

Test Report No.50041195 50041197 002

Appendix D: Radiated and Mains Spurious Emission Data

(File: 50041195 50041197 002AppendixD)

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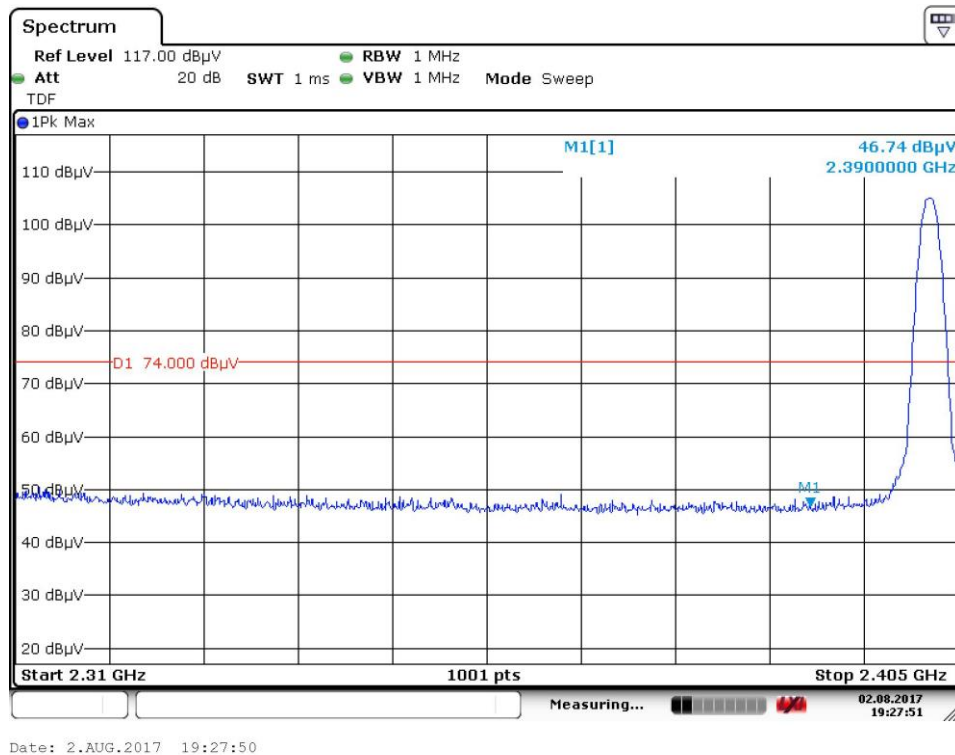
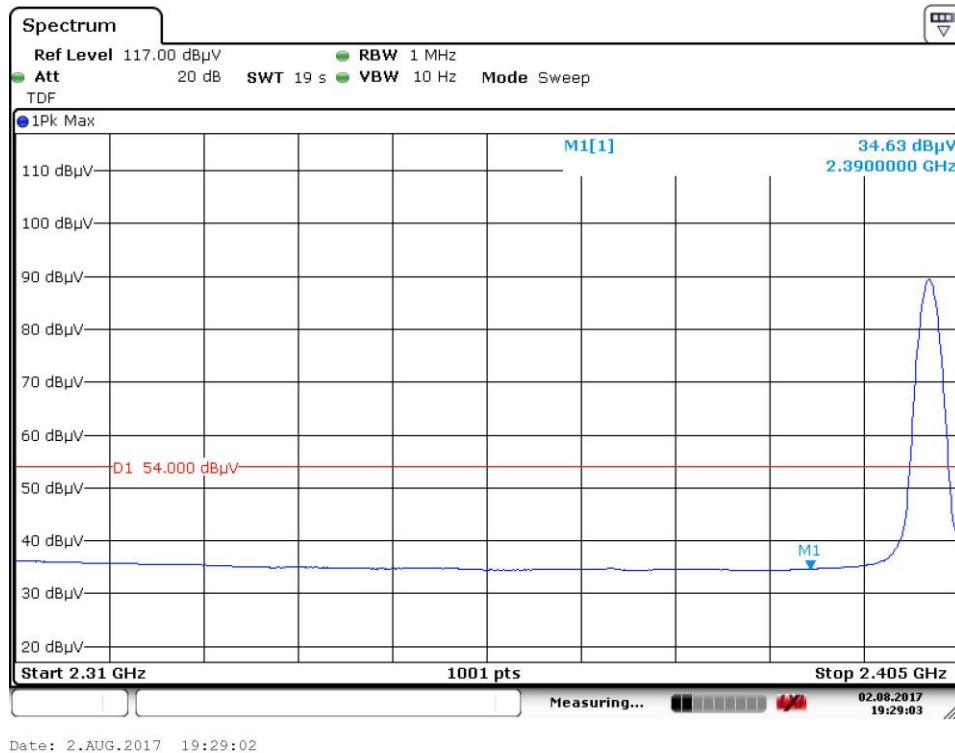
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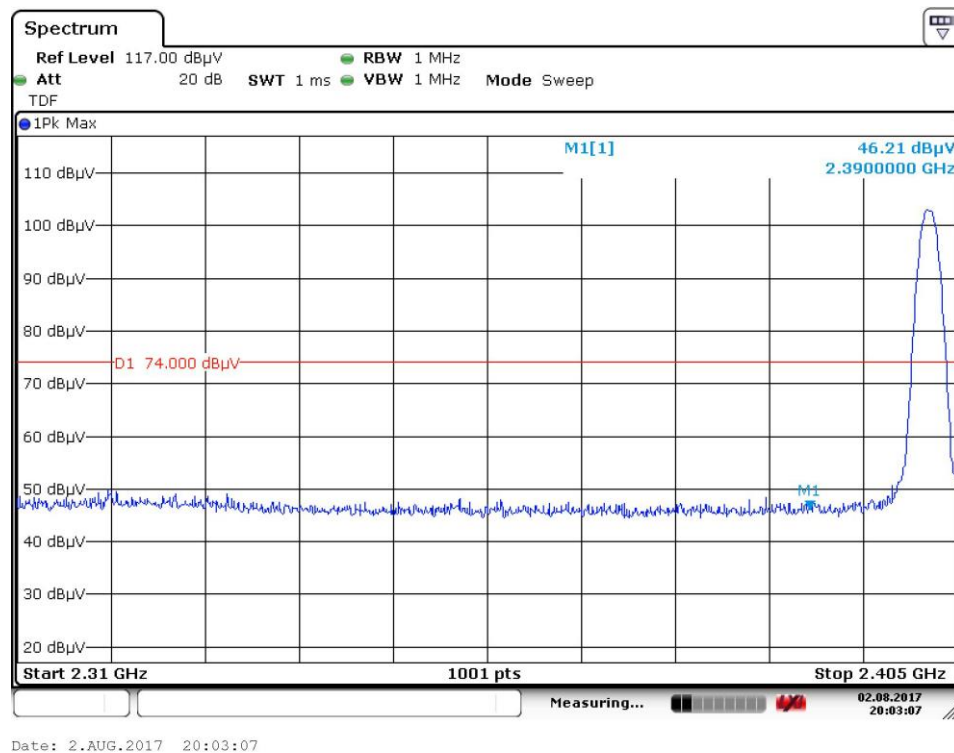
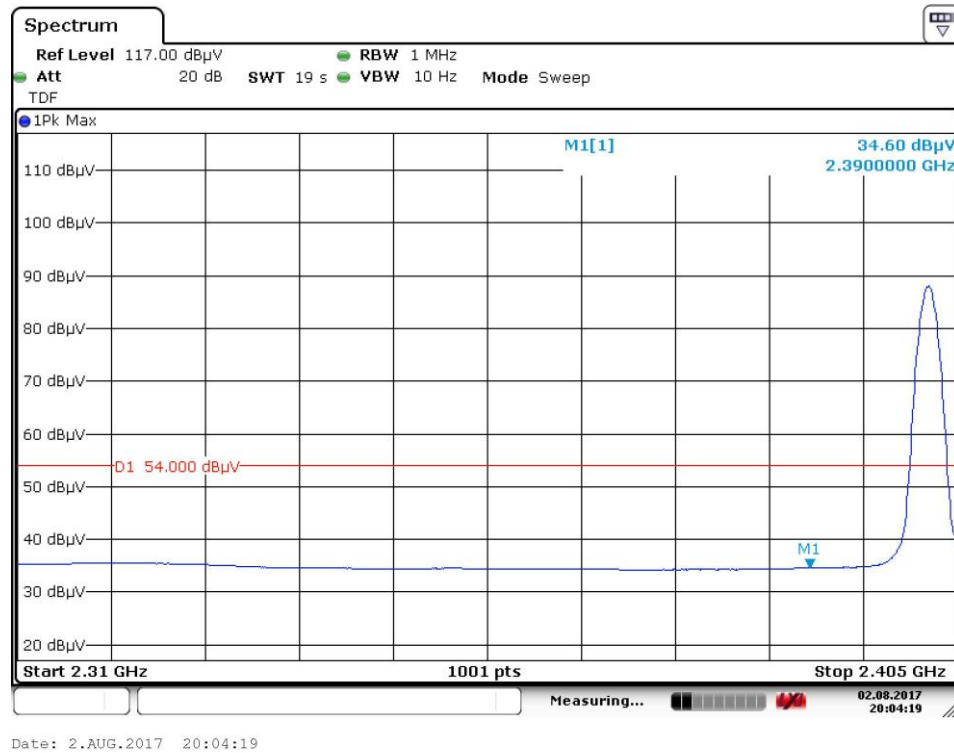
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Radiated Bandedge (GFSK)

Low Channel (Hor)

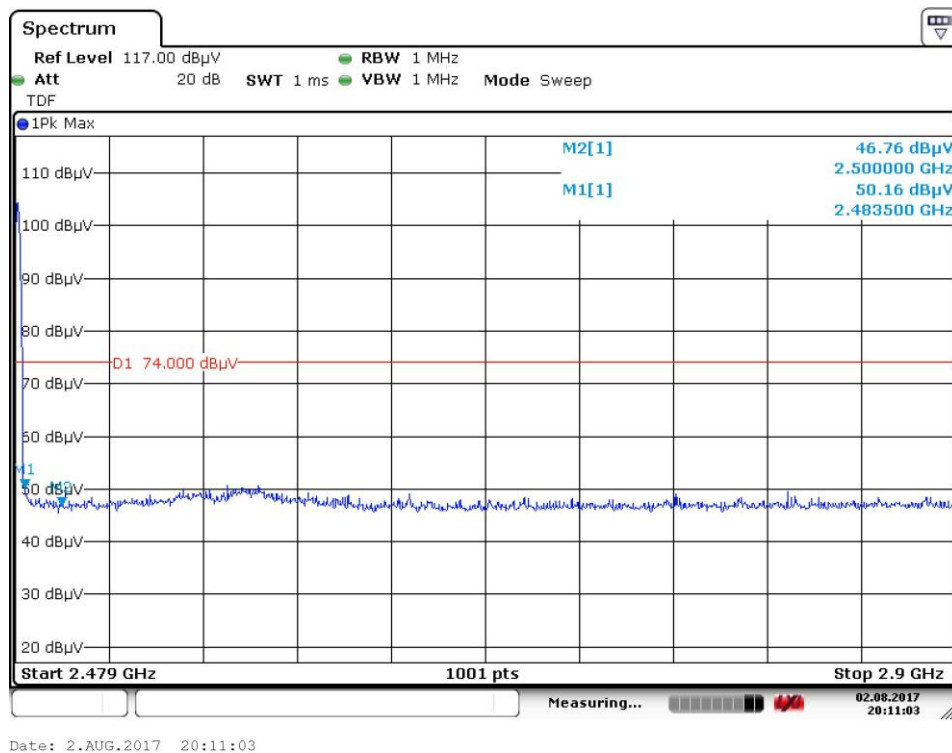
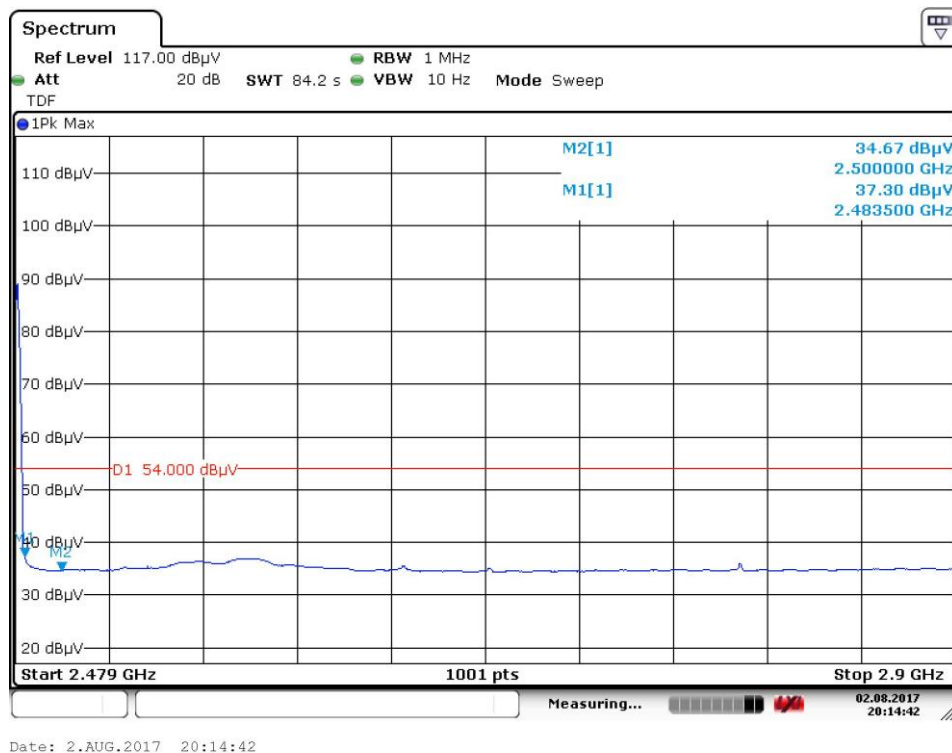


Low Channel (Ver)

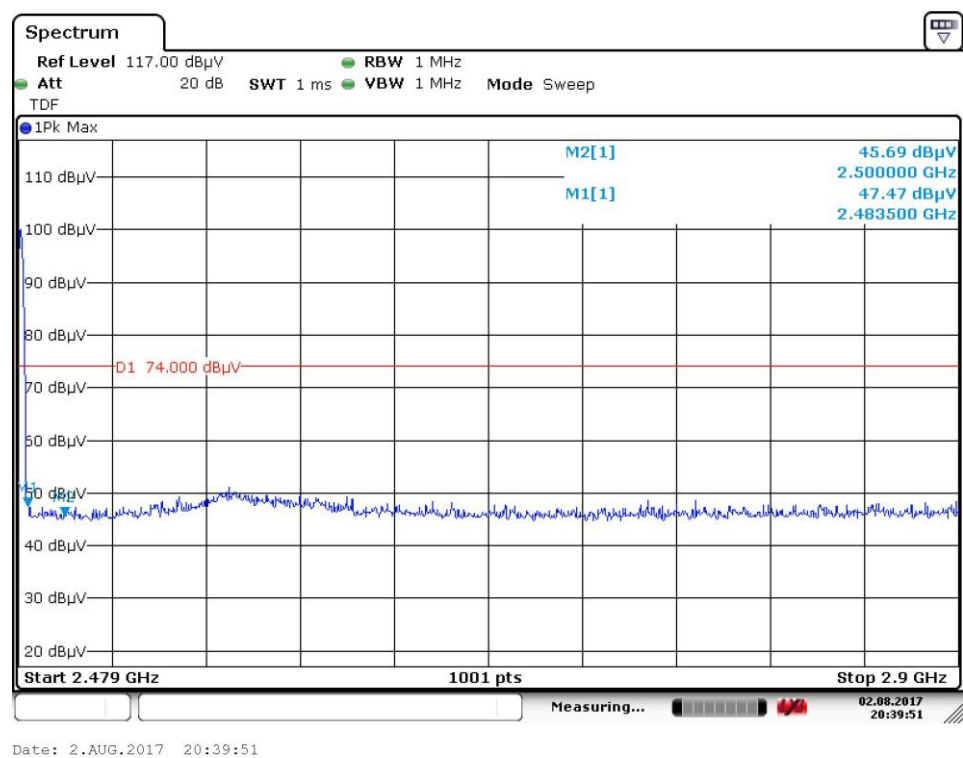
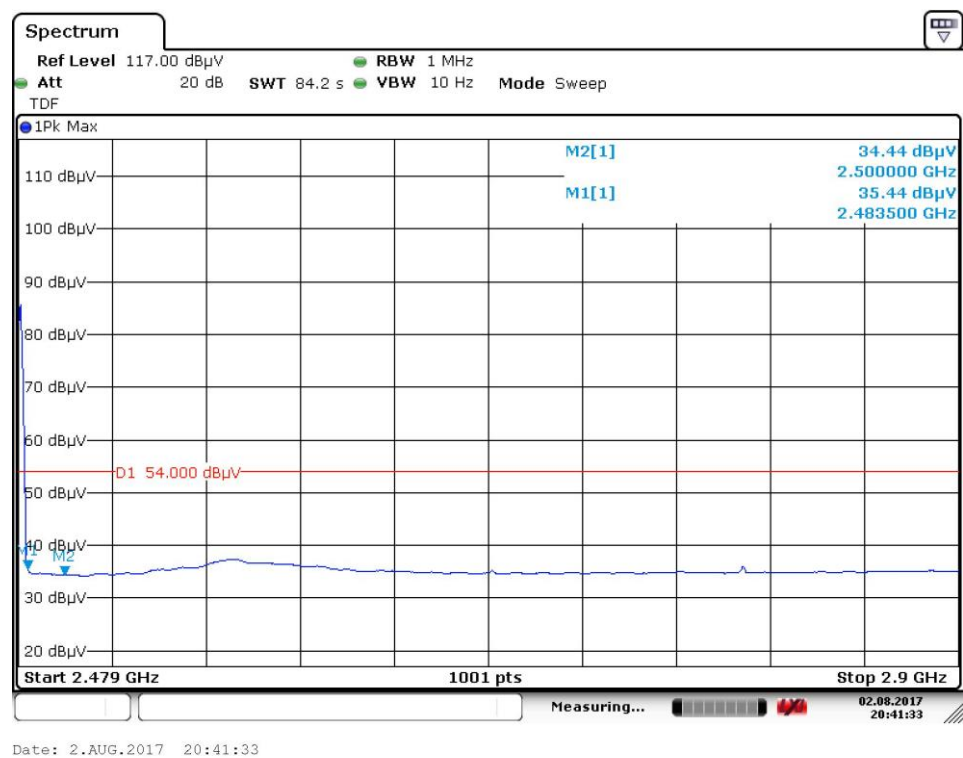


Radiated Bandedge (GFSK)

High Channel (Hor)

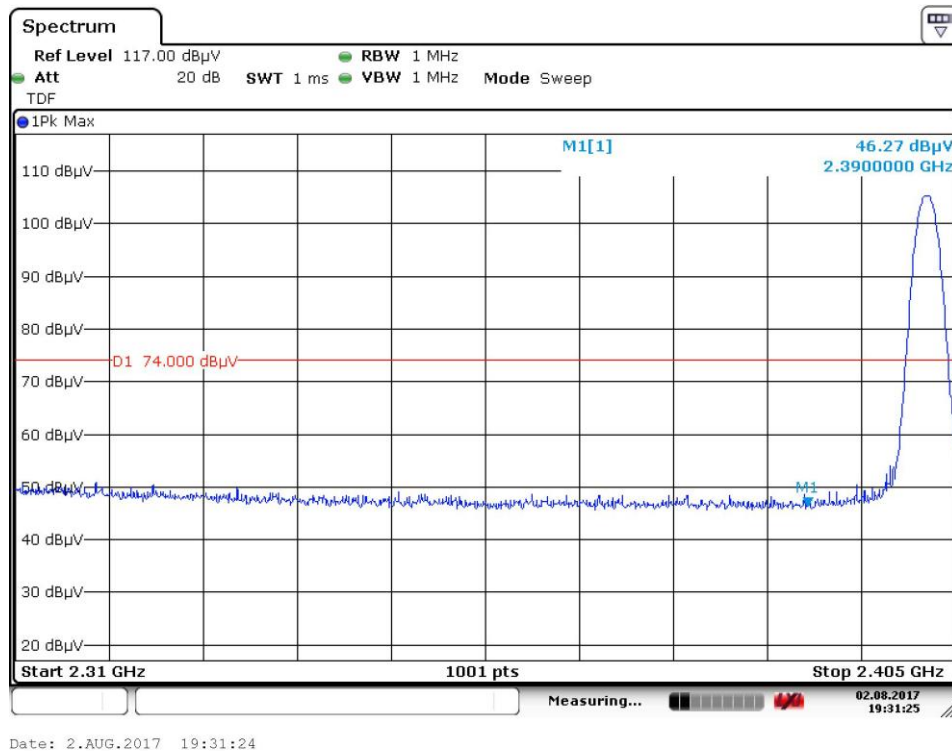
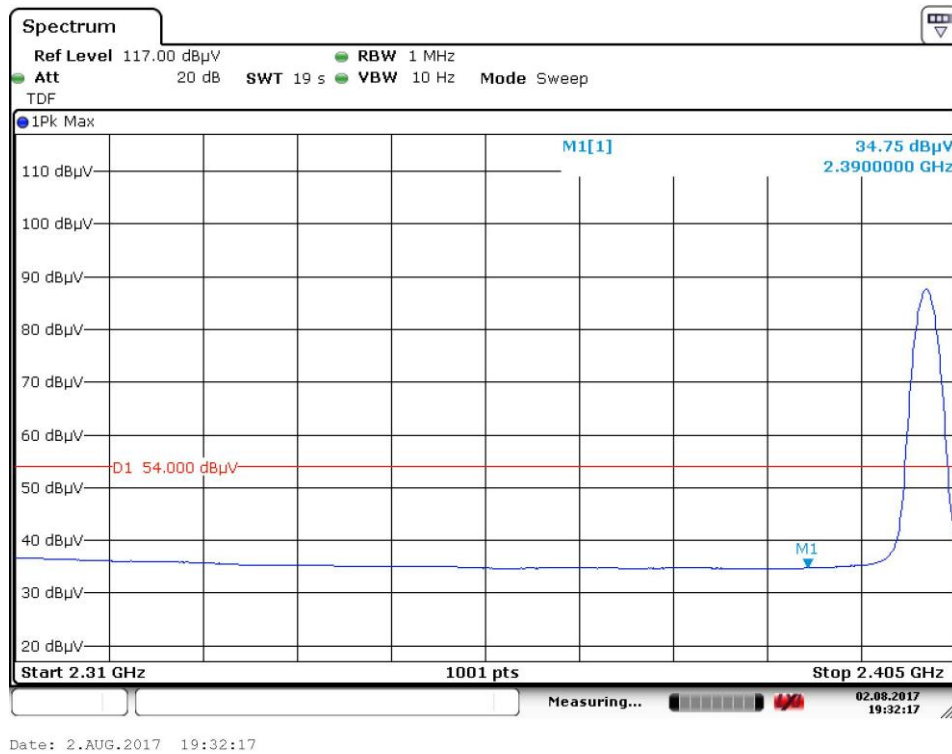


High Channel (Ver)

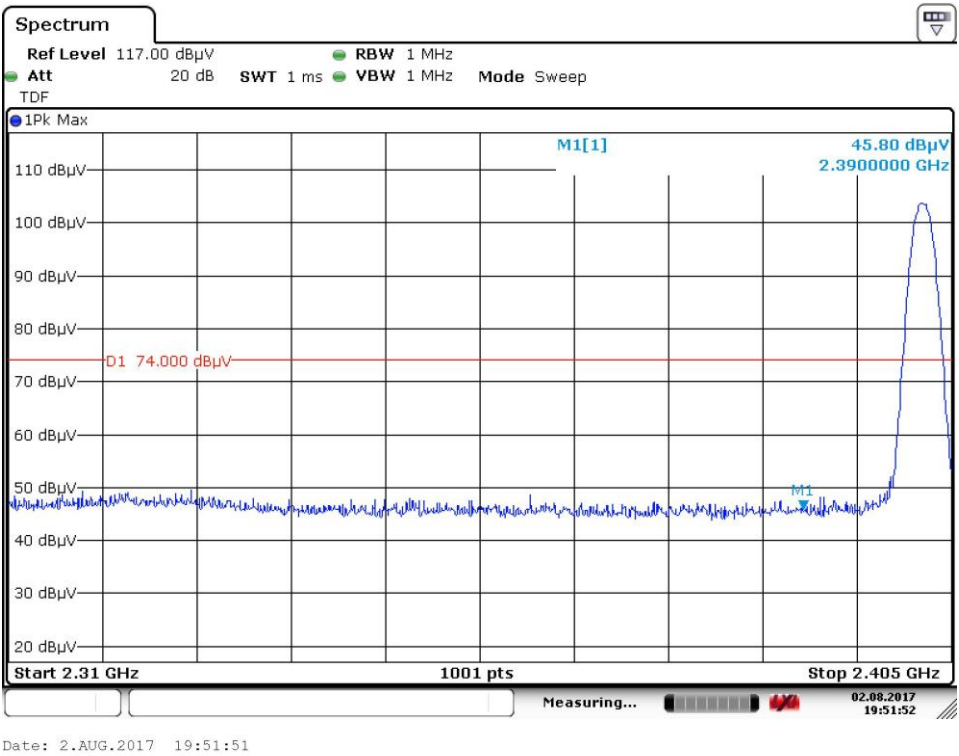
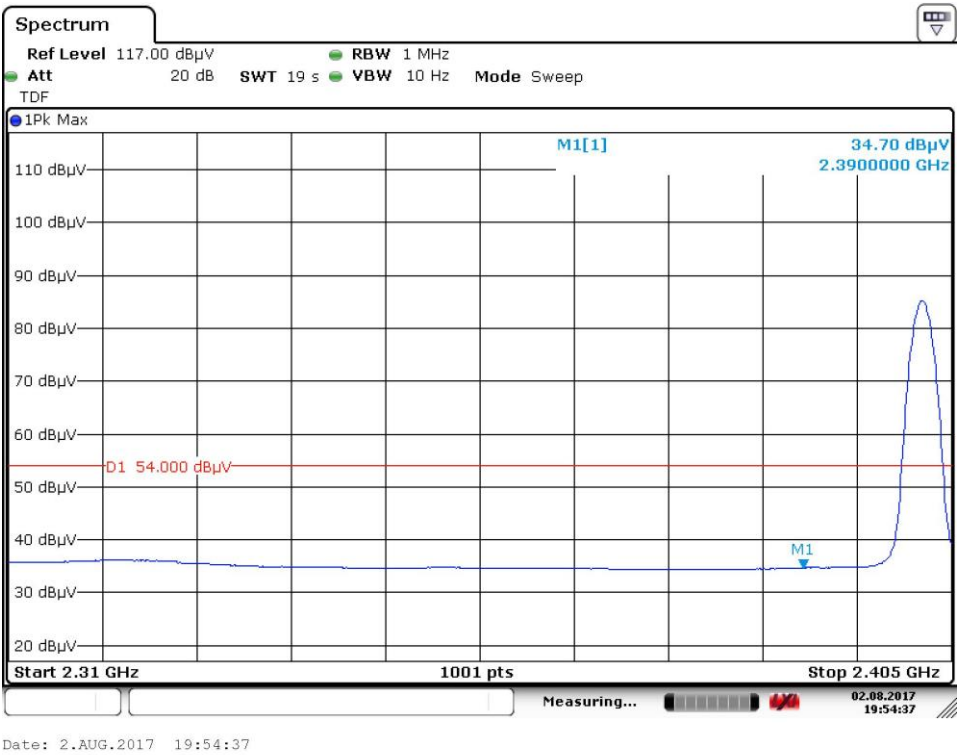


Radiated Bandedge (8DPSK)

Low Channel (Hor)

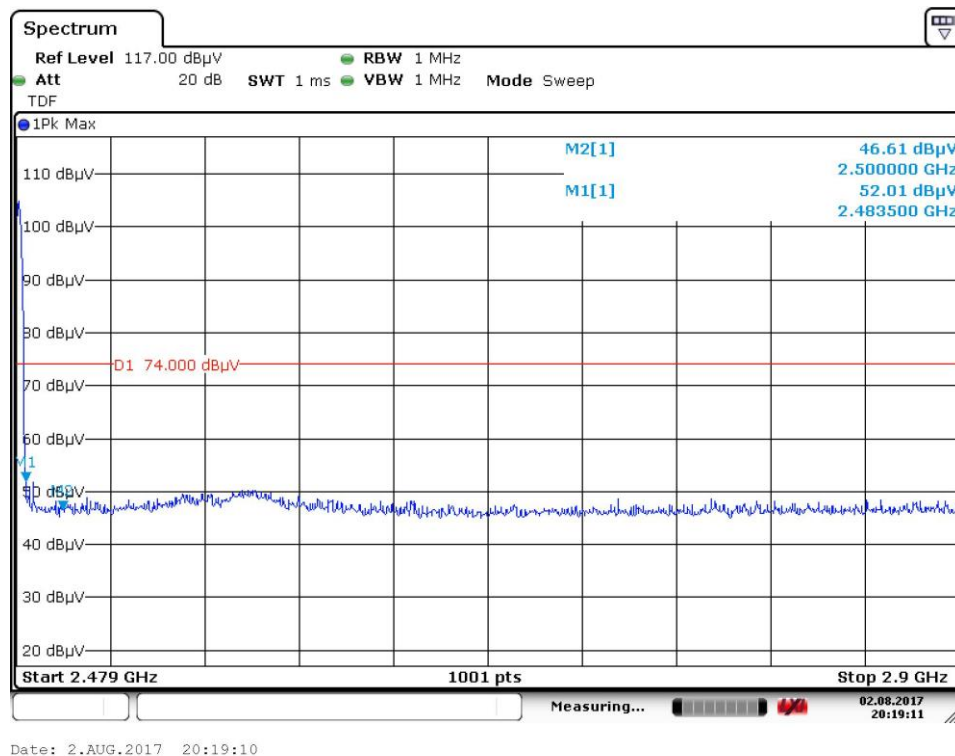
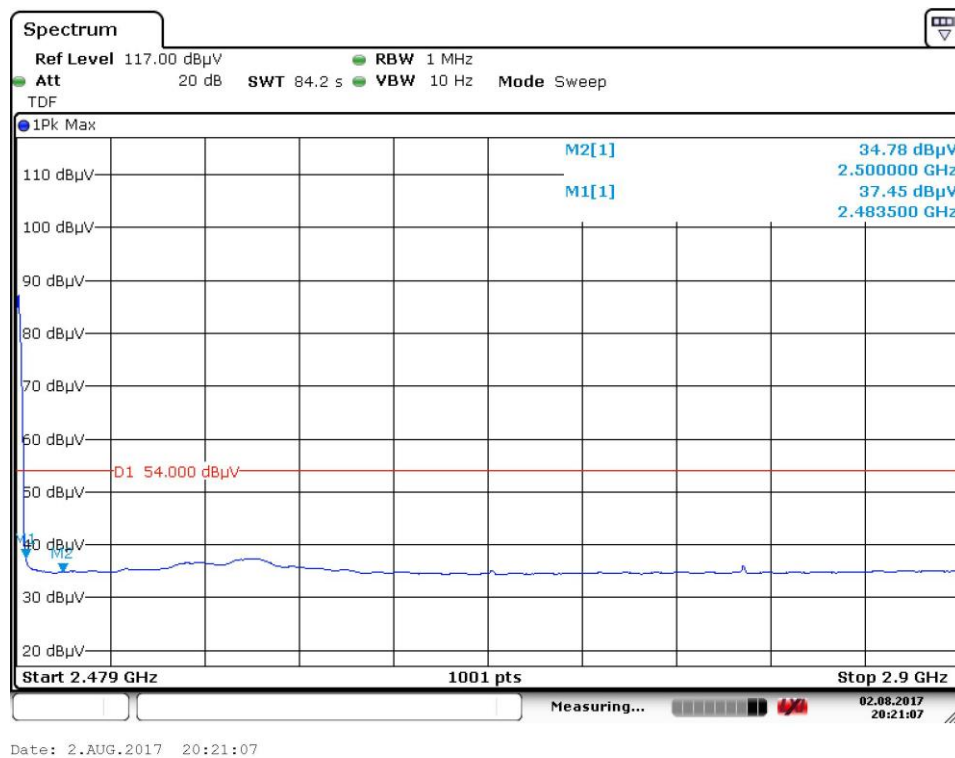


Low Channel (Ver)

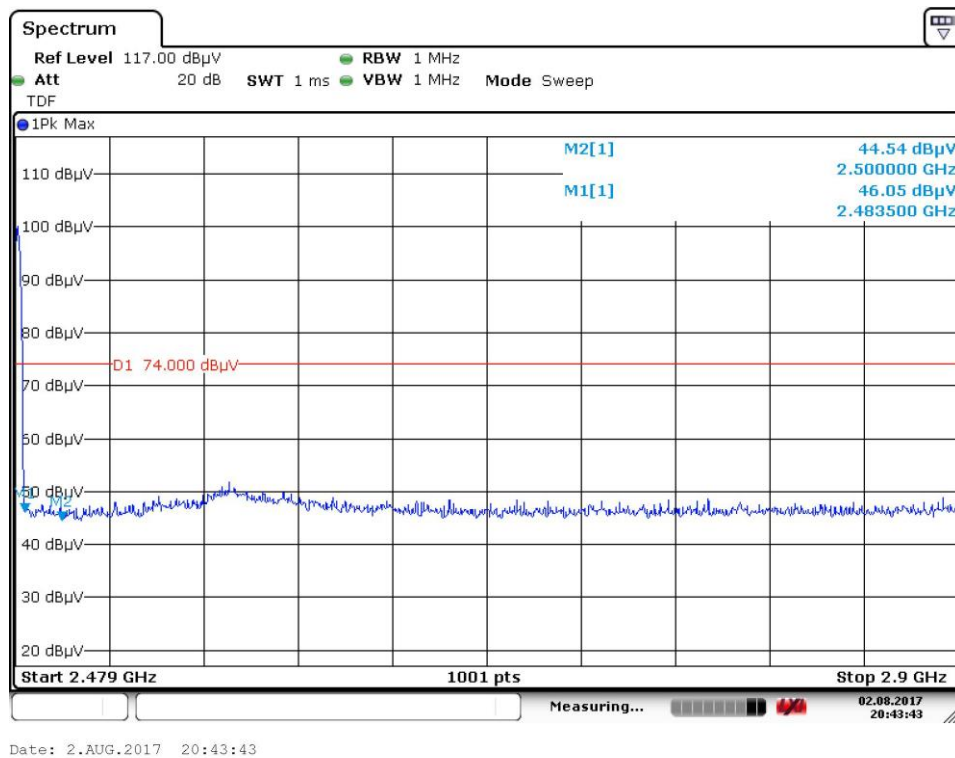
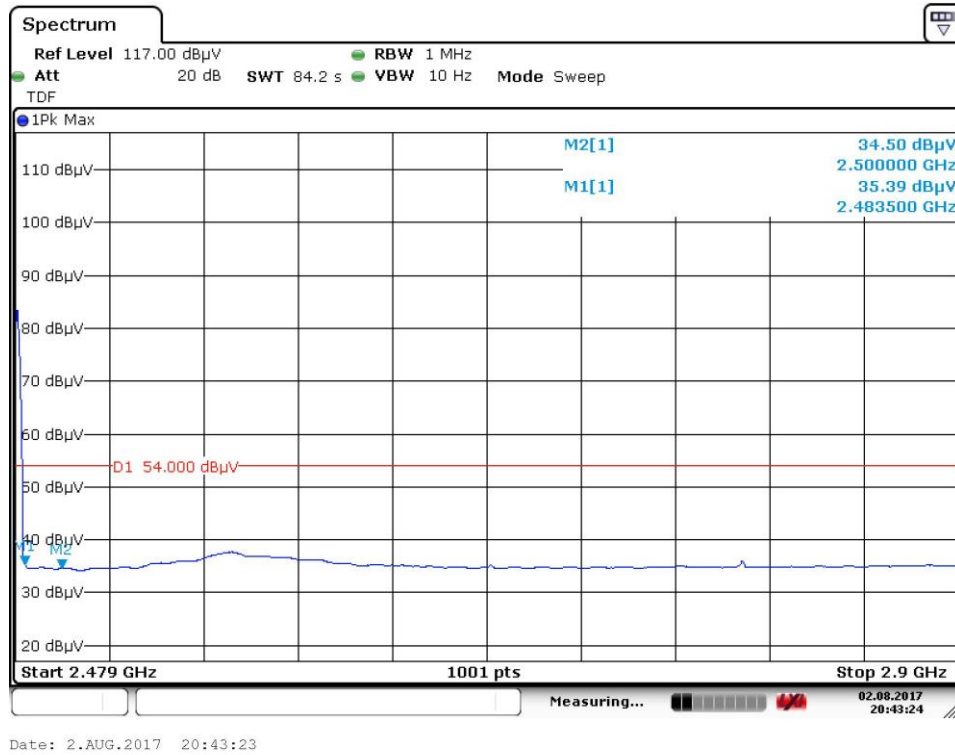


Radiated Bandedge (8DPSK)

High Channel (Hor)



High Channel (Ver)



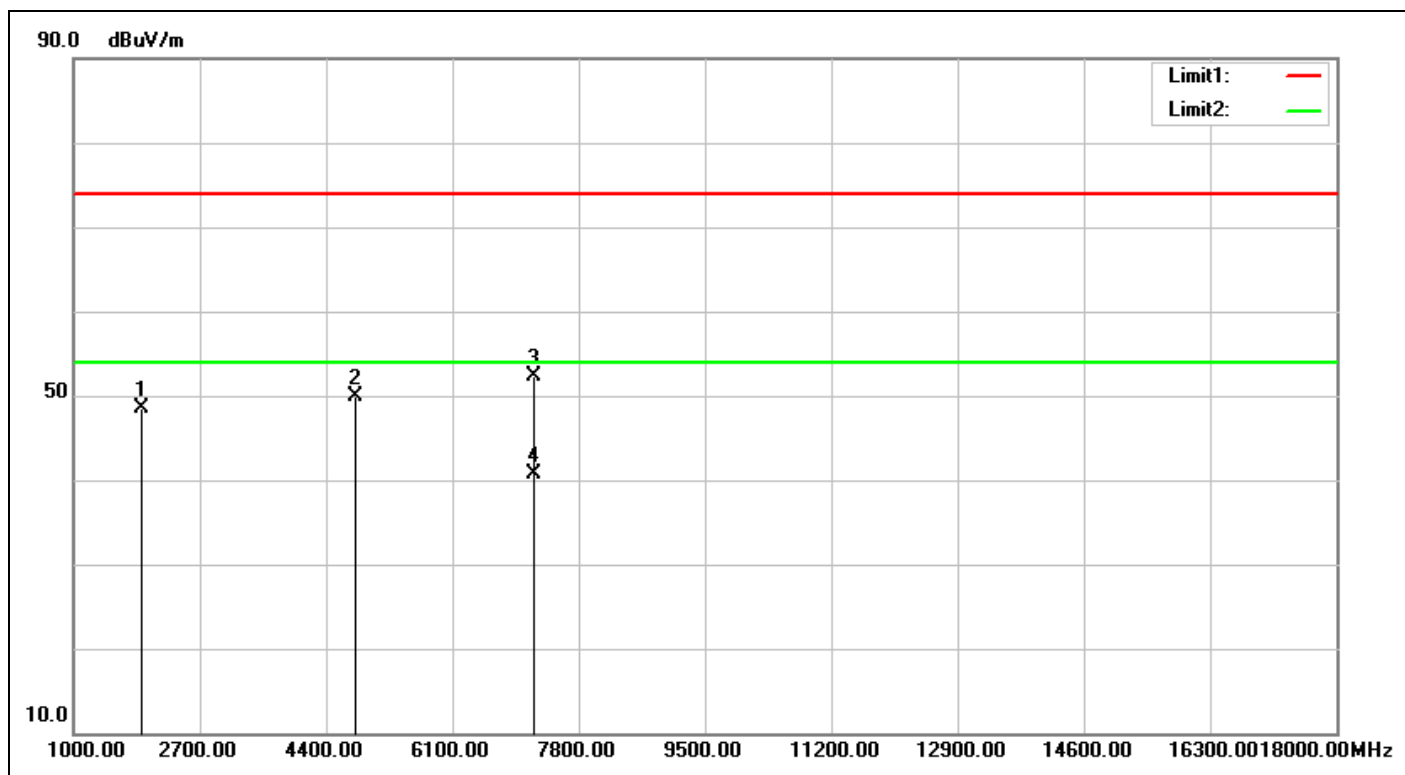
Spurious Emissions, TX Mode, 1-18G



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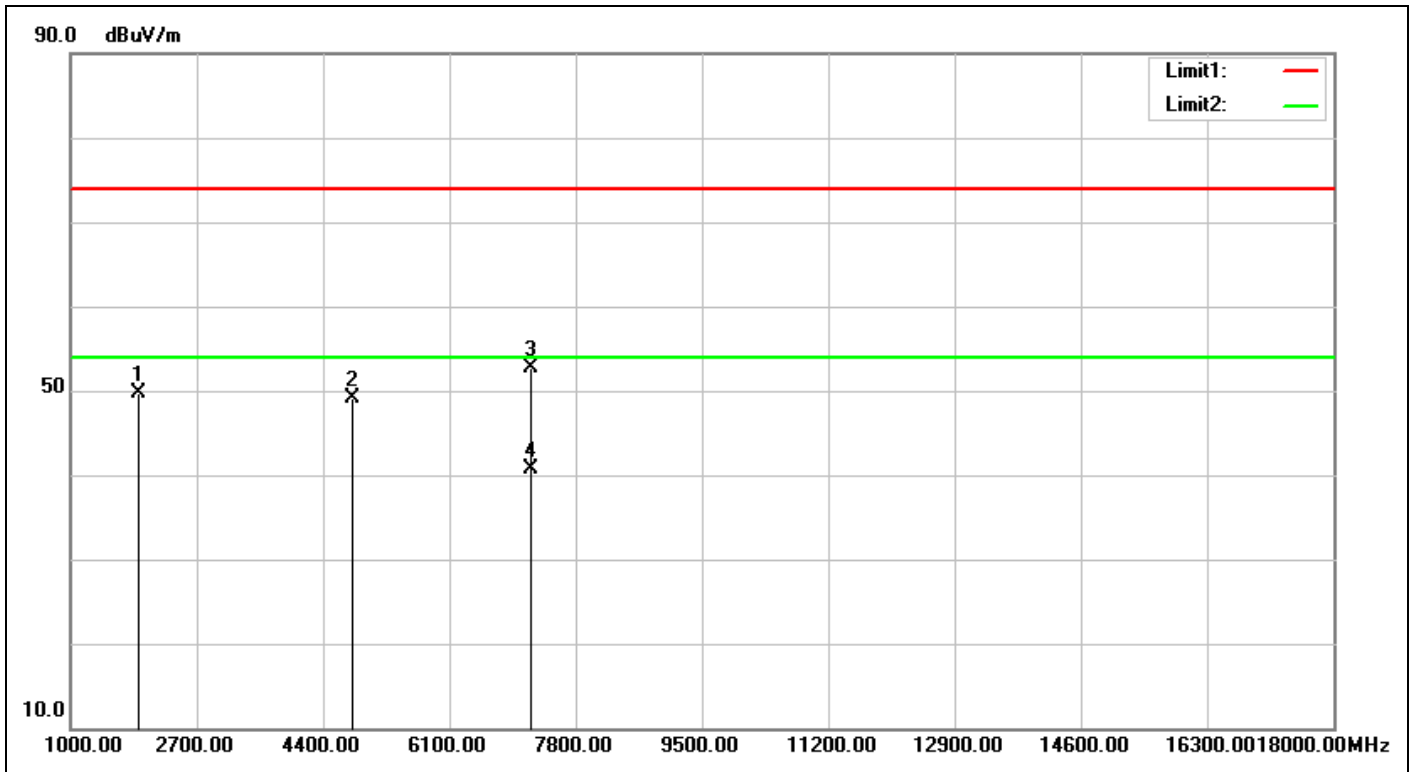
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



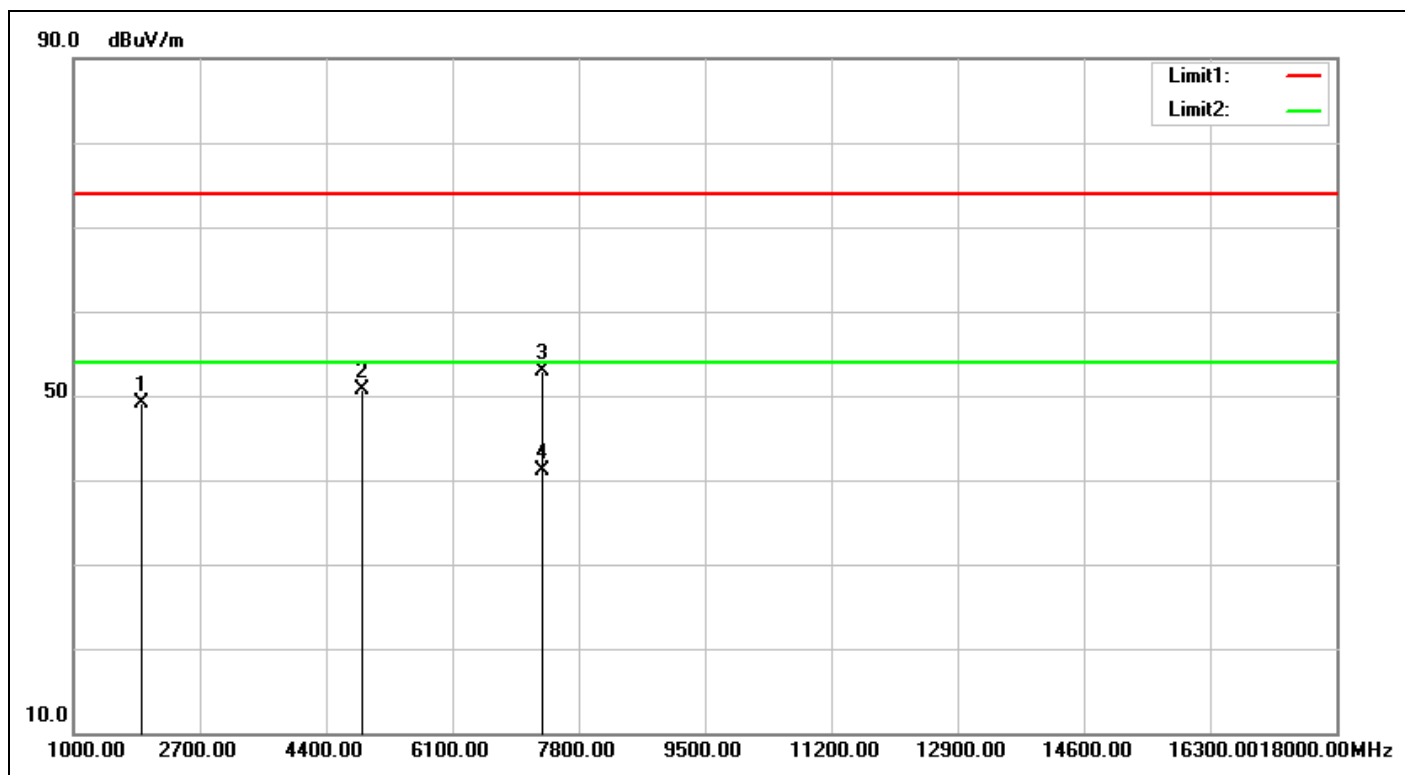
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/2 20:42:00
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	1DH5		
	Class 1 ; 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	55.09	48.46	74.00	-25.54	peak	100	281	
2	4804.000	-0.38	50.30	49.92	74.00	-24.08	peak	100	350	
3	7206.000	8.07	44.29	52.36	74.00	-21.64	peak	100	292	
4	7206.000	8.07	32.69	40.76	54.00	-13.24	AVG	100	292	



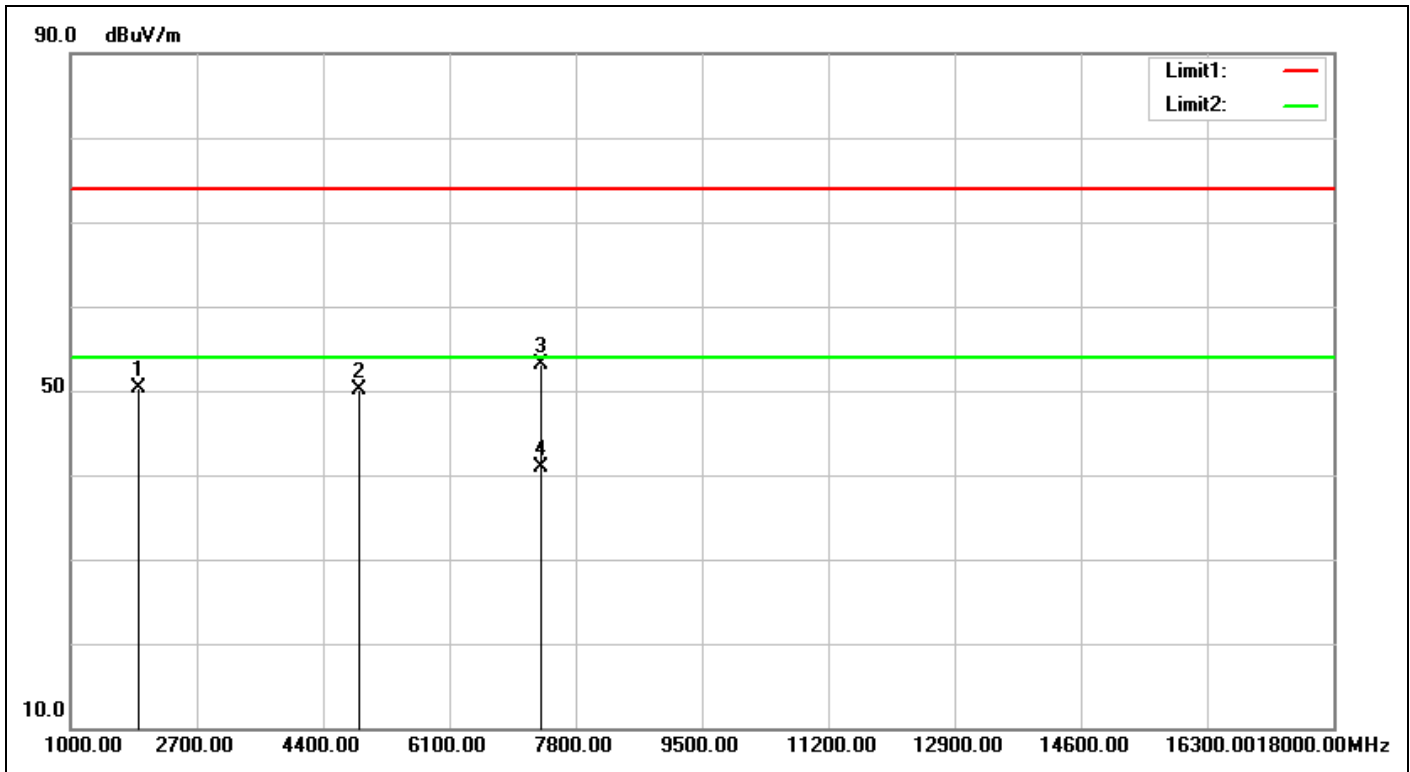
Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/2 20:43:02
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	1DH5		
	Class 1 ; 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	56.41	49.78	74.00	-24.22	peak	100	312	
2	4804.000	-0.38	49.49	49.11	74.00	-24.89	peak	100	121	
3	7206.000	8.07	44.65	52.72	74.00	-21.28	peak	100	221	
4	7206.000	8.07	32.58	40.65	54.00	-13.35	AVG	100	221	



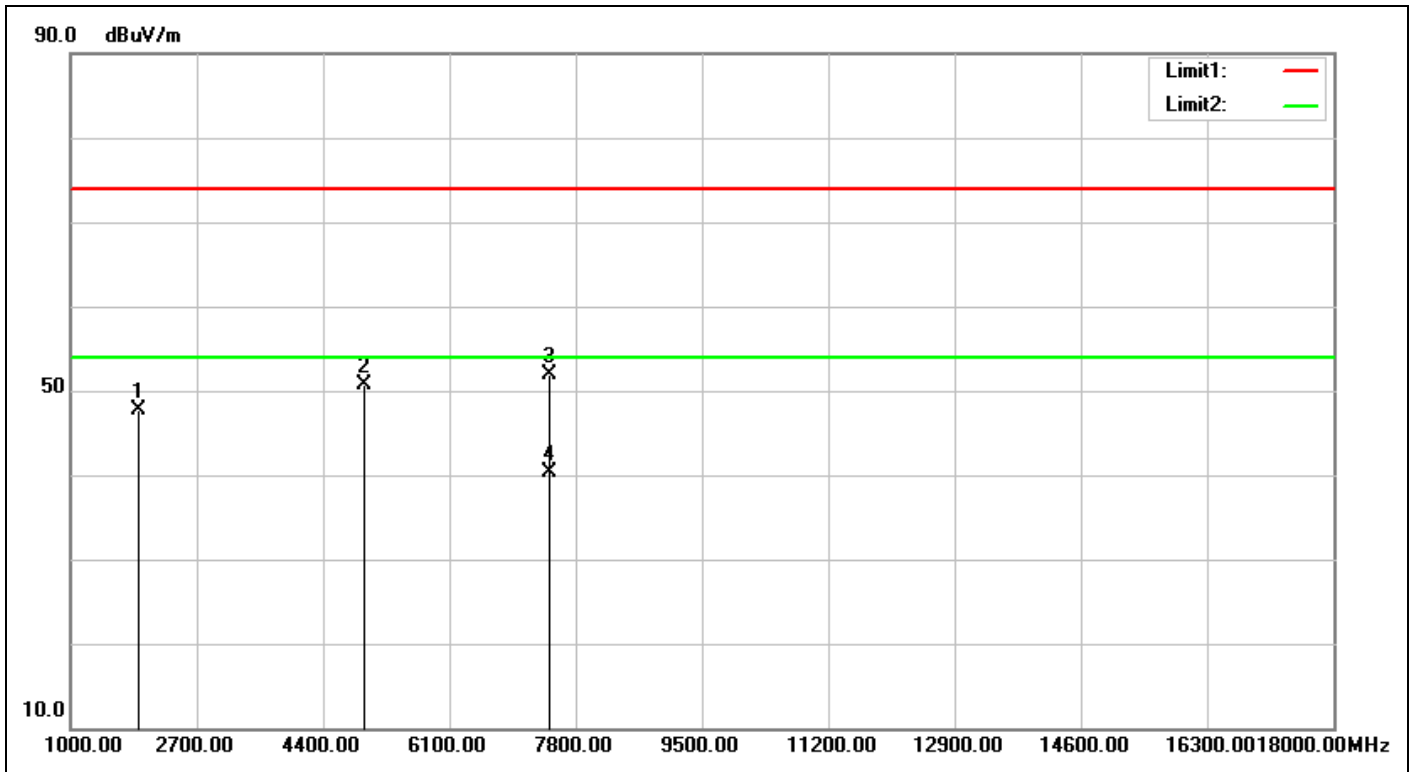
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/2 20:46:51
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 1 ; 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	55.81	49.18	74.00	-24.82	peak	100	263	
2	4882.000	-0.23	51.02	50.79	74.00	-23.21	peak	100	255	
3	7323.000	8.41	44.51	52.92	74.00	-21.08	peak	100	338	
4	7323.000	8.41	32.60	41.01	54.00	-12.99	AVG	100	338	



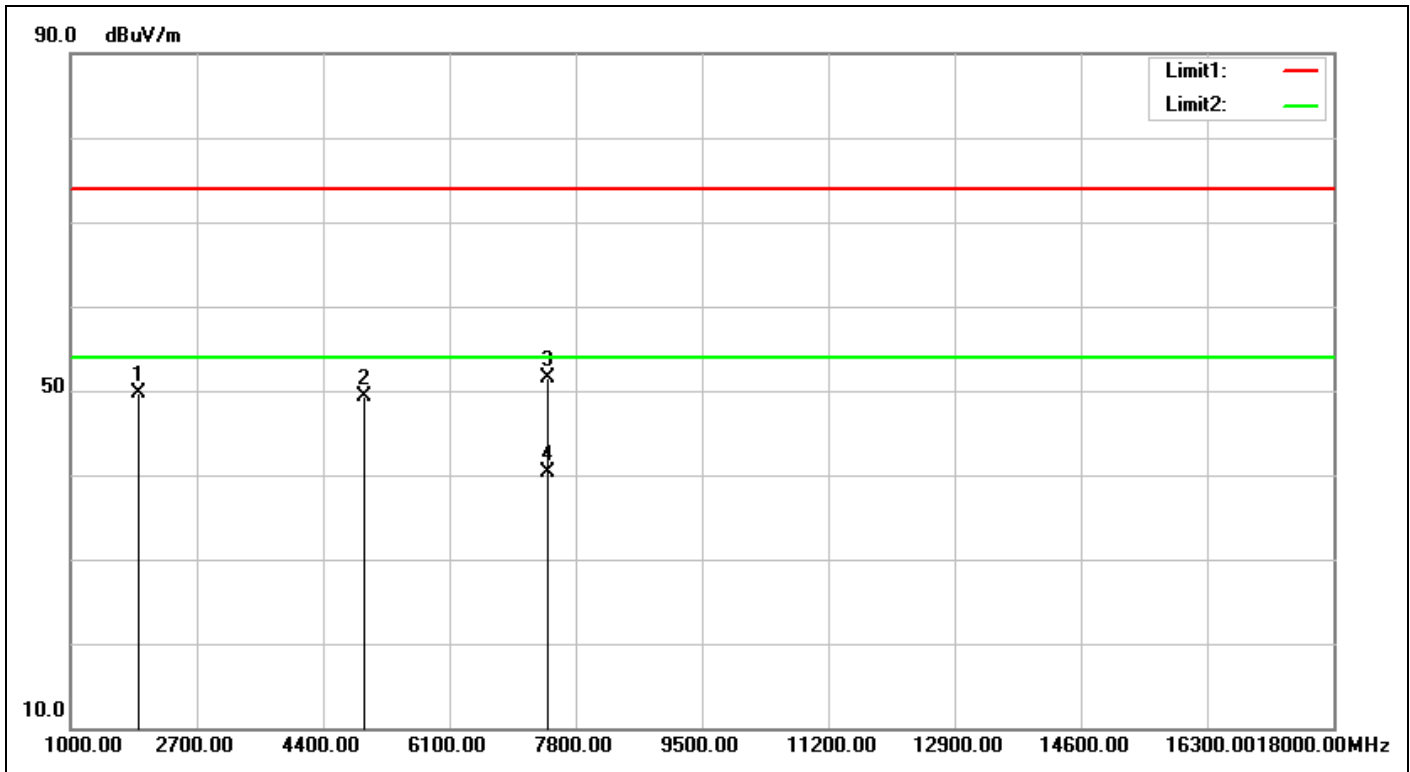
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Test item:	Radiation Emission	Test Time:	2017/8/2 20:47:54
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 1 ; 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	56.89	50.26	74.00	-23.74	peak	100	312	
2	4882.000	-0.23	50.24	50.01	74.00	-23.99	peak	100	77	
3	7323.000	8.41	44.72	53.13	74.00	-20.87	peak	100	199	
4	7323.000	8.41	32.51	40.92	54.00	-13.08	AVG	100	199	



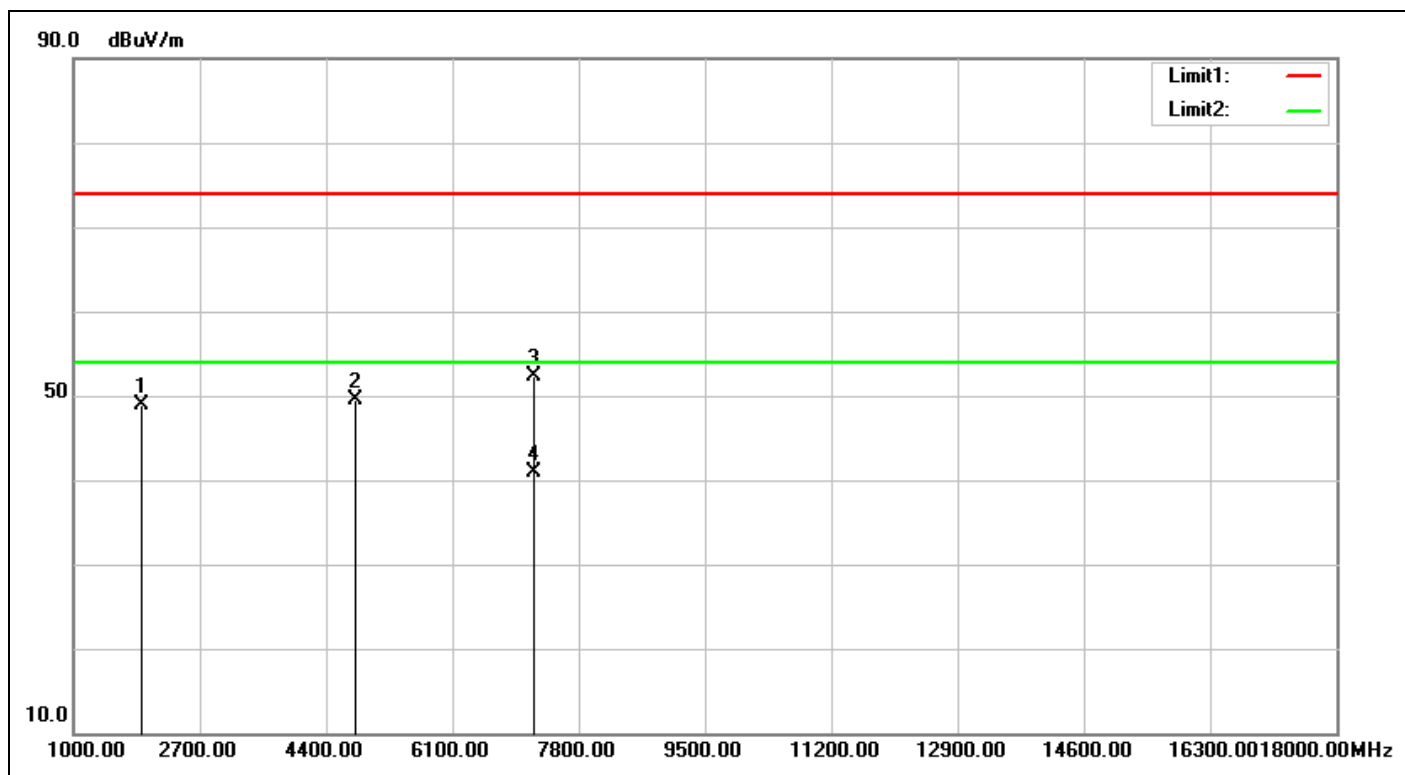
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/2 20:53:28
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	1DH5		
	Class 1 ; 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	54.42	47.79	74.00	-26.21	peak	100	264	
2	4960.000	-0.09	50.73	50.64	74.00	-23.36	peak	100	197	
3	7440.000	8.75	43.22	51.97	74.00	-22.03	peak	100	291	
4	7440.000	8.75	31.46	40.21	54.00	-13.79	AVG	100	291	



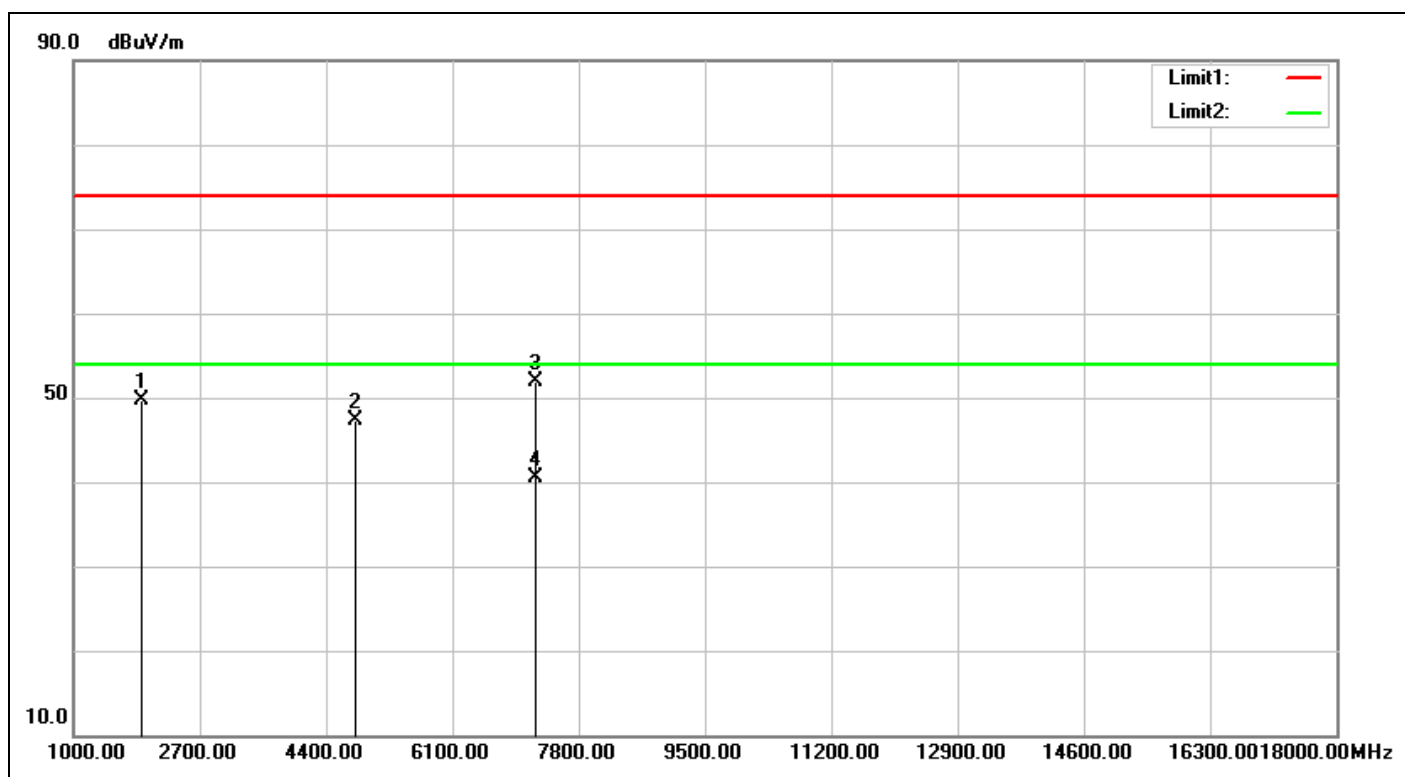
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/2 20:54:31
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	1DH5		
	Class 1 ; 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	56.29	49.66	74.00	-24.34	peak	100	315	
2	4960.000	-0.09	49.38	49.29	74.00	-24.71	peak	100	236	
3	7440.000	8.75	42.82	51.57	74.00	-22.43	peak	100	271	
4	7440.000	8.75	31.59	40.34	54.00	-13.66	AVG	100	271	



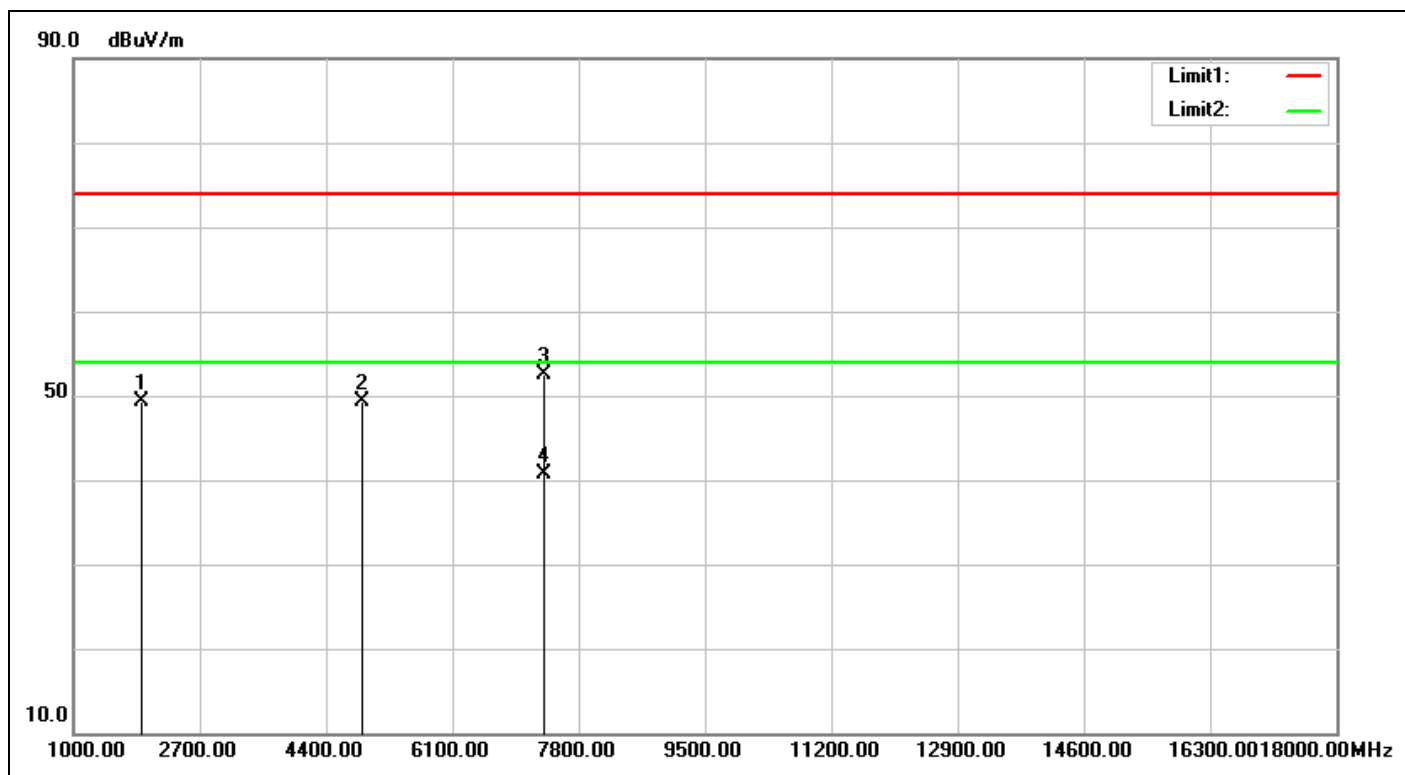
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/2 20:57:56
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	3DH5		
	Class 1 ; 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	55.52	48.89	74.00	-25.11	peak	100	283	
2	4804.000	-0.38	49.79	49.41	74.00	-24.59	peak	100	191	
3	7206.000	8.07	44.30	52.37	74.00	-21.63	peak	100	81	
4	7206.000	8.07	32.85	40.92	54.00	-13.08	AVG	100	81	



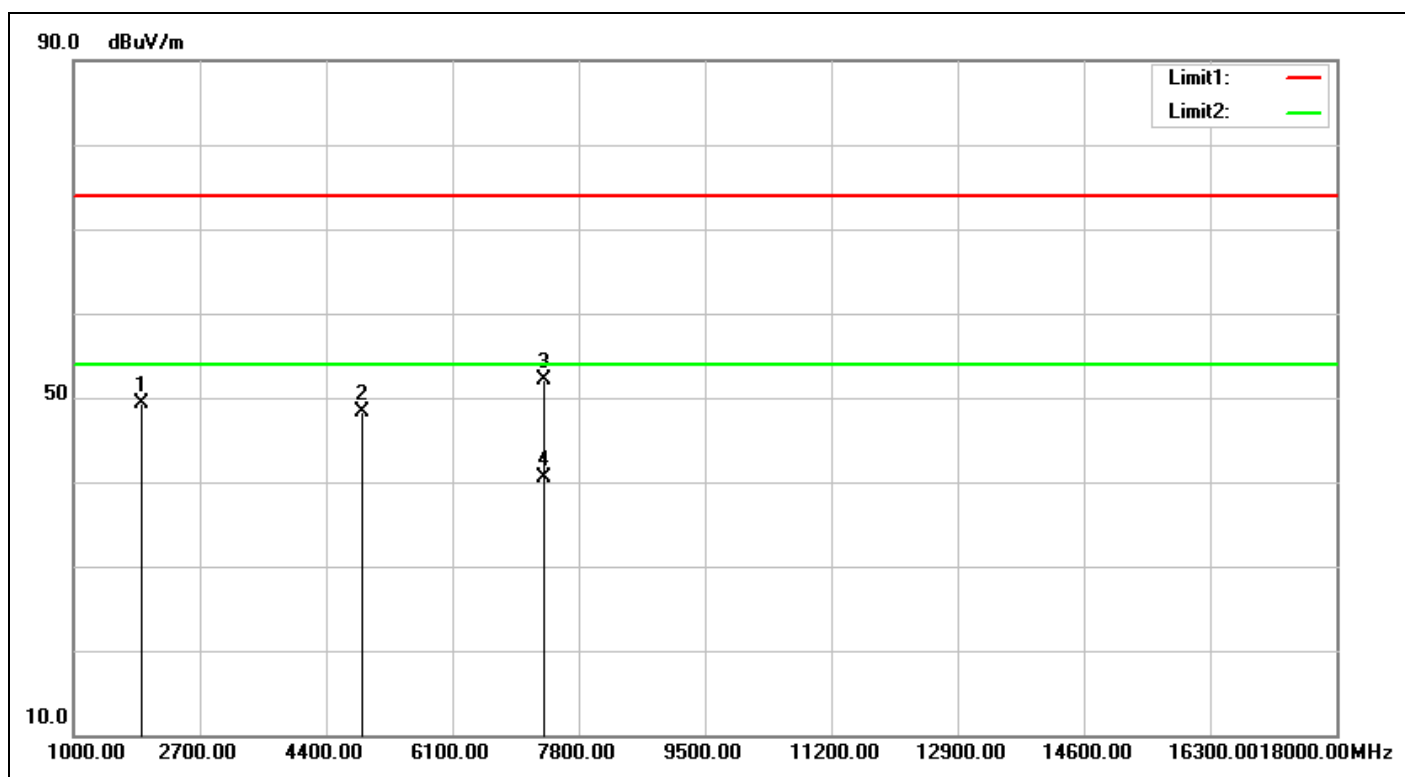
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/2 20:58:59
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	3DH5		
	Class 1 ; 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	56.37	49.74	74.00	-24.26	peak	100	313	
2	4804.000	-0.38	47.73	47.35	74.00	-26.65	peak	100	205	
3	7206.000	8.07	43.93	52.00	74.00	-22.00	peak	100	296	
4	7206.000	8.07	32.41	40.48	54.00	-13.52	AVG	100	296	



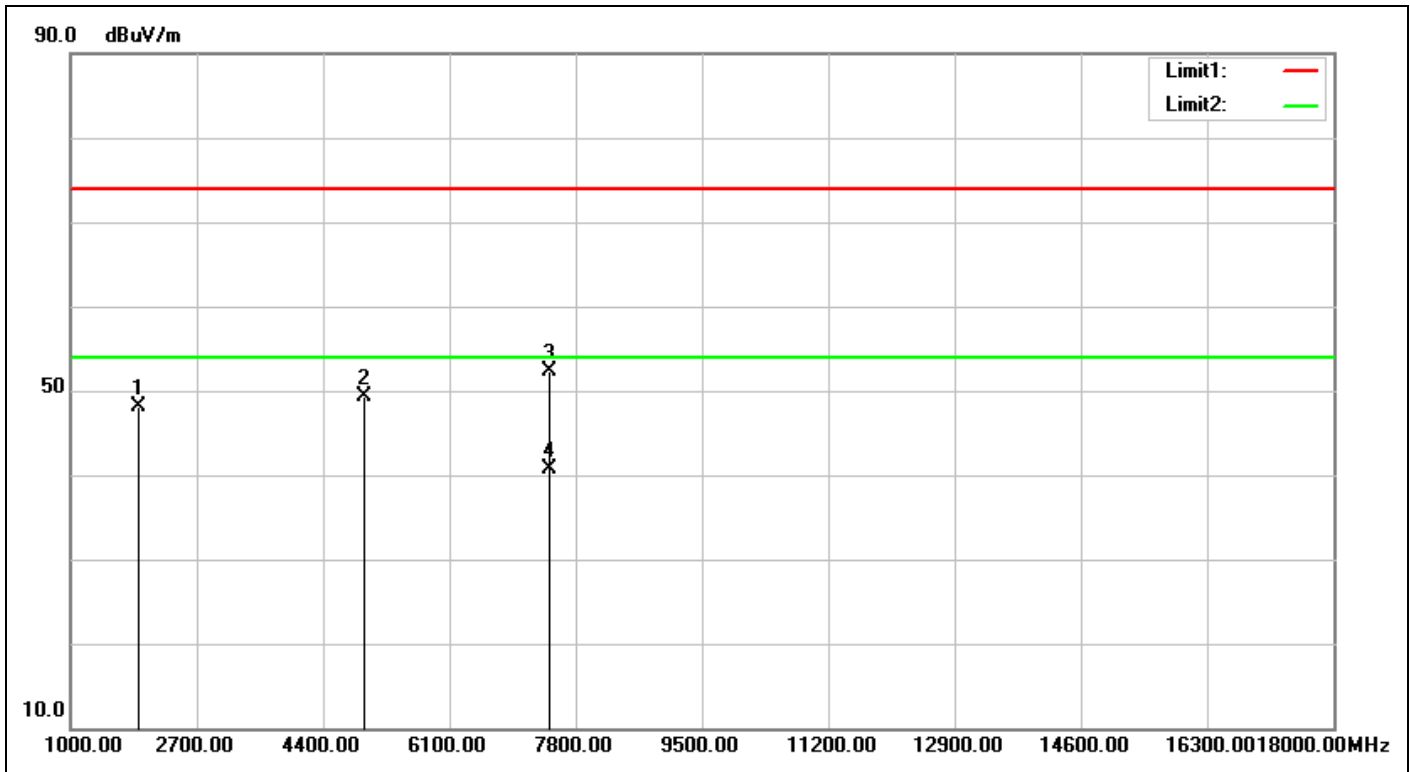
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/2 21:02:36
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	3DH5		
	Class 1 ; 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	55.89	49.26	74.00	-24.74	peak	100	263	
2	4882.000	-0.23	49.53	49.30	74.00	-24.70	peak	100	194	
3	7323.000	8.41	44.06	52.47	74.00	-21.53	peak	100	335	
4	7323.000	8.41	32.24	40.65	54.00	-13.35	AVG	100	335	



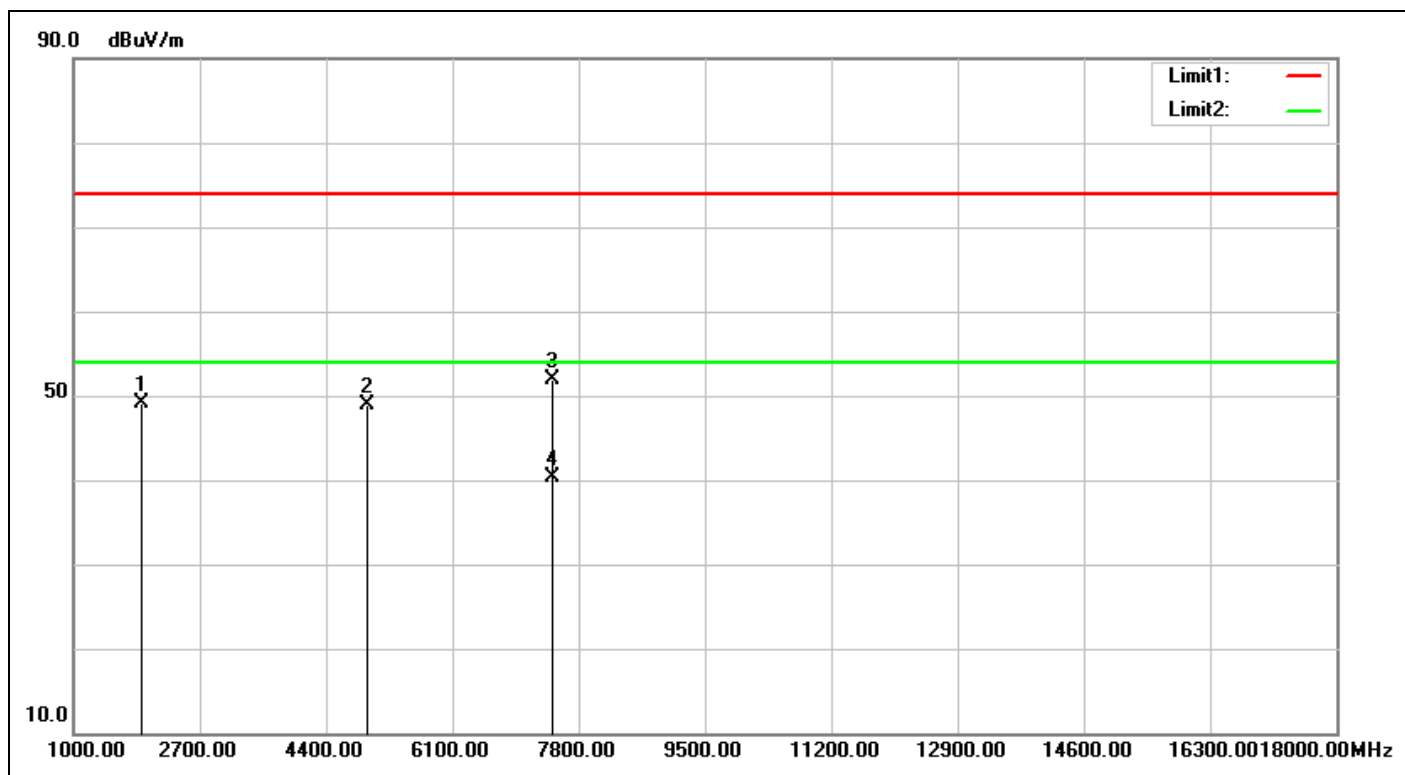
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/2 21:03:39
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	3DH5		
	Class 1 ; 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	55.96	49.33	74.00	-24.67	peak	100	315	
2	4882.000	-0.23	48.51	48.28	74.00	-25.72	peak	100	226	
3	7323.000	8.41	43.73	52.14	74.00	-21.86	peak	100	194	
4	7323.000	8.41	32.16	40.57	54.00	-13.43	AVG	100	194	



Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/2 21:06:53
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	3DH5		
	Class 1 ; 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	54.77	48.14	74.00	-25.86	peak	100	264	
2	4960.000	-0.09	49.36	49.27	74.00	-24.73	peak	100	67	
3	7440.000	8.75	43.53	52.28	74.00	-21.72	peak	100	78	
4	7440.000	8.75	31.93	40.68	54.00	-13.32	AVG	100	78	



Service No.:	114066608	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/2 21:07:56
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	3DH5		
	Class 1 ; 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	55.79	49.16	74.00	-24.84	peak	100	313	
2	4960.000	-0.09	48.91	48.82	74.00	-25.18	peak	100	318	
3	7440.000	8.75	43.18	51.93	74.00	-22.07	peak	100	116	
4	7440.000	8.75	31.62	40.37	54.00	-13.63	AVG	100	116	

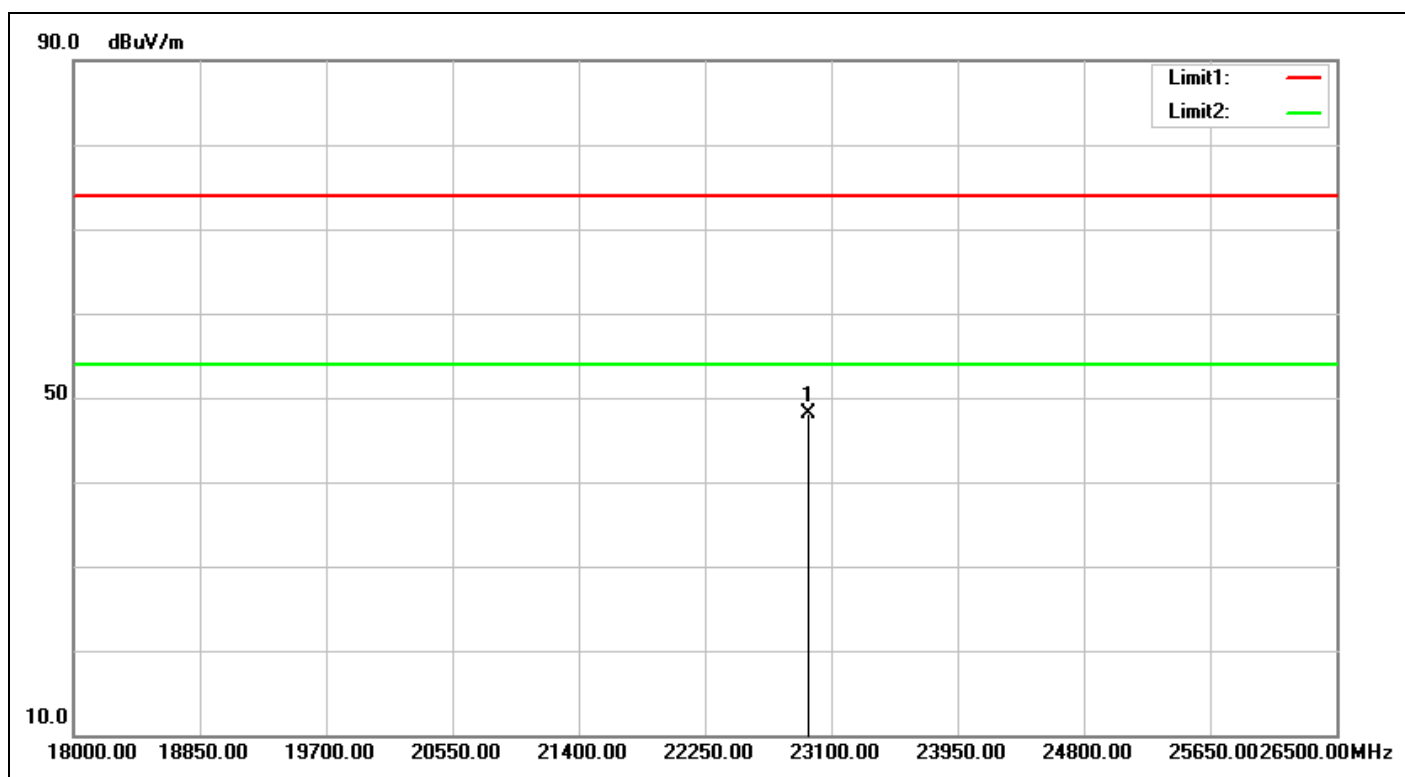
Spurious Emissions, TX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

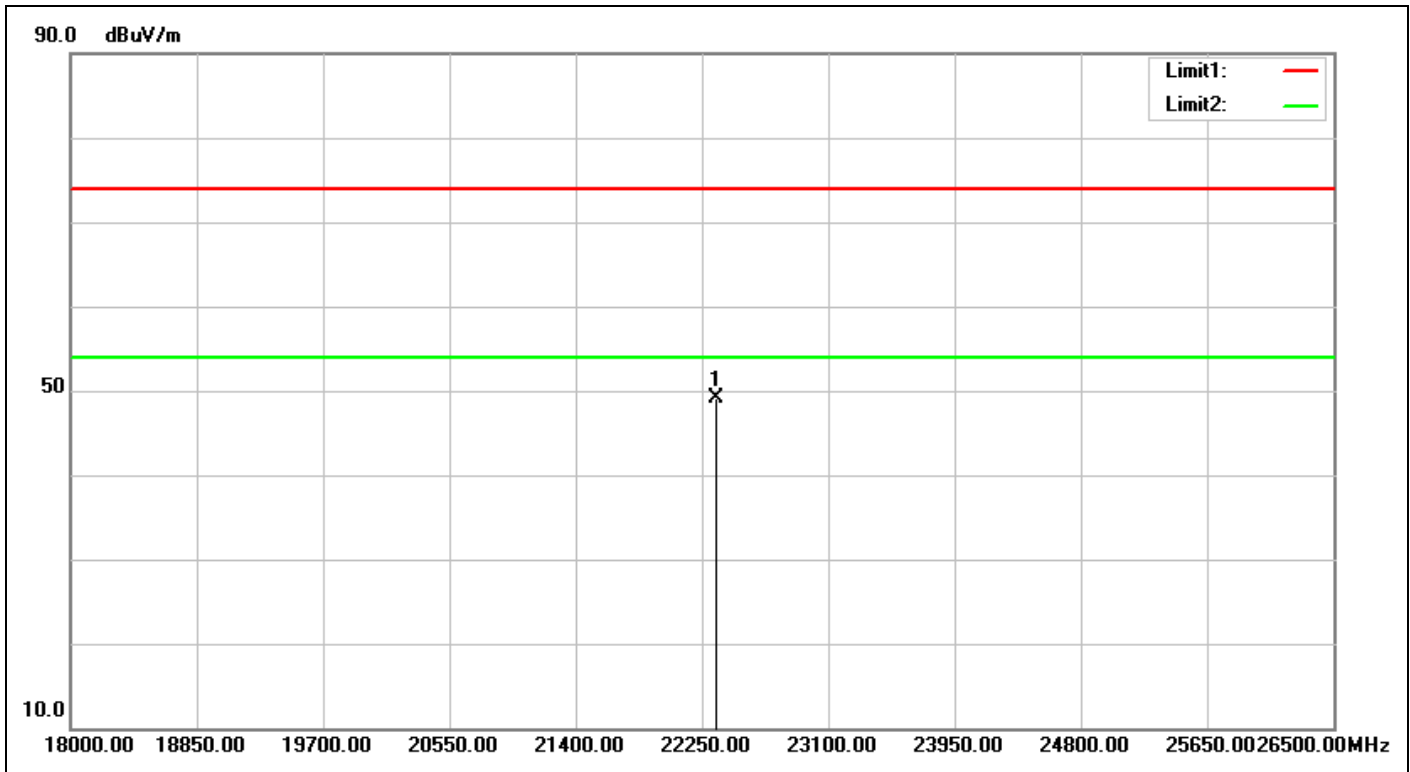
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



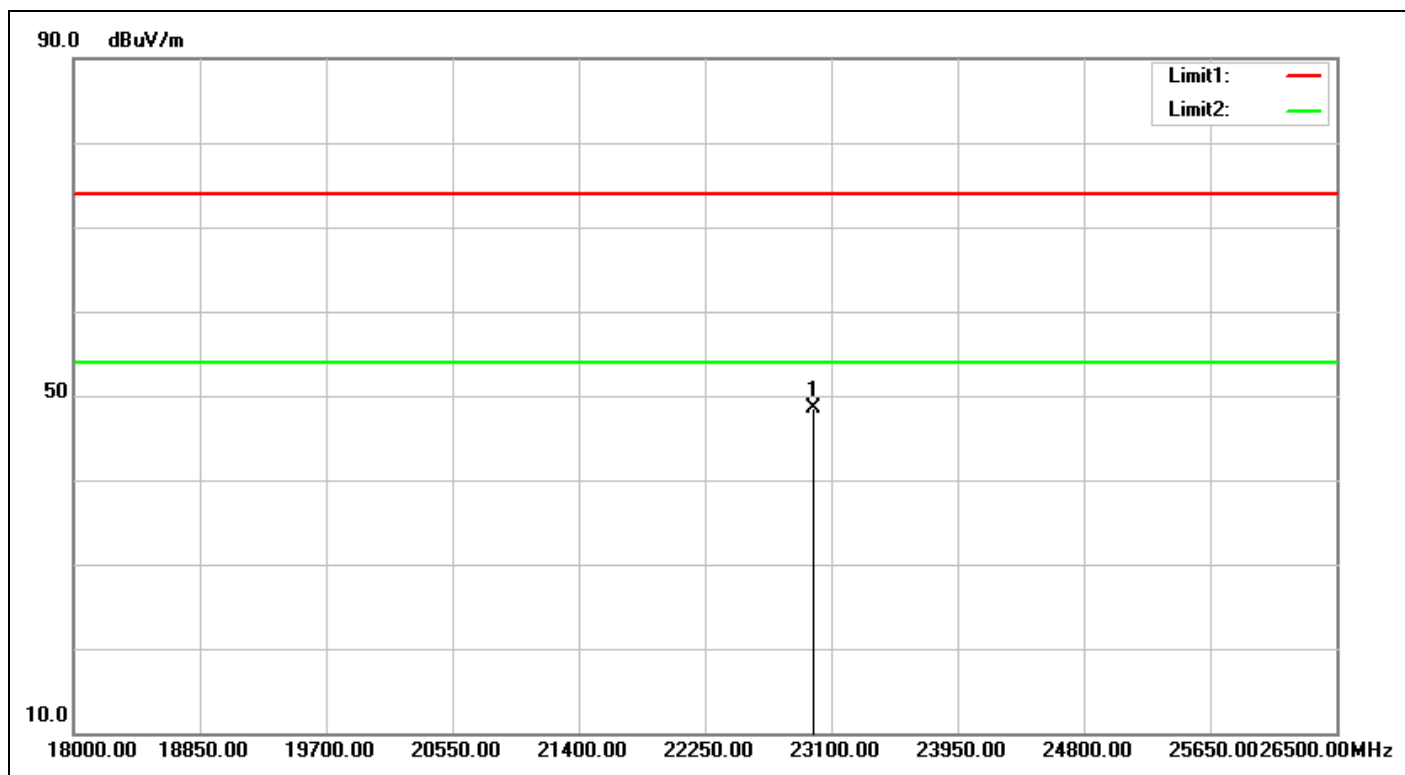
Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/2 22:03:12
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	1DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22947.000	32.12	15.91	48.03	74.00	-25.97	peak	100	161	



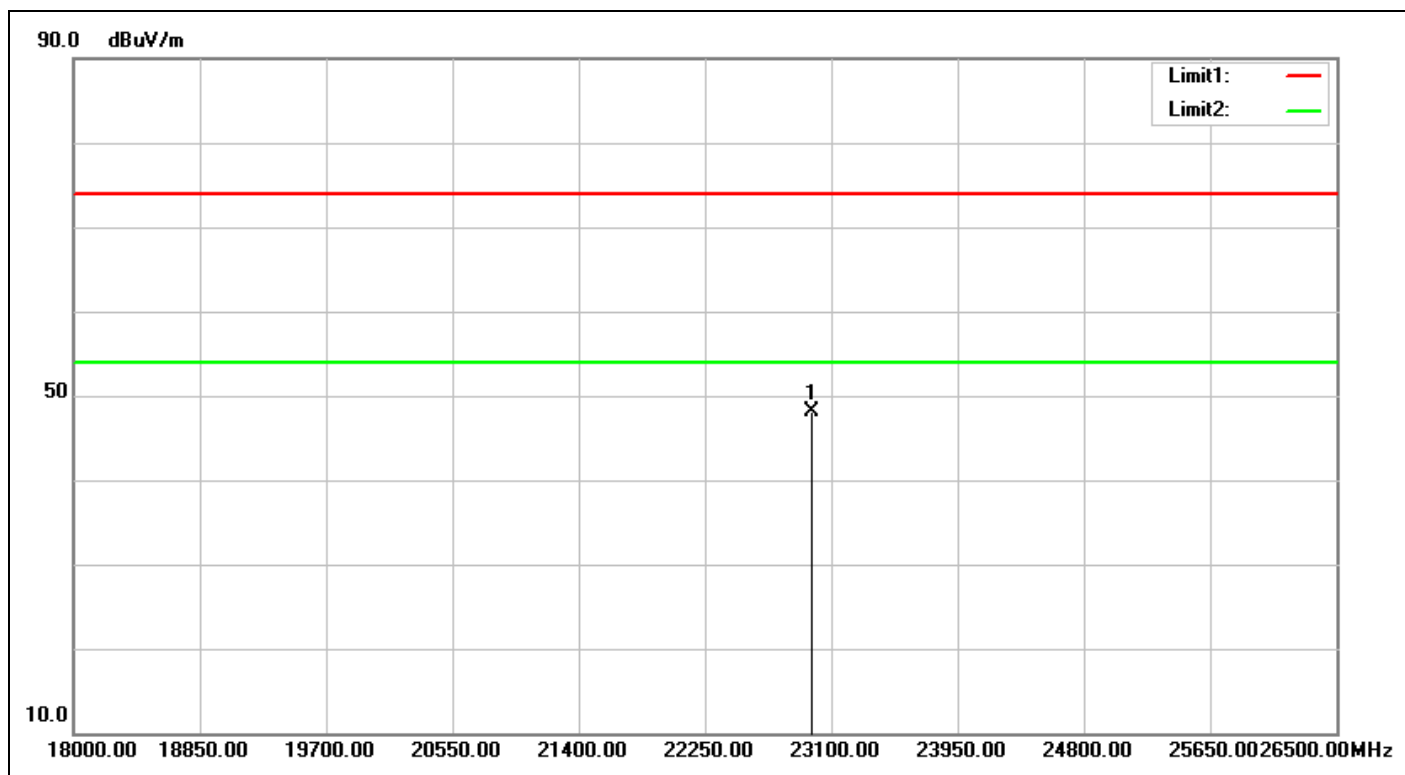
Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/2 22:04:15
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	1DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22343.500	32.48	16.61	49.09	74.00	-24.91	peak	100	343	



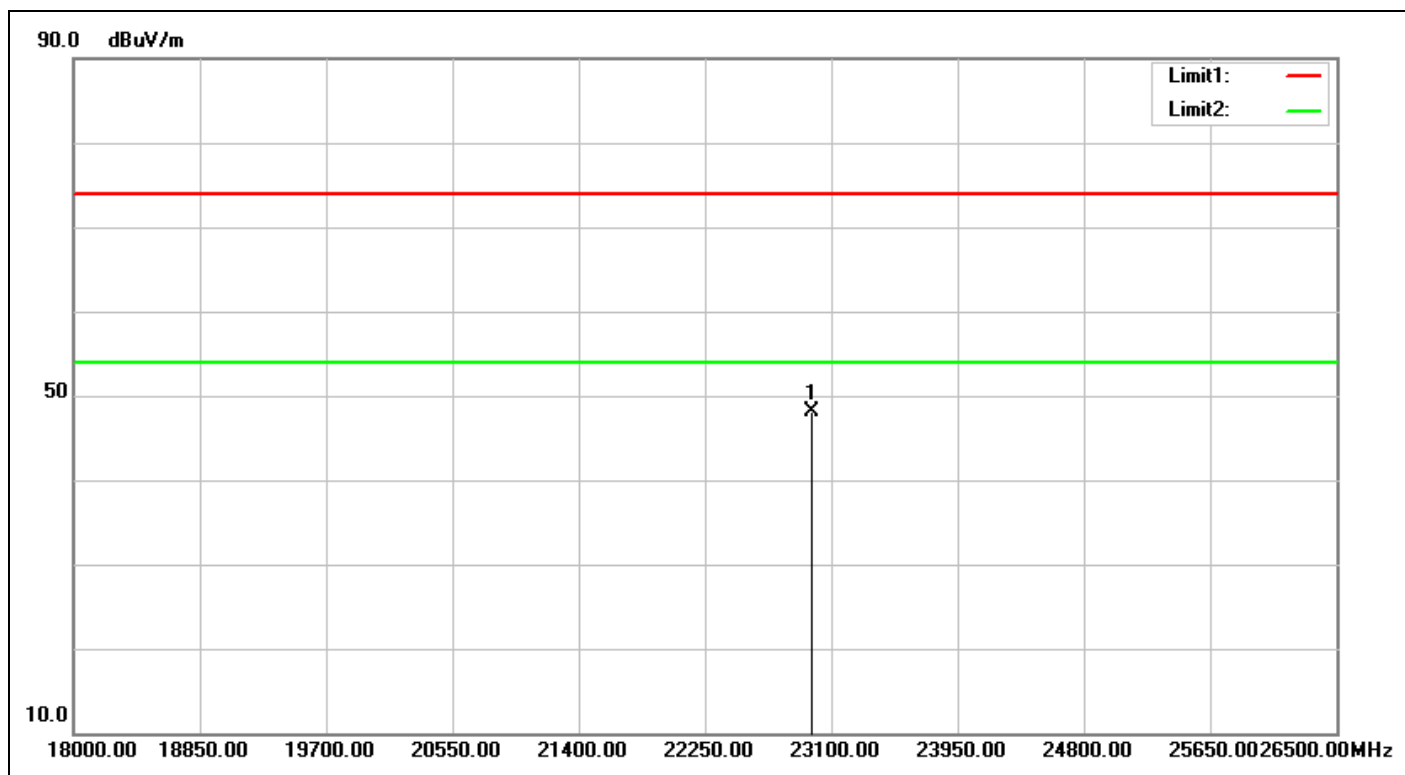
Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/2 22:05:43
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22981.000	32.11	16.30	48.41	74.00	-25.59	peak	100	236	



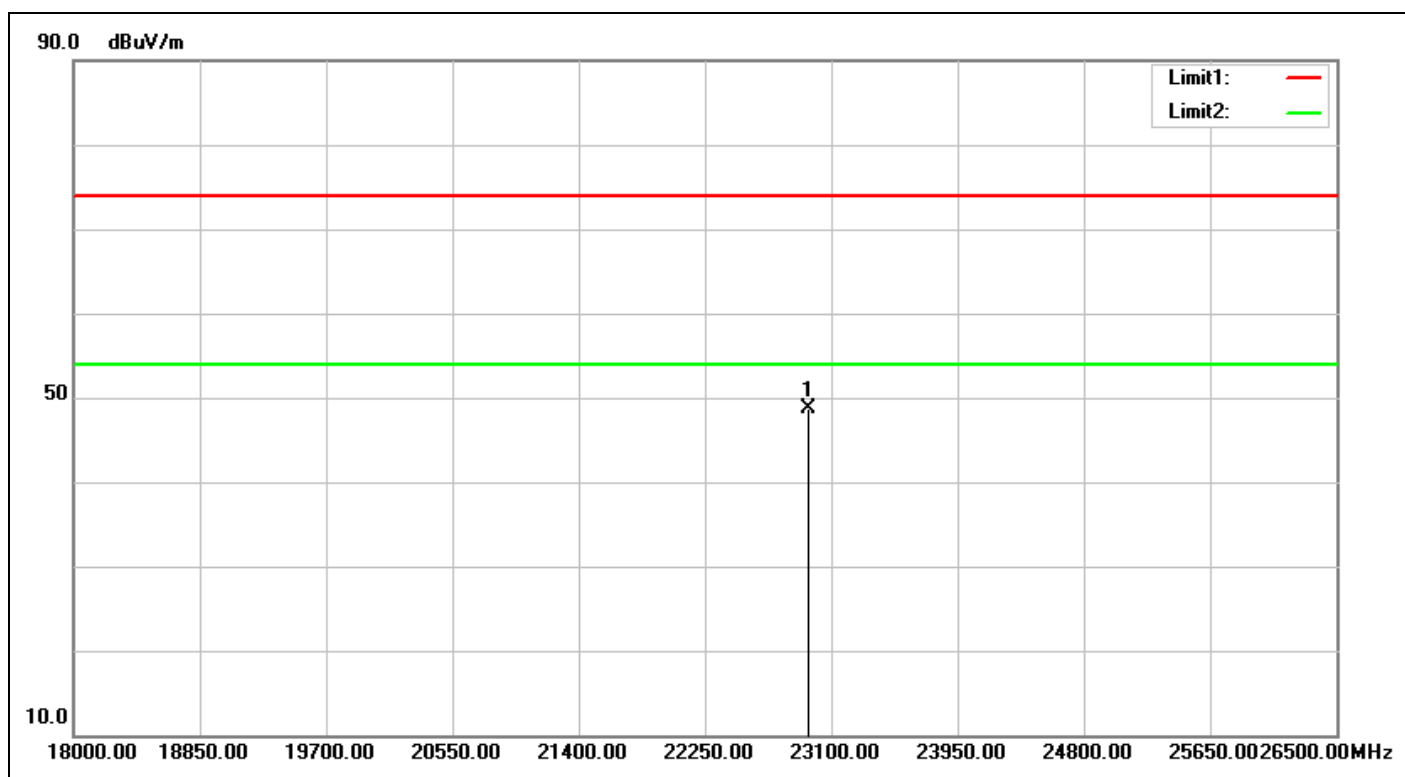
Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/2 22:06:45
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22972.500	32.10	16.00	48.10	74.00	-25.90	peak	100	354	



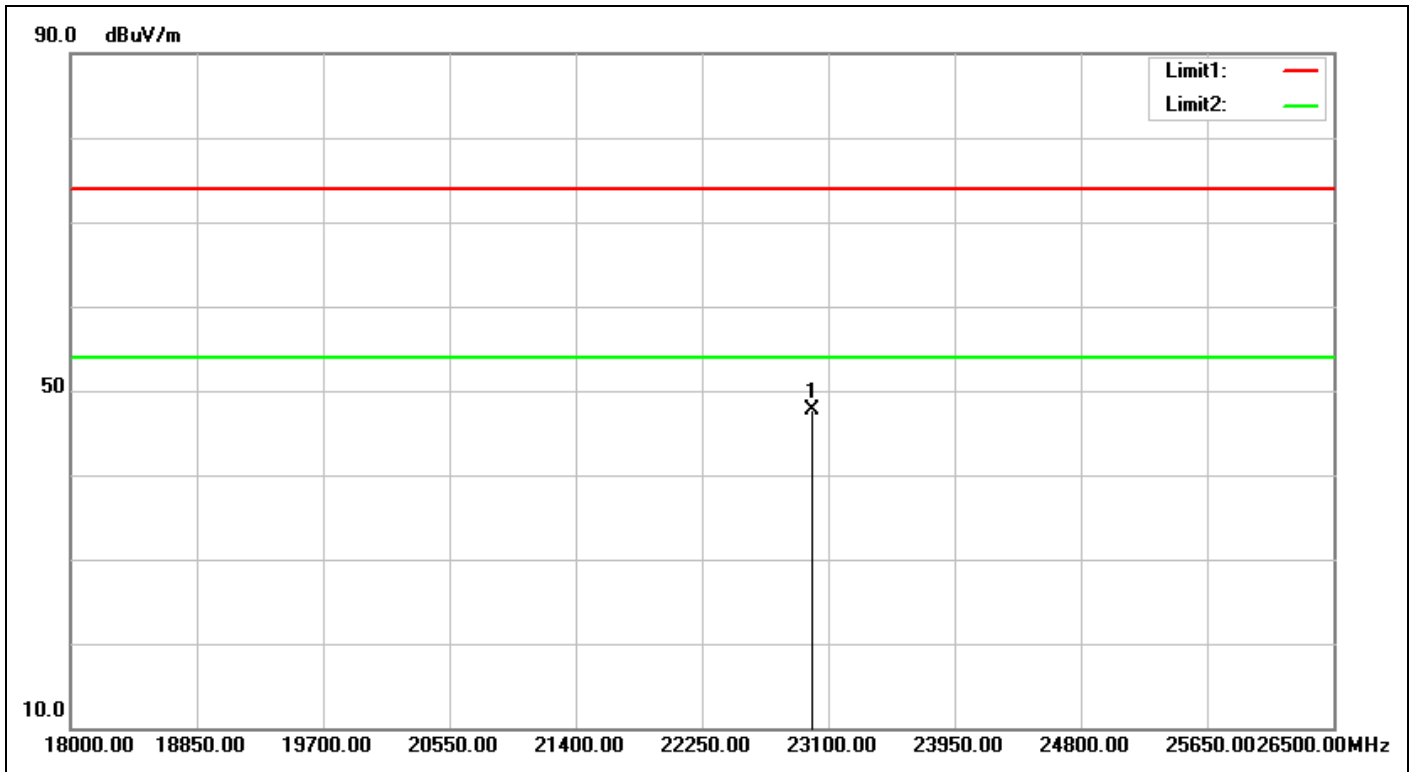
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	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/2 22:08:20
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	1DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22972.500	32.10	15.92	48.02	74.00	-25.98	peak	100	158	



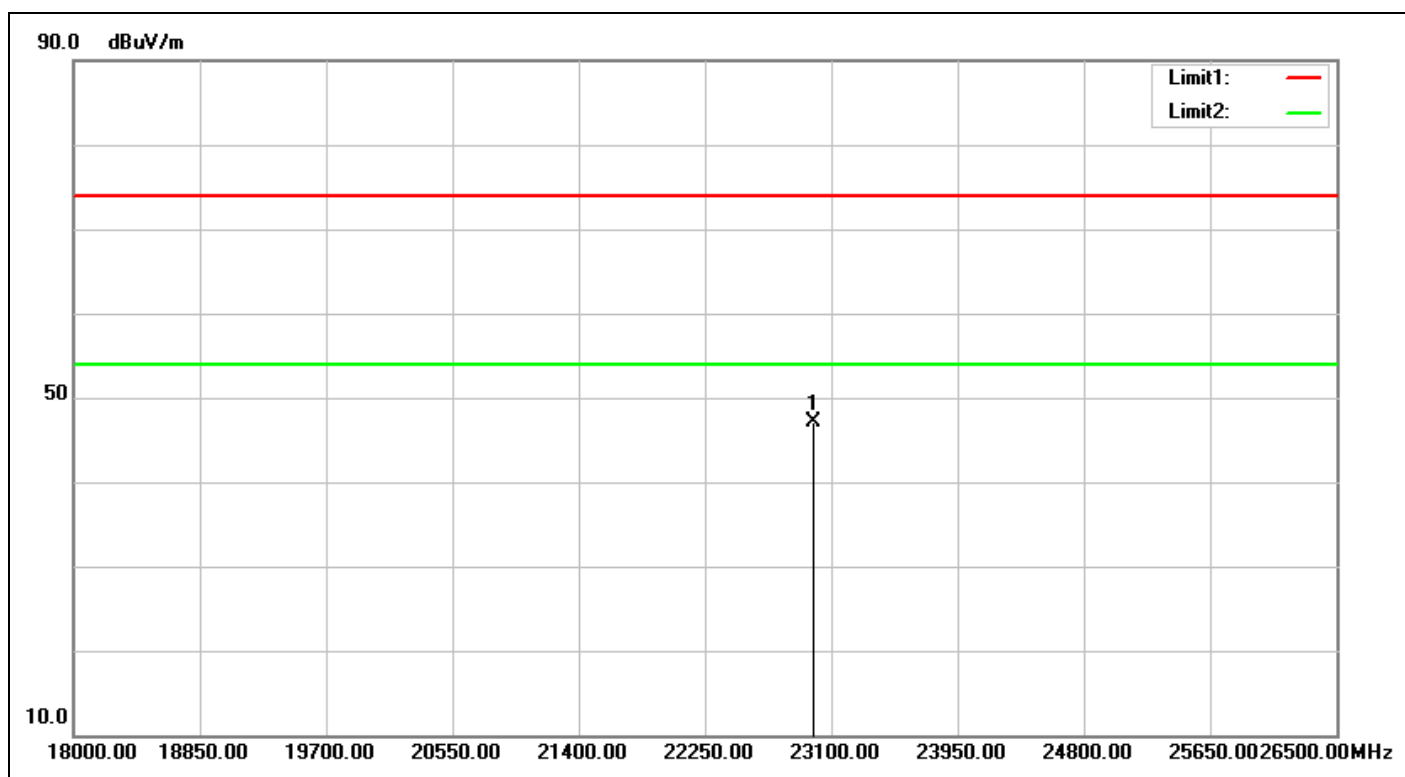
Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/2 22:09:24
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	1DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22947.000	32.12	16.55	48.67	74.00	-25.33	peak	100	324	



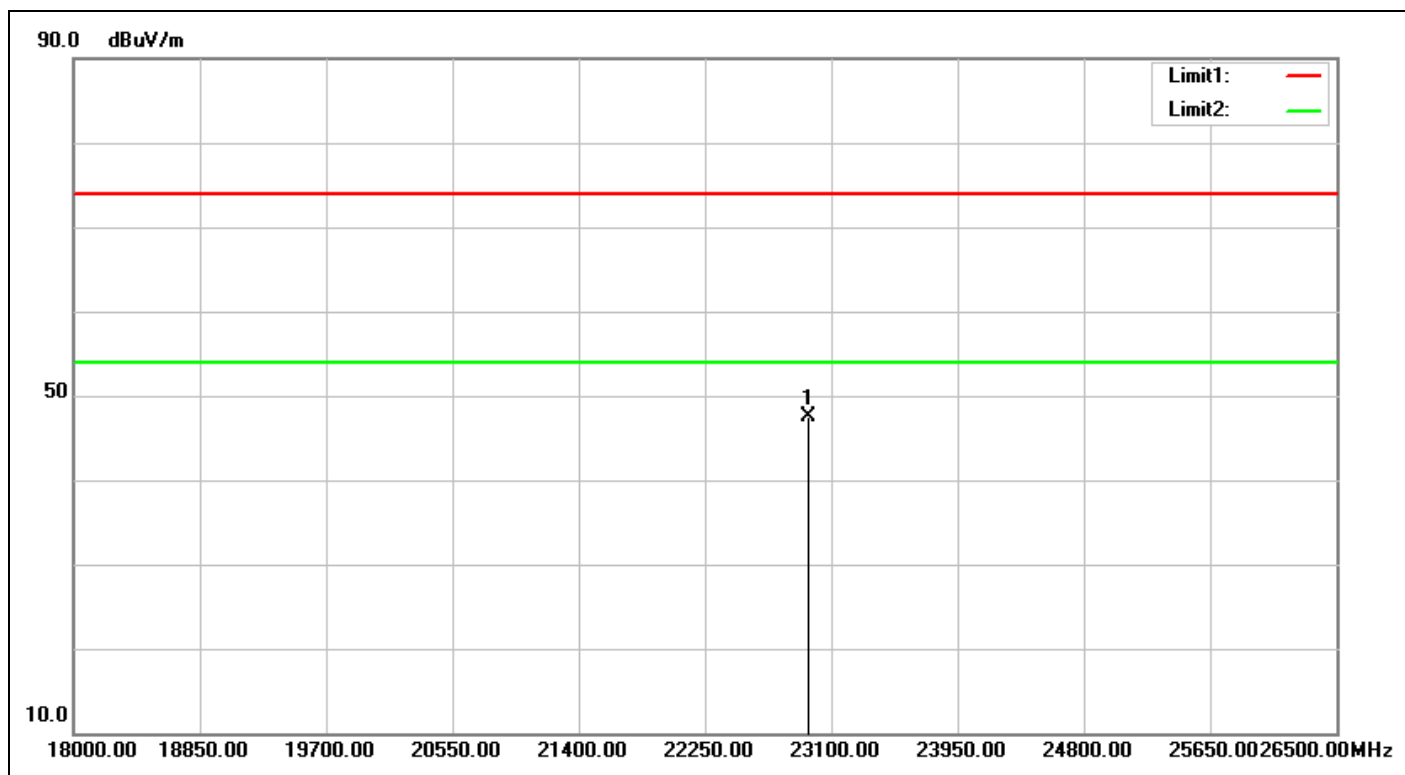
Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/2 22:11:05
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	3DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22989.500	32.09	15.64	47.73	74.00	-26.27	peak	100	153	



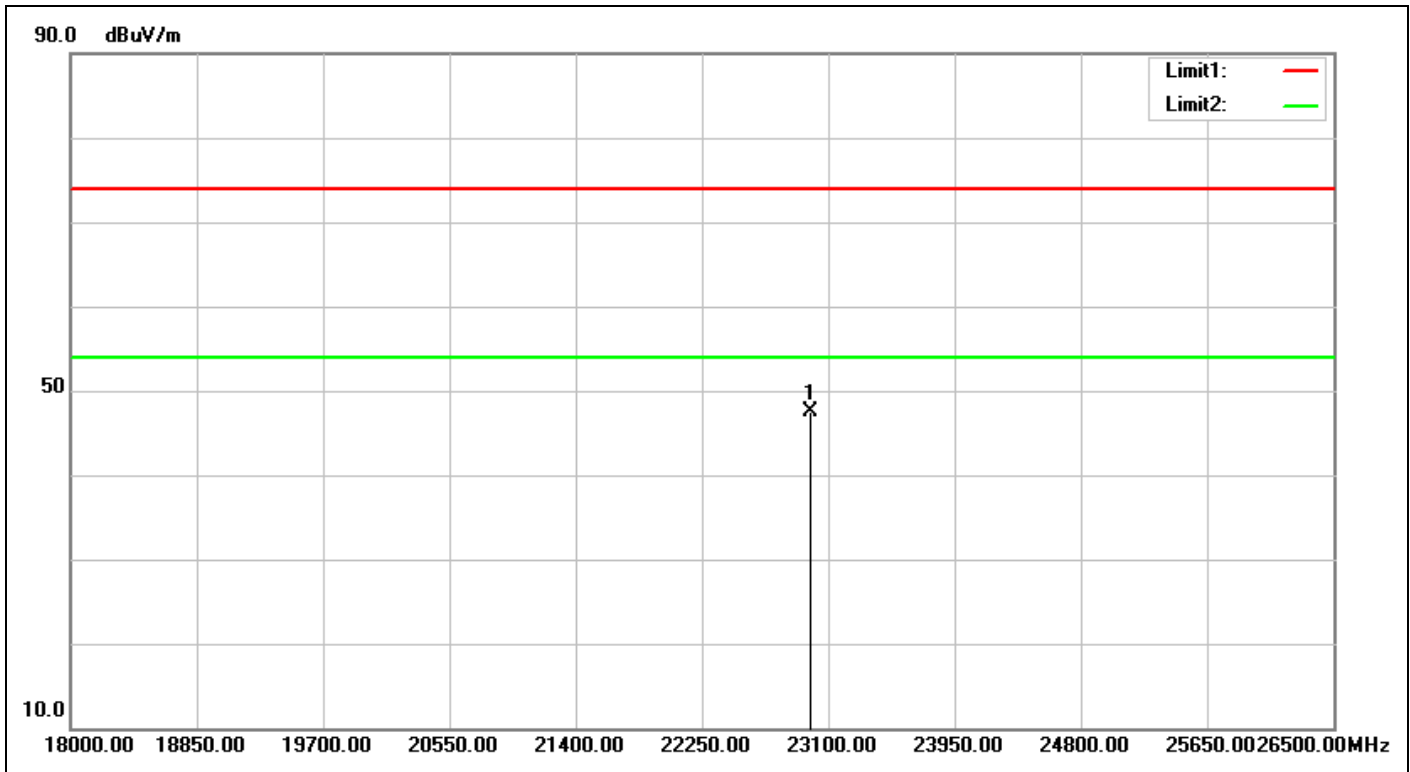
Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/2 22:12:08
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2402-Tx		
Remark:	3DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22981.000	32.11	14.92	47.03	74.00	-26.97	peak	100	33	



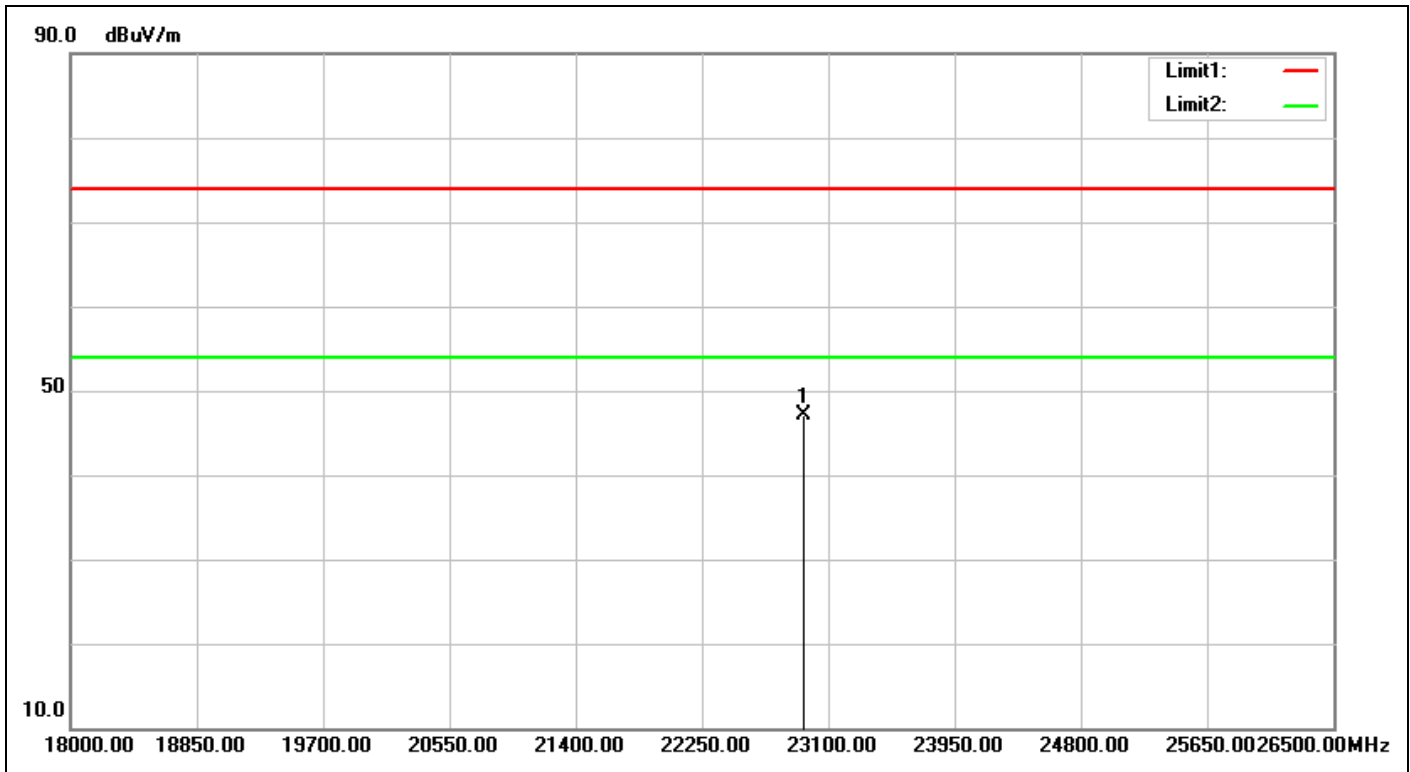
Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/2 22:13:37
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	3DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22947.000	32.12	15.40	47.52	74.00	-26.48	peak	100	100	



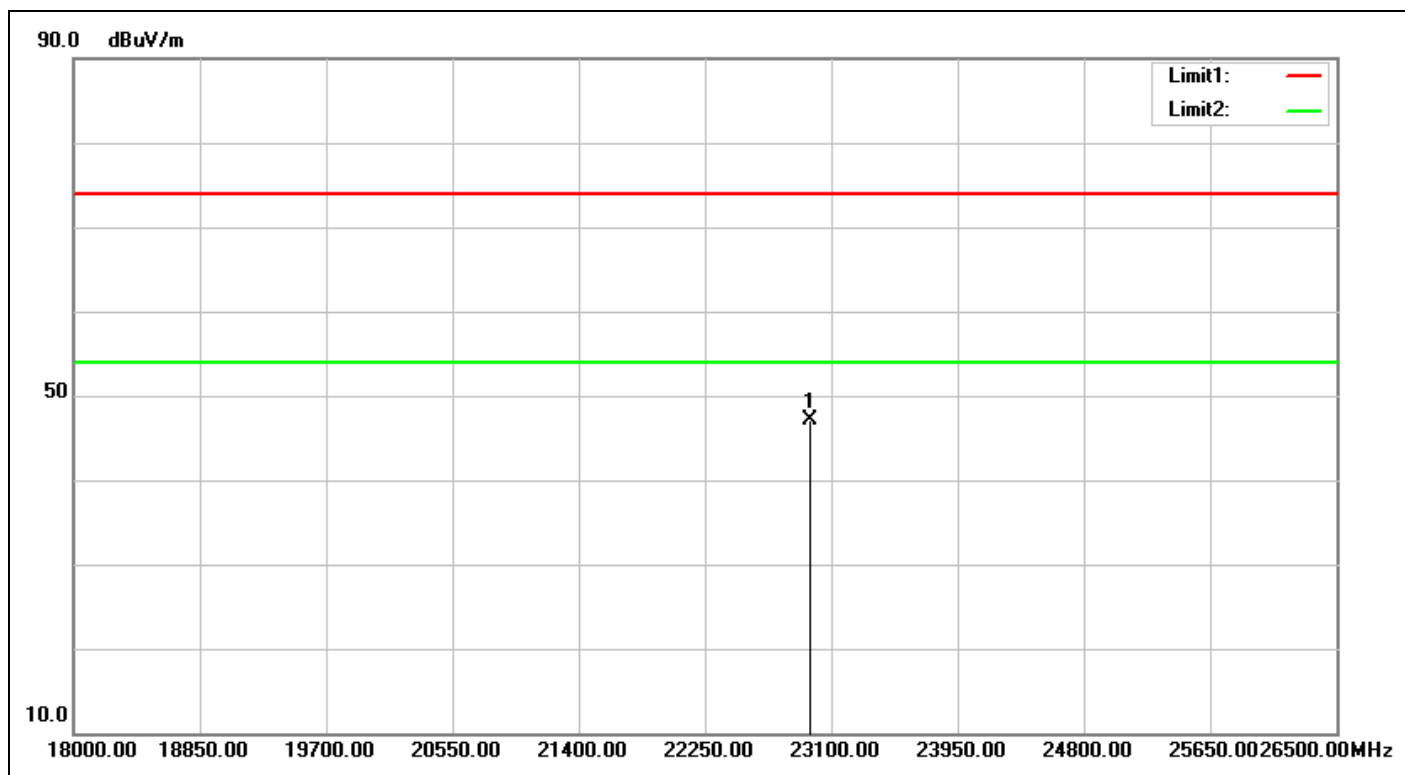
Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/2 22:14:40
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	3DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22981.000	32.11	15.48	47.59	74.00	-26.41	peak	100	116	



Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/2 22:16:10
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	3DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22938.500	32.12	15.00	47.12	74.00	-26.88	peak	100	178	



Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/2 22:17:13
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2480-Tx		
Remark:	3DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22955.500	32.12	14.94	47.06	74.00	-26.94	peak	100	238	

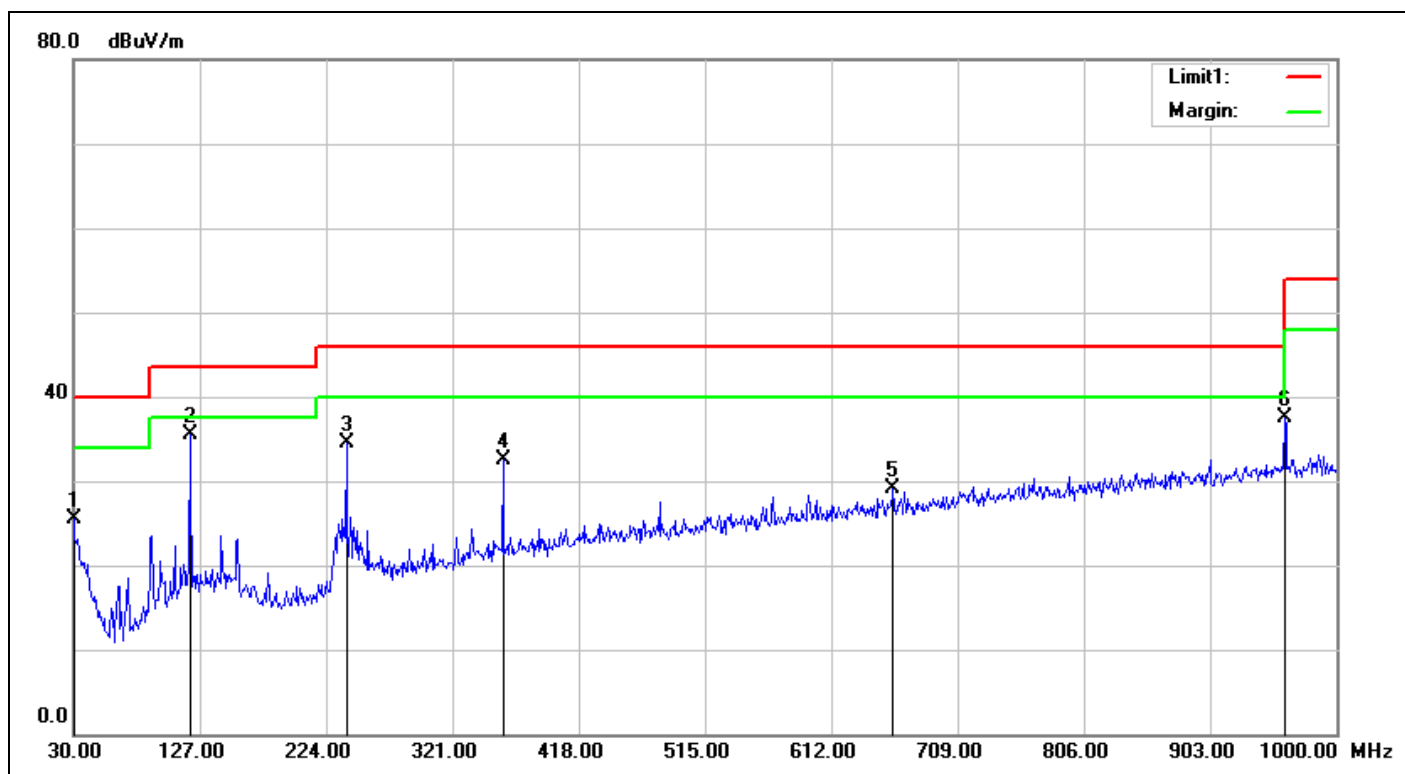
Spurious Emissions, TX Mode, 30M-1G



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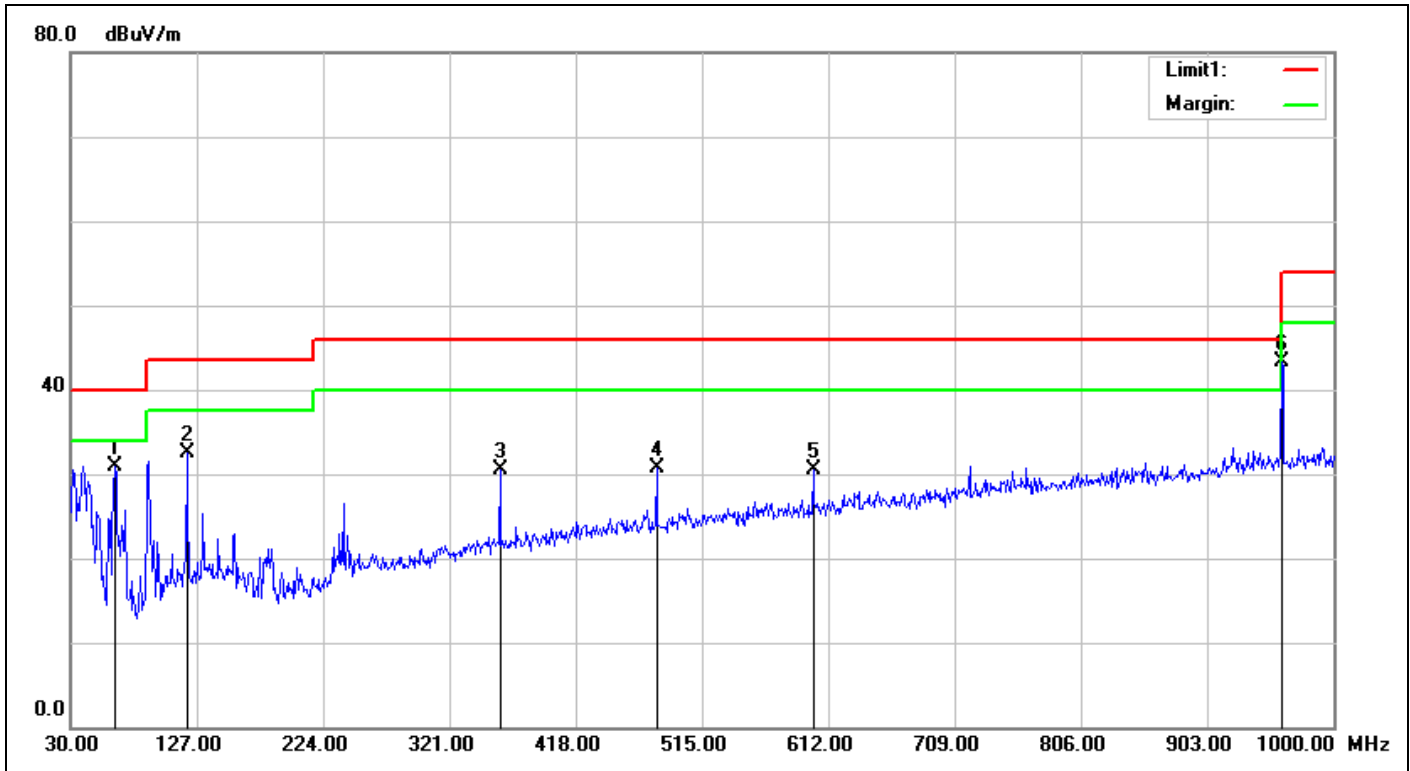
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Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/3 07:32:32
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	22.6(°C)/42%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 1 ; 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	-0.08	25.66	25.58	40.00	-14.42	QP	200	81	
2	119.2400	-7.46	42.87	35.41	43.50	-8.09	QP	400	98	
3	239.5200	-6.76	41.35	34.59	46.00	-11.41	QP	100	111	
4	359.8000	-3.24	35.79	32.55	46.00	-13.45	QP	300	62	
5	659.5300	0.63	28.50	29.13	46.00	-16.87	QP	100	49	
6	960.2300	5.46	32.04	37.50	54.00	-16.50	QP	200	165	



Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/3 07:37:36
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	22.6(°C)/42%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	63.9500	-13.44	44.34	30.90	40.00	-9.10	QP	200	346	
2	119.2400	-7.46	39.98	32.52	43.50	-10.98	QP	130	193	
3	359.8000	-3.24	33.67	30.43	46.00	-15.57	QP	100	233	
4	480.0800	-1.54	32.21	30.67	46.00	-15.33	QP	100	217	
5	600.3600	-0.06	30.55	30.49	46.00	-15.51	QP	108	351	
6	960.2300	5.46	37.93	43.39	54.00	-10.61	QP	100	252	

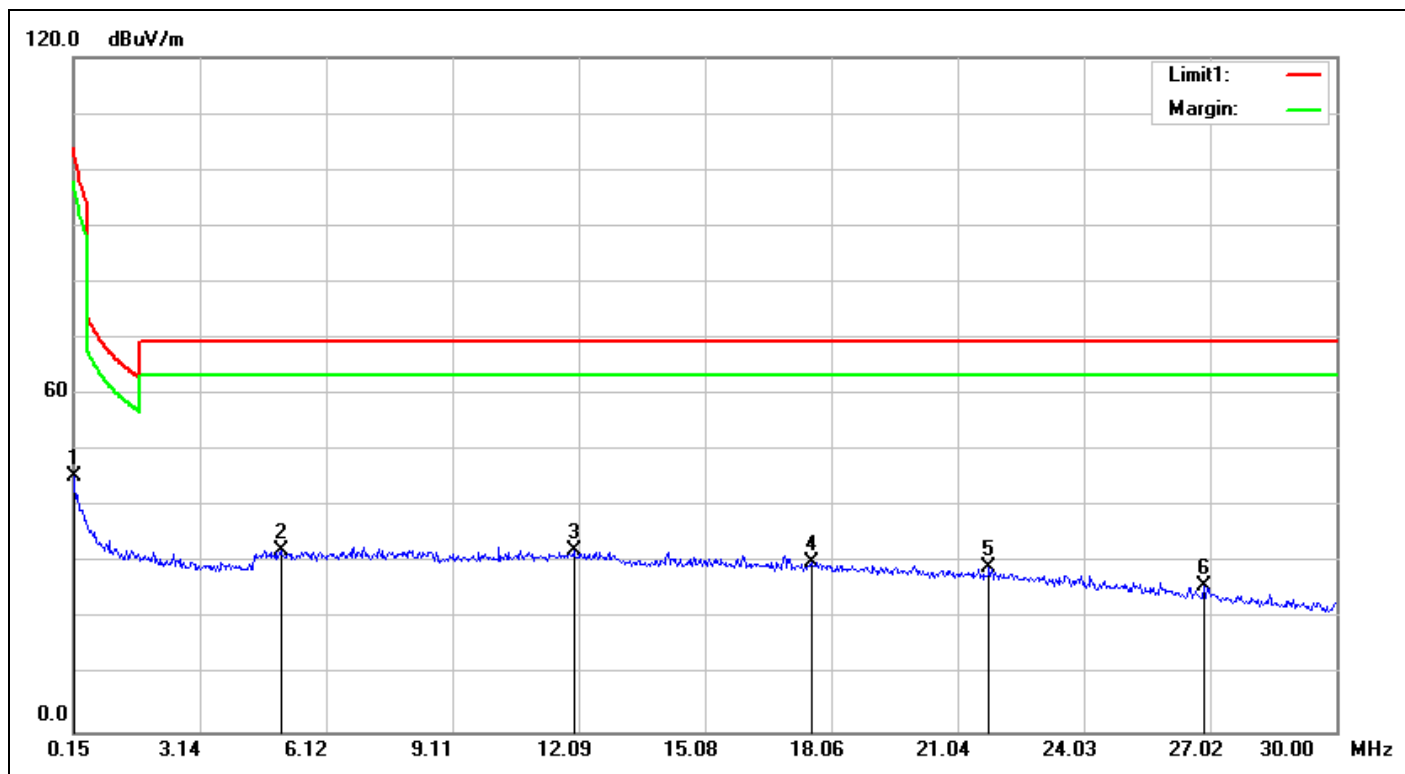
Spurious Emissions, TX Mode, 150K-30M



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Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC15.209_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2017/8/3 08:37:10
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	22.6(°C)/42%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 1 ; 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	26.30	45.38	104.08	-58.70	QP	100	301	
2	5.0454	19.76	12.41	32.17	69.50	-37.33	QP	100	52	
3	11.9706	20.57	11.59	32.16	69.50	-37.34	QP	100	154	
4	17.5824	21.56	8.54	30.10	69.50	-39.40	QP	100	269	
5	21.7913	22.11	7.06	29.17	69.50	-40.33	QP	100	135	
6	26.8658	22.44	3.54	25.98	69.50	-43.52	QP	100	247	

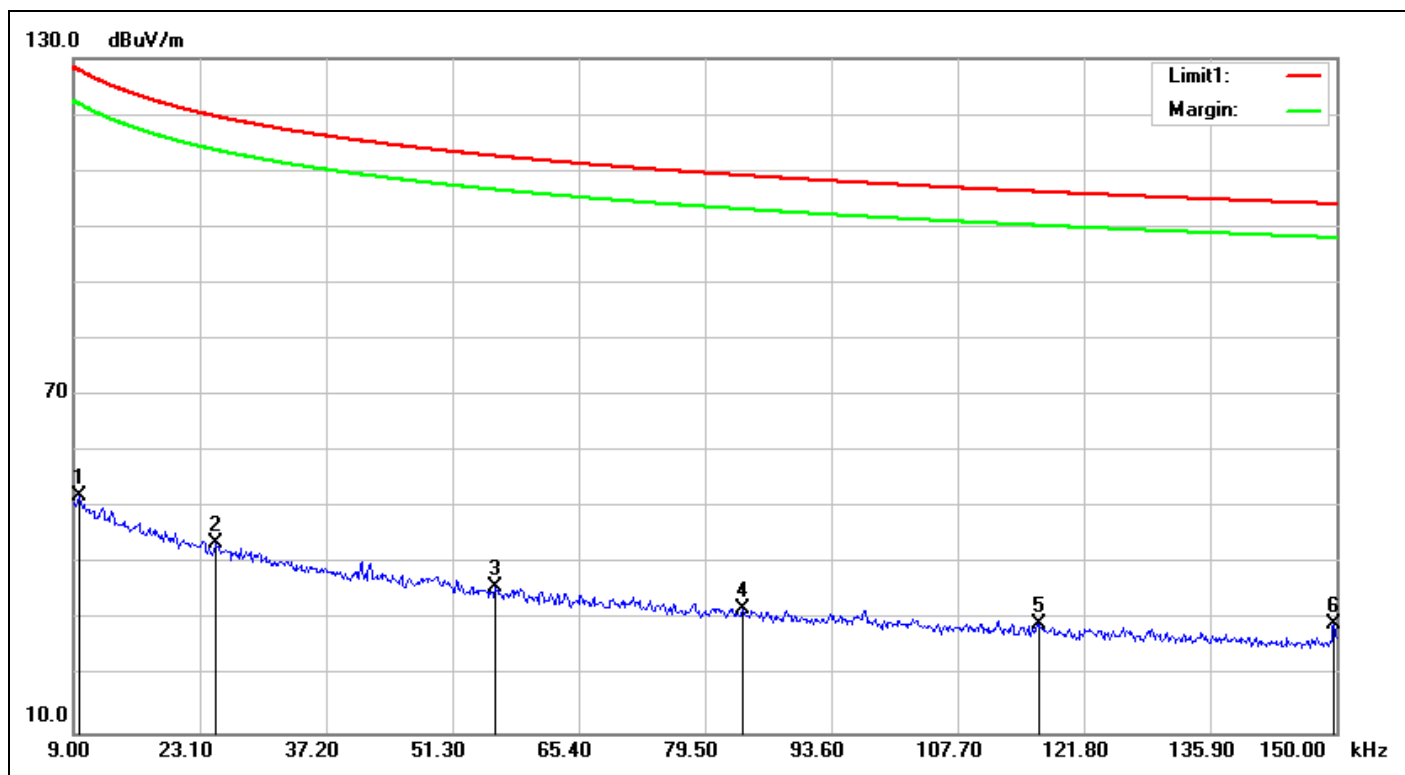
Spurious Emissions, TX Mode, 9K-150K



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Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC15.209_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2017/8/3 08:34:36
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	22.6(°C)/42%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Tx		
Remark:	1DH5		
	Class 1 ; 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	32.43	52.20	127.94	-75.74	QP	100	179	
2	0.0248	20.08	23.59	43.67	119.70	-76.03	QP	100	211	
3	0.0561	19.39	16.44	35.83	112.61	-76.78	QP	100	168	
4	0.0837	19.23	12.78	32.01	109.14	-77.13	QP	100	189	
5	0.1167	19.11	10.12	29.23	106.26	-77.03	QP	100	315	
6	0.1497	19.08	10.14	29.22	104.09	-74.87	QP	100	57	

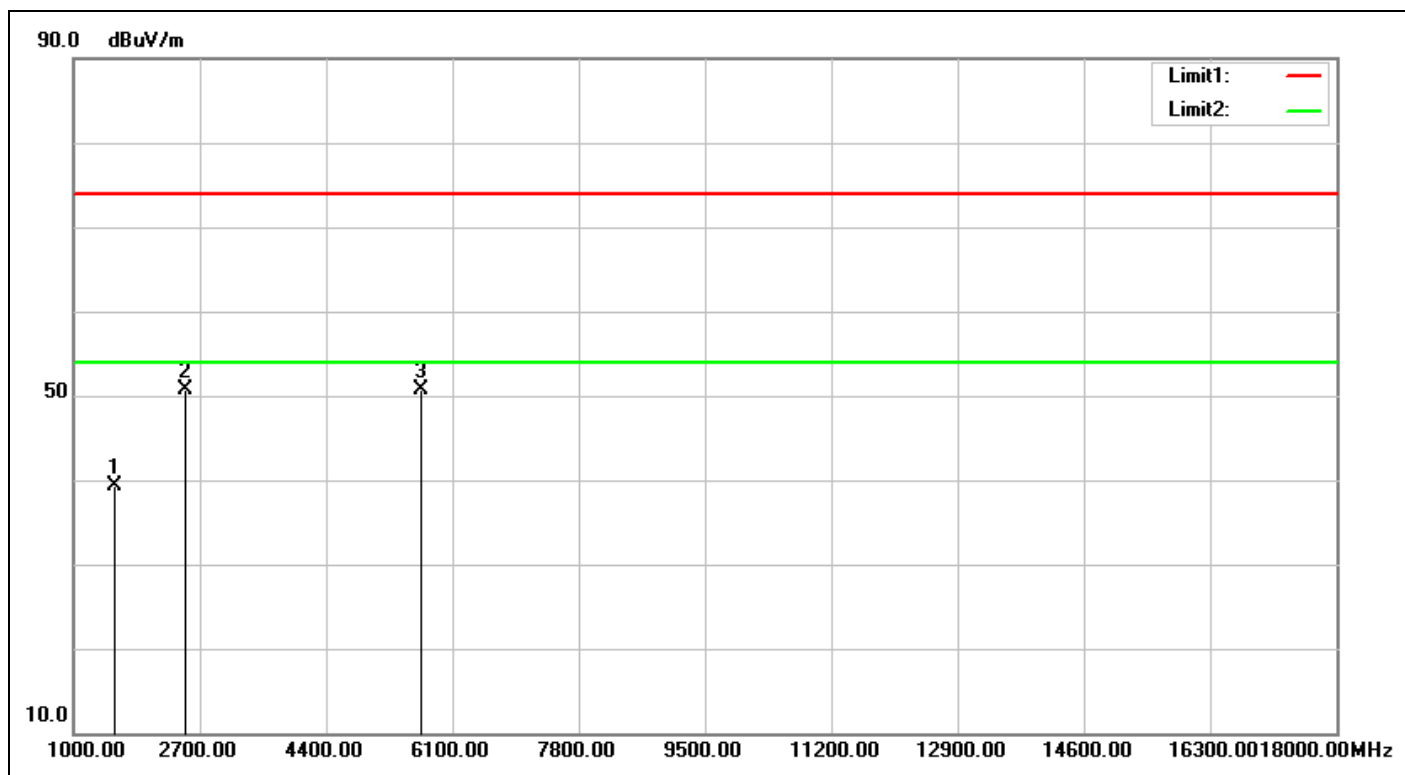
Spurious Emissions, RX Mode, 1-18G



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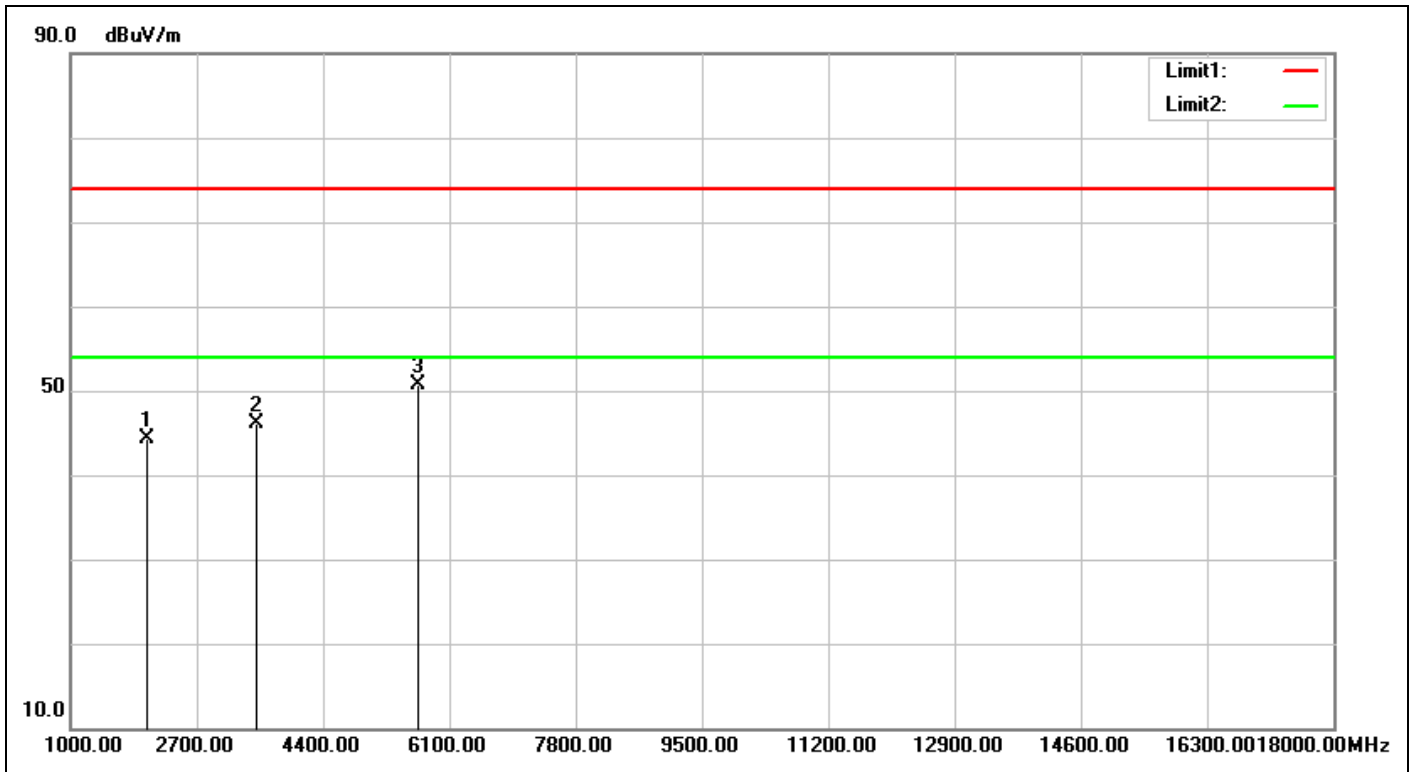
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Tel:+886-2172-7000 fax:+886-2528-0018



Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/2 21:41:42
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	1DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1561.000	-9.26	48.62	39.36	74.00	-34.64	peak	100	39	
2	2513.000	-5.79	56.42	50.63	74.00	-23.37	peak	100	335	
3	5675.000	3.67	46.94	50.61	74.00	-23.39	peak	100	288	



Service No.: 114066608(BM64SPK1NC1) Class 1

Test Distance: 3m

BT-CE+FCC

Test Standard: FCC Above 1G PEAK

Ant. Polarization: Vertical

Test item: Radiation Emission

Test Time: 2017/8/2 21:42:45

Applicant: Microchip

Test Rating: DC 5V

Product: Bluetooth Module

Temp.(°C)/Hum.(%): 23.1(°C)/49%

Model No.: BM64SPK1NC1

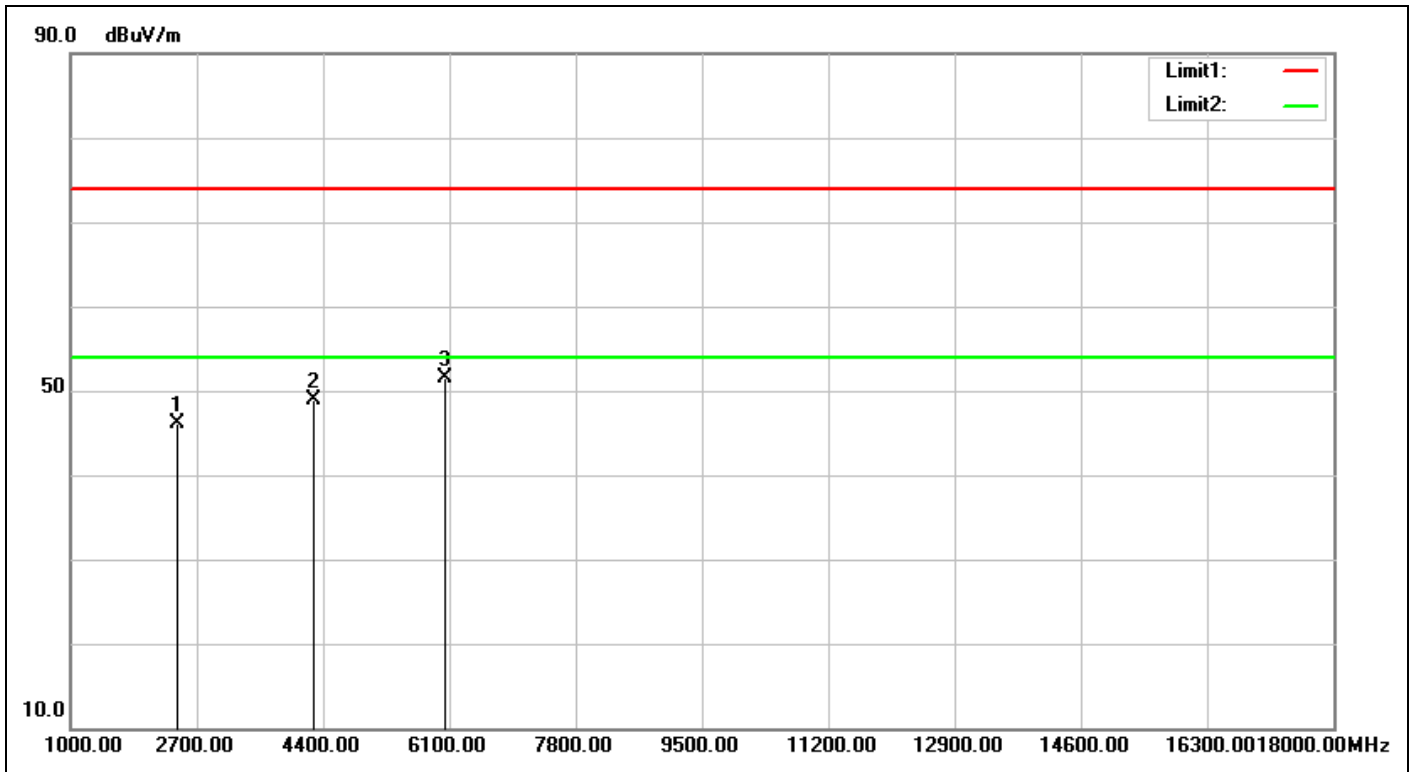
Test Engineer: Kai Wang

Test Mode: 2441-Rx

Remark: 1DH5

Class 1 ; Shield

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2037.000	-6.00	50.21	44.21	74.00	-29.79	peak	100	147	
2	3499.000	-4.17	50.36	46.19	74.00	-27.81	peak	100	346	
3	5675.000	3.67	47.08	50.75	74.00	-23.25	peak	100	102	



Service No.: 114066608(BM64SPK1NC1) Class 1

Test Distance: 3m

BT-CE+FCC

Test Standard: FCC Above 1G PEAK

Ant. Polarization: Horizontal

Test item: Radiation Emission

Test Time: 2017/8/2 21:44:54

Applicant: Microchip

Test Rating: DC 5V

Product: Bluetooth Module

Temp.(°C)/Hum.(%): 23.1(°C)/49%

Model No.: BM64SPK1NC1

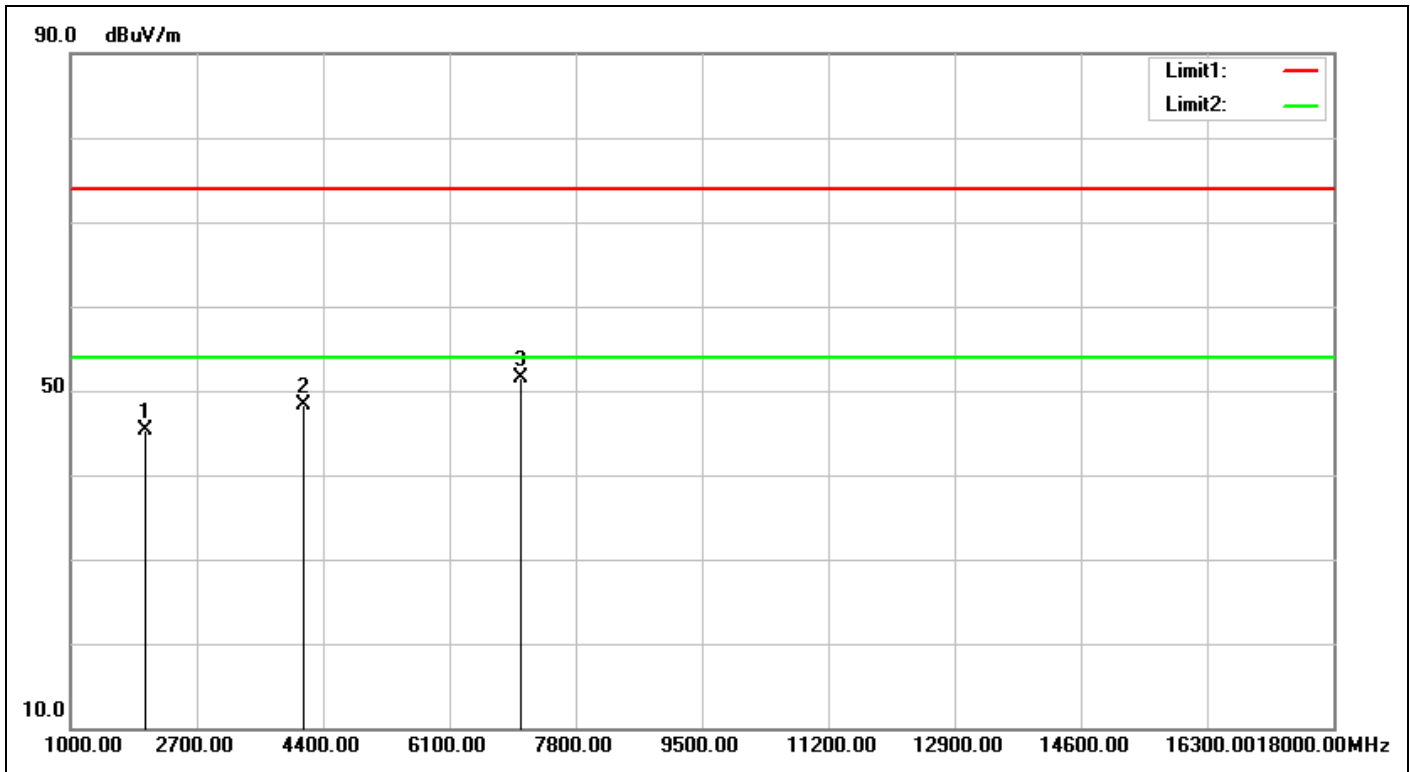
Test Engineer: Kai Wang

Test Mode: 2441-Rx

Remark: 3DH5

Class 1 ; Shield

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2428.000	-5.85	51.92	46.07	74.00	-27.93	peak	100	222	
2	4264.000	-1.92	50.75	48.83	74.00	-25.17	peak	100	100	
3	6032.000	6.02	45.42	51.44	74.00	-22.56	peak	100	89	



Service No.: 114066608(BM64SPK1NC1) Class 1

Test Distance: 3m

BT-CE+FCC

Test Standard: FCC Above 1G PEAK

Ant. Polarization: Vertical

Test item: Radiation Emission

Test Time: 2017/8/2 21:45:57

Applicant: Microchip

Test Rating: DC 5V

Product: Bluetooth Module

Temp.(°C)/Hum.(%): 23.1(°C)/49%

Model No.: BM64SPK1NC1

Test Engineer: Kai Wang

Test Mode: 2441-Rx

Remark: 3DH5

Class 1 ; Shield

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2003.000	-6.02	51.36	45.34	74.00	-28.66	peak	100	91	
2	4145.000	-2.43	50.80	48.37	74.00	-25.63	peak	100	360	
3	7069.000	7.68	43.86	51.54	74.00	-22.46	peak	100	224	

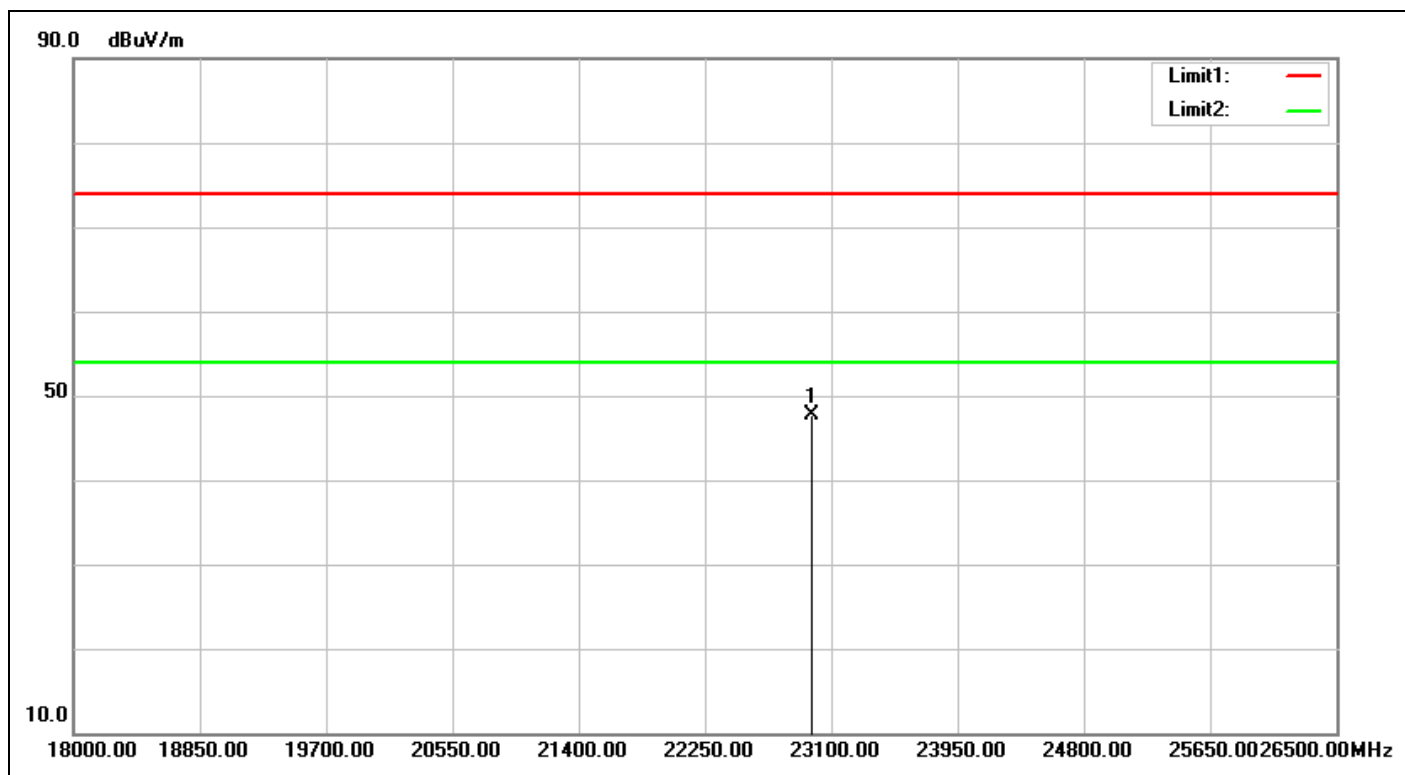
Spurious Emissions, RX Mode, 18-26G



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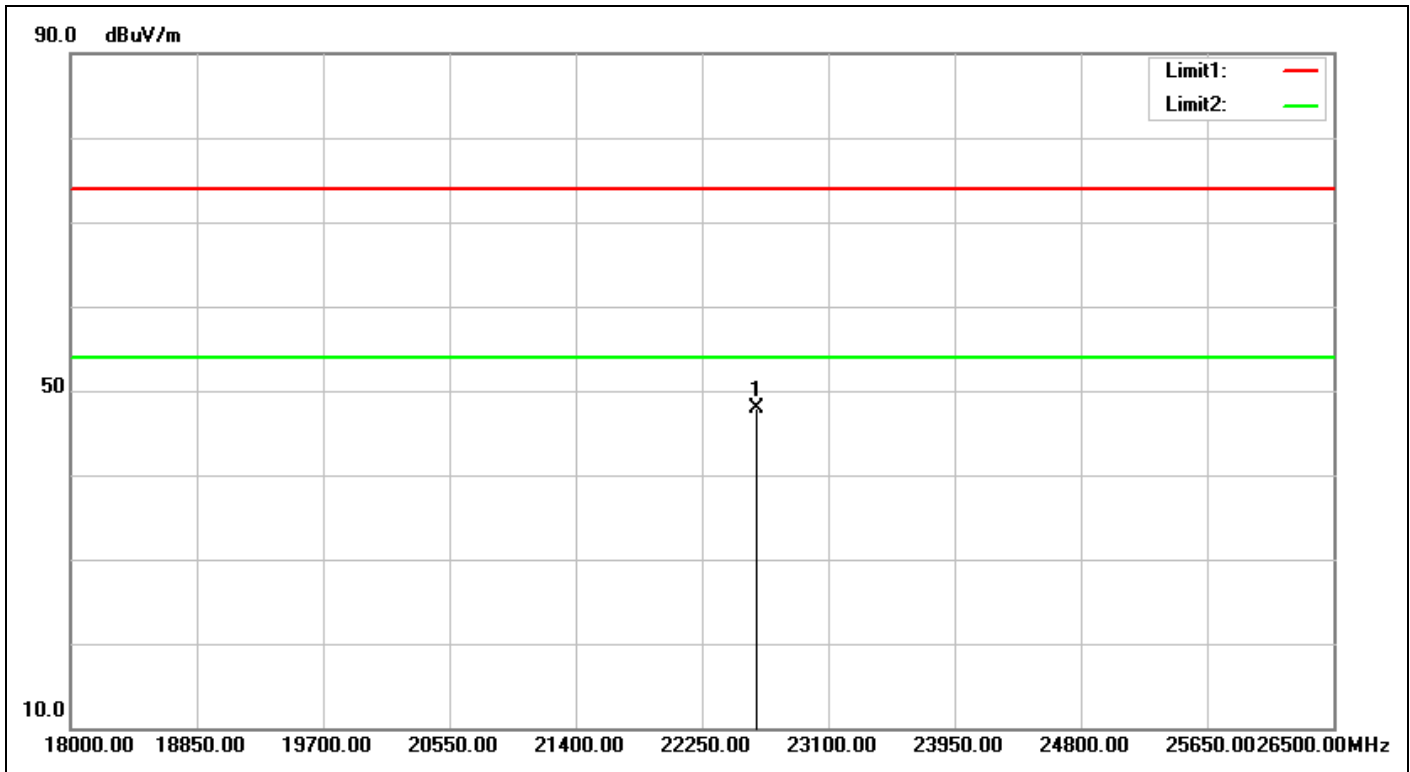
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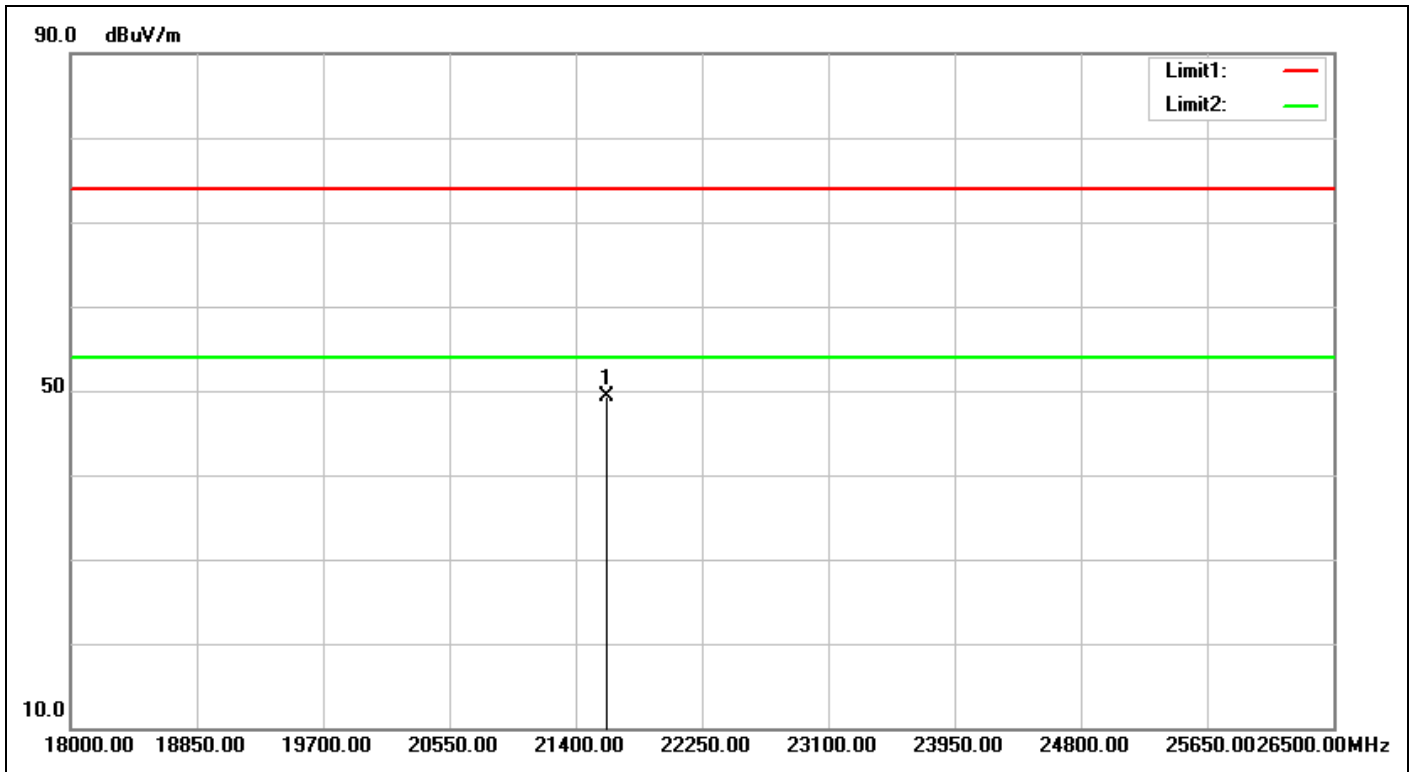
Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/2 21:55:16
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	1DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22972.500	32.10	15.62	47.72	74.00	-26.28	peak	100	17	



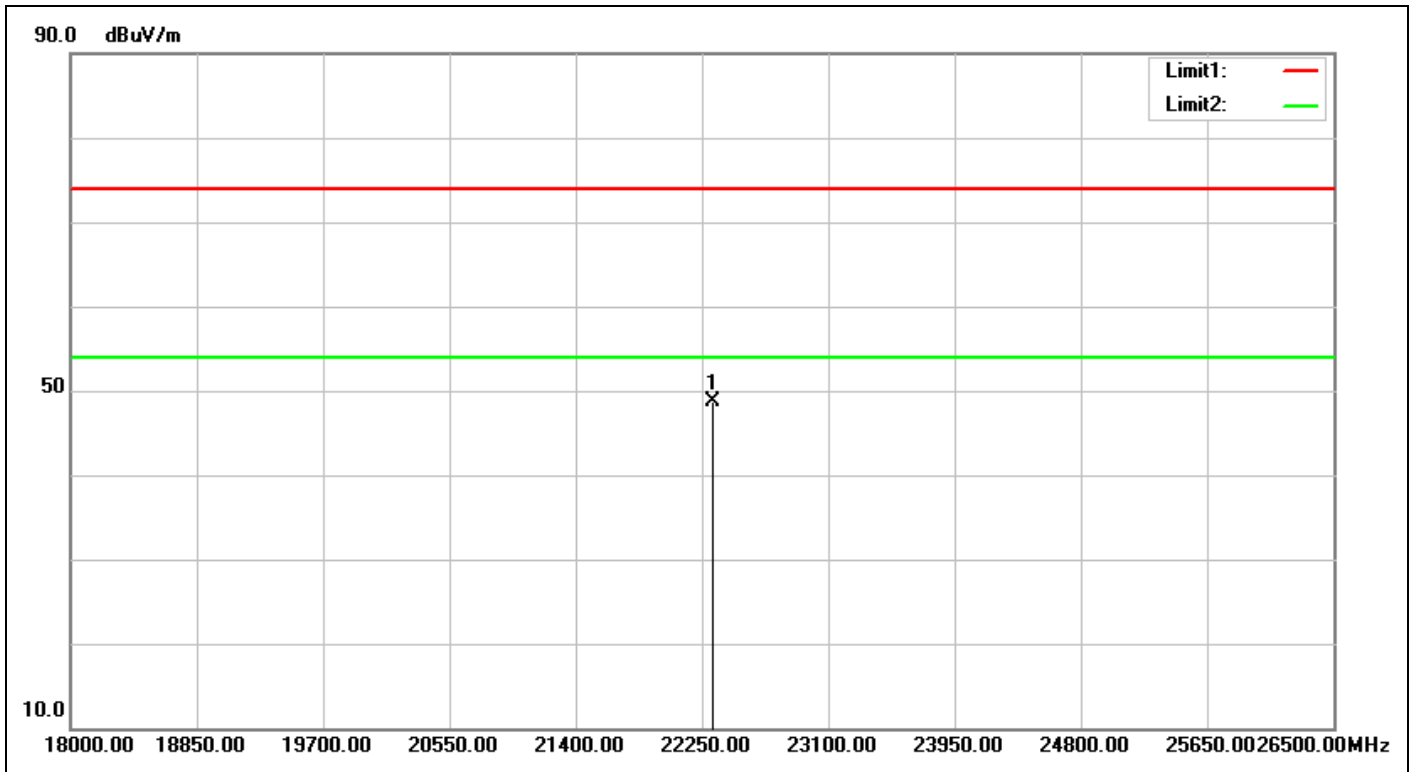
Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/2 21:56:20
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	1DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22615.500	32.32	15.56	47.88	74.00	-26.12	peak	100	349	



Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/2 21:58:57
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	3DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21612.500	32.32	17.00	49.32	74.00	-24.68	peak	100	260	



Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/2 22:00:00
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	23.1(°C)/49%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	3DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22326.500	32.48	16.23	48.71	74.00	-25.29	peak	100	111	

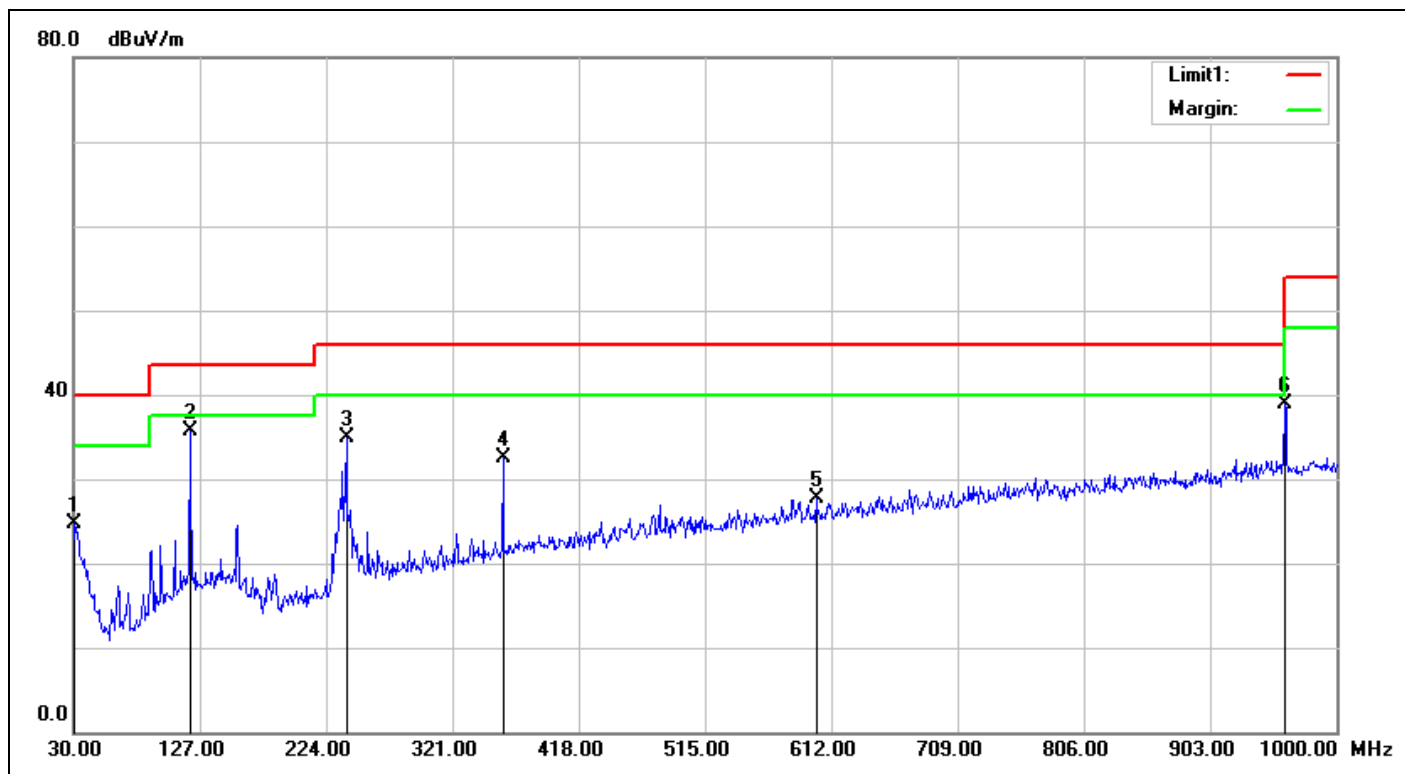
Spurious Emissions, RX Mode, 30M-1G



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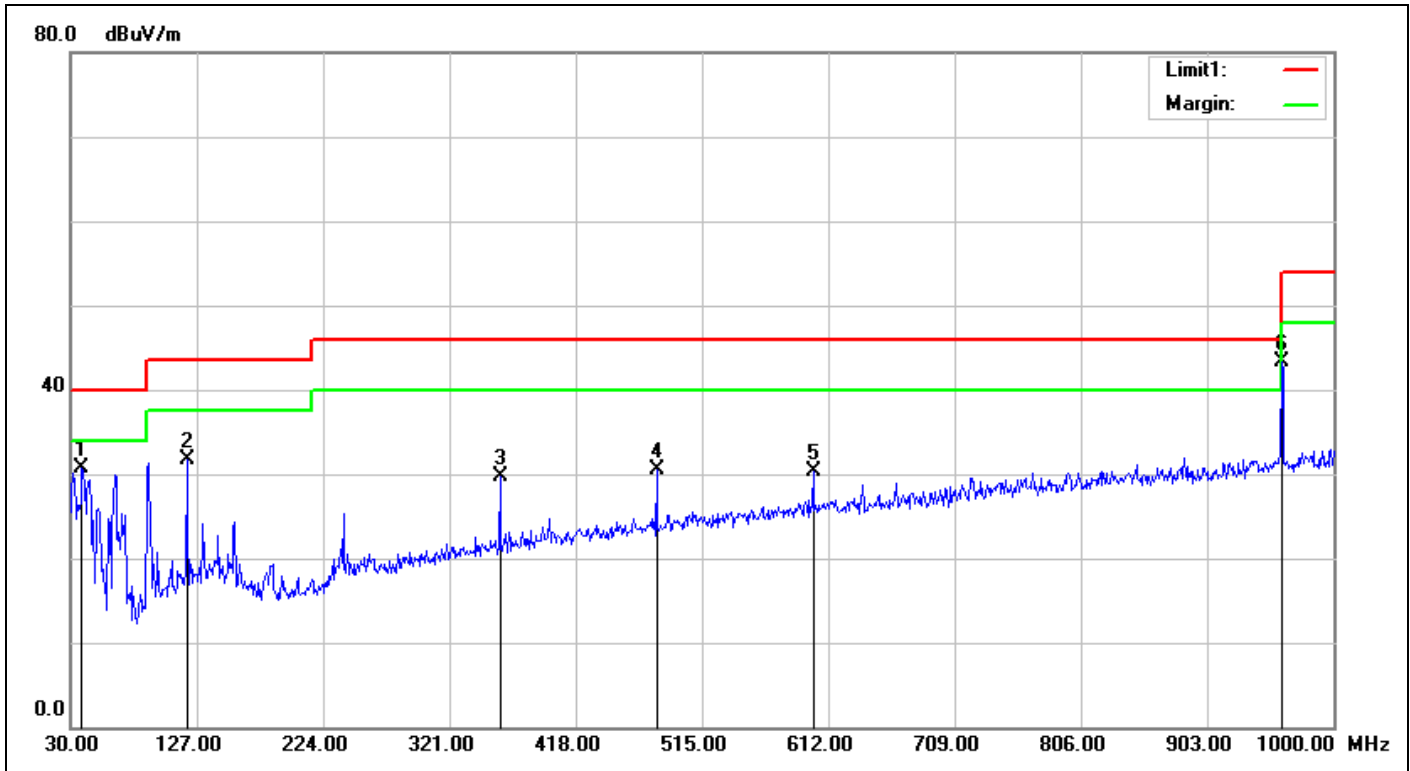
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/8/3 07:43:39
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	22.6(°C)/42%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	1DH5		
	Class 1 ; 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	-0.08	24.80	24.72	40.00	-15.28	QP	300	118	
2	119.2400	-7.46	43.22	35.76	43.50	-7.74	QP	100	255	
3	239.5200	-6.76	41.71	34.95	46.00	-11.05	QP	100	94	
4	359.8000	-3.24	35.65	32.41	46.00	-13.59	QP	200	308	
5	600.3600	-0.06	27.82	27.76	46.00	-18.24	QP	167	145	
6	960.2300	5.46	33.38	38.84	54.00	-15.16	QP	100	180	



Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/8/3 07:48:42
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	22.6(°C)/42%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	1DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	38.7300	-5.05	35.78	30.73	40.00	-9.27	QP	102	351	
2	119.2400	-7.46	39.19	31.73	43.50	-11.77	QP	100	175	
3	359.8000	-3.24	32.87	29.63	46.00	-16.37	QP	100	231	
4	480.0800	-1.54	32.12	30.58	46.00	-15.42	QP	100	207	
5	600.3600	-0.06	30.42	30.36	46.00	-15.64	QP	114	175	
6	960.2300	5.46	37.84	43.30	54.00	-10.70	QP	100	245	

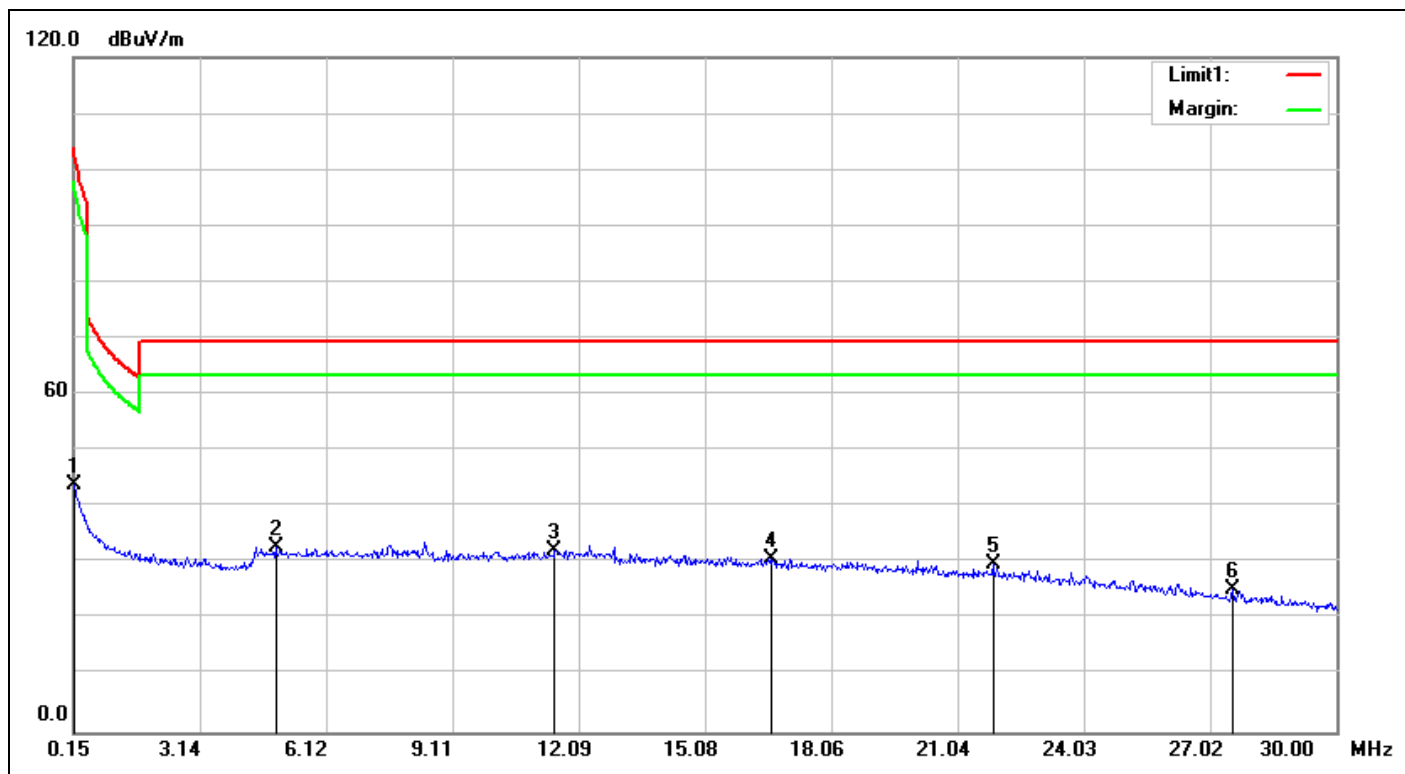
Spurious Emissions, RX Mode, 150K-30M



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Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC15.209_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2017/8/3 08:30:14
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	22.6(°C)/42%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	1DH5		
	Class 1 ; 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	24.98	44.06	104.08	-60.02	QP	100	324	
2	4.9260	19.72	12.99	32.71	69.50	-36.79	QP	100	102	
3	11.5229	20.49	11.74	32.23	69.50	-37.27	QP	100	126	
4	16.6272	21.39	9.35	30.74	69.50	-38.76	QP	100	137	
5	21.8808	22.11	7.87	29.98	69.50	-39.52	QP	100	228	
6	27.5523	22.48	2.84	25.32	69.50	-44.18	QP	100	202	

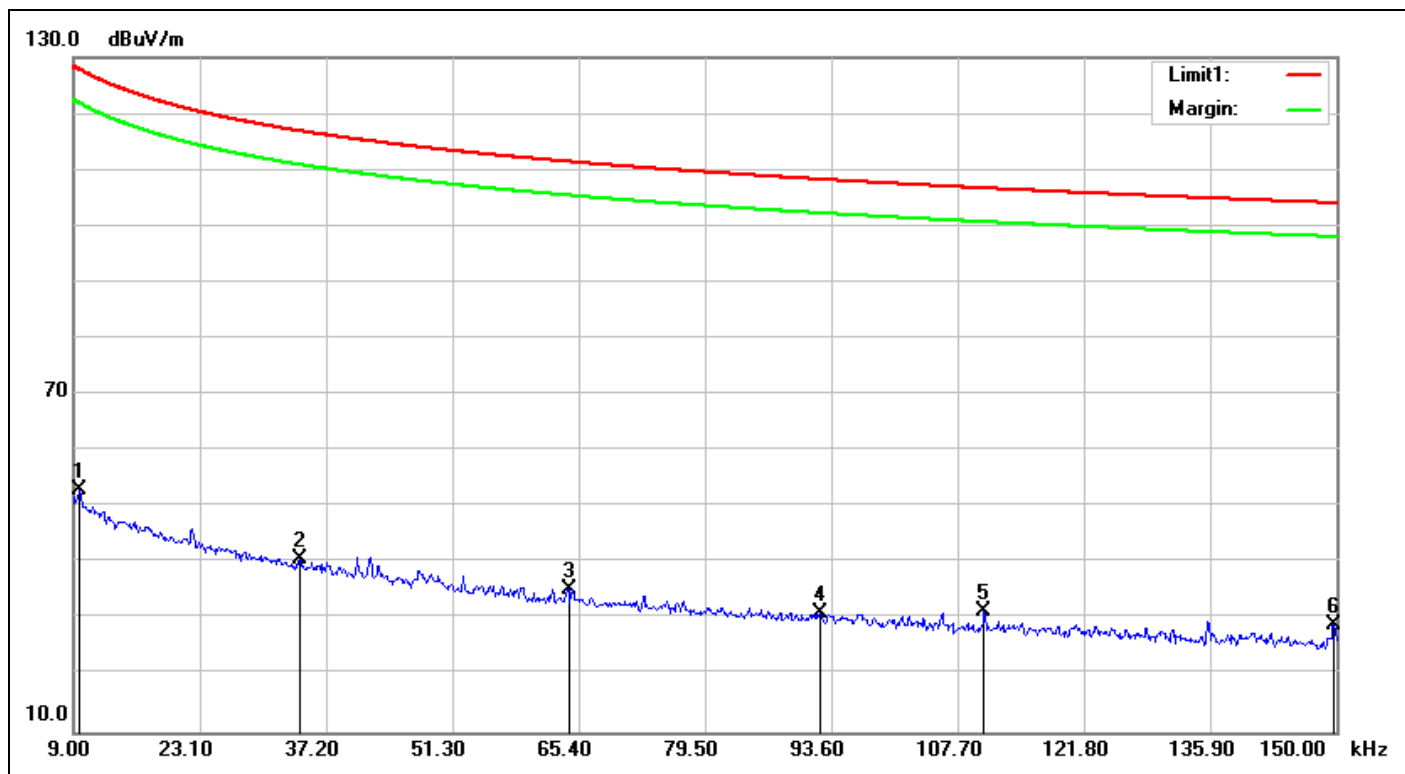
Spurious Emissions, RX Mode, 9K-150K



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Service No.:	114066608(BM64SPK1NC1) Class 1	Test Distance:	3m
	BT-CE+FCC		
Test Standard:	FCC15.209_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2017/8/3 08:26:27
Applicant:	Microchip	Test Rating:	DC 5V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	22.6(°C)/42%
Model No.:	BM64SPK1NC1	Test Engineer:	Kai Wang
Test Mode:	2441-Rx		
Remark:	1DH5		
	Class 1 ; Shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0097	19.81	33.15	52.96	127.85	-74.89	QP	100	253	
2	0.0342	19.98	20.88	40.86	116.91	-76.05	QP	100	95	
3	0.0643	19.34	16.16	35.50	111.43	-75.93	QP	100	114	
4	0.0923	19.18	11.89	31.07	108.29	-77.22	QP	100	325	
5	0.1107	19.12	12.43	31.55	106.71	-75.16	QP	100	347	
6	0.1497	19.08	9.93	29.01	104.09	-75.08	QP	100	138	