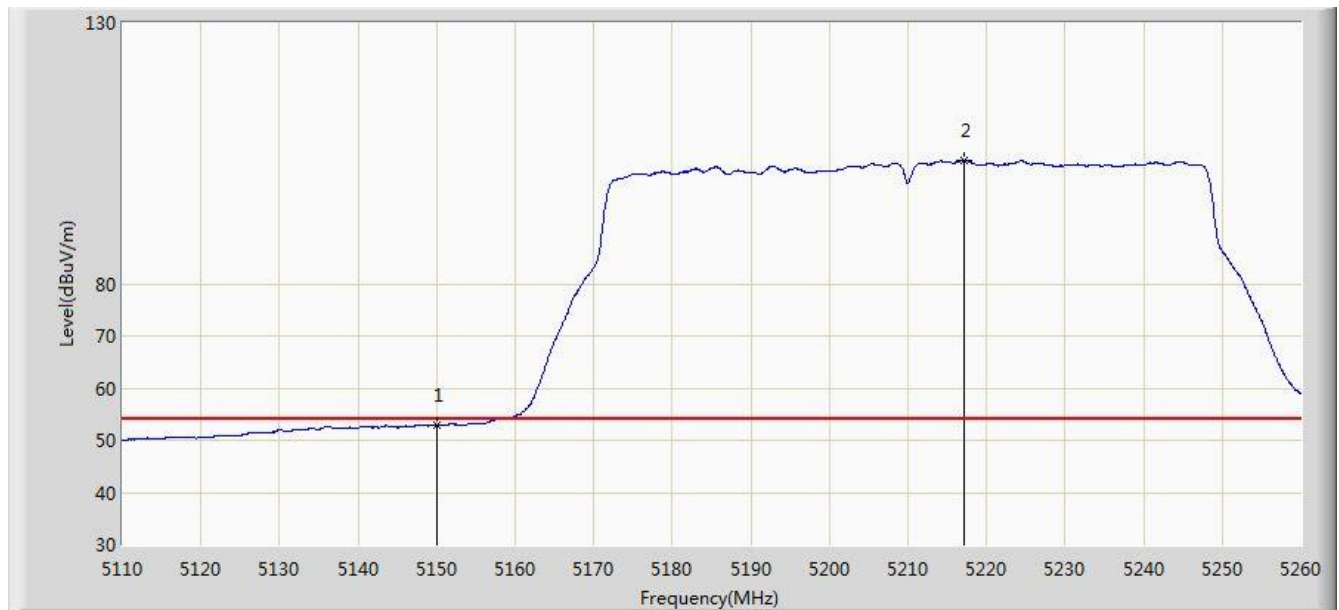


Site: AC2	Time: 2017/02/28 - 14:31
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80+80 at Channel 5210MHz + 5775MHz Ant 0 + 1	

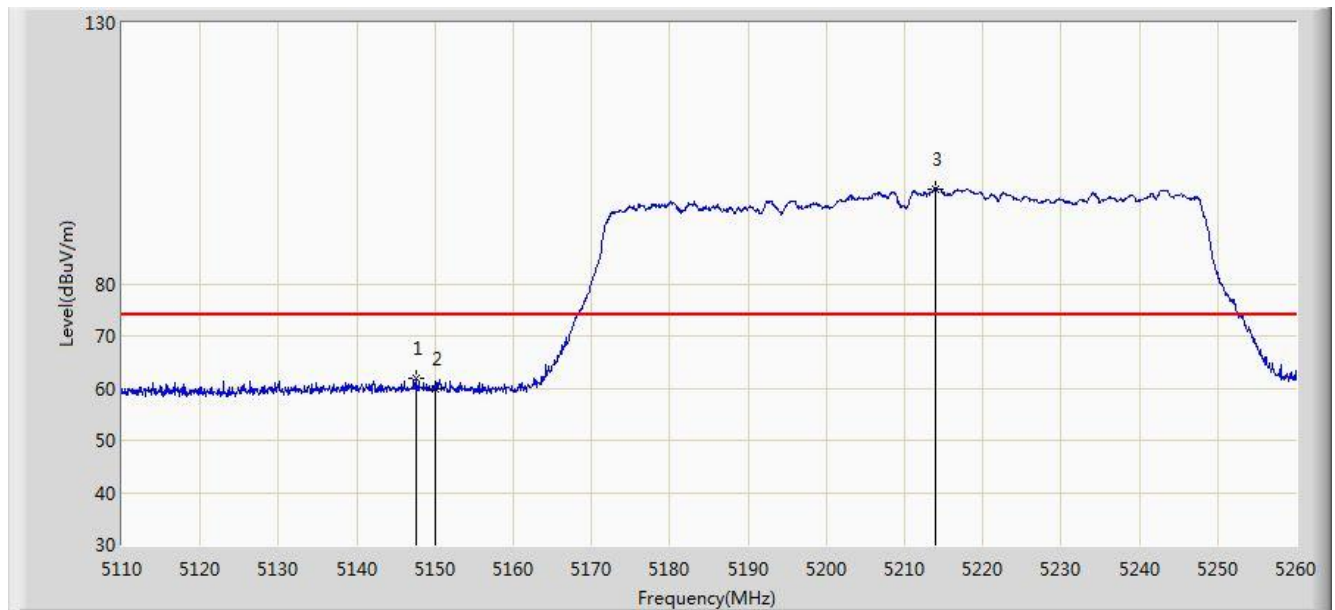


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	52.874	49.804	-1.126	54.000	3.069	AV
2		*	5217.175	103.585	100.781	N/A	N/A	2.804	AV

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

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

Site: AC2	Time: 2017/02/28 - 14:34
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80+80 at Channel 5210MHz + 5775MHz Ant 0 + 1	

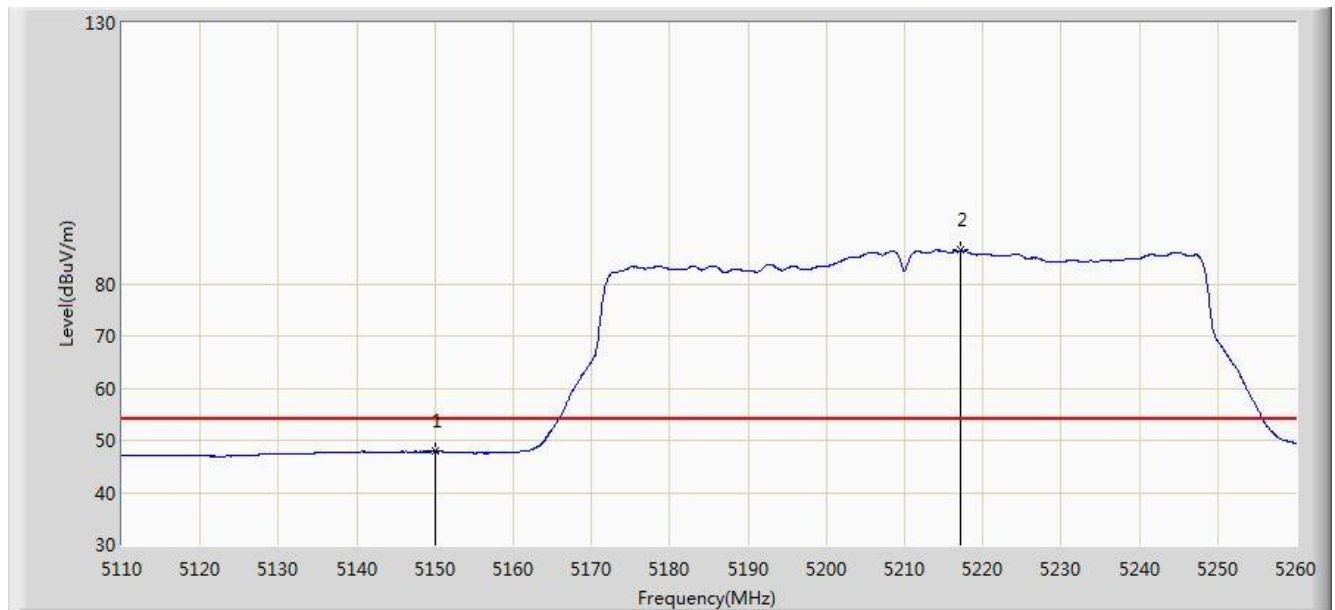


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5147.500	61.873	58.797	-12.127	74.000	3.075	PK
2			5150.000	59.877	56.807	-14.123	74.000	3.069	PK
3		*	5213.950	98.252	95.451	N/A	N/A	2.800	PK

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

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

Site: AC2	Time: 2017/02/28 - 14:35
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80+80 at Channel 5210MHz + 5775MHz Ant 0 + 1	

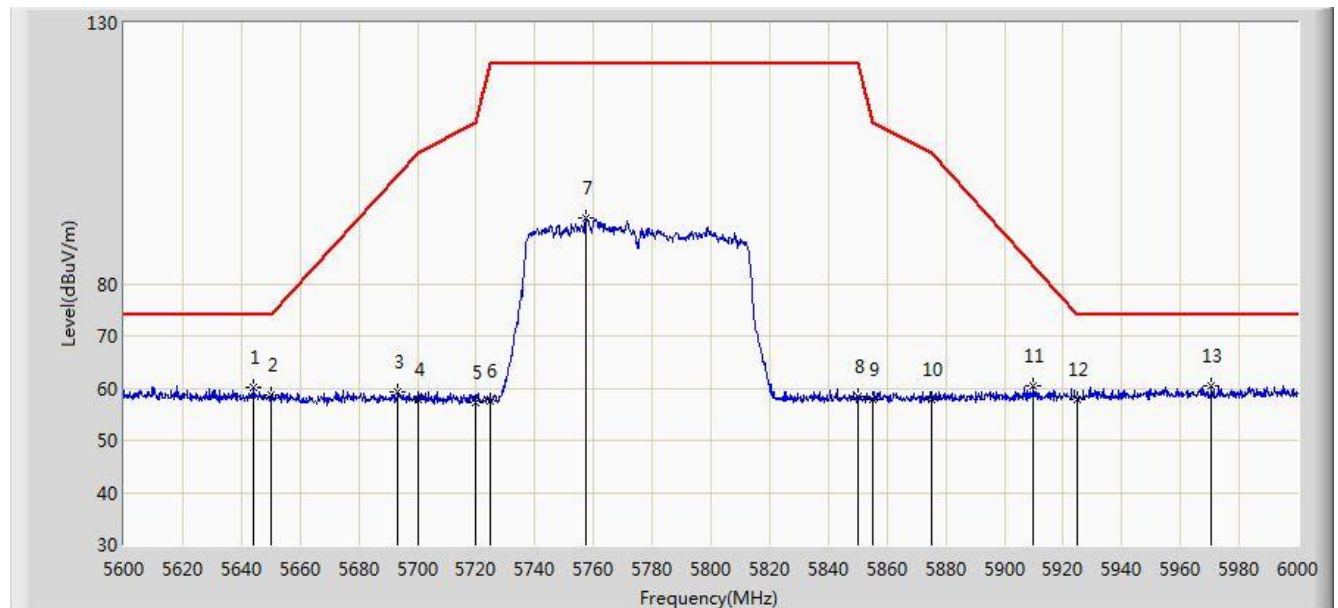


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	47.849	44.779	-6.151	54.000	3.069	AV
2		*	5217.175	86.381	83.577	N/A	N/A	2.804	AV

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

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

Site: AC2	Time: 2017/02/28 - 14:37
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80+80 at Channel 5210MHz + 5775MHz Ant 0 + 1	

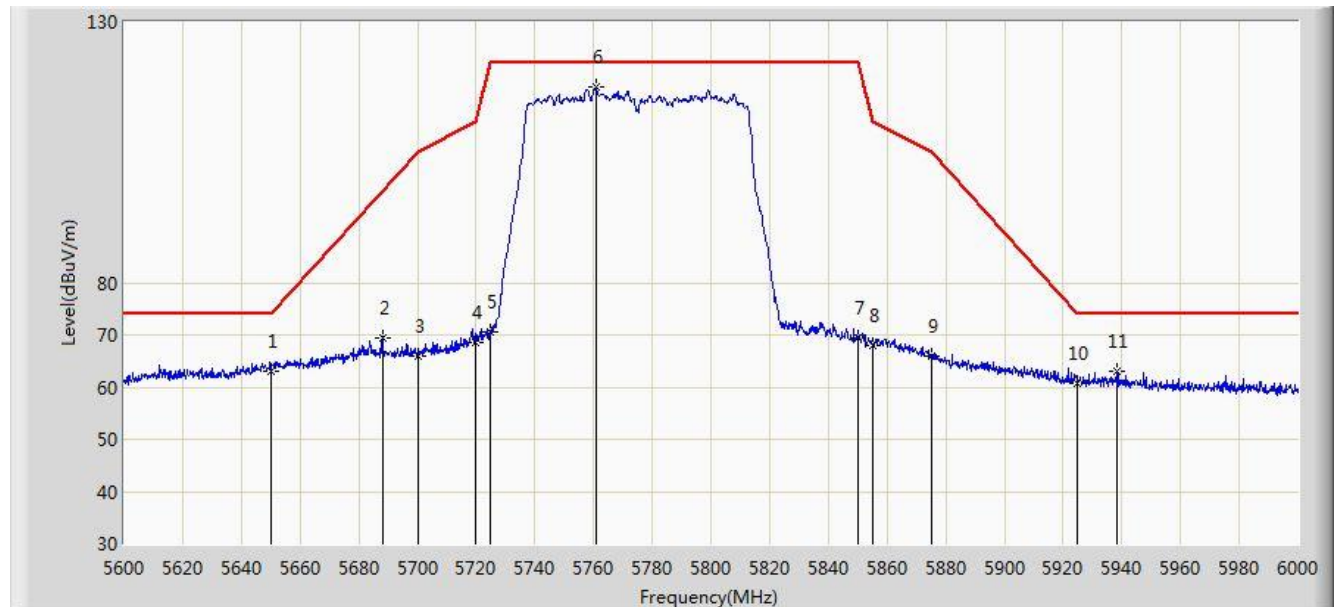


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5644.000	60.086	56.186	-13.914	74.000	3.900	PK
2			5650.000	58.720	54.917	-15.280	74.000	3.803	PK
3			5693.400	59.349	55.343	-41.748	101.097	4.006	PK
4			5700.000	57.816	53.876	-47.384	105.200	3.940	PK
5			5720.000	57.143	53.161	-53.657	110.800	3.982	PK
6			5725.000	57.596	53.490	-64.604	122.200	4.105	PK
7			5757.400	92.615	88.220	N/A	N/A	4.395	PK
8			5850.000	58.348	53.353	-63.852	122.200	4.995	PK
9			5855.000	57.701	52.713	-53.099	110.800	4.987	PK
10			5875.000	57.894	52.887	-47.306	105.200	5.008	PK
11			5910.000	60.408	55.227	-22.924	83.332	5.182	PK
12			5925.000	57.908	52.756	-16.092	74.000	5.152	PK
13		*	5970.600	60.496	55.271	-13.504	74.000	5.225	PK

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

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

Site: AC2	Time: 2017/02/28 - 14:30
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80+80 at Channel 5210MHz + 5775MHz Ant 0 + 1	



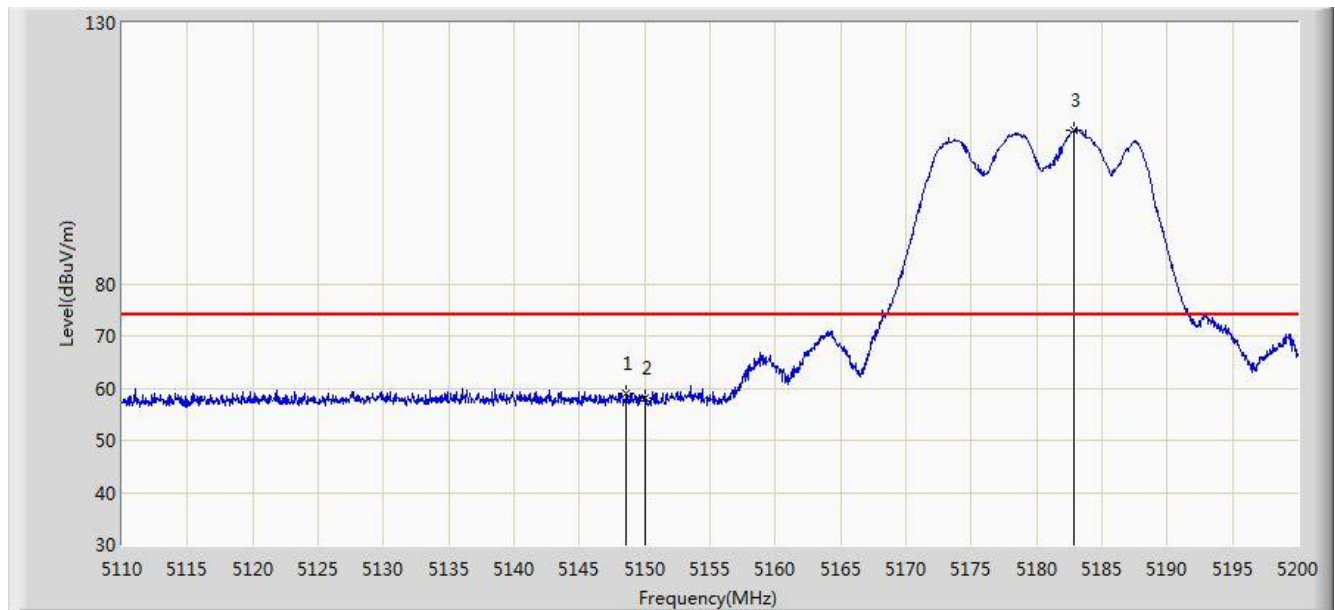
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5650.000	63.123	59.320	-10.877	74.000	3.803	PK
2			5688.200	69.565	65.548	-28.296	97.862	4.017	PK
3			5700.000	65.812	61.872	-39.388	105.200	3.940	PK
4			5720.000	68.478	64.496	-42.322	110.800	3.982	PK
5			5725.000	70.672	66.566	-51.528	122.200	4.105	PK
6		*	5760.800	117.439	112.999	N/A	N/A	4.440	PK
7			5850.000	69.385	64.390	-52.815	122.200	4.995	PK
8			5855.000	67.992	63.004	-42.808	110.800	4.987	PK
9			5875.000	65.989	60.982	-39.211	105.200	5.008	PK
10			5925.000	60.693	55.541	-13.307	74.000	5.152	PK
11			5938.200	63.050	57.873	-10.950	74.000	5.176	PK

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

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

Radio C Radiated Restricted Band Edge Measurement

Site: AC2	Time: 2017/01/11 - 16:25
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at Channel 5180MHz Ant 0+1	

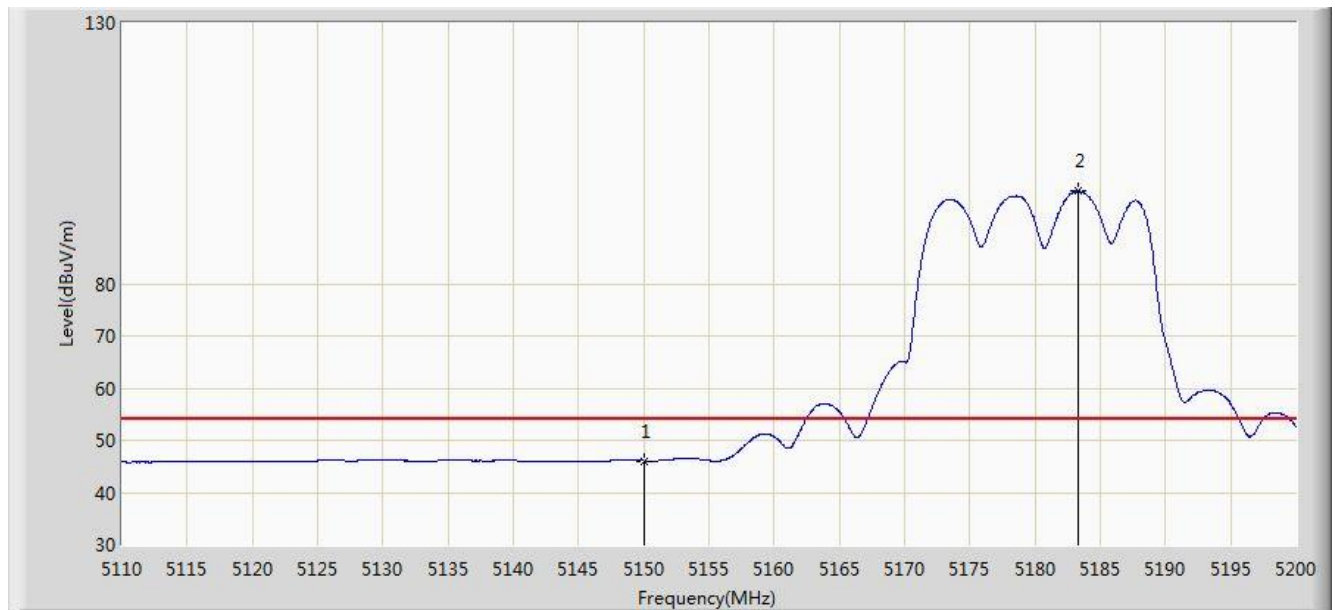


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5148.565	59.115	56.042	-14.885	74.000	3.073	PK
2			5150.000	58.213	55.143	-15.787	74.000	3.069	PK
3		*	5182.855	109.440	106.400	N/A	N/A	3.040	PK

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

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

Site: AC2	Time: 2017/01/11 - 16:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at Channel 5180MHz Ant 0+1	

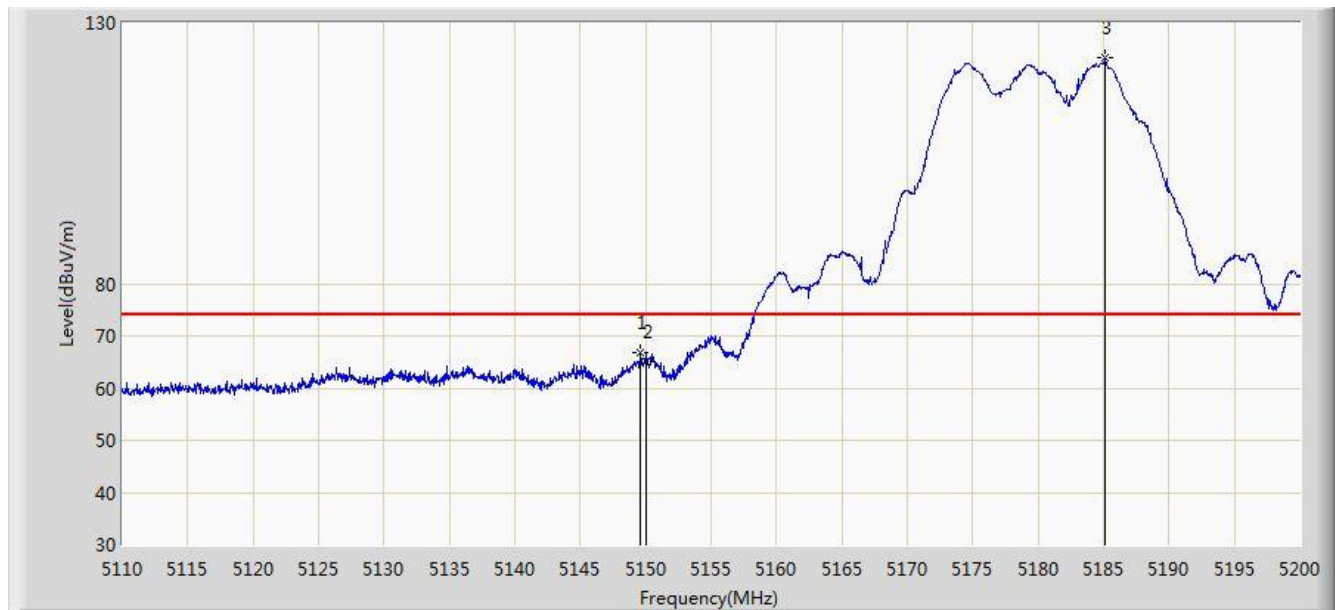


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	46.086	43.016	-7.914	54.000	3.069	AV
2		*	5183.305	97.786	94.751	N/A	N/A	3.035	AV

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

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

Site: AC2	Time: 2017/01/11 - 16:25
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at Channel 5180MHz Ant 0+1	

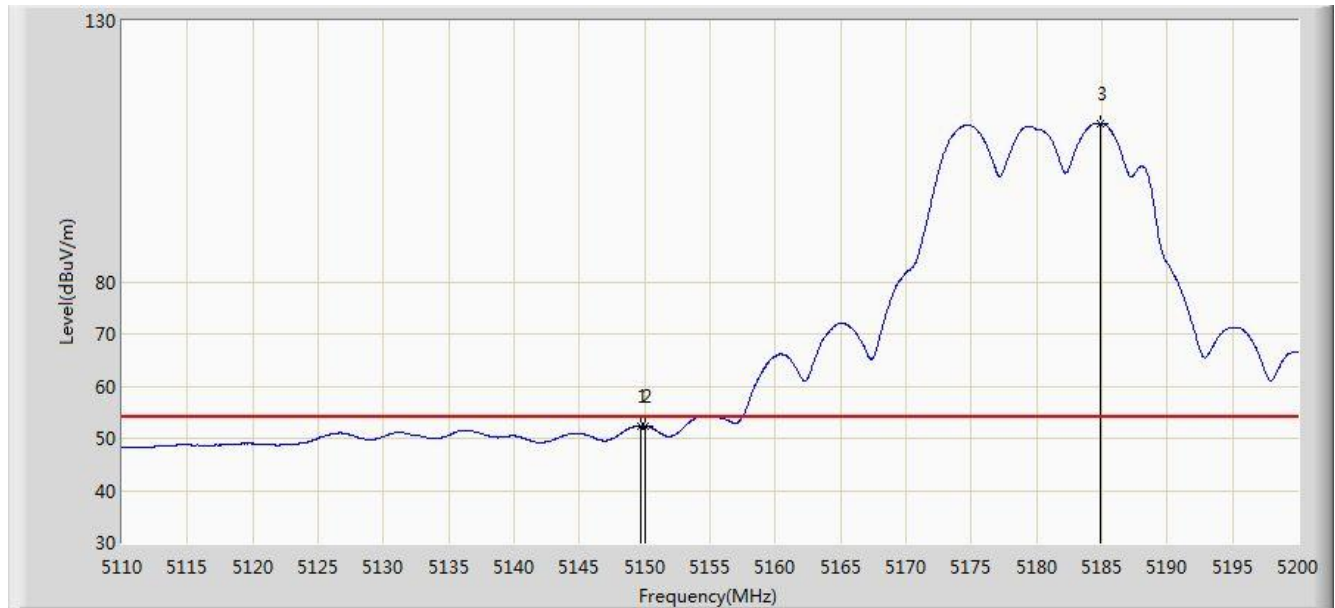


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5149.600	66.806	63.736	-7.194	74.000	3.070	PK
2			5150.000	65.213	62.143	-8.787	74.000	3.069	PK
3		*	5185.150	123.347	120.335	N/A	N/A	3.011	PK

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

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

Site: AC2	Time: 2017/01/11 - 16:24
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at Channel 5180MHz Ant 0+1	

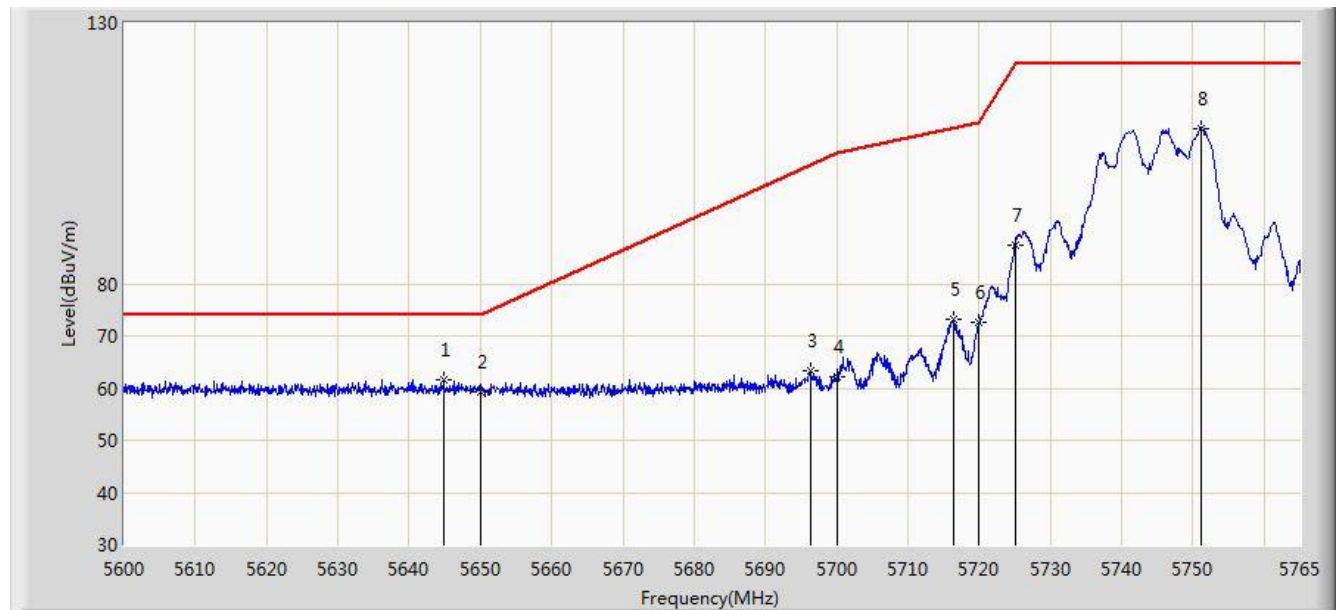


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5149.735	52.451	49.381	-1.549	54.000	3.070	AV
2			5150.000	52.438	49.368	-1.562	54.000	3.069	AV
3		*	5184.835	110.424	107.408	N/A	N/A	3.015	AV

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

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

Site: AC2	Time: 2017/01/14 - 11:48
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at Channel 5745MHz Ant 0+1	

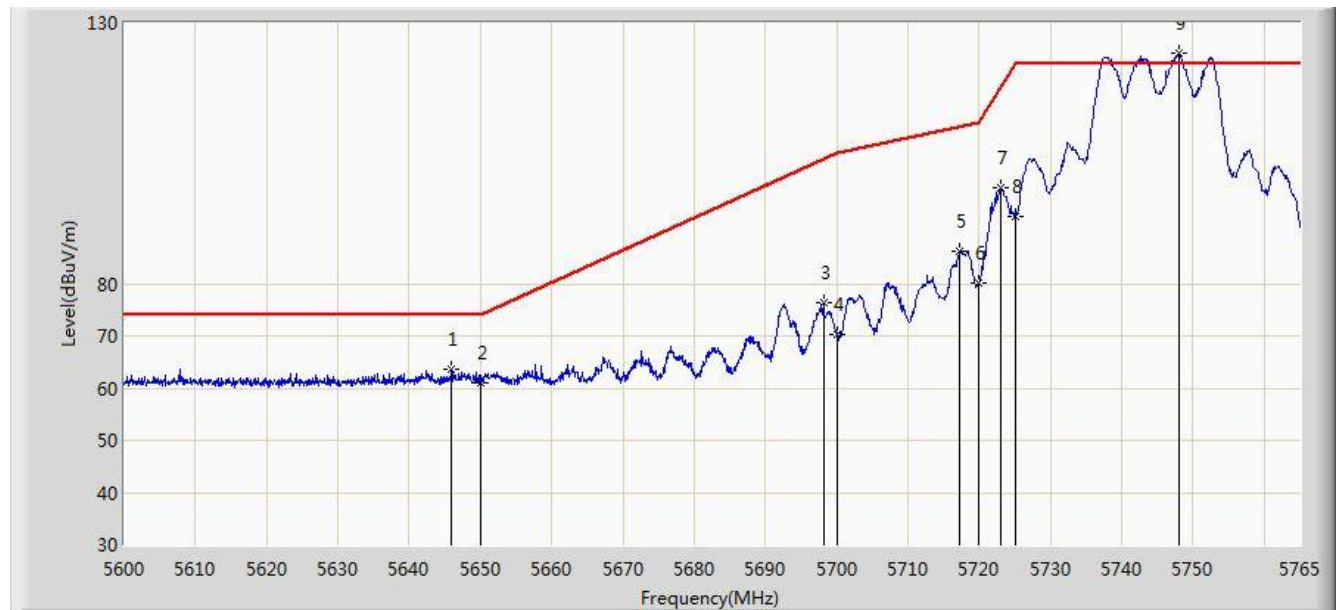


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5644.880	61.645	57.730	-12.355	74.000	3.916	PK
2			5650.000	59.262	55.459	-14.738	74.000	3.803	PK
3			5696.277	63.455	59.476	-39.432	102.886	3.979	PK
4			5700.000	62.180	58.240	-43.020	105.200	3.940	PK
5			5716.325	73.183	69.291	-36.590	109.772	3.892	PK
6			5720.000	72.530	68.548	-38.270	110.800	3.982	PK
7			5725.000	87.272	83.166	-34.928	122.200	4.105	PK
8			5751.058	109.842	105.557	N/A	N/A	4.285	PK

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

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

Site: AC2	Time: 2017/01/14 - 11:45
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at Channel 5745MHz Ant 0+1	

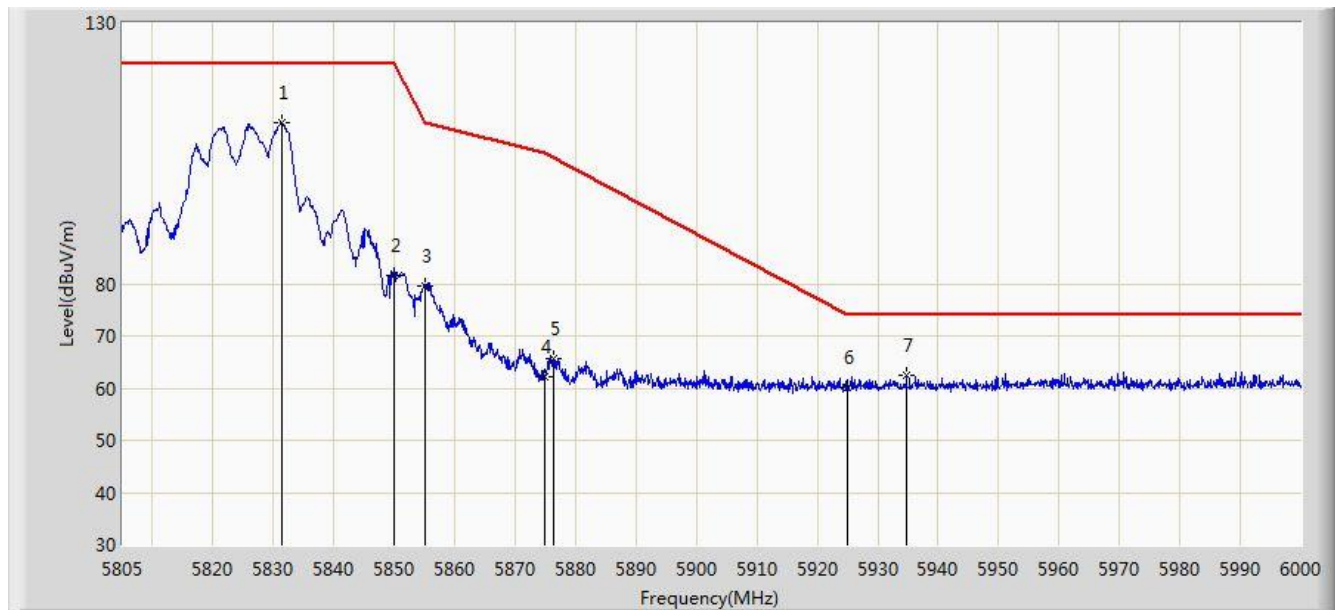


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5645.953	63.516	59.620	-10.484	74.000	3.895	PK
2			5650.000	61.050	57.247	-12.950	74.000	3.803	PK
3			5698.175	76.311	72.351	-27.755	104.066	3.960	PK
4			5700.000	70.305	66.365	-34.895	105.200	3.940	PK
5			5717.315	86.196	82.280	-23.853	110.049	3.916	PK
6			5720.000	80.160	76.178	-30.640	110.800	3.982	PK
7			5722.925	98.359	94.305	-19.111	117.470	4.054	PK
8			5725.000	92.996	88.890	-29.204	122.200	4.105	PK
9		*	5748.005	124.089	119.822	N/A	N/A	4.267	PK

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

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

Site: AC2	Time: 2017/01/14 - 11:53
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at Channel 5825MHz Ant 0+1	

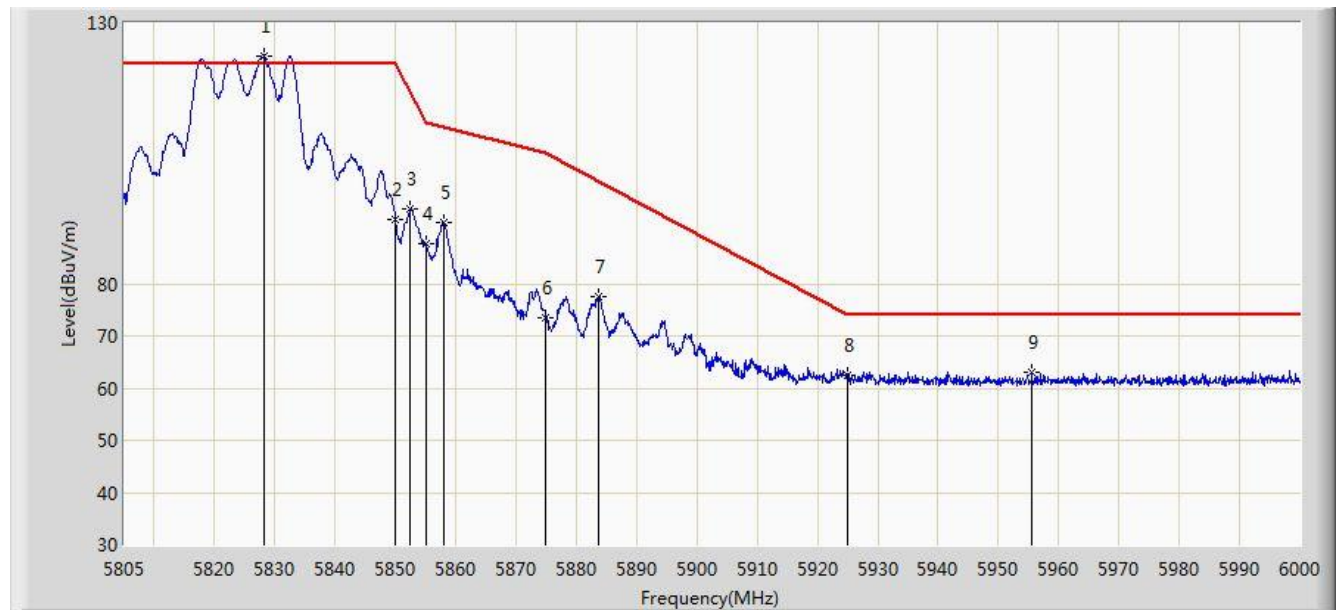


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5831.325	110.832	105.988	N/A	N/A	4.843	PK
2			5850.000	81.634	76.639	-40.566	122.200	4.995	PK
3			5855.000	79.708	74.720	-31.092	110.800	4.987	PK
4			5875.000	62.289	57.282	-42.911	105.200	5.008	PK
5			5876.272	65.579	60.558	-38.824	104.403	5.022	PK
6			5925.000	60.242	55.090	-13.758	74.000	5.152	PK
7			5934.772	62.391	57.206	-11.609	74.000	5.185	PK

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

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

Site: AC2	Time: 2017/01/14 - 11:50
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11a at Channel 5825MHz Ant 0+1	

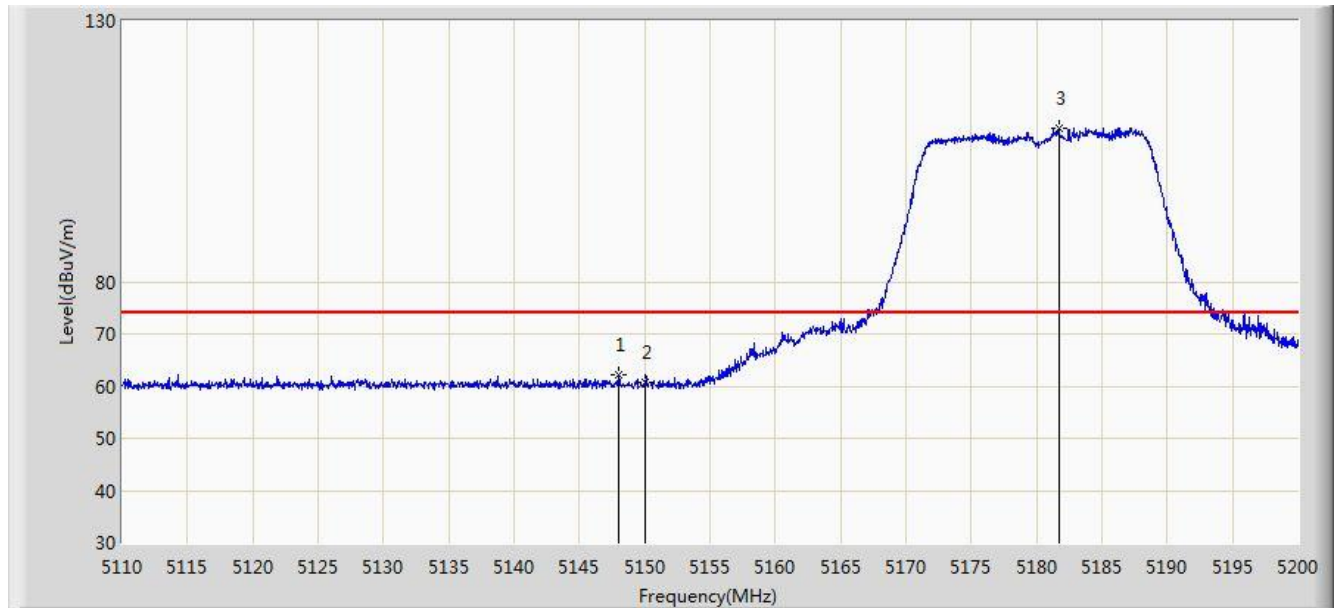


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5828.205	123.732	118.946	N/A	N/A	4.787	PK
2			5850.000	92.380	87.385	-29.820	122.200	4.995	PK
3			5852.482	94.328	89.337	-22.211	116.540	4.991	PK
4			5855.000	87.720	82.732	-23.080	110.800	4.987	PK
5			5858.040	91.660	86.678	-18.287	109.948	4.983	PK
6			5875.000	73.344	68.337	-31.856	105.200	5.008	PK
7			5883.780	77.556	72.477	-22.146	99.702	5.079	PK
8			5925.000	62.569	57.417	-11.431	74.000	5.152	PK
9			5955.540	63.086	57.783	-10.914	74.000	5.304	PK

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

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

Site: AC2	Time: 2017/01/14 - 12:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 5180MHz Ant 0+1	

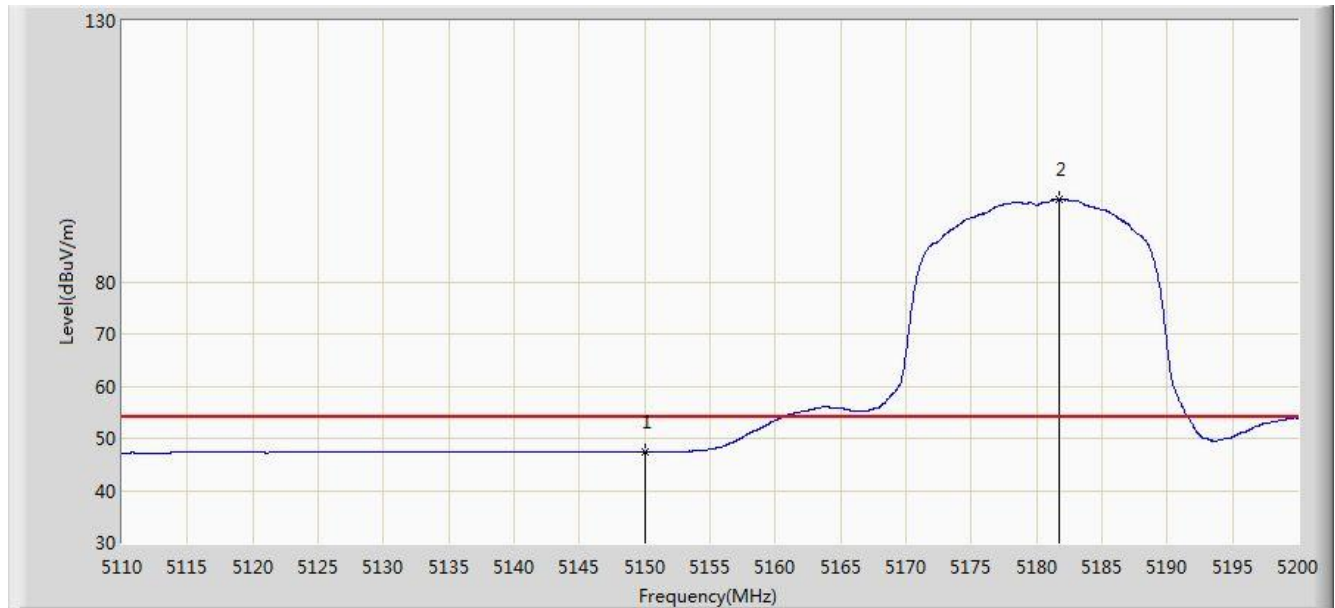


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5147.980	62.095	59.021	-11.905	74.000	3.075	PK
2			5150.000	60.762	57.692	-13.238	74.000	3.069	PK
3		*	5181.730	109.496	106.446	N/A	N/A	3.050	PK

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

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

Site: AC2	Time: 2017/01/14 - 12:12
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 5180MHz Ant 0+1	

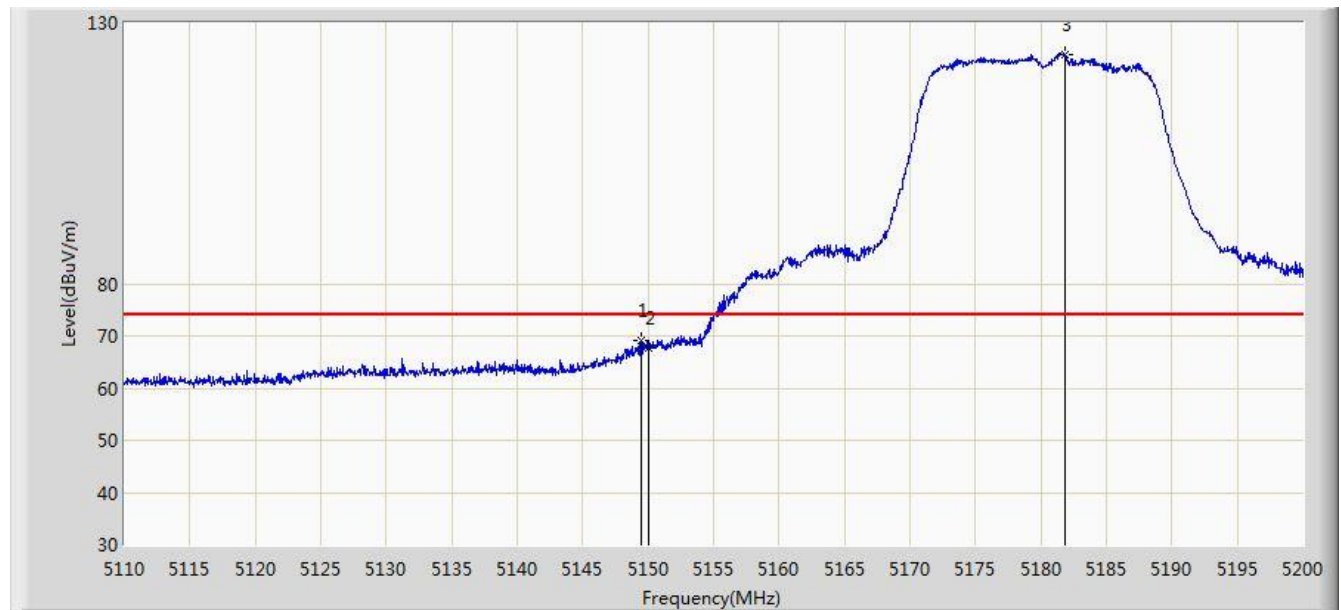


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	47.405	44.335	-6.595	54.000	3.069	AV
2		*	5181.775	95.737	92.687	N/A	N/A	3.050	AV

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

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

Site: AC2	Time: 2017/01/14 - 12:09
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 5180MHz Ant 0+1	

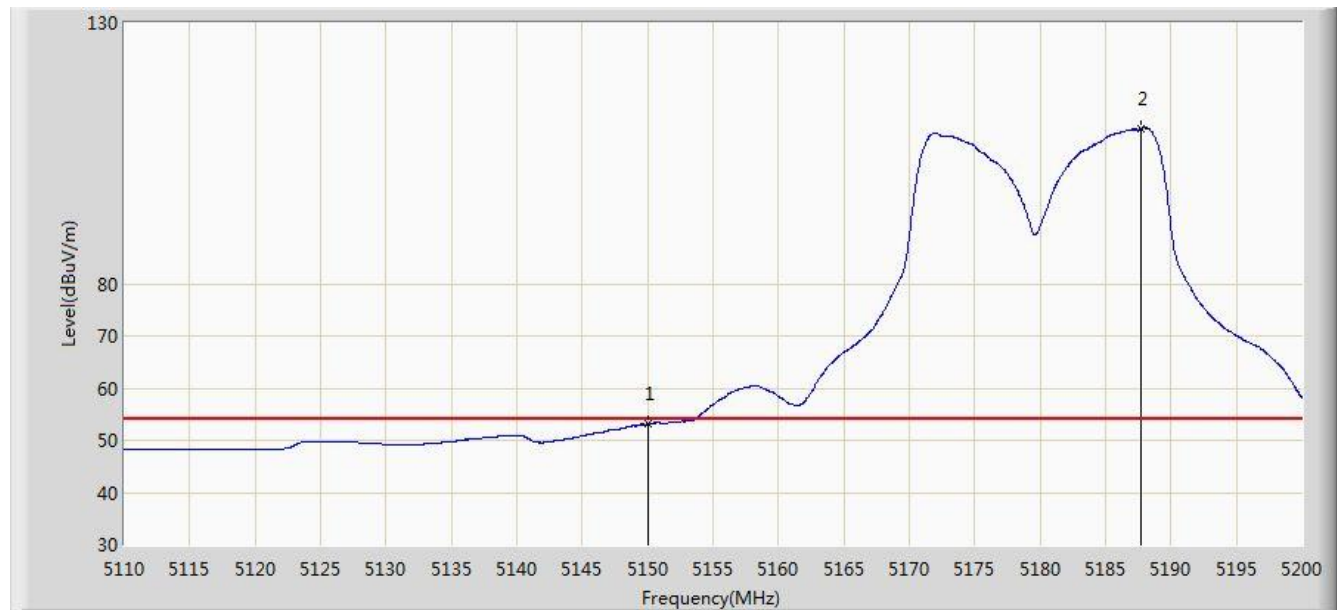


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5149.420	69.034	65.963	-4.966	74.000	3.071	PK
2			5150.000	67.537	64.467	-6.463	74.000	3.069	PK
3		*	5181.820	124.050	121.000	N/A	N/A	3.051	PK

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

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

Site: AC2	Time: 2017/01/14 - 12:05
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 5180MHz Ant 0+1	

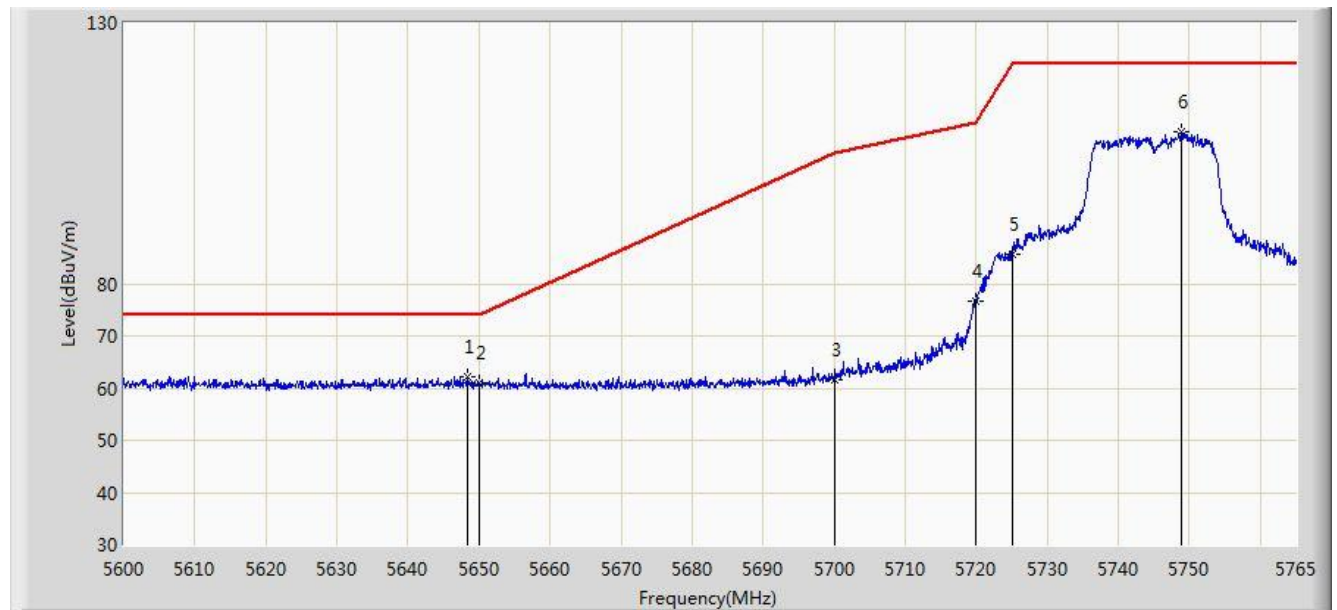


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	53.127	50.057	-0.873	54.000	3.069	AV
2		*	5187.760	109.765	106.786	N/A	N/A	2.979	AV

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

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

Site: AC2	Time: 2017/01/14 - 12:37
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 5745MHz Ant 0+1	

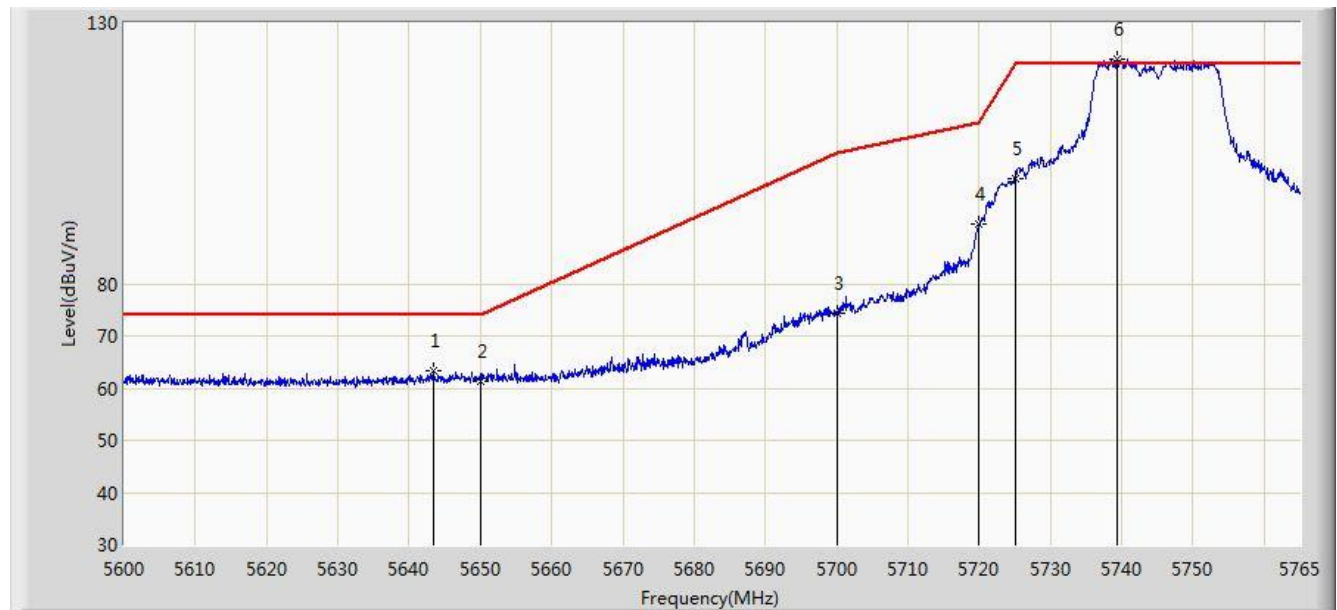


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5648.428	62.150	58.311	-11.850	74.000	3.840	PK
2			5650.000	60.930	57.127	-13.070	74.000	3.803	PK
3			5700.000	61.641	57.701	-43.559	105.200	3.940	PK
4			5720.000	76.780	72.798	-34.020	110.800	3.982	PK
5			5725.000	85.534	81.428	-36.666	122.200	4.105	PK
6			5748.830	109.164	104.897	N/A	N/A	4.267	PK

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

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

Site: AC2	Time: 2017/01/14 - 12:35
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 5745MHz Ant 0+1	

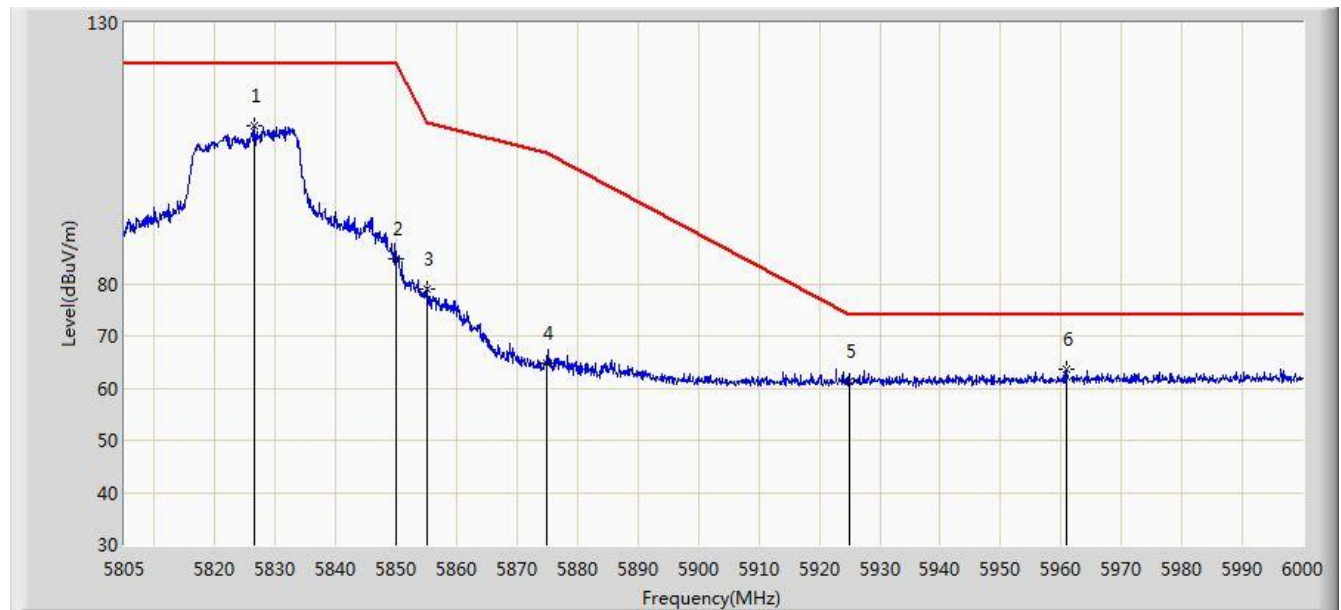


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5643.395	63.325	59.435	-10.675	74.000	3.889	PK
2			5650.000	61.299	57.496	-12.701	74.000	3.803	PK
3			5700.000	74.426	70.486	-30.774	105.200	3.940	PK
4			5720.000	91.329	87.347	-19.471	110.800	3.982	PK
5			5725.000	100.094	95.988	-22.106	122.200	4.105	PK
6		*	5739.342	123.088	118.808	N/A	N/A	4.280	PK

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

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

Site: AC2	Time: 2017/01/14 - 12:40
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 5825MHz Ant 0+1	

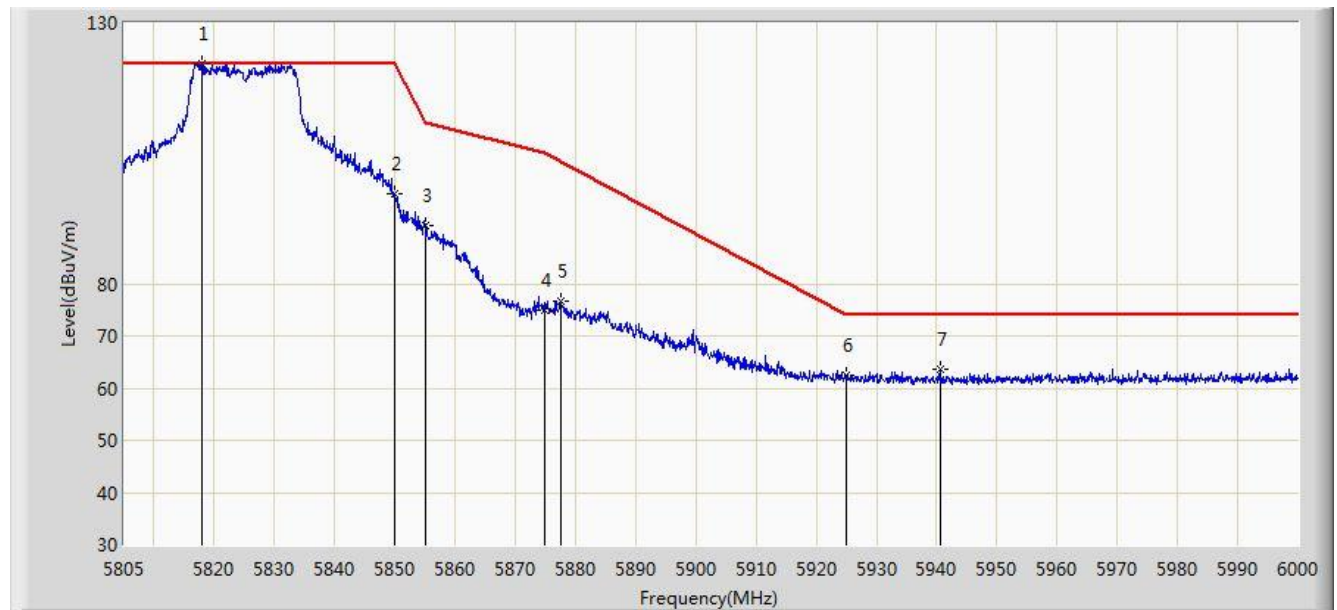


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5826.547	110.362	105.601	N/A	N/A	4.761	PK
2			5850.000	84.921	79.926	-37.279	122.200	4.995	PK
3			5855.000	79.038	74.050	-31.762	110.800	4.987	PK
4			5875.000	64.655	59.648	-40.545	105.200	5.008	PK
5			5925.000	61.328	56.176	-12.672	74.000	5.152	PK
6		*	5961.000	63.481	58.118	-10.519	74.000	5.364	PK

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

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

Site: AC2	Time: 2017/01/14 - 12:39
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 5825MHz Ant 0+1	

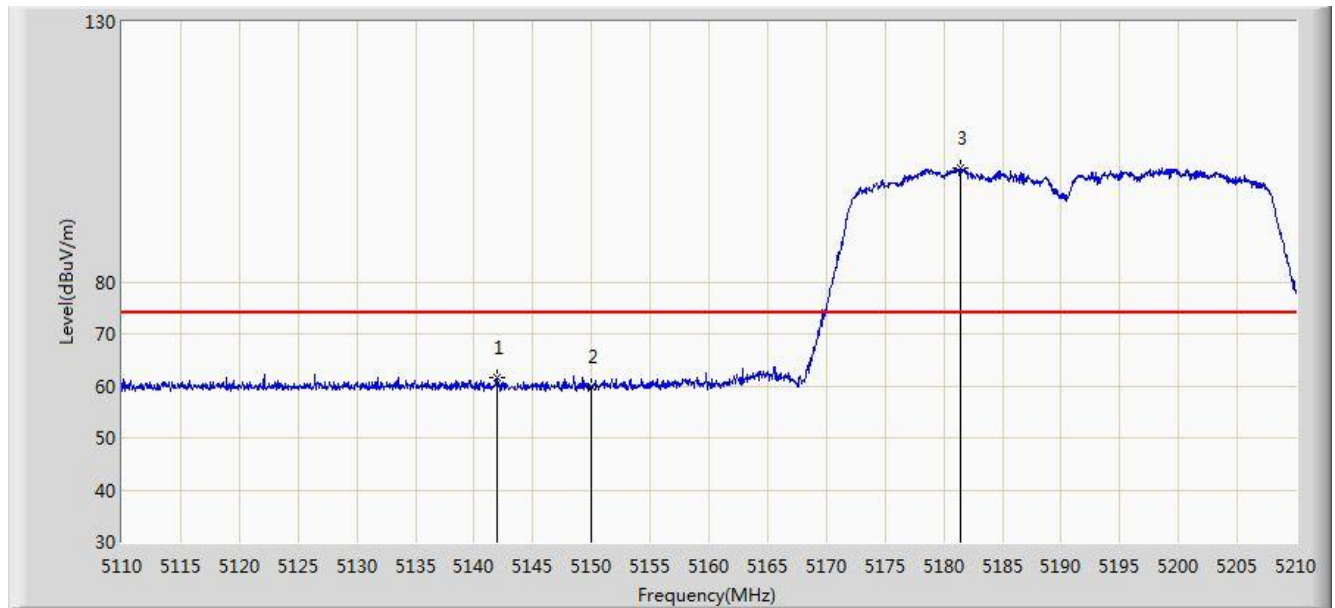


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5817.967	122.105	117.444	N/A	N/A	4.661	PK
2			5850.000	97.103	92.108	-25.097	122.200	4.995	PK
3			5855.000	91.294	86.306	-19.506	110.800	4.987	PK
4			5875.000	74.880	69.873	-30.320	105.200	5.008	PK
5			5877.540	76.807	71.771	-26.802	103.609	5.035	PK
6			5925.000	62.402	57.250	-11.598	74.000	5.152	PK
7			5940.623	63.591	58.420	-10.409	74.000	5.172	PK

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

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

Site: AC2	Time: 2017/01/14 - 12:50
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 5190MHz Ant 0+1	

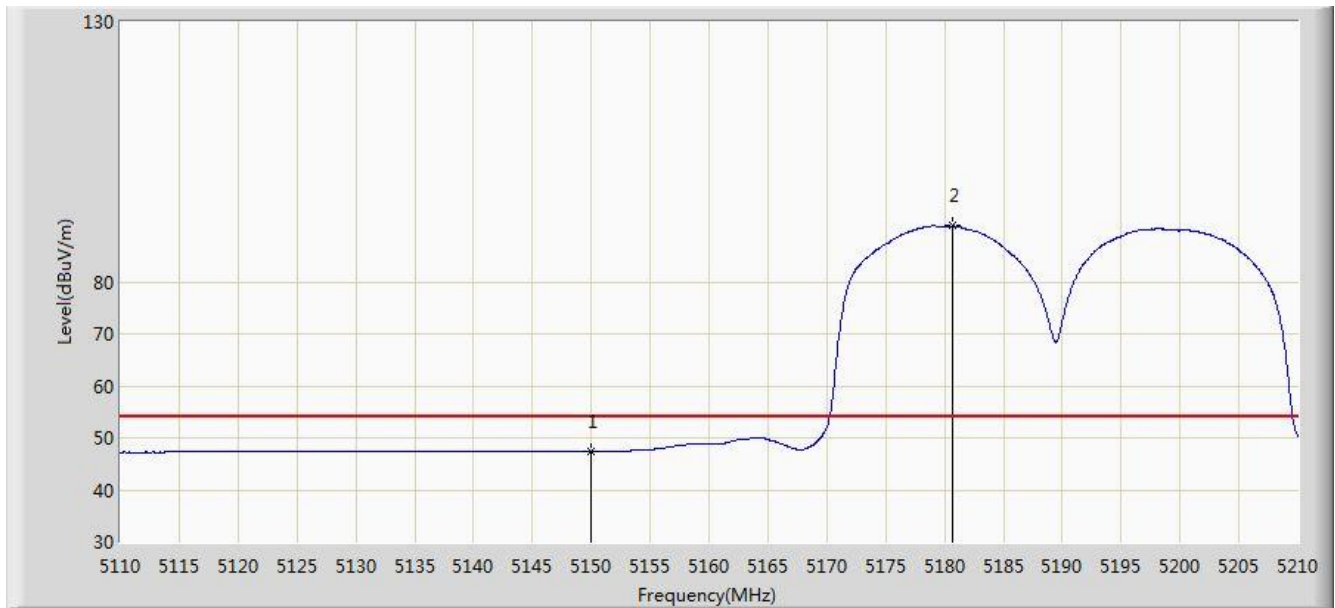


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5141.900	61.554	58.464	-12.446	74.000	3.090	PK
2			5150.000	59.898	56.828	-14.102	74.000	3.069	PK
3		*	5181.400	101.776	98.728	N/A	N/A	3.048	PK

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

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

Site: AC2	Time: 2017/01/14 - 12:51
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 5190MHz Ant 0+1	

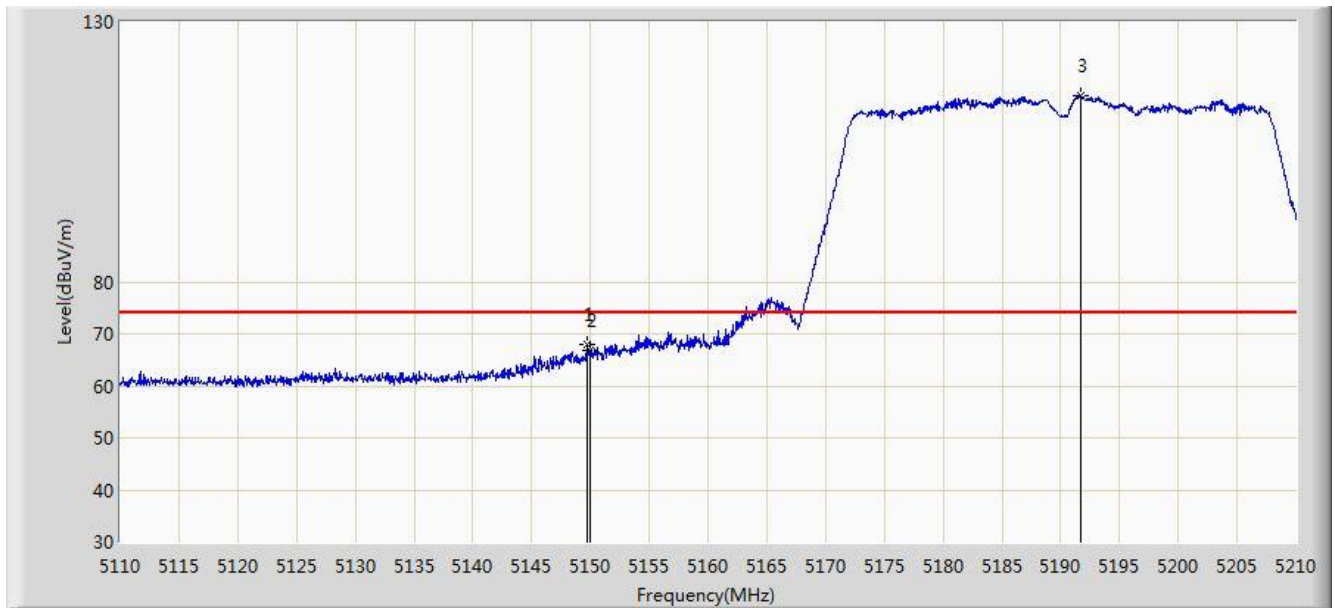


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	47.367	44.297	-6.633	54.000	3.069	AV
2		*	5180.700	90.740	87.694	N/A	N/A	3.046	AV

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

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

Site: AC2	Time: 2017/01/14 - 12:49
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 5190MHz Ant 0+1	

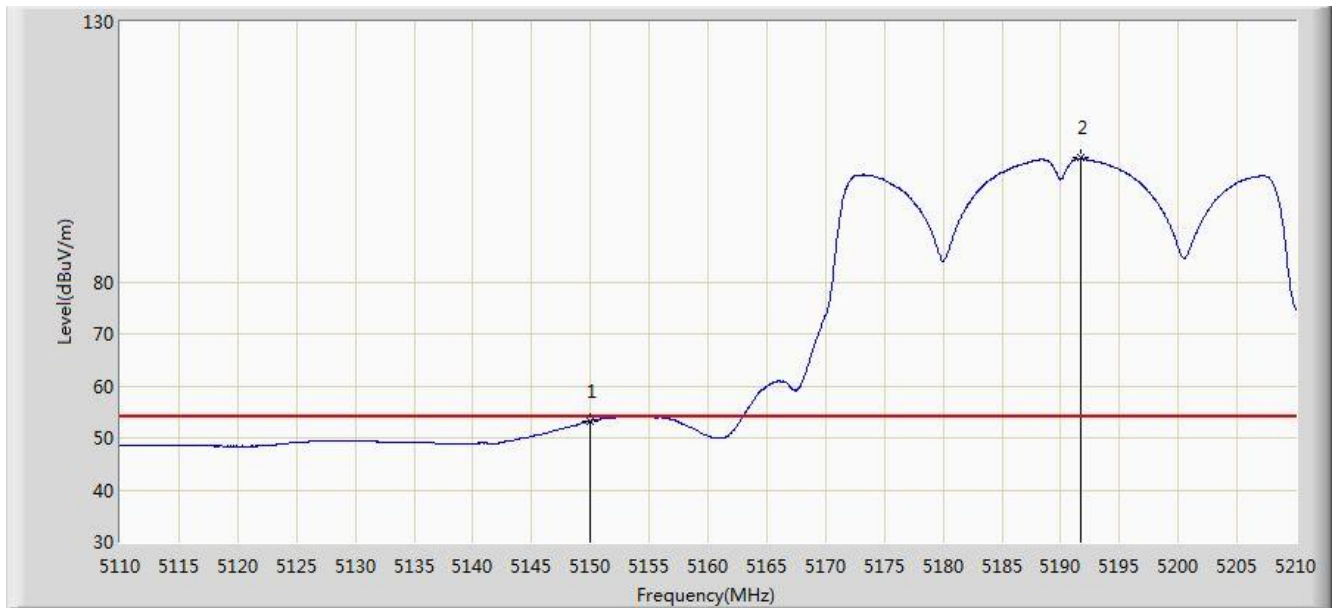


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5149.750	67.941	64.871	-6.059	74.000	3.070	PK
2			5150.000	66.727	63.657	-7.273	74.000	3.069	PK
3		*	5191.750	115.872	112.947	N/A	N/A	2.925	PK

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

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

Site: AC2	Time: 2017/01/14 - 12:48
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 5190MHz Ant 0+1	

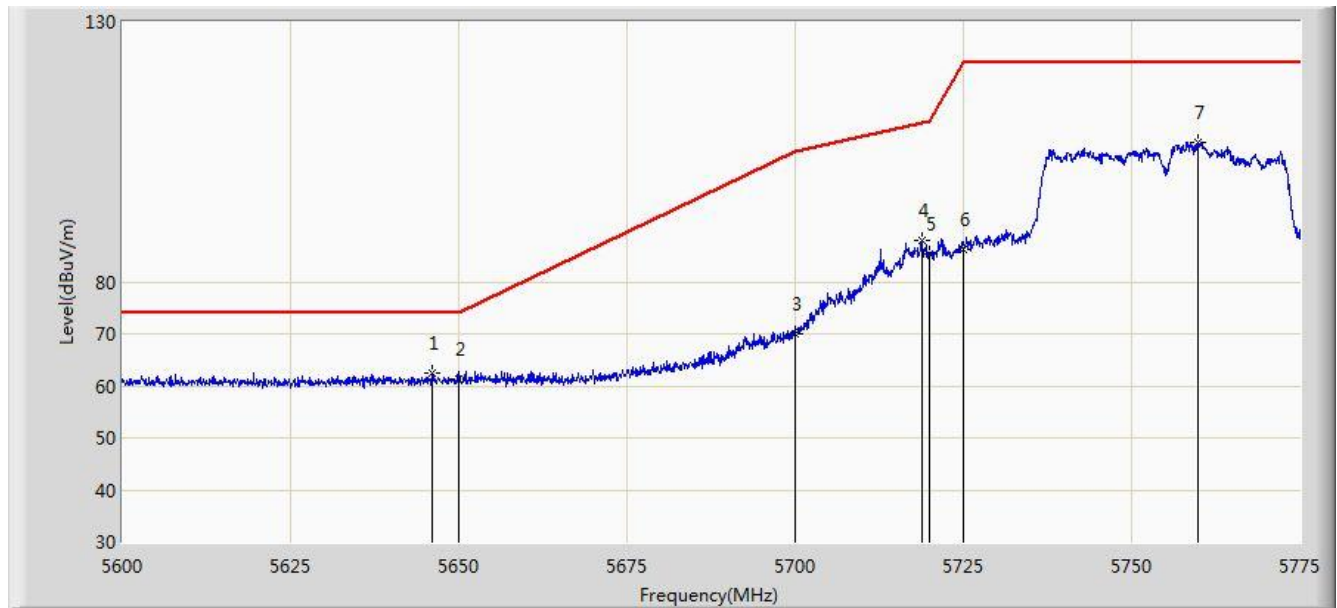


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	53.307	50.237	-0.693	54.000	3.069	AV
2		*	5191.650	103.805	100.878	N/A	N/A	2.926	AV

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

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

Site: AC2	Time: 2017/01/14 - 14:05
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 5755MHz Ant 0+1	

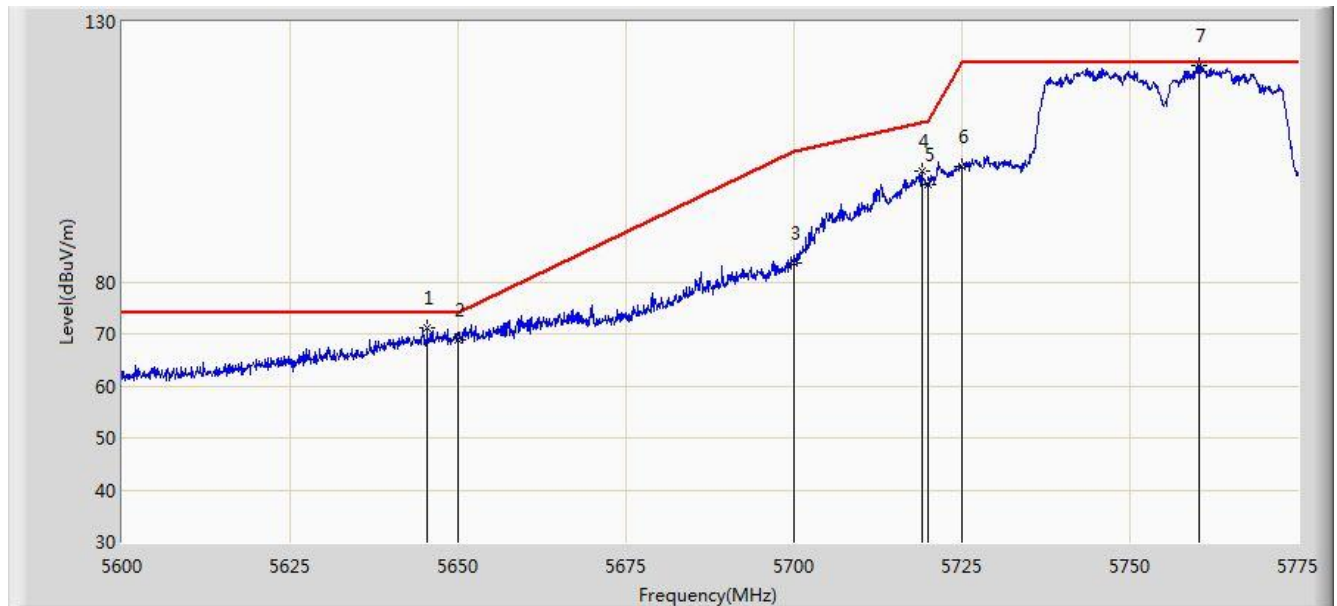


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5646.025	62.553	58.659	-11.447	74.000	3.894	PK
2			5650.000	61.179	57.376	-12.821	74.000	3.803	PK
3			5700.000	69.979	66.039	-35.221	105.200	3.940	PK
4			5718.913	88.104	84.148	-22.393	110.496	3.956	PK
5			5720.000	85.471	81.489	-25.329	110.800	3.982	PK
6			5725.000	86.279	82.173	-35.921	122.200	4.105	PK
7			5759.950	106.941	102.503	N/A	N/A	4.438	PK

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

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

Site: AC2	Time: 2017/01/14 - 14:03
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 5755MHz Ant 0+1	

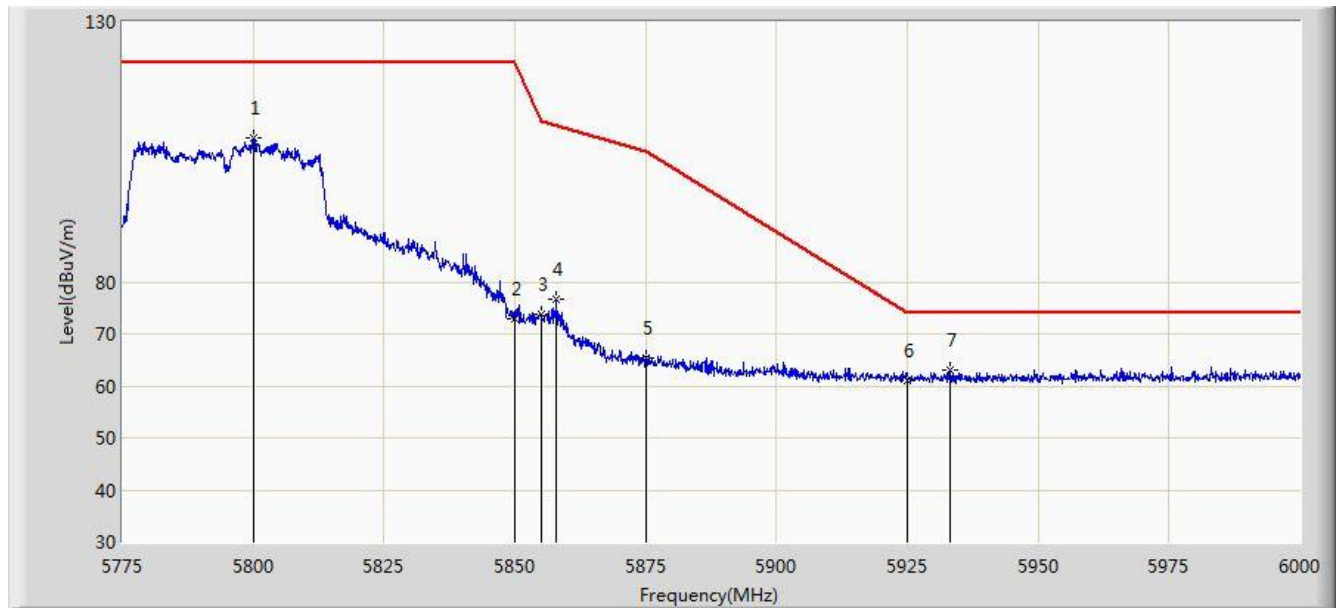


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5645.413	71.121	67.213	-2.879	74.000	3.909	PK
2			5650.000	68.891	65.088	-5.109	74.000	3.803	PK
3			5700.000	83.711	79.771	-21.489	105.200	3.940	PK
4			5719.087	101.187	97.227	-9.358	110.545	3.959	PK
5			5720.000	98.775	94.793	-12.025	110.800	3.982	PK
6			5725.000	102.058	97.952	-20.142	122.200	4.105	PK
7		*	5760.300	121.676	117.237	N/A	N/A	4.440	PK

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

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

Site: AC2	Time: 2017/01/14 - 14:10
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 5795MHz Ant 0+1	

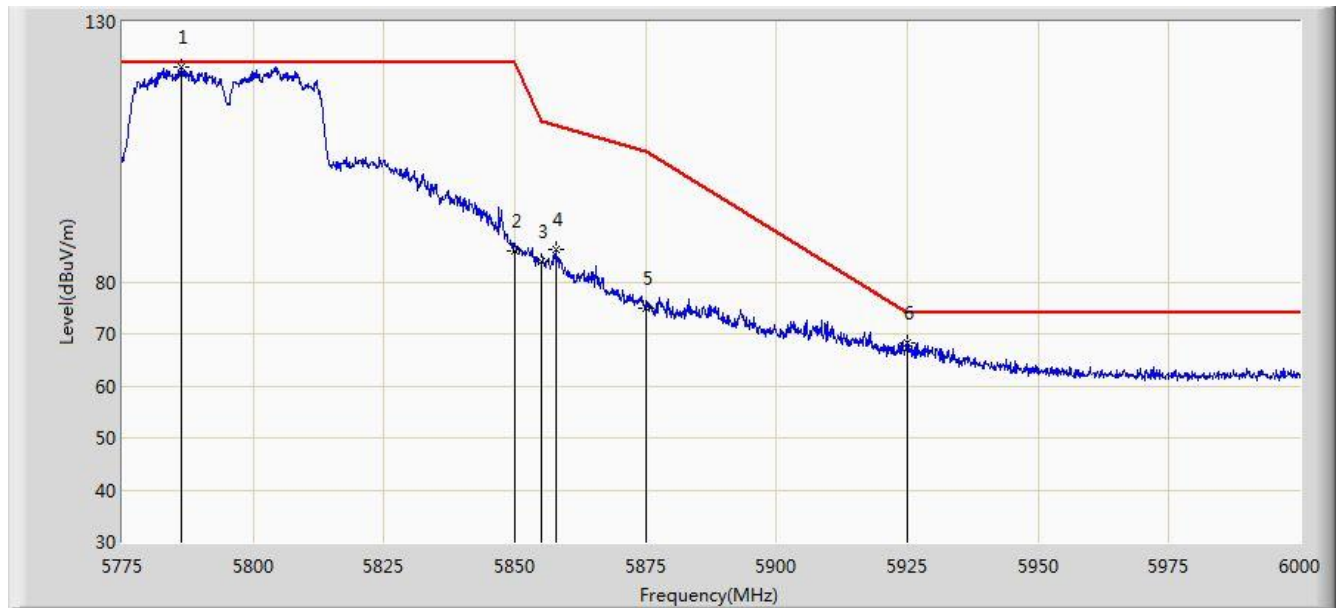


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5800.200	107.613	102.966	N/A	N/A	4.647	PK
2			5850.000	72.826	67.831	-49.374	122.200	4.995	PK
3			5855.000	73.813	68.825	-36.987	110.800	4.987	PK
4			5858.025	76.719	71.736	-33.233	109.952	4.983	PK
5			5875.000	65.442	60.435	-39.758	105.200	5.008	PK
6			5925.000	60.936	55.784	-13.064	74.000	5.152	PK
7		*	5933.175	62.917	57.728	-11.083	74.000	5.188	PK

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

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

Site: AC2	Time: 2017/01/14 - 14:07
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 5795MHz Ant 0+1	

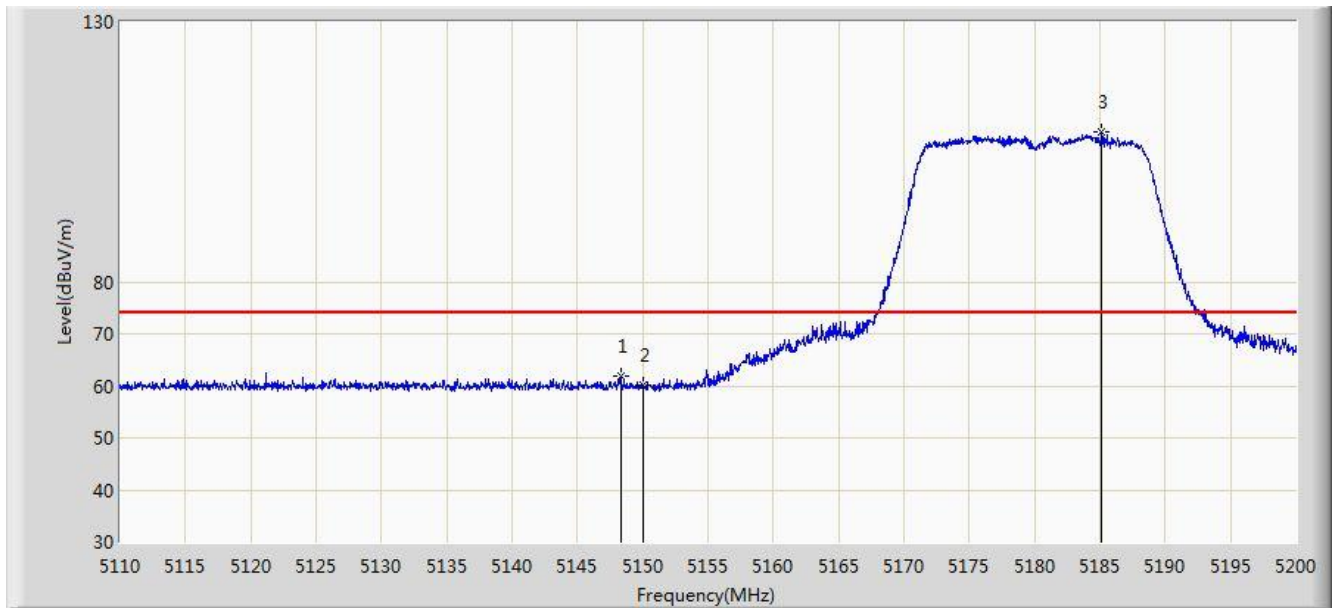


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5786.362	121.249	116.760	N/A	N/A	4.489	PK
2			5850.000	85.909	80.914	-36.291	122.200	4.995	PK
3			5855.000	83.822	78.834	-26.978	110.800	4.987	PK
4			5857.913	86.265	81.282	-23.718	109.983	4.983	PK
5			5875.000	75.033	70.026	-30.167	105.200	5.008	PK
6			5925.000	68.209	63.057	-5.791	74.000	5.152	PK

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

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

Site: AC2	Time: 2017/01/14 - 14:16
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT20 at Channel 5180MHz Ant 0+1	

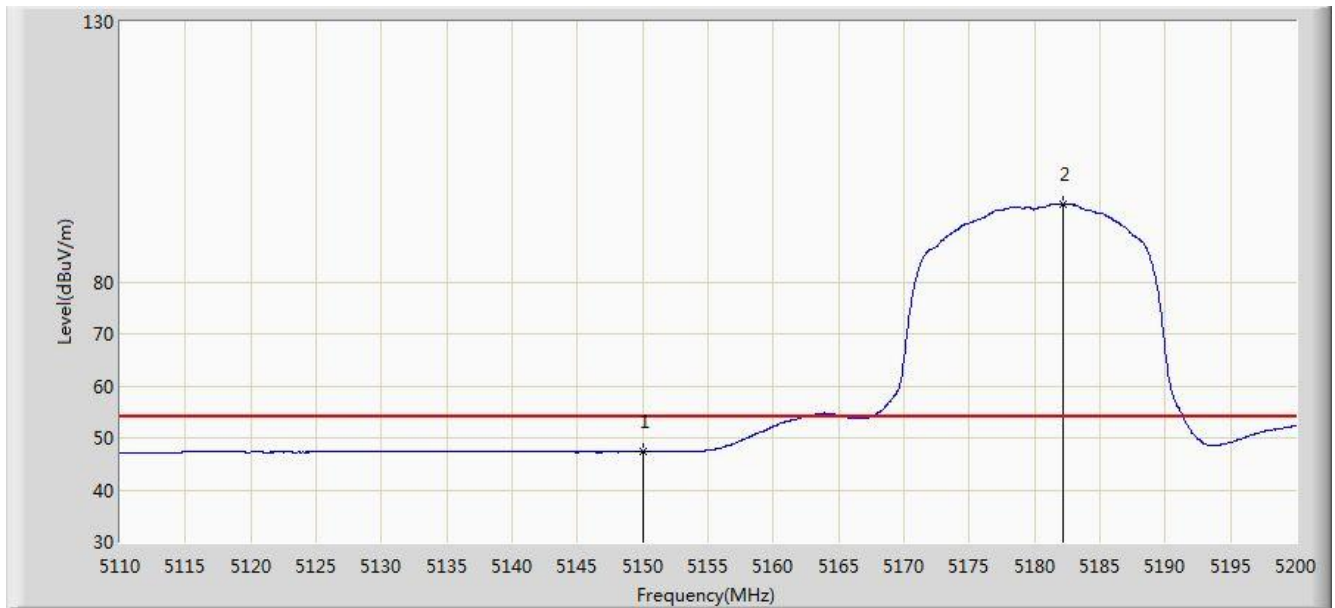


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5148.295	61.772	58.698	-12.228	74.000	3.073	PK
2			5150.000	60.129	57.059	-13.871	74.000	3.069	PK
3		*	5185.150	108.719	105.707	N/A	N/A	3.011	PK

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

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

Site: AC2	Time: 2017/01/14 - 14:17
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT20 at Channel 5180MHz Ant 0+1	

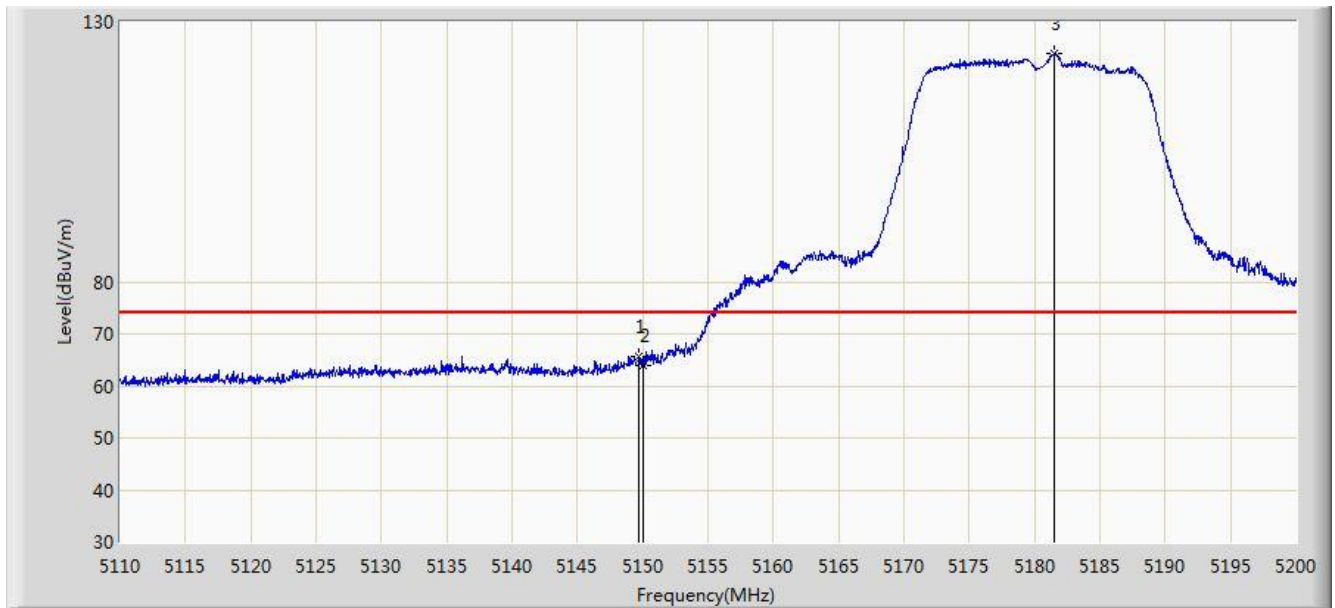


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	47.317	44.247	-6.683	54.000	3.069	AV
2		*	5182.180	94.953	91.904	N/A	N/A	3.049	AV

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

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

Site: AC2	Time: 2017/01/14 - 14:15
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT20 at Channel 5180MHz Ant 0+1	

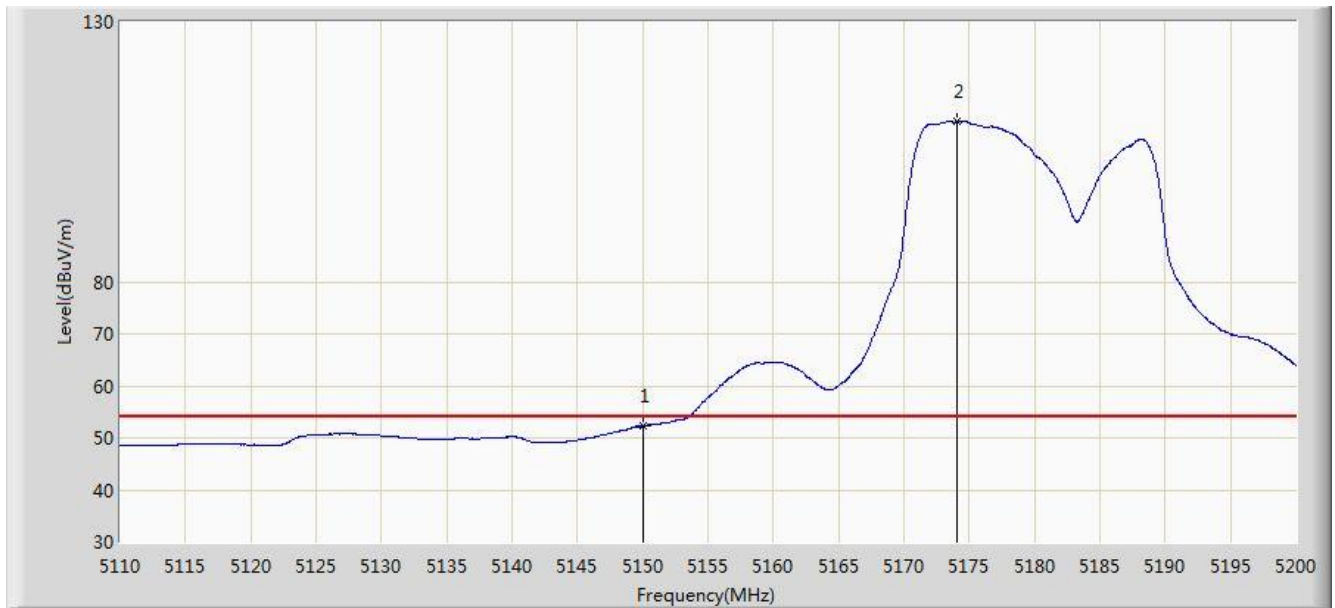


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5149.735	65.760	62.690	-8.240	74.000	3.070	PK
2			5150.000	63.997	60.927	-10.003	74.000	3.069	PK
3		*	5181.550	124.020	120.971	N/A	N/A	3.049	PK

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

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

Site: AC2	Time: 2017/01/14 - 14:14
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT20 at Channel 5180MHz Ant 0+1	

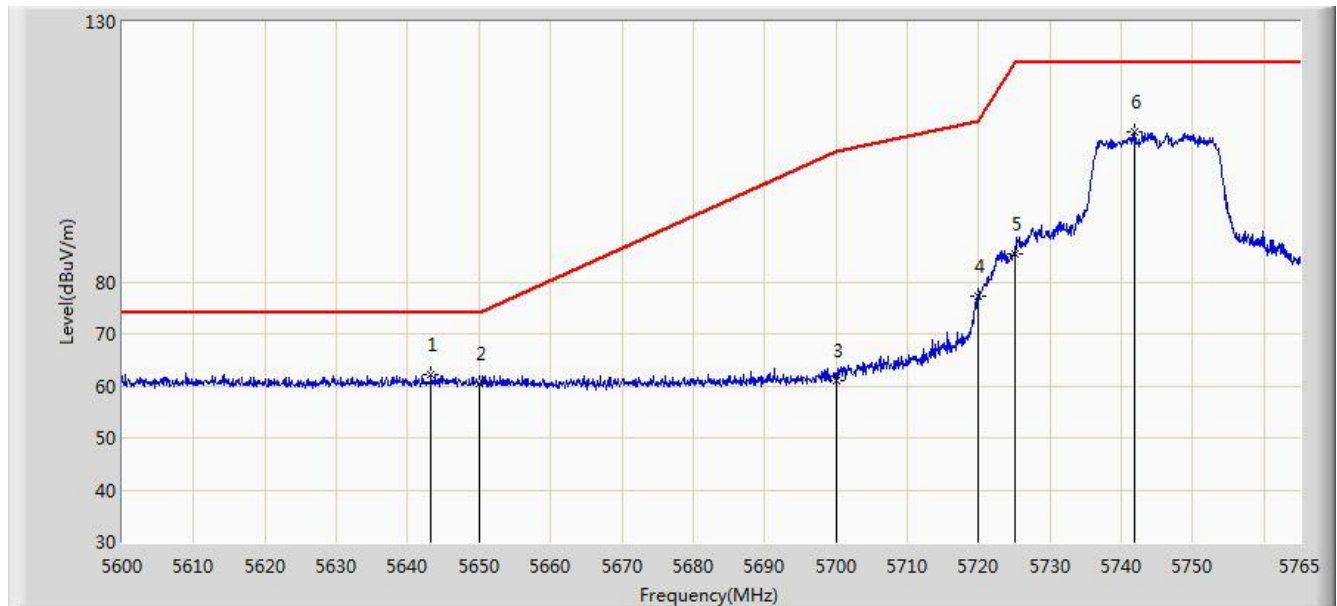


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	52.242	49.172	-1.758	54.000	3.069	AV
2		*	5174.080	110.727	107.707	N/A	N/A	3.019	AV

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

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

Site: AC2	Time: 2017/01/14 - 14:55
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT20 at Channel 5745MHz Ant 0+1	

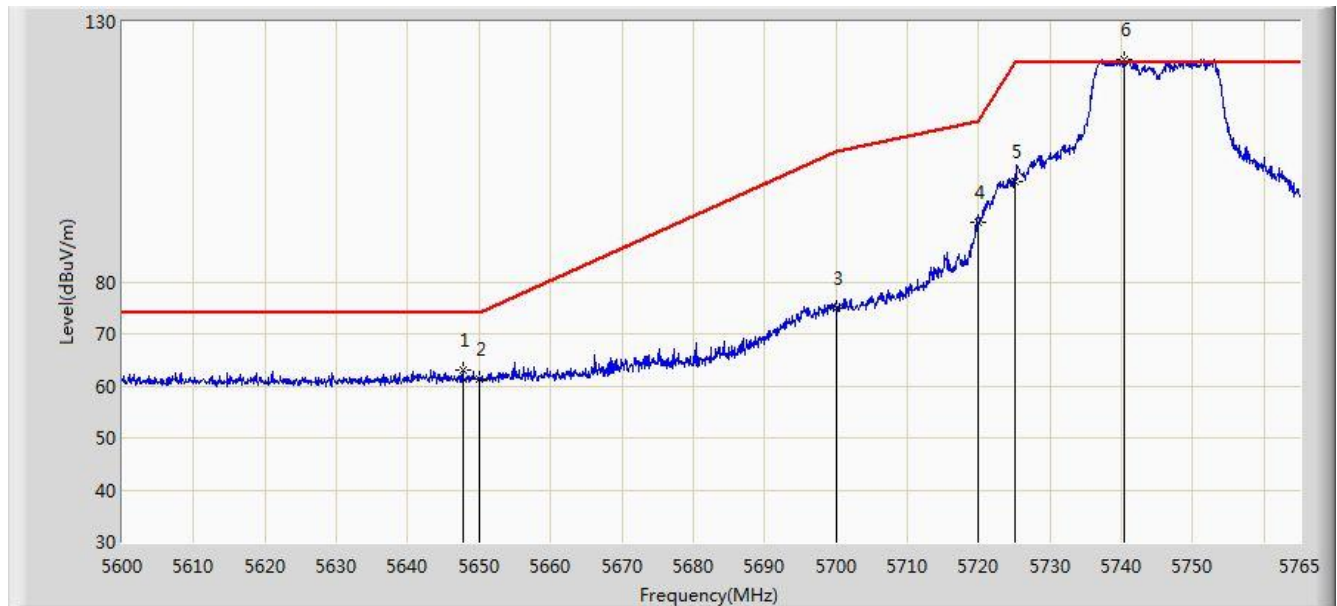


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5643.312	62.228	58.340	-11.772	74.000	3.888	PK
2			5650.000	60.478	56.675	-13.522	74.000	3.803	PK
3			5700.000	61.085	57.145	-44.115	105.200	3.940	PK
4			5720.000	77.144	73.162	-33.656	110.800	3.982	PK
5			5725.000	85.382	81.276	-36.818	122.200	4.105	PK
6			5741.900	108.841	104.568	N/A	N/A	4.273	PK

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

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

Site: AC2	Time: 2017/01/14 - 14:54
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT20 at Channel 5745MHz Ant 0+1	

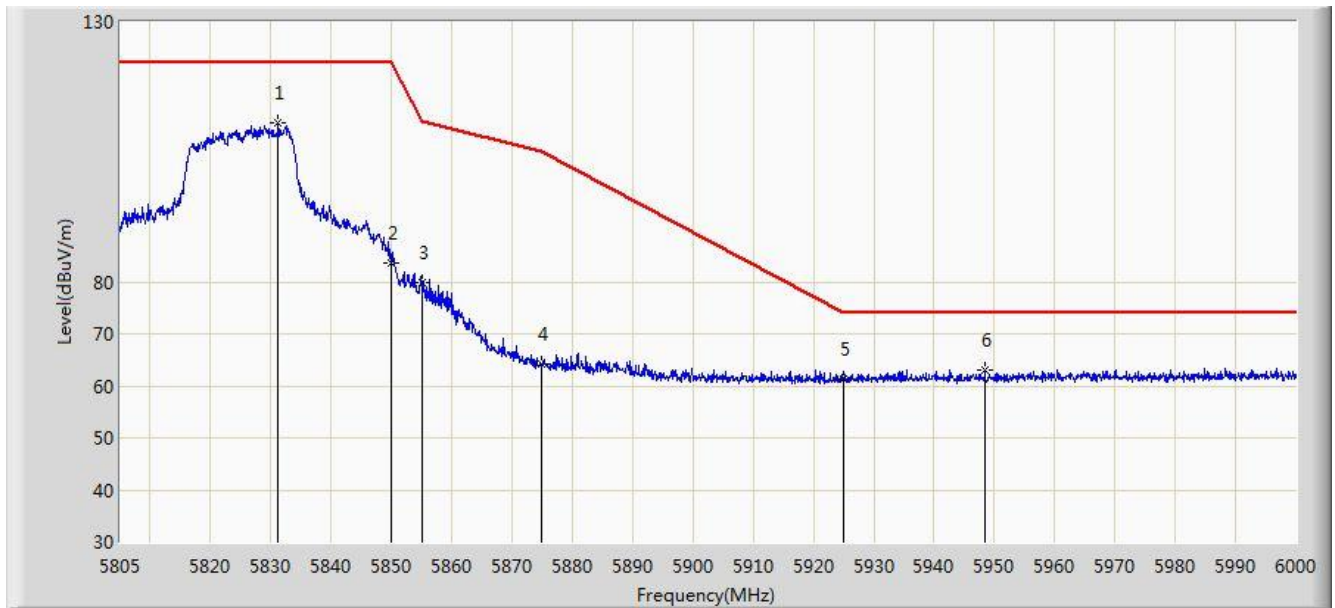


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5647.768	63.087	59.233	-10.913	74.000	3.854	PK
2			5650.000	61.402	57.599	-12.598	74.000	3.803	PK
3			5700.000	74.873	70.933	-30.327	105.200	3.940	PK
4			5720.000	91.467	87.485	-19.333	110.800	3.982	PK
5			5725.000	99.218	95.112	-22.982	122.200	4.105	PK
6		*	5740.498	122.727	118.450	N/A	N/A	4.277	PK

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

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

Site: AC2	Time: 2017/01/14 - 15:08
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT20 at Channel 5825MHz Ant 0+1	

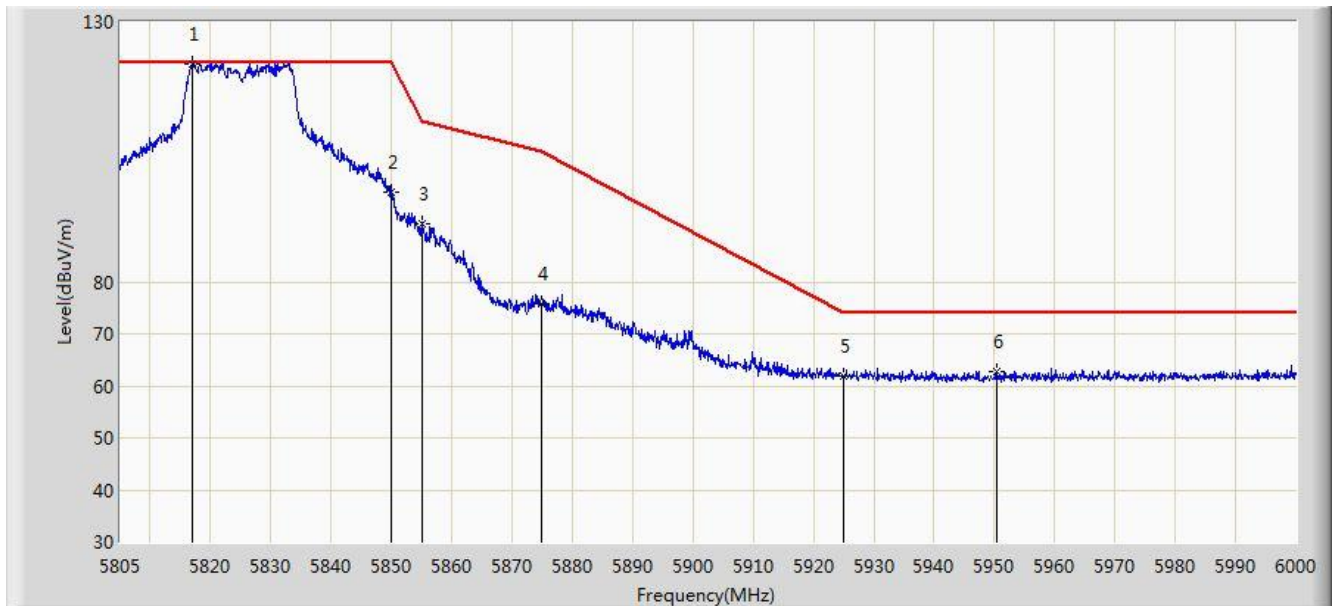


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5831.228	110.571	105.729	N/A	N/A	4.842	PK
2			5850.000	83.709	78.714	-38.491	122.200	4.995	PK
3			5855.000	79.721	74.733	-31.079	110.800	4.987	PK
4			5875.000	64.071	59.064	-41.129	105.200	5.008	PK
5			5925.000	61.381	56.229	-12.619	74.000	5.152	PK
6		*	5948.422	63.097	57.903	-10.903	74.000	5.194	PK

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

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

Site: AC2	Time: 2017/01/14 - 14:57
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT20 at Channel 5825MHz Ant 0+1	

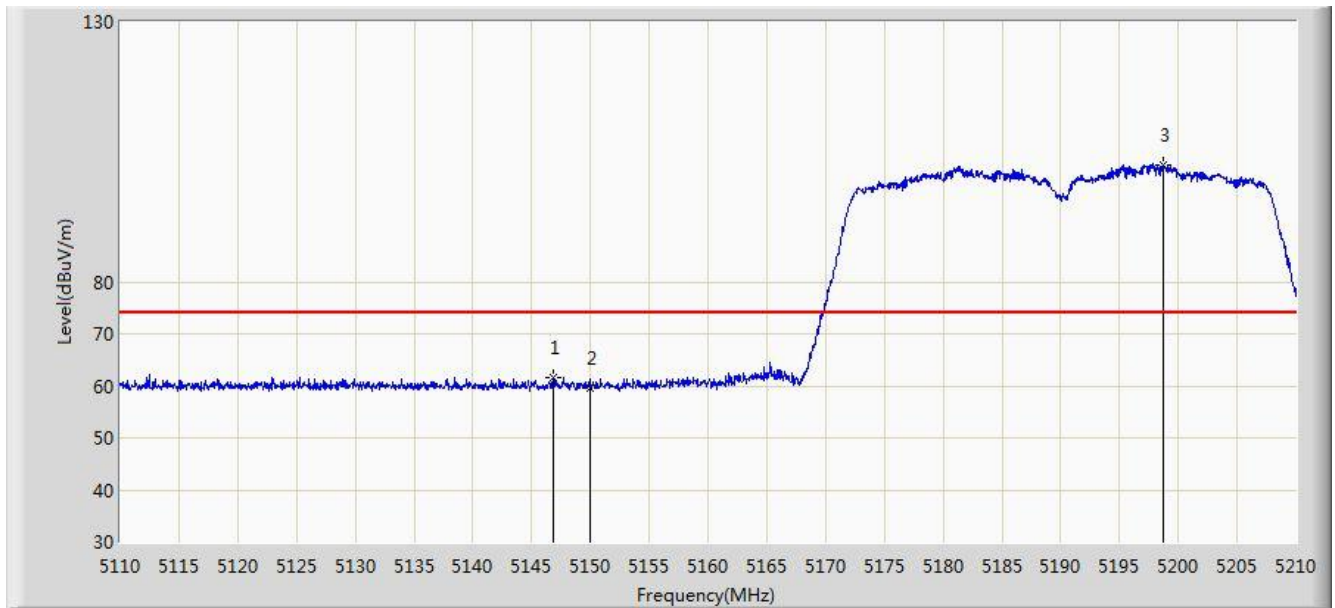


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5816.993	121.800	117.140	N/A	N/A	4.661	PK
2			5850.000	97.295	92.300	-24.905	122.200	4.995	PK
3			5855.000	91.037	86.049	-19.763	110.800	4.987	PK
4			5875.000	75.796	70.789	-29.404	105.200	5.008	PK
5			5925.000	61.804	56.652	-12.196	74.000	5.152	PK
6			5950.470	62.866	57.643	-11.134	74.000	5.223	PK

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

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

Site: AC2	Time: 2017/01/14 - 15:20
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT40 at Channel 5190MHz Ant 0+1	

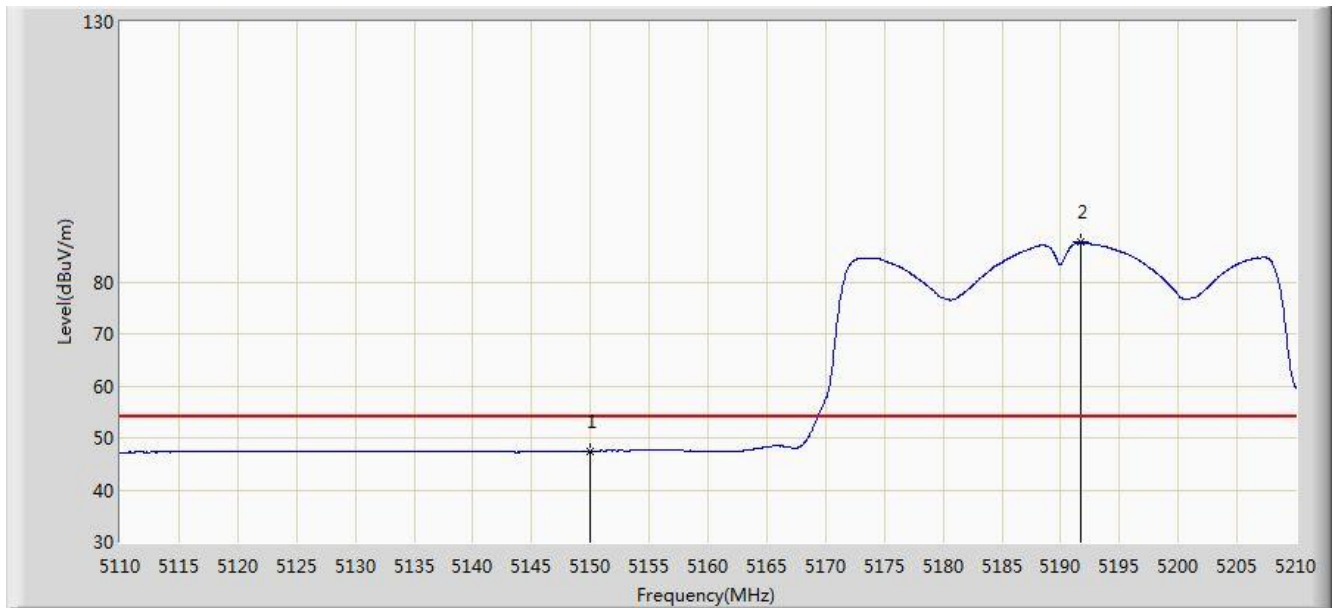


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5146.800	61.521	58.444	-12.479	74.000	3.077	PK
2			5150.000	59.533	56.463	-14.467	74.000	3.069	PK
3		*	5198.750	102.582	99.761	N/A	N/A	2.822	PK

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

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

Site: AC2	Time: 2017/01/14 - 15:21
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT40 at Channel 5190MHz Ant 0+1	

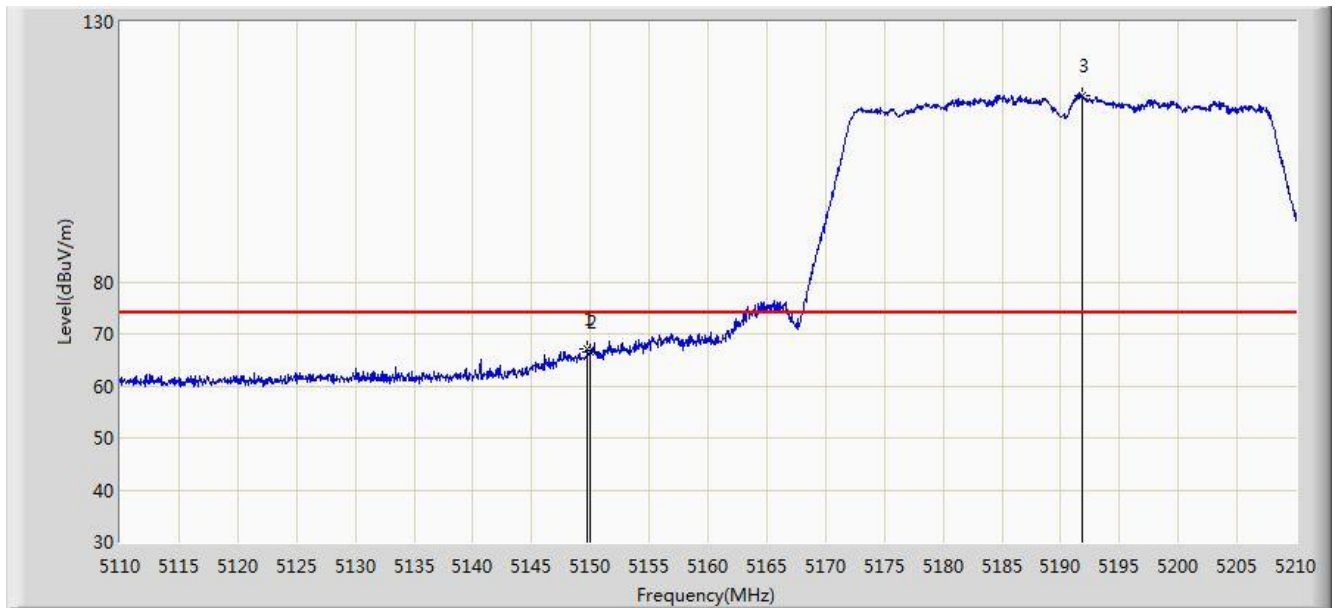


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	47.529	44.459	-6.471	54.000	3.069	AV
2		*	5191.750	87.620	84.695	N/A	N/A	2.925	AV

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

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

Site: AC2	Time: 2017/01/14 - 15:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT40 at Channel 5190MHz Ant 0+1	

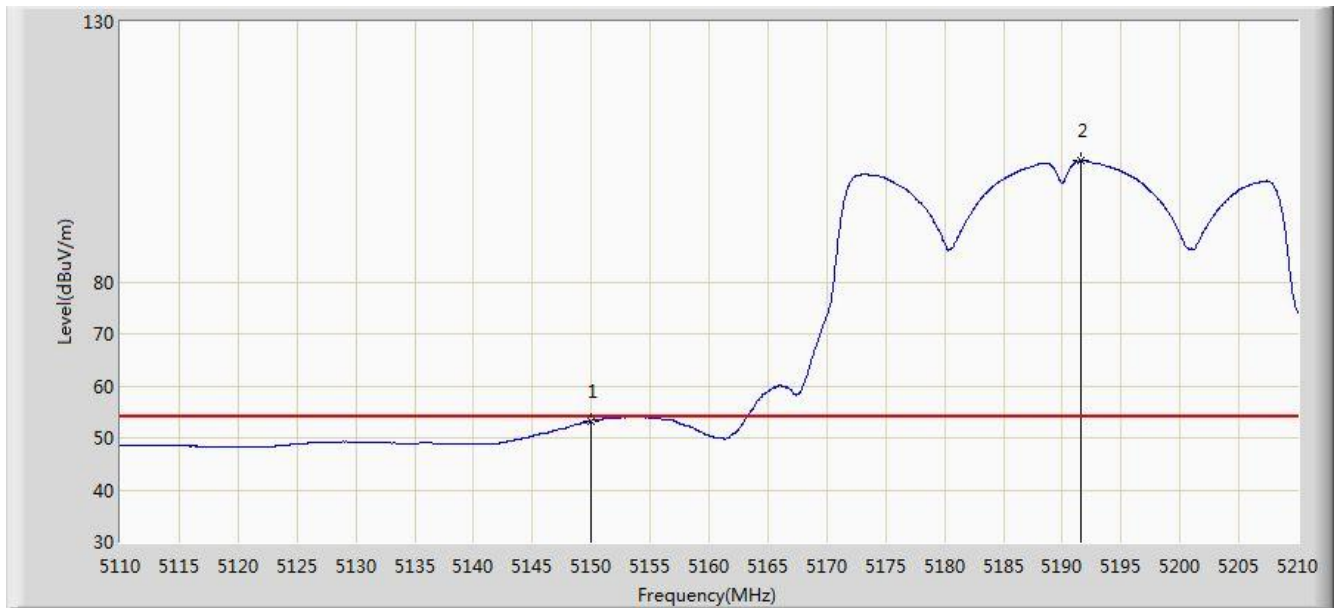


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5149.750	66.987	63.917	-7.013	74.000	3.070	PK
2			5150.000	66.612	63.542	-7.388	74.000	3.069	PK
3		*	5191.800	115.889	112.964	N/A	N/A	2.925	PK

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

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

Site: AC2	Time: 2017/01/14 - 15:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT40 at Channel 5190MHz Ant 0+1	

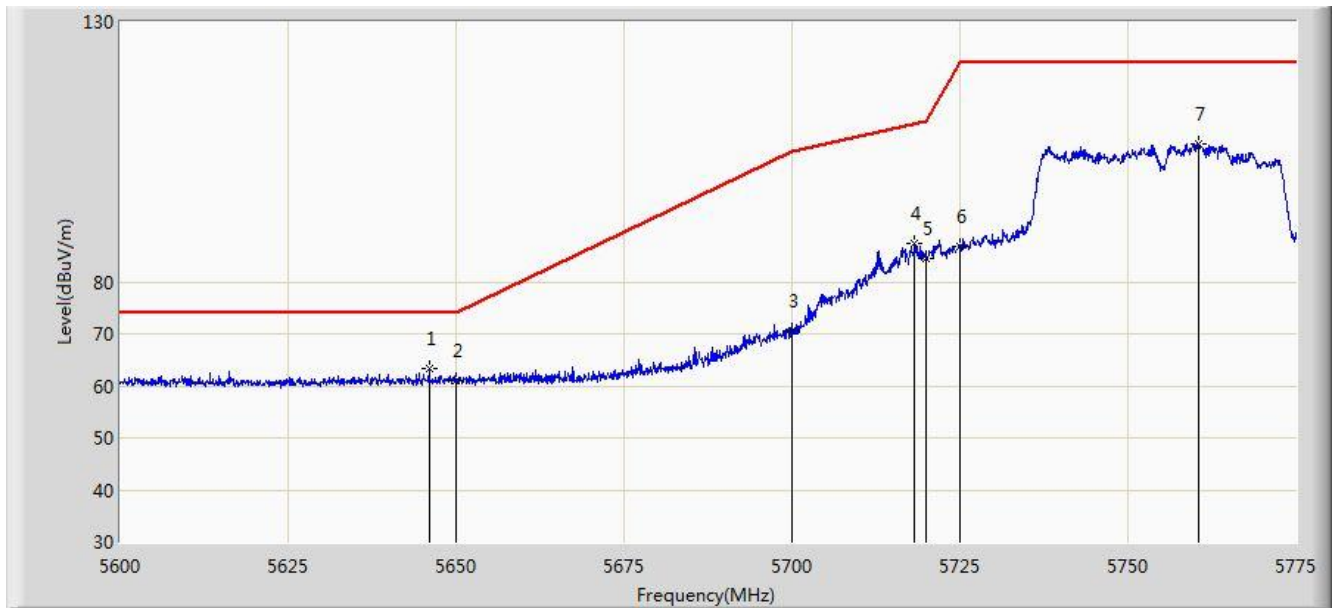


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	53.234	50.164	-0.766	54.000	3.069	AV
2		*	5191.600	103.219	100.291	N/A	N/A	2.929	AV

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

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

Site: AC2	Time: 2017/01/14 - 15:49
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT40 at Channel 5755MHz Ant 0+1	

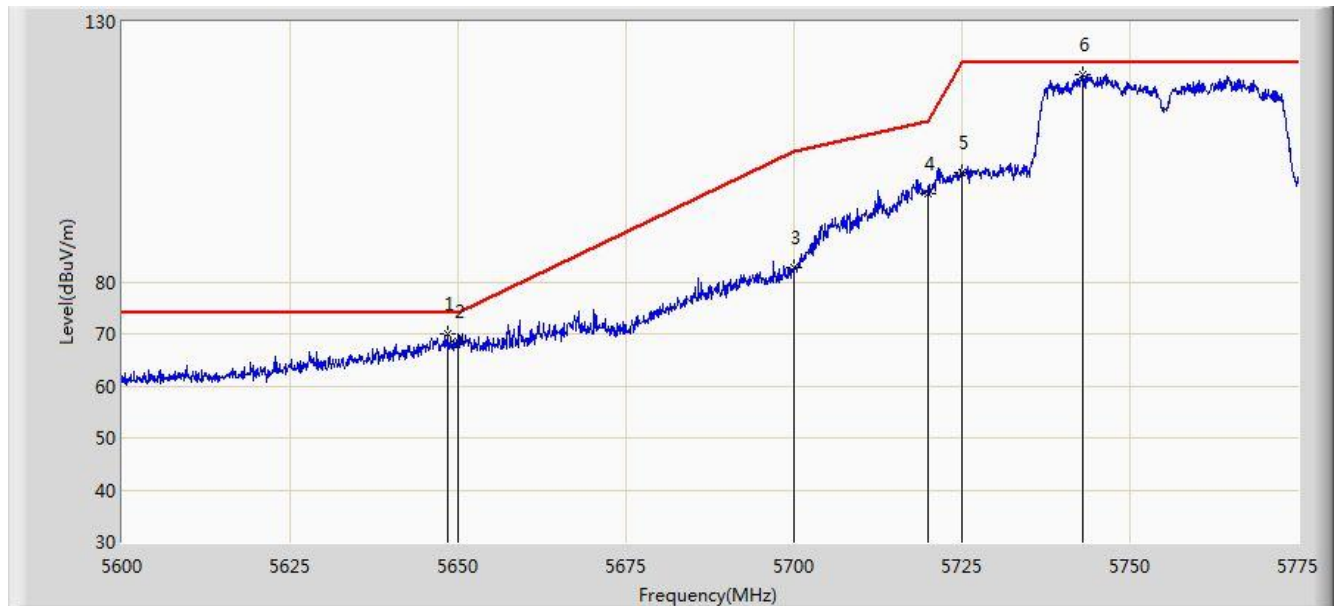


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5646.025	63.352	59.458	-10.648	74.000	3.894	PK
2			5650.000	61.135	57.332	-12.865	74.000	3.803	PK
3			5700.000	70.503	66.563	-34.697	105.200	3.940	PK
4			5718.300	87.441	83.500	-22.884	110.325	3.941	PK
5			5720.000	84.595	80.613	-26.205	110.800	3.982	PK
6			5725.000	86.744	82.638	-35.456	122.200	4.105	PK
7			5760.475	106.626	102.186	N/A	N/A	4.439	PK

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

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

Site: AC2	Time: 2017/01/14 - 15:47
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT40 at Channel 5755MHz Ant 0+1	

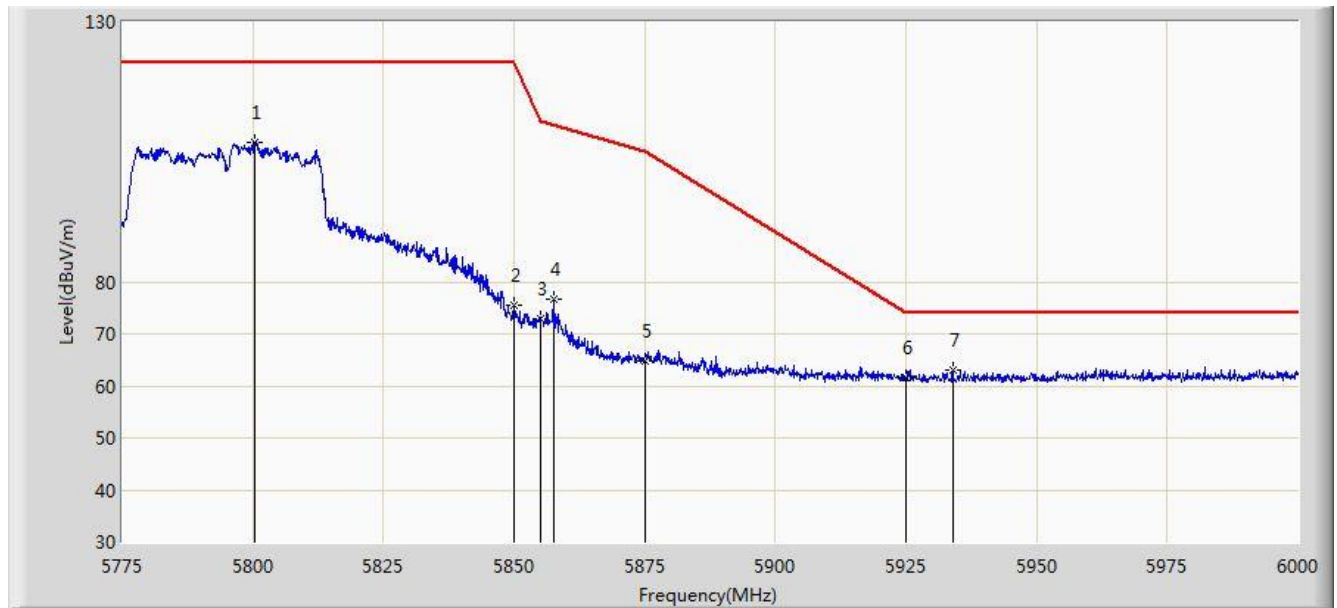


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5648.475	69.856	66.018	-4.144	74.000	3.839	PK
2			5650.000	68.619	64.816	-5.381	74.000	3.803	PK
3			5700.000	82.672	78.732	-22.528	105.200	3.940	PK
4			5720.000	97.045	93.063	-13.755	110.800	3.982	PK
5			5725.000	100.968	96.862	-21.232	122.200	4.105	PK
6		*	5743.062	119.909	115.639	N/A	N/A	4.270	PK

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

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

Site: AC2	Time: 2017/01/14 - 15:57
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT40 at Channel 5795MHz Ant 0+1	

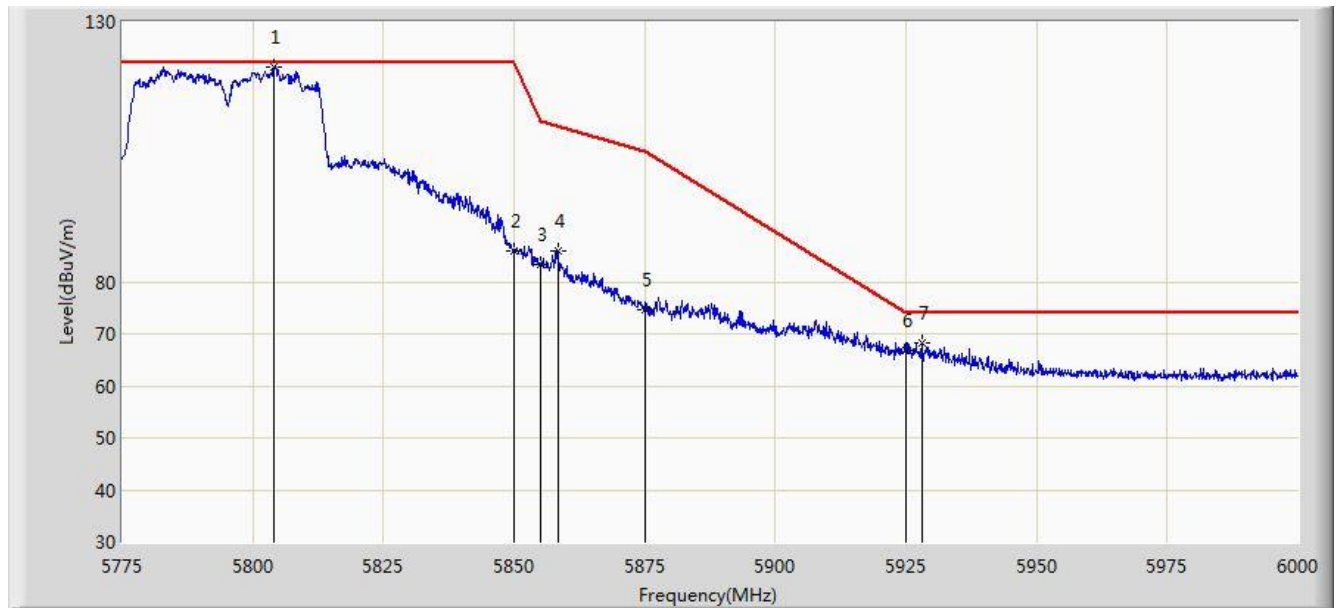


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5800.312	106.953	102.305	N/A	N/A	4.648	PK
2			5850.000	75.447	70.452	-46.753	122.200	4.995	PK
3			5855.000	73.005	68.017	-37.795	110.800	4.987	PK
4			5857.575	76.548	71.565	-33.530	110.078	4.983	PK
5			5875.000	64.875	59.868	-40.325	105.200	5.008	PK
6			5925.000	61.466	56.314	-12.534	74.000	5.152	PK
7		*	5933.962	62.996	57.809	-11.004	74.000	5.187	PK

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

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

Site: AC2	Time: 2017/01/14 - 15:56
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT40 at Channel 5795MHz Ant 0+1	

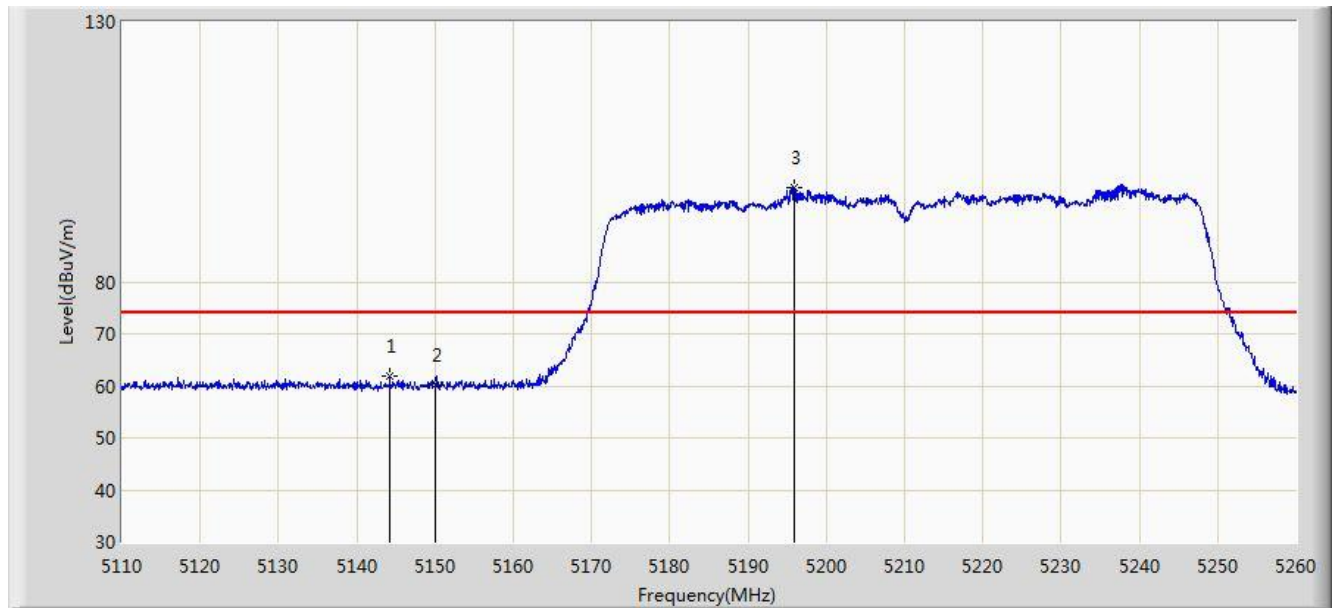


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5804.138	121.202	116.539	N/A	N/A	4.664	PK
2			5850.000	85.939	80.944	-36.261	122.200	4.995	PK
3			5855.000	83.378	78.390	-27.422	110.800	4.987	PK
4			5858.362	86.074	81.092	-23.783	109.857	4.982	PK
5			5875.000	74.647	69.640	-30.553	105.200	5.008	PK
6			5925.000	66.921	61.769	-7.079	74.000	5.152	PK
7			5928.000	68.215	63.036	-5.785	74.000	5.179	PK

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

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

Site: AC2	Time: 2017/01/14 - 16:06
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT80 at Channel 5210MHz Ant 0+1	

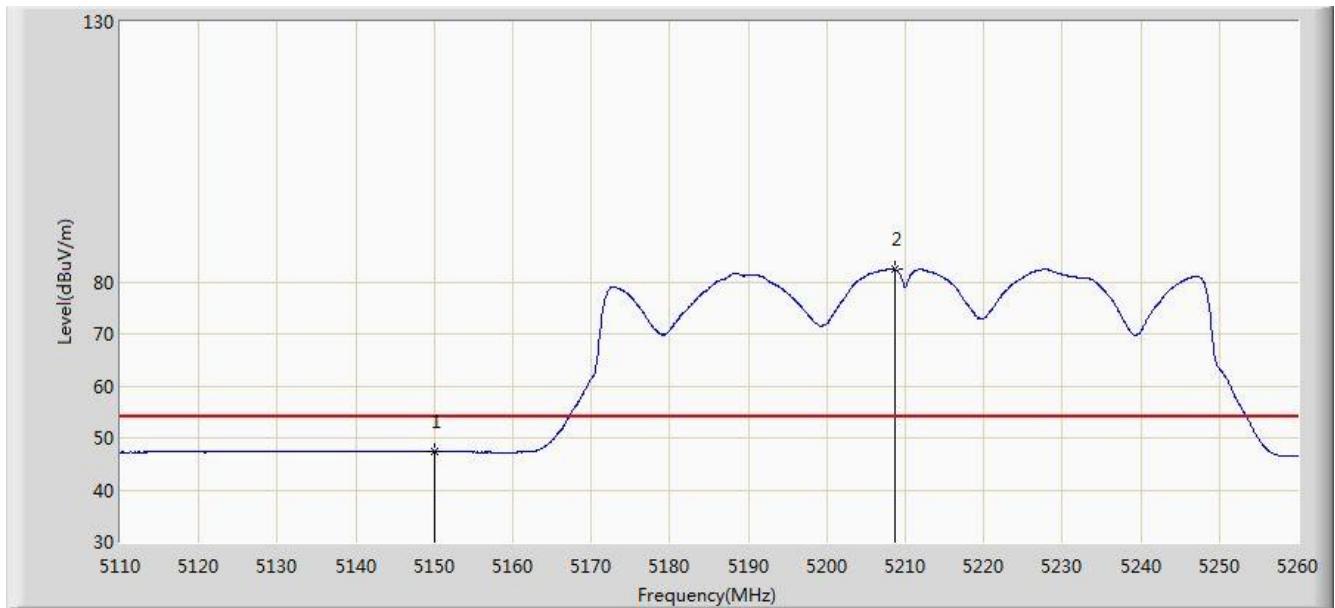


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5144.200	61.992	58.908	-12.008	74.000	3.084	PK
2			5150.000	60.164	57.094	-13.836	74.000	3.069	PK
3		*	5195.875	98.234	95.370	N/A	N/A	2.864	PK

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

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

Site: AC2	Time: 2017/01/14 - 16:07
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT80 at Channel 5210MHz Ant 0+1	

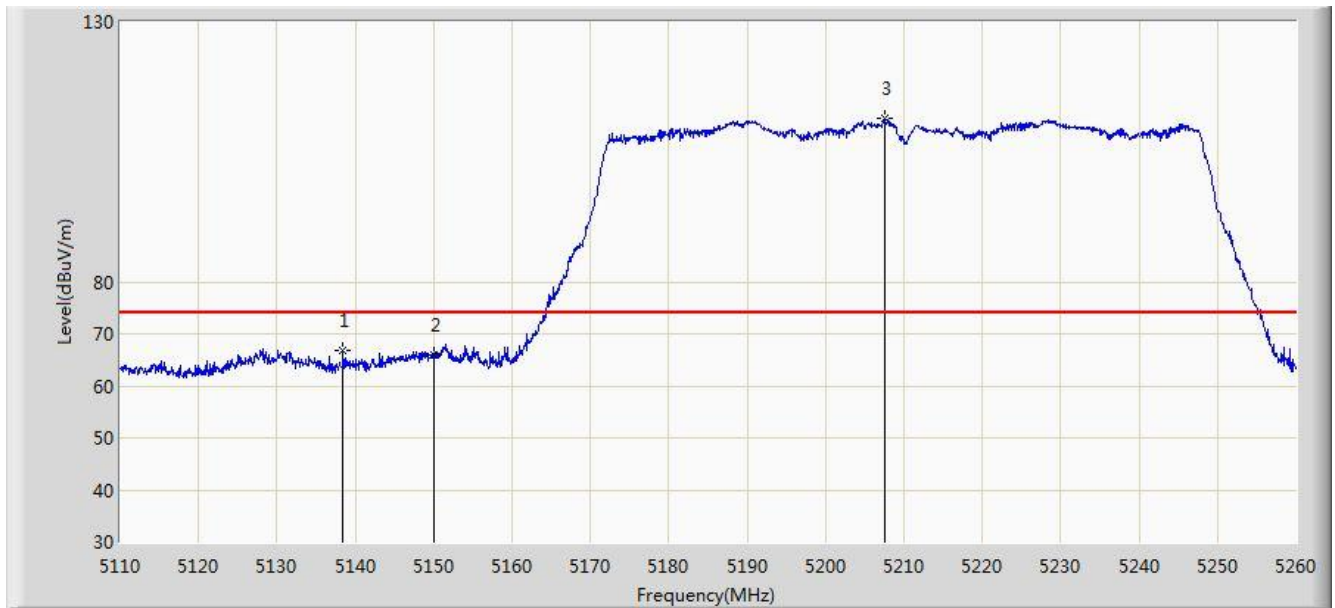


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	47.442	44.372	-6.558	54.000	3.069	AV
2		*	5208.625	82.337	79.544	N/A	N/A	2.793	AV

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

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

Site: AC2	Time: 2017/01/14 - 16:05
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT80 at Channel 5210MHz Ant 0+1	

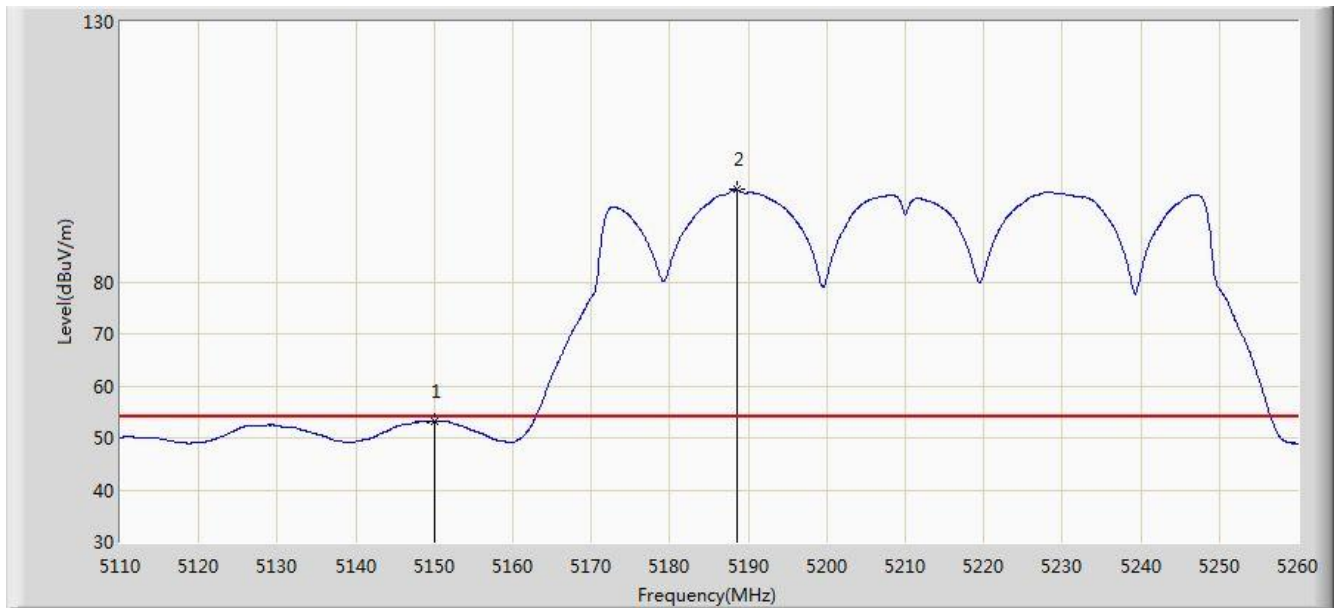


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5138.425	66.726	63.628	-7.274	74.000	3.099	PK
2			5150.000	65.996	62.926	-8.004	74.000	3.069	PK
3		*	5207.650	111.428	108.636	N/A	N/A	2.792	PK

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

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

Site: AC2	Time: 2017/01/14 - 16:04
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT80 at Channel 5210MHz Ant 0+1	

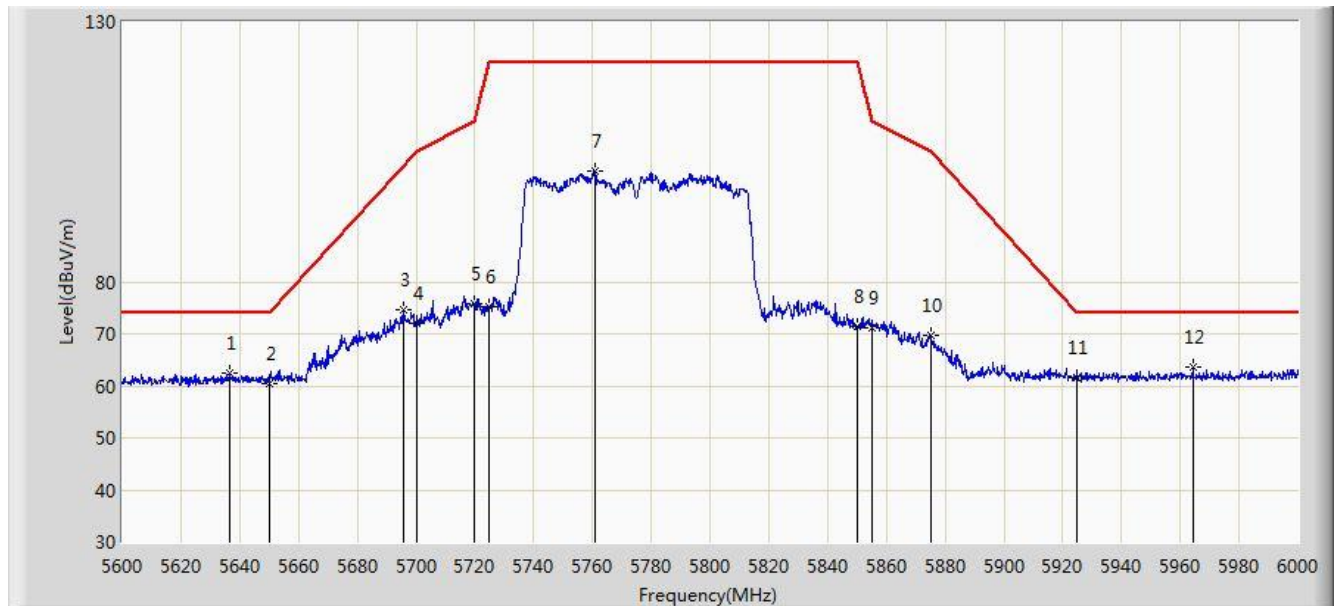


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	53.214	50.144	-0.786	54.000	3.069	AV
2		*	5188.525	97.682	94.712	N/A	N/A	2.970	AV

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

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

Site: AC2	Time: 2017/01/14 - 16:35
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT80 at Channel 5775MHz Ant 0+1	

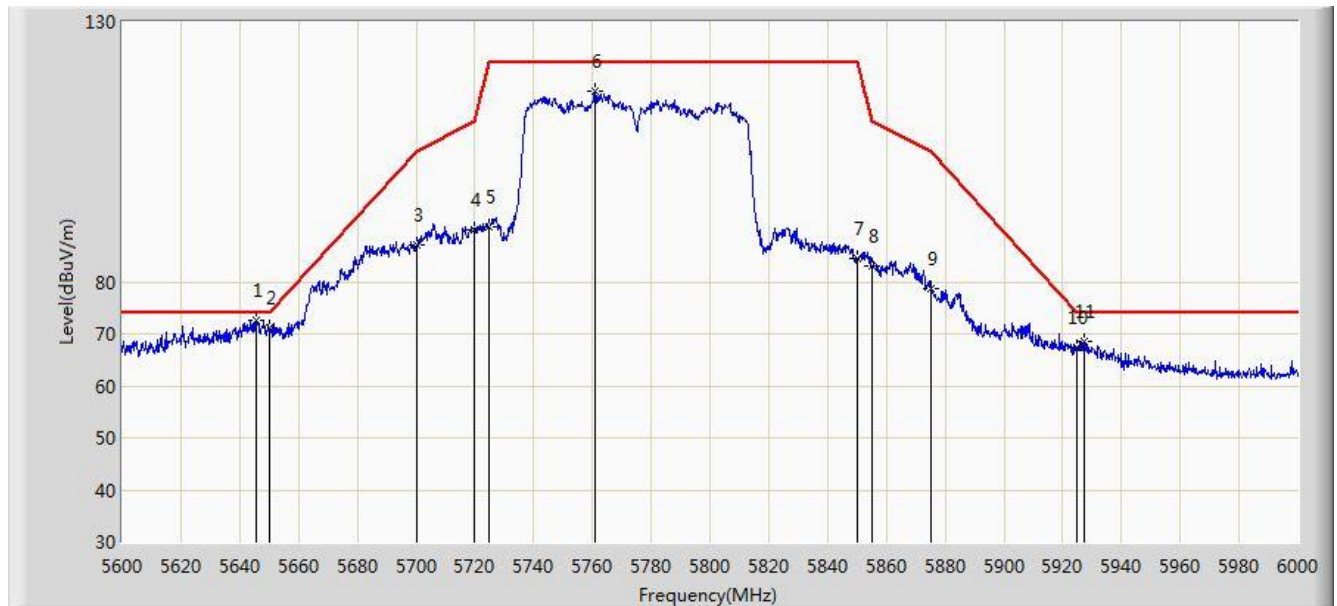


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5636.600	62.524	58.770	-11.476	74.000	3.755	PK
2			5650.000	60.430	56.627	-13.570	74.000	3.803	PK
3			5695.600	74.496	70.511	-27.969	102.465	3.985	PK
4			5700.000	72.106	68.166	-33.094	105.200	3.940	PK
5			5720.000	75.739	71.757	-35.061	110.800	3.982	PK
6			5725.000	75.288	71.182	-46.912	122.200	4.105	PK
7			5761.000	101.384	96.943	N/A	N/A	4.441	PK
8			5850.000	71.553	66.558	-50.647	122.200	4.995	PK
9			5855.000	71.211	66.223	-39.589	110.800	4.987	PK
10			5875.000	69.720	64.713	-35.480	105.200	5.008	PK
11			5925.000	61.498	56.346	-12.502	74.000	5.152	PK
12		*	5964.200	63.640	58.313	-10.360	74.000	5.327	PK

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

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

Site: AC2	Time: 2017/01/14 - 16:32
Limit: FCC_Part15.407_RE(3m)	Engineer: Snake Ni
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-HT80 at Channel 5775MHz Ant 0+1	

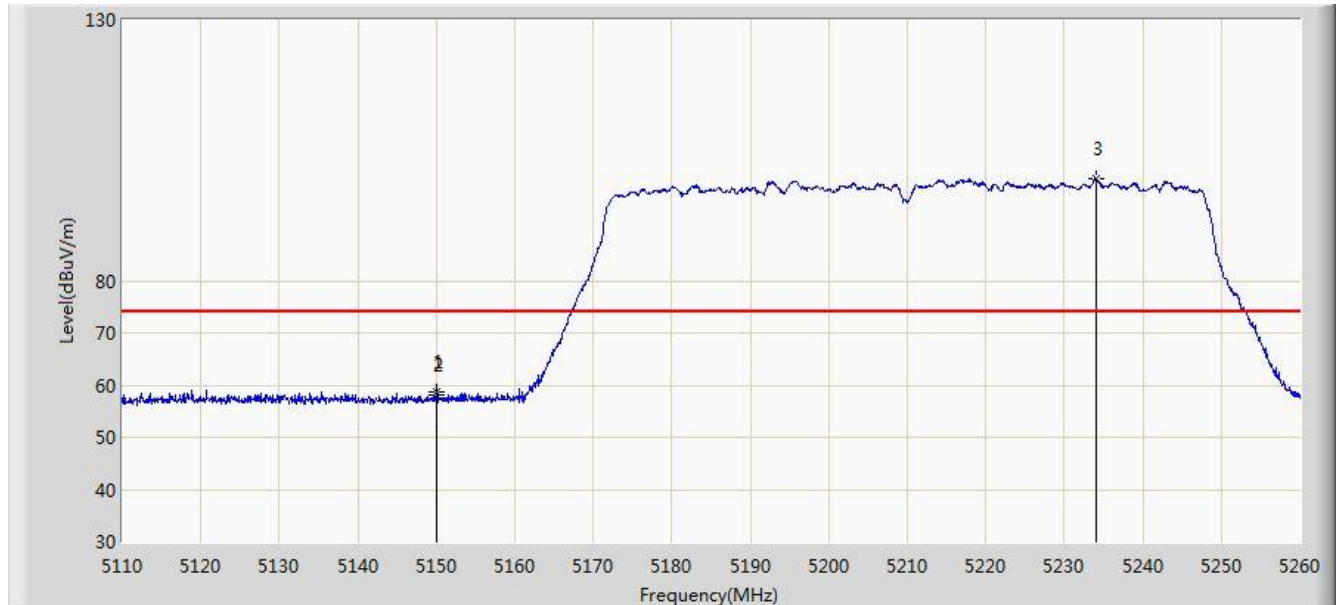


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5645.600	72.491	68.587	-1.509	74.000	3.904	PK
2			5650.000	71.060	67.257	-2.940	74.000	3.803	PK
3			5700.000	87.197	83.257	-18.003	105.200	3.940	PK
4			5720.000	90.097	86.115	-20.703	110.800	3.982	PK
5			5725.000	90.501	86.395	-31.699	122.200	4.105	PK
6			5760.800	116.604	112.164	N/A	N/A	4.440	PK
7			5850.000	84.406	79.411	-37.794	122.200	4.995	PK
8			5855.000	82.970	77.982	-27.830	110.800	4.987	PK
9			5875.000	78.780	73.773	-26.420	105.200	5.008	PK
10			5925.000	67.359	62.207	-6.641	74.000	5.152	PK
11			5927.400	68.646	63.473	-5.354	74.000	5.173	PK

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

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

Site: AC2	Time: 2017/02/26 - 16:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80+80 at Channel 5210MHz + 5775MHz Ant 0 + 1	

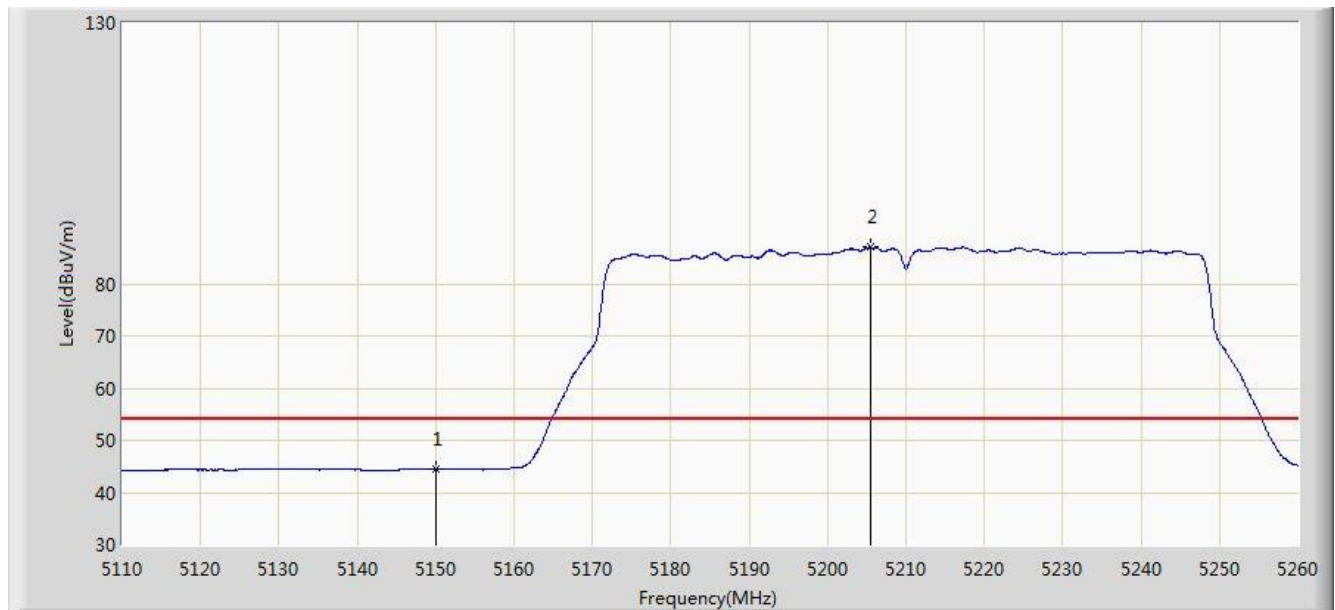


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5149.975	58.644	55.574	-15.356	74.000	3.070	PK
2			5150.000	58.028	54.958	-15.972	74.000	3.069	PK
3		*	5234.050	99.670	96.873	N/A	N/A	2.798	PK

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

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

Site: AC2	Time: 2017/02/26 - 16:13
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80+80 at Channel 5210MHz + 5775MHz Ant 0 + 1	

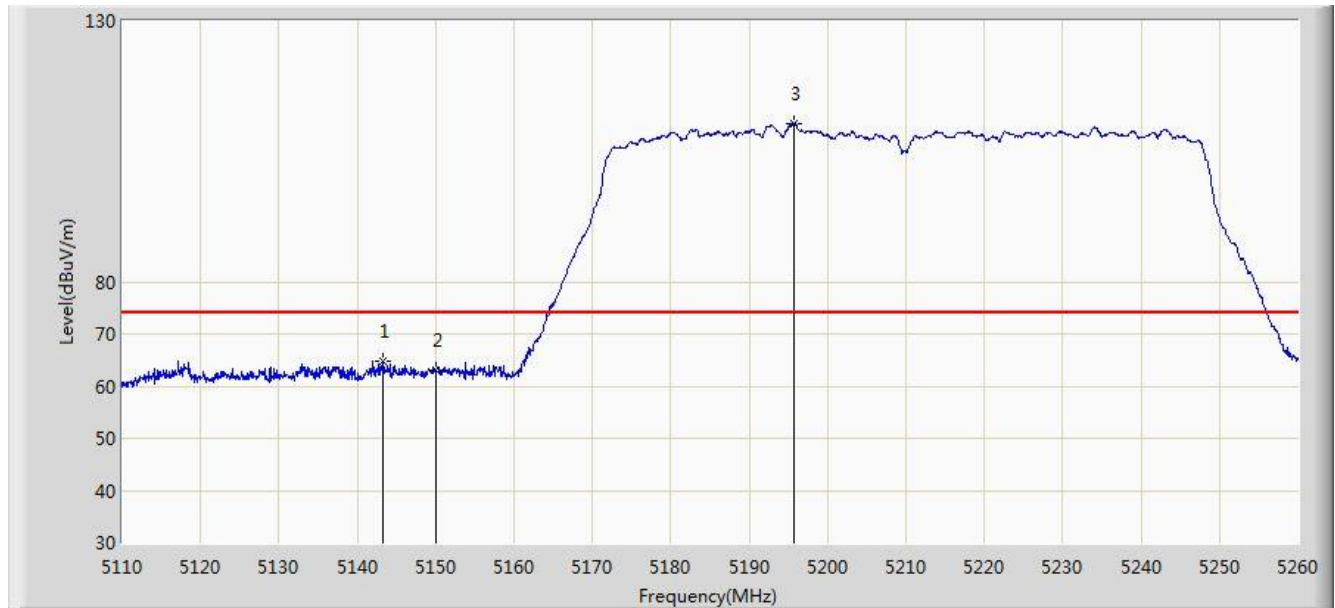


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	44.509	41.439	-9.491	54.000	3.069	AV
2		*	5205.400	86.971	84.173	N/A	N/A	2.798	AV

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

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

Site: AC2	Time: 2017/02/26 - 16:14
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80+80 at Channel 5210MHz + 5775MHz Ant 0 + 1	

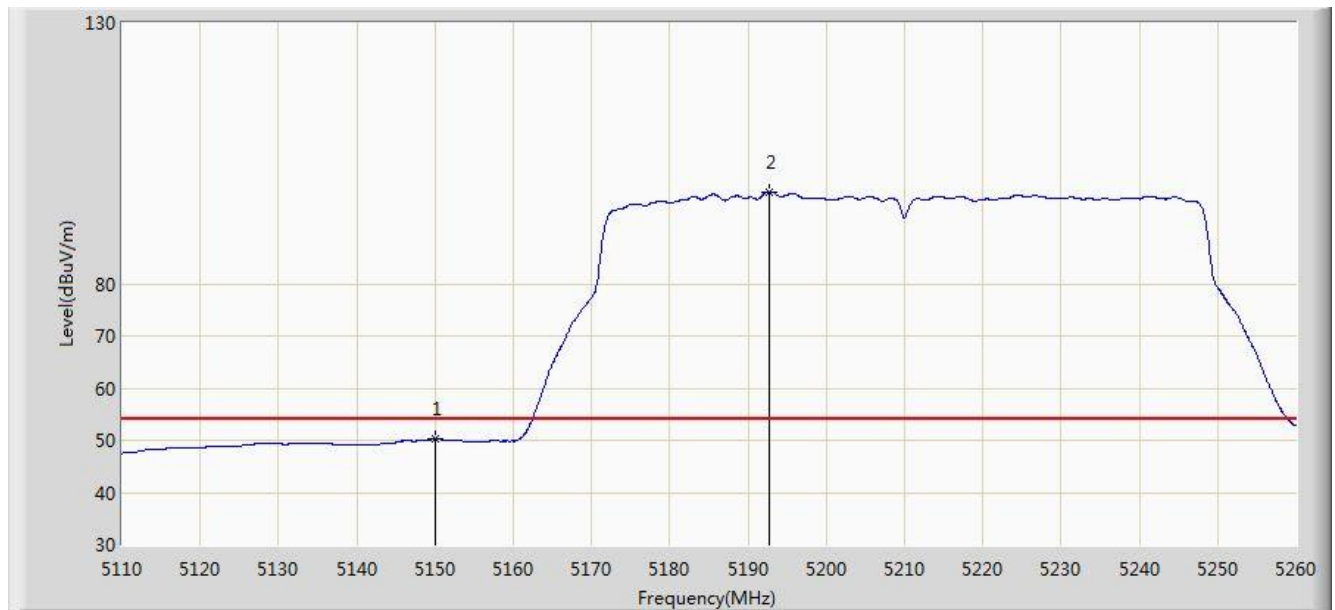


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5143.300	64.662	61.576	-9.338	74.000	3.085	PK
2			5150.000	63.093	60.023	-10.907	74.000	3.069	PK
3		*	5195.725	110.291	107.425	N/A	N/A	2.866	PK

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

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

Site: AC2	Time: 2017/02/26 - 16:15
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80+80 at Channel 5210MHz + 5775MHz Ant 0 + 1	

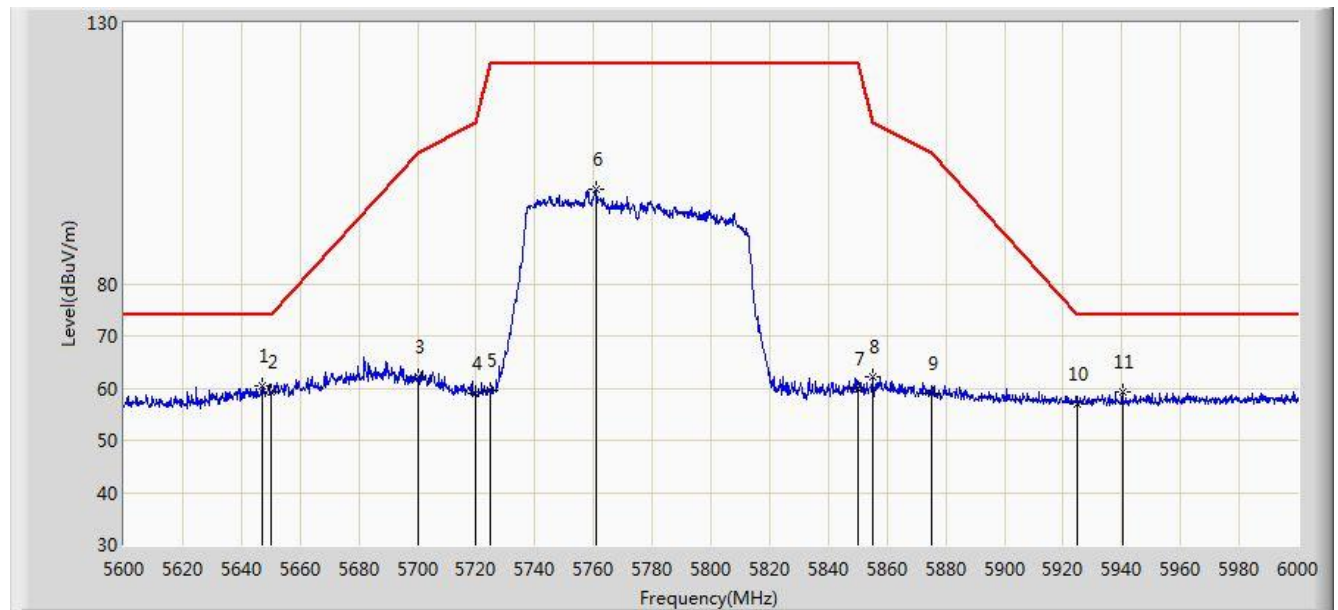


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			5150.000	50.248	47.178	-3.752	54.000	3.069	AV
2		*	5192.650	97.672	94.760	N/A	N/A	2.912	AV

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

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

Site: AC2	Time: 2017/02/26 - 16:08
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11ac-VHT80+80 at Channel 5210MHz + 5775MHz Ant 0 + 1	

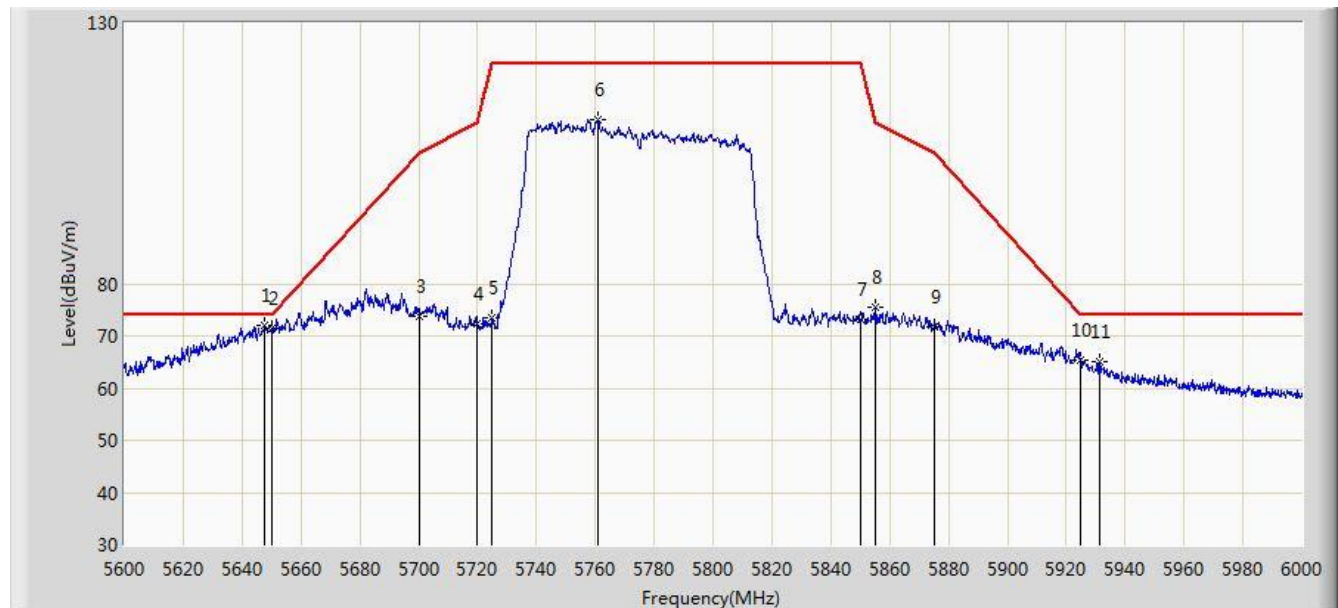


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5647.200	60.520	56.653	-13.480	74.000	3.867	PK
2			5650.000	59.192	55.389	-14.808	74.000	3.803	PK
3			5700.000	62.151	58.211	-43.049	105.200	3.940	PK
4			5720.000	59.129	55.147	-51.671	110.800	3.982	PK
5			5725.000	59.686	55.580	-62.514	122.200	4.105	PK
6			5760.800	98.138	93.698	N/A	N/A	4.440	PK
7			5850.000	59.999	55.004	-62.201	122.200	4.995	PK
8			5855.000	62.302	57.314	-48.498	110.800	4.987	PK
9			5875.000	59.009	54.002	-46.191	105.200	5.008	PK
10			5925.000	57.073	51.921	-16.927	74.000	5.152	PK
11			5940.200	59.170	53.998	-14.830	74.000	5.172	PK

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

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

Site: AC2	Time: 2017/02/26 - 16:06
Limit: FCC_Part15.407_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: X33 MeshRanger	Power: DC 55V
Test Mode: Transmit by 802.11ac-VHT80+80 at Channel 5210MHz + 5775MHz Ant 0 + 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	5647.800	72.029	68.176	-1.971	74.000	3.853	PK
2			5650.000	71.348	67.545	-2.652	74.000	3.803	PK
3			5700.000	73.796	69.856	-31.404	105.200	3.940	PK
4			5720.000	72.439	68.457	-38.361	110.800	3.982	PK
5			5725.000	73.515	69.409	-48.685	122.200	4.105	PK
6			5760.800	111.426	106.986	N/A	N/A	4.440	PK
7			5850.000	73.064	68.069	-49.136	122.200	4.995	PK
8			5855.000	75.456	70.468	-35.344	110.800	4.987	PK
9			5875.000	71.635	66.628	-33.565	105.200	5.008	PK
10			5925.000	65.334	60.182	-8.666	74.000	5.152	PK
11			5931.400	65.158	59.965	-8.842	74.000	5.192	PK

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

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

7.10. AC Conducted Emissions Measurement

7.10.1. Test Limit

FCC Part 15.207 Limits		
Frequency (MHz)	QP (dBμV)	AV (dBμV)
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.

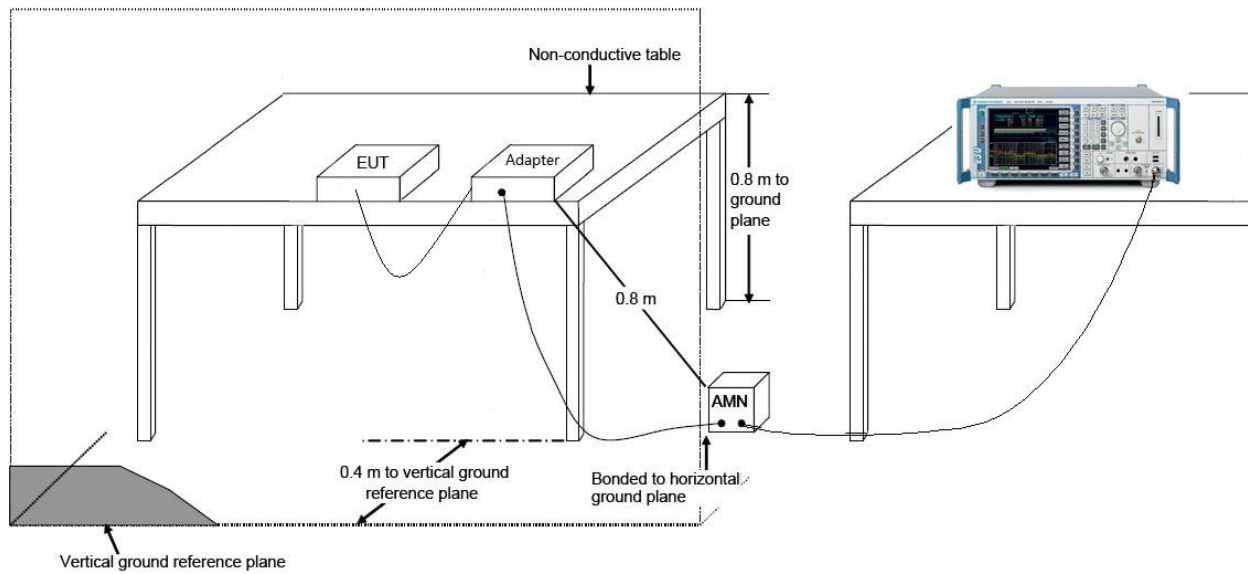
7.10.2. Test Procedure

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.

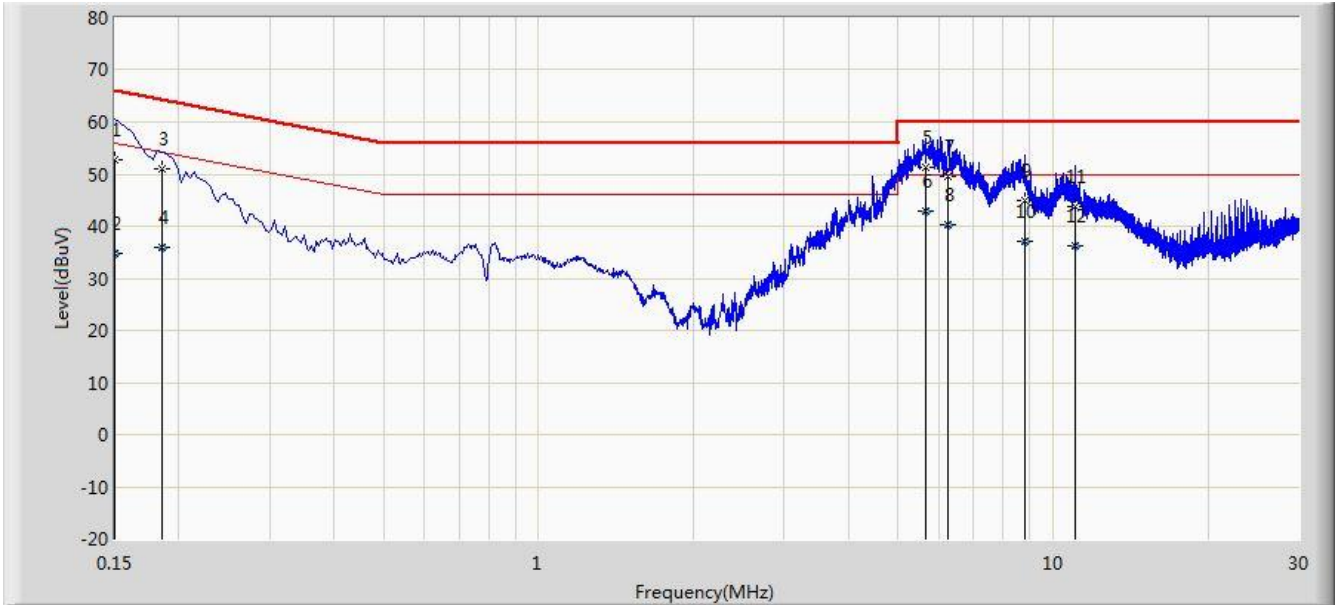
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

7.10.3. Test Setup



7.10.4. Test Result

Site: SR2	Time: 2017/02/21 - 11:05
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Will Yan
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: X33 MeshRanger	Power: AC 120V/60Hz
Test Mode 1	

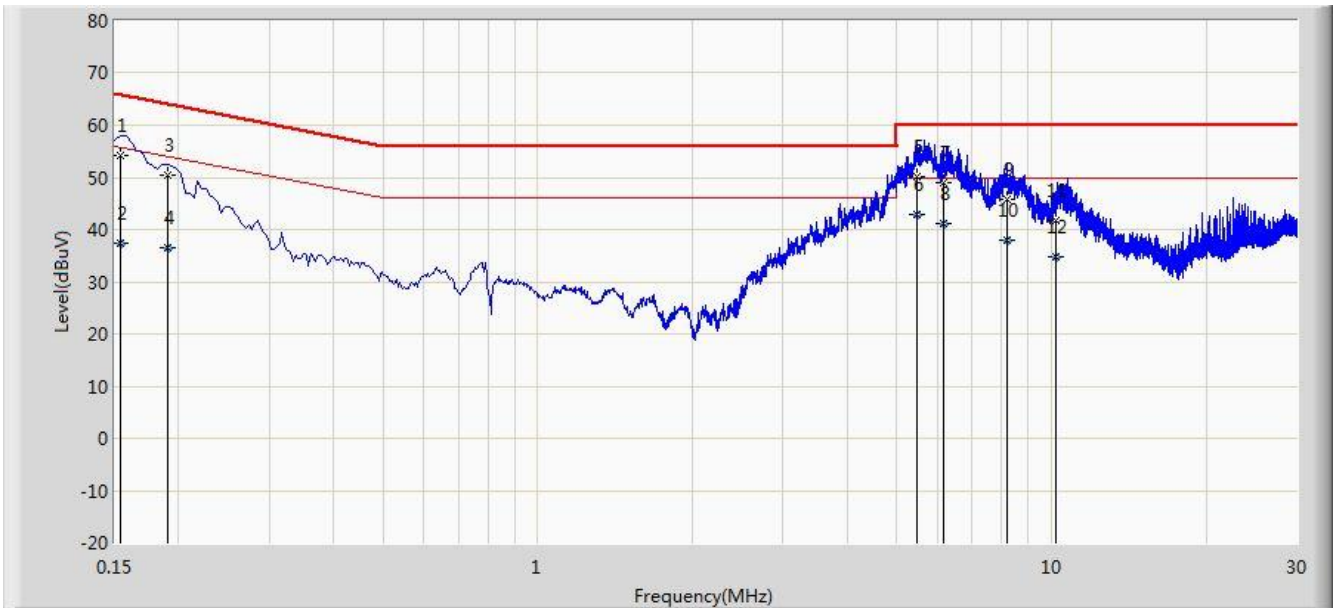


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.150	52.668	41.500	-13.332	66.000	11.168	QP
2			0.150	34.868	23.700	-21.132	56.000	11.168	AV
3			0.186	51.039	41.000	-13.175	64.213	10.039	QP
4			0.186	36.039	26.000	-18.175	54.213	10.039	AV
5			5.650	51.190	41.100	-8.810	60.000	10.090	QP
6		*	5.650	42.990	32.900	-7.010	50.000	10.090	AV
7			6.250	49.424	39.300	-10.576	60.000	10.124	QP
8			6.250	40.424	30.300	-9.576	50.000	10.124	AV
9			8.782	44.865	34.700	-15.135	60.000	10.165	QP
10			8.782	37.165	27.000	-12.835	50.000	10.165	AV
11			11.062	43.704	33.600	-16.296	60.000	10.104	QP
12			11.062	36.304	26.200	-13.696	50.000	10.104	AV

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

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

Site: SR2	Time: 2017/02/21 - 11:11
Limit: FCC_Part15.107_CE_AC Power_Class B	Engineer: Will Yan
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: X33 MeshRanger	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			0.154	54.116	43.400	-11.666	65.781	10.716	QP
2			0.154	37.416	26.700	-18.366	55.781	10.716	AV
3			0.190	50.528	40.500	-13.509	64.037	10.028	QP
4			0.190	36.628	26.600	-17.409	54.037	10.028	AV
5			5.466	50.083	40.000	-9.917	60.000	10.083	QP
6		*	5.466	42.983	32.900	-7.017	50.000	10.083	AV
7			6.158	49.125	39.000	-10.875	60.000	10.125	QP
8			6.158	41.025	30.900	-8.975	50.000	10.125	AV
9			8.166	45.786	35.600	-14.214	60.000	10.186	QP
10			8.166	37.886	27.700	-12.114	50.000	10.186	AV
11			10.174	41.757	31.600	-18.243	60.000	10.157	QP
12			10.174	34.657	24.500	-15.343	50.000	10.157	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 **X33/X32/X32e MeshRanger**
FCC ID: 2AD6M-X30 is in compliance with Part 15E of the FCC Rules.

The End