

Test Report No.50209102 001

Appendix D: Radiated and Mains Spurious Emission Data

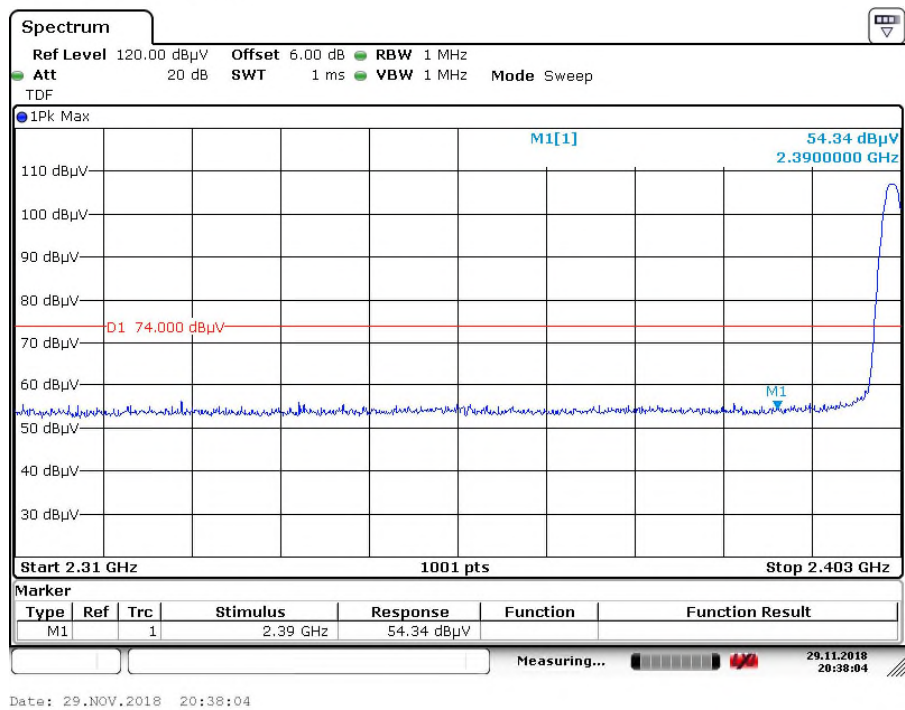
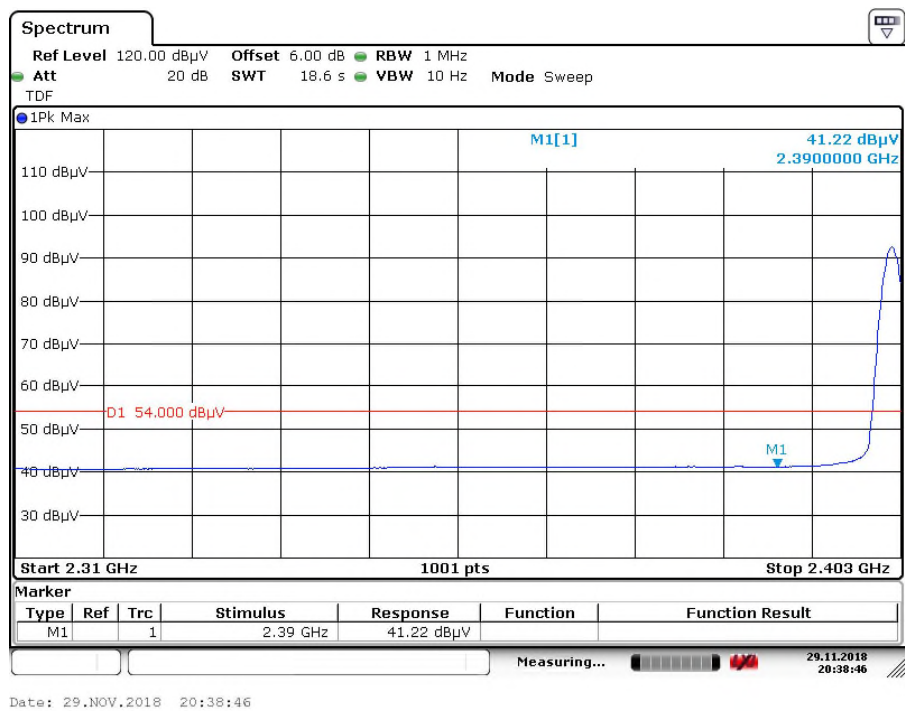
(File: 50209102 001 AppendixD)

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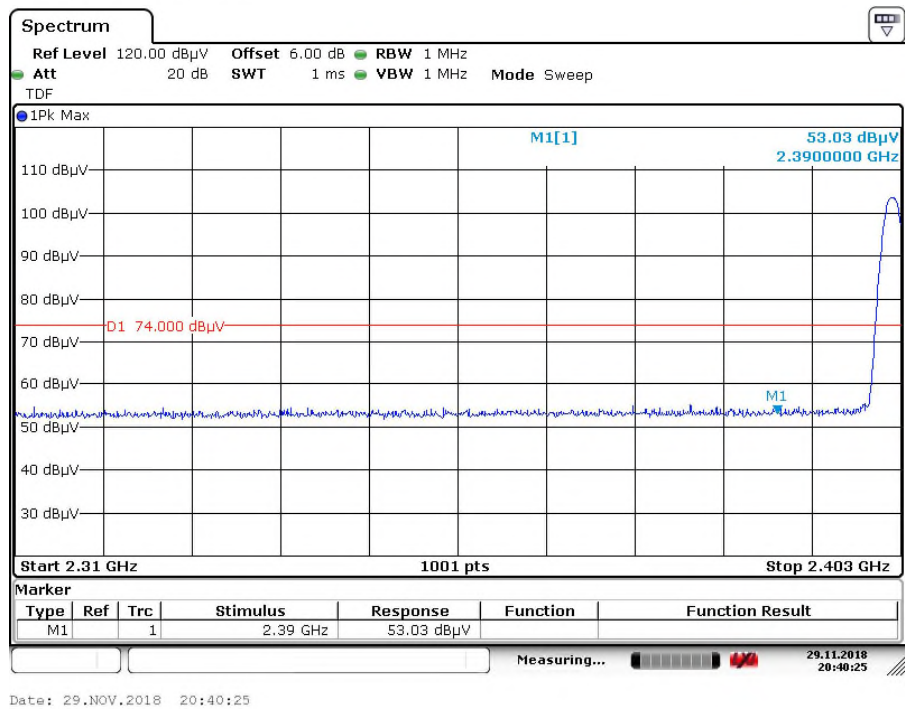
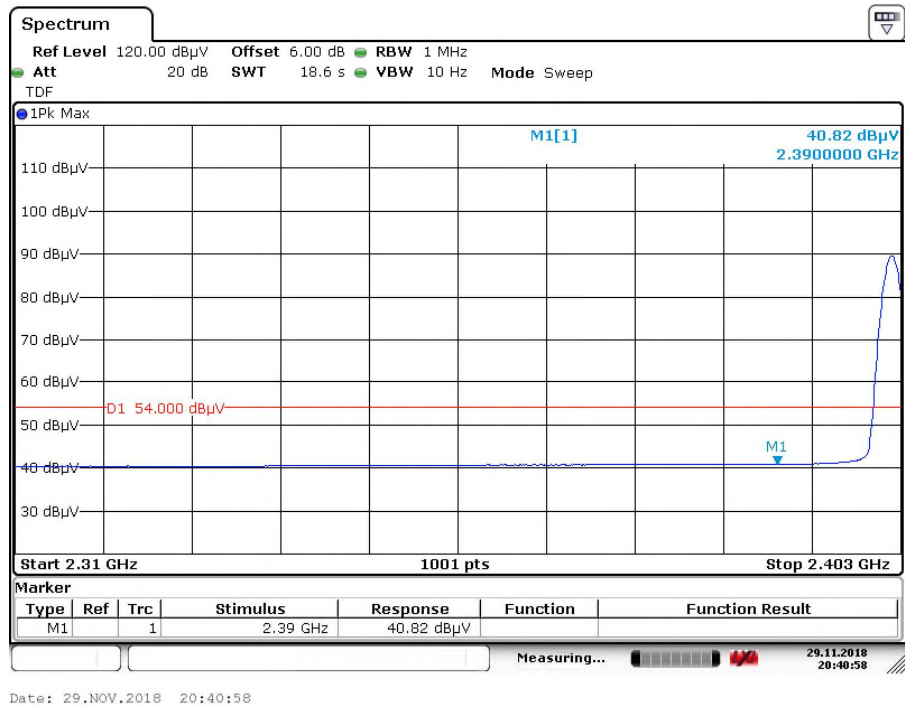
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Radiated Bandedge (GFSK)

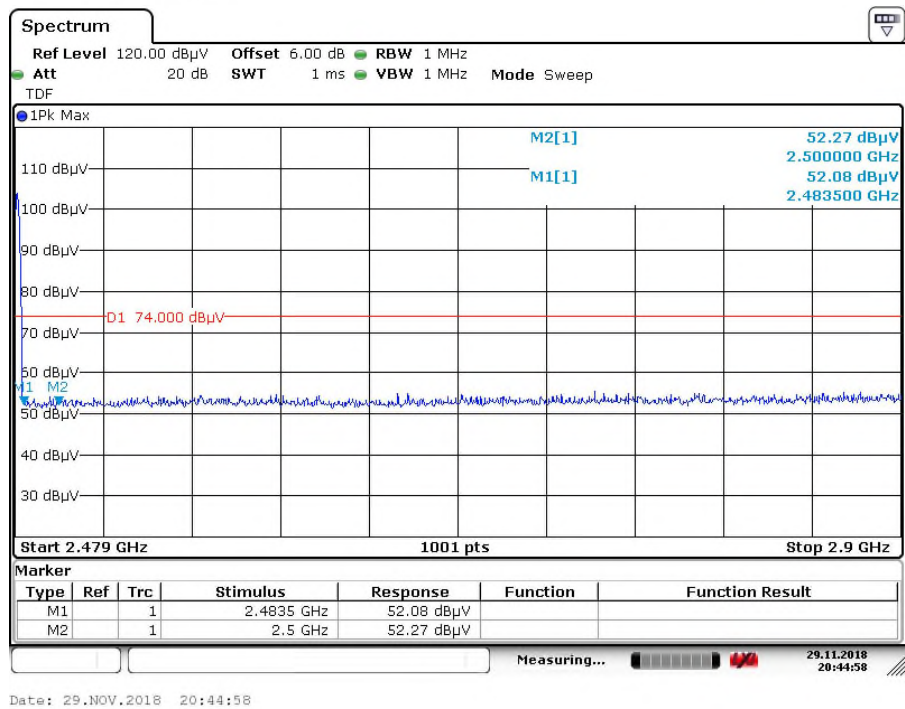
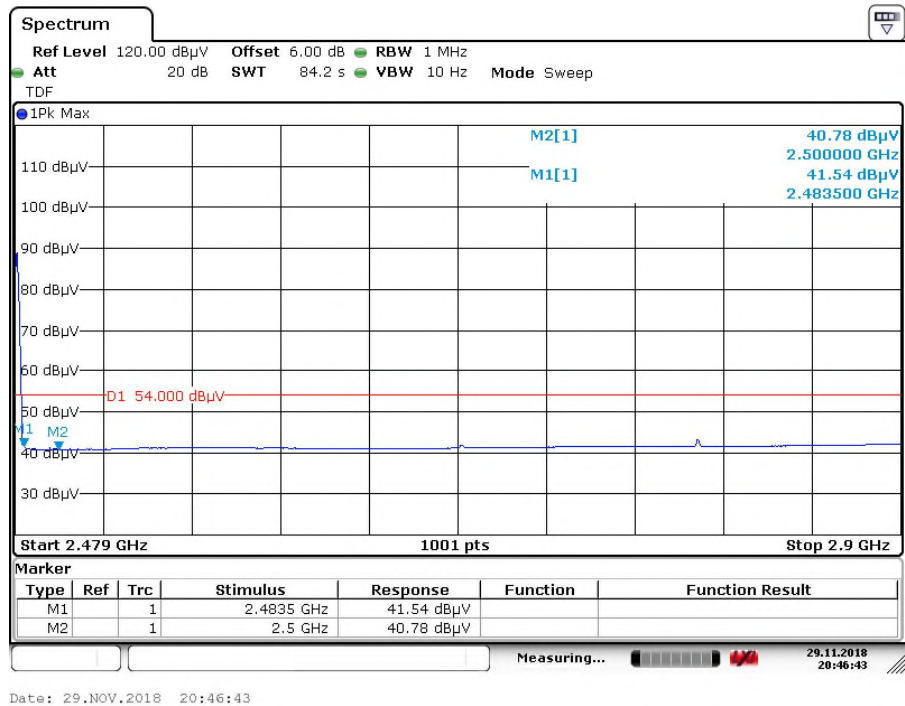
Low Channel (Hor)



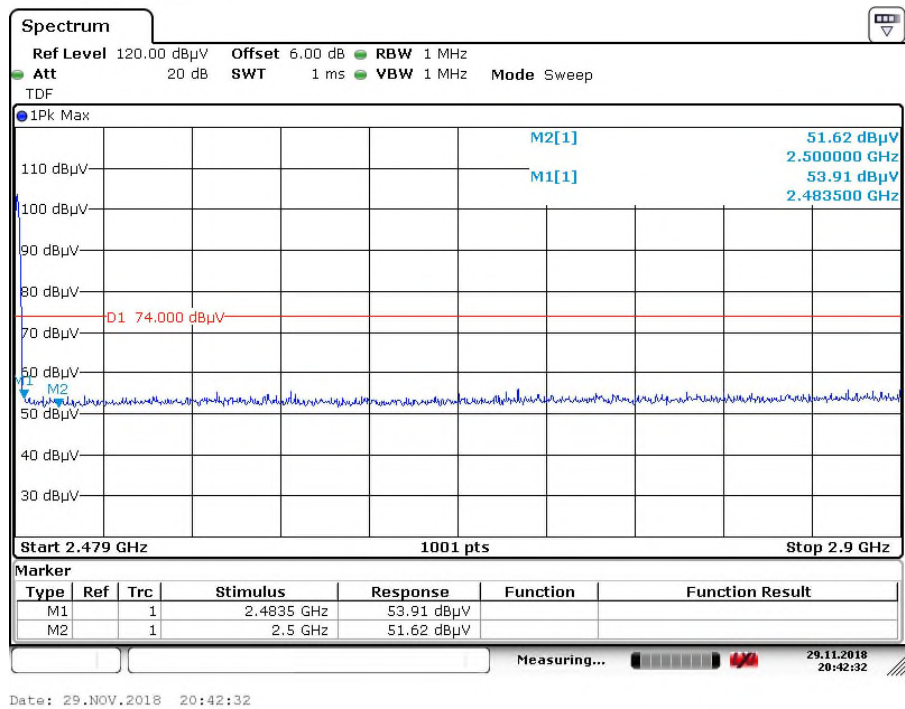
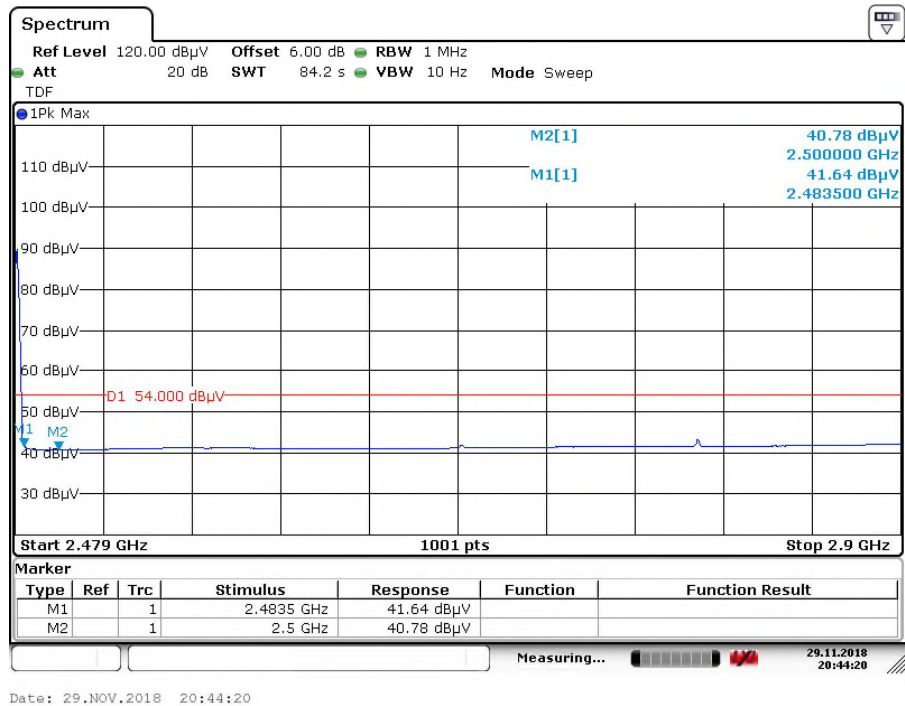
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High Channel (Hor)

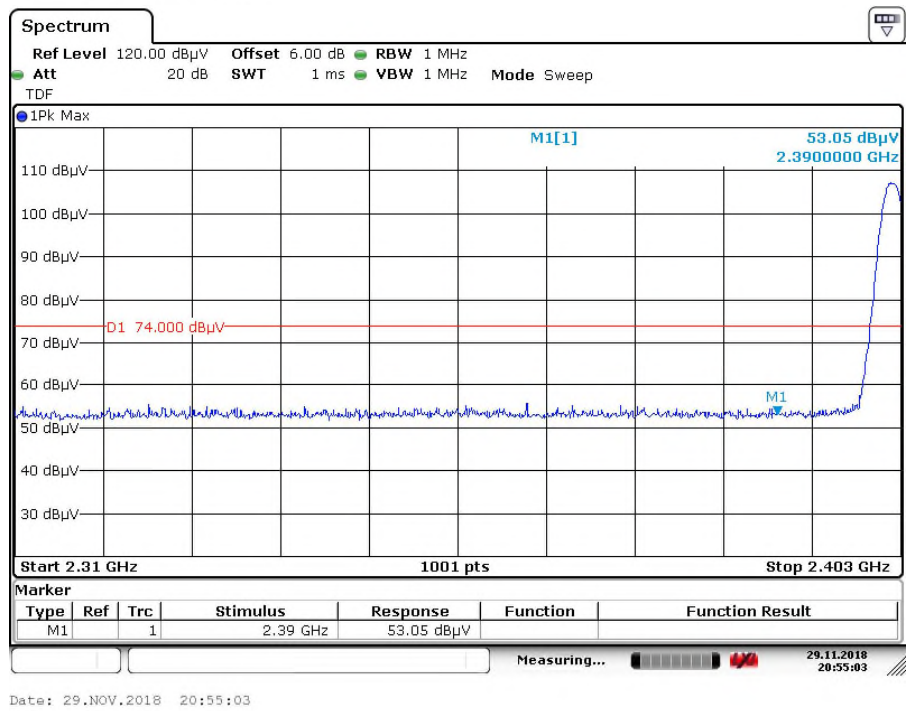
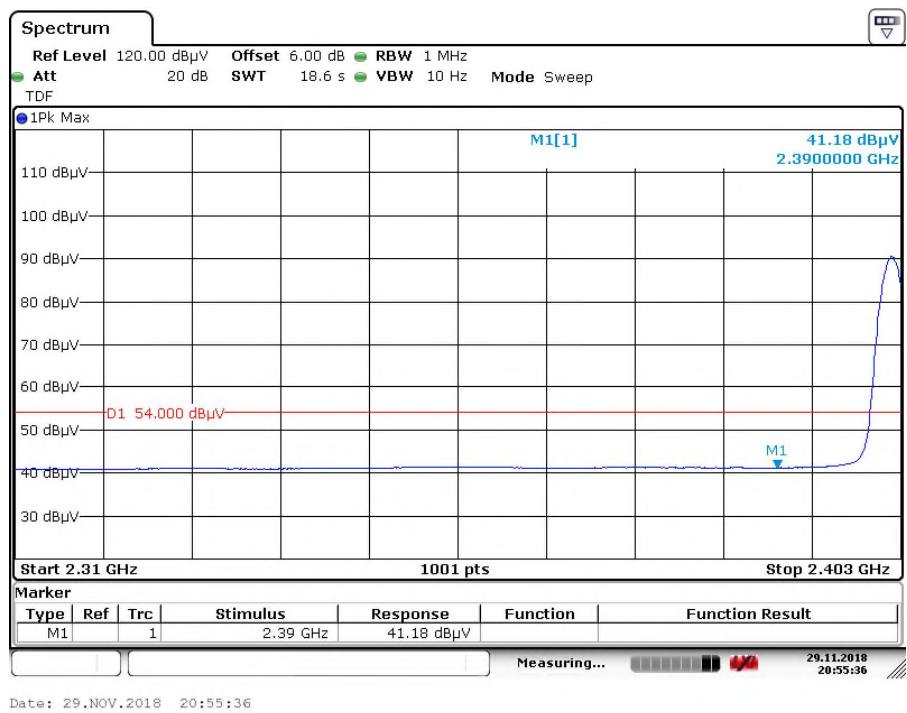


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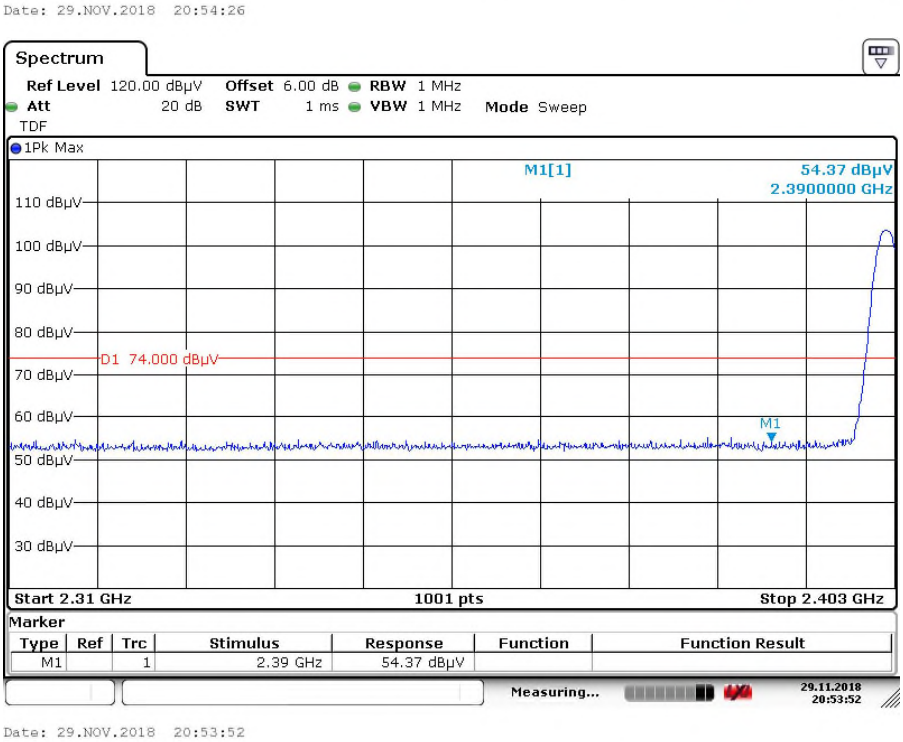
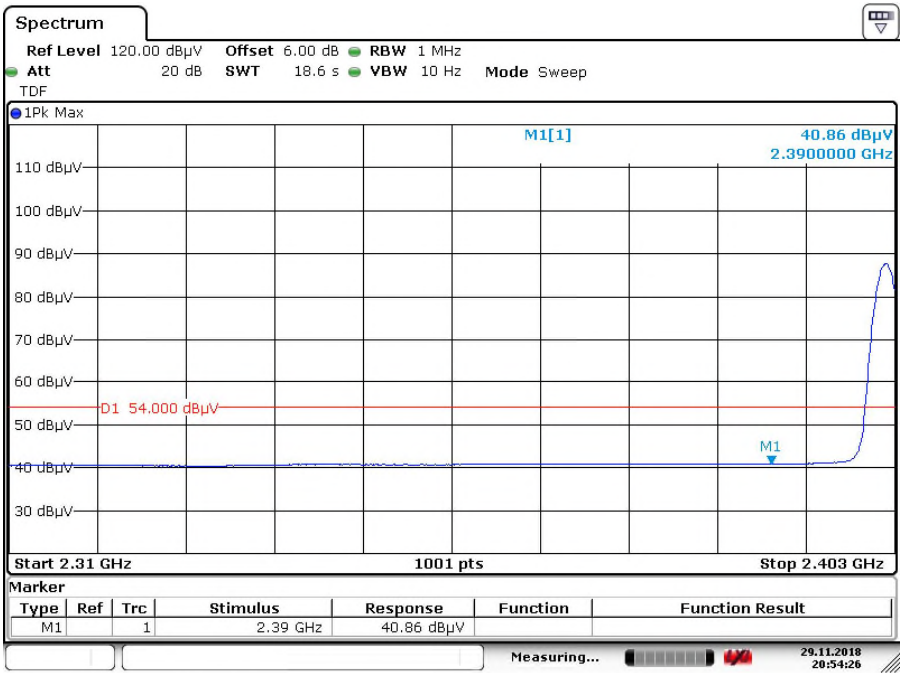


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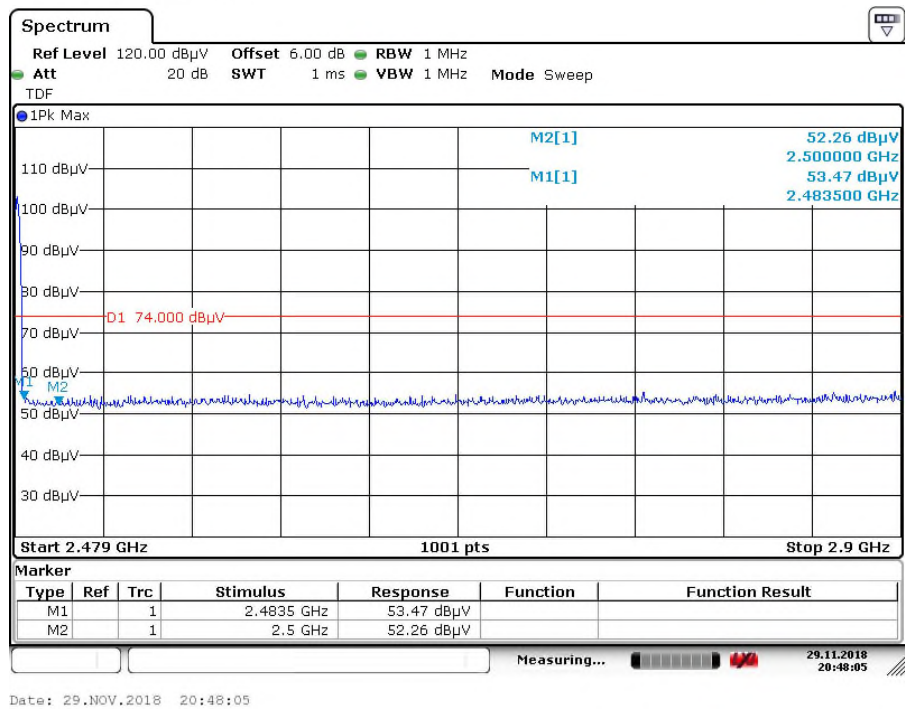
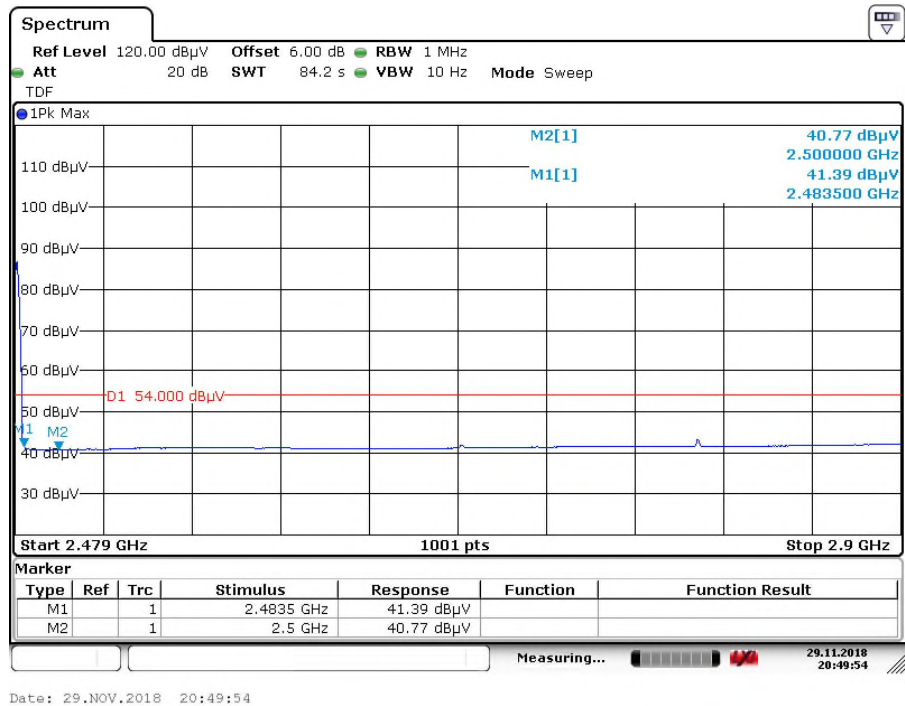
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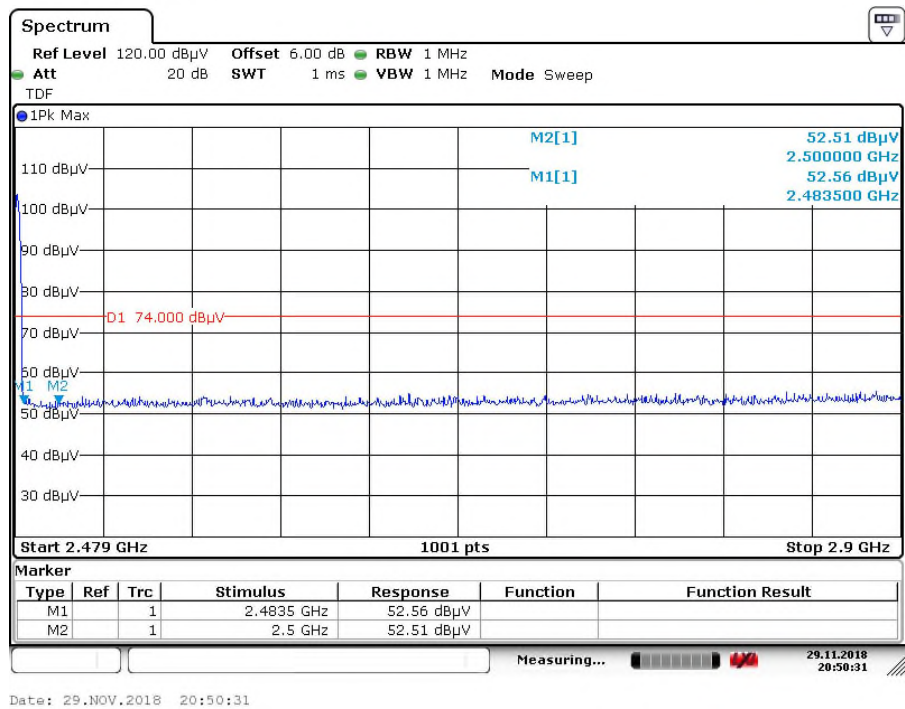
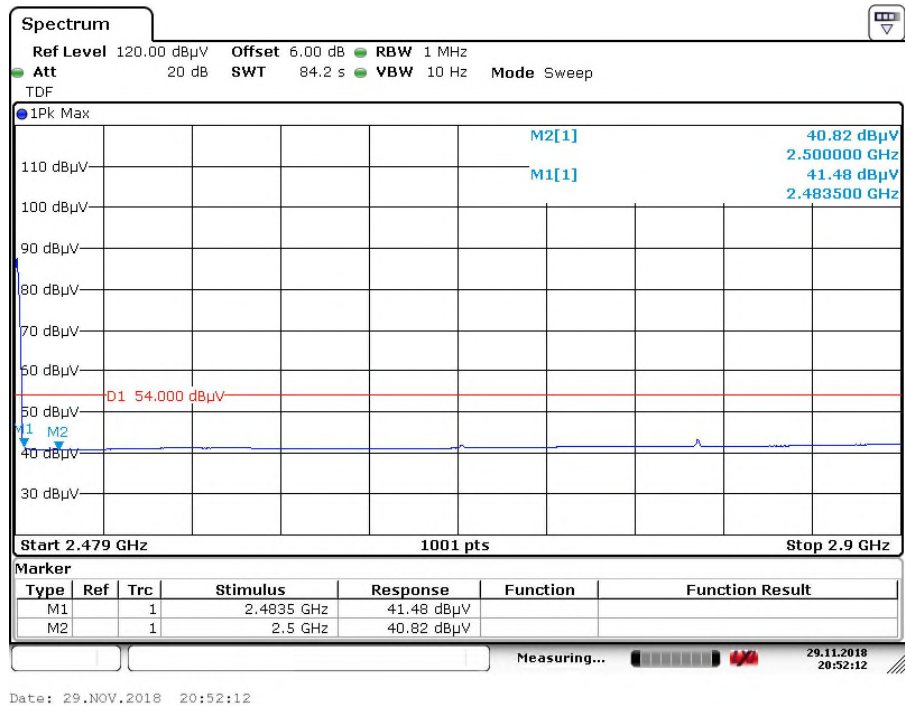
Low Channel (Ver)



High Channel (Hor)



High Channel (Ver)



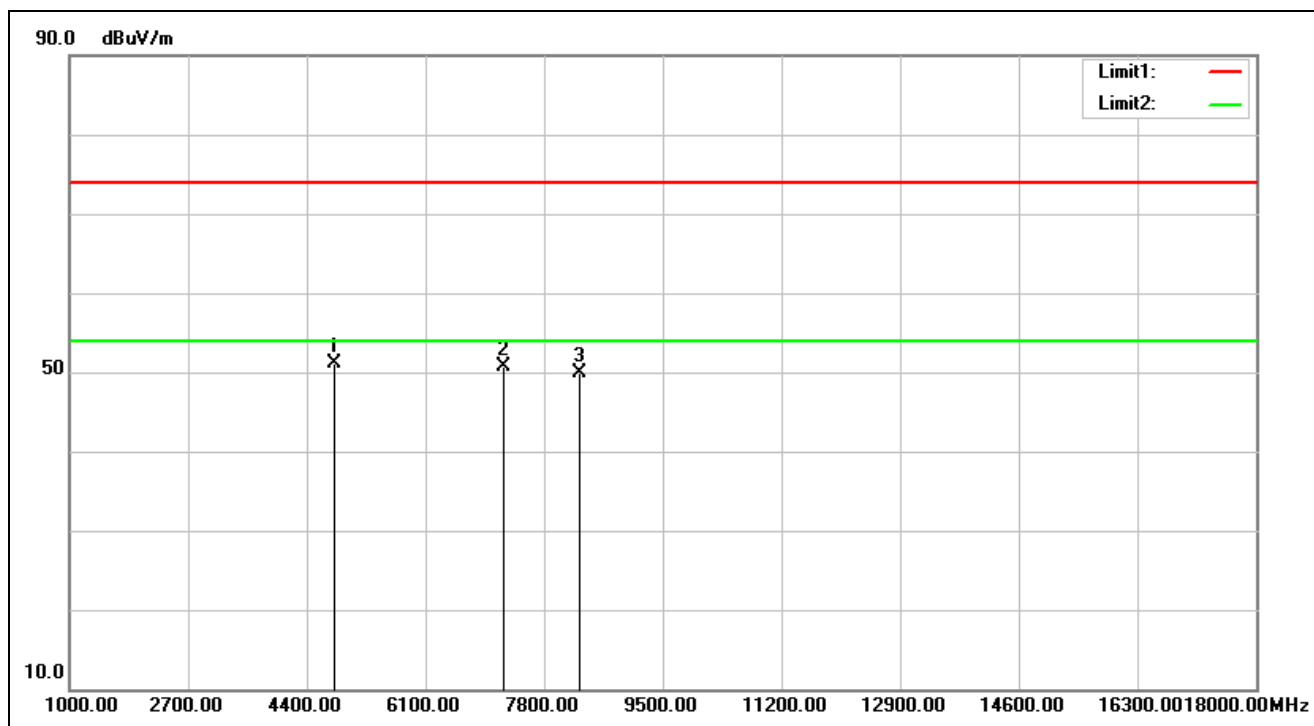
Spurious Emissions, TX Mode, 1-18G



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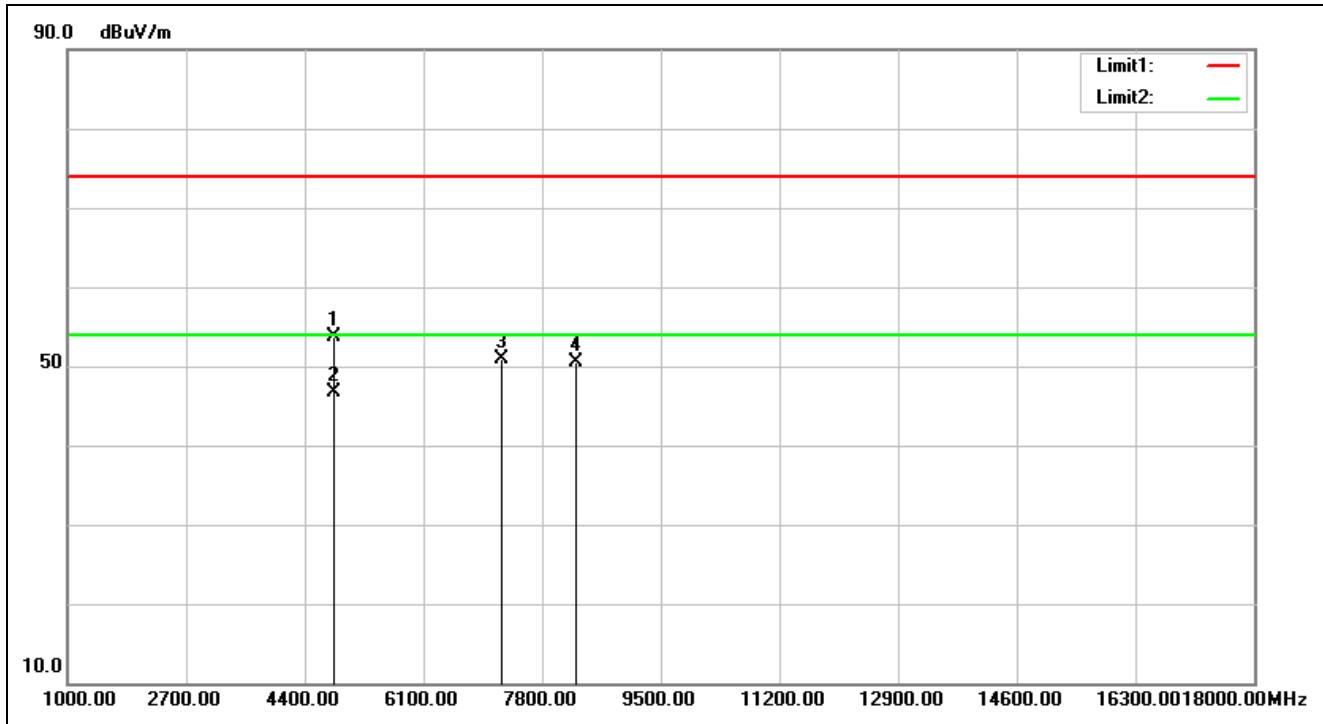
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



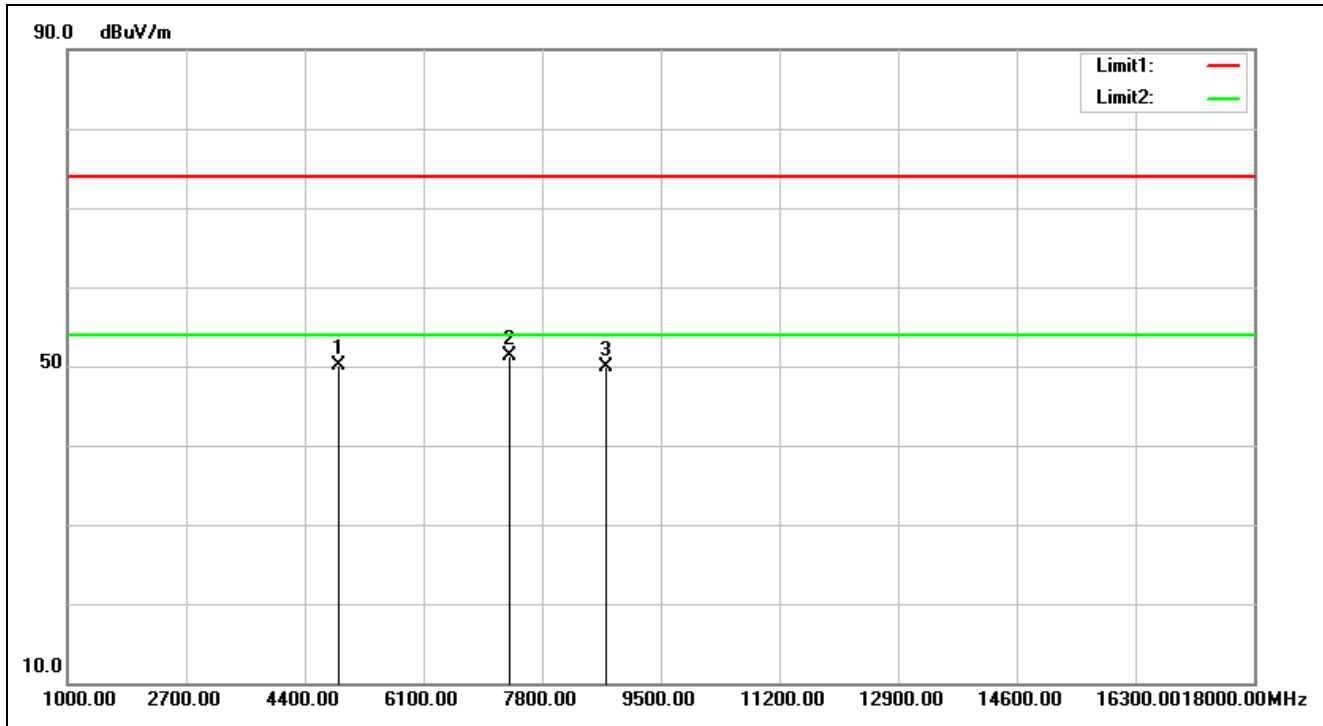
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 20:46:56
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4804.000	3.30	47.74	51.04	74.00	-22.96	peak	100	347	
2	7206.000	4.77	45.85	50.62	74.00	-23.38	peak		0	
3	8310.000	4.86	44.99	49.85	74.00	-24.15	peak	100	360	



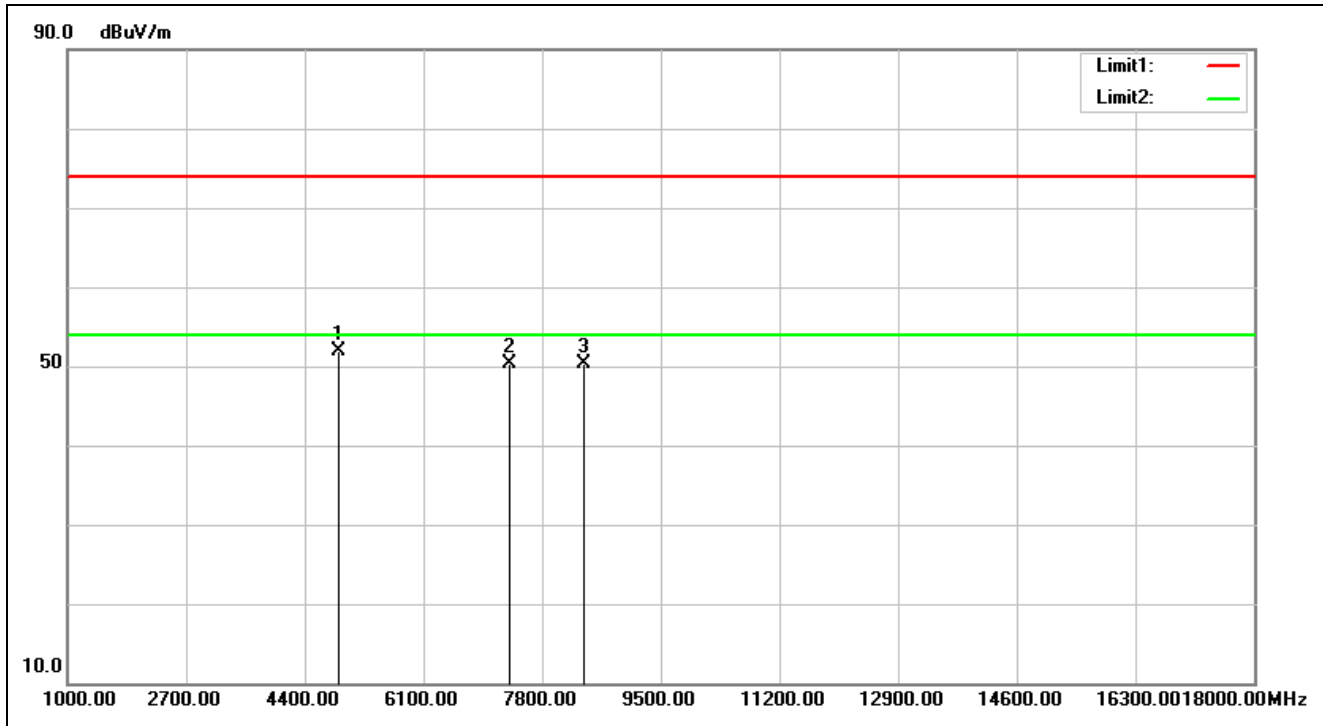
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Test item:	Radiation Emission	Test Time:	2018/11/29 20:47:49
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4804.000	3.30	50.33	53.63	74.00	-20.37	peak	100	27	
2	4804.000	3.30	43.40	46.70	54.00	-7.30	AVG	100	27	
3	7206.000	4.77	46.14	50.91	74.00	-23.09	peak			
4	8293.000	4.85	45.72	50.57	74.00	-23.43	peak	100	20	



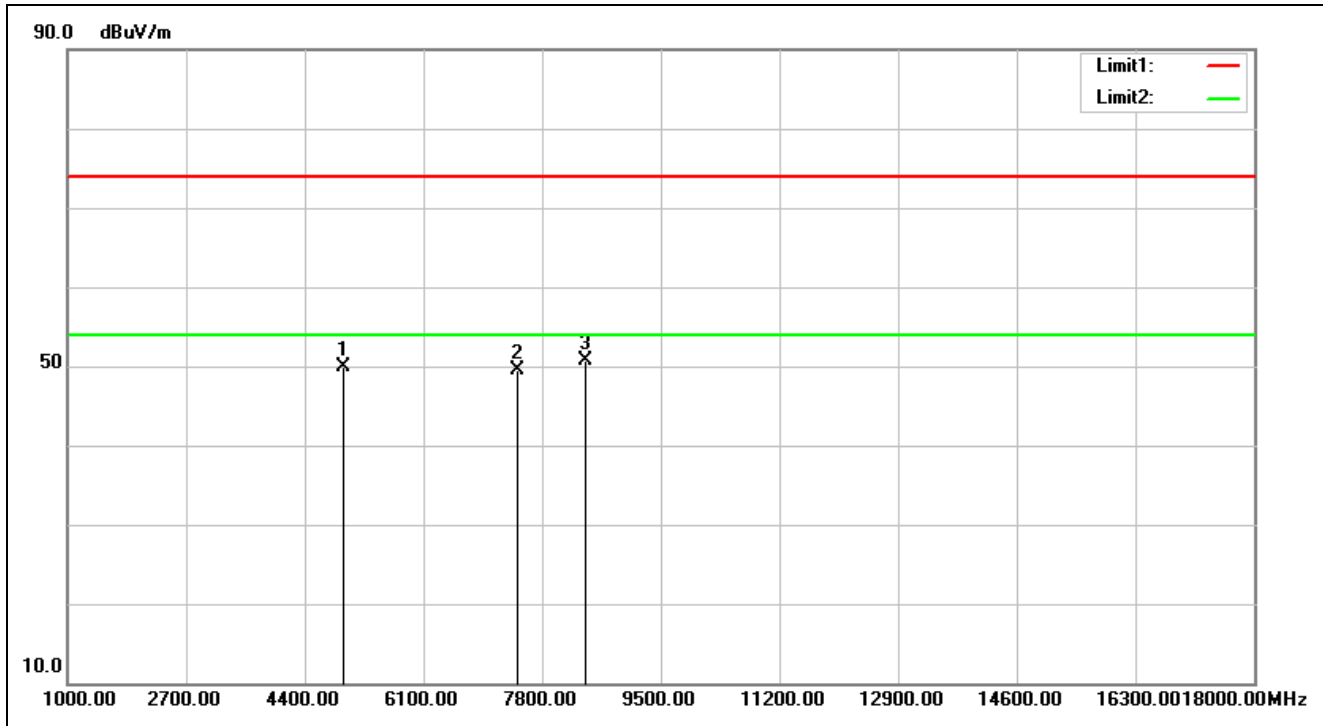
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Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	46.46	50.07	74.00	-23.93	peak	100	359	
2	7323.000	4.66	46.72	51.38	74.00	-22.62	peak			
3	8718.000	5.40	44.57	49.97	74.00	-24.03	peak	100	174	



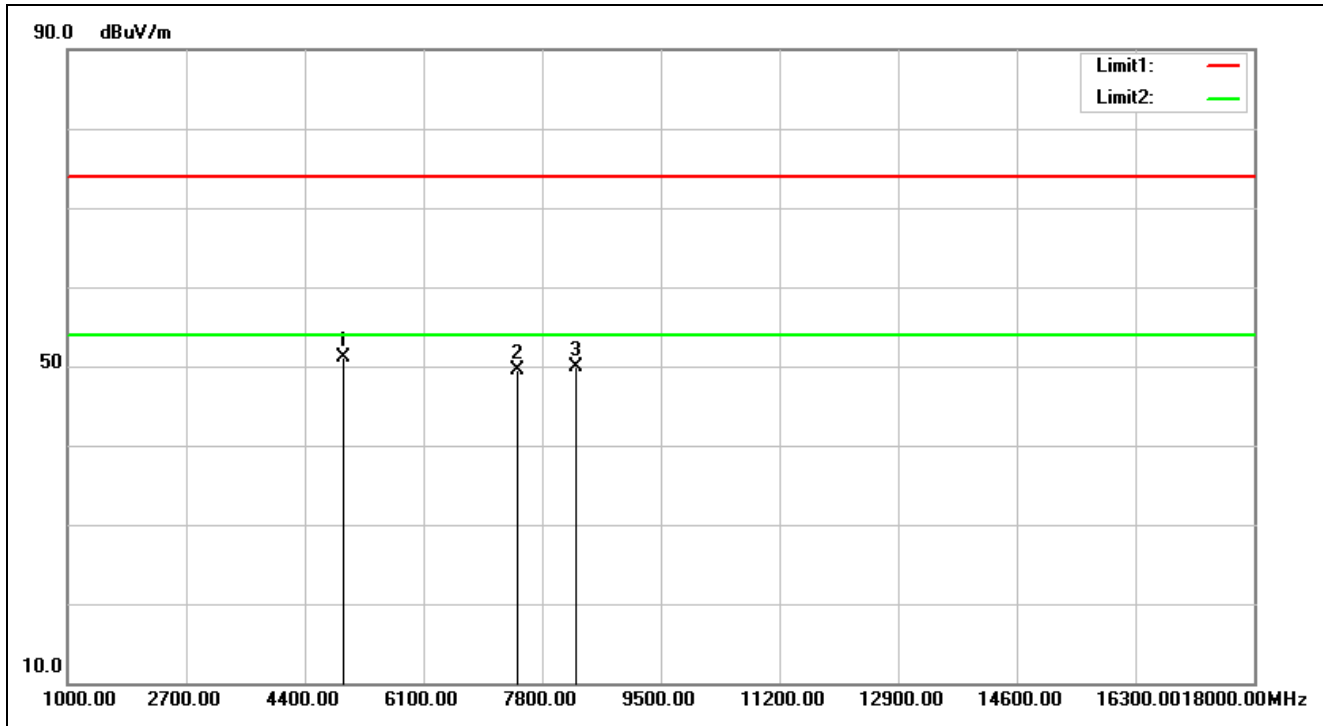
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Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	48.21	51.82	74.00	-22.18	peak	100	356	
2	7323.000	4.66	45.72	50.38	74.00	-23.62	peak			
3	8395.000	4.91	45.43	50.34	74.00	-23.66	peak	100	39	



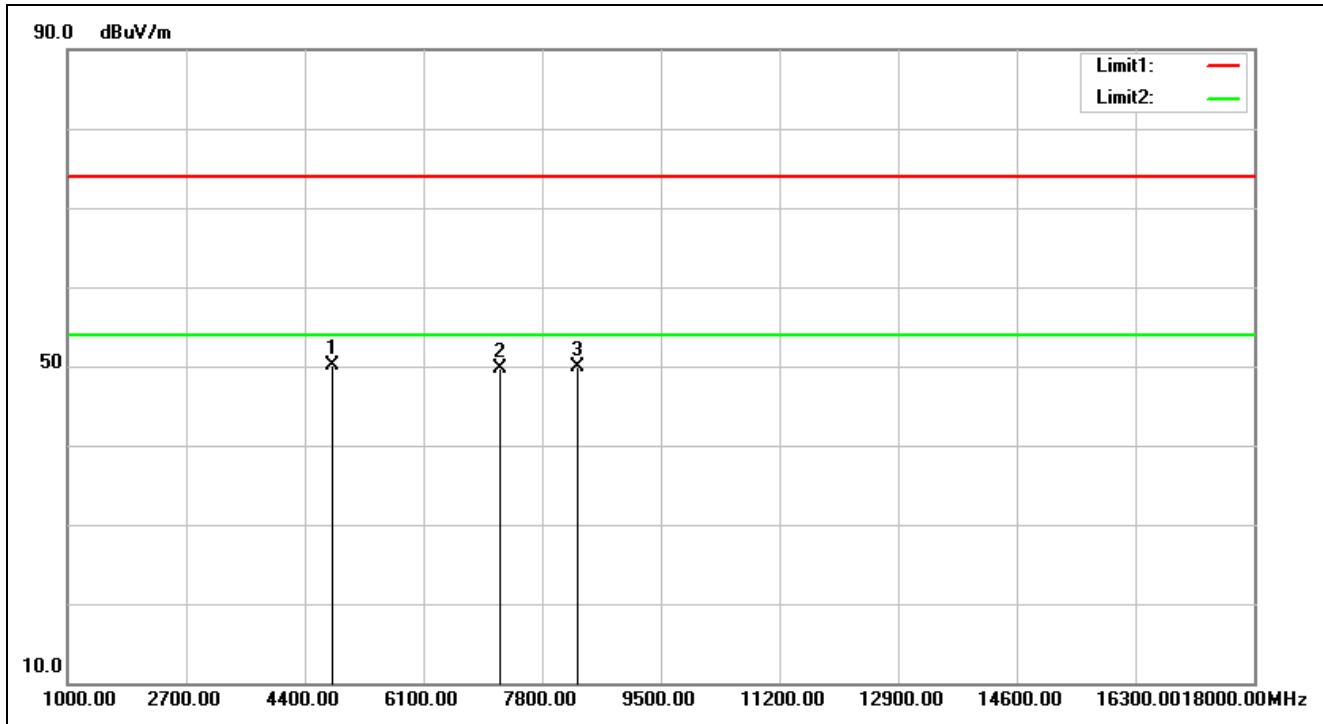
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Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4960.000	3.93	45.98	49.91	74.00	-24.09	peak	100	187	
2	7440.000	4.54	45.04	49.58	74.00	-24.42	peak			
3	8429.000	4.94	45.68	50.62	74.00	-23.38	peak	100	287	



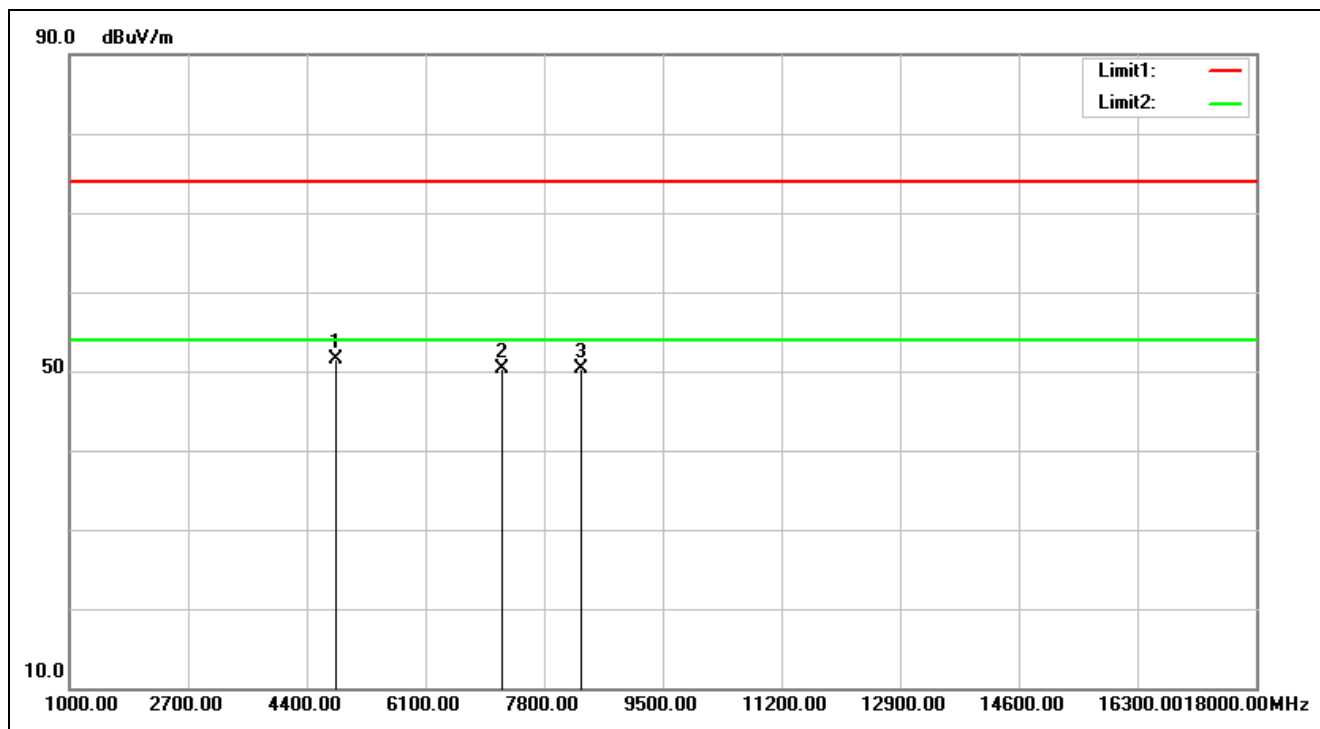
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Test item:	Radiation Emission	Test Time:	2018/11/29 20:55:46
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4960.000	3.93	47.20	51.13	74.00	-22.87	peak	100	32	
2	7440.000	4.54	44.97	49.51	74.00	-24.49	peak			
3	8293.000	4.85	45.07	49.92	74.00	-24.08	peak	100	360	



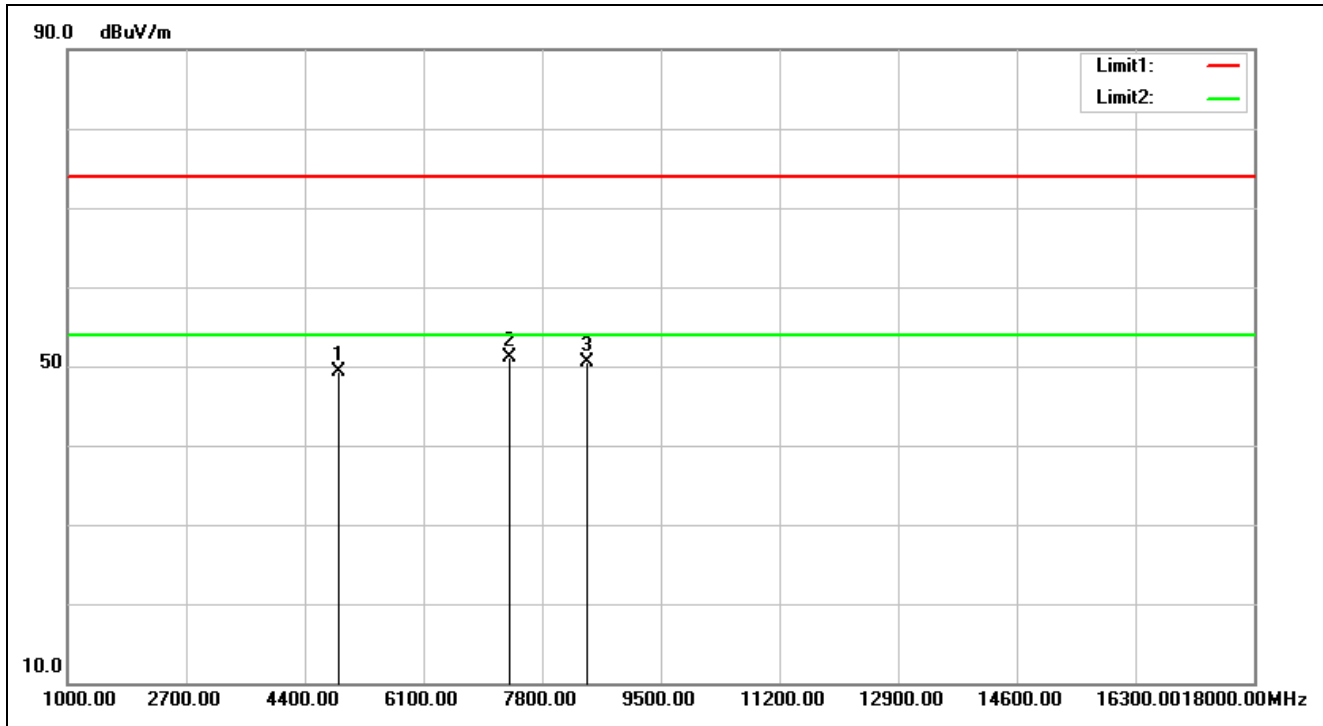
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Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4804.000	3.30	46.87	50.17	74.00	-23.83	peak	100	360	
2	7206.000	4.77	44.90	49.67	74.00	-24.33	peak			
3	8310.000	4.86	45.08	49.94	74.00	-24.06	peak	100	0	



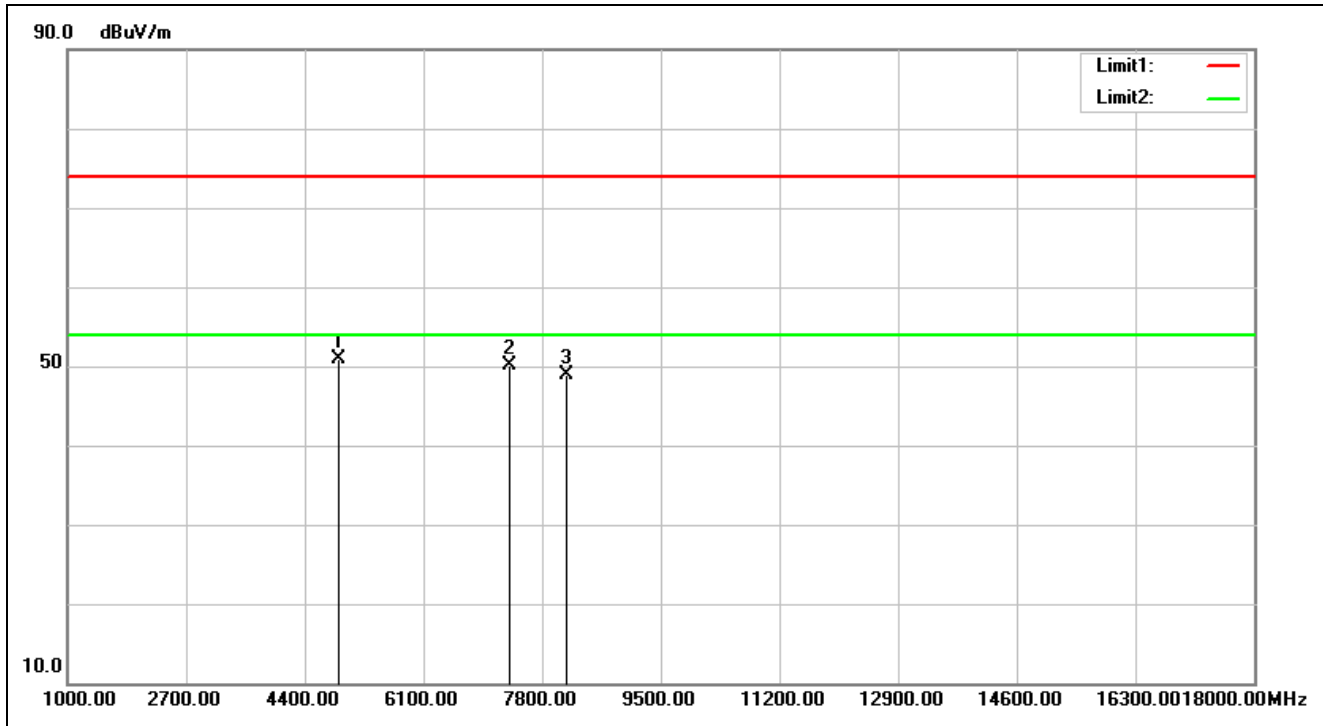
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Test item:	Radiation Emission	Test Time:	2018/11/29 20:59:37
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4804.000	3.30	48.28	51.58	74.00	-22.42	peak	100	32	
2	7206.000	4.77	45.57	50.34	74.00	-23.66	peak			
3	8327.000	4.87	45.51	50.38	74.00	-23.62	peak	100	360	



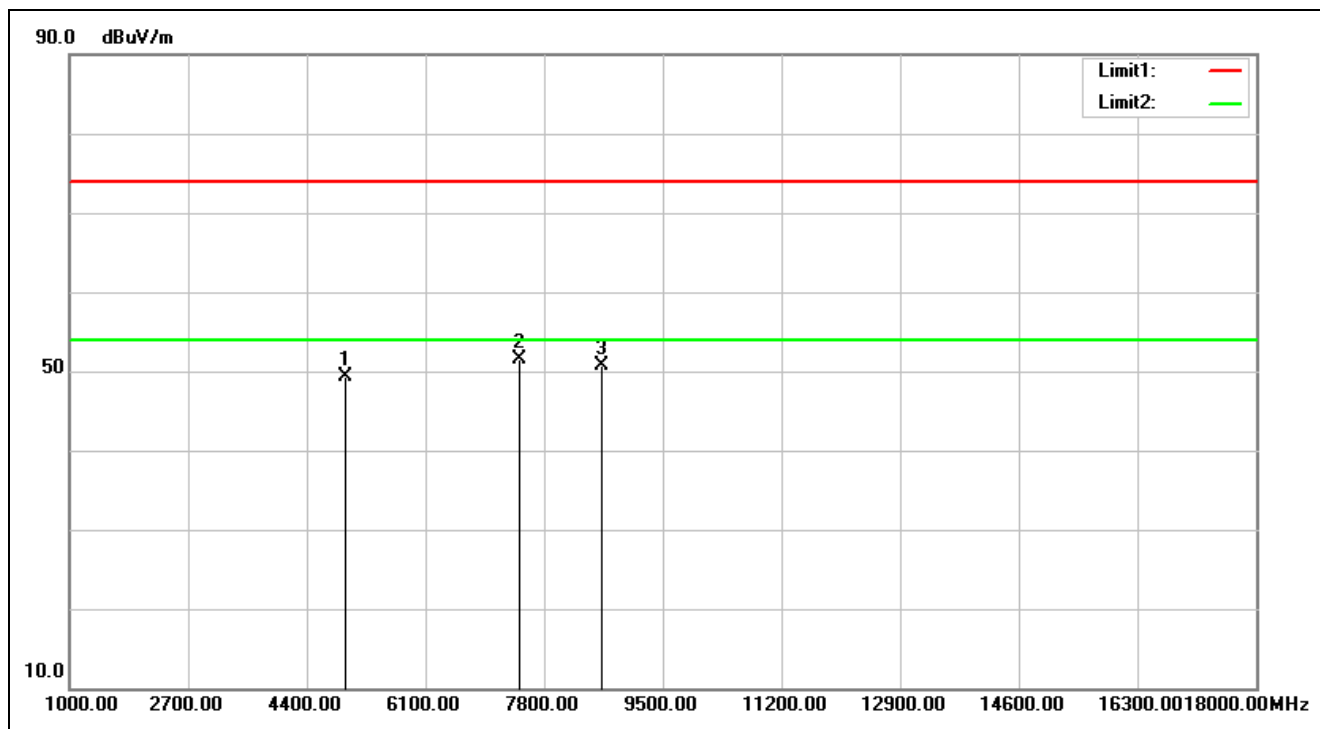
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Test item:	Radiation Emission	Test Time:	2018/11/29 21:02:21
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	45.63	49.24	74.00	-24.76	peak	100	359	
2	7323.000	4.66	46.41	51.07	74.00	-22.93	peak			
3	8446.000	4.95	45.51	50.46	74.00	-23.54	peak	100	297	



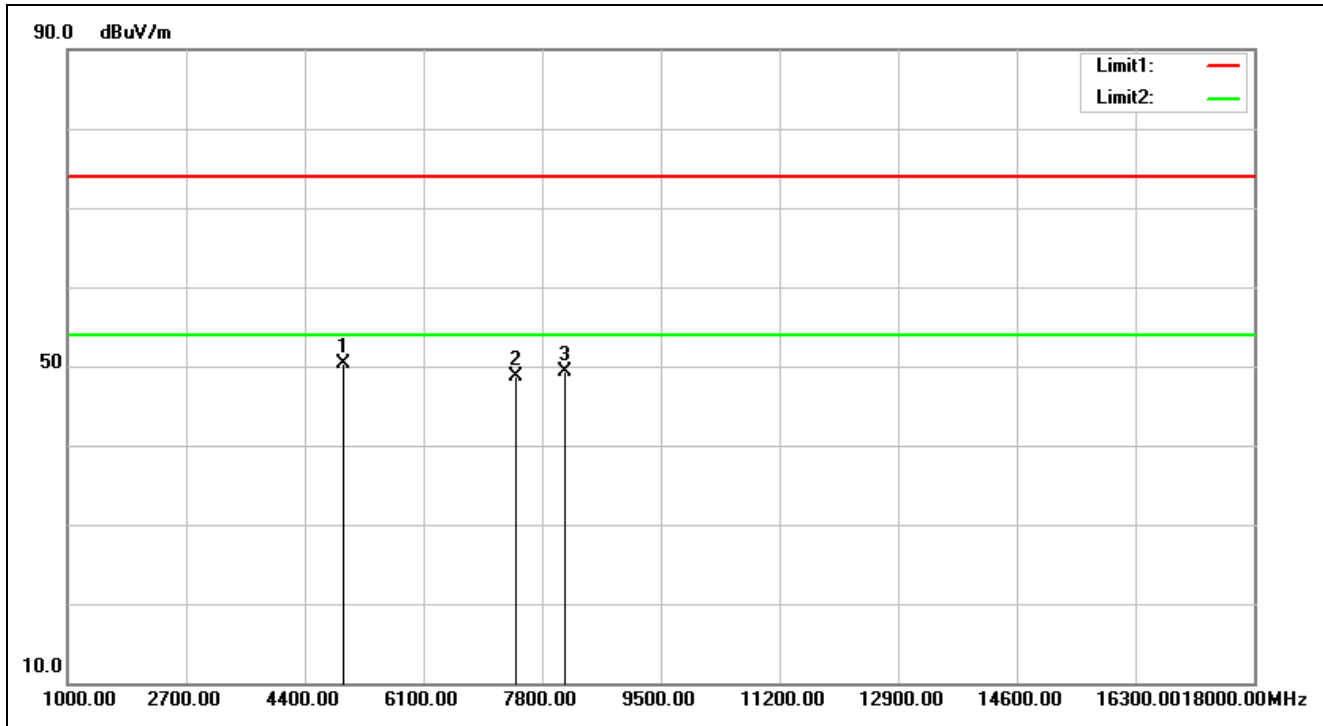
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Test item:	Radiation Emission	Test Time:	2018/11/29 21:03:14
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	47.39	51.00	74.00	-23.00	peak	100	1	
2	7323.000	4.66	45.53	50.19	74.00	-23.81	peak			
3	8157.000	4.75	44.19	48.94	74.00	-25.06	peak	100	278	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 21:05:35
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4960.000	3.93	45.39	49.32	74.00	-24.68	peak	100	187	
2	7440.000	4.54	46.92	51.46	74.00	-22.54	peak			
3	8633.000	5.24	45.41	50.65	74.00	-23.35	peak	100	102	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 21:06:27
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4960.000	3.93	46.47	50.40	74.00	-23.60	peak	100	360	
2	7440.000	4.54	44.23	48.77	74.00	-25.23	peak			
3	8123.000	4.72	44.63	49.35	74.00	-24.65	peak	100	108	

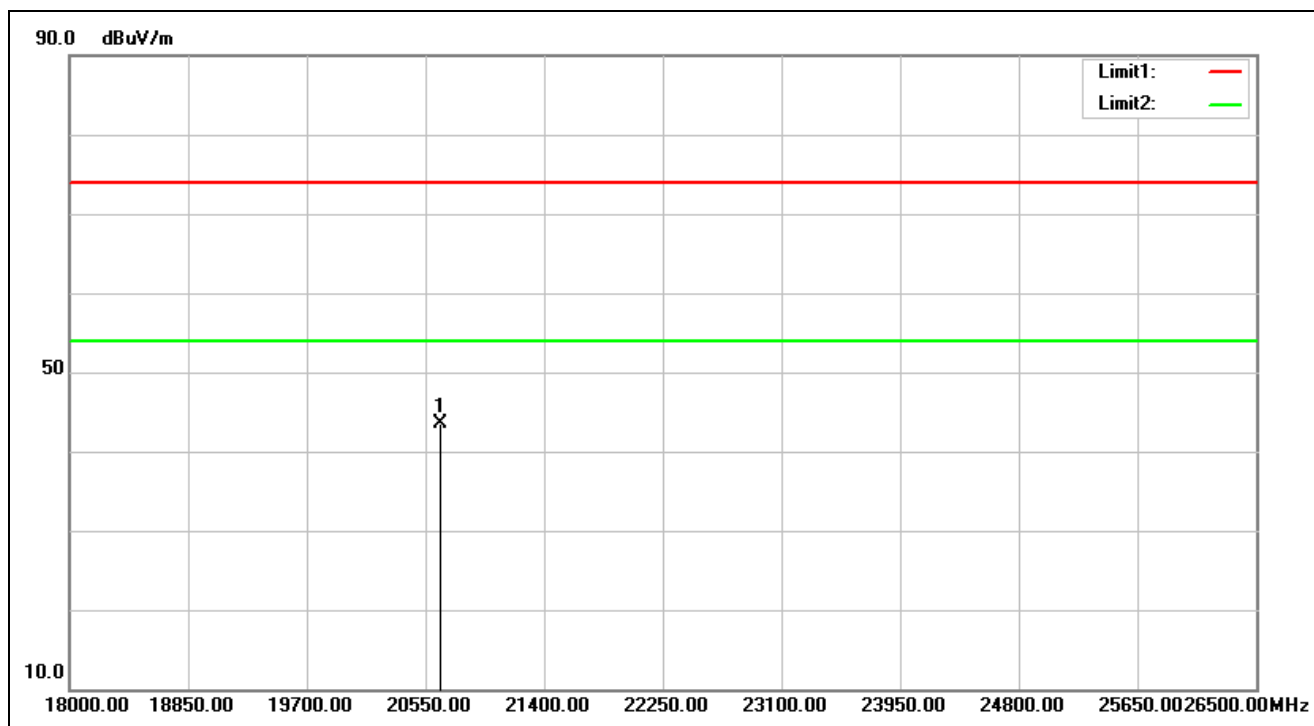
Spurious Emissions, TX Mode, 18-26.5G



TUV Rheinland Taiwan Ltd.

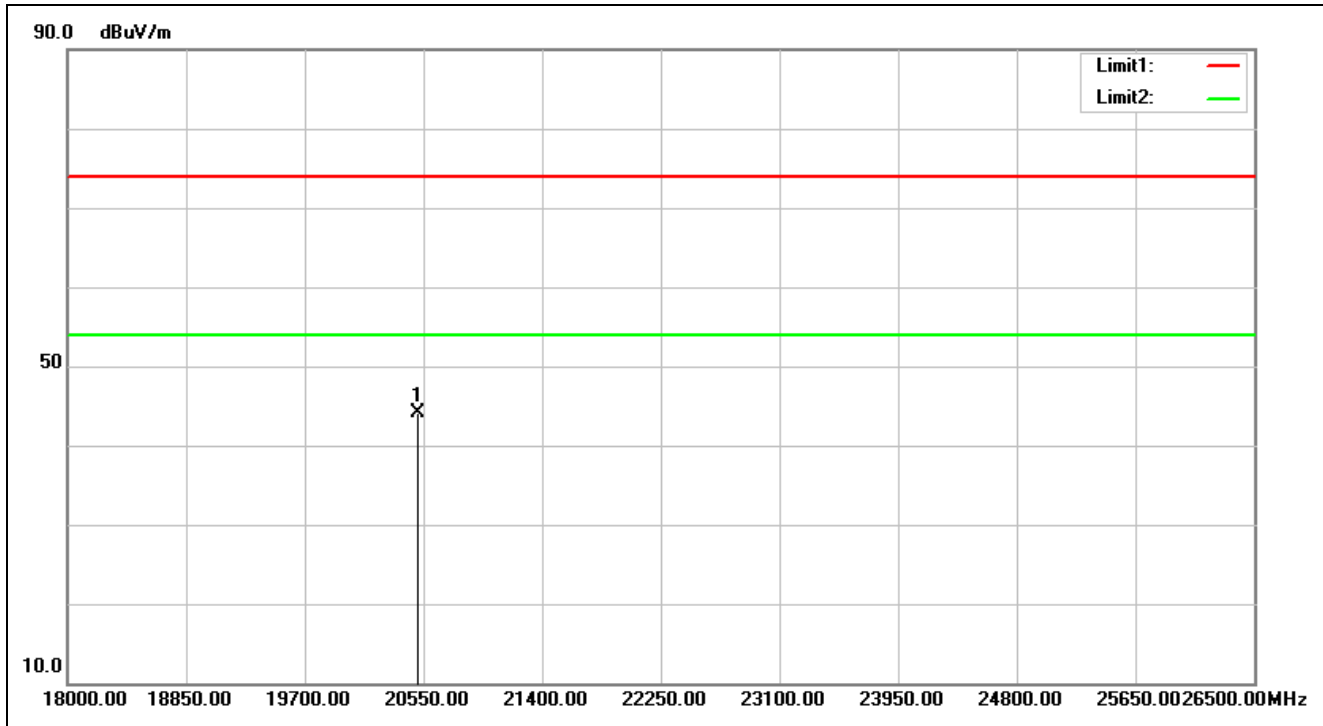
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



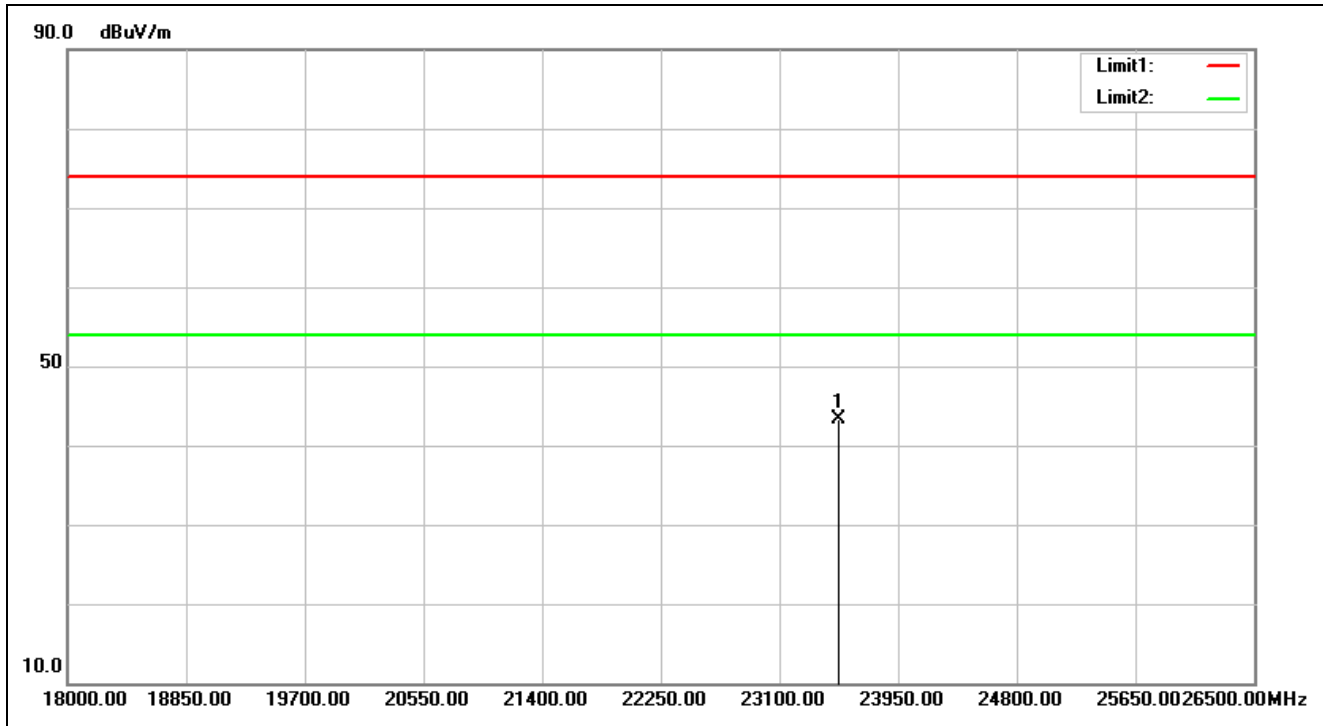
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Test item:	Radiation Emission	Test Time:	2018/11/29 21:23:21
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20660.500	4.38	39.09	43.47	74.00	-30.53	peak		0	



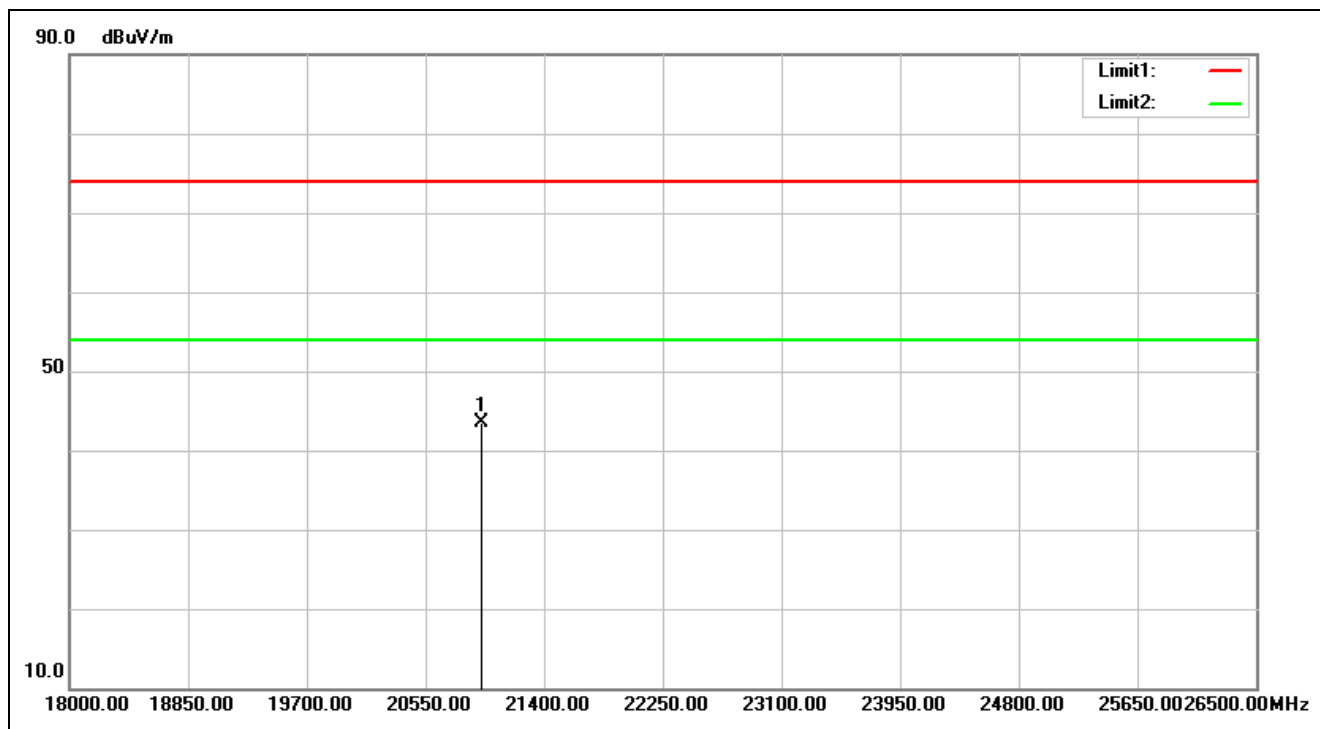
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 21:23:28
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20507.500	4.19	39.94	44.13	74.00	-29.87	peak			



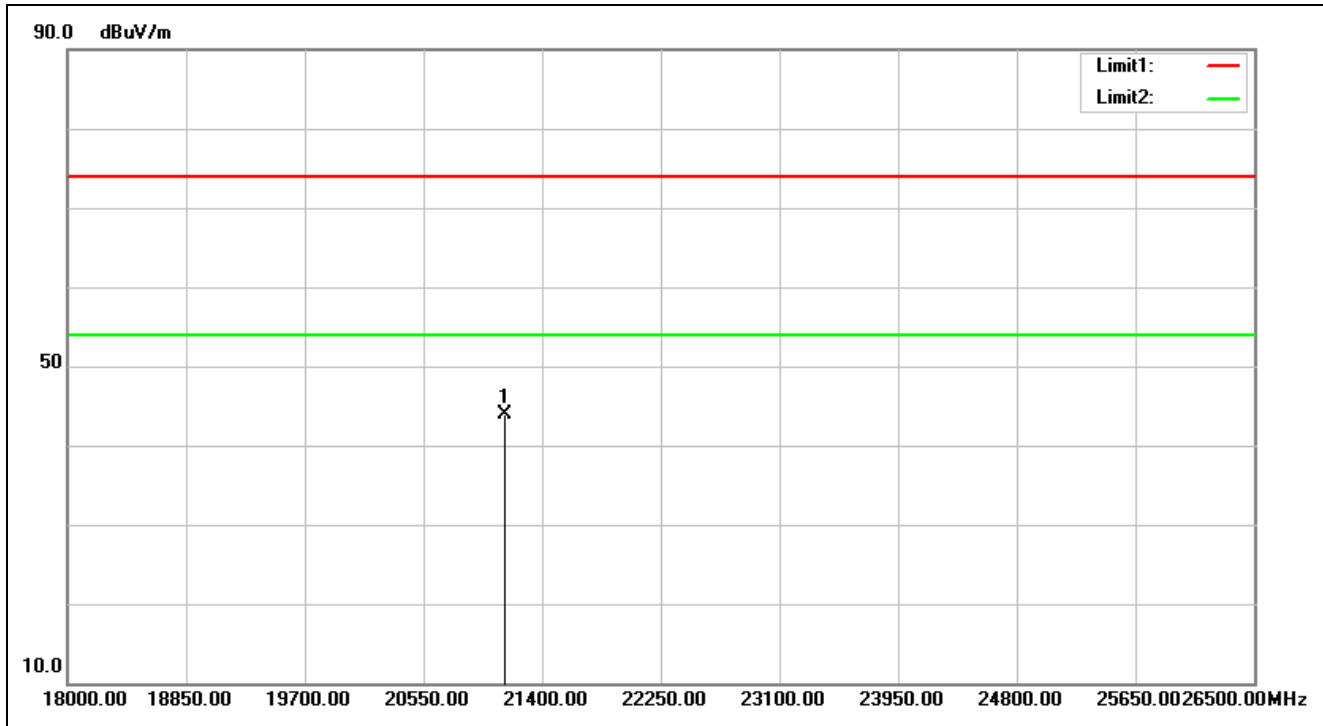
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 21:23:52
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23525.000	5.85	37.47	43.32	74.00	-30.68	peak			



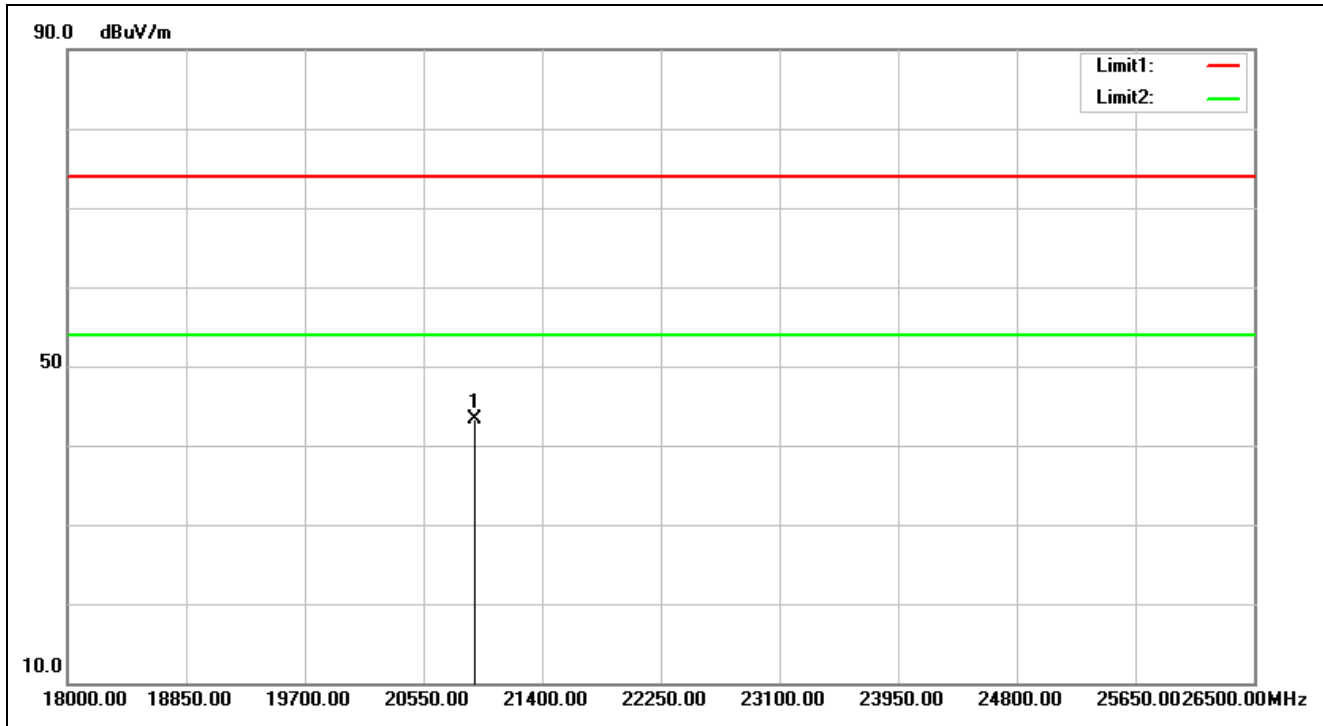
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 21:23:59
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20949.500	4.73	38.85	43.58	74.00	-30.42	peak			



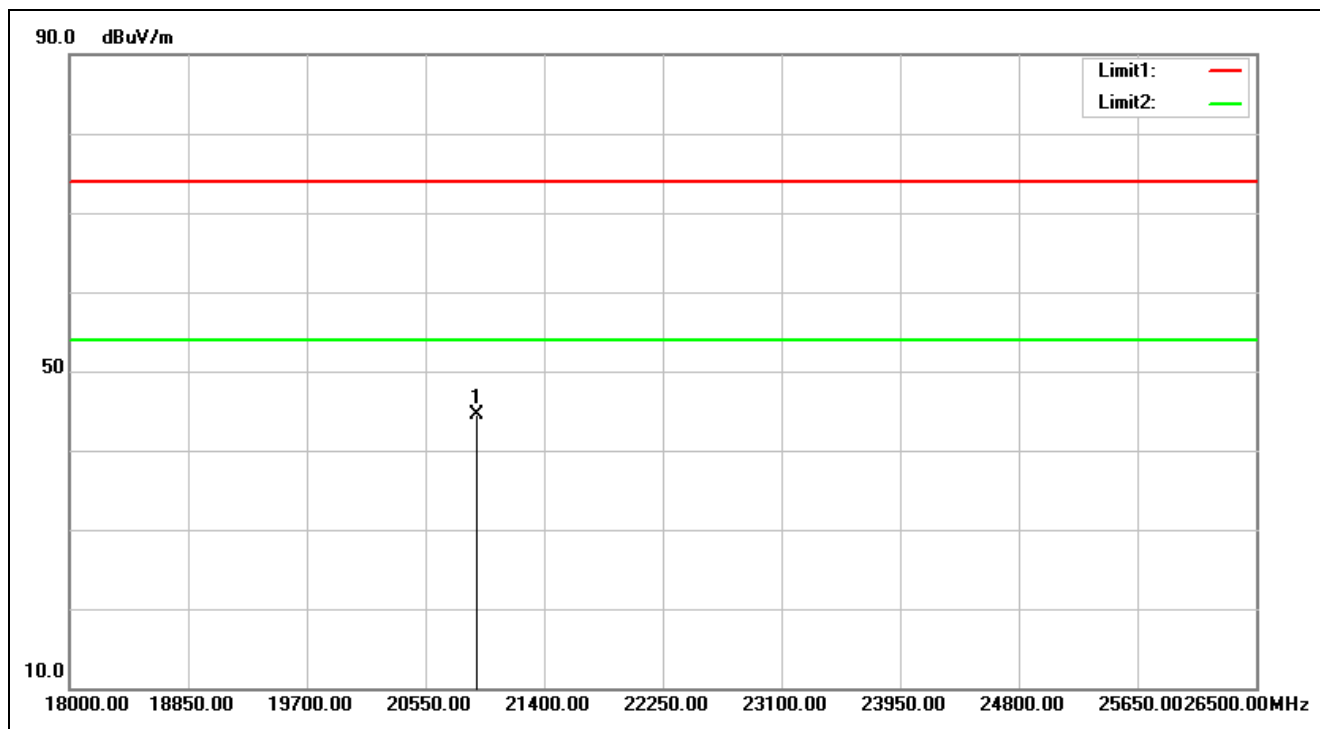
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 21:24:27
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21128.000	4.67	39.20	43.87	74.00	-30.13	peak			



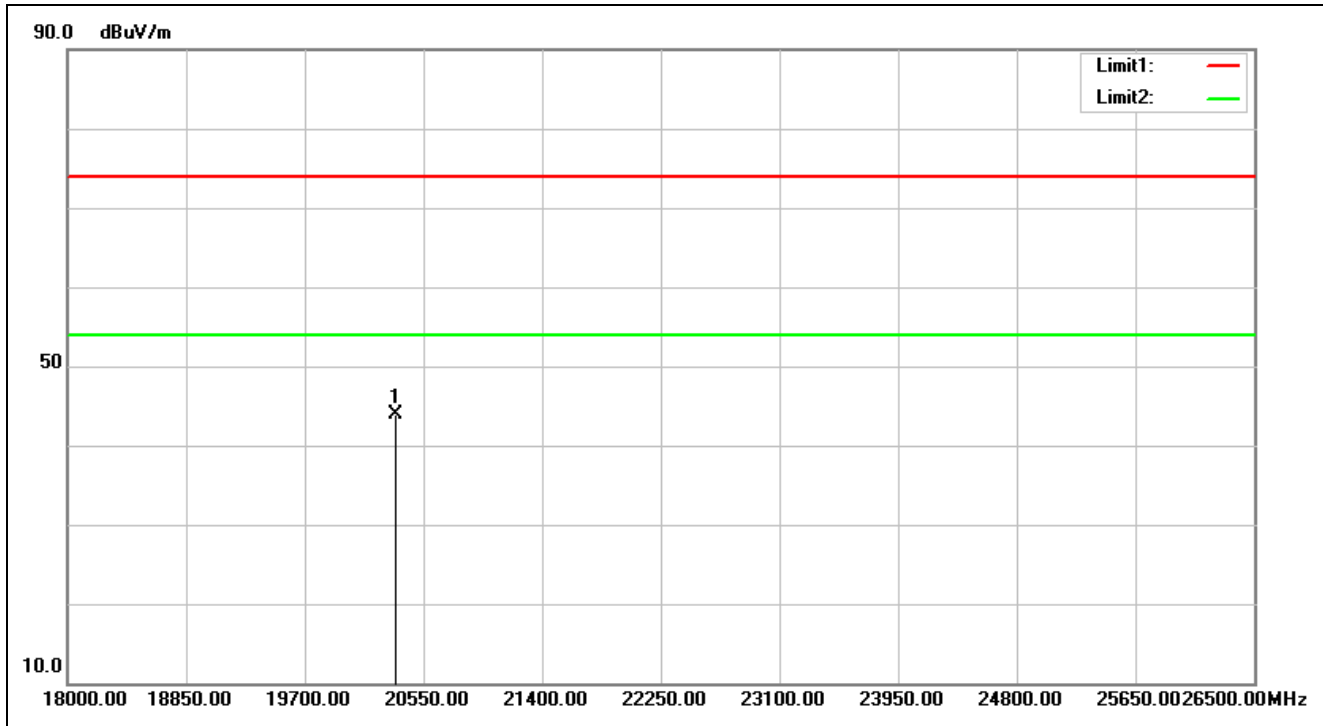
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 21:24:34
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20915.500	4.69	38.61	43.30	74.00	-30.70	peak			



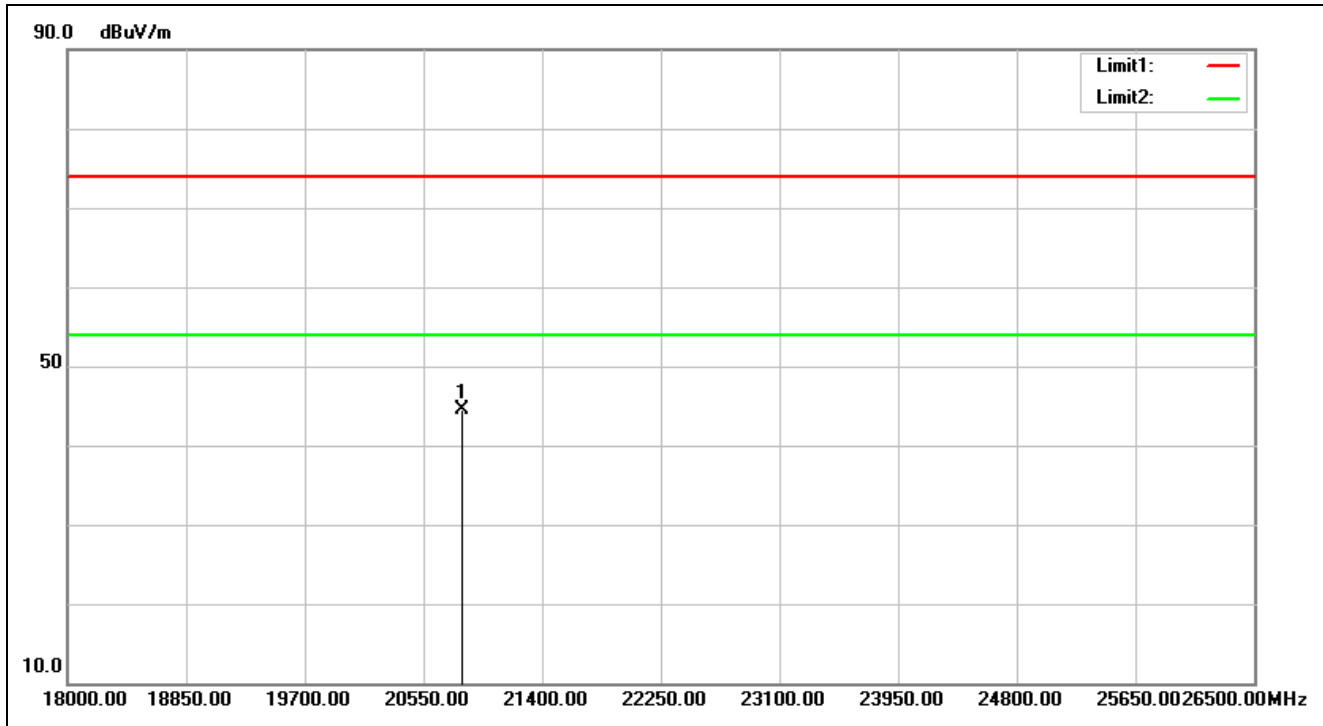
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 21:25:09
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20915.500	4.69	39.88	44.57	74.00	-29.43	peak			



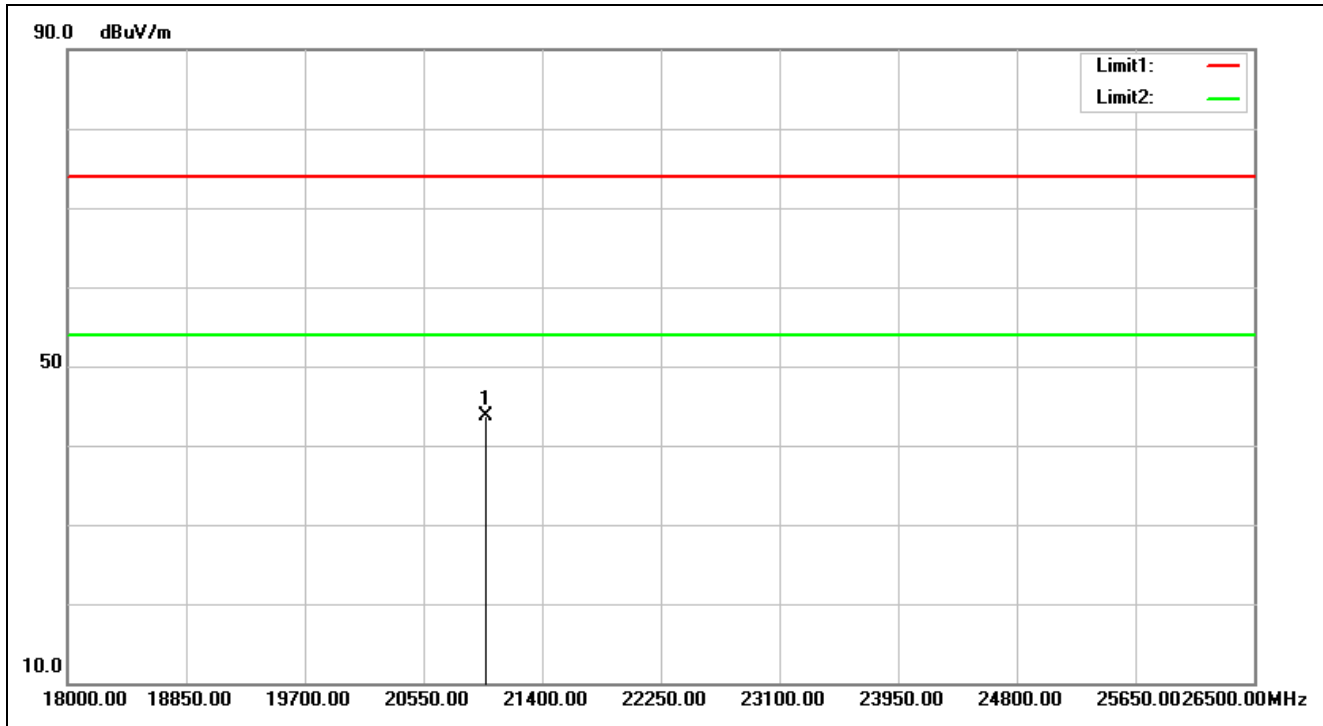
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 21:25:16
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20354.500	4.22	39.76	43.98	74.00	-30.02	peak			



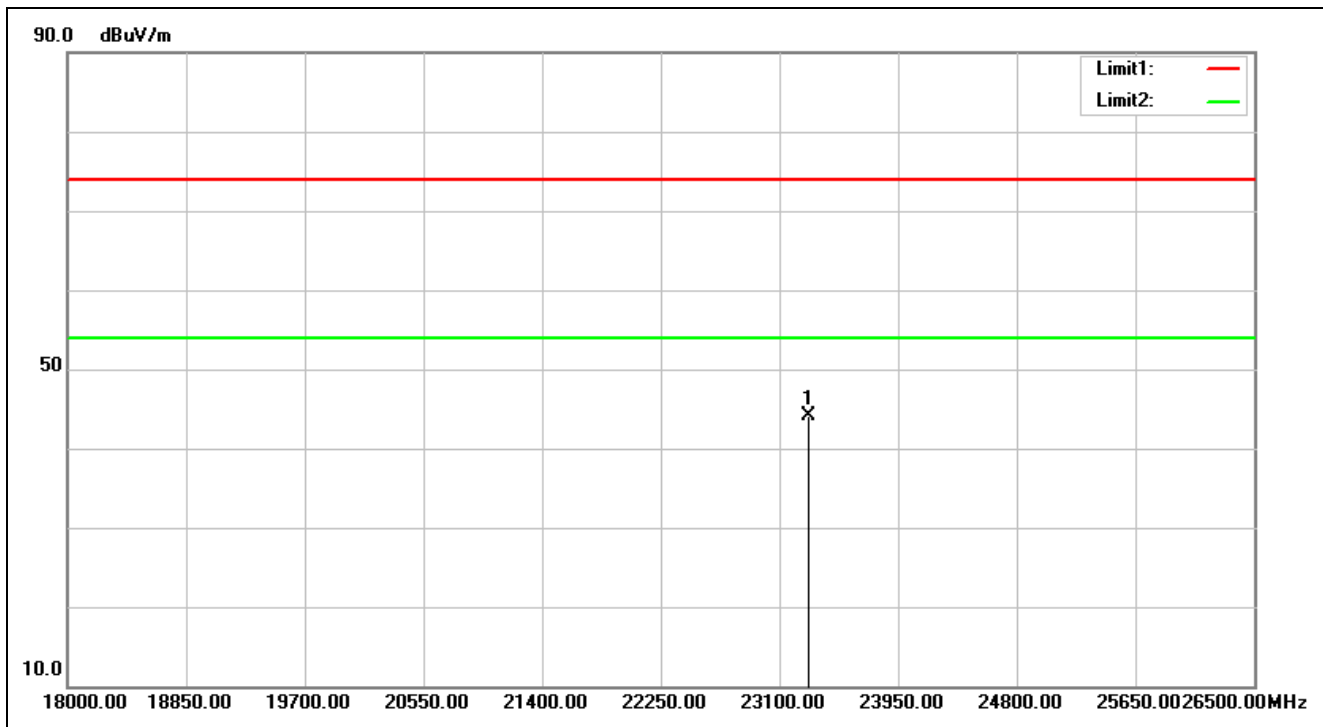
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 21:25:48
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20830.500	4.59	39.90	44.49	74.00	-29.51	peak			



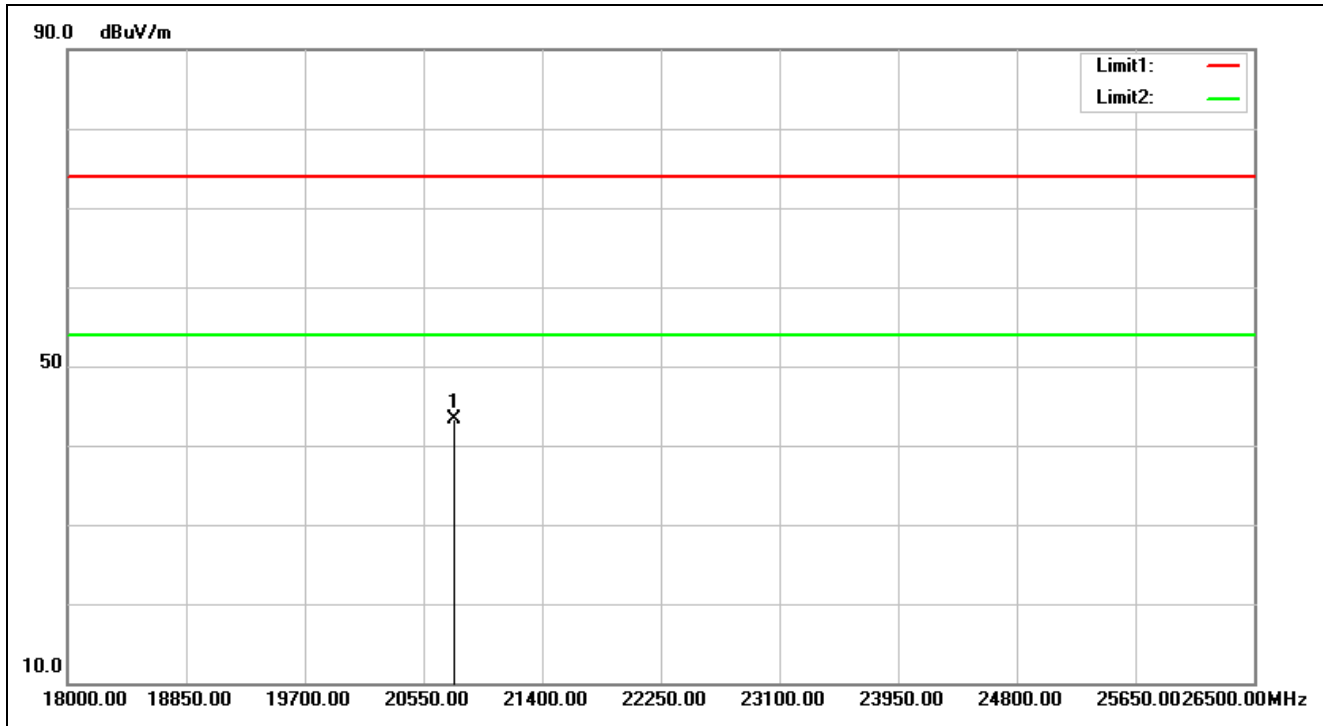
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 21:25:55
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20992.000	4.79	38.94	43.73	74.00	-30.27	peak			



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 21:26:13
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23304.000	5.65	38.50	44.15	74.00	-29.85	peak			



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 21:26:20
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20771.000	4.51	38.87	43.38	74.00	-30.62	peak			

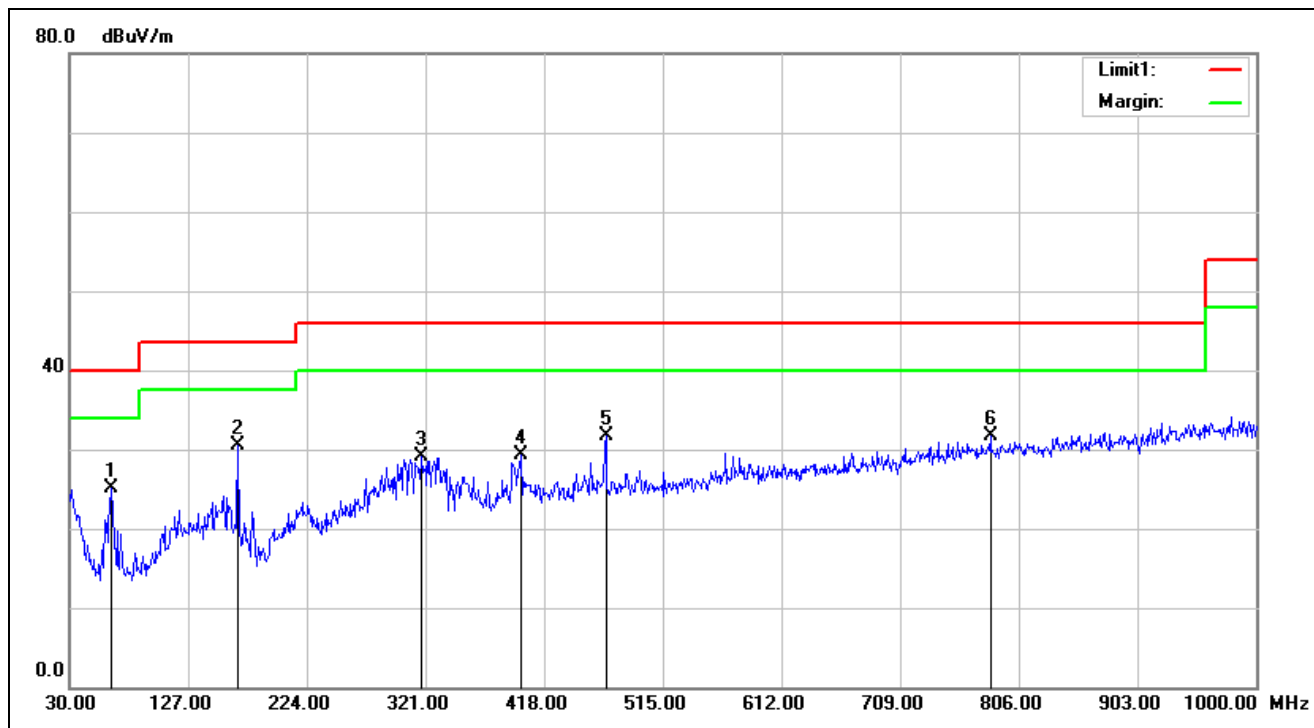
Spurious Emissions, TX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

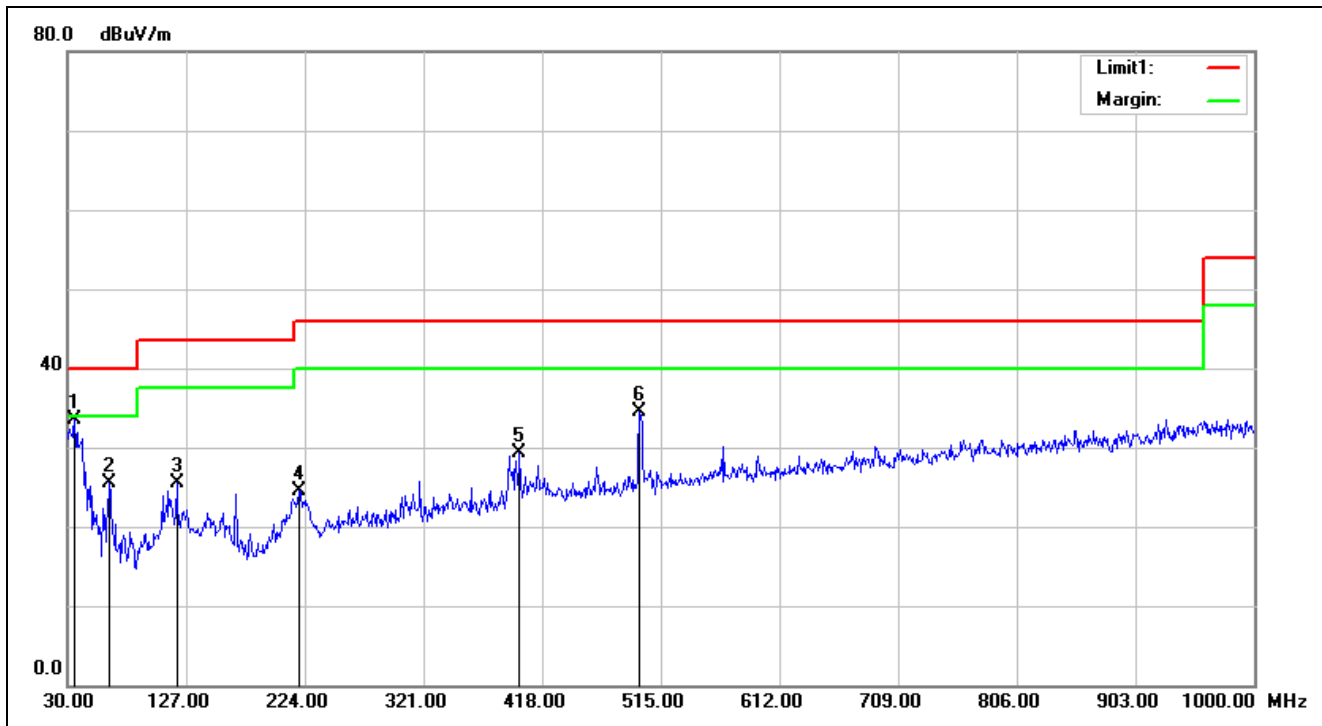
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 21:42:16
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL0		
Remark:	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	-13.56	38.71	25.15	40.00	-14.85	QP	100	52	
2	167.7400	-8.76	39.24	30.48	43.50	-13.02	QP	100	117	
3	318.0899	-4.39	33.44	29.05	46.00	-16.95	QP	100	82	
4	398.6000	-2.37	31.63	29.26	46.00	-16.74	QP	100	131	
5	468.4400	-1.69	33.40	31.71	46.00	-14.29	QP	100	134	
6	782.7200	2.88	28.85	31.73	46.00	-14.27	QP	100	0	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 21:43:10
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	35.8200	-3.37	36.94	33.57	40.00	-6.43	QP	100	255	
2	63.9500	-13.56	39.04	25.48	40.00	-14.52	QP	100	255	
3	119.2400	-7.46	32.91	25.45	43.50	-18.05	QP	100	157	
4	219.1500	-8.29	32.82	24.53	46.00	-21.47	QP	100	58	
5	399.5700	-2.33	31.68	29.35	46.00	-16.65	QP	100	49	
6	497.5400	-1.21	35.62	34.41	46.00	-11.59	QP	100	107	

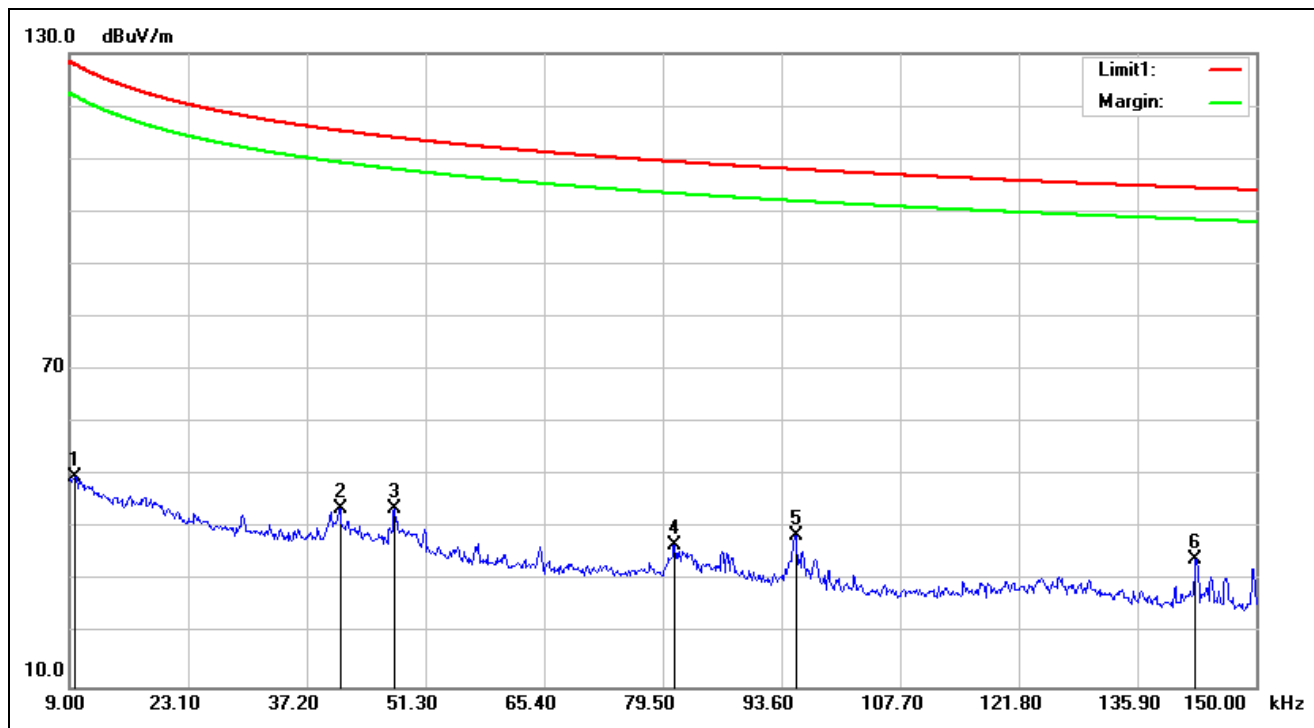
Spurious Emissions, TX Mode, 9K-30M



TUV Rheinland Taiwan Ltd.

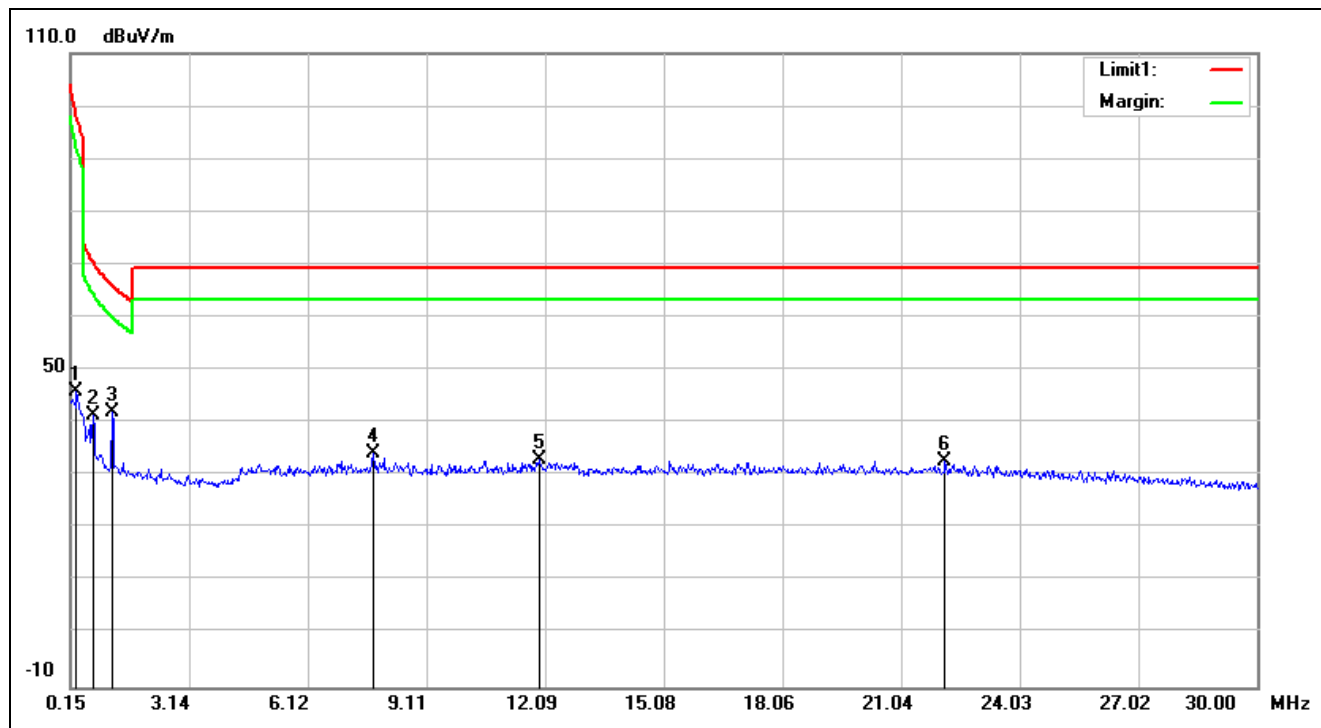
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/11/29 21:49:59
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL0		
Remark:	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	18.46	31.37	49.83	127.85	-78.02	QP	100	233	
2	0.0411	19.10	24.54	43.64	115.32	-71.68	QP	100	157	
3	0.0476	18.97	24.65	43.62	114.04	-70.42	QP	100	164	
4	0.0809	18.55	18.36	36.91	109.44	-72.53	QP	100	151	
5	0.0952	18.39	20.38	38.77	108.02	-69.25	QP	100	164	
6	0.1428	18.35	15.73	34.08	104.50	-70.42	QP	100	174	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/11/29 21:52:47
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.2992	18.44	27.43	45.87	98.08	-52.21	QP	100	108	
2	0.7171	18.66	22.80	41.46	70.50	-29.04	QP	100	154	
3	1.1947	18.66	23.41	42.07	66.08	-24.01	QP	100	115	
4	7.7617	20.01	14.17	34.18	69.50	-35.32	QP	100	359	
5	11.9407	20.66	12.33	32.99	69.50	-36.51	QP	100	157	
6	22.1494	21.68	11.19	32.87	69.50	-36.63	QP	100	358	

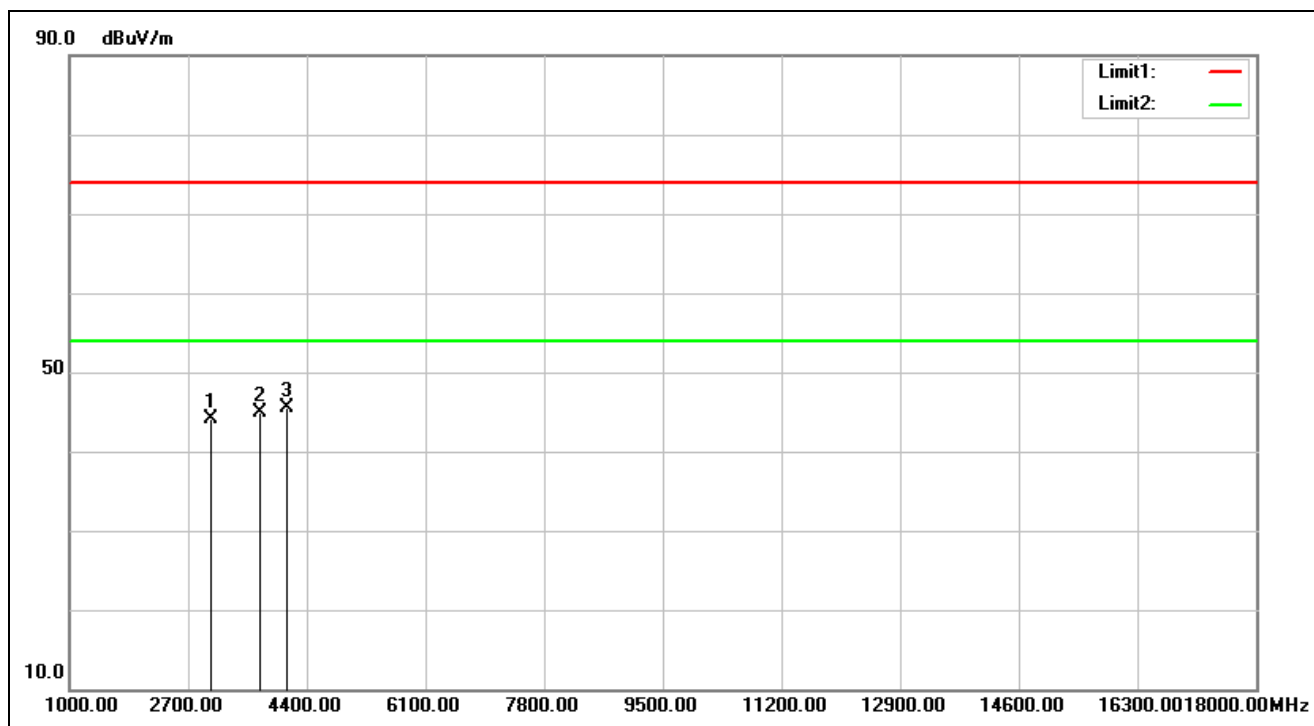
Spurious Emissions, RX Mode, 1-18G



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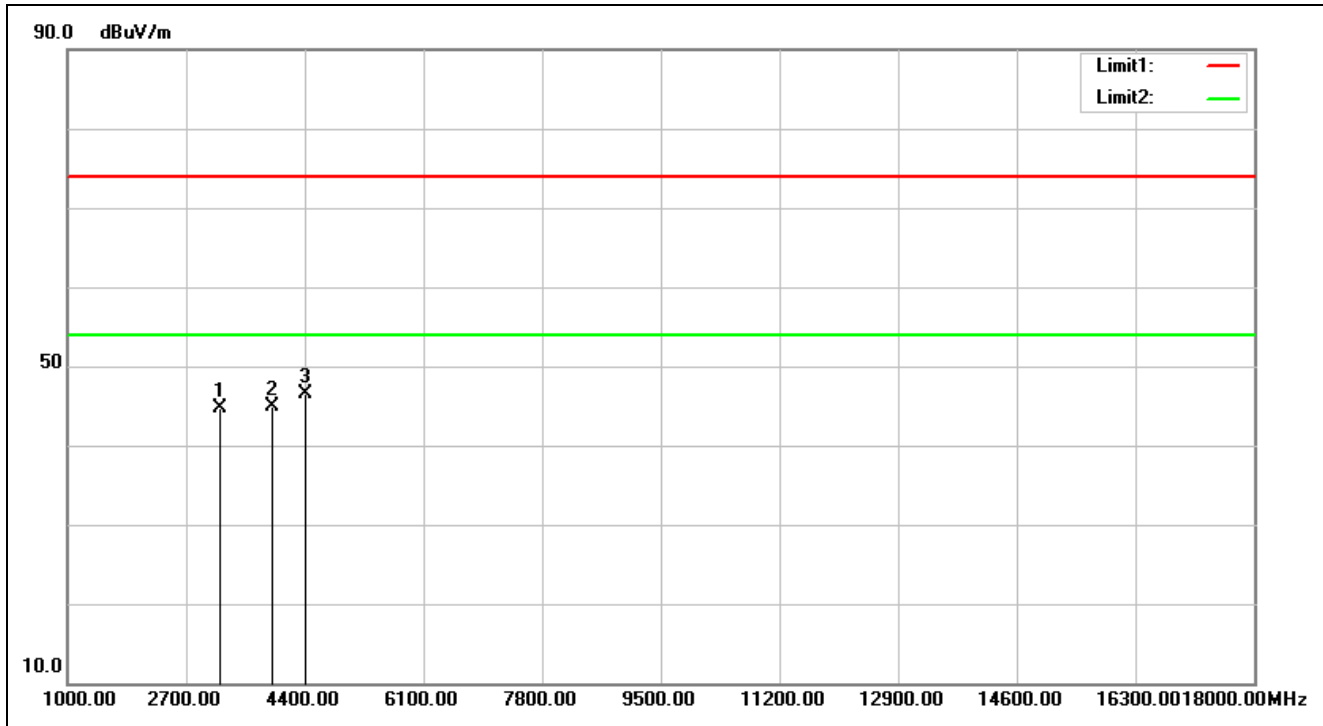
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



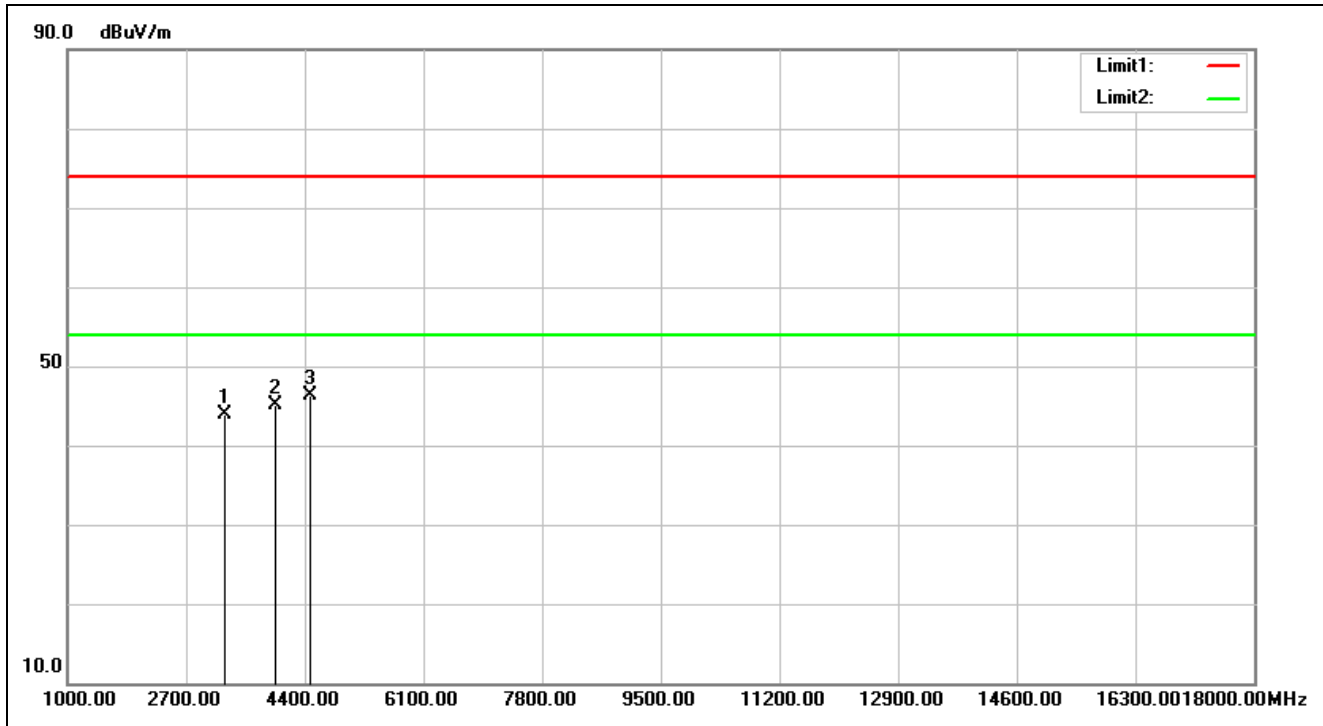
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 21:09:09
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	3023.000	-2.16	46.19	44.03	74.00	-29.97	peak	100	140	
2	3737.000	-1.04	45.90	44.86	74.00	-29.14	peak	100	34	
3	4111.000	0.12	45.34	45.46	74.00	-28.54	peak	100	54	



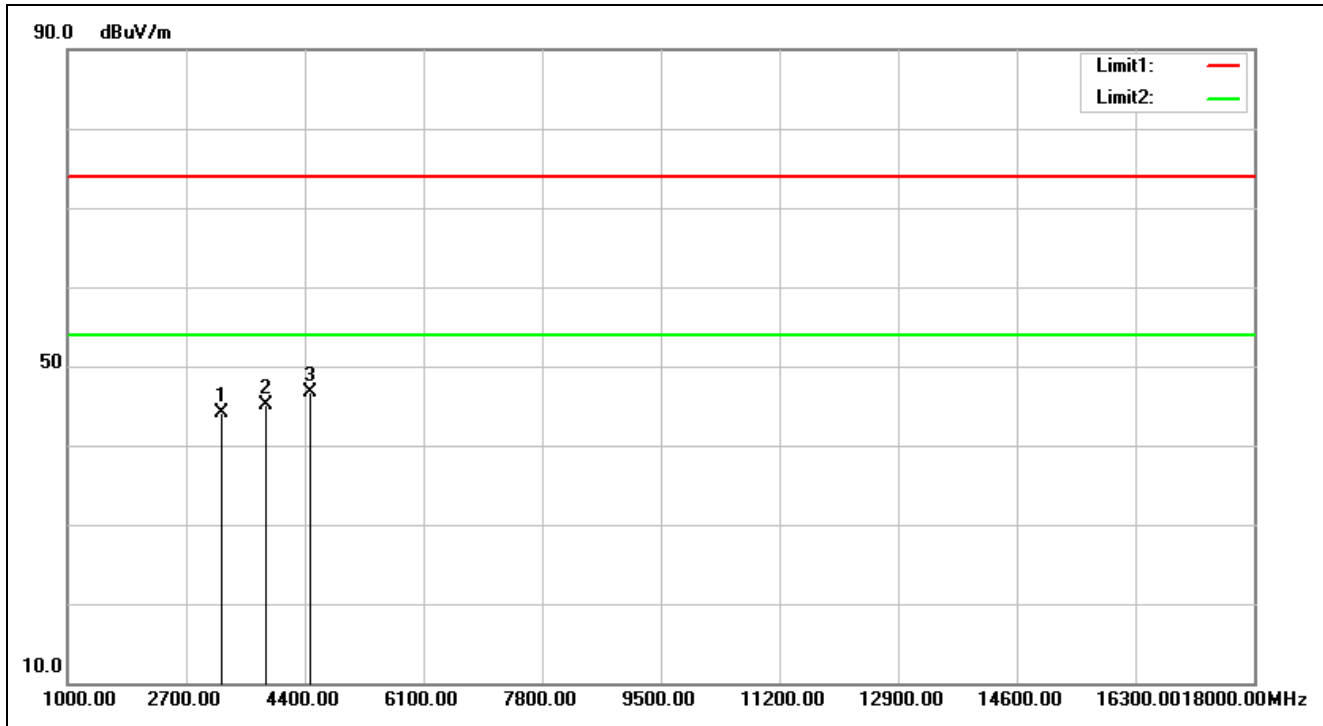
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 21:10:01
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	3193.000	-2.00	46.69	44.69	74.00	-29.31	peak	100	316	
2	3924.000	-0.52	45.35	44.83	74.00	-29.17	peak	100	131	
3	4400.000	1.21	45.36	46.57	74.00	-27.43	peak	100	265	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 21:11:19
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-RX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	3244.000	-1.95	45.82	43.87	74.00	-30.13	peak	100	303	
2	3975.000	-0.38	45.46	45.08	74.00	-28.92	peak	100	163	
3	4485.000	1.54	44.69	46.23	74.00	-27.77	peak	100	204	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 21:12:11
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-RX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	3210.000	-1.98	46.03	44.05	74.00	-29.95	peak	100	330	
2	3839.000	-0.77	45.92	45.15	74.00	-28.85	peak	100	91	
3	4485.000	1.54	45.25	46.79	74.00	-27.21	peak	100	118	

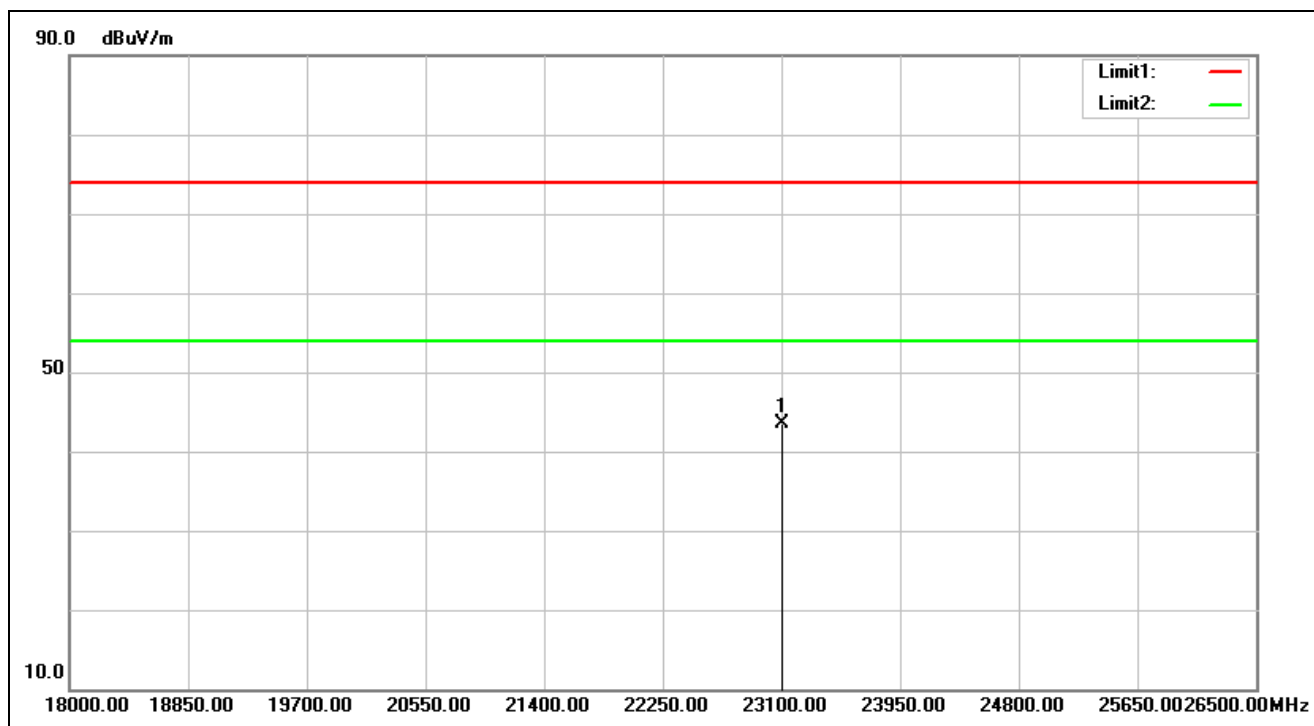
Spurious Emissions, RX Mode, 18-26.5G



TUV Rheinland Taiwan Ltd.

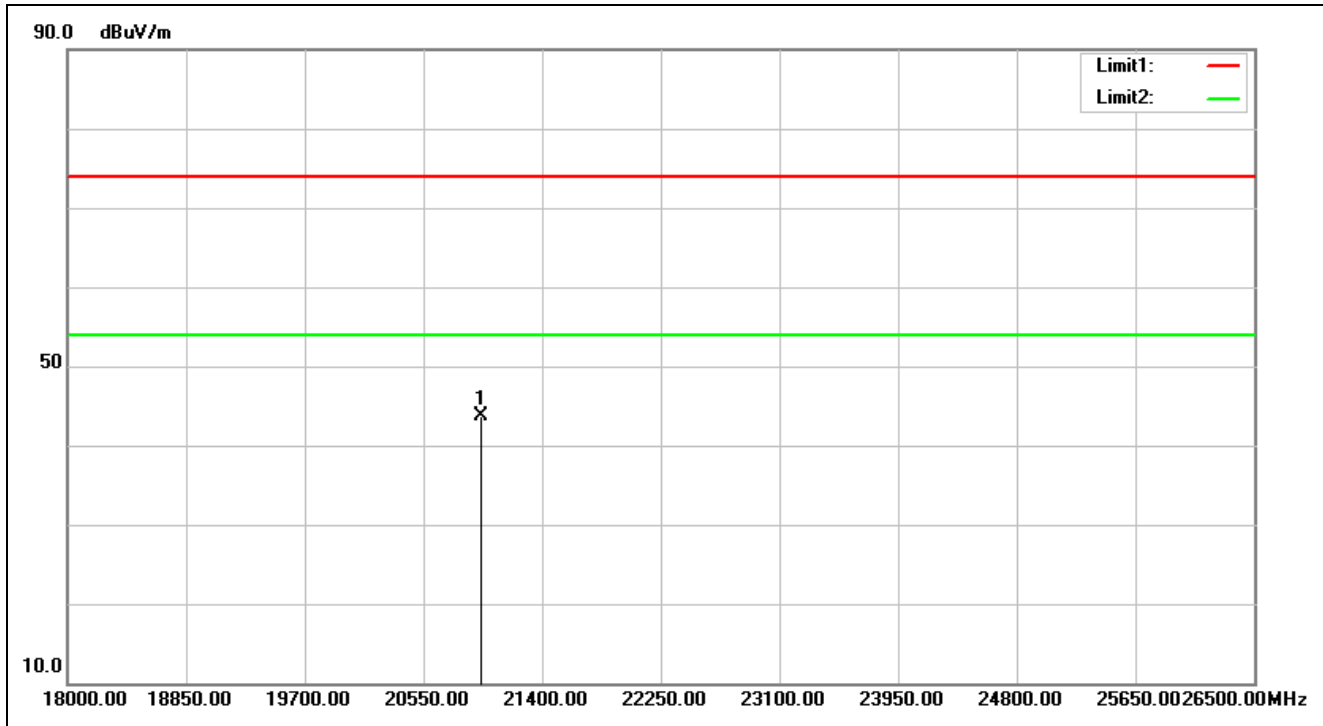
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



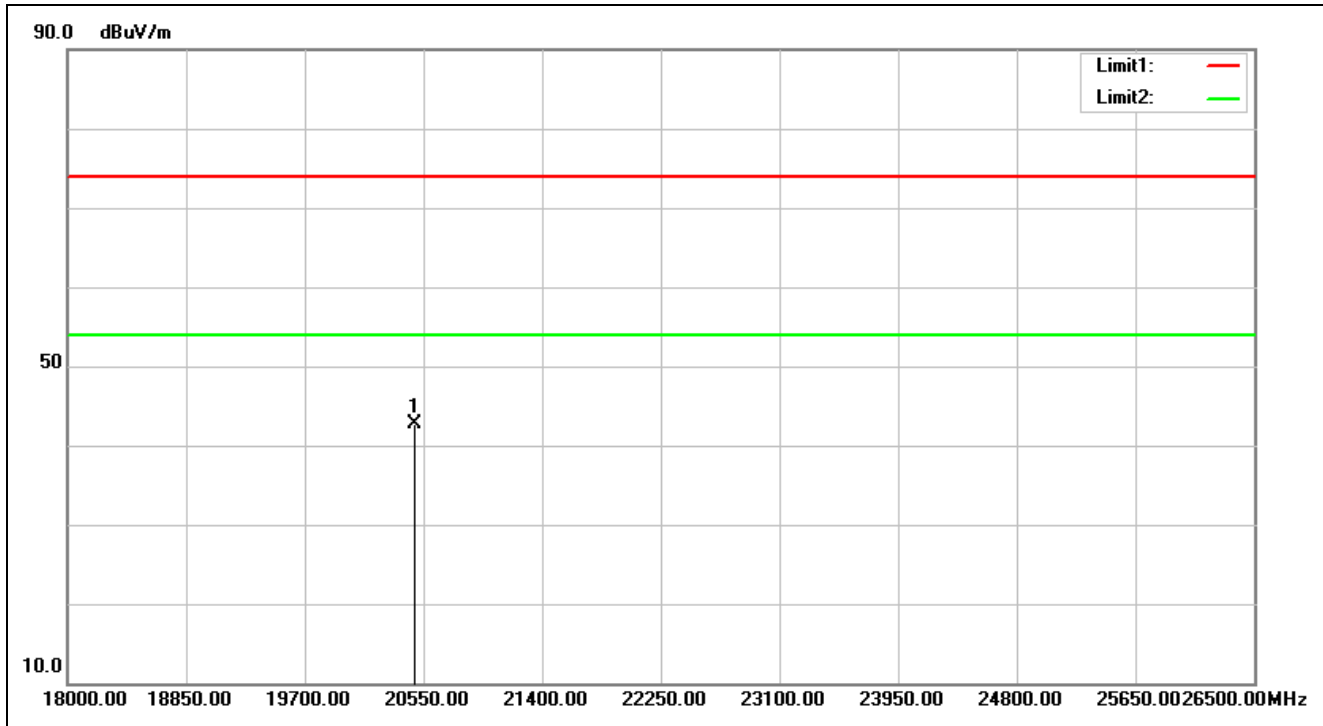
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 21:26:55
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23108.500	5.44	38.08	43.52	74.00	-30.48	peak			



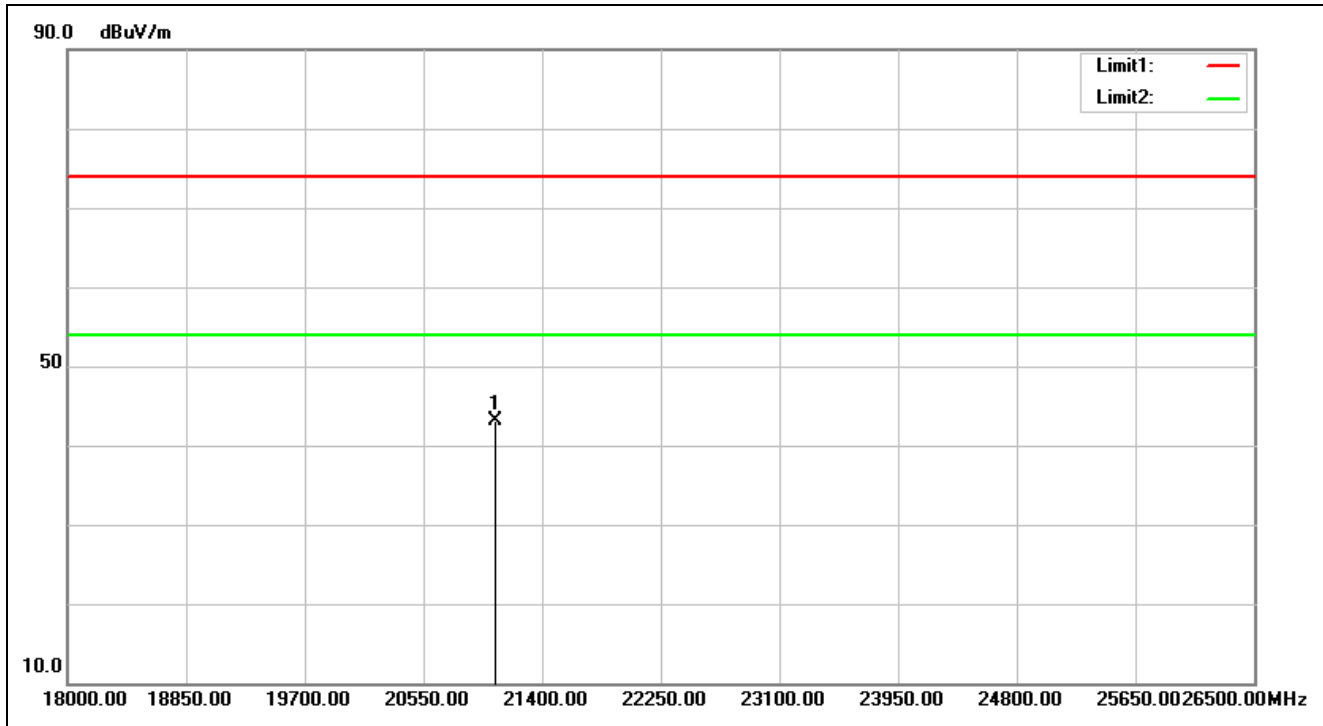
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 21:27:02
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20966.500	4.75	38.92	43.67	74.00	-30.33	peak			



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 21:27:33
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-RX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20490.500	4.20	38.51	42.71	74.00	-31.29	peak			



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 21:27:40
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-RX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21068.500	4.73	38.42	43.15	74.00	-30.85	peak			

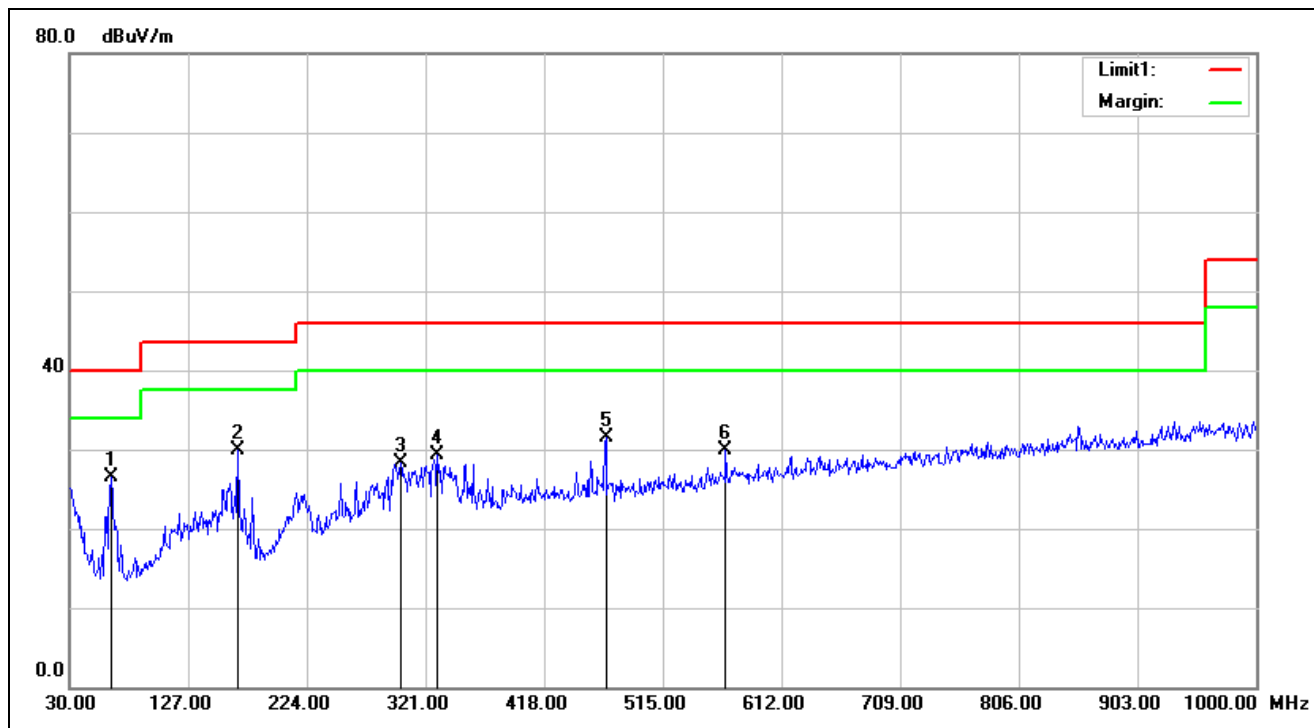
Spurious Emissions, RX Mode, 30M-1G



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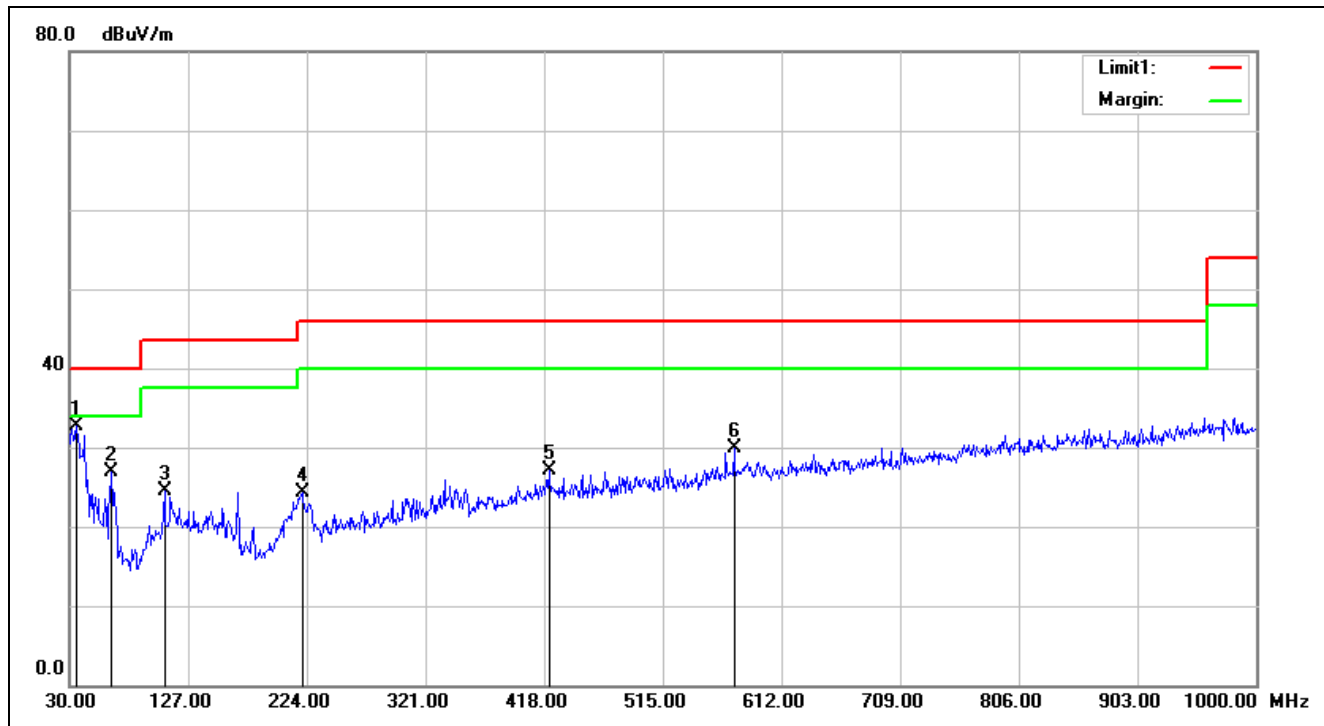
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 21:44:32
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL0		
Remark:	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	-13.56	39.99	26.43	40.00	-13.57	QP	100	163	
2	167.7400	-8.76	38.59	29.83	43.50	-13.67	QP	100	124	
3	300.6300	-4.55	32.83	28.28	46.00	-17.72	QP	100	65	
4	330.7000	-3.89	33.20	29.31	46.00	-16.69	QP	100	124	
5	468.4400	-1.69	33.10	31.41	46.00	-14.59	QP	100	131	
6	566.4100	0.07	29.78	29.85	46.00	-16.15	QP	100	88	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 21:45:26
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	35.8200	-3.37	36.09	32.72	40.00	-7.28	QP	100	278	
2	63.9500	-13.56	40.52	26.96	40.00	-13.04	QP	100	308	
3	107.6000	-8.49	33.03	24.54	43.50	-18.96	QP	100	140	
4	220.1200	-8.23	32.50	24.27	46.00	-21.73	QP	100	88	
5	421.8800	-1.96	29.05	27.09	46.00	-18.91	QP	100	101	
6	573.2000	0.14	29.78	29.92	46.00	-16.08	QP	100	360	

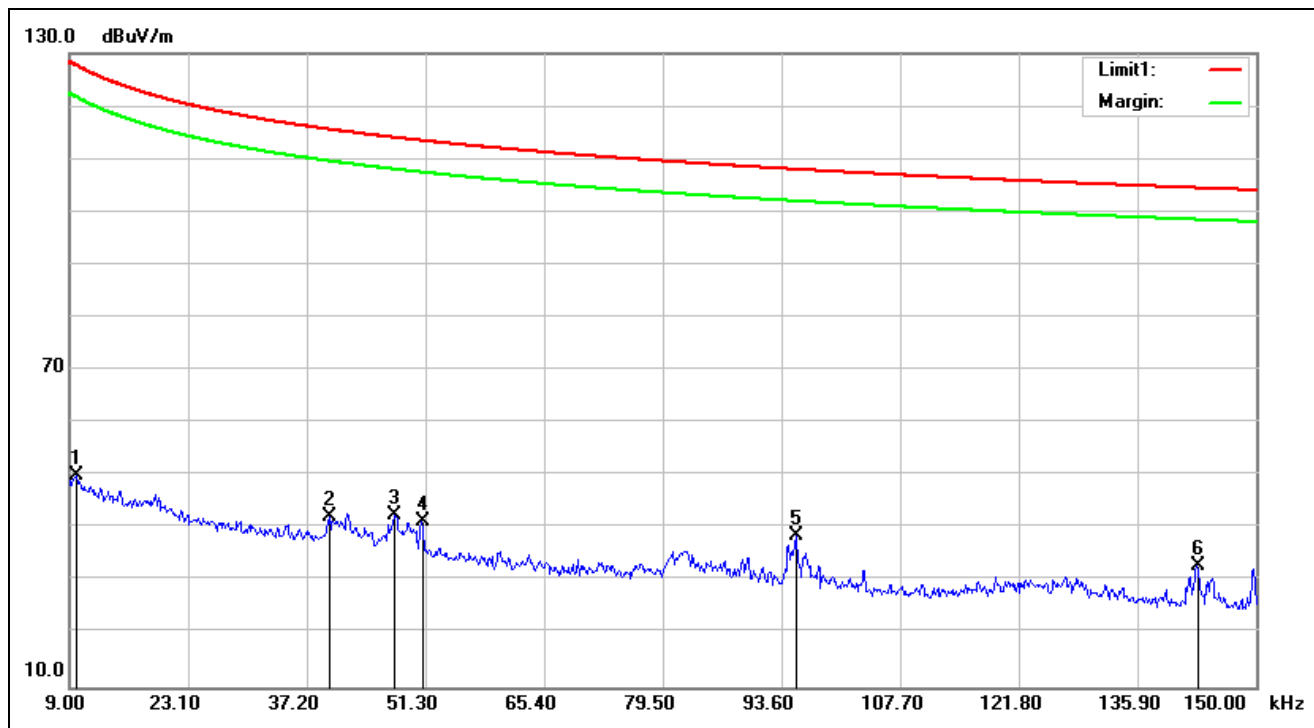
Spurious Emissions, RX Mode, 9K-30M



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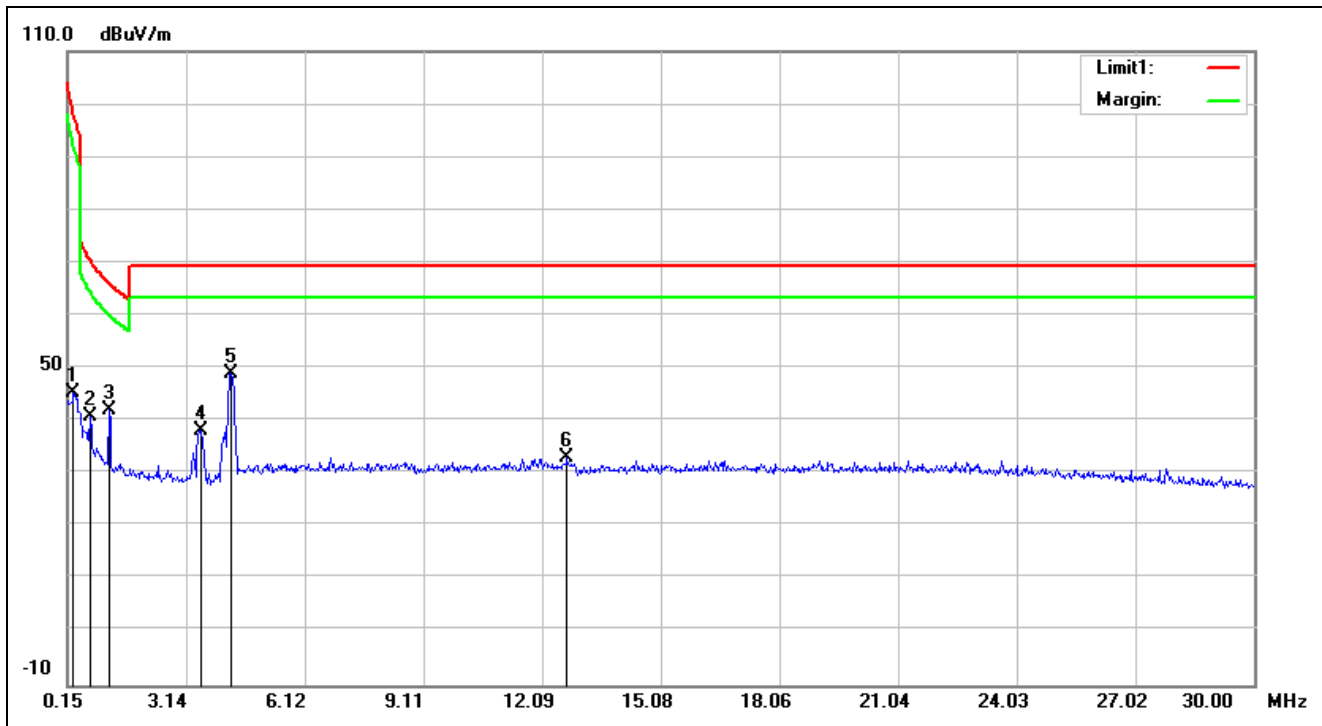
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Tel:+886-2172-7000 fax:+886-2528-0018



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/11/29 21:50:53
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0098	18.48	31.48	49.96	127.76	-77.80	QP	100	351	
2	0.0399	19.12	23.14	42.26	115.57	-73.31	QP	100	154	
3	0.0476	18.97	23.50	42.47	114.04	-71.57	QP	100	154	
4	0.0509	18.91	22.50	41.41	113.46	-72.05	QP	100	147	
5	0.0953	18.39	20.23	38.62	108.01	-69.39	QP	100	154	
6	0.1430	18.35	14.57	32.92	104.49	-71.57	QP	100	154	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/11/29 21:53:41
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL0		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.2993	18.44	27.01	45.45	98.08	-52.63	QP	100	114	
2	0.7172	18.66	22.16	40.82	70.50	-29.68	QP	100	164	
3	1.1948	18.66	23.38	42.04	66.08	-24.04	QP	100	111	
4	3.4932	18.76	19.52	38.28	69.50	-31.22	QP	100	328	
5	4.2693	19.12	29.83	48.95	69.50	-20.55	QP	100	328	
6	12.7169	20.76	12.36	33.12	69.50	-36.38	QP	100	45	

Module with Shielded Case, Class 2

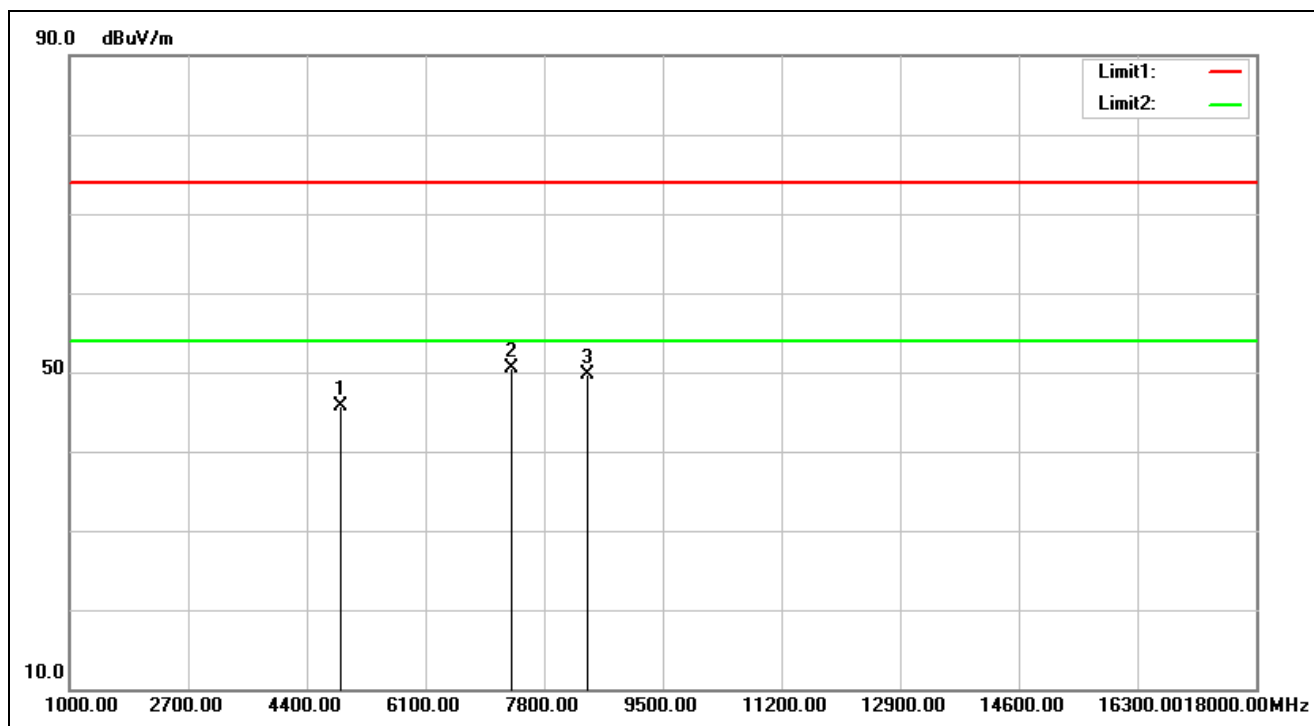
Spurious Emissions, TX Mode, 1-18G



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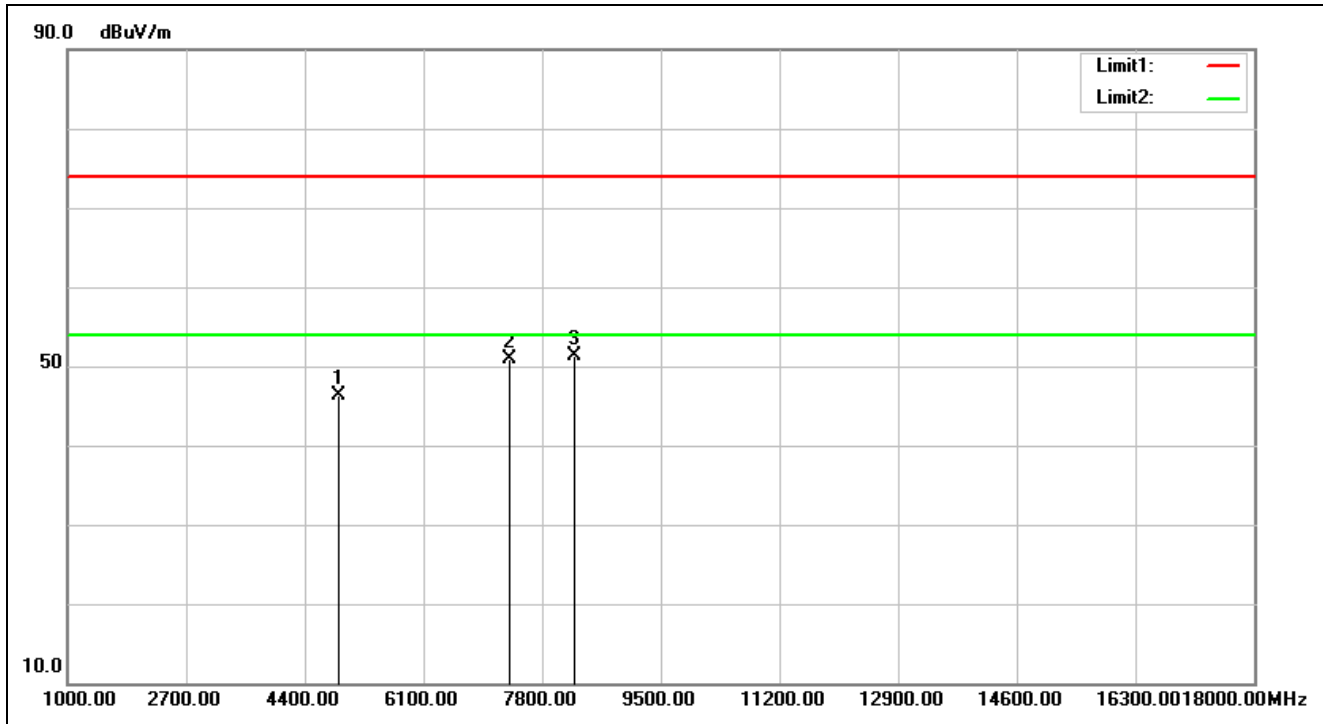
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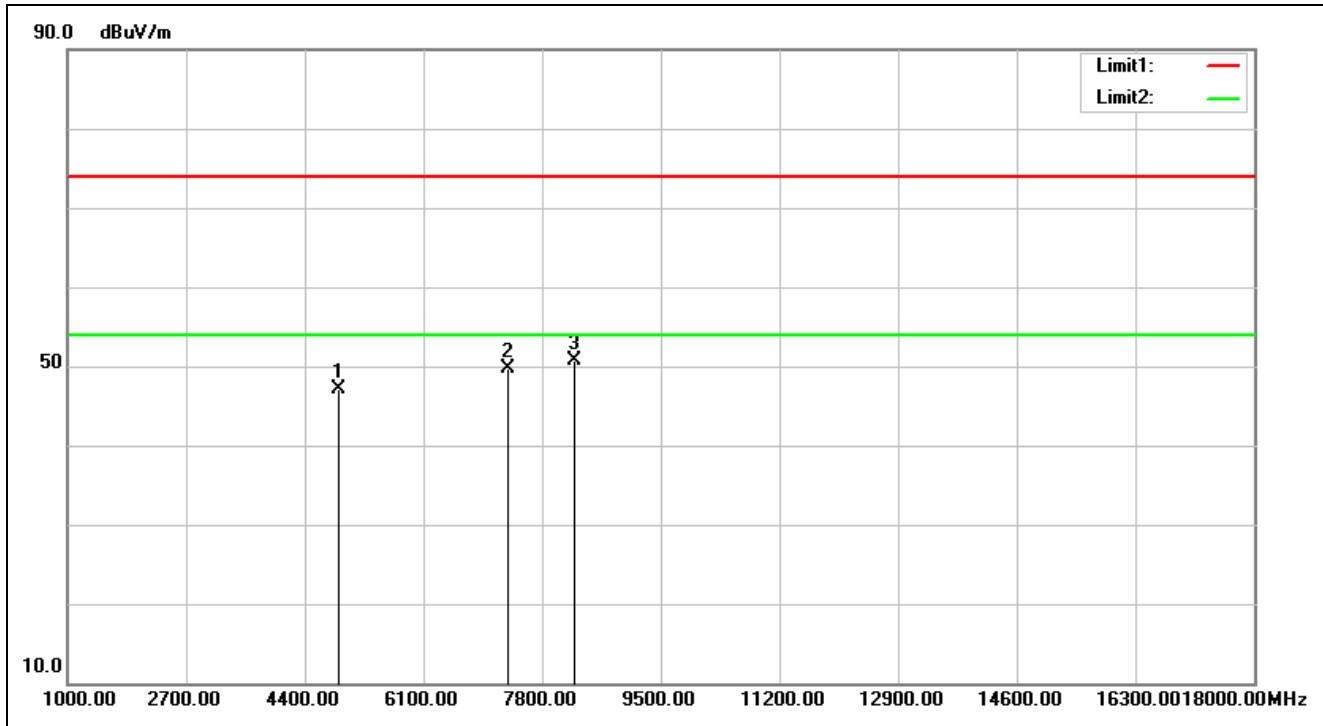
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 19:23:33
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	42.14	45.75	74.00	-28.25	peak		0	
2	7323.000	4.66	45.88	50.54	74.00	-23.46	peak		0	
3	8429.000	4.94	44.85	49.79	74.00	-24.21	peak	100	14	



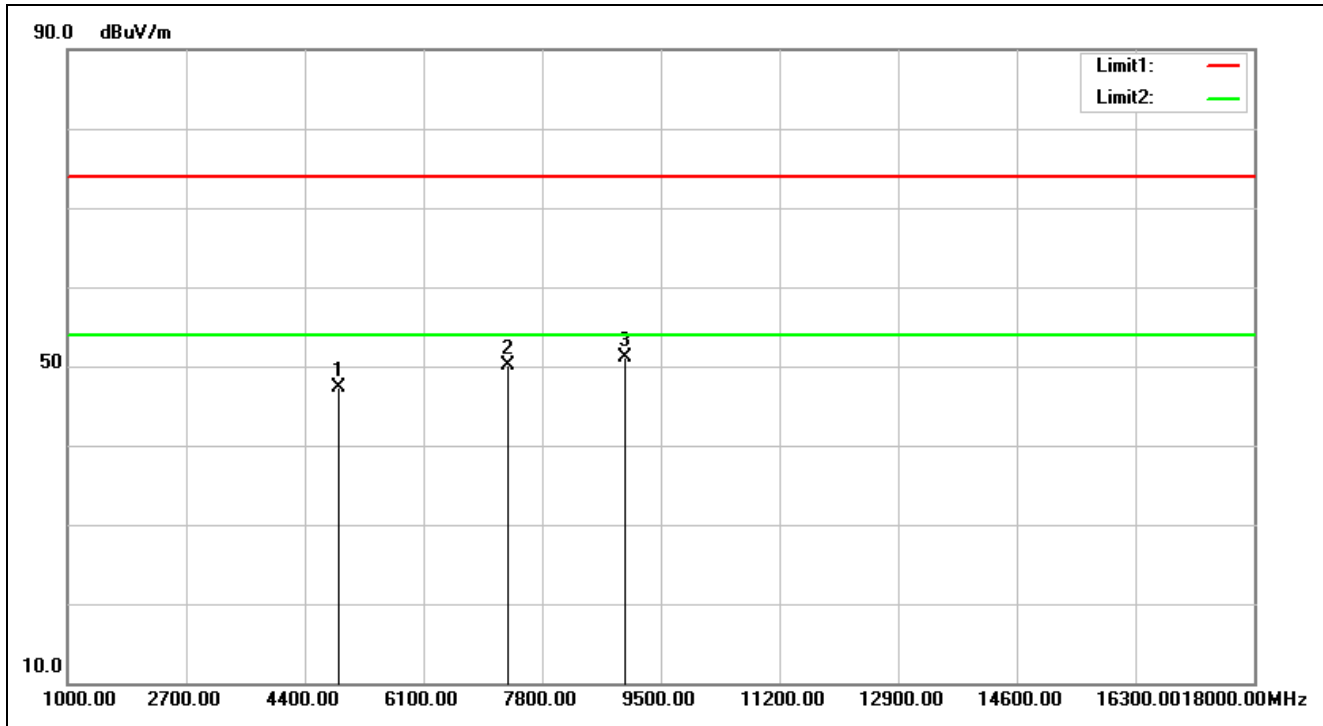
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 19:24:26
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	42.64	46.25	74.00	-27.75	peak			
2	7323.000	4.66	46.16	50.82	74.00	-23.18	peak			
3	8259.000	4.82	46.39	51.21	74.00	-22.79	peak	100	0	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 19:25:55
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	43.45	47.06	74.00	-26.94	peak			
2	7323.000	4.66	45.05	49.71	74.00	-24.29	peak			
3	8259.000	4.82	45.79	50.61	74.00	-23.39	peak	100	20	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 19:26:47
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	43.76	47.37	74.00	-26.63	peak			
2	7323.000	4.66	45.39	50.05	74.00	-23.95	peak			
3	8990.000	5.93	45.20	51.13	74.00	-22.87	peak	100	238	

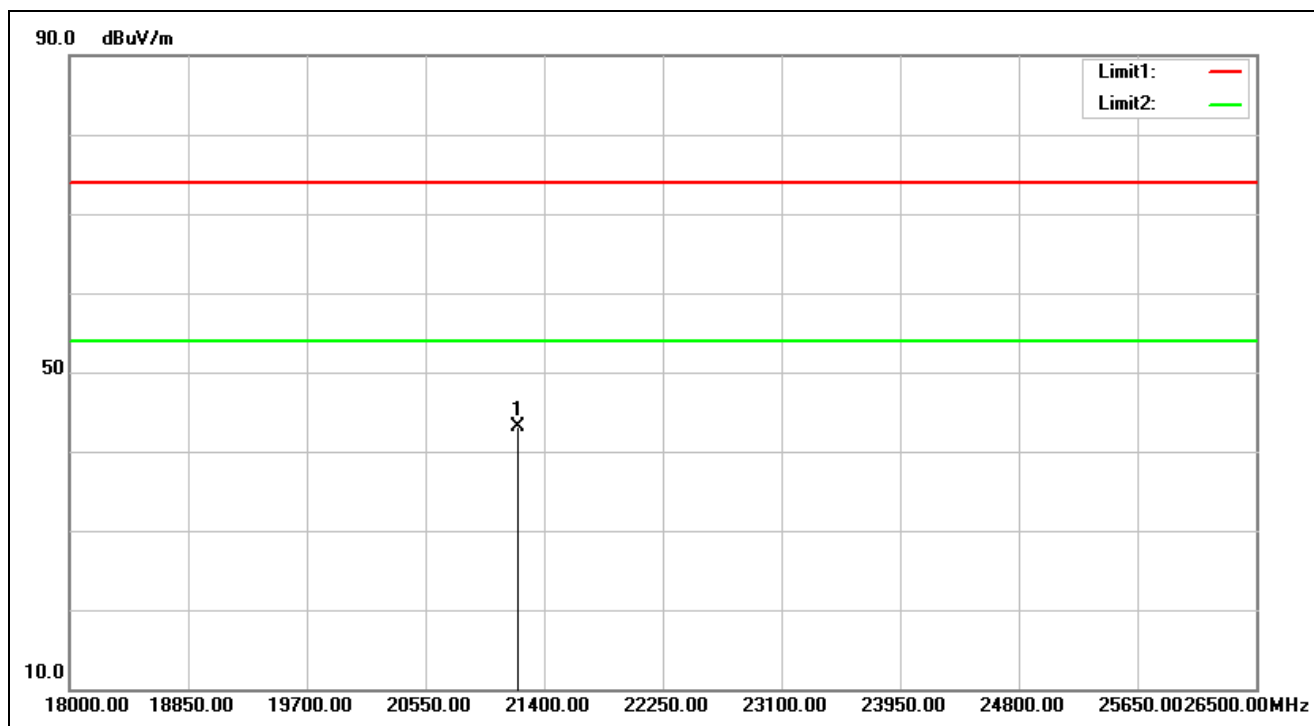
Spurious Emissions, TX Mode, 18-26.5G



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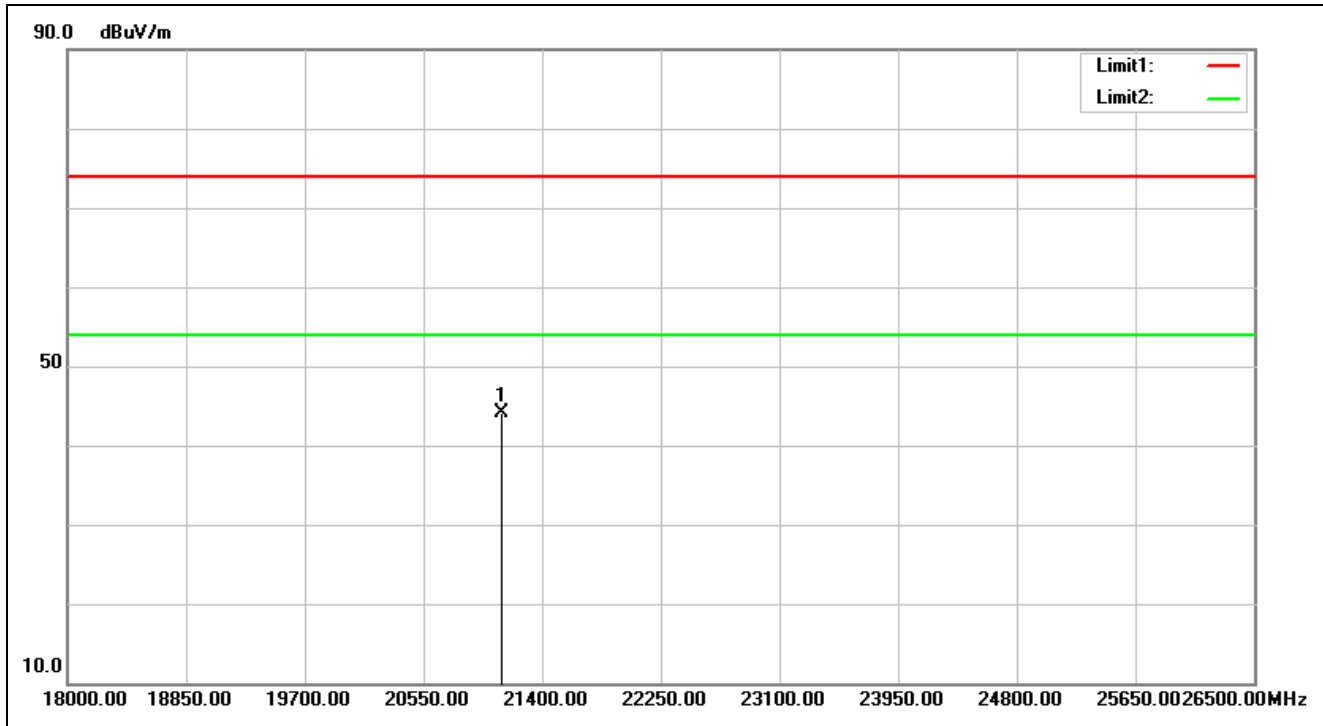
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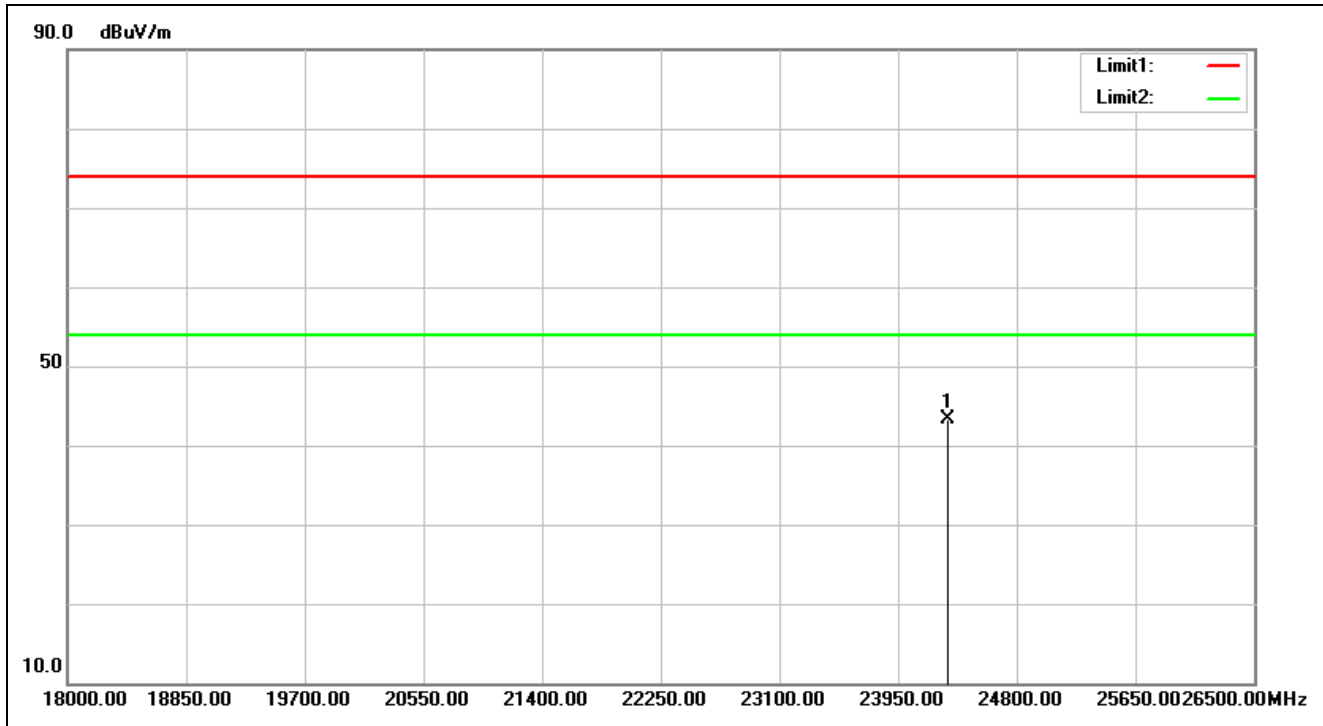
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 20:29:43
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21213.000	4.59	38.51	43.10	74.00	-30.90	peak		0	



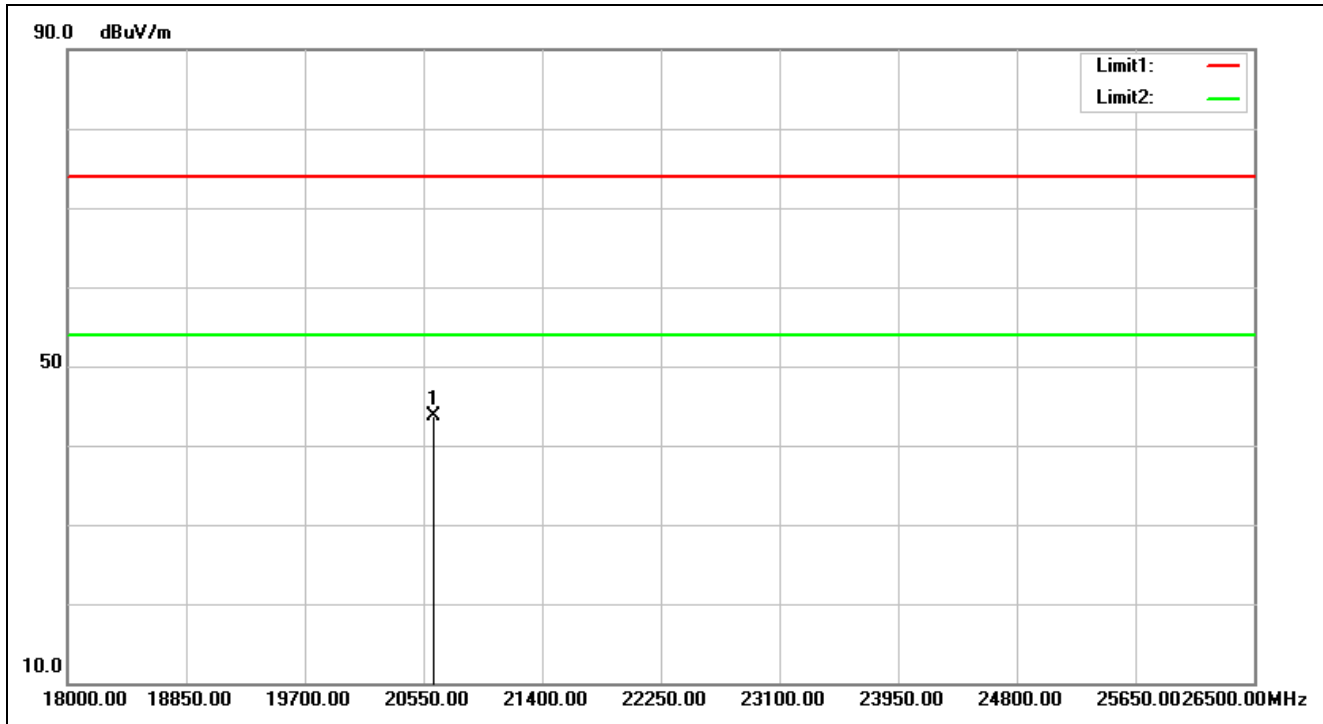
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 20:29:50
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21111.000	4.69	39.37	44.06	74.00	-29.94	peak			



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 20:30:33
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24307.000	5.32	38.01	43.33	74.00	-30.67	peak			



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 20:30:39
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20618.000	4.33	39.34	43.67	74.00	-30.33	peak			

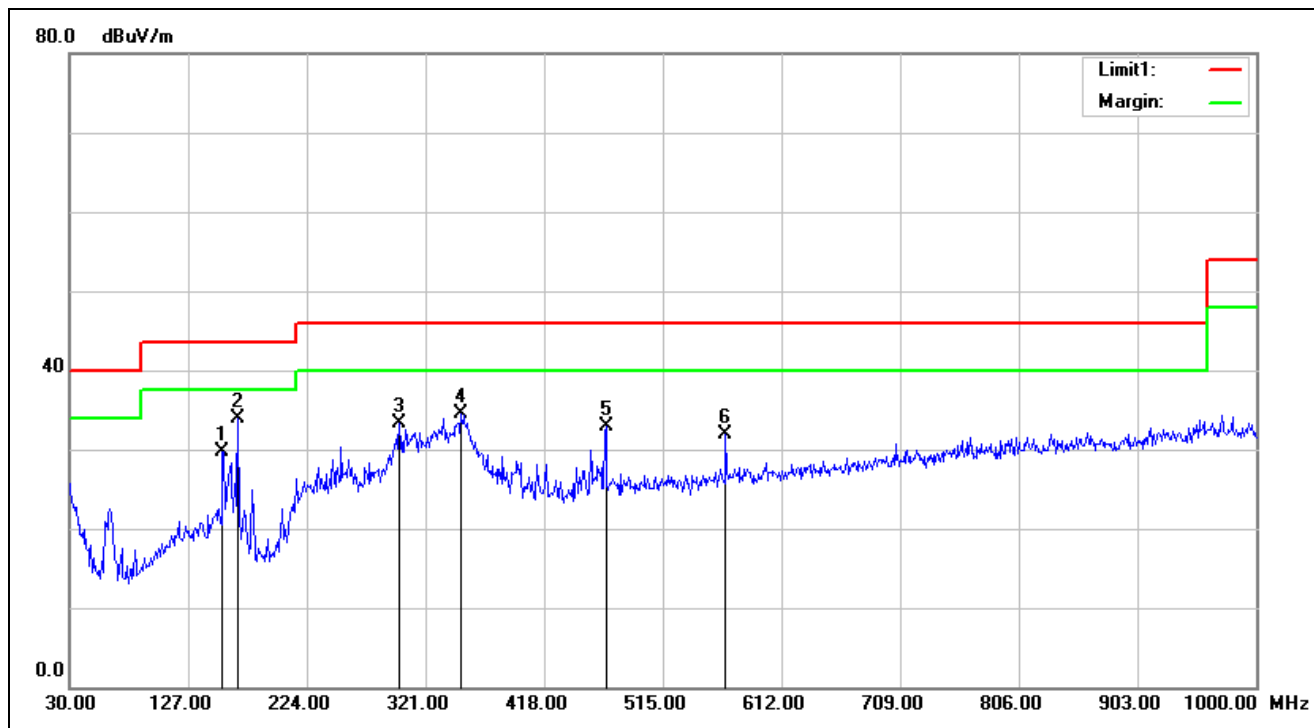
Spurious Emissions, TX Mode, 30M-1G



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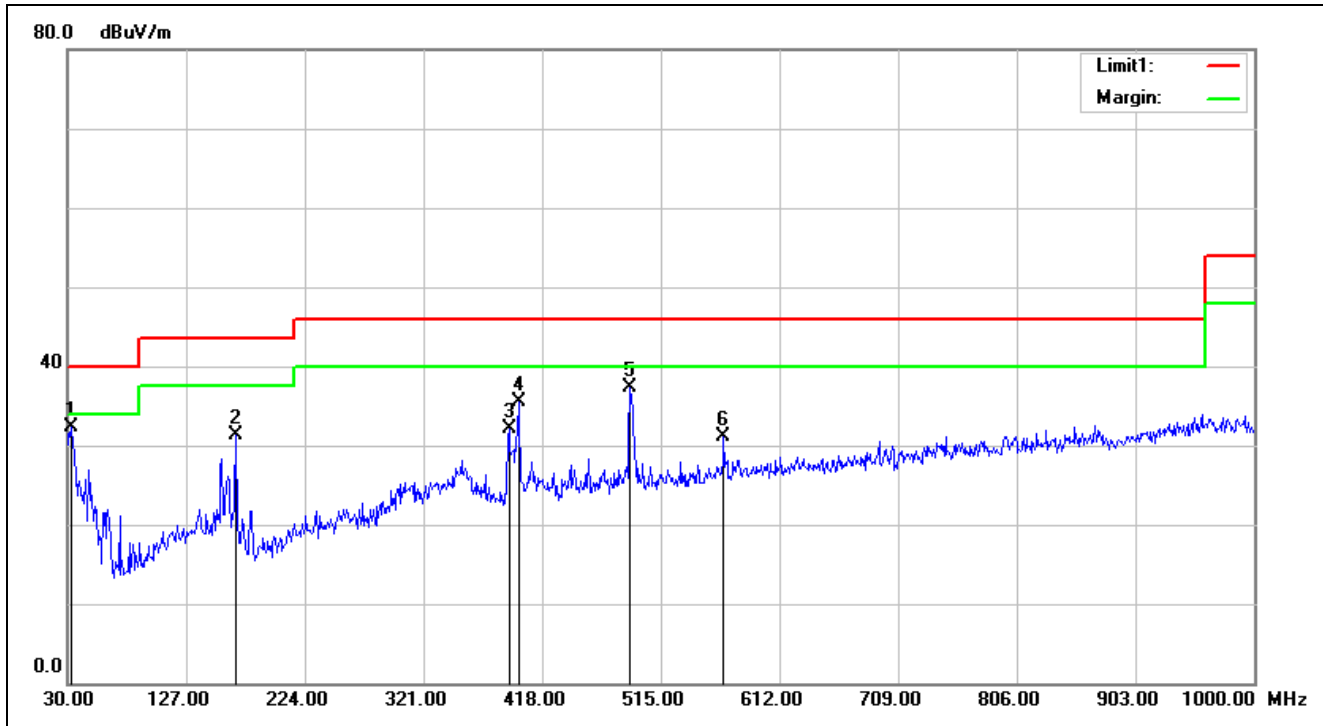
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Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 20:59:47
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	155.1300	-7.59	37.22	29.63	43.50	-13.87	QP	100	0	
2	167.7400	-8.76	42.69	33.93	43.50	-9.57	QP	100	4	
3	299.6600	-4.56	37.82	33.26	46.00	-12.74	QP	100	66	
4	350.1000	-3.32	37.89	34.57	46.00	-11.43	QP	100	79	
5	468.4400	-1.69	34.55	32.86	46.00	-13.14	QP	100	282	
6	566.4100	0.07	31.89	31.96	46.00	-14.04	QP	100	85	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 21:00:40
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	32.9100	-1.75	34.01	32.26	40.00	-7.74	QP	100	134	
2	167.7400	-8.76	39.99	31.23	43.50	-12.27	QP	100	301	
3	390.8400	-2.72	34.88	32.16	46.00	-13.84	QP	100	167	
4	398.6000	-2.37	37.78	35.41	46.00	-10.59	QP	100	167	
5	489.7800	-1.36	38.61	37.25	46.00	-8.75	QP	100	174	
6	566.4100	0.07	31.04	31.11	46.00	-14.89	QP	100	130	

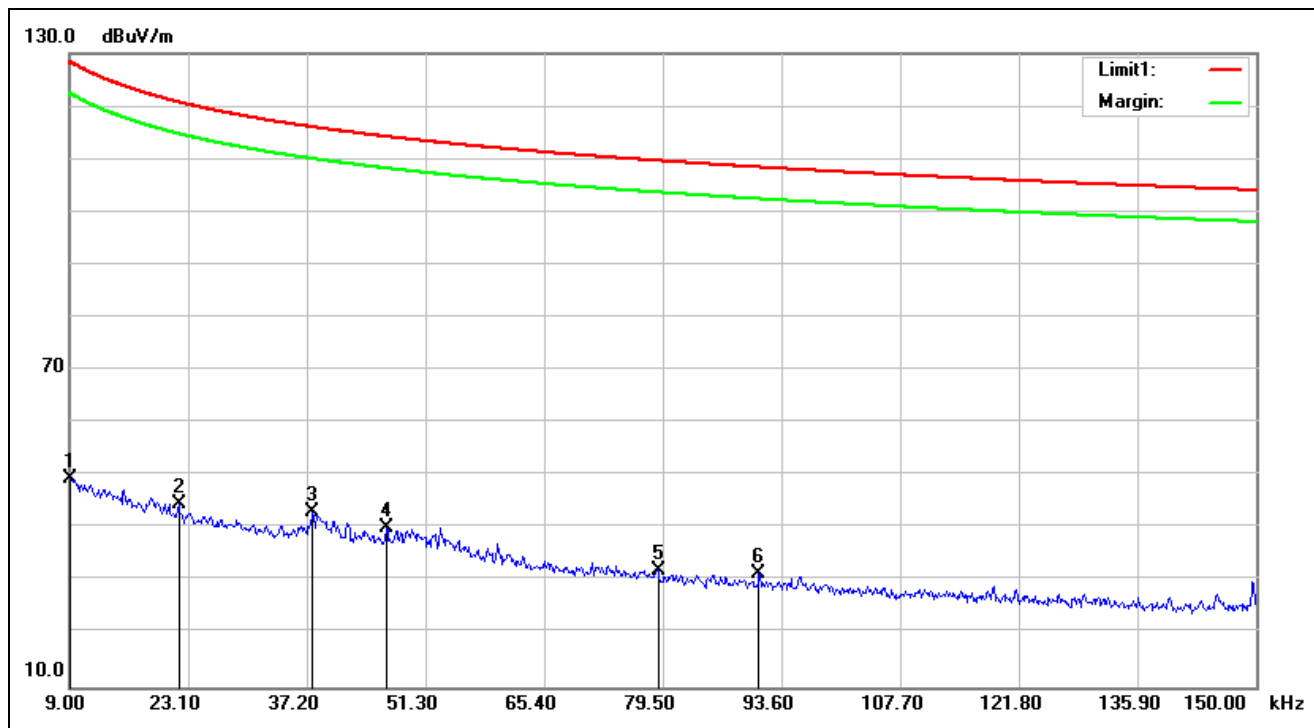
Spurious Emissions, TX Mode, 9K-30M



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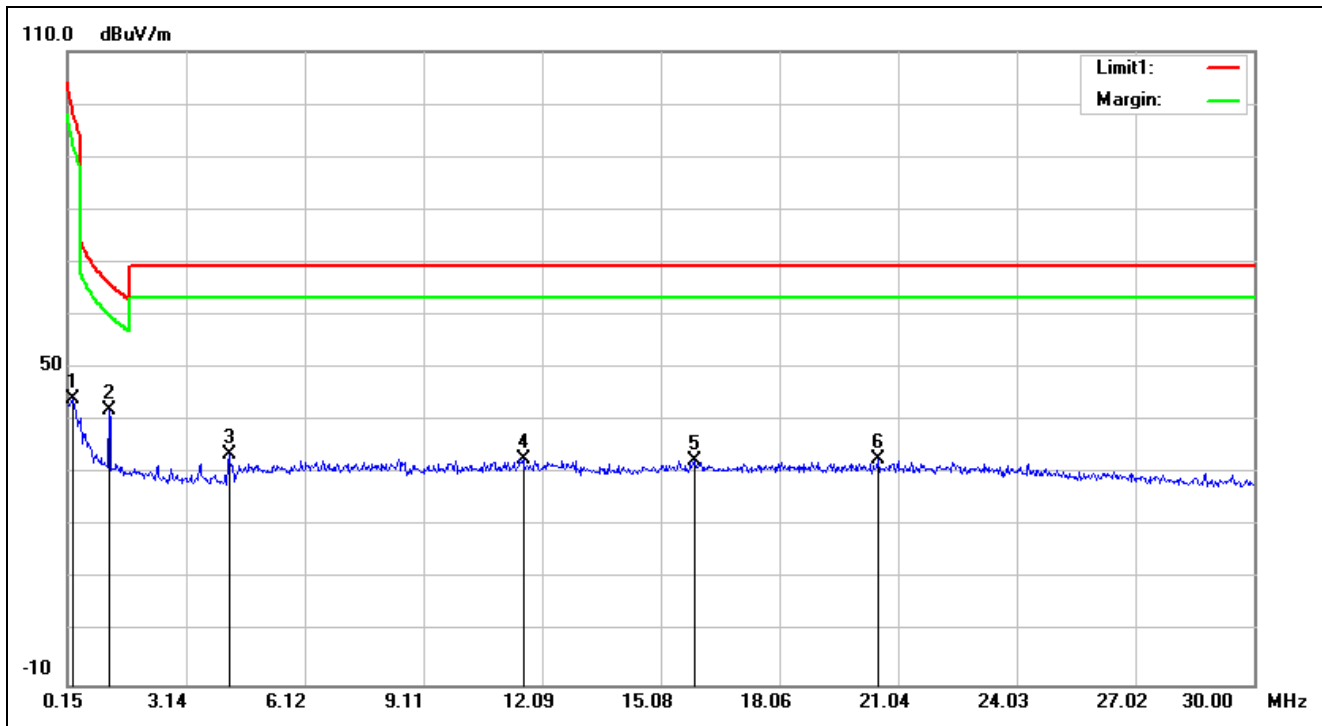
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Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/11/30 21:19:39
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL2		
Remark:	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	18.32	31.12	49.44	128.50	-79.06	QP	100	305	
2	0.0219	19.00	25.60	44.60	120.78	-76.18	QP	100	223	
3	0.0379	19.16	24.00	43.16	116.02	-72.86	QP	100	115	
4	0.0466	18.99	21.18	40.17	114.22	-74.05	QP	100	0	
5	0.0789	18.57	13.54	32.11	109.65	-77.54	QP	100	36	
6	0.0909	18.43	12.96	31.39	108.42	-77.03	QP	100	157	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/11/30 21:22:45
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.2992	18.44	25.85	44.29	98.08	-53.79	QP	100	95	
2	1.1947	18.66	23.36	42.02	66.08	-24.06	QP	100	115	
3	4.2096	19.09	14.62	33.71	69.50	-35.79	QP	100	292	
4	11.6123	20.63	12.10	32.73	69.50	-36.77	QP	100	265	
5	15.9406	21.13	11.27	32.40	69.50	-37.10	QP	100	341	
6	20.5375	21.63	10.99	32.62	69.50	-36.88	QP	100	359	

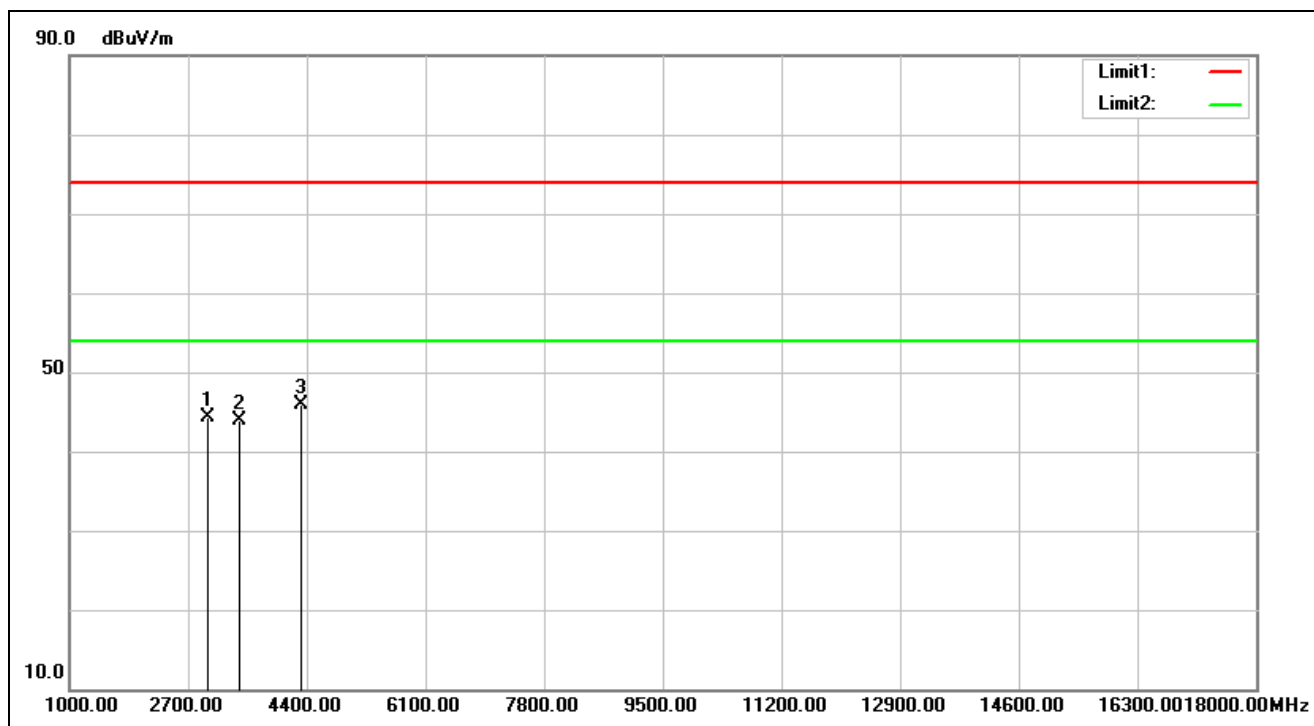
Spurious Emissions, RX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

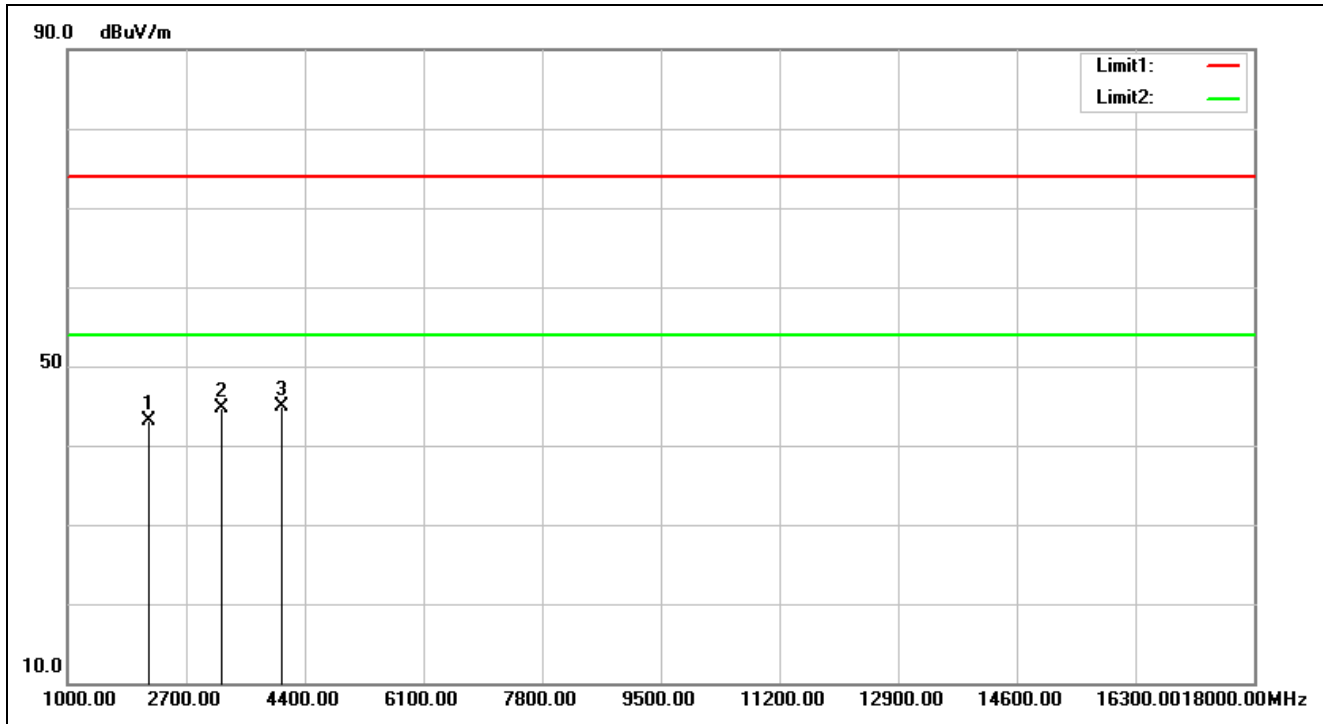
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



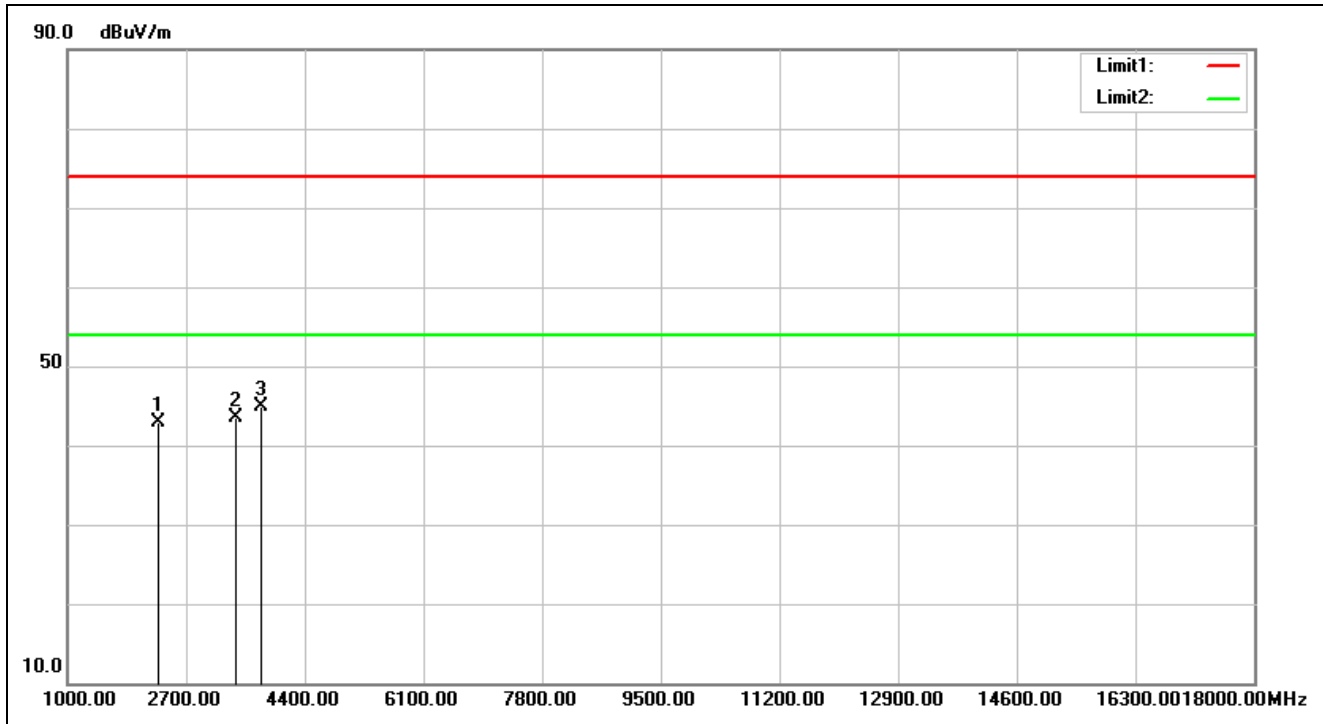
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 19:29:24
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2989.000	-2.22	46.48	44.26	74.00	-29.74	peak	100	239	
2	3431.000	-1.77	45.72	43.95	74.00	-30.05	peak	100	38	
3	4315.000	0.88	45.00	45.88	74.00	-28.12	peak	100	41	



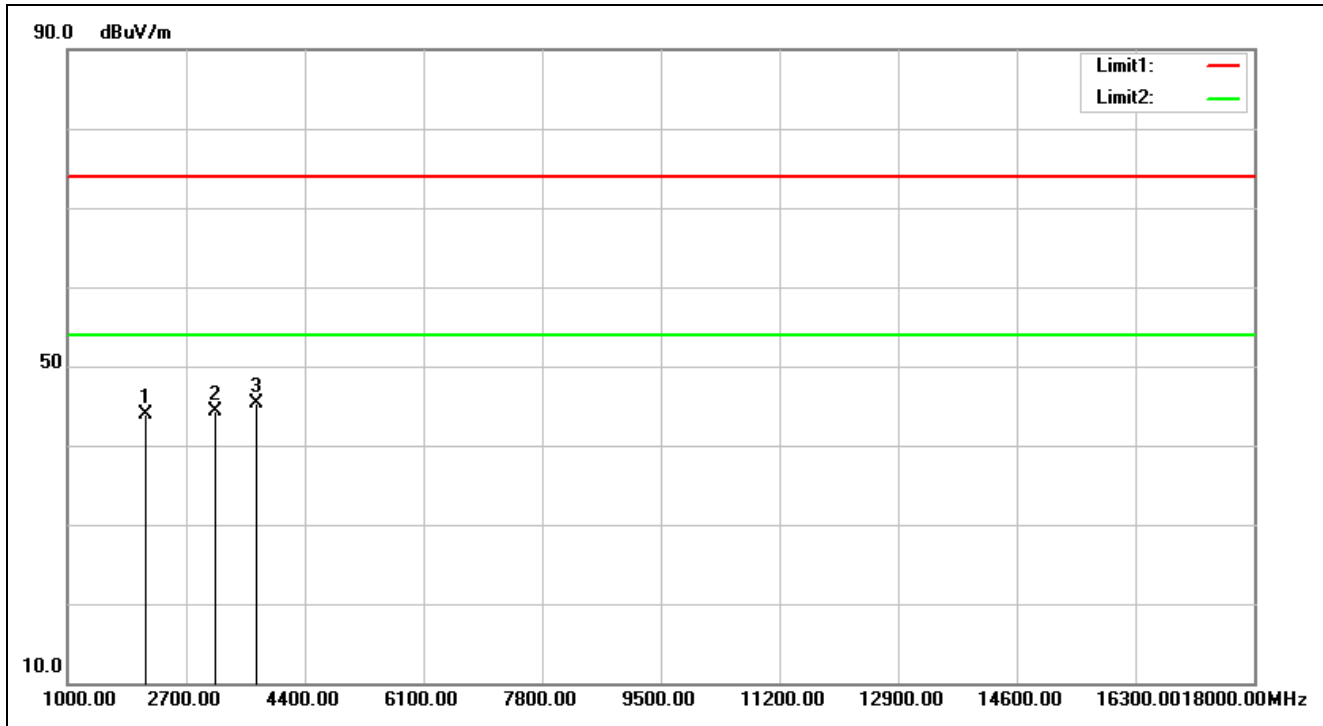
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 19:30:17
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2173.000	-4.65	47.80	43.15	74.00	-30.85	peak	100	132	
2	3210.000	-1.98	46.74	44.76	74.00	-29.24	peak	100	264	
3	4060.000	-0.08	45.06	44.98	74.00	-29.02	peak	100	2	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 19:31:58
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-RX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2292.000	-4.37	47.28	42.91	74.00	-31.09	peak	100	229	
2	3414.000	-1.79	45.29	43.50	74.00	-30.50	peak	100	3	
3	3771.000	-0.94	45.79	44.85	74.00	-29.15	peak	100	167	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 19:32:51
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-RX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2122.000	-4.78	48.77	43.99	74.00	-30.01	peak	100	83	
2	3108.000	-2.08	46.47	44.39	74.00	-29.61	peak	100	142	
3	3703.000	-1.14	46.49	45.35	74.00	-28.65	peak	100	251	

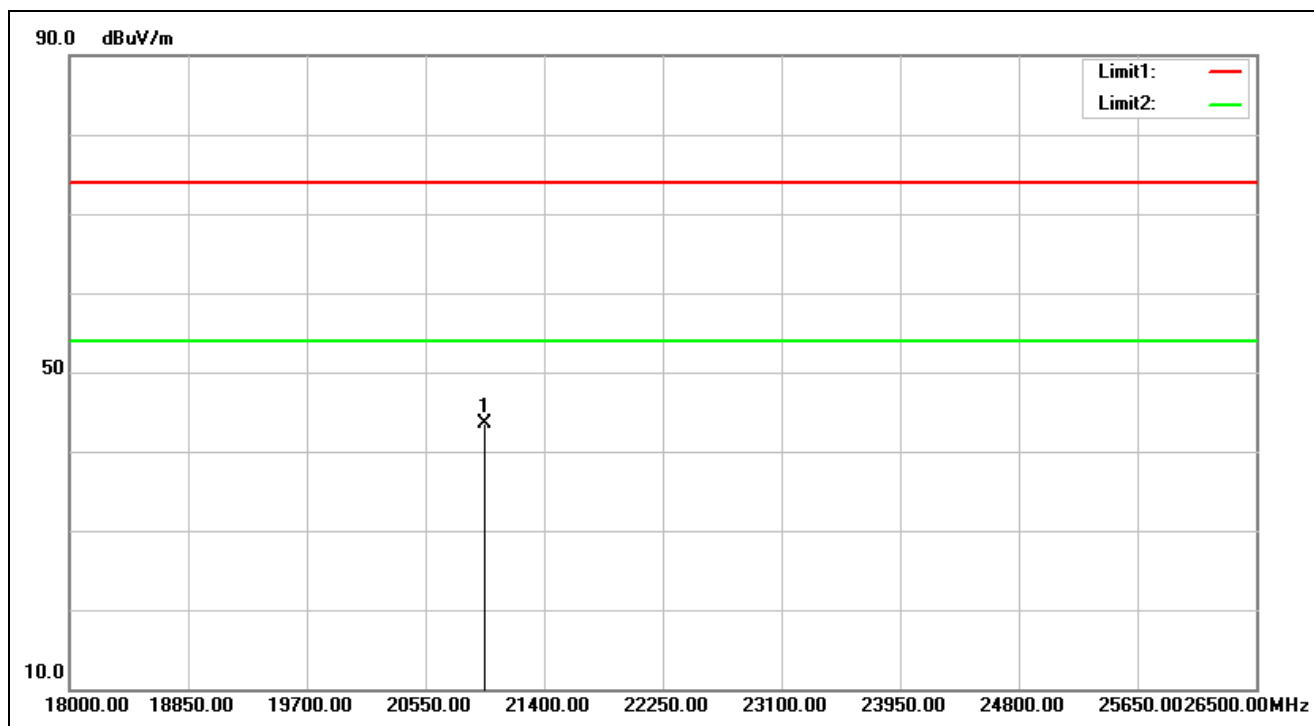
Spurious Emissions, RX Mode, 18-26.5G



TUV Rheinland Taiwan Ltd.

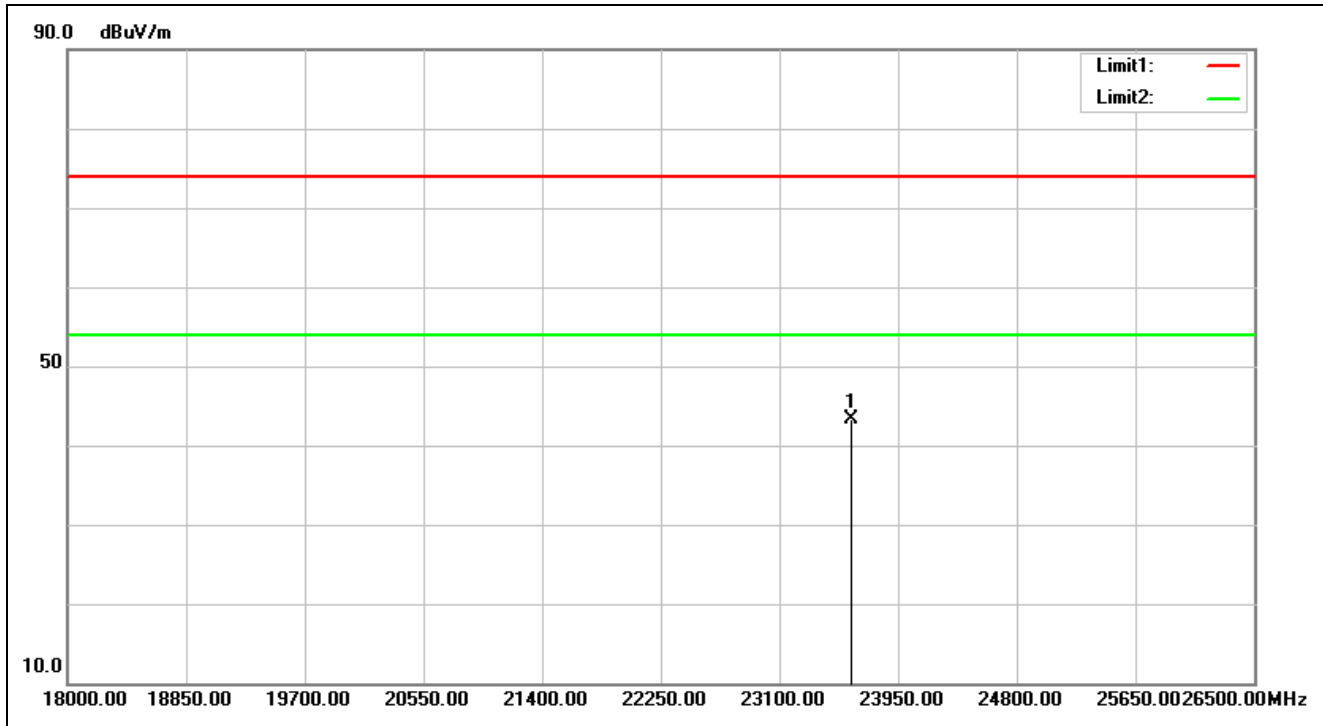
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



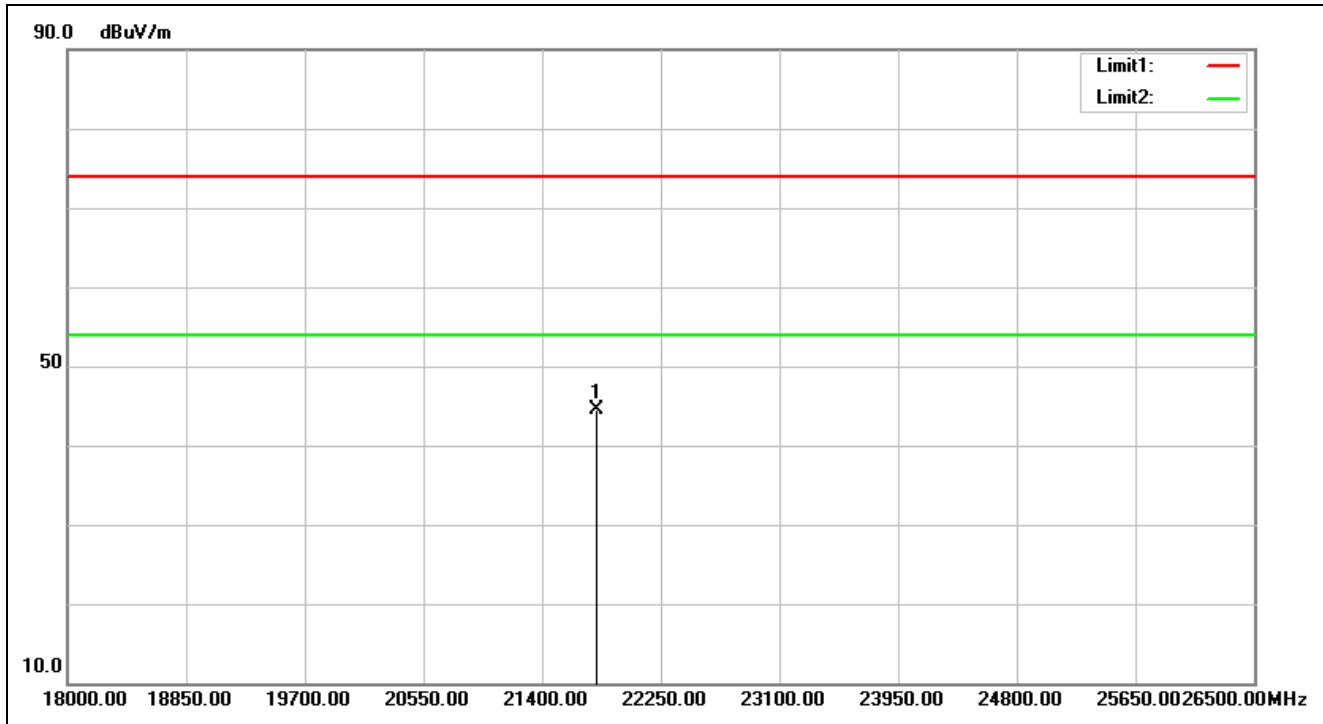
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 20:31:08
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20975.000	4.76	38.84	43.60	74.00	-30.40	peak			



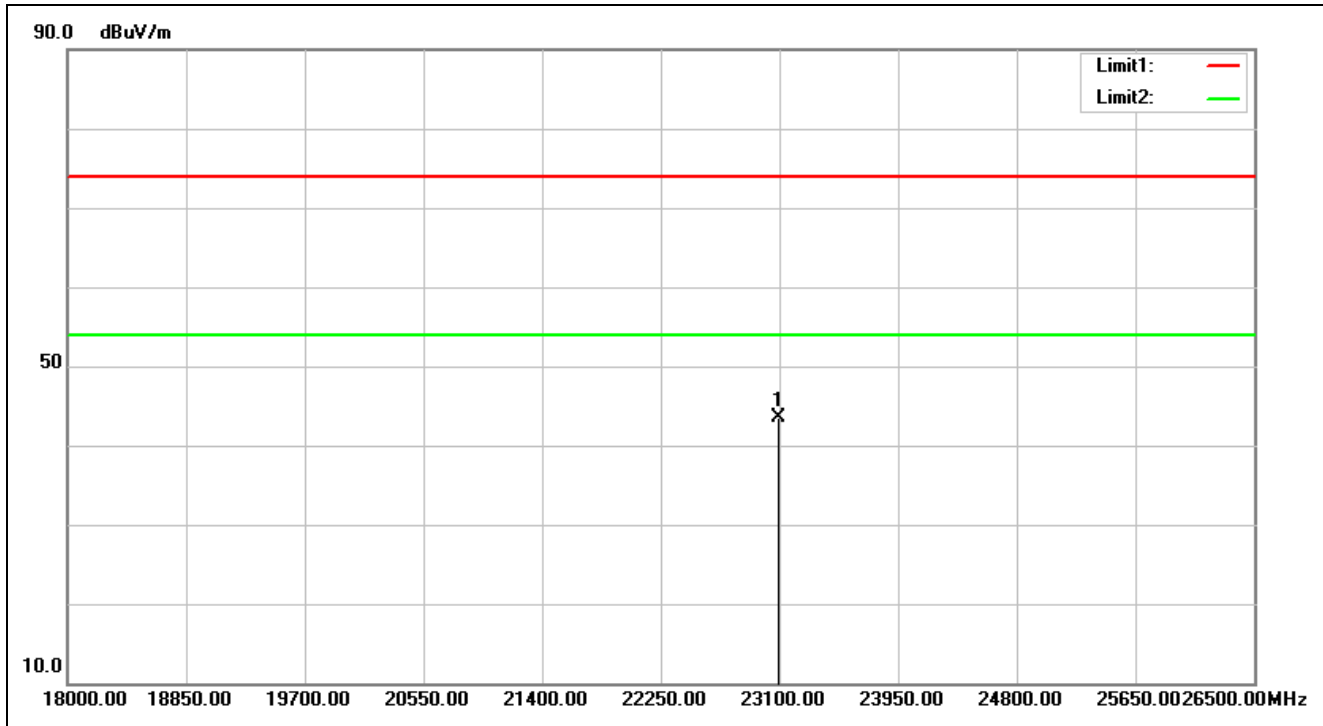
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 20:31:14
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23610.000	5.78	37.48	43.26	74.00	-30.74	peak			



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 20:31:38
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-RX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21791.000	4.18	40.37	44.55	74.00	-29.45	peak			



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 20:31:45
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-RX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23091.500	5.41	38.04	43.45	74.00	-30.55	peak			

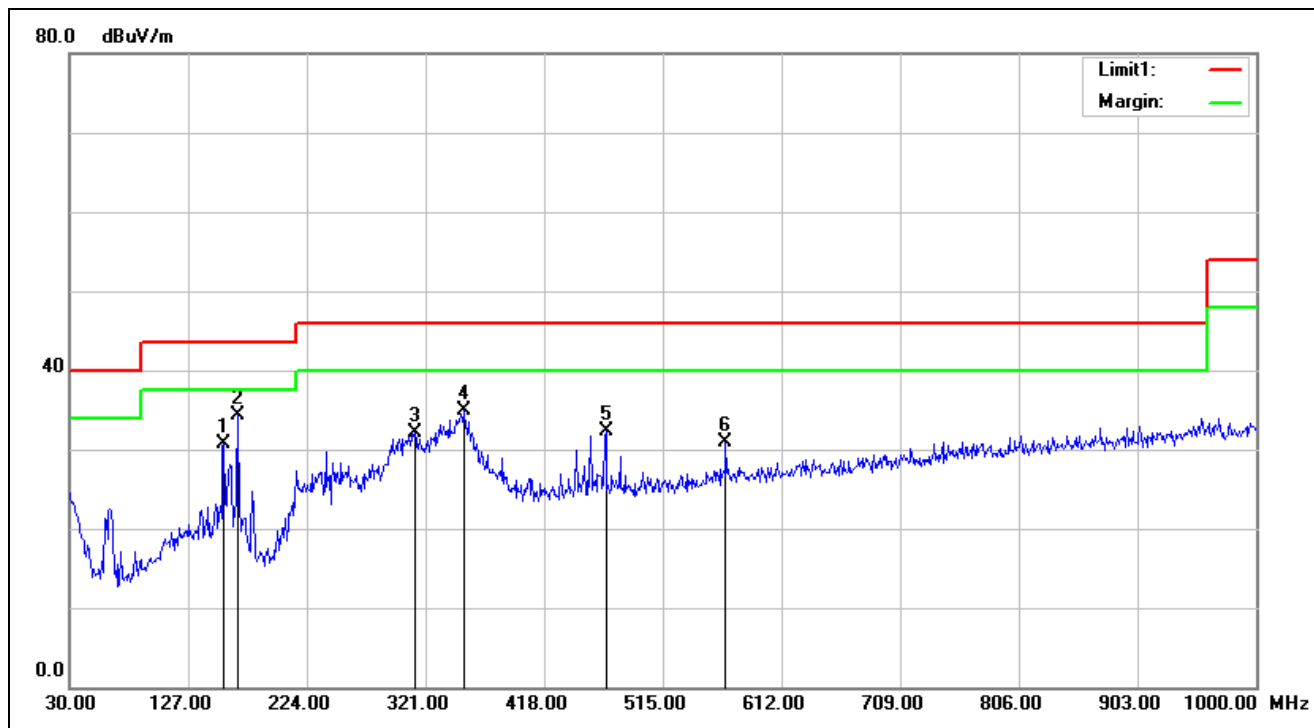
Spurious Emissions, RX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

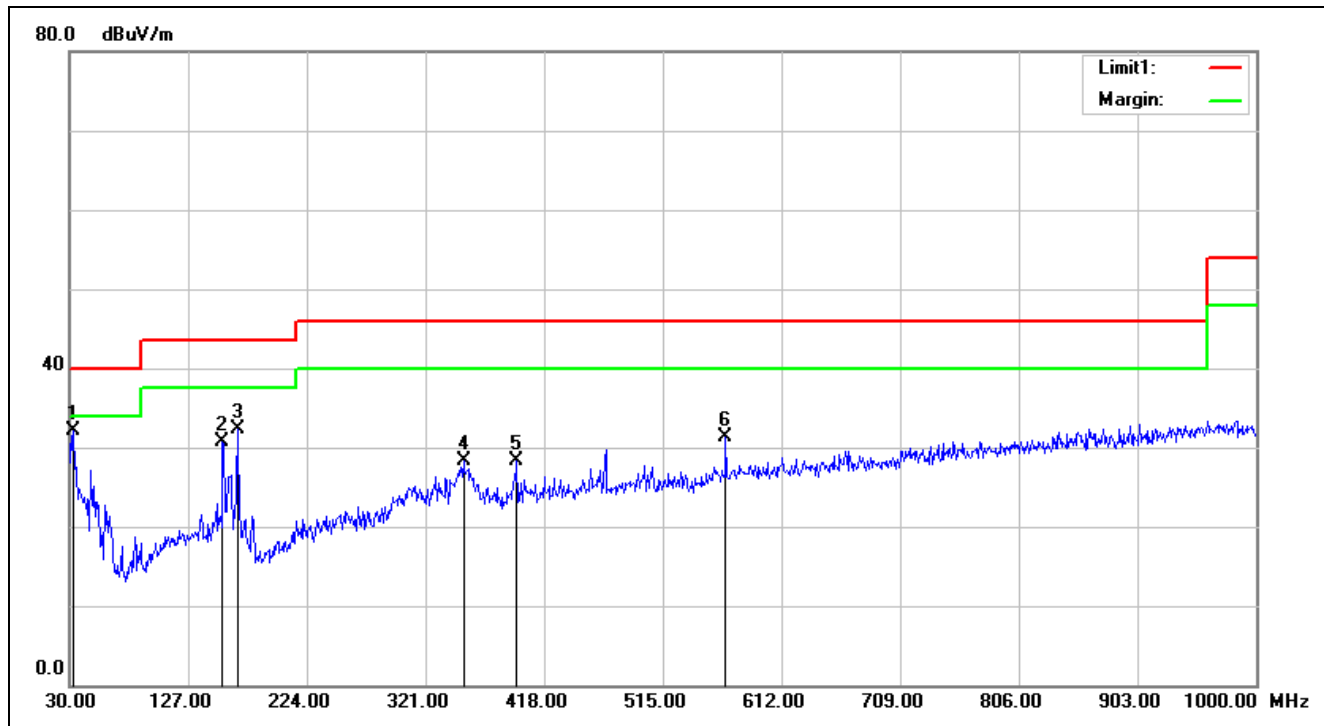
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Tel:+886-2172-7000 fax:+886-2528-0018



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 21:02:03
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	156.1000	-7.68	38.46	30.78	43.50	-12.72	QP	100	0	
2	167.7400	-8.76	43.12	34.36	43.50	-9.14	QP	100	145	
3	312.2700	-4.47	36.55	32.08	46.00	-13.92	QP	100	63	
4	352.0400	-3.26	38.26	35.00	46.00	-11.00	QP	100	79	
5	468.4400	-1.69	33.90	32.21	46.00	-13.79	QP	100	355	
6	566.4100	0.07	30.92	30.99	46.00	-15.01	QP	100	92	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 21:02:57
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL2		
Remark:	shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	32.9100	-1.75	33.88	32.13	40.00	-7.87	QP	100	141	
2	155.1300	-7.59	38.38	30.79	43.50	-12.71	QP	100	164	
3	167.7400	-8.76	41.02	32.26	43.50	-11.24	QP	100	341	
4	352.0400	-3.26	31.59	28.33	46.00	-17.67	QP	100	98	
5	395.6900	-2.54	30.87	28.33	46.00	-17.67	QP	100	160	
6	566.4100	0.07	31.32	31.39	46.00	-14.61	QP	100	124	

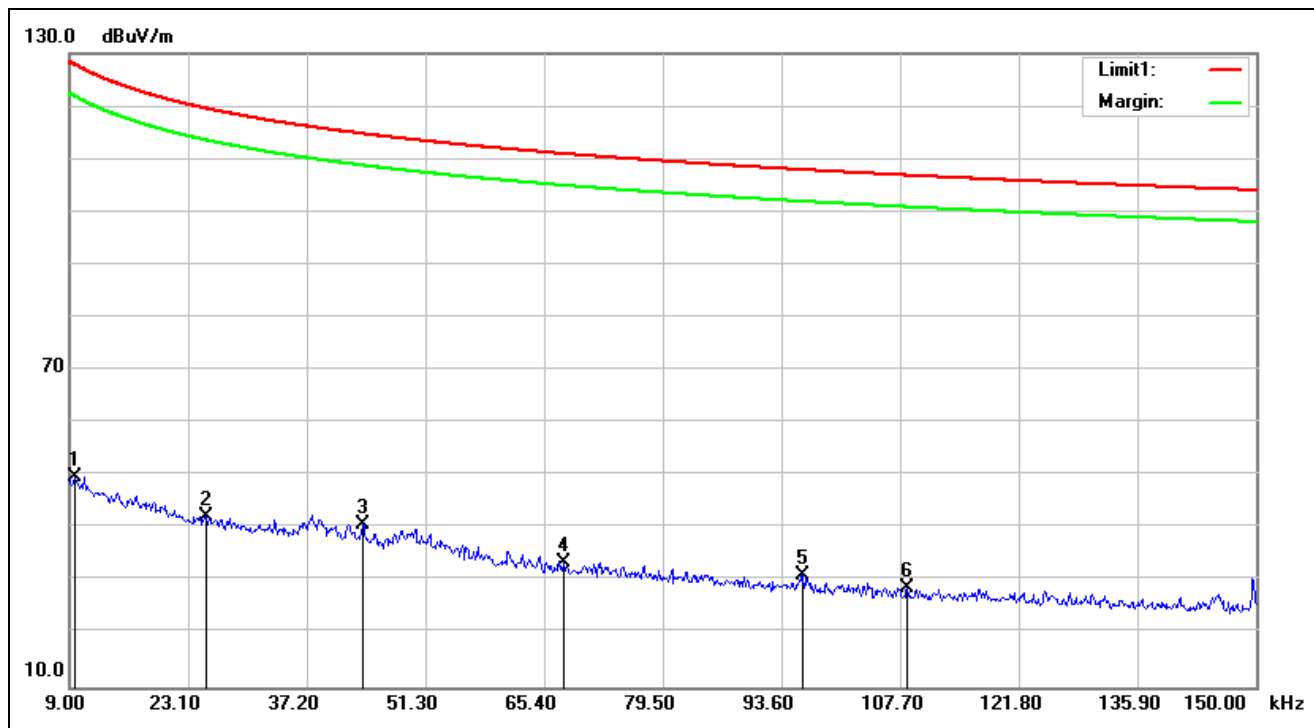
Spurious Emissions, RX Mode, 9K-30M



TUV Rheinland Taiwan Ltd.

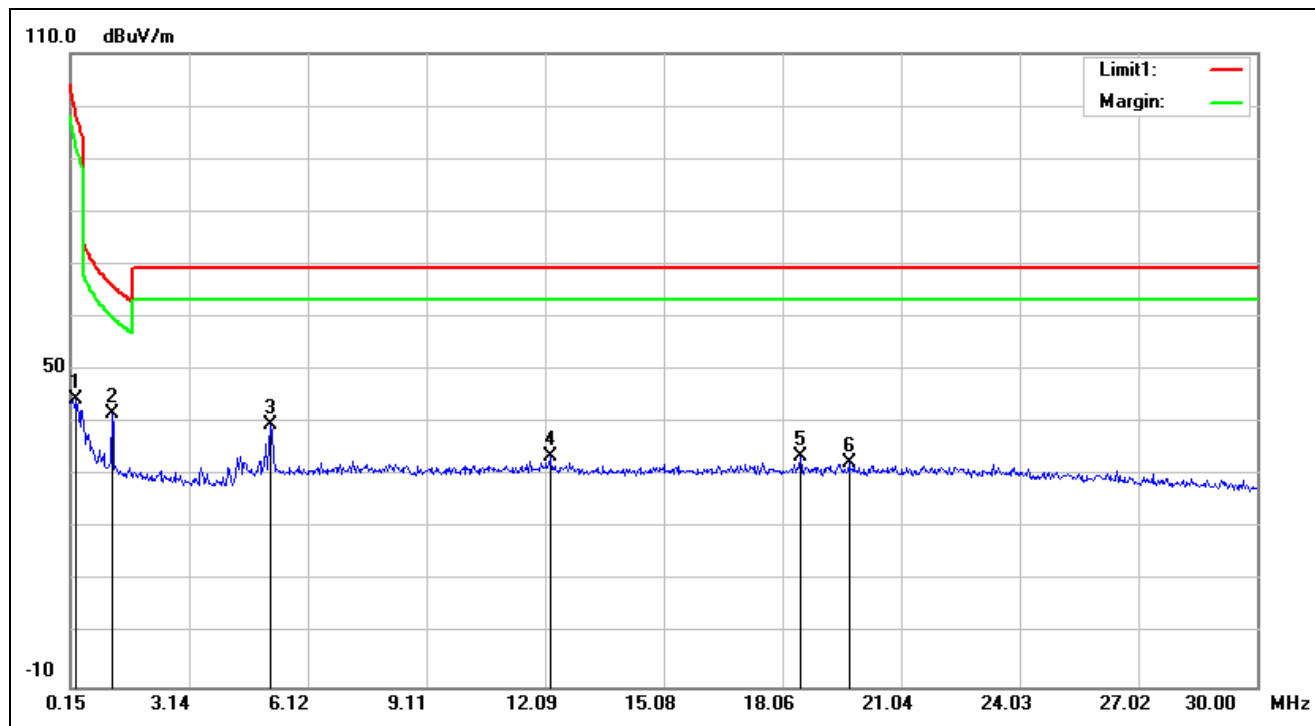
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Tel:+886-2172-7000 fax:+886-2528-0018



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/11/30 21:20:32
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL2		
Remark:	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	18.44	31.37	49.81	127.94	-78.13	QP	100	359	
2	0.0252	19.13	23.15	42.28	119.56	-77.28	QP	100	105	
3	0.0438	19.04	21.74	40.78	114.76	-73.98	QP	100	95	
4	0.0678	18.71	14.84	33.55	110.97	-77.42	QP	100	360	
5	0.0961	18.38	12.80	31.18	107.94	-76.76	QP	100	81	
6	0.1085	18.33	10.52	28.85	106.89	-78.04	QP	100	265	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/11/30 21:23:38
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	20(°C)/60%
Model No.:	BM83SM1, BM83SL1	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX-PL2		
Remark:	shield		

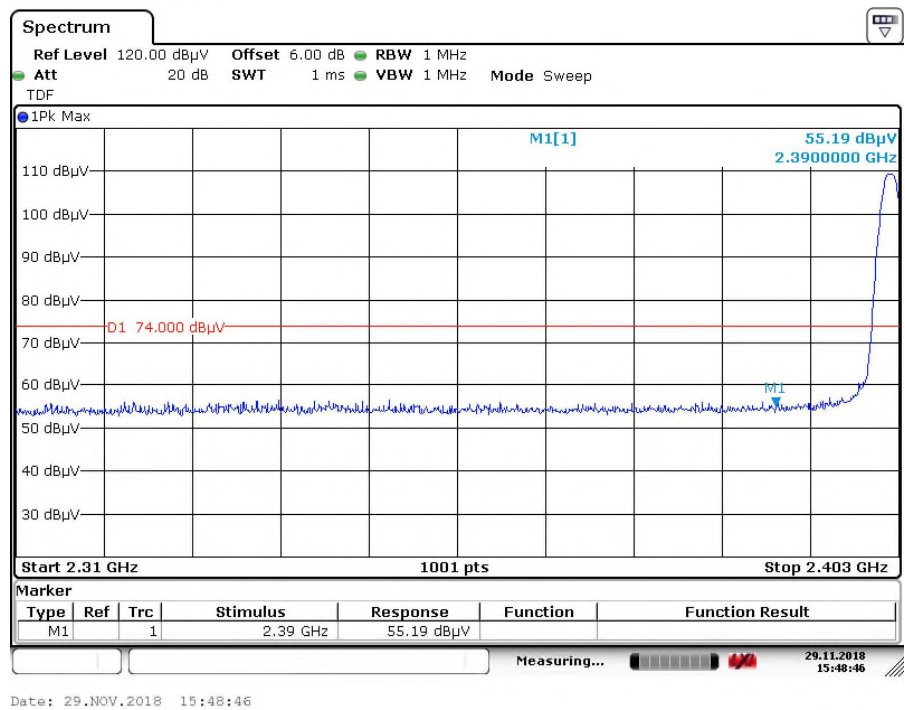
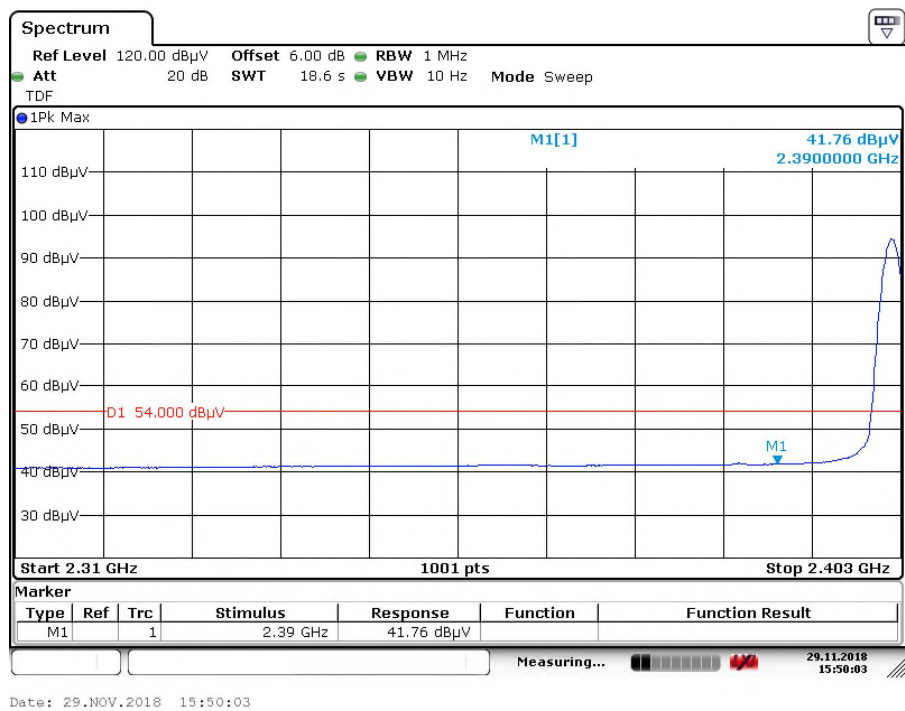
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.2993	18.44	26.11	44.55	98.08	-53.53	QP	100	108	
2	1.1948	18.66	22.96	41.62	66.08	-24.46	QP	100	111	
3	5.1947	19.51	20.20	39.71	69.50	-29.79	QP	100	207	
4	12.2094	20.69	12.92	33.61	69.50	-35.89	QP	100	164	
5	18.5078	21.44	12.08	33.52	69.50	-35.98	QP	100	121	
6	19.7316	21.57	10.81	32.38	69.50	-37.12	QP	100	216	

Module without Shielded Case, Class 1

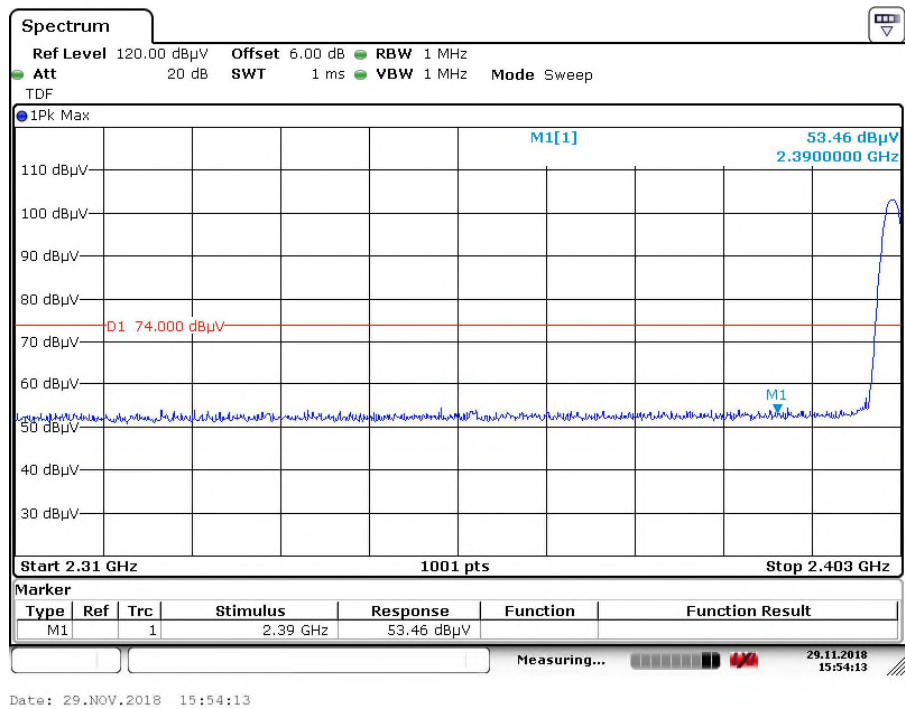
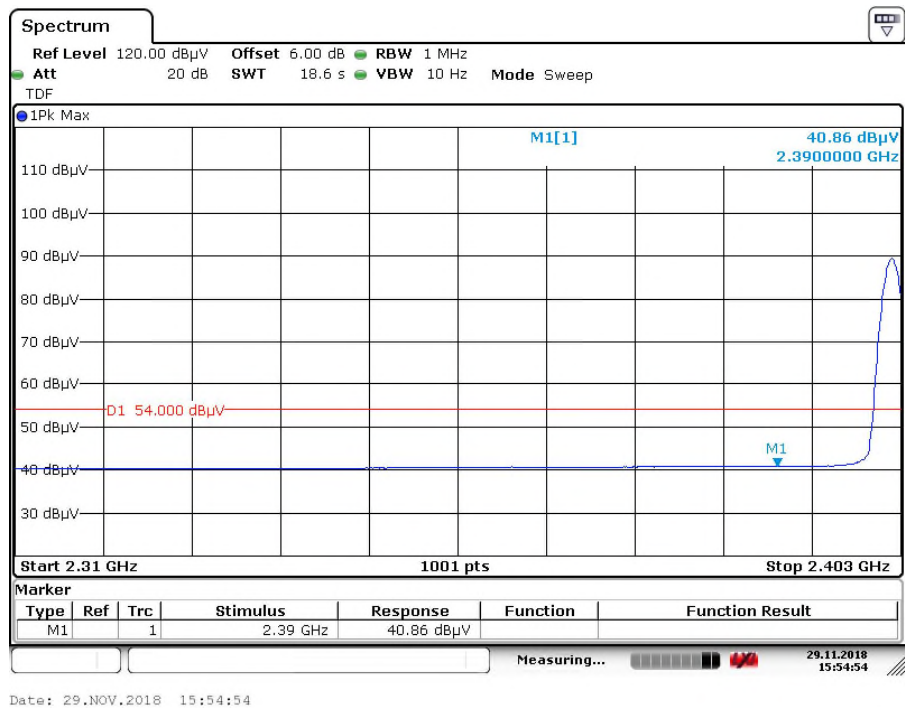
Spurious Emissions, Band Edges, 2.35-2.5G

Radiated Bandedge (GFSK)

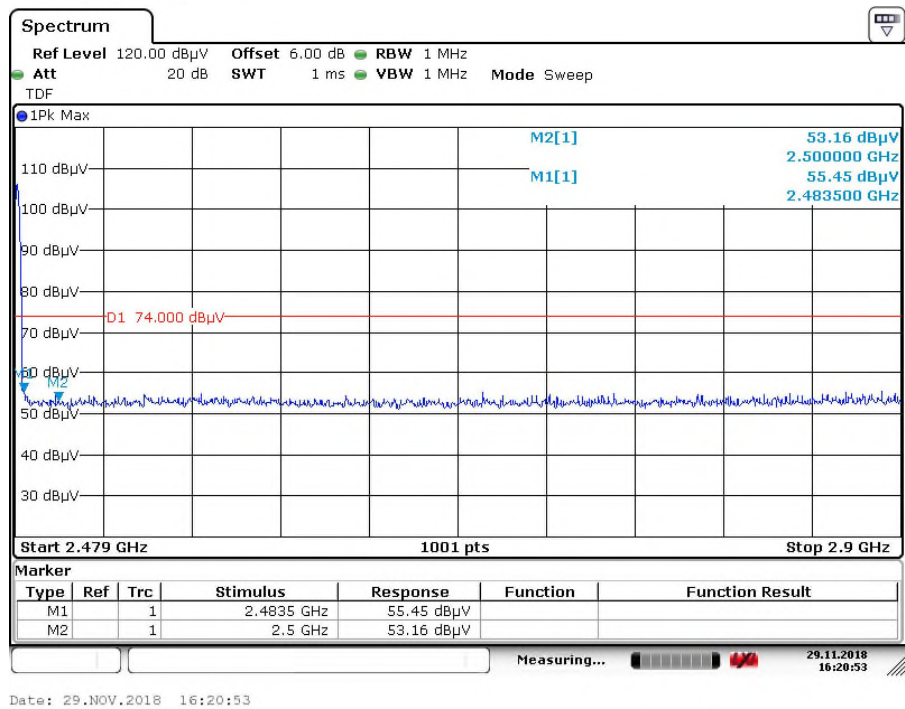
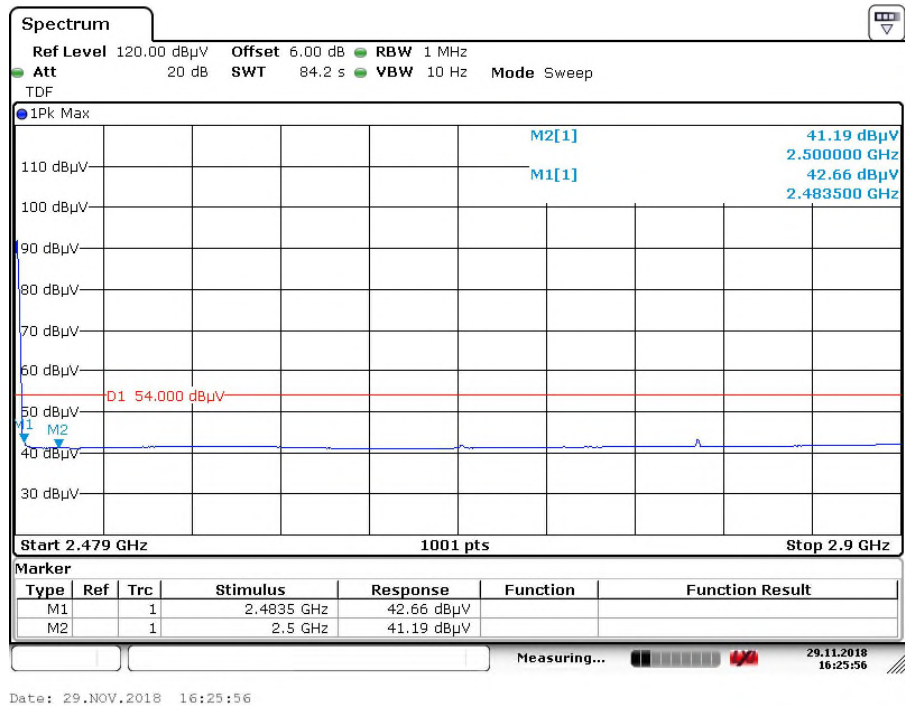
Low Channel (Hor)



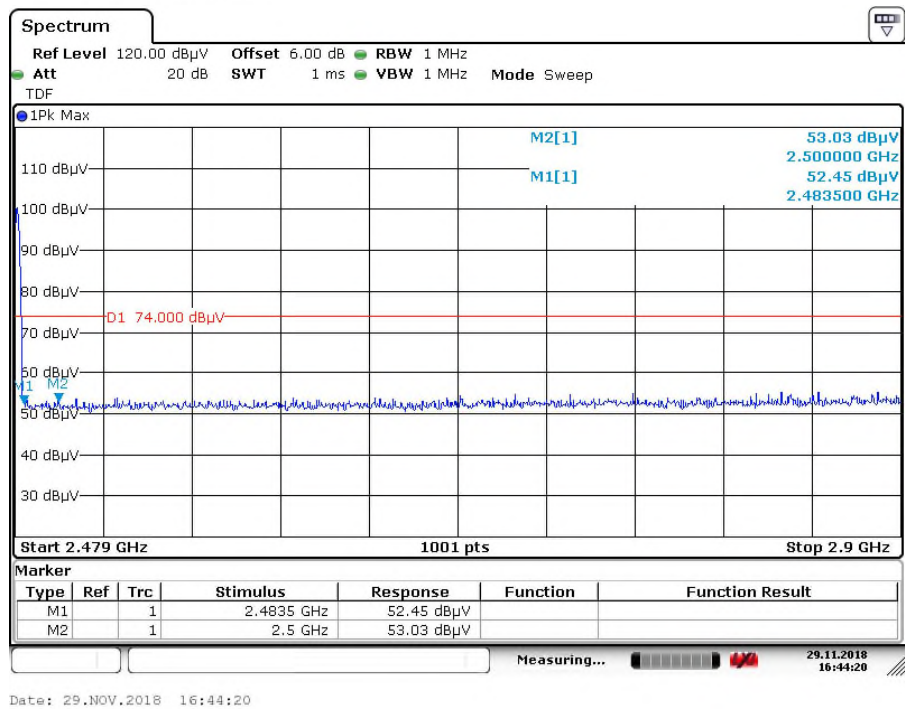
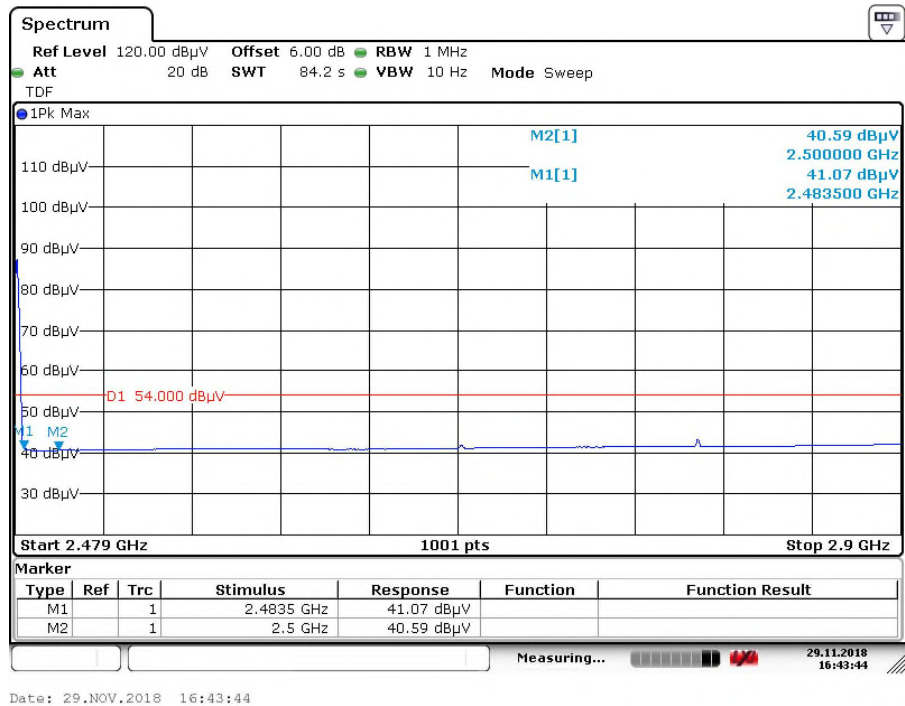
Low Channel (Ver)



High Channel (Hor)

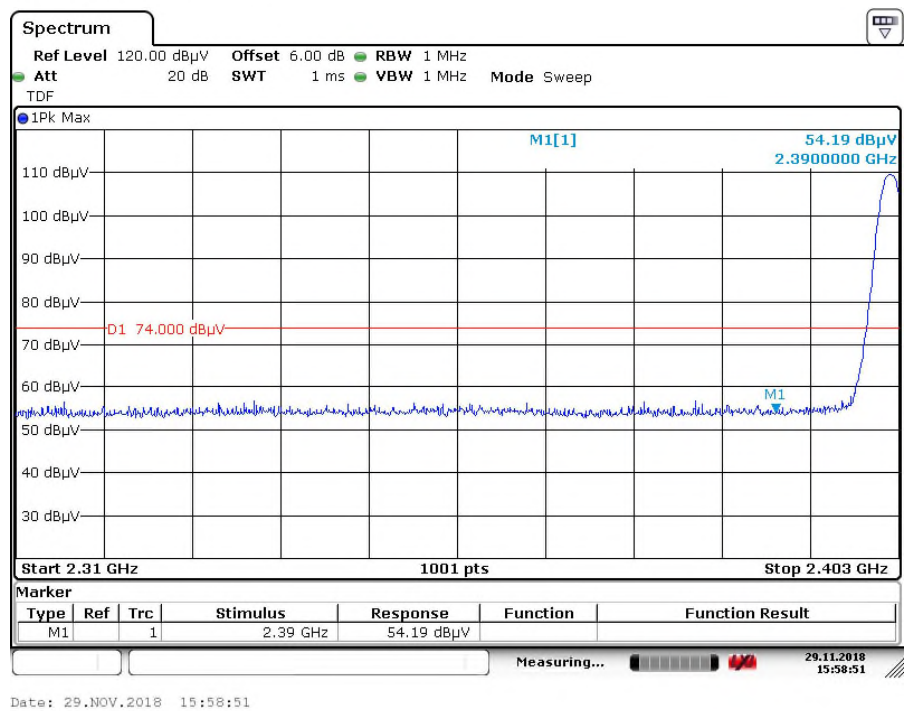
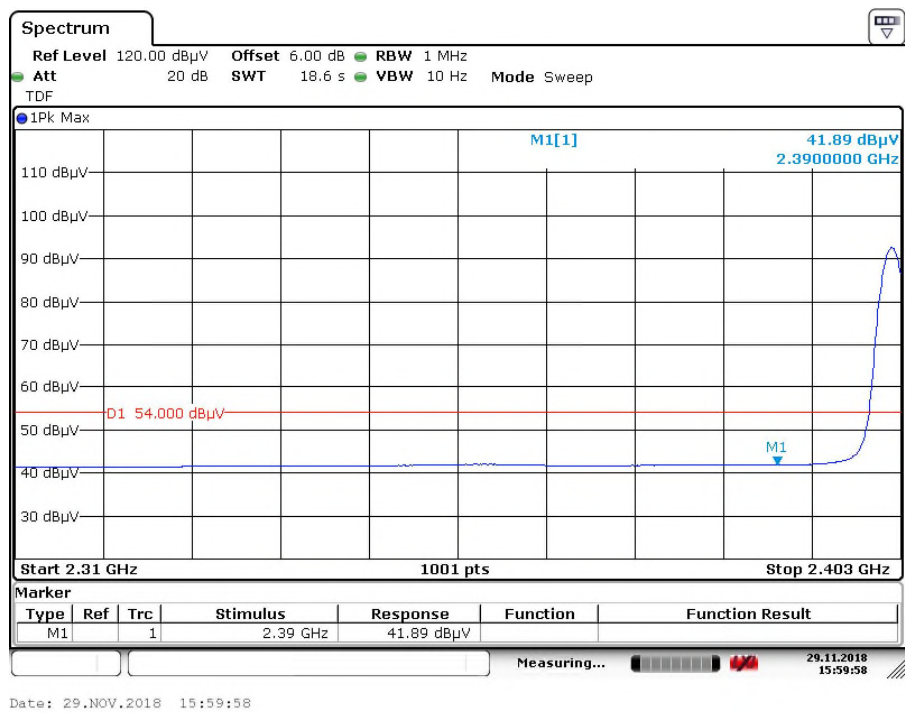


High Channel (Ver)

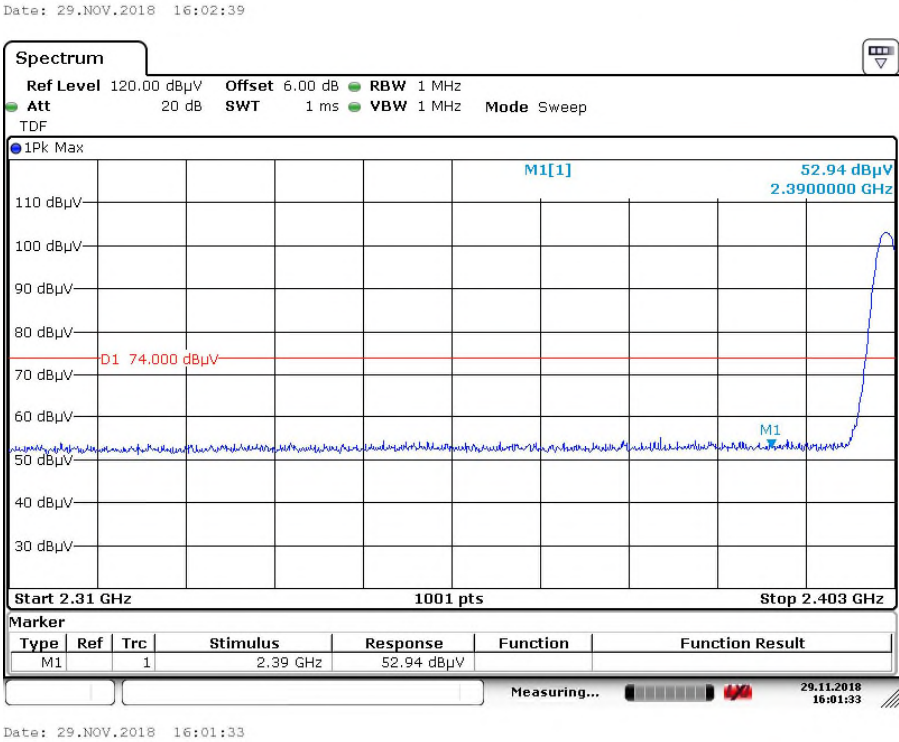
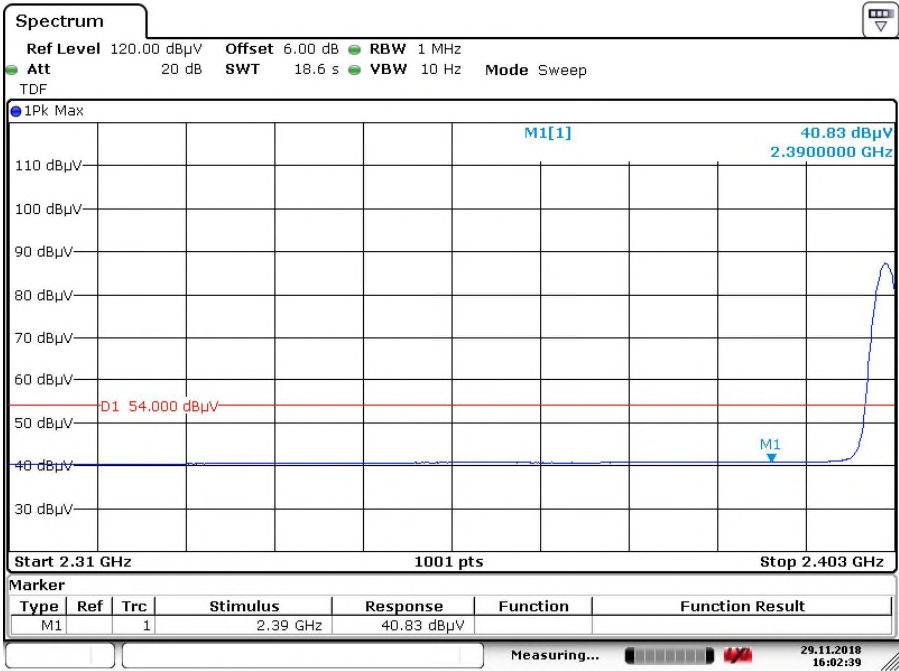


Radiated Bandedge (8DPSK)

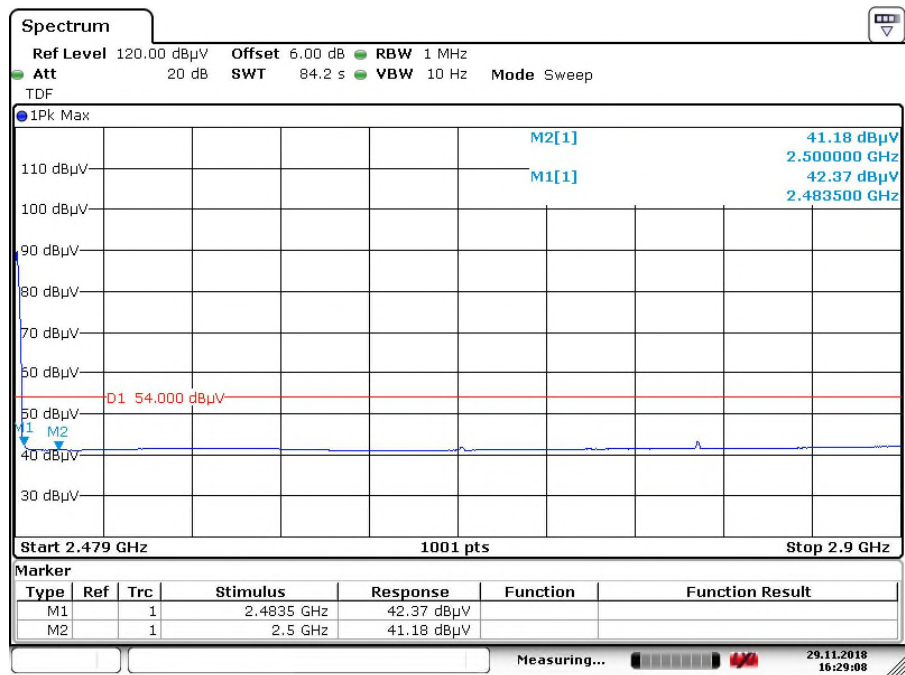
Low Channel (Hor)



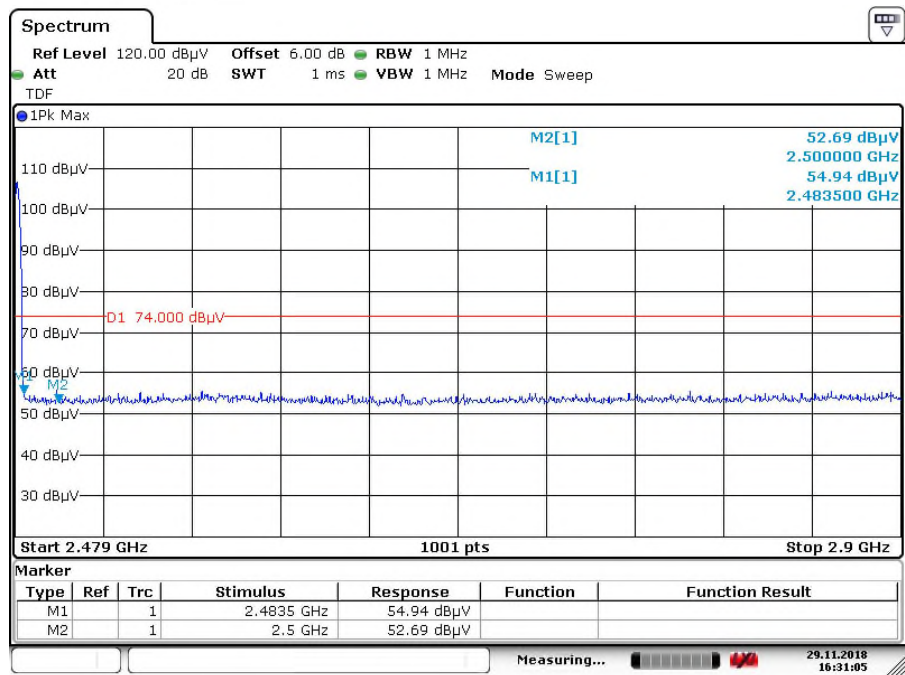
Low Channel (Ver)



High Channel (Hor)

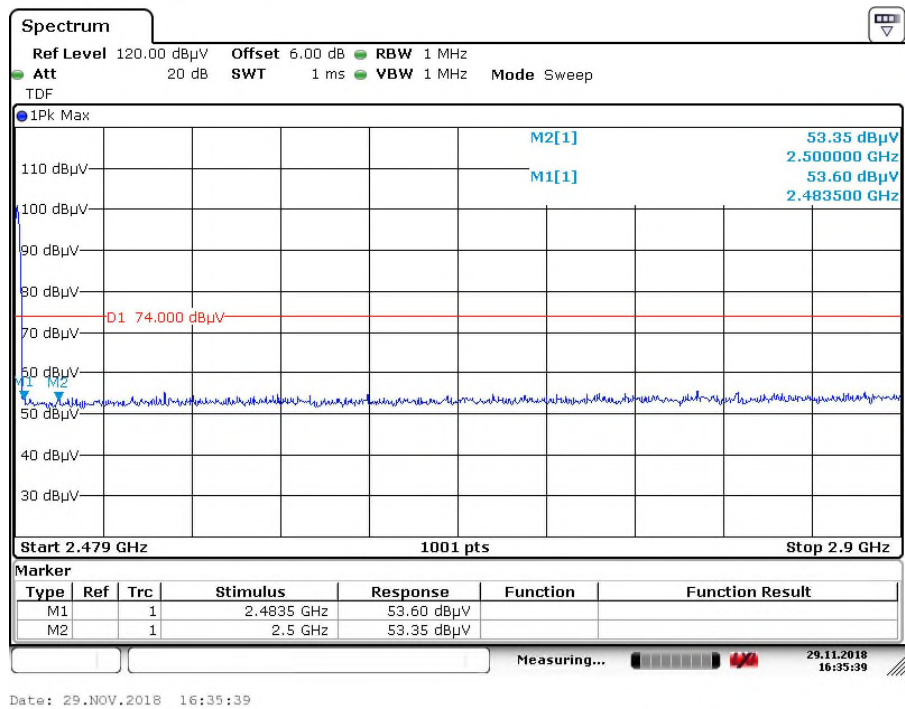
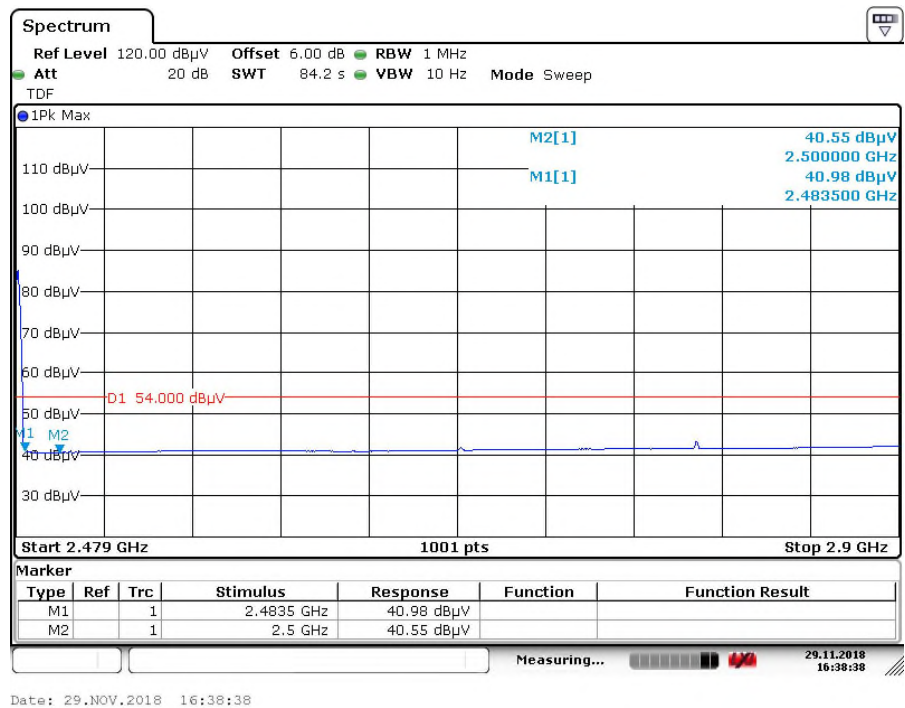


Date: 29.NOV.2018 16:29:09



Date: 29.NOV.2018 16:31:05

High Channel (Ver)



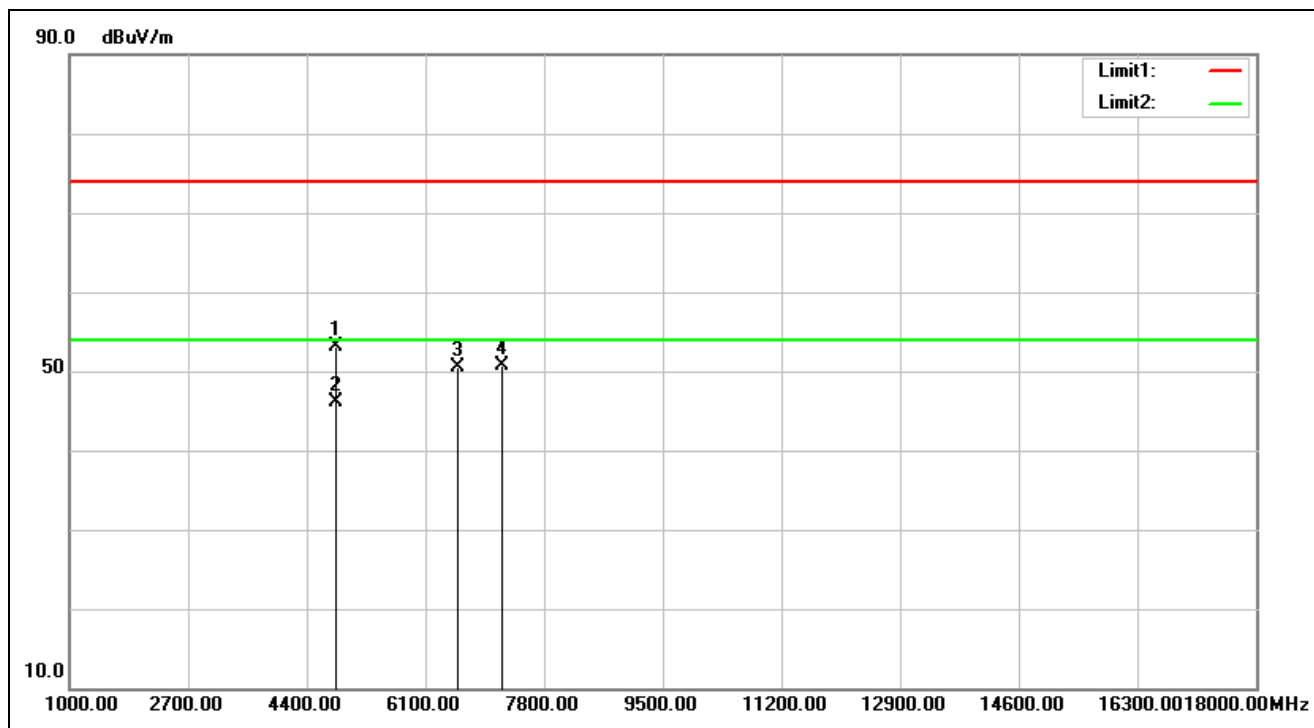
Spurious Emissions, TX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

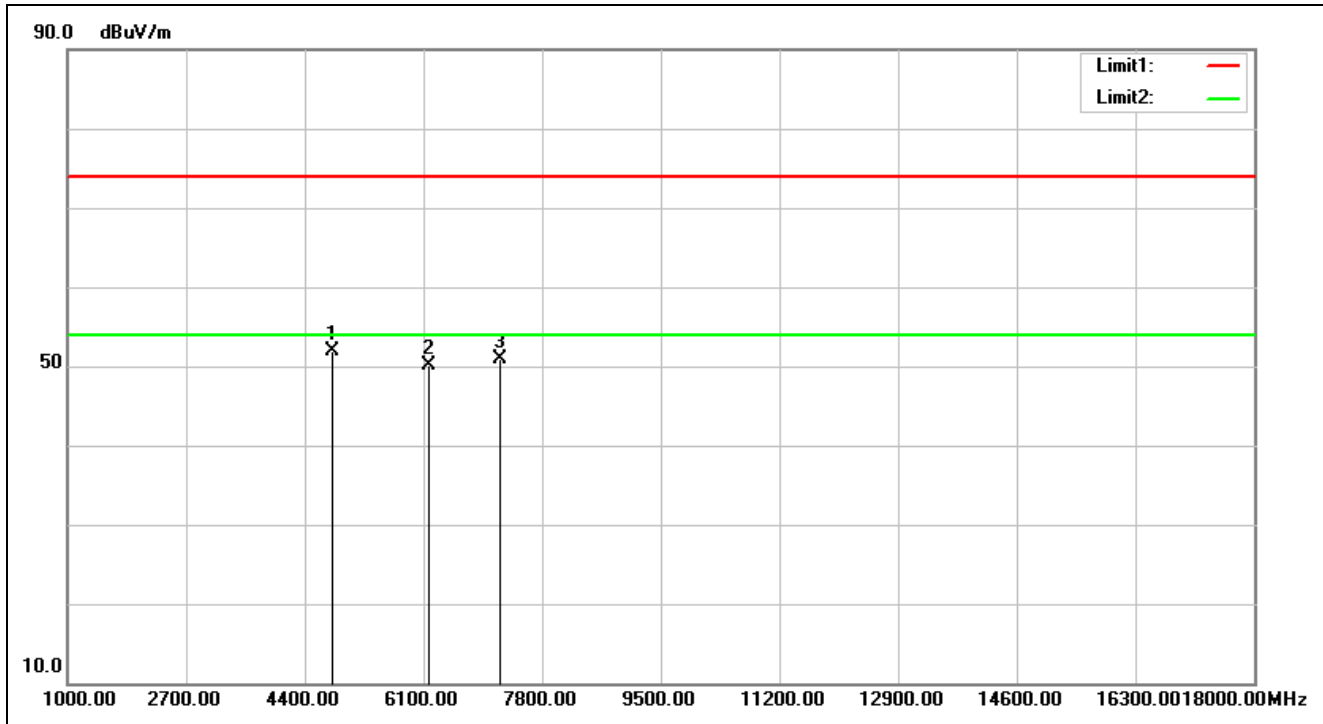
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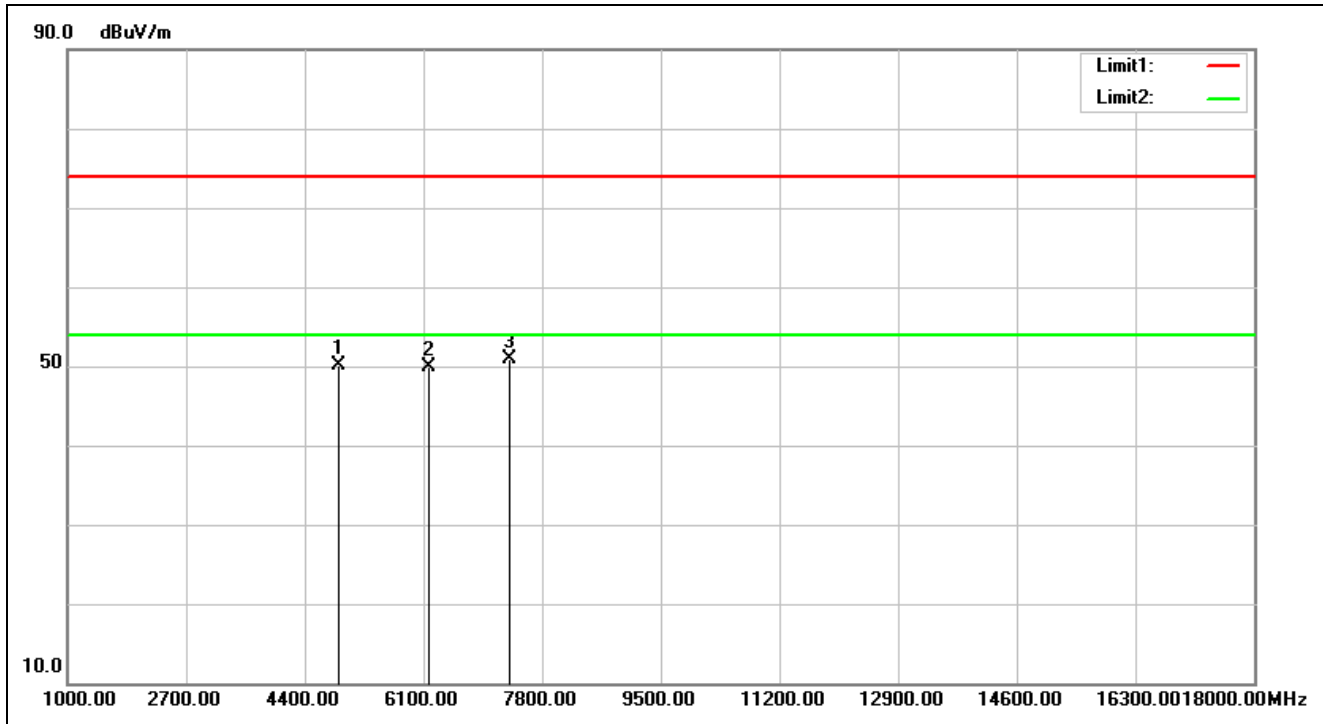
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 14:35:21
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2402-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4804.000	3.30	49.75	53.05	74.00	-20.95	peak	100	61	
2	4804.000	3.30	42.90	46.20	54.00	-7.80	AVG	100	61	
3	6559.000	5.64	44.86	50.50	74.00	-23.50	peak	100	71	
4	7206.000	4.77	45.87	50.64	74.00	-23.36	peak	100	167	



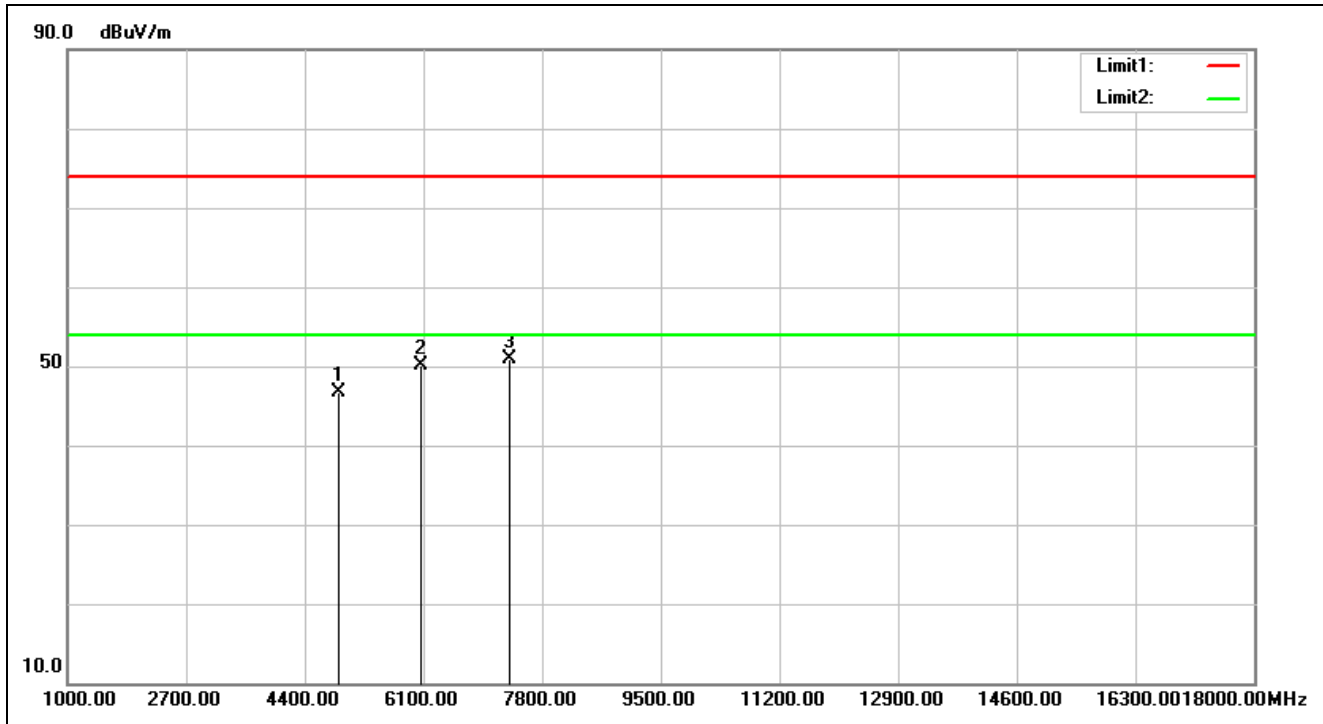
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 14:34:29
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2402-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4804.000	3.30	48.65	51.95	74.00	-22.05	peak	100	34	
2	6185.000	5.55	44.55	50.10	74.00	-23.90	peak	100	1	
3	7206.000	4.77	46.12	50.89	74.00	-23.11	peak	100	210	



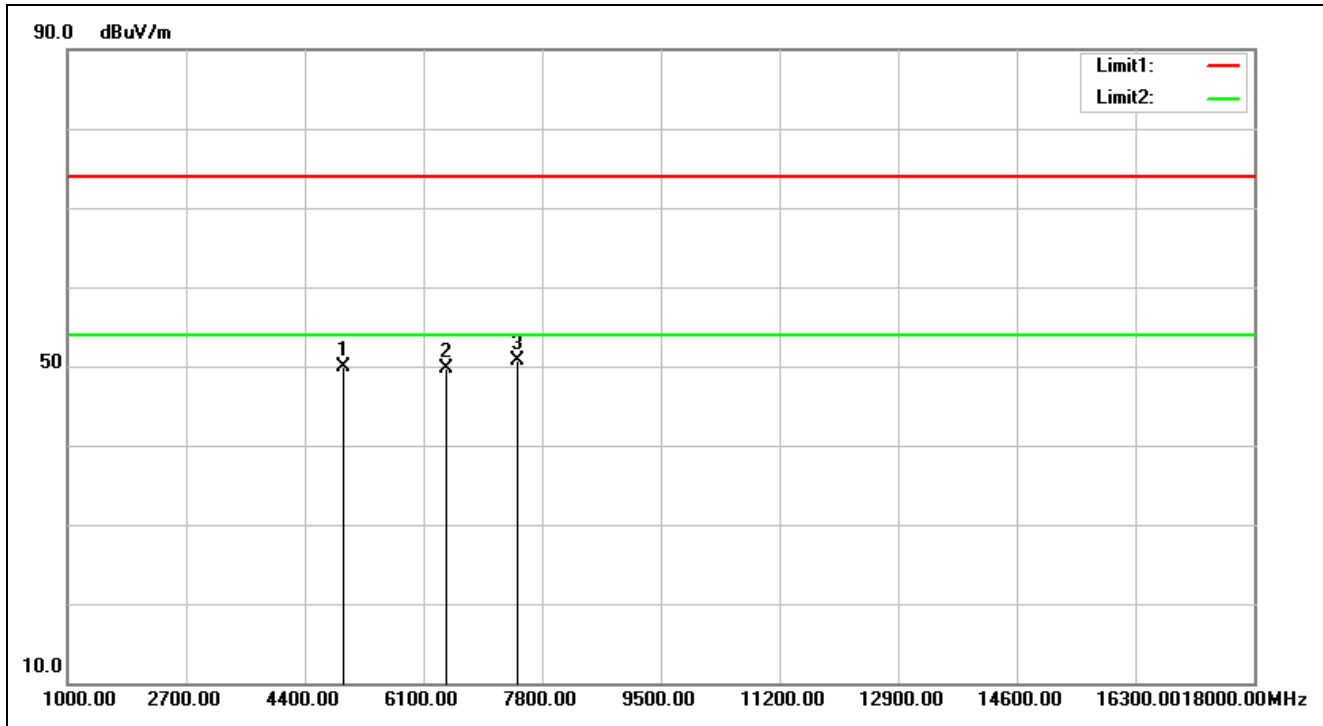
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 14:44:30
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	46.58	50.19	74.00	-23.81	peak	100	75	
2	6185.000	5.55	44.29	49.84	74.00	-24.16	peak	100	126	
3	7323.000	4.66	46.33	50.99	74.00	-23.01	peak	100	189	



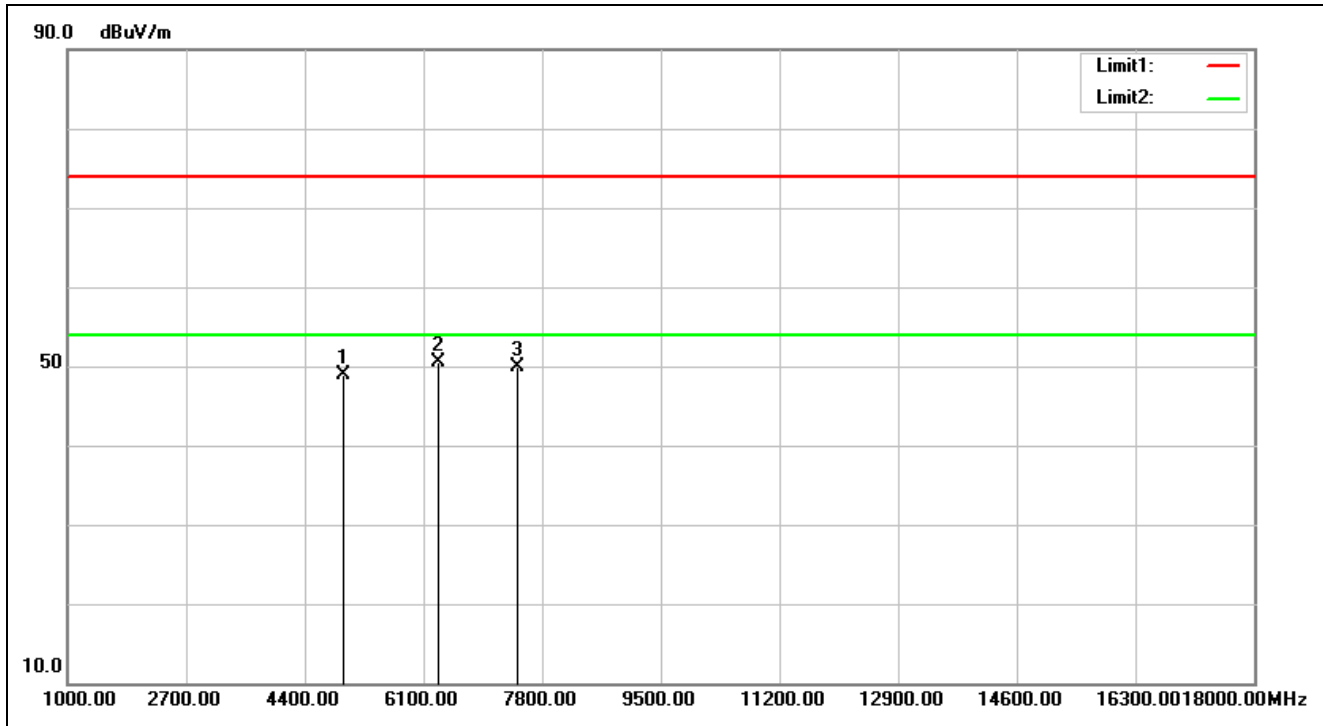
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 14:43:38
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	43.16	46.77	74.00	-27.23	peak	100	158	
2	6066.000	5.49	44.57	50.06	74.00	-23.94	peak	100	74	
3	7323.000	4.66	46.18	50.84	74.00	-23.16	peak	100	196	



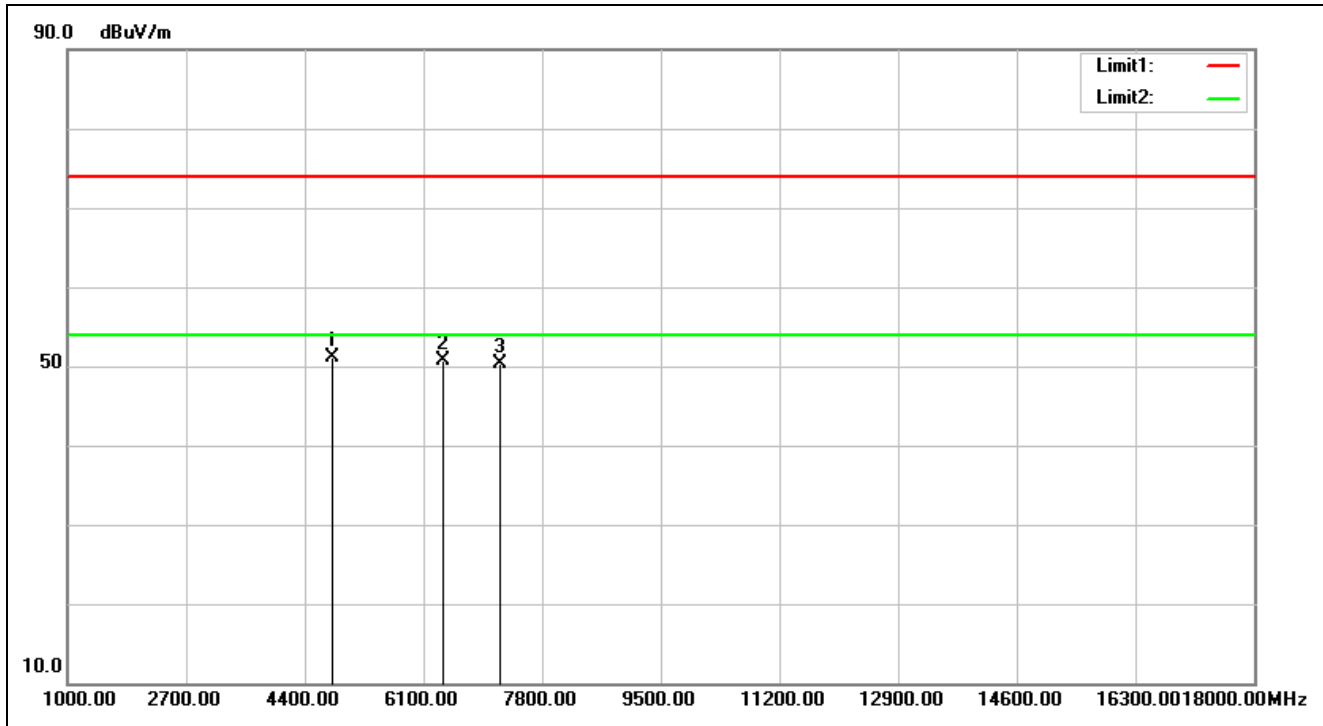
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 14:48:14
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2480-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4960.000	3.93	46.07	50.00	74.00	-24.00	peak	100	141	
2	6423.000	5.69	43.97	49.66	74.00	-24.34	peak	100	274	
3	7440.000	4.54	46.24	50.78	74.00	-23.22	peak	100	224	



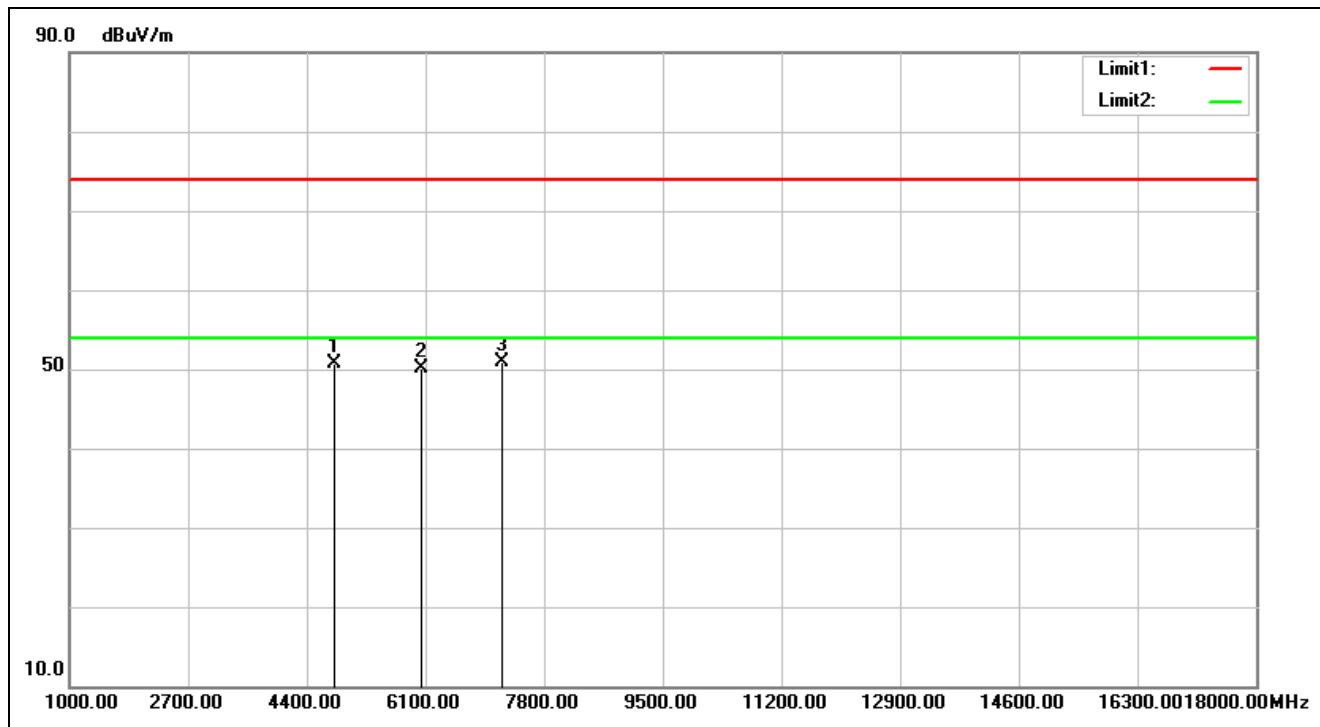
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 14:47:21
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2480-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4960.000	3.93	44.97	48.90	74.00	-25.10	peak	100	185	
2	6304.000	5.62	44.79	50.41	74.00	-23.59	peak	100	359	
3	7440.000	4.54	45.31	49.85	74.00	-24.15	peak	100	197	



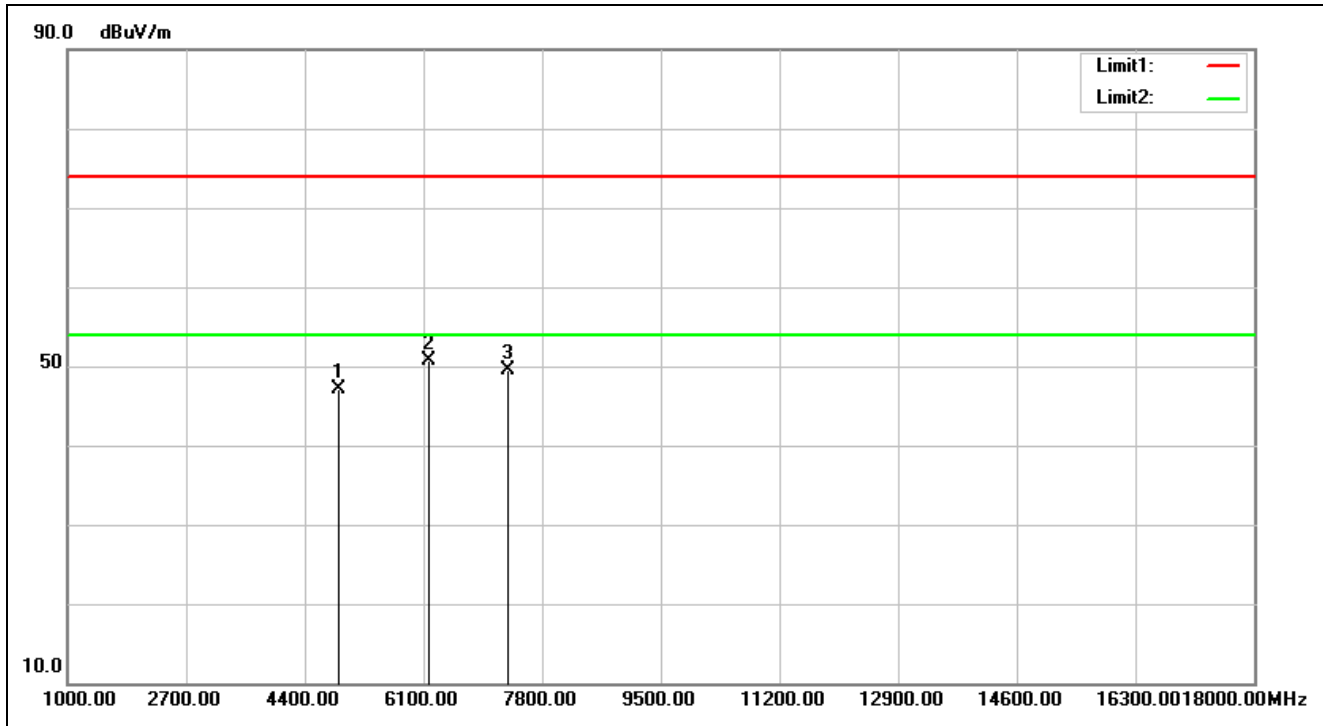
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 14:52:03
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2402-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4804.000	3.30	47.86	51.16	74.00	-22.84	peak	100	127	
2	6389.000	5.68	44.96	50.64	74.00	-23.36	peak	100	17	
3	7206.000	4.77	45.58	50.35	74.00	-23.65	peak	100	193	



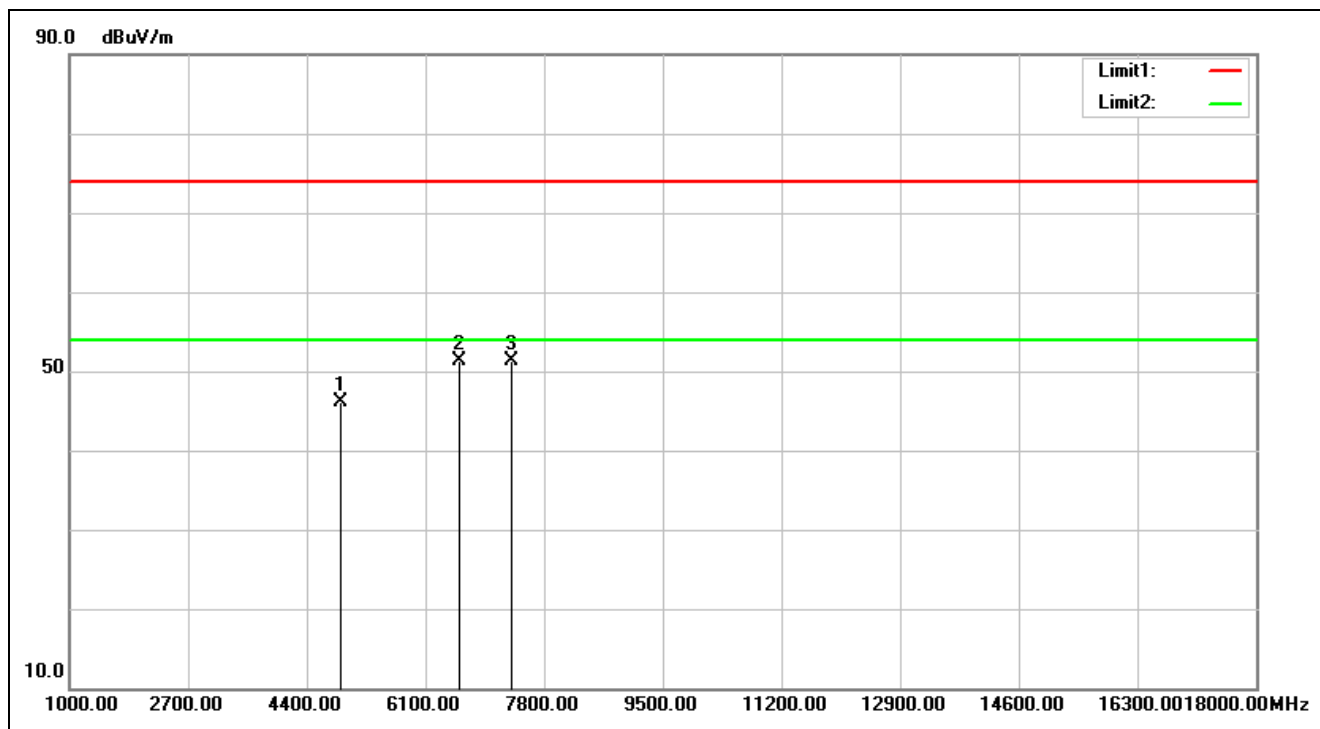
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 14:51:11
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2402-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4804.000	3.30	47.47	50.77	74.00	-23.23	peak	100	207	
2	6049.000	5.47	44.71	50.18	74.00	-23.82	peak	100	43	
3	7206.000	4.77	46.09	50.86	74.00	-23.14	peak	100	116	



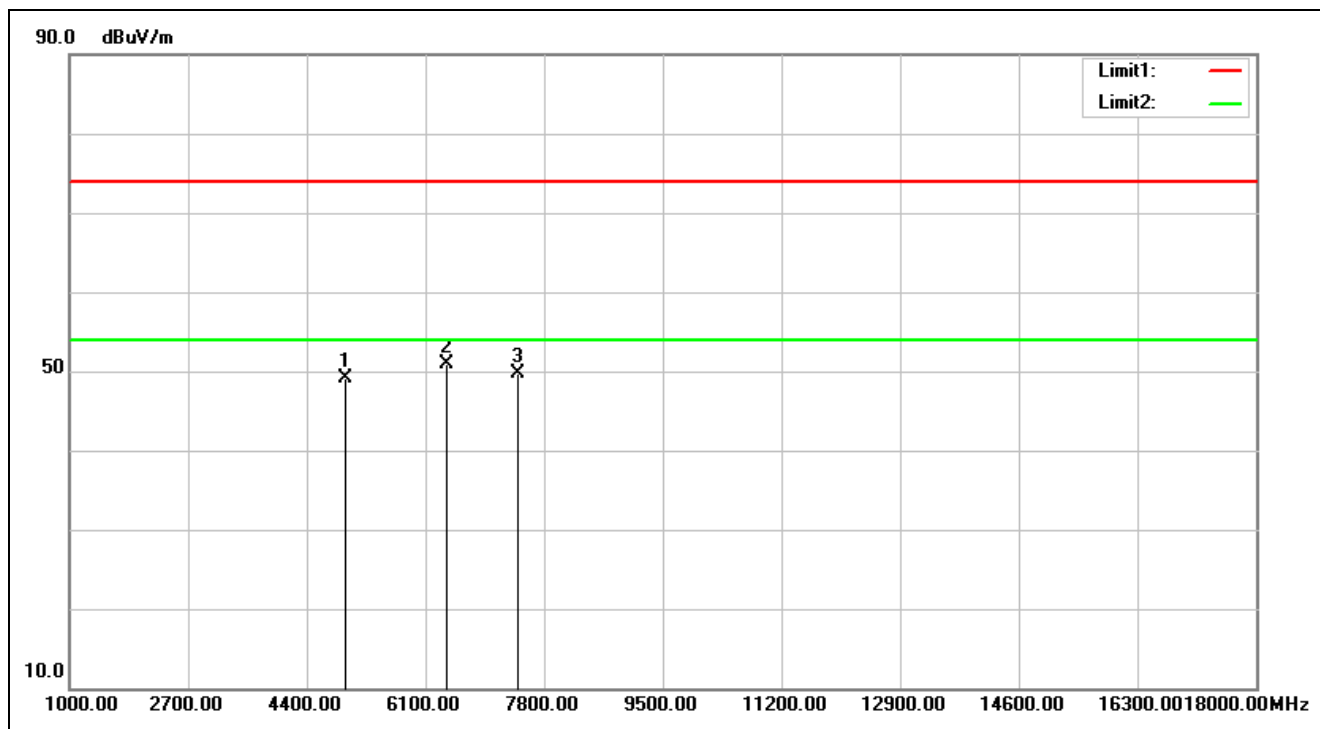
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 14:56:00
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2441-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	43.49	47.10	74.00	-26.90	peak	100	174	
2	6185.000	5.55	45.15	50.70	74.00	-23.30	peak	100	95	
3	7323.000	4.66	44.94	49.60	74.00	-24.40	peak	100	216	



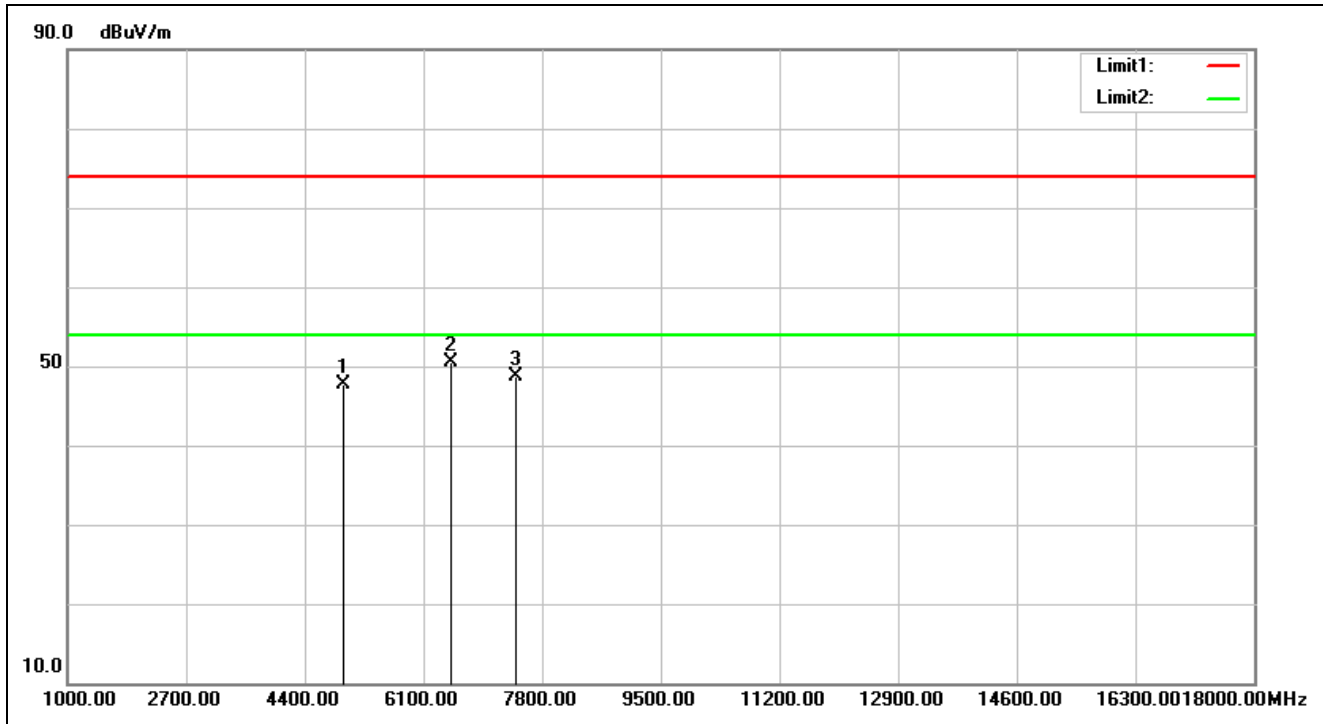
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 14:55:07
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2441-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	42.56	46.17	74.00	-27.83	peak	100	116	
2	6593.000	5.60	45.68	51.28	74.00	-22.72	peak	100	8	
3	7323.000	4.66	46.55	51.21	74.00	-22.79	peak	100	279	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 14:59:33
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2480-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4960.000	3.93	45.21	49.14	74.00	-24.86	peak	100	278	
2	6406.000	5.69	45.22	50.91	74.00	-23.09	peak	100	51	
3	7440.000	4.54	45.07	49.61	74.00	-24.39	peak	100	174	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 14:58:41
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2480-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4960.000	3.93	43.70	47.63	74.00	-26.37	peak	100	163	
2	6491.000	5.73	44.80	50.53	74.00	-23.47	peak	100	340	
3	7440.000	4.54	44.23	48.77	74.00	-25.23	peak	100	241	

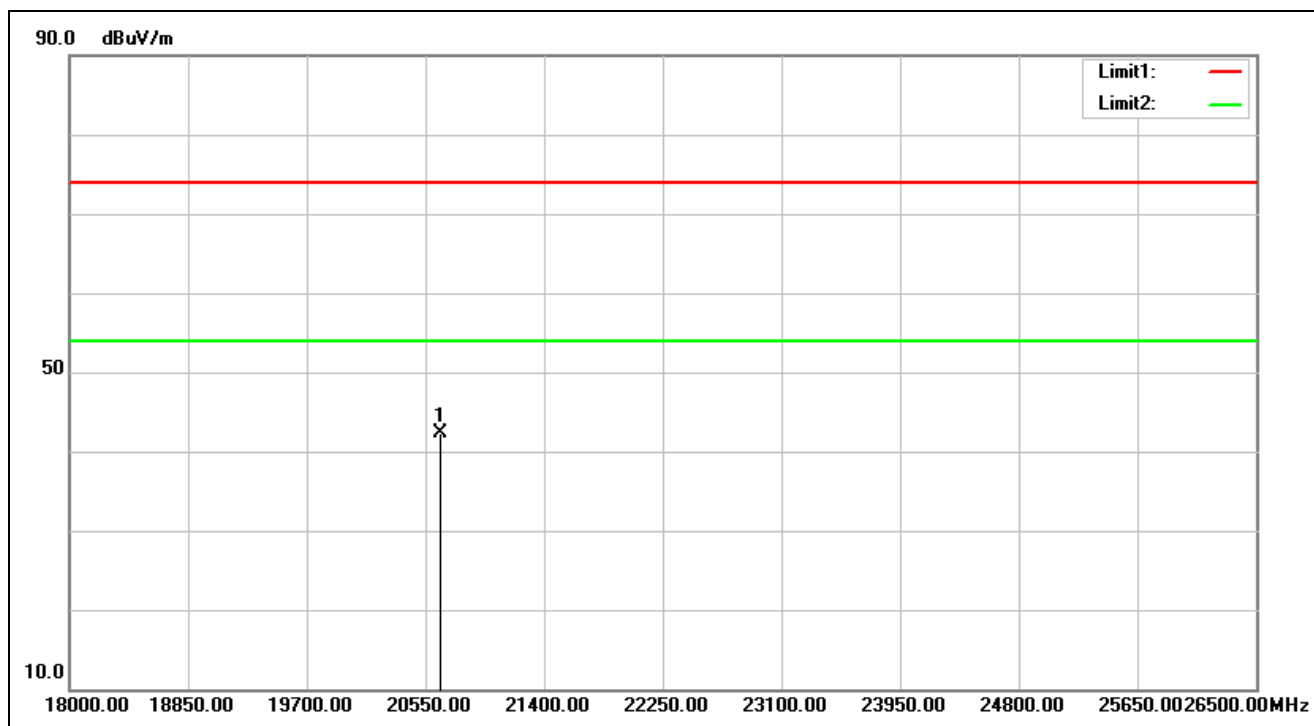
Spurious Emissions, TX Mode, 18-26.5G



TUV Rheinland Taiwan Ltd.

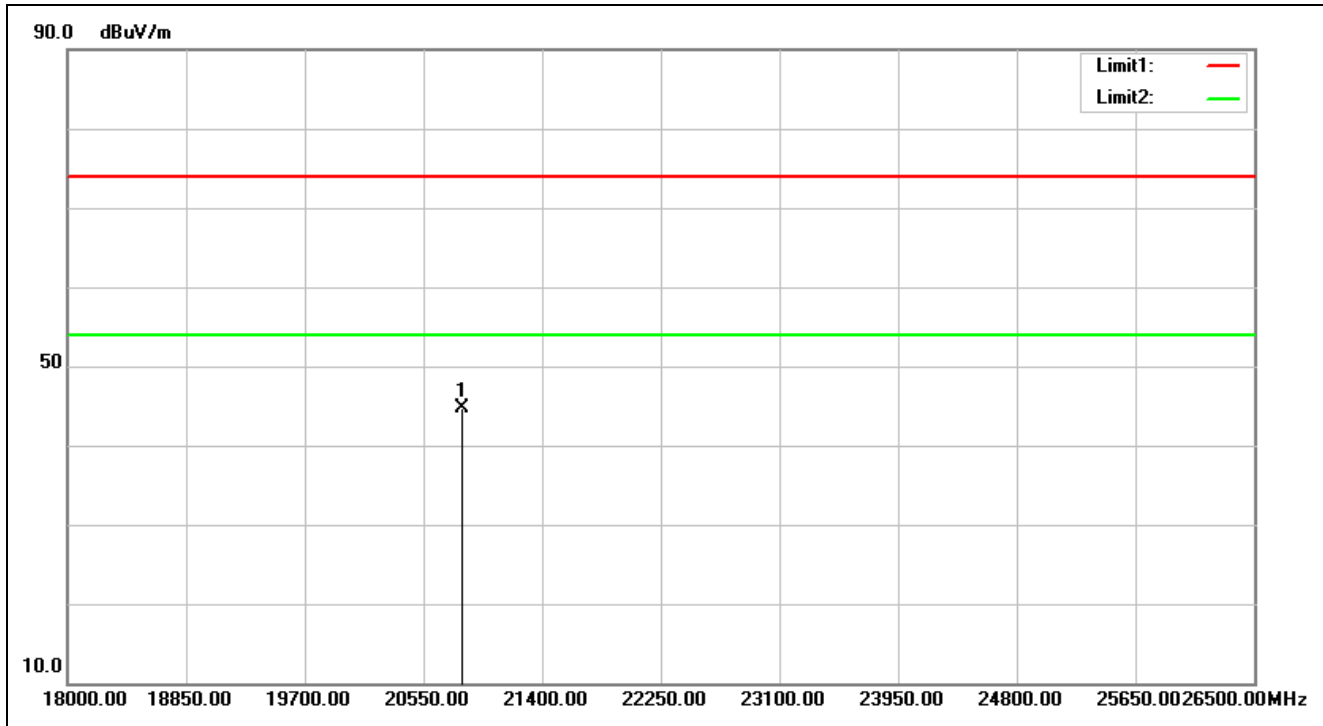
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



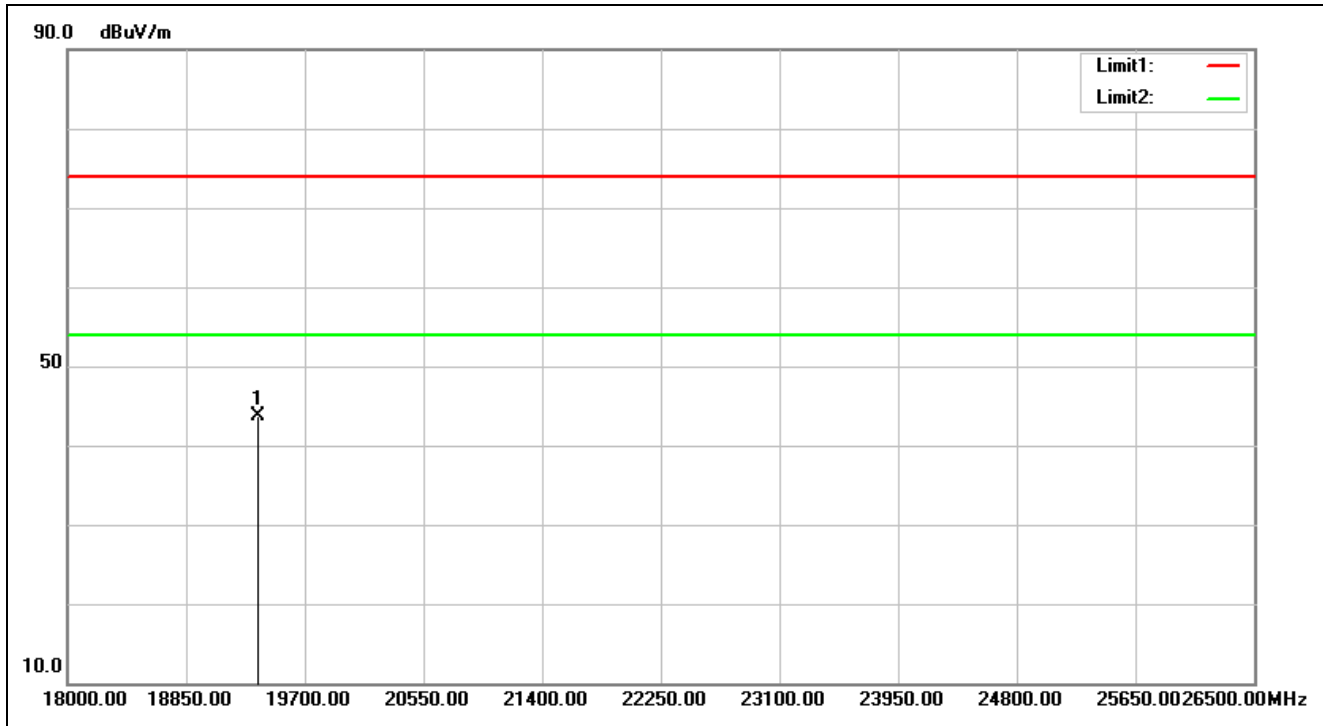
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 09:39:53
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2402-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20660.000	4.38	37.88	42.26	74.00	-31.74	peak	100	126	



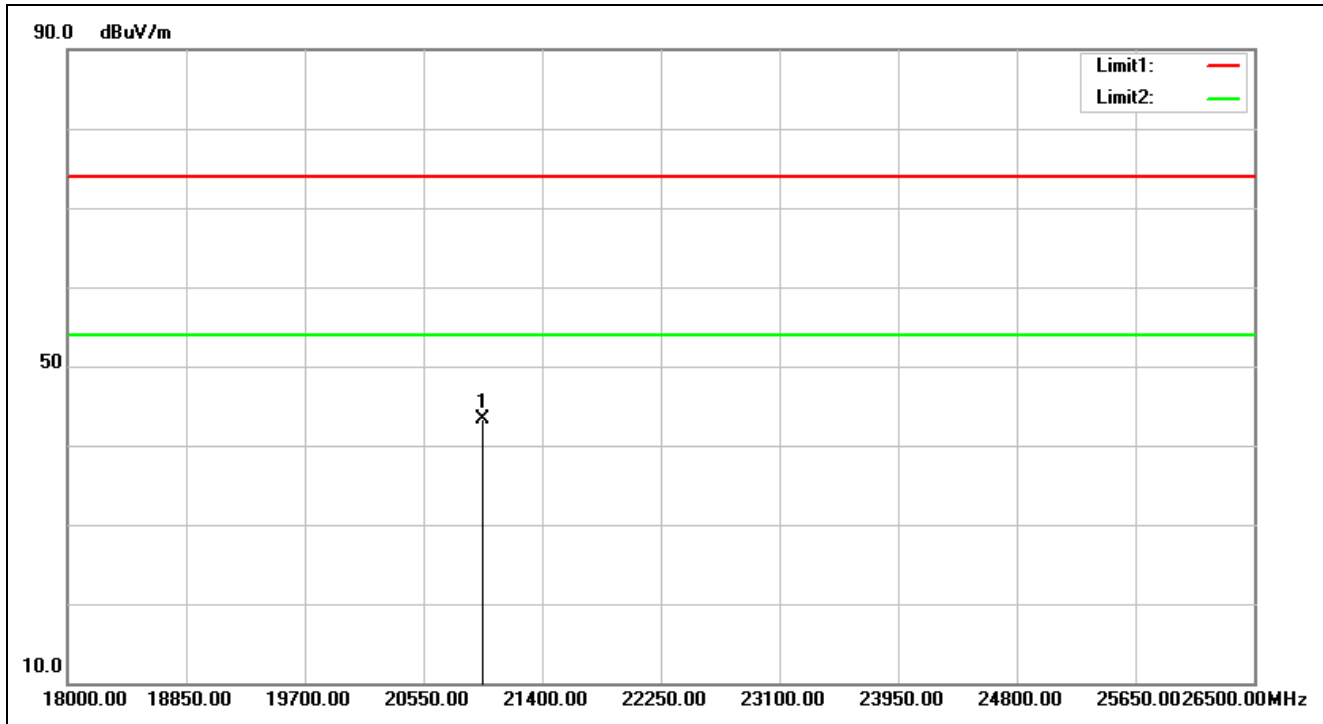
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 09:41:20
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2402-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20830.500	4.59	40.02	44.61	74.00	-29.39	peak	100	163	



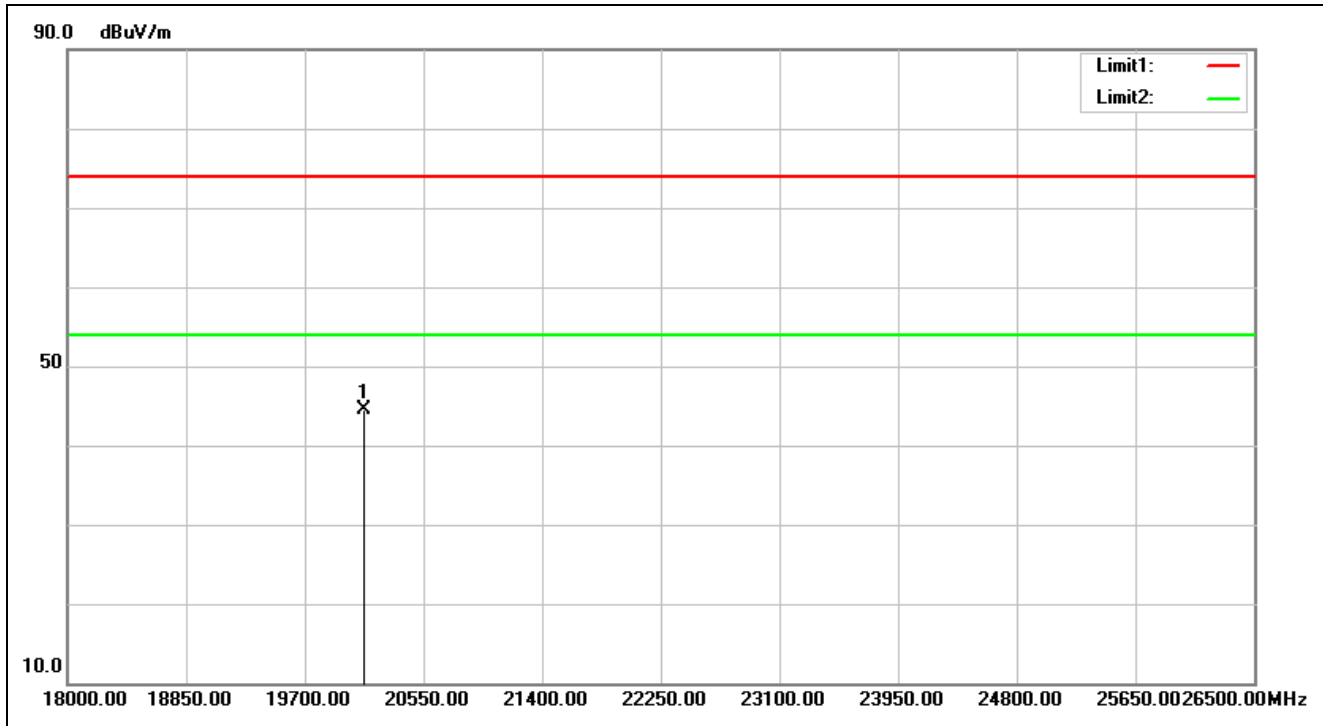
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 09:42:13
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	19368.500	3.97	39.70	43.67	74.00	-30.33	peak	100	146	



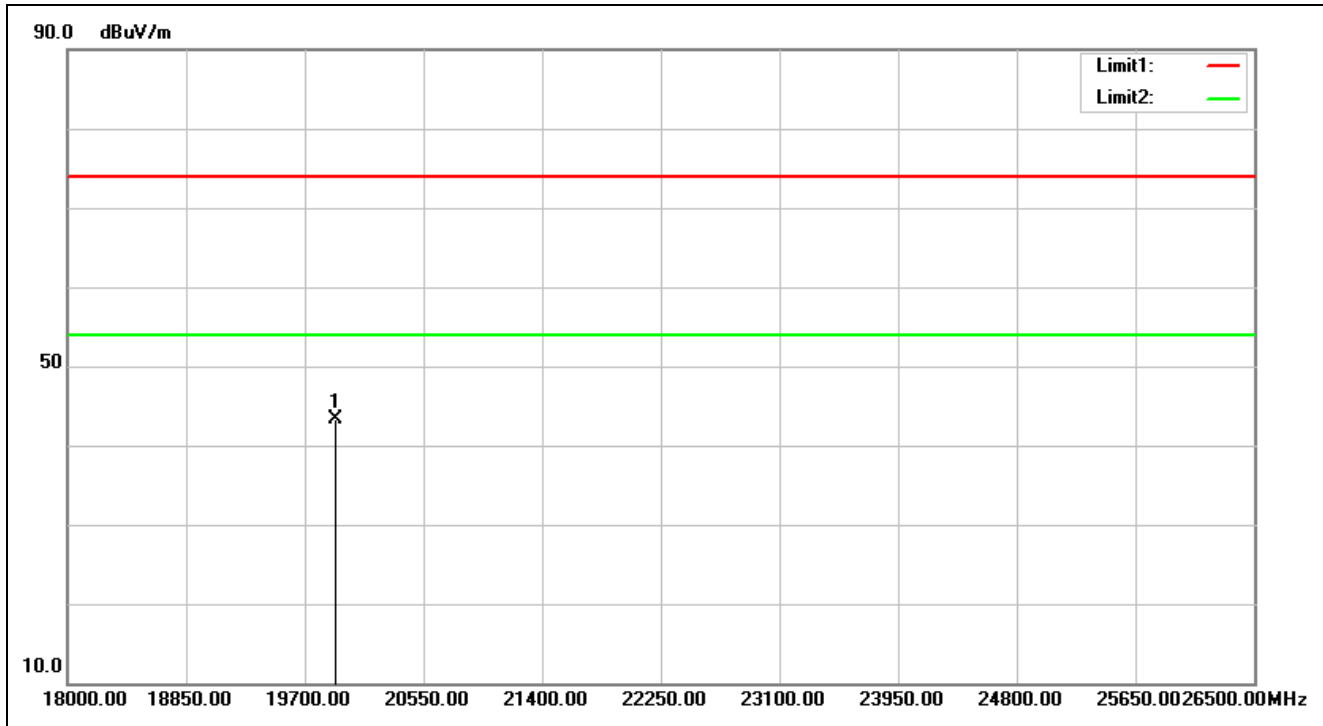
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 09:43:30
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20975.000	4.76	38.51	43.27	74.00	-30.73	peak	100	154	



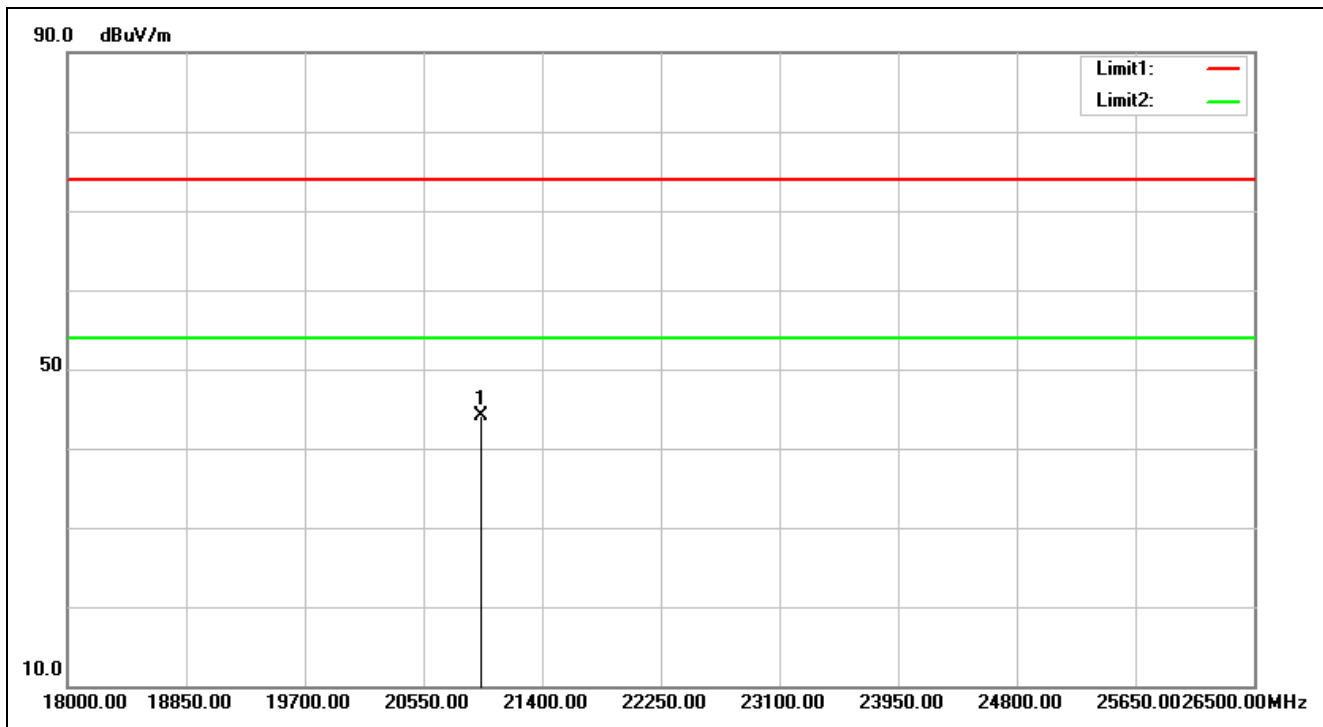
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 09:44:04
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2480-RX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20125.000	4.24	40.29	44.53	74.00	-29.47	peak	100	179	



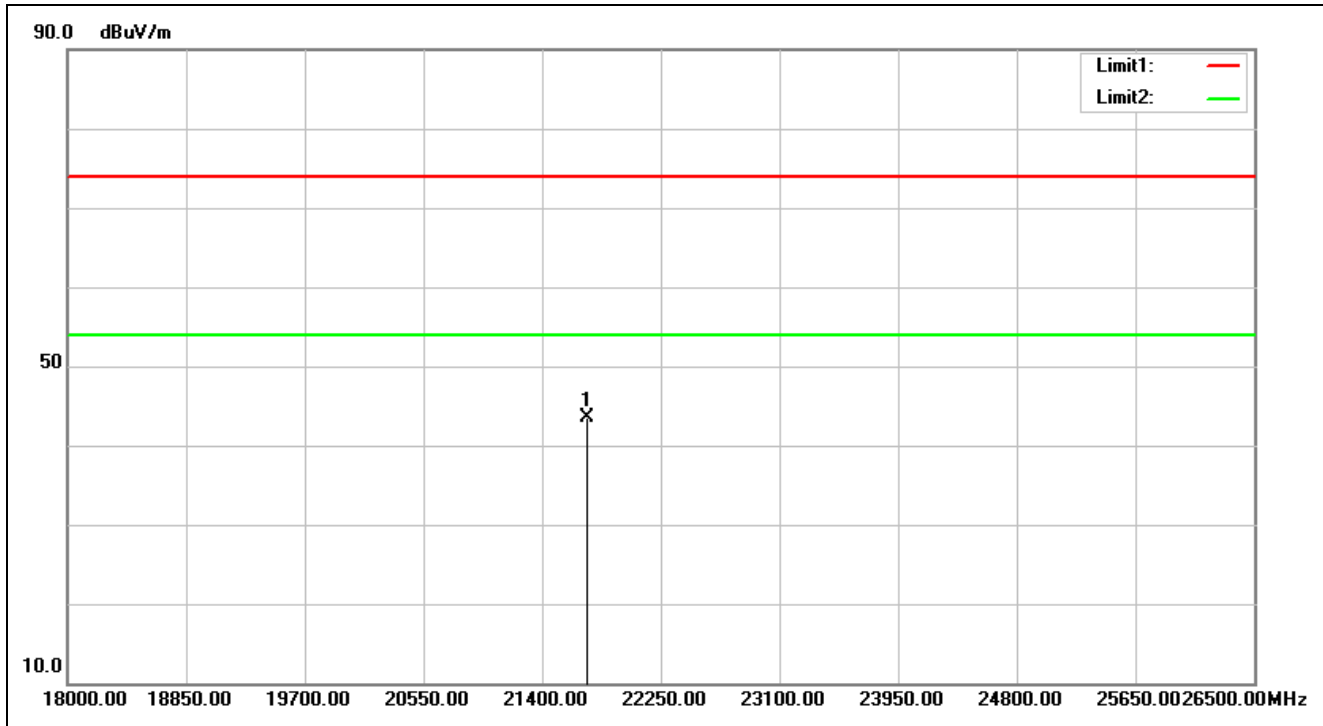
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 09:45:15
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2480-RX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	19921.000	4.20	39.13	43.33	74.00	-30.67	peak	100	174	



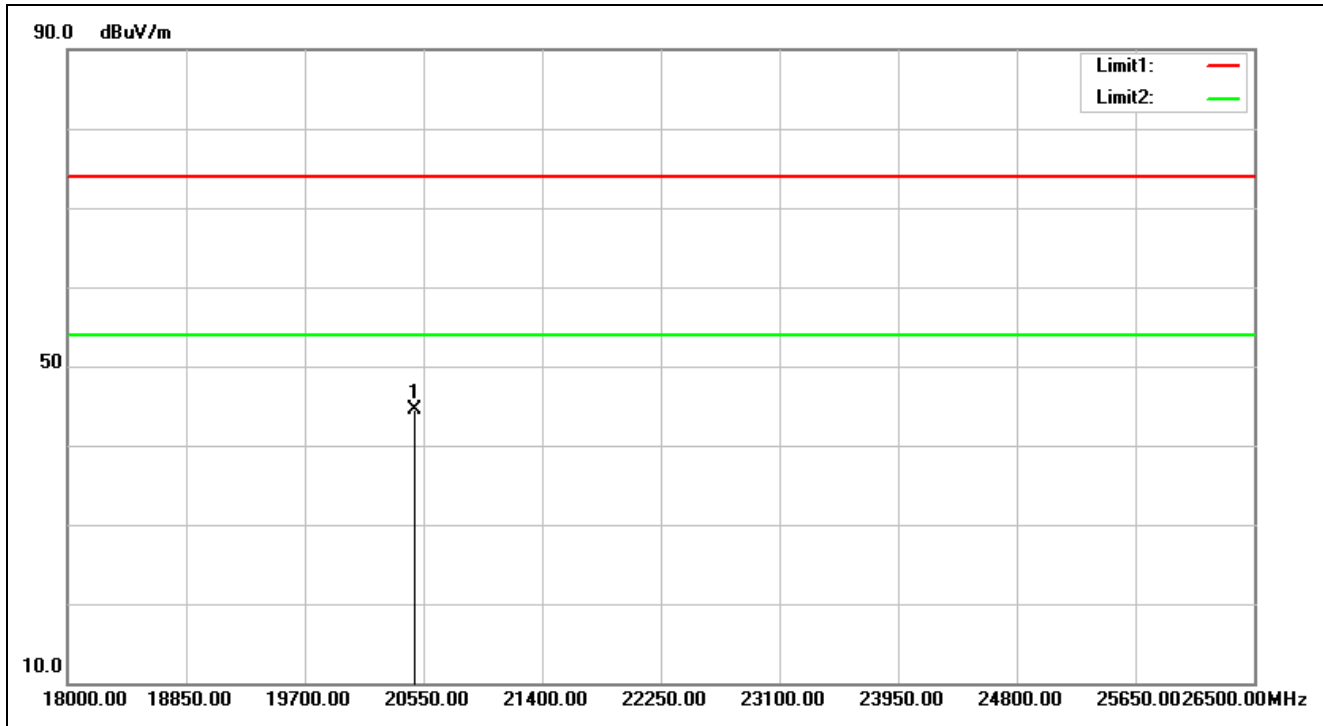
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 09:46:34
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2402-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20966.500	4.75	39.27	44.02	74.00	-29.98	peak	100	113	



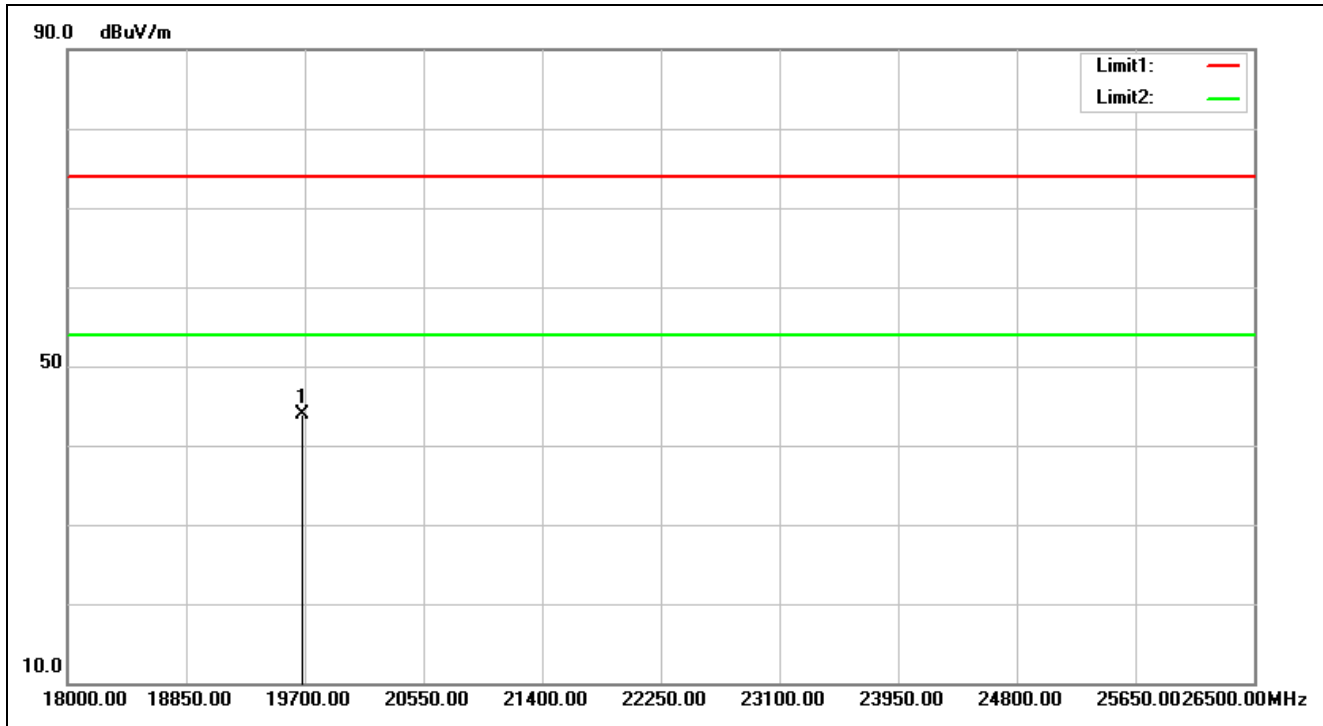
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 09:47:48
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2402-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21723.000	4.21	39.32	43.53	74.00	-30.47	peak	100	167	



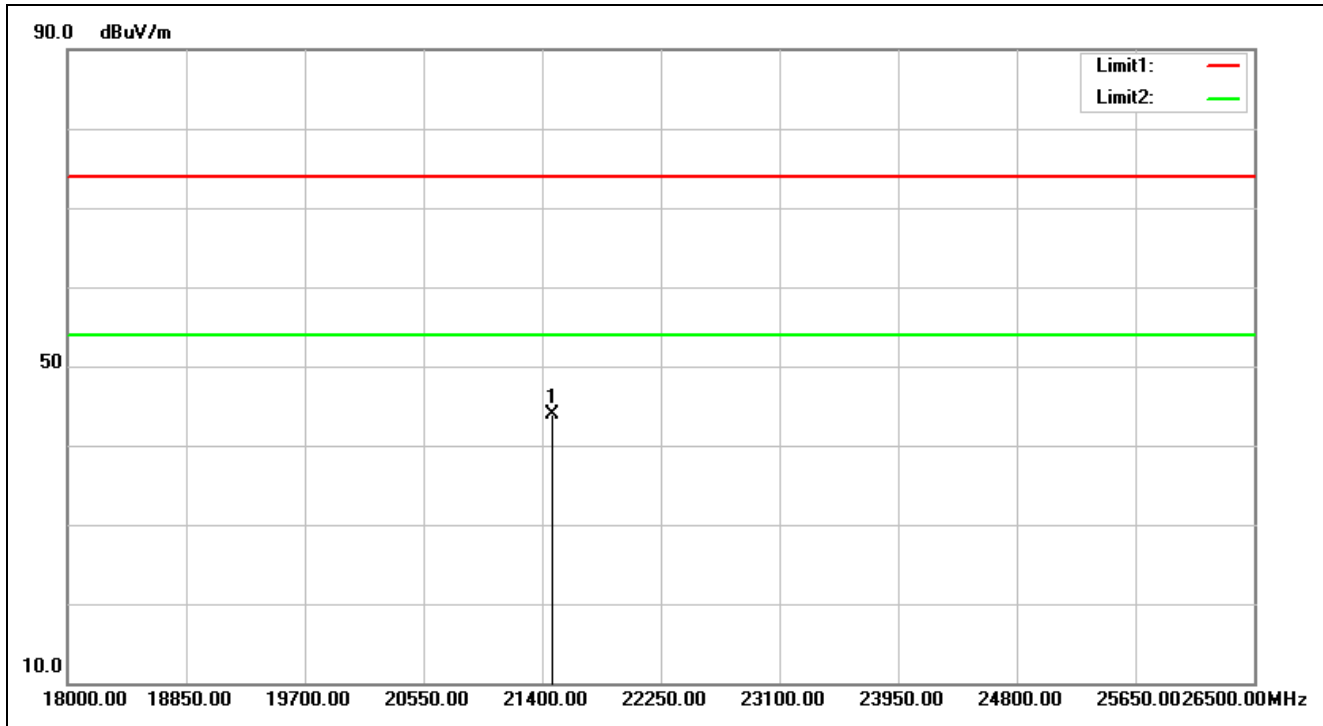
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 09:48:20
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2441-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20482.000	4.19	40.30	44.49	74.00	-29.51	peak	100	193	



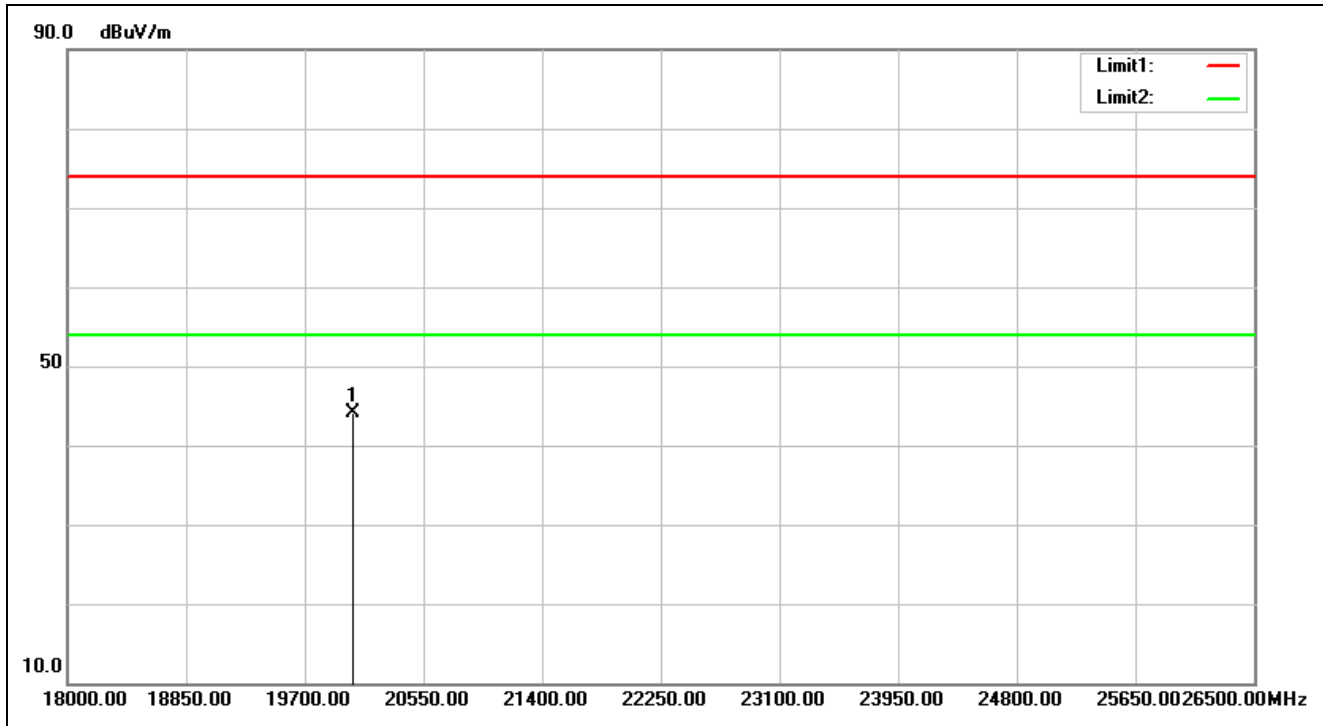
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 09:49:32
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2441-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	19683.000	3.98	40.00	43.98	74.00	-30.02	peak	100	174	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 09:50:30
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2480-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21468.000	4.36	39.46	43.82	74.00	-30.18	peak	100	157	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 09:51:42
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2480-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20048.500	4.26	39.89	44.15	74.00	-29.85	peak	100	133	

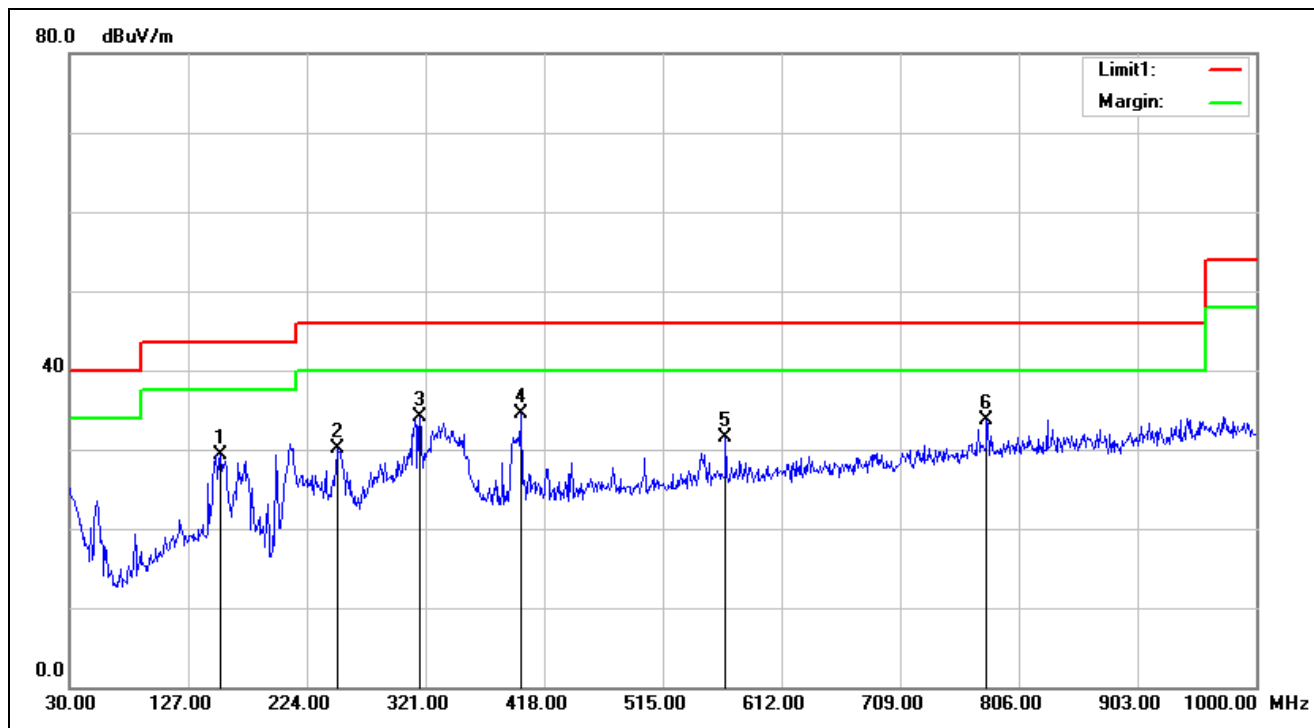
Spurious Emissions, TX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

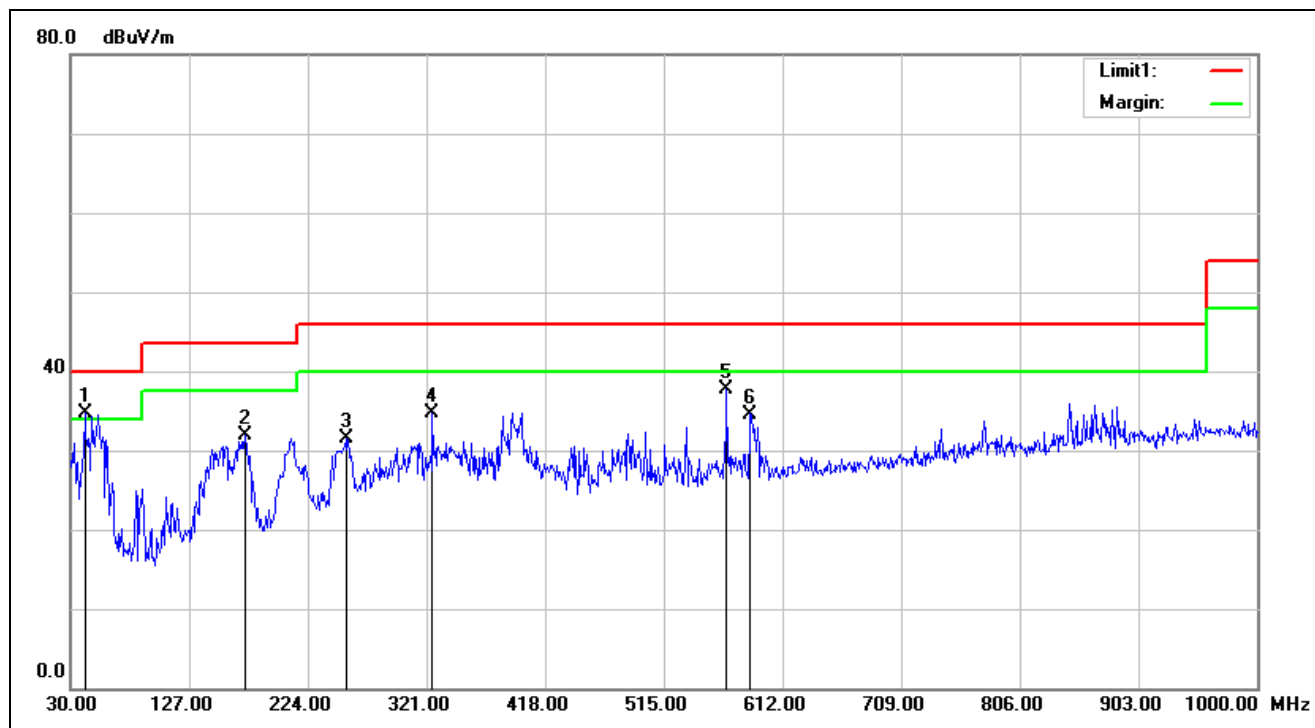
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Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 08:55:46
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	153.1900	-7.51	36.84	29.33	43.50	-14.17	QP	100	268	
2	249.2200	-5.78	35.88	30.10	46.00	-15.90	QP	100	118	
3	316.1500	-4.42	38.52	34.10	46.00	-11.90	QP	100	329	
4	399.5700	-2.33	36.93	34.60	46.00	-11.40	QP	100	241	
5	566.4100	0.07	31.38	31.45	46.00	-14.55	QP	100	137	
6	779.8099	2.86	30.85	33.71	46.00	-12.29	QP	100	126	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 08:56:50
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	41.6400	-6.75	41.38	34.63	40.00	-5.37	QP	100	278	
2	172.5900	-9.20	41.05	31.85	43.50	-11.65	QP	100	275	
3	255.0400	-5.26	36.81	31.55	46.00	-14.45	QP	100	309	
4	325.8500	-4.14	38.77	34.63	46.00	-11.37	QP	100	208	
5	566.4100	0.07	37.56	37.63	46.00	-8.37	QP	100	168	
6	585.8100	0.21	34.39	34.60	46.00	-11.40	QP	100	178	

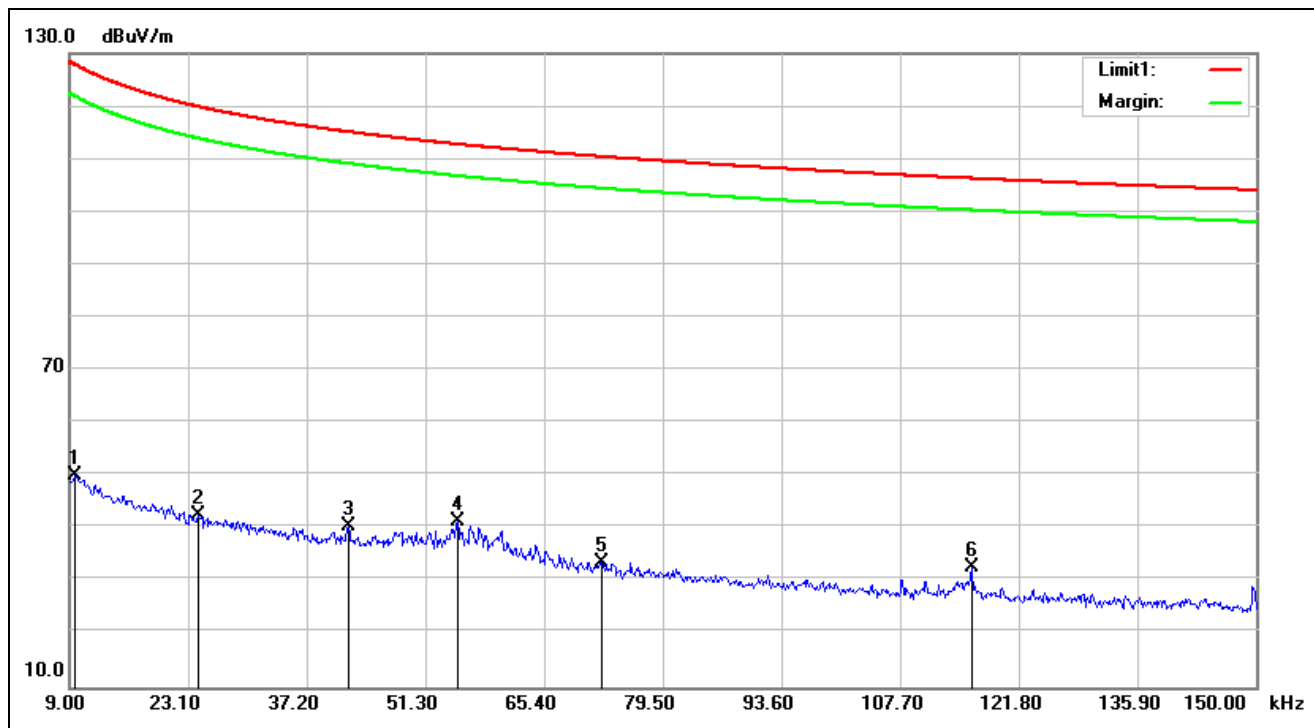
Spurious Emissions, TX Mode, 9K-30M



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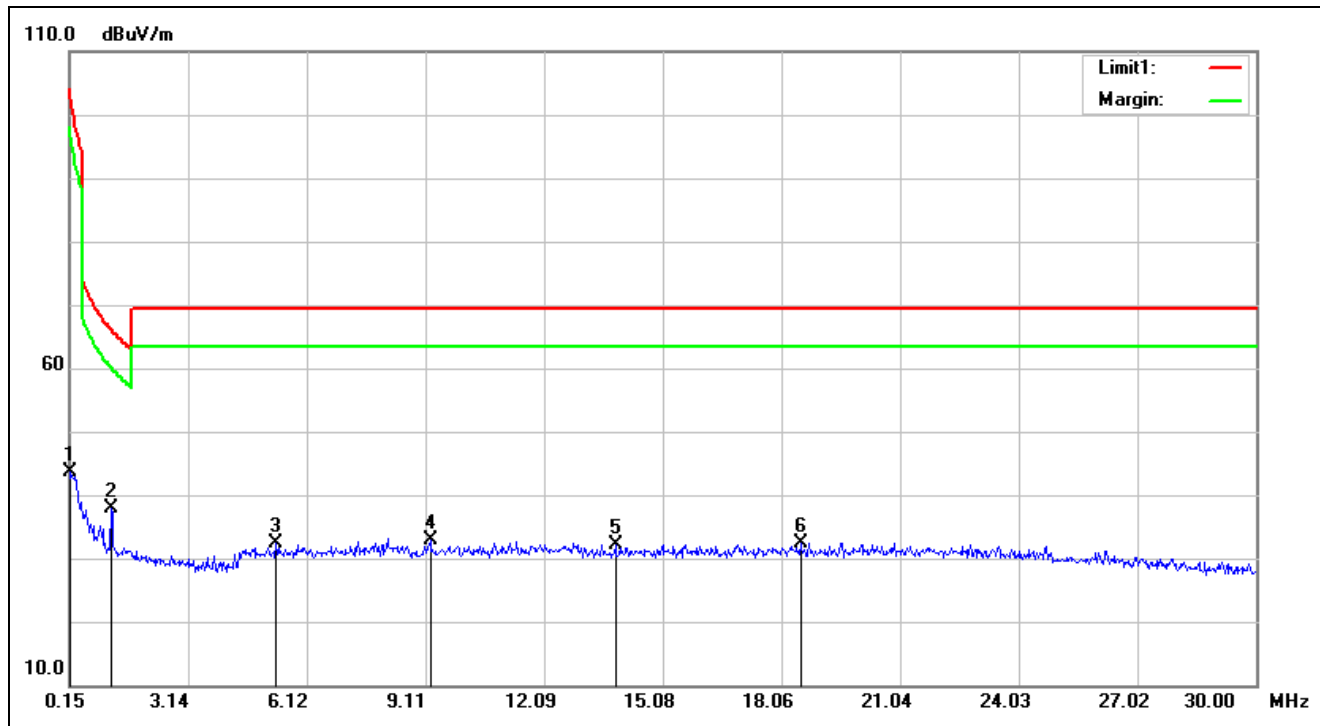
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Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/11/30 09:11:38
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0095	18.42	31.69	50.11	128.03	-77.92	QP	100	187	
2	0.0242	19.09	23.34	42.43	119.91	-77.48	QP	100	212	
3	0.0421	19.08	21.33	40.41	115.11	-74.70	QP	100	230	
4	0.0551	18.86	22.39	41.25	112.77	-71.52	QP	100	204	
5	0.0723	18.65	14.87	33.52	110.41	-76.89	QP	100	152	
6	0.1161	18.34	14.25	32.59	106.30	-73.71	QP	100	198	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/11/30 09:15:05
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-TX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1798	18.37	25.26	43.63	102.50	-58.87	QP	100	0	
2	1.1947	18.66	19.30	37.96	66.08	-28.12	QP	100	252	
3	5.3439	19.53	12.73	32.26	69.50	-37.24	QP	100	291	
4	9.2243	20.29	12.58	32.87	69.50	-36.63	QP	100	78	
5	13.8810	20.90	11.26	32.16	69.50	-37.34	QP	100	260	
6	18.5376	21.44	11.00	32.44	69.50	-37.06	QP	100	41	

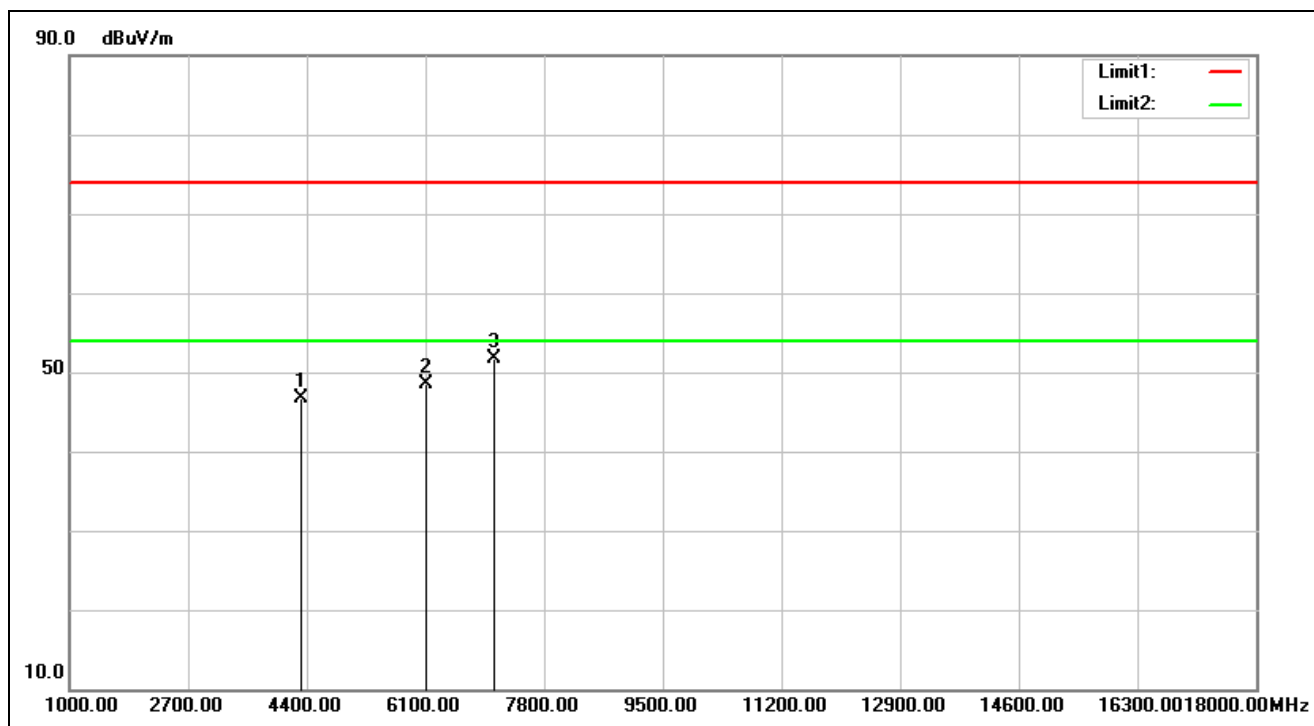
Spurious Emissions, RX Mode, 1-18G



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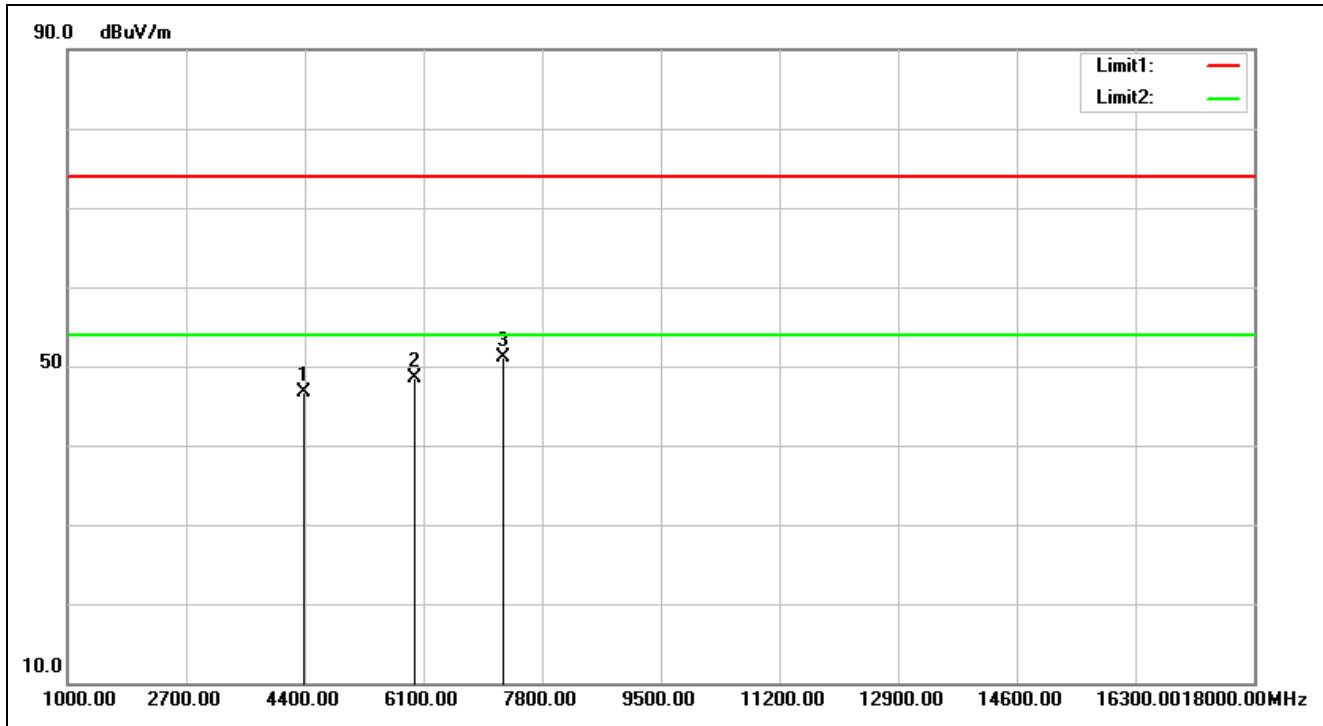
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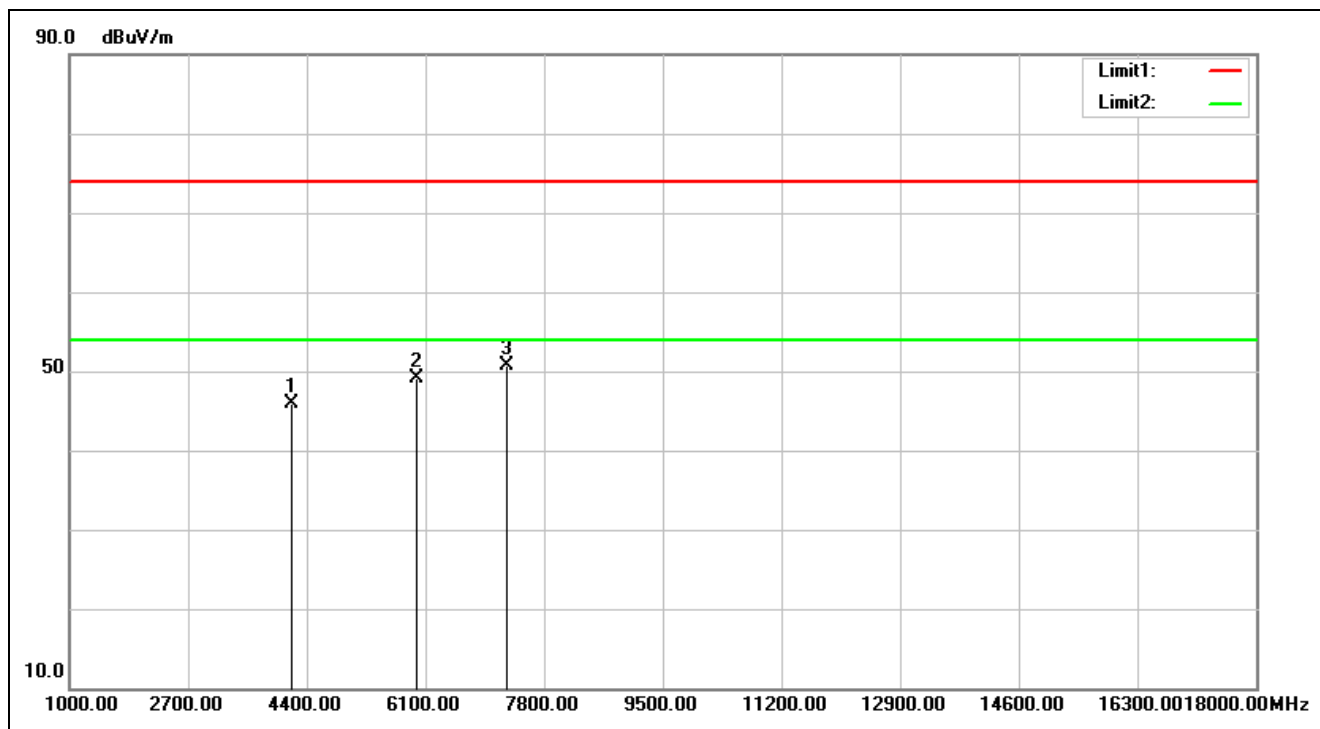
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 15:04:27
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-RX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4315.000	0.88	45.81	46.69	74.00	-27.31	peak	100	335	
2	6100.000	4.46	44.12	48.58	74.00	-25.42	peak	100	276	
3	7086.000	3.84	47.87	51.71	74.00	-22.29	peak	100	113	



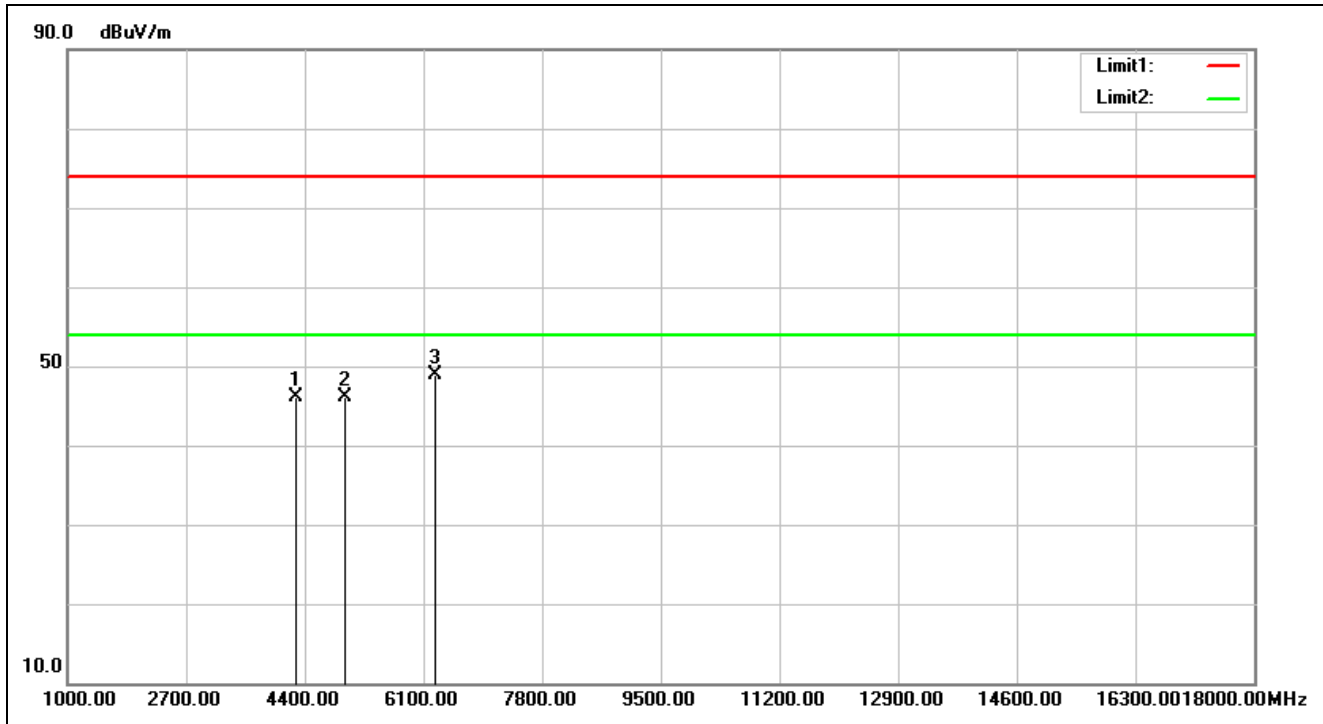
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 15:03:35
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-RX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4383.000	1.14	45.65	46.79	74.00	-27.21	peak	100	26	
2	5981.000	4.36	44.15	48.51	74.00	-25.49	peak	100	104	
3	7239.000	3.69	47.32	51.01	74.00	-22.99	peak	100	12	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 15:06:32
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2441-RX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4179.000	0.37	45.53	45.90	74.00	-28.10	peak	100	63	
2	5981.000	4.36	44.79	49.15	74.00	-24.85	peak	100	108	
3	7256.000	3.68	47.11	50.79	74.00	-23.21	peak	100	282	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 15:07:24
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2441-RX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4264.000	0.69	45.48	46.17	74.00	-27.83	peak	100	68	
2	4978.000	3.00	43.13	46.13	74.00	-27.87	peak	100	95	
3	6270.000	4.56	44.43	48.99	74.00	-25.01	peak	100	24	

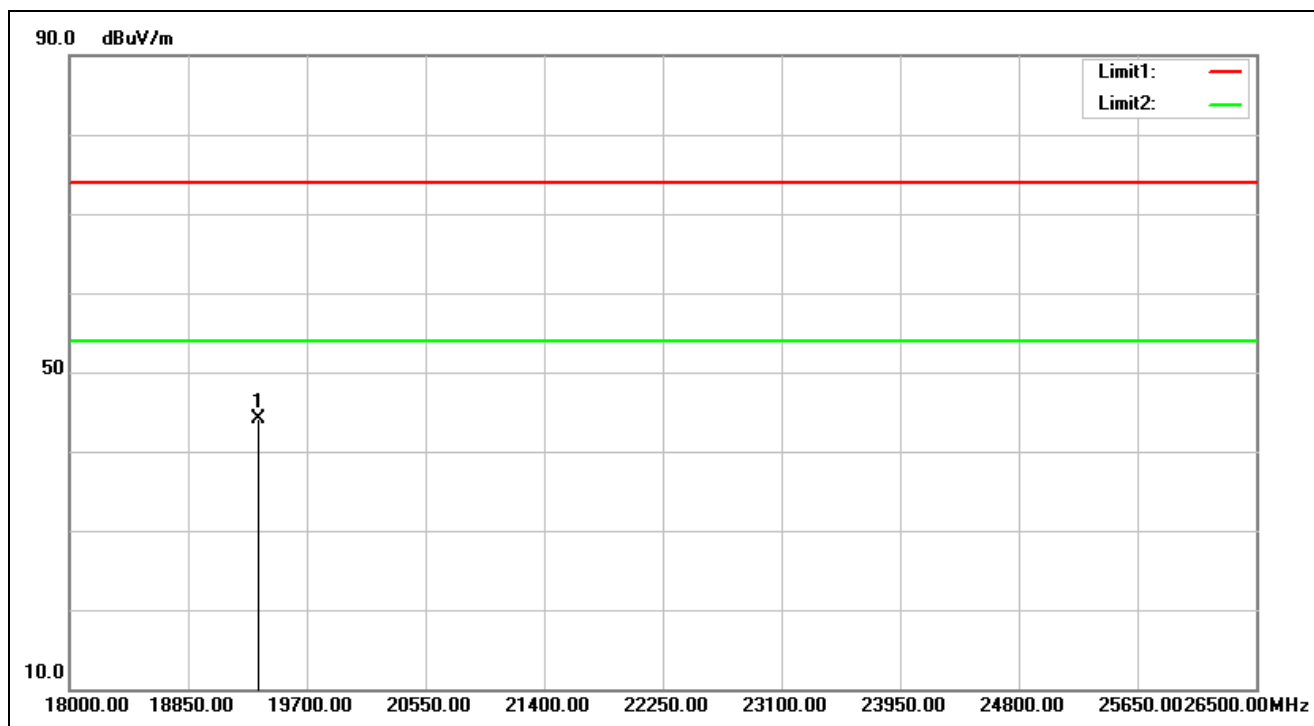
Spurious Emissions, RX Mode, 18-26.5G



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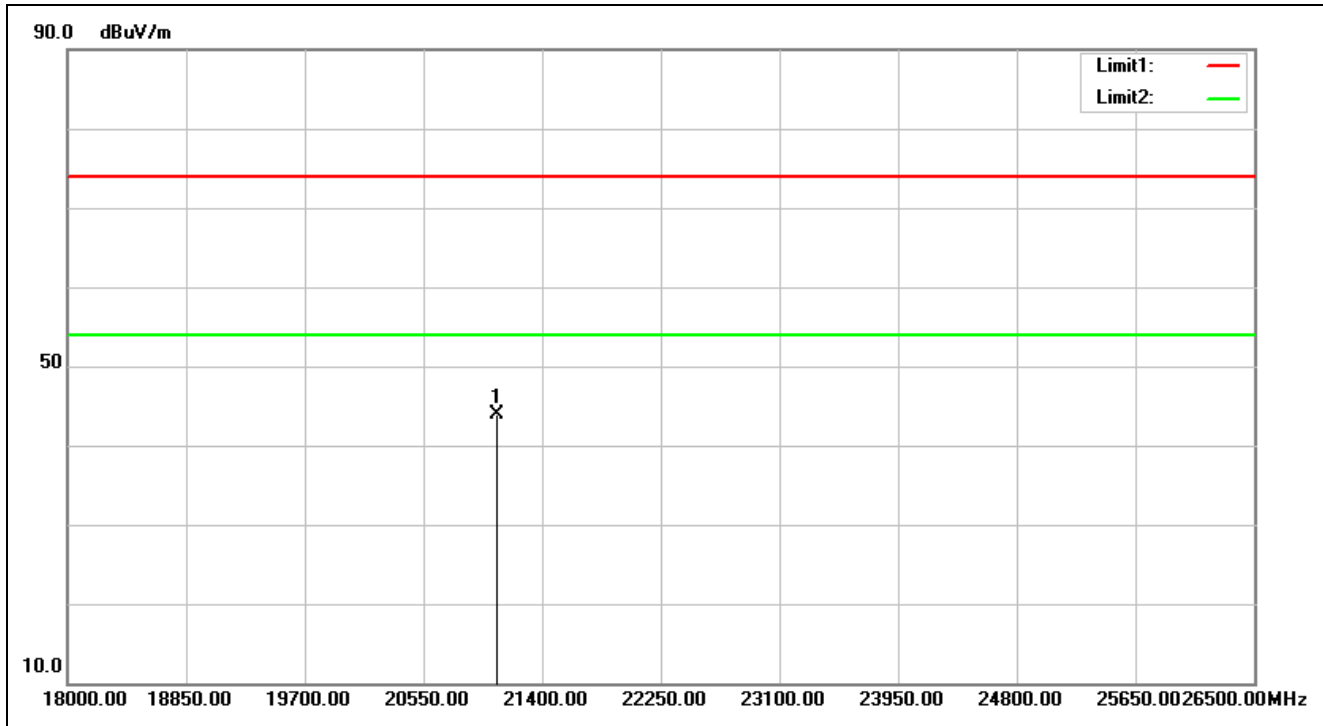
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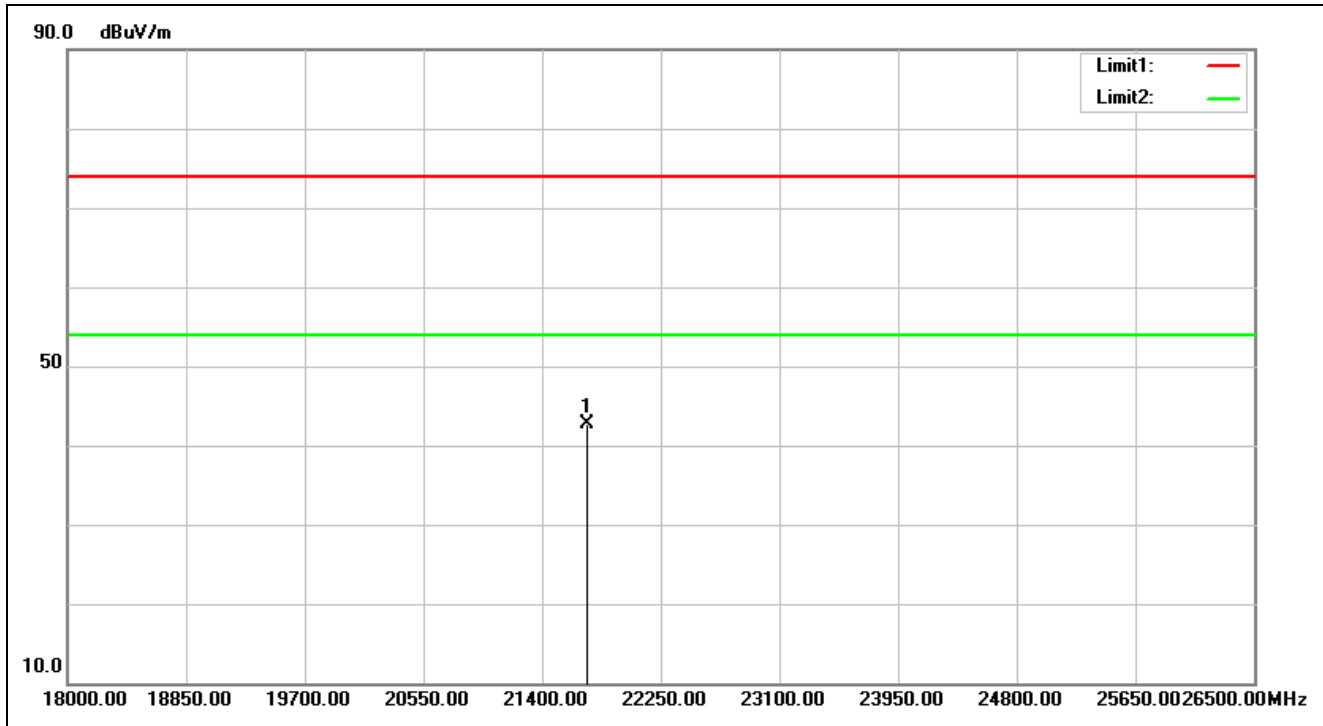
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 09:52:06
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-RX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	19351.500	3.99	40.06	44.05	74.00	-29.95	peak	100	198	



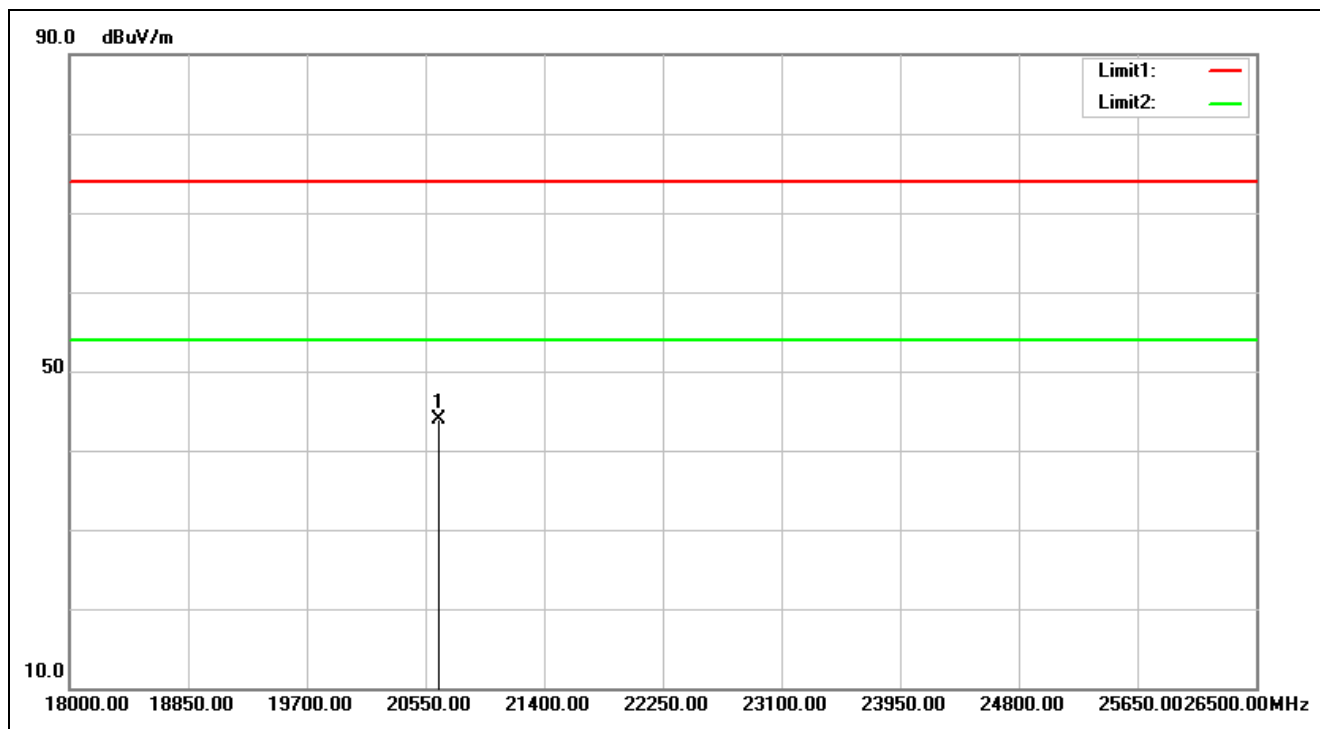
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 09:53:17
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-RX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21077.000	4.72	39.21	43.93	74.00	-30.07	peak	100	37	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 09:54:38
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2441-RX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21723.000	4.21	38.59	42.80	74.00	-31.20	peak	100	173	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 09:55:49
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2441-RX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20643.500	4.37	39.48	43.85	74.00	-30.15	peak	100	112	

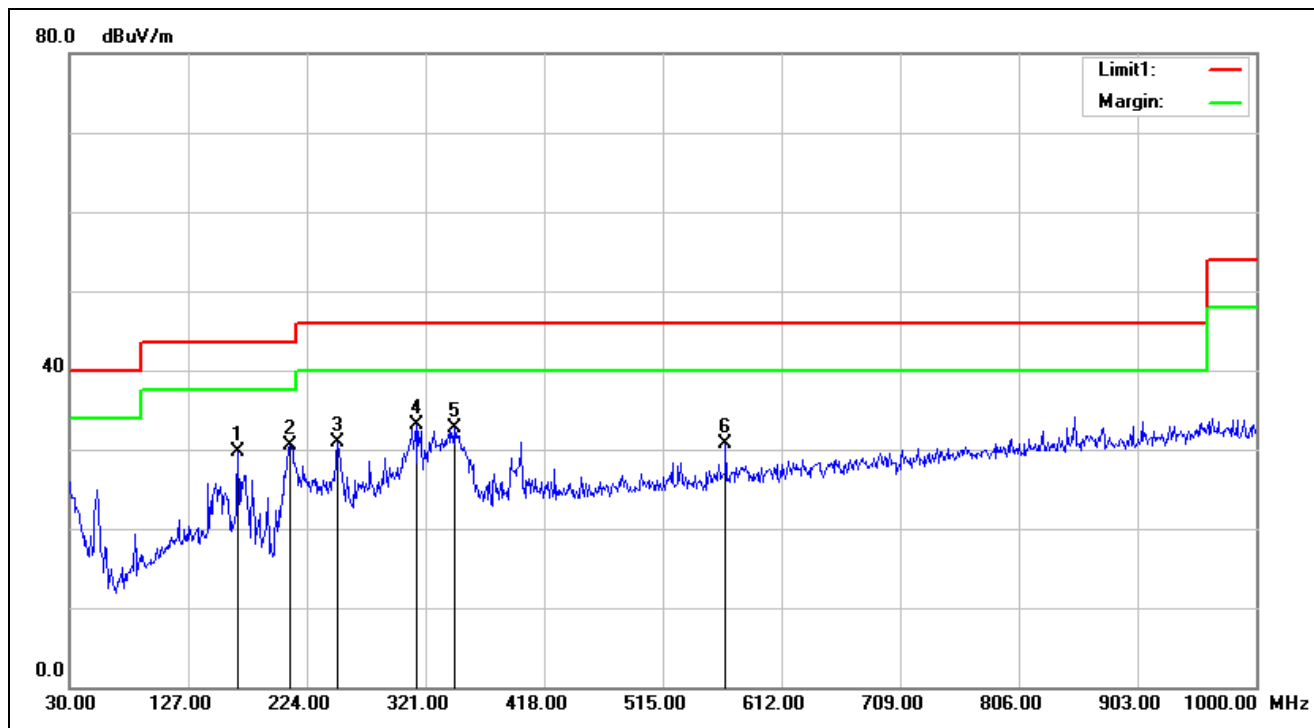
Spurious Emissions, RX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

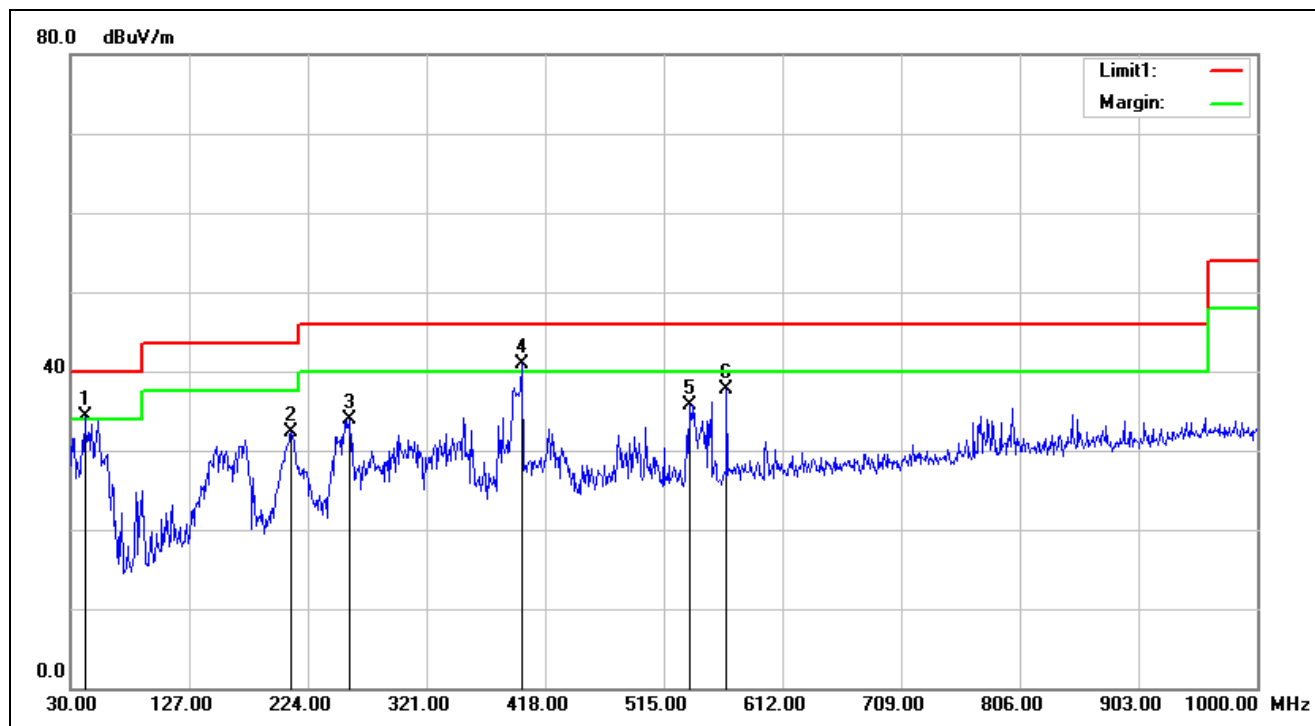
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Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 08:58:51
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-RX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	167.7400	-8.76	38.38	29.62	43.50	-13.88	QP	100	251	
2	210.4200	-8.58	39.06	30.48	43.50	-13.02	QP	100	278	
3	249.2200	-5.78	36.71	30.93	46.00	-15.07	QP	100	142	
4	313.2400	-4.46	37.56	33.10	46.00	-12.90	QP	100	337	
5	344.2799	-3.51	36.15	32.64	46.00	-13.36	QP	100	300	
6	566.4100	0.07	30.60	30.67	46.00	-15.33	QP	100	150	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 08:59:54
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-RX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	41.6400	-6.75	41.05	34.30	40.00	-5.70	QP	100	277	
2	210.4200	-8.58	40.92	32.34	43.50	-11.16	QP	100	196	
3	257.9500	-5.01	38.88	33.87	46.00	-12.13	QP	100	218	
4	398.6000	-2.37	43.29	40.92	46.00	-5.08	QP	100	207	
5	536.3400	-0.94	36.74	35.80	46.00	-10.20	QP	100	349	
6	566.4100	0.07	37.72	37.79	46.00	-8.21	QP	100	162	

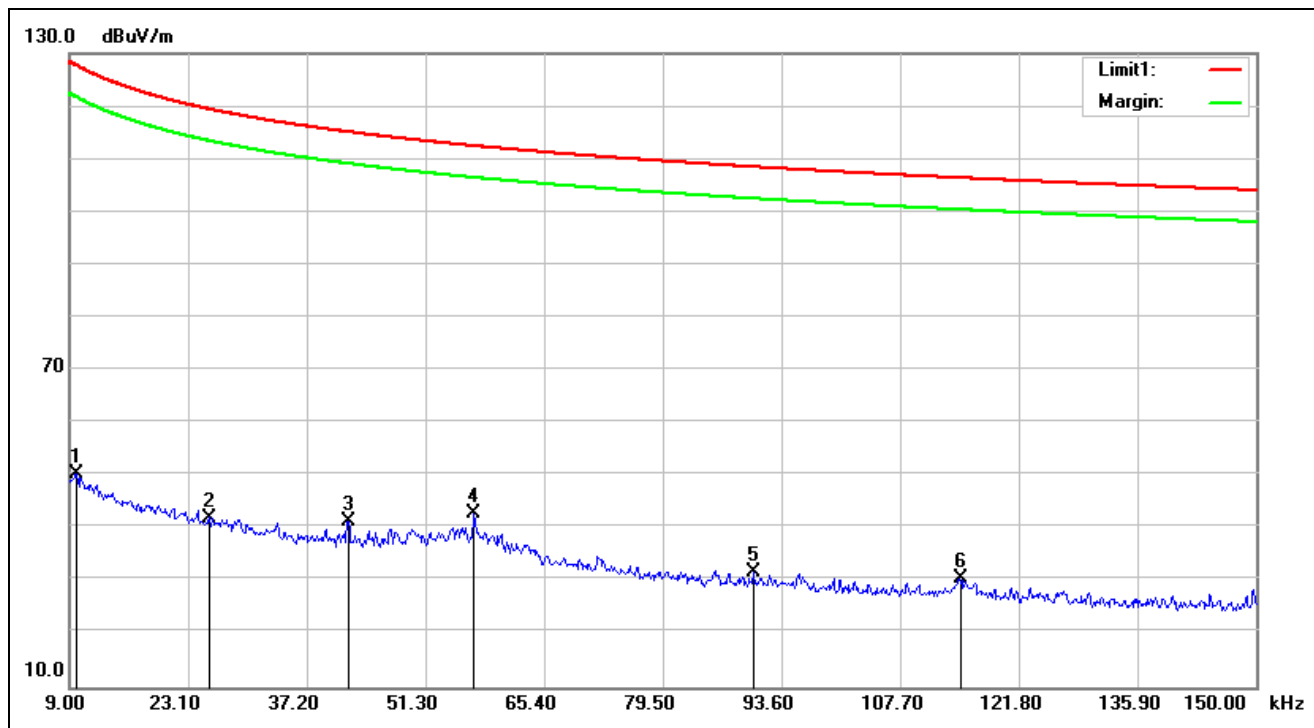
Spurious Emissions, RX Mode, 9K-30M



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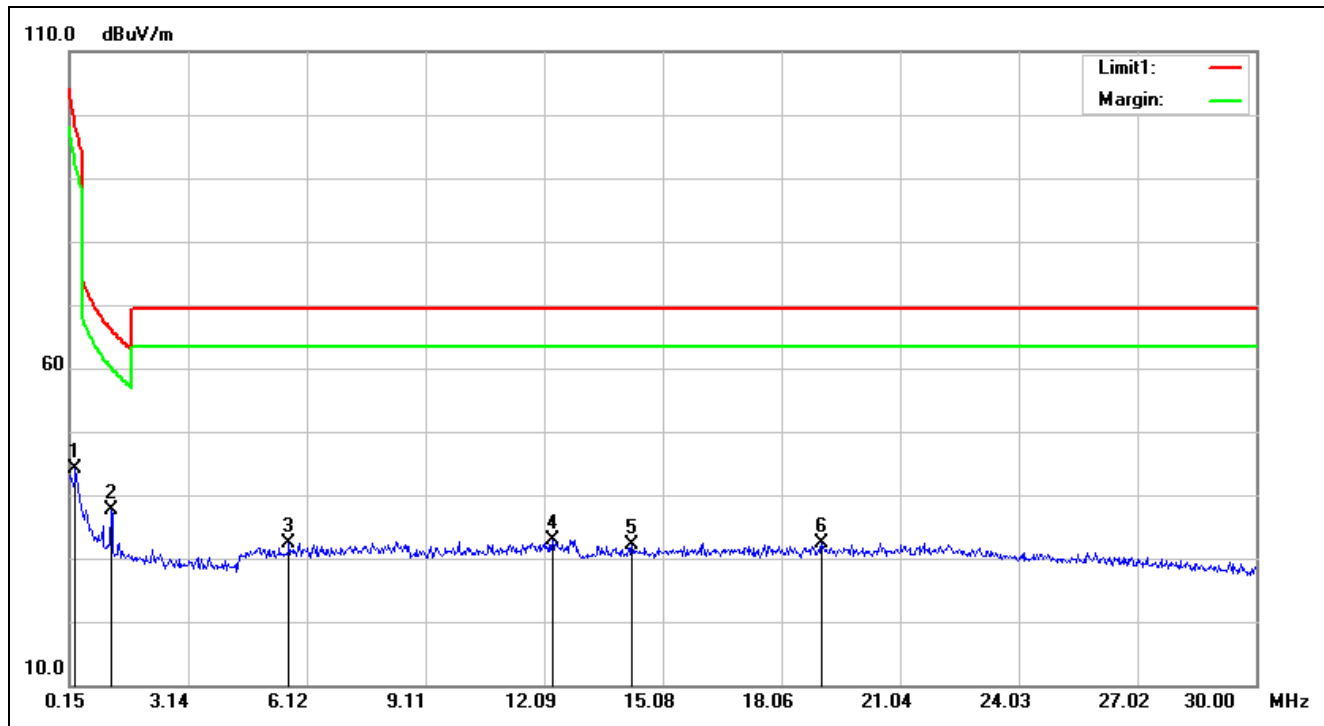
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Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/11/30 09:12:42
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-RX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0098	18.48	31.94	50.42	127.76	-77.34	QP	100	242	
2	0.0256	19.14	22.96	42.10	119.43	-77.33	QP	100	333	
3	0.0421	19.08	22.40	41.48	115.11	-73.63	QP	100	325	
4	0.0571	18.83	23.98	42.81	112.46	-69.65	QP	100	194	
5	0.0902	18.44	13.21	31.65	108.49	-76.84	QP	100	200	
6	0.1148	18.34	12.25	30.59	106.40	-75.81	QP	100	202	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/11/30 09:16:08
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-RX-PL0		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.2992	18.44	25.63	44.07	98.08	-54.01	QP	100	218	
2	1.1947	18.66	19.02	37.68	66.08	-28.40	QP	100	154	
3	5.6722	19.60	12.79	32.39	69.50	-37.11	QP	100	234	
4	12.2989	20.70	12.25	32.95	69.50	-36.55	QP	100	354	
5	14.2989	20.94	11.09	32.03	69.50	-37.47	QP	100	274	
6	19.0749	21.50	10.78	32.28	69.50	-37.22	QP	100	338	

Module without Shielded Case, Class 2

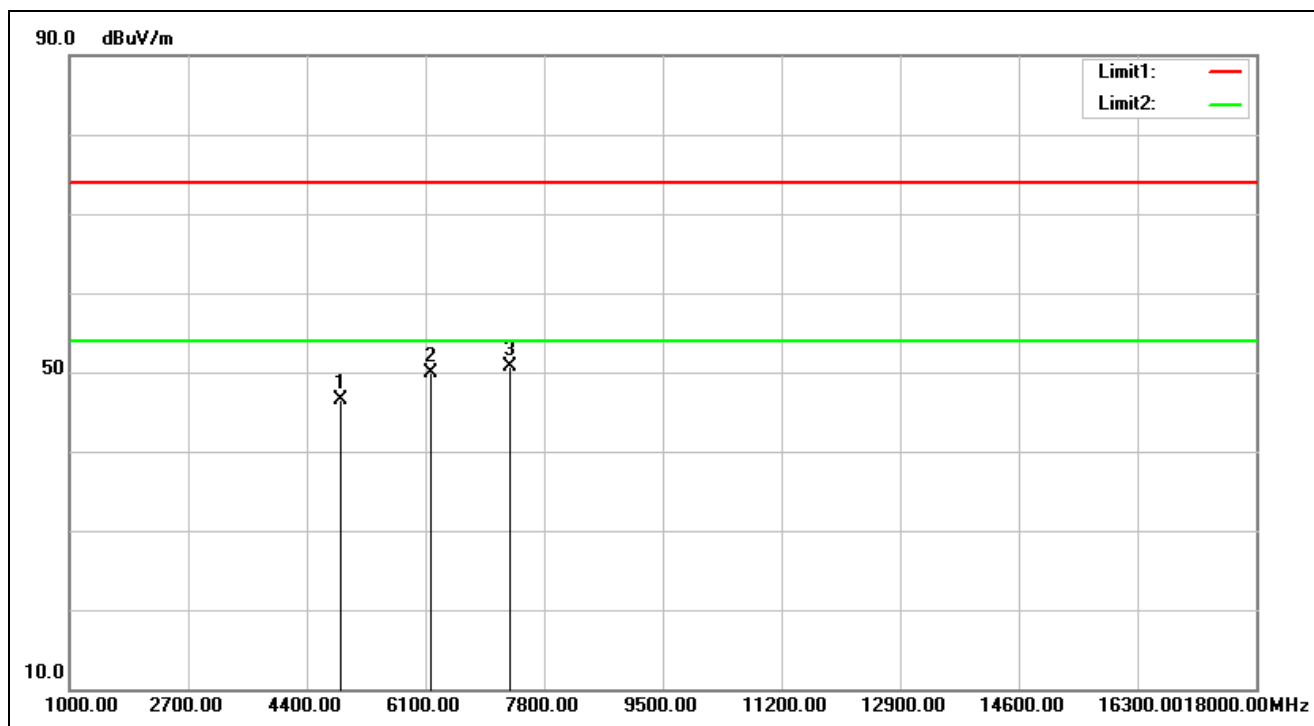
Spurious Emissions, TX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

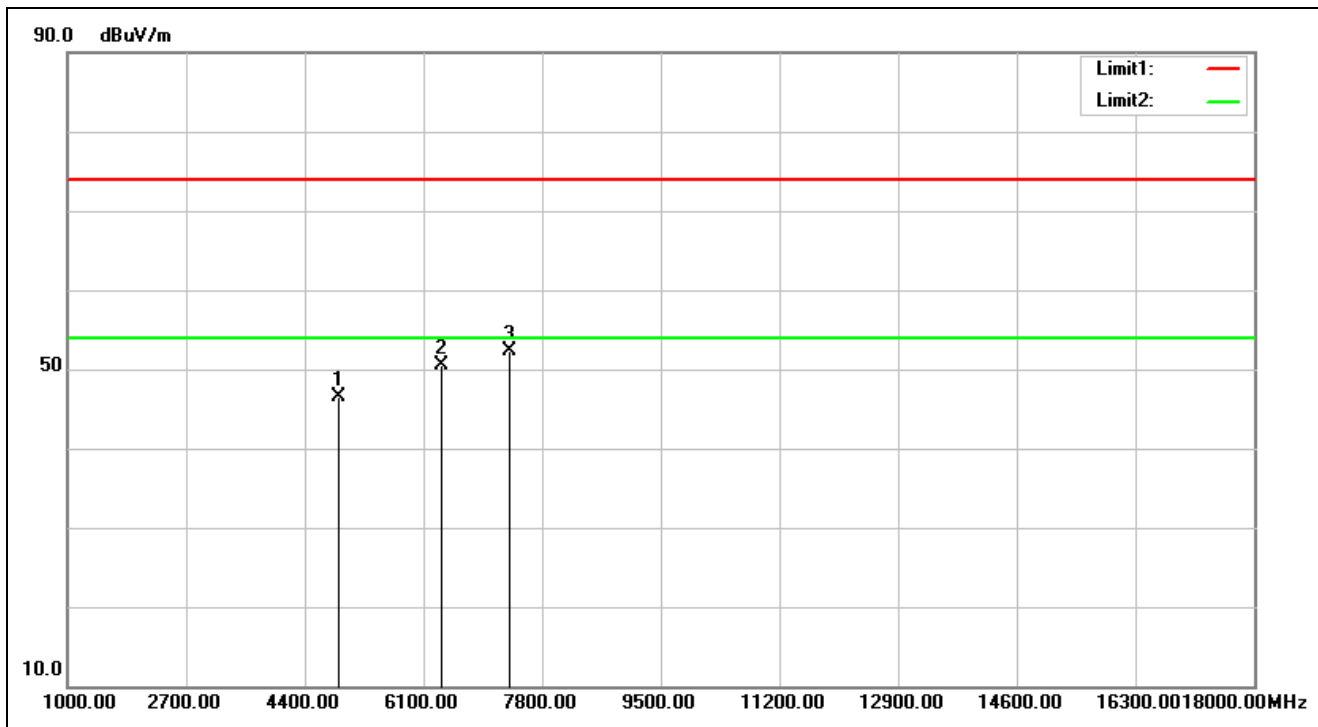
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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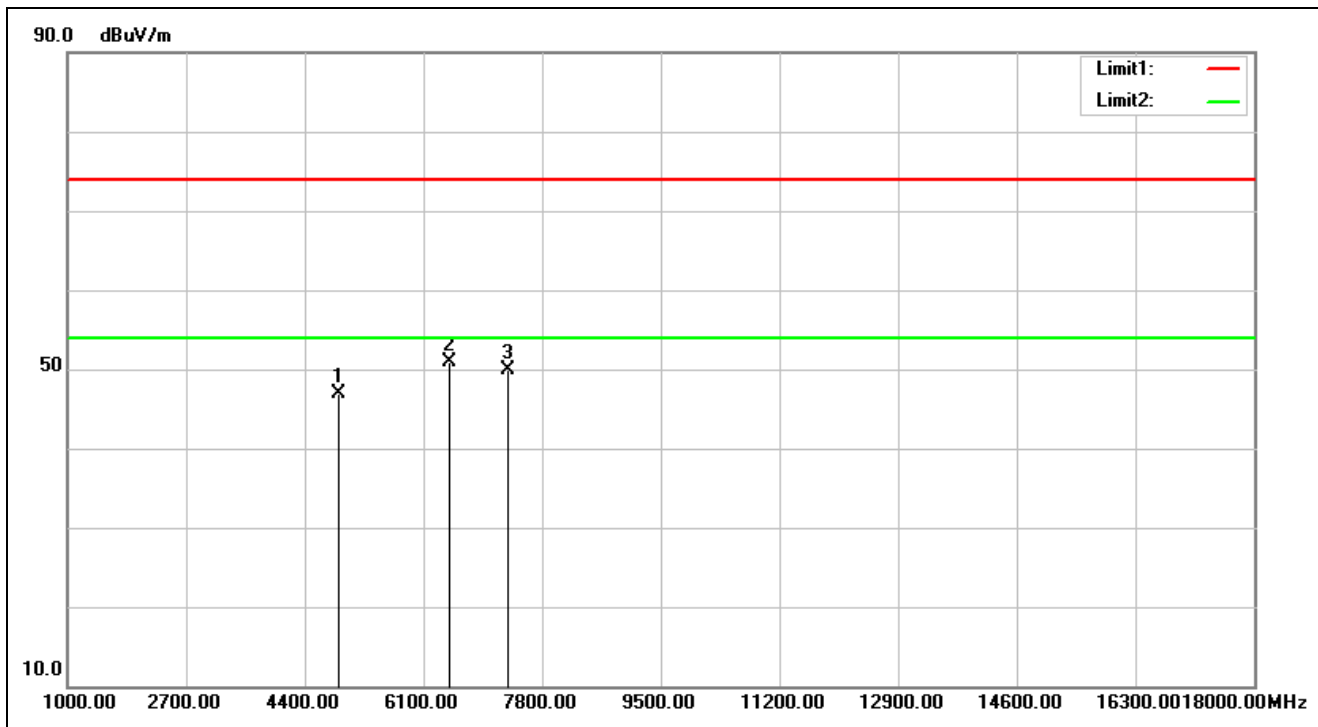
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 15:16:28
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-TX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	42.89	46.50	74.00	-27.50	peak	100	166	
2	6185.000	5.55	44.36	49.91	74.00	-24.09	peak	100	108	
3	7323.000	4.66	46.11	50.77	74.00	-23.23	peak	100	248	



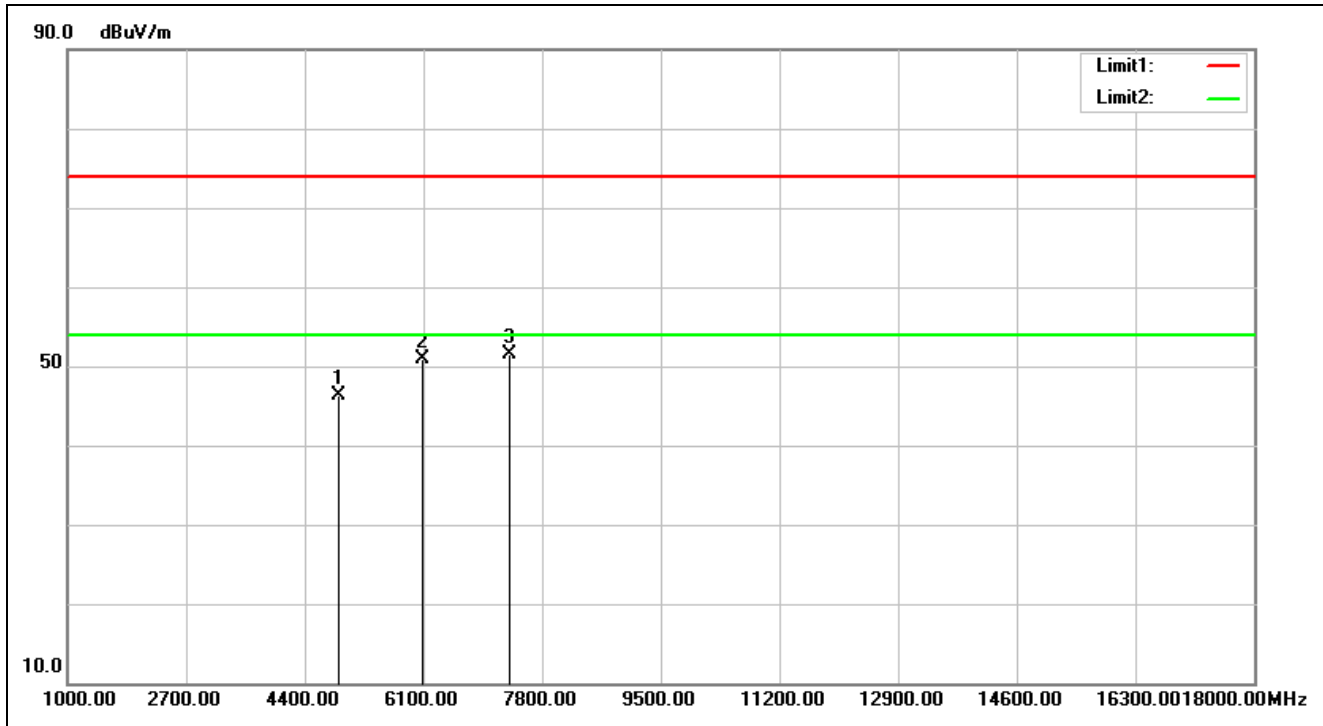
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 15:17:20
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-TX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	42.89	46.50	74.00	-27.50	peak	100	109	
2	6355.000	5.66	44.76	50.42	74.00	-23.58	peak	100	61	
3	7323.000	4.66	46.67	51.33	74.00	-22.67	peak	100	243	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 15:19:19
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2441-TX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	43.25	46.86	74.00	-27.14	peak	100	166	
2	6474.000	5.72	45.09	50.81	74.00	-23.19	peak	100	217	
3	7323.000	4.66	45.31	49.97	74.00	-24.03	peak	100	145	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 15:20:11
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2441-TX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	3.61	42.62	46.23	74.00	-27.77	peak	100	113	
2	6083.000	5.49	45.34	50.83	74.00	-23.17	peak	100	360	
3	7323.000	4.66	46.78	51.44	74.00	-22.56	peak	100	291	

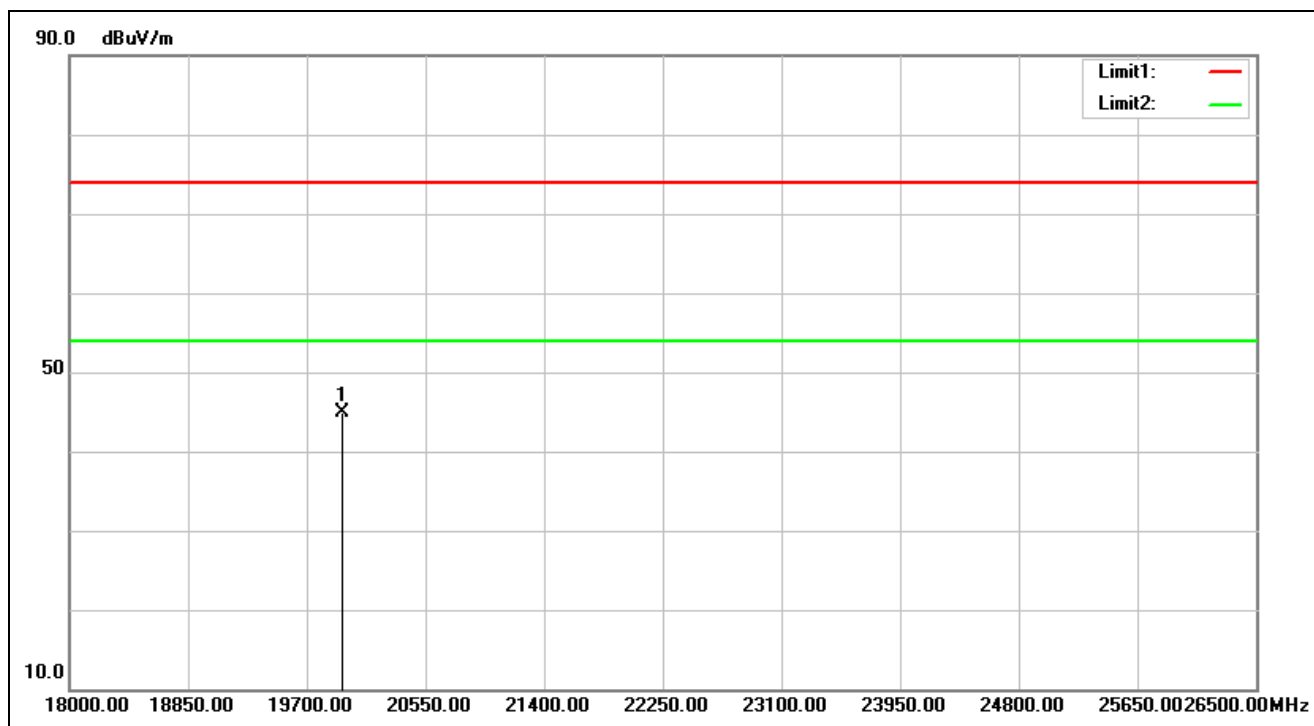
Spurious Emissions, TX Mode, 18-26.5G



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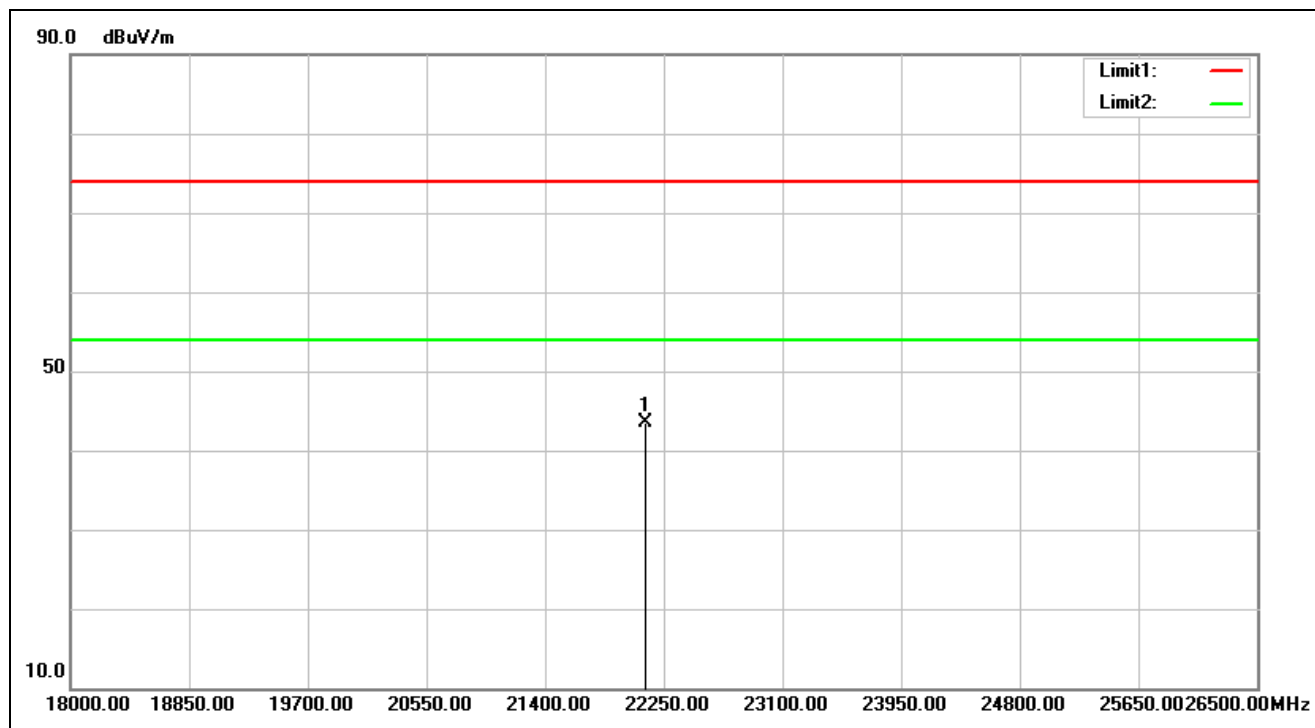
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



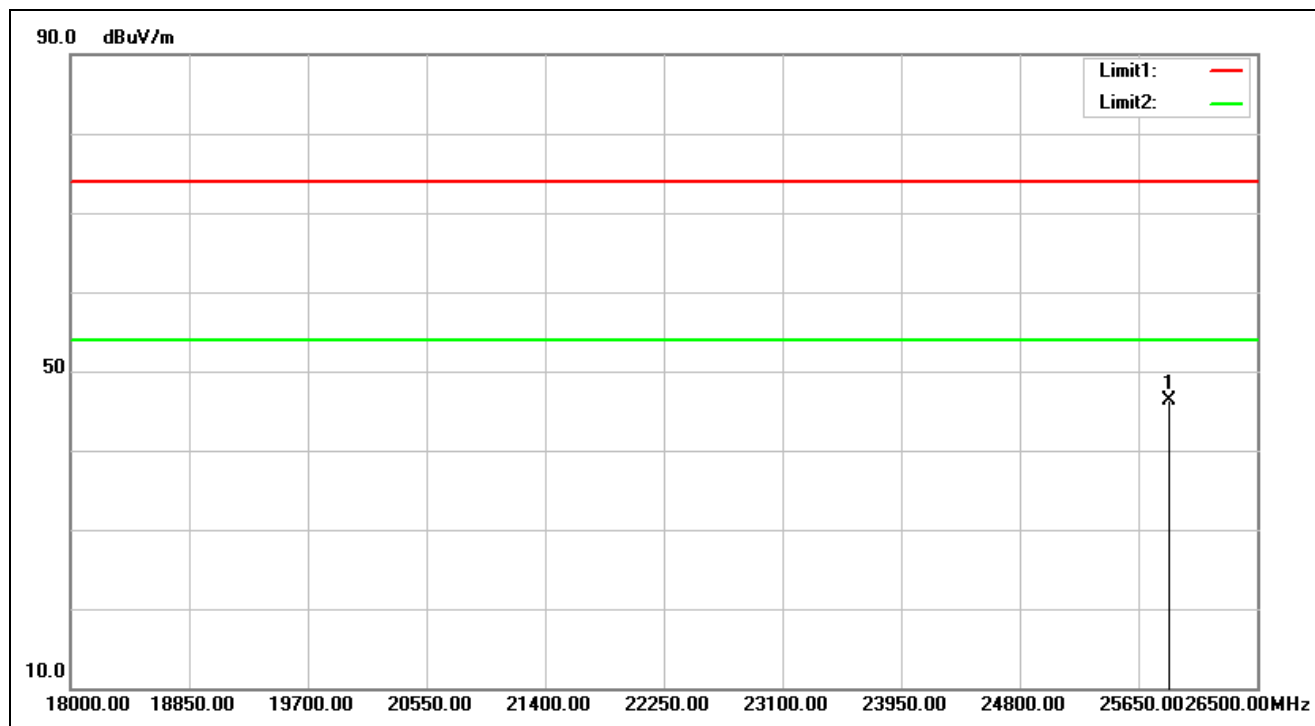
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/12/3 11:23:30
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	22.4(°C)/57%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Kevin Kuo
Test Mode:	1DH5-2441-TX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	19955.000	4.23	40.63	44.86	74.00	-29.14	peak	100	271	



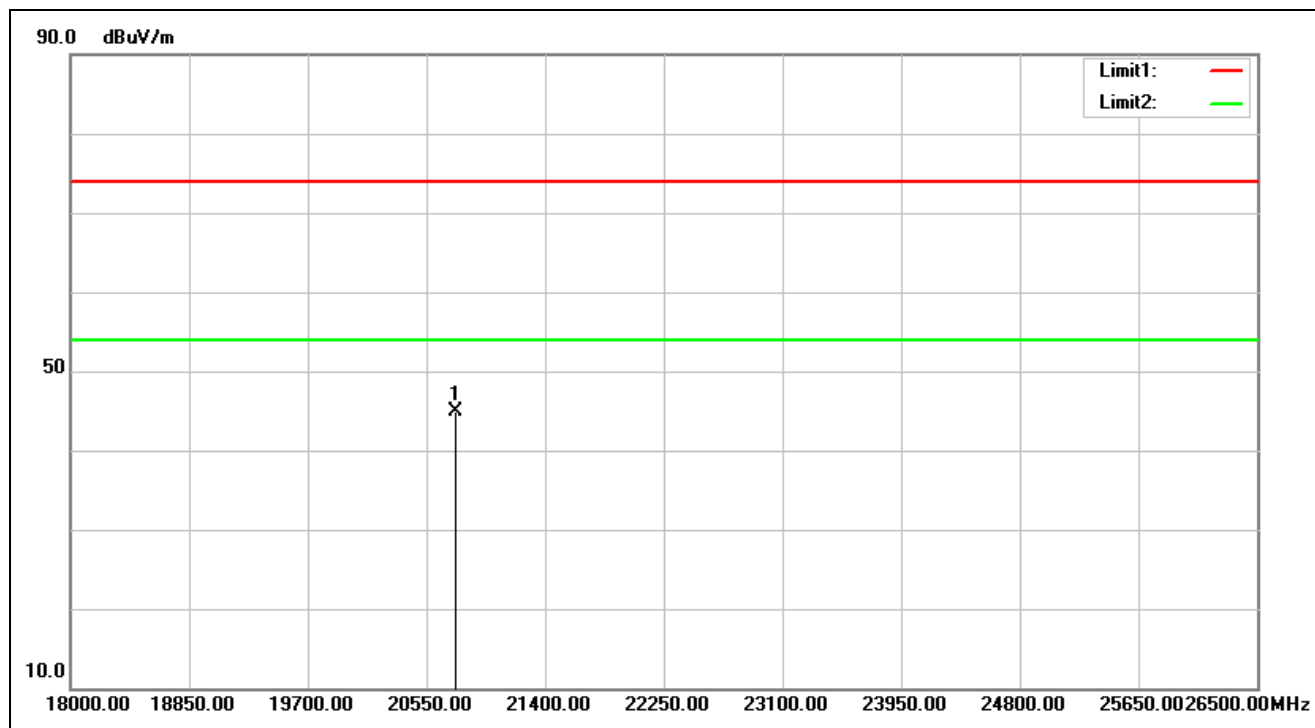
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/12/3 11:24:32
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	22.4(°C)/57%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Kevin Kuo
Test Mode:	1DH5-2441-TX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22122.500	4.21	39.34	43.55	74.00	-30.45	peak	100	205	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/12/3 11:31:27
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	22.4(°C)/57%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Kevin Kuo
Test Mode:	3DH5-2441-TX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	25871.000	5.71	40.67	46.38	74.00	-27.62	peak	100	232	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/12/3 11:32:29
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	22.4(°C)/57%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Kevin Kuo
Test Mode:	3DH5-2441-TX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20754.000	4.49	40.48	44.97	74.00	-29.03	peak	100	258	

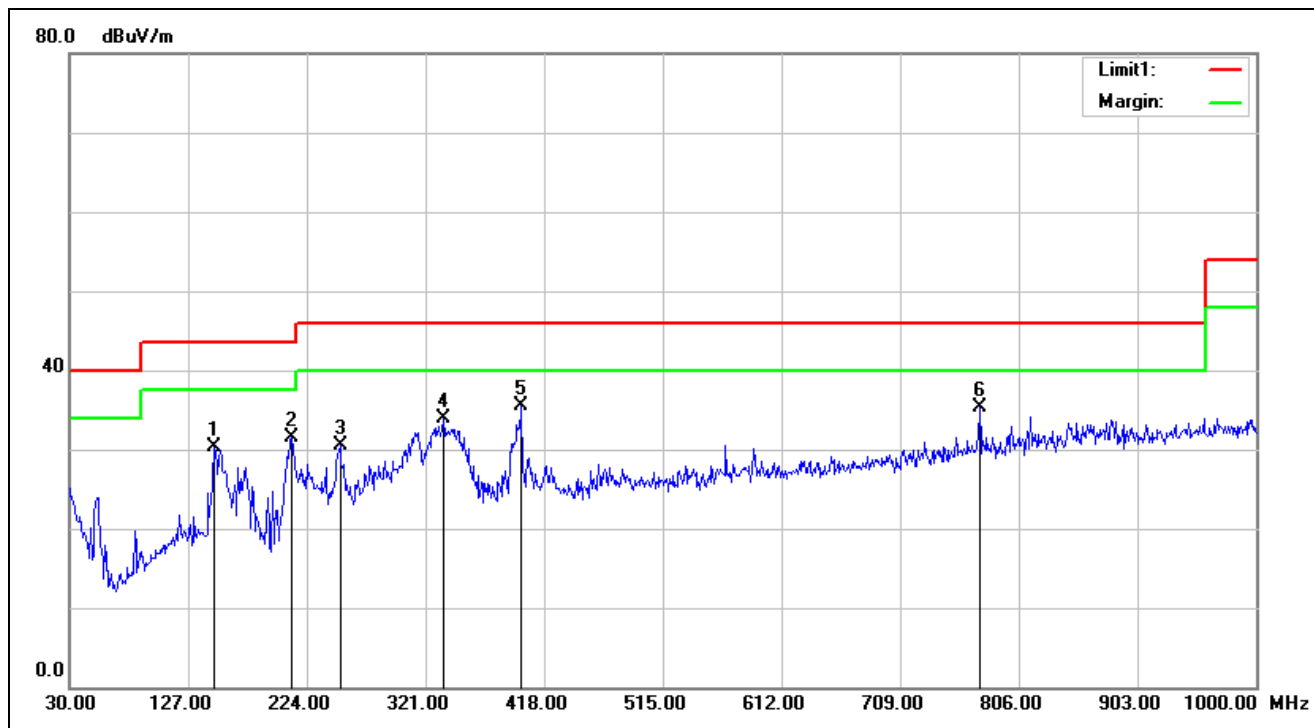
Spurious Emissions, TX Mode, 30M-1G



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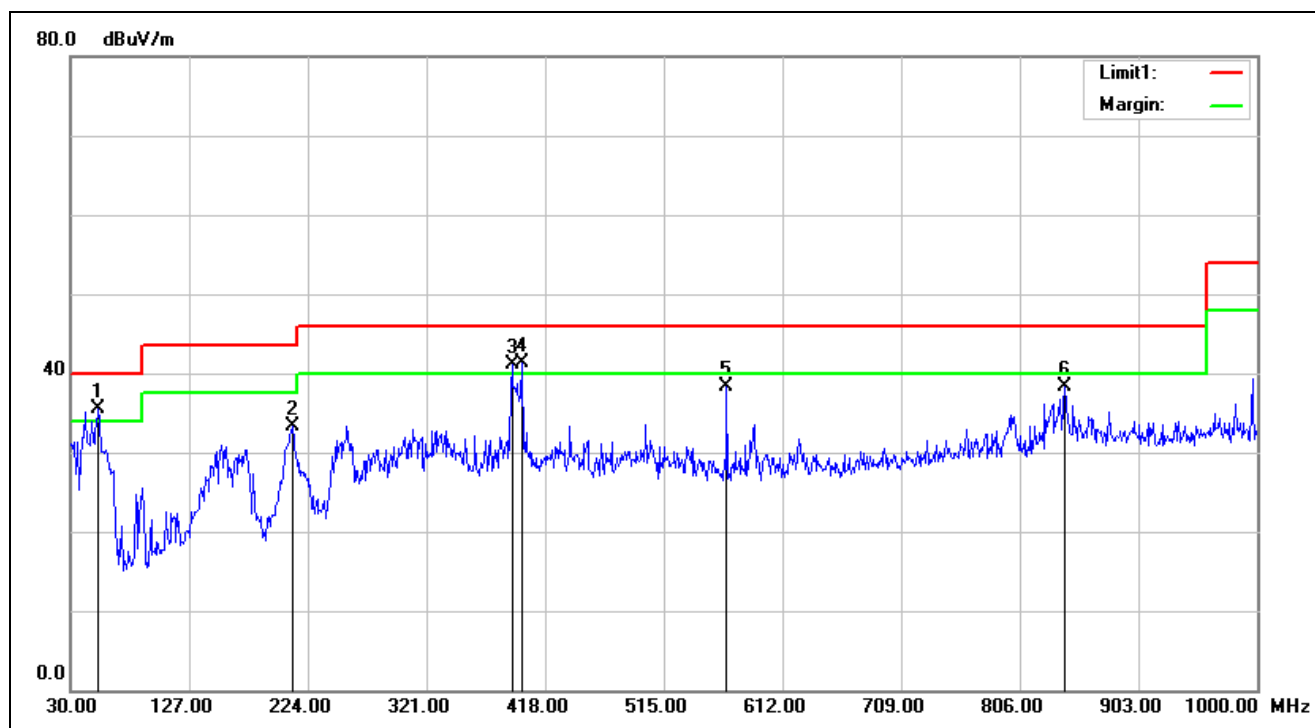
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 08:45:53
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-TX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	148.3400	-7.23	37.45	30.22	43.50	-13.28	QP	100	97	
2	211.3900	-8.58	40.13	31.55	43.50	-11.95	QP	100	297	
3	251.1600	-5.59	36.01	30.42	46.00	-15.58	QP	100	145	
4	335.5500	-3.73	37.59	33.86	46.00	-12.14	QP	100	150	
5	399.5700	-2.33	37.89	35.56	46.00	-10.44	QP	100	252	
6	773.9900	2.75	32.57	35.32	46.00	-10.68	QP	100	137	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 08:46:56
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-TX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	52.3100	-12.12	47.62	35.50	40.00	-4.50	QP	100	269	
2	211.3900	-8.58	41.80	33.22	43.50	-10.28	QP	100	189	
3	390.8400	-2.72	43.76	41.04	46.00	-4.96	QP	100	229	
4	398.6000	-2.37	43.60	41.23	46.00	-4.77	QP	100	202	
5	566.4100	0.07	38.14	38.21	46.00	-7.79	QP	100	156	
6	842.8600	3.80	34.60	38.40	46.00	-7.60	QP	100	285	

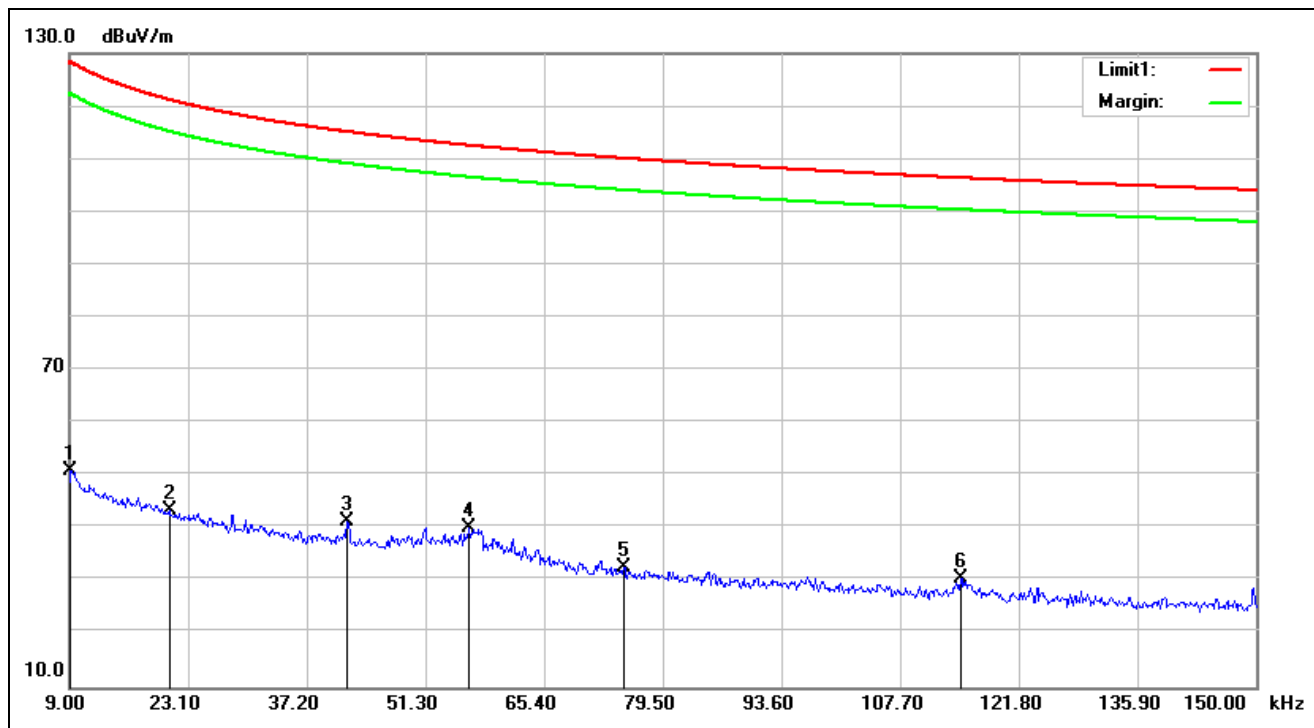
Spurious Emissions, TX Mode, 9K-30M



TUV Rheinland Taiwan Ltd.

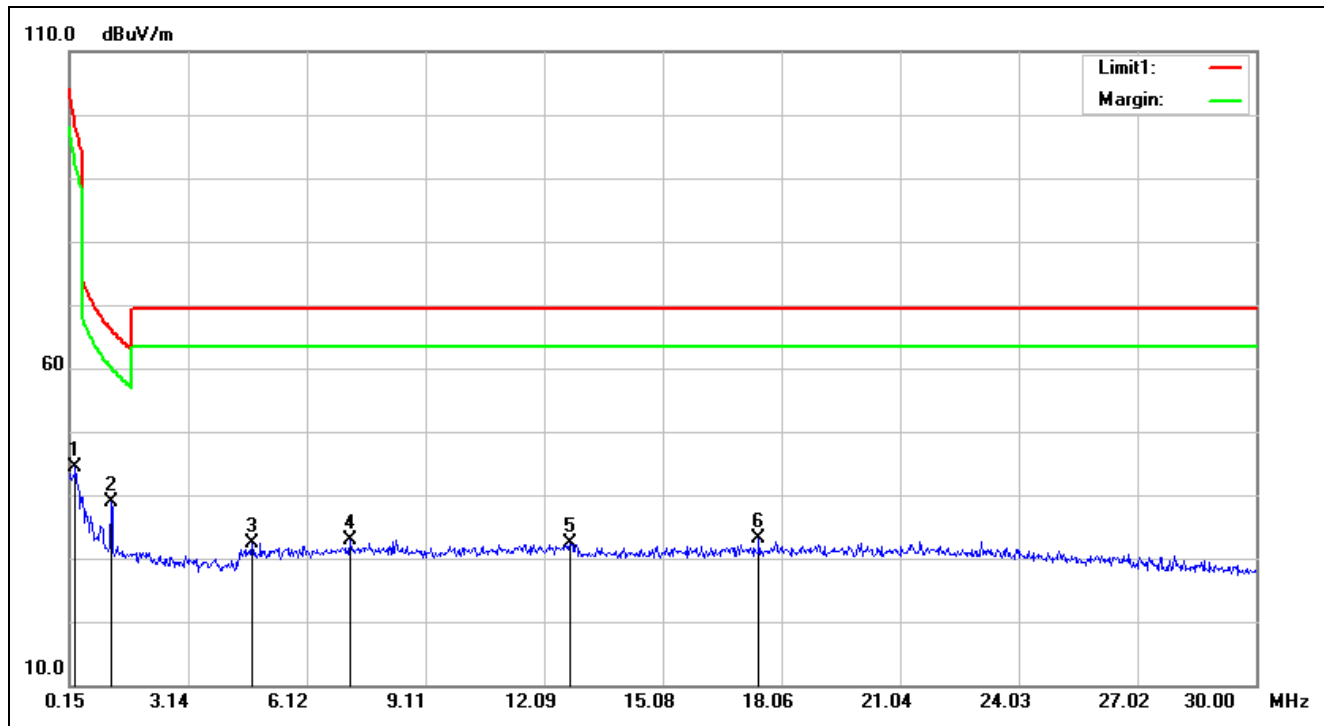
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Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/11/30 09:07:47
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-TX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0091	18.34	32.52	50.86	128.40	-77.54	QP	100	249	
2	0.0208	18.95	24.38	43.33	121.23	-77.90	QP	100	147	
3	0.0419	19.08	22.24	41.32	115.15	-73.83	QP	100	209	
4	0.0565	18.84	21.20	40.04	112.55	-72.51	QP	100	190	
5	0.0748	18.62	14.14	32.76	110.12	-77.36	QP	100	180	
6	0.1148	18.34	12.20	30.54	106.40	-75.86	QP	100	204	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/11/30 09:18:11
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-TX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.2992	18.44	25.88	44.32	98.08	-53.76	QP	100	230	
2	1.1947	18.66	20.19	38.85	66.08	-27.23	QP	100	238	
3	4.7469	19.35	13.14	32.49	69.50	-37.01	QP	100	12	
4	7.2244	19.90	13.04	32.94	69.50	-36.56	QP	100	244	
5	12.7467	20.76	11.55	32.31	69.50	-37.19	QP	100	268	
6	17.4928	21.31	11.78	33.09	69.50	-36.41	QP	100	4	

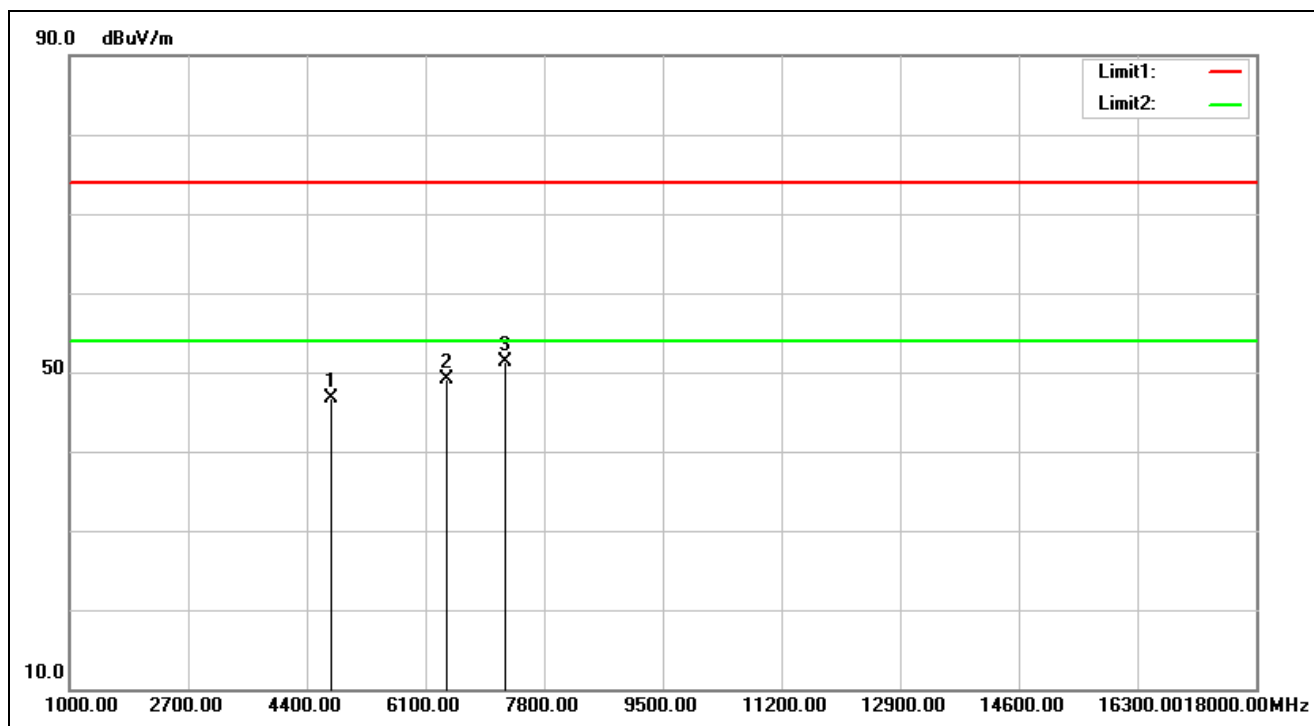
Spurious Emissions, RX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

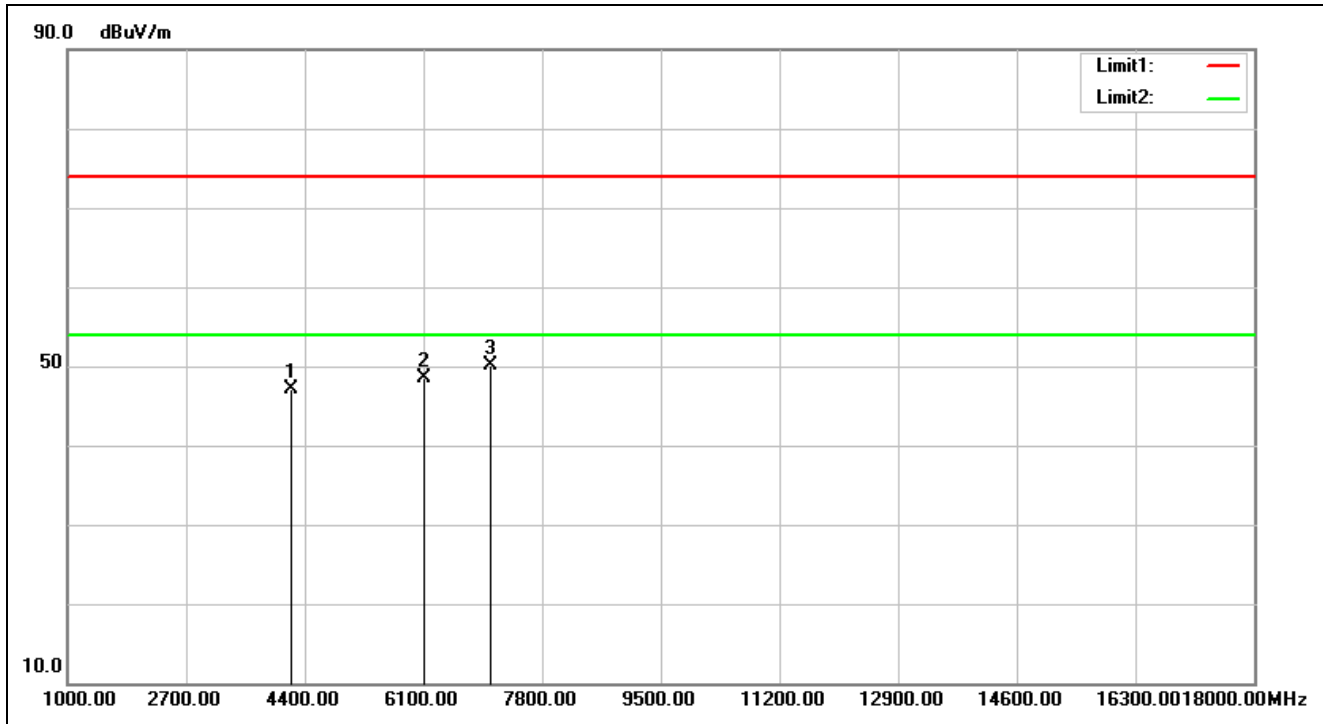
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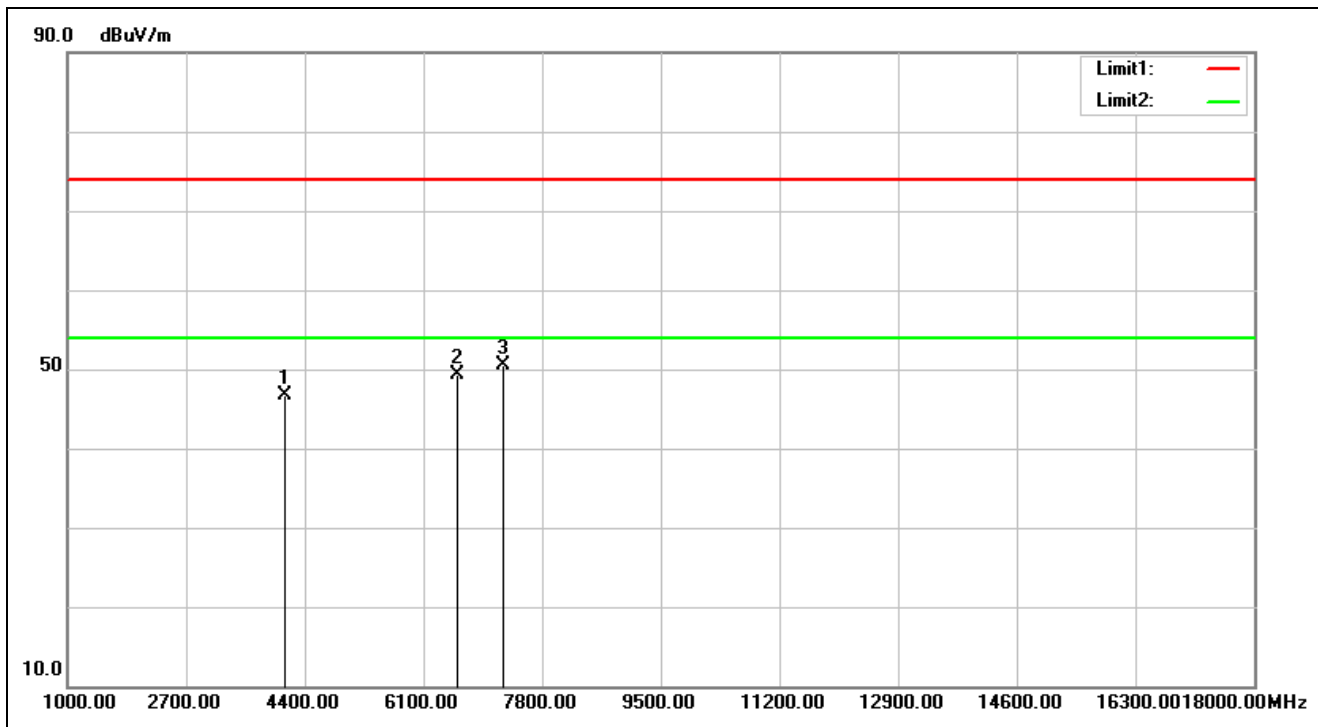
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 15:25:12
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-RX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4757.000	2.34	44.27	46.61	74.00	-27.39	peak	100	336	
2	6406.000	4.65	44.39	49.04	74.00	-24.96	peak	100	169	
3	7239.000	3.69	47.52	51.21	74.00	-22.79	peak	100	134	



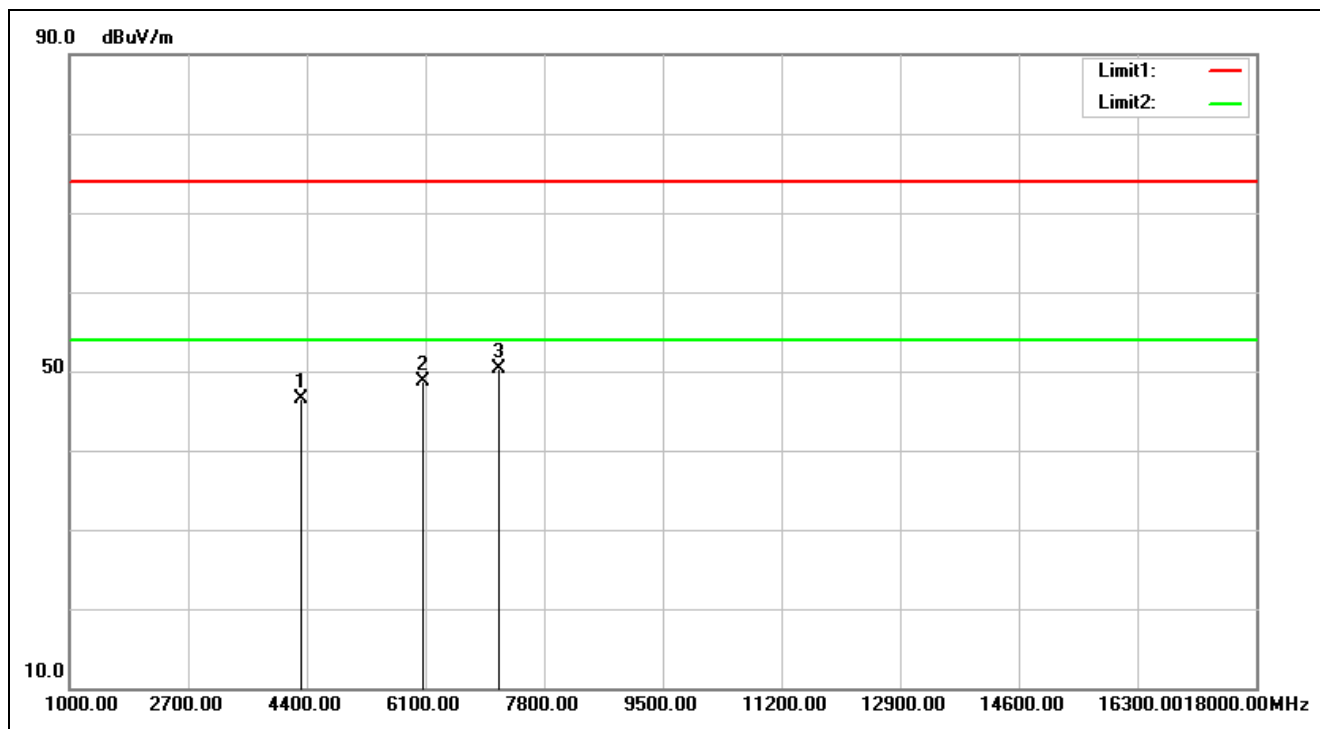
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 15:26:04
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-RX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4213.000	0.49	46.61	47.10	74.00	-26.90	peak	100	218	
2	6117.000	4.48	43.97	48.45	74.00	-25.55	peak	100	187	
3	7069.000	3.86	46.33	50.19	74.00	-23.81	peak	100	276	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/29 15:27:18
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2441-RX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4111.000	0.12	46.60	46.72	74.00	-27.28	peak	100	306	
2	6576.000	4.58	44.73	49.31	74.00	-24.69	peak	100	0	
3	7239.000	3.69	46.89	50.58	74.00	-23.42	peak	100	43	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/29 15:28:10
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	24(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	3DH5-2441-RX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4315.000	0.88	45.61	46.49	74.00	-27.51	peak	100	301	
2	6066.000	4.45	44.25	48.70	74.00	-25.30	peak	100	229	
3	7154.000	3.78	46.44	50.22	74.00	-23.78	peak	100	133	

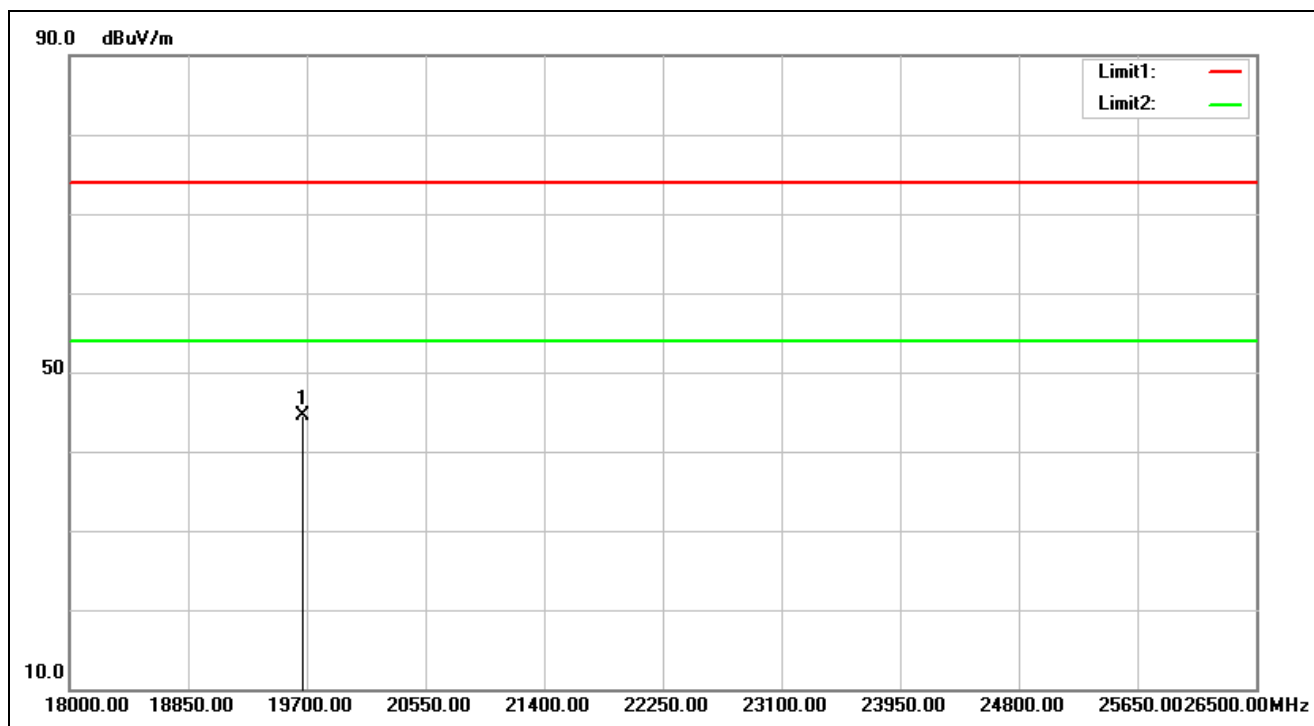
Spurious Emissions, RX Mode, 18-26.5G



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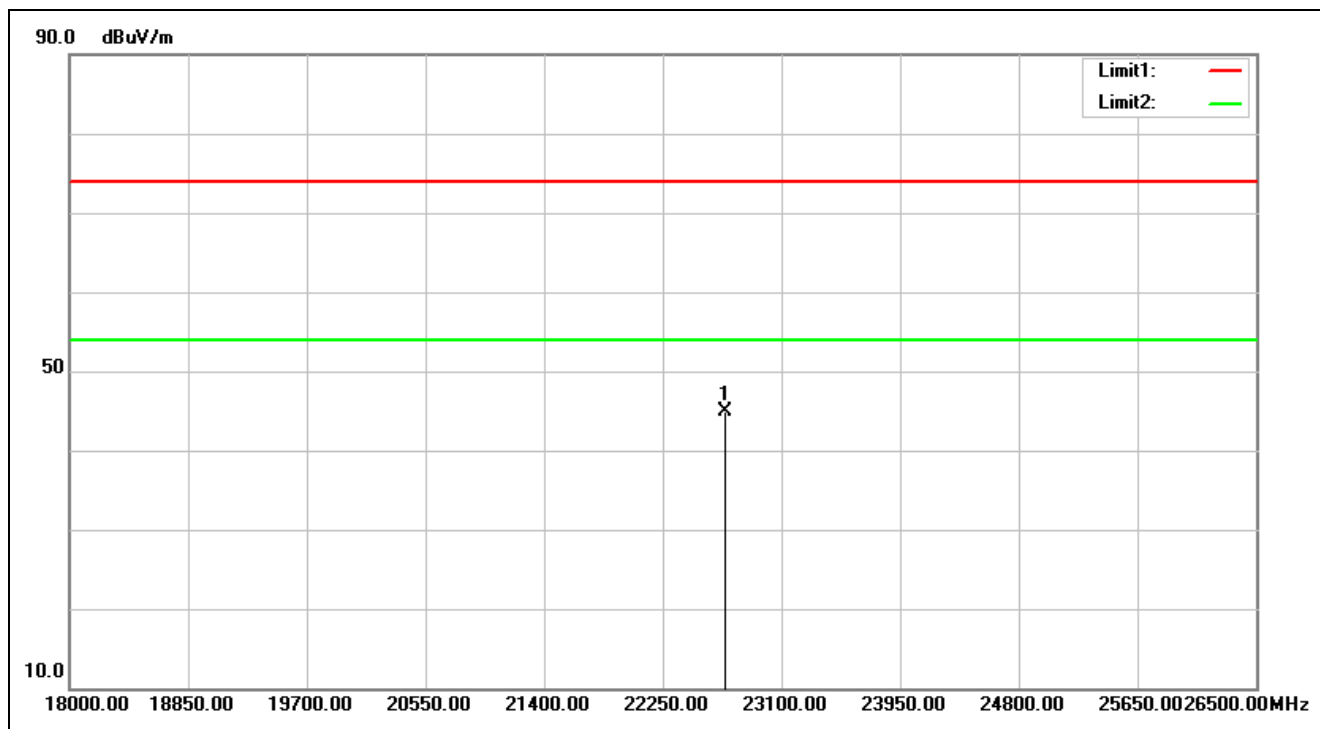
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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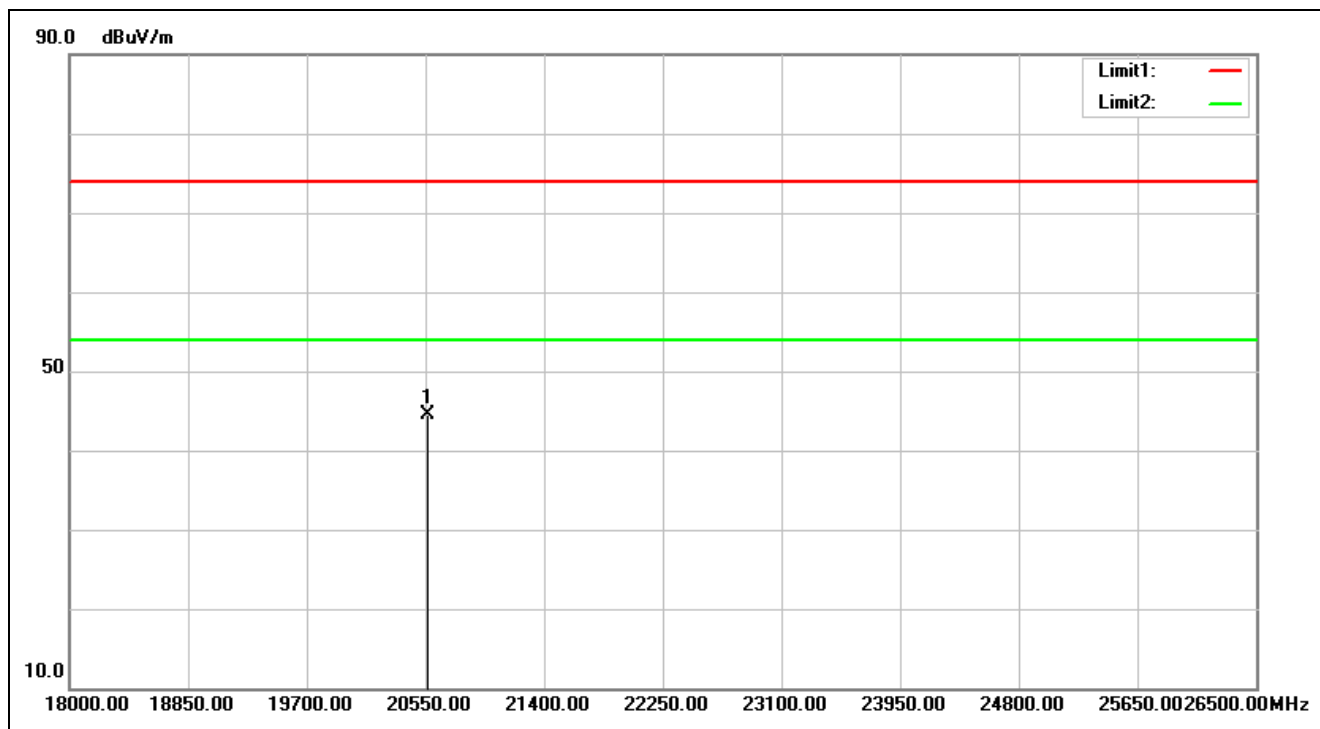
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/12/3 11:18:19
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	22.4(°C)/57%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Kevin Kuo
Test Mode:	1DH5-2441-RX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	19674.500	3.97	40.49	44.46	74.00	-29.54	peak	100	221	



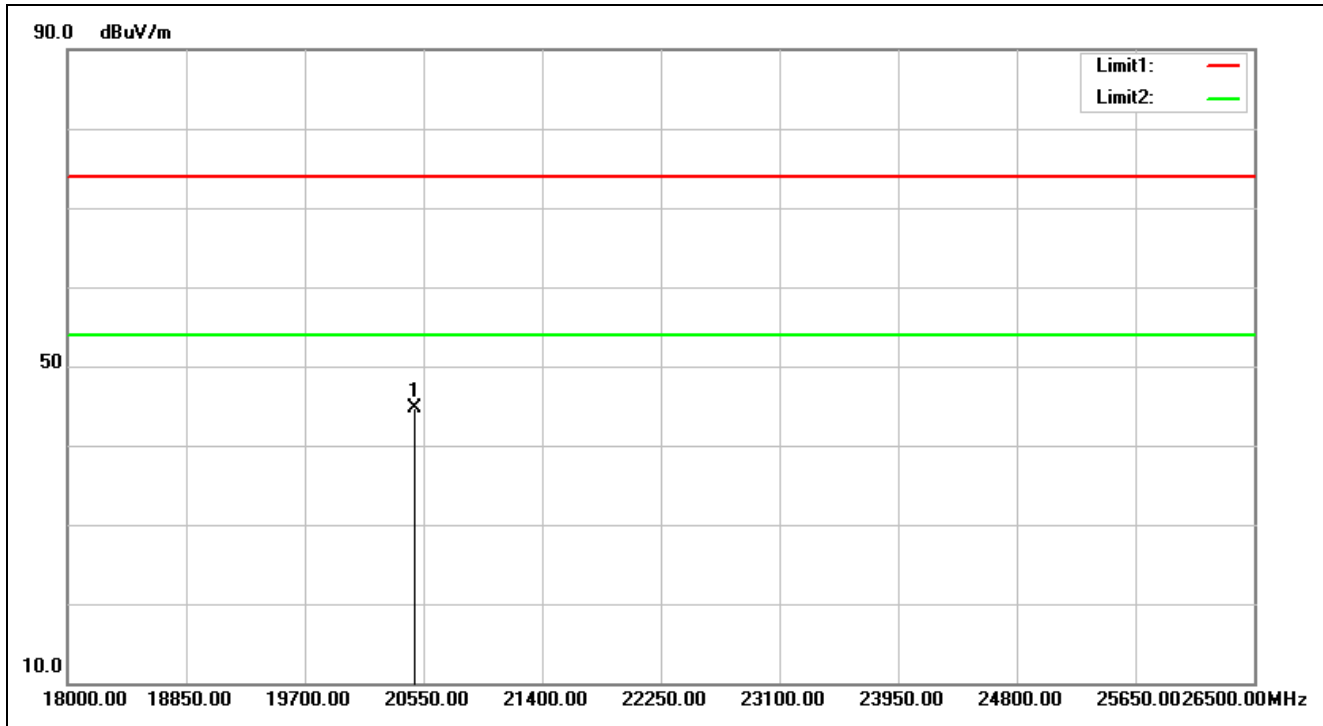
Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/12/3 11:19:22
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	22.4(°C)/57%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Kevin Kuo
Test Mode:	1DH5-2441-RX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22692.000	4.91	39.96	44.87	74.00	-29.13	peak	100	92	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/12/3 11:01:21
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	22.4(°C)/57%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Kevin Kuo
Test Mode:	3DH5-2441-RX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20567.000	4.27	40.28	44.55	74.00	-29.45	peak	100	10	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/12/3 11:02:24
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	22.4(°C)/57%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Kevin Kuo
Test Mode:	3DH5-2441-RX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20490.500	4.20	40.42	44.62	74.00	-29.38	peak	100	0	

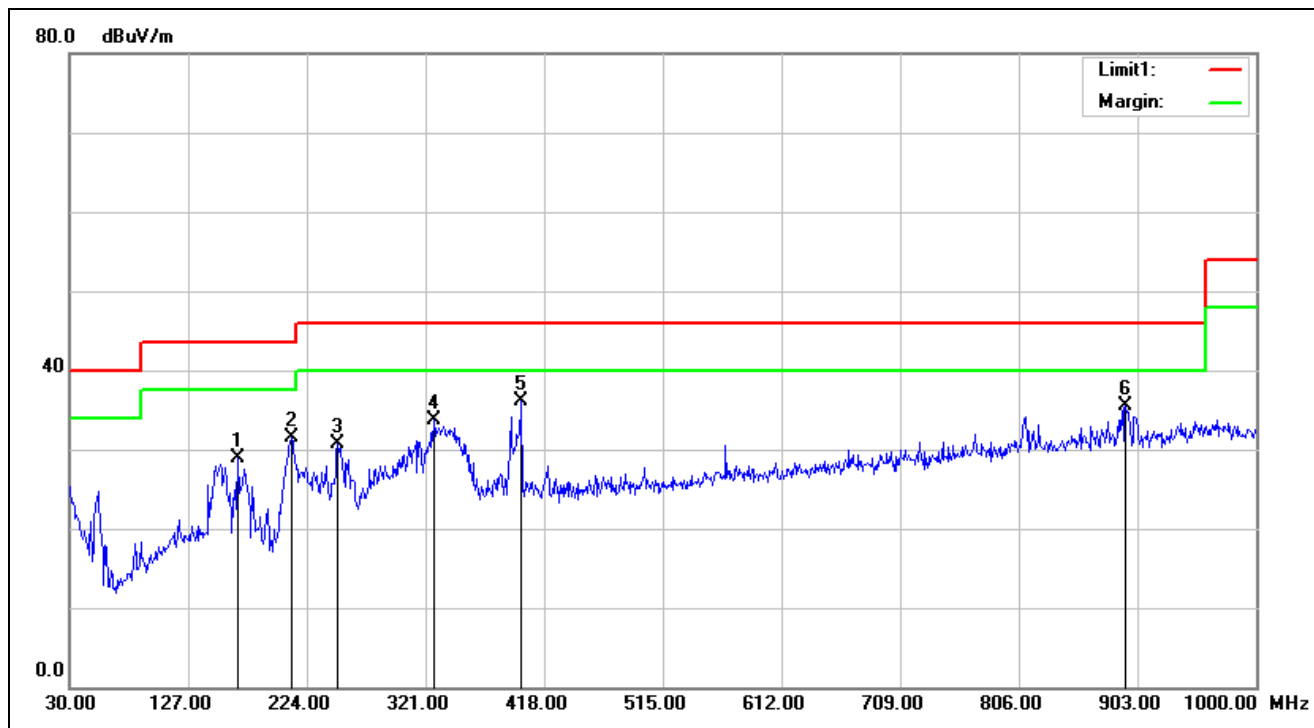
Spurious Emissions, RX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

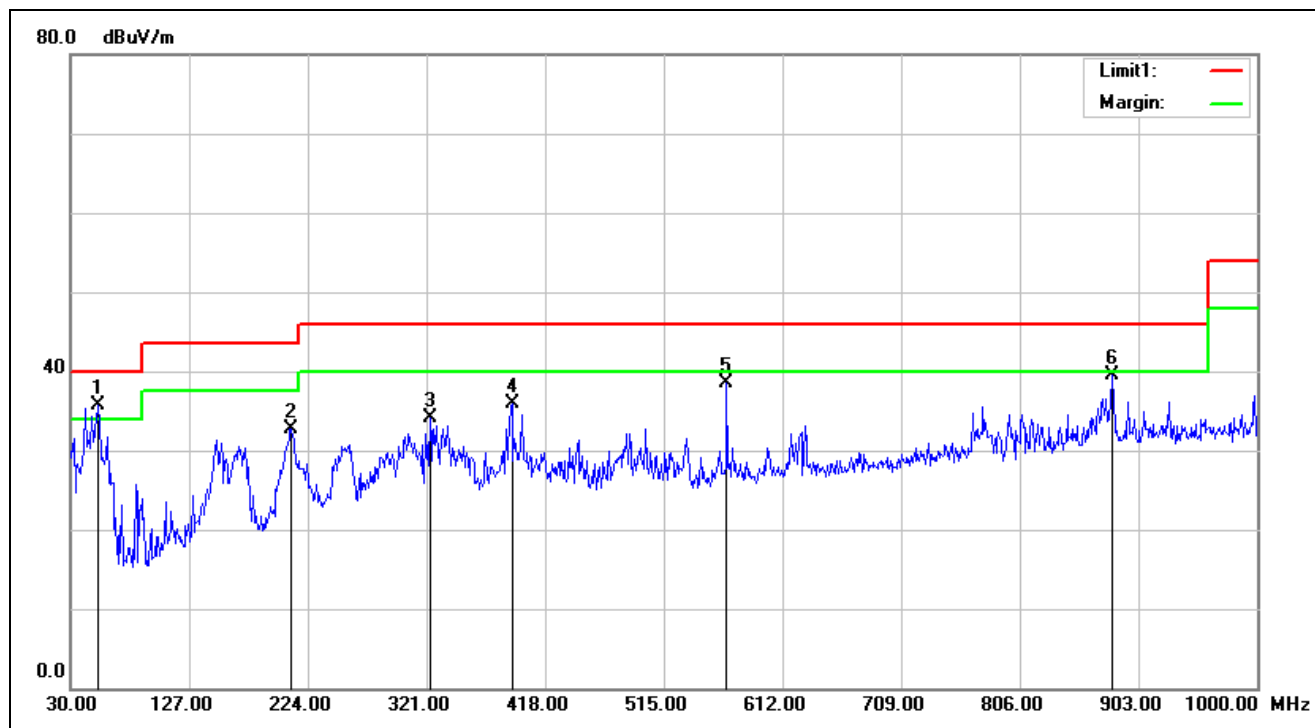
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/11/30 08:50:07
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-RX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	167.7400	-8.76	37.68	28.92	43.50	-14.58	QP	100	261	
2	211.3900	-8.58	40.05	31.47	43.50	-12.03	QP	100	296	
3	249.2200	-5.78	36.45	30.67	46.00	-15.33	QP	100	149	
4	327.7900	-4.04	37.83	33.79	46.00	-12.21	QP	100	141	
5	399.5700	-2.33	38.44	36.11	46.00	-9.89	QP	100	250	
6	893.3000	4.27	31.25	35.52	46.00	-10.48	QP	100	141	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 08:52:24
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%)	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-RX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	52.3100	-12.12	47.87	35.75	40.00	-4.25	QP	100	287	
2	210.4200	-8.58	41.28	32.70	43.50	-10.80	QP	100	185	
3	323.9100	-4.23	38.40	34.17	46.00	-11.83	QP	100	201	
4	390.8400	-2.72	38.68	35.96	46.00	-10.04	QP	100	255	
5	566.4100	0.07	38.40	38.47	46.00	-7.53	QP	100	156	
6	881.6600	4.06	35.46	39.52	46.00	-6.48	QP	100	169	

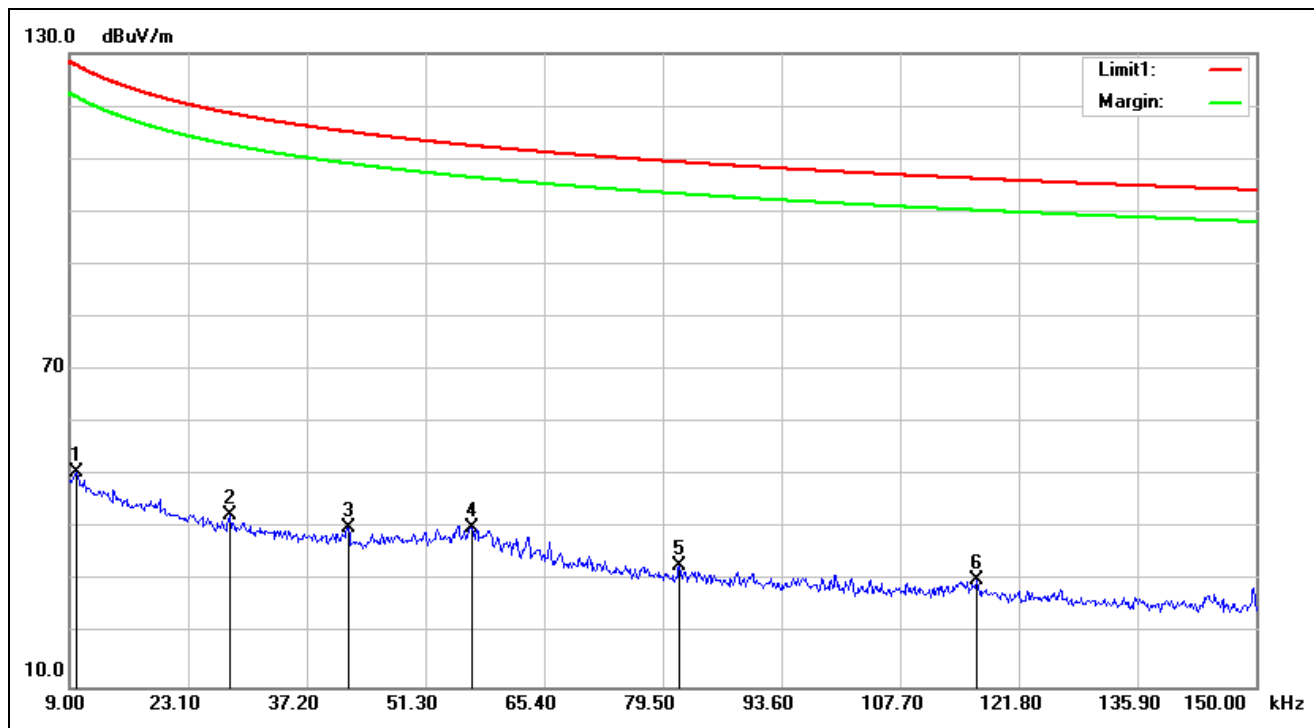
Spurious Emissions, RX Mode, 9K-30M



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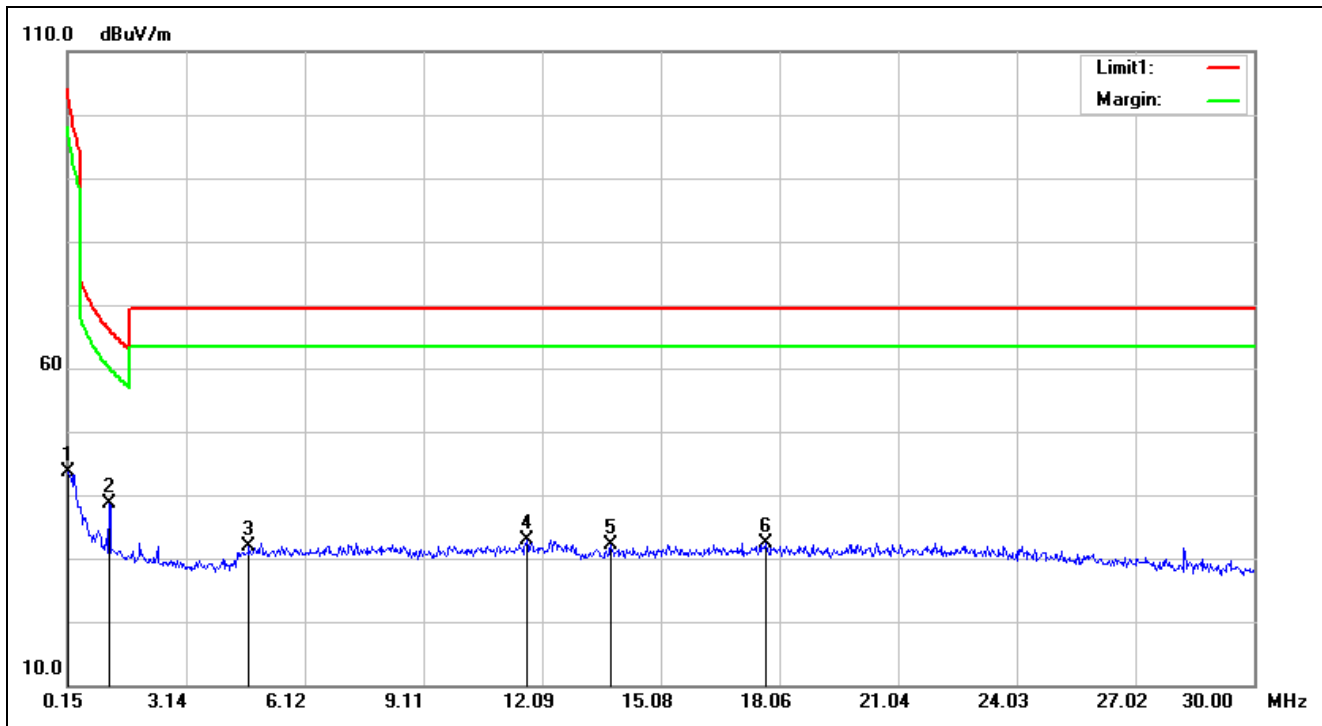
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Tel:+886-2172-7000 fax:+886-2528-0018



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/11/30 09:08:51
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-RX-PL2		
Remark:	un-shield		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0098	18.48	32.08	50.56	127.76	-77.20	QP	100	51	
2	0.0280	19.24	23.30	42.54	118.65	-76.11	QP	100	67	
3	0.0421	19.08	21.04	40.12	115.11	-74.99	QP	100	196	
4	0.0567	18.84	21.23	40.07	112.52	-72.45	QP	100	187	
5	0.0815	18.54	14.28	32.82	109.37	-76.55	QP	100	193	
6	0.1169	18.34	11.78	30.12	106.24	-76.12	QP	100	201	



Service No.:	114080534	Test Distance:	3m
Test Standard:	FCC 15.209_9k-30M_3m	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/11/30 09:19:14
Applicant:	Microchip Technology Inc.	Test Rating:	DC 3.8V
Product:	Bluetooth Module	Temp.(°C)/Hum.(%):	21.3(°C)/52%
Model No.:	BM83AM1, BM83AL1	Test Engineer:	Amy Hsu
Test Mode:	1DH5-2441-RX-PL2		
Remark:	un-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	18.36	25.25	43.61	104.08	-60.47	QP	100	216	
2	1.1948	18.66	20.02	38.68	66.08	-27.40	QP	100	248	
3	4.7171	19.33	12.54	31.87	69.50	-37.63	QP	100	232	
4	11.7020	20.64	12.27	32.91	69.50	-36.59	QP	100	280	
5	13.8213	20.88	11.26	32.14	69.50	-37.36	QP	100	258	
6	17.7018	21.34	10.94	32.28	69.50	-37.22	QP	100	1	

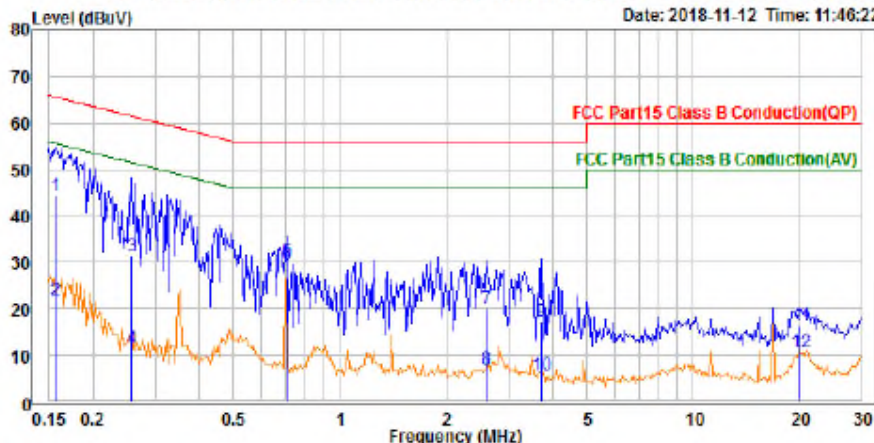
Mains



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Date: 2018-11-12 Time: 11:46:22



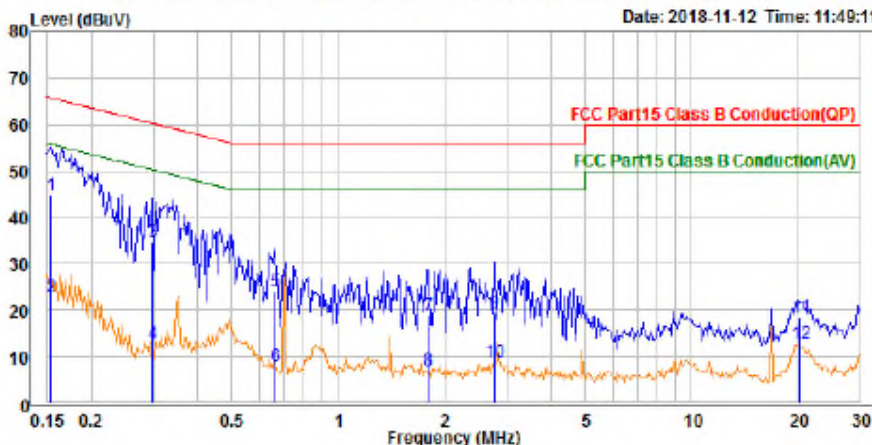
Trace: 1

Site : Conduction room
Condition : FCC Part15 Class B Conduction(QP) line1
Test Engineer: Amy Hsu
Applicant : Microchip Technology
Product : Bluetooth Module
Model No. : BM83SM1, BM83SL1
Test Rating : 15VDC(EVB- Host Board supply)
Tmp/Hum : 21.8°C/48%
Memo : BT link mode

		Read		Limit	Over	
	Freq	Level	Factor	Level	Line	Limit Remark
	MHz	dBuV	dB	dBuV	dBuV	dB
1	0.156	34.64	9.68	44.32	65.67	-21.35 QP
2	0.156	12.18	9.68	21.86	55.67	-33.81 Average
3	0.257	21.72	9.68	31.40	61.54	-30.14 QP
4	0.257	1.96	9.68	11.64	51.54	-39.98 Average
5	0.707	20.72	9.69	30.41	56.00	-25.59 QP
6	0.707	19.85	9.69	29.54	46.00	-16.46 Average
7	2.601	10.23	9.72	19.95	56.00	-36.05 QP
8	2.601	-2.74	9.72	6.98	46.00	-39.02 Average
9	3.720	7.72	9.74	17.46	56.00	-38.54 QP
10	3.720	-4.10	9.74	5.64	46.00	-40.36 Average
11	20.157	6.46	9.86	16.32	60.00	-43.68 QP
12	20.157	0.81	9.86	10.67	50.00	-39.33 Average

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Date: 2018-11-12 Time: 11:49:11



Trace: 1

Site : Conduction room
Condition : FCC Part15 Class B Conduction(QP) neutral
Test Engineer: Amy Hsu
Applicant : Microchip Technology
Product : Bluetooth Module
Model No. : BM83SM1, BM83SL1
Test Rating : 15VDC(EVB- Host Board supply)
Temp/Hum : 21.8°C / 48%
Memo : BT link mode

		Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.153	35.01	9.68	44.69	65.83	-21.14	QP
2	0.153	13.07	9.68	22.75	55.83	-33.08	Average
3	0.298	25.11	9.67	34.78	60.30	-25.52	QP
4	0.298	3.14	9.67	12.81	50.30	-37.49	Average
5	0.666	14.22	9.69	23.91	56.00	-32.09	QP
6	0.666	-1.81	9.69	7.88	46.00	-38.12	Average
7	1.800	9.09	9.72	18.81	56.00	-37.19	QP
8	1.800	-2.67	9.72	7.05	46.00	-38.95	Average
9	2.761	9.84	9.73	19.57	56.00	-36.43	QP
10	2.761	-0.92	9.73	8.81	46.00	-37.19	Average
11	20.359	8.58	9.91	18.49	60.00	-41.51	QP
12	20.359	2.75	9.91	12.66	50.00	-37.34	Average