

Test Report No.50097227 001

Appendix D: Radiated Spurious Emission Data

(File: 50097227AppendixD)

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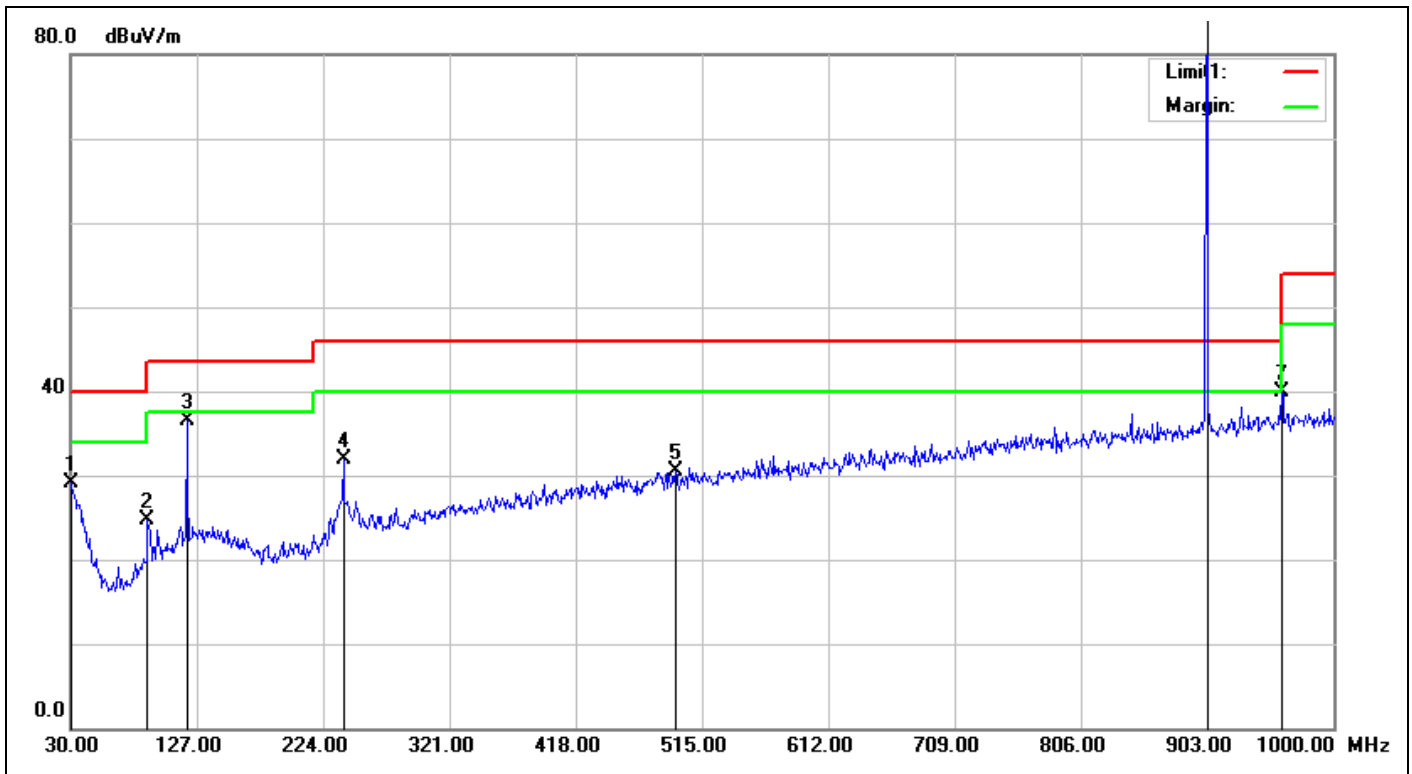
Spurious Emissions, TX Mode, 30M-1G



TUV Taiwan

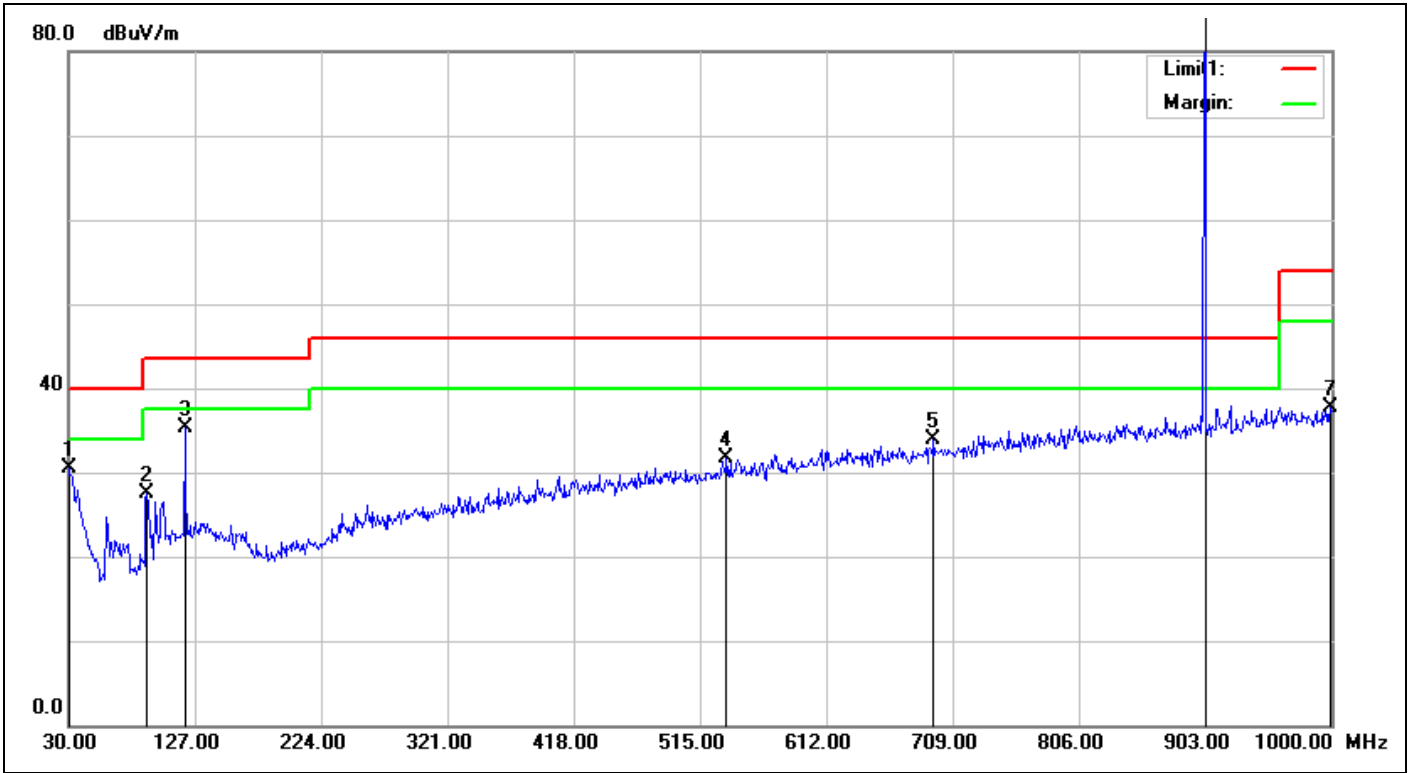
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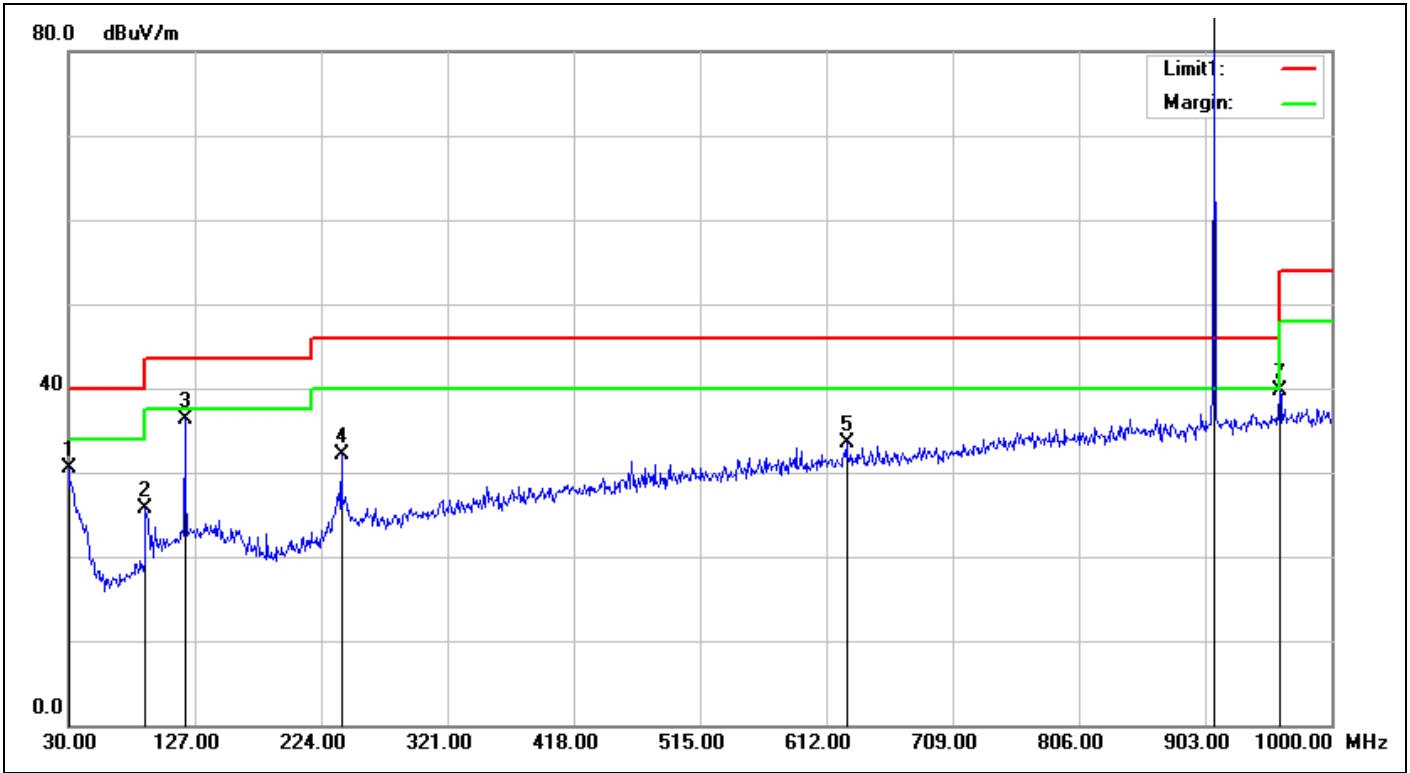
Service No.:	114058583	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/2/17 17:04:54
Applicant:	Liyatech	Test Rating:	DC 5V
Product:	LRM001	Temp.(°C)/Hum.(%):	20.6(°C)/52%
Model No.:	LRM001-915	Test Engineer:	George Yang
Test Mode:	902.3-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	30.9700	-0.62	29.81	29.19	40.00	-10.81	QP	100	155	
2	89.1700	-10.94	35.72	24.78	43.50	-18.72	QP	100	88	
3	119.2400	-7.40	43.85	36.45	43.50	-7.05	QP	100	120	
4	239.5200	-6.73	38.60	31.87	46.00	-14.13	QP	100	266	
5	494.6300	-1.44	31.91	30.47	46.00	-15.53	QP	100	354	
6	902.3000	4.21	99.56	103.77	46.00	57.77	QP	100	147	Fundamental
7	960.2300	5.48	34.46	39.94	54.00	-14.06	QP	100	327	



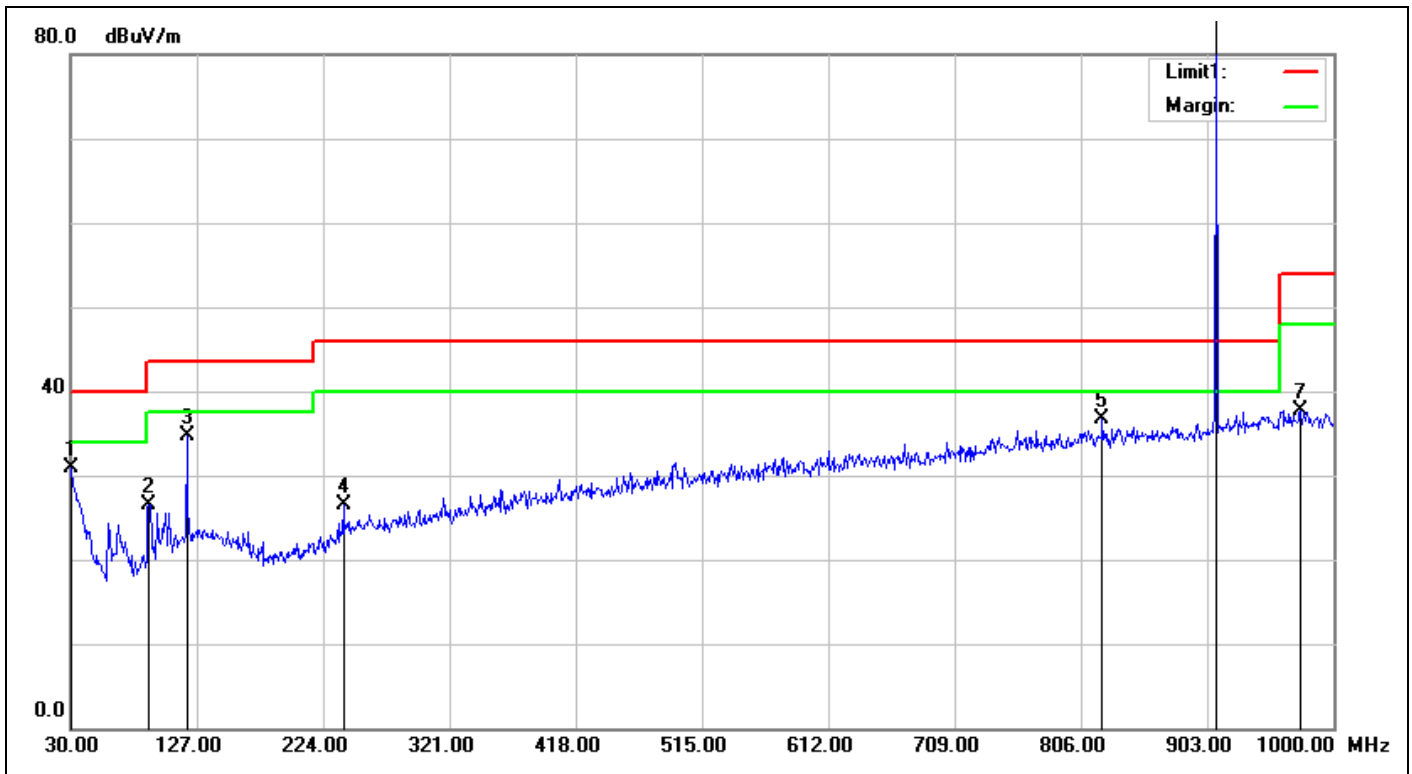
Service No.:	114058583	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/2/17 17:05:57
Applicant:	Liyatech	Test Rating:	DC 5V
Product:	LRM001	Temp.(°C)/Hum.(%):	20.6(°C)/52%
Model No.:	LRM001-915	Test Engineer:	George Yang
Test Mode:	902.3-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	30.0000	-0.07	30.56	30.49	40.00	-9.51	QP	100	52	
2	90.1400	-10.84	38.43	27.59	43.50	-15.91	QP	100	54	
3	119.2400	-7.40	42.79	35.39	43.50	-8.11	QP	100	25	
4	535.3700	-0.96	32.76	31.80	46.00	-14.20	QP	100	216	
5	694.4500	1.01	32.92	33.93	46.00	-12.07	QP	100	211	
6	902.3000	4.21	90.73	94.94	46.00	48.94	QP	100	17	Fundamental
7	999.0300	5.83	31.83	37.66	54.00	-16.34	QP	100	192	



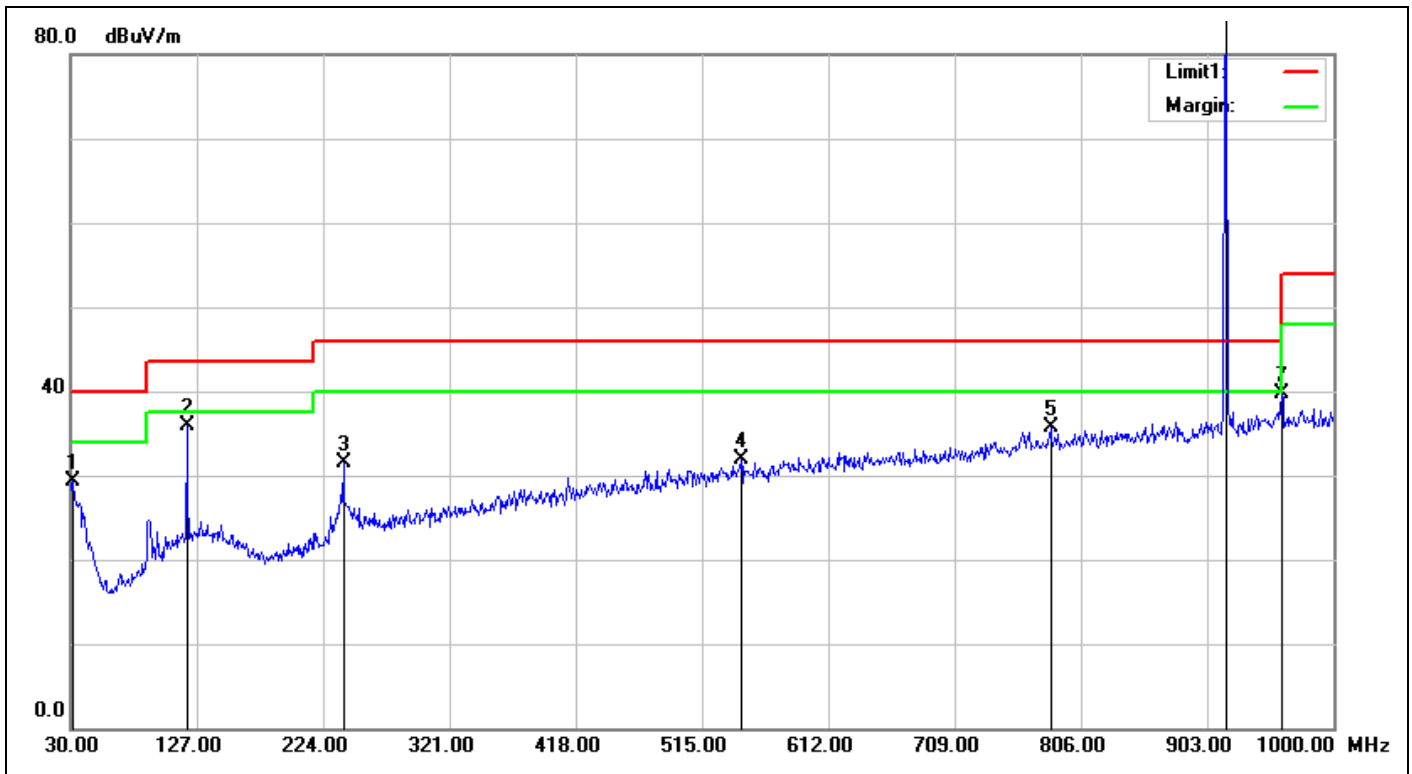
Service No.:	114058583	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/2/17 17:08:47
Applicant:	Liyatech	Test Rating:	DC 5V
Product:	LRM001	Temp.(°C)/Hum.(%):	20.6(°C)/52%
Model No.:	LRM001-915	Test Engineer:	George Yang
Test Mode:	909.5-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	30.0000	-0.07	30.63	30.56	40.00	-9.44	QP	100	48	
2	89.1700	-10.94	36.62	25.68	43.50	-17.82	QP	100	40	
3	119.2400	-7.40	43.62	36.22	43.50	-7.28	QP	100	293	
4	239.5200	-6.73	38.93	32.20	46.00	-13.80	QP	100	114	
5	627.5200	0.30	33.20	33.50	46.00	-12.50	QP	100	224	
6	909.5000	4.39	98.78	103.17	46.00	57.17	QP	100	219	Fundamental
7	960.2300	5.48	34.32	39.80	54.00	-14.20	QP	100	335	



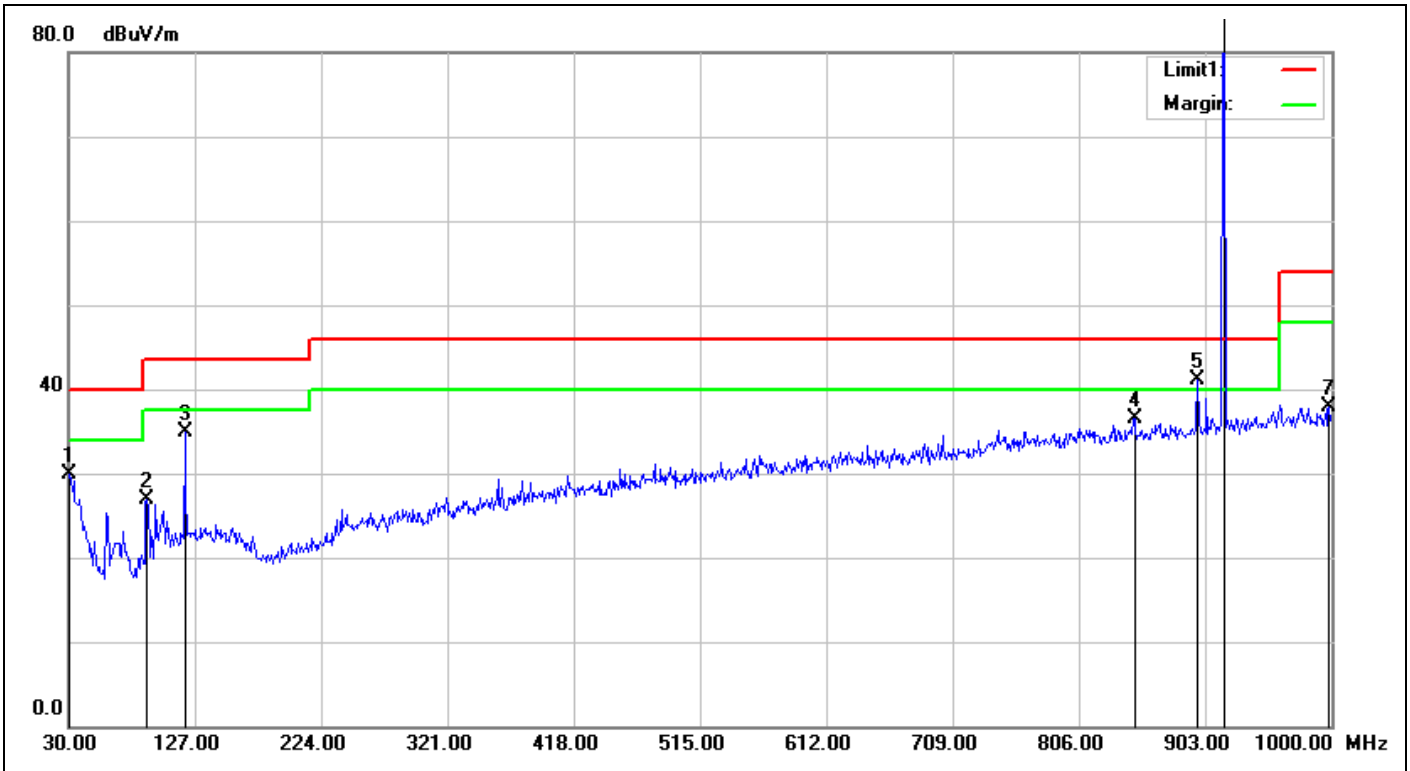
Service No.:	114058583	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/2/17 17:09:50
Applicant:	Liyatech	Test Rating:	DC 5V
Product:	LRM001	Temp.(°C)/Hum.(%):	20.6(°C)/52%
Model No.:	LRM001-915	Test Engineer:	George Yang
Test Mode:	909.5-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	30.9700	-0.62	31.50	30.88	40.00	-9.12	QP	100	259	
2	90.1400	-10.84	37.42	26.58	43.50	-16.92	QP	100	360	
3	119.2400	-7.40	42.19	34.79	43.50	-8.71	QP	100	44	
4	239.5200	-6.73	33.15	26.42	46.00	-19.58	QP	100	166	
5	822.4900	3.20	33.41	36.61	46.00	-9.39	QP	100	360	
6	909.5000	4.39	91.40	95.79	46.00	49.79	QP	100	163	Fundamental
7	974.7800	5.60	32.17	37.77	54.00	-16.23	QP	100	147	



Service No.:	114058583	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/2/17 17:12:15
Applicant:	Liyatech	Test Rating:	DC 5V
Product:	LRM001	Temp.(°C)/Hum.(%):	20.6(°C)/52%
Model No.:	LRM001-915	Test Engineer:	George Yang
Test Mode:	916.9-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	30.39	29.21	40.00	-10.79	QP	100	59	
2	119.2400	-7.40	43.38	35.98	43.50	-7.52	QP	100	122	
3	239.5200	-6.73	38.27	31.54	46.00	-14.46	QP	100	104	
4	545.0700	-0.84	32.71	31.87	46.00	-14.13	QP	100	104	
5	782.7200	2.66	33.01	35.67	46.00	-10.33	QP	100	189	
6	917.5500	4.58	99.35	103.93	46.00	57.93	QP	100	219	Fundamental
7	960.2300	5.48	34.18	39.66	54.00	-14.34	QP	100	332	



Service No.:	114058583	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/2/17 17:13:18
Applicant:	Liyatech	Test Rating:	DC 5V
Product:	LRM001	Temp.(°C)/Hum.(%):	20.6(°C)/52%
Model No.:	LRM001-915	Test Engineer:	George Yang
Test Mode:	916.9-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	30.0000	-0.07	29.99	29.92	40.00	-10.08	QP	100	346	
2	90.1400	-10.84	37.84	27.00	43.50	-16.50	QP	100	360	
3	119.2400	-7.40	42.28	34.88	43.50	-8.62	QP	100	28	
4	848.6800	3.66	32.78	36.44	46.00	-9.56	QP	100	219	
5	897.1800	4.12	37.04	41.16	46.00	-4.84	QP	100	185	
6	917.5500	4.58	91.87	96.45	46.00	50.45	QP	100	160	Fundamental
7	998.0600	5.81	32.10	37.91	54.00	-16.09	QP	100	352	

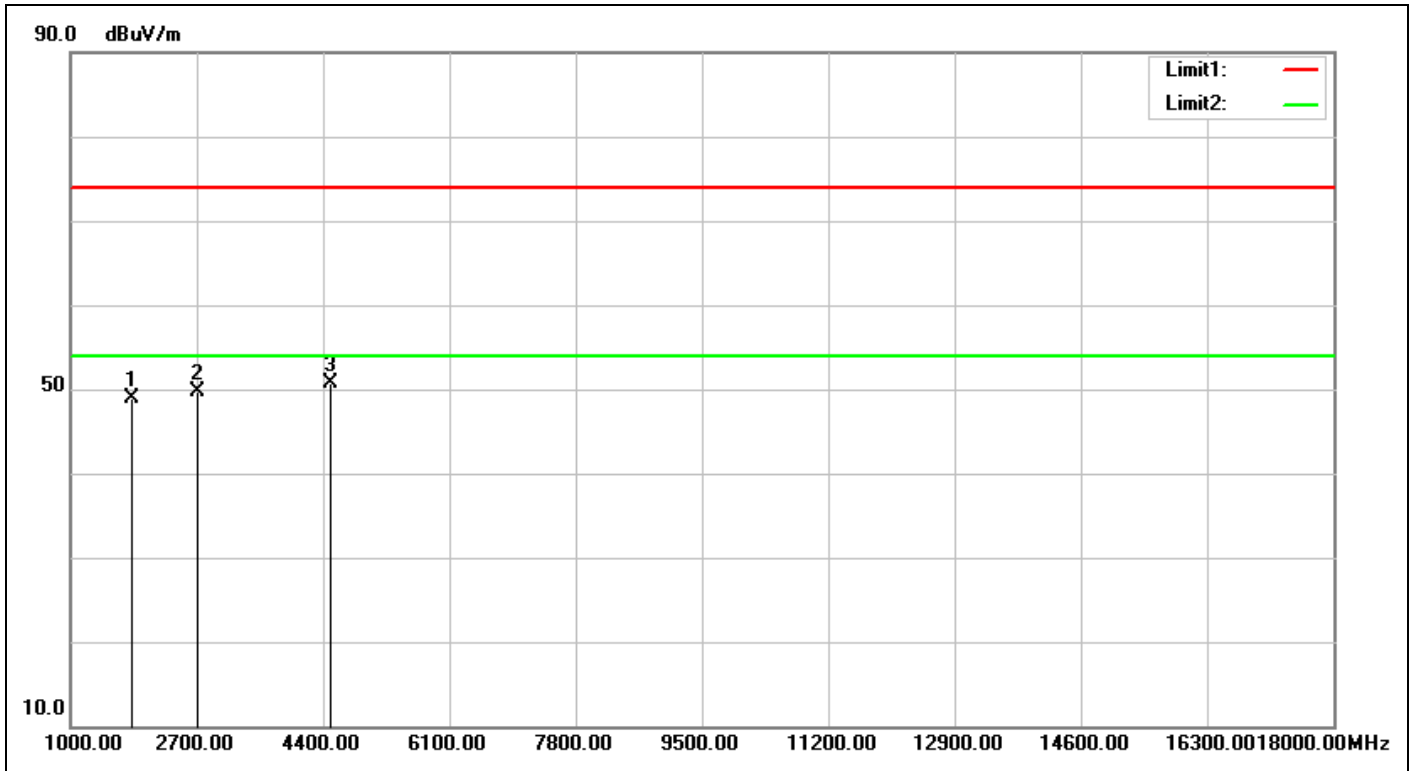
Spurious Emissions, TX Mode, 1-18G



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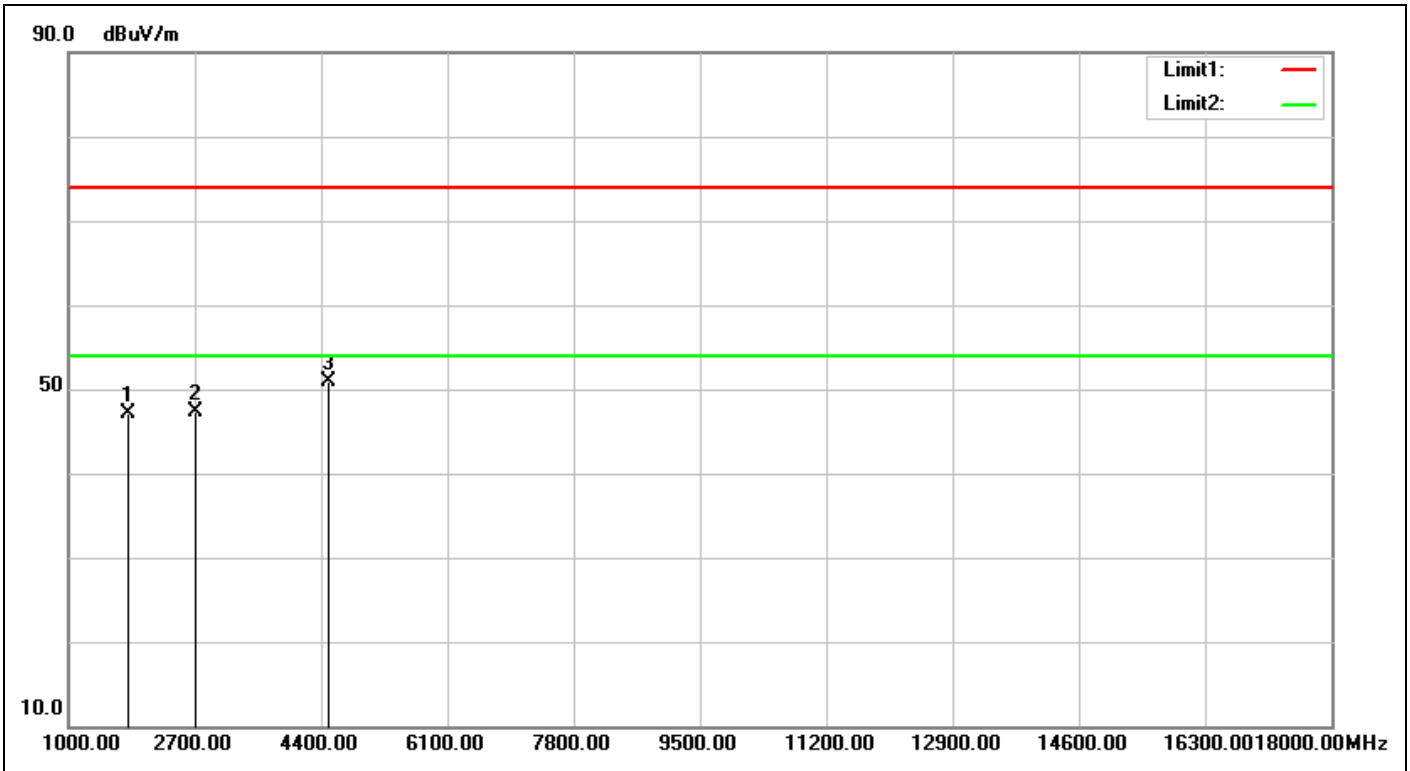
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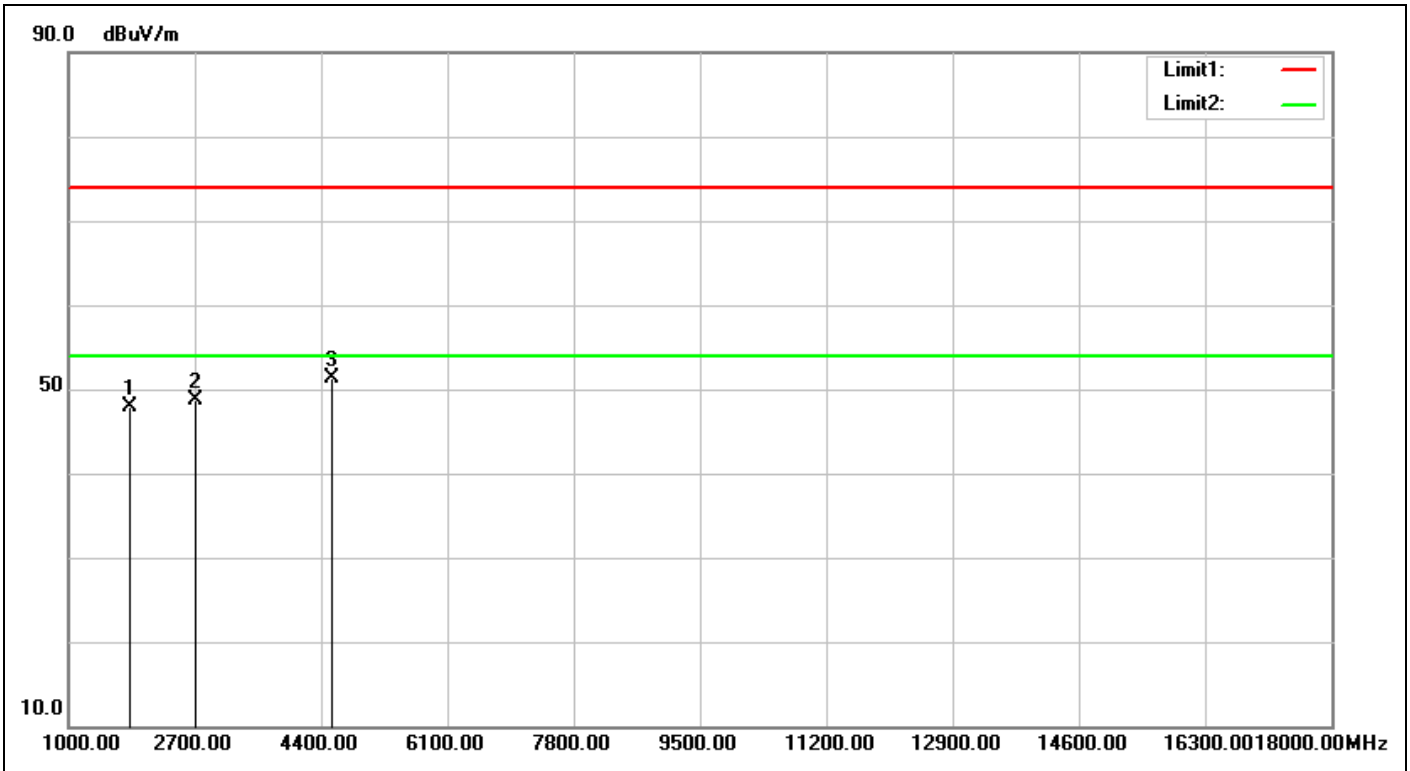
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/2/17 20:26:13
Applicant:	Liyatech	Test Rating:	DC 5V
Product:	LRM001	Temp.(°C)/Hum.(%):	20.6(°C)/52%
Model No.:	LRM001-915	Test Engineer:	George Yang
Test Mode:	902.3-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1804.600	-9.34	58.29	48.95	74.00	-25.05	peak	100	192	
2	2706.900	-7.60	57.26	49.66	74.00	-24.34	peak	100	200	
3	4502.000	-3.80	54.47	50.67	74.00	-23.33	peak	100	327	



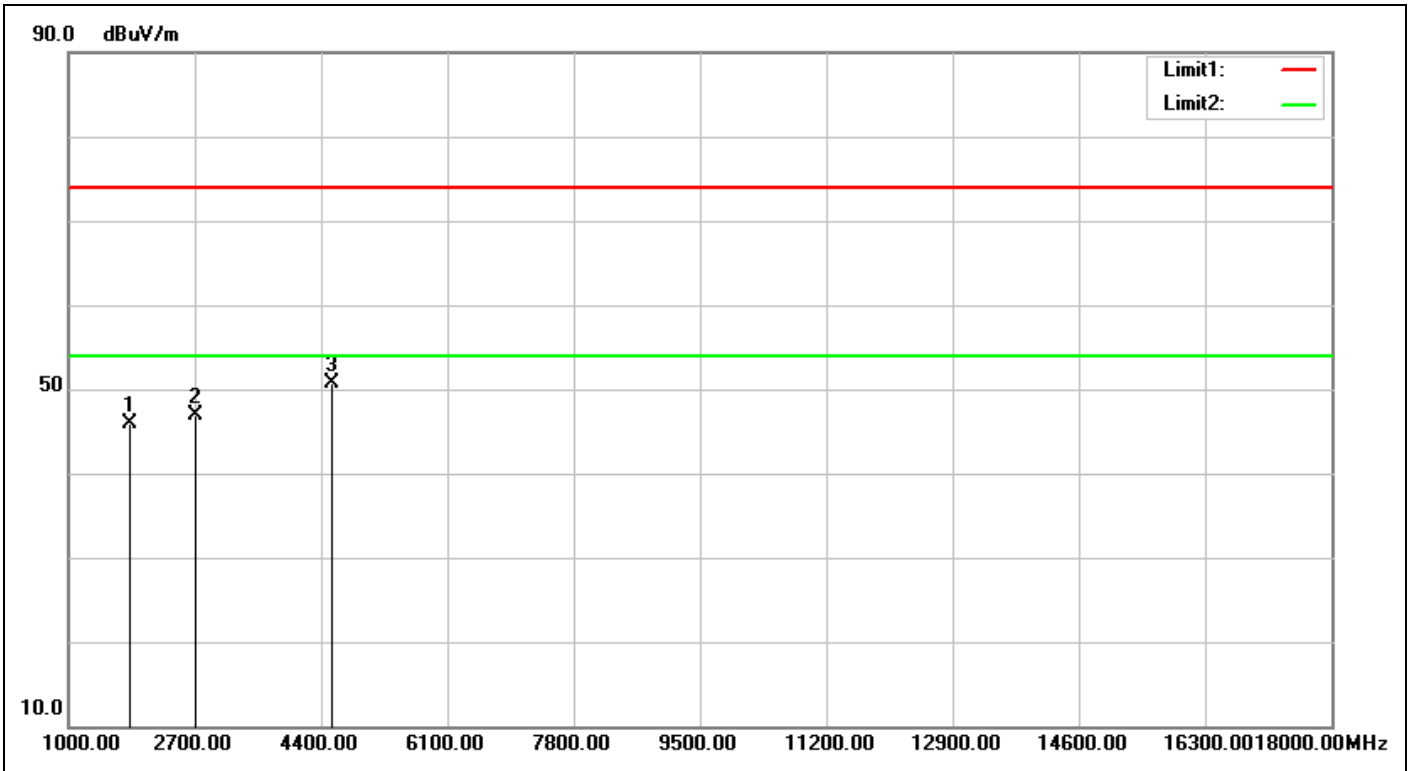
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/2/17 20:27:16
Applicant:	Liyatech	Test Rating:	DC 5V
Product:	LRM001	Temp.(°C)/Hum.(%):	20.6(°C)/52%
Model No.:	LRM001-915	Test Engineer:	George Yang
Test Mode:	902.3-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1804.600	-9.34	56.45	47.11	74.00	-26.89	peak	100	290	
2	2706.900	-7.60	54.88	47.28	74.00	-26.72	peak	100	204	
3	4502.000	-3.80	54.74	50.94	74.00	-23.06	peak	100	2	



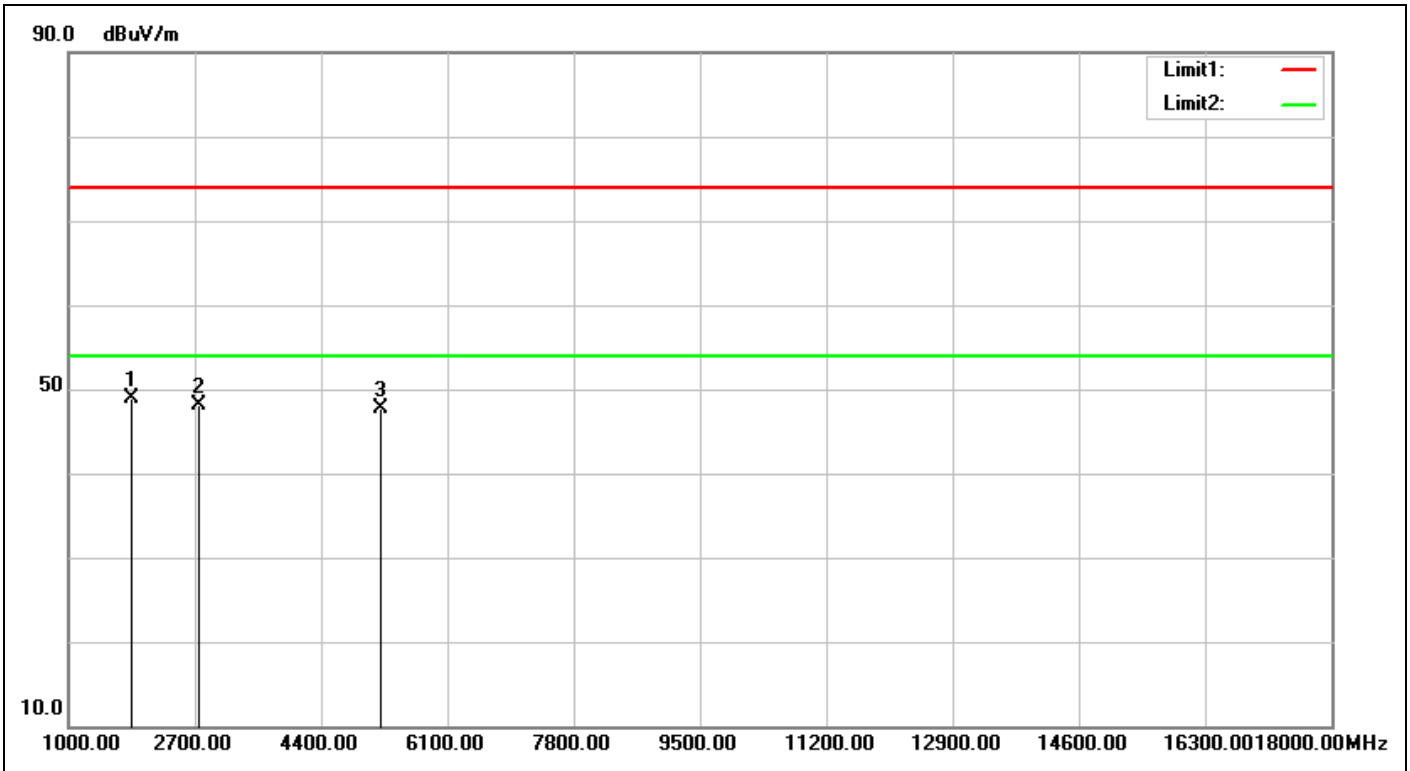
Service No.:	114058583	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/2/17 20:30:10
Applicant:	Liyatech	Test Rating:	DC 5V
Product:	LRM001	Temp.(°C)/Hum.(%):	20.6(°C)/52%
Model No.:	LRM001-915	Test Engineer:	George Yang
Test Mode:	909.5-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1819.000	-9.25	57.18	47.93	74.00	-26.07	peak	100	200	
2	2728.500	-7.56	56.36	48.80	74.00	-25.20	peak	100	175	
3	4536.000	-3.76	55.11	51.35	74.00	-22.65	peak	100	322	



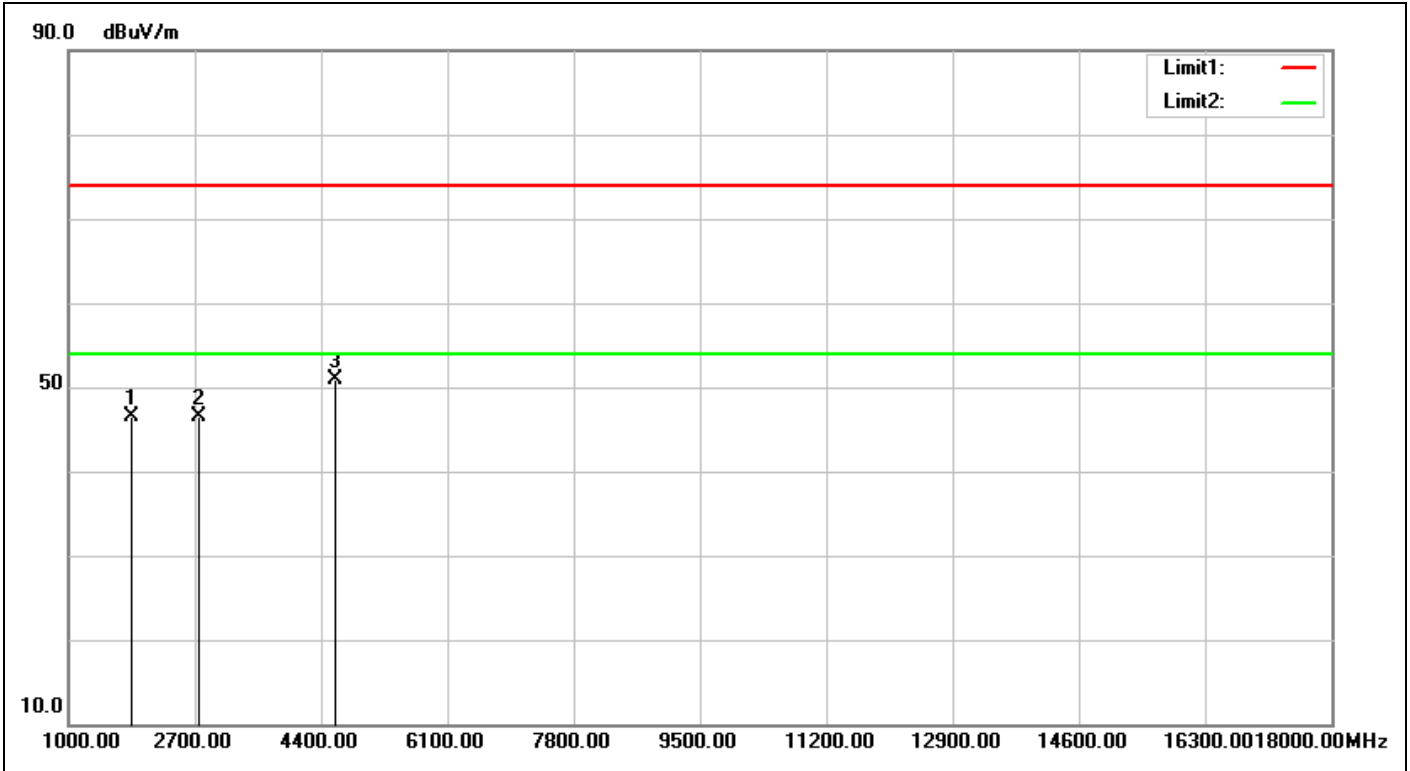
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/2/17 20:31:13
Applicant:	Liyatech	Test Rating:	DC 5V
Product:	LRM001	Temp.(°C)/Hum.(%):	20.6(°C)/52%
Model No.:	LRM001-915	Test Engineer:	George Yang
Test Mode:	909.5-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1819.000	-9.25	55.25	46.00	74.00	-28.00	peak	100	177	
2	2728.500	-7.56	54.52	46.96	74.00	-27.04	peak	100	216	
3	4536.000	-3.76	54.42	50.66	74.00	-23.34	peak	100	23	



Service No.:	114058583	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/2/17 20:33:12
Applicant:	Liyatech	Test Rating:	DC 5V
Product:	LRM001	Temp.(°C)/Hum.(%):	20.6(°C)/52%
Model No.:	LRM001-915	Test Engineer:	George Yang
Test Mode:	916.9-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1833.800	-9.16	58.06	48.90	74.00	-25.10	peak	100	189	
2	2750.700	-7.53	55.63	48.10	74.00	-25.90	peak	100	205	
3	5199.000	-2.19	49.86	47.67	74.00	-26.33	peak	100	358	



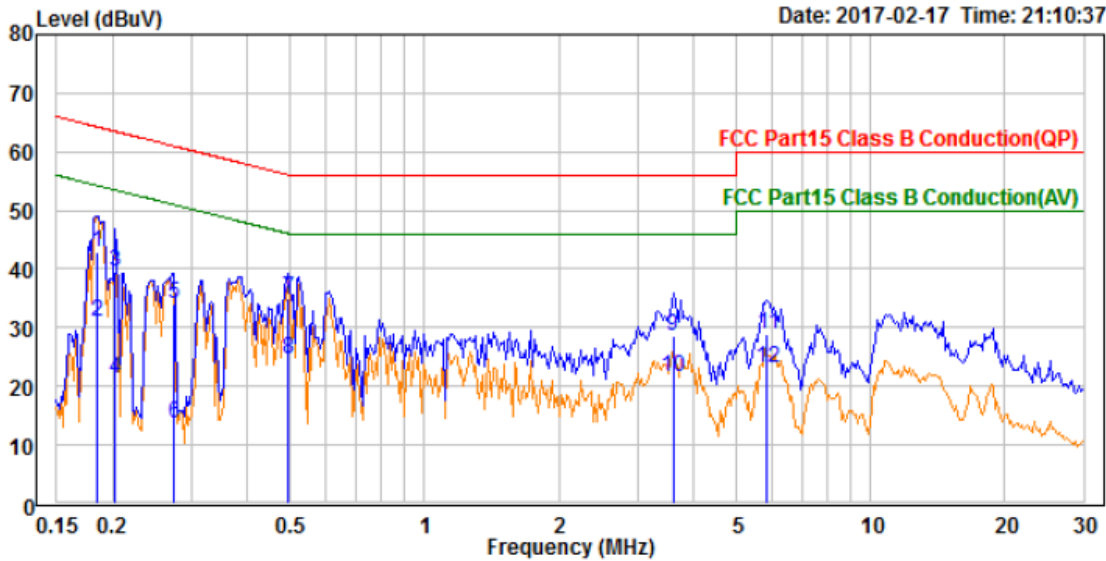
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/2/17 20:34:15
Applicant:	Liyatech	Test Rating:	DC 5V
Product:	LRM001	Temp.(°C)/Hum.(%):	20.6(°C)/52%
Model No.:	LRM001-915	Test Engineer:	George Yang
Test Mode:	916.9-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	1833.800	-9.16	55.69	46.53	74.00	-27.47	peak	100	293	
2	2750.700	-7.53	54.04	46.51	74.00	-27.49	peak	100	210	
3	4587.000	-3.71	54.68	50.97	74.00	-23.03	peak	100	22	

Mains Spurious Emissions

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Date: 2017-02-17 Time: 21:10:37



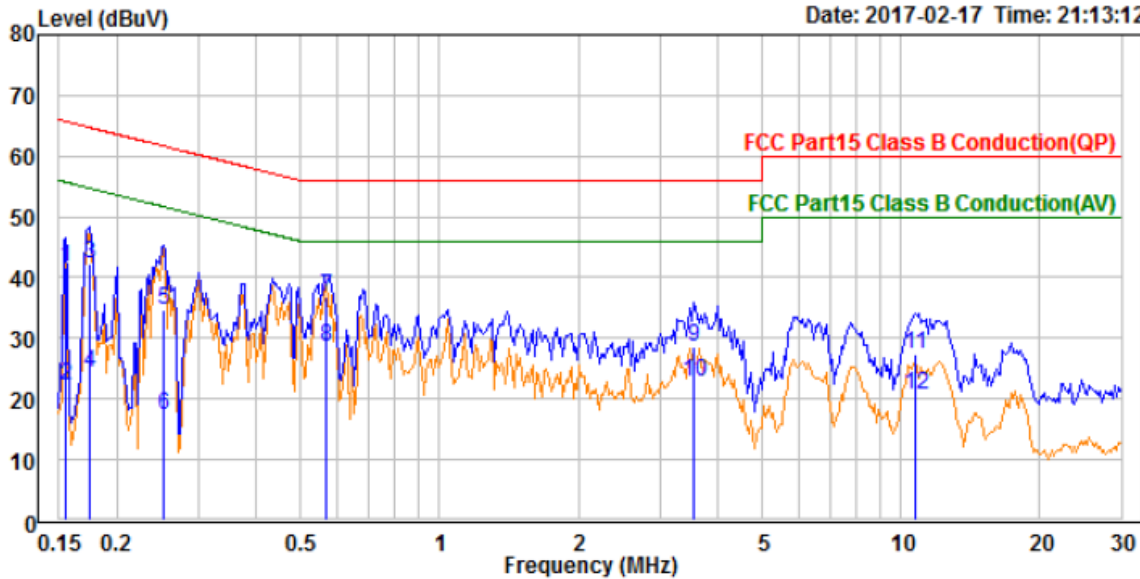
Trace: 1

Site : Conduction room
 Condition : FCC Part15 Class B Conduction(QP) line1
 Test Engineer: George Yang
 Applicant : Liyatech
 Product : LRM001
 Model No. : LRM001-915
 Test Rating : 120Vac/60Hz
 Tmp/Hum : 22.2°C / 42%
 Memo : Mains

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	
1	0.185	43.01	33.25	9.76	64.24	-21.23	QP
2	0.185	31.16	21.40	9.76	54.24	-23.08	Average
3	0.202	39.58	29.82	9.76	63.54	-23.96	QP
4	0.202	21.14	11.38	9.76	53.54	-32.40	Average
5	0.274	33.95	24.20	9.75	60.98	-27.03	QP
6	0.274	13.72	3.97	9.75	50.98	-37.26	Average
7	0.497	35.03	25.28	9.75	56.05	-21.02	QP
8	0.497	24.61	14.86	9.75	46.05	-21.44	Average
9	3.603	28.50	18.70	9.80	56.00	-27.50	QP
10	3.603	21.57	11.77	9.80	46.00	-24.43	Average
11	5.867	28.90	19.09	9.81	60.00	-31.10	QP
12	5.867	23.06	13.25	9.81	50.00	-26.94	Average

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Date: 2017-02-17 Time: 21:13:12



Trace: 1

Site : Conduction room
 Condition : FCC Part15 Class B Conduction(QP) neutral
 Test Engineer: George Yang
 Applicant : Liyatech
 Product : LRM001
 Model No. : LRM001-915
 Test Rating : 120Vac/60Hz
 Tmp/Hum : 22.2°C / 42%
 Memo : Mains

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	
1	0.155	41.70	31.97	9.73	65.74	-24.04	QP
2	0.155	22.21	12.48	9.73	55.74	-33.53	Average
3	0.174	42.40	32.69	9.71	64.77	-22.37	QP
4	0.174	24.48	14.77	9.71	54.77	-30.29	Average
5	0.252	34.78	25.10	9.68	61.69	-26.91	QP
6	0.252	17.25	7.57	9.68	51.69	-34.44	Average
7	0.570	36.83	27.14	9.69	56.00	-19.17	QP
8	0.570	28.70	19.01	9.69	46.00	-17.30	Average
9	3.565	28.62	18.91	9.71	56.00	-27.38	QP
10	3.565	22.87	13.16	9.71	46.00	-23.13	Average
11	10.733	27.36	17.51	9.85	60.00	-32.64	QP
12	10.733	20.83	10.98	9.85	50.00	-29.17	Average