

Test Report No.50066147 001

Appendix D: Radiated Emission Data

(File: 50066147AppendixD)

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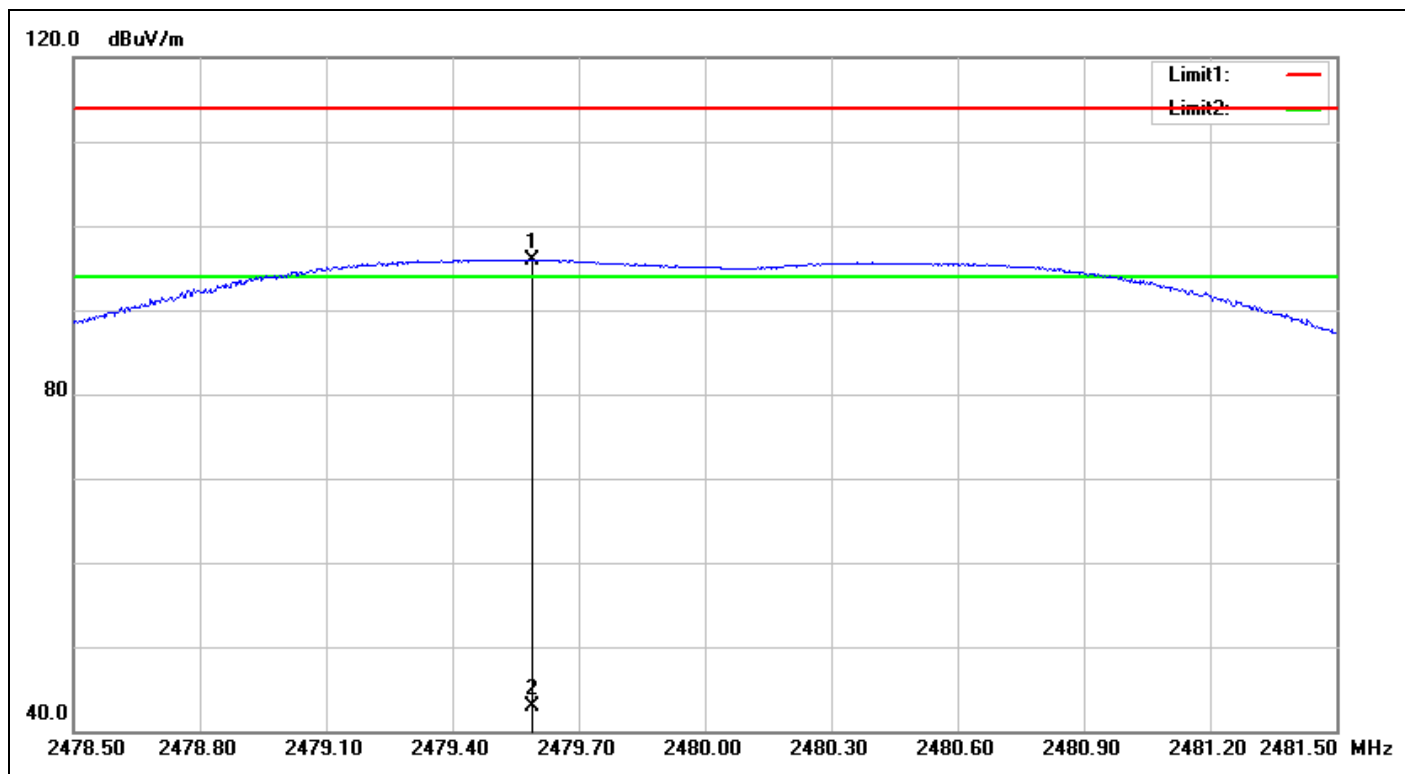
Radiated Emissions, Fundamental and Band Edges



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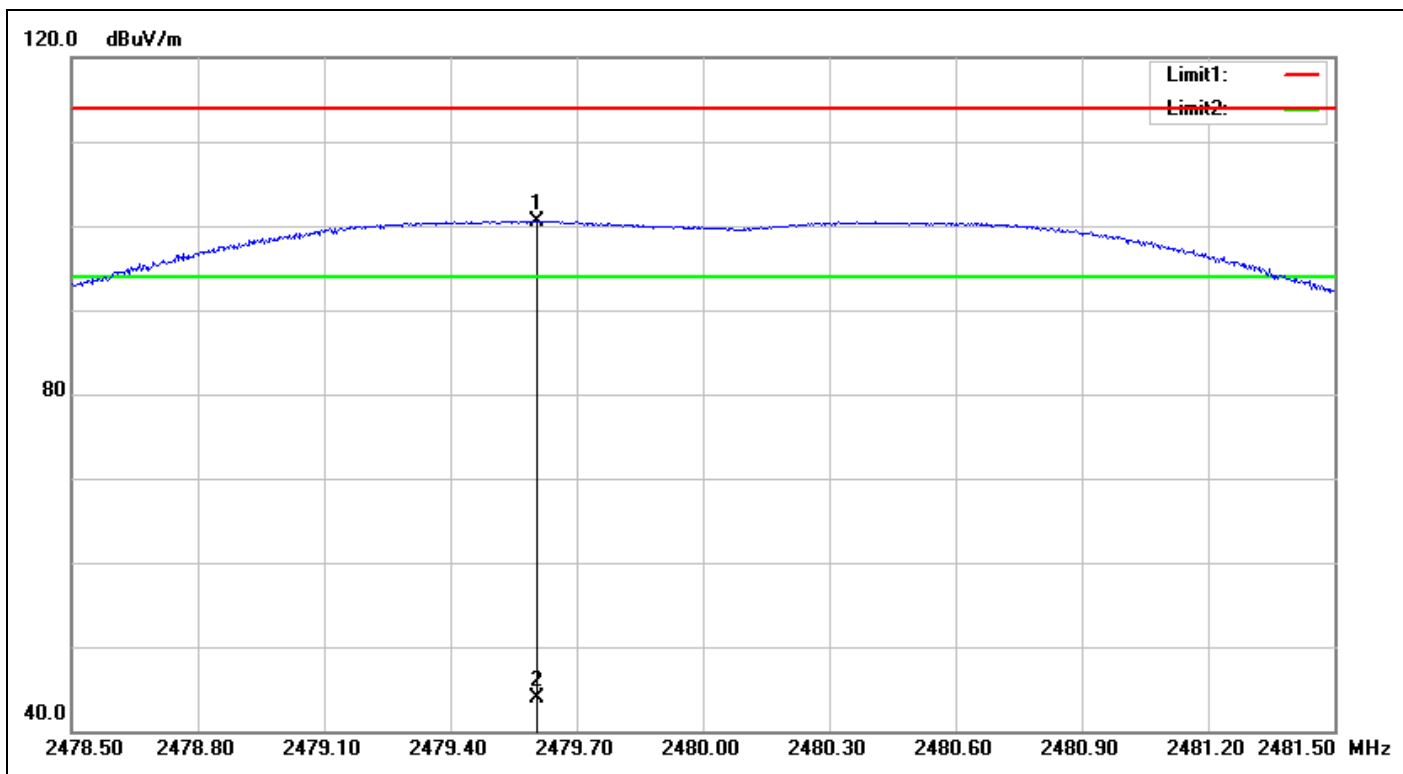
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Service No.:	114058028	Test Distance:	3m
Test Standard:	NCC_3.10.2_TX_PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2016/12/1 20:36:16
Applicant:	Hong Long	Test Rating:	DC 3.7V
Product:	Quickly Ball / 反應球	Temp.(°C)/Hum.(%):	22.7(°C)/67%
Model No.:	Q-Ball	Test Engineer:	George Yang
Test Mode:	Fundamental		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2479.589	-3.84	99.80	95.96	114.00	-18.04	peak		0	
2	2479.589	-3.84	46.79	42.95	94.00	-51.05	AVG		0	

Remark: Duty Factor = -17.72, thus the average result would be 78.24dBuV/m.



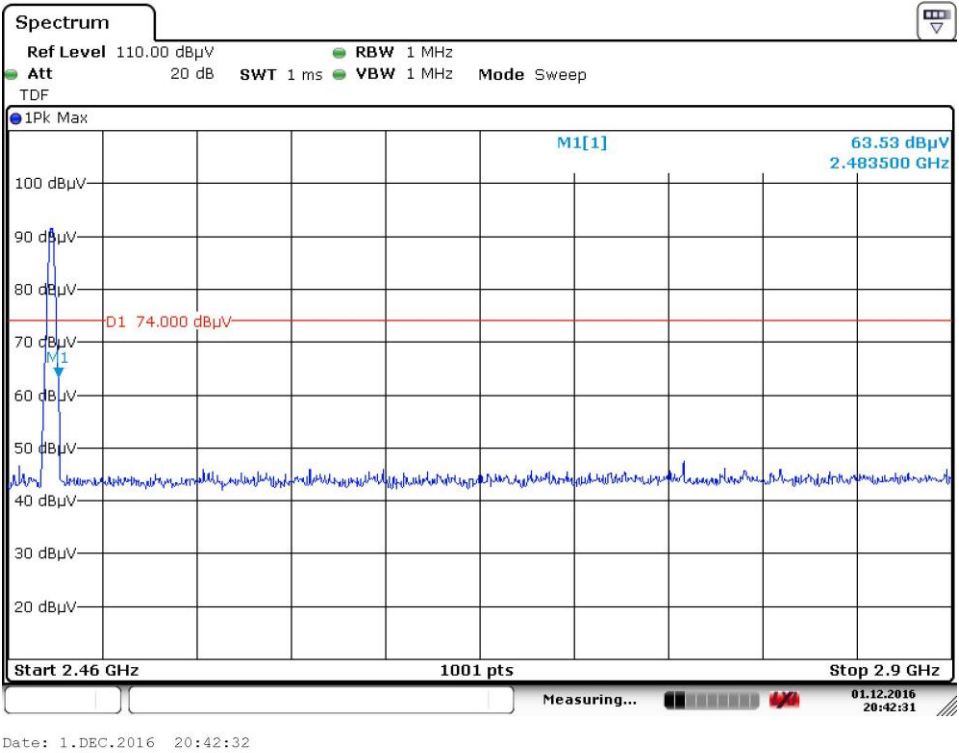
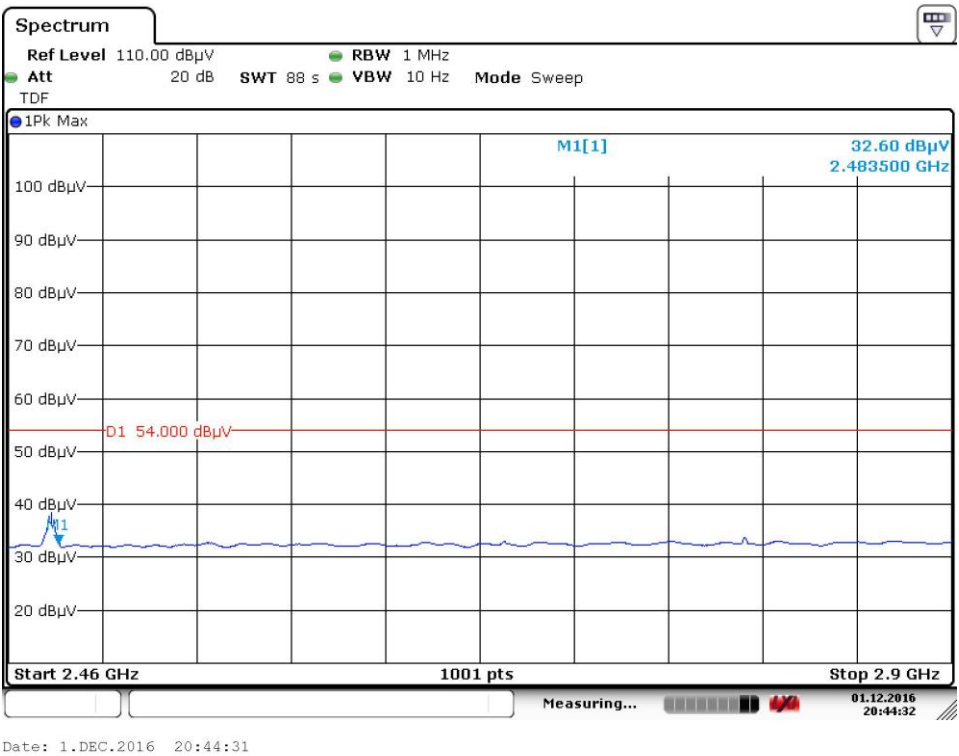
Service No.:	114058028	Test Distance:	3m
Test Standard:	NCC_3.10.2_TX_PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2016/12/1 20:37:45
Applicant:	Hong Long	Test Rating:	DC 3.7V
Product:	Quickly Ball / 反應球	Temp.(°C)/Hum.(%)	22.7(°C)/67%
Model No.:	Q-Ball	Test Engineer:	George Yang
Test Mode:	Fundamental		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	2479.607	-3.84	104.40	100.56	114.00	-13.44	peak			
2	2479.607	-3.84	47.70	43.86	94.00	-50.14	AVG			

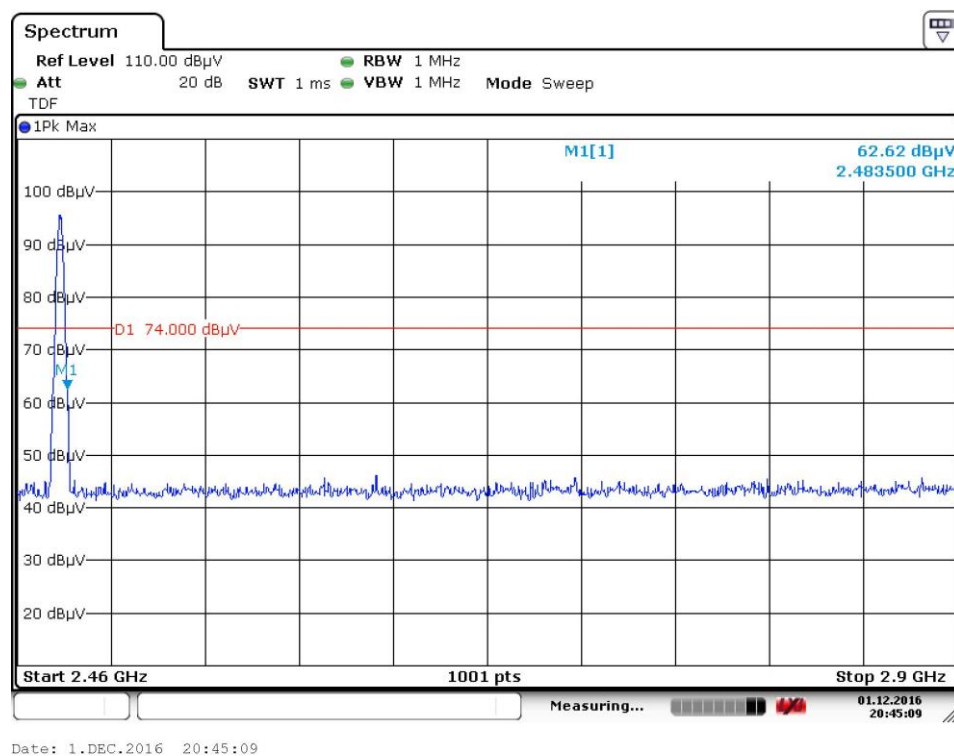
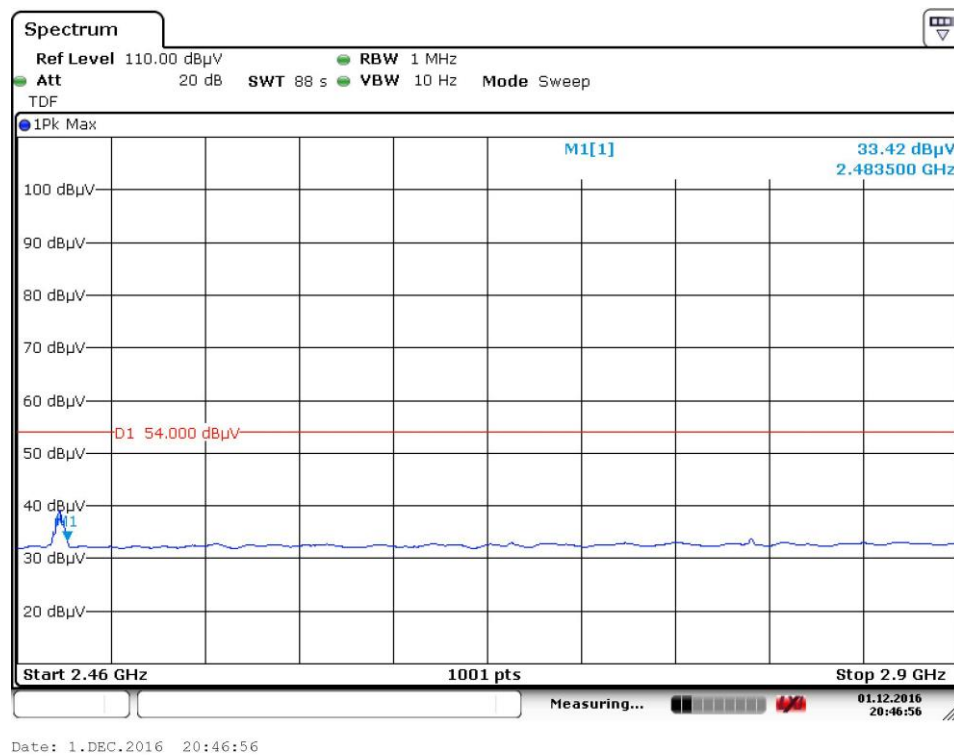
Remark: Duty Factor = -17.72, thus the average result would be 82.84dBuV/m.

Radiated Bandedge

(Hor)



(Ver)



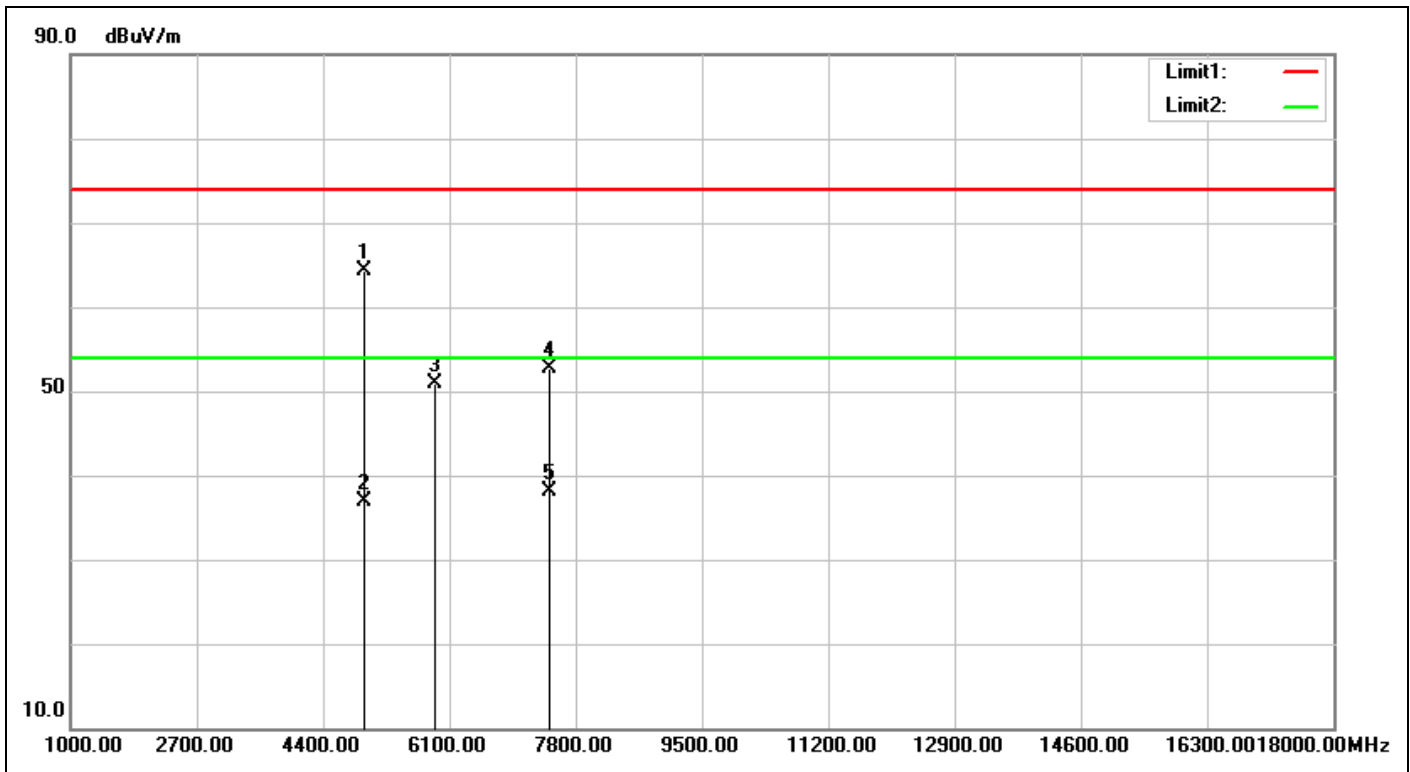
Spurious Emissions, TX Mode, 1-18G



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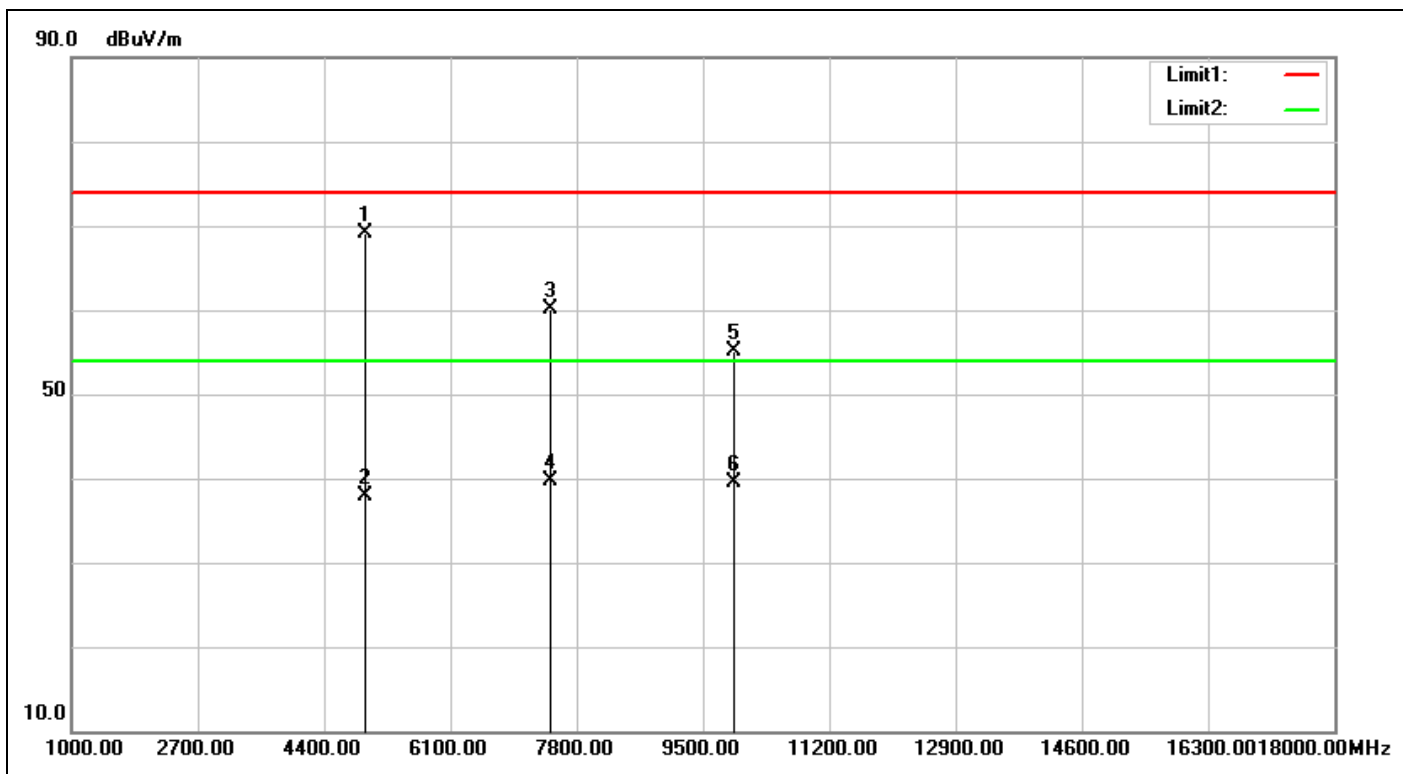
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Service No.:	114058028	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2016/12/1 20:01:00
Applicant:	Hong Long	Test Rating:	DC 3.7V
Product:	Quickly Ball / 反應球	Temp.(°C)/Hum.(%):	22.4(°C)/64%
Model No.:	Q-Ball	Test Engineer:	George Yang
Test Mode:	2480-TX		
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	-2.30	66.70	64.40	74.00	-9.60	peak	100	67	
2	4960.000	-2.30	39.13	36.83	54.00	-17.17	AVG	100	67	
3	5896.000	3.20	47.63	50.83	74.00	-23.17	peak	100	283	
4	7440.000	6.24	46.52	52.76	74.00	-21.24	peak	100	58	
5	7440.000	6.24	31.83	38.07	54.00	-15.93	AVG	100	58	



Service No.:	114058028	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2016/12/1 20:02:02
Applicant:	Hong Long	Test Rating:	DC 3.7V
Product:	Quickly Ball / 反應球	Temp.(°C)/Hum.(%)	22.4(°C)/64%
Model No.:	Q-Ball	Test Engineer:	George Yang
Test Mode:	2480-TX		
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	-2.30	71.43	69.13	74.00	-4.87	peak	100	92	
2	4960.000	-2.30	40.22	37.92	54.00	-16.08	AVG	100	92	
3	7440.000	6.24	53.84	60.08	74.00	-13.92	peak	100	343	
4	7440.000	6.24	33.42	39.66	54.00	-14.34	AVG	100	343	
5	9920.000	5.65	49.53	55.18	74.00	-18.82	peak	100	252	
6	9920.000	5.65	33.85	39.50	54.00	-14.50	AVG	100	252	

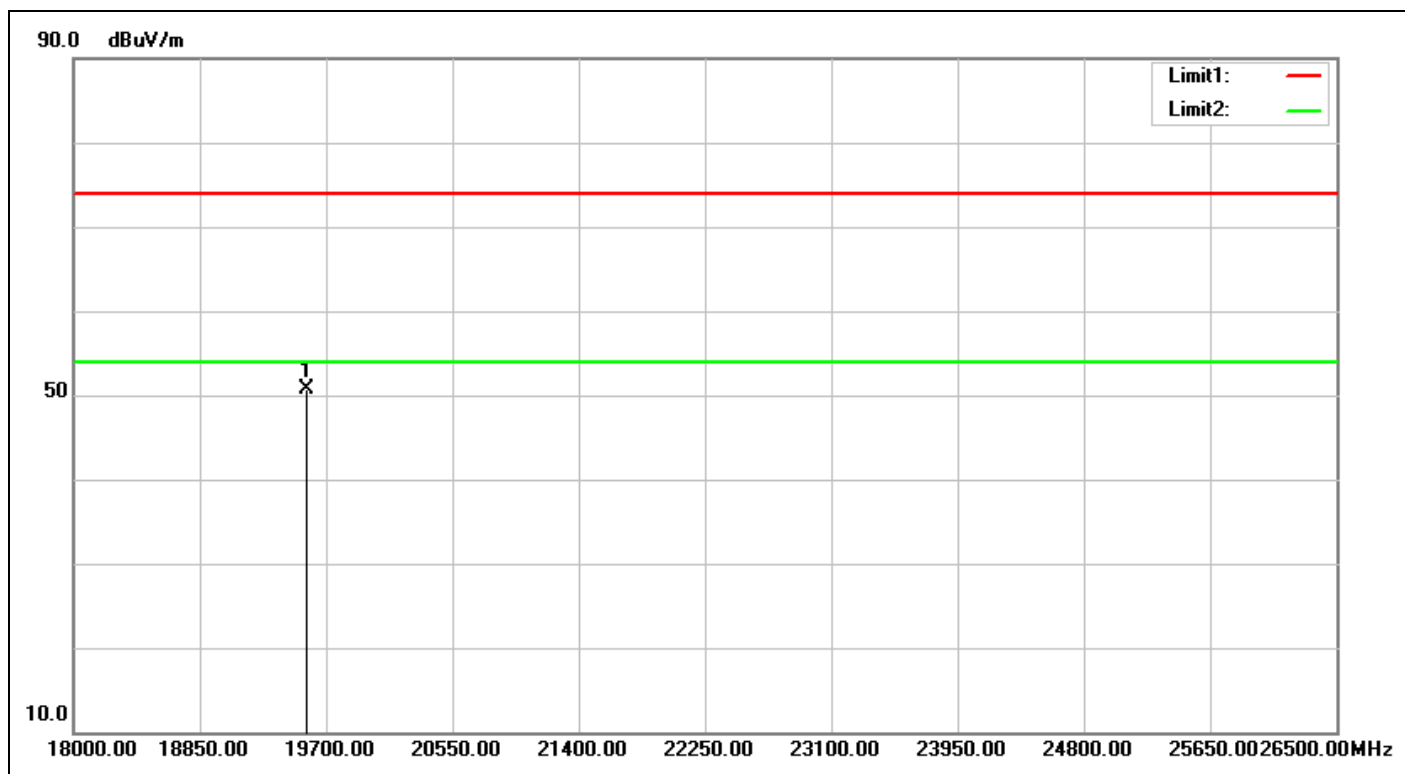
Spurious Emissions, TX Mode, 18-26G



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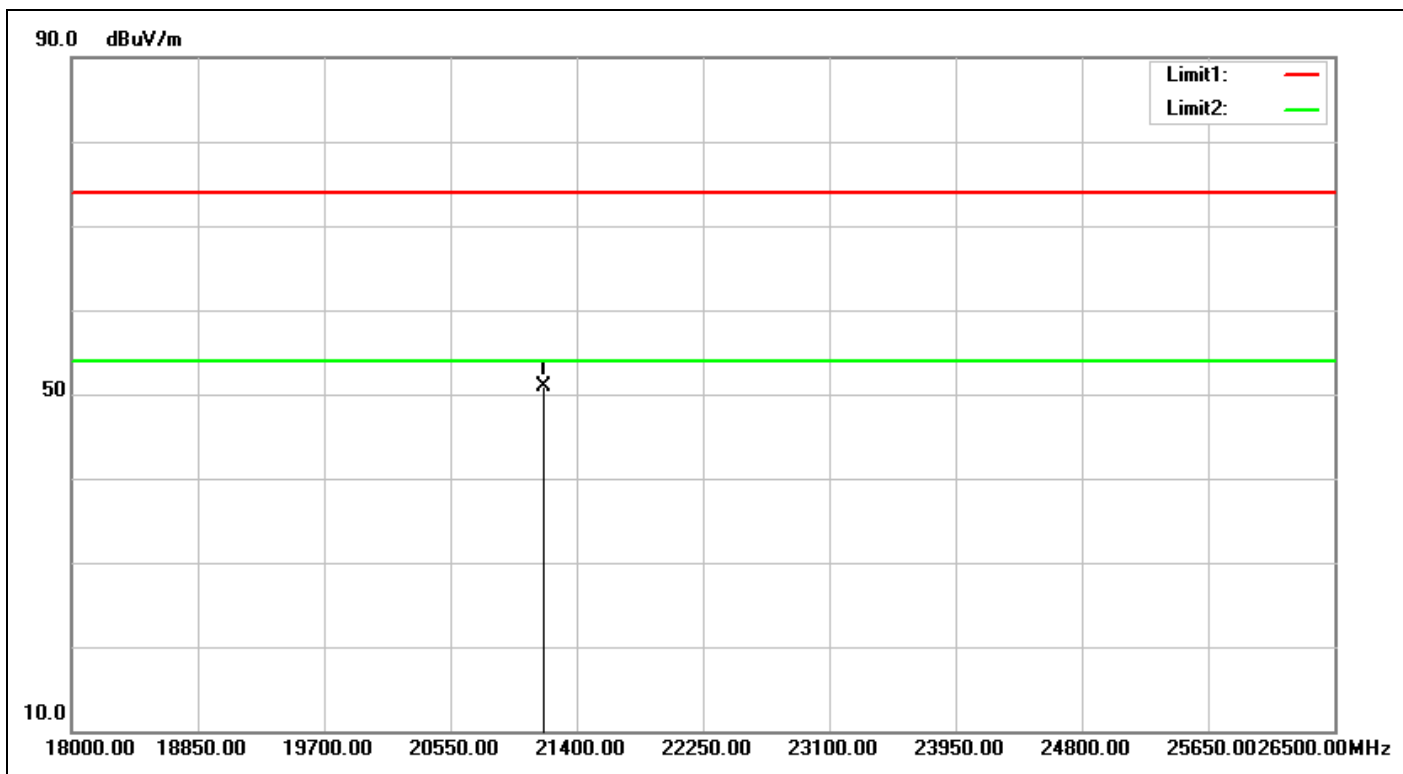
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Service No.:	114058028	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2016/12/7 13:28:23
Applicant:	Hong Long	Test Rating:	DC 3.7V
Product:	Quickly Ball / 反應球	Temp.(°C)/Hum.(%):	22.7(°C)/67%
Model No.:	Q-Ball	Test Engineer:	George Yang
Test Mode:	2480-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	19572.500	31.26	19.48	50.74	74.00	-23.26	peak		0	



Service No.:	114058028	Test Distance:	3m
Test Standard:	NCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2016/12/7 13:28:38
Applicant:	Hong Long	Test Rating:	DC 3.7V
Product:	Quickly Ball / 反應球	Temp.(°C)/Hum.(%):	22.7(°C)/67%
Model No.:	Q-Ball	Test Engineer:	George Yang
Test Mode:	2480-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21179.000	32.18	18.64	50.82	74.00	-23.18	peak			

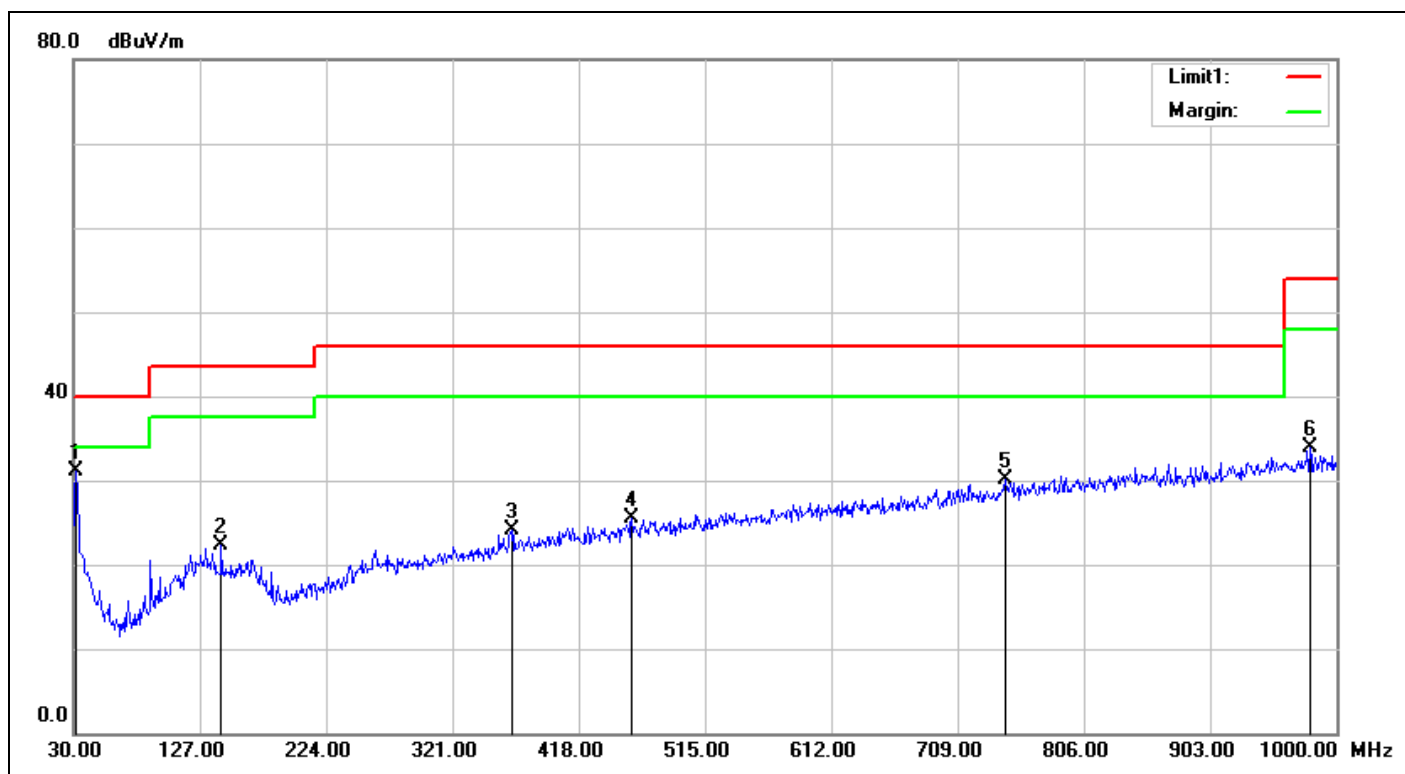
Spurious Emissions, TX Mode, 30M-1G



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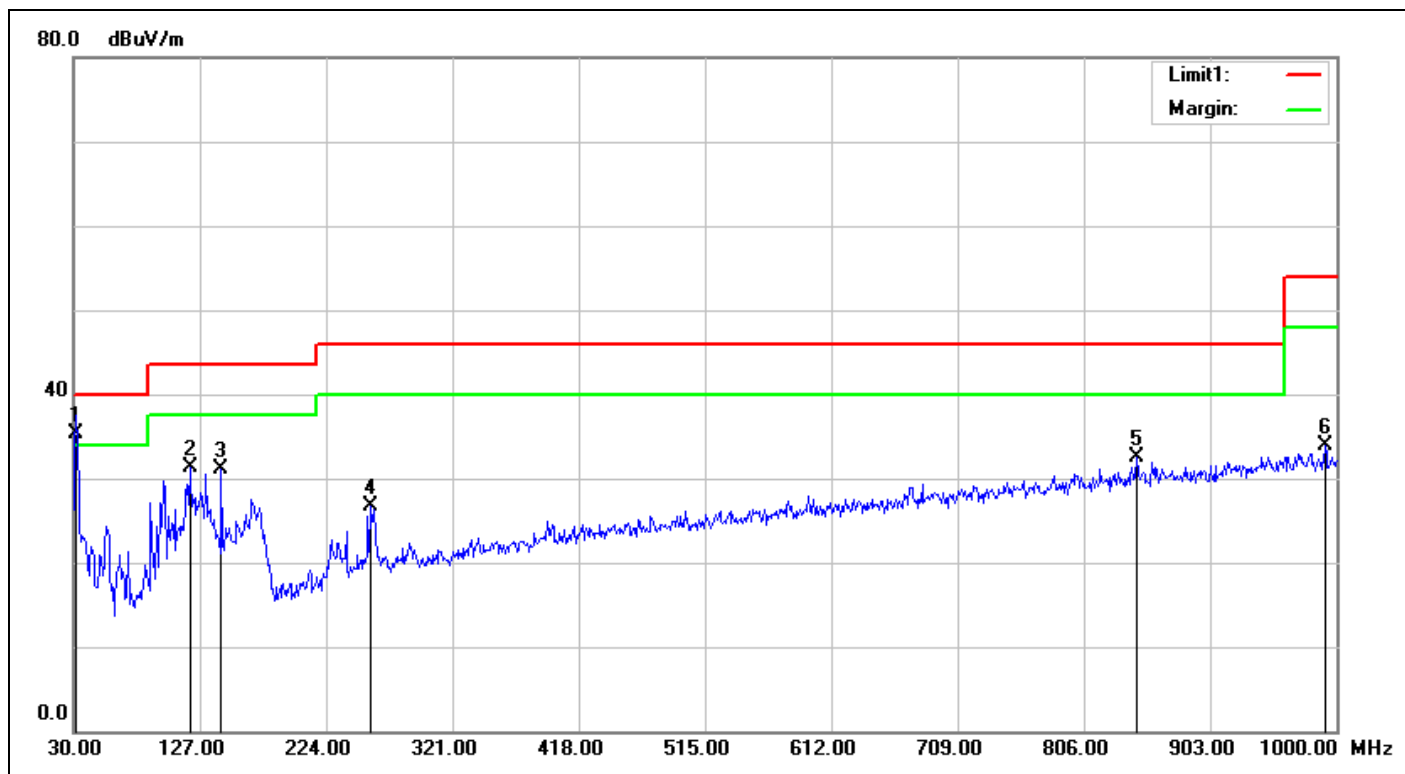
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Tel: +886-2172-7000 fax: +886-2528-0018



Service No.:	114058028	Test Distance:	3m
Test Standard:	NCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2016/12/1 18:55:13
Applicant:	Hong Long	Test Rating:	DC 3.7V
Product:	Quickly Ball / 反應球	Temp.(°C)/Hum.(%)	22.4(°C)/64%
Model No.:	Q-Ball	Test Engineer:	George Yang
Test Mode:	2480-TX		
Remark:			

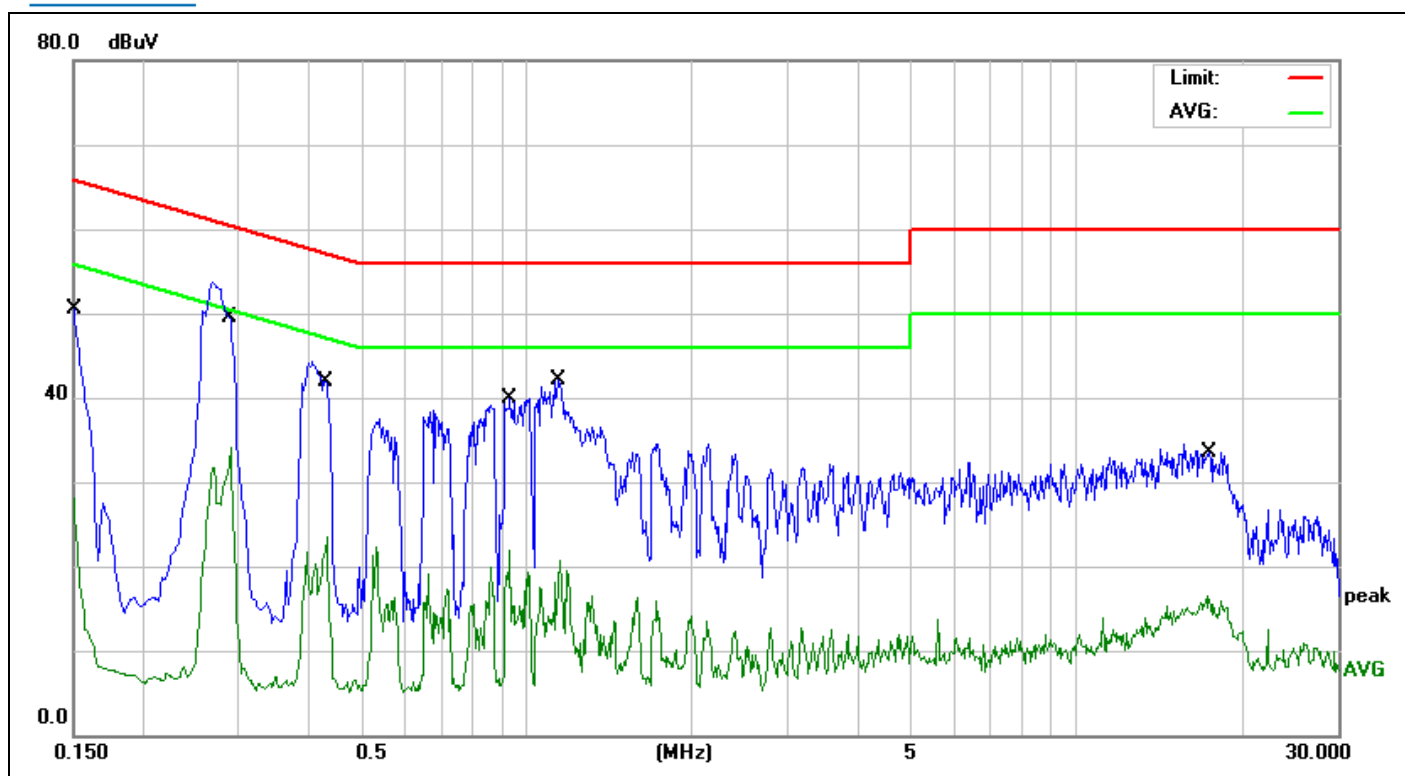
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	31.9400	-1.18	32.33	31.15	40.00	-8.85	QP	100	94	
2	143.4900	-7.14	29.36	22.22	43.50	-21.28	QP	100	127	
3	366.5899	-3.19	27.33	24.14	46.00	-21.86	QP	100	3	
4	458.7400	-1.89	27.38	25.49	46.00	-20.51	QP	100	290	
5	745.8600	2.24	27.80	30.04	46.00	-15.96	QP	100	183	
6	979.6299	5.65	28.21	33.86	54.00	-20.14	QP	100	61	



Service No.:	114058028	Test Distance:	3m
Test Standard:	NCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2016/12/1 18:56:16
Applicant:	Hong Long	Test Rating:	DC 3.7V
Product:	Quickly Ball / 反應球	Temp.(°C)/Hum.(%)	22.4(°C)/64%
Model No.:	Q-Ball	Test Engineer:	George Yang
Test Mode:	2480-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	31.9400	-1.18	36.48	35.30	40.00	-4.70	QP	100	137	
2	119.2400	-7.40	38.65	31.25	43.50	-12.25	QP	100	347	
3	143.4900	-7.14	38.21	31.07	43.50	-12.43	QP	100	286	
4	257.9500	-5.05	31.85	26.80	46.00	-19.20	QP	100	0	
5	846.7400	3.62	28.91	32.53	46.00	-13.47	QP	100	23	
6	991.2700	5.75	28.18	33.93	54.00	-20.07	QP	100	170	

Mains Spurious Emissions



Service No.: 114058028(Q-Ball)

Test Standard: FCC Class B Conduction(QP)

Probe: L1

Test item: Conduction Emission

Test Time: 2016/12/2 09:42:56

Applicant: Hong Long

Test Rating: AC 120V/60Hz

Product: Quickly Ball / 反應球

Temp.(°C)/Hum.(%): 22(°C)/53%

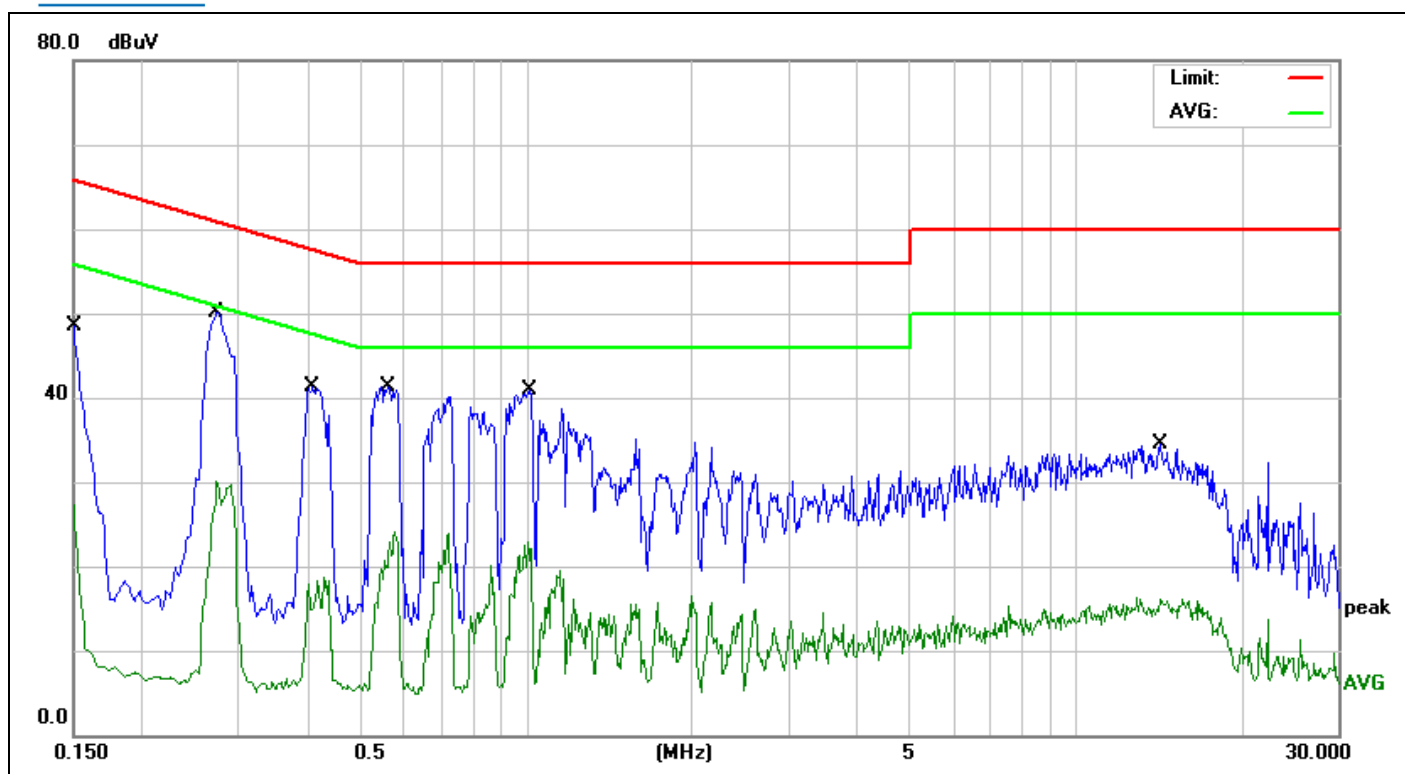
Model No.: Q-Ball

Test Engineer: George Yang

Test Mode: Mains

Remark:

No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Remark
1	0.1500	9.78	36.97	46.75	65.99	-19.24	QP	
2	0.1500	9.78	18.28	28.06	55.99	-27.93	AVG	
3	0.2900	9.75	34.54	44.29	60.52	-16.23	QP	
4	0.2900	9.75	17.42	27.17	50.52	-23.35	AVG	
5	0.4340	9.75	26.06	35.81	57.18	-21.37	QP	
6	0.4340	9.75	8.99	18.74	47.18	-28.44	AVG	
7	0.9340	9.75	27.37	37.12	56.00	-18.88	QP	
8	0.9340	9.75	9.14	18.89	46.00	-27.11	AVG	
9	1.1500	9.75	27.30	37.05	56.00	-18.95	QP	
10	1.1500	9.75	7.08	16.83	46.00	-29.17	AVG	
11	17.3300	9.95	14.78	24.73	60.00	-35.27	QP	
12	17.3300	9.95	3.96	13.91	50.00	-36.09	AVG	



Service No.: 114058028(Q-Ball)

Test Standard: FCC Class B Conduction(QP)

Probe: N

Test item: Conduction Emission

Test Time: 2016/12/2 09:45:25

Applicant: Hong Long

Test Rating: AC 120V/60Hz

Product: Quickly Ball / 反應球

Temp.(°C)/Hum.(%): 22(°C)/53%

Model No.: Q-Ball

Test Engineer: George Yang

Test Mode: Mains

Remark:

No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Remark
1	0.1500	9.73	35.97	45.70	65.99	-20.29	QP	
2	0.1500	9.73	18.30	28.03	55.99	-27.96	AVG	
3	0.2740	9.68	35.48	45.16	60.99	-15.83	QP	
4	0.2740	9.68	16.36	26.04	50.99	-24.95	AVG	
5	0.4100	9.68	26.51	36.19	57.65	-21.46	QP	
6	0.4100	9.68	5.20	14.88	47.65	-32.77	AVG	
7	0.5620	9.69	26.10	35.79	56.00	-20.21	QP	
8	0.5620	9.69	10.65	20.34	46.00	-25.66	AVG	
9	1.0180	9.70	28.68	38.38	56.00	-17.62	QP	
10	1.0180	9.70	11.77	21.47	46.00	-24.53	AVG	
11	14.2780	9.88	15.25	25.13	60.00	-34.87	QP	
12	14.2780	9.88	4.05	13.93	50.00	-36.07	AVG	