

Test Report No.50066467 001

Appendix D: Radiated and Mains Spurious Emission Data

(File: 50066467AppendixD)

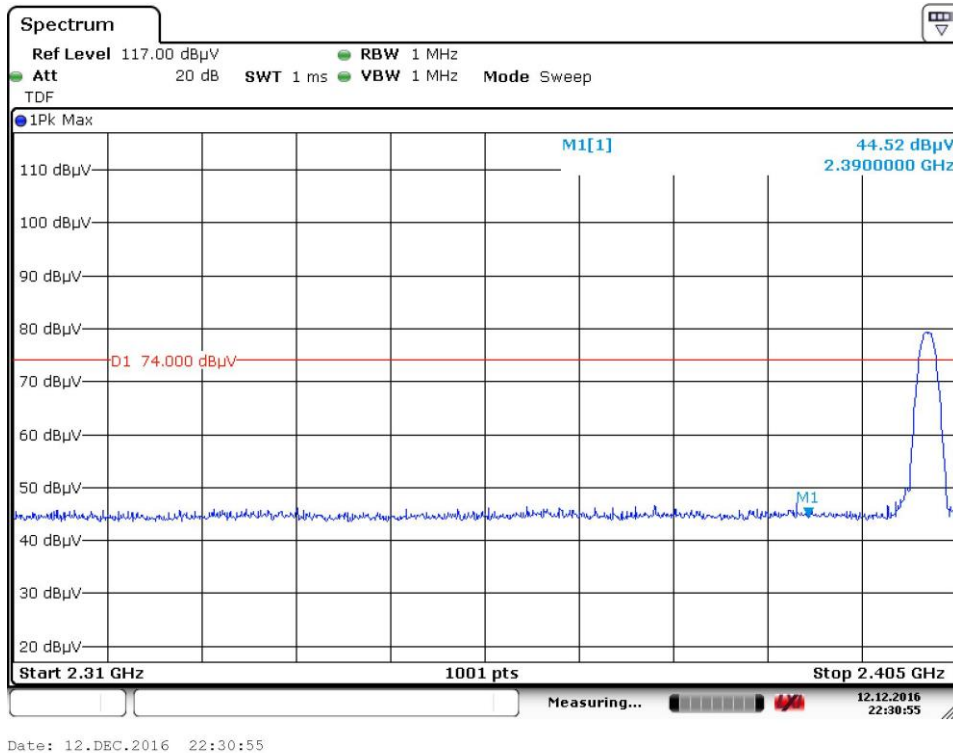
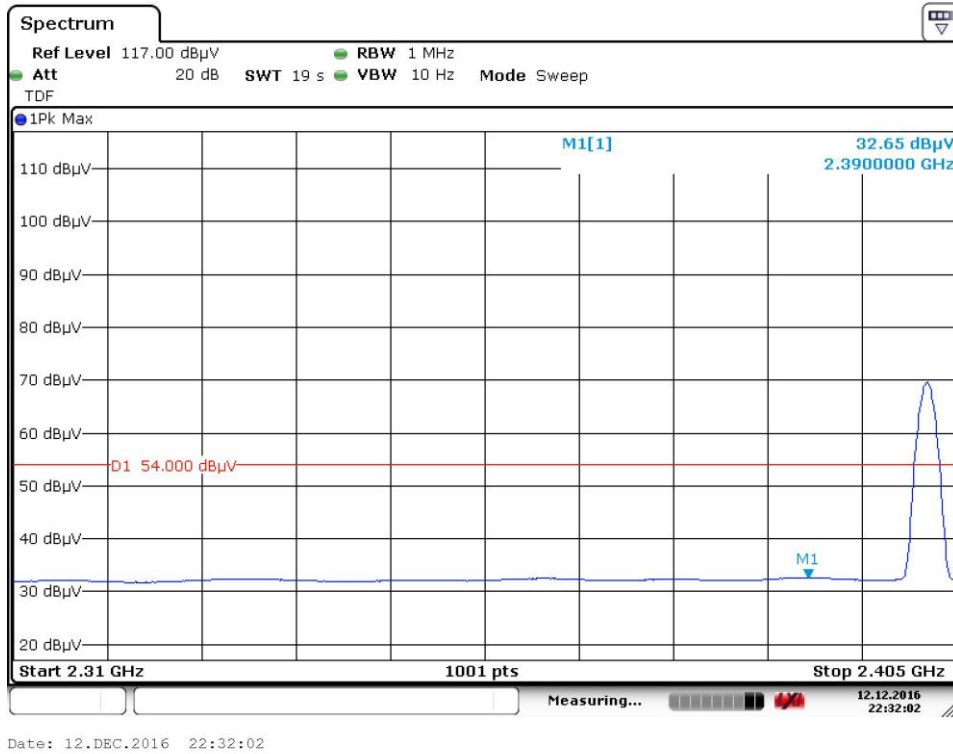
Contents

Spurious Emissions, Band Edges, 2.35-2.5G	2
Spurious Emissions, TX Mode, 1-18G.....	6
Spurious Emissions, TX Mode, 18-26G.....	12
Spurious Emissions, TX Mode, 30M-1G	18
Spurious Emissions, RX Mode, 1-18G	20
Spurious Emissions, RX Mode, 18-26G	22
Spurious Emissions, RX Mode, 30M-1G.....	24

Spurious Emissions, Band Edges, 2.35-2.5G

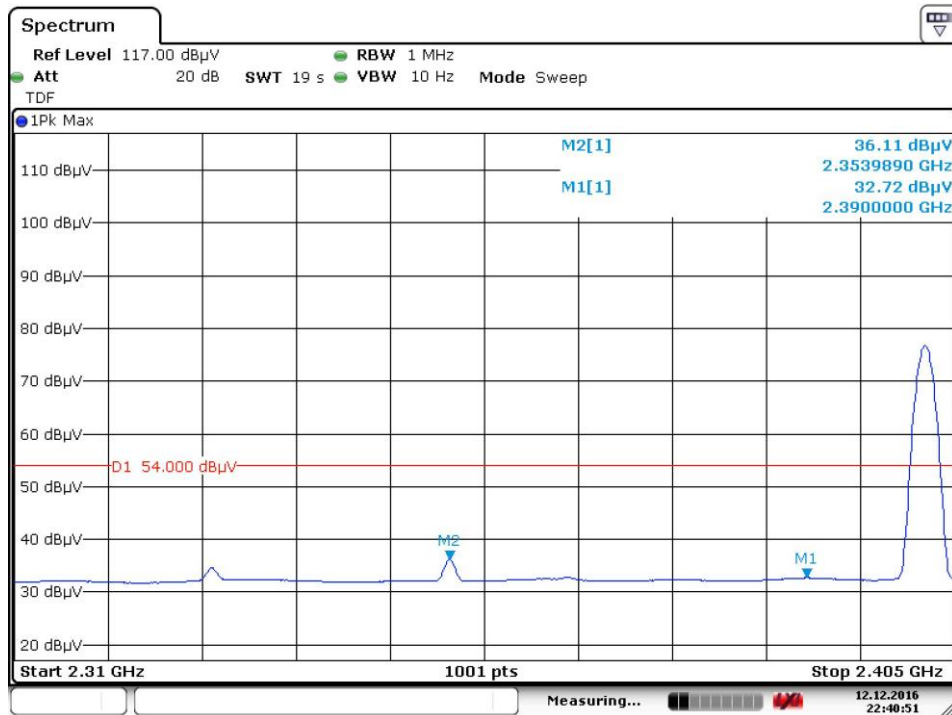
Radiated Bandedge (GFSK)

Low Channel (Hor)

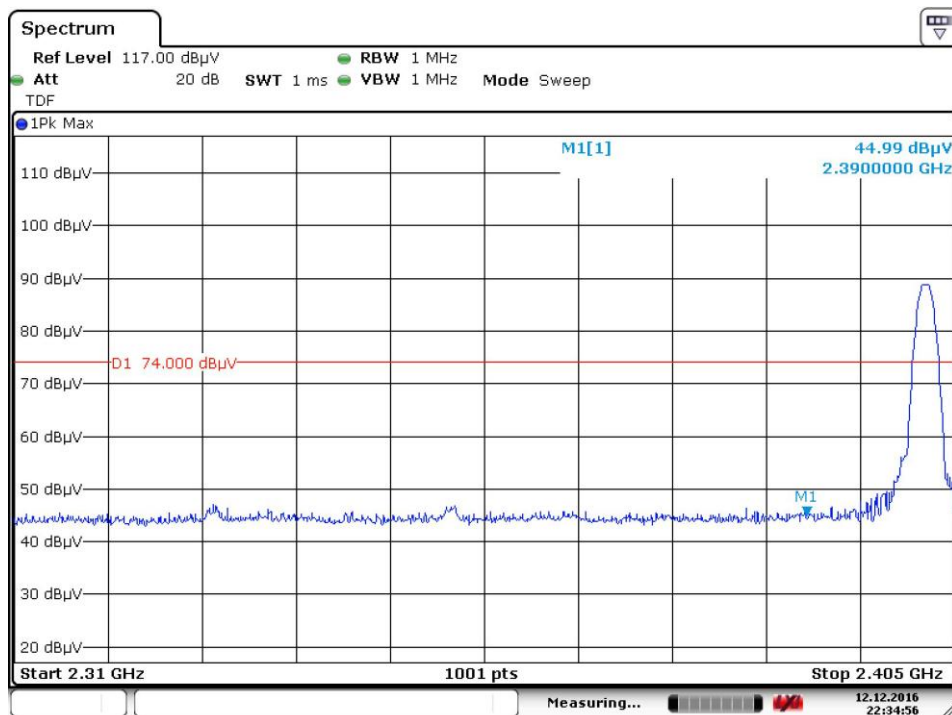


Spurious Emissions, Band Edge, 2.35-2.5G

Low Channel (Ver)



Date: 12.DEC.2016 22:40:51

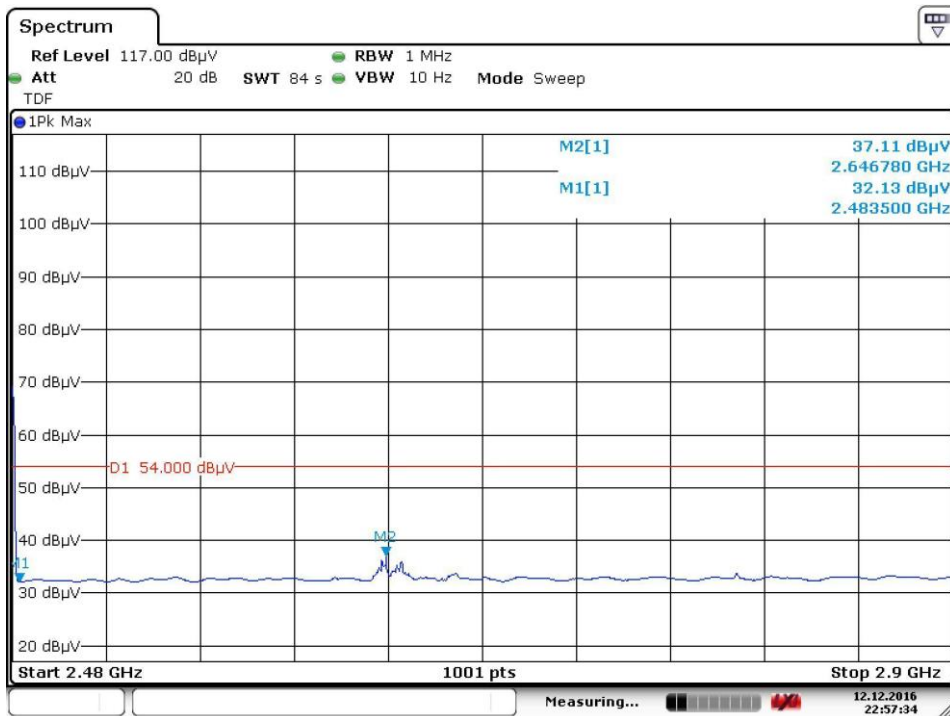


Date: 12.DEC.2016 22:34:56

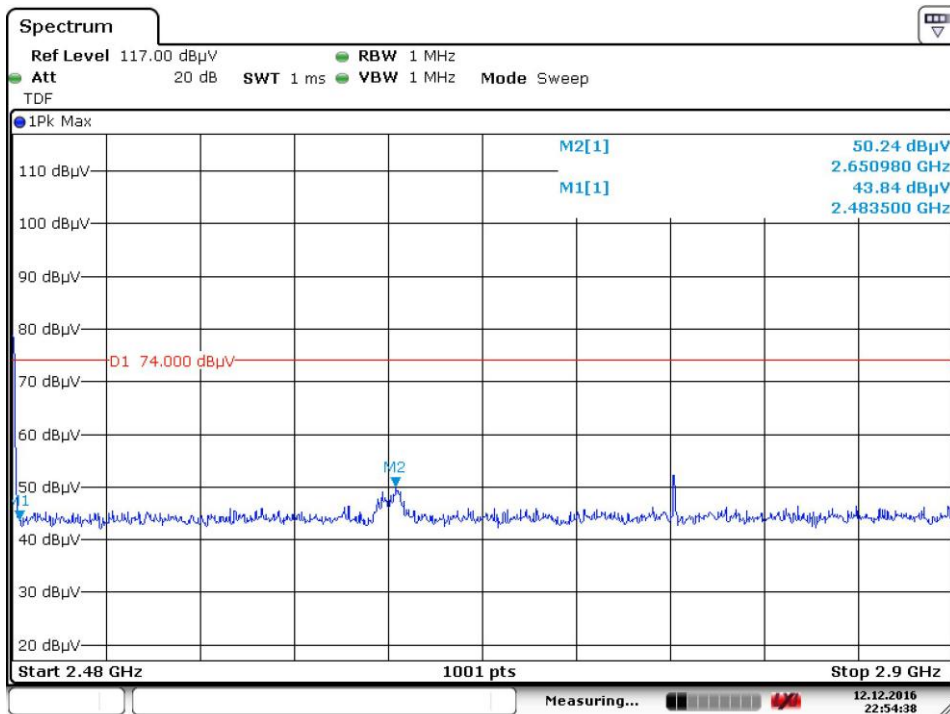
Spurious Emissions, Band Edge, 2.35-2.5G

Radiated Bandedge (GFSK)

High Channel (Hor)



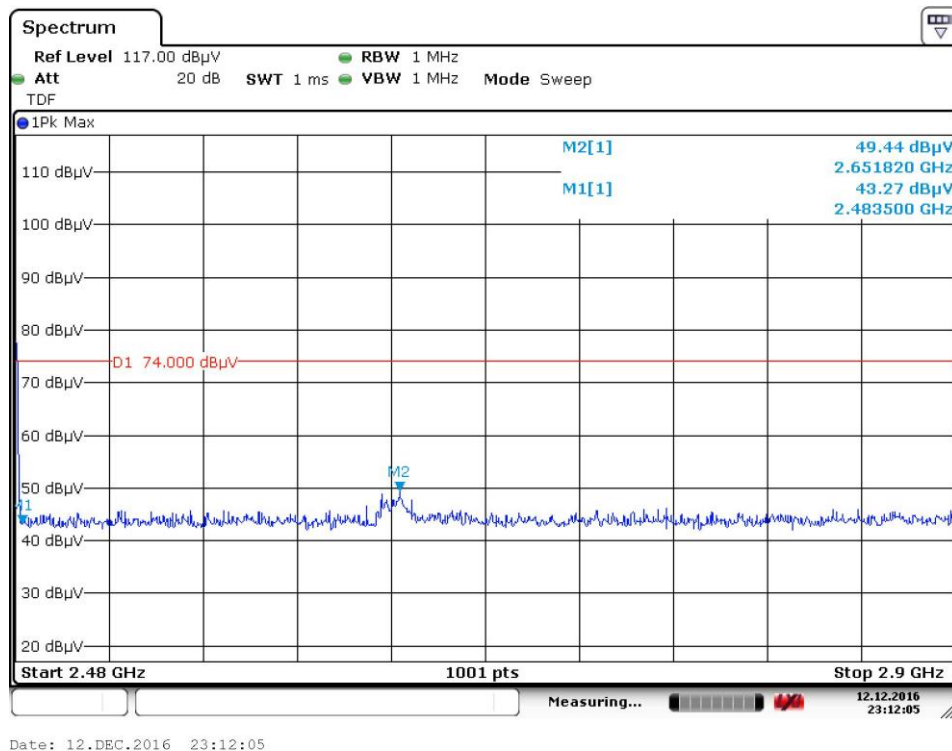
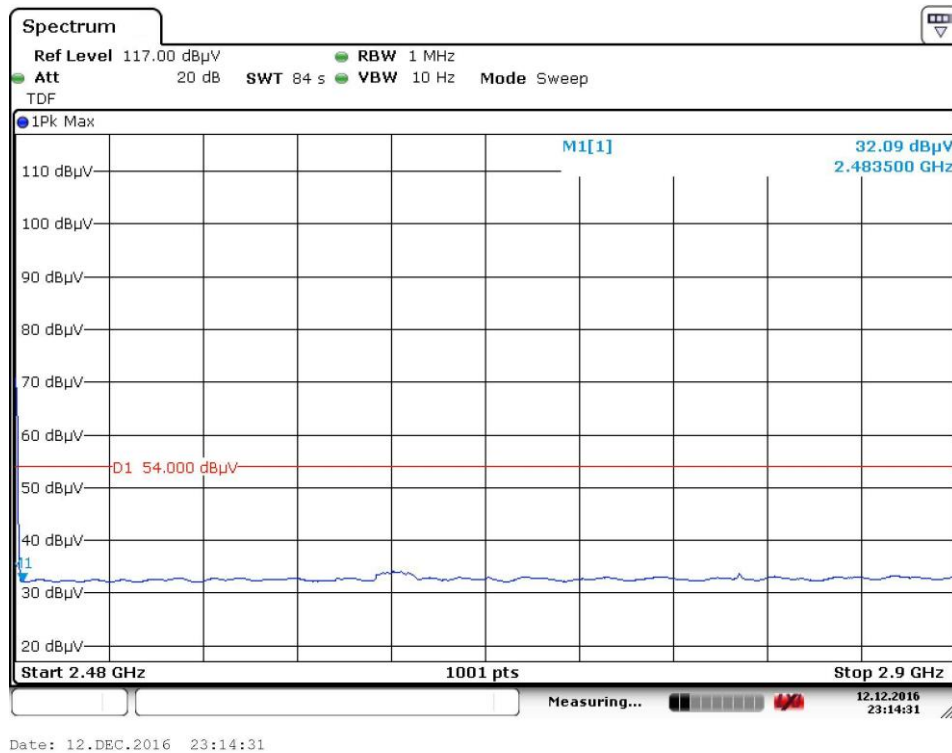
Date: 12.DEC.2016 22:57:34



Date: 12.DEC.2016 22:54:38

Spurious Emissions, Band Edge, 2.35-2.5G

High Channel (Ver)



Spurious Emissions, Band Edge, 2.35-2.5G

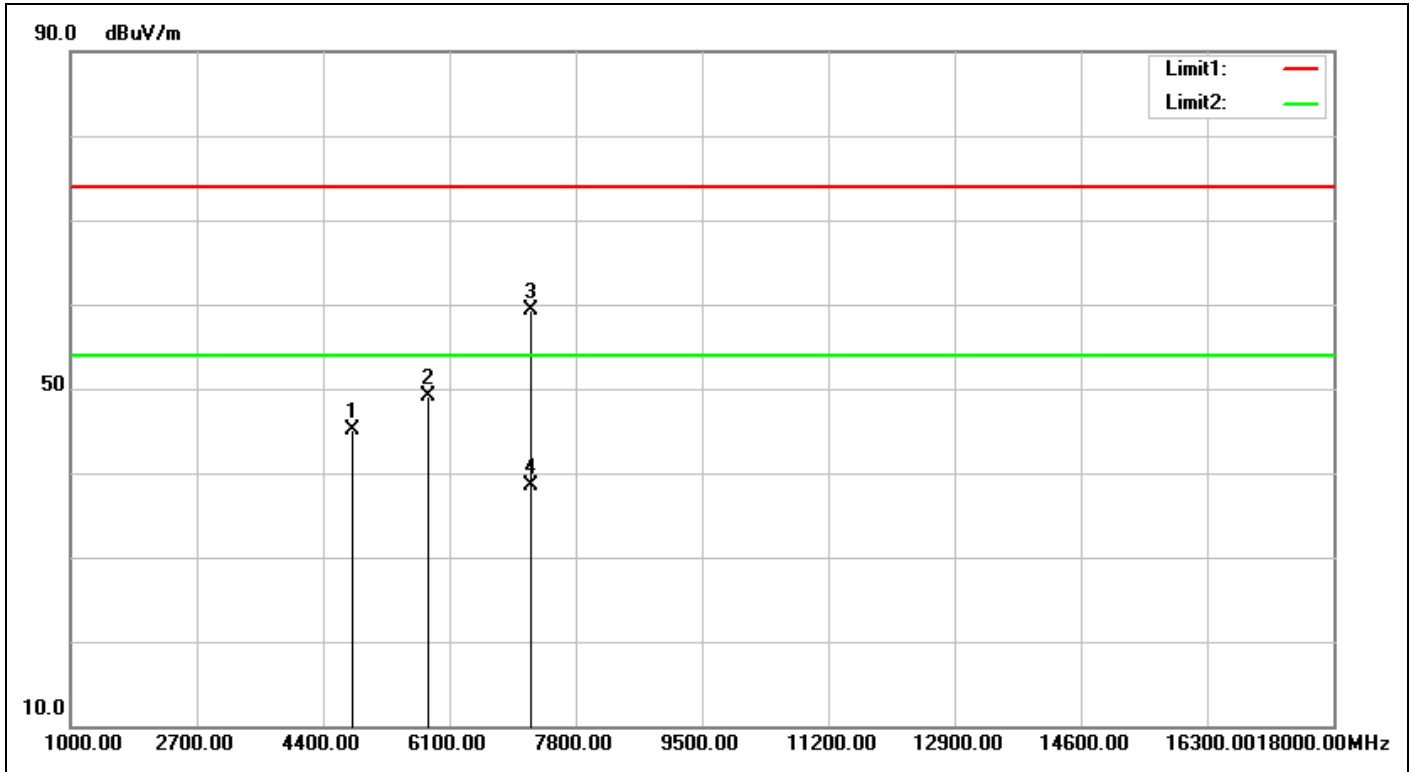
Spurious Emissions, TX Mode, 1-18G



TUV Taiwan

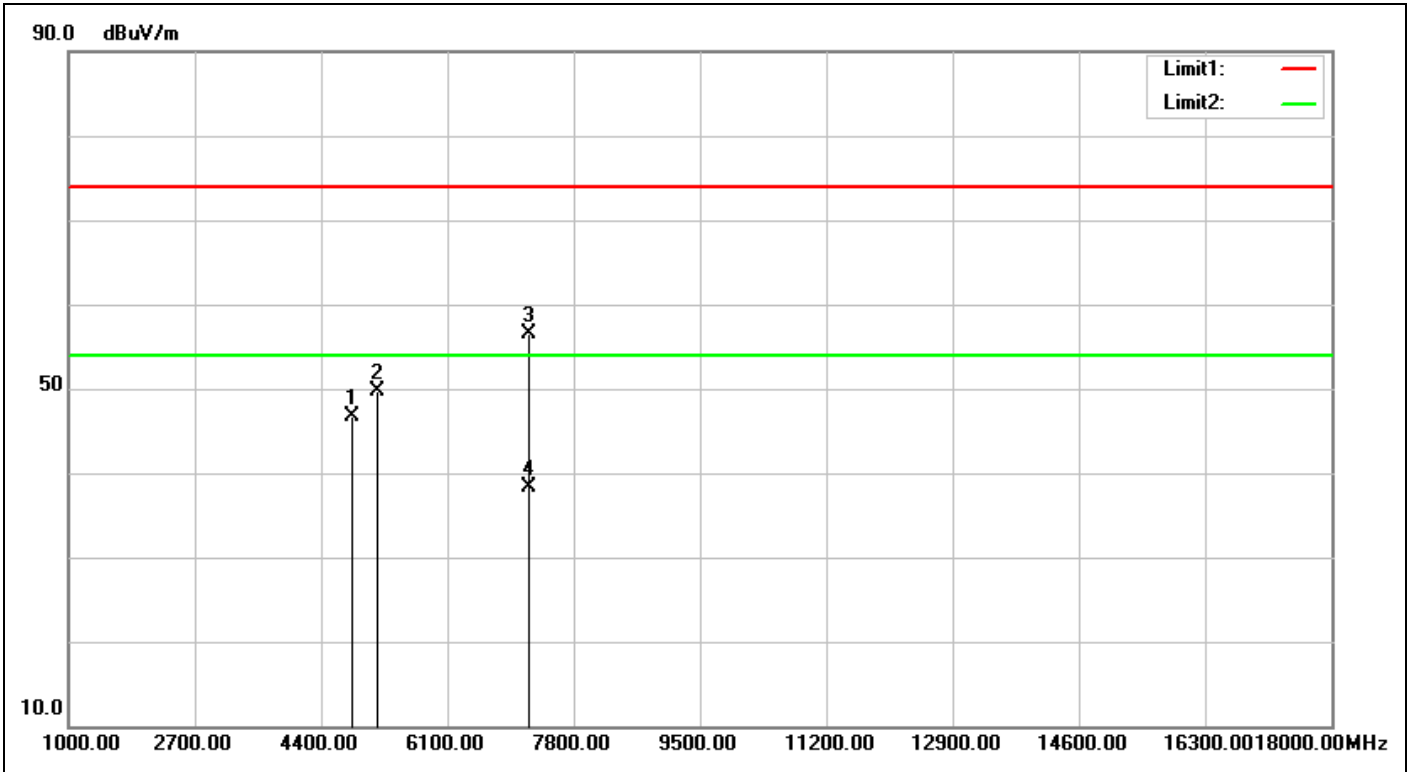
11F., No.758, Sec.4 Bade Road, Songshan Dist, Taipei City 105

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



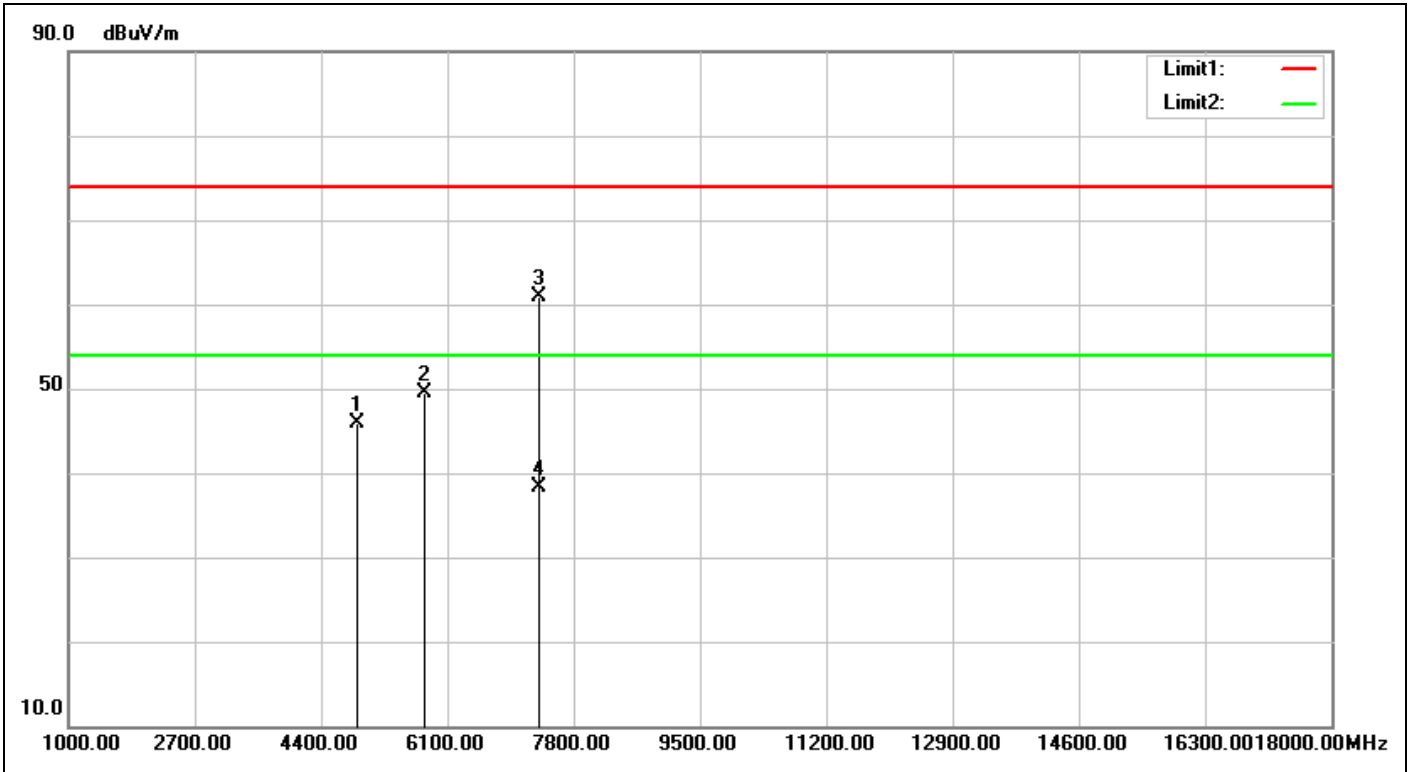
Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2016/12/14 19:53:45
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.6(°C)/52%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	TX-1DH5-2402		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4804.000	-2.66	47.67	45.01	74.00	-28.99	peak		0	
2	5811.000	2.60	46.41	49.01	74.00	-24.99	peak	100	336	
3	7206.000	5.58	53.78	59.36	74.00	-14.64	peak	100	280	
4	7206.000	5.58	32.93	38.51	54.00	-15.49	AVG	100	280	



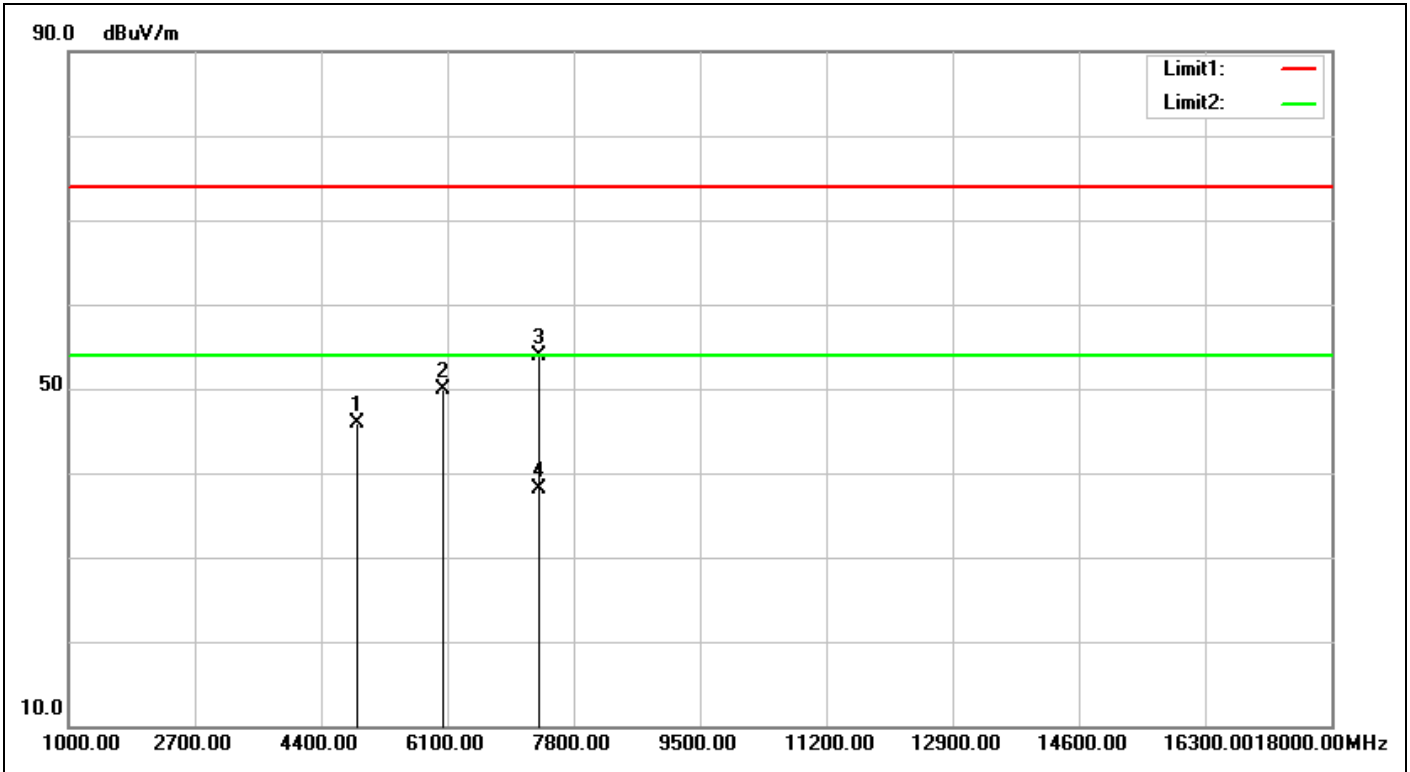
Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2016/12/14 19:54:47
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.6(°C)/52%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	TX-1DH5-2402		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4804.000	-2.66	49.40	46.74	74.00	-27.26	peak			
2	5148.000	-1.42	51.04	49.62	74.00	-24.38	peak	100	349	
3	7206.000	5.58	50.96	56.54	74.00	-17.46	peak	100	307	
4	7206.000	5.58	32.82	38.40	54.00	-15.60	AVG	100	307	



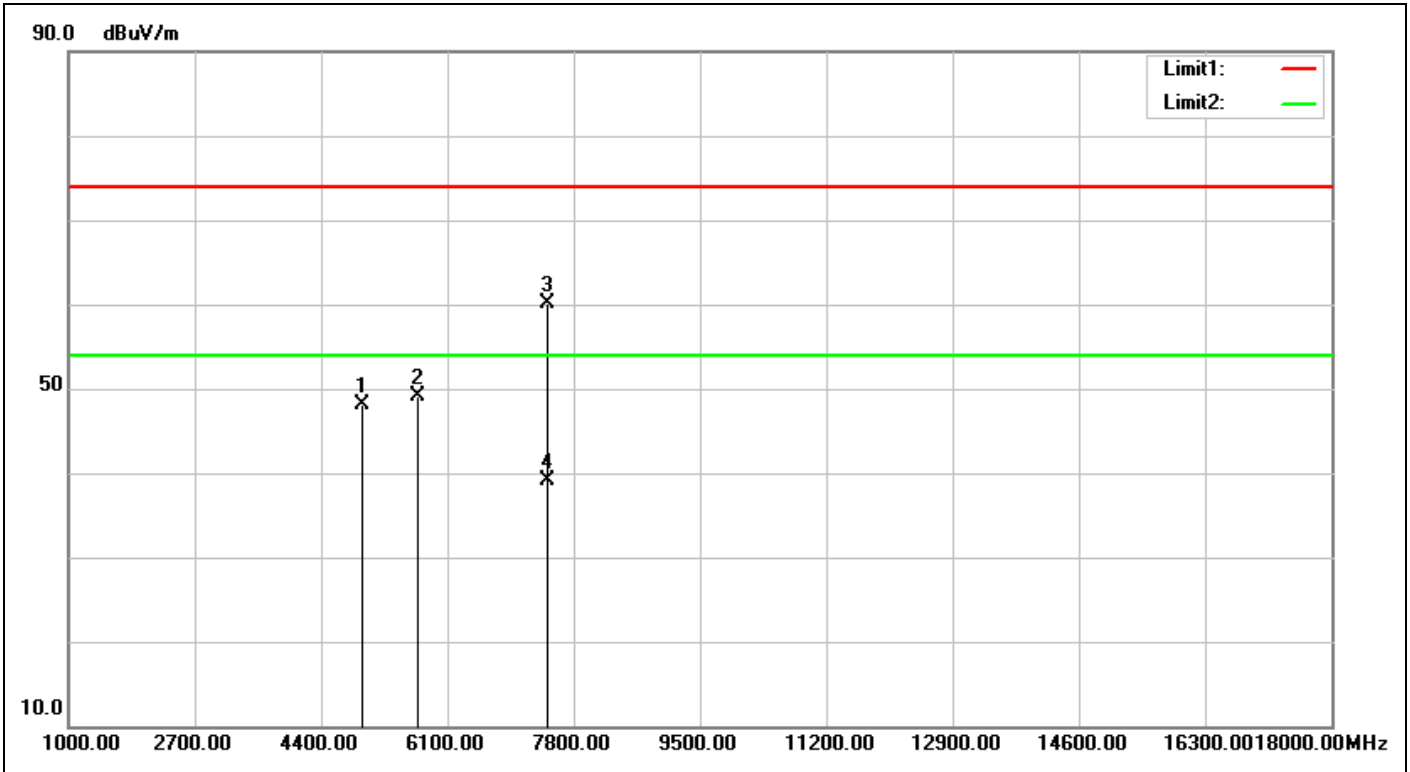
Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2016/12/14 20:00:23
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.6(°C)/52%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	TX-1DH5-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	-2.48	48.43	45.95	74.00	-28.05	peak			
2	5794.000	2.48	47.04	49.52	74.00	-24.48	peak	100	287	
3	7323.000	5.93	54.98	60.91	74.00	-13.09	peak	100	227	
4	7323.000	5.93	32.29	38.22	54.00	-15.78	AVG	100	227	



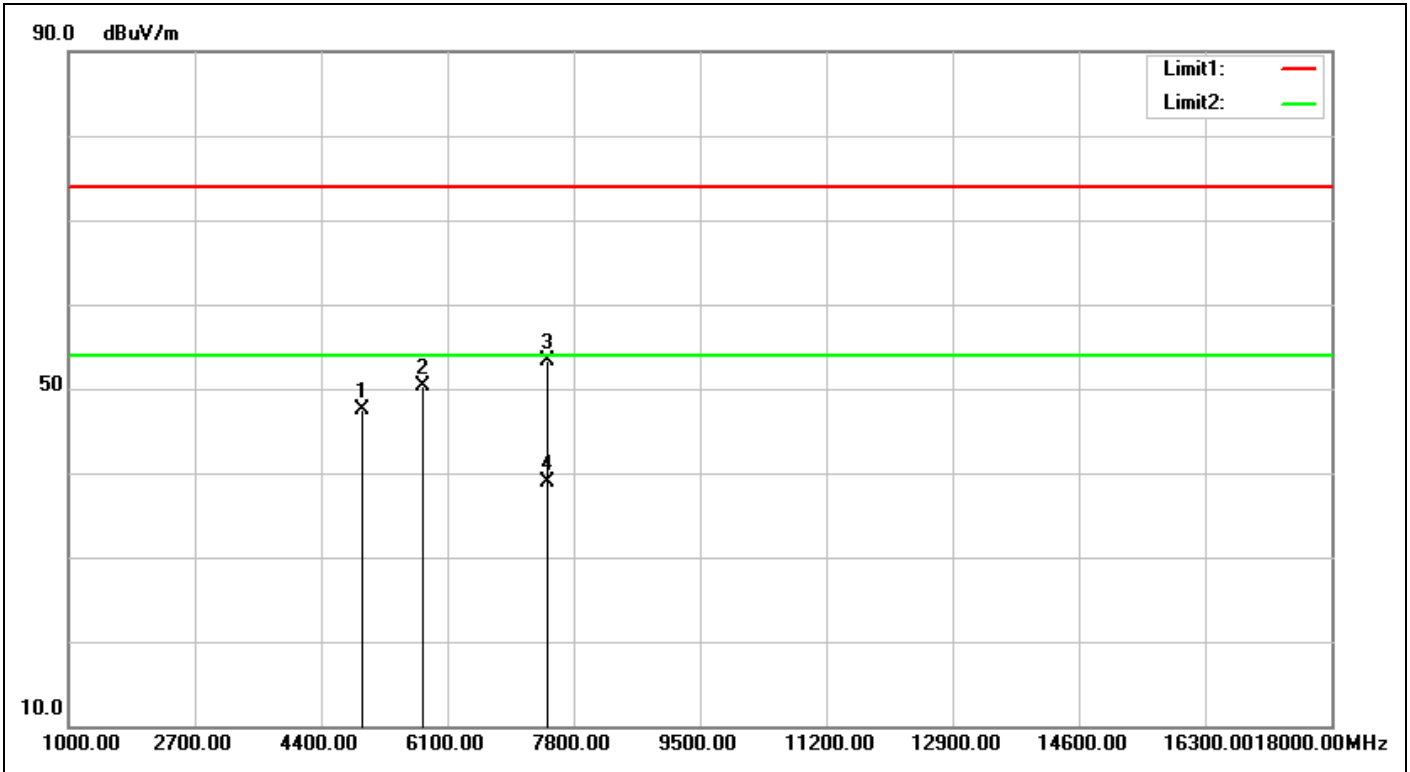
Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2016/12/14 20:01:25
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.6(°C)/52%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	TX-1DH5-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	-2.48	48.33	45.85	74.00	-28.15	peak			
2	6049.000	4.06	45.76	49.82	74.00	-24.18	peak	100	164	
3	7323.000	5.93	47.91	53.84	74.00	-20.16	peak	100	271	
4	7323.000	5.93	32.27	38.20	54.00	-15.80	AVG	100	271	



Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2016/12/14 20:04:58
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.6(°C)/52%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	TX-1DH5-2480		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4960.000	-2.31	50.49	48.18	74.00	-25.82	peak			
2	5692.000	1.78	47.35	49.13	74.00	-24.87	peak	100	25	
3	7443.000	6.29	53.74	60.03	74.00	-13.97	peak	100	285	
4	7443.000	6.29	32.73	39.02	54.00	-14.98	AVG	100	285	



Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2016/12/14 20:06:00
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.6(°C)/52%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	TX-1DH5-2480		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4960.000	-2.31	49.90	47.59	74.00	-26.41	peak			
2	5777.000	2.36	47.99	50.35	74.00	-23.65	peak	100	208	
3	7440.000	6.28	47.10	53.38	74.00	-20.62	peak			
4	7440.000	6.28	32.60	38.88	54.00	-15.12	AVG	100	14	

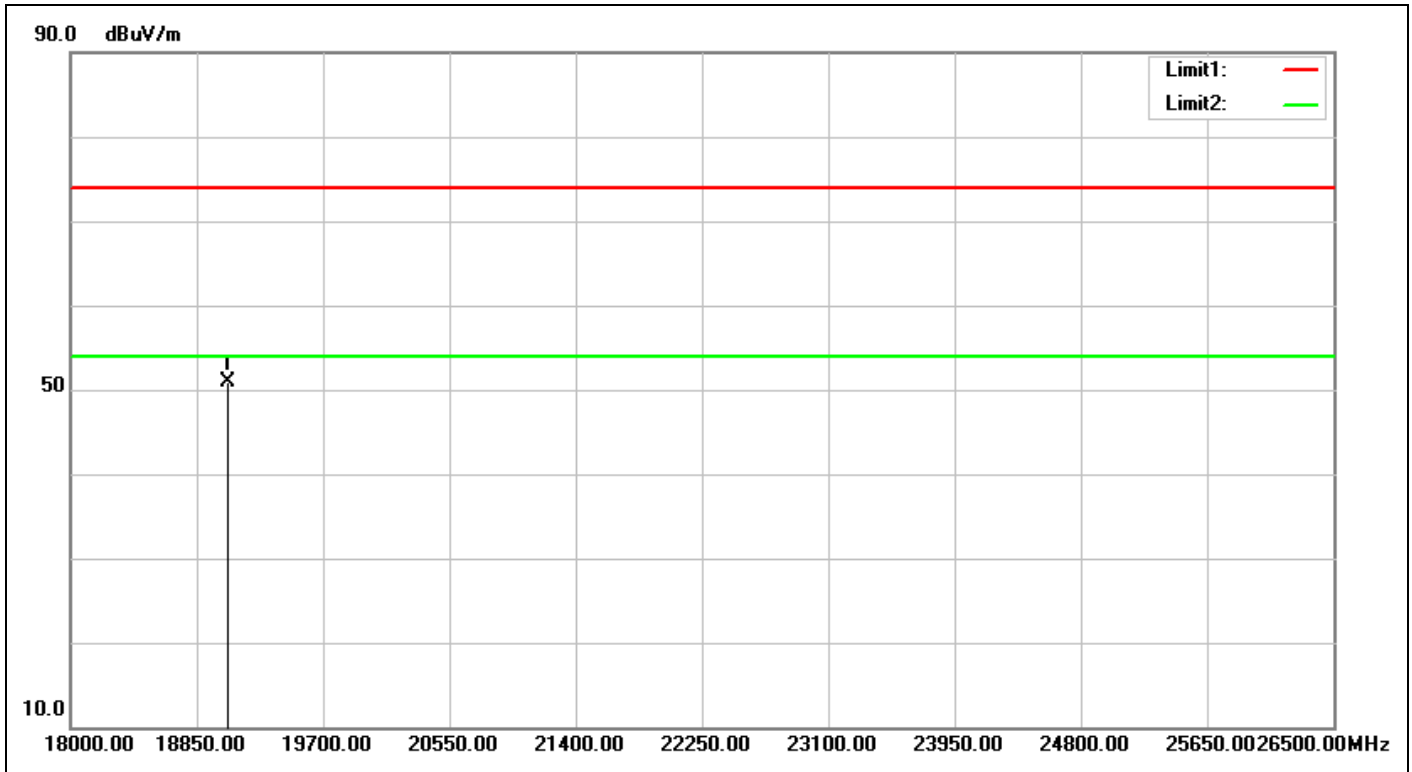
Spurious Emissions, TX Mode, 18-26G



TUV Taiwan

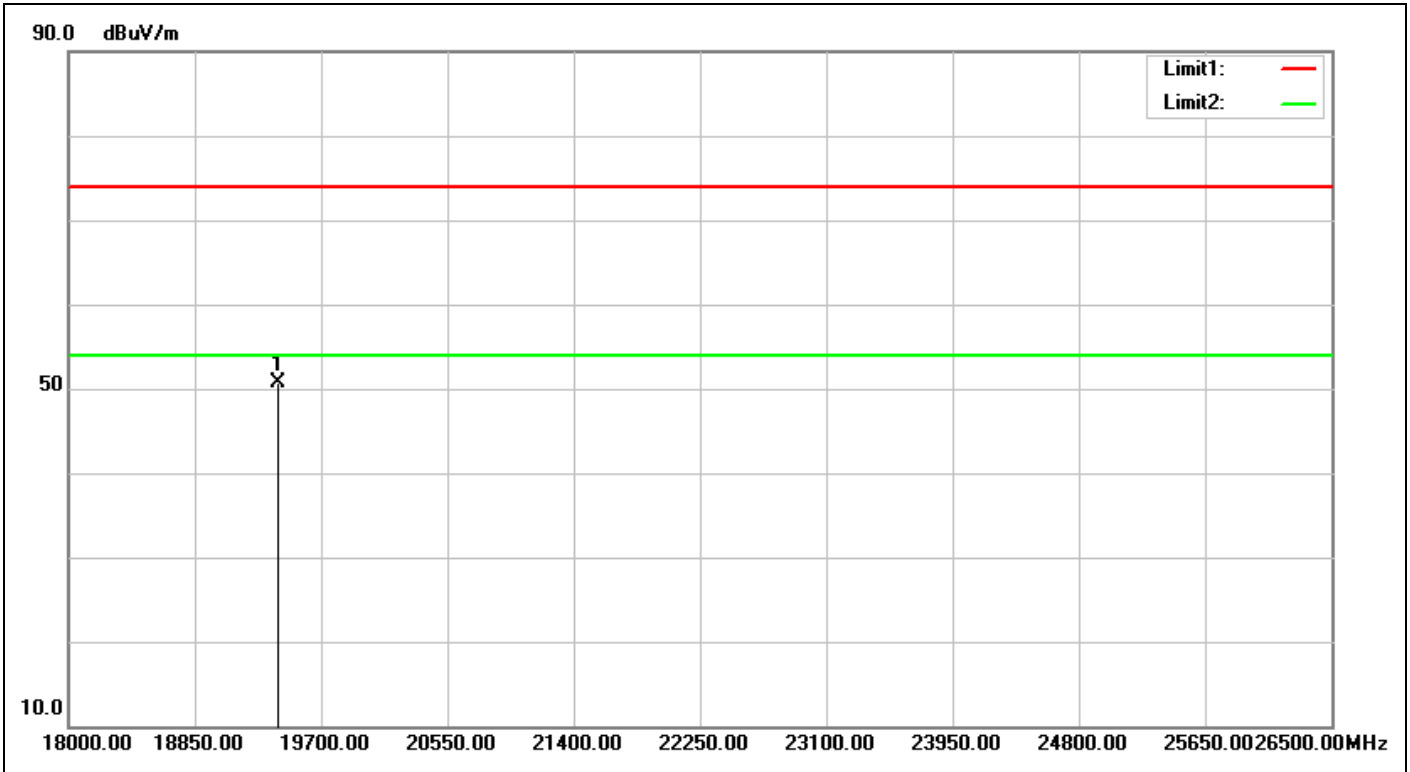
11F., No.758, Sec.4 Bade Road, Songshan Dist, Taipei City 105

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



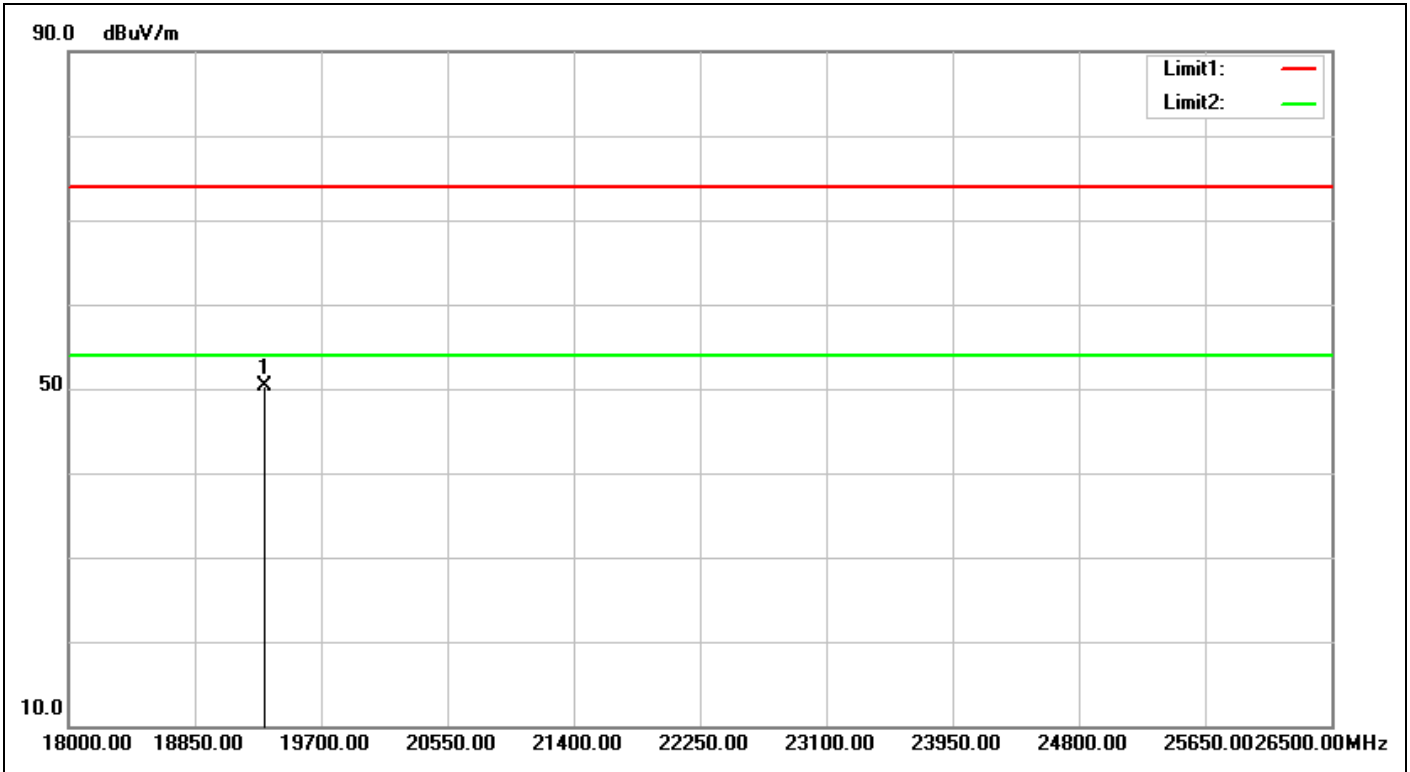
Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2016/12/14 20:46:49
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.6(°C)/52%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	TX-1DH5-2402		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	19062.500	30.59	20.27	50.86	74.00	-23.14	peak	100	164	



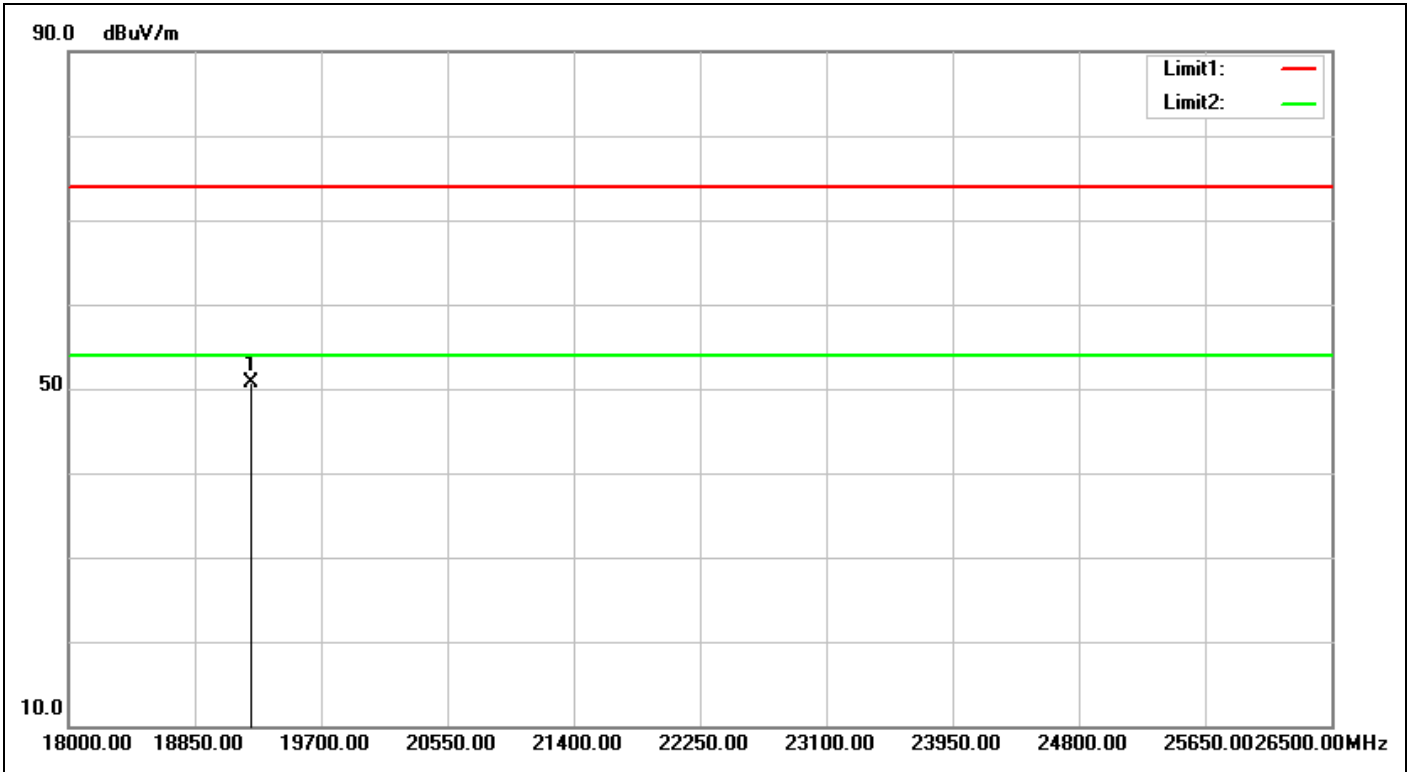
Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2016/12/14 20:47:52
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.6(°C)/52%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	TX-1DH5-2402		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	19411.000	31.09	19.64	50.73	74.00	-23.27	peak	100	124	



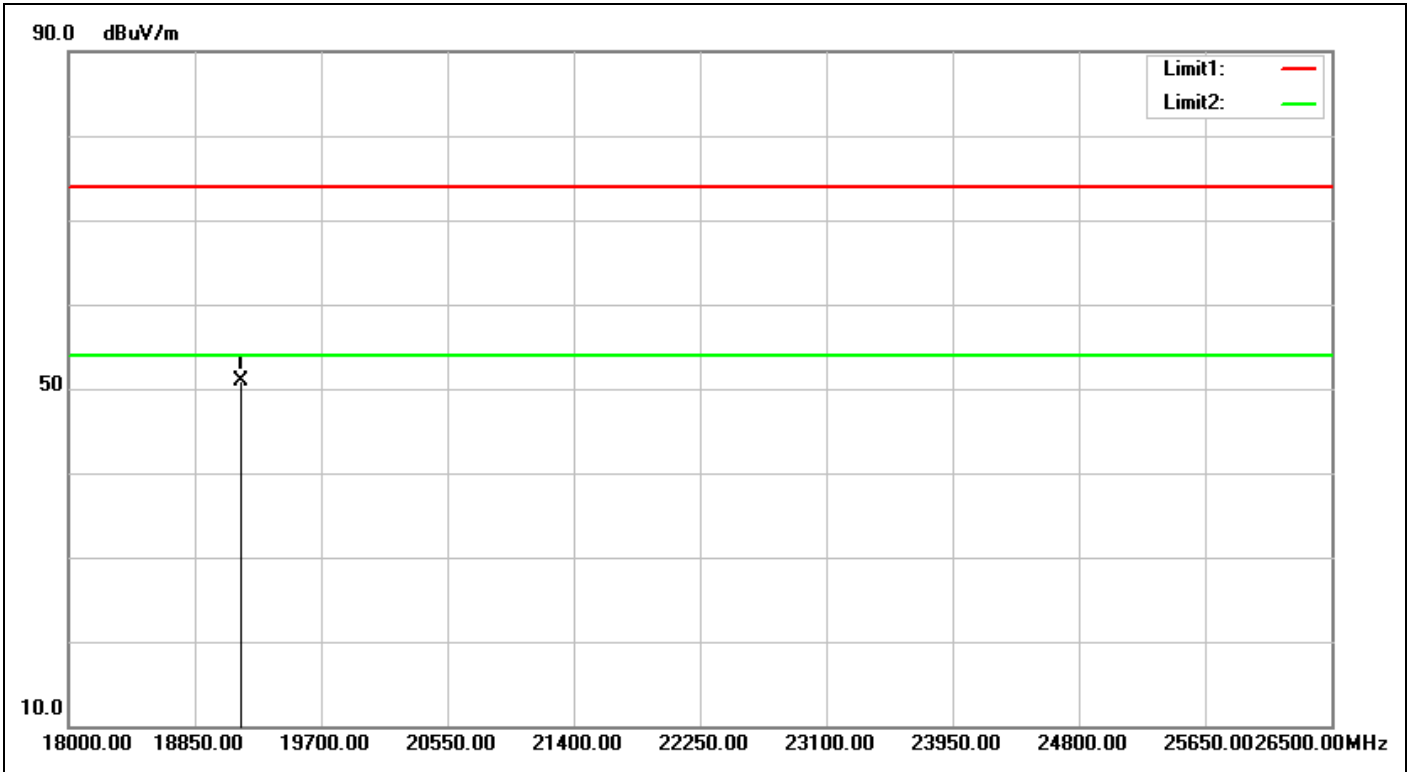
Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2016/12/14 20:51:04
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.6(°C)/52%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	TX-1DH5-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	19317.500	30.96	19.28	50.24	74.00	-23.76	peak	100	319	



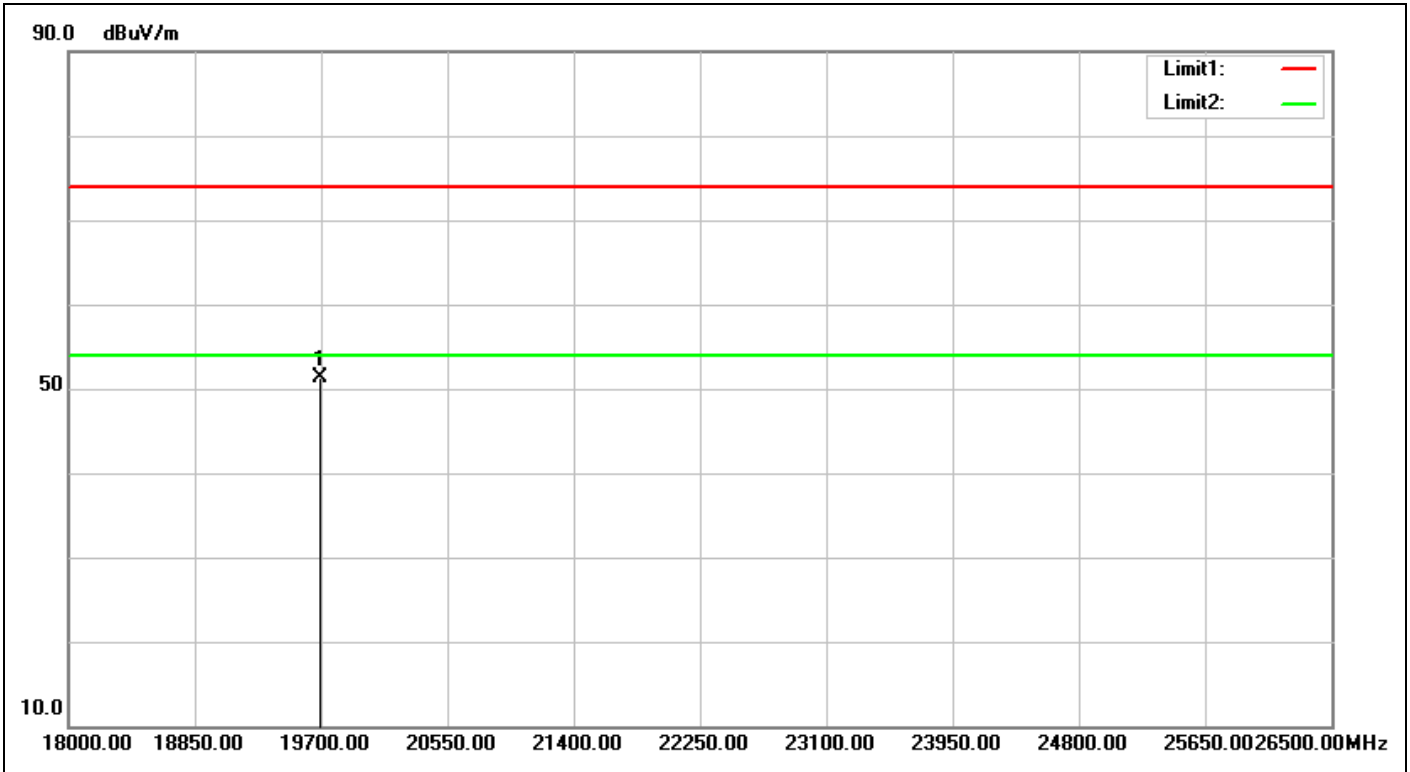
Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2016/12/14 20:52:07
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.6(°C)/52%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	TX-1DH5-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	19232.500	30.83	19.82	50.65	74.00	-23.35	peak	100	160	



Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2016/12/14 20:58:25
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.6(°C)/52%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	TX-1DH5-2480		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	19156.000	30.72	20.09	50.81	74.00	-23.19	peak	100	130	



Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2016/12/14 20:59:48
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.6(°C)/52%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	TX-1DH5-2480		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	19691.500	31.32	19.98	51.30	74.00	-22.70	peak	100	356	

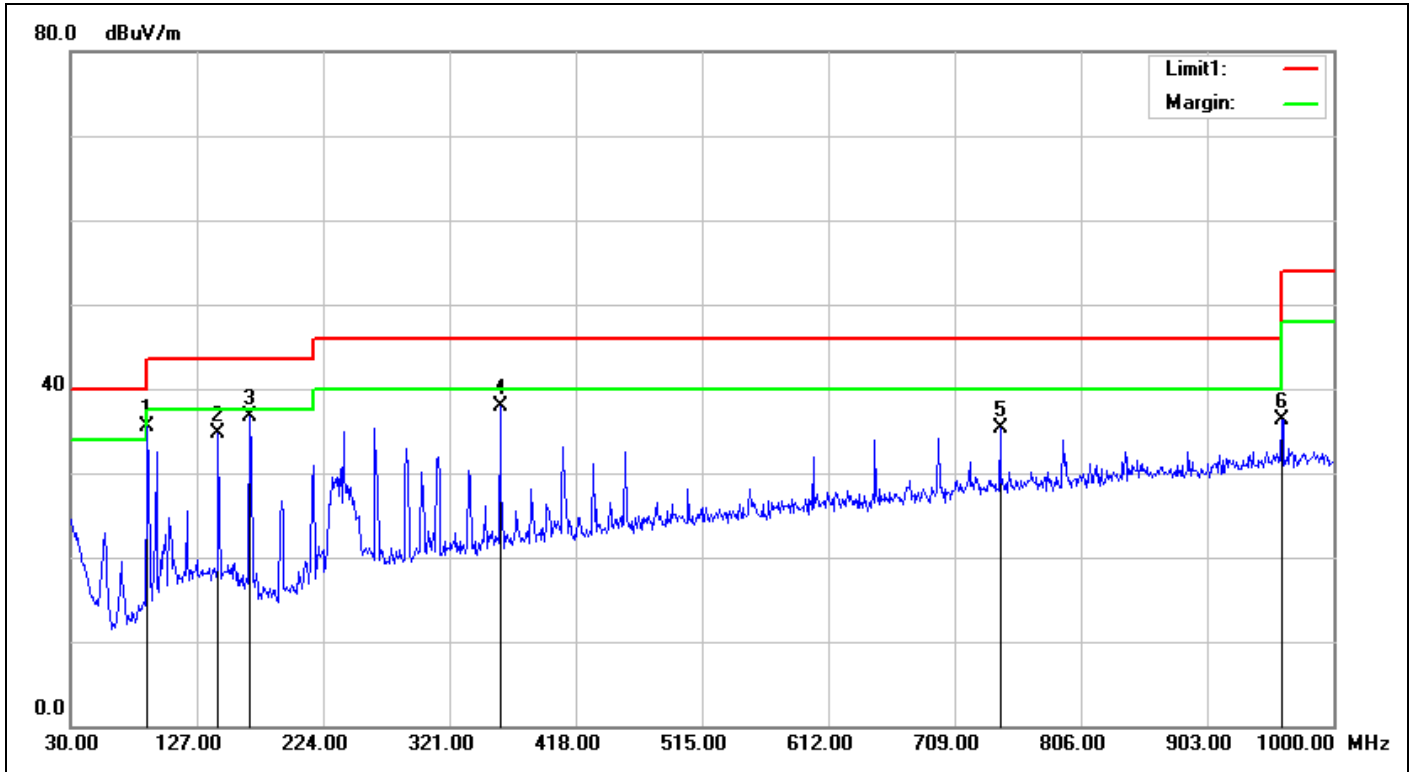
Spurious Emissions, TX Mode, 30M-1G



TUV Taiwan

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

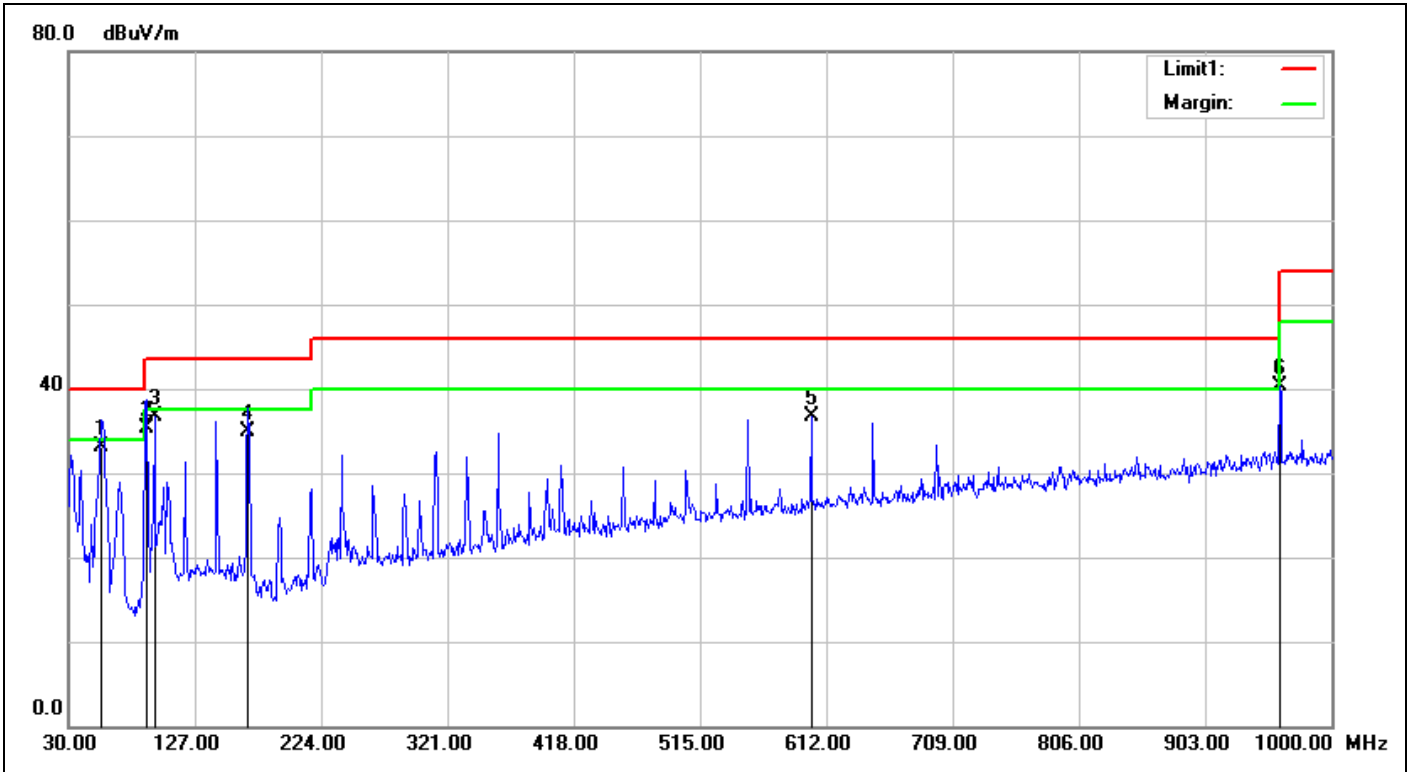
Tel:+886-2172-7000 fax:+886-2528-0018



Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2016/12/14 21:15:59
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.6(°C)/52%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	TX-1DH5-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	89.1700	-10.94	46.43	35.49	43.50	-8.01	QP	100	96	
2	143.4900	-7.14	41.76	34.62	43.50	-8.88	QP	100	237	
3	167.7400	-8.76	45.38	36.62	43.50	-6.88	QP	100	125	
4	359.8000	-3.30	41.14	37.84	46.00	-8.16	QP	100	224	
5	743.9200	2.19	33.05	35.24	46.00	-10.76	QP	100	194	
6	960.2300	5.48	30.87	36.35	54.00	-17.65	QP	100	48	

Spurious Emissions, TX Mode, 30M-1G



Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2016/12/14 21:17:03
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.6(°C)/52%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	TX-1DH5-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	55.2200	-12.55	45.75	33.20	40.00	-6.80	QP	100	315	
2	90.1400	-10.84	46.14	35.30	43.50	-8.20	QP	100	68	
3	95.9600	-10.03	46.75	36.72	43.50	-6.78	QP	100	75	
4	167.7400	-8.76	43.66	34.90	43.50	-8.60	QP	100	115	
5	600.3600	0.01	36.61	36.62	46.00	-9.38	QP	100	237	
6	960.2300	5.48	34.83	40.31	54.00	-13.69	QP	100	176	

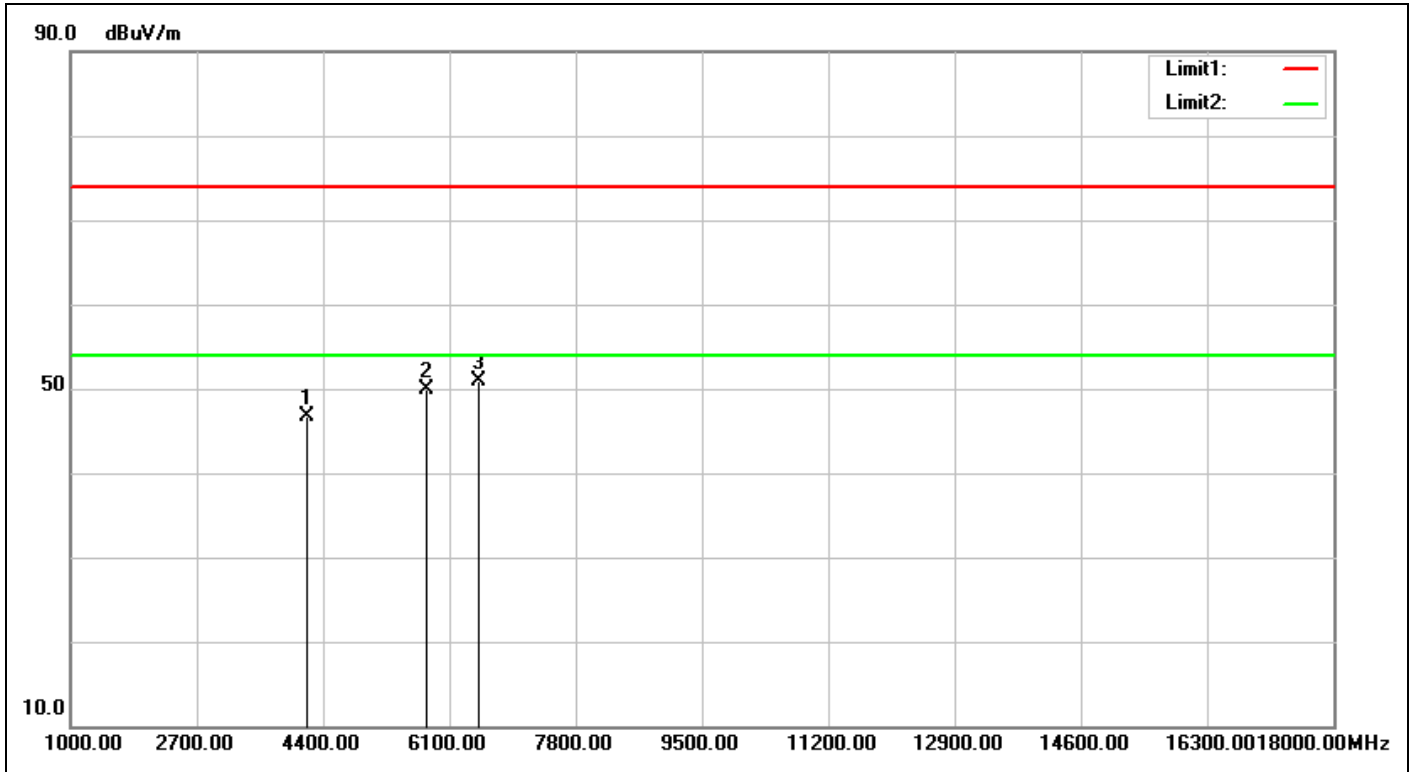
Spurious Emissions, RX Mode, 1-18G



TUV Taiwan

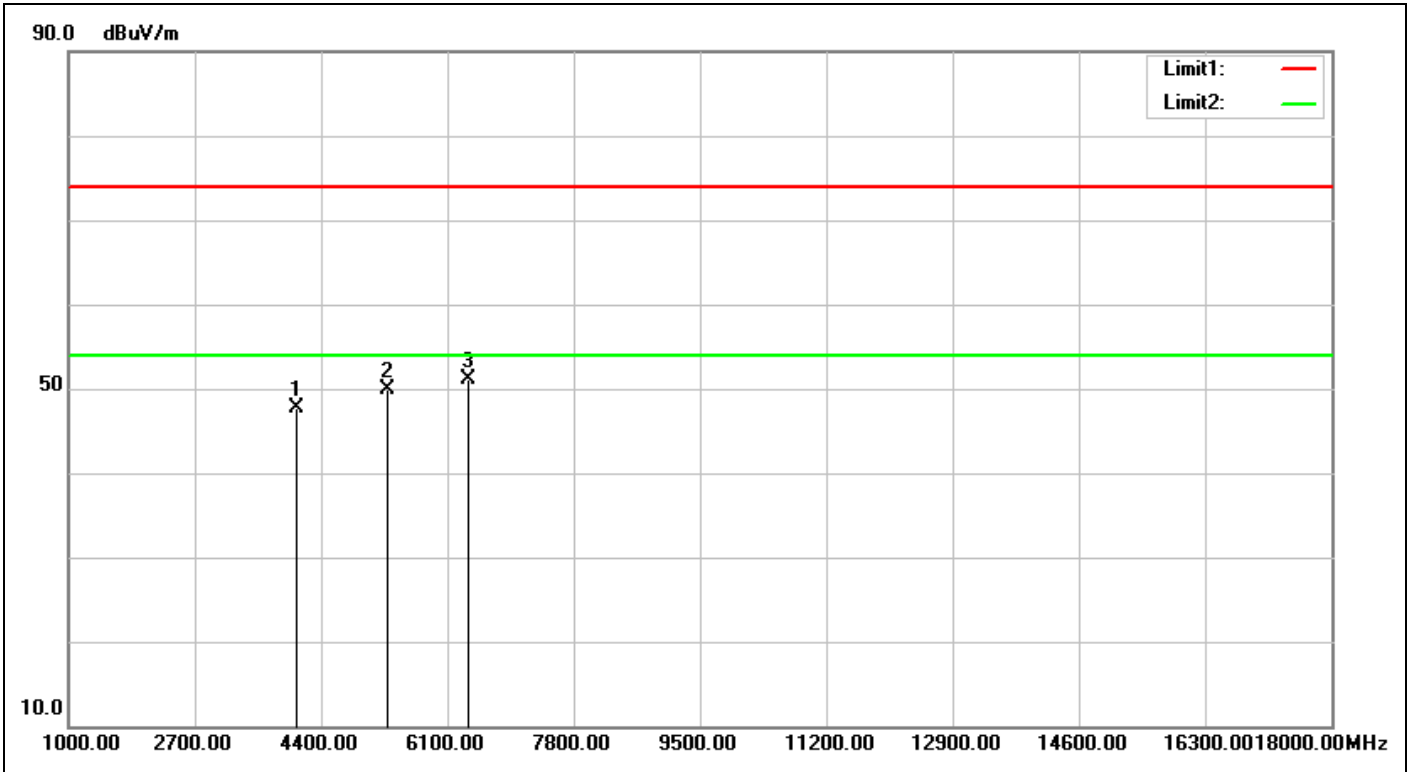
11F., No.758, Sec.4 Bade Road, Songshan Dist, Taipei City 105

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



Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2016/12/19 19:21:15
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.3(°C)/54%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	RX-1DH5-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4179.000	-4.64	51.42	46.78	74.00	-27.22	peak	100	73	
2	5794.000	2.48	47.49	49.97	74.00	-24.03	peak	100	113	
3	6491.000	5.52	45.34	50.86	74.00	-23.14	peak	100	221	



Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2016/12/19 19:22:24
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.3(°C)/54%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	RX-1DH5-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4077.000	-5.04	52.73	47.69	74.00	-26.31	peak	100	195	
2	5301.000	-0.61	50.42	49.81	74.00	-24.19	peak	100	47	
3	6389.000	5.18	45.87	51.05	74.00	-22.95	peak	100	301	

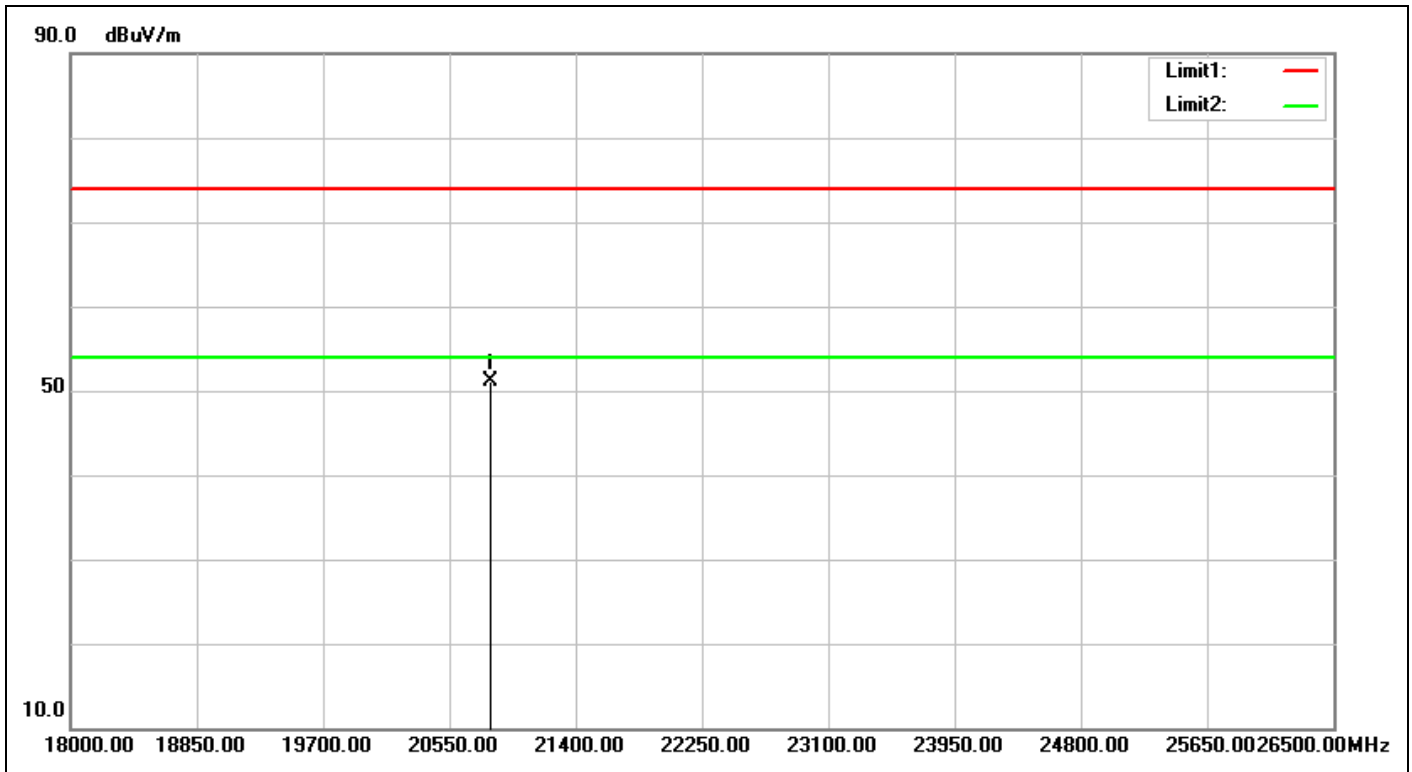
Spurious Emissions, RX Mode, 18-26G



TUV Taiwan

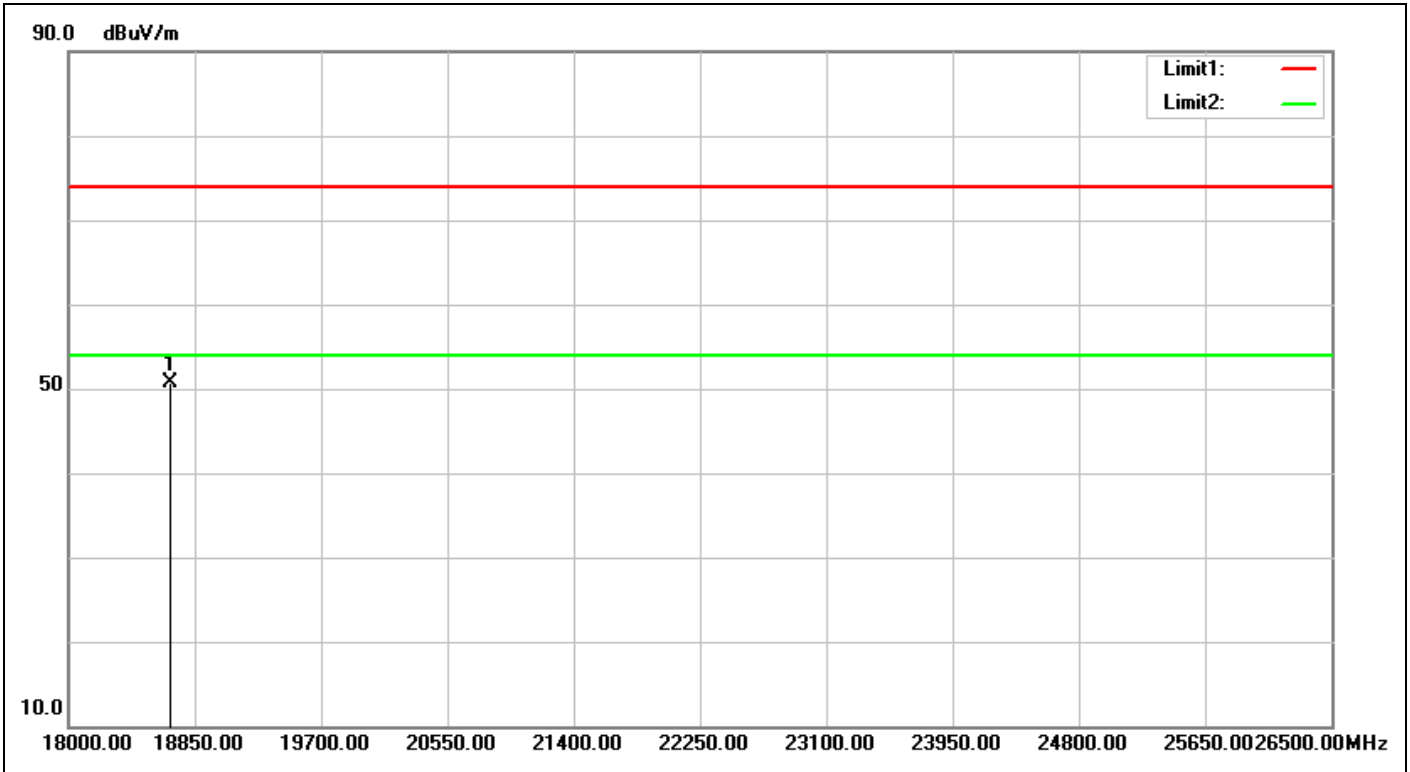
11F., No.758, Sec.4 Bade Road, Songshan Dist, Taipei City 105

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



Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2016/12/19 19:47:50
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.3(°C)/54%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	RX-1DH5-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	20830.500	31.86	19.31	51.17	74.00	-22.83	peak	100	55	



Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2016/12/19 19:48:54
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.3(°C)/54%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	RX-1DH5-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	18680.000	29.78	20.84	50.62	74.00	-23.38	peak	100	13	

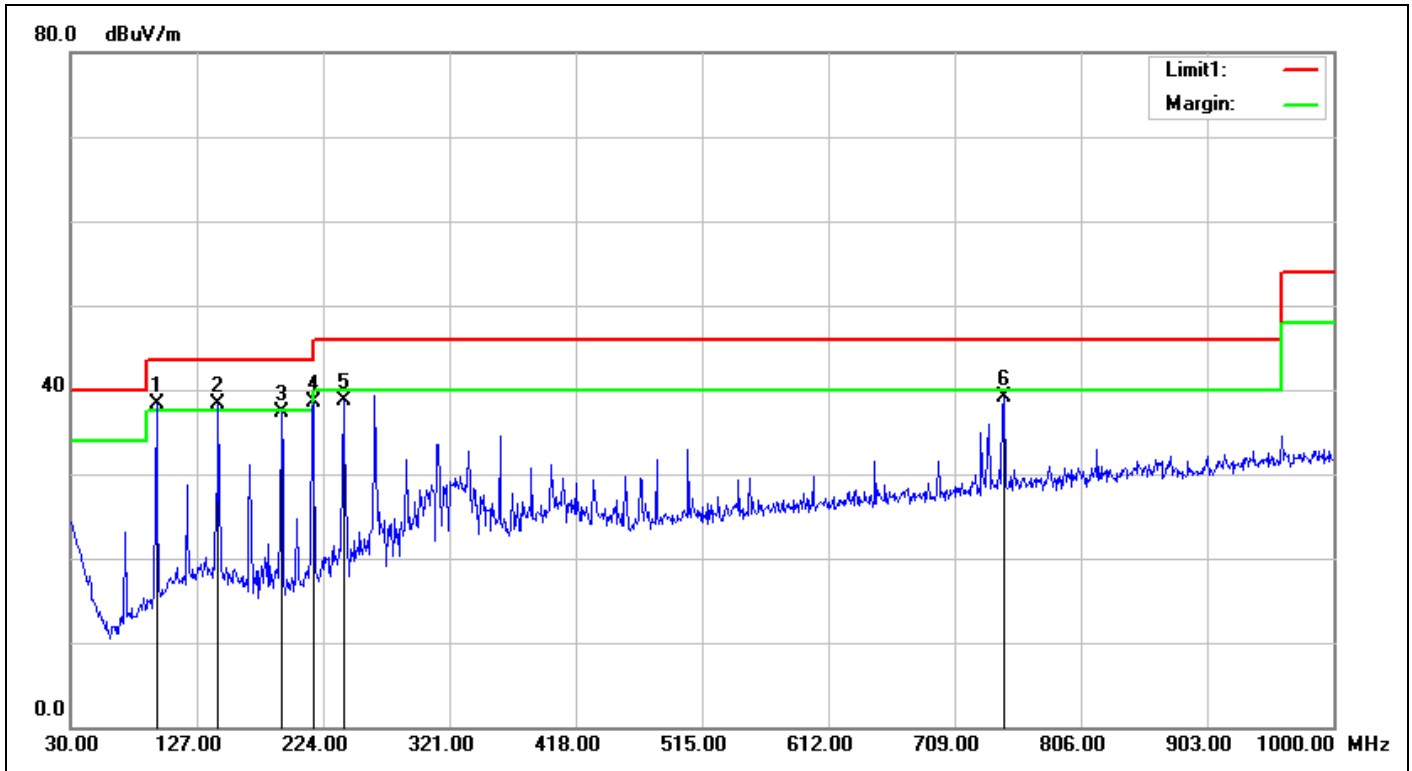
Spurious Emissions, RX Mode, 30M-1G



TUV Taiwan

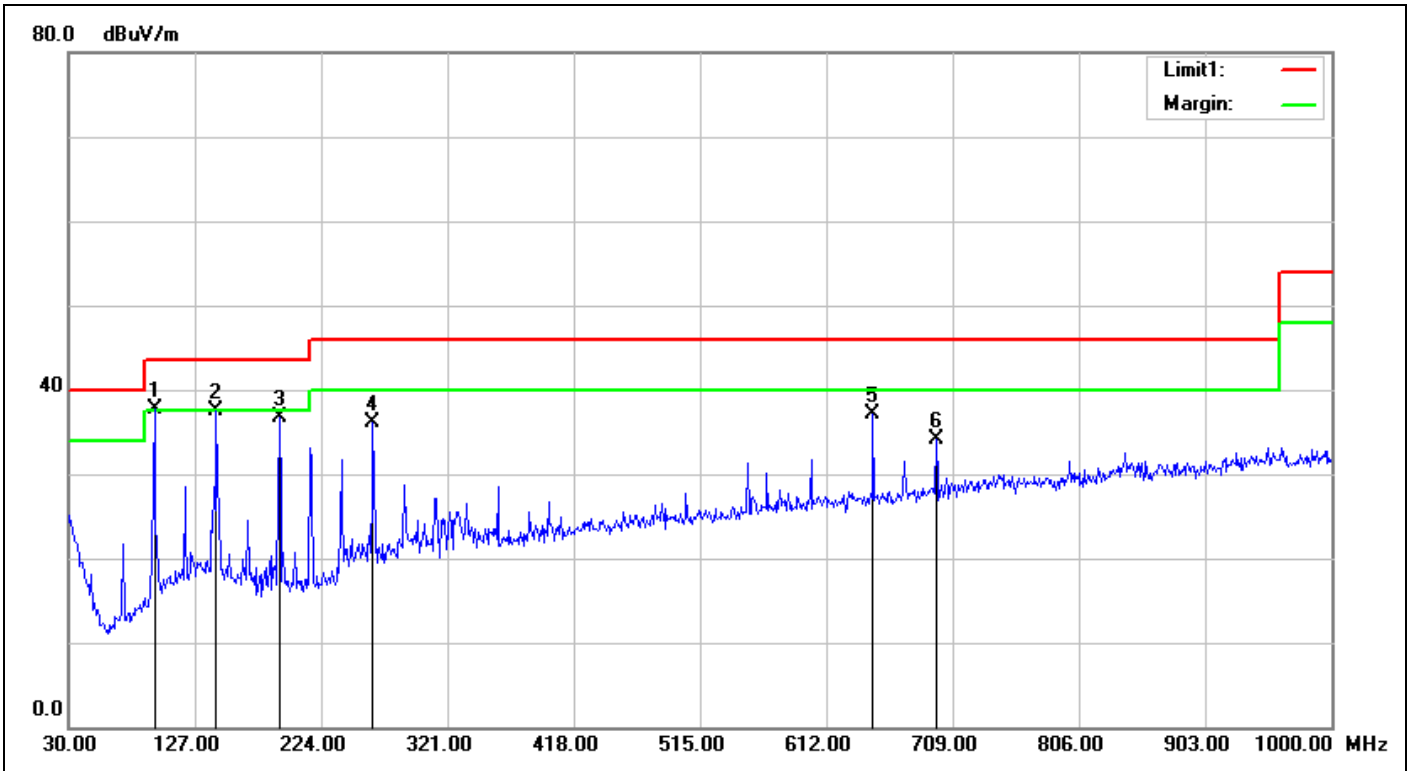
11F., No.758, Sec.4 Bade Road, Songshan Dist, Taipei City 105

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



Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2016/12/19 20:15:51
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.3(°C)/54%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	RX-1DH5-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	95.9599	-10.03	48.41	38.38	43.50	-5.12	QP	100	144	
2	143.4900	-7.14	45.40	38.26	43.50	-5.24	QP	100	191	
3	191.9900	-9.43	46.75	37.32	43.50	-6.18	QP	100	205	
4	216.2400	-8.40	46.96	38.56	46.00	-7.44	QP	100	208	
5	239.5200	-6.73	45.36	38.63	46.00	-7.37	QP	100	332	
6	746.8300	2.26	36.86	39.12	46.00	-6.88	QP	100	72	



Service No.:	114058557-FCC	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2016/12/19 20:16:54
Applicant:	Acrox	Test Rating:	DC 5V
Product:	NS-PNM3B8BK/ BKY Bluetooth Mouse	Temp.(°C)/Hum.(%):	21.3(°C)/54%
Model No.:	NS- PNM3B8BK-C	Test Engineer:	Sam Su
Test Mode:	RX-1DH5-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	95.9599	-10.03	47.79	37.76	43.50	-5.74	QP	100	229	
2	143.4900	-7.14	44.60	37.46	43.50	-6.04	QP	103	324	
3	191.9900	-9.43	46.16	36.73	43.50	-6.77	QP	100	152	
4	263.7700	-5.05	41.08	36.03	46.00	-9.97	QP	100	19	
5	647.8900	0.51	36.69	37.20	46.00	-8.80	QP	100	127	
6	696.3900	1.03	33.15	34.18	46.00	-11.82	QP	100	127	