

Appendix B_Radiated Spurious Emission Data for BLE:

1.Radiated Spurious Emission and Restricted Band

Test Result

Radiated Spurious Emission:

For 9 kHz ~ 30 MHz

Note:

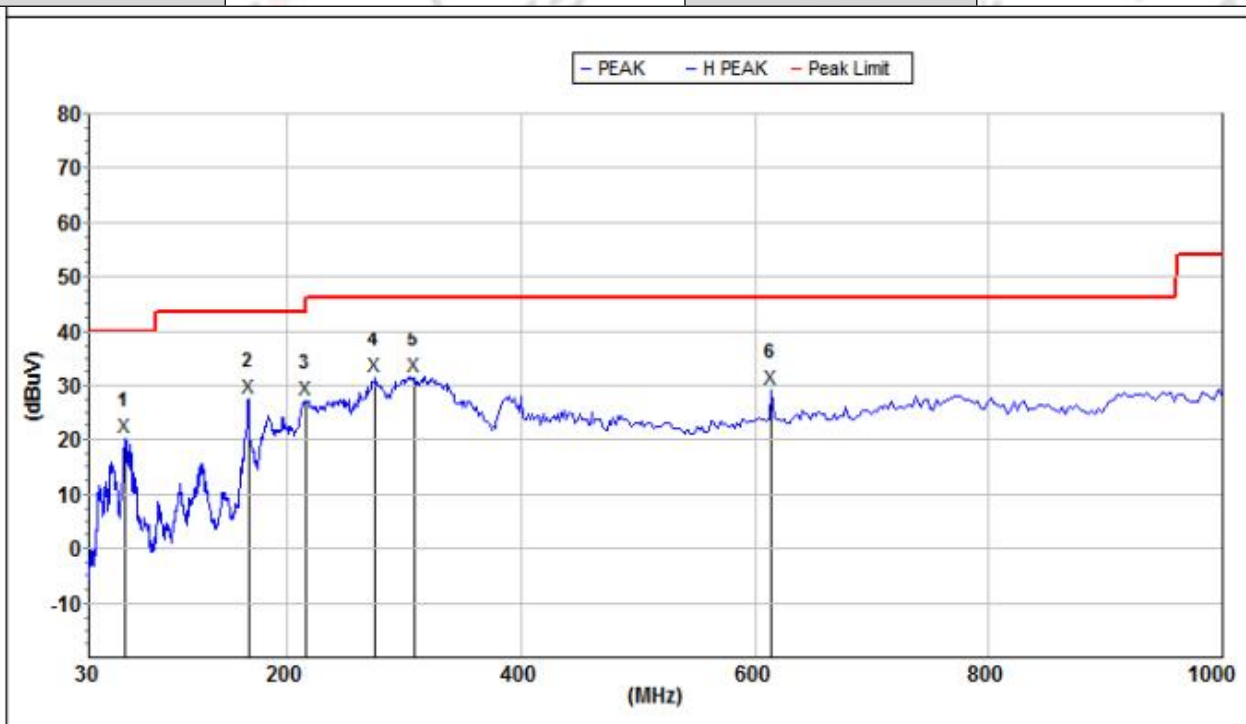
- 1.The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.
- 2.The all data rate modes had been test, but only worse test data was recorded in the test report.

Below 1GHz:

Note:

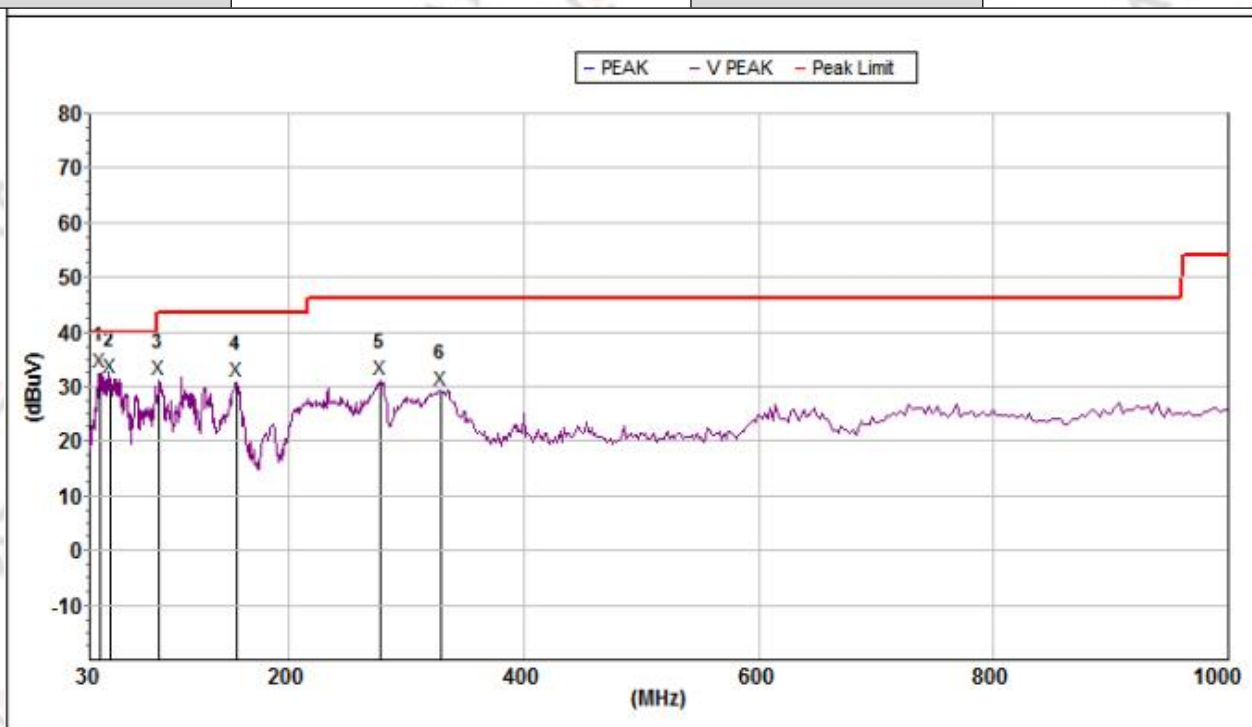
- 1.All modes have been tested, only worst (BLE_2M-TX-2480MHz)mode was recorded in the test report.
- 2.Emission Level (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
- 3.Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)-Amplifier Gain.
- 4.The emission levels of other frequencies were less than 20dB margin against the limit.
- 5.Margin value = Emission level-Limit value.

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2M-2480MHz	Antenna	Horizontal



Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	60.704	72.3	-51.9	20.4	40.0	19.6	H
2	166.651	65.5	-37.8	27.7	43.5	15.8	H
3	215.268	57.2	-29.9	27.3	43.5	16.2	H
4	275.157	58.7	-27.0	31.7	46.0	14.3	H
5	308.913	58.6	-26.8	31.8	46.0	14.2	H
6	614.214	50.3	-20.8	29.5	46.0	16.5	H

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2M-2480MHz	Antenna	Vertical



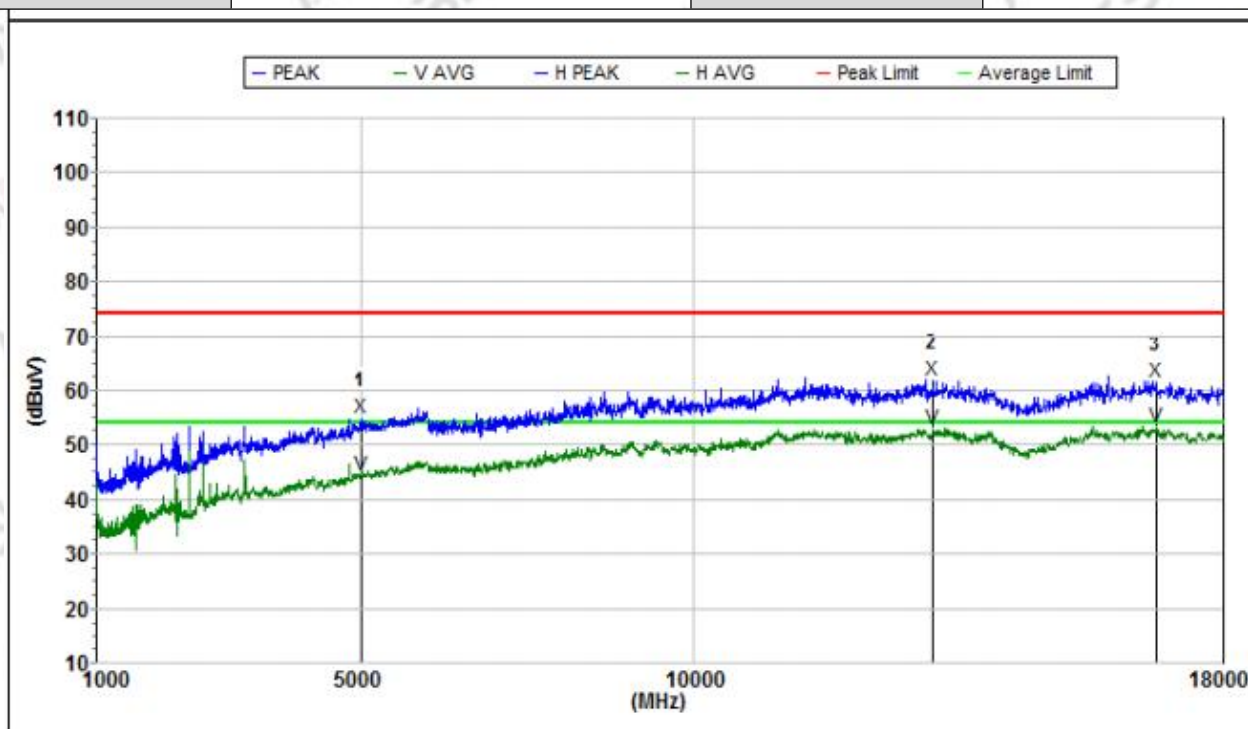
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	38.481	78.5	-45.9	32.6	40.0	7.4	V
2	47.659	75.9	-44.2	31.7	40.0	8.3	V
3	89.590	72.1	-40.7	31.4	43.5	12.1	V
4	154.821	66.2	-35.3	30.9	43.5	12.6	V
5	278.067	58.7	-27.5	31.2	46.0	14.8	V
6	329.039	55.4	-26.1	29.3	46.0	16.7	V

1GHz-18GHz:

Note:

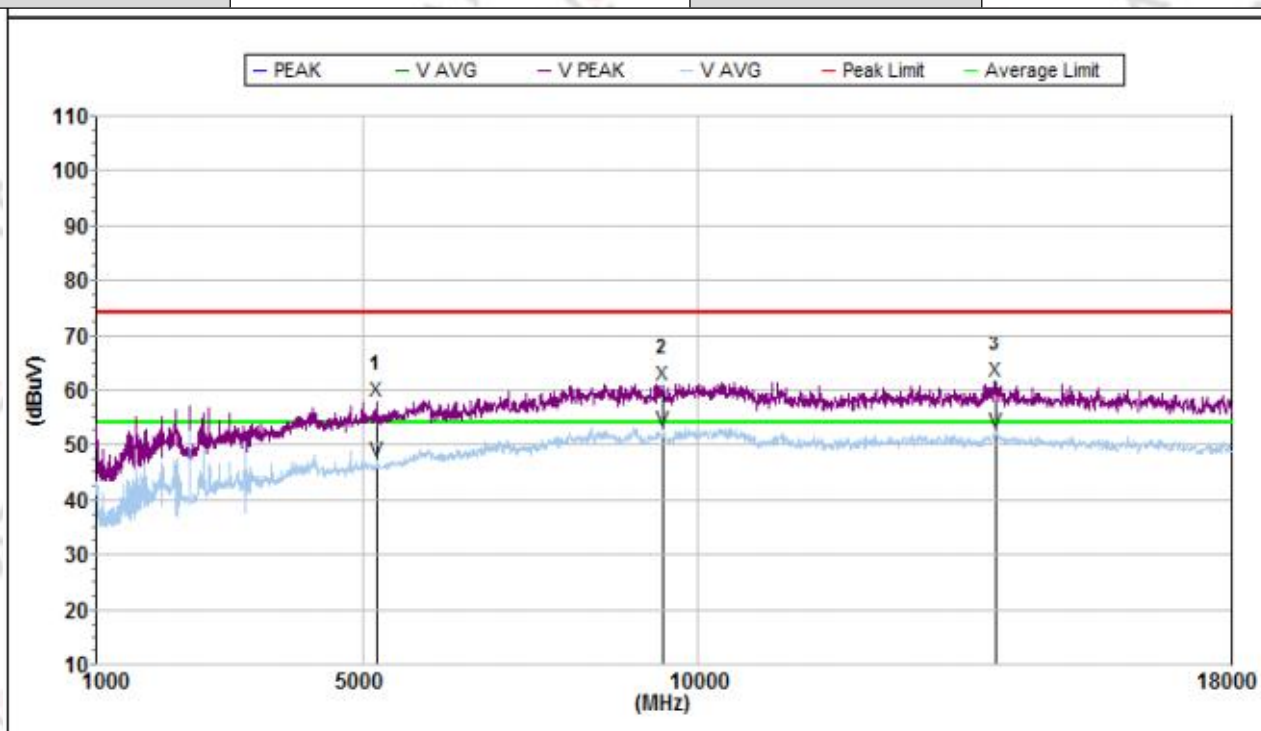
- 1.All modes have been tested, only worst (BLE_2M)mode was recorded in the test report.
- 2.In frequency ranges 18 ~25GHz no any other harmonic emissions detected which are tested to compliance with the limit. No recording in the test report. No any other emissions level which are attenuated less than 20dB below the limit. No recording in the test report.
- 3.We used the filter to test and the main frequency was filtered out.
- 4.Emission Level (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
5. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)-Amplifier Gain.
6. Margin value = Emission level-Limit value.

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2M-2402MHz	Antenna	Horizontal



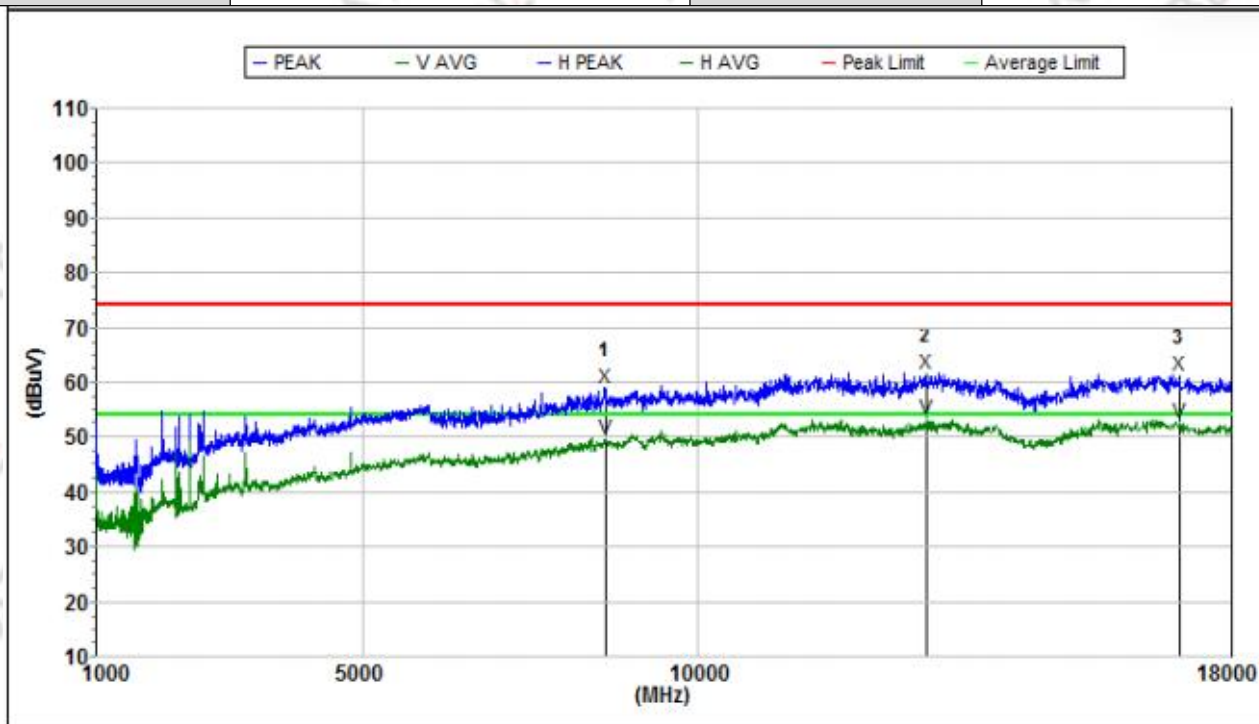
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	4987.500	60.7	-5.5	55.2	74.0	18.8	H
2	13626.000	58.9	3.0	61.9	74.0	12.1	H
3	16992.000	57.8	4.0	61.8	74.0	12.2	H
Avg							
1	4987.500	50.1	-5.5	44.6	54.0	9.4	H
2	13626.000	50.1	3.0	53.1	54.0	0.9	H
3	16992.000	49.3	4.0	53.3	54.0	0.7	H

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2M-2402MHz	Antenna	Vertical



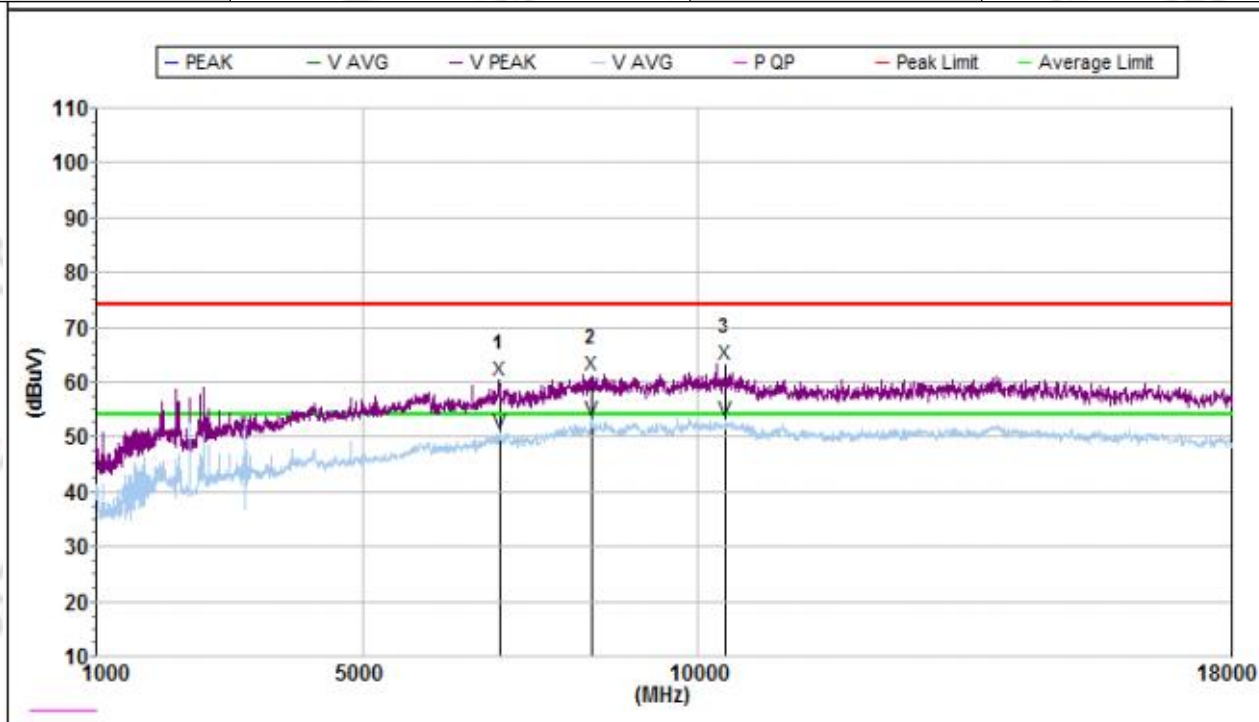
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	5202.500	61.8	-3.9	57.9	74.0	16.1	V
2	9498.000	58.8	2.3	61.1	74.0	12.9	V
3	14478.000	59.2	2.5	61.7	74.0	12.3	V
Avg							
1	5202.500	51.1	-3.9	47.2	54.0	6.8	V
2	9498.000	50.3	2.3	52.6	54.0	1.4	V
3	14478.000	49.9	2.5	52.4	54.0	1.6	V

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2MHz2440MHz	Antenna	Horizontal



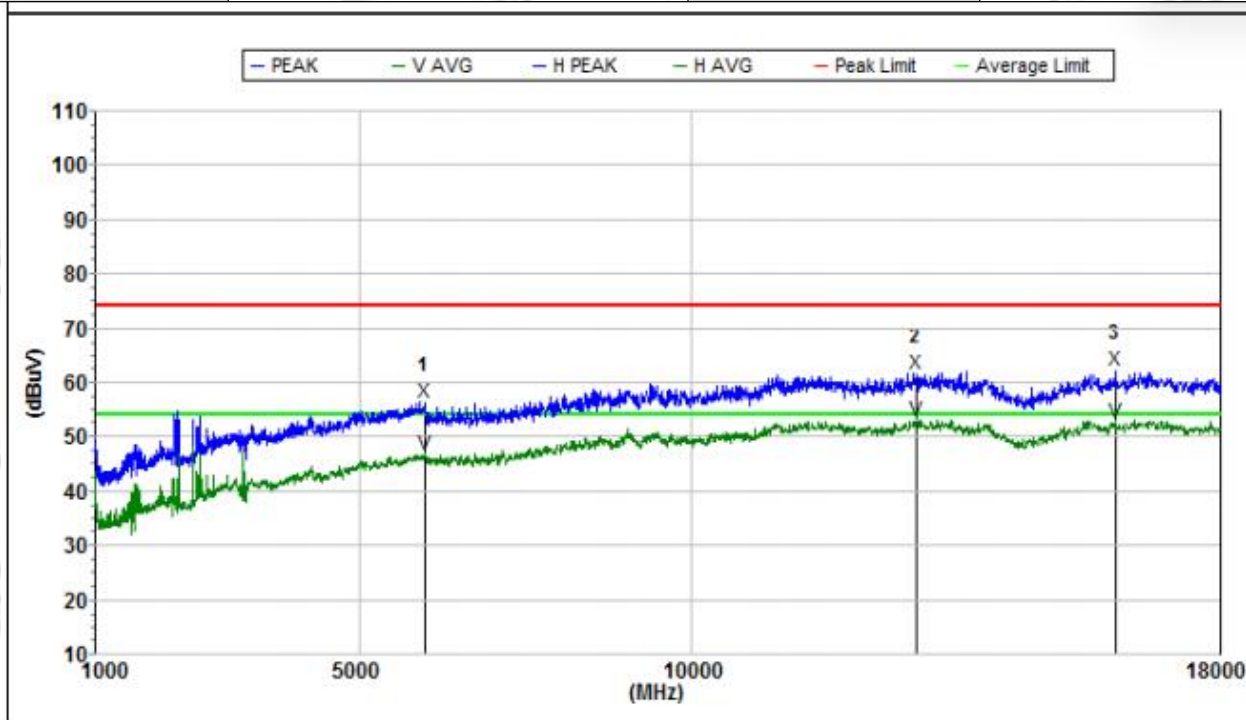
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	8640.000	59.3	-0.4	58.9	74.0	15.1	H
2	13440.000	58.6	3.0	61.6	74.0	12.4	H
3	17226.000	57.6	3.7	61.3	74.0	12.7	H
Avg							
1	8640.000	50.1	-0.4	49.7	54.0	4.3	H
2	13440.000	50.4	3.0	53.4	54.0	0.6	H
3	17226.000	49.2	3.7	52.9	54.0	1.1	H

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2MHz2440MHz	Antenna	Vertical



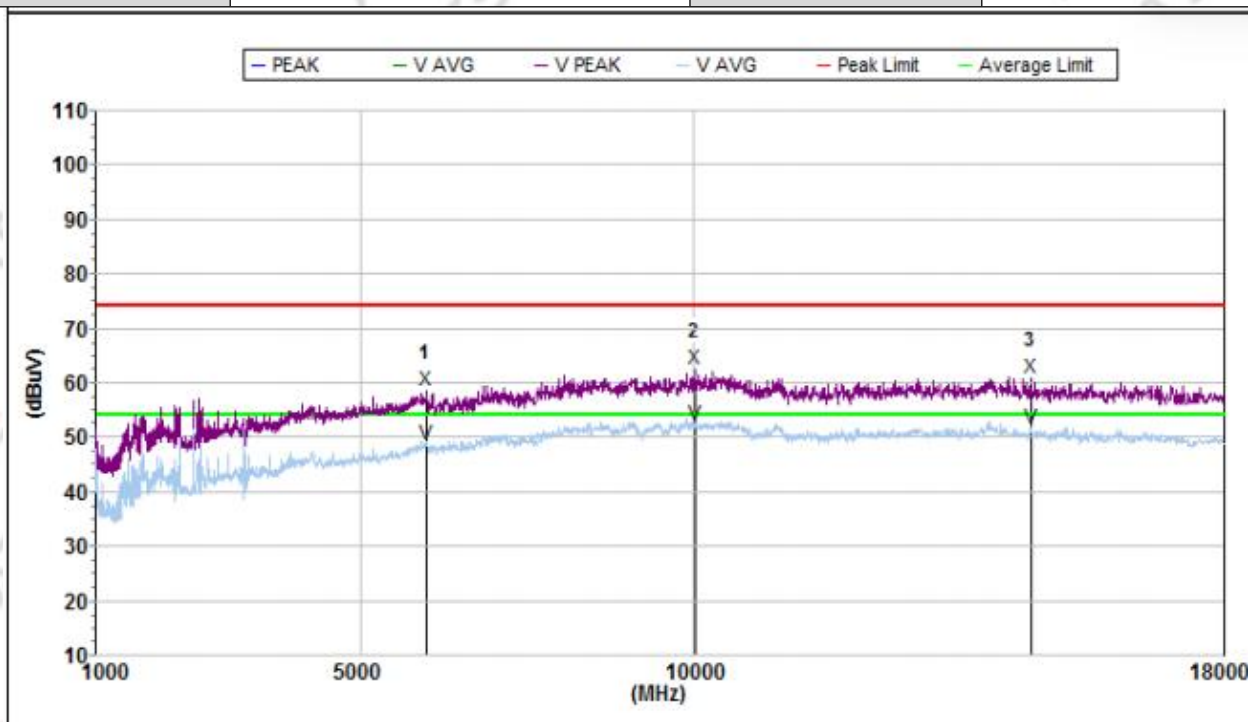
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	7038.000	59.5	0.8	60.3	74.0	13.7	V
2	8412.000	58.9	2.4	61.3	74.0	12.7	V
3	10434.000	59.9	3.3	63.2	74.0	10.8	V
Avg							
1	7038.000	49.9	0.8	50.7	54.0	3.3	V
2	8412.000	50.6	2.4	53.0	54.0	1.0	V
3	10434.000	49.8	3.3	53.1	54.0	0.9	V

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2MHz2480MHz	Antenna	Horizontal



Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	5987.500	59.6	-3.1	56.5	74.0	17.5	H
2	13404.000	58.8	2.9	61.7	74.0	12.3	H
3	16404.000	58.6	3.6	62.2	74.0	11.8	H
Avg							
1	5987.500	50.0	-3.1	46.9	54.0	7.1	H
2	13404.000	50.3	2.9	53.2	54.0	0.8	H
3	16404.000	49.1	3.6	52.7	54.0	1.3	H

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2MHz2480MHz	Antenna	Vertical



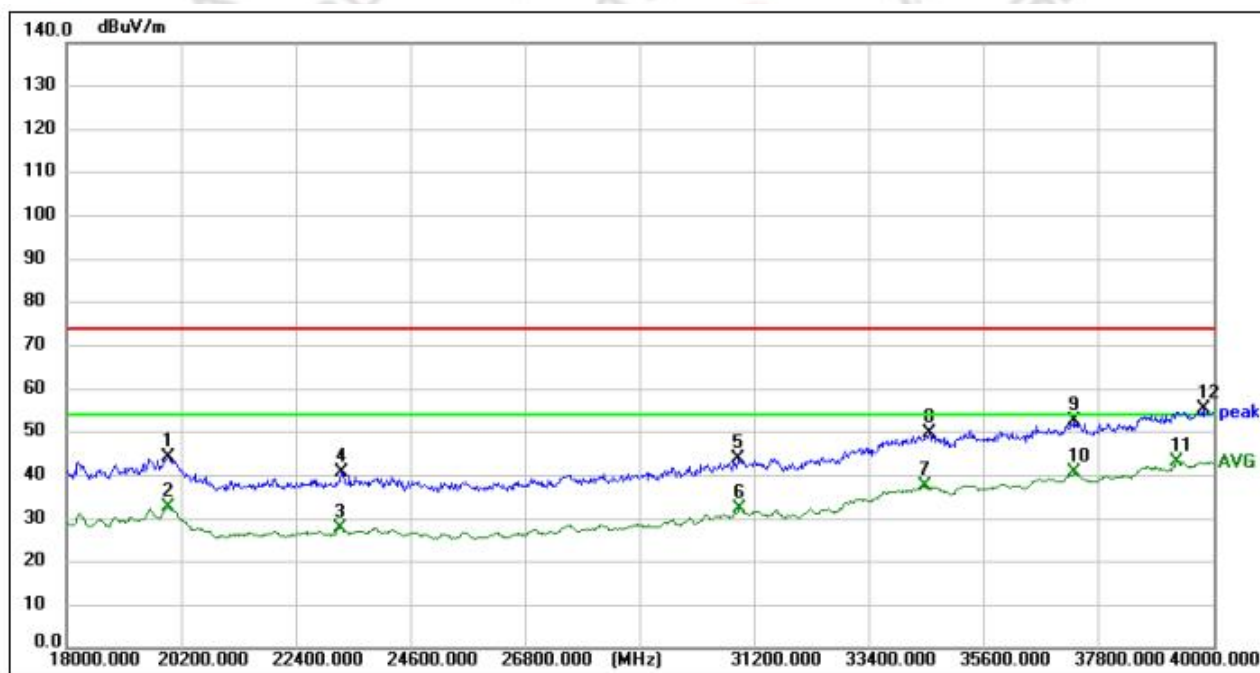
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	5987.500	59.9	-1.1	58.8	74.0	15.2	V
2	10026.000	59.6	3.0	62.6	74.0	11.4	V
3	15090.000	59.7	1.4	61.1	74.0	12.9	V
Avg							
1	5987.500	50.0	-1.1	48.9	54.0	5.1	V
2	10026.000	49.4	3.0	52.4	54.0	1.6	V
3	15090.000	50.4	1.4	51.8	54.0	2.2	V

18GHz-40GHz:

Note:

All modes have been tested, only worst (BLE_2M-2480MHz)mode was recorded in the test report.

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2M-2480MHz	Antenna	Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	19958.000	43.89	0.21	44.10	74.00	-29.90	peak
2	19958.000	32.41	0.21	32.62	54.00	-21.38	AVG
3	23258.000	30.14	-2.32	27.82	54.00	-26.18	AVG
4	23280.000	42.80	-2.30	40.50	74.00	-33.50	peak
5	30892.000	42.76	1.00	43.76	74.00	-30.24	peak
6	30914.000	31.37	1.04	32.41	54.00	-21.59	AVG
7	34456.000	33.66	3.85	37.51	54.00	-16.49	AVG
8	34544.000	45.87	3.95	49.82	74.00	-24.18	peak
9	37338.000	47.07	5.53	52.60	74.00	-21.40	peak
10	37338.000	34.97	5.53	40.50	54.00	-13.50	AVG
11	39296.000	35.67	7.40	43.07	54.00	-10.93	AVG
*							
12	39802.000	47.81	7.39	55.20	74.00	-18.80	peak

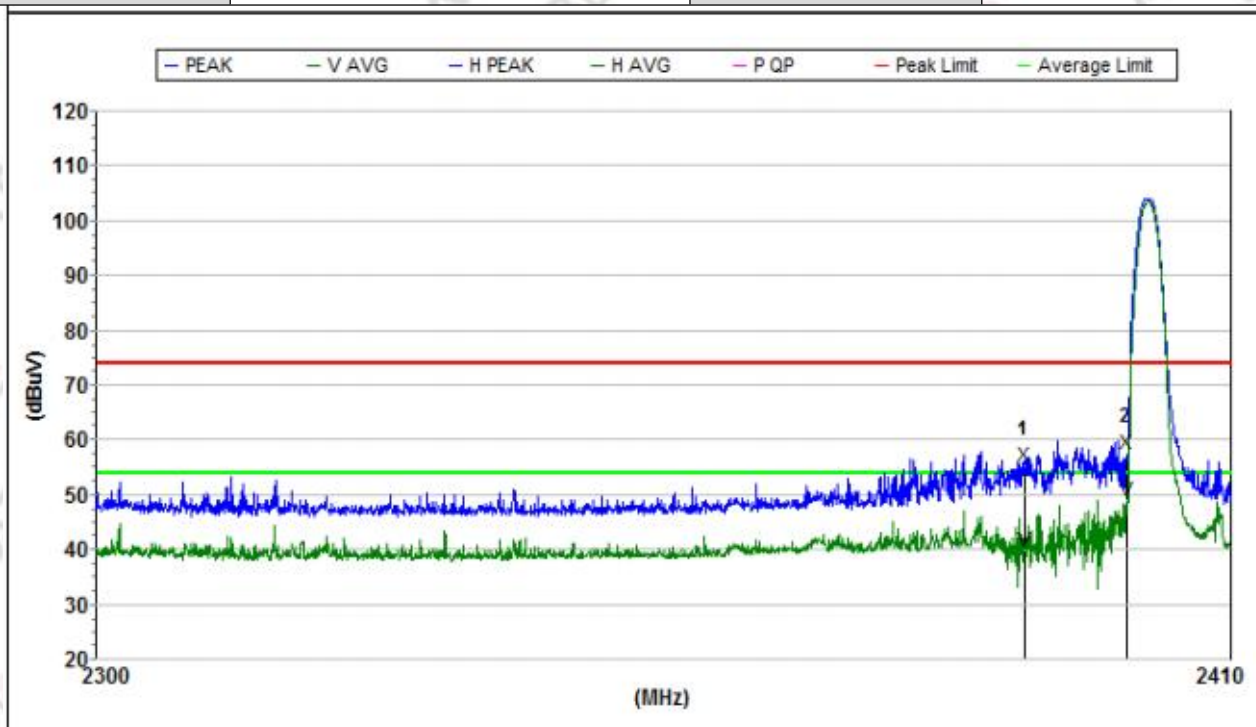
EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2M-2480MHz	Antenna	Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	19892.000	44.16	-0.12	44.04	74.00	-29.96	peak
2	19980.000	32.33	-0.06	32.27	54.00	-21.73	AVG
3	23258.000	30.17	-2.50	27.67	54.00	-26.33	AVG
4	23940.000	41.85	-2.09	39.76	74.00	-34.24	peak
5	28252.000	30.23	-1.36	28.87	54.00	-25.13	AVG
6	28802.000	42.74	-1.65	41.09	74.00	-32.91	peak
7	30936.000	31.30	0.67	31.97	54.00	-22.03	AVG
8	31596.000	43.19	0.45	43.64	74.00	-30.36	peak
9	35226.000	45.63	4.48	50.11	74.00	-23.89	peak
10	35908.000	32.68	4.99	37.67	54.00	-16.33	AVG
11	39362.000	47.28	6.94	54.22	74.00	-19.78	peak
12	39362.000	35.71	6.94	42.65	54.00	-11.35	AVG
*							

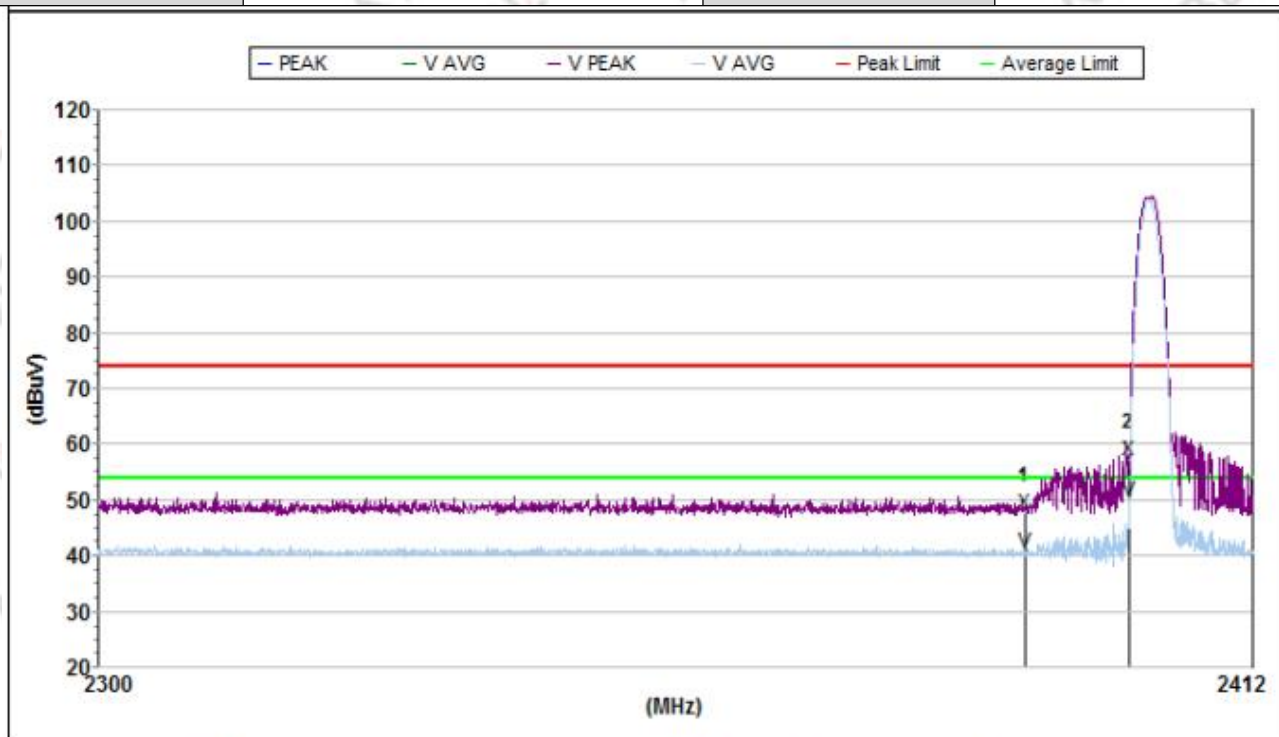
Restricted Band:

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-1M-2402MHz	Antenna	Horizontal



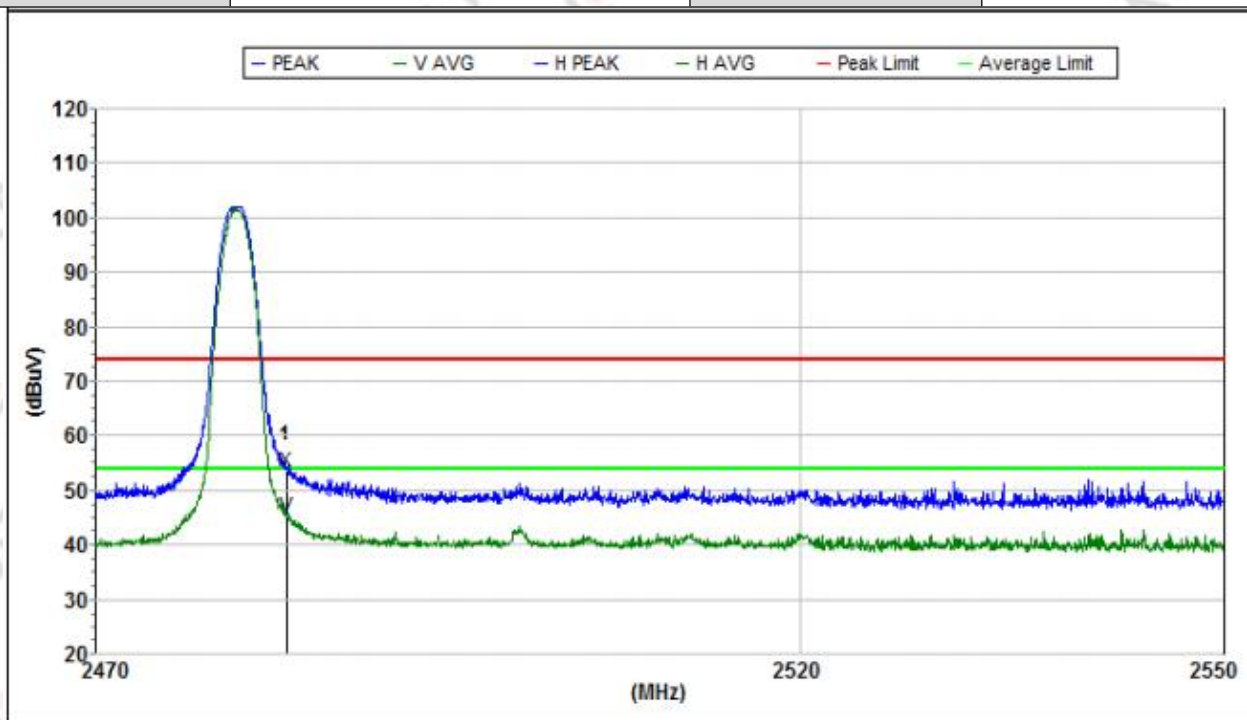
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2390.000	69.4	-14.2	55.2	74.0	18.8	H
2	2400.000	71.8	-14.2	57.6	74.0	16.4	H
Avg							
1	2390.000	54.1	-14.2	39.9	54.0	14.1	H
2	2400.000	63.0	-14.2	48.8	54.0	5.2	H

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-1M-2402MHz	Antenna	Vertical



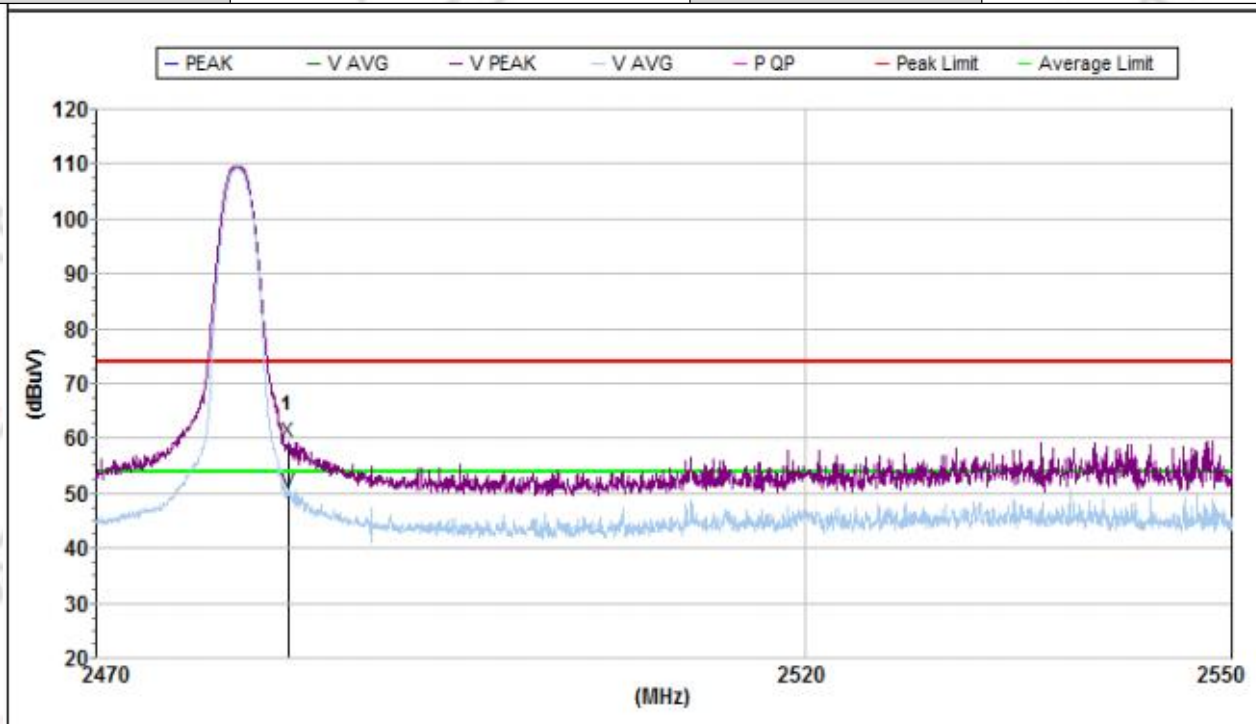
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2390.000	58.9	-11.3	47.6	74.0	26.4	V
2	2400.000	68.5	-11.4	57.1	74.0	16.9	V
Avg							
1	2390.000	51.9	-11.3	40.6	54.0	13.4	V
2	2400.000	61.2	-11.4	49.8	54.0	4.2	V

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-1M-2480MHz	Antenna	Horizontal



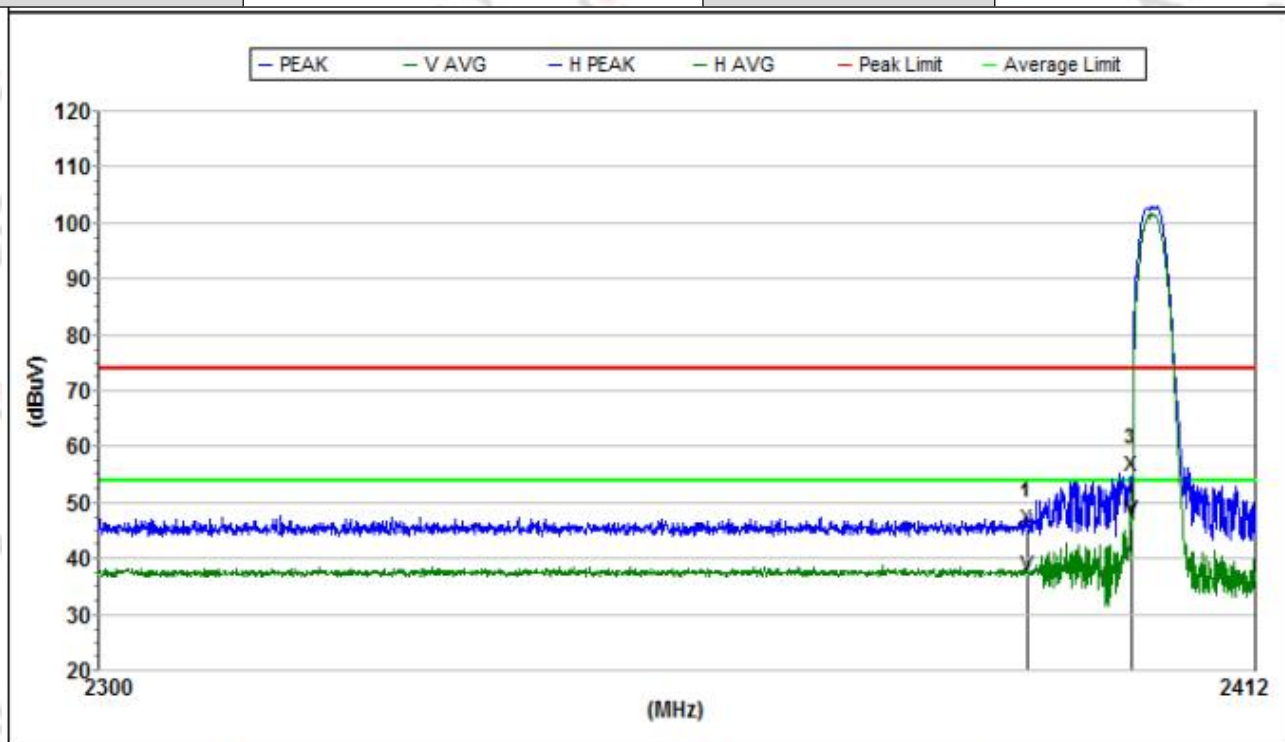
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2483.500	68.0	-14.3	53.7	74.0	20.3	H
Avg							
1	2483.500	59.5	-14.3	45.2	54.0	8.8	H

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-1M-2480MHz	Antenna	Vertical



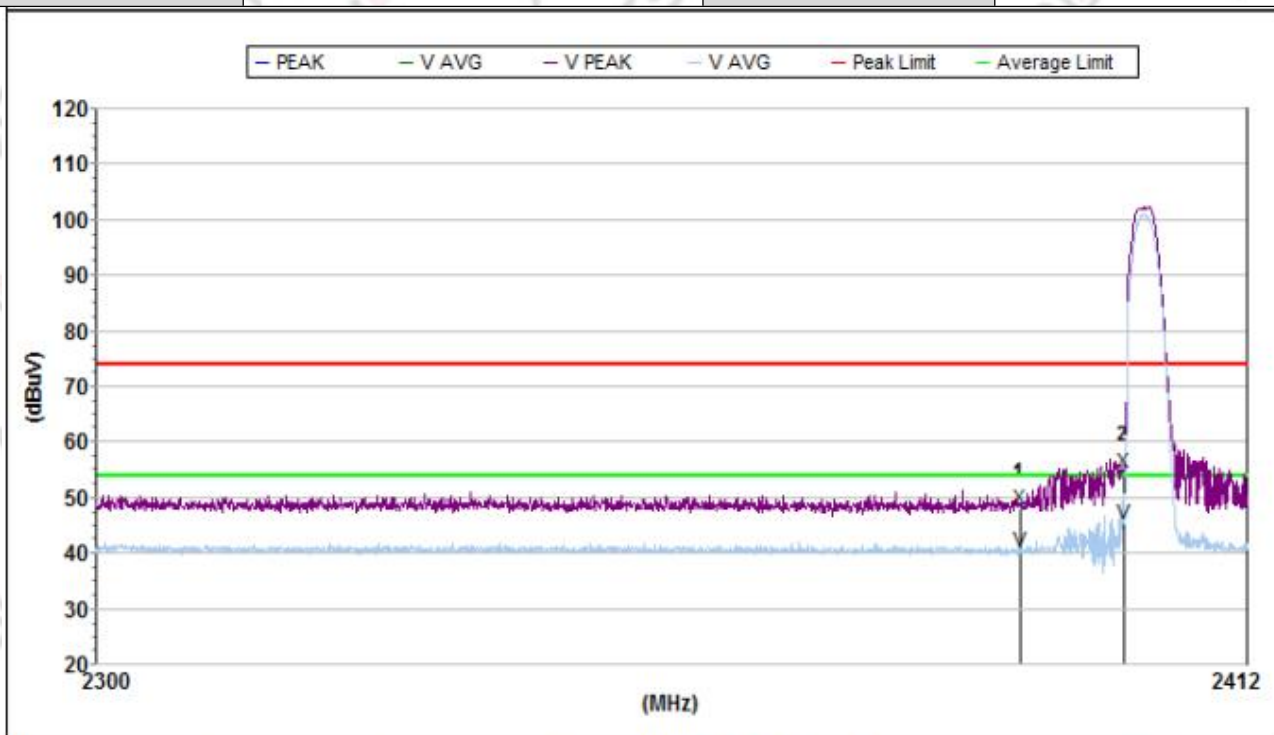
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2483.500	71.1	-11.7	59.4	74.0	14.6	V
Avg							
1	2483.500	62.1	-11.7	50.4	54.0	3.6	V

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2M-2402MHz	Antenna	Horizontal



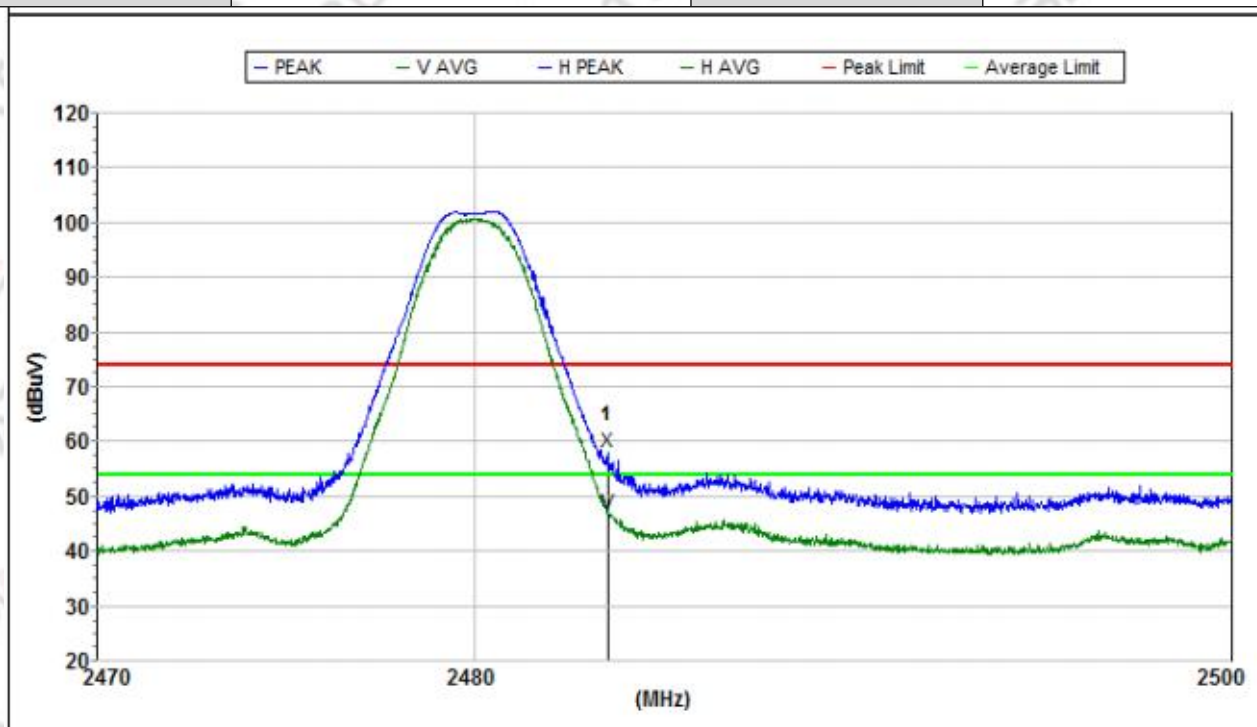
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2390.000	59.4	-14.2	45.2	74.0	28.8	H
2	2400.000	69.2	-14.2	55.0	74.0	19.0	H
3	2400.000	69.2	-14.2	55.0	74.0	19.0	H
Avg							
1	2390.000	51.4	-14.2	37.2	54.0	16.8	H
2	2400.000	61.3	-14.2	47.1	54.0	6.9	H
3	2400.000	61.3	-14.2	47.1	54.0	6.9	H

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2M-2402MHz	Antenna	Vertical



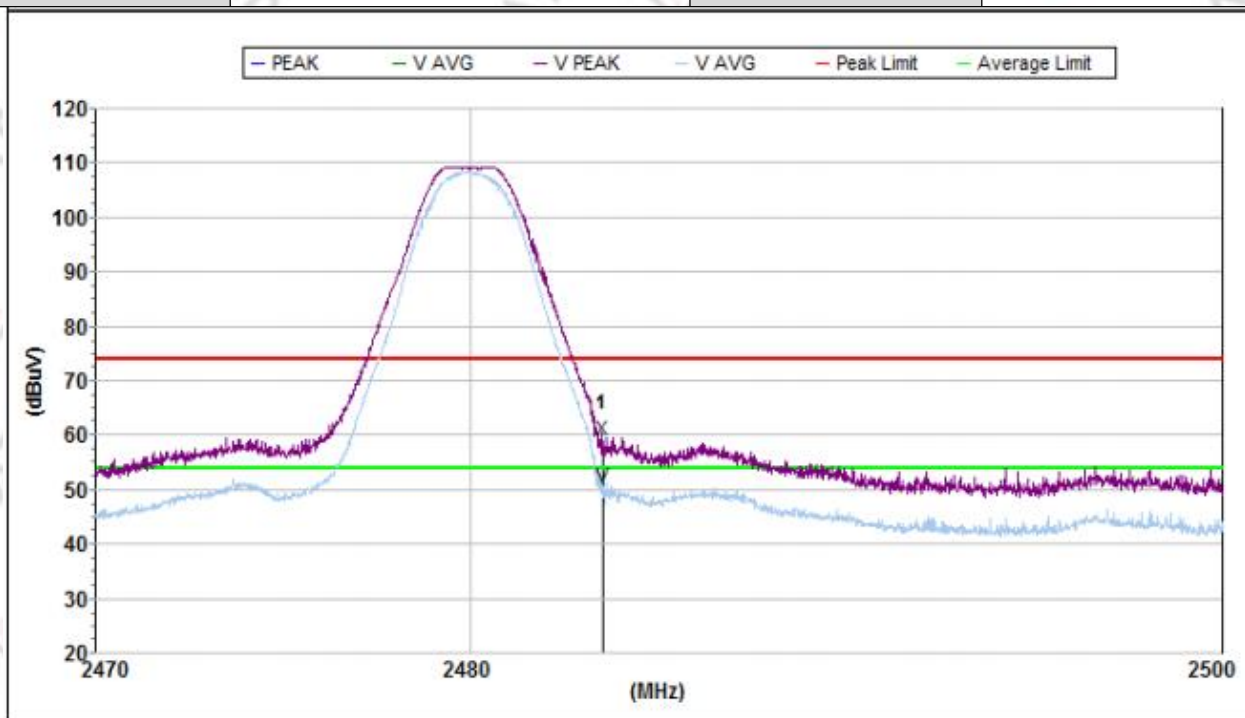
Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2390.000	59.4	-11.3	48.1	74.0	25.9	V
2	2400.000	66.1	-11.4	54.7	74.0	19.3	V
Avg							
1	2390.000	51.8	-11.3	40.5	54.0	13.5	V
2	2400.000	56.8	-11.4	45.4	54.0	8.6	V

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2M-2480MHz	Antenna	Horizontal



Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2483.500	72.3	-14.3	58.0	74.0	16.0	H
Avg							
1	2483.500	61.4	-14.3	47.1	54.0	6.9	H

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2M-2480MHz	Antenna	Vertical



Mk.	Freq.(MHz)	Reading(dBuV/m)	Factor(dB)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Pol.
Peak:							
1	2483.500	70.8	-11.7	59.1	74.0	14.9	V
Avg							
1	2483.500	62.3	-11.7	50.6	54.0	3.4	V

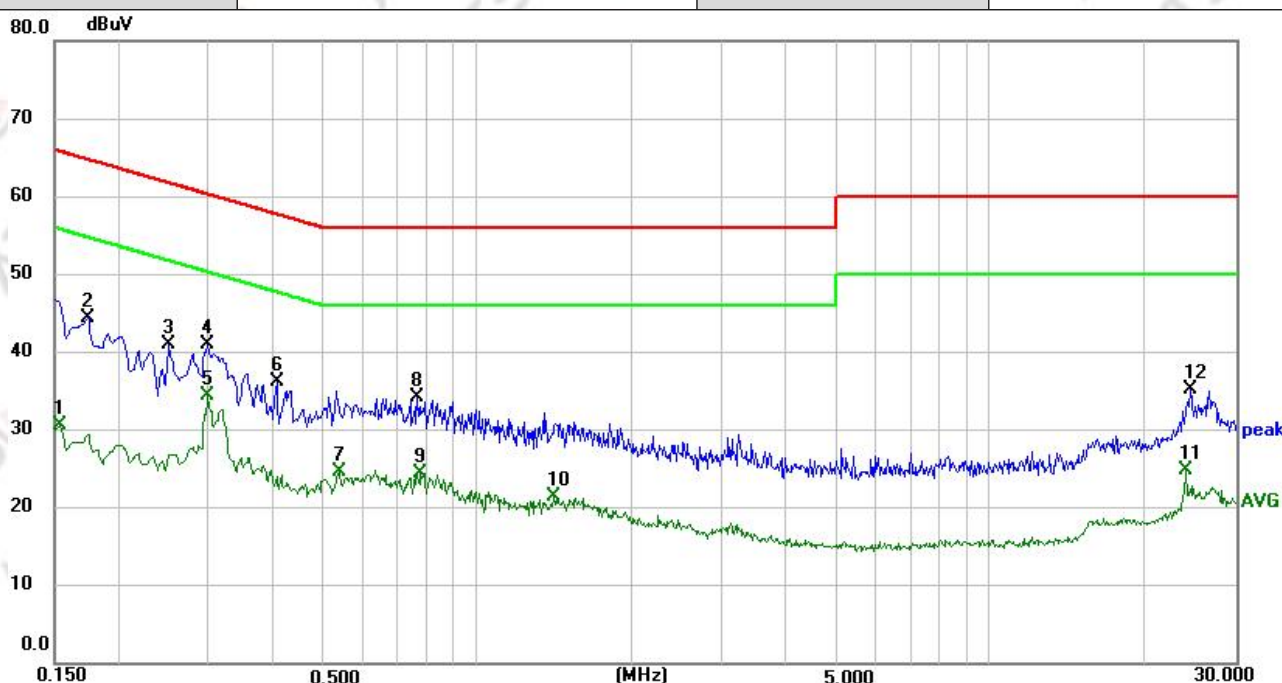
2.AC Power-Line Conducted Emission

Test Result

Note:

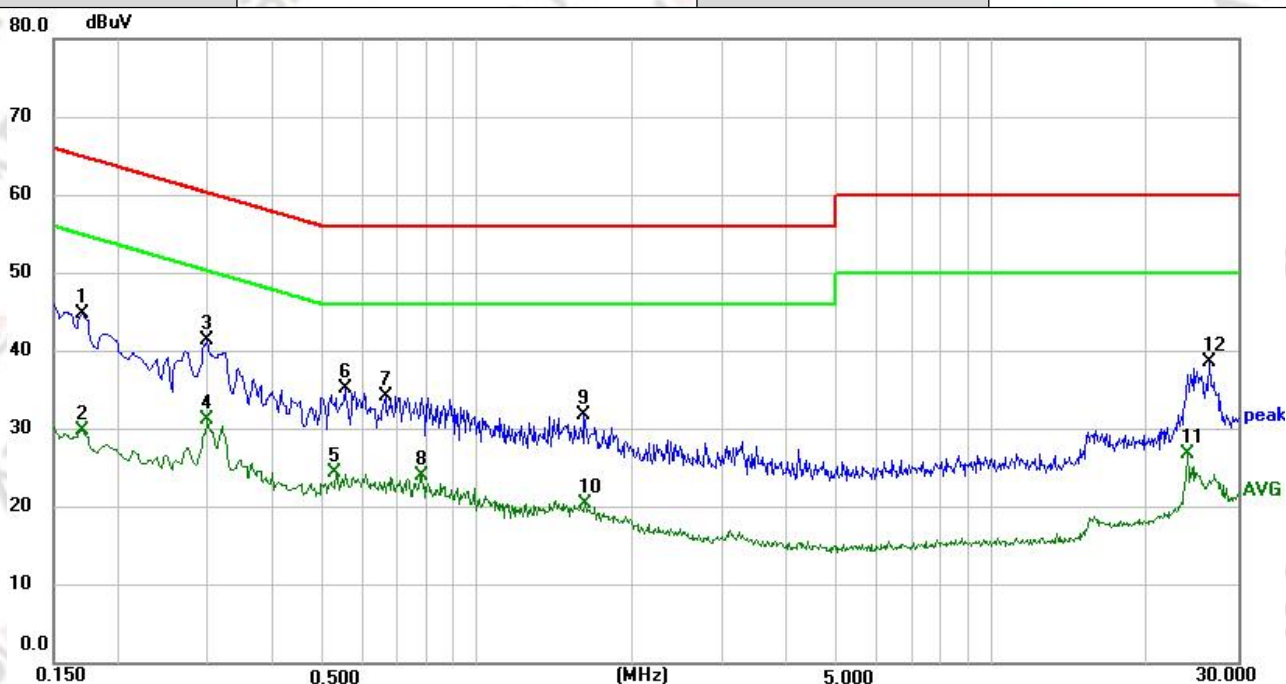
- 1.All modes have been tested, only worst mode(BLE-2M-2480MHz) was recorded in the test report.
- 2.Emission Level = Reading Value + Correction Factor .
3. Correction Factor = Insertion loss + Cable loss.
4. The emission levels of other frequencies were less than 20dB margin against the limit.
5. Margin value = Emission level-Limit value.

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2M-2480MHz	Phase	L1



No.	Frequency (MHz)	Reading Level(dBuV)	Factor (dB)	Measure-ment(dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1539	10.95	19.75	30.70	55.79	-25.09	AVG
2	0.1740	24.59	19.74	44.33	64.77	-20.44	peak
3	0.2500	21.21	19.74	40.95	61.76	-20.81	peak
4	0.2980	21.20	19.79	40.99	60.30	-19.31	peak
5 *	0.2980	14.54	19.79	34.33	50.30	-15.97	AVG
6	0.4060	16.30	19.82	36.12	57.73	-21.61	peak
7	0.5380	4.68	19.87	24.55	46.00	-21.45	AVG
8	0.7660	14.35	19.91	34.26	56.00	-21.74	peak
9	0.7780	4.51	19.90	24.41	46.00	-21.59	AVG
10	1.4180	1.51	19.93	21.44	46.00	-24.56	AVG
11	24.0020	0.07	24.73	24.80	50.00	-25.20	AVG
12	24.4140	10.39	24.83	35.22	60.00	-24.78	peak

EUT	smart wireless window camera	Model Name	EC09301
Test Mode	BLE-2M-2480MHz	Phase	N



No.	Frequency (MHz)	Reading Level(dBuV)	Factor (dB)	Measurement(dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1700	24.98	19.86	44.84	64.96	-20.12	peak
2	0.1700	10.06	19.86	29.92	54.96	-25.04	AVG
3 *	0.2980	21.55	19.90	41.45	60.30	-18.85	peak
4	0.2980	11.25	19.90	31.15	50.30	-19.15	AVG
5	0.5299	4.79	19.58	24.37	46.00	-21.63	AVG
6	0.5540	15.62	19.60	35.22	56.00	-20.78	peak
7	0.6620	14.46	19.71	34.17	56.00	-21.83	peak
8	0.7820	4.25	19.75	24.00	46.00	-22.00	AVG
9	1.6180	11.81	19.96	31.77	56.00	-24.23	peak
10	1.6220	0.56	19.96	20.52	46.00	-25.48	AVG
11	23.9980	2.59	24.30	26.89	50.00	-23.11	AVG
12	26.4620	13.74	24.95	38.69	60.00	-21.31	peak