

Test Report No.10048915 001

Appendix D: Radiated and Mains Spurious Emission Data

(File: 10048915AppendixD)

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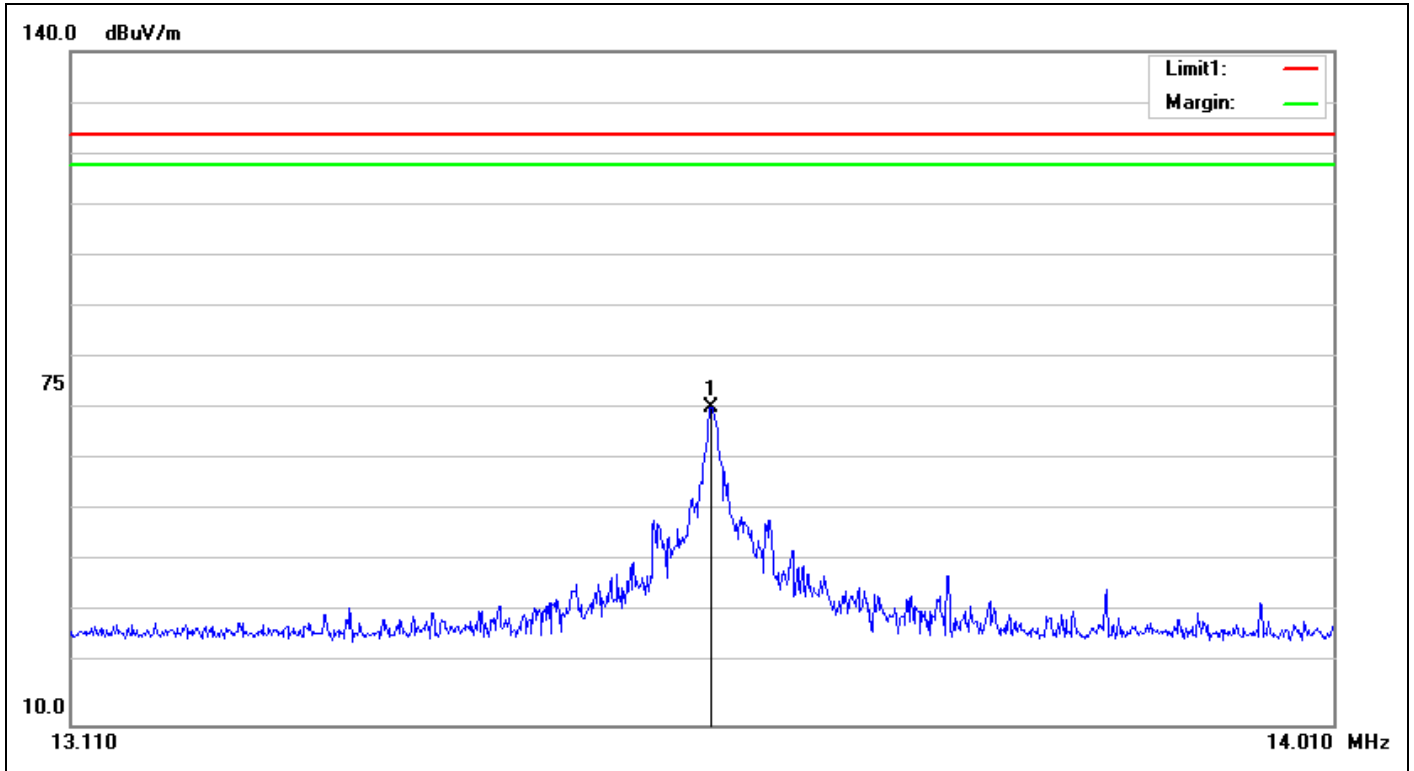
Emissions, Fundamental



TUV Taiwan

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Service No.:	114036404-FCC	Test Distance:	3m
Test Standard:	FCC 15.225_field strength_3m(dBuV/m)	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2015/6/16 14:57:12
Applicant:	Nedap	Test Rating:	
Product:	Smartcard Booster Ultimate	Temp.(°C)/Hum.(%):	25.0(°C)/51%
Model No.:	9982809	Test Engineer:	Freeman Wang
Test Mode:	TX 13.56MHz		
Remark:	Z worst		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	13.5591	20.94	50.31	71.25	124.00	-52.75	QP		0	

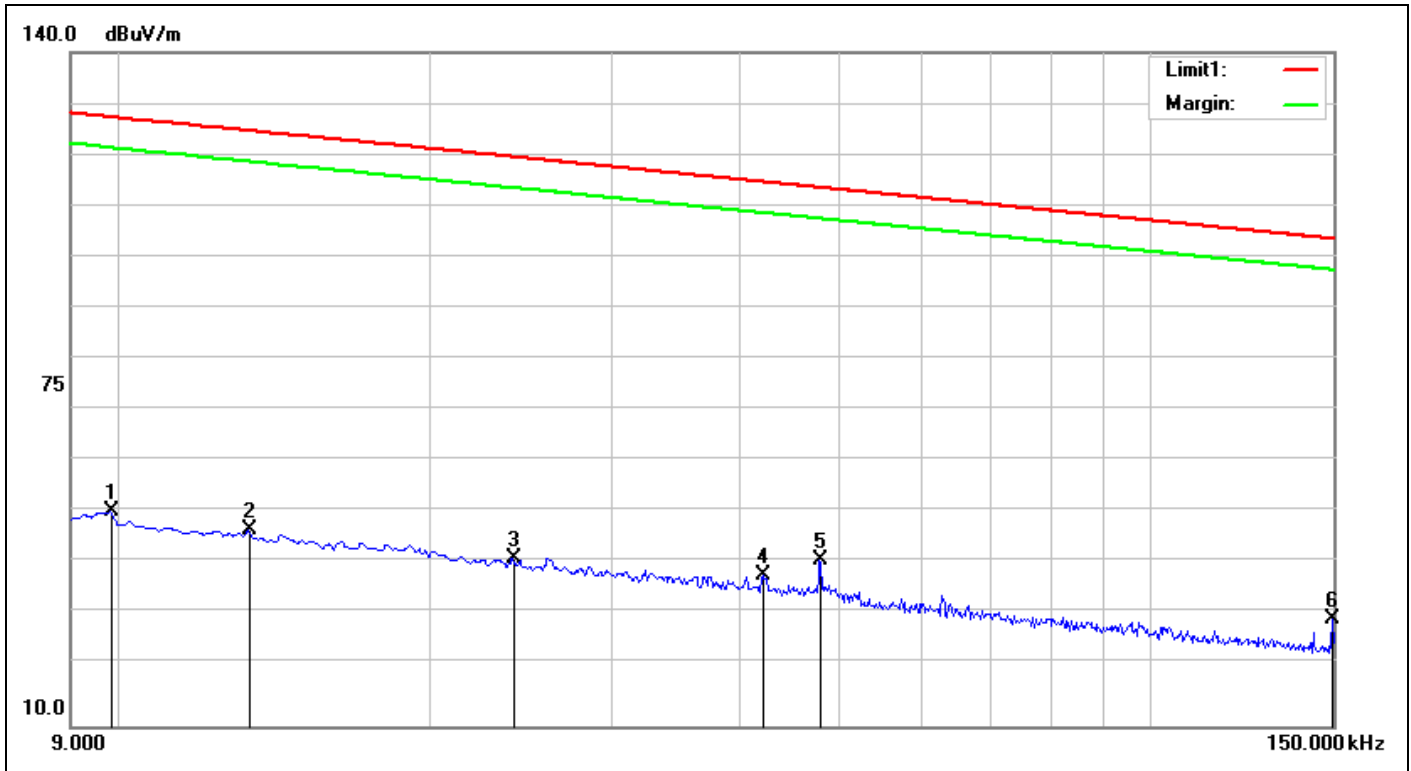
Spurious Emissions, TX Mode, 0.009-30M



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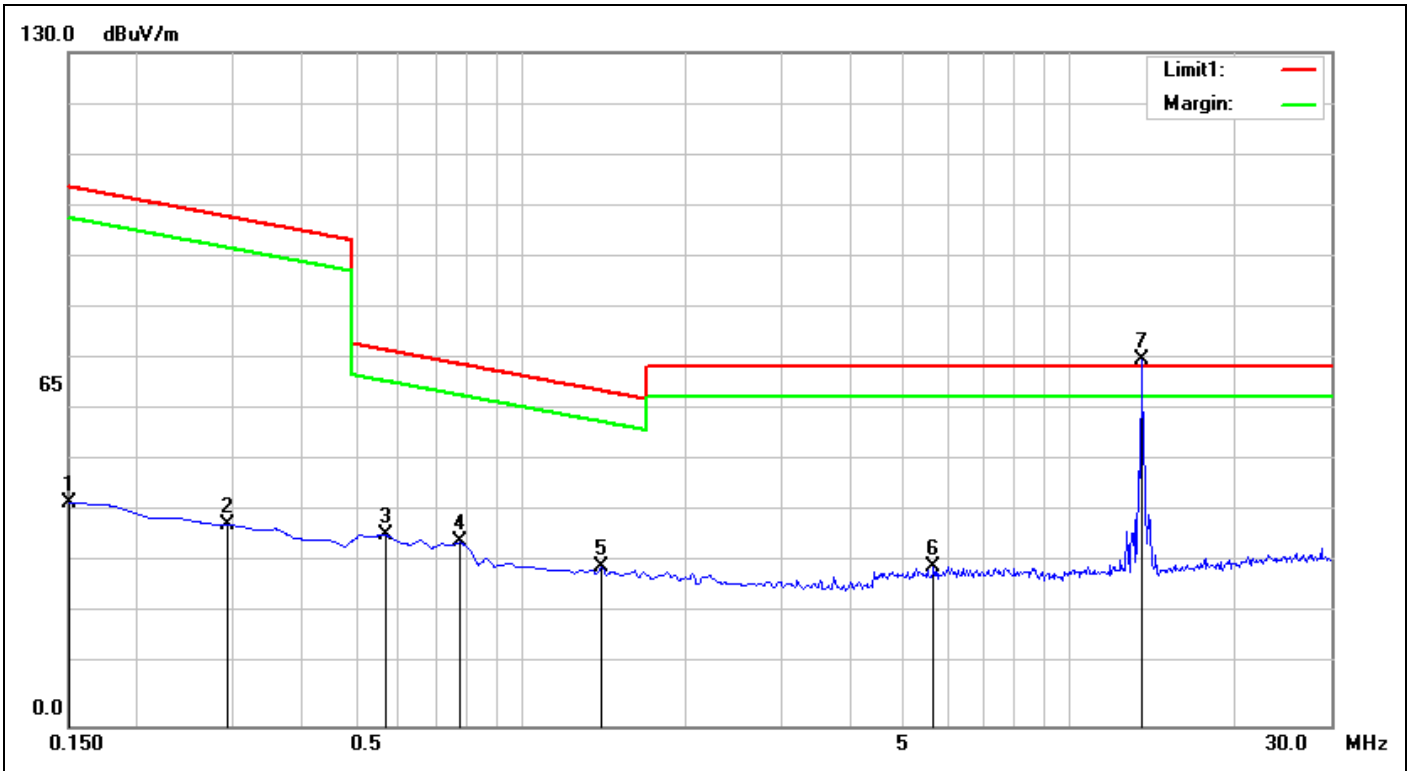
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Service No.:	114036404-FCC	Test Distance:	3m
Test Standard:	FCC 15.225_9k-30M_3m(dBuV/m)	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2015/6/16 15:14:01
Applicant:	Nedap	Test Rating:	
Product:	Smartcard Booster Ultimate	Temp.(°C)/Hum.(%):	25.0(°C)/51%
Model No.:	9982809	Test Engineer:	Freeman Wang
Test Mode:	TX 13.56MHz		
Remark:	Z		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0098	20.43	30.87	51.30	127.59	-76.29	QP		0	
2	0.0134	20.51	27.22	47.73	124.89	-77.16	QP		0	
3	0.0241	20.46	21.90	42.36	119.82	-77.46	QP		0	
4	0.0421	19.93	19.19	39.12	115.00	-75.88	QP		0	
5	0.0478	19.71	22.24	41.95	113.90	-71.95	QP		0	
6	0.1497	19.25	11.43	30.68	104.04	-73.36	QP		0	

Spurious Emissions, Mains, 150kHz - 30MHz



Service No.:	114036404-FCC	Test Distance:	3m
Test Standard:	FCC 15.225_9k-30M_3m(dBuV/m)	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2015/6/16 15:15:44
Applicant:	Nedap	Test Rating:	
Product:	Smartcard Booster Ultimate	Temp.(°C)/Hum.(%):	25.0(°C)/51%
Model No.:	9982809	Test Engineer:	Freeman Wang
Test Mode:	TX 13.56MHz		
Remark:	Z		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1500	19.25	23.90	43.15	104.05	-60.90	QP		0	
2	0.2924	19.27	19.54	38.81	98.27	-59.46	QP		0	
3	0.5679	19.25	17.70	36.95	72.52	-35.57	QP		0	
4	0.7768	19.35	16.10	35.45	69.81	-34.36	QP		0	
5	1.4037	19.38	11.23	30.61	64.68	-34.07	QP		0	
6	5.6723	19.81	10.76	30.57	69.54	-38.97	QP		0	
7	13.5526	20.94	49.79	70.73	69.54	1.19	QP		0	TX

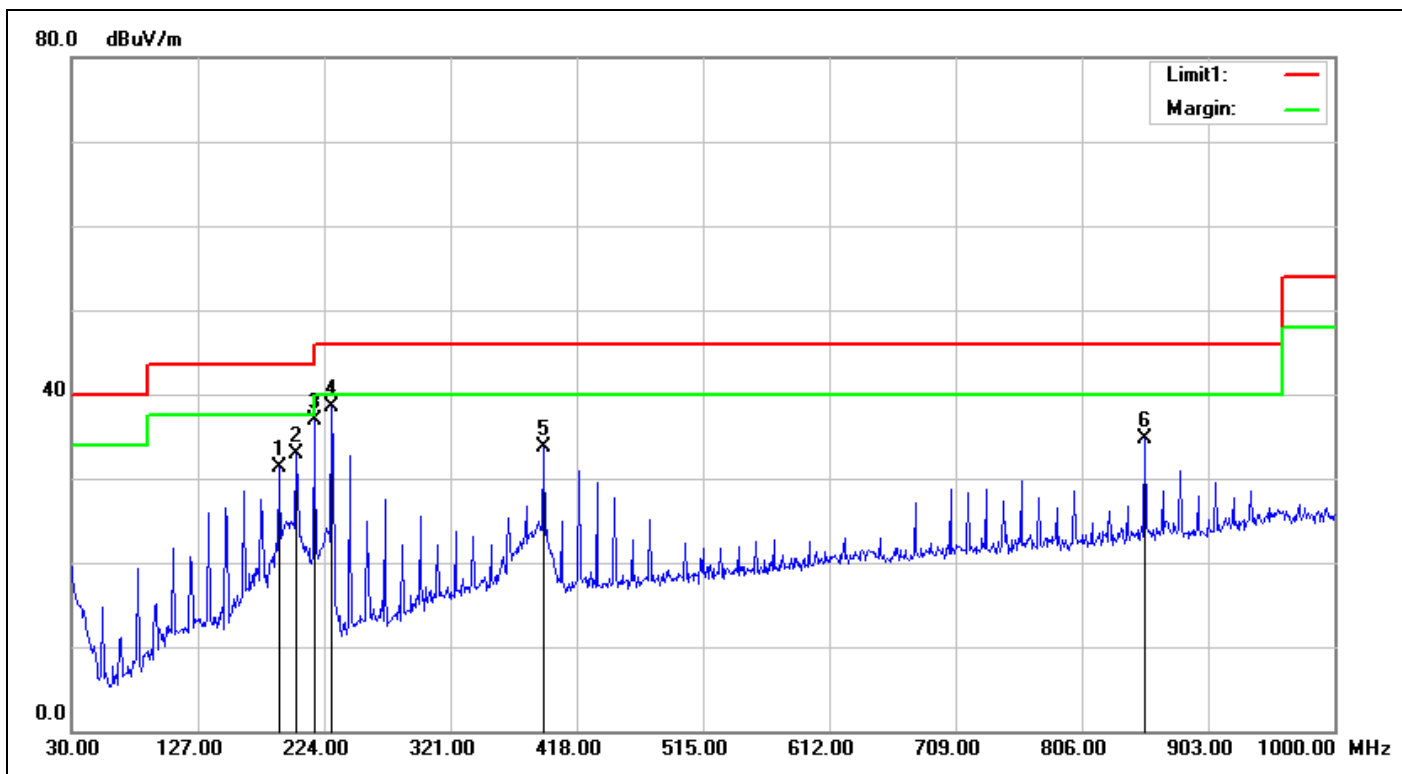
Spurious Emissions, TX Mode, 30M-1G



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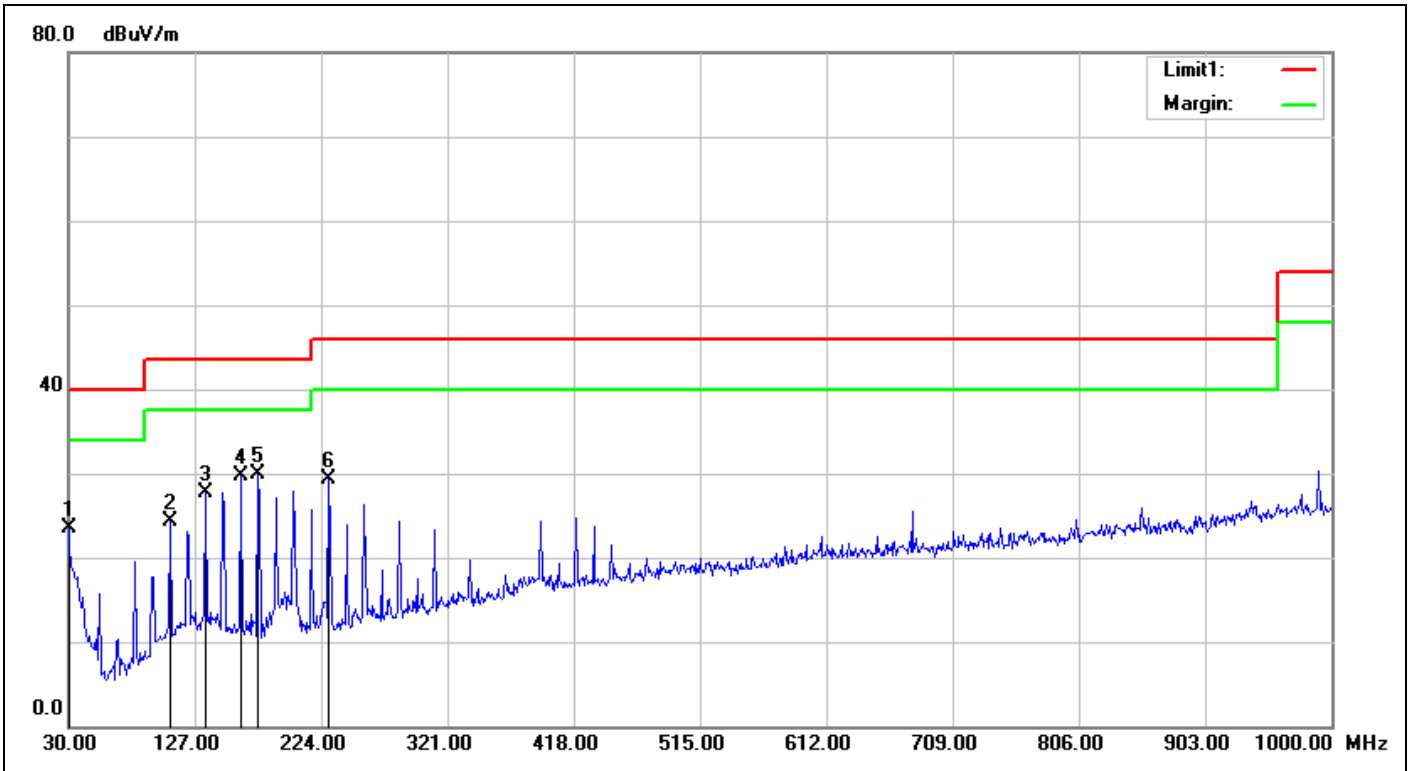
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Service No.:	114036404-FCC	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2015/6/16 15:46:37
Applicant:	Nedap	Test Rating:	
Product:	Smartcard Booster Ultimate	Temp.(°C)/Hum.(%):	25.0(°C)/51%
Model No.:	9982809	Test Engineer:	Freeman Wang
Test Mode:	TX 13.56MHz		
Remark:	Z		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	189.0800	-15.37	46.67	31.30	43.50	-12.20	QP	100	359	
2	202.6599	-14.61	47.60	32.99	43.50	-10.51	QP	100	205	
3	216.2400	-14.28	51.12	36.84	46.00	-9.16	QP	200	0	
4	229.8199	-13.54	52.14	38.60	46.00	-7.40	QP	200	0	
5	392.7799	-8.76	42.47	33.71	46.00	-12.29	QP	100	182	
6	854.5000	-2.42	37.20	34.78	46.00	-11.22	QP	100	168	

Spurious Emissions, Mains, 150kHz - 30MHz



Service No.:	114036404-FCC	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2015/6/16 15:51:33
Applicant:	Nedap	Test Rating:	
Product:	Smartcard Booster Ultimate	Temp.(°C)/Hum.(%):	25.0(°C)/51%
Model No.:	9982809	Test Engineer:	Freeman Wang
Test Mode:	TX 13.56MHz		
Remark:	Z		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	30.0000	-5.83	29.33	23.50	40.00	-16.50	QP	100	0	
2	107.6000	-13.81	38.07	24.26	43.50	-19.24	QP	100	163	
3	134.7600	-12.63	40.27	27.64	43.50	-15.86	QP	100	166	
4	161.9200	-14.01	43.78	29.77	43.50	-13.73	QP	100	341	
5	175.5000	-15.24	45.13	29.89	43.50	-13.61	QP	100	341	
6	229.8200	-13.54	42.91	29.37	46.00	-16.63	QP	200	293	

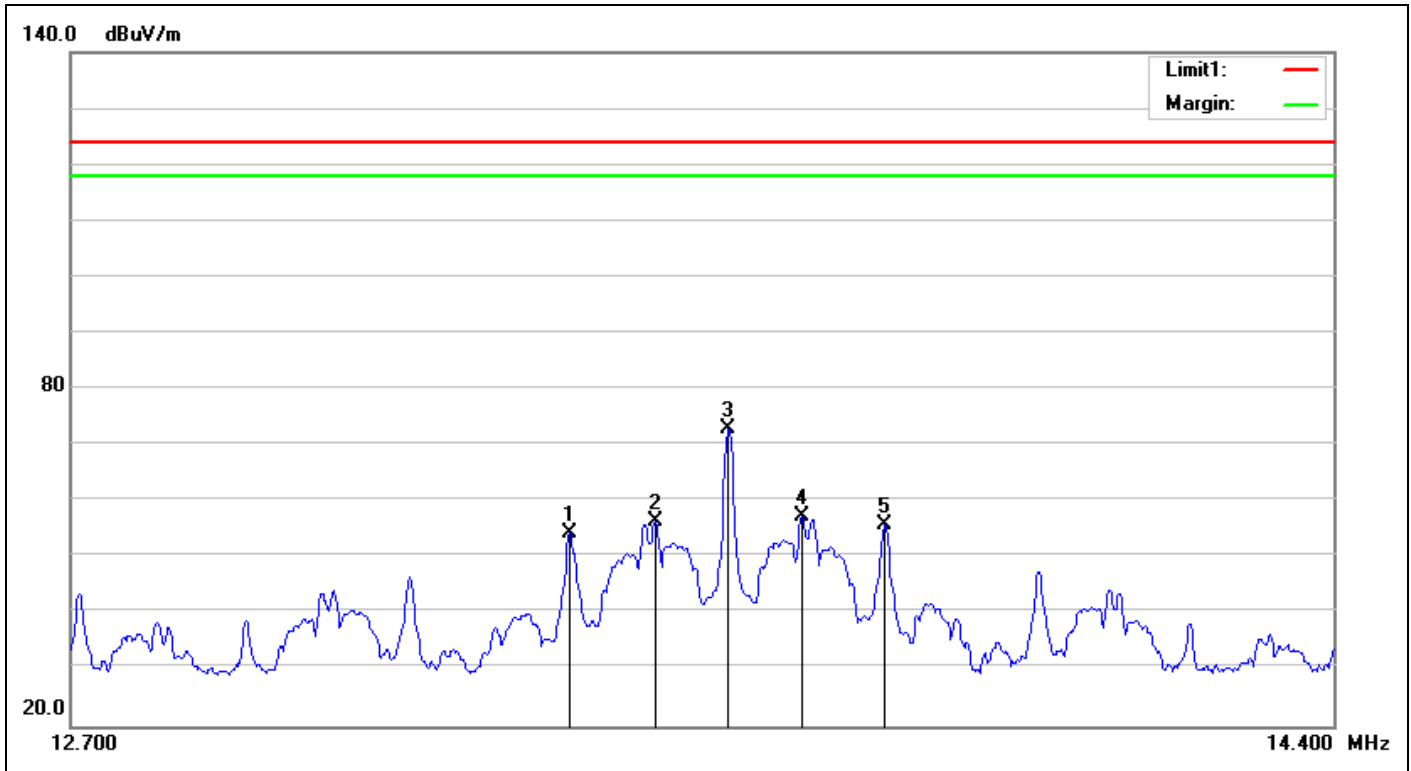
Emission Mask



TUV Taiwan

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Service No.:	114036404-FCC	Test Distance:	3m
Test Standard:	FCC 15.225_field strength_3m(dBuV/m)	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2015/6/16 15:36:50
Applicant:	Nedap	Test Rating:	
Product:	Smartcard Booster Ultimate	Temp.(°C)/Hum.(%):	22.4(°C)/50%
Model No.:	9982809	Test Engineer:	Freeman Wang
Test Mode:	TX 13.56MHz		
Remark:	Z		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	13.3476	20.91	33.41	54.32	80.5	-26.18	Peak		0	
2	13.4616	20.93	35.39	56.32	90.5	-34.18	Peak		0	
3	13.5602	20.94	52.10	73.04	124.00	-50.96	Peak		0	
4	13.6587	20.95	36.34	57.29	90.5	-33.21	Peak		0	
5	13.7727	20.96	34.89	55.85	80.5	-24.65	Peak		0	