

Test Report No.50176071 001

Appendix D: Radiated and Mains Spurious Emission Data

(File: 50176071 001AppendixD)

Contents

Spurious Emissions, TX Mode, 1-10G.....	2
Spurious Emissions, TX Mode, 30M-1G	12
Spurious Emissions, TX Mode, 9K-30M	18
Spurious Emissions, RX Mode, 1-10G	20
Spurious Emissions, RX Mode, 30M-1G	22
Spurious Emissions, RX Mode, 9K-30M.....	24
Spurious Emissions, Main	26

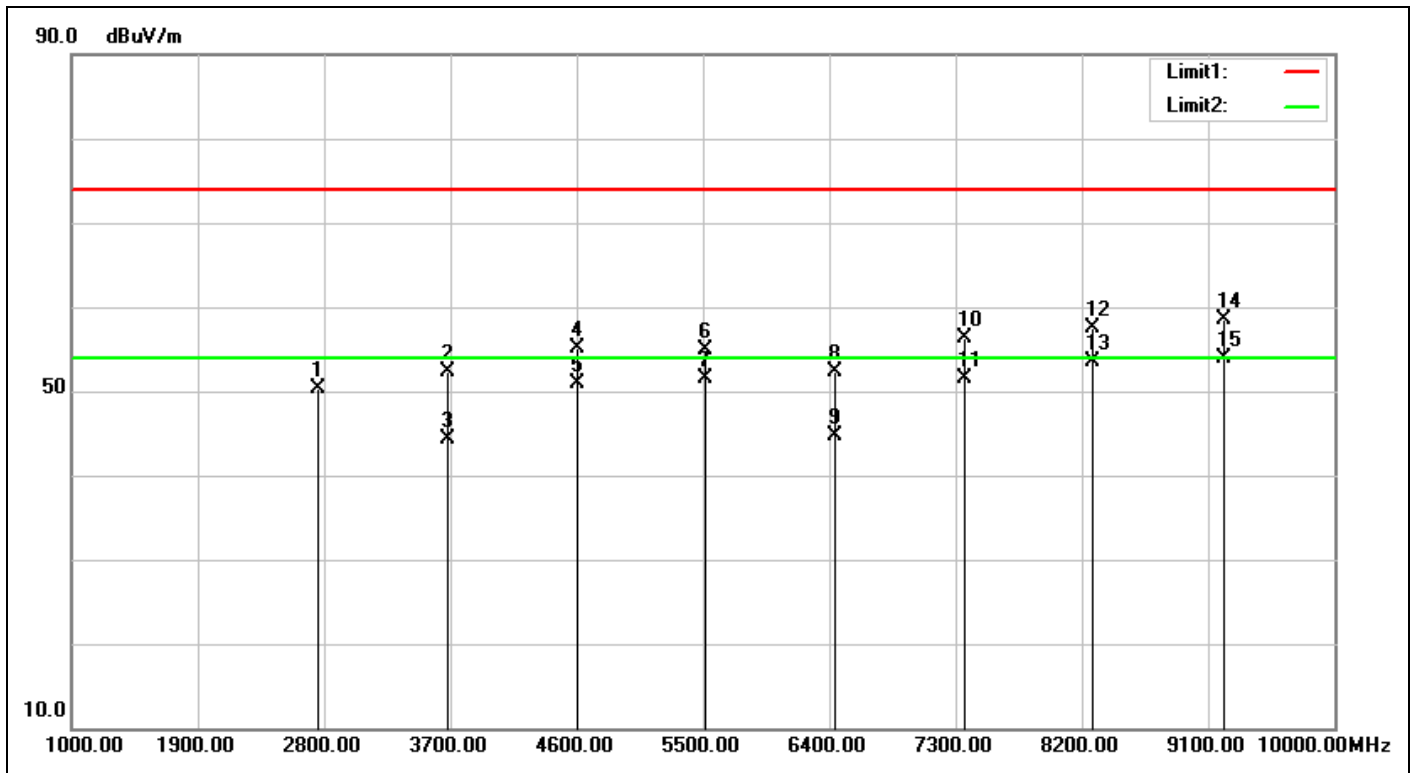
Spurious Emissions, TX Mode, 1-10G



TUV Rheinland Taiwan Ltd.

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

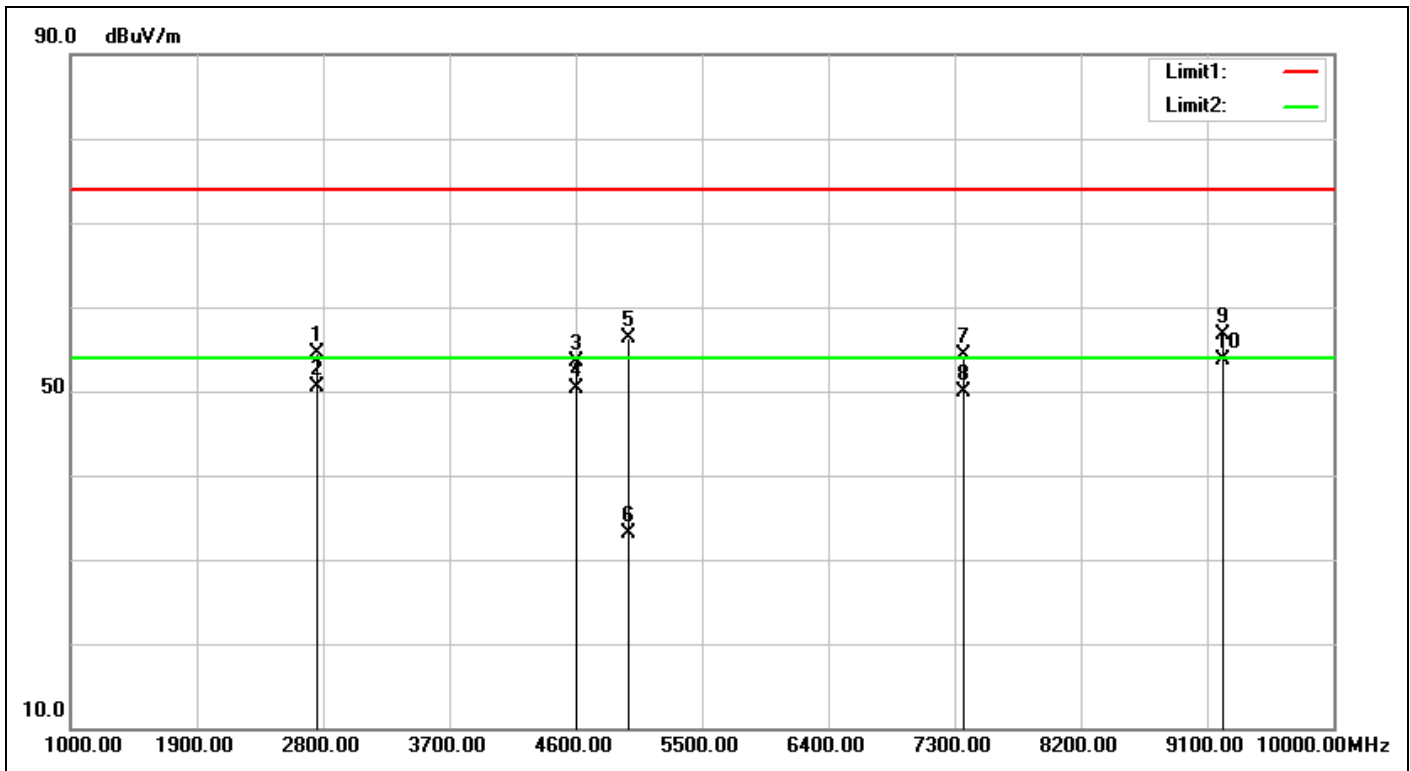
Tel:+886-2172-7000 fax:+886-2528-0018



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/8/27 10:17:55
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%)	25.4(°C)/56%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	920.1375M-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2755.000	-7.59	57.98	50.39	74.00	-23.61	peak	100	326	
2	3680.000	-6.40	58.74	52.34	74.00	-21.66	peak	100	224	
3	3680.000	-6.40	50.73	44.33	54.00	-9.67	AVG	100	224	
4	4600.700	-3.79	58.99	55.20	74.00	-18.80	peak	100	190	
5	4600.700	-3.79	54.60	50.81	54.00	-3.19	AVG	100	190	
6	5520.800	-0.73	55.73	55.00	74.00	-19.00	peak	100	56	
7	5520.800	-0.73	52.16	51.43	54.00	-2.57	AVG	100	56	

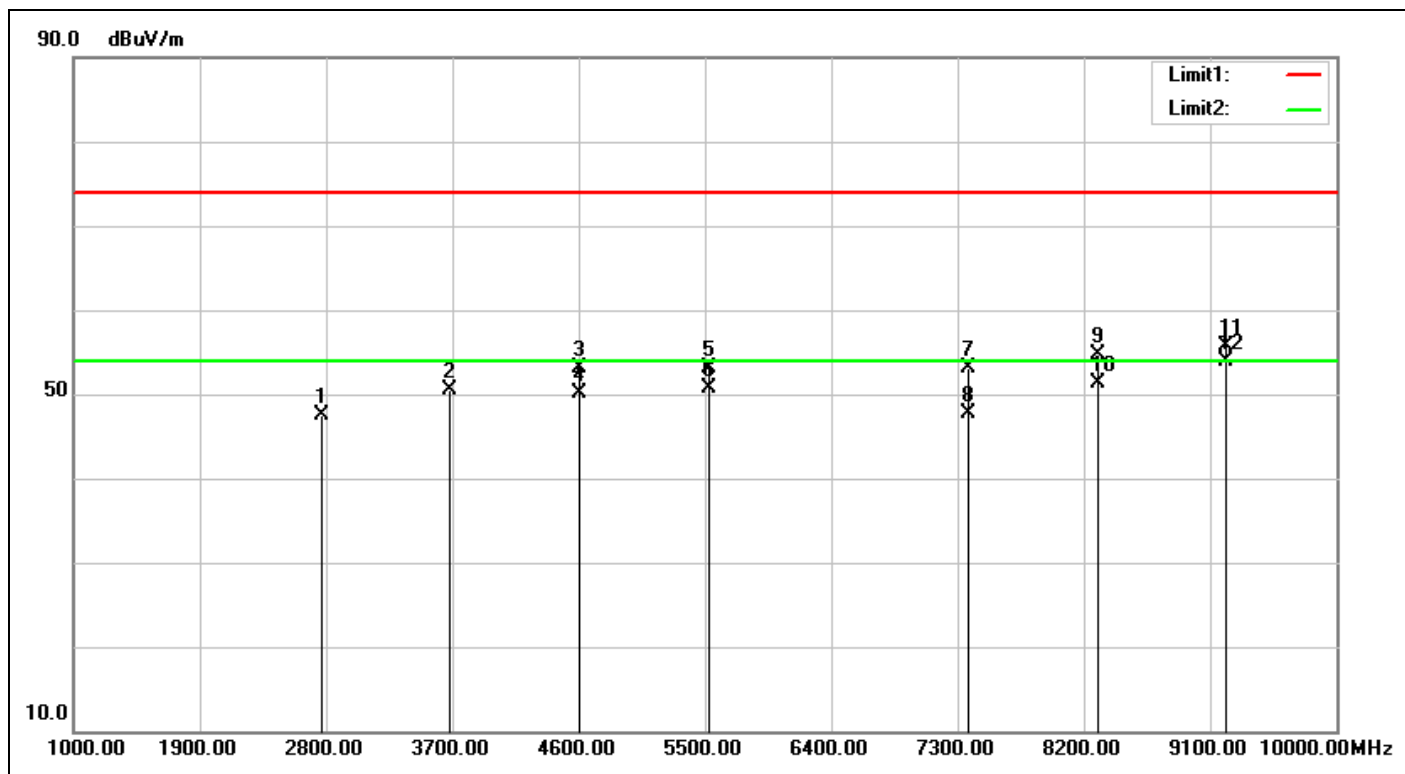
8	6441.000	4.15	48.20	52.35	74.00	-21.65	peak	100	279	
9	6441.000	4.15	40.48	44.63	54.00	-9.37	AVG	100	279	
10	7361.100	4.58	51.69	56.27	74.00	-17.73	peak	100	176	
11	7361.100	4.58	46.92	51.50	54.00	-2.50	AVG	100	176	
12	8281.200	5.15	52.36	57.51	74.00	-16.49	peak	100	107	
13	8281.200	5.15	48.37	53.52	54.00	-0.48	AVG	100	107	
14	9201.400	5.48	52.96	58.44	74.00	-15.56	peak	100	53	
15	9201.400	5.48	48.40	53.88	54.00	-0.12	AVG	100	53	



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/8/27 10:18:47
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%):	25.4(°C)/56%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	920.1375M-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2760.000	-7.59	62.04	54.45	74.00	-19.55	peak	100	154	
2	2760.000	-7.59	58.06	50.47	54.00	-3.53	AVG	100	154	
3	4600.700	-3.79	57.29	53.50	74.00	-20.50	peak	100	263	
4	4600.700	-3.79	54.12	50.33	54.00	-3.67	AVG	100	263	
5	4978.000	-3.18	59.52	56.34	74.00	-17.66	peak	100	358	
6	4978.000	-3.18	36.24	33.06	54.00	-20.94	AVG	100	358	
7	7363.000	4.57	49.73	54.30	74.00	-19.70	peak	100	263	
8	7363.000	4.57	45.33	49.90	54.00	-4.10	AVG	100	263	

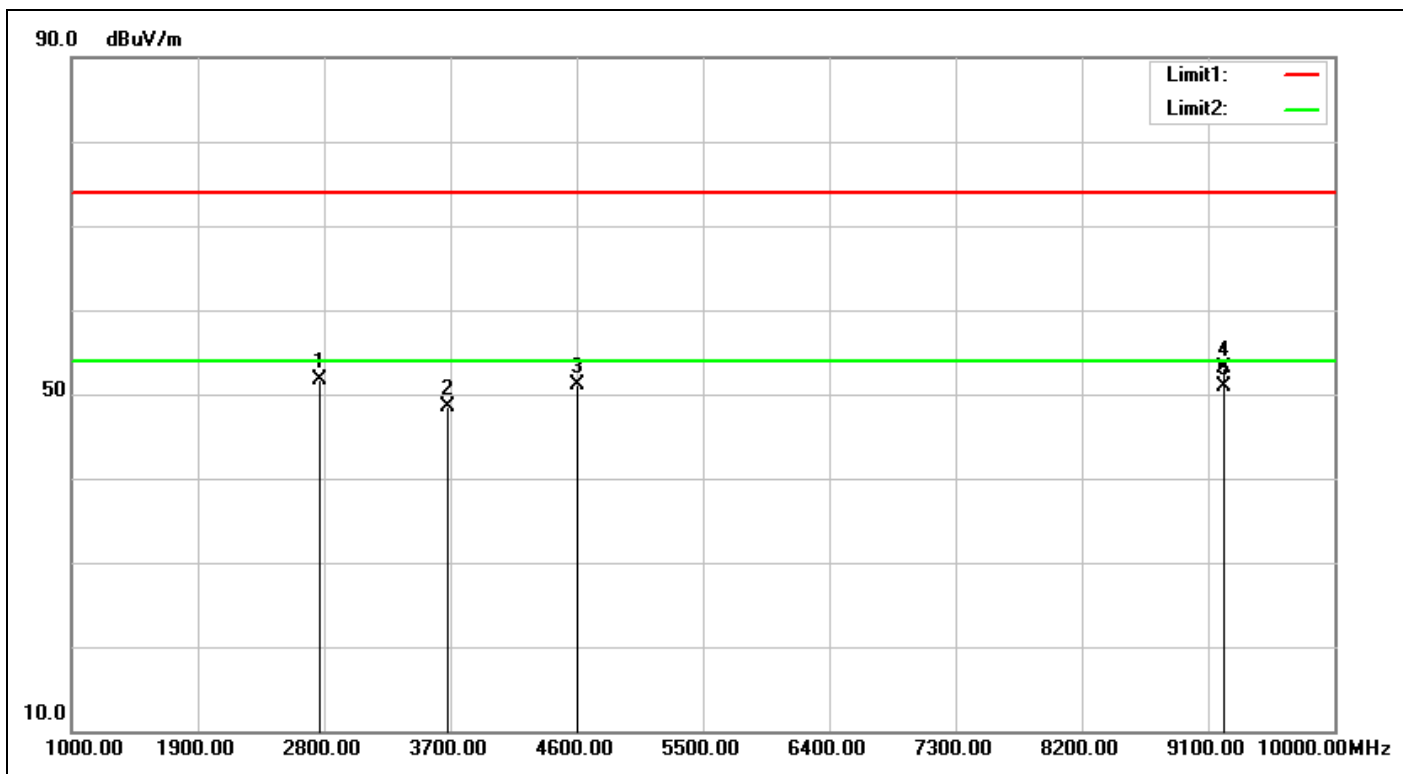
9	9201.400	5.48	51.15	56.63	74.00	-17.37	peak	100	338	
10	9201.400	5.48	48.25	53.73	54.00	-0.27	AVG	100	338	



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/8/27 10:50:01
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%)	25.4(°C)/56%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	921.3875M-TX		
Remark:			

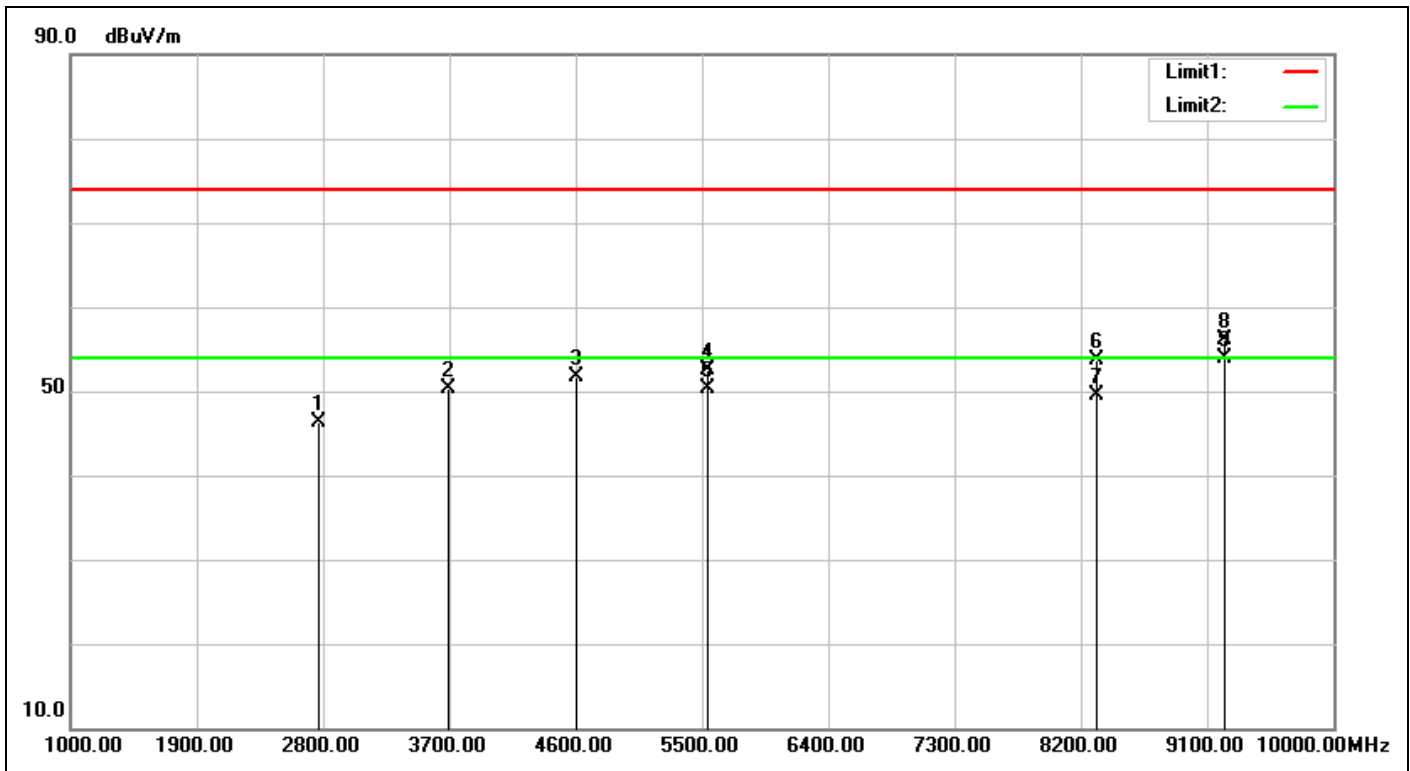
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2764.160	-7.58	55.12	47.54	74.00	-26.46	peak	100	325	
2	3685.550	-6.39	56.85	50.46	74.00	-23.54	peak	100	226	
3	4606.900	-3.78	56.91	53.13	74.00	-20.87	peak	100	287	
4	4606.900	-3.78	53.91	50.13	54.00	-3.87	AVG	100	287	
5	5528.300	-0.69	53.87	53.18	74.00	-20.82	peak	100	65	
6	5528.300	-0.69	51.36	50.67	54.00	-3.33	AVG	100	65	
7	7371.100	4.59	48.52	53.11	74.00	-20.89	peak	100	177	
8	7371.100	4.59	43.05	47.64	54.00	-6.36	AVG	100	177	

9	8292.500	5.17	49.59	54.76	74.00	-19.24	peak	100	48	
10	8292.500	5.17	46.09	51.26	54.00	-2.74	AVG	100	48	
11	9213.900	5.48	50.14	55.62	74.00	-18.38	peak	100	38	
12	9213.900	5.48	48.43	53.91	54.00	-0.09	AVG	100	38	



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/8/27 10:50:53
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%)	25.4(°C)/56%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	921.3875M-TX		
Remark:			

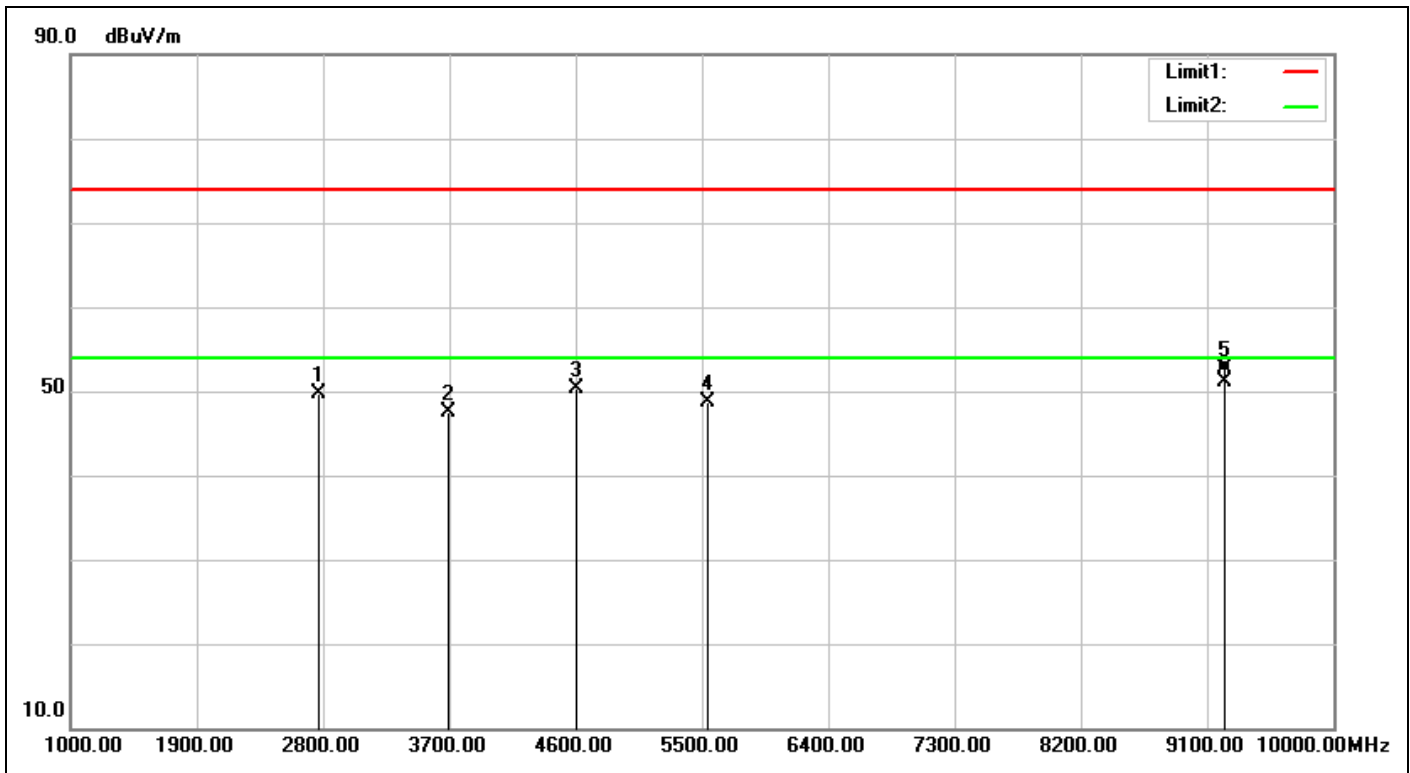
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2764.160	-7.58	59.26	51.68	74.00	-22.32	peak	100	158	
2	3685.550	-6.39	54.93	48.54	74.00	-25.46	peak	100	125	
3	4606.900	-3.78	54.79	51.01	74.00	-22.99	peak	100	254	
4	9213.900	5.48	47.53	53.01	74.00	-20.99	peak	100	350	
5	9213.900	5.48	45.50	50.98	54.00	-3.02	AVG	100	350	



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/8/27 11:07:02
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%)	25.4(°C)/56%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	922.6625M-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2767.980	-7.58	53.96	46.38	74.00	-27.62	peak	100	297	
2	3690.650	-6.37	56.70	50.33	74.00	-23.67	peak	100	225	
3	4613.300	-3.76	55.47	51.71	74.00	-22.29	peak	100	303	
4	5536.000	-0.63	53.11	52.48	74.00	-21.52	peak	100	112	
5	5536.000	-0.63	50.96	50.33	54.00	-3.67	AVG	100	112	
6	8304.000	5.18	48.49	53.67	74.00	-20.33	peak	100	40	
7	8304.000	5.18	44.34	49.52	54.00	-4.48	AVG	100	40	
8	9226.600	5.48	50.63	56.11	74.00	-17.89	peak	100	47	

9	9226.600	5.48	48.47	53.95	54.00	-0.05	AVG	100	47	
---	----------	------	-------	-------	-------	-------	-----	-----	----	--



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/8/27 11:07:54
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%):	25.4(°C)/56%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	922.6625M-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2767.980	-7.58	57.34	49.76	74.00	-24.24	peak	100	149	
2	3690.650	-6.37	53.92	47.55	74.00	-26.45	peak	100	207	
3	4613.300	-3.76	54.12	50.36	74.00	-23.64	peak	100	316	
4	5536.000	-0.63	49.33	48.70	74.00	-25.30	peak	100	230	
5	9226.600	5.48	47.27	52.75	74.00	-21.25	peak	100	350	
6	9226.600	5.48	45.55	51.03	54.00	-2.97	AVG	100	350	

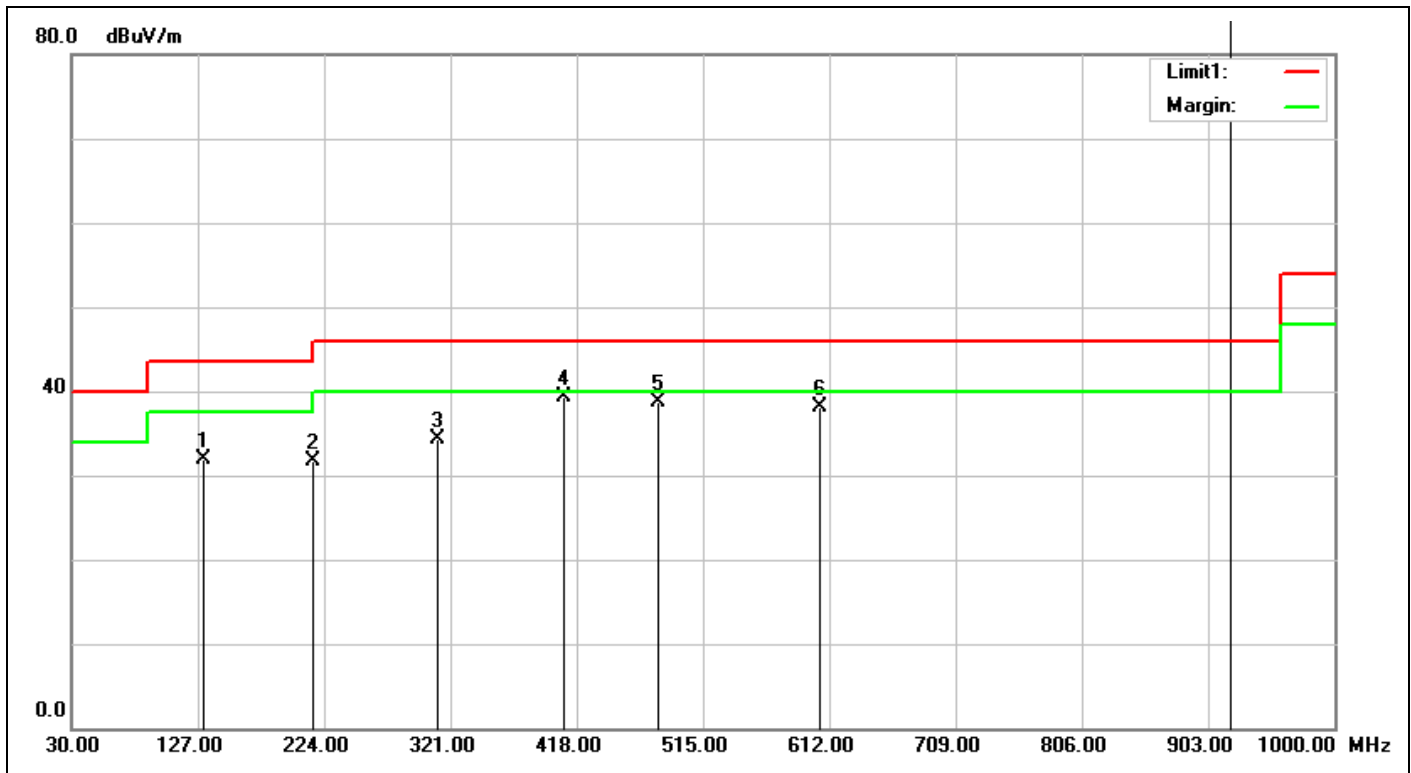
Spurious Emissions, TX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

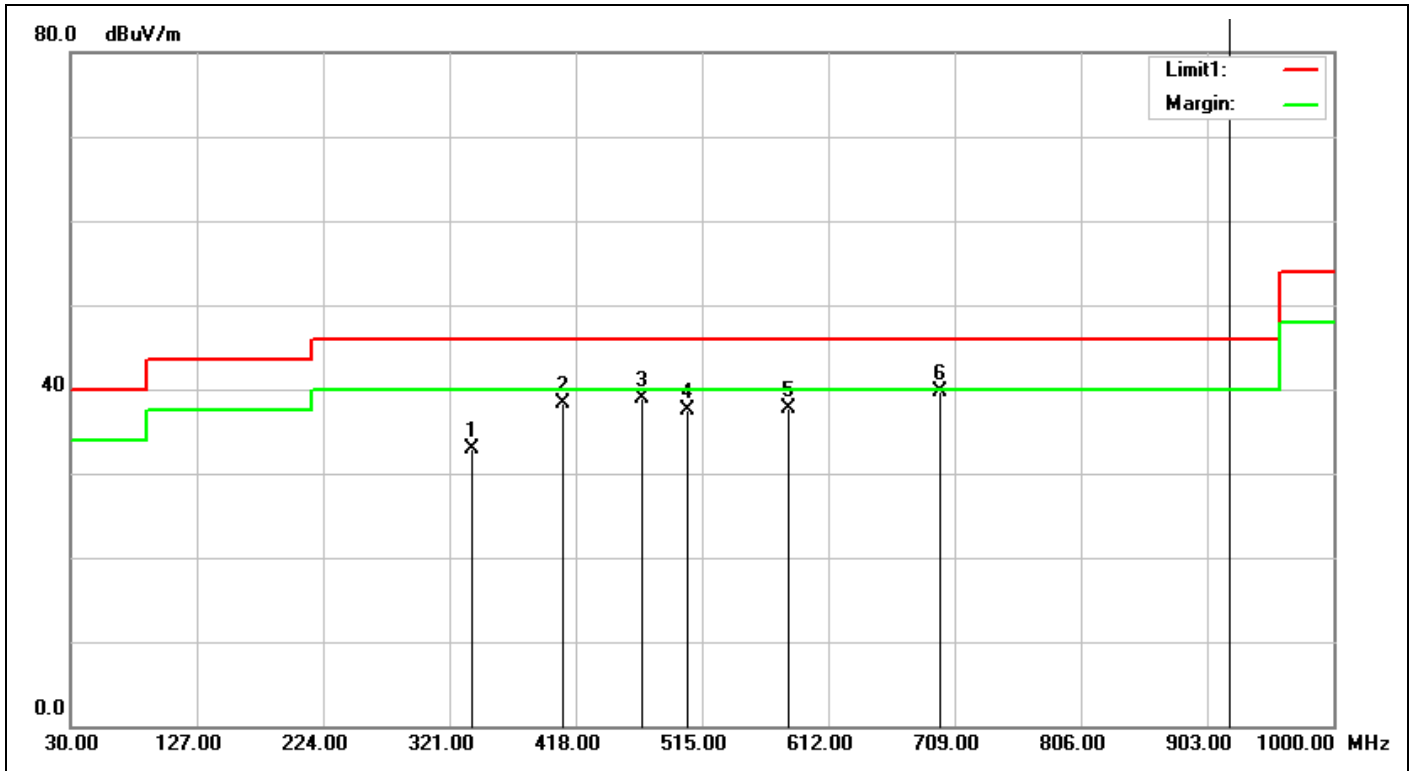
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



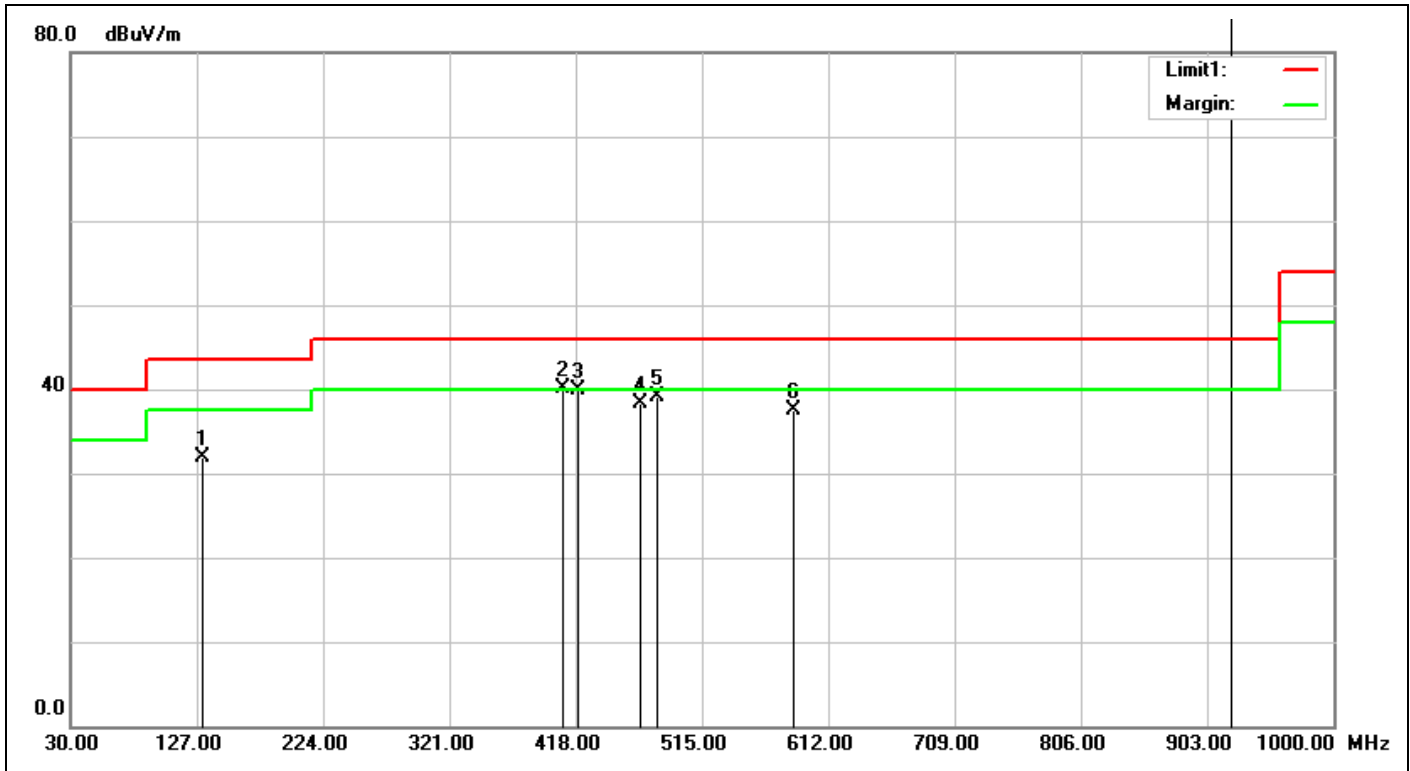
Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/8/24 17:19:33
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%):	25(°C)/47%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	920.1375M-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	131.8500	-8.45	40.32	31.87	43.50	-11.63	QP	100	190	
2	215.2700	-9.98	41.60	31.62	43.50	-11.88	QP	100	216	
3	311.3000	-5.81	40.02	34.21	46.00	-11.79	QP	100	222	
4	408.3000	-3.69	42.90	39.21	46.00	-6.79	QP	100	222	
5	480.0800	-2.71	41.38	38.67	46.00	-7.33	QP	100	101	
6	605.2100	-0.83	38.99	38.16	46.00	-7.84	QP	100	68	
7	920.4600	4.41	114.77	119.18	46.00	73.18	peak	100	78	TX



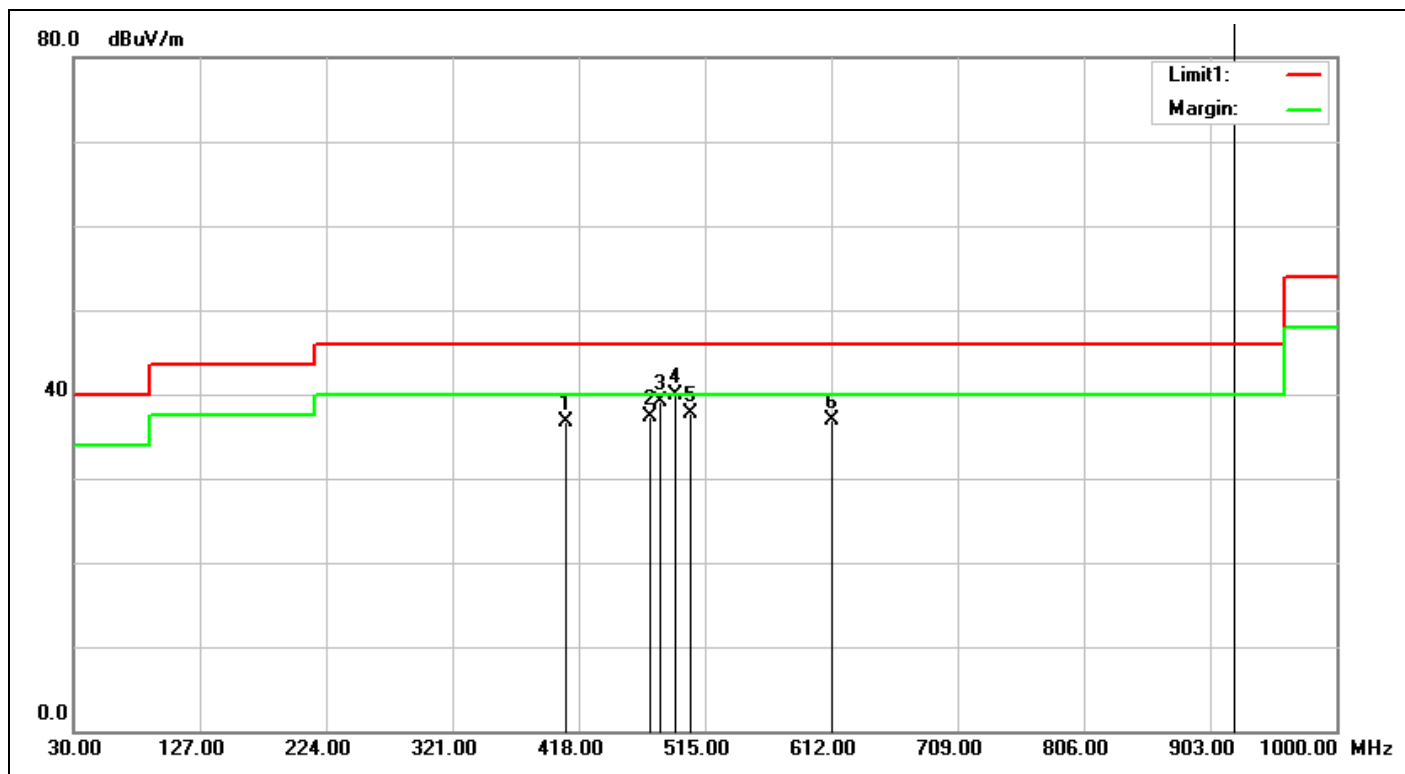
Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/8/24 17:20:26
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%):	25(°C)/47%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	920.1375M-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	338.4600	-5.06	37.90	32.84	46.00	-13.16	QP	100	183	
2	408.3000	-3.69	41.96	38.27	46.00	-7.73	QP	100	219	
3	468.4400	-2.96	41.77	38.81	46.00	-7.19	QP	100	78	
4	504.3300	-2.25	39.66	37.41	46.00	-8.59	QP	100	42	
5	580.9600	-1.18	38.91	37.73	46.00	-8.27	QP	100	167	
6	698.3300	0.46	39.20	39.66	46.00	-6.34	QP	100	322	
7	920.4600	4.41	105.96	110.37	46.00	64.37	peak	100	322	TX



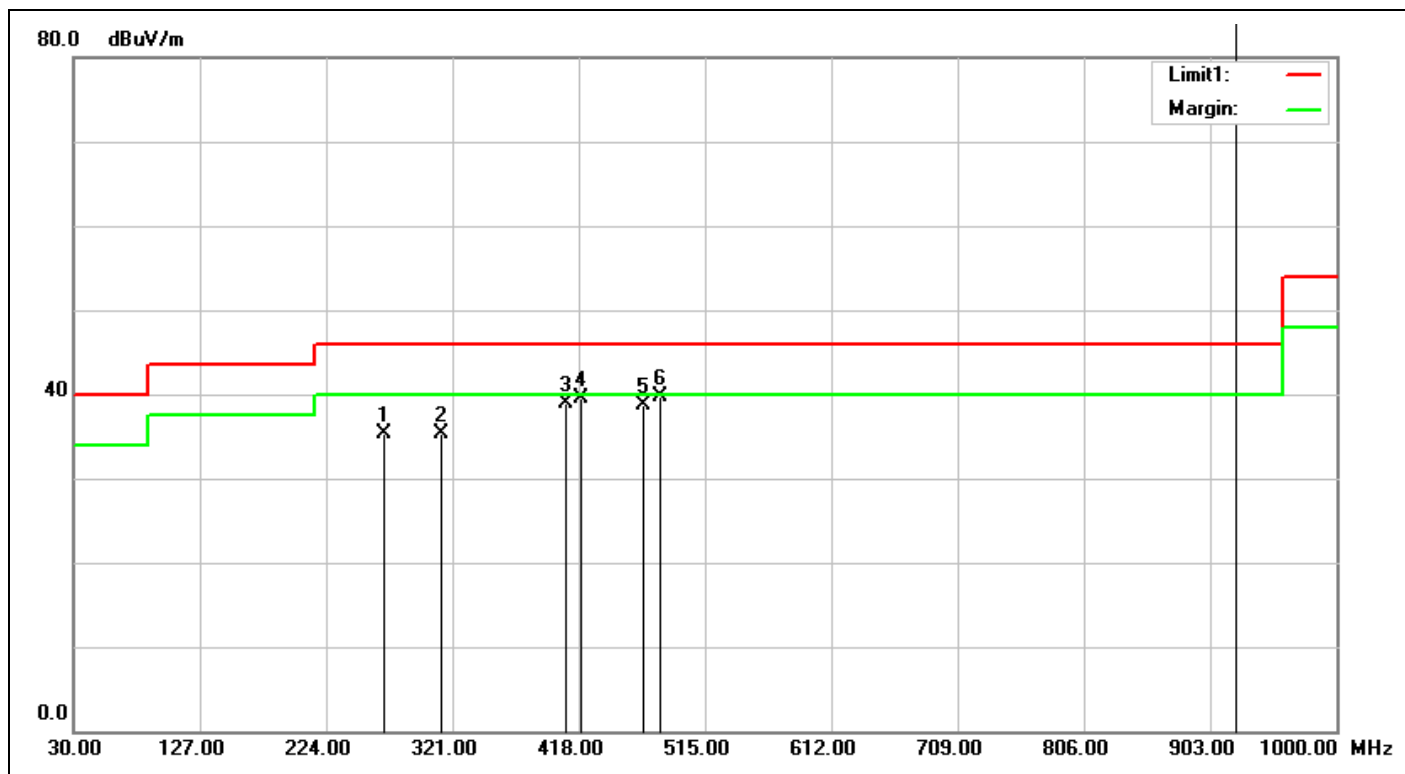
Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/8/24 17:24:59
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%):	25(°C)/47%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	921.3875M-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	131.8500	-8.45	40.30	31.85	43.50	-11.65	QP	100	199	
2	408.3000	-3.69	43.88	40.19	46.00	-5.81	QP	100	226	
3	419.9400	-3.59	43.58	39.99	46.00	-6.01	QP	100	334	
4	467.4700	-2.97	41.36	38.39	46.00	-7.61	QP	100	114	
5	480.0800	-2.71	41.87	39.16	46.00	-6.84	QP	100	111	
6	584.8400	-1.11	38.52	37.41	46.00	-8.59	QP	100	199	
7	921.4300	4.44	114.65	119.09	46.00	73.09	peak	100	78	TX



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/8/24 17:25:52
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%)	25(°C)/47%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	921.3875M-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	408.3000	-3.69	40.41	36.72	46.00	-9.28	QP	100	226	
2	473.2900	-2.85	40.22	37.37	46.00	-8.63	QP	100	45	
3	480.0800	-2.71	41.88	39.17	46.00	-6.83	QP	100	69	
4	491.7200	-2.47	42.33	39.86	46.00	-6.14	QP	100	69	
5	504.3300	-2.25	40.04	37.79	46.00	-8.21	QP	100	46	
6	612.9700	-0.76	37.62	36.86	46.00	-9.14	QP	100	357	
7	921.4300	4.44	105.42	109.86	46.00	63.86	peak	100	325	TX



Service No.: 114080238

Test Standard: NCC Class B 3M Radiation

Test item: Radiation Emission

Applicant: GloabalSat

Product: Sigfox Tracker

Model No.: ST-100A

Test Mode: 922.6625M-TX

Remark:

Test Distance: 3m

Ant. Polarization: Horizontal

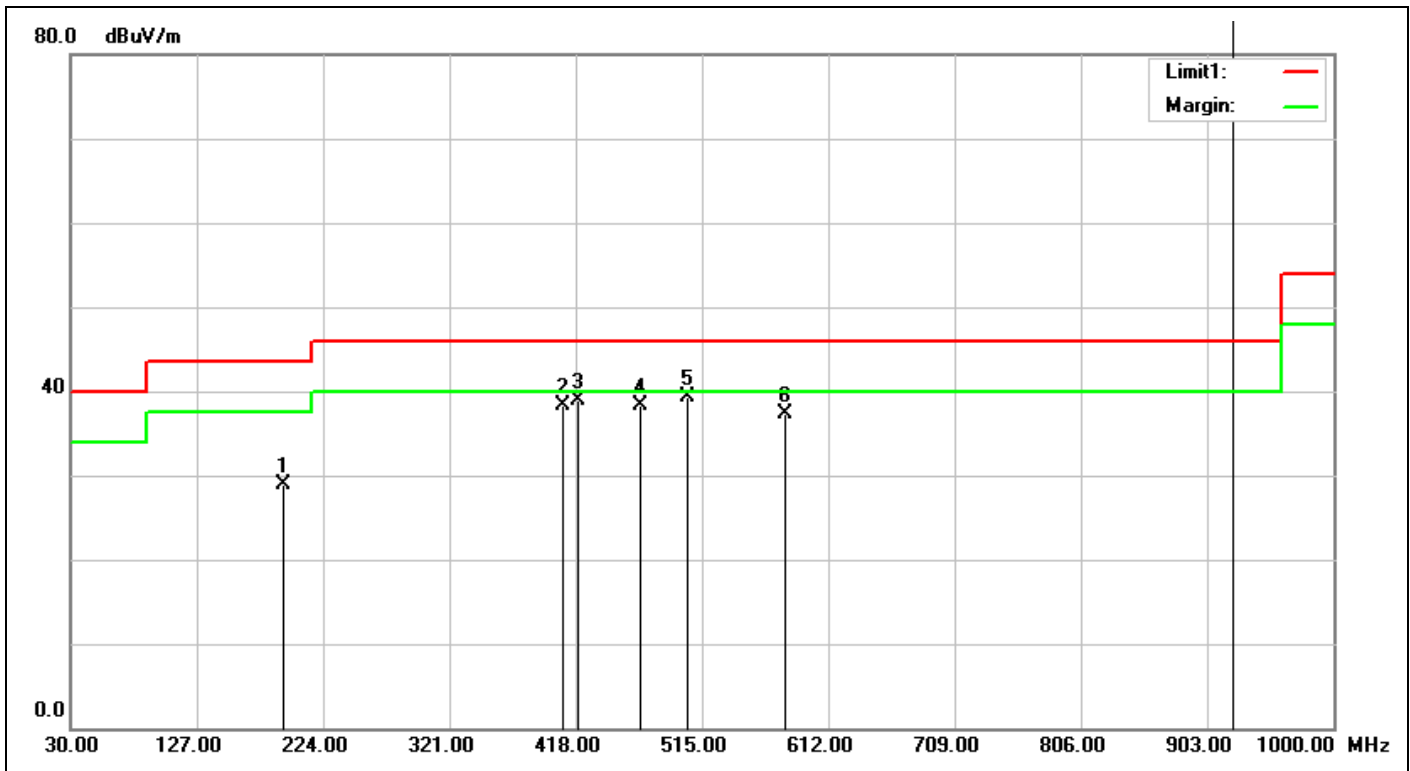
Test Time: 2018/8/24 17:28:37

Test Rating: DC 5V

Temp.(°C)/Hum.(%): 25(°C)/47%

Test Engineer: Amy Hsu

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	268.6200	-6.82	42.05	35.23	46.00	-10.77	peak	100	150	
2	312.2700	-5.79	41.17	35.38	46.00	-10.62	peak	100	209	
3	408.3000	-3.69	42.59	38.90	46.00	-7.10	peak	100	348	
4	419.9400	-3.59	43.13	39.54	46.00	-6.46	peak	100	344	
5	467.4700	-2.97	41.72	38.75	46.00	-7.25	peak	100	114	
6	480.0800	-2.71	42.46	39.75	46.00	-6.25	peak	100	97	
7	923.3700	4.50	113.96	118.46	46.00	72.46	peak	100	78	TX



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/8/24 17:29:30
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%):	25(°C)/47%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	922.6625M-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	193.9300	-10.77	39.65	28.88	43.50	-14.62	QP	100	219	
2	408.3000	-3.69	41.97	38.28	46.00	-7.72	QP	100	233	
3	419.9400	-3.59	42.49	38.90	46.00	-7.10	QP	100	229	
4	467.4700	-2.97	41.34	38.37	46.00	-7.63	QP	100	233	
5	504.3300	-2.25	41.51	39.26	46.00	-6.74	QP	100	55	
6	579.0200	-1.21	38.49	37.28	46.00	-8.72	QP	100	130	
7	923.3700	4.50	104.60	109.10	46.00	63.10	peak	100	138	TX

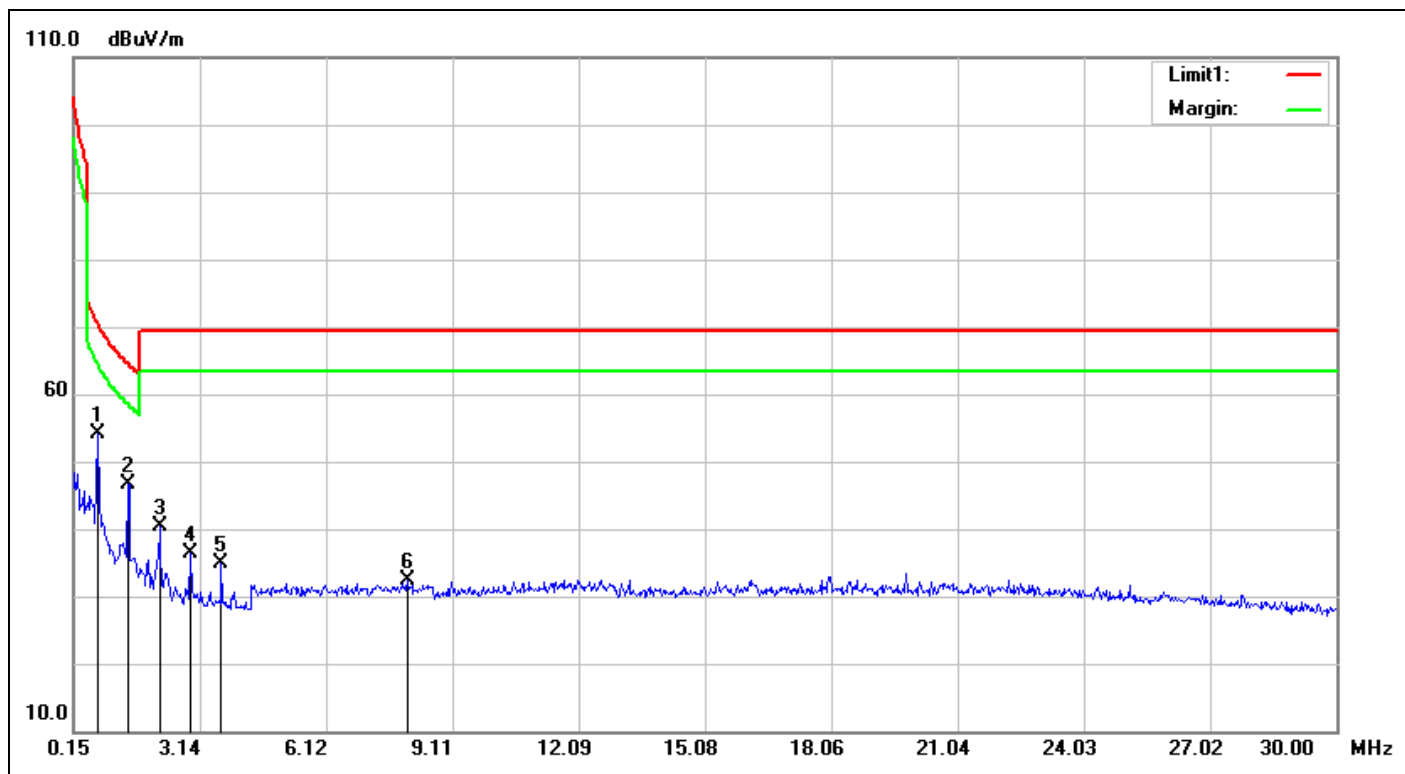
Spurious Emissions, TX Mode, 9K-30M



TUV Rheinland Taiwan Ltd.

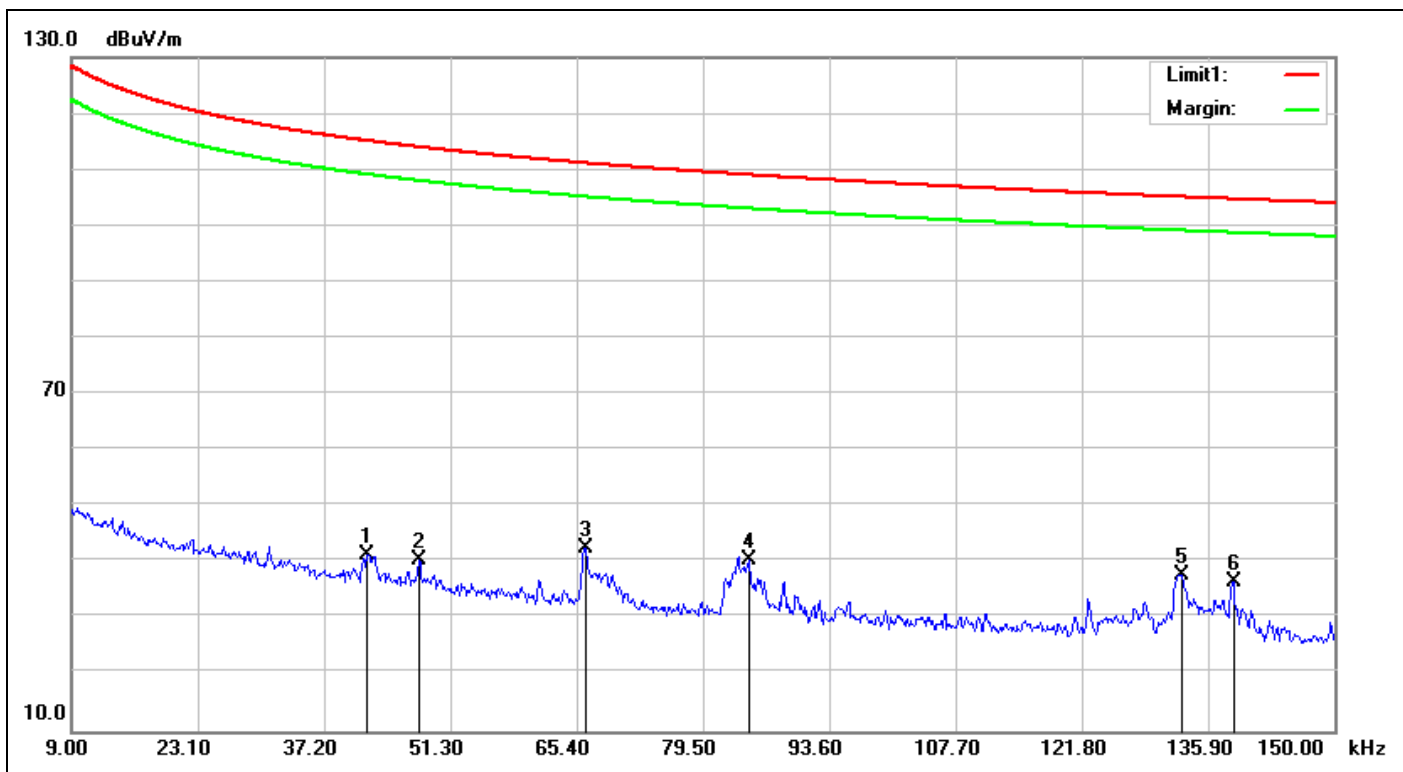
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC2.8_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2018/8/27 09:59:35
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%):	25.4(°C)/56%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	921.3875M-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.7171	18.66	35.57	54.23	70.50	-16.27	QP	100	255	
2	1.4335	18.65	27.92	46.57	64.50	-17.93	QP	100	272	
3	2.1798	18.59	21.78	40.37	69.50	-29.13	QP	100	272	
4	2.8962	18.53	17.81	36.34	69.50	-33.16	QP	100	272	
5	3.6424	18.83	16.07	34.90	69.50	-34.60	QP	100	272	
6	8.0304	20.06	12.25	32.31	69.50	-37.19	QP	100	42	



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC2.8_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2018/8/27 09:56:58
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%)	25.4(°C)/56%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	921.3875M-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0419	19.08	22.30	41.38	115.15	-73.77	QP	100	269	
2	0.0477	18.97	21.48	40.45	114.02	-73.57	QP	100	209	
3	0.0663	18.72	23.82	42.54	111.16	-68.62	QP	100	275	
4	0.0847	18.50	22.03	40.53	109.04	-68.51	QP	100	232	
5	0.1329	18.35	19.43	37.78	105.13	-67.35	QP	100	269	
6	0.1387	18.35	18.17	36.52	104.76	-68.24	QP	100	262	

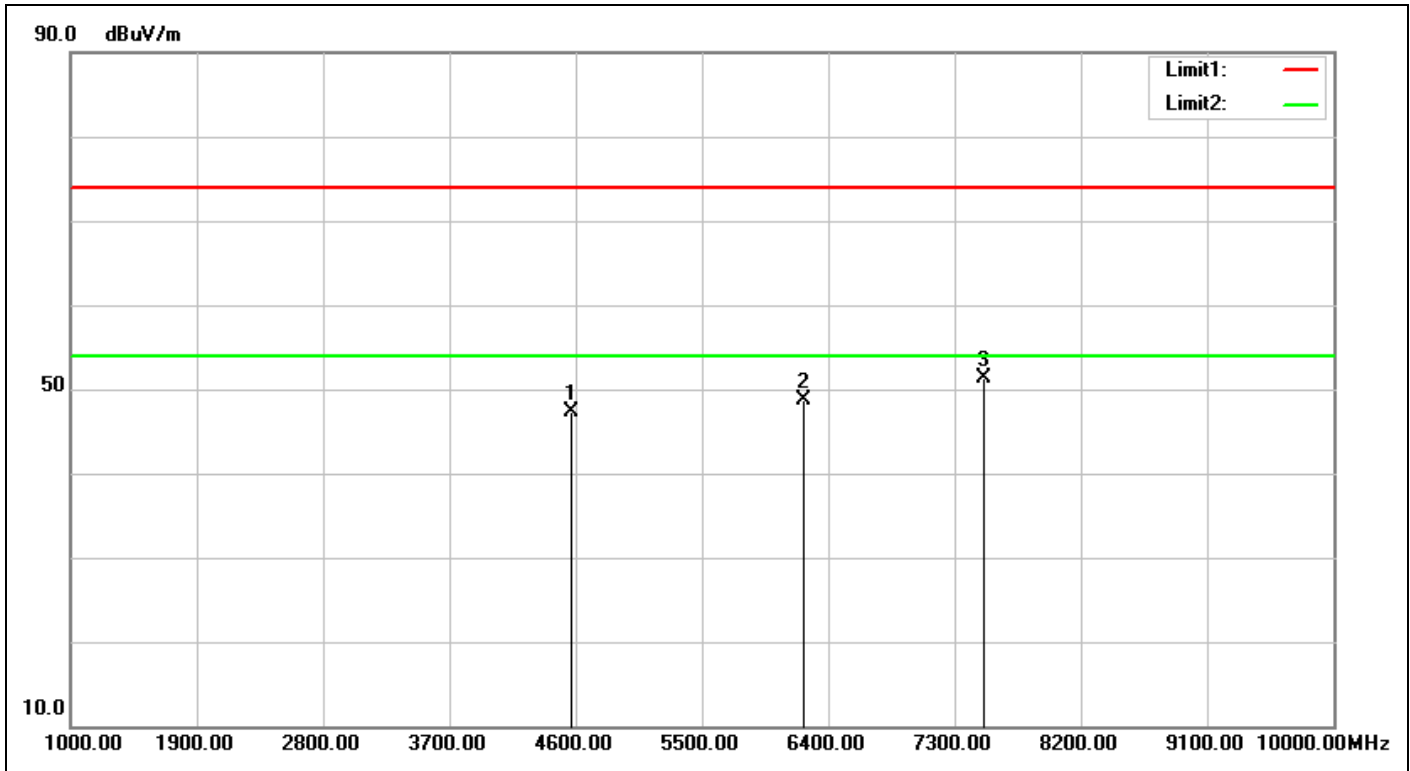
Spurious Emissions, RX Mode, 1-10G



TUV Rheinland Taiwan Ltd.

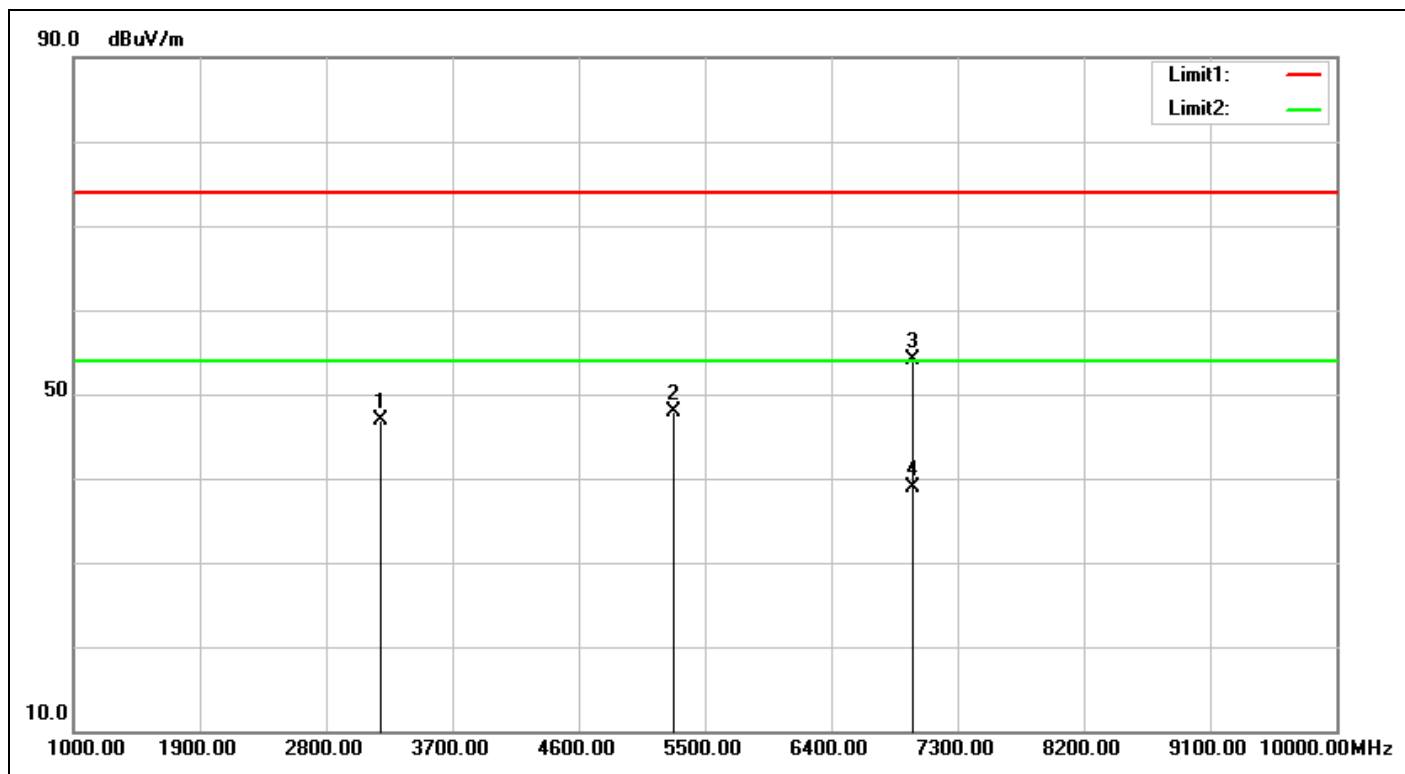
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/8/27 11:18:41
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%)	25.4(°C)/56%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	921.3875M-RX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4573.000	-3.83	51.11	47.28	74.00	-26.72	peak	100	98	
2	6229.000	3.26	45.48	48.74	74.00	-25.26	peak	100	303	
3	7507.000	4.88	46.42	51.30	74.00	-22.70	peak	100	160	



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/8/27 11:19:33
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%):	25.4(°C)/56%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	921.3875M-RX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	3187.000	-7.03	53.93	46.90	74.00	-27.10	peak	100	8	
2	5275.000	-1.89	49.71	47.82	74.00	-26.18	peak	100	316	
3	6985.000	3.75	50.31	54.06	74.00	-19.94	peak	100	214	
4	6985.000	3.75	35.15	38.90	54.00	-15.10	AVG	100	214	

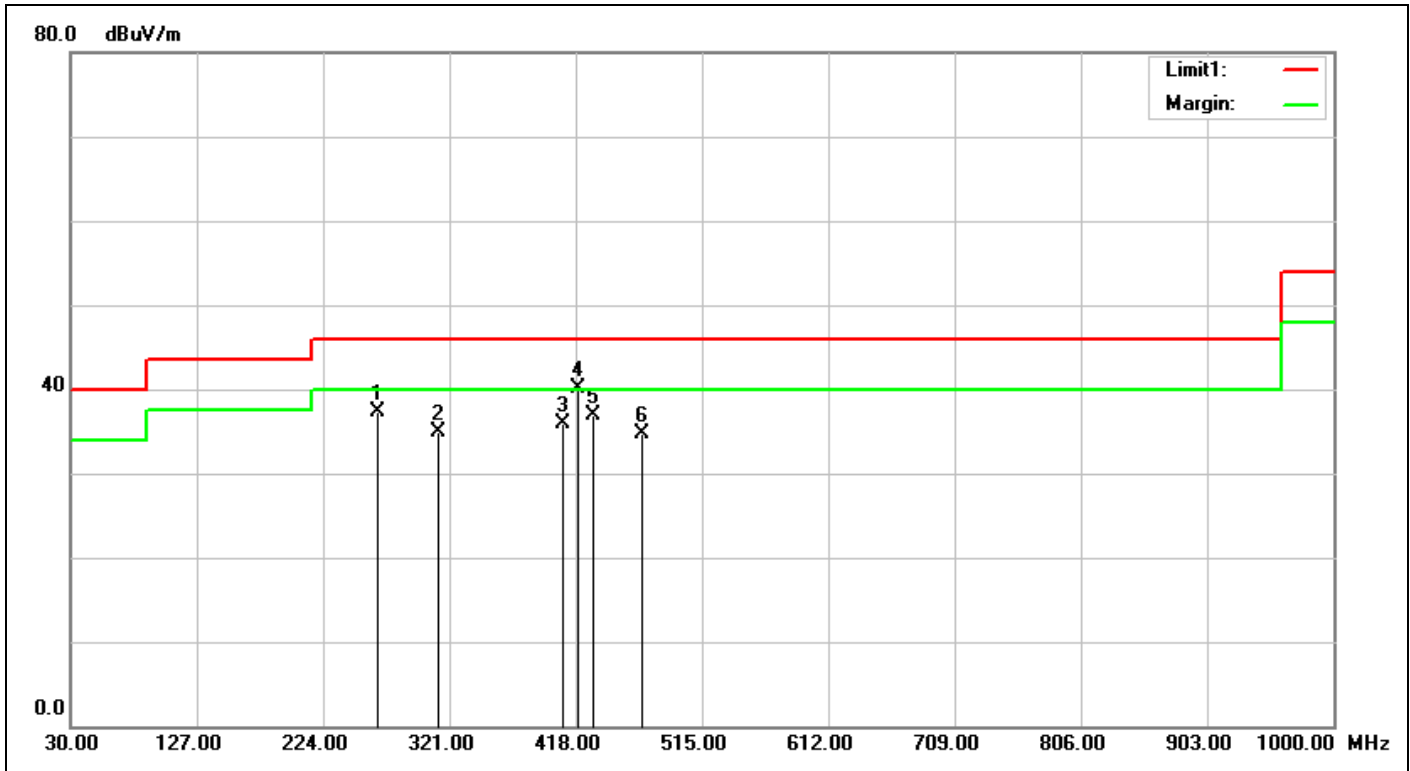
Spurious Emissions, RX Mode, 30M-1G



TUV Rheinland Taiwan Ltd.

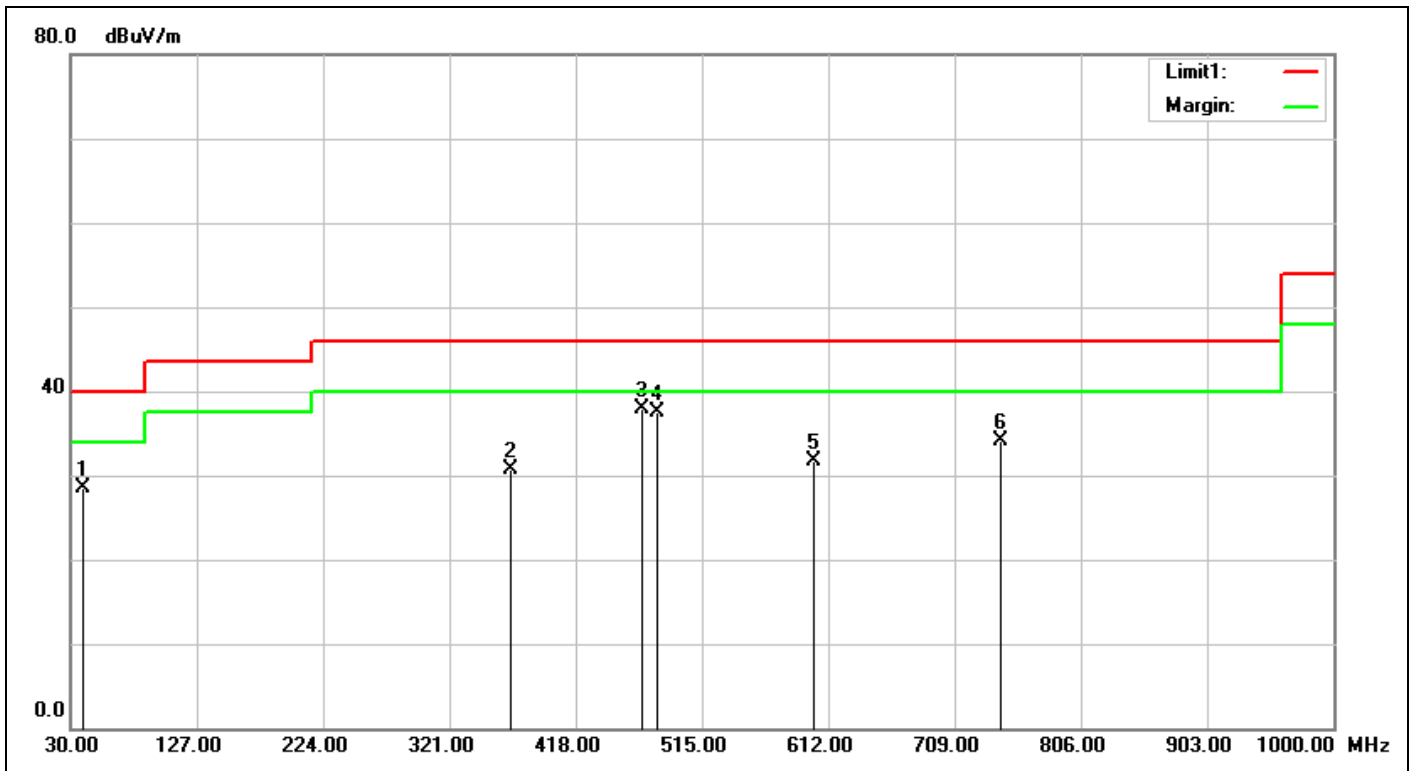
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/8/27 09:26:22
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%):	25.4(°C)/56%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	921.3875M-RX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	265.7100	-6.70	43.93	37.23	46.00	-8.77	QP	100	226	
2	312.2700	-5.79	40.73	34.94	46.00	-11.06	QP	100	242	
3	408.3000	-3.69	39.58	35.89	46.00	-10.11	QP	100	242	
4	419.9400	-3.59	43.60	40.01	46.00	-5.99	QP	100	242	
5	431.5800	-3.48	40.31	36.83	46.00	-9.17	QP	100	242	
6	468.4400	-2.96	37.74	34.78	46.00	-11.22	QP	100	6	



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/8/27 09:27:15
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%):	25.4(°C)/56%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	921.3875M-RX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	39.7000	-6.94	35.43	28.49	40.00	-11.51	QP	100	43	
2	368.5300	-4.38	35.03	30.65	46.00	-15.35	QP	100	230	
3	468.4400	-2.96	40.87	37.91	46.00	-8.09	QP	100	145	
4	480.0800	-2.71	40.24	37.53	46.00	-8.47	QP	100	138	
5	600.3600	-0.87	32.53	31.66	46.00	-14.34	QP	100	177	
6	743.9200	1.36	32.73	34.09	46.00	-11.91	QP	100	345	

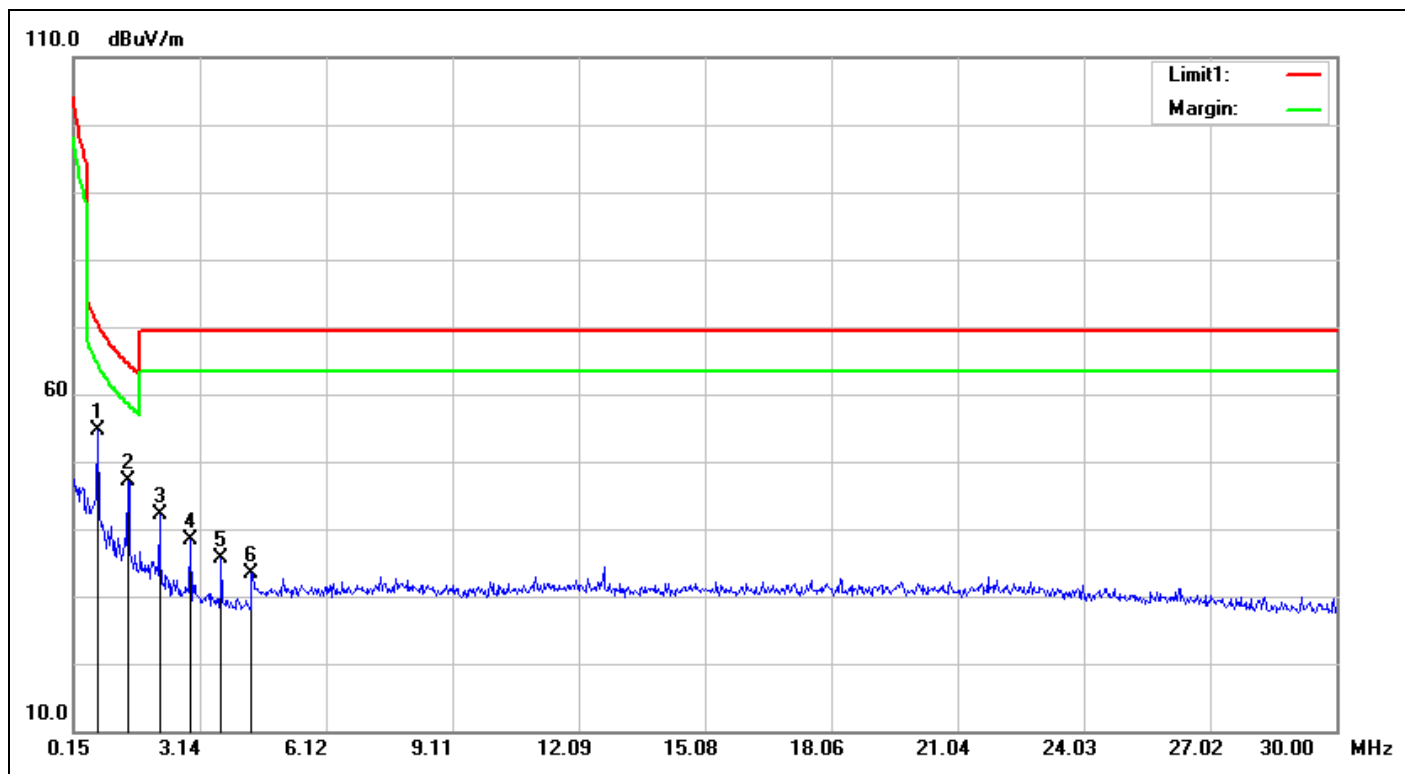
Spurious Emissions, RX Mode, 9K-30M



TUV Rheinland Taiwan Ltd.

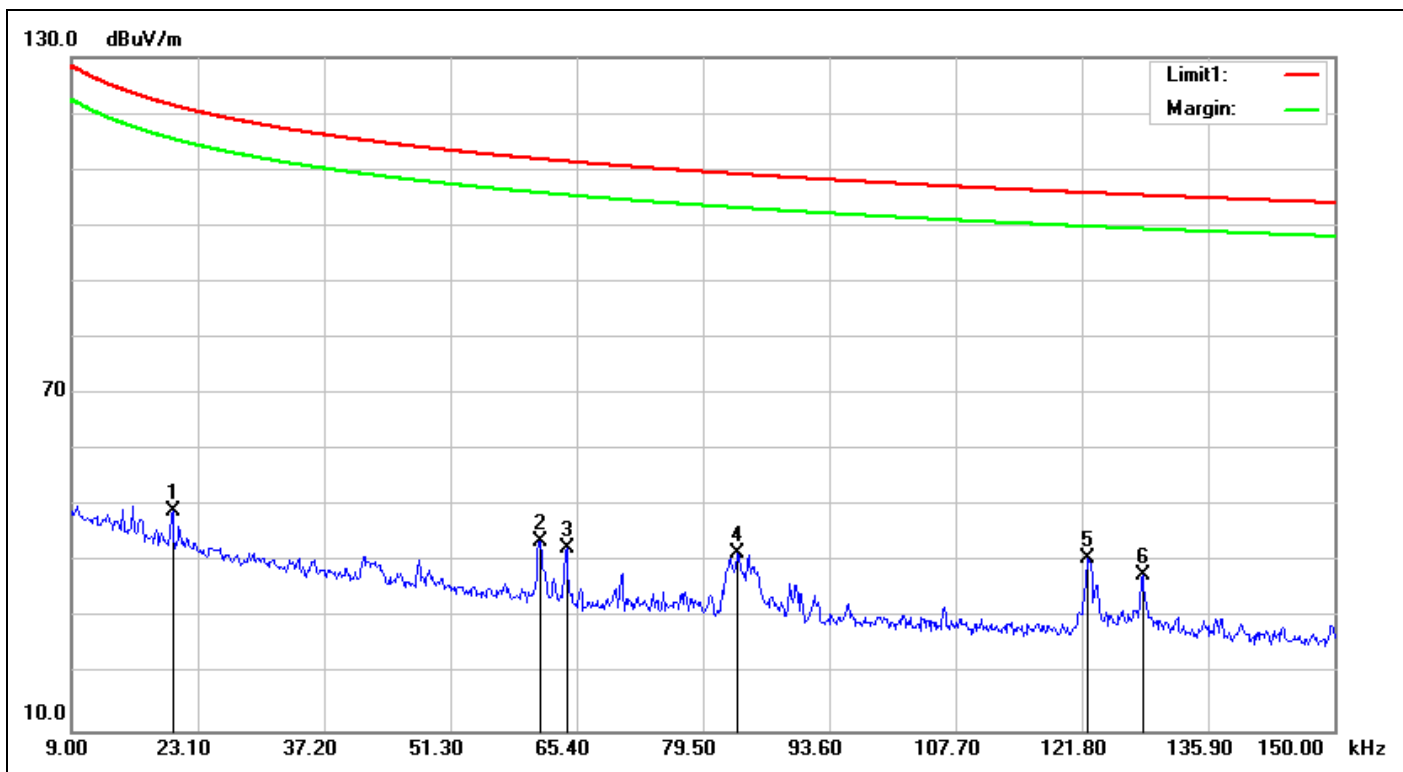
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC2.8_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2018/8/27 10:00:28
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%):	25.4(°C)/56%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	921.3875M-RX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.7172	18.66	35.86	54.52	70.50	-15.98	QP	100	272	
2	1.4336	18.65	28.49	47.14	64.50	-17.36	QP	100	272	
3	2.1798	18.59	23.50	42.09	69.50	-27.41	QP	100	272	
4	2.9261	18.53	19.81	38.34	69.50	-31.16	QP	100	269	
5	3.6425	18.83	16.76	35.59	69.50	-33.91	QP	100	272	
6	4.3589	19.17	14.27	33.44	69.50	-36.06	QP	100	272	



Service No.:	114080238	Test Distance:	3m
Test Standard:	NCC2.8_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2018/8/27 09:57:51
Applicant:	GloabalSat	Test Rating:	DC 5V
Product:	Sigfox Tracker	Temp.(°C)/Hum.(%)	25.4(°C)/56%
Model No.:	ST-100A	Test Engineer:	Amy Hsu
Test Mode:	921.3875M-RX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0203	18.93	30.12	49.05	121.44	-72.39	QP	100	260	
2	0.0613	18.78	24.89	43.67	111.84	-68.17	QP	100	267	
3	0.0643	18.75	23.72	42.47	111.43	-68.96	QP	100	251	
4	0.0833	18.52	23.13	41.65	109.18	-67.53	QP	100	260	
5	0.1225	18.34	22.44	40.78	105.83	-65.05	QP	100	260	
6	0.1286	18.34	19.49	37.83	105.41	-67.58	QP	100	251	

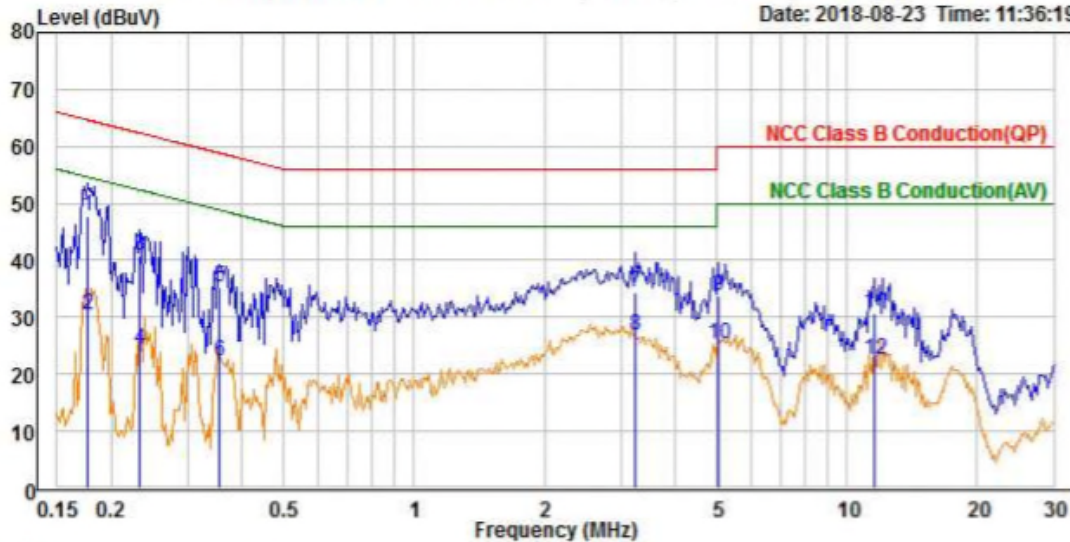
Spurious Emissions, Main



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\Gloabalsat\114080238(ST-100A)\114080238(ST-100U)_00005.EMI

Date: 2018-08-23 Time: 11:36:19



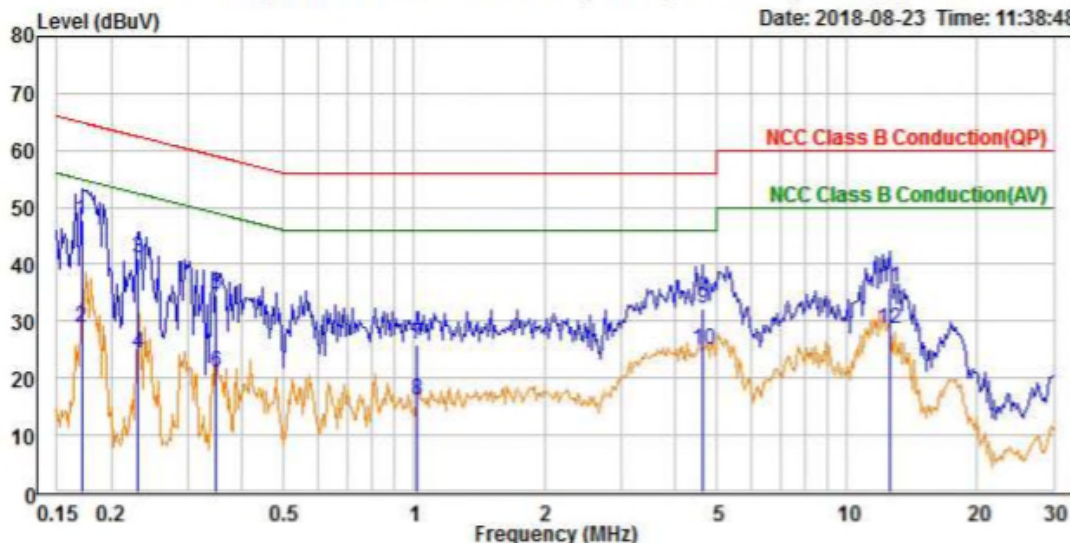
Trace: 1

Site : Conduction room
Condition : NCC Class B Conduction(QP) line1
Test Engineer: Amy Hsu
Applicant : Gloabalsat
Product : Sigfox Tracker
Model No. : ST-100A
Test Rating : 110Vac/60Hz
Tmp/Hum : 21 °C / 47 %
Memo :

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.176	38.08	9.68	47.76	64.68	-16.92	QP
2	0.176	20.68	9.68	30.36	54.68	-24.32	Average
3	0.232	31.12	9.68	40.80	62.37	-21.57	QP
4	0.232	14.51	9.68	24.19	52.37	-28.18	Average
5	0.356	25.60	9.69	35.29	58.82	-23.53	QP
6	0.356	12.49	9.69	22.18	48.82	-26.64	Average
7	3.237	24.61	9.74	34.35	56.00	-21.65	QP
8	3.237	17.03	9.74	26.77	46.00	-19.23	Average
9	5.062	24.02	9.76	33.78	60.00	-26.22	QP
10	5.062	15.54	9.76	25.30	50.00	-24.70	Average
11	11.553	20.83	9.84	30.67	60.00	-29.33	QP
12	11.553	12.62	9.84	22.46	50.00	-27.54	Average

File: C:\EMC\Report\2018\Gloabalsat\114080238(ST-100A)\114080238(ST-100U)_00007.EMI

Date: 2018-08-23 Time: 11:38:48



Trace: 1
Site : Conduction room
Condition : NCC Class B Conduction(QP) neutral
Test Engineer: Amy Hsu
Applicant : Gloabalsat
Product : Sigfox Tracker
Model No. : ST-100A
Test Rating : 110Vac/60Hz
Tmp/Hum : 21 °C / 47 %
Memo :

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.171	38.10	9.68	47.78	64.93	-17.15	QP
2	0.171	19.25	9.68	28.93	54.93	-26.00	Average
3	0.230	31.39	9.68	41.07	62.45	-21.38	QP
4	0.230	14.53	9.68	24.21	52.45	-28.24	Average
5	0.349	25.11	9.67	34.78	58.98	-24.20	QP
6	0.349	11.29	9.67	20.96	48.98	-28.02	Average
7	1.012	16.19	9.70	25.89	56.00	-30.11	QP
8	1.012	6.48	9.70	16.18	46.00	-29.82	Average
9	4.629	22.42	9.76	32.18	56.00	-23.82	QP
10	4.629	15.28	9.76	25.04	46.00	-20.96	Average
11	12.509	26.17	9.86	36.03	60.00	-23.97	QP
12	12.509	18.82	9.86	28.68	50.00	-21.32	Average