Test Report No.10053161 001

Appendix D: Radiated and Mains Spurious Emission Data

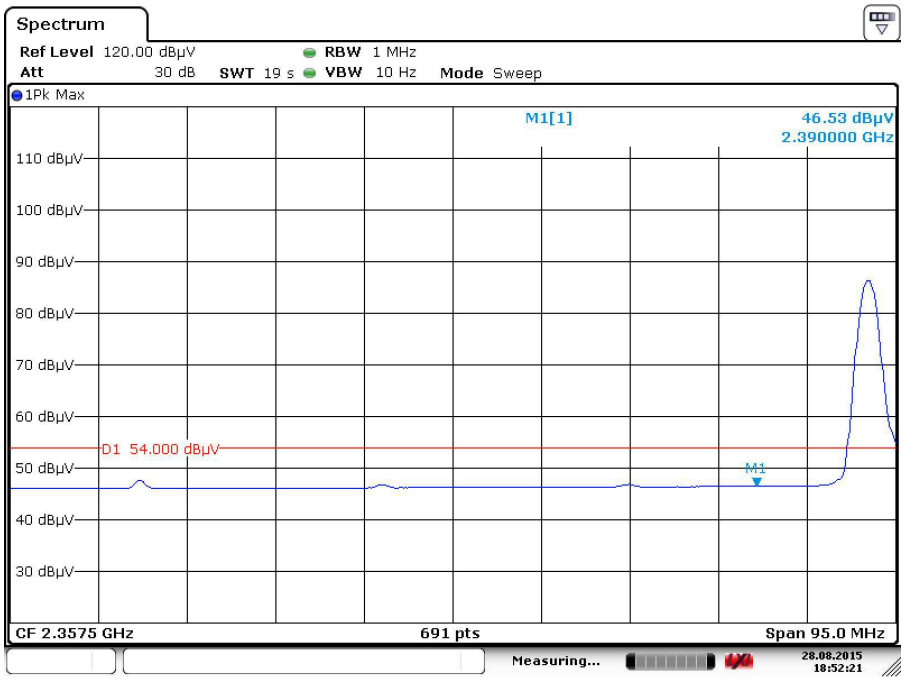
(File: 10053161AppendixD)

Contents

Spurious Emissions, Band Edges, 2.35-2.5G 2
Spurious Emissions, TX Mode, 1-18G..... 6
Spurious Emissions, TX Mode, 18-26G..... 12
Spurious Emissions, TX Mode, 30M-1G 18
Spurious Emissions, Mains, 150kHz - 30MHz..... 20

Radiated Bandedge (GFSK)

Low Channel (Hor)



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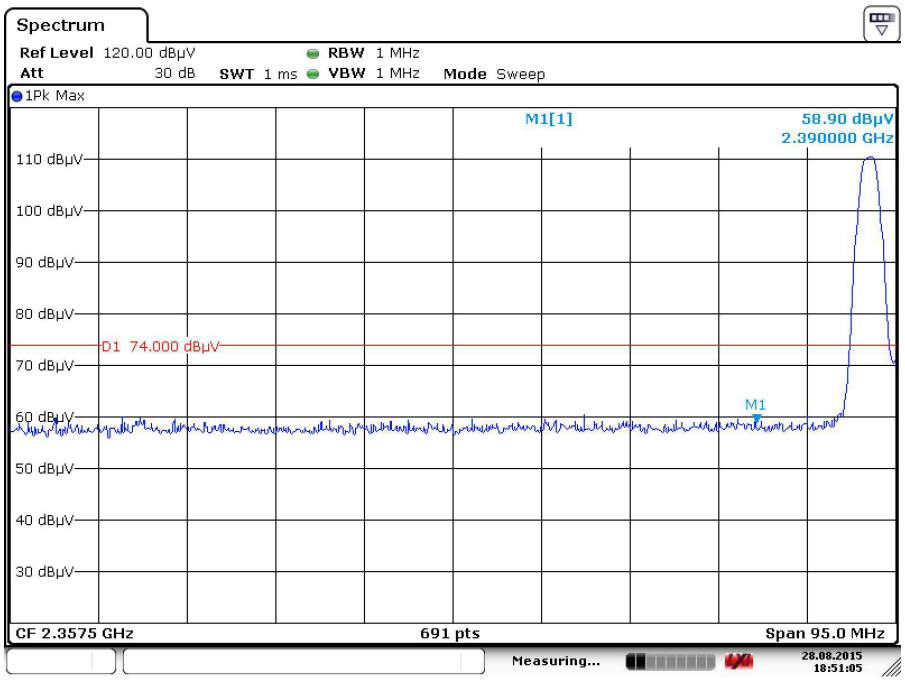

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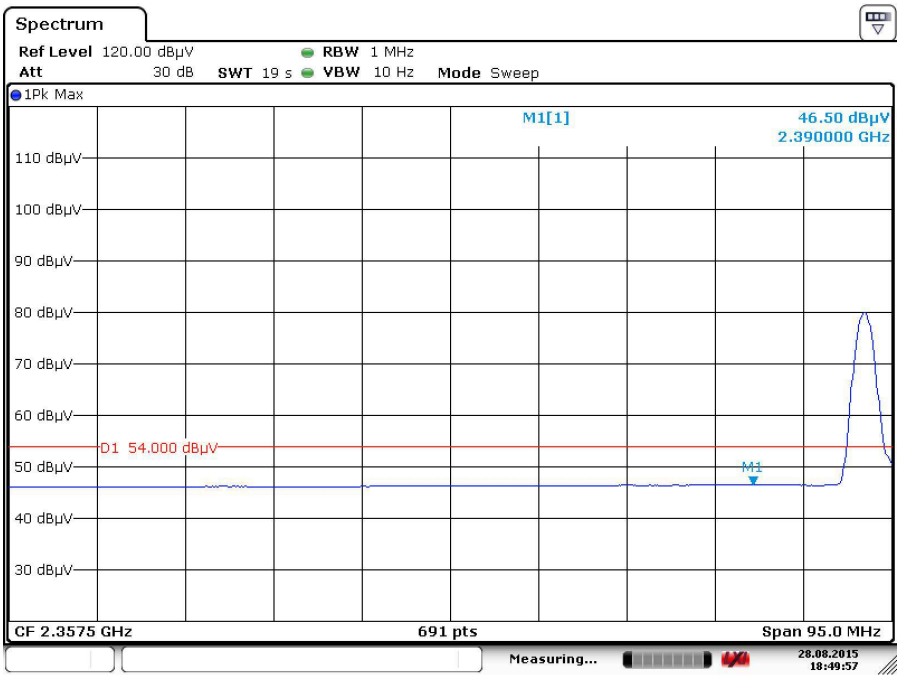
Low Channel (Ver)



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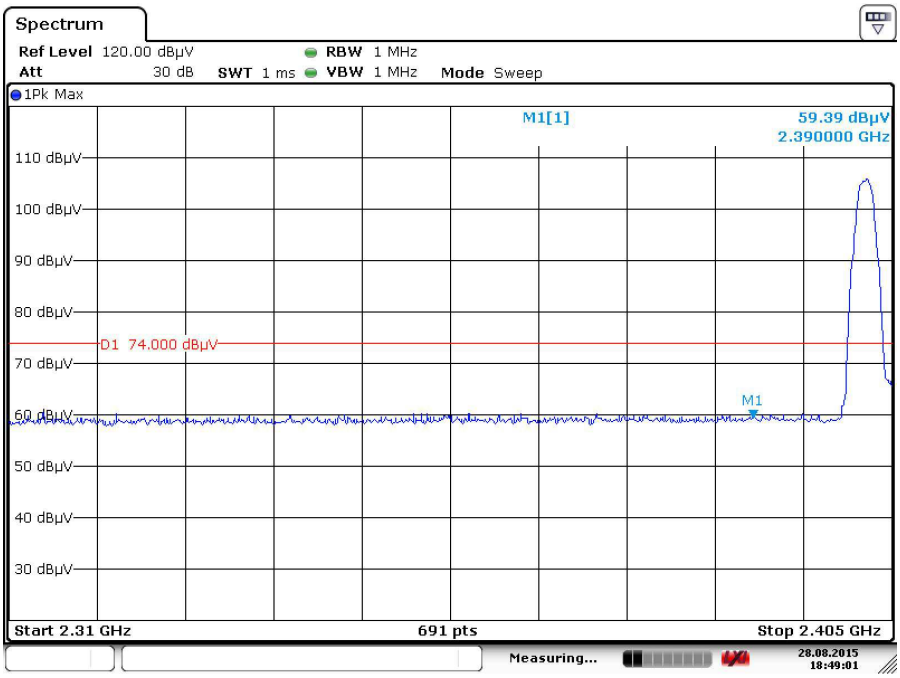
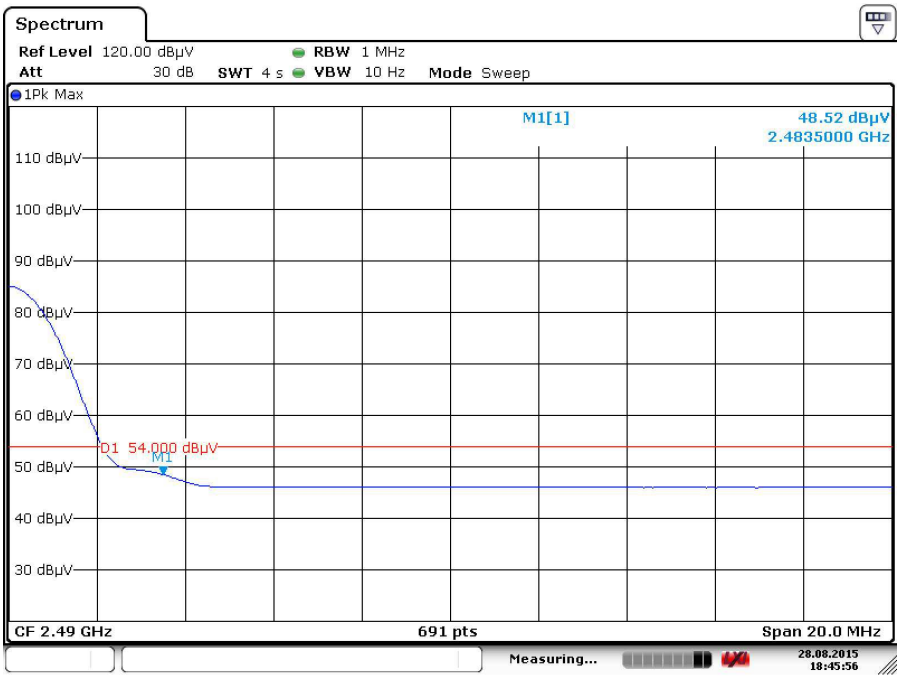


Date: 28.AUG.2015 18:49:01

Spurious Emissions, Band Edge, 2.35-2.5G

Radiated Bandedge (GFSK)

High Channel (Hor)



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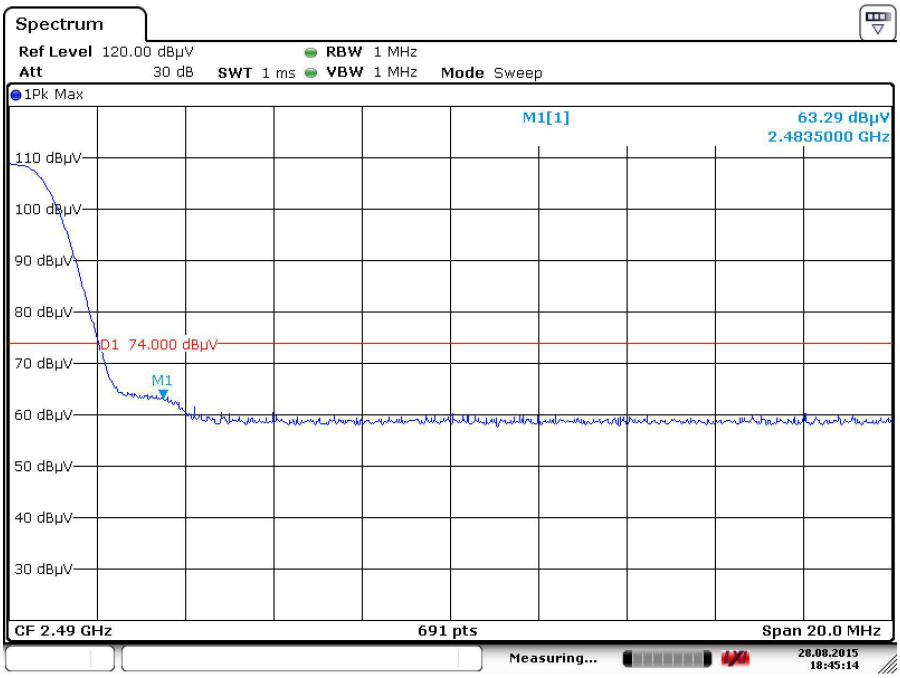

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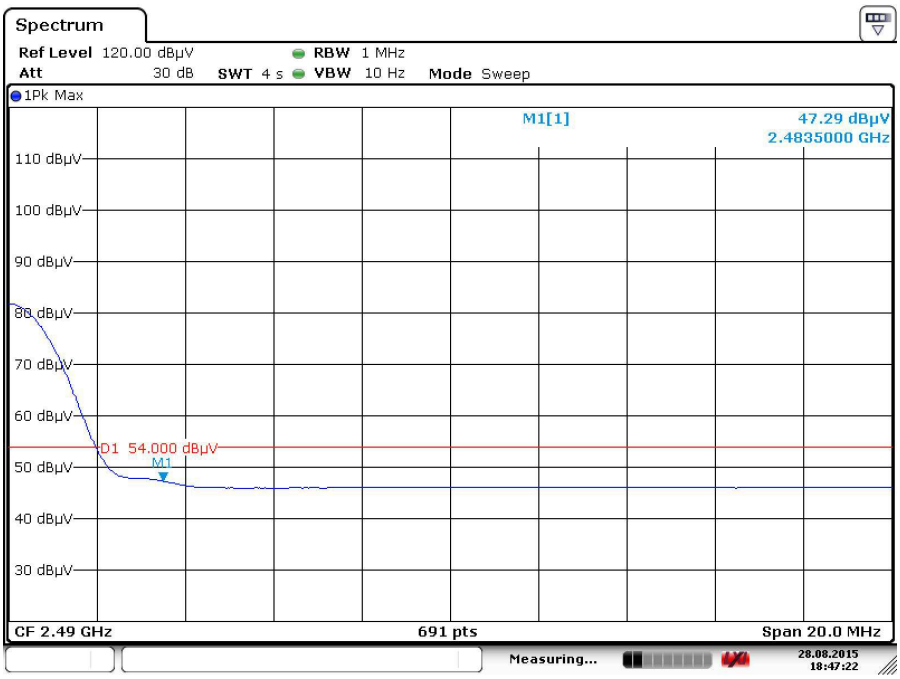
High Channel (Ver)



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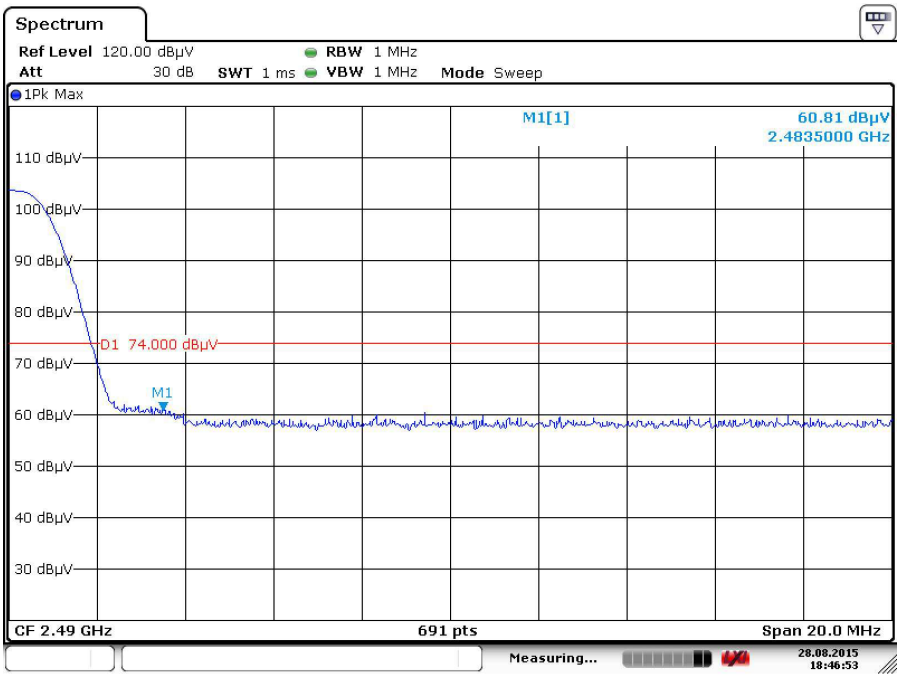

Date: 28.AUG.2015 18:46:53

Spurious Emissions, Band Edge, 2.35-2.5G

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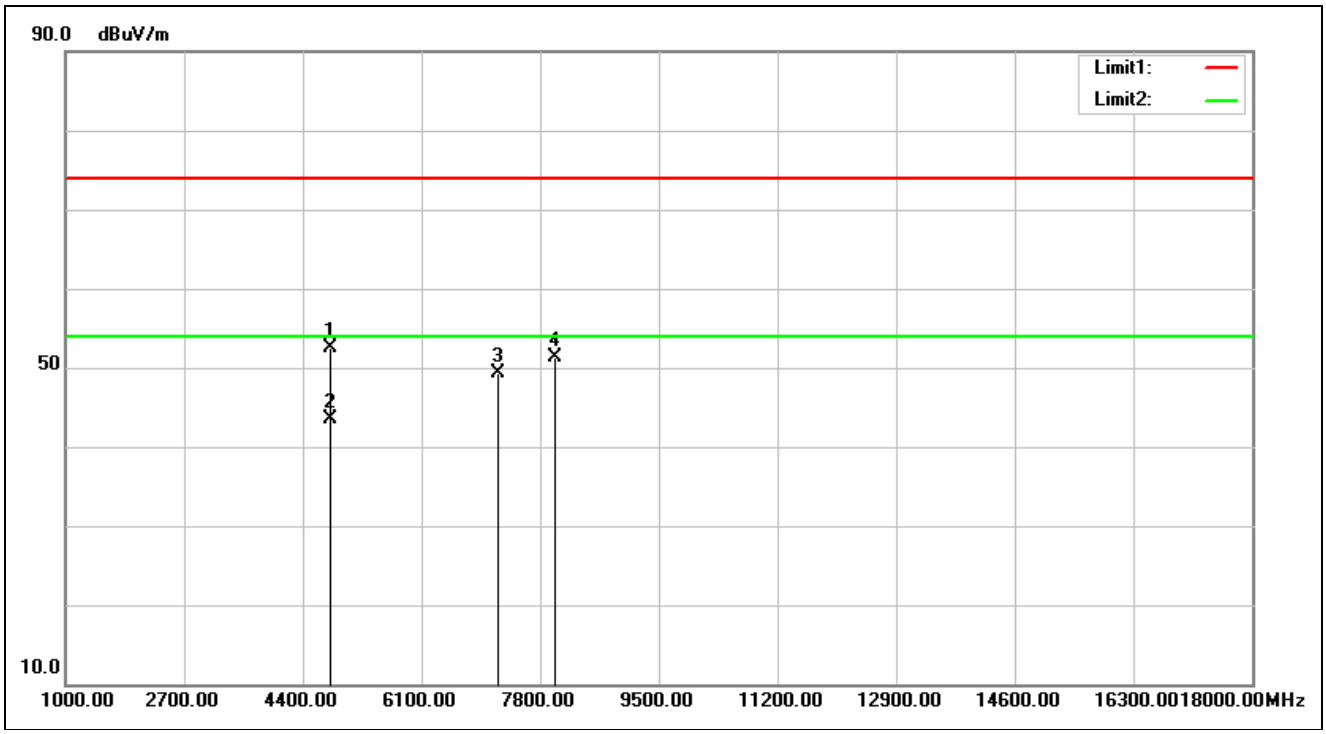

Service No.:	**114036792-FCC**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2015/9/22 15:00:10**
Applicant:	**Vencer**	**Test Rating:**	**DC 5V**
Product:	**Bluetooth 4.0 classI USB Dongle**	**Temp.(℃)/Hum.(%):**	**23.1(℃)/59%**
Model No.:	**VD-2104**	**Test Engineer:**	**George Yang**
Test Mode:	**LE-2402-TX**		
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	-2.35	54.78	52.43	74.00	-21.57	peak	100	227	
2	4804.000	-2.35	45.88	43.53	54.00	-10.47	AVG	100	227	
3	7206.000	5.78	43.49	49.27	74.00	-24.73	peak		0	
4	8004.000	6.56	44.70	51.26	74.00	-22.74	peak		0	

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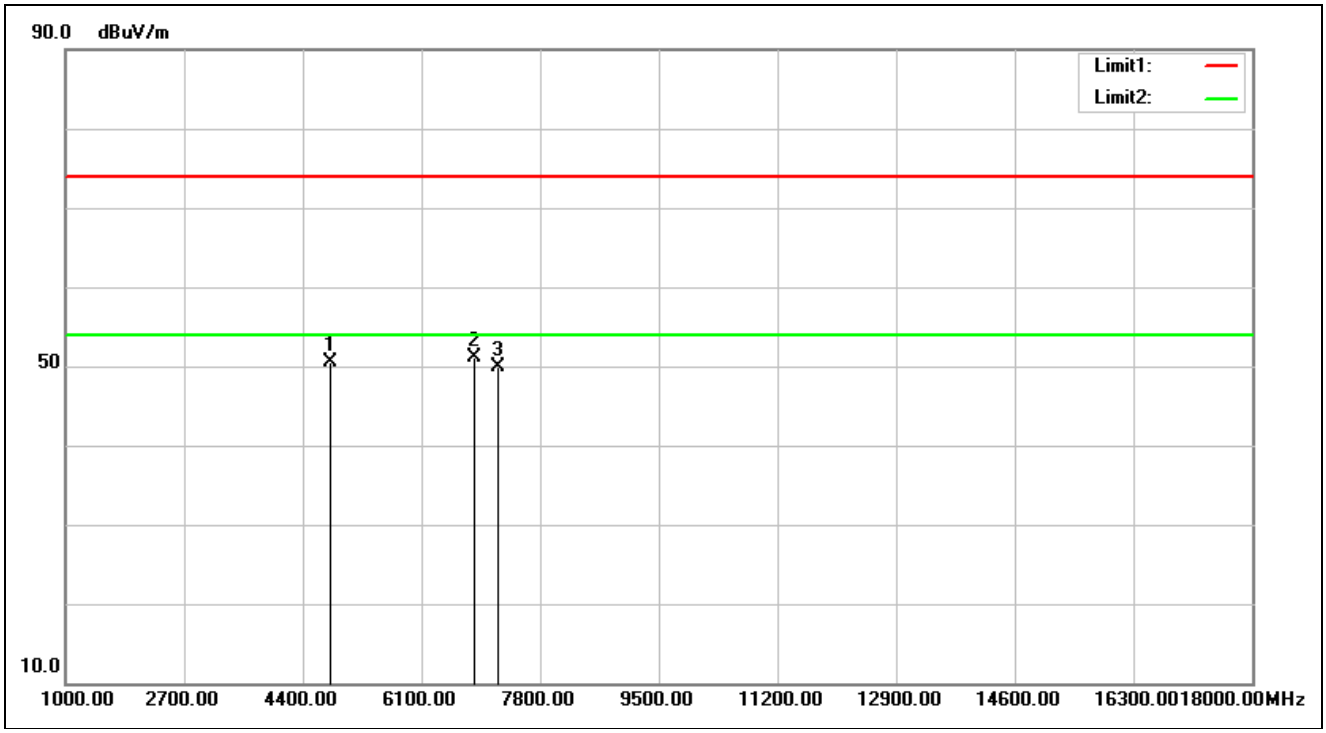

Service No.:	**114036792-FCC**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2015/8/28 18:19:14**
Applicant:	**Vencer**	**Test Rating:**	**DC 5V**
Product:	**Bluetooth 4.0 classI USB Dongle**	**Temp.(℃)/Hum.(%):**	**23.1(℃)/59%**
Model No.:	**VD-2104**	**Test Engineer:**	**George Yang**
Test Mode:	**LE-2402-TX**		
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	-2.35	52.94	50.59	74.00	-23.41	peak	100	108	
2	6865.000	5.39	45.79	51.18	74.00	-22.82	peak	100	138	
3	7206.000	5.78	44.09	49.87	74.00	-24.13	peak			

Spurious Emissions, TX Mode, 1-18G

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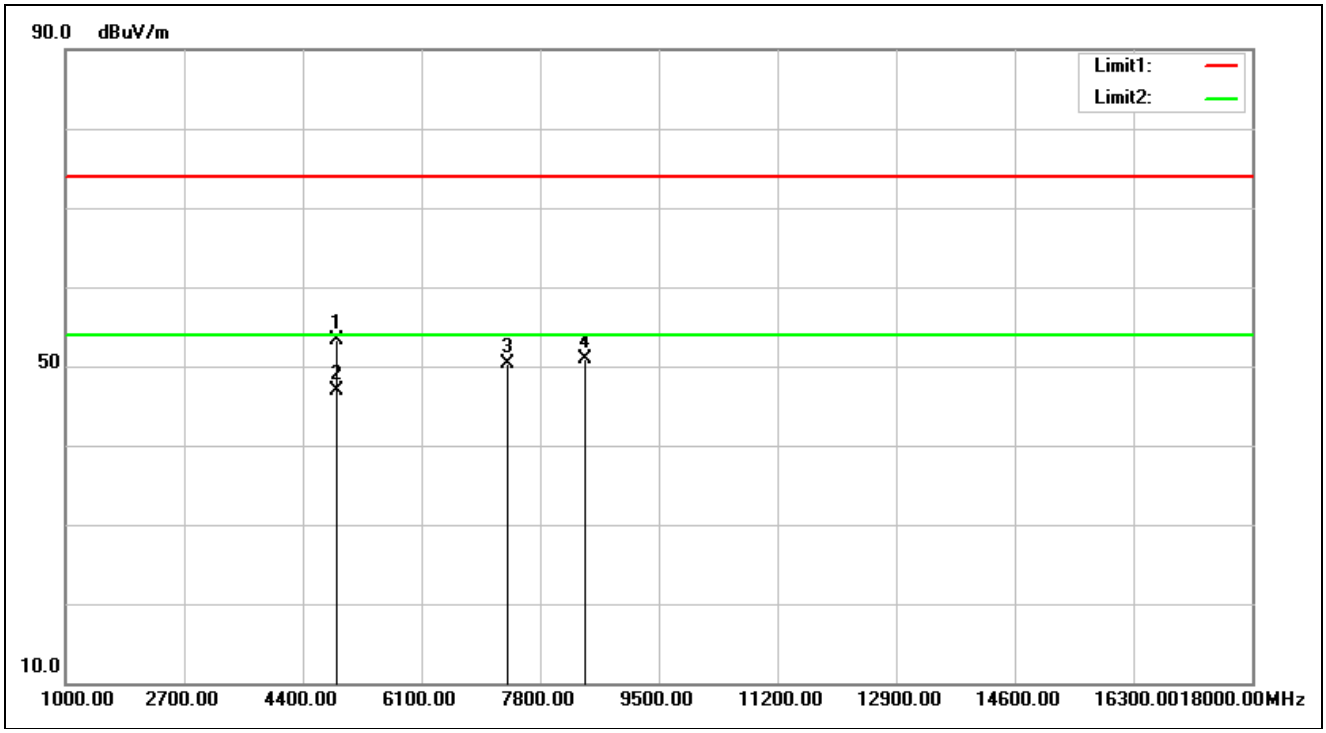

Service No.:	**114036792-FCC**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2015/9/22 15:13:27**
Applicant:	**Vencer**	**Test Rating:**	**DC 5V**
Product:	**Bluetooth 4.0 classI USB Dongle**	**Temp.(℃)/Hum.(%):**	**23.1(℃)/59%**
Model No.:	**VD-2104**	**Test Engineer:**	**George Yang**
Test Mode:	**LE-2442-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	4884.000	-2.15	55.37	53.22	74.00	-20.78	peak	100	225	
2	4884.000	-2.15	49.10	46.95	54.00	-7.05	AVG	100	225	
3	7326.000	6.14	44.19	50.33	74.00	-23.67	peak			
4	8446.000	6.69	44.27	50.96	74.00	-23.04	peak	100	131	

Spurious Emissions, TX Mode, 1-18G

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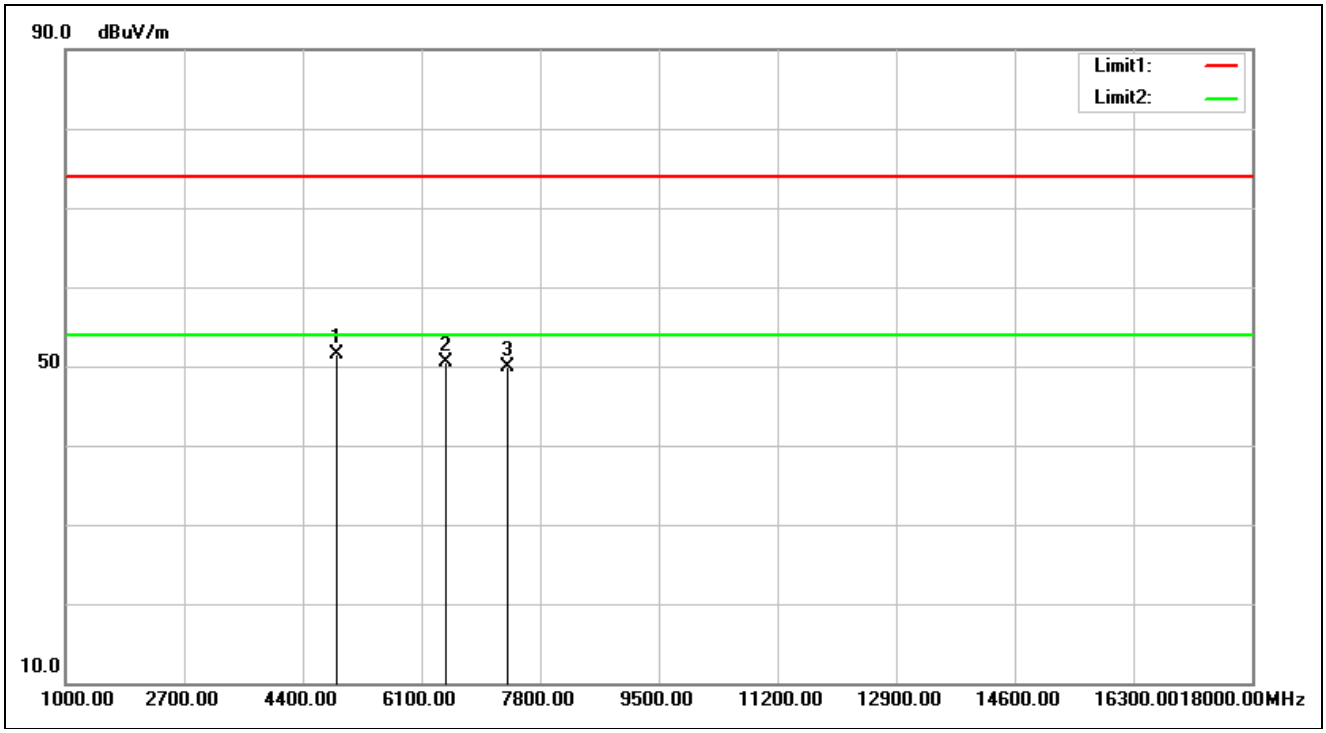

Service No.:	**114036792-FCC**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2015/8/28 18:23:51**
Applicant:	**Vencer**	**Test Rating:**	**DC 5V**
Product:	**Bluetooth 4.0 classI USB Dongle**	**Temp.(℃)/Hum.(%):**	**23.1(℃)/59%**
Model No.:	**VD-2104**	**Test Engineer:**	**George Yang**
Test Mode:	**LE-2442-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	4884.000	-2.15	53.68	51.53	74.00	-22.47	peak	100	277	
2	6457.000	5.87	44.66	50.53	74.00	-23.47	peak	100	360	
3	7326.000	6.14	43.76	49.90	74.00	-24.10	peak			

Spurious Emissions, TX Mode, 1-18G

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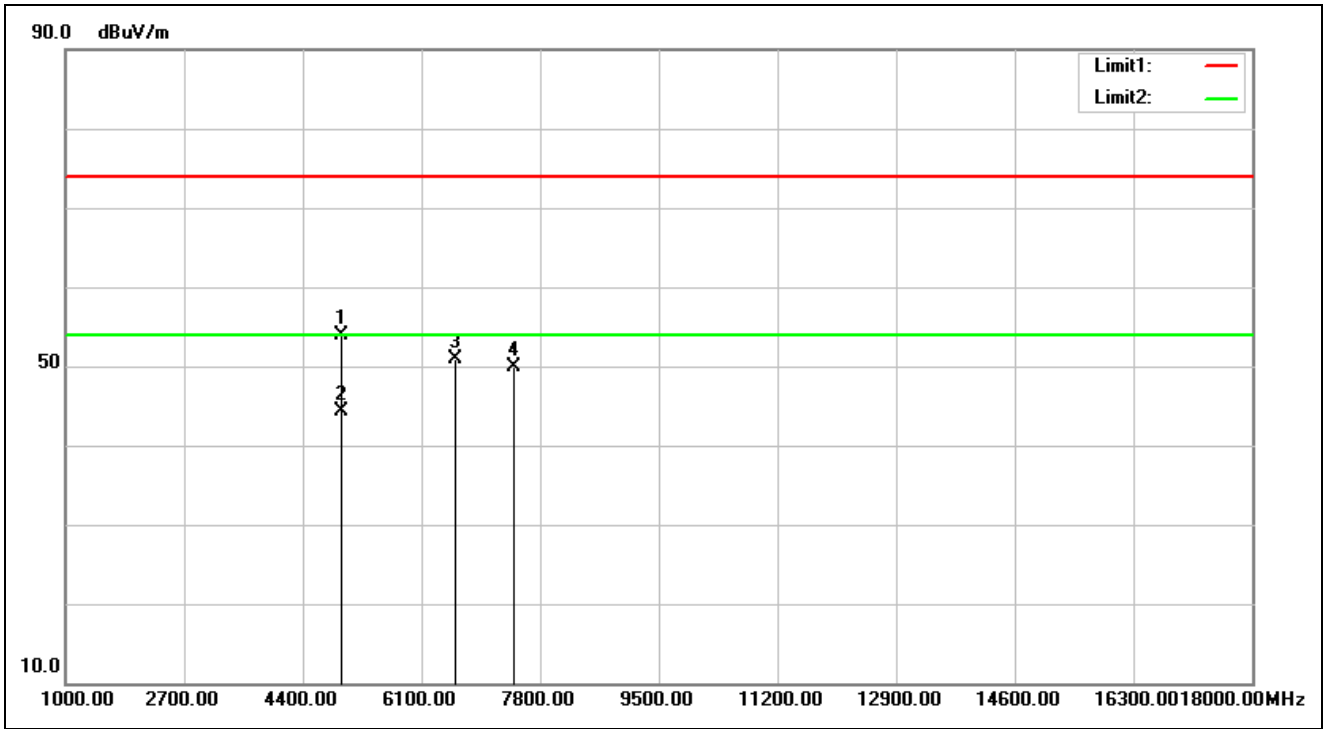

Service No.:	**114036792-FCC**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2015/8/28 18:27:41**
Applicant:	**Vencer**	**Test Rating:**	**DC 5V**
Product:	**Bluetooth 4.0 classI USB Dongle**	**Temp.(℃)/Hum.(%):**	**23.1(℃)/59%**
Model No.:	**VD-2104**	**Test Engineer:**	**George Yang**
Test Mode:	**LE-2480-TX**		
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	-1.97	55.94	53.97	74.00	-20.03	peak	100	222	
2	4960.000	-1.97	46.23	44.26	54.00	-9.74	AVG	100	222	
3	6576.000	5.91	44.94	50.85	74.00	-23.15	peak	100	161	
4	7440.000	6.47	43.53	50.00	74.00	-24.00	peak		0	

Spurious Emissions, TX Mode, 1-18G

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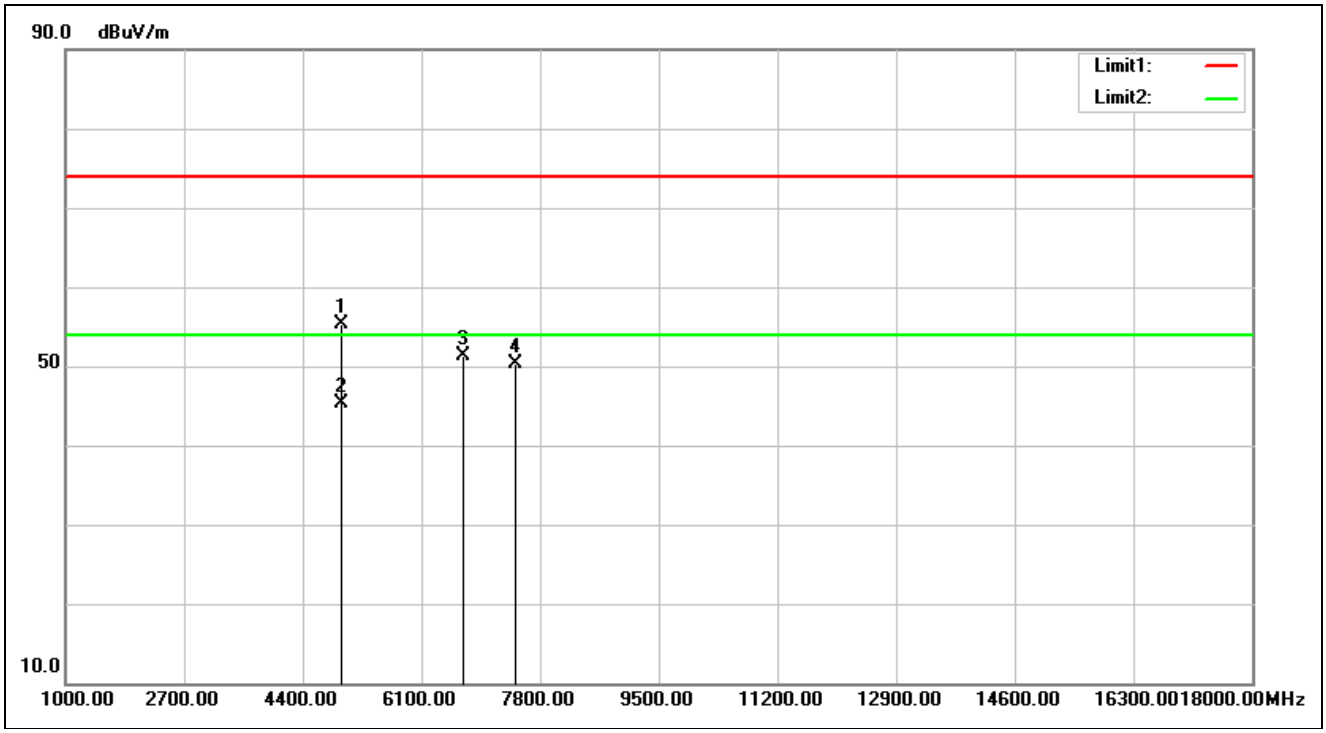

Service No.:	**114036792-FCC**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2015/8/28 18:28:44**
Applicant:	**Vencer**	**Test Rating:**	**DC 5V**
Product:	**Bluetooth 4.0 classI USB Dongle**	**Temp.(℃)/Hum.(%):**	**23.1(℃)/59%**
Model No.:	**VD-2104**	**Test Engineer:**	**George Yang**
Test Mode:	**LE-2480-TX**		
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	-1.97	57.36	55.39	74.00	-18.61	peak	100	266	
2	4960.000	-1.97	47.19	45.22	54.00	-8.78	AVG	100	266	
3	6695.000	5.70	45.64	51.34	74.00	-22.66	peak	100	103	
4	7440.000	6.47	43.77	50.24	74.00	-23.76	peak			

Spurious Emissions, TX Mode, 1-18G

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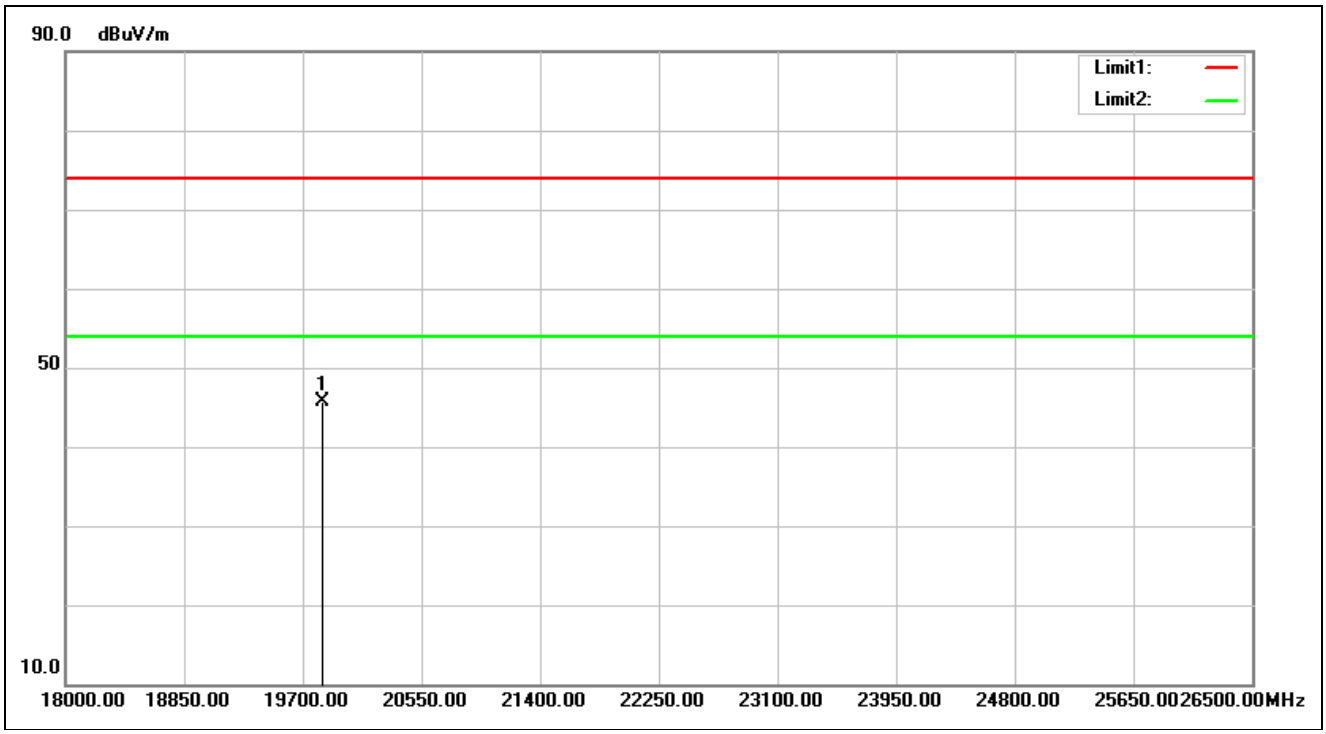

Service No.:	**114036792-FCC**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2015/9/3 17:52:05**
Applicant:	**Vencer**	**Test Rating:**	**DC 5V**
Product:	**Bluetooth 4.0 classI USB Dongle**	**Temp.(℃)/Hum.(%):**	**23.1(℃)/59%**
Model No.:	**VD-2104**	**Test Engineer:**	**George Yang**
Test Mode:	**LE-2402-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	19836.000	28.94	16.84	45.78	74.00	-28.22	peak		0	

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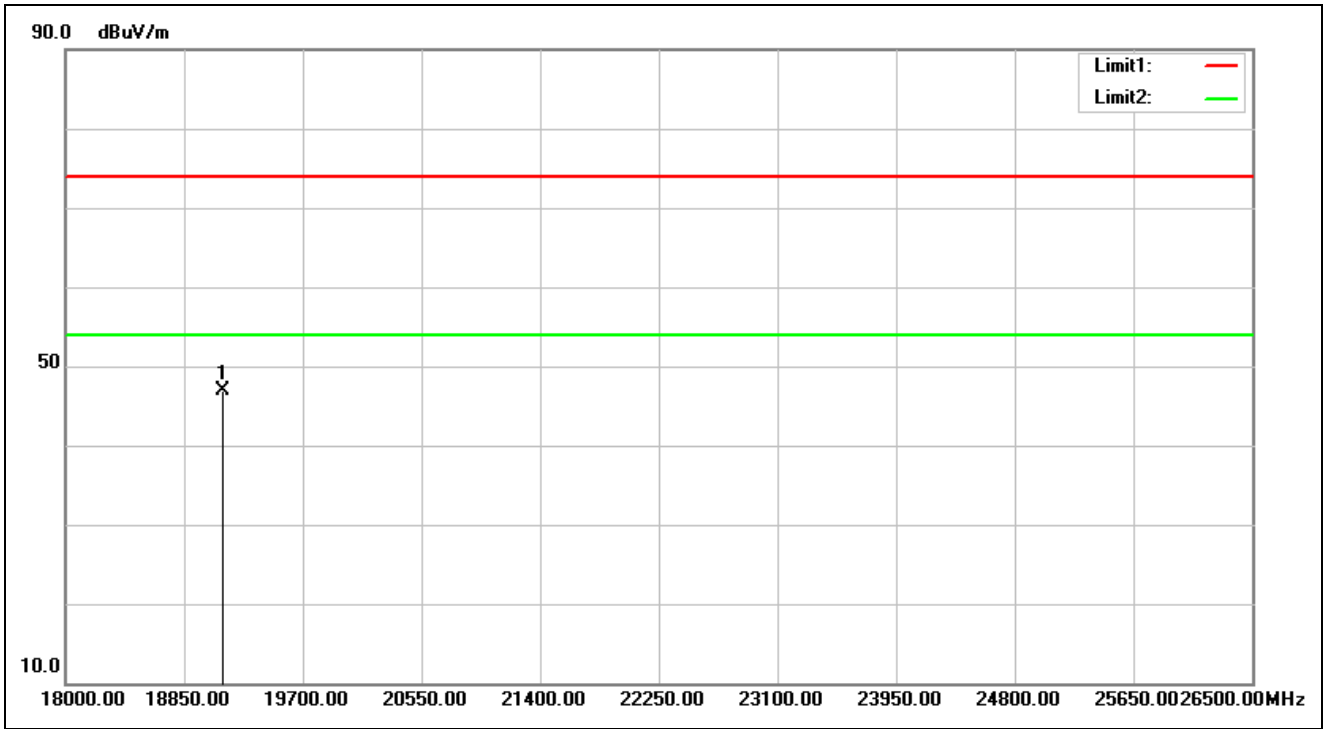

Service No.:	**114036792-FCC**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2015/9/3 17:53:03**
Applicant:	**Vencer**	**Test Rating:**	**DC 5V**
Product:	**Bluetooth 4.0 classI USB Dongle**	**Temp.(℃)/Hum.(%):**	**23.1(℃)/59%**
Model No.:	**VD-2104**	**Test Engineer:**	**George Yang**
Test Mode:	**LE-2402-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	19130.500	28.91	17.99	46.90	74.00	-27.10	peak			

Spurious Emissions, TX Mode, 18-26G

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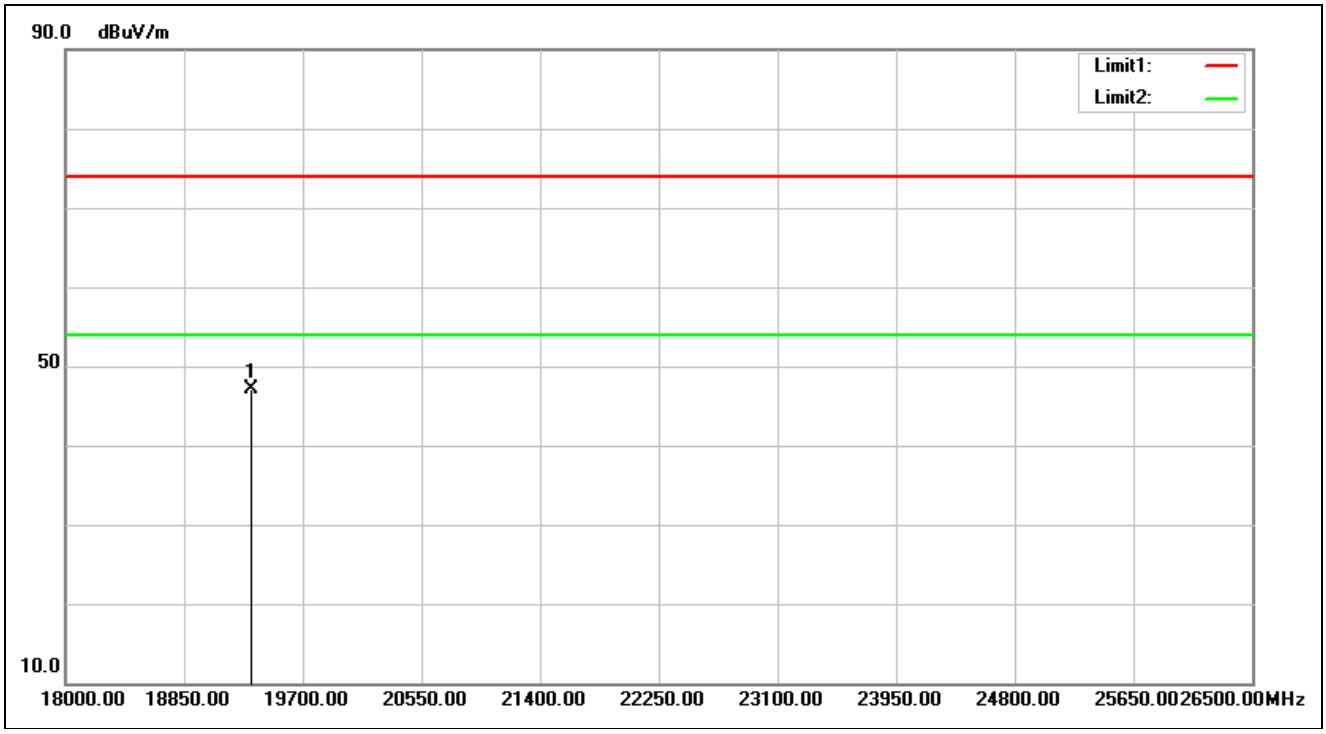

Service No.:	**114036792-FCC**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2015/9/3 17:54:24**
Applicant:	**Vencer**	**Test Rating:**	**DC 5V**
Product:	**Bluetooth 4.0 classI USB Dongle**	**Temp.(℃)/Hum.(%):**	**23.1(℃)/59%**
Model No.:	**VD-2104**	**Test Engineer:**	**George Yang**
Test Mode:	**LE-2442-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	19326.000	28.94	18.19	47.13	74.00	-26.87	peak			

Spurious Emissions, TX Mode, 18-26G

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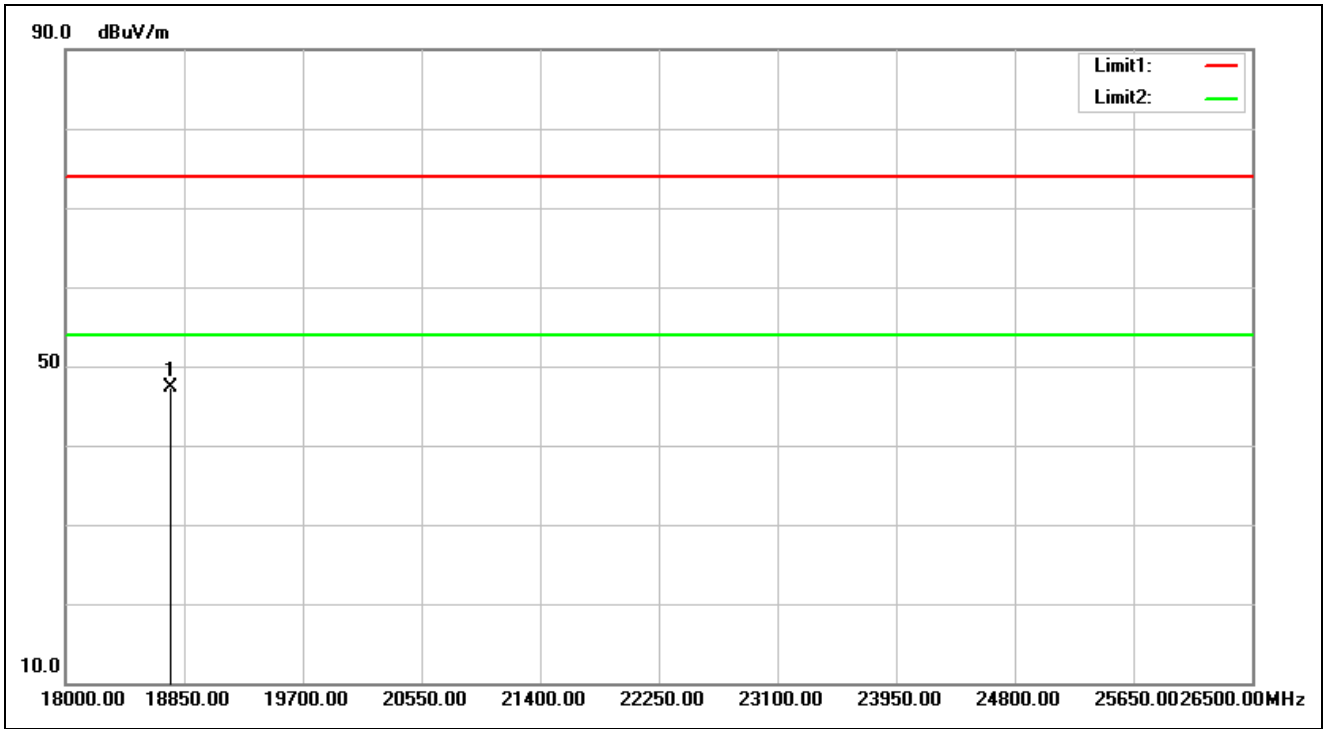

Service No.:	**114036792-FCC**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2015/9/3 17:54:40**
Applicant:	**Vencer**	**Test Rating:**	**DC 5V**
Product:	**Bluetooth 4.0 classI USB Dongle**	**Temp.(℃)/Hum.(%):**	**23.1(℃)/59%**
Model No.:	**VD-2104**	**Test Engineer:**	**George Yang**
Test Mode:	**LE-2442-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	18756.500	28.62	18.74	47.36	74.00	-26.64	peak			

Spurious Emissions, TX Mode, 18-26G

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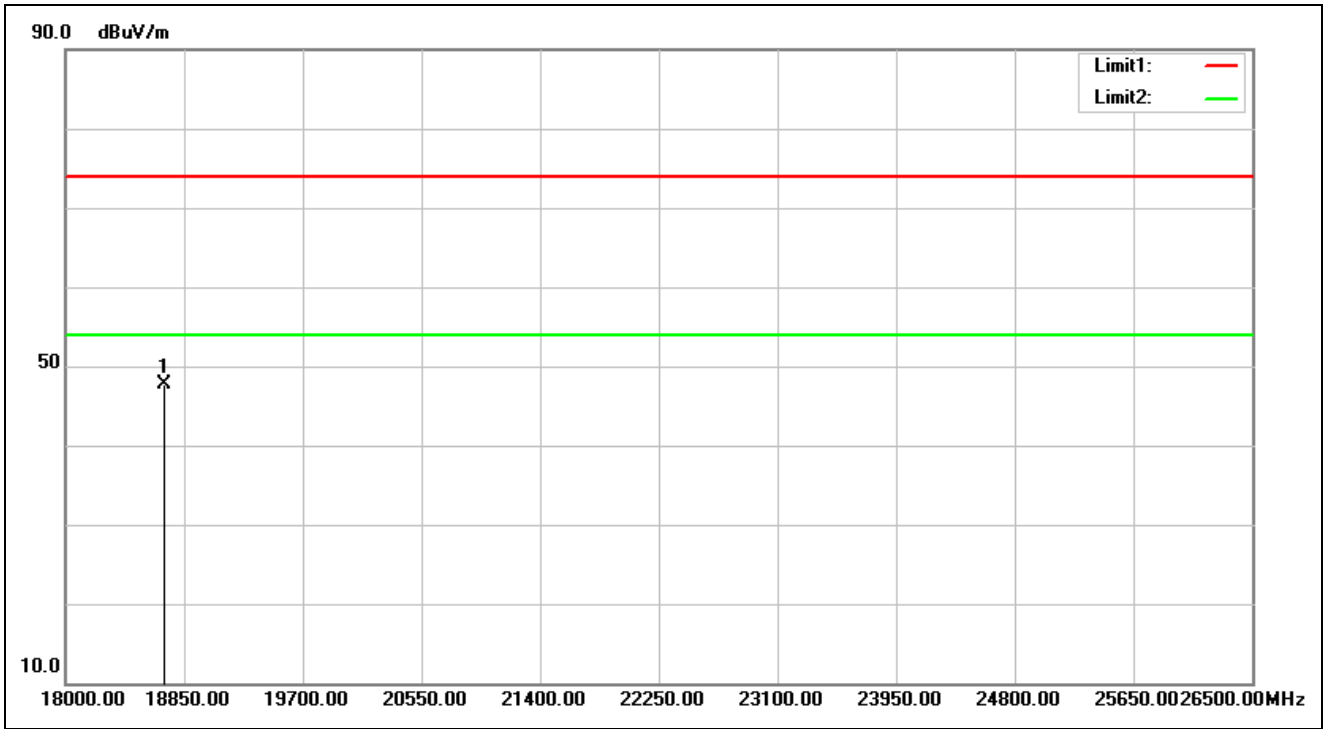

Service No.:	**114036792-FCC**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2015/9/3 17:55:09**
Applicant:	**Vencer**	**Test Rating:**	**DC 5V**
Product:	**Bluetooth 4.0 classI USB Dongle**	**Temp.(℃)/Hum.(%):**	**23.1(℃)/59%**
Model No.:	**VD-2104**	**Test Engineer:**	**George Yang**
Test Mode:	**LE-2480-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	18705.500	28.57	19.16	47.73	74.00	-26.27	peak			

Spurious Emissions, TX Mode, 18-26G

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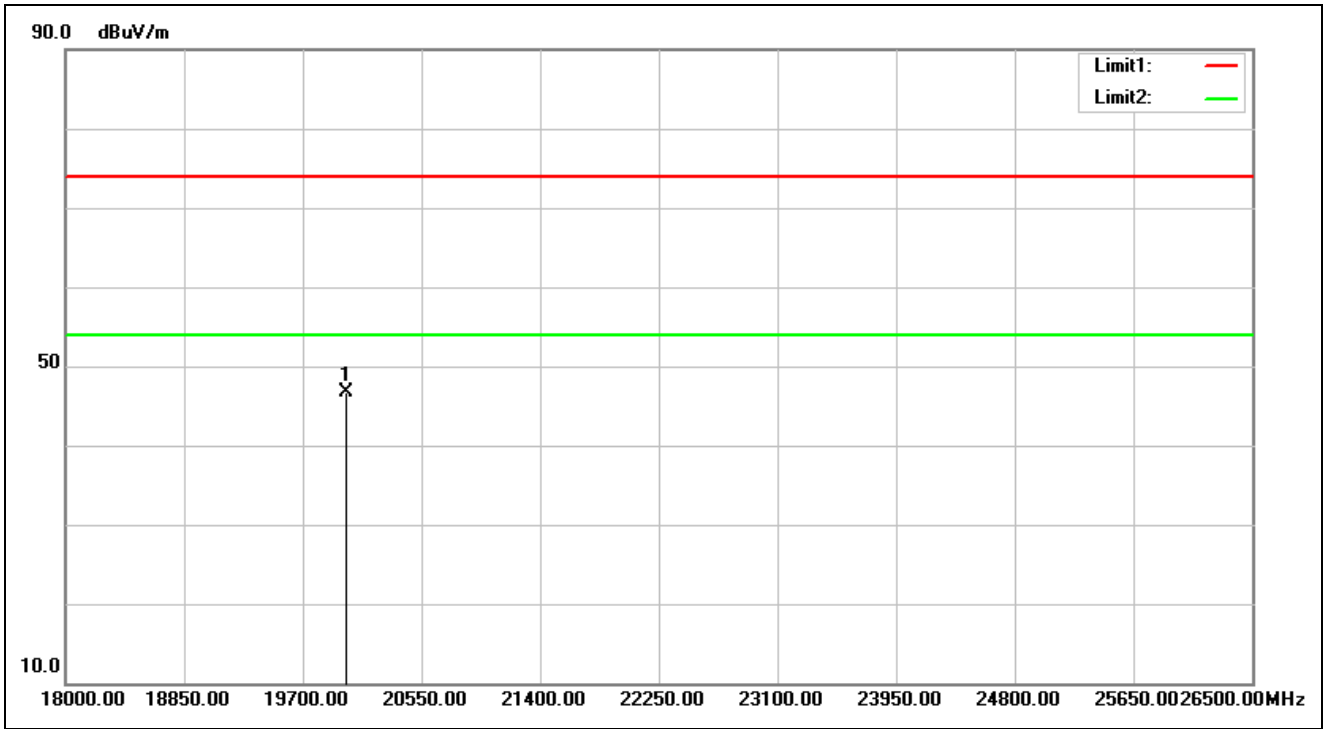

Service No.:	**114036792-FCC**	**Test Distance:**	**3m**
Test Standard:	**FCC Above 1G PEAK**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2015/9/3 17:55:23**
Applicant:	**Vencer**	**Test Rating:**	**DC 5V**
Product:	**Bluetooth 4.0 classI USB Dongle**	**Temp.(℃)/Hum.(%):**	**23.1(℃)/59%**
Model No.:	**VD-2104**	**Test Engineer:**	**George Yang**
Test Mode:	**LE-2480-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (◦)	Remark
1	20014.500	28.93	17.69	46.62	74.00	-27.38	peak			

Spurious Emissions, TX Mode, 18-26G

Spurious Emissions, TX Mode, 30M-1G

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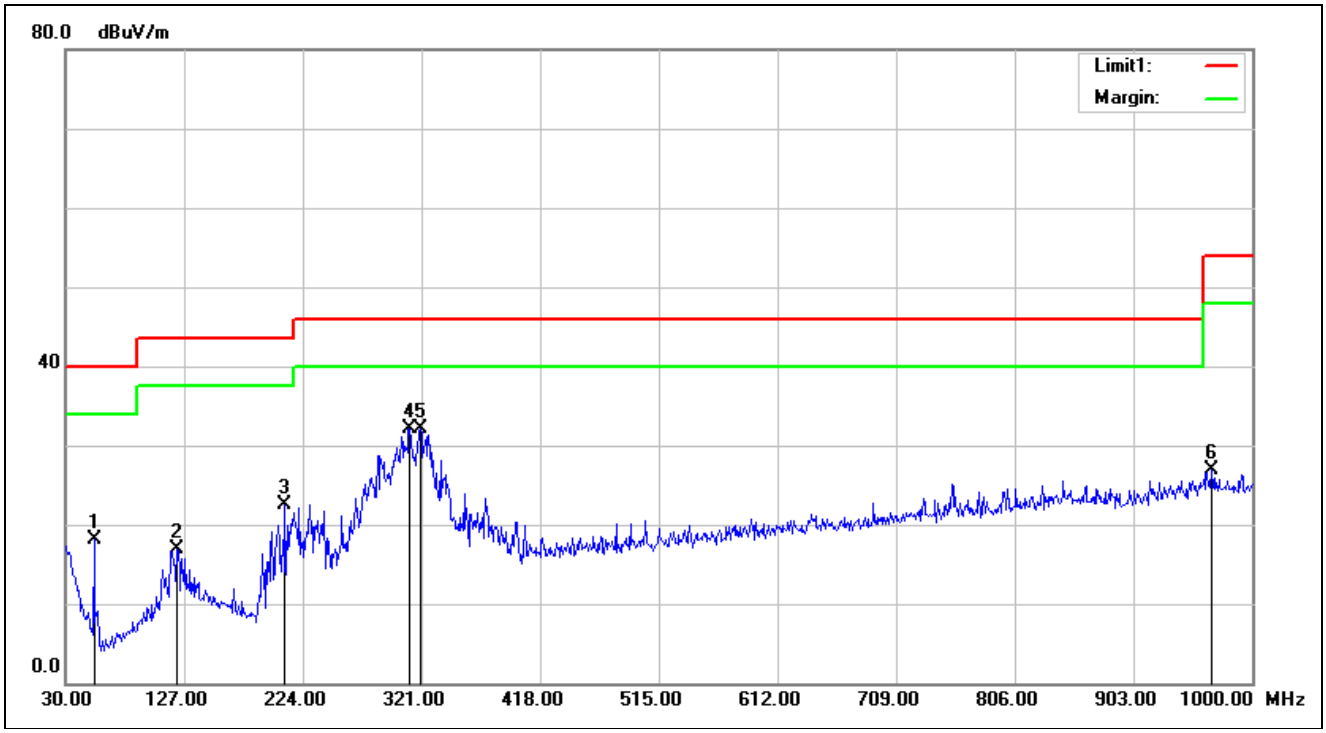
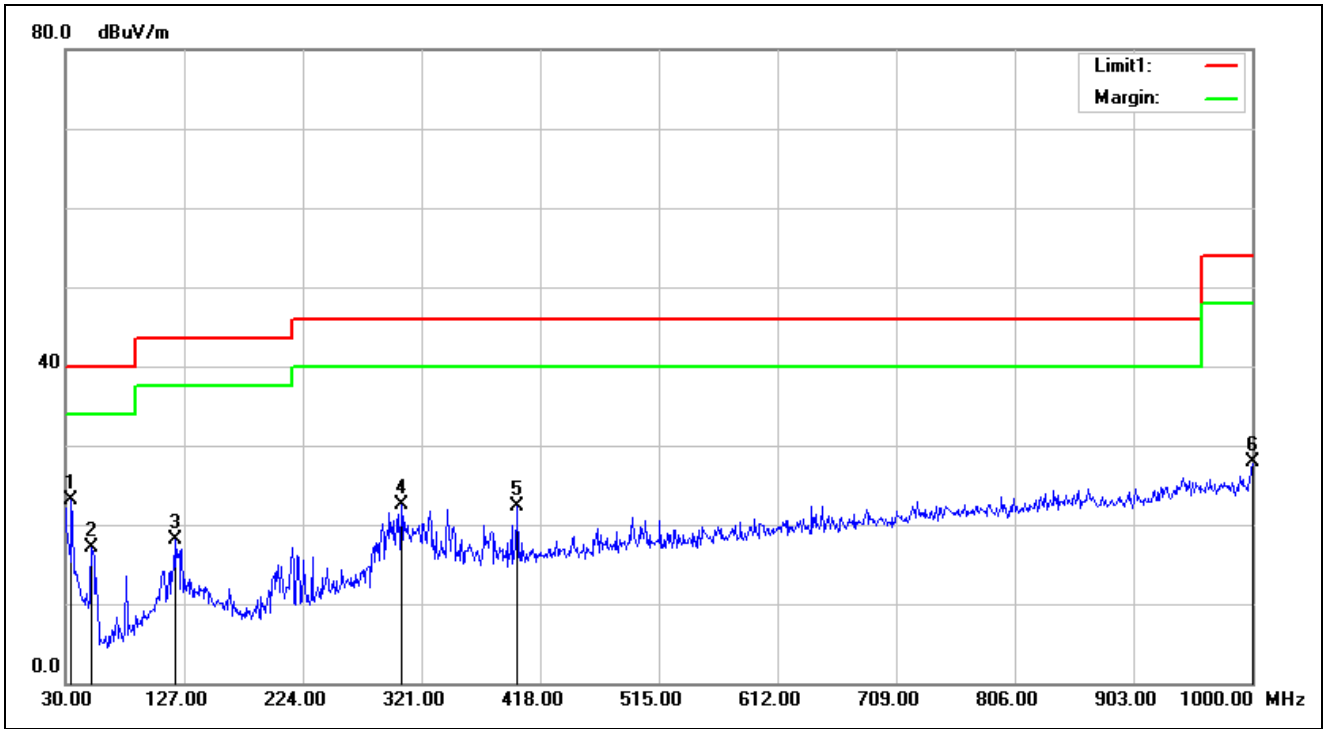


Service No.:	**114036792-FCC**	**Test Distance:**	**3m**
Test Standard:	**FCC Class B 3M Radiation**	**Ant. Polarization:**	**Horizontal**
Test item:	**Radiation Emission**	**Test Time:**	**2015/8/28 15:10:56**
Applicant:	**Vencer**	**Test Rating:**	**DC 5V**
Product:	**Bluetooth 4.0 classI USB Dongle**	**Temp.(℃)/Hum.(%):**	**23.1(℃)/59%**
Model No.:	**VD-2104**	**Test Engineer:**	**George Yang**
Test Mode:	**LE-2442-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	53.2800	-19.48	37.52	18.04	40.00	-21.96	QP	100	176	
2	121.1800	-14.62	31.46	16.84	43.50	-26.66	QP	100	168	
3	209.4499	-16.21	38.66	22.45	43.50	-21.05	QP	100	195	
4	311.3000	-11.76	43.94	32.18	46.00	-13.82	QP	100	182	
5	320.0299	-11.56	43.75	32.19	46.00	-13.81	QP	100	301	
6	967.0199	-1.20	28.08	26.88	54.00	-27.12	QP	100	192	

Spurious Emissions, Mains, 150kHz - 30MHz

TUV Taiwan
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105
Tel:+886-2172-7000 fax:+886-2528-0018



Service No.:	**114036792-FCC**	**Test Distance:**	**3m**
Test Standard:	**FCC Class B 3M Radiation**	**Ant. Polarization:**	**Vertical**
Test item:	**Radiation Emission**	**Test Time:**	**2015/8/28 15:11:59**
Applicant:	**Vencer**	**Test Rating:**	**DC 5V**
Product:	**Bluetooth 4.0 classI USB Dongle**	**Temp.(℃)/Hum.(%):**	**23.1(℃)/59%**
Model No.:	**VD-2104**	**Test Engineer:**	**George Yang**
Test Mode:	**LE-2442-TX**		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (∘)	Remark
1	34.8500	-10.41	33.45	23.04	40.00	-16.96	QP	100	248	
2	51.3400	-19.03	36.10	17.07	40.00	-22.93	QP	100	296	
3	119.2400	-14.71	32.89	18.18	43.50	-25.32	QP	100	224	
4	304.5100	-11.92	34.40	22.48	46.00	-23.52	QP	100	83	
5	399.5700	-10.07	32.31	22.24	46.00	-23.76	QP	100	213	
6	1000.0000	-1.24	29.17	27.93	54.00	-26.07	QP	100	194	

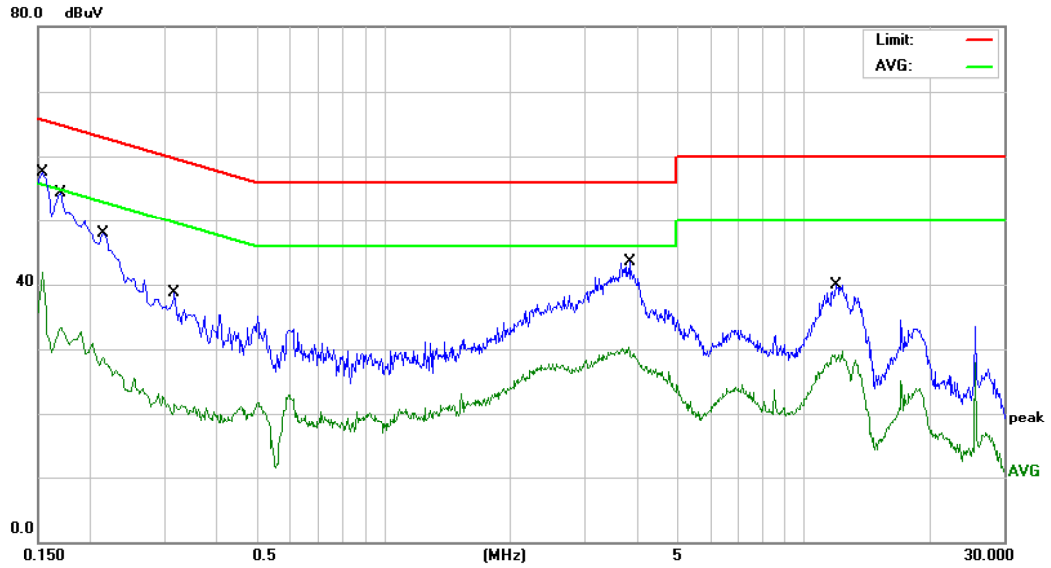
Spurious Emissions, Mains, 150kHz - 30MHz

Mains Spurious Emissions

TUV Rheinland Taiwan
11F.,No.758,Sec. 4,Bade Rd.,Songshan Dist.,Taipei 105,Taiwan
Tel:+886-2-2172-7000 Fax:+886-2-2528-0018

Site: Conduction

Test Time: 2015/8/15 16:17:31



Service No.: 114036792-EMC

Test Standard: FCC Class B Conduction(QP)

Test item: Conducted Emission

Phase: L1

Applicant: Vencer

Temp.(℃)/Hum.(%): 25.4(℃) / 45 %

Product: Bluetooth 4.0 Class I USB Dongle

Power Rating: DC 5V

Model No.: VD-2104

Test Engineer: Kai Wang

Test Mode: (a)Normal operation (with BT mouse)

Remark:

No.	Frequency (MHz)	Factor ()	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1539	9.65	40.70	50.35	65.78	-15.43	QP	P	
2	0.1539	9.65	21.99	31.64	55.78	-24.14	AVG	P	
3	0.1700	9.65	38.46	48.11	64.96	-16.85	QP	P	
4	0.1700	9.65	22.26	31.91	54.96	-23.05	AVG	P	
5	0.2140	9.63	31.45	41.08	63.04	-21.96	QP	P	
6	0.2140	9.63	16.10	25.73	53.04	-27.31	AVG	P	
7	0.3180	9.63	20.71	30.34	59.76	-29.42	QP	P	
8	0.3180	9.63	10.36	19.99	49.76	-29.77	AVG	P	
9	3.8420	9.66	27.32	36.98	56.00	-19.02	QP	P	
10	3.8420	9.66	18.20	27.86	46.00	-18.14	AVG	P	
11	11.9740	9.78	22.09	31.87	60.00	-28.13	QP	P	
12	11.9740	9.78	16.23	26.01	50.00	-23.99	AVG	P	

File:114036792-EMC\ #1 *Page: 1*

Spurious Emissions, Mains, 150kHz - 30MHz

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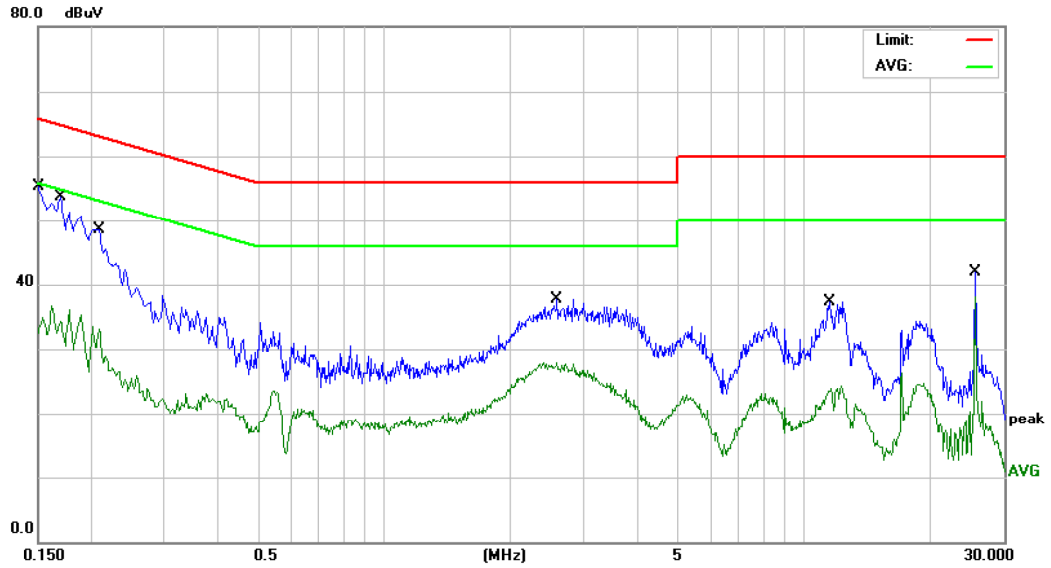
Tel:+886-2-2172-7000 Fax:+886-2-2528-0018

Site: Conduction

Test Time: 2015/8/15 16:22:11



Service No.: 114036792-EMC

Test Standard: FCC Class B Conduction(QP)

Test item: Conducted Emission

Phase: N

Applicant: Vencer

Temp.(℃)/Hum.(%): 25.4(℃) / 45 %

Product: Bluetooth 4.0 Class I USB Dongle

Power Rating: DC 5V

Model No.: VD-2104

Test Engineer: Kai Wang

Test Mode: (a)Normal operation (with BT mouse)

Remark:

No.	Frequency (MHz)	Factor ()	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1500	9.66	44.34	54.00	65.99	-11.99	QP	P	
2	0.1500	9.66	25.06	34.72	55.99	-21.27	AVG	P	
3	0.1700	9.66	39.39	49.05	64.96	-15.91	QP	P	
4	0.1700	9.66	19.87	29.53	54.96	-25.43	AVG	P	
5	0.2100	9.65	34.93	44.58	63.20	-18.62	QP	P	
6	0.2100	9.65	18.29	27.94	53.20	-25.26	AVG	P	
7	2.5860	9.67	23.80	33.47	56.00	-22.53	QP	P	
8	2.5860	9.67	18.17	27.84	46.00	-18.16	AVG	P	
9	11.5579	9.82	17.79	27.61	60.00	-32.39	QP	P	
10	11.5579	9.82	10.06	19.88	50.00	-30.12	AVG	P	
11	25.6700	10.05	30.94	40.99	60.00	-19.01	QP	P	
12	25.6700	10.05	26.80	36.85	50.00	-13.15	AVG	P	

Spurious Emissions, Mains, 150kHz - 30MHz