Test Report No.50193573 001

Appendix D: Radiated and Mains Spurious Emission Data

(File: 50193573 001AppendixD)

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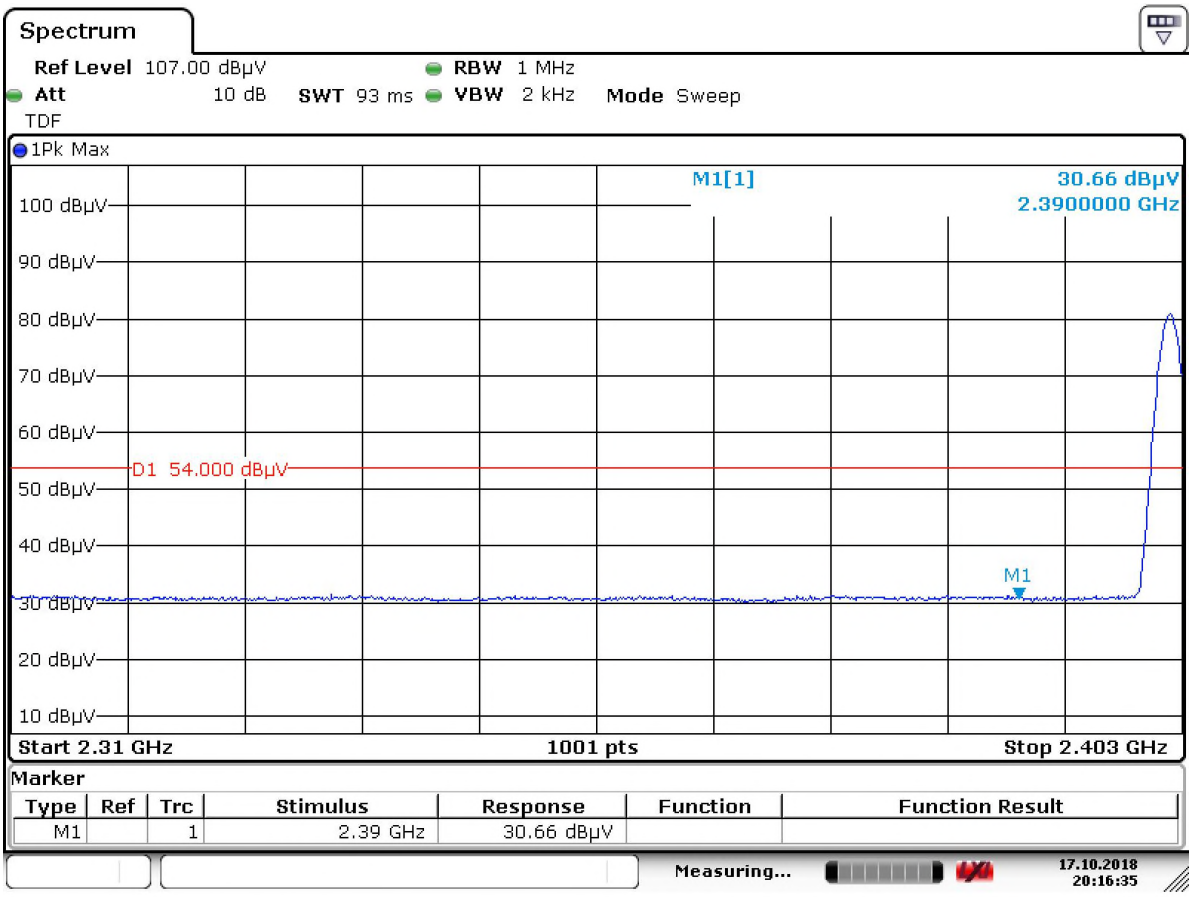
Spurious Emissions, Band Edges, 2.35-2.5G

Low Channel (Horizontal)



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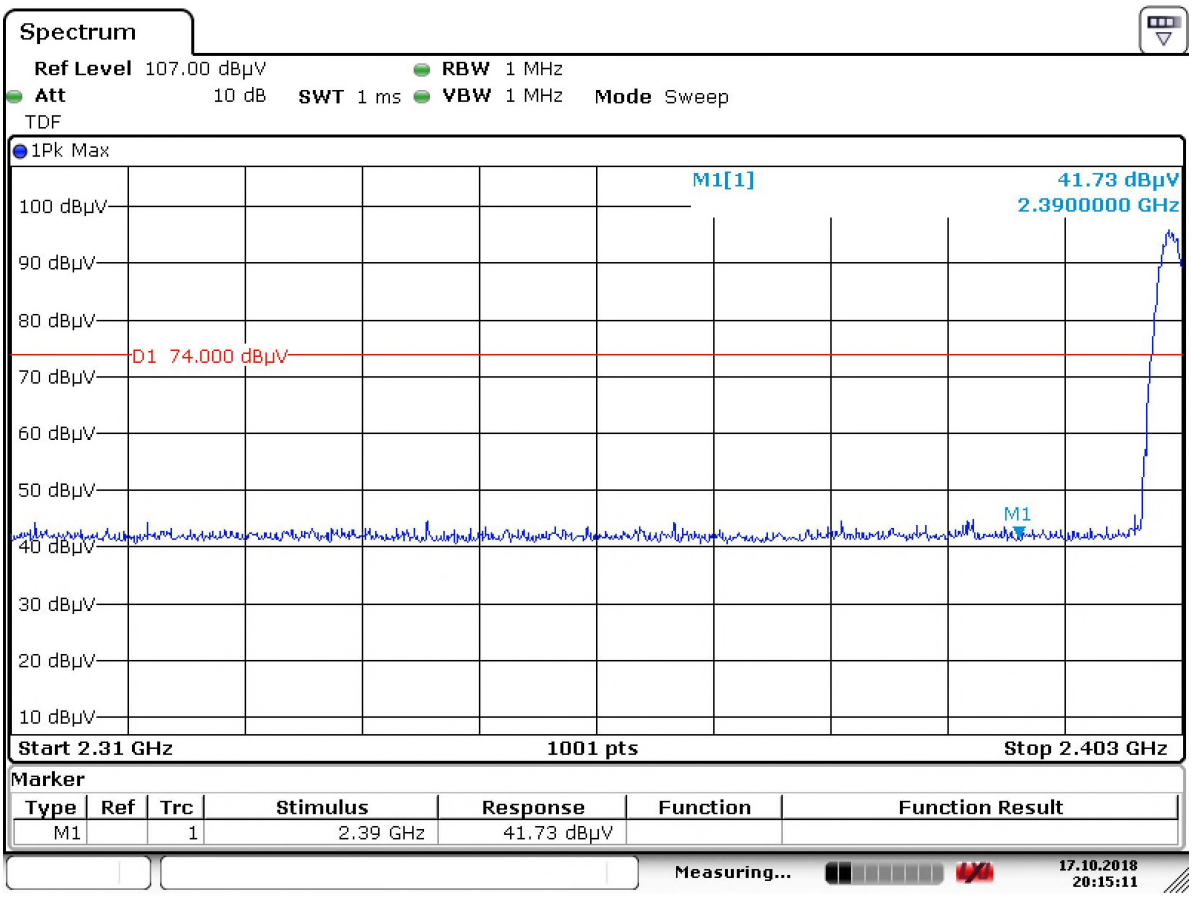

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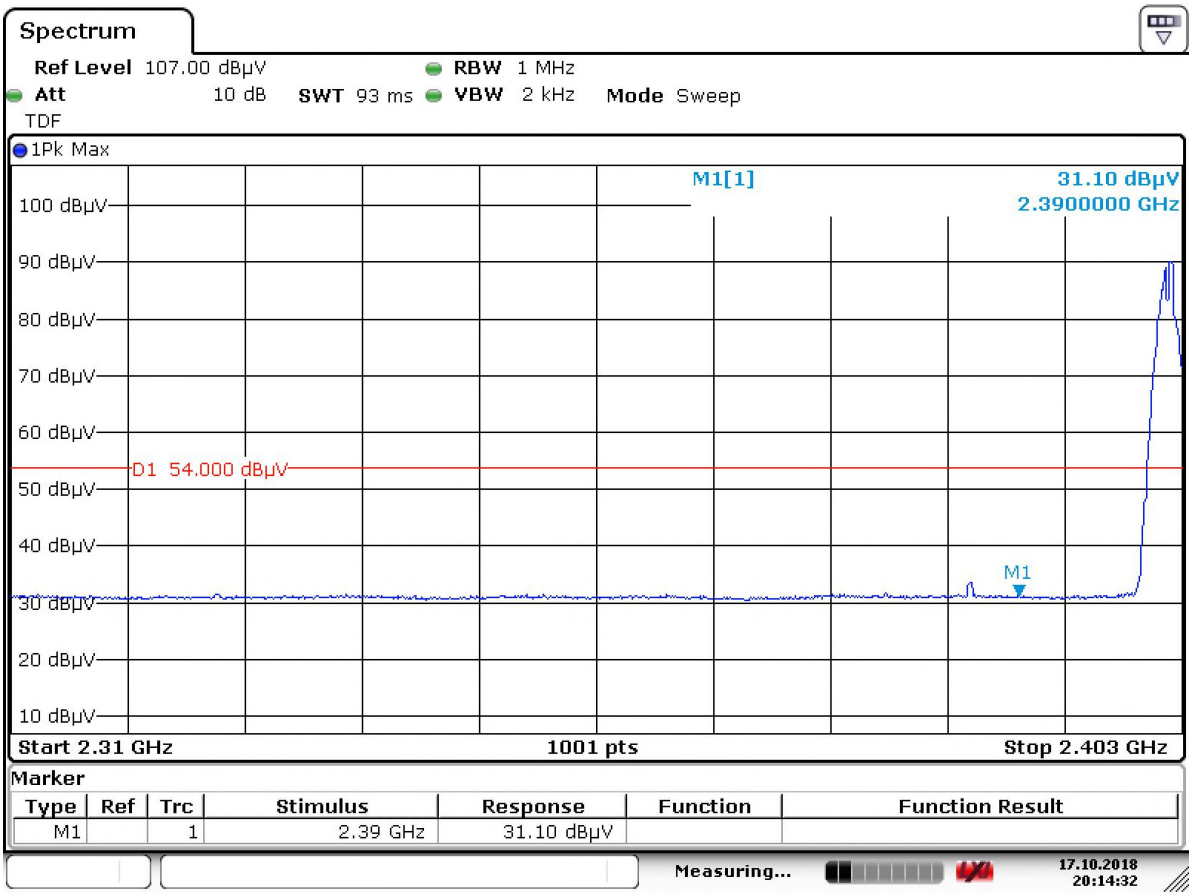

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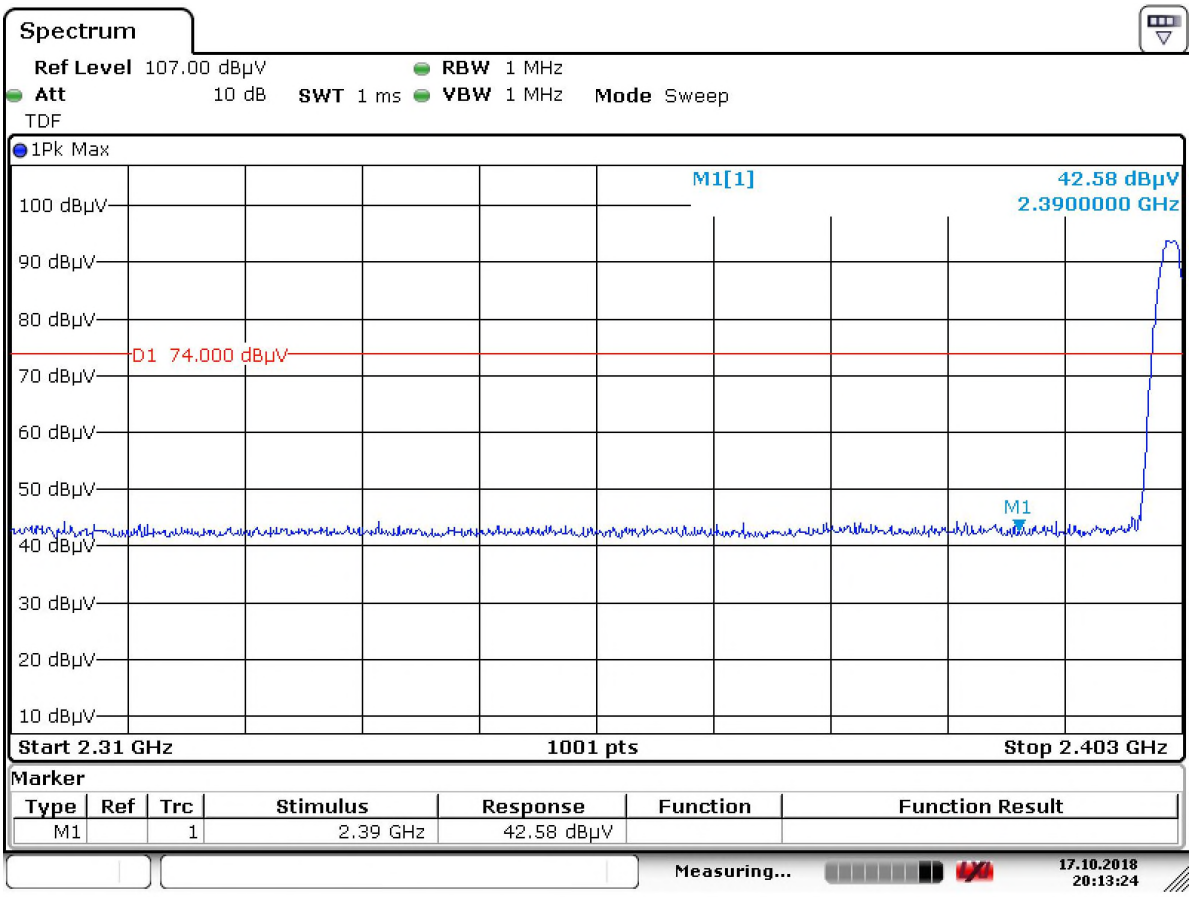

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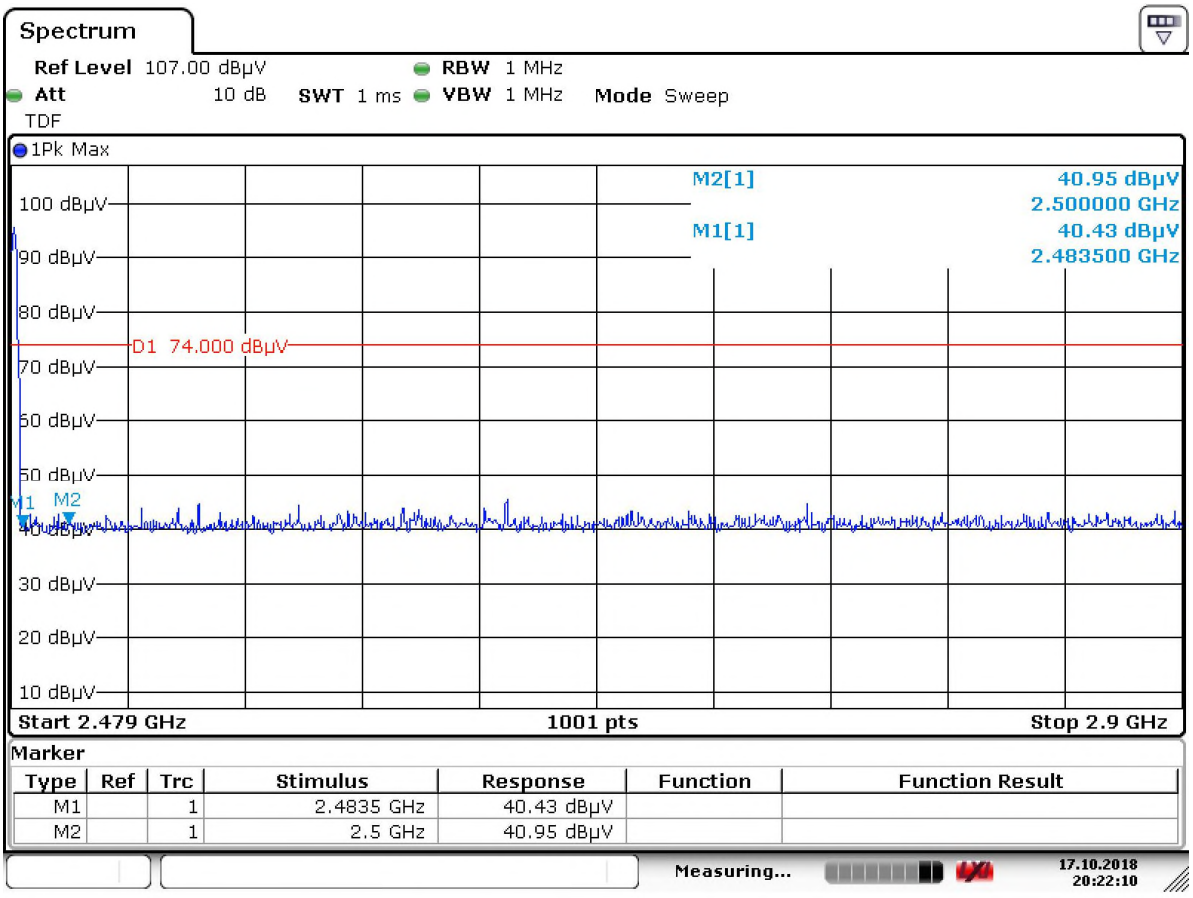

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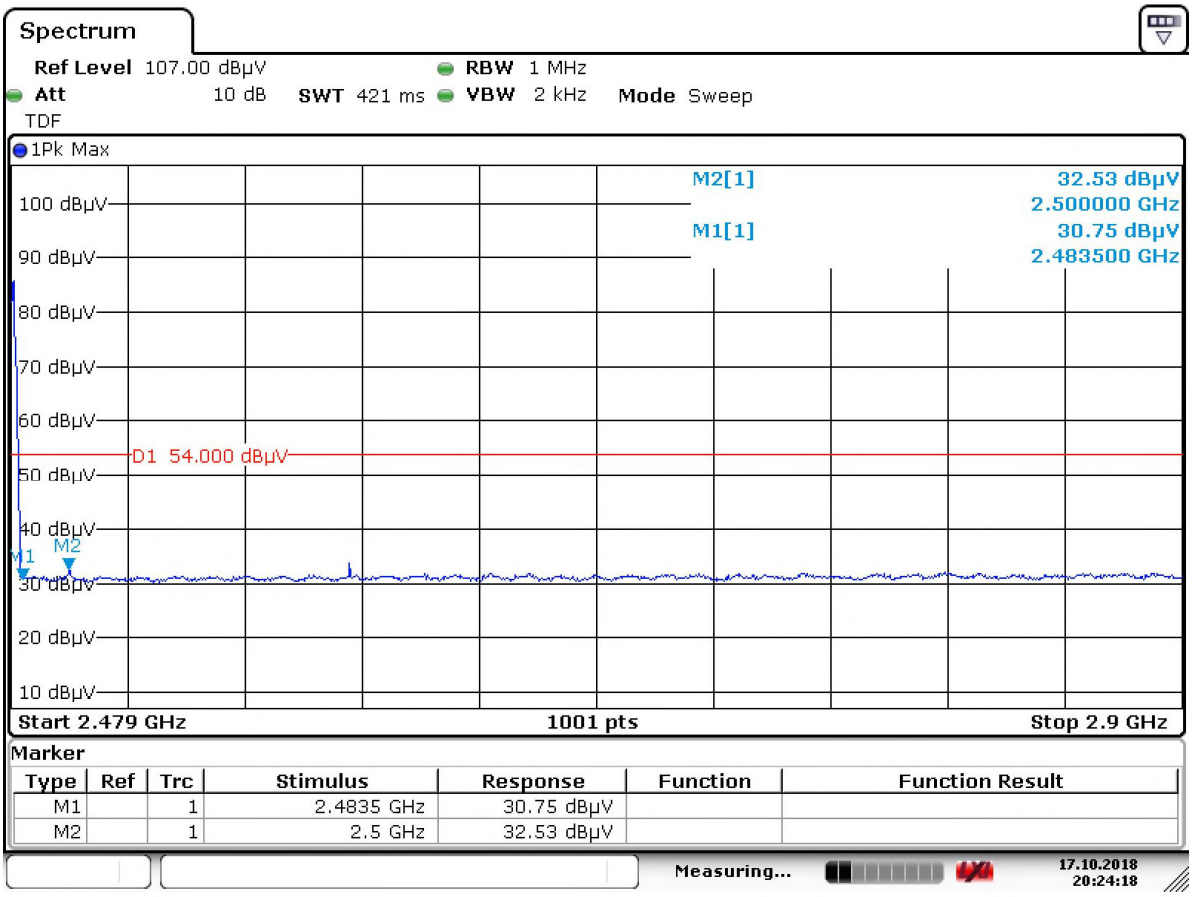

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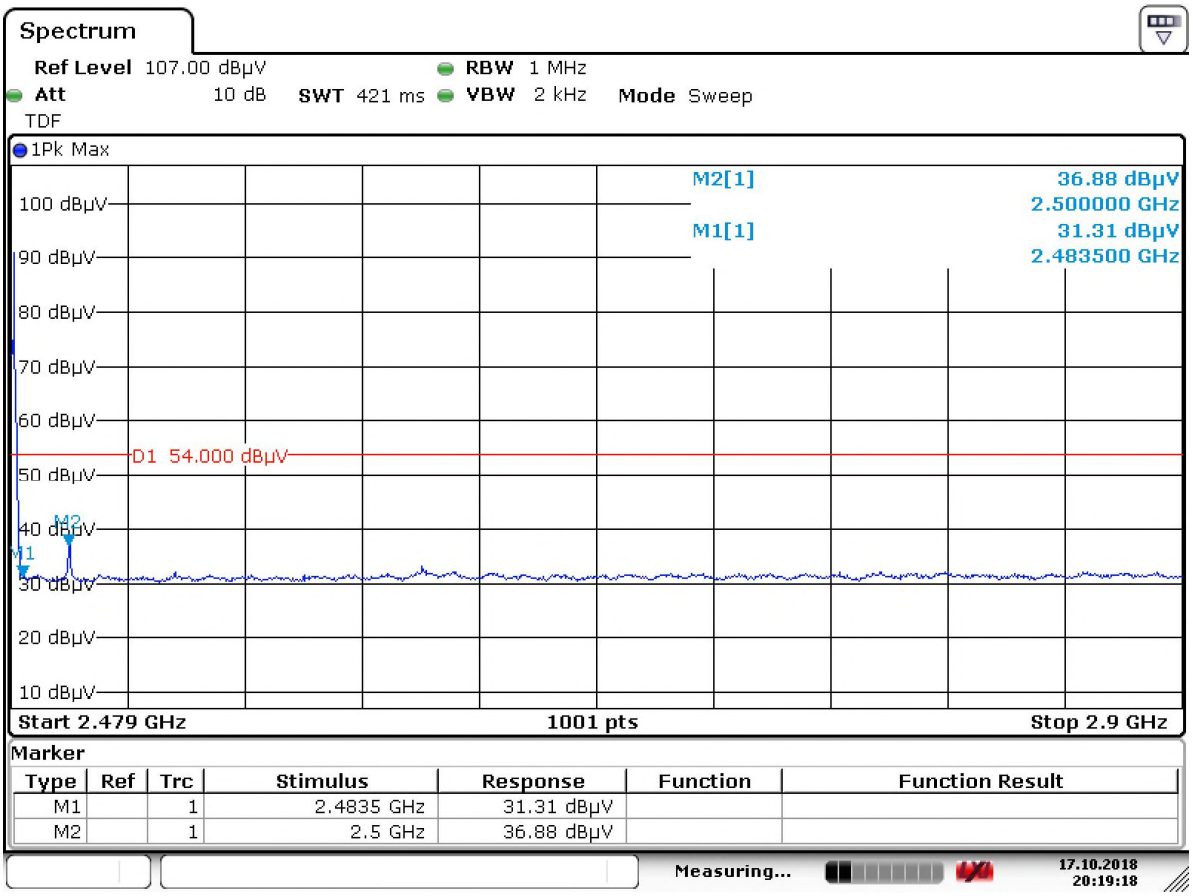

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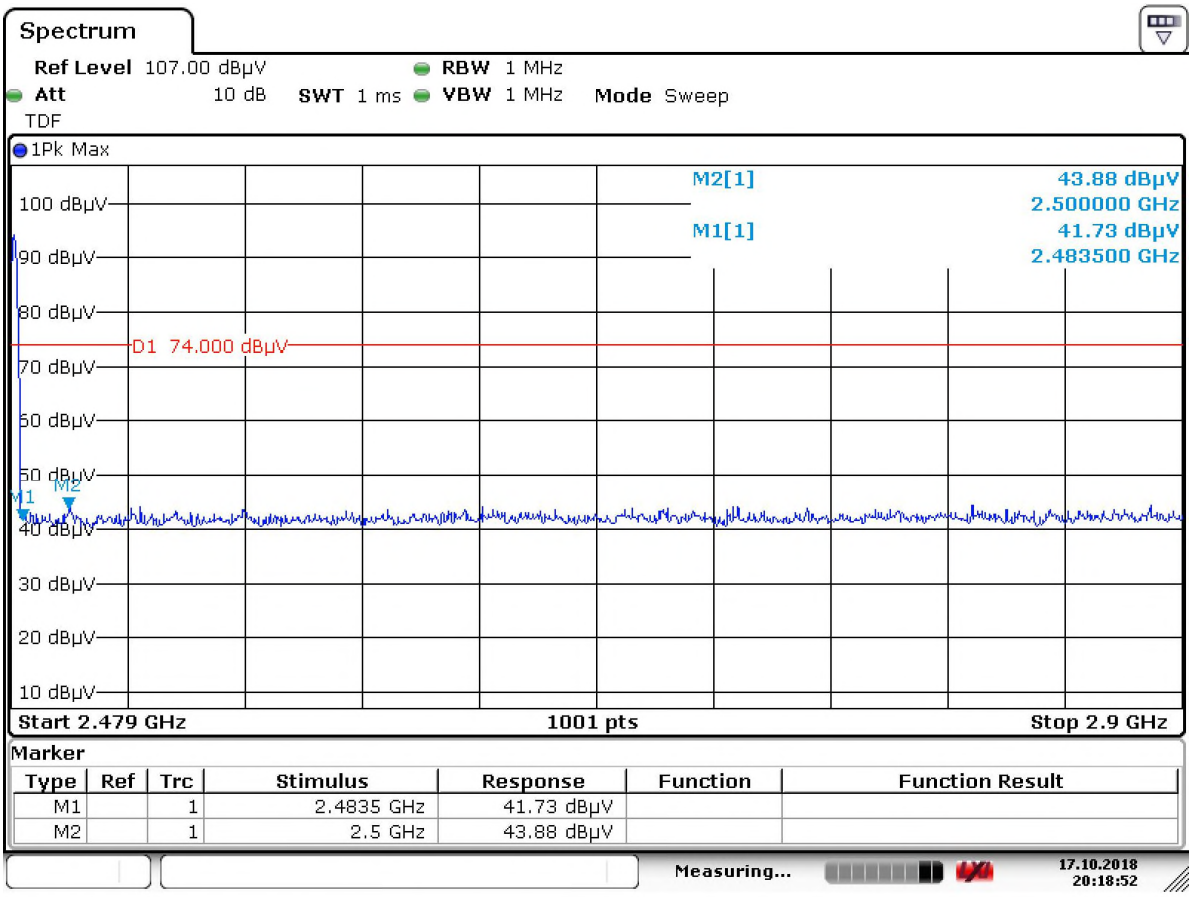

Date: 17.OCT.2018 20:18:53

Spurious Emissions, TX Mode, 1-18G

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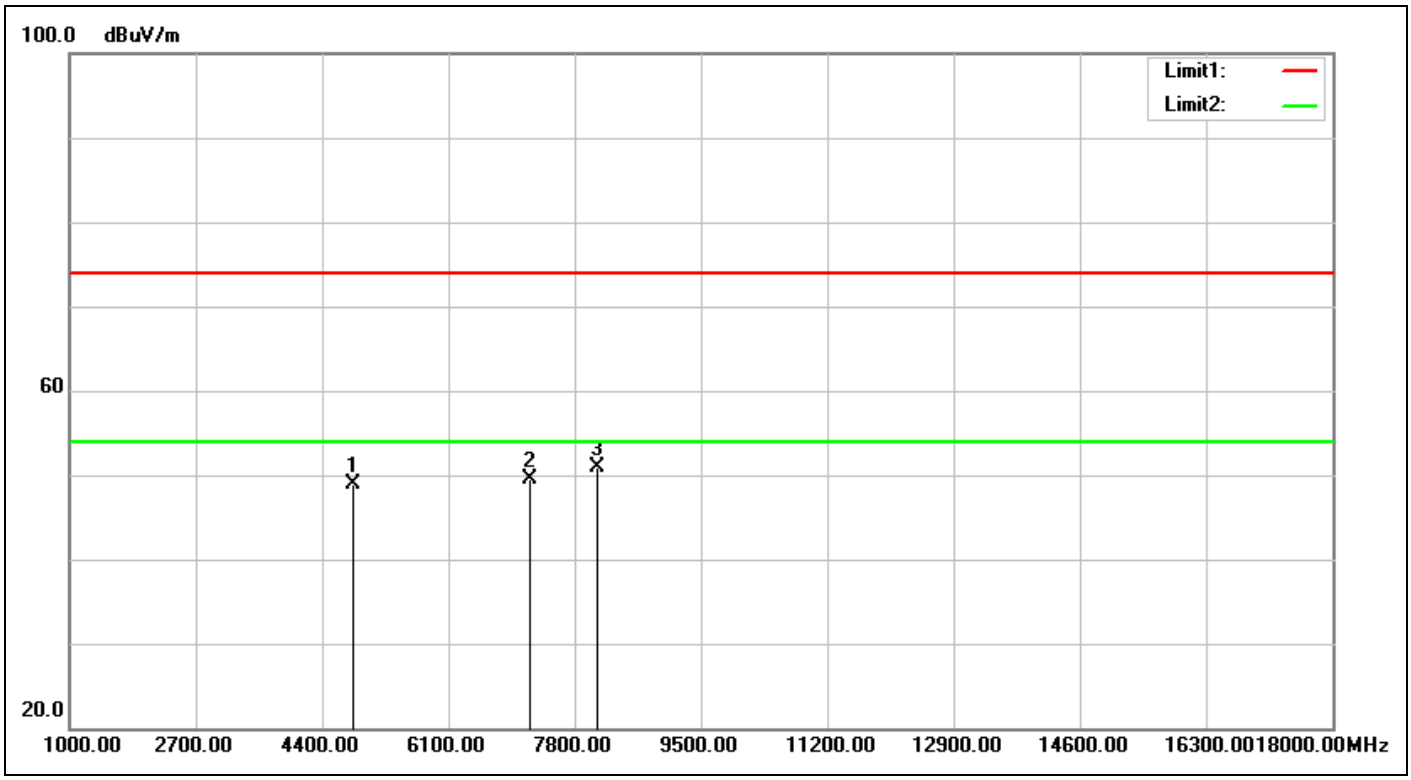

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 20:16:33**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2402- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	4804.000	-2.65	51.49	48.84	74.00	-25.16	peak	100	0	
2	7206.000	5.26	44.19	49.45	74.00	-24.55	peak	100	160	
3	8106.000	5.93	44.99	50.92	74.00	-23.08	peak	100	164	

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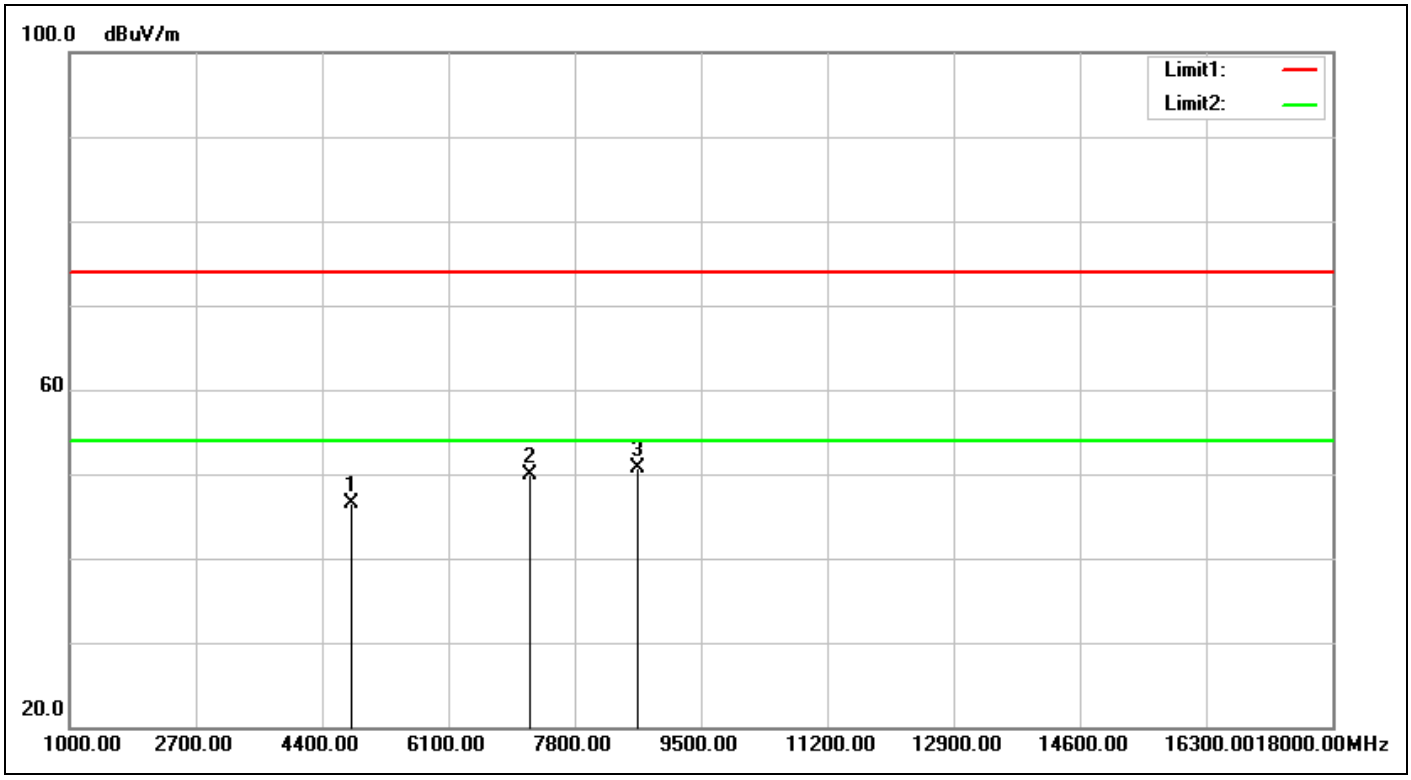

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 20:17:26**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2402- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	4804.000	-2.65	49.25	46.60	74.00	-27.40	peak	100	90	
2	7206.000	5.26	44.63	49.89	74.00	-24.11	peak	100	285	
3	8650.000	6.53	44.10	50.63	74.00	-23.37	peak	100	125	

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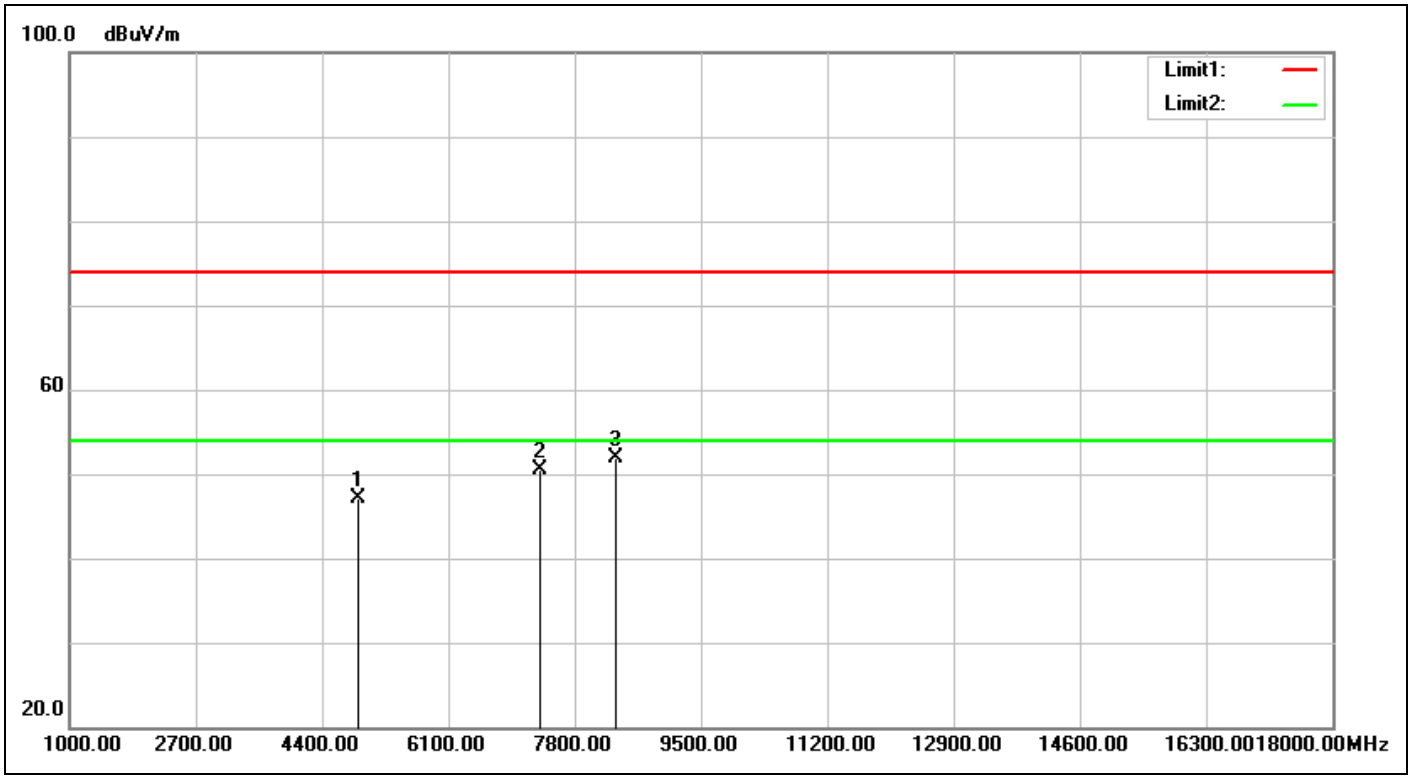

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 20:21:17**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2440- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	4880.000	-2.44	49.56	47.12	74.00	-26.88	peak	100	147	
2	7320.000	5.52	44.99	50.51	74.00	-23.49	peak	100	163	
3	8344.000	6.28	45.71	51.99	74.00	-22.01	peak	100	215	

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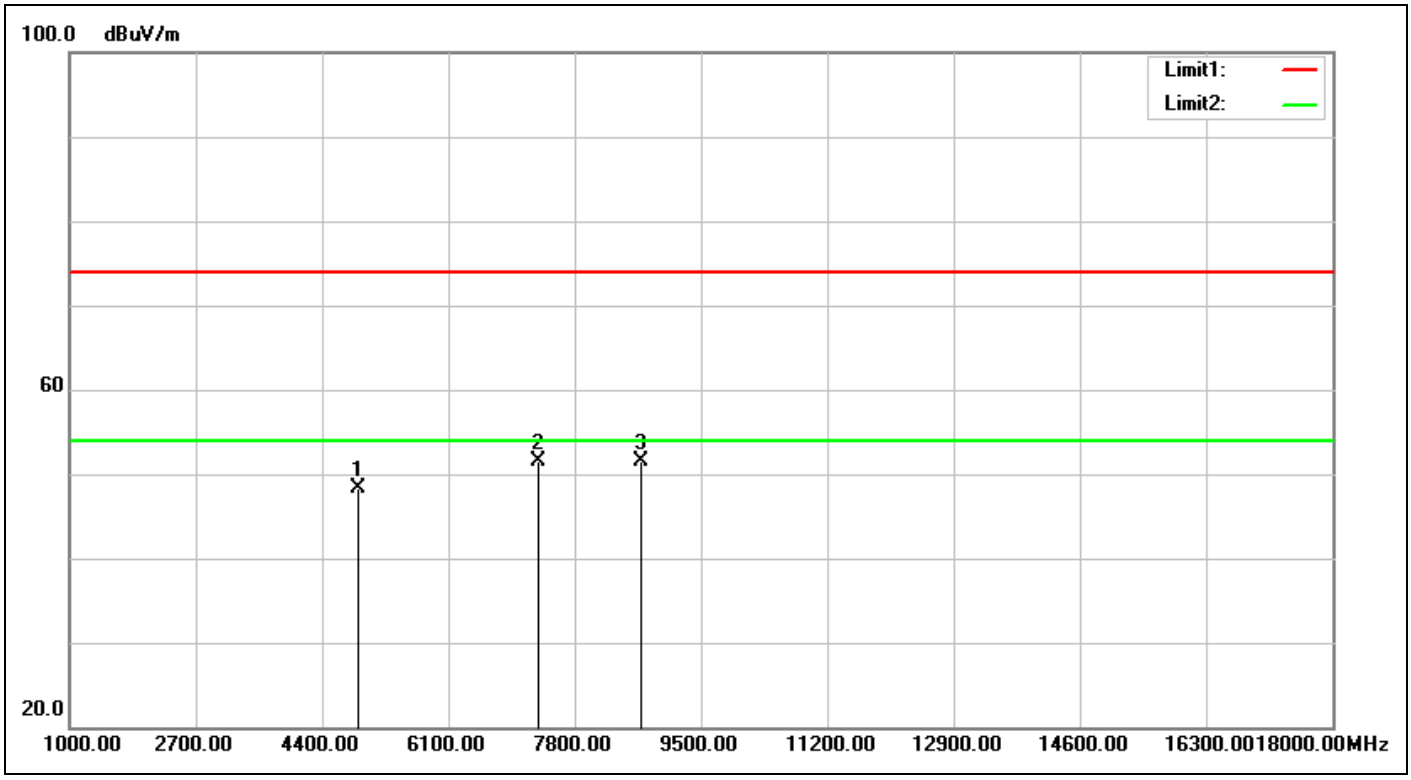

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 20:22:10**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2440- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	4880.000	-2.44	50.75	48.31	74.00	-25.69	peak	100	1	
2	7320.000	5.52	45.96	51.48	74.00	-22.52	peak	100	340	
3	8684.000	6.52	44.92	51.44	74.00	-22.56	peak	100	356	

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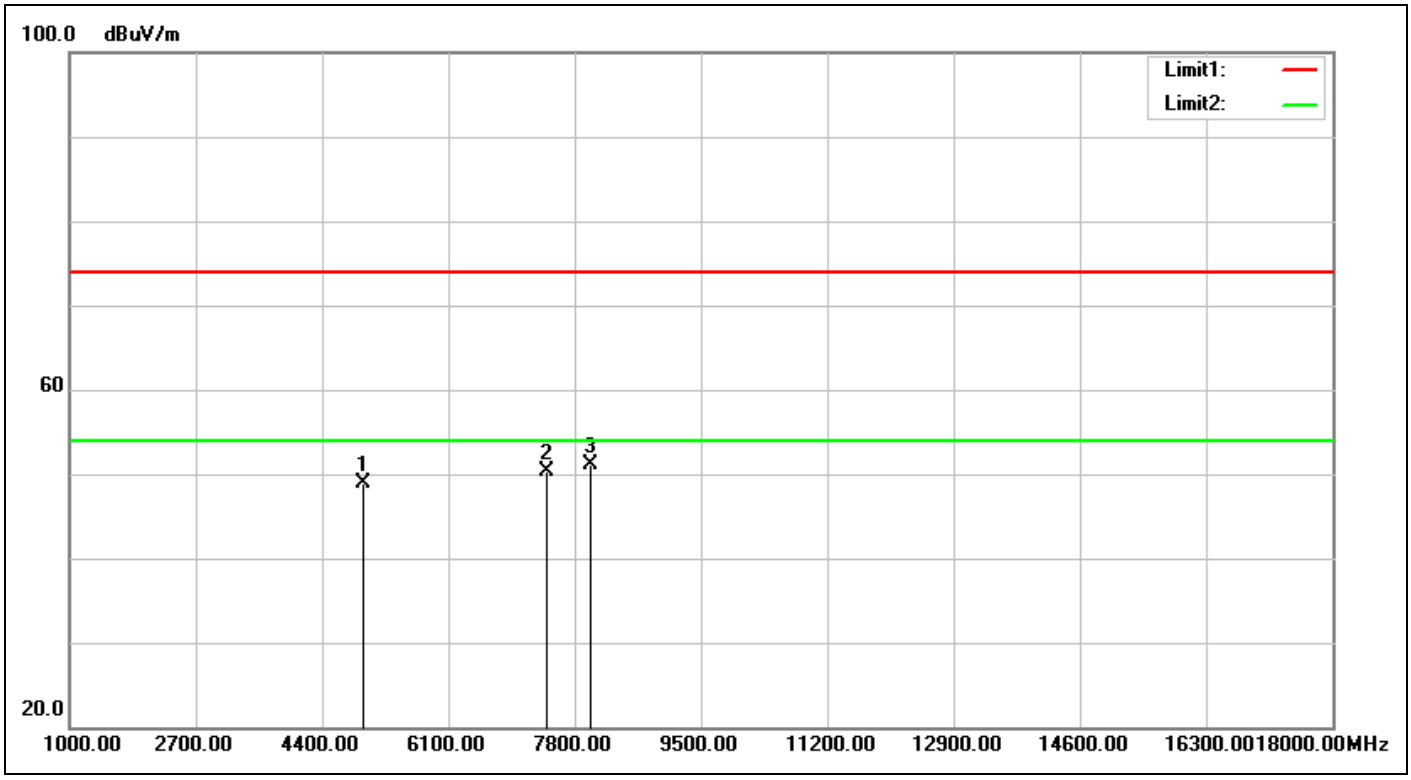

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 20:24:54**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2480- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	4960.000	-2.22	51.11	48.89	74.00	-25.11	peak	100	222	
2	7440.000	5.79	44.58	50.37	74.00	-23.63	peak	100	0	
3	8021.000	5.80	45.28	51.08	74.00	-22.92	peak	100	198	

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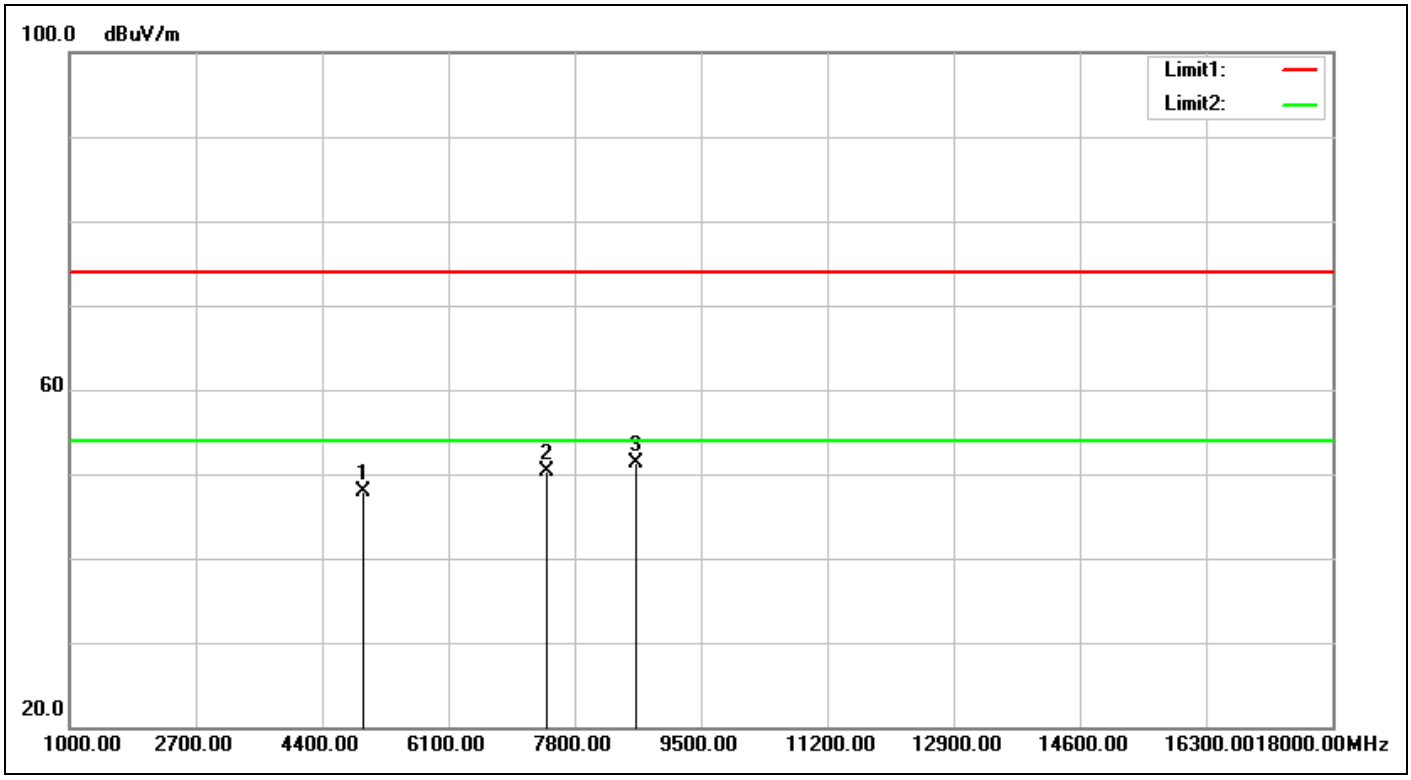

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 20:25:47**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2480- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	4960.000	-2.22	50.16	47.94	74.00	-26.06	peak	100	340	
2	7440.000	5.79	44.45	50.24	74.00	-23.76	peak	100	32	
3	8633.000	6.52	44.71	51.23	74.00	-22.77	peak	100	162	

Spurious Emissions, TX Mode, 18-26G

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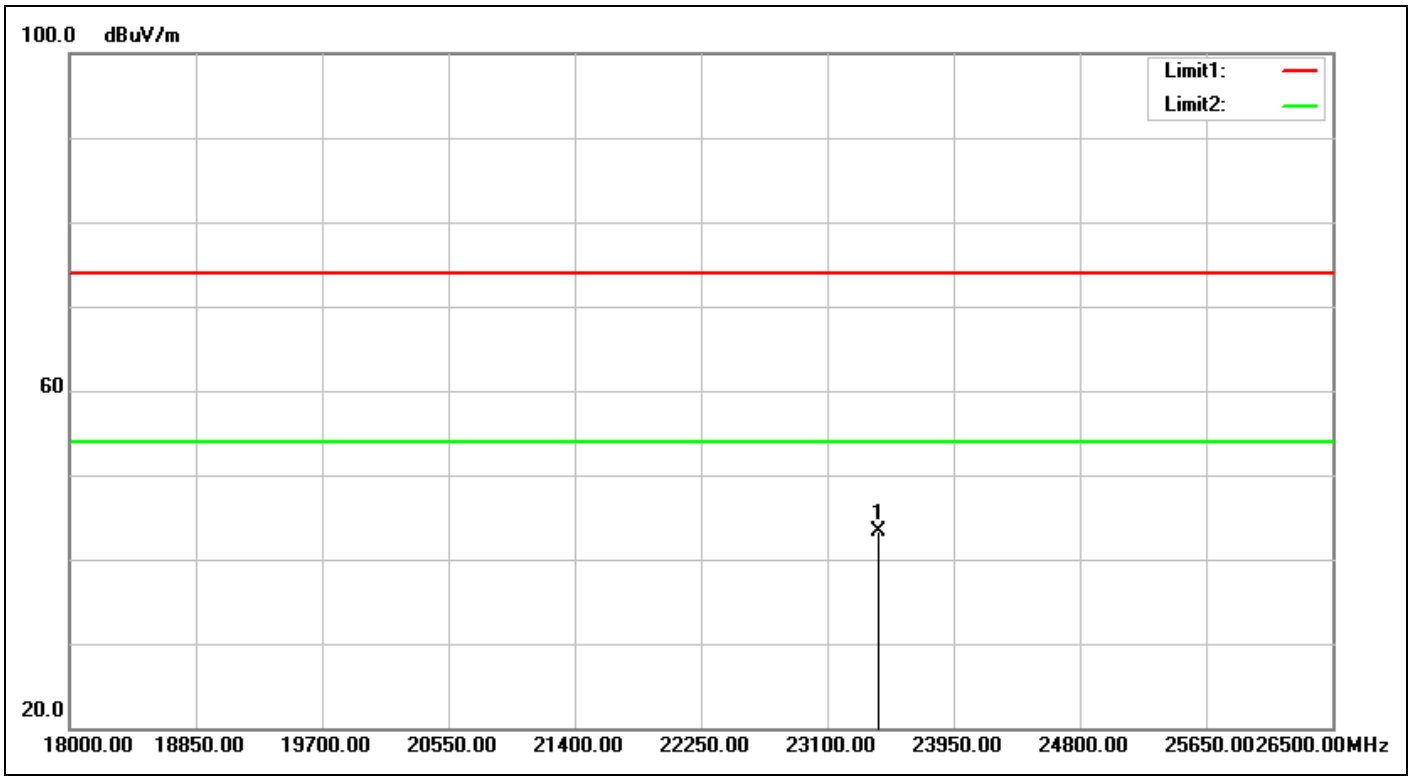

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 20:40:07**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2402- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	23448.500	5.81	37.40	43.21	74.00	-30.79	peak	100	30	

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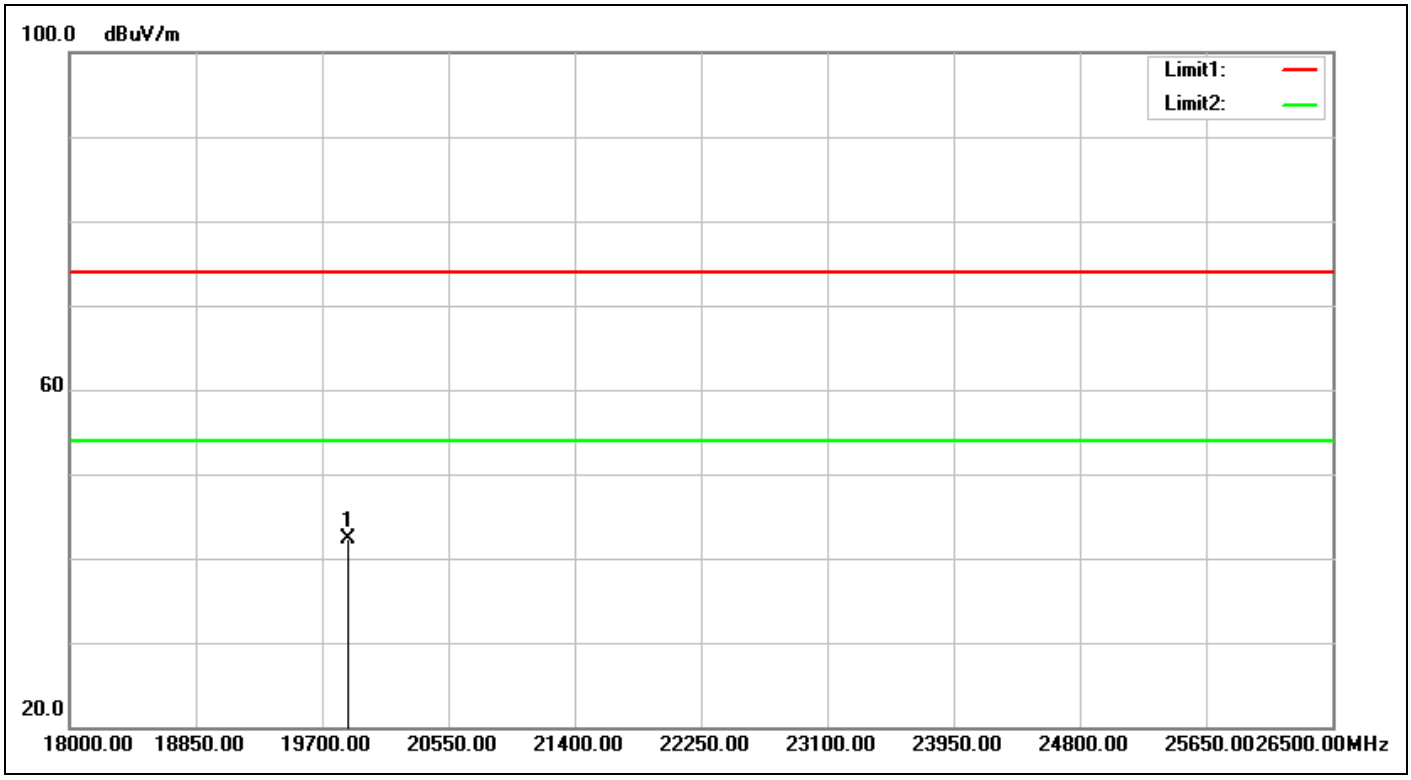

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 20:41:00**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2402- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	19878.500	4.16	38.23	42.39	74.00	-31.61	peak	100	69	

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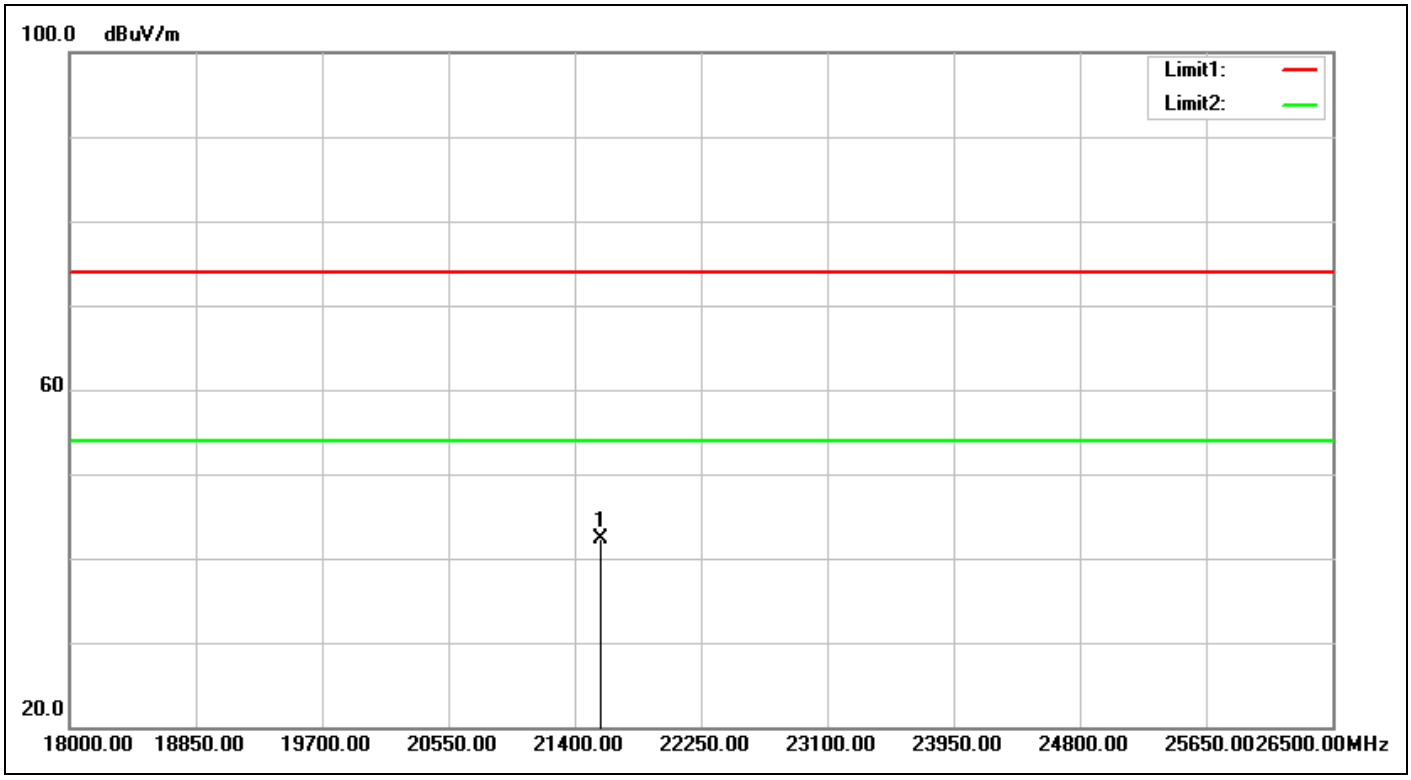

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 20:42:56**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2440- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	21578.500	4.30	38.06	42.36	74.00	-31.64	peak	100	44	

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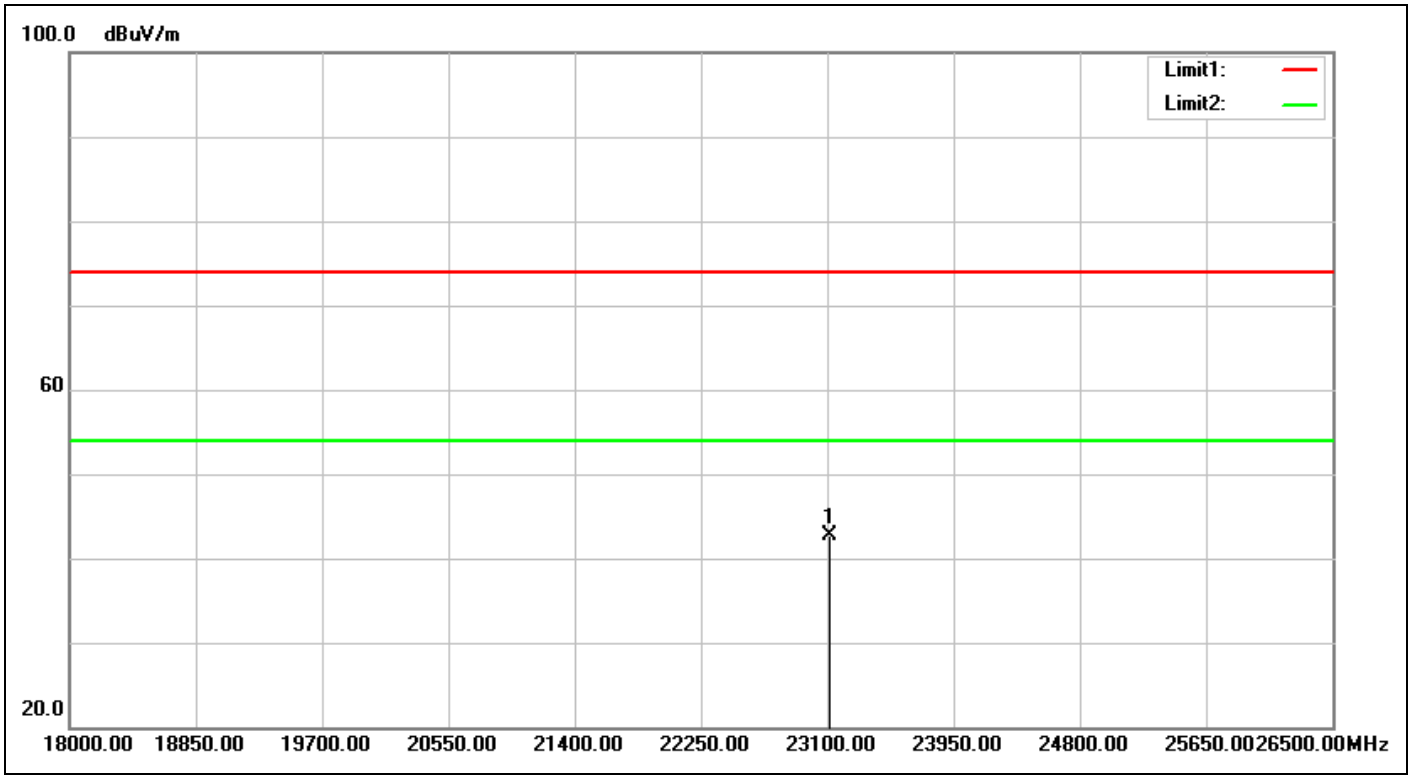

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 20:43:49**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2440- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	23117.000	5.44	37.32	42.76	74.00	-31.24	peak	100	255	

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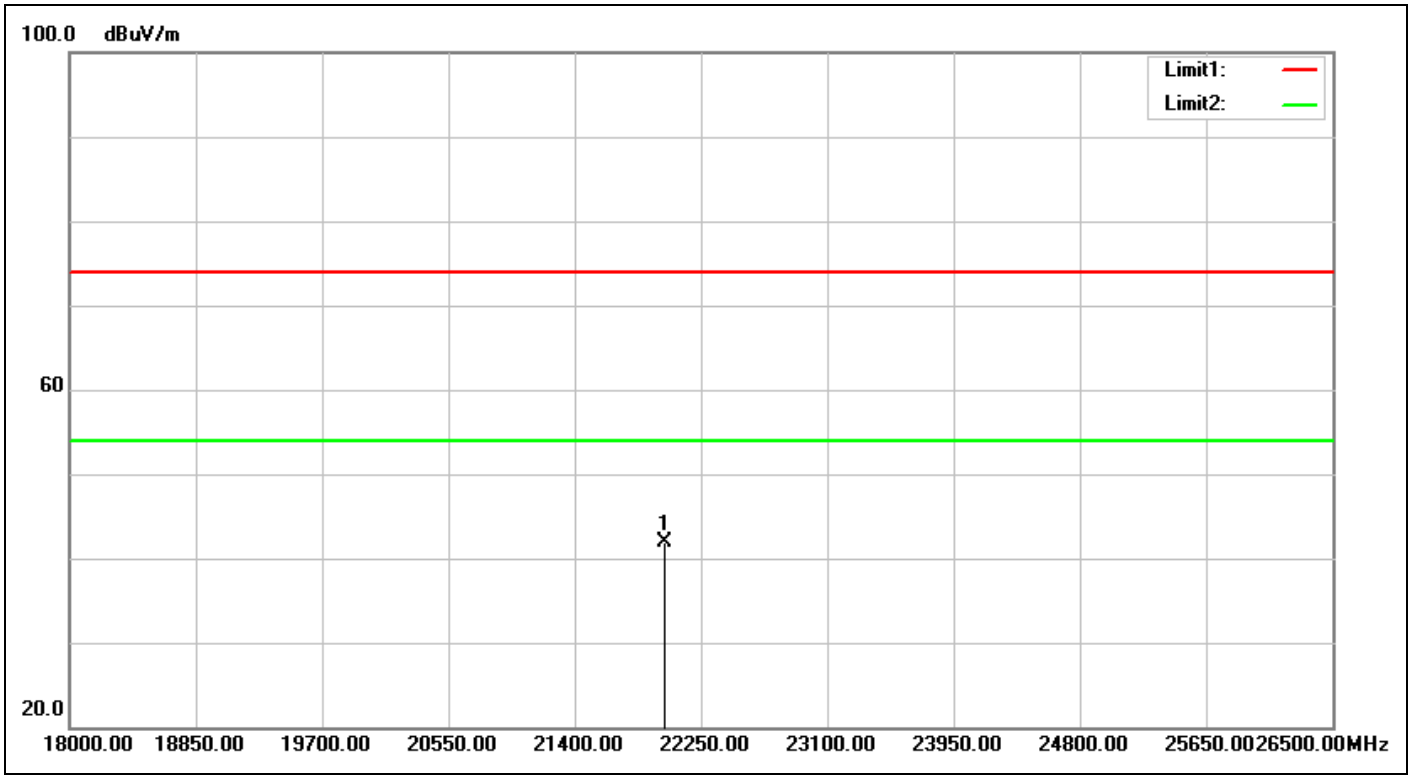

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 20:45:17**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2480- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	22003.500	4.07	37.74	41.81	74.00	-32.19	peak	100	287	

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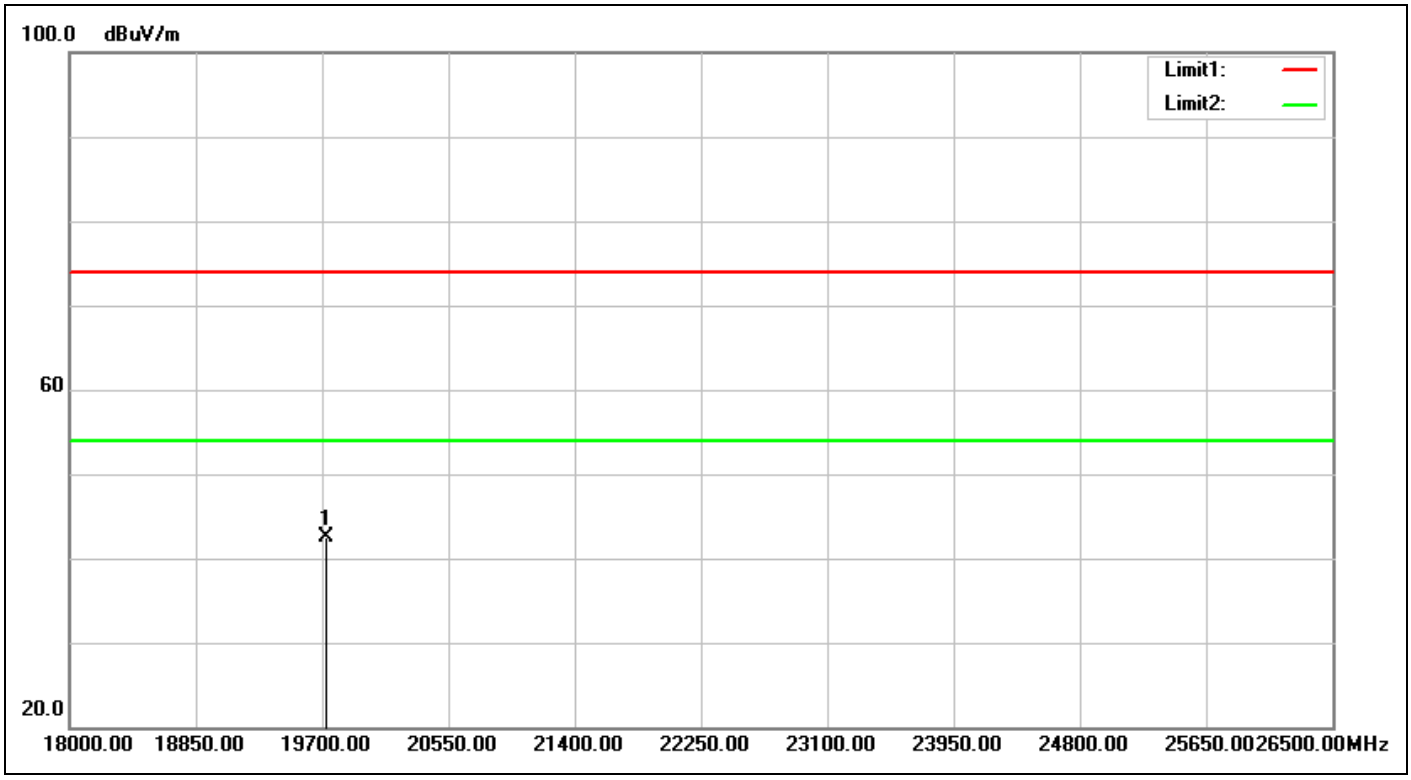

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 20:46:09**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2480- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	19725.500	4.02	38.44	42.46	74.00	-31.54	peak	100	231	

Spurious Emissions, TX Mode, 30M-1G

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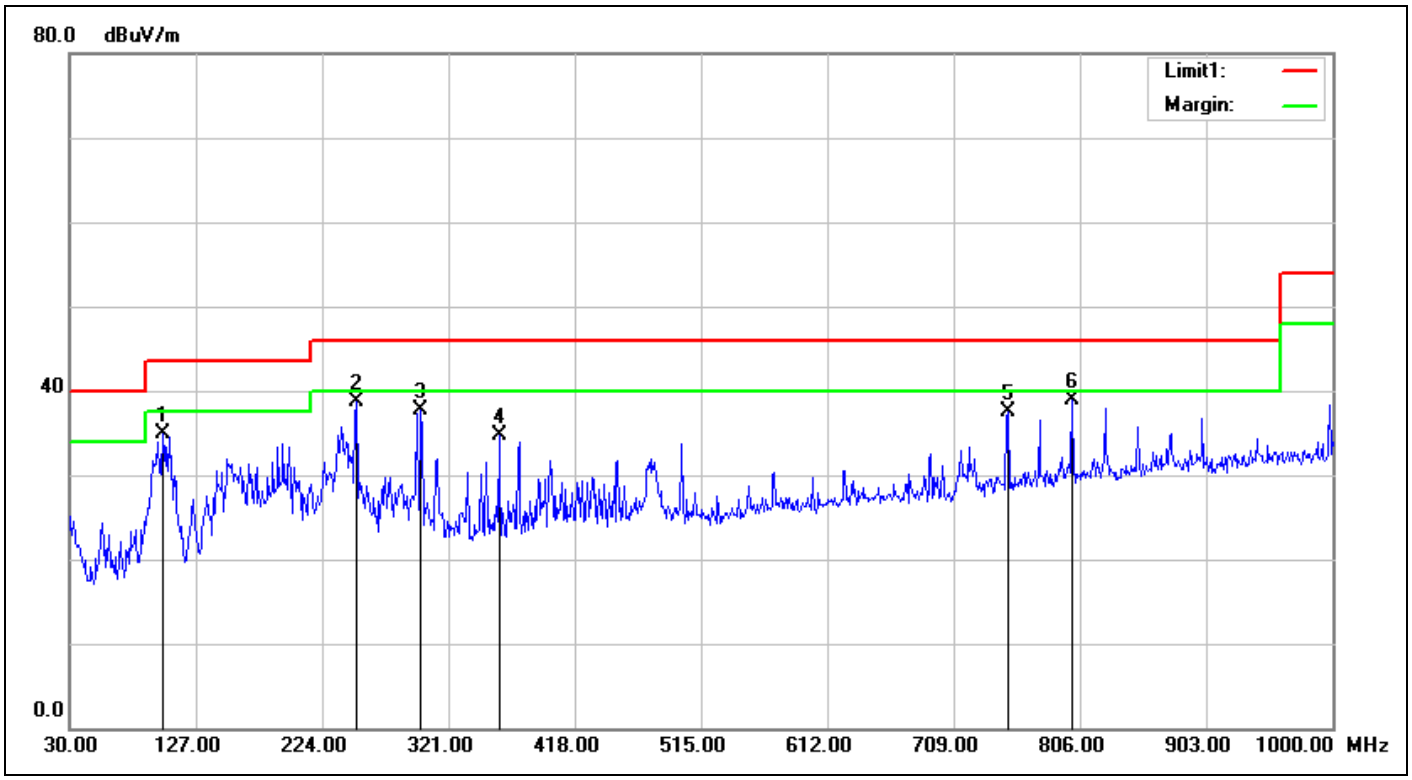

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC Class B 3M Radiation**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 21:09:30**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2440- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	101.7800	-9.21	44.03	34.82	43.50	-8.68	QP	100	3	
2	250.1899	-5.67	44.43	38.76	46.00	-7.24	QP	100	78	
3	299.6600	-4.56	42.18	37.62	46.00	-8.38	QP	100	111	
4	359.8000	-3.18	37.79	34.61	46.00	-11.39	QP	100	68	
5	750.7100	2.40	35.11	37.51	46.00	-8.49	QP	100	213	
6	800.1799	3.12	35.84	38.96	46.00	-7.04	QP	100	223	

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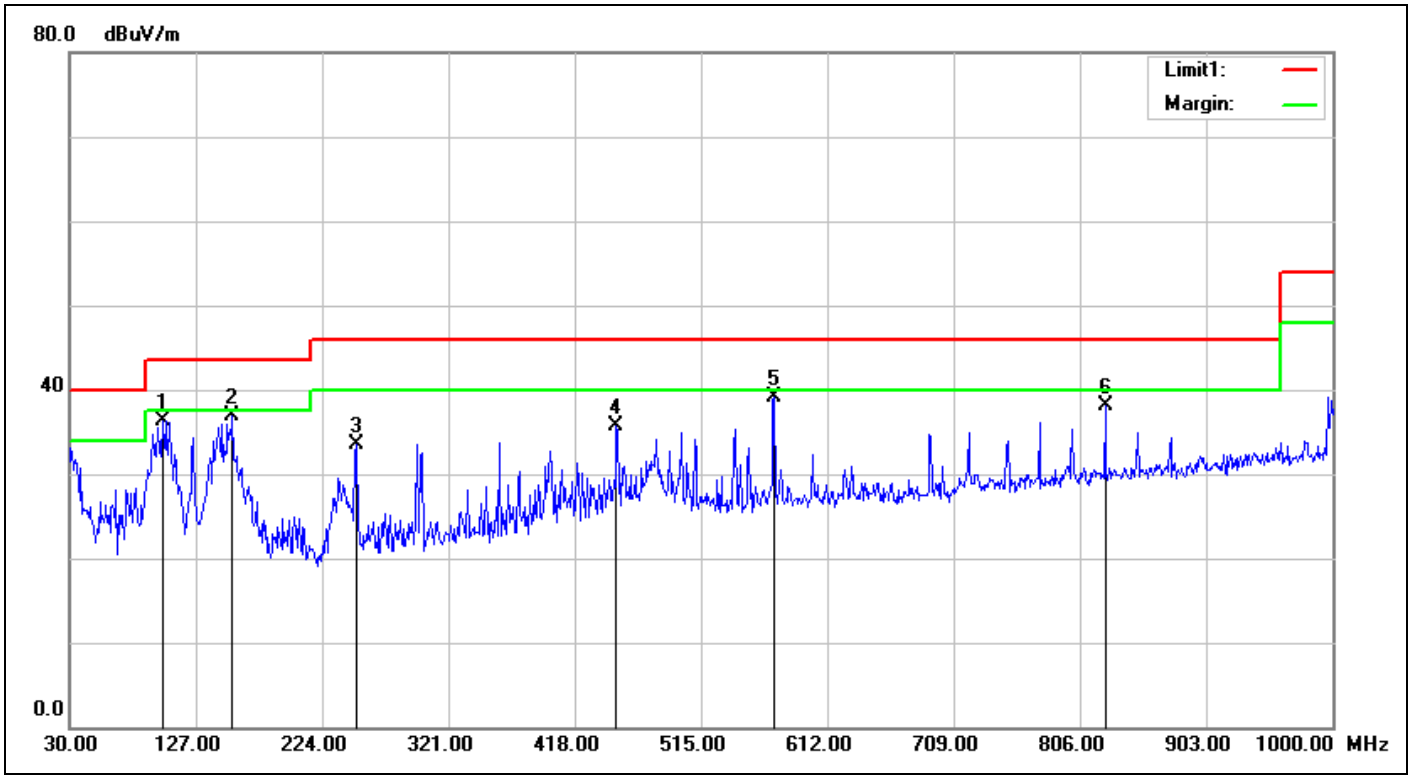

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC Class B 3M Radiation**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 21:10:23**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2440- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	101.7800	-9.21	45.59	36.38	43.50	-7.12	QP	100	360	
2	155.1300	-7.59	44.44	36.85	43.50	-6.65	QP	100	101	
3	250.1900	-5.66	39.22	33.56	46.00	-12.44	QP	100	124	
4	450.0100	-1.96	37.76	35.80	46.00	-10.20	QP	100	357	
5	571.2600	0.13	38.96	39.09	46.00	-6.91	QP	100	183	
6	825.4000	3.40	34.76	38.16	46.00	-7.84	QP	100	32	

Spurious Emissions, TX Mode, 9K-30M

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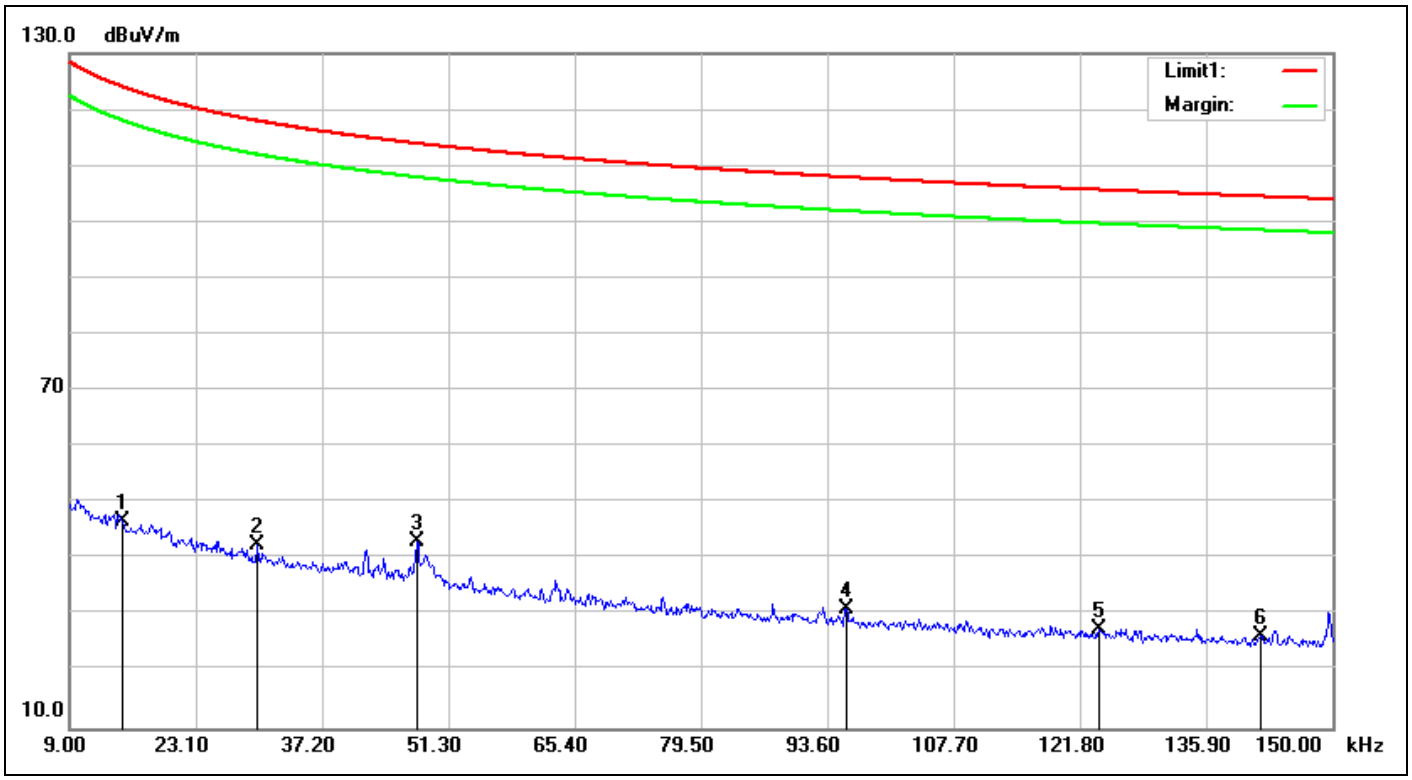

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC15.209_9k-1G_3m**	**Ant. Polarization:**	
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 21:04:25**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2440- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	0.0149	18.72	27.94	46.66	124.04	-77.38	QP	100	8	
2	0.0300	19.32	23.17	42.49	117.98	-75.49	QP	100	146	
3	0.0478	18.96	24.20	43.16	113.95	-70.79	QP	100	38	
4	0.0957	18.38	12.76	31.14	107.94	-76.80	QP	100	251	
5	0.1239	18.34	9.18	27.52	105.70	-78.18	QP	100	56	
6	0.1420	18.35	7.97	26.32	104.52	-78.20	QP	100	13	

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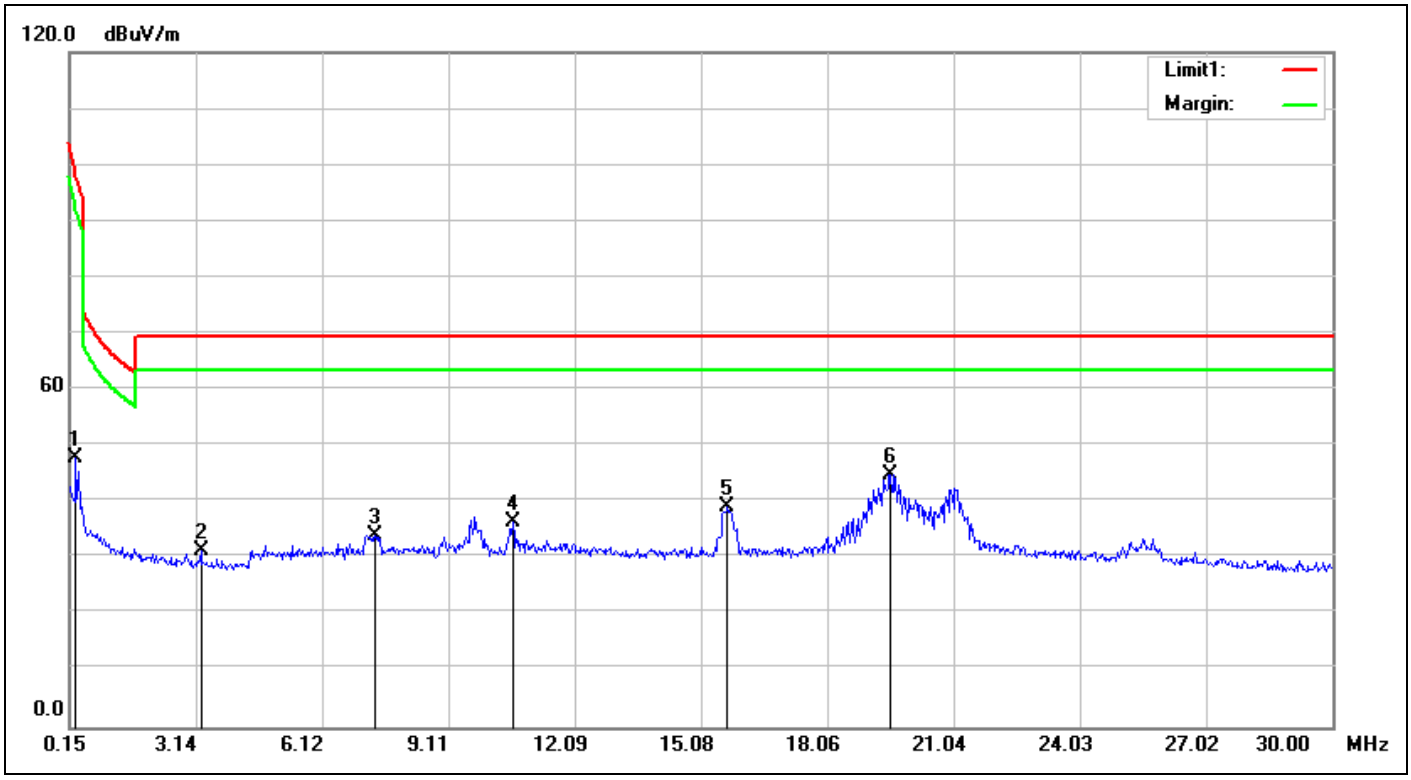

Service No.:	**114082189**	**Test Distance:**	**3m**
Test Standard:	**FCC15.209_9k-1G_3m**	**Ant. Polarization:**	
Test item:	**Radiation Emission**	**Test Time:**	**2018/10/17 21:02:26**
Applicant:	**InnoComm**	**Test Rating:**	**DC 5V**
Product:	**Wireless audio module**	**Temp.(℃)/Hum.(%):**	**22.1(℃)/67%**
Model No.:	**WB10**	**Test Engineer:**	**Kevin Kuo**
Test Mode:	**BLE-TX-2440- default**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	0.2993	18.44	29.37	47.81	98.07	-50.26	QP	100	254	
2	3.2544	18.64	12.76	31.40	69.50	-38.10	QP	100	223	
3	7.3737	19.93	14.21	34.14	69.50	-35.36	QP	100	1	
4	10.6273	20.51	16.06	36.57	69.50	-32.93	QP	100	56	
5	15.7019	21.11	17.90	39.01	69.50	-30.49	QP	100	47	
6	19.5525	21.55	23.36	44.91	69.50	-24.59	QP	100	158	

Spurious Emissions, AC Mains

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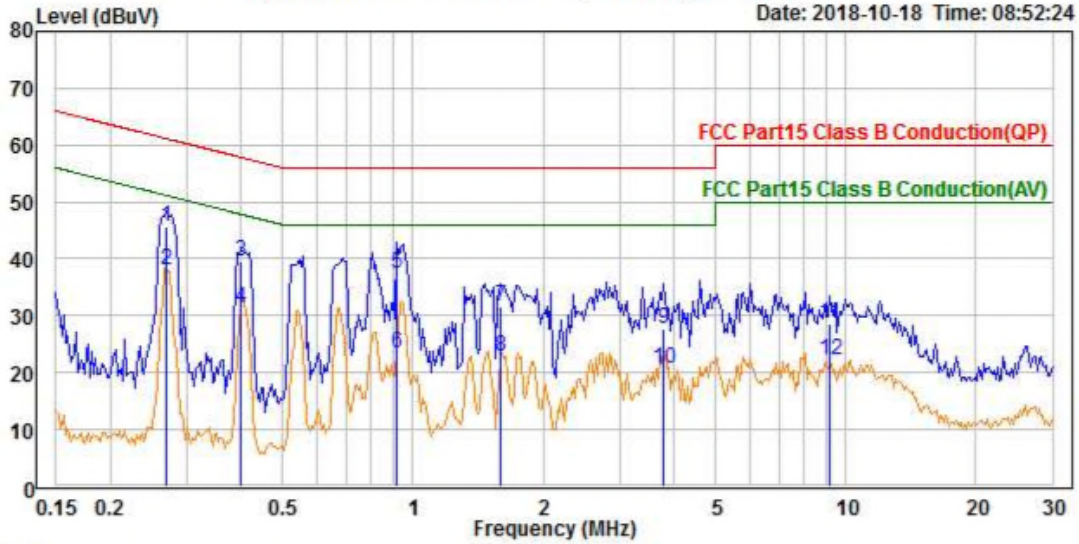

Trace: 1

Site : Conduction room
Condition : FCC Part15 Class B Conduction(QP) line1
Test Engineer: Amy Hsu
Applicant : InnoComm
Product : Wireless Module
Model No. : WB10
Test Rating : 120Vac/60Hz
Tmp/Hum : 23.2℃/55%
Memo : Normal operation

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.270	36.02	9.68	45.70	61.13	-15.43	QP
2	0.270	28.23	9.68	37.91	51.13	-13.22	Average
3	0.401	29.78	9.69	39.47	57.83	-18.36	QP
4	0.401	21.58	9.69	31.27	47.83	-16.56	Average
5	0.916	27.67	9.70	37.37	56.00	-18.63	QP
6	0.916	13.60	9.70	23.30	46.00	-22.70	Average
7	1.598	21.89	9.72	31.61	56.00	-24.39	QP
8	1.598	12.98	9.72	22.70	46.00	-23.30	Average
9	3.795	17.93	9.74	27.67	56.00	-28.33	QP
10	3.795	10.80	9.74	20.54	46.00	-25.46	Average
11	9.191	18.72	9.83	28.55	60.00	-31.45	QP
12	9.191	12.26	9.83	22.09	50.00	-27.91	Average

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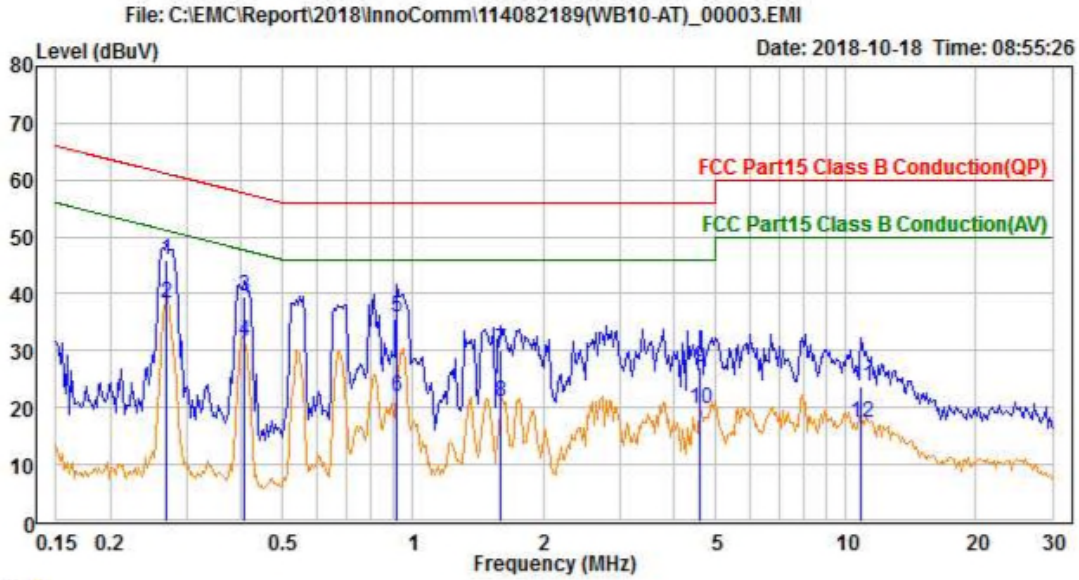

Trace: 1

Site : Conduction room
Condition : FCC Part15 Class B Conduction(QP) neutral
Test Engineer: Amy Hsu
Applicant : InnoComm
Product : Wireless Module
Model No. : WB10
Test Rating : 120Vac/60Hz
Tmp/Hum : 23.2℃/55%
Memo : Normal operation

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.270	36.37	9.68	46.05	61.13	-15.08	QP
2	0.270	28.63	9.68	38.31	51.13	-12.82	Average
3	0.409	29.89	9.68	39.57	57.66	-18.09	QP
4	0.409	22.06	9.68	31.74	47.66	-15.92	Average
5	0.916	26.28	9.70	35.98	56.00	-20.02	QP
6	0.916	12.24	9.70	21.94	46.00	-24.06	Average
7	1.598	20.37	9.72	30.09	56.00	-25.91	QP
8	1.598	11.16	9.72	20.88	46.00	-25.12	Average
9	4.583	17.40	9.76	27.16	56.00	-28.84	QP
10	4.583	9.91	9.76	19.67	46.00	-26.33	Average
11	10.884	14.02	9.84	23.86	60.00	-36.14	QP
12	10.884	7.40	9.84	17.24	50.00	-32.76	Average