

Test Report No.50141823 001

Appendix D: Radiated and Mains Spurious Emission Data

(File: 50141823AppendixD)

Contents

RFA-02-5-C7H1-ANT.....	4
Spurious Emissions, Band Edges, 2.35-2.5G.....	4
Spurious Emissions, TX Mode, 1-18G.....	17
Spurious Emissions, TX Mode, 18-26G.....	35
Spurious Emissions, TX Mode, 30M-1G	53
Spurious Emissions, TX Mode, 9k-30M	55
Spurious Emissions, RX Mode, 1-18G.....	57
Spurious Emissions, RX Mode, 18-26G.....	59
Spurious Emissions, RX Mode, 30M-1G	61
Spurious Emissions, RX Mode, 9K-30M	63
RFMTA331215IMAB701-ANT	65
Spurious Emissions, Band Edges, 2.35-2.5G.....	65
Spurious Emissions, TX Mode, 1-18G.....	78
Spurious Emissions, TX Mode, 18-26G.....	96
Spurious Emissions, TX Mode, 30M-1G	114
Spurious Emissions, TX Mode, 9k-30M	116
Spurious Emissions, RX Mode, 1-18G.....	118
Spurious Emissions, RX Mode, 18-26G.....	120
Spurious Emissions, RX Mode, 30M-1G	122
Spurious Emissions, RX Mode, 9K-30M	124
RFPCA381013IMAB701IMAB701-ANT	126
Spurious Emissions, Band Edges, 2.35-2.5G.....	126
Spurious Emissions, TX Mode, 1-18G.....	139
Spurious Emissions, TX Mode, 18-26G.....	157
Spurious Emissions, TX Mode, 30M-1G	175
Spurious Emissions, TX Mode, 9k-30M	177
Spurious Emissions, RX Mode, 1-18G.....	179
Spurious Emissions, RX Mode, 18-26G.....	181
Spurious Emissions, RX Mode, 30M-1G	183
Spurious Emissions, RX Mode, 9K-30M	185

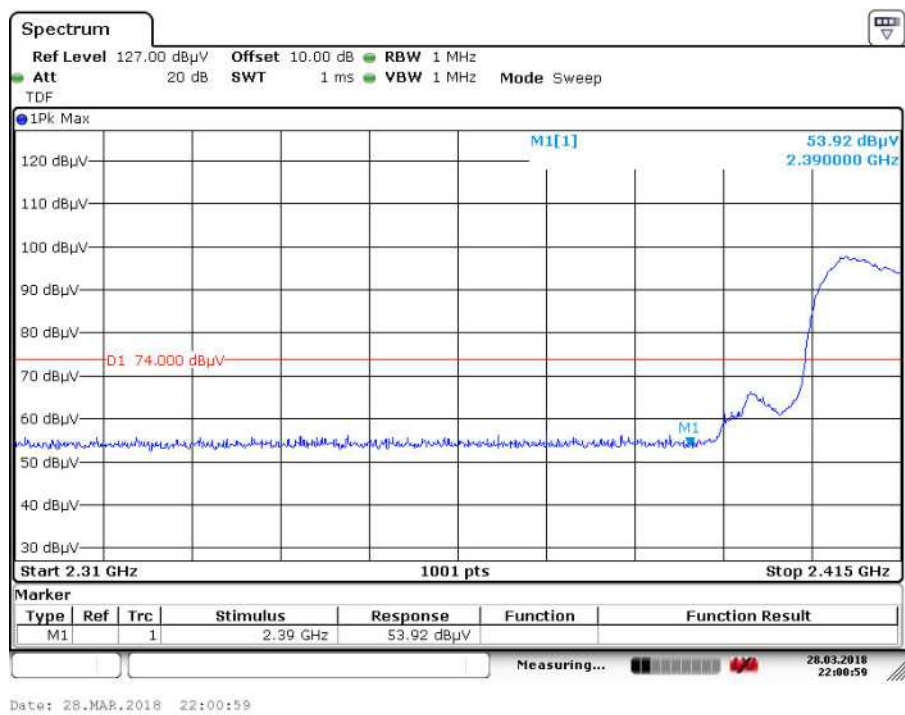
W3525B039-ANT	187
Spurious Emissions, TX Mode, 1-18G	187
RN-SMA-4-ANT	189
Spurious Emissions, TX Mode, 1-18G	189
RFDPA870920IMLB301-ANT	190
Spurious Emissions, TX Mode, 1-18G	190
RFA-02-3-C5H1-ANT	191
Spurious Emissions, TX Mode, 1-18G	191
1461530100-ANT	192
Spurious Emissions, TX Mode, 1-18G	192
RN-SMA-S -ANT	194
Spurious Emissions, TX Mode, 1-18G	194
RFA-02-G03-ANT	195
Spurious Emissions, TX Mode, 1-18G	195
Mains	197

RFA-02-5-C7H1-ANT

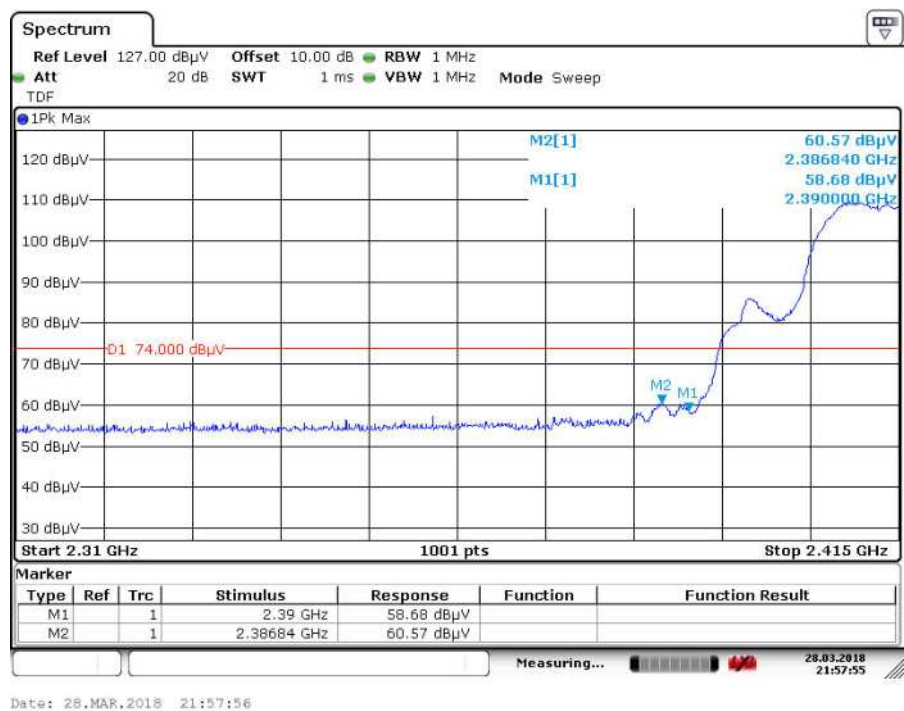
Spurious Emissions, Band Edges, 2.35-2.5G

Radiated Bandedge 11b

Low Channel (Hor)

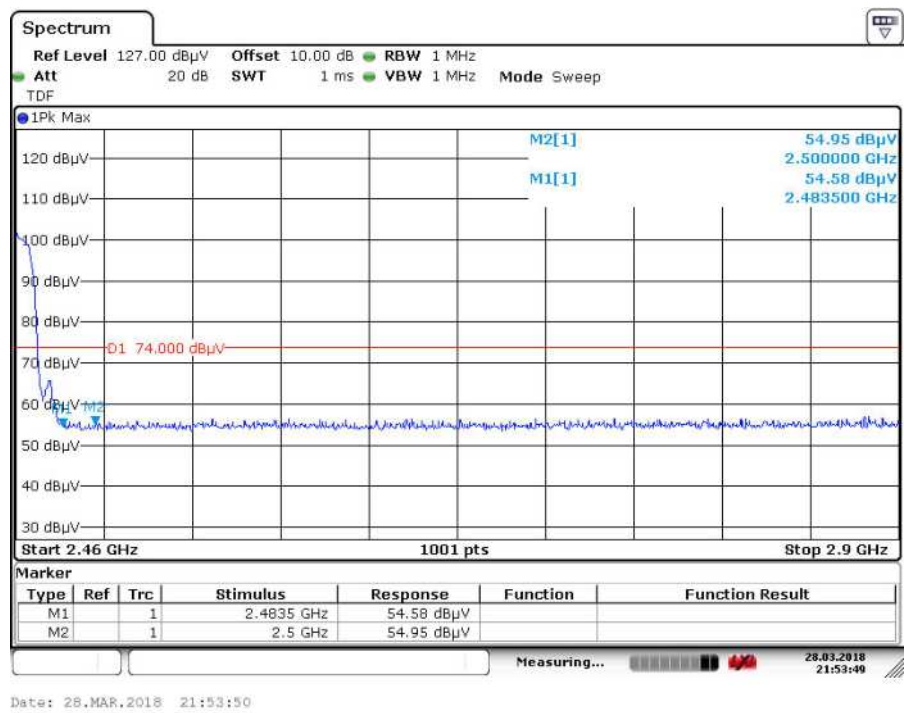
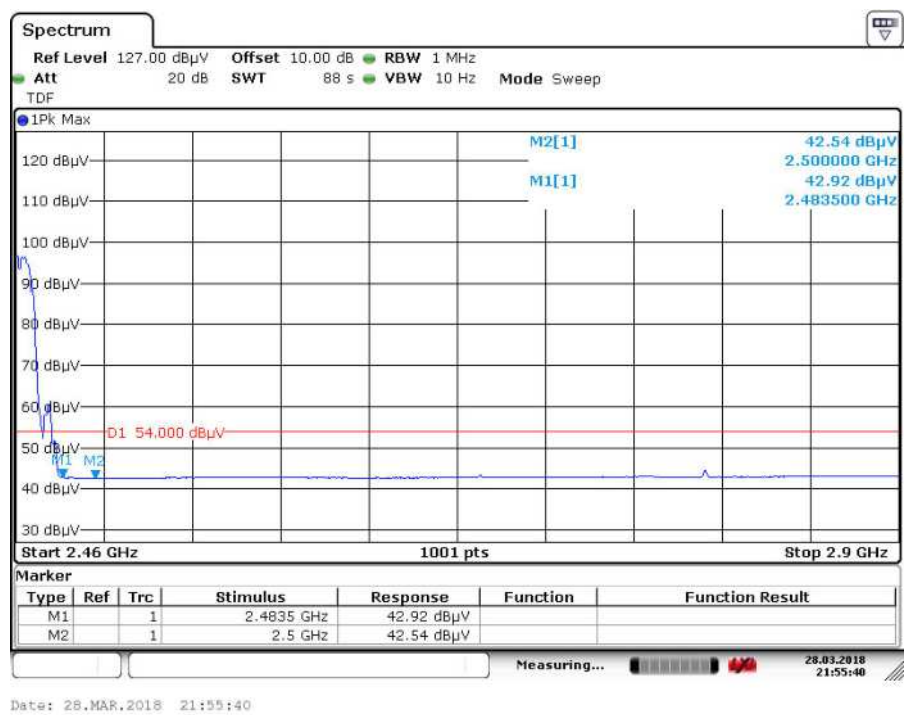


Low Channel (Ver)

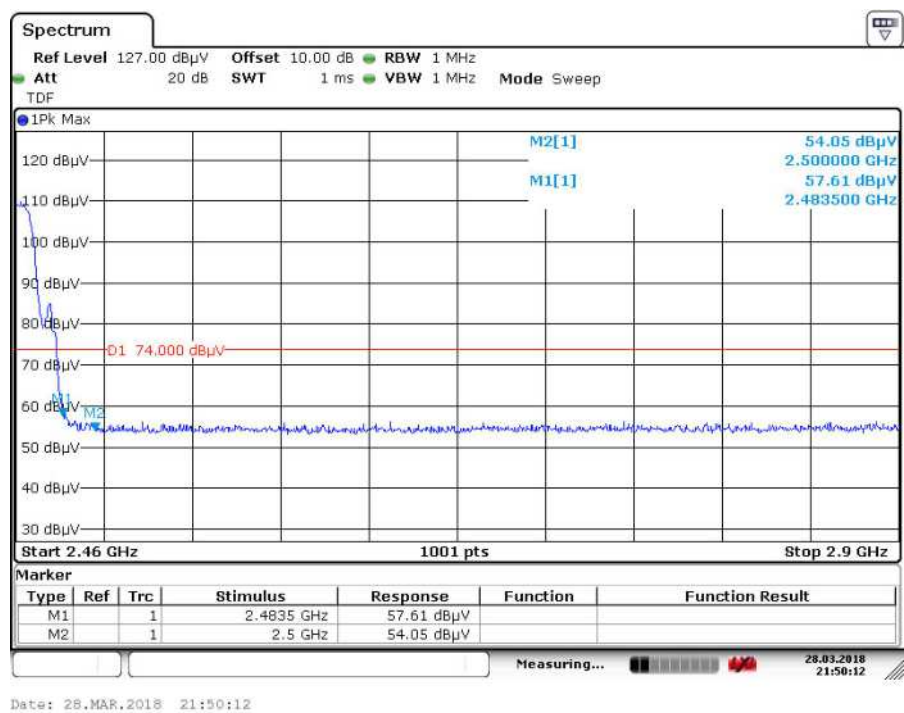
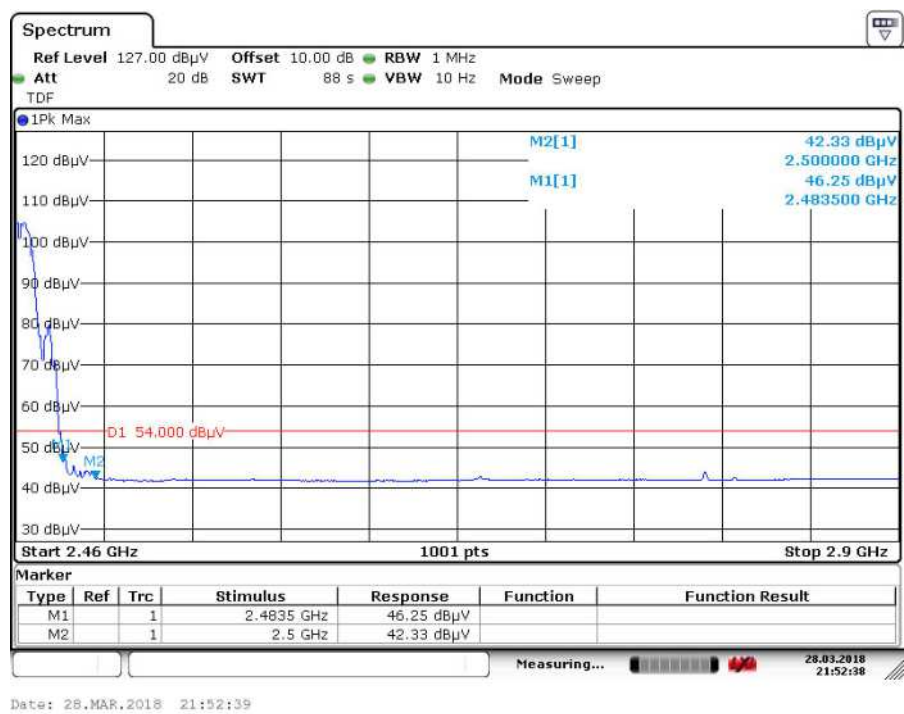


Radiated Bandedge 11b

High Channel (Hor)

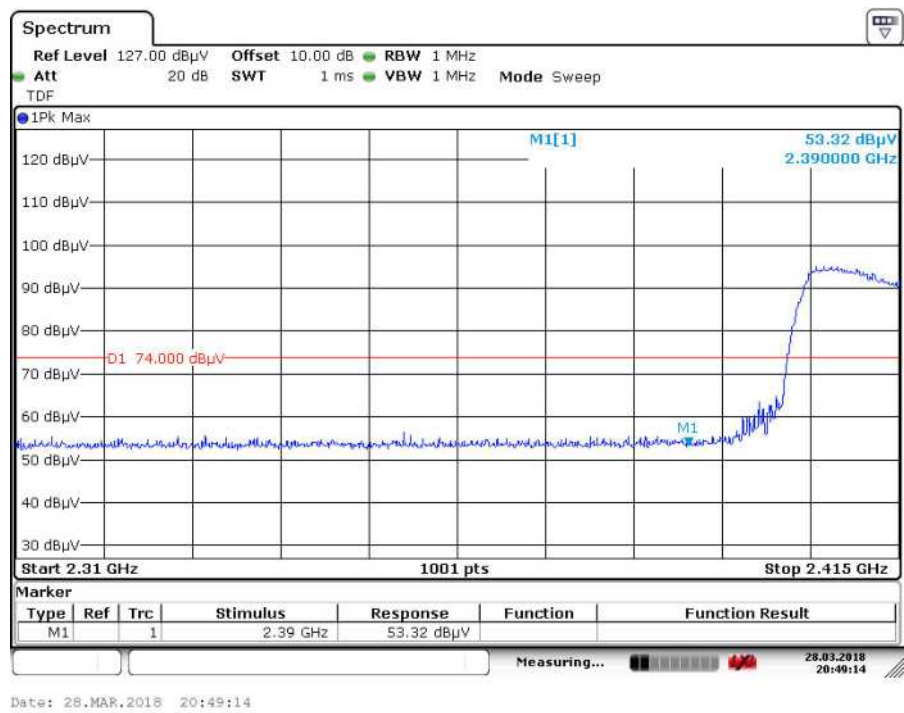
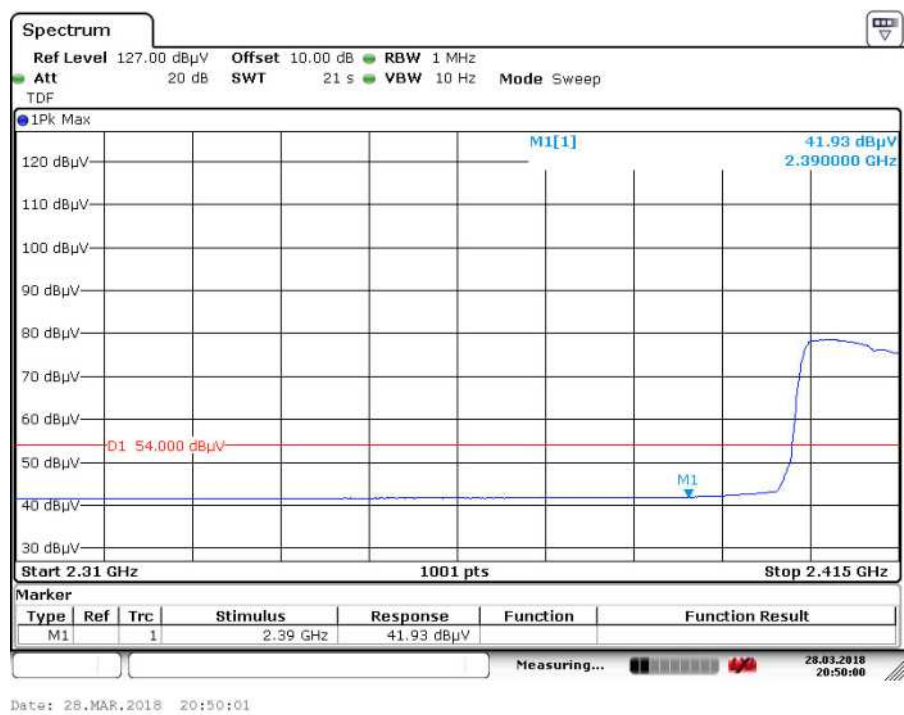


High Channel (Ver)

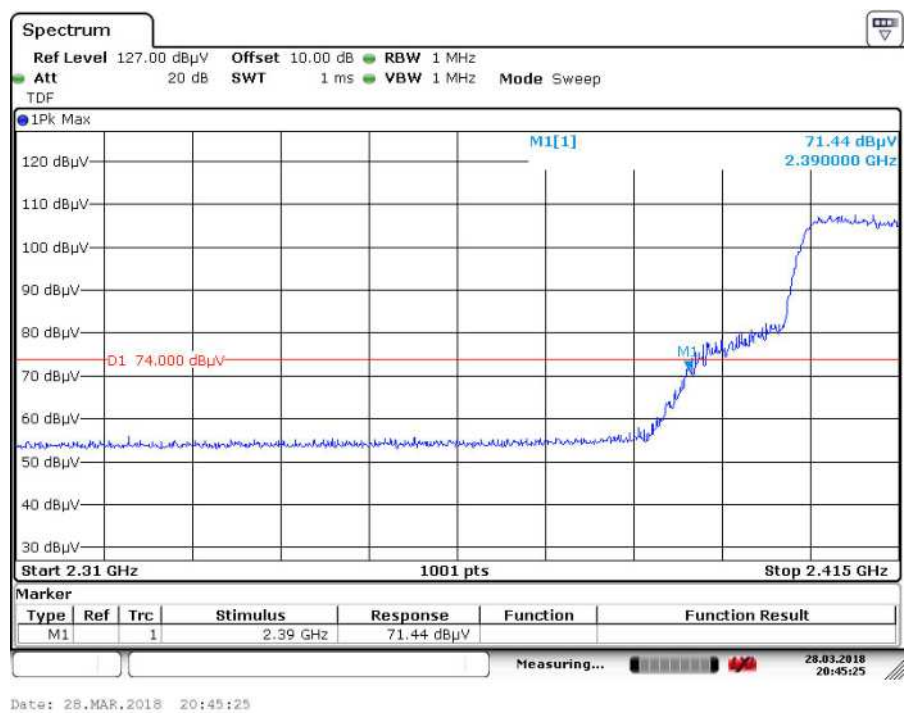
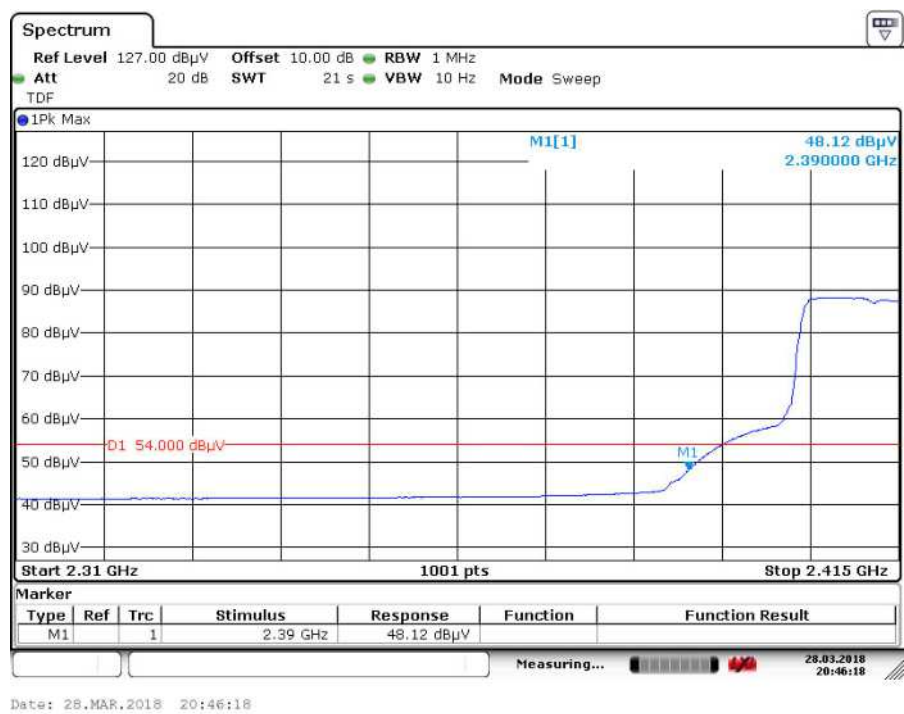


Radiated Bandedge 11g

Low Channel (Hor)

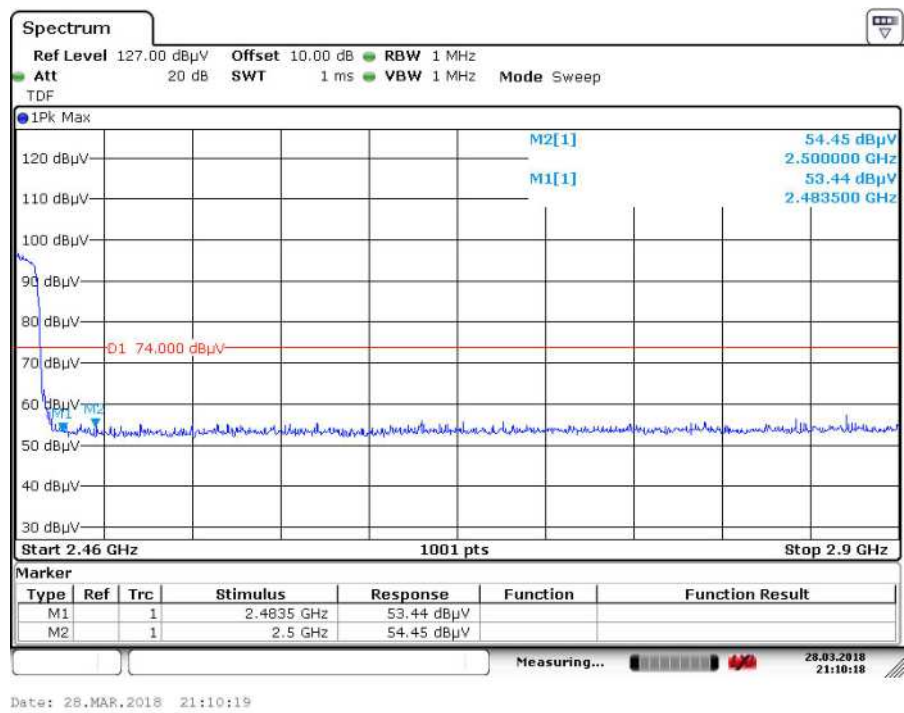
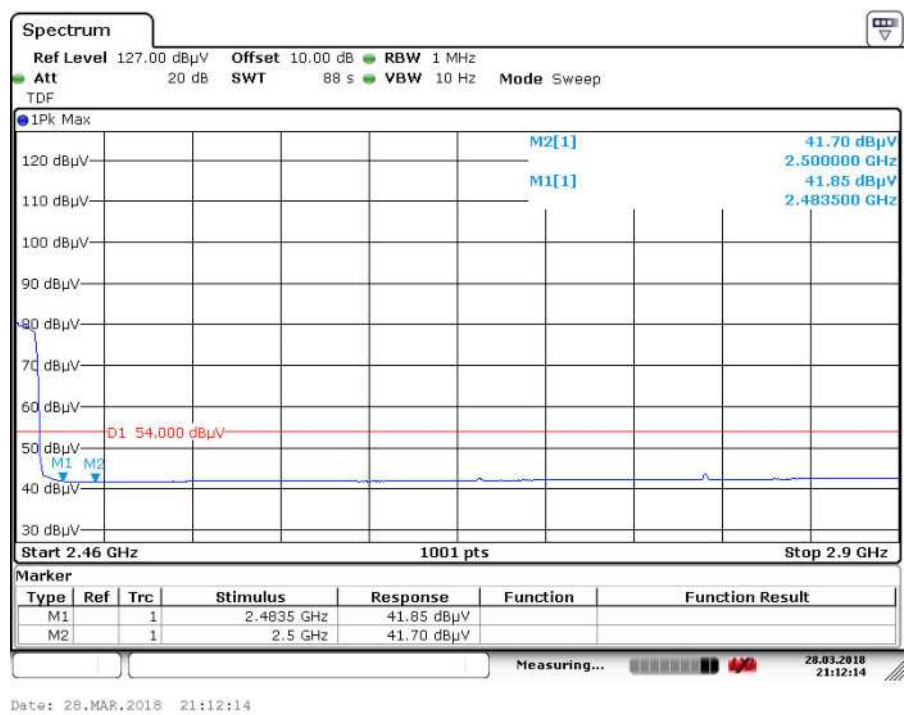


Low Channel (Ver)

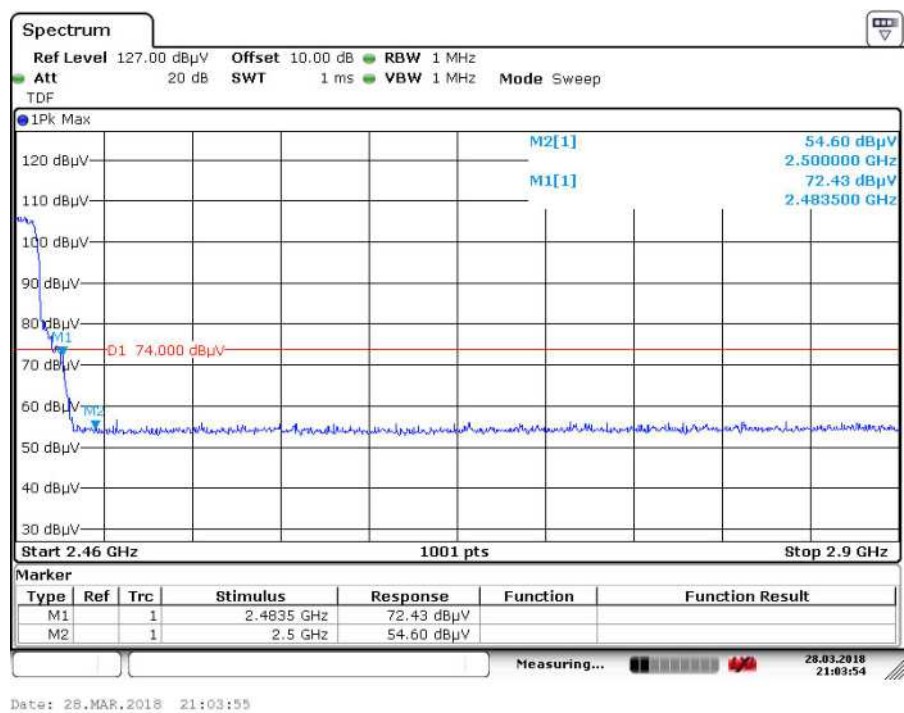
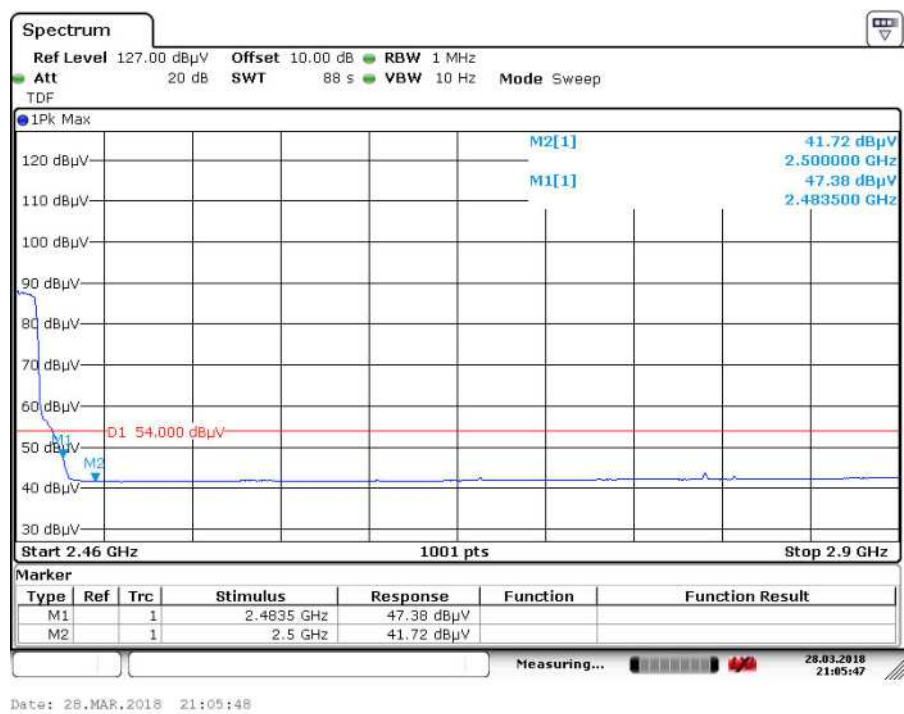


Radiated Bandedge 11g

High Channel (Hor)

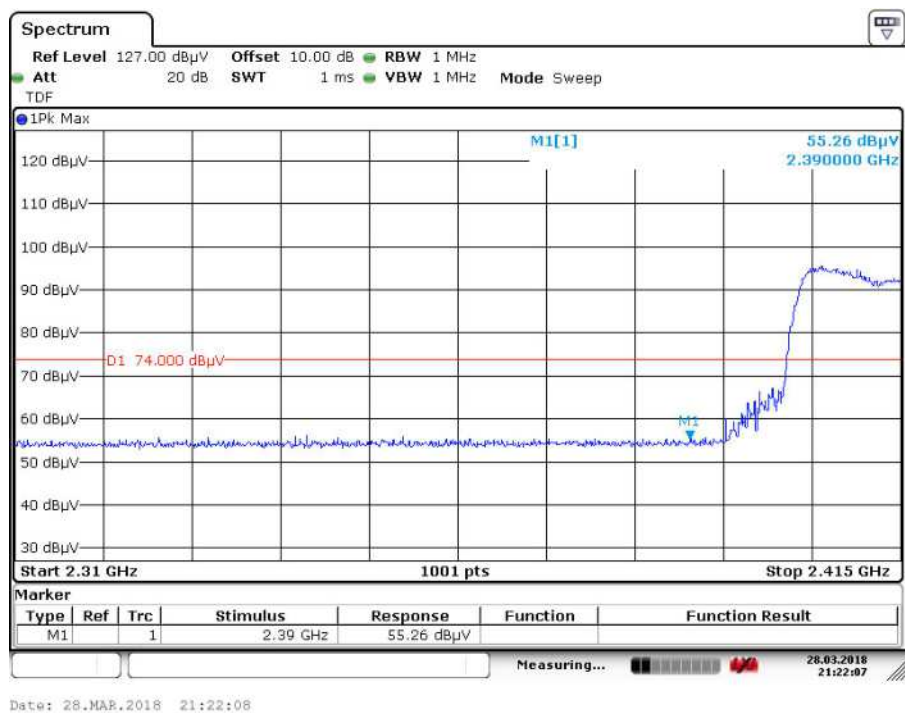
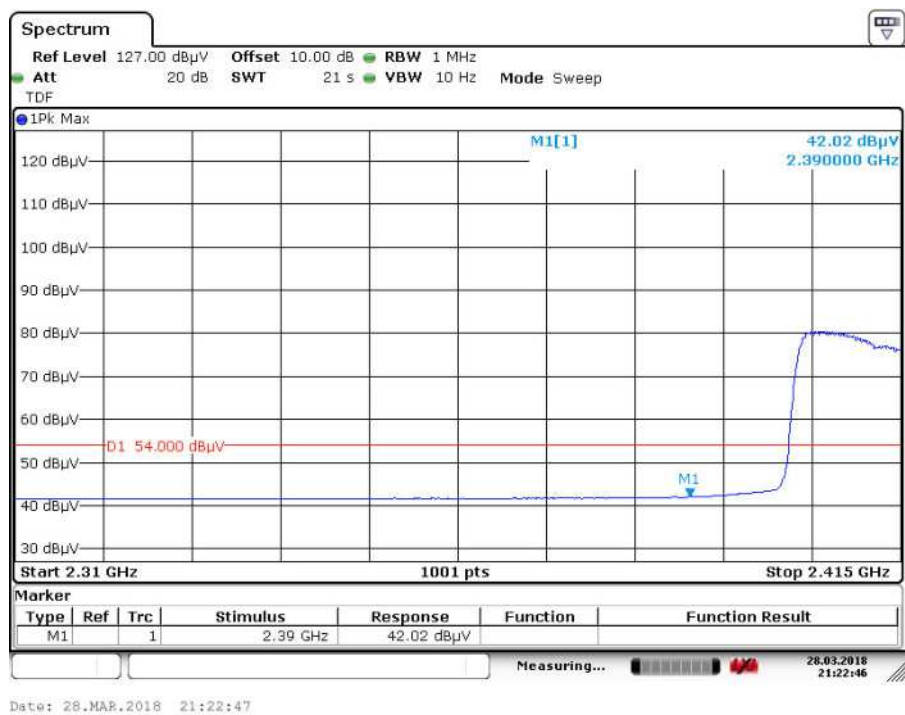


High Channel (Ver)

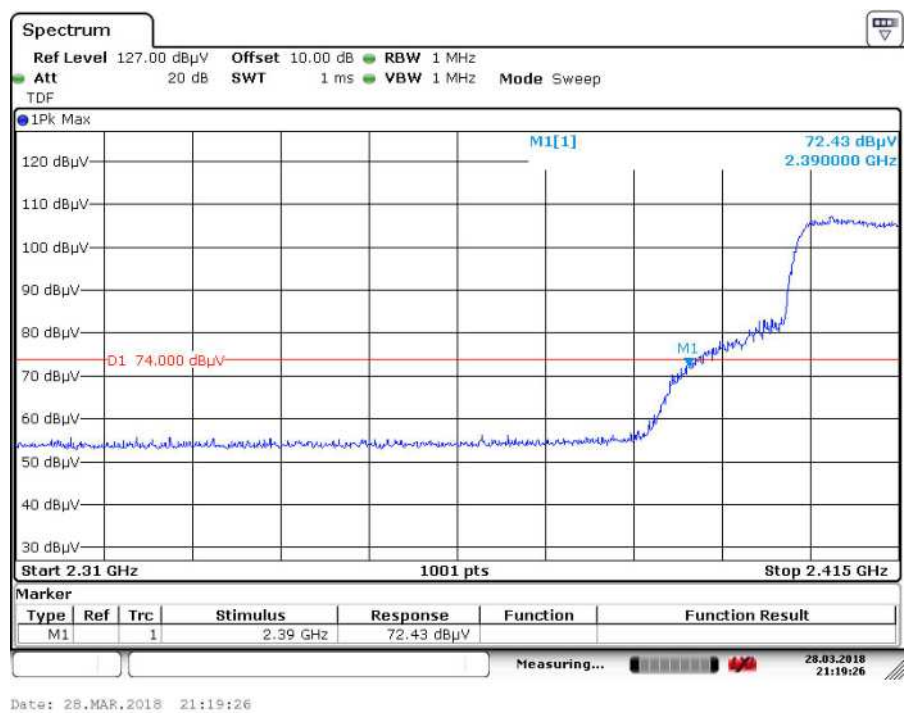
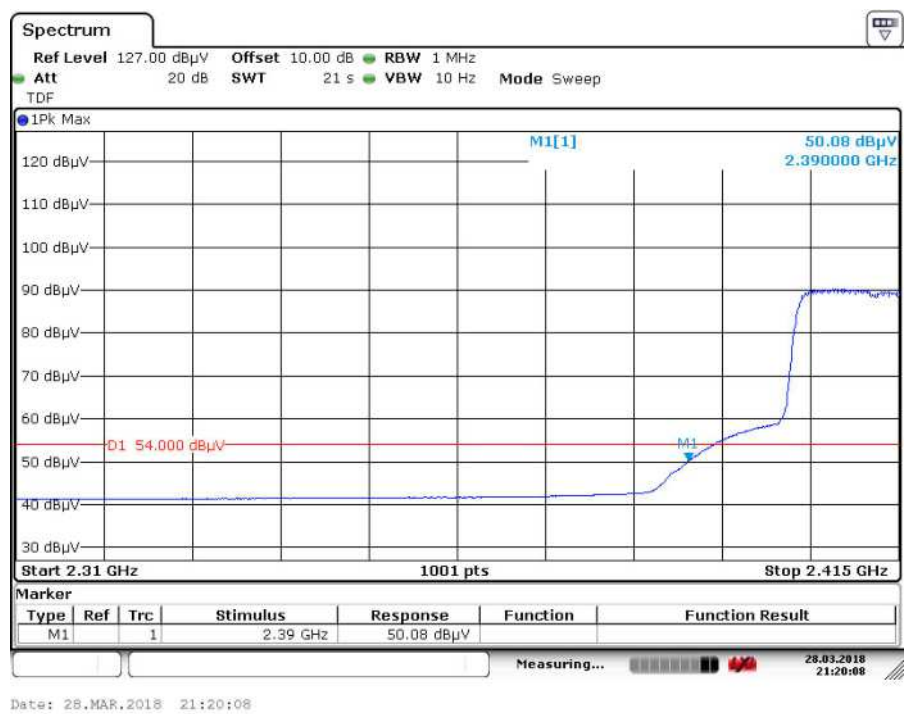


Radiated Bandedge 11n

Low Channel (Hor)

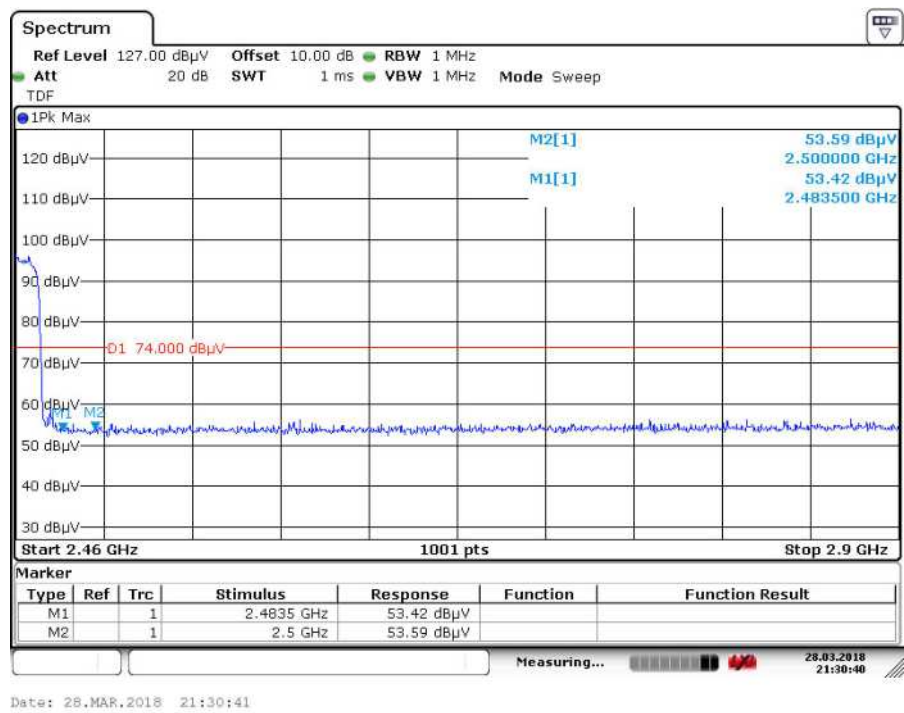
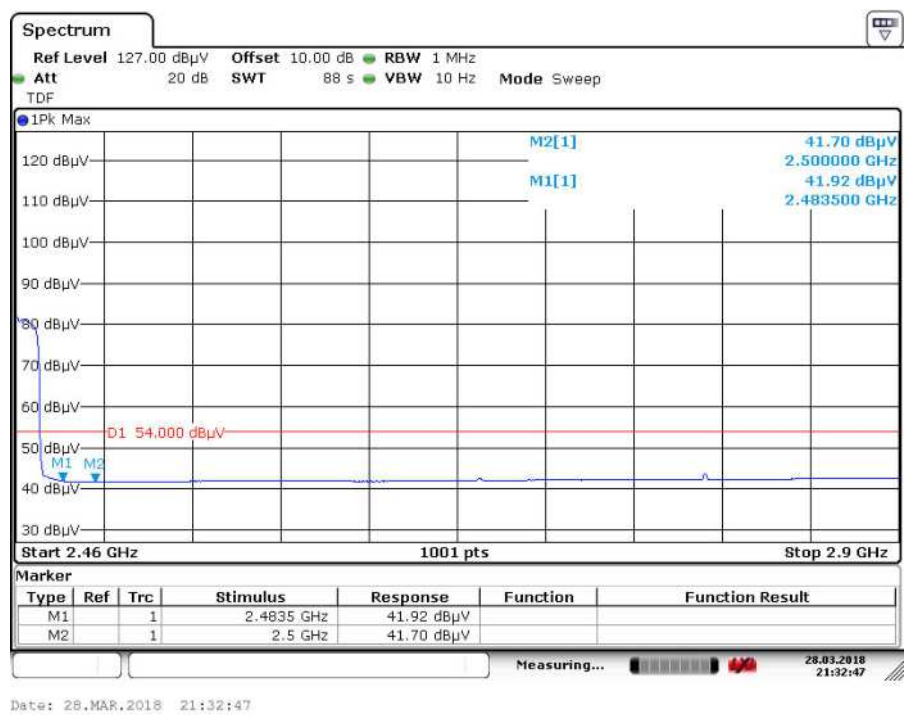


Low Channel (Ver)

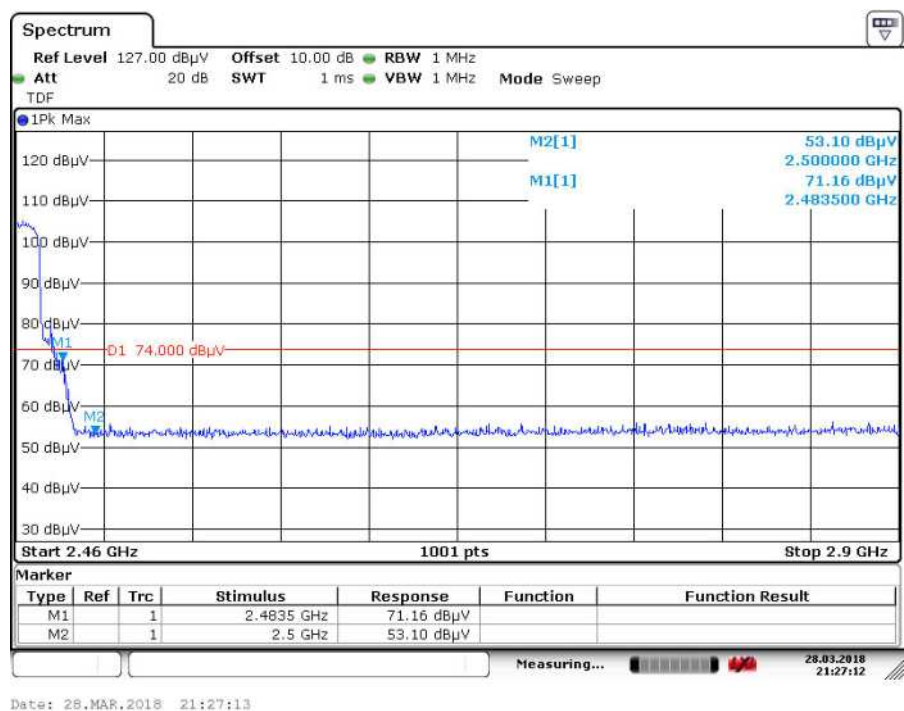
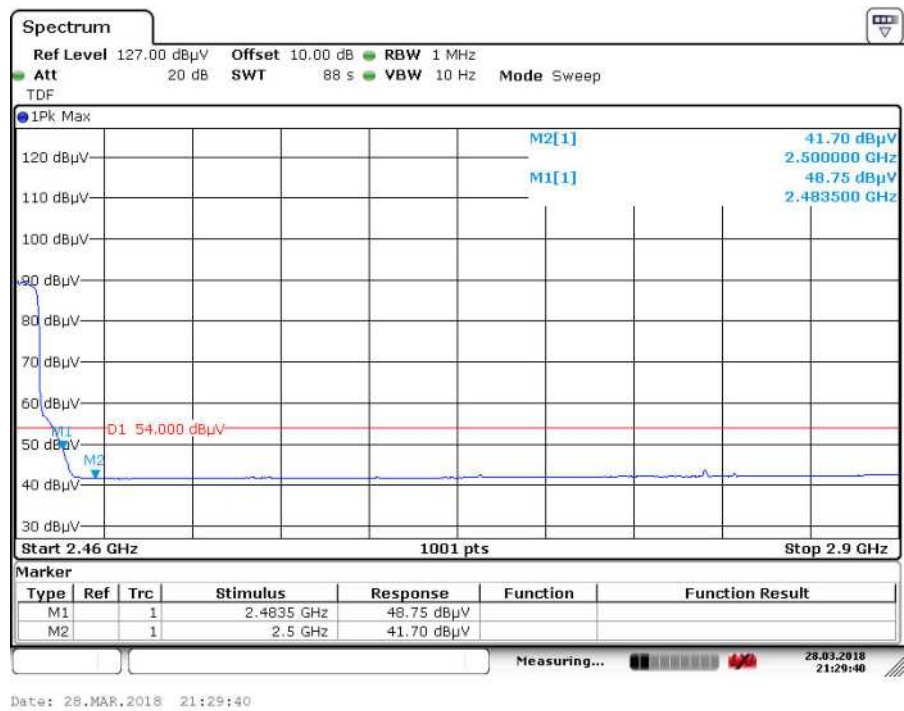


Radiated Bandedge 11n

High Channel (Hor)



High Channel (Ver)



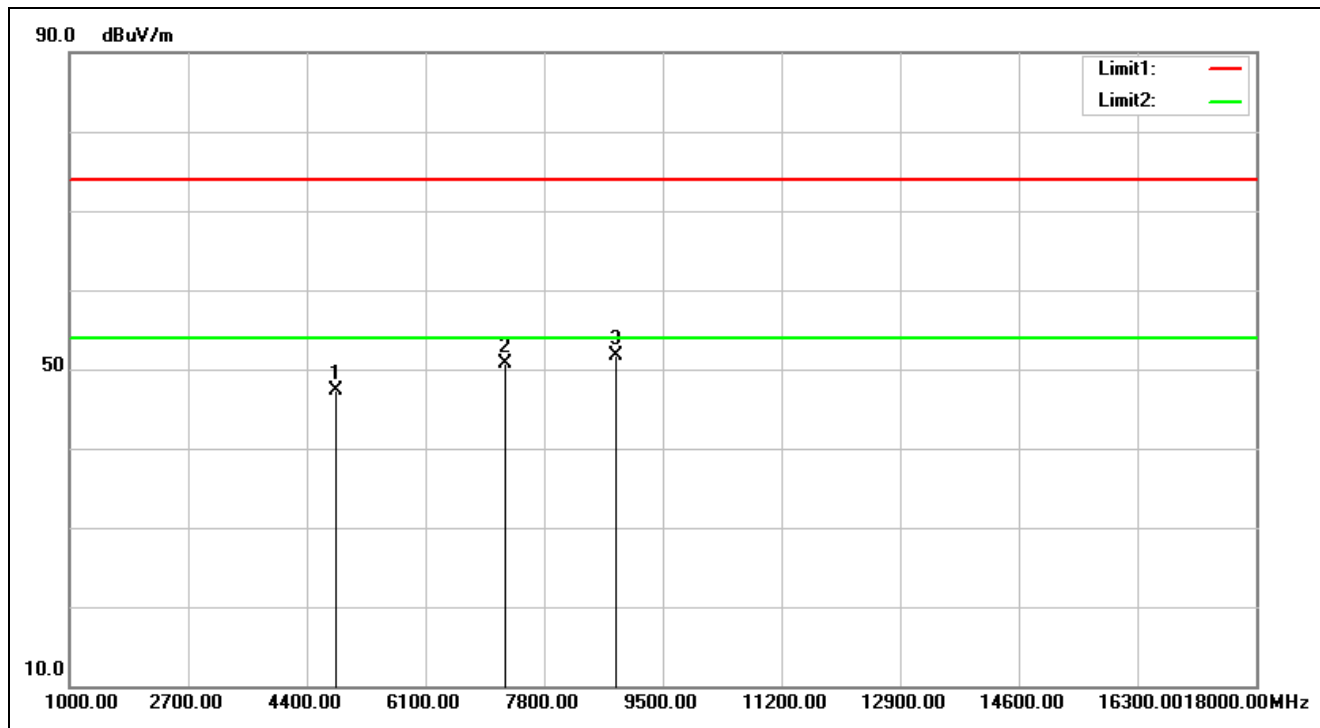
Spurious Emissions, TX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

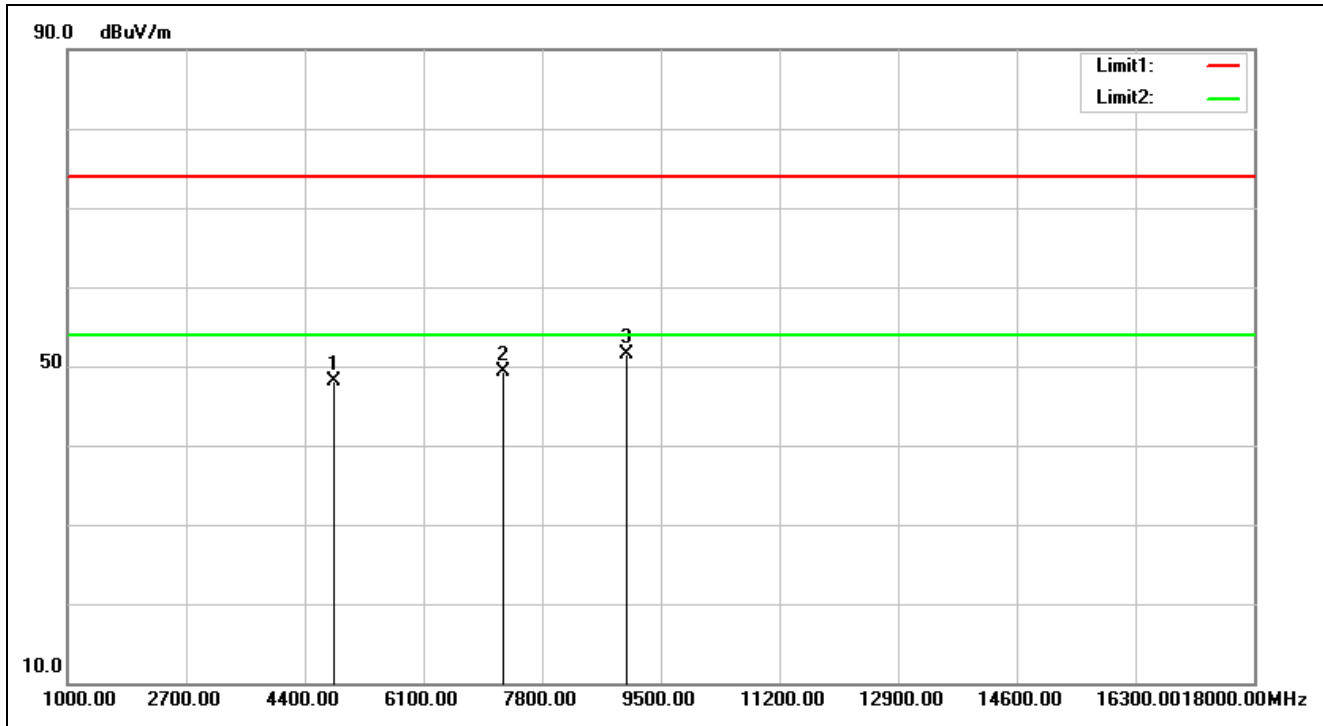
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



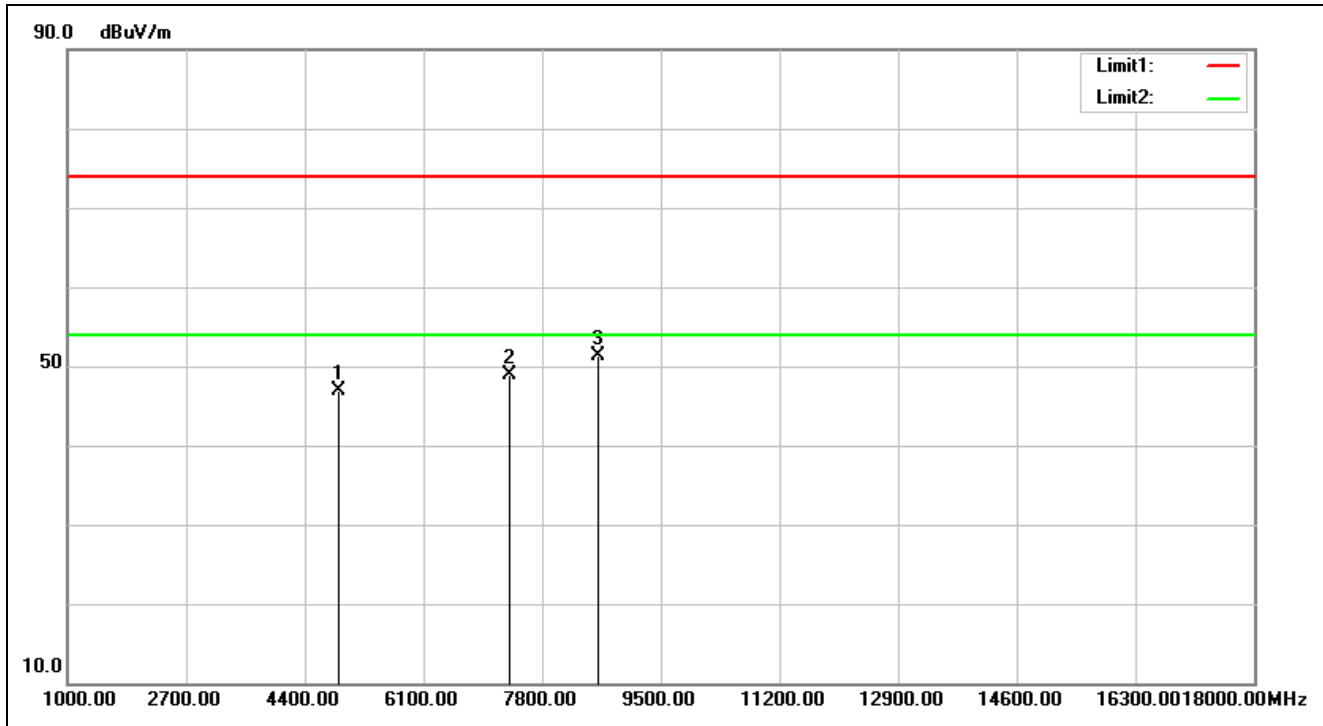
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/3/28 21:28:51
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	Power Setting -9 RFA-02-5-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	50.01	47.35	74.00	-26.65	peak		0	
2	7236.000	5.32	45.44	50.76	74.00	-23.24	peak		0	
3	8820.000	6.41	45.38	51.79	74.00	-22.21	peak	100	12	



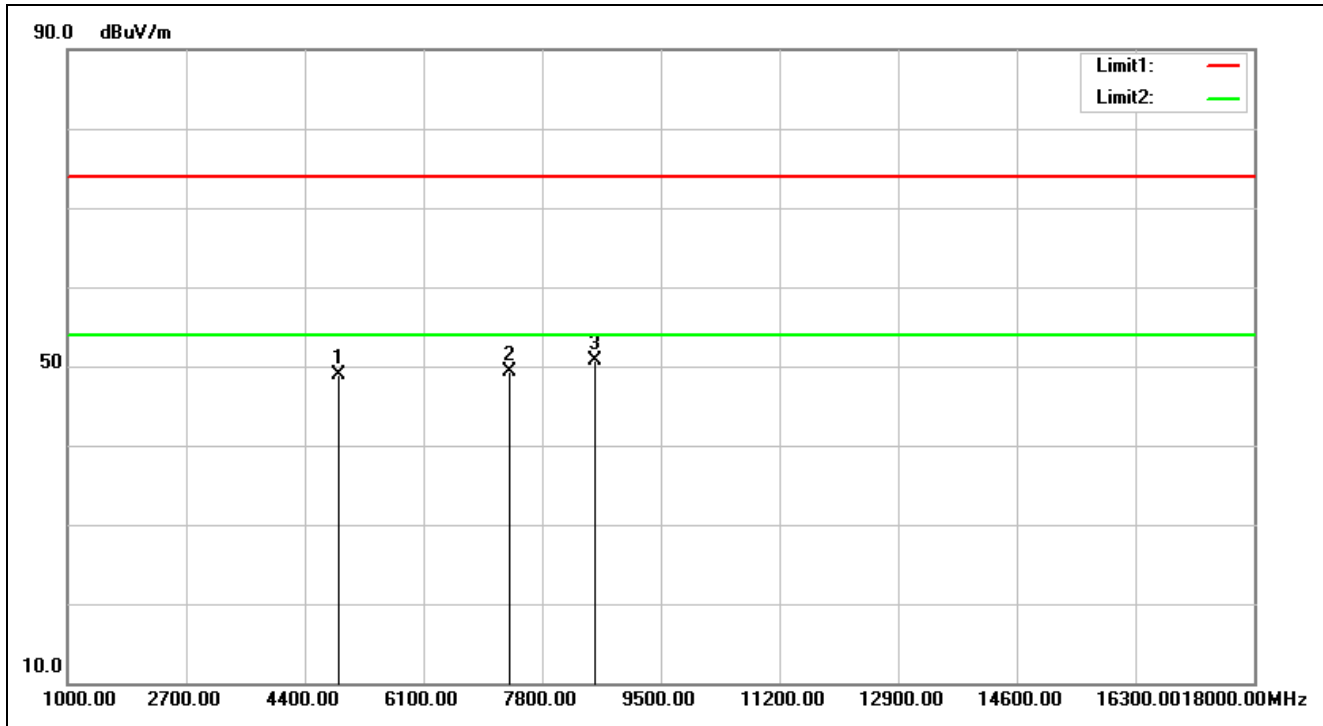
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/3/28 21:29:48
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	Power Setting -9 RFA-02-5-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	50.82	48.16	74.00	-25.84	peak			
2	7236.000	5.32	44.08	49.40	74.00	-24.60	peak			
3	9007.000	6.44	45.10	51.54	74.00	-22.46	peak	100	263	



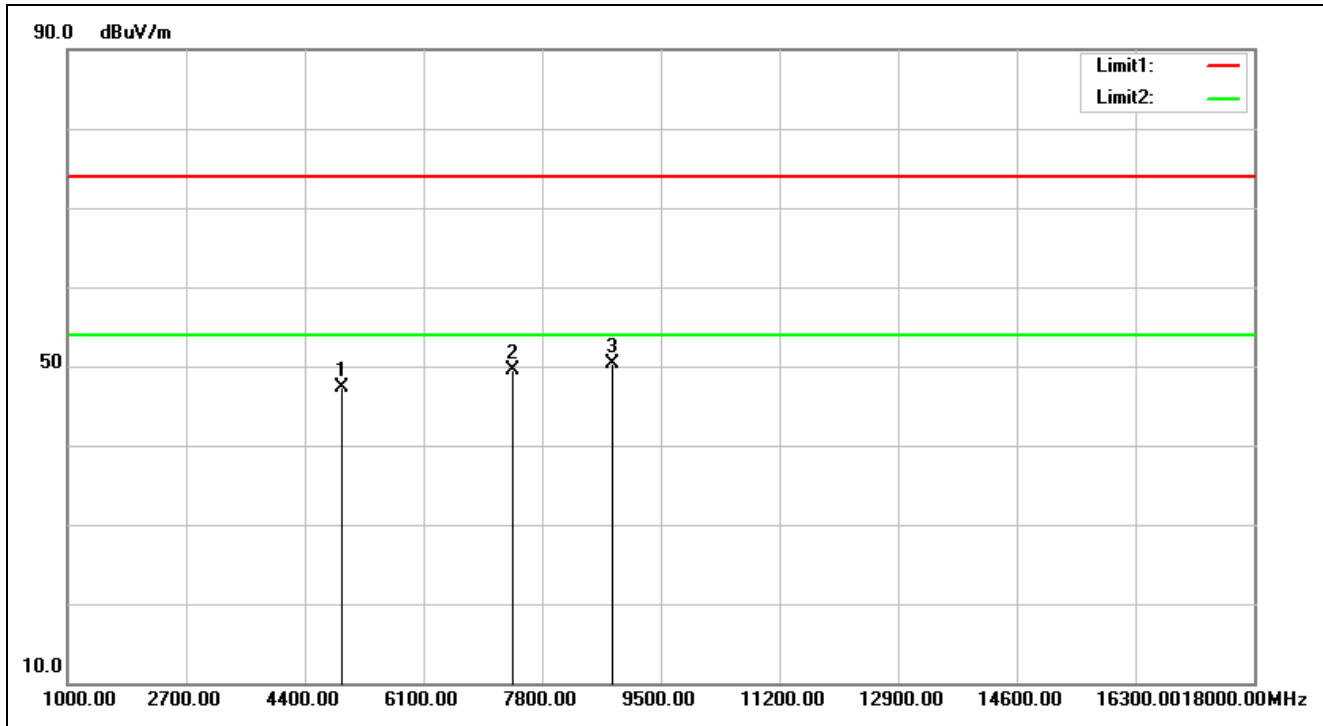
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/3/28 21:32:19
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9 RFA-02-5-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	49.53	47.00	74.00	-27.00	peak			
2	7311.000	5.52	43.45	48.97	74.00	-25.03	peak			
3	8599.000	6.39	45.01	51.40	74.00	-22.60	peak	100	151	



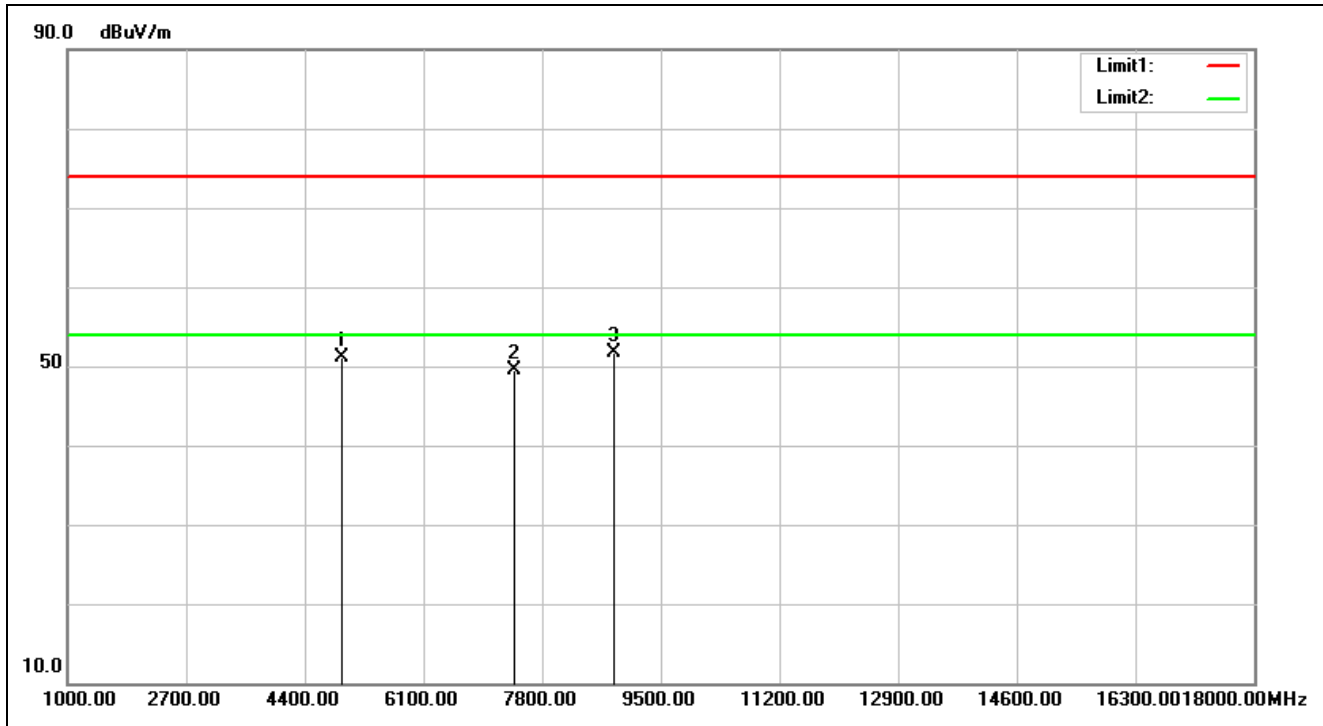
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/3/28 21:33:16
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9 RFA-02-5-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	51.50	48.97	74.00	-25.03	peak			
2	7311.000	5.52	43.86	49.38	74.00	-24.62	peak			
3	8548.000	6.38	44.38	50.76	74.00	-23.24	peak	100	166	



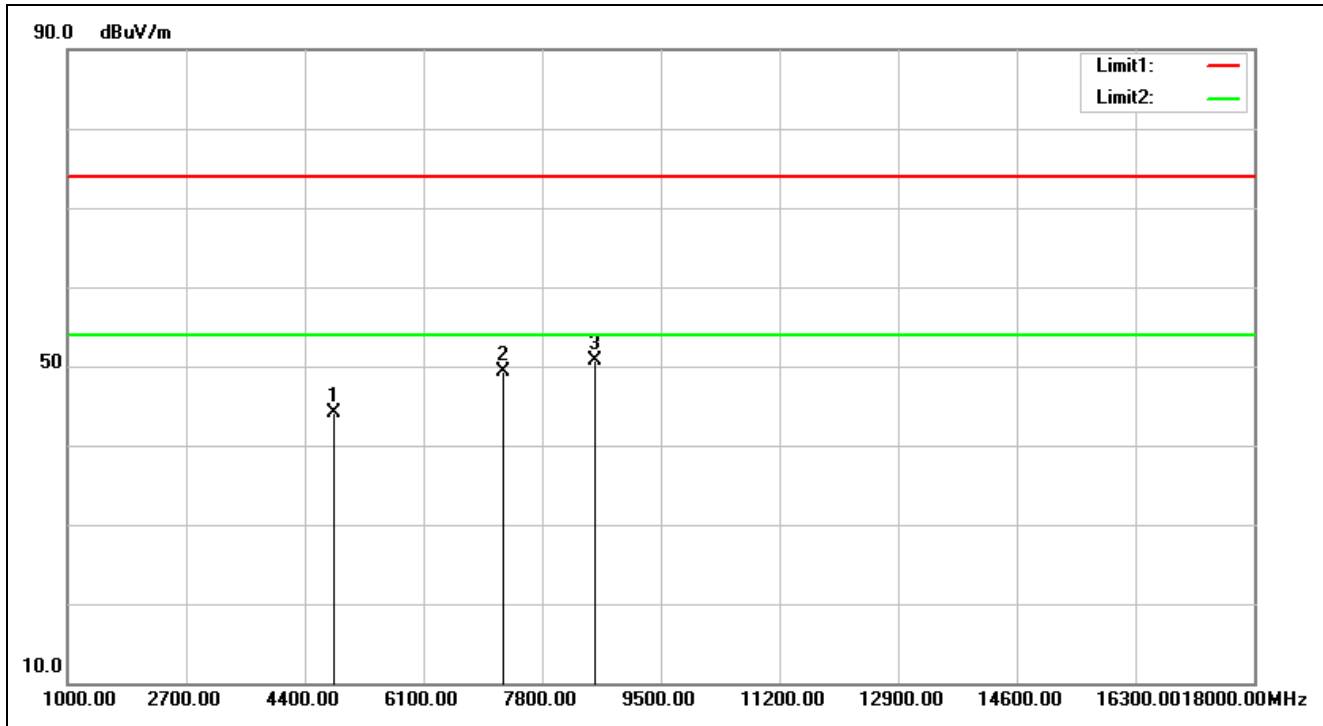
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/3/28 21:35:53
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	Power Setting -9 RFA-02-5-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	49.78	47.39	74.00	-26.61	peak			
2	7386.000	5.70	43.87	49.57	74.00	-24.43	peak			
3	8803.000	6.42	43.85	50.27	74.00	-23.73	peak	100	270	



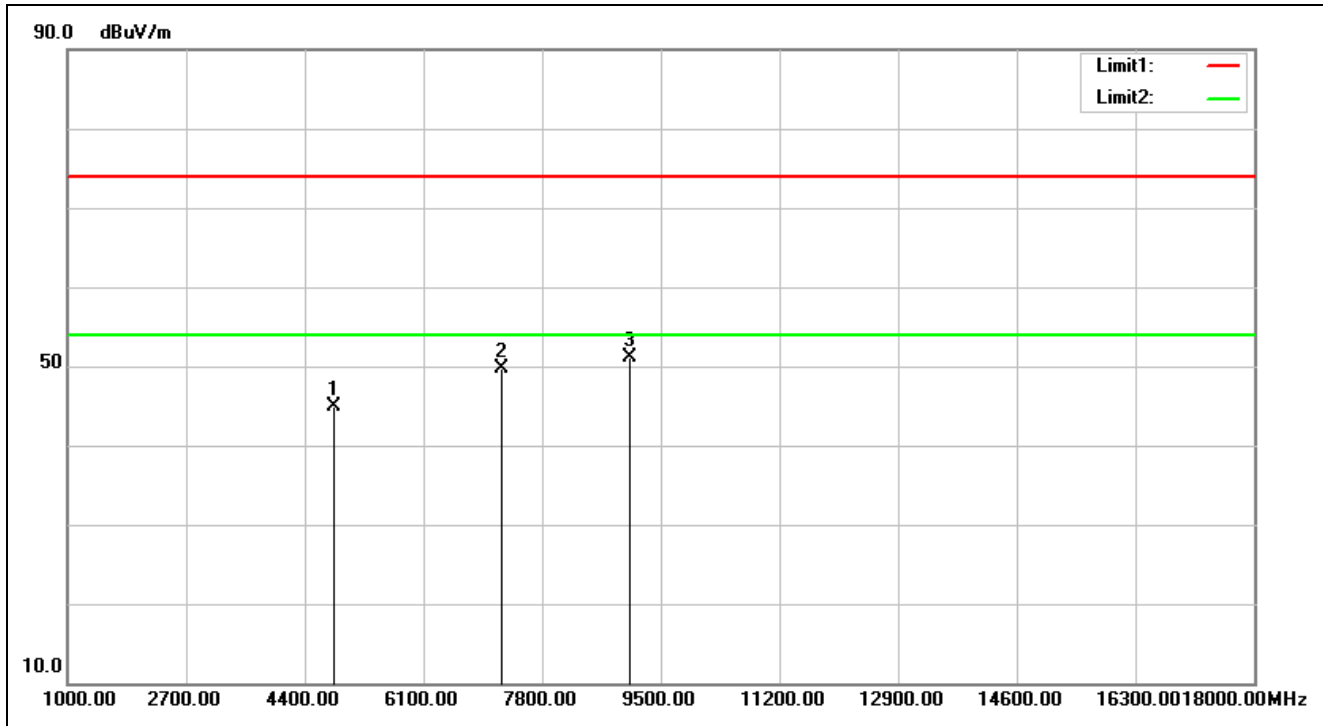
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/3/28 21:36:50
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	Power Setting -9 RFA-02-5-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	53.40	51.01	74.00	-22.99	peak	100	304	
2	7386.000	5.70	43.85	49.55	74.00	-24.45	peak			
3	8837.000	6.42	45.25	51.67	74.00	-22.33	peak	100	226	



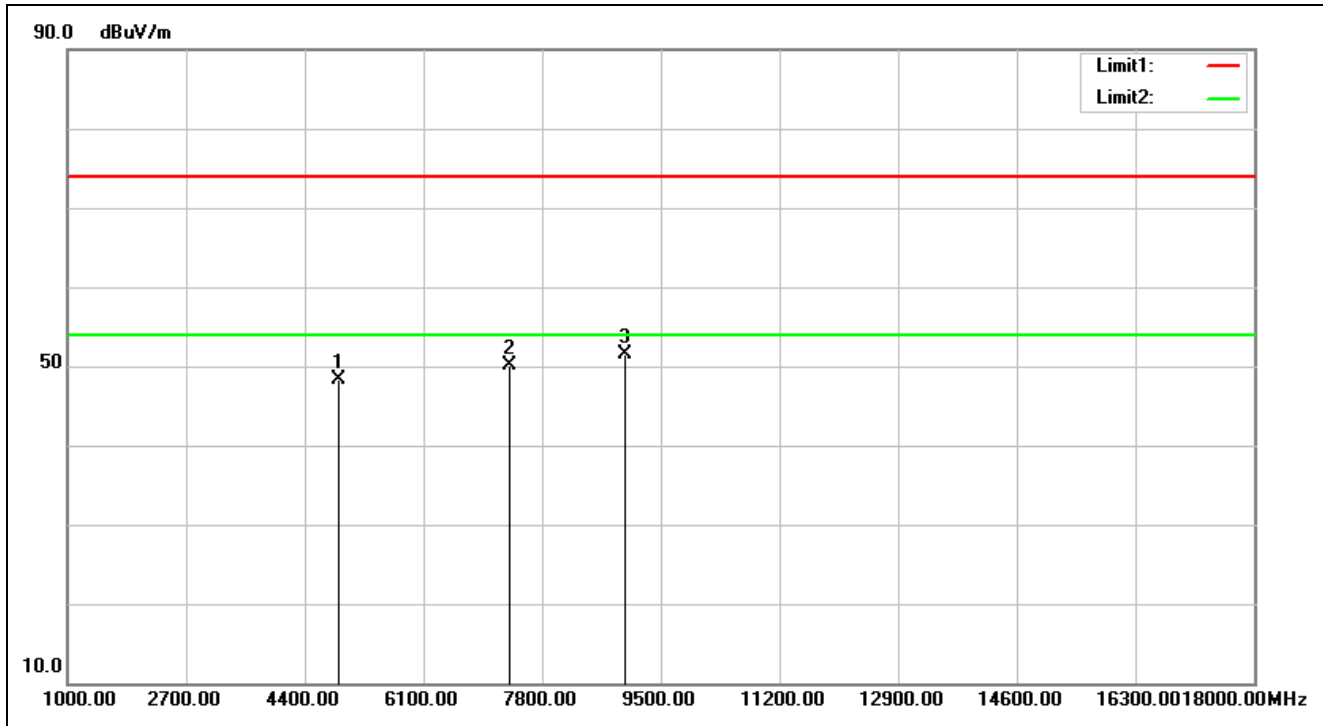
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/3/28 21:55:46
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	Power Setting -13 RFA-02-5-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	46.81	44.15	74.00	-29.85	peak			
2	7236.000	5.32	44.04	49.36	74.00	-24.64	peak			
3	8548.000	6.38	44.38	50.76	74.00	-23.24	peak	100	207	



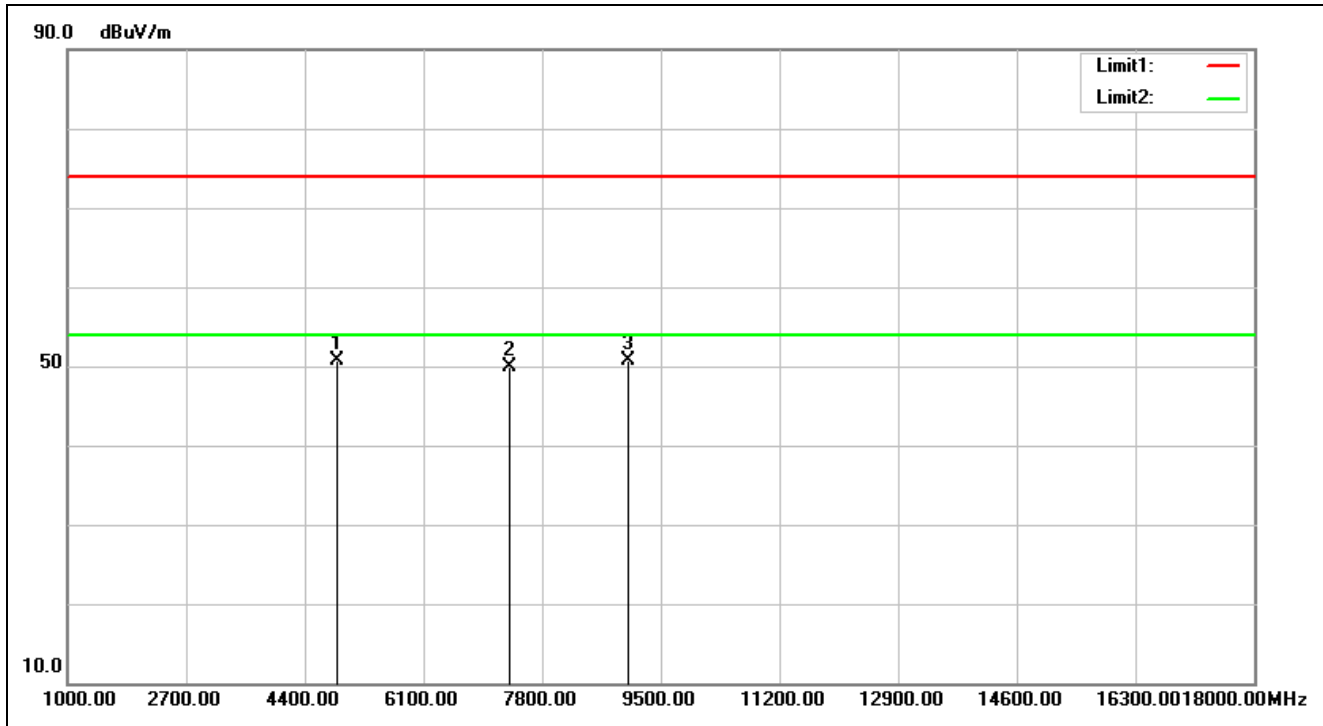
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/3/28 21:56:42
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	Power Setting -13 RFA-02-5-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	47.50	44.84	74.00	-29.16	peak			
2	7236.000	5.32	44.33	49.65	74.00	-24.35	peak			
3	9058.000	6.46	44.56	51.02	74.00	-22.98	peak	100	309	



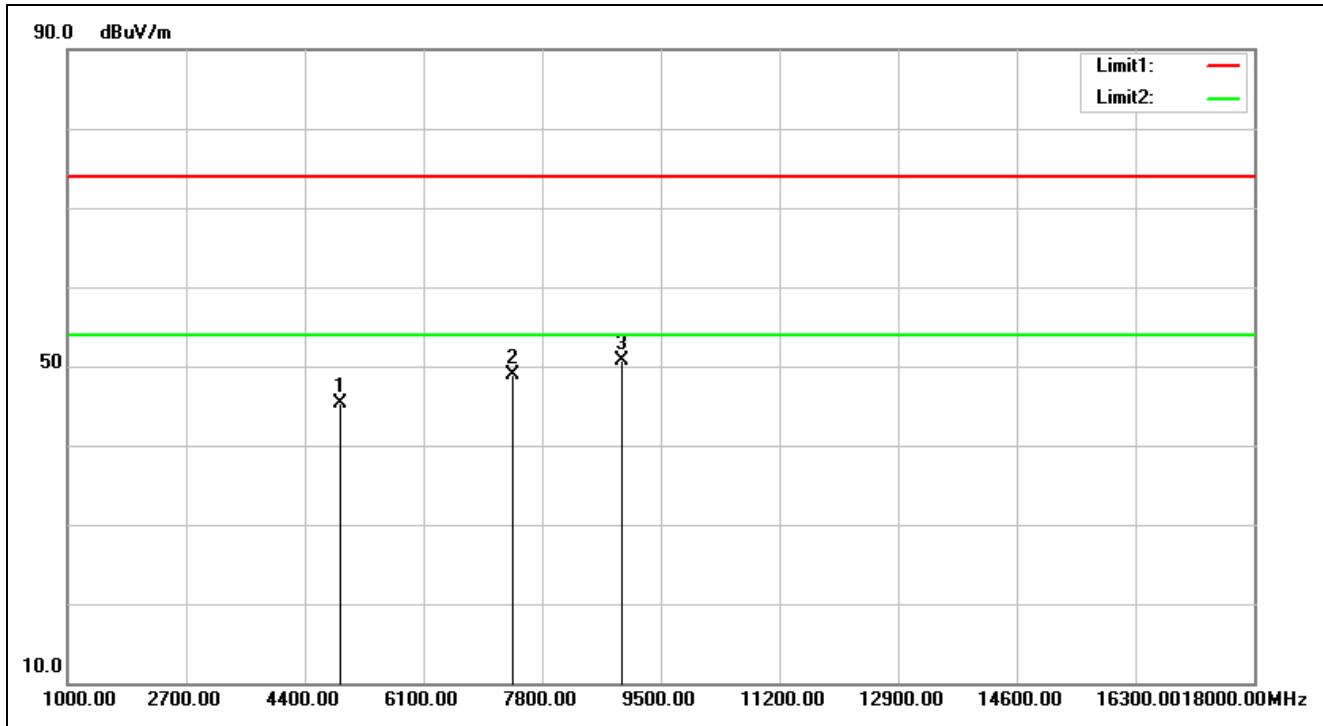
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/3/28 21:59:01
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4 RFA-02-5-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	50.86	48.33	74.00	-25.67	peak	100	323	
2	7311.000	5.52	44.57	50.09	74.00	-23.91	peak			
3	8990.000	6.44	45.08	51.52	74.00	-22.48	peak	100	82	



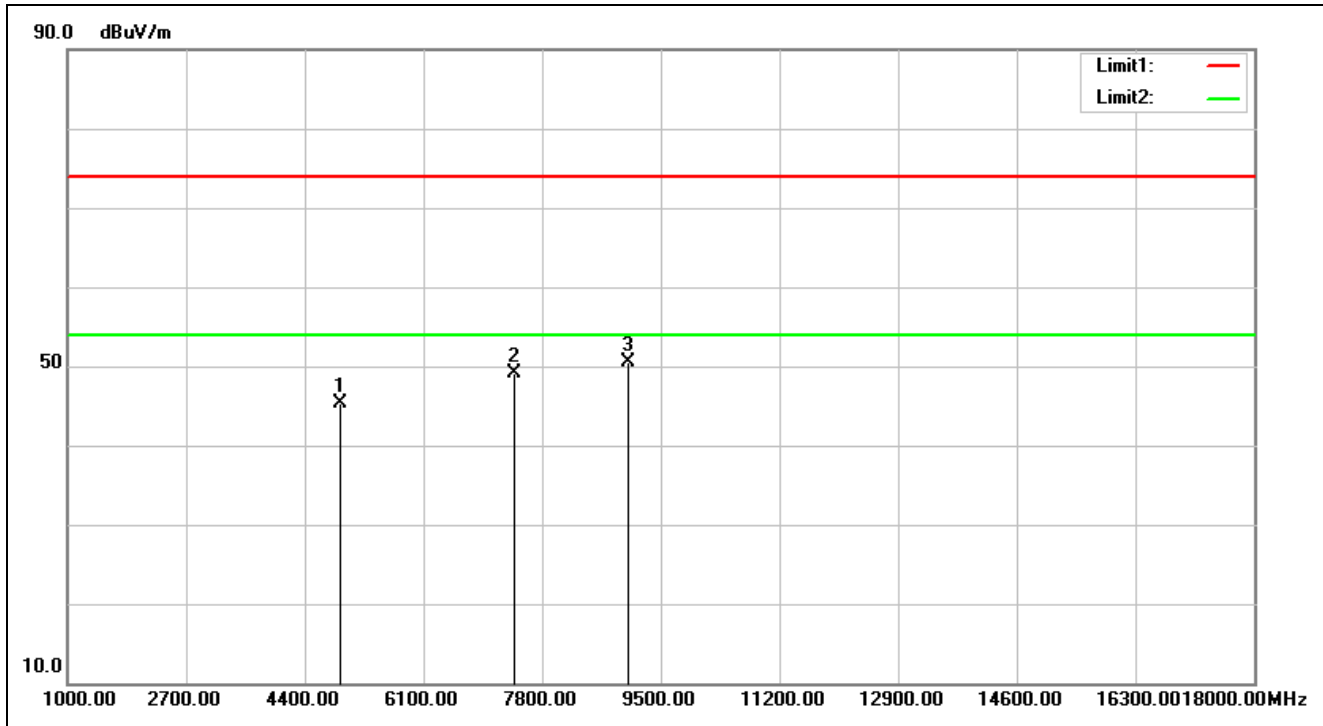
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/3/28 21:59:57
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4 RFA-02-5-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	53.25	50.72	74.00	-23.28	peak	100	331	
2	7311.000	5.52	44.40	49.92	74.00	-24.08	peak			
3	9024.000	6.45	44.23	50.68	74.00	-23.32	peak	100	313	



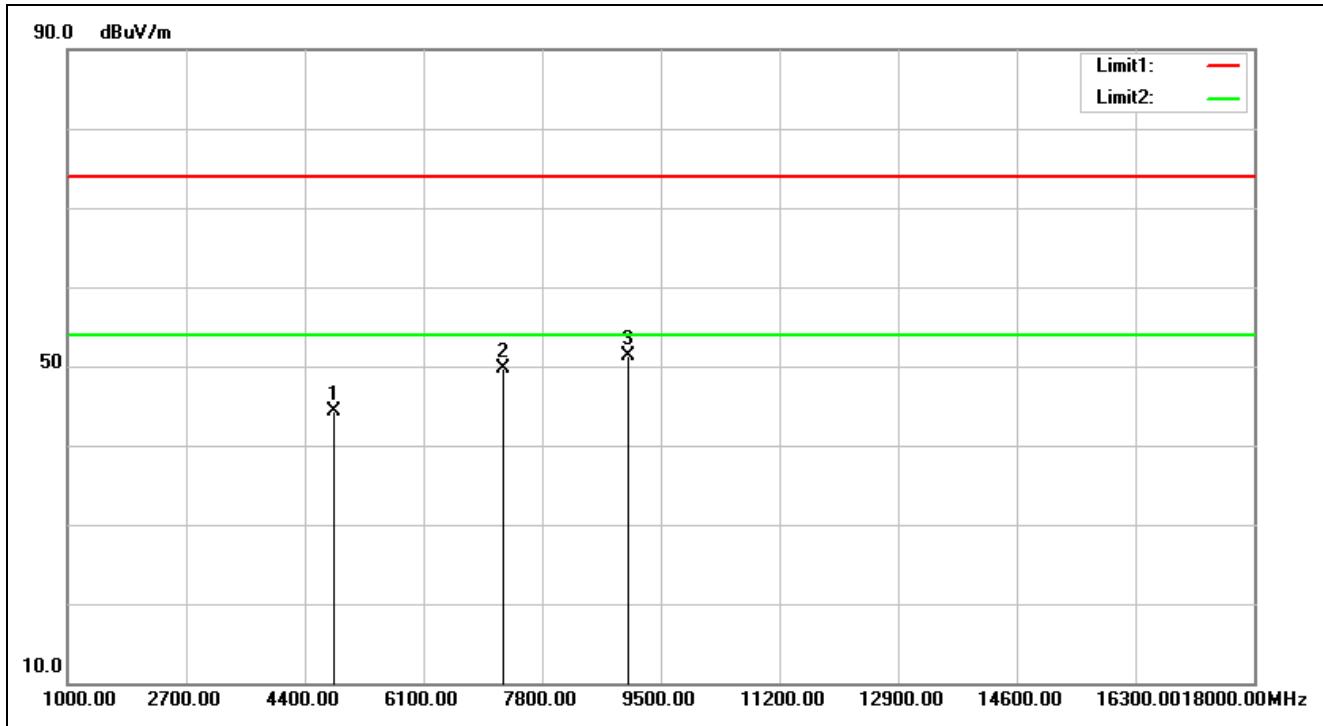
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/3/28 22:03:08
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	Power Setting -13 RFA-02-5-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	47.72	45.33	74.00	-28.67	peak			
2	7386.000	5.70	43.24	48.94	74.00	-25.06	peak			
3	8939.000	6.43	44.21	50.64	74.00	-23.36	peak	100	285	



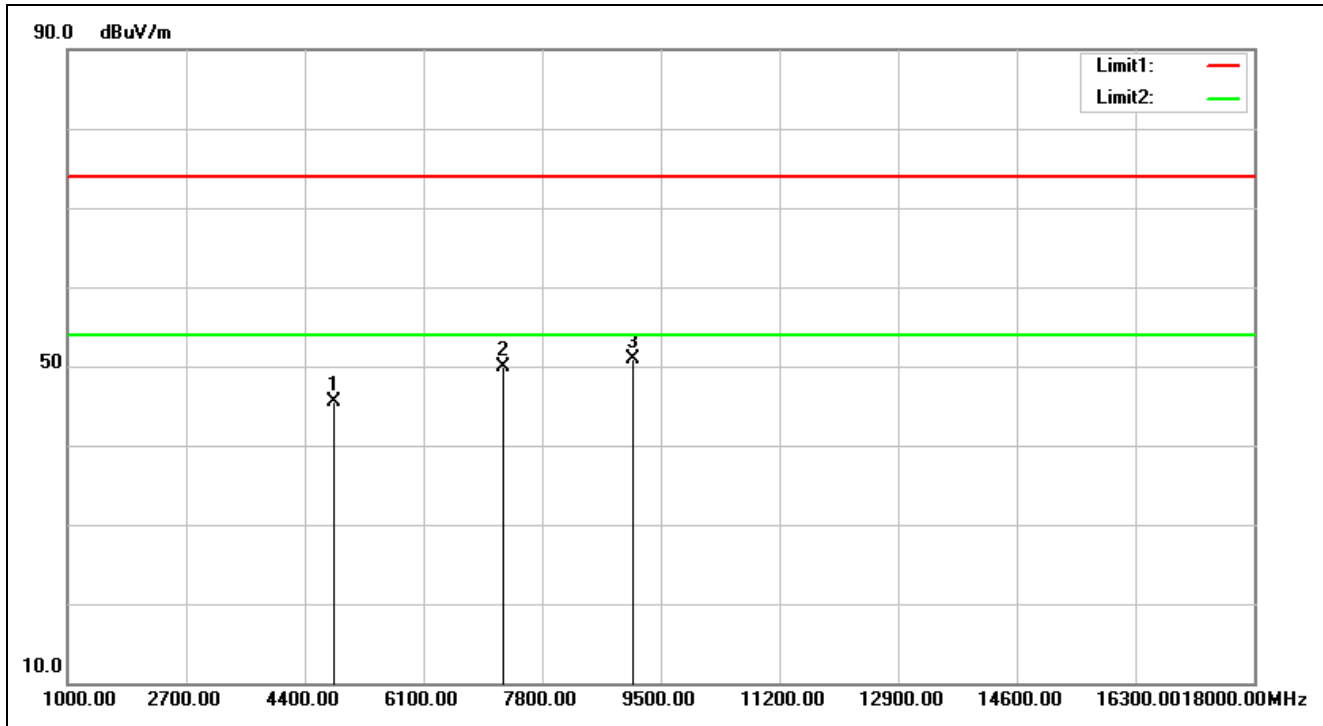
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/3/28 22:04:05
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	Power Setting -13 RFA-02-5-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	47.74	45.35	74.00	-28.65	peak			
2	7386.000	5.70	43.44	49.14	74.00	-24.86	peak			
3	9041.000	6.45	44.02	50.47	74.00	-23.53	peak	100	297	



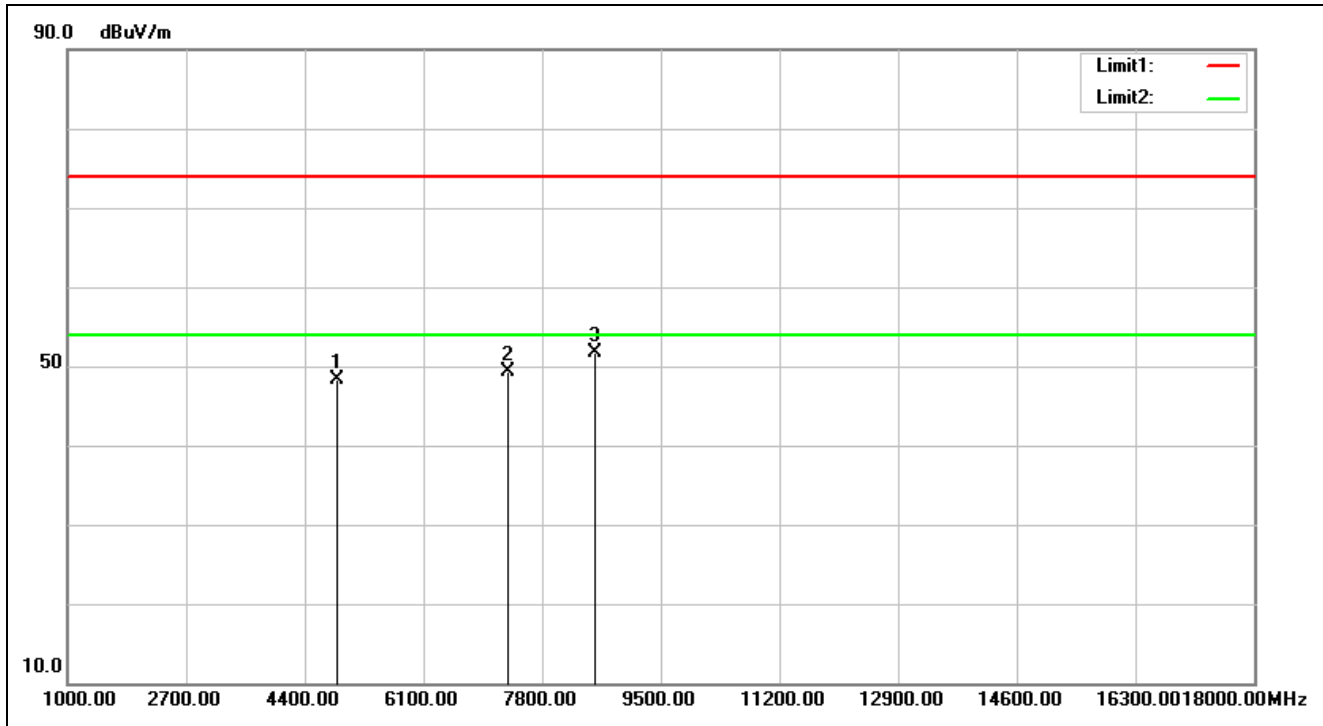
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/3/28 22:06:38
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	Power Setting -13 RFA-02-5-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	46.92	44.26	74.00	-29.74	peak			
2	7236.000	5.32	44.33	49.65	74.00	-24.35	peak			
3	9041.000	6.45	44.80	51.25	74.00	-22.75	peak	100	85	



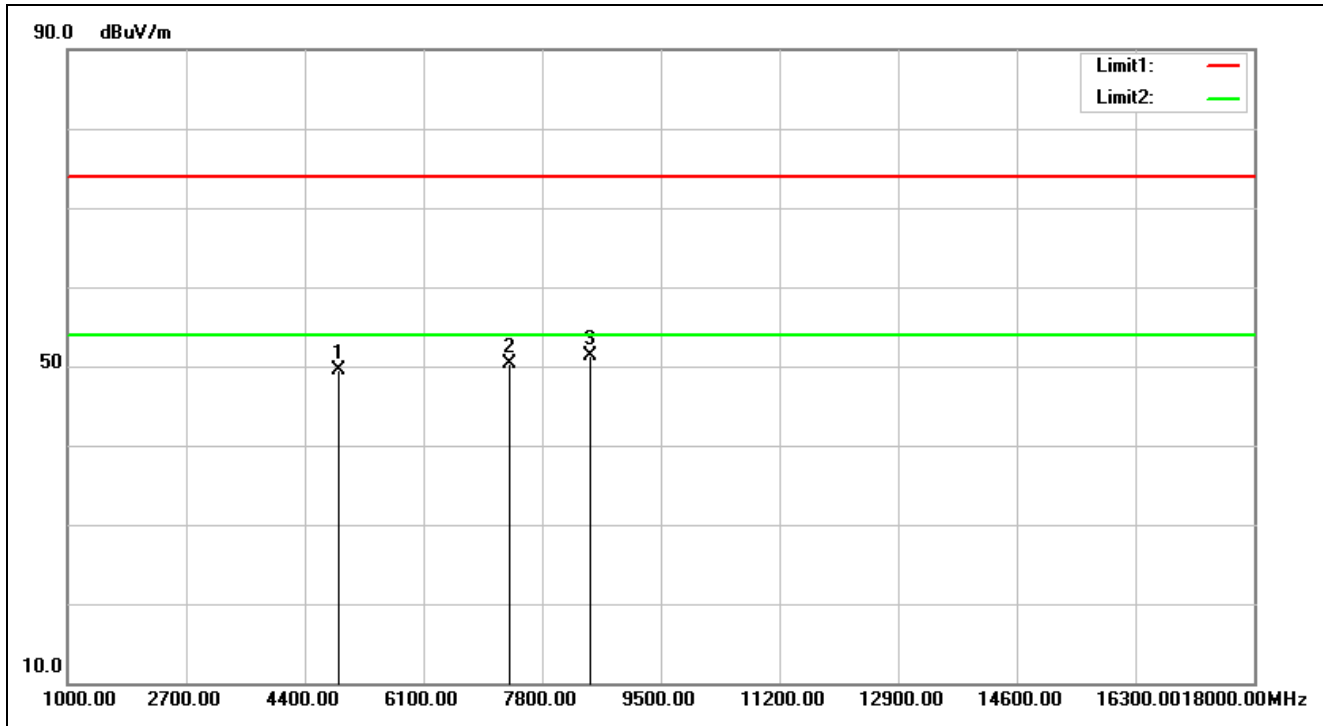
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/3/28 22:07:35
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	Power Setting -13 RFA-02-5-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	48.15	45.49	74.00	-28.51	peak			
2	7236.000	5.32	44.51	49.83	74.00	-24.17	peak			
3	9109.000	6.47	44.50	50.97	74.00	-23.03	peak	100	253	



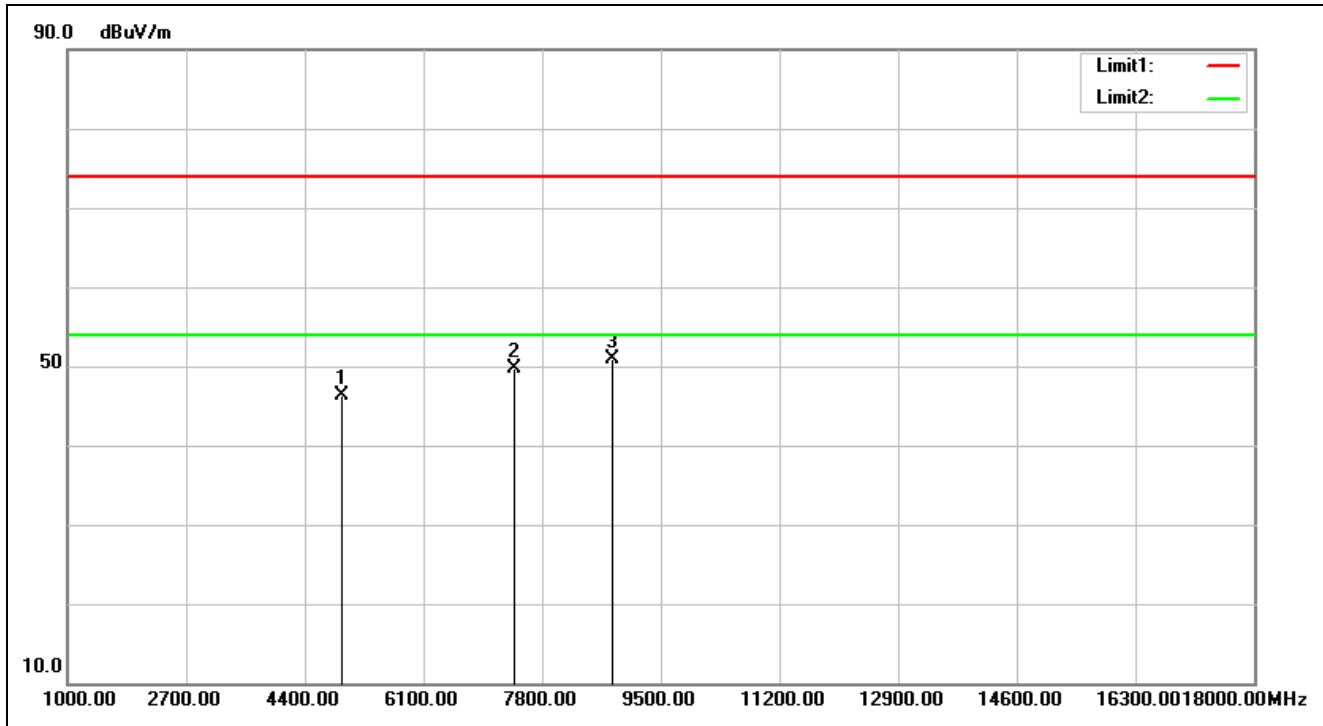
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/3/28 22:10:09
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	Power Setting -4 RFA-02-5-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	50.79	48.26	74.00	-25.74	peak	100	322	
2	7311.000	5.52	43.75	49.27	74.00	-24.73	peak			
3	8548.000	6.38	45.27	51.65	74.00	-22.35	peak	100	338	



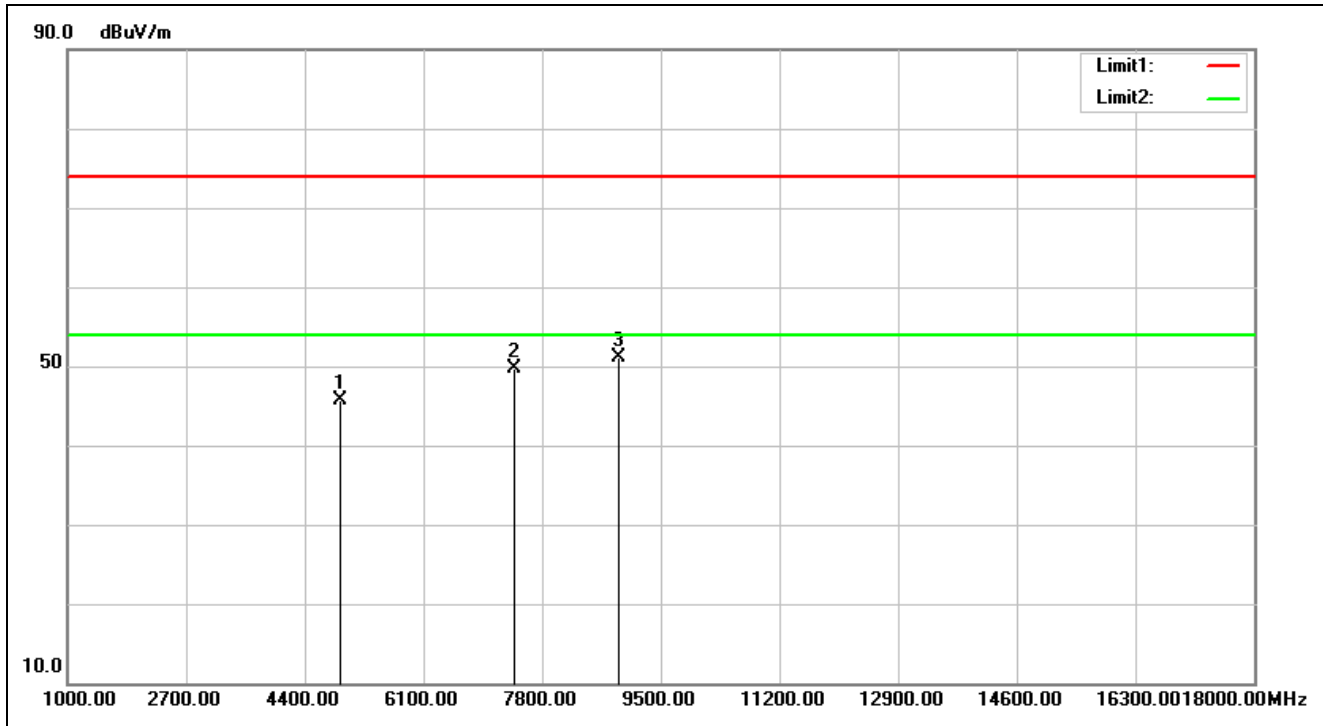
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/3/28 22:11:05
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	Power Setting -4 RFA-02-5-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	52.11	49.58	74.00	-24.42	peak	100	350	
2	7311.000	5.52	44.75	50.27	74.00	-23.73	peak			
3	8480.000	6.35	45.03	51.38	74.00	-22.62	peak	100	19	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/3/28 22:13:45
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/60%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	Power Setting -13		
	RFA-02-5-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	48.61	46.22	74.00	-27.78	peak			
2	7386.000	5.70	44.00	49.70	74.00	-24.30	peak			
3	8803.000	6.42	44.39	50.81	74.00	-23.19	peak	100	285	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/3/28 22:14:41
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	Power Setting -13 RFA-02-5-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	48.17	45.78	74.00	-28.22	peak			
2	7386.000	5.70	44.01	49.71	74.00	-24.29	peak			
3	8888.000	6.43	44.68	51.11	74.00	-22.89	peak	100	126	

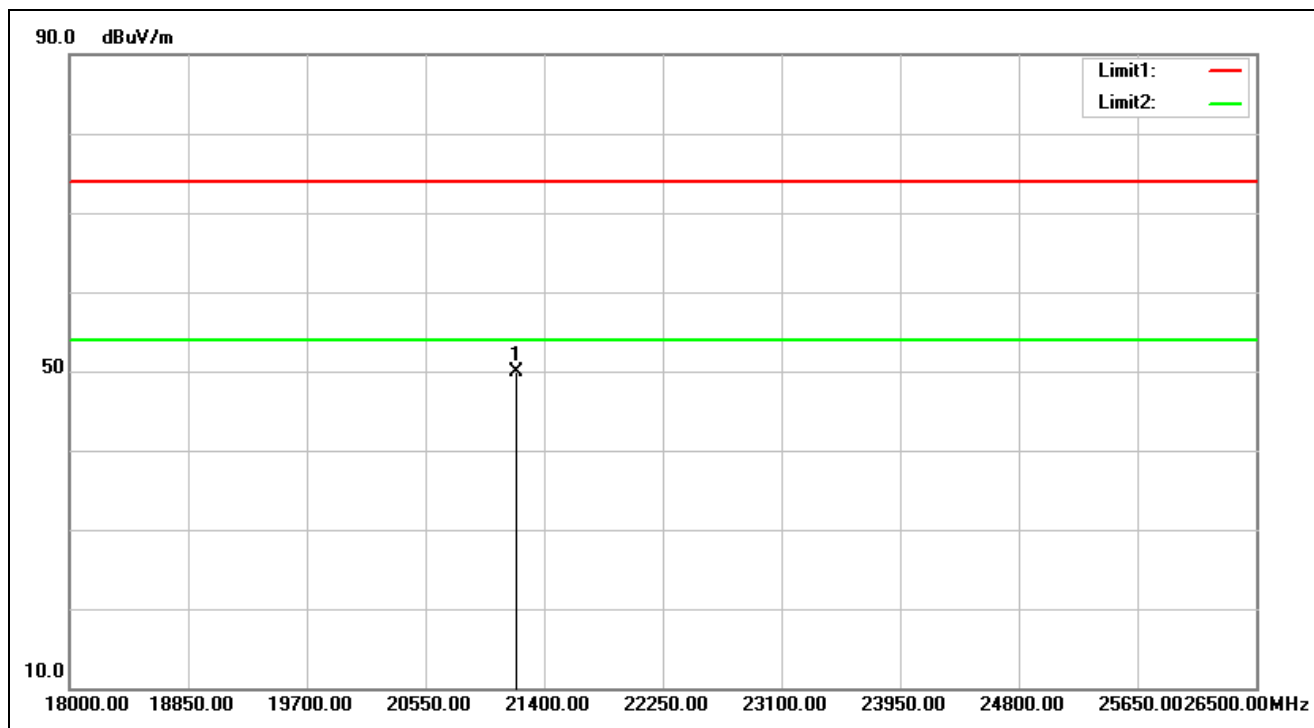
Spurious Emissions, TX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

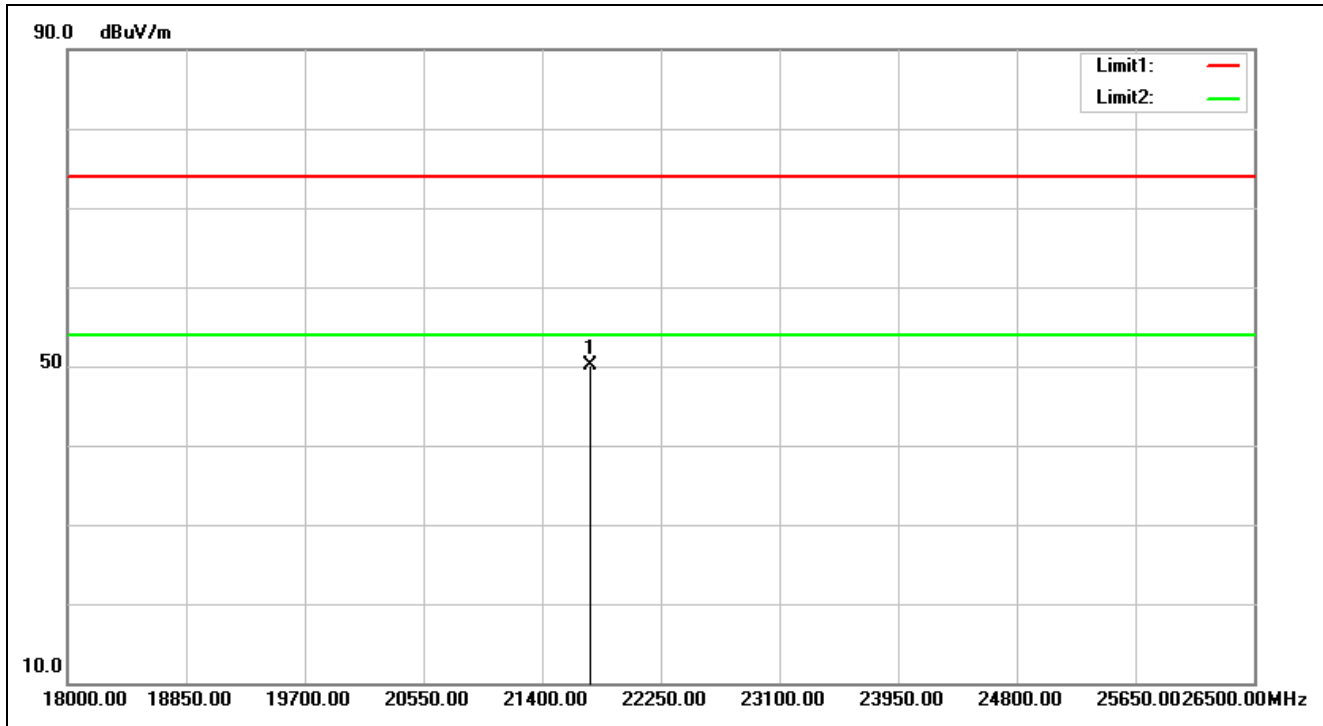
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



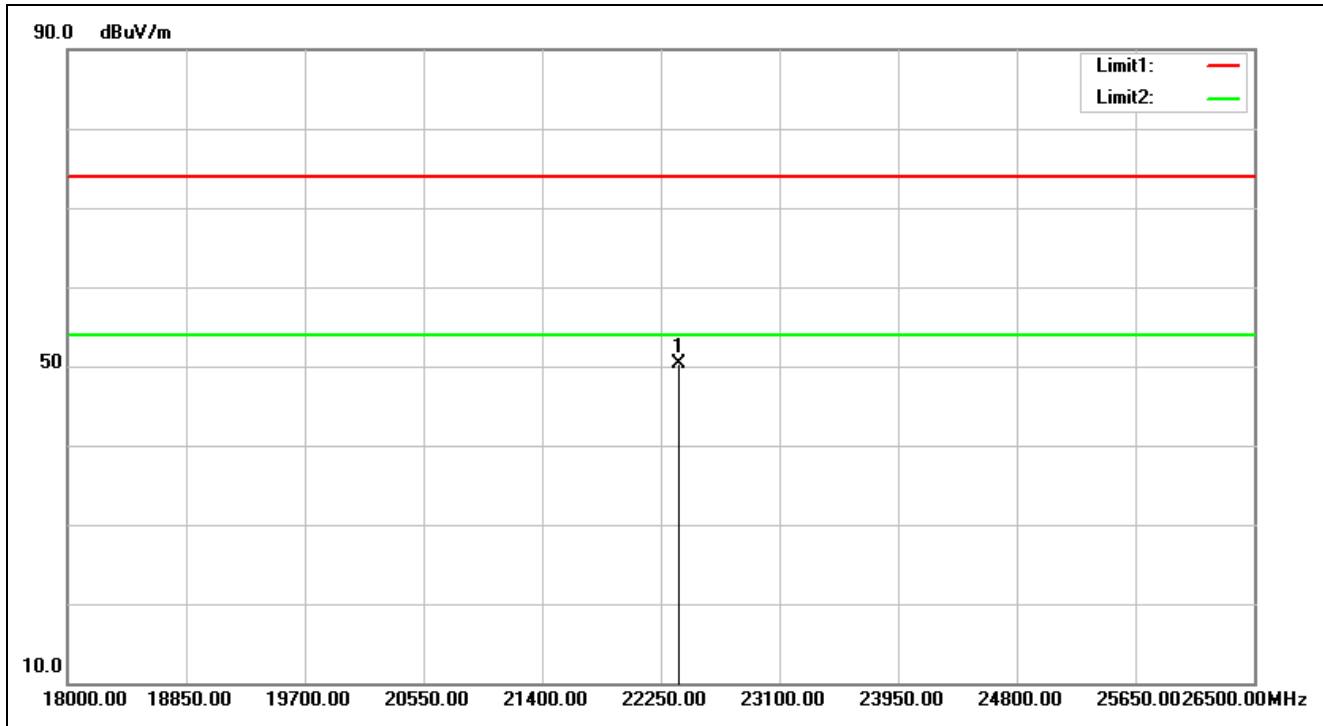
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 05:06:10
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%):	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	Power Setting -9		
	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21196.000	32.61	17.20	49.81	74.00	-24.19	peak		0	



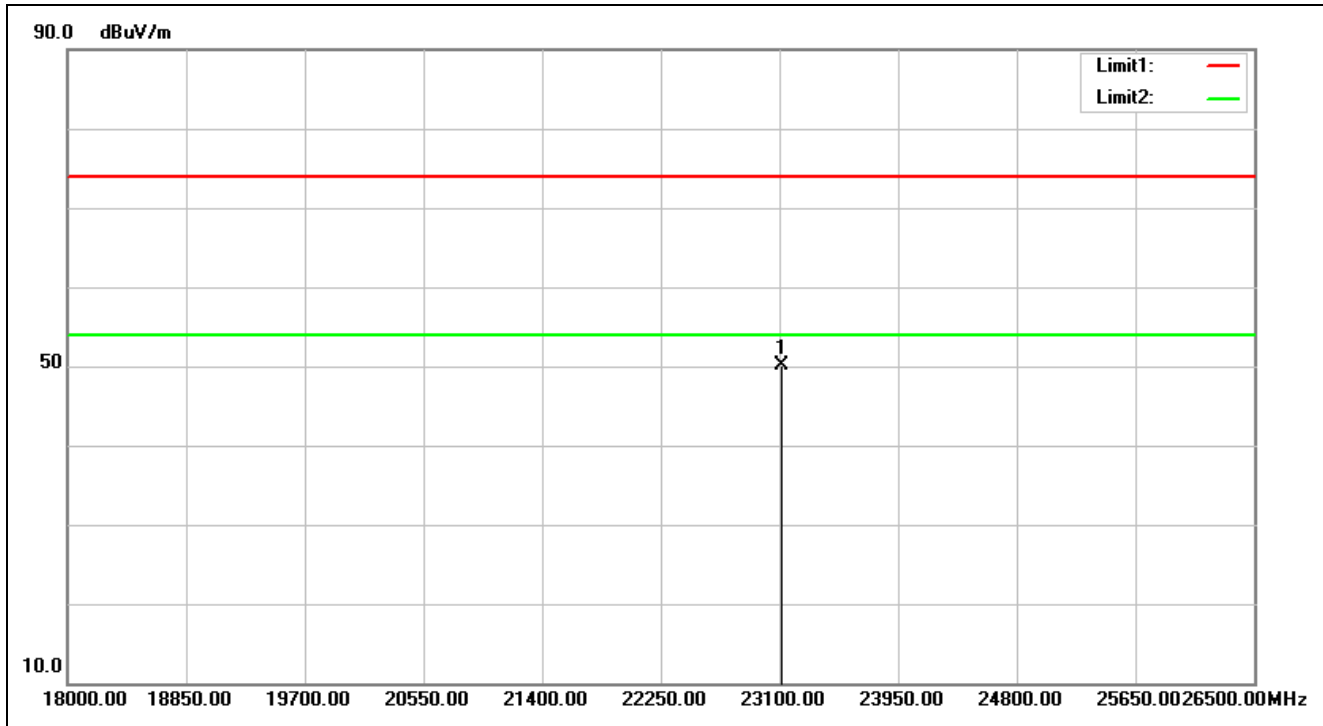
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 05:06:17
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	Power Setting -9		
	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21740.000	32.74	17.27	50.01	74.00	-23.99	peak			



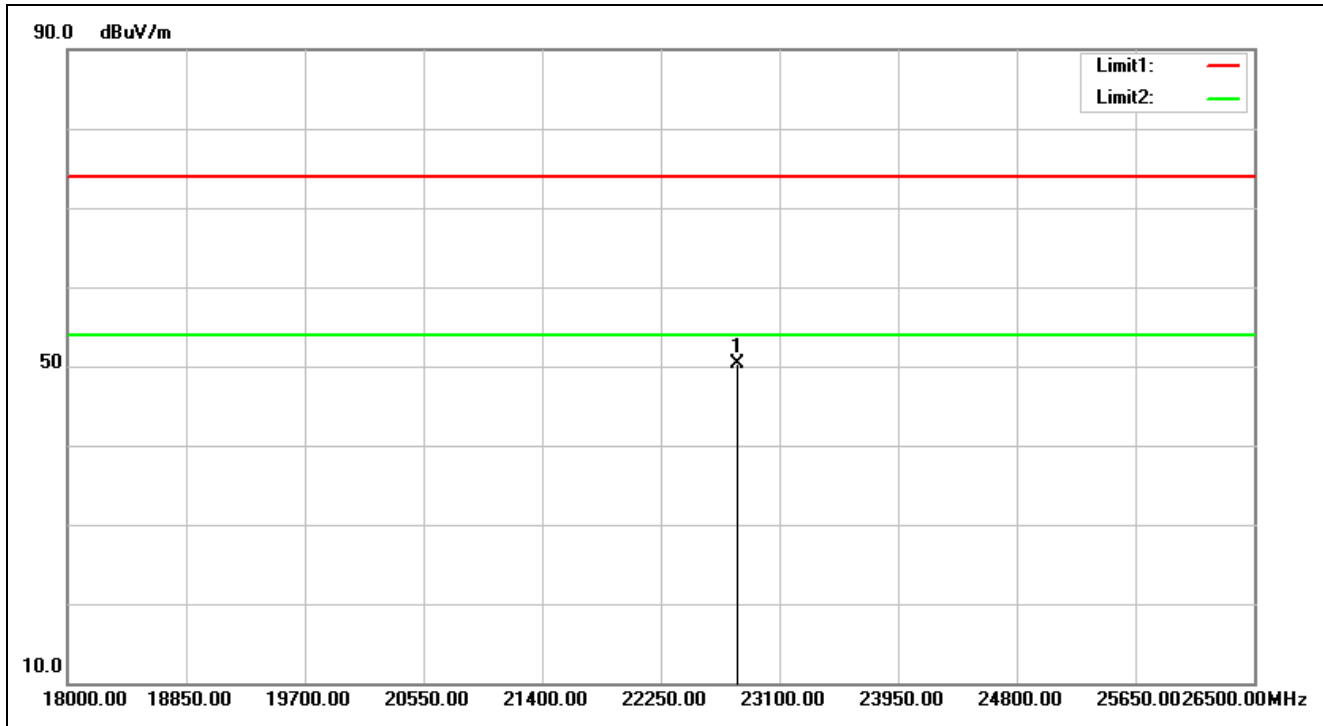
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 05:06:52
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%):	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9		
	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22377.500	32.63	17.74	50.37	74.00	-23.63	peak			



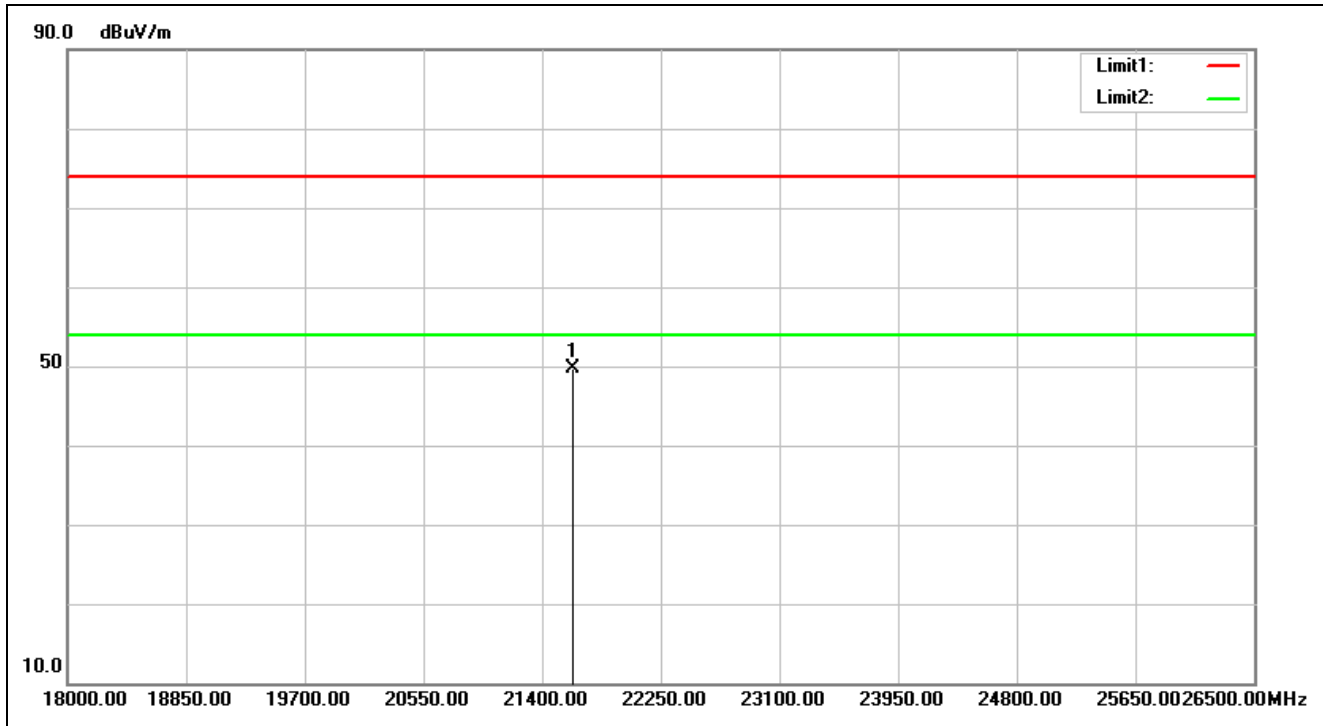
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 05:06:59
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%):	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9		
	RFA-02-5-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	32.91	17.17	50.08	74.00	-23.92	peak			



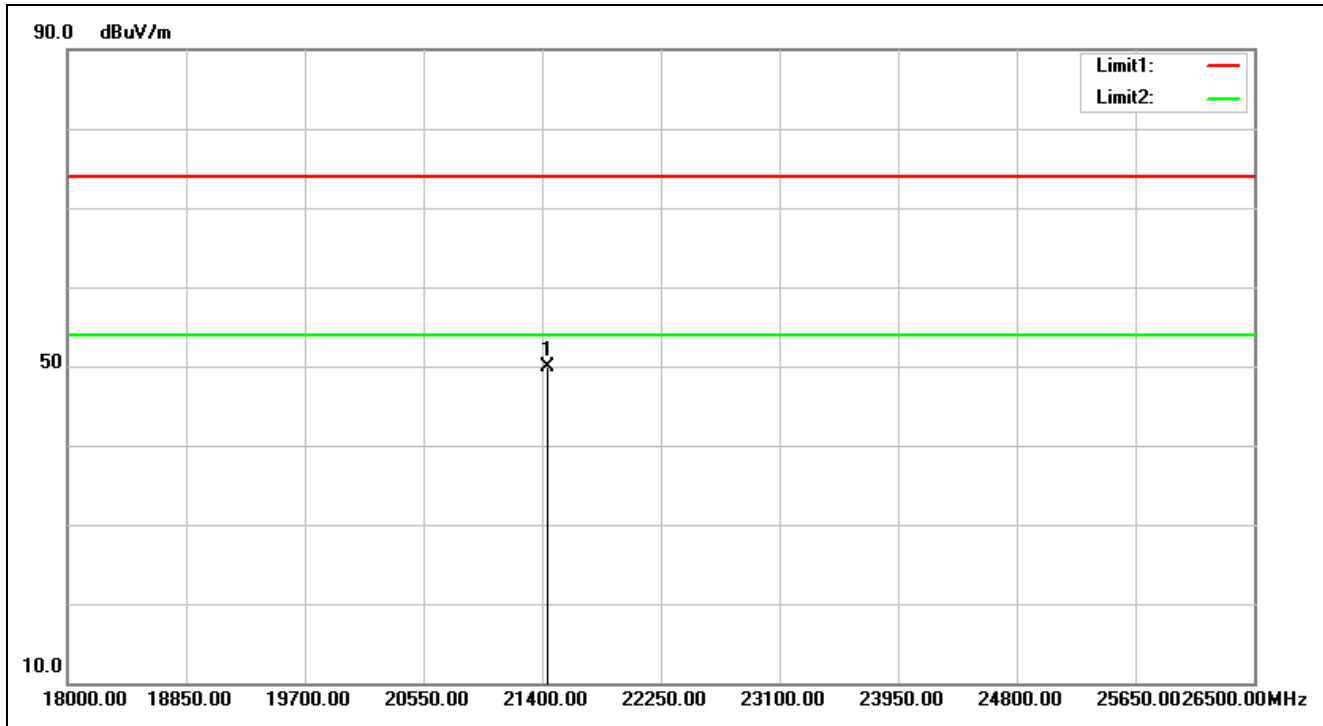
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 05:07:21
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%):	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	Power Setting -9		
	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22794.000	32.74	17.61	50.35	74.00	-23.65	peak			



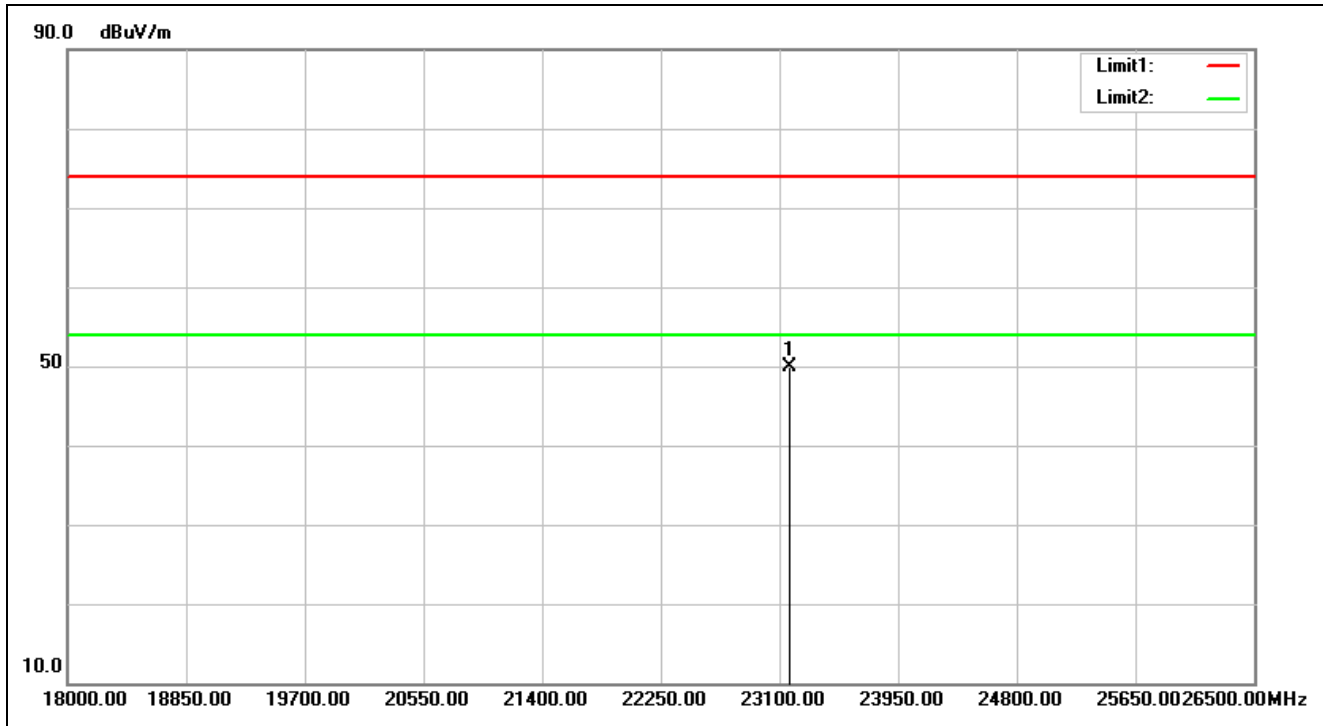
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 05:07:28
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%) :	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	Power Setting -9 RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21621.000	32.81	16.89	49.70	74.00	-24.30	peak			



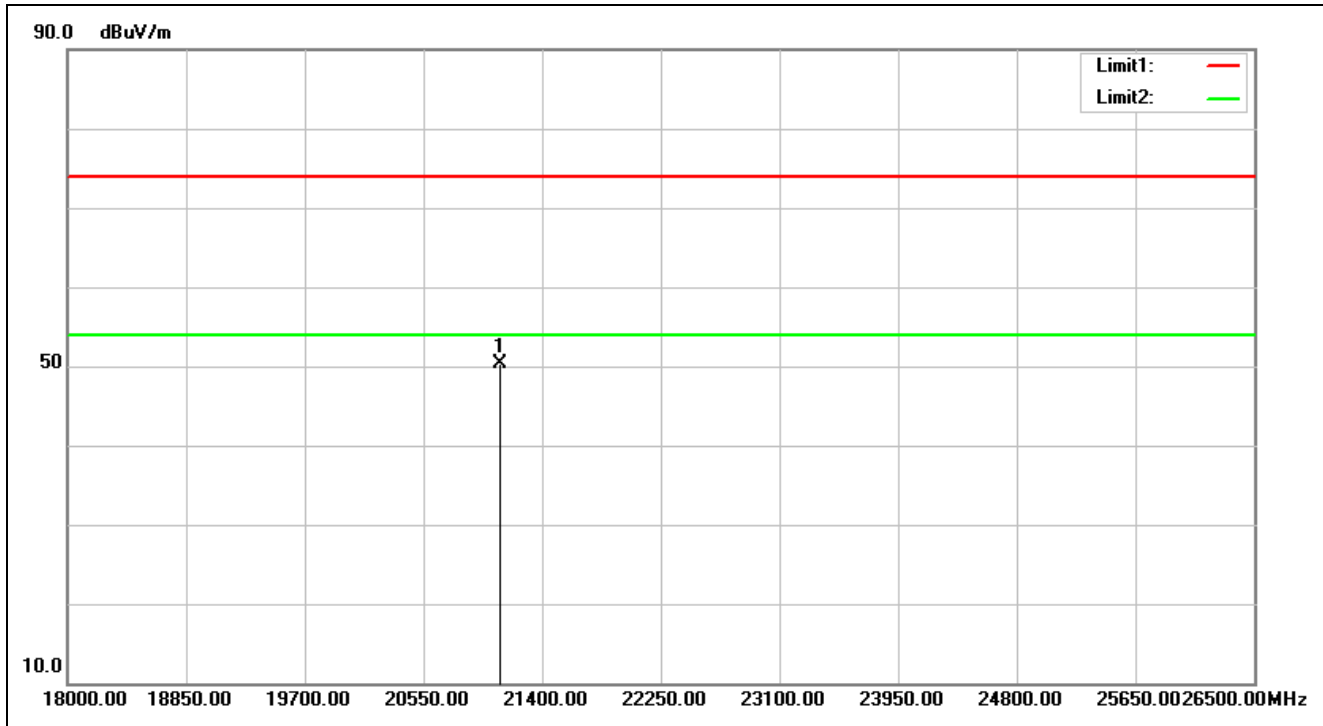
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 05:07:58
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%) :	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	Power Setting -13 RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21442.500	32.84	17.09	49.93	74.00	-24.07	peak			



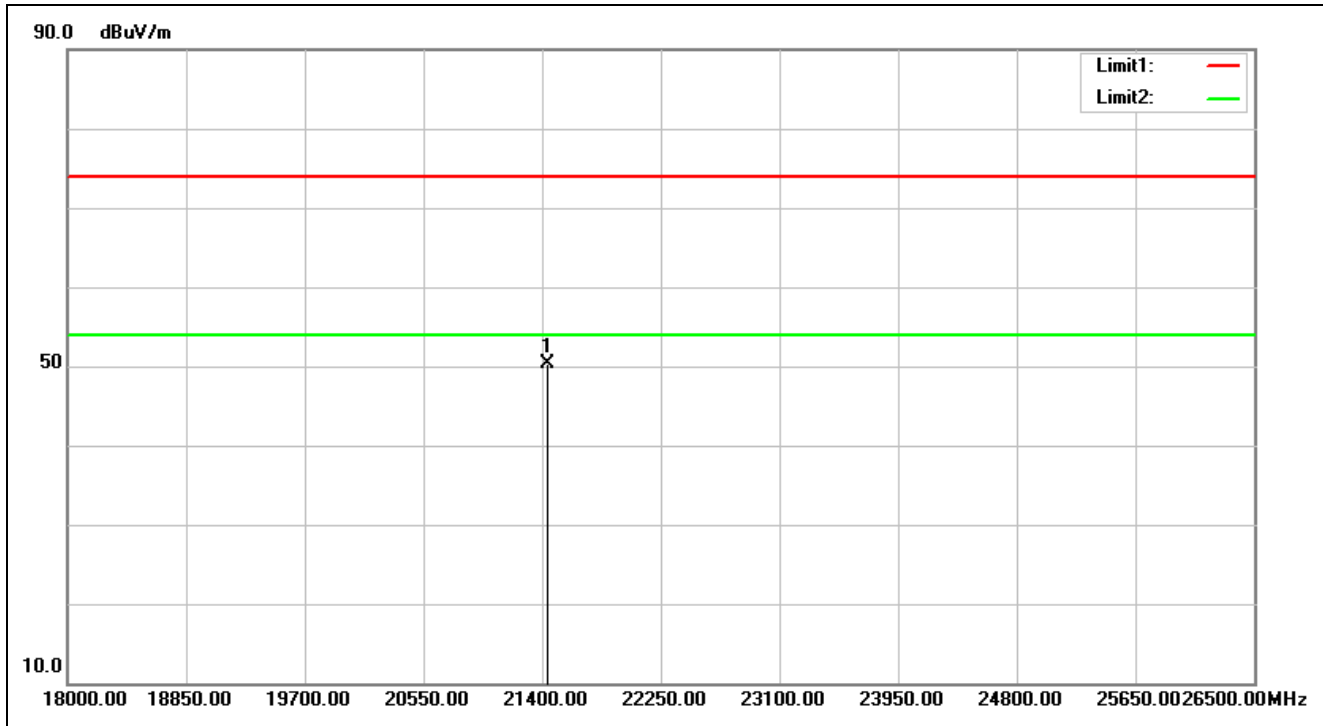
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 05:08:05
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%) :	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	Power Setting -13 RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23176.500	32.97	17.00	49.97	74.00	-24.03	peak			



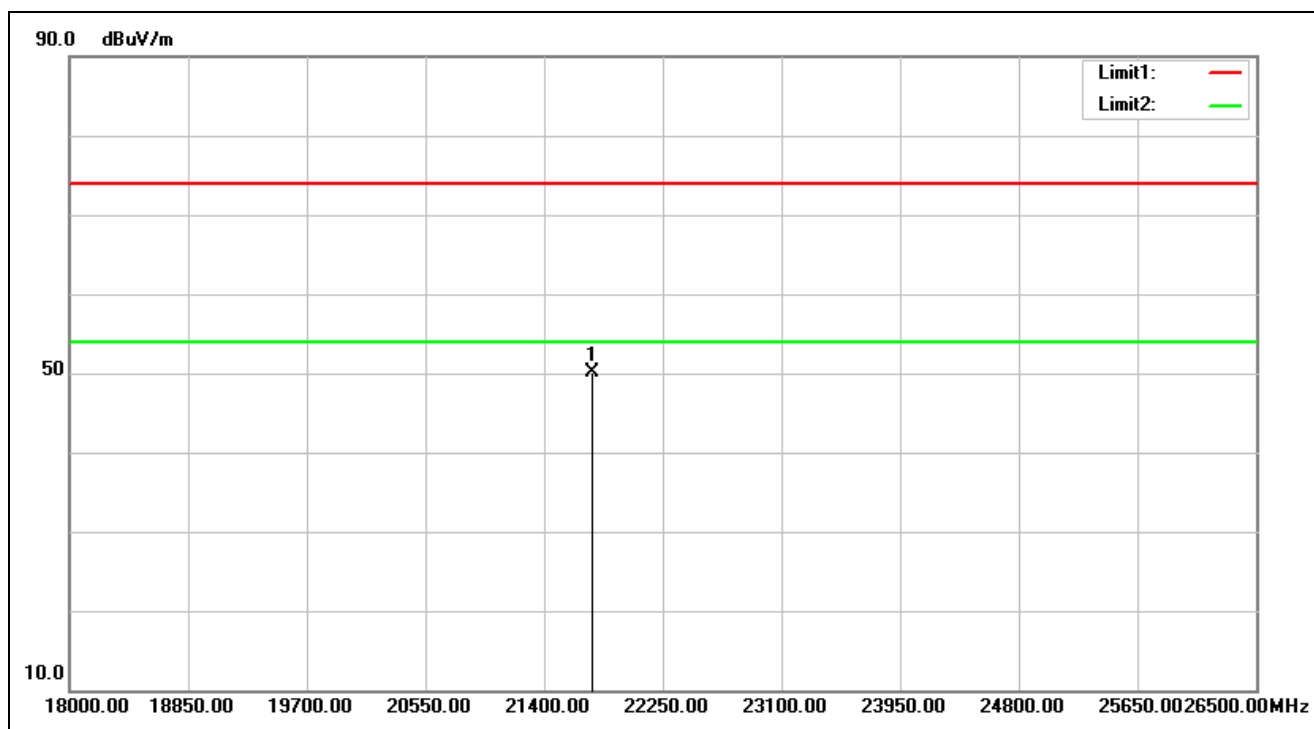
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 05:08:31
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%) :	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4 RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21102.500	32.53	17.79	50.32	74.00	-23.68	peak			



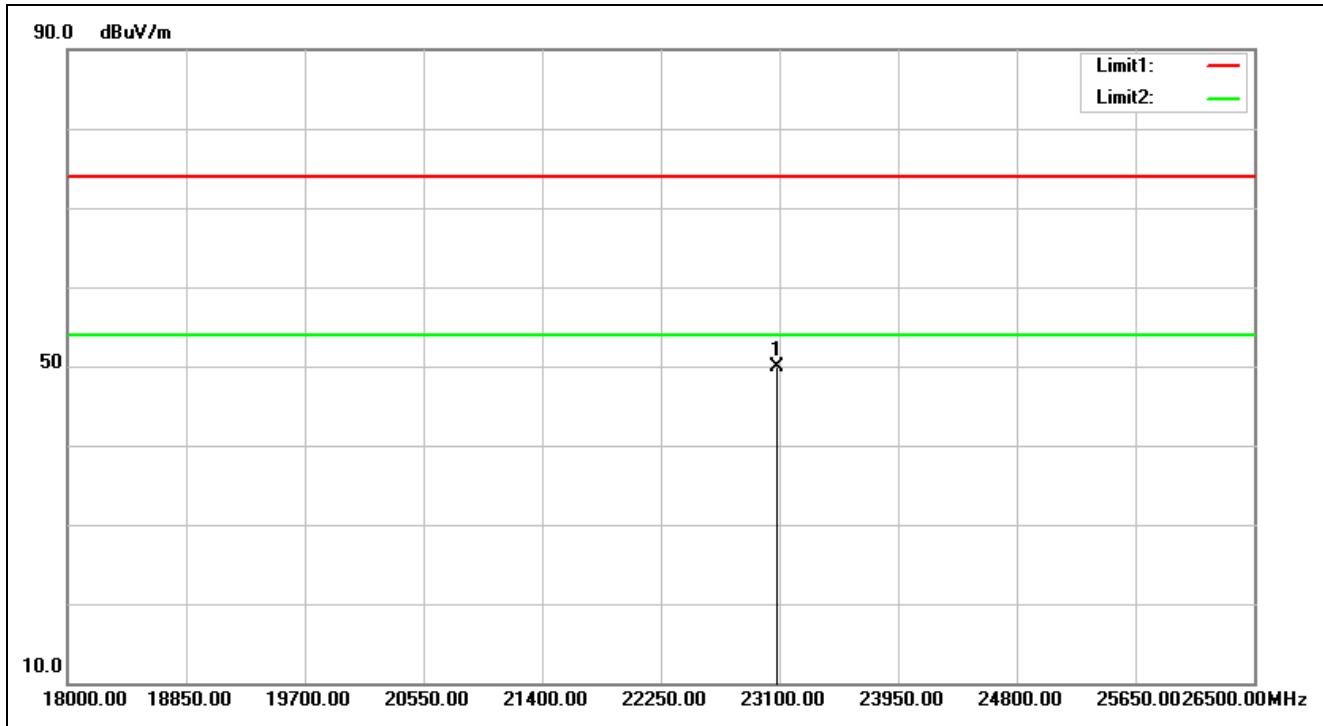
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 05:08:38
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4		
	RFA-02-5-C7H1-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	32.83	17.52	50.35	74.00	-23.65	peak			



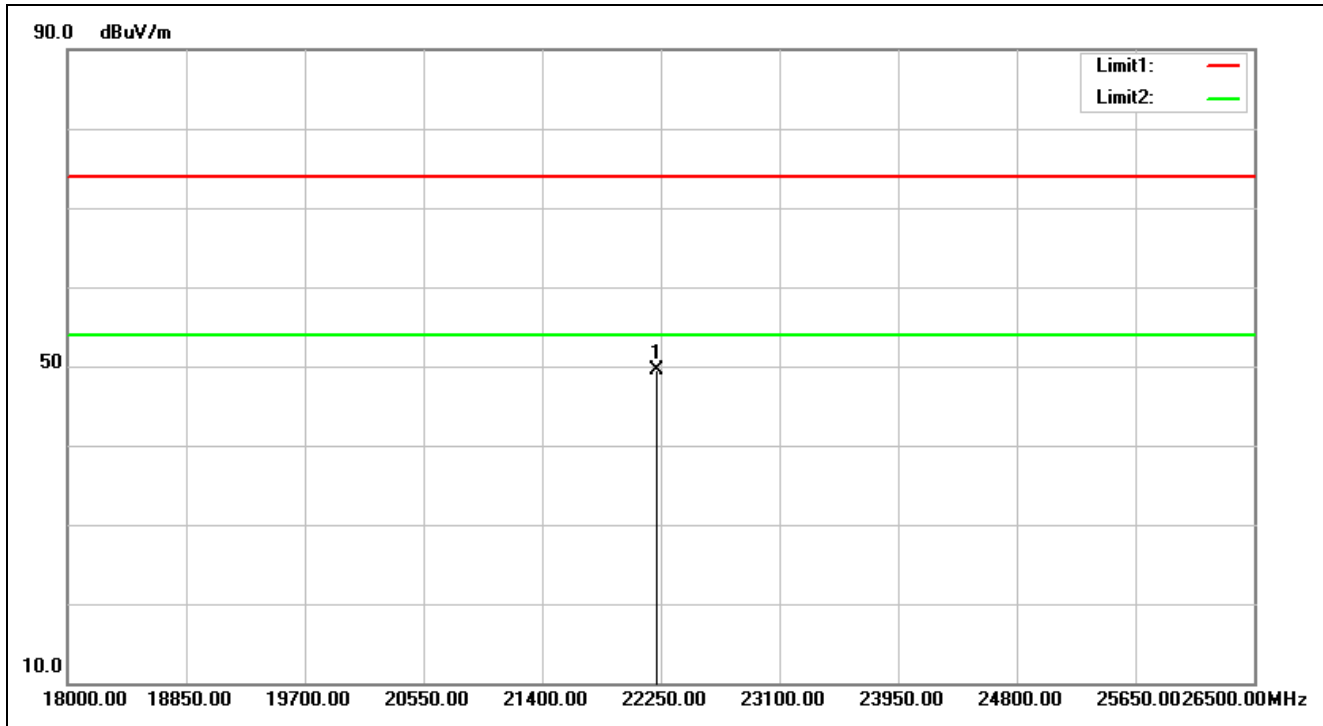
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 05:09:07
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	Power Setting -13 RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21740.000	32.74	17.37	50.11	74.00	-23.89	peak			



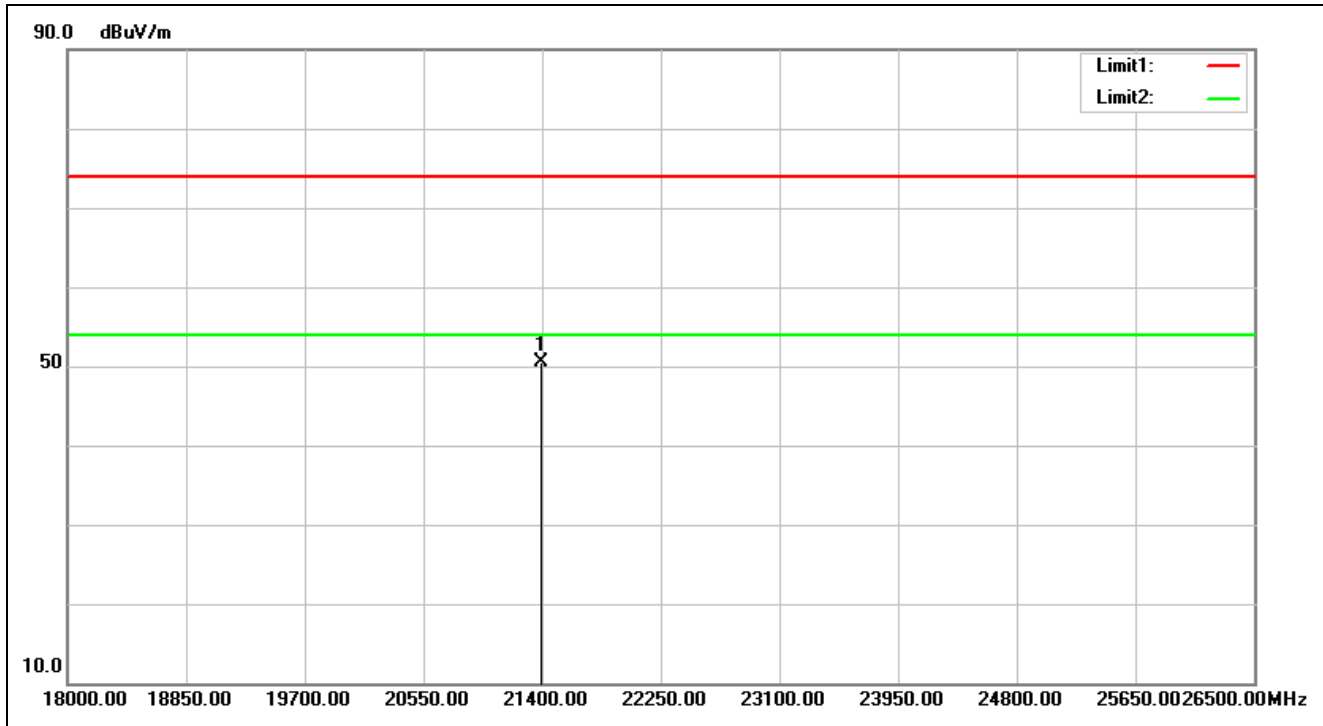
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 05:09:14
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	Power Setting -13		
	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23083.000	32.87	17.05	49.92	74.00	-24.08	peak			



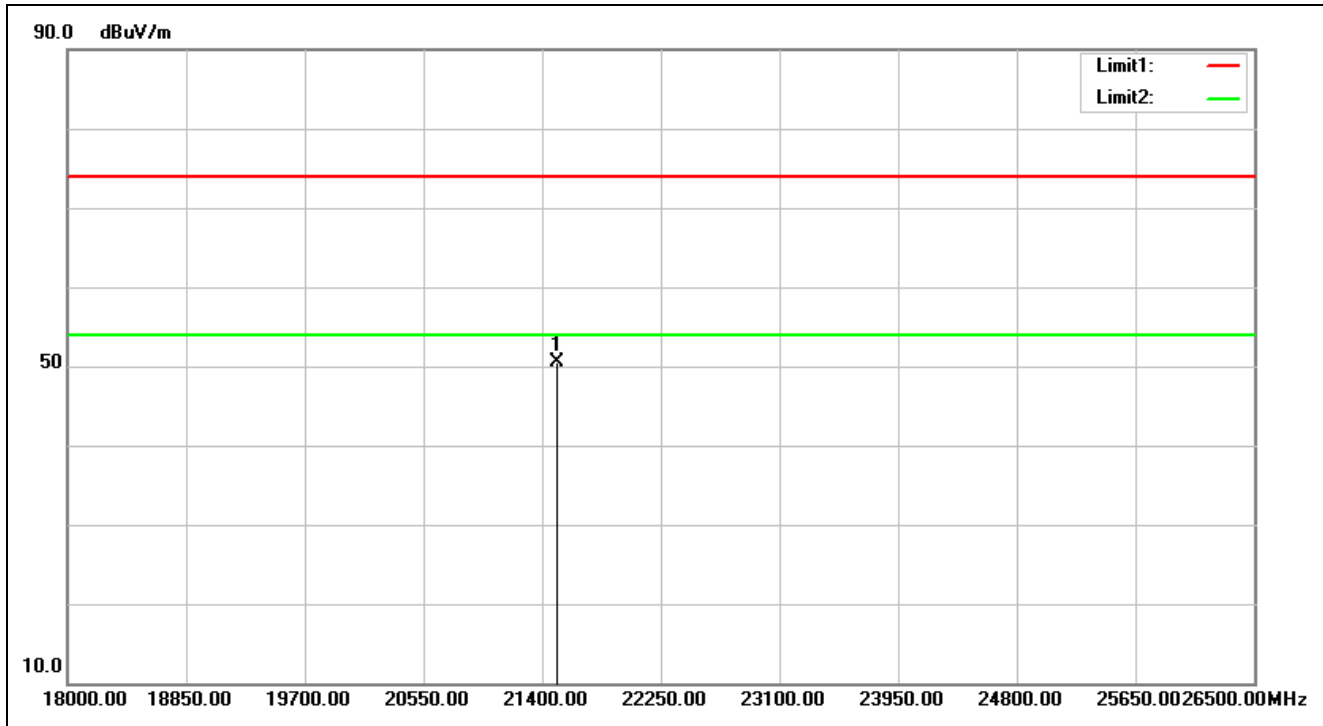
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 05:09:36
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	Power Setting -13		
	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22216.000	32.61	16.83	49.44	74.00	-24.56	peak			



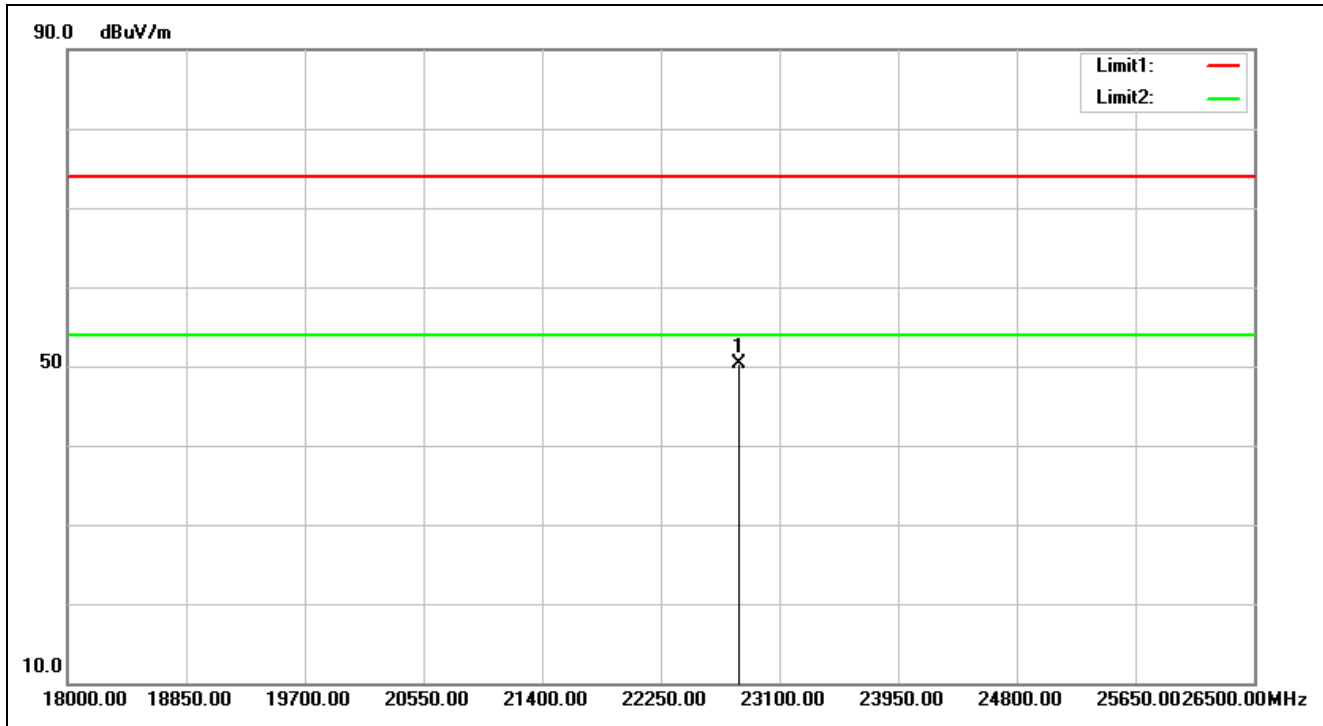
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 05:09:43
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	Power Setting -13		
	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21391.500	32.80	17.79	50.59	74.00	-23.41	peak			



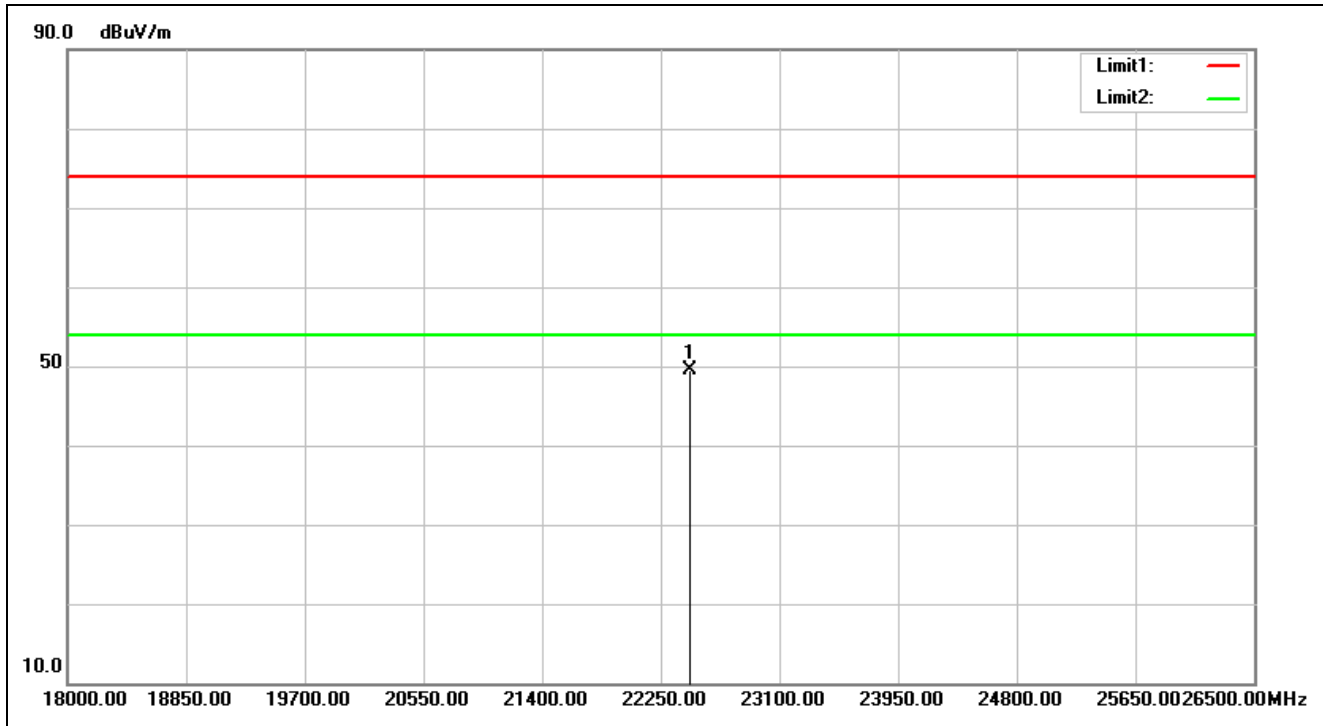
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 05:10:07
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%):	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	Power Setting -4		
	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21502.000	32.89	17.57	50.46	74.00	-23.54	peak			



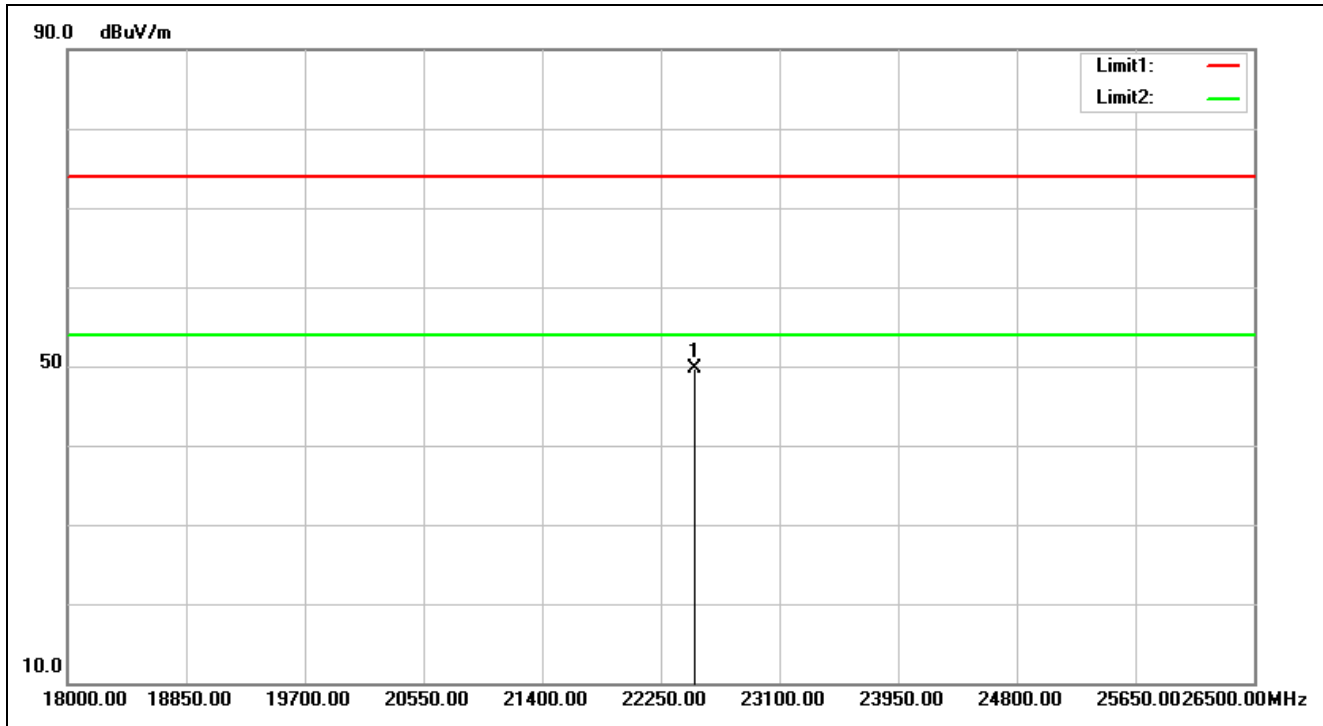
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 05:10:14
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	Power Setting -4 RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22811.000	32.74	17.51	50.25	74.00	-23.75	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 05:10:42
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	Power Setting -13		
	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22462.500	32.64	16.81	49.45	74.00	-24.55	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 05:10:48
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%):	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	Power Setting -13		
	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22488.000	32.64	17.00	49.64	74.00	-24.36	peak			

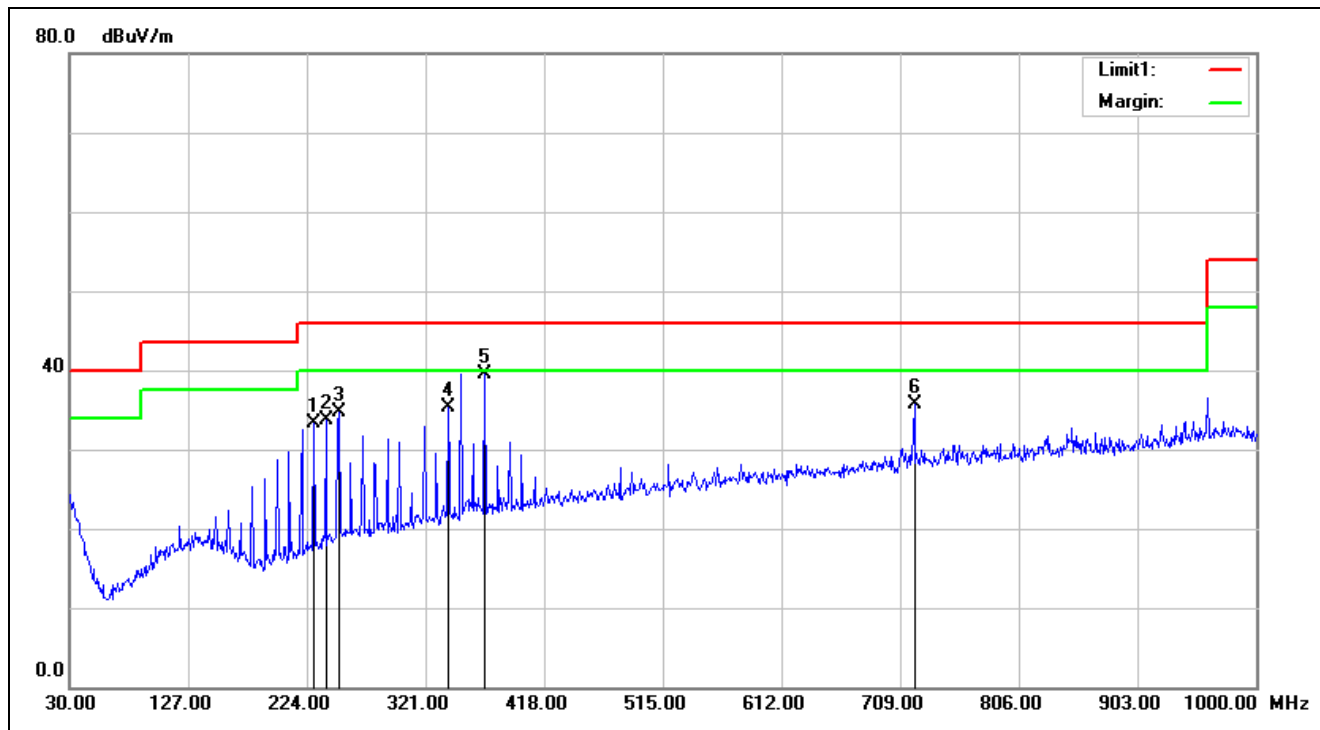
Spurious Emissions, TX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

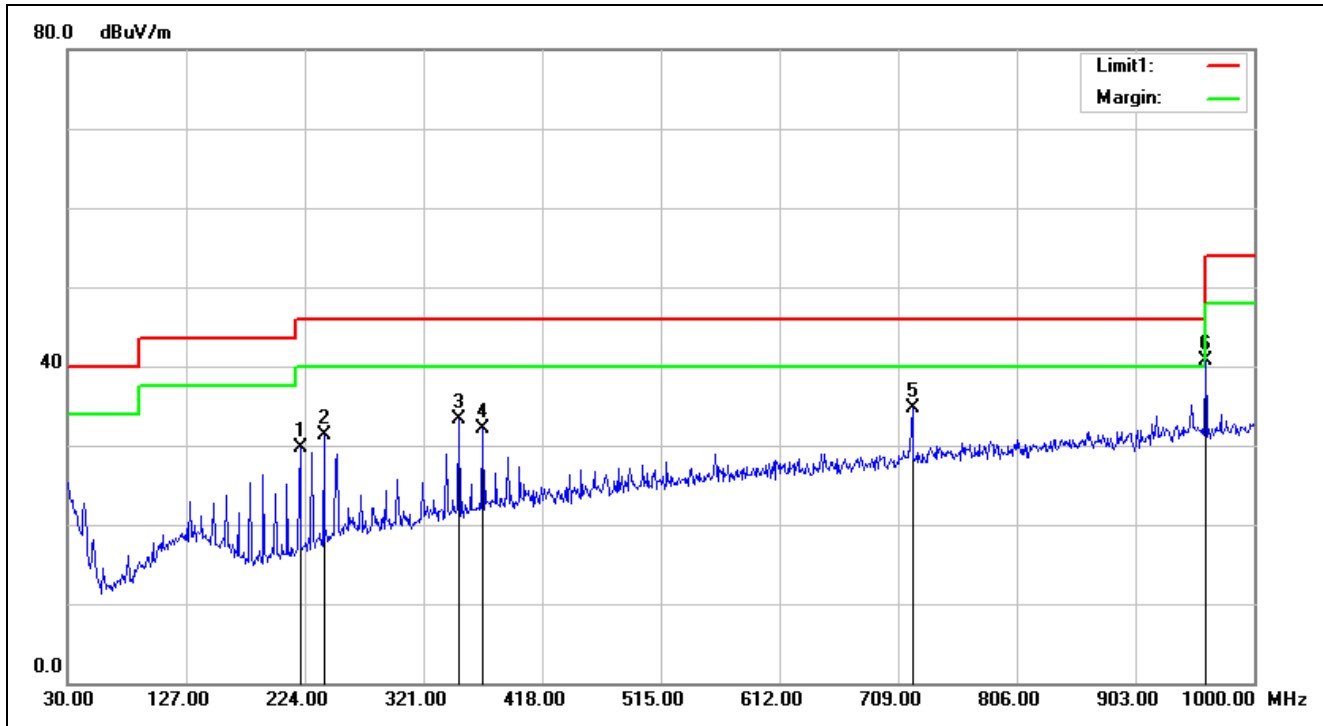
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 05:39:33
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9 RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	229.8199	-7.57	40.85	33.28	46.00	-12.72	QP	100	244	
2	239.5200	-6.85	40.64	33.79	46.00	-12.21	QP	100	244	
3	250.1899	-5.76	40.42	34.66	46.00	-11.34	QP	100	100	
4	339.4300	-3.61	38.96	35.35	46.00	-10.65	QP	100	291	
5	369.5000	-2.98	42.43	39.45	46.00	-6.55	QP	100	303	
6	720.6399	1.72	34.06	35.78	46.00	-10.22	QP	100	150	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 05:40:30
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9 RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	220.1200	-8.30	37.98	29.68	46.00	-16.32	QP	100	298	
2	239.5200	-6.85	38.10	31.25	46.00	-14.75	QP	100	270	
3	350.1000	-3.34	36.63	33.29	46.00	-12.71	QP	100	207	
4	369.5000	-2.98	35.15	32.17	46.00	-13.83	QP	100	238	
5	720.6400	1.72	33.01	34.73	46.00	-11.27	QP	100	1	
6	960.2300	5.54	35.25	40.79	54.00	-13.21	QP	100	359	

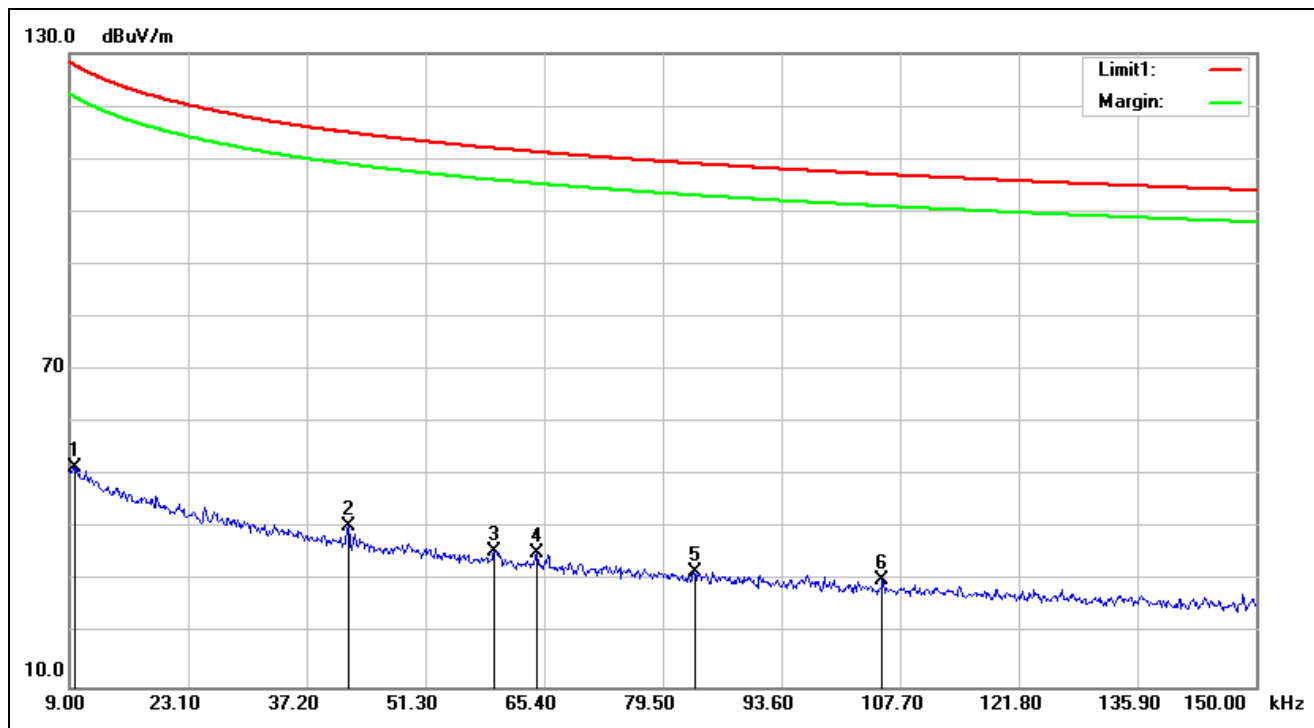
Spurious Emissions, TX Mode, 9k-30M



TUV Rheinland Taiwan Ltd.

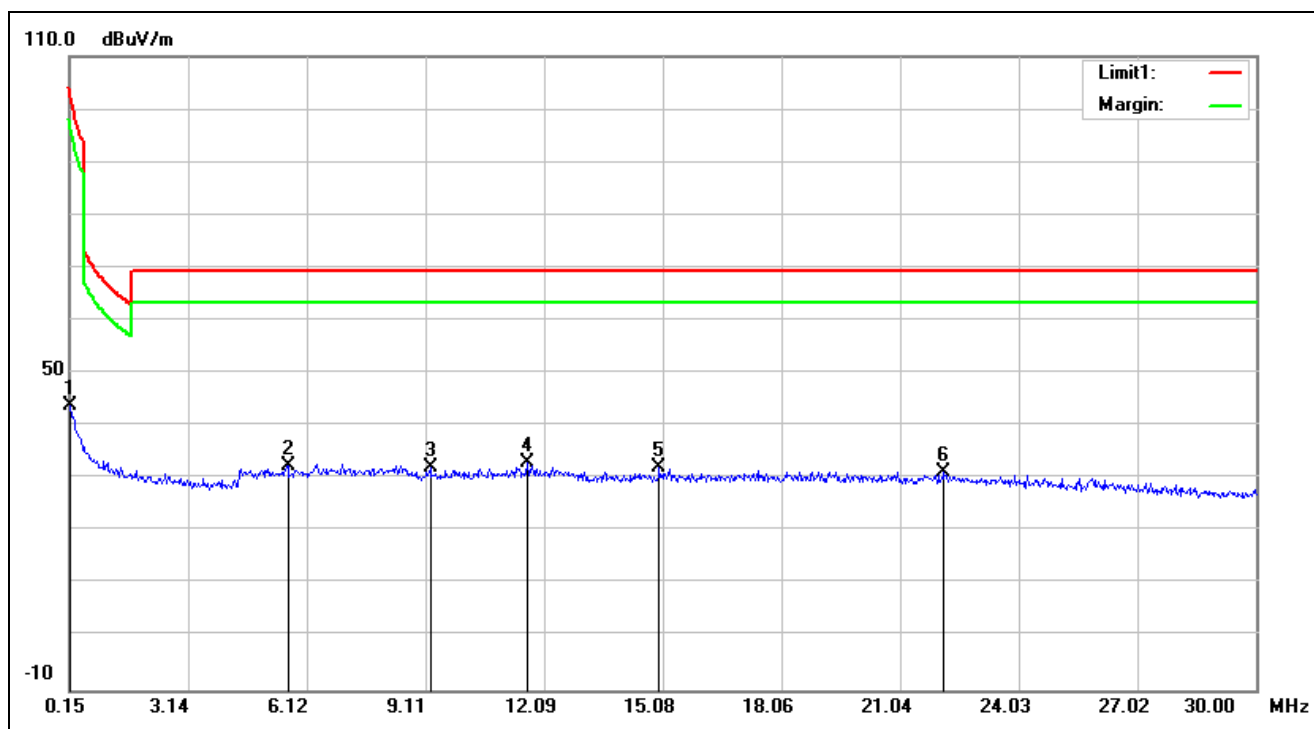
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/10 06:32:00
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9 RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0095	19.76	31.86	51.62	127.84	-76.22	QP	100	223	
2	0.0421	19.70	20.64	40.34	114.99	-74.65	QP	100	226	
3	0.0594	19.37	16.26	35.63	112.01	-76.38	QP	100	258	
4	0.0645	19.34	15.92	35.26	111.30	-76.04	QP	100	6	
5	0.0831	19.23	12.51	31.74	109.12	-77.38	QP	100	105	
6	0.1055	19.12	11.00	30.12	107.06	-76.94	QP	100	357	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/10 06:34:43
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9 RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1798	19.06	24.66	43.72	102.45	-58.73	QP	100	90	
2	5.6424	19.82	12.67	32.49	69.50	-37.01	QP	100	53	
3	9.2243	20.15	12.05	32.20	69.50	-37.30	QP	100	315	
4	11.6721	20.51	12.49	33.00	69.50	-36.50	QP	100	57	
5	14.9854	21.10	10.95	32.05	69.50	-37.45	QP	100	219	
6	22.1494	22.13	9.12	31.25	69.50	-38.25	QP	100	144	

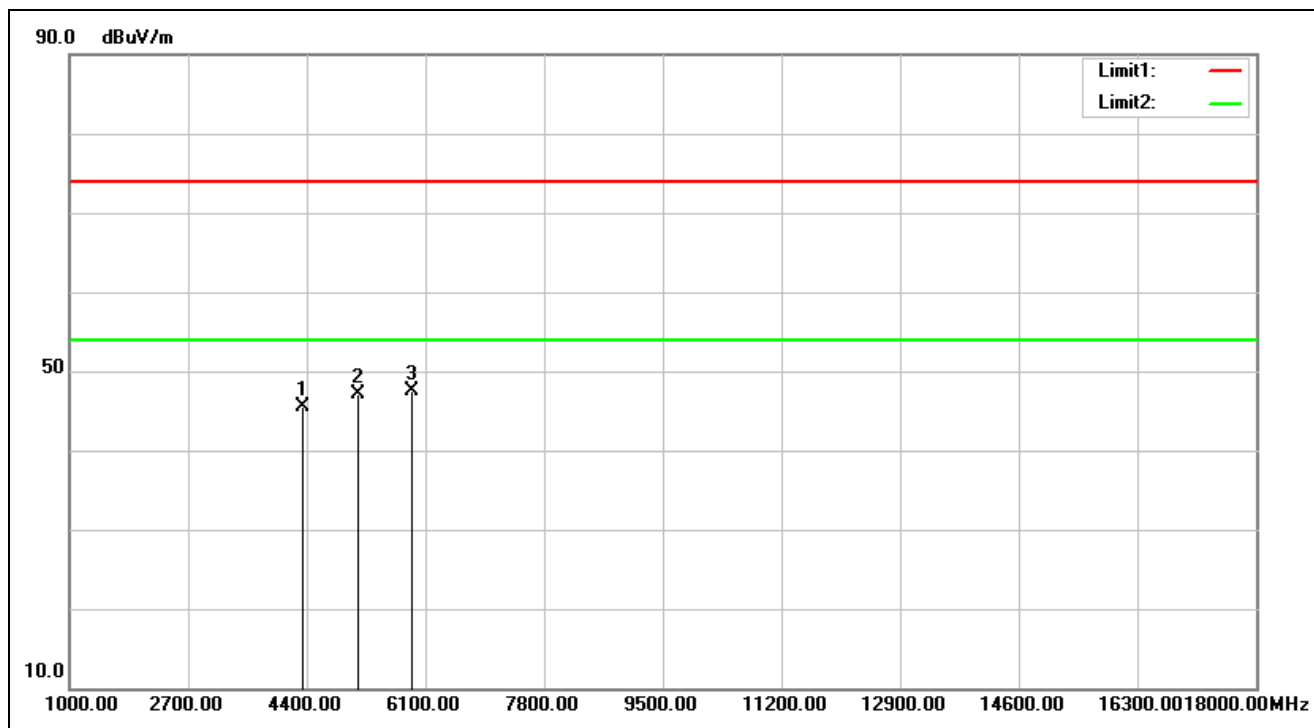
Spurious Emissions, RX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

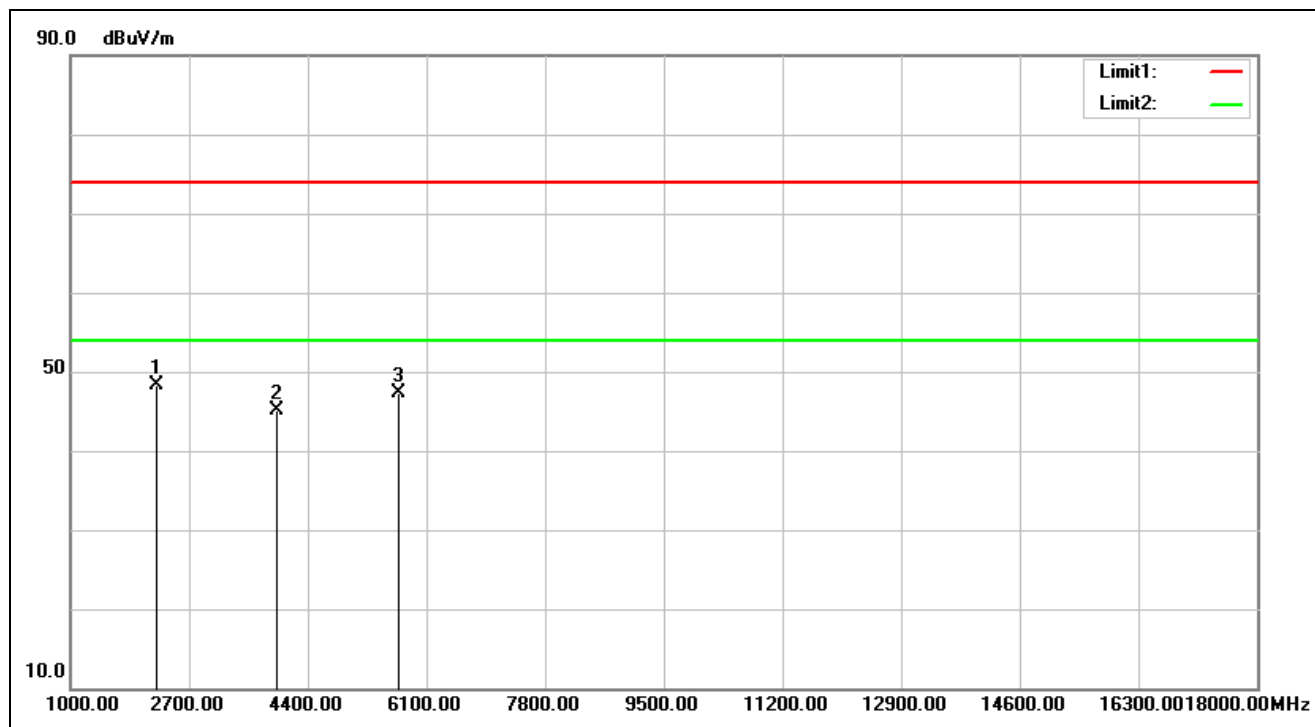
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/3/28 22:17:43
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4332.000	-4.64	50.15	45.51	74.00	-28.49	peak	100	0	
2	5131.000	-2.58	49.60	47.02	74.00	-26.98	peak	100	101	
3	5913.000	1.80	45.70	47.50	74.00	-26.50	peak	100	10	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/3/28 22:18:39
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2241.000	-8.07	56.33	48.26	74.00	-25.74	peak	100	193	
2	3958.000	-5.94	51.02	45.08	74.00	-28.92	peak	100	72	
3	5692.000	0.39	46.89	47.28	74.00	-26.72	peak	100	178	

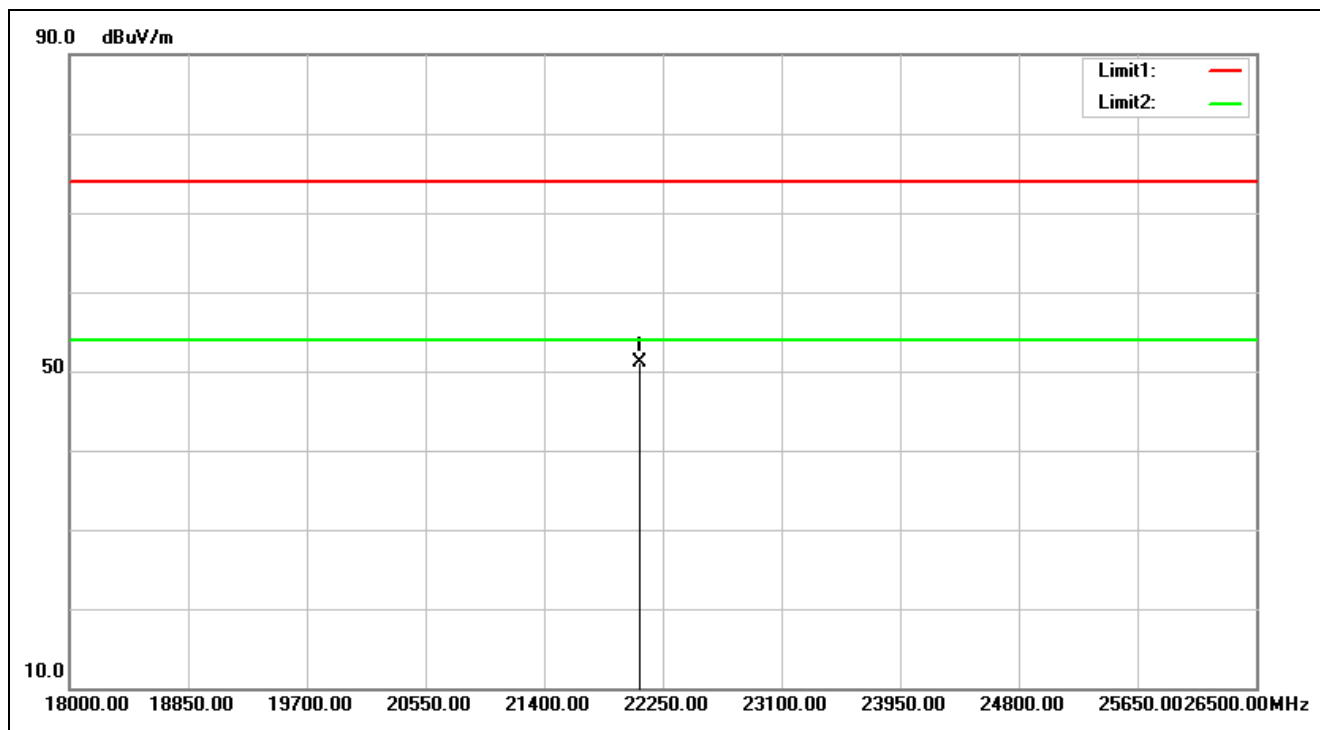
Spurious Emissions, RX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

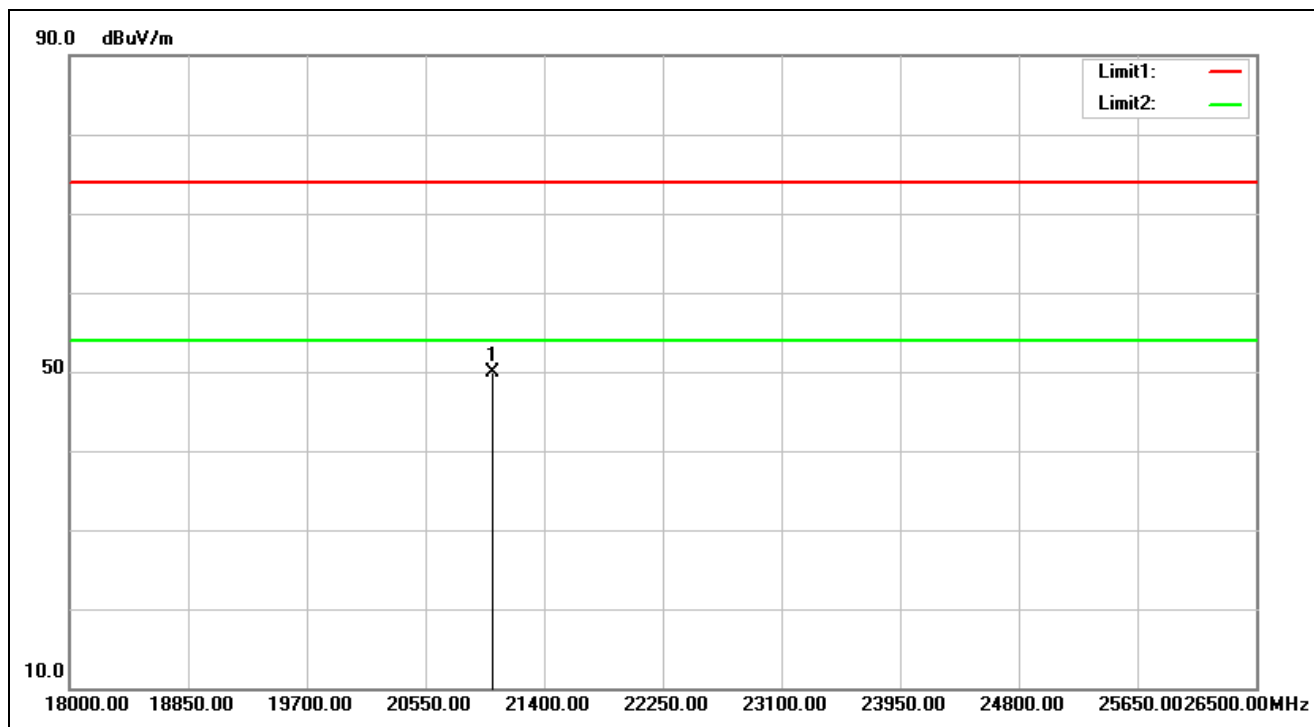
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 05:11:16
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-5-C7H1-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	32.60	18.50	51.10	74.00	-22.90	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 05:11:22
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21026.000	32.46	17.50	49.96	74.00	-24.04	peak			

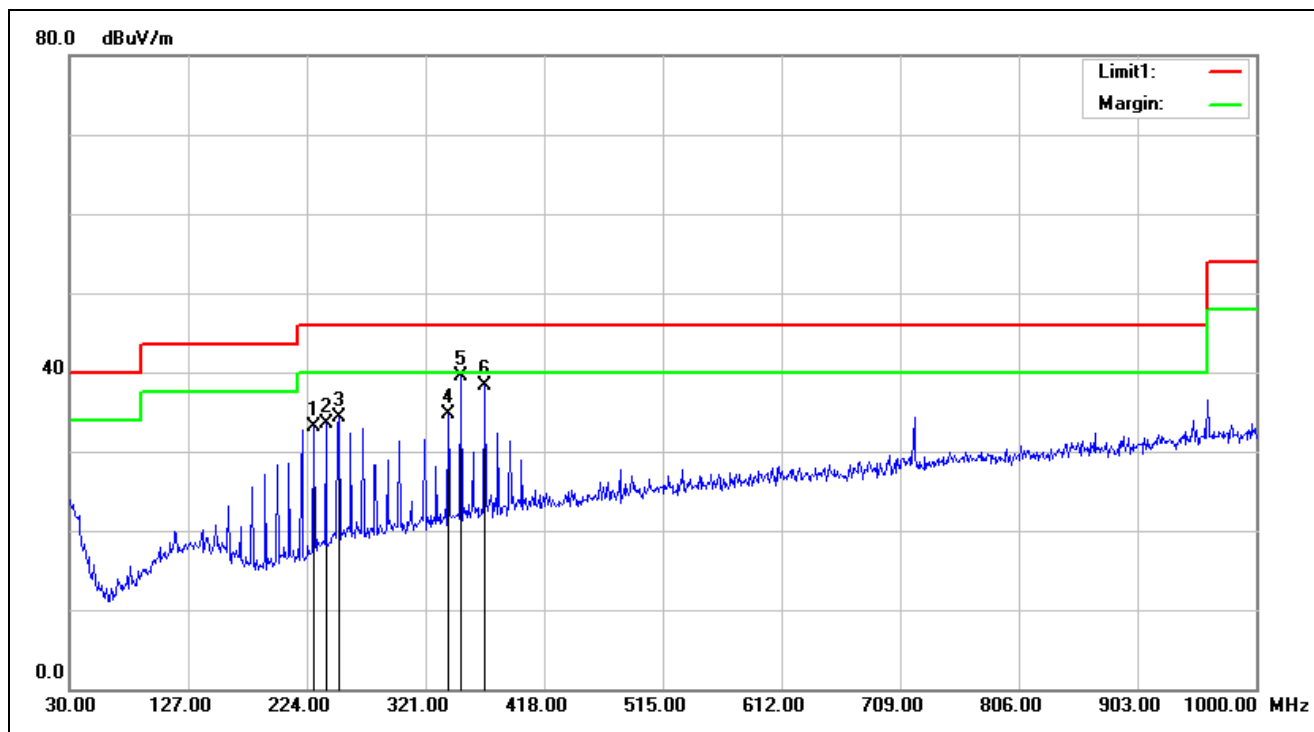
Spurious Emissions, RX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

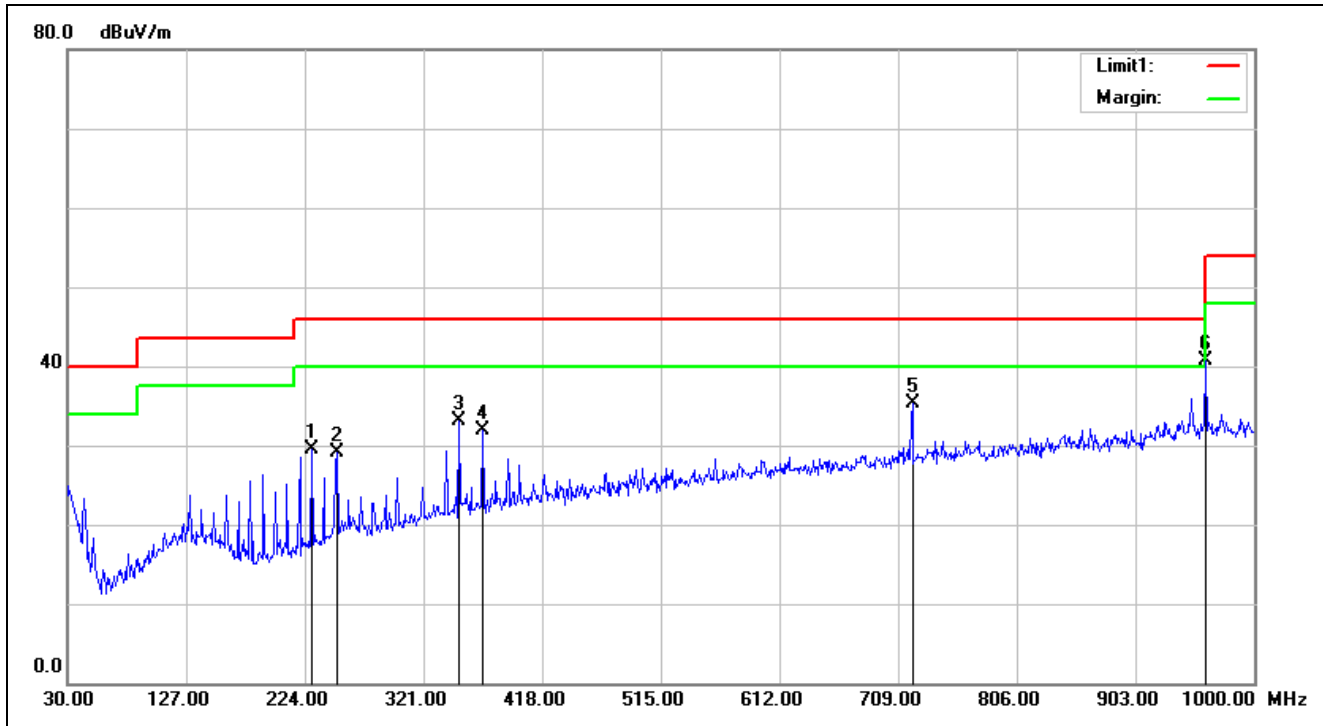
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 05:42:38
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	229.8199	-7.57	40.76	33.19	46.00	-12.81	QP	100	244	
2	239.5200	-6.85	40.36	33.51	46.00	-12.49	QP	100	115	
3	250.1899	-5.76	40.14	34.38	46.00	-11.62	QP	100	94	
4	339.4300	-3.61	38.34	34.73	46.00	-11.27	QP	100	284	
5	350.1000	-3.34	42.83	39.49	46.00	-6.51	QP	100	297	
6	369.5000	-2.98	41.22	38.24	46.00	-7.76	QP	100	312	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 05:43:36
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	229.8200	-7.57	37.05	29.48	46.00	-16.52	QP	100	273	
2	250.1900	-5.75	34.79	29.04	46.00	-16.96	QP	100	270	
3	350.1000	-3.34	36.38	33.04	46.00	-12.96	QP	100	201	
4	369.5000	-2.98	34.83	31.85	46.00	-14.15	QP	100	229	
5	720.6400	1.72	33.59	35.31	46.00	-10.69	QP	100	170	
6	960.2300	5.54	35.13	40.67	54.00	-13.33	QP	100	326	

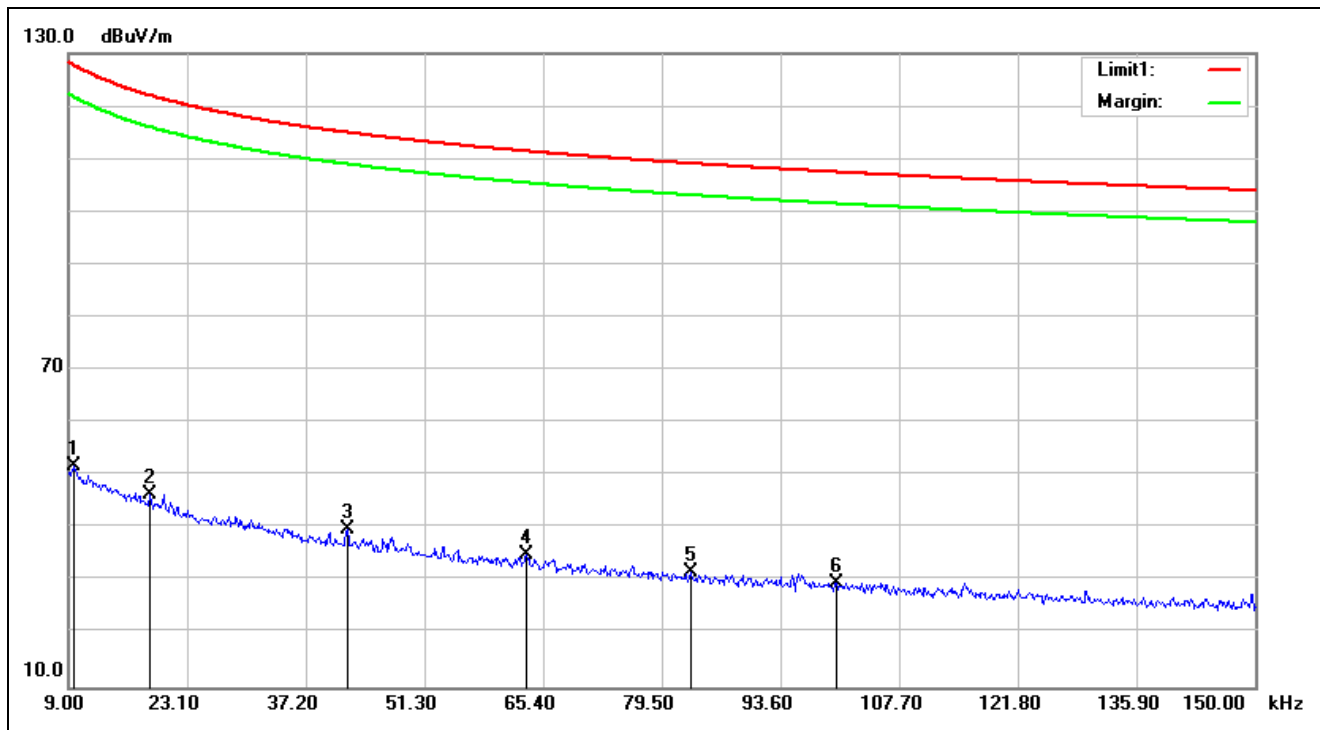
Spurious Emissions, RX Mode, 9K-30M



TUV Rheinland Taiwan Ltd.

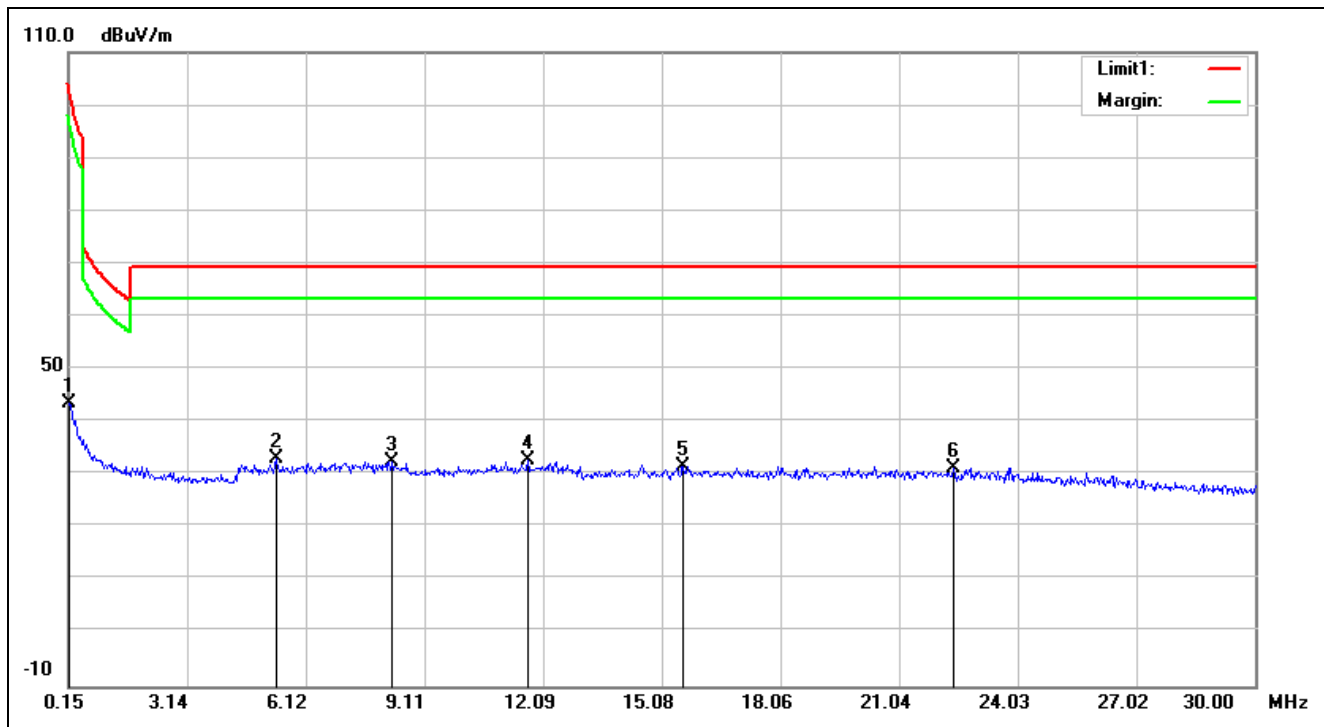
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/10 06:32:57
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-5-C7H1-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0097	19.83	31.94	51.77	127.66	-75.89	QP	100	3	
2	0.0187	20.02	26.54	46.56	121.99	-75.43	QP	100	357	
3	0.0421	19.70	20.27	39.97	114.99	-75.02	QP	100	266	
4	0.0634	19.35	15.82	35.17	111.45	-76.28	QP	100	348	
5	0.0829	19.23	12.47	31.70	109.14	-77.44	QP	100	98	
6	0.1002	19.13	10.62	29.75	107.50	-77.75	QP	100	270	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/10 06:35:40
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFA-02-5-C7H1-ANT		

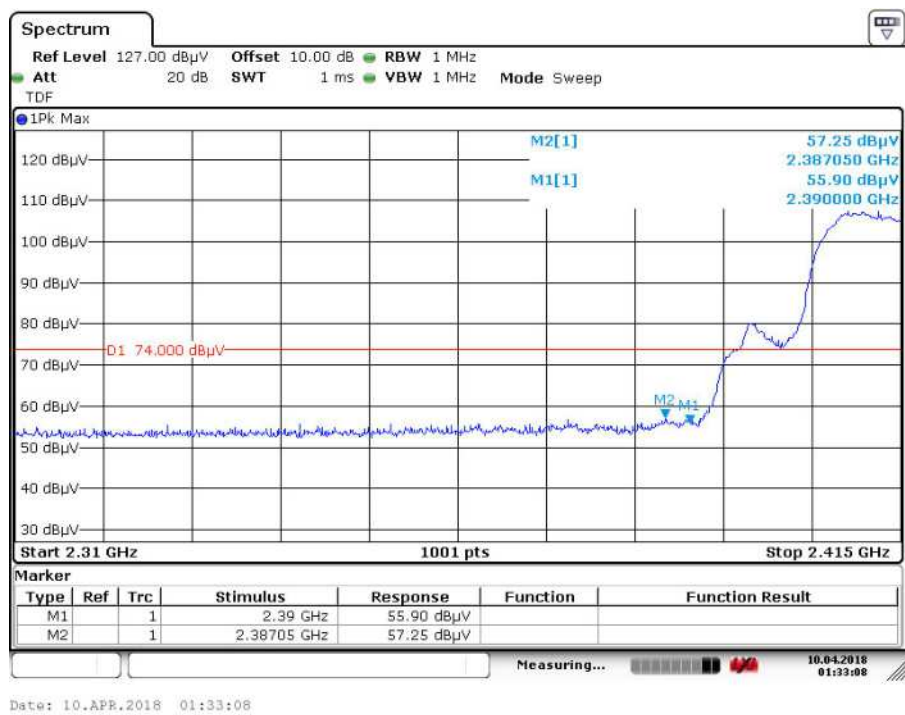
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1799	19.06	24.44	43.50	102.45	-58.95	QP	100	272	
2	5.3738	19.79	13.20	32.99	69.50	-36.51	QP	100	360	
3	8.2990	20.06	12.46	32.52	69.50	-36.98	QP	100	181	
4	11.7020	20.52	12.11	32.63	69.50	-36.87	QP	100	241	
5	15.6123	21.21	10.45	31.66	69.50	-37.84	QP	100	57	
6	22.4181	22.14	9.04	31.18	69.50	-38.32	QP	100	344	

RFMTA331215IMAB701-ANT

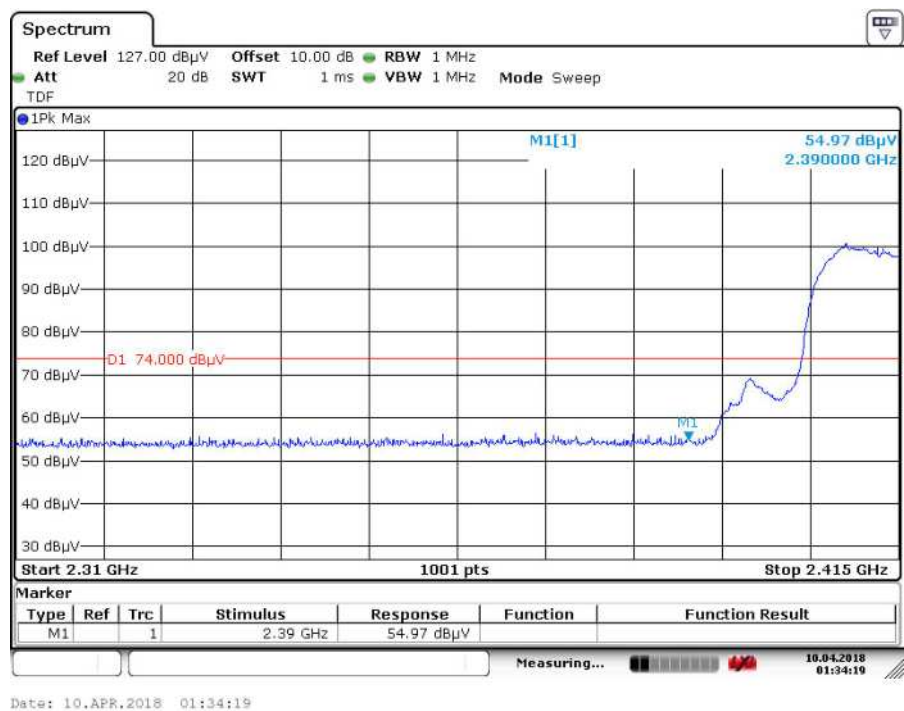
Spurious Emissions, Band Edges, 2.35-2.5G

Radiated Bandedge 11b

Low Channel (Hor)

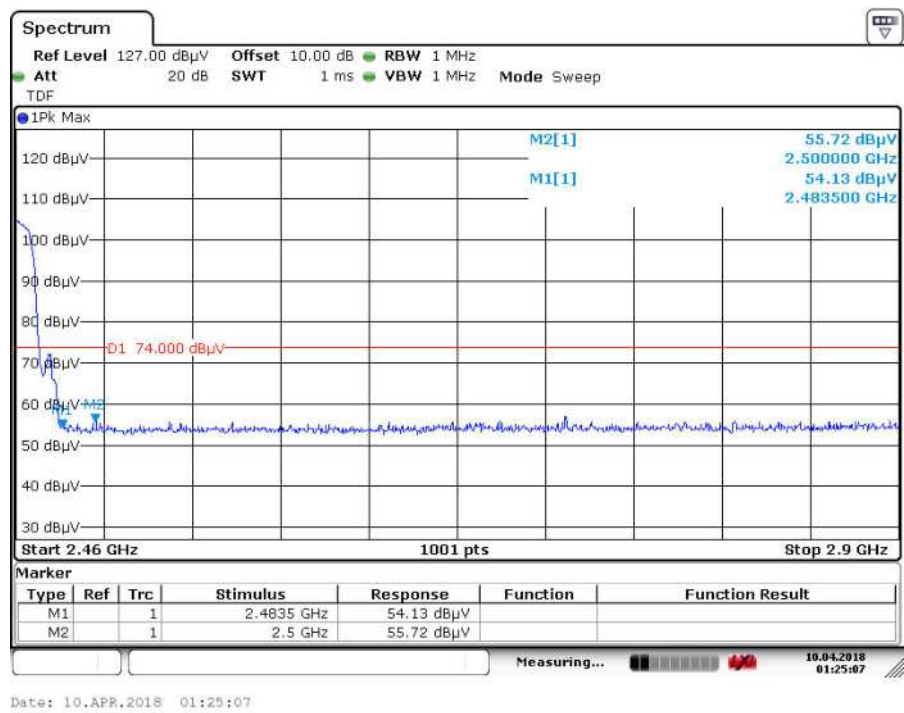
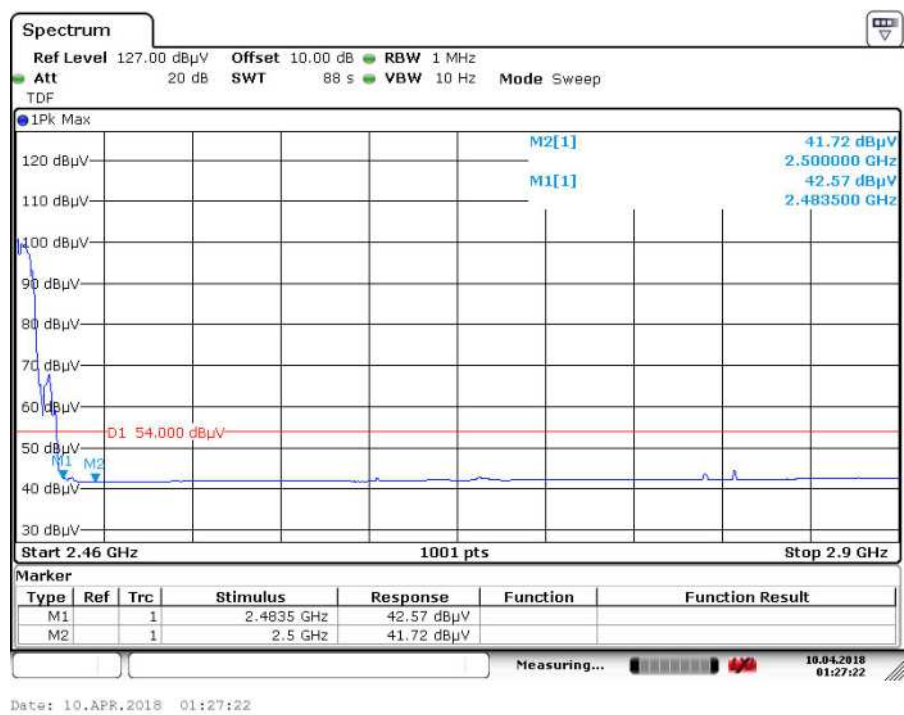


Low Channel (Ver)

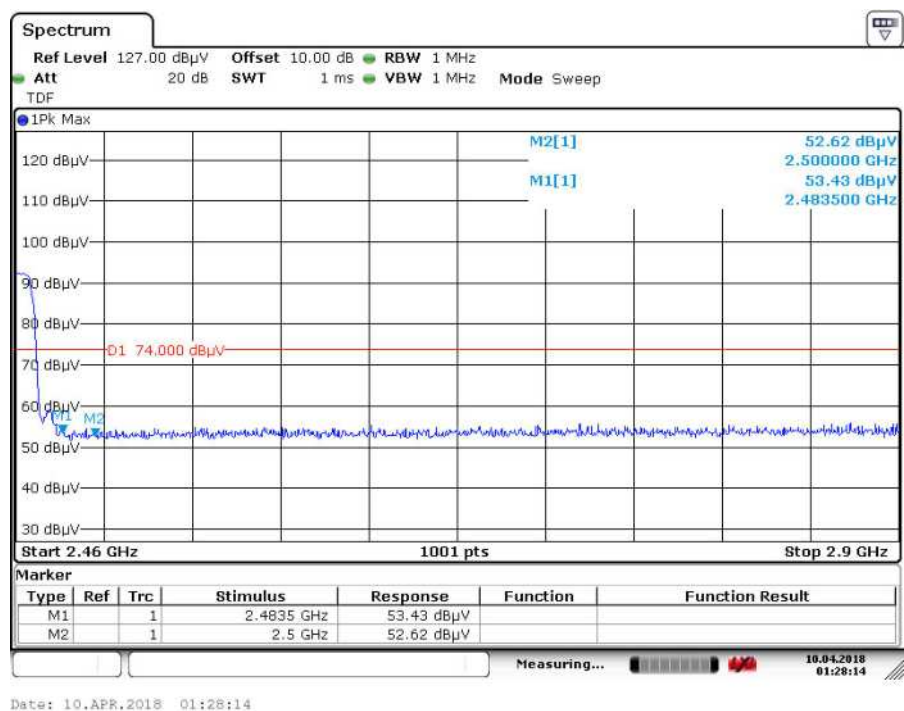
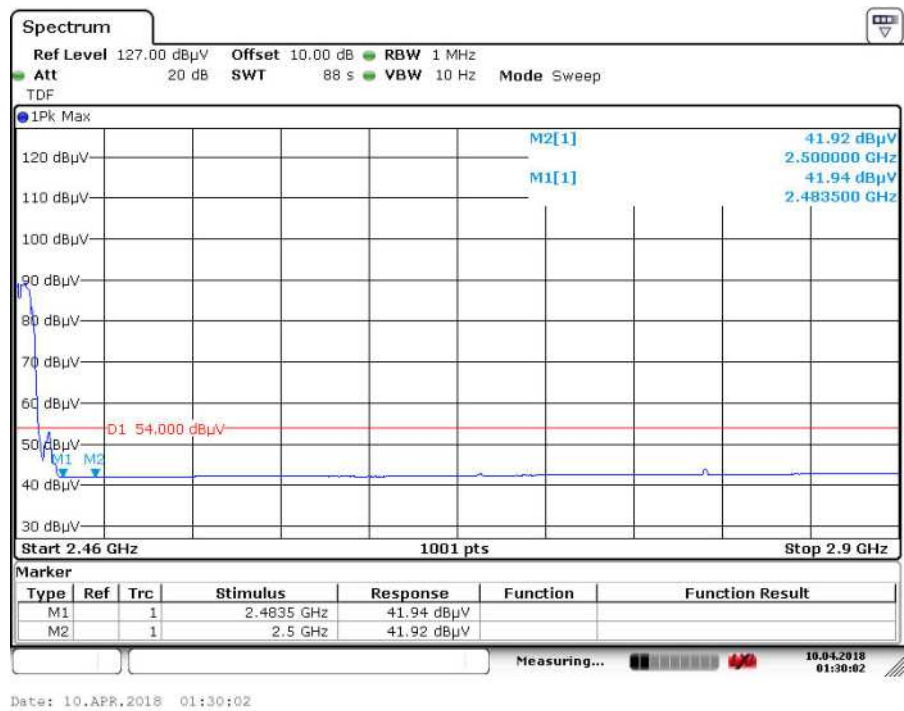


Radiated Bandedge 11b

High Channel (Hor)

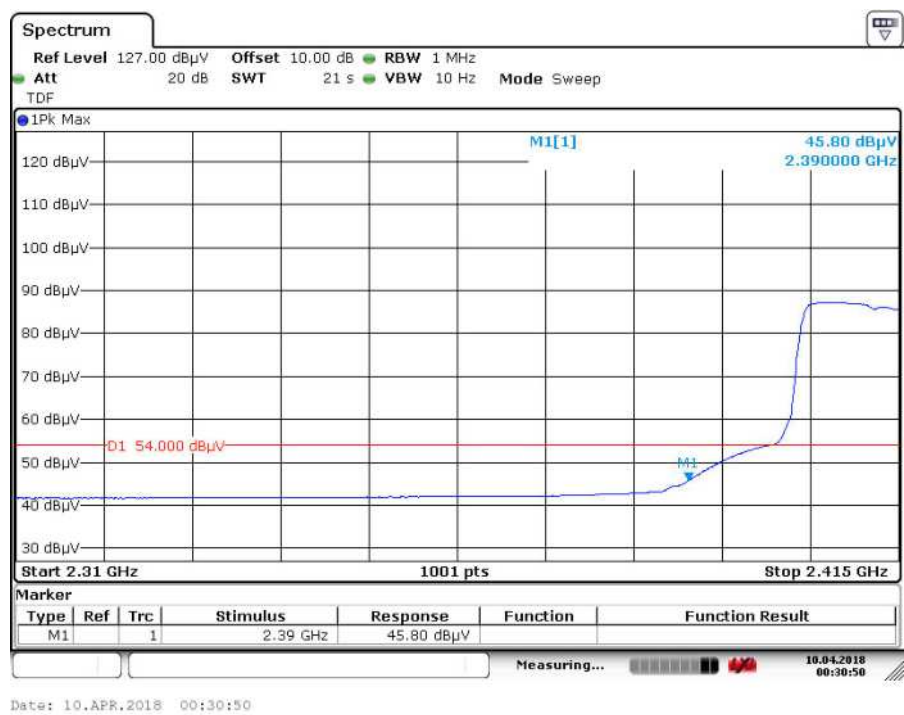


High Channel (Ver)

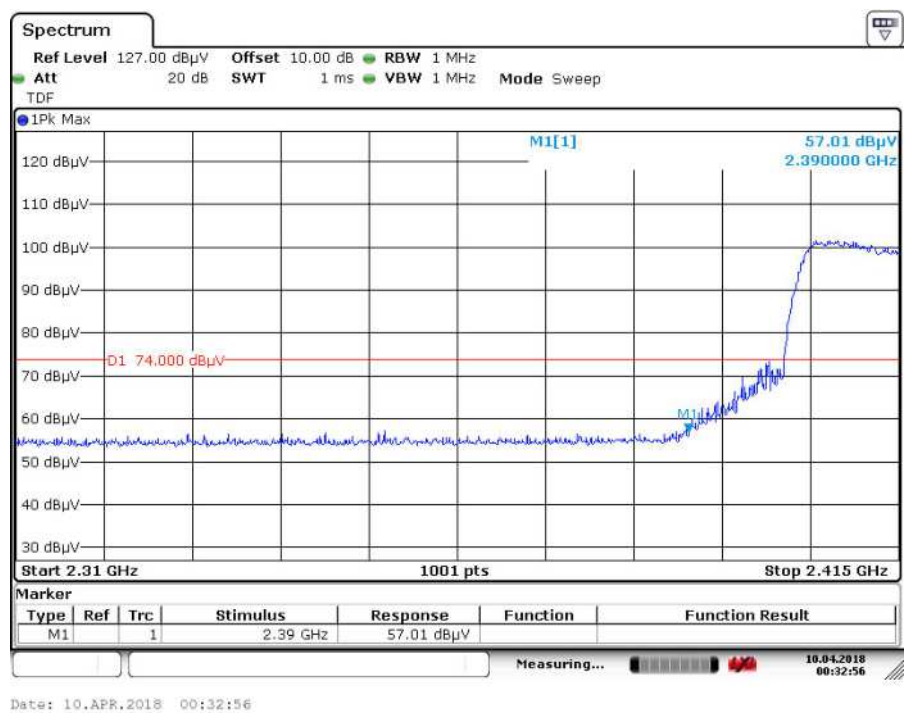
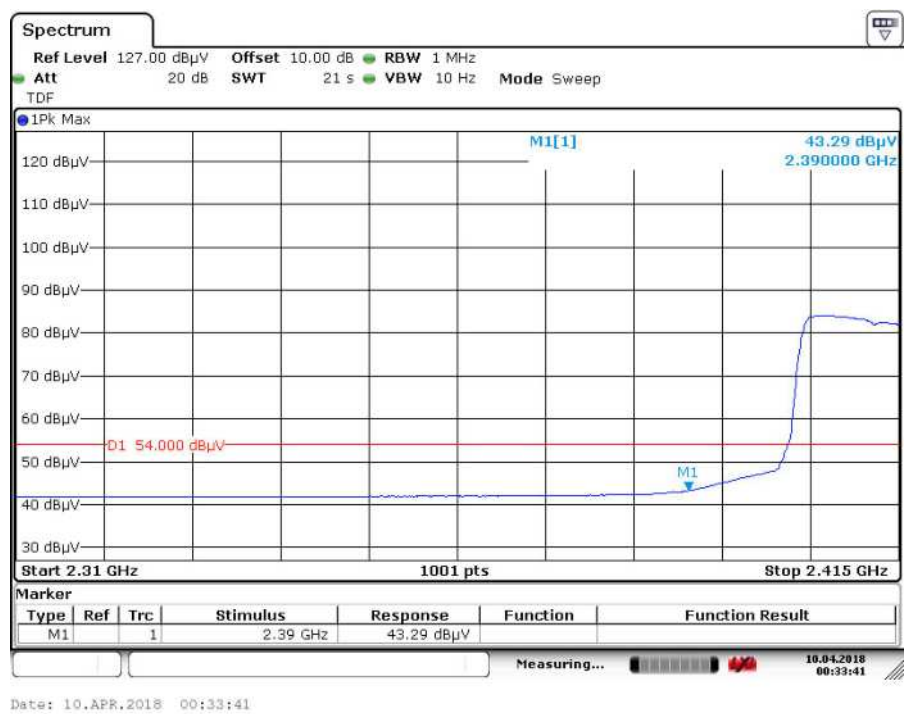


Radiated Bandedge 11g

Low Channel (Hor)

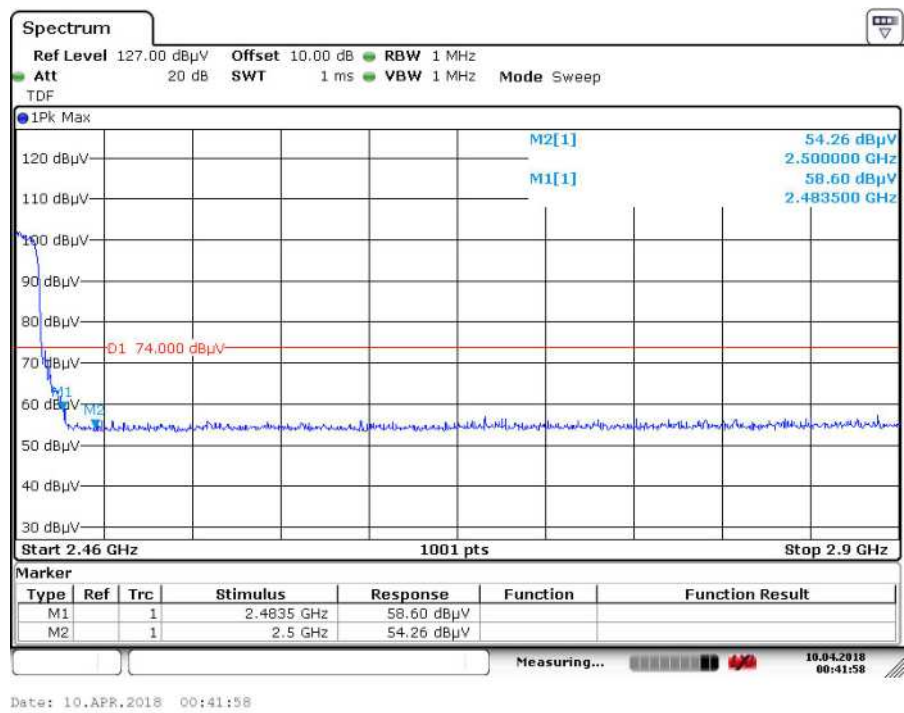
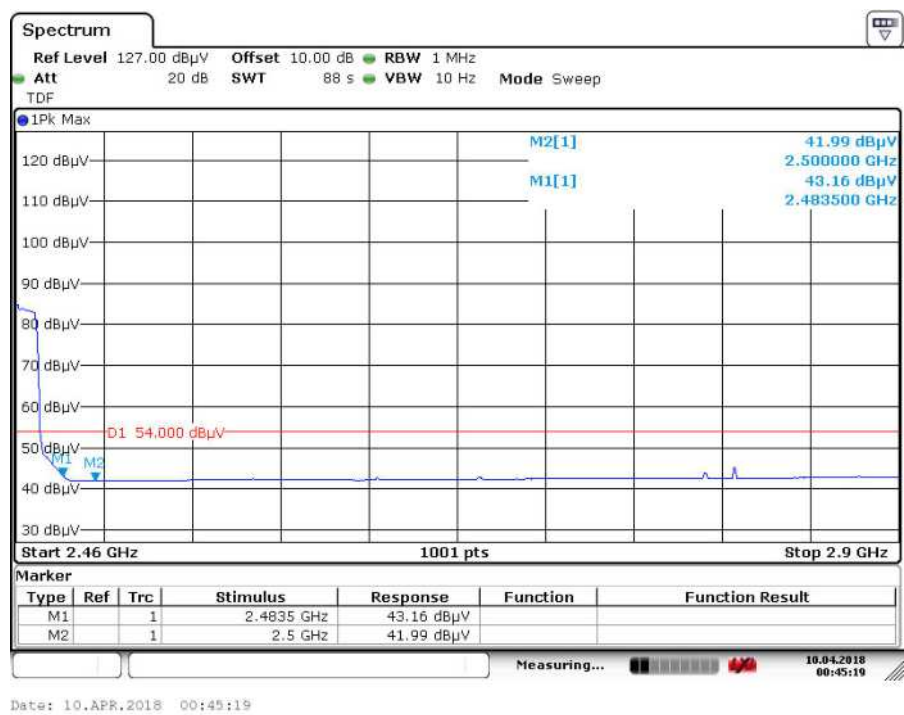


Low Channel (Ver)

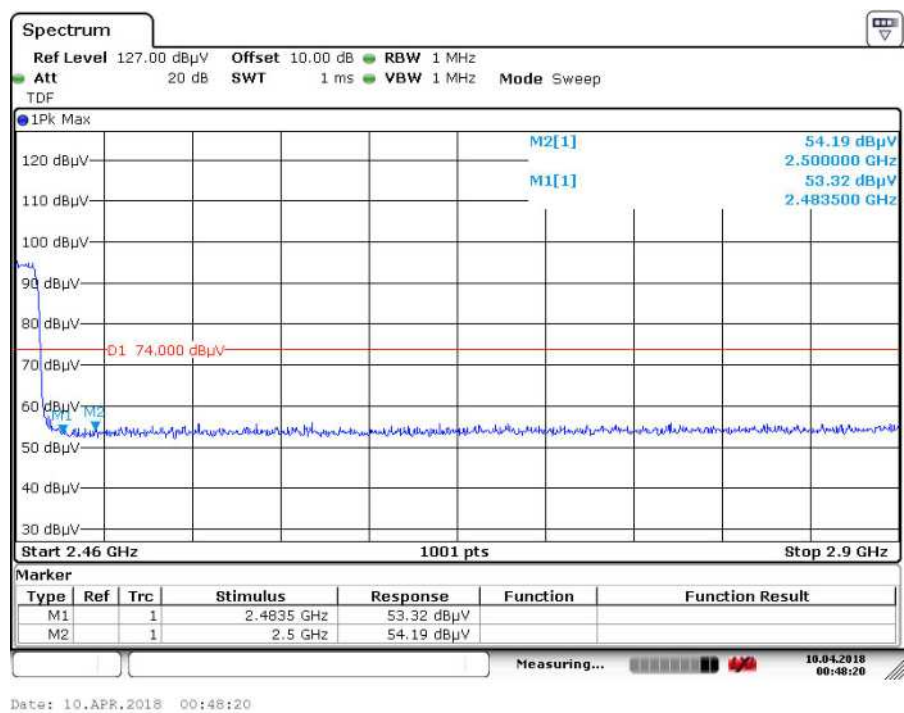
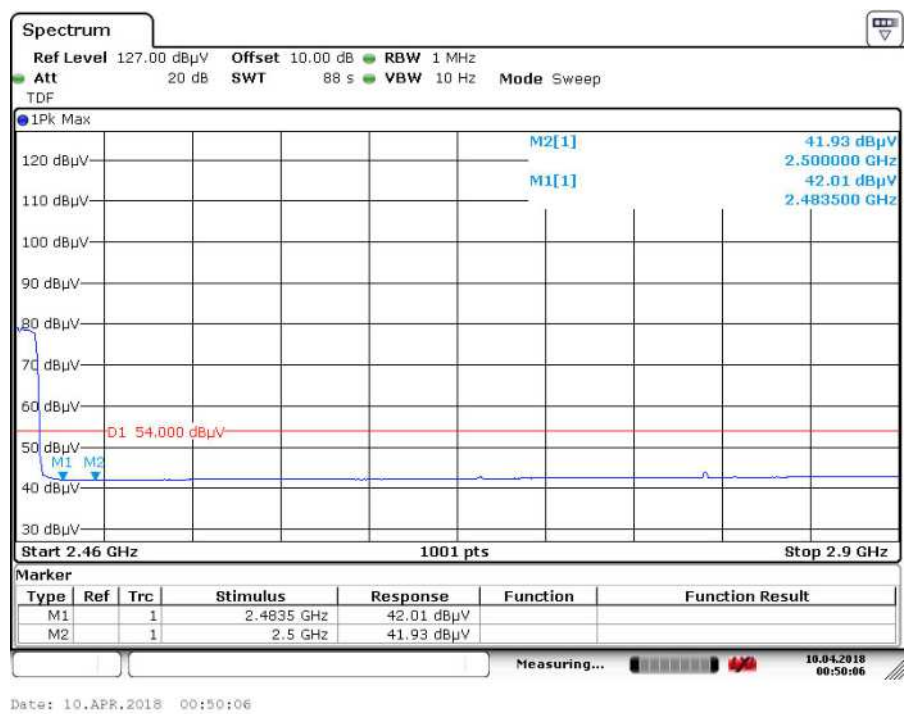


Radiated Bandedge 11g

High Channel (Hor)

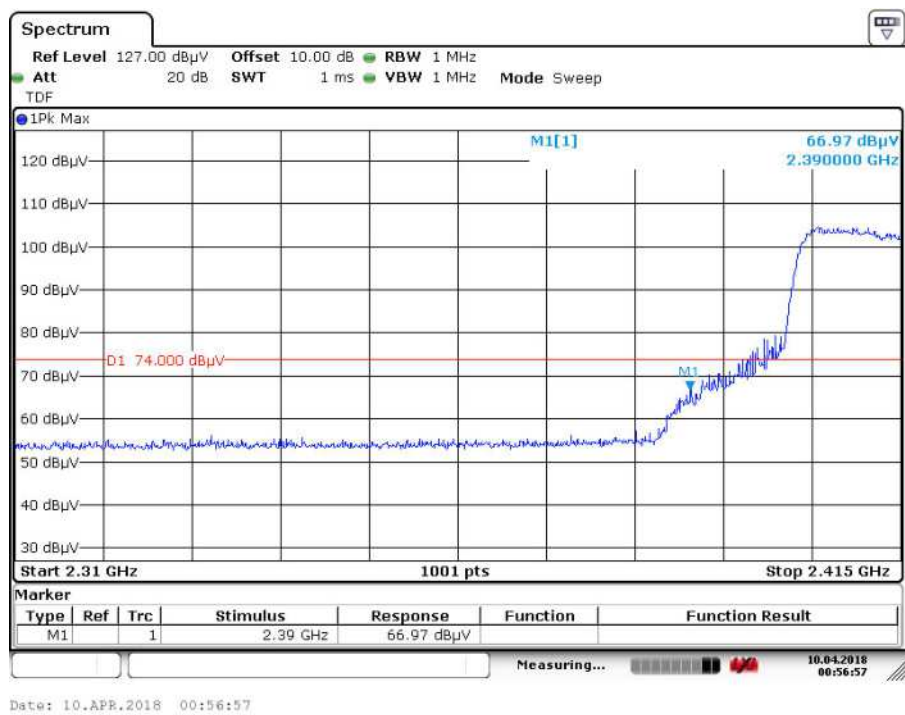
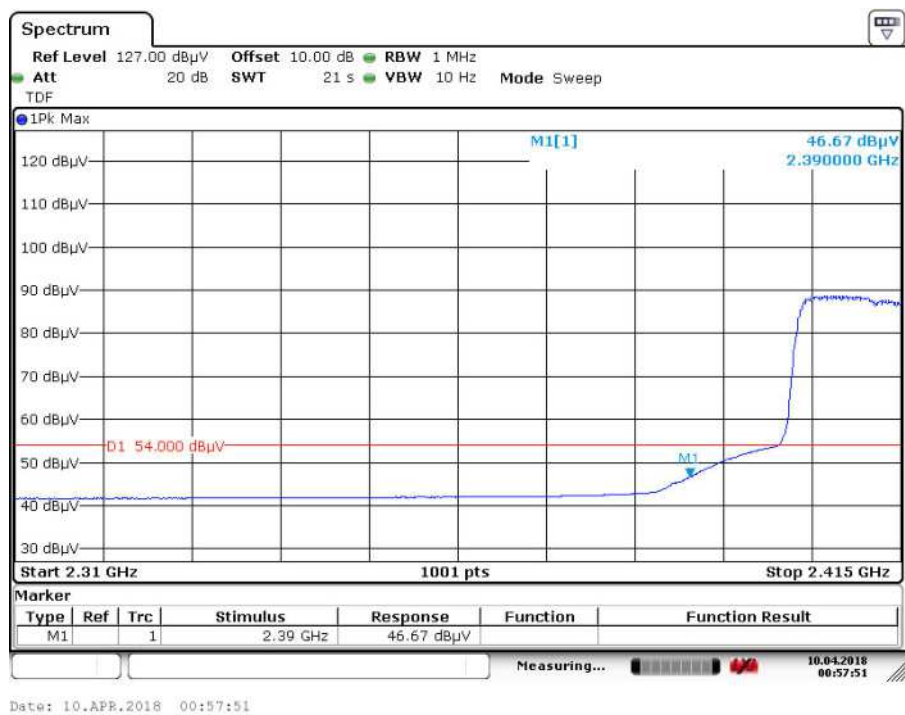


High Channel (Ver)

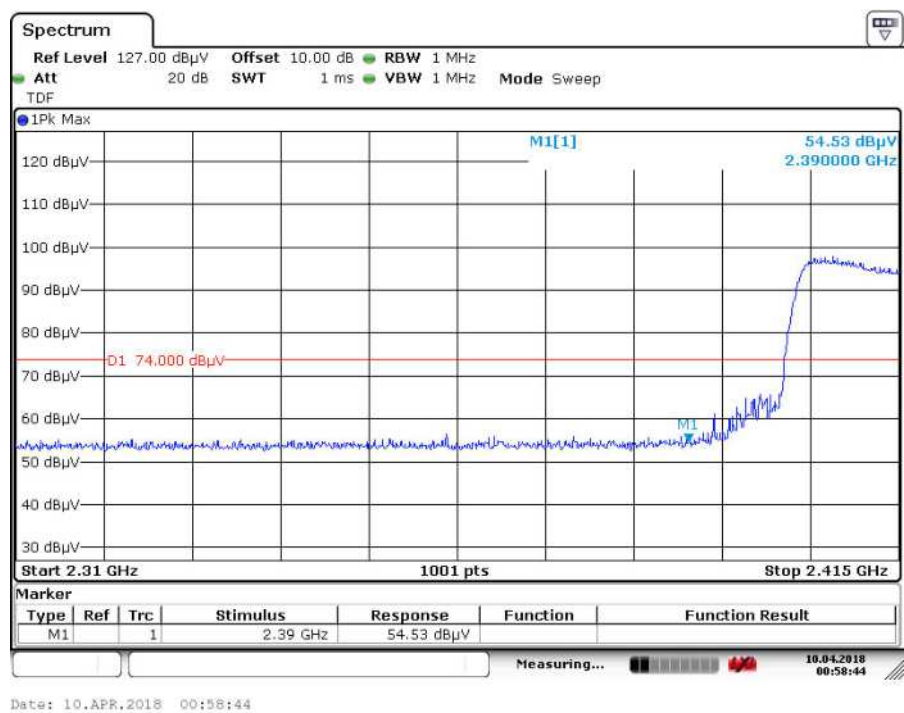
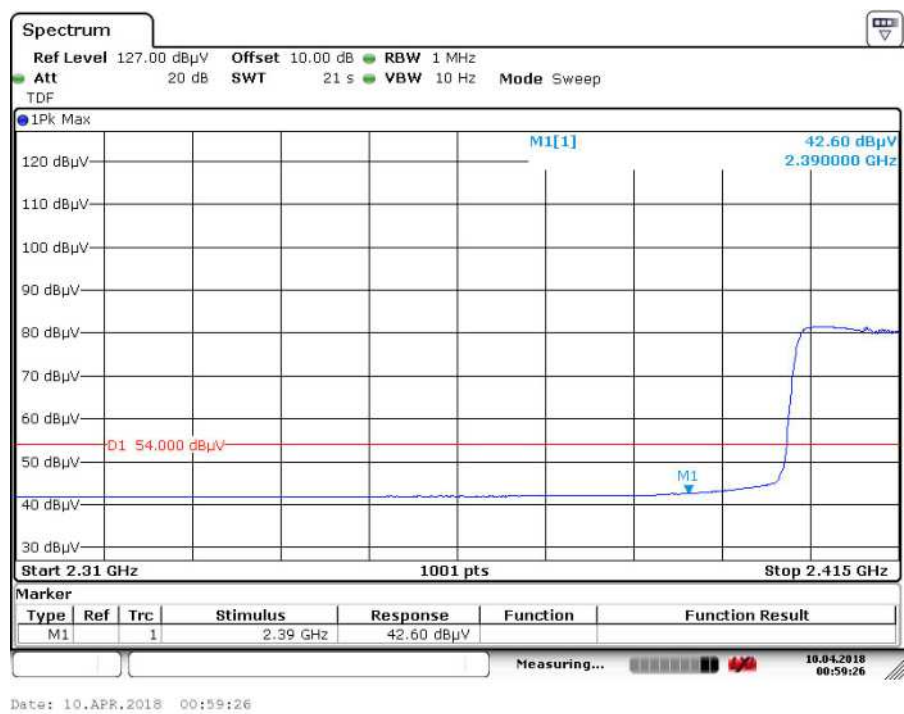


Radiated Bandedge 11n

Low Channel (Hor)

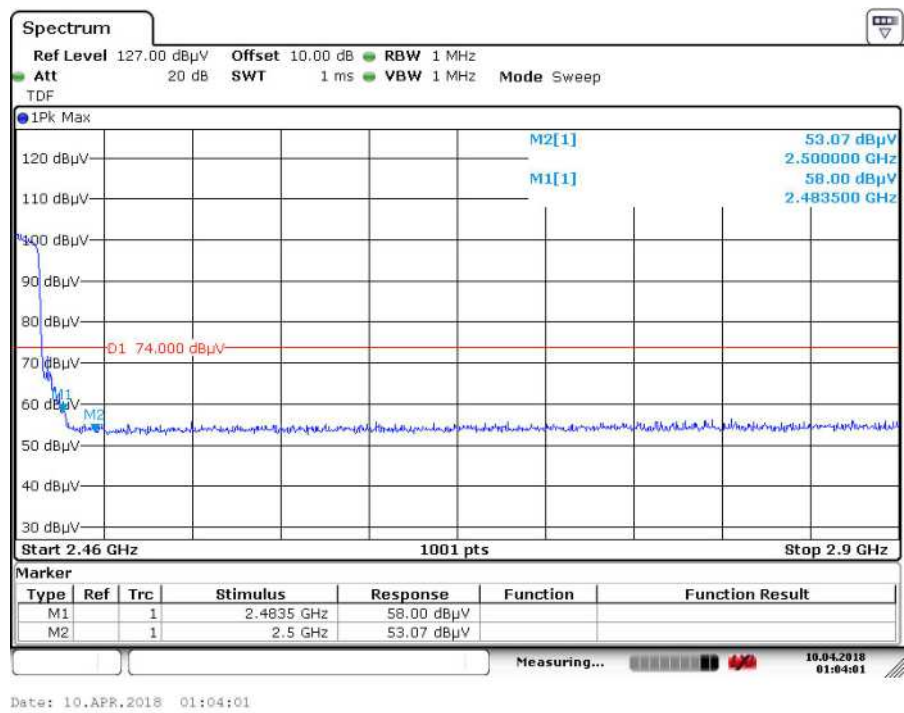
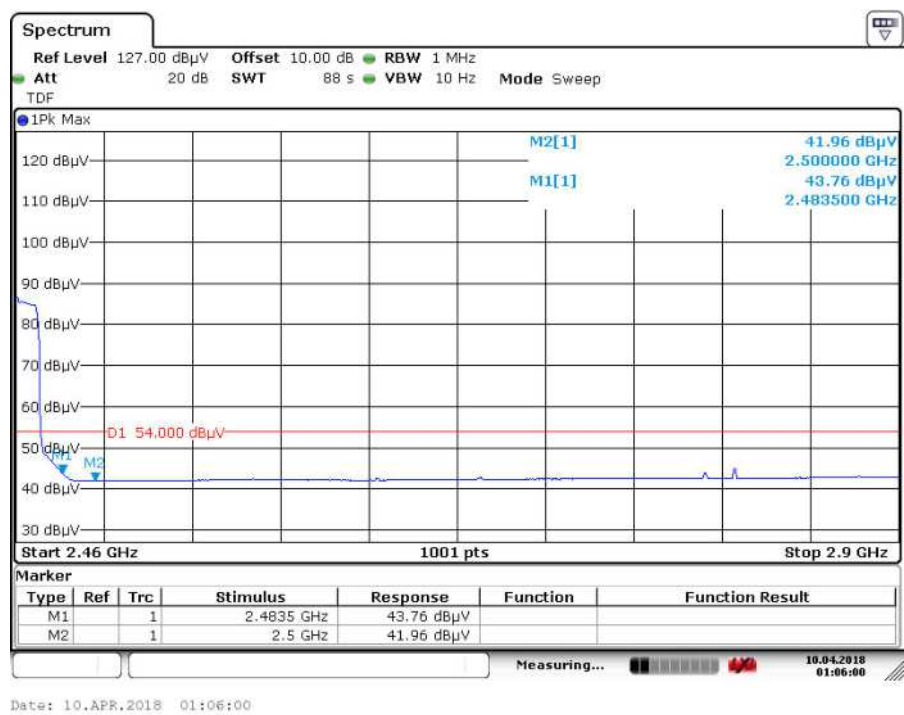


Low Channel (Ver)

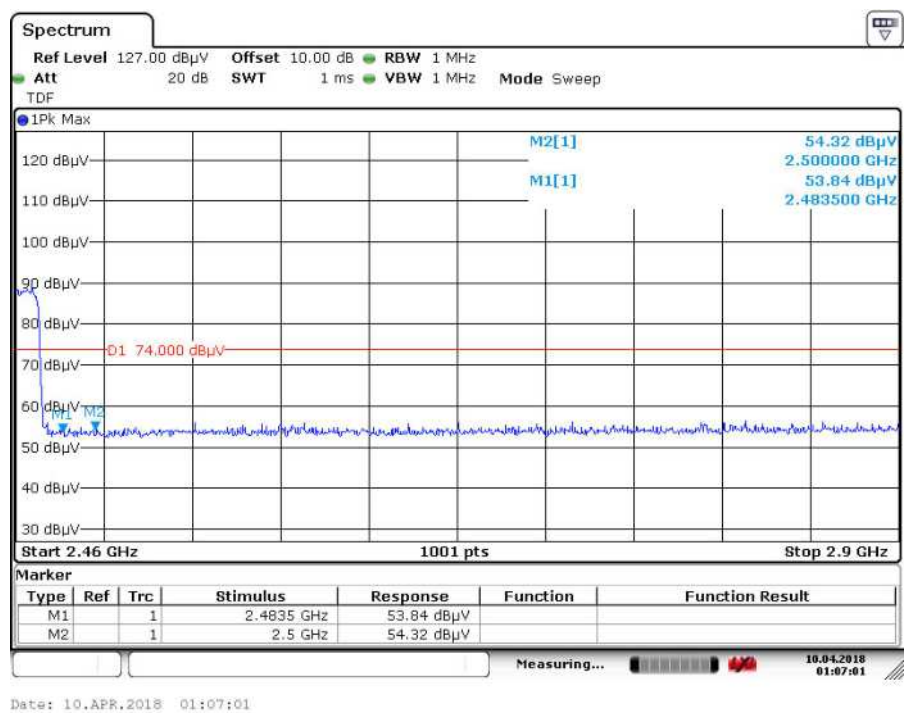
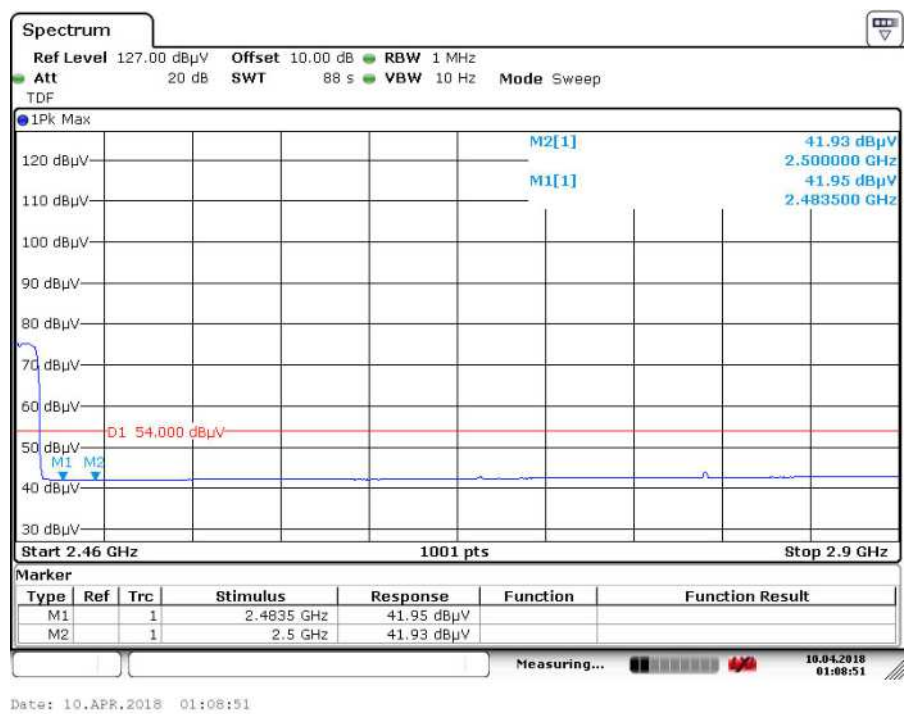


Radiated Bandedge 11n

High Channel (Hor)



High Channel (Ver)



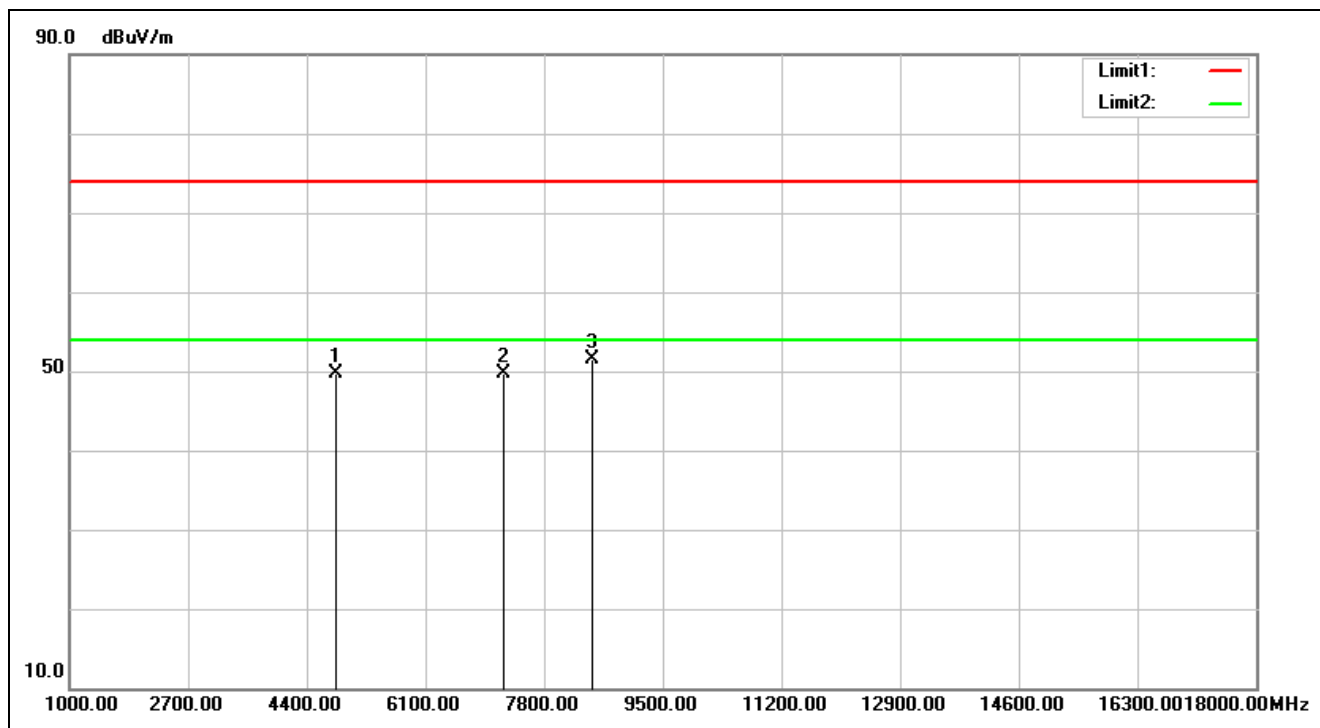
Spurious Emissions, TX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

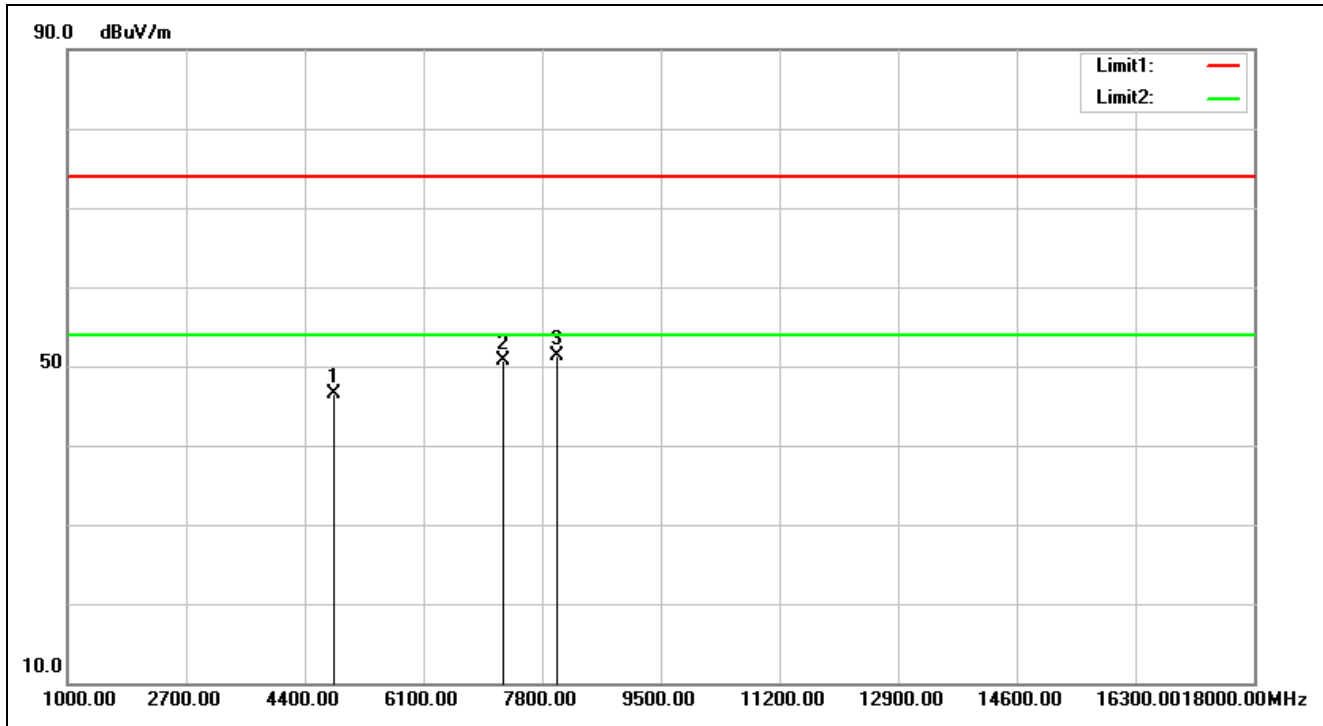
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



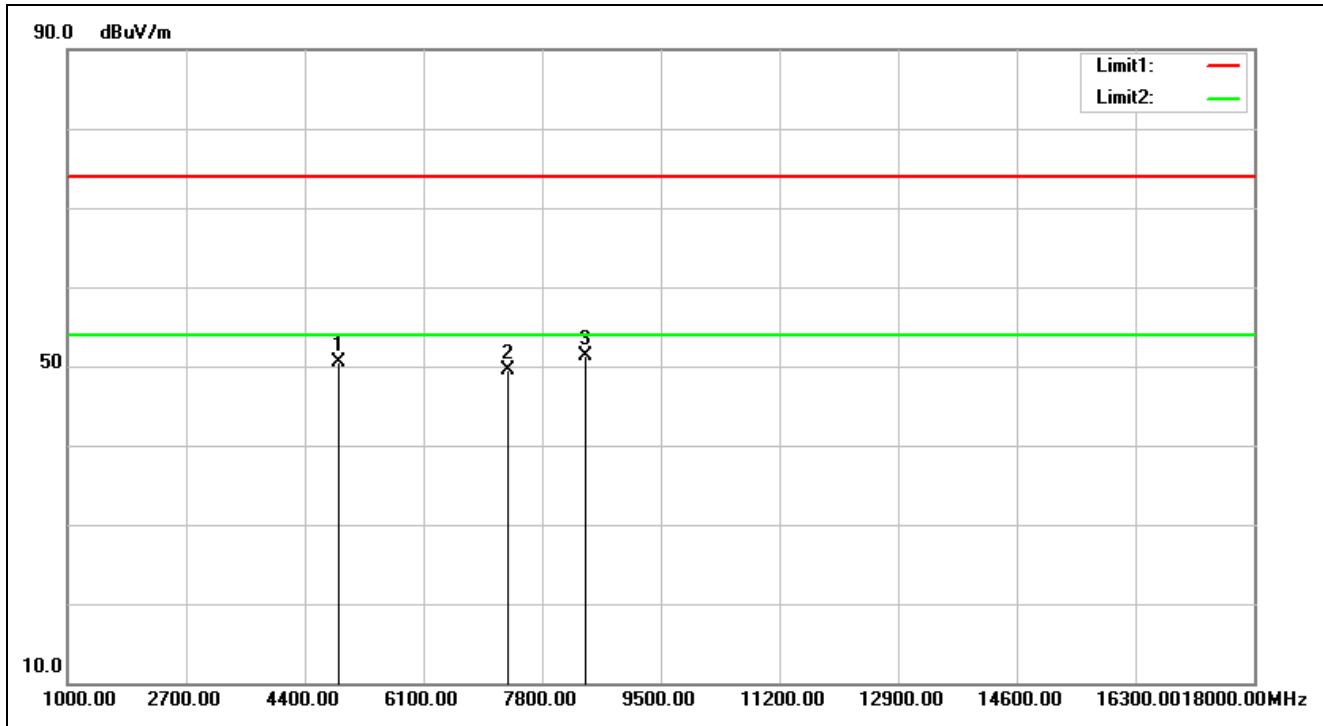
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 01:04:34
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	Power Setting -9 RFMTA331215IMAB701-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	52.36	49.70	74.00	-24.30	peak	100	137	
2	7236.000	5.32	44.47	49.79	74.00	-24.21	peak		0	
3	8497.000	6.38	45.14	51.52	74.00	-22.48	peak	100	272	



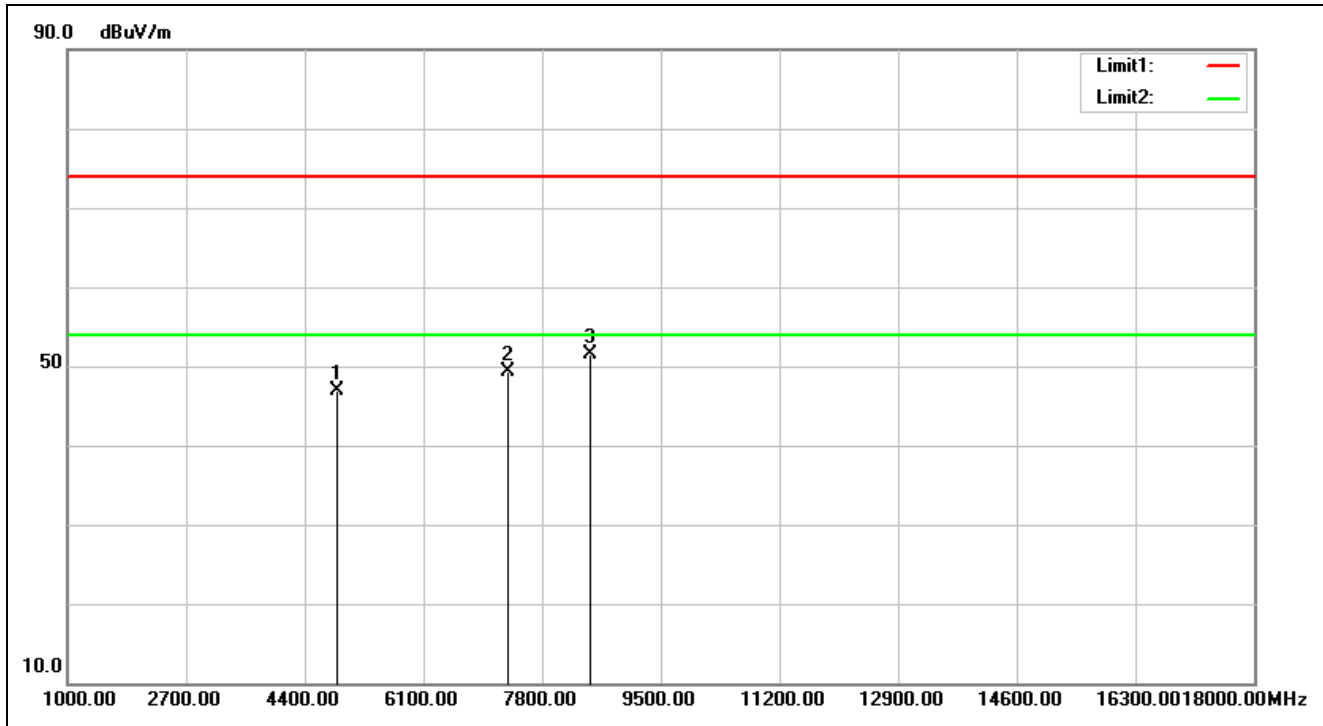
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 01:05:30
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	Power Setting -9		
	RFMTA331215IMAB701-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	49.21	46.55	74.00	-27.45	peak			
2	7236.000	5.32	45.35	50.67	74.00	-23.33	peak			
3	8021.000	5.85	45.43	51.28	74.00	-22.72	peak	100	141	



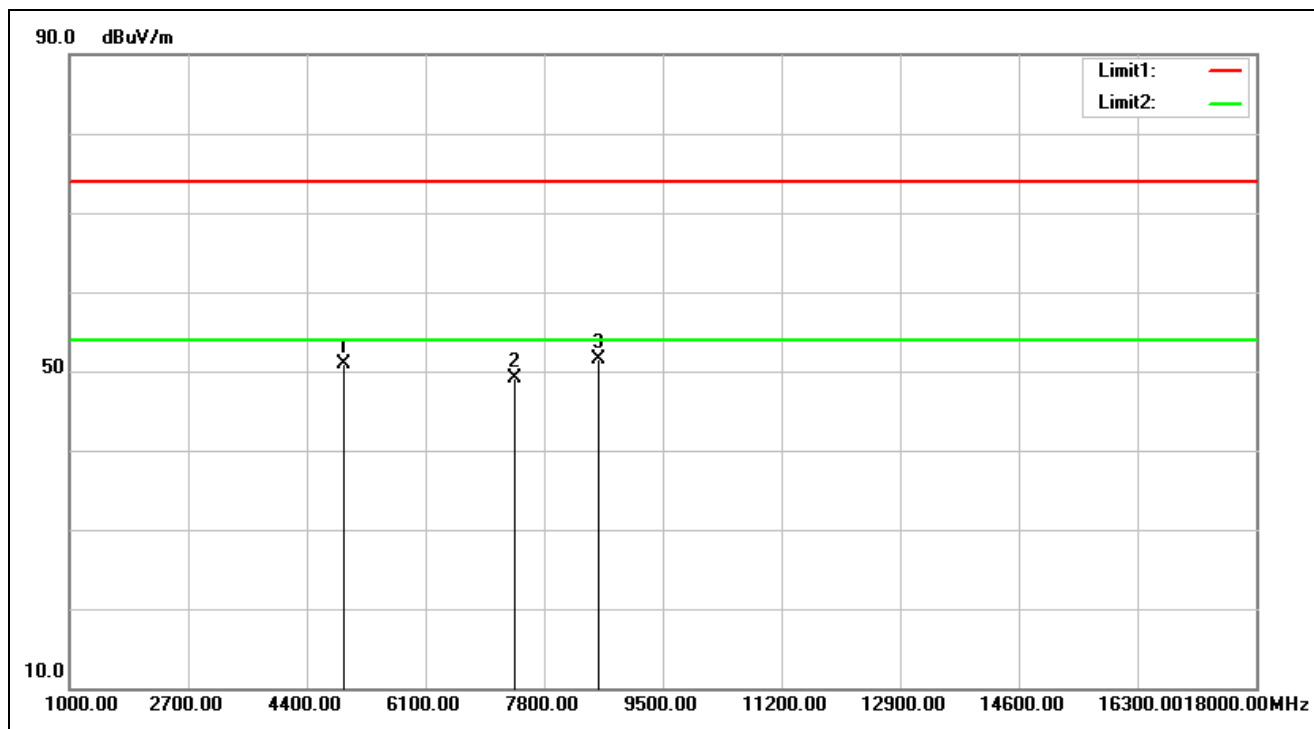
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 01:07:56
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9		
	RFMTA331215IMAB701-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	53.08	50.55	74.00	-23.45	peak	100	148	
2	7311.000	5.52	43.90	49.42	74.00	-24.58	peak			
3	8429.000	6.30	45.03	51.33	74.00	-22.67	peak	100	307	



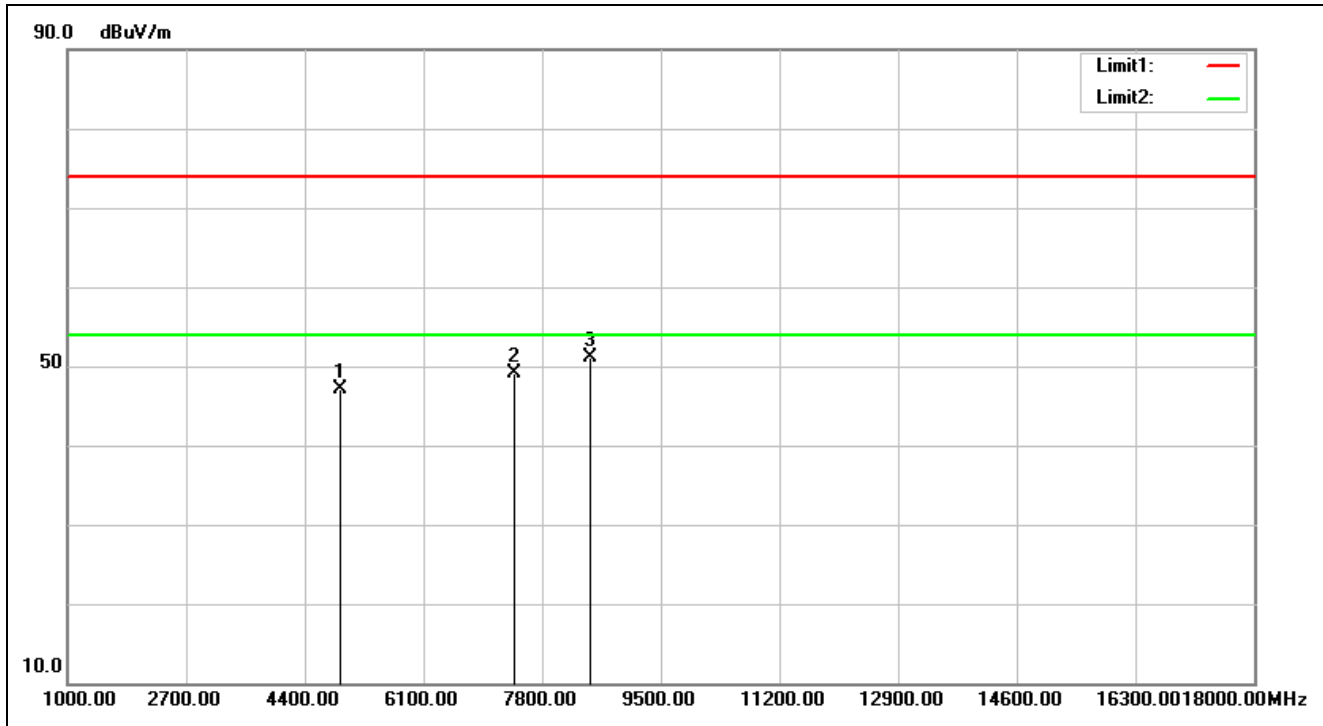
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 01:08:52
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9 RFMTA331215IMAB701-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	49.35	46.82	74.00	-27.18	peak			
2	7311.000	5.52	43.82	49.34	74.00	-24.66	peak			
3	8497.000	6.38	45.14	51.52	74.00	-22.48	peak	100	15	



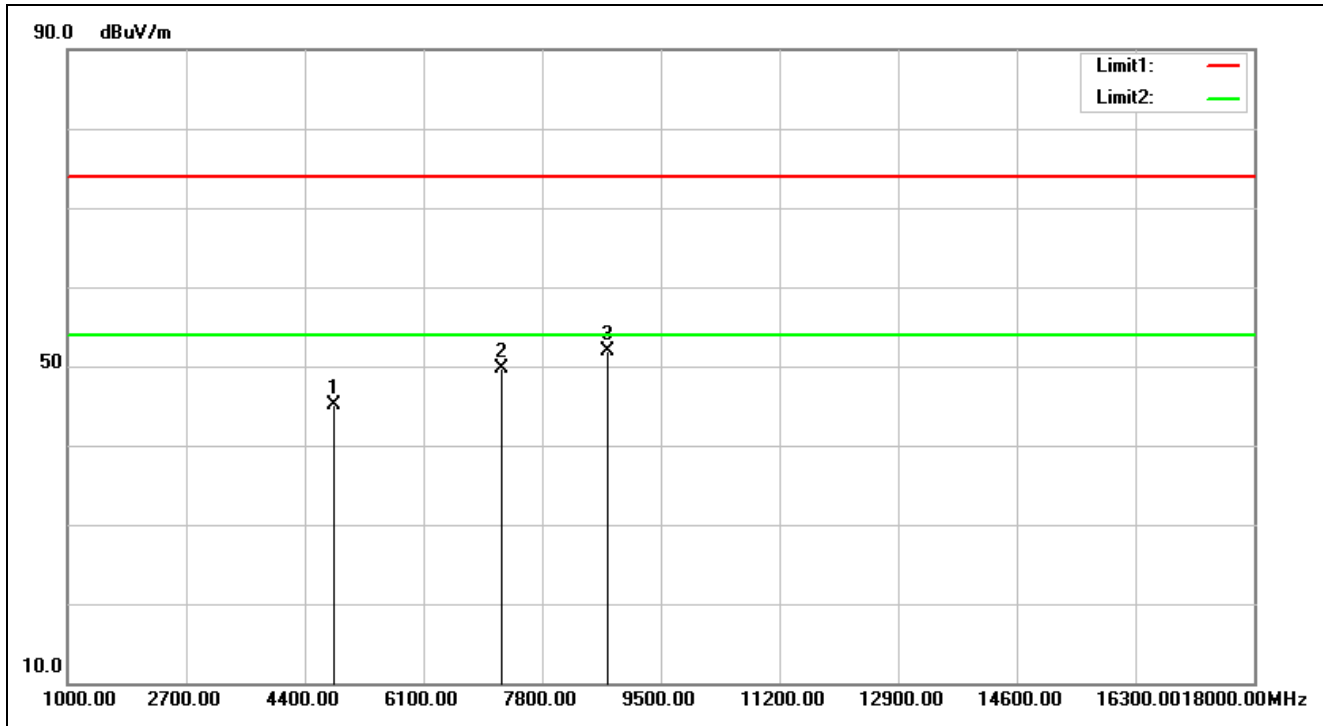
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 01:11:37
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	Power Setting -9		
	RFMTA331215IMAB701-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	53.28	50.89	74.00	-23.11	peak	100	144	
2	7386.000	5.70	43.40	49.10	74.00	-24.90	peak			
3	8582.000	6.39	45.09	51.48	74.00	-22.52	peak	100	100	



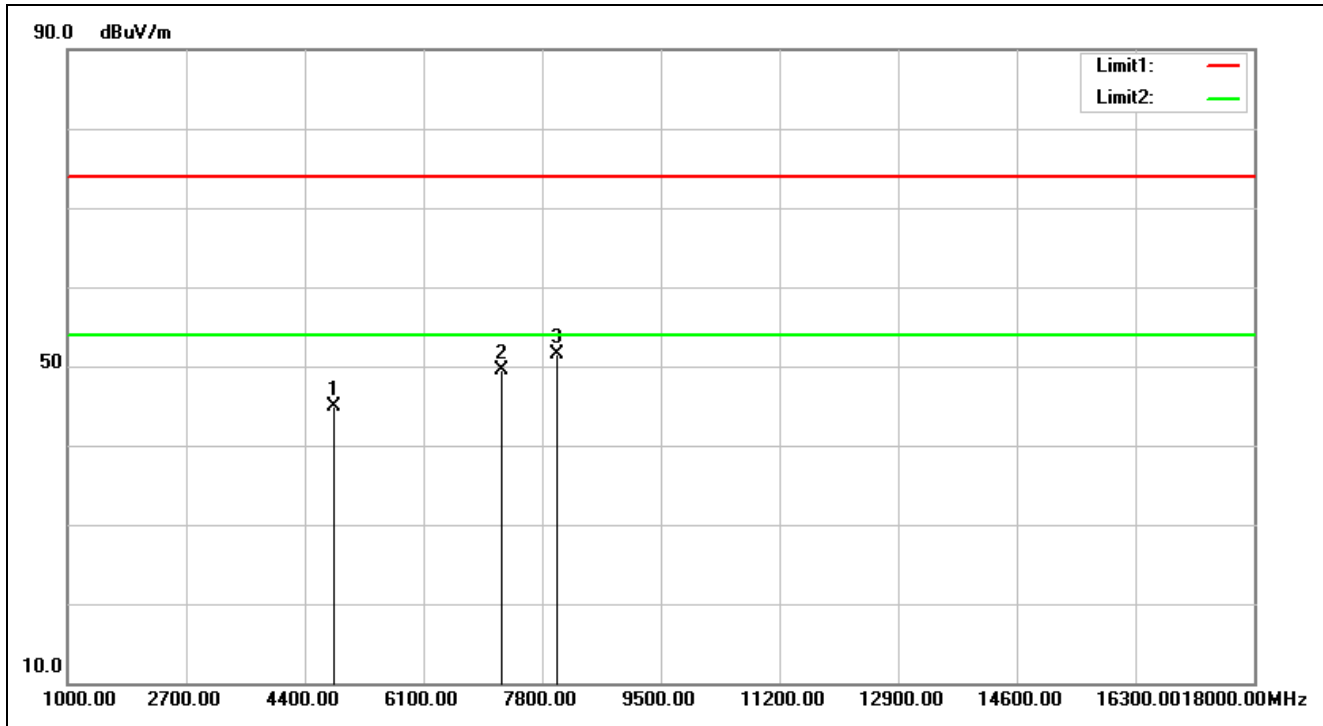
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 01:12:34
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	Power Setting -9		
	RFMTA331215IMAB701-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	49.42	47.03	74.00	-26.97	peak			
2	7386.000	5.70	43.43	49.13	74.00	-24.87	peak			
3	8480.000	6.35	44.76	51.11	74.00	-22.89	peak	100	125	



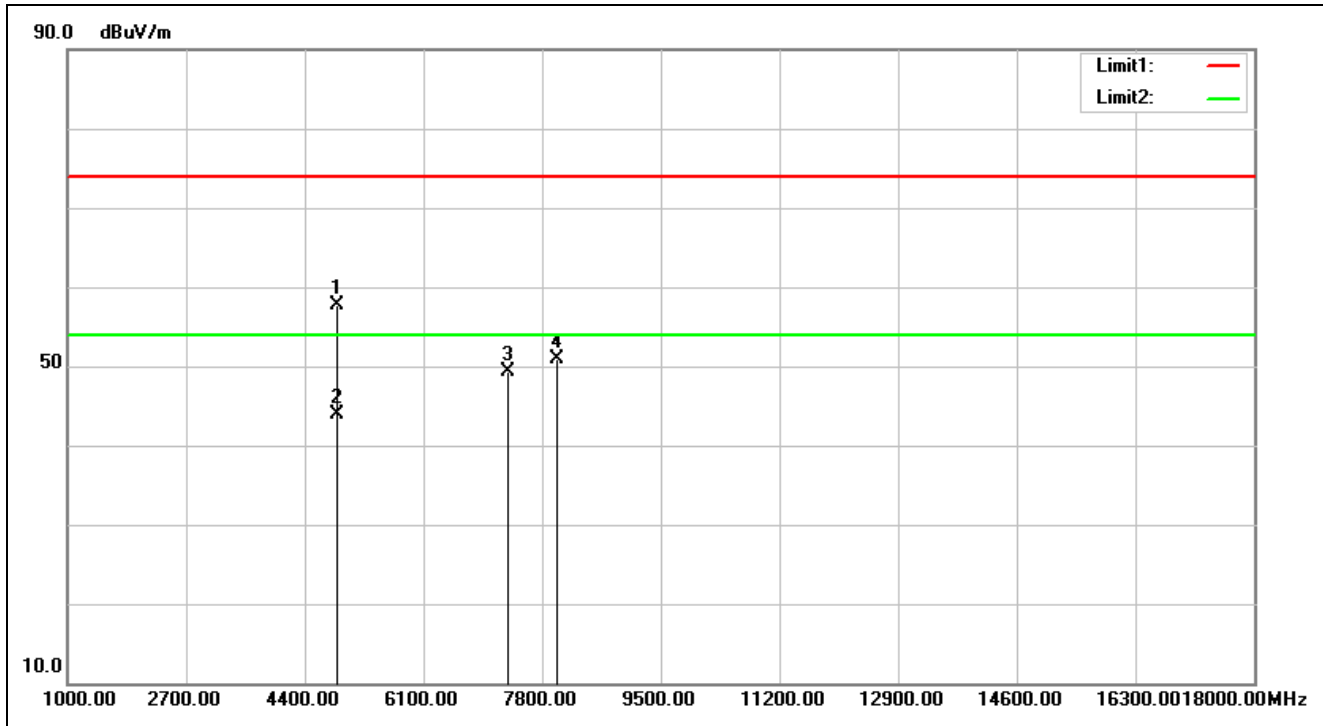
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 01:38:05
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	Power Setting -13		
	RFMTA331215IMAB701-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	44.37	49.69	74.00	-24.31	peak			
3	8735.000	6.40	45.50	51.90	74.00	-22.10	peak	100	106	



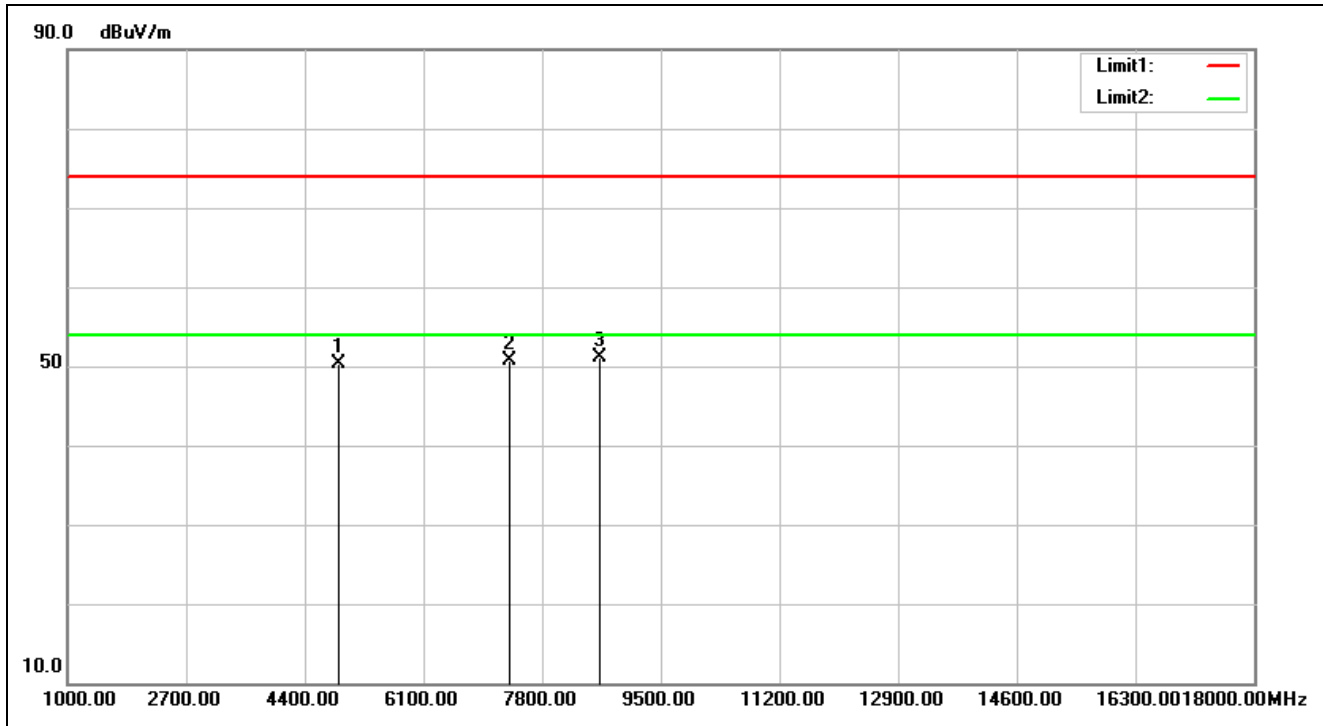
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 01:39:02
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	Power Setting -13		
	RFMTA331215IMAB701-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	47.61	44.95	74.00	-29.05	peak			
2	7236.000	5.32	44.13	49.45	74.00	-24.55	peak			
3	8004.000	5.82	45.68	51.50	74.00	-22.50	peak	100	156	



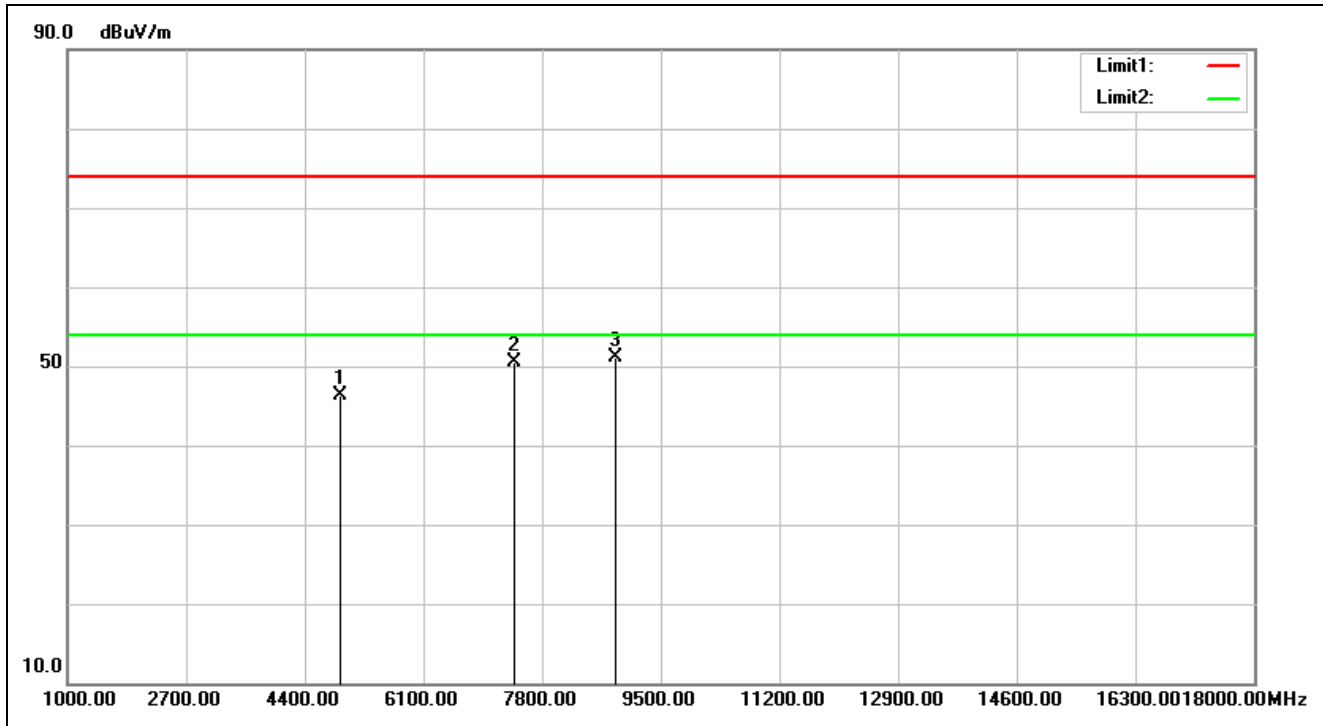
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 01:41:39
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4		
	RFMTA331215IMAB701-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	60.19	57.66	74.00	-16.34	peak	100	140	
2	4874.000	-2.53	46.46	43.93	54.00	-10.07	AVG	100	140	
3	7311.000	5.52	43.82	49.34	74.00	-24.66	peak			
4	8021.000	5.85	45.06	50.91	74.00	-23.09	peak	100	56	



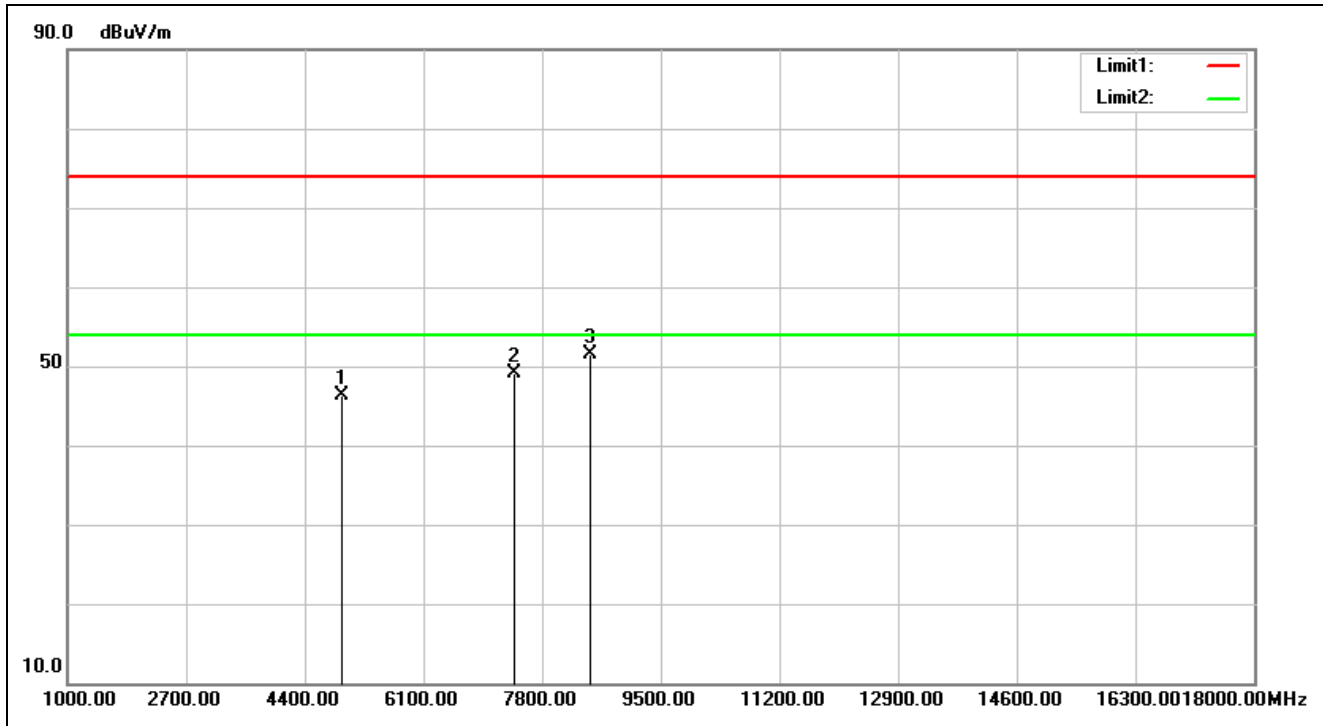
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 01:42:35
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4 RFMTA331215IMAB701-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	52.85	50.32	74.00	-23.68	peak	100	238	
2	7311.000	5.52	45.12	50.64	74.00	-23.36	peak			
3	8633.000	6.39	44.74	51.13	74.00	-22.87	peak	100	272	



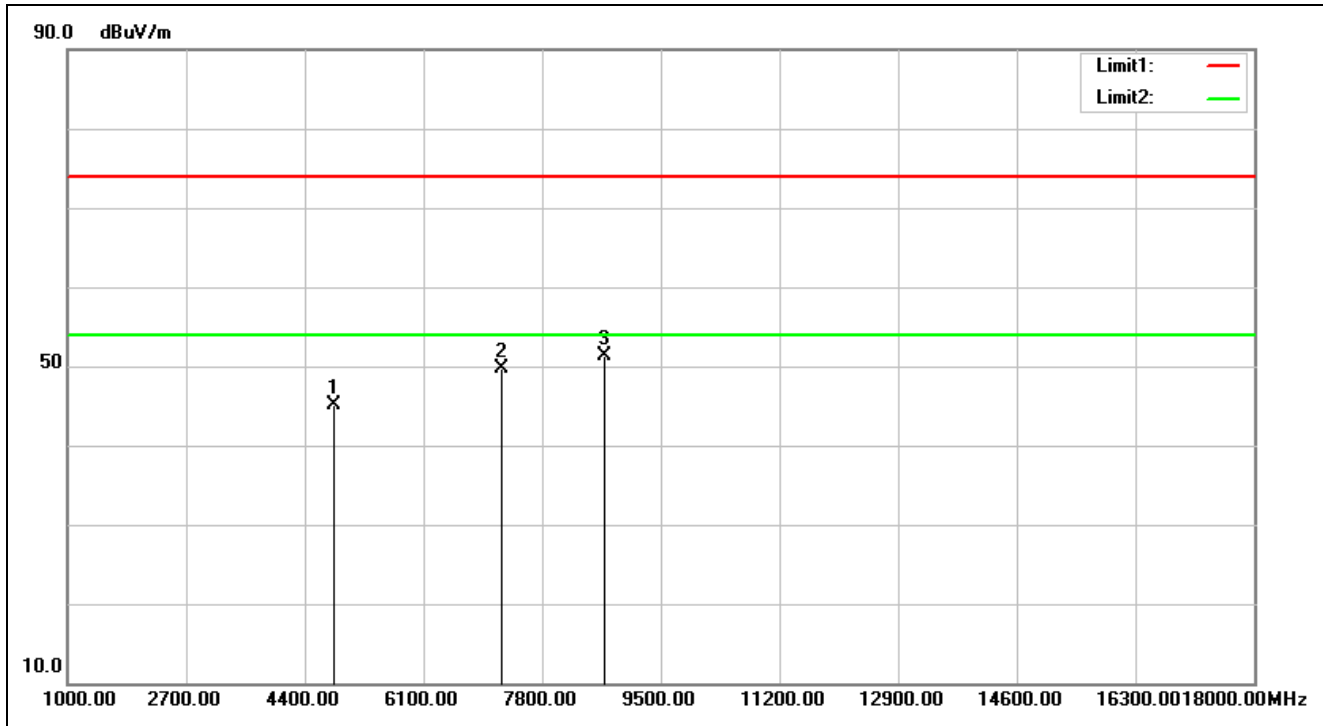
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 01:46:58
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	Power Setting -13		
	RFMTA331215IMAB701-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	48.69	46.30	74.00	-27.70	peak			
2	7386.000	5.70	44.87	50.57	74.00	-23.43	peak			
3	8854.000	6.42	44.75	51.17	74.00	-22.83	peak	100	156	



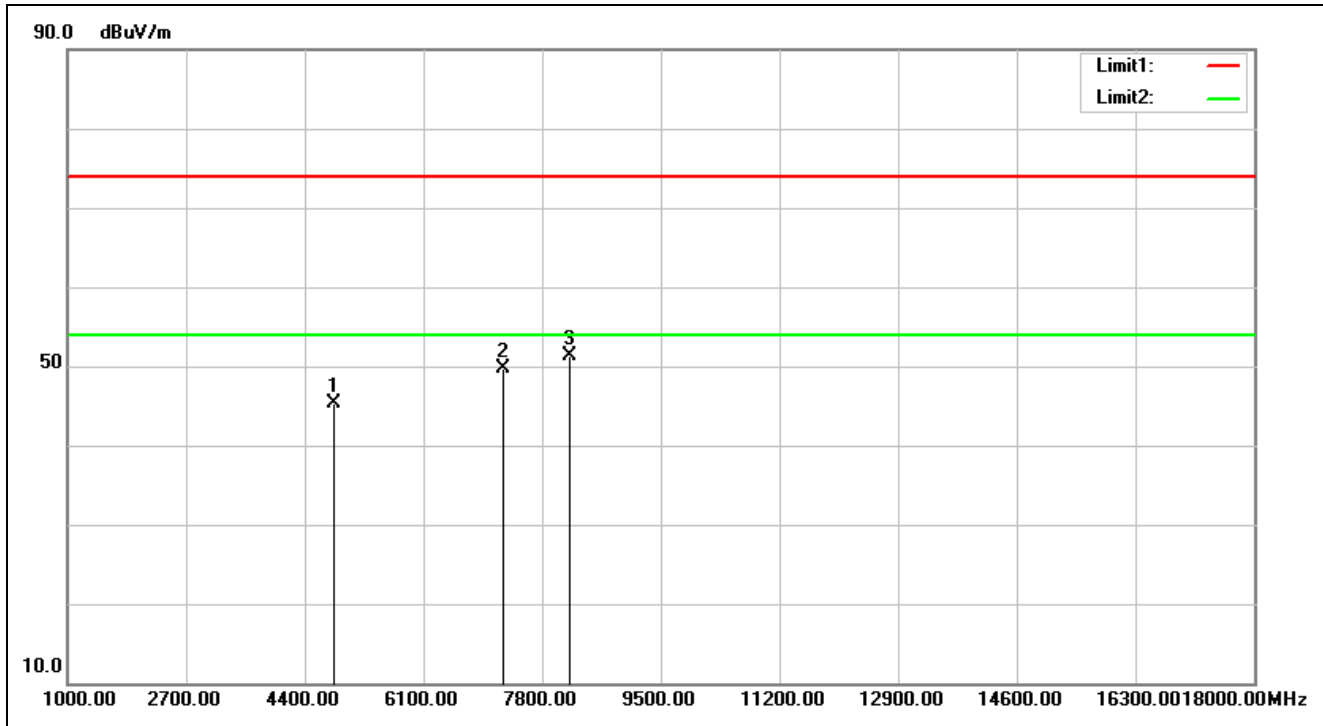
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 01:47:55
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	Power Setting -13		
	RFMTA331215IMAB701-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	48.63	46.24	74.00	-27.76	peak			
2	7386.000	5.70	43.39	49.09	74.00	-24.91	peak			
3	8480.000	6.35	45.14	51.49	74.00	-22.51	peak	100	73	



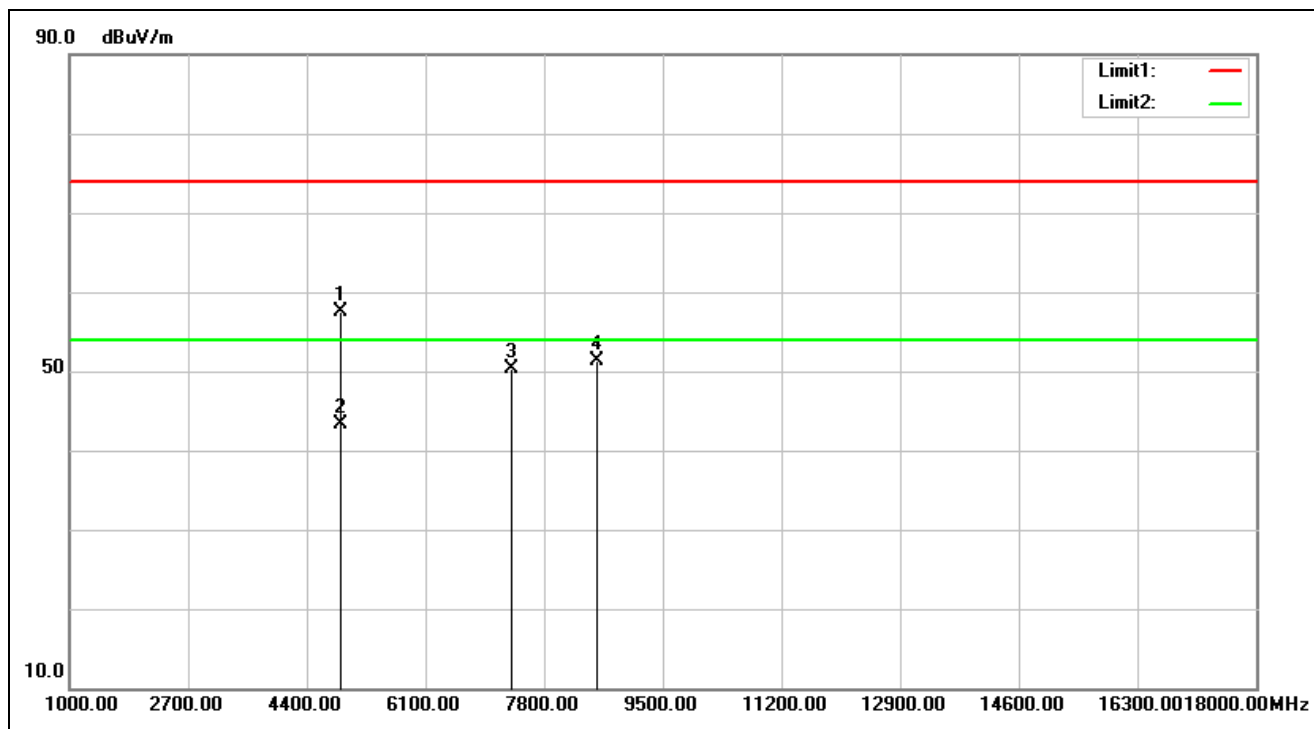
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 01:52:46
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	Power Setting -13 RFMTA331215IMAB701-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	47.81	45.15	74.00	-28.85	peak			
2	7236.000	5.32	44.32	49.64	74.00	-24.36	peak			
3	8701.000	6.41	44.97	51.38	74.00	-22.62	peak	100	257	



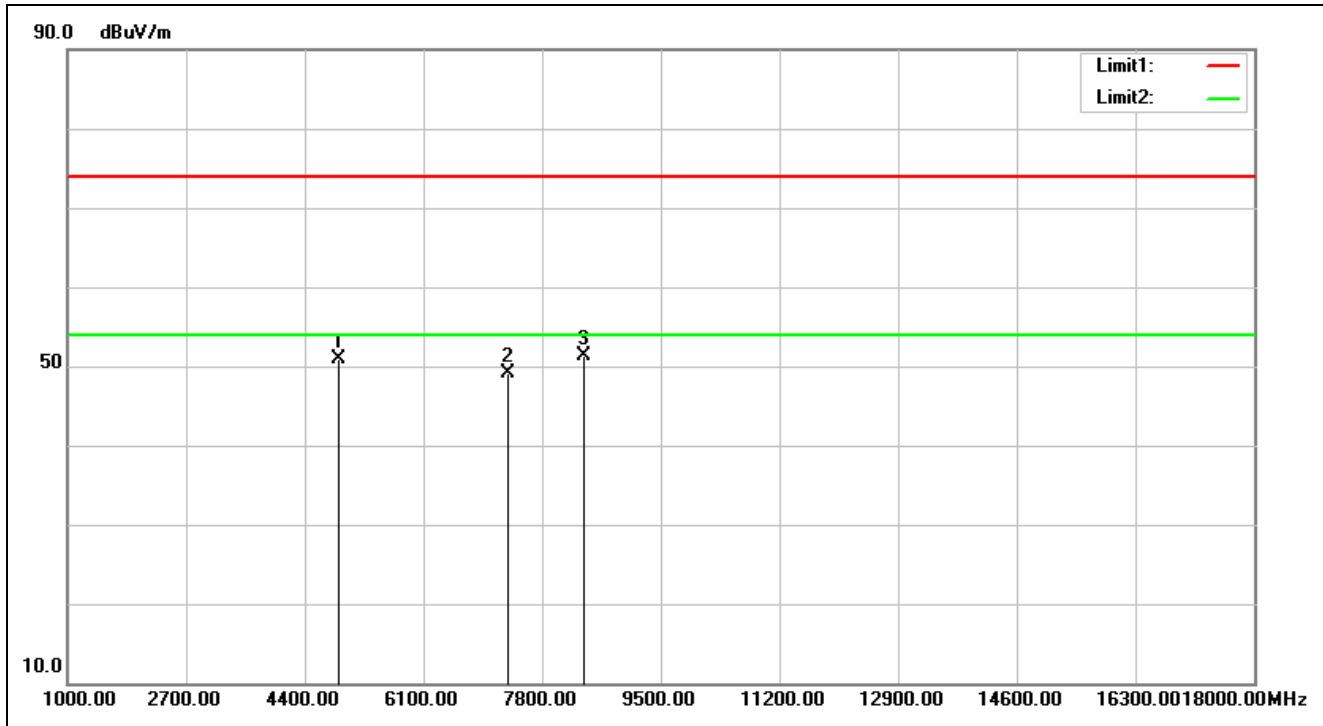
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 01:53:42
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	Power Setting -13		
	RFMTA331215IMAB701-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	47.89	45.23	74.00	-28.77	peak			
2	7236.000	5.32	44.33	49.65	74.00	-24.35	peak			
3	8191.000	6.03	45.30	51.33	74.00	-22.67	peak	100	210	



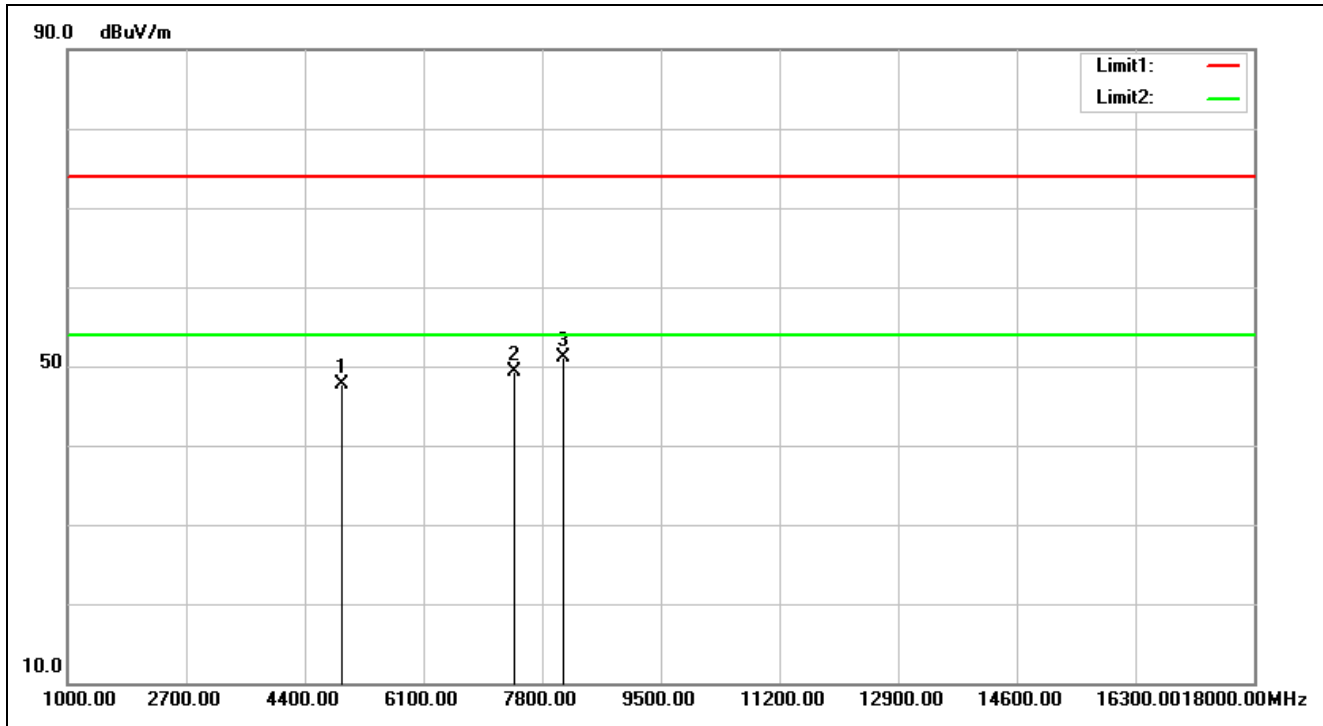
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 01:56:18
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	Power Setting -4		
	RFMTA331215IMAB701-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	60.01	57.48	74.00	-16.52	peak	100	137	
2	4874.000	-2.53	45.89	43.36	54.00	-10.64	AVG	100	137	
3	7311.000	5.52	44.88	50.40	74.00	-23.60	peak			
4	8548.000	6.38	44.95	51.33	74.00	-22.67	peak	100	357	



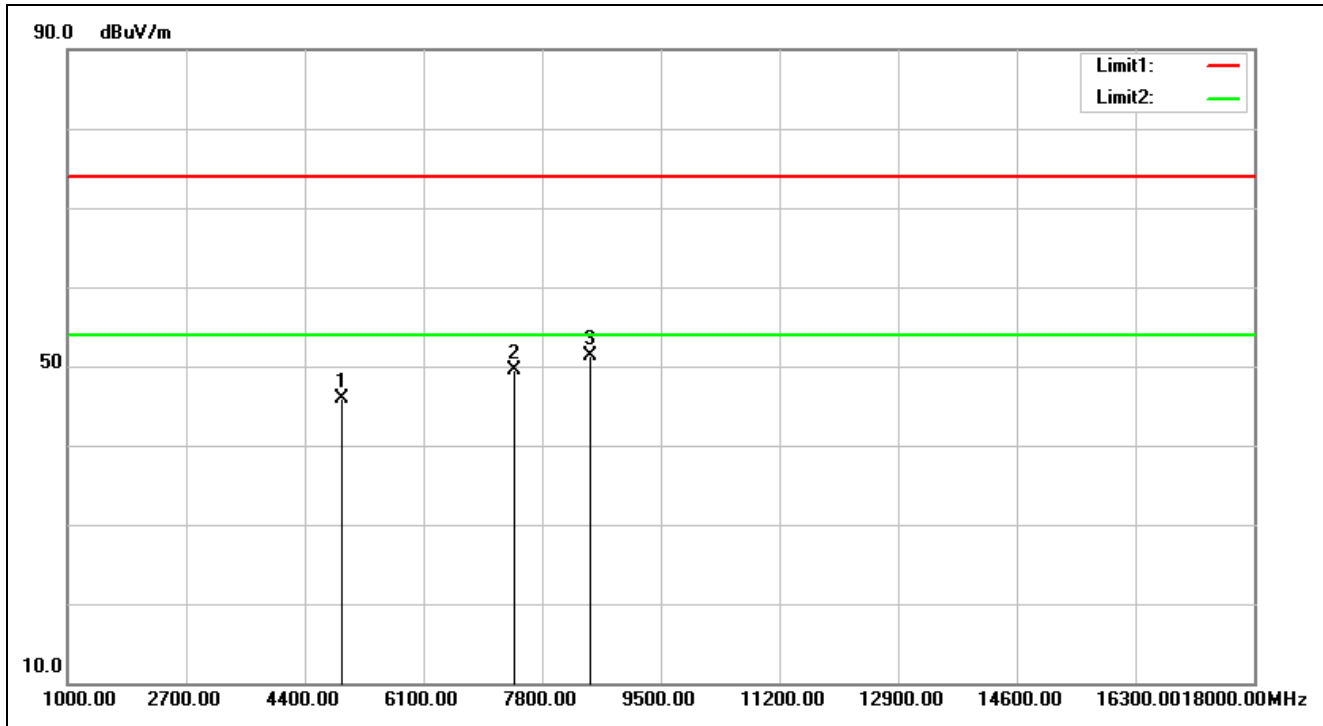
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 01:57:14
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	Power Setting -4		
	RFMTA331215IMAB701-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	53.52	50.99	74.00	-23.01	peak	100	307	
2	7311.000	5.52	43.52	49.04	74.00	-24.96	peak			
3	8395.000	6.26	45.02	51.28	74.00	-22.72	peak	100	142	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 02:00:44
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	Power Setting -13		
	RFMTA331215IMAB701-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	50.13	47.74	74.00	-26.26	peak			
2	7386.000	5.70	43.58	49.28	74.00	-24.72	peak			
3	8106.000	5.94	45.24	51.18	74.00	-22.82	peak	100	313	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 02:01:41
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	Power Setting -13 RFMTA331215IMAB701-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	48.25	45.86	74.00	-28.14	peak			
2	7386.000	5.70	43.83	49.53	74.00	-24.47	peak			
3	8480.000	6.35	44.92	51.27	74.00	-22.73	peak	100	92	

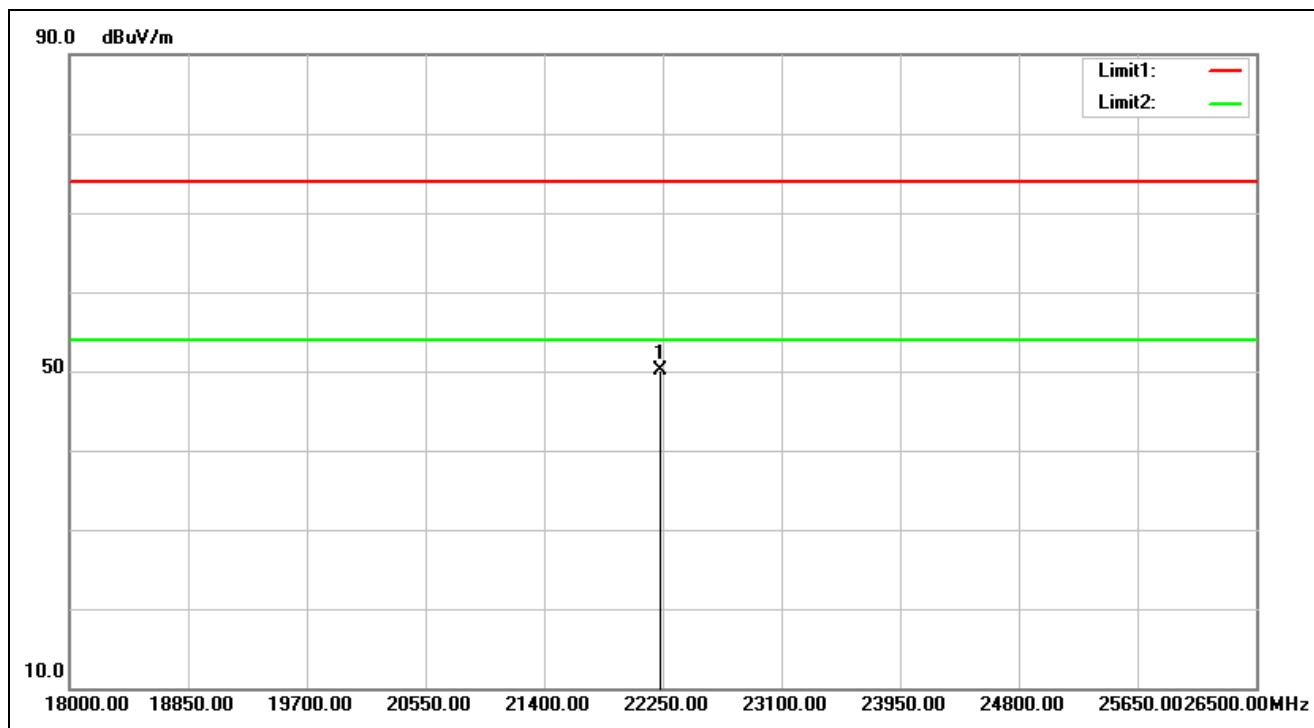
Spurious Emissions, TX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

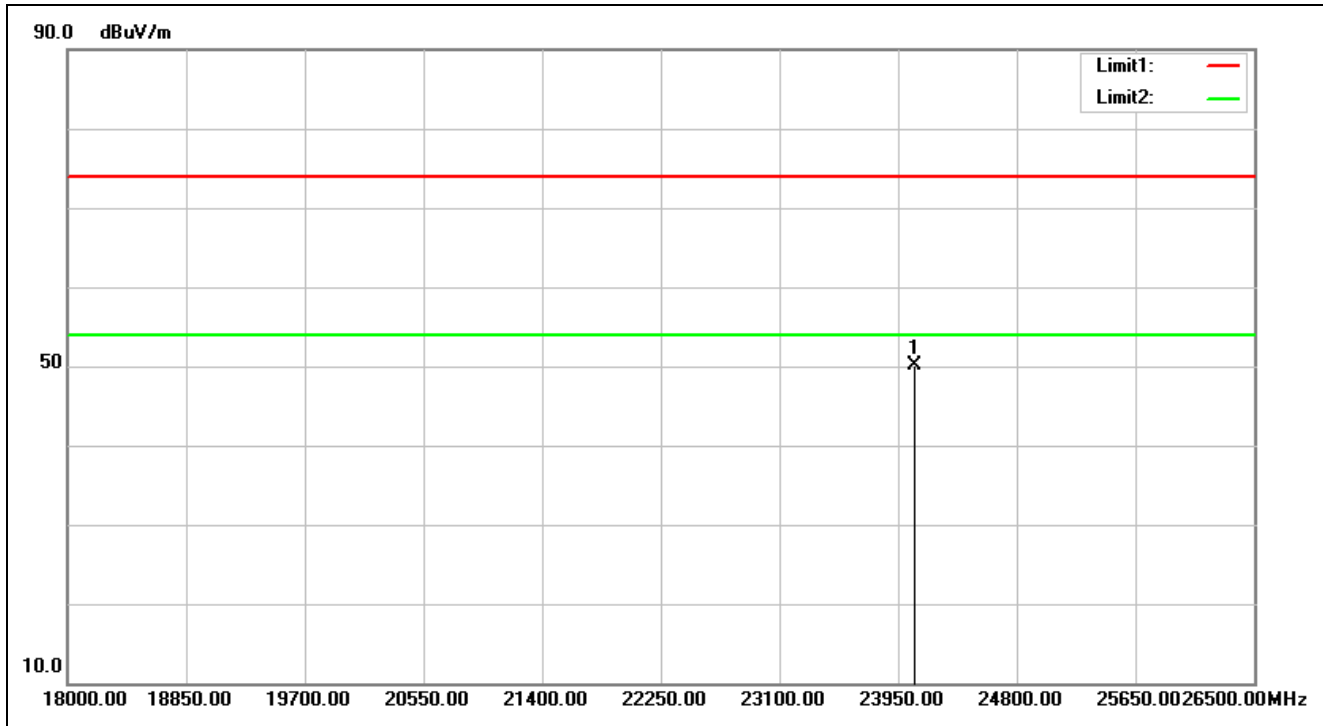
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



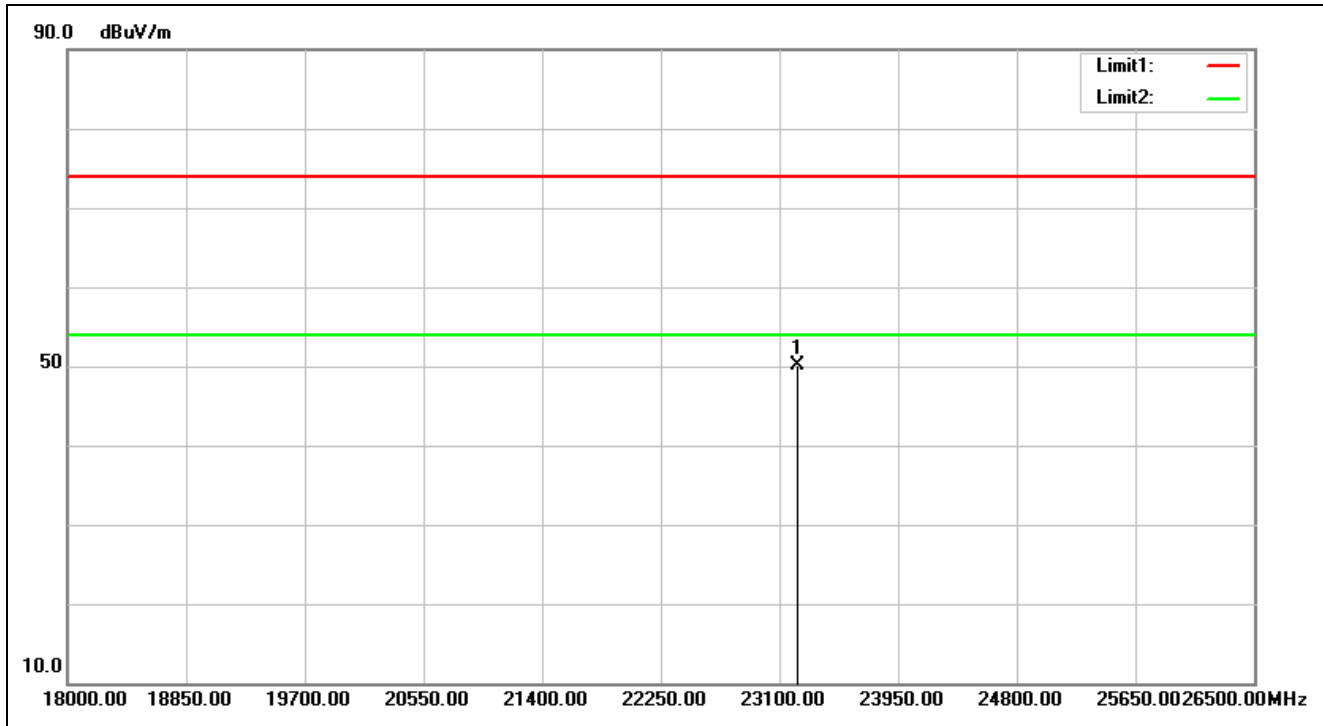
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:53:26
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	Power Setting -9 RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22233.000	32.62	17.49	50.11	74.00	-23.89	peak		0	



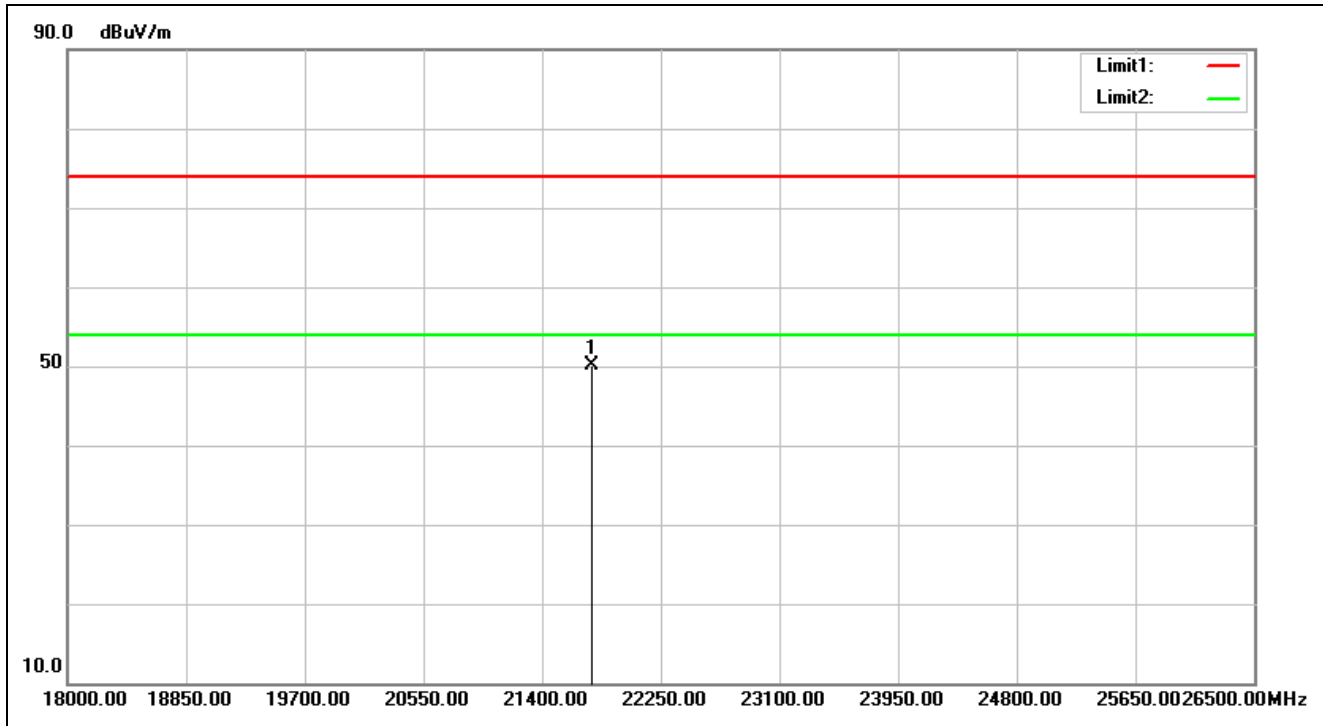
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:53:32
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%):	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	Power Setting -9		
	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	24069.000	32.99	17.03	50.02	74.00	-23.98	peak			



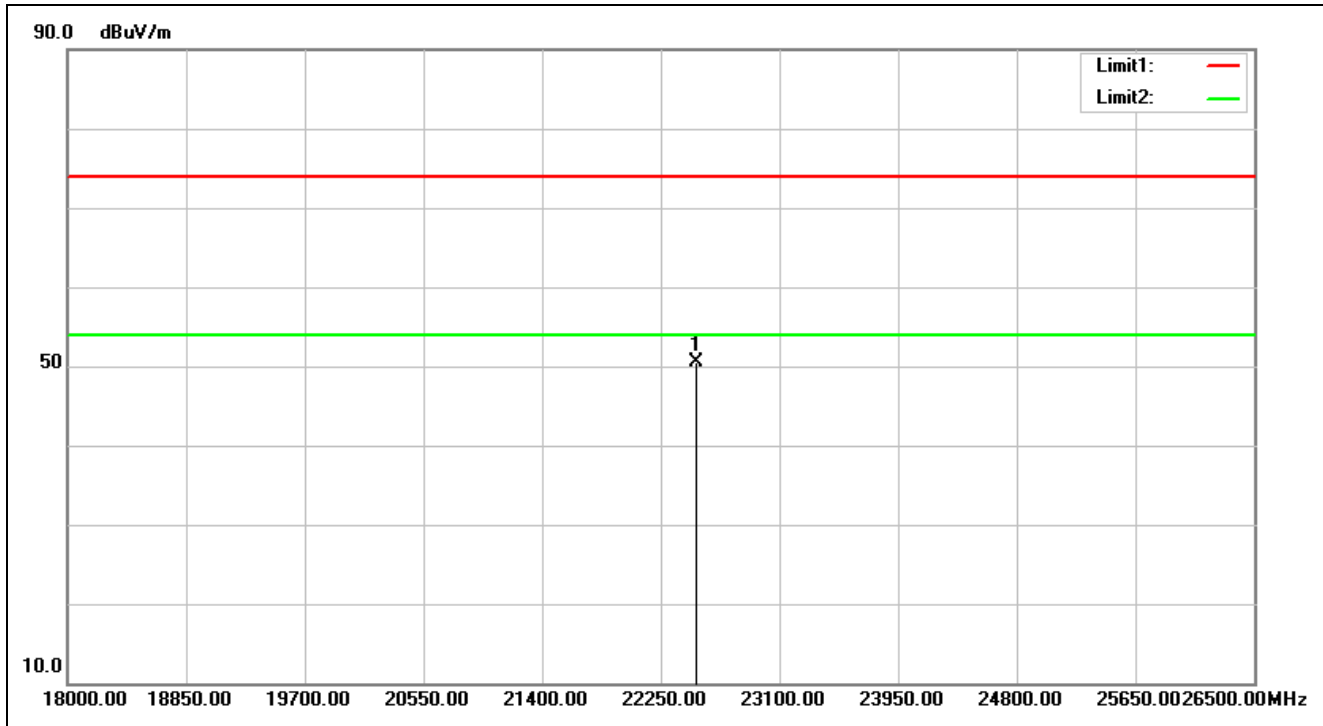
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:53:56
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9		
	RFMTA331215IMAB701-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	33.01	17.11	50.12	74.00	-23.88	peak			



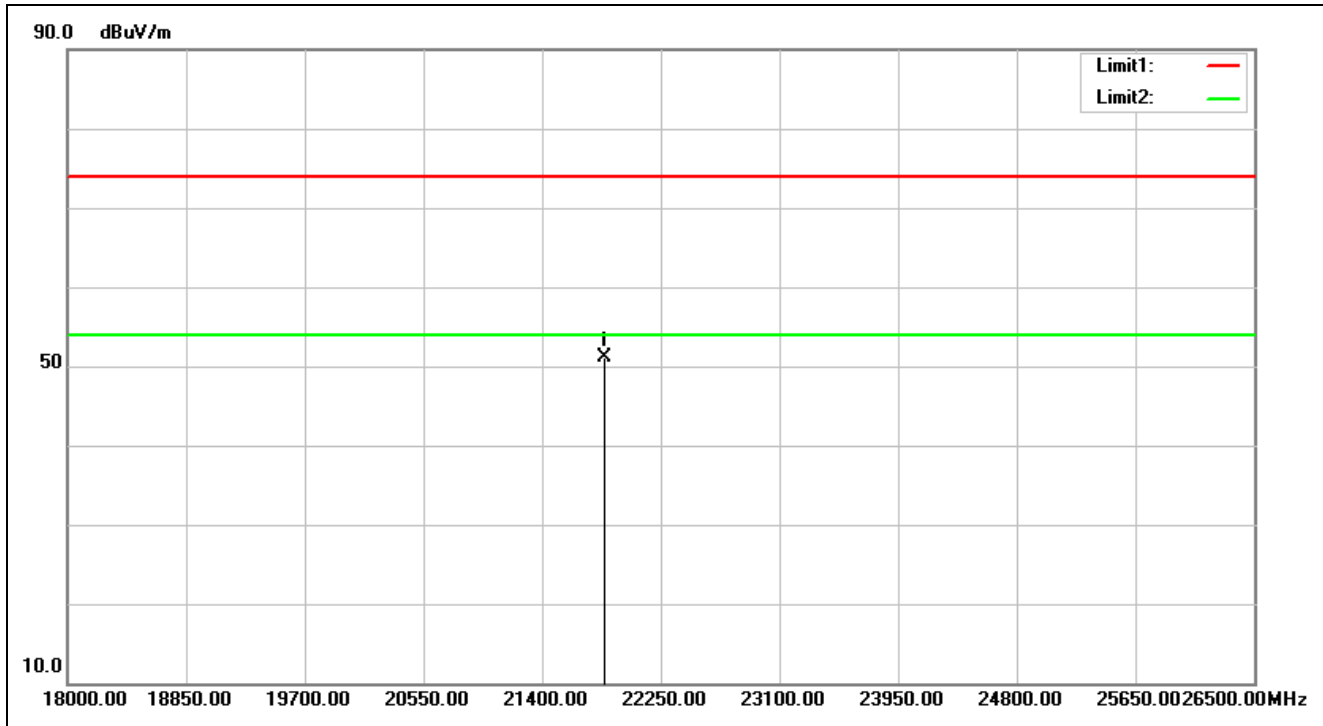
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:54:02
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9		
	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21757.000	32.73	17.31	50.04	74.00	-23.96	peak			



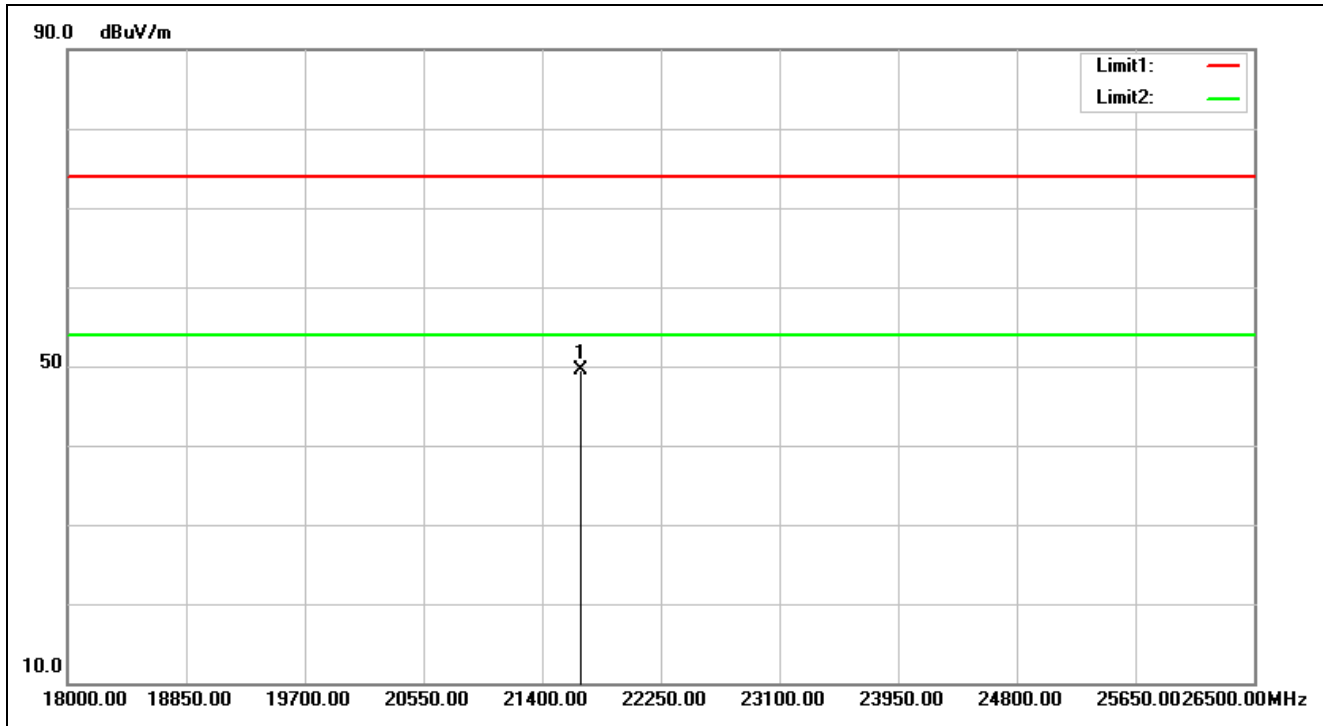
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:54:25
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%):	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	Power Setting -9		
	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22505.000	32.64	17.83	50.47	74.00	-23.53	peak			



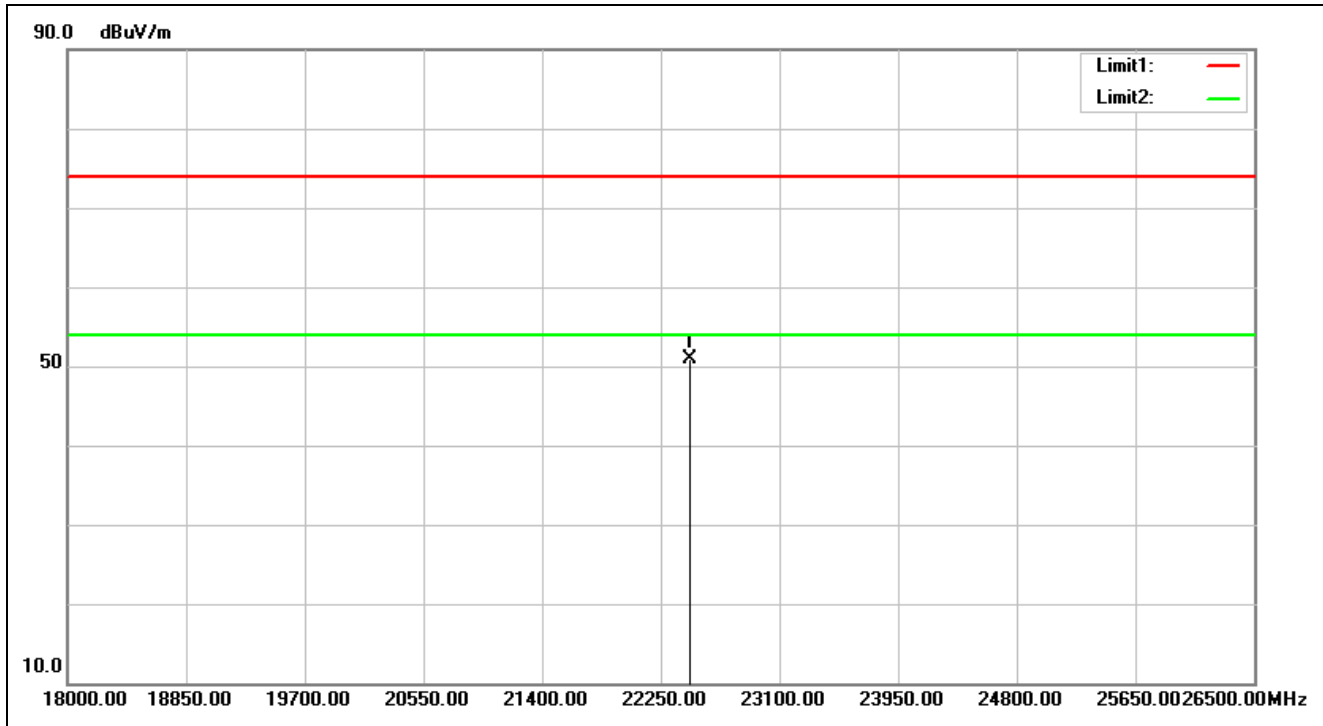
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:54:32
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	Power Setting -9		
	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21850.500	32.68	18.42	51.10	74.00	-22.90	peak			



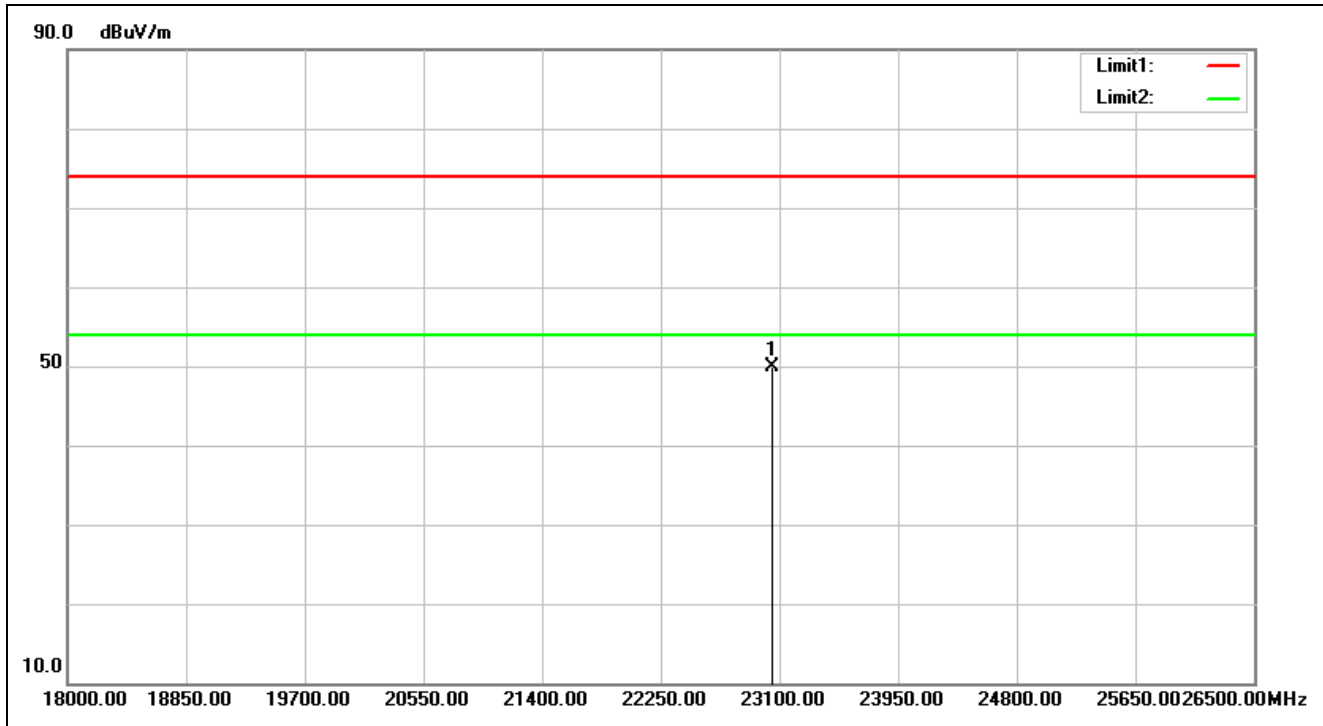
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:55:05
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%) :	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	Power Setting -13 RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21680.500	32.78	16.66	49.44	74.00	-24.56	peak			



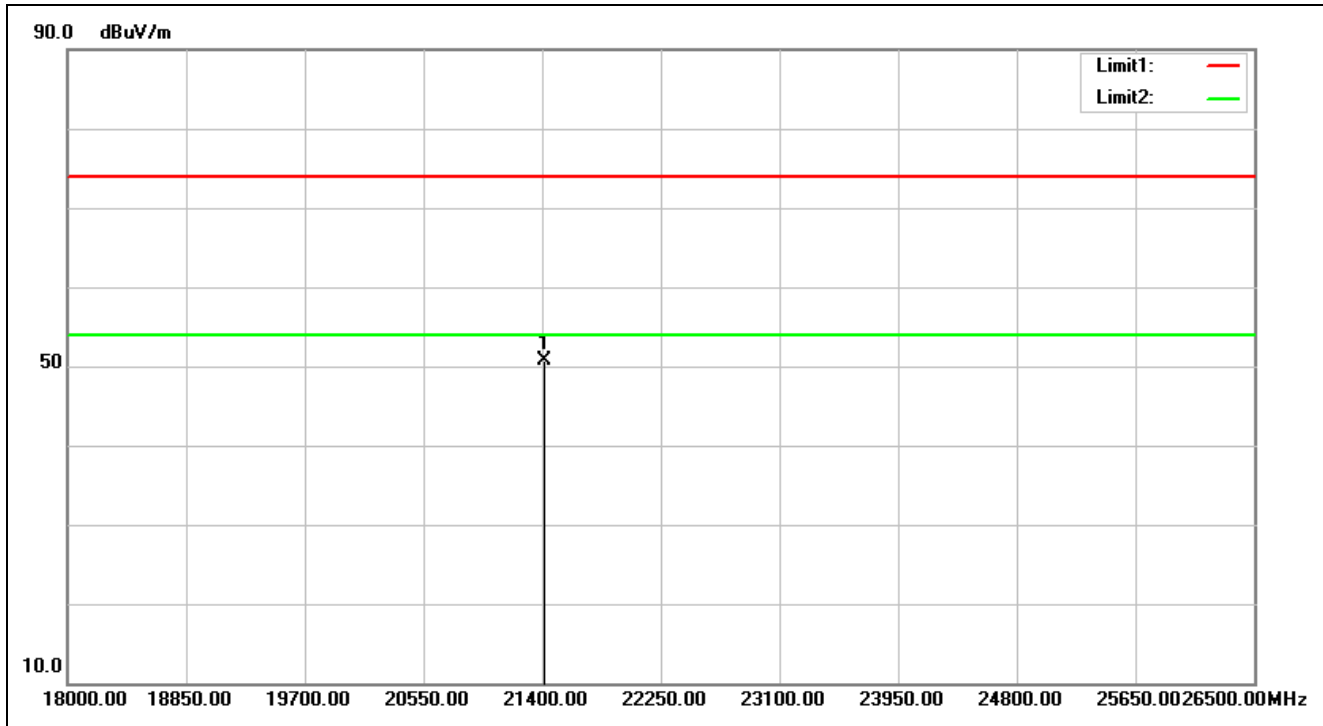
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:55:12
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%):	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	Power Setting -13		
	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22454.000	32.63	18.25	50.88	74.00	-23.12	peak			



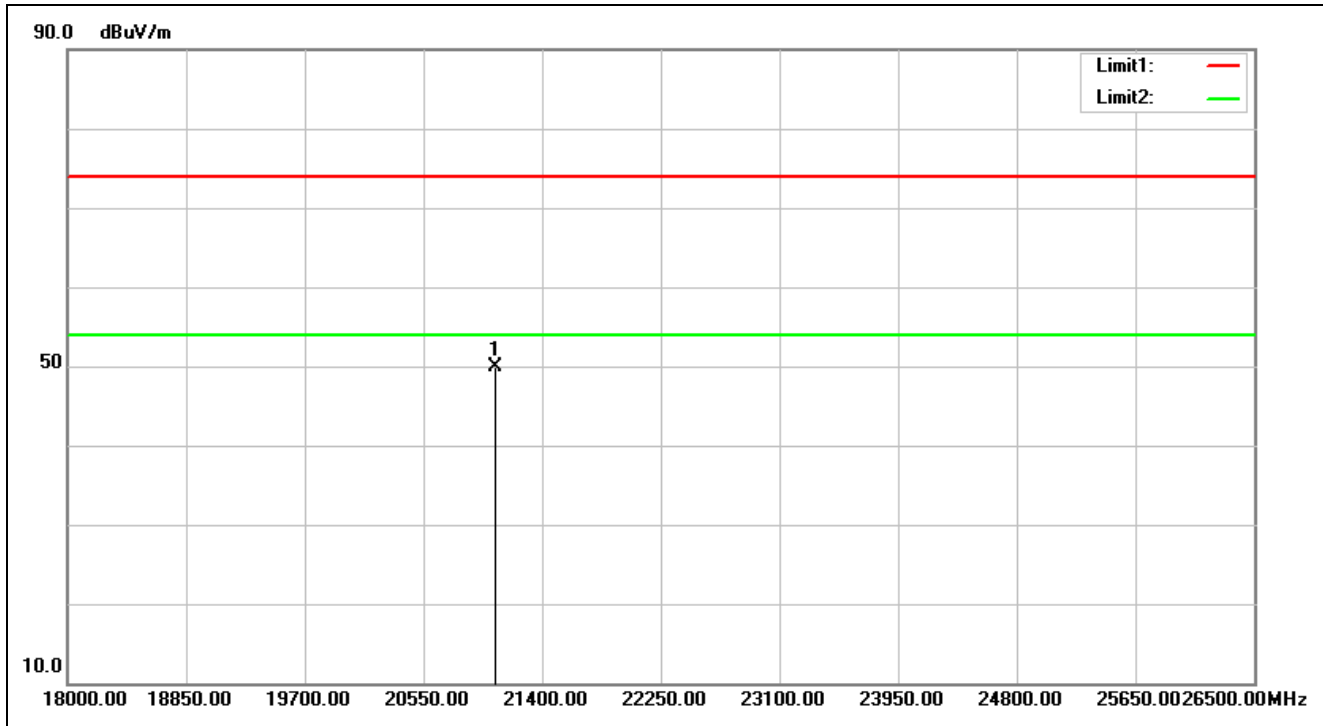
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:55:35
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4		
	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23049.000	32.84	17.07	49.91	74.00	-24.09	peak			



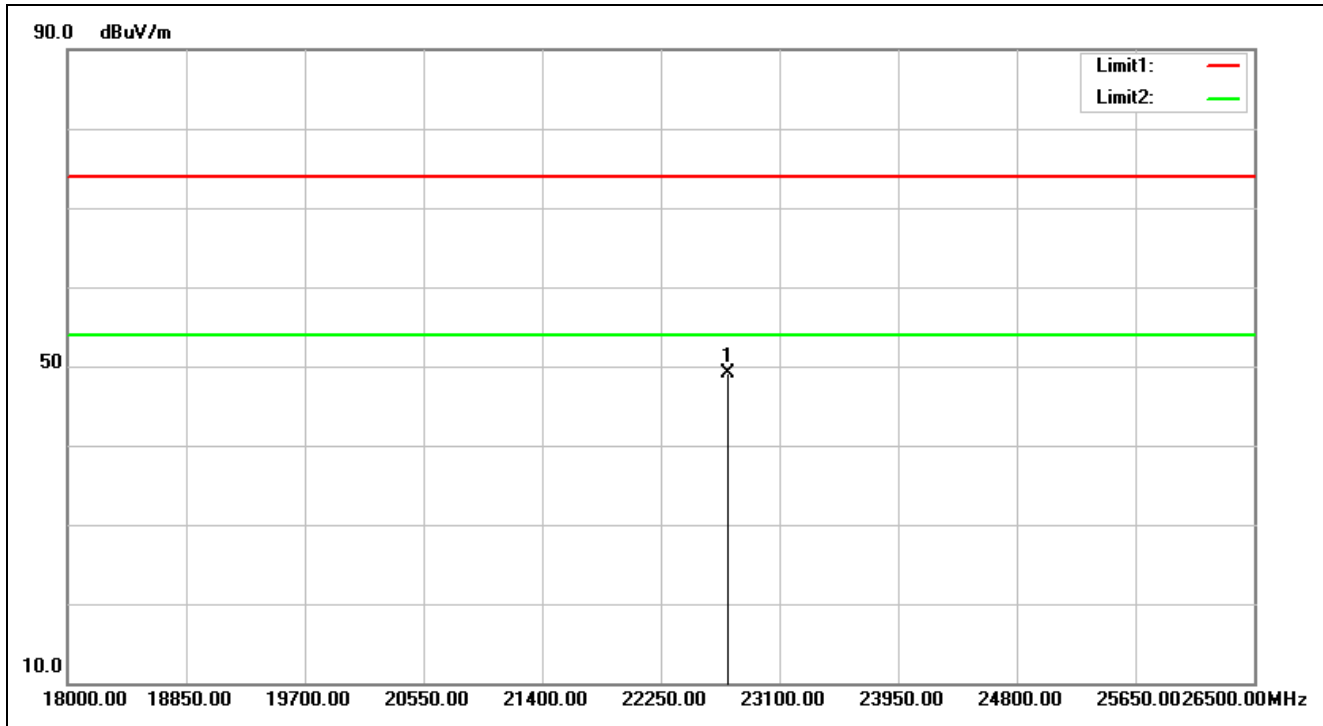
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:55:41
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4		
	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21417.000	32.82	17.88	50.70	74.00	-23.30	peak			



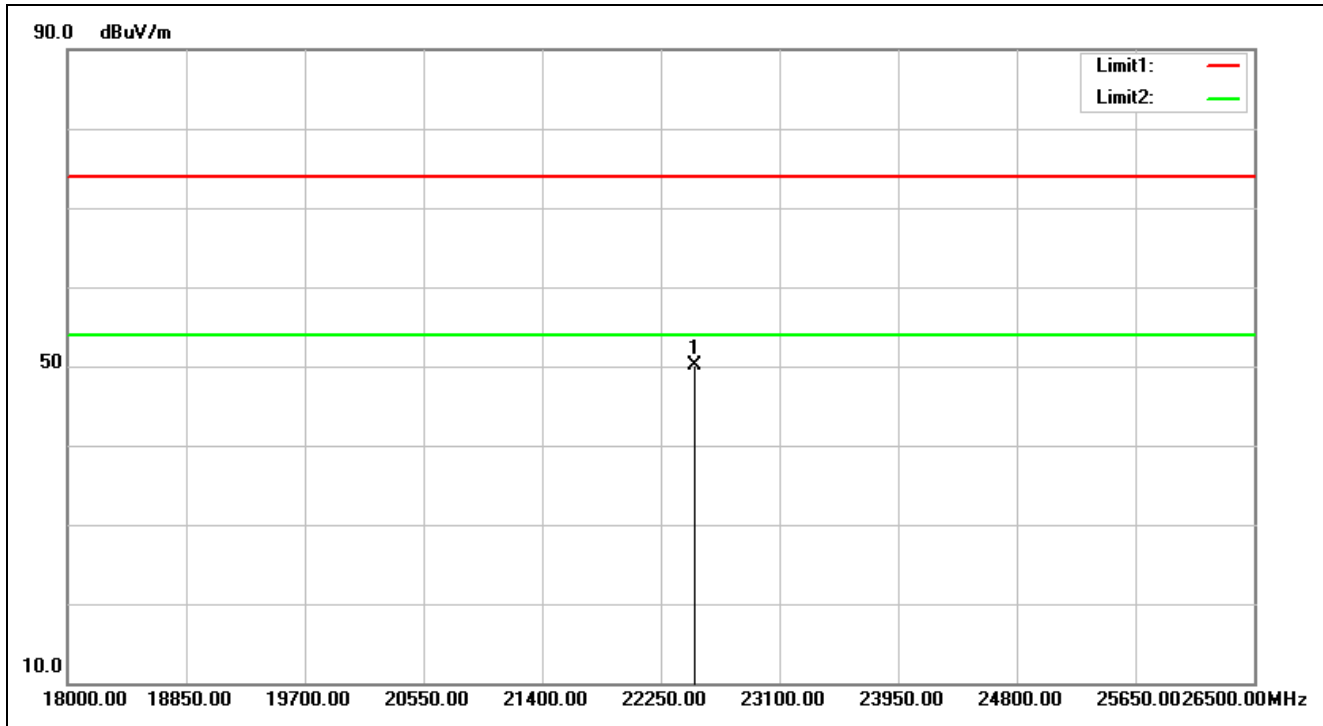
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:56:12
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	Power Setting -13		
	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21060.000	32.50	17.43	49.93	74.00	-24.07	peak			



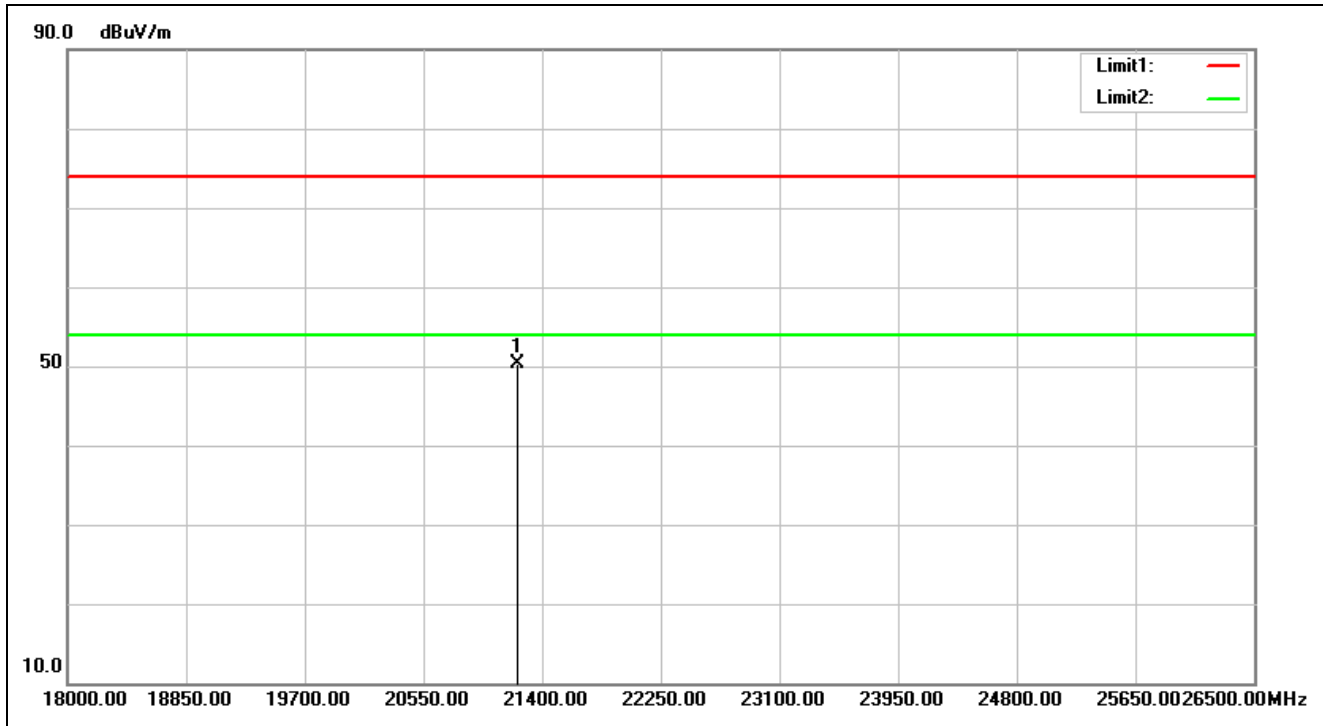
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:56:19
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	Power Setting -13		
	RFMTA331215IMAB701-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	32.72	16.47	49.19	74.00	-24.81	peak			



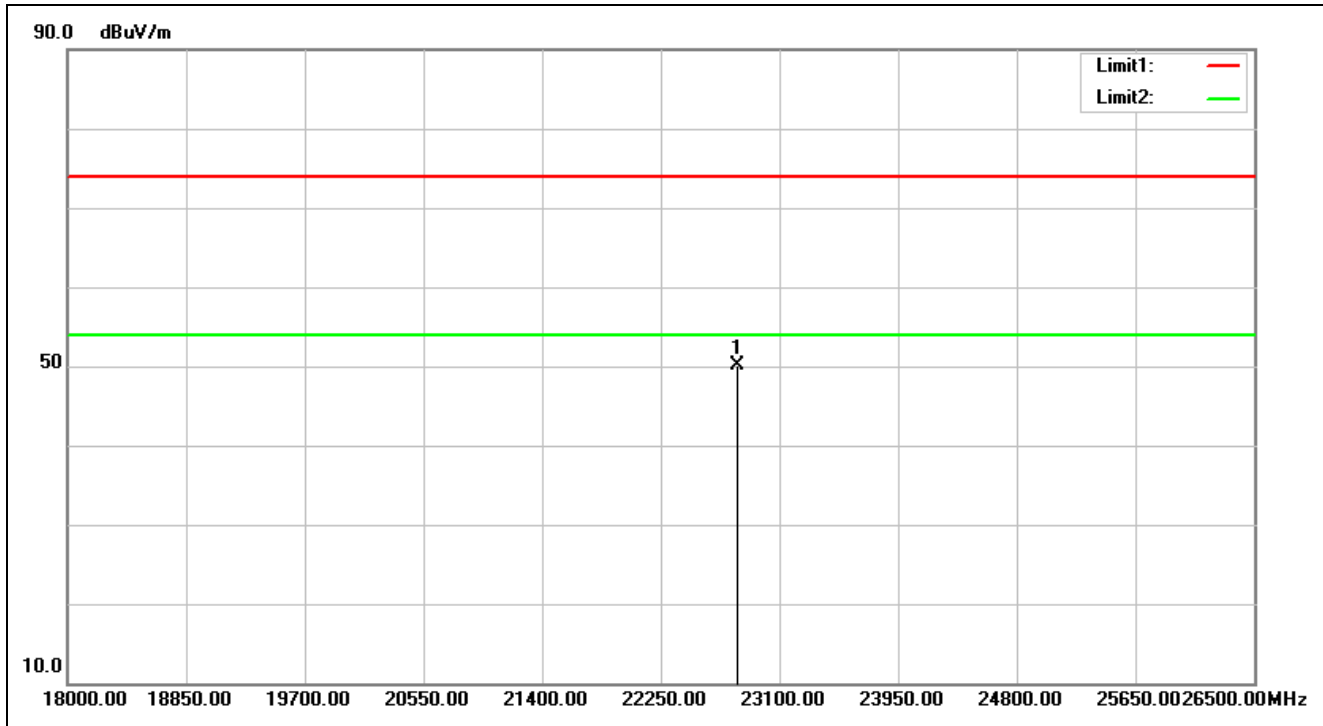
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:57:13
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%):	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	Power Setting -13		
	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22496.500	32.64	17.37	50.01	74.00	-23.99	peak			



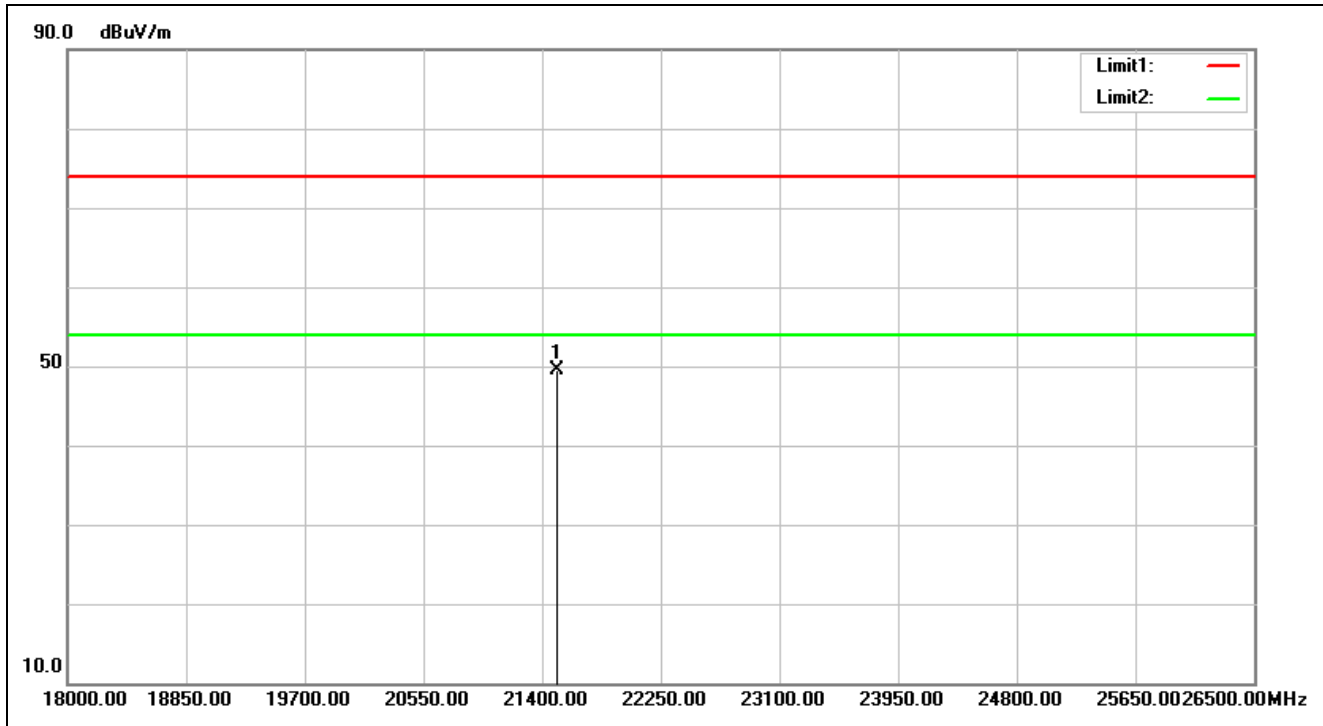
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:57:19
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	Power Setting -13		
	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21221.500	32.63	17.67	50.30	74.00	-23.70	peak			



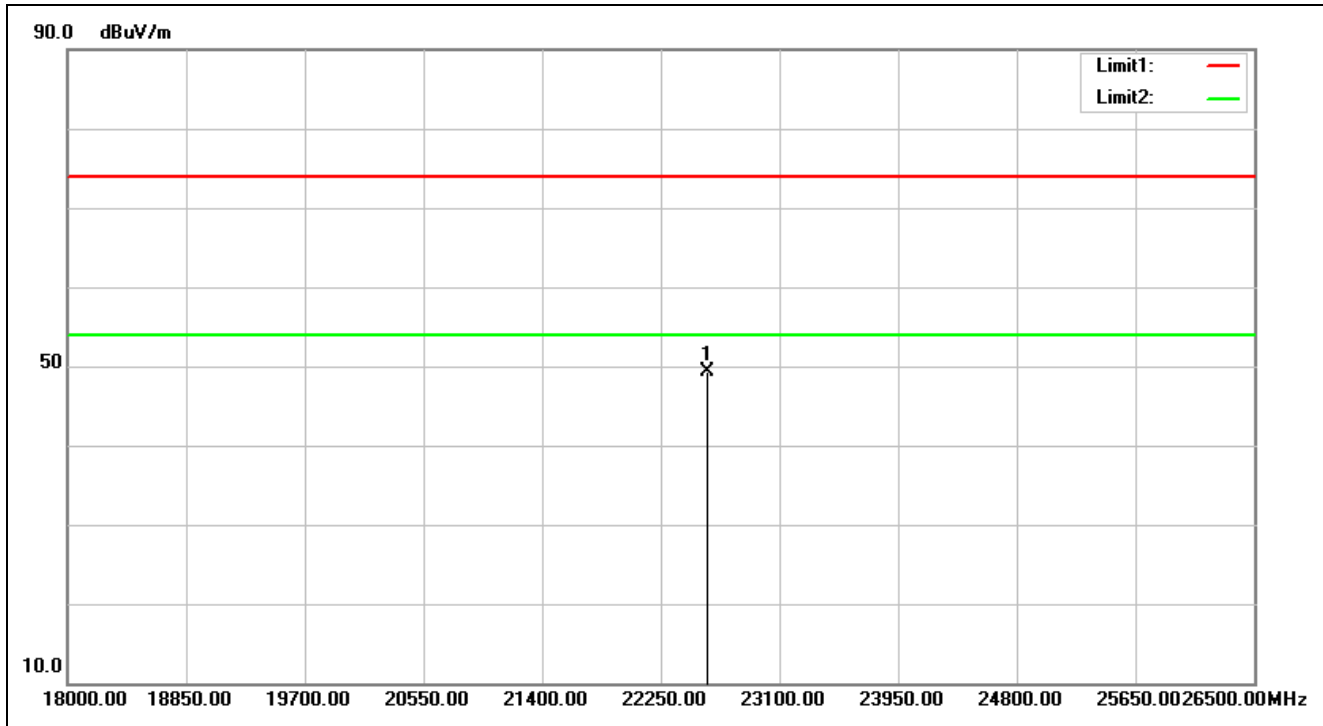
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:57:53
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%):	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	Power Setting -4		
	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22794.000	32.74	17.42	50.16	74.00	-23.84	peak			



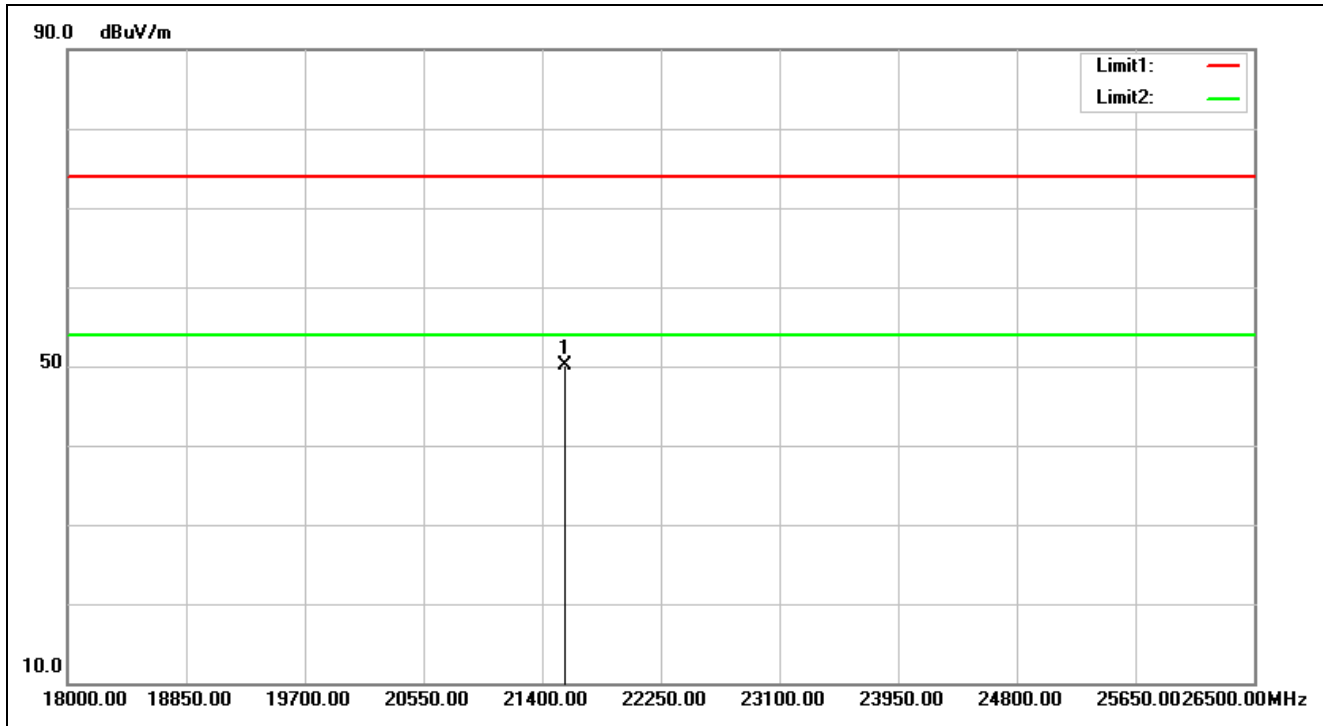
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:58:00
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	Power Setting -4		
	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21502.000	32.89	16.52	49.41	74.00	-24.59	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:58:25
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	Power Setting -13		
	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22581.500	32.67	16.71	49.38	74.00	-24.62	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:58:32
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	Power Setting -13		
	RFMTA331215IMAB701-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	32.85	17.35	50.20	74.00	-23.80	peak			

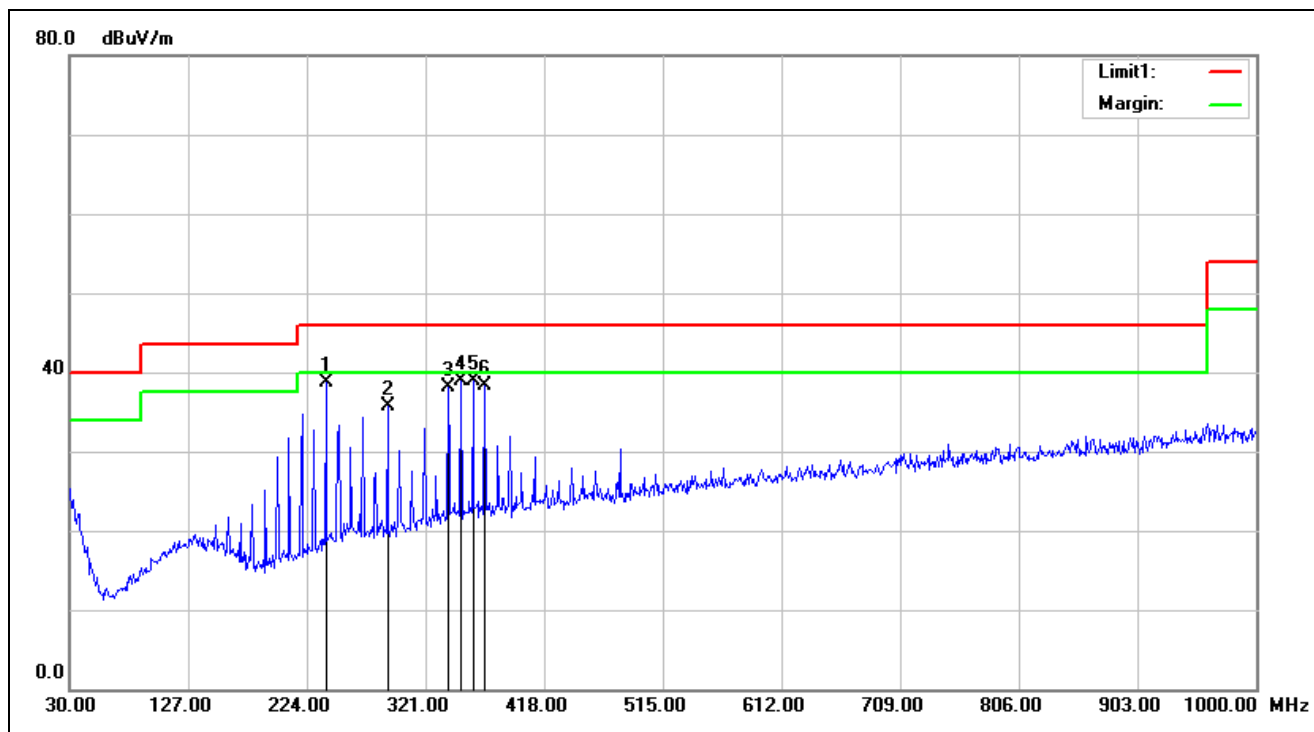
Spurious Emissions, TX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

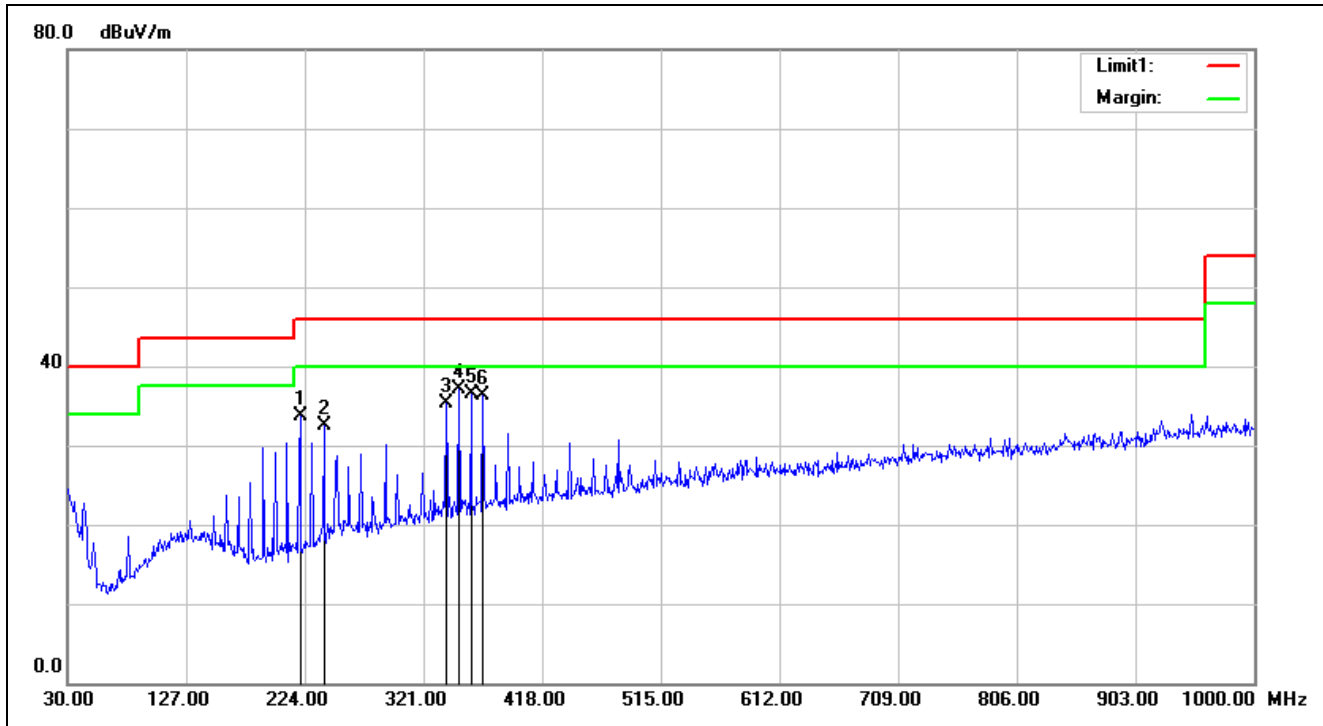
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 05:53:55
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9 RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	239.5200	-6.85	45.47	38.62	46.00	-7.38	QP	100	234	
2	289.9599	-4.80	40.58	35.78	46.00	-10.22	QP	100	237	
3	339.4300	-3.61	41.78	38.17	46.00	-7.83	QP	100	255	
4	350.1000	-3.34	42.33	38.99	46.00	-7.01	QP	100	230	
5	359.8000	-3.16	42.11	38.95	46.00	-7.05	QP	100	230	
6	369.5000	-2.98	41.31	38.33	46.00	-7.67	QP	100	264	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 05:54:52
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%) :	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9 RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	220.1200	-8.30	41.98	33.68	46.00	-12.32	QP	100	310	
2	239.5200	-6.85	39.39	32.54	46.00	-13.46	QP	100	279	
3	339.4300	-3.61	38.86	35.25	46.00	-10.75	QP	100	222	
4	350.1000	-3.34	40.45	37.11	46.00	-8.89	QP	100	204	
5	359.8000	-3.16	39.71	36.55	46.00	-9.45	QP	100	210	
6	369.5000	-2.98	39.23	36.25	46.00	-9.75	QP	100	229	

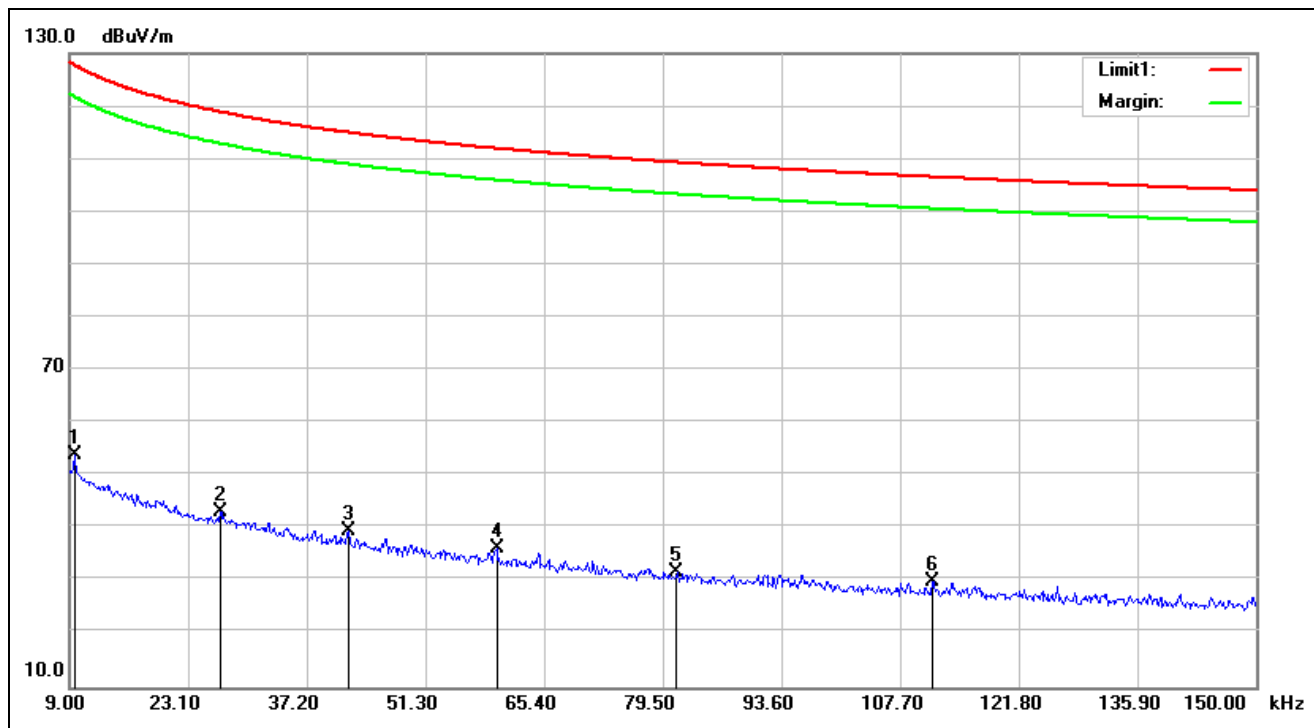
Spurious Emissions, TX Mode, 9k-30M



TUV Rheinland Taiwan Ltd.

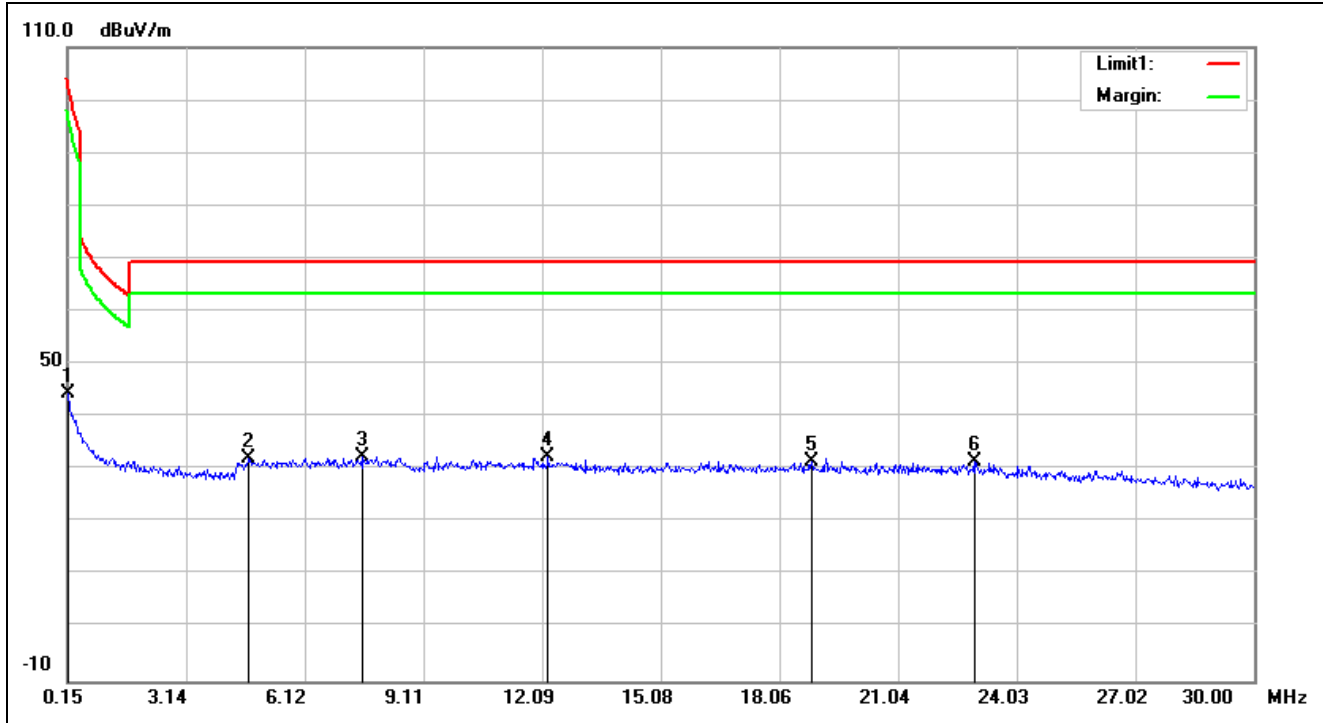
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/10 06:24:50
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9 RFMTA331215IMAB701-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	19.76	34.09	53.85	127.84	-73.99	QP	100	4	
2	0.0269	20.10	23.19	43.29	118.85	-75.56	QP	100	34	
3	0.0421	19.70	19.83	39.53	114.99	-75.46	QP	100	147	
4	0.0597	19.37	16.77	36.14	111.97	-75.83	QP	100	15	
5	0.0810	19.24	12.63	31.87	109.34	-77.47	QP	100	25	
6	0.1115	19.12	10.87	29.99	106.58	-76.59	QP	100	0	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/10 06:27:38
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9 RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1499	19.08	25.50	44.58	104.02	-59.44	QP	100	331	
2	4.7170	19.58	12.64	32.22	69.50	-37.28	QP	100	78	
3	7.5826	20.00	12.53	32.53	69.50	-36.97	QP	100	228	
4	12.2392	20.61	11.73	32.34	69.50	-37.16	QP	100	59	
5	18.8659	21.79	9.71	31.50	69.50	-38.00	QP	100	28	
6	22.9553	22.18	9.35	31.53	69.50	-37.97	QP	100	359	

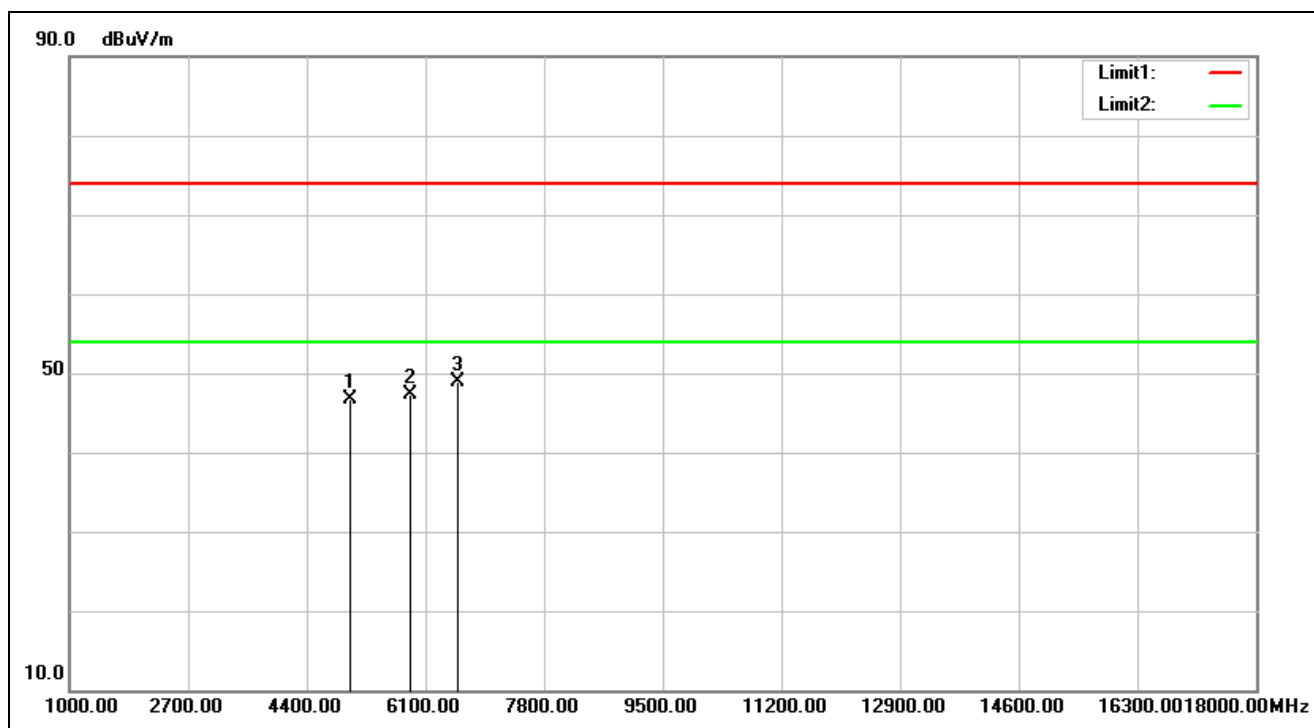
Spurious Emissions, RX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

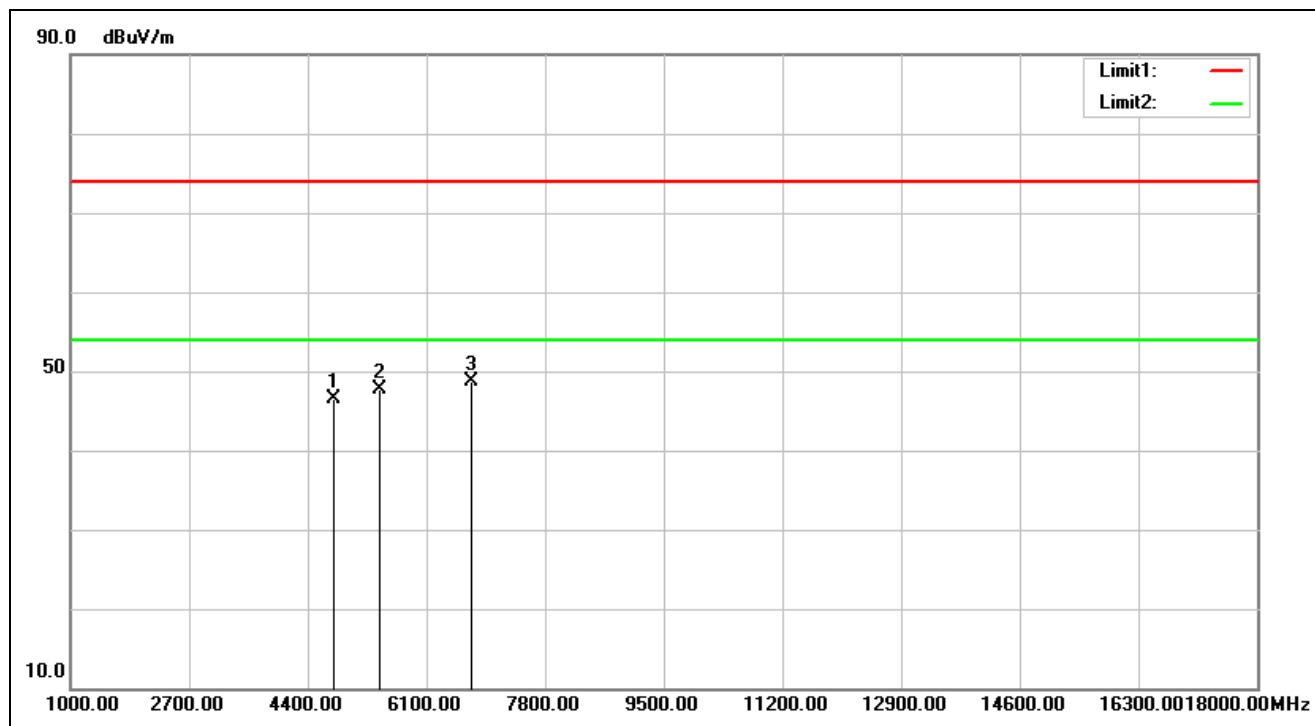
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 02:04:50
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	5029.000	-3.07	49.81	46.74	74.00	-27.26	peak	100	316	
2	5879.000	1.58	45.74	47.32	74.00	-26.68	peak	100	244	
3	6559.000	4.25	44.57	48.82	74.00	-25.18	peak	100	341	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 02:05:46
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4774.000	-3.58	50.17	46.59	74.00	-27.41	peak	100	119	
2	5420.000	-1.22	48.99	47.77	74.00	-26.23	peak	100	19	
3	6746.000	4.01	44.76	48.77	74.00	-25.23	peak	100	113	

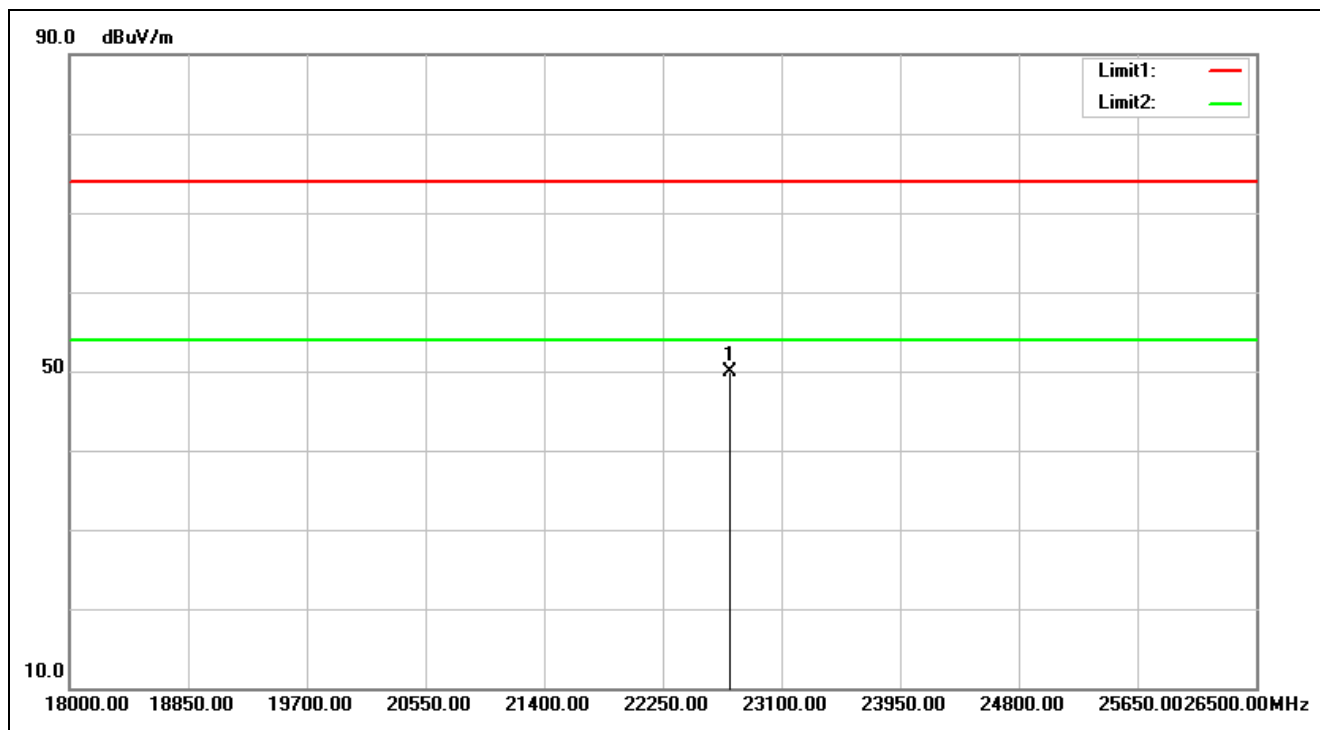
Spurious Emissions, RX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

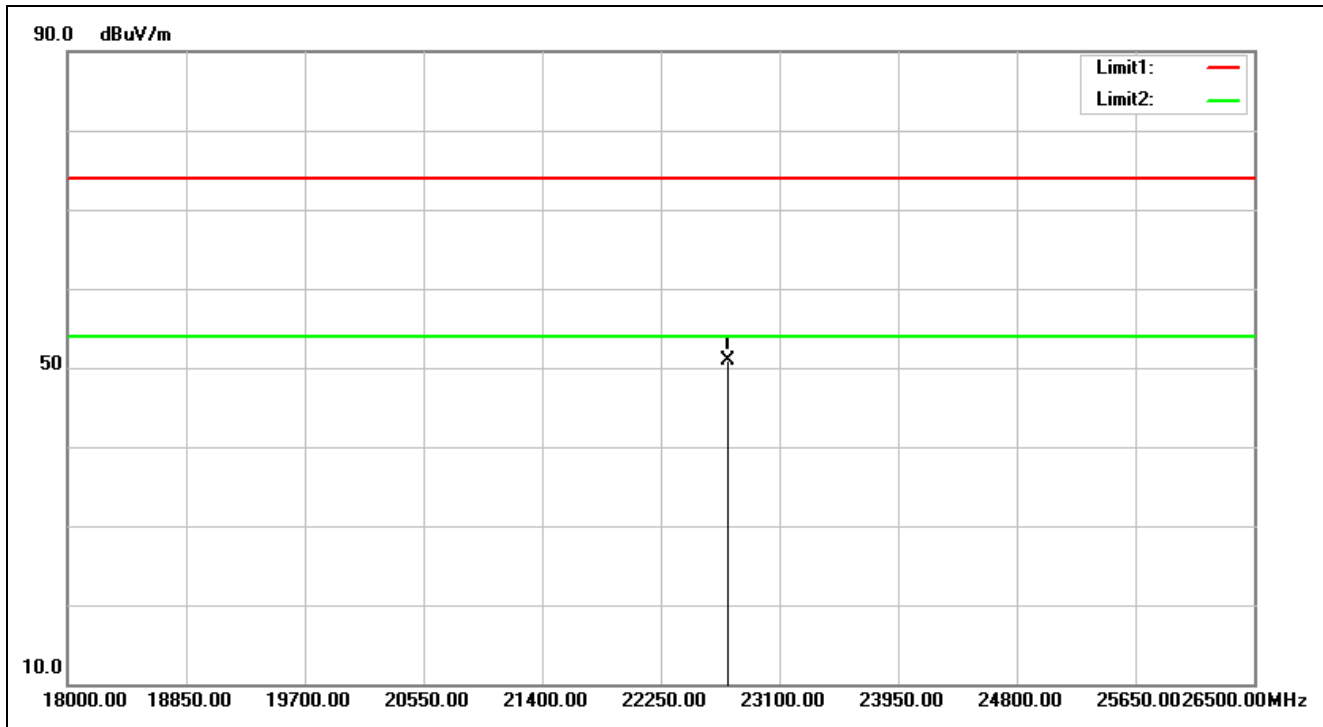
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:59:09
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22734.500	32.72	17.15	49.87	74.00	-24.13	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:59:15
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215IMAB701-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	32.72	18.13	50.85	74.00	-23.15	peak			

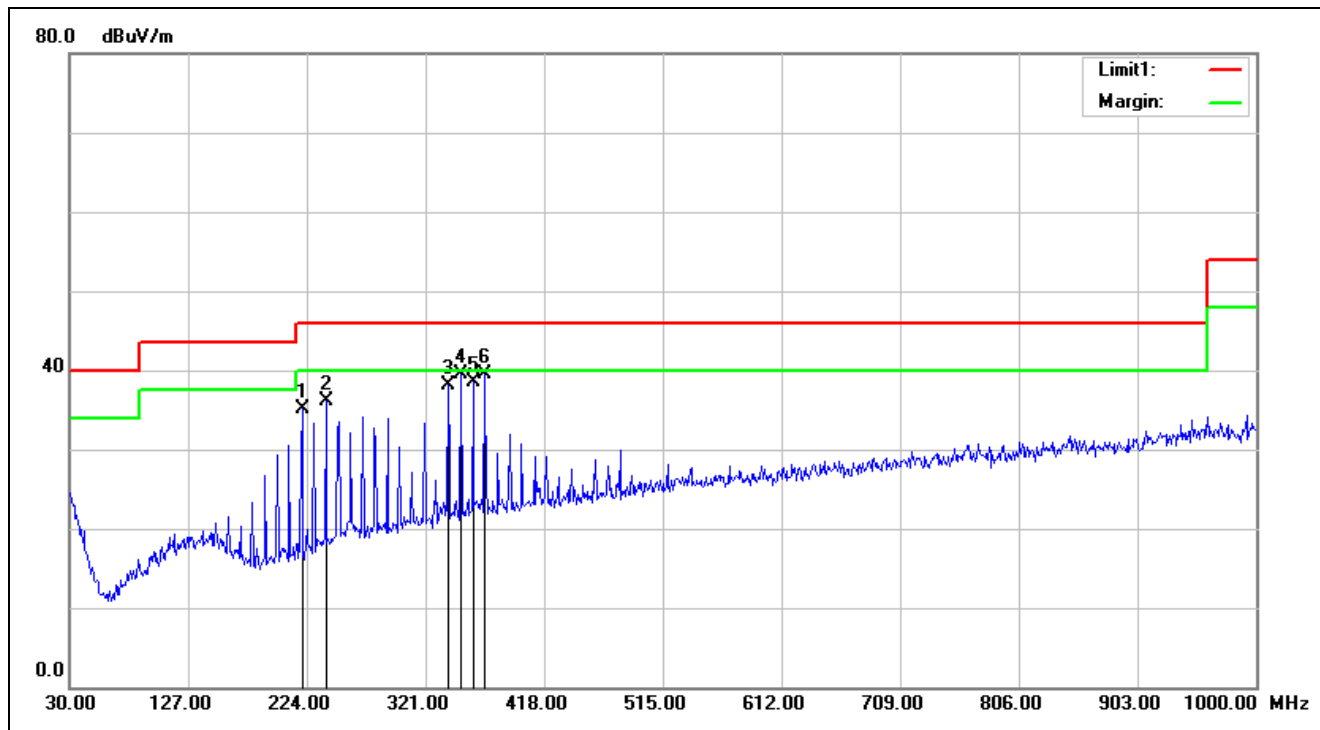
Spurious Emissions, RX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

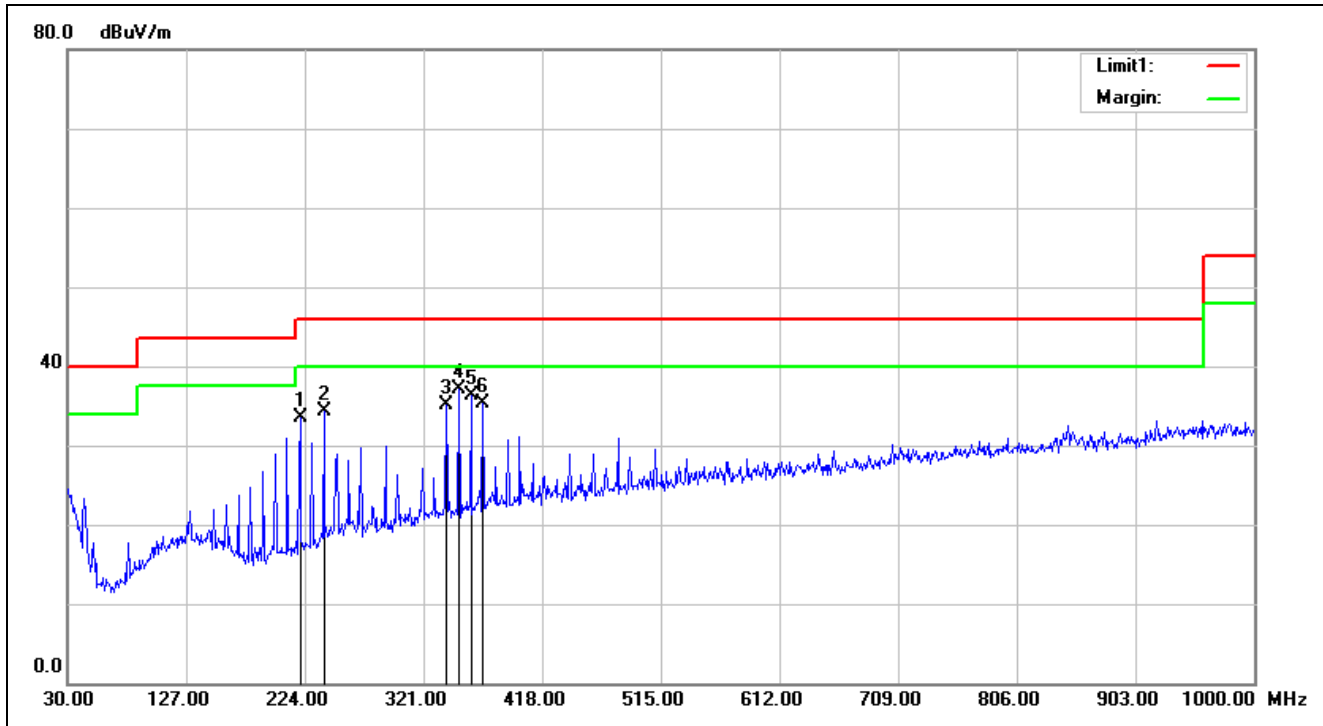
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 05:56:29
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	220.1200	-8.30	43.38	35.08	46.00	-10.92	QP	100	250	
2	239.5200	-6.85	42.99	36.14	46.00	-9.86	QP	100	281	
3	339.4300	-3.61	41.71	38.10	46.00	-7.90	QP	100	237	
4	350.1000	-3.34	42.75	39.41	46.00	-6.59	QP	100	246	
5	359.8000	-3.16	41.64	38.48	46.00	-7.52	QP	100	241	
6	369.5000	-2.98	42.54	39.56	46.00	-6.44	QP	100	234	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 05:57:27
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%) :	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	220.1200	-8.30	41.80	33.50	46.00	-12.50	QP	100	316	
2	239.5200	-6.85	41.17	34.32	46.00	-11.68	QP	100	269	
3	339.4300	-3.61	38.67	35.06	46.00	-10.94	QP	100	226	
4	350.1000	-3.34	40.48	37.14	46.00	-8.86	QP	100	207	
5	359.8000	-3.16	39.41	36.25	46.00	-9.75	QP	100	219	
6	369.5000	-2.98	38.35	35.37	46.00	-10.63	QP	100	194	

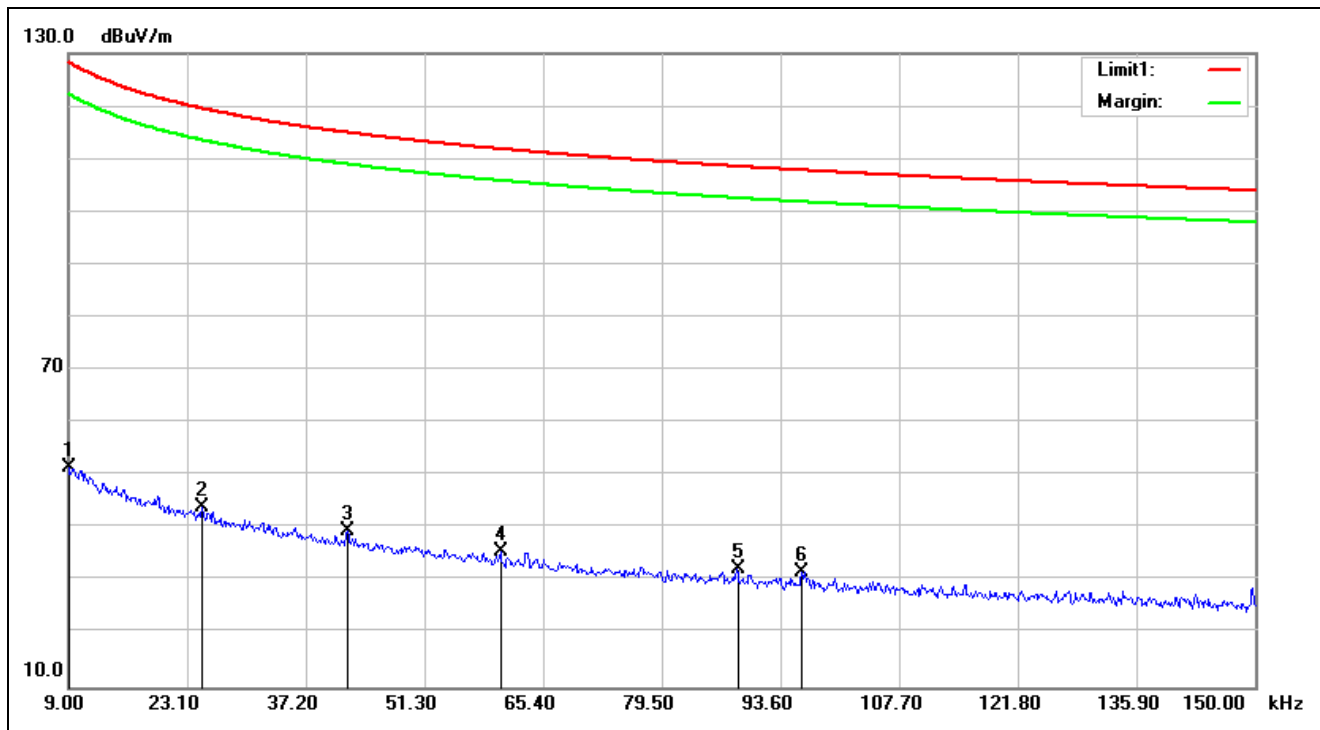
Spurious Emissions, RX Mode, 9K-30M



TUV Rheinland Taiwan Ltd.

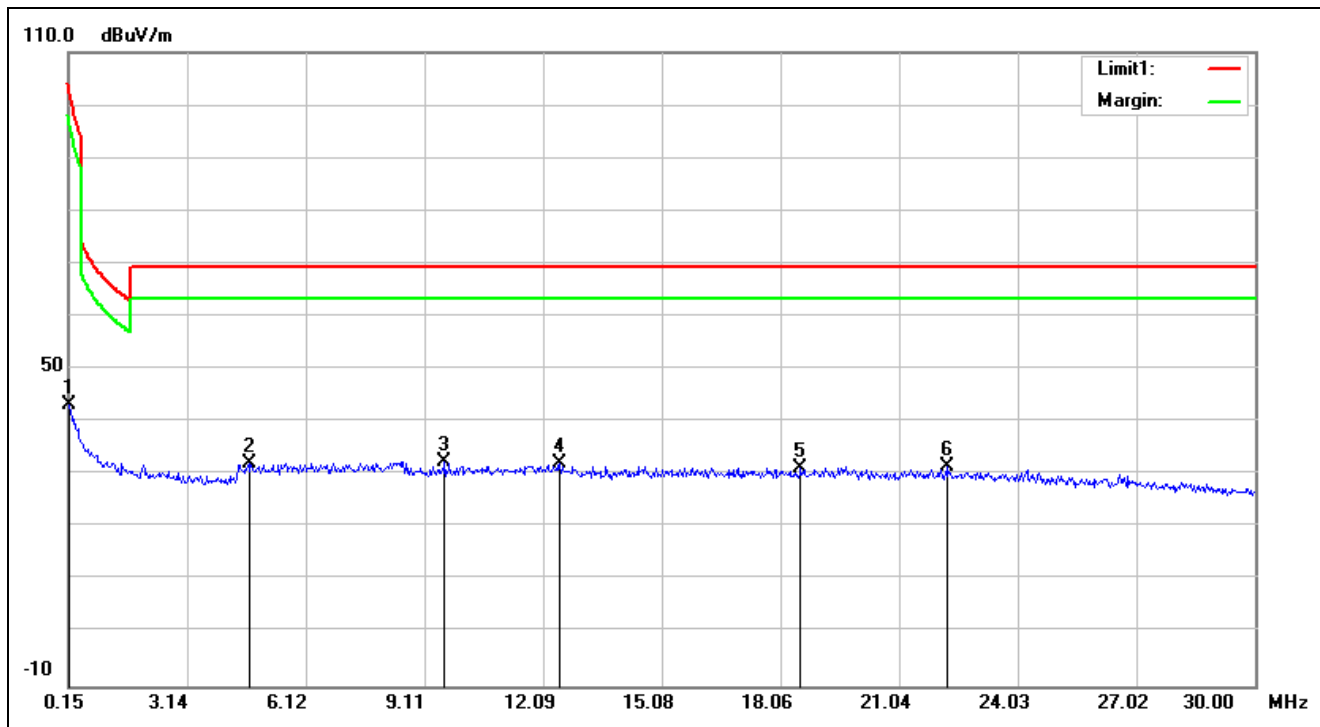
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/10 06:25:47
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215IMAB701-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	19.60	31.98	51.58	128.31	-76.73	QP	100	182	
2	0.0247	20.08	24.09	44.17	119.59	-75.42	QP	100	197	
3	0.0421	19.70	19.84	39.54	114.99	-75.45	QP	100	92	
4	0.0603	19.37	16.35	35.72	111.88	-76.16	QP	100	51	
5	0.0884	19.20	13.25	32.45	108.58	-76.13	QP	100	330	
6	0.0961	19.15	12.58	31.73	107.86	-76.13	QP	100	173	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/10 06:28:36
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFMTA331215IMAB701-ANT		

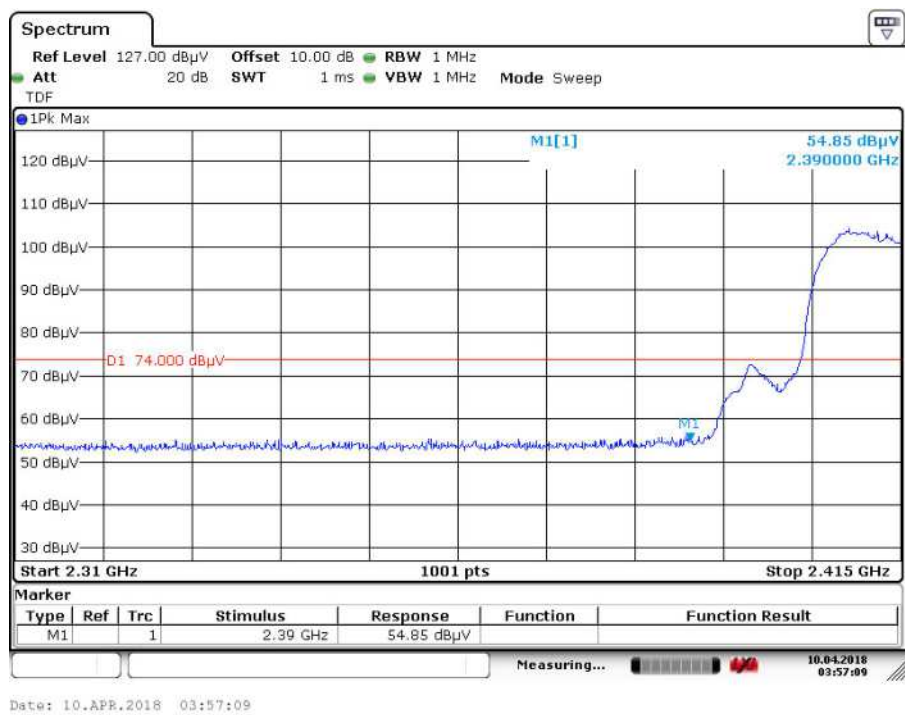
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1500	19.08	24.29	43.37	104.02	-60.65	QP	100	213	
2	4.6872	19.56	12.62	32.18	69.50	-37.32	QP	100	163	
3	9.6125	20.19	12.32	32.51	69.50	-36.99	QP	100	132	
4	12.5079	20.67	11.63	32.30	69.50	-37.20	QP	100	189	
5	18.5674	21.74	9.64	31.38	69.50	-38.12	QP	100	126	
6	22.2689	22.14	9.31	31.45	69.50	-38.05	QP	100	73	

RFPCA381013IMAB701IMAB701-ANT

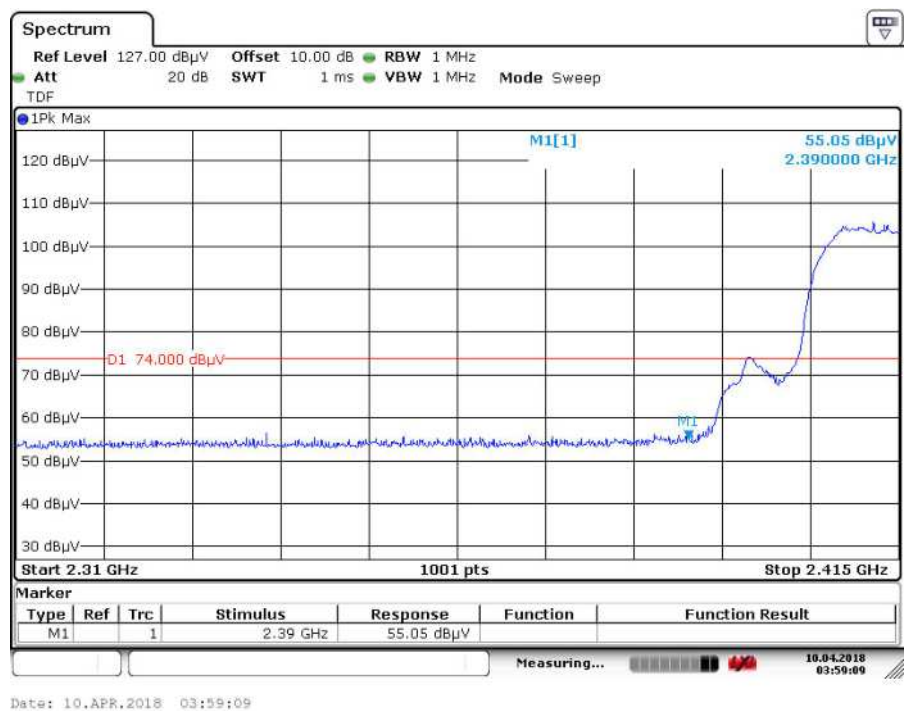
Spurious Emissions, Band Edges, 2.35-2.5G

Radiated Bandedge 11b

Low Channel (Hor)

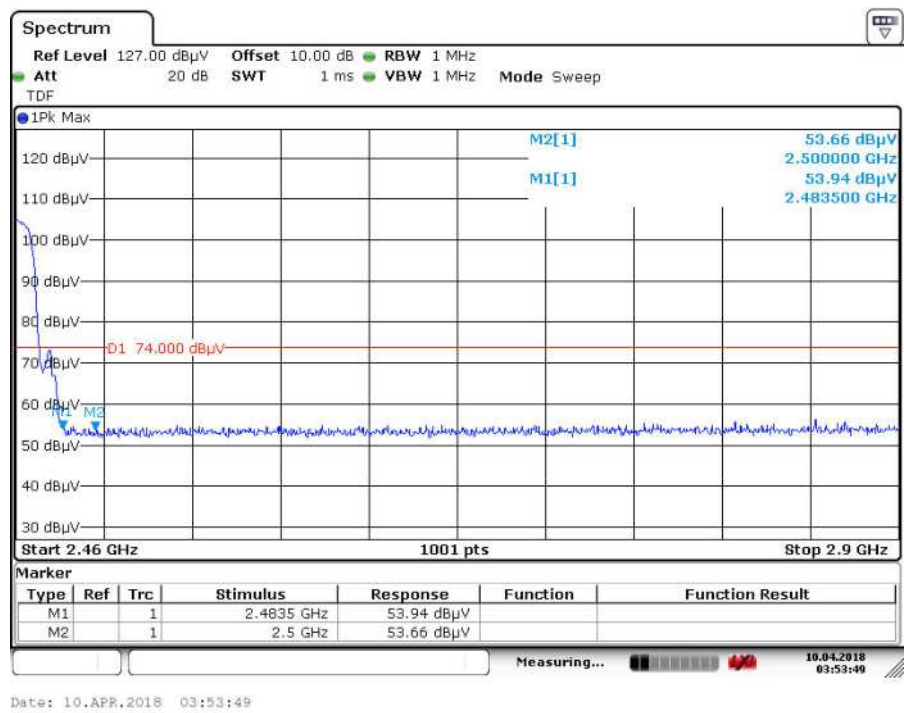
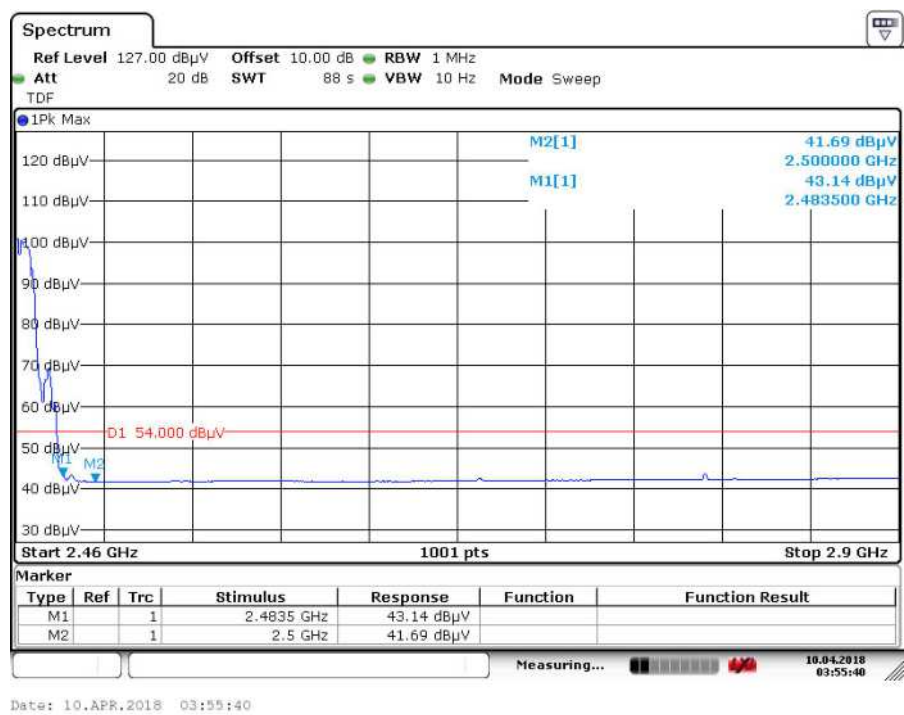


Low Channel (Ver)

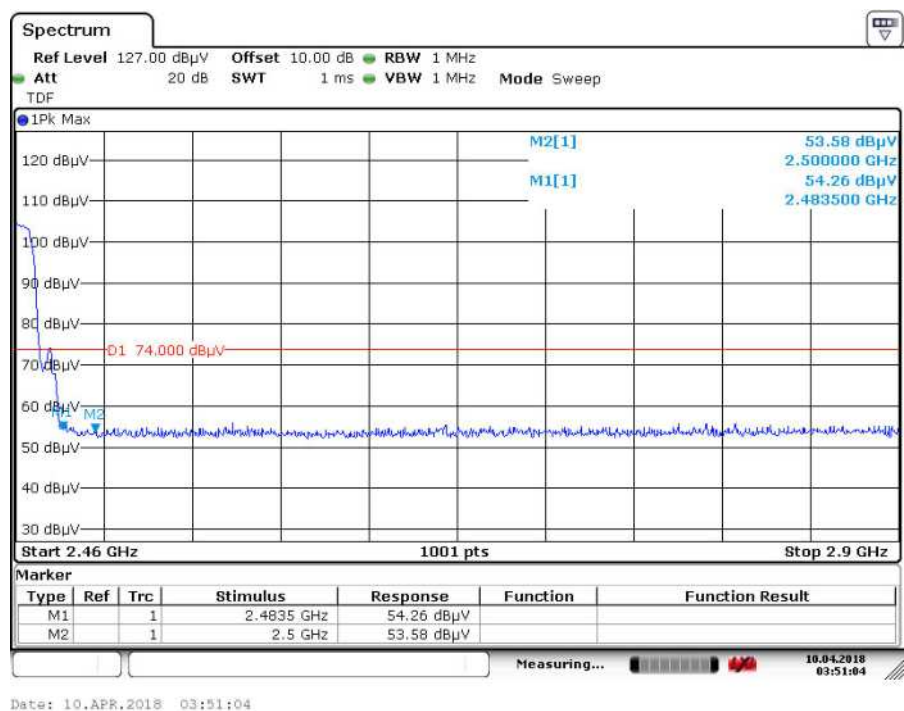
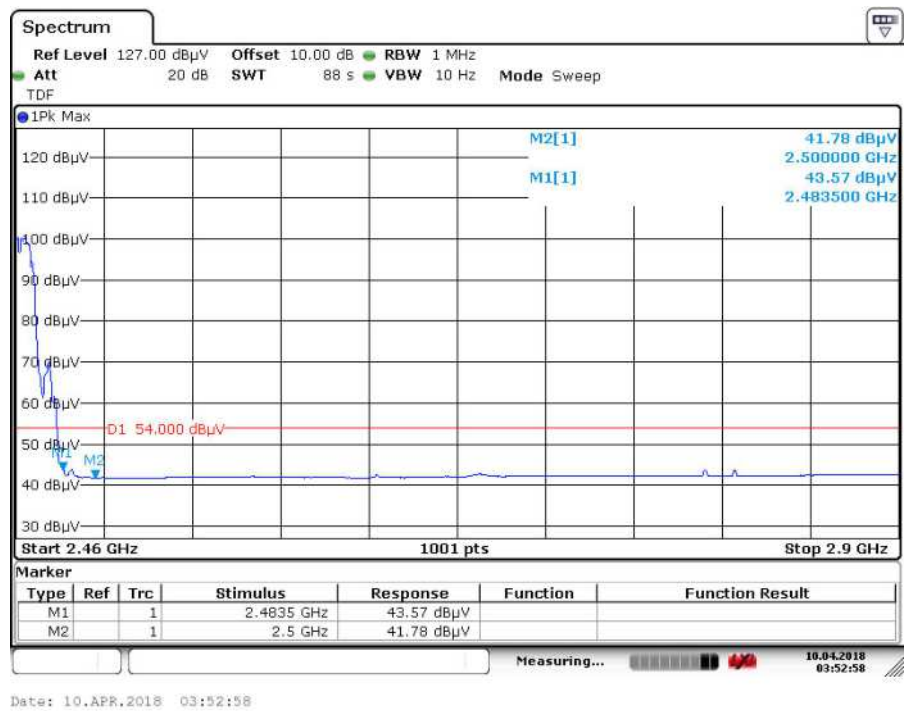


Radiated Bandedge 11b

High Channel (Hor)

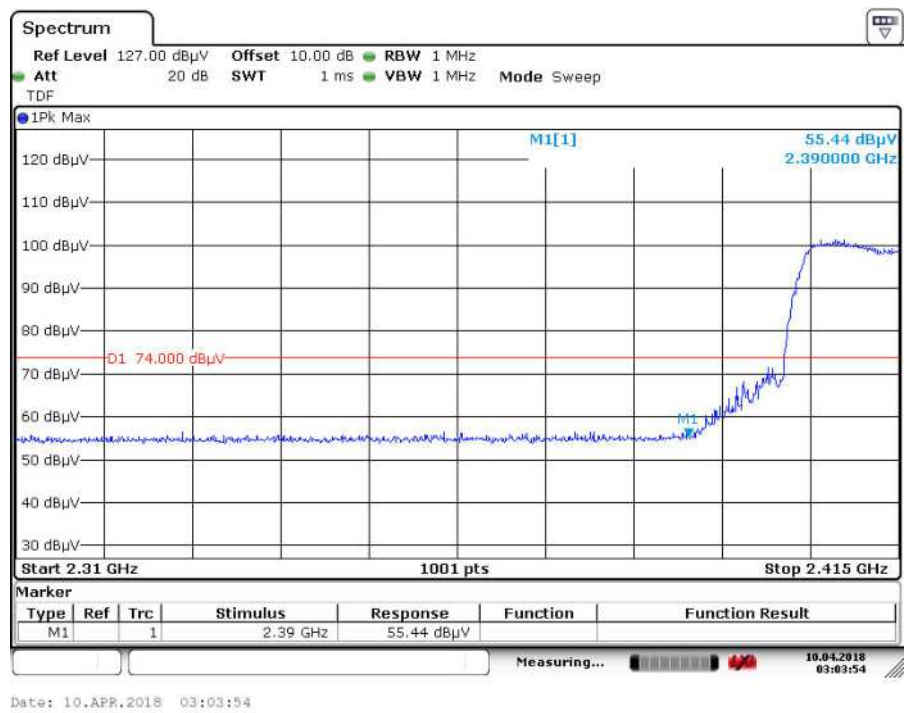
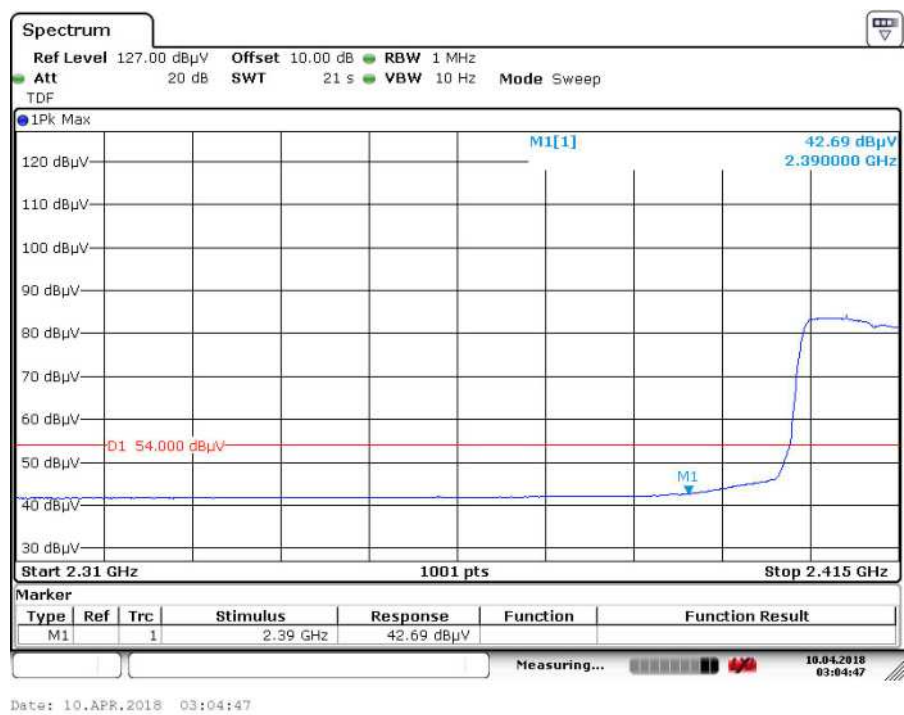


High Channel (Ver)

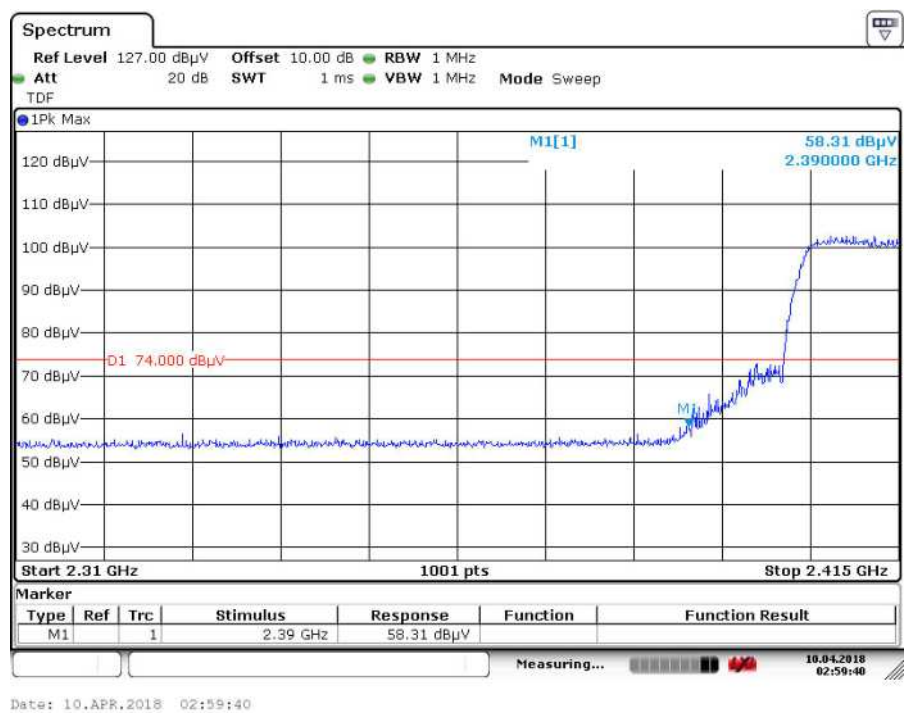
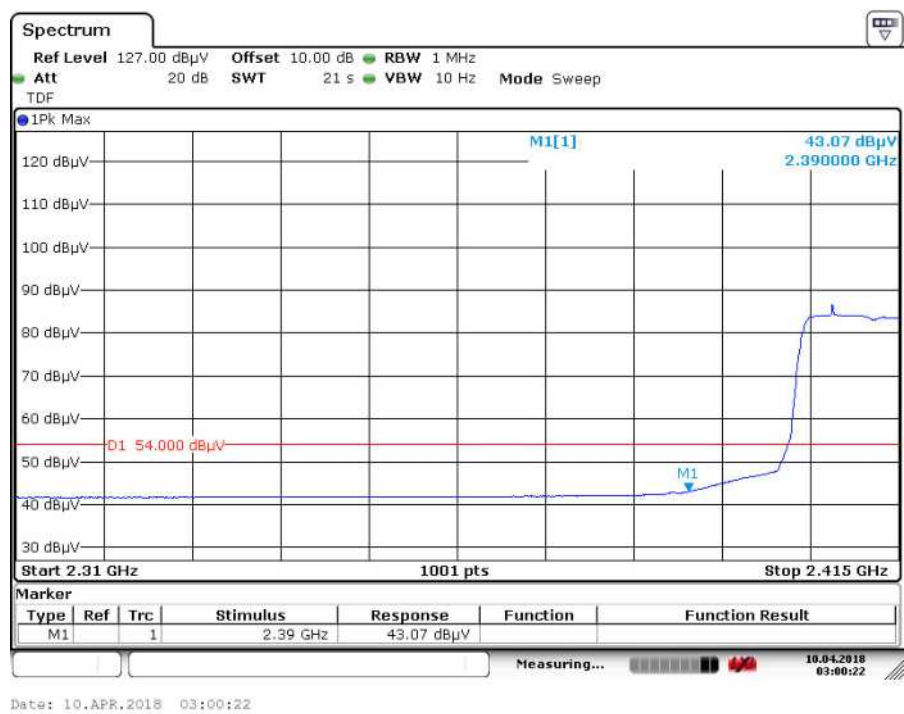


Radiated Bandedge 11g

Low Channel (Hor)

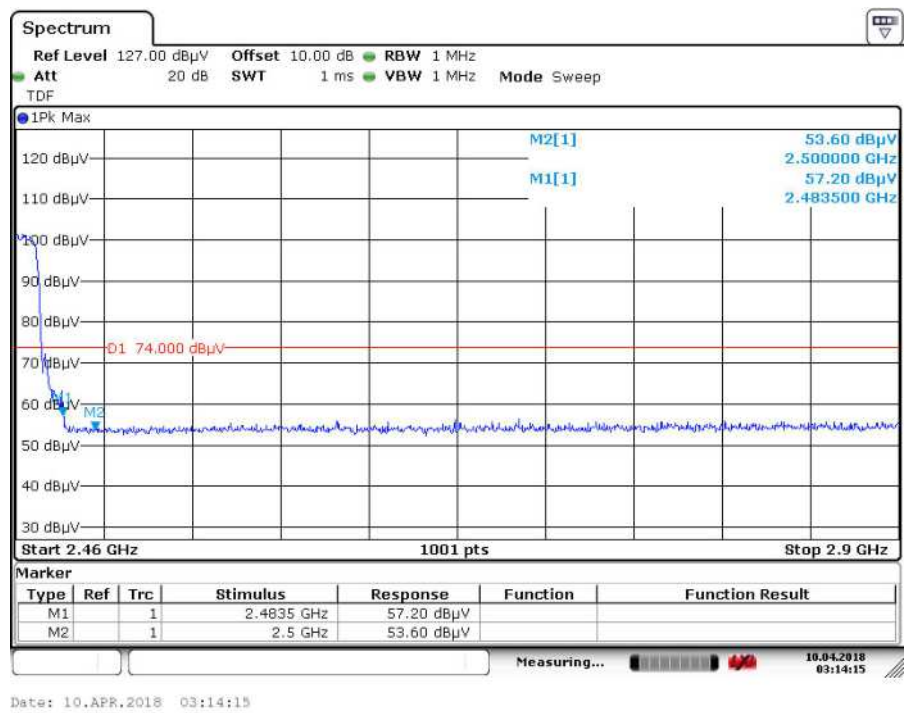
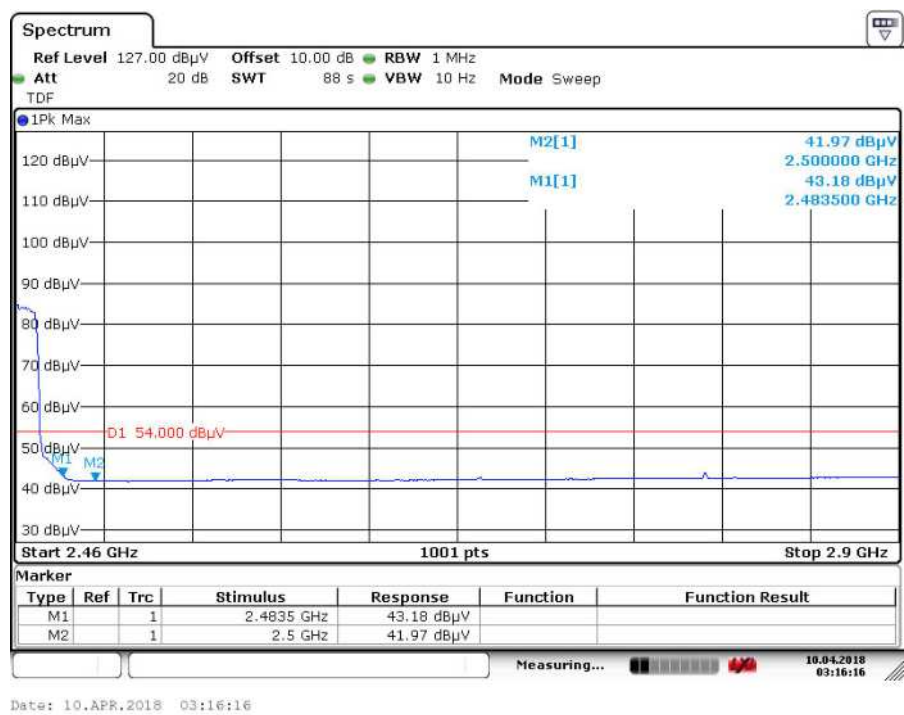


Low Channel (Ver)

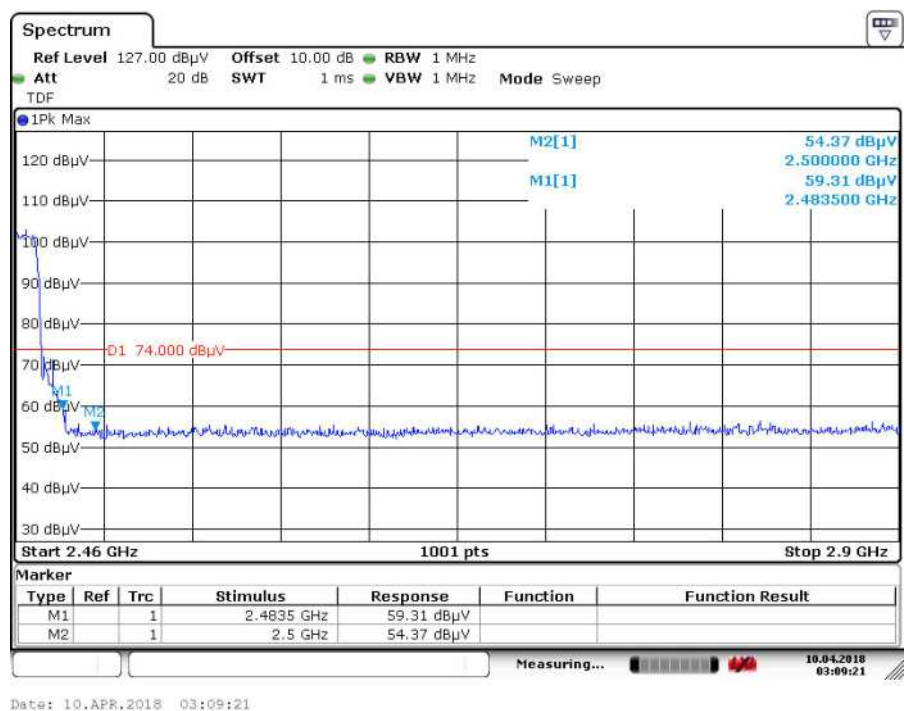
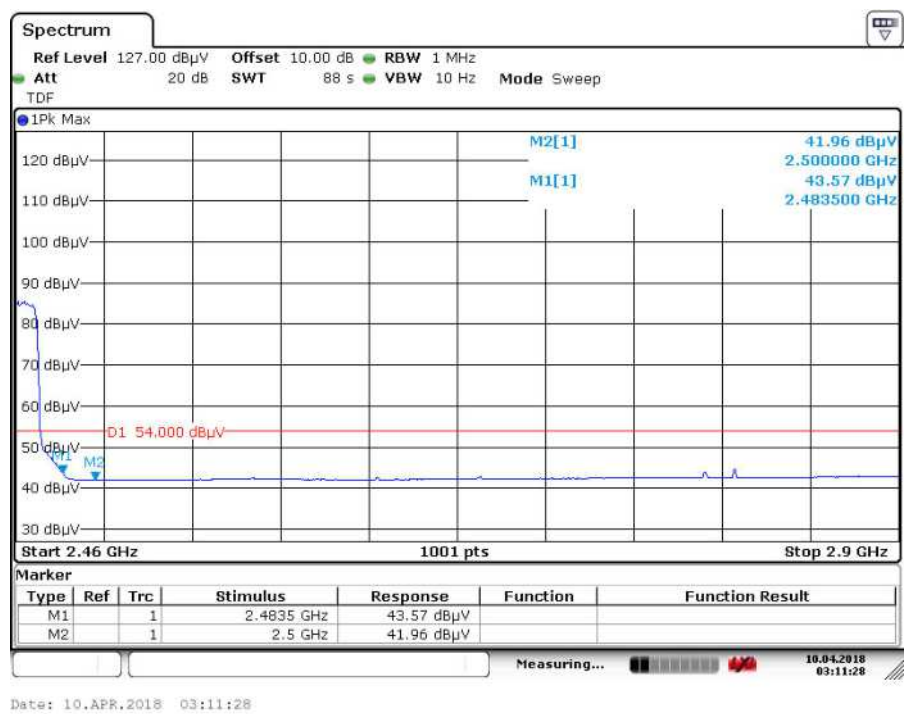


Radiated Bandedge 11g

High Channel (Hor)

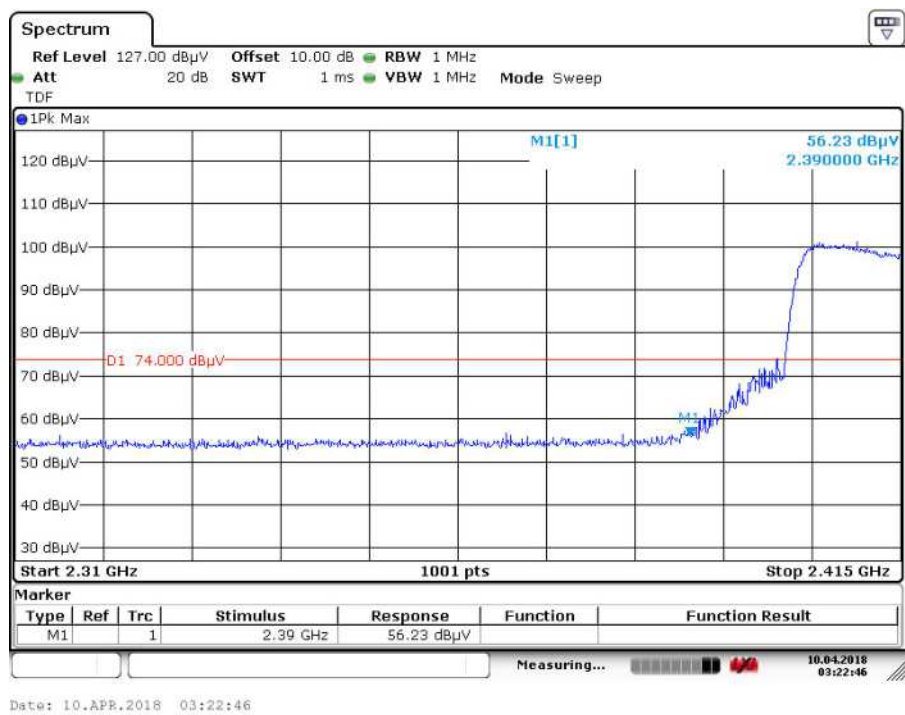
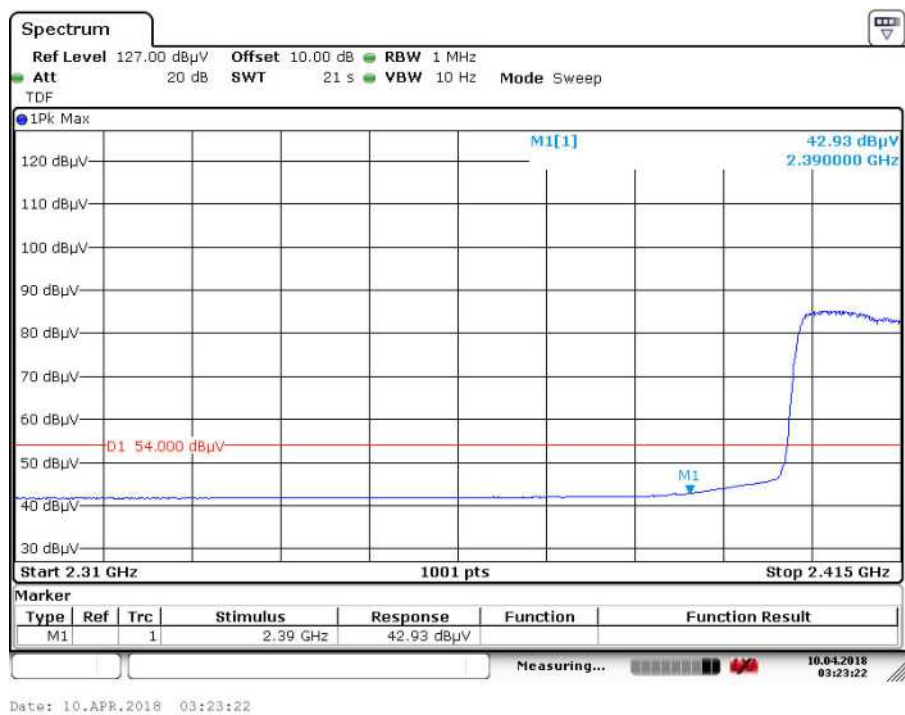


High Channel (Ver)

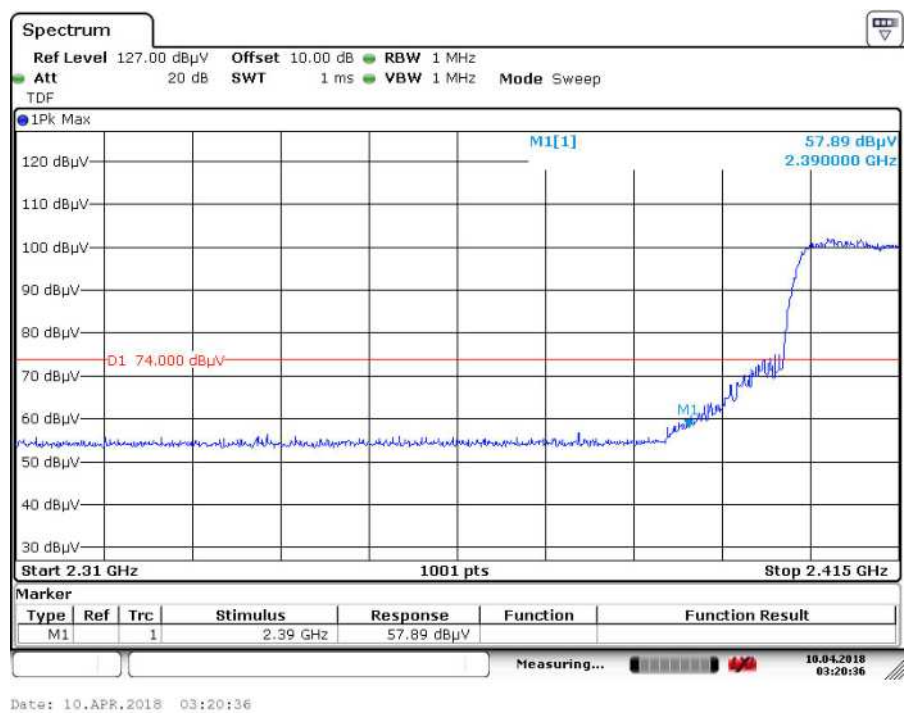
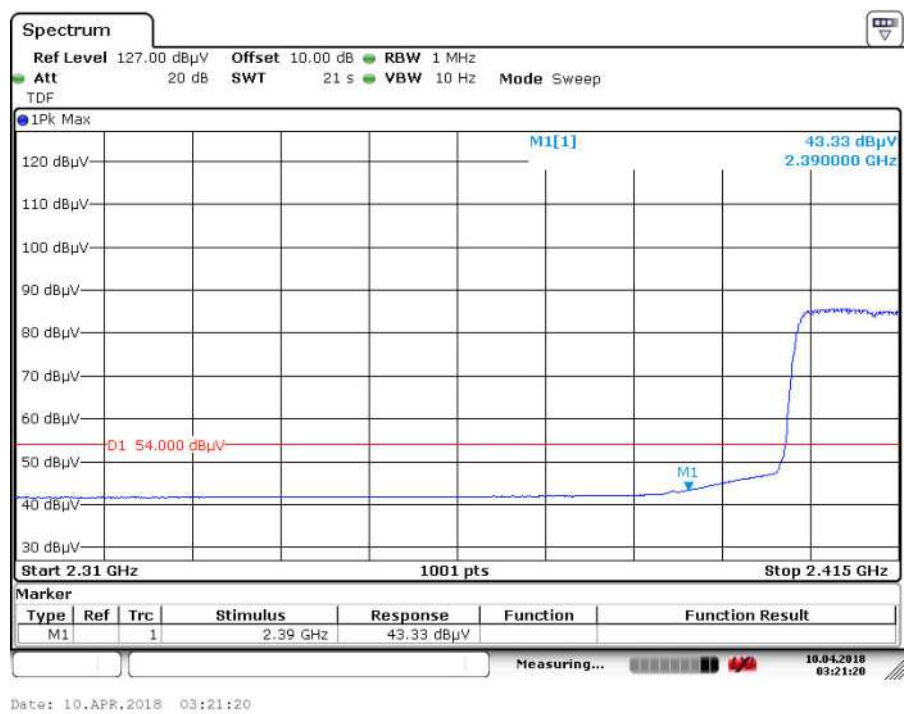


Radiated Bandedge 11n

Low Channel (Hor)

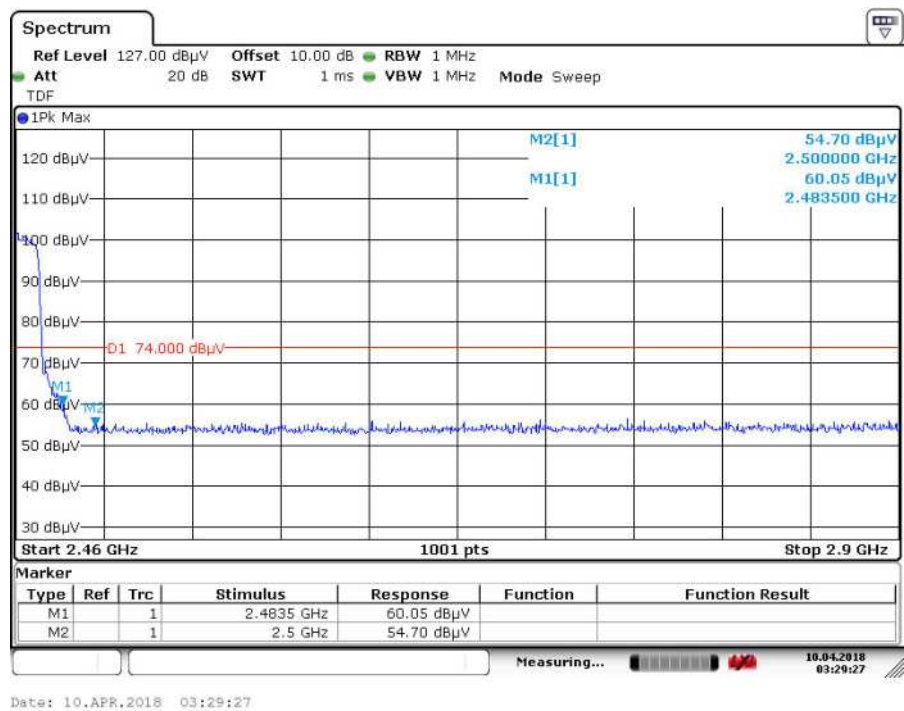
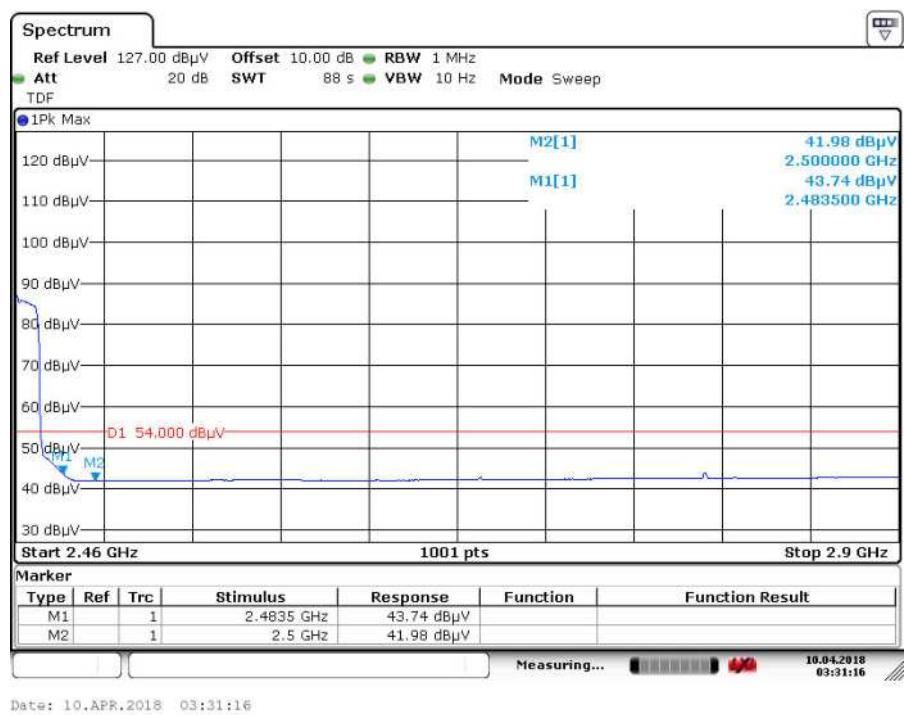


Low Channel (Ver)

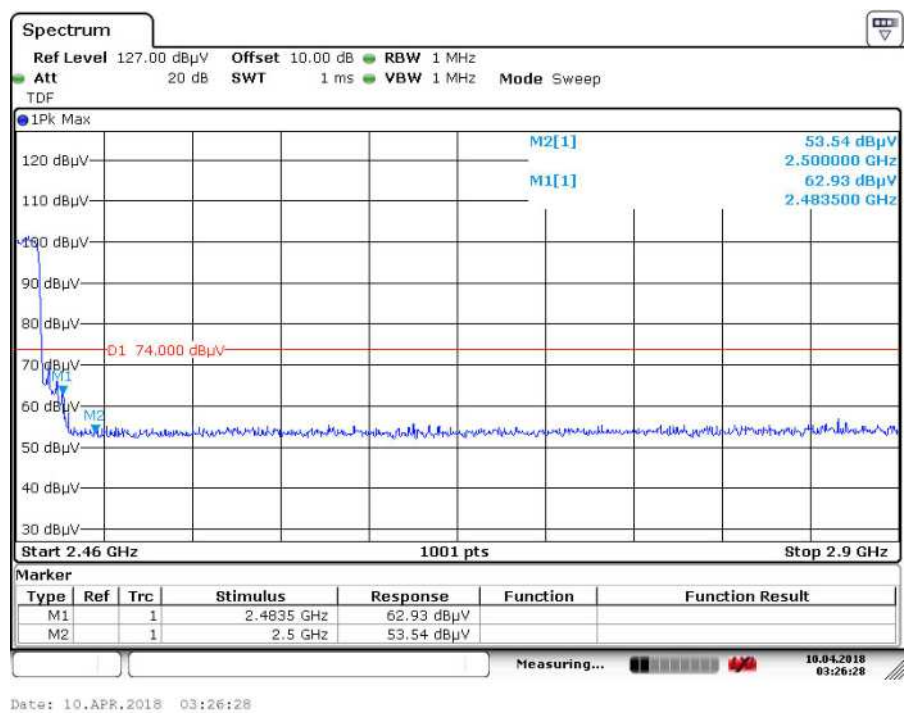
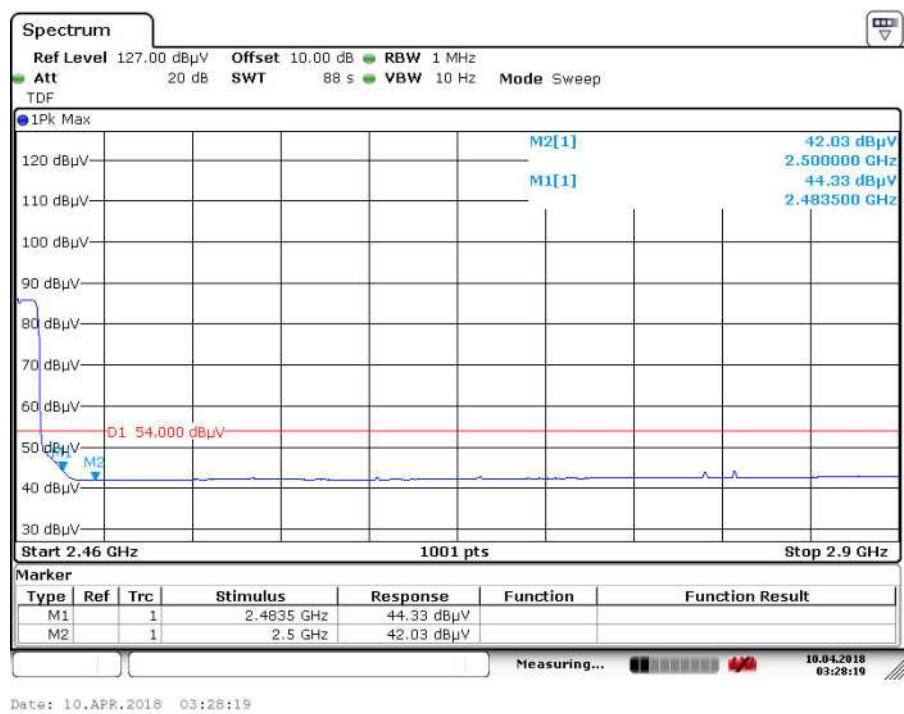


Radiated Bandedge 11n

High Channel (Hor)



High Channel (Ver)



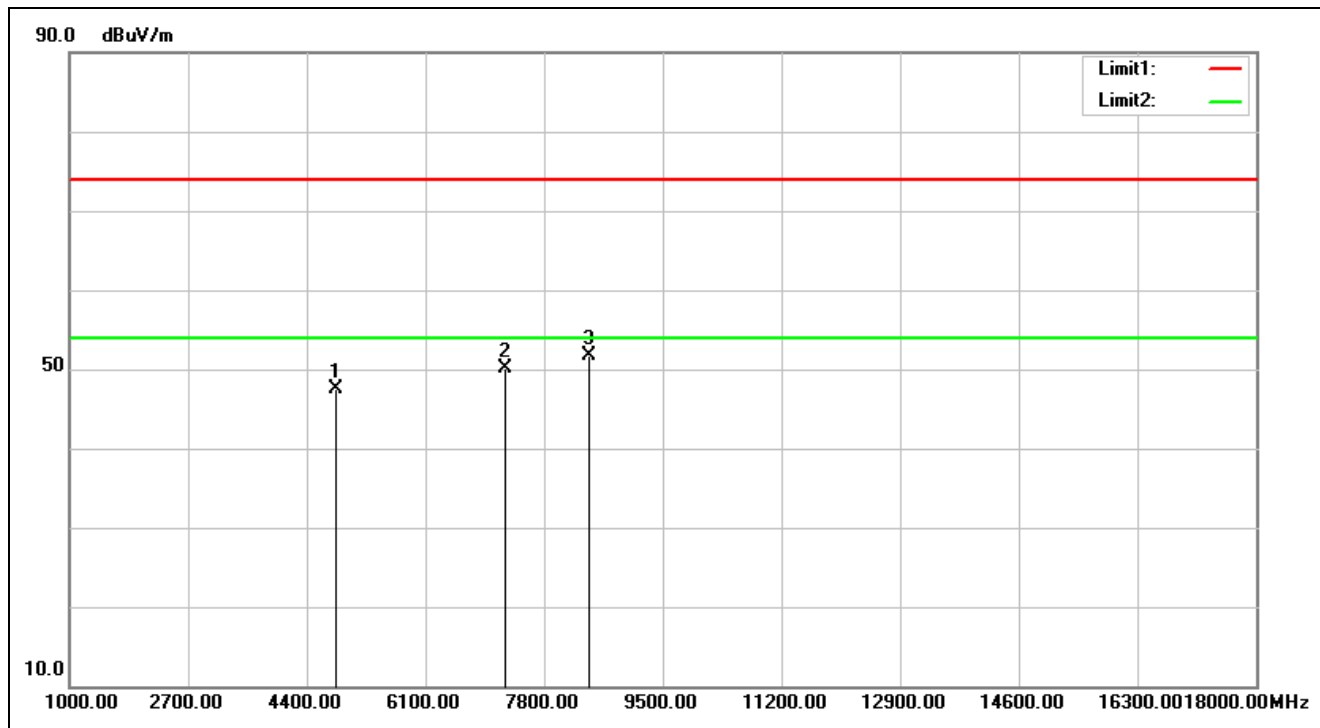
Spurious Emissions, TX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

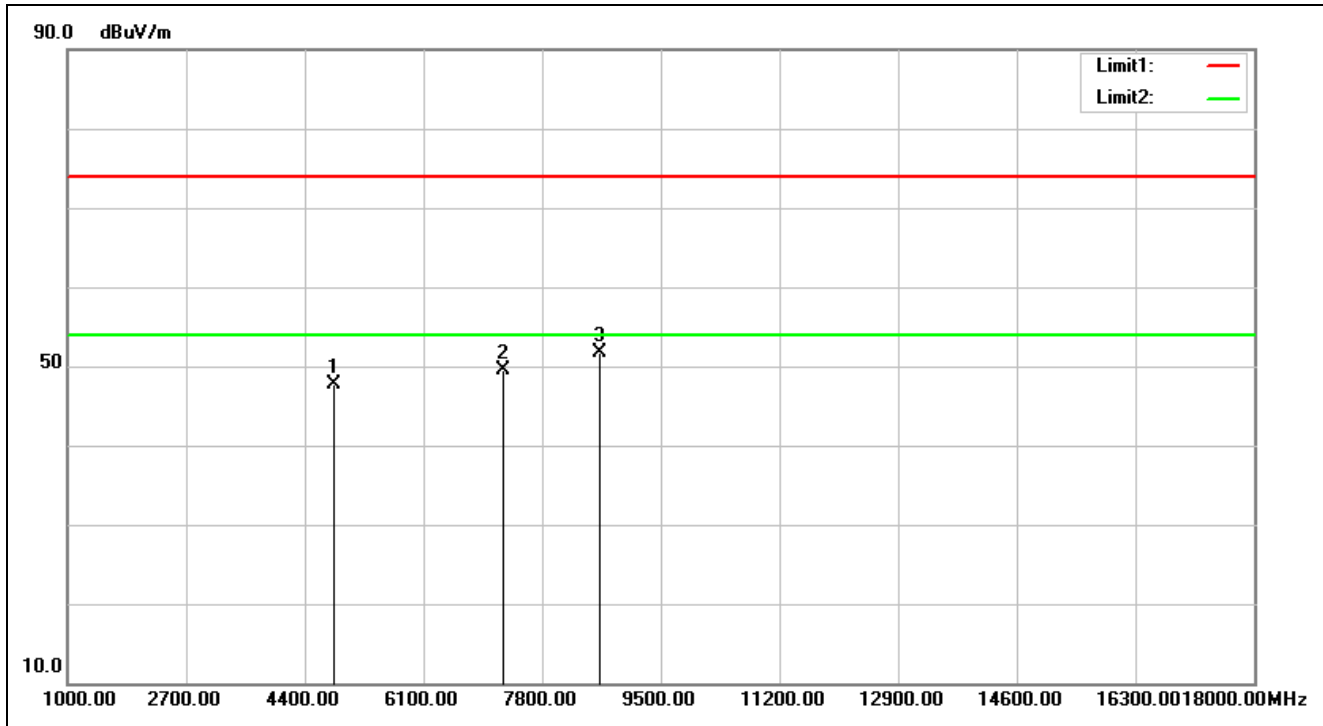
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



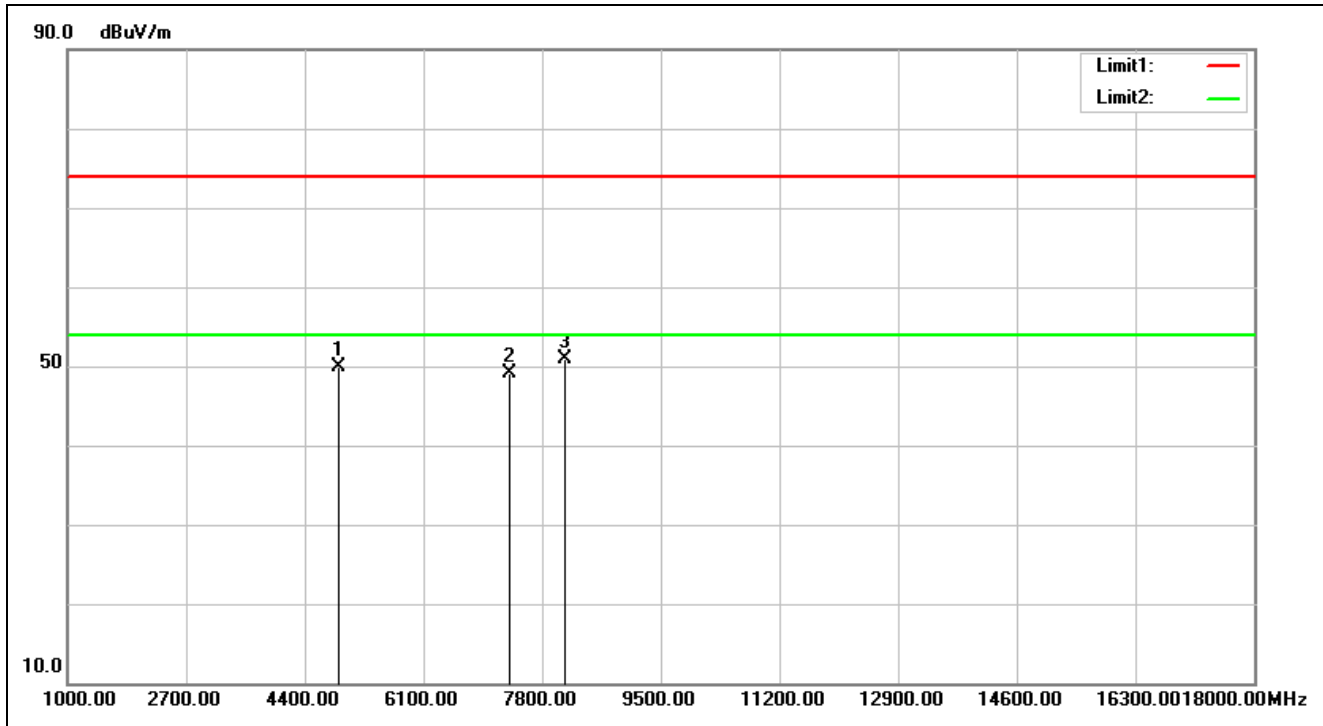
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 03:26:53
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	Power Setting -9 RFPCA381013IMAB701-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	50.23	47.57	74.00	-26.43	peak		0	
2	7236.000	5.32	44.85	50.17	74.00	-23.83	peak		0	
3	8446.000	6.31	45.31	51.62	74.00	-22.38	peak	100	226	



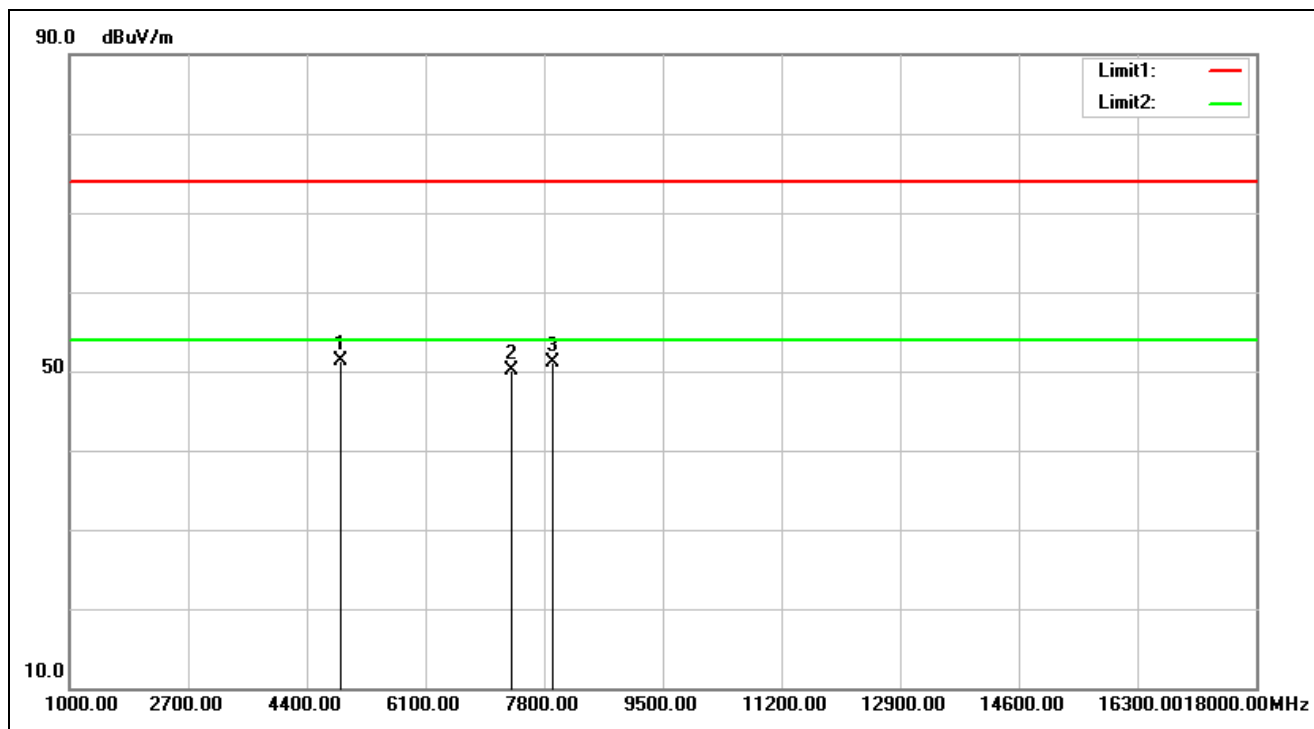
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 03:27:50
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	Power Setting -9		
	RFPCA381013IMAB701-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	50.31	47.65	74.00	-26.35	peak			
2	7236.000	5.32	44.25	49.57	74.00	-24.43	peak			
3	8633.000	6.39	45.27	51.66	74.00	-22.34	peak	100	147	



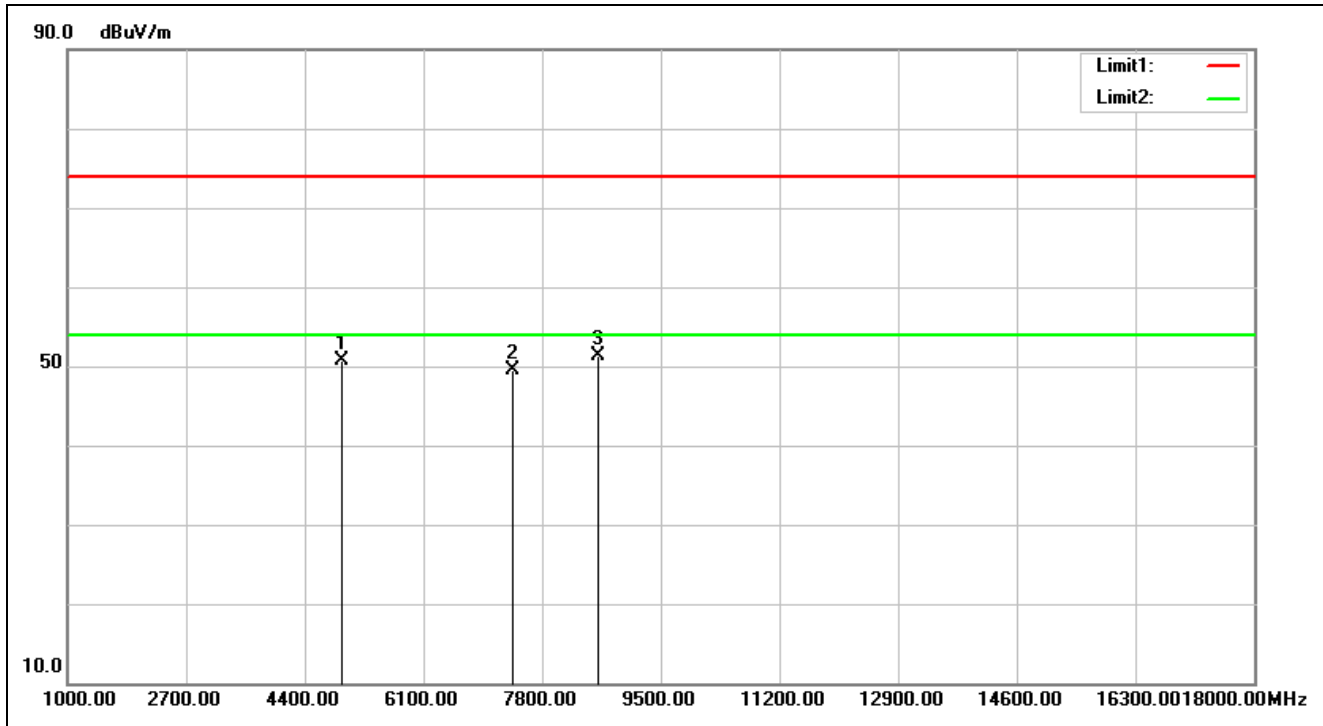
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 03:30:02
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9		
	RFPKA381013IMAB701-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	52.53	50.00	74.00	-24.00	peak	100	307	
2	7311.000	5.52	43.66	49.18	74.00	-24.82	peak			
3	8123.000	5.96	44.95	50.91	74.00	-23.09	peak	100	295	



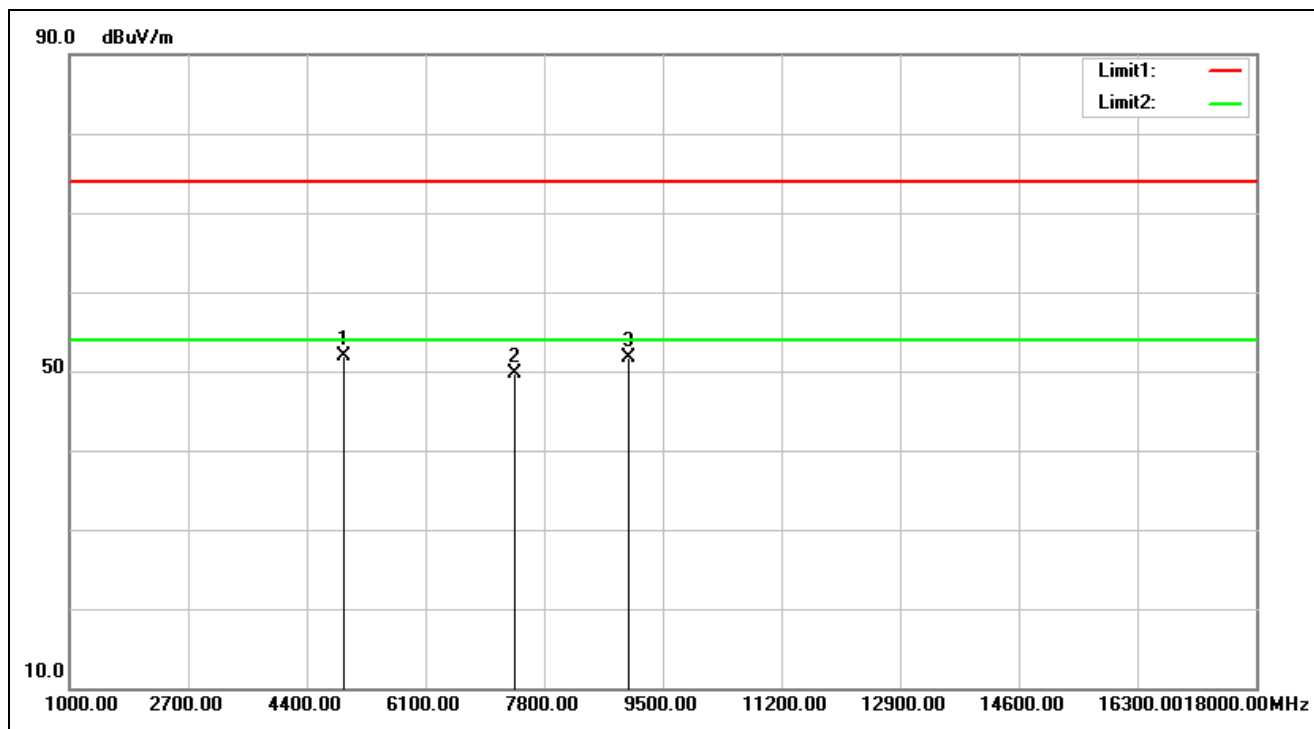
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 03:30:58
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9 RFPKA381013IMAB701-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	53.75	51.22	74.00	-22.78	peak	100	275	
2	7311.000	5.52	44.63	50.15	74.00	-23.85	peak			
3	7919.000	5.84	45.33	51.17	74.00	-22.83	peak	100	57	



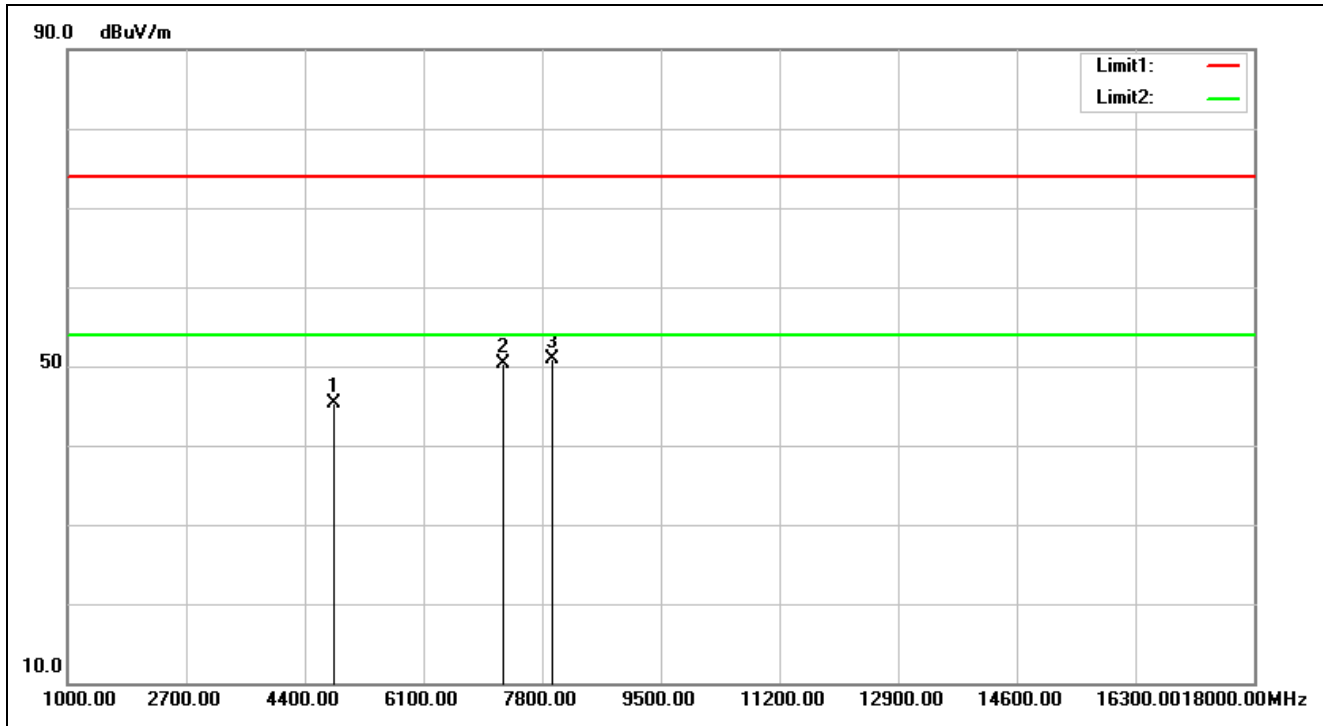
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 03:33:23
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	Power Setting -9		
	RFPKA381013IMAB701-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	53.12	50.73	74.00	-23.27	peak	100	291	
2	7386.000	5.70	43.72	49.42	74.00	-24.58	peak			
3	8599.000	6.40	44.87	51.27	74.00	-22.73	peak	100	307	



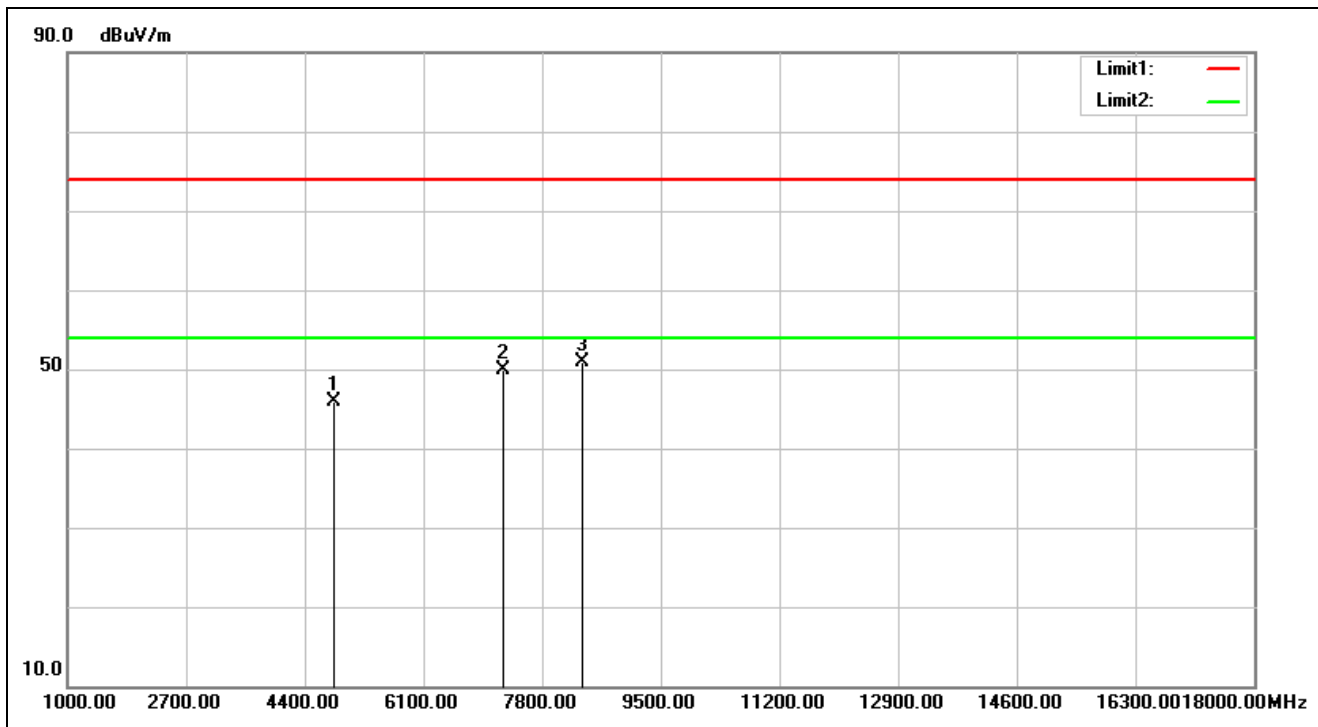
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 03:34:20
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	Power Setting -9 RFPKA381013IMAB701-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	54.33	51.94	74.00	-22.06	peak	100	266	
2	7386.000	5.70	44.02	49.72	74.00	-24.28	peak			
3	9007.000	6.44	45.25	51.69	74.00	-22.31	peak	100	140	



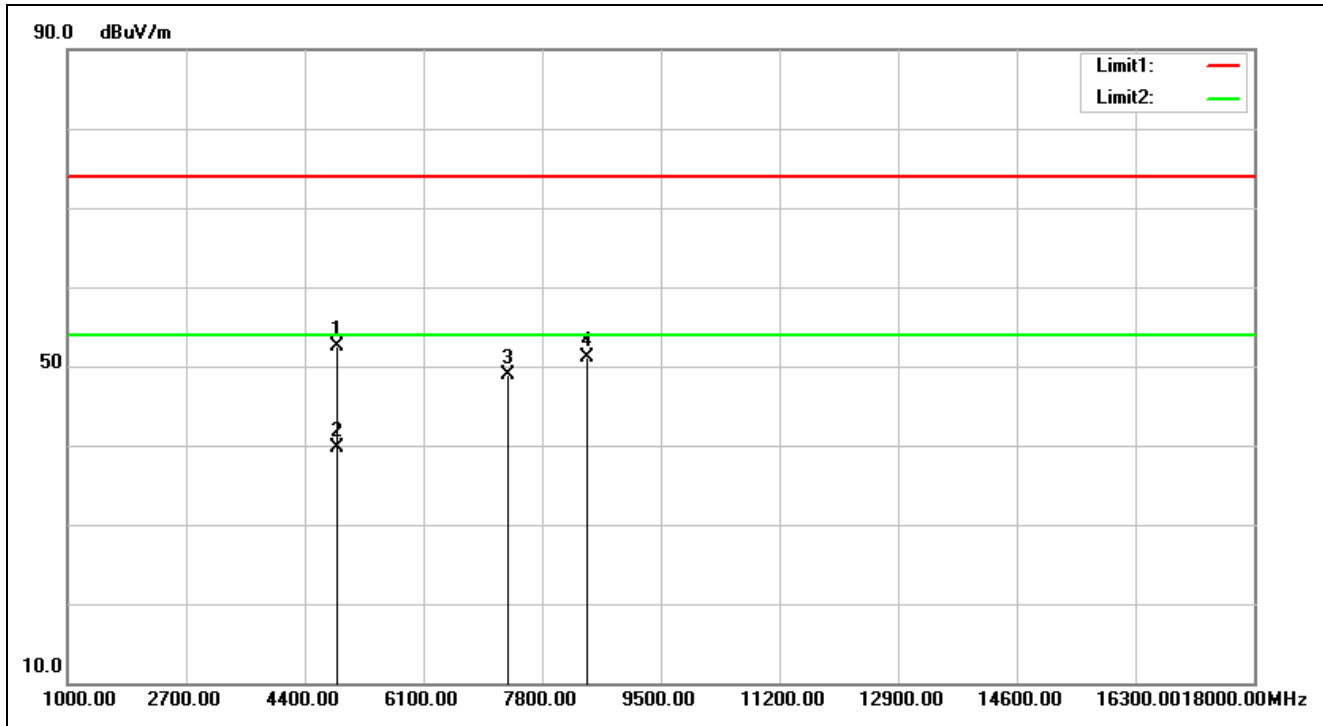
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:03:01
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	Power Setting -13 RFPKA381013IMAB701-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	47.87	45.21	74.00	-28.79	peak			
2	7236.000	5.32	44.96	50.28	74.00	-23.72	peak			
3	7936.000	5.84	45.10	50.94	74.00	-23.06	peak	100	303	



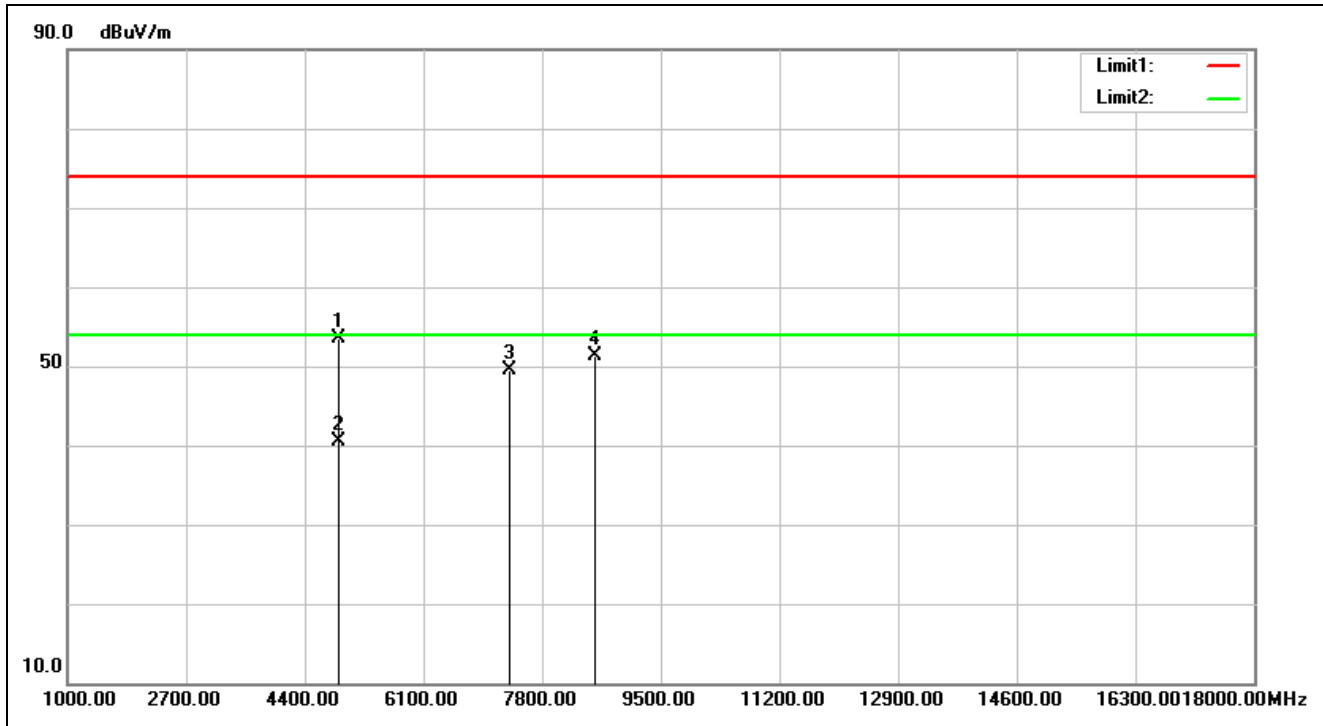
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:03:58
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	Power Setting -13		
	RFPCA381013IMAB701-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	48.66	46.00	74.00	-28.00	peak			
2	7236.000	5.32	44.50	49.82	74.00	-24.18	peak			
3	8378.000	6.24	44.57	50.81	74.00	-23.19	peak	100	320	



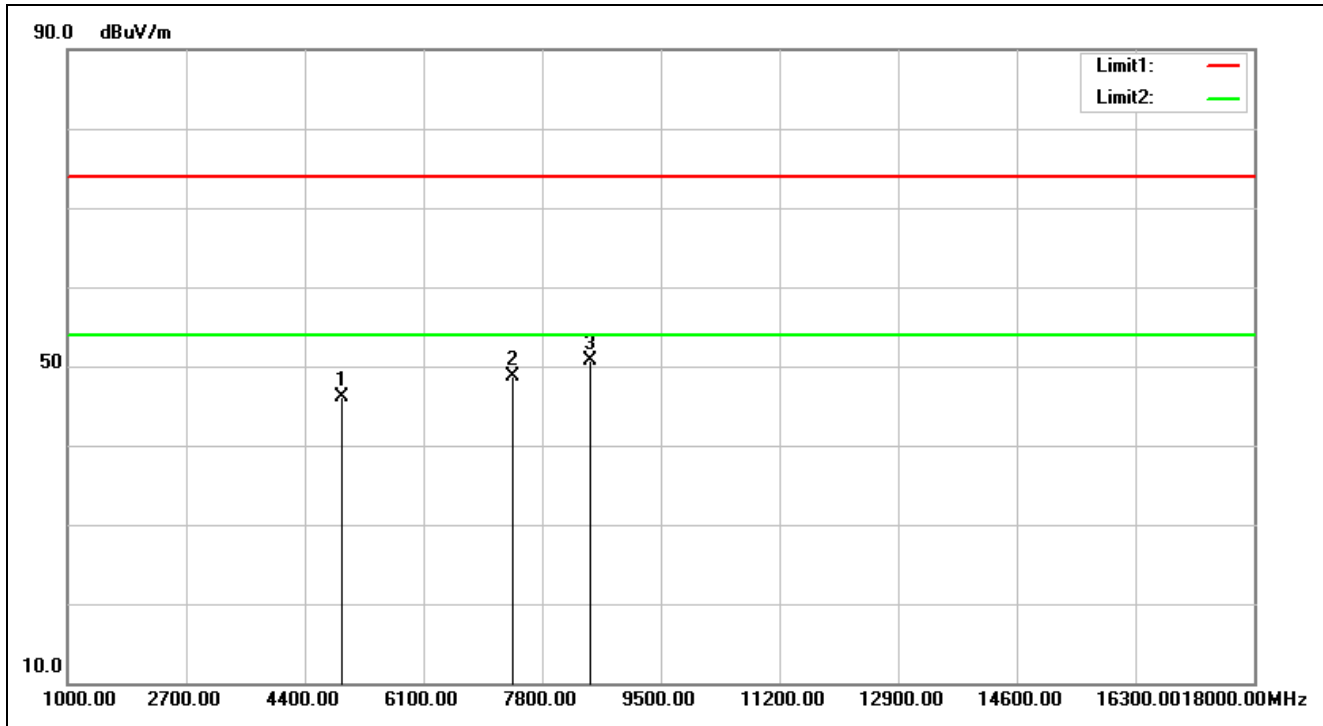
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:06:21
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4		
	RFPKA381013IMAB701-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	55.09	52.56	74.00	-21.44	peak	100	303	
2	4874.000	-2.53	42.31	39.78	54.00	-14.22	AVG	100	303	
3	7311.000	5.52	43.37	48.89	74.00	-25.11	peak			
4	8446.000	6.31	44.89	51.20	74.00	-22.80	peak	100	353	



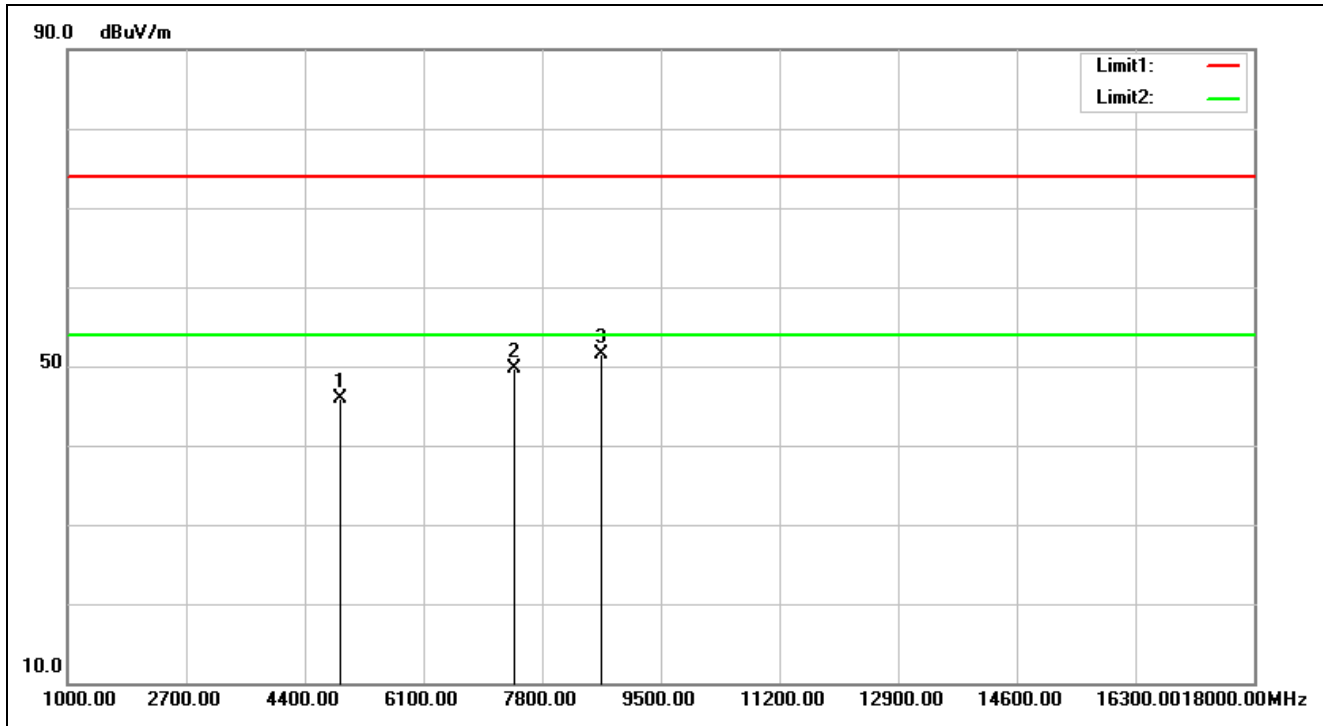
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:07:17
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4		
	RFPCA381013IMAB701-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	56.12	53.59	74.00	-20.41	peak	100	360	
2	4874.000	-2.53	42.95	40.42	54.00	-13.58	AVG	100	360	
3	7311.000	5.52	43.89	49.41	74.00	-24.59	peak			
4	8548.000	6.38	45.02	51.40	74.00	-22.60	peak	100	266	



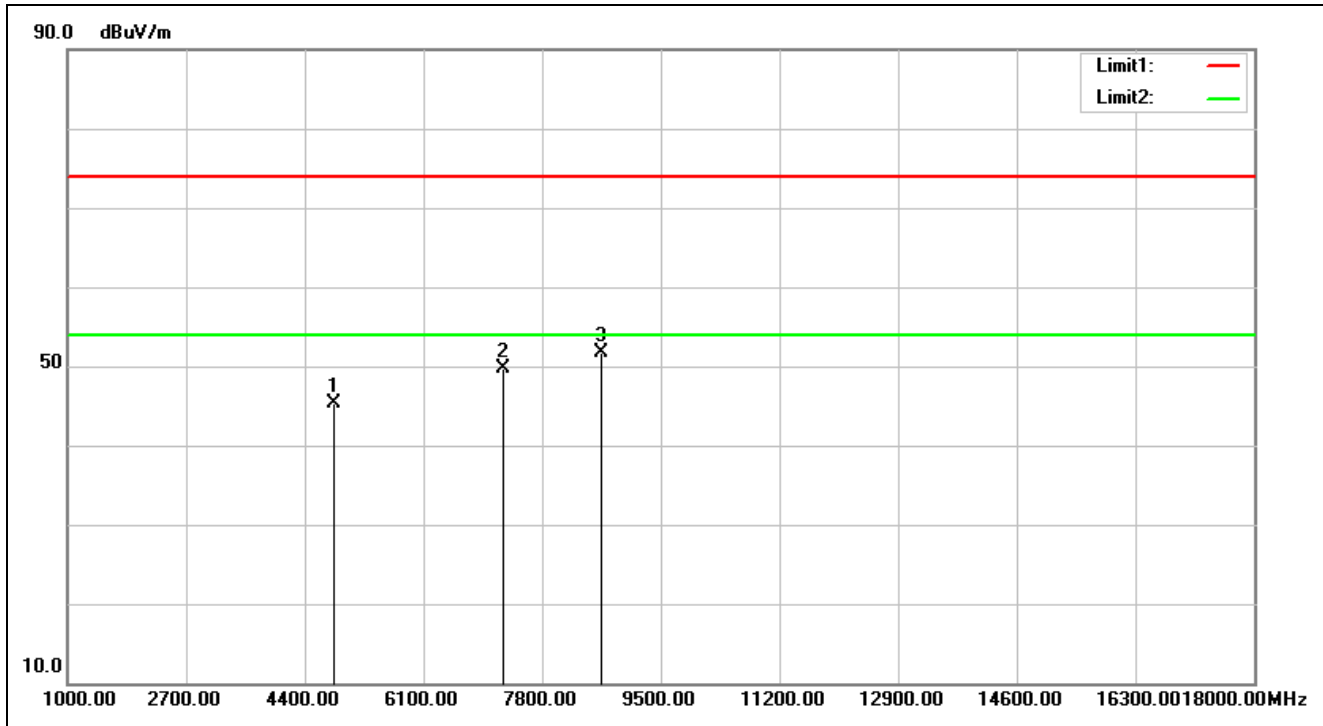
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:11:49
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	Power Setting -13		
	RFPCA381013IMAB701-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	48.56	46.17	74.00	-27.83	peak			
2	7386.000	5.70	43.08	48.78	74.00	-25.22	peak			
3	8497.000	6.38	44.42	50.80	74.00	-23.20	peak	100	263	



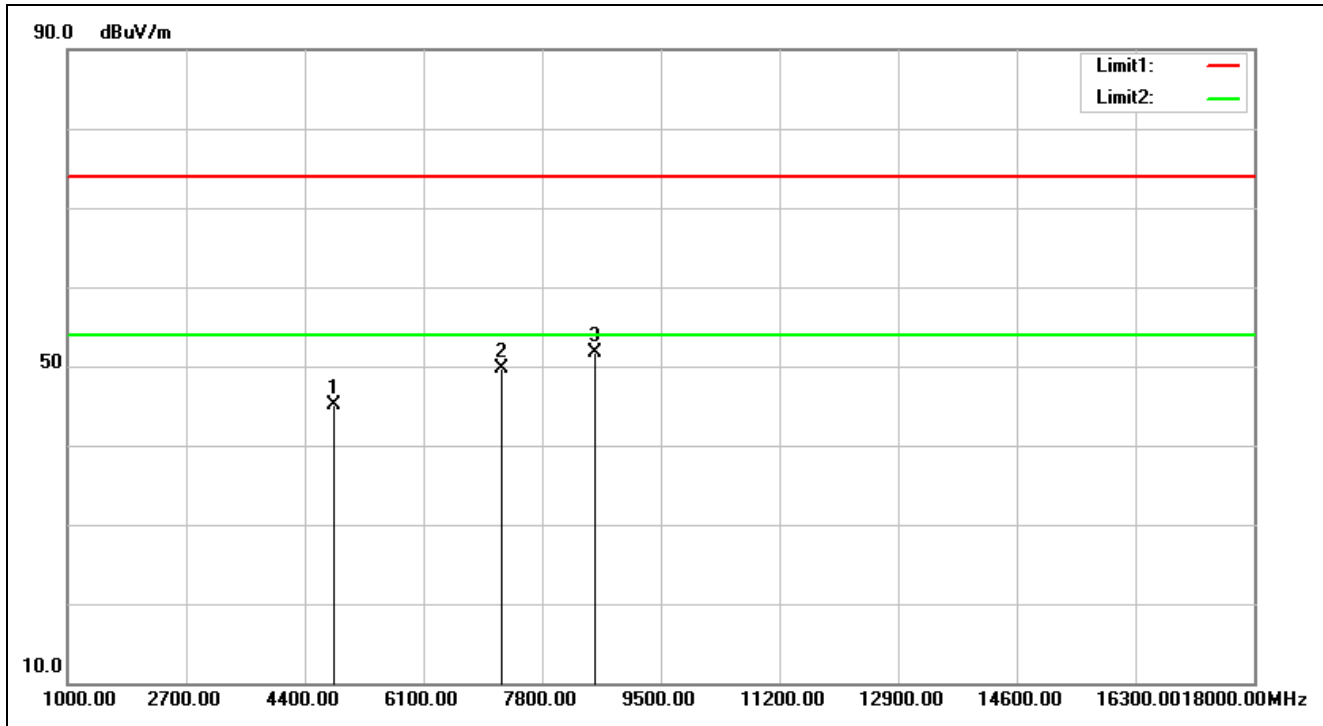
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:12:46
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	Power Setting -13 RFPKA381013IMAB701-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	44.03	49.73	74.00	-24.27	peak			
3	8650.000	6.40	45.02	51.42	74.00	-22.58	peak	100	168	



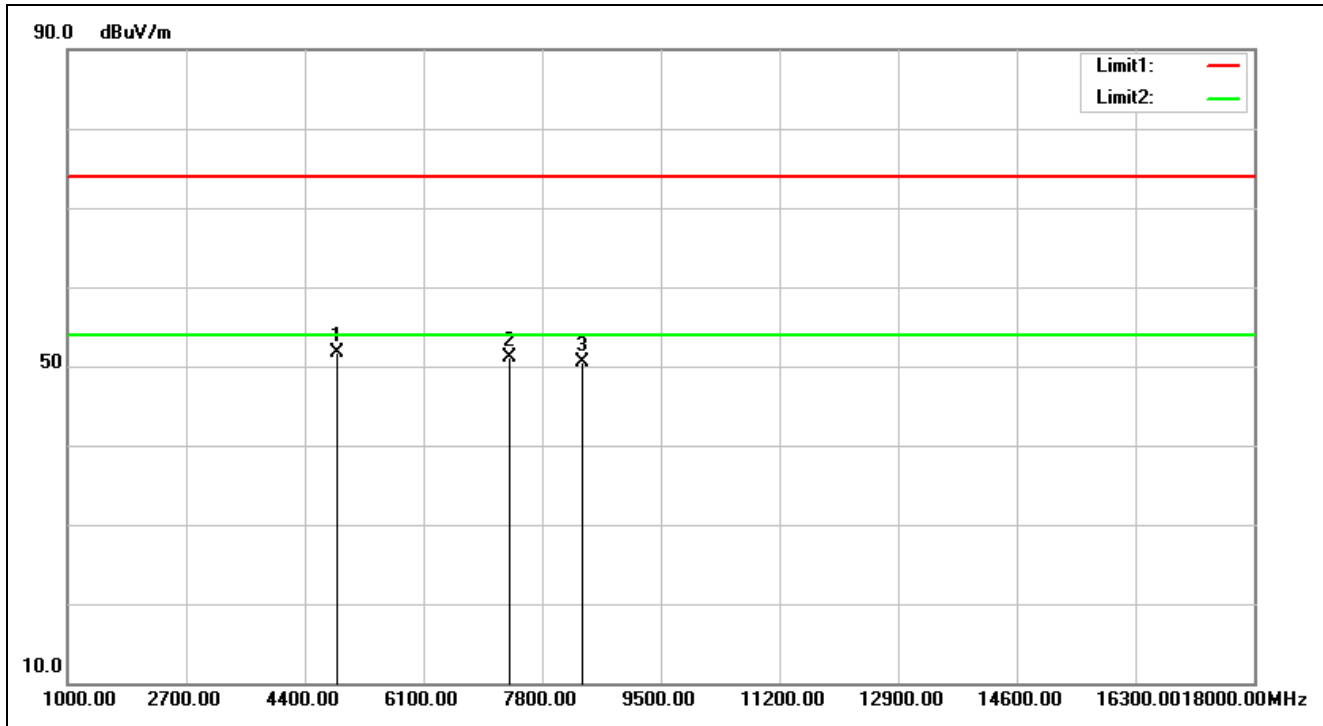
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:15:15
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	Power Setting -13		
	RFPCA381013IMAB701-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	47.87	45.21	74.00	-28.79	peak			
2	7236.000	5.32	44.41	49.73	74.00	-24.27	peak			
3	8650.000	6.40	45.30	51.70	74.00	-22.30	peak	100	244	



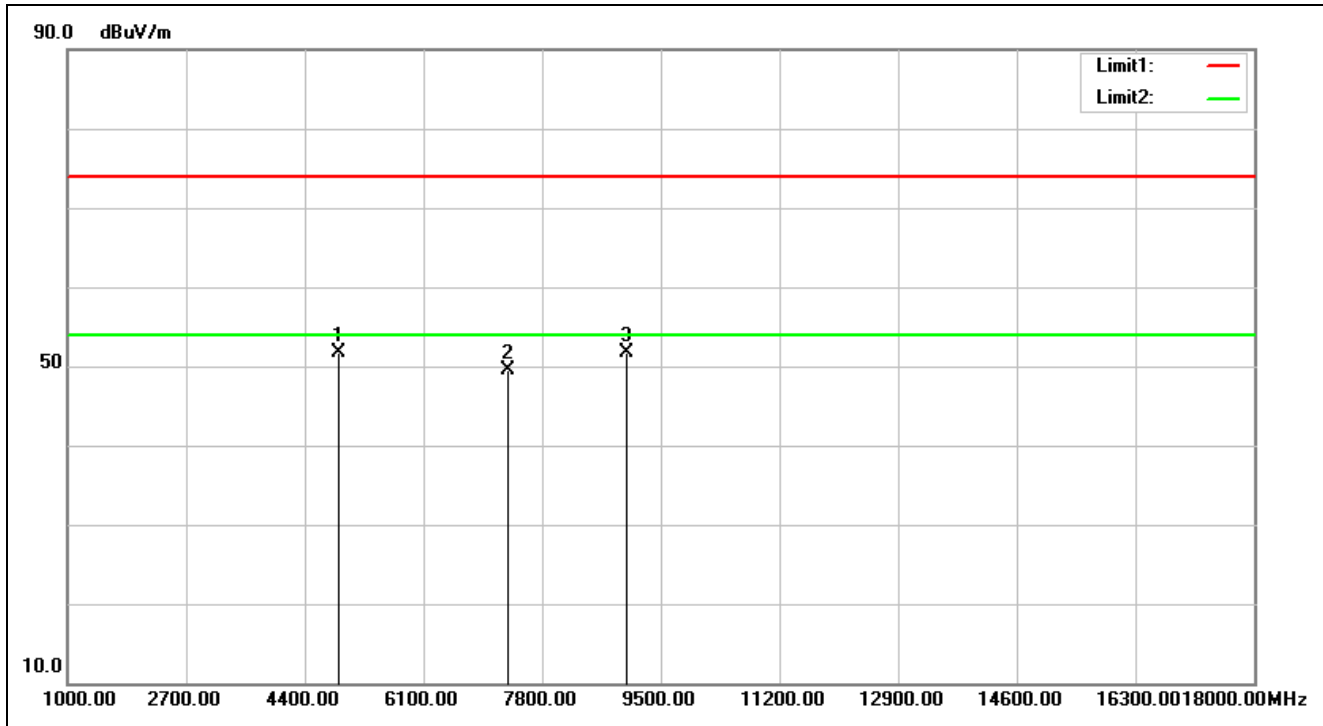
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:16:12
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	Power Setting -13 RFPKA381013IMAB701-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	47.67	45.01	74.00	-28.99	peak			
2	7236.000	5.32	44.37	49.69	74.00	-24.31	peak			
3	8548.000	6.38	45.30	51.68	74.00	-22.32	peak	100	200	



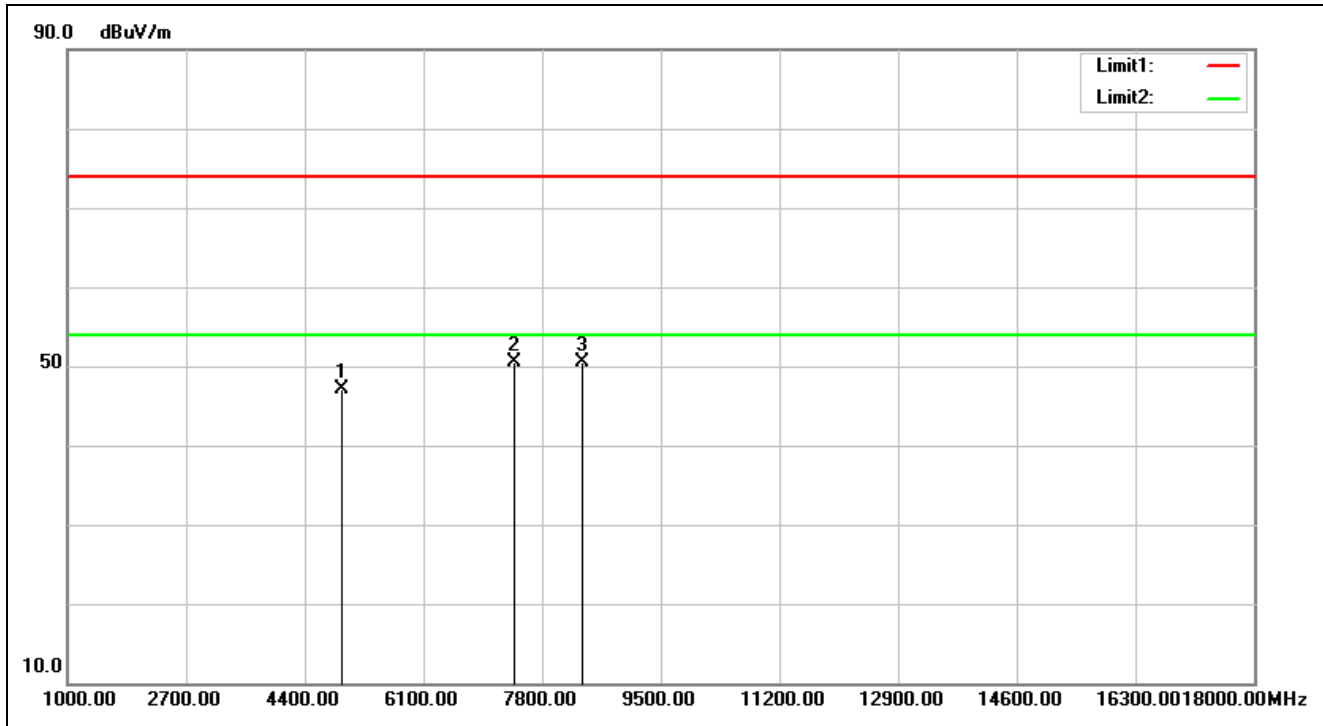
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:18:35
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	Power Setting -4		
	RFPCA381013IMAB701-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	54.14	51.61	74.00	-22.39	peak	100	232	
2	7311.000	5.52	45.64	51.16	74.00	-22.84	peak			
3	8378.000	6.24	44.31	50.55	74.00	-23.45	peak	100	82	



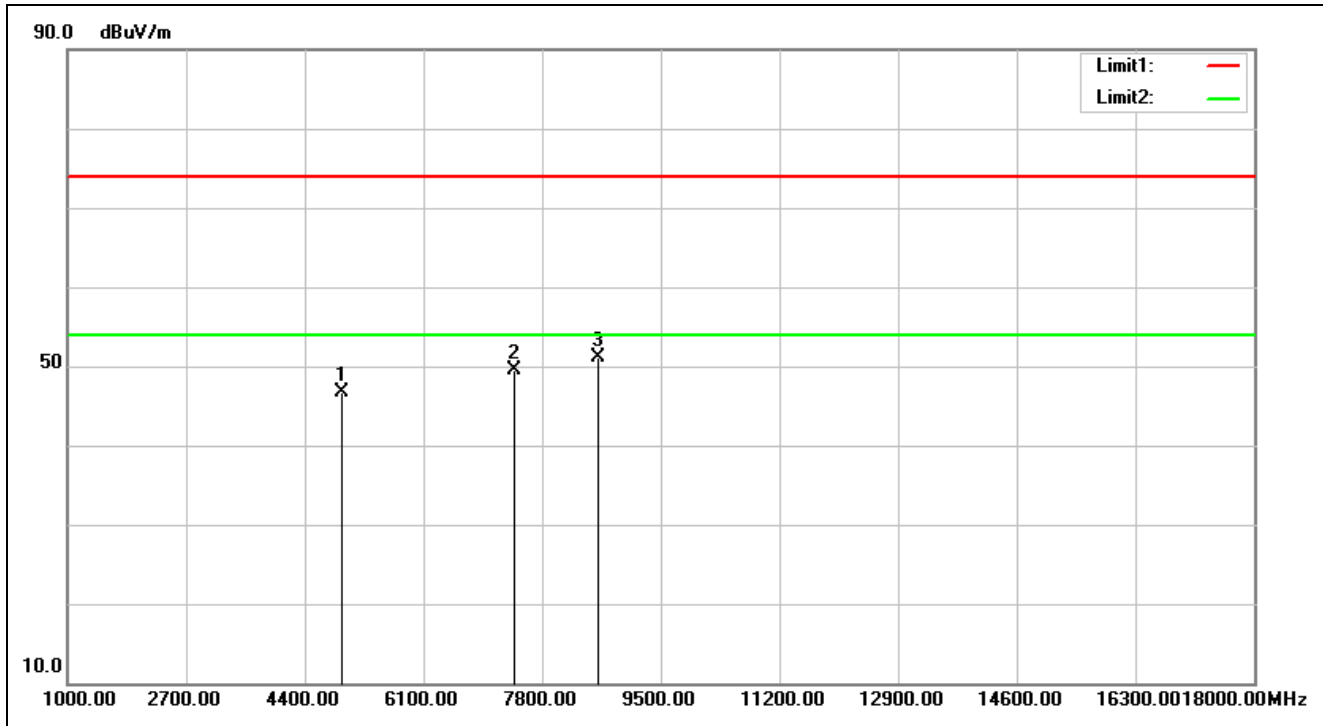
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:19:31
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	Power Setting -4		
	RFPCA381013IMAB701-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	54.21	51.68	74.00	-22.32	peak	100	272	
2	7311.000	5.52	43.99	49.51	74.00	-24.49	peak			
3	9007.000	6.44	45.19	51.63	74.00	-22.37	peak	100	0	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:22:17
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	Power Setting -13 RFPKA381013IMAB701-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	49.43	47.04	74.00	-26.96	peak			
2	7386.000	5.70	44.74	50.44	74.00	-23.56	peak			
3	8378.000	6.24	44.35	50.59	74.00	-23.41	peak	100	357	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:23:13
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	Power Setting -13 RFPKA381013IMAB701-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	49.11	46.72	74.00	-27.28	peak			
2	7386.000	5.70	43.90	49.60	74.00	-24.40	peak			
3	8599.000	6.40	44.76	51.16	74.00	-22.84	peak	100	218	

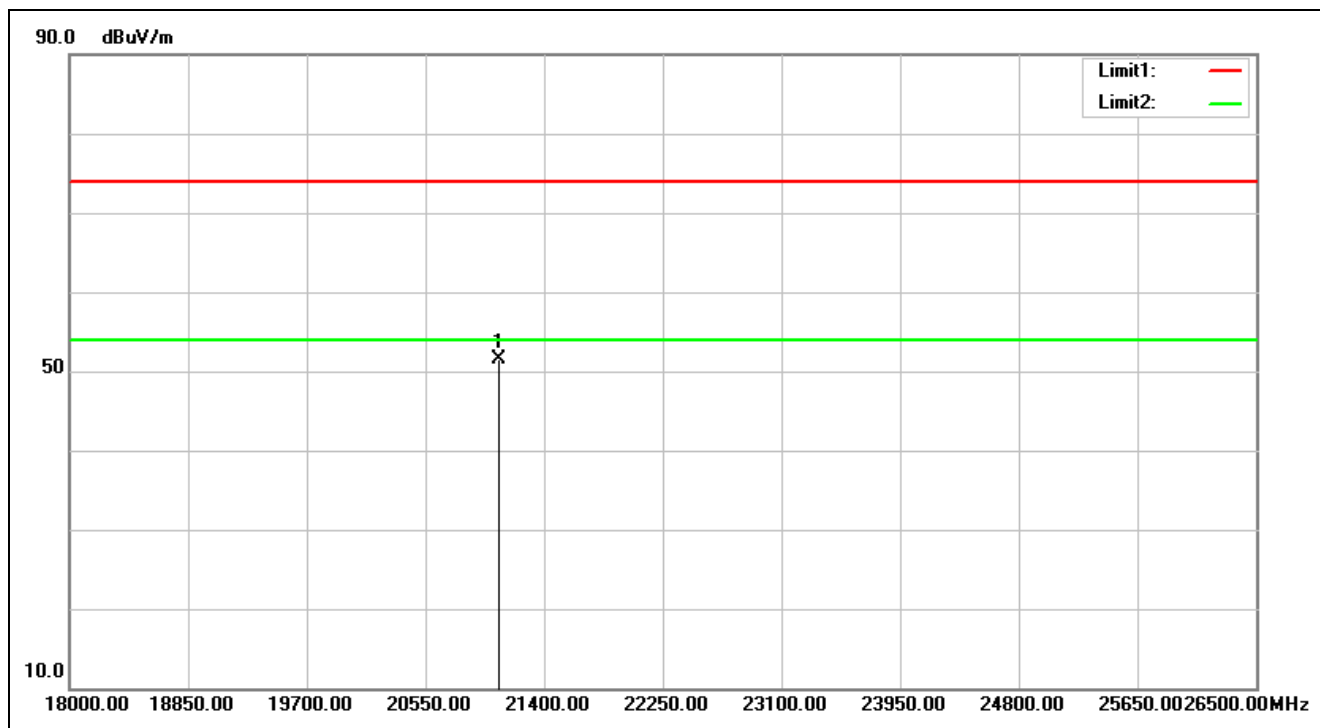
Spurious Emissions, TX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

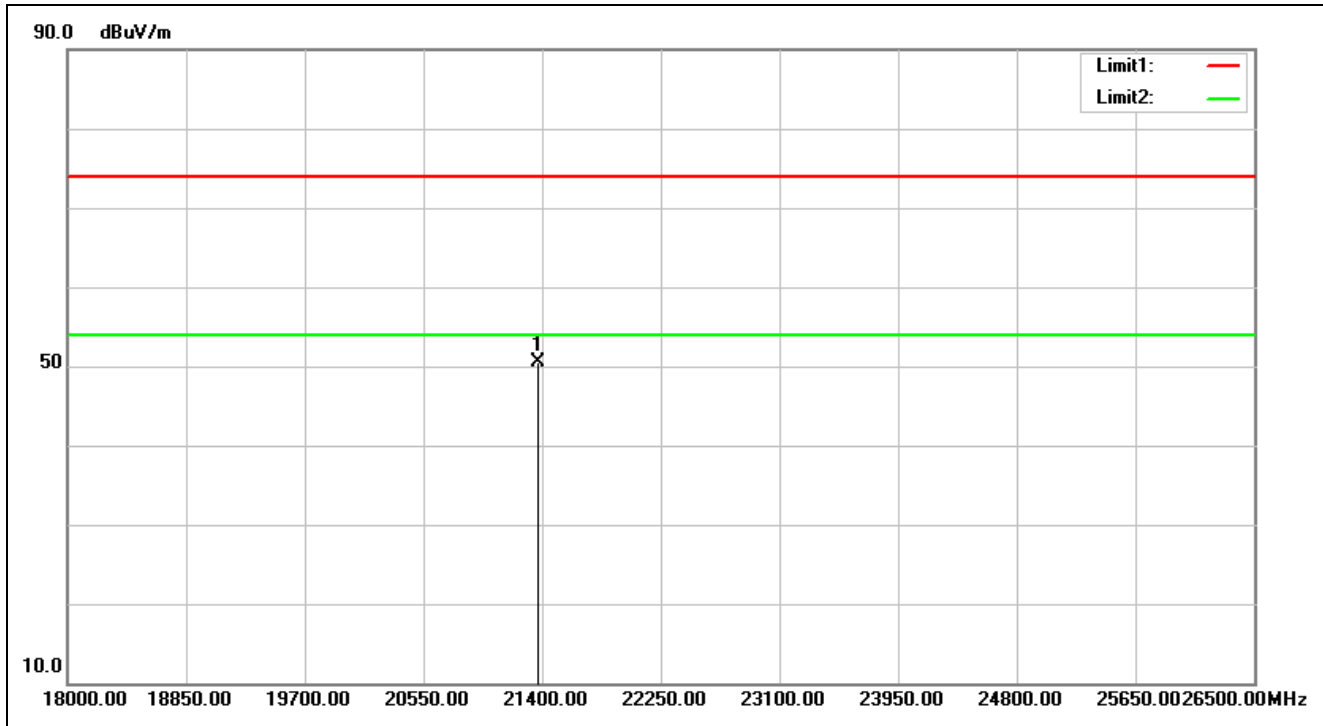
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



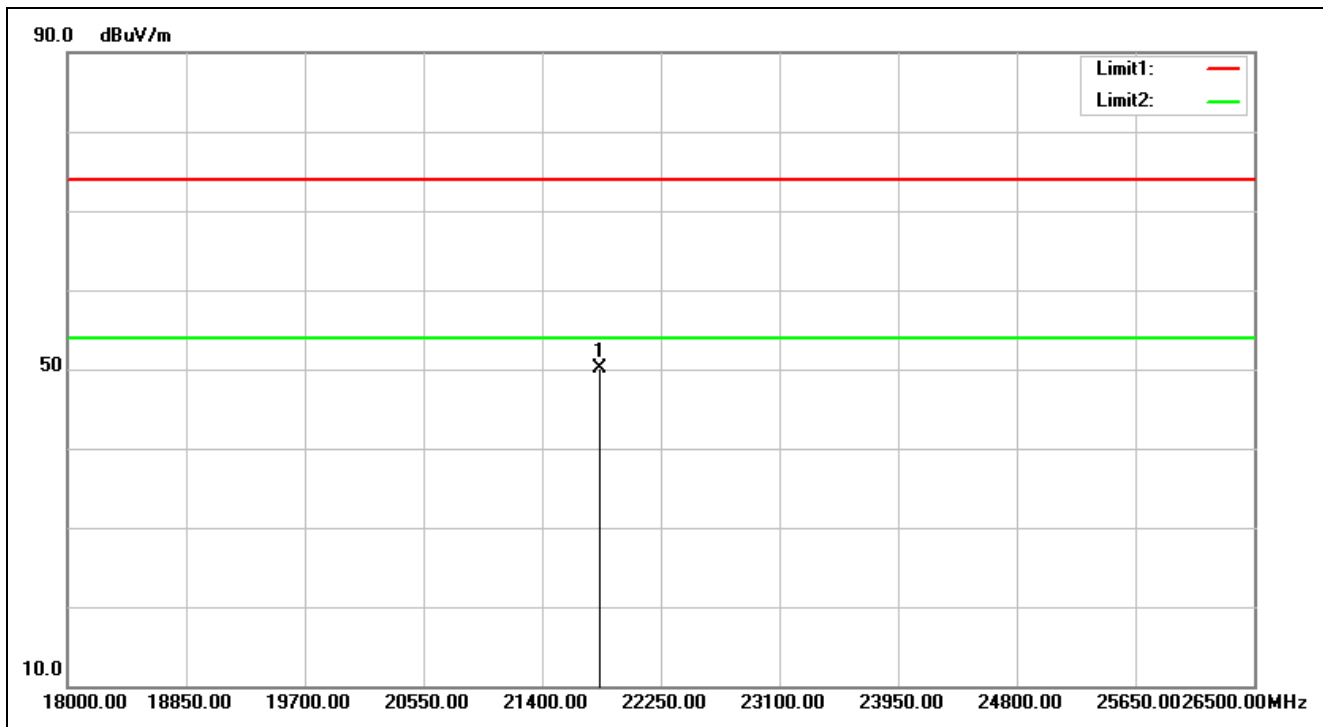
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:39:09
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	Power Setting -9 RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21077.000	32.51	18.98	51.49	74.00	-22.51	peak		0	



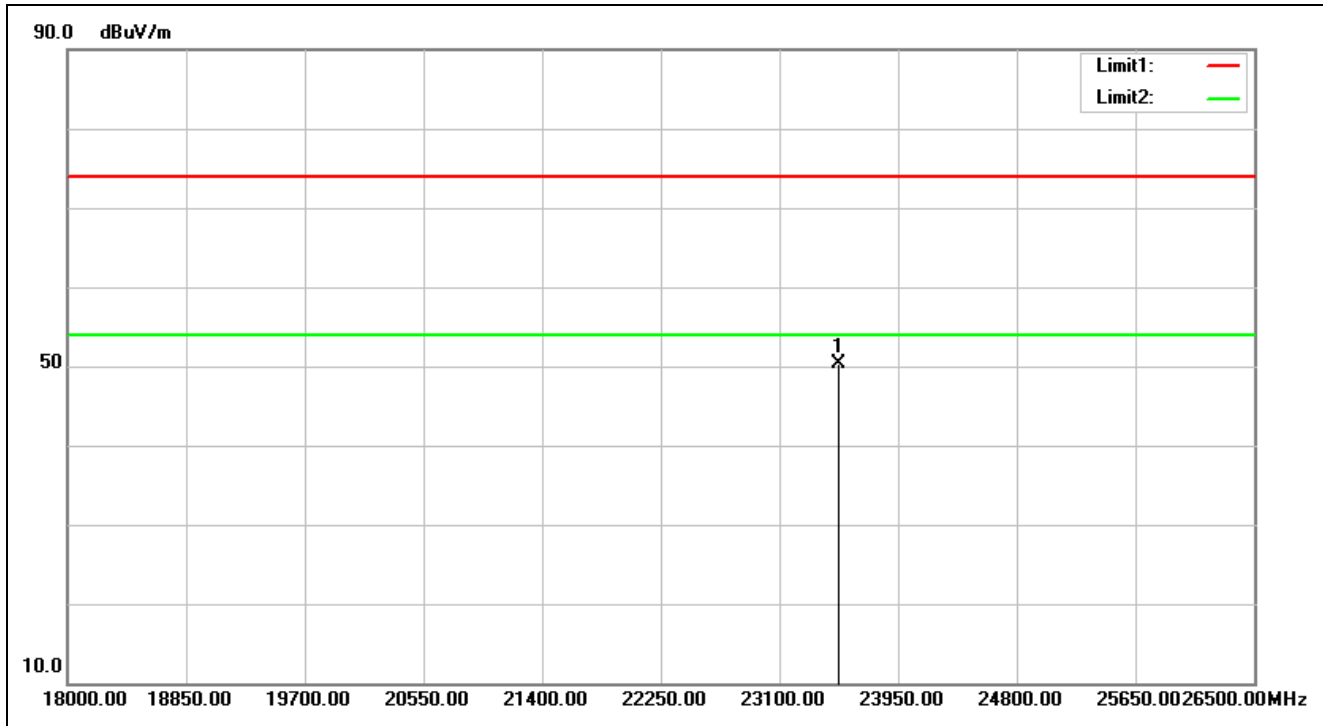
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:39:15
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2412-TX		
Remark:	Power Setting -9		
	RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21366.000	32.77	17.66	50.43	74.00	-23.57	peak			



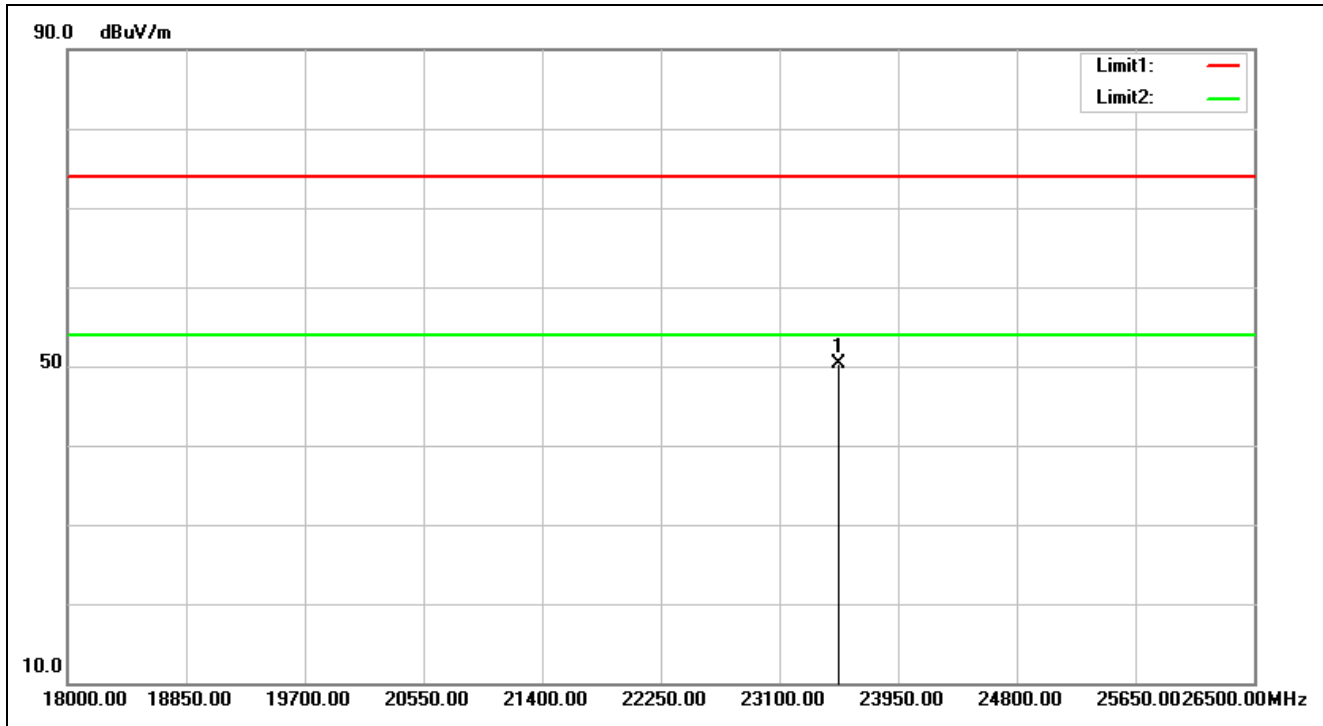
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:39:44
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9		
	RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21808.000	32.70	17.50	50.20	74.00	-23.80	peak			



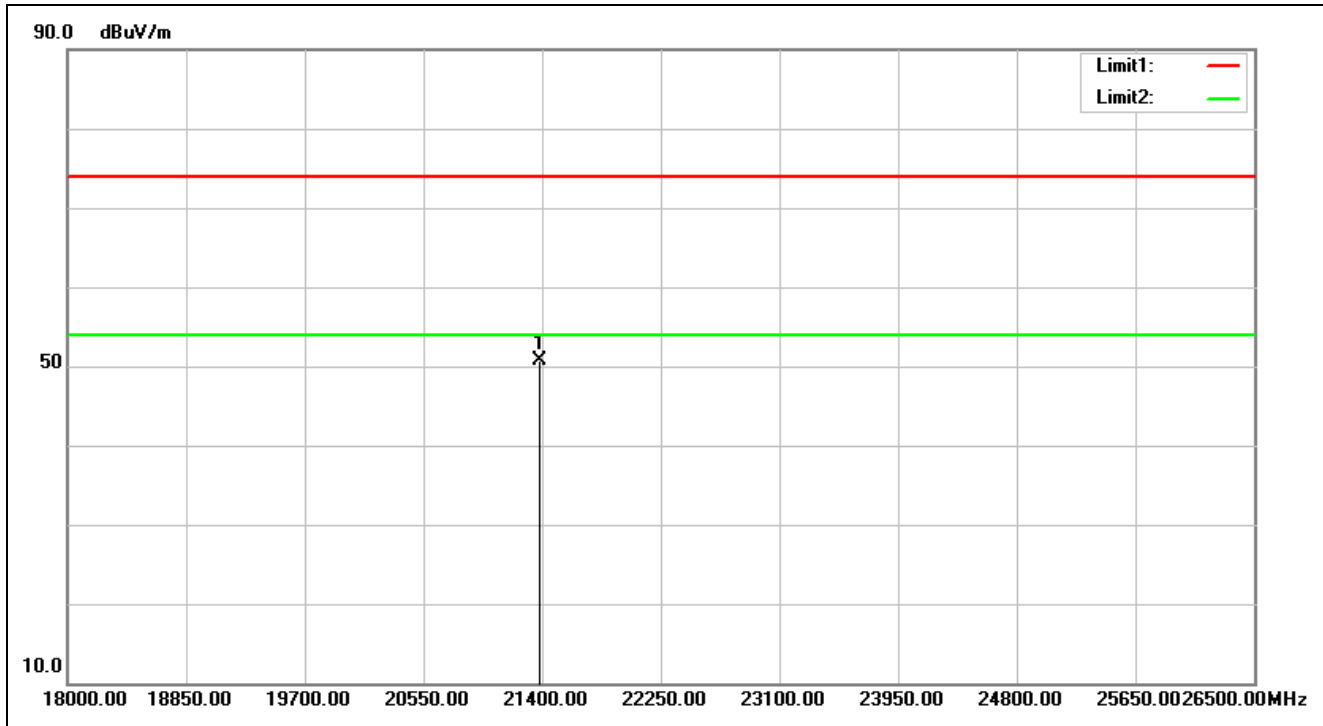
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:39:50
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9		
	RFPCA381013IMAB701-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	33.25	17.11	50.36	74.00	-23.64	peak			



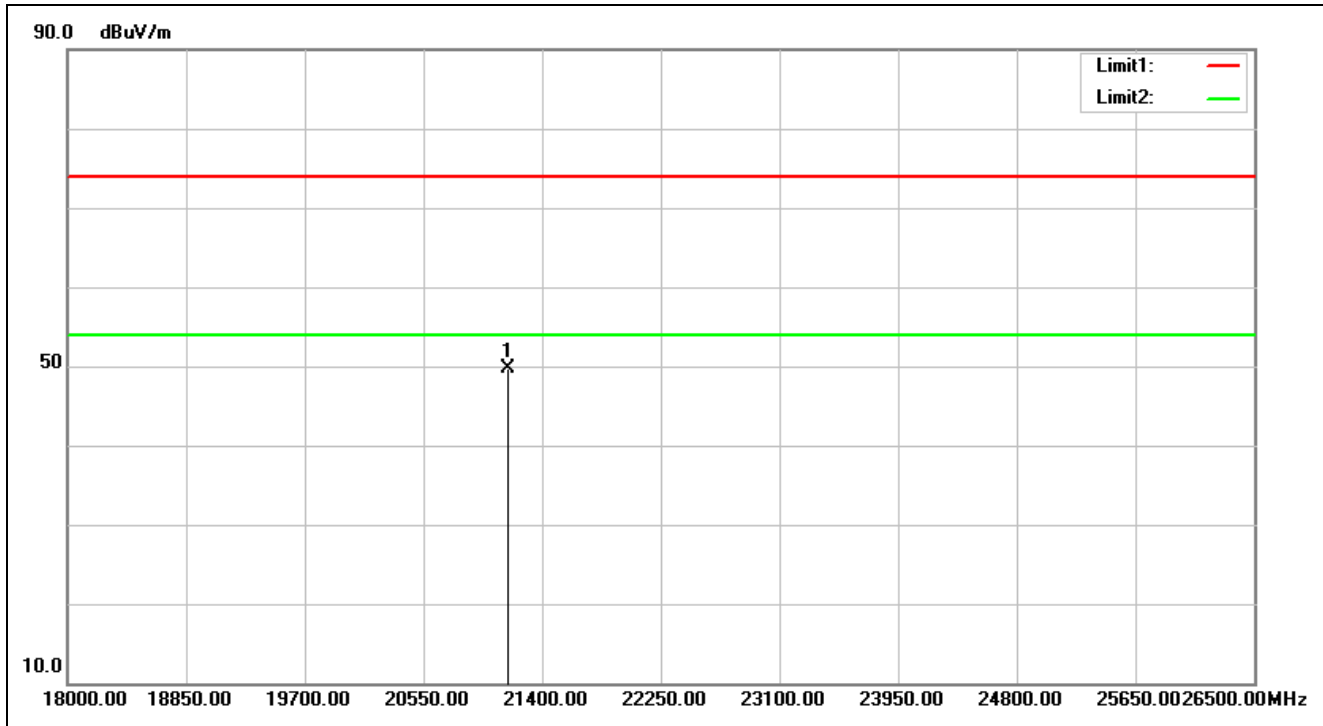
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:40:12
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	Power Setting -9		
	RFPCA381013IMAB701-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	33.25	17.09	50.34	74.00	-23.66	peak			



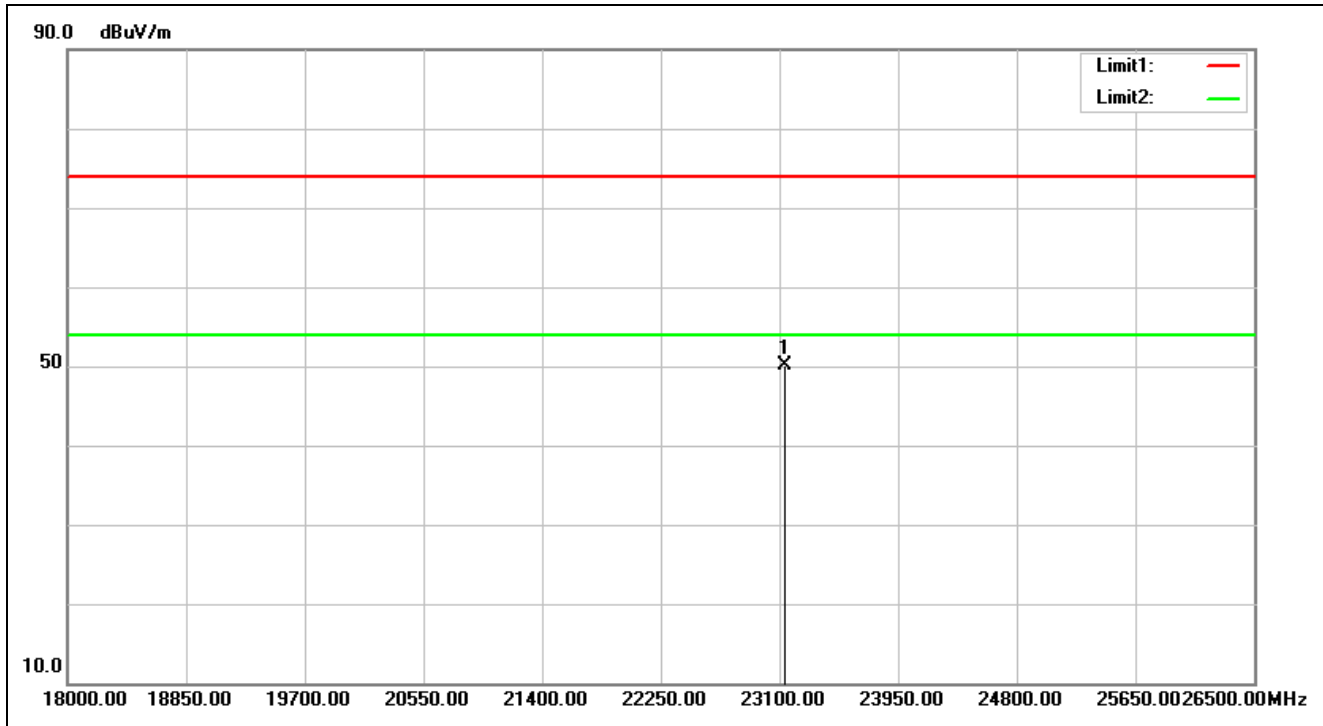
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:40:19
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2462-TX		
Remark:	Power Setting -9		
	RFPCA381013IMAB701-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	32.78	17.86	50.64	74.00	-23.36	peak			



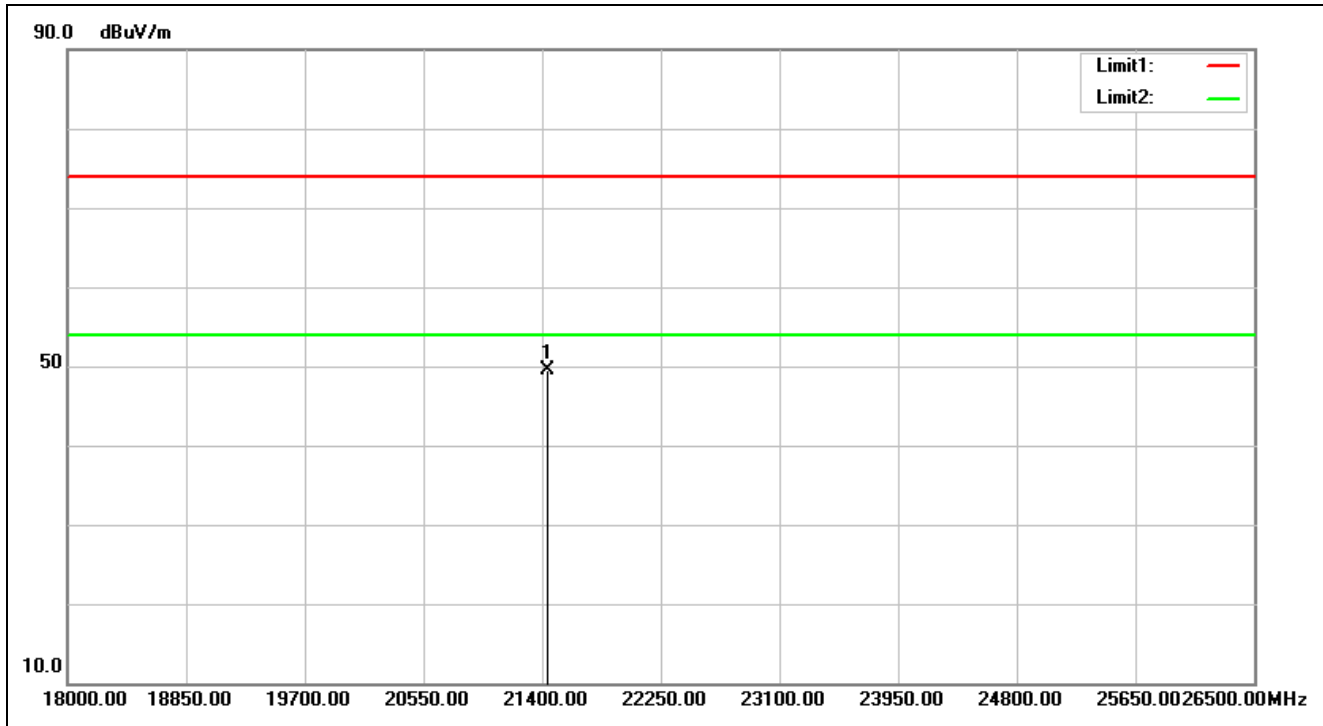
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:40:45
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	Power Setting -13		
	RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21153.500	32.59	17.10	49.69	74.00	-24.31	peak			



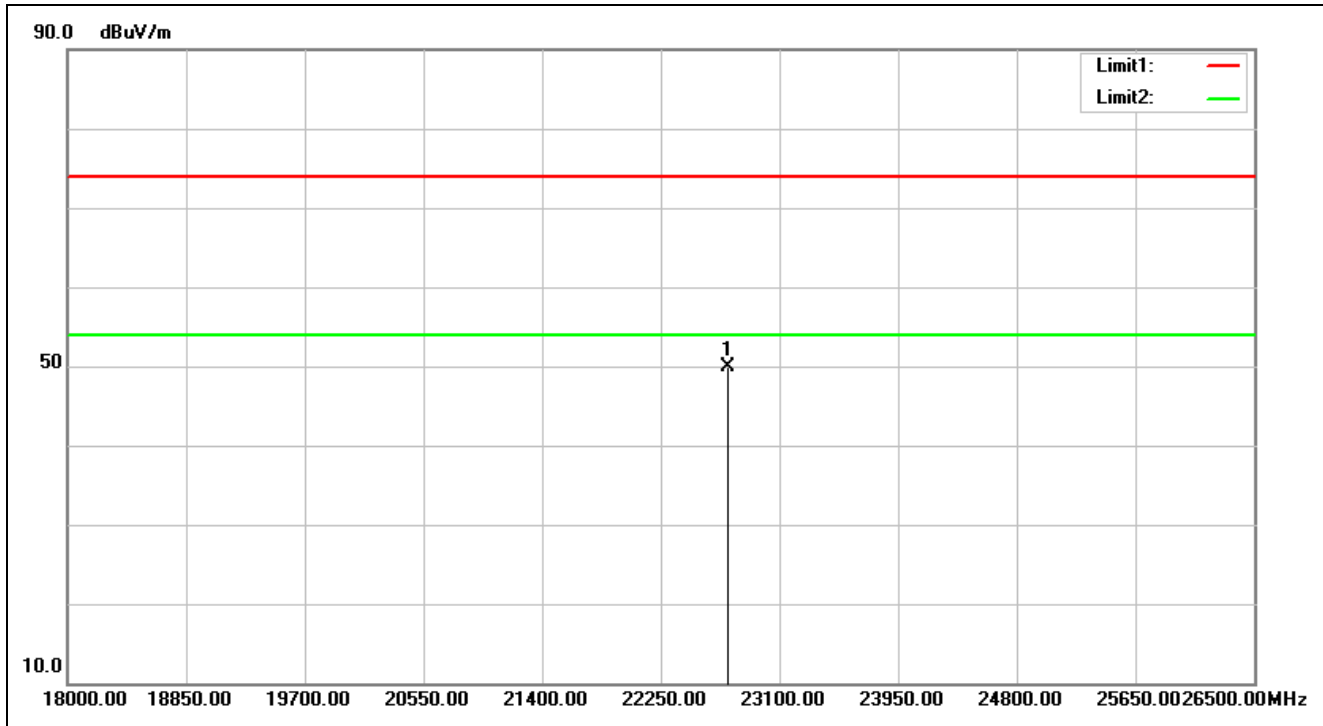
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:40:52
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2412-TX		
Remark:	Power Setting -13		
	RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23142.500	32.93	17.16	50.09	74.00	-23.91	peak			



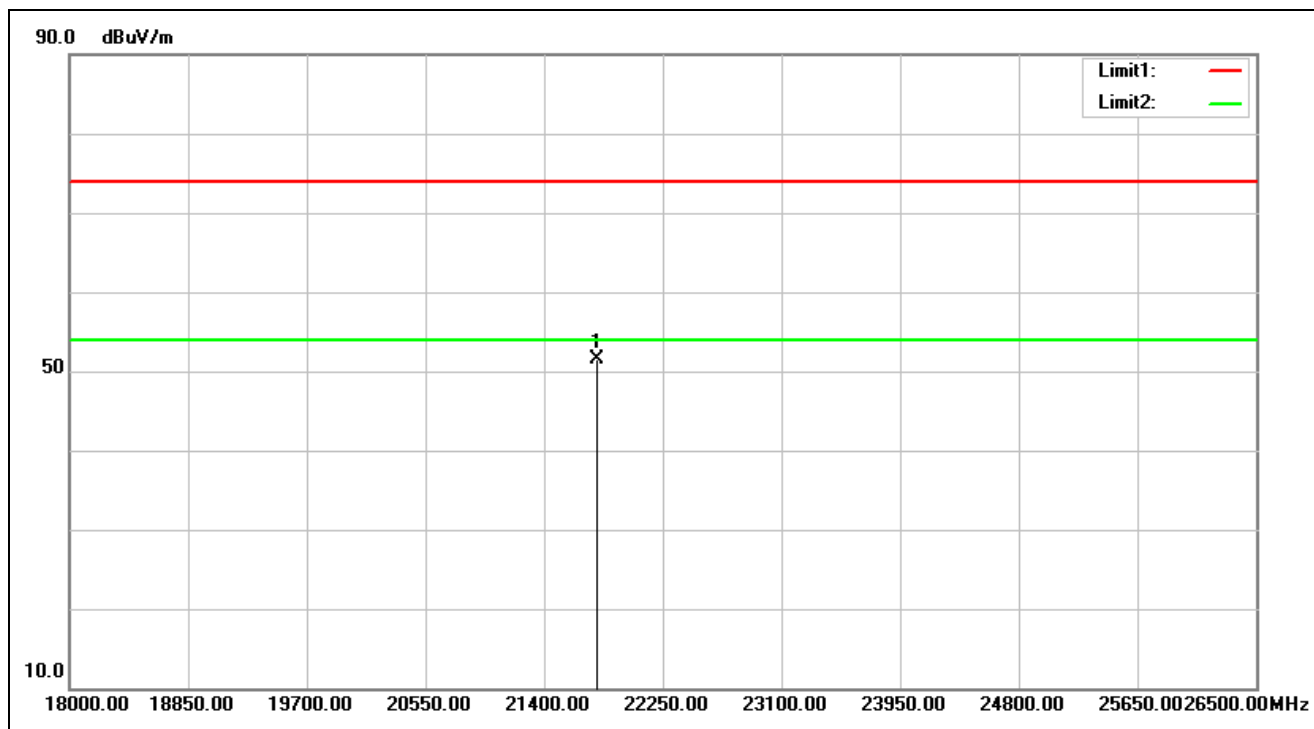
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:41:20
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4		
	RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21442.500	32.84	16.58	49.42	74.00	-24.58	peak			



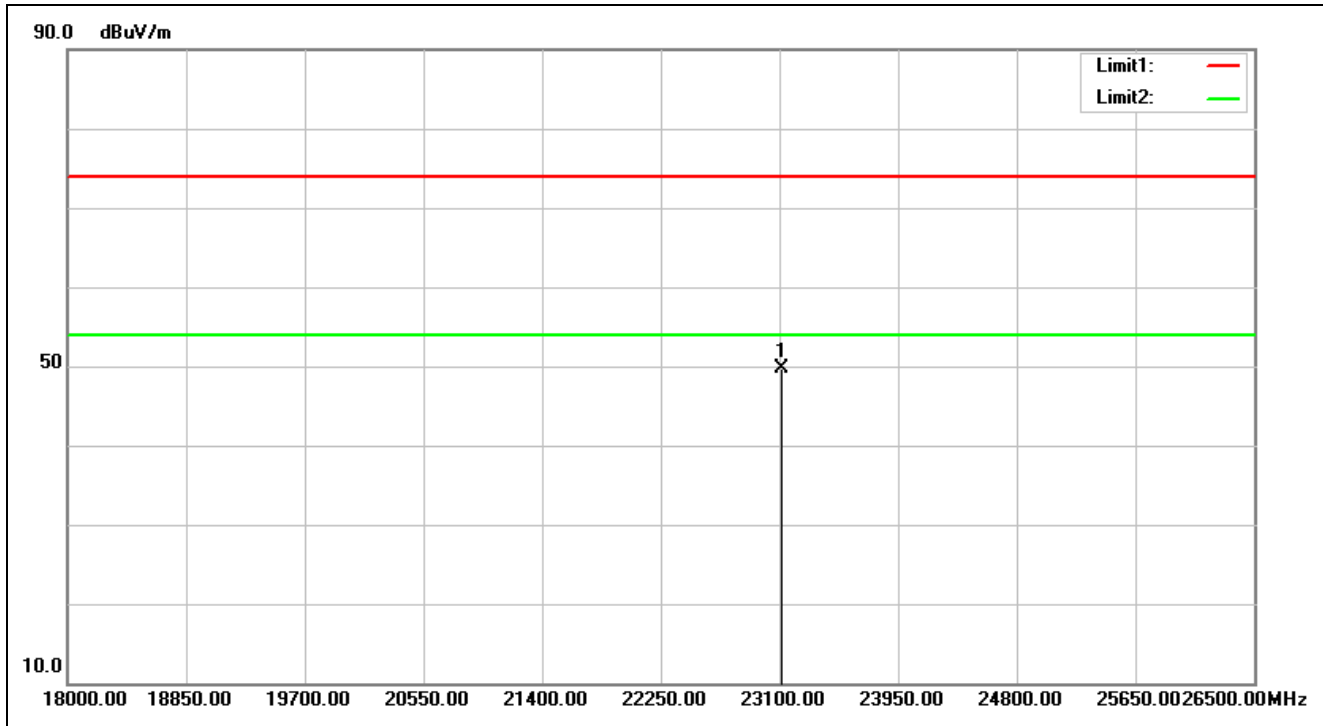
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:41:26
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%):	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4		
	RFPCA381013IMAB701-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	32.72	17.28	50.00	74.00	-24.00	peak			



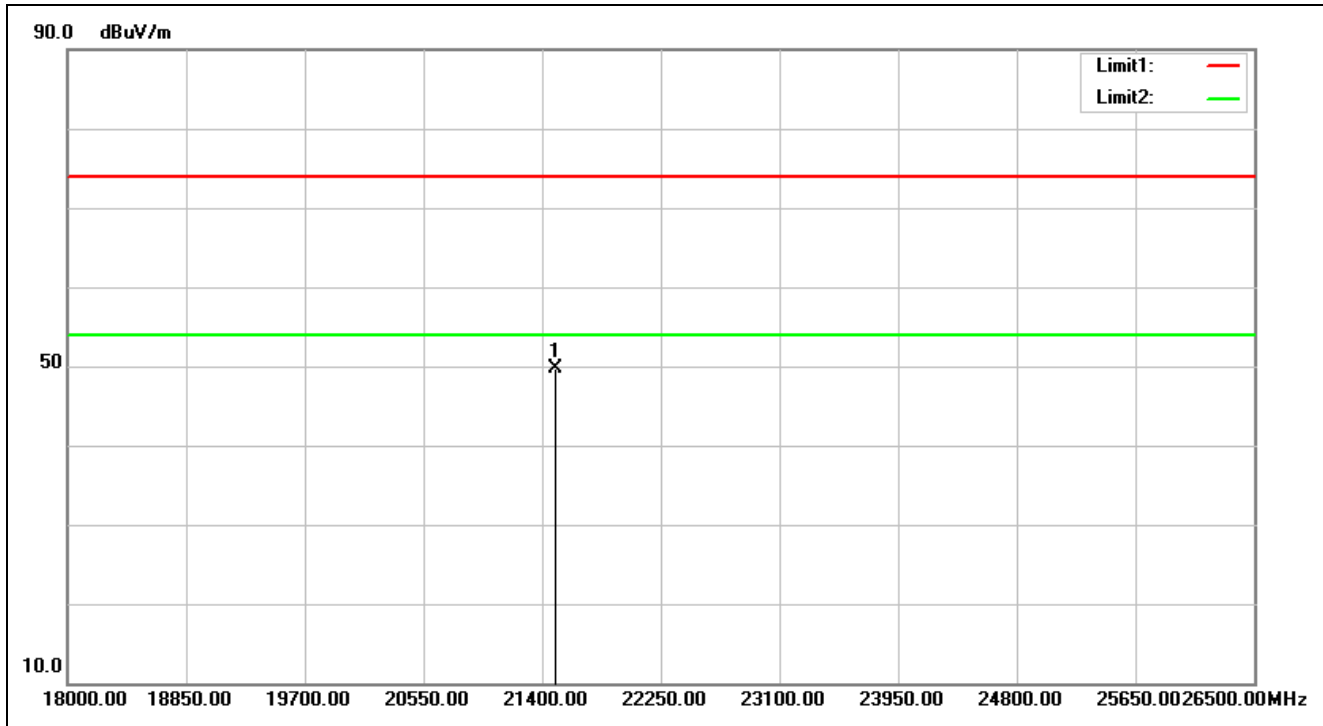
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:41:51
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%) :	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	Power Setting -13 RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21774.000	32.72	18.76	51.48	74.00	-22.52	peak			



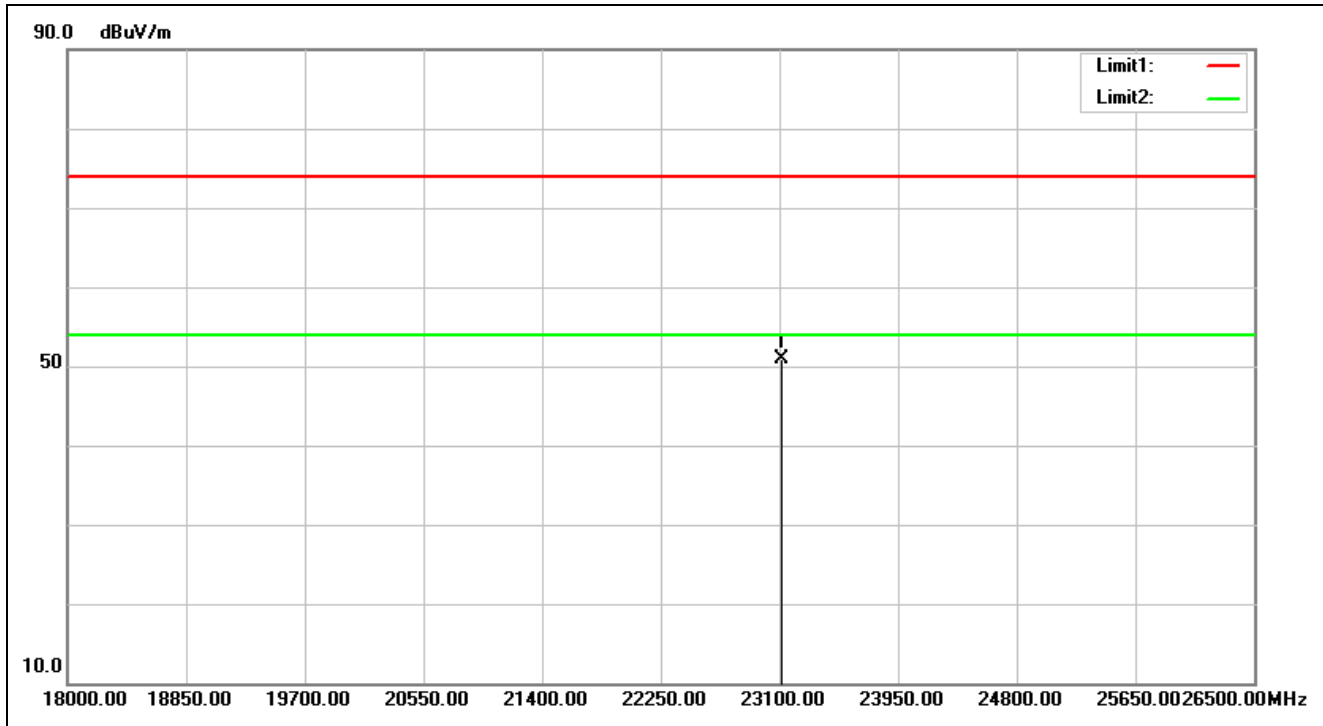
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:41:57
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2462-TX		
Remark:	Power Setting -13		
	RFPCA381013IMAB701-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	32.91	16.89	49.80	74.00	-24.20	peak			



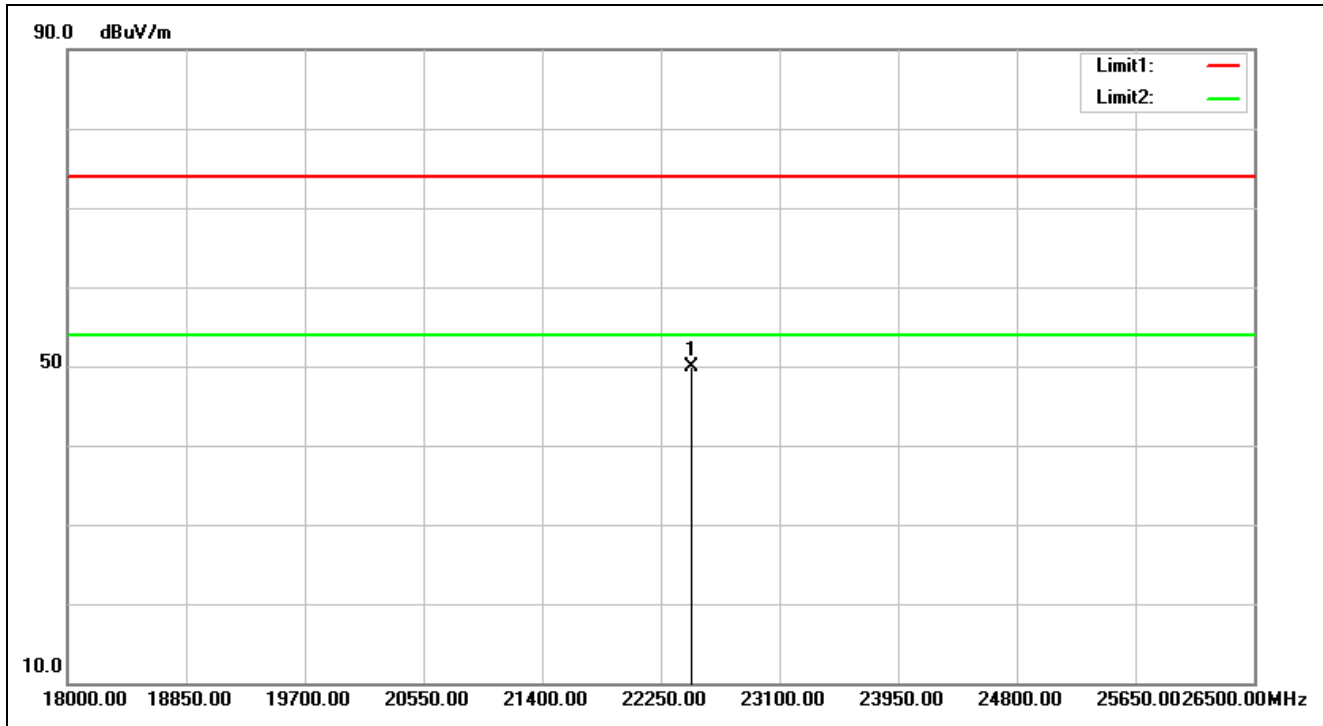
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:42:23
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	Power Setting -13		
	RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21493.500	32.89	16.76	49.65	74.00	-24.35	peak			



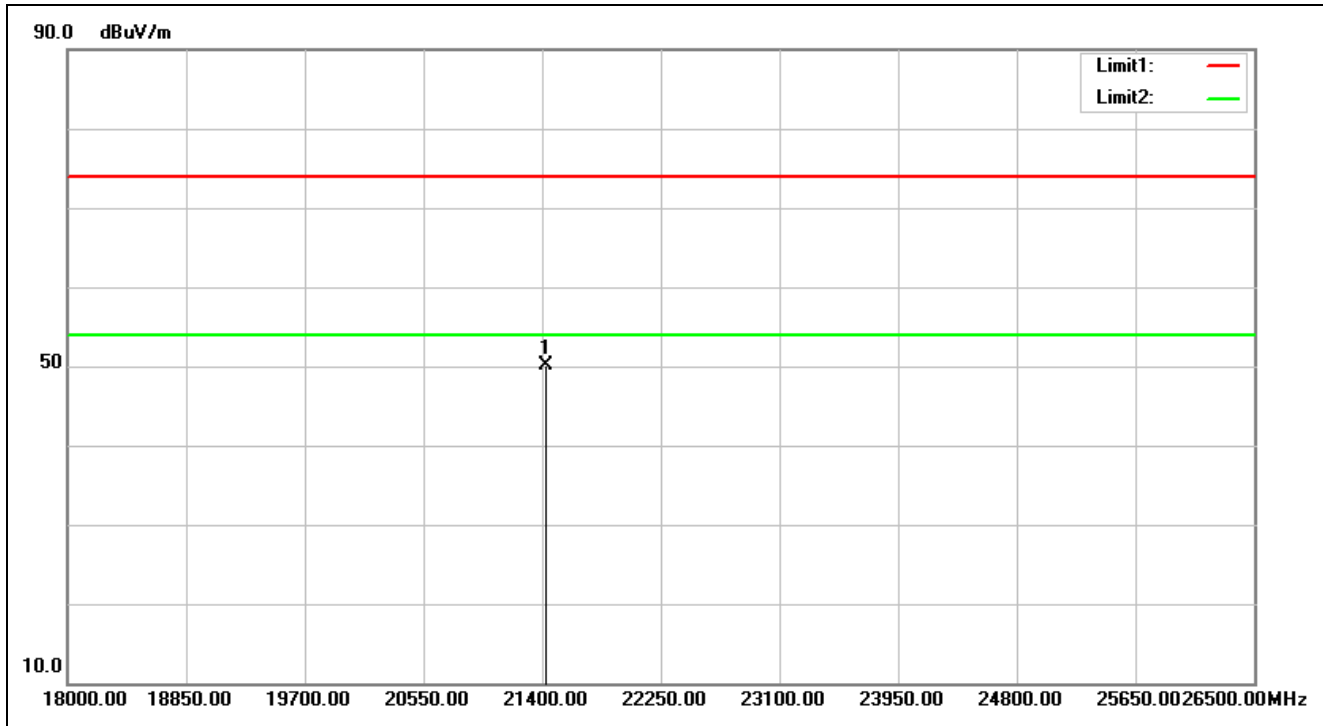
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:42:30
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2412-TX		
Remark:	Power Setting -13		
	RFPCA381013IMAB701-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	32.91	17.97	50.88	74.00	-23.12	peak			



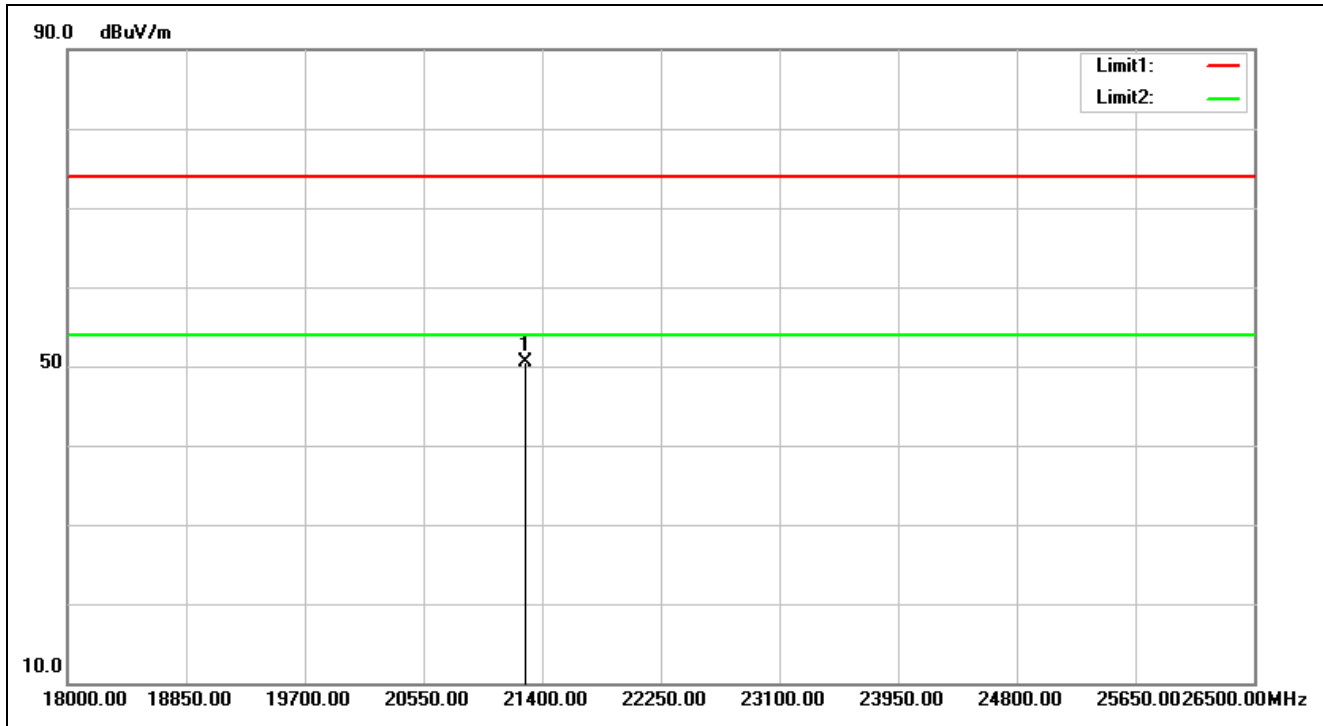
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:42:58
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%):	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	Power Setting -4		
	RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22471.000	32.64	17.35	49.99	74.00	-24.01	peak			



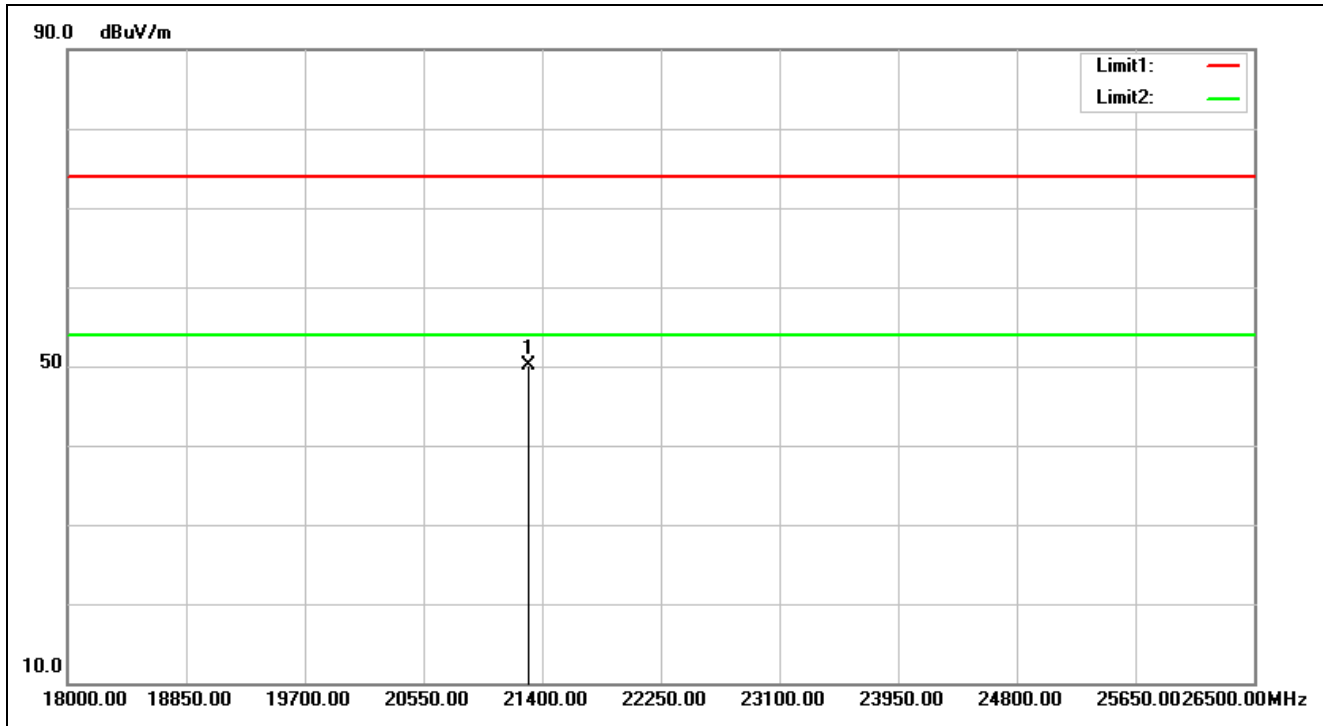
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:43:05
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2437-TX		
Remark:	Power Setting -4		
	RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21425.500	32.82	17.26	50.08	74.00	-23.92	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:43:34
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	Power Setting -13		
	RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21281.000	32.69	17.78	50.47	74.00	-23.53	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:43:41
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	N20-2462-TX		
Remark:	Power Setting -13		
	RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21298.000	32.71	17.41	50.12	74.00	-23.88	peak			

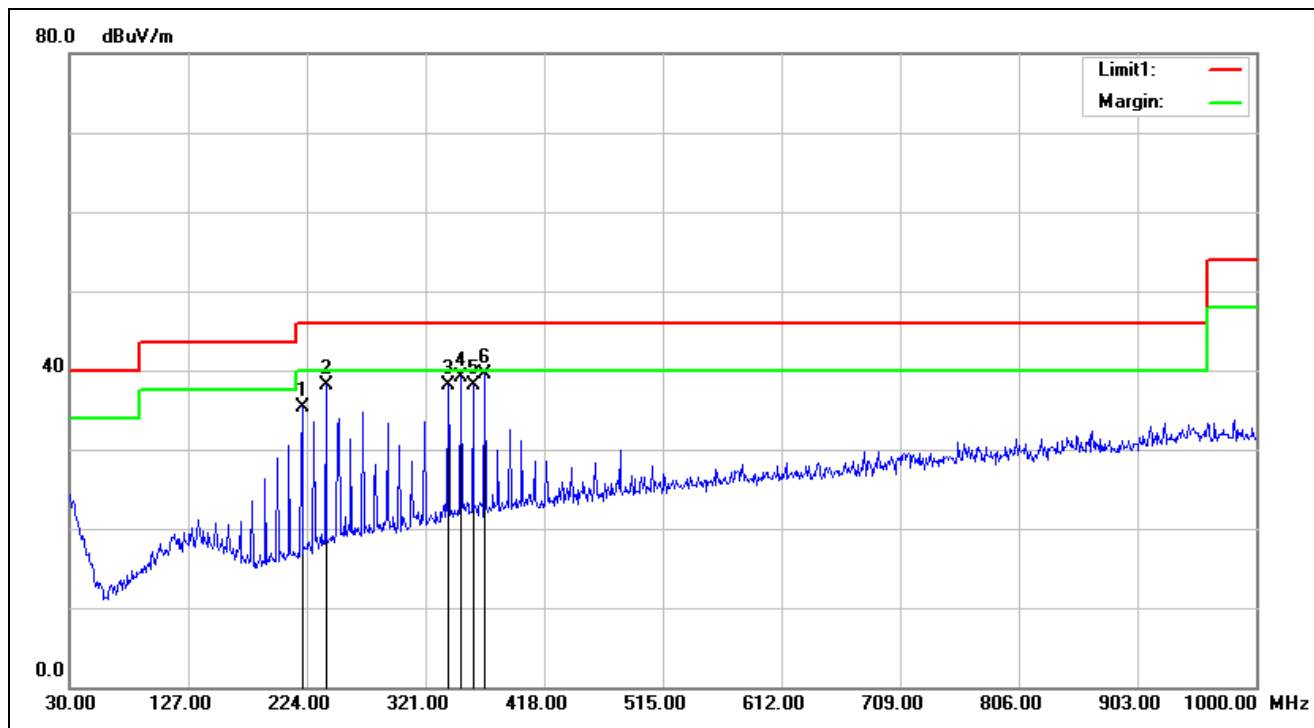
Spurious Emissions, TX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

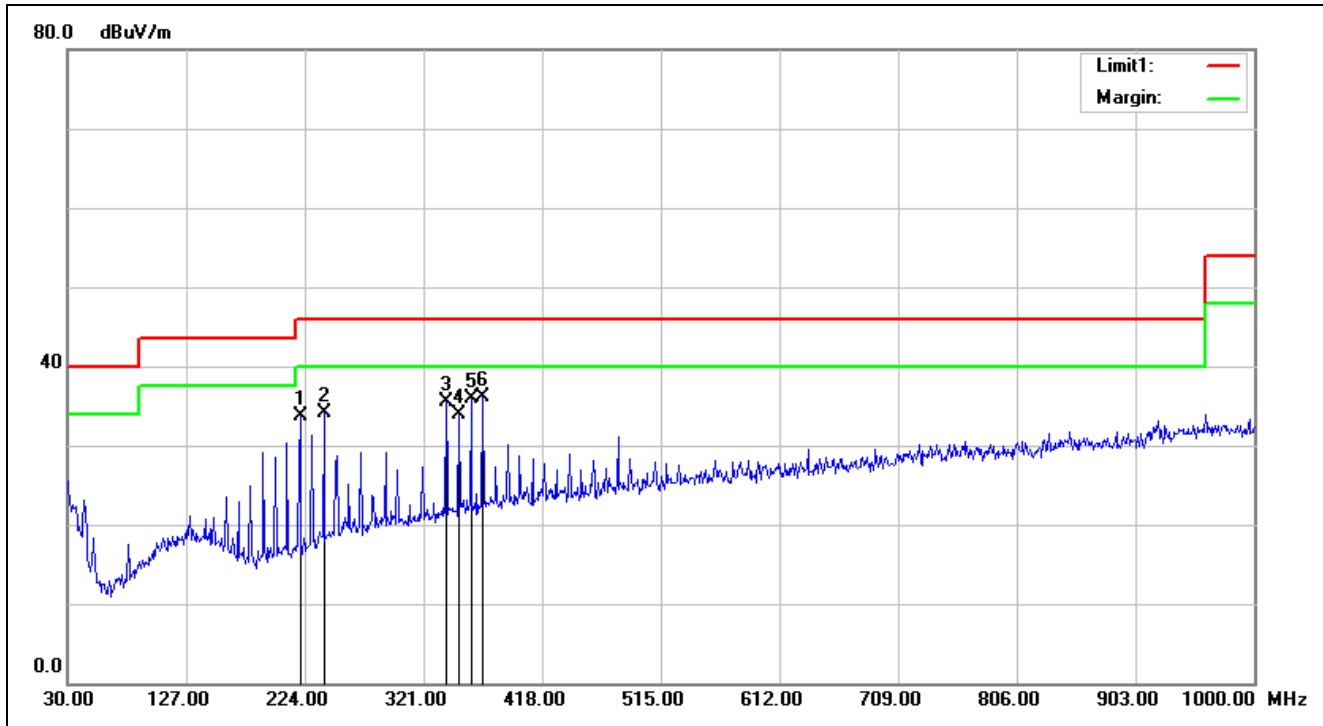
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 06:00:53
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9 RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	220.1200	-8.30	43.57	35.27	46.00	-10.73	QP	100	126	
2	239.5200	-6.85	45.02	38.17	46.00	-7.83	QP	100	248	
3	339.4300	-3.61	41.69	38.08	46.00	-7.92	QP	100	252	
4	350.1000	-3.34	42.45	39.11	46.00	-6.89	QP	100	261	
5	359.8000	-3.16	41.19	38.03	46.00	-7.97	QP	100	236	
6	369.5000	-2.98	42.43	39.45	46.00	-6.55	QP	100	227	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 06:01:51
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%) :	21(°C)/58%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9		
	RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	220.1200	-8.30	42.01	33.71	46.00	-12.29	QP	100	301	
2	239.5200	-6.85	41.05	34.20	46.00	-11.80	QP	100	288	
3	339.4300	-3.61	39.15	35.54	46.00	-10.46	QP	100	222	
4	350.1000	-3.34	37.33	33.99	46.00	-12.01	QP	100	226	
5	359.8000	-3.16	38.99	35.83	46.00	-10.17	QP	100	213	
6	369.5000	-2.98	39.11	36.13	46.00	-9.87	QP	100	217	

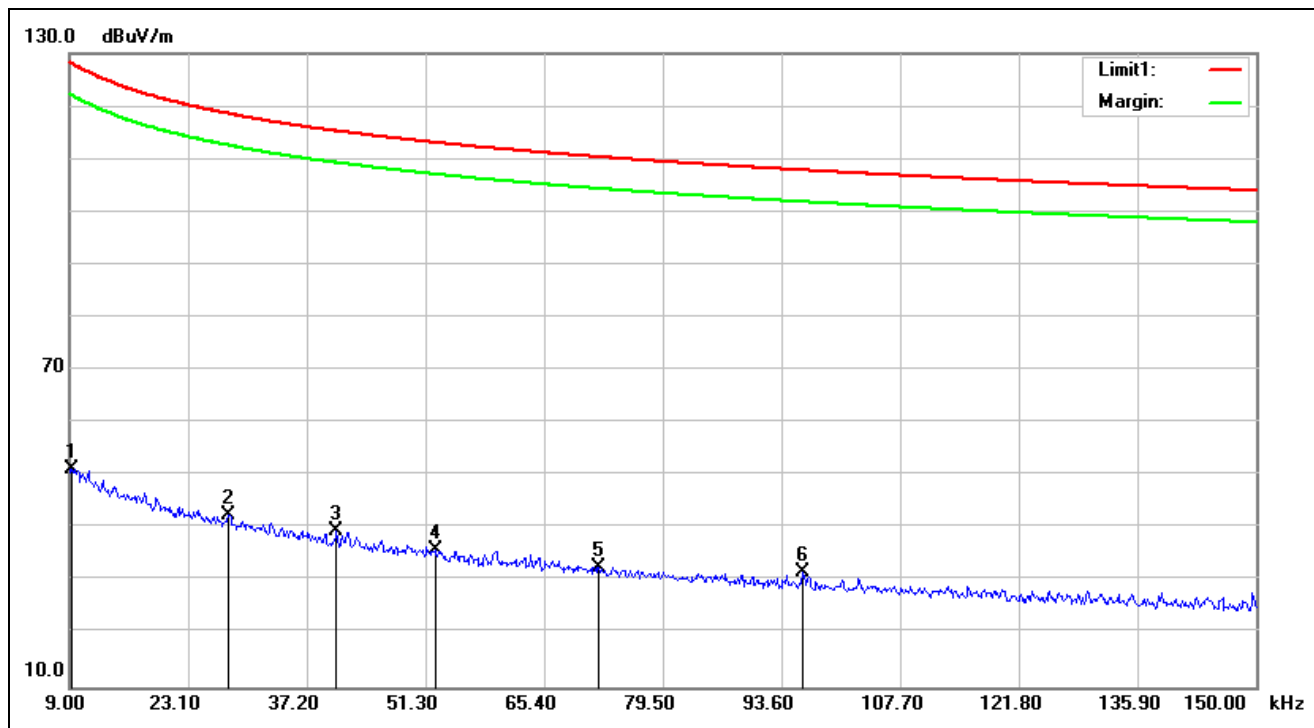
Spurious Emissions, TX Mode, 9k-30M



TUV Rheinland Taiwan Ltd.

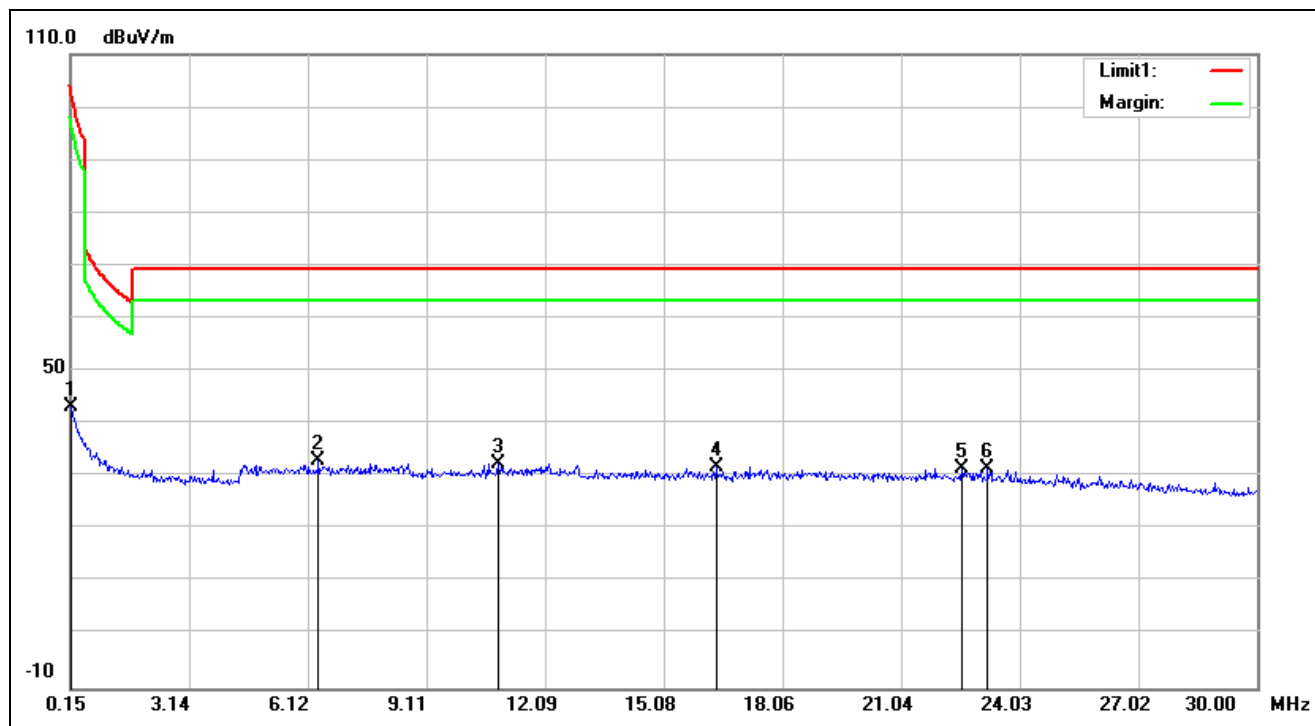
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/10 06:17:11
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9 RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0092	19.66	31.74	51.40	128.12	-76.72	QP	100	159	
2	0.0278	20.11	22.41	42.52	118.57	-76.05	QP	100	69	
3	0.0407	19.75	19.66	39.41	115.28	-75.87	QP	100	216	
4	0.0524	19.42	16.56	35.98	113.10	-77.12	QP	100	214	
5	0.0717	19.30	13.50	32.80	110.39	-77.59	QP	100	159	
6	0.0961	19.15	12.58	31.73	107.86	-76.13	QP	100	78	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/10 06:20:19
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-TX		
Remark:	Power Setting -9 RFPKA381013IMAB701-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	24.06	43.12	102.45	-59.33	QP	100	237	
2	6.3886	19.89	13.16	33.05	69.50	-36.45	QP	100	203	
3	10.9258	20.39	12.07	32.46	69.50	-37.04	QP	100	103	
4	16.3884	21.35	10.49	31.84	69.50	-37.66	QP	100	125	
5	22.5673	22.15	9.43	31.58	69.50	-37.92	QP	100	306	
6	23.2240	22.20	9.37	31.57	69.50	-37.93	QP	100	319	

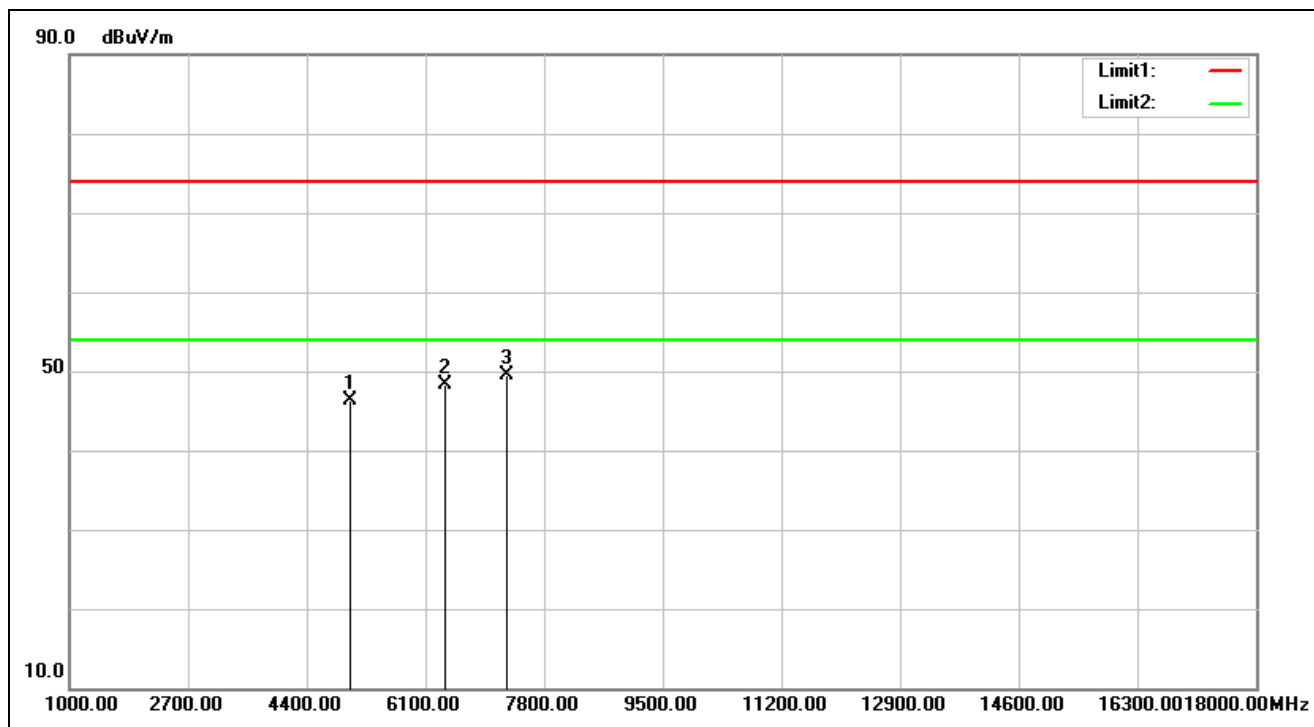
Spurious Emissions, RX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

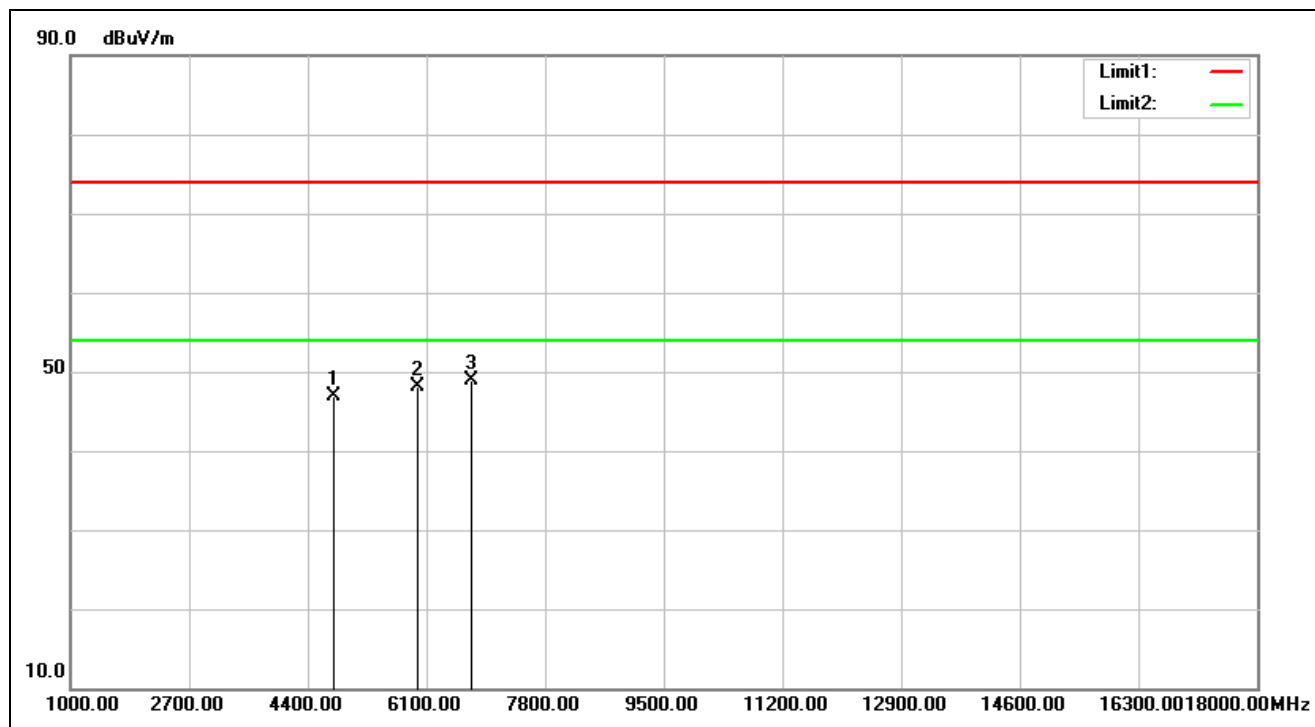
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:26:14
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPKA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	5029.000	-3.07	49.32	46.25	74.00	-27.75	peak	100	56	
2	6389.000	3.89	44.49	48.38	74.00	-25.62	peak	100	40	
3	7273.000	4.39	45.12	49.51	74.00	-24.49	peak	100	191	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:27:11
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4774.000	-3.58	50.46	46.88	74.00	-27.12	peak	100	28	
2	5964.000	2.12	45.90	48.02	74.00	-25.98	peak	100	197	
3	6746.000	4.01	44.90	48.91	74.00	-25.09	peak	100	250	

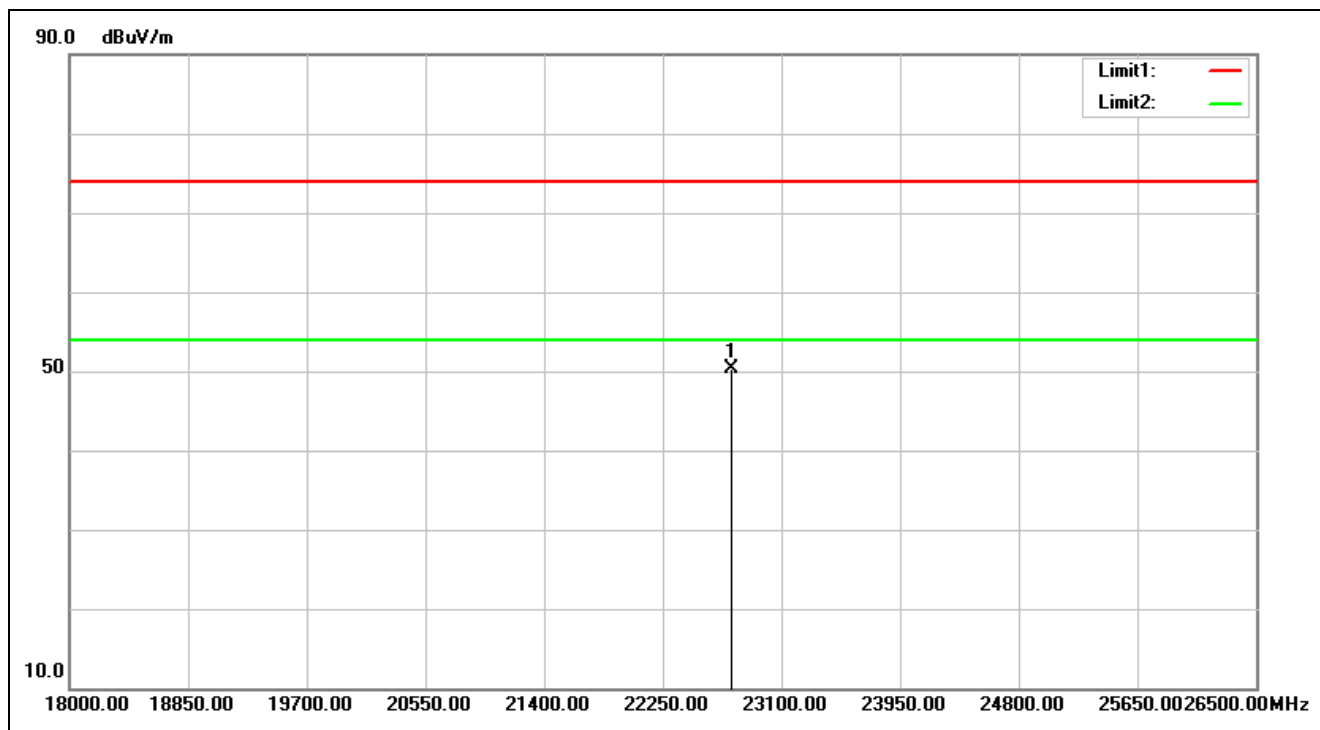
Spurious Emissions, RX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

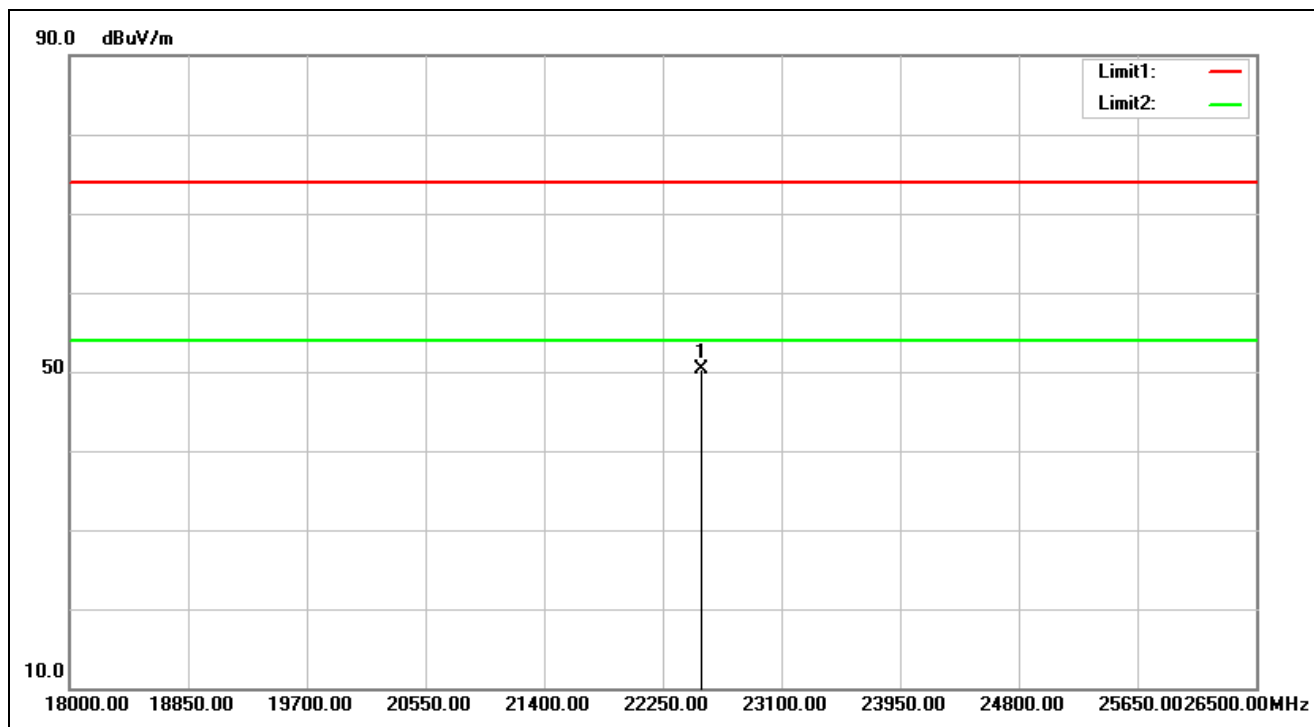
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 04:44:20
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22743.000	32.72	17.63	50.35	74.00	-23.65	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 04:44:26
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22522.000	32.64	17.72	50.36	74.00	-23.64	peak			

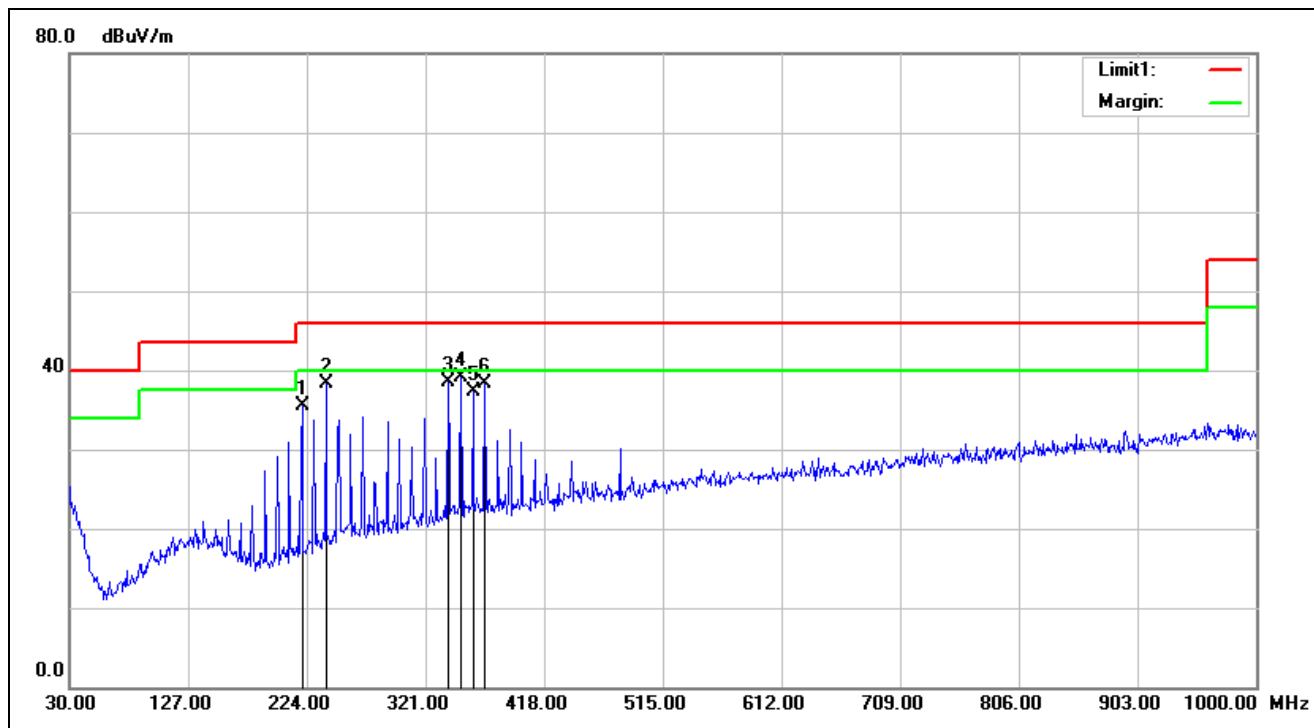
Spurious Emissions, RX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

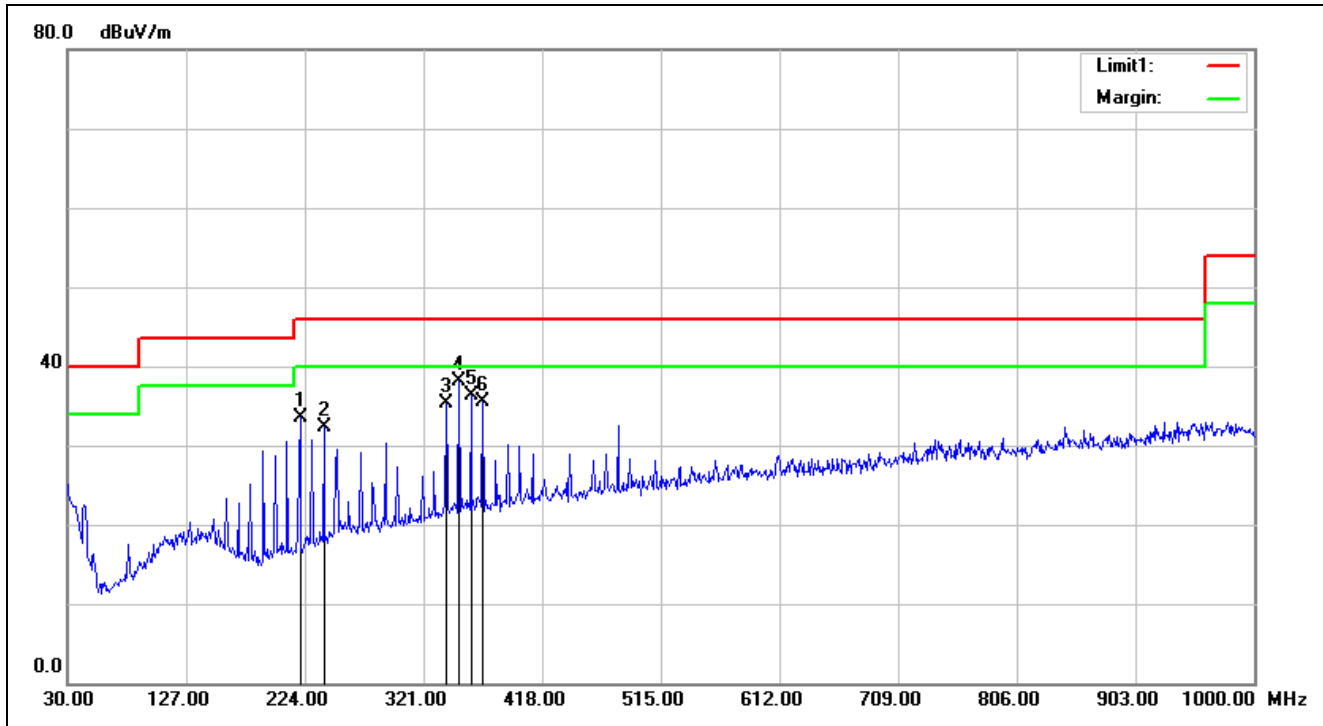
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/10 06:03:28
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPCA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	220.1200	-8.30	43.85	35.55	46.00	-10.45	QP	100	257	
2	239.5200	-6.85	45.13	38.28	46.00	-7.72	QP	100	237	
3	339.4300	-3.61	42.04	38.43	46.00	-7.57	QP	100	244	
4	350.1000	-3.34	42.50	39.16	46.00	-6.84	QP	100	234	
5	359.8000	-3.16	40.53	37.37	46.00	-8.63	QP	100	234	
6	369.5000	-2.98	41.33	38.35	46.00	-7.65	QP	100	219	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/10 06:04:26
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%) :	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPKA381013IMAB701-ANT		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	220.1200	-8.30	41.88	33.58	46.00	-12.42	QP	100	310	
2	239.5200	-6.85	39.11	32.26	46.00	-13.74	QP	100	328	
3	339.4300	-3.61	38.85	35.24	46.00	-10.76	QP	100	213	
4	350.1000	-3.35	41.52	38.17	46.00	-7.83	QP	100	204	
5	359.8000	-3.17	39.52	36.35	46.00	-9.65	QP	100	213	
6	369.5000	-2.98	38.58	35.60	46.00	-10.40	QP	100	191	

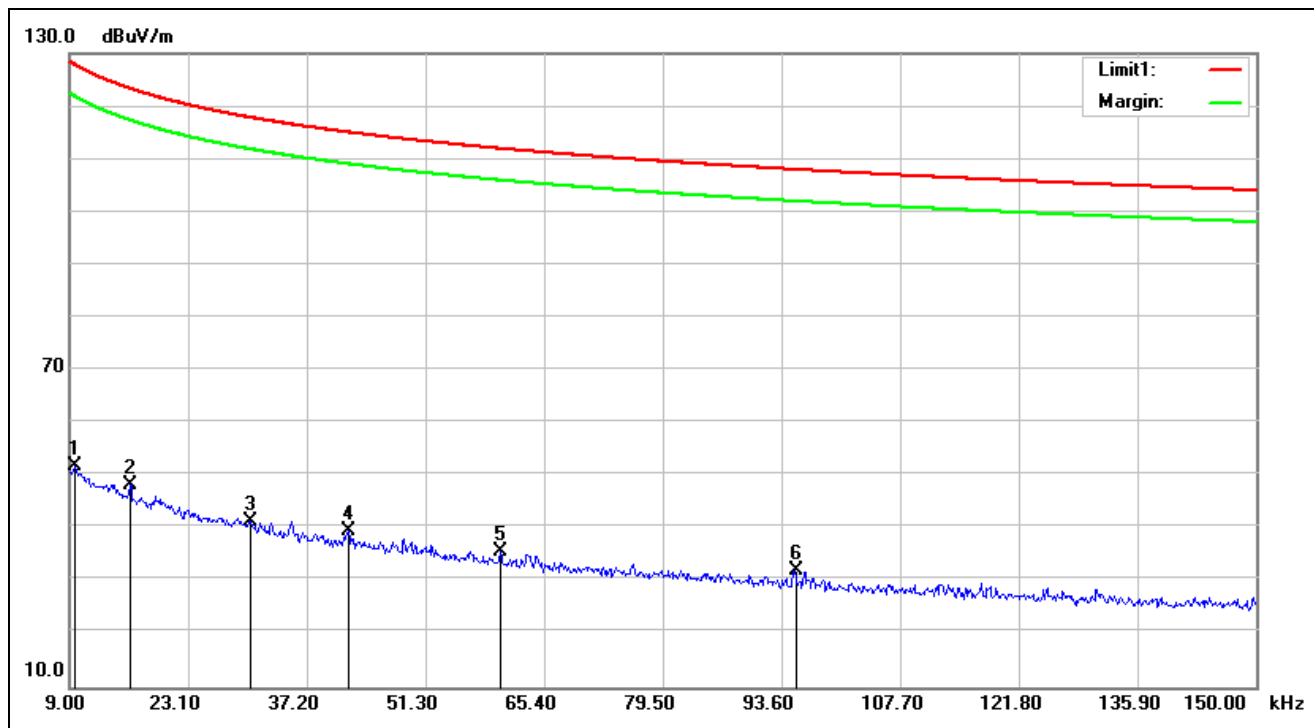
Spurious Emissions, RX Mode, 9K-30M



TUV Rheinland Taiwan Ltd.

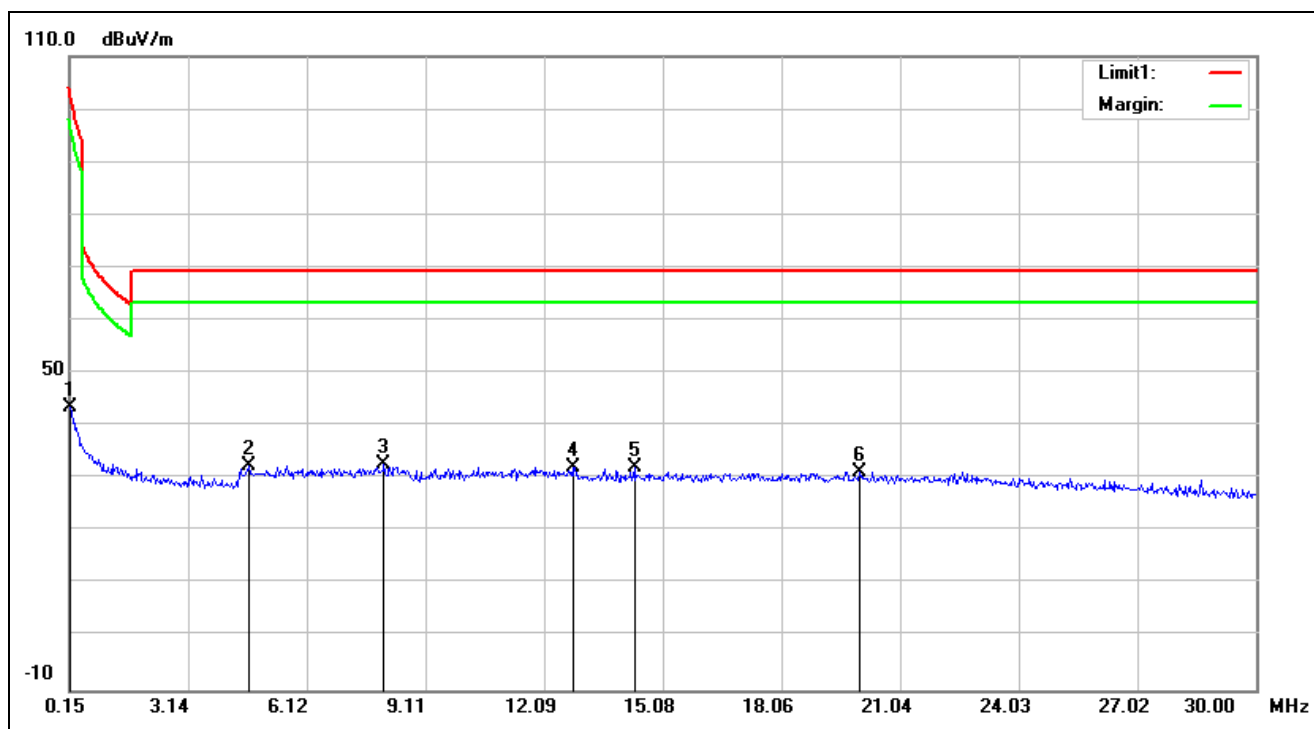
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/10 06:18:09
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPCA381013IMAB701-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	19.78	32.00	51.78	127.84	-76.06	QP	100	177	
2	0.0162	19.99	28.37	48.36	123.31	-74.95	QP	100	12	
3	0.0306	20.11	21.26	41.37	117.81	-76.44	QP	100	237	
4	0.0421	19.71	19.78	39.49	115.05	-75.56	QP	100	258	
5	0.0602	19.37	16.30	35.67	111.95	-76.28	QP	100	312	
6	0.0952	19.16	12.91	32.07	107.98	-75.91	QP	100	108	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/10 06:21:16
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/58%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	B-2437-RX		
Remark:	RFPKA381013IMAB701-ANT		

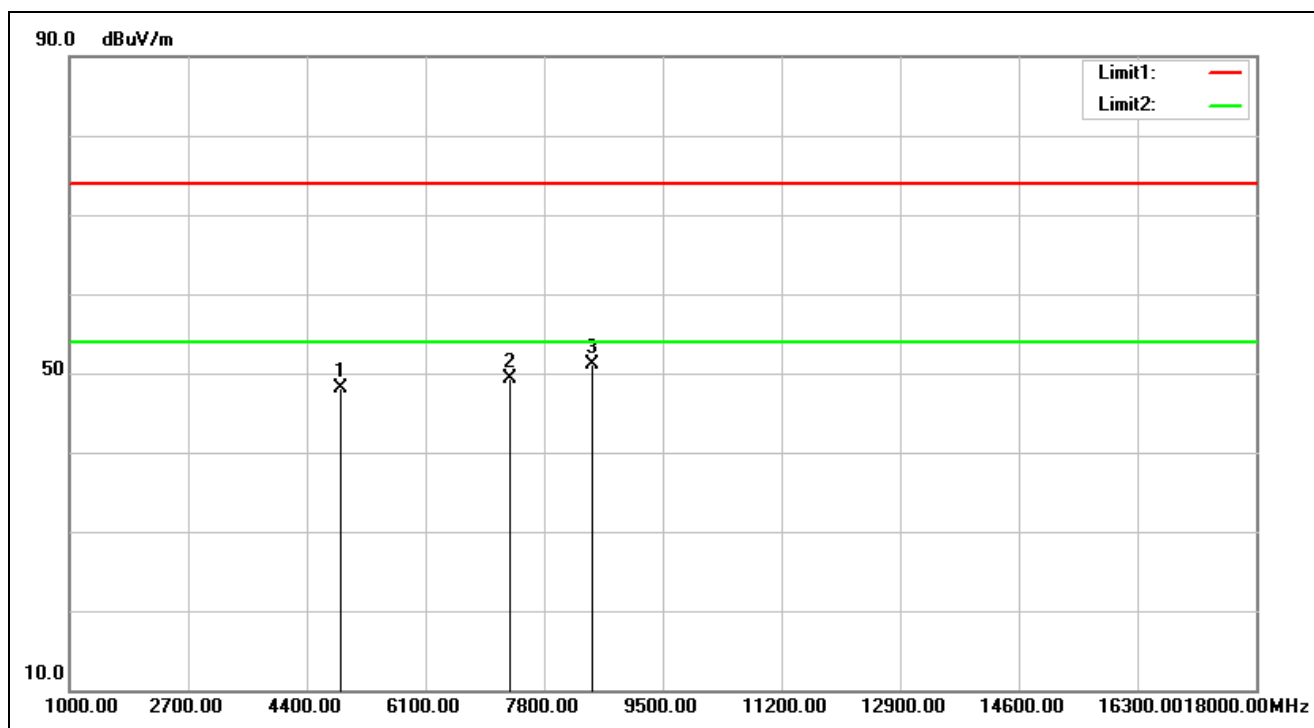
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1799	19.06	24.39	43.45	102.45	-59.00	QP	100	128	
2	4.6574	19.54	12.99	32.53	69.50	-36.97	QP	100	325	
3	8.0602	20.04	12.58	32.62	69.50	-36.88	QP	100	181	
4	12.8063	20.72	11.57	32.29	69.50	-37.21	QP	100	344	
5	14.3586	20.99	11.10	32.09	69.50	-37.41	QP	100	2	
6	20.0301	21.99	9.34	31.33	69.50	-38.17	QP	100	128	

Spurious Emissions, TX Mode, 1-18G

TUV Rheinland Taiwan Ltd.

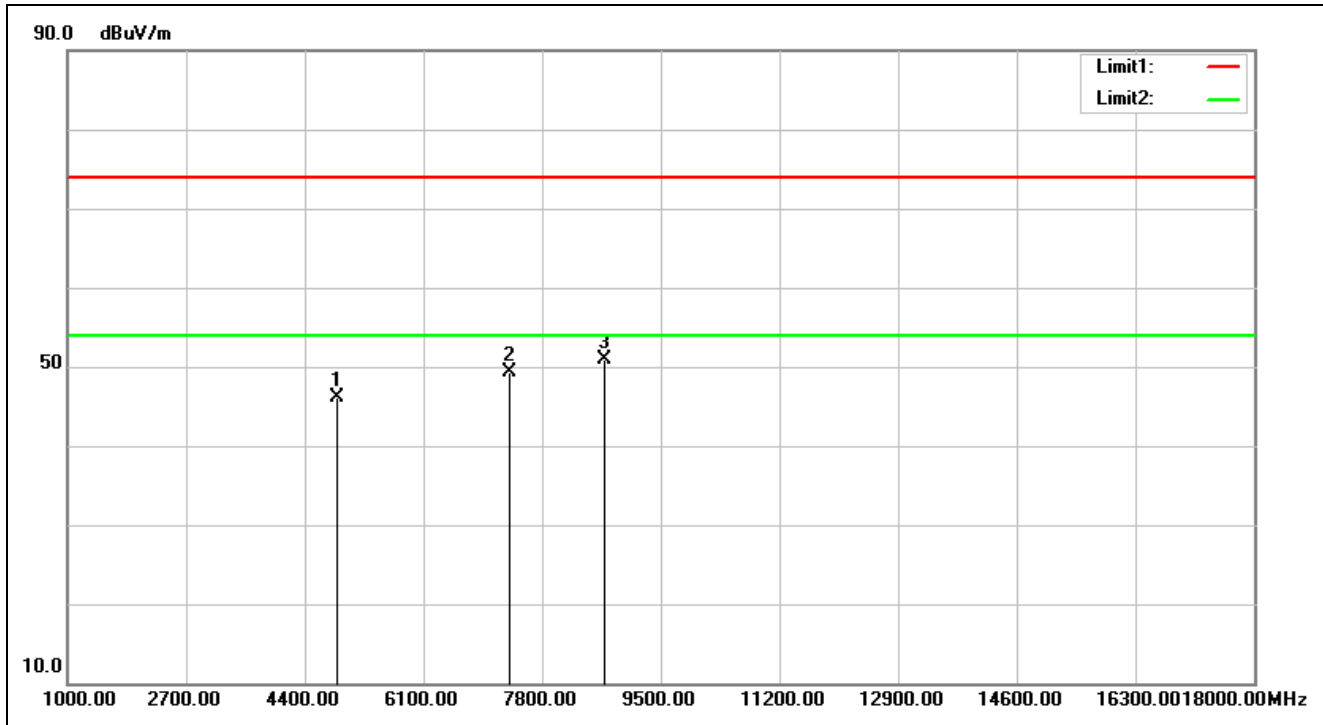
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/21 00:43:15
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4 W3525B039 PCB-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	50.54	48.01	74.00	-25.99	peak		0	
2	7311.000	5.52	43.83	49.35	74.00	-24.65	peak		0	
3	8497.000	6.38	44.73	51.11	74.00	-22.89	peak	100	313	

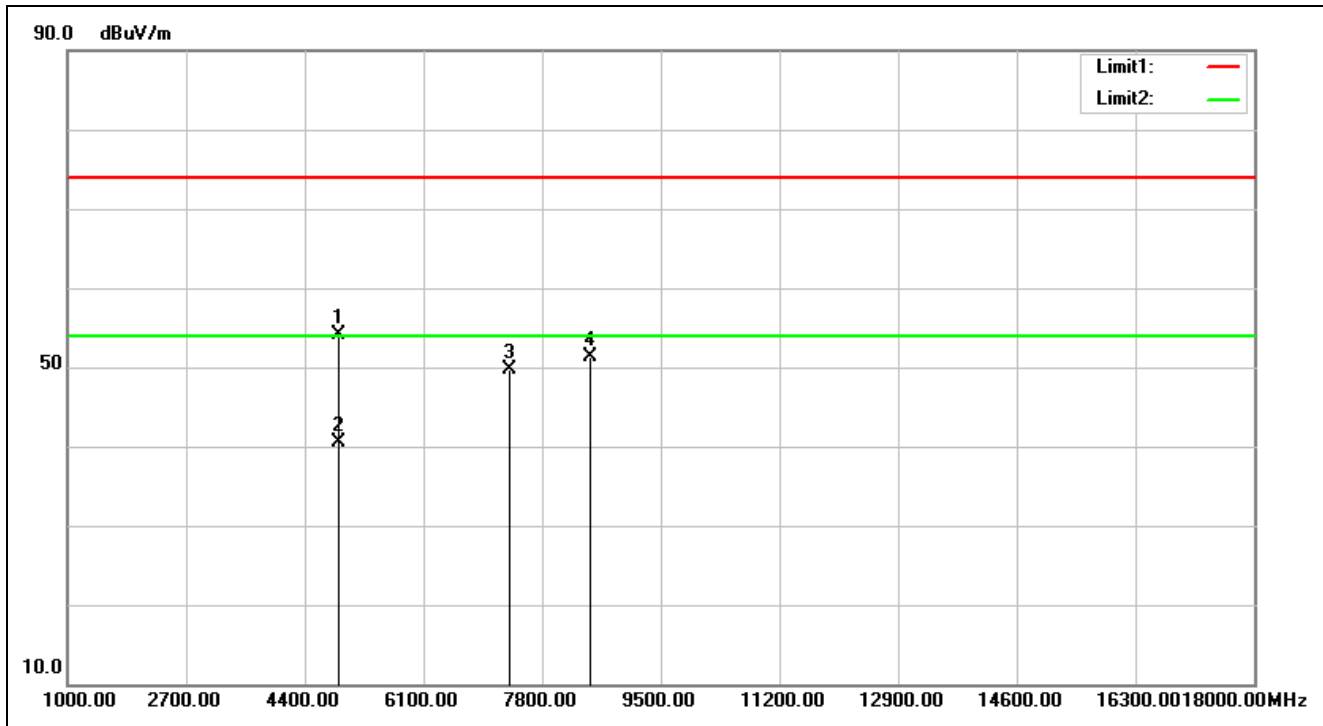


Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/21 00:44:07
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60 %
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4 W3525B039 PCB-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	48.62	46.09	74.00	-27.91	peak			
2	7311.000	5.52	43.81	49.33	74.00	-24.67	peak			
3	8684.000	6.40	44.56	50.96	74.00	-23.04	peak	100	359	

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.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/21 00:34:58
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4 RN-SMA-4 Dipole-ANT		

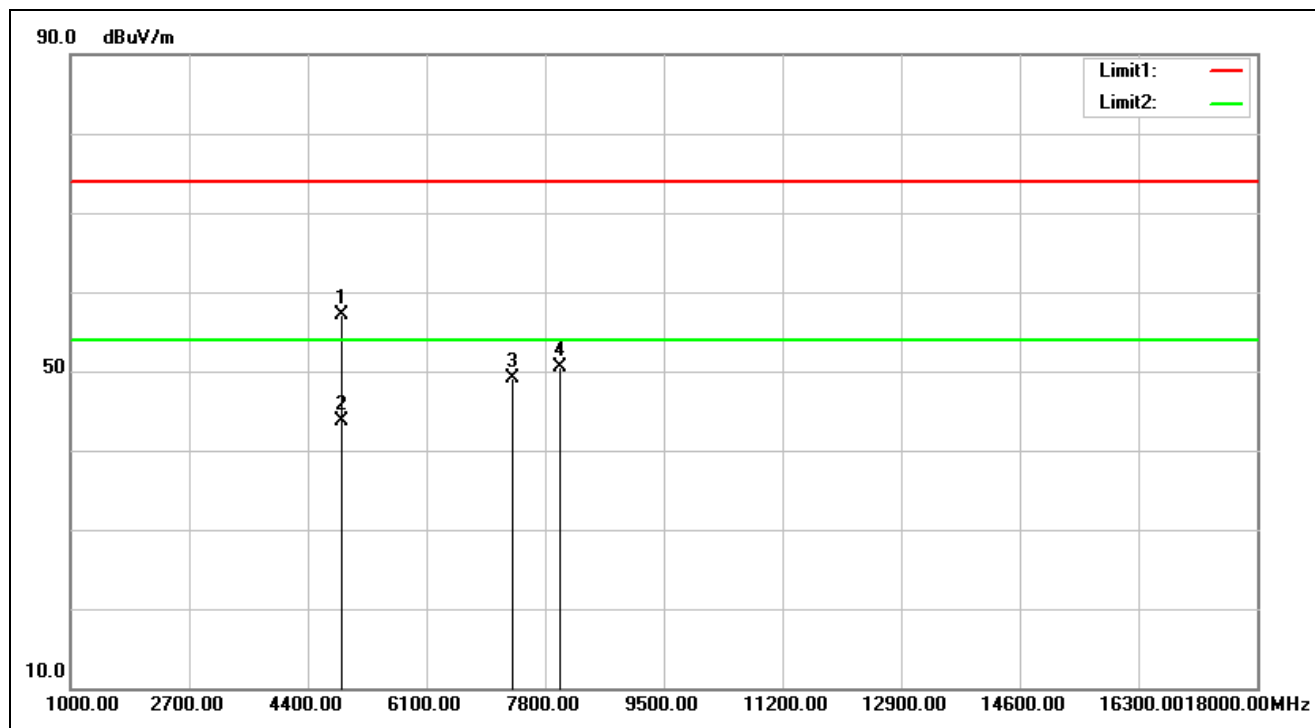
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	56.58	54.05	74.00	-19.95	peak	100	217	
2	4874.000	-2.53	43.10	40.57	54.00	-13.43	AVG	100	217	
3	7311.000	5.52	44.22	49.74	74.00	-24.26	peak		0	
4	8480.000	6.35	44.96	51.31	74.00	-22.69	peak	100	23	

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.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/21 00:51:21
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4 RFDPA870920IMLB301 dual band Dipole-ANT		

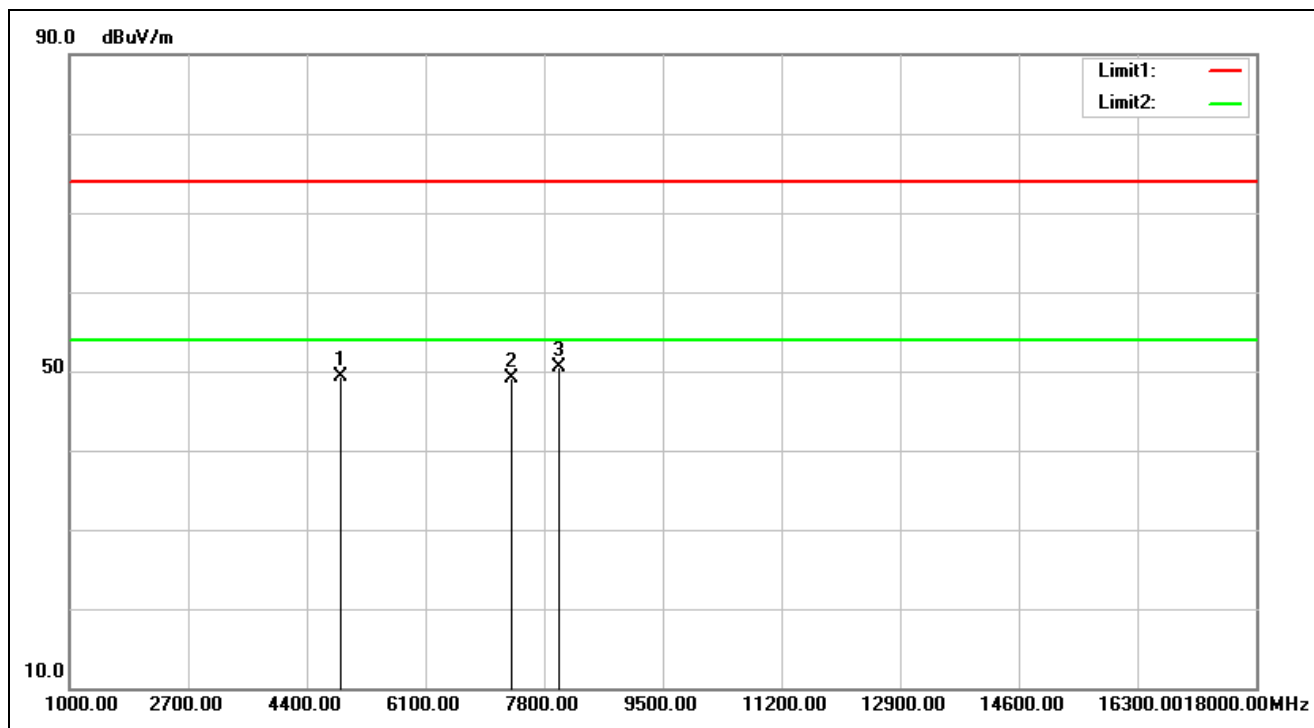
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	59.68	57.15	74.00	-16.85	peak	100	320	
2	4874.000	-2.53	46.26	43.73	54.00	-10.27	AVG	100	320	
3	7311.000	5.52	43.63	49.15	74.00	-24.85	peak		0	
4	8004.000	5.82	44.70	50.52	74.00	-23.48	peak	100	81	

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

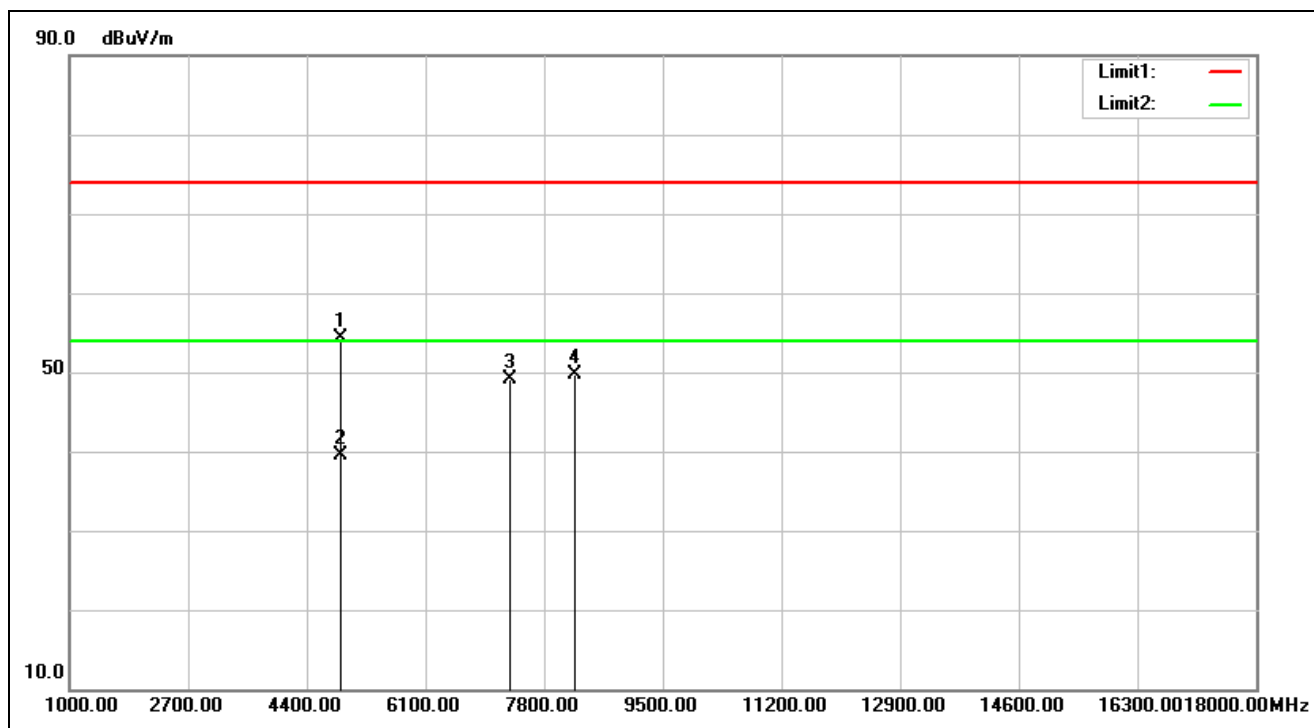


Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/21 00:58:04
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4 RFA-02-3-C5H1 Dipole-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	51.93	49.40	74.00	-24.60	peak	100	340	
2	7311.000	5.52	43.68	49.20	74.00	-24.80	peak		0	
3	8021.000	5.85	44.72	50.57	74.00	-23.43	peak	100	326	

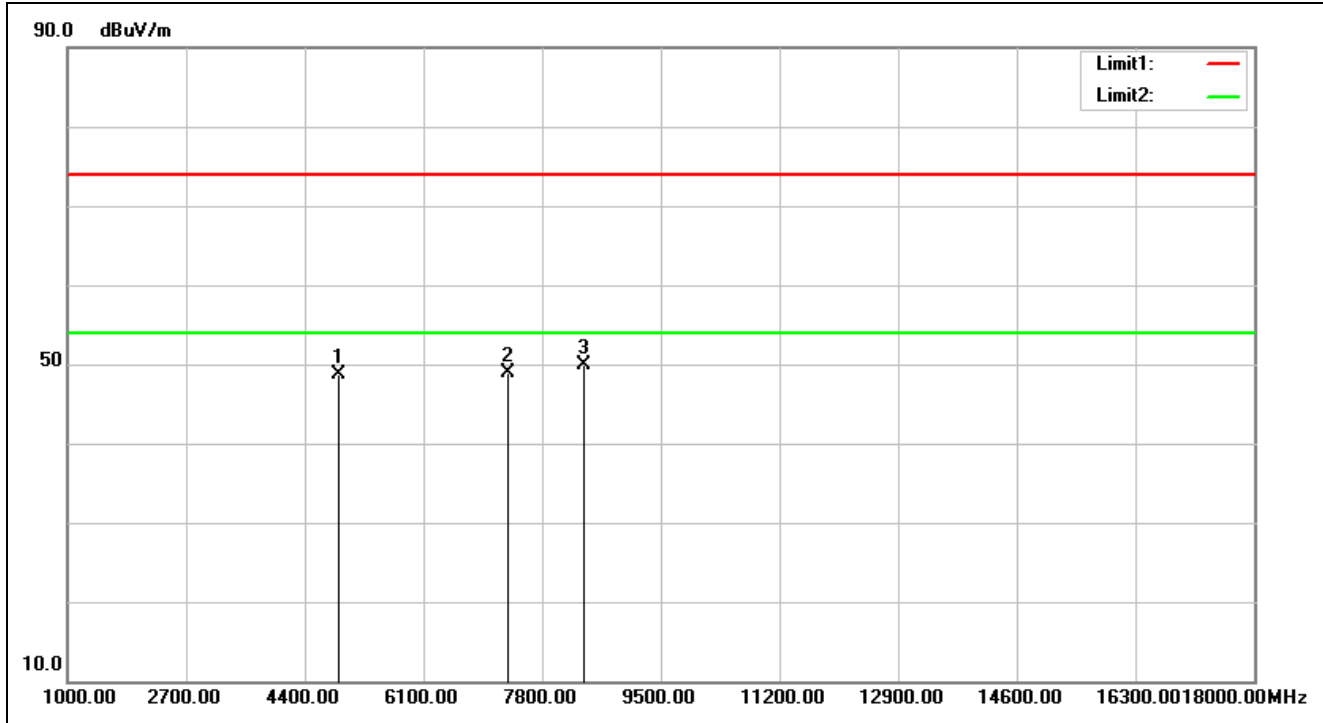
Spurious Emissions, TX Mode, 1-18G**TUV Rheinland Taiwan Ltd.****11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105**

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/21 01:07:38
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4 1461530100 Dual band PCB-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	56.86	54.33	74.00	-19.67	peak	100	333	
2	4874.000	-2.53	42.10	39.57	54.00	-14.43	AVG	100	333	
3	7311.000	5.52	43.57	49.09	74.00	-24.91	peak		0	
4	8242.000	6.09	43.61	49.70	74.00	-24.30	peak	100	221	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/21 01:08:31
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4 1461530100 Dual band PCB-ANT		

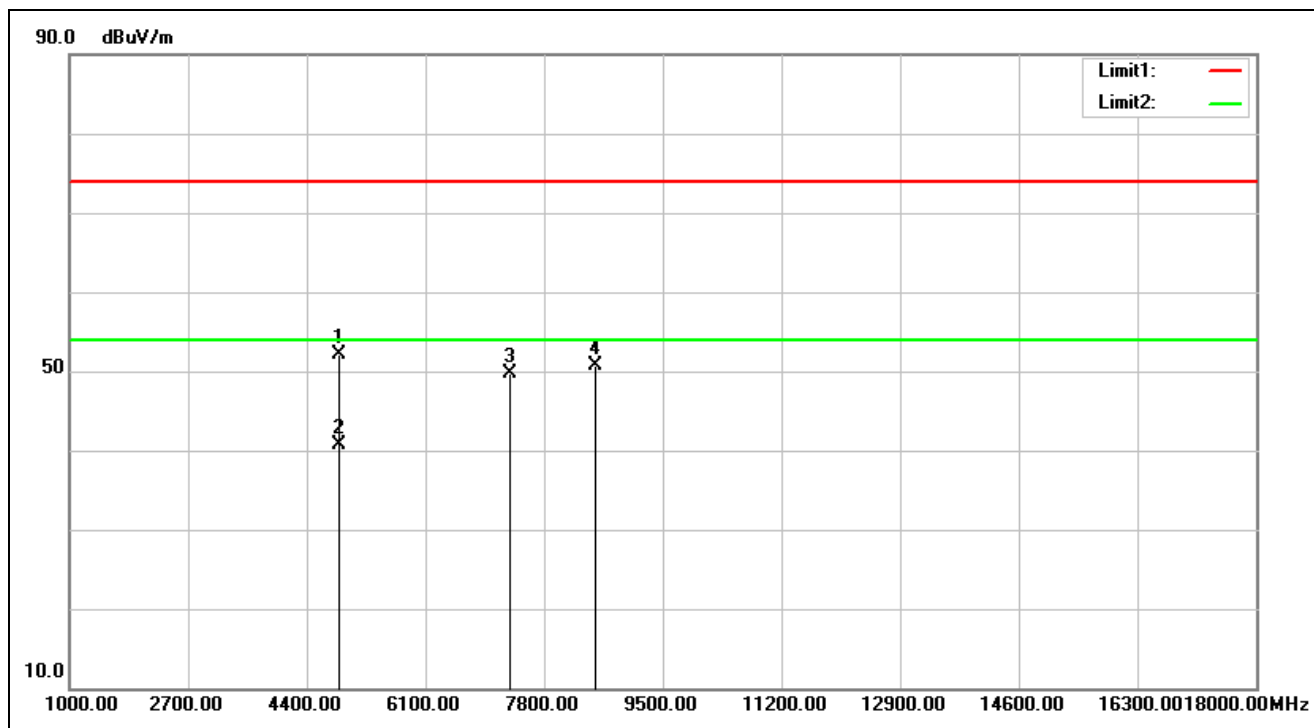
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	51.22	48.69	74.00	-25.31	peak	100	283	
2	7311.000	5.52	43.38	48.90	74.00	-25.10	peak			
3	8395.000	6.26	43.57	49.83	74.00	-24.17	peak	100	360	

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.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/21 01:19:07
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	21(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4 RN-SMA-S short Dipole-ANT		

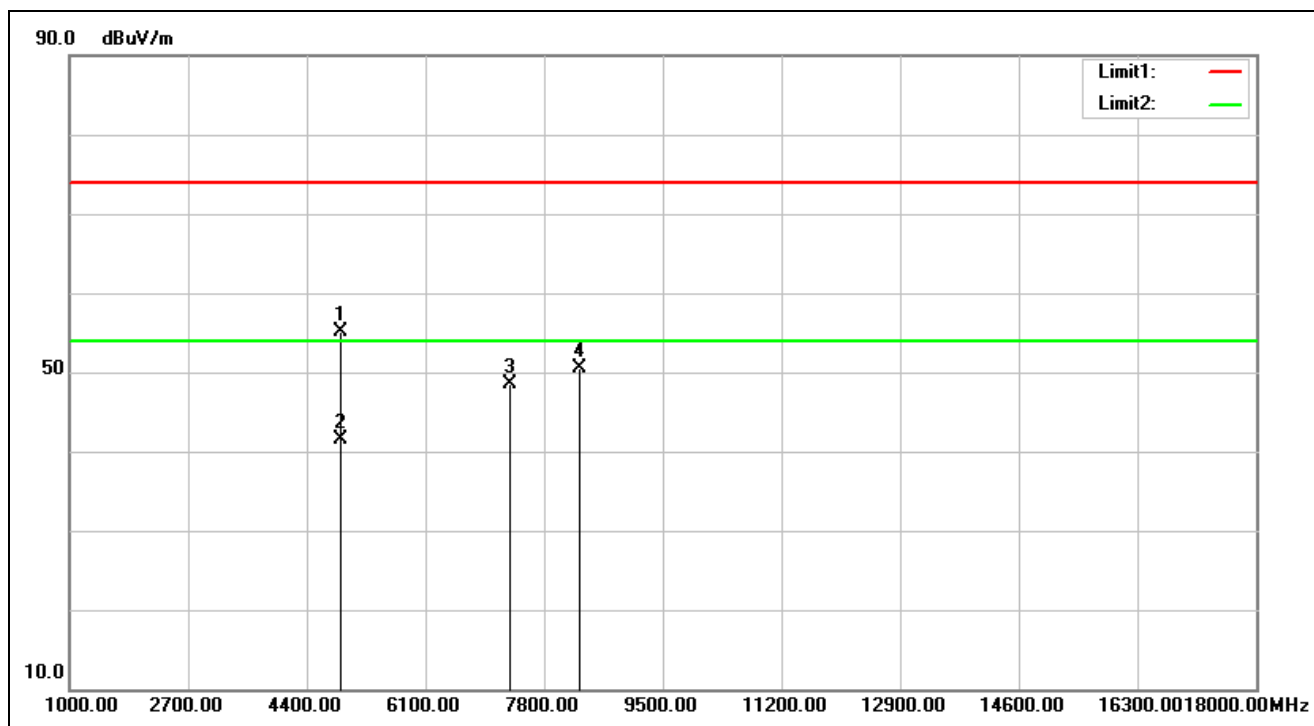
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4874.000	-2.53	54.73	52.20	74.00	-21.80	peak	100	262	
2	4874.000	-2.53	43.28	40.75	54.00	-13.25	AVG	100	262	
3	7311.000	5.52	44.28	49.80	74.00	-24.20	peak		0	
4	8531.000	6.38	44.37	50.75	74.00	-23.25	peak	100	139	

Spurious Emissions, TX Mode, 1-18G

TUV Rheinland Taiwan Ltd.

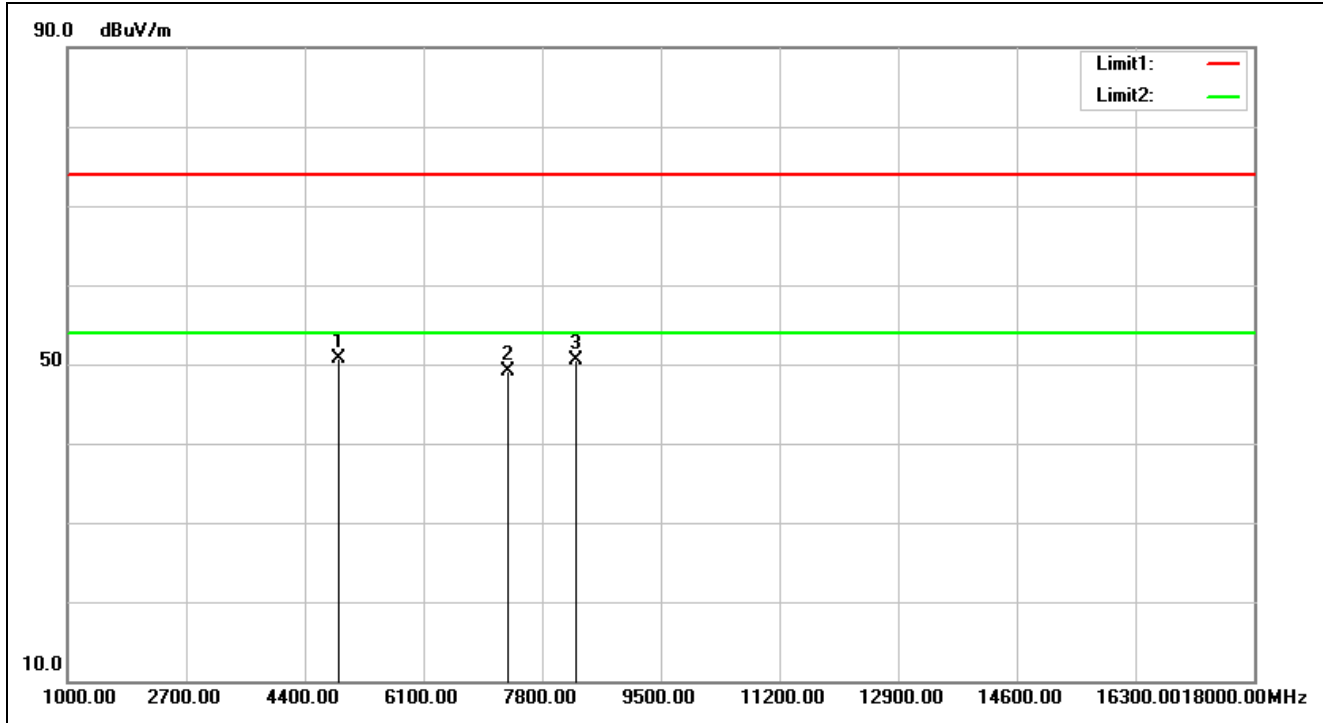
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/5/2 19:38:05
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	23(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4 RFA-02-G03-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	57.69	55.16	74.00	-18.84	peak	100	330	
2	4874.000	-2.53	44.06	41.53	54.00	-12.47	AVG	100	330	
3	7311.000	5.52	43.01	48.53	74.00	-25.47	peak		0	
4	8310.000	6.17	44.34	50.51	74.00	-23.49	peak	100	357	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/5/2 19:38:58
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	23(°C)/60%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	G-2437-TX		
Remark:	Power Setting -4 RFA-02-G03-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	53.18	50.65	74.00	-23.35	peak	100	239	
2	7311.000	5.52	43.57	49.09	74.00	-24.91	peak			
3	8293.000	6.15	44.31	50.46	74.00	-23.54	peak	100	359	

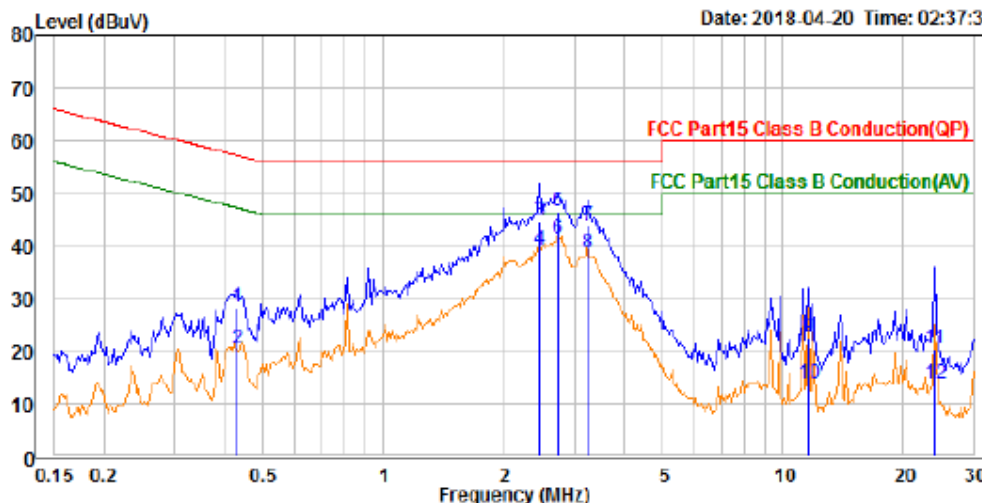
Mains



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

File: C:\EMC\Report\2018\Microchip\114074446(ATWILC3000-MR110UA)\114074446(ATWILC3000-MR110UA).

Date: 2018-04-20 Time: 02:37:37

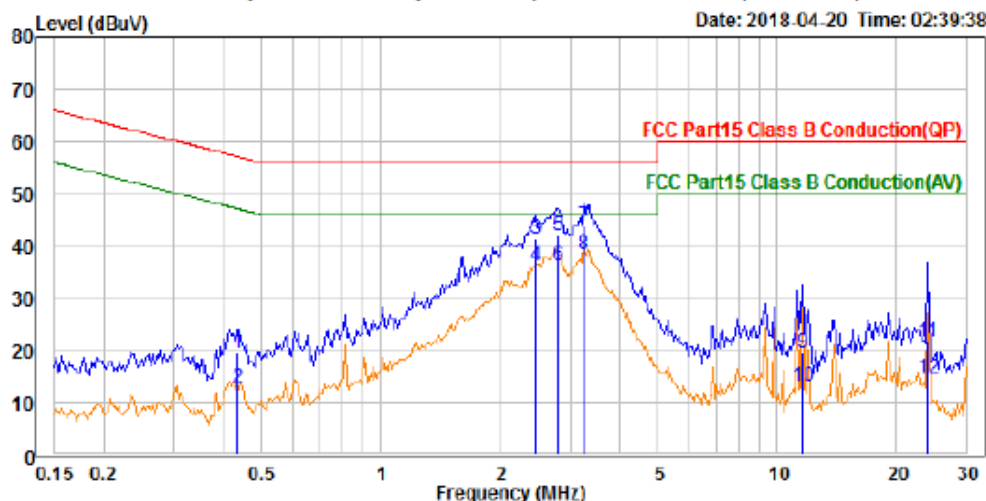


Trace: 1

Site : Conduction room
Condition : FCC Part15 Class B Conduction(QP) line1
Test Engineer: Curry Chen
Applicant : Microchip
Product : IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth
Model No. : ATWILC3000-MR110UA
Test Rating : 120Vac/60Hz
Tmp/Hum : 22.7 °C / 52 %
Memo : Mains

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.430	18.50	9.66	28.16	57.25	-29.09	QP
2	0.430	10.69	9.66	20.35	47.25	-26.90	Average
3	2.450	34.99	9.69	44.68	56.00	-11.32	QP
4	2.450	29.61	9.69	39.30	46.00	-6.70	Average
5	2.733	36.90	9.69	46.59	56.00	-9.41	QP
6	2.733	31.59	9.69	41.28	46.00	-4.72	Average
7	3.237	34.22	9.71	43.93	56.00	-12.07	QP
8	3.237	28.85	9.71	38.56	46.00	-7.44	Average
9	11.553	12.64	9.80	22.44	60.00	-37.56	QP
10	11.553	3.82	9.80	13.62	50.00	-36.38	Average
11	23.869	10.63	9.81	20.44	60.00	-39.56	QP
12	23.869	3.85	9.81	13.66	50.00	-36.34	Average

File: C:\EMC\Report\2018\Microchip\114074446(ATWILC3000-MR110UA)\114074446(ATWILC3000-MR110UA).



Trace: 1

Site : Conduction room
Condition : FCC Part15 Class B Conduction(QP) neutral
Test Engineer: Curry Chen
Applicant : Microchip
Product : IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth
Model No. : ATWILC3000-MR110UA
Test Rating : 120Vac/60Hz
Tmp/Hum : 22.7 °C / 52 %
Memo : Mains

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.435	9.66	9.66	19.32	57.17	-37.85	QP
2	0.435	3.15	9.66	12.81	47.17	-34.36	Average
3	2.450	31.66	9.70	41.36	56.00	-14.64	QP
4	2.450	26.45	9.70	36.15	46.00	-9.85	Average
5	2.788	32.12	9.71	41.83	56.00	-14.17	QP
6	2.788	26.52	9.71	36.23	46.00	-9.77	Average
7	3.237	33.95	9.72	43.67	56.00	-12.33	QP
8	3.237	28.67	9.72	38.39	46.00	-7.61	Average
9	11.553	9.49	9.83	19.32	60.00	-40.68	QP
10	11.553	3.19	9.83	13.02	50.00	-36.98	Average
11	23.869	11.80	9.89	21.69	60.00	-38.31	QP
12	23.869	4.66	9.89	14.55	50.00	-35.45	Average