

Test Report No.10055786 10055790 002

Appendix D: Radiated and Mains Spurious Emission Data

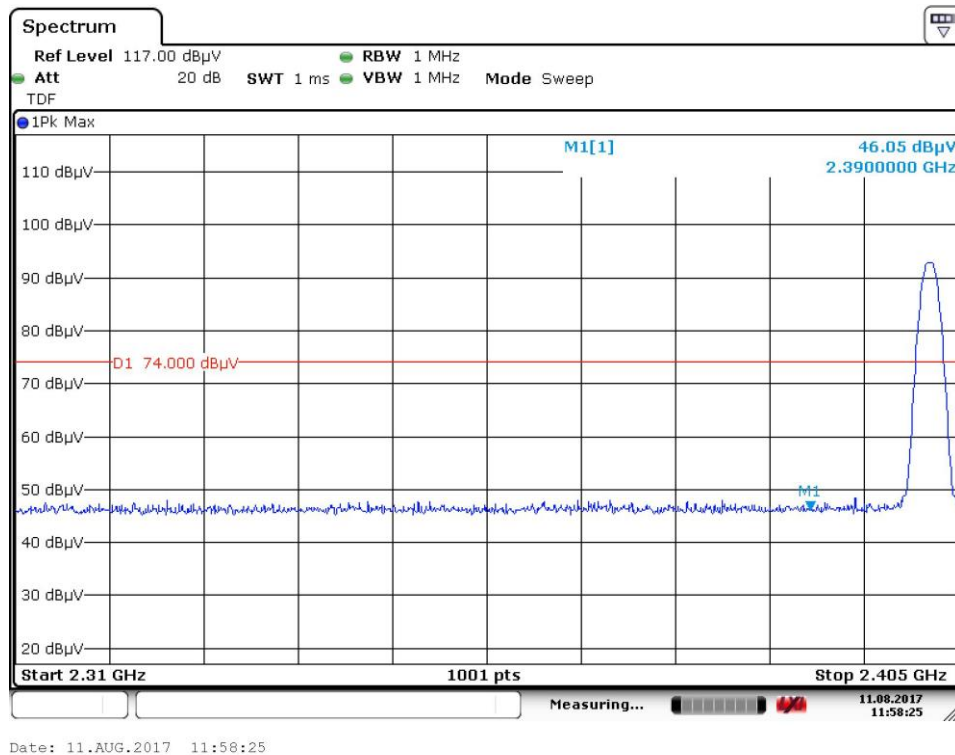
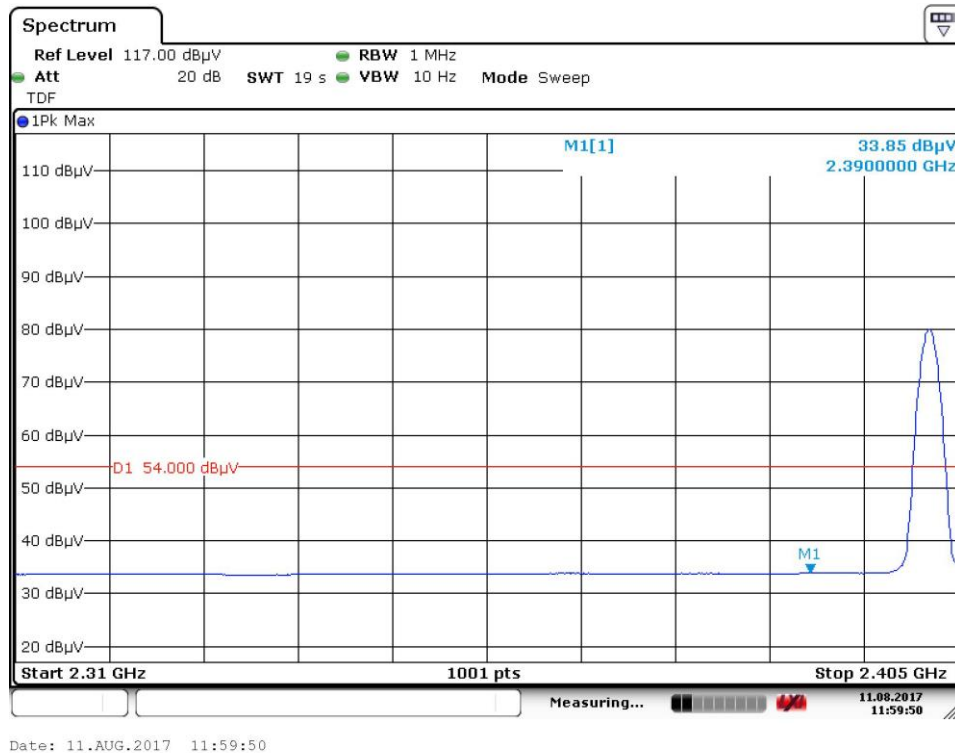
(File: 10055786 10055790 002AppendixD)

Contents

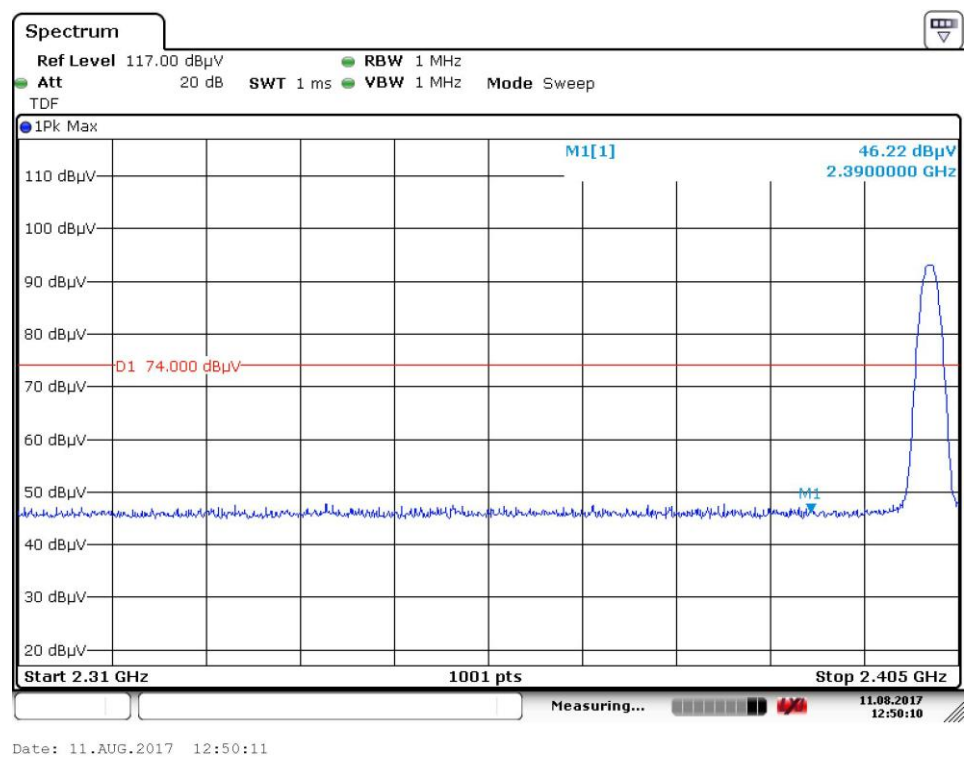
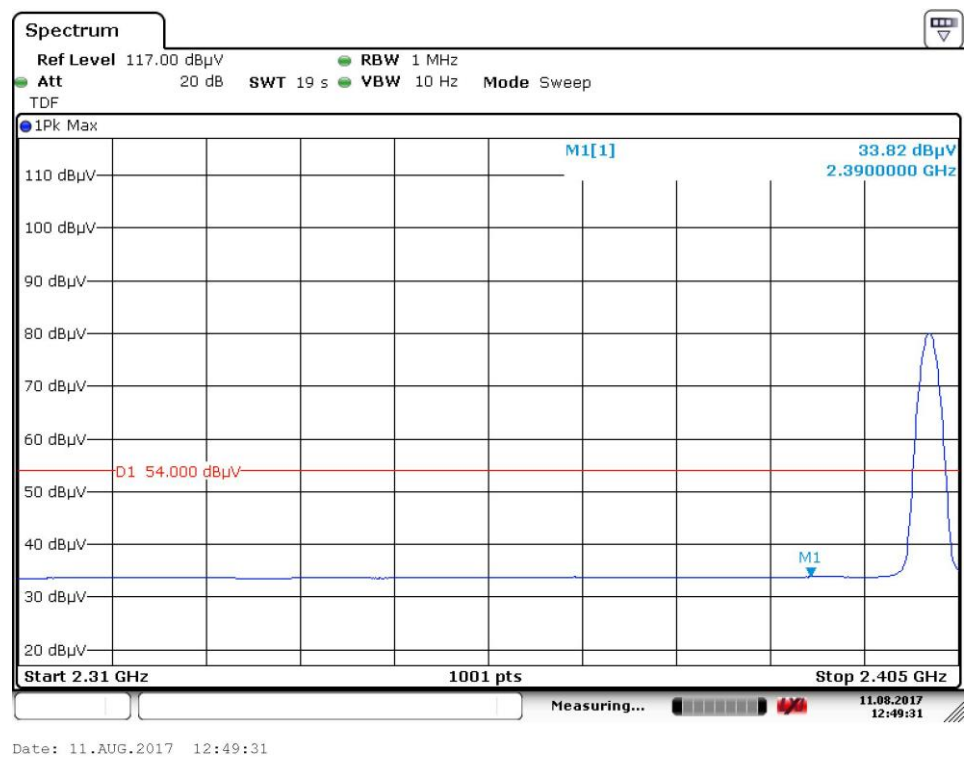
Spurious Emissions, Band Edges, 2.35-2.5G	2
Spurious Emissions, TX Mode, 1-18G.....	10
Spurious Emissions, TX Mode, 18-26G.....	21
Spurious Emissions, TX Mode, 30M-1G	34
Spurious Emissions, TX Mode, 150K-30M	35
Spurious Emissions, TX Mode, 9K-150K.....	37
Spurious Emissions, RX Mode, 1-18G	38
Spurious Emissions, RX Mode, 18-26G	42
Spurious Emissions, RX Mode, 30M-1G.....	46
Spurious Emissions, RX Mode, 150K-30M.....	47
Spurious Emissions, RX Mode, 9K-150K.....	49

Radiated Bandedge (GFSK)

Low Channel (Hor)

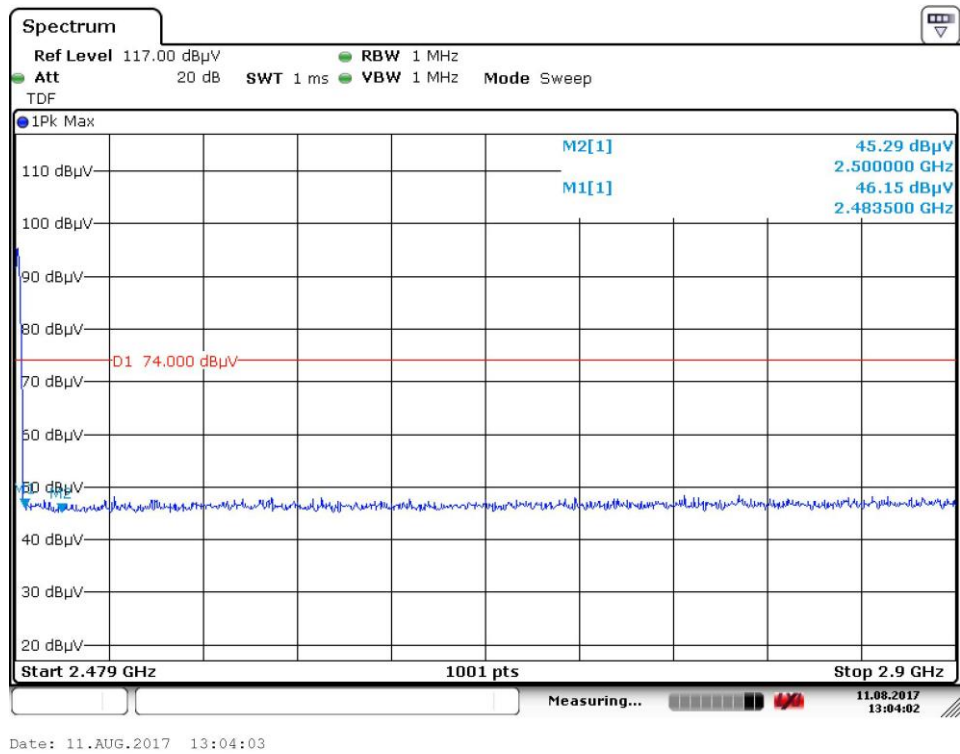
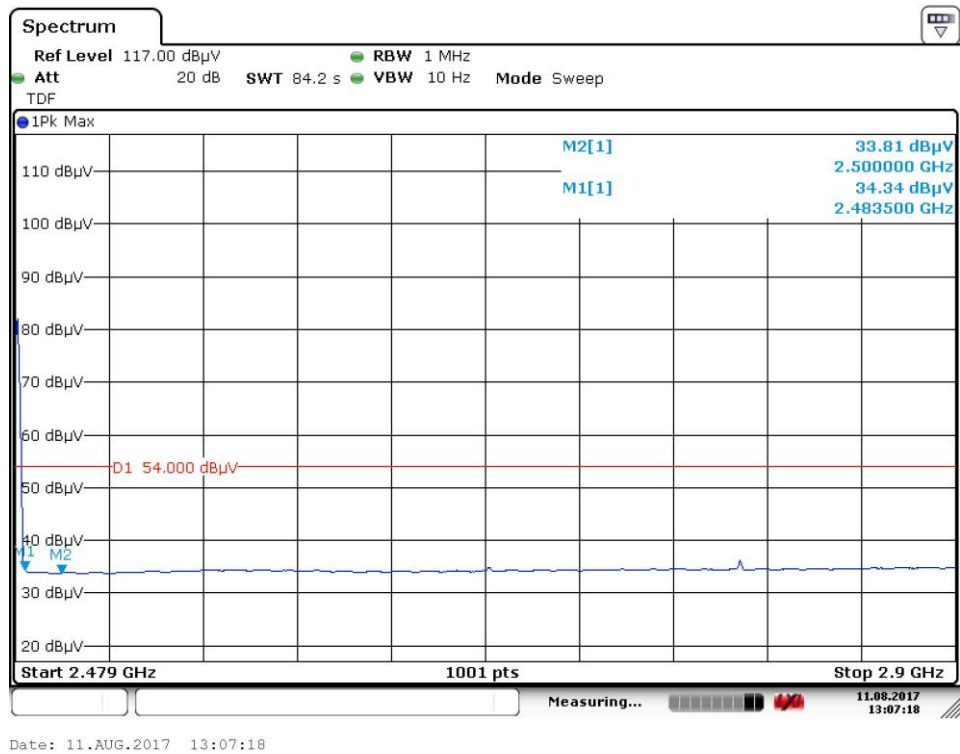


Low Channel (Ver)

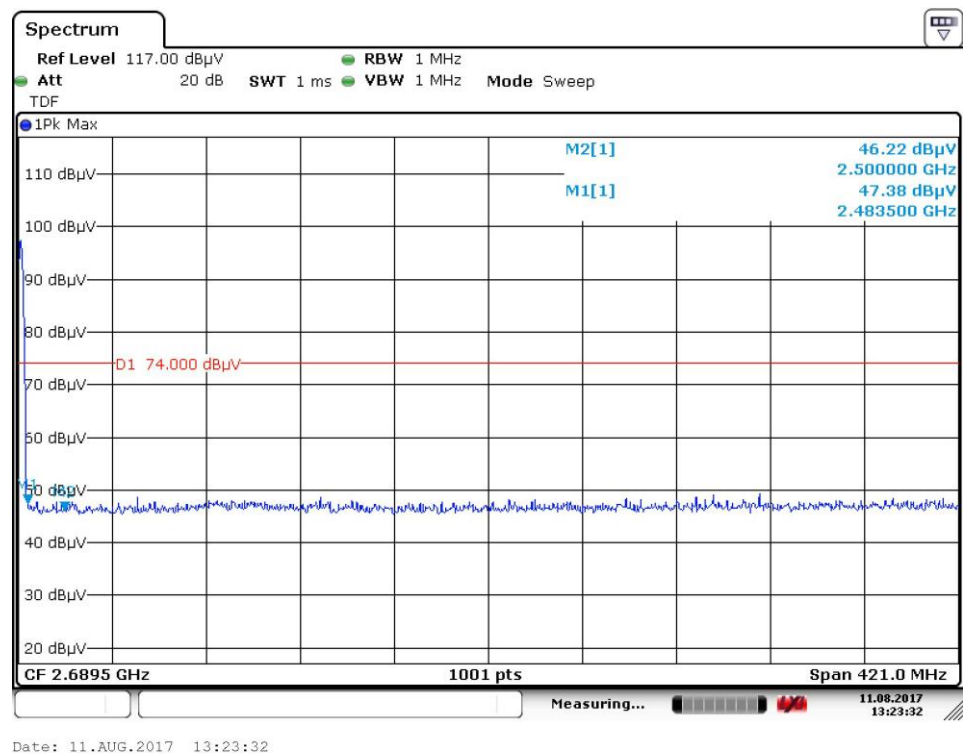
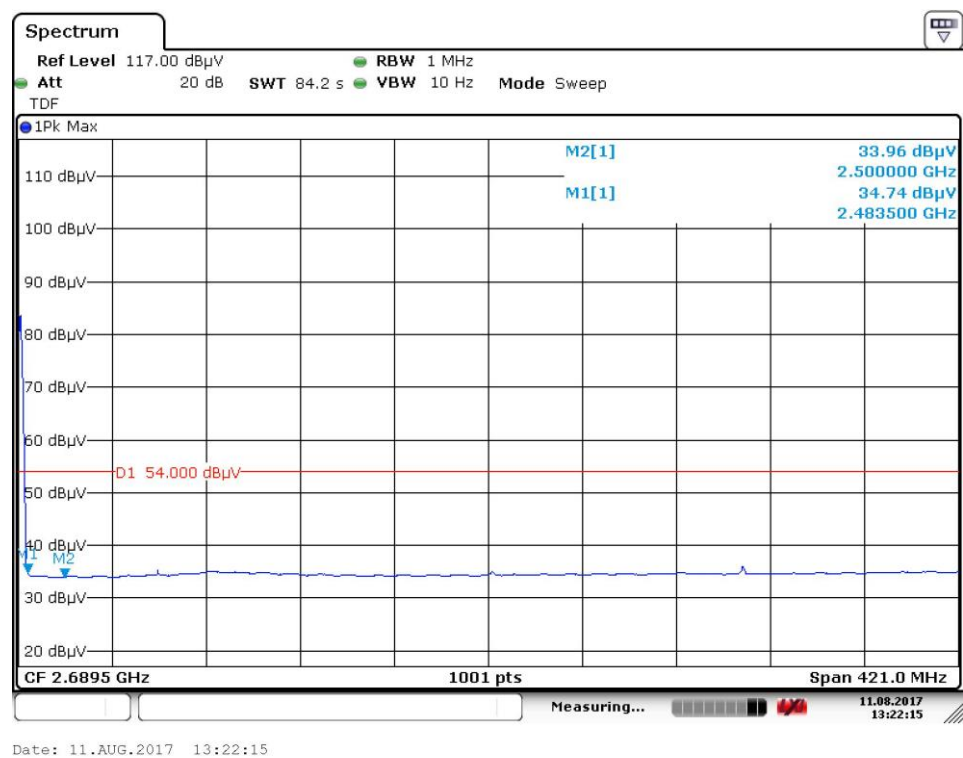


Radiated Bandedge (GFSK)

High Channel (Hor)

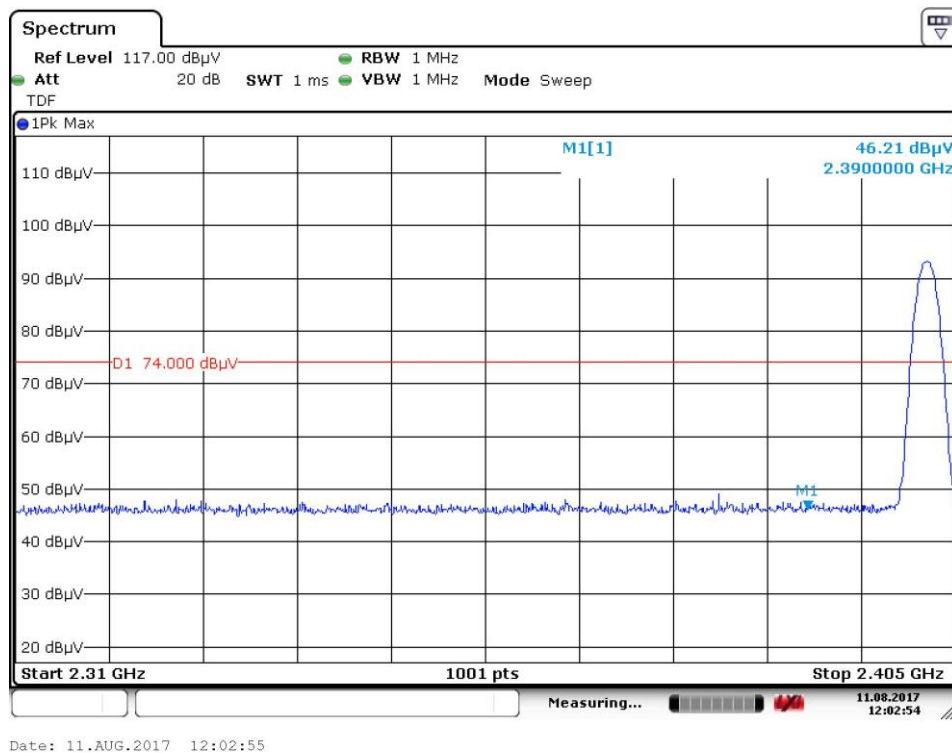
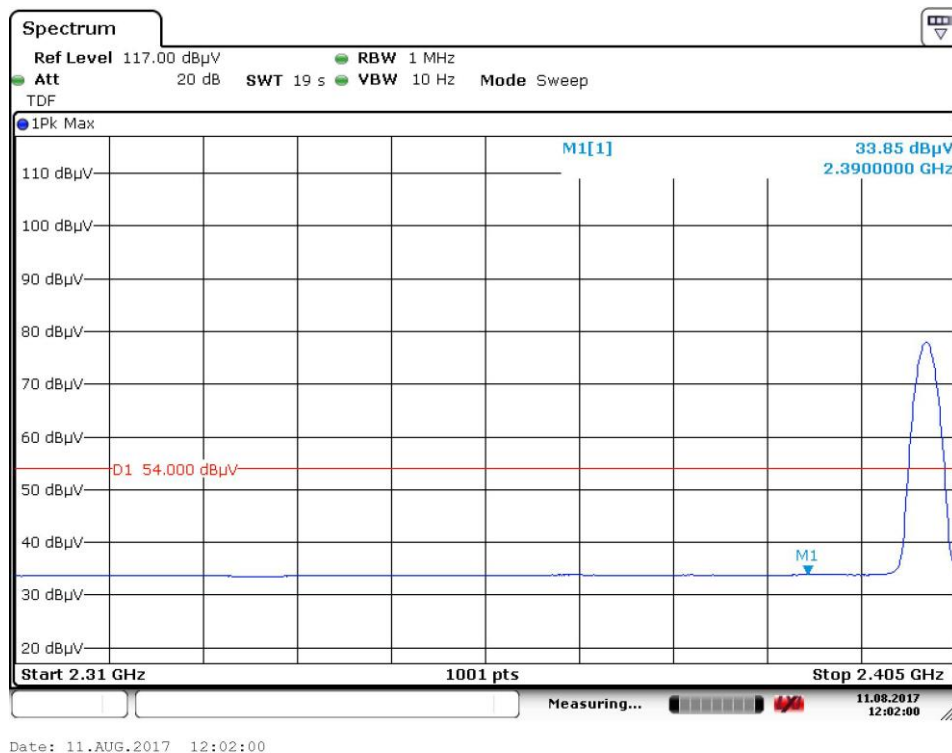


High Channel (Ver)

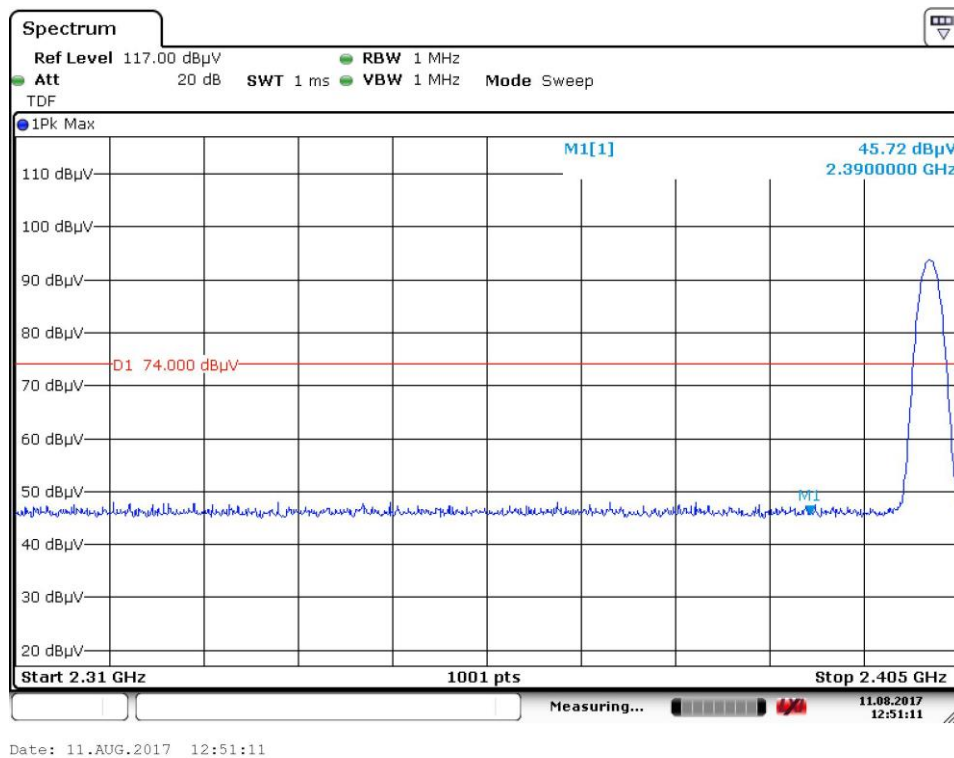
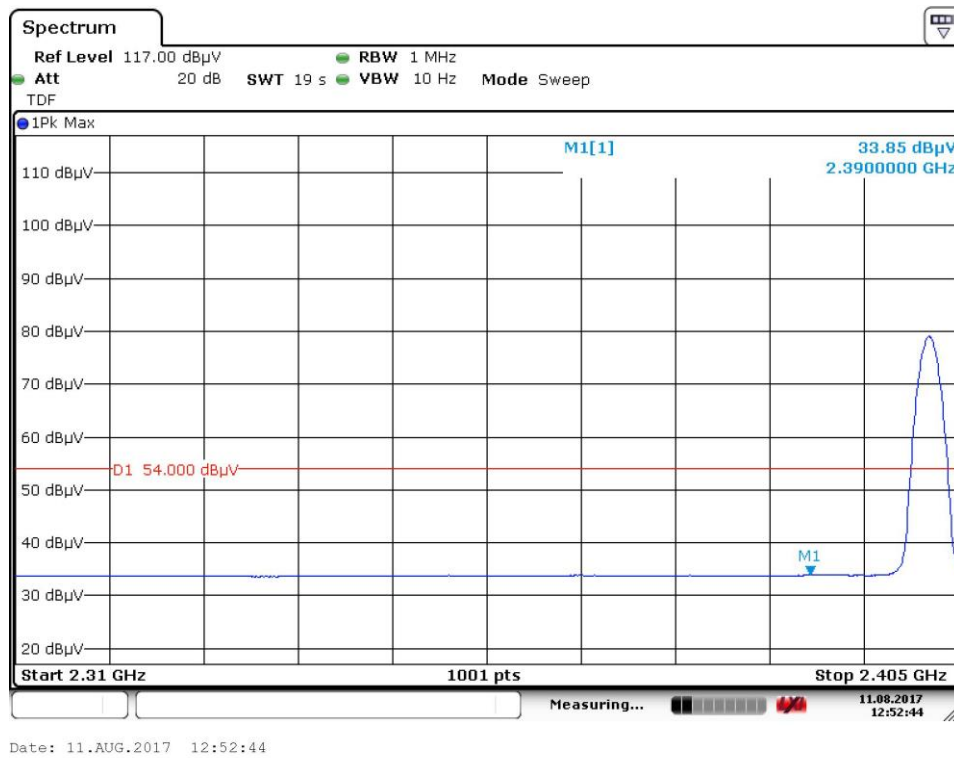


Radiated Bandedge (8DPSK)

Low Channel (Hor)

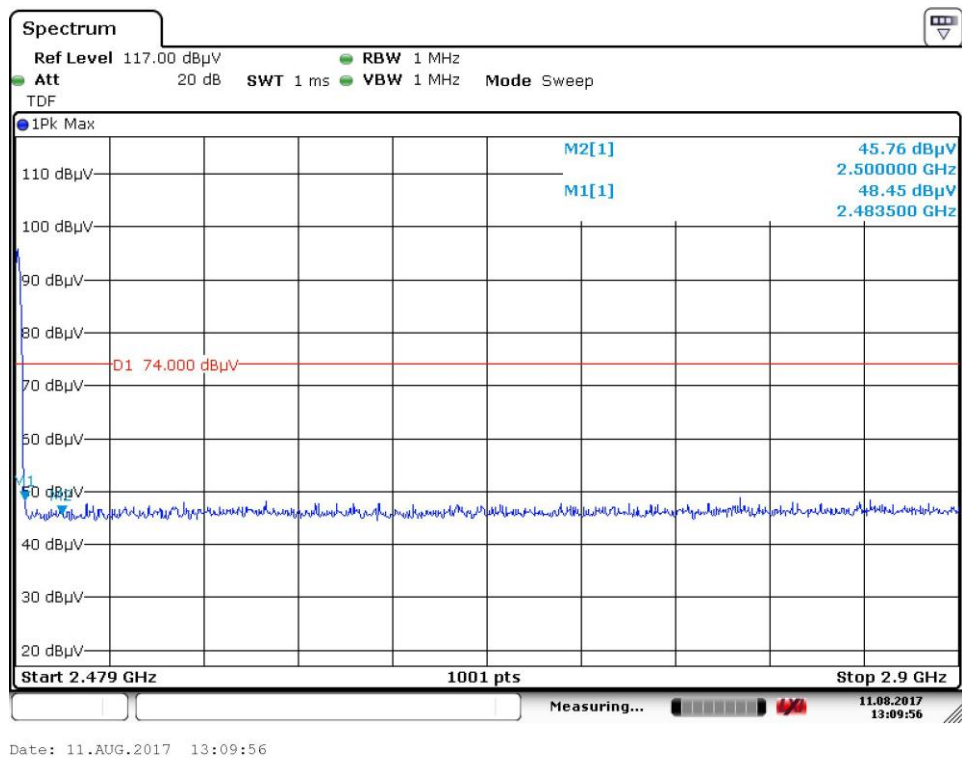
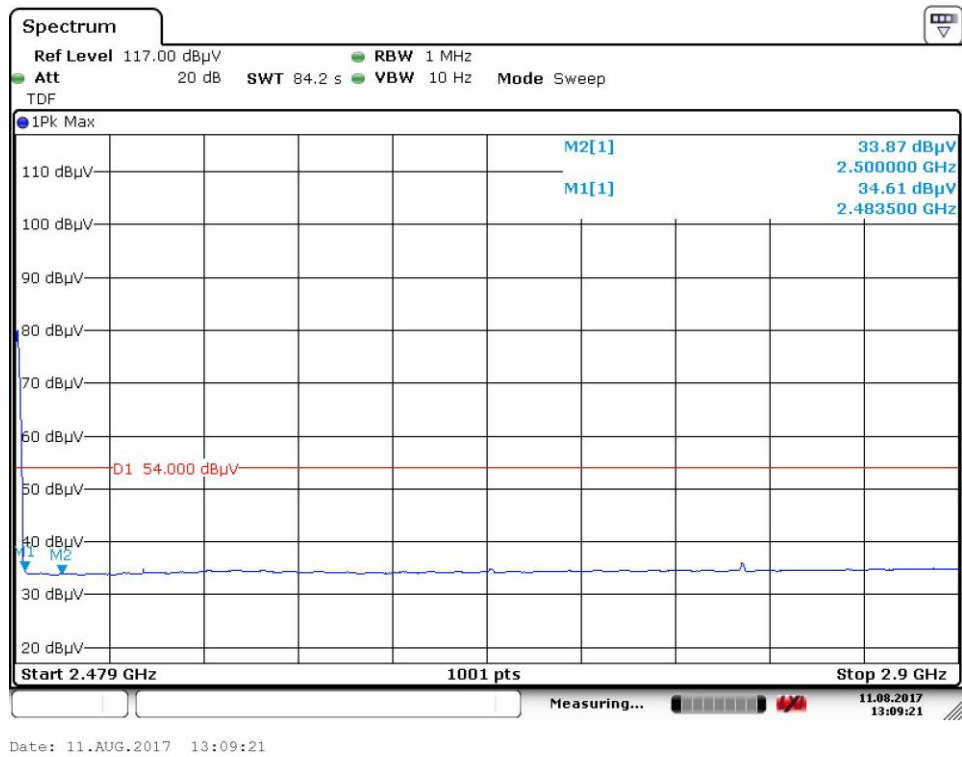


Low Channel (Ver)

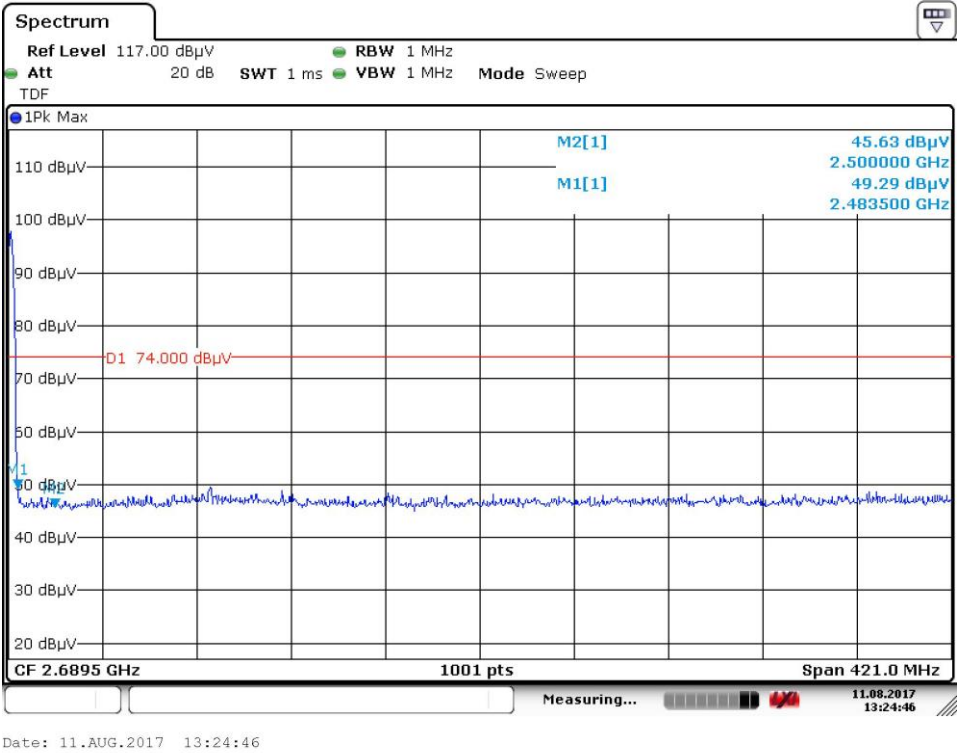
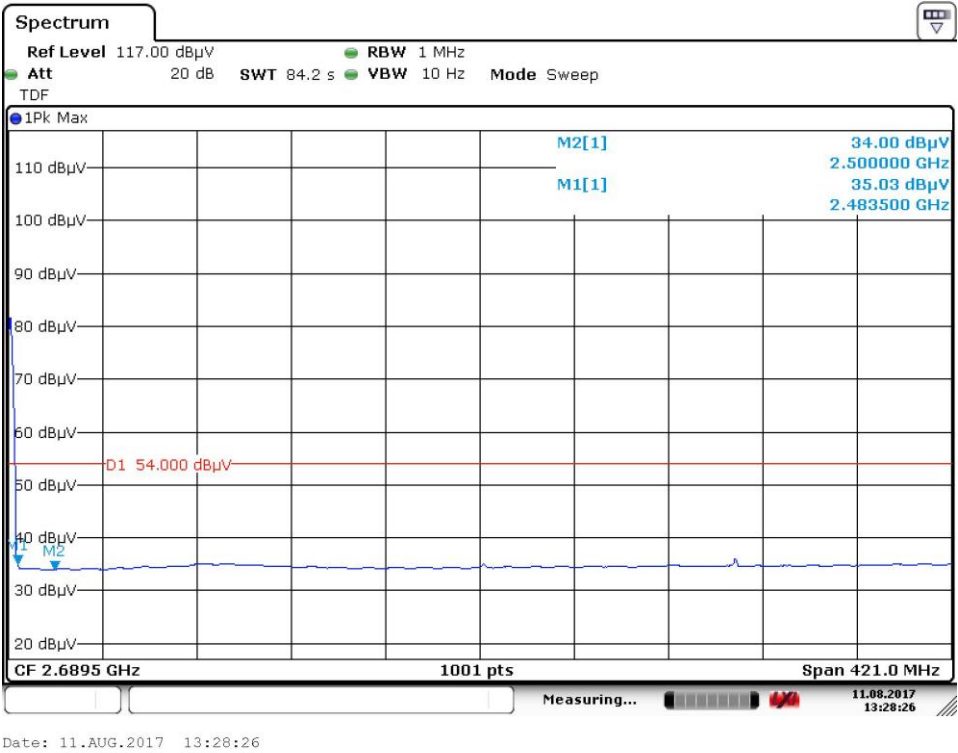


Radiated Bandedge (8DPSK)

High Channel (Hor)



High Channel (Ver)



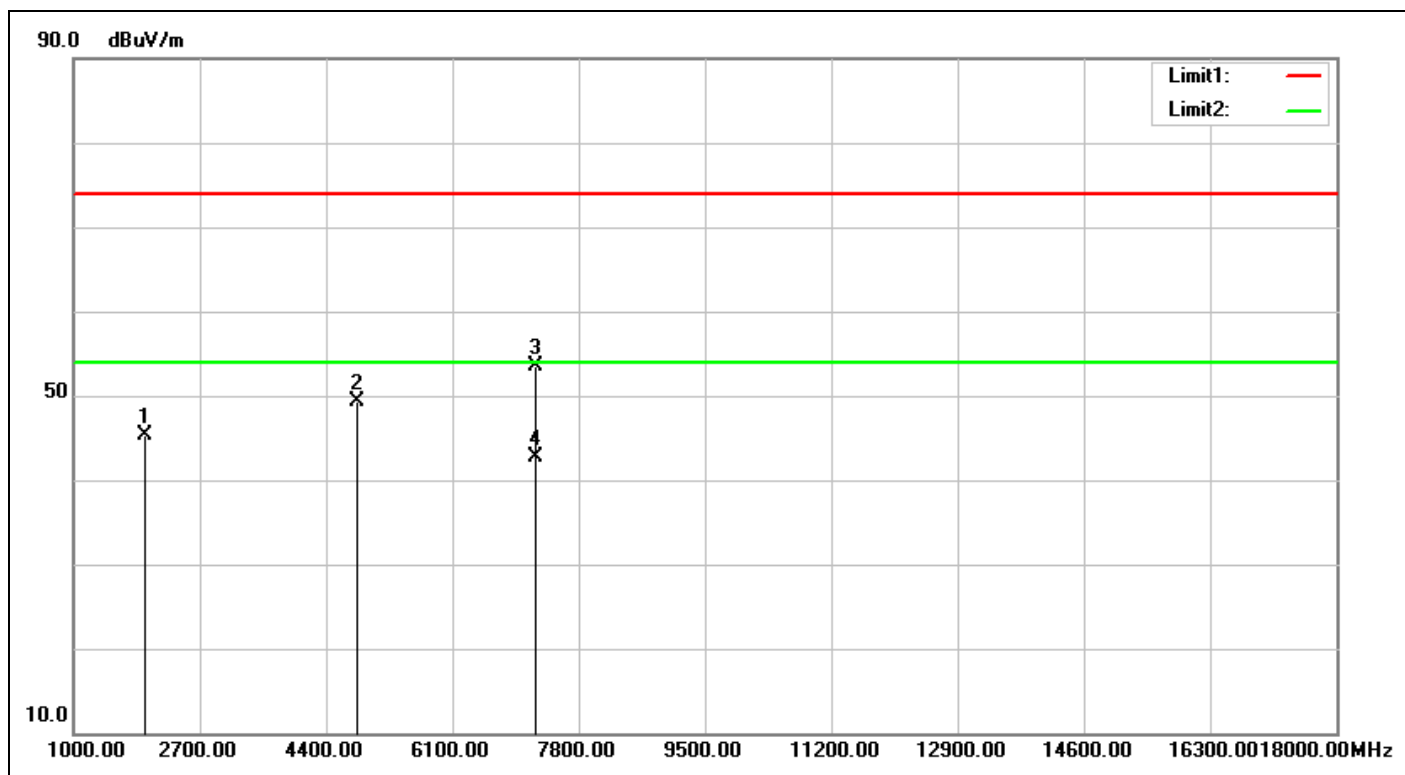
Spurious Emissions, TX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

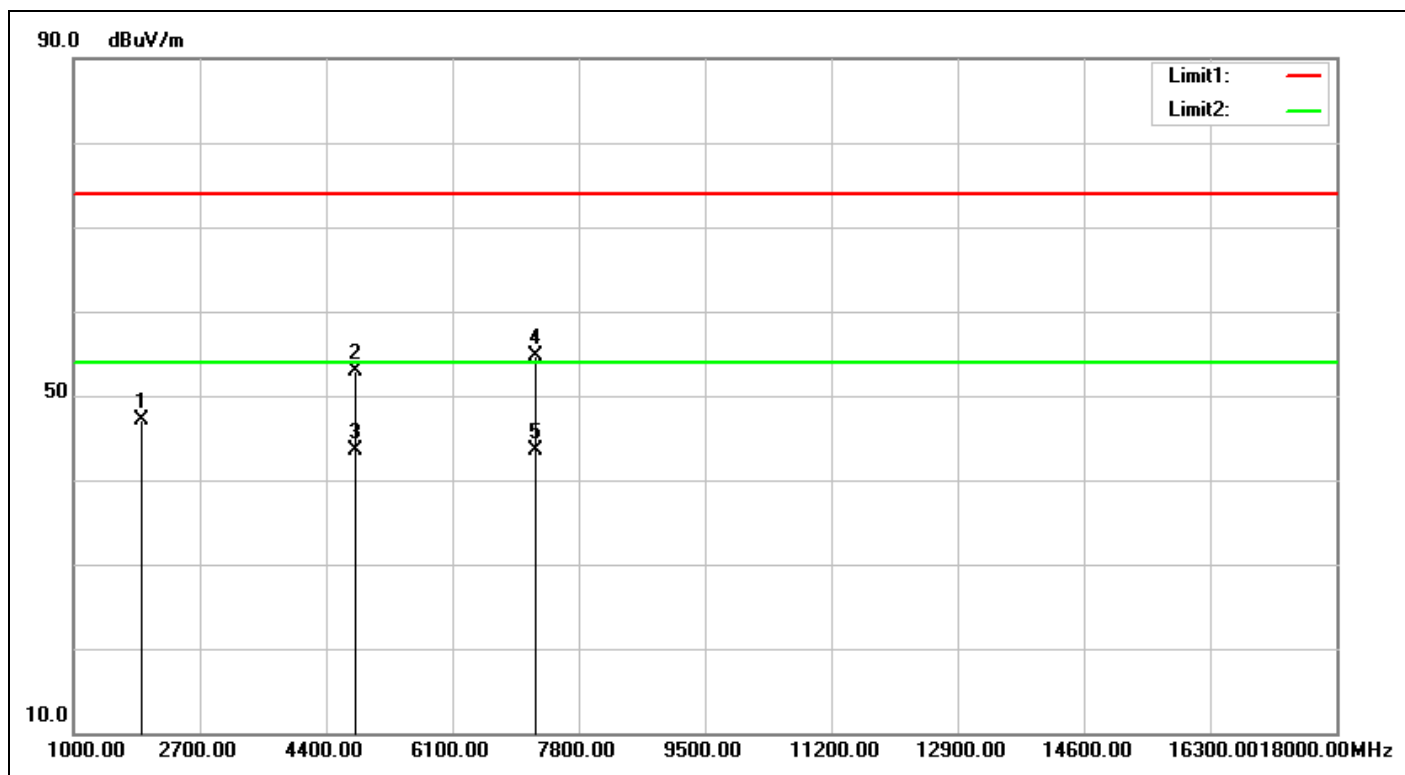
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

Tel:+886-2172-7000 fax:+886-2528-0018



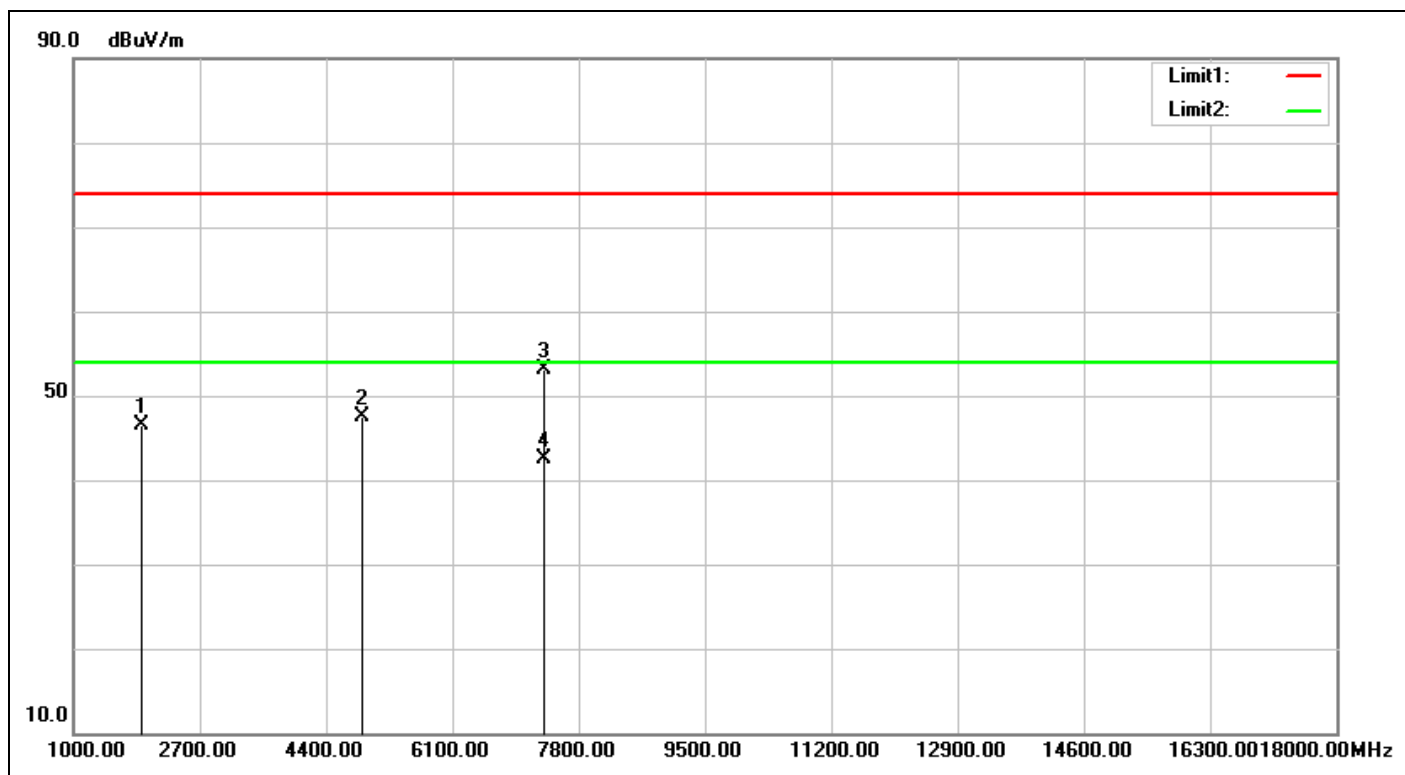
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 10:28:03
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1952.000	-5.41	50.71	45.30	74.00	-28.70	peak	100	249	
2	4804.000	0.43	48.83	49.26	74.00	-24.74	peak	100	257	
3	7206.000	9.11	44.31	53.42	74.00	-20.58	peak	100	321	
4	7206.000	9.11	33.62	42.73	54.00	-11.27	AVG	100	321	



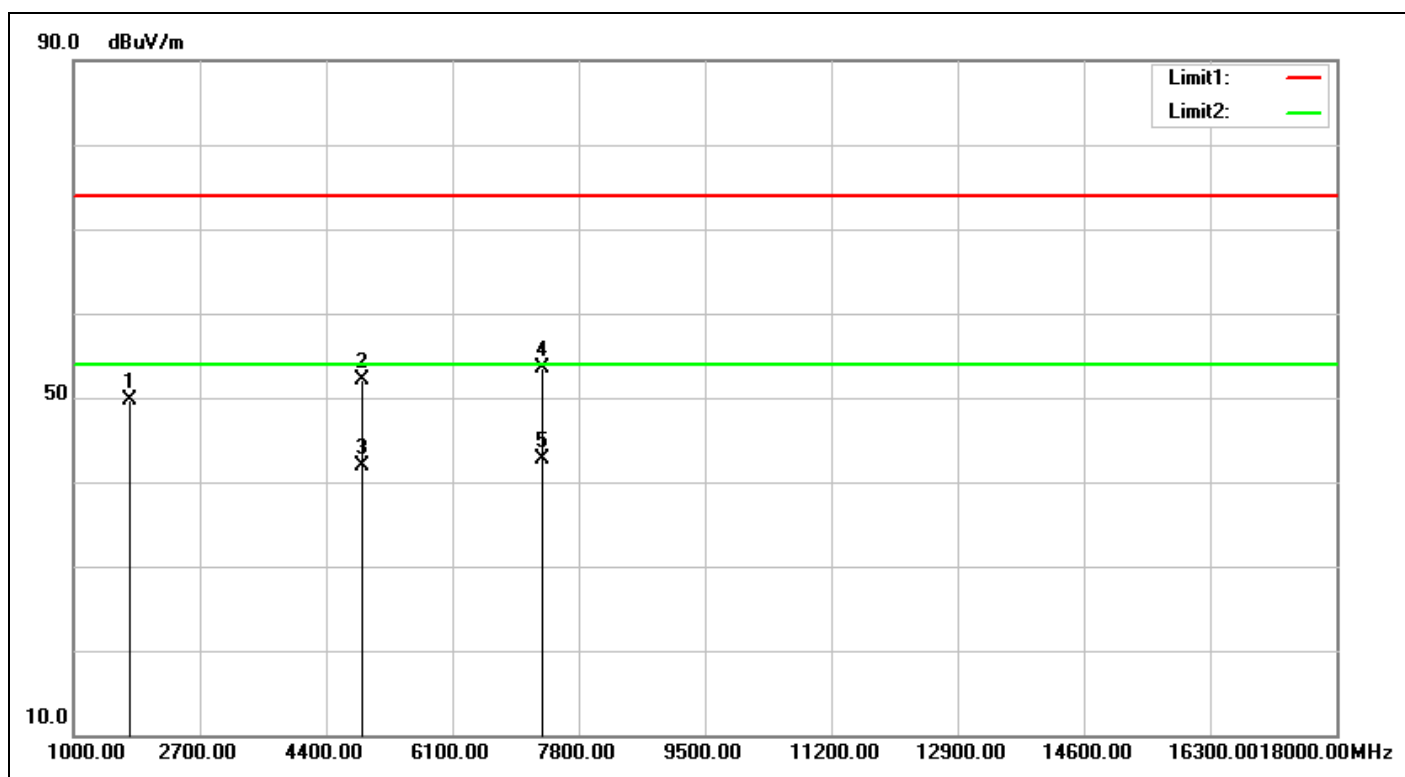
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 10:30:06
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1918.000	-5.67	52.82	47.15	74.00	-26.85	peak	100	131	
2	4804.000	0.43	52.47	52.90	74.00	-21.10	peak	100	275	
3	4804.000	0.43	43.13	43.56	54.00	-10.44	AVG	100	275	
4	7206.000	9.11	45.59	54.70	74.00	-19.30	peak	100	128	
5	7206.000	9.11	34.49	43.60	54.00	-10.40	AVG	100	128	



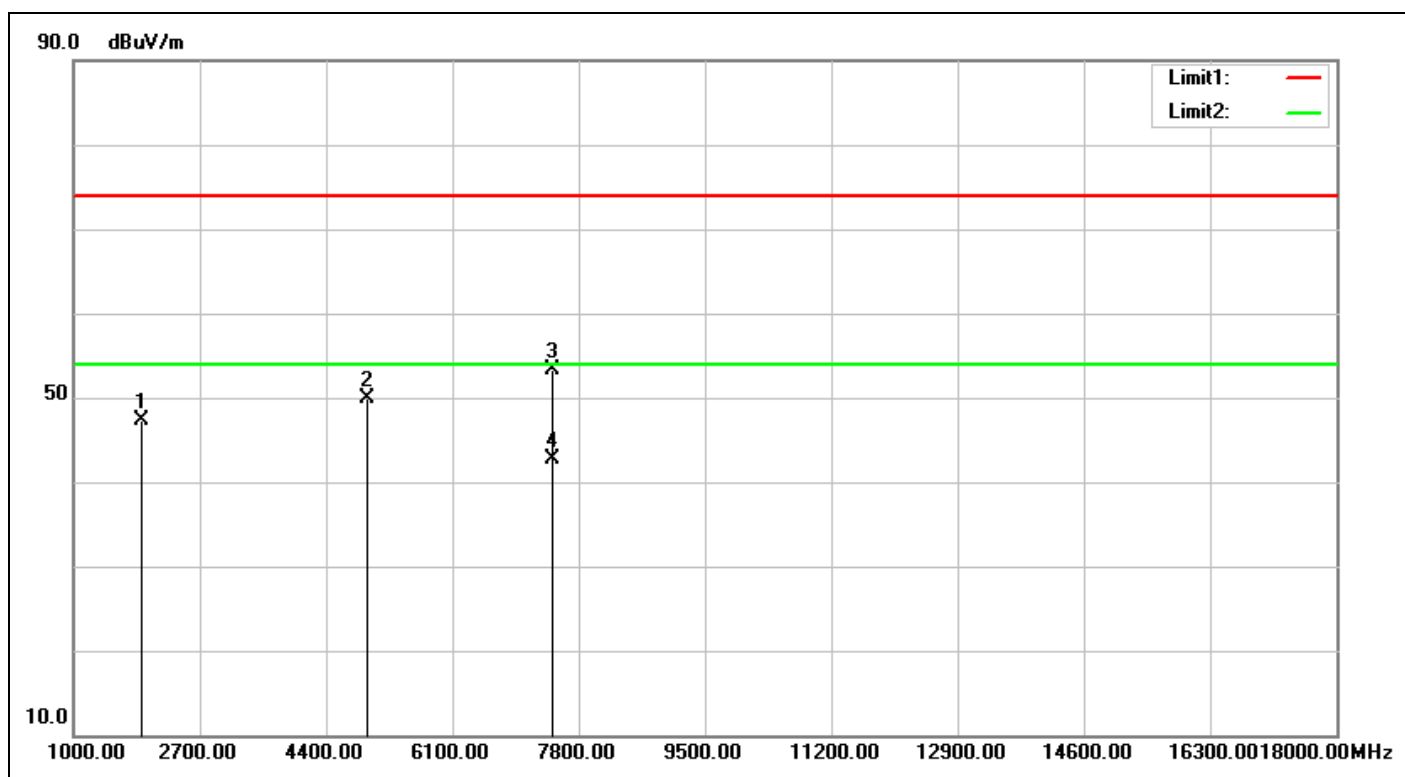
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 10:37:36
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1918.000	-5.67	52.23	46.56	74.00	-27.44	peak	100	305	
2	4882.000	0.67	46.92	47.59	74.00	-26.41	peak	100	133	
3	7323.000	9.45	43.72	53.17	74.00	-20.83	peak	100	255	
4	7323.000	9.45	33.11	42.56	54.00	-11.44	AVG	100	255	



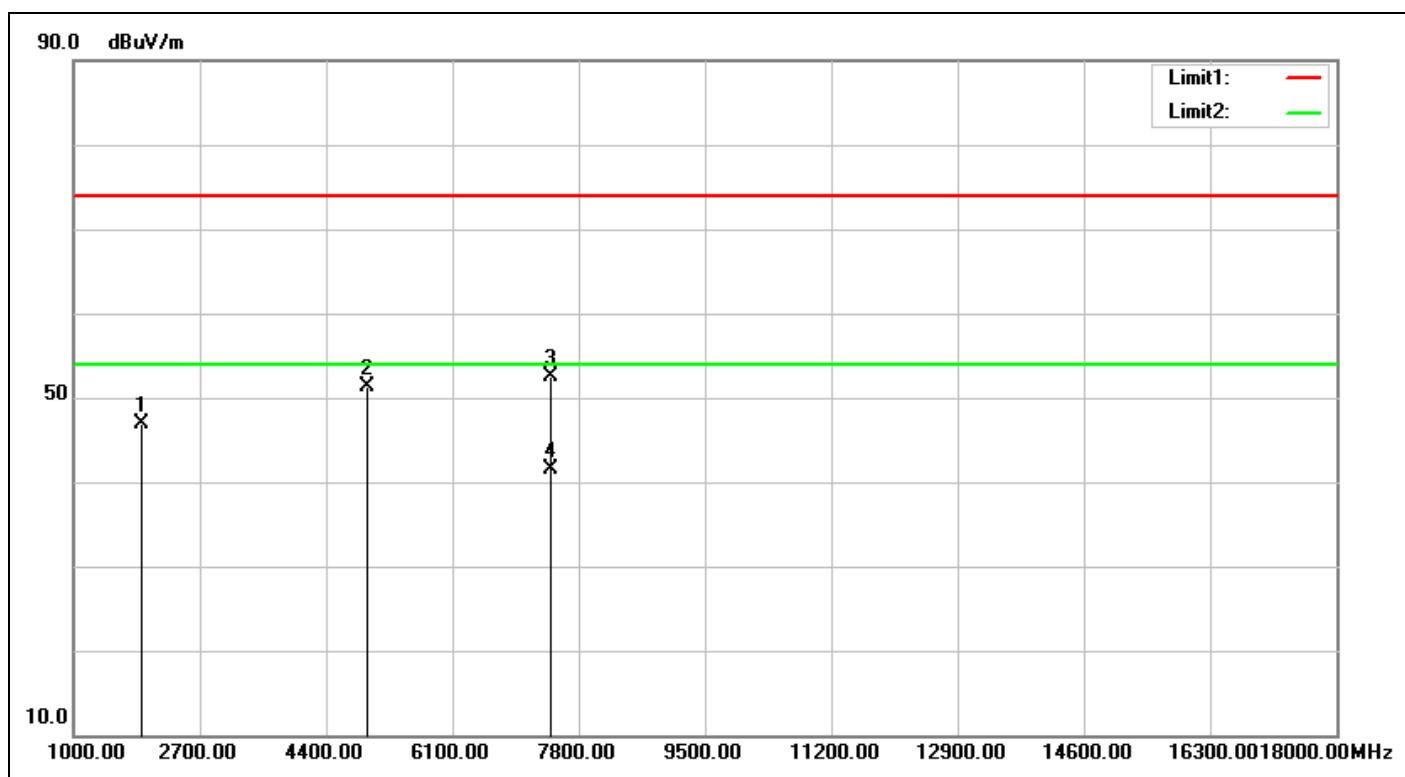
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Test item:	Radiation Emission	Test Time:	2017/8/11 10:39:39
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1765.000	-6.80	56.41	49.61	74.00	-24.39	peak	100	141	
2	4882.000	0.67	51.34	52.01	74.00	-21.99	peak	100	114	
3	4882.000	0.67	41.17	41.84	54.00	-12.16	AVG	100	114	
4	7323.000	9.45	44.00	53.45	74.00	-20.55	peak	100	28	
5	7323.000	9.45	33.22	42.67	54.00	-11.33	AVG	100	28	



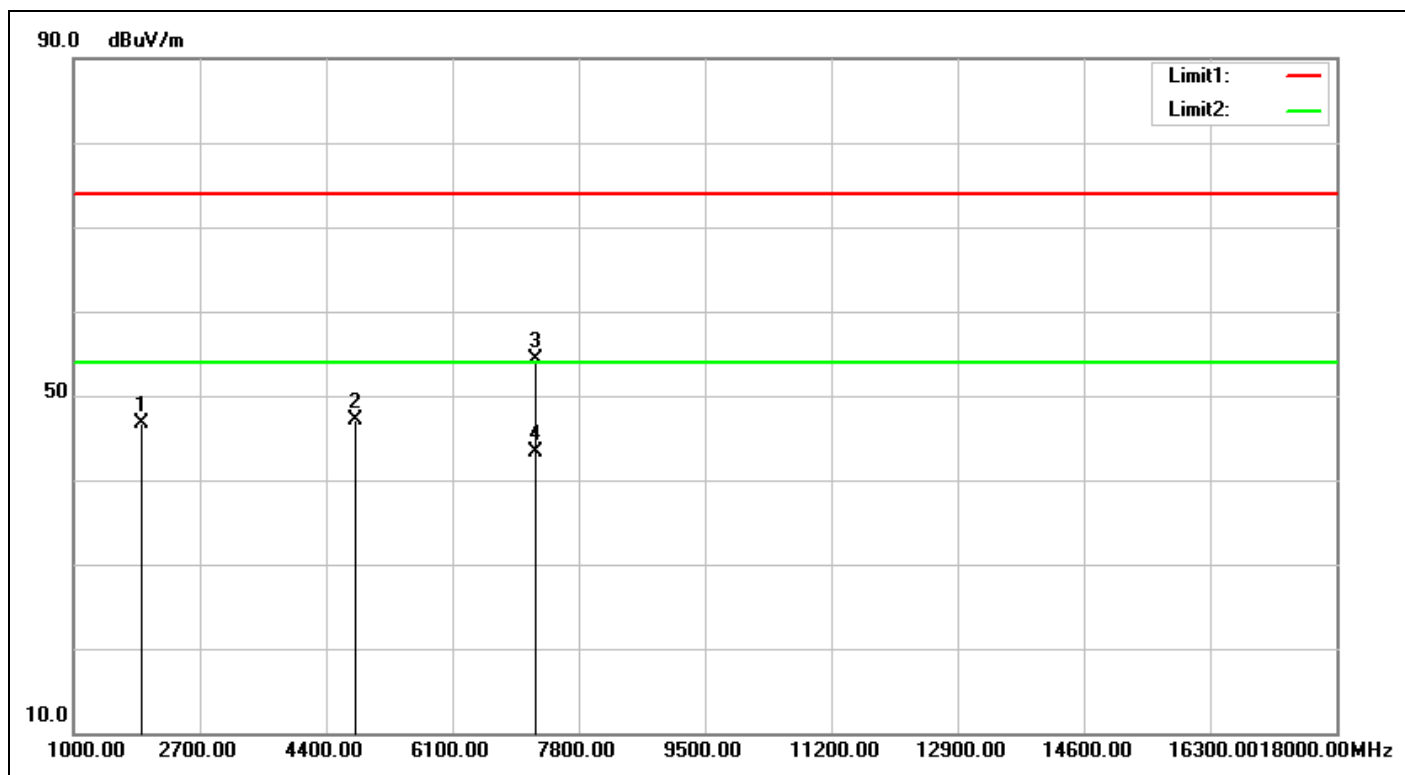
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 10:45:35
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1918.000	-5.67	53.05	47.38	74.00	-26.62	peak	100	305	
2	4960.000	0.90	49.09	49.99	74.00	-24.01	peak	100	106	
3	7440.000	9.79	43.46	53.25	74.00	-20.75	peak	100	197	
4	7440.000	9.79	32.88	42.67	54.00	-11.33	AVG	100	197	



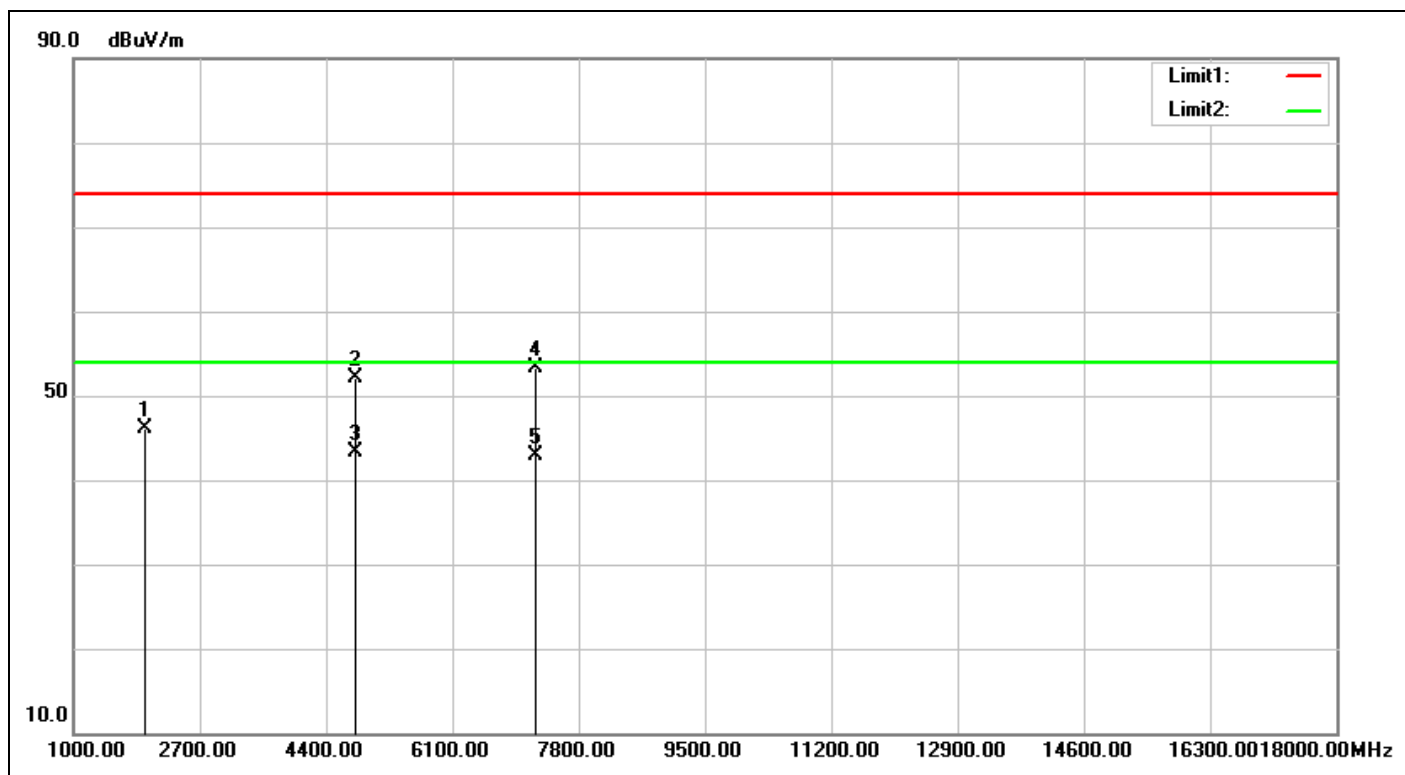
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 10:47:38
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1918.000	-5.67	52.63	46.96	74.00	-27.04	peak	100	235	
2	4960.000	0.90	50.42	51.32	74.00	-22.68	peak	100	268	
3	7440.000	9.79	42.76	52.55	74.00	-21.45	peak	100	232	
4	7440.000	9.79	31.64	41.43	54.00	-12.57	AVG	100	232	



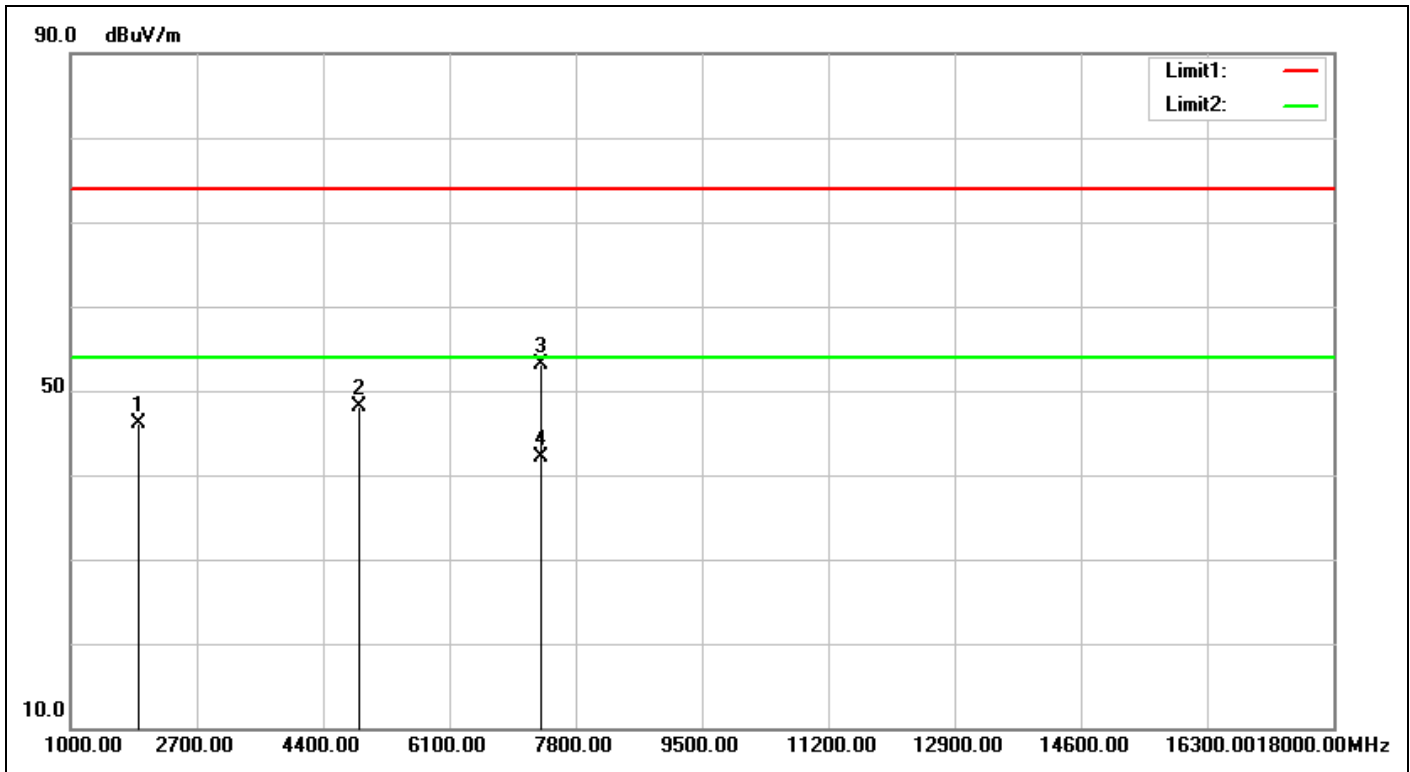
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 10:56:51
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1918.000	-5.67	52.30	46.63	74.00	-27.37	peak	100	308	
2	4804.000	0.43	46.65	47.08	74.00	-26.92	peak	100	296	
3	7206.000	9.11	45.16	54.27	74.00	-19.73	peak	100	195	
4	7206.000	9.11	34.19	43.30	54.00	-10.70	AVG	100	195	



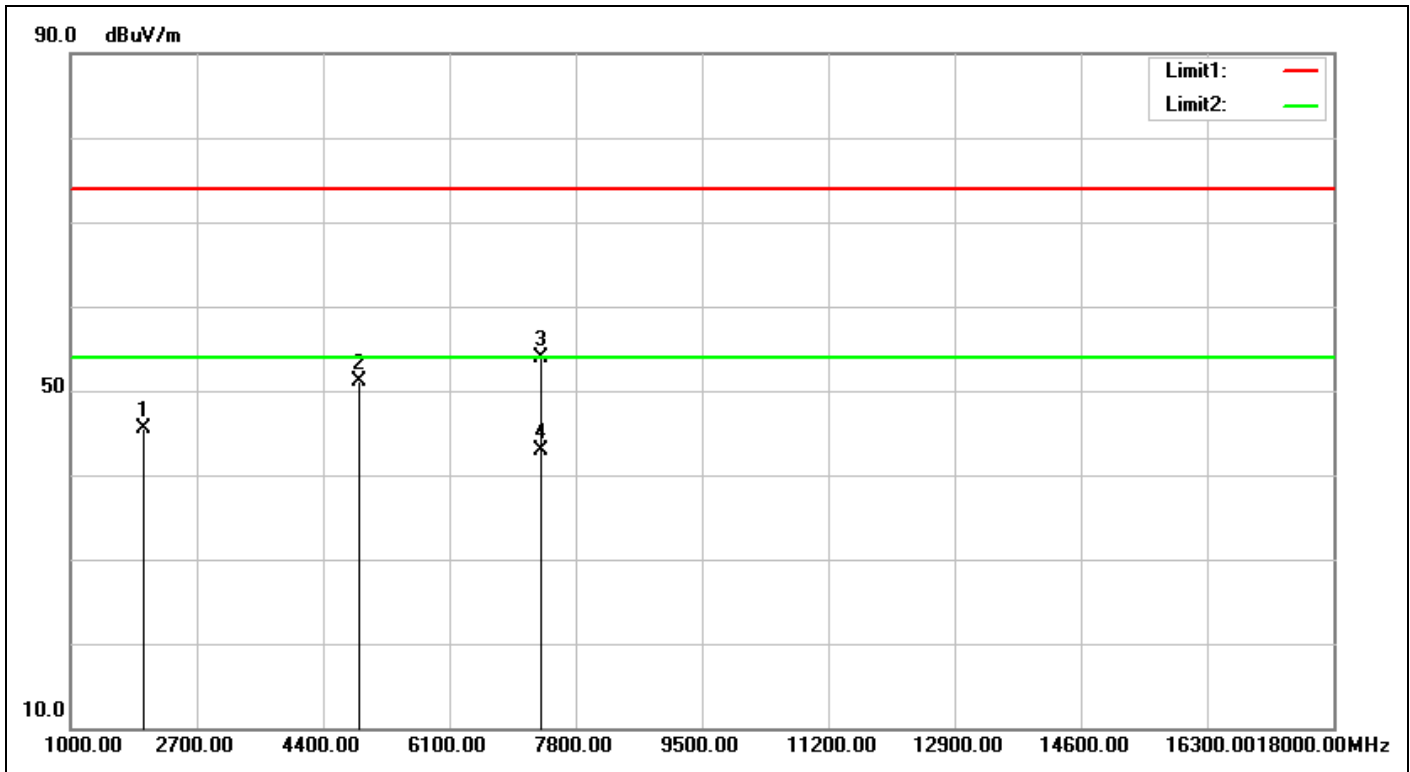
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Test item:	Radiation Emission	Test Time:	2017/8/11 10:58:54
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1952.000	-5.41	51.61	46.20	74.00	-27.80	peak	100	312	
2	4804.000	0.43	51.68	52.11	74.00	-21.89	peak	100	276	
3	4804.000	0.43	42.83	43.26	54.00	-10.74	AVG	100	276	
4	7206.000	9.11	44.23	53.34	74.00	-20.66	peak	100	207	
5	7206.000	9.11	33.73	42.84	54.00	-11.16	AVG	100	207	



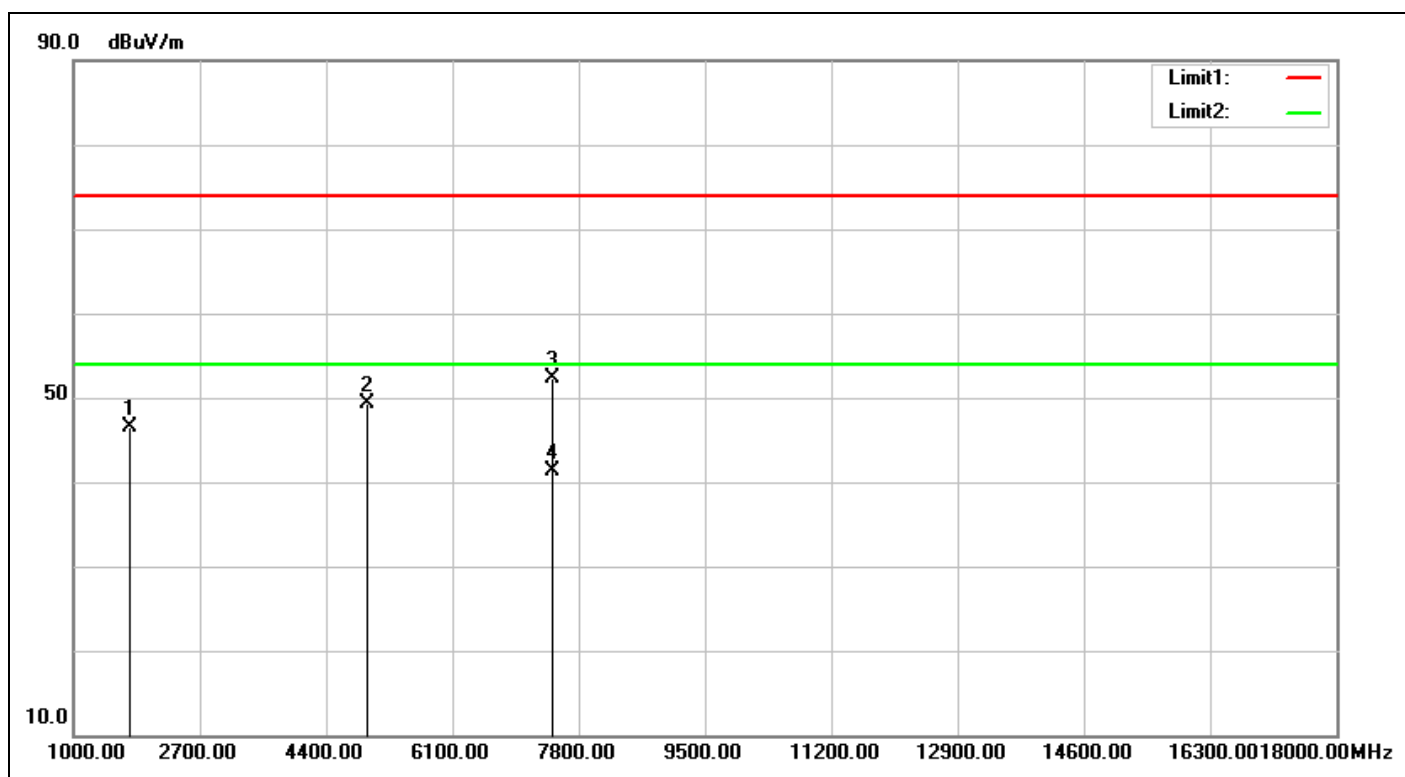
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 11:07:22
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1918.000	-5.67	51.78	46.11	74.00	-27.89	peak	100	305	
2	4882.000	0.67	47.34	48.01	74.00	-25.99	peak	100	295	
3	7323.000	9.45	43.73	53.18	74.00	-20.82	peak	100	342	
4	7323.000	9.45	32.62	42.07	54.00	-11.93	AVG	100	342	



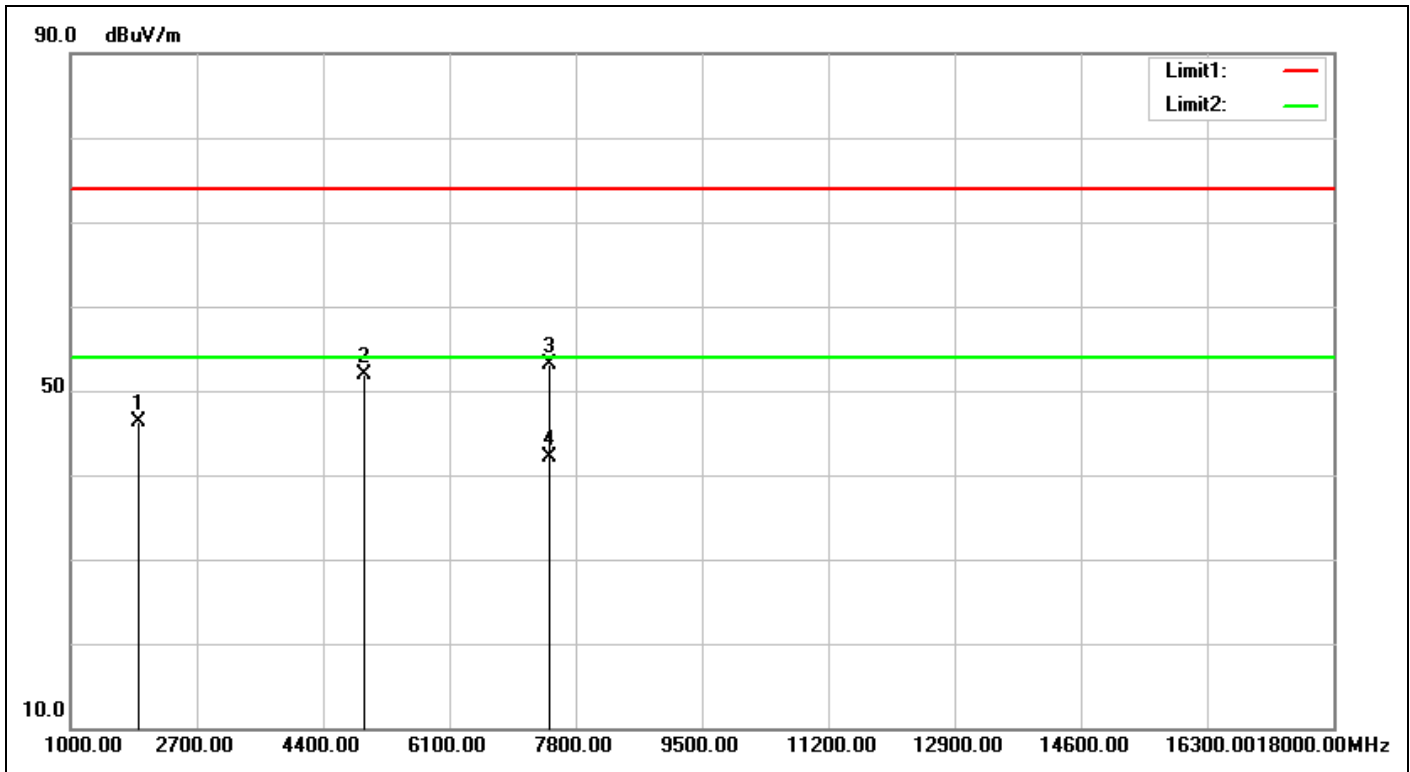
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 11:09:25
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1986.000	-5.16	50.72	45.56	74.00	-28.44	peak	100	160	
2	4882.000	0.67	50.50	51.17	74.00	-22.83	peak	100	194	
3	7323.000	9.45	44.55	54.00	74.00	-20.00	peak	100	152	
4	7323.000	9.45	33.39	42.84	54.00	-11.16	AVG	100	152	



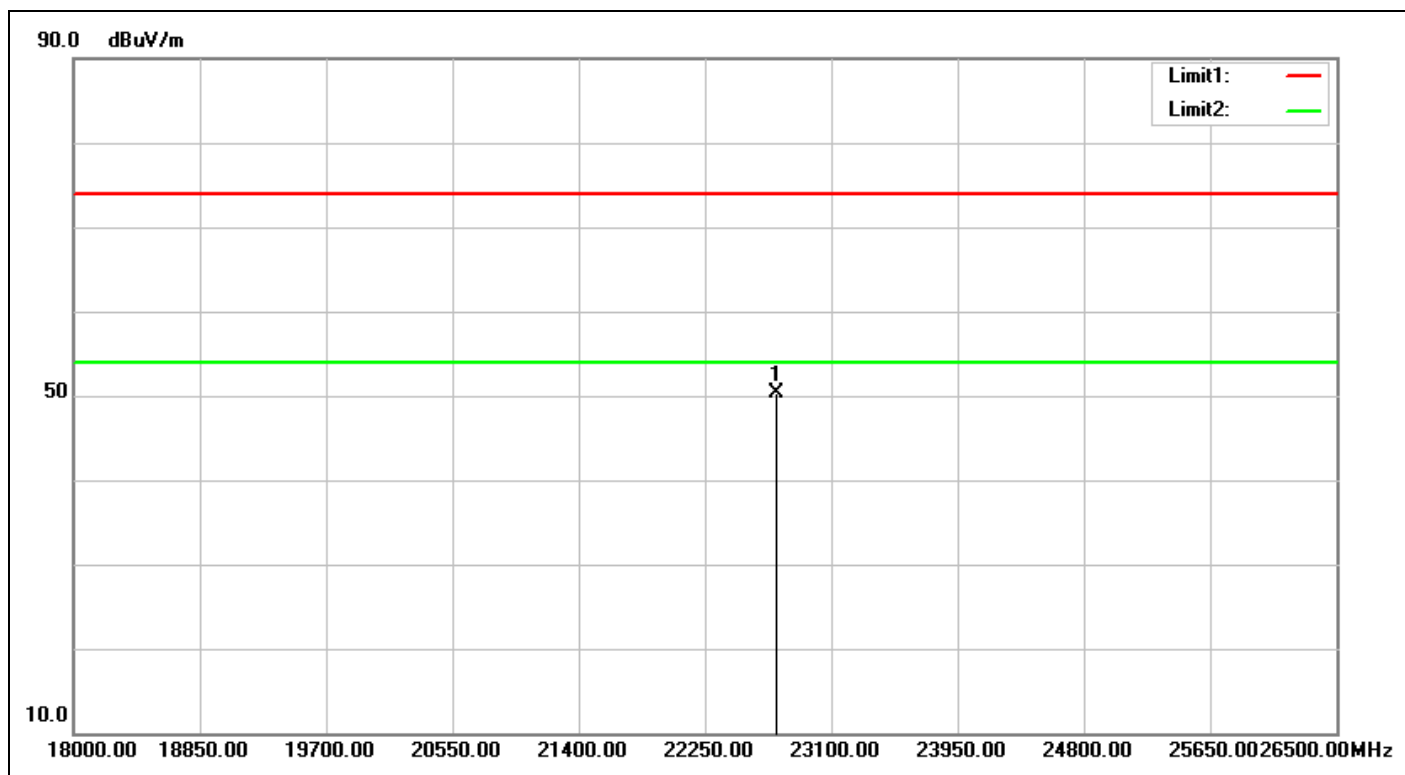
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 11:15:33
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1748.000	-6.92	53.39	46.47	74.00	-27.53	peak	100	140	
2	4960.000	0.90	48.49	49.39	74.00	-24.61	peak	100	192	
3	7440.000	9.79	42.59	52.38	74.00	-21.62	peak	100	255	
4	7443.000	9.79	31.46	41.25	54.00	-12.75	AVG	100	255	



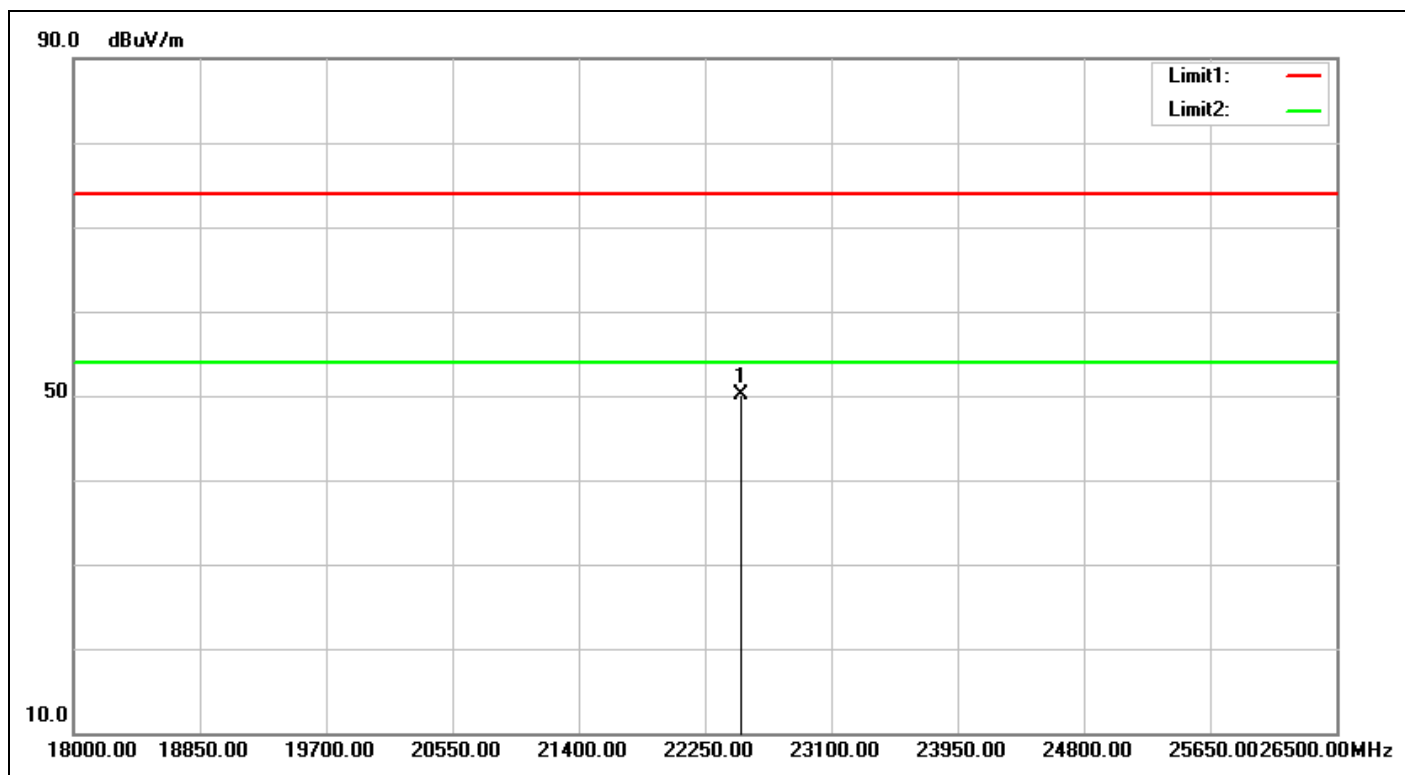
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 11:17:36
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1918.000	-5.67	51.99	46.32	74.00	-27.68	peak	100	269	
2	4960.000	0.90	51.05	51.95	74.00	-22.05	peak	100	277	
3	7440.000	9.79	43.37	53.16	74.00	-20.84	peak	100	86	
4	7440.000	9.79	32.23	42.02	54.00	-11.98	AVG	100	86	



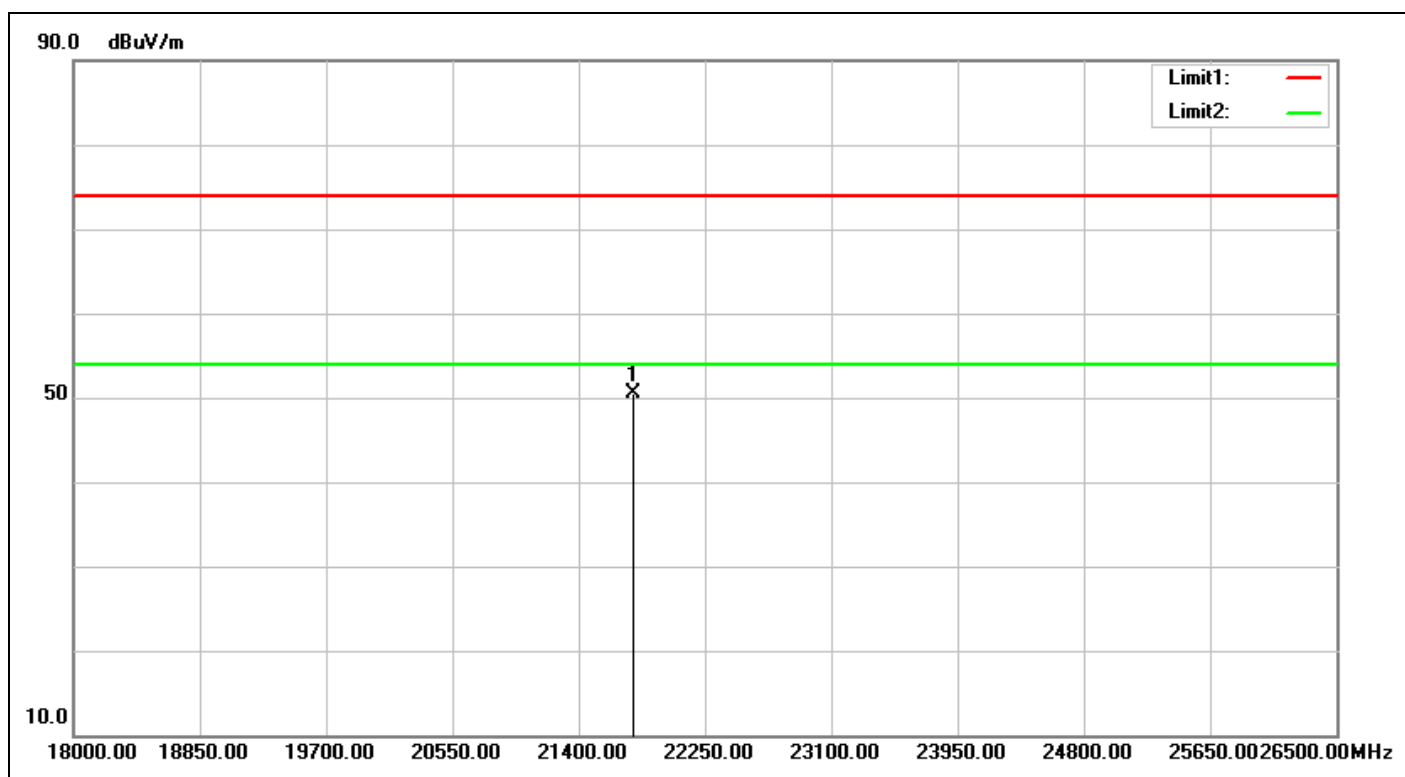
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 13:45:02
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22734.500	32.25	18.05	50.30	74.00	-23.70	peak	100	282	



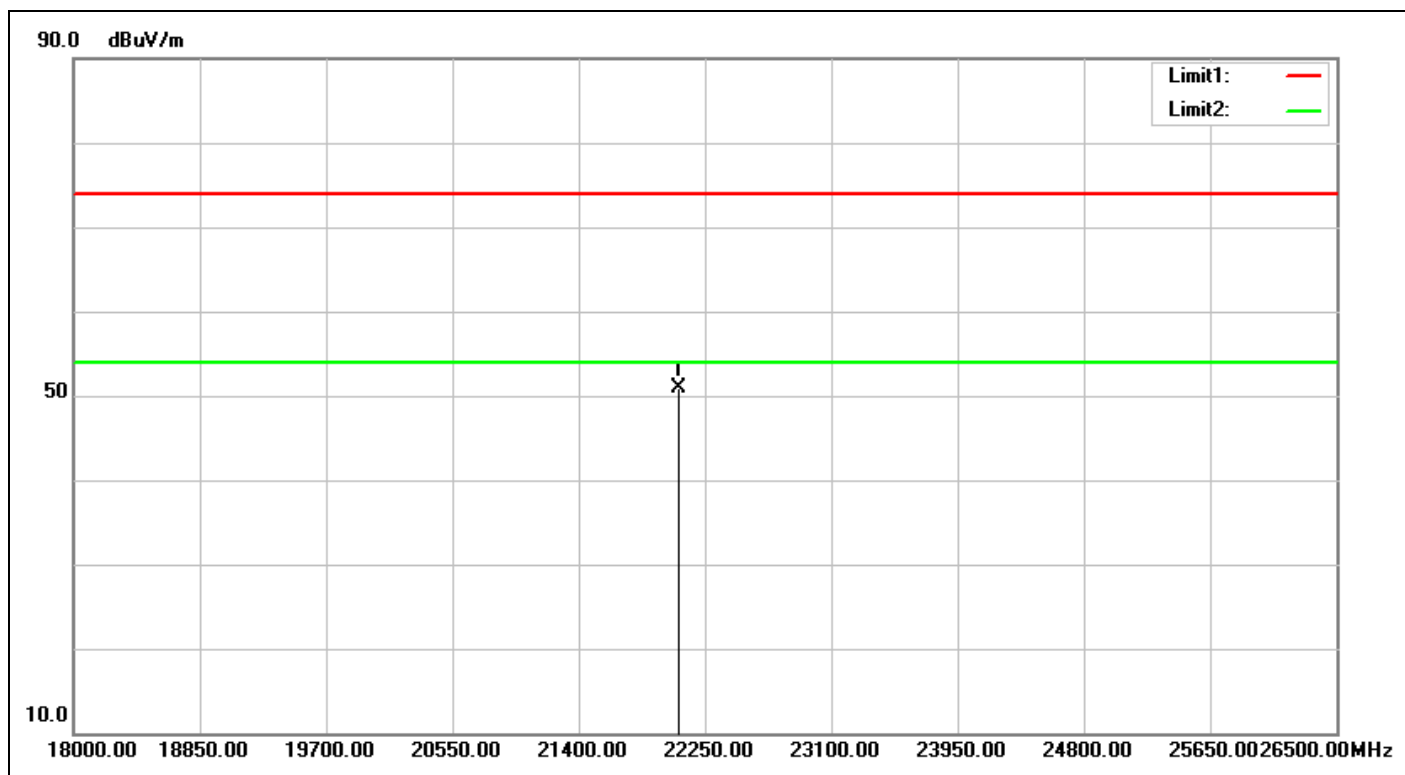
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 13:46:05
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22488.000	32.40	17.80	50.20	74.00	-23.80	peak	100	81	



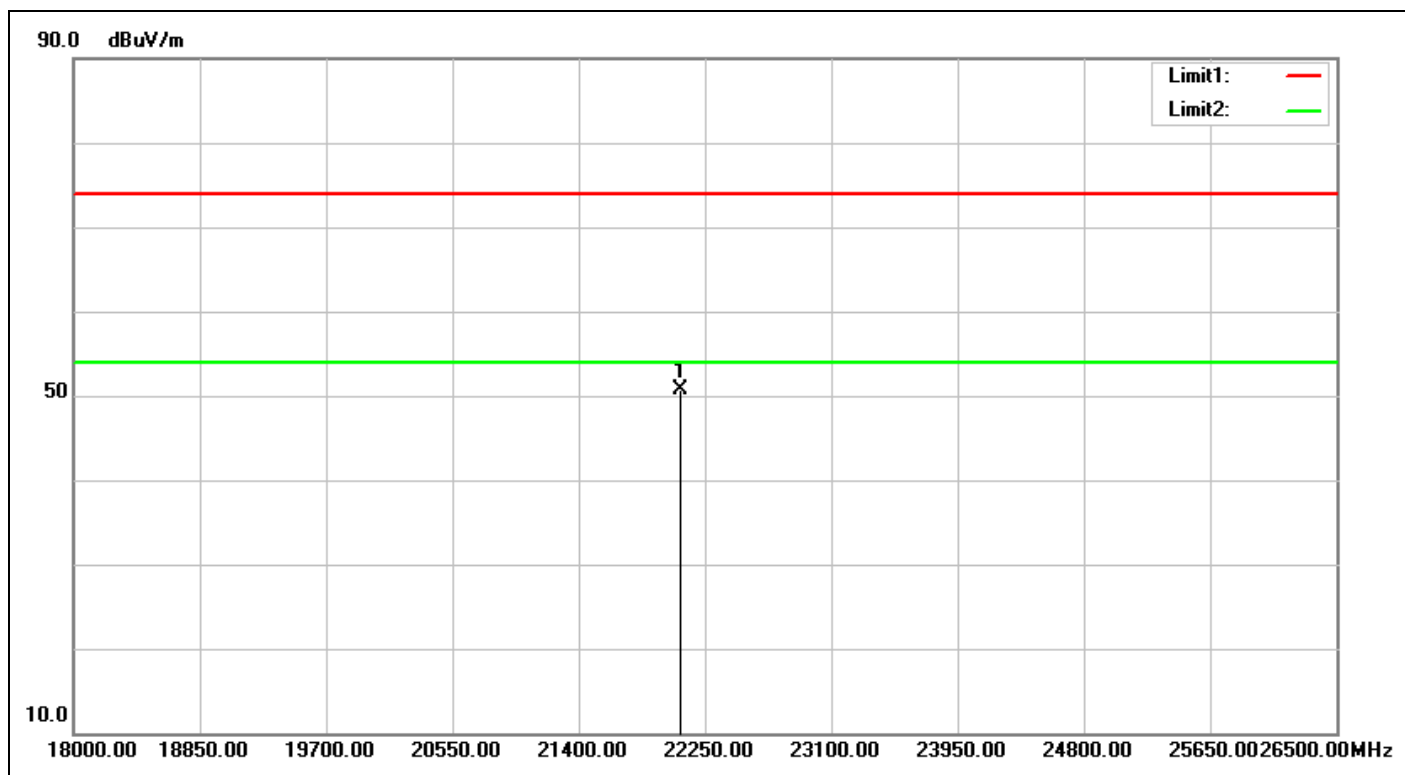
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 13:48:22
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21765.500	32.46	18.07	50.53	74.00	-23.47	peak	100	360	



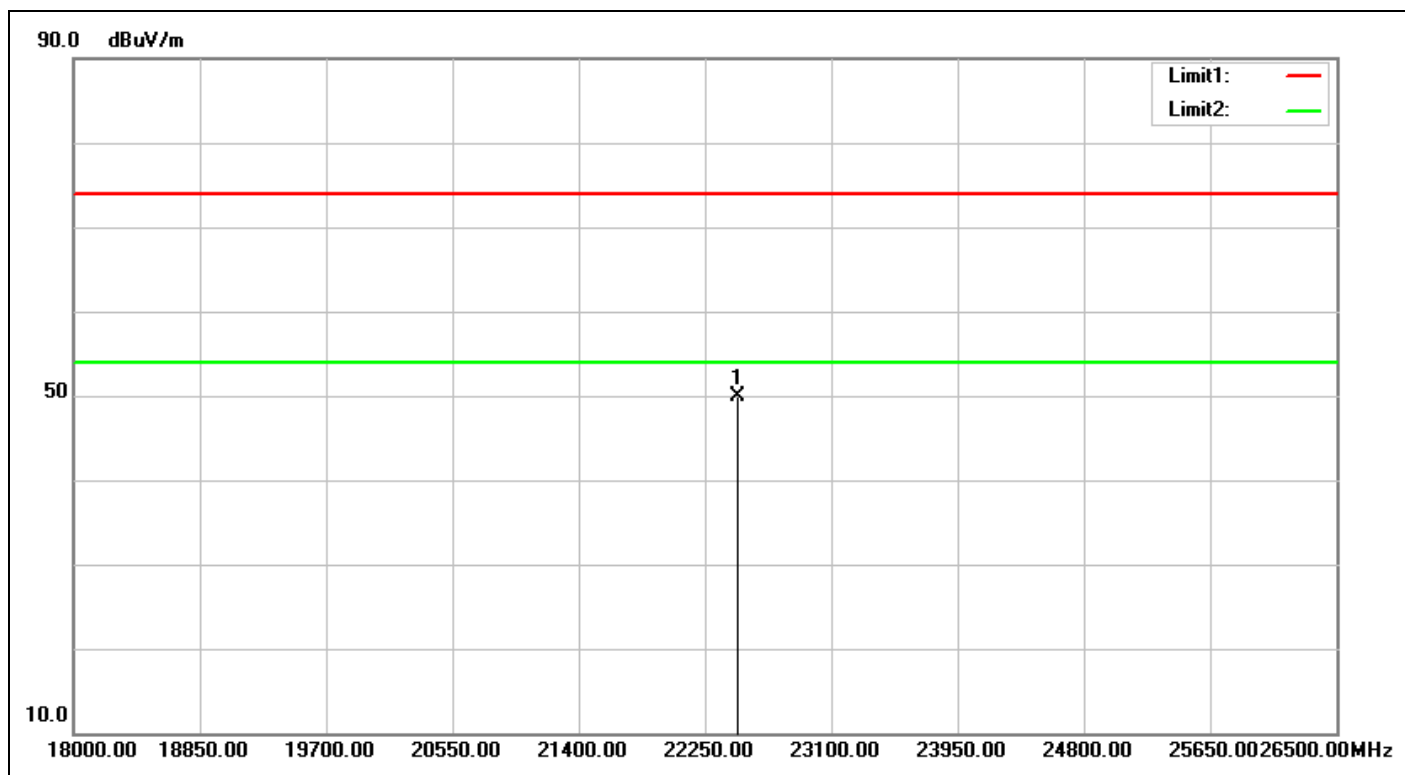
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 13:49:24
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22071.500	32.64	18.18	50.82	74.00	-23.18	peak	100	244	



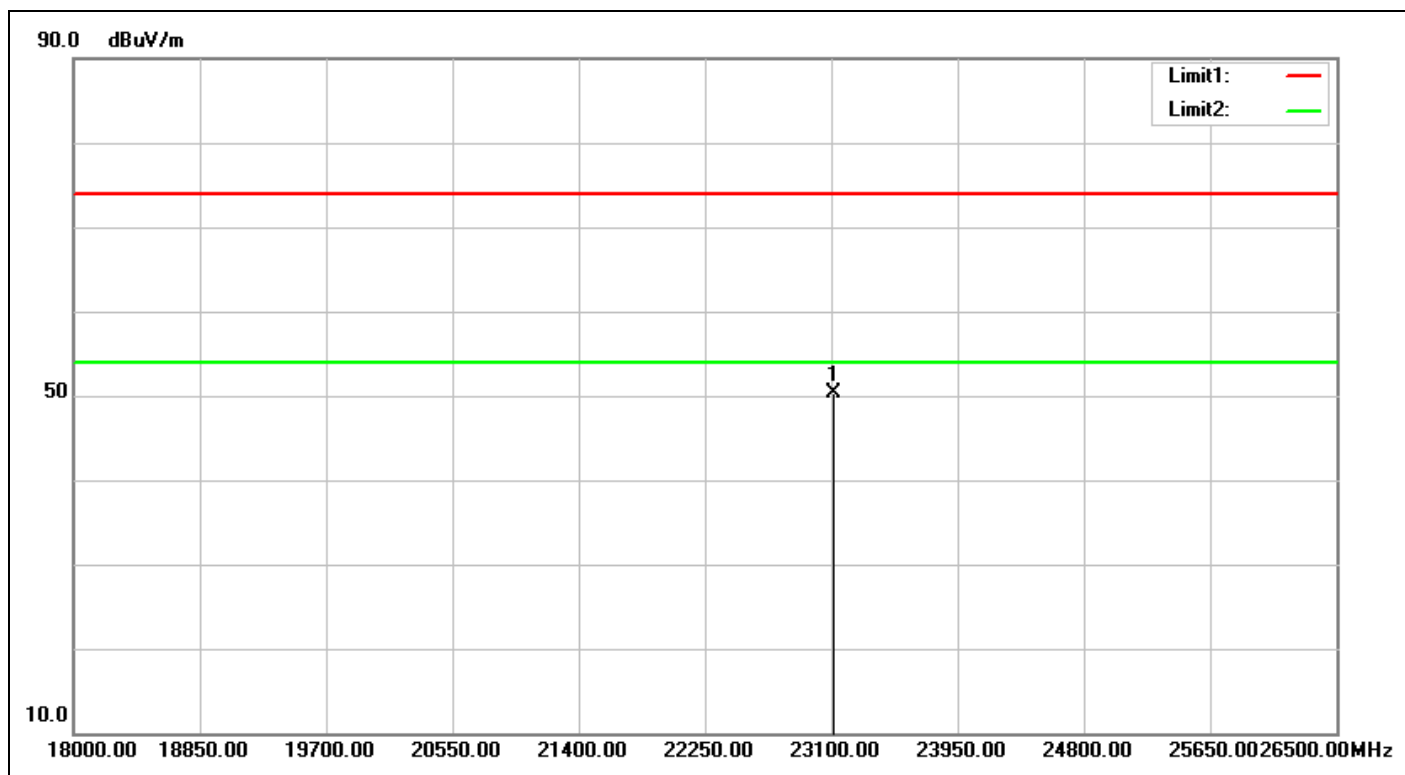
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 13:51:50
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22080.000	32.62	18.11	50.73	74.00	-23.27	peak	100	227	



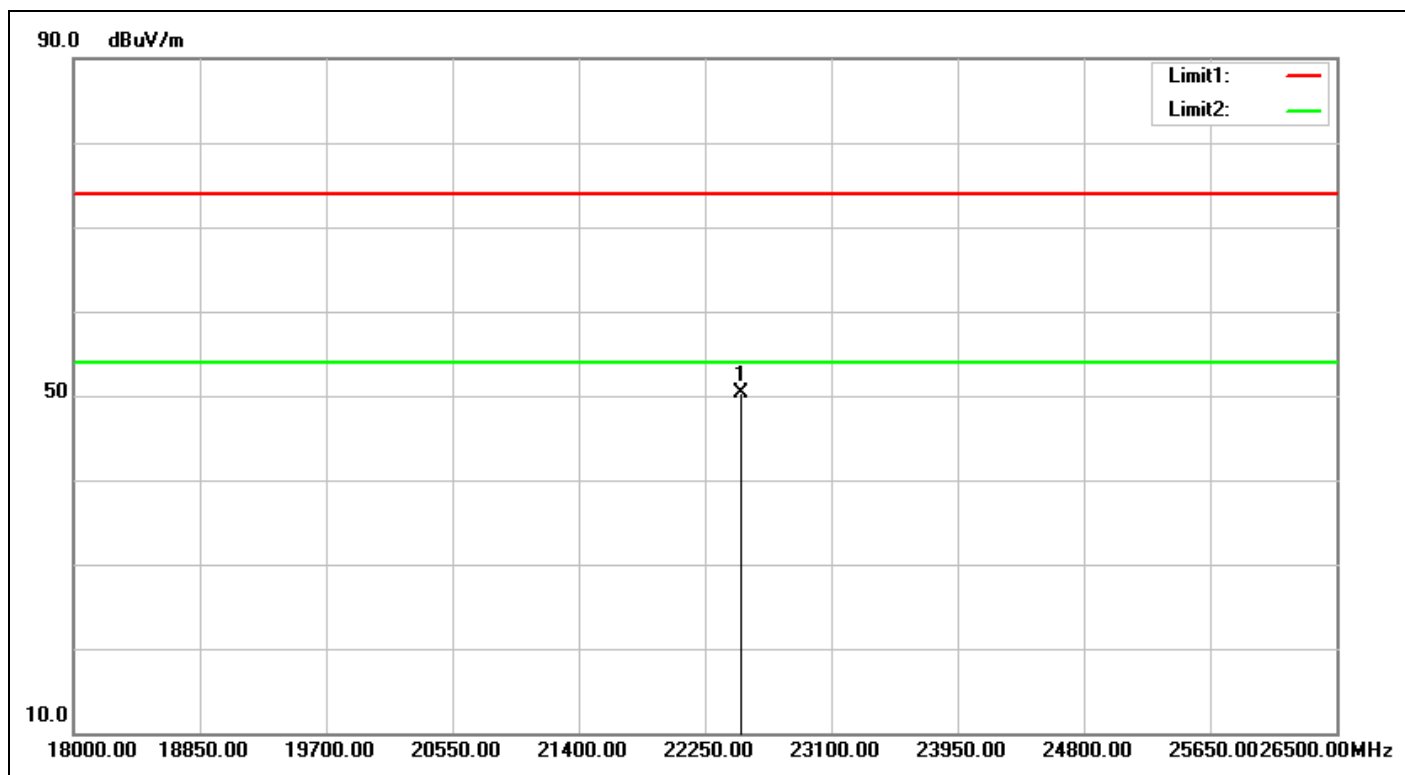
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 13:52:52
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22471.000	32.41	17.51	49.92	74.00	-24.08	peak	100	86	



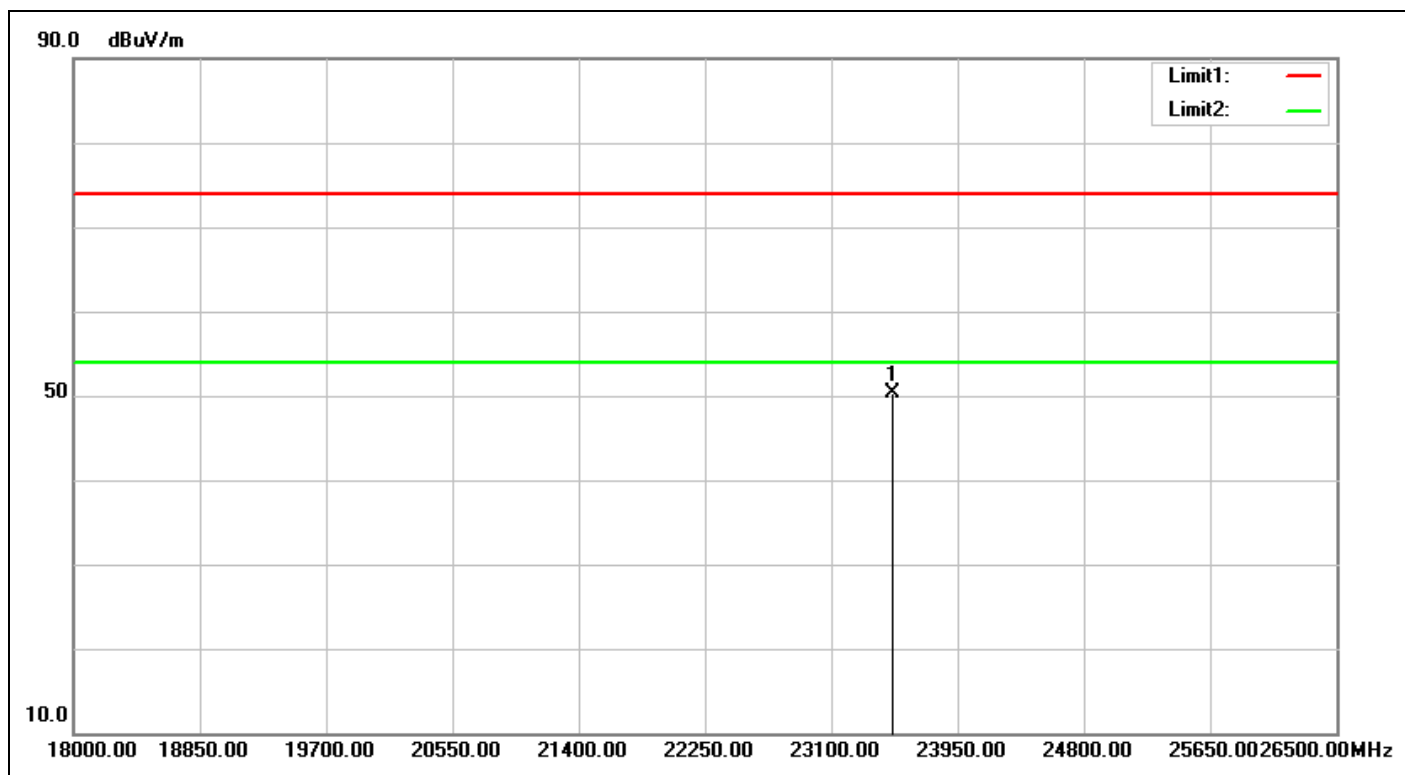
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 13:54:37
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23117.000	32.20	18.04	50.24	74.00	-23.76	peak	100	230	



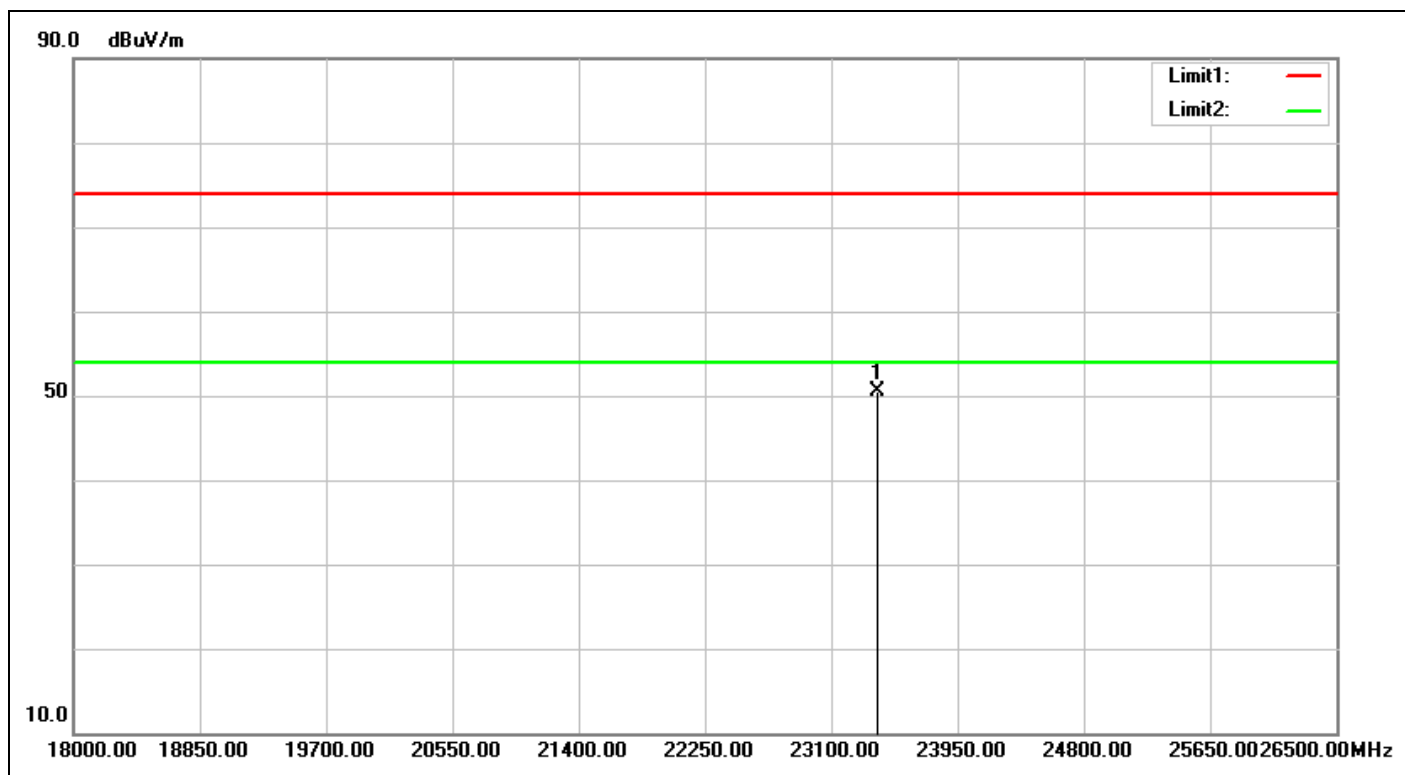
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 13:55:39
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22488.000	32.40	17.92	50.32	74.00	-23.68	peak	100	128	



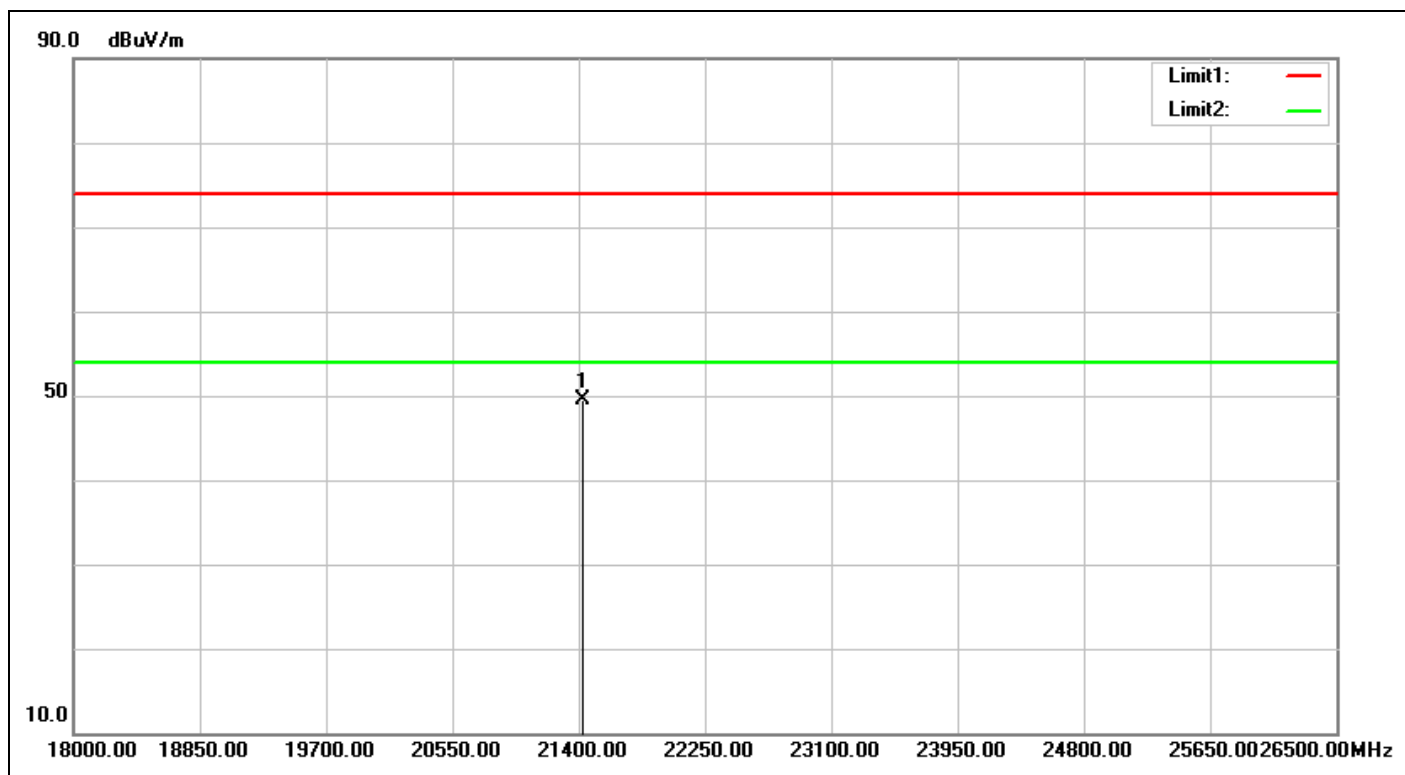
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 13:57:20
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23508.000	32.56	17.71	50.27	74.00	-23.73	peak	100	108	



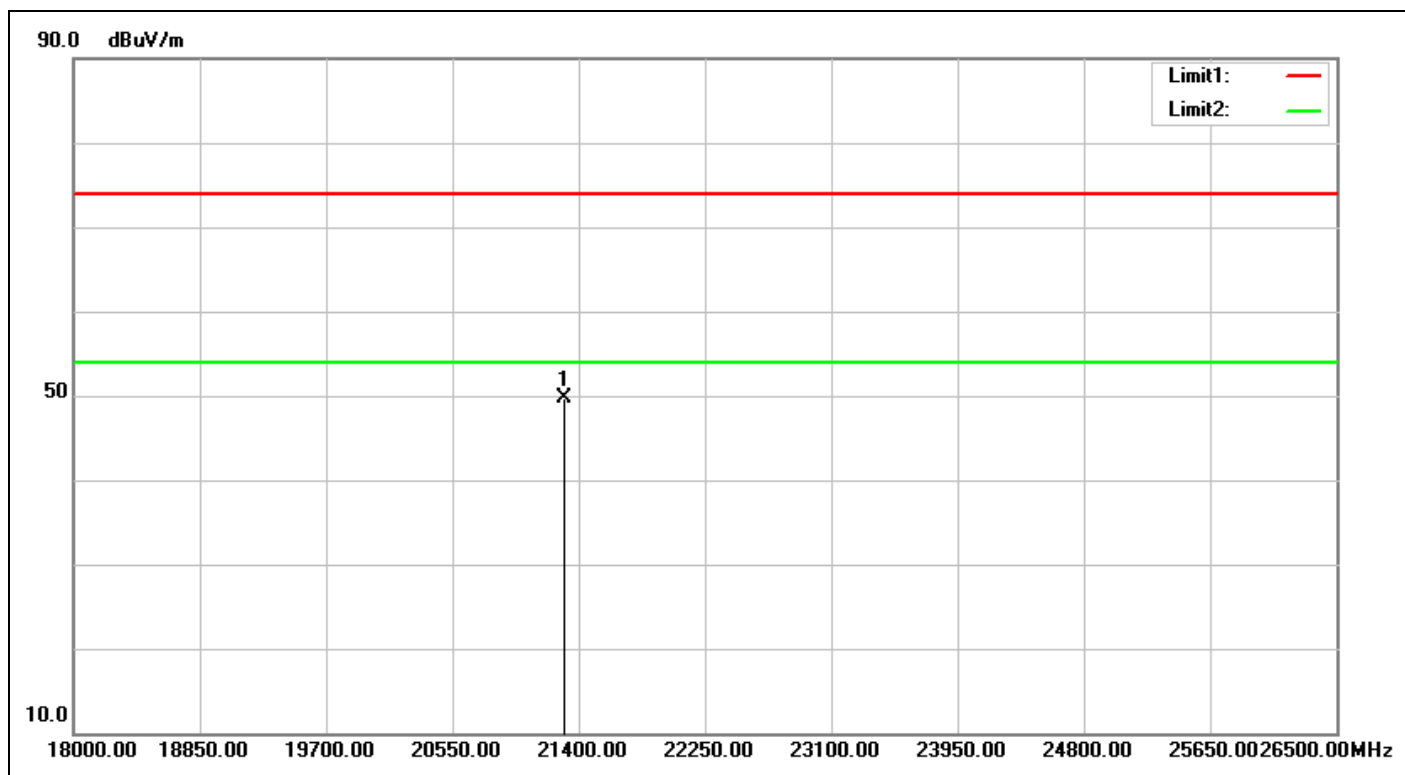
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 13:58:22
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23406.000	32.49	18.04	50.53	74.00	-23.47	peak	100	214	



Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 13:59:05
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21425.500	32.09	17.40	49.49	74.00	-24.51	peak	100	167	



Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 13:59:17
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21306.500	31.92	17.75	49.67	74.00	-24.33	peak	100	213	

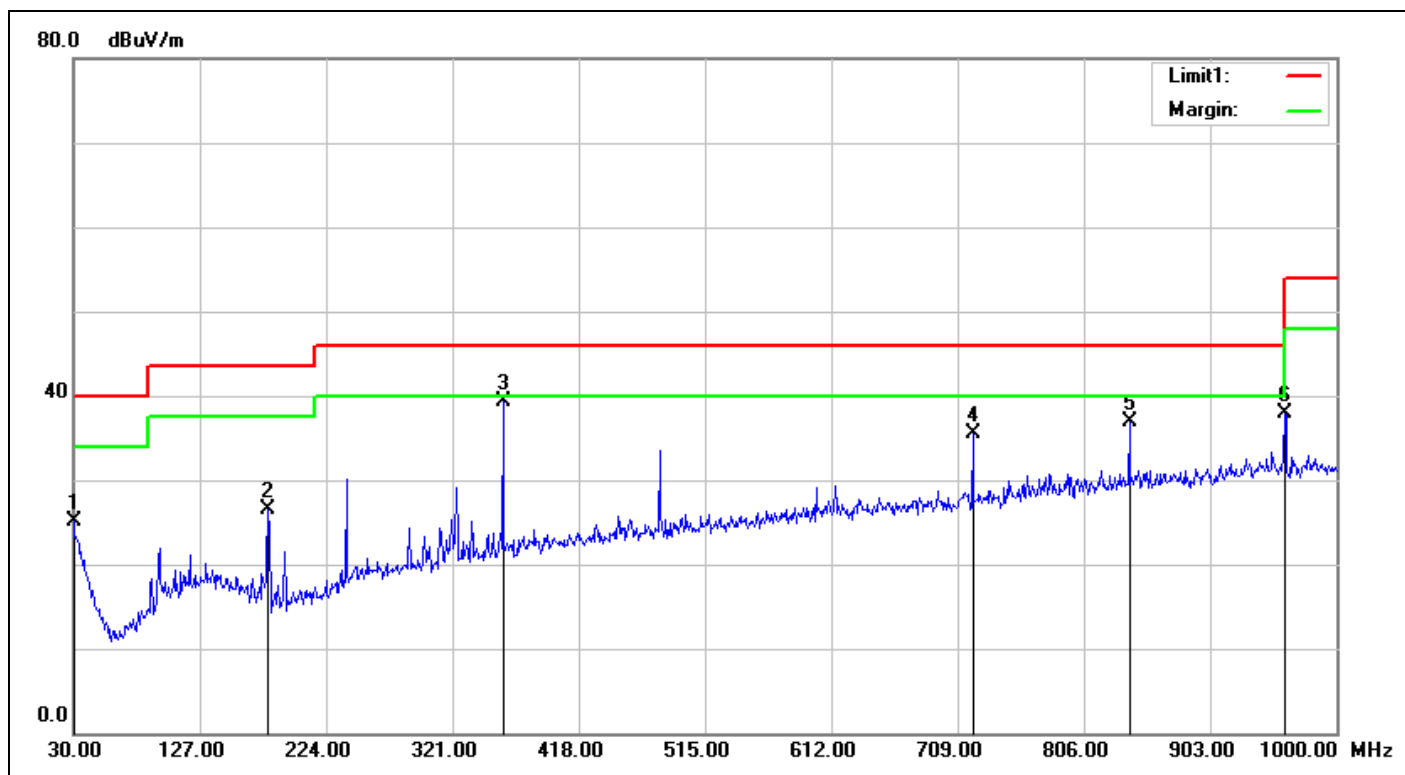
Spurious Emissions, TX Mode, 30M-1G



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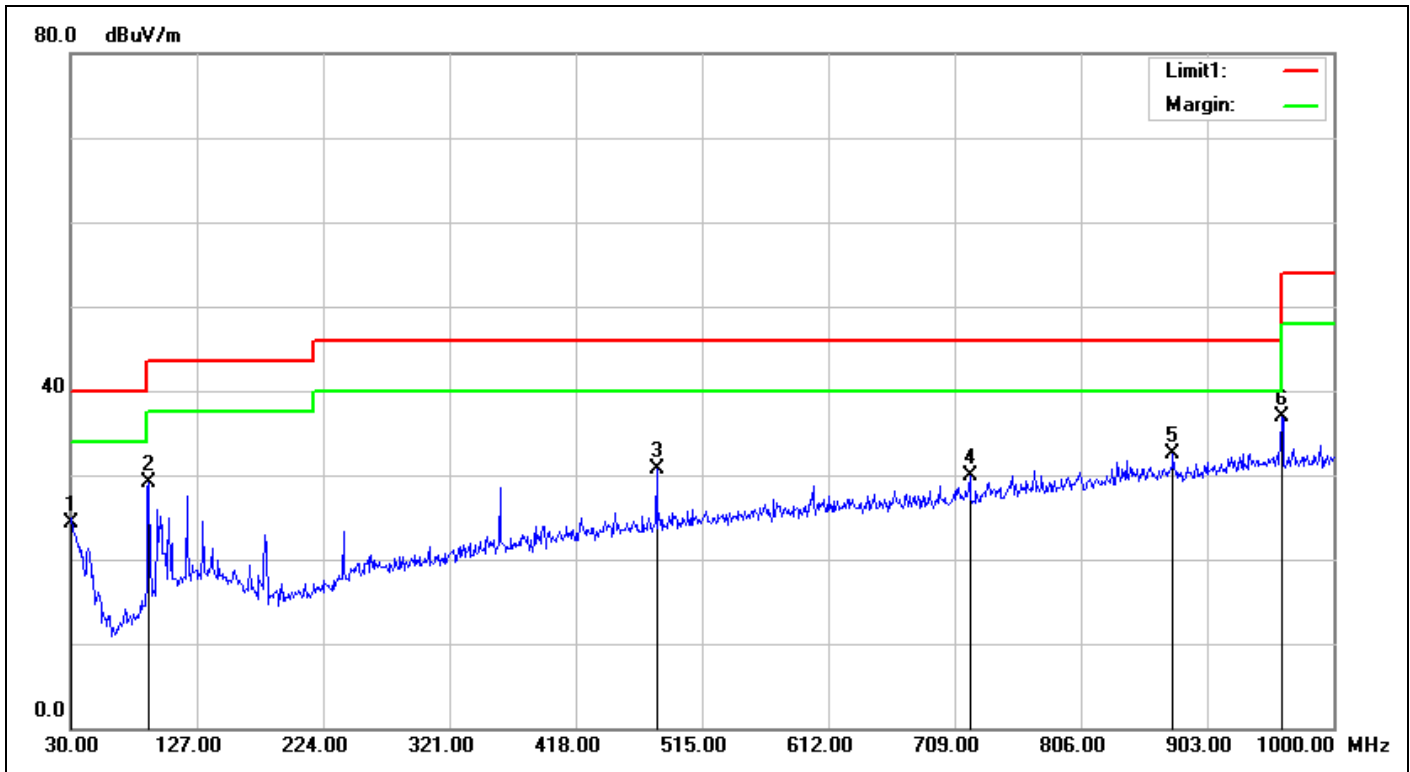
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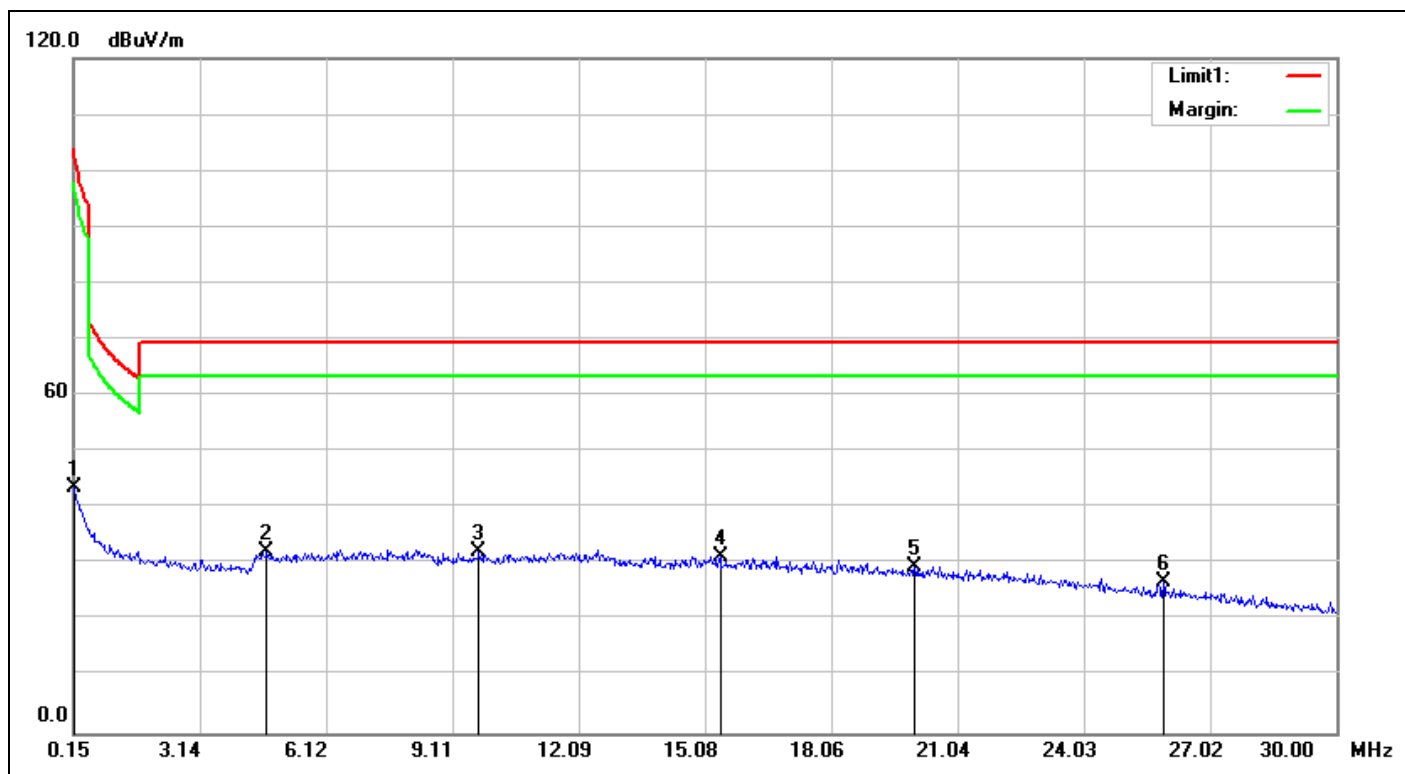
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 09:26:38
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	30.0000	-1.32	26.34	25.02	40.00	-14.98	QP	400	155	
2	179.3800	-10.68	37.22	26.54	43.50	-16.96	QP	200	163	
3	359.8000	-4.28	43.61	39.33	46.00	-6.67	QP	100	285	
4	720.6400	0.71	34.75	35.46	46.00	-10.54	QP	200	224	
5	840.9200	3.05	33.80	36.85	46.00	-9.15	QP	300	208	
6	960.2300	5.11	32.73	37.84	54.00	-16.16	QP	200	147	



Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 09:31:42
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	30.0000	-1.32	25.61	24.29	40.00	-15.71	QP	100	285	
2	90.1400	-12.09	41.23	29.14	43.50	-14.36	QP	100	208	
3	480.0800	-2.48	33.11	30.63	46.00	-15.37	QP	100	254	
4	720.6400	0.71	29.28	29.99	46.00	-16.01	QP	100	347	
5	876.8100	3.50	29.07	32.57	46.00	-13.43	QP	100	299	
6	960.2300	5.11	31.70	36.81	54.00	-17.19	QP	100	315	



Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC15.209_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2017/8/11 08:24:37
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1500	19.08	24.67	43.75	104.08	-60.33	QP	100	215	
2	4.7171	19.58	12.57	32.15	69.50	-37.35	QP	100	302	
3	9.7319	20.20	12.04	32.24	69.50	-37.26	QP	100	227	
4	15.4332	21.18	10.24	31.42	69.50	-38.08	QP	100	246	
5	20.0301	21.99	7.56	29.55	69.50	-39.95	QP	100	168	
6	25.9106	22.37	4.47	26.84	69.50	-42.66	QP	100	192	

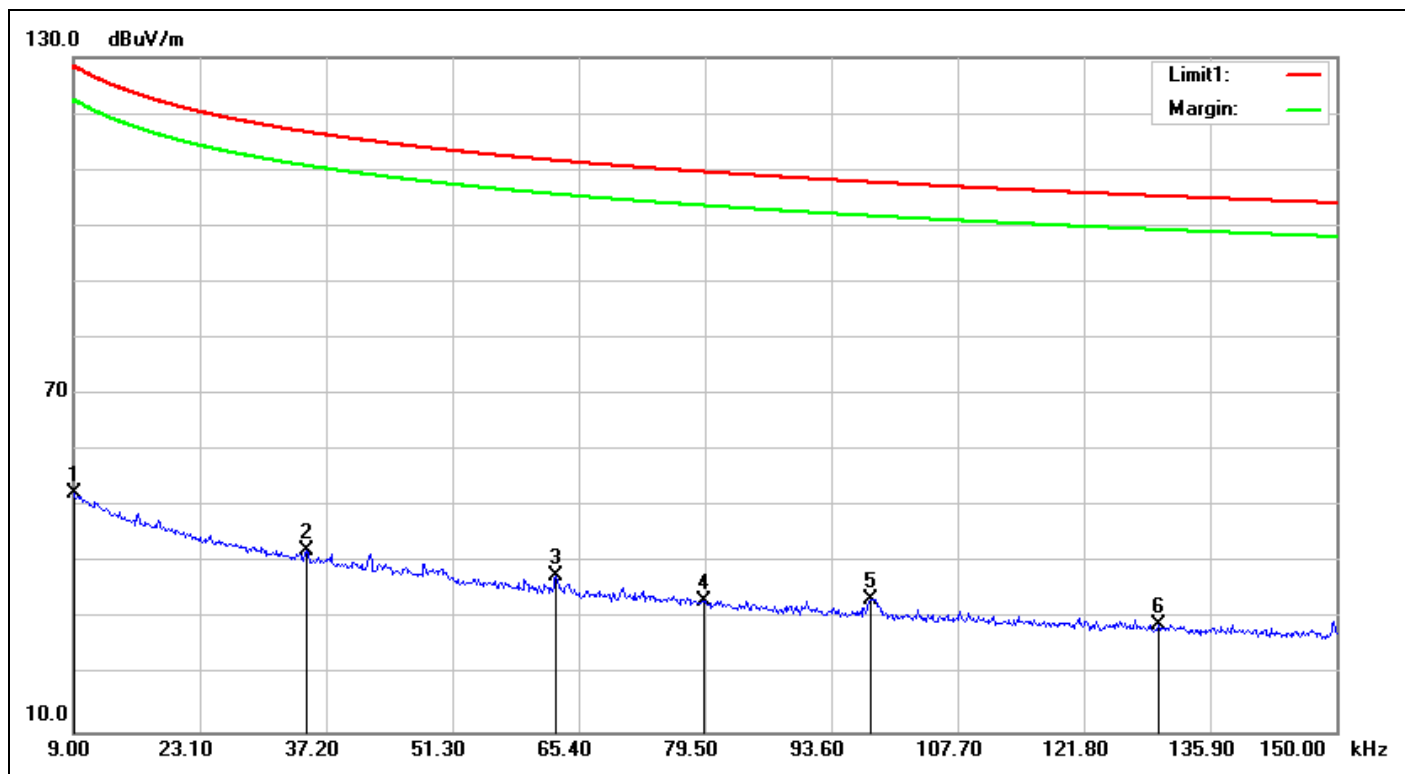
Spurious Emissions, TX Mode, 9K-150K



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Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC15.209_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2017/8/11 08:21:51
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0090	19.53	32.86	52.39	128.50	-76.11	QP	100	247	
2	0.0349	19.96	22.20	42.16	116.73	-74.57	QP	100	309	
3	0.0629	19.35	18.26	37.61	111.62	-74.01	QP	100	116	
4	0.0794	19.25	14.04	33.29	109.60	-76.31	QP	100	158	
5	0.0980	19.14	14.52	33.66	107.77	-74.11	QP	100	128	
6	0.1301	19.10	10.00	29.10	105.31	-76.21	QP	100	134	

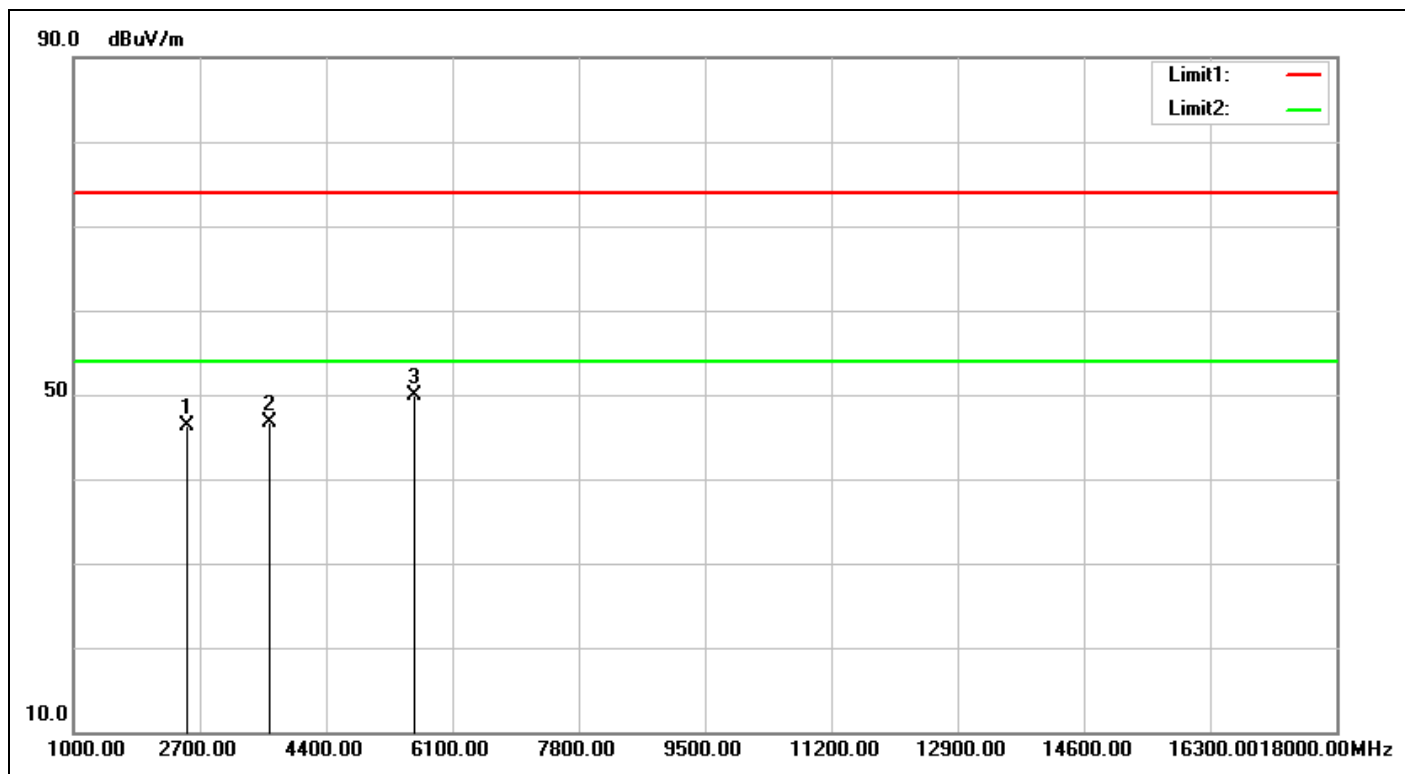
Spurious Emissions, RX Mode, 1-18G



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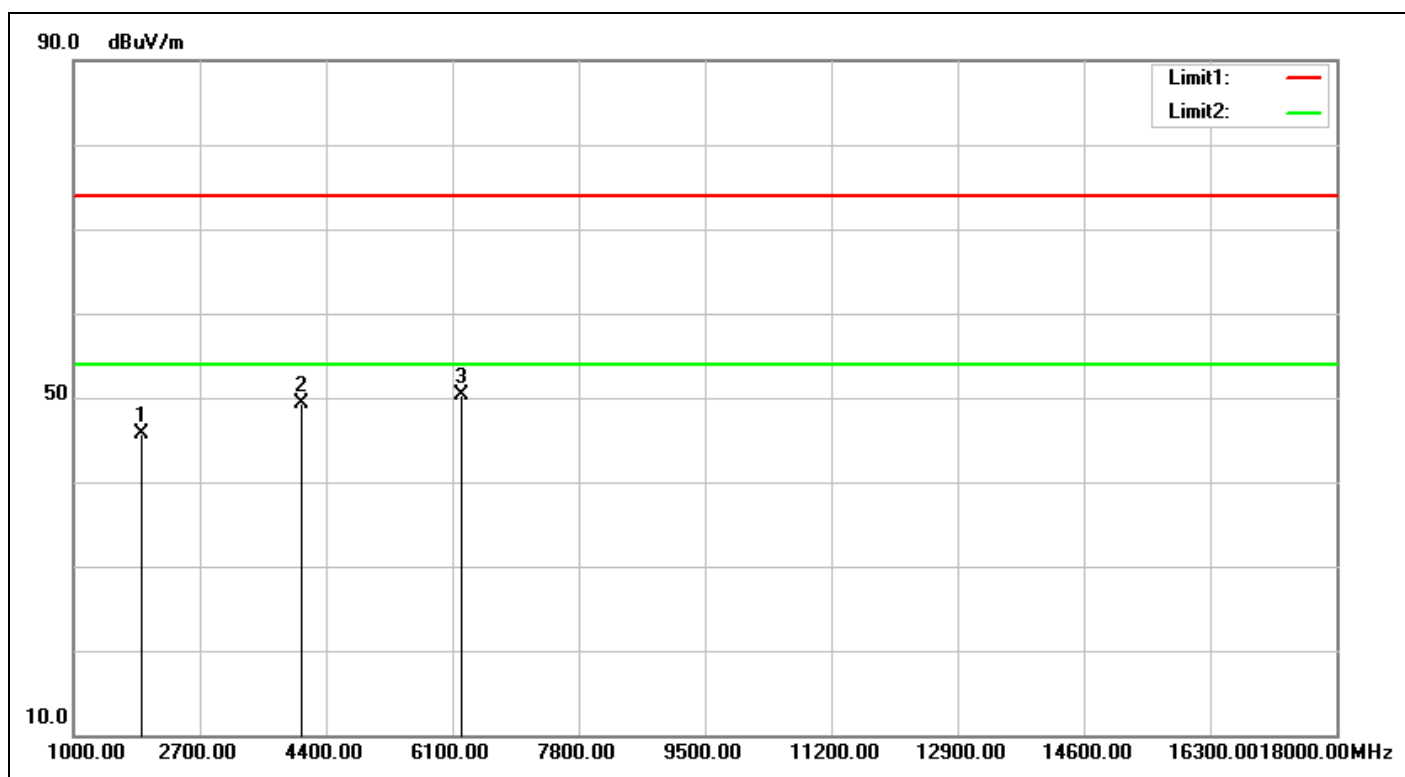
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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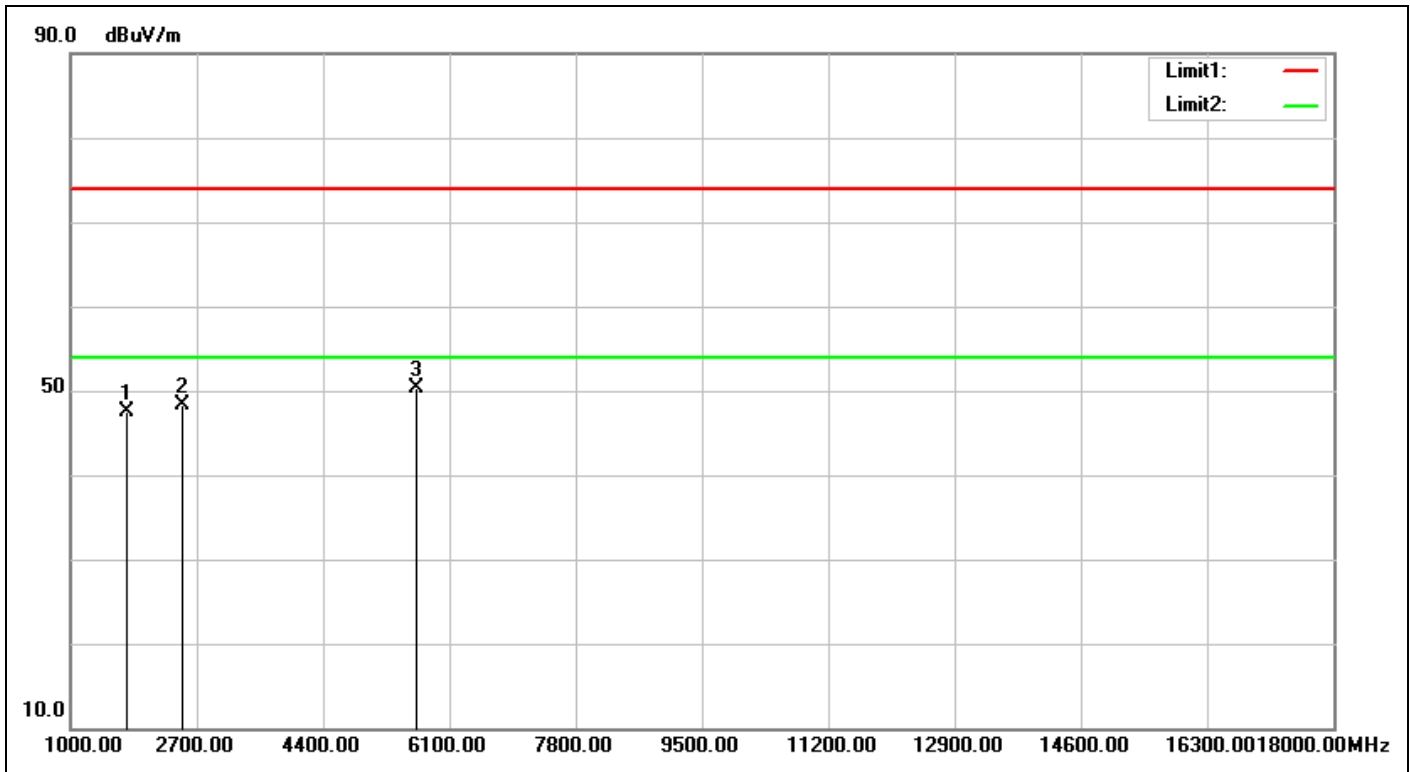
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 10:14:25
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2530.000	-5.76	52.07	46.31	74.00	-27.69	peak	100	154	
2	3635.000	-3.86	50.59	46.73	74.00	-27.27	peak	100	224	
3	5590.000	3.09	46.74	49.83	74.00	-24.17	peak	100	360	



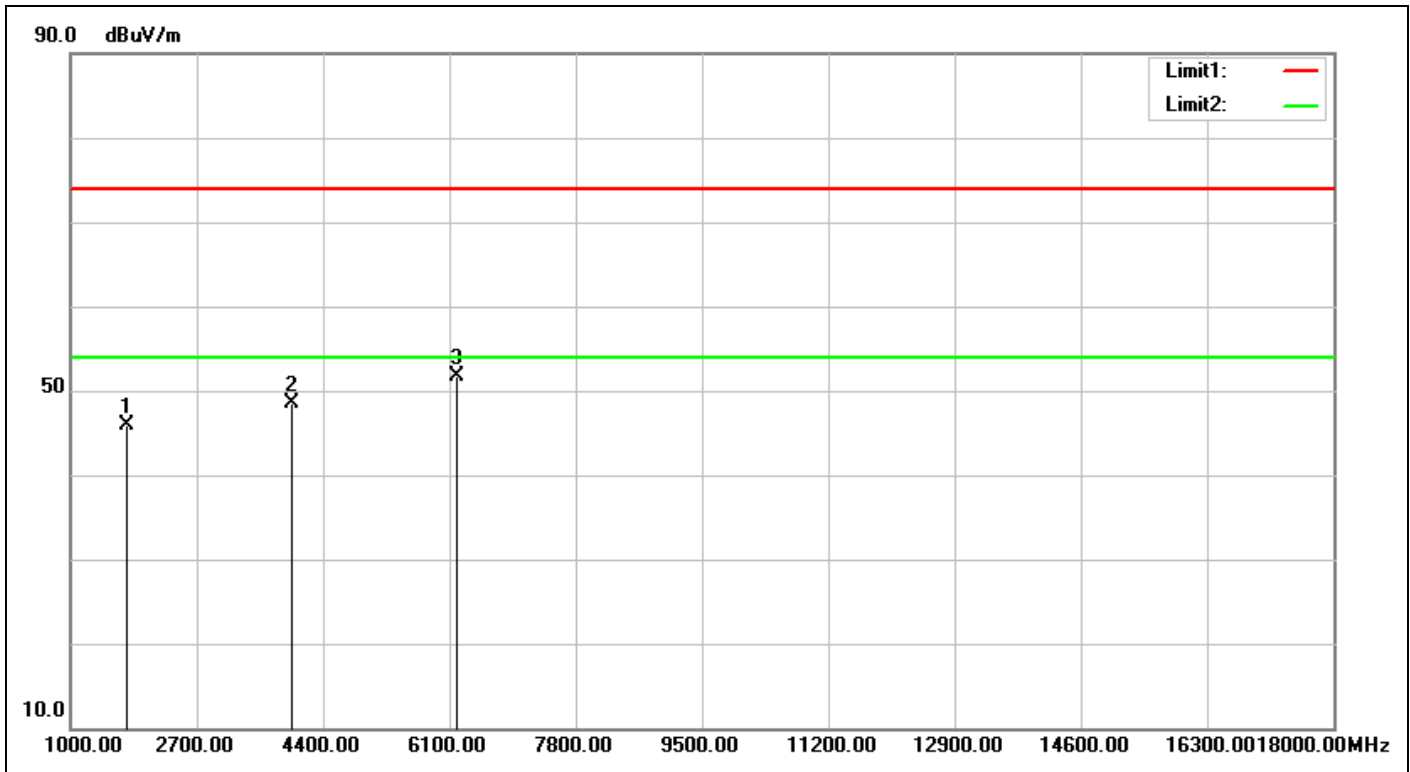
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 10:16:28
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1918.000	-6.63	52.32	45.69	74.00	-28.31	peak	100	239	
2	4077.000	-2.70	51.95	49.25	74.00	-24.75	peak	100	216	
3	6219.000	6.79	43.48	50.27	74.00	-23.73	peak	100	89	



Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 10:20:43
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1748.000	-7.88	55.33	47.45	74.00	-26.55	peak	100	207	
2	2513.000	-5.79	54.19	48.40	74.00	-25.60	peak	100	152	
3	5658.000	3.55	46.72	50.27	74.00	-23.73	peak	100	130	



Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 10:22:46
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1748.000	-7.88	53.71	45.83	74.00	-28.17	peak	100	272	
2	3975.000	-3.09	51.65	48.56	74.00	-25.44	peak	100	286	
3	6202.000	6.72	45.04	51.76	74.00	-22.24	peak	100	357	

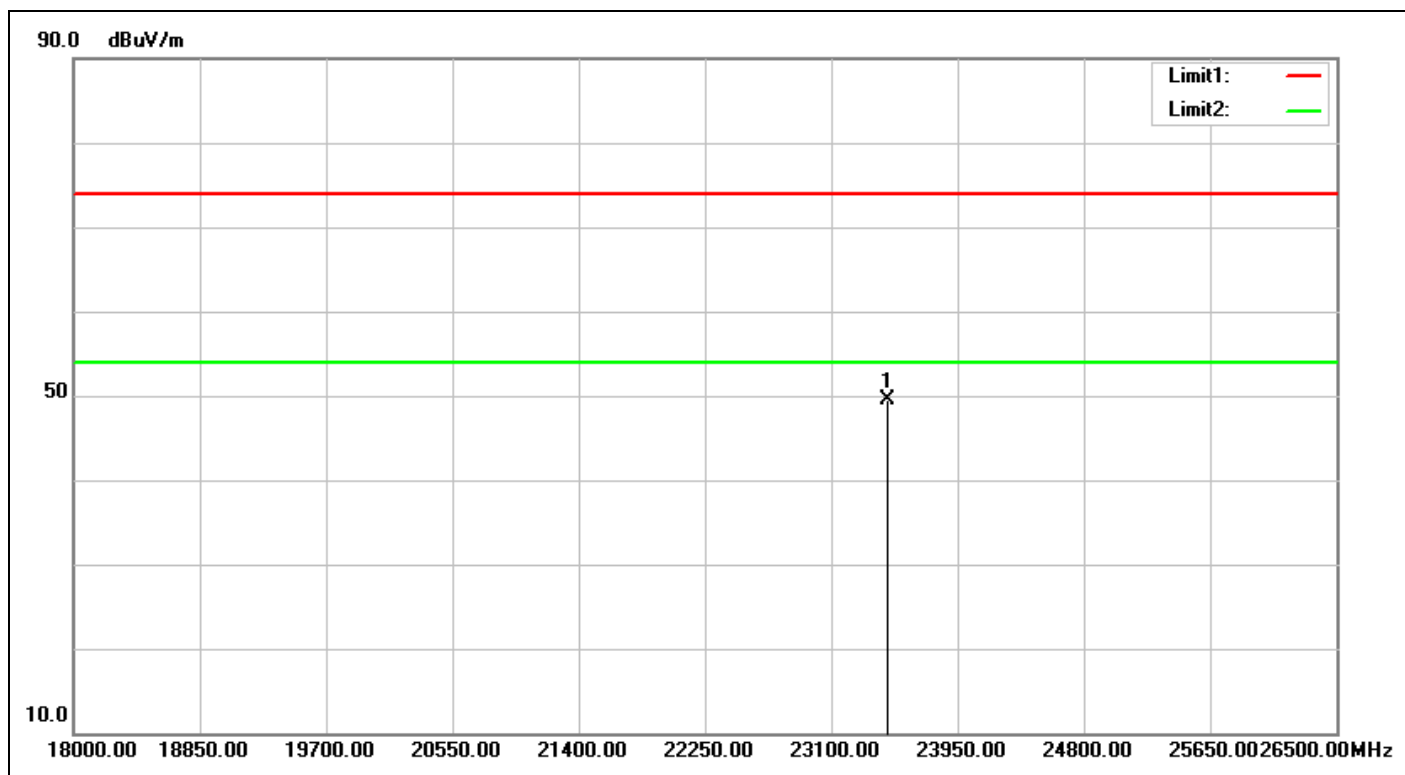
Spurious Emissions, RX Mode, 18-26G



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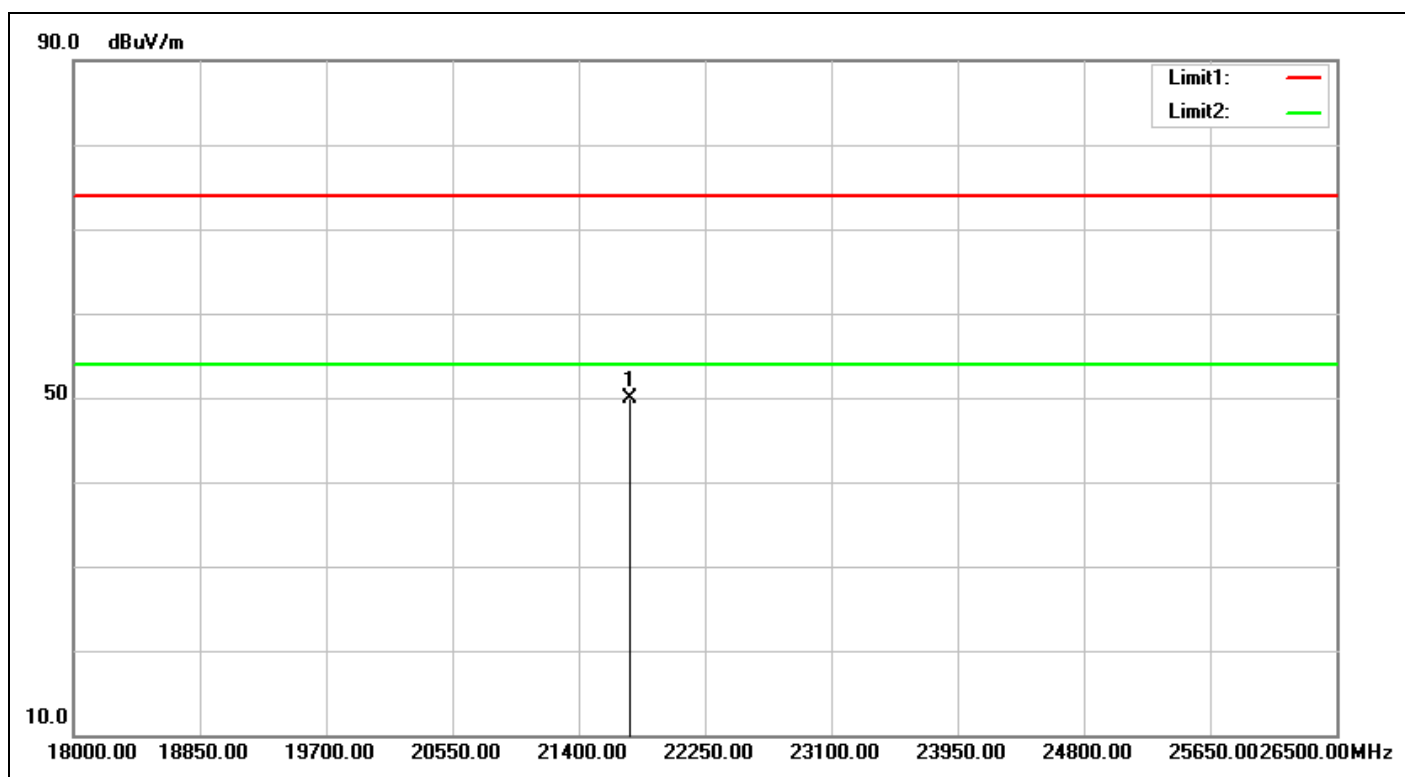
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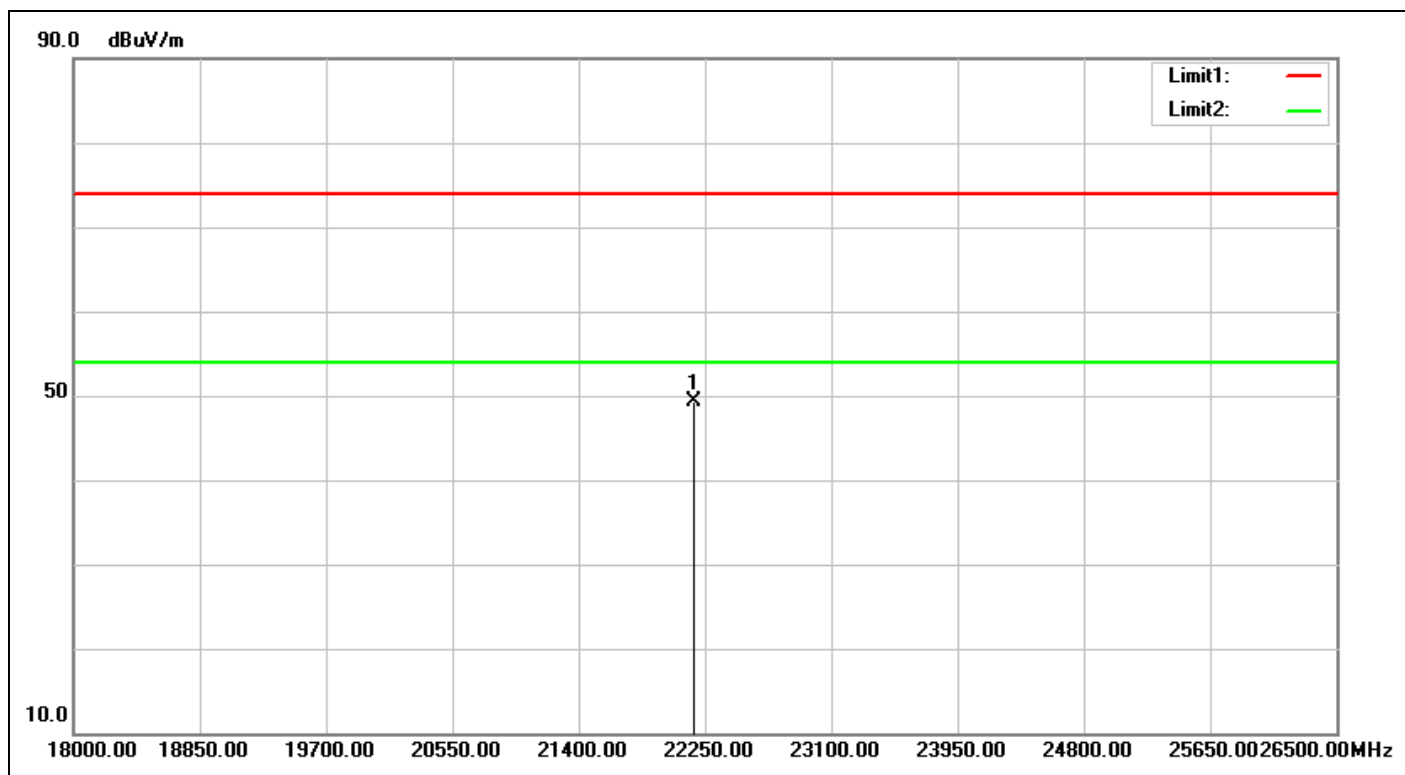
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 14:06:19
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23482.500	32.55	16.94	49.49	74.00	-24.51	peak	100	247	



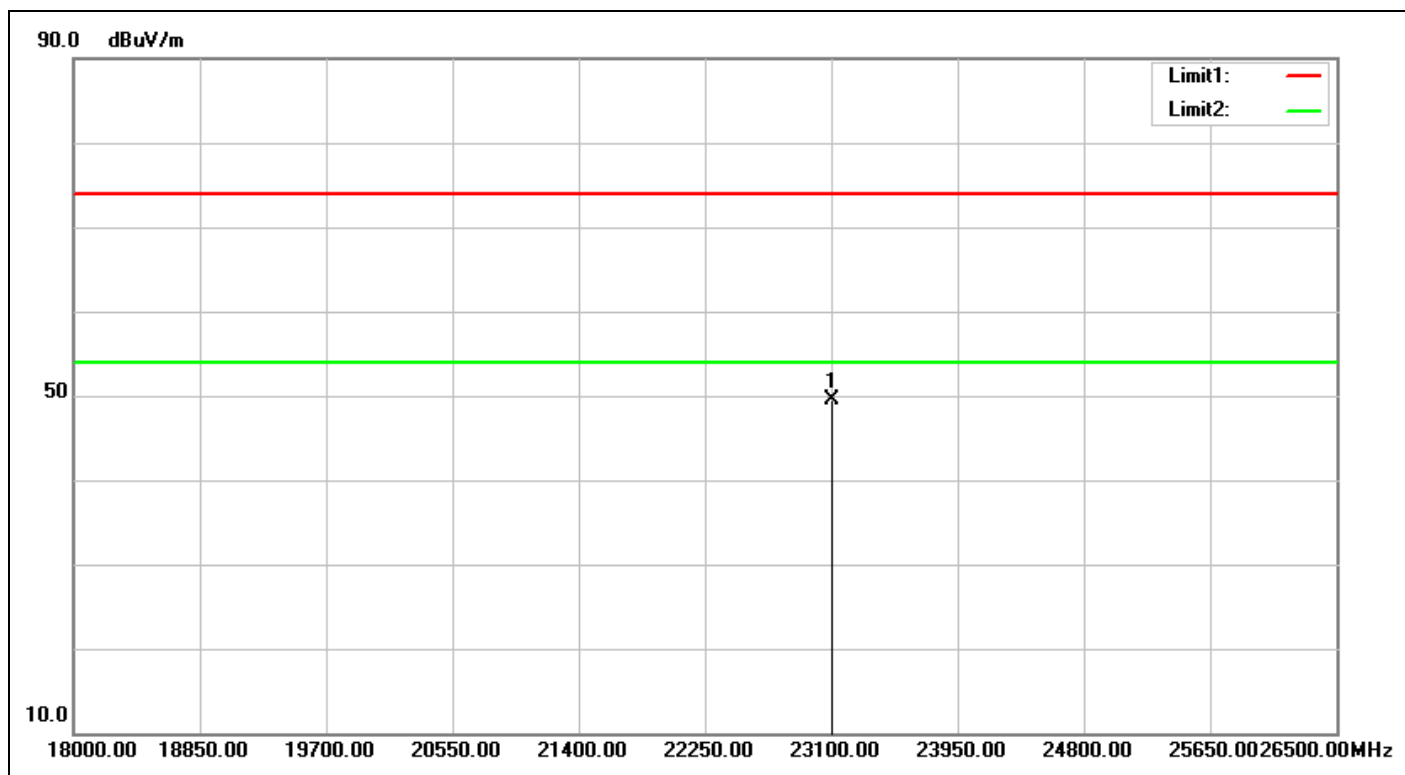
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 14:07:39
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21748.500	32.43	17.50	49.93	74.00	-24.07	peak	100	289	



Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 14:08:20
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22173.500	32.58	16.64	49.22	74.00	-24.78	peak	100	150	



Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 14:08:55
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	3DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23100.000	32.19	17.36	49.55	74.00	-24.45	peak	100	133	

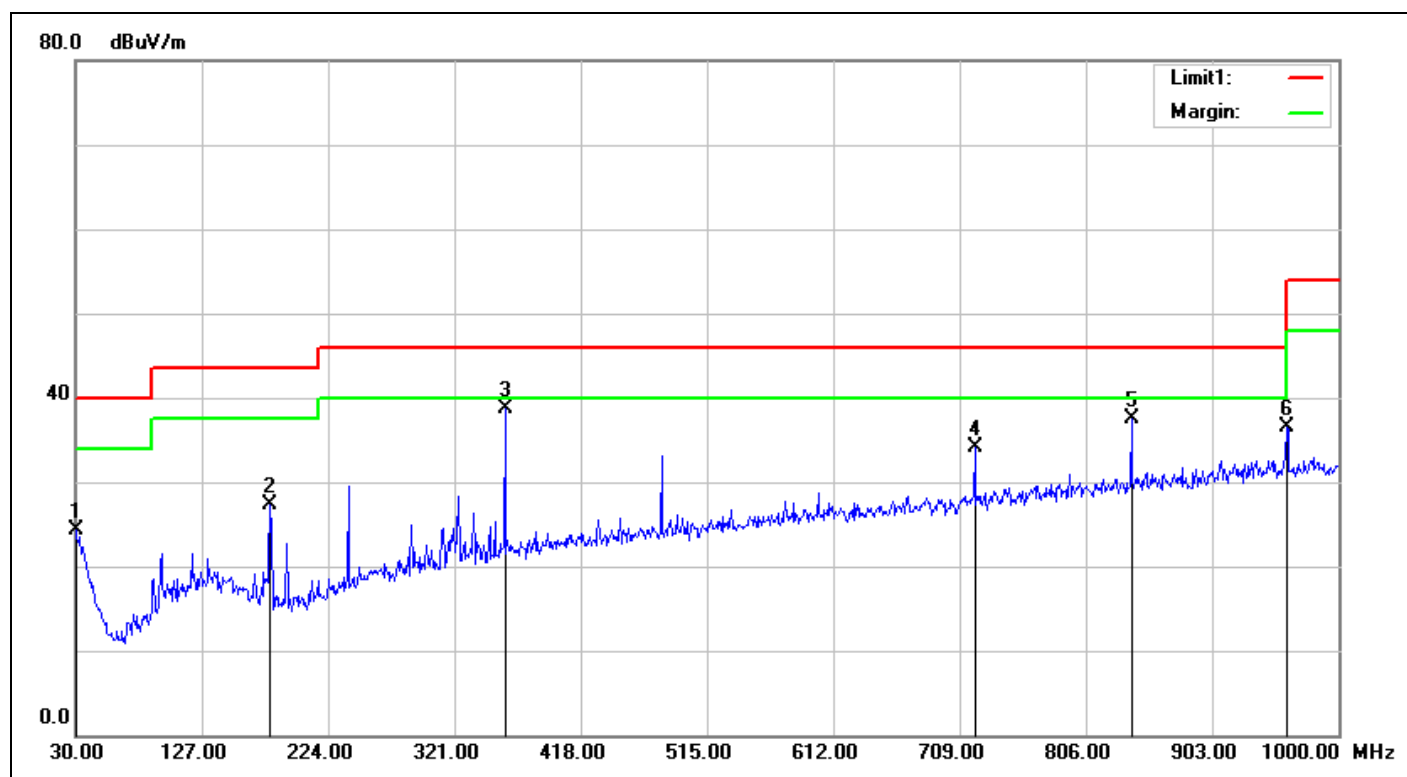
Spurious Emissions, RX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

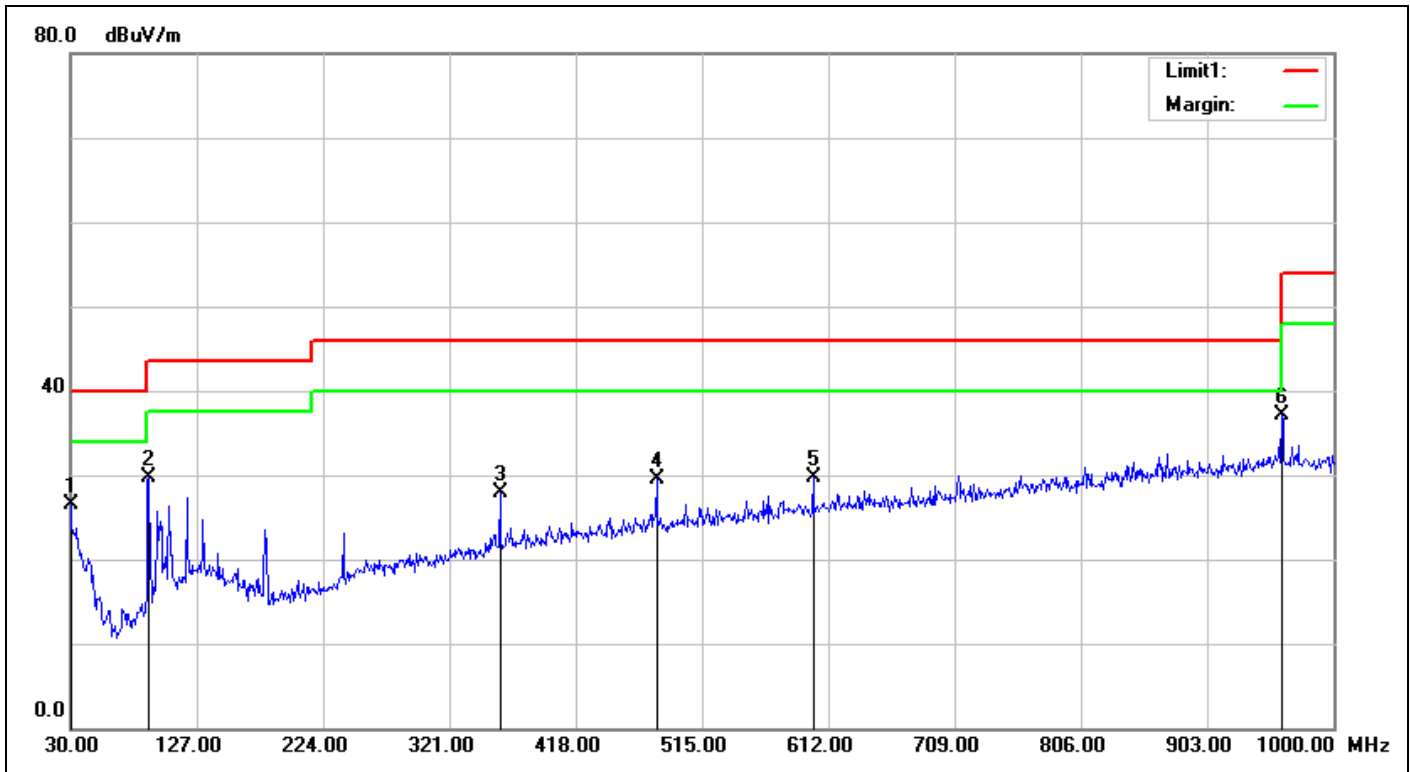
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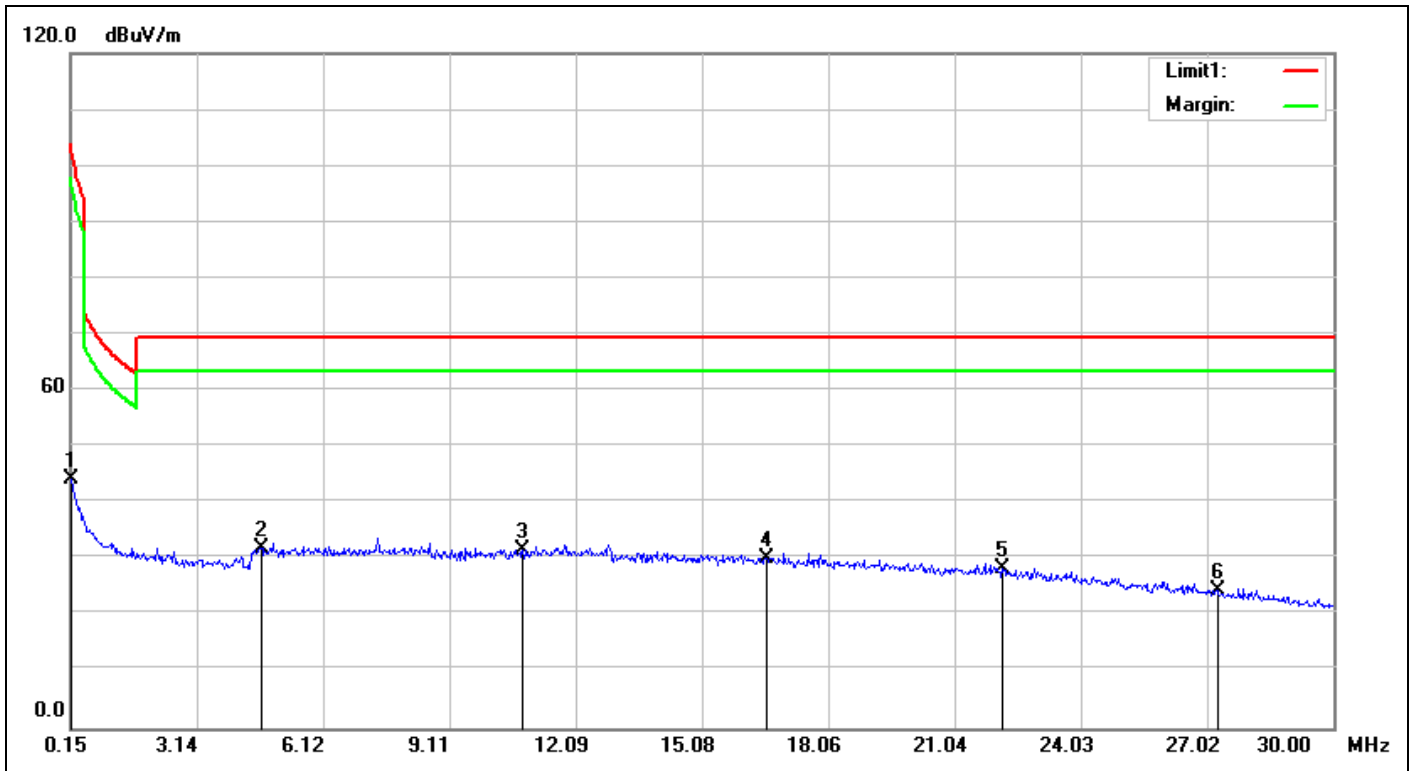
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/11 09:15:40
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	30.0000	-1.32	25.58	24.26	40.00	-15.74	QP	100	167	
2	179.3800	-10.68	37.99	27.31	43.50	-16.19	QP	100	285	
3	359.8000	-4.28	43.02	38.74	46.00	-7.26	QP	100	272	
4	720.6400	0.71	33.40	34.11	46.00	-11.89	QP	100	216	
5	840.9200	3.05	34.41	37.46	46.00	-8.54	QP	100	208	
6	960.2300	5.11	31.35	36.46	54.00	-17.54	QP	100	155	



Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/11 09:20:43
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	30.0000	-1.32	27.73	26.41	40.00	-13.59	QP	150	155	
2	90.1400	-12.09	41.88	29.79	43.50	-13.71	QP	100	198	
3	359.8000	-4.28	32.26	27.98	46.00	-18.02	QP	100	62	
4	480.0800	-2.48	32.08	29.60	46.00	-16.40	QP	100	275	
5	600.3600	-0.81	30.56	29.75	46.00	-16.25	QP	200	305	
6	960.2300	5.11	32.02	37.13	54.00	-16.87	QP	132	318	



Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC15.209_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2017/8/11 08:29:03
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1799	19.06	25.17	44.23	102.50	-58.27	QP	100	201	
2	4.6574	19.54	12.49	32.03	69.50	-37.47	QP	100	173	
3	10.8363	20.37	11.25	31.62	69.50	-37.88	QP	100	194	
4	16.5974	21.38	8.89	30.27	69.50	-39.23	QP	100	285	
5	22.1793	22.13	6.28	28.41	69.50	-41.09	QP	100	96	
6	27.2538	22.47	2.08	24.55	69.50	-44.95	QP	100	157	

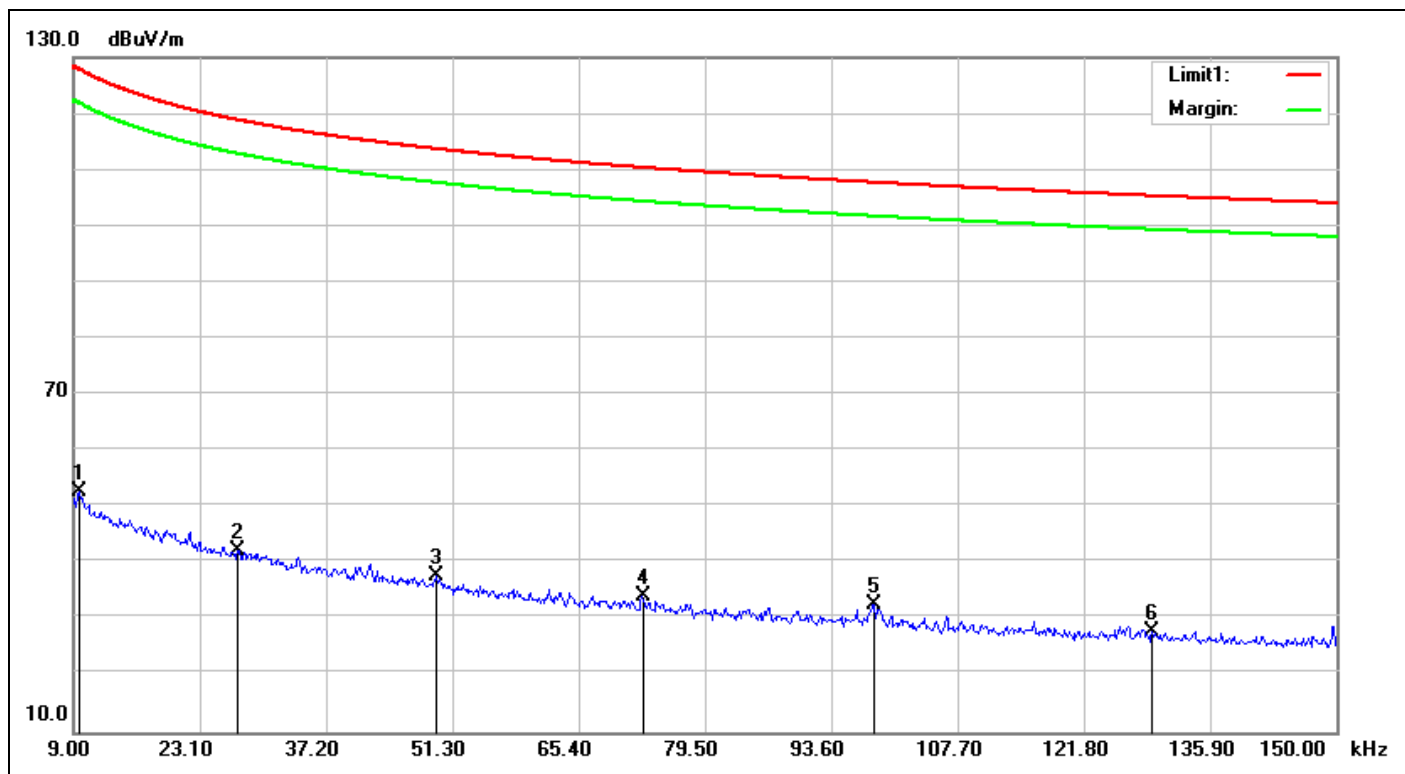
Spurious Emissions, RX Mode, 9K-150K



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Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC15.209_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2017/8/11 08:26:57
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24.2(°C)/49%
Model No.:	BM64SPK1NC2	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	1DH5		
	Class 2 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0096	19.77	33.00	52.77	127.94	-75.17	QP	100	208	
2	0.0273	20.10	22.26	42.36	118.87	-76.51	QP	100	135	
3	0.0495	19.45	18.32	37.77	113.70	-75.93	QP	100	92	
4	0.0725	19.30	14.99	34.29	110.39	-76.10	QP	100	244	
5	0.0983	19.14	13.56	32.70	107.75	-75.05	QP	100	312	
6	0.1294	19.10	8.82	27.92	105.36	-77.44	QP	100	286	