

Test Report No.50157344 001

Appendix D: Radiated and Mains Spurious Emission Data

(File: 50157344AppendixD)

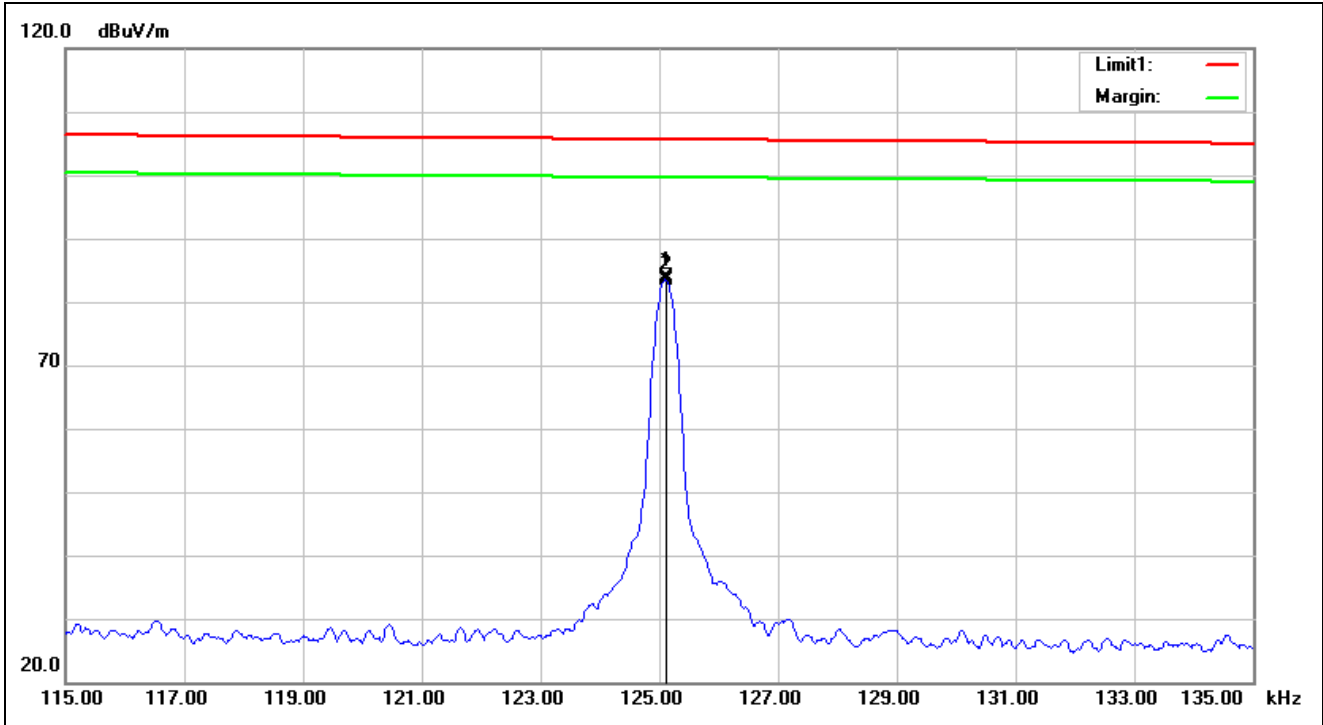
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Emissions, Fundamental



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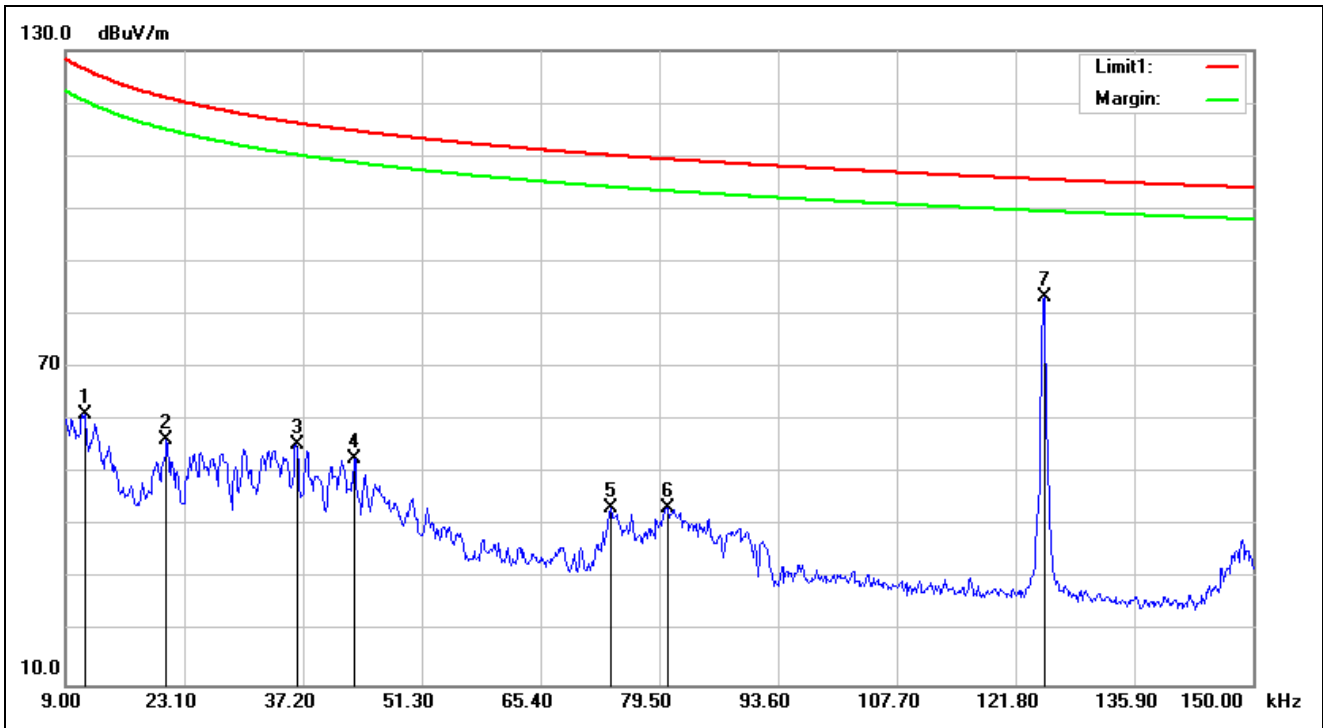
Service No.:	114078743(ASSY T325R RF+MD+RFID)_FCC	Test Distance:	3m
Test Standard:	FCC15.209_9k-1G_3m	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/7/12 20:07:28
Applicant:	Nedap	Test Rating:	AC 120V/60Hz
Product:	Lumen iL33	Temp.(°C)/Hum.(%):	25(°C)/50%
Model No.:	ASSY T325R RF+MD+RFID	Test Engineer:	Amy Hsu
Test Mode:	125kHz-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1251	18.33	65.67	84.00	105.62	-21.62	peak	100	104	
2	0.1251	18.33	65.17	83.50	105.62	-22.12	AVG	100	104	

Spurious Emissions, TX Mode, 9-150 kHz



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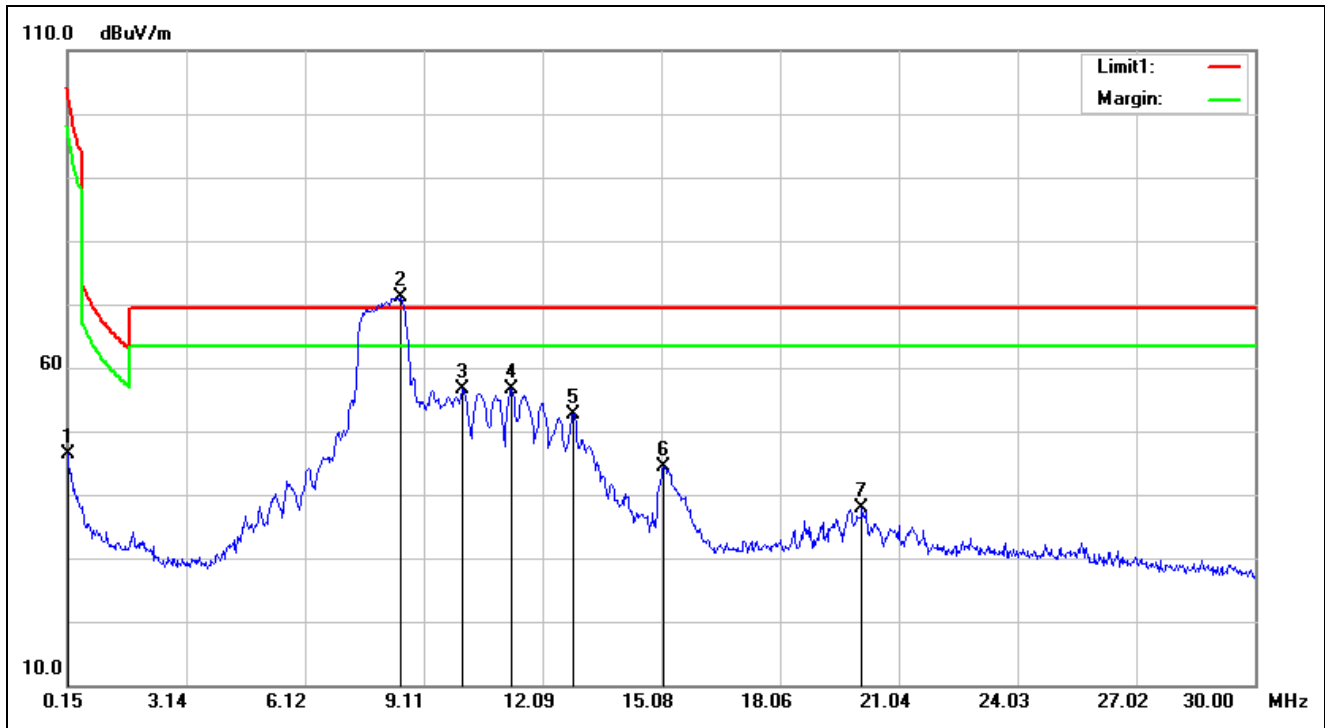
Service No.:	114078743(ASSY T325R RF+MD+RFID)_FCC	Test Distance:	3m
Test Standard:	FCC15.209_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2018/7/12 19:55:50
Applicant:	Nedap	Test Rating:	AC 120V/60Hz
Product:	Lumen iL33	Temp.(°C)/Hum.(%):	25(°C)/50%
Model No.:	ASSY T325R RF+MD+RFID	Test Engineer:	Amy Hsu
Test Mode:			
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0113	18.57	42.70	61.27	126.34	-65.07	QP	100	317	
2	0.0210	18.96	37.25	56.21	120.99	-64.78	QP	100	285	
3	0.0364	19.19	36.33	55.52	116.24	-60.72	QP	100	320	
4	0.0433	19.05	33.74	52.79	114.74	-61.95	QP	100	320	
5	0.0737	18.64	24.68	43.32	110.15	-66.83	QP	100	256	
6	0.0803	18.56	24.86	43.42	109.41	-65.99	QP	100	248	
7	0.1252	18.33	65.05	83.38	105.58	-22.20	QP	100	104	TX

Spurious Emissions, TX Mode, 150 kHz -30MHz



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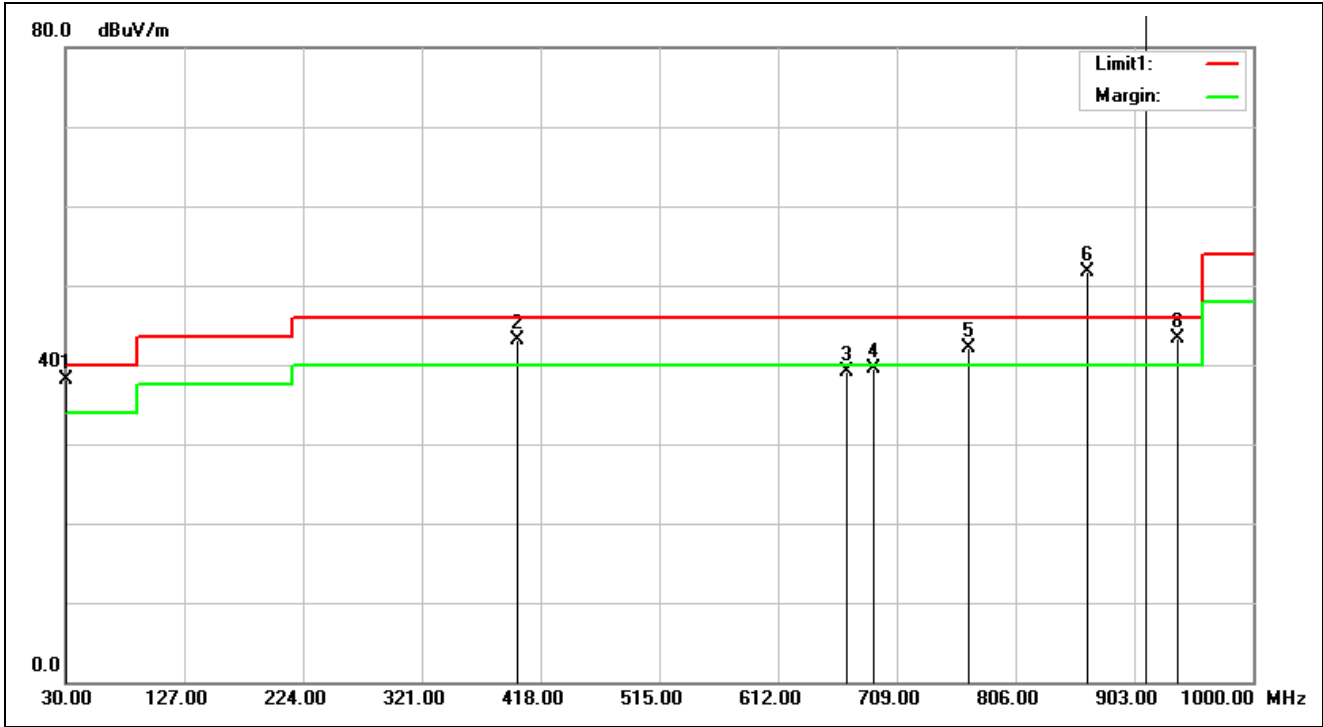
Service No.:	114078743(ASSY T325R RF+MD+RFID)_FCC	Test Distance:	3m
Test Standard:	FCC15.209_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2018/7/12 19:58:22
Applicant:	Nedap	Test Rating:	AC 120V/60Hz
Product:	Lumen iL33	Temp.(°C)/Hum.(%):	25(°C)/50%
Model No.:	ASSY T325R RF+MD+RFID	Test Engineer:	Amy Hsu
Test Mode:			
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1500	18.34	28.01	46.35	104.02	-57.67	QP	100	263	
2	8.5378	20.01	51.11	71.12	69.50	1.62	QP	100	81	TX
3	10.0900	20.29	36.23	56.52	69.50	-12.98	QP	100	73	
4	11.3139	20.42	36.25	56.67	69.50	-12.83	QP	100	222	
5	12.8660	20.61	32.04	52.65	69.50	-16.85	QP	100	272	
6	15.1347	20.85	23.49	44.34	69.50	-25.16	QP	100	277	
7	20.1196	21.40	16.43	37.83	69.50	-31.67	QP	100	89	

Spurious Emissions, TX Mode, 30MHz-1GHz

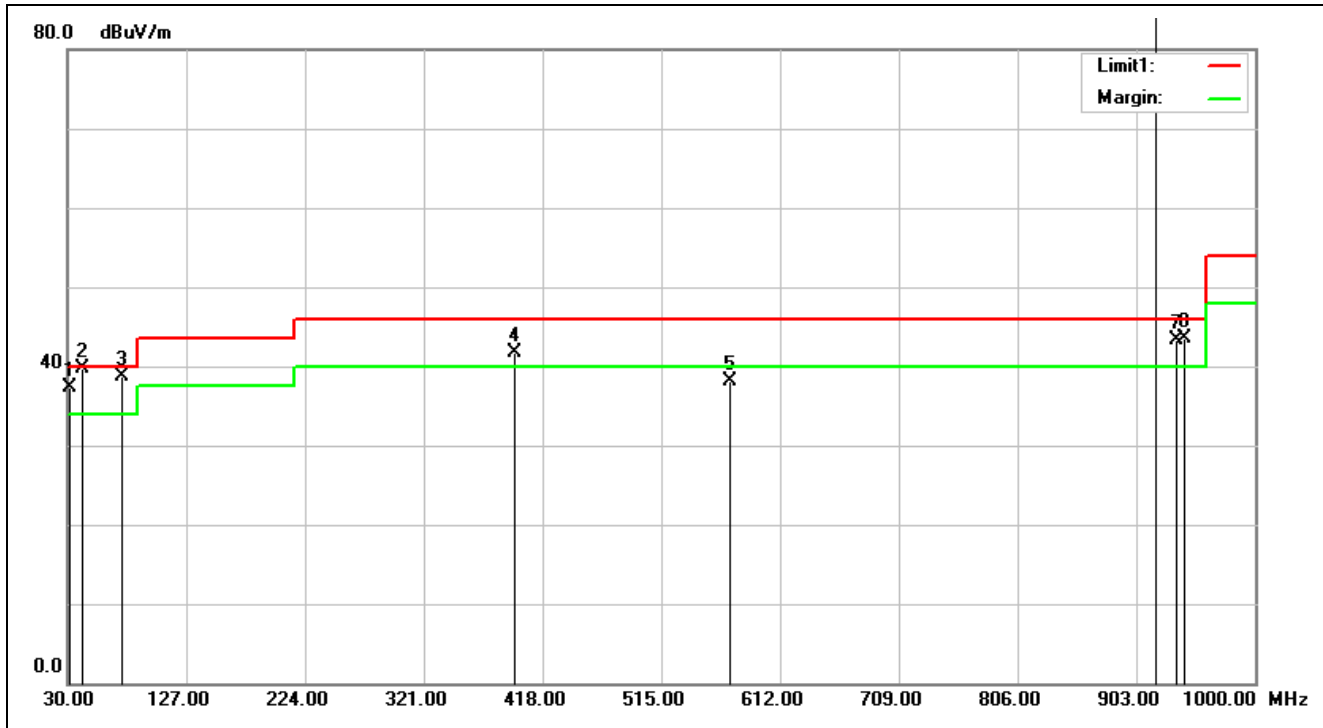


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Service No.:	114078743(ASSY T325R RF+MD+RFID)_FCC	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/7/12 12:45:56
Applicant:	Nedap	Test Rating:	AC 120V/60Hz
Product:	Lumen iL33	Temp.(°C)/Hum.(%):	25(°C)/50%
Model No.:	ASSY T325R RF+MD+RFID	Test Engineer:	Amy Hsu
Test Mode:			
Remark:			

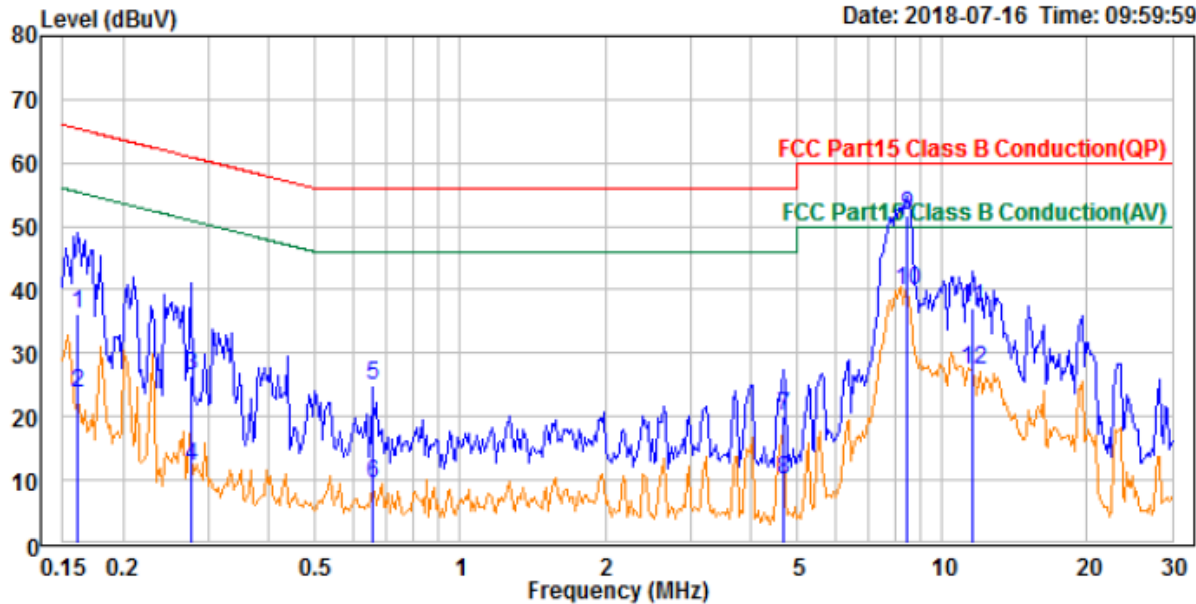
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	30.0000	-0.47	38.67	38.20	40.00	-1.80	QP	100	207	
2	399.5700	-3.28	46.43	43.15	46.00	-2.85	QP	100	62	
3	668.2600	-0.27	39.47	39.20	46.00	-6.80	QP	100	327	
4	690.5700	0.04	39.46	39.50	46.00	-6.50	QP	100	265	
5	768.1700	1.40	40.80	42.20	46.00	-3.80	QP	100	161	
6	864.2000	2.67	48.96	51.63	59.72	-8.09	QP	100	163	
7	912.7000	3.23	122.49	125.72	46.00	79.72	QP	100	265	TX
8	937.9200	3.93	39.47	43.40	46.00	-2.60	QP	100	276	



Service No.:	114078743(ASSY T325R RF+MD+RFID)_FCC	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/7/12 12:47:00
Applicant:	Nedap	Test Rating:	AC 120V/60Hz
Product:	Lumen iL33	Temp.(°C)/Hum.(%):	25(°C)/50%
Model No.:	ASSY T325R RF+MD+RFID	Test Engineer:	Amy Hsu
Test Mode:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	31.9400	-1.58	38.98	37.40	40.00	-2.60	QP	100	306	
2	42.6100	-7.67	47.47	39.80	40.00	-0.20	QP	100	322	
3	74.6200	-12.98	51.78	38.80	40.00	-1.20	QP	100	127	
4	395.6899	-3.34	45.04	41.70	46.00	-4.30	QP	100	279	
5	571.2600	-1.22	39.42	38.20	46.00	-7.80	QP	100	52	
6	918.5200	3.39	123.02	126.41	46.00	80.41	QP	100	49	TX
7	935.9800	3.88	39.52	43.40	46.00	-2.60	QP	100	317	
8	941.8000	4.04	39.56	43.60	46.00	-2.40	QP	100	133	

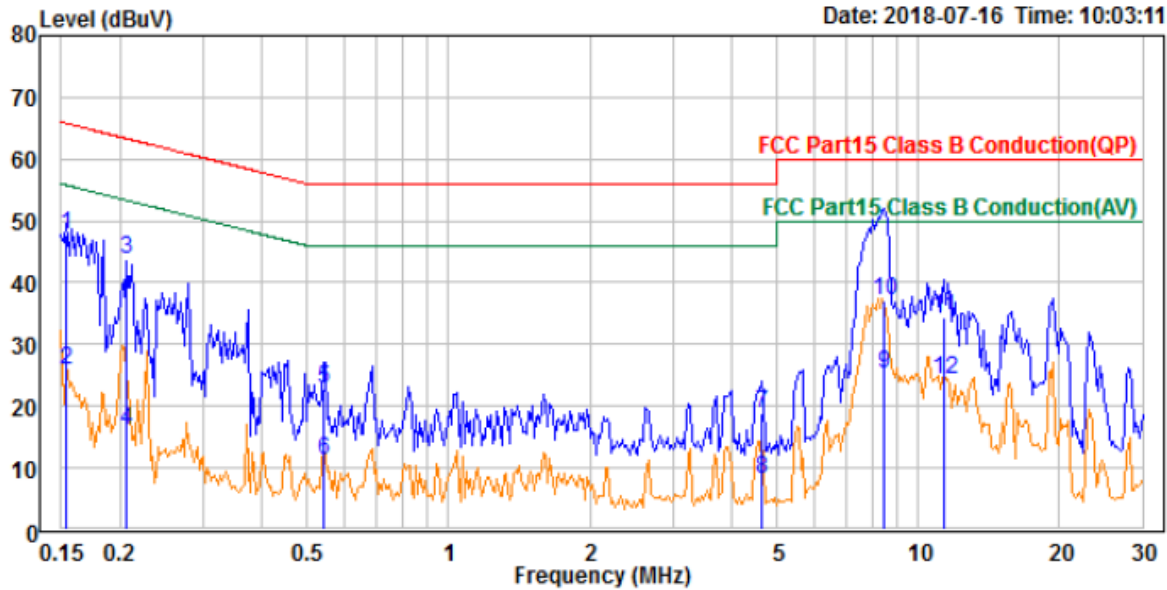
Mains Spurious Emissions



Trace: 1

Site : Conduction room
 Condition : FCC Part15 Class B Conduction(QP) line1
 Test Engineer: Joe Tien
 Applicant : Nedap
 Product : Lumen iL33
 Model No. : ASSY T325R RF+MD+RFID
 Test Rating : 120Vac/60Hz
 Tmp/Hum : 28.1 °C / 29%
 Memo : Normal operation

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.161	26.61	9.68	36.29	65.42	-29.13	QP
2	0.161	13.92	9.68	23.60	55.42	-31.82	Average
3	0.278	16.80	9.68	26.48	60.88	-34.40	QP
4	0.278	2.43	9.68	12.11	50.88	-38.77	Average
5	0.660	15.26	9.69	24.95	56.00	-31.05	QP
6	0.660	-0.29	9.69	9.40	46.00	-36.60	Average
7	4.675	10.20	9.76	19.96	56.00	-36.04	QP
8	4.675	0.29	9.76	10.05	46.00	-35.95	Average
9	8.489	41.97	9.81	51.78	60.00	-8.22	QP
10	8.489	29.98	9.81	39.79	50.00	-10.21	Average
11	11.553	27.20	9.84	37.04	60.00	-22.96	QP
12	11.553	17.48	9.84	27.32	50.00	-22.68	Average



Trace: 1

Site : Conduction room
 Condition : FCC Part15 Class B Conduction(QP) neutral
 Test Engineer: Joe Tien
 Applicant : Nedap
 Product : Lumen iL33
 Model No. : ASSY T325R RF+MD+RFID
 Test Rating : 120Vac/60Hz
 Tmp/Hum : 28.1 °C / 29%
 Memo : Normal operation

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.153	38.20	9.68	47.88	65.83	-17.95	QP
2	0.153	16.06	9.68	25.74	55.83	-30.09	Average
3	0.206	34.17	9.68	43.85	63.36	-19.51	QP
4	0.206	6.55	9.68	16.23	53.36	-37.13	Average
5	0.541	13.27	9.68	22.95	56.00	-33.05	QP
6	0.541	1.43	9.68	11.11	46.00	-34.89	Average
7	4.629	9.19	9.76	18.95	56.00	-37.05	QP
8	4.629	-1.48	9.76	8.28	46.00	-37.72	Average
9	8.489	15.34	9.82	25.16	60.00	-34.84	QP
10	8.489	27.17	9.82	36.99	50.00	-13.01	Average
11	11.325	24.60	9.86	34.46	60.00	-25.54	QP
12	11.325	14.61	9.86	24.47	50.00	-25.53	Average