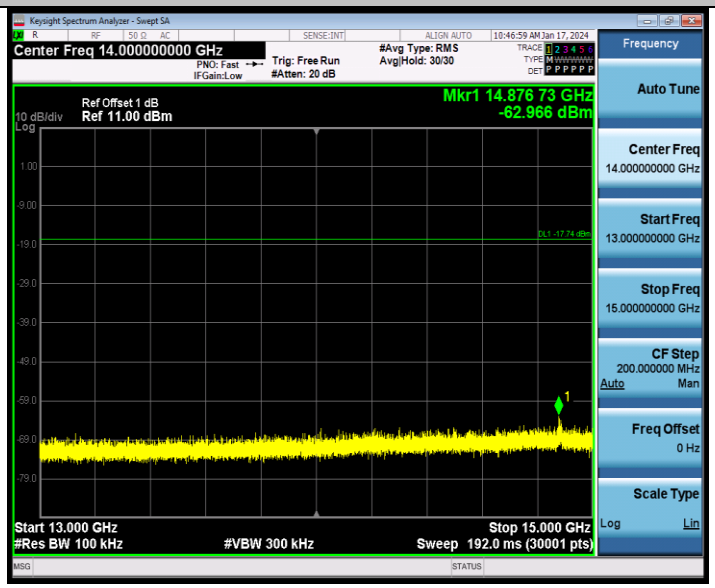
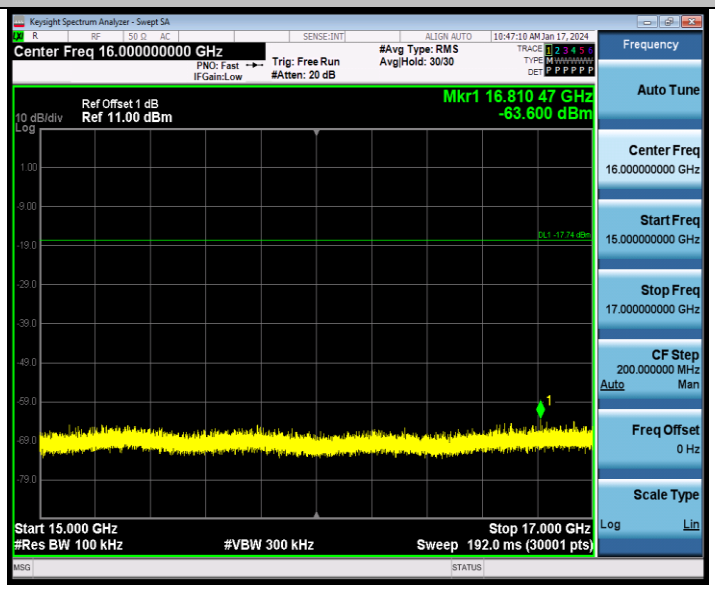
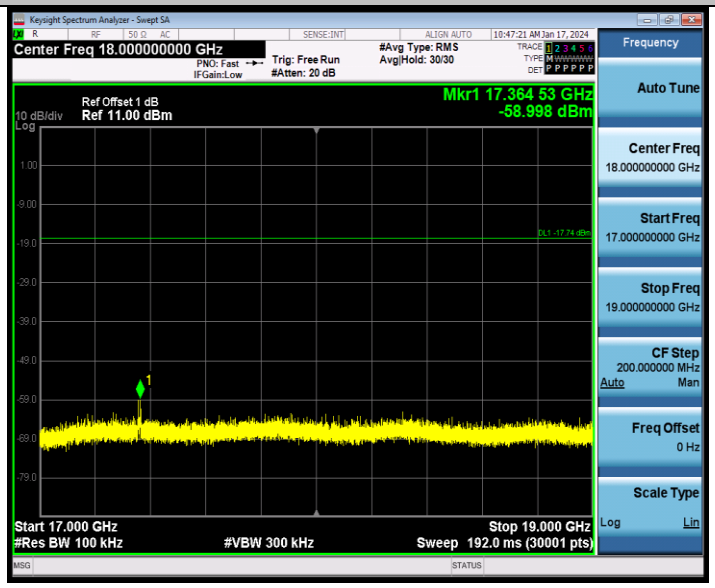
ZIGB_Ant1_2480_13000~15000



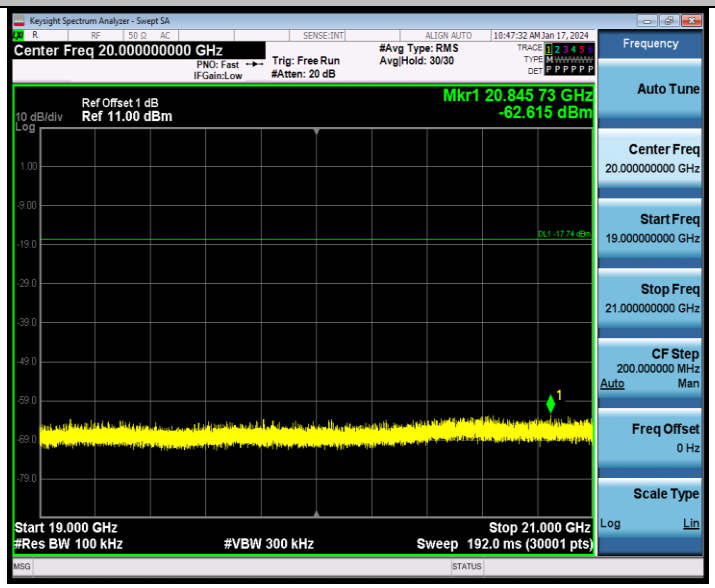
ZIGB_Ant1_2480_15000~17000



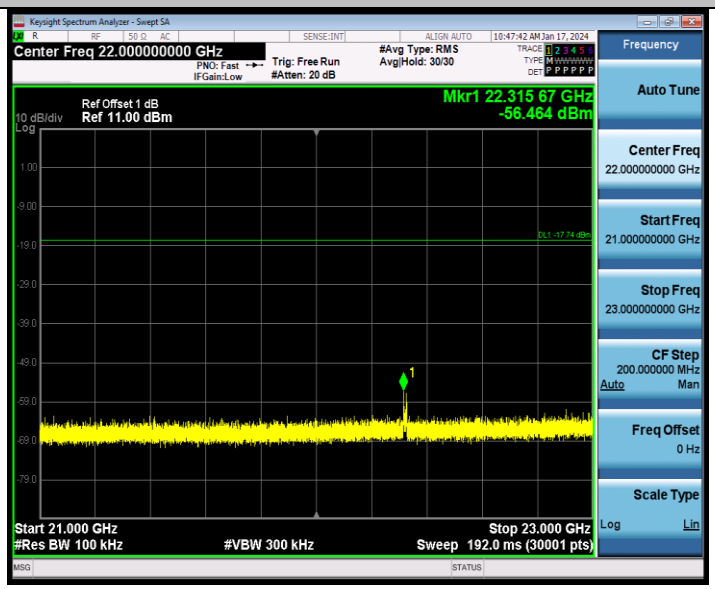
ZIGB_Ant1_2480_17000~19000



ZIGB_Ant1_2480_19000~21000



ZIGB_Ant1_2480_21000~23000

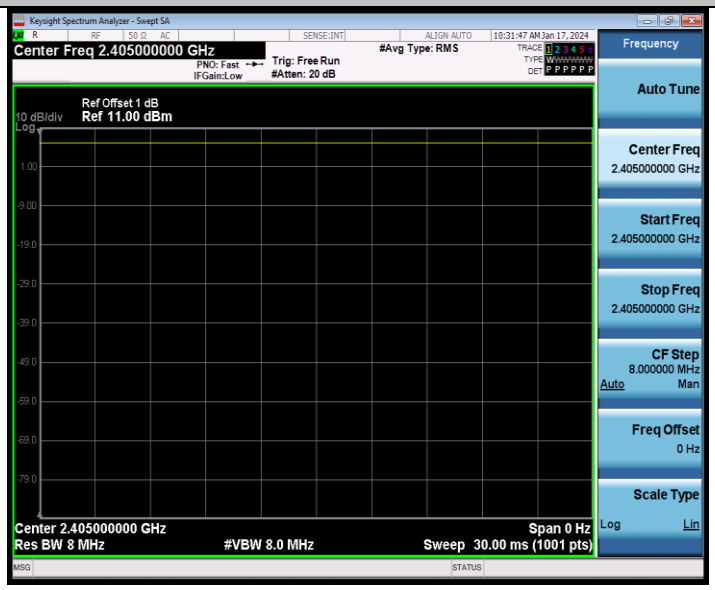


ZIGB_Ant1_2480_23000~25000

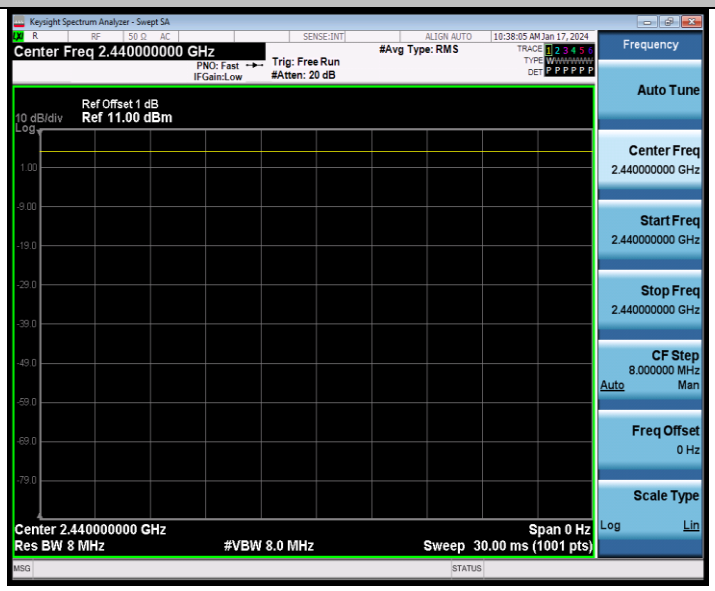
Appendix G: Duty Cycle

TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
ZIGB	Ant1	2405	0.00	0.00	100	N/A	Pass
		2440	0.00	0.00	100	N/A	Pass
		2480	0.00	0.00	100	N/A	Pass

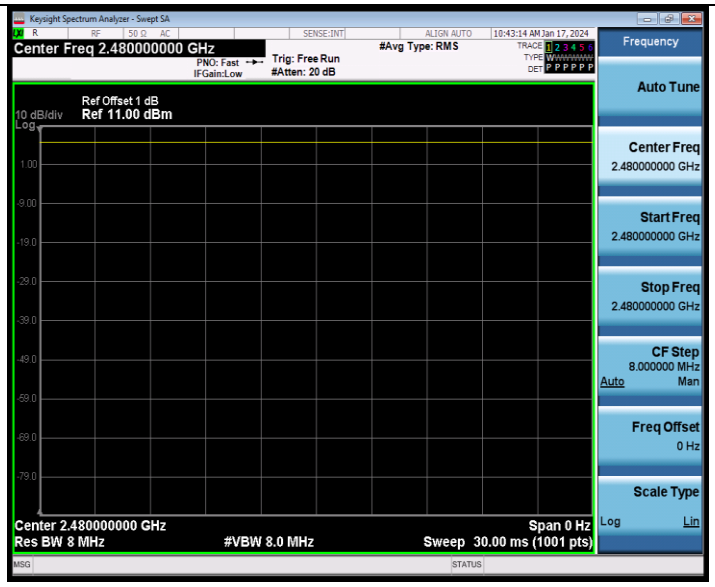
ZIGB_Ant1_2405



ZIGB_Ant1_2440

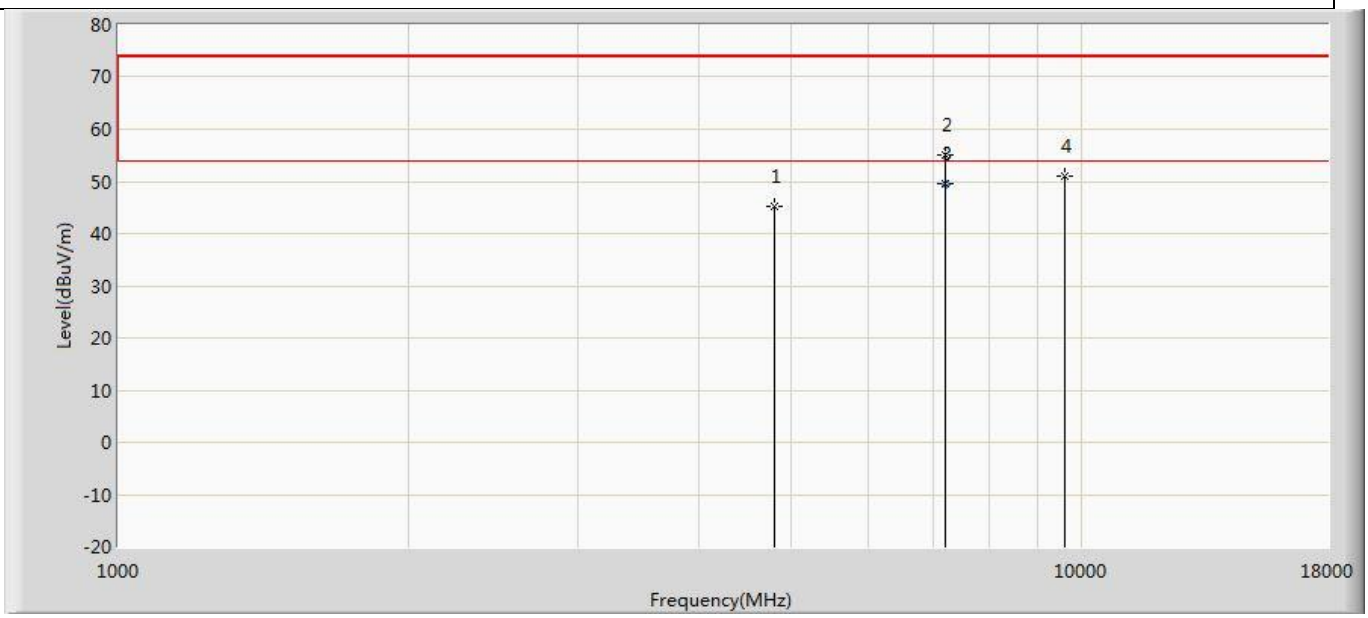


ZIGB_Ant1_2480


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 20 dB
#Avg Type: RMS
10:43:14 AM Jan 17, 2024
Ref Offset 1 dB
10 dB/div
Ref 11.00 dBm
Log
Center 2.480000000 GHz
Span 0 Hz
Res BW 8 MHz
#VBW 8.0 MHz
Sweep 30.00 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.480000000 GHz
Stop Freq
2.480000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

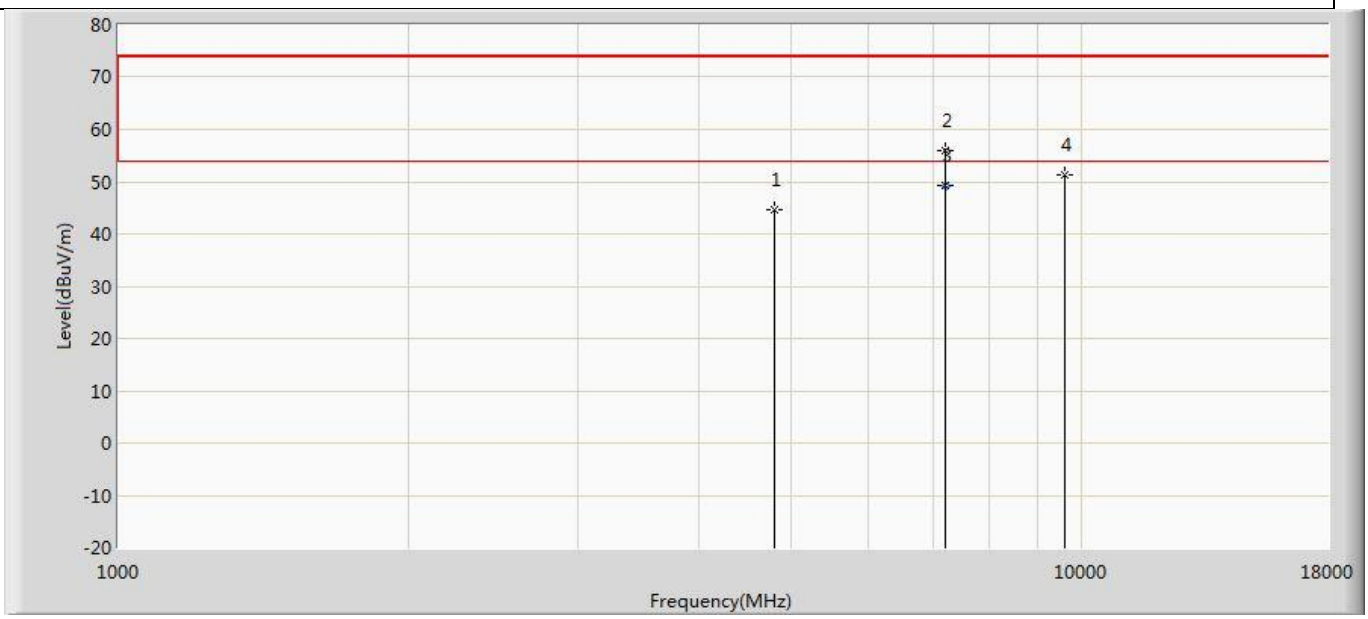
Appendix H: Emissions in Restricted Bands

Profile: 2410388R	Page No.: 55
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/16 - 09:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED device	Power: 120 Vac / 60 Hz
Note: Mode 1：Transmit at 2405MHz by Zigbee	



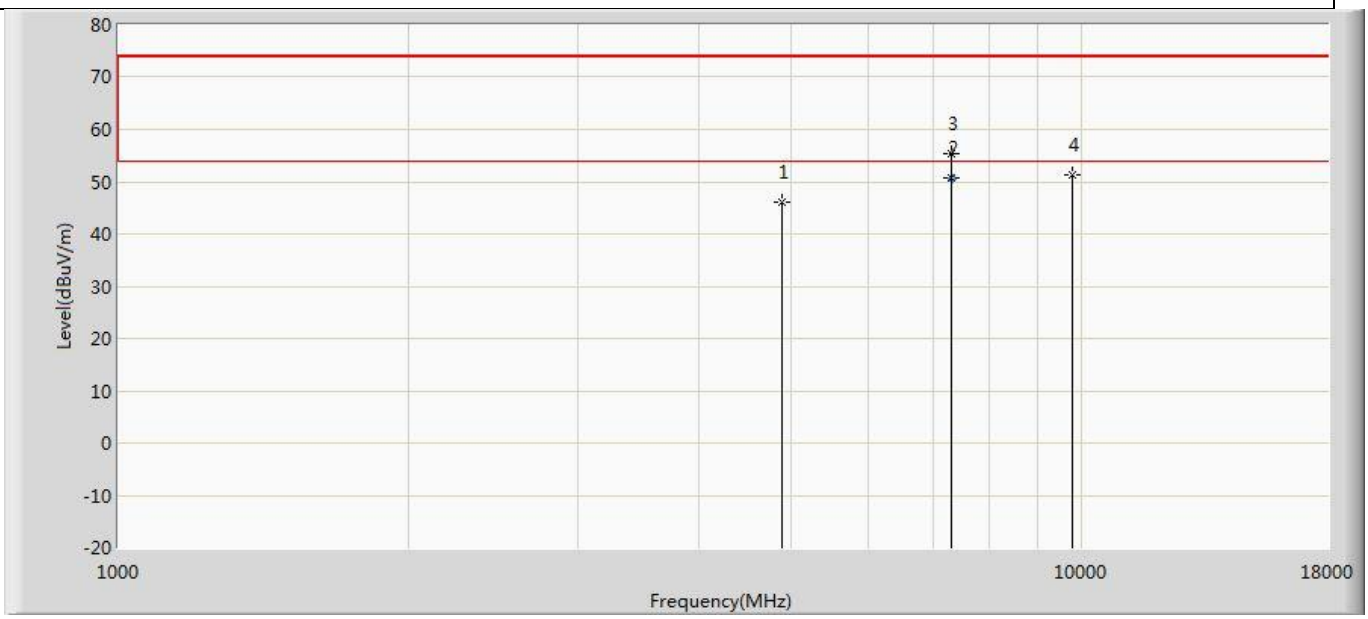
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	45.317	57.205	-28.683	74.000	-11.888	PK
2		7205.000	55.054	61.204	-18.946	74.000	-6.150	PK
3	*	7213.500	49.496	55.780	-4.504	54.000	-6.284	AV
4		9608.000	51.058	54.281	-22.942	74.000	-3.222	PK

Profile: 2410388R	Page No.: 56
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/16 - 09:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED device	Power: 120 Vac / 60 Hz
Note: Mode 1：Transmit at 2405MHz by Zigbee	



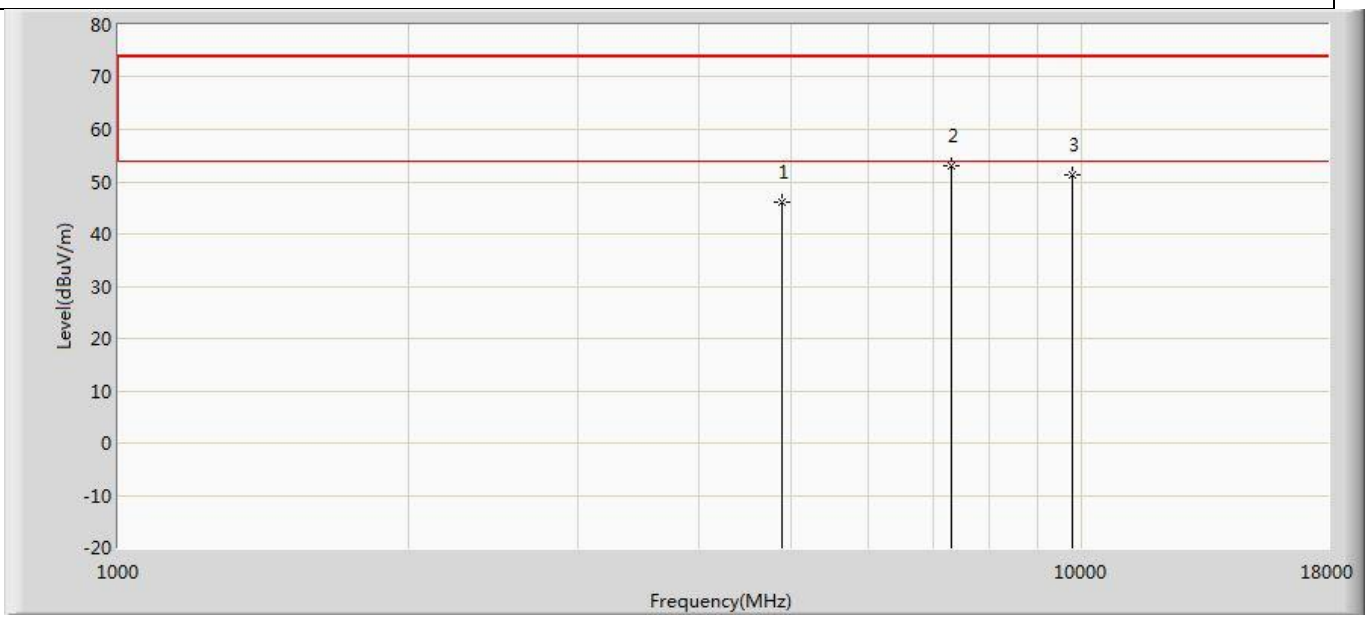
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4804.000	44.543	56.431	-29.457	74.000	-11.888	PK
2		7205.000	55.923	62.073	-18.077	74.000	-6.150	PK
3	*	7216.720	49.325	55.660	-4.675	54.000	-6.335	AV
4		9608.000	51.198	54.421	-22.802	74.000	-3.222	PK

Profile: 2410388R	Page No.: 57
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/16 - 09:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED device	Power: 120 Vac / 60 Hz
Note: Mode 1：Transmit at 2440MHz by Zigbee	



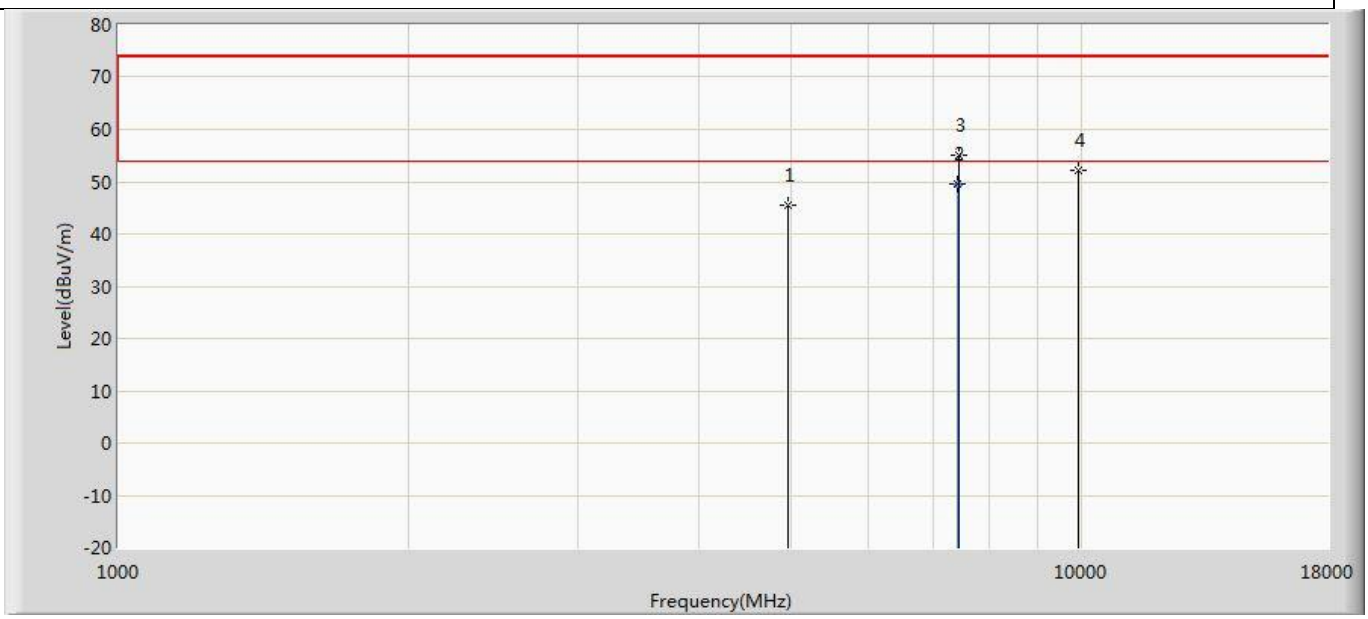
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	46.059	56.663	-27.941	74.000	-10.603	PK
2	*	7321.680	50.581	57.470	-3.419	54.000	-6.889	AV
3		7324.000	55.495	62.330	-18.505	74.000	-6.835	PK
4		9760.000	51.246	54.119	-22.754	74.000	-2.874	PK

Profile: 2410388R	Page No.: 58
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/16 - 09:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED device	Power: 120 Vac / 60 Hz
Note: Mode 1：Transmit at 2440MHz by Zigbee	



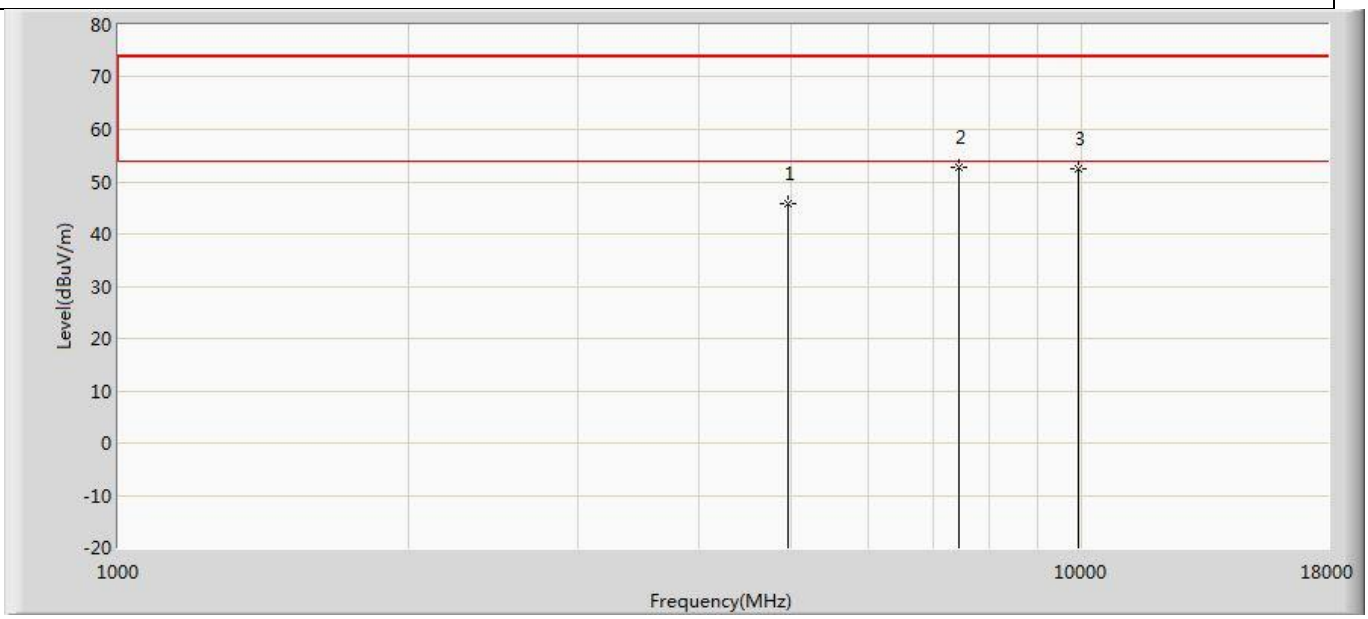
No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4880.000	45.973	56.577	-28.027	74.000	-10.603	PK
2	*	7324.000	52.986	59.821	-21.014	74.000	-6.835	PK
3		9760.000	51.207	54.080	-22.793	74.000	-2.874	PK

Profile: 2410388R	Page No.: 59
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/16 - 09:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Horizontal
EUT: LED device	Power: 120 Vac / 60 Hz
Note: Mode 1：Transmit at 2480MHz by Zigbee	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	45.486	56.192	-28.514	74.000	-10.707	PK
2	*	7438.600	49.512	56.300	-4.488	54.000	-6.788	AV
3		7443.000	55.026	61.783	-18.974	74.000	-6.757	PK
4		9920.000	52.098	53.920	-21.902	74.000	-1.821	PK

Profile: 2410388R	Page No.: 60
Engineer: Pengcheng Yang	
Site: AC5	Time: 2024/01/16 - 09:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: Horn_3117_00167055(1-18GHz)	Polarity: Vertical
EUT: LED device	Power: 120 Vac / 60 Hz
Note: Mode 1：Transmit at 2480MHz by Zigbee	

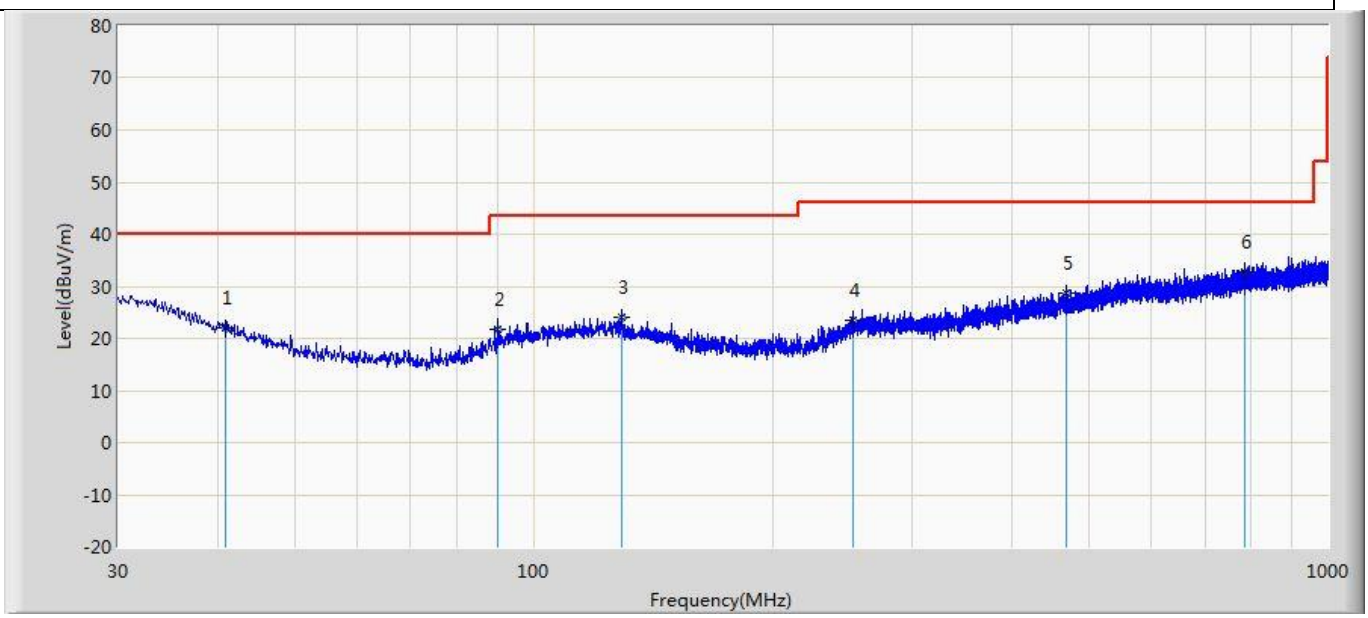


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		4960.000	45.804	56.510	-28.196	74.000	-10.707	PK
2	*	7443.000	52.814	59.571	-21.186	74.000	-6.757	PK
3		9920.000	52.578	54.400	-21.422	74.000	-1.821	PK

Note:
1. Measured Level = Reading Level + Factor.
2. The test frequency range, 9kHz~30MHz, worst case are at least 20dB below the limits, therefore no data appear in the report.
3. The test frequency range, 18GHz~26GHz test result on peak is lower than average limit, all is the noise base, therefore no data appear in the report.
4. If the test result on peak is lower than average limit, then average measurement needn't be performed.

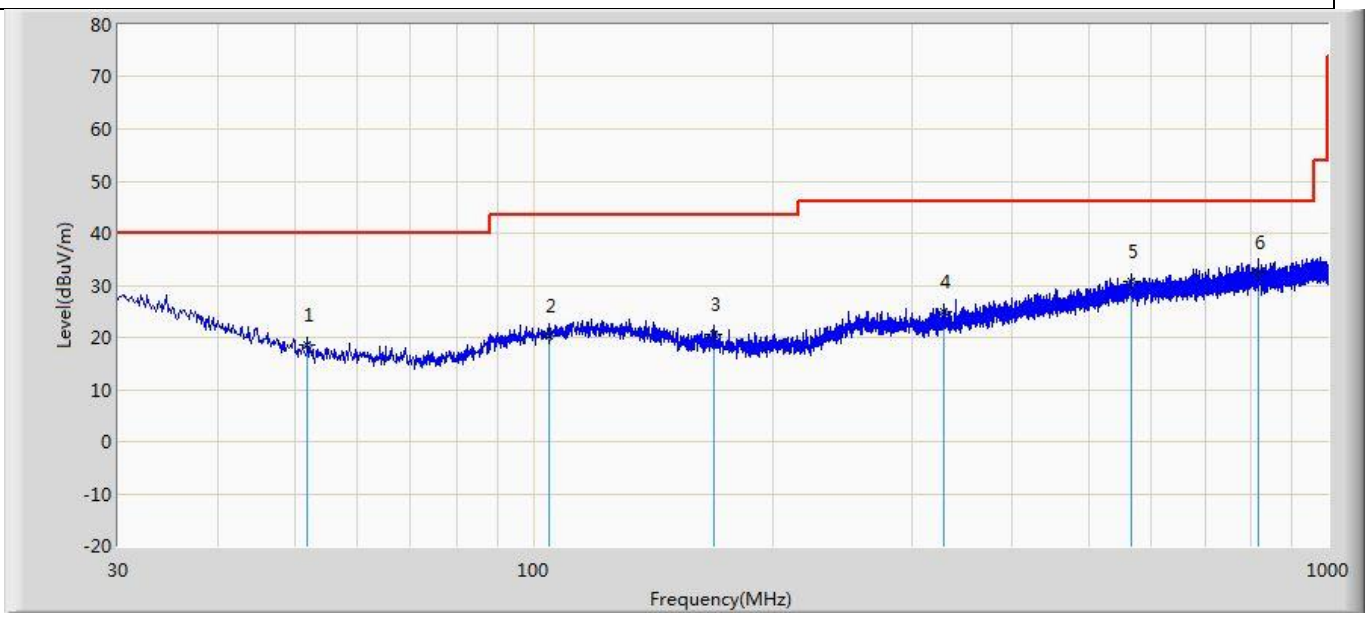
The worst case of Radiated Emission below 1GHz :

Profile: 2410388R	Page No.: 63
Engineer: Pengchengyang	
Site: AC2	Time: 2024/01/17 - 08:18
Limit: FCC_Part 15.209_RE (3m)	Margin: 0
Probe: CBL6112D_27613(30-1000MHz)	Polarity: Horizontal
EUT: LED device	Power: 120 Vac / 60 Hz
Note: Mode 1：Transmit at 2405MHz by Zigbee	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		40.912	21.950	2.860	-18.050	40.000	19.090	QP
2		90.261	21.863	5.914	-21.637	43.500	15.950	QP
3		128.940	23.964	4.883	-19.536	43.500	19.081	QP
4		252.979	23.431	3.292	-22.569	46.000	20.140	QP
5		469.289	28.624	3.613	-17.376	46.000	25.011	QP
6	*	785.751	32.655	3.508	-13.345	46.000	29.147	QP

Profile: 2410388R	Page No.: 64
Engineer: Pengchengyang	
Site: AC2	Time: 2024/01/17 - 08:18
Limit: FCC_Part 15.209_RE (3m)	Margin: 0
Probe: CBL6112D_27613(30-1000MHz)	Polarity: Vertical
EUT: LED device	Power: 120 Vac / 60 Hz
Note: Mode 1：Transmit at 2405MHz by Zigbee	

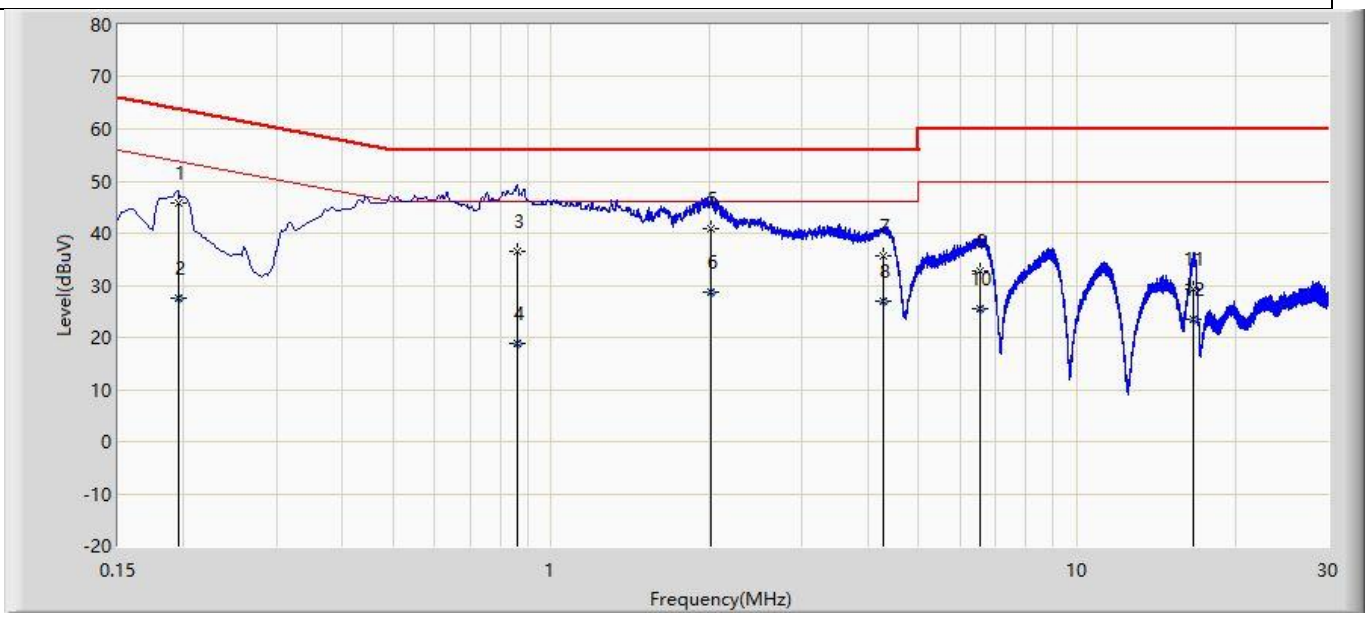


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		51.946	18.650	4.322	-21.350	40.000	14.328	QP
2		104.811	20.370	1.725	-23.130	43.500	18.644	QP
3		168.346	20.722	3.931	-22.778	43.500	16.790	QP
4		328.517	24.910	3.461	-21.090	46.000	21.448	QP
5		566.046	30.610	3.470	-15.390	46.000	27.140	QP
6	*	816.064	32.399	3.017	-13.601	46.000	29.382	QP

Note:
1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp)

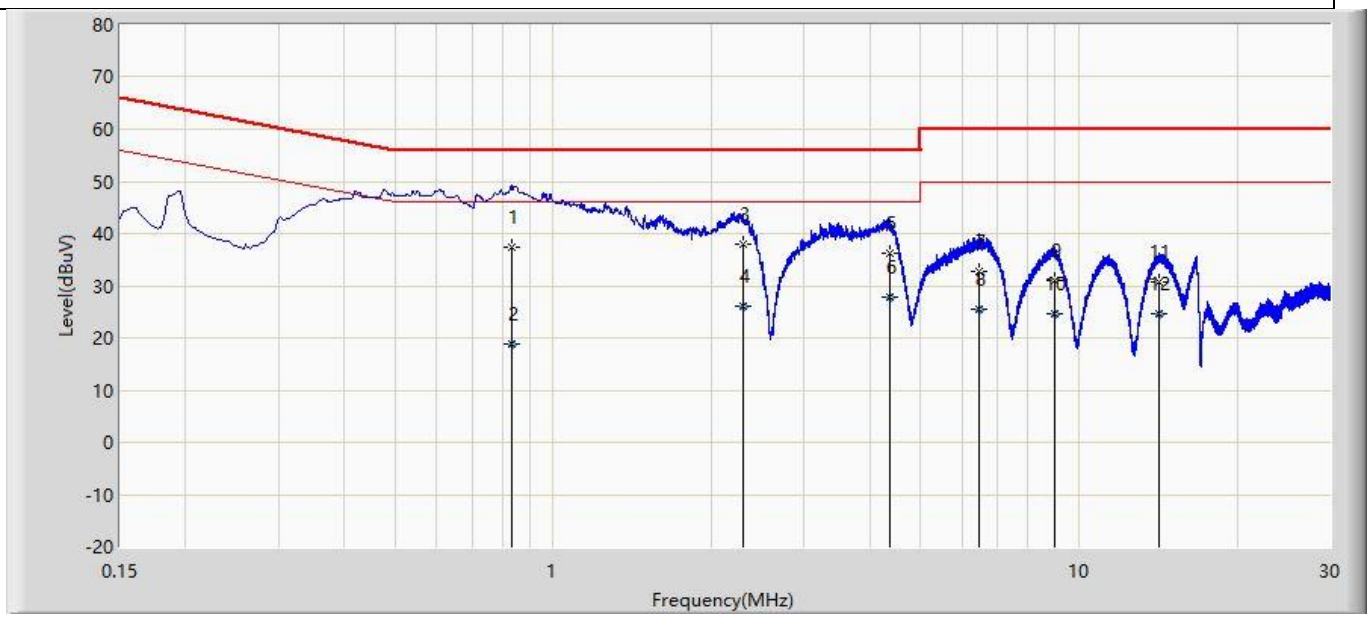
Appendix I: AC Power Line Conducted Emission

Profile: 2410388R	Page No.: 23
Engineer: Pengchengyang	
Site: TR1	Time: 2024/01/17 - 08:55
Limit: FCC_Part 15.207	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Line
EUT: LED device	Power: 120 Vac / 60 Hz
Note: Mode 1：Transmit at 2405MHz by Zigbee	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.195	45.833	36.210	-17.988	63.821	9.623	QP
2		0.195	27.454	17.831	-26.367	53.821	9.623	AV
3		0.861	36.386	26.727	-19.614	56.000	9.659	QP
4		0.861	18.899	9.240	-27.101	46.000	9.659	AV
5	*	2.009	40.776	31.081	-15.224	56.000	9.695	QP
6		2.009	28.769	19.074	-17.231	46.000	9.695	AV
7		4.290	35.554	25.809	-20.446	56.000	9.745	QP
8		4.290	26.906	17.161	-19.094	46.000	9.745	AV
9		6.522	32.714	22.911	-27.286	60.000	9.803	QP
10		6.522	25.535	15.731	-24.465	50.000	9.803	AV
11		16.690	29.287	19.253	-30.713	60.000	10.034	QP
12		16.690	23.354	13.320	-26.646	50.000	10.034	AV

Profile: 2410388R	Page No.: 24
Engineer: Pengchengyang	
Site: TR1	Time: 2024/01/17 - 08:57
Limit: FCC_Part 15.207	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Neutral
EUT: LED device	Power: 120 Vac / 60 Hz
Note: Mode 1：Transmit at 2405MHz by Zigbee	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.832	37.526	27.864	-18.474	56.000	9.662	QP
2		0.832	18.721	9.059	-27.279	46.000	9.662	AV
3	*	2.296	37.850	28.145	-18.150	56.000	9.705	QP
4		2.296	26.046	16.341	-19.954	46.000	9.705	AV
5		4.371	36.225	26.468	-19.775	56.000	9.757	QP
6		4.371	27.736	17.978	-18.264	46.000	9.757	AV
7		6.470	32.805	23.001	-27.195	60.000	9.805	QP
8		6.470	25.476	15.671	-24.524	50.000	9.805	AV
9		9.002	31.041	21.176	-28.959	60.000	9.865	QP
10		9.002	24.591	14.726	-25.409	50.000	9.865	AV
11		14.239	30.599	20.648	-29.401	60.000	9.951	QP
12		14.239	24.576	14.624	-25.424	50.000	9.951	AV

Note:
1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp)

The End