

Test Report No.50141802 001

Appendix D: Radiated and Mains Spurious Emission Data

(File: 50141802AppendixD)

Contents

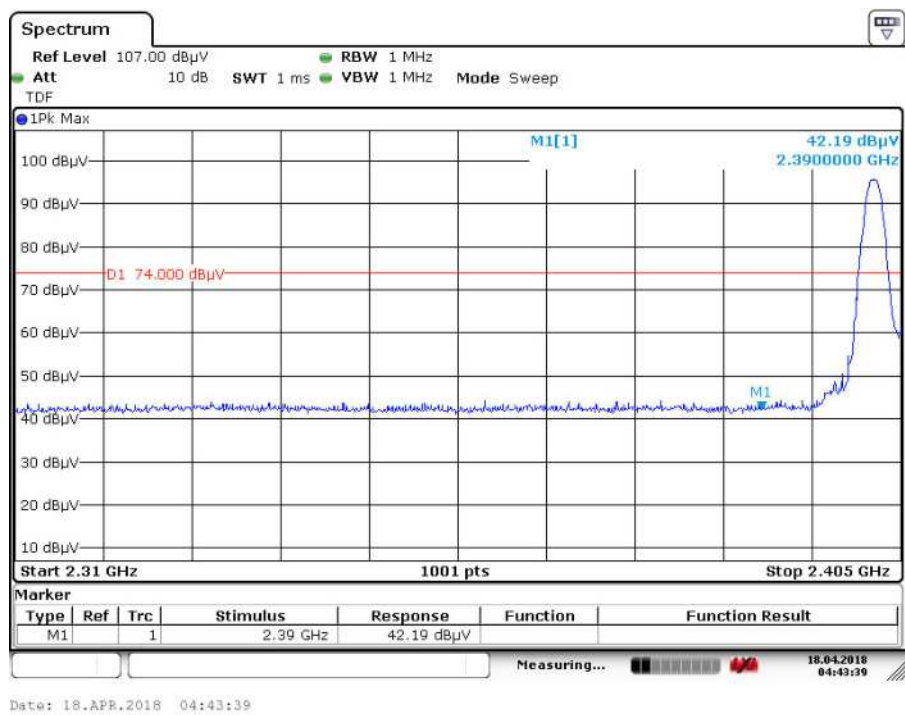
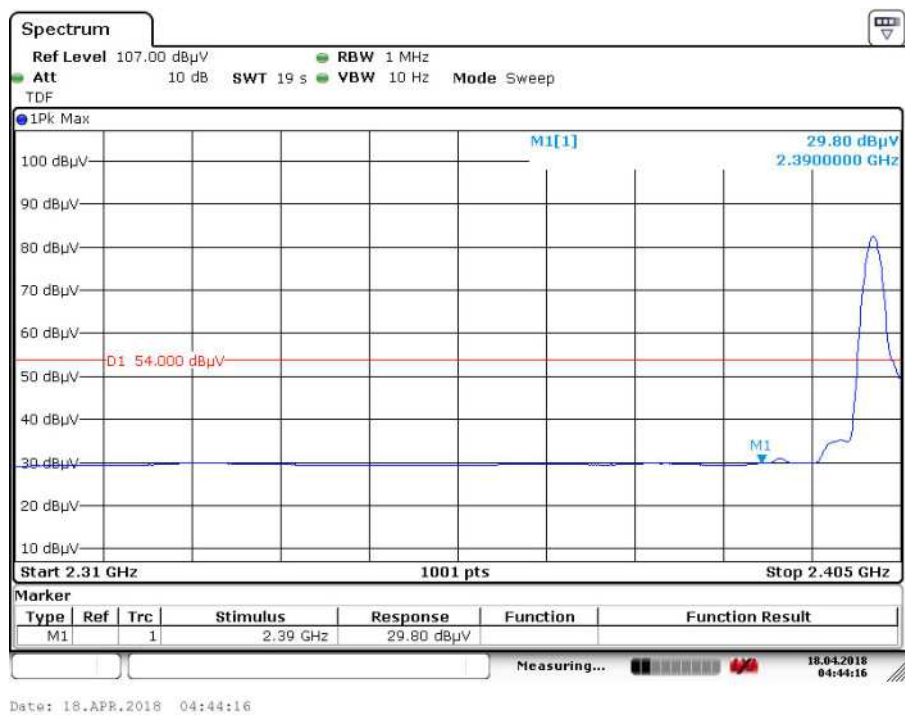
RFA-02-5-C7H1-ANT.....	3
Spurious Emissions, Band Edges, 2.35-2.5G.....	3
Spurious Emissions, TX Mode, 1-18G.....	12
Spurious Emissions, TX Mode, 18-26G.....	24
Spurious Emissions, TX Mode, 30M-1G	36
Spurious Emissions, TX Mode, 9k-30M	38
Spurious Emissions, RX Mode, 1-18G.....	40
Spurious Emissions, RX Mode, 18-26G.....	42
Spurious Emissions, RX Mode, 30M-1G	44
Spurious Emissions, RX Mode, 9K-30M	46
RFMTA331215IMAB701-ANT	48
Spurious Emissions, Band Edges, 2.35-2.5G.....	48
Spurious Emissions, TX Mode, 1-18G.....	57
Spurious Emissions, TX Mode, 18-26G.....	69
Spurious Emissions, TX Mode, 30M-1G	81
Spurious Emissions, TX Mode, 9k-30M	83
Spurious Emissions, RX Mode, 1-18G.....	85
Spurious Emissions, RX Mode, 18-26G.....	87
Spurious Emissions, RX Mode, 30M-1G	89
Spurious Emissions, RX Mode, 9K-30M	91
RFPCA381013IMAB701-ANT	93
Spurious Emissions, Band Edges, 2.35-2.5G.....	93
Spurious Emissions, TX Mode, 1-18G.....	102
Spurious Emissions, TX Mode, 18-26G.....	114
Spurious Emissions, TX Mode, 30M-1G	126
Spurious Emissions, TX Mode, 9k-30M	128
Spurious Emissions, RX Mode, 1-18G.....	130
Spurious Emissions, RX Mode, 18-26G.....	132
Spurious Emissions, RX Mode, 30M-1G	134
Spurious Emissions, RX Mode, 9K-30M	136
Mains	138

RFA-02-5-C7H1-ANT

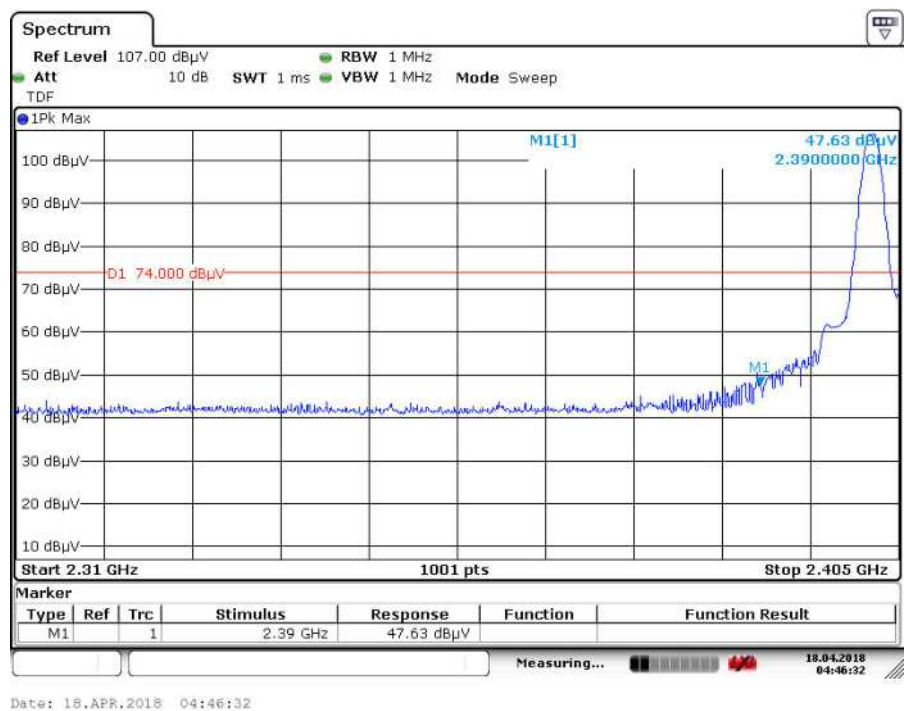
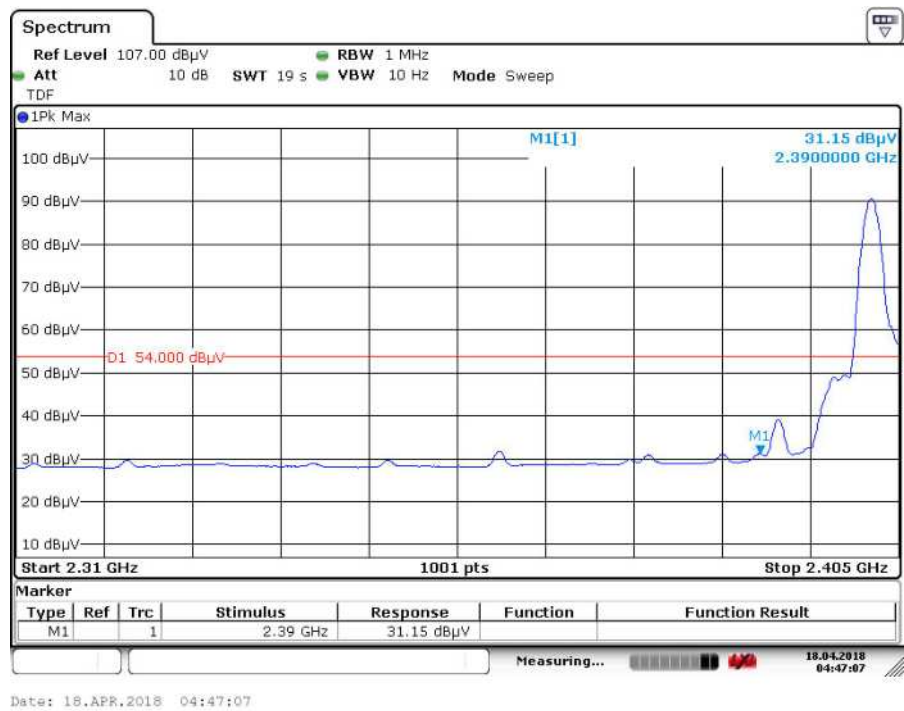
Spurious Emissions, Band Edges, 2.35-2.5G

Radiated Bandedge 1DH5

Low Channel (Hor)

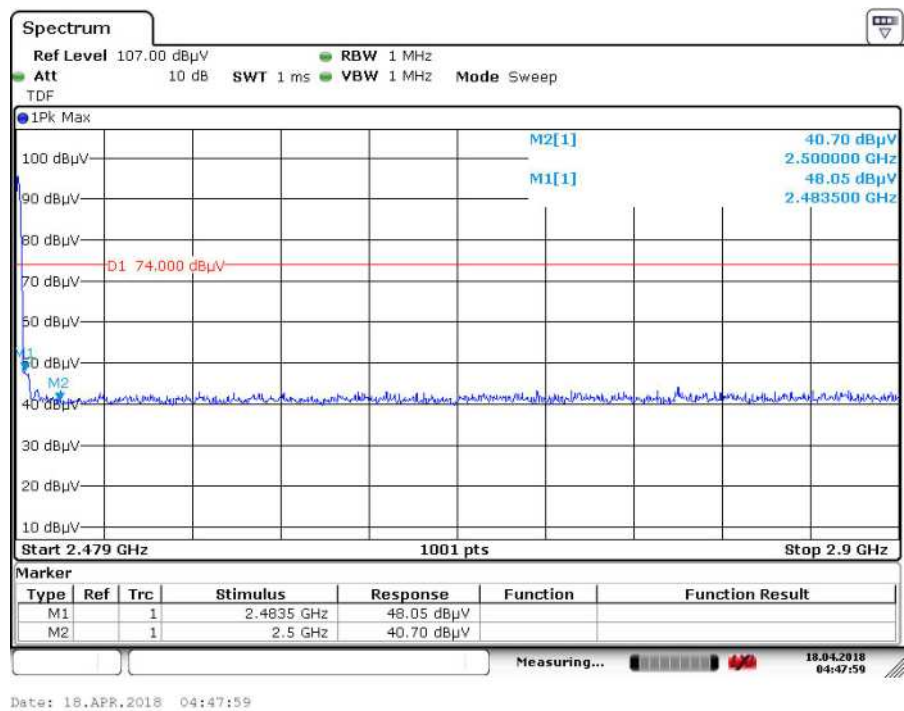
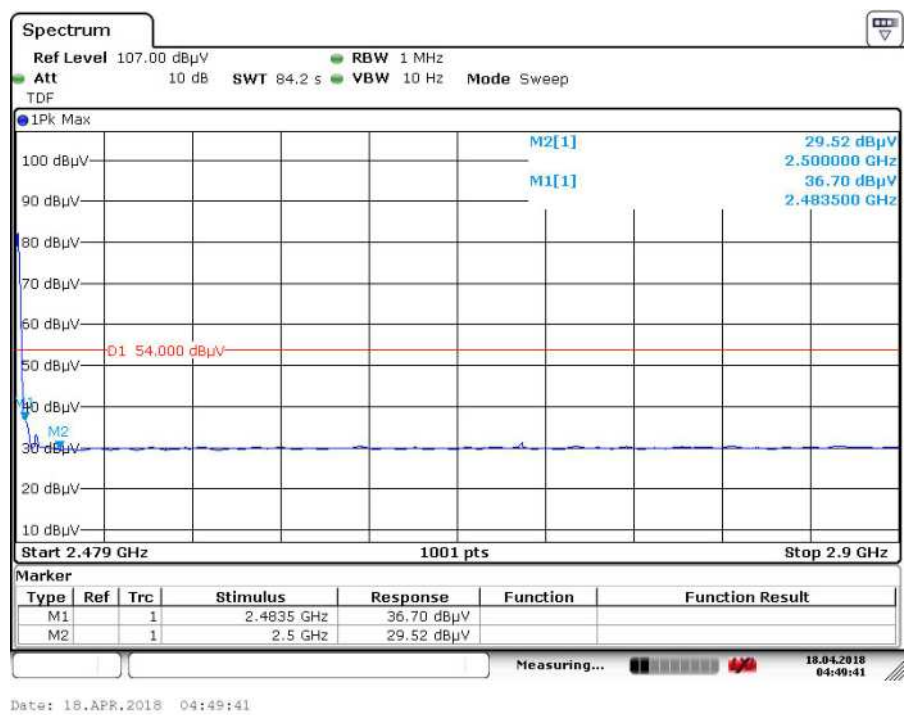


Low Channel (Ver)

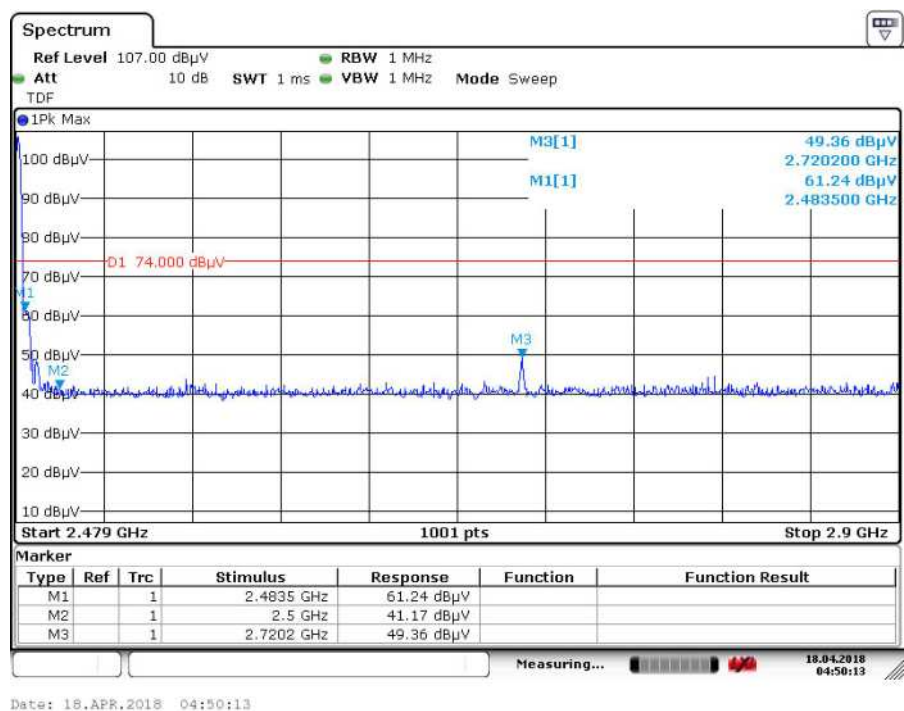
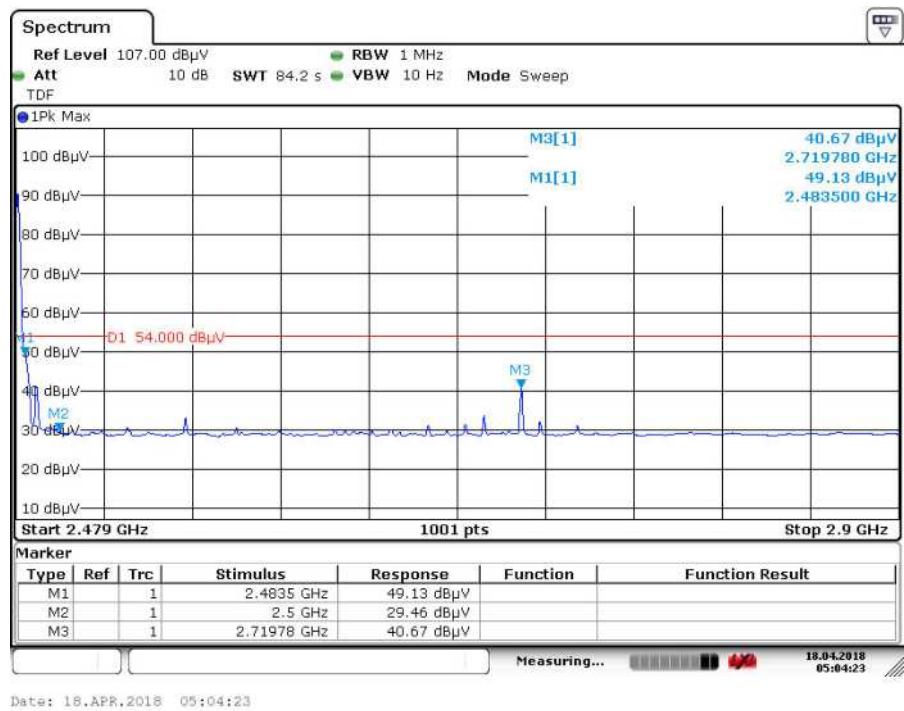


Radiated Bandedge 1DH5

High Channel (Hor)

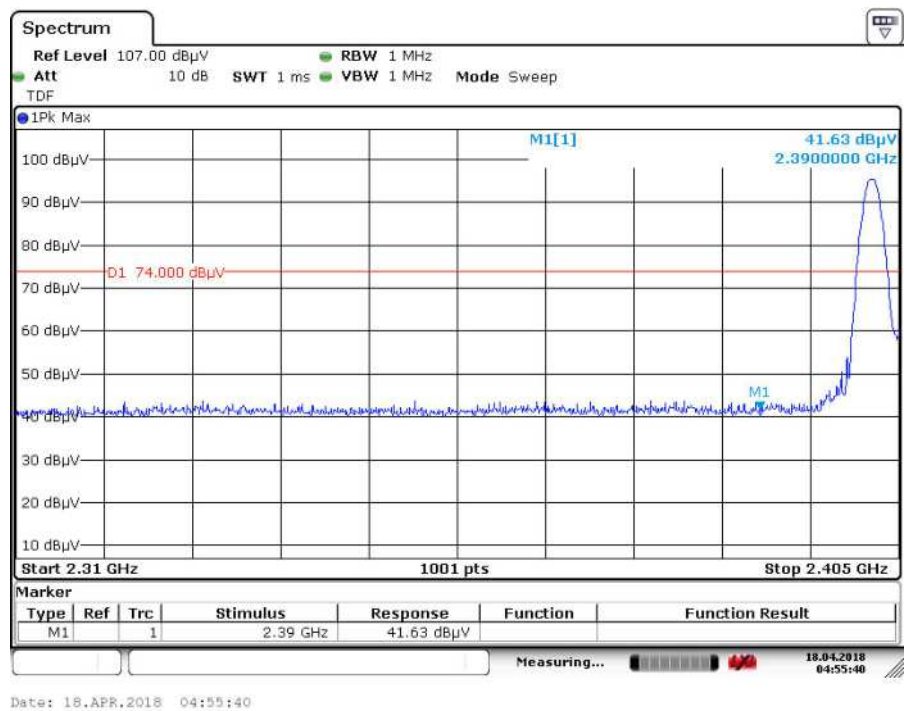
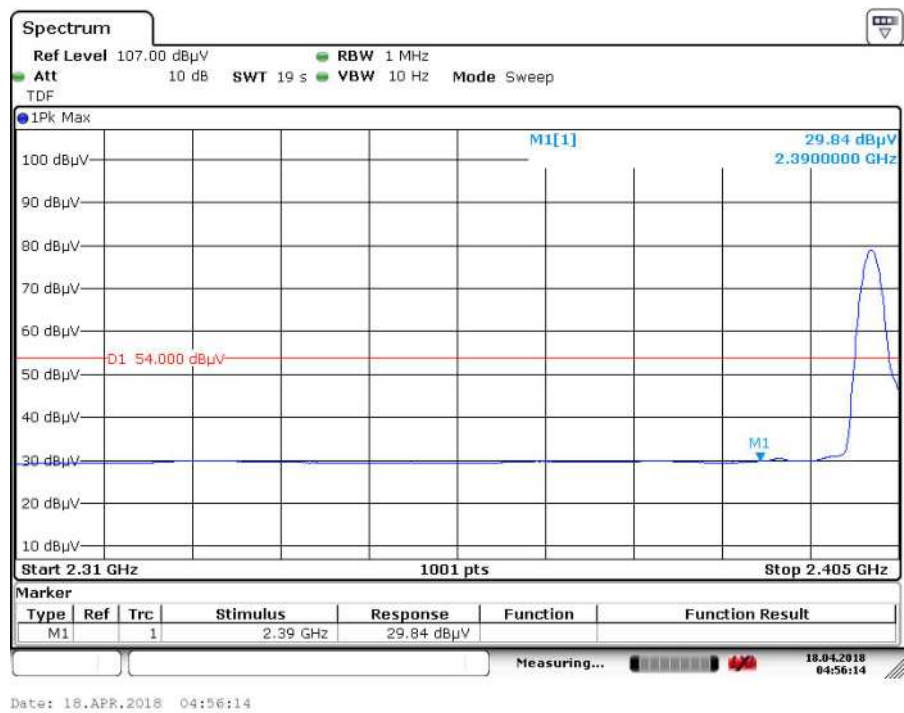


High Channel (Ver)

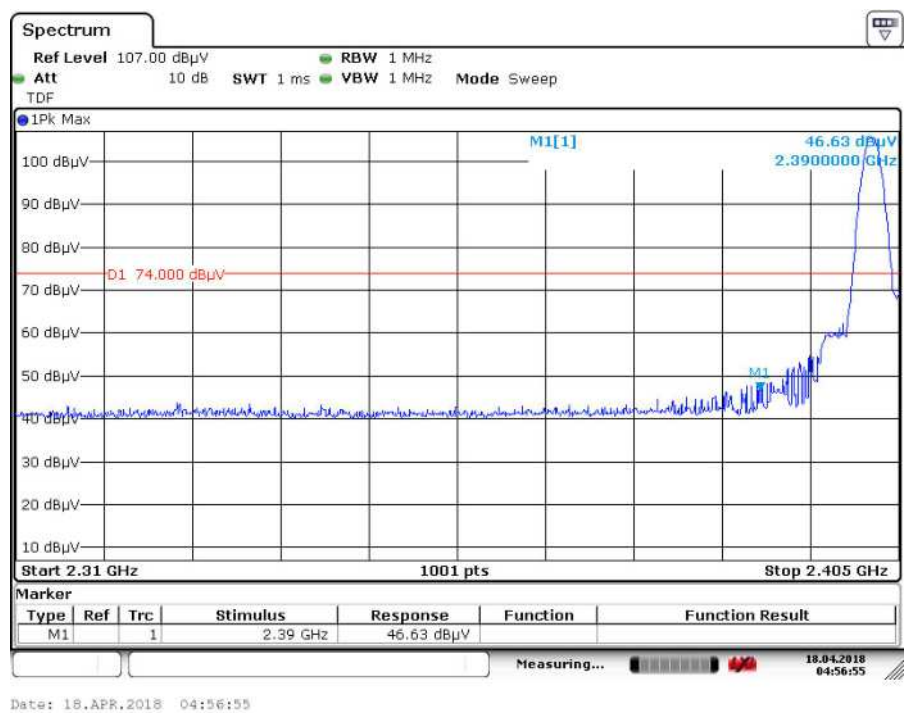
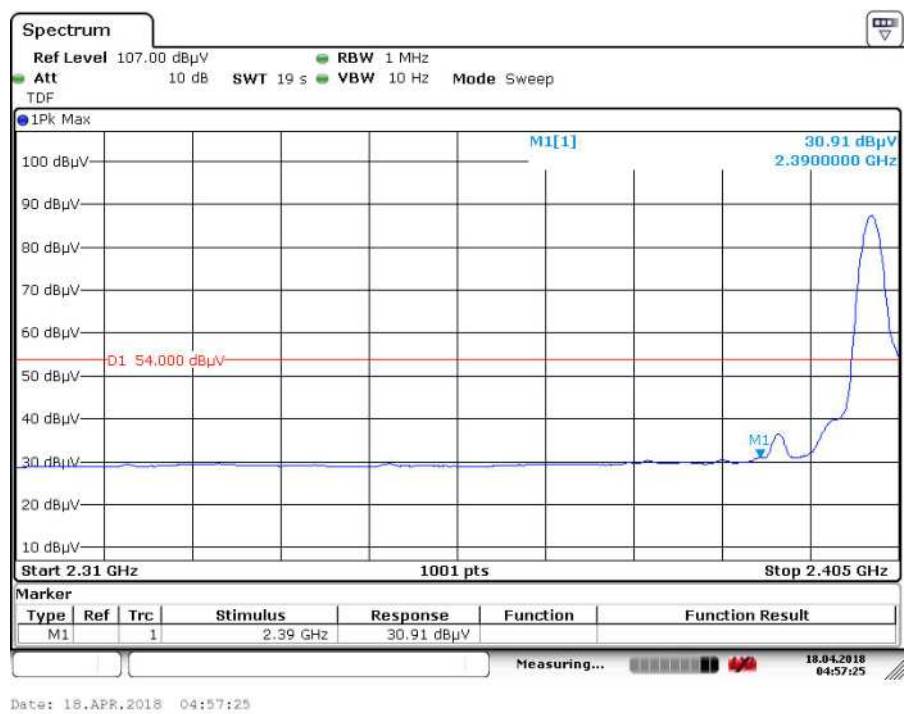


Radiated Bandedge 3DH5

Low Channel (Hor)

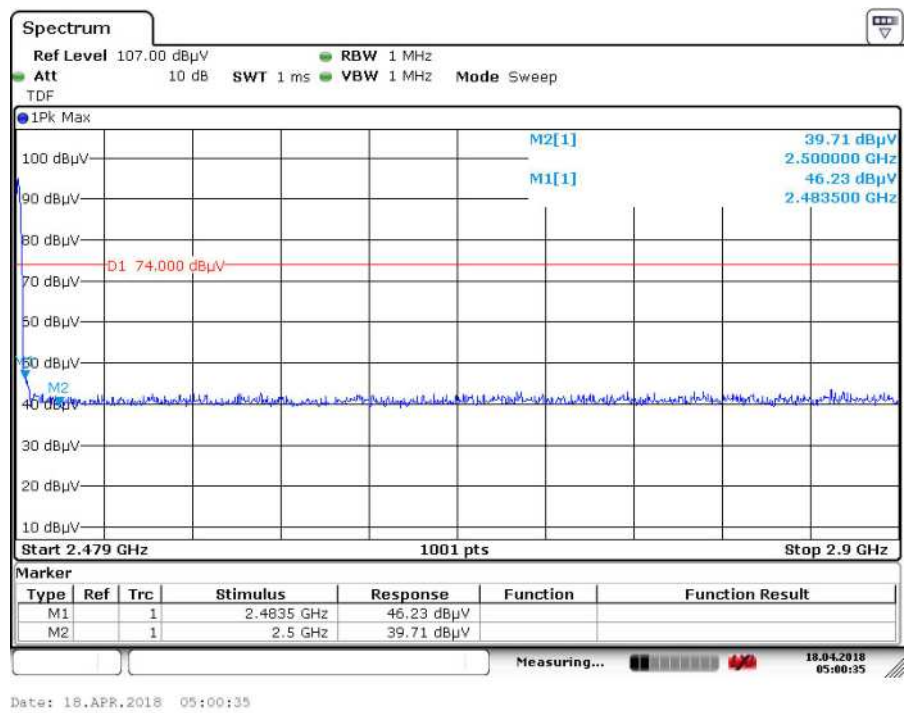
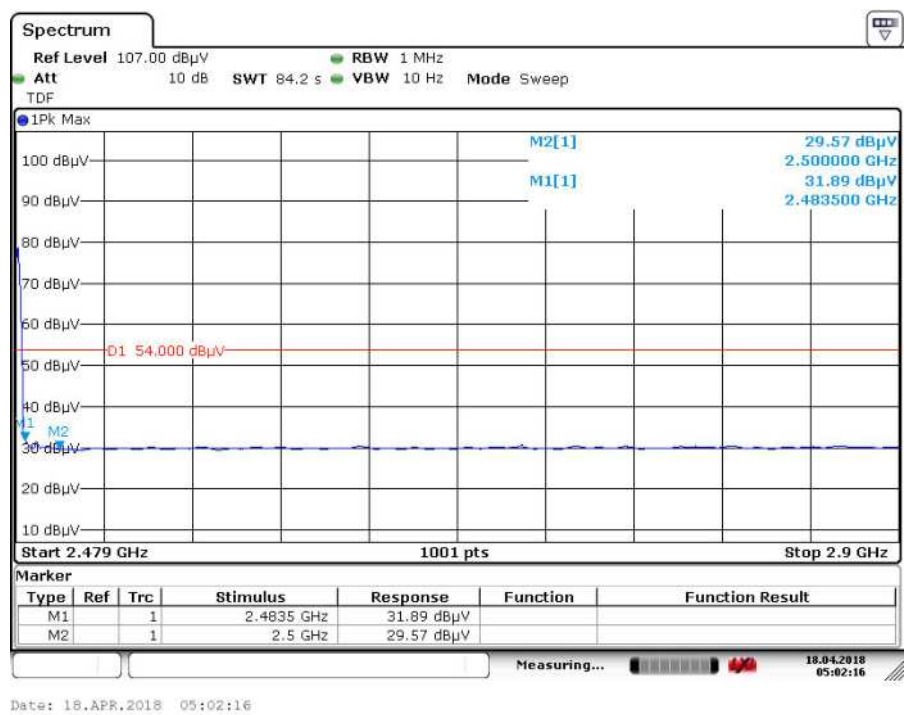


Low Channel (Ver)

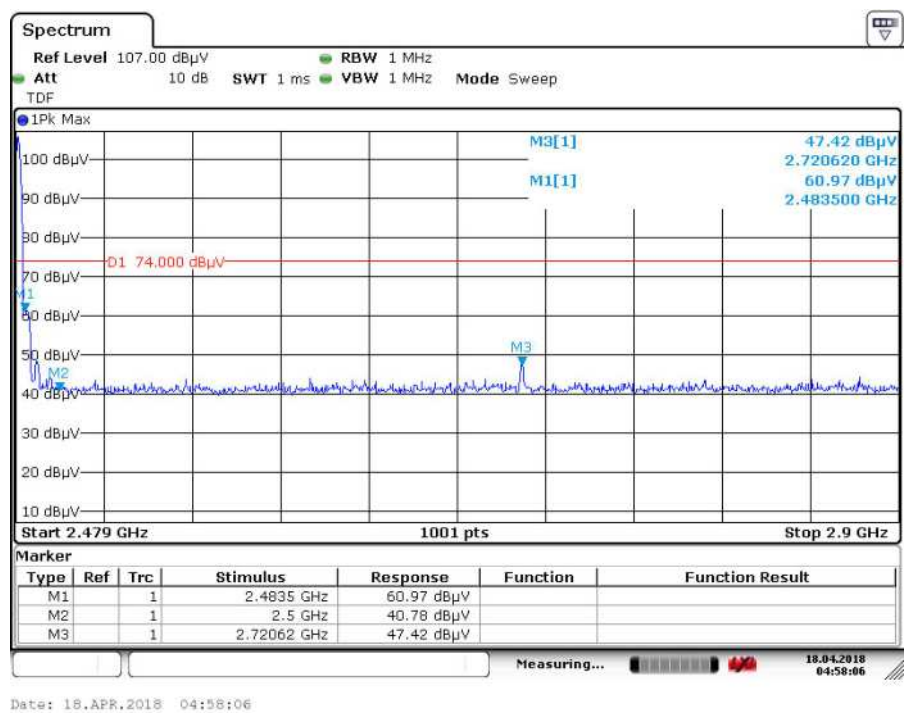
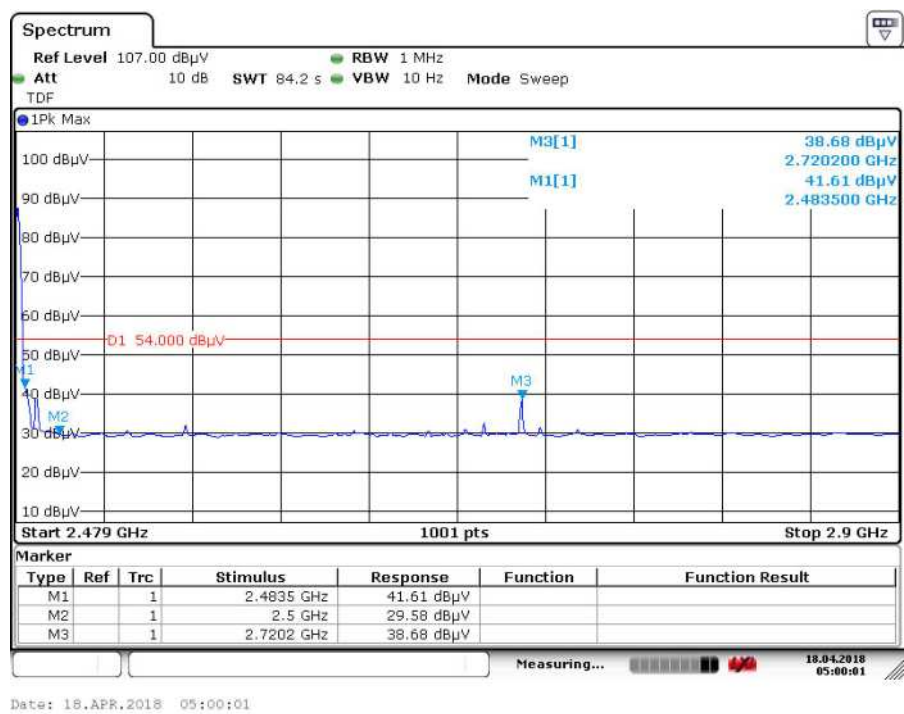


Radiated Bandedge 3DH5

High Channel (Hor)



High Channel (Ver)



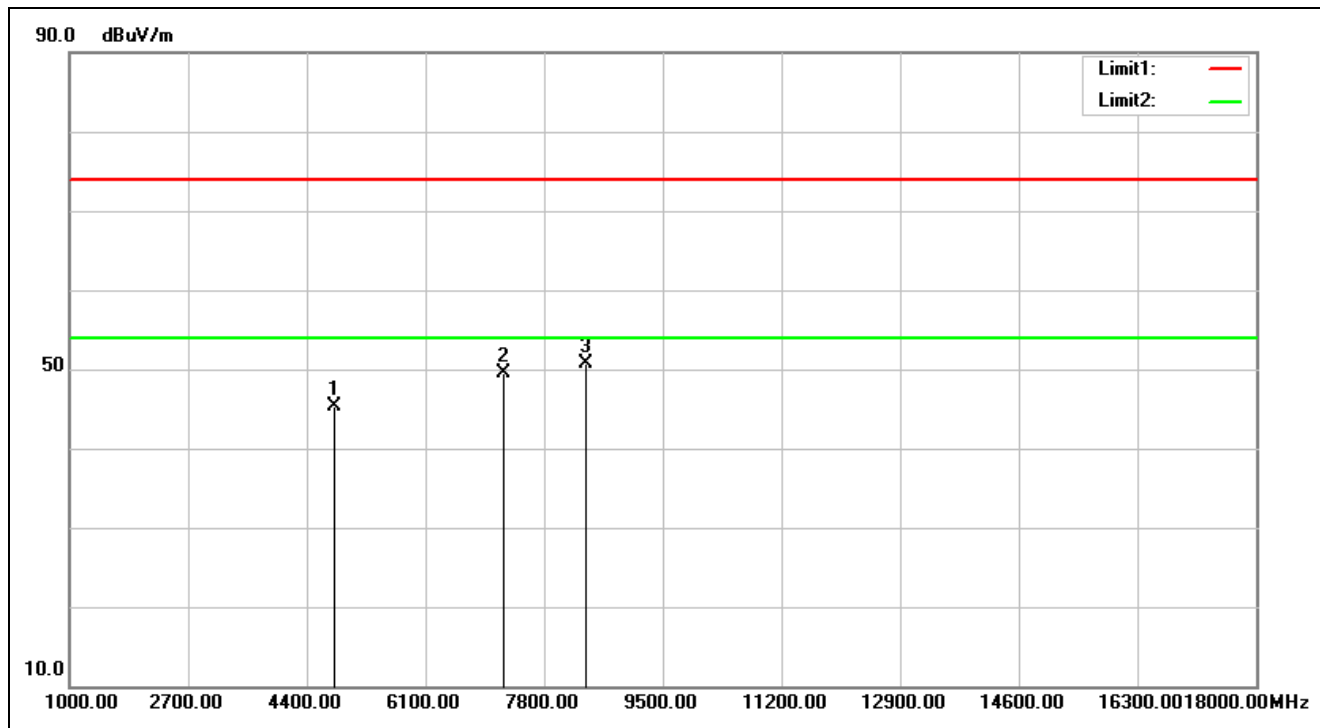
Spurious Emissions, TX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

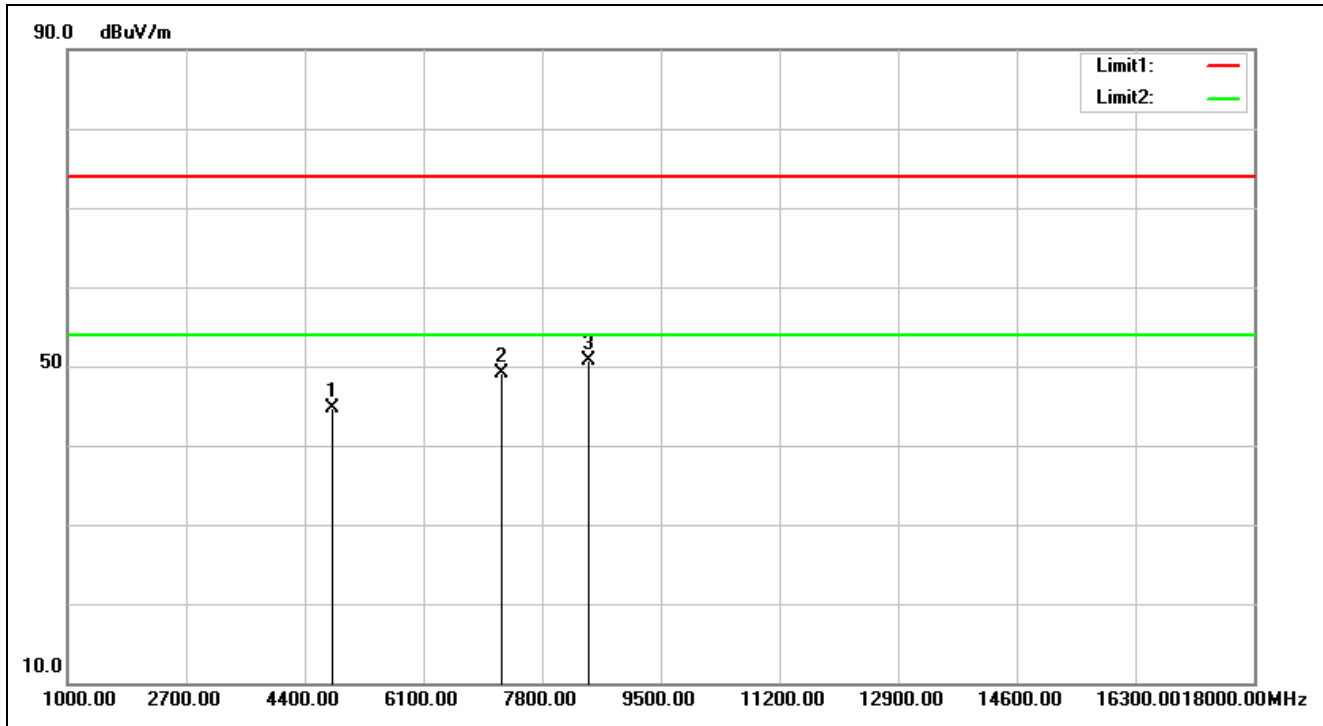
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



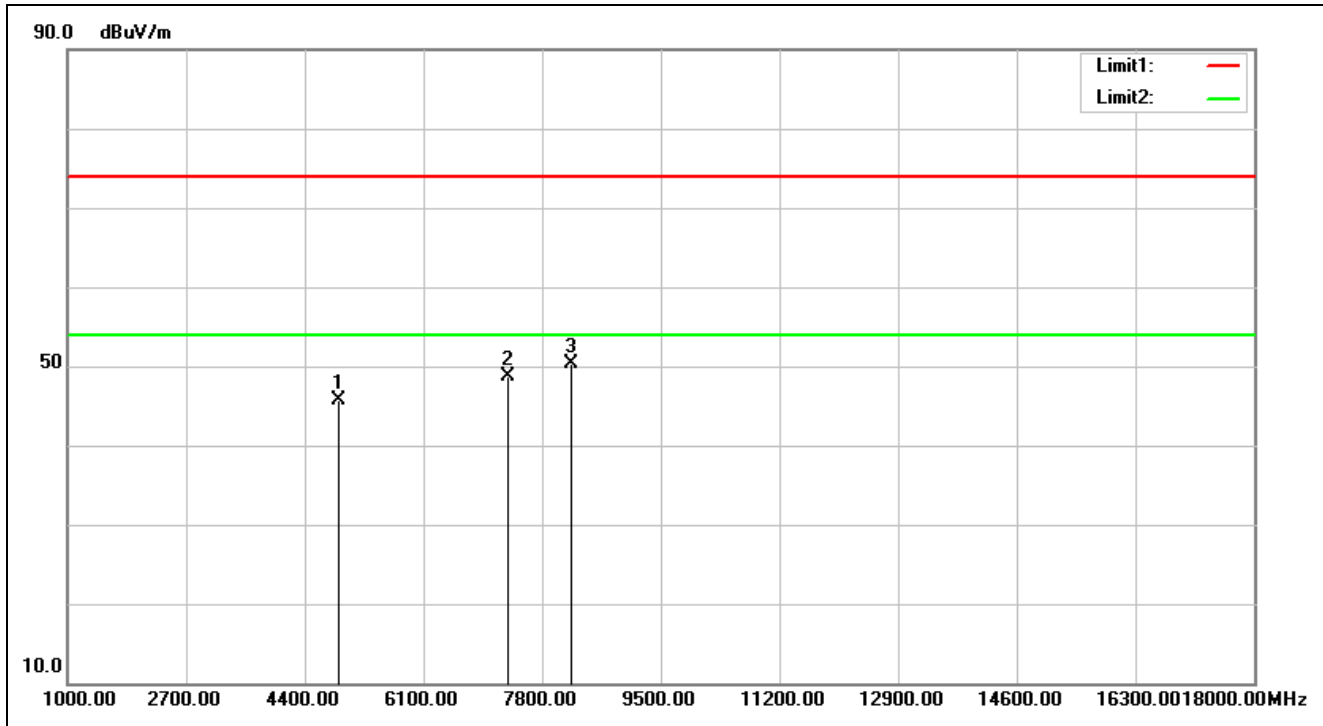
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 04:57:38
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX		
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	4804.000	-2.72	48.05	45.33	74.00	-28.67	peak		0	
2	7206.000	5.25	44.30	49.55	74.00	-24.45	peak		0	
3	8395.000	6.26	44.35	50.61	74.00	-23.39	peak	100	213	



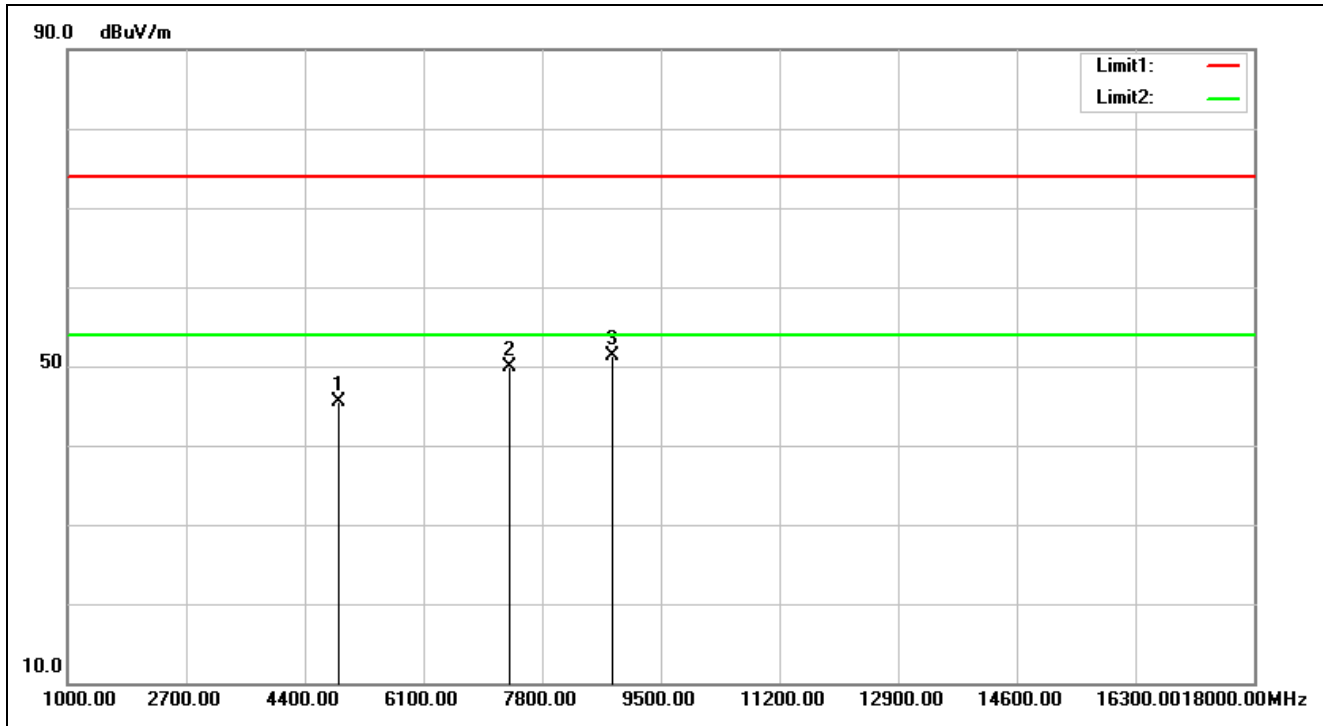
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 04:58:30
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX		
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	4804.000	-2.72	47.46	44.74	74.00	-29.26	peak			
2	7206.000	5.25	43.95	49.20	74.00	-24.80	peak			
3	8463.000	6.34	44.39	50.73	74.00	-23.27	peak	100	313	



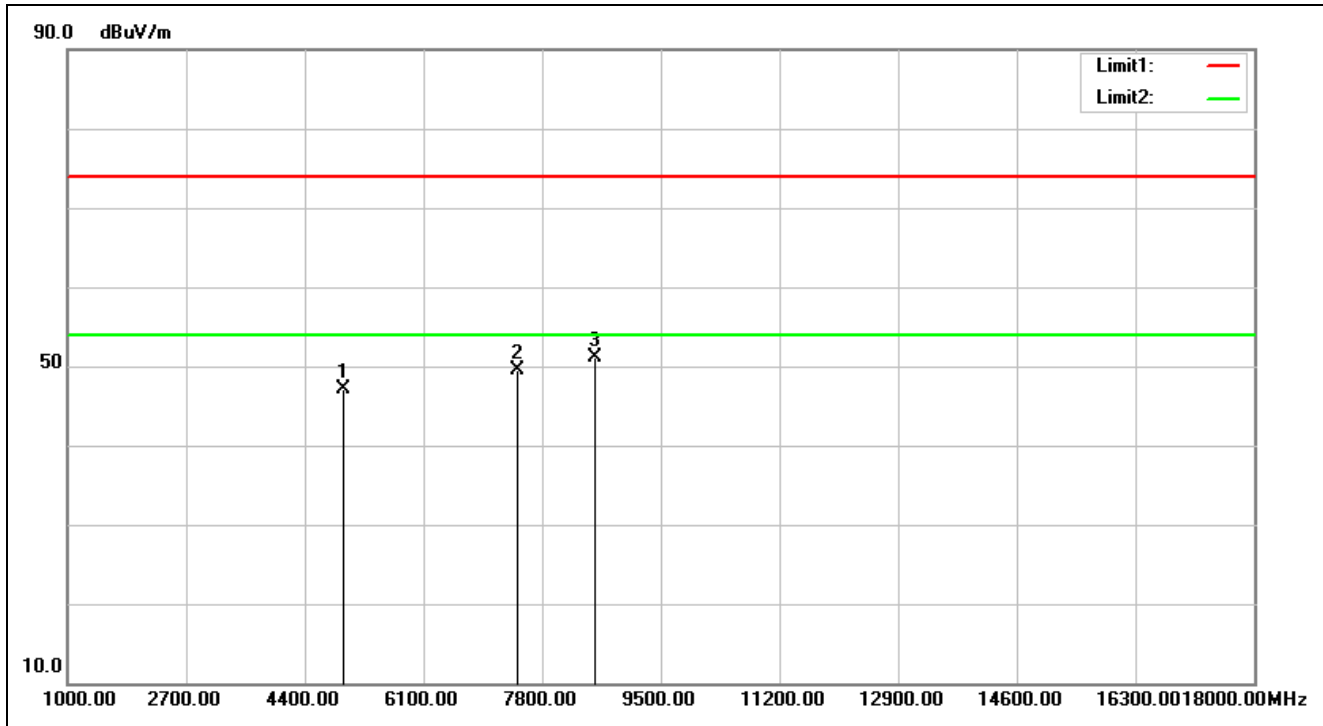
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 04:59:53
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	20(°C)/50%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	4882.000	-2.50	48.20	45.70	74.00	-28.30	peak			
2	7323.000	5.54	43.24	48.78	74.00	-25.22	peak			
3	8225.000	6.08	44.21	50.29	74.00	-23.71	peak	100	256	



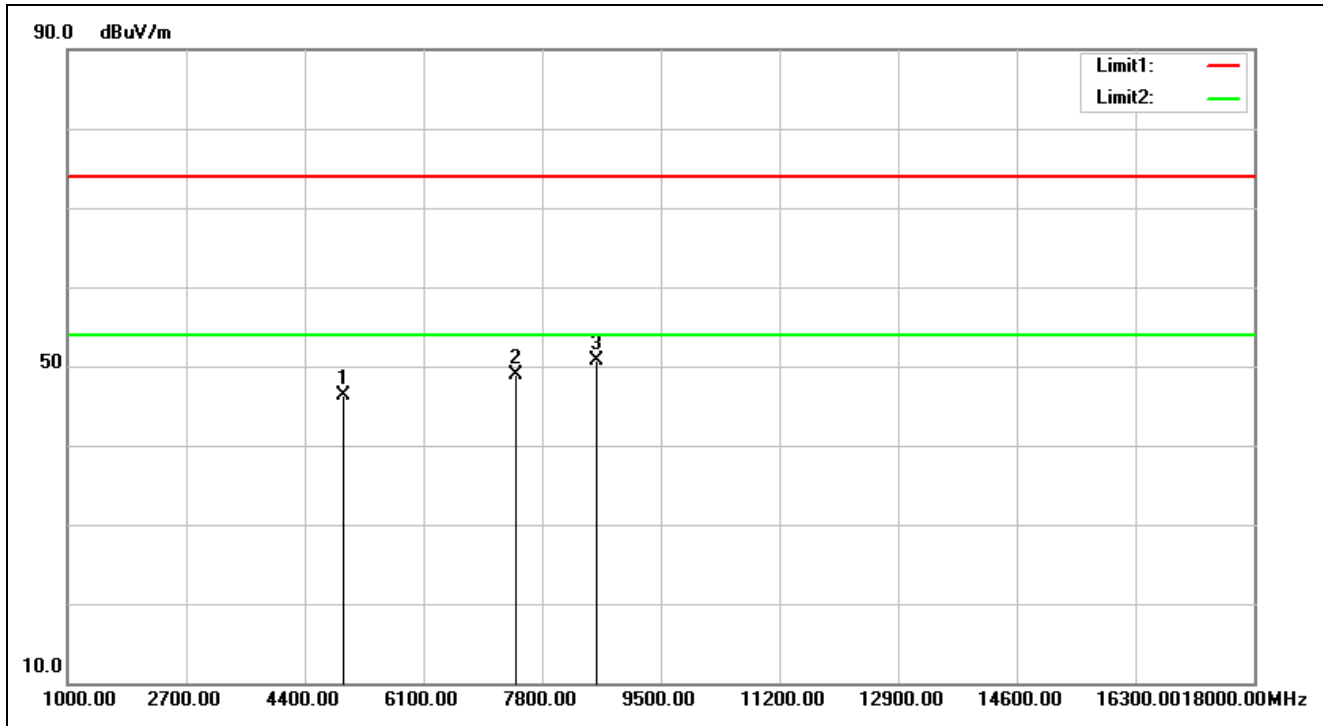
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:00:46
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	20(°C)/50%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	4882.000	-2.50	48.09	45.59	74.00	-28.41	peak			
2	7323.000	5.54	44.37	49.91	74.00	-24.09	peak			
3	8803.000	6.42	44.81	51.23	74.00	-22.77	peak	100	360	



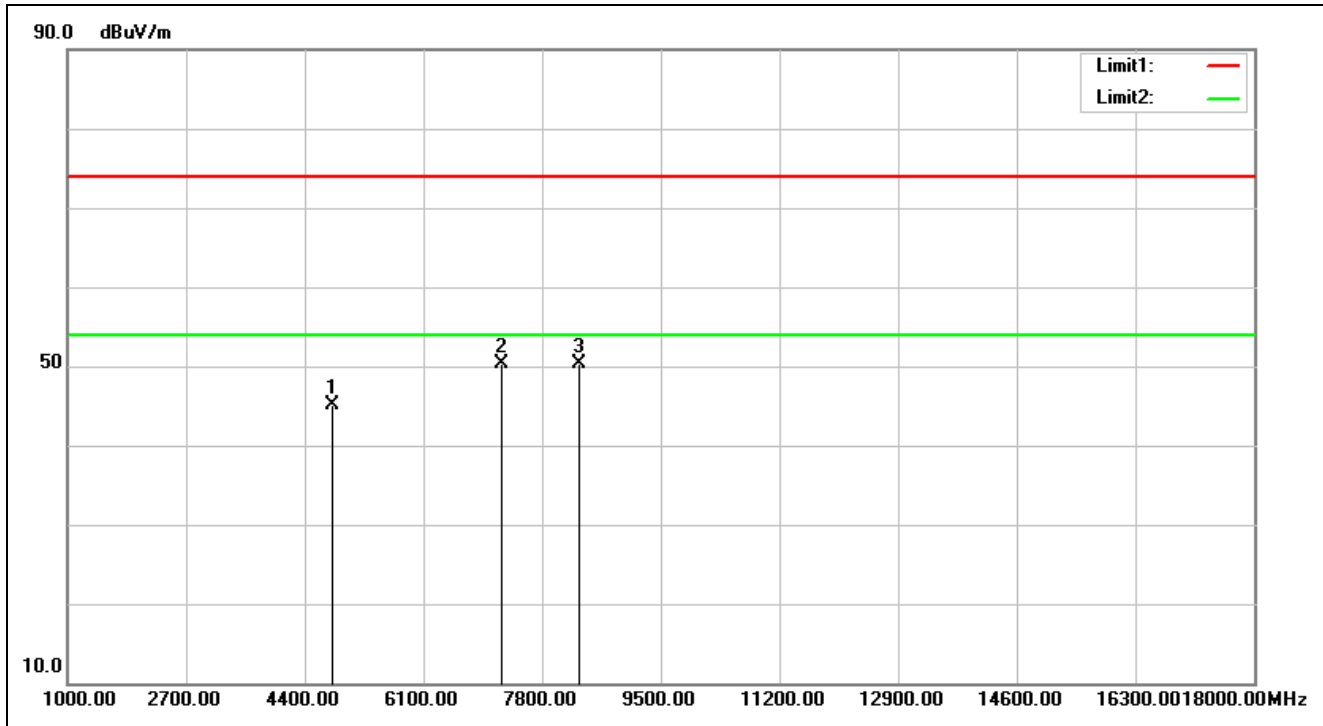
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:02:10
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX		
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	4960.000	-2.28	49.38	47.10	74.00	-26.90	peak			
2	7440.000	5.84	43.57	49.41	74.00	-24.59	peak			
3	8548.000	6.38	44.68	51.06	74.00	-22.94	peak	100	0	



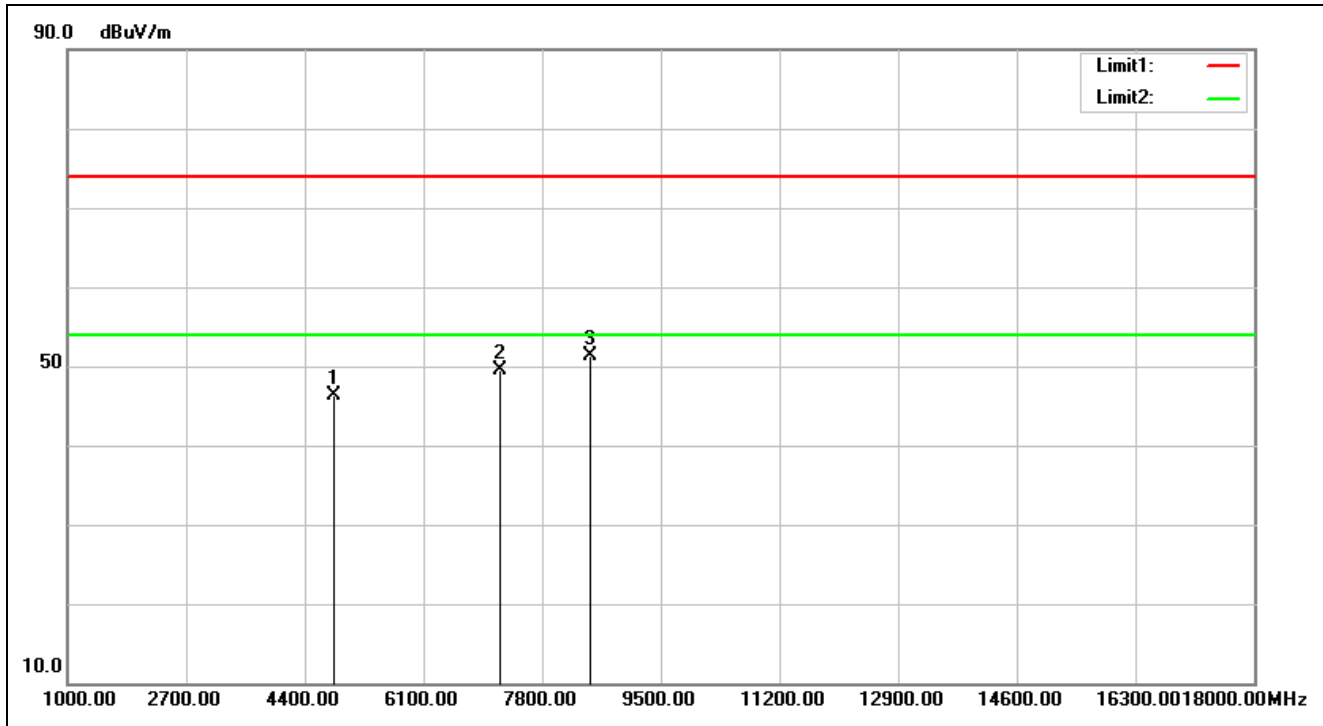
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:03:02
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX		
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	4960.000	-2.28	48.64	46.36	74.00	-27.64	peak			
2	7440.000	5.84	43.03	48.87	74.00	-25.13	peak			
3	8582.000	6.39	44.27	50.66	74.00	-23.34	peak	100	180	



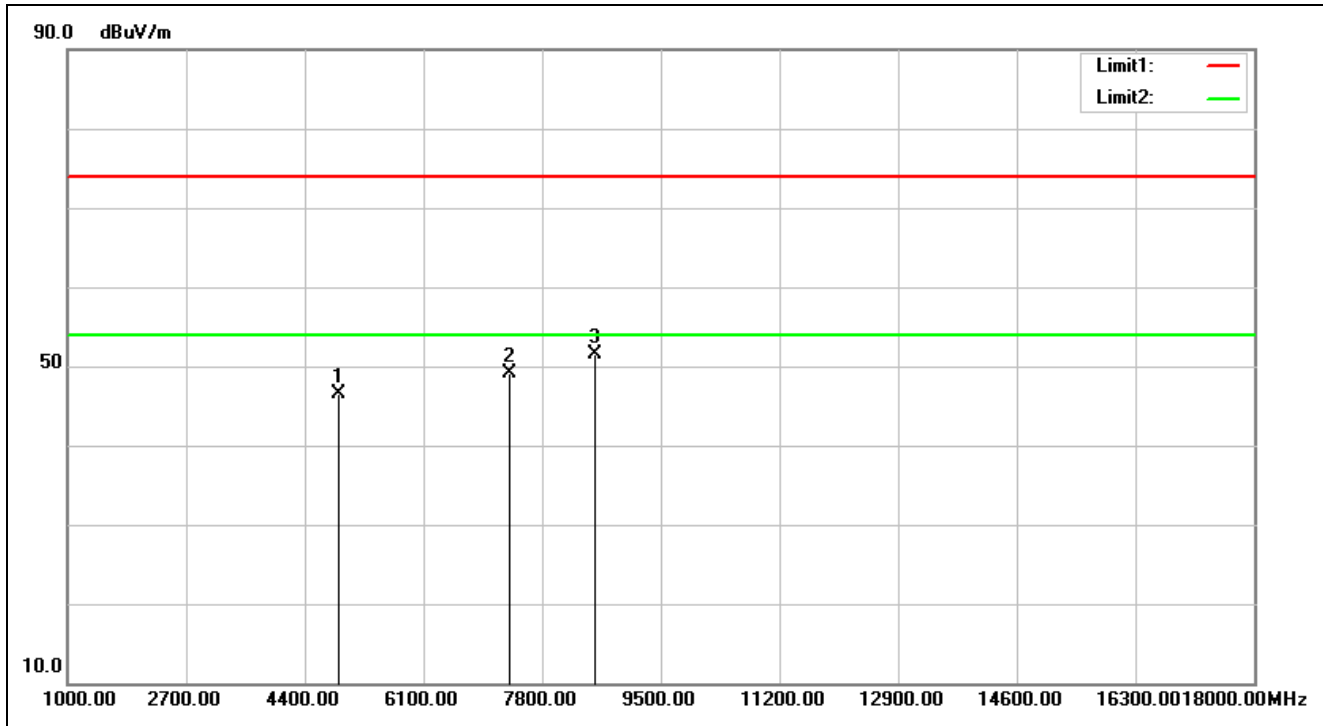
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:04:58
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX		
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	4804.000	-2.72	47.78	45.06	74.00	-28.94	peak			
2	7206.000	5.25	45.09	50.34	74.00	-23.66	peak			
3	8327.000	6.18	44.12	50.30	74.00	-23.70	peak	100	10	



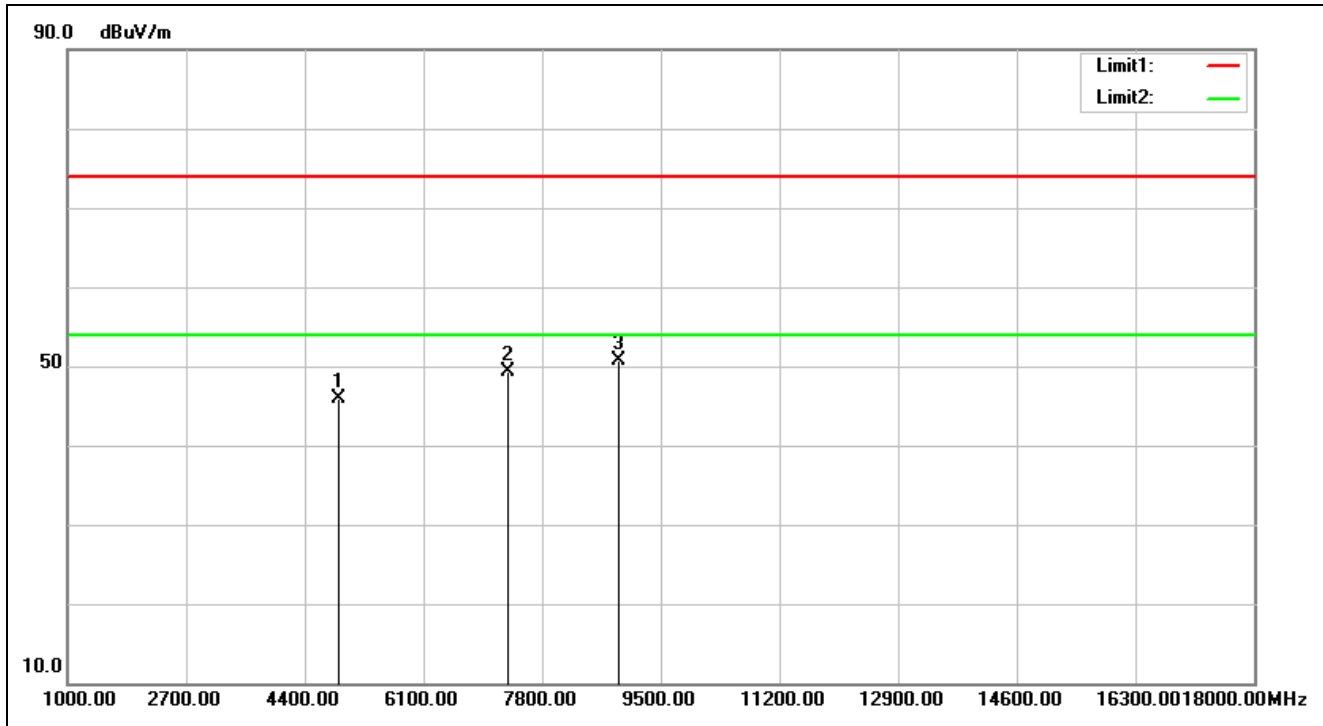
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:05:51
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX		
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	4804.000	-2.72	48.96	46.24	74.00	-27.76	peak			
2	7206.000	5.25	44.16	49.41	74.00	-24.59	peak			
3	8497.000	6.38	44.90	51.28	74.00	-22.72	peak	100	206	



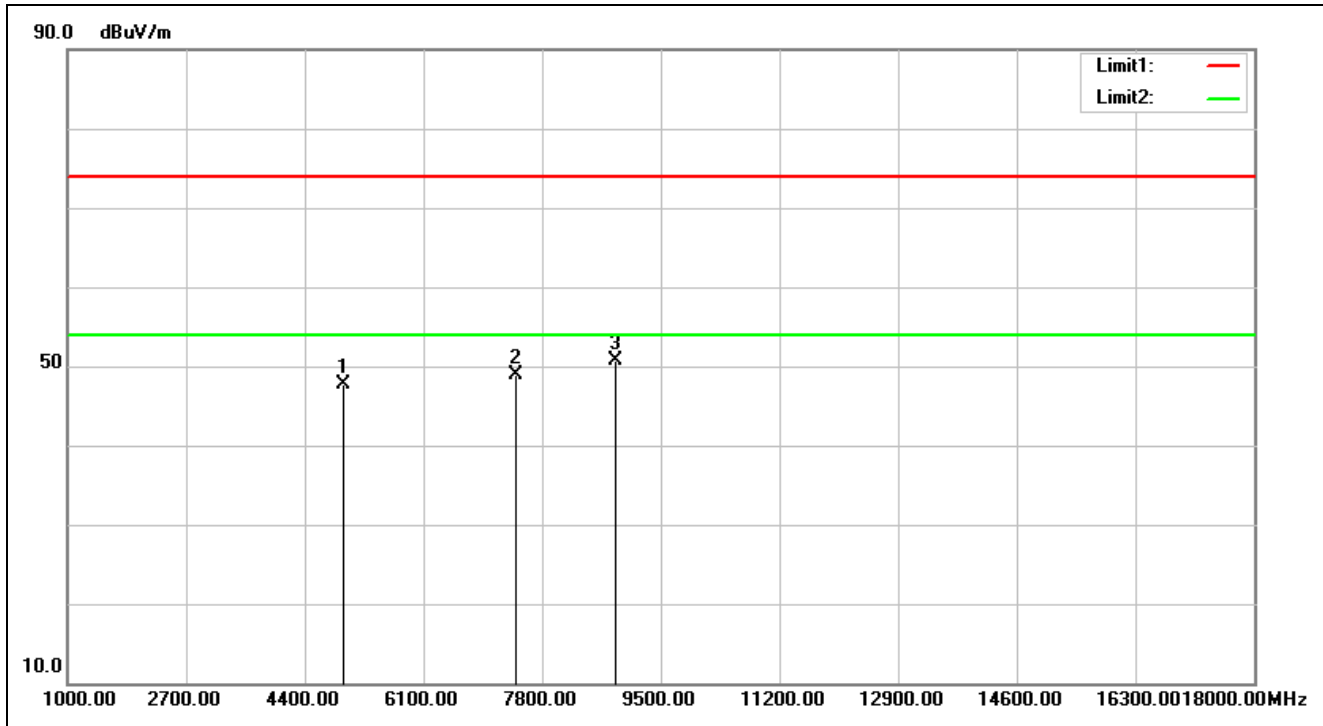
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:07:16
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX		
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	4882.000	-2.50	49.06	46.56	74.00	-27.44	peak			
2	7323.000	5.54	43.66	49.20	74.00	-24.80	peak			
3	8565.000	6.39	45.04	51.43	74.00	-22.57	peak	100	198	



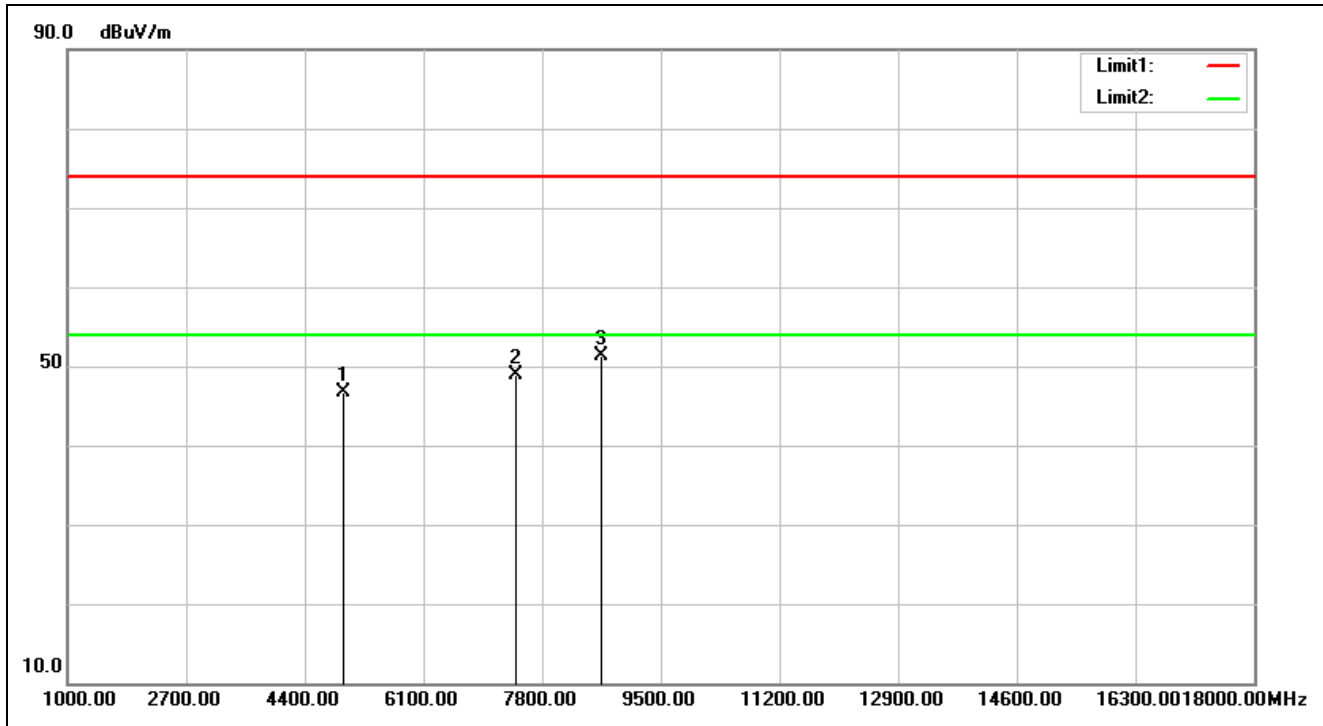
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:08:09
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	20(°C)/50%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX		
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	4882.000	-2.50	48.33	45.83	74.00	-28.17	peak			
2	7323.000	5.54	43.70	49.24	74.00	-24.76	peak			
3	8905.000	6.42	44.22	50.64	74.00	-23.36	peak	100	132	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:09:33
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX		
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	4960.000	-2.28	49.91	47.63	74.00	-26.37	peak			
2	7440.000	5.84	43.02	48.86	74.00	-25.14	peak			
3	8854.000	6.42	44.32	50.74	74.00	-23.26	peak	100	147	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:10:26
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX		
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	4960.000	-2.28	48.97	46.69	74.00	-27.31	peak			
2	7440.000	5.84	43.16	49.00	74.00	-25.00	peak			
3	8650.000	6.40	44.86	51.26	74.00	-22.74	peak	100	299	

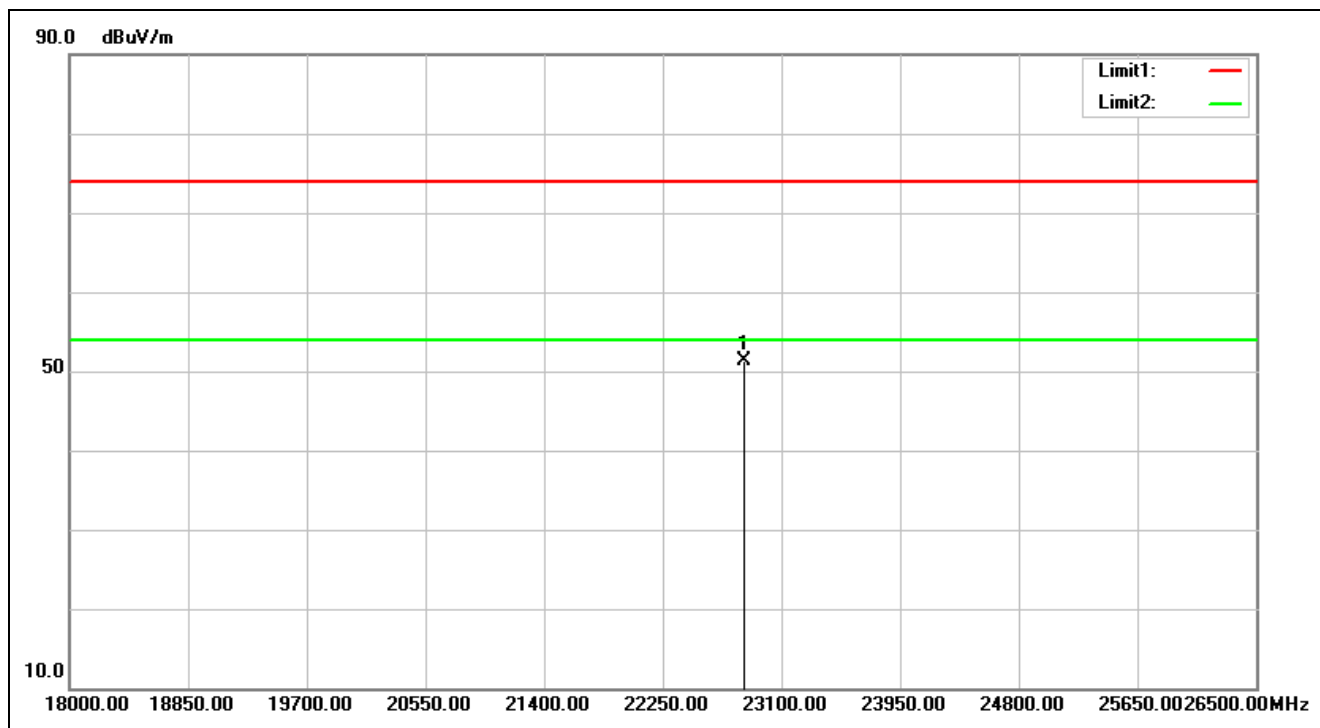
Spurious Emissions, TX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

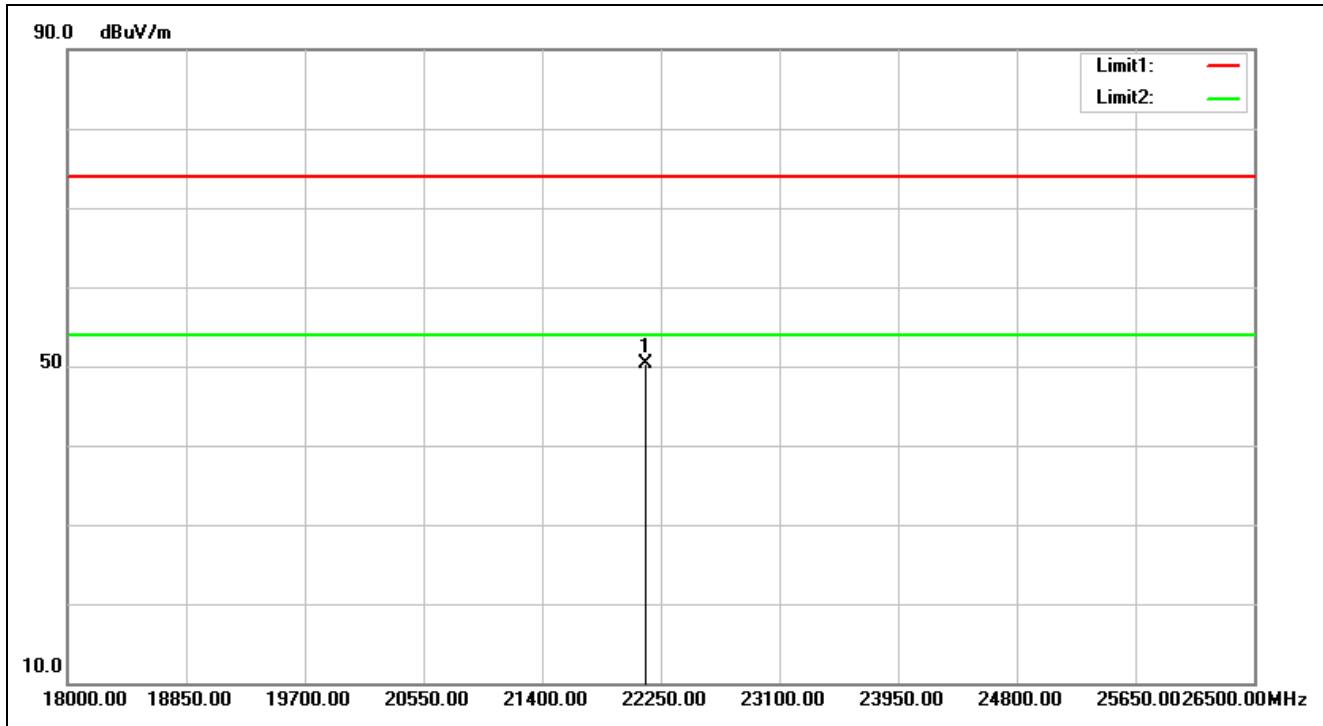
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



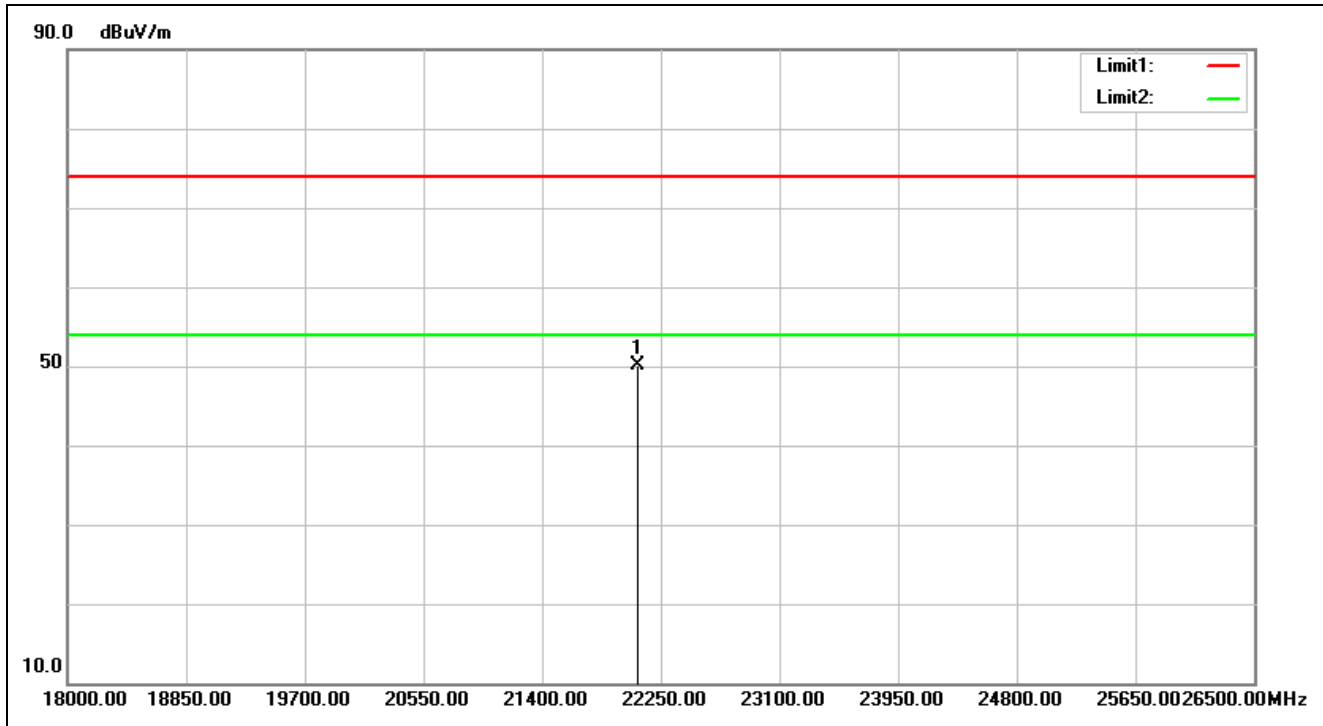
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:18:43
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX		
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	22836.500	32.75	18.47	51.22	74.00	-22.78	peak		0	



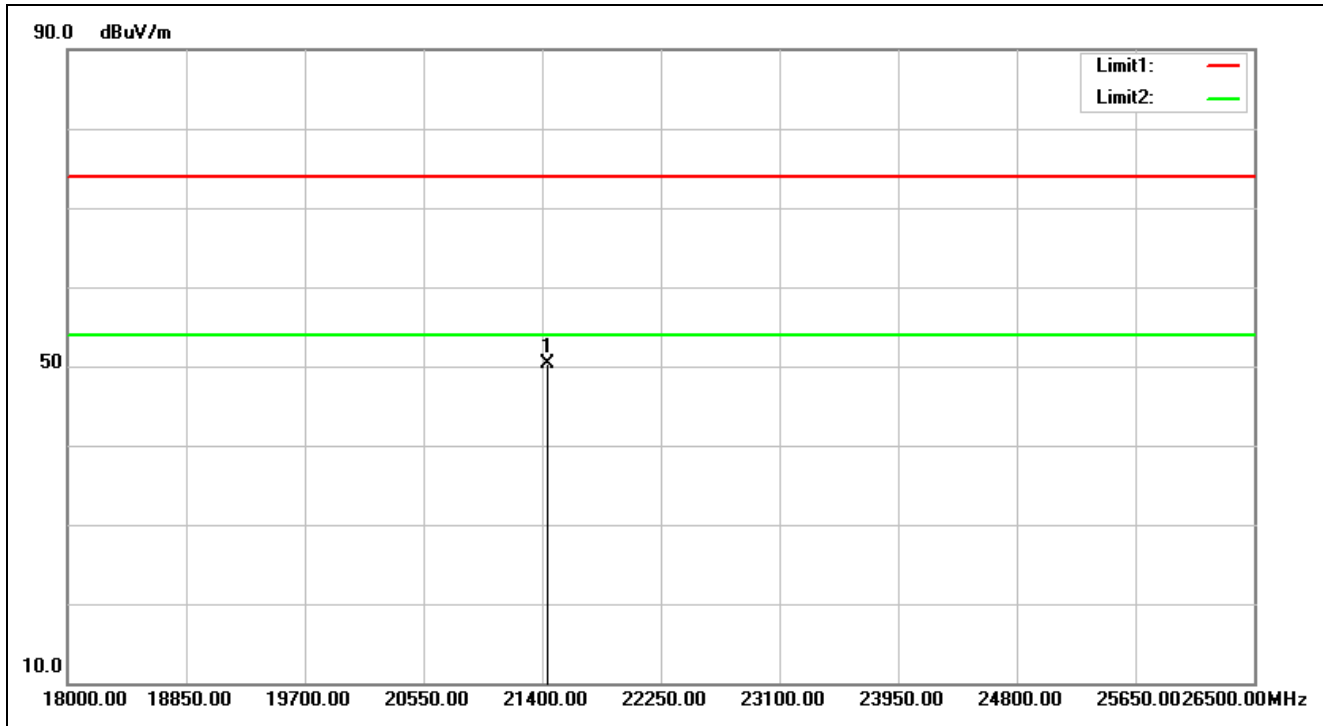
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:18:49
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX		
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	22139.500	32.61	17.67	50.28	74.00	-23.72	peak	100	220	



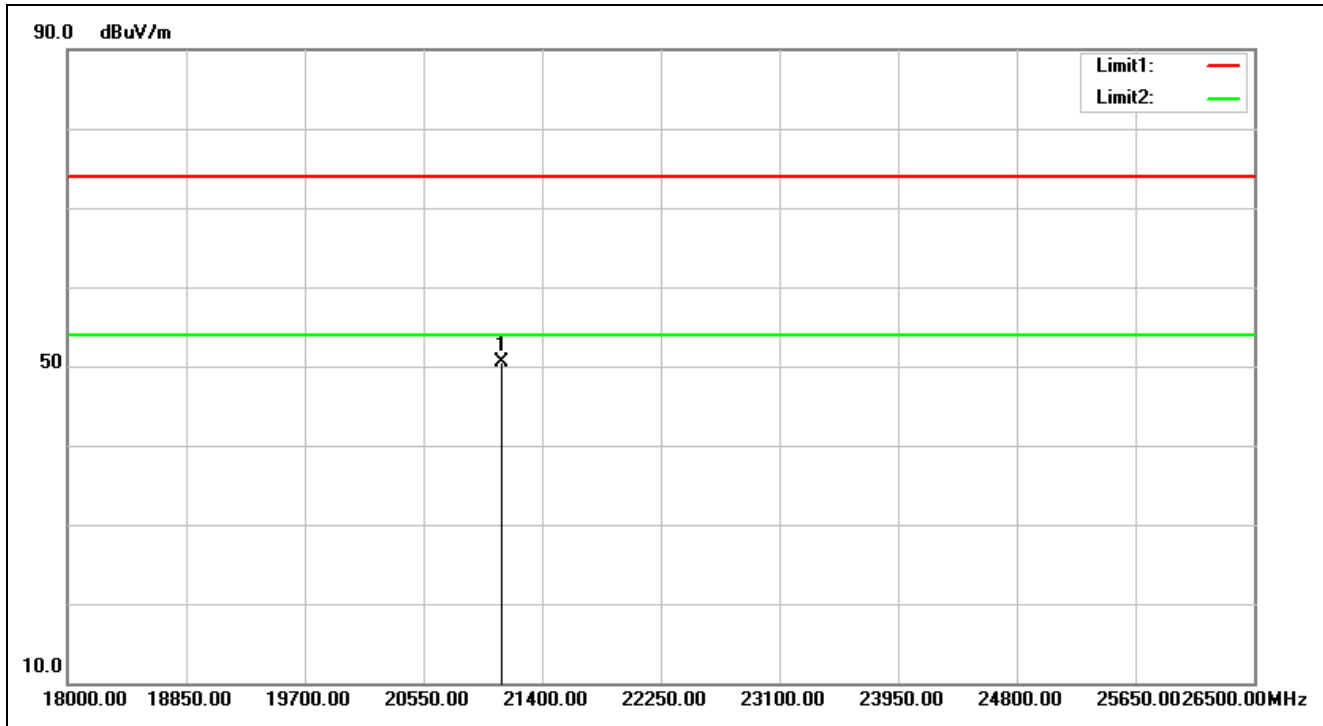
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:19:15
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	22080.000	32.59	17.43	50.02	74.00	-23.98	peak			



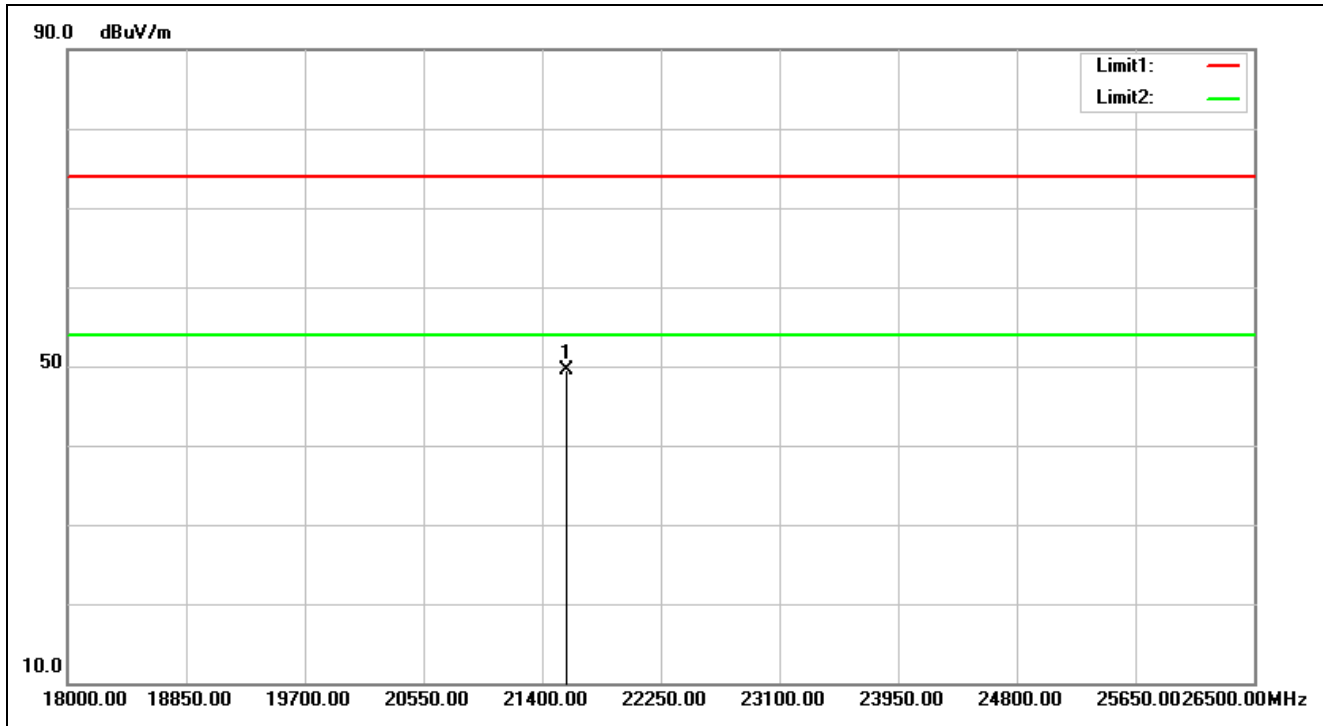
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:19:21
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	21442.500	32.84	17.47	50.31	74.00	-23.69	peak			



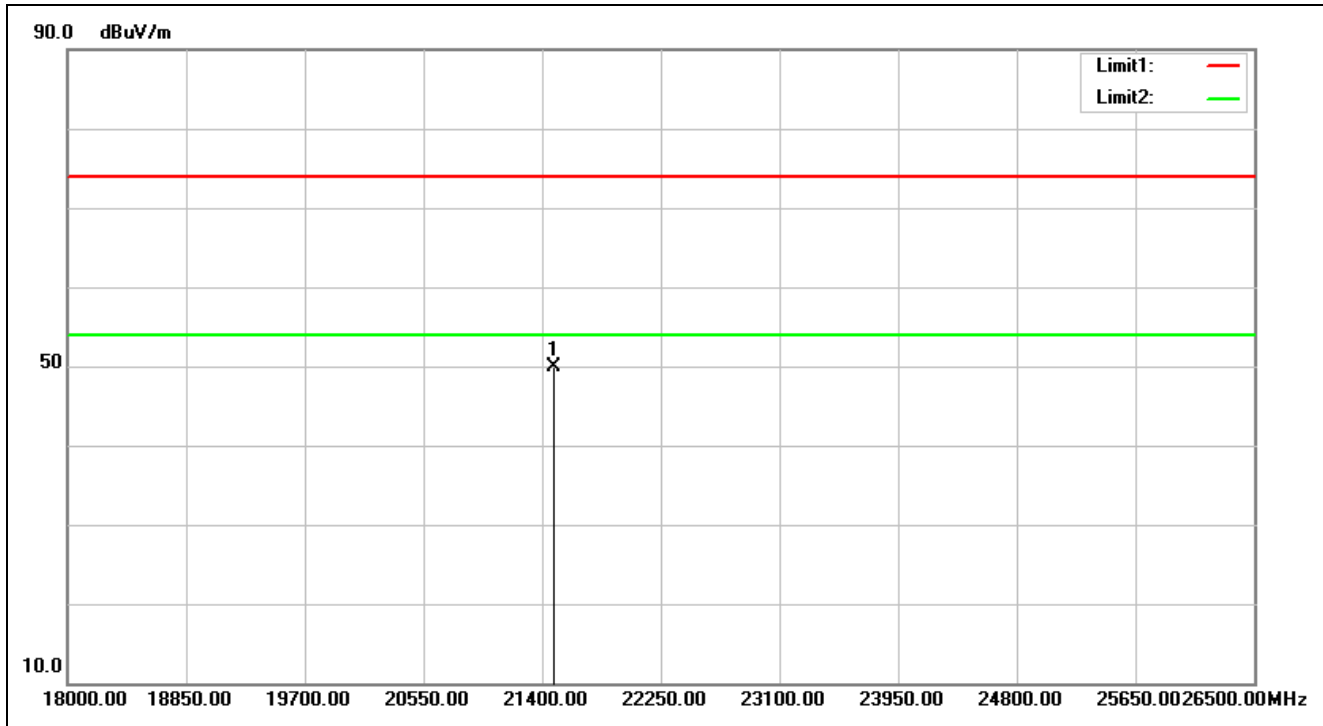
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:19:45
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX		
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	21111.000	32.55	18.03	50.58	74.00	-23.42	peak			



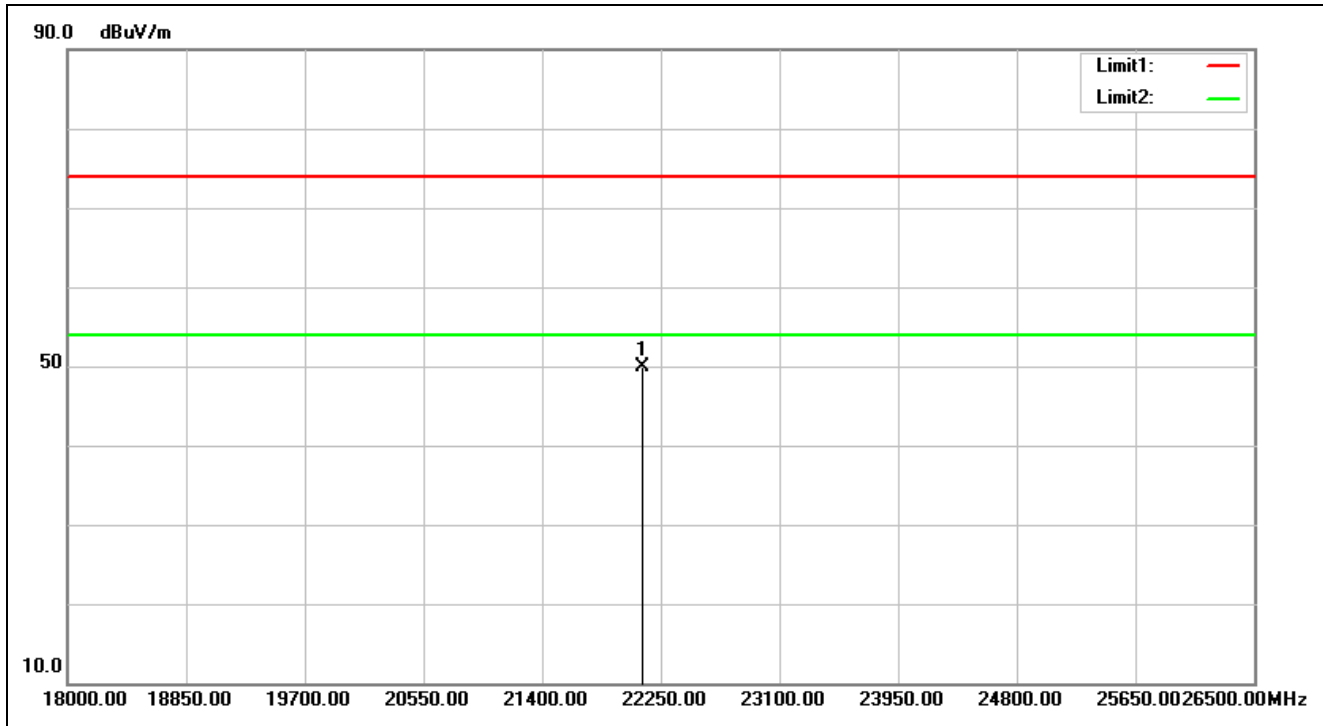
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:19:51
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX		
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	21570.000	32.85	16.71	49.56	74.00	-24.44	peak			



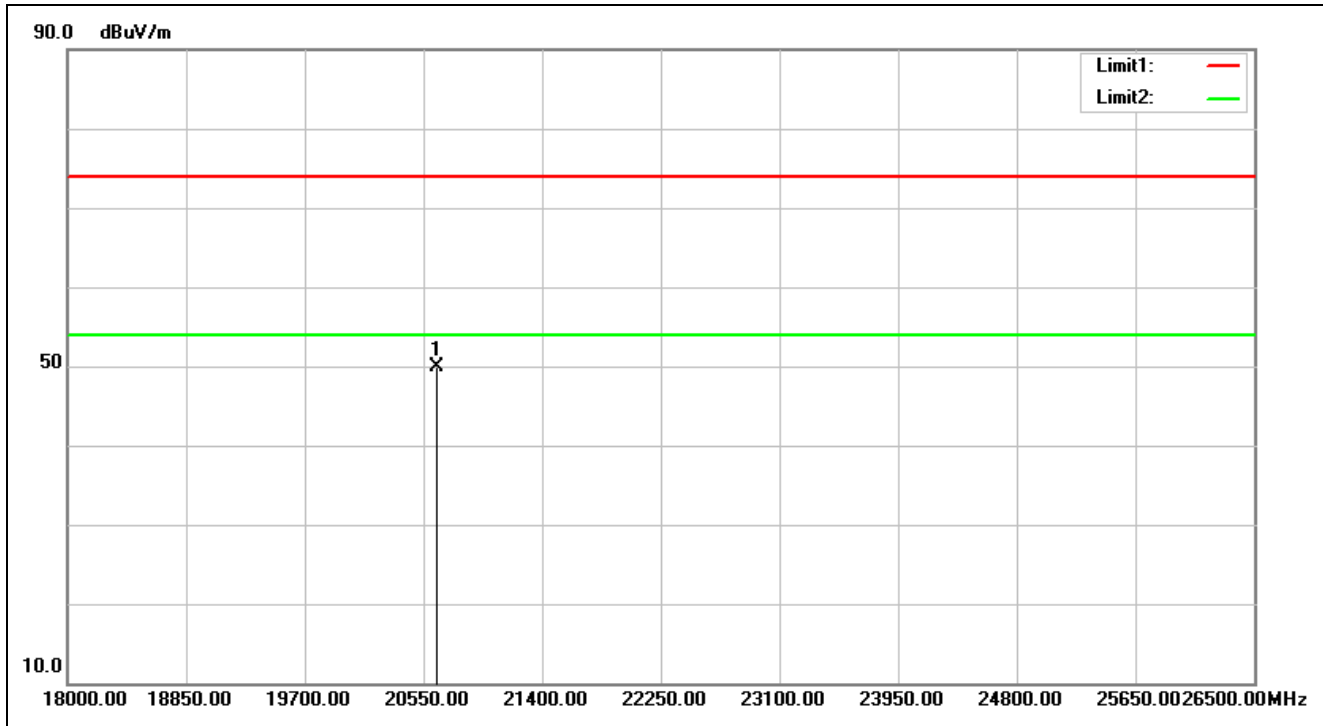
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:20:16
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX		
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	21485.000	32.88	17.07	49.95	74.00	-24.05	peak			



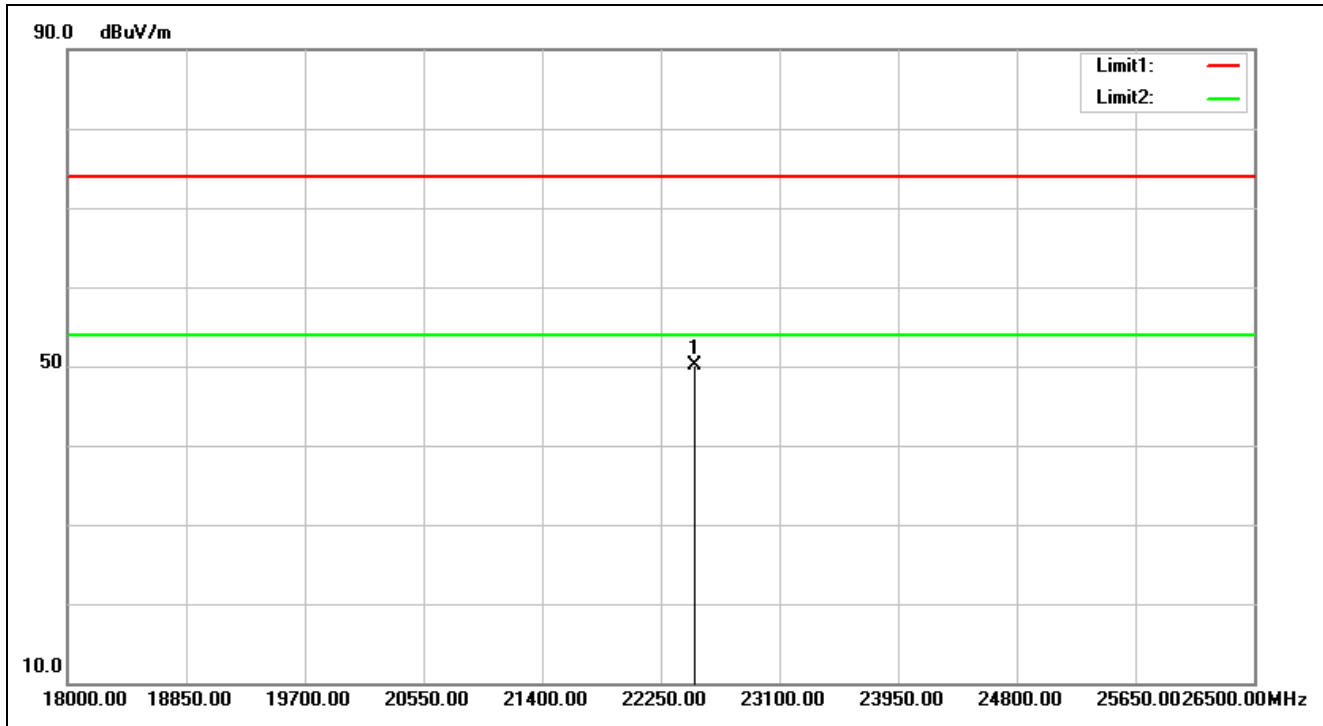
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:20:23
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX		
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	22122.500	32.60	17.25	49.85	74.00	-24.15	peak			



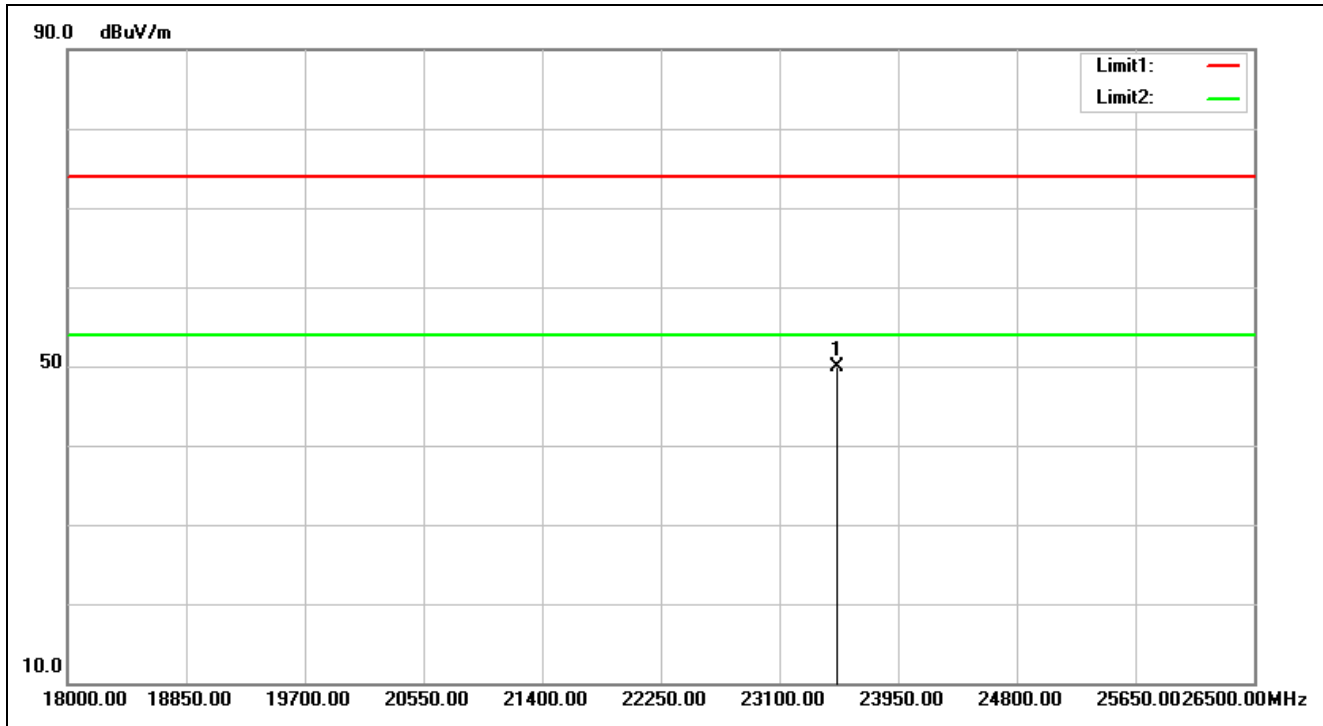
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:20:49
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX		
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	20643.500	31.70	18.29	49.99	74.00	-24.01	peak			



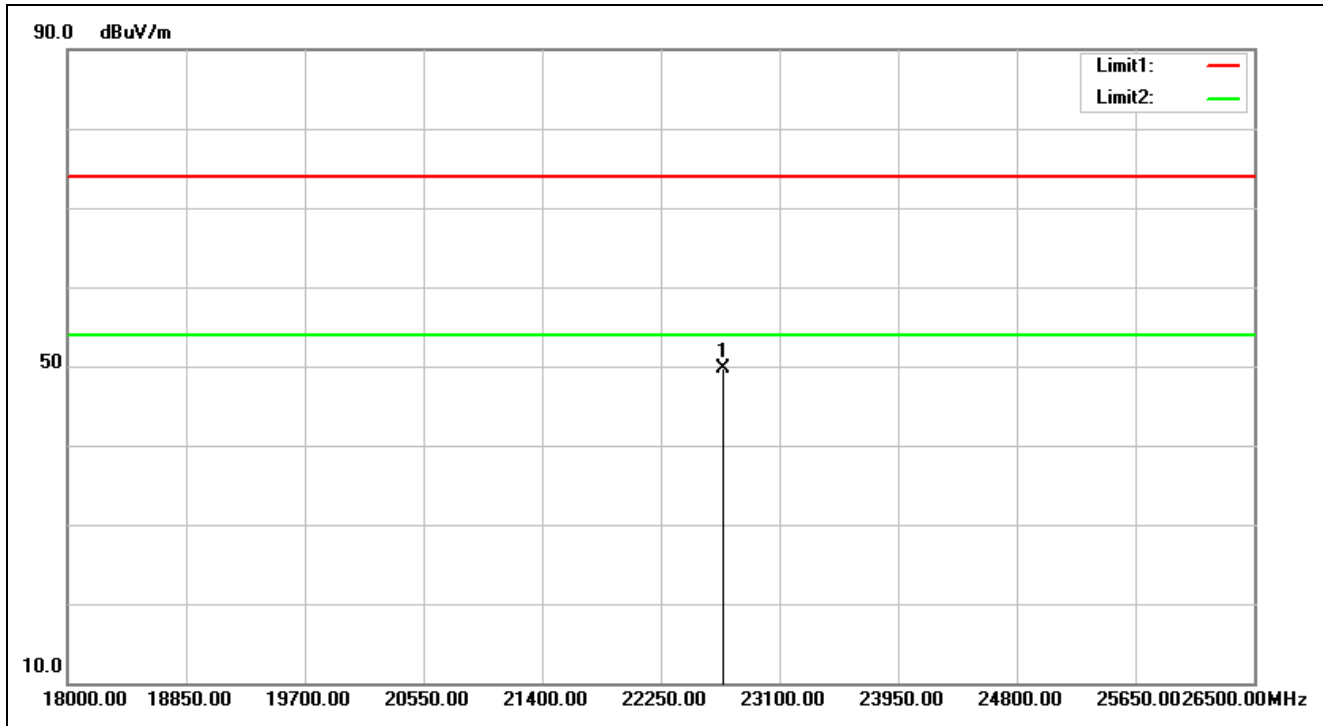
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:20:56
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX		
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	22496.500	32.64	17.41	50.05	74.00	-23.95	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:22:40
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX		
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	23508.000	33.26	16.67	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:	2018/4/18 05:22:47
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX		
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	22692.000	32.70	17.10	49.80	74.00	-24.20	peak			

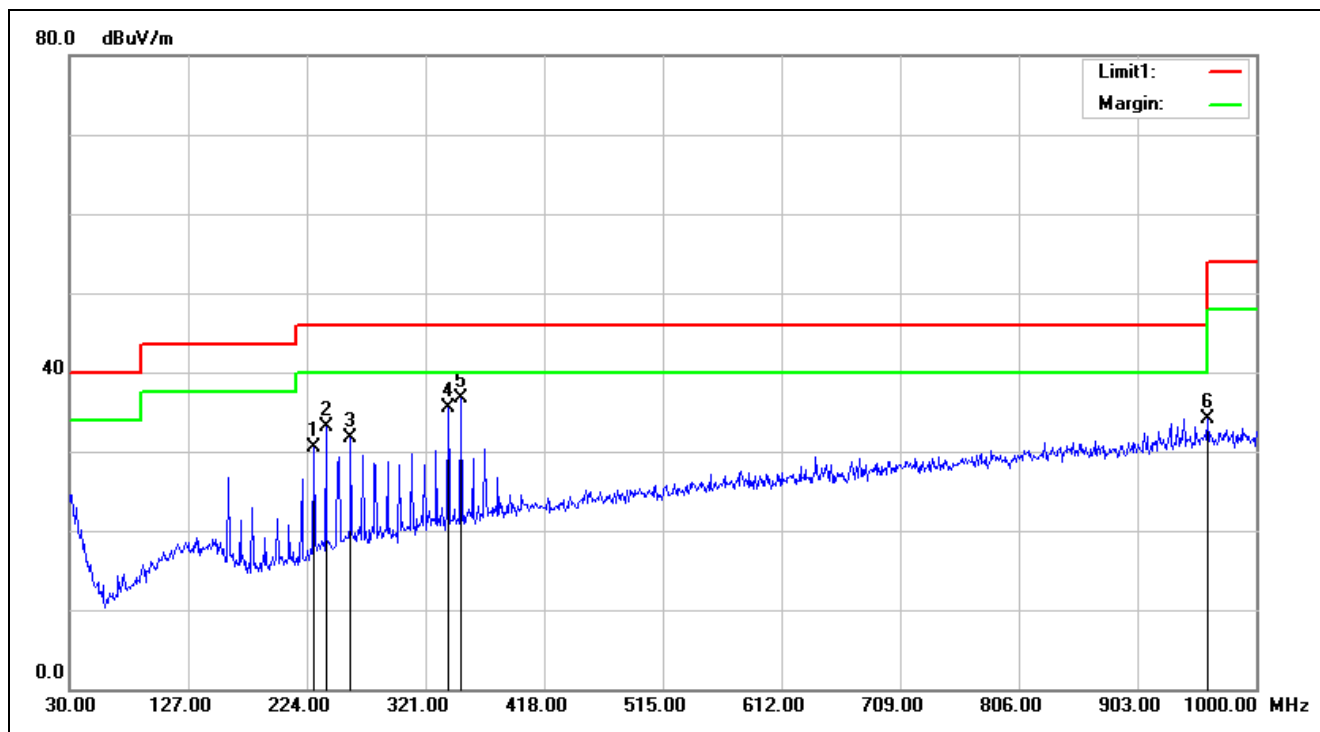
Spurious Emissions, TX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

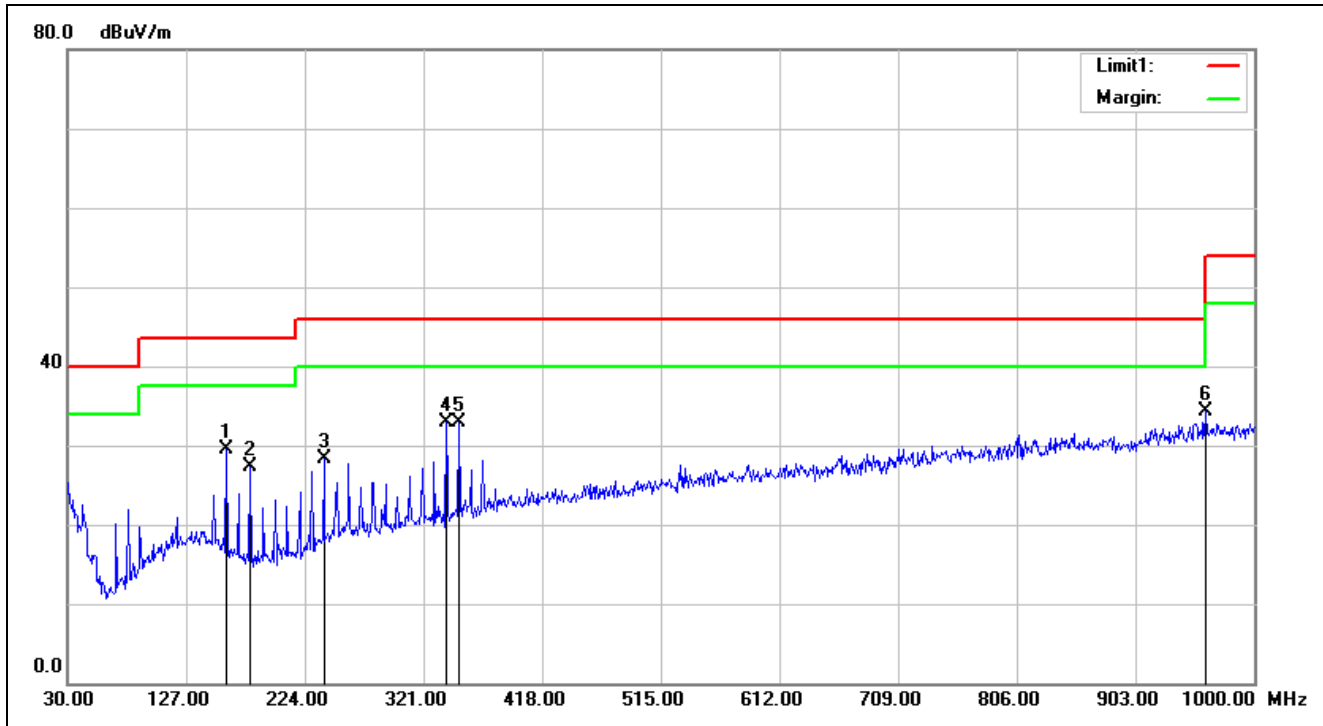
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/19 04:45:34
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	38.01	30.44	46.00	-15.56	QP	100	260	
2	239.5200	-6.85	39.97	33.12	46.00	-12.88	QP	100	122	
3	259.8900	-4.94	36.55	31.61	46.00	-14.39	QP	100	273	
4	339.4300	-3.61	39.14	35.53	46.00	-10.47	QP	100	250	
5	350.1000	-3.34	40.01	36.67	46.00	-9.33	QP	100	250	
6	960.2300	5.54	28.64	34.18	54.00	-19.82	QP	100	43	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/19 04:46:27
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	159.9800	-8.07	37.57	29.50	43.50	-14.00	QP	100	84	
2	179.3800	-9.59	36.88	27.29	43.50	-16.21	QP	100	81	
3	239.5200	-6.85	35.24	28.39	46.00	-17.61	QP	100	223	
4	339.4300	-3.61	36.55	32.94	46.00	-13.06	QP	100	1	
5	350.1000	-3.34	36.20	32.86	46.00	-13.14	QP	100	341	
6	960.2300	5.54	28.86	34.40	54.00	-19.60	QP	100	127	

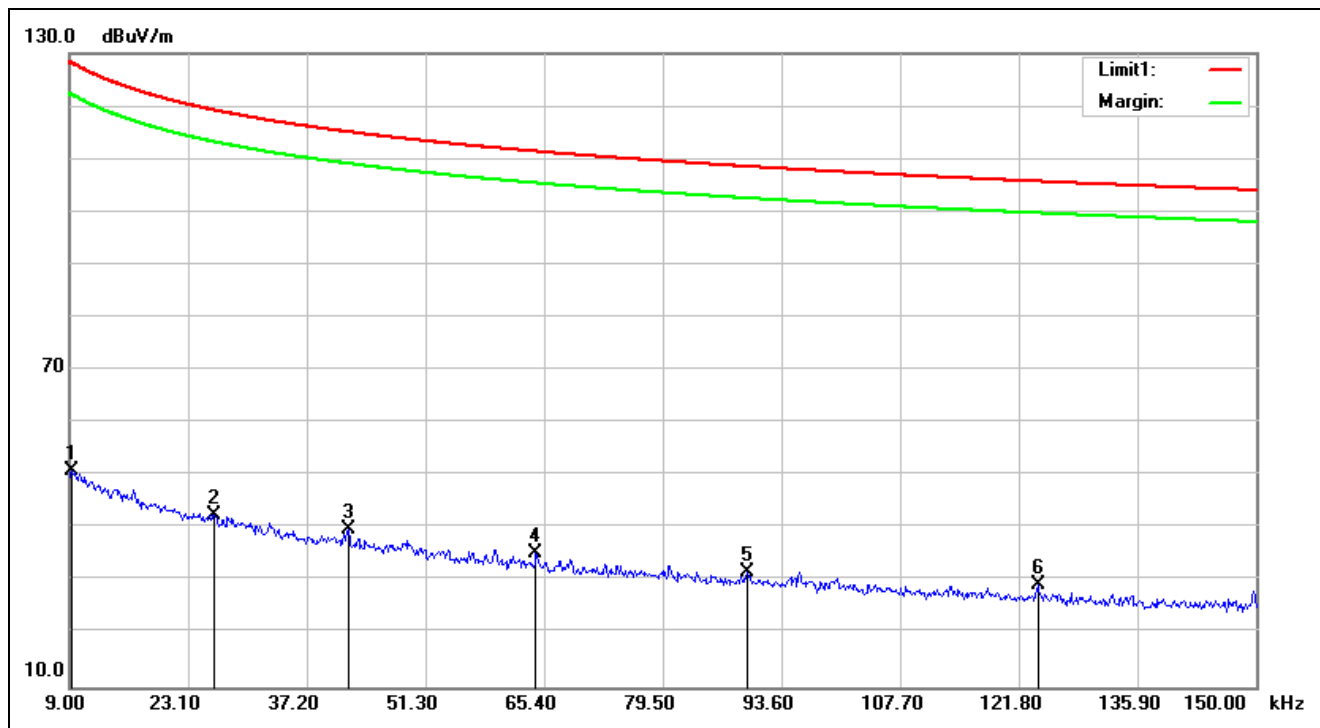
Spurious Emissions, TX Mode, 9k-30M



TUV Rheinland Taiwan Ltd.

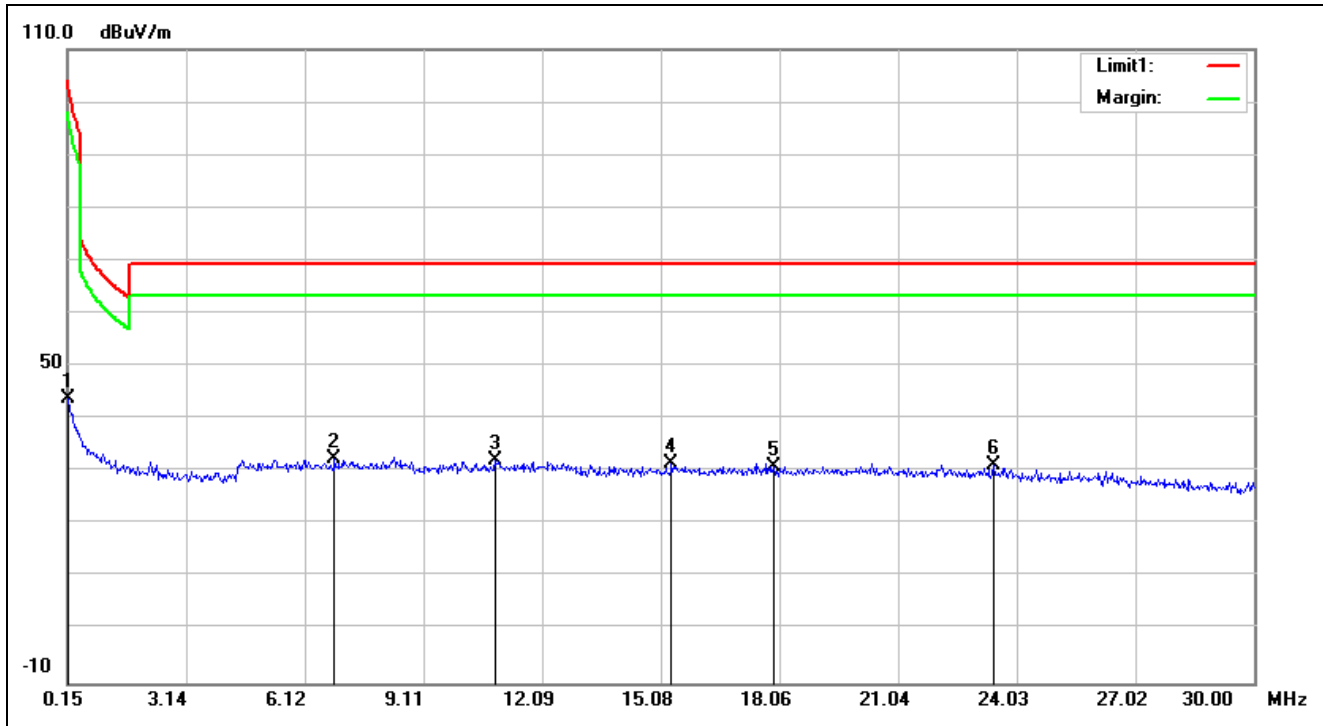
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/19 05:21:09
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	0.0092	19.61	31.45	51.06	128.31	-77.25	QP	100	359	
2	0.0262	20.09	22.55	42.64	119.22	-76.58	QP	100	68	
3	0.0421	19.71	20.19	39.90	115.11	-75.21	QP	100	6	
4	0.0644	19.34	16.05	35.39	111.42	-76.03	QP	100	55	
5	0.0895	19.19	12.58	31.77	108.56	-76.79	QP	100	82	
6	0.1240	19.11	10.14	29.25	105.73	-76.48	QP	100	167	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/19 05:23:43
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	0.1798	19.06	24.84	43.90	102.50	-58.60	QP	100	359	
2	6.8662	19.93	12.38	32.31	69.50	-37.19	QP	100	277	
3	10.8960	20.38	11.69	32.07	69.50	-37.43	QP	100	181	
4	15.3436	21.16	10.32	31.48	69.50	-38.02	QP	100	38	
5	17.9107	21.61	9.40	31.01	69.50	-38.49	QP	100	154	
6	23.4330	22.22	8.90	31.12	69.50	-38.38	QP	100	331	

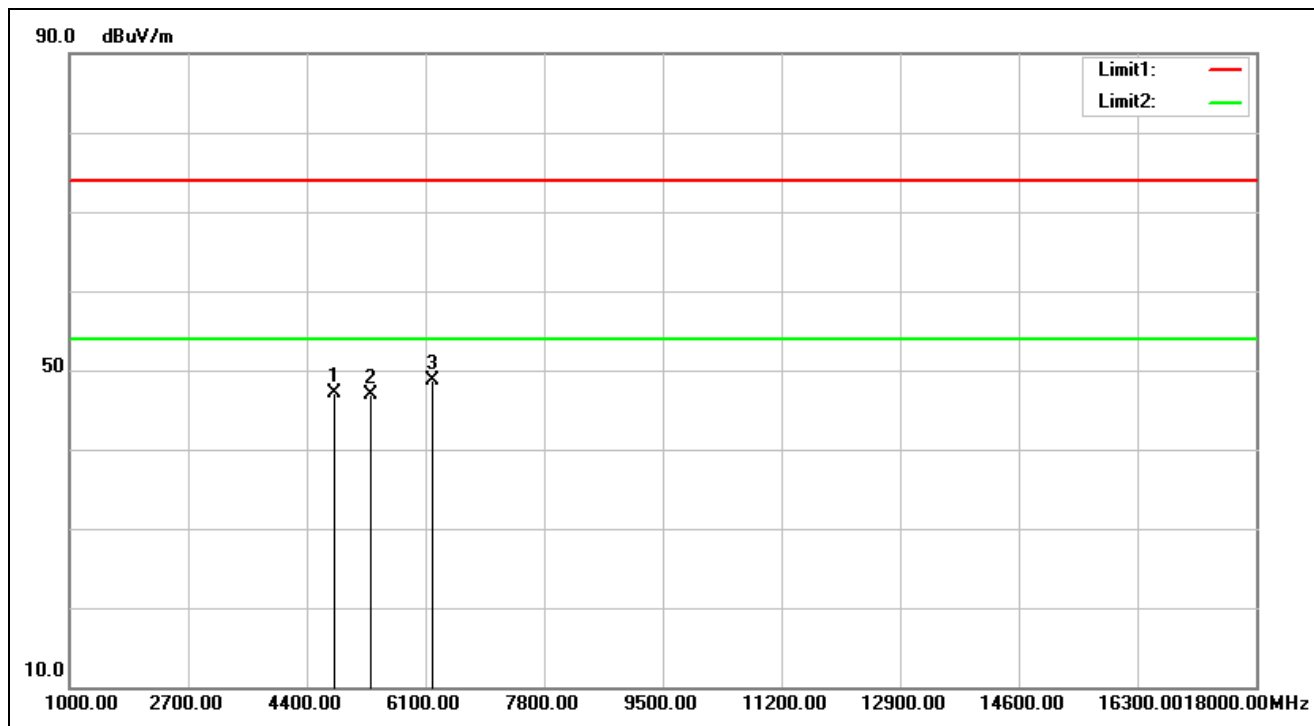
Spurious Emissions, RX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

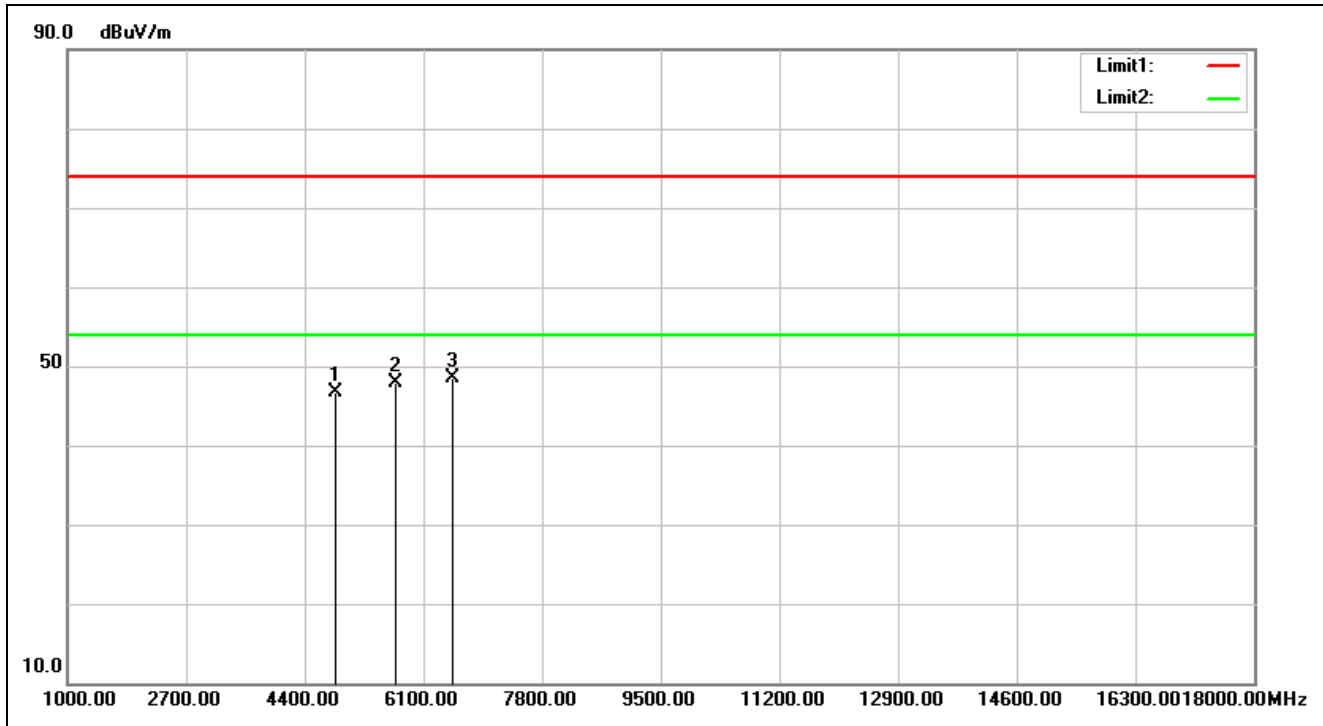
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/18 05:12:39
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	4791.000	-3.55	50.74	47.19	74.00	-26.81	peak	100	358	
2	5318.000	-1.70	48.62	46.92	74.00	-27.08	peak	100	359	
3	6202.000	3.15	45.49	48.64	74.00	-25.36	peak	100	0	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:13:32
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	4842.000	-3.47	50.14	46.67	74.00	-27.33	peak	100	36	
2	5692.000	0.39	47.53	47.92	74.00	-26.08	peak	100	180	
3	6508.000	4.31	44.17	48.48	74.00	-25.52	peak	100	180	

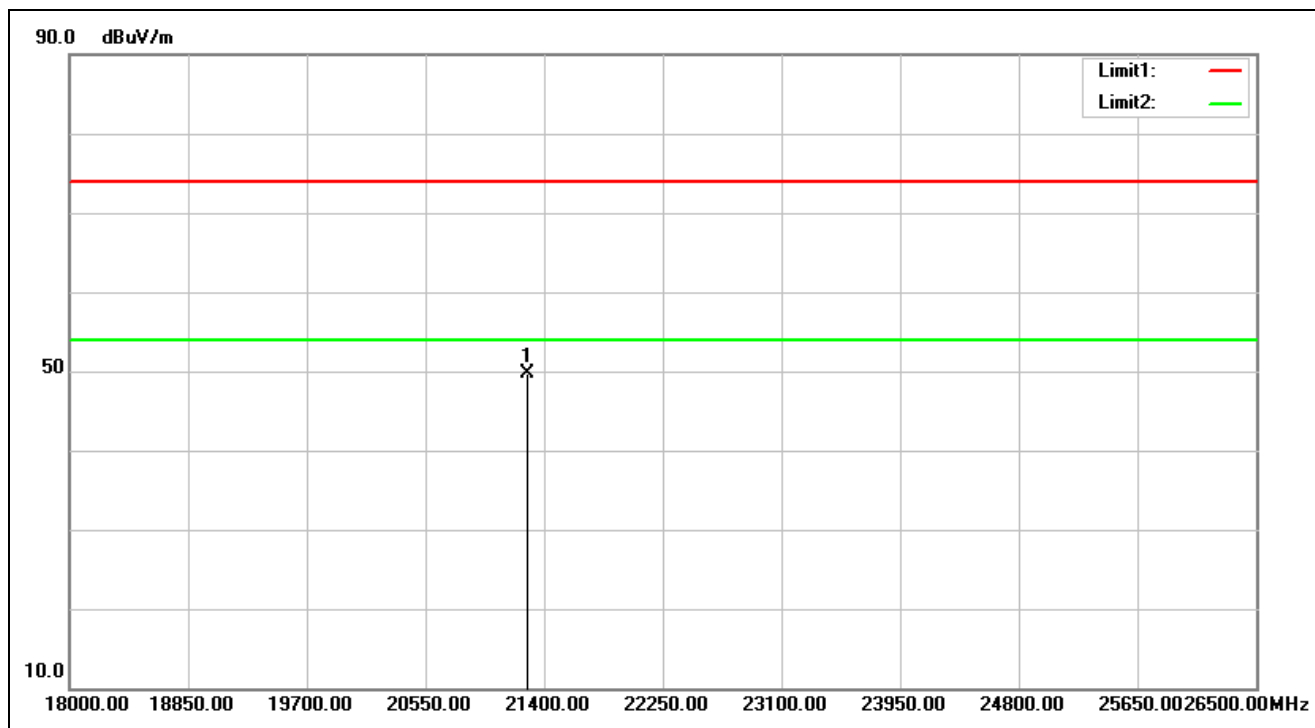
Spurious Emissions, RX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

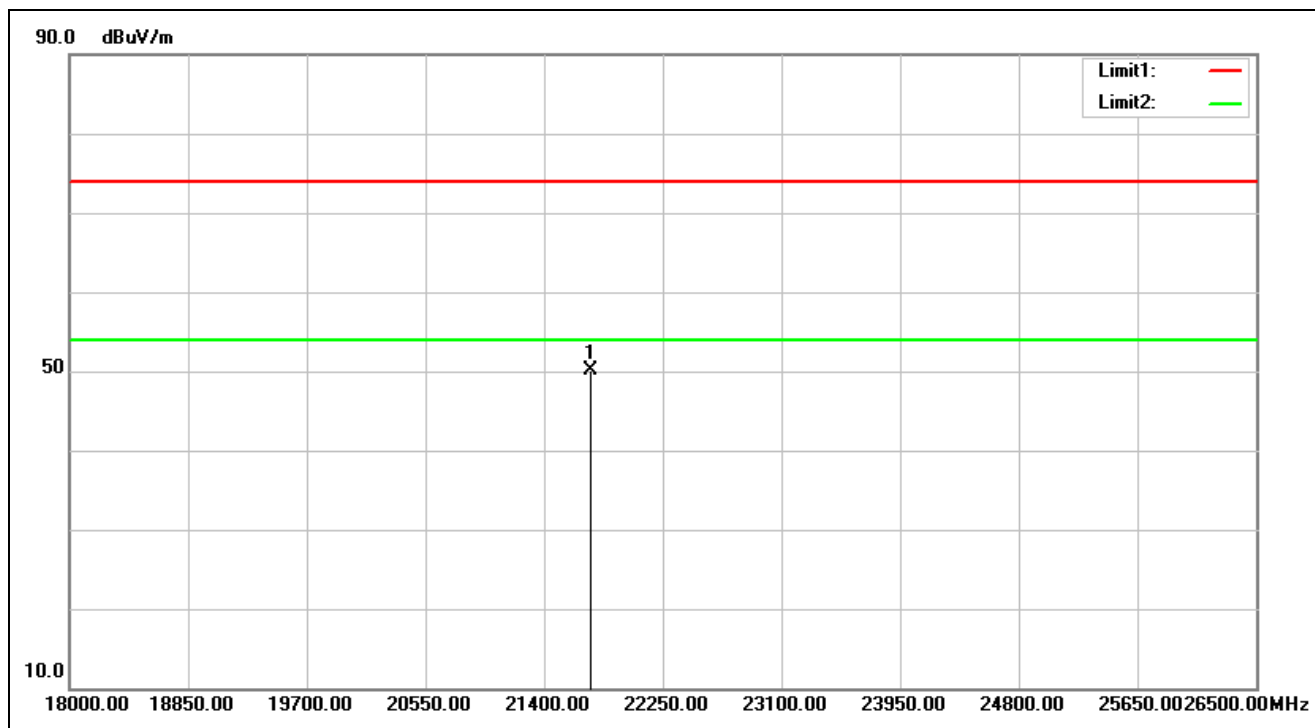
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/18 05:23:15
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	21281.000	32.69	17.00	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:	2018/4/18 05:23:22
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	21731.500	32.75	17.38	50.13	74.00	-23.87	peak			

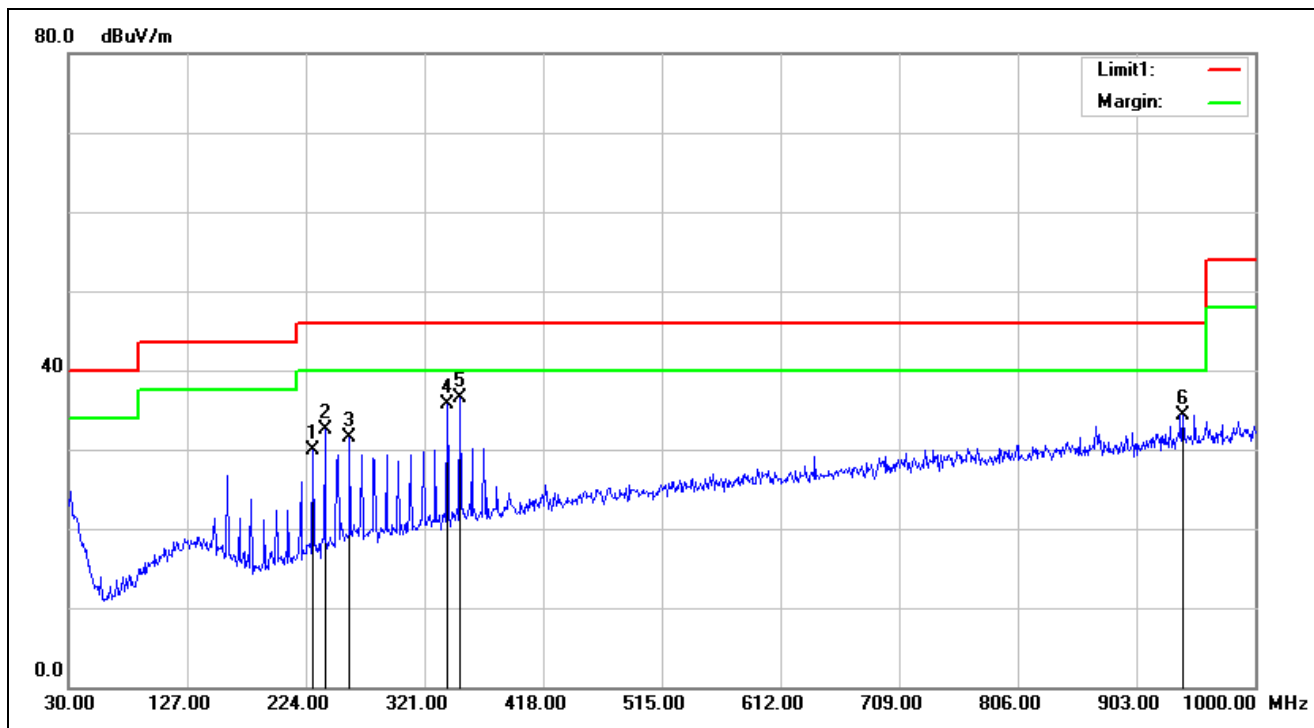
Spurious Emissions, RX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

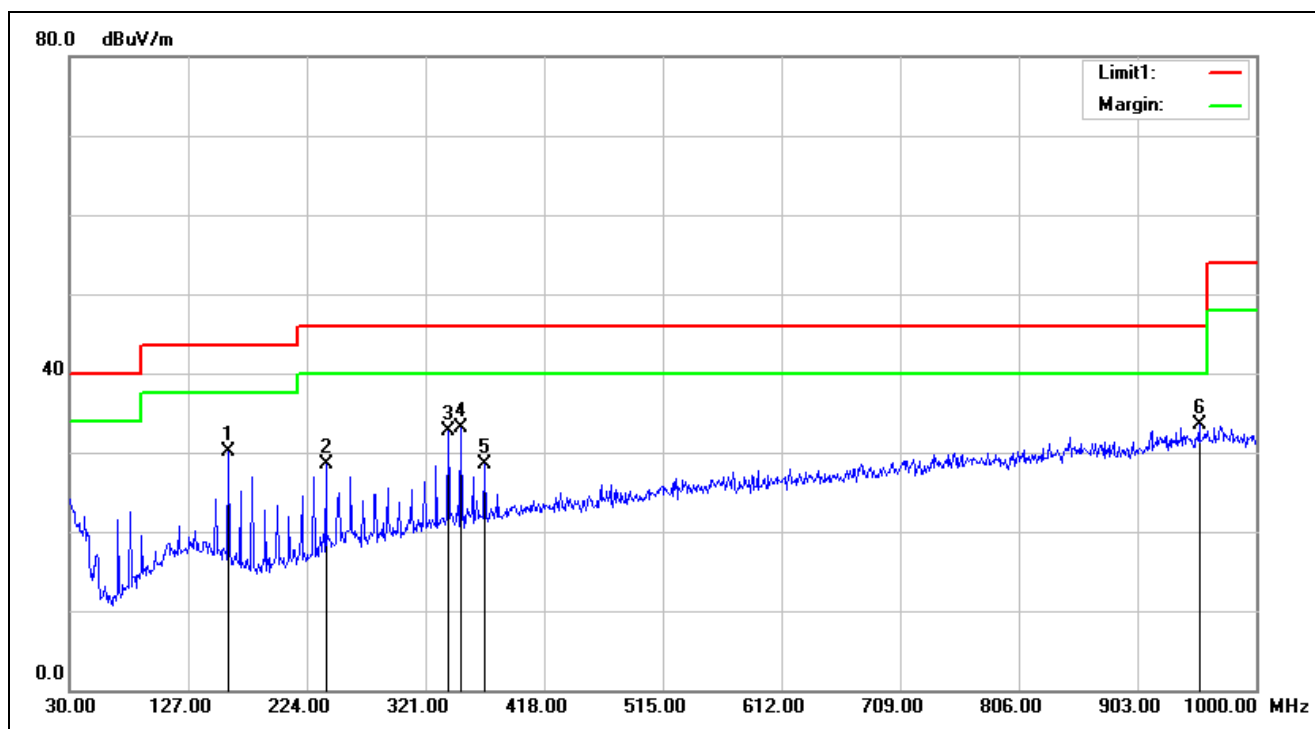
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/19 04:48:15
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	37.44	29.87	46.00	-16.13	QP	100	112	
2	239.5200	-6.85	39.36	32.51	46.00	-13.49	QP	100	109	
3	259.8900	-4.94	36.52	31.58	46.00	-14.42	QP	100	119	
4	339.4300	-3.61	39.28	35.67	46.00	-10.33	QP	100	261	
5	350.1000	-3.34	39.94	36.60	46.00	-9.40	QP	100	245	
6	940.8300	5.23	29.14	34.37	46.00	-11.63	QP	100	66	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/19 04:49:09
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	159.9800	-8.07	38.16	30.09	43.50	-13.41	QP	100	76	
2	239.5200	-6.85	35.26	28.41	46.00	-17.59	QP	100	208	
3	339.4300	-3.61	36.41	32.80	46.00	-13.20	QP	100	360	
4	350.1000	-3.34	36.50	33.16	46.00	-12.84	QP	100	347	
5	369.5000	-2.98	31.50	28.52	46.00	-17.48	QP	100	2	
6	953.4400	5.51	27.94	33.45	46.00	-12.55	QP	100	255	

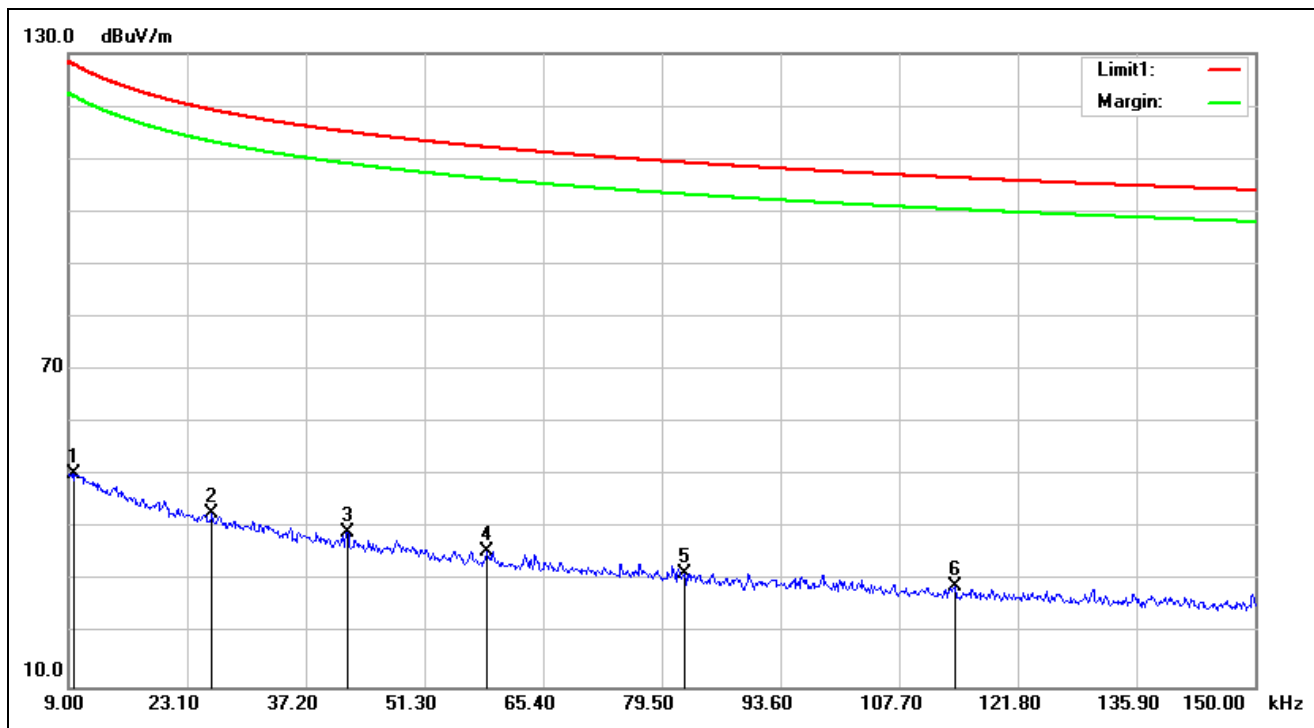
Spurious Emissions, RX Mode, 9K-30M



TUV Rheinland Taiwan Ltd.

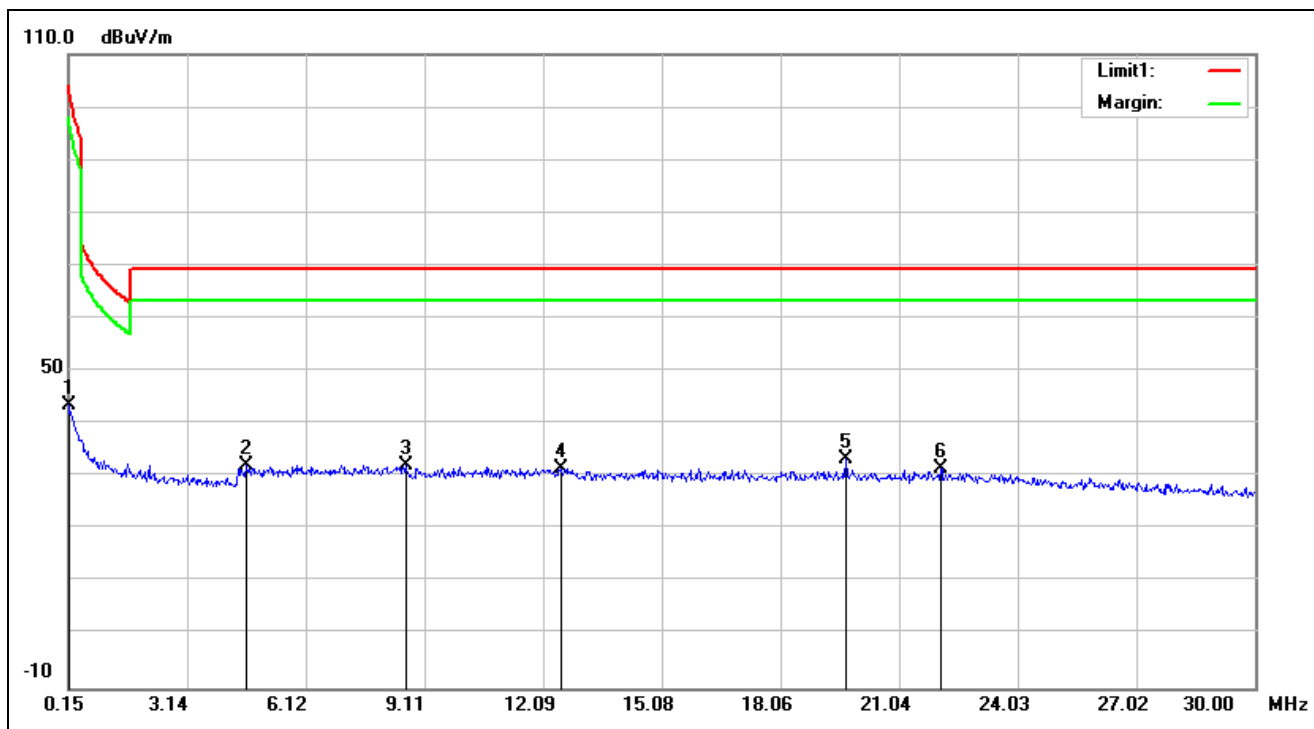
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/19 05:22:03
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	21(°C)/55%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	19.81	30.69	50.50	127.85	-77.35	QP	100	3	
2	0.0261	20.09	22.75	42.84	119.26	-76.42	QP	100	58	
3	0.0421	19.71	19.65	39.36	115.11	-75.75	QP	100	0	
4	0.0586	19.38	16.42	35.80	112.24	-76.44	QP	100	239	
5	0.0822	19.24	12.22	31.46	109.30	-77.84	QP	100	202	
6	0.1143	19.12	9.94	29.06	106.44	-77.38	QP	100	212	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/19 05:24:36
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX		
Remark:	RFA-02-5-C7H1-ANT		

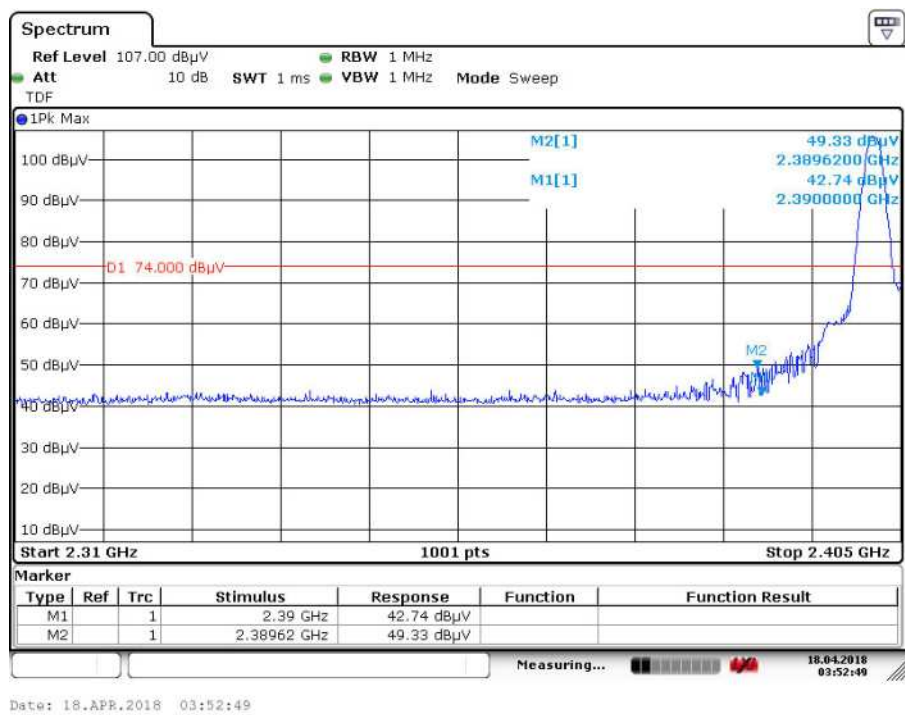
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1500	19.08	24.50	43.58	104.08	-60.50	QP	100	268	
2	4.6275	19.53	12.48	32.01	69.50	-37.49	QP	100	183	
3	8.6274	20.09	12.15	32.24	69.50	-37.26	QP	100	210	
4	12.5378	20.67	10.82	31.49	69.50	-38.01	QP	100	169	
5	19.7018	21.93	11.31	33.24	69.50	-36.26	QP	100	121	
6	22.0898	22.13	9.33	31.46	69.50	-38.04	QP	100	346	

RFMTA331215IMAB701-ANT

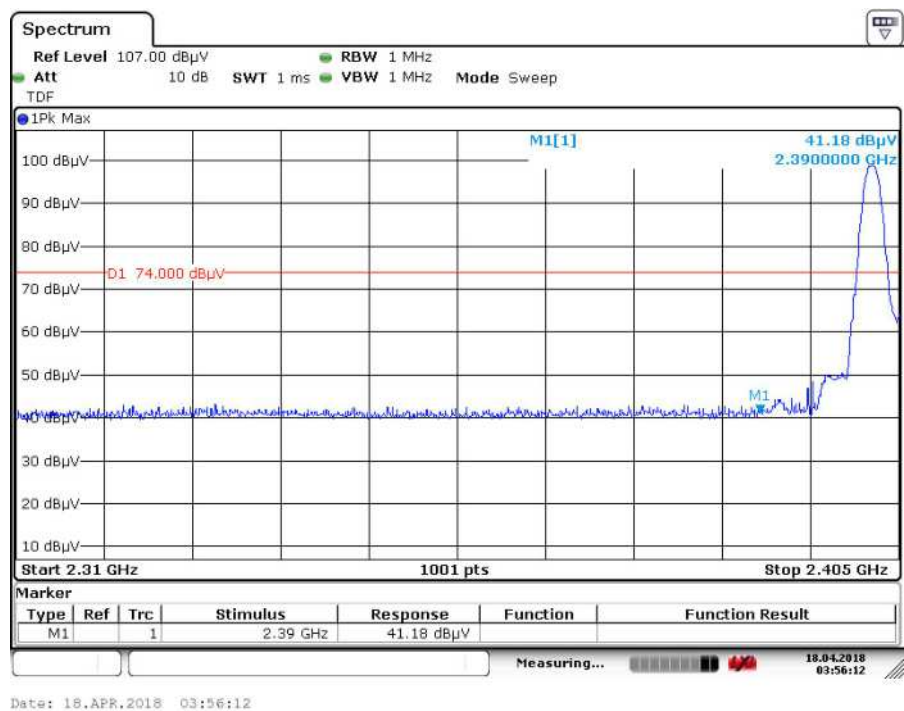
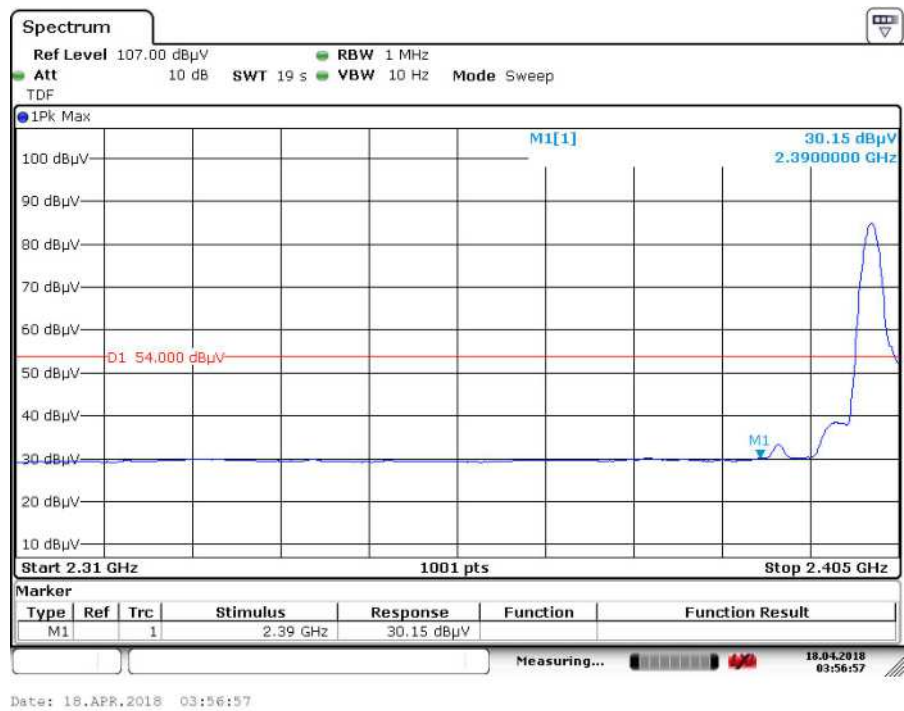
Spurious Emissions, Band Edges, 2.35-2.5G

Radiated Bandedge 1DH5

Low Channel (Hor)

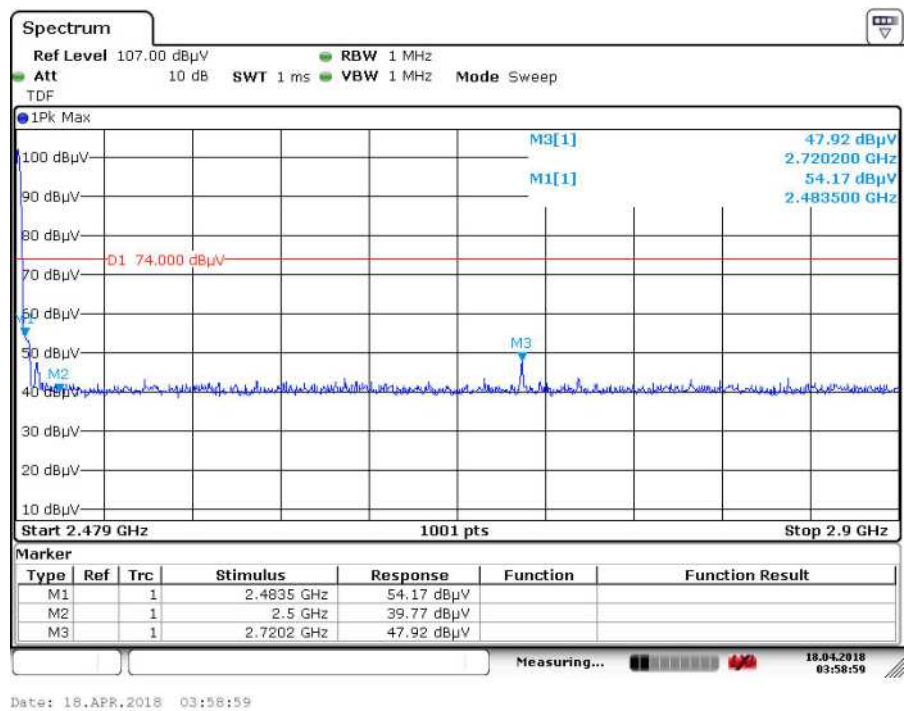
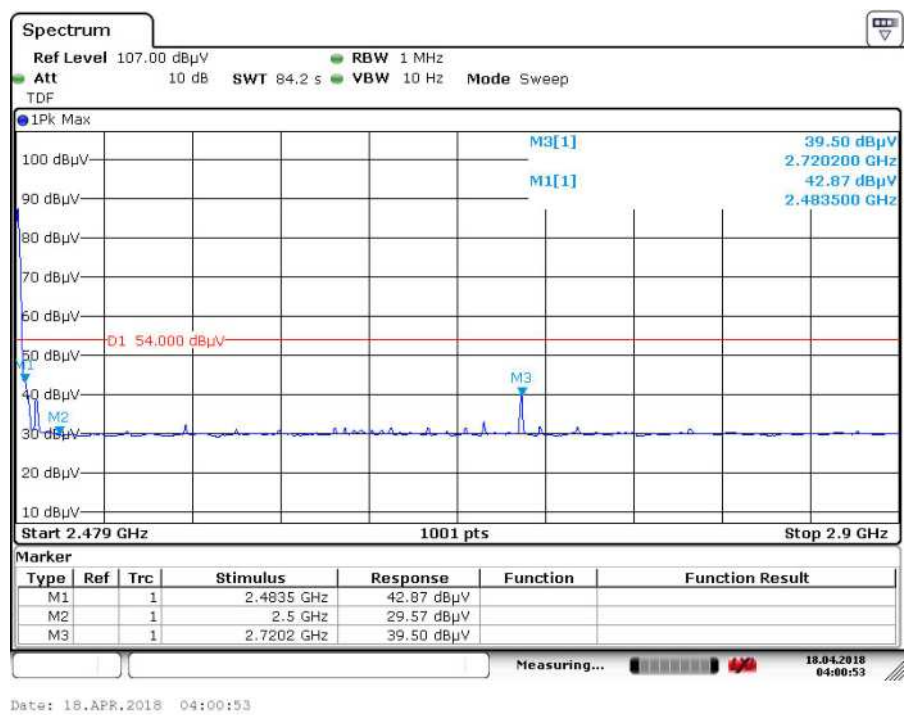


Low Channel (Ver)

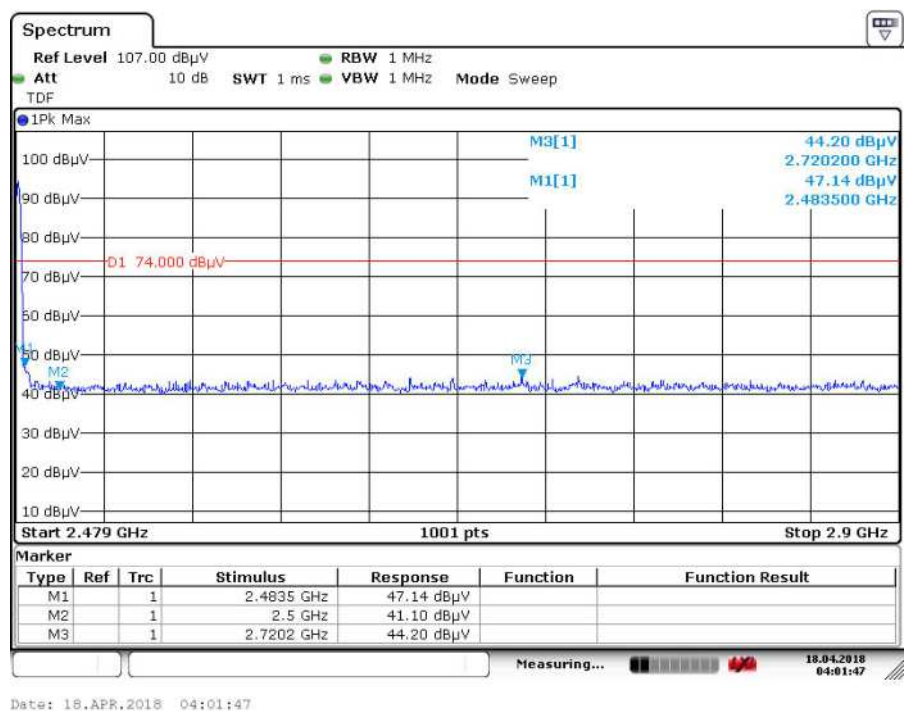
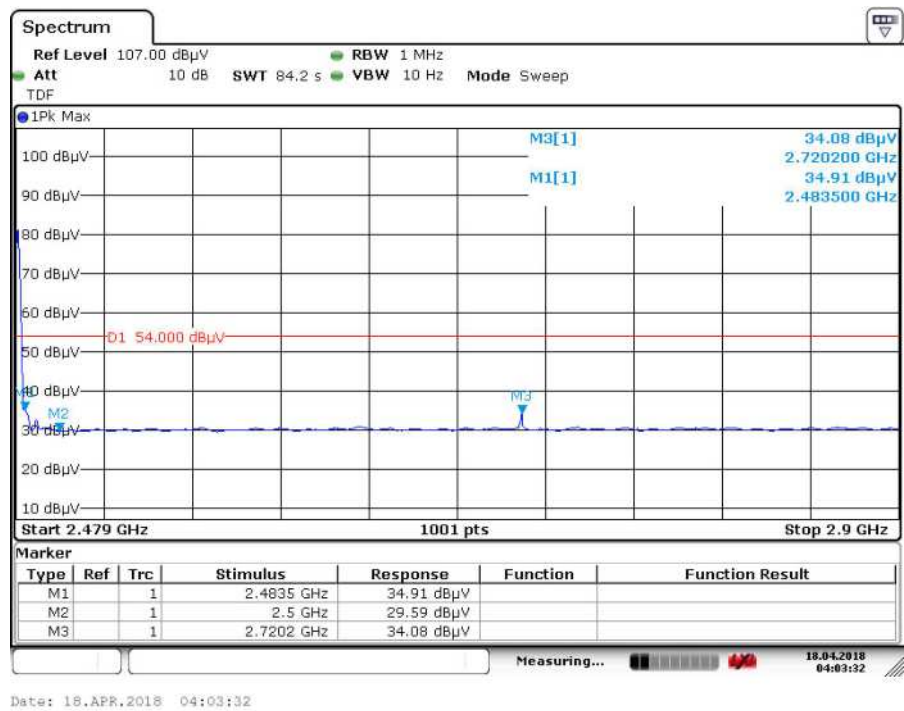


Radiated Bandedge 1DH5

High Channel (Hor)

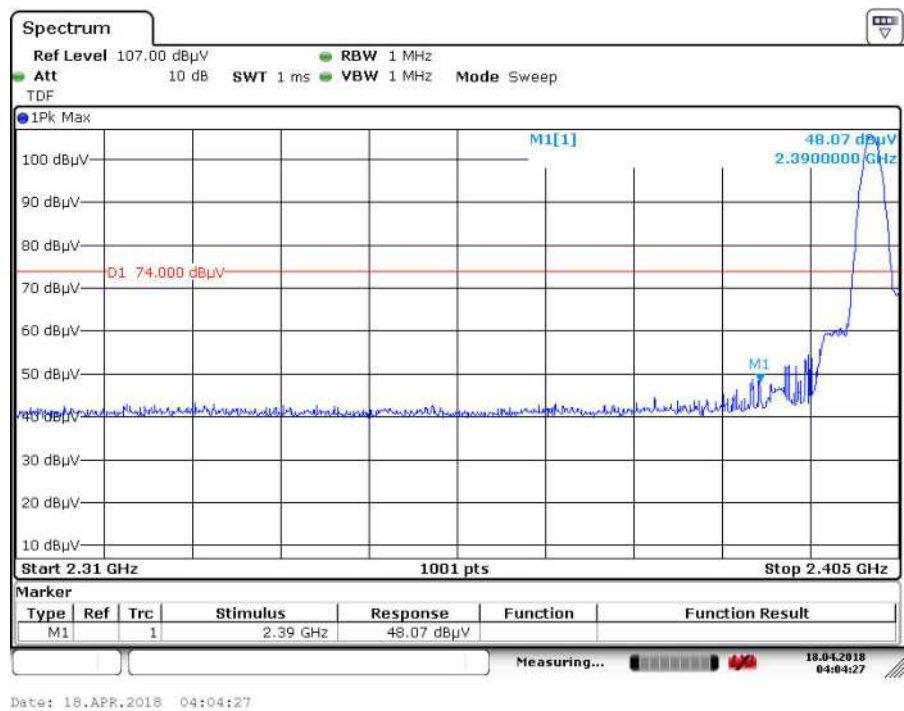
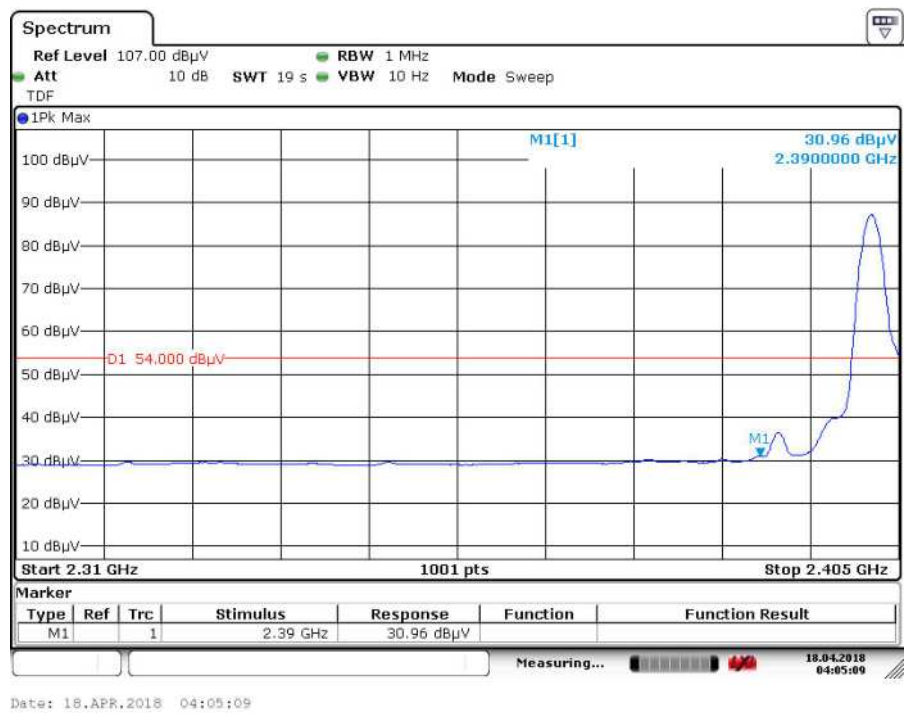


High Channel (Ver)

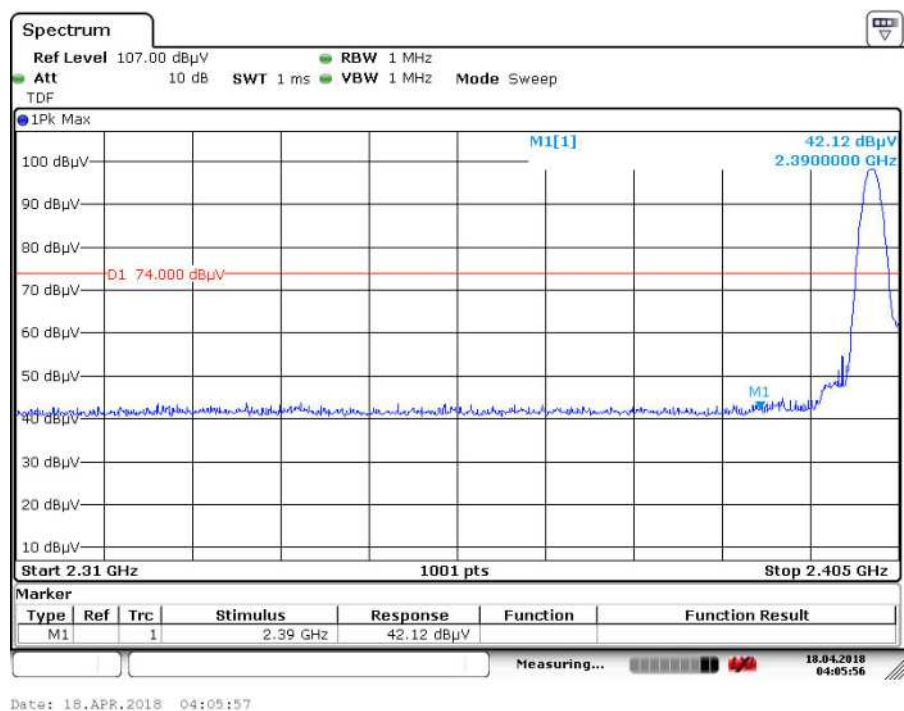
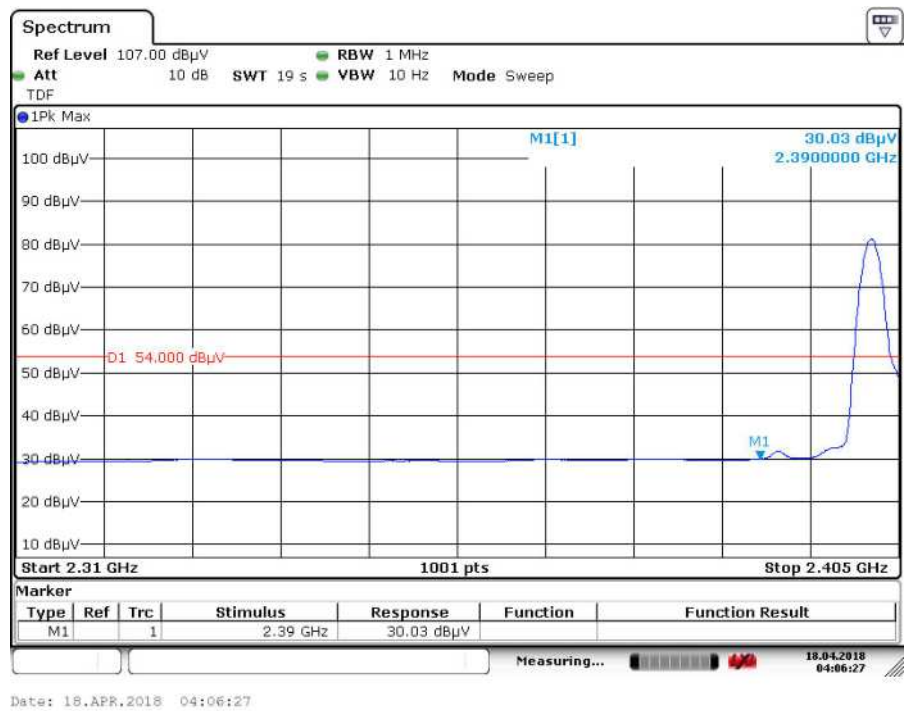


Radiated Bandedge 3DH5

Low Channel (Hor)

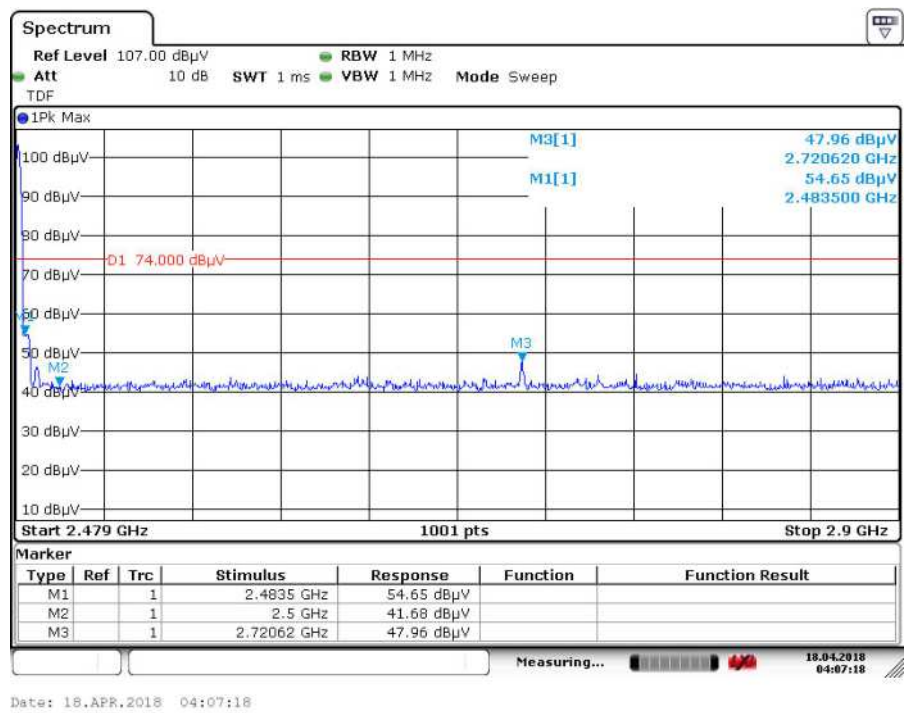
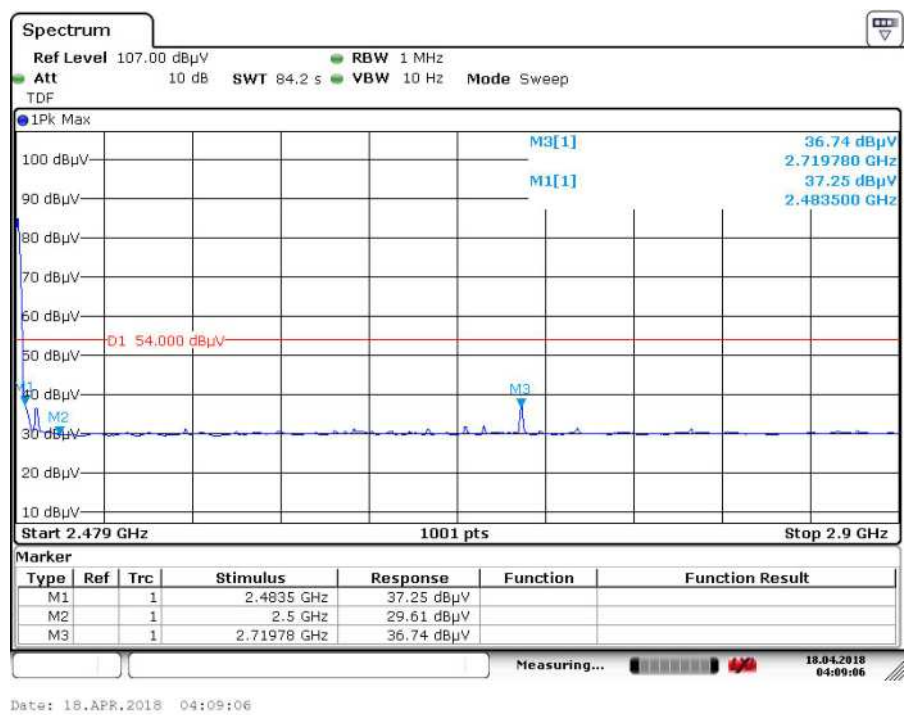


Low Channel (Ver)

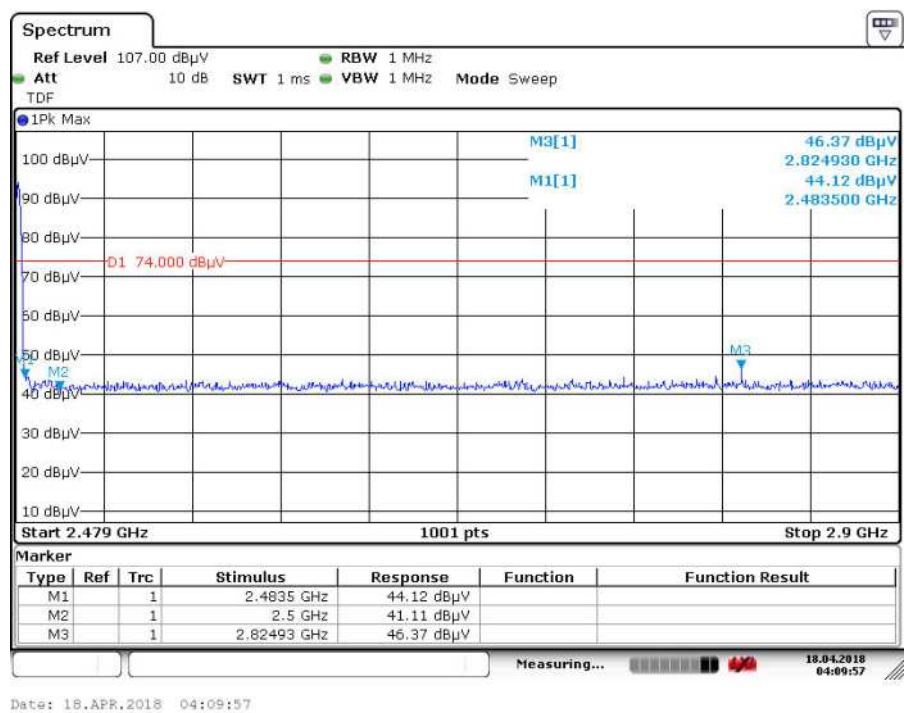
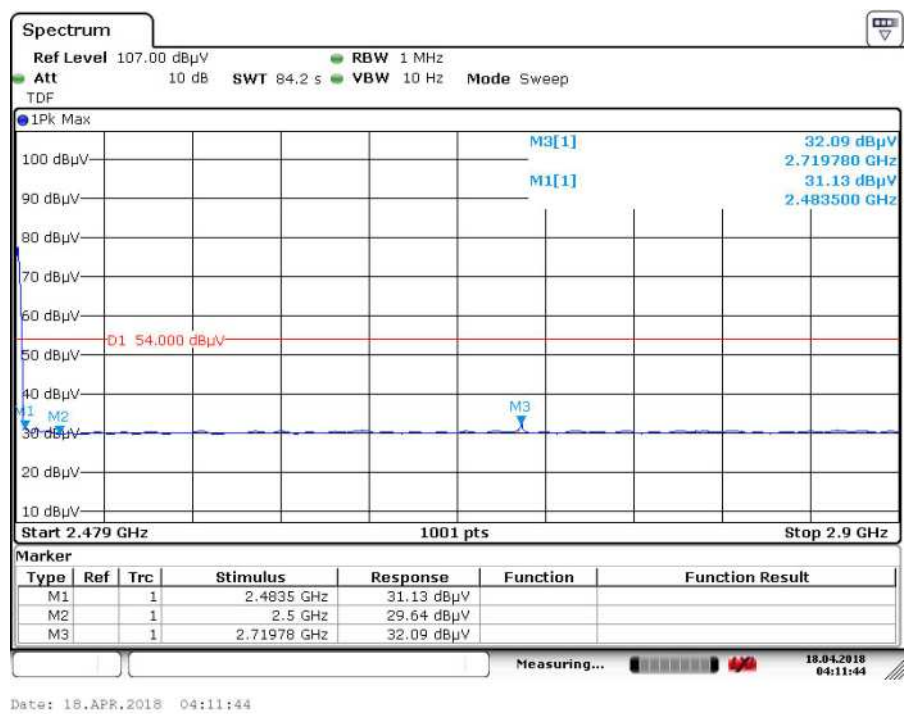


Radiated Bandedge 3DH5

High Channel (Hor)



High Channel (Ver)



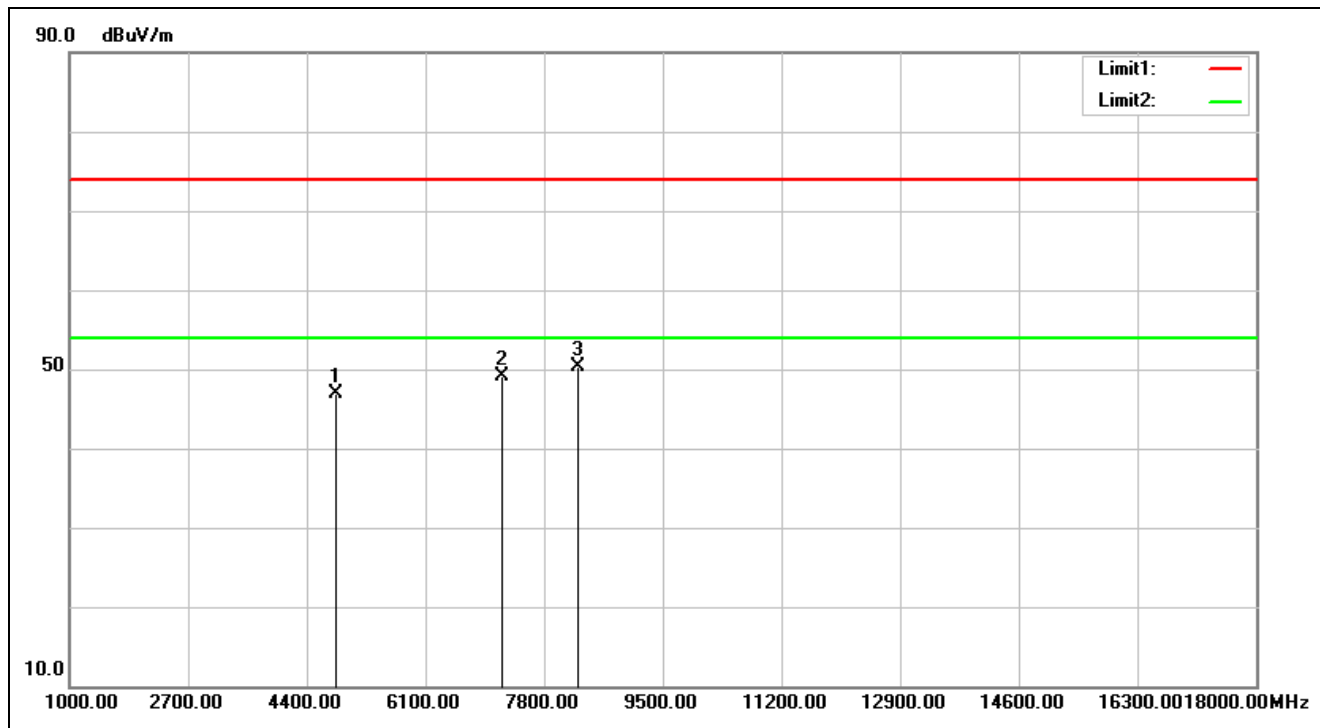
Spurious Emissions, TX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

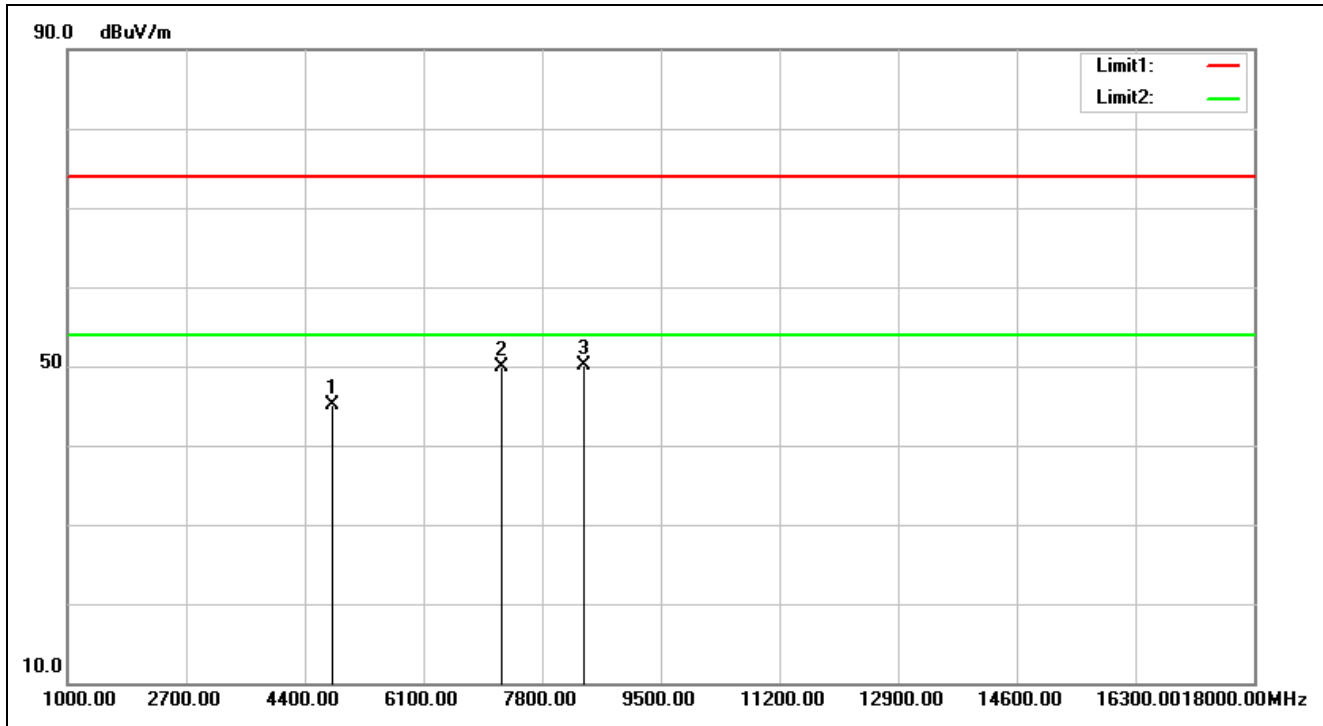
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



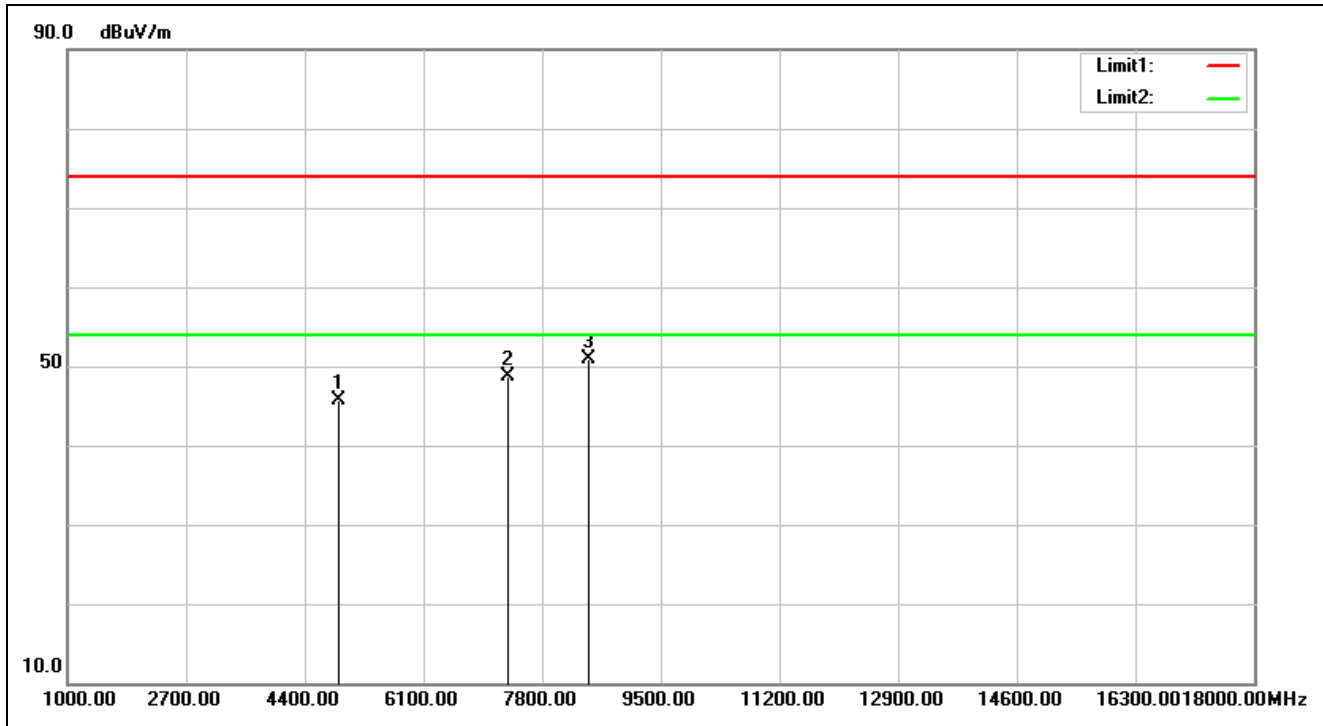
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 04:04:22
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX		
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	4804.000	-2.72	49.54	46.82	74.00	-27.18	peak		0	
2	7206.000	5.25	43.89	49.14	74.00	-24.86	peak		0	
3	8276.000	6.12	44.14	50.26	74.00	-23.74	peak	100	27	



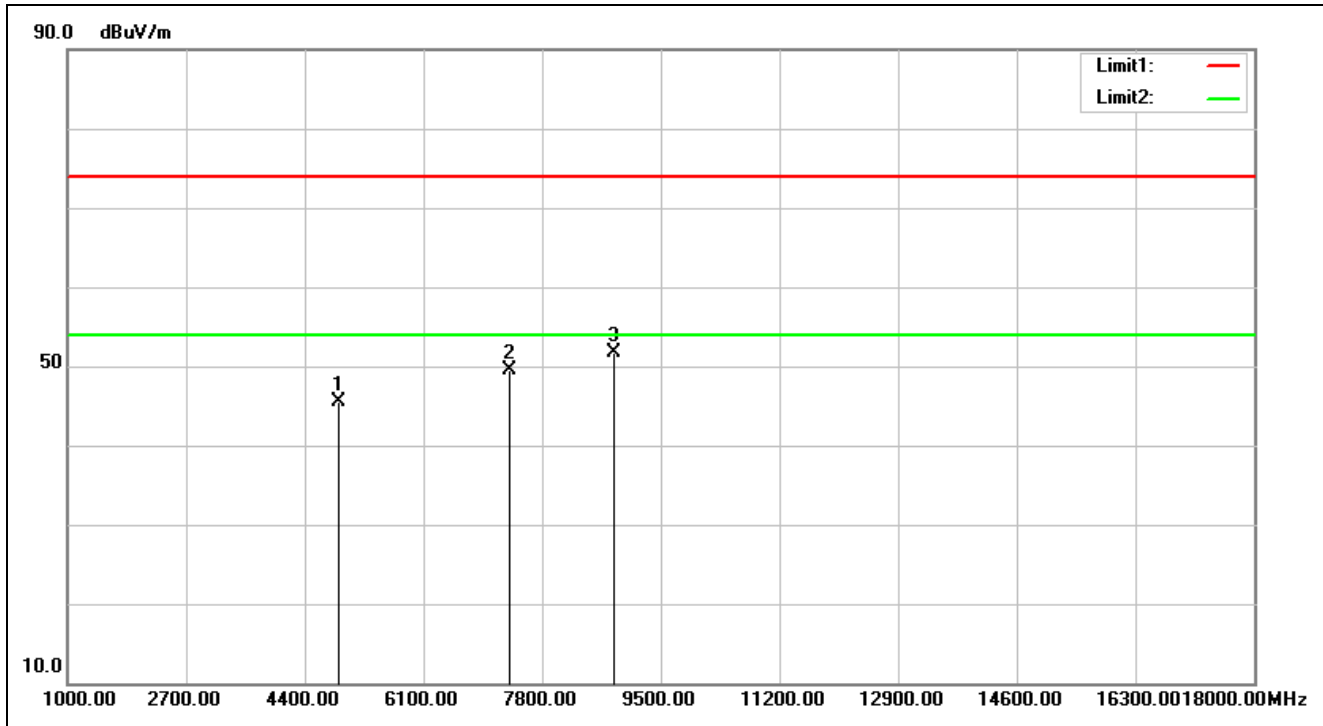
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 04:05:14
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX		
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	4804.000	-2.72	47.80	45.08	74.00	-28.92	peak			
2	7206.000	5.25	44.68	49.93	74.00	-24.07	peak			
3	8395.000	6.26	43.77	50.03	74.00	-23.97	peak	100	90	



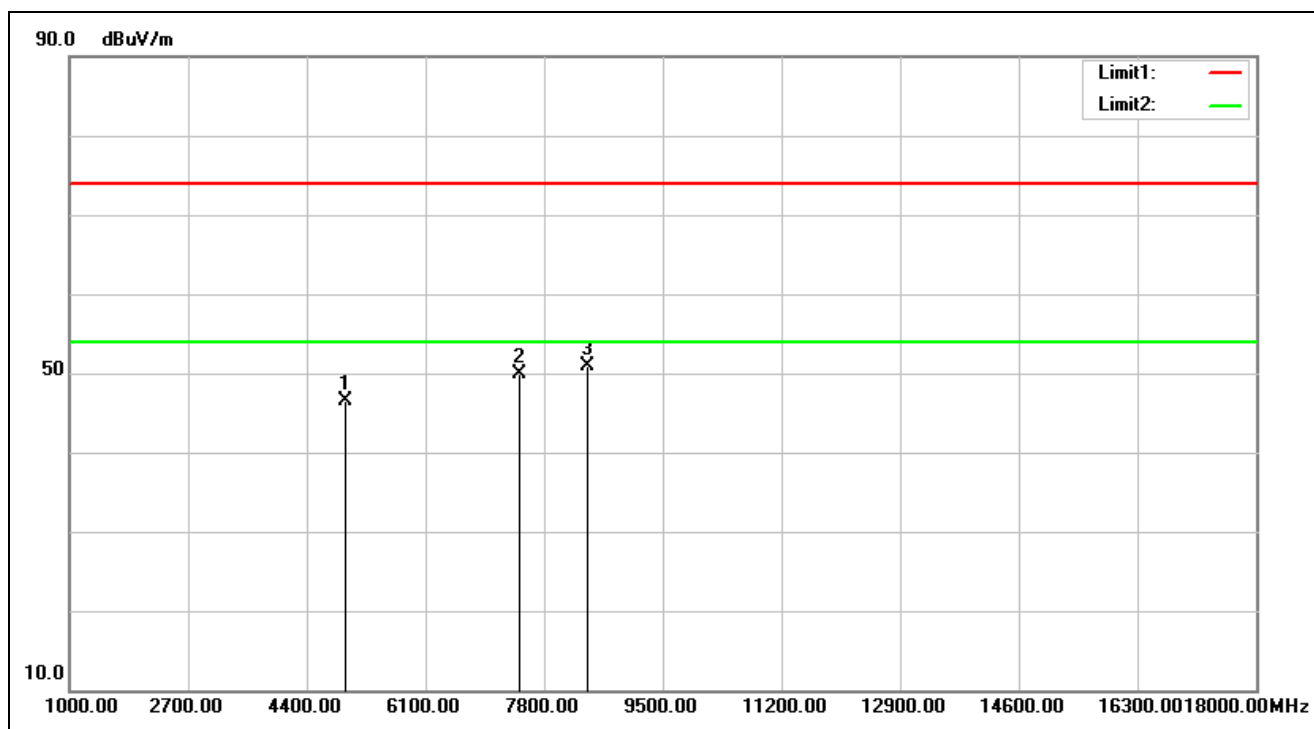
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 04:06:38
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	20(°C)/50%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	4882.000	-2.50	48.16	45.66	74.00	-28.34	peak			
2	7323.000	5.54	43.24	48.78	74.00	-25.22	peak			
3	8463.000	6.34	44.58	50.92	74.00	-23.08	peak	100	348	



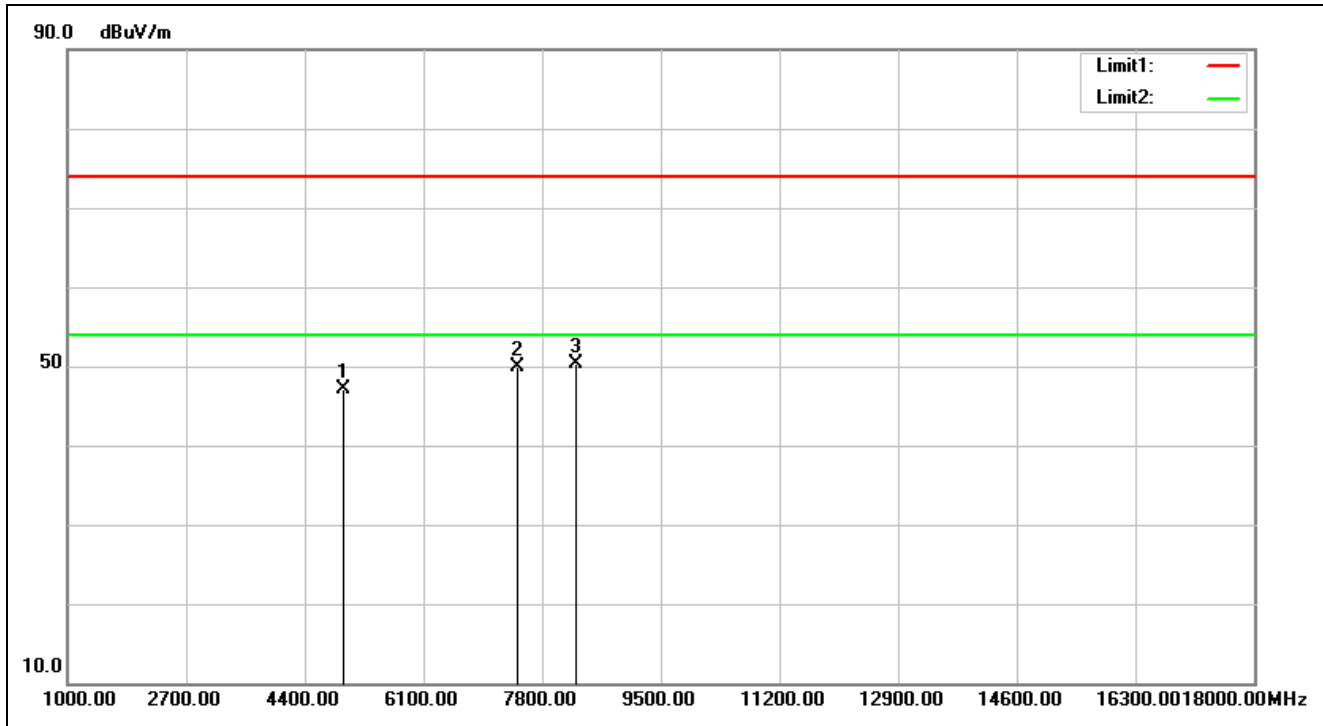
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 04:07:30
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	4882.000	-2.50	48.00	45.50	74.00	-28.50	peak			
2	7323.000	5.54	43.94	49.48	74.00	-24.52	peak			
3	8837.000	6.42	45.33	51.75	74.00	-22.25	peak	100	121	



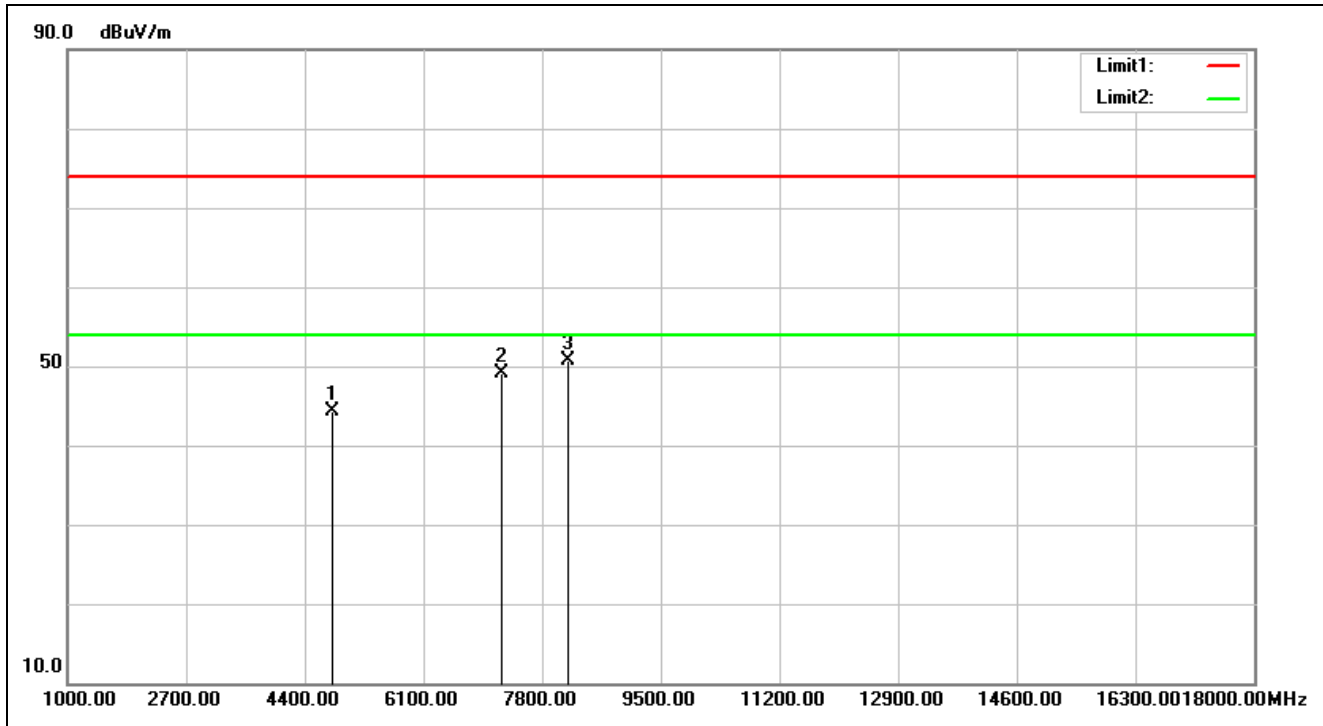
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 04:09:01
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX		
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	4960.000	-2.28	48.77	46.49	74.00	-27.51	peak			
2	7440.000	5.84	44.10	49.94	74.00	-24.06	peak			
3	8429.000	6.30	44.51	50.81	74.00	-23.19	peak	100	249	



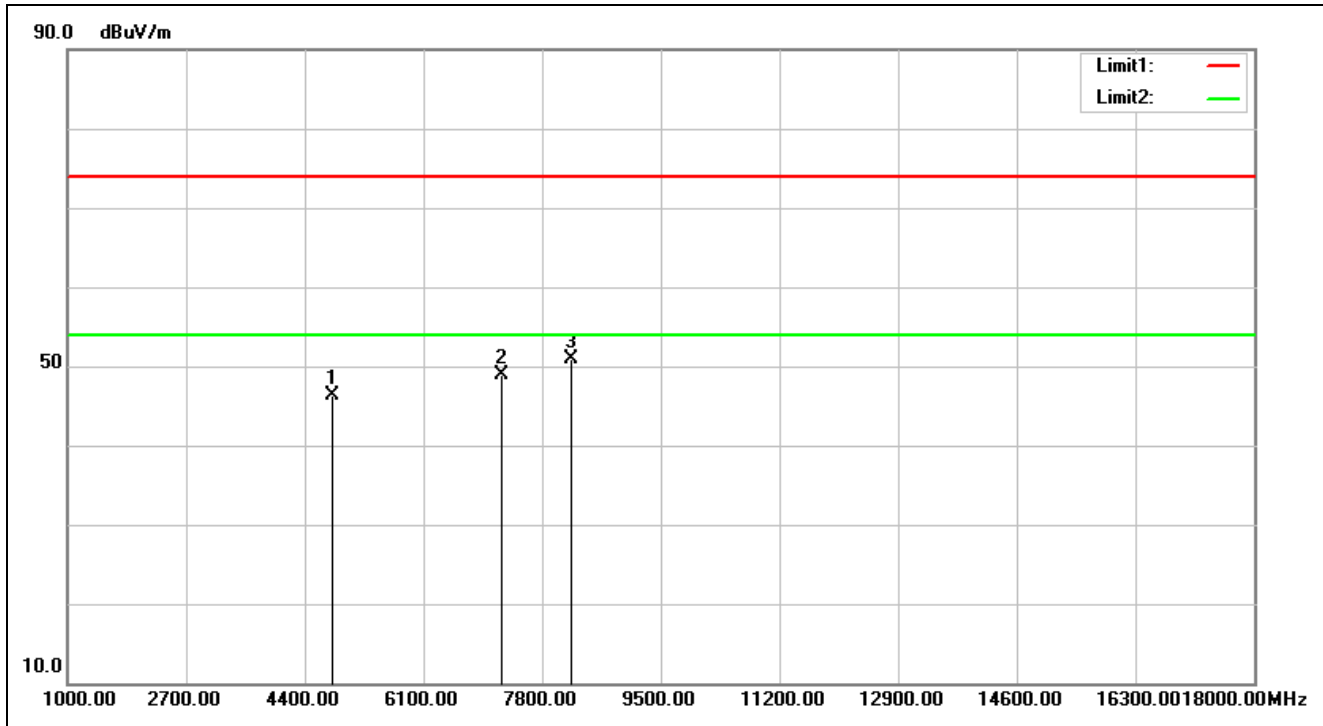
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 04:09:53
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module	Temp.(°C)/Hum.(%)	20(°C)/50%
	With Integrated Bluetooth		
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX		
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	4960.000	-2.28	49.36	47.08	74.00	-26.92	peak			
2	7440.000	5.84	43.97	49.81	74.00	-24.19	peak			
3	8276.000	6.12	44.17	50.29	74.00	-23.71	peak	100	95	



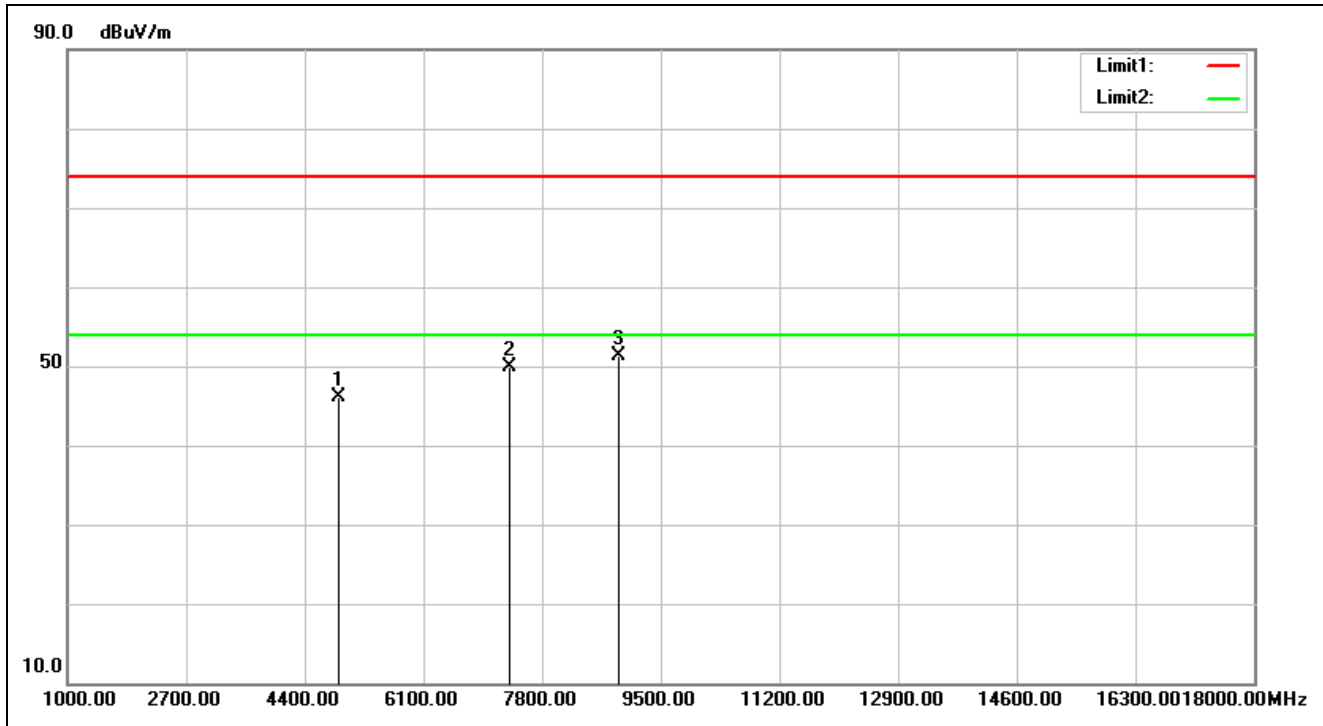
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 04:11:29
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX		
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	4804.000	-2.72	47.00	44.28	74.00	-29.72	peak			
2	7206.000	5.25	43.93	49.18	74.00	-24.82	peak			
3	8174.000	6.02	44.67	50.69	74.00	-23.31	peak	100	154	



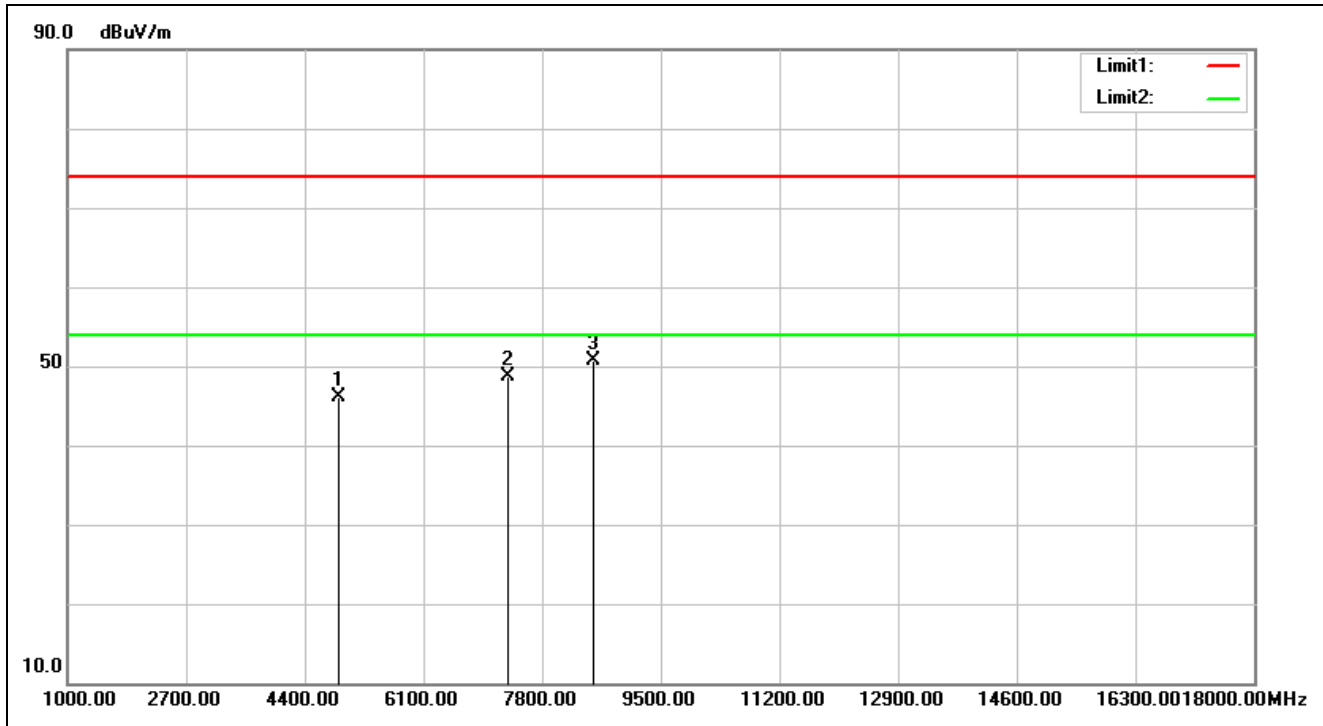
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 04:12:21
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX		
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	4804.000	-2.72	49.00	46.28	74.00	-27.72	peak			
2	7206.000	5.25	43.64	48.89	74.00	-25.11	peak			
3	8225.000	6.08	44.90	50.98	74.00	-23.02	peak	100	359	



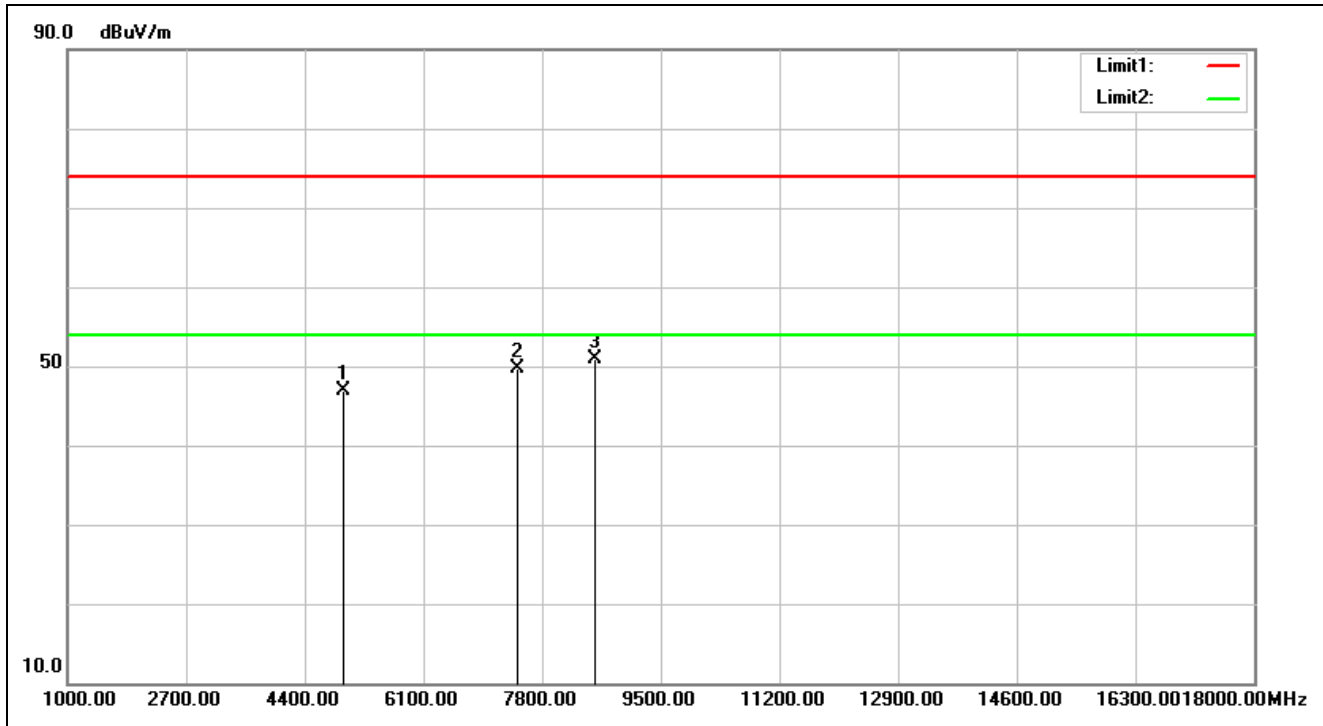
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 04:13:49
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX		
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	4882.000	-2.50	48.66	46.16	74.00	-27.84	peak			
2	7323.000	5.54	44.32	49.86	74.00	-24.14	peak			
3	8905.000	6.42	44.90	51.32	74.00	-22.68	peak	100	1	



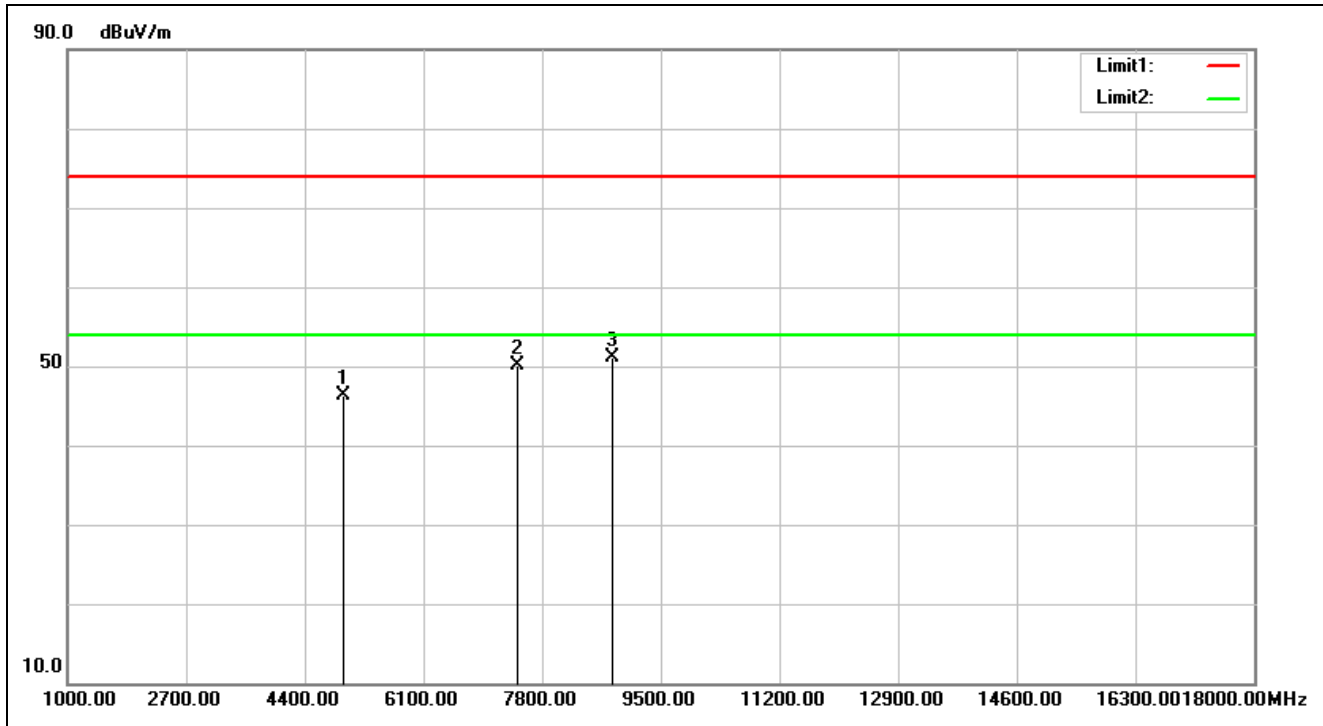
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 04:14:41
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX		
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	4882.000	-2.50	48.62	46.12	74.00	-27.88	peak			
2	7323.000	5.54	43.19	48.73	74.00	-25.27	peak			
3	8531.000	6.38	44.36	50.74	74.00	-23.26	peak	100	26	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 04:16:25
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX		
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	4960.000	-2.28	49.25	46.97	74.00	-27.03	peak			
2	7440.000	5.84	43.89	49.73	74.00	-24.27	peak			
3	8565.000	6.39	44.47	50.86	74.00	-23.14	peak	100	269	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 04:17:18
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX		
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	4960.000	-2.28	48.61	46.33	74.00	-27.67	peak			
2	7440.000	5.84	44.34	50.18	74.00	-23.82	peak			
3	8803.000	6.42	44.70	51.12	74.00	-22.88	peak	100	278	

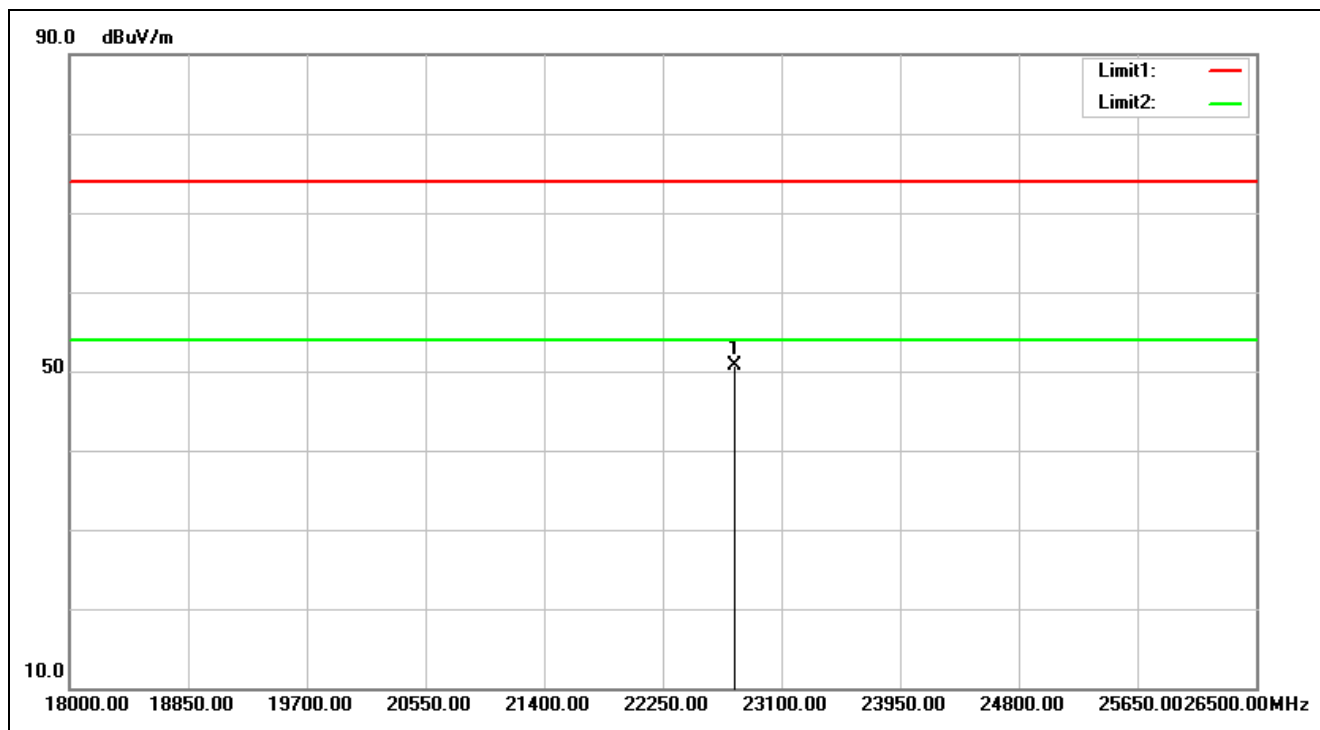
Spurious Emissions, TX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

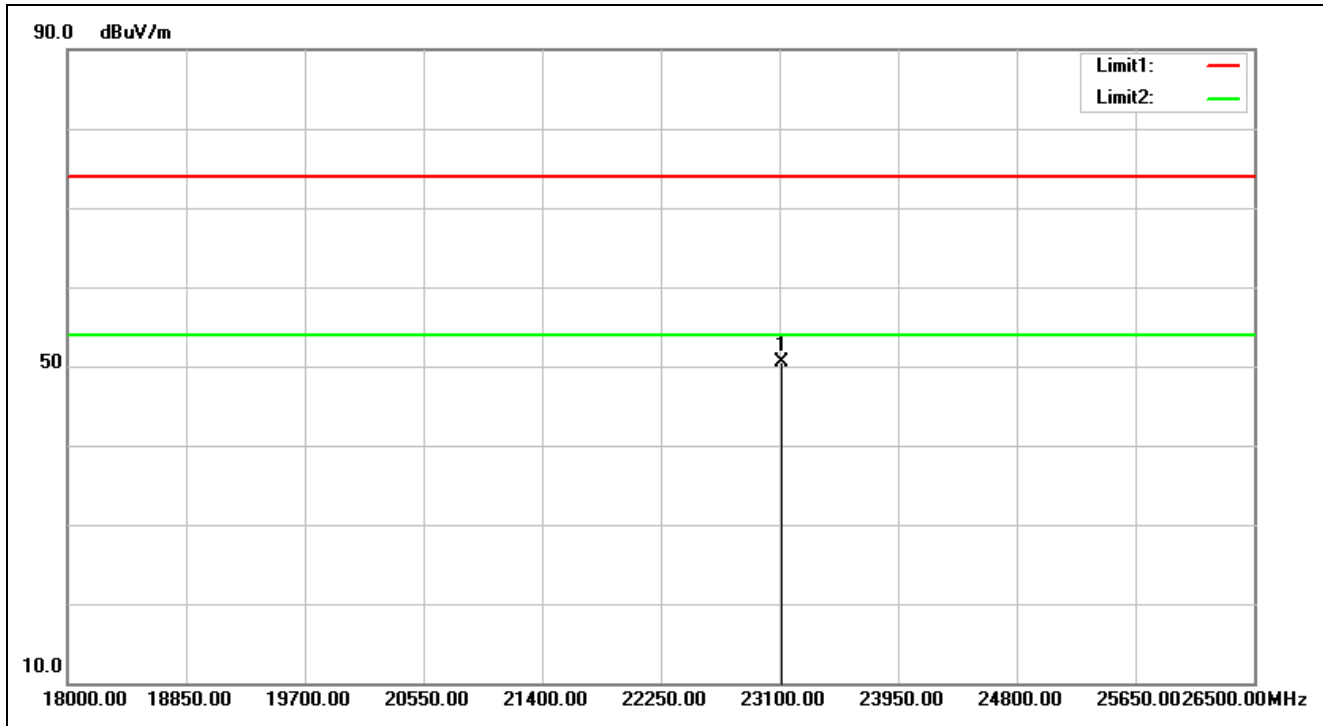
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



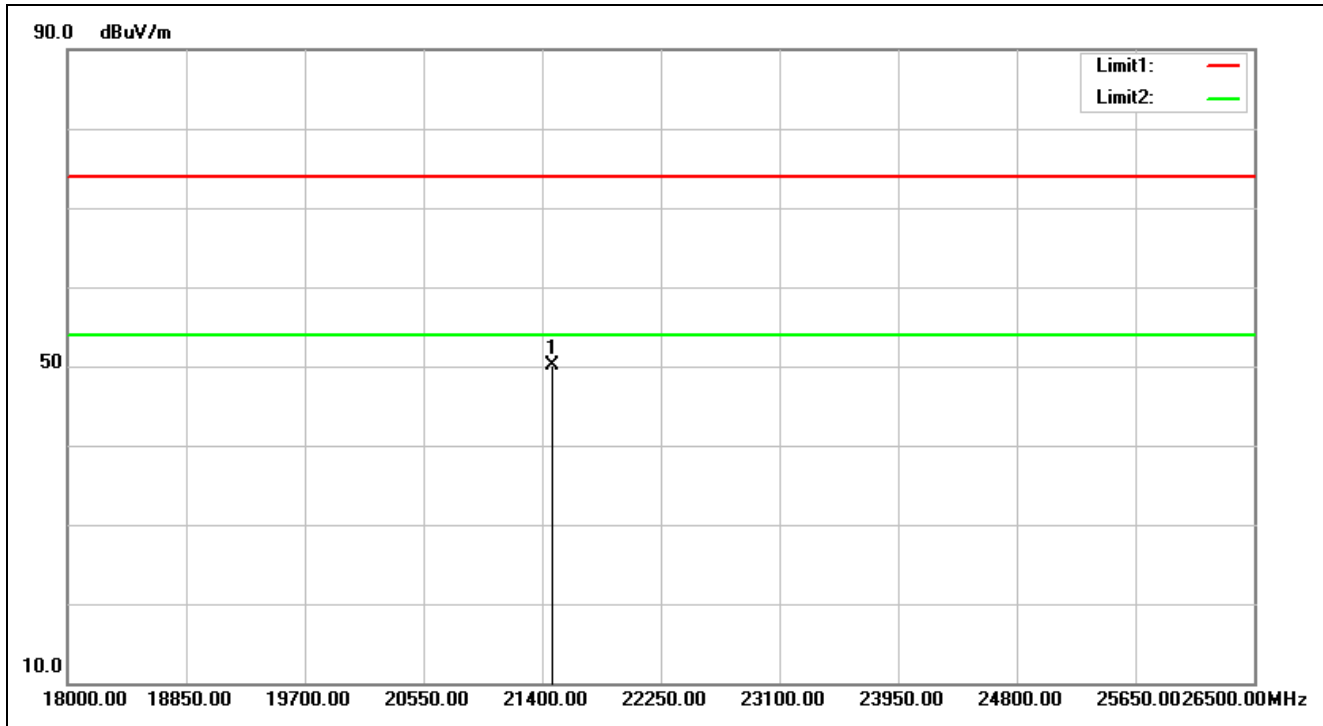
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:27:27
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX		
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	22760.000	32.73	17.98	50.71	74.00	-23.29	peak		0	



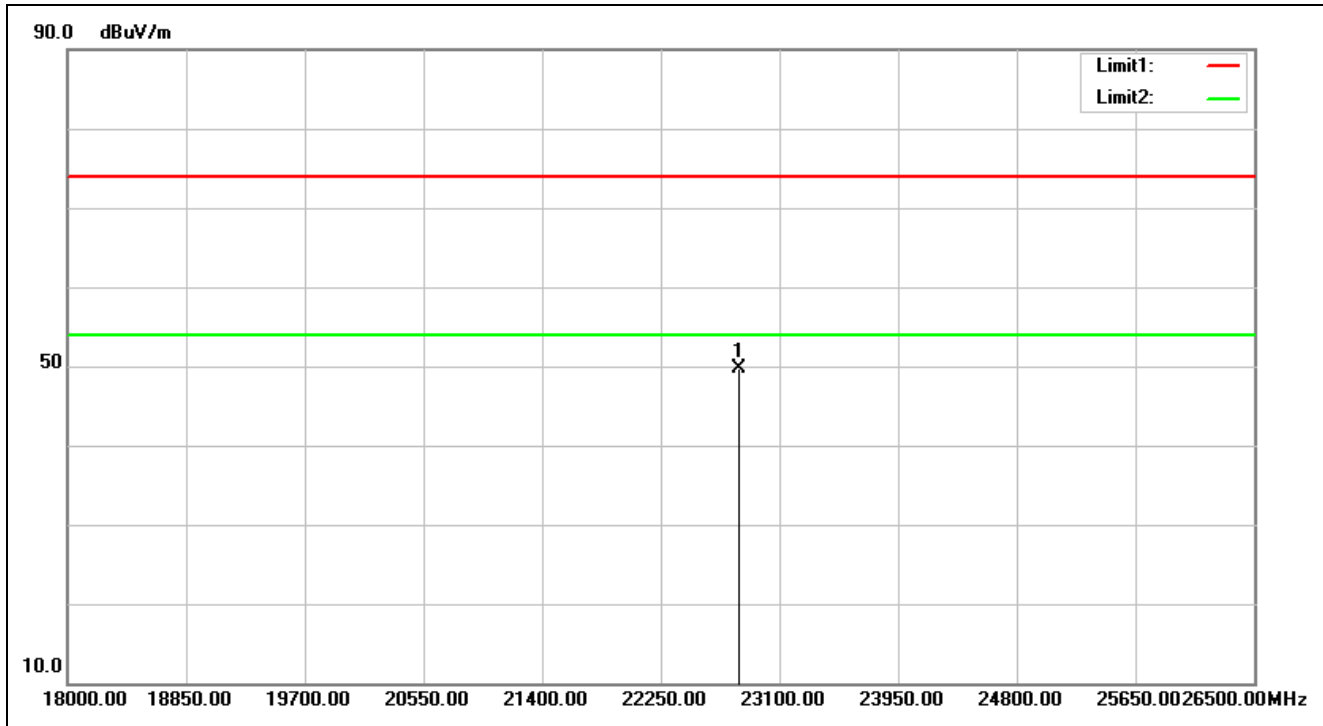
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:27:34
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX		
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	23117.000	32.91	17.67	50.58	74.00	-23.42	peak			



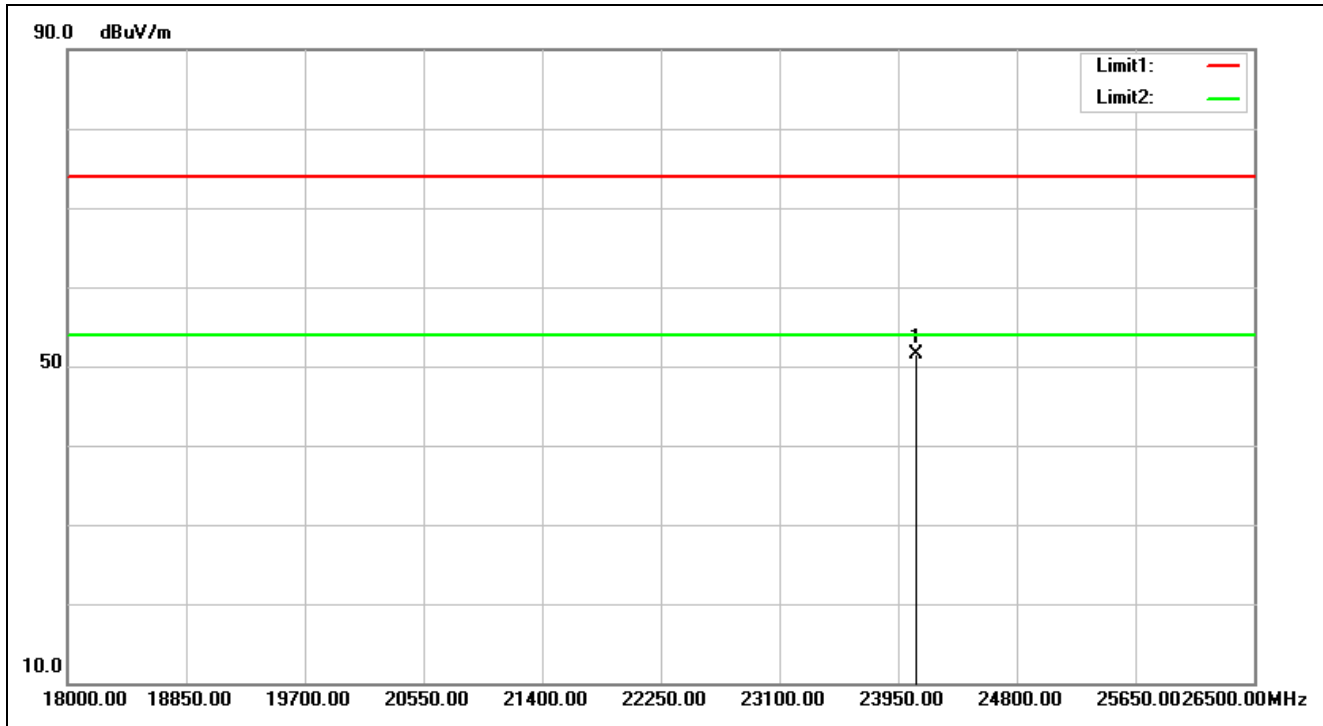
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:27:57
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	21468.000	32.86	17.21	50.07	74.00	-23.93	peak			



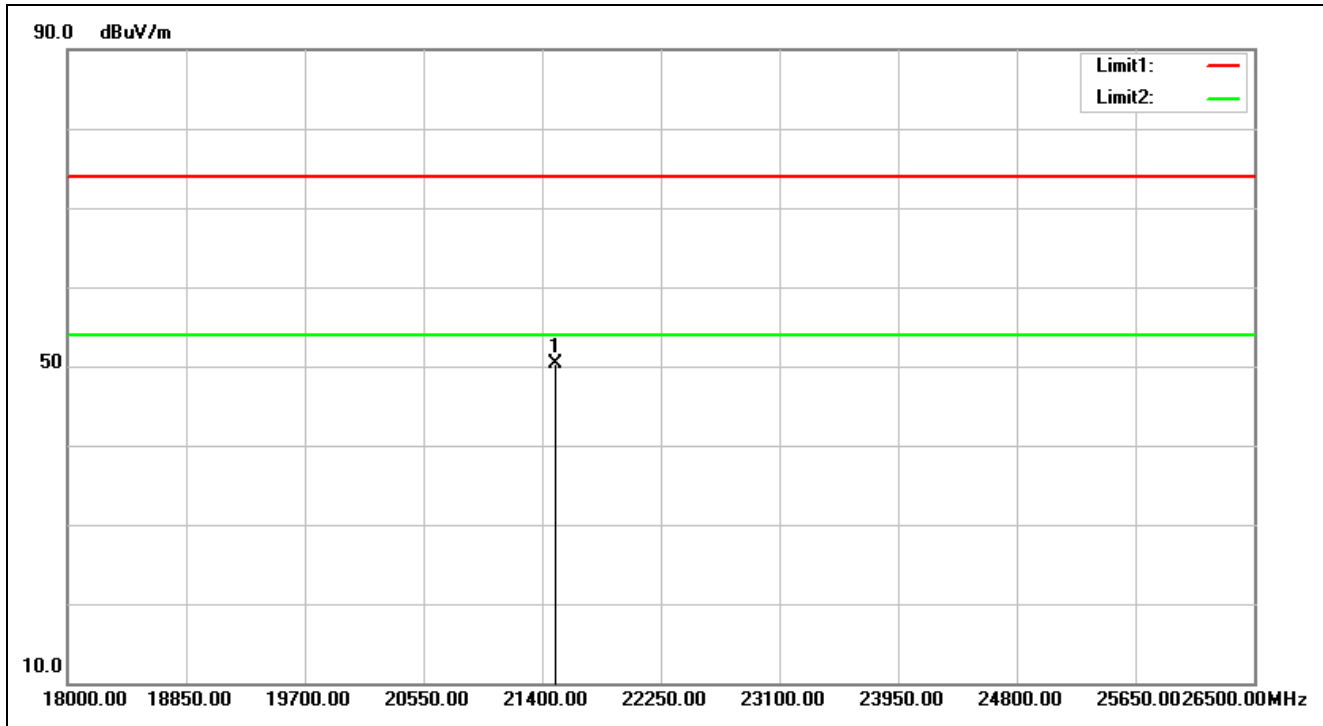
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:28:03
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	22811.000	32.74	16.96	49.70	74.00	-24.30	peak			



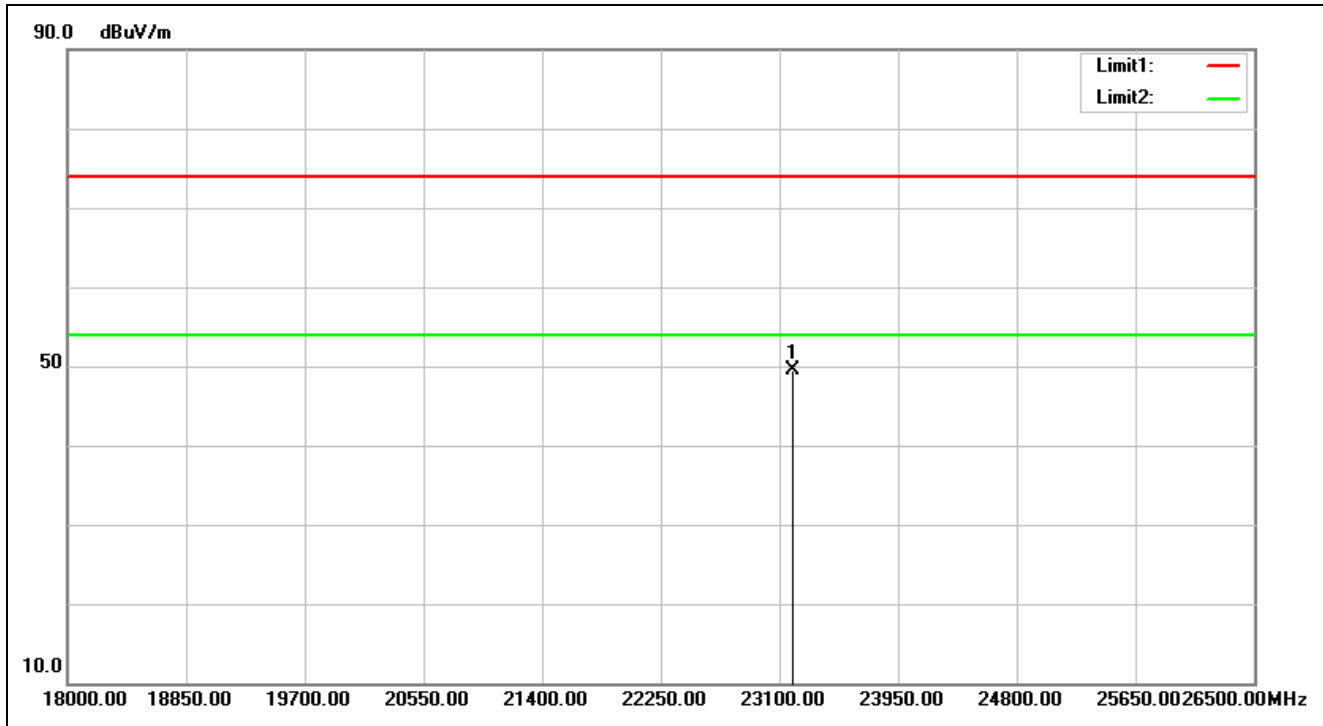
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:28:25
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX		
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	24077.500	32.98	18.43	51.41	74.00	-22.59	peak			



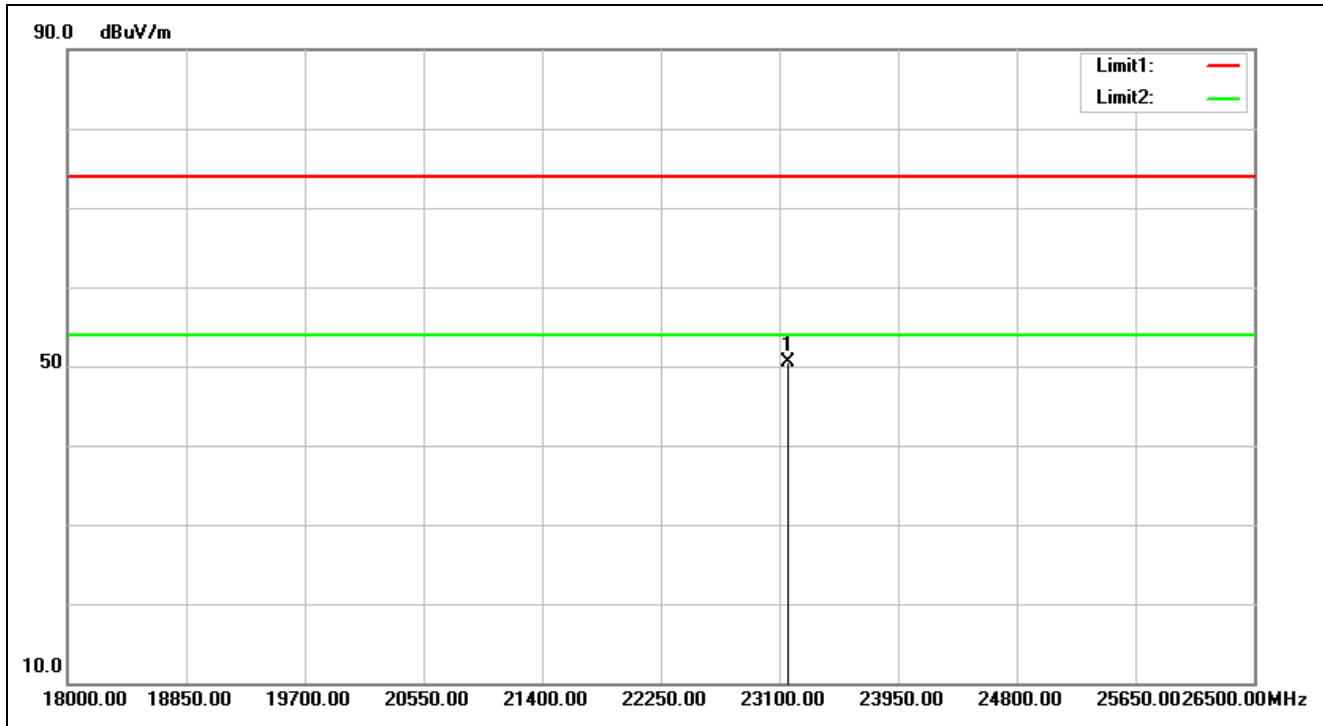
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:28:31
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX		
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	21493.500	32.89	17.38	50.27	74.00	-23.73	peak			



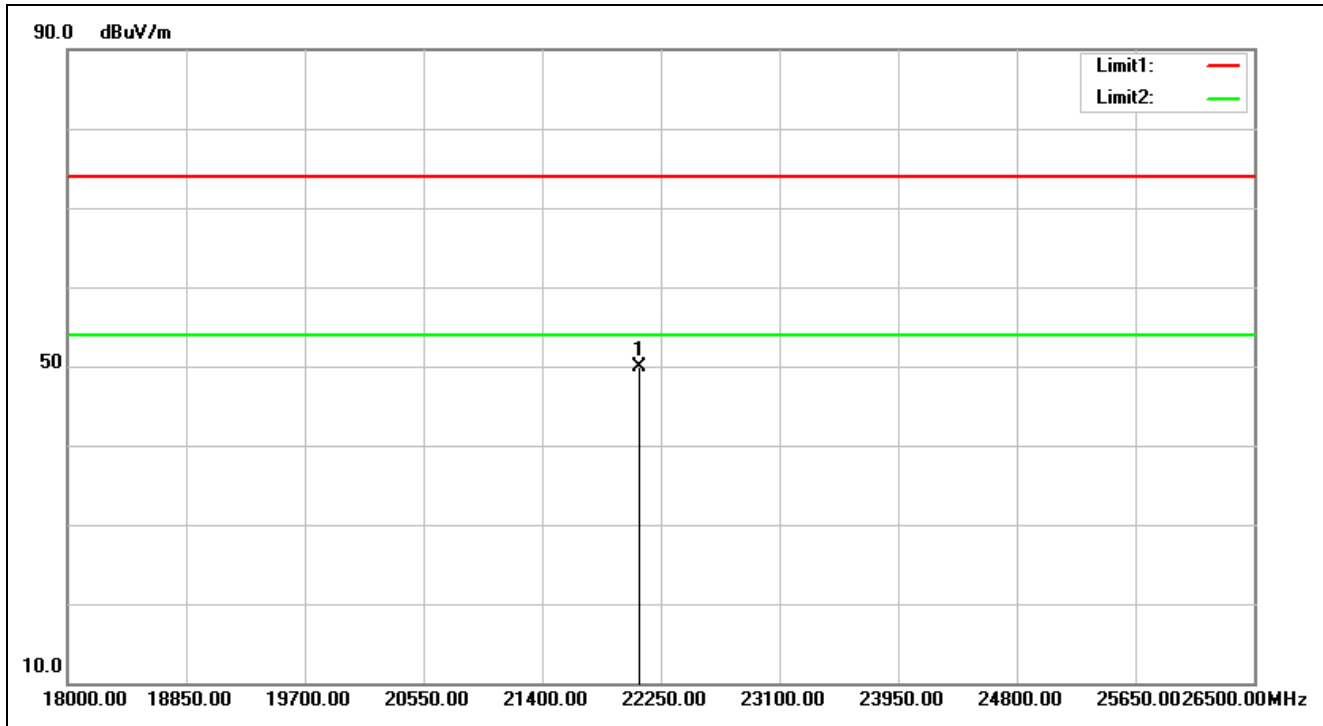
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:29:04
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX		
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	23193.500	32.98	16.45	49.43	74.00	-24.57	peak			



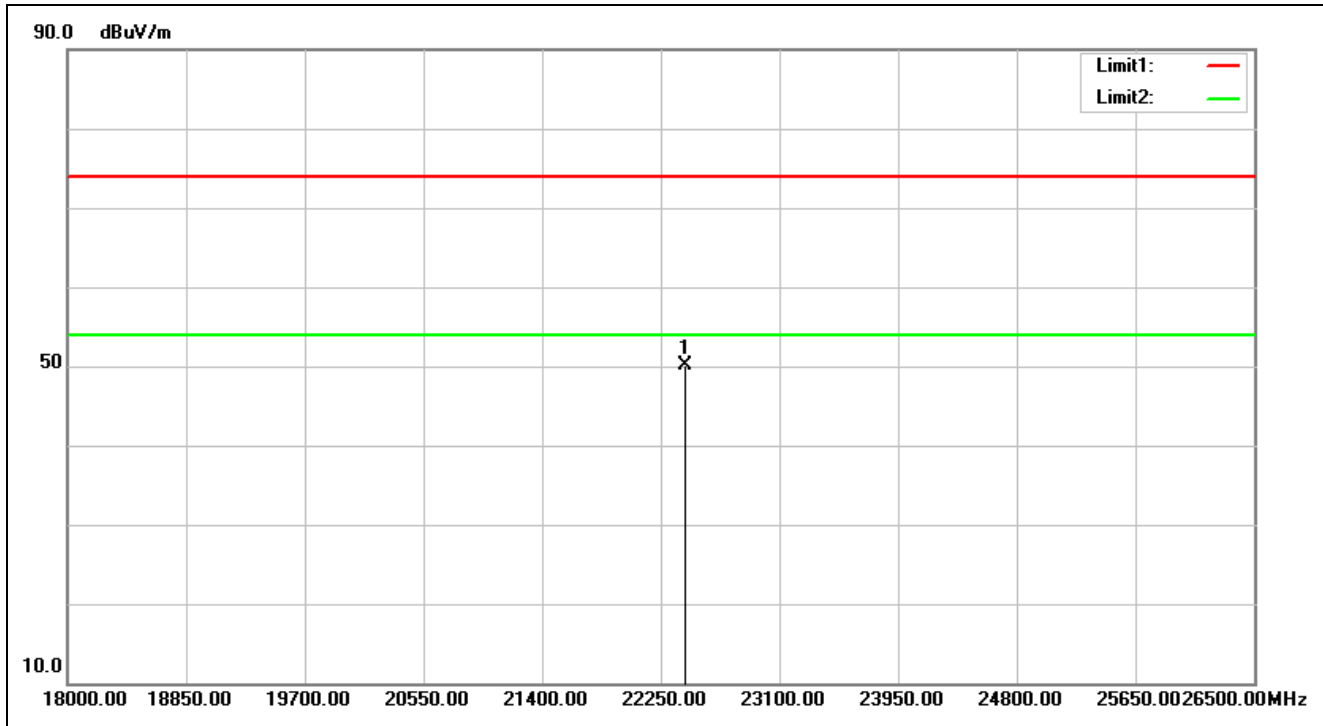
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:29:10
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX		
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	23159.500	32.95	17.51	50.46	74.00	-23.54	peak			



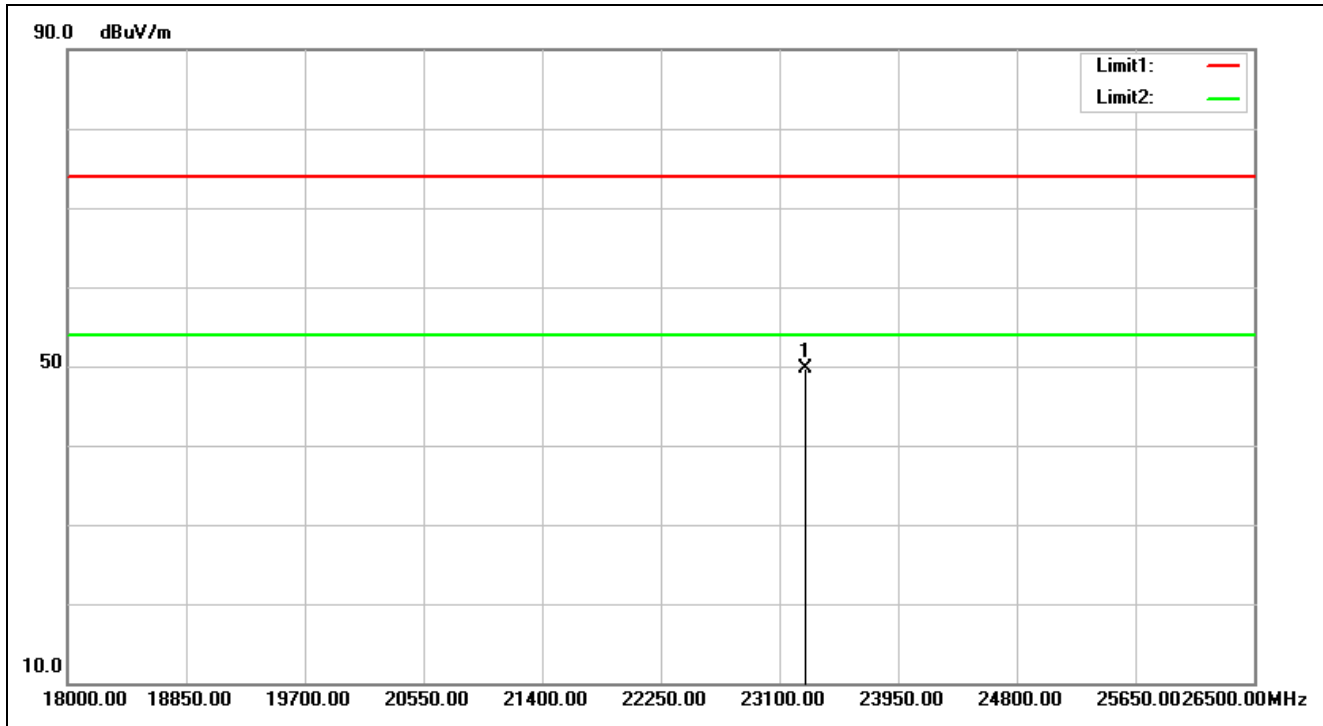
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:30:07
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX		
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	22097.000	32.61	17.25	49.86	74.00	-24.14	peak			



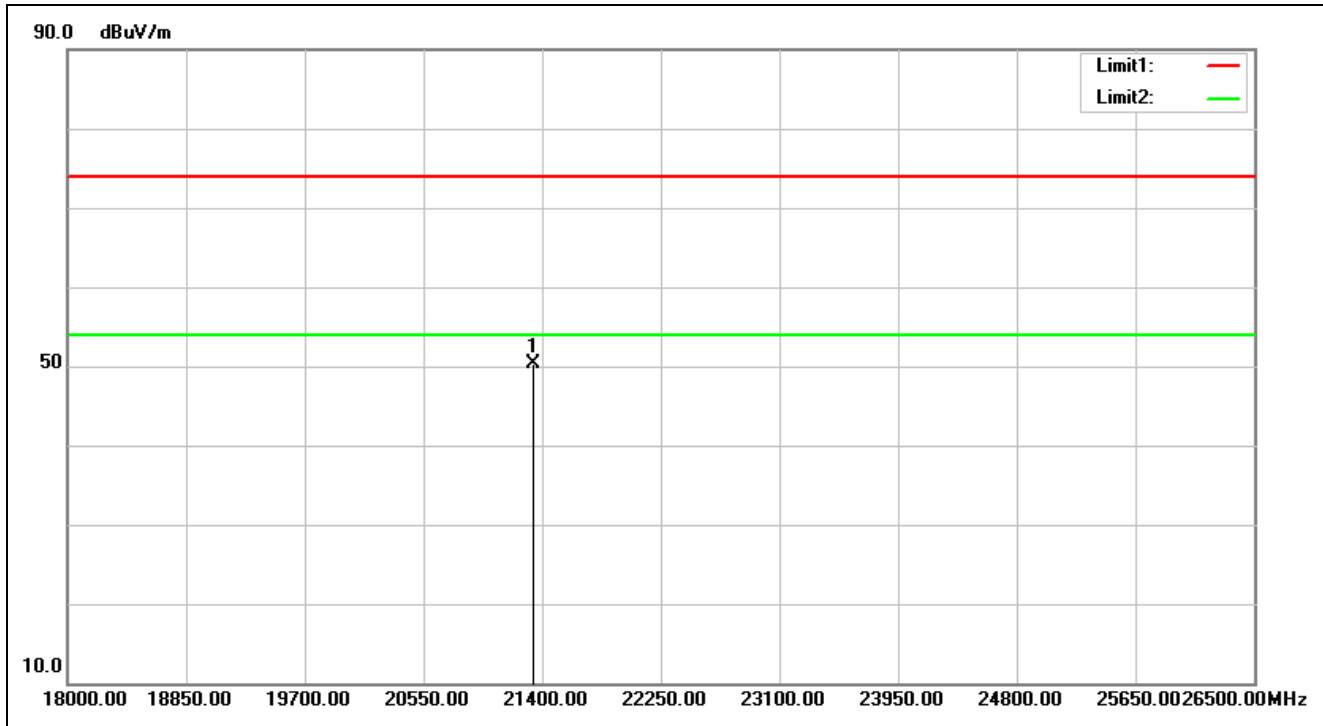
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:30:13
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX		
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	22428.500	32.63	17.53	50.16	74.00	-23.84	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:30:40
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX		
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	23287.000	33.07	16.64	49.71	74.00	-24.29	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:30:46
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX		
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	21340.500	32.74	17.64	50.38	74.00	-23.62	peak			

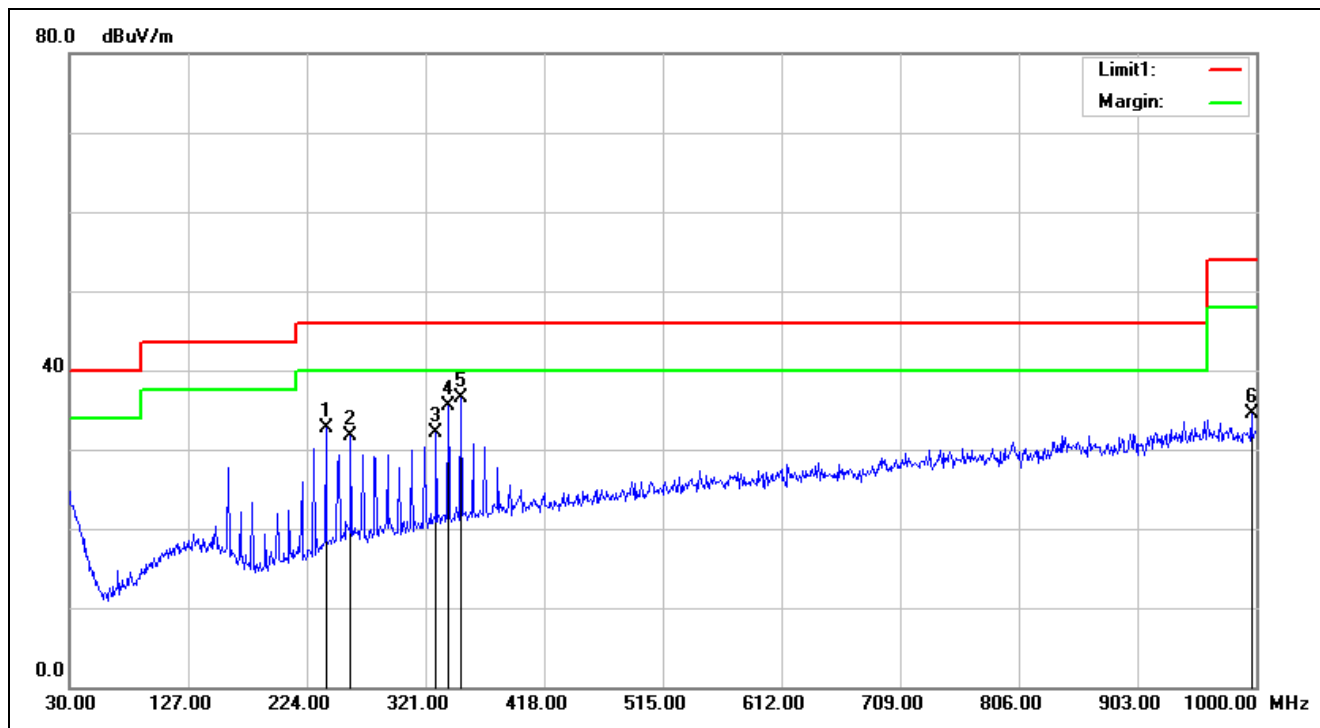
Spurious Emissions, TX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

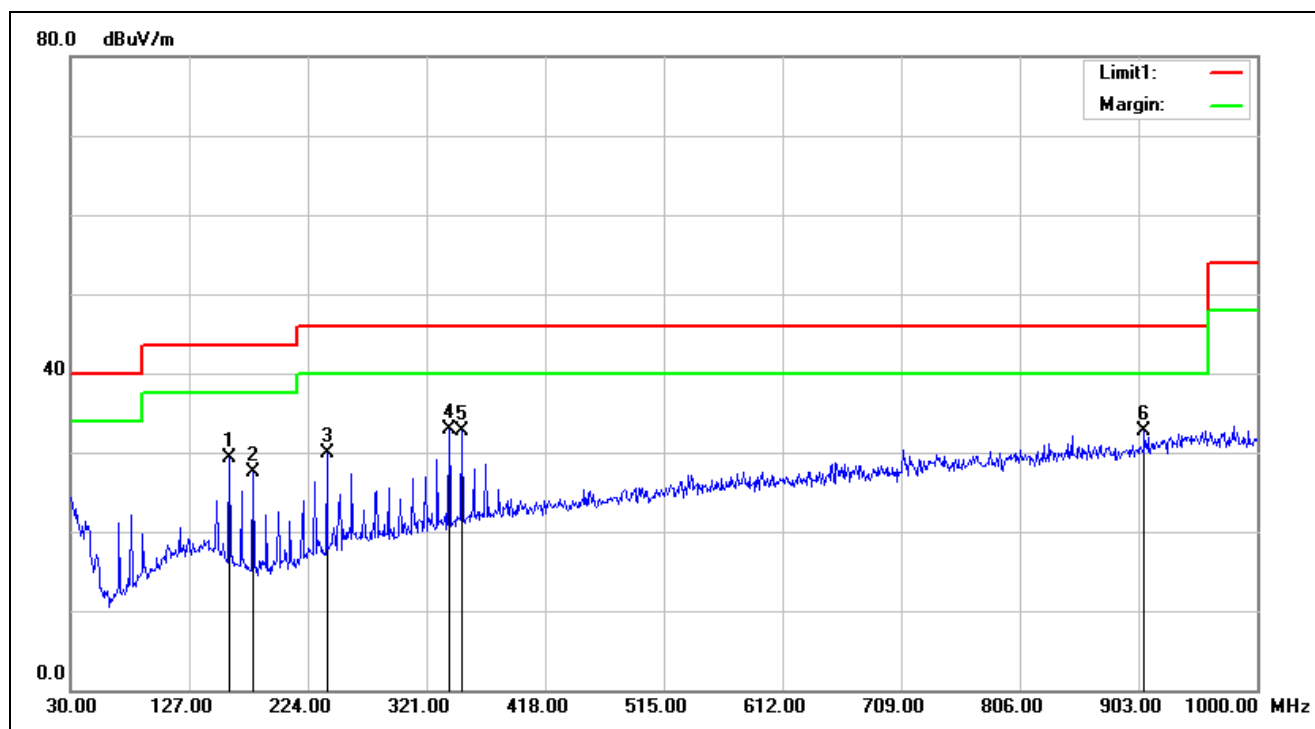
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/19 04:51:59
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	239.5200	-6.85	39.51	32.66	46.00	-13.34	QP	100	108	
2	259.8900	-4.94	36.72	31.78	46.00	-14.22	QP	100	254	
3	329.7300	-3.84	35.97	32.13	46.00	-13.87	QP	100	261	
4	339.4300	-3.61	39.03	35.42	46.00	-10.58	QP	100	254	
5	350.1000	-3.34	39.75	36.41	46.00	-9.59	QP	100	254	
6	996.1200	5.72	28.69	34.41	54.00	-19.59	QP	100	349	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/19 04:52:52
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	159.9800	-8.07	37.37	29.30	43.50	-14.20	QP	100	88	
2	179.3800	-9.59	37.15	27.56	43.50	-15.94	QP	100	78	
3	239.5200	-6.85	36.75	29.90	46.00	-16.10	QP	100	199	
4	339.4300	-3.61	36.51	32.90	46.00	-13.10	QP	100	350	
5	350.1000	-3.34	36.13	32.79	46.00	-13.21	QP	100	0	
6	907.8500	4.29	28.39	32.68	46.00	-13.32	QP	100	298	

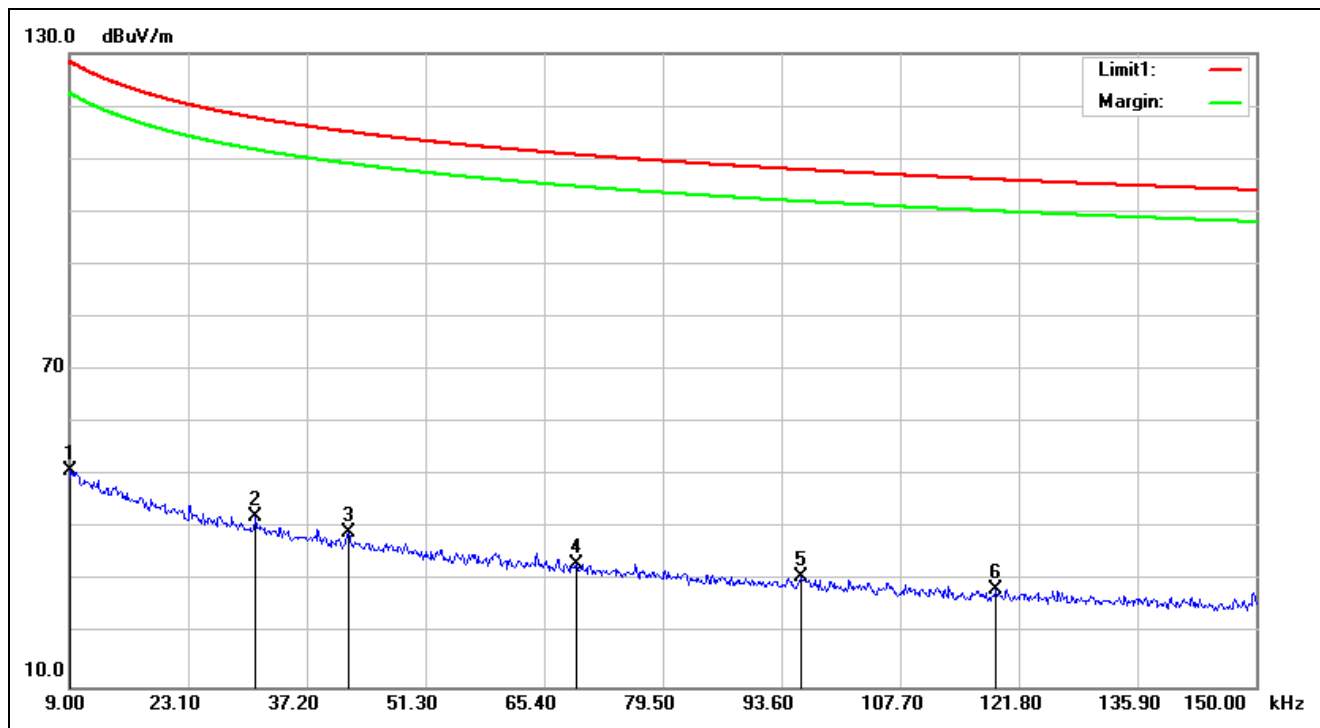
Spurious Emissions, TX Mode, 9k-30M



TUV Rheinland Taiwan Ltd.

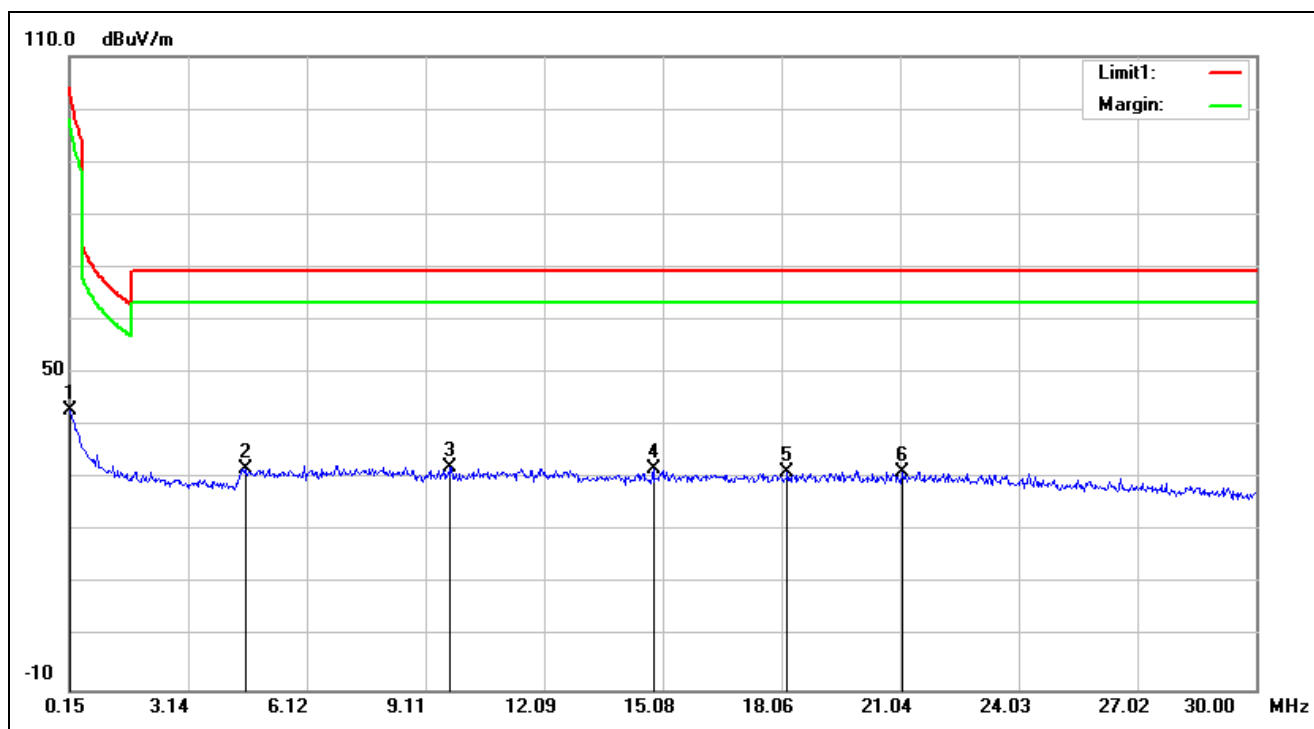
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/19 05:14:44
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	0.0091	19.57	31.29	50.86	128.40	-77.54	QP	100	359	
2	0.0311	20.09	22.05	42.14	117.74	-75.60	QP	100	0	
3	0.0421	19.71	19.67	39.38	115.11	-75.73	QP	100	42	
4	0.0692	19.31	14.04	33.35	110.79	-77.44	QP	100	357	
5	0.0959	19.15	11.71	30.86	107.96	-77.10	QP	100	217	
6	0.1191	19.11	9.33	28.44	106.08	-77.64	QP	100	226	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/19 05:17:16
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	23.90	42.98	104.08	-61.10	QP	100	205	
2	4.5678	19.49	12.34	31.83	69.50	-37.67	QP	100	205	
3	9.7318	20.20	11.85	32.05	69.50	-37.45	QP	100	0	
4	14.8362	21.07	10.71	31.78	69.50	-37.72	QP	100	219	
5	18.2092	21.67	9.63	31.30	69.50	-38.20	QP	100	314	
6	21.1047	22.06	9.33	31.39	69.50	-38.11	QP	100	242	

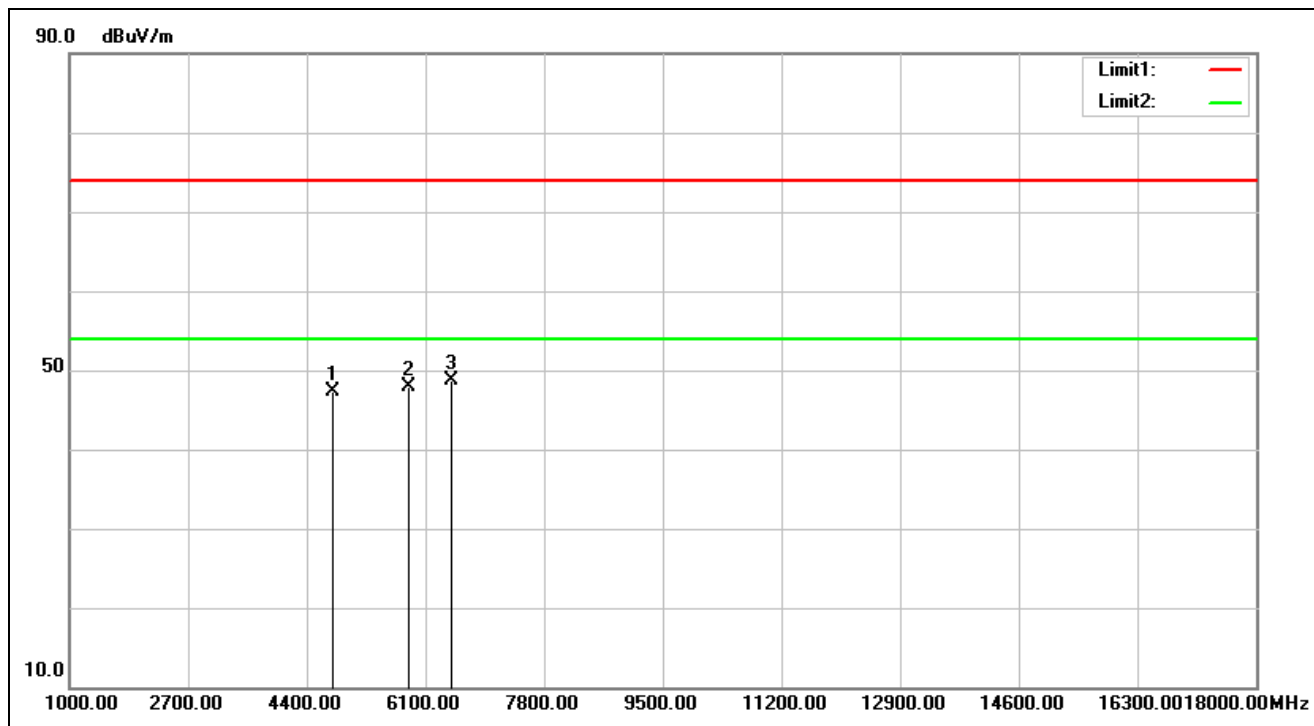
Spurious Emissions, RX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

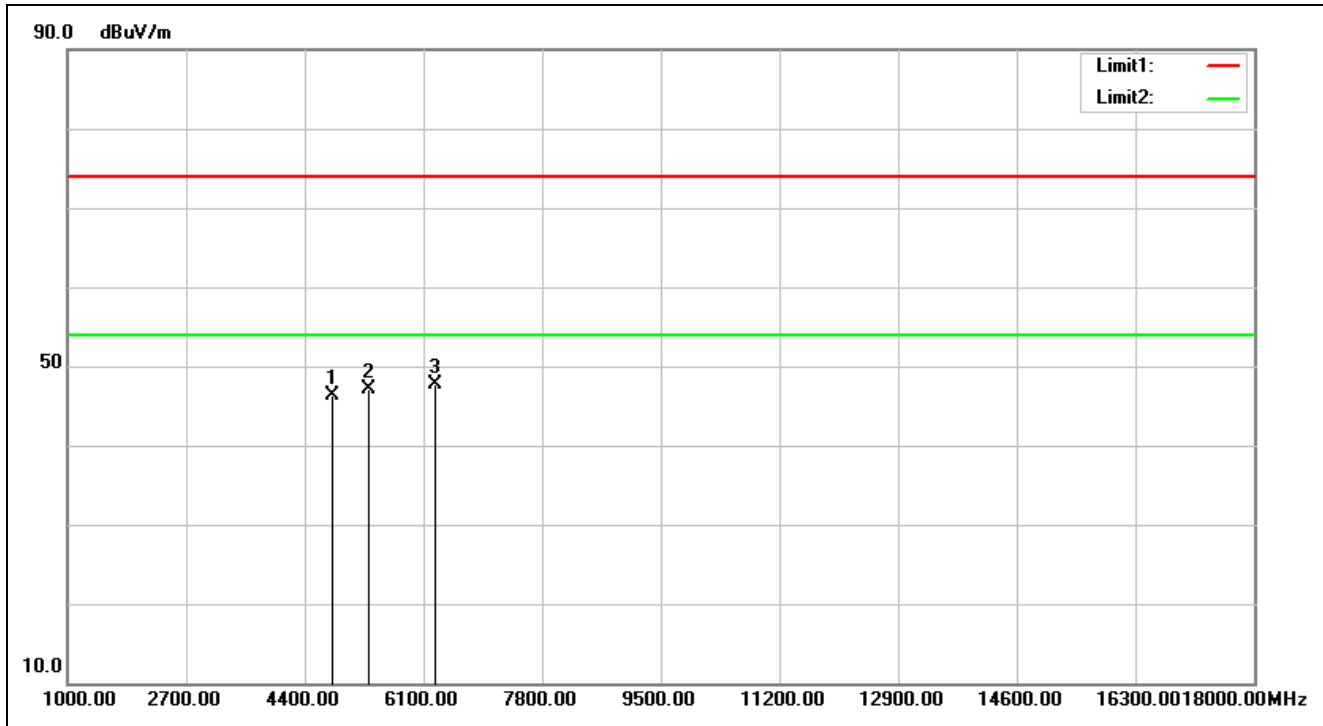
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/18 04:19:11
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	50.92	47.34	74.00	-26.66	peak	100	252	
2	5862.000	1.47	46.34	47.81	74.00	-26.19	peak	100	20	
3	6474.000	4.23	44.55	48.78	74.00	-25.22	peak	100	320	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 04:20:03
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	4791.000	-3.55	49.81	46.26	74.00	-27.74	peak	100	19	
2	5318.000	-1.70	48.74	47.04	74.00	-26.96	peak	100	309	
3	6270.000	3.43	44.20	47.63	74.00	-26.37	peak	100	357	

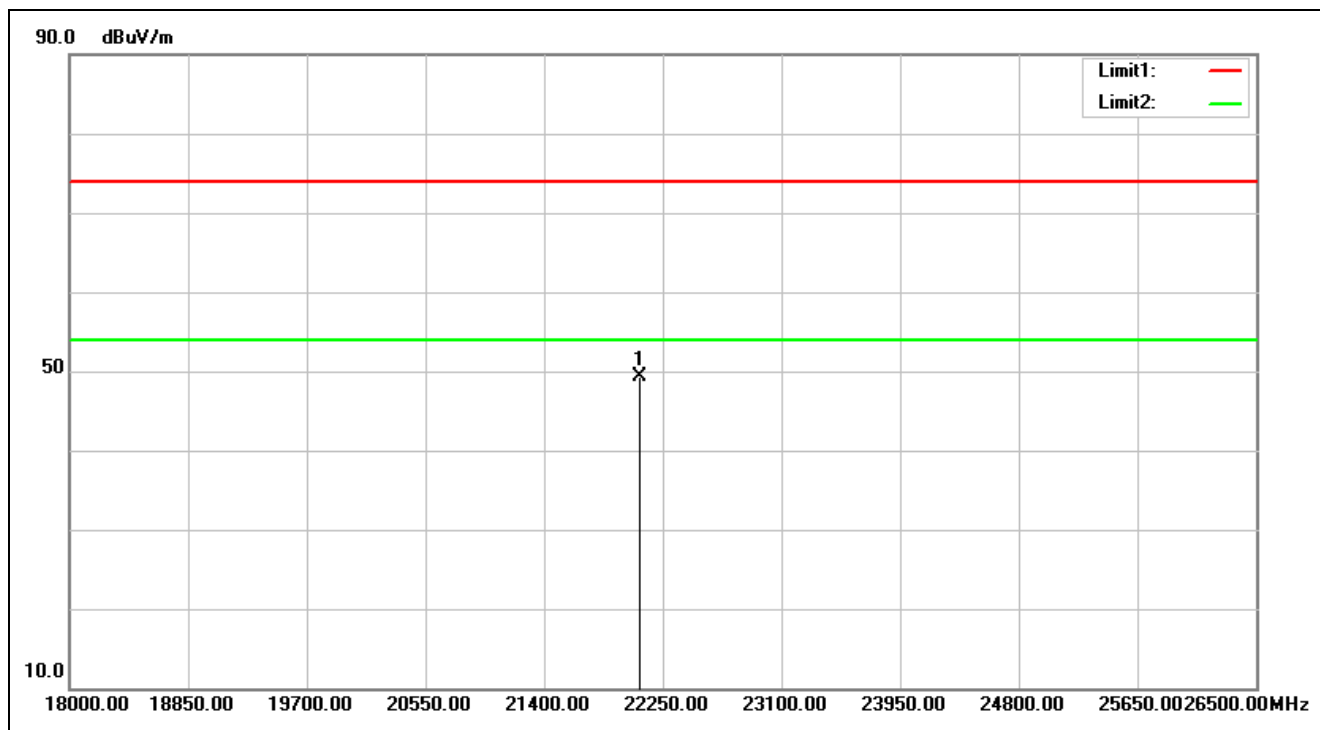
Spurious Emissions, RX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

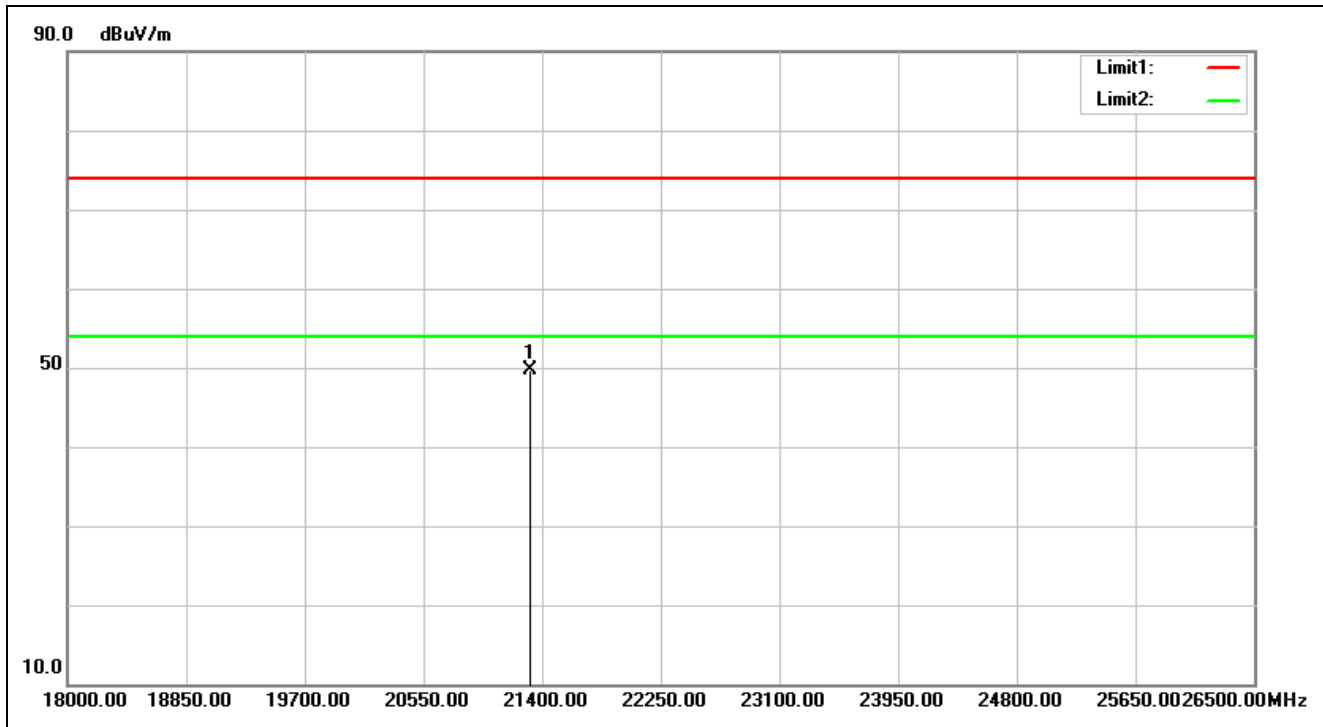
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/18 05:31:29
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	22088.500	32.60	16.80	49.40	74.00	-24.60	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:31:36
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	21315.000	32.72	17.00	49.72	74.00	-24.28	peak			

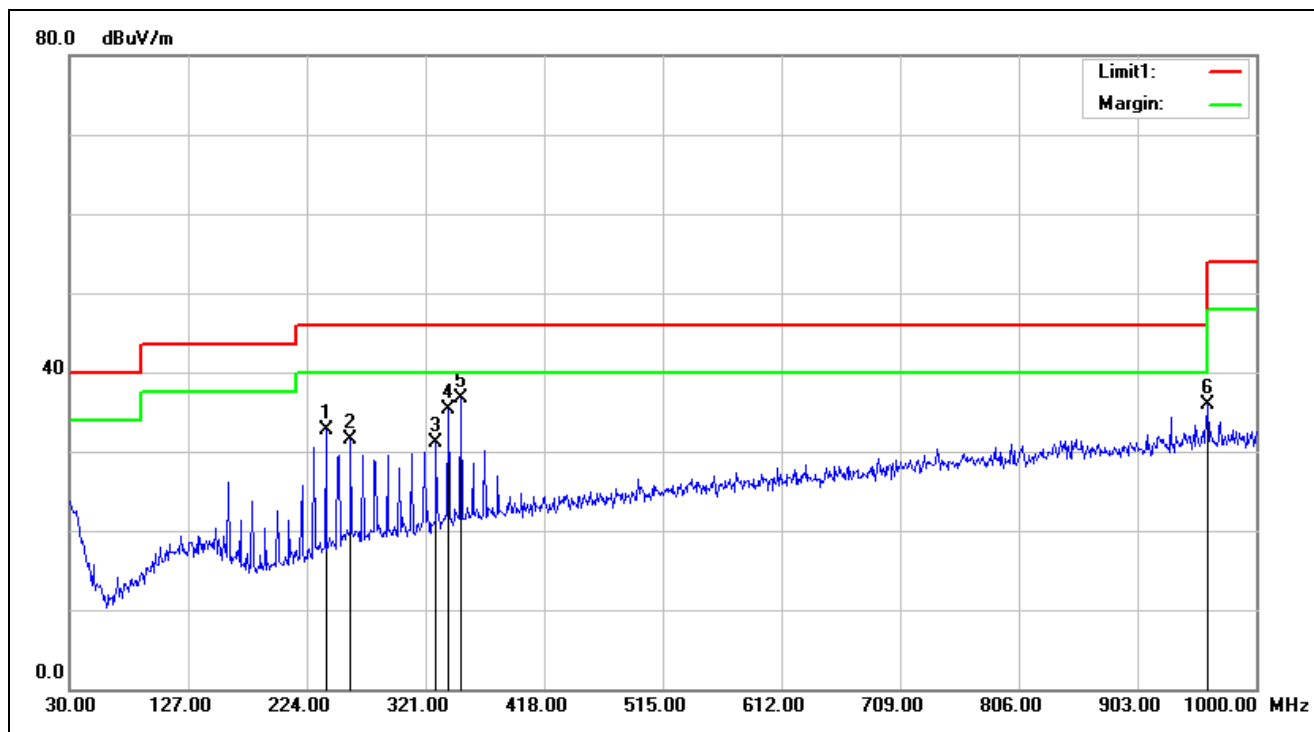
Spurious Emissions, RX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

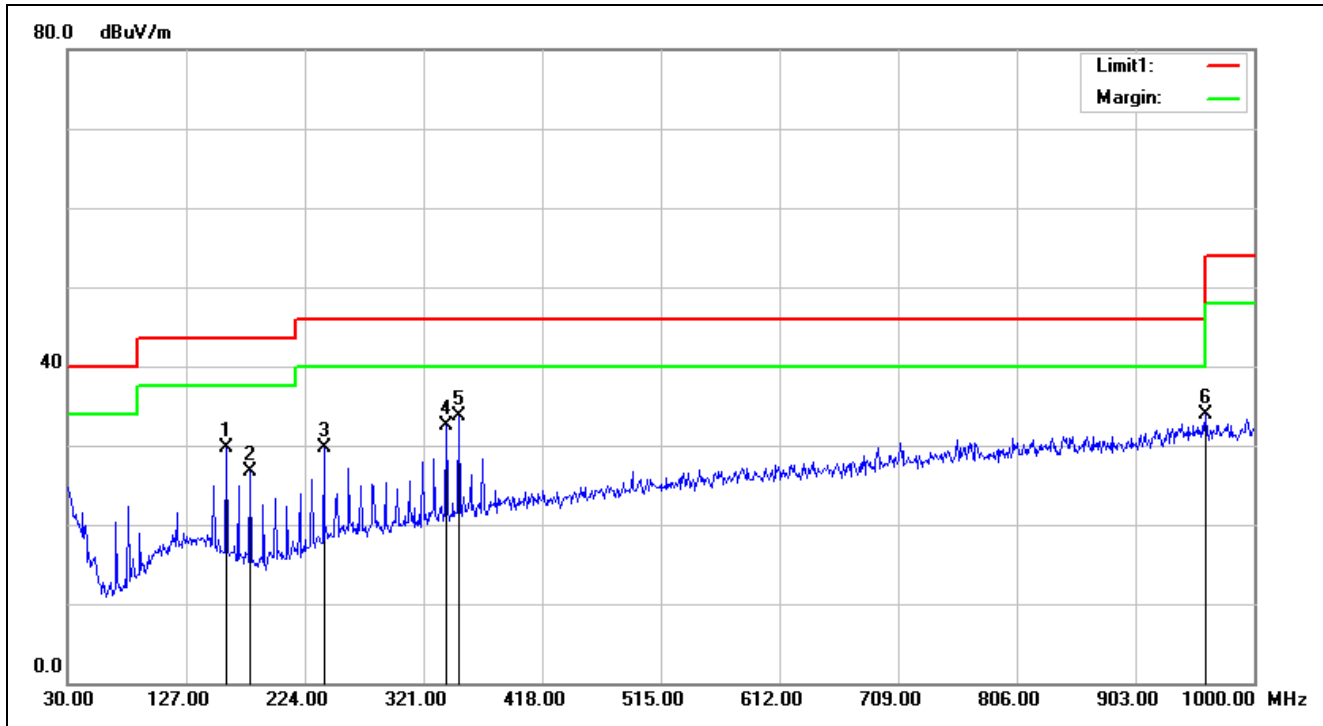
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/19 04:54:18
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	239.5200	-6.85	39.47	32.62	46.00	-13.38	QP	100	122	
2	259.8900	-4.94	36.47	31.53	46.00	-14.47	QP	100	255	
3	329.7300	-3.84	34.86	31.02	46.00	-14.98	QP	100	242	
4	339.4300	-3.61	38.82	35.21	46.00	-10.79	QP	100	259	
5	350.1000	-3.34	39.95	36.61	46.00	-9.39	QP	100	248	
6	960.2300	5.54	30.46	36.00	54.00	-18.00	QP	100	78	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/19 04:55:11
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	159.9800	-8.07	37.77	29.70	43.50	-13.80	QP	100	60	
2	179.3800	-9.59	36.20	26.61	43.50	-16.89	QP	100	66	
3	239.5200	-6.85	36.50	29.65	46.00	-16.35	QP	100	204	
4	339.4300	-3.61	36.21	32.60	46.00	-13.40	QP	100	5	
5	350.1000	-3.34	36.96	33.62	46.00	-12.38	QP	100	360	
6	960.2300	5.54	28.33	33.87	54.00	-20.13	QP	100	197	

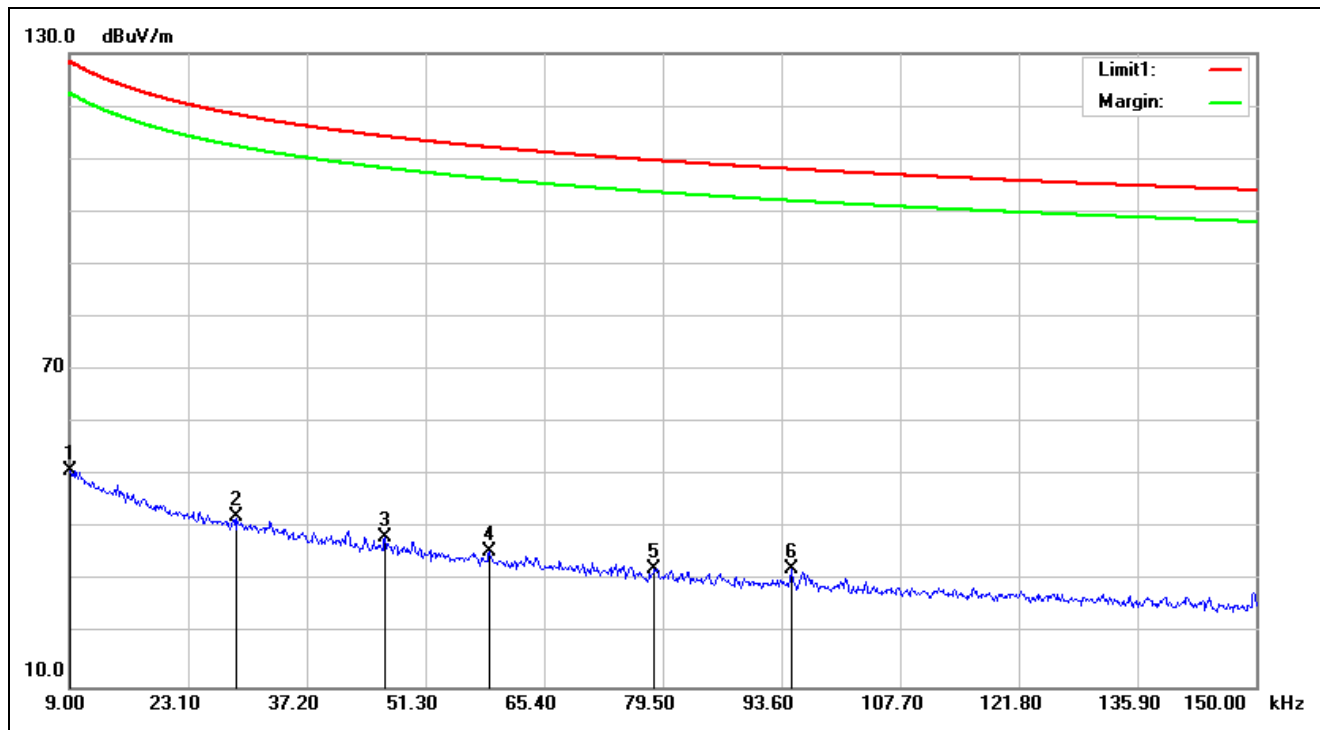
Spurious Emissions, RX Mode, 9K-30M



TUV Rheinland Taiwan Ltd.

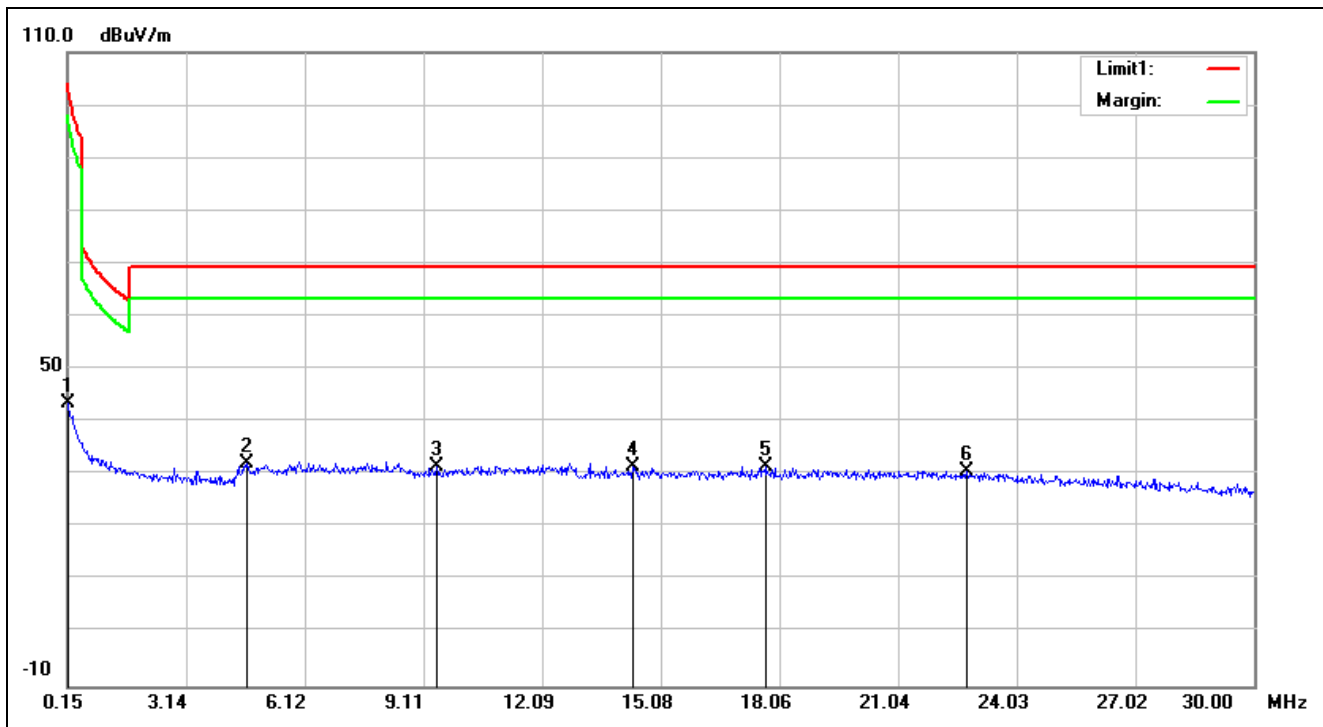
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/19 05:15:37
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	19.53	31.52	51.05	128.50	-77.45	QP	100	117	
2	0.0289	20.12	21.99	42.11	118.37	-76.26	QP	100	157	
3	0.0465	19.55	18.69	38.24	114.24	-76.00	QP	100	22	
4	0.0589	19.38	16.38	35.76	112.19	-76.43	QP	100	318	
5	0.0785	19.26	13.20	32.46	109.70	-77.24	QP	100	271	
6	0.0947	19.16	13.22	32.38	108.07	-75.69	QP	100	6	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/19 05:18:09
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-RX		
Remark:	RFMTA331215IMAB701-ANT		

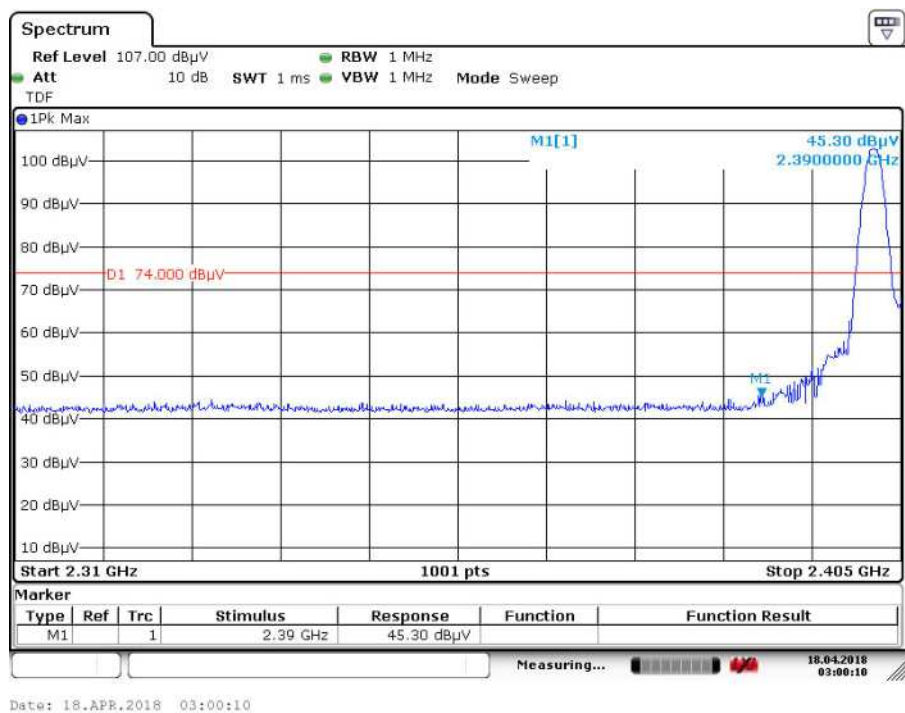
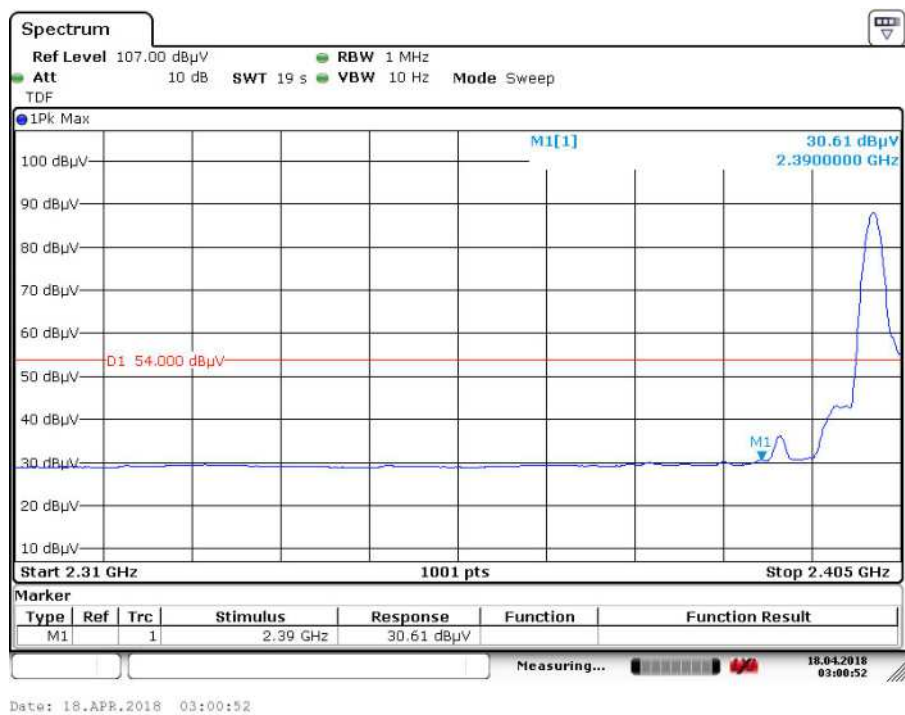
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1500	19.08	24.60	43.68	104.08	-60.40	QP	100	262	
2	4.6574	19.54	12.50	32.04	69.50	-37.46	QP	100	183	
3	9.4334	20.16	11.37	31.53	69.50	-37.97	QP	100	303	
4	14.3586	20.99	10.68	31.67	69.50	-37.83	QP	100	340	
5	17.7018	21.58	9.97	31.55	69.50	-37.95	QP	100	176	
6	22.7763	22.17	8.53	30.70	69.50	-38.80	QP	100	333	

RFPCA381013IMAB701-ANT

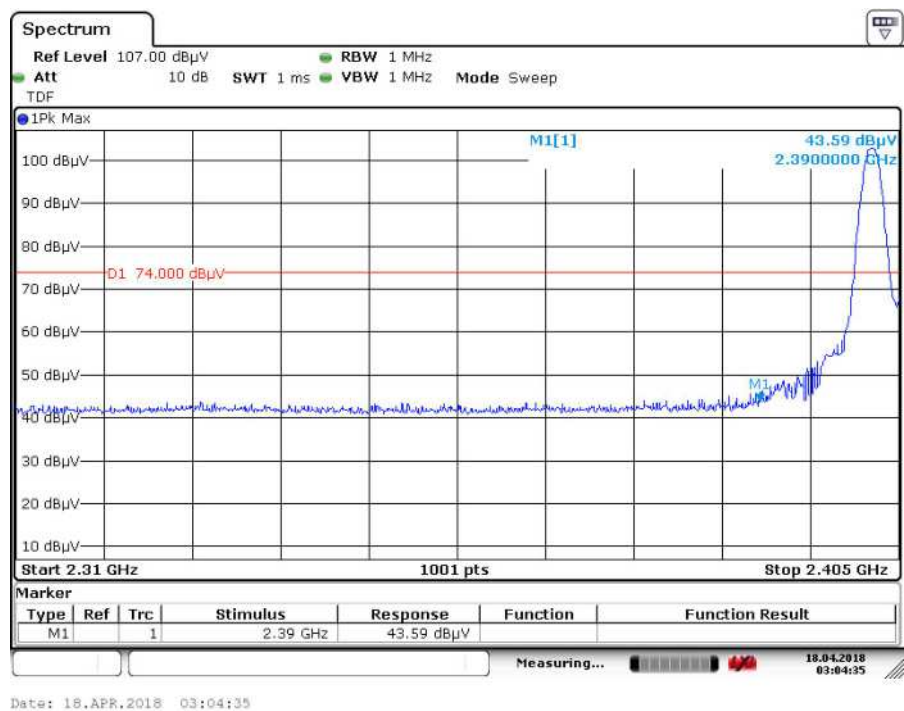
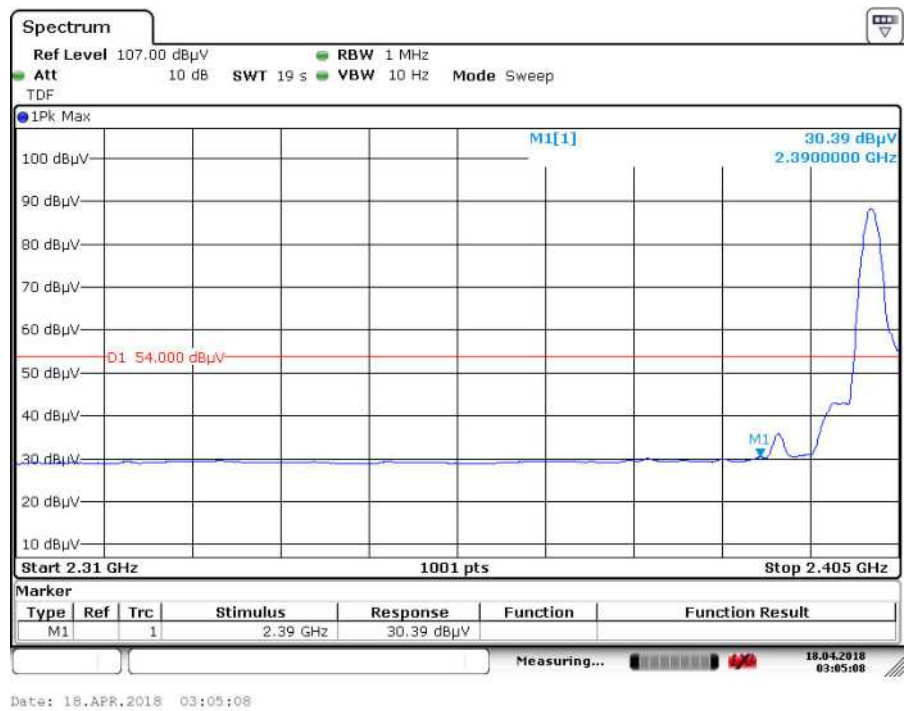
Spurious Emissions, Band Edges, 2.35-2.5G

Radiated Bandedge 1DH5

Low Channel (Hor)

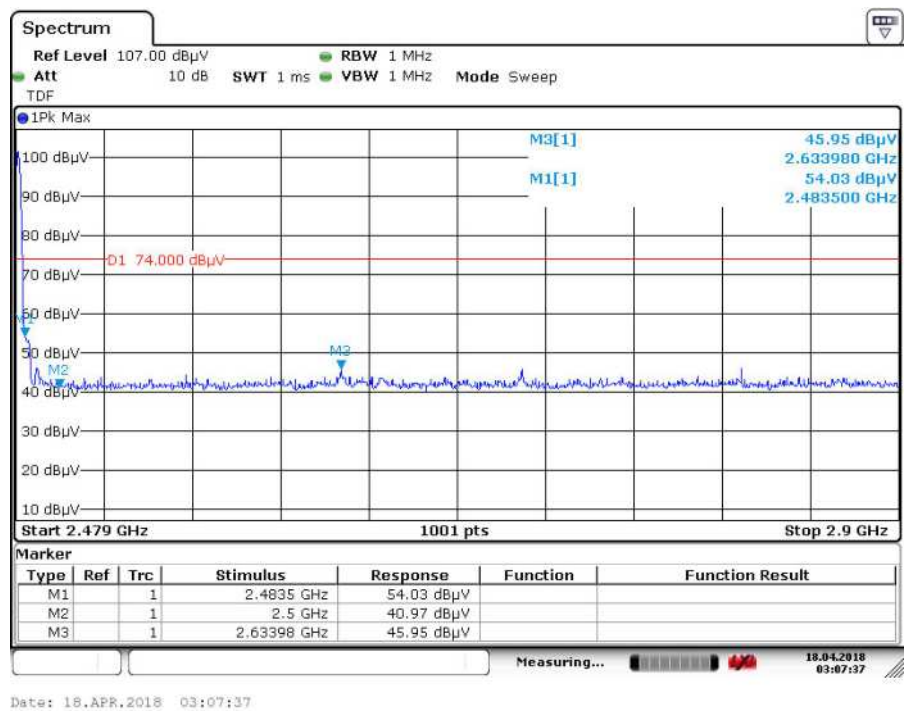
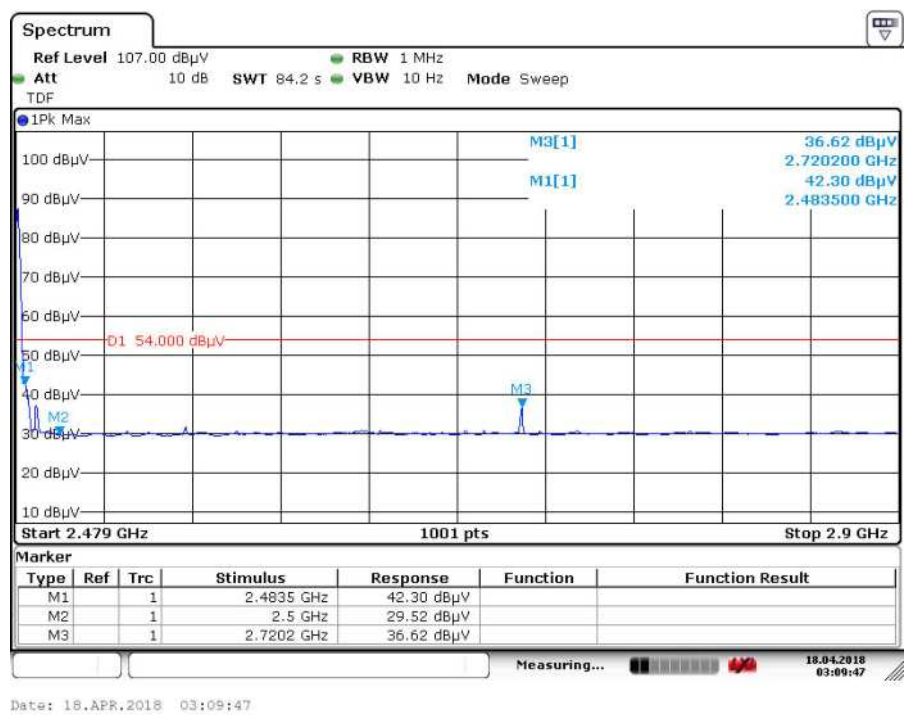


Low Channel (Ver)

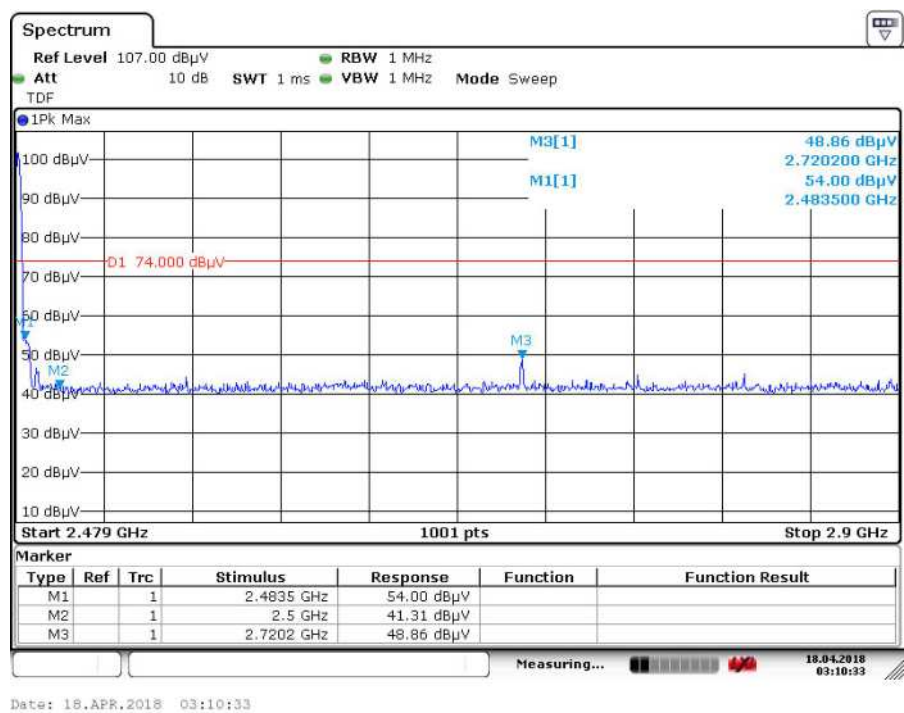
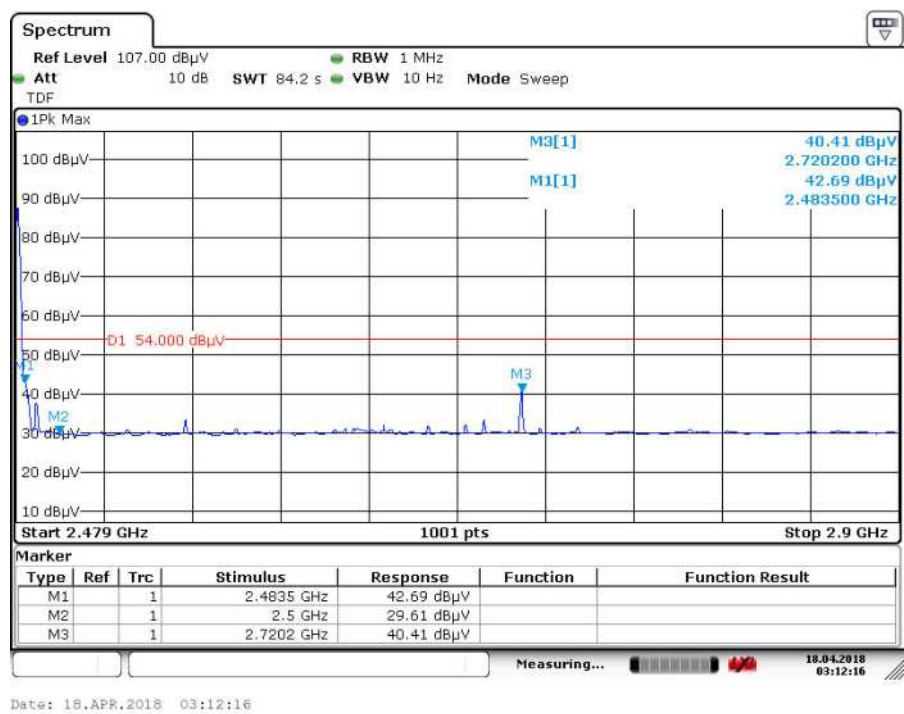


Radiated Bandedge 1DH5

High Channel (Hor)

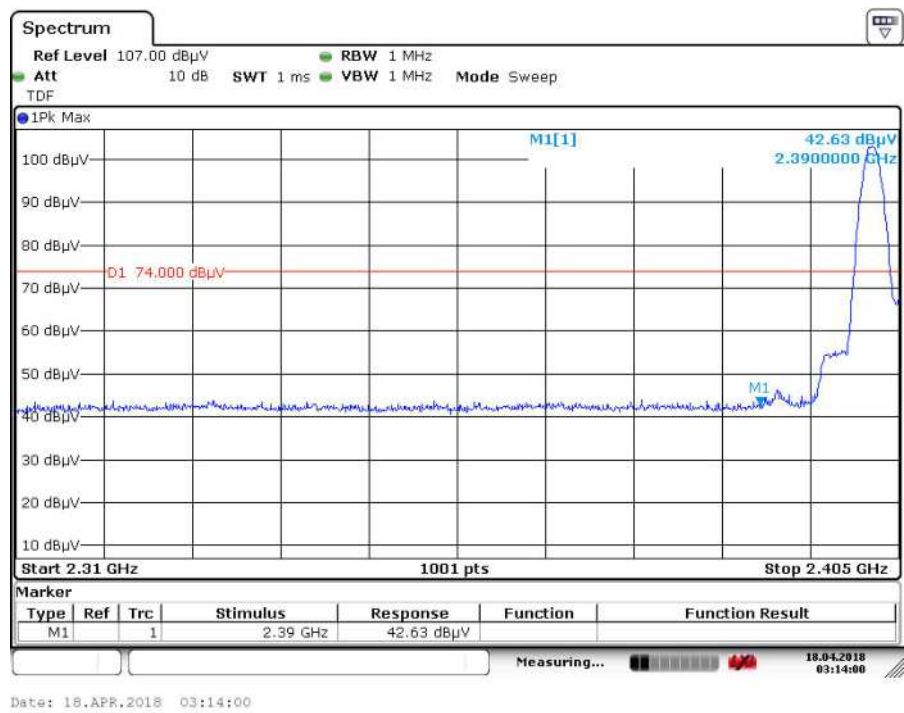
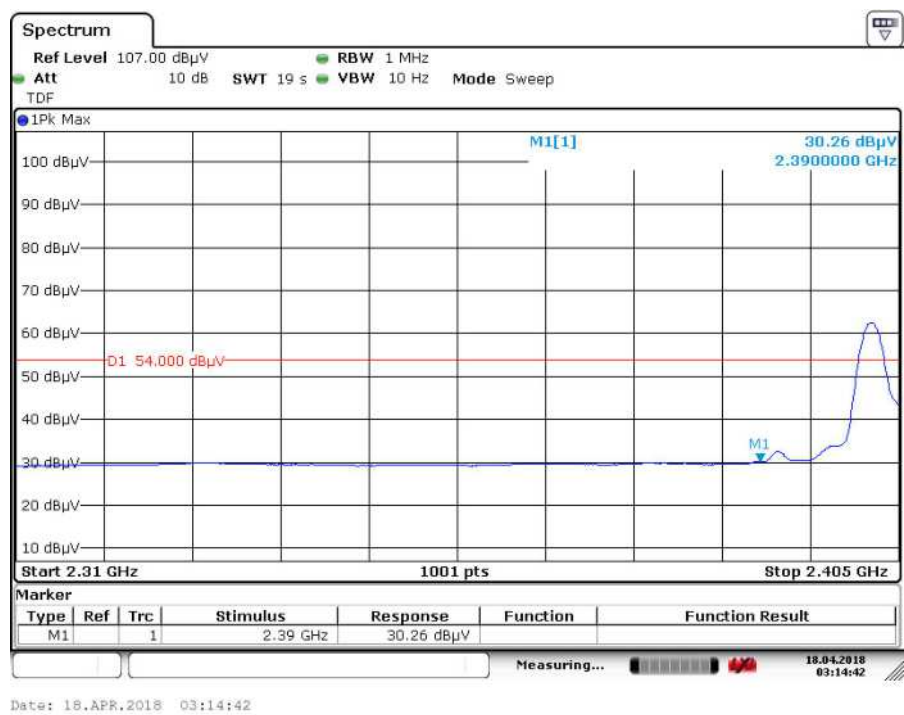


High Channel (Ver)

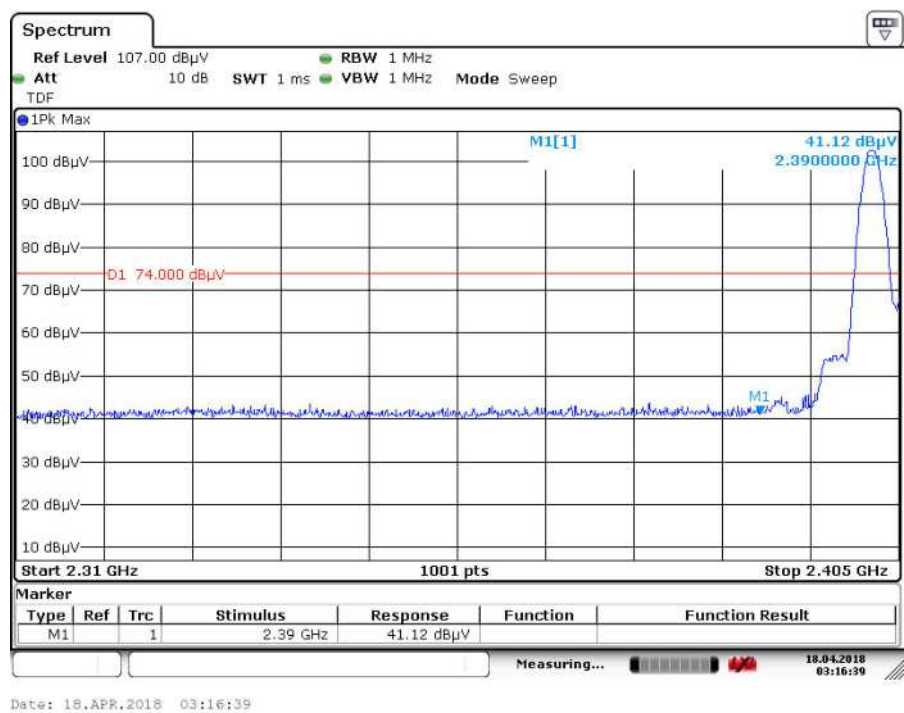
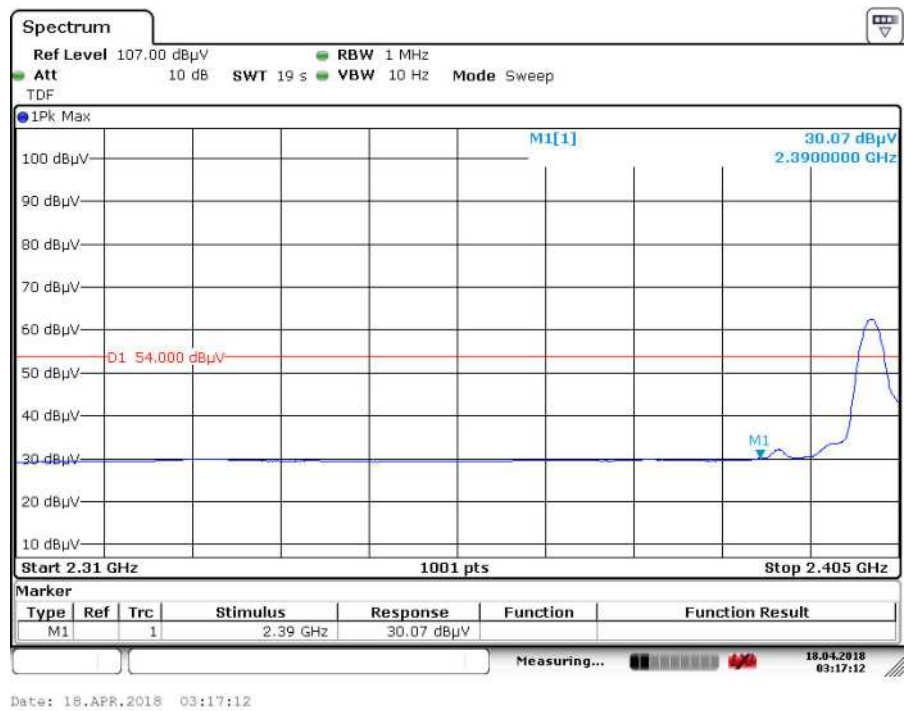


Radiated Bandedge 3DH5

Low Channel (Hor)

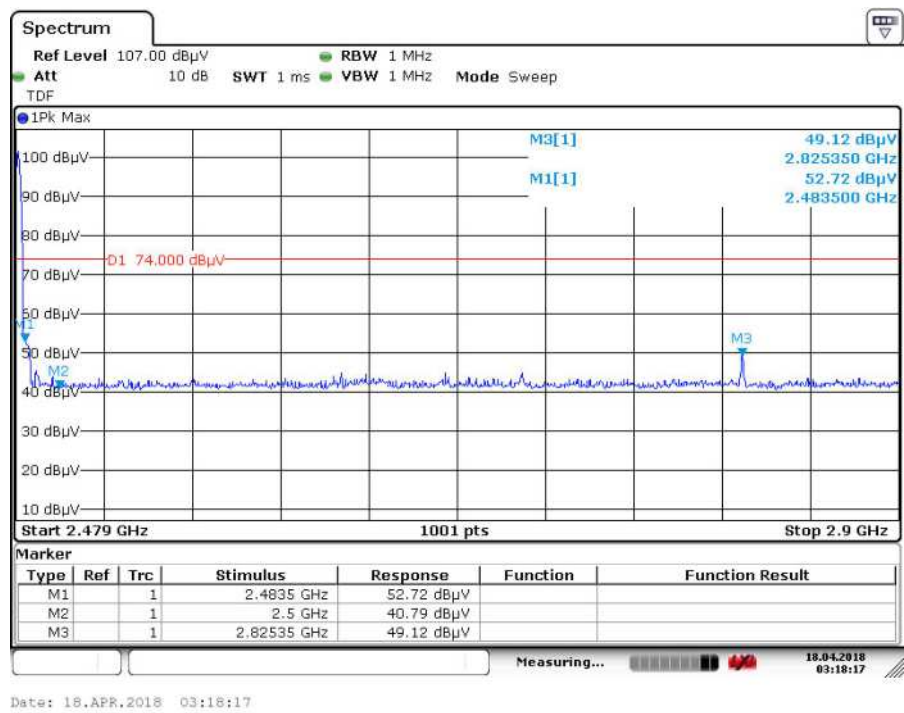
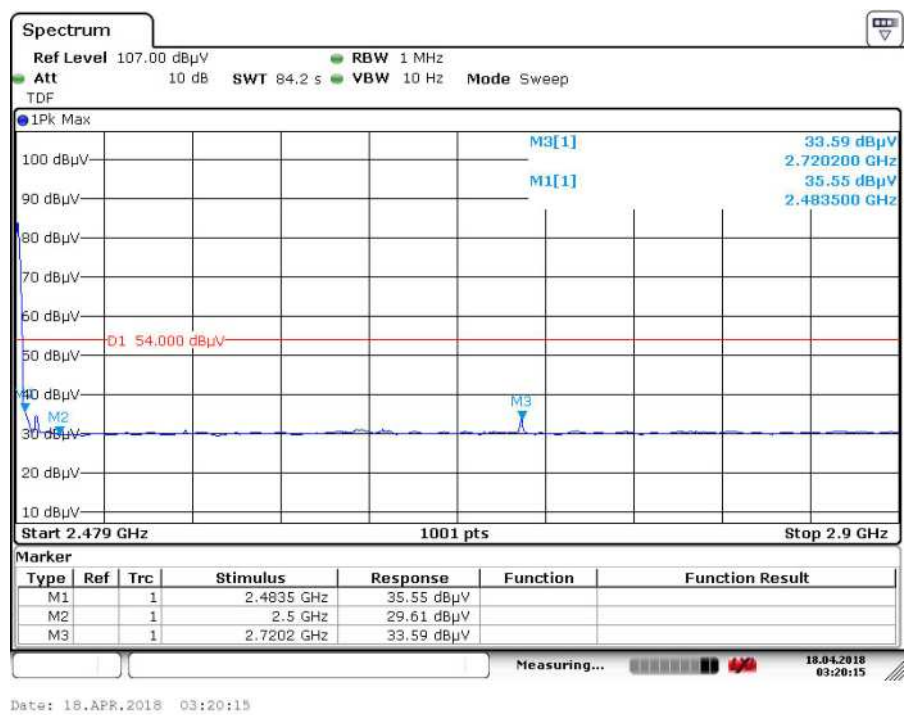


Low Channel (Ver)

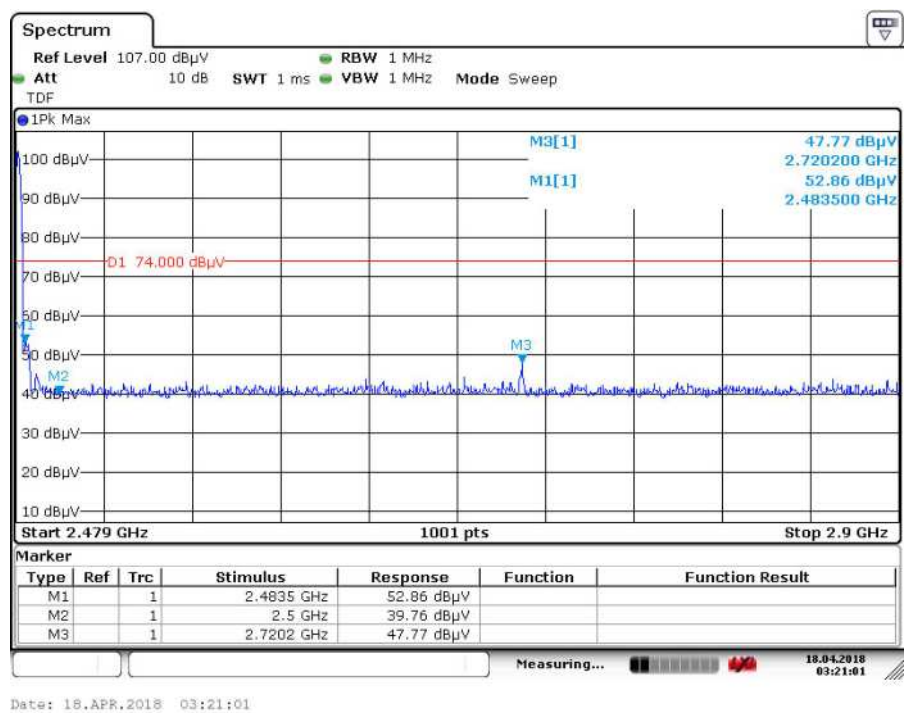
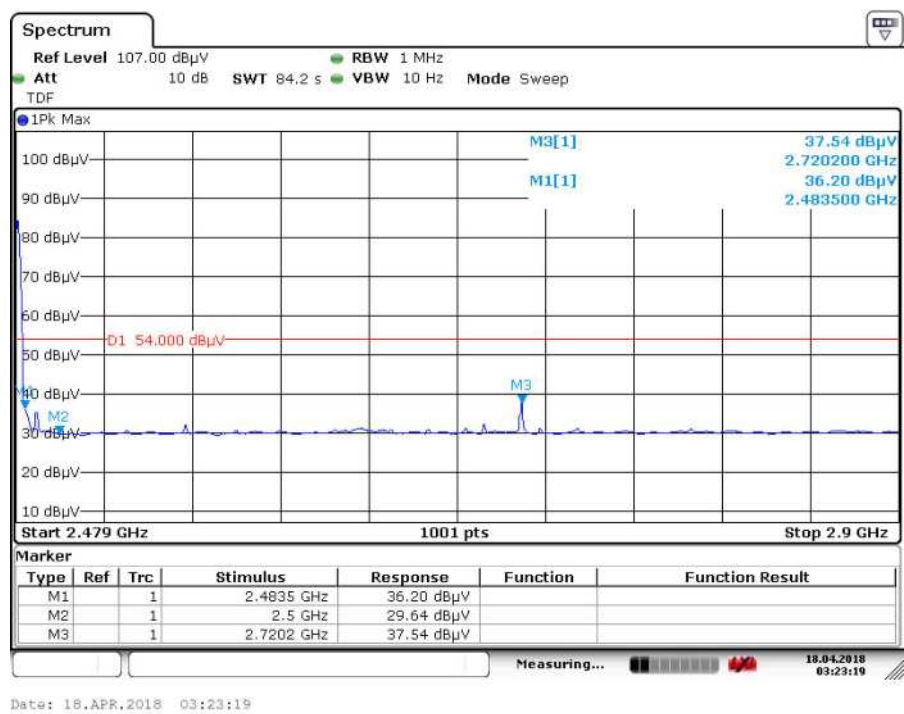


Radiated Bandedge 3DH5

High Channel (Hor)



High Channel (Ver)



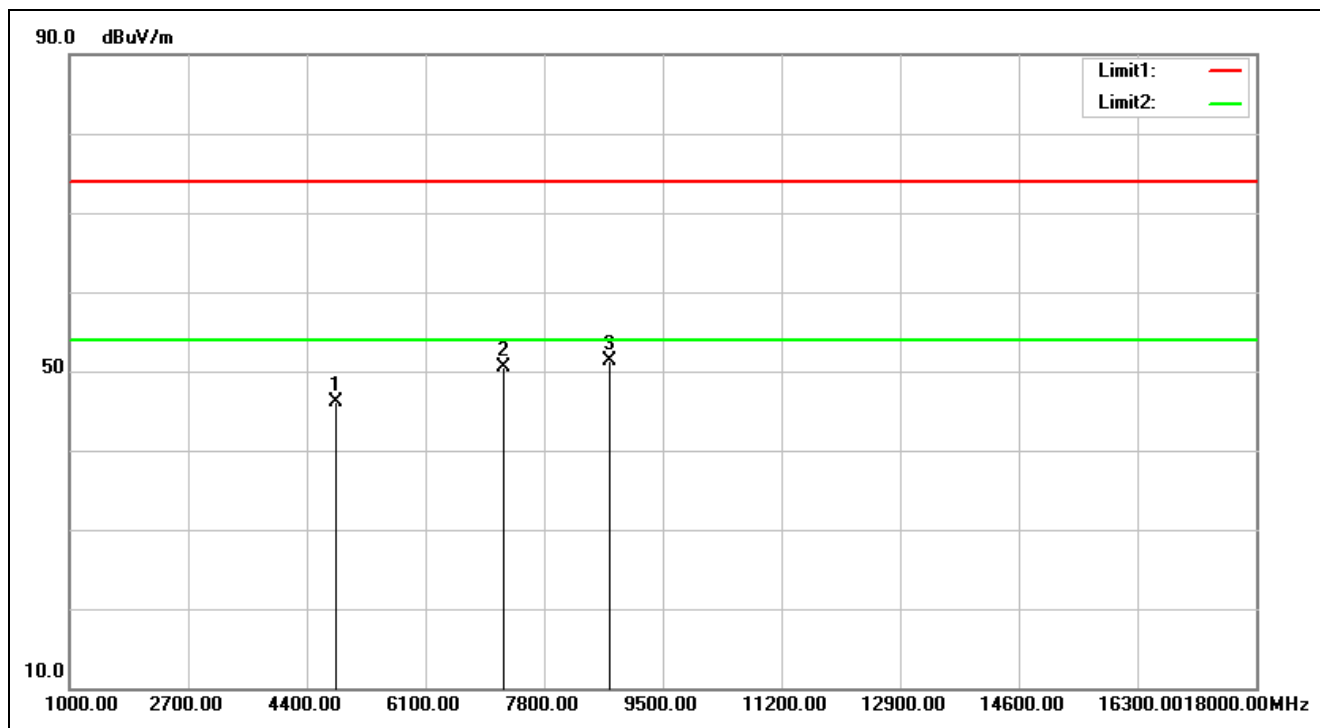
Spurious Emissions, TX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

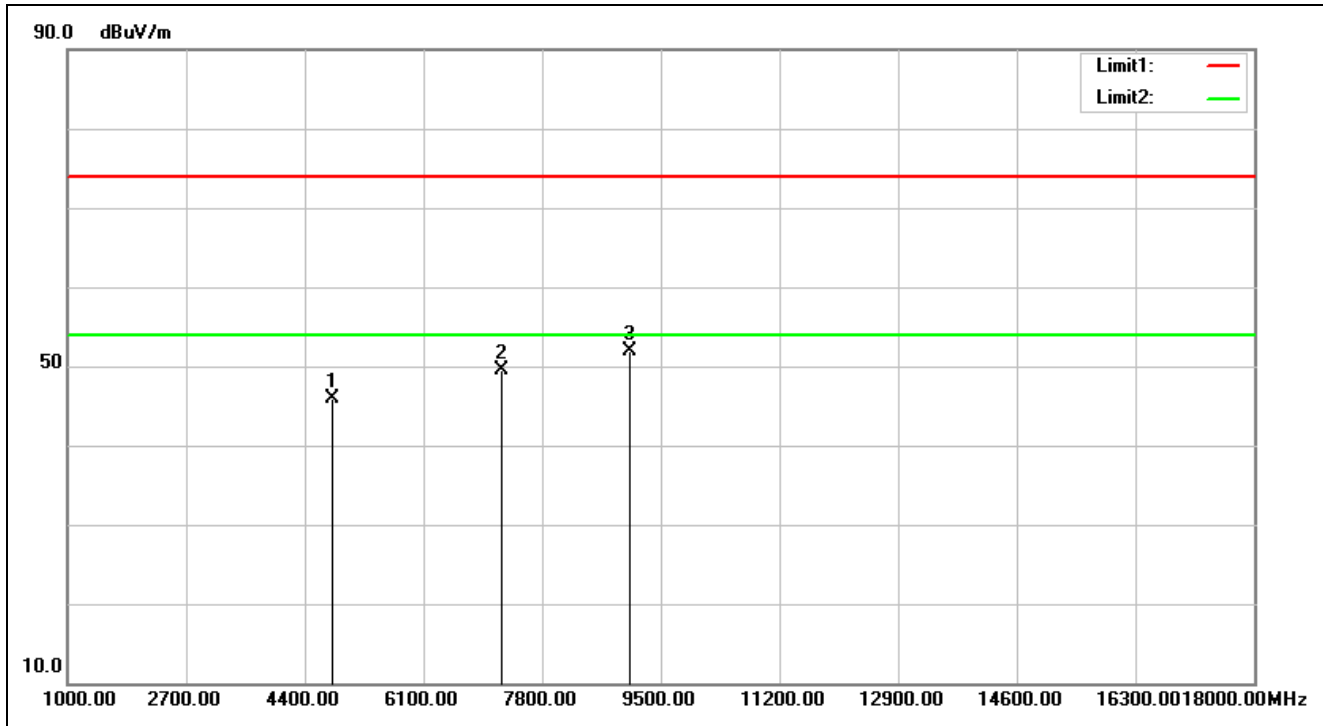
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



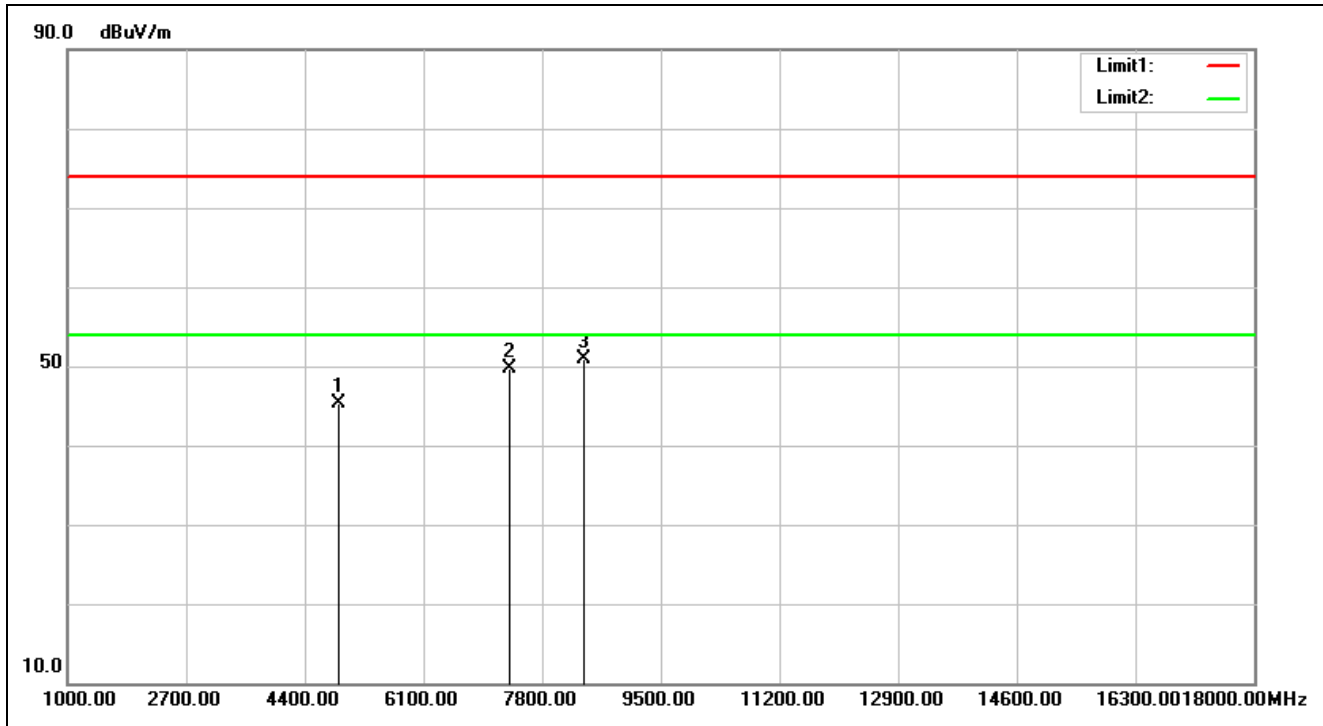
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 03:16:21
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX		
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	4804.000	-2.72	48.75	46.03	74.00	-27.97	peak		0	
2	7206.000	5.25	45.22	50.47	74.00	-23.53	peak		0	
3	8735.000	6.40	44.96	51.36	74.00	-22.64	peak		0	



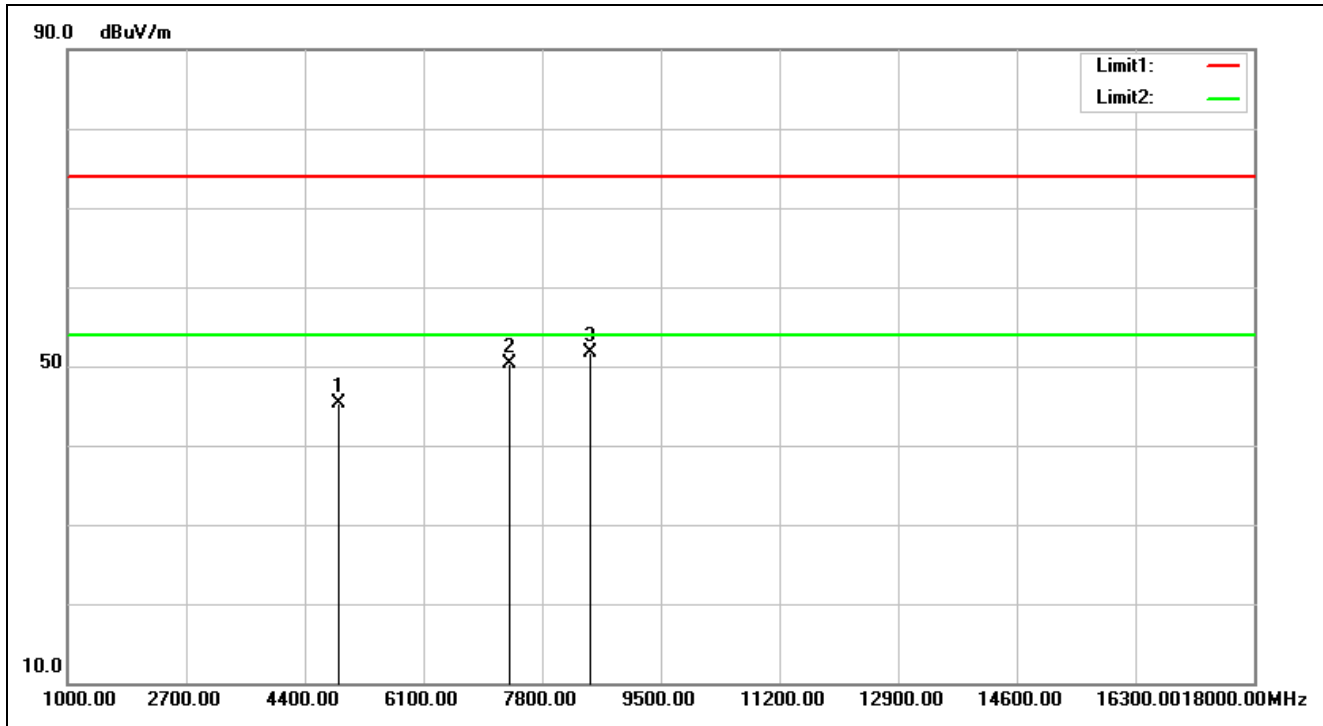
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 03:17:14
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX		
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	4804.000	-2.72	48.67	45.95	74.00	-28.05	peak			
2	7206.000	5.25	44.28	49.53	74.00	-24.47	peak			
3	9058.000	6.46	45.49	51.95	74.00	-22.05	peak	100	90	



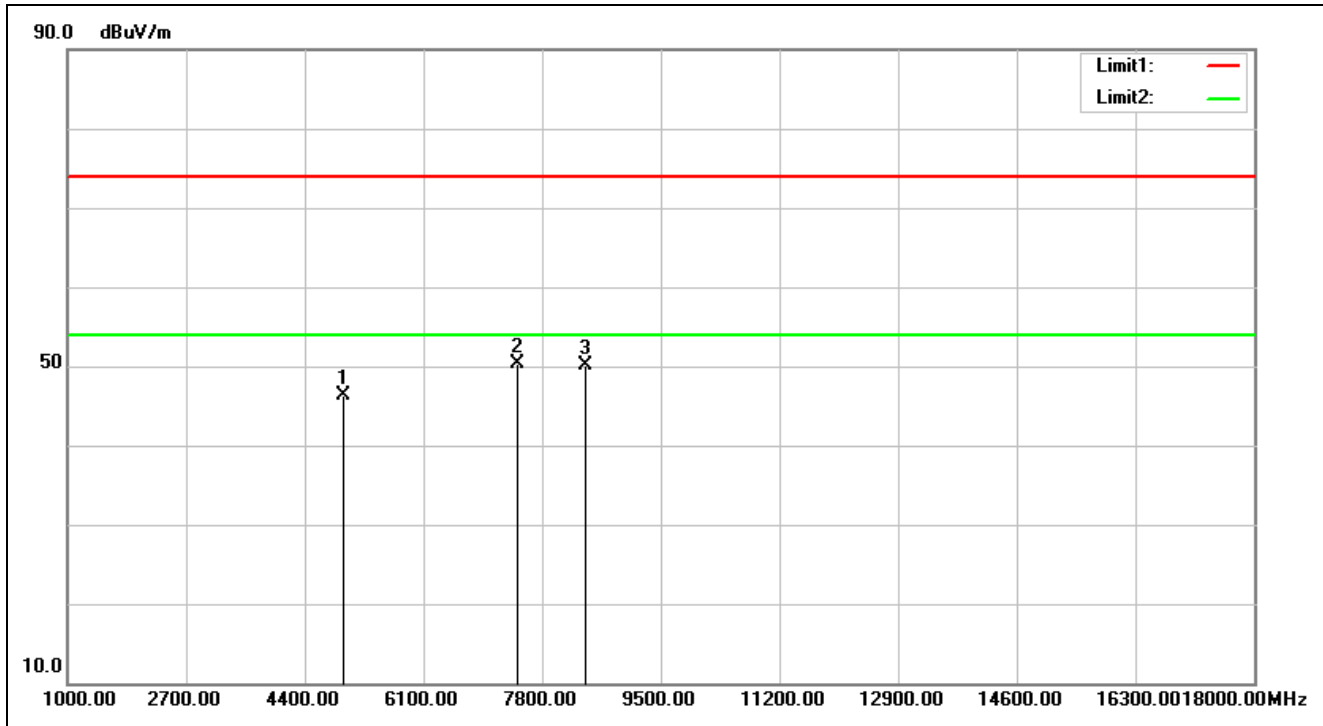
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 03:21:06
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	4882.000	-2.50	47.83	45.33	74.00	-28.67	peak			
2	7323.000	5.54	44.14	49.68	74.00	-24.32	peak			
3	8395.000	6.26	44.60	50.86	74.00	-23.14	peak	100	284	



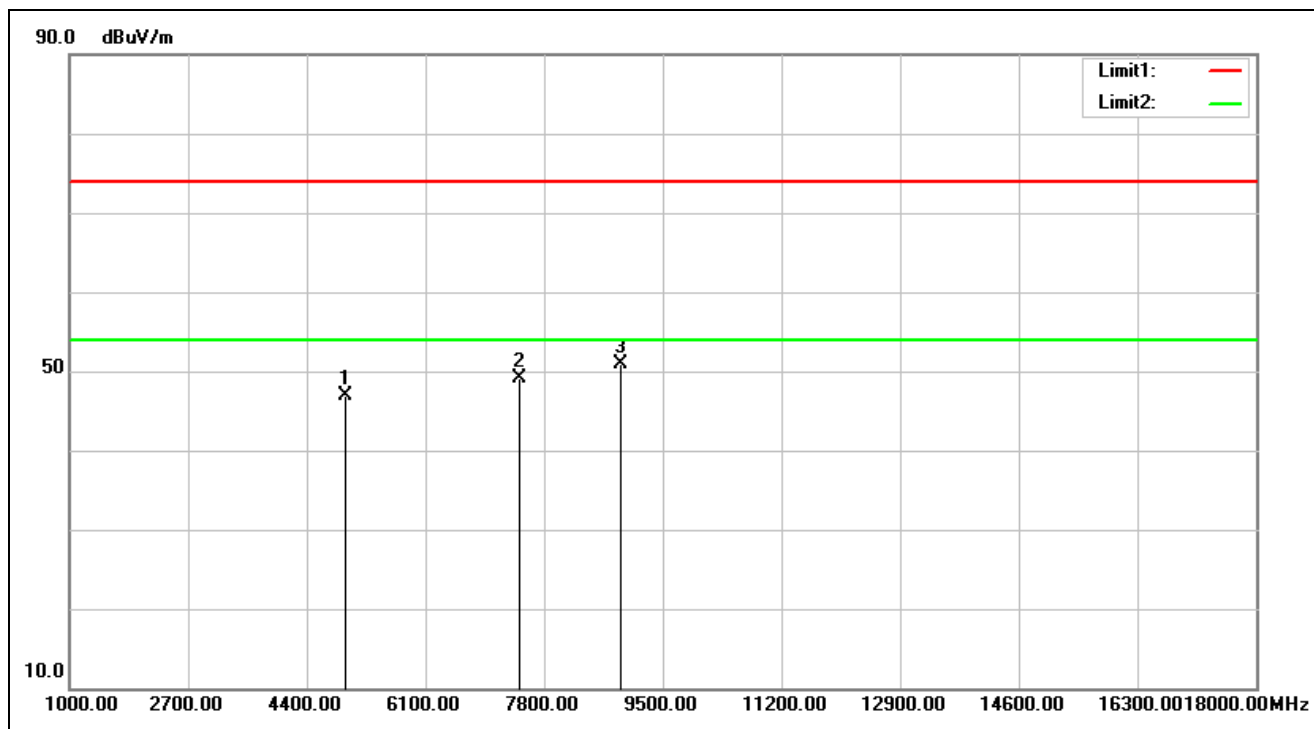
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 03:21:58
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	4882.000	-2.50	47.75	45.25	74.00	-28.75	peak			
2	7323.000	5.54	44.81	50.35	74.00	-23.65	peak			
3	8480.000	6.35	45.26	51.61	74.00	-22.39	peak	100	357	



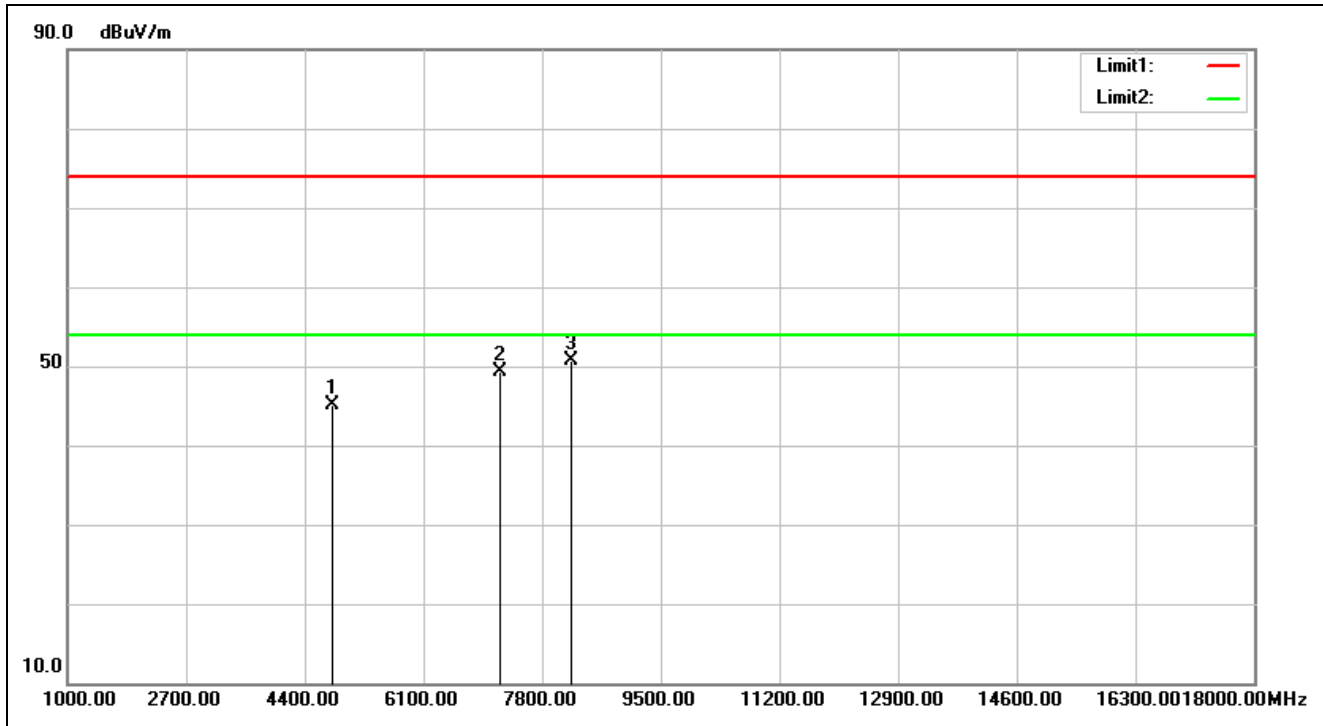
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 03:24:02
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX		
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	4960.000	-2.28	48.62	46.34	74.00	-27.66	peak			
2	7440.000	5.84	44.49	50.33	74.00	-23.67	peak			
3	8429.000	6.30	43.73	50.03	74.00	-23.97	peak	100	61	



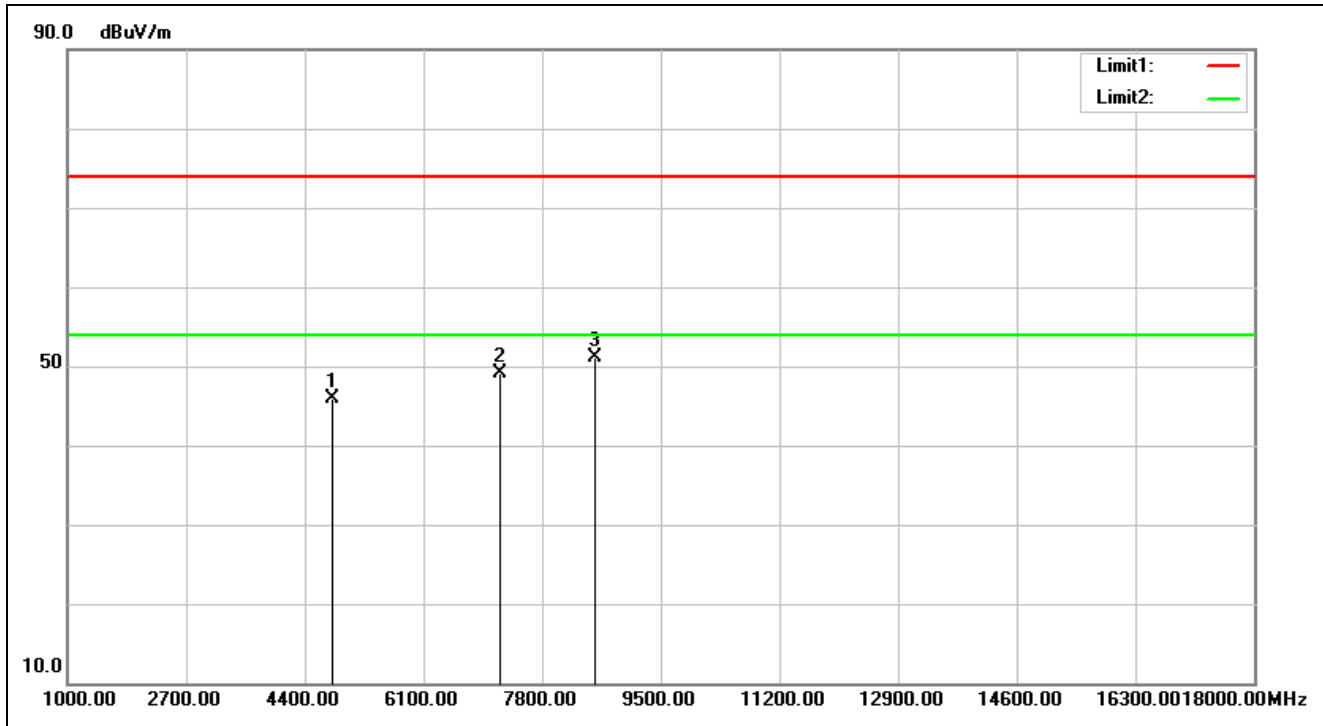
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 03:24:55
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX		
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	4960.000	-2.28	49.12	46.84	74.00	-27.16	peak			
2	7440.000	5.84	43.30	49.14	74.00	-24.86	peak			
3	8905.000	6.42	44.56	50.98	74.00	-23.02	peak	100	211	



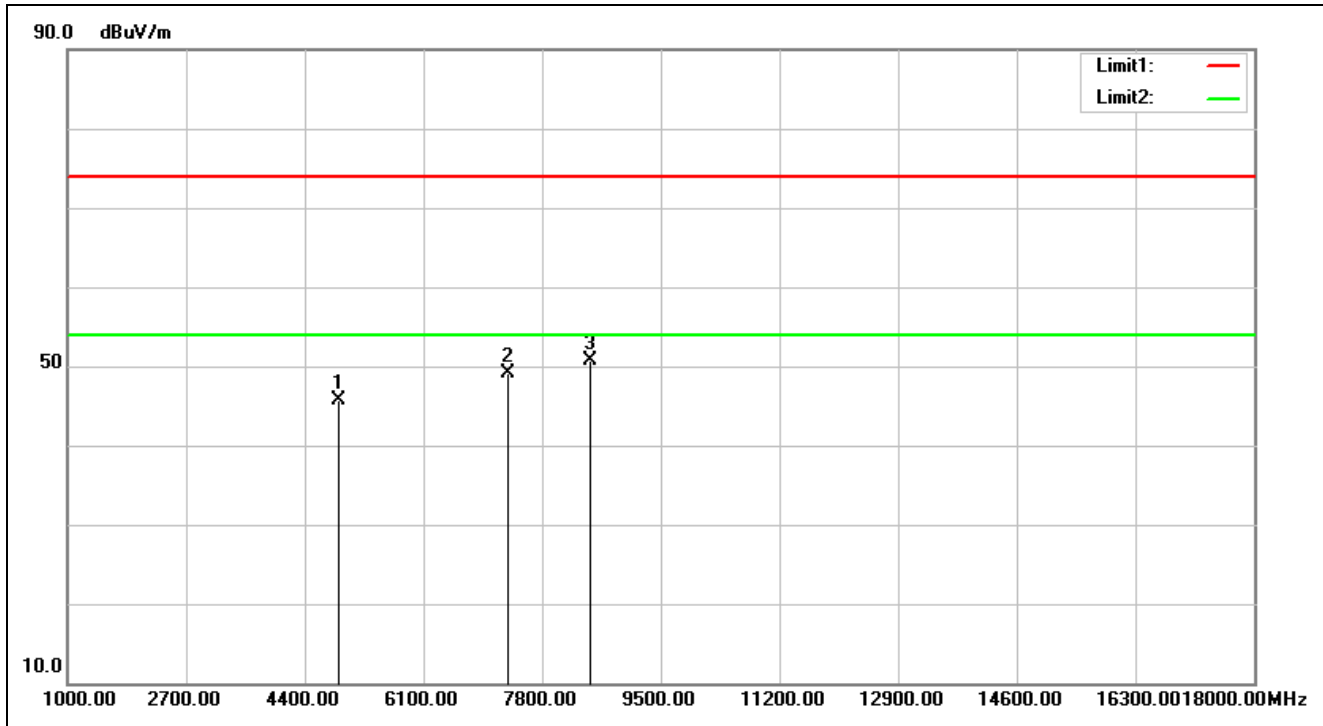
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 03:26:44
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX		
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	4804.000	-2.72	47.86	45.14	74.00	-28.86	peak			
2	7206.000	5.25	43.97	49.22	74.00	-24.78	peak			
3	8225.000	6.08	44.63	50.71	74.00	-23.29	peak	100	98	



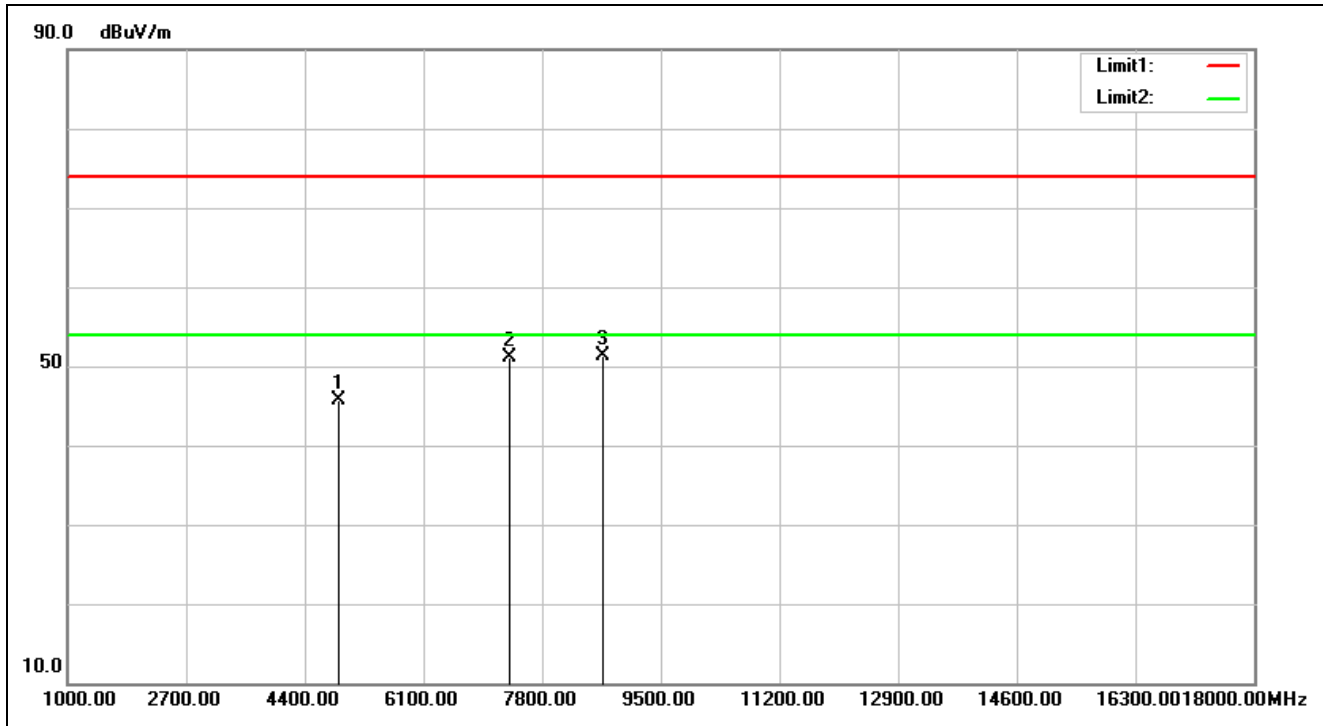
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 03:27:36
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX		
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	4804.000	-2.72	48.63	45.91	74.00	-28.09	peak			
2	7206.000	5.25	43.89	49.14	74.00	-24.86	peak			
3	8548.000	6.38	44.71	51.09	74.00	-22.91	peak	100	334	



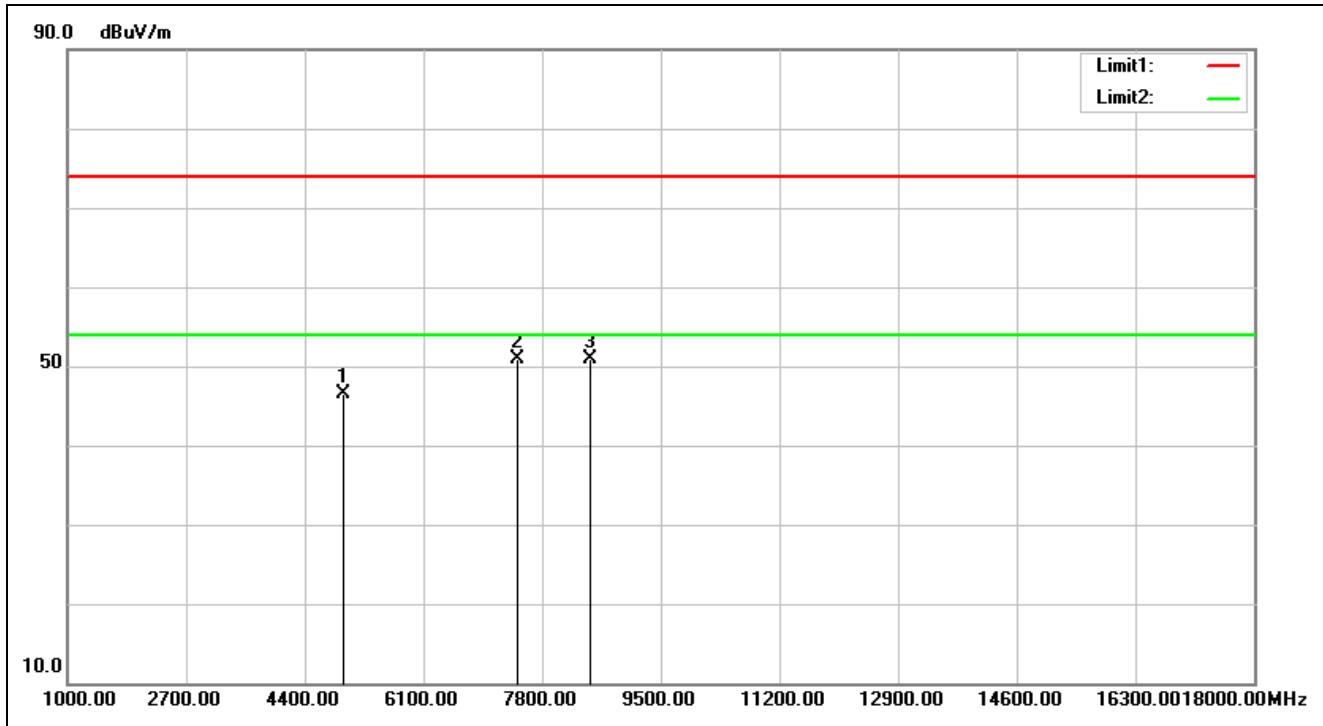
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 03:29:12
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX		
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	4882.000	-2.50	48.29	45.79	74.00	-28.21	peak			
2	7323.000	5.54	43.59	49.13	74.00	-24.87	peak			
3	8480.000	6.35	44.45	50.80	74.00	-23.20	peak	100	229	



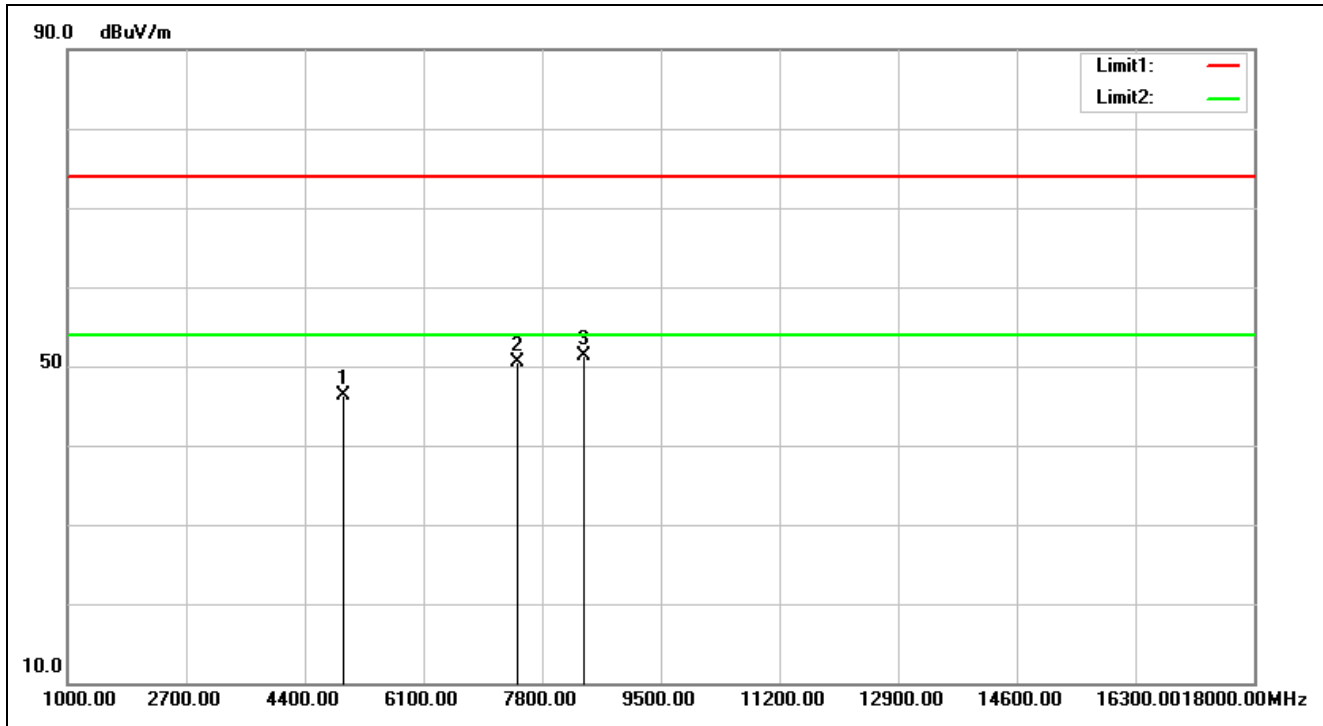
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 03:30:04
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX		
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	4882.000	-2.50	48.20	45.70	74.00	-28.30	peak			
2	7323.000	5.54	45.59	51.13	74.00	-22.87	peak			
3	8667.000	6.40	44.84	51.24	74.00	-22.76	peak	100	282	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 03:31:39
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX		
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	4960.000	-2.28	48.69	46.41	74.00	-27.59	peak			
2	7440.000	5.84	45.15	50.99	74.00	-23.01	peak			
3	8480.000	6.35	44.46	50.81	74.00	-23.19	peak	100	245	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 03:32:31
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX		
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	4960.000	-2.28	48.66	46.38	74.00	-27.62	peak			
2	7440.000	5.84	44.75	50.59	74.00	-23.41	peak			
3	8395.000	6.26	44.99	51.25	74.00	-22.75	peak	100	145	

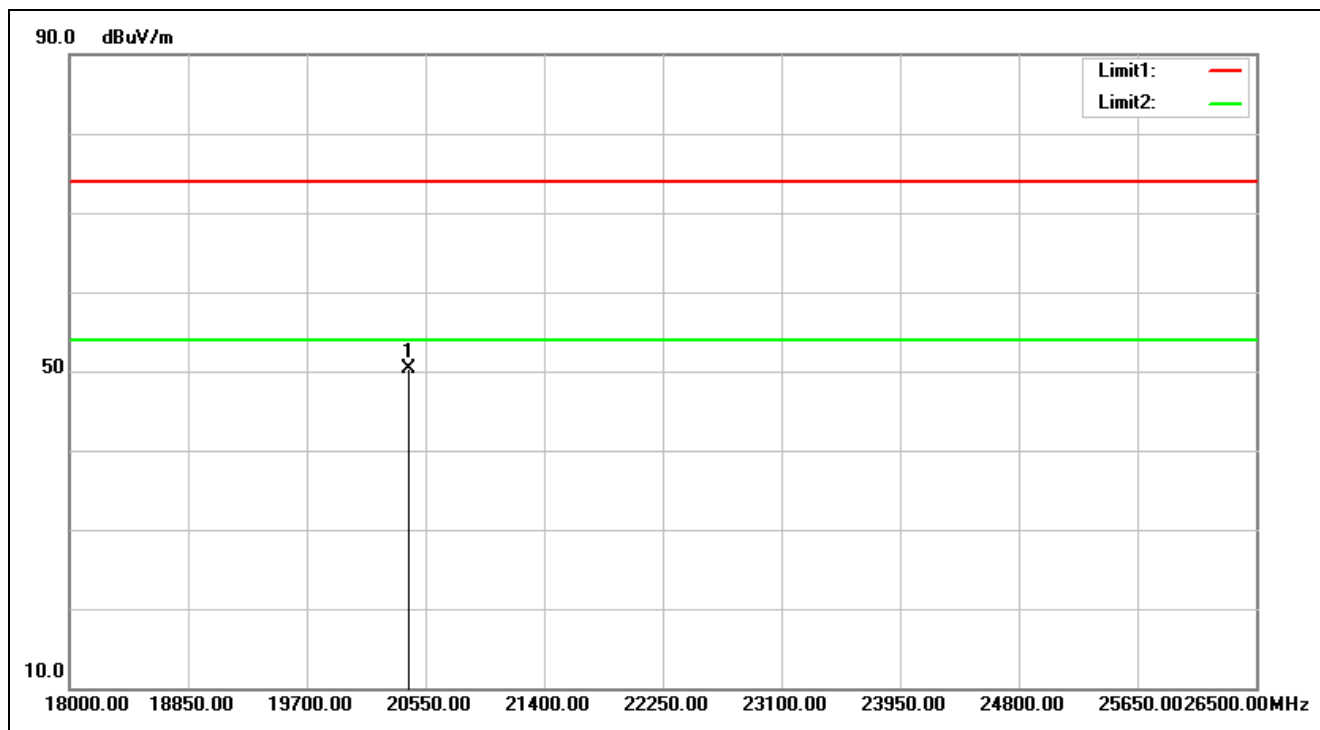
Spurious Emissions, TX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

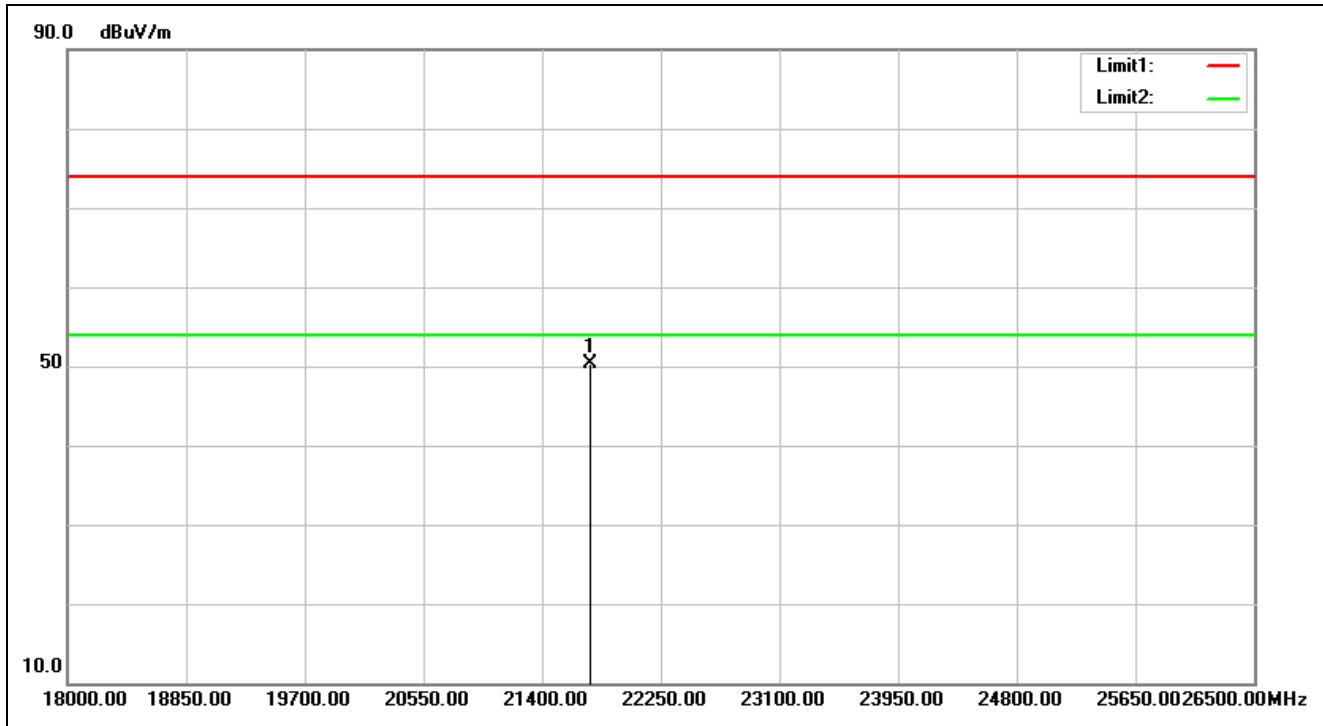
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



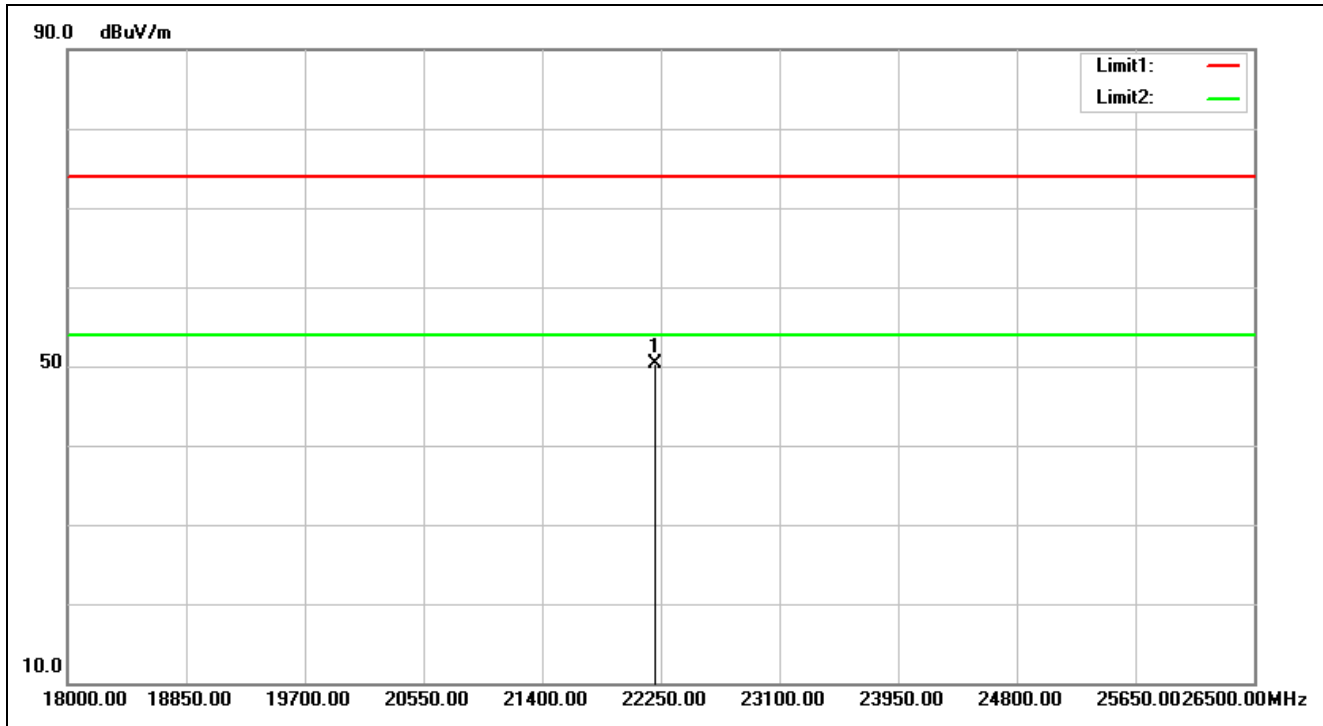
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:36:11
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX		
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	20431.000	31.38	18.86	50.24	74.00	-23.76	peak		0	



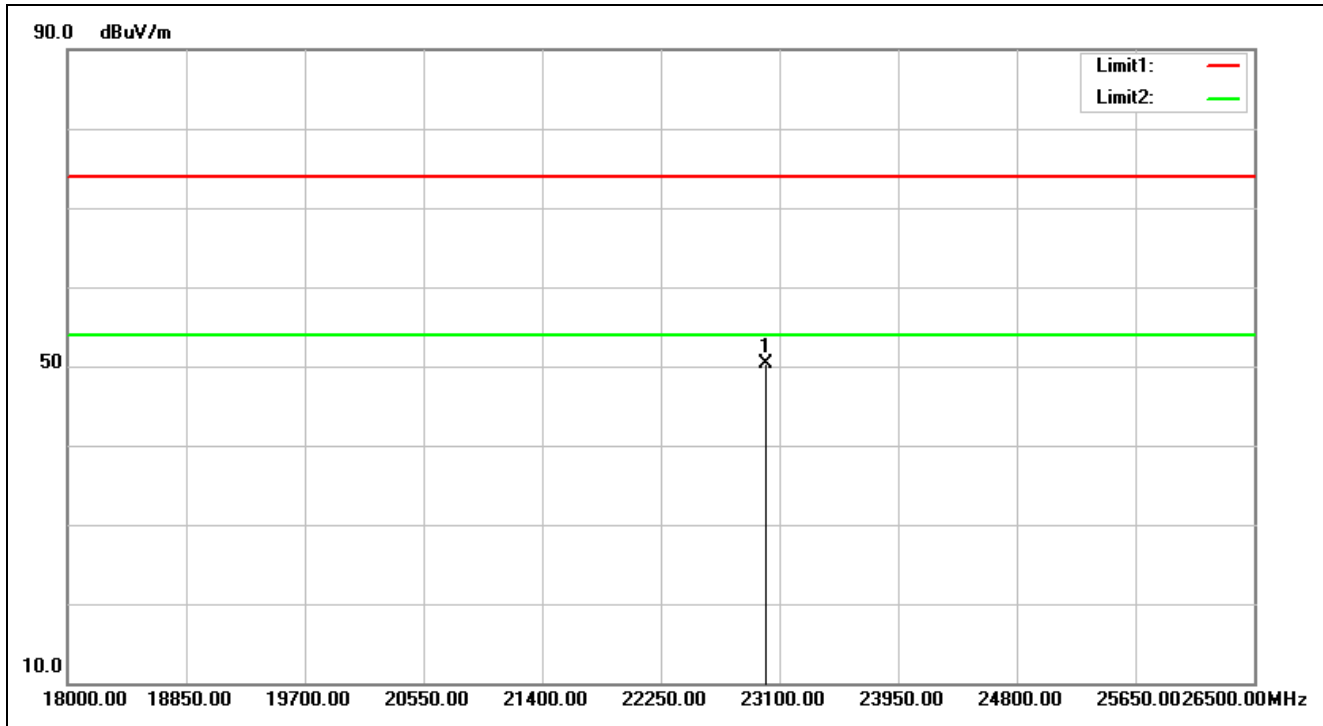
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:36:18
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2402-TX		
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	21740.000	32.74	17.61	50.35	74.00	-23.65	peak			



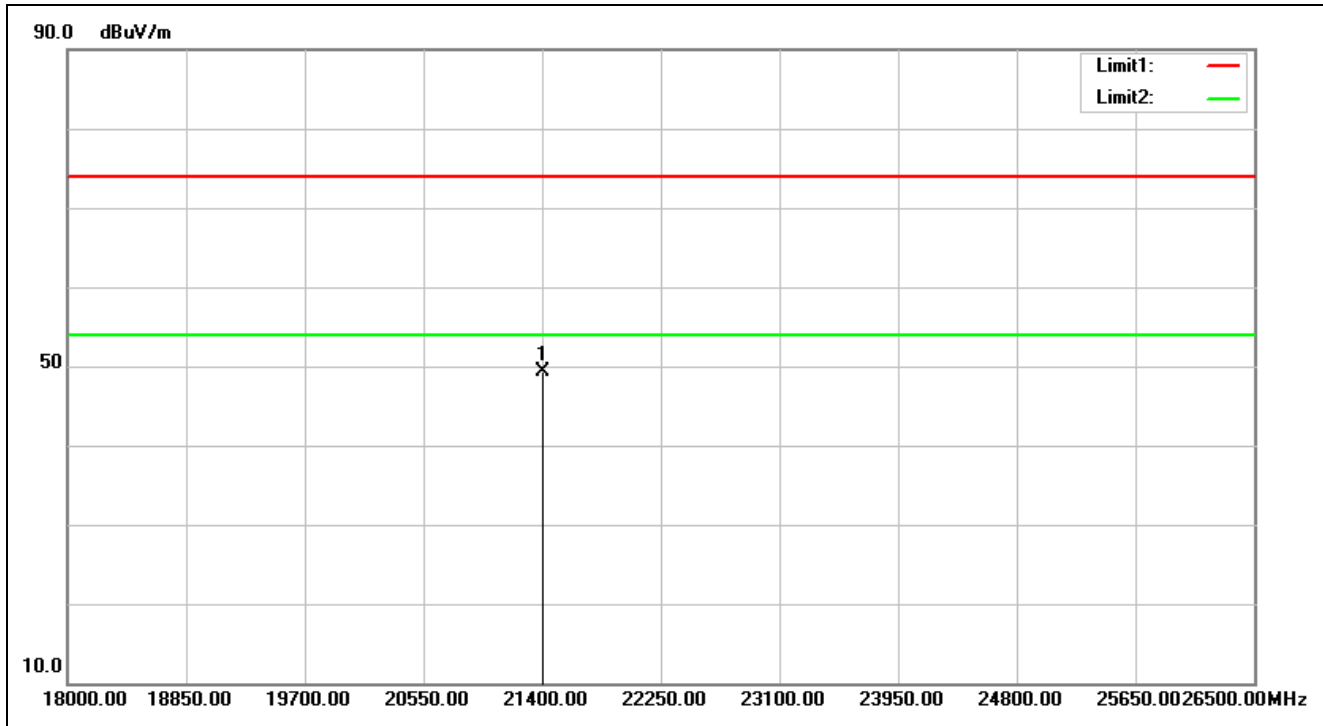
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:36:49
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	22207.500	32.61	17.63	50.24	74.00	-23.76	peak			



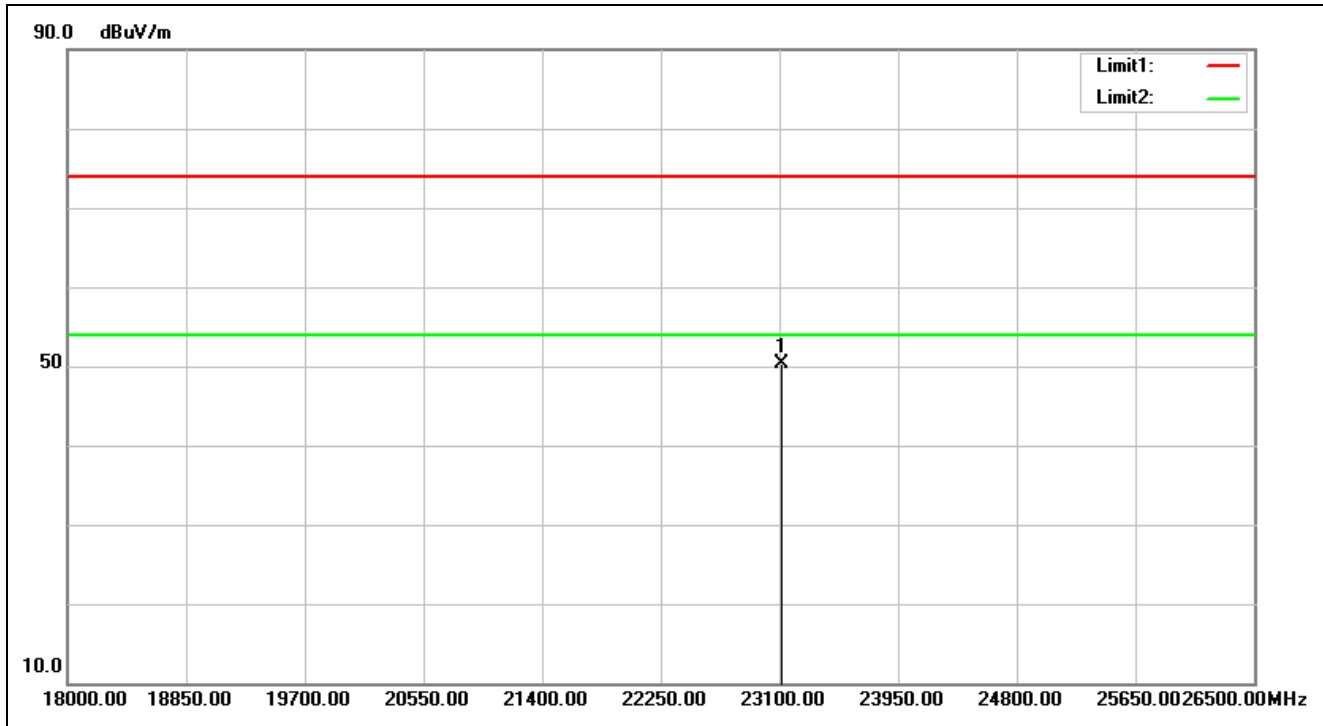
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:36:56
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	22998.000	32.80	17.52	50.32	74.00	-23.68	peak			



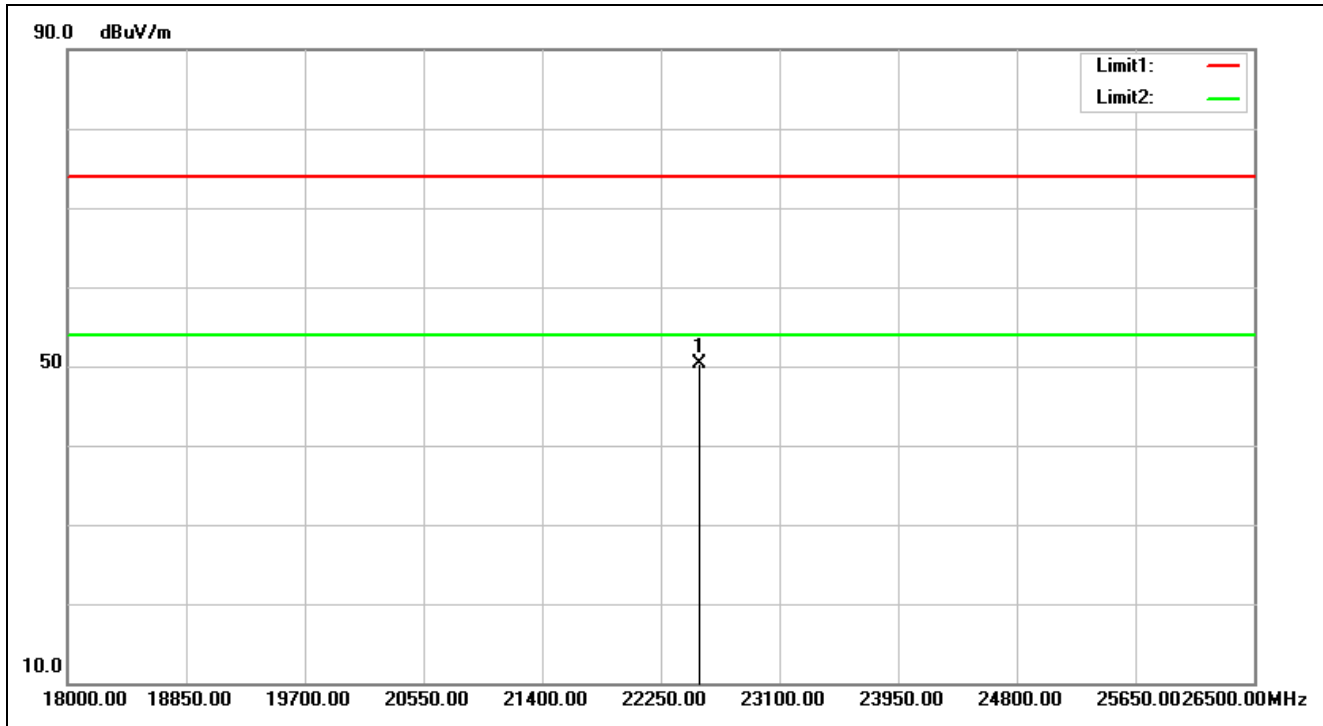
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:37:31
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX		
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	21400.000	32.80	16.47	49.27	74.00	-24.73	peak			



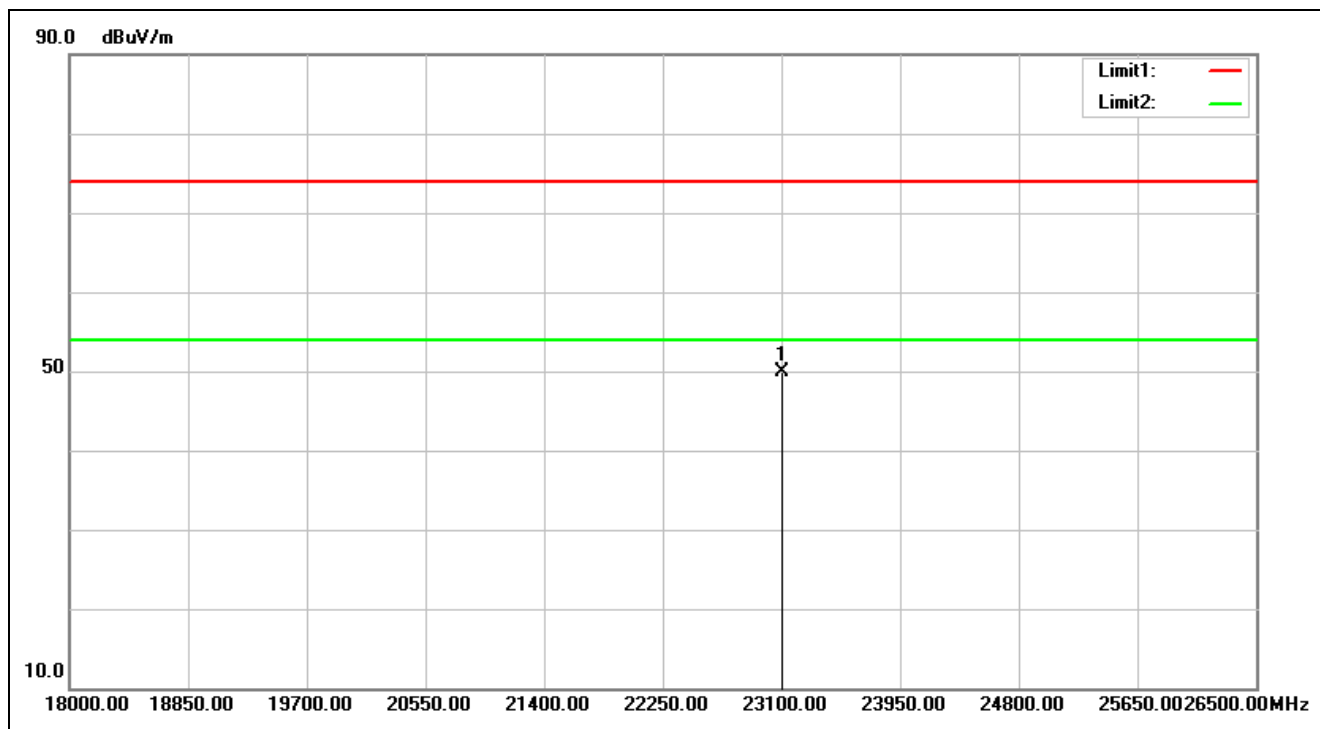
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:37:38
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2480-TX		
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	23117.000	32.91	17.44	50.35	74.00	-23.65	peak			



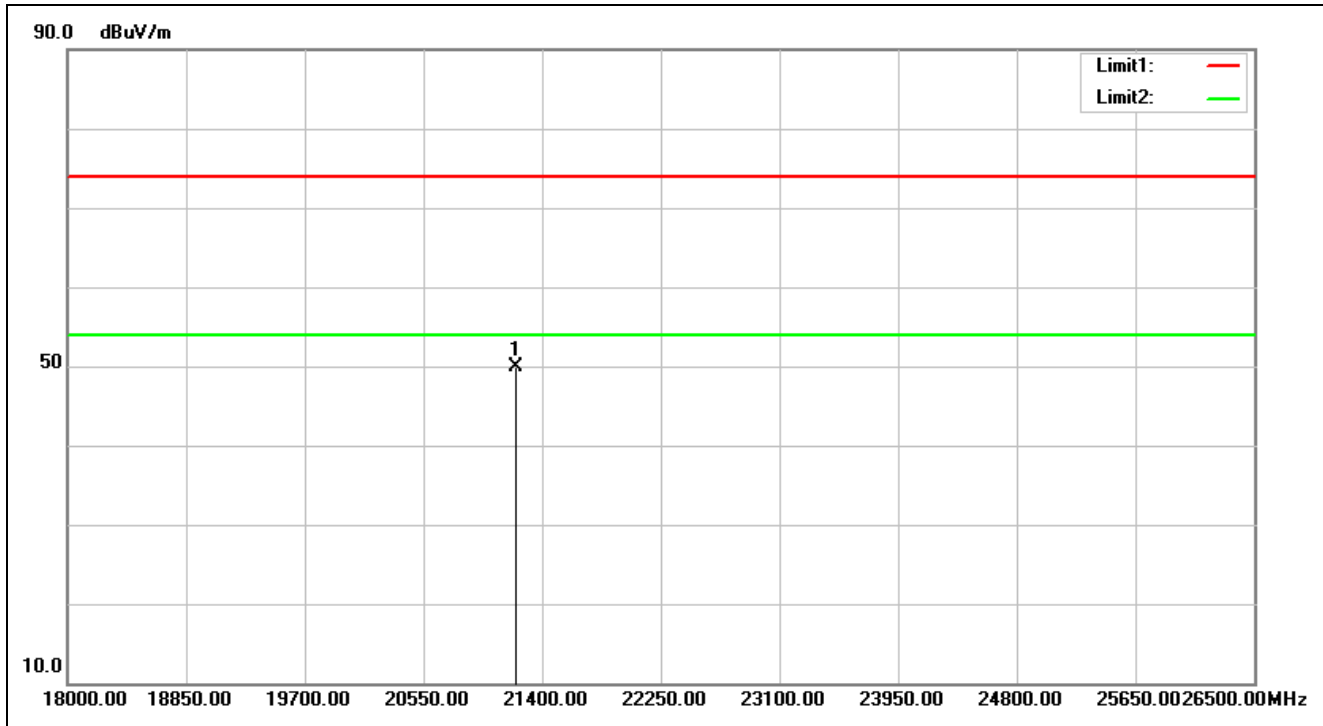
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:38:09
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX		
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	22530.500	32.65	17.63	50.28	74.00	-23.72	peak			



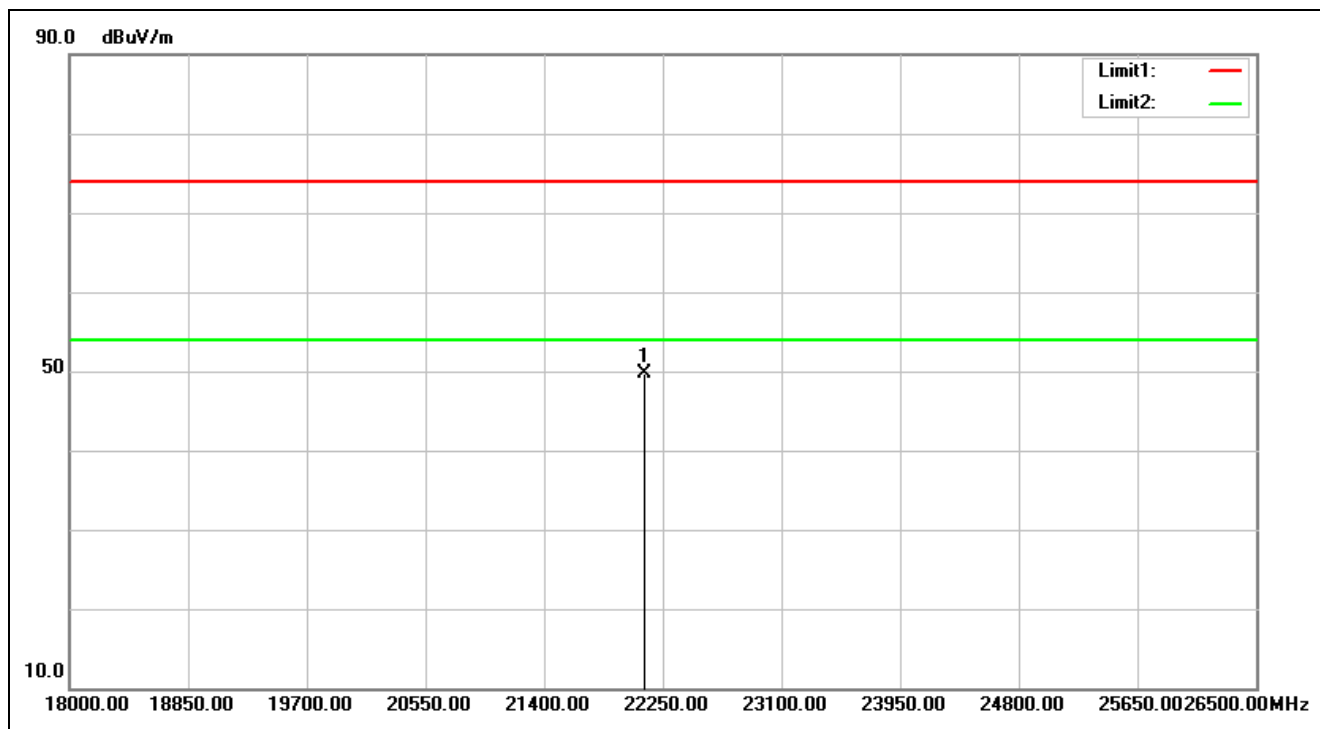
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:38:16
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2402-TX		
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	23108.500	32.90	17.04	49.94	74.00	-24.06	peak			



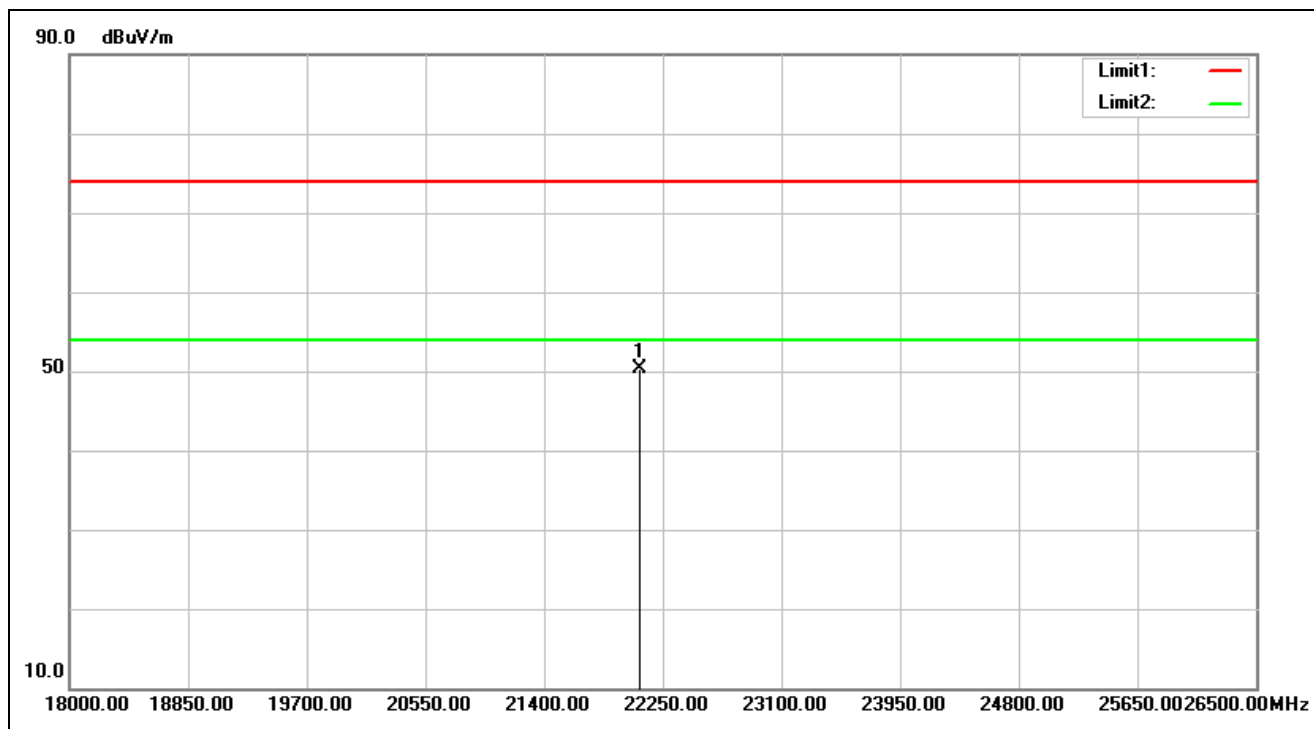
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:38:36
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX		
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	21213.000	32.63	17.25	49.88	74.00	-24.12	peak			



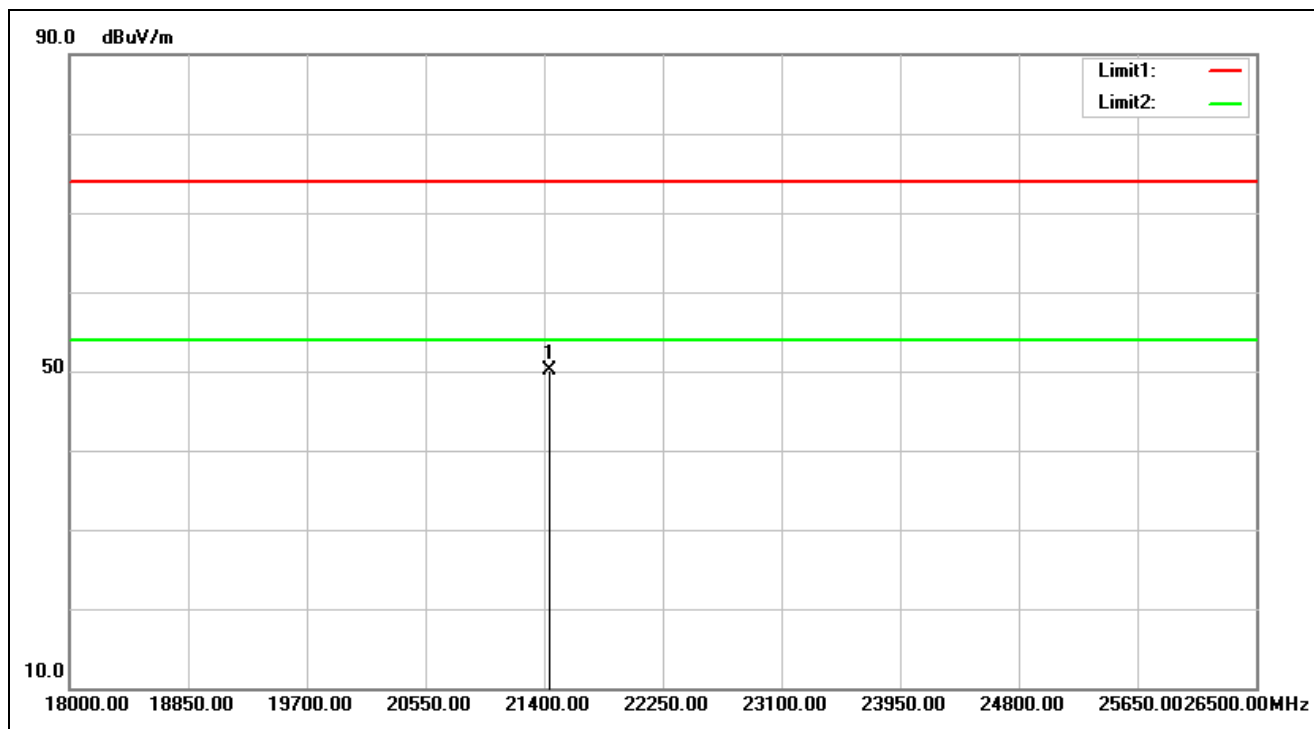
Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:38:43
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2441-TX		
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	22114.000	32.60	17.08	49.68	74.00	-24.32	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/4/18 05:39:05
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX		
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	22088.500	32.60	17.69	50.29	74.00	-23.71	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:39:12
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	3DH5-2480-TX		
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	21434.000	32.83	17.23	50.06	74.00	-23.94	peak			

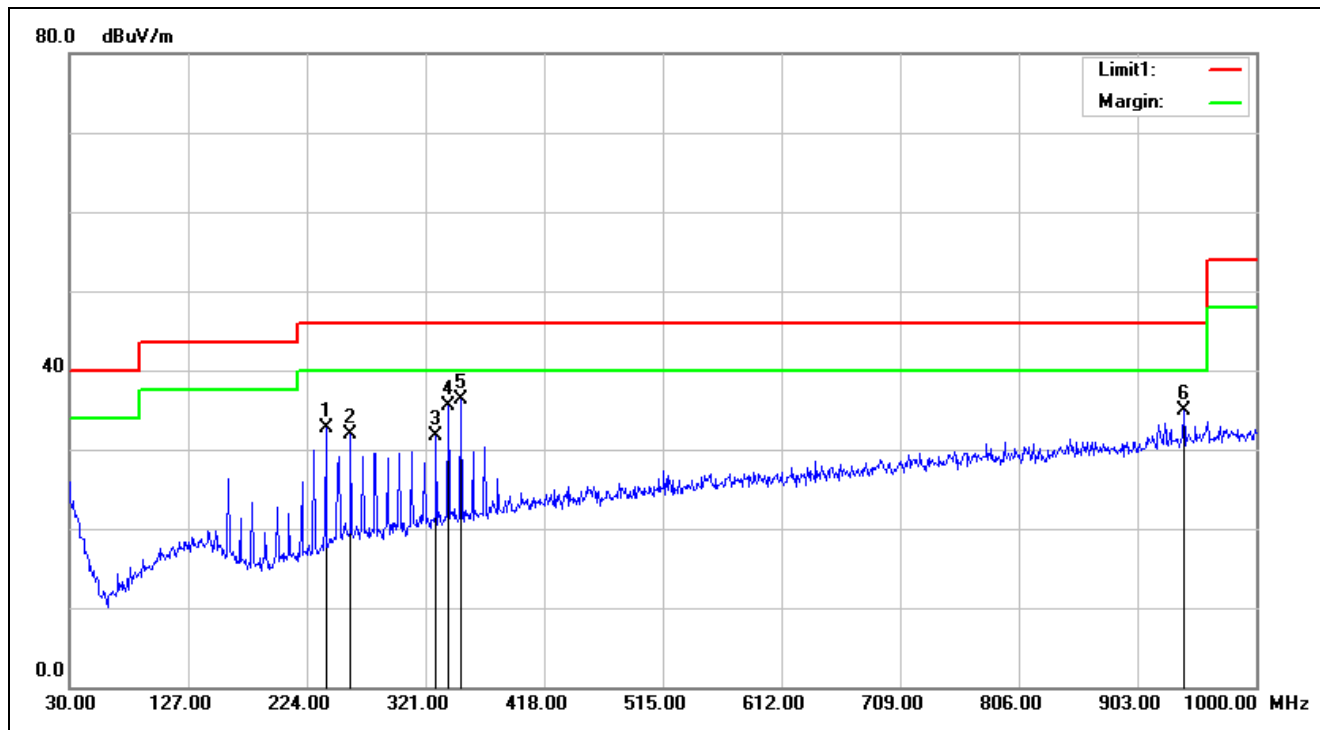
Spurious Emissions, TX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

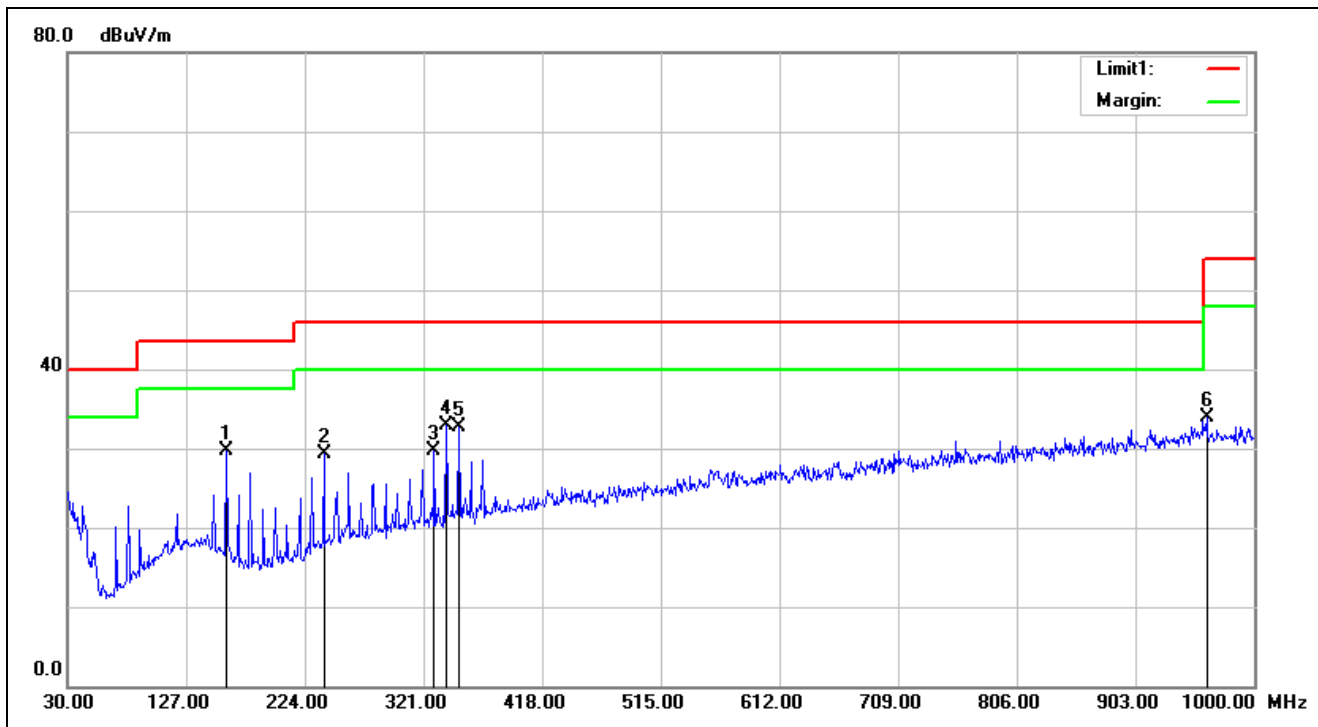
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/19 04:58:04
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	239.5200	-6.85	39.56	32.71	46.00	-13.29	QP	100	250	
2	259.8900	-4.94	36.90	31.96	46.00	-14.04	QP	100	273	
3	329.7300	-3.84	35.57	31.73	46.00	-14.27	QP	100	266	
4	339.4300	-3.61	39.19	35.58	46.00	-10.42	QP	100	256	
5	350.1000	-3.34	39.62	36.28	46.00	-9.72	QP	100	253	
6	940.8300	5.23	29.60	34.83	46.00	-11.17	QP	100	56	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/19 04:58:57
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	159.9800	-8.07	37.83	29.76	43.50	-13.74	QP	100	97	
2	239.5200	-6.85	36.19	29.34	46.00	-16.66	QP	100	211	
3	329.7300	-3.84	33.57	29.73	46.00	-16.27	QP	100	336	
4	339.4300	-3.61	36.49	32.88	46.00	-13.12	QP	100	354	
5	350.1000	-3.34	36.05	32.71	46.00	-13.29	QP	100	340	
6	961.2000	5.54	28.37	33.91	54.00	-20.09	QP	100	306	

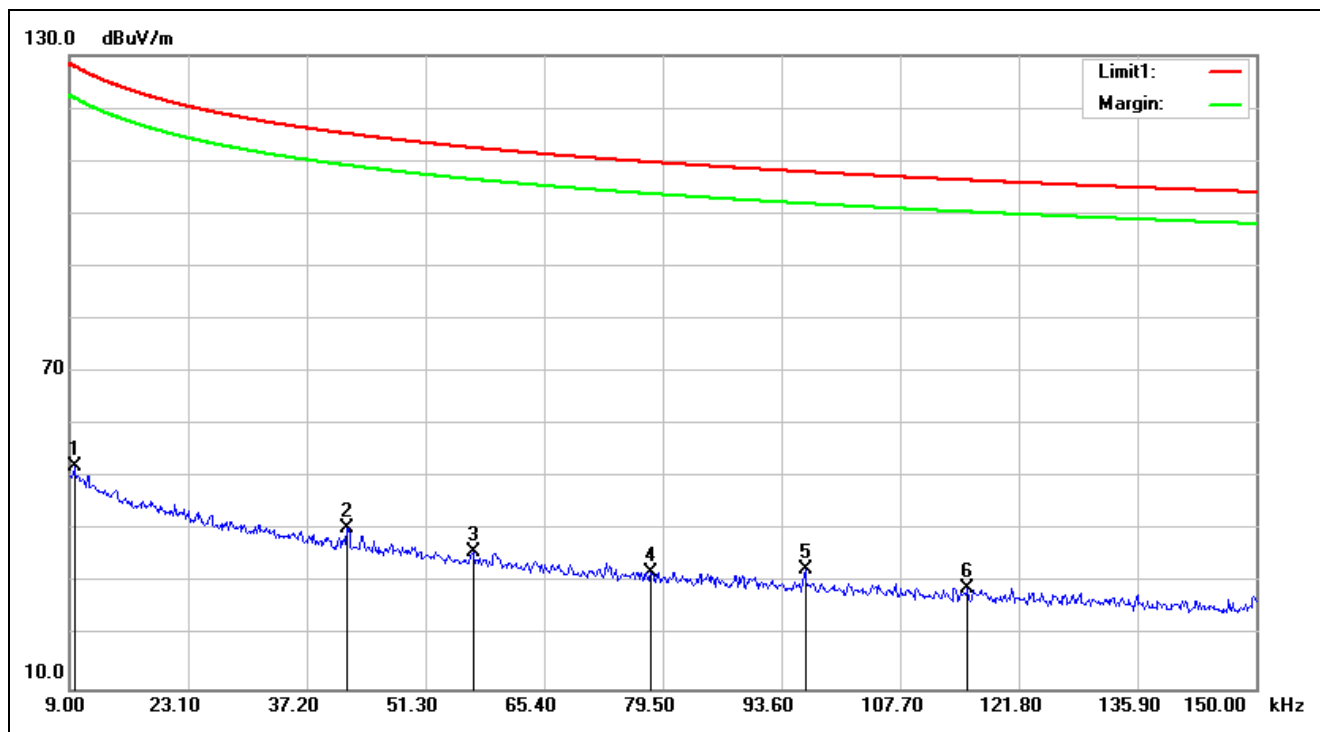
Spurious Emissions, TX Mode, 9k-30M



TUV Rheinland Taiwan Ltd.

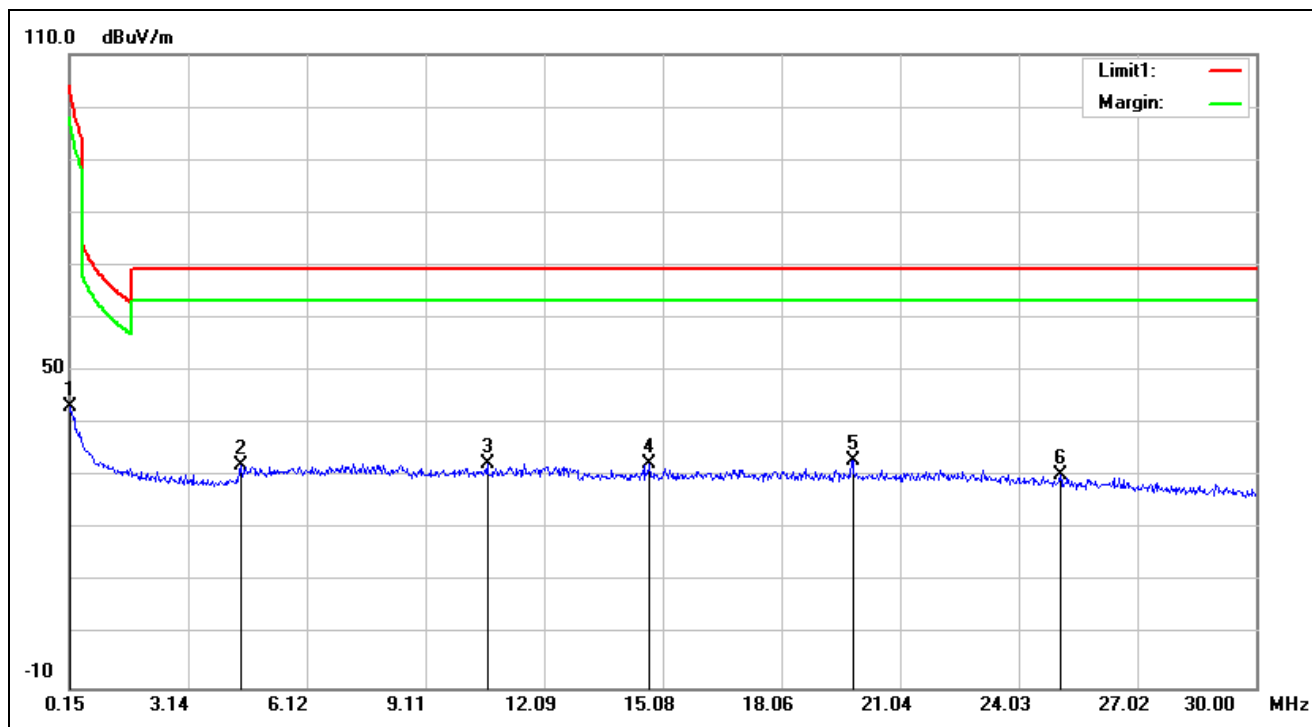
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/19 05:08:08
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	0.0095	19.73	32.50	52.23	128.03	-75.80	QP	100	164	
2	0.0419	19.71	20.74	40.45	115.15	-74.70	QP	100	292	
3	0.0569	19.39	16.57	35.96	112.49	-76.53	QP	100	16	
4	0.0780	19.26	12.83	32.09	109.75	-77.66	QP	100	269	
5	0.0964	19.15	13.40	32.55	107.91	-75.36	QP	100	36	
6	0.1157	19.11	9.92	29.03	106.33	-77.30	QP	100	170	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/19 05:10:48
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-TX		
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	0.1500	19.08	24.32	43.40	104.08	-60.68	QP	100	98	
2	4.4484	19.42	12.61	32.03	69.50	-37.47	QP	100	360	
3	10.6572	20.33	12.02	32.35	69.50	-37.15	QP	100	256	
4	14.7466	21.06	11.26	32.32	69.50	-37.18	QP	100	348	
5	19.8510	21.95	11.03	32.98	69.50	-36.52	QP	100	360	
6	25.0747	22.32	8.09	30.41	69.50	-39.09	QP	100	105	

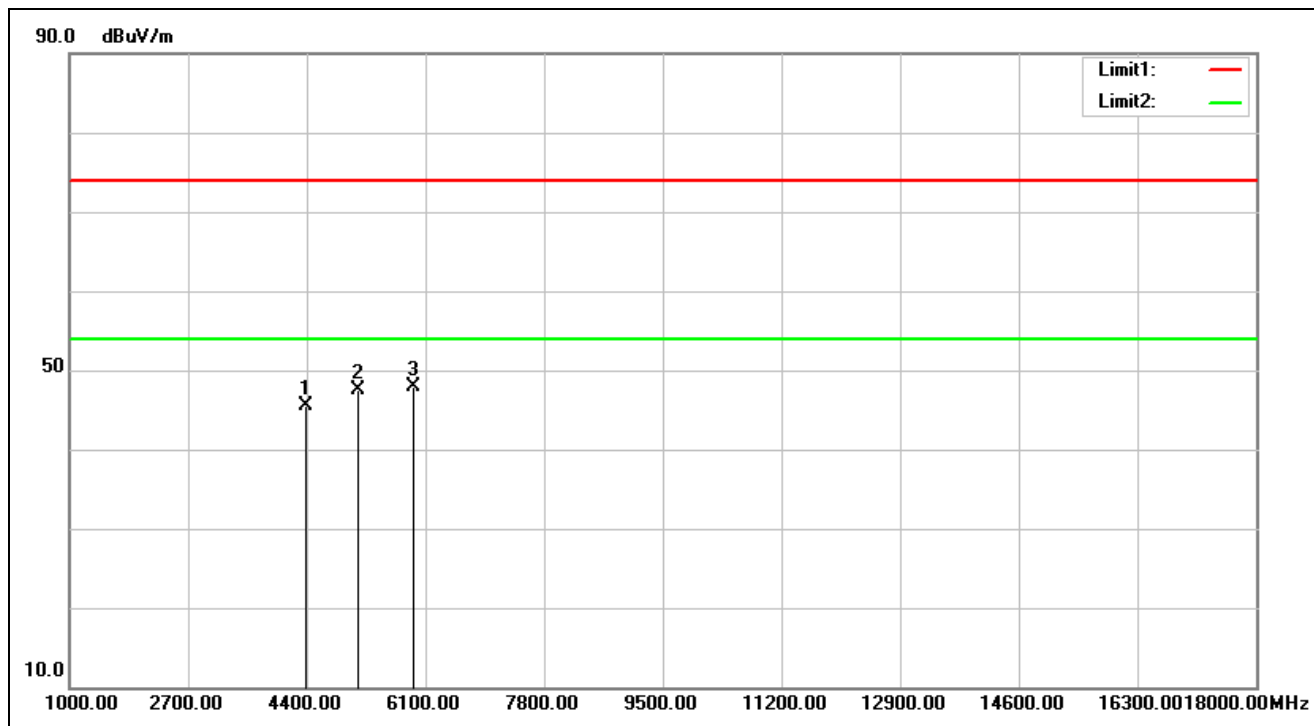
Spurious Emissions, RX Mode, 1-18G



TUV Rheinland Taiwan Ltd.

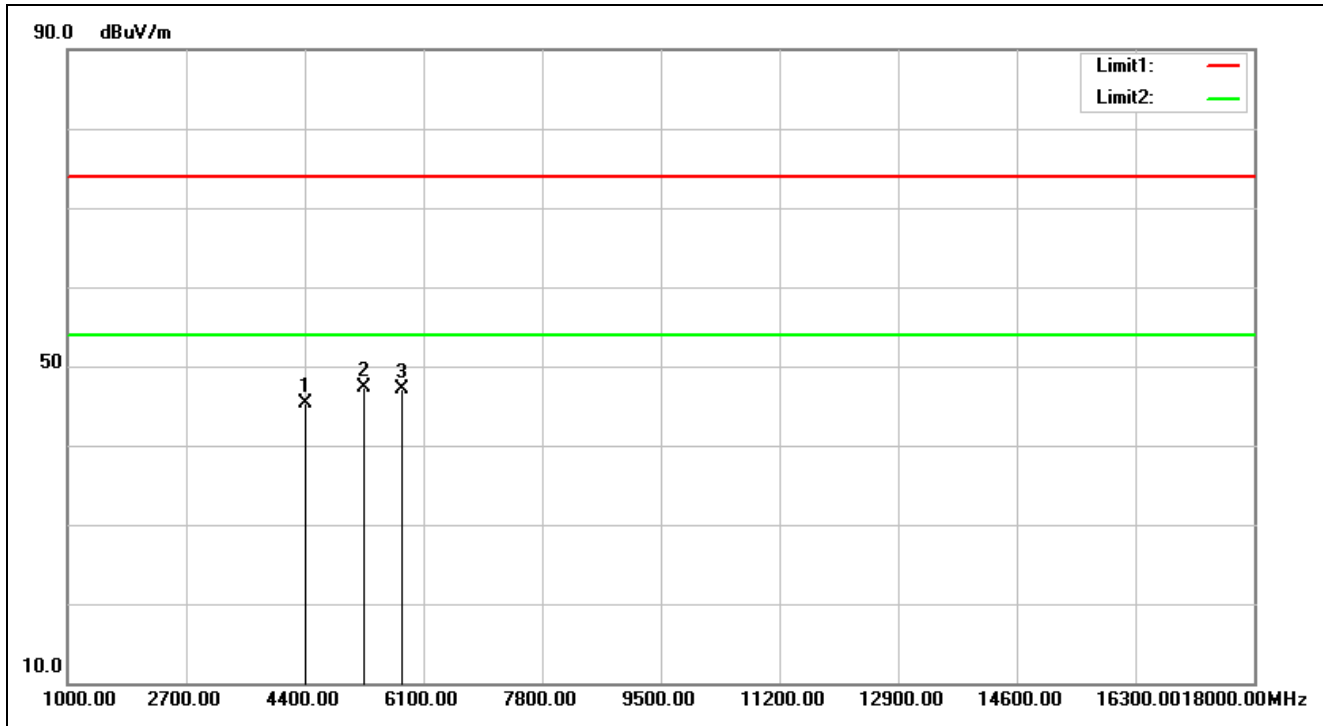
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/18 03:34:34
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	4383.000	-4.46	49.91	45.45	74.00	-28.55	peak	100	201	
2	5131.000	-2.58	49.99	47.41	74.00	-26.59	peak	100	256	
3	5930.000	1.90	46.05	47.95	74.00	-26.05	peak	100	96	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 03:35:26
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	20(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	4417.000	-4.33	49.68	45.35	74.00	-28.65	peak	100	1	
2	5250.000	-2.03	49.25	47.22	74.00	-26.78	peak	100	347	
3	5794.000	1.03	46.13	47.16	74.00	-26.84	peak	100	220	

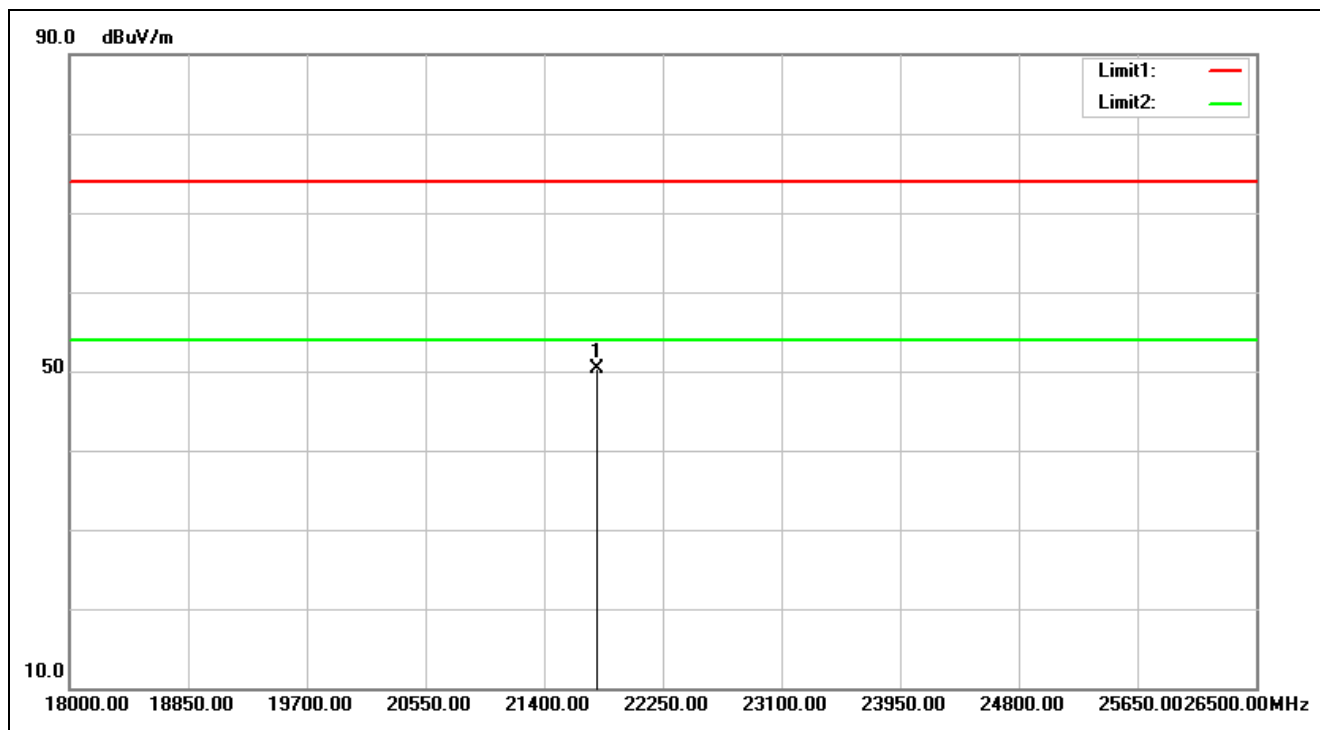
Spurious Emissions, RX Mode, 18-26G



TUV Rheinland Taiwan Ltd.

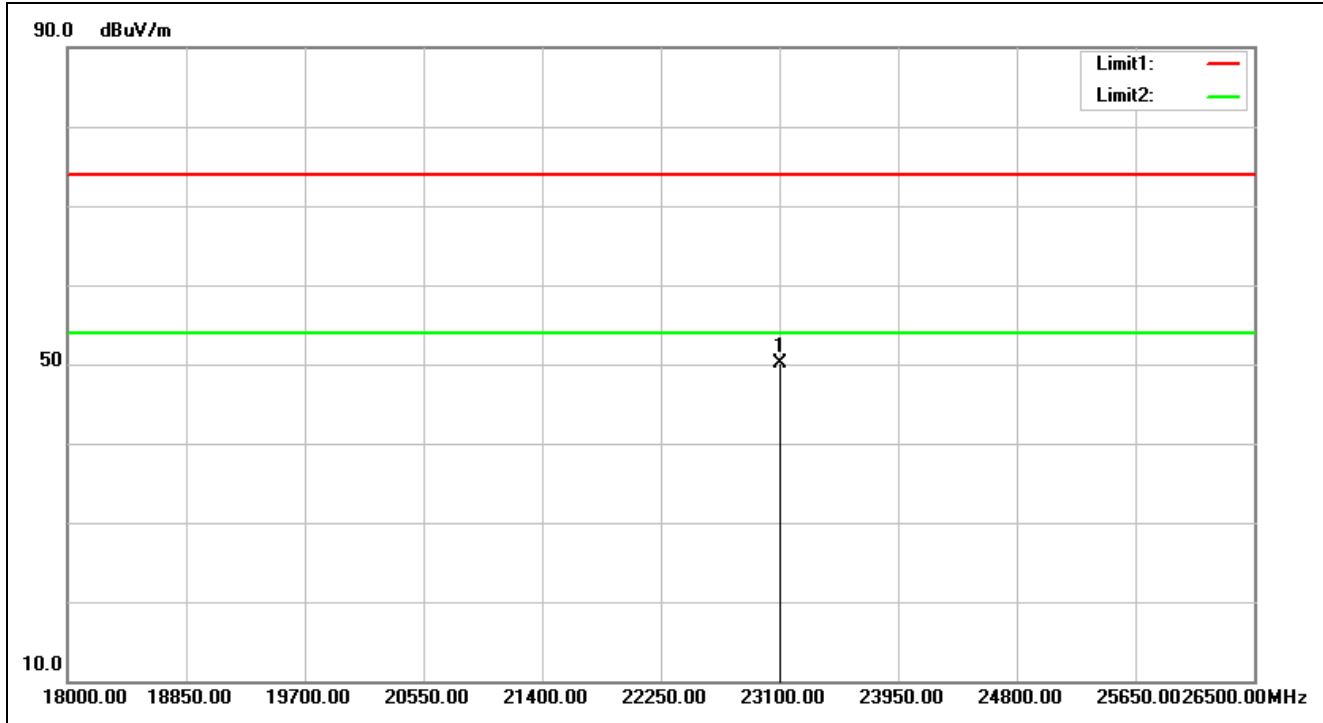
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/18 05:39:35
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%):	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	21782.500	32.72	17.50	50.22	74.00	-23.78	peak			



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/18 05:39:42
Applicant:	Microchip	Test Rating:	DC 3.3V
Product:	IEEE 802.11 b/g/n Link Controller Module With Integrated Bluetooth	Temp.(°C)/Hum.(%)	22(°C)/50%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	23108.500	32.90	17.21	50.11	74.00	-23.89	peak			

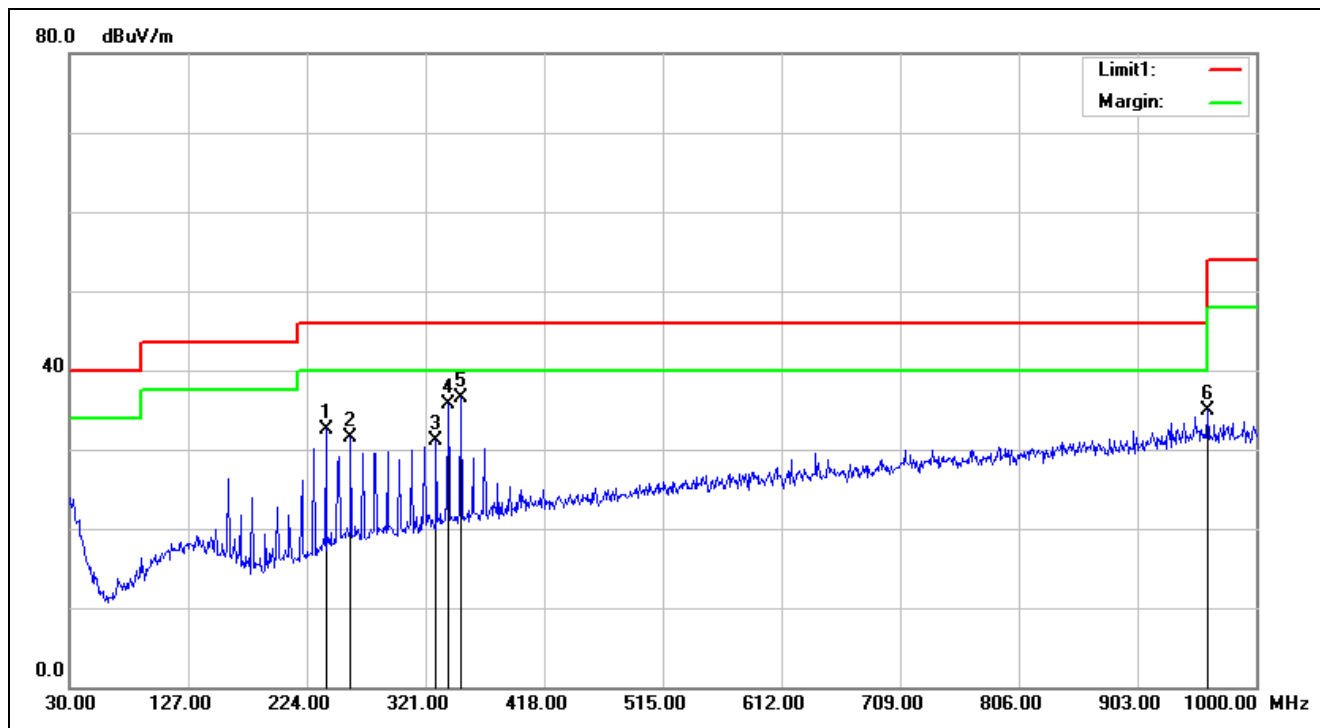
Spurious Emissions, RX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

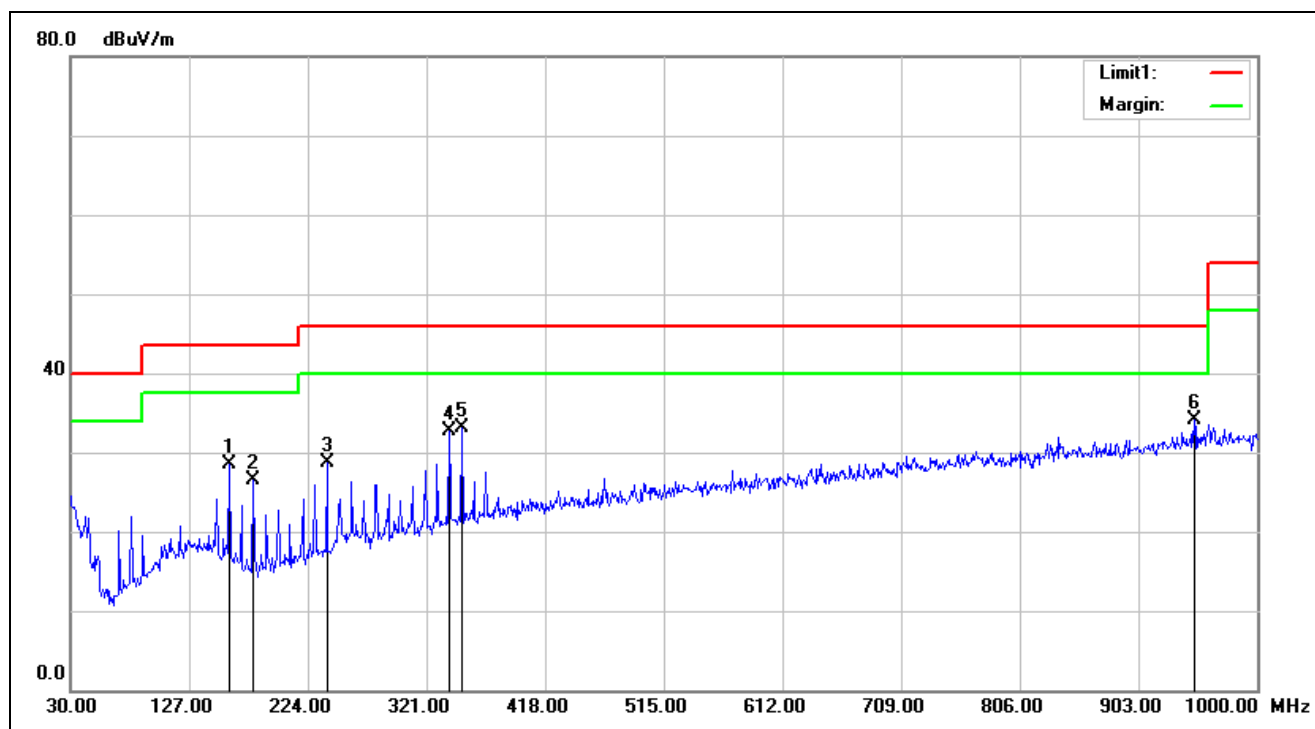
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/19 05:00:27
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	239.5200	-6.85	39.26	32.41	46.00	-13.59	QP	100	108	
2	259.8900	-4.94	36.51	31.57	46.00	-14.43	QP	100	248	
3	329.7300	-3.84	35.04	31.20	46.00	-14.80	QP	100	252	
4	339.4300	-3.61	39.26	35.65	46.00	-10.35	QP	100	258	
5	350.1000	-3.34	39.76	36.42	46.00	-9.58	QP	100	245	
6	960.2300	5.54	29.45	34.99	54.00	-19.01	QP	100	61	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/4/19 05:01:20
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	159.9800	-8.07	36.65	28.58	43.50	-14.92	QP	100	97	
2	179.3800	-9.59	36.07	26.48	43.50	-17.02	QP	100	74	
3	239.5200	-6.85	35.61	28.76	46.00	-17.24	QP	100	195	
4	339.4300	-3.61	36.34	32.73	46.00	-13.27	QP	100	360	
5	350.1000	-3.34	36.48	33.14	46.00	-12.86	QP	100	353	
6	948.5900	5.46	28.57	34.03	46.00	-11.97	QP	100	37	

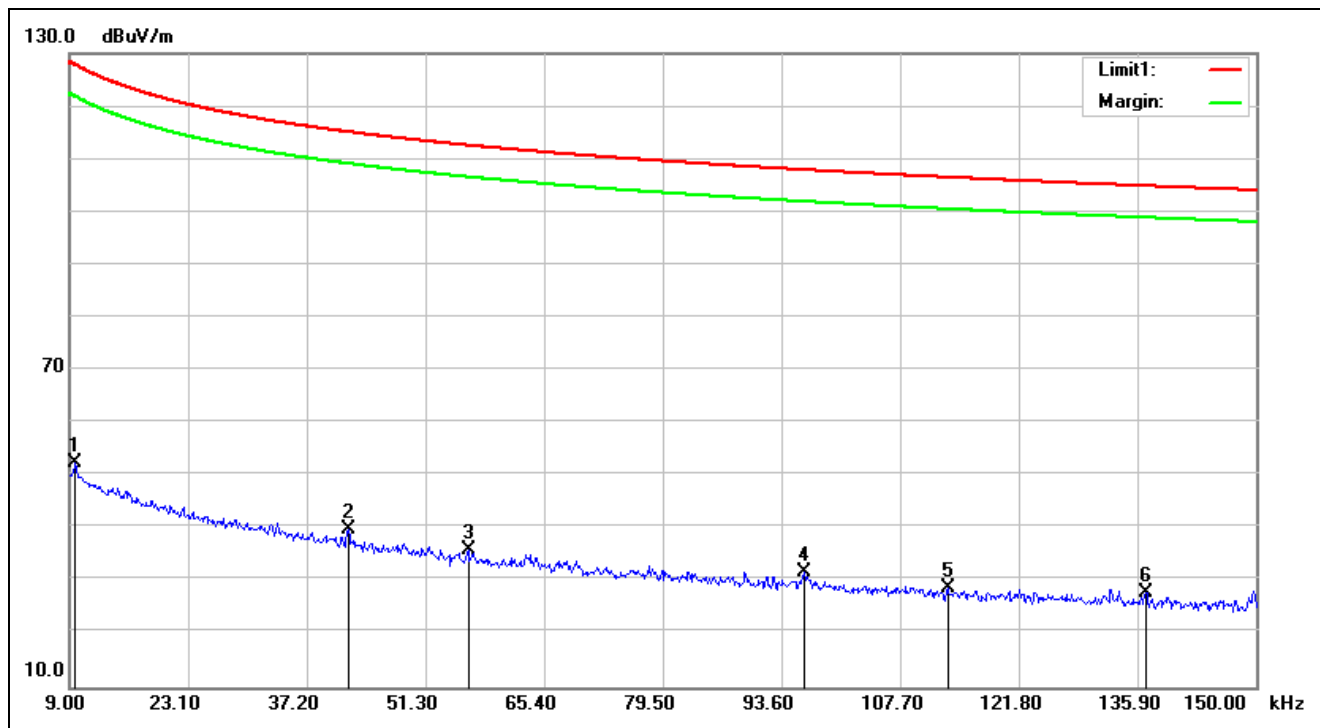
Spurious Emissions, RX Mode, 9K-30M



TUV Rheinland Taiwan Ltd.

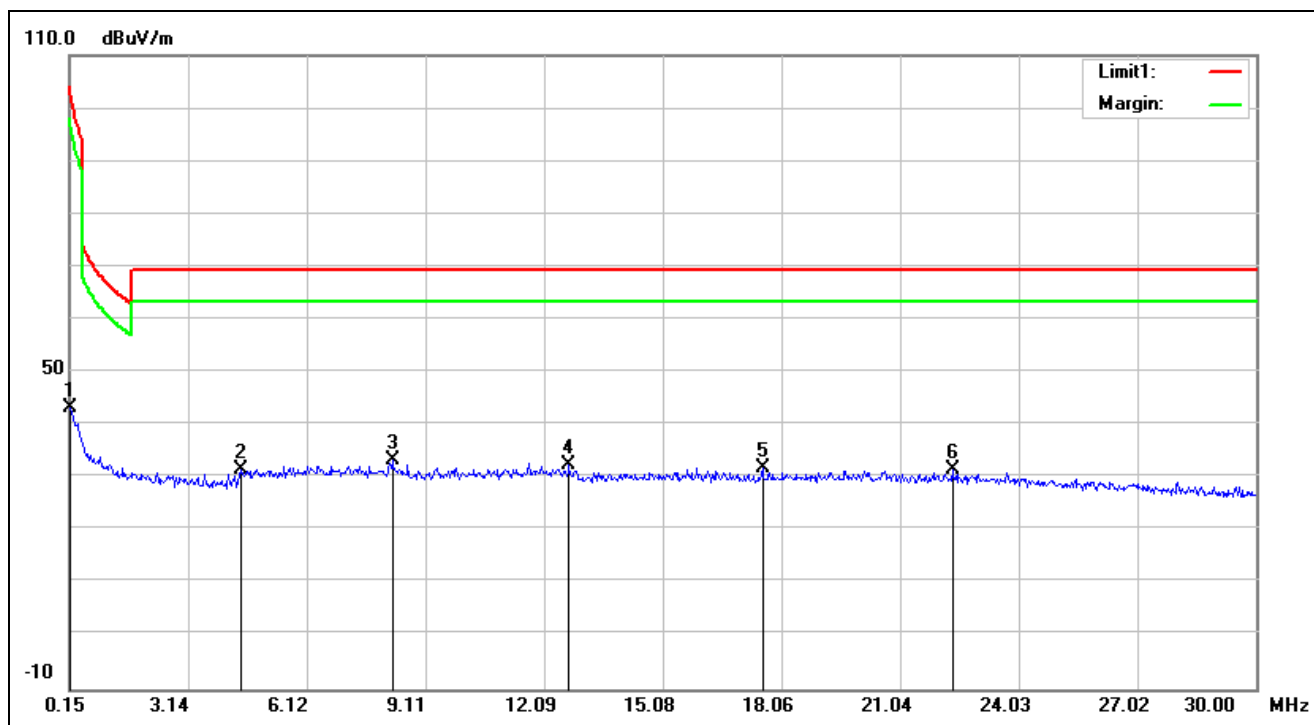
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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:	2018/4/19 05:09:02
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	0.0097	19.81	32.54	52.35	127.85	-75.50	QP	100	52	
2	0.0421	19.71	20.12	39.83	115.11	-75.28	QP	100	56	
3	0.0564	19.39	16.52	35.91	112.57	-76.66	QP	100	243	
4	0.0963	19.15	12.50	31.65	107.92	-76.27	QP	100	292	
5	0.1133	19.12	9.49	28.61	106.51	-77.90	QP	100	138	
6	0.1369	19.09	8.69	27.78	104.87	-77.09	QP	100	105	



Service No.:	114074446	Test Distance:	3m
Test Standard:	FCC&ISED 9k-1G_3m	Ant. Polarization:	N/A
Test item:	Radiation Emission	Test Time:	2018/4/19 05:11:41
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)/55%
Model No.:	ATWILC3000-MR110UA	Test Engineer:	Curry Chen
Test Mode:	1DH5-2441-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	0.1500	19.08	24.28	43.36	104.08	-60.72	QP	100	155	
2	4.4484	19.42	12.10	31.52	69.50	-37.98	QP	100	210	
3	8.2692	20.06	13.34	33.40	69.50	-36.10	QP	100	237	
4	12.7169	20.70	11.78	32.48	69.50	-37.02	QP	100	1	
5	17.5824	21.56	10.18	31.74	69.50	-37.76	QP	100	0	
6	22.3584	22.14	9.30	31.44	69.50	-38.06	QP	100	190	

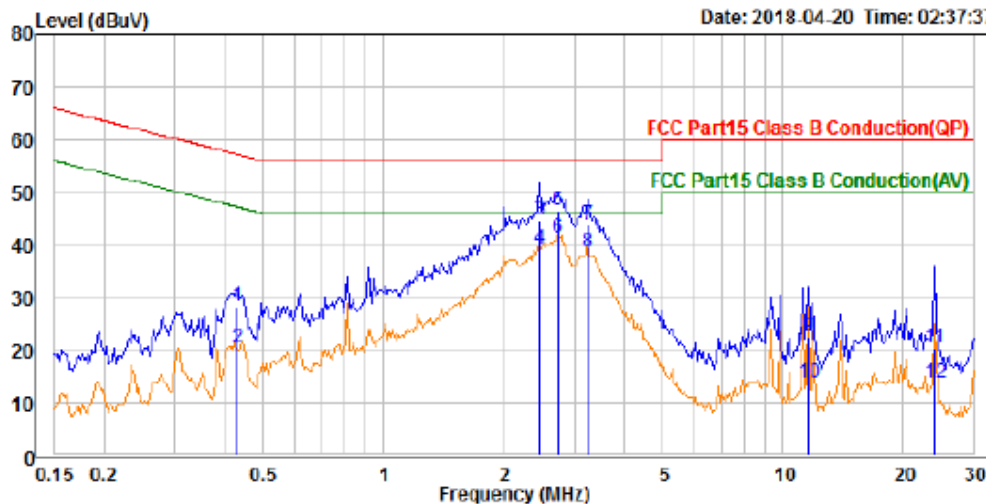
Mains



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

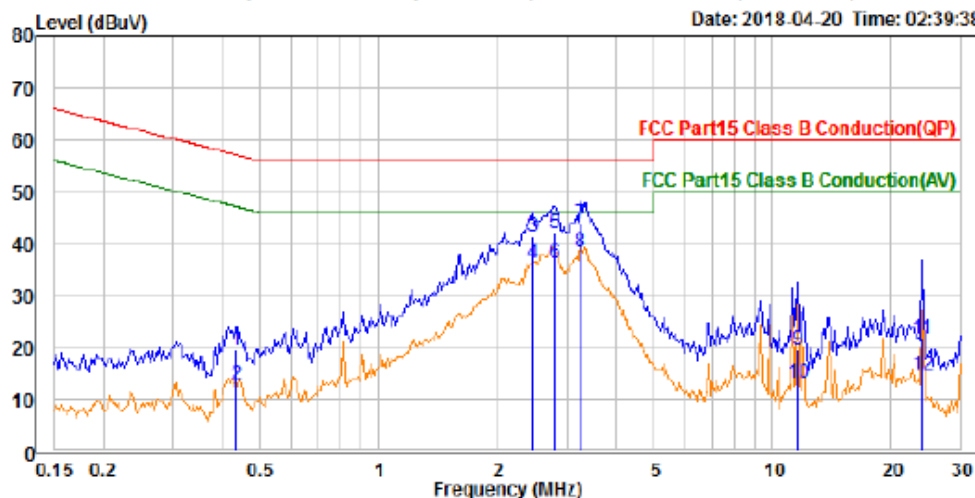


Trace: 1

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