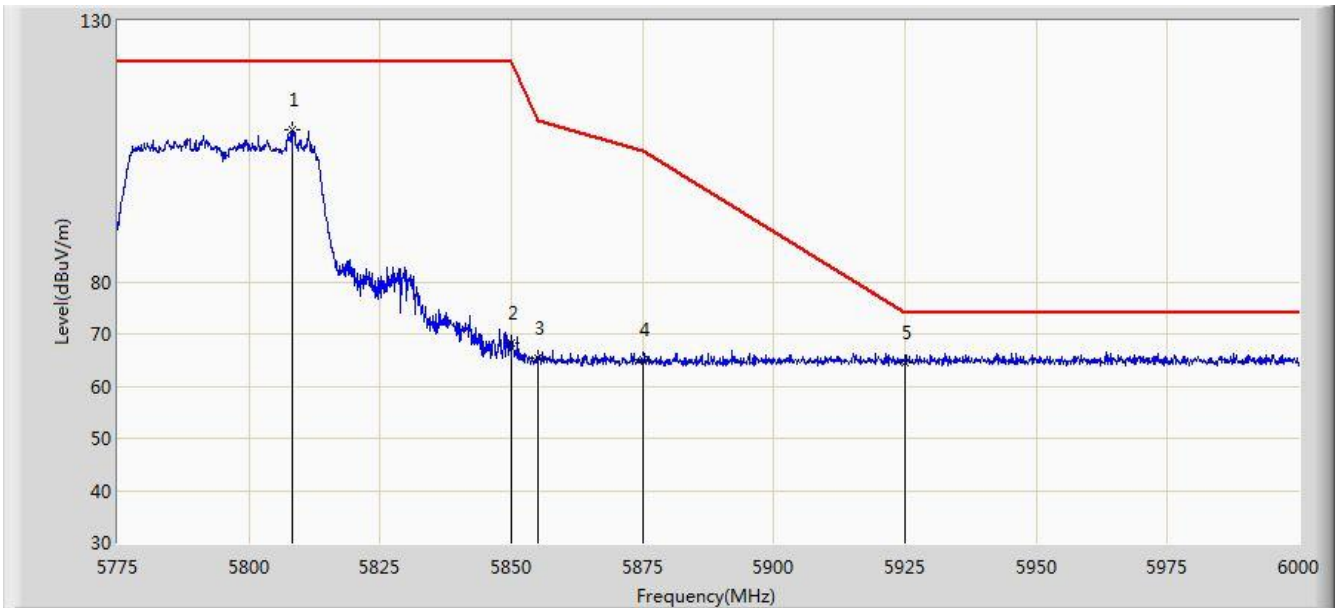


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5650.000	65.053	27.266	-8.947	74.000	37.787	PK
2			5700.000	76.234	38.342	-28.966	105.200	37.892	PK
3			5720.000	89.130	51.161	-21.670	110.800	37.970	PK
4			5725.000	99.739	61.749	-22.461	122.200	37.990	PK
5		*	5749.712	118.807	80.713	N/A	N/A	38.094	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:44
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5795MHz, Ant 0+1+2+3	

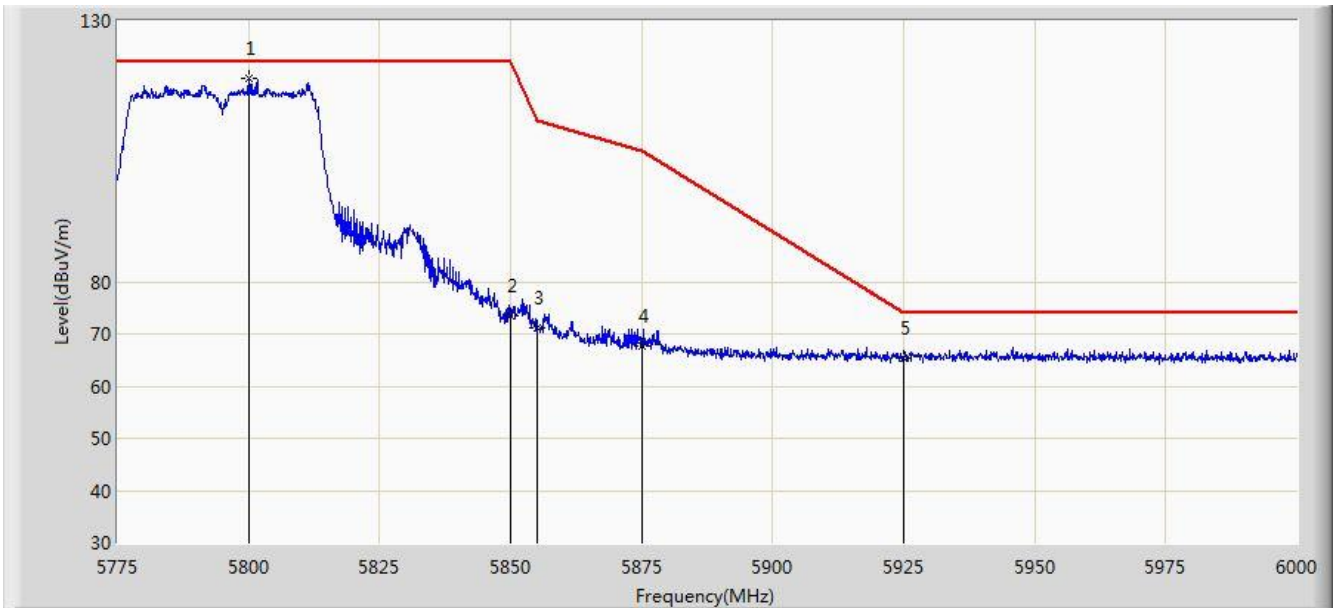


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5808.300	109.072	70.783	N/A	N/A	38.289	PK
2			5850.000	68.243	29.790	-53.957	122.200	38.454	PK
3			5855.000	65.437	26.972	-45.363	110.800	38.465	PK
4			5875.000	65.179	26.682	-40.021	105.200	38.497	PK
5		*	5925.000	64.356	25.823	-9.644	74.000	38.533	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:43
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT40 at channel 5795MHz, Ant 0+1+2+3	

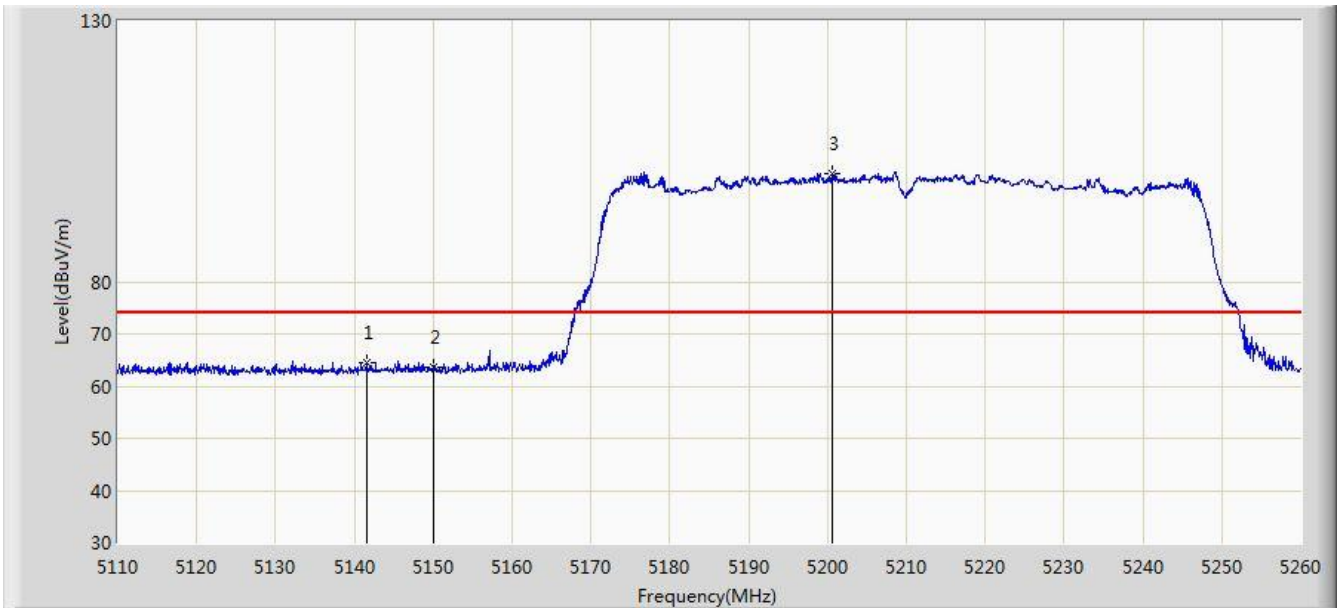


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5799.975	119.029	80.765	N/A	N/A	38.264	PK
2			5850.000	73.587	35.134	-48.613	122.200	38.454	PK
3			5855.000	71.185	32.720	-39.615	110.800	38.465	PK
4			5875.000	67.727	29.230	-37.473	105.200	38.497	PK
5			5925.000	65.454	26.921	-8.546	74.000	38.533	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:52
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80 at channel 5210MHz, Ant 0+1+2+3	

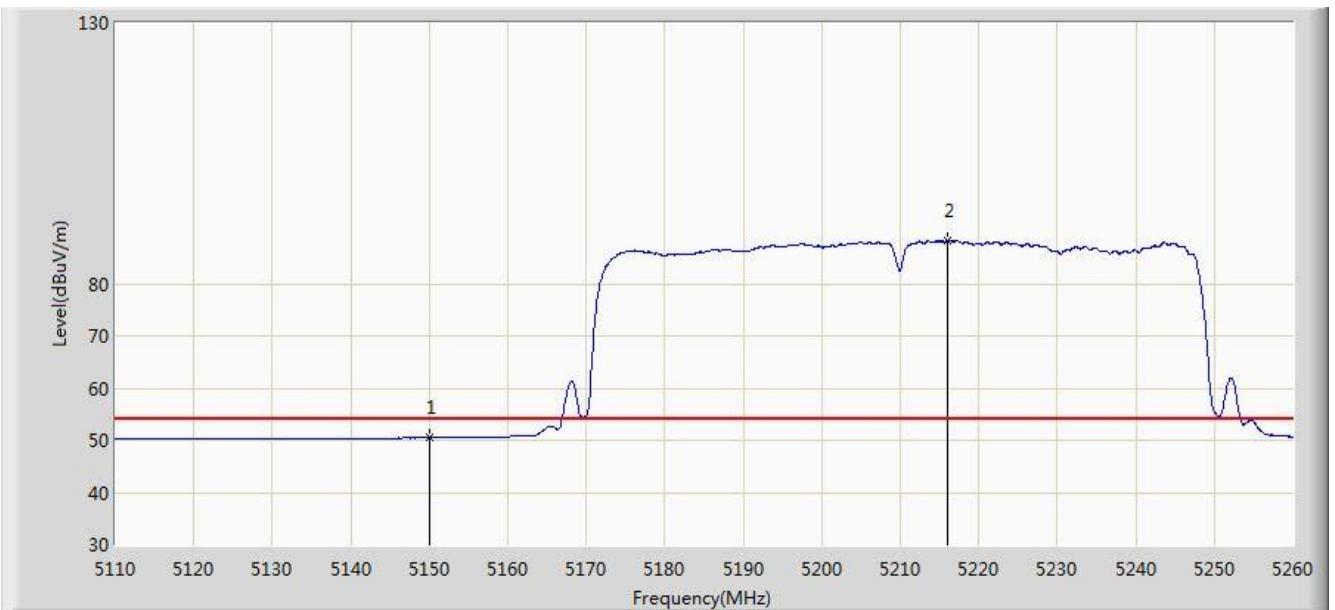


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5141.500	64.391	26.926	-9.609	74.000	37.465	PK
2			5150.000	63.538	26.086	-10.462	74.000	37.452	PK
3		*	5200.600	100.670	63.348	N/A	N/A	37.323	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:54
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80 at channel 5210MHz, Ant 0+1+2+3	

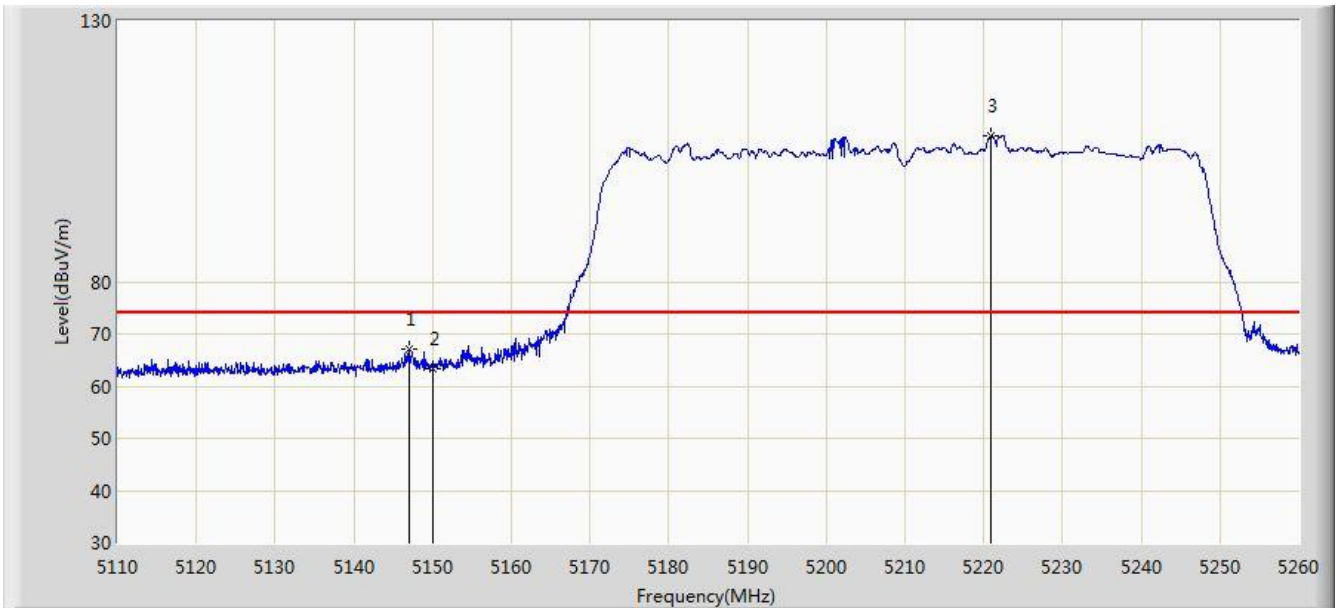


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	50.517	13.065	-3.483	54.000	37.452	AV
2		*	5216.050	88.243	50.972	N/A	N/A	37.271	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:51
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80 at channel 5210MHz, Ant 0+1+2+3	

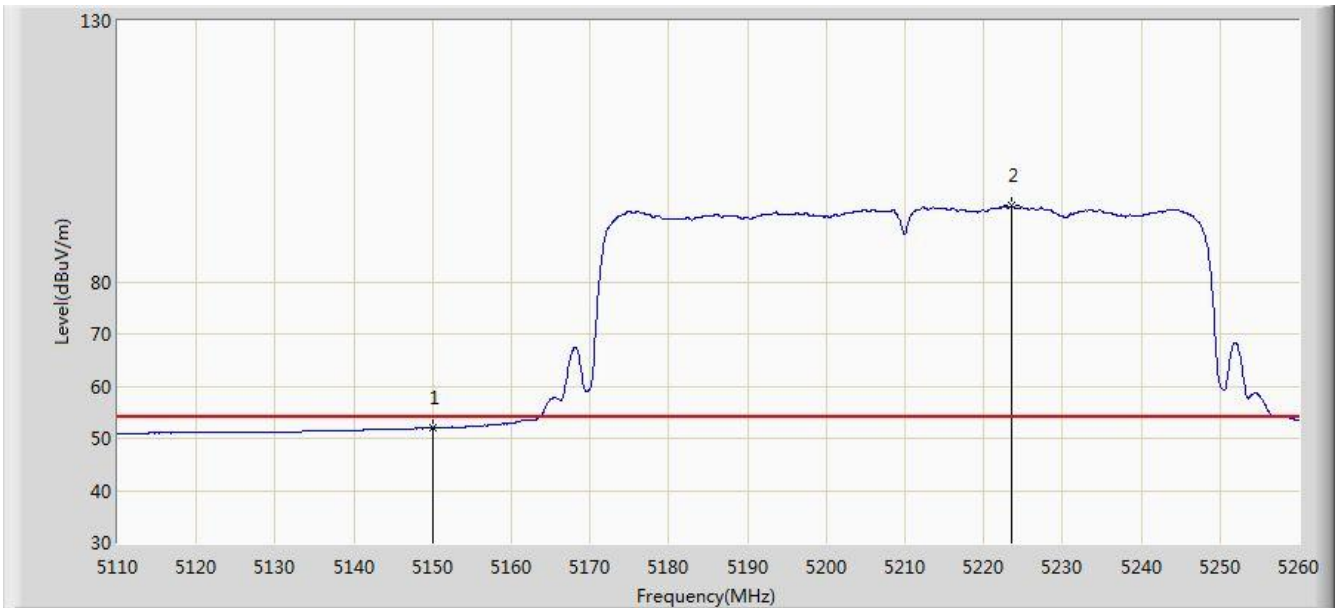


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5147.050	67.162	29.706	-6.838	74.000	37.456	PK
2			5150.000	63.320	25.868	-10.680	74.000	37.452	PK
3		*	5220.850	107.844	70.584	N/A	N/A	37.260	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:51
Limit: FCC_Part15.209_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80 at channel 5210MHz, Ant 0+1+2+3	

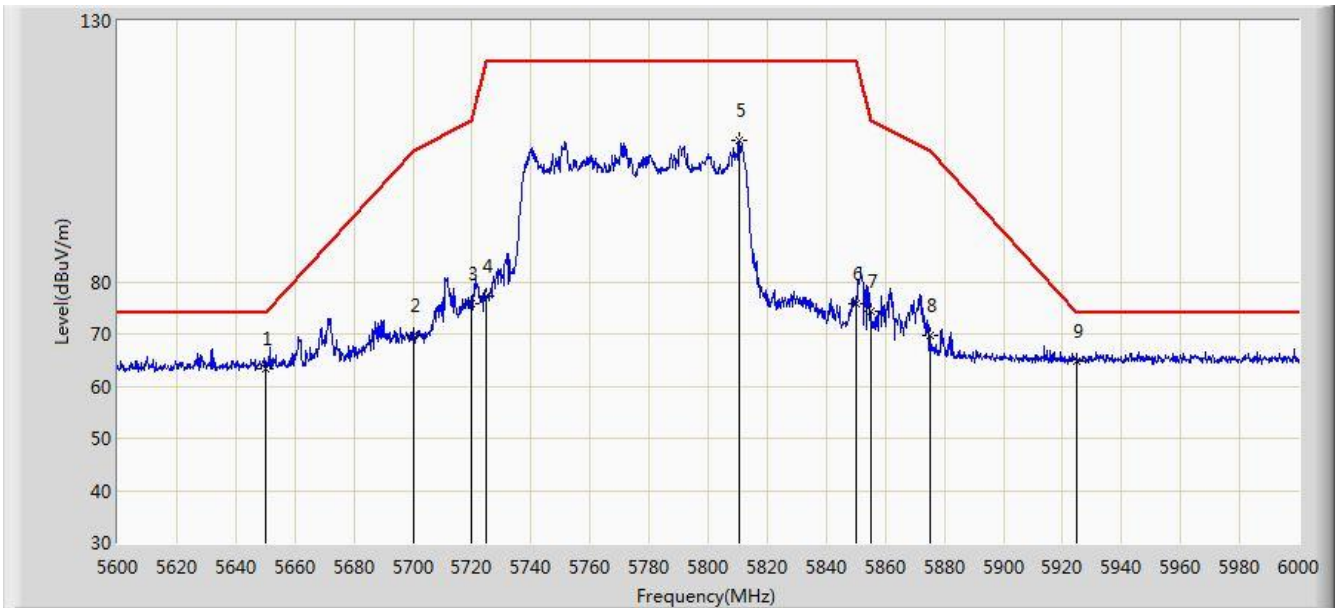


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	52.003	14.551	-1.997	54.000	37.452	AV
2		*	5223.475	94.571	57.316	N/A	N/A	37.255	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:57
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80 at channel 5775MHz, Ant 0+1+2+3	

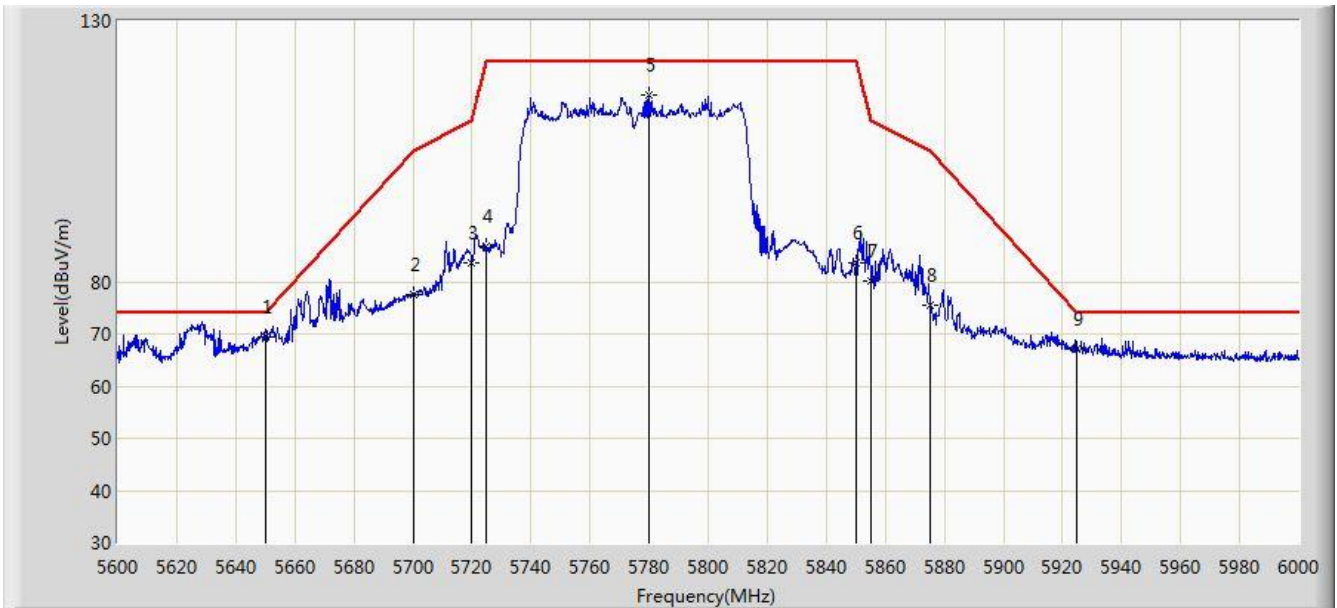


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5650.000	63.397	25.610	-10.603	74.000	37.787	PK
2			5700.000	69.832	31.940	-35.368	105.200	37.892	PK
3			5720.000	75.699	37.730	-35.101	110.800	37.970	PK
4			5725.000	77.167	39.177	-45.033	122.200	37.990	PK
5			5810.600	107.240	68.944	N/A	N/A	38.296	PK
6			5850.000	75.679	37.226	-46.521	122.200	38.454	PK
7			5855.000	74.363	35.898	-36.437	110.800	38.465	PK
8			5875.000	69.761	31.264	-35.439	105.200	38.497	PK
9		*	5925.000	64.851	26.318	-9.149	74.000	38.533	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2016/11/30 - 14:55
Limit: FCC_Part15.407_RE(3m)	Engineer: Will Yan
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80 at channel 5775MHz, Ant 0+1+2+3	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5650.000	69.288	31.501	-4.712	74.000	37.787	PK
2			5700.000	77.502	39.610	-27.698	105.200	37.892	PK
3			5720.000	83.634	45.665	-27.166	110.800	37.970	PK
4			5725.000	86.817	48.827	-35.383	122.200	37.990	PK
5			5780.000	115.821	77.627	N/A	N/A	38.194	PK
6			5850.000	83.531	45.078	-38.669	122.200	38.454	PK
7			5855.000	80.240	41.775	-30.560	110.800	38.465	PK
8			5875.000	75.364	36.867	-29.836	105.200	38.497	PK
9			5925.000	67.082	28.549	-6.918	74.000	38.533	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

7.10. AC Conducted Emissions Measurement

7.10.1. Test Limit

FCC Part 15.207 Limits		
Frequency (MHz)	QP (dB μ V)	AV (dB μ V)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

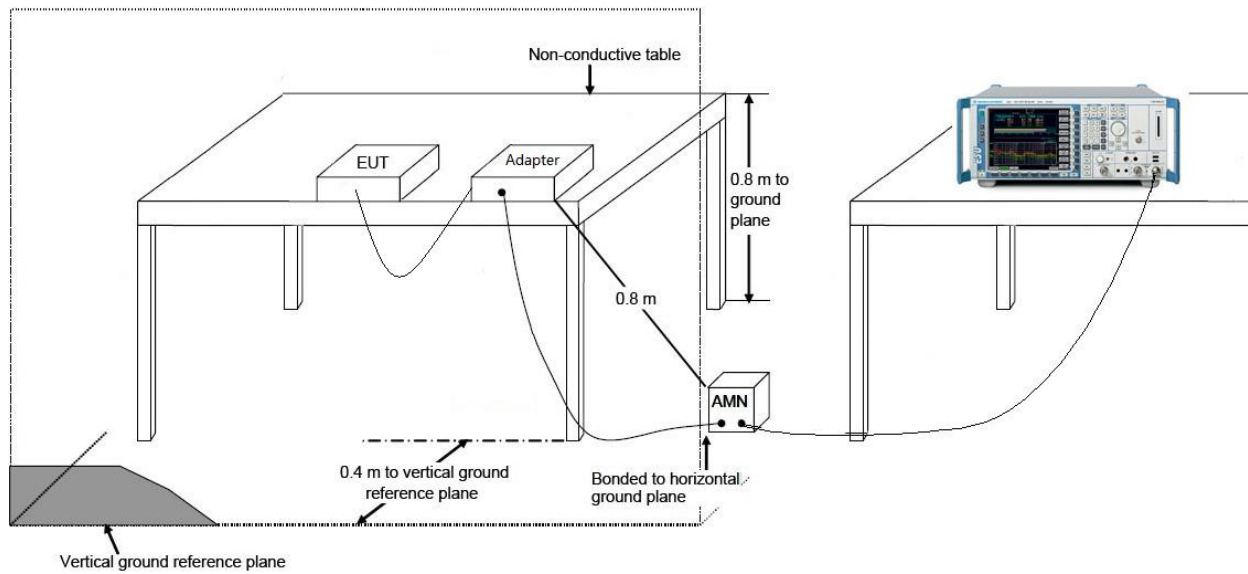
7.10.2. Test Procedure

The EUT was setup according to ANSI C63.4, 2009 and tested according to KDB 789033 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

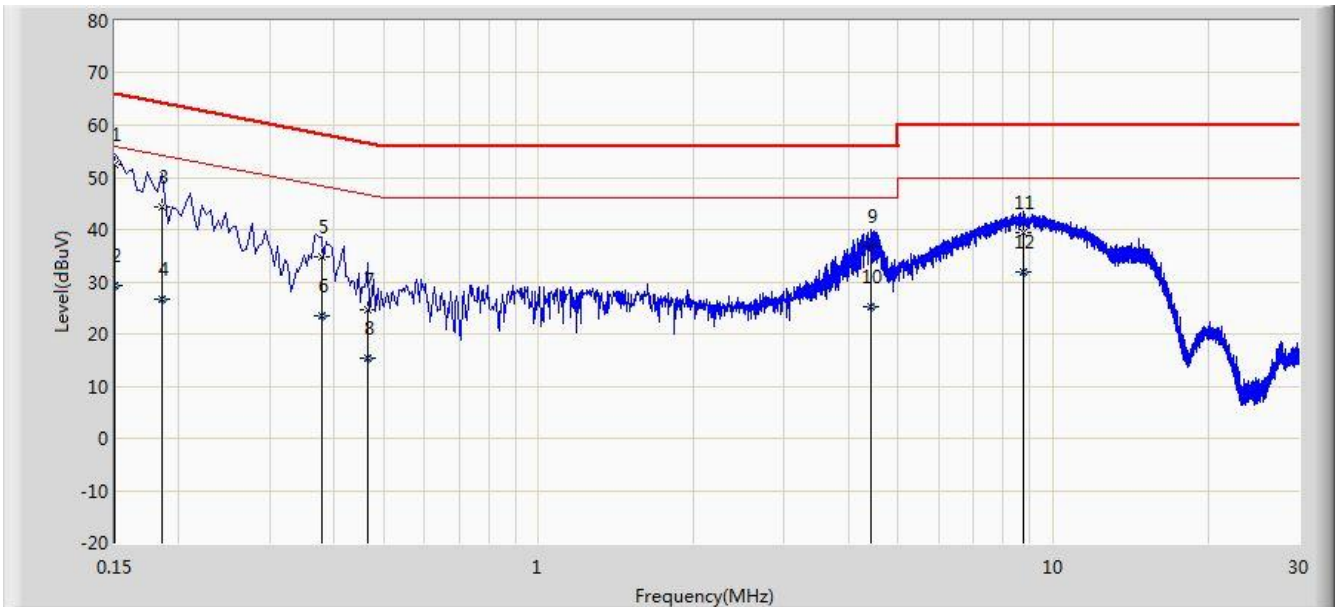
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

7.10.3. Test Setup



7.10.4. Test Result

Site: SR2	Time: 2016/12/12 - 21:00
Limit: FCC_Part15.207_CE_AC Power	Engineer: Bruce Wang
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode 1	

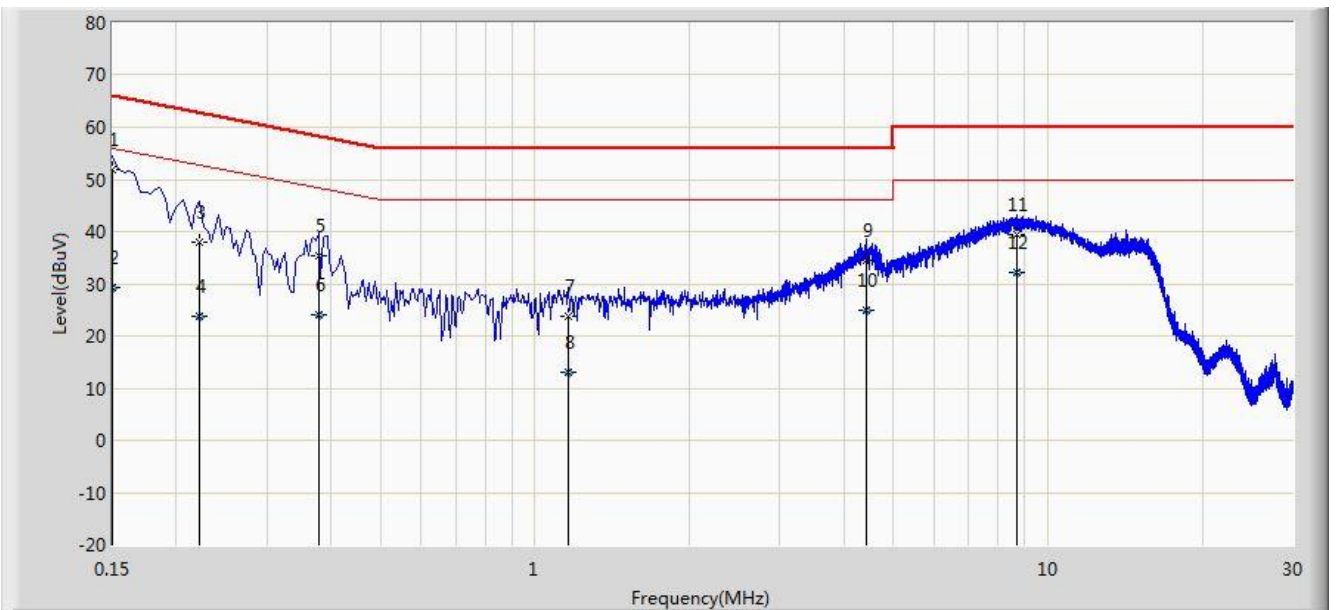


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.150	52.585	41.417	-13.415	66.000	11.168	QP
2			0.150	29.356	18.187	-26.644	56.000	11.168	AV
3			0.186	44.414	34.376	-19.799	64.213	10.039	QP
4			0.186	26.540	16.501	-27.673	54.213	10.039	AV
5			0.378	34.661	24.594	-23.662	58.323	10.067	QP
6			0.378	23.603	13.535	-24.721	48.323	10.067	AV
7			0.466	24.687	14.548	-31.898	56.585	10.139	QP
8			0.466	15.434	5.295	-31.151	46.585	10.139	AV
9			4.434	36.672	26.686	-19.328	56.000	9.986	QP
10			4.434	25.233	15.247	-20.767	46.000	9.986	AV
11			8.770	39.276	29.109	-20.724	60.000	10.167	QP
12			8.770	31.866	21.699	-18.134	50.000	10.167	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2016/12/12 - 21:02
Limit: FCC_Part15.207_CE_AC Power	Engineer: Bruce Wang
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: Indoor GPON HGU	Power: AC 120V/60Hz
Test Mode 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.150	52.008	40.866	-13.992	66.000	11.142	QP
2			0.150	29.138	17.996	-26.862	56.000	11.142	AV
3			0.222	37.895	27.915	-24.849	62.744	9.980	QP
4			0.222	23.745	13.766	-28.999	52.744	9.980	AV
5			0.378	35.460	25.364	-22.863	58.323	10.096	QP
6			0.378	24.110	14.014	-24.213	48.323	10.096	AV
7			1.162	23.910	14.006	-32.090	56.000	9.904	QP
8			1.162	12.984	3.080	-33.016	46.000	9.904	AV
9			4.434	34.588	24.594	-21.412	56.000	9.994	QP
10			4.434	24.800	14.806	-21.200	46.000	9.994	AV
11			8.702	39.387	29.193	-20.613	60.000	10.194	QP
12			8.702	32.070	21.876	-17.930	50.000	10.194	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

8. CONCLUSION

The data collected relate only the item(s) tested and show that the EUT: **Indoor GPON HGU FCC ID: I88C424G** is in compliance with Part 15E of the FCC Rules.

The End