

Test Report No.50124667 001

Appendix D: Radiated and Mains Spurious Emission Data

(File: 50124667AppendixD)

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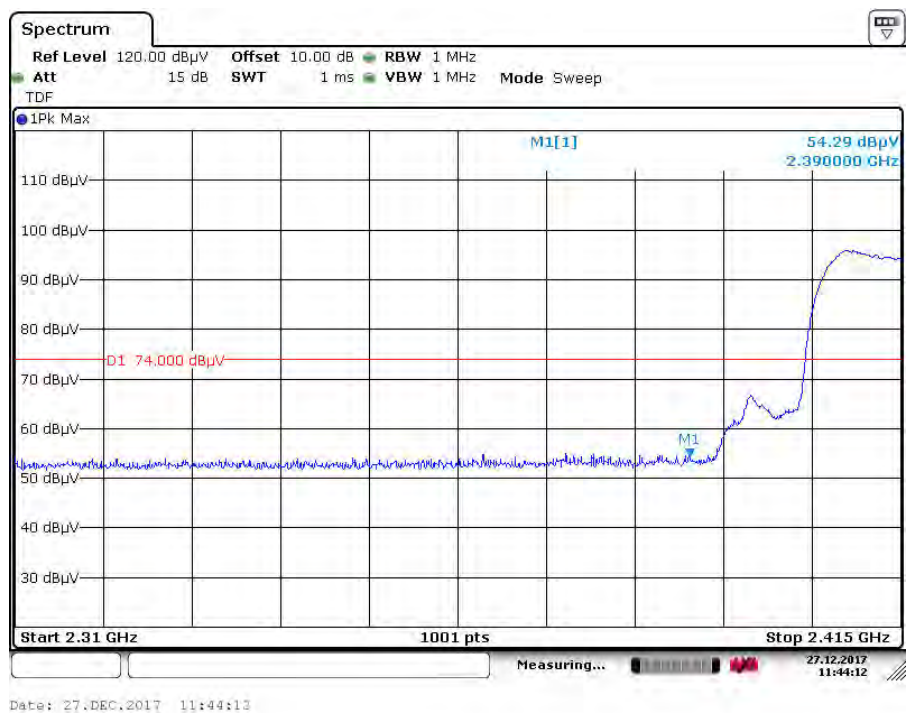
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RFA-02-05-C7H1-ANT

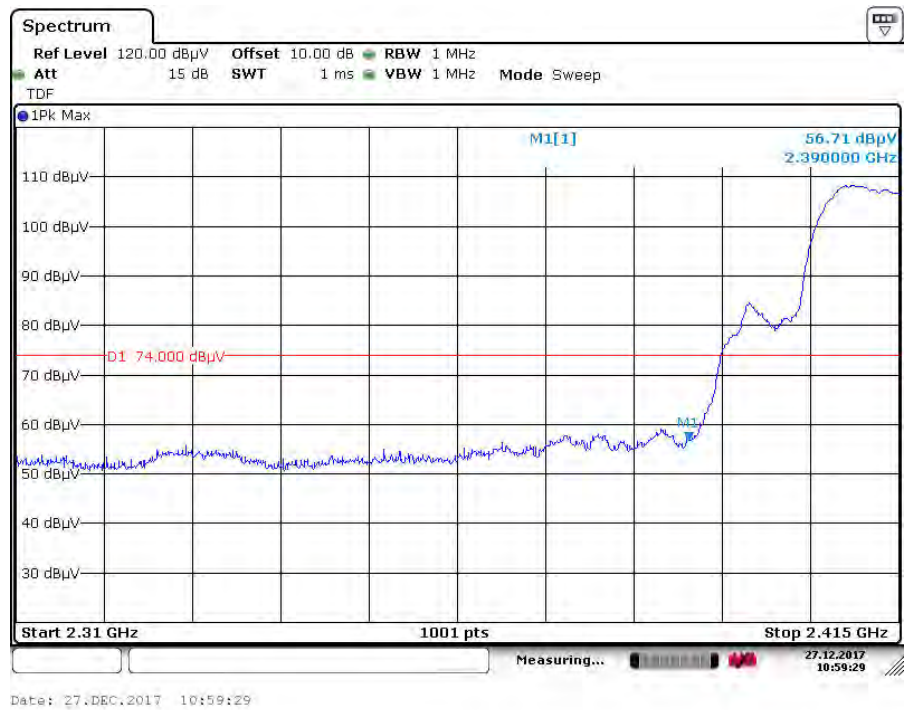
Spurious Emissions, Band Edges, 2.35-2.5G

Radiated Bandedge 11b

Low Channel (Hor)

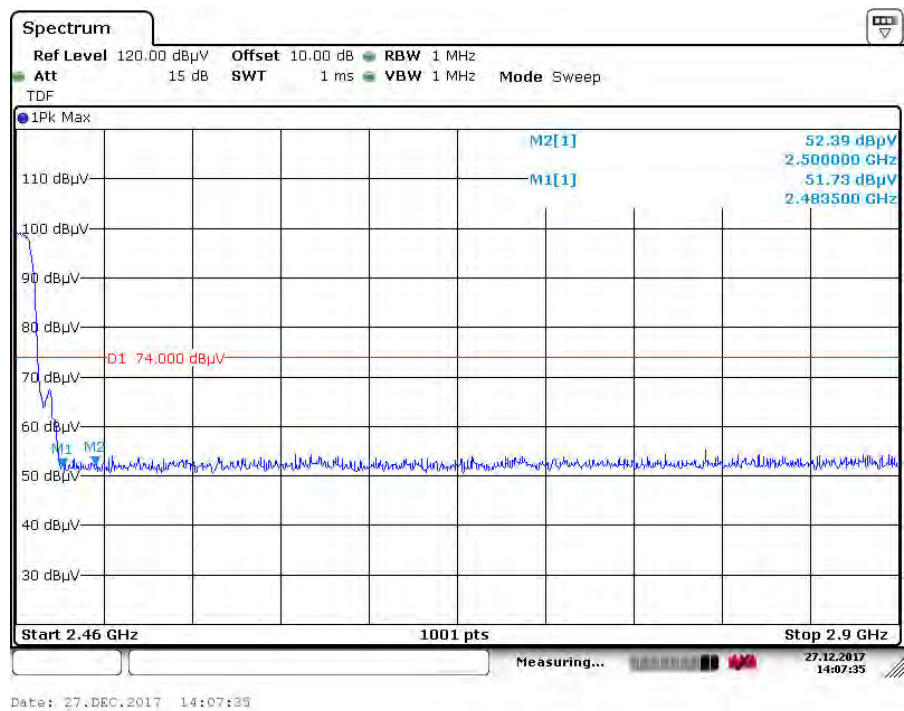
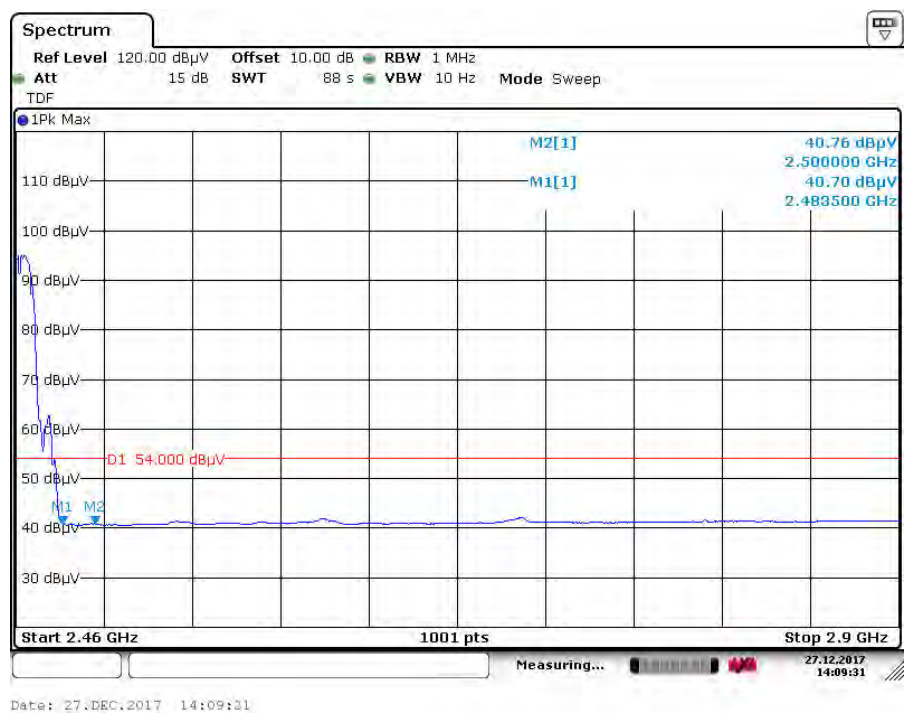


Low Channel (Ver)

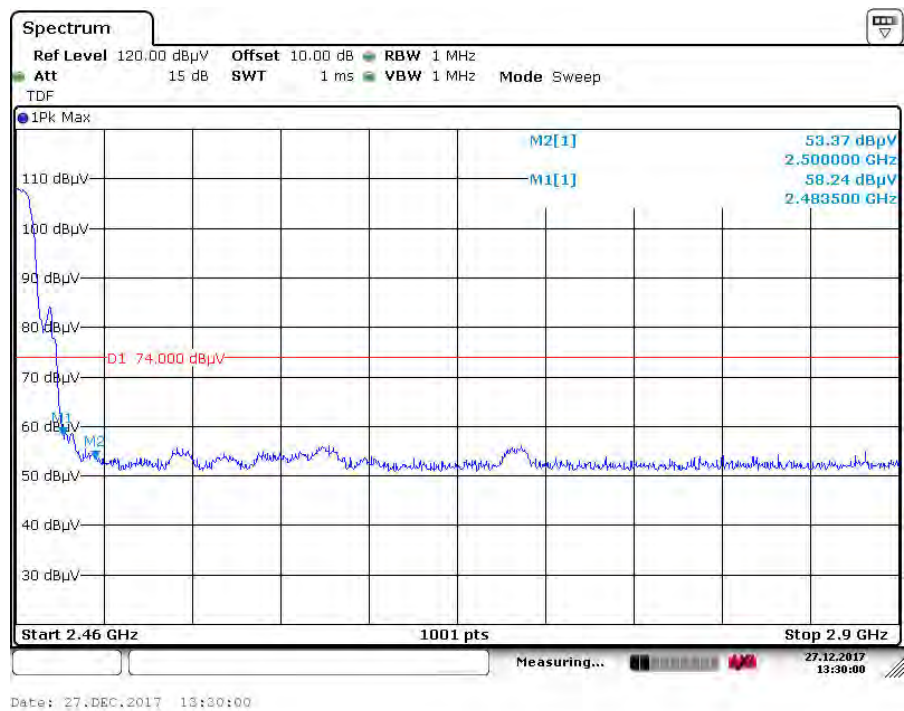


Radiated Bandedge 11b

High Channel (Hor)

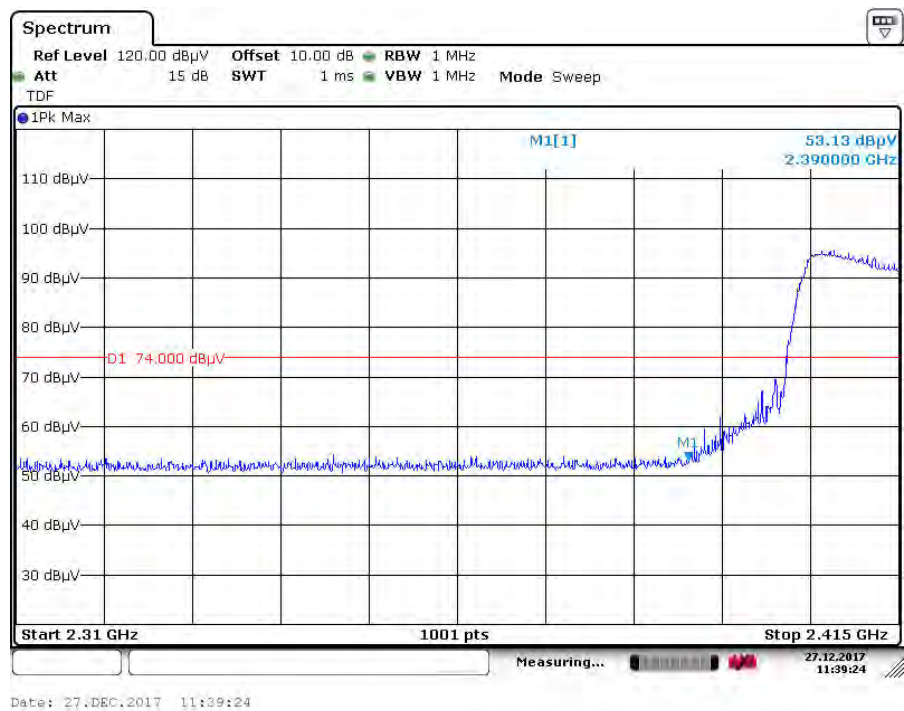
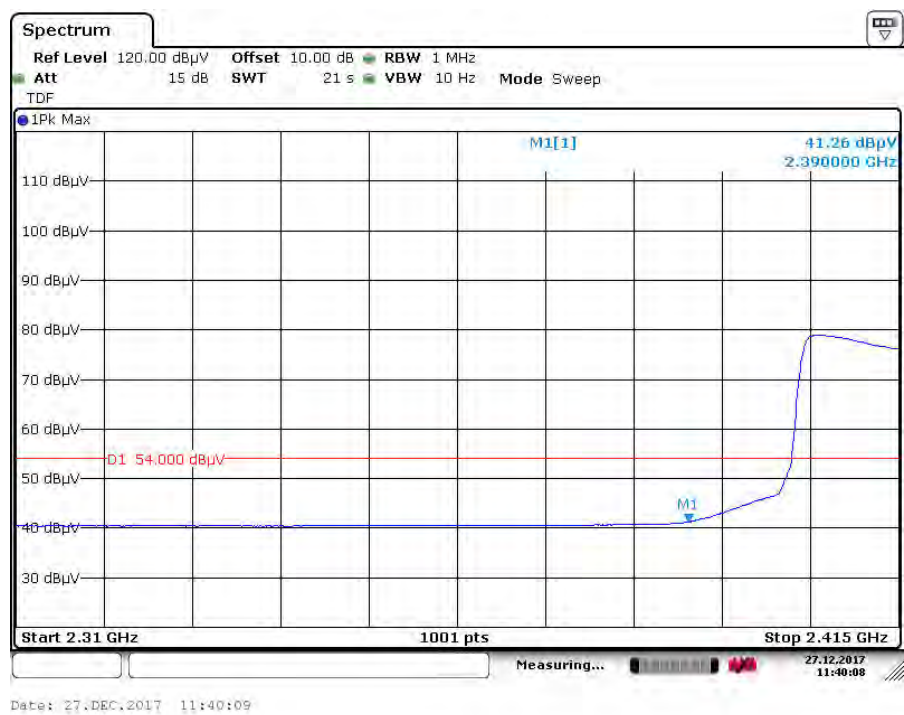


High Channel (Ver)

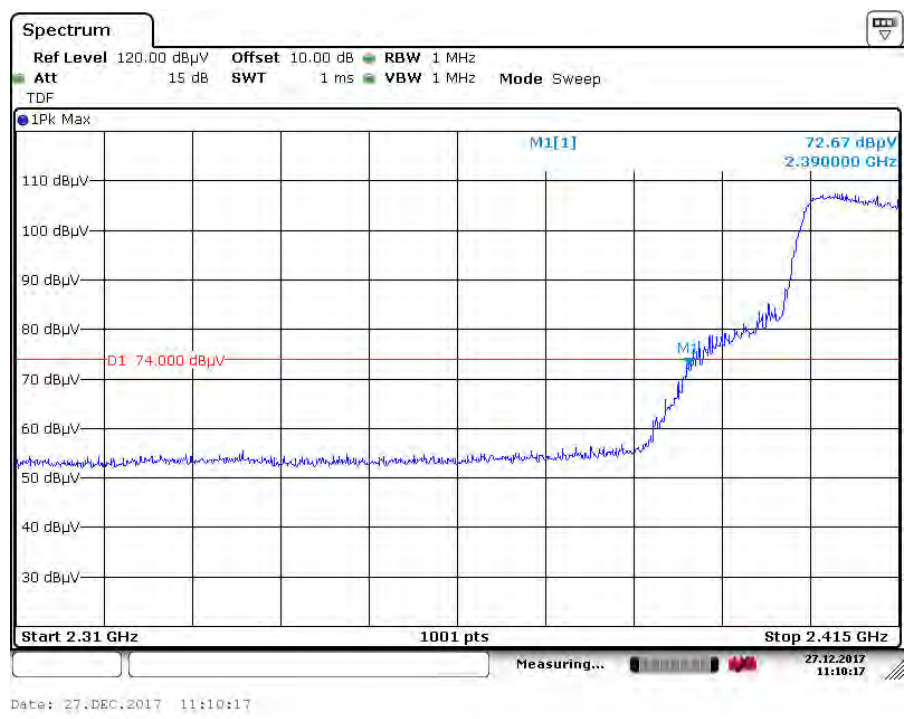
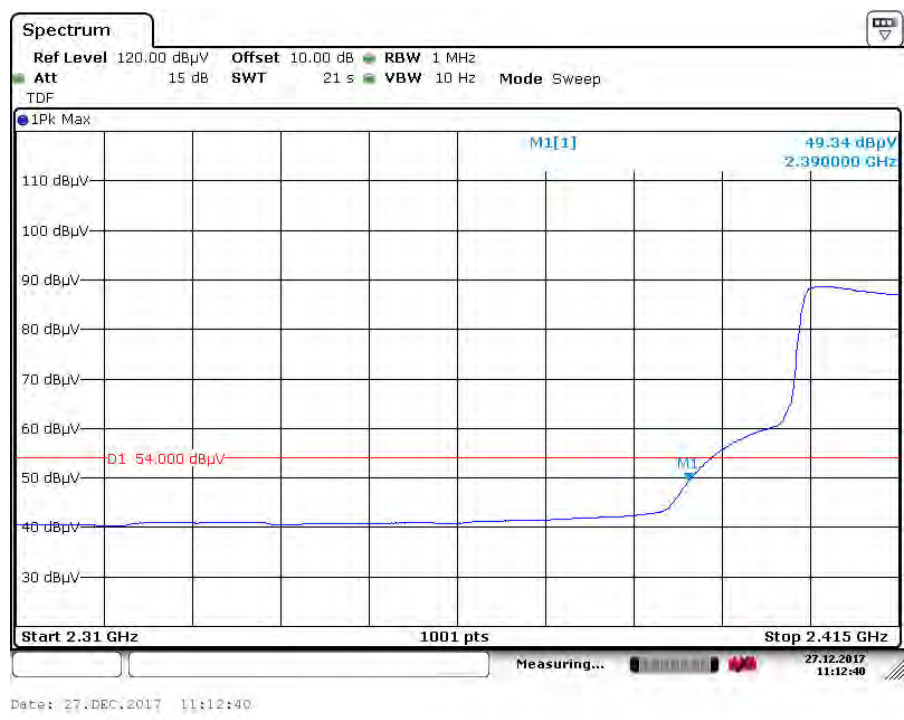


Radiated Bandedge 11g

Low Channel (Hor)

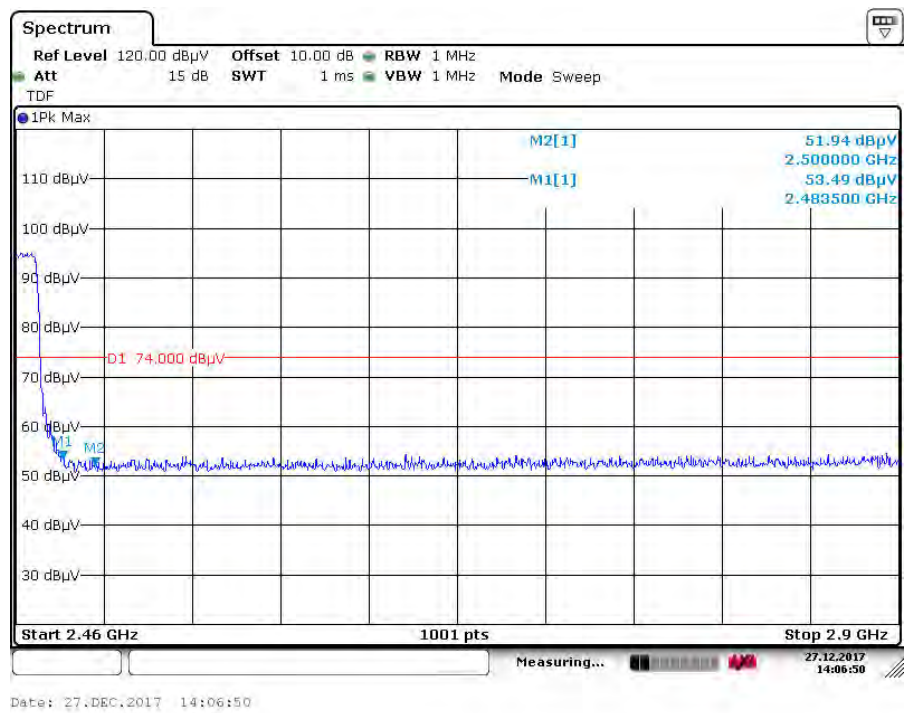
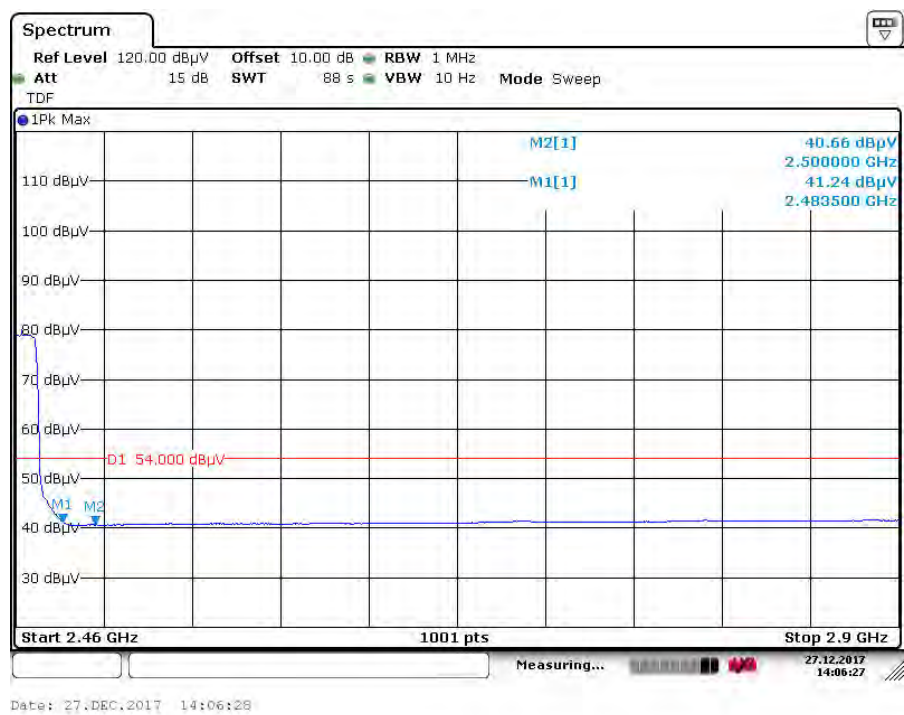


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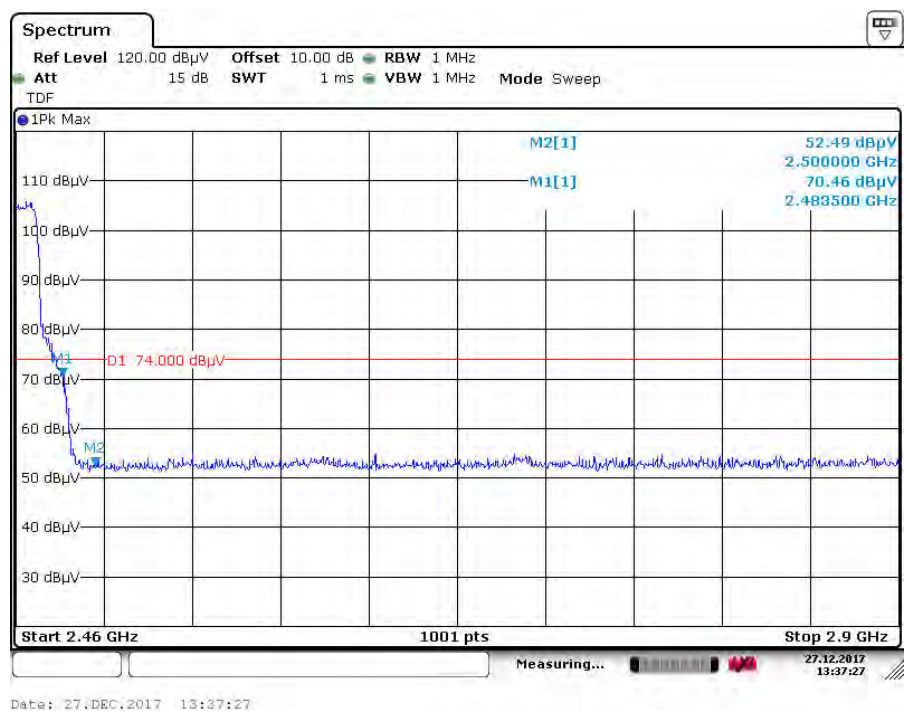
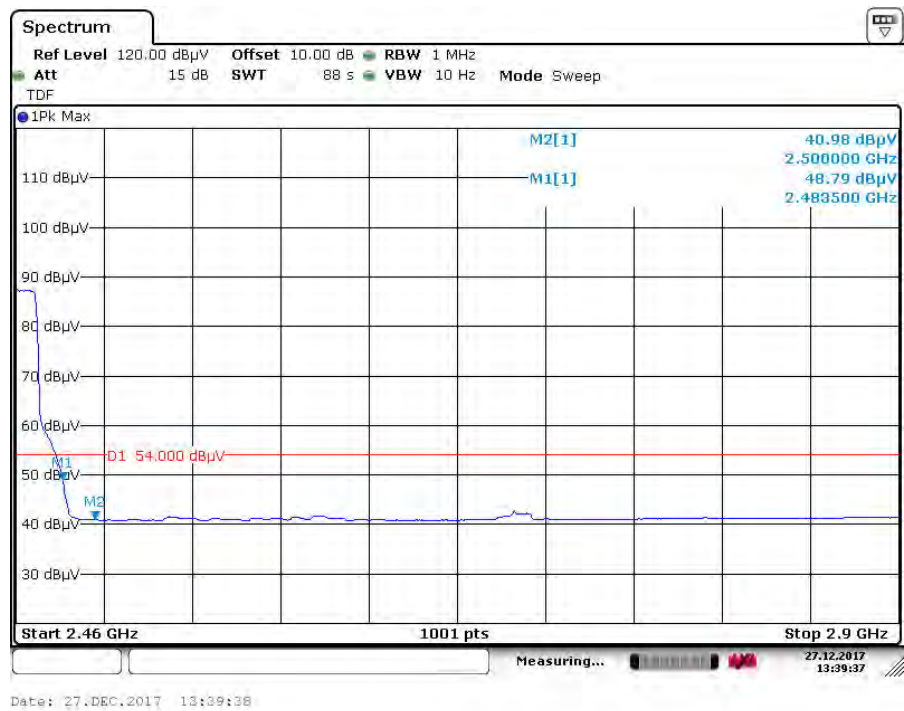


Radiated Bandedge 11g

High Channel (Hor)

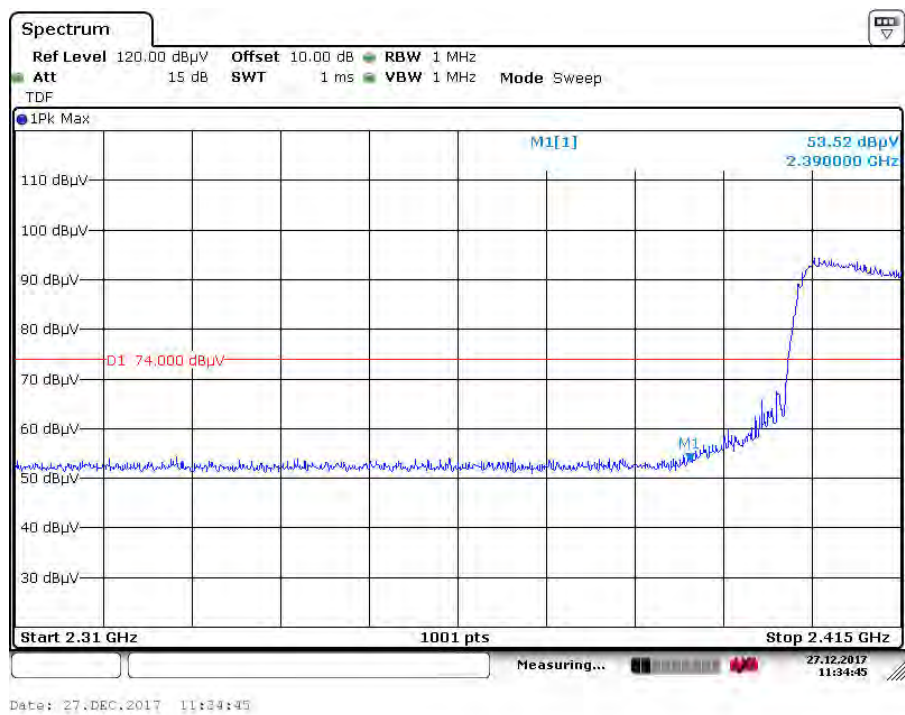
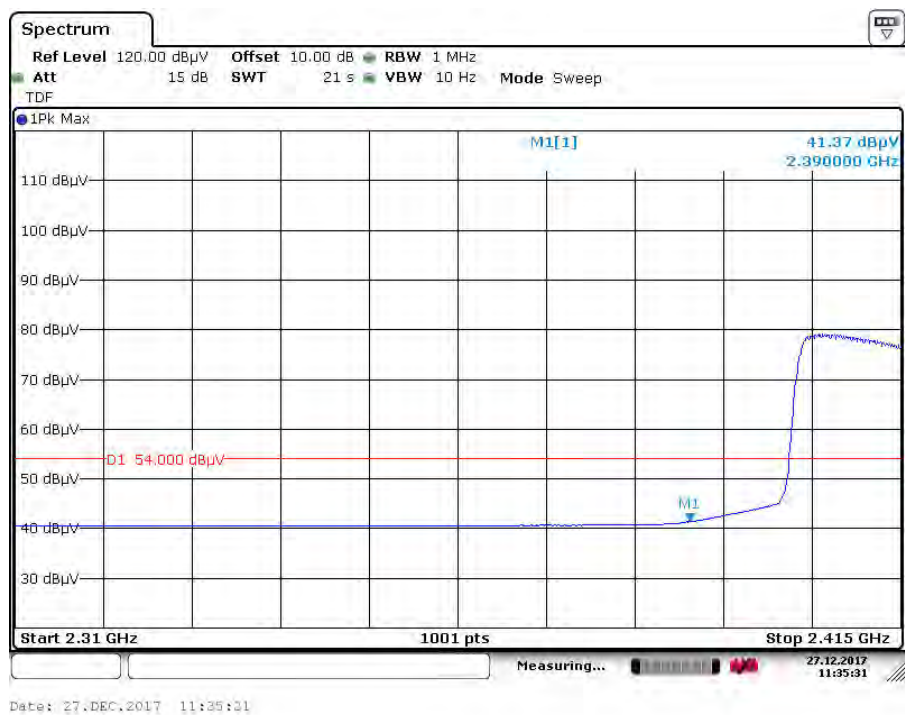


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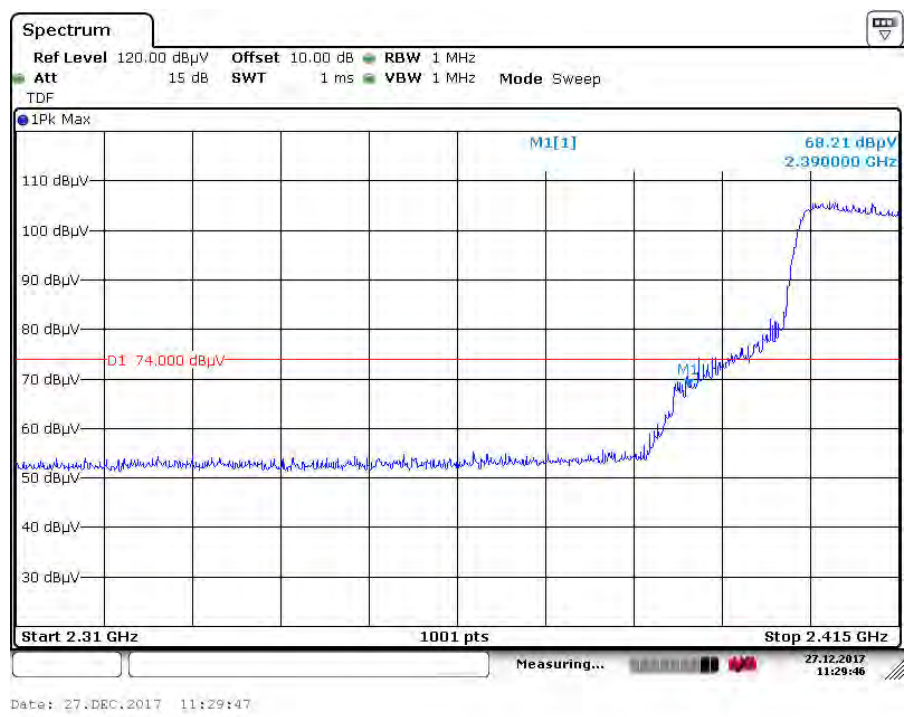
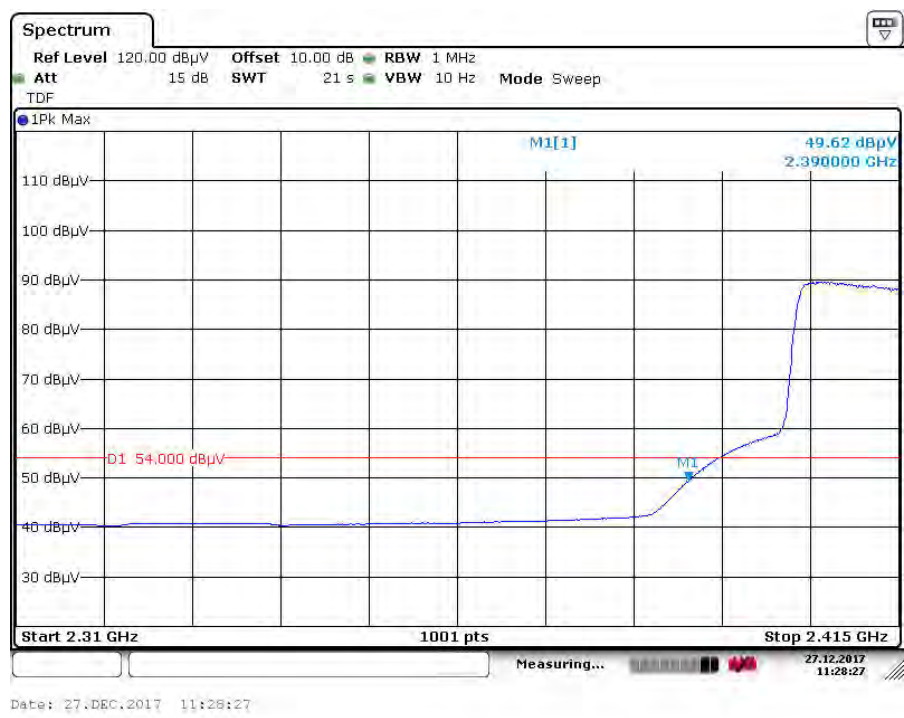


Radiated Bandedge 11n

Low Channel (Hor)

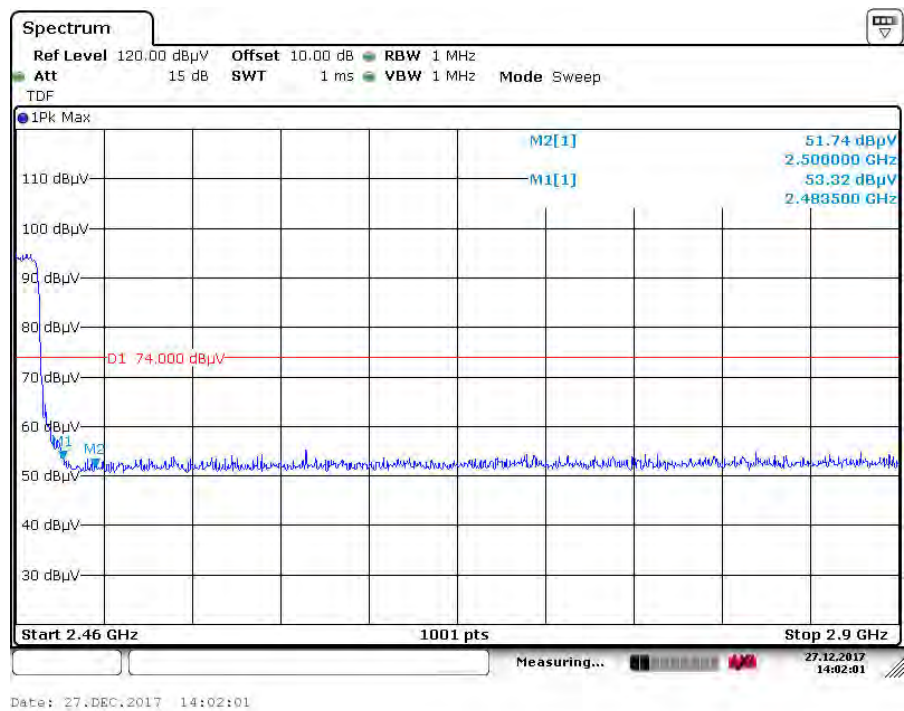
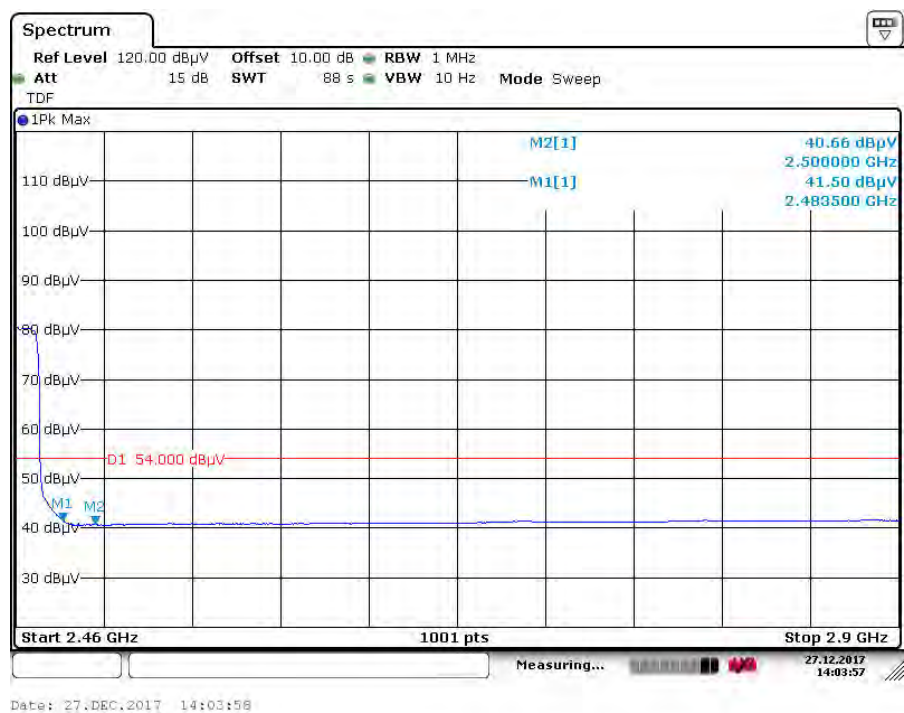


Low Channel (Ver)

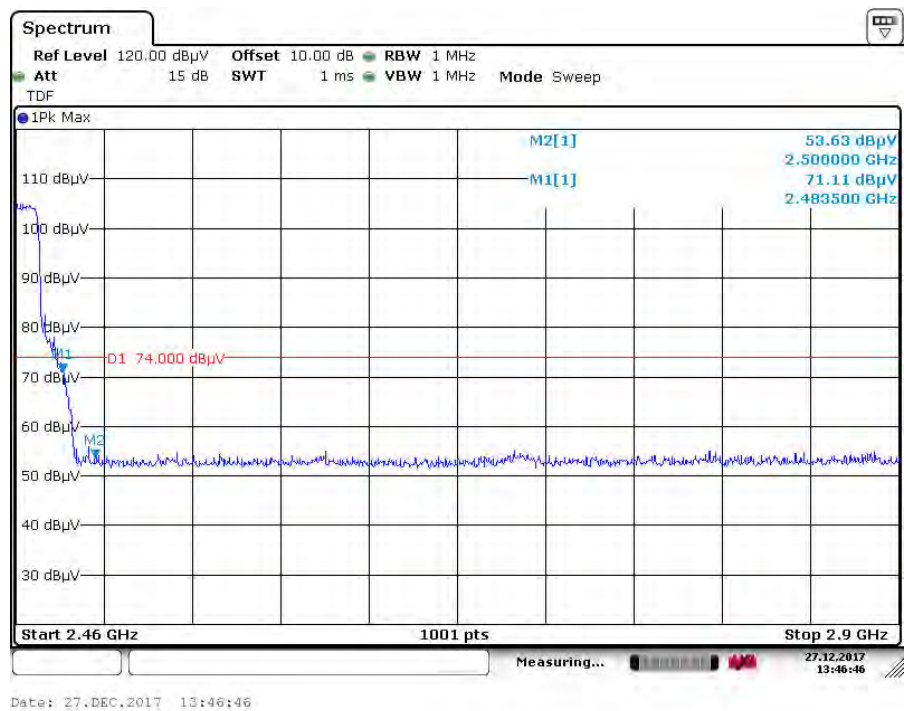
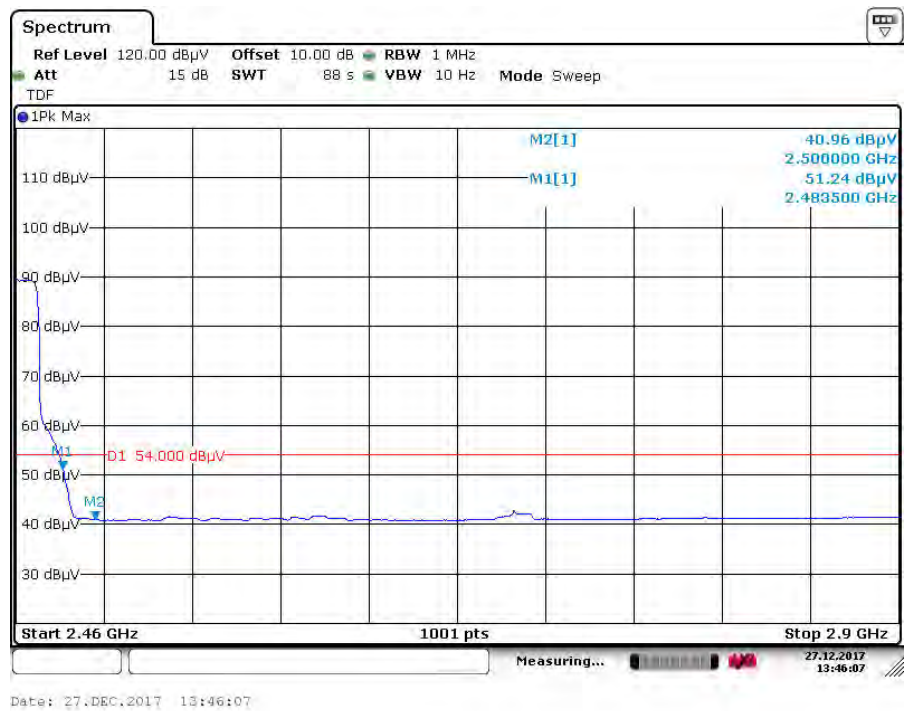


Radiated Bandedge 11n

High Channel (Hor)



High Channel (Ver)



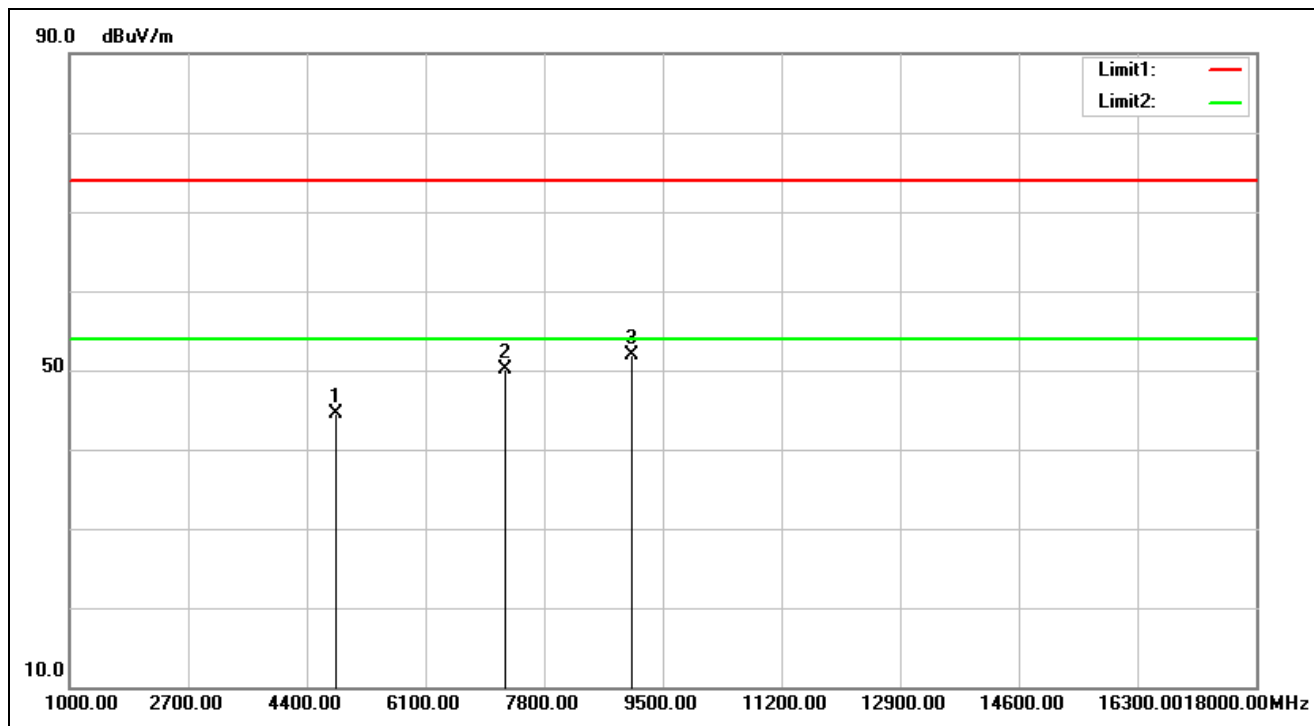
Spurious Emissions, TX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

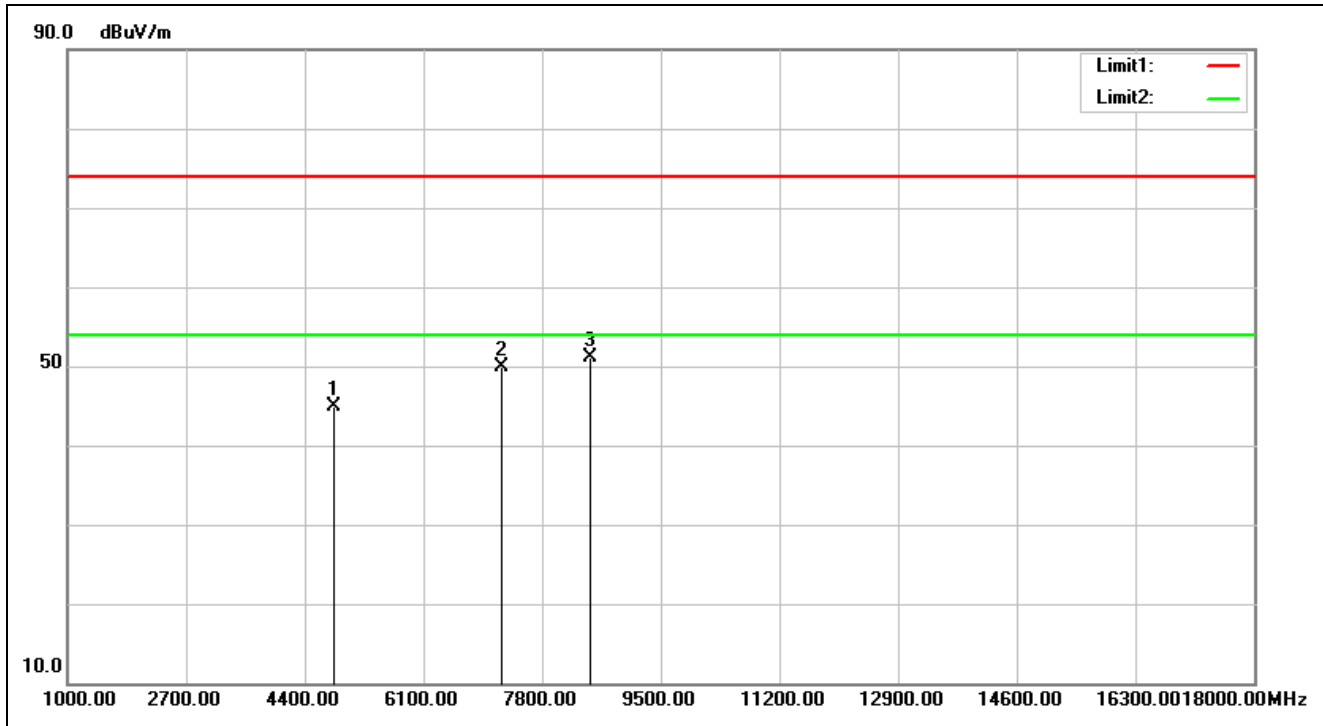
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



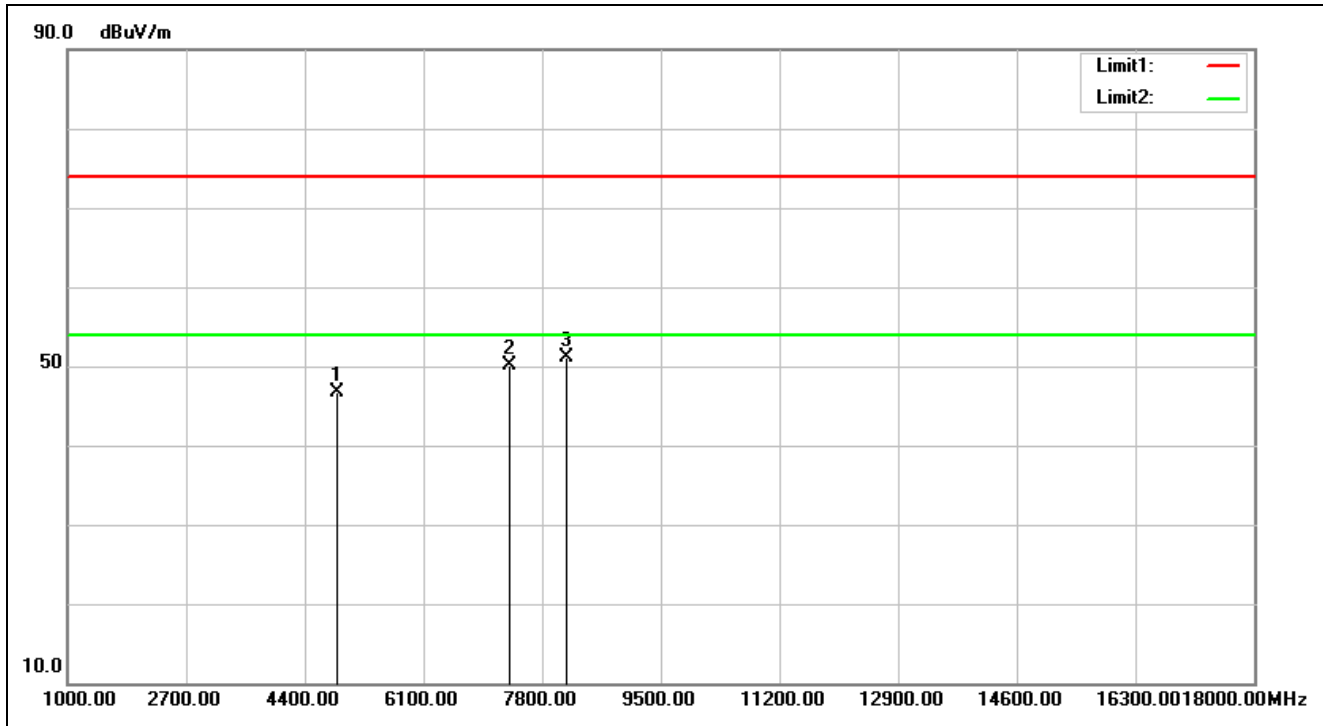
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 11:26:24
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	47.24	44.58	74.00	-29.42	peak		0	
2	7236.000	5.32	44.88	50.20	74.00	-23.80	peak		0	
3	9058.000	6.46	45.47	51.93	74.00	-22.07	peak		0	



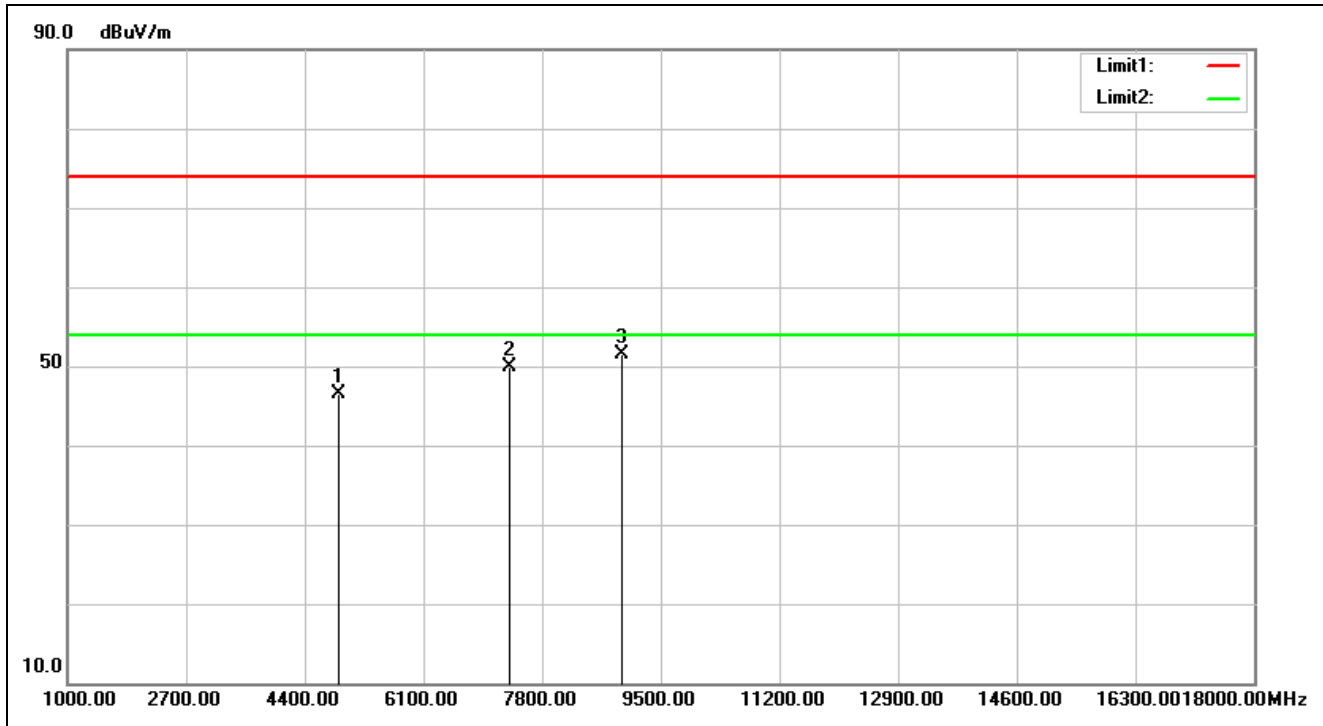
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 11:27:27
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	47.60	44.94	74.00	-29.06	peak			
2	7236.000	5.32	44.63	49.95	74.00	-24.05	peak			
3	8480.000	6.35	44.67	51.02	74.00	-22.98	peak			



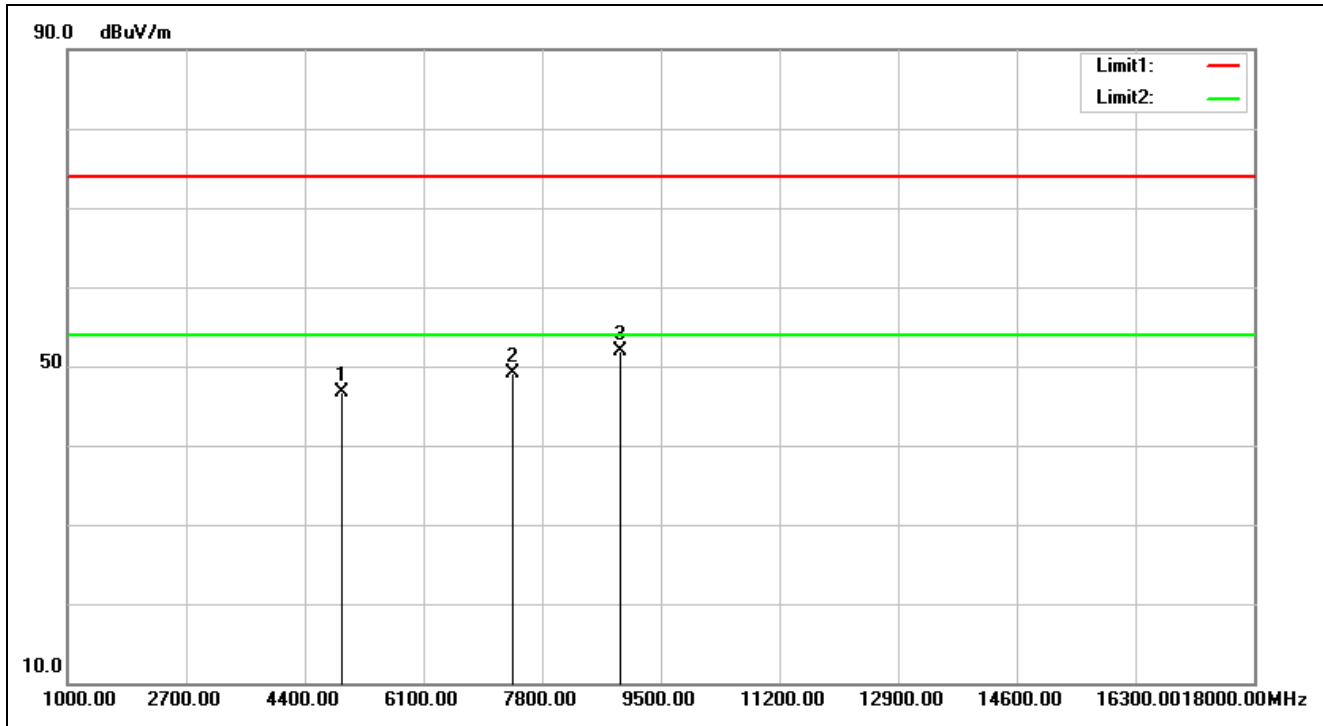
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 11:32:22
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	49.18	46.65	74.00	-27.35	peak			
2	7311.000	5.52	44.60	50.12	74.00	-23.88	peak			
3	8140.000	5.98	45.06	51.04	74.00	-22.96	peak			



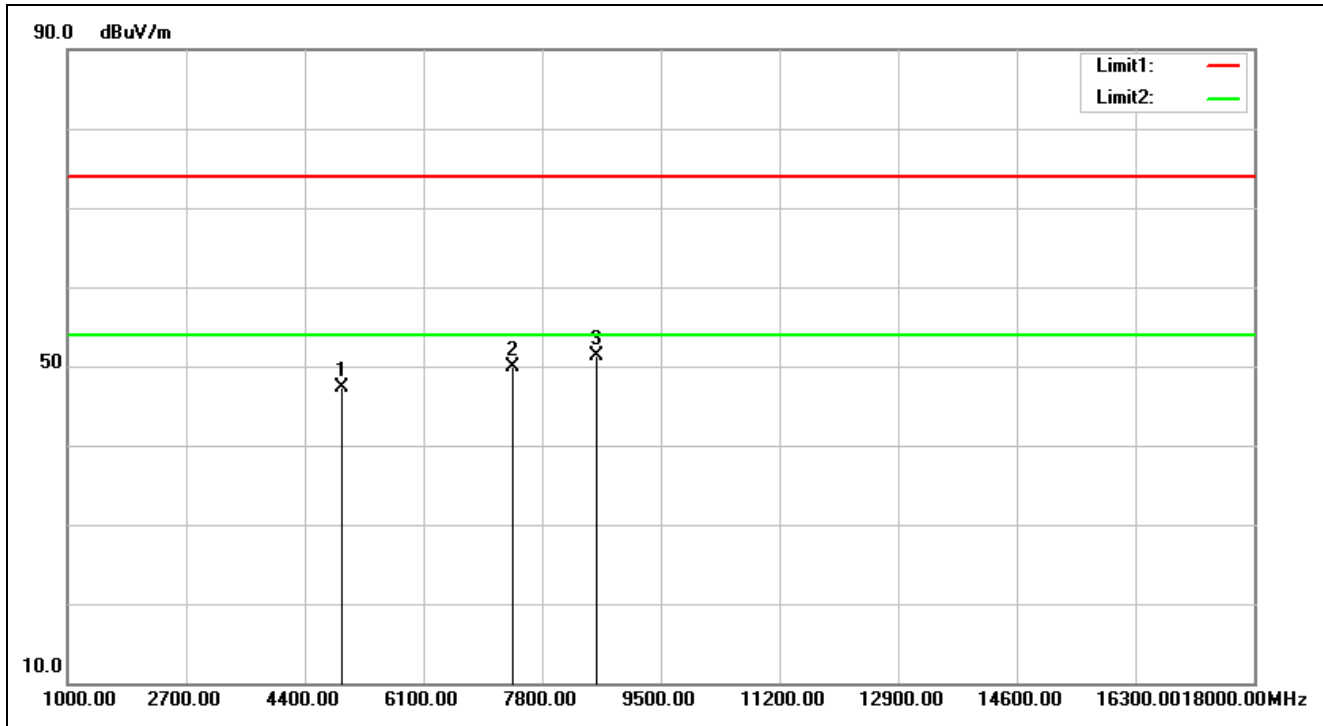
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 11:33:25
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	48.95	46.42	74.00	-27.58	peak			
2	7311.000	5.52	44.42	49.94	74.00	-24.06	peak			
3	8939.000	6.43	45.07	51.50	74.00	-22.50	peak			



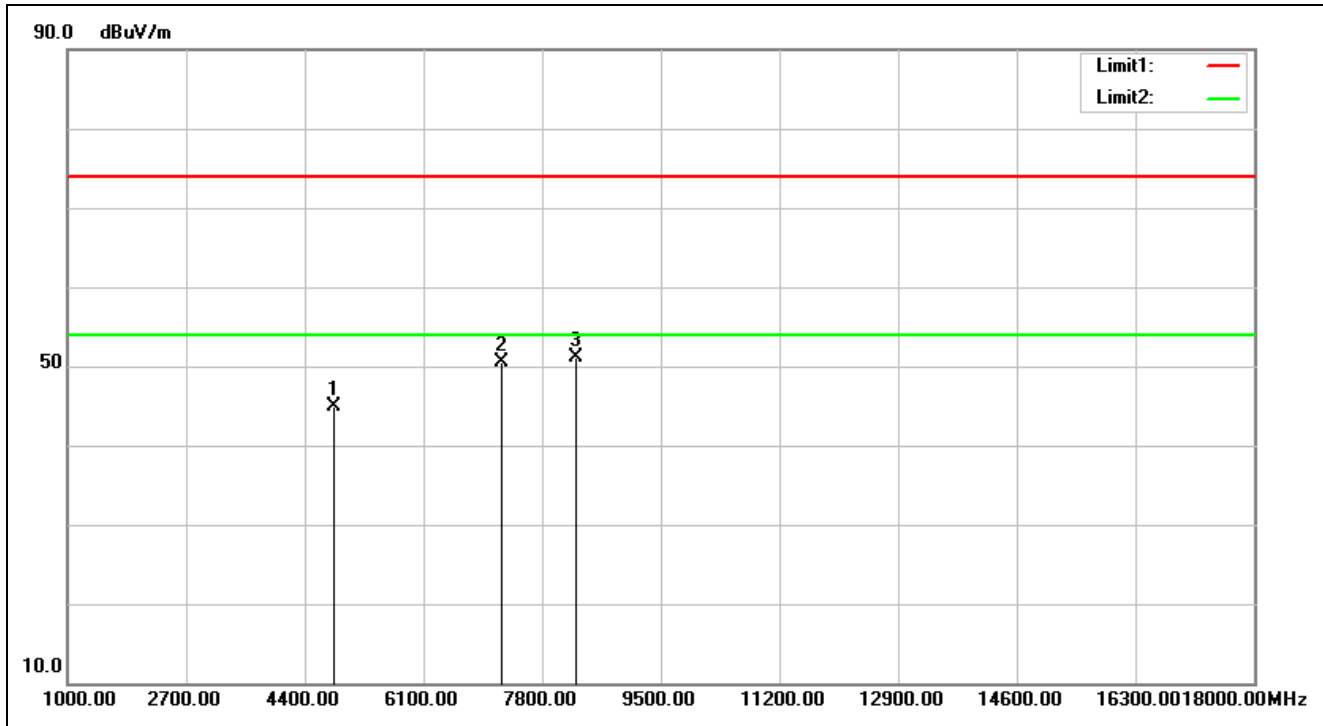
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 11:37:19
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	49.12	46.73	74.00	-27.27	peak			
2	7386.000	5.70	43.32	49.02	74.00	-24.98	peak			
3	8922.000	6.42	45.45	51.87	74.00	-22.13	peak			



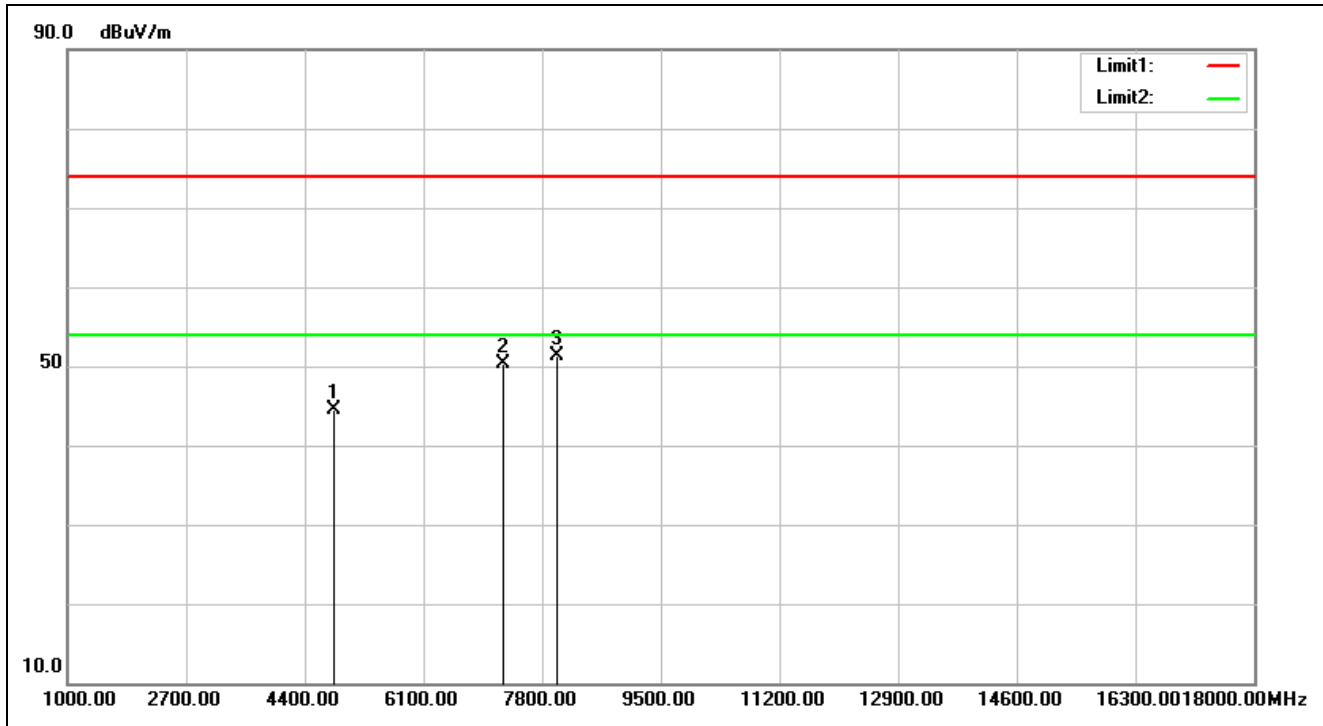
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Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	49.79	47.40	74.00	-26.60	peak			
2	7386.000	5.70	44.25	49.95	74.00	-24.05	peak			
3	8582.000	6.39	44.92	51.31	74.00	-22.69	peak			



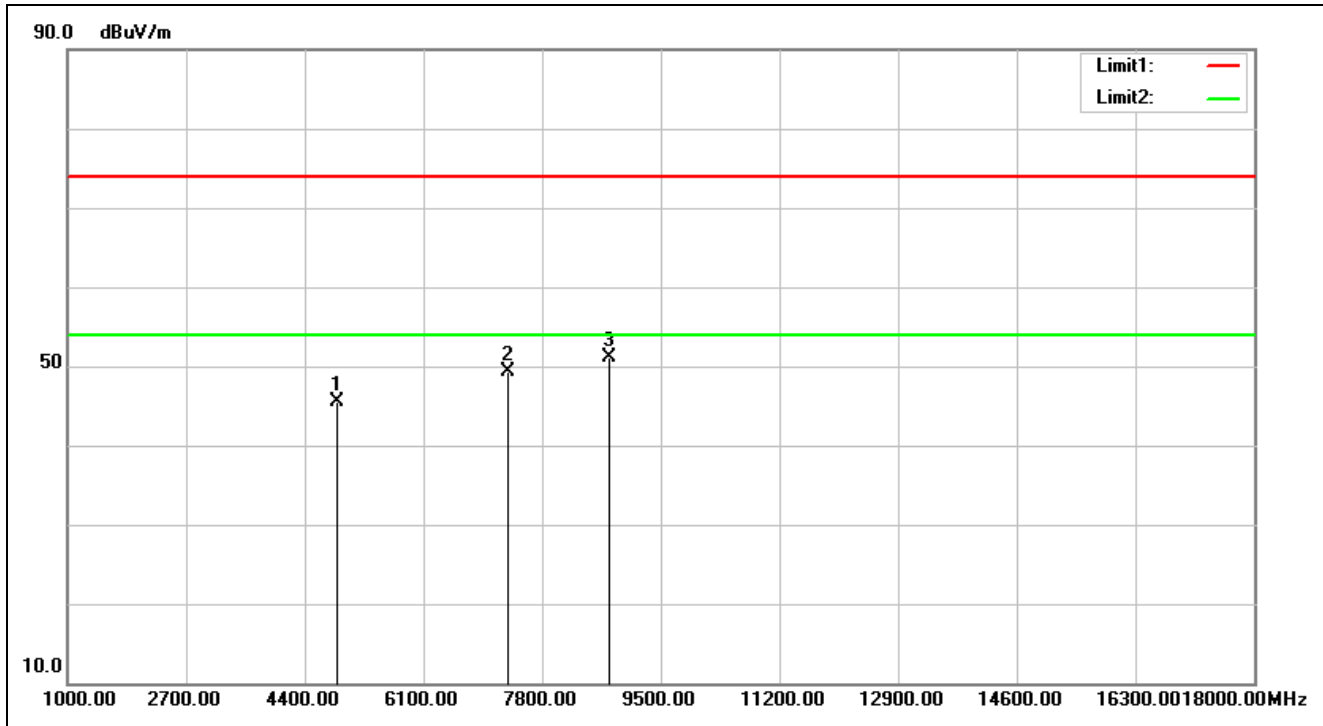
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 11:42:09
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	47.51	44.85	74.00	-29.15	peak			
2	7236.000	5.32	45.12	50.44	74.00	-23.56	peak			
3	8276.000	6.12	44.98	51.10	74.00	-22.90	peak			



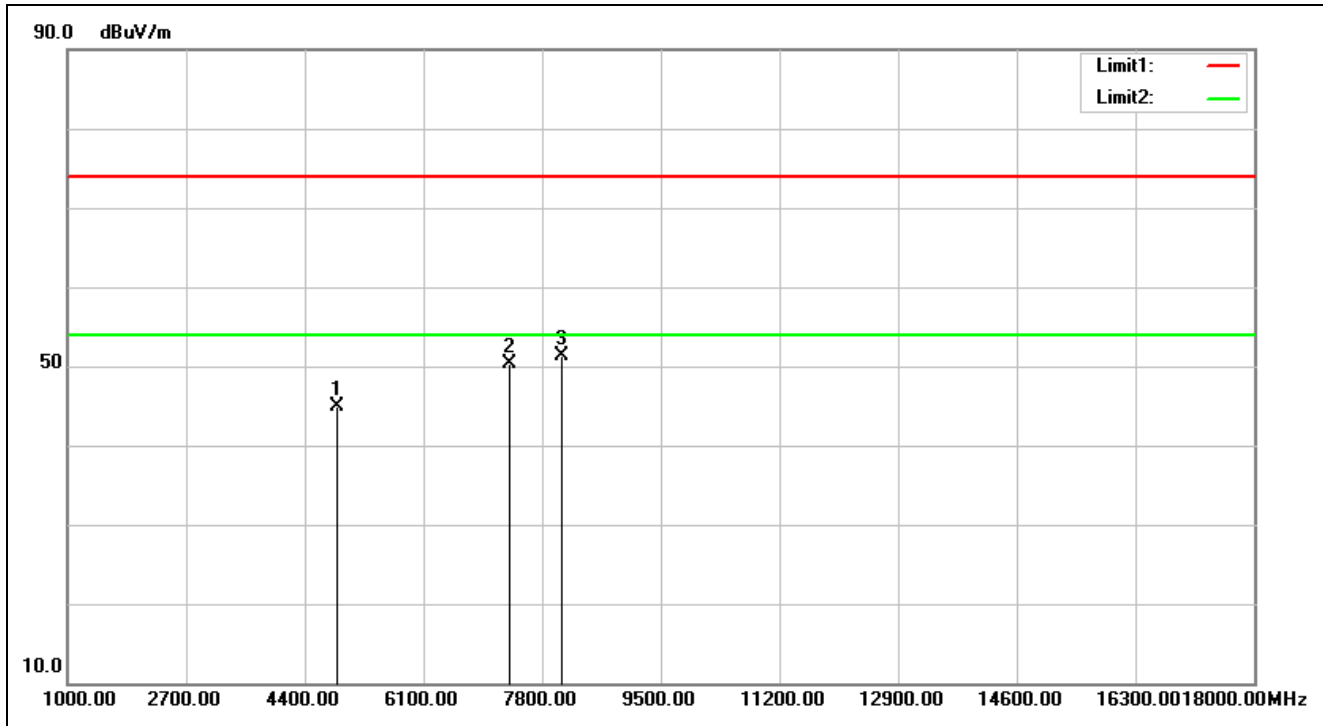
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 11:43:12
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	47.20	44.54	74.00	-29.46	peak			
2	7236.000	5.32	45.02	50.34	74.00	-23.66	peak			
3	8004.000	5.82	45.52	51.34	74.00	-22.66	peak	100	252	



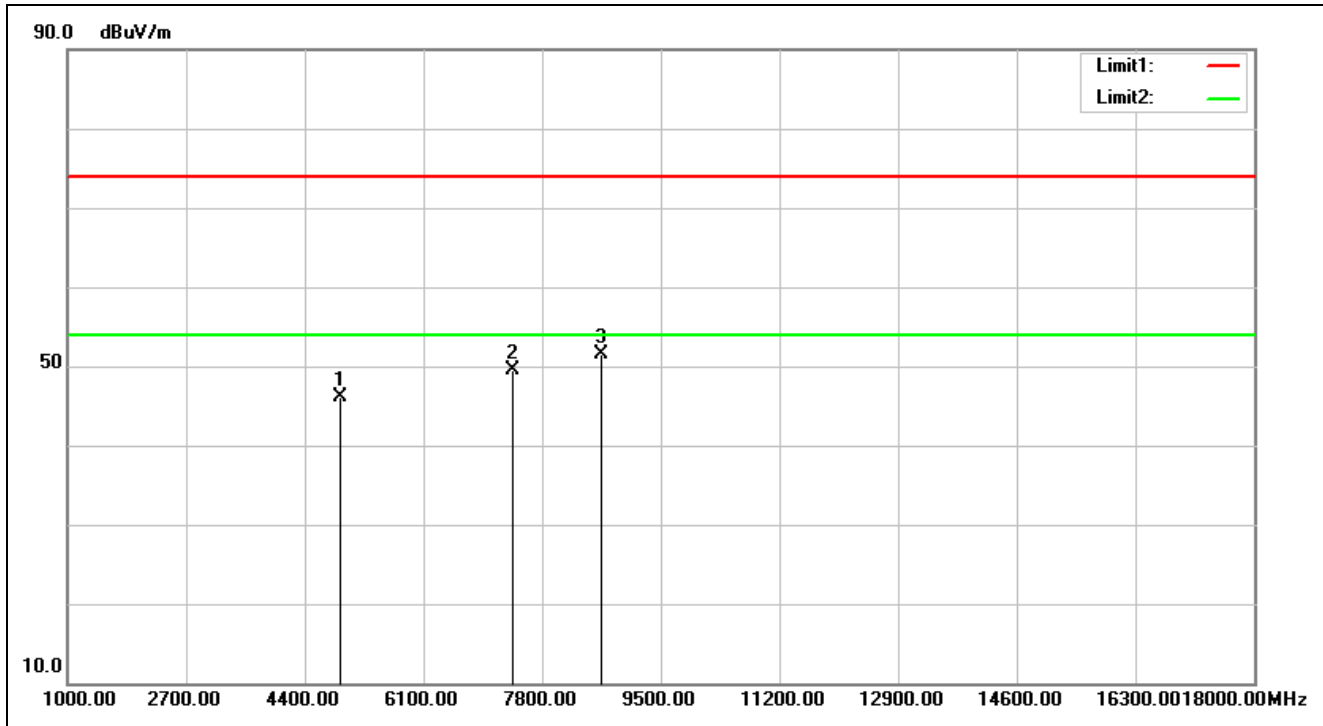
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 11:45:40
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	48.05	45.52	74.00	-28.48	peak			
2	7311.000	5.52	43.83	49.35	74.00	-24.65	peak			
3	8752.000	6.41	44.72	51.13	74.00	-22.87	peak			



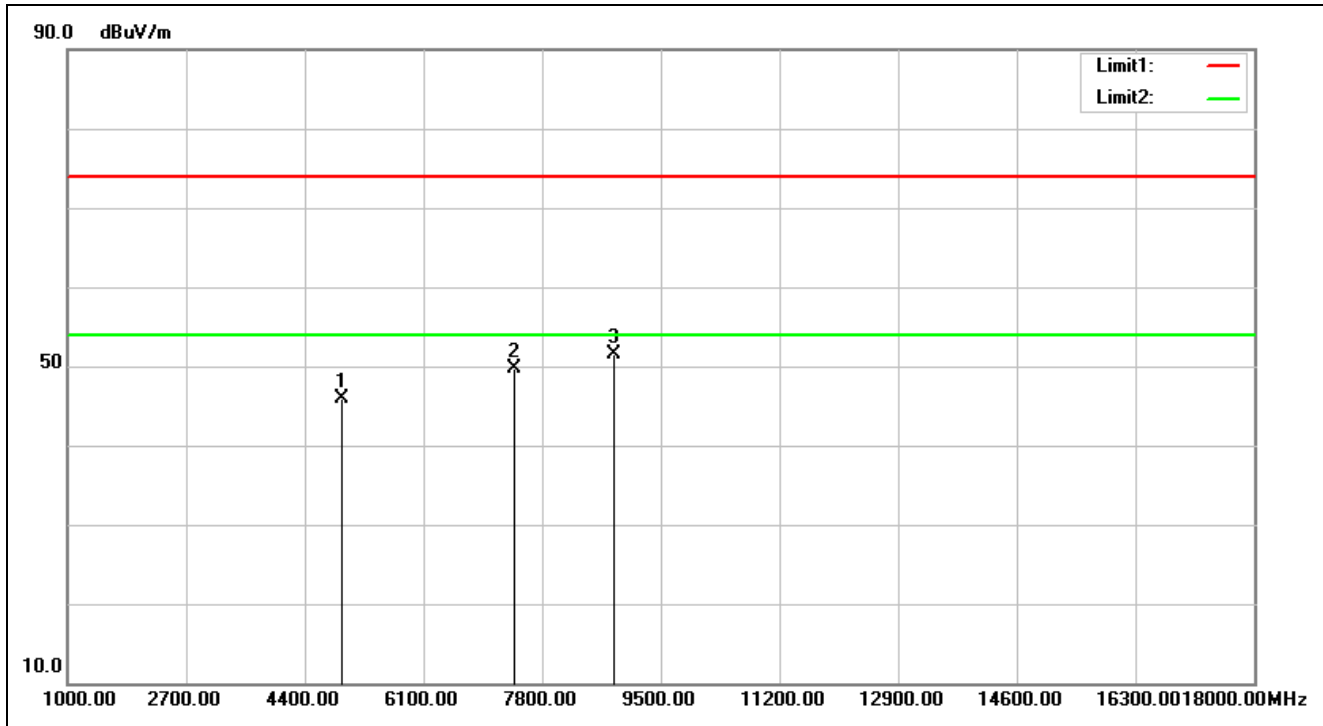
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 11:46:43
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	47.51	44.98	74.00	-29.02	peak			
2	7311.000	5.52	44.78	50.30	74.00	-23.70	peak			
3	8072.000	5.90	45.45	51.35	74.00	-22.65	peak			



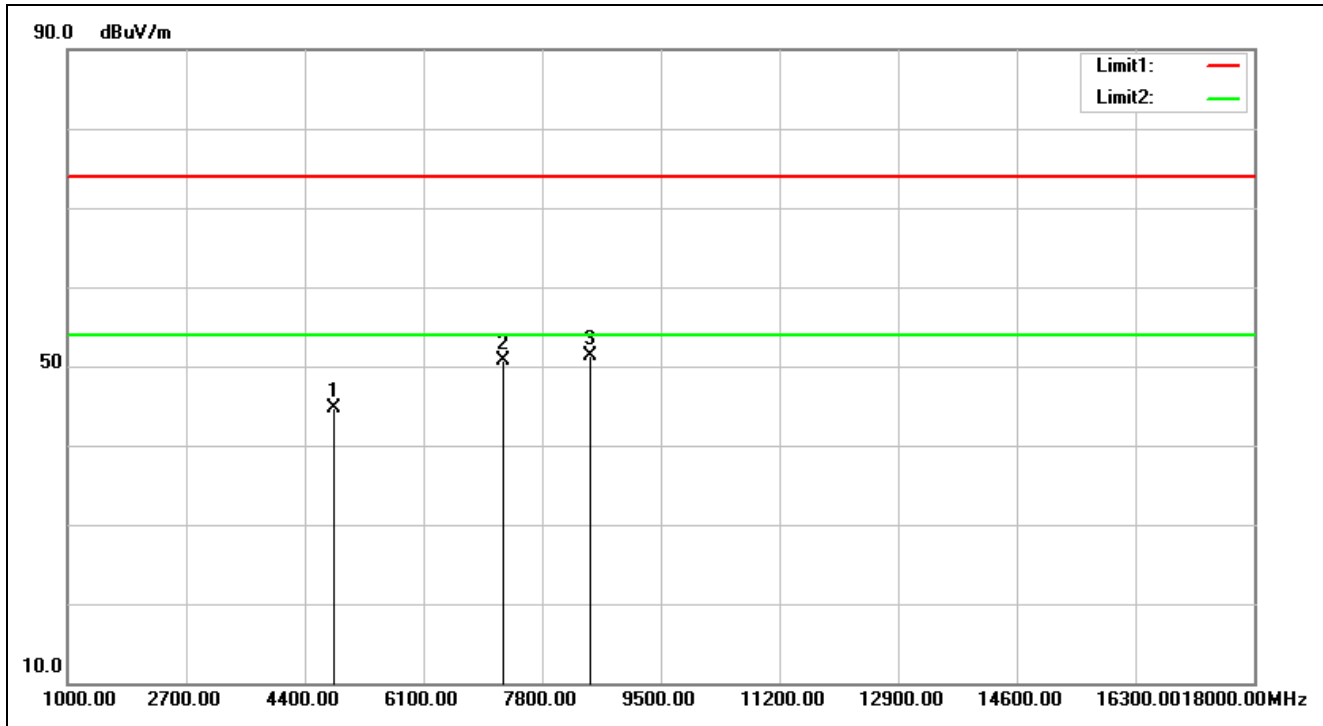
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 11:49:18
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	48.57	46.18	74.00	-27.82	peak			
2	7386.000	5.70	43.84	49.54	74.00	-24.46	peak			
3	8650.000	6.40	45.03	51.43	74.00	-22.57	peak			



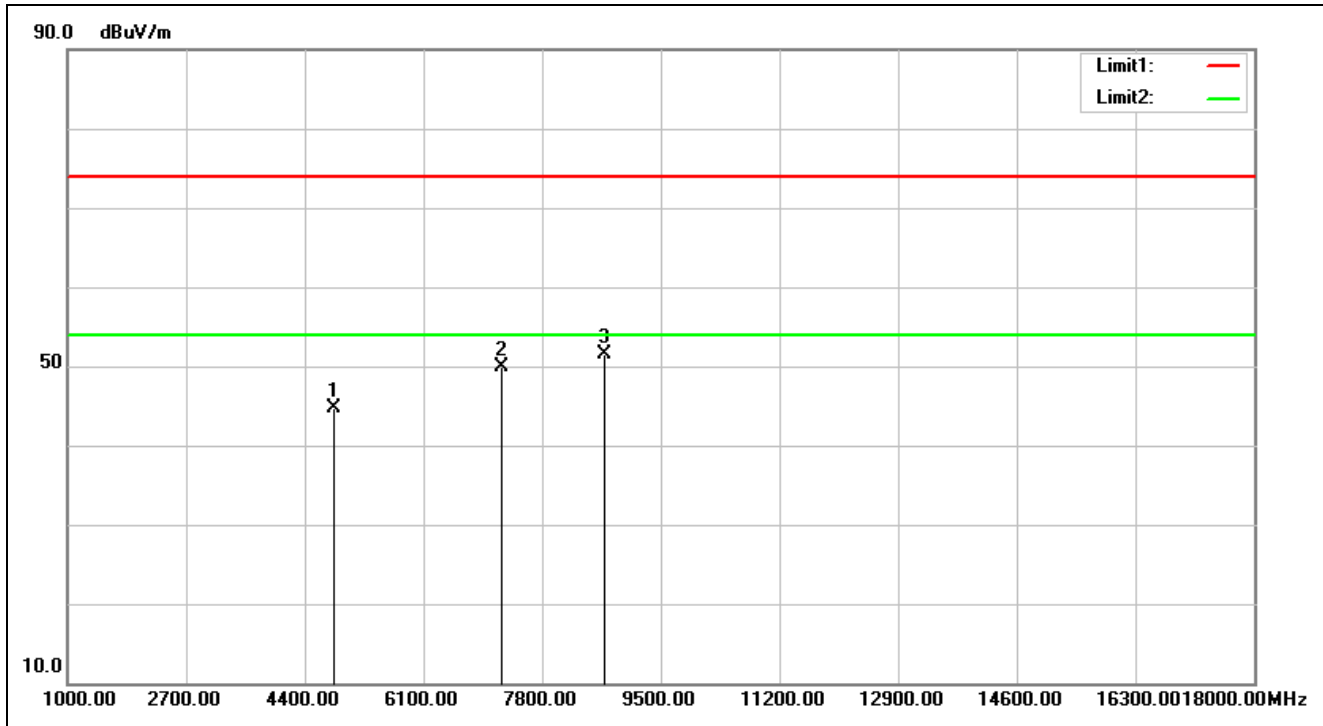
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 11:50:21
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	48.35	45.96	74.00	-28.04	peak			
2	7386.000	5.70	43.96	49.66	74.00	-24.34	peak			
3	8820.000	6.41	45.14	51.55	74.00	-22.45	peak	100	274	



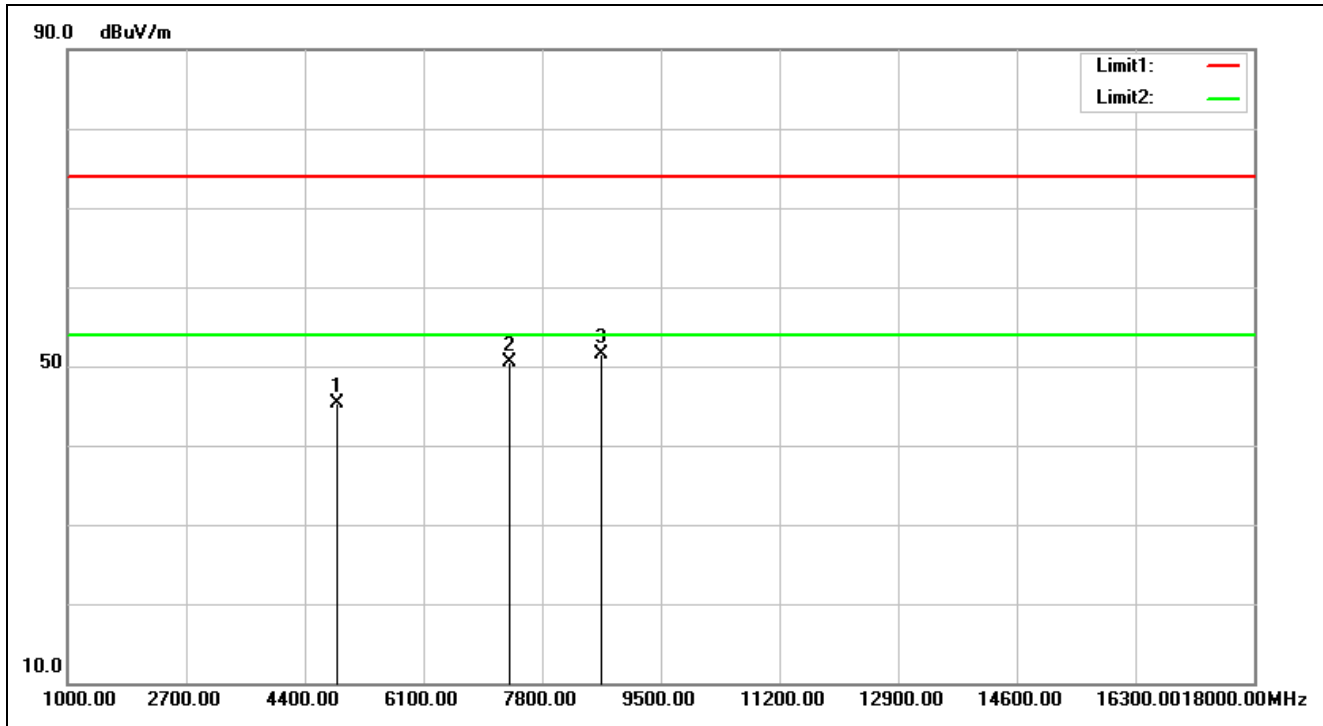
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 11:53:22
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	47.45	44.79	74.00	-29.21	peak			
2	7236.000	5.32	45.34	50.66	74.00	-23.34	peak			
3	8480.000	6.35	45.00	51.35	74.00	-22.65	peak			



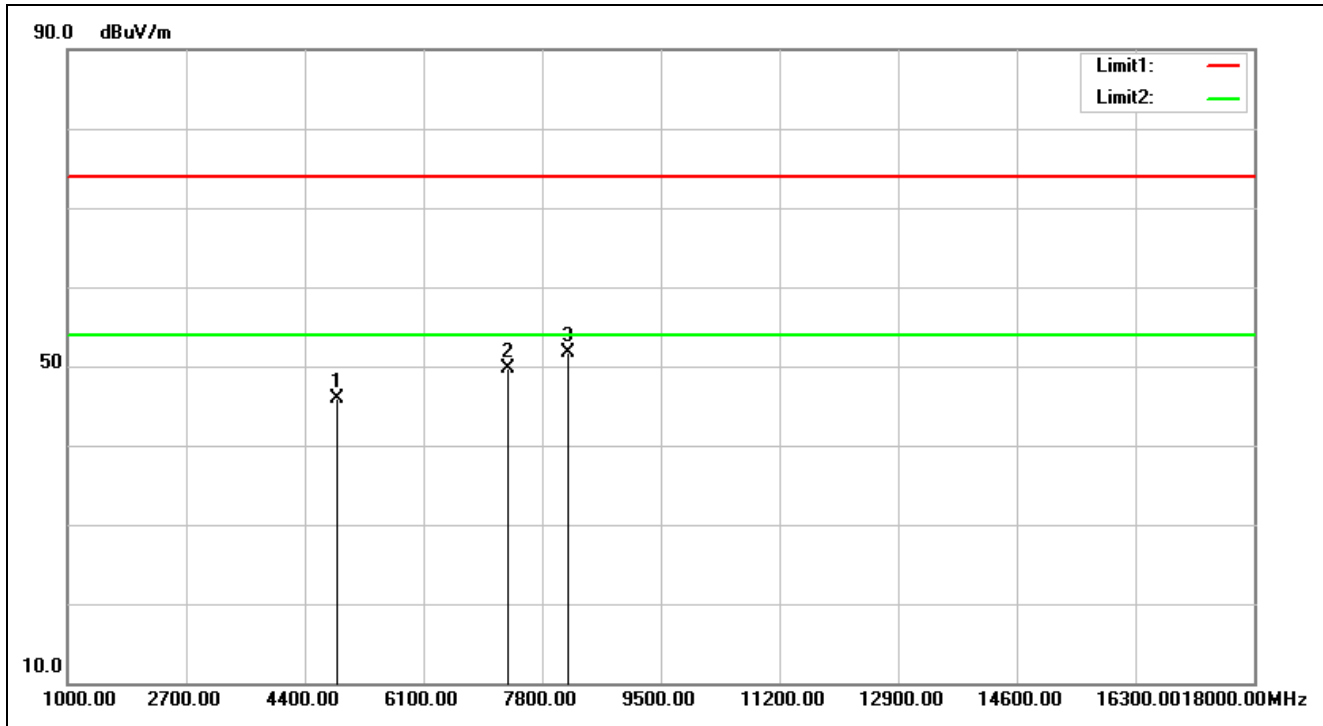
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 11:54:25
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	47.27	44.61	74.00	-29.39	peak			
2	7236.000	5.32	44.63	49.95	74.00	-24.05	peak			
3	8684.000	6.40	45.03	51.43	74.00	-22.57	peak			



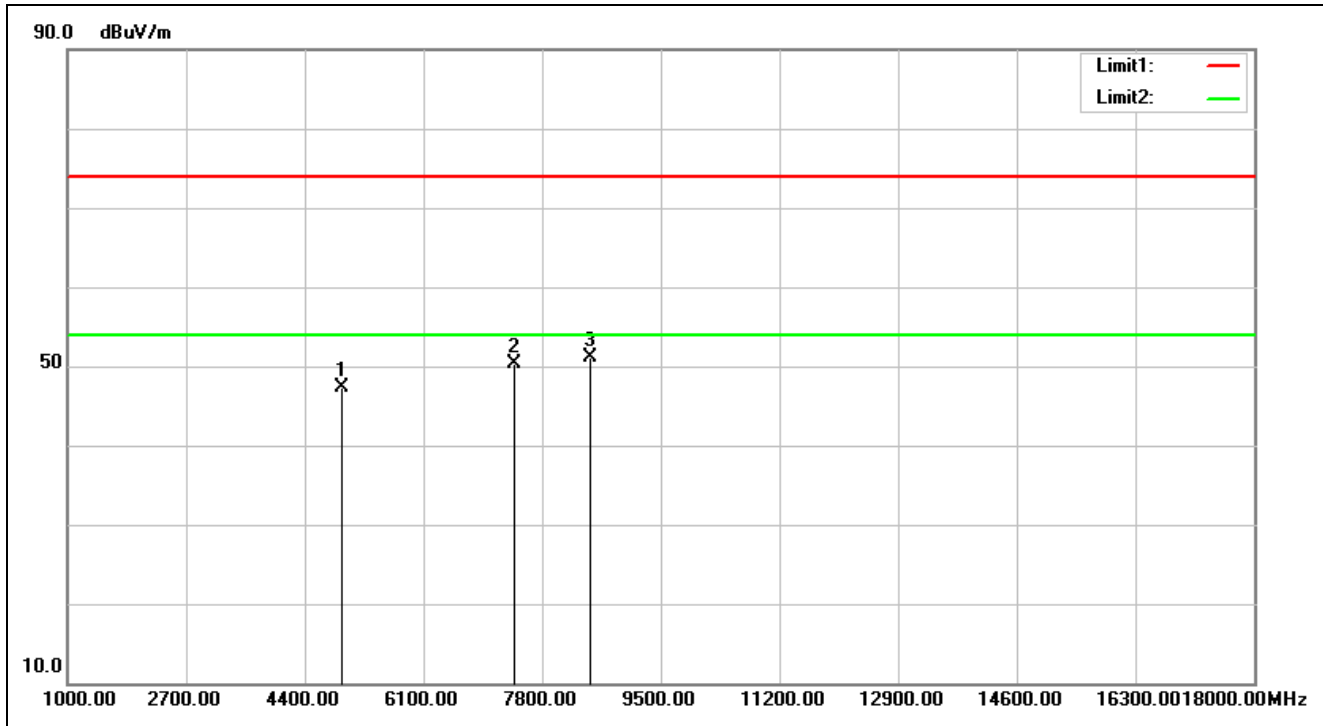
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 13:05:38
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	47.86	45.33	74.00	-28.67	peak			
2	7311.000	5.52	45.04	50.56	74.00	-23.44	peak			
3	8650.000	6.40	45.07	51.47	74.00	-22.53	peak			



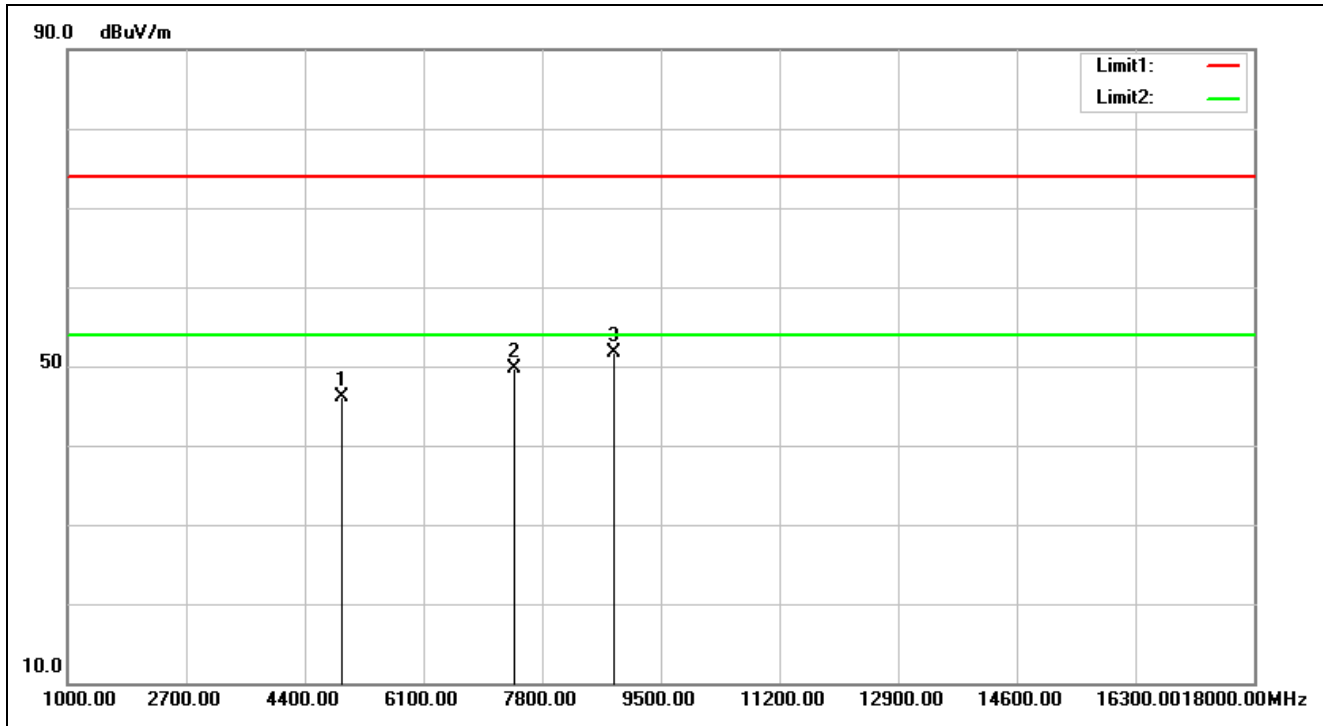
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 13:06:41
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	48.40	45.87	74.00	-28.13	peak			
2	7311.000	5.52	44.21	49.73	74.00	-24.27	peak			
3	8174.000	6.02	45.66	51.68	74.00	-22.32	peak			



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 13:09:10
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	49.67	47.28	74.00	-26.72	peak			
2	7386.000	5.70	44.70	50.40	74.00	-23.60	peak			
3	8480.000	6.35	44.78	51.13	74.00	-22.87	peak			



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 13:10:13
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/60%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	48.53	46.14	74.00	-27.86	peak			
2	7386.000	5.70	44.05	49.75	74.00	-24.25	peak			
3	8837.000	6.42	45.22	51.64	74.00	-22.36	peak	100	207	

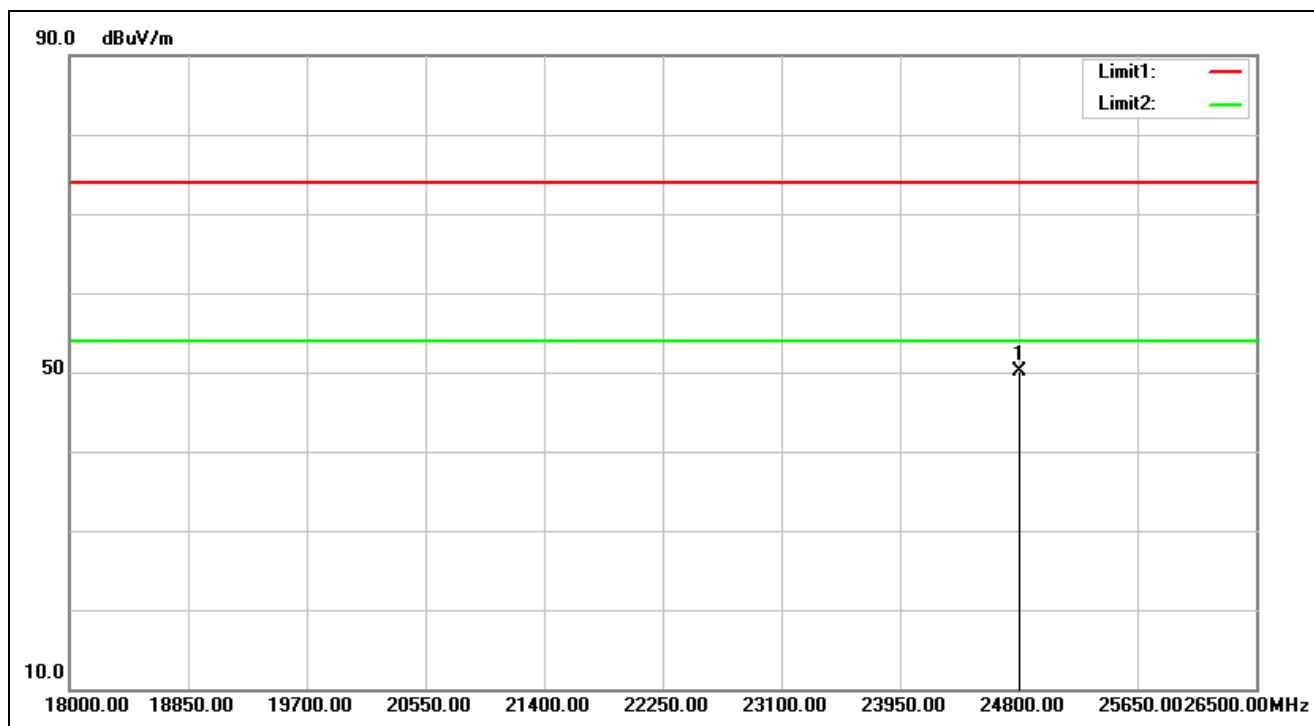
Spurious Emissions, TX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

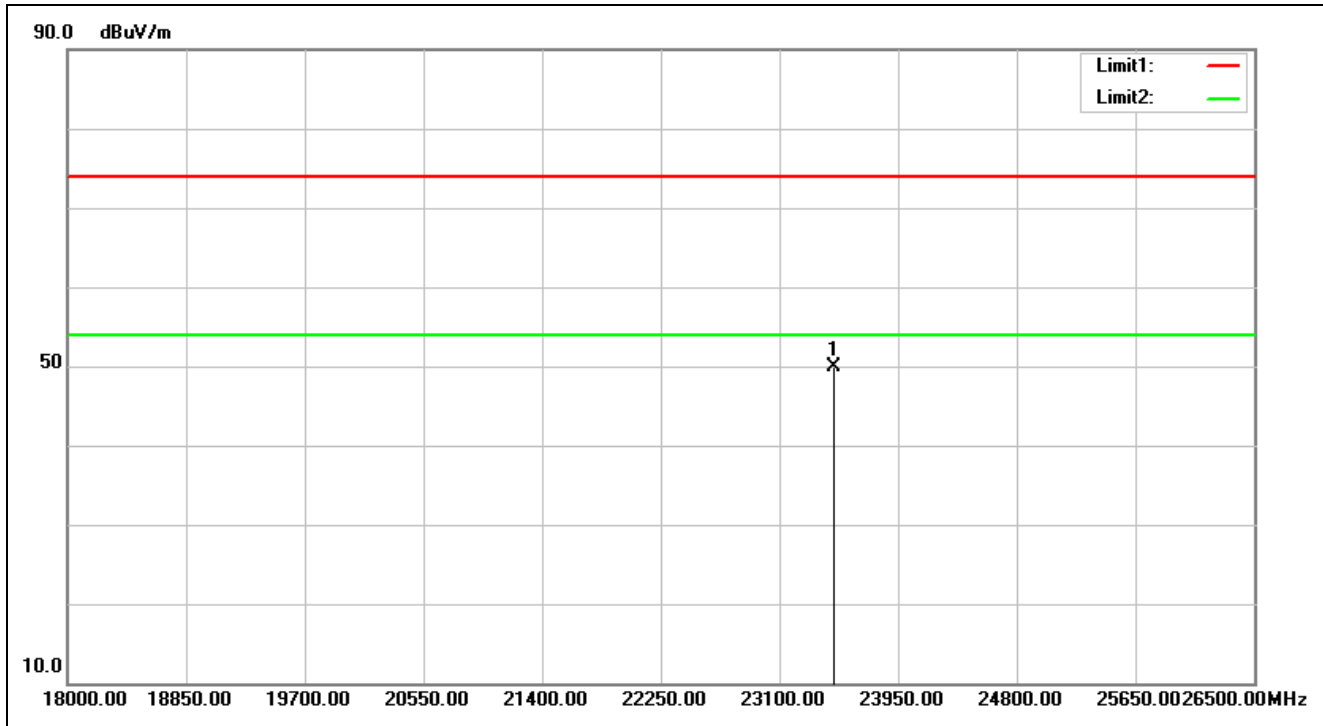
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



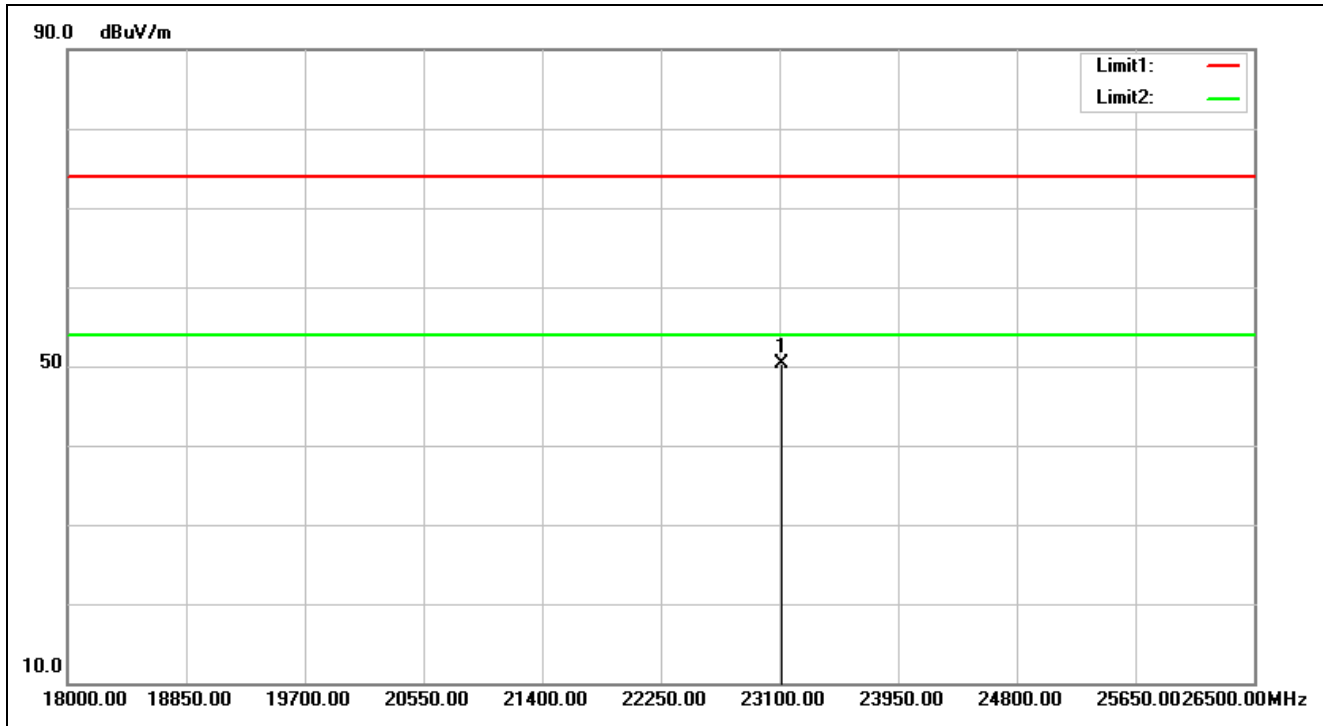
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:53:20
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24800.000	32.88	17.19	50.07	74.00	-23.93	peak		0	



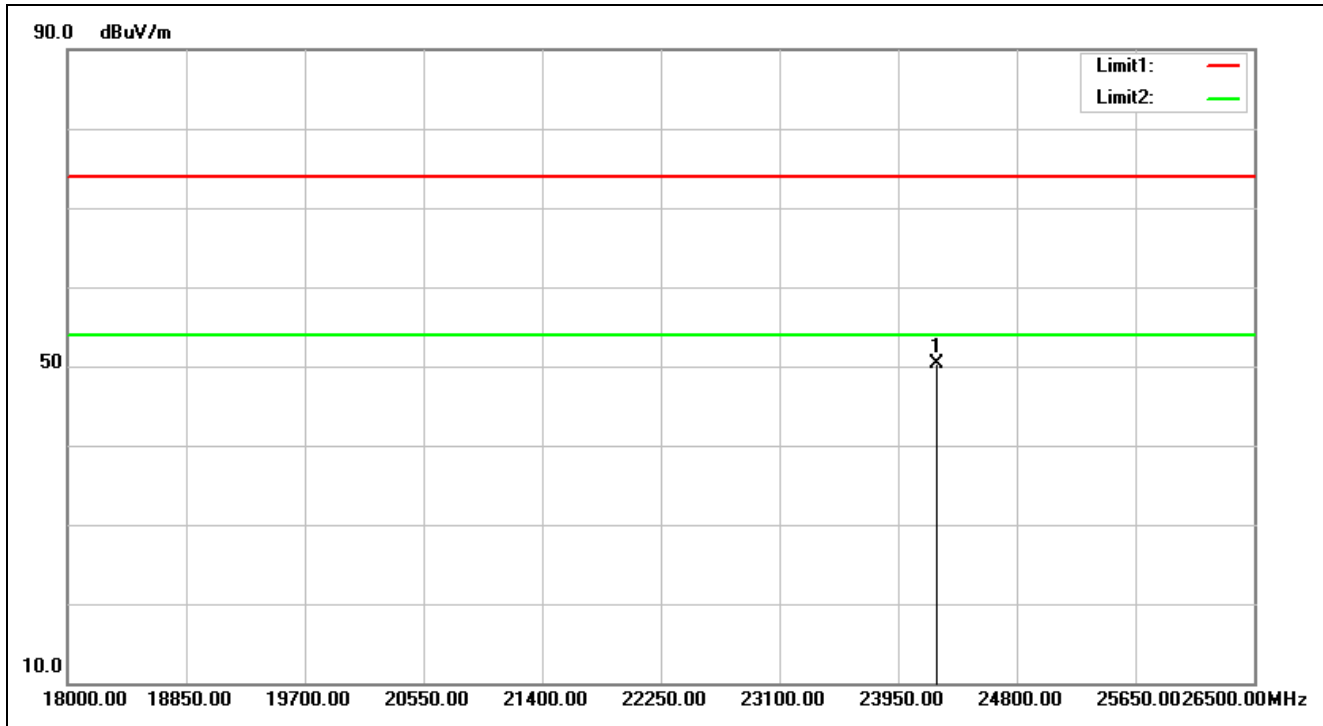
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:53:27
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23491.000	32.82	17.18	50.00	74.00	-24.00	peak			



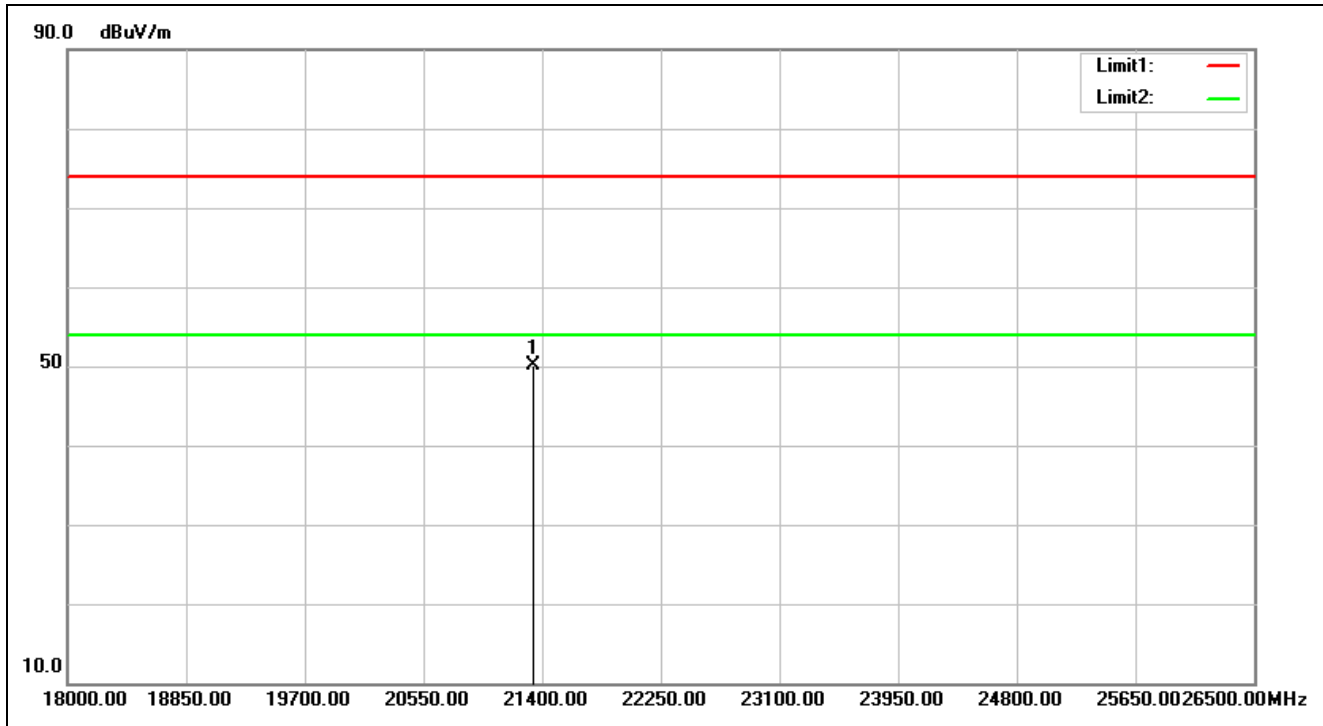
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:53:50
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23117.000	32.45	17.83	50.28	74.00	-23.72	peak			



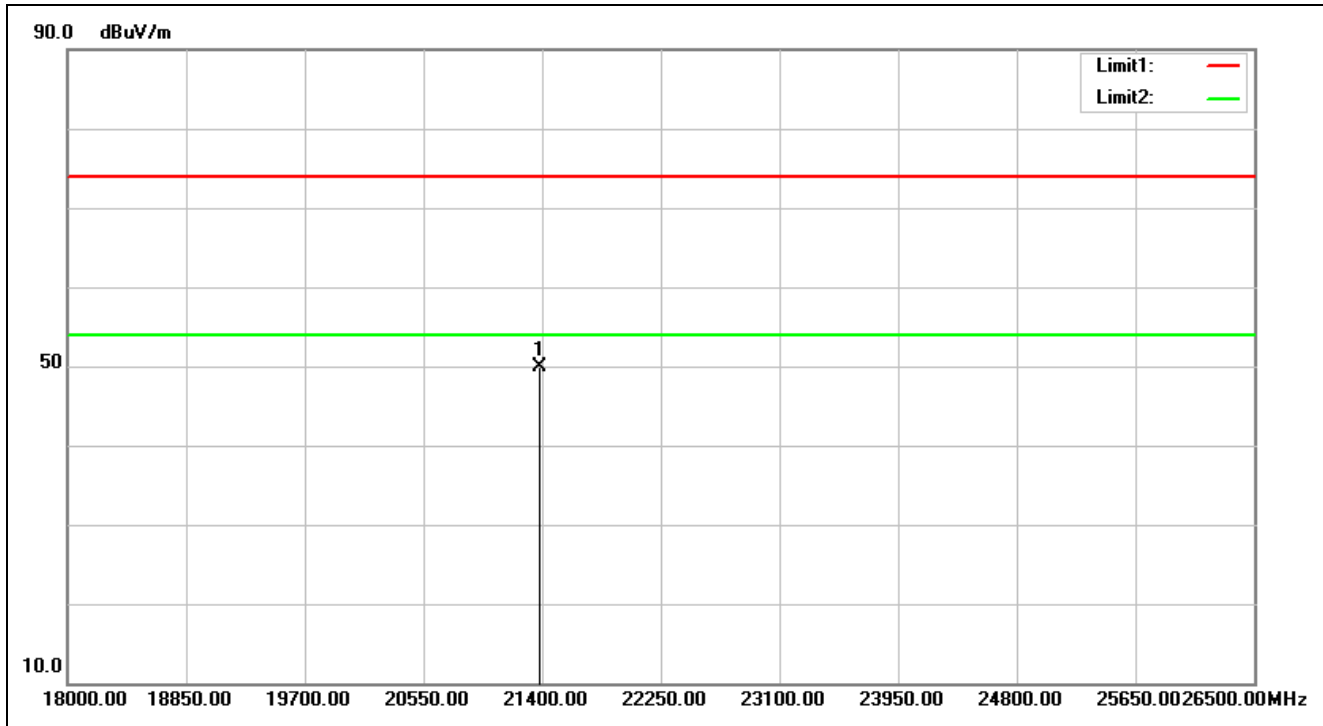
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:53:56
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24222.000	32.49	17.73	50.22	74.00	-23.78	peak			



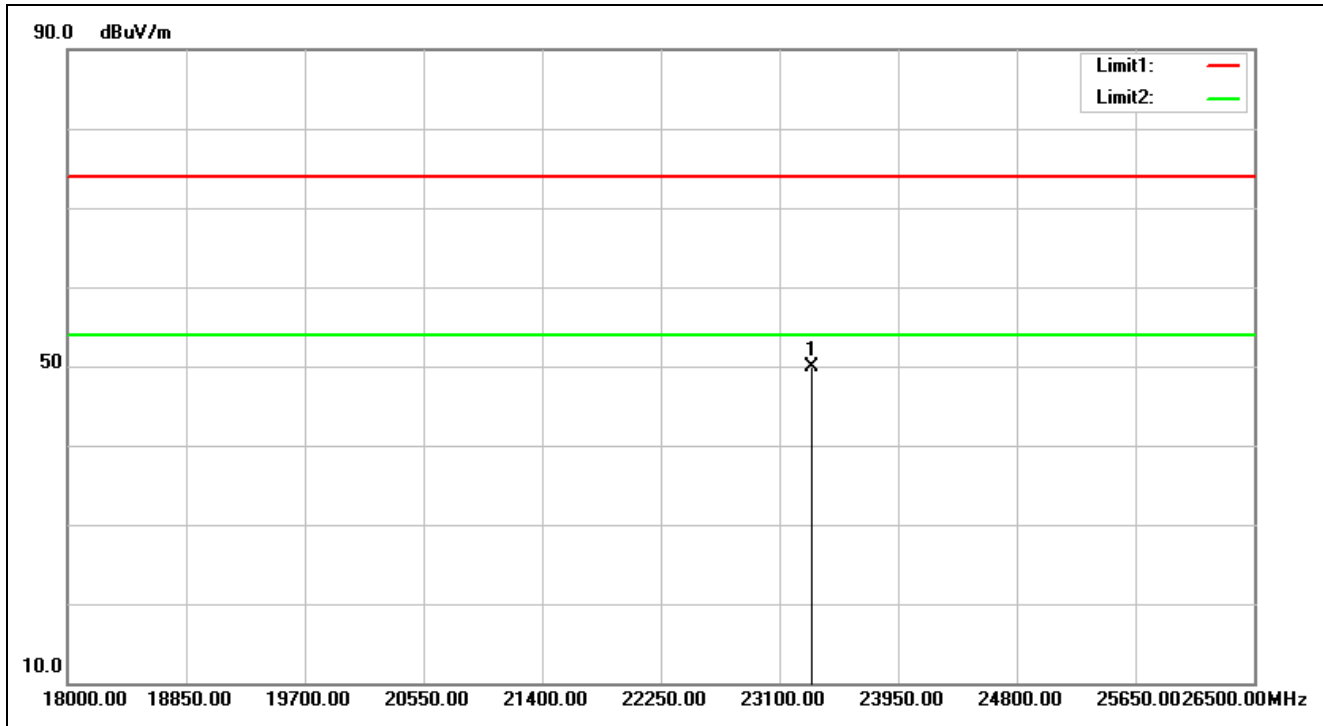
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:54:46
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21332.000	32.15	18.02	50.17	74.00	-23.83	peak			



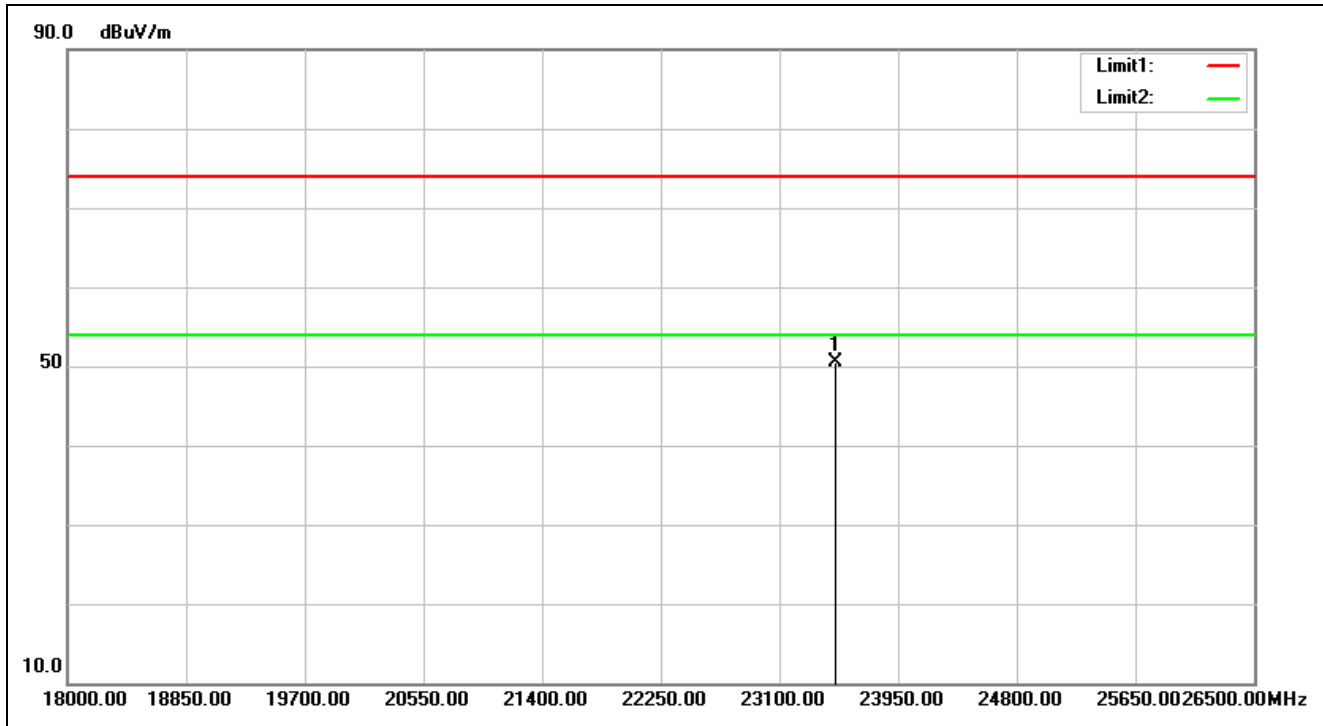
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:54:53
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21383.000	32.17	17.79	49.96	74.00	-24.04	peak			



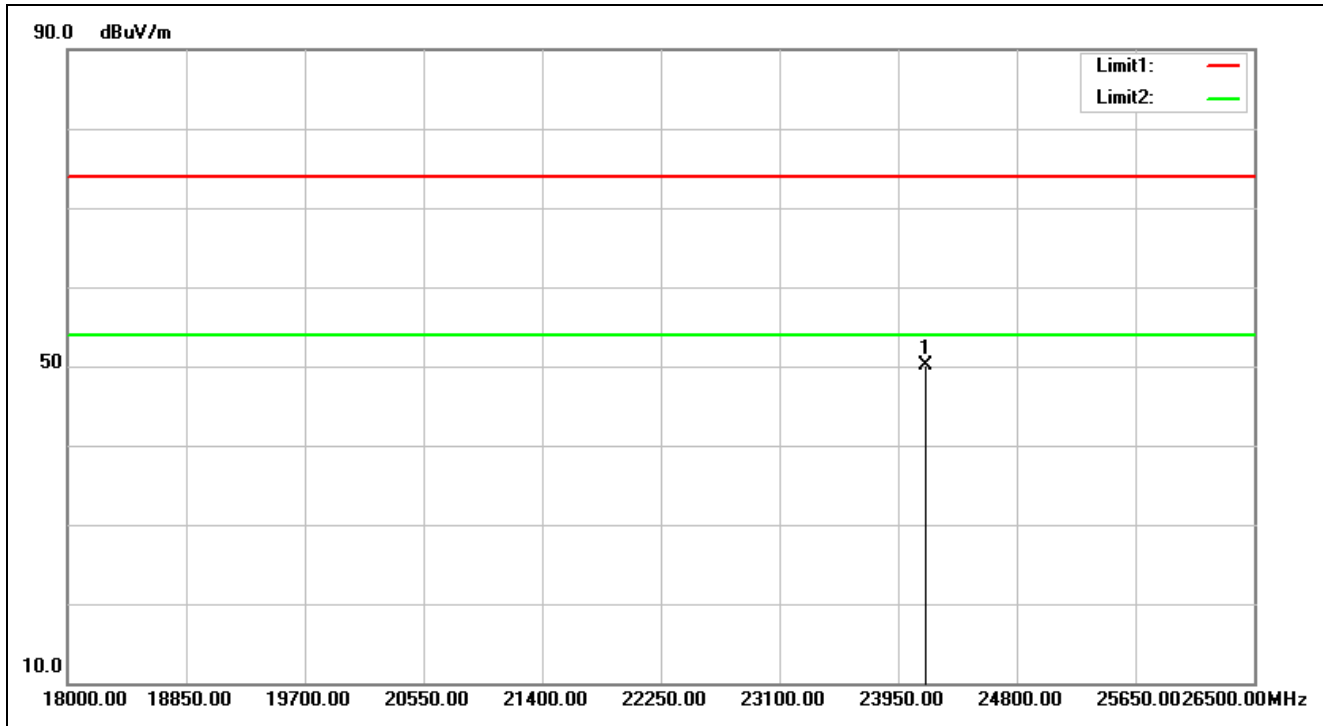
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:56:17
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23329.500	32.66	17.25	49.91	74.00	-24.09	peak			



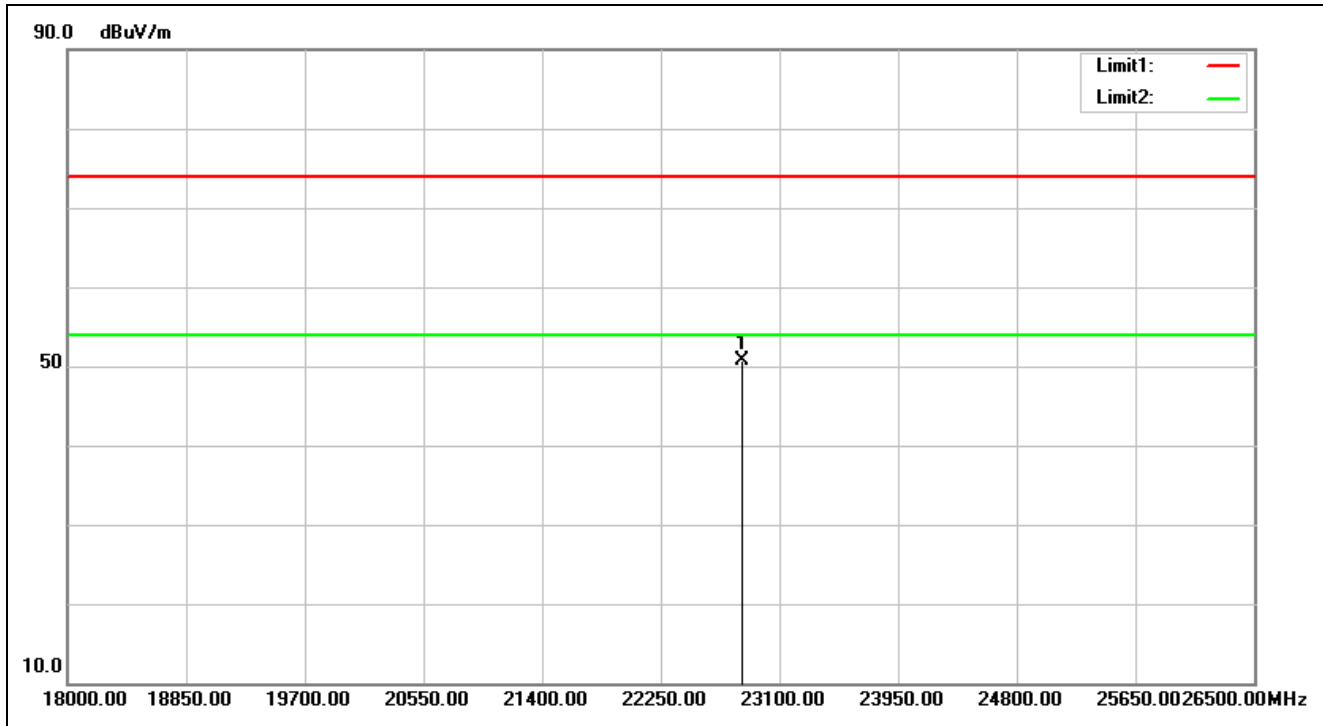
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:56:24
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23499.500	32.83	17.73	50.56	74.00	-23.44	peak			



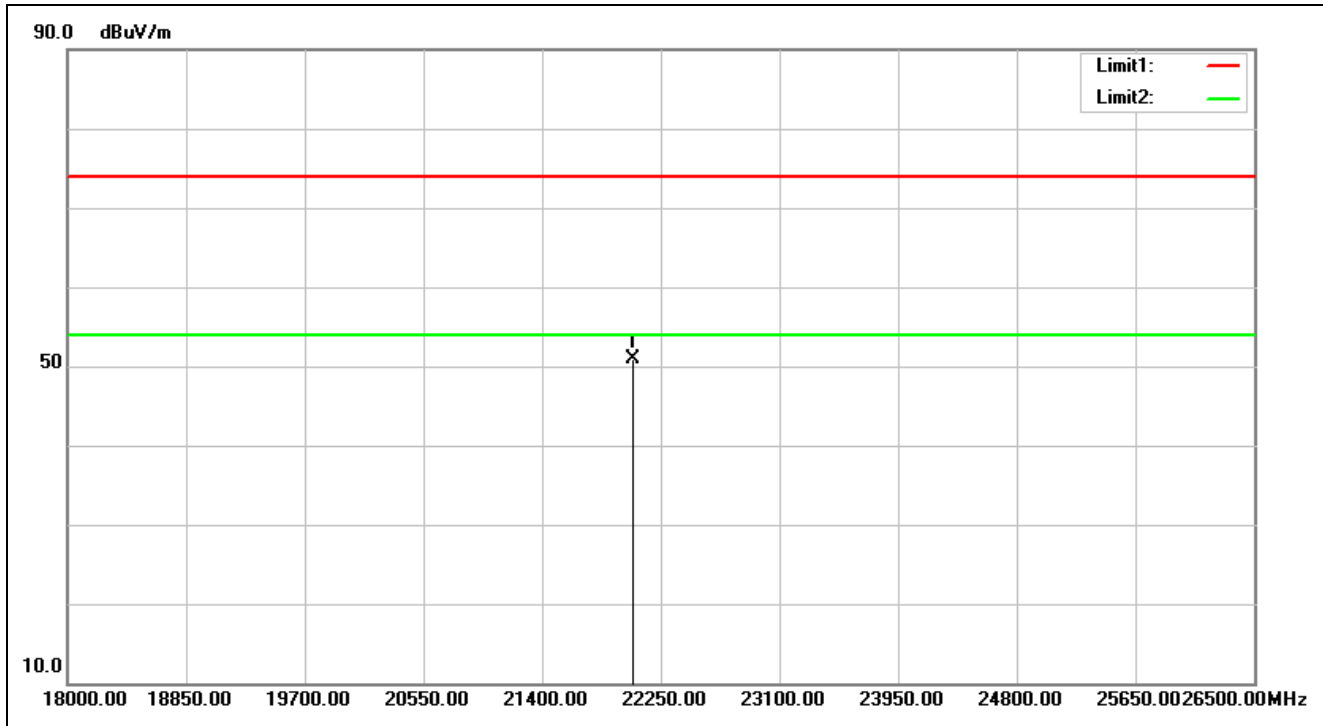
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:56:48
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24145.500	32.47	17.62	50.09	74.00	-23.91	peak			



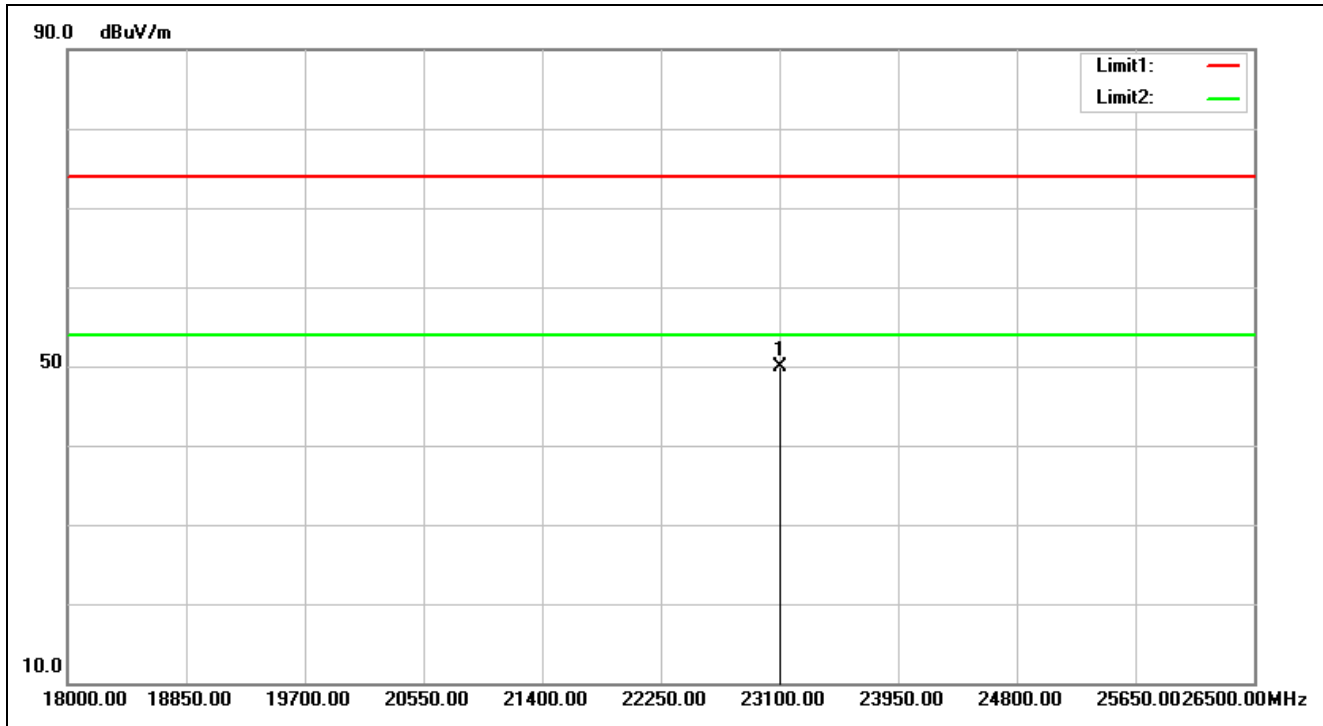
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:56:55
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22836.500	32.27	18.44	50.71	74.00	-23.29	peak			



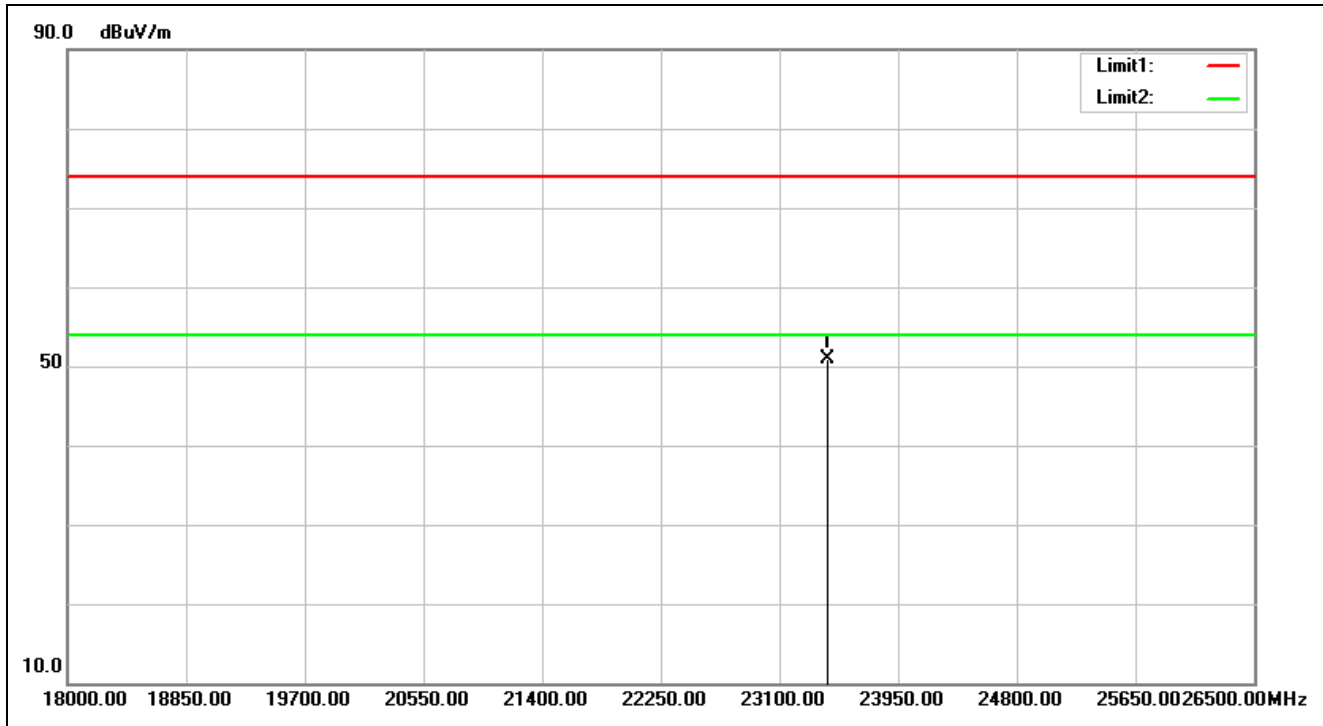
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:57:20
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22054.500	31.99	18.84	50.83	74.00	-23.17	peak			



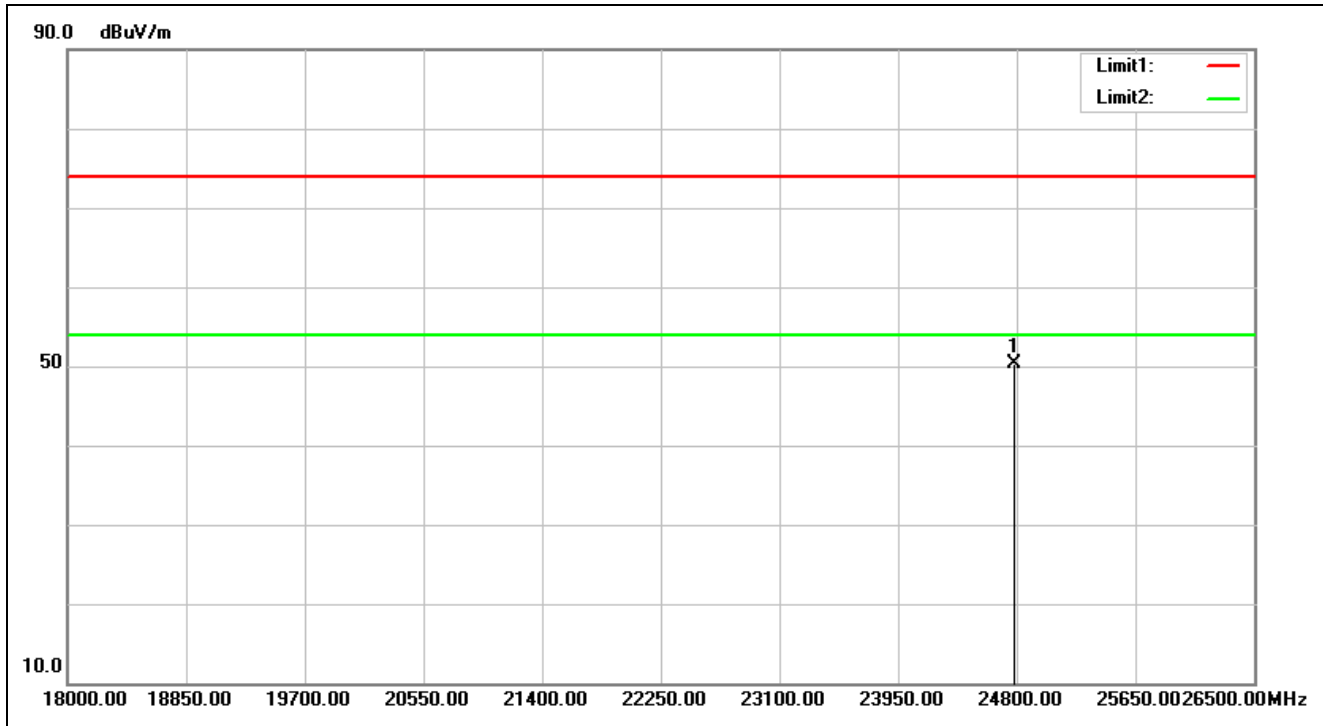
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:57:27
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23100.000	32.43	17.38	49.81	74.00	-24.19	peak			



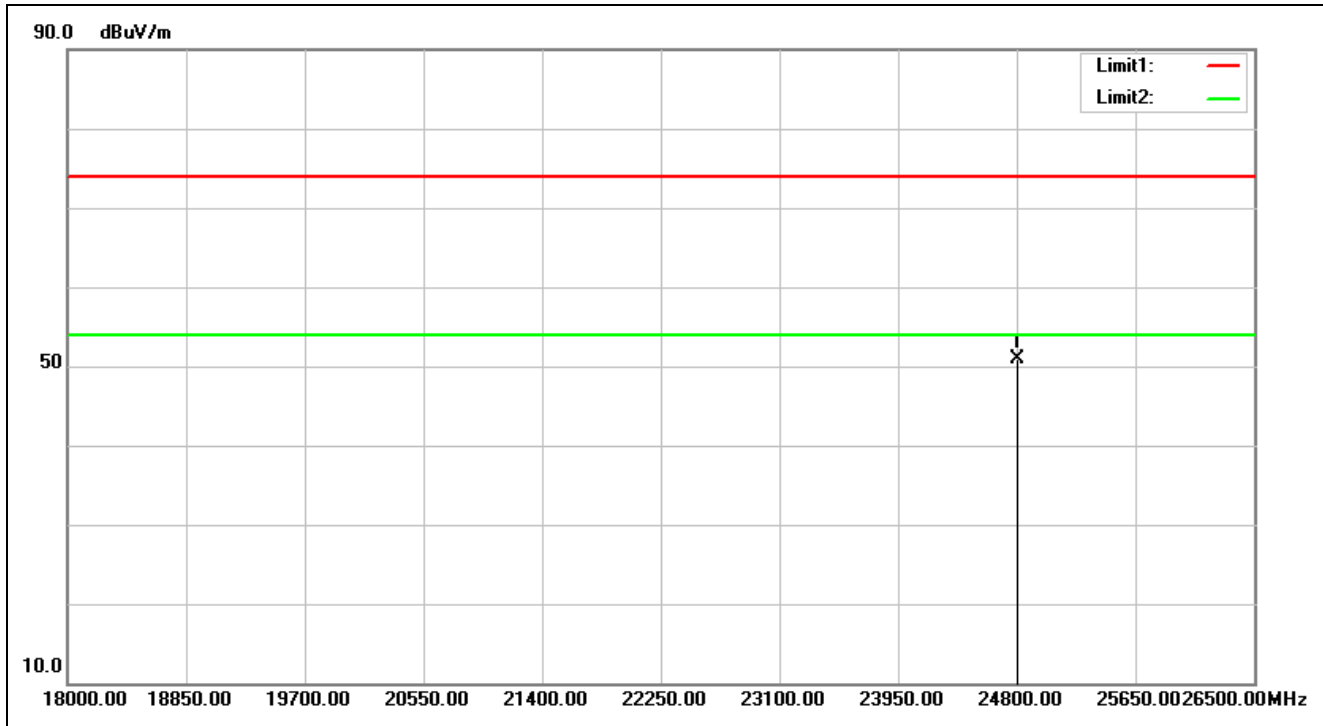
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:57:58
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23440.000	32.77	18.06	50.83	74.00	-23.17	peak			



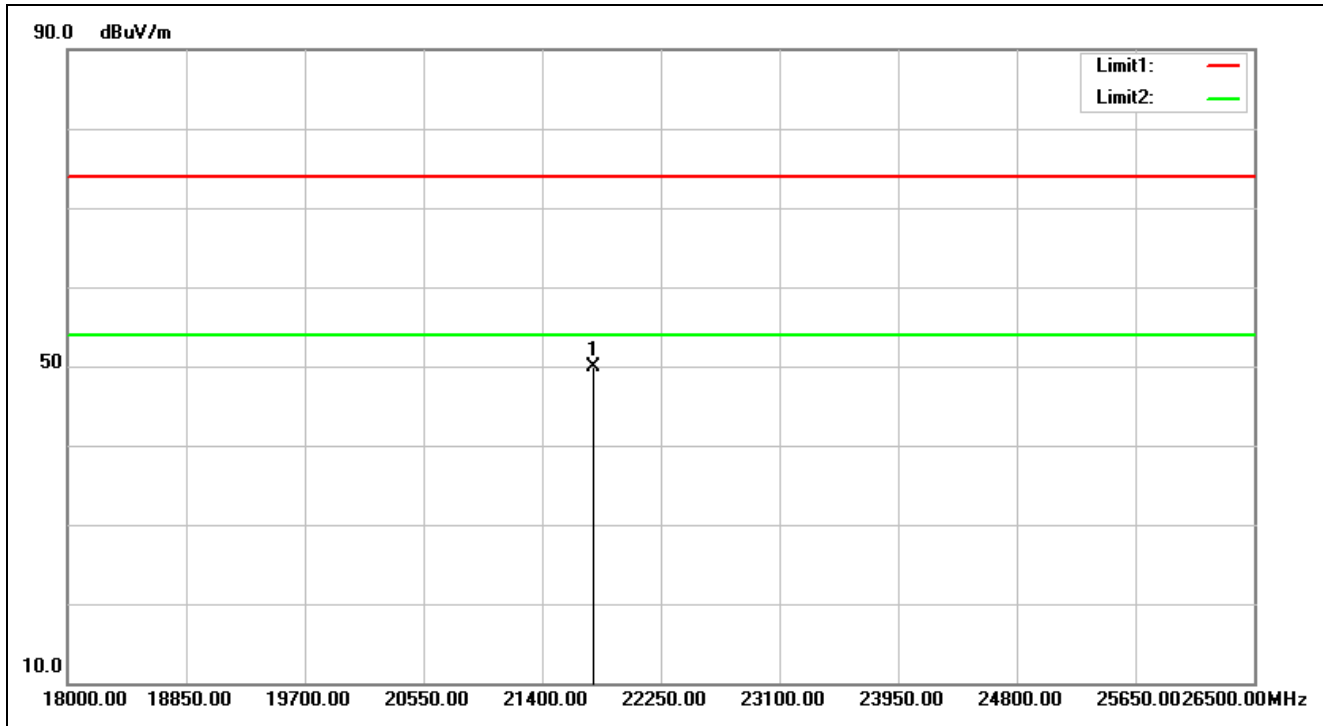
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:58:05
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24783.000	32.87	17.42	50.29	74.00	-23.71	peak			



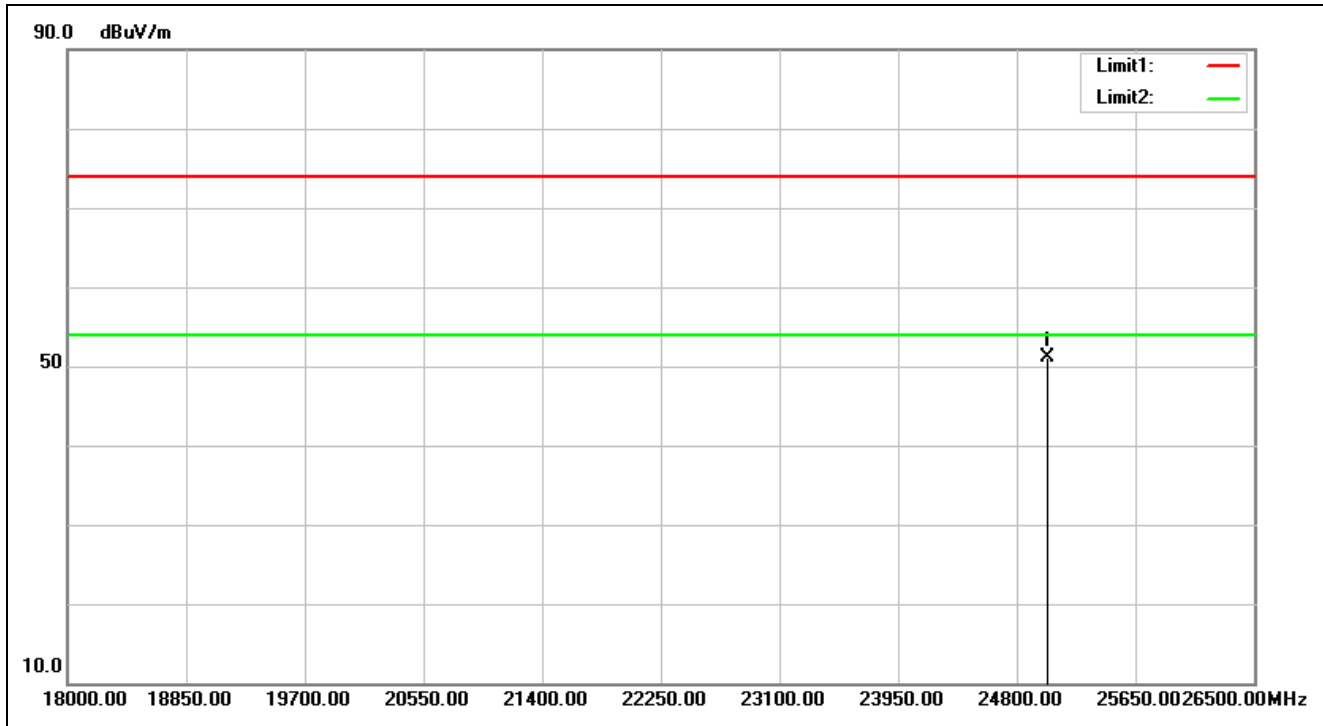
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:58:36
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24800.000	32.88	18.11	50.99	74.00	-23.01	peak			



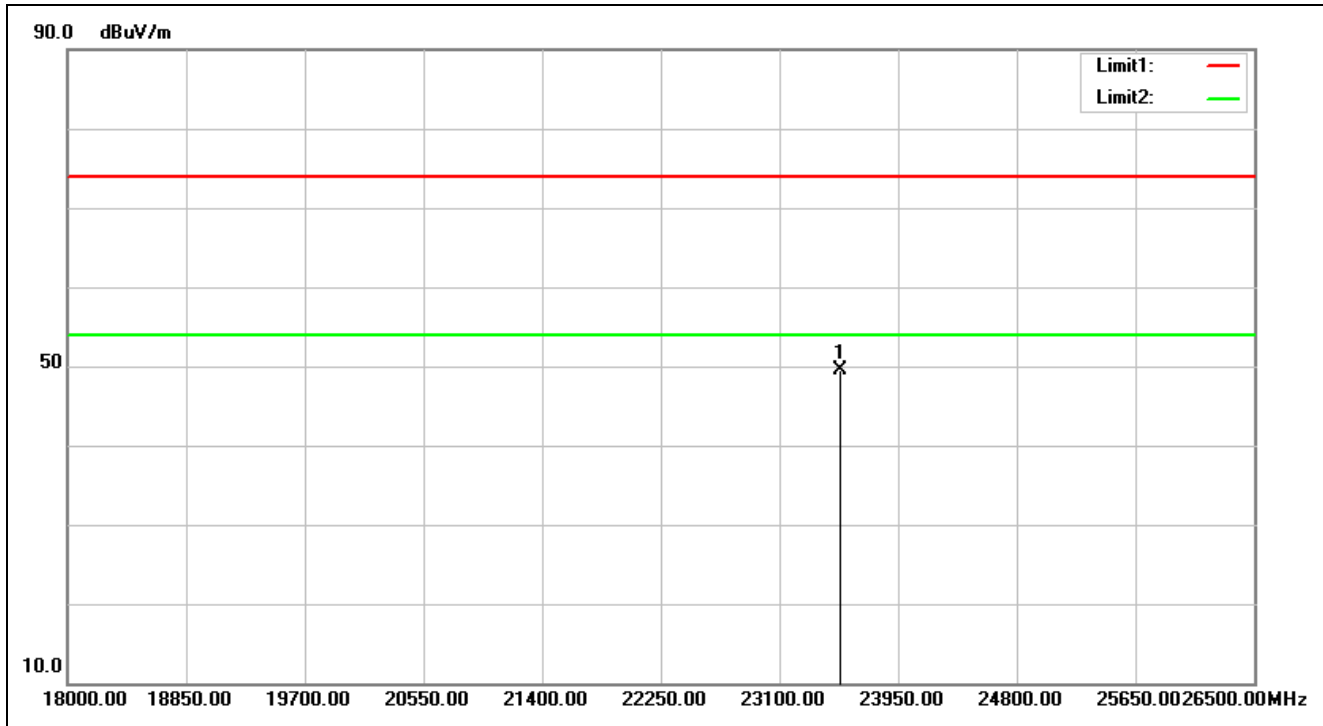
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:58:43
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21765.500	32.10	17.76	49.86	74.00	-24.14	peak			



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:59:17
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	25021.000	33.14	17.88	51.02	74.00	-22.98	peak			



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:59:24
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23533.500	32.80	16.79	49.59	74.00	-24.41	peak			

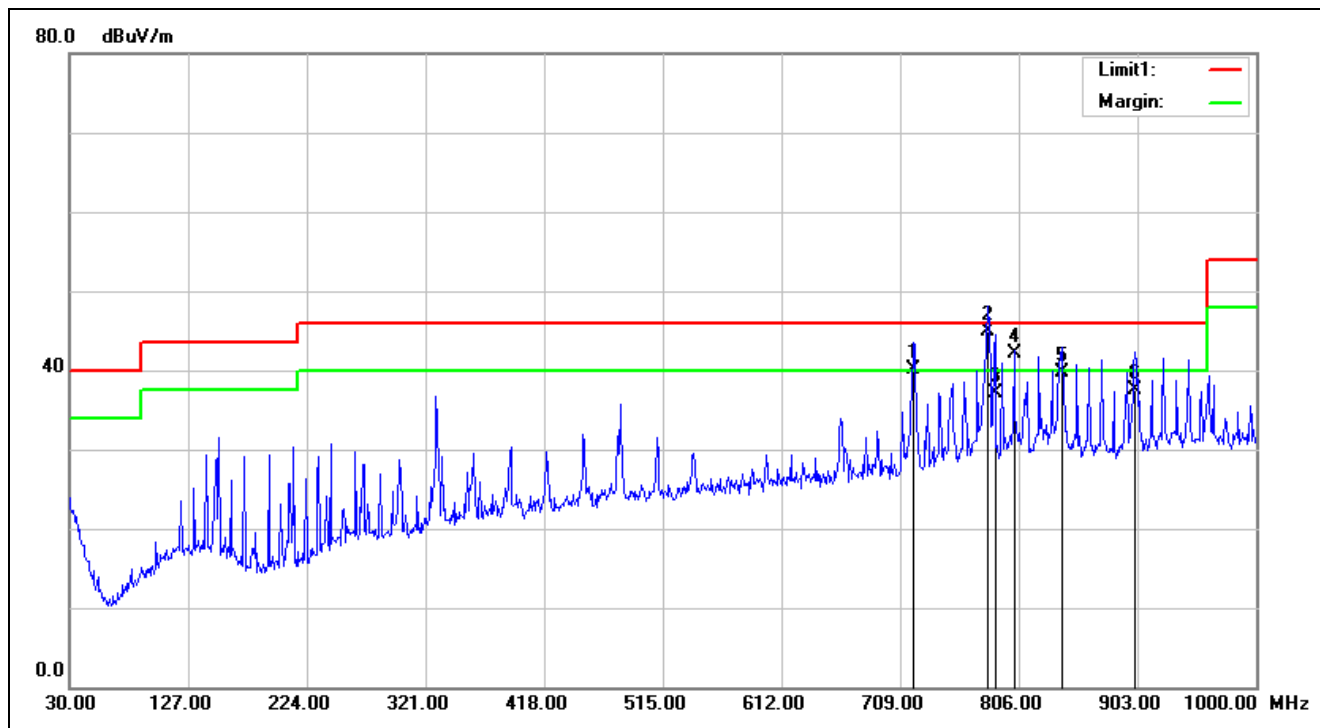
Spurious Emissions, TX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

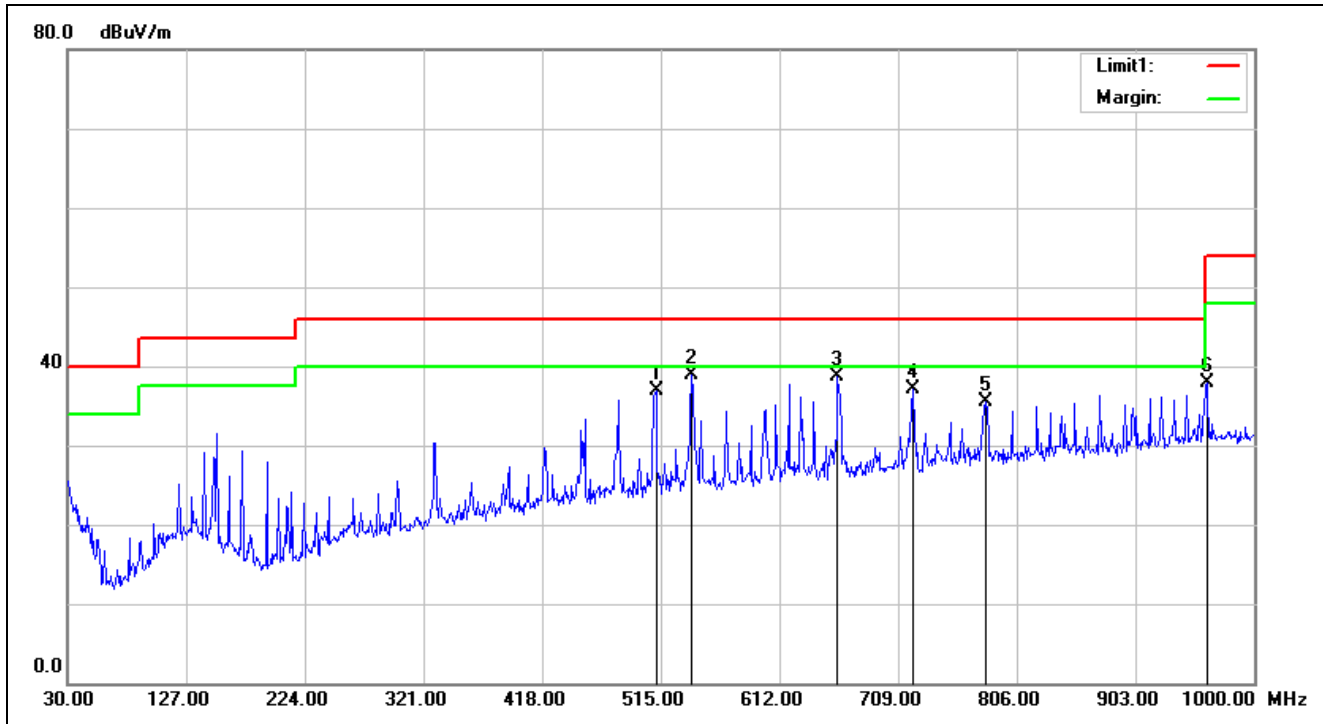
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 14:24:36
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	719.6700	1.70	38.50	40.20	46.00	-5.80	QP	100	253	
2	780.7800	2.61	42.29	44.90	46.00	-1.10	QP	100	240	
3	786.6000	2.67	34.53	37.20	46.00	-8.80	QP	100	251	
4	802.1200	2.80	39.30	42.10	46.00	-3.90	QP	100	230	
5	840.9200	3.54	36.16	39.70	46.00	-6.30	QP	100	220	
6	901.0600	4.09	33.41	37.50	46.00	-8.50	QP	100	110	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 14:25:39
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	511.1200	-1.01	38.01	37.00	46.00	-9.00	QP	100	349	
2	540.2200	-0.59	39.42	38.83	46.00	-7.17	QP	100	136	
3	659.5300	0.67	38.03	38.70	46.00	-7.30	QP	100	197	
4	721.6100	1.74	35.40	37.14	46.00	-8.86	QP	100	165	
5	780.7800	2.61	32.94	35.55	46.00	-10.45	QP	100	208	
6	961.2000	5.54	32.36	37.90	54.00	-16.10	QP	100	181	

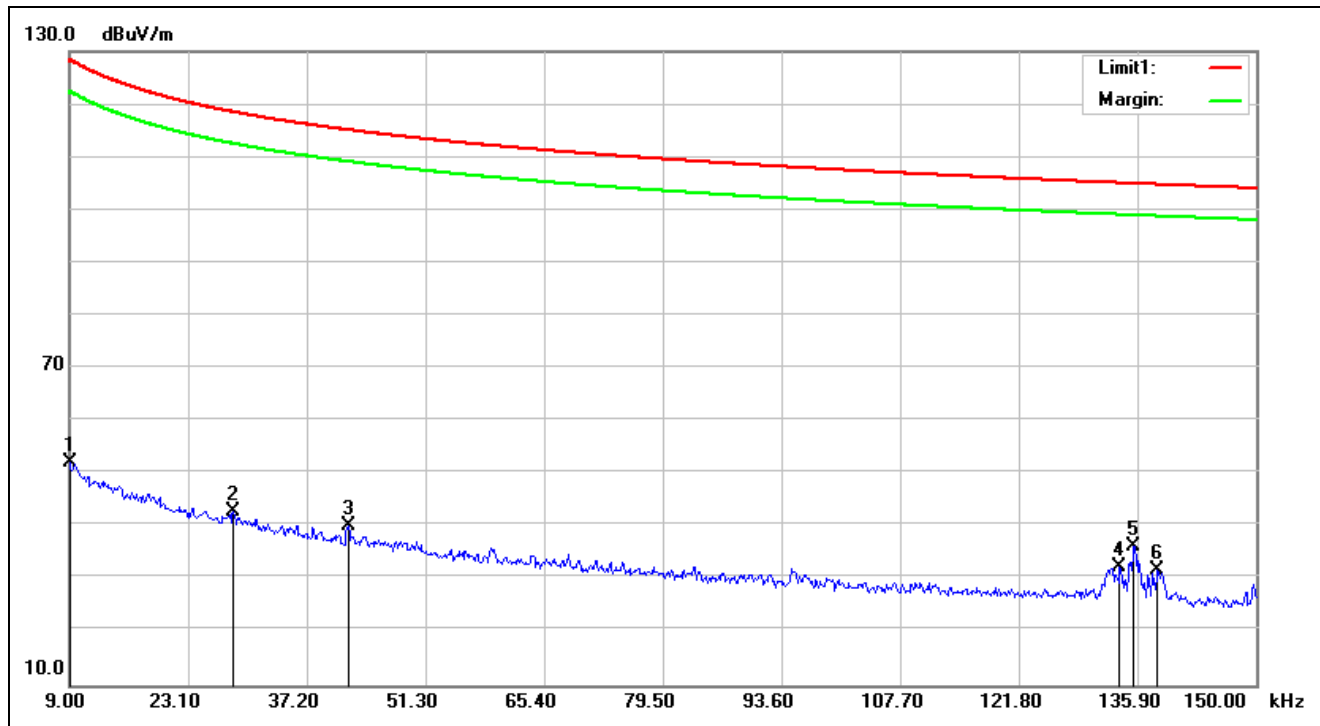
Spurious Emissions, TX Mode, 9k-30M



TUV Rheinland Taiwan Ltd.

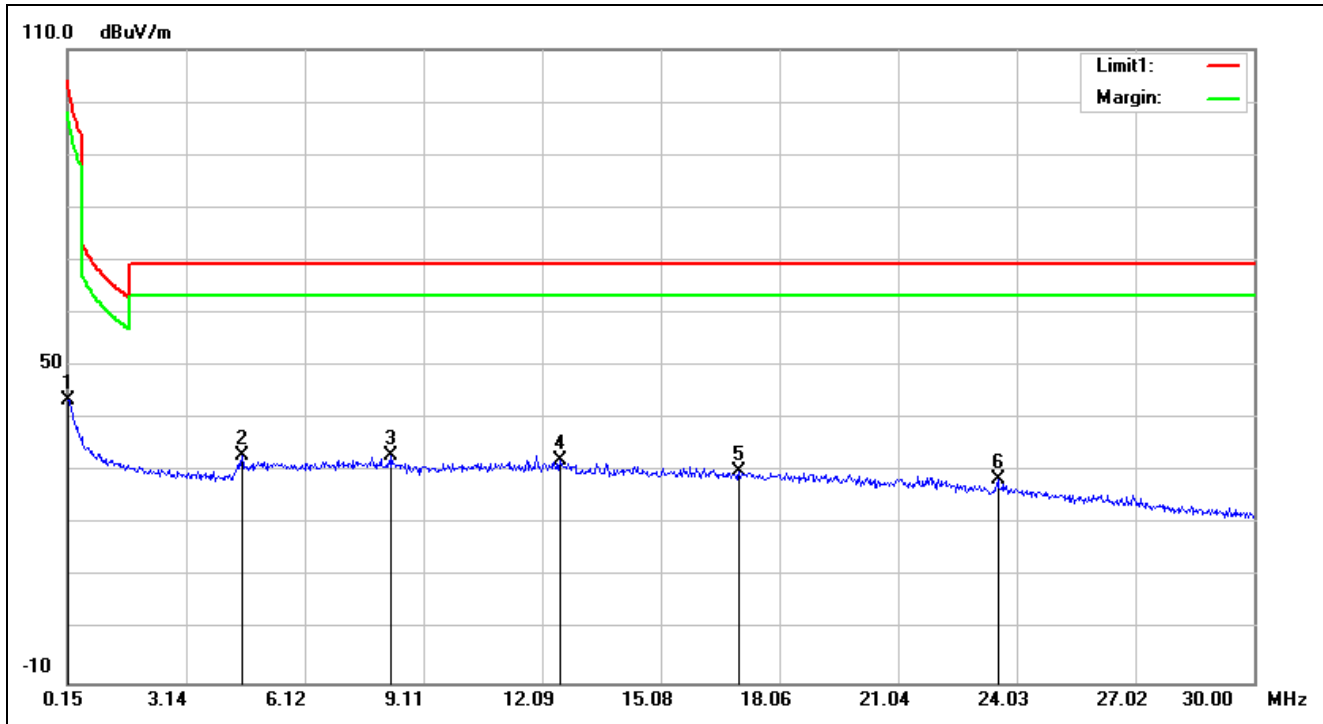
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED 15.209_9k-1G_3m	Ant. Polarization:	NA
Test item:	Radiation Emission	Test Time:	2018/1/24 17:19:37
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0090	19.53	32.74	52.27	128.50	-76.23	QP	100	256	
2	0.0284	20.11	22.79	42.90	118.52	-75.62	QP	100	150	
3	0.0421	19.71	20.43	40.14	115.11	-74.97	QP	100	230	
4	0.1337	19.10	13.12	32.22	105.08	-72.86	QP	100	160	
5	0.1354	19.09	17.06	36.15	104.97	-68.82	QP	100	251	
6	0.1382	19.09	12.53	31.62	104.79	-73.17	QP	100	110	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED 15.209_9k-1G_3m	Ant. Polarization:	NA
Test item:	Radiation Emission	Test Time:	2018/1/24 17:23:20
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1500	19.08	24.51	43.59	104.08	-60.49	QP	100	256	
2	4.5379	19.47	13.56	33.03	69.50	-36.47	QP	100	245	
3	8.2990	20.06	12.97	33.03	69.50	-36.47	QP	100	150	
4	12.5377	20.67	11.45	32.12	69.50	-37.38	QP	100	165	
5	17.0451	21.47	8.61	30.08	69.50	-39.42	QP	100	89	
6	23.5524	22.22	6.38	28.60	69.50	-40.90	QP	100	155	

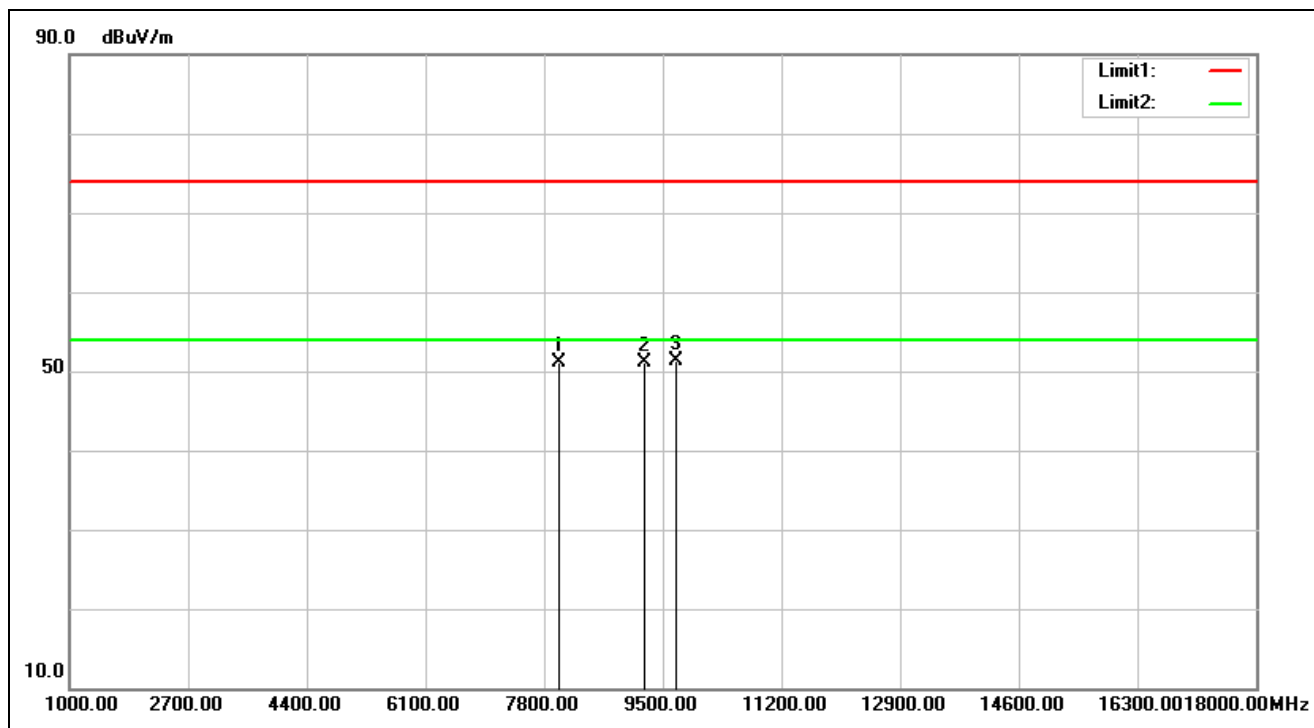
Spurious Emissions, RX Mode, 1-18G



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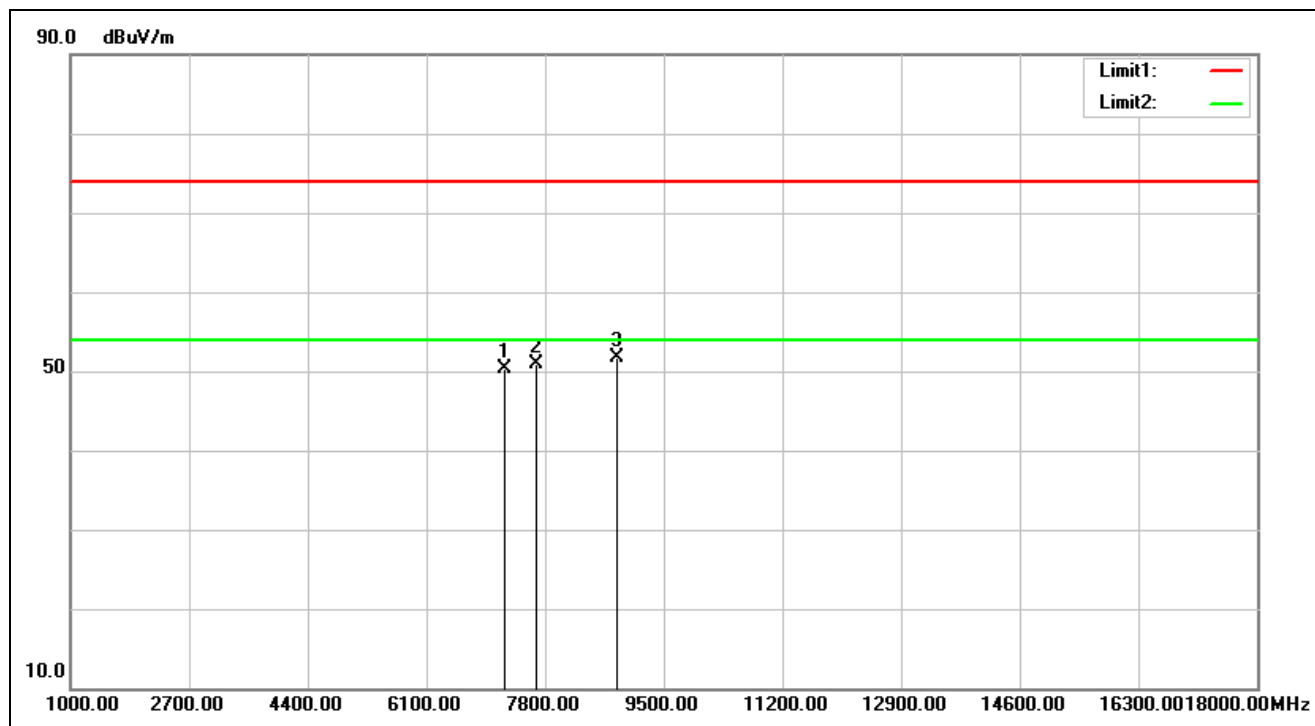
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Tel: +886-2172-7000 fax: +886-2528-0018



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 16:21:01
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	8021.000	4.81	46.27	51.08	74.00	-22.92	peak		0	
2	9245.000	5.46	45.64	51.10	74.00	-22.90	peak		0	
3	9687.000	5.16	46.14	51.30	74.00	-22.70	peak		0	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 16:22:04
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	7222.000	4.25	45.99	50.24	74.00	-23.76	peak	100	177	
2	7664.000	4.90	46.03	50.93	74.00	-23.07	peak	100	86	
3	8837.000	5.38	46.31	51.69	74.00	-22.31	peak	100	221	

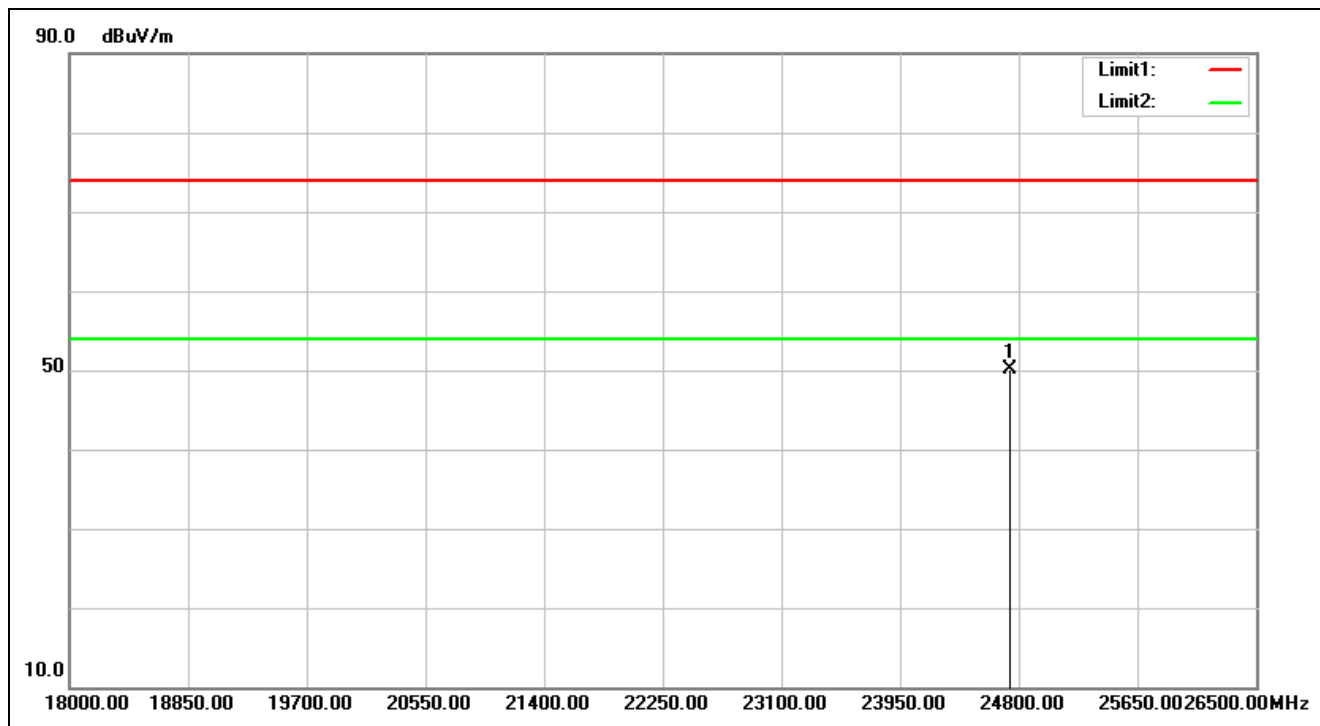
Spurious Emissions, RX Mode, 18-26G



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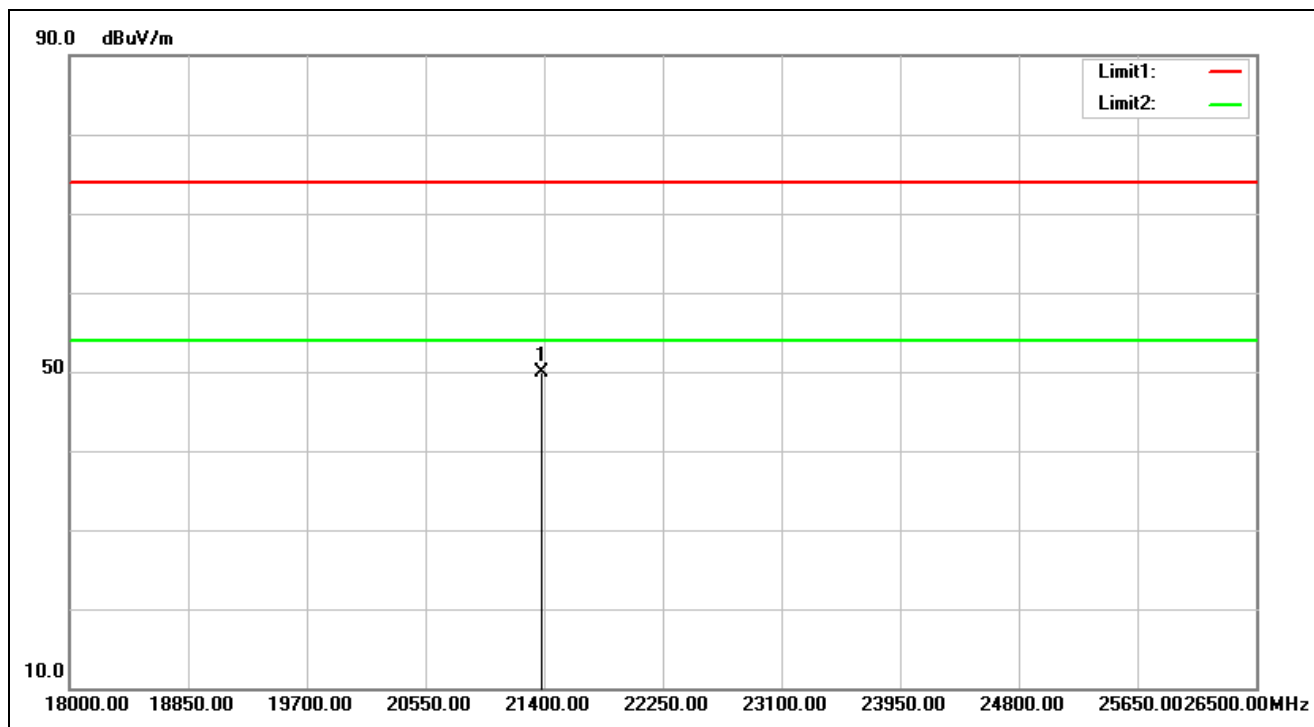
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 14:00:02
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24740.500	32.83	17.27	50.10	74.00	-23.90	peak		0	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 14:00:09
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21383.000	32.17	17.83	50.00	74.00	-24.00	peak			

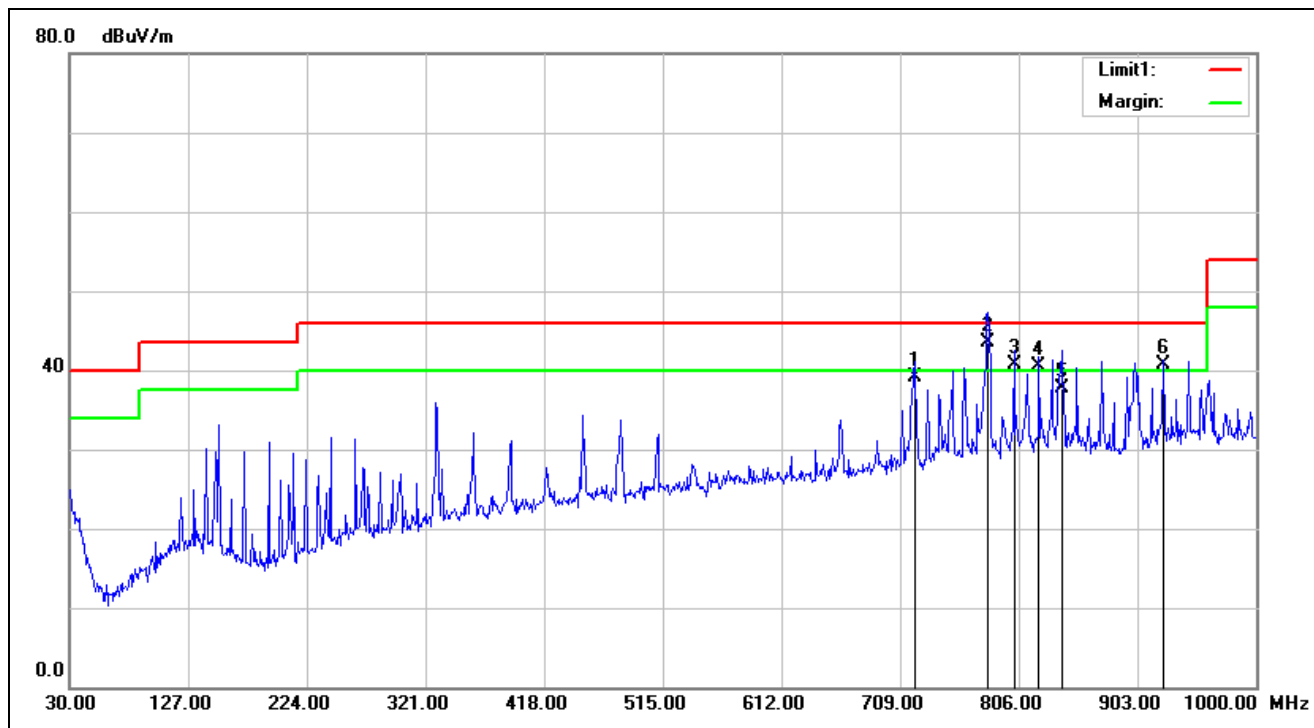
Spurious Emissions, RX Mode, 30M-1G



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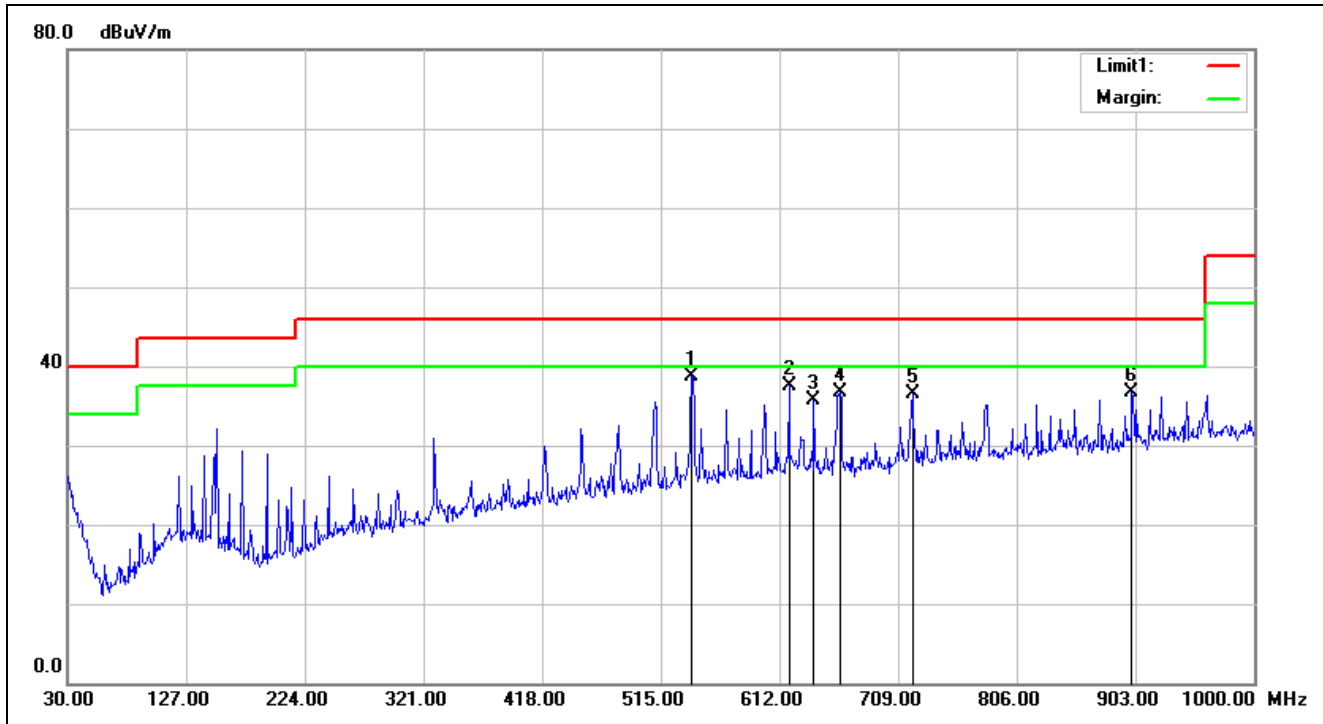
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 14:54:05
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	720.6400	1.72	37.48	39.20	46.00	-6.80	QP	100	240	
2	780.7800	2.61	40.99	43.60	46.00	-2.40	QP	100	245	
3	802.1200	2.80	37.90	40.70	46.00	-5.30	QP	100	245	
4	822.4900	3.19	37.31	40.50	46.00	-5.50	QP	100	240	
5	840.9200	3.54	34.16	37.70	46.00	-8.30	QP	100	253	
6	924.3400	4.76	35.94	40.70	46.00	-5.30	QP	100	78	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 14:55:09
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	540.2200	-0.59	39.34	38.75	46.00	-7.25	QP	100	115	
2	619.7600	0.26	37.34	37.60	46.00	-8.40	QP	100	360	
3	640.1300	0.43	35.36	35.79	46.00	-10.21	QP	100	51	
4	661.4700	0.70	35.98	36.68	46.00	-9.32	QP	100	56	
5	720.6400	1.72	34.73	36.45	46.00	-9.55	QP	100	202	
6	900.0900	4.06	32.72	36.78	46.00	-9.22	QP	100	152	

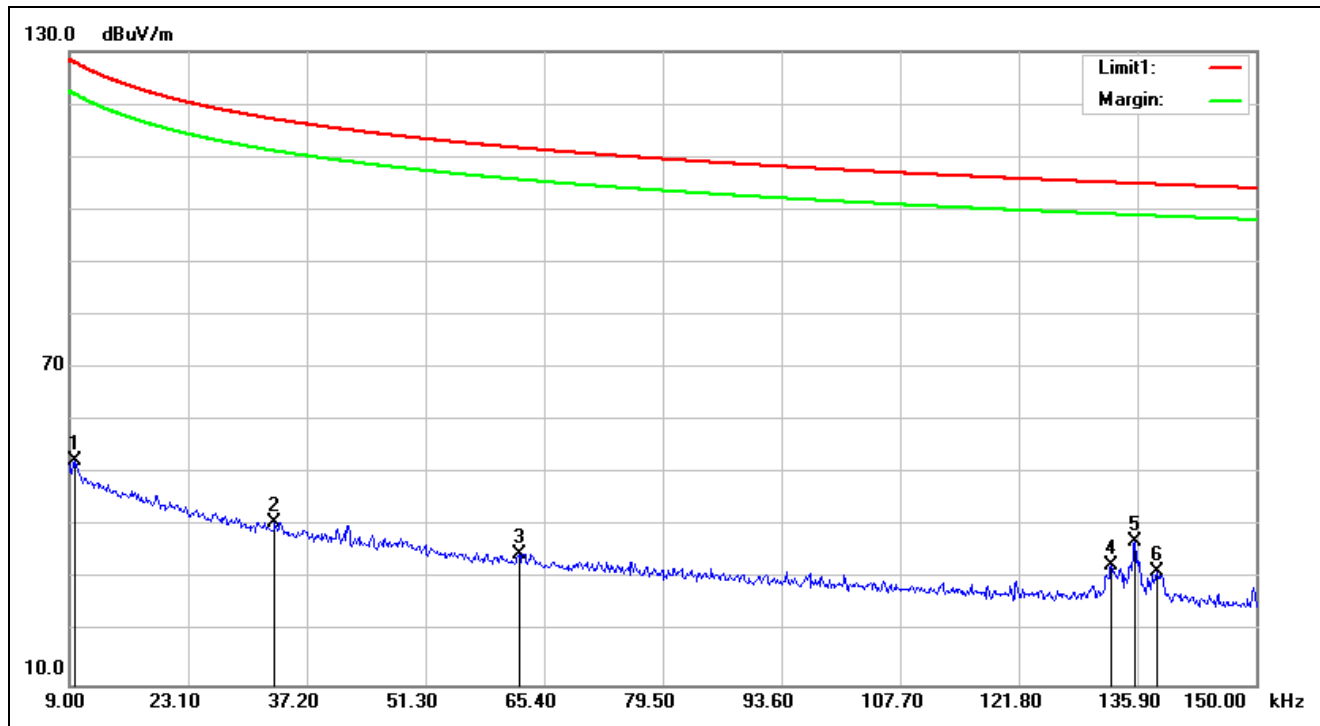
Spurious Emissions, RX Mode, 9K-30M



TUV Rheinland Taiwan Ltd.

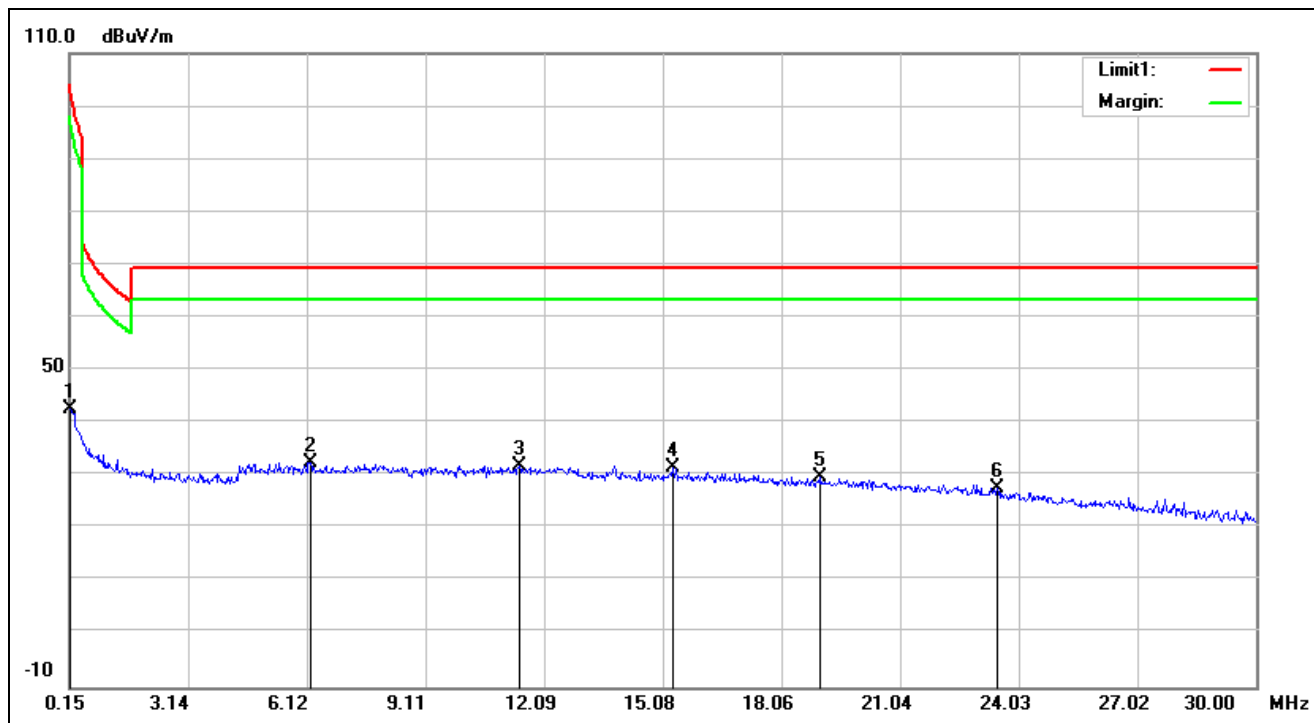
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED 15.209_9k-1G_3m	Ant. Polarization:	NA
Test item:	Radiation Emission	Test Time:	2018/1/24 17:20:40
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0096	19.77	32.73	52.50	127.94	-75.44	QP	100	259	
2	0.0334	20.01	20.89	40.90	117.12	-76.22	QP	100	62	
3	0.0624	19.36	15.53	34.89	111.69	-76.80	QP	100	227	
4	0.1328	19.10	13.58	32.68	105.13	-72.45	QP	100	184	
5	0.1356	19.09	17.92	37.01	104.95	-67.94	QP	100	197	
6	0.1382	19.09	12.47	31.56	104.79	-73.23	QP	100	177	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED 15.209_9k-1G_3m	Ant. Polarization:	NA
Test item:	Radiation Emission	Test Time:	2018/1/24 17:24:23
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-05-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1500	19.08	23.46	42.54	104.08	-61.54	QP	100	354	
2	6.2096	19.87	12.73	32.60	69.50	-36.90	QP	100	264	
3	11.4632	20.48	11.51	31.99	69.50	-37.51	QP	100	360	
4	15.3437	21.16	10.26	31.42	69.50	-38.08	QP	100	315	
5	19.0451	21.82	7.90	29.72	69.50	-39.78	QP	100	28	
6	23.4927	22.22	5.40	27.62	69.50	-41.88	QP	100	328	

RFMTA331215IMAB701-ANT

Spurious Emissions, Band Edges, 2.35-2.5G

Radiated Bandedge 11b

Low Channel (Hor)

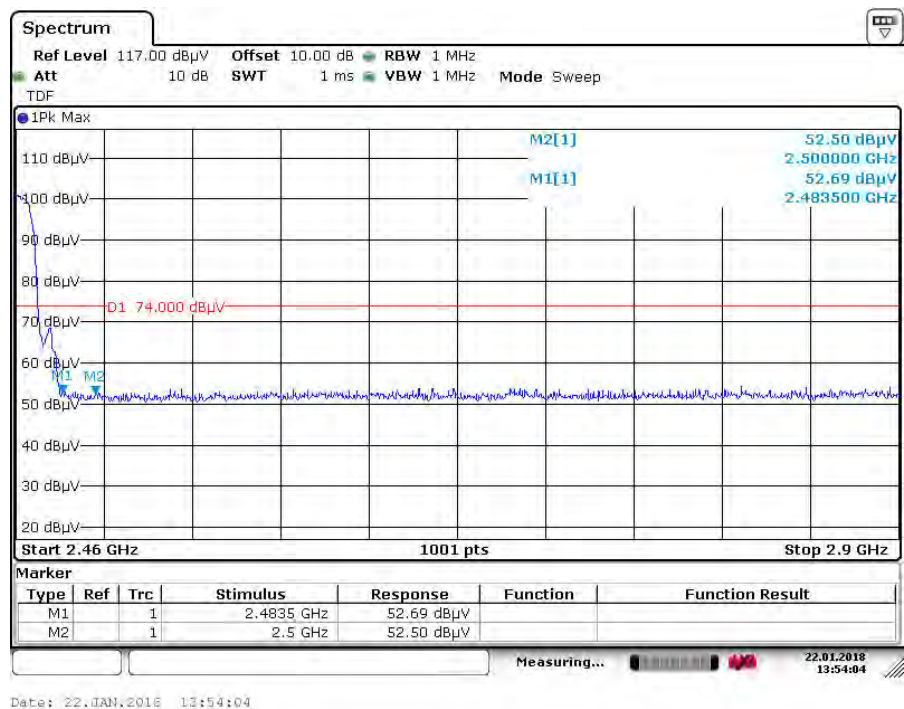
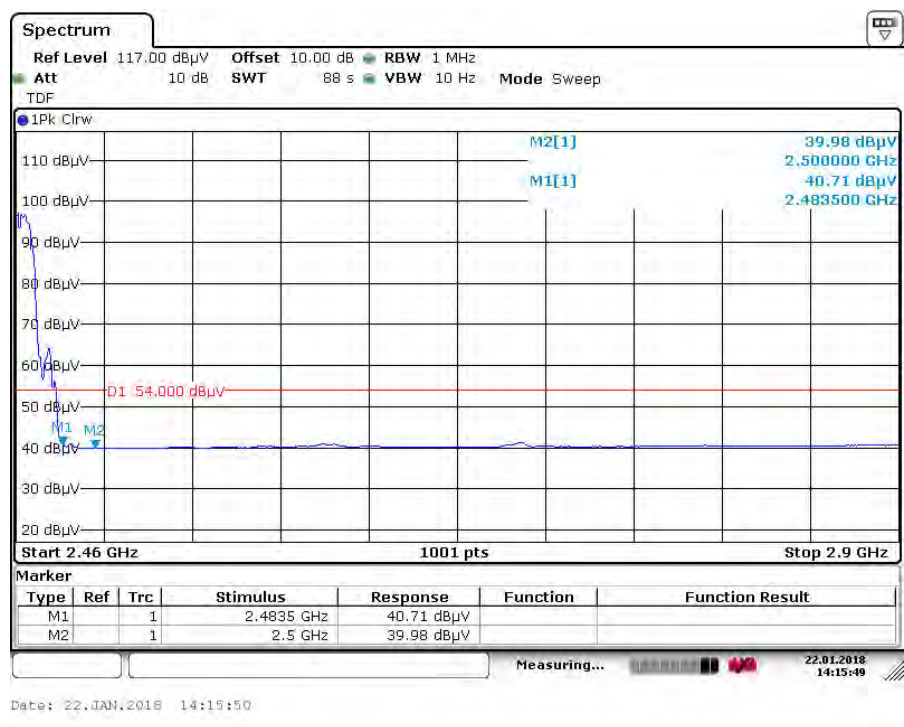


Low Channel (Ver)

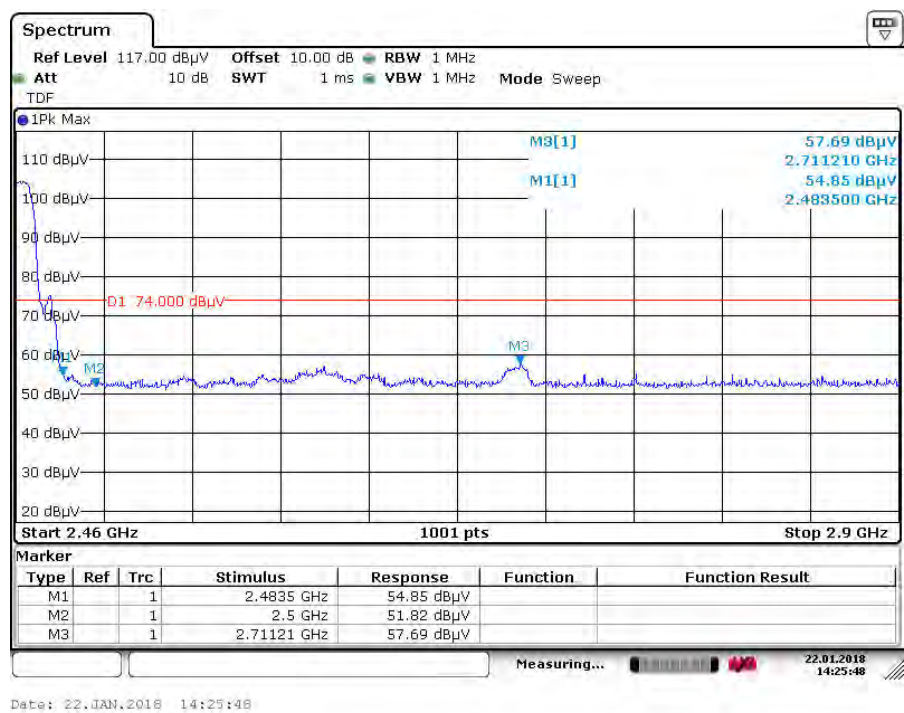
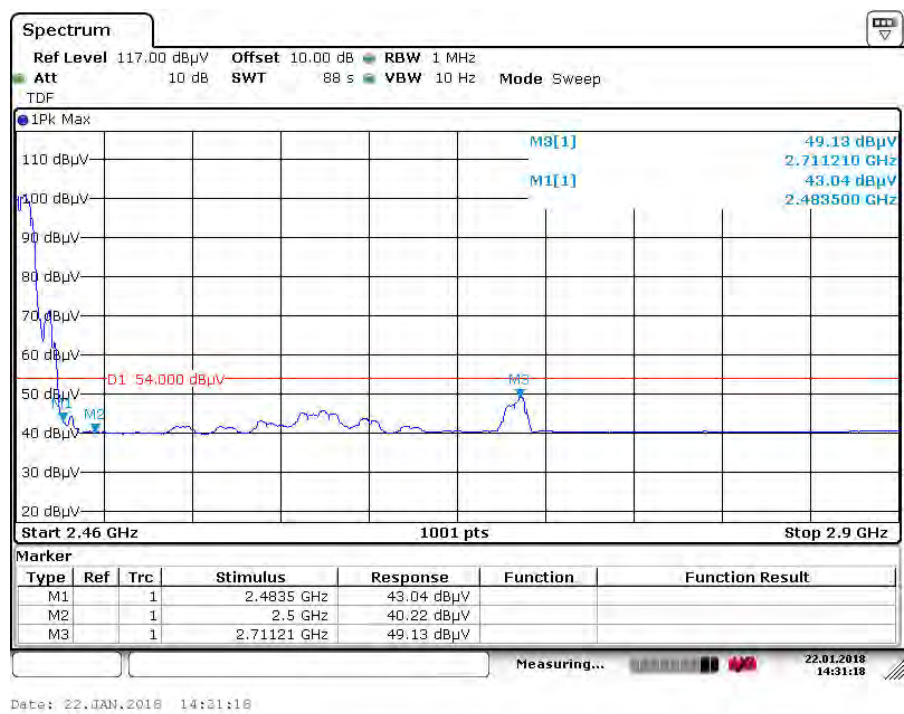


Radiated Bandedge 11b

High Channel (Hor)

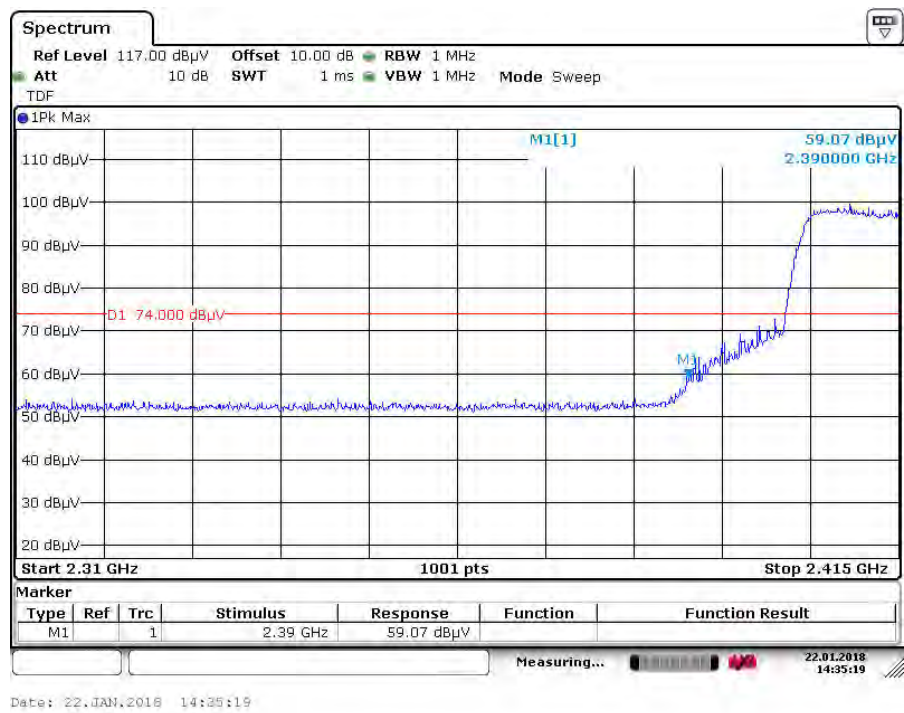
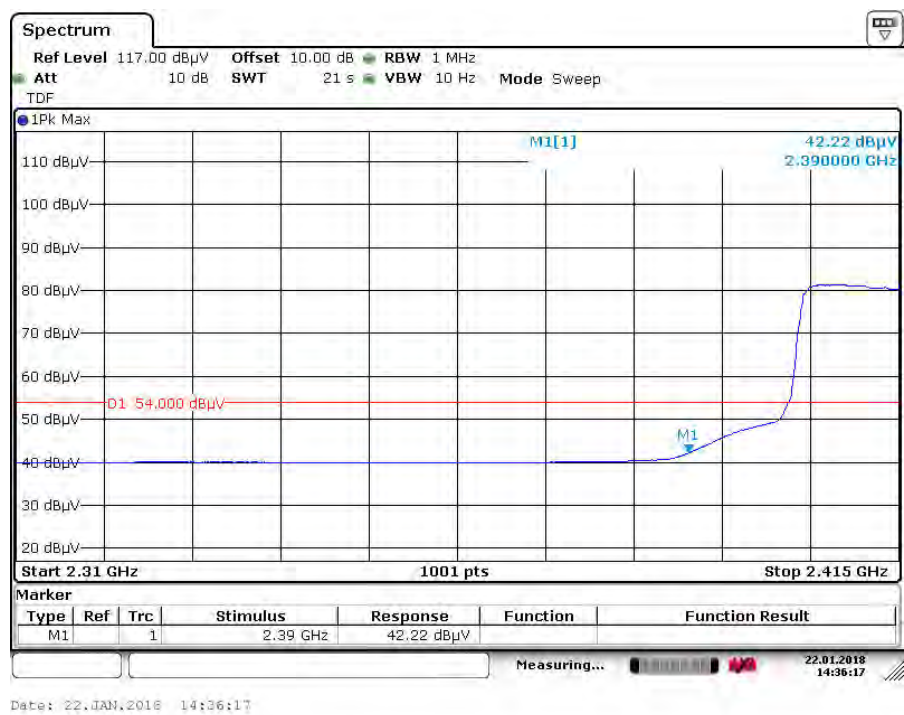


High Channel (Ver)

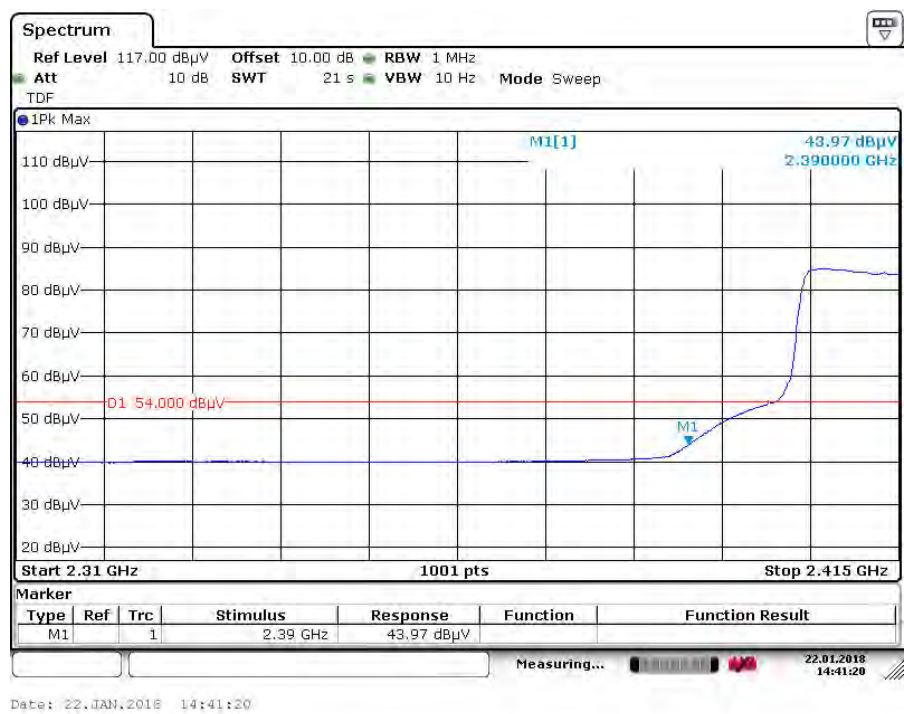


Radiated Bandedge 11g

Low Channel (Hor)

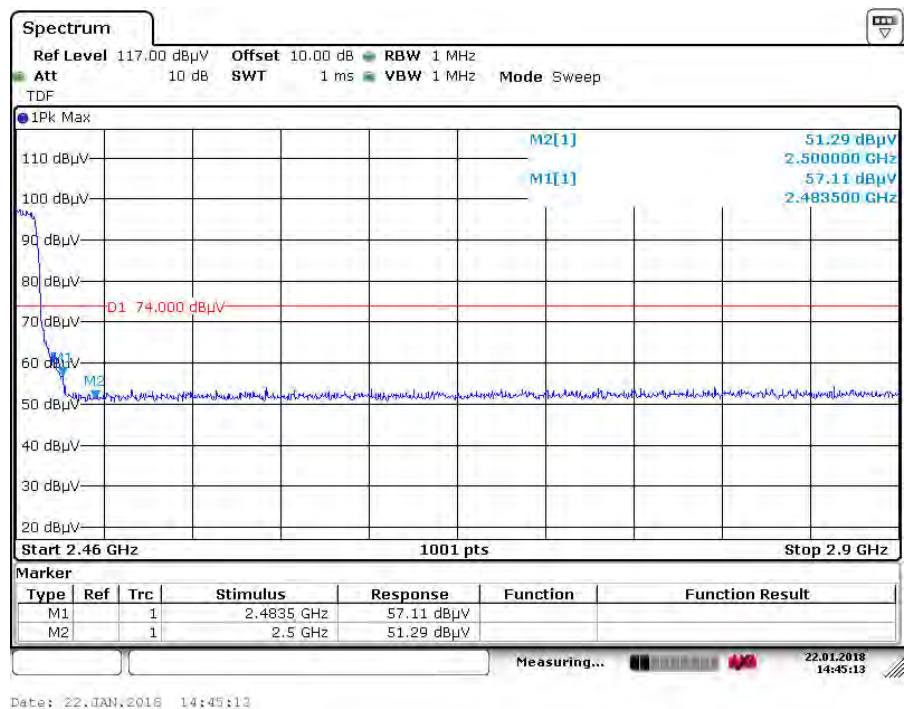
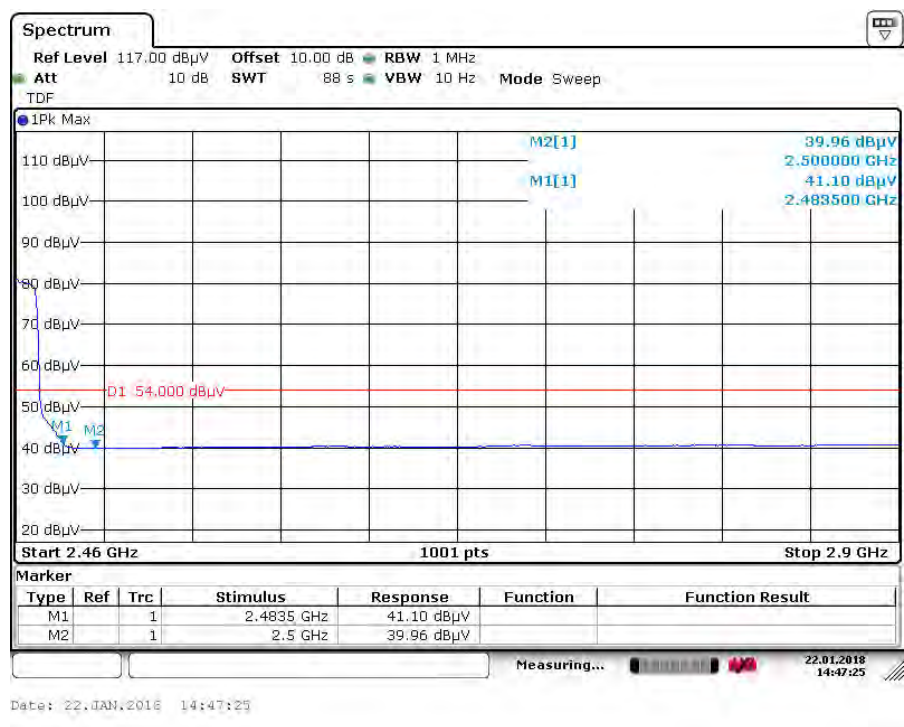


Low Channel (Ver)

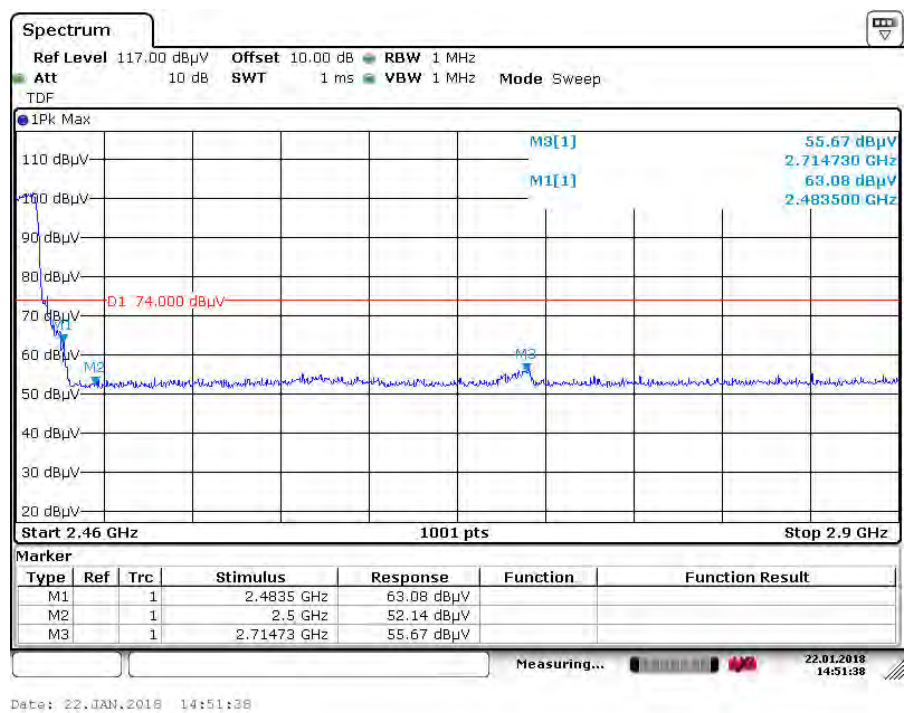
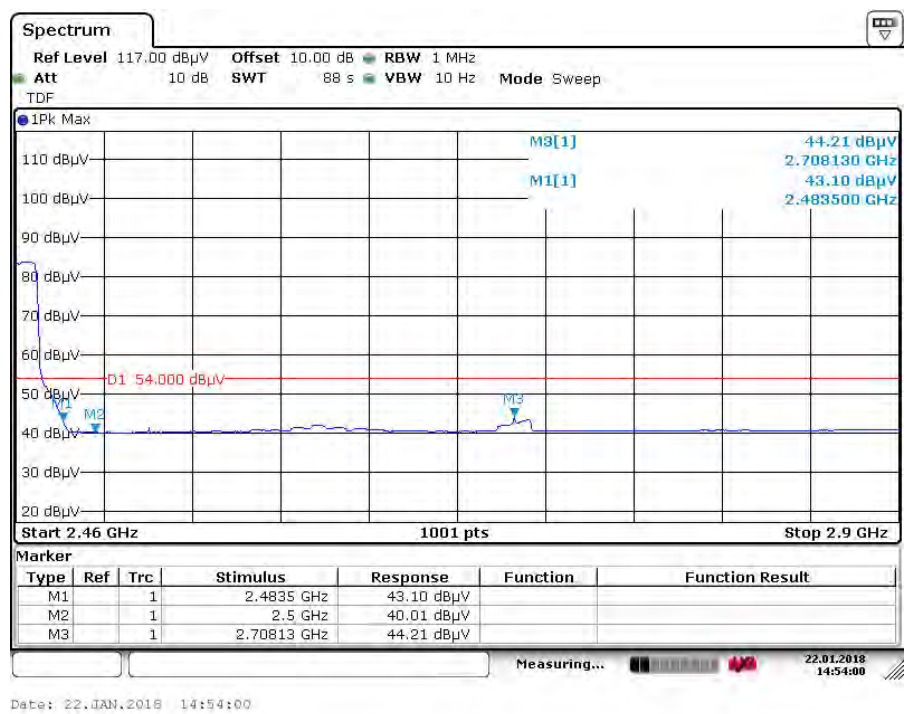


Radiated Bandedge 11g

High Channel (Hor)

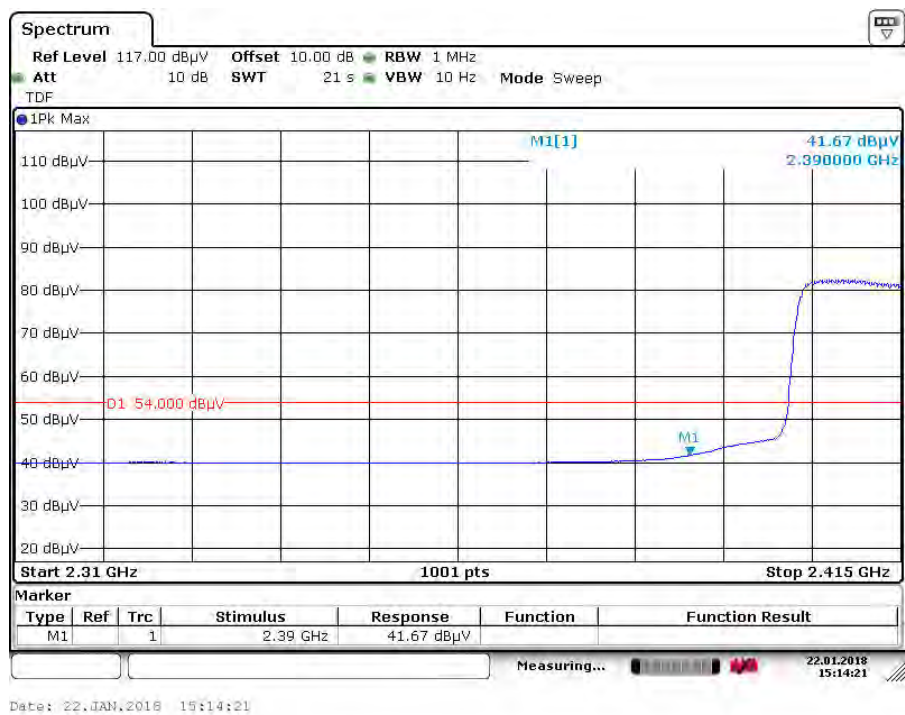


High Channel (Ver)



Radiated Bandedge 11n

Low Channel (Hor)

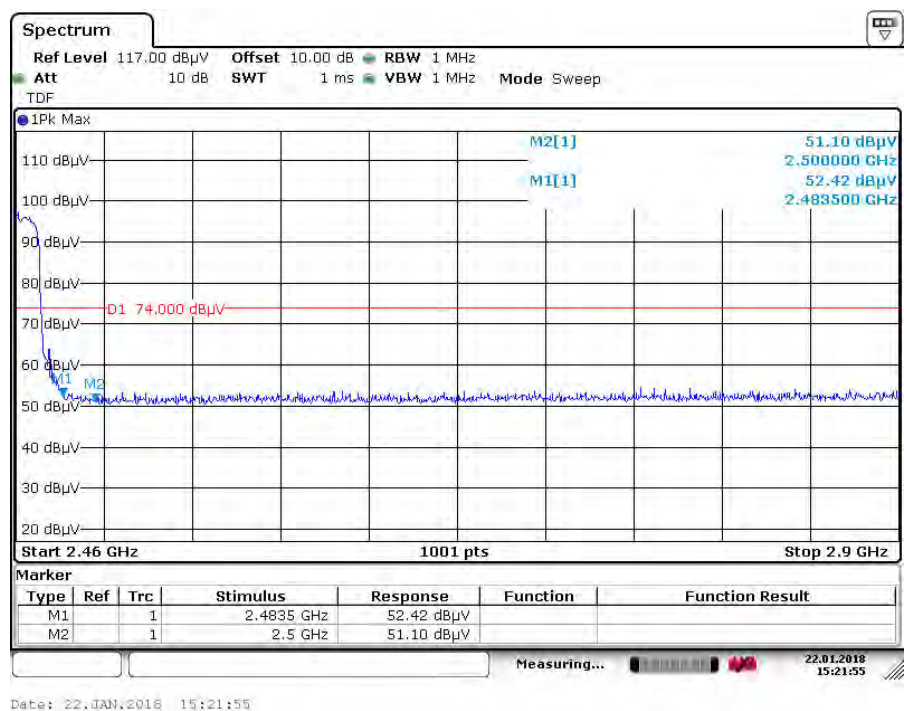
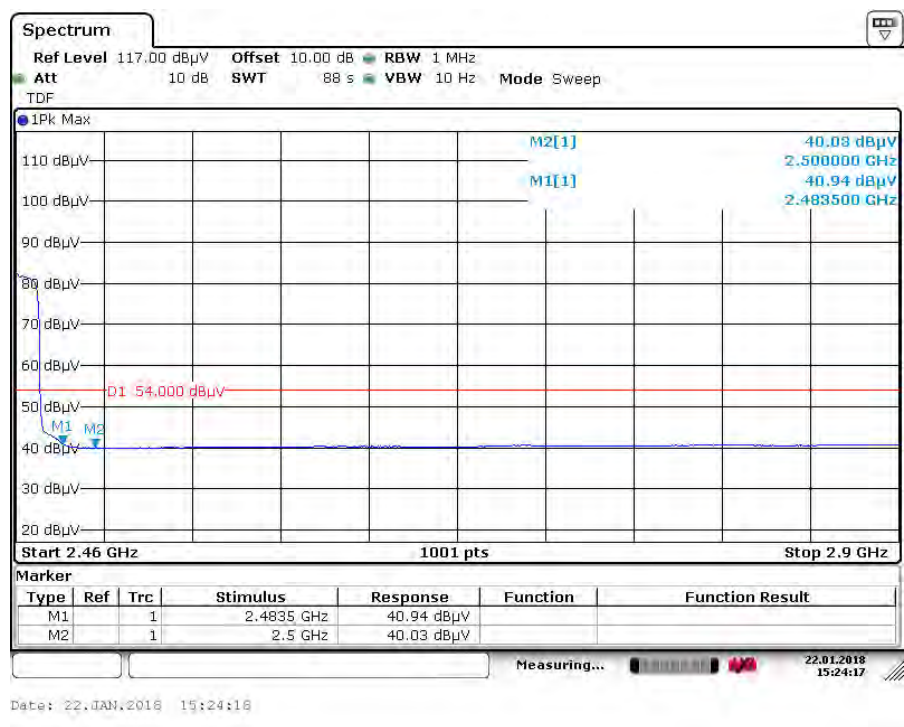


Low Channel (Ver)

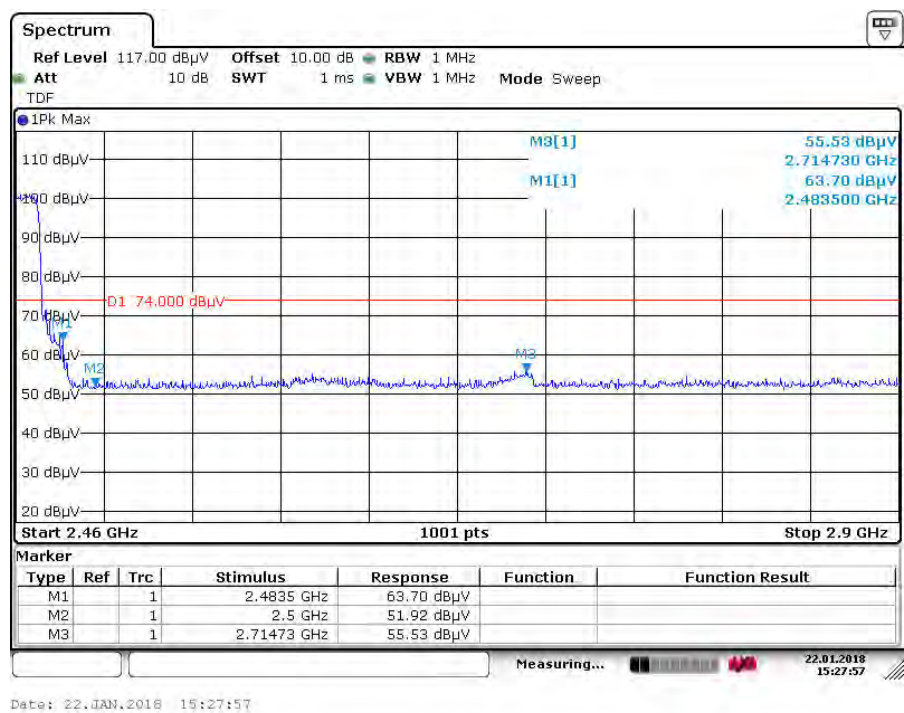
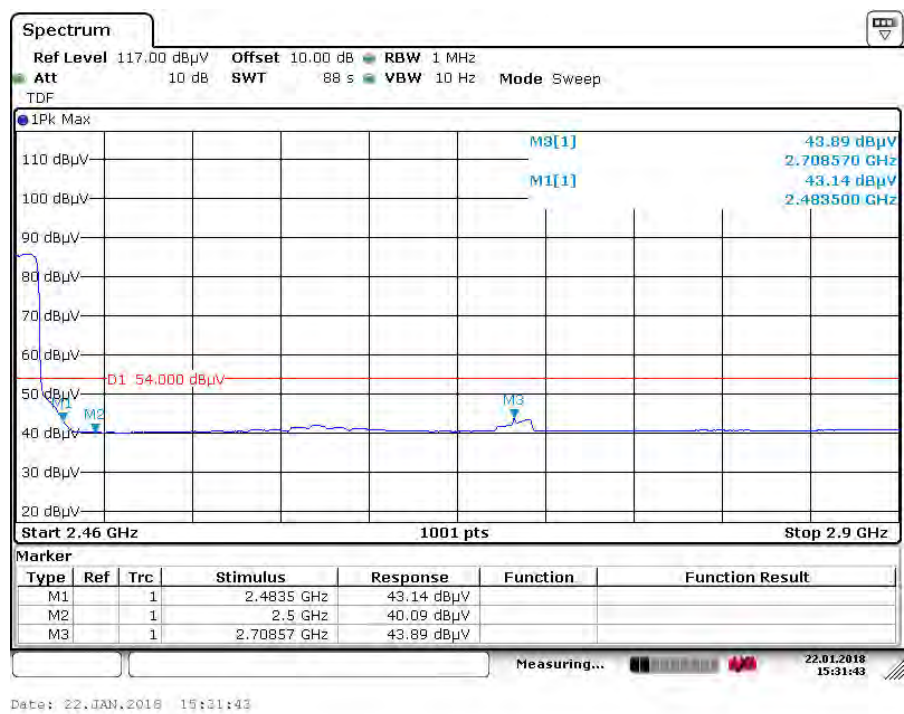


Radiated Bandedge 11n

High Channel (Hor)



High Channel (Ver)



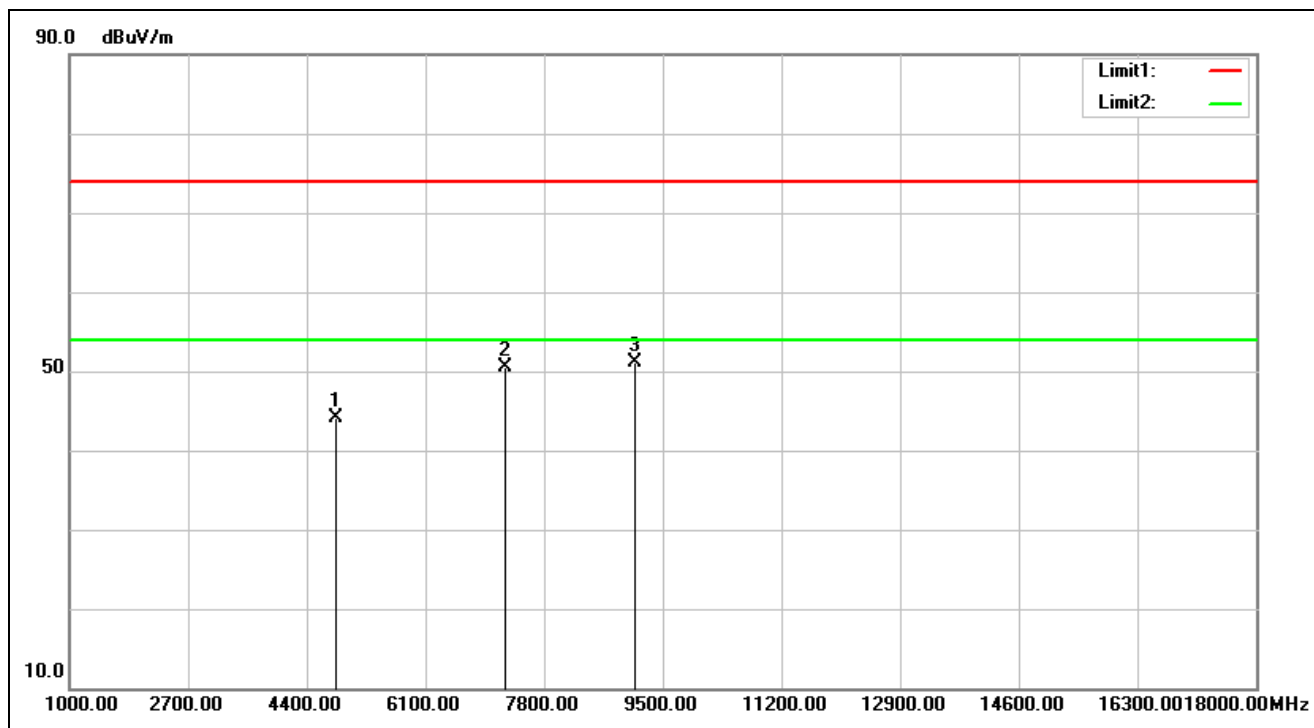
Spurious Emissions, TX Mode, 1-18G



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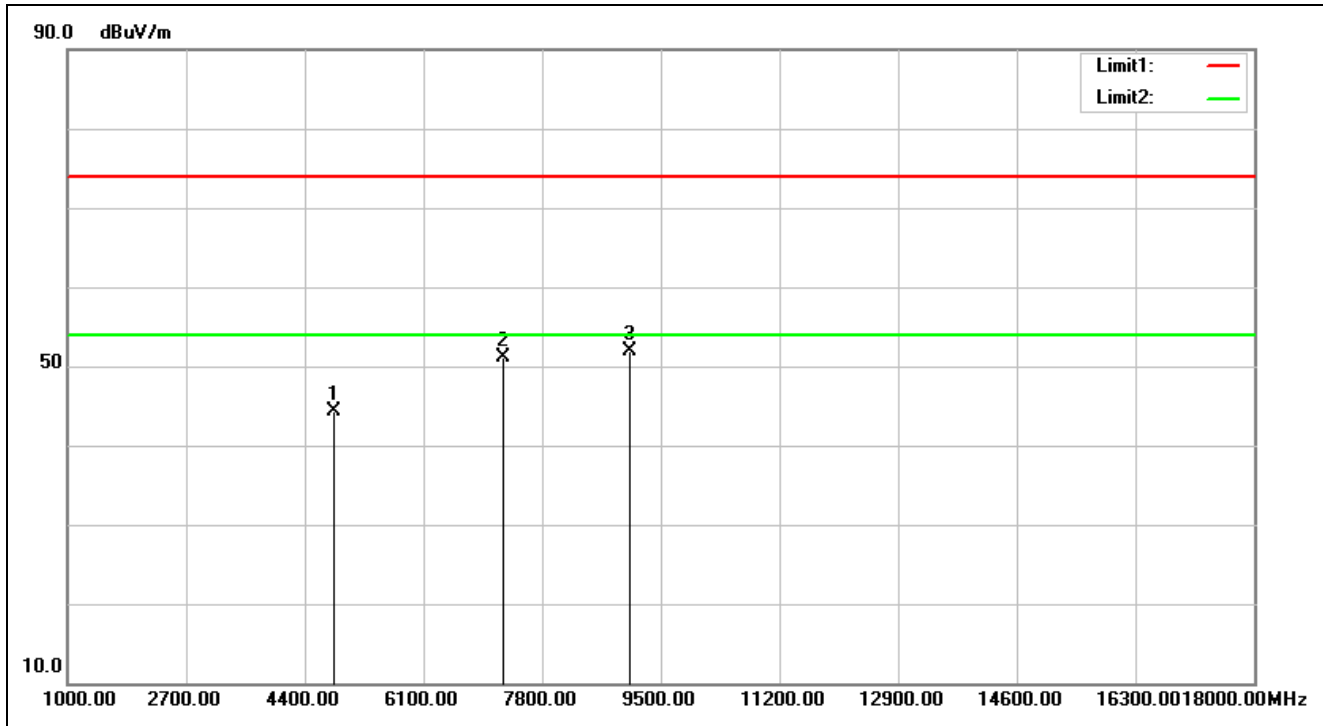
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



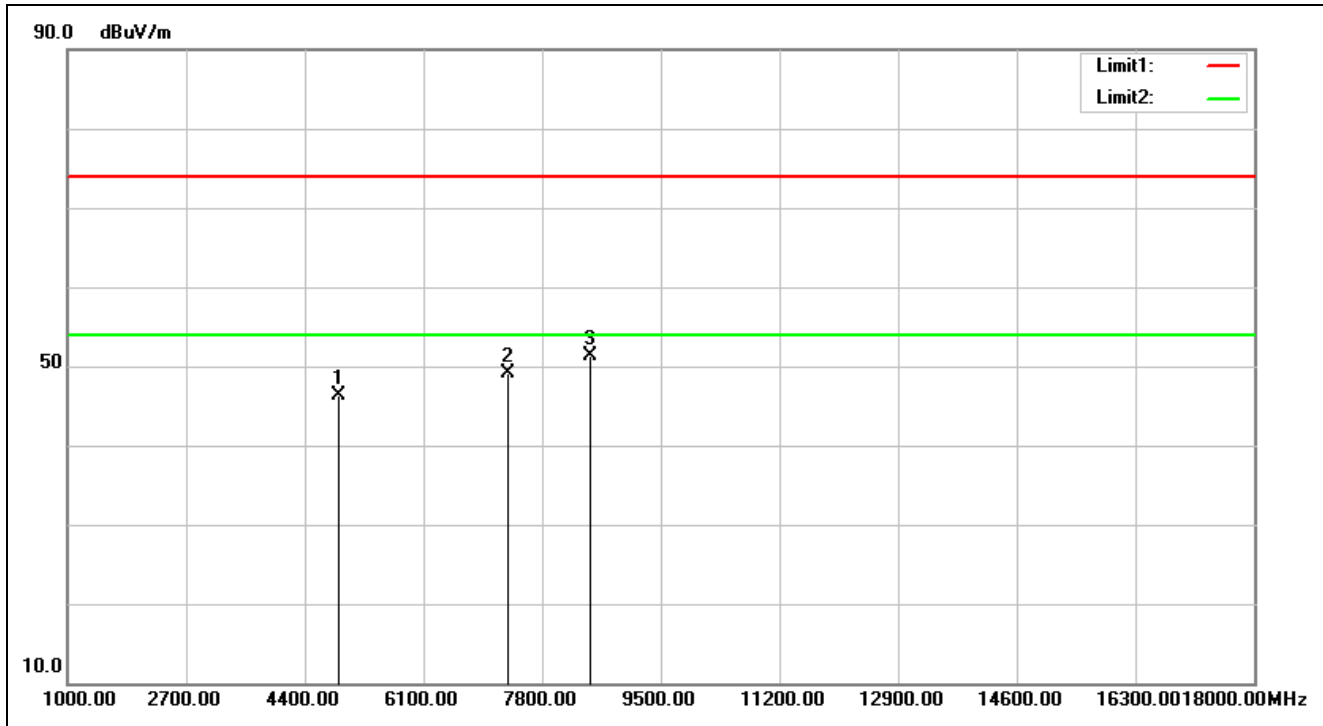
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 15:30:40
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	46.86	44.20	74.00	-29.80	peak		0	
2	7236.000	5.32	45.28	50.60	74.00	-23.40	peak		0	
3	9109.000	6.47	44.68	51.15	74.00	-22.85	peak		0	



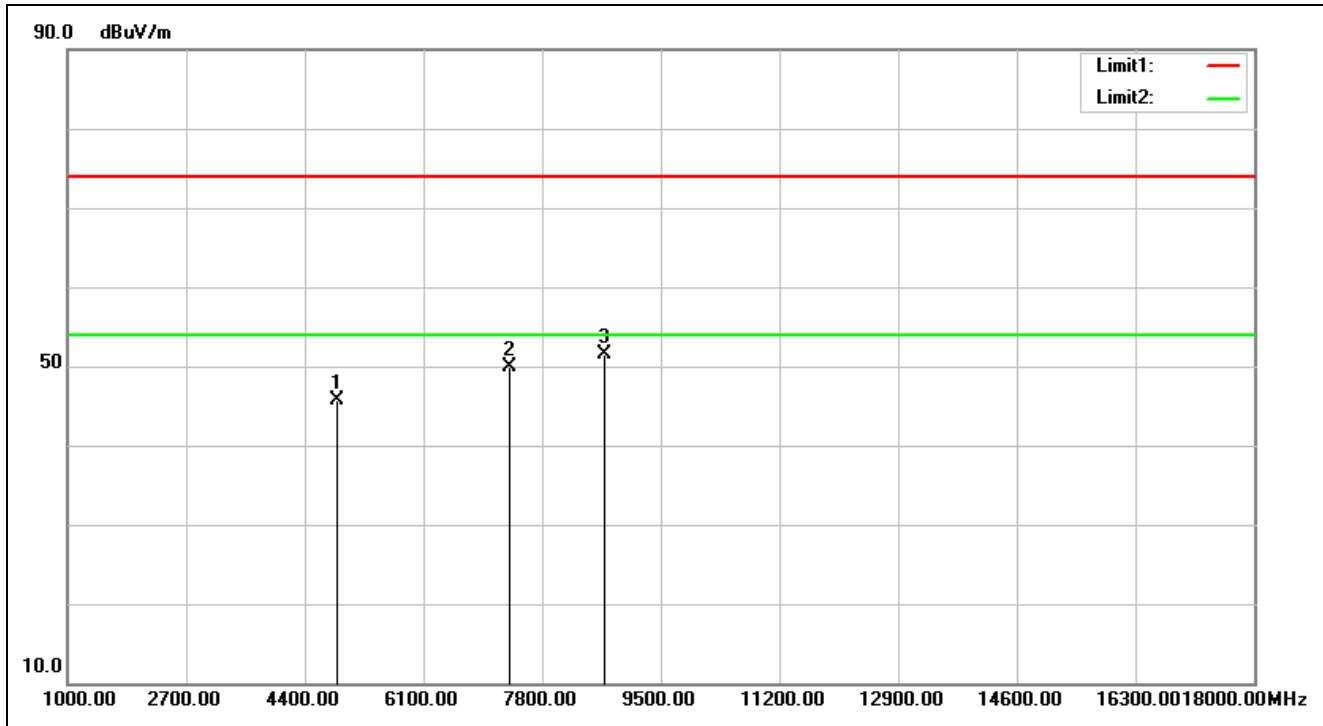
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 15:31:43
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	46.87	44.21	74.00	-29.79	peak			
2	7236.000	5.32	45.72	51.04	74.00	-22.96	peak			
3	9058.000	6.46	45.38	51.84	74.00	-22.16	peak			



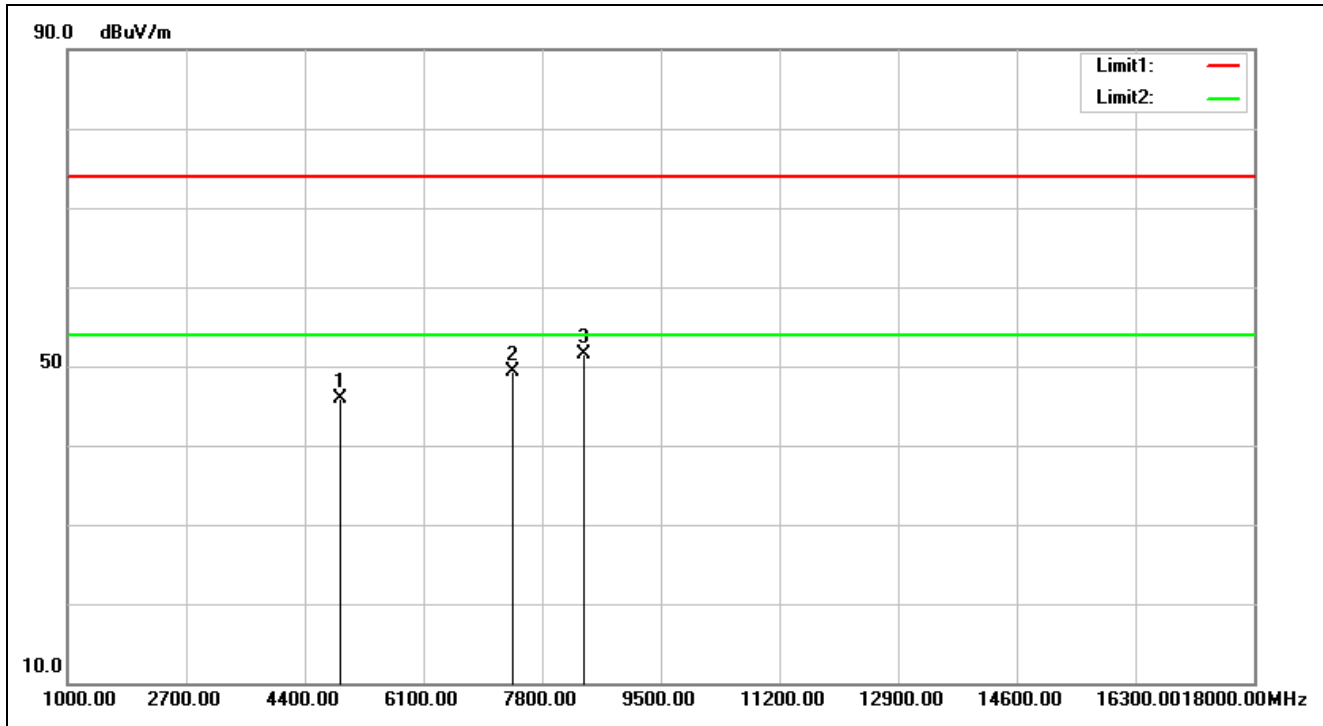
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 15:38:50
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	48.76	46.23	74.00	-27.77	peak			
2	7311.000	5.52	43.68	49.20	74.00	-24.80	peak			
3	8480.000	6.35	44.96	51.31	74.00	-22.69	peak			



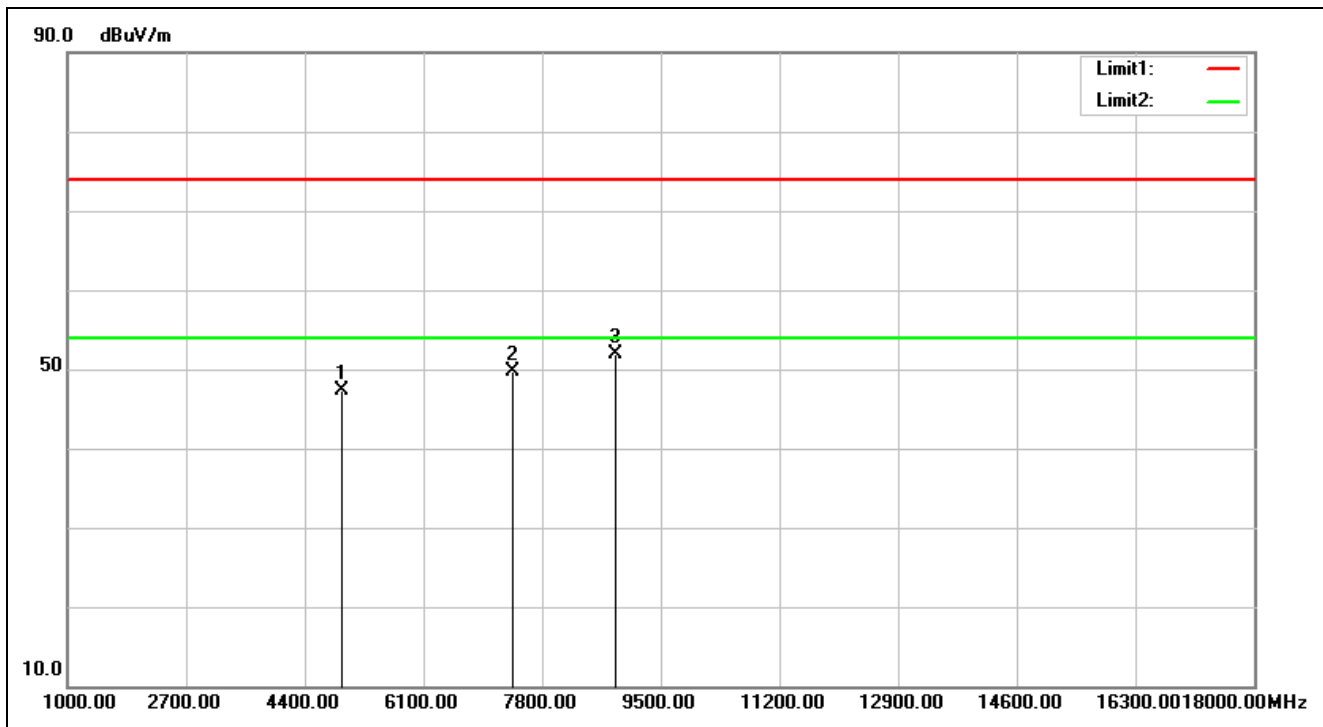
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 15:39:53
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	48.29	45.76	74.00	-28.24	peak			
2	7311.000	5.52	44.31	49.83	74.00	-24.17	peak			
3	8701.000	6.41	45.06	51.47	74.00	-22.53	peak			



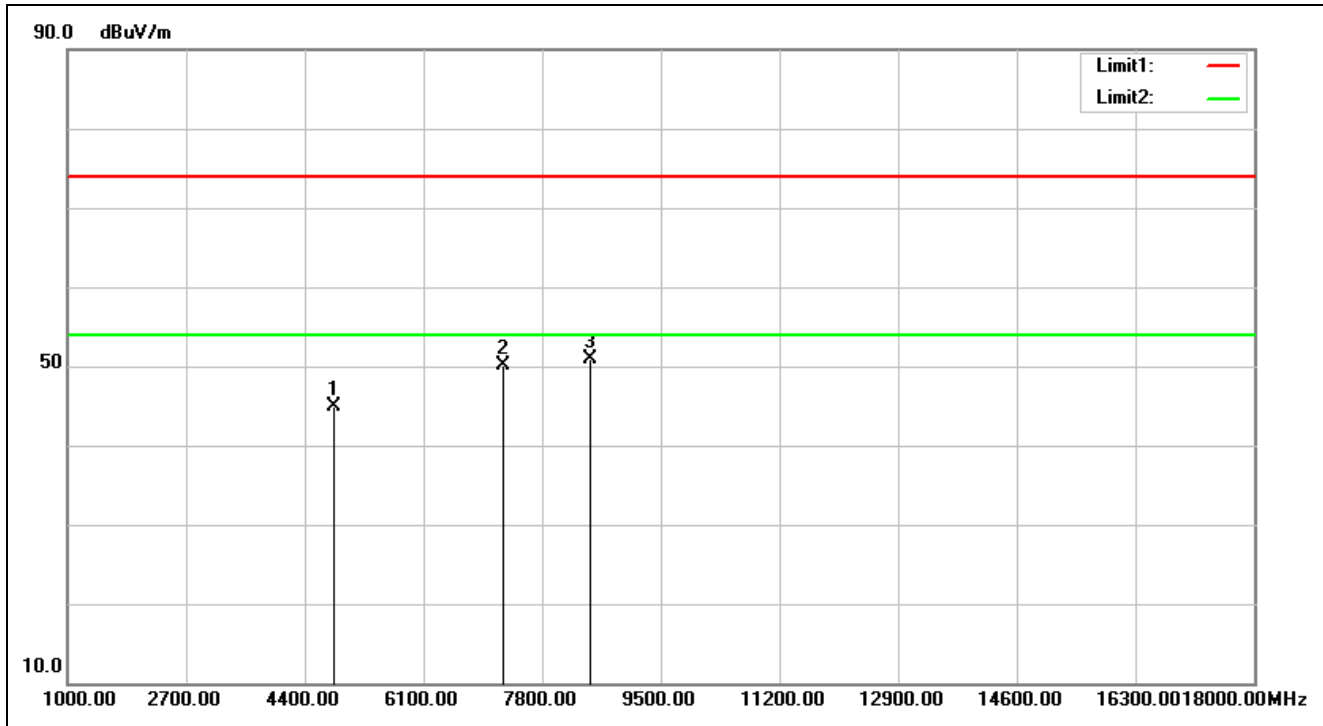
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 15:44:47
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	48.34	45.95	74.00	-28.05	peak			
2	7386.000	5.70	43.55	49.25	74.00	-24.75	peak			
3	8395.000	6.26	45.25	51.51	74.00	-22.49	peak			



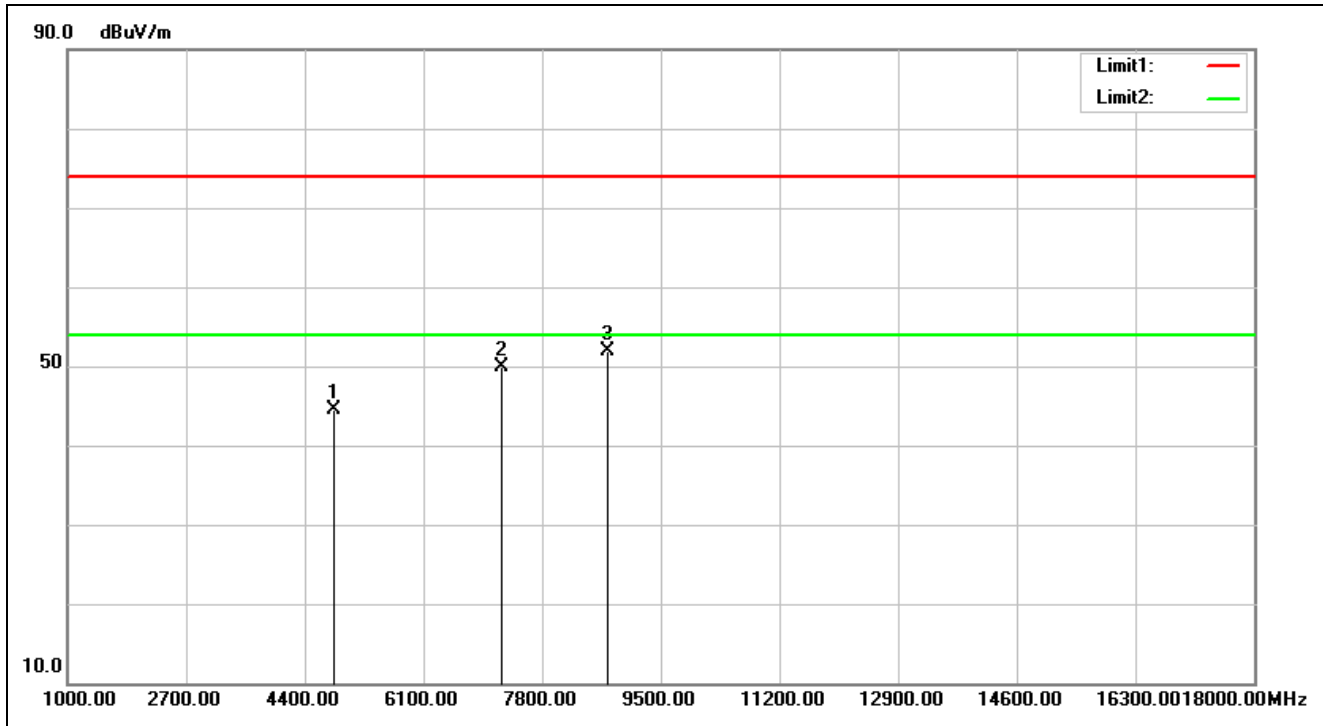
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 15:45:50
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	49.73	47.34	74.00	-26.66	peak			
2	7386.000	5.70	43.99	49.69	74.00	-24.31	peak			
3	8854.000	6.42	45.56	51.98	74.00	-22.02	peak	100	249	



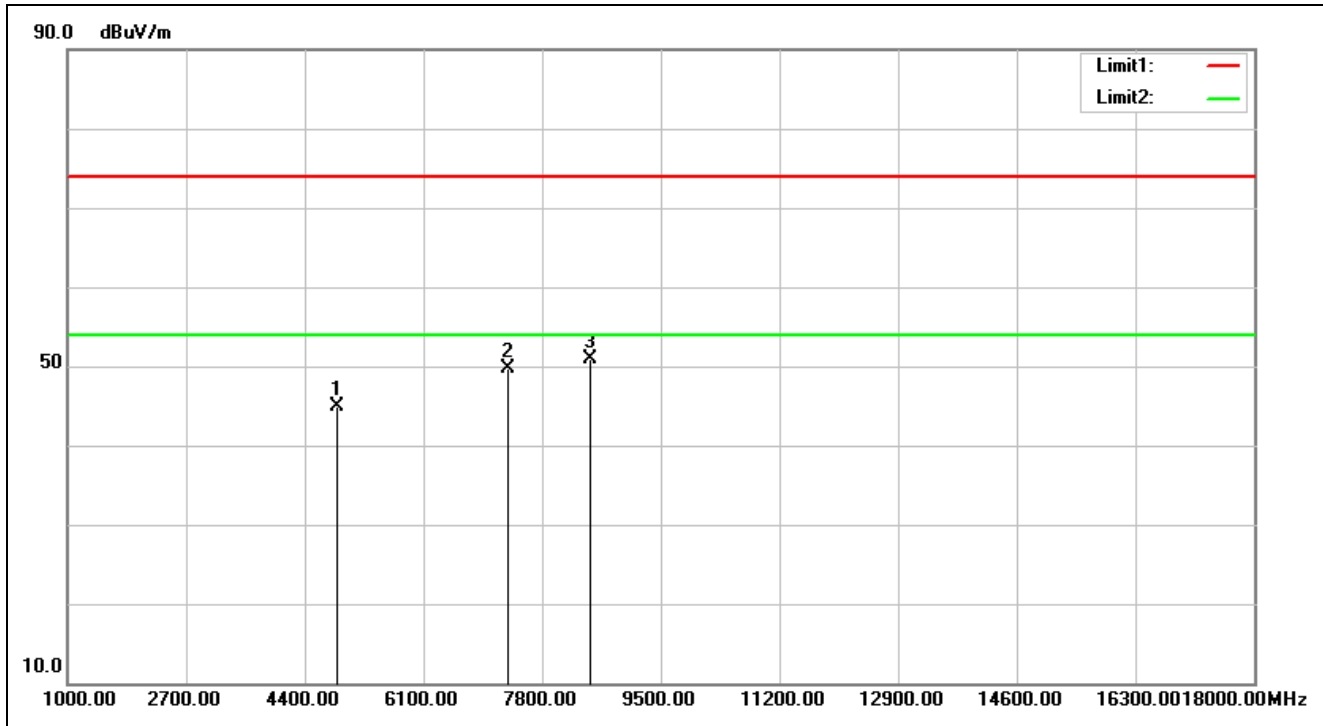
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 15:50:48
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	47.48	44.82	74.00	-29.18	peak			
2	7236.000	5.32	44.82	50.14	74.00	-23.86	peak			
3	8480.000	6.35	44.54	50.89	74.00	-23.11	peak			



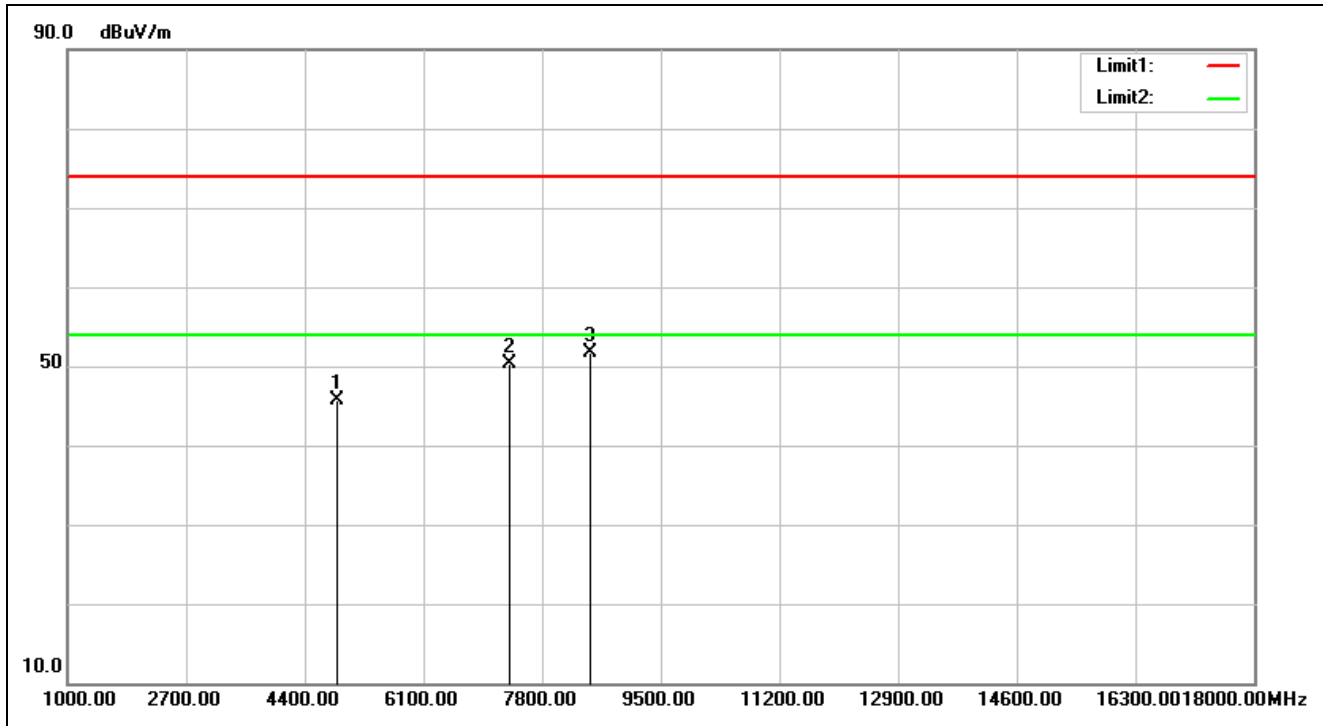
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 15:51:51
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	47.08	44.42	74.00	-29.58	peak			
2	7236.000	5.32	44.51	49.83	74.00	-24.17	peak			
3	8735.000	6.40	45.59	51.99	74.00	-22.01	peak	100	343	



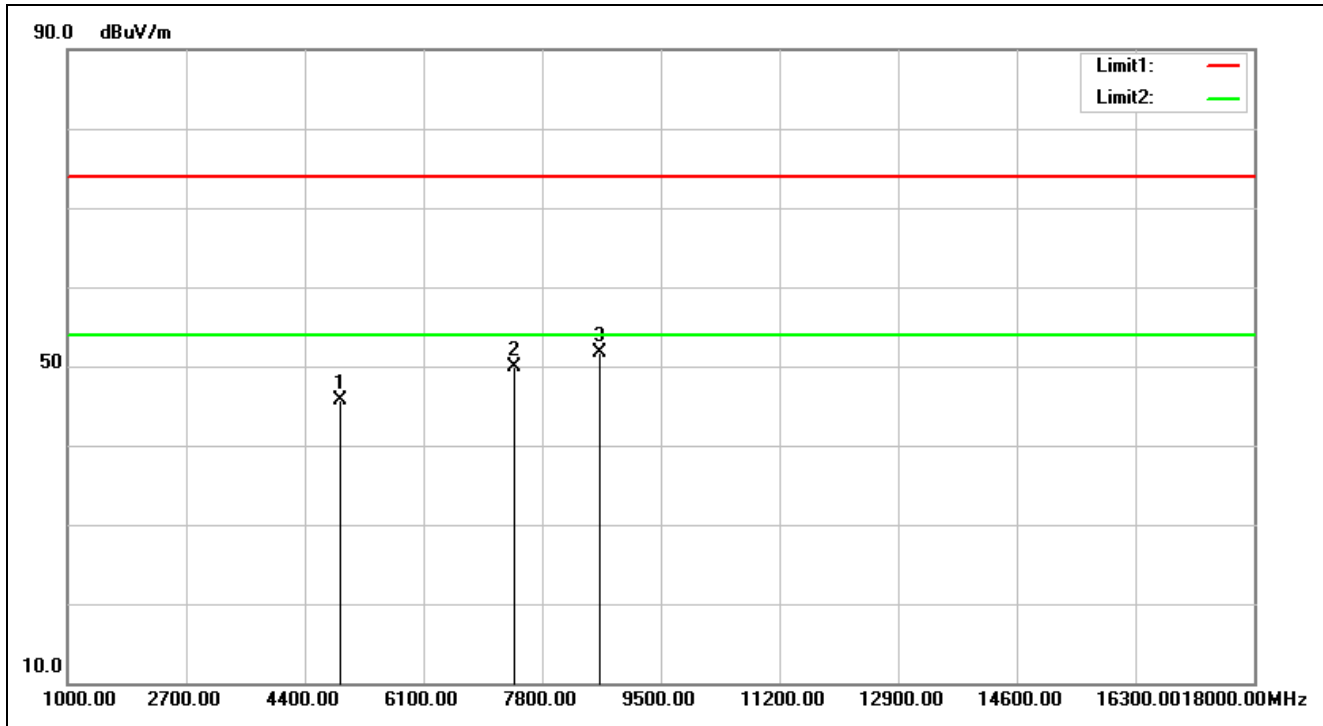
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 15:53:54
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	47.38	44.85	74.00	-29.15	peak			
2	7311.000	5.52	44.17	49.69	74.00	-24.31	peak			
3	8480.000	6.35	44.65	51.00	74.00	-23.00	peak			



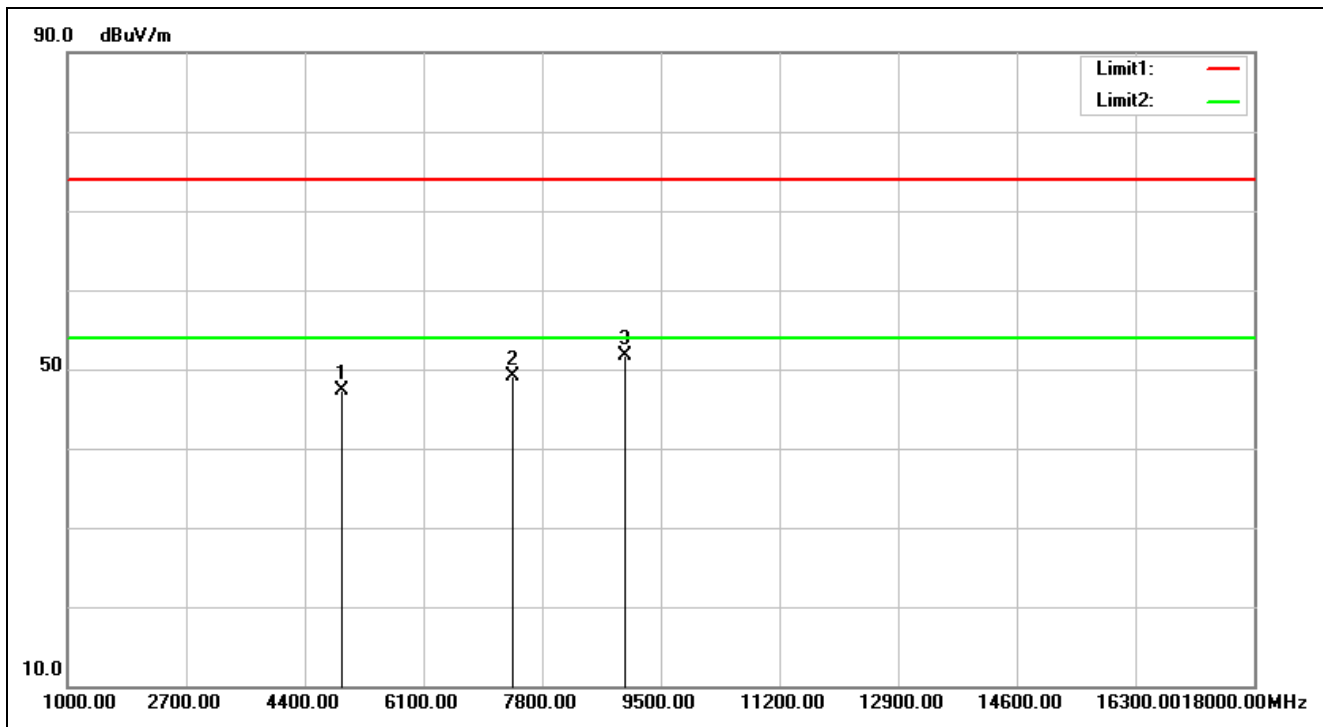
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 15:54:56
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	48.32	45.79	74.00	-28.21	peak			
2	7311.000	5.52	44.78	50.30	74.00	-23.70	peak			
3	8497.000	6.38	45.34	51.72	74.00	-22.28	peak	100	52	



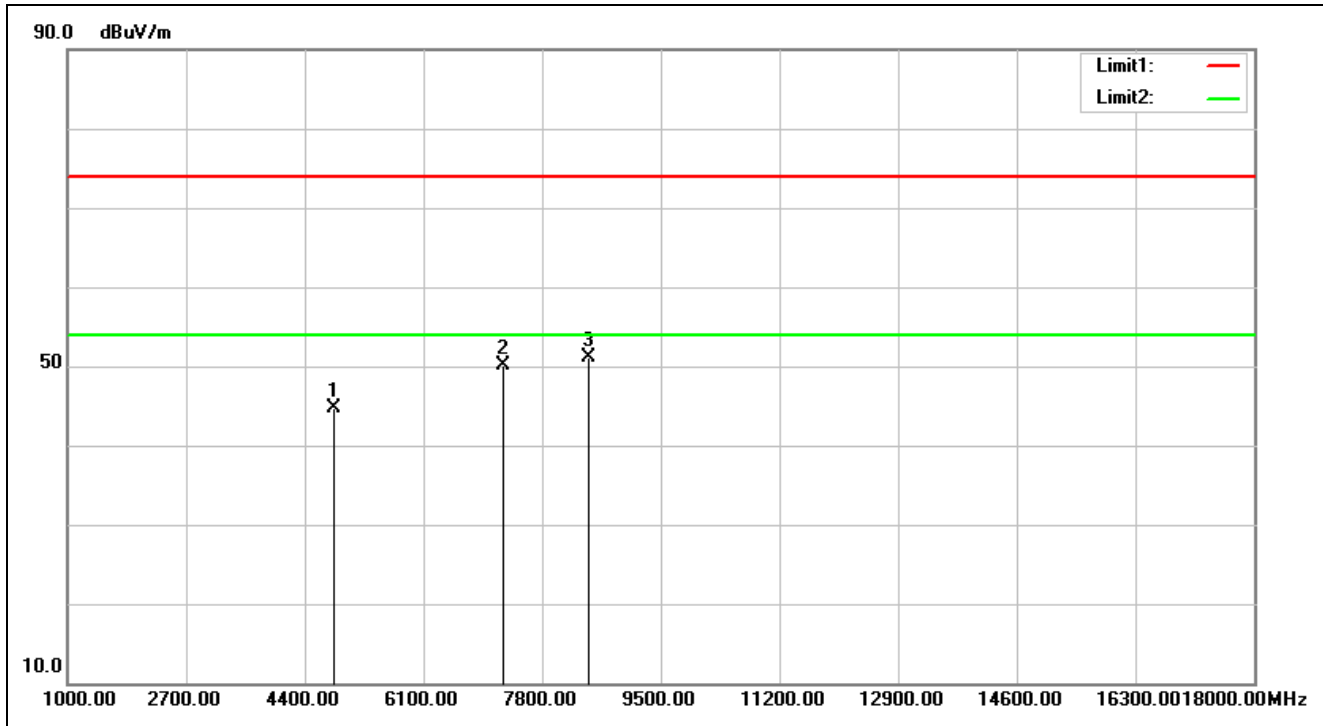
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 15:59:29
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	48.19	45.80	74.00	-28.20	peak			
2	7386.000	5.70	44.22	49.92	74.00	-24.08	peak			
3	8633.000	6.39	45.28	51.67	74.00	-22.33	peak			



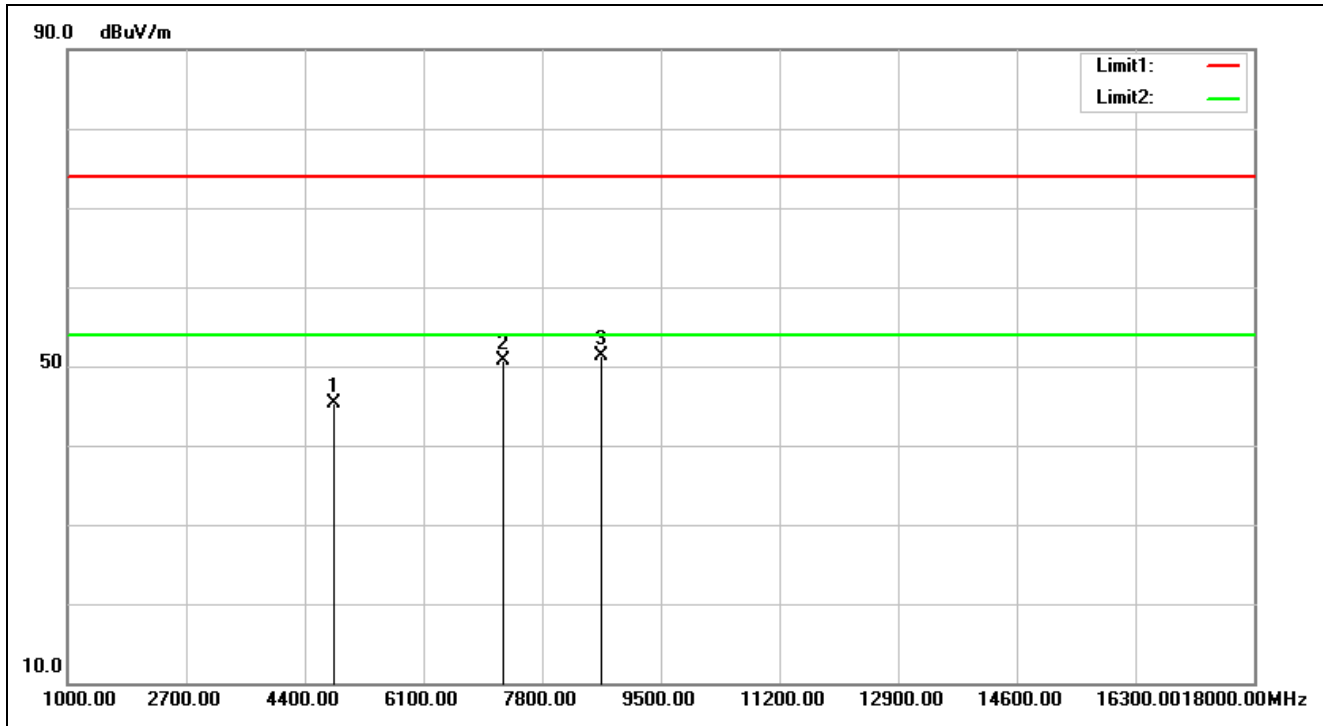
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 16:00:32
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	49.69	47.30	74.00	-26.70	peak			
2	7386.000	5.70	43.48	49.18	74.00	-24.82	peak			
3	8990.000	6.44	45.33	51.77	74.00	-22.23	peak	100	55	



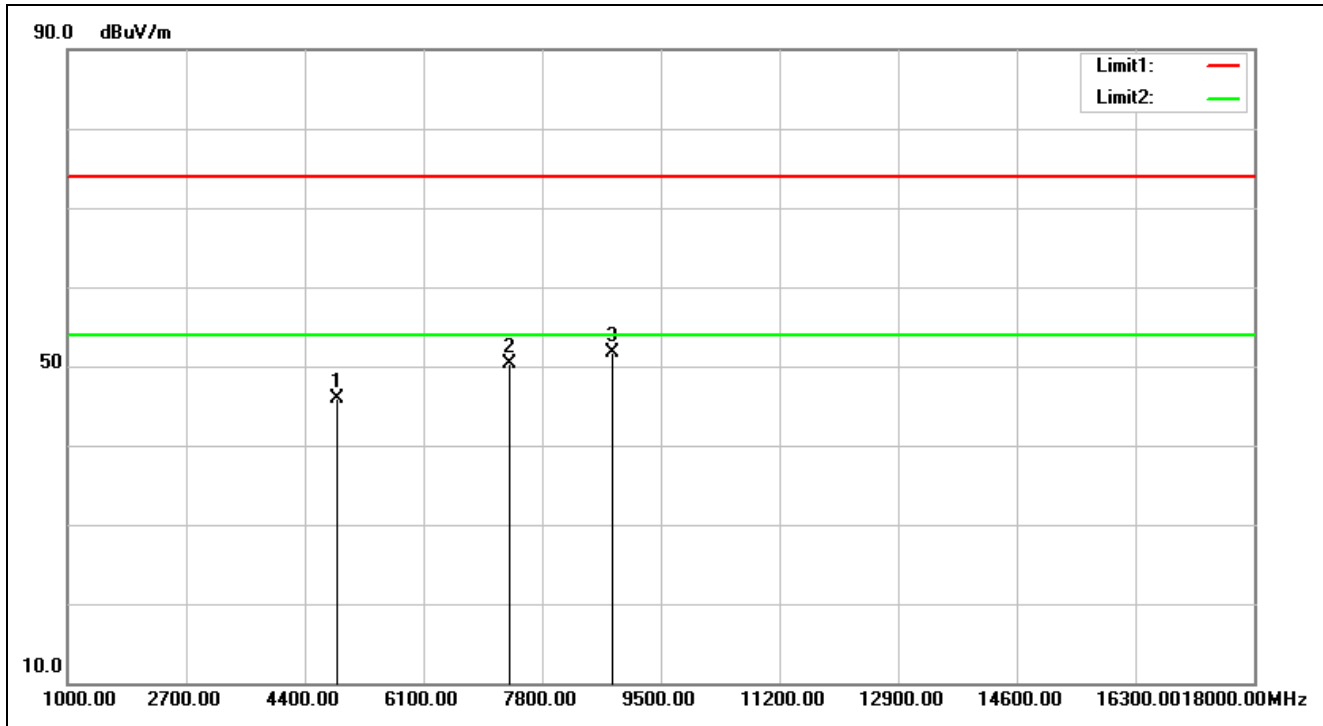
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 16:02:54
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	47.29	44.63	74.00	-29.37	peak			
2	7236.000	5.32	44.82	50.14	74.00	-23.86	peak			
3	8463.000	6.34	44.82	51.16	74.00	-22.84	peak			



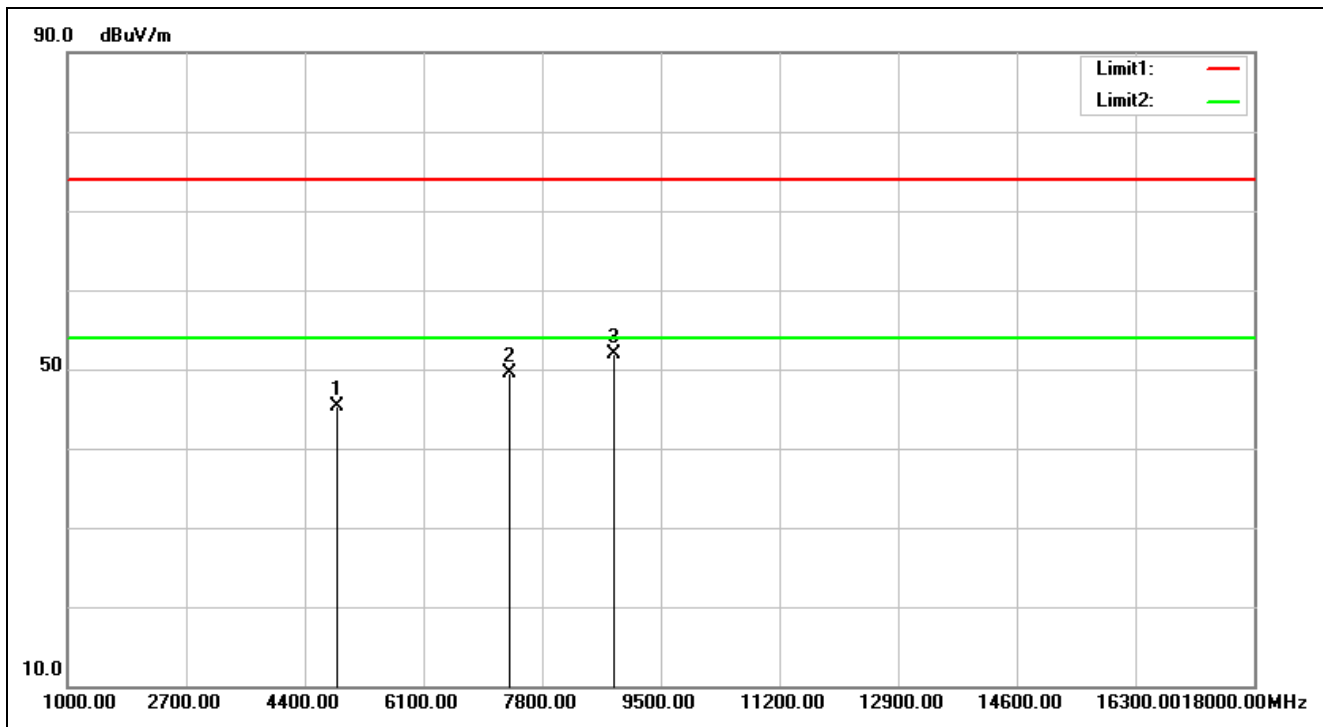
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 16:03:57
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	48.03	45.37	74.00	-28.63	peak			
2	7236.000	5.32	45.43	50.75	74.00	-23.25	peak			
3	8650.000	6.40	44.97	51.37	74.00	-22.63	peak	100	248	



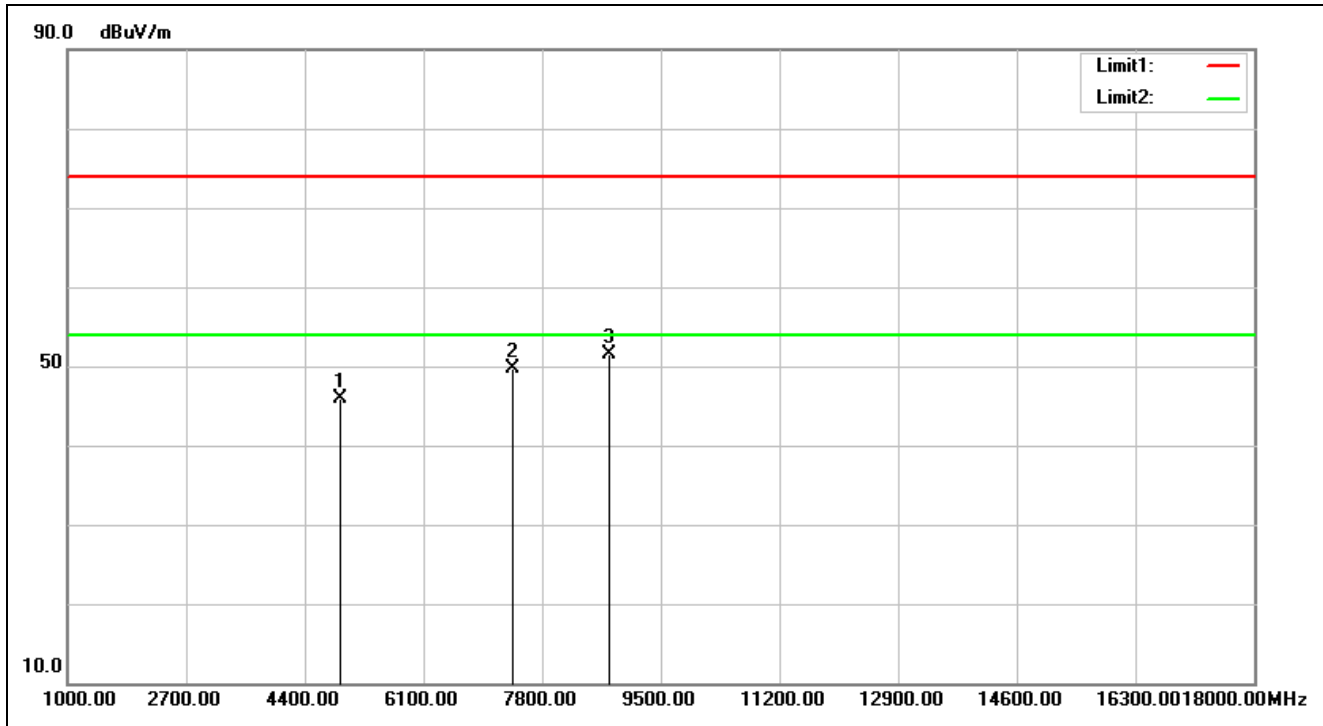
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 16:06:23
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	48.43	45.90	74.00	-28.10	peak			
2	7311.000	5.52	44.85	50.37	74.00	-23.63	peak			
3	8803.000	6.42	45.21	51.63	74.00	-22.37	peak			



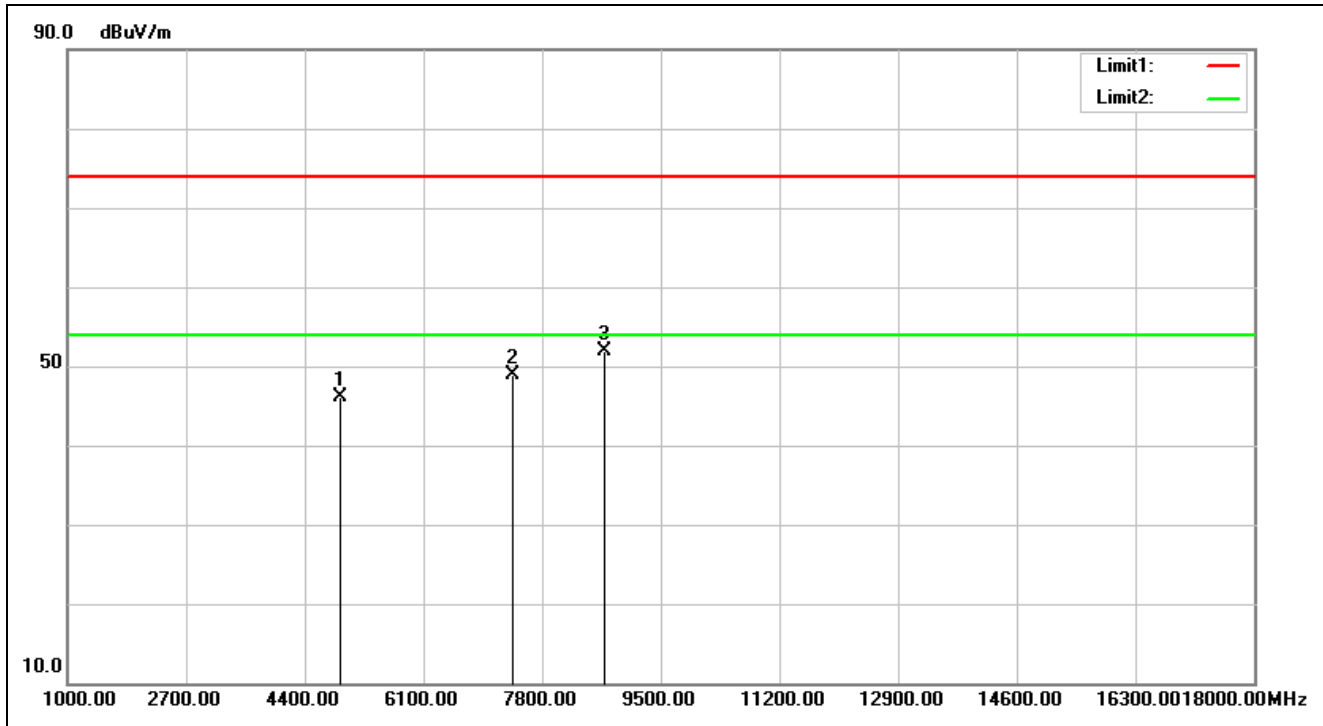
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 16:07:26
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	47.93	45.40	74.00	-28.60	peak			
2	7311.000	5.52	44.01	49.53	74.00	-24.47	peak			
3	8837.000	6.42	45.41	51.83	74.00	-22.17	peak	100	232	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 16:09:32
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	48.28	45.89	74.00	-28.11	peak			
2	7386.000	5.70	43.92	49.62	74.00	-24.38	peak			
3	8752.000	6.41	45.17	51.58	74.00	-22.42	peak			



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 16:10:35
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	48.42	46.03	74.00	-27.97	peak			
2	7386.000	5.70	43.13	48.83	74.00	-25.17	peak			
3	8701.000	6.41	45.43	51.84	74.00	-22.16	peak	100	221	

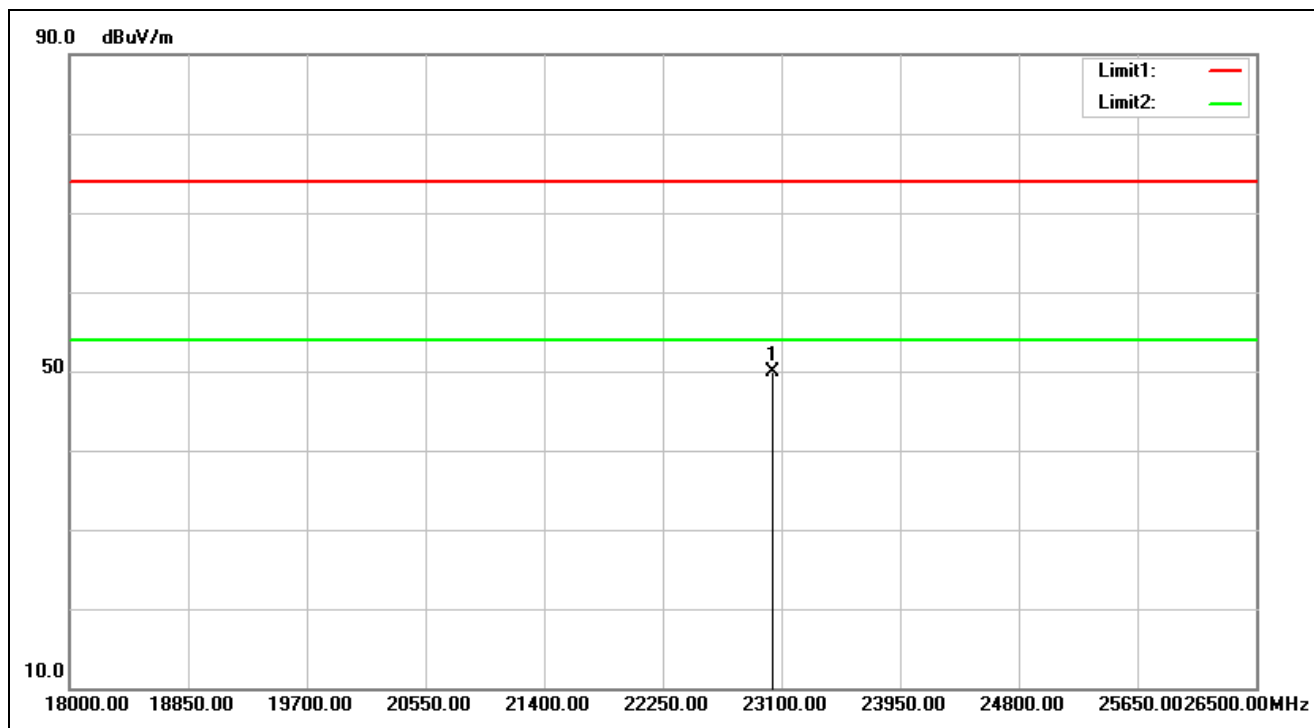
Spurious Emissions, TX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

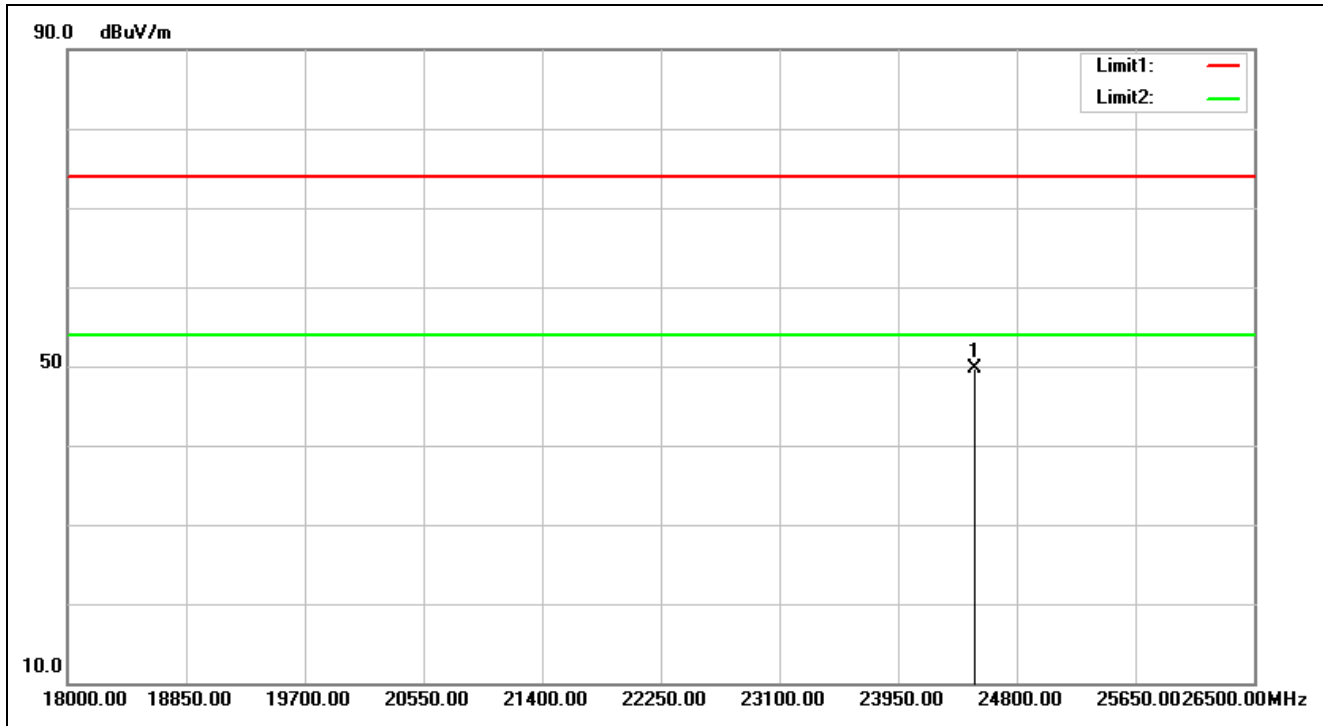
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



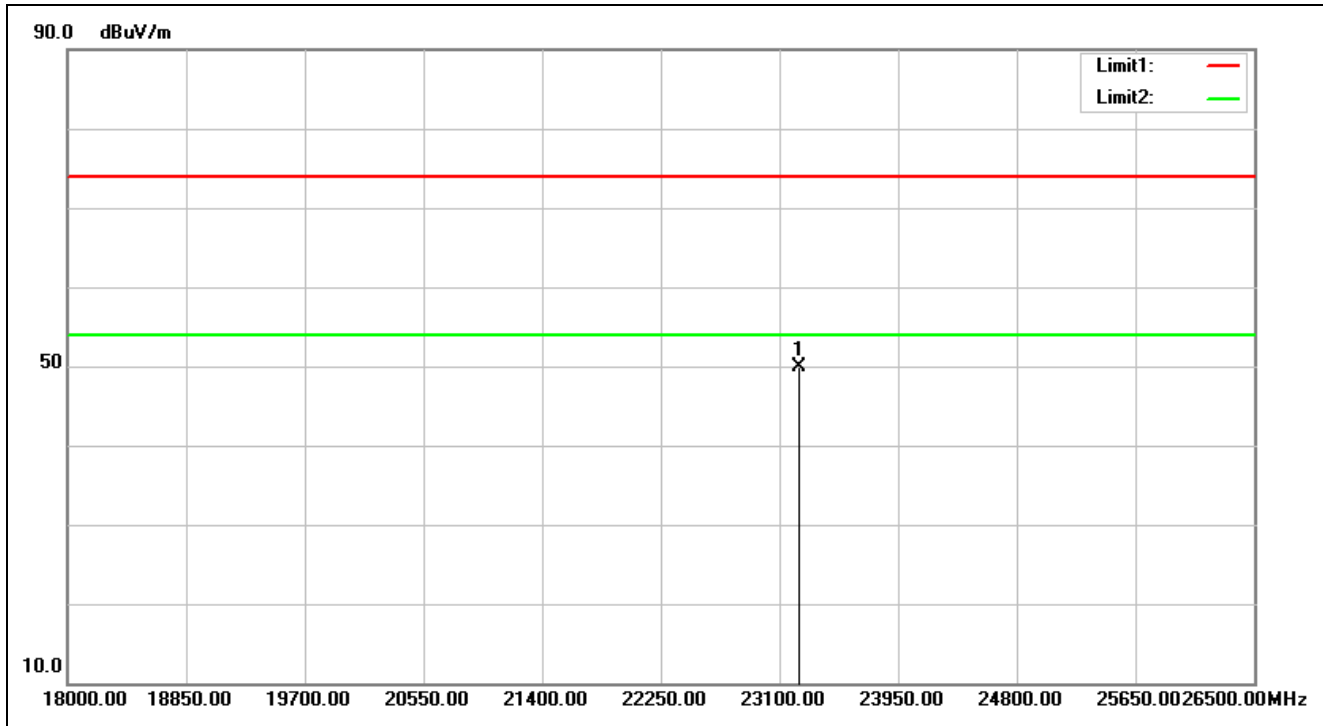
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:41:11
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23040.500	32.37	17.54	49.91	74.00	-24.09	peak		0	



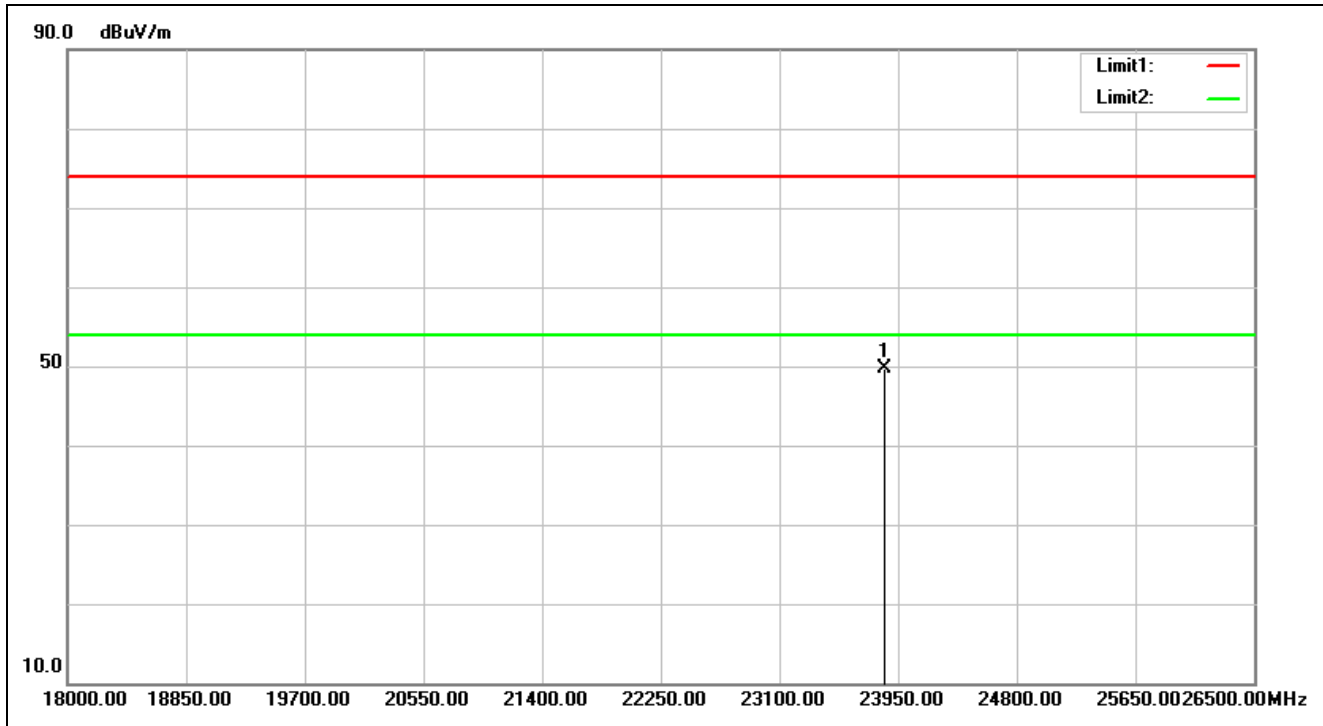
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:41:18
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24494.000	32.59	17.14	49.73	74.00	-24.27	peak			



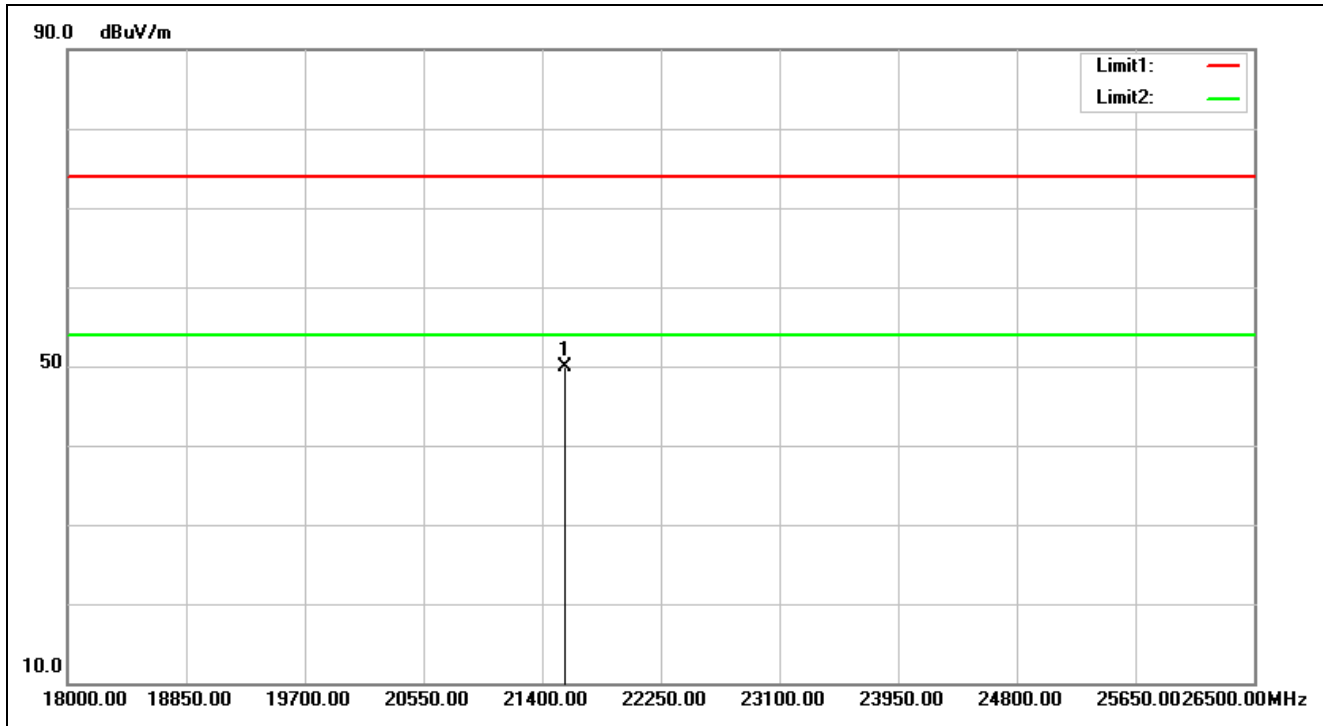
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:41:43
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23236.000	32.57	17.28	49.85	74.00	-24.15	peak			



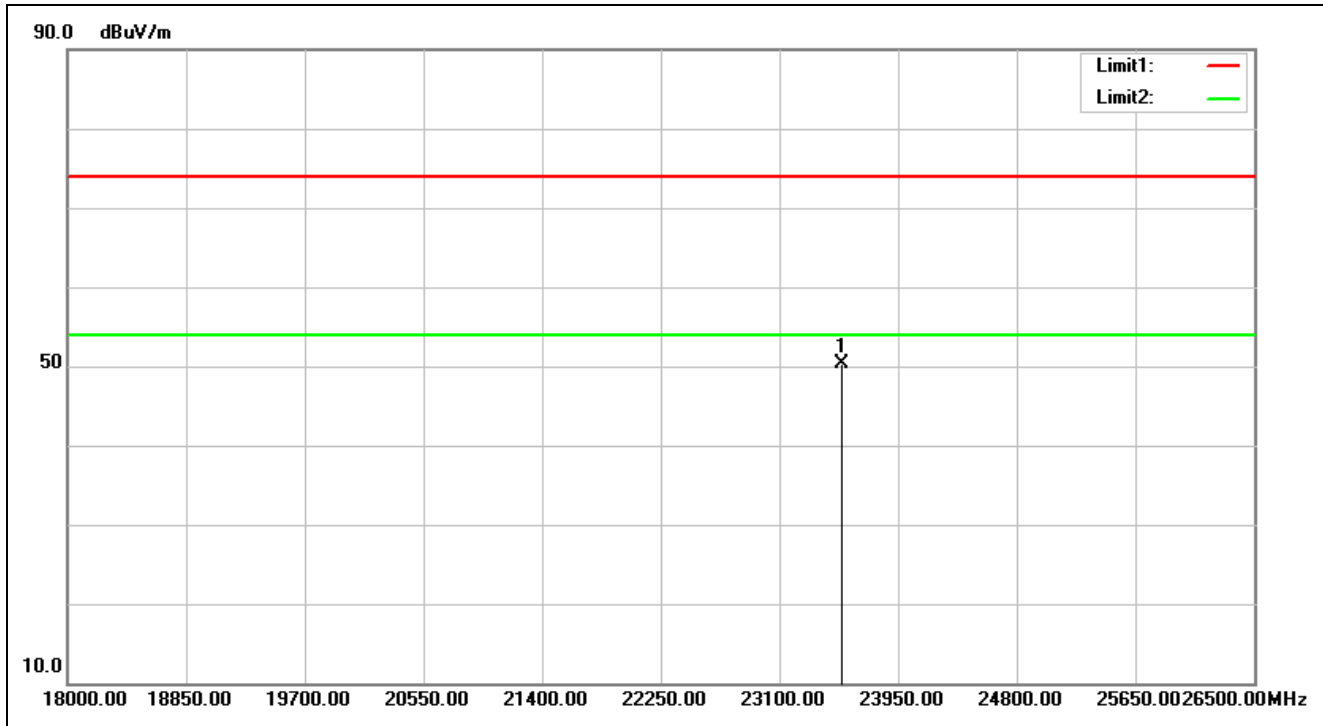
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:41:50
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23848.000	32.54	17.21	49.75	74.00	-24.25	peak			



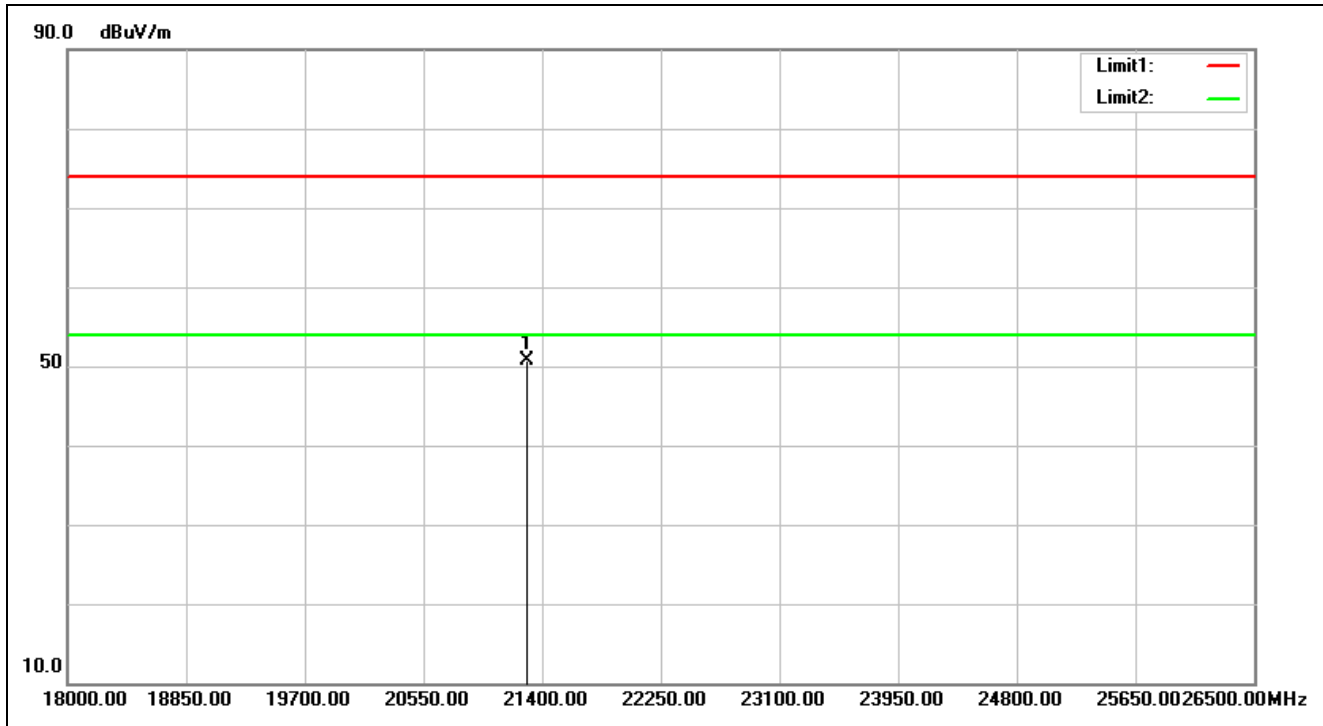
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:42:21
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21561.500	32.20	17.67	49.87	74.00	-24.13	peak			



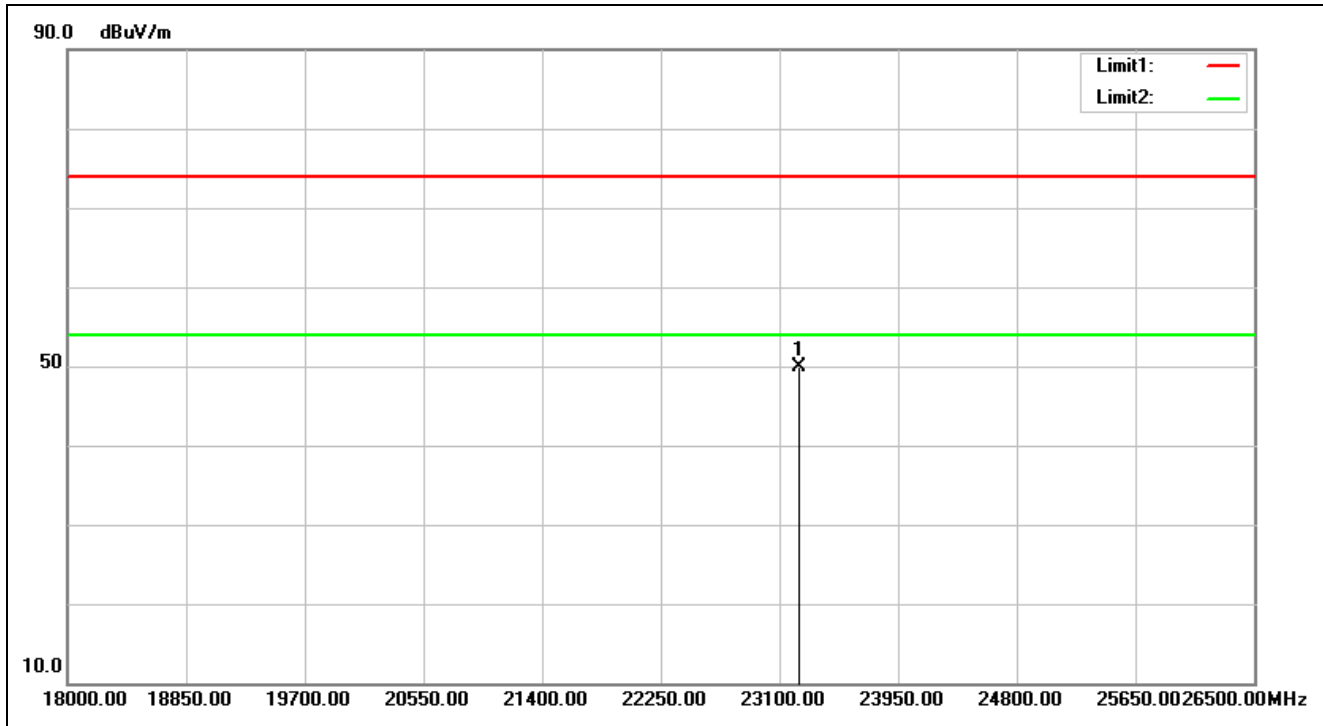
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:42:14
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23542.000	32.79	17.44	50.23	74.00	-23.77	peak			



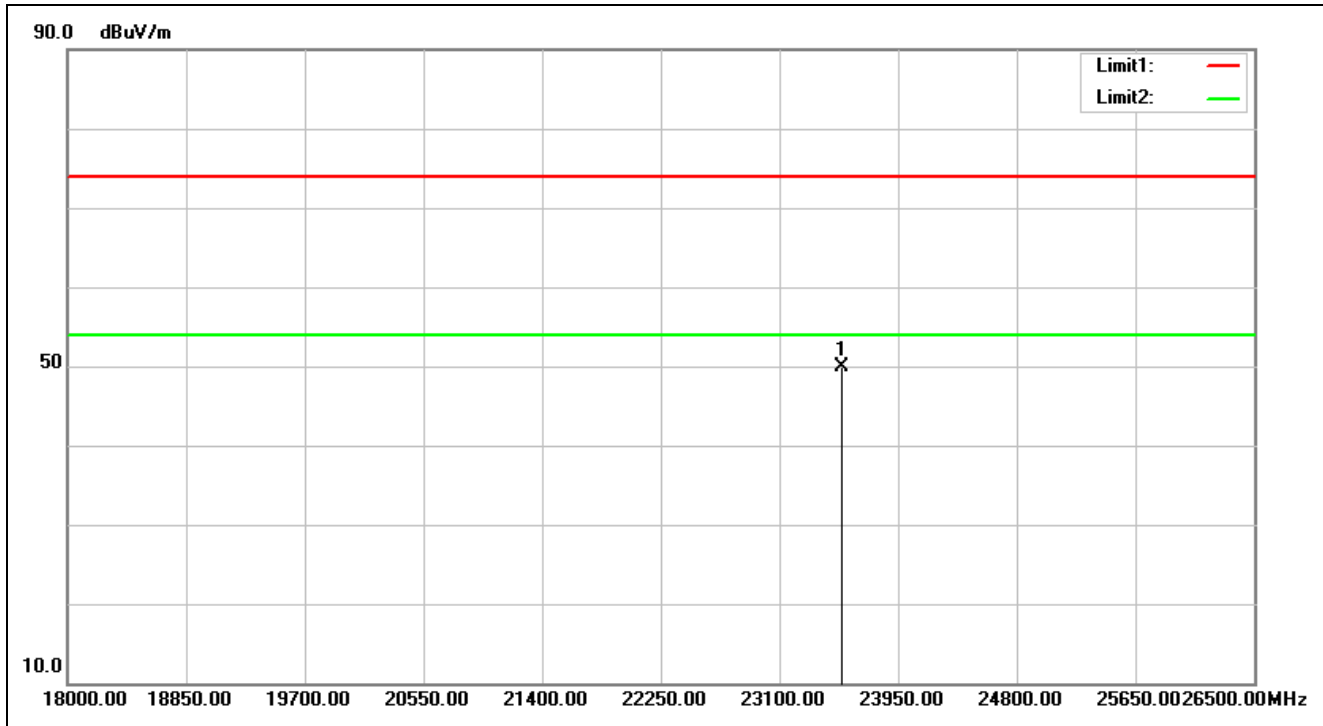
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:42:55
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21289.500	32.12	18.61	50.73	74.00	-23.27	peak			



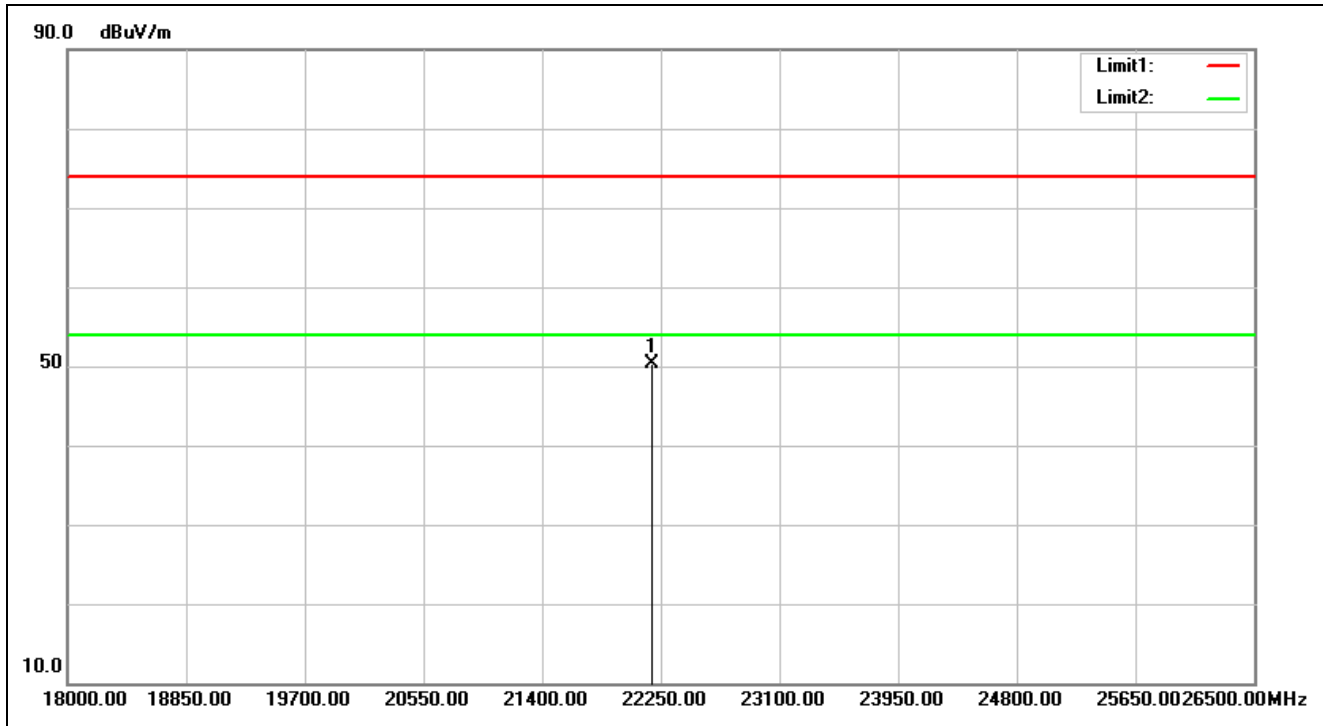
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:43:01
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23236.000	32.57	17.37	49.94	74.00	-24.06	peak			



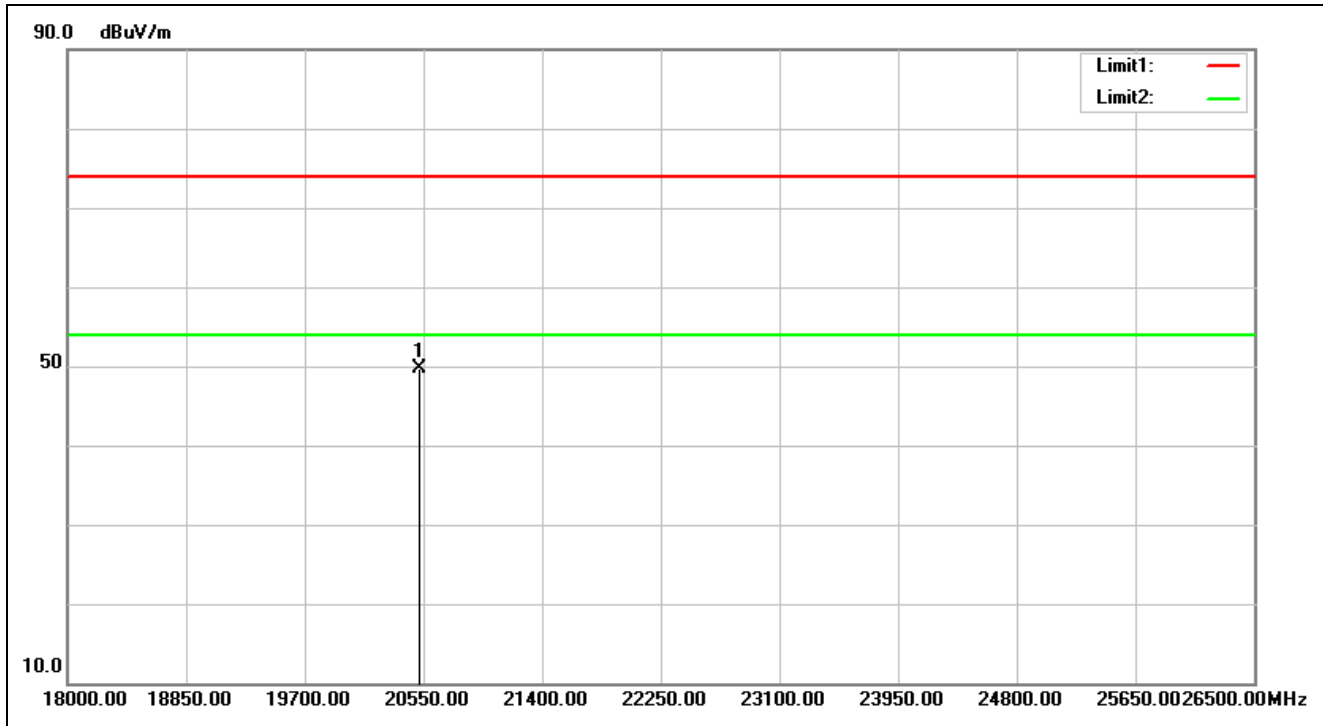
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:43:30
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23542.000	32.79	17.04	49.83	74.00	-24.17	peak			



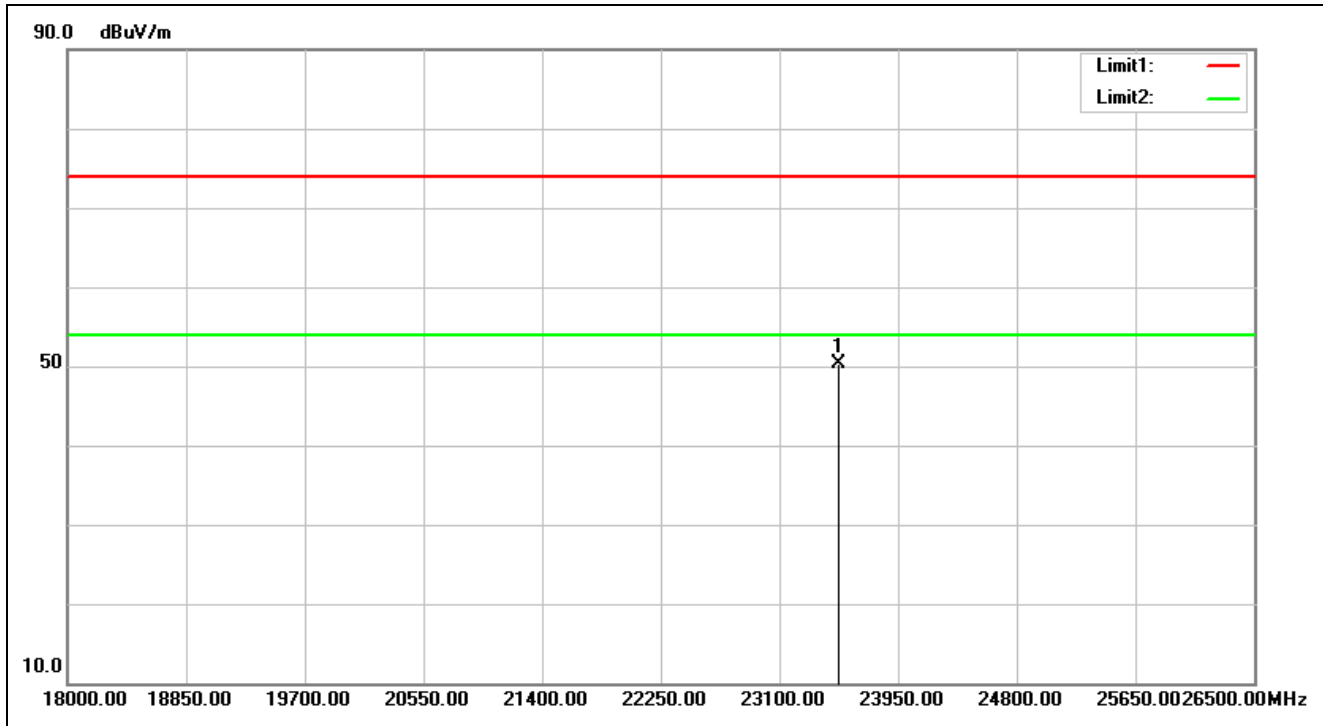
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:43:37
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22182.000	32.05	18.30	50.35	74.00	-23.65	peak			



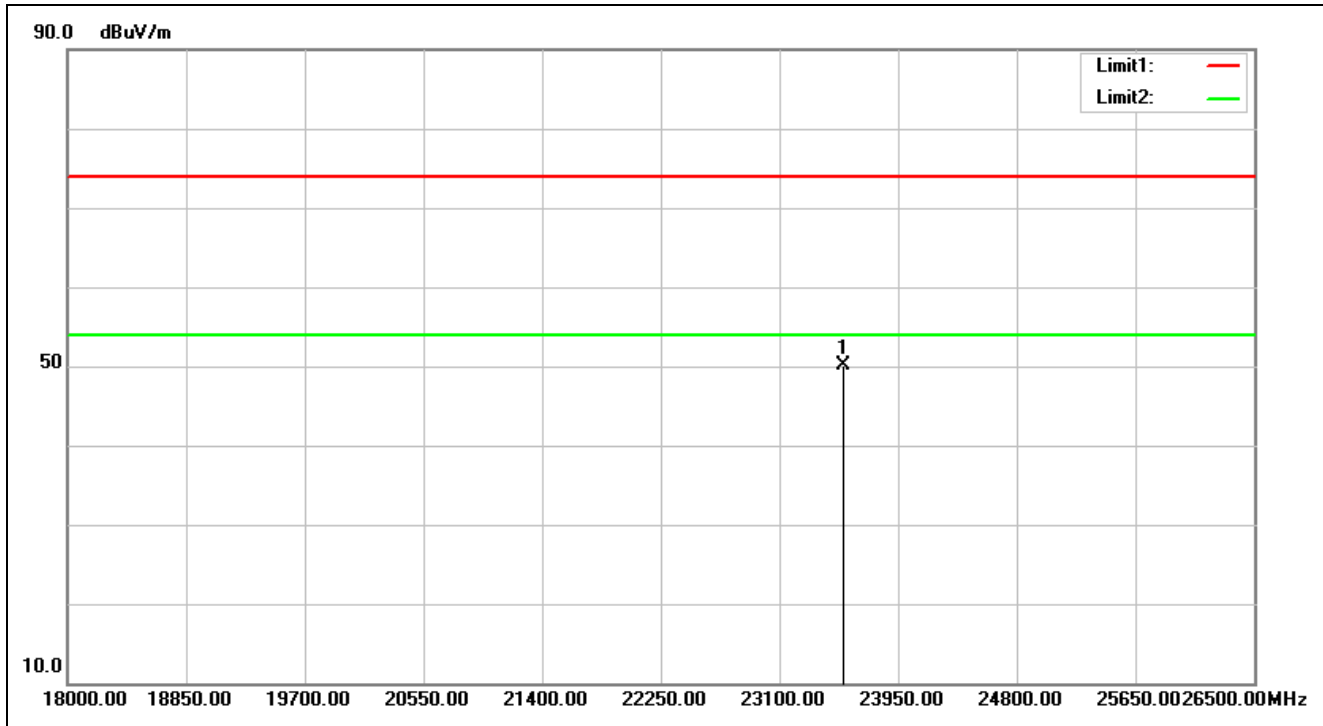
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:44:03
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20516.000	31.00	18.79	49.79	74.00	-24.21	peak			



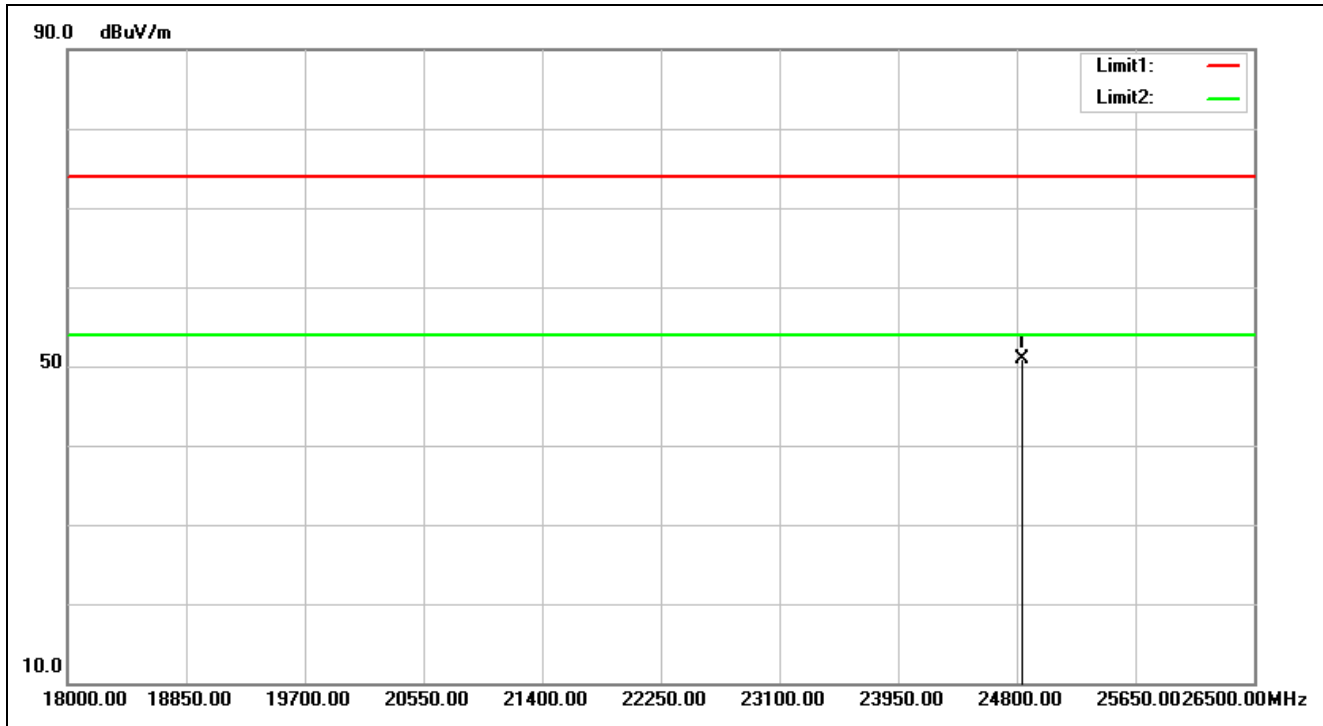
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:44:09
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23525.000	32.81	17.42	50.23	74.00	-23.77	peak			



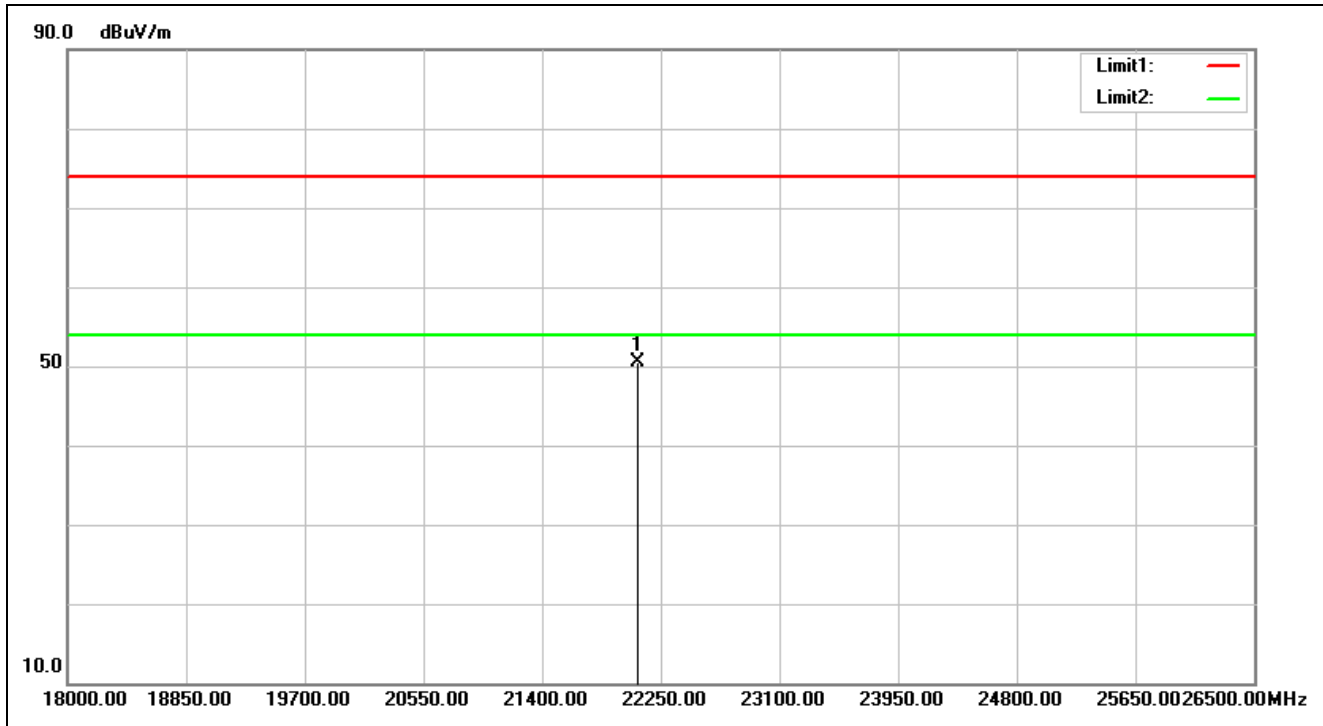
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:44:38
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23559.000	32.78	17.42	50.20	74.00	-23.80	peak			



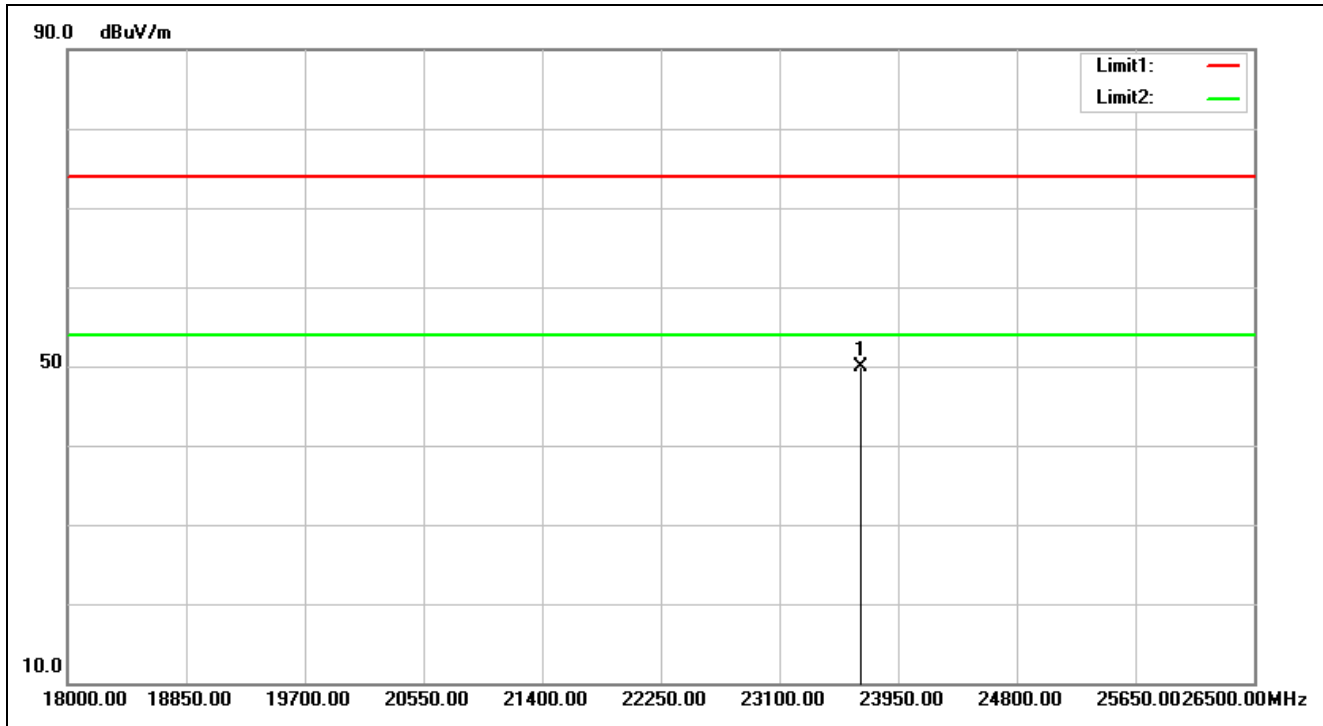
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:44:45
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24834.000	32.91	17.90	50.81	74.00	-23.19	peak			



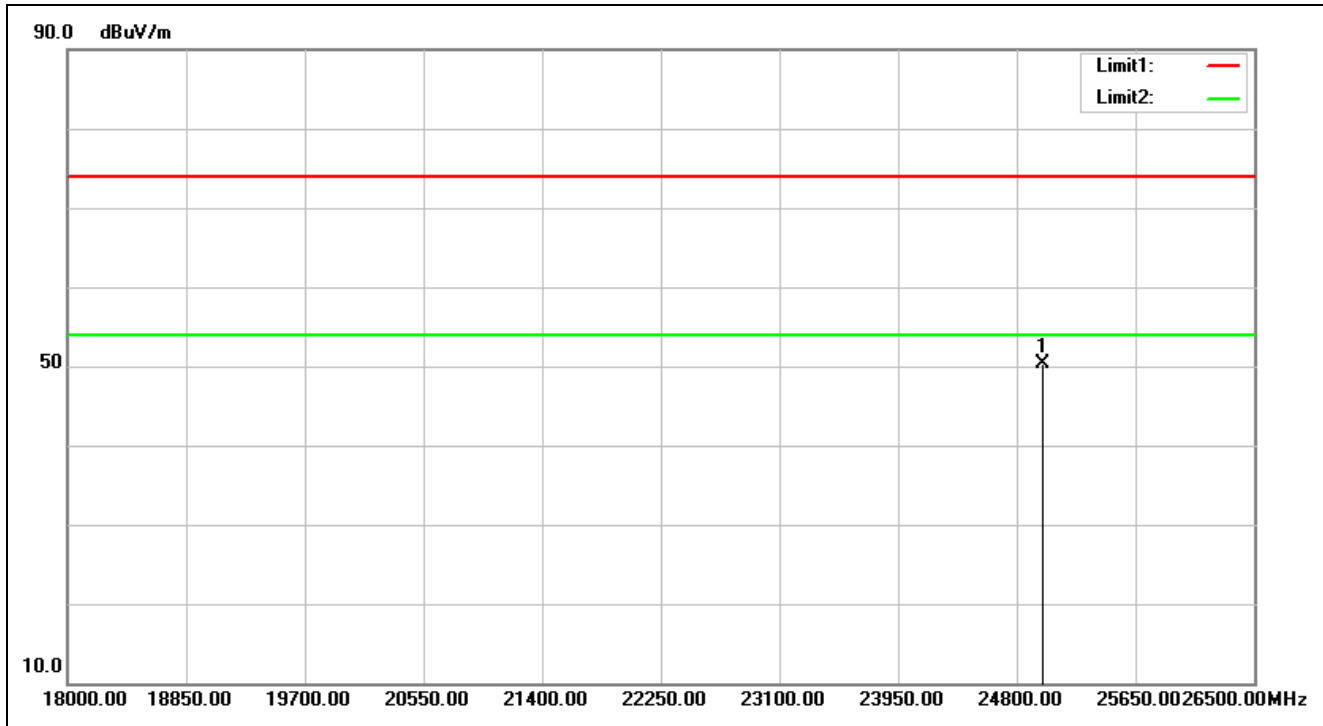
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:45:09
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22088.500	32.00	18.43	50.43	74.00	-23.57	peak			



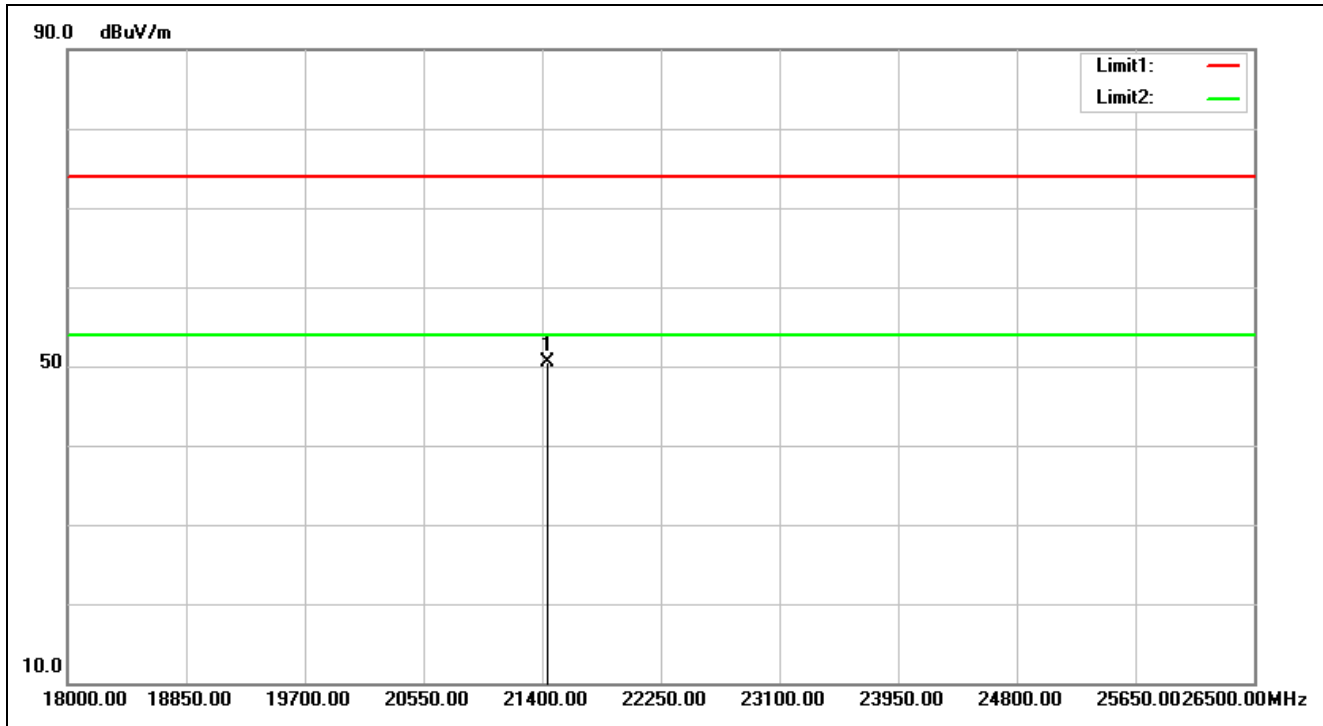
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:45:16
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23678.000	32.69	17.12	49.81	74.00	-24.19	peak			



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:45:39
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24987.000	33.07	17.23	50.30	74.00	-23.70	peak			



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:45:46
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21434.000	32.20	18.32	50.52	74.00	-23.48	peak			

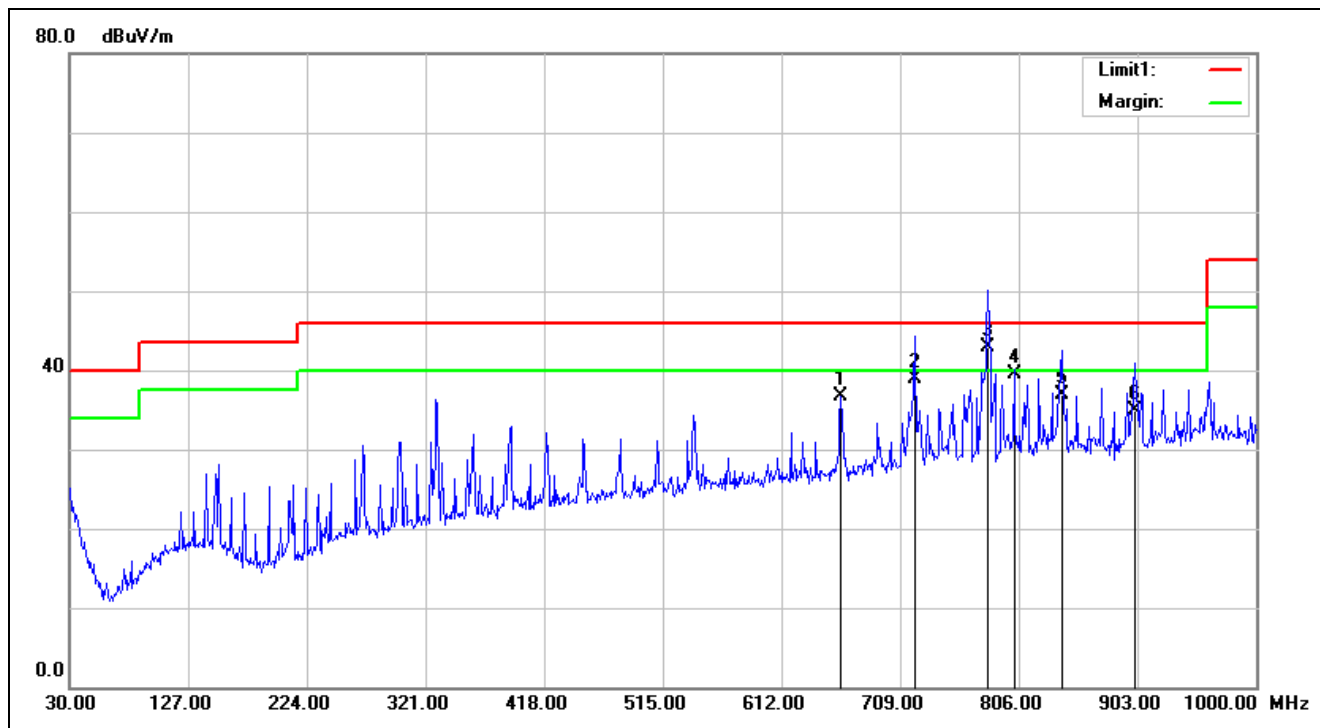
Spurious Emissions, TX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

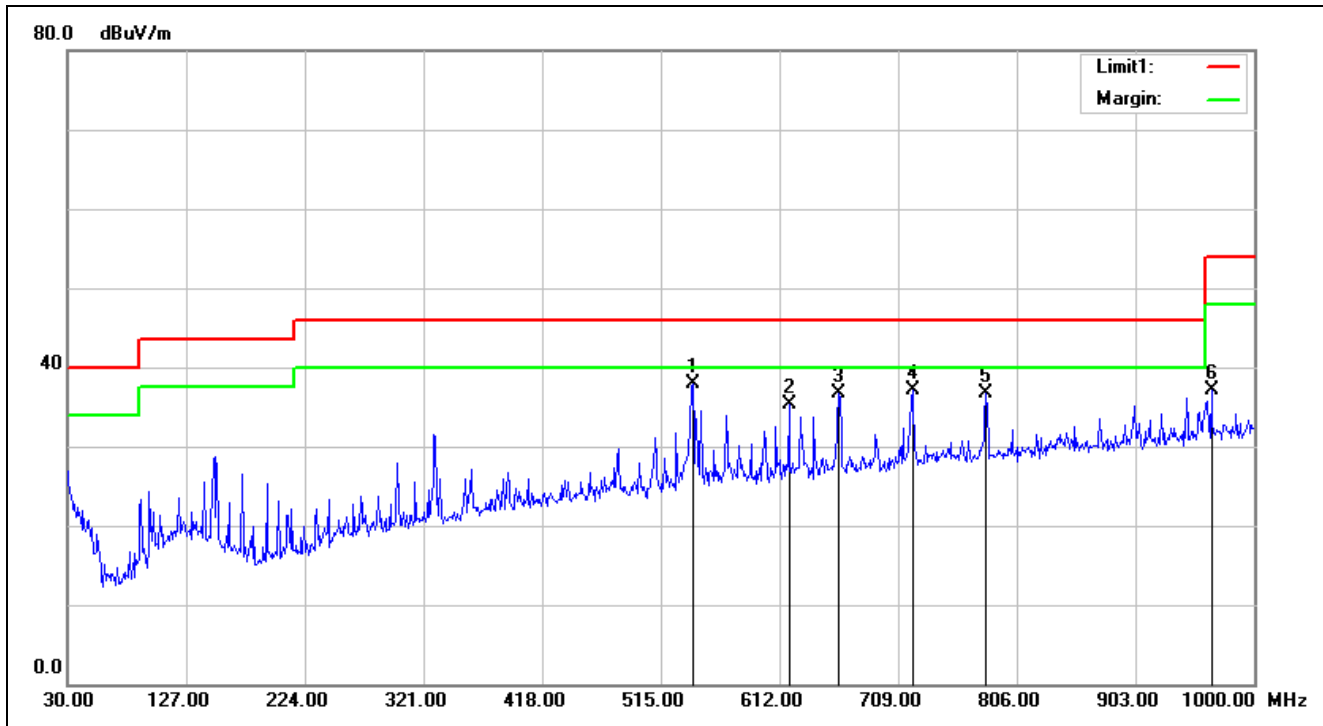
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 15:23:52
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	660.5000	0.69	36.01	36.70	46.00	-9.30	QP	100	94	
2	720.6400	1.72	37.18	38.90	46.00	-7.10	QP	100	248	
3	780.7800	2.61	40.39	43.00	46.00	-3.00	QP	100	243	
4	802.1200	2.80	36.70	39.50	46.00	-6.50	QP	100	235	
5	841.8900	3.56	33.34	36.90	46.00	-9.10	QP	100	235	
6	901.0600	4.09	30.91	35.00	46.00	-11.00	QP	100	227	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 15:24:56
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	541.1900	-0.58	38.44	37.86	46.00	-8.14	QP	100	237	
2	619.7600	0.26	35.10	35.36	46.00	-10.64	QP	100	3	
3	660.5000	0.69	35.99	36.68	46.00	-9.32	QP	100	272	
4	720.6400	1.72	35.48	37.20	46.00	-8.80	QP	100	360	
5	780.7800	2.61	34.09	36.70	46.00	-9.30	QP	100	312	
6	965.0800	5.57	31.62	37.19	54.00	-16.81	QP	100	154	

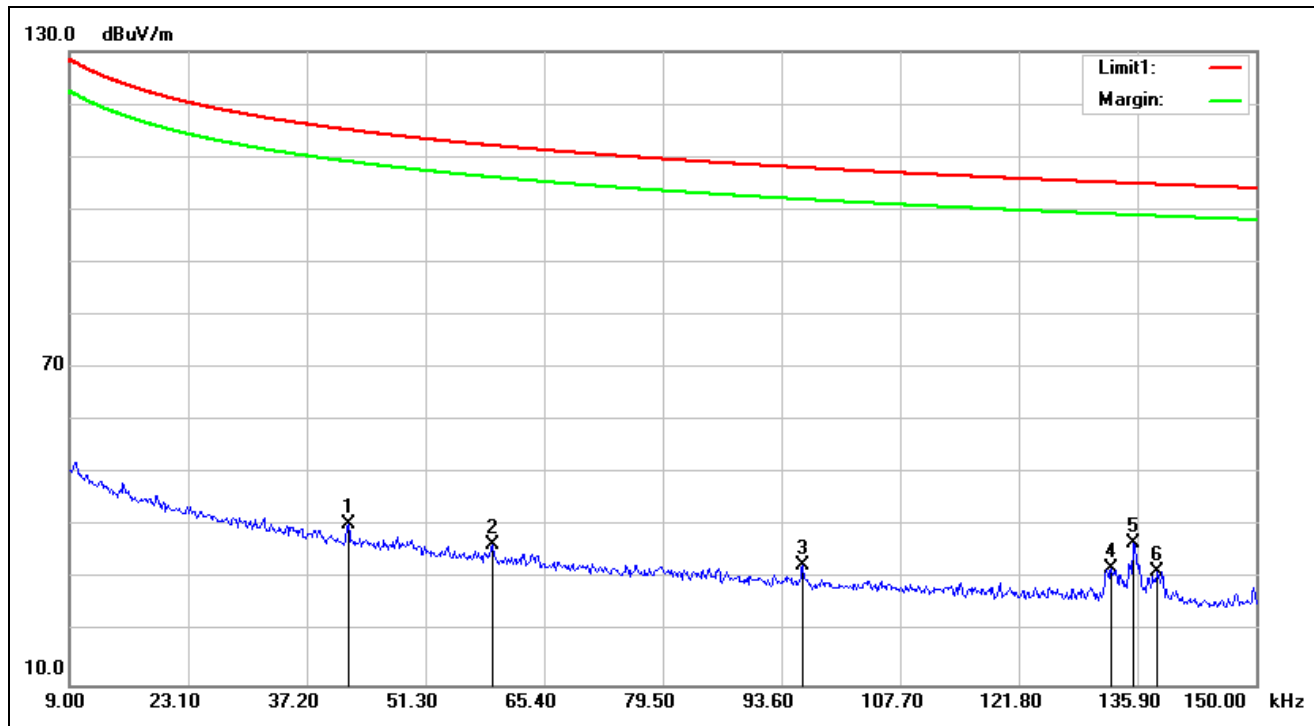
Spurious Emissions, TX Mode, 9k-30M



TUV Rheinland Taiwan Ltd.

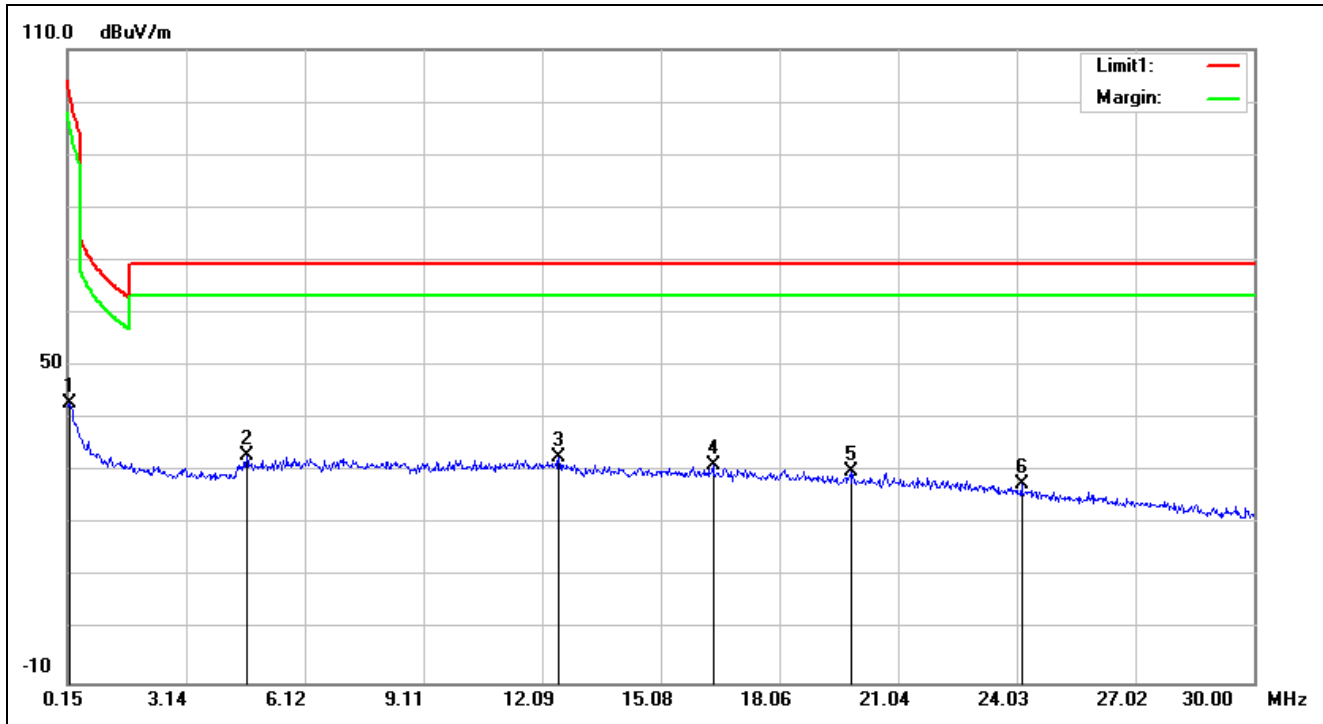
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED 15.209_9k-1G_3m	Ant. Polarization:	NA
Test item:	Radiation Emission	Test Time:	2018/1/24 16:48:42
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0421	19.71	20.71	40.42	115.11	-74.69	QP	100	150	
2	0.0593	19.37	17.12	36.49	112.13	-75.64	QP	100	252	
3	0.0961	19.15	13.37	32.52	107.94	-75.42	QP	100	130	
4	0.1327	19.10	12.87	31.97	105.14	-73.17	QP	100	240	
5	0.1354	19.09	17.66	36.75	104.97	-68.22	QP	100	95	
6	0.1382	19.09	12.31	31.40	104.79	-73.39	QP	100	235	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED 15.209_9k-1G_3m	Ant. Polarization:	NA
Test item:	Radiation Emission	Test Time:	2018/1/24 16:53:22
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.2097	19.03	23.86	42.89	101.17	-58.28	QP	100	256	
2	4.6573	19.54	13.50	33.04	69.50	-36.46	QP	100	230	
3	12.5079	20.67	12.11	32.78	69.50	-36.72	QP	100	240	
4	16.3884	21.35	9.96	31.31	69.50	-38.19	QP	100	158	
5	19.8510	21.95	8.20	30.15	69.50	-39.35	QP	100	169	
6	24.1494	22.26	5.53	27.79	69.50	-41.71	QP	100	80	

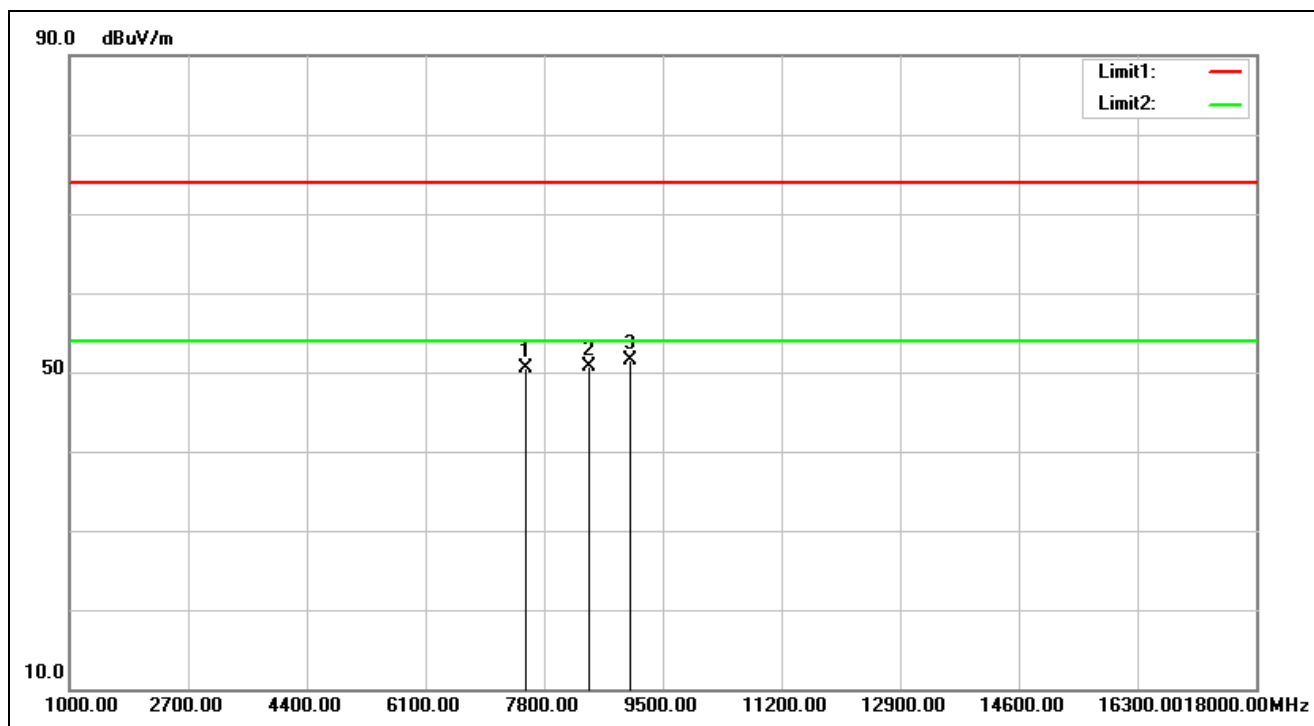
Spurious Emissions, RX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

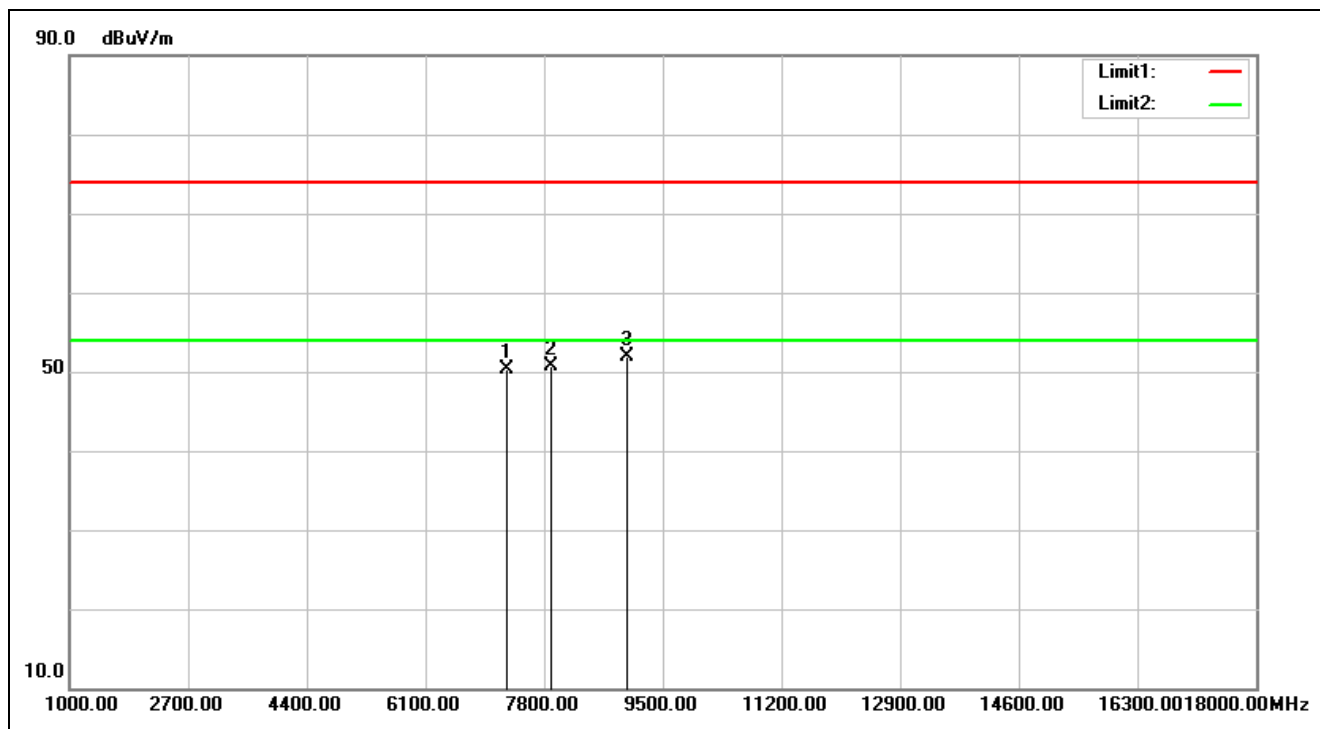
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/22 16:17:48
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	7545.000	4.93	45.56	50.49	74.00	-23.51	peak		0	
2	8446.000	5.27	45.46	50.73	74.00	-23.27	peak		0	
3	9041.000	5.41	46.08	51.49	74.00	-22.51	peak		0	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/22 16:18:51
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	24(°C)/65%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	7273.000	4.39	45.98	50.37	74.00	-23.63	peak	100	359	
2	7902.000	4.81	45.83	50.64	74.00	-23.36	peak	100	232	
3	8990.000	5.40	46.53	51.93	74.00	-22.07	peak	100	282	

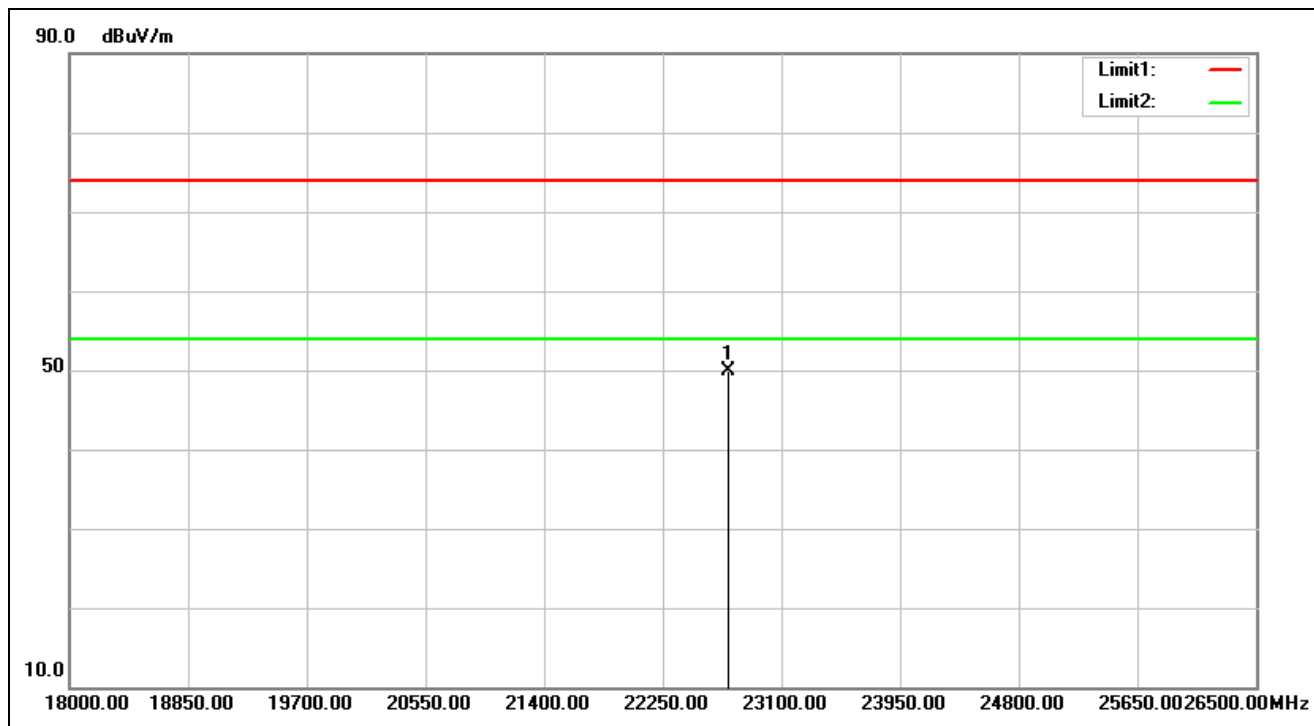
Spurious Emissions, RX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

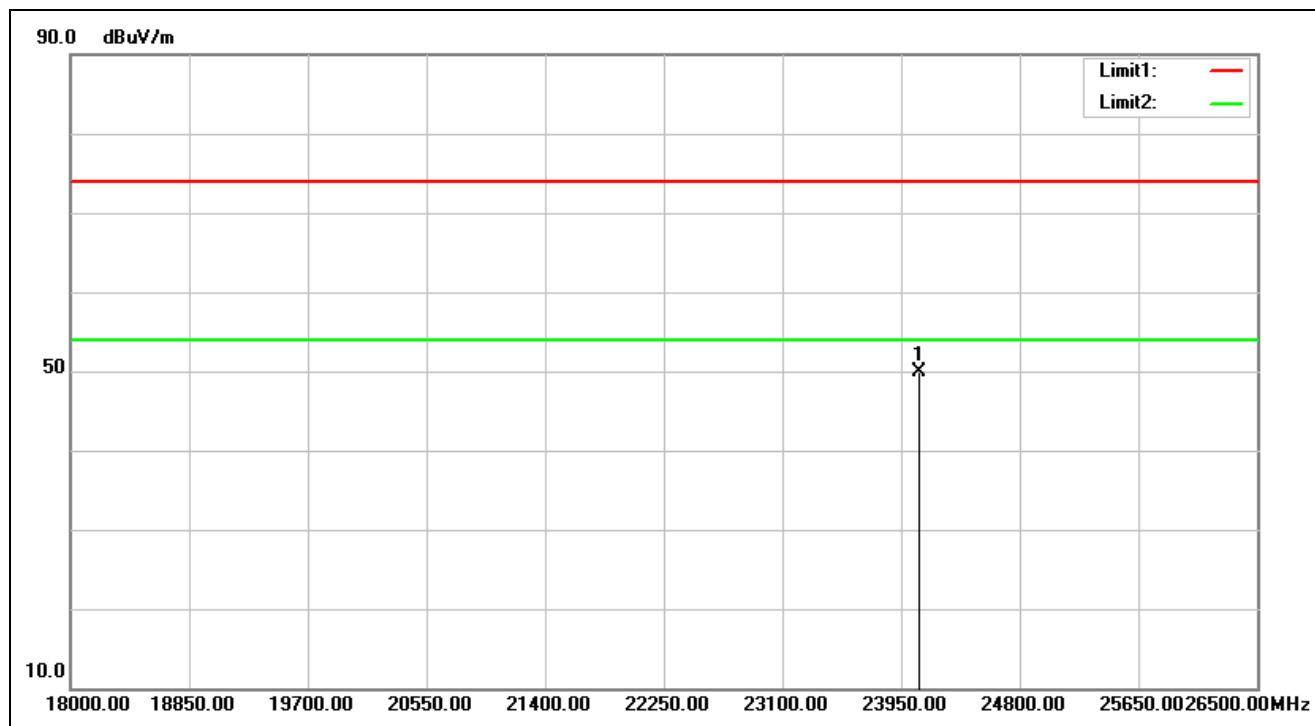
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:46:21
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22717.500	32.23	17.64	49.87	74.00	-24.13	peak		0	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:46:28
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24077.500	32.44	17.55	49.99	74.00	-24.01	peak			

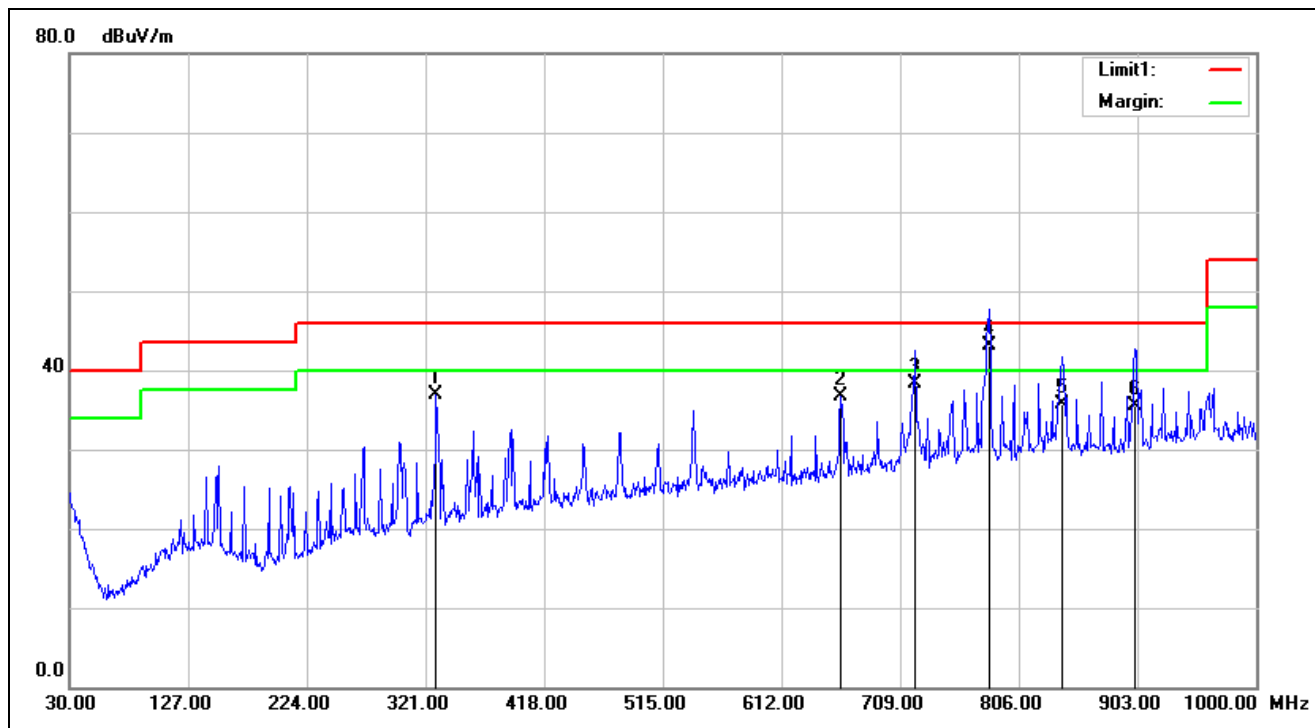
Spurious Emissions, RX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

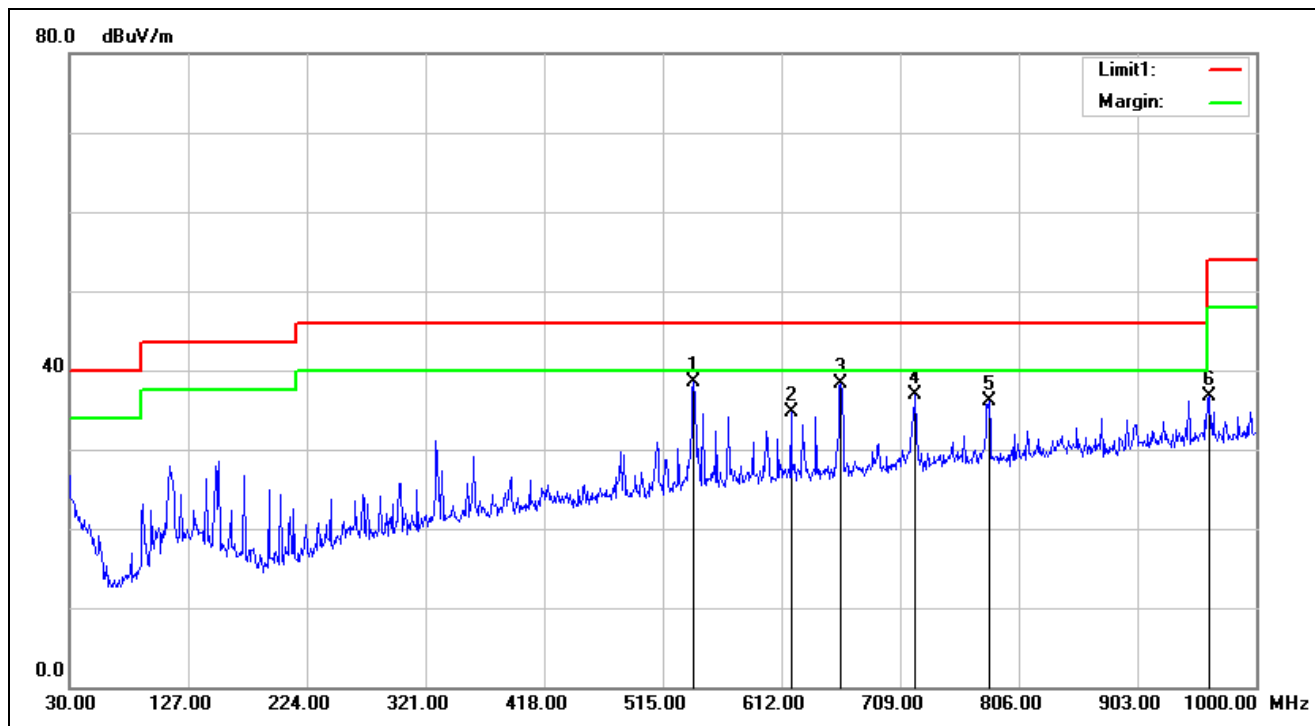
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 15:40:40
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	329.7300	-3.84	40.66	36.82	46.00	-9.18	QP	100	283	
2	660.5000	0.69	35.97	36.66	46.00	-9.34	QP	100	83	
3	721.6100	1.74	36.66	38.40	46.00	-7.60	QP	100	243	
4	781.7500	2.62	40.58	43.20	46.00	-2.80	QP	100	240	
5	840.9200	3.54	32.16	35.70	46.00	-10.30	QP	100	262	
6	901.0600	4.09	31.51	35.60	46.00	-10.40	QP	100	243	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 15:41:43
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	540.2200	-0.59	39.19	38.60	46.00	-7.40	QP	100	237	
2	619.7600	0.26	34.37	34.63	46.00	-11.37	QP	100	360	
3	660.5000	0.69	37.65	38.34	46.00	-7.66	QP	100	360	
4	720.6400	1.72	35.22	36.94	46.00	-9.06	QP	100	343	
5	781.7500	2.62	33.47	36.09	46.00	-9.91	QP	100	336	
6	961.2000	5.54	31.16	36.70	54.00	-17.30	QP	100	144	

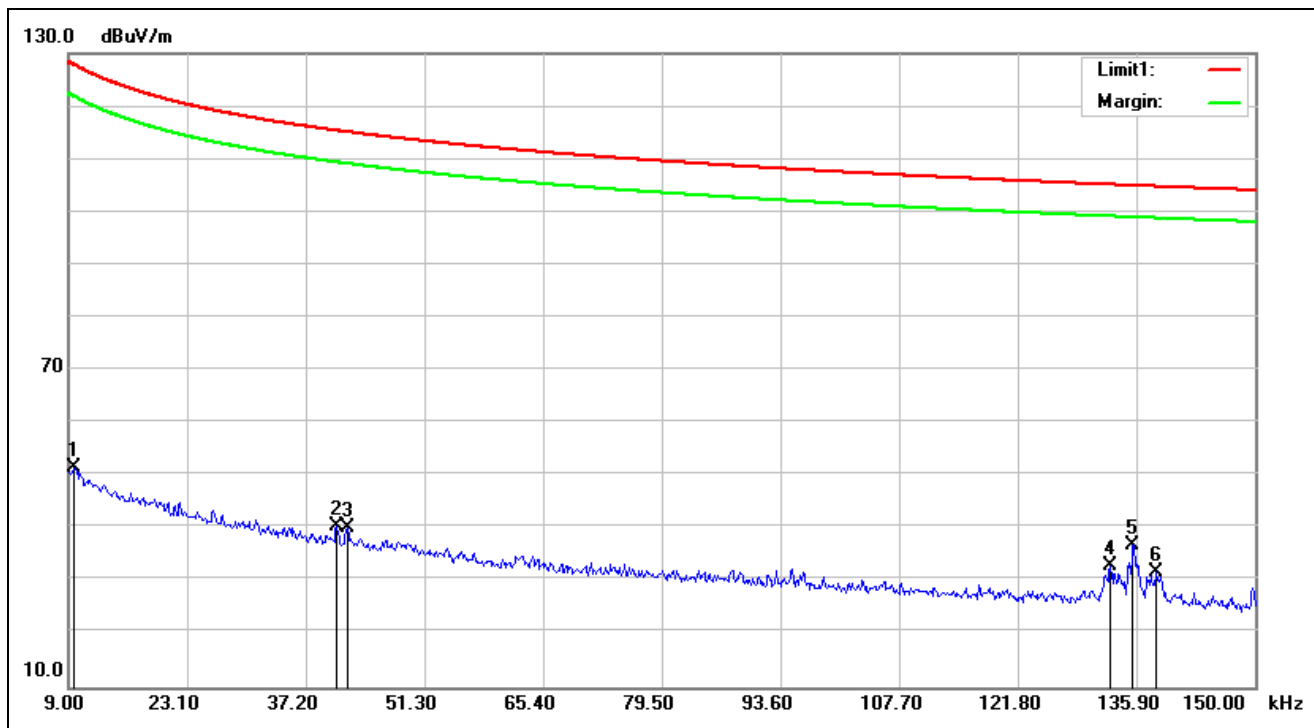
Spurious Emissions, RX Mode, 9K-30M



TUV Rheinland Taiwan Ltd.

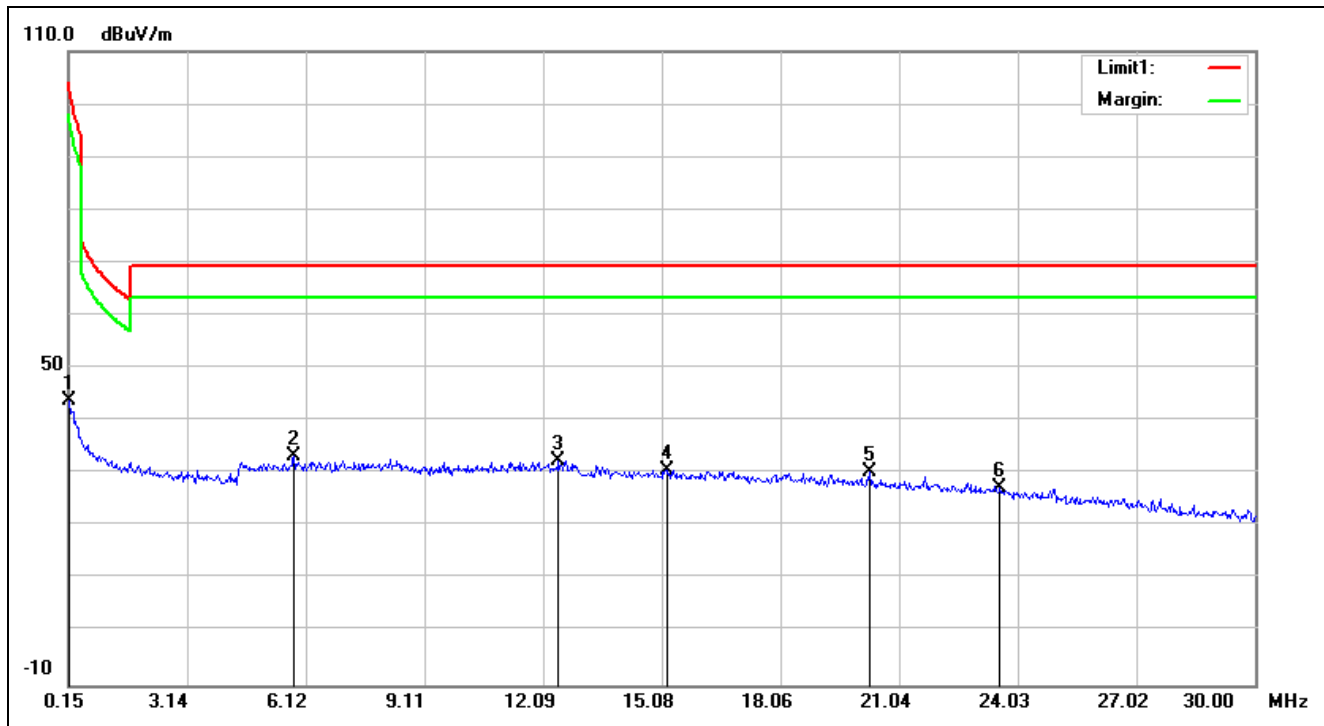
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED 15.209_9k-1G_3m	Ant. Polarization:	NA
Test item:	Radiation Emission	Test Time:	2018/1/24 16:49:45
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0097	19.81	31.75	51.56	127.85	-76.29	QP	100	290	
2	0.0409	19.75	20.57	40.32	115.36	-75.04	QP	100	72	
3	0.0421	19.71	20.38	40.09	115.11	-75.02	QP	100	357	
4	0.1328	19.10	13.95	33.05	105.13	-72.08	QP	100	190	
5	0.1355	19.09	17.85	36.94	104.96	-68.02	QP	100	176	
6	0.1383	19.09	12.77	31.86	104.78	-72.92	QP	100	190	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED 15.209_9k-1G_3m	Ant. Polarization:	NA
Test item:	Radiation Emission	Test Time:	2018/1/24 16:54:25
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1798	19.06	24.73	43.79	102.50	-58.71	QP	100	150	
2	5.8215	19.84	13.44	33.28	69.50	-36.22	QP	100	158	
3	12.4780	20.66	11.93	32.59	69.50	-36.91	QP	100	254	
4	15.1944	21.13	9.62	30.75	69.50	-38.75	QP	100	230	
5	20.2987	22.01	8.41	30.42	69.50	-39.08	QP	100	269	
6	23.5822	22.22	5.04	27.26	69.50	-42.24	QP	100	96	

RFPCA381013IMAB701-ANT

Spurious Emissions, Band Edges, 2.35-2.5G

Radiated Bandedge 11b

Low Channel (Hor)

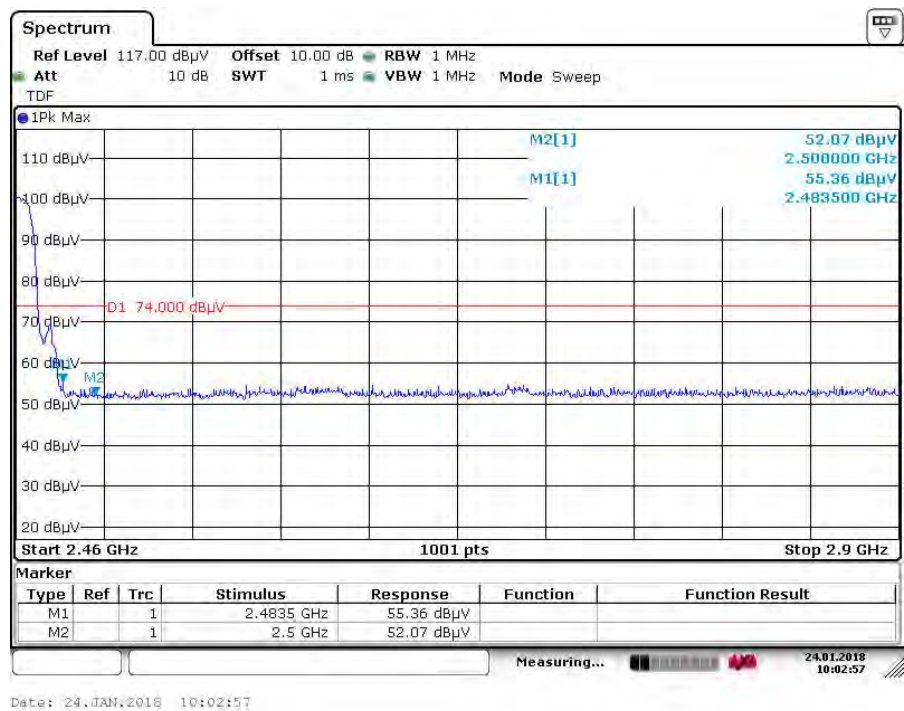
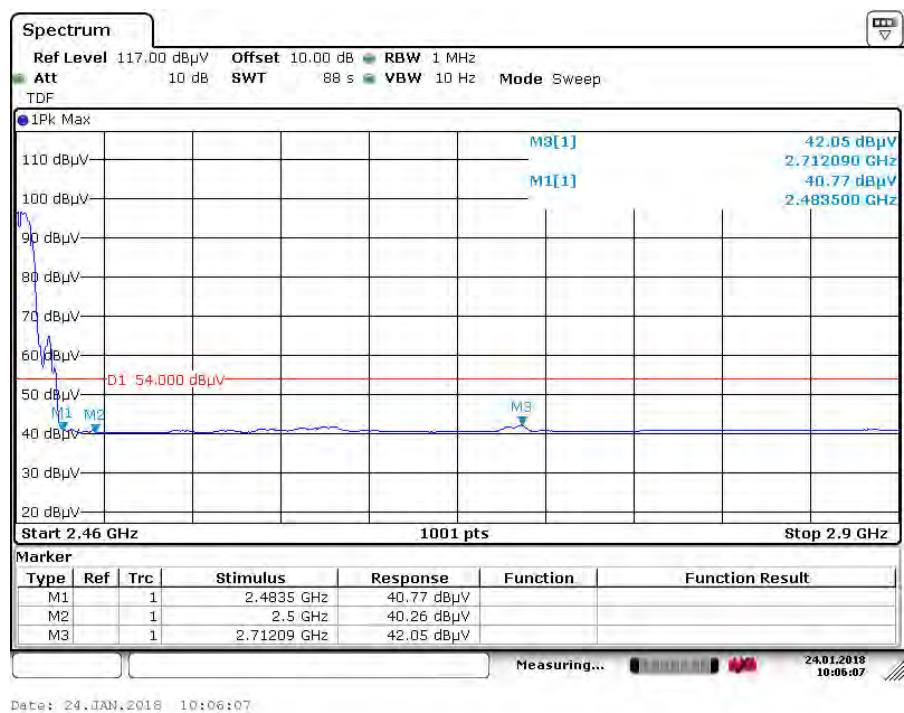


Low Channel (Ver)

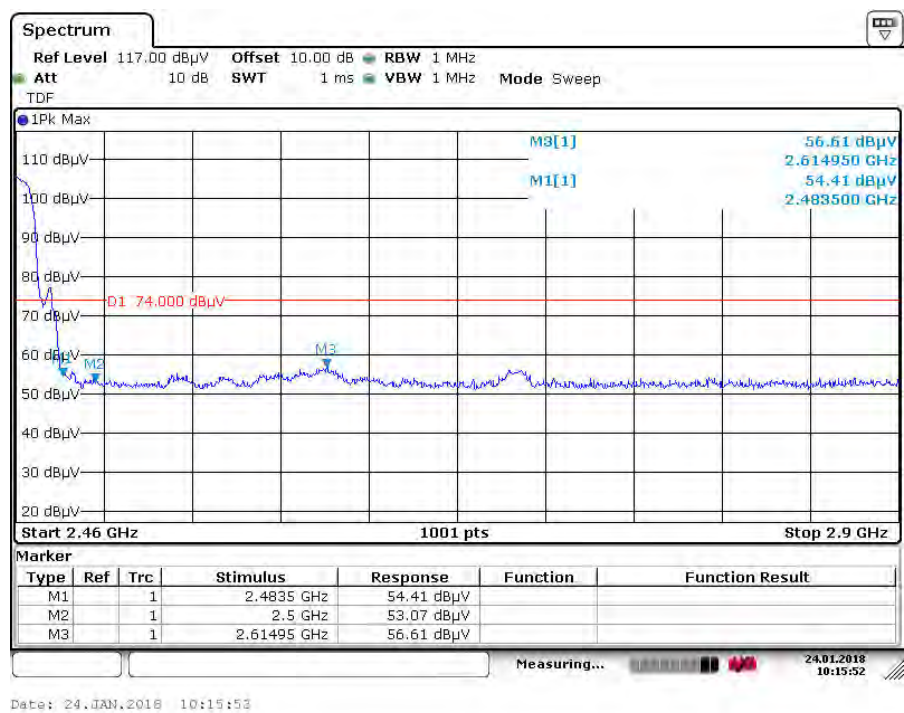
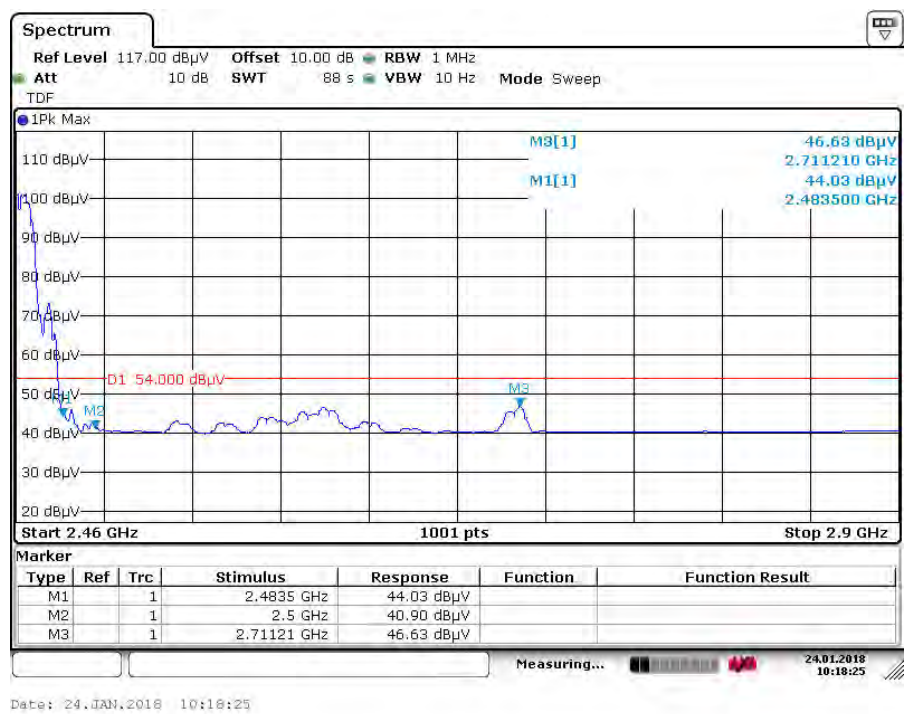


Radiated Bandedge 11b

High Channel (Hor)

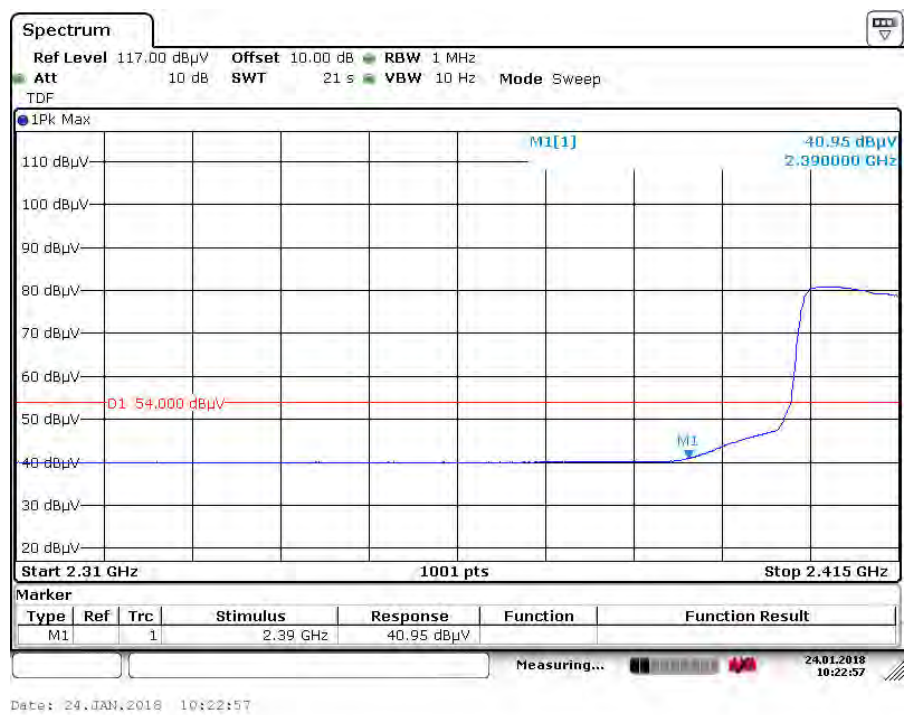


High Channel (Ver)



Radiated Bandedge 11g

Low Channel (Hor)

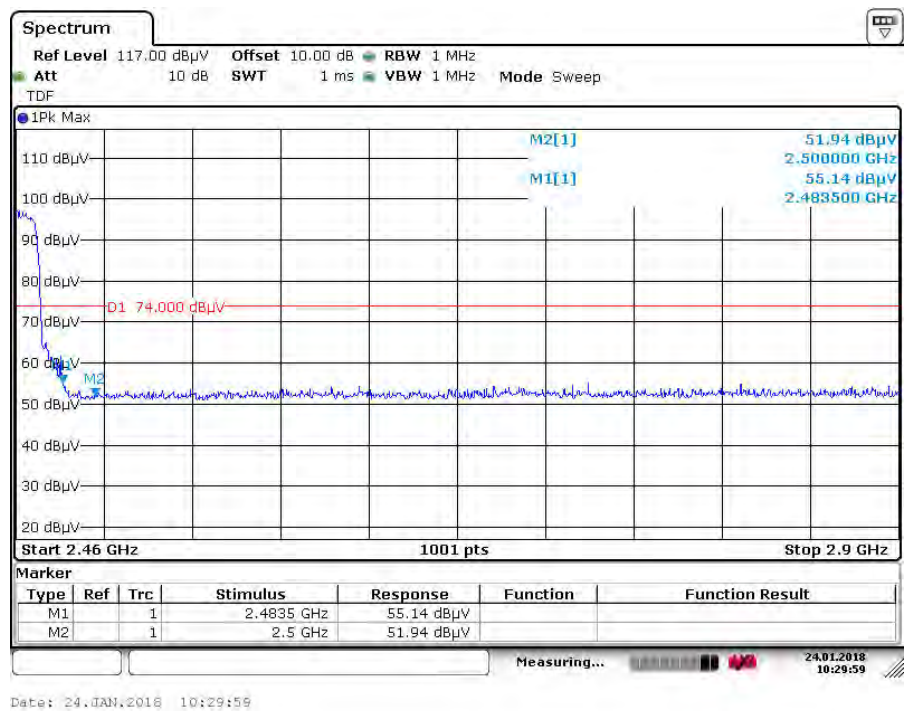
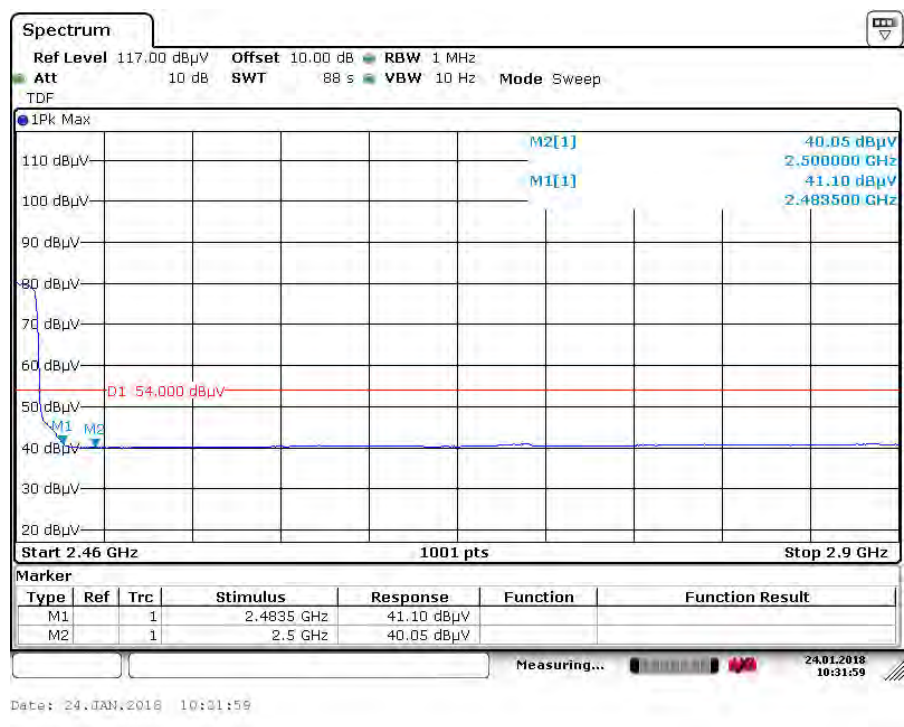


Low Channel (Ver)

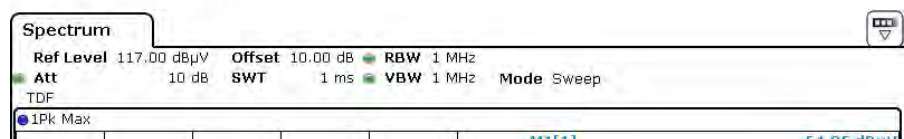
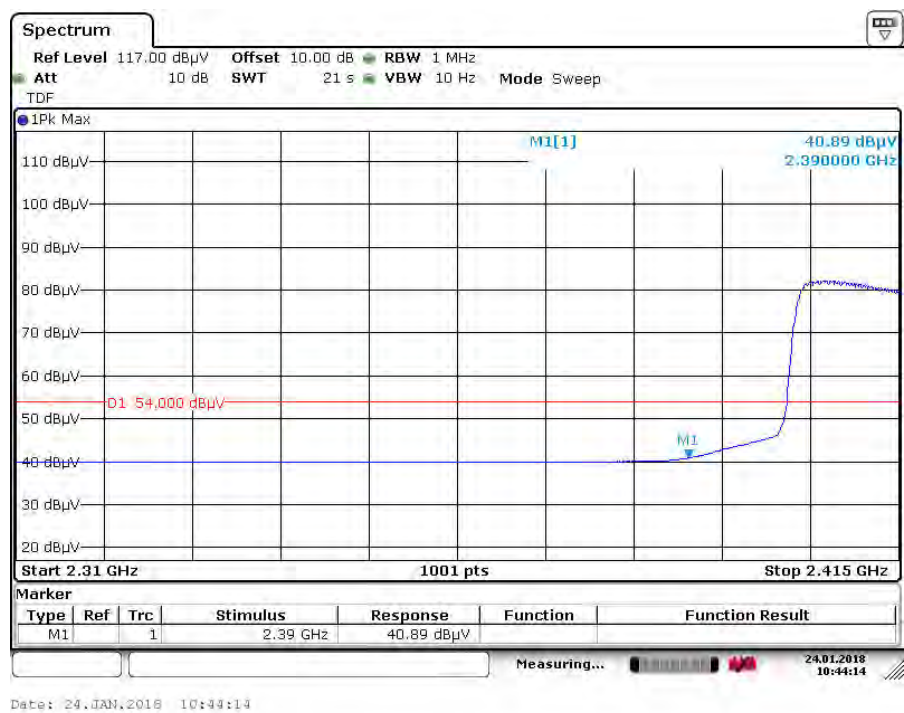
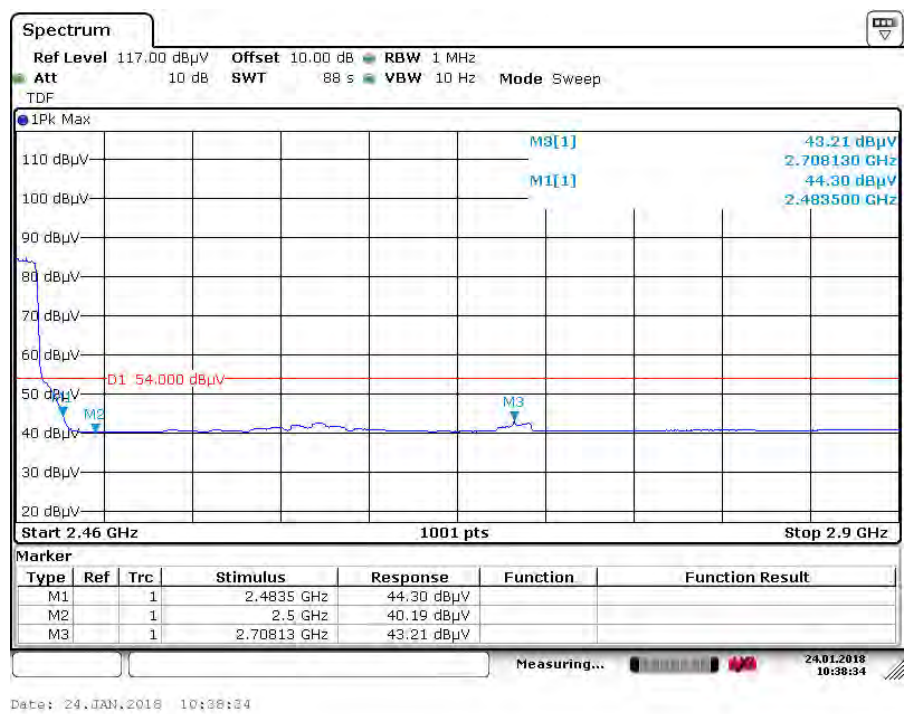


Radiated Bandedge 11g

High Channel (Hor)

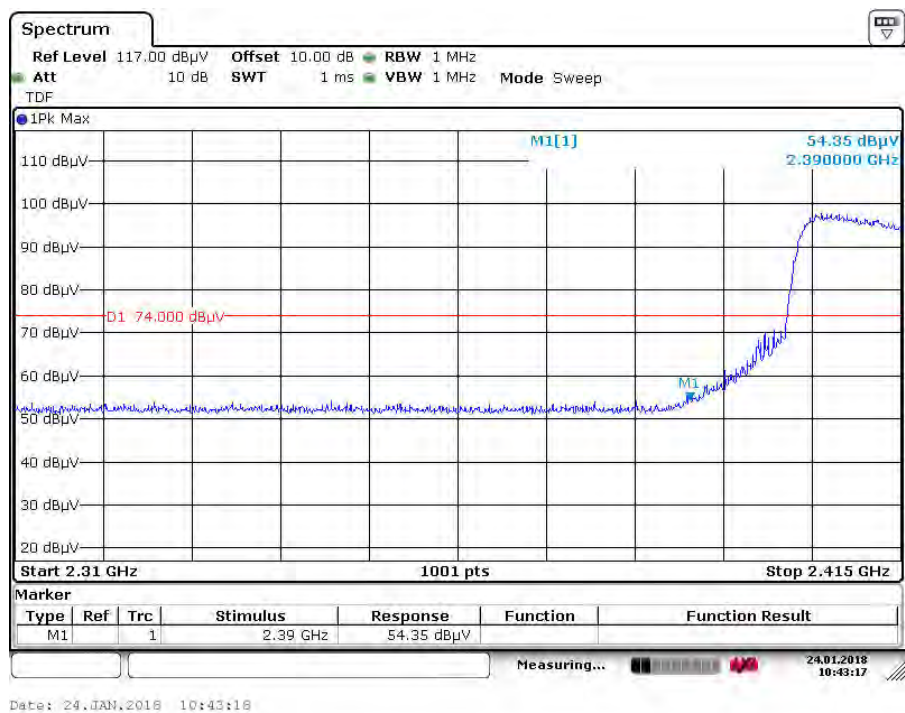
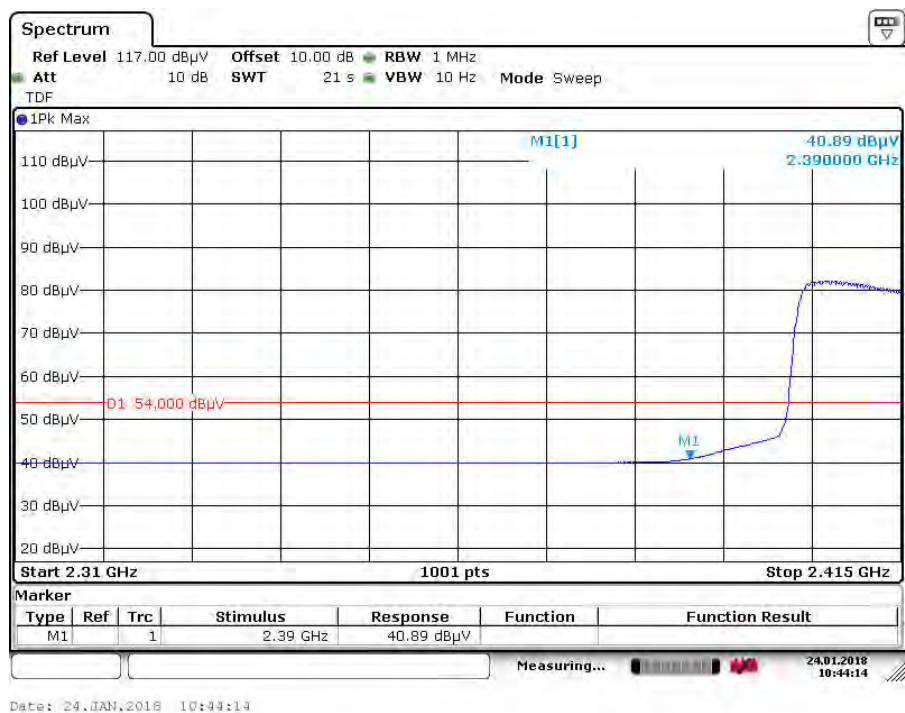


High Channel (Ver)

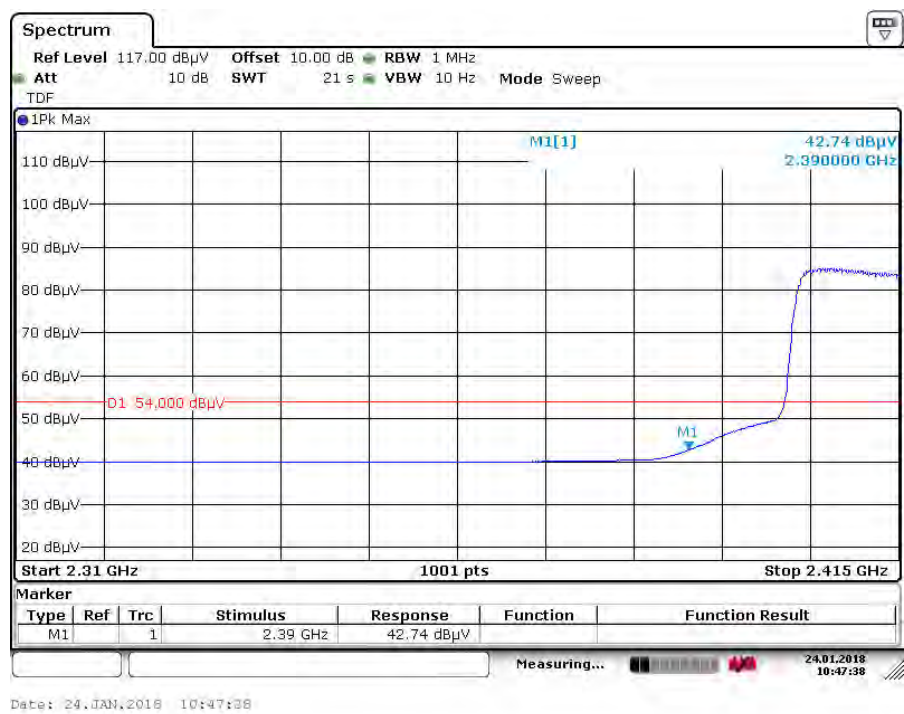


Radiated Bandedge 11n

Low Channel (Hor)

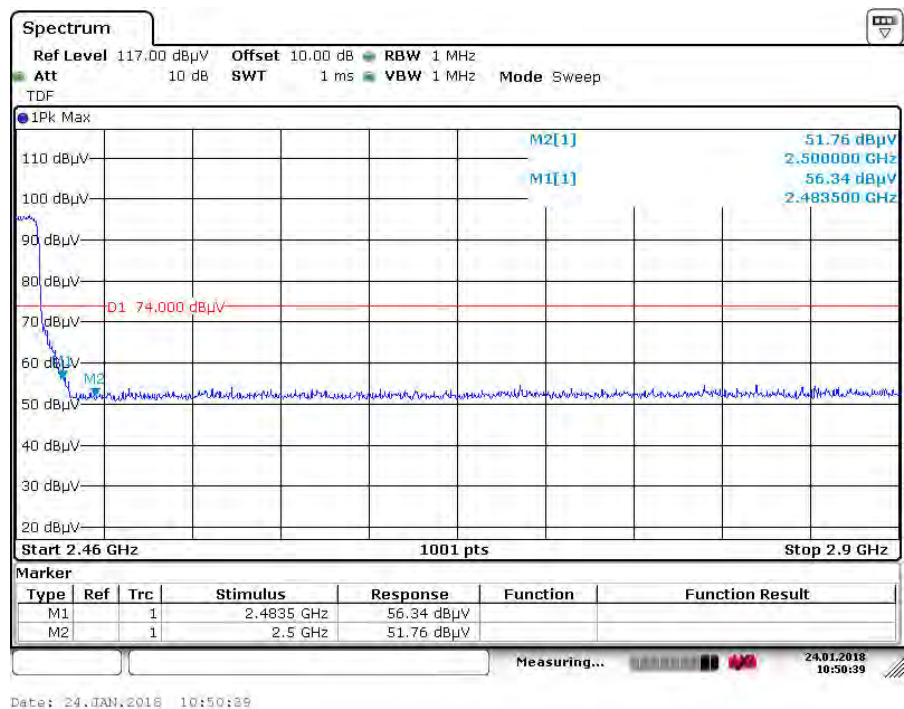
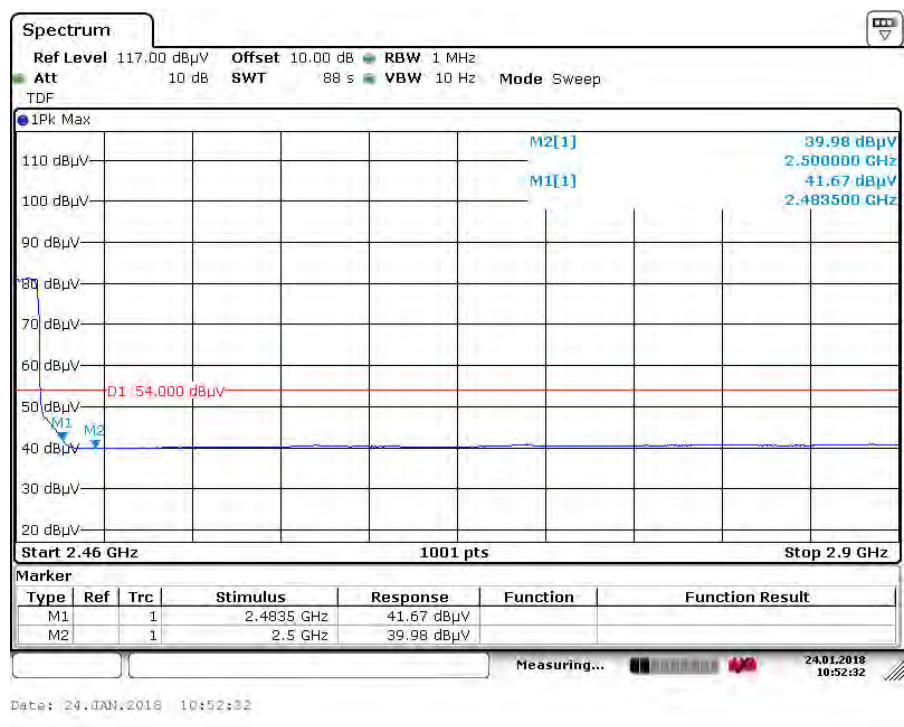


Low Channel (Ver)

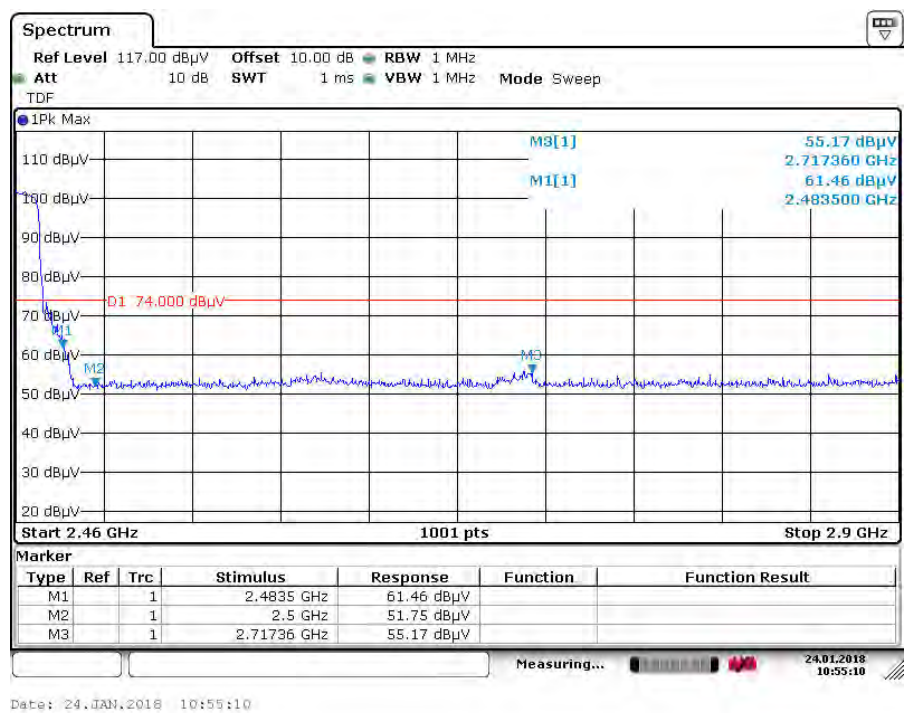
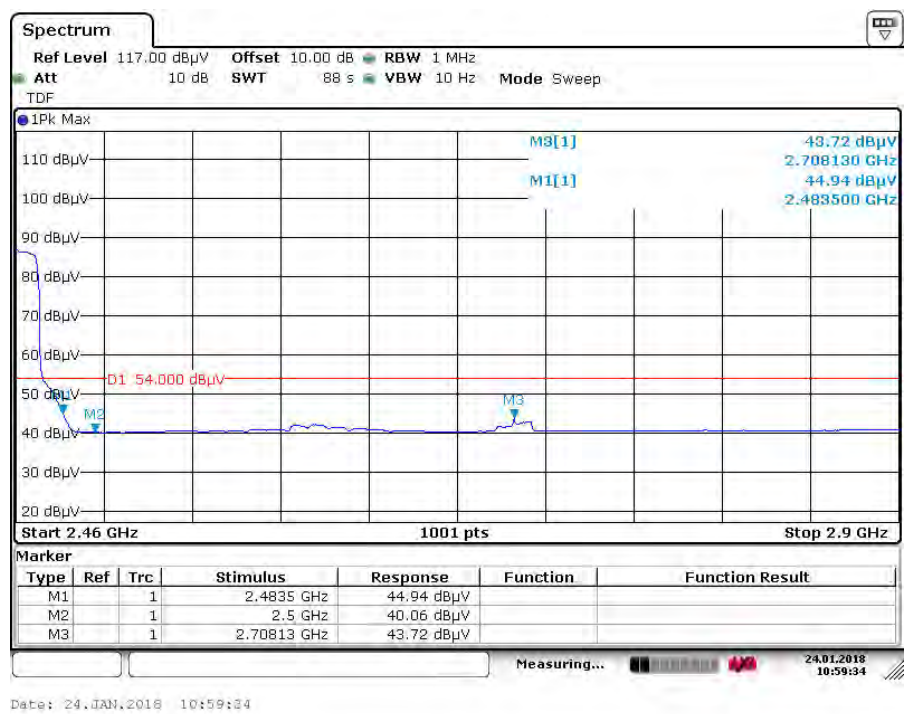


Radiated Bandedge 11n

High Channel (Hor)



High Channel (Ver)



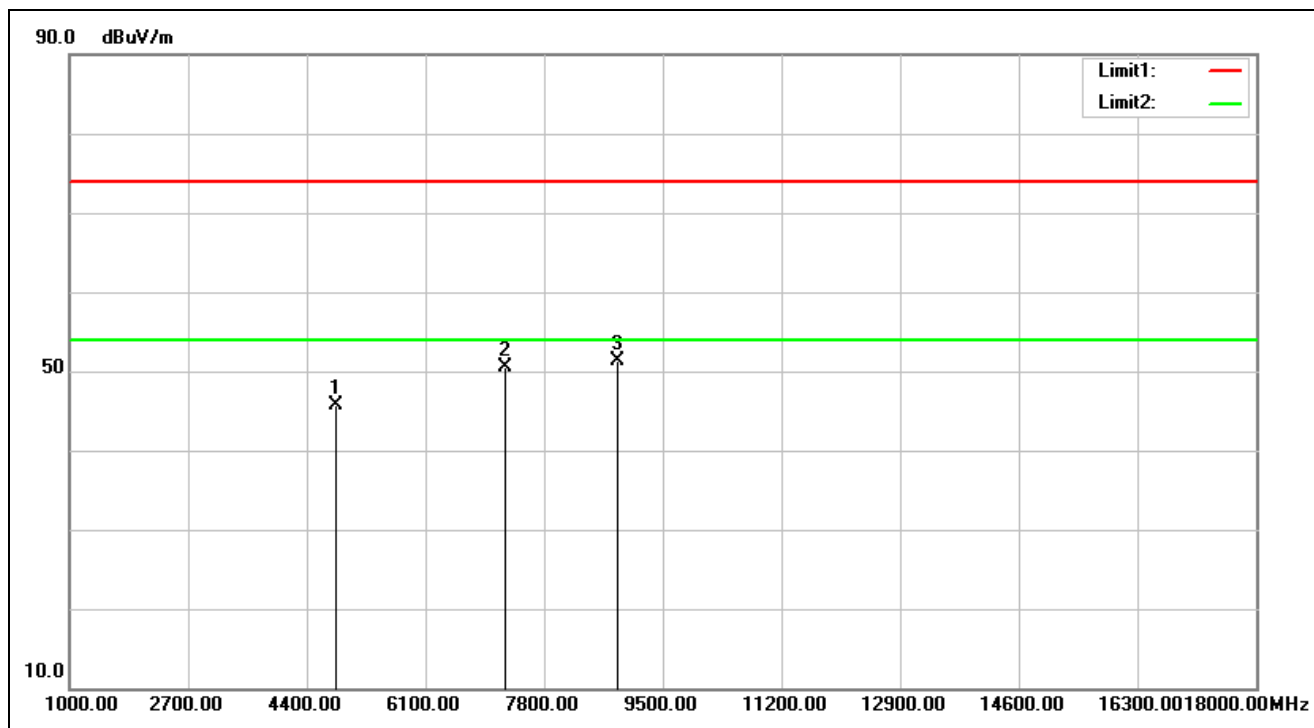
Spurious Emissions, TX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

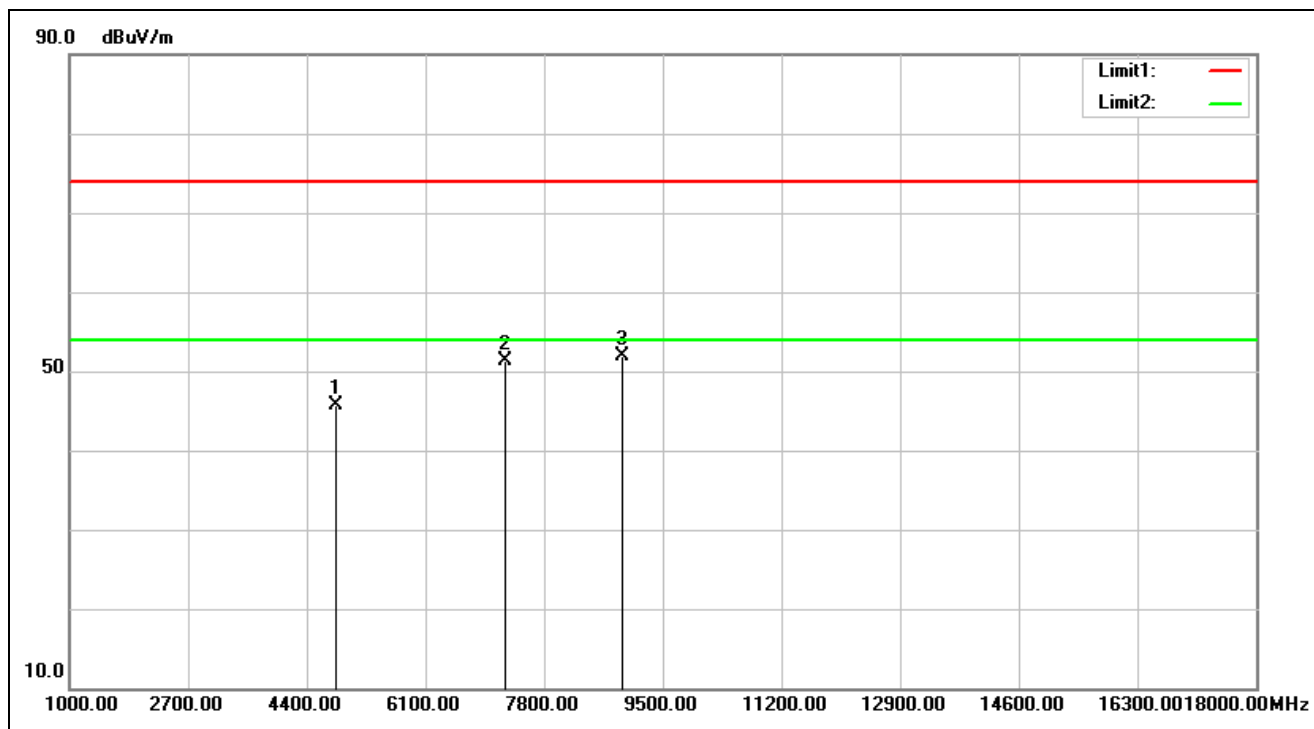
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



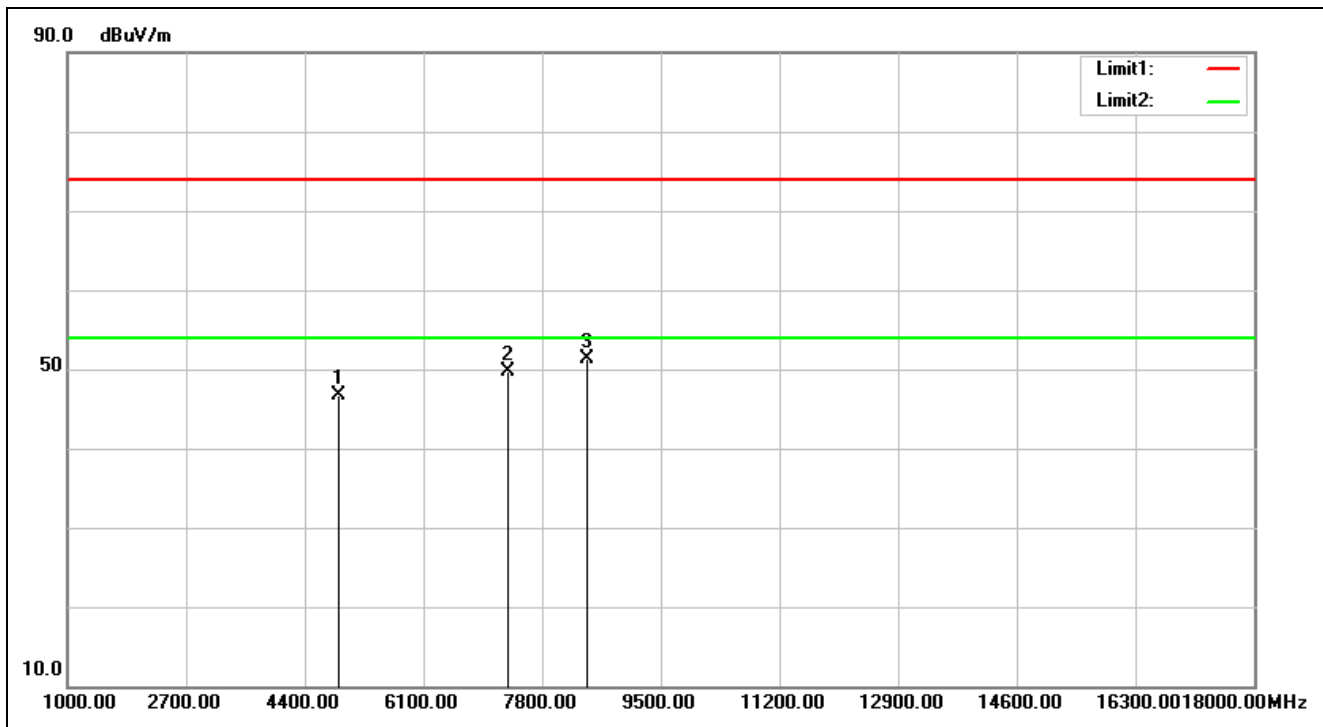
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 11:19:41
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	48.31	45.65	74.00	-28.35	peak		0	
2	7236.000	5.32	45.10	50.42	74.00	-23.58	peak		0	
3	8854.000	6.42	44.90	51.32	74.00	-22.68	peak		0	



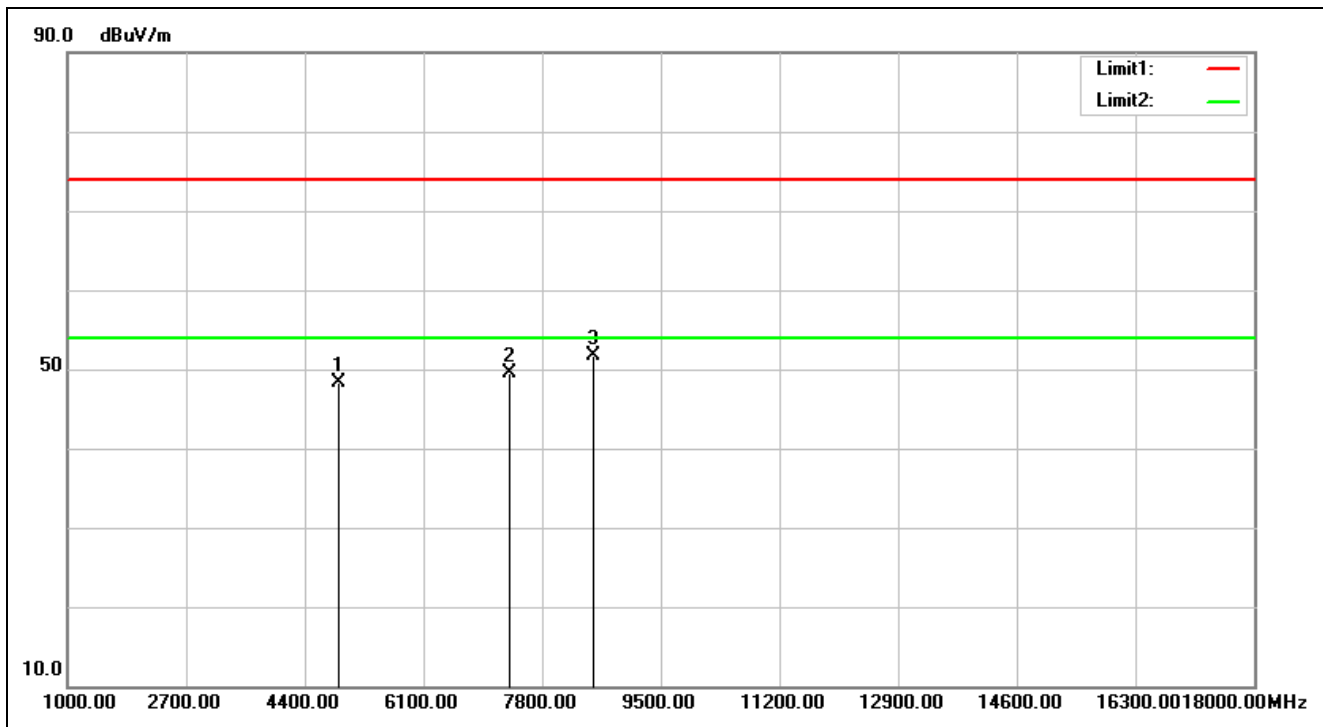
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 11:20:44
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	48.28	45.62	74.00	-28.38	peak			
2	7236.000	5.32	46.00	51.32	74.00	-22.68	peak			
3	8922.000	6.42	45.50	51.92	74.00	-22.08	peak	100	230	



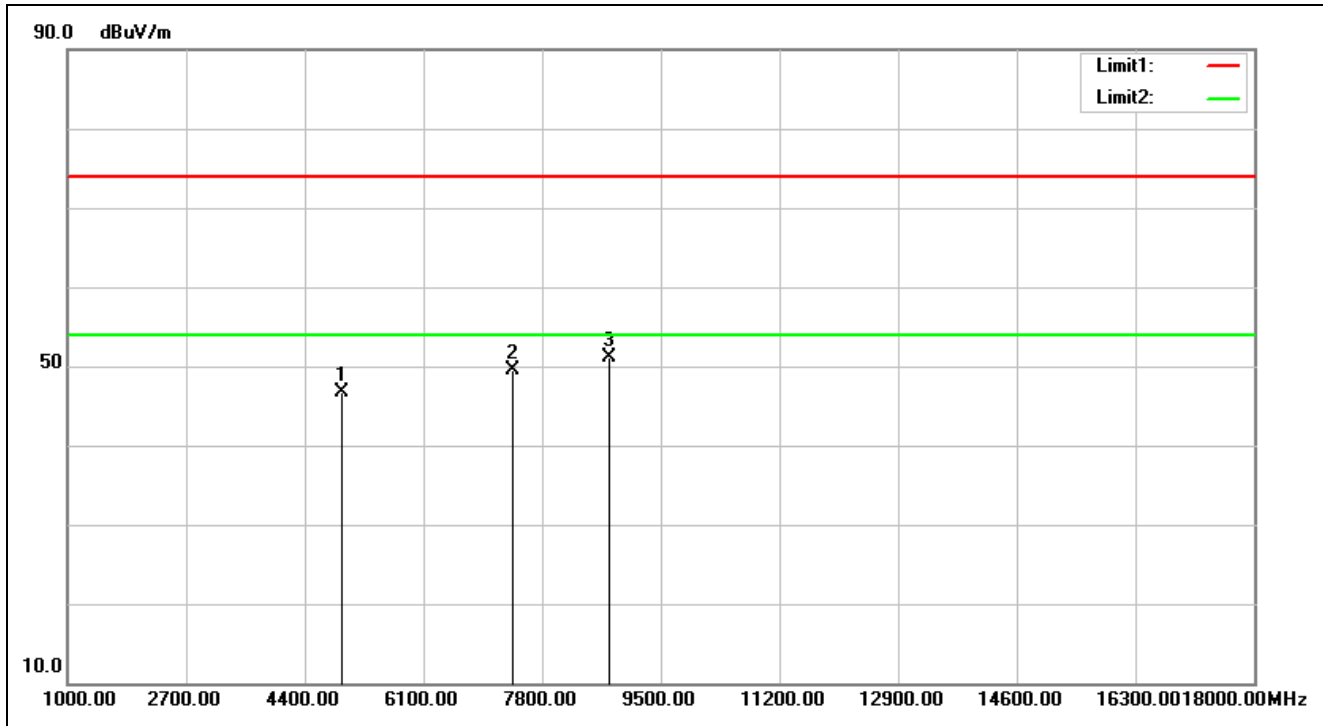
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 11:23:38
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	49.22	46.69	74.00	-27.31	peak			
2	7311.000	5.52	44.09	49.61	74.00	-24.39	peak			
3	8446.000	6.31	45.05	51.36	74.00	-22.64	peak			



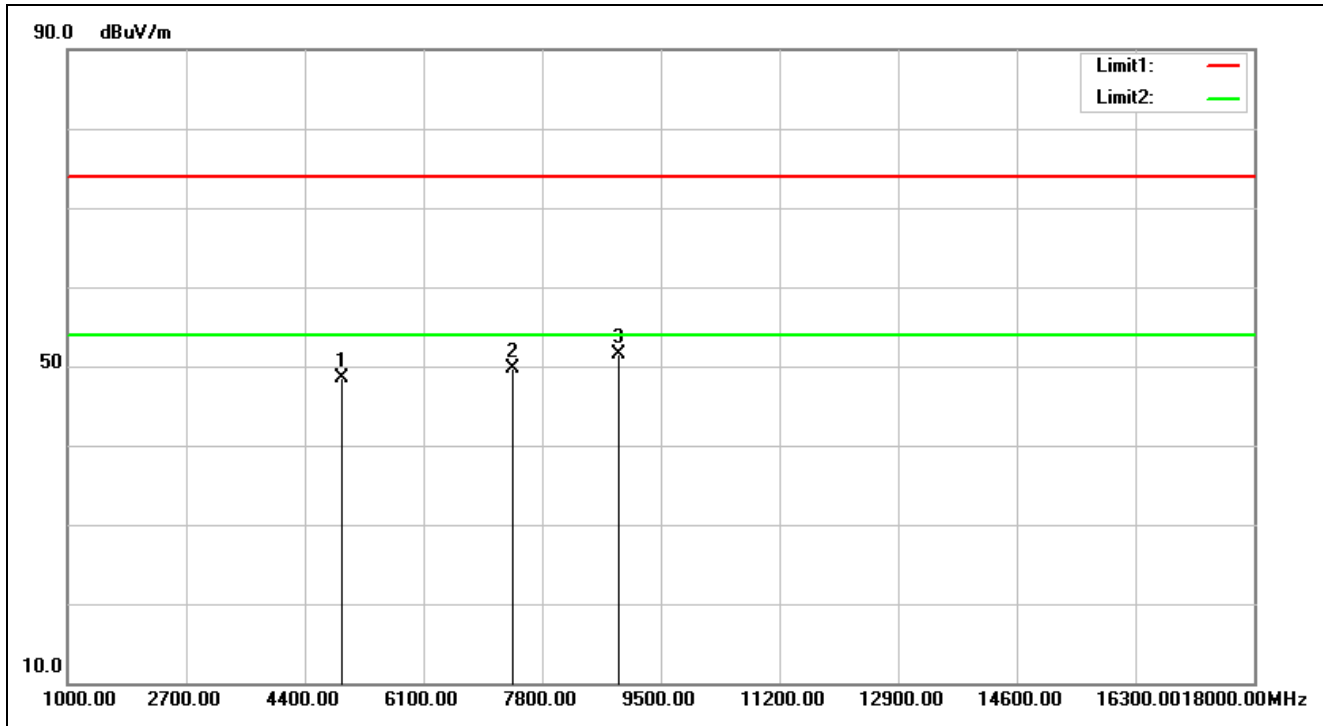
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 11:24:41
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	50.82	48.29	74.00	-25.71	peak			
2	7311.000	5.52	43.98	49.50	74.00	-24.50	peak			
3	8531.000	6.38	45.29	51.67	74.00	-22.33	peak	100	359	



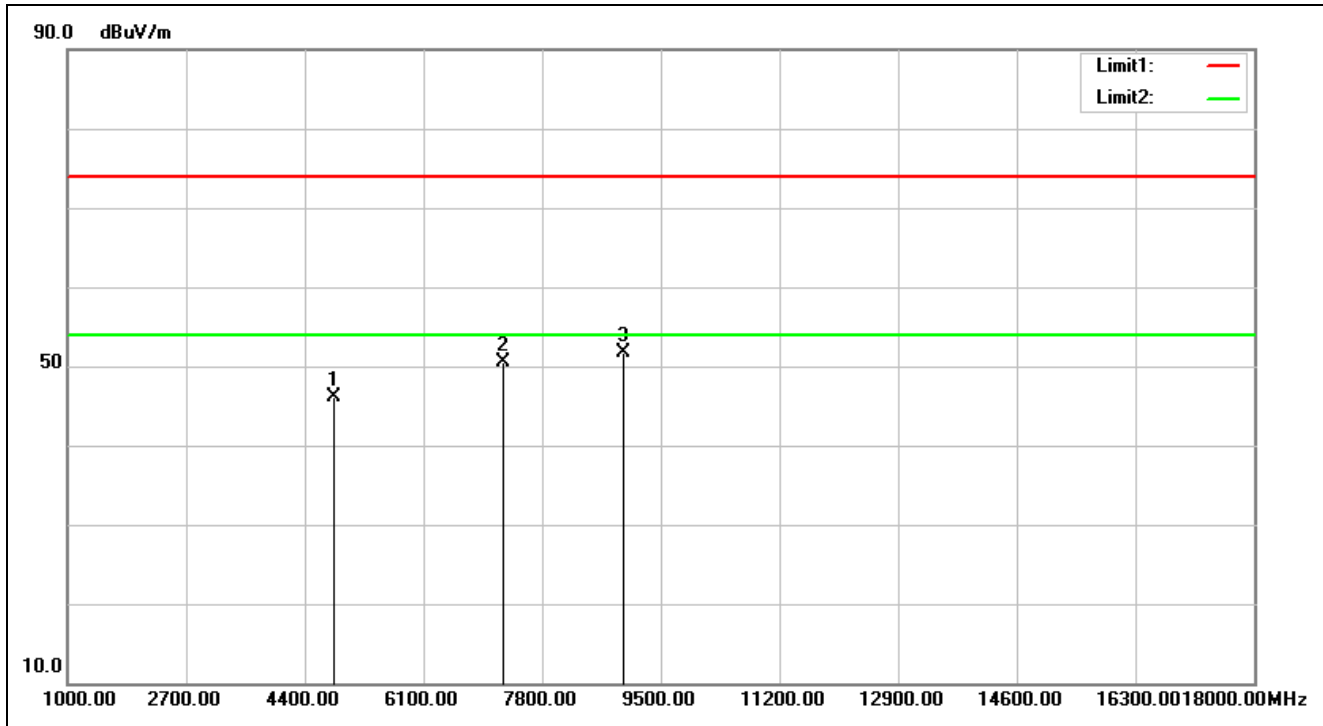
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 11:27:02
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	49.19	46.80	74.00	-27.20	peak			
2	7386.000	5.70	43.75	49.45	74.00	-24.55	peak			
3	8752.000	6.41	44.76	51.17	74.00	-22.83	peak			



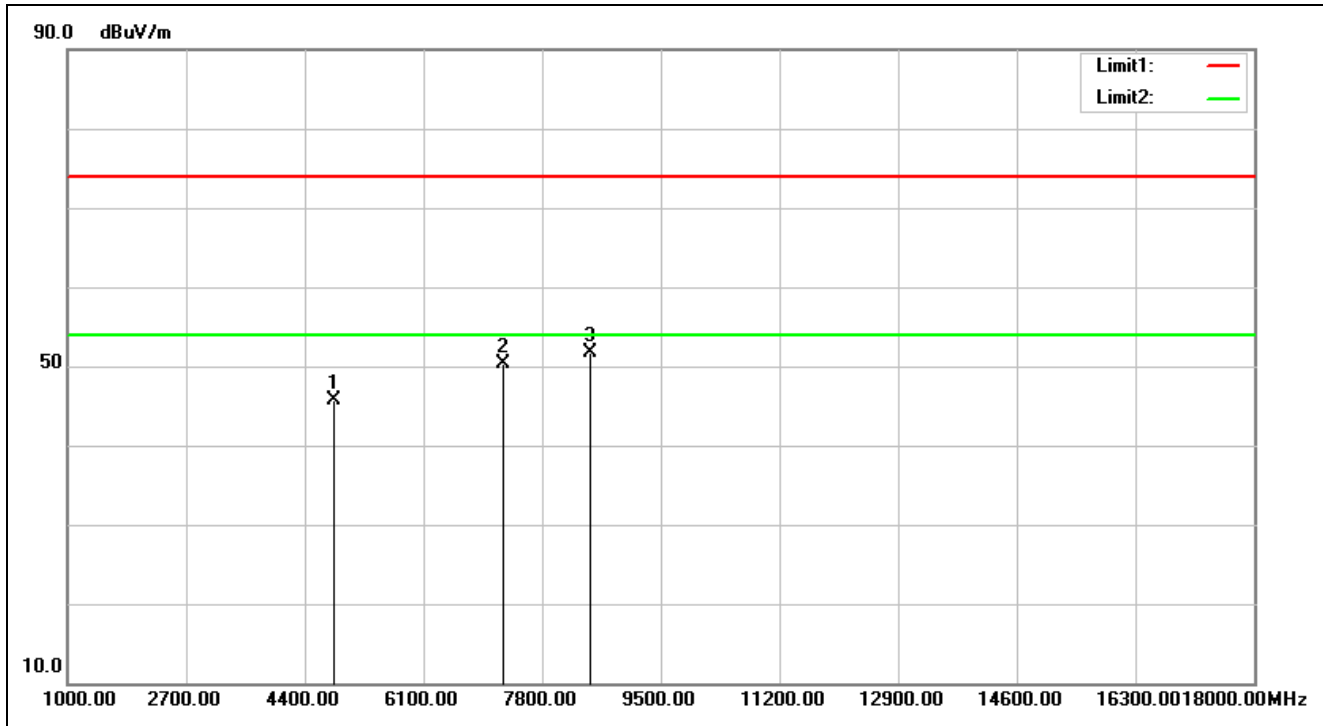
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 11:28:04
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	50.87	48.48	74.00	-25.52	peak			
2	7386.000	5.70	44.05	49.75	74.00	-24.25	peak			
3	8905.000	6.42	45.16	51.58	74.00	-22.42	peak	100	3	



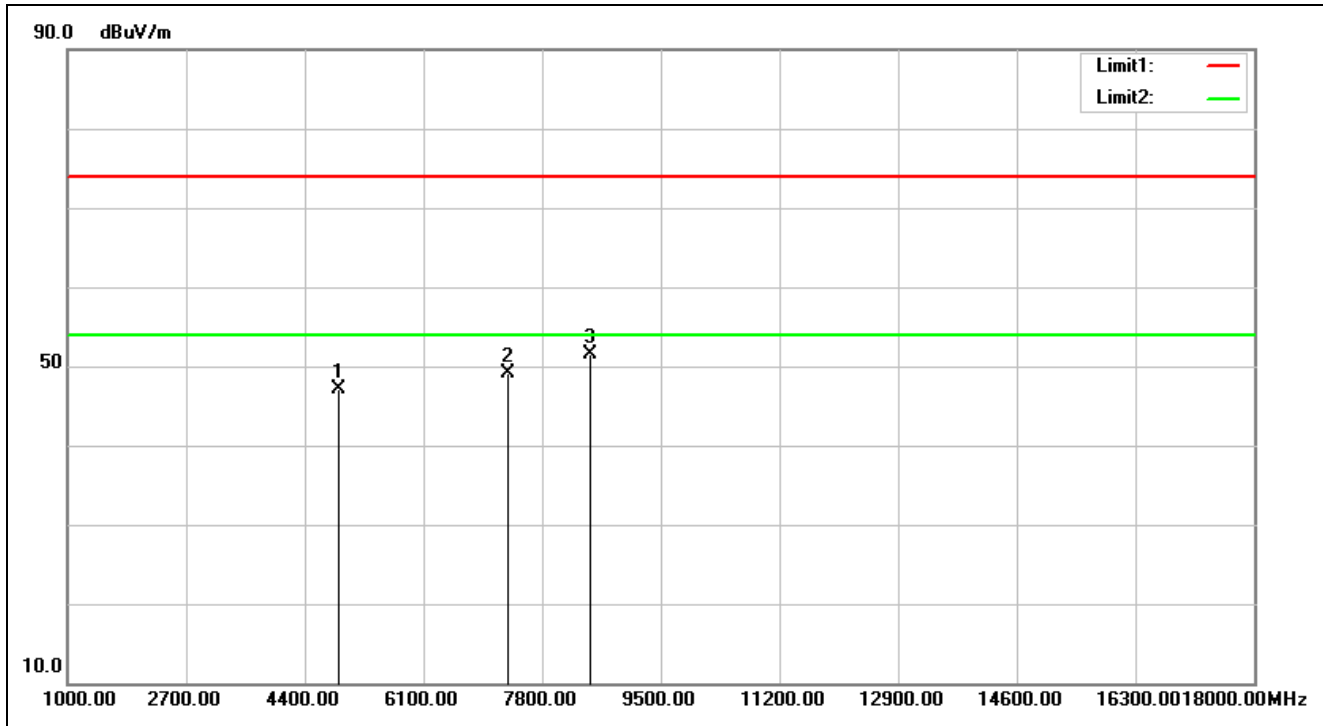
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 11:31:49
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	48.69	46.03	74.00	-27.97	peak			
2	7236.000	5.32	45.17	50.49	74.00	-23.51	peak			
3	8956.000	6.43	45.29	51.72	74.00	-22.28	peak			



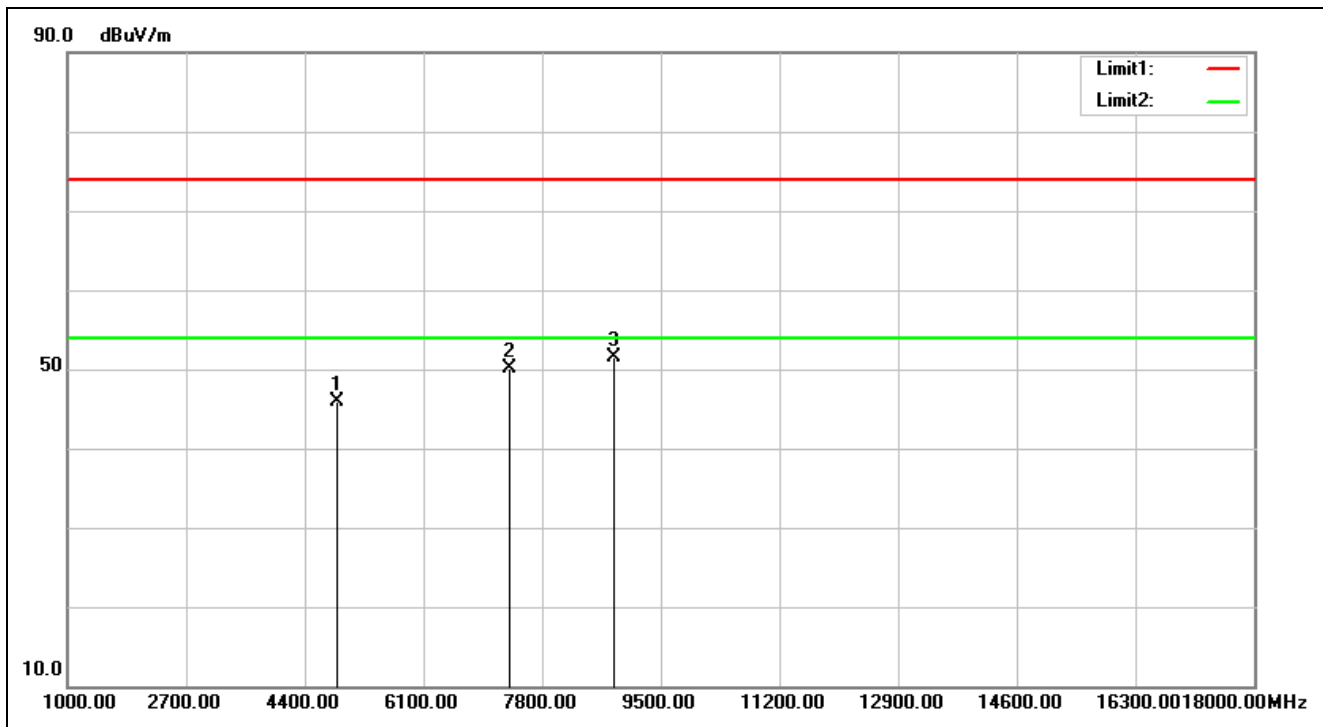
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 11:32:52
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	48.45	45.79	74.00	-28.21	peak			
2	7236.000	5.32	44.98	50.30	74.00	-23.70	peak			
3	8480.000	6.35	45.43	51.78	74.00	-22.22	peak	100	132	



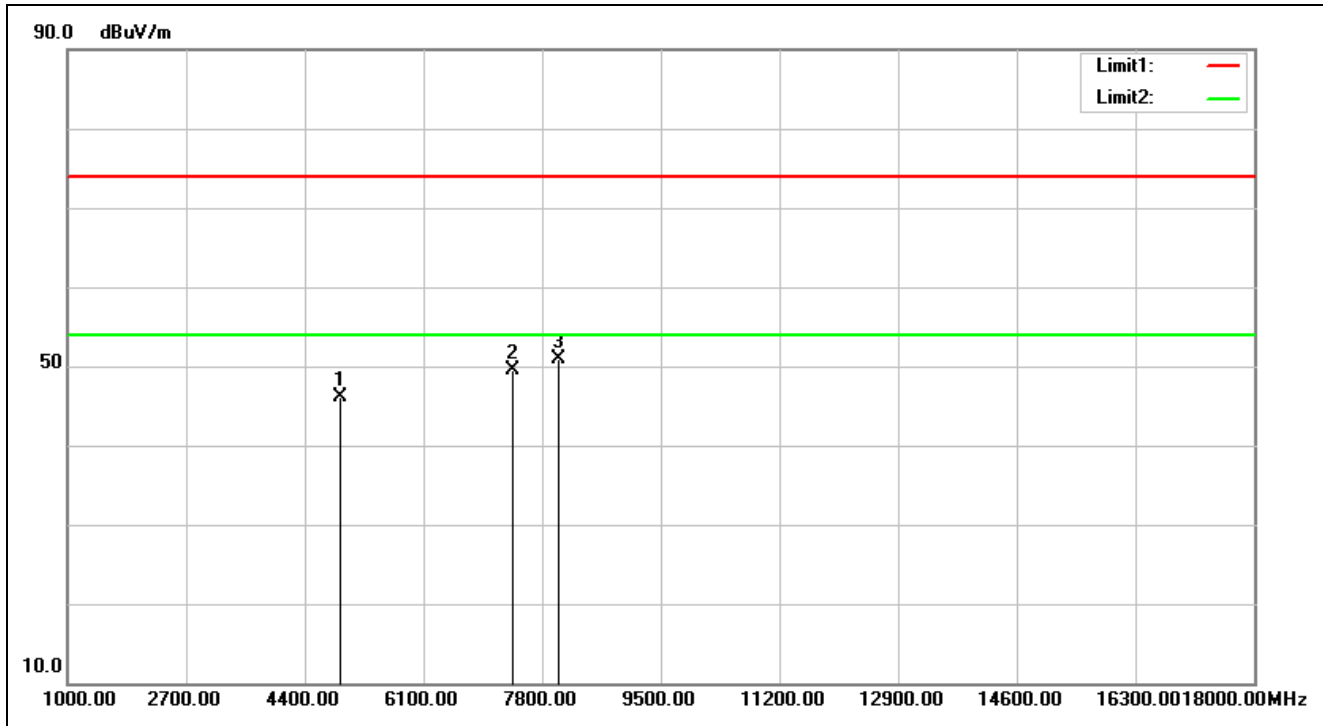
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 11:36:19
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	49.69	47.16	74.00	-26.84	peak			
2	7311.000	5.52	43.56	49.08	74.00	-24.92	peak			
3	8480.000	6.35	45.10	51.45	74.00	-22.55	peak	100	154	



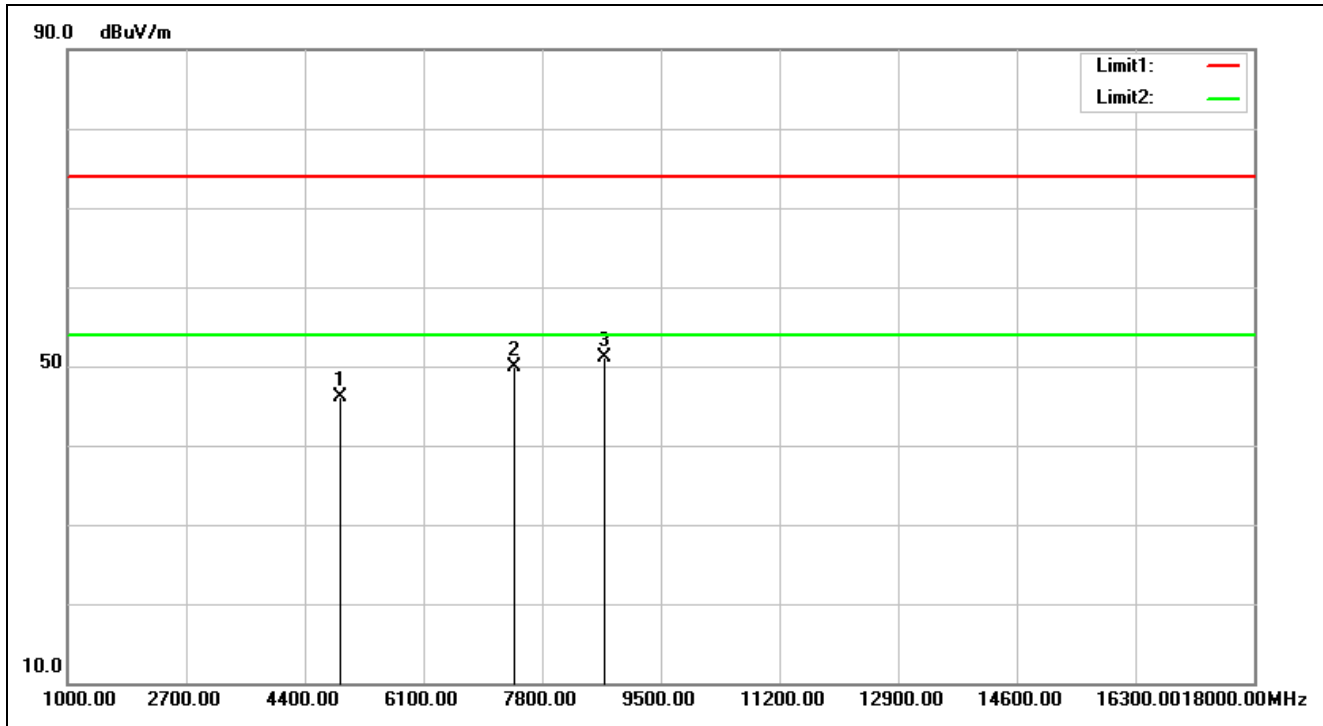
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 11:35:16
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	48.41	45.88	74.00	-28.12	peak			
2	7311.000	5.52	44.57	50.09	74.00	-23.91	peak			
3	8820.000	6.41	45.16	51.57	74.00	-22.43	peak			



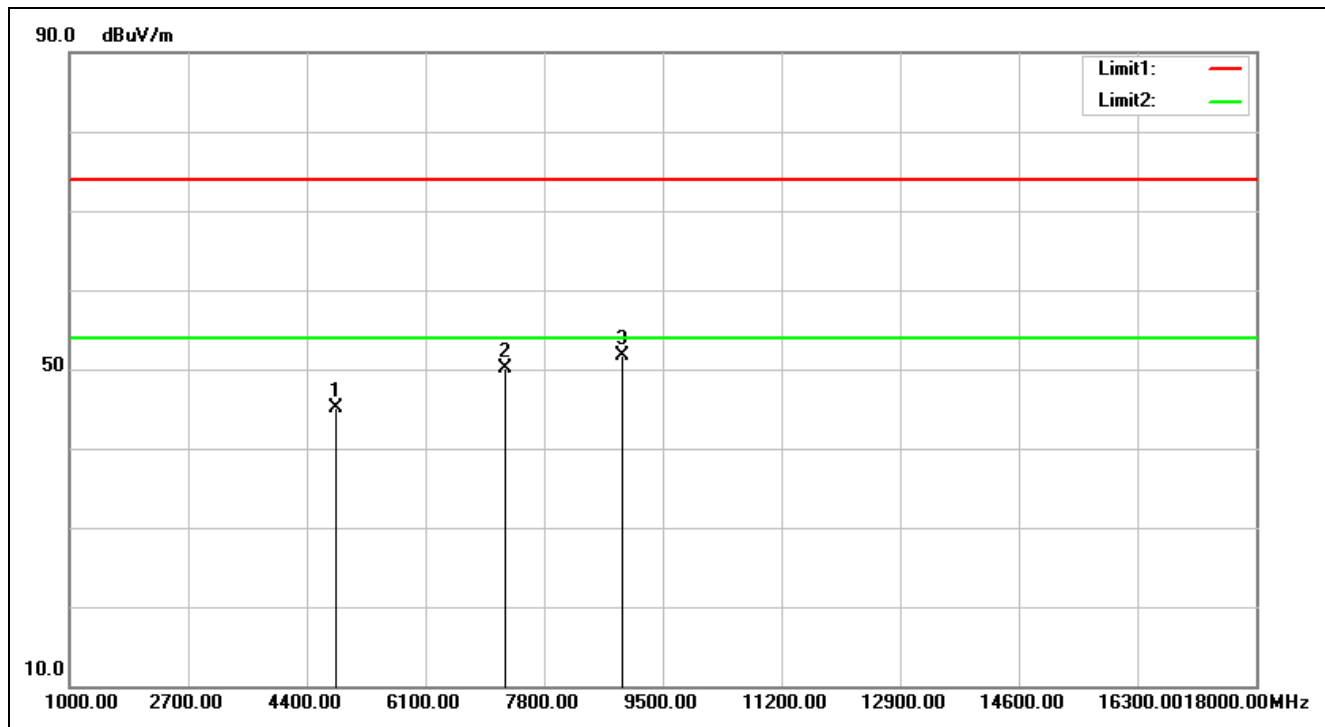
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 11:38:53
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	48.47	46.08	74.00	-27.92	peak			
2	7386.000	5.70	43.76	49.46	74.00	-24.54	peak			
3	8038.000	5.86	45.12	50.98	74.00	-23.02	peak			



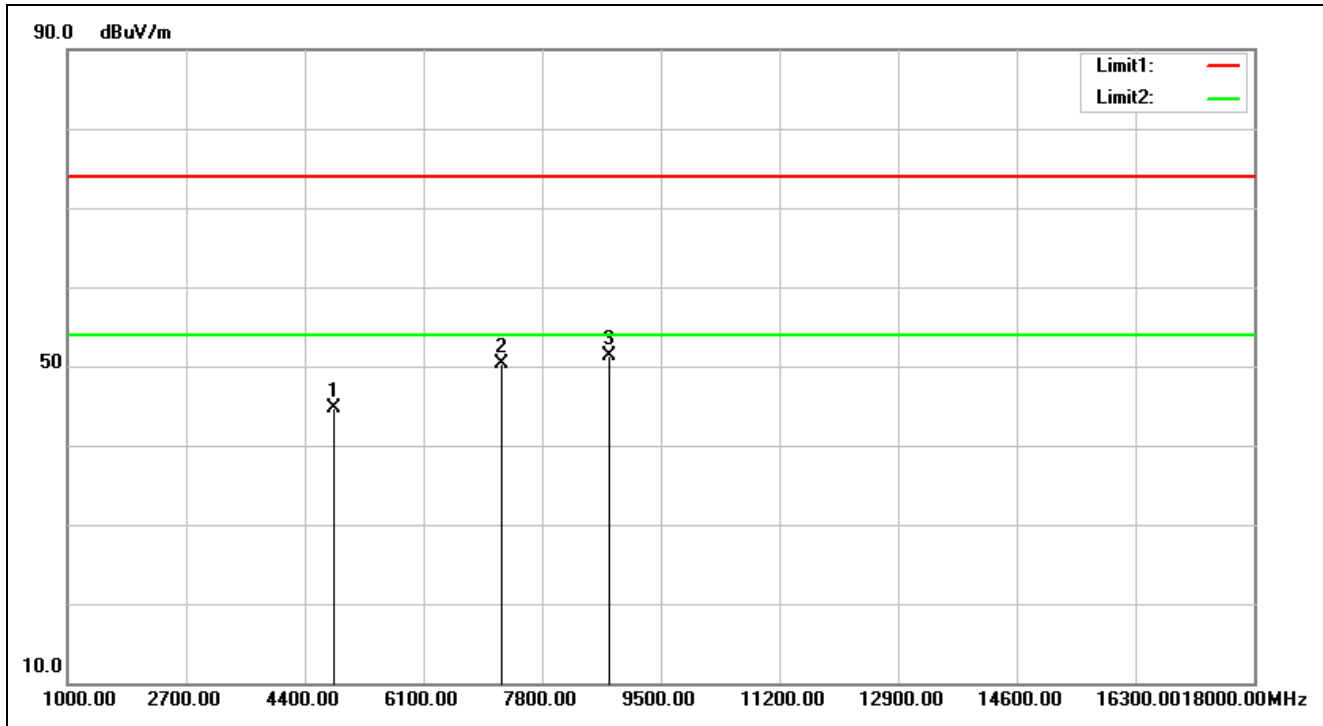
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Test item:	Radiation Emission	Test Time:	2018/1/24 11:39:56
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	48.57	46.18	74.00	-27.82	peak			
2	7386.000	5.70	44.23	49.93	74.00	-24.07	peak			
3	8684.000	6.40	44.80	51.20	74.00	-22.80	peak	100	301	



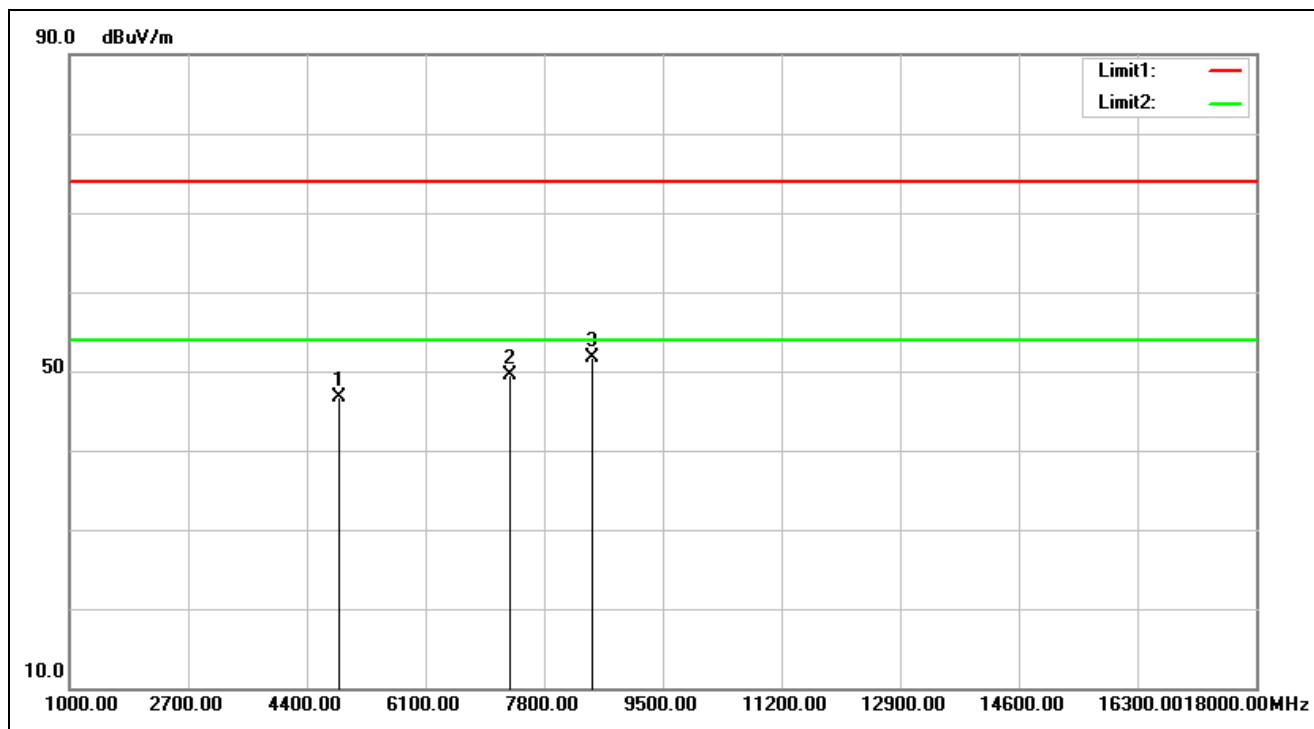
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Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	47.82	45.16	74.00	-28.84	peak			
2	7236.000	5.32	44.85	50.17	74.00	-23.83	peak			
3	8922.000	6.42	45.30	51.72	74.00	-22.28	peak			



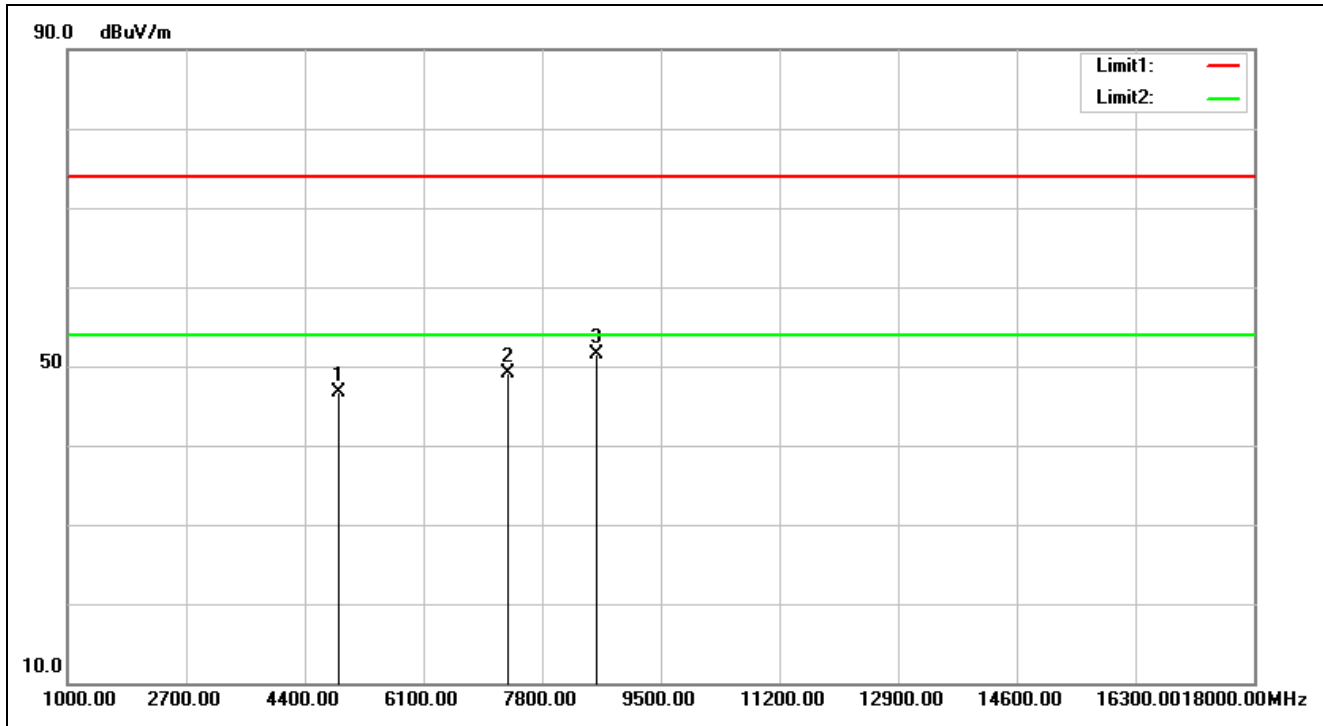
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Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4824.000	-2.66	47.38	44.72	74.00	-29.28	peak			
2	7236.000	5.32	45.06	50.38	74.00	-23.62	peak			
3	8752.000	6.41	44.83	51.24	74.00	-22.76	peak	100	25	



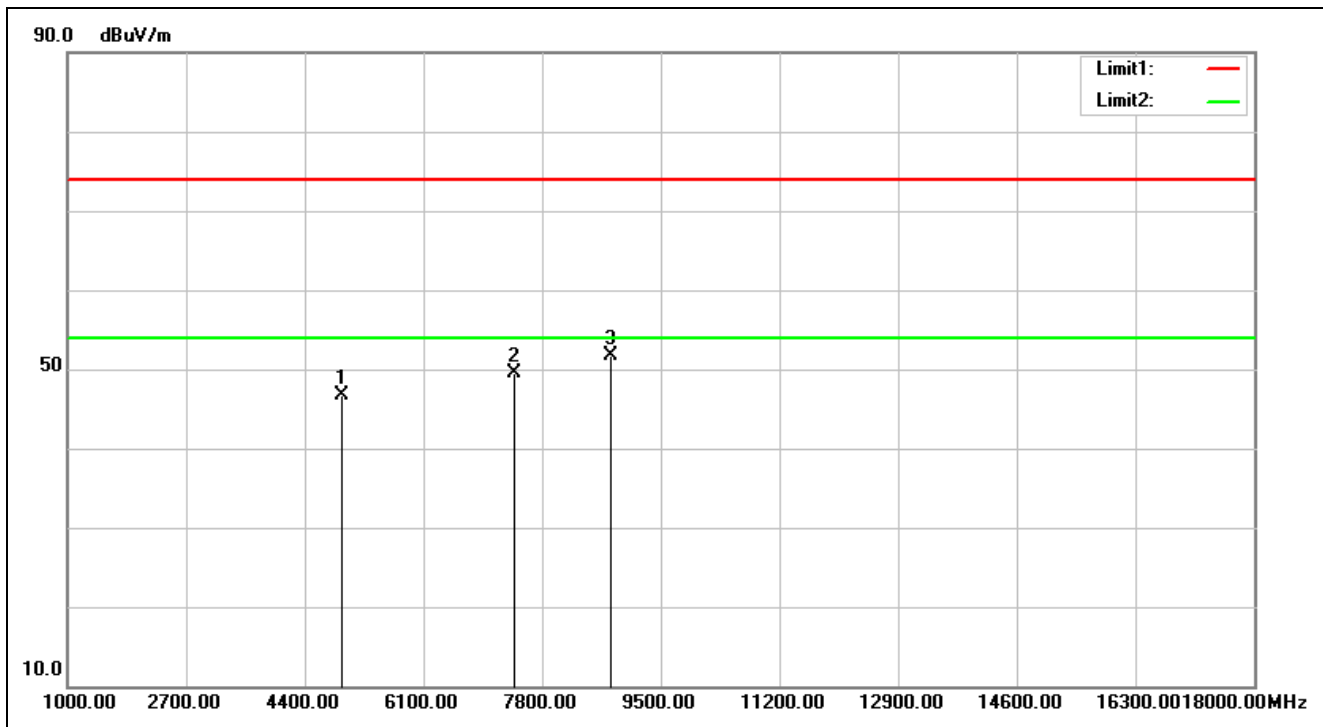
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 11:45:34
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	49.20	46.67	74.00	-27.33	peak			
2	7311.000	5.52	44.00	49.52	74.00	-24.48	peak			
3	8480.000	6.35	45.43	51.78	74.00	-22.22	peak			



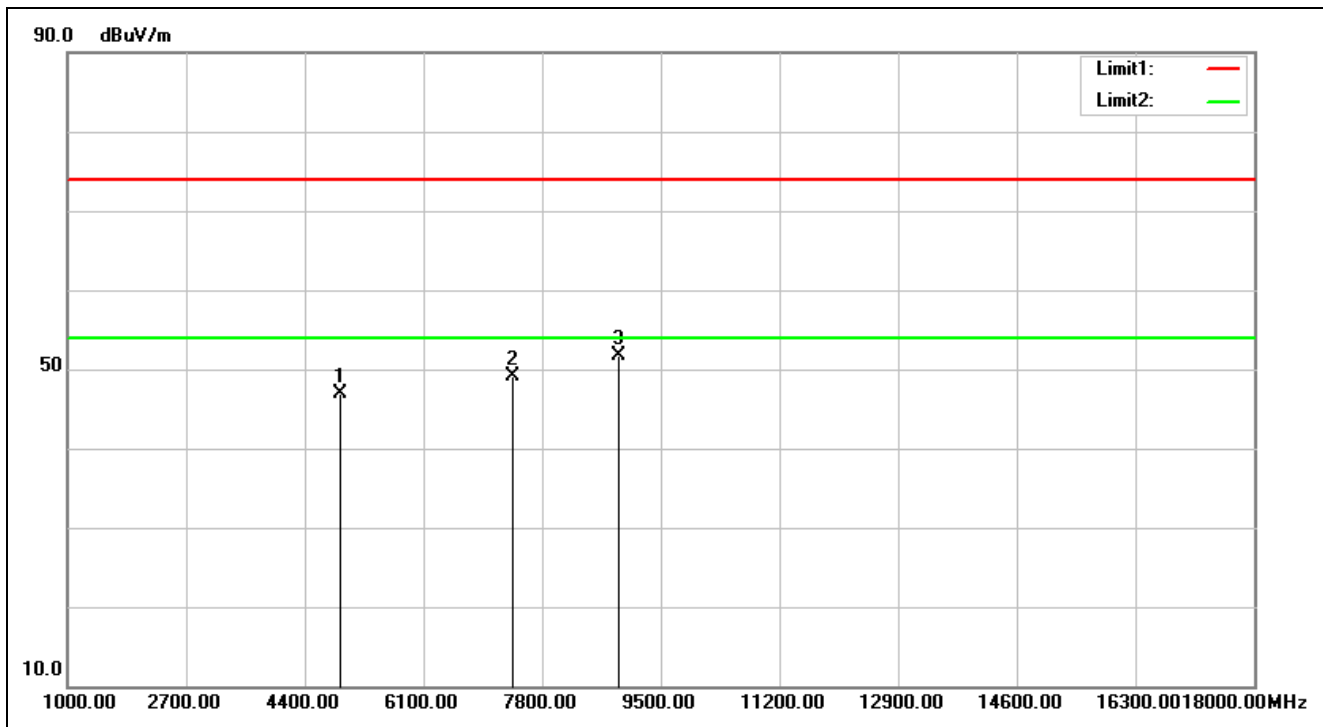
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 11:46:36
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	49.28	46.75	74.00	-27.25	peak			
2	7311.000	5.52	43.59	49.11	74.00	-24.89	peak			
3	8582.000	6.39	45.02	51.41	74.00	-22.59	peak			



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 11:49:48
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	49.01	46.62	74.00	-27.38	peak			
2	7386.000	5.70	43.83	49.53	74.00	-24.47	peak			
3	8786.000	6.42	45.21	51.63	74.00	-22.37	peak			



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 11:50:50
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4924.000	-2.39	49.31	46.92	74.00	-27.08	peak			
2	7386.000	5.70	43.34	49.04	74.00	-24.96	peak			
3	8905.000	6.42	45.32	51.74	74.00	-22.26	peak	100	157	

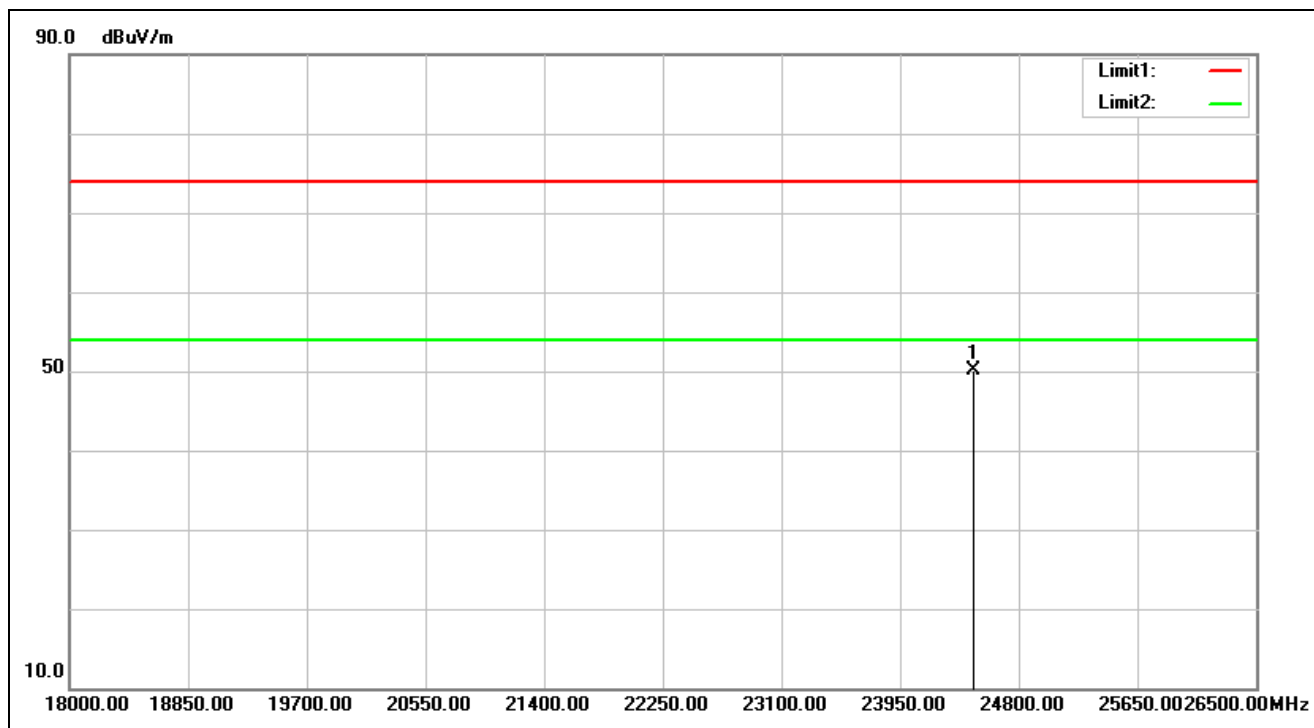
Spurious Emissions, TX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

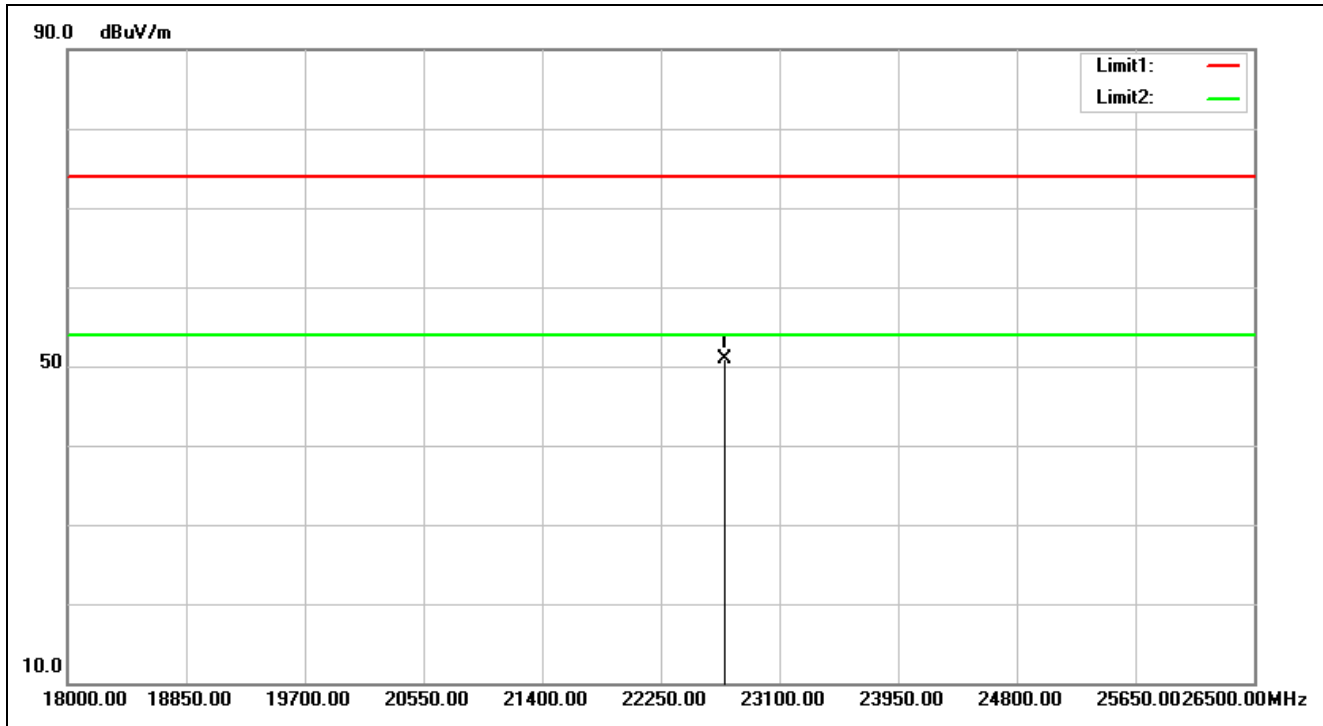
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



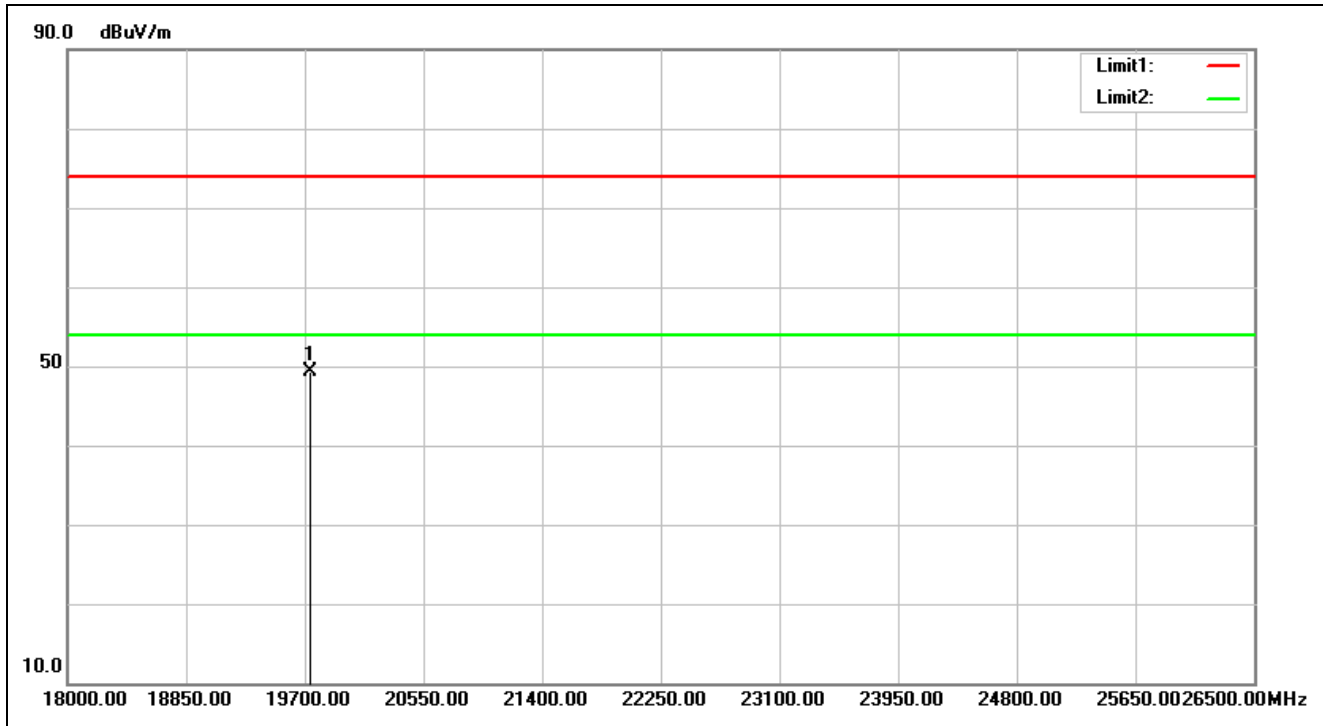
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Test item:	Radiation Emission	Test Time:	2018/1/24 13:23:25
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24477.000	32.58	17.54	50.12	74.00	-23.88	peak		0	



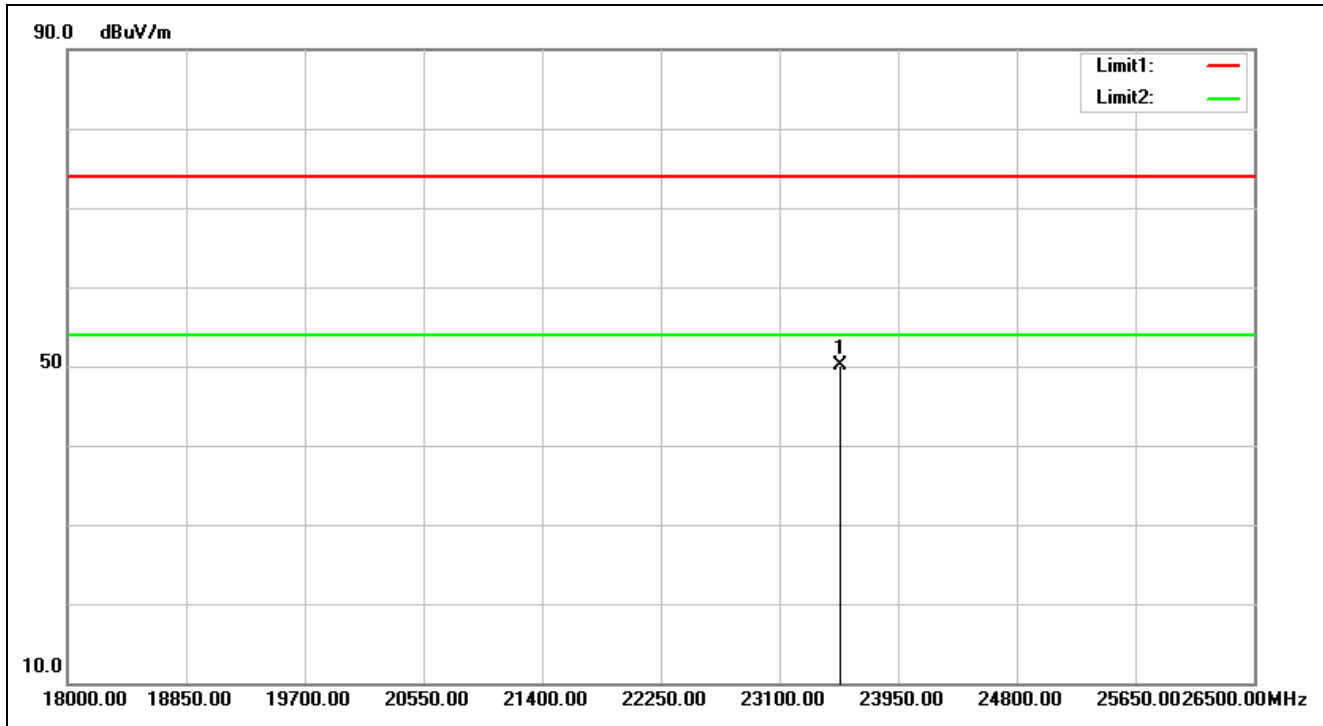
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:23:31
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22709.000	32.22	18.60	50.82	74.00	-23.18	peak			



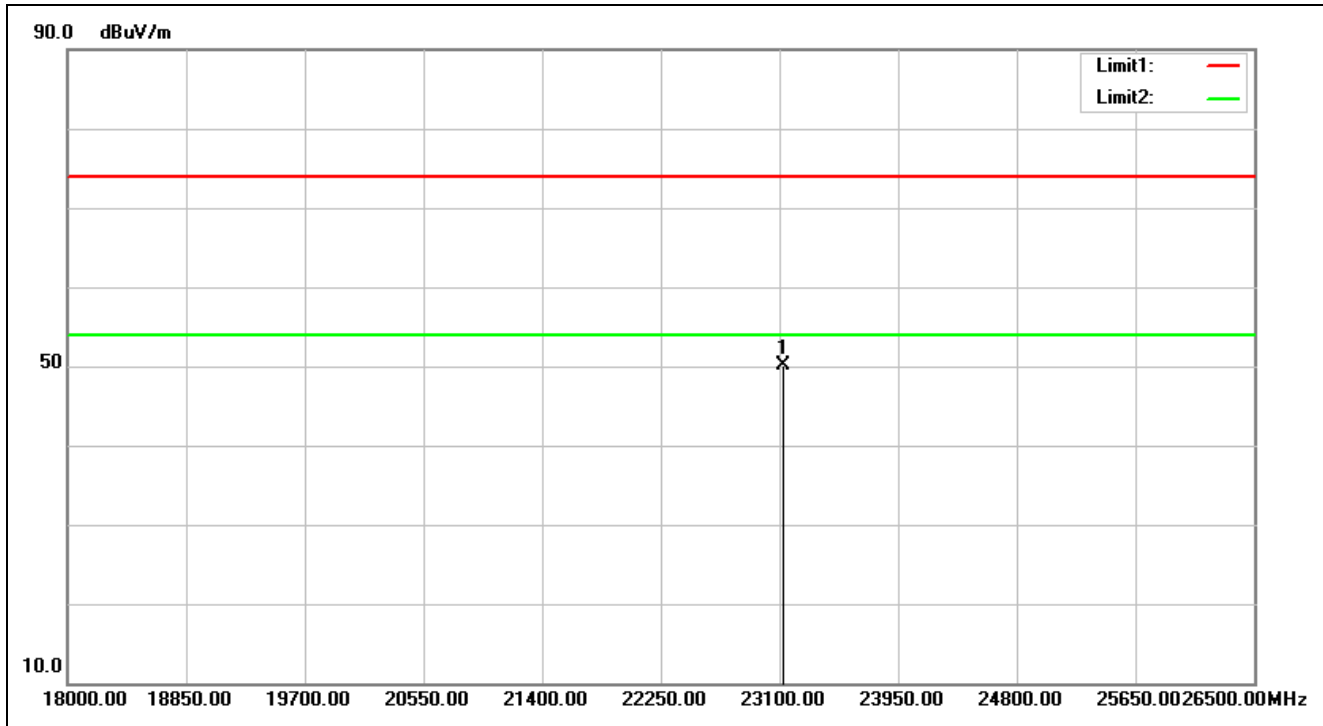
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:24:09
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	19734.000	30.38	18.98	49.36	74.00	-24.64	peak			



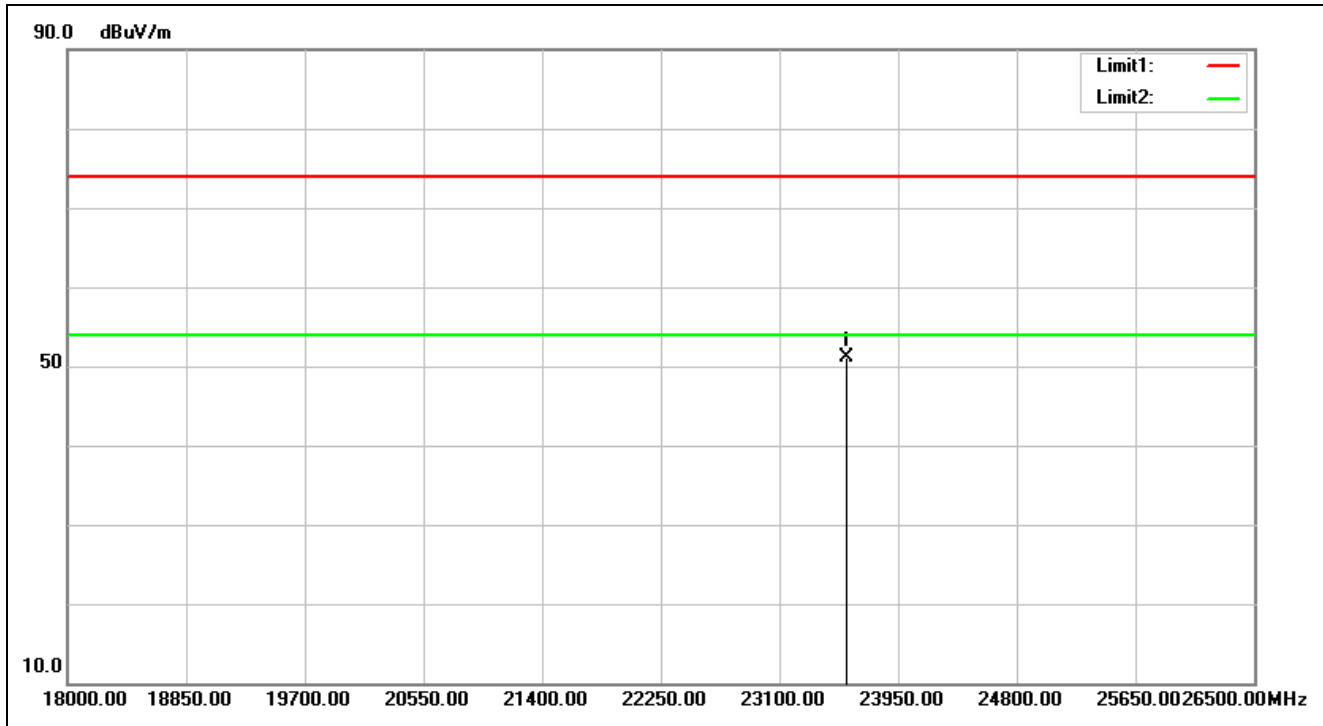
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:24:15
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23533.500	32.80	17.31	50.11	74.00	-23.89	peak			



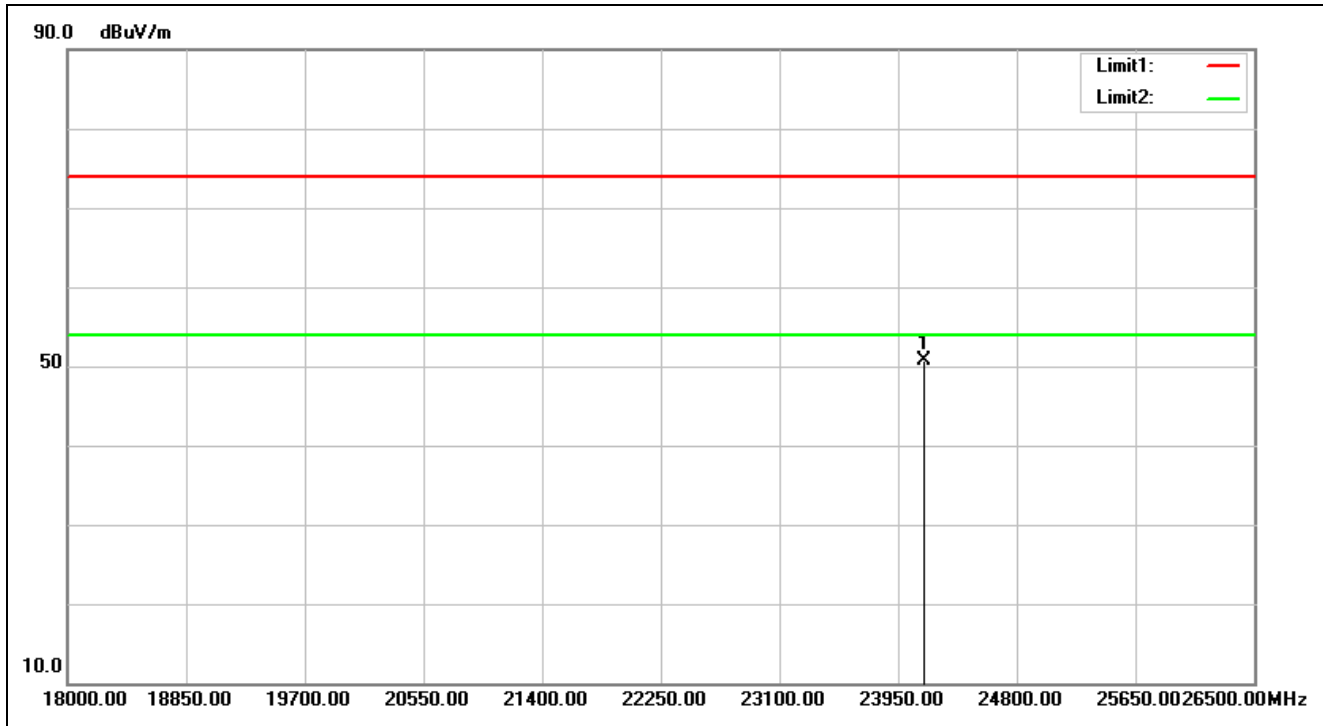
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:26:21
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23125.500	32.46	17.69	50.15	74.00	-23.85	peak			



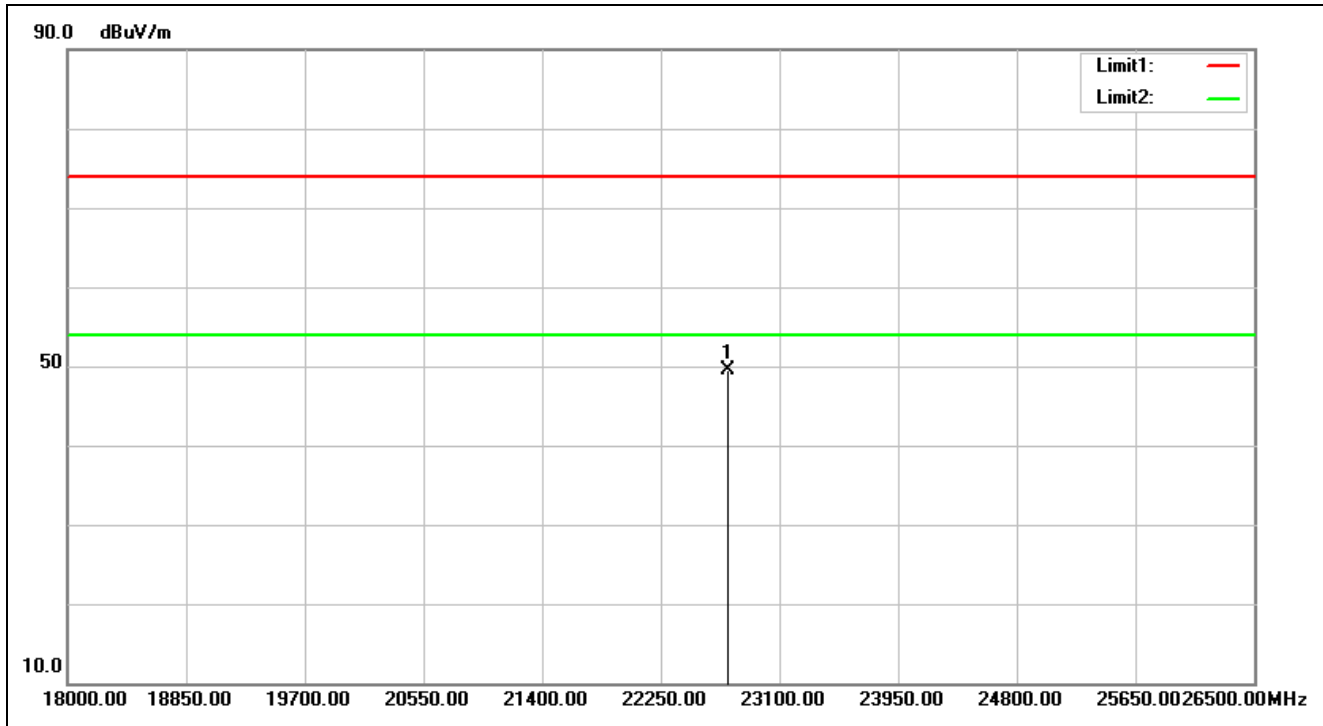
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Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:26:28
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23584.500	32.76	18.29	51.05	74.00	-22.95	peak			



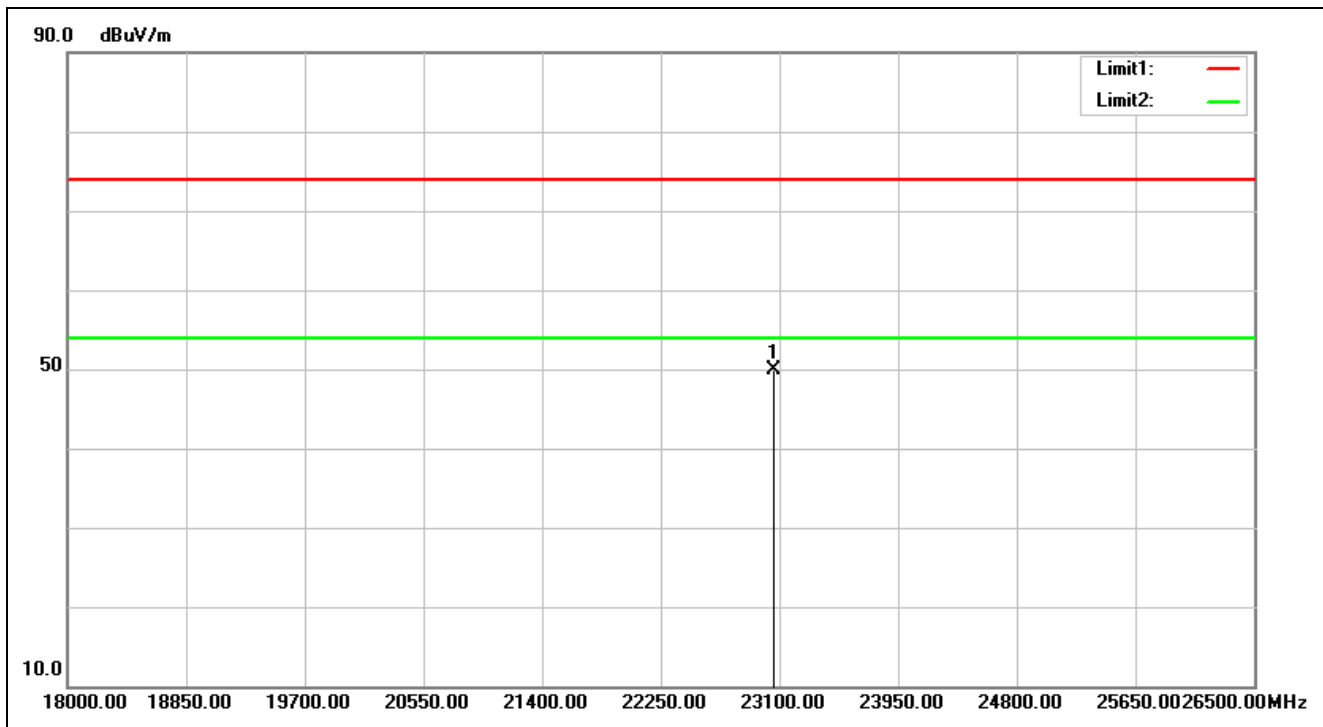
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:28:47
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24137.000	32.47	18.28	50.75	74.00	-23.25	peak			



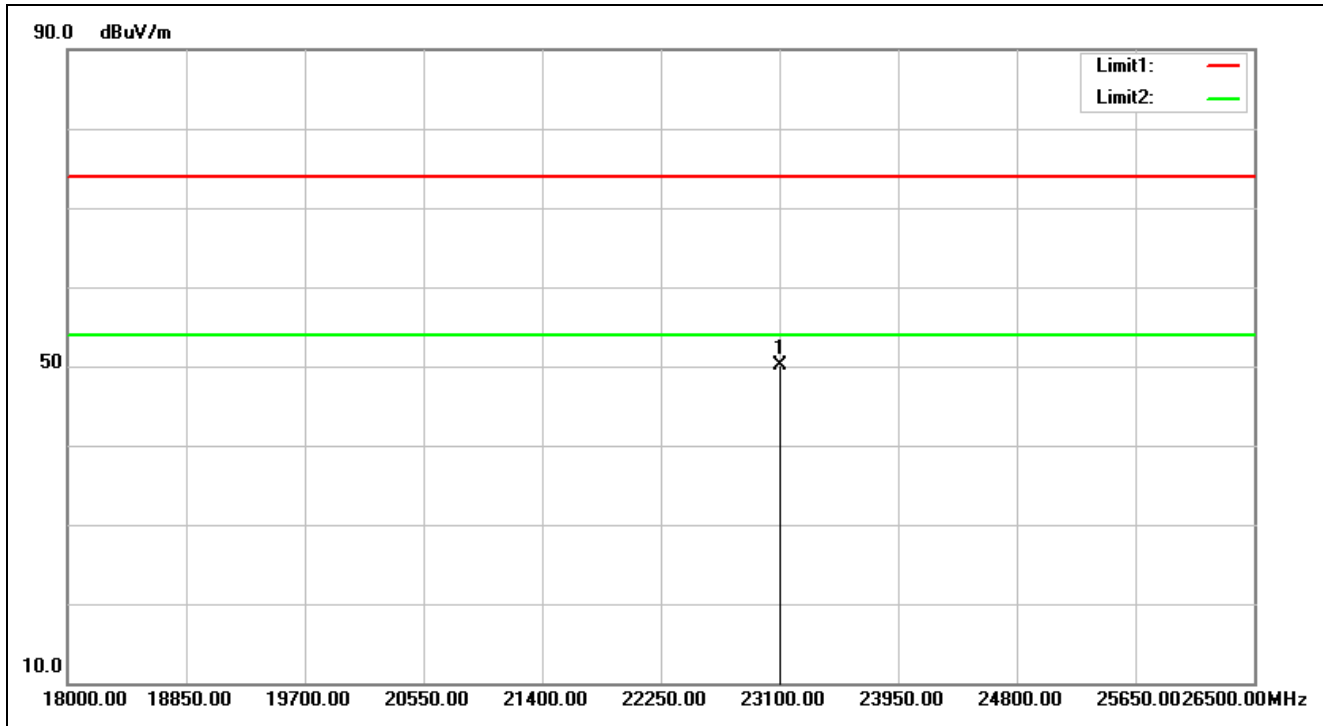
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:28:53
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22726.000	32.23	17.21	49.44	74.00	-24.56	peak			



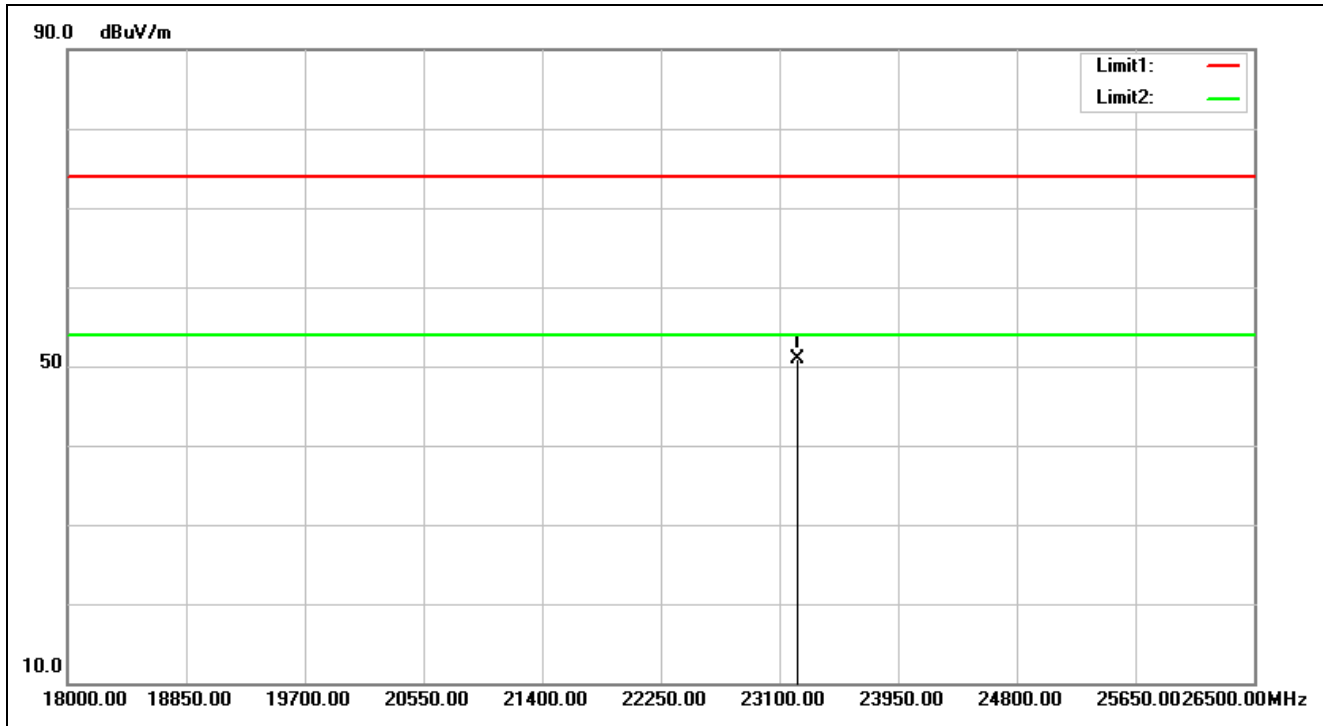
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:30:43
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23057.500	32.39	17.60	49.99	74.00	-24.01	peak			



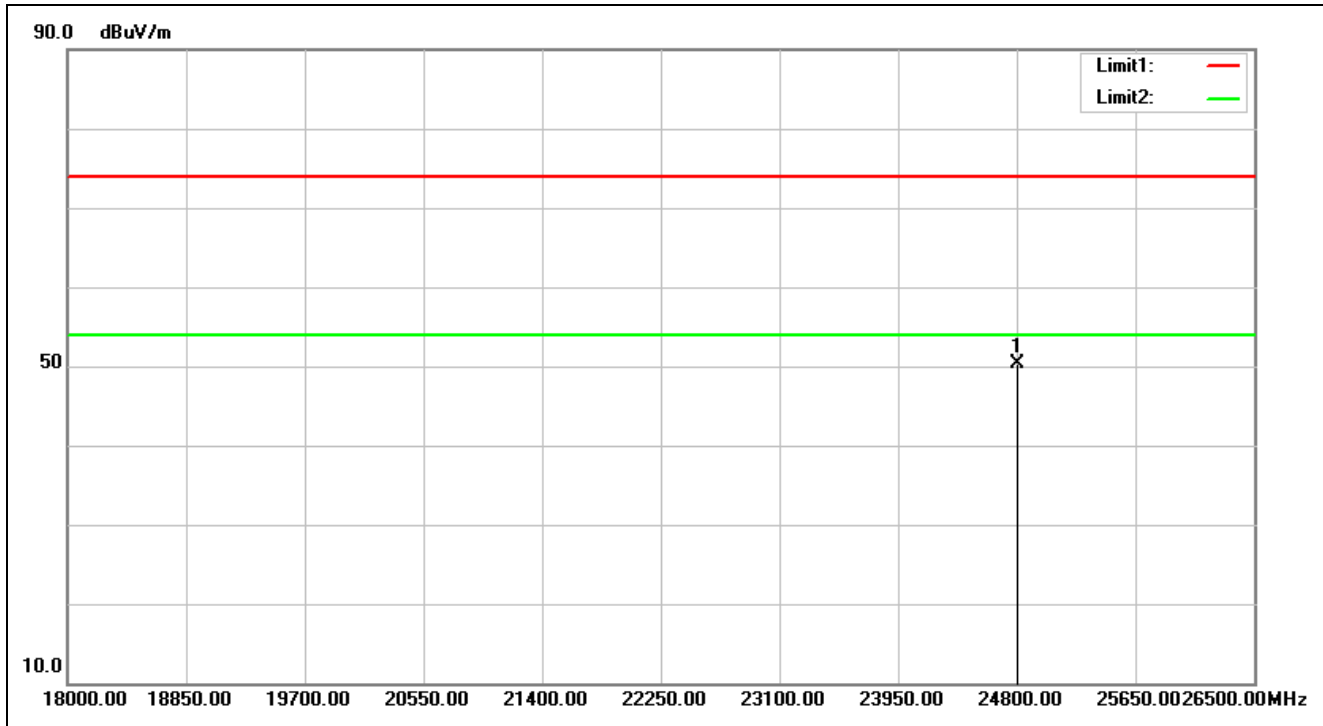
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:30:49
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23108.500	32.44	17.72	50.16	74.00	-23.84	peak			



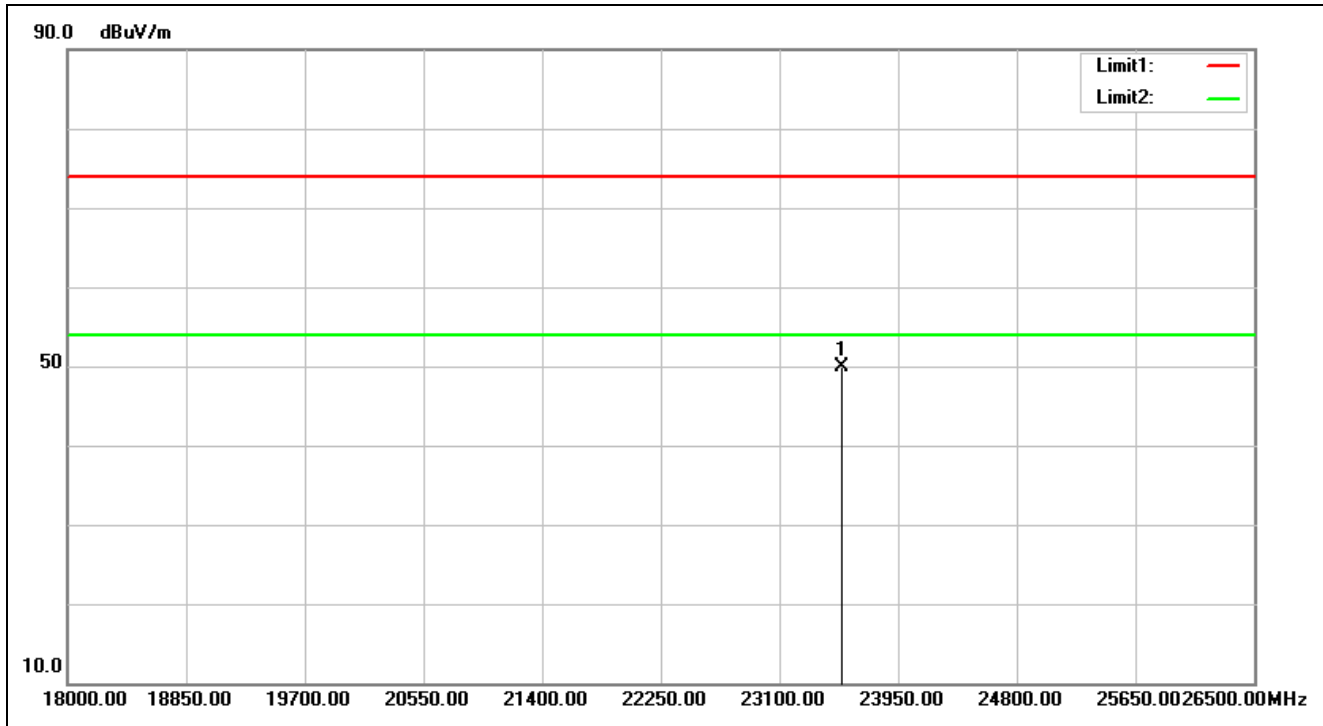
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:32:17
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23227.500	32.56	18.29	50.85	74.00	-23.15	peak			



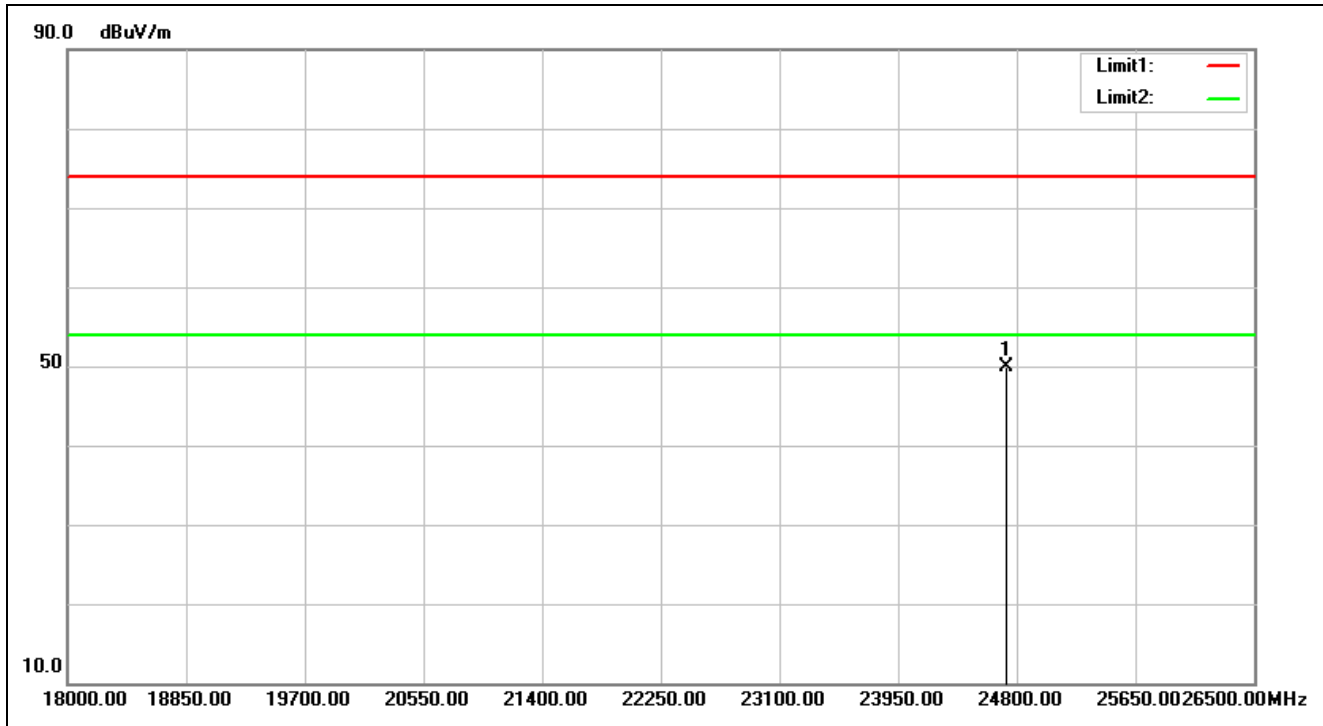
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:32:23
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24808.500	32.88	17.41	50.29	74.00	-23.71	peak			



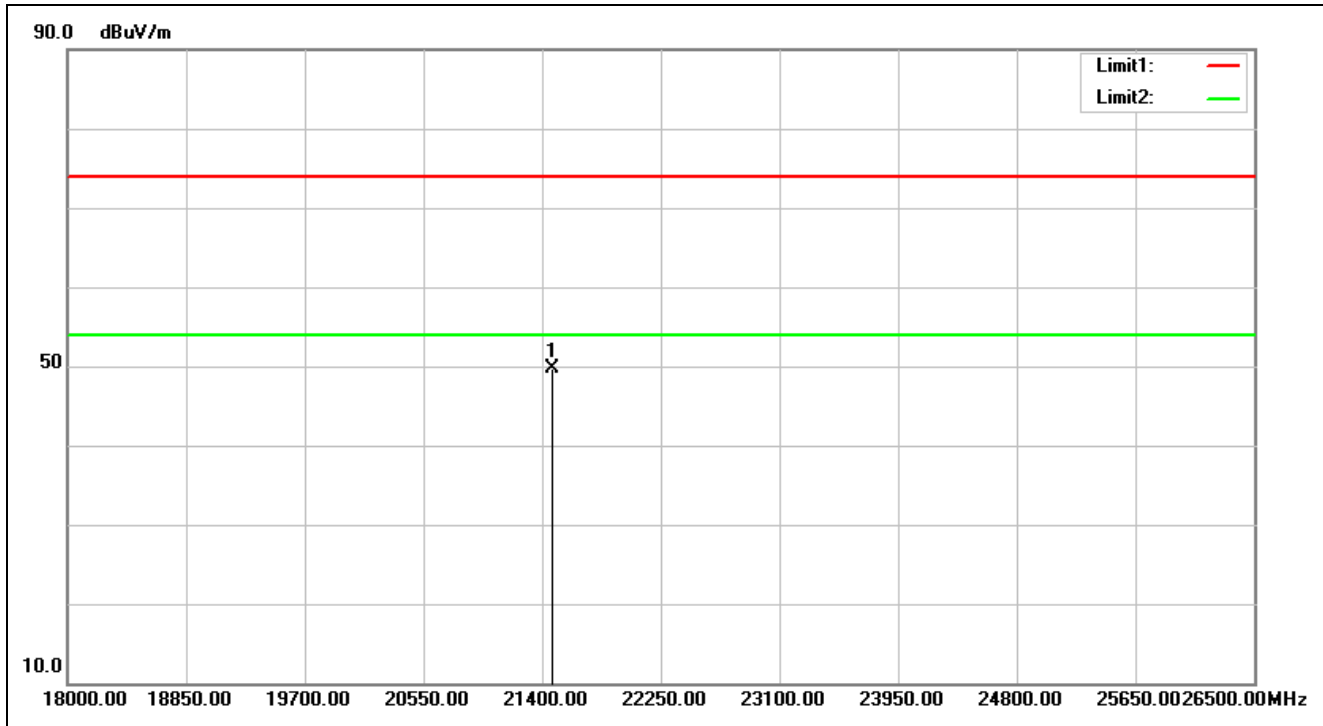
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:32:55
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23542.000	32.79	17.09	49.88	74.00	-24.12	peak			



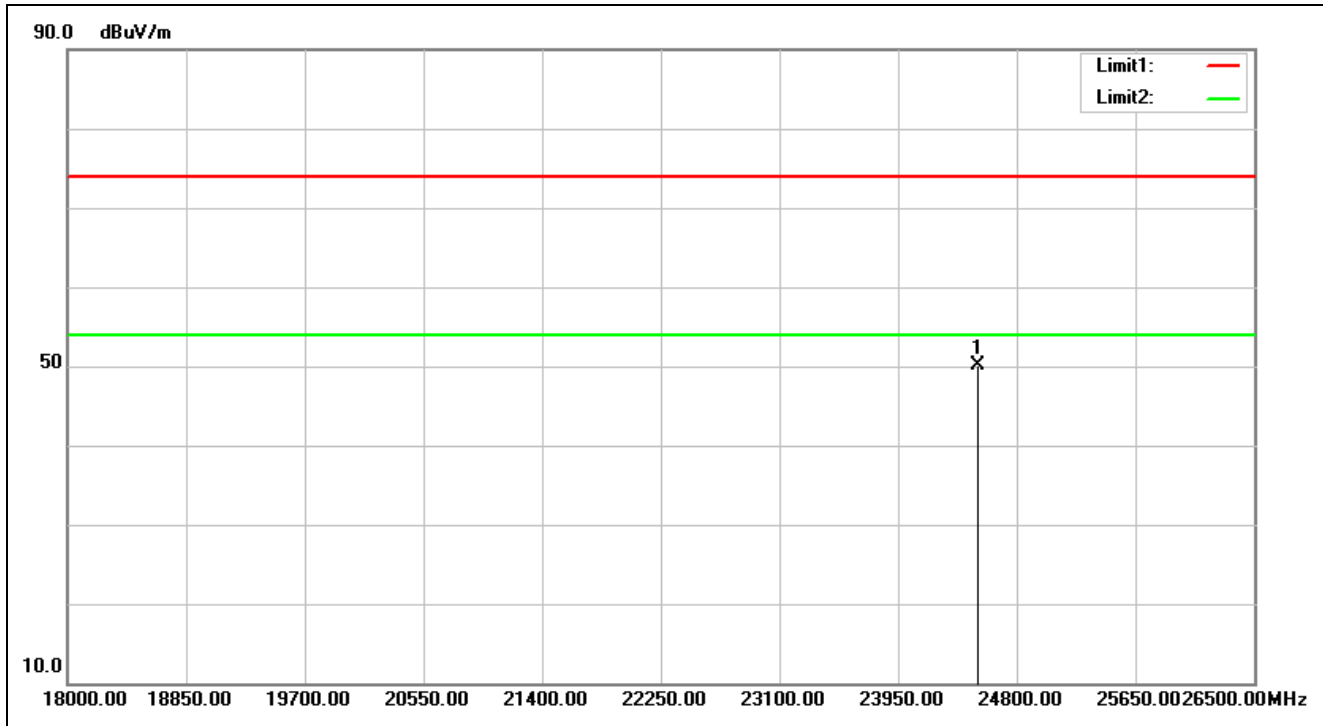
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:33:01
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24723.500	32.82	17.14	49.96	74.00	-24.04	peak			



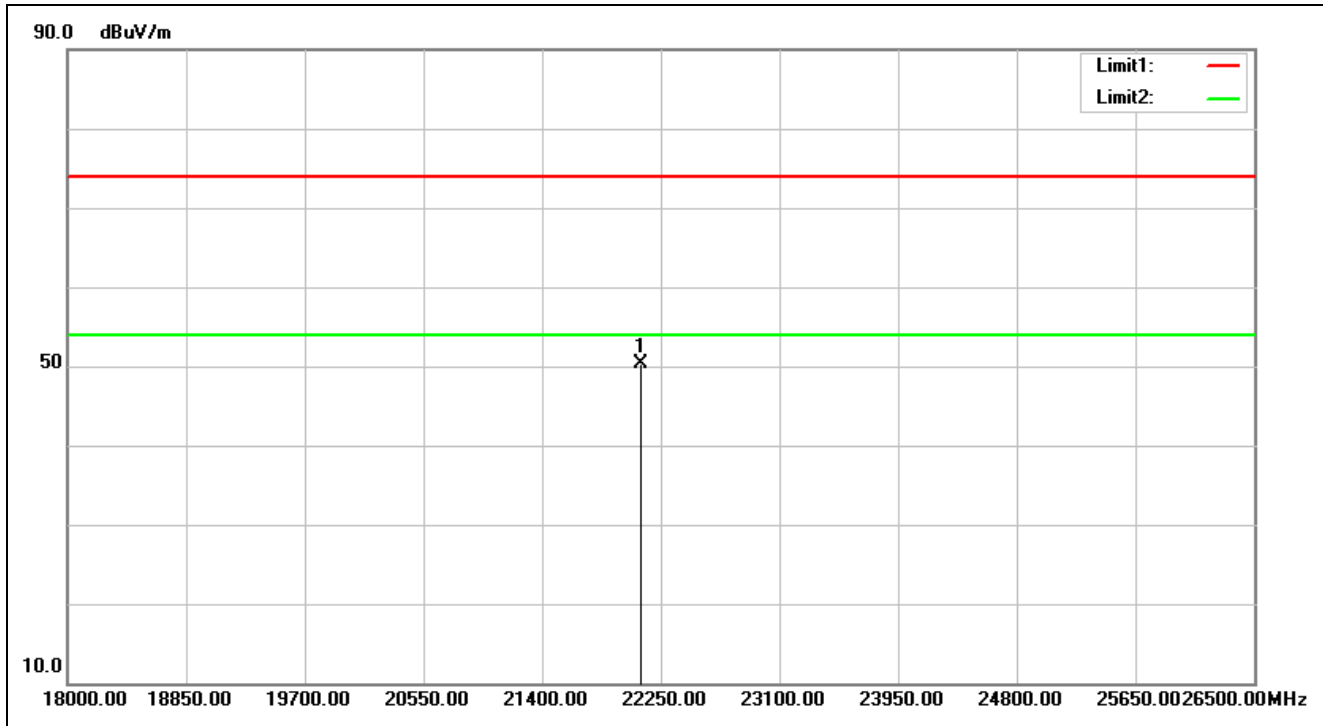
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:33:47
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21468.000	32.21	17.53	49.74	74.00	-24.26	peak			



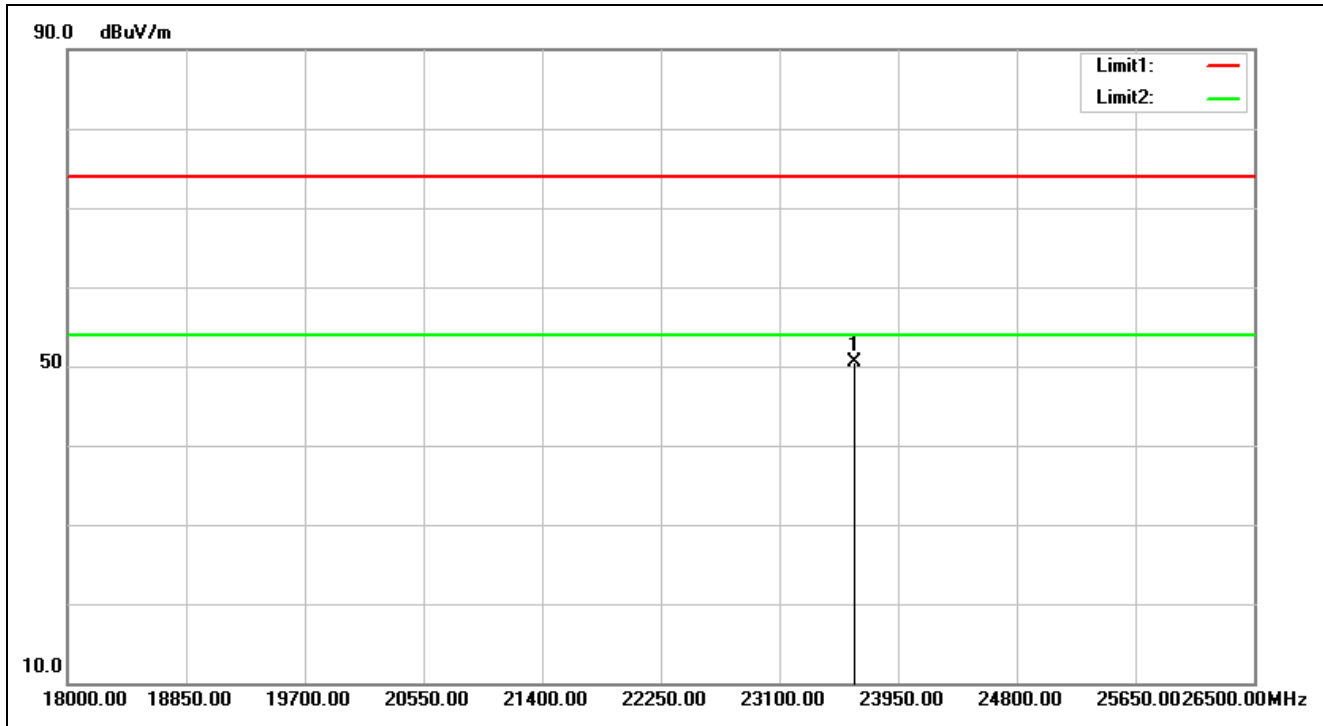
Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:33:54
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24519.500	32.61	17.59	50.20	74.00	-23.80	peak			



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:34:17
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22105.500	32.01	18.33	50.34	74.00	-23.66	peak			



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:34:23
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23635.500	32.73	17.81	50.54	74.00	-23.46	peak			

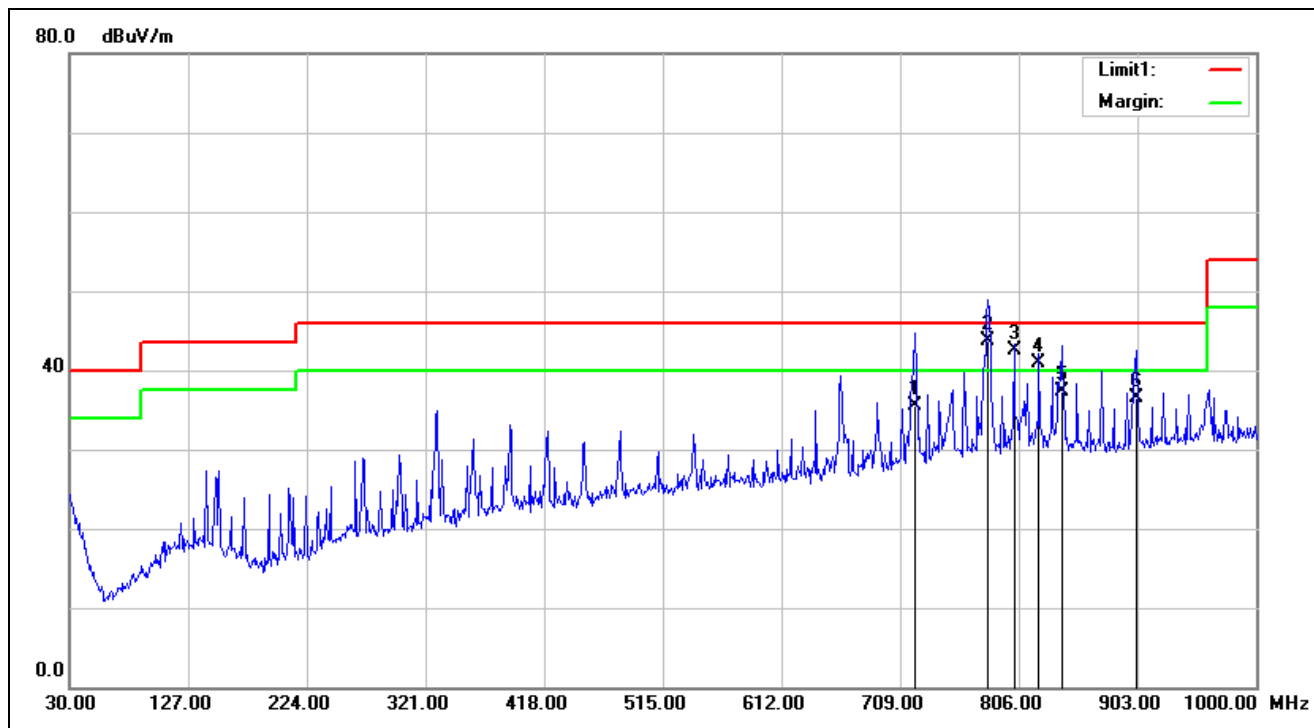
Spurious Emissions, TX Mode, 30M-1G



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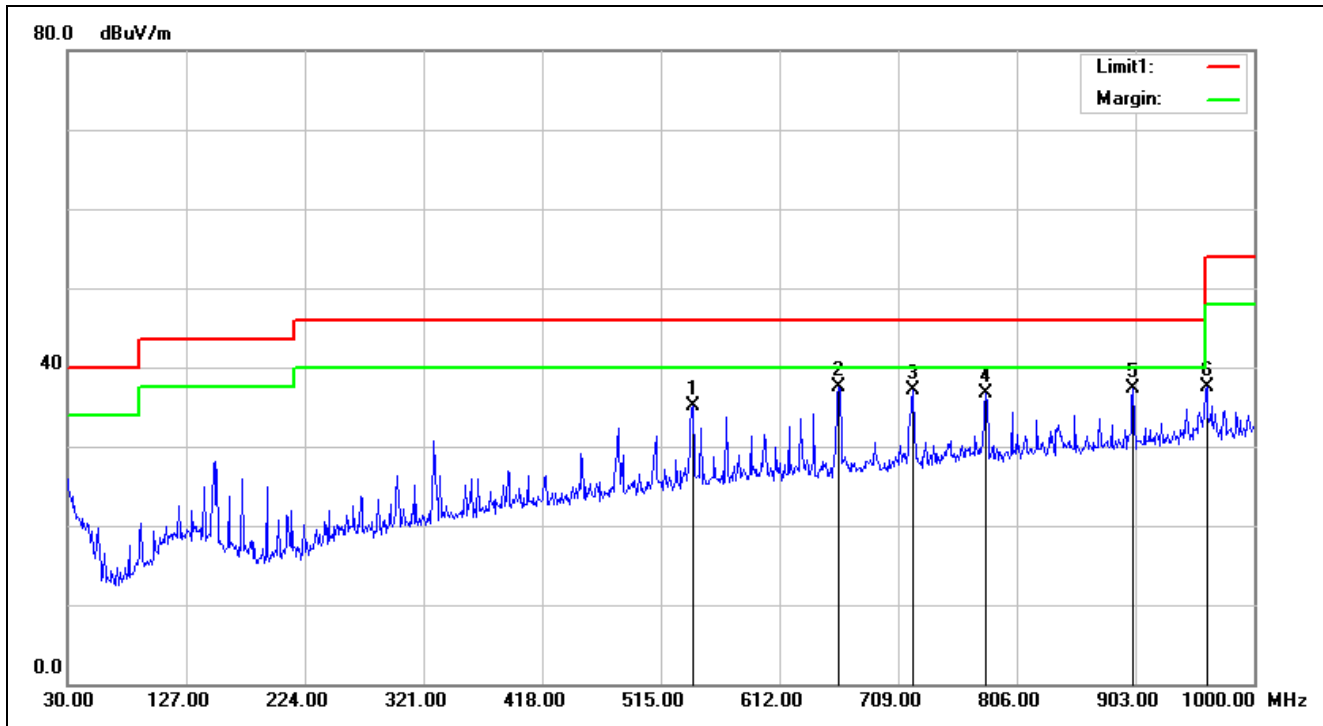
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 15:59:08
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	721.6100	1.74	33.76	35.50	46.00	-10.50	QP	100	253	
2	780.7800	2.61	41.19	43.80	46.00	-2.20	QP	100	221	
3	802.1200	2.80	39.80	42.60	46.00	-3.40	QP	100	234	
4	822.4900	3.19	37.81	41.00	46.00	-5.00	QP	100	240	
5	840.9200	3.54	33.86	37.40	46.00	-8.60	QP	100	255	
6	902.0300	4.12	32.48	36.60	46.00	-9.40	QP	100	247	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 16:00:12
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	541.1900	-0.58	35.63	35.05	46.00	-10.95	QP	100	349	
2	660.5000	0.69	36.90	37.59	46.00	-8.41	QP	100	352	
3	720.6400	1.72	35.31	37.03	46.00	-8.97	QP	100	27	
4	780.7800	2.61	34.19	36.80	46.00	-9.20	QP	100	118	
5	901.0600	4.09	33.12	37.21	46.00	-8.79	QP	100	123	
6	961.2000	5.54	32.05	37.59	54.00	-16.41	QP	100	144	

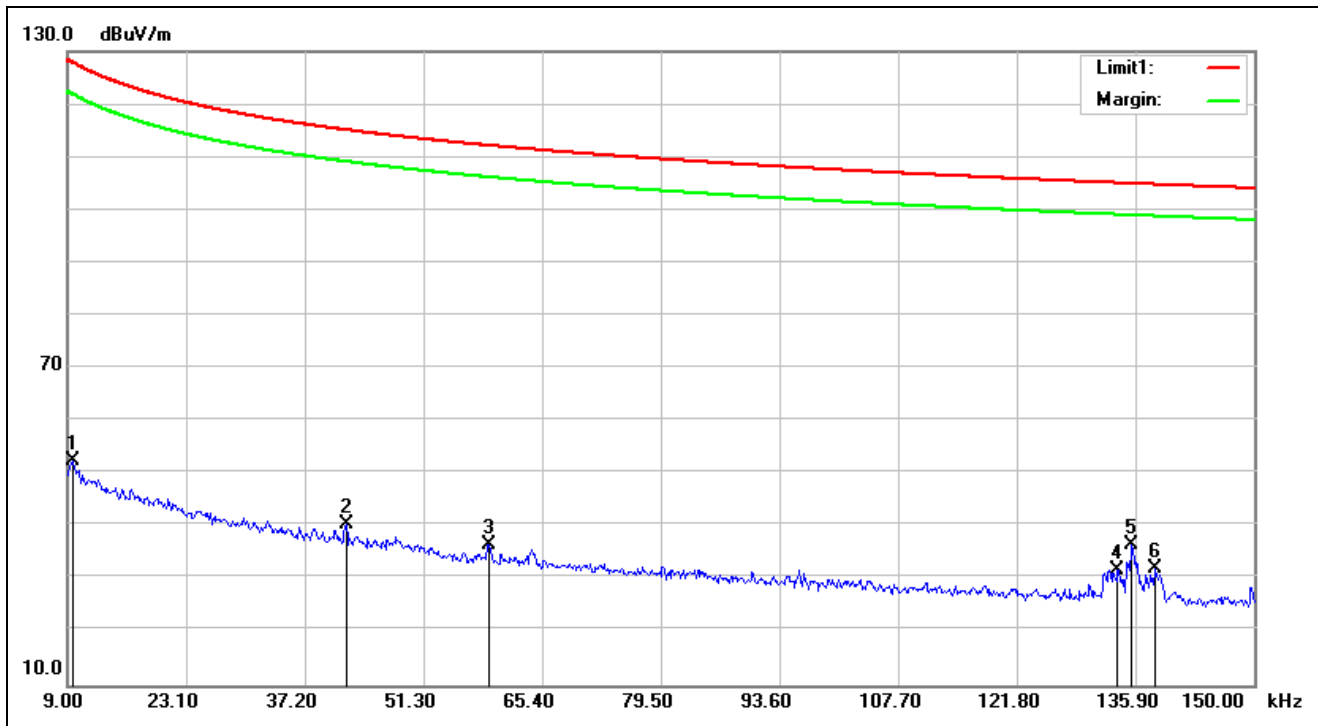
Spurious Emissions, TX Mode, 9k-30M



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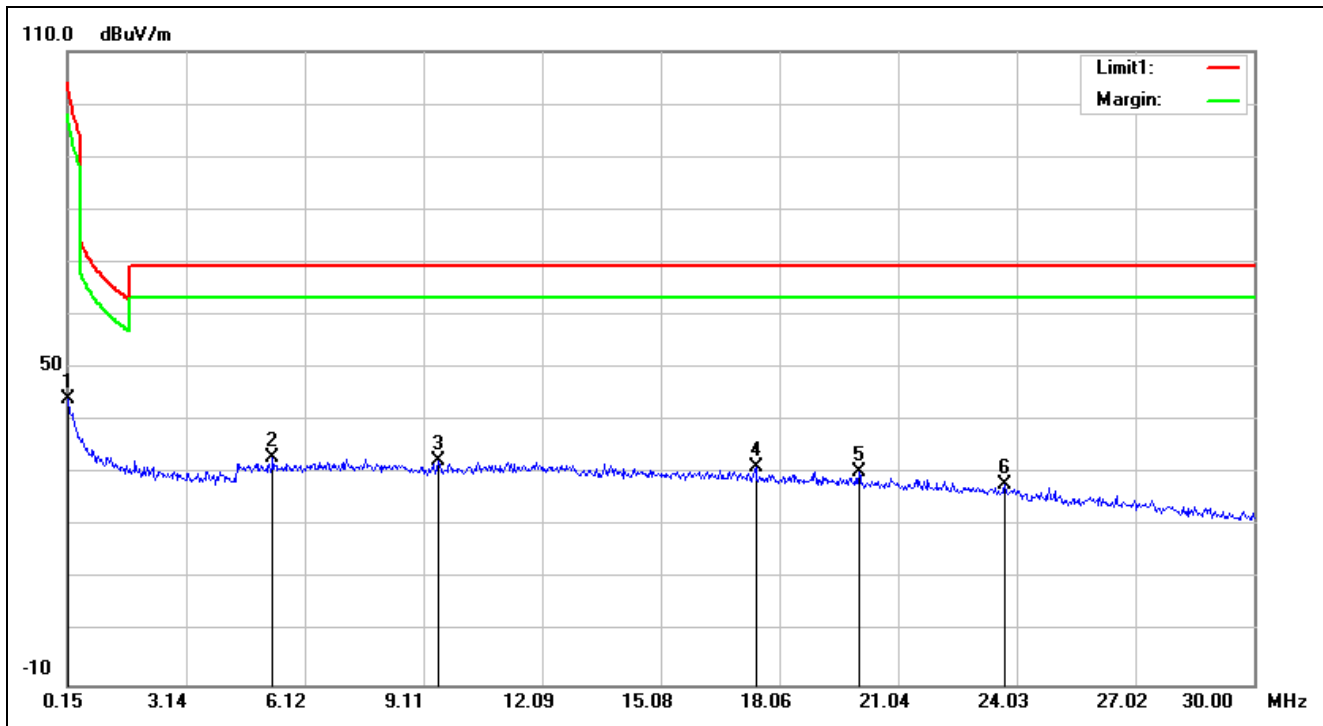
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Tel: +886-2172-7000 fax: +886-2528-0018



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED 15.209_9k-1G_3m	Ant. Polarization:	NA
Test item:	Radiation Emission	Test Time:	2018/1/24 17:04:10
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0095	19.73	32.60	52.33	128.03	-75.70	QP	100	94	
2	0.0421	19.71	20.89	40.60	115.11	-74.51	QP	100	319	
3	0.0590	19.38	17.32	36.70	112.18	-75.48	QP	100	224	
4	0.1337	19.10	12.80	31.90	105.08	-73.18	QP	100	173	
5	0.1354	19.09	17.42	36.51	104.97	-68.46	QP	100	181	
6	0.1382	19.09	12.84	31.93	104.79	-72.86	QP	100	184	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED 15.209_9k-1G_3m	Ant. Polarization:	NA
Test item:	Radiation Emission	Test Time:	2018/1/24 17:07:28
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1798	19.06	24.97	44.03	102.50	-58.47	QP	100	255	
2	5.3140	19.79	13.17	32.96	69.50	-36.54	QP	100	216	
3	9.4632	20.17	12.29	32.46	69.50	-37.04	QP	100	189	
4	17.4630	21.54	9.60	31.14	69.50	-38.36	QP	100	122	
5	20.0599	21.99	8.37	30.36	69.50	-39.14	QP	100	341	
6	23.7315	22.23	5.87	28.10	69.50	-41.40	QP	100	221	

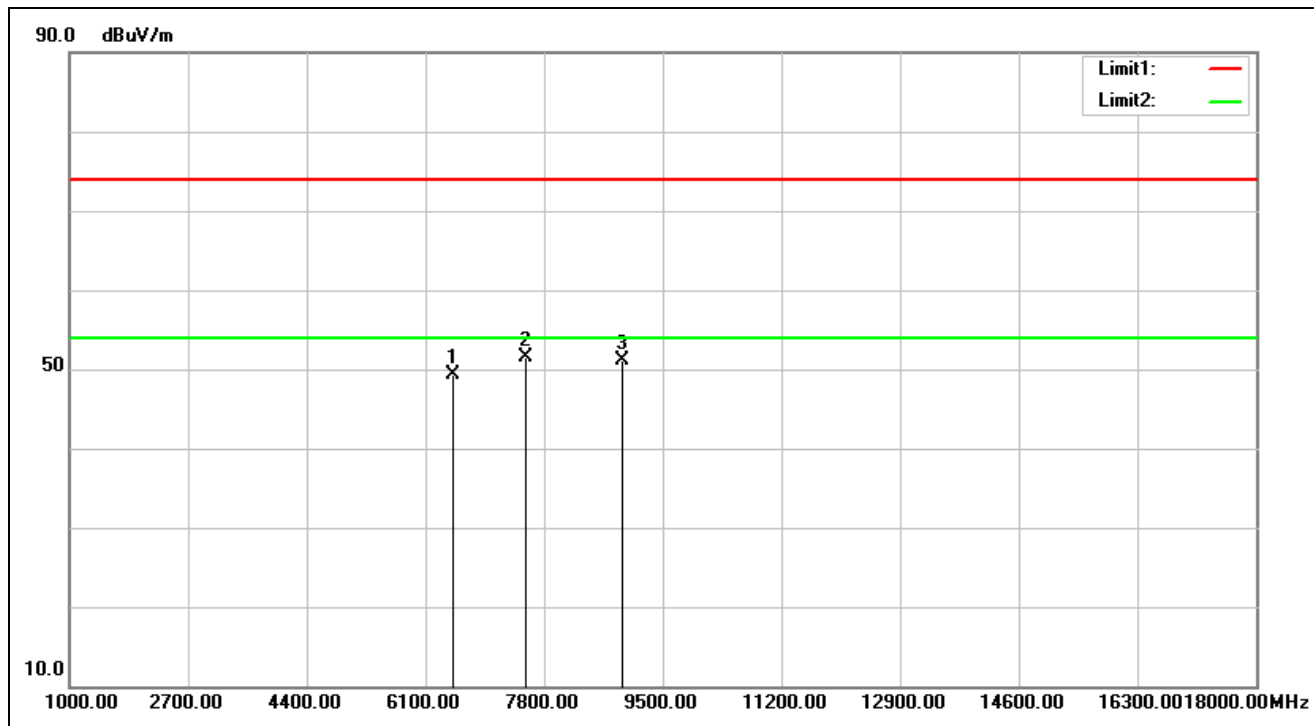
Spurious Emissions, RX Mode, 1-18G



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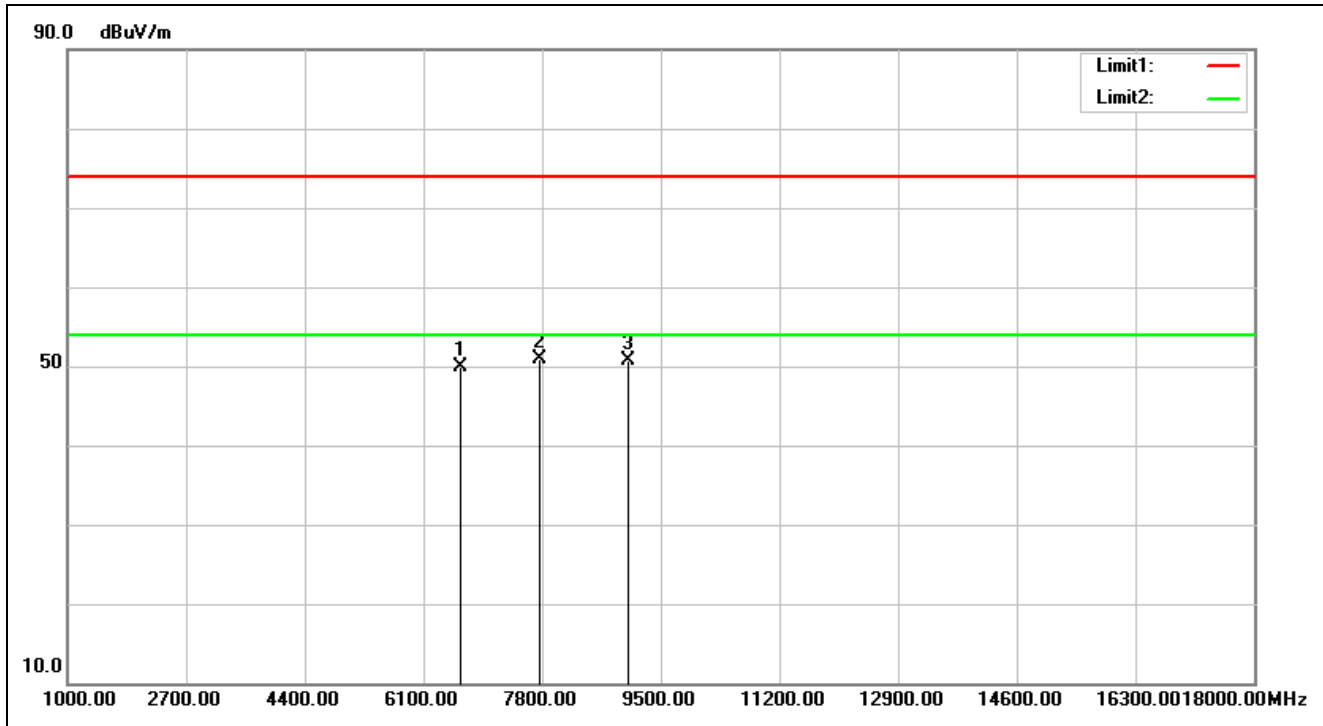
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 11:53:40
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	6491.000	4.30	44.97	49.27	74.00	-24.73	peak		0	
2	7545.000	4.93	46.52	51.45	74.00	-22.55	peak		0	
3	8922.000	5.38	45.75	51.13	74.00	-22.87	peak		0	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 11:54:43
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	6627.000	4.17	45.65	49.82	74.00	-24.18	peak	100	346	
2	7766.000	4.85	46.00	50.85	74.00	-23.15	peak	100	204	
3	9024.000	5.41	45.21	50.62	74.00	-23.38	peak	100	360	

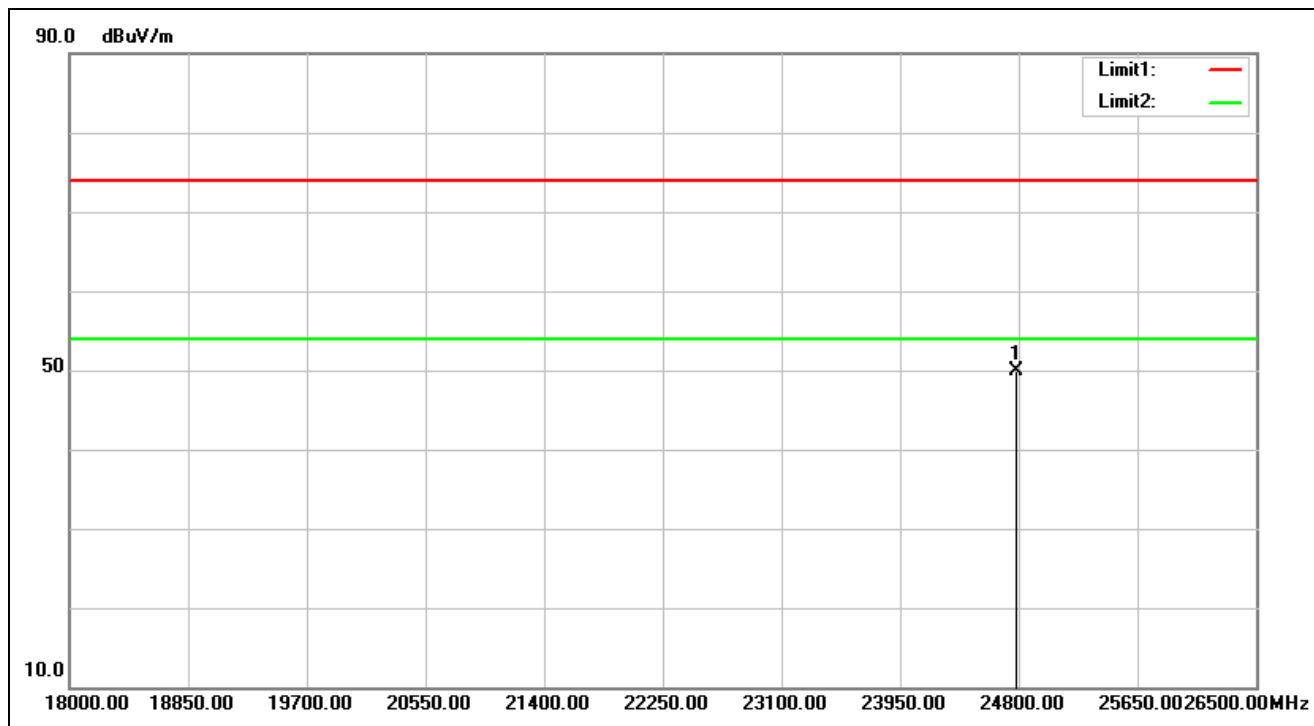
Spurious Emissions, RX Mode, 18-26G



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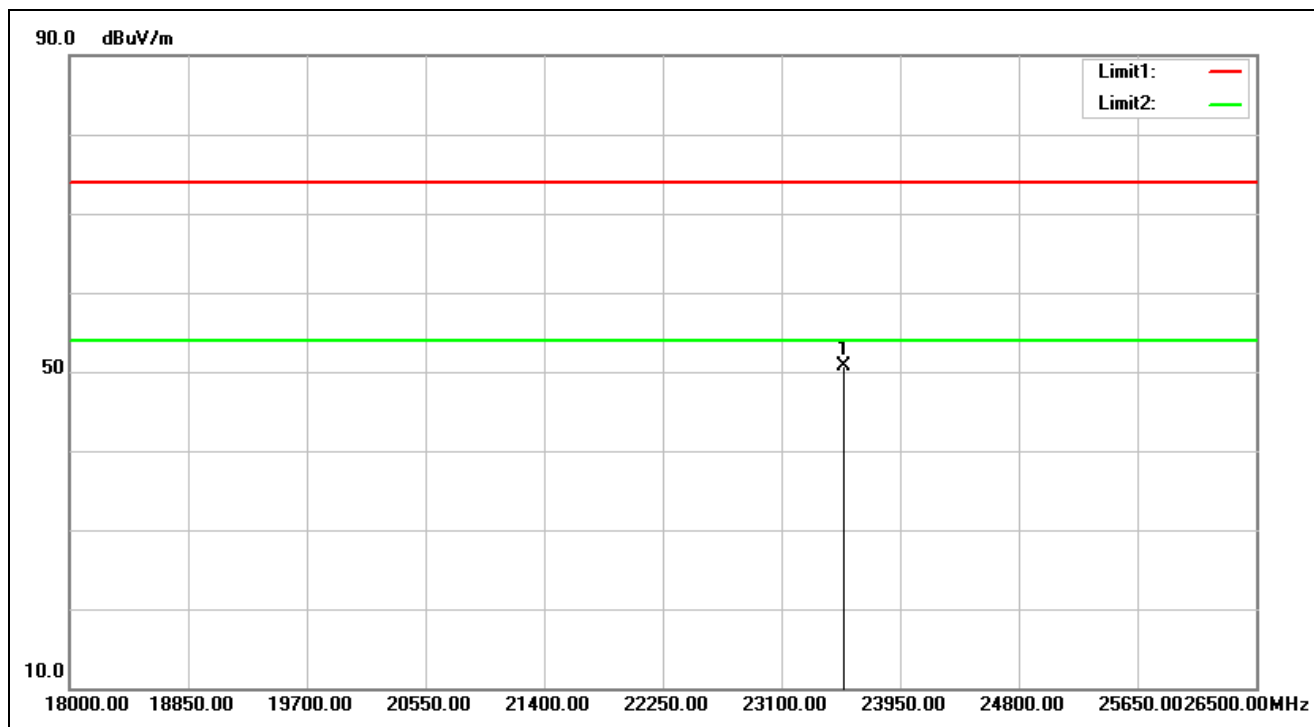
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 13:35:23
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24783.000	32.87	16.98	49.85	74.00	-24.15	peak		0	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 13:35:29
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23550.500	32.79	17.84	50.63	74.00	-23.37	peak			

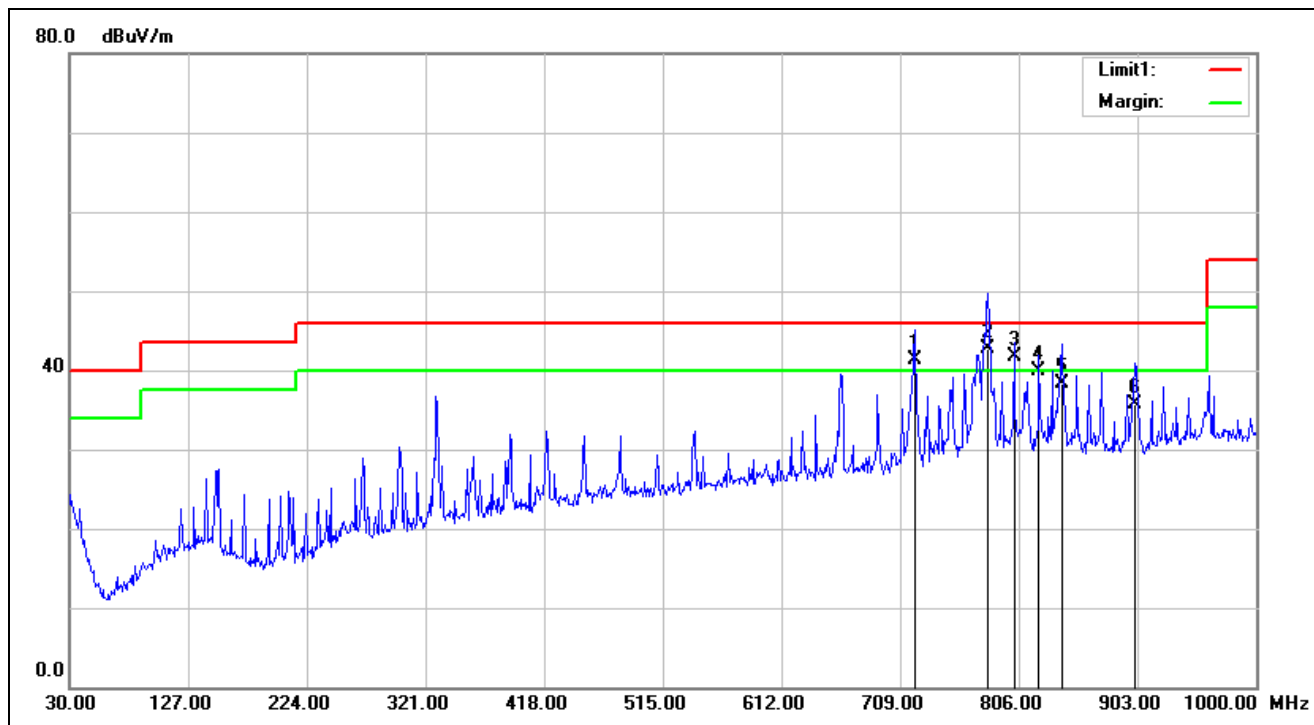
Spurious Emissions, RX Mode, 30M-1G



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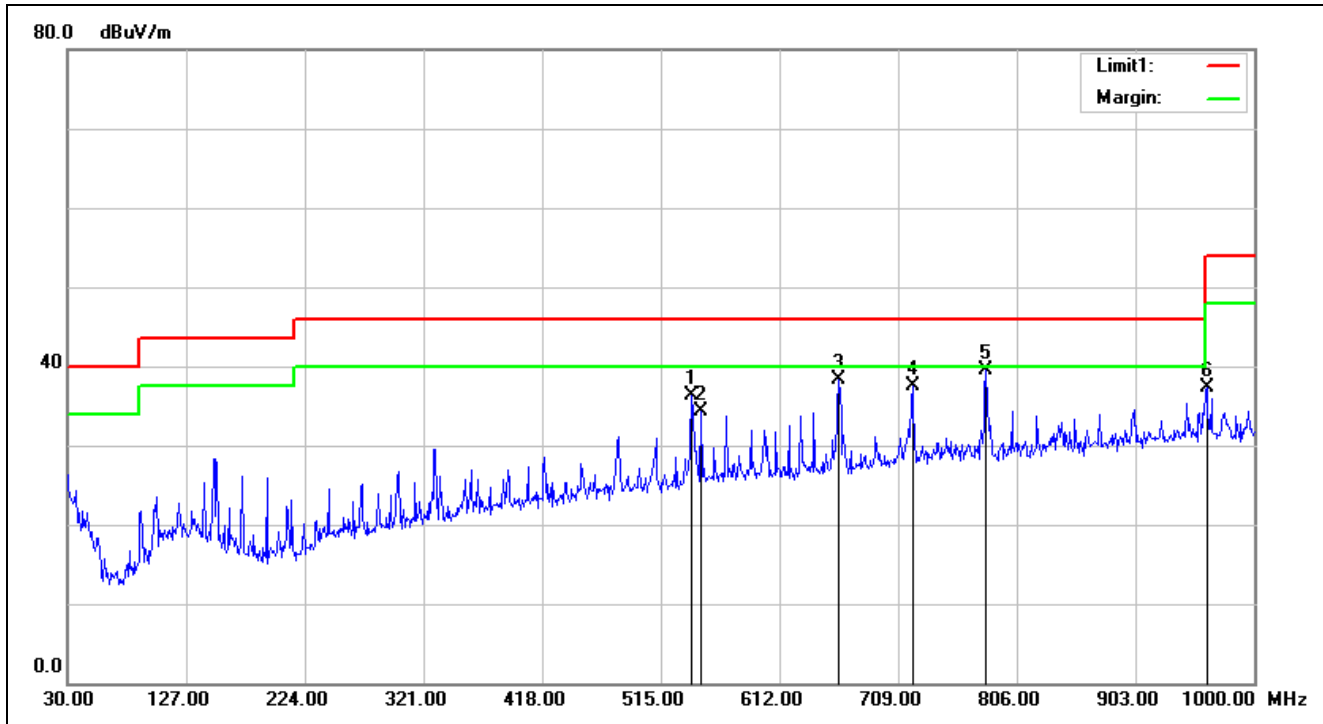
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/1/24 16:23:05
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	720.6400	1.72	39.58	41.30	46.00	-4.70	QP	100	237	
2	780.7800	2.61	40.09	42.70	46.00	-3.30	QP	100	255	
3	802.1200	2.80	38.90	41.70	46.00	-4.30	QP	100	242	
4	822.4900	3.19	36.71	39.90	46.00	-6.10	QP	100	224	
5	840.9200	3.54	34.76	38.30	46.00	-7.70	QP	100	248	
6	901.0600	4.09	31.71	35.80	46.00	-10.20	QP	100	240	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/1/24 16:24:09
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	540.2200	-0.59	36.97	36.38	46.00	-9.62	QP	100	102	
2	547.9800	-0.47	34.71	34.24	46.00	-11.76	QP	100	245	
3	660.5000	0.69	37.54	38.23	46.00	-7.77	QP	100	19	
4	720.6400	1.72	35.83	37.55	46.00	-8.45	QP	100	320	
5	780.7800	2.61	36.97	39.58	46.00	-6.42	QP	100	296	
6	961.2000	5.54	31.67	37.21	54.00	-16.79	QP	100	118	

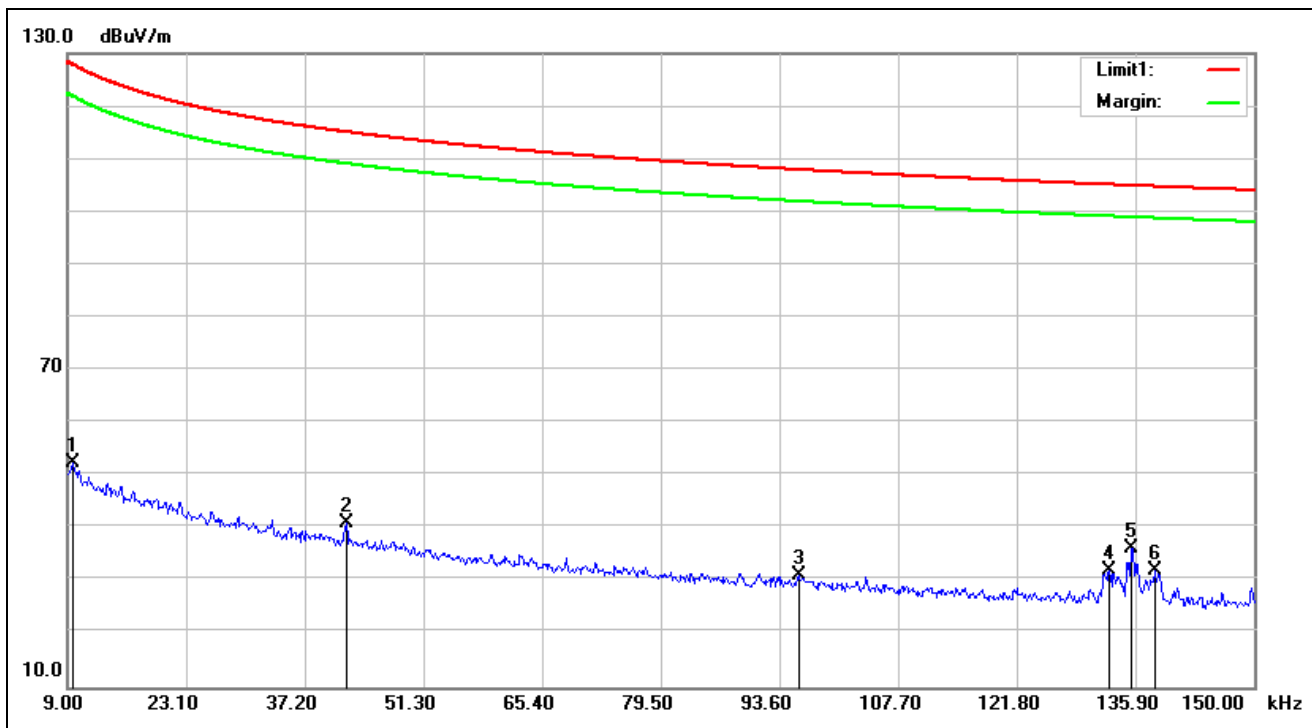
Spurious Emissions, RX Mode, 9K-30M



TUV Rheinland Taiwan Ltd.

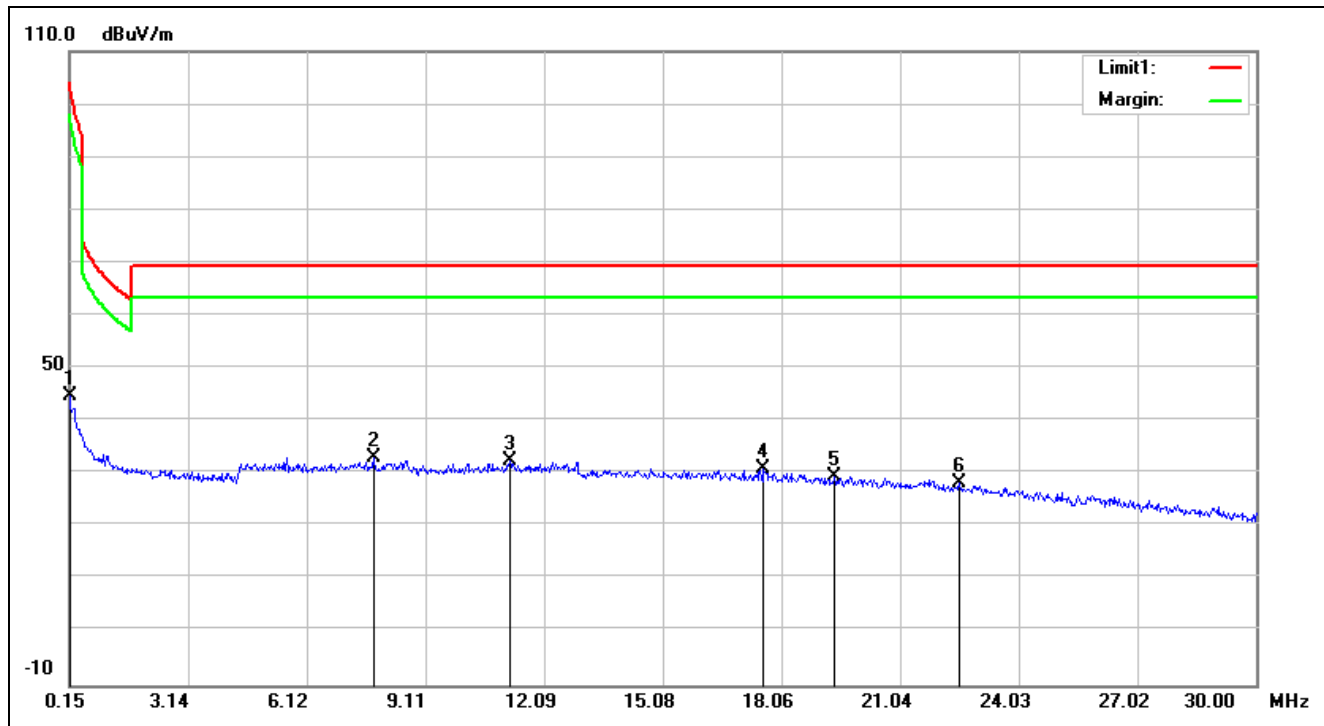
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED 15.209_9k-1G_3m	Ant. Polarization:	NA
Test item:	Radiation Emission	Test Time:	2018/1/24 17:05:14
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPCA381013-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0097	19.81	32.69	52.50	127.85	-75.35	QP	100	360	
2	0.0421	19.71	21.20	40.91	115.11	-74.20	QP	100	163	
3	0.0959	19.15	11.97	31.12	107.96	-76.84	QP	100	357	
4	0.1328	19.10	12.85	31.95	105.13	-73.18	QP	100	203	
5	0.1355	19.09	17.21	36.30	104.96	-68.66	QP	100	187	
6	0.1382	19.09	12.96	32.05	104.79	-72.74	QP	100	171	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED 15.209_9k-1G_3m	Ant. Polarization:	NA
Test item:	Radiation Emission	Test Time:	2018/1/24 17:08:32
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	21(°C)/53%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPCA381013-ANT		

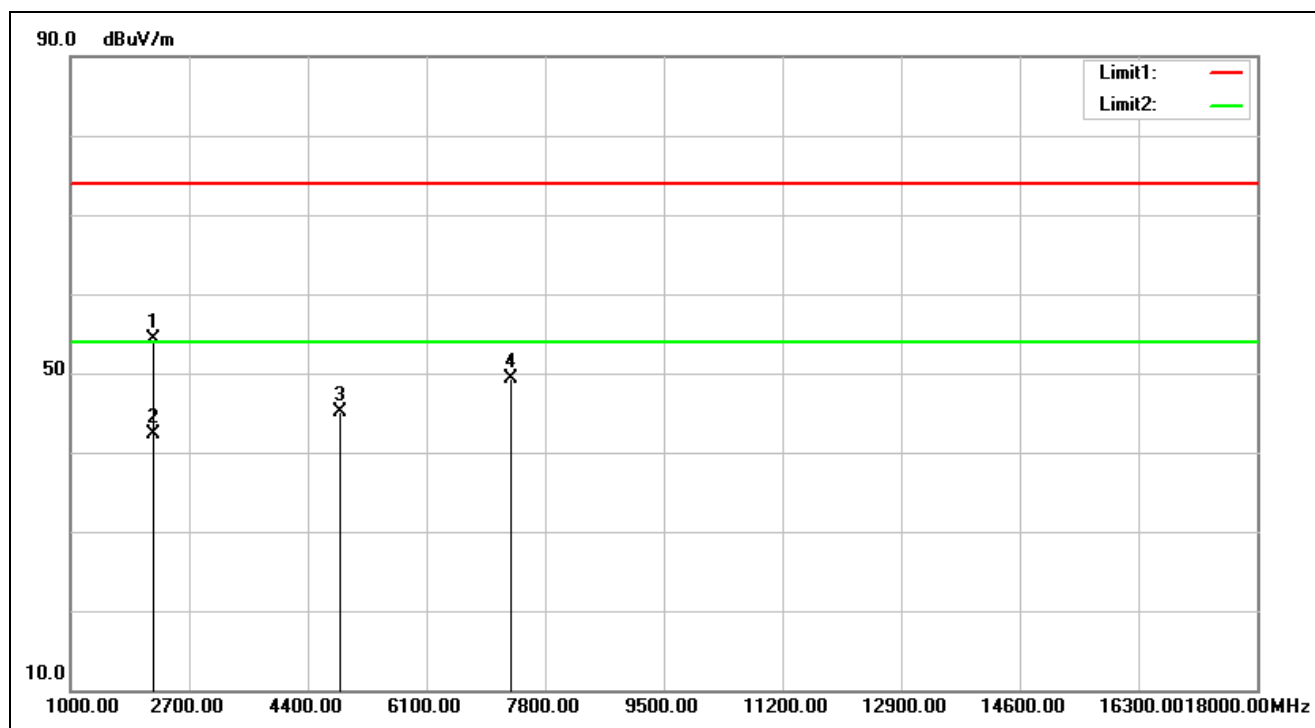
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1500	19.08	25.77	44.85	104.08	-59.23	QP	100	258	
2	7.7916	20.01	13.13	33.14	69.50	-36.36	QP	100	150	
3	11.2243	20.44	12.07	32.51	69.50	-36.99	QP	100	130	
4	17.6122	21.56	9.41	30.97	69.50	-38.53	QP	100	159	
5	19.4032	21.88	7.72	29.60	69.50	-39.90	QP	100	210	
6	22.5375	22.15	6.14	28.29	69.50	-41.21	QP	100	110	

Spurious Emissions, TX Mode, 1-18G

TUV Rheinland Taiwan Ltd.

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

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/3/7 13:31:49
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	22.5(°C)/56%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Amy Hsu
Test Mode:	G-2437		
Remark:	RFDPA870920IMLB301		

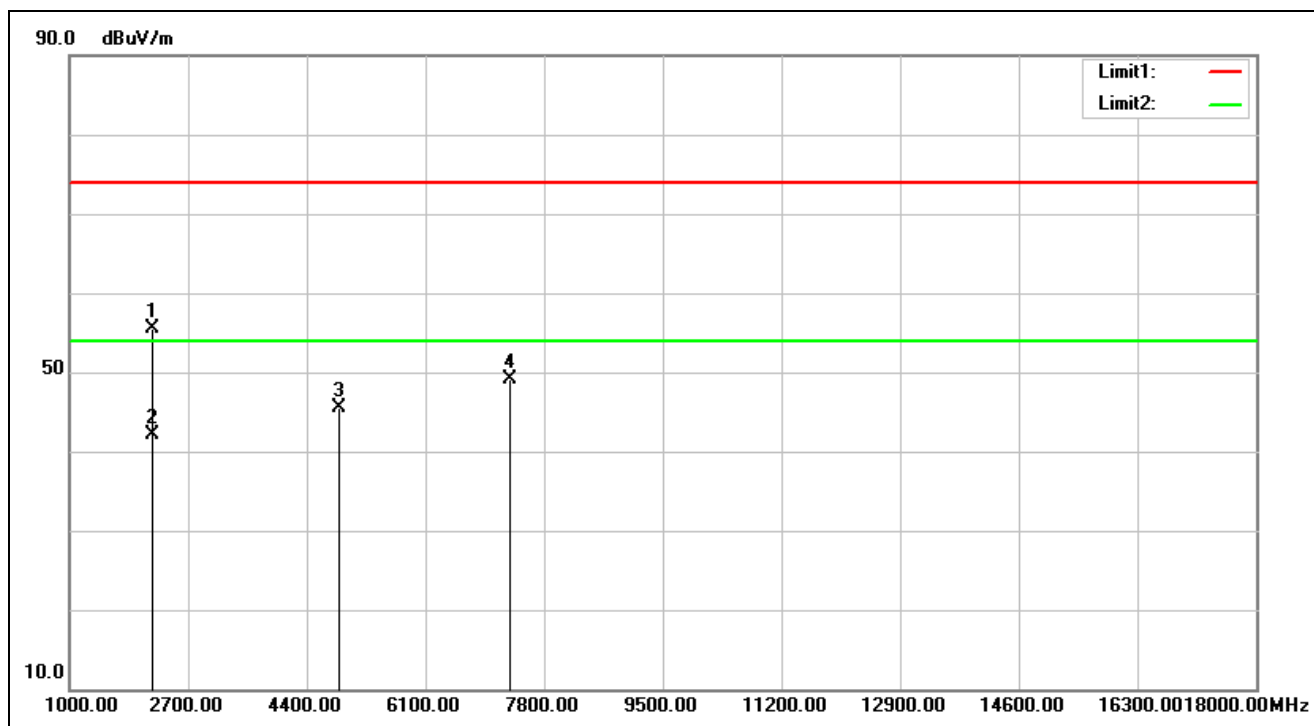
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2190.000	-7.10	61.33	54.23	74.00	-19.77	peak	100	160	
2	2190.000	-7.10	49.46	42.36	54.00	-11.64	AVG	100	160	
3	4874.000	-2.53	47.69	45.16	74.00	-28.84	peak	100	201	
4	7311.000	5.52	43.69	49.21	74.00	-24.79	peak	100	87	

Spurious Emissions, TX Mode, 1-18G

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

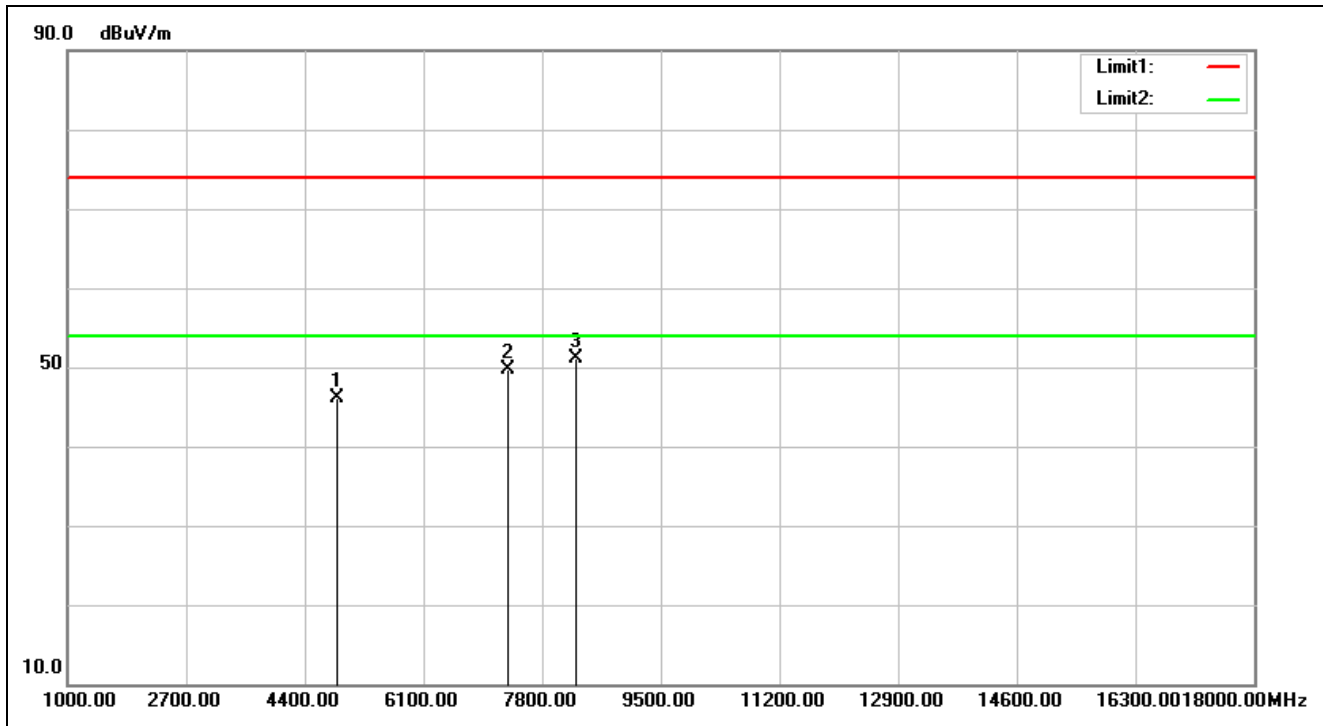


Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/3/7 13:23:05
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	22.5(°C)/56%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Amy Hsu
Test Mode:	G-2437		
Remark:	RFA-02-3-C5H1		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2190.000	-7.10	62.65	55.55	74.00	-18.45	peak	100	94	
2	2190.000	-7.10	49.19	42.09	54.00	-11.91	AVG	100	94	
3	4874.000	-2.53	48.01	45.48	74.00	-28.52	peak	100	163	
4	7311.000	5.52	43.65	49.17	74.00	-24.83	peak	100	248	

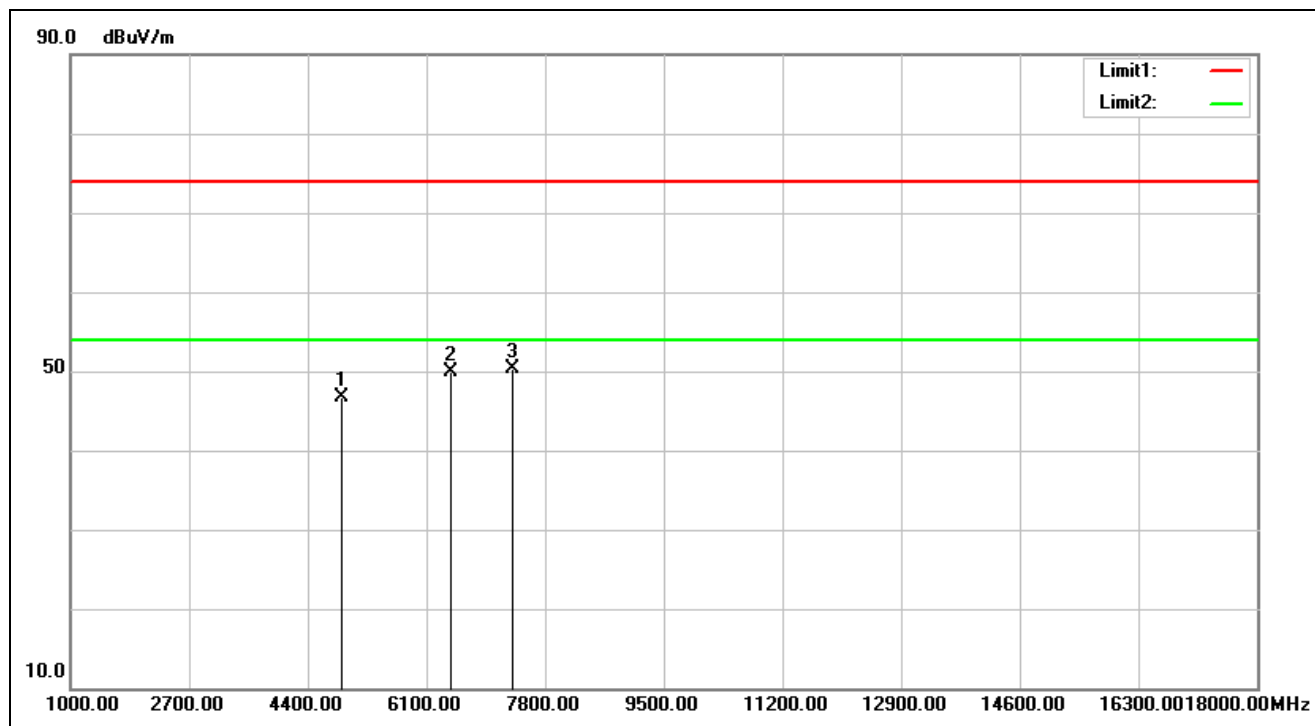
Spurious Emissions, TX Mode, 1-18G**TUV Rheinland Taiwan Ltd.****11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105**

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/3/7 13:38:22
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	22.5(°C)/56%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Amy Hsu
Test Mode:	G-2437		
Remark:	14615300100		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	48.65	46.12	74.00	-27.88	peak	100	231	
2	7311.000	5.52	44.21	49.73	74.00	-24.27	peak	100	158	
3	8293.000	6.15	45.03	51.18	74.00	-22.82	peak	100	130	

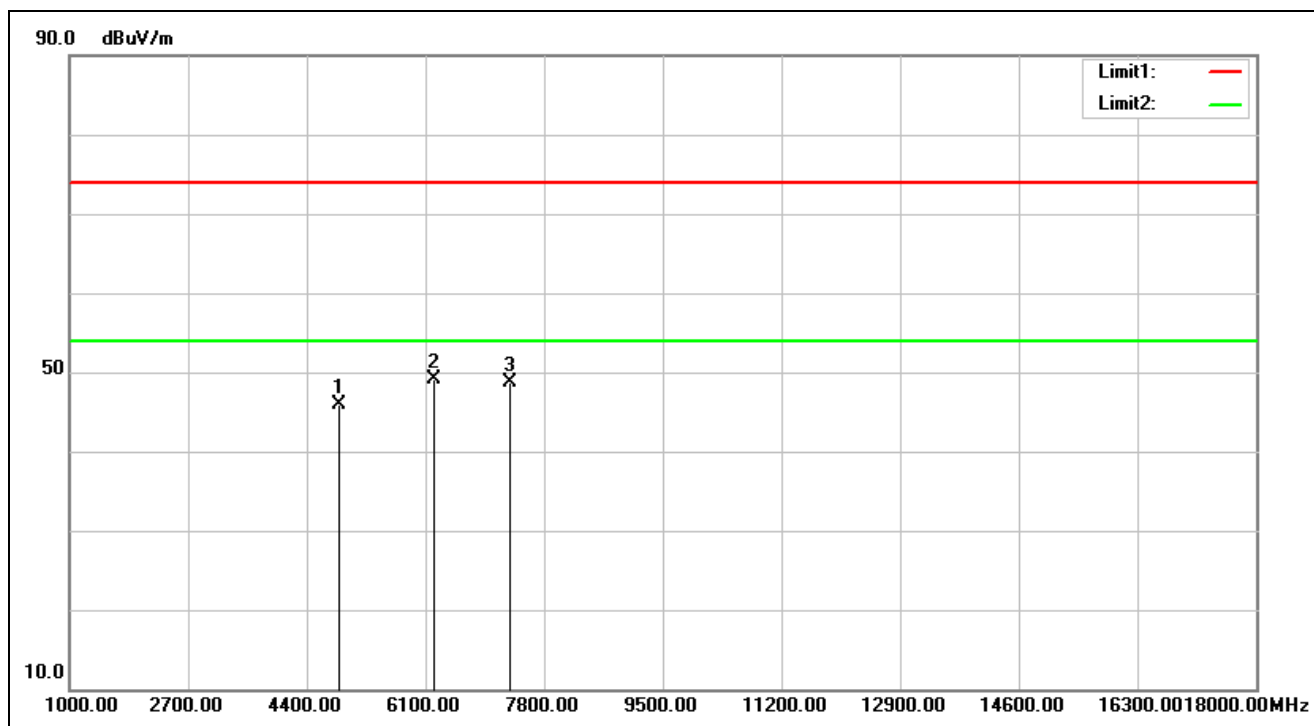


Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/3/7 13:39:19
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	22.5(°C)/56%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Amy Hsu
Test Mode:	G-2437		
Remark:	14615300100		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	49.27	46.74	74.00	-27.26	peak	100	175	
2	6440.000	5.13	44.69	49.82	74.00	-24.18	peak	100	285	
3	7311.000	5.52	44.75	50.27	74.00	-23.73	peak	100	216	

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Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/3/7 13:44:38
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	22.5(°C)/56%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Amy Hsu
Test Mode:	G-2437		
Remark:	ACC-RN-SMA-S-DS		

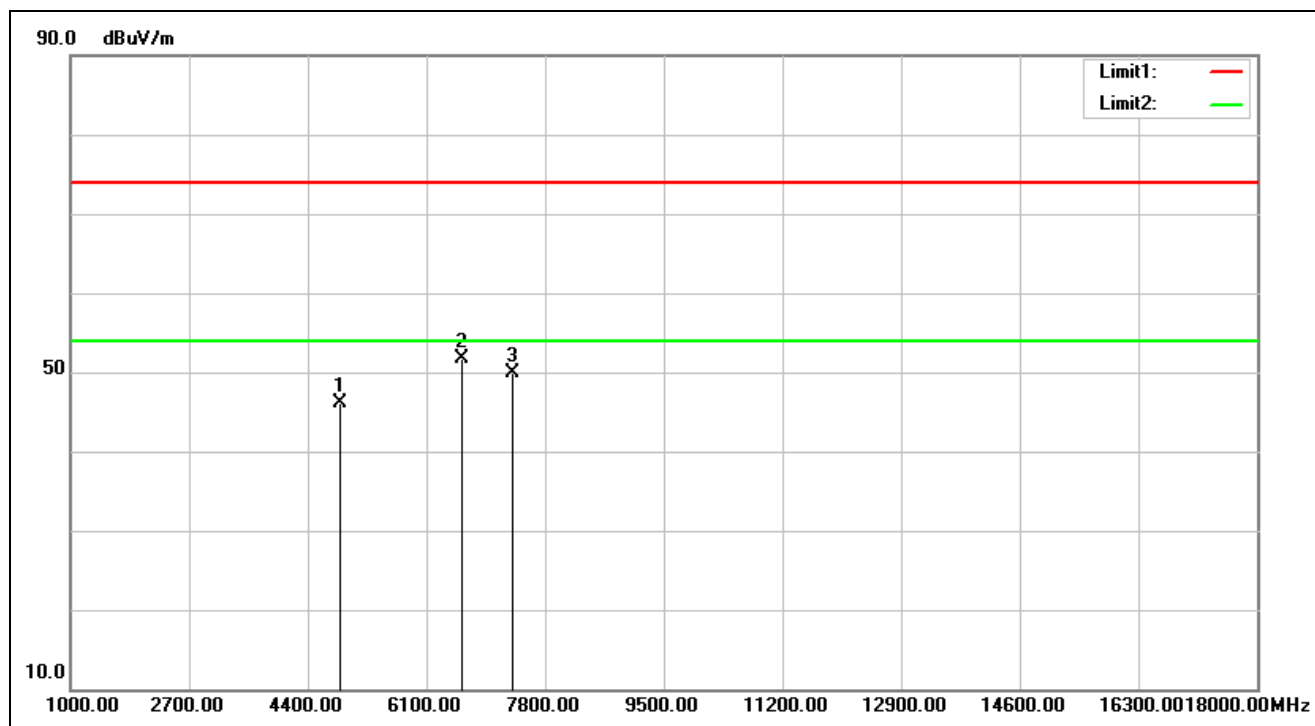
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	48.35	45.82	74.00	-28.18	peak	100	204	
2	6219.000	4.26	44.79	49.05	74.00	-24.95	peak	100	69	
3	7311.000	5.52	43.16	48.68	74.00	-25.32	peak	100	178	

Spurious Emissions, TX Mode, 1-18G

TUV Rheinland Taiwan Ltd.

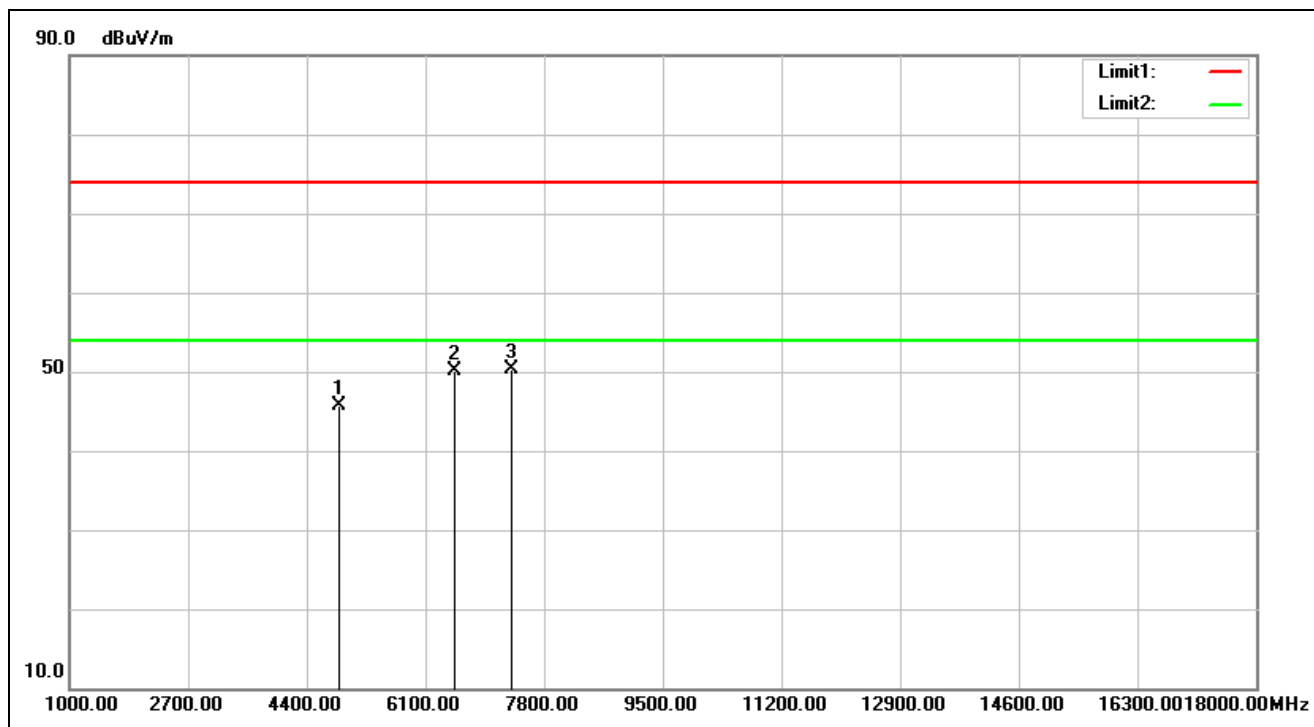
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/3/7 13:50:41
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%):	22.5(°C)/56%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Amy Hsu
Test Mode:	G-2437		
Remark:	W3525B039		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	48.57	46.04	74.00	-27.96	peak	100	157	
2	6610.000	5.23	46.50	51.73	74.00	-22.27	peak	100	174	
3	7311.000	5.52	44.39	49.91	74.00	-24.09	peak	100	223	



Service No.:	114072024	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/3/7 13:51:38
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n SmartConnect IoT Module	Temp.(°C)/Hum.(%)	22.5(°C)/56%
Model No.:	ATWINC1510-MR210UB	Test Engineer:	Amy Hsu
Test Mode:	G-2437		
Remark:	W3525B039		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	48.15	45.62	74.00	-28.38	peak	100	166	
2	6508.000	5.35	44.85	50.20	74.00	-23.80	peak	100	49	
3	7311.000	5.52	44.86	50.38	74.00	-23.62	peak	100	208	