

Test Report No.50080045 001

Appendix D: Radiated and Mains Spurious Emission Data

(File: 50080045AppendixD)

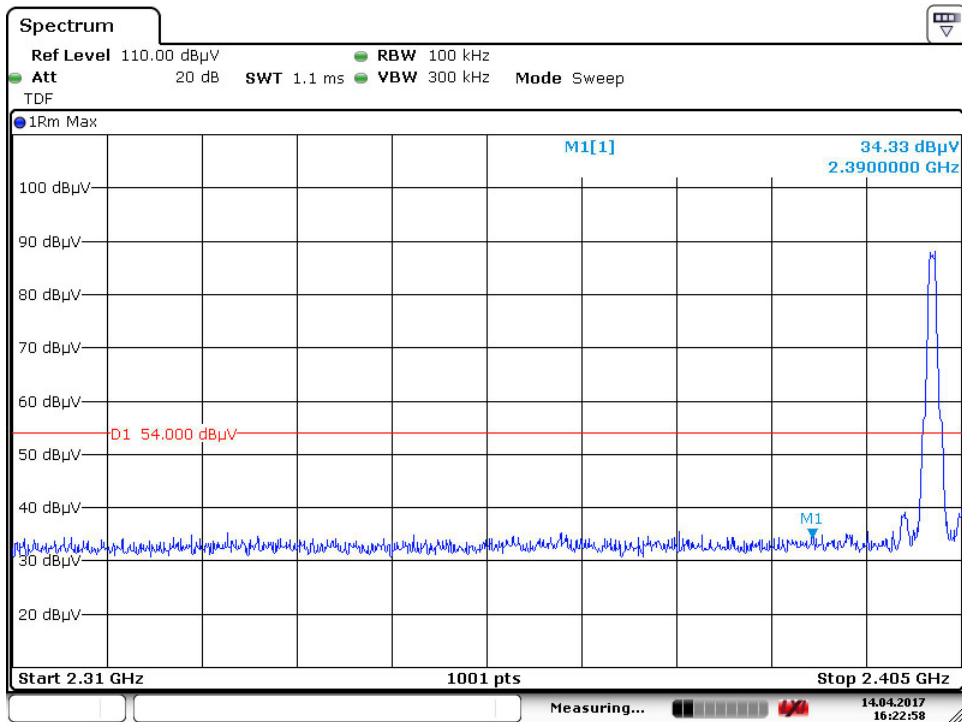
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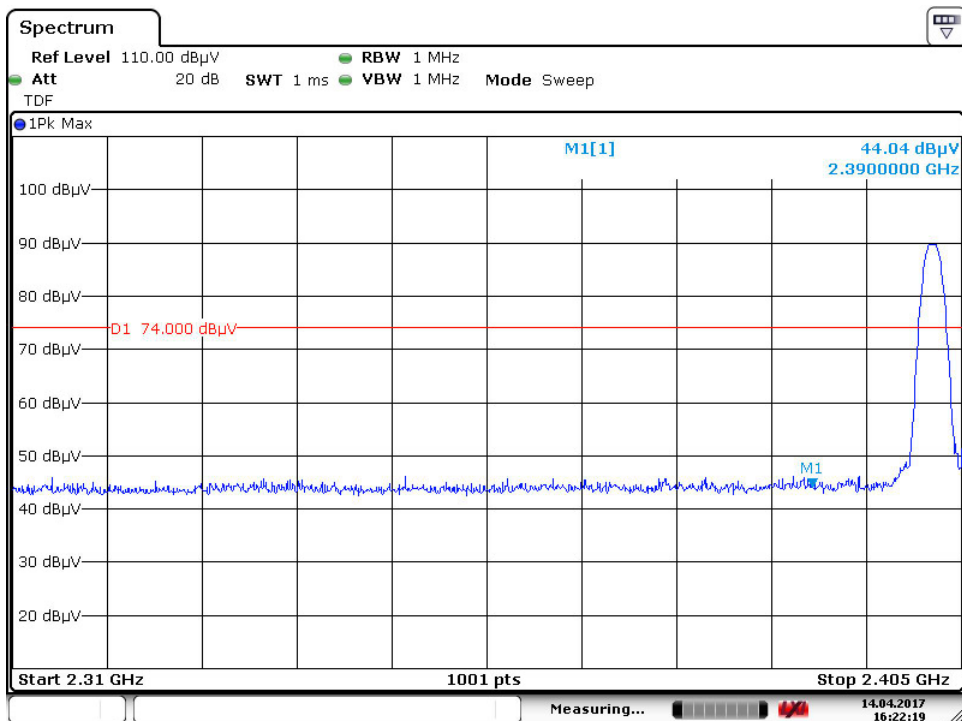
Spurious Emissions, Band Edges, 2.35-2.5G

Radiated Band Edges

Low Channel (Hor)



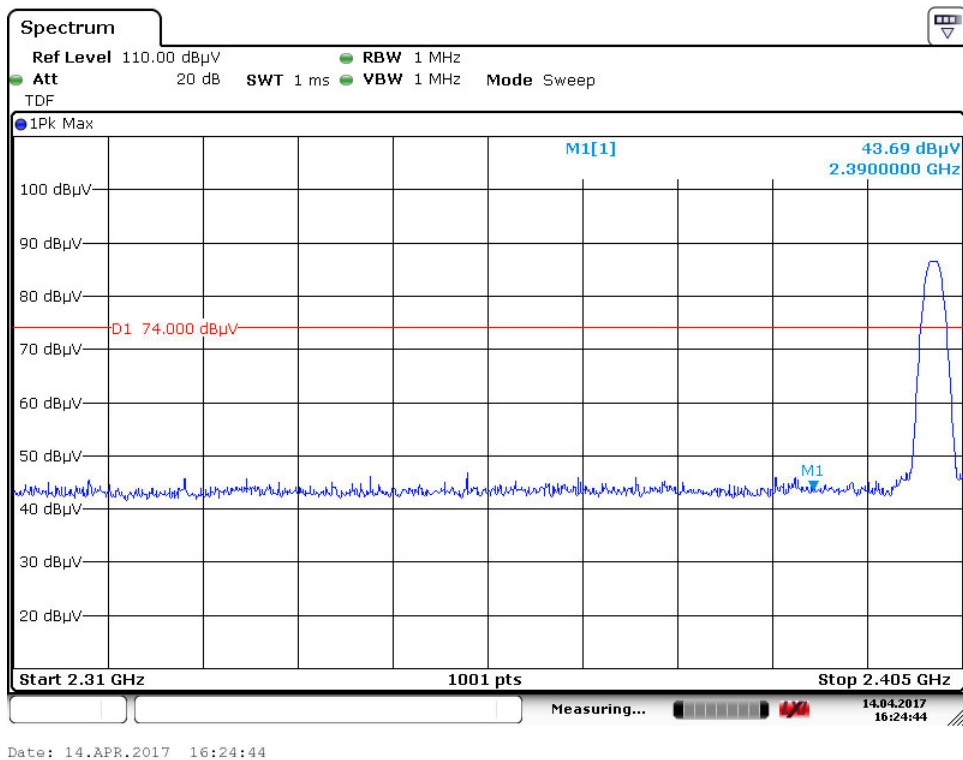
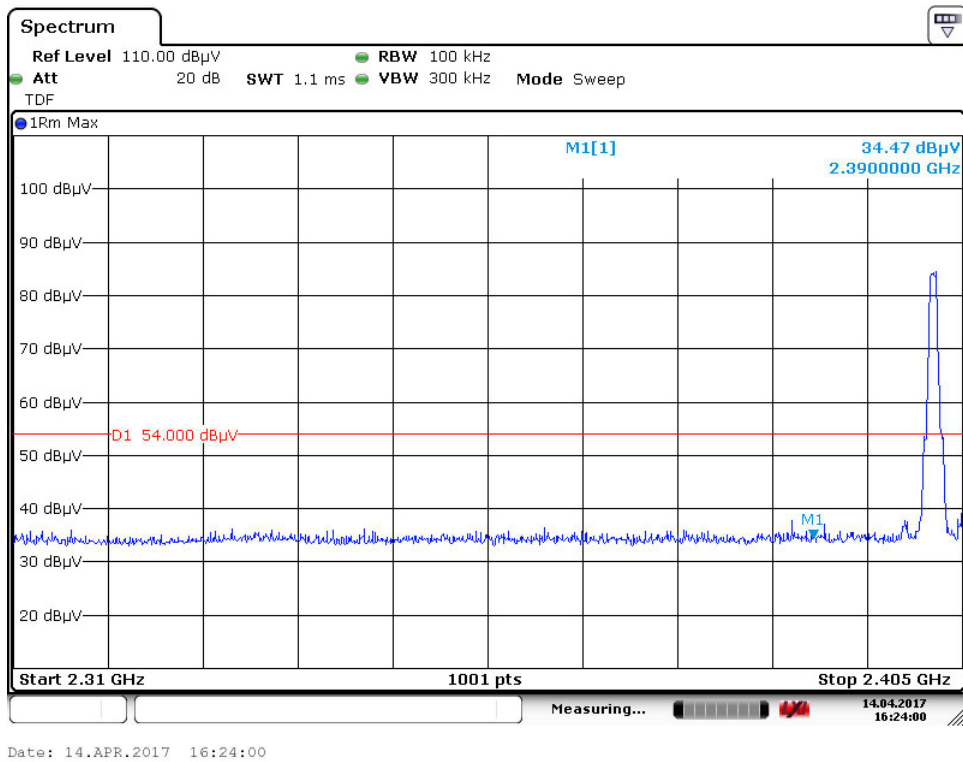
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Date: 14.APR.2017 16:22:18

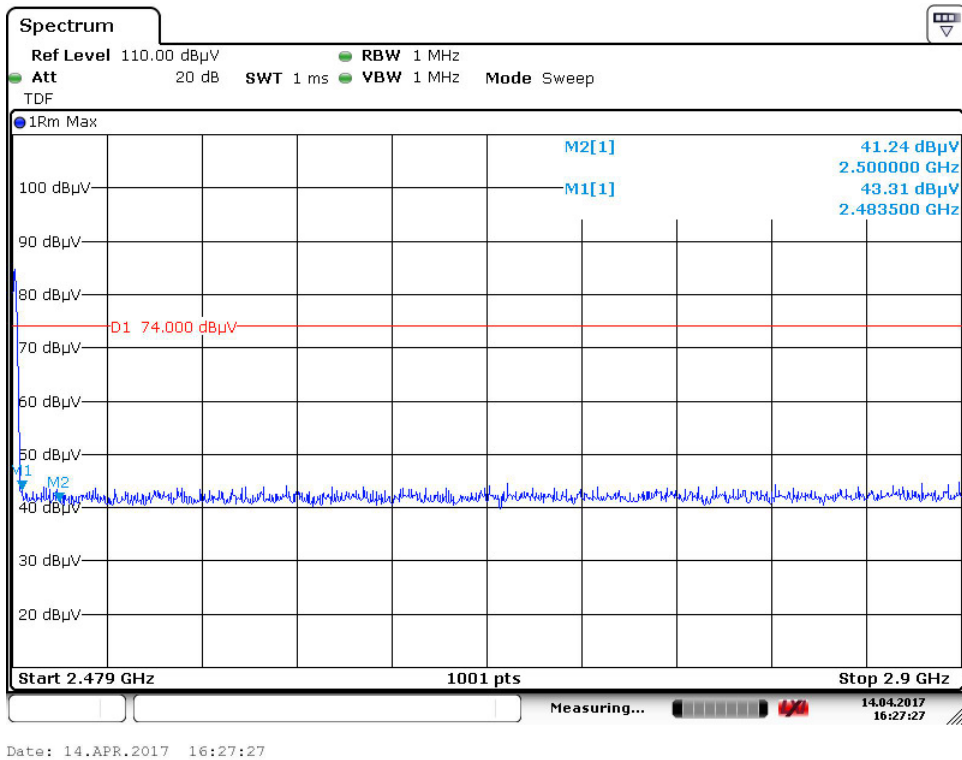
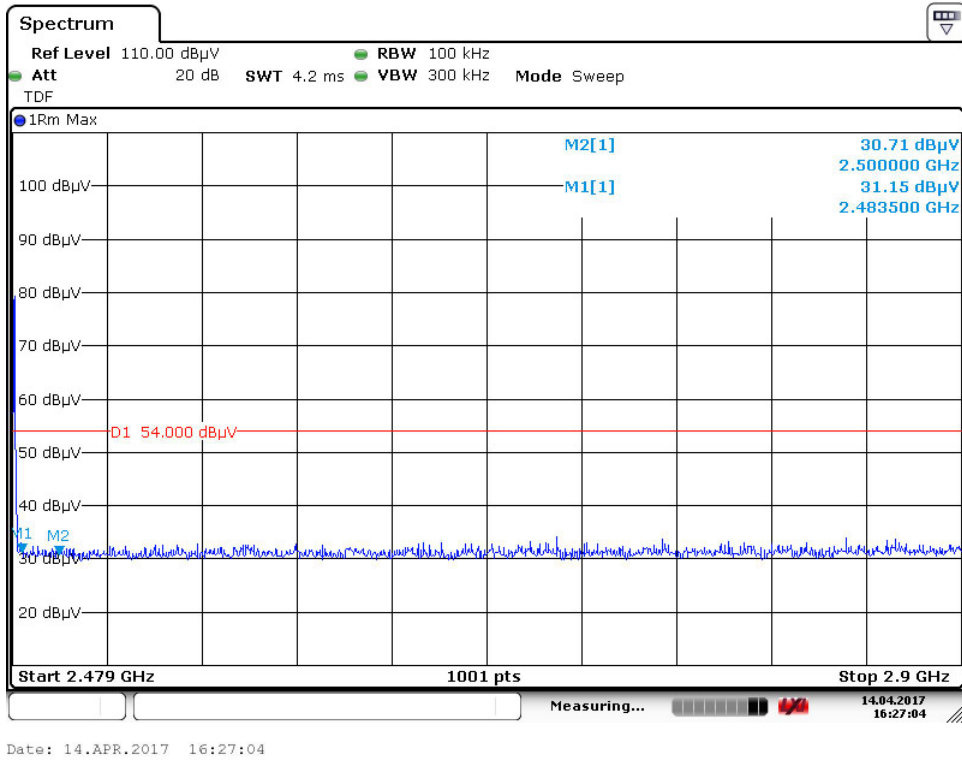
Spurious Emissions, Band Edge, 2.35-2.5G

Low Channel (Ver)



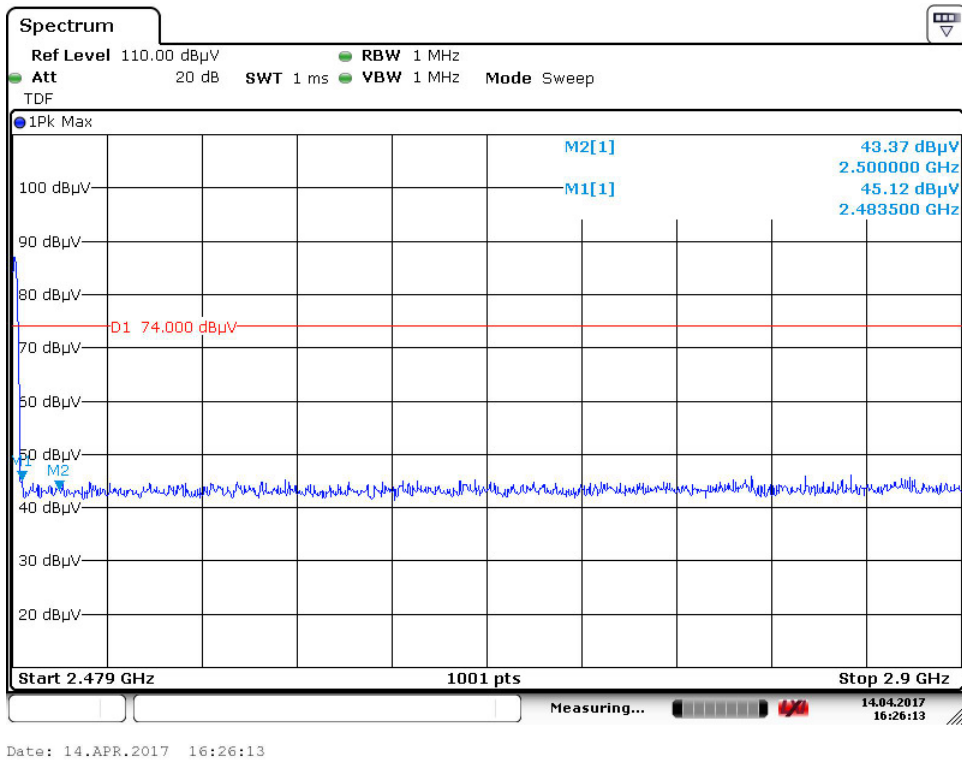
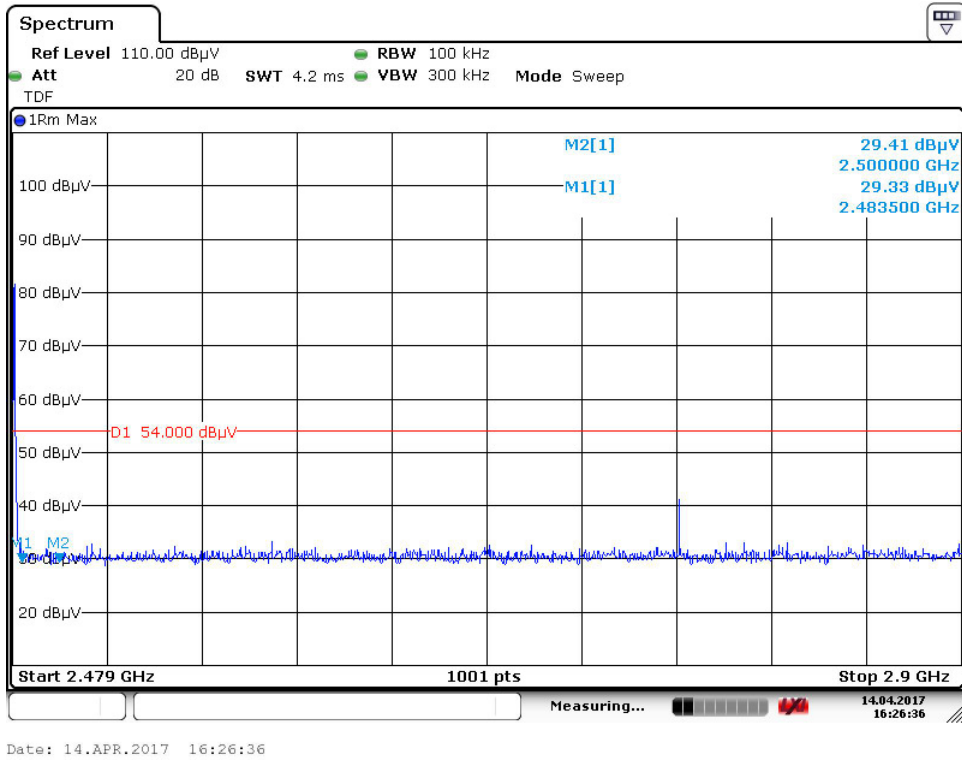
Spurious Emissions, Band Edge, 2.35-2.5G

High Channel (Hor)



Spurious Emissions, Band Edge, 2.35-2.5G

High Channel (Ver)



Spurious Emissions, Band Edge, 2.35-2.5G

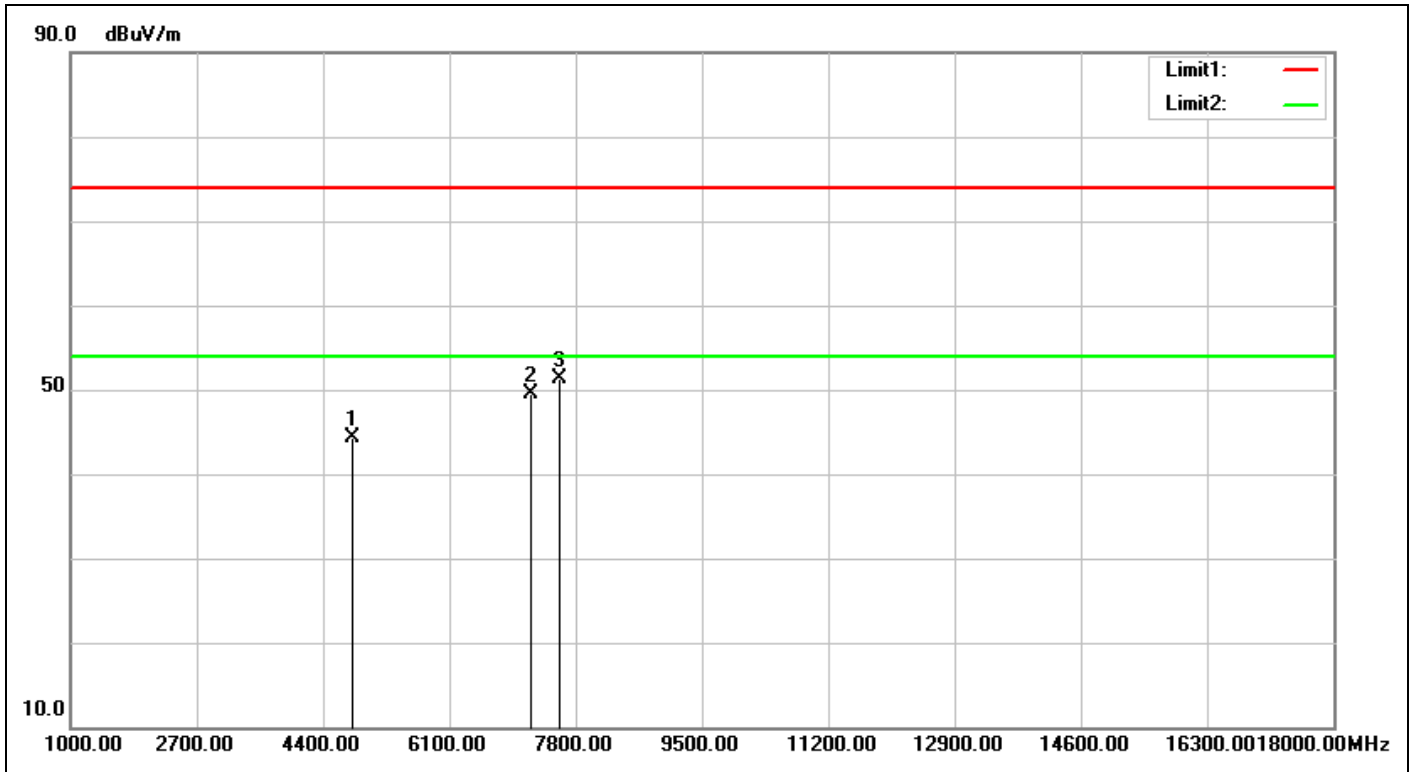
Spurious Emissions, TX Mode, 1-18G



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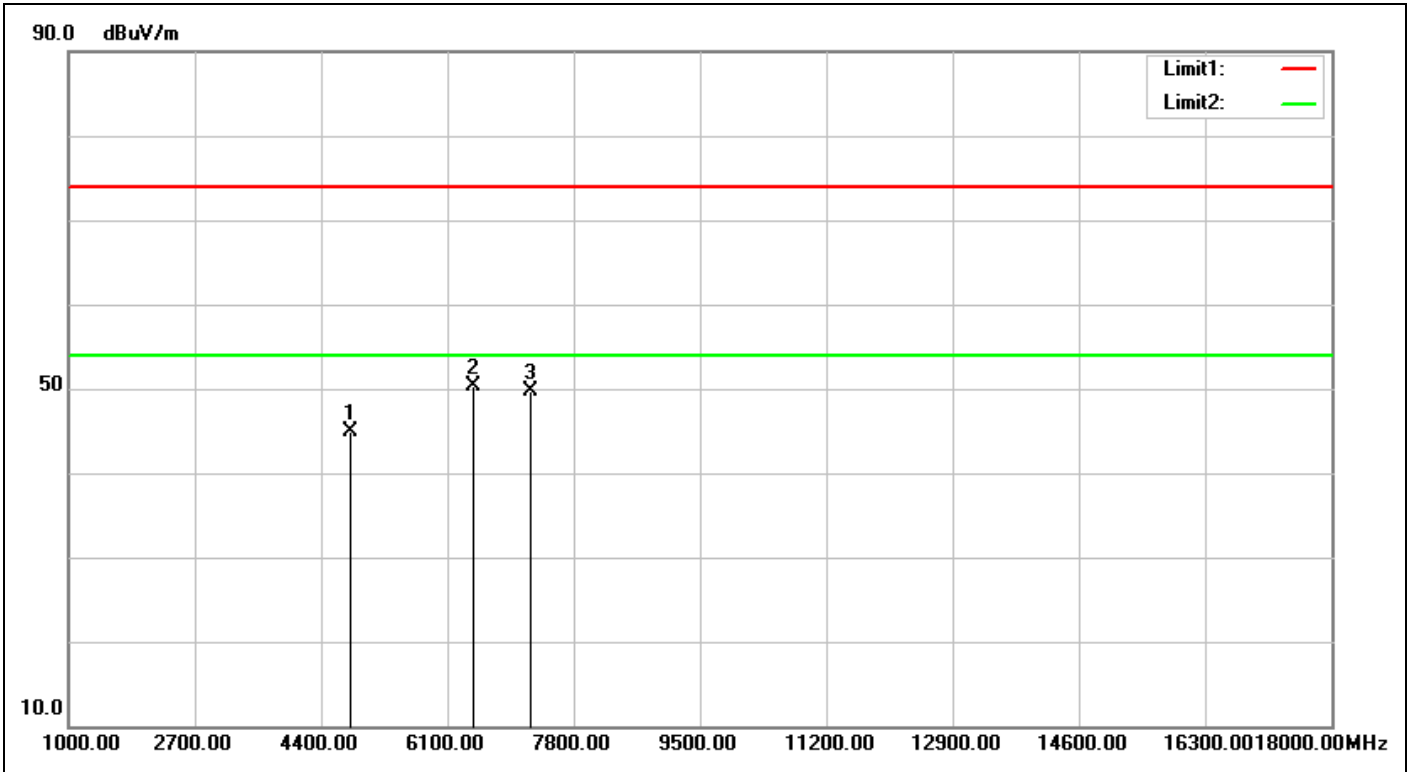
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



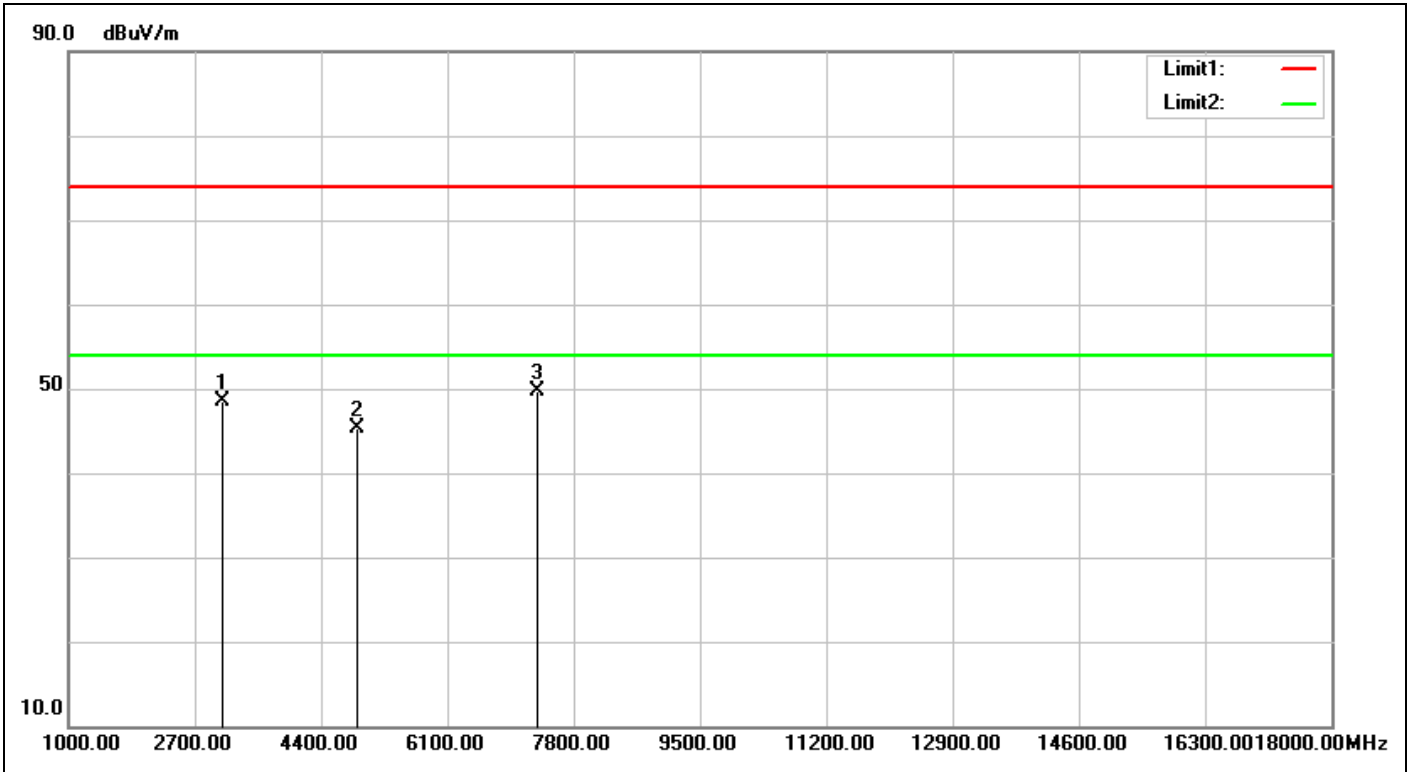
Service No.:	114061922(PM601)-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/4/14 16:35:10
Applicant:	OMRON	Test Rating:	
Product:		Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	Test Engineer:	George Yang
Test Mode:	2402-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4804.000	-2.66	46.91	44.25	74.00	-29.75	peak			
2	7206.000	5.58	44.01	49.59	74.00	-24.41	peak			
3	7579.000	6.45	44.82	51.27	74.00	-22.73	peak	100	11	



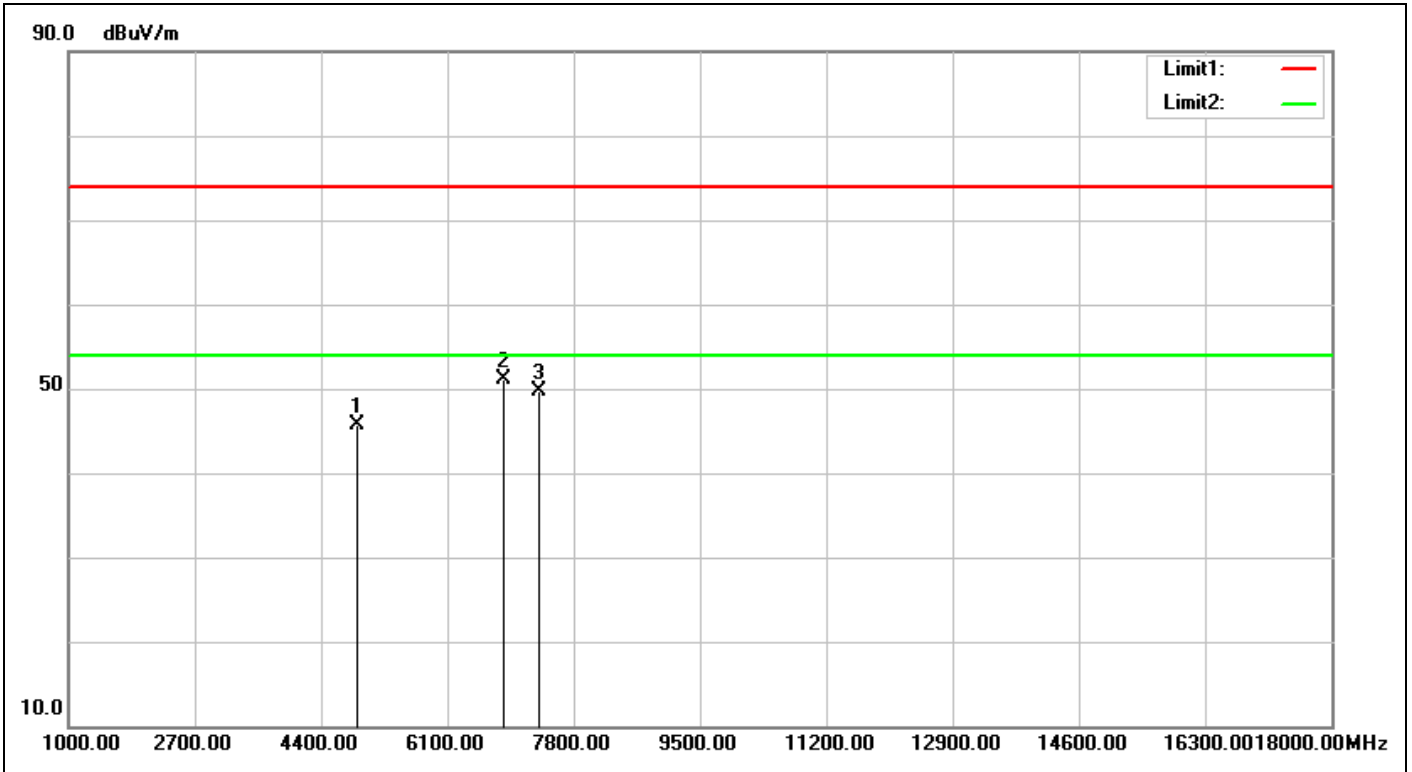
Service No.:	114061922(PM601)-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/4/14 16:36:12
Applicant:	OMRON	Test Rating:	
Product:	Avail™ Wireless Dual Channel TENS	Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	Test Engineer:	George Yang
Test Mode:	2402-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4804.000	-2.66	47.65	44.99	74.00	-29.01	peak			
2	6440.000	5.35	44.91	50.26	74.00	-23.74	peak	100	53	
3	7206.000	5.58	44.03	49.61	74.00	-24.39	peak			



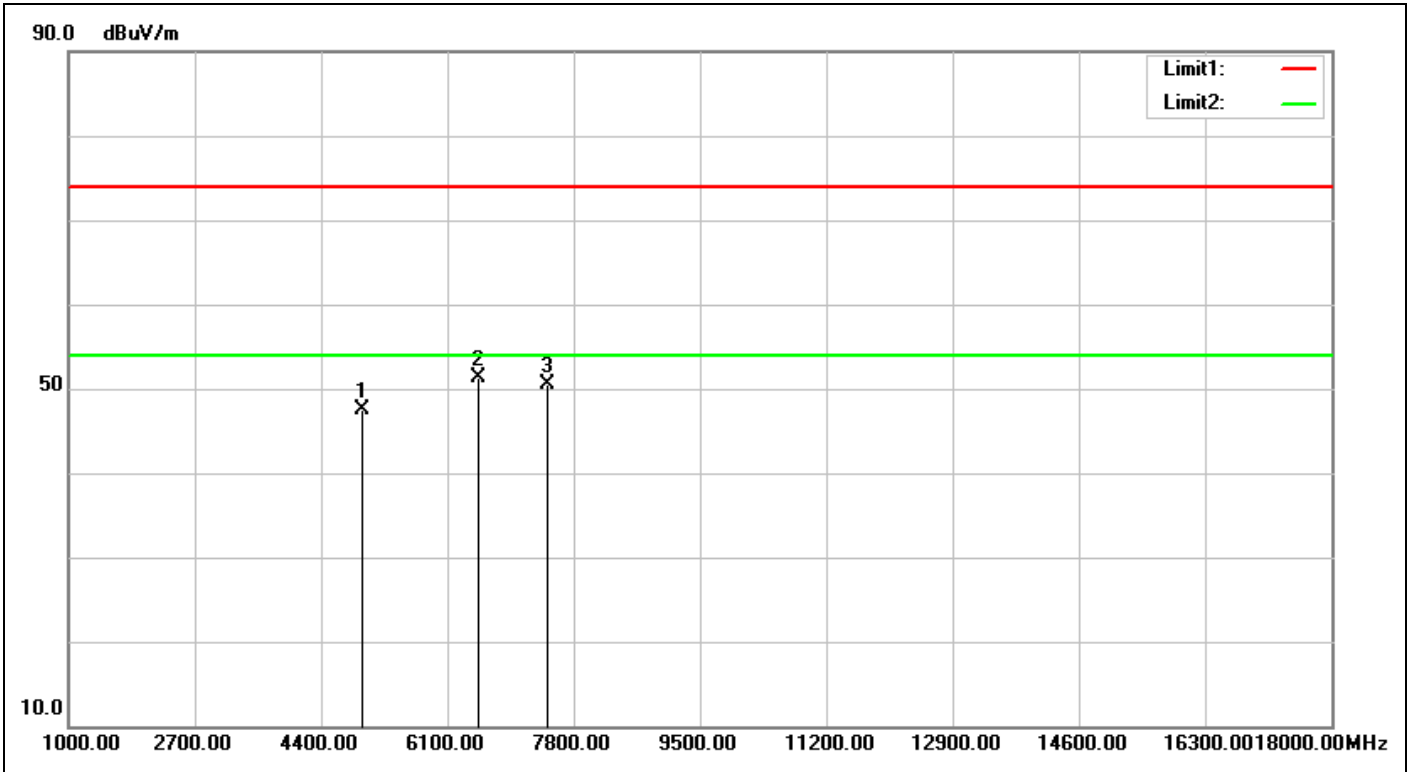
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/4/14 16:32:17
Applicant:	OMRON	Test Rating:	
Product:	Avail™ Wireless Dual Channel TENS	Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	Test Engineer:	George Yang
Test Mode:	2440-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	3074.000	-6.42	55.02	48.60	74.00	-25.40	peak	100	265	
2	4880.000	-2.48	47.69	45.21	74.00	-28.79	peak			
3	7320.000	5.93	43.85	49.78	74.00	-24.22	peak			



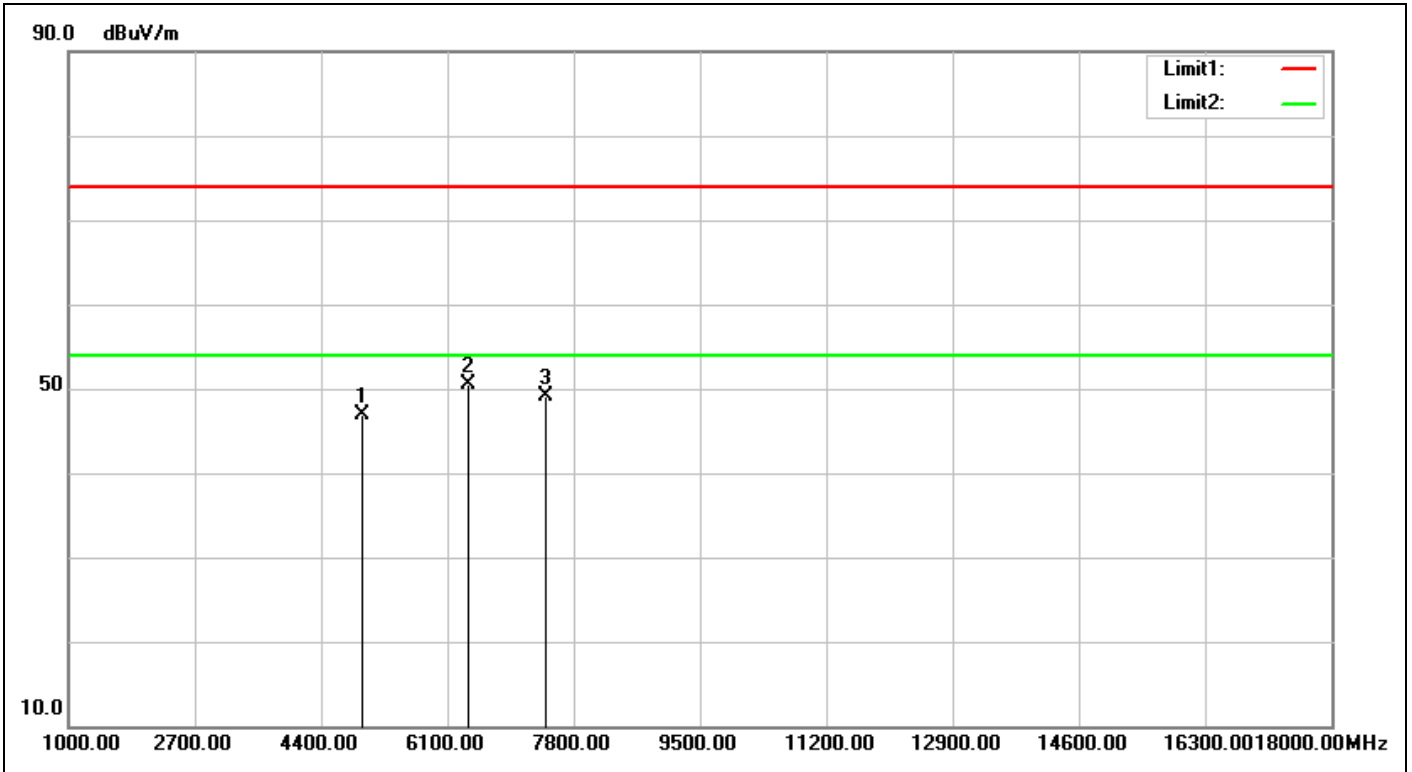
Service No.:	114061922(PM601)-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/4/14 16:33:20
Applicant:	OMRON	Test Rating:	
Product:	Avail™ Wireless Dual Channel TENS	Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	Test Engineer:	George Yang
Test Mode:	2440-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4880.000	-2.48	48.10	45.62	74.00	-28.38	peak			
2	6865.000	5.12	46.01	51.13	74.00	-22.87	peak	100	280	
3	7320.000	5.93	43.81	49.74	74.00	-24.26	peak			



Service No.:	114061922(PM601)-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/4/14 16:28:37
Applicant:	OMRON	Test Rating:	
Product:	Avail™ Wireless Dual Channel TENS	Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	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	-2.31	49.90	47.59	74.00	-26.41	peak		0	
2	6508.000	5.53	45.72	51.25	74.00	-22.75	peak	100	169	
3	7440.000	6.28	44.20	50.48	74.00	-23.52	peak		0	



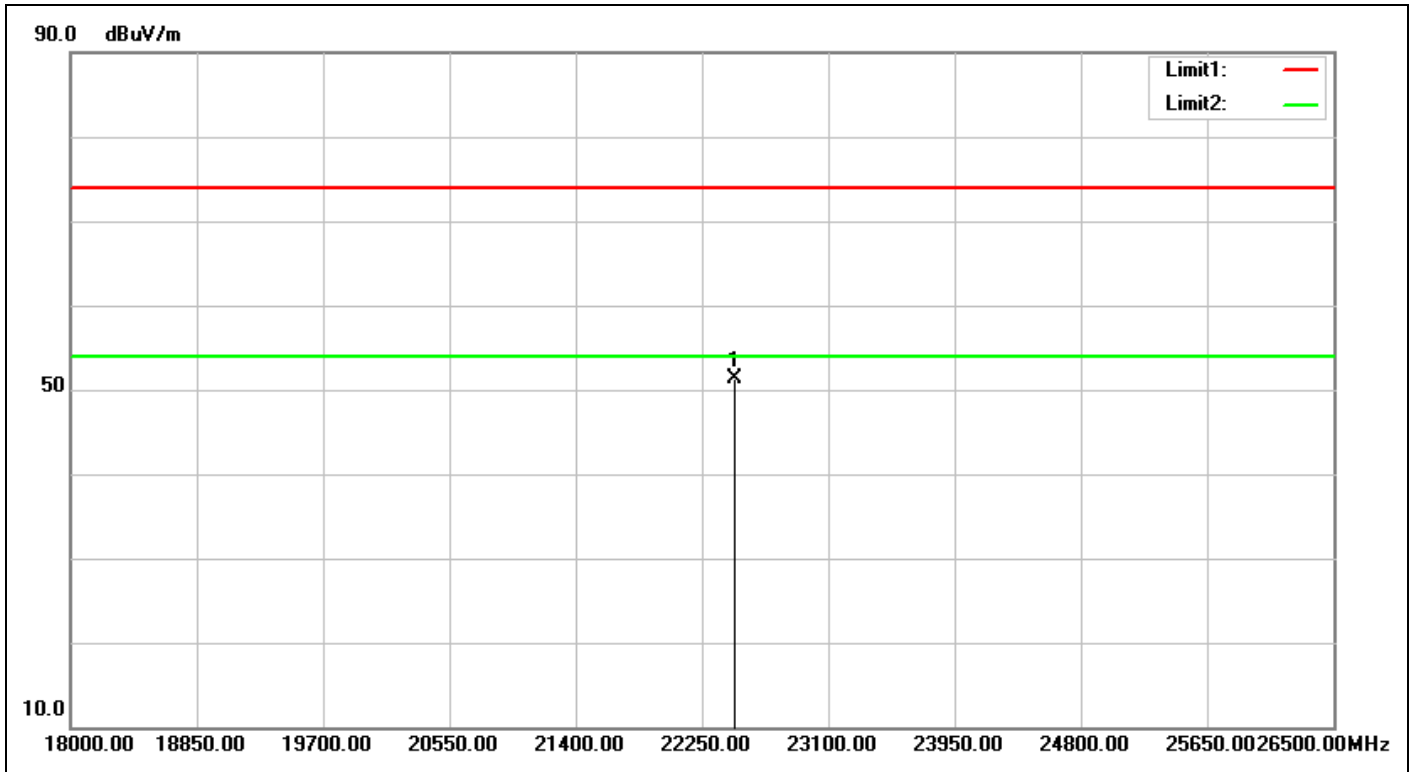
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/4/14 16:29:40
Applicant:	OMRON	Test Rating:	
Product:	Avail™ Wireless Dual Channel TENS	Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	Test 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	-2.31	49.12	46.81	74.00	-27.19	peak			
2	6372.000	5.12	45.33	50.45	74.00	-23.55	peak	100	327	
3	7440.000	6.28	42.82	49.10	74.00	-24.90	peak			

Spurious Emissions, TX Mode, 18-26G

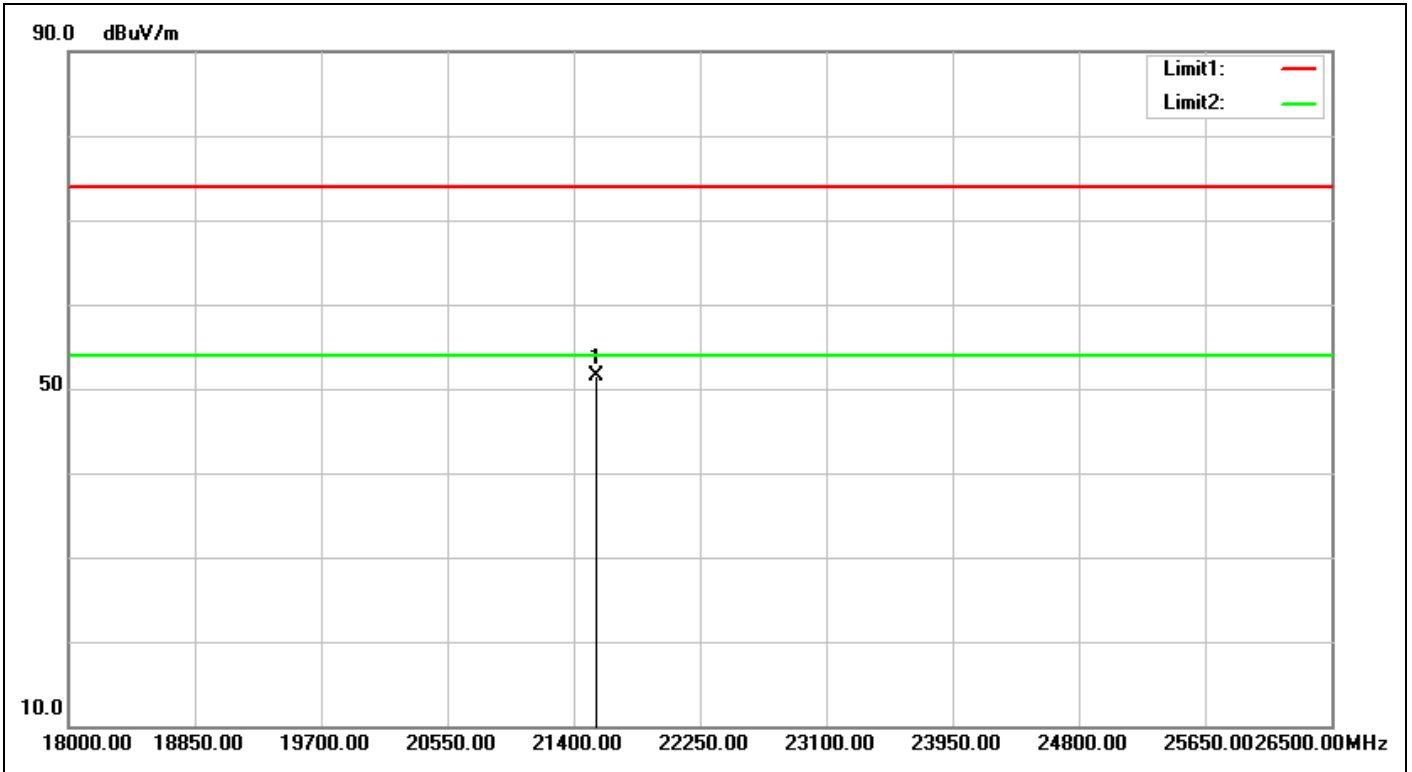


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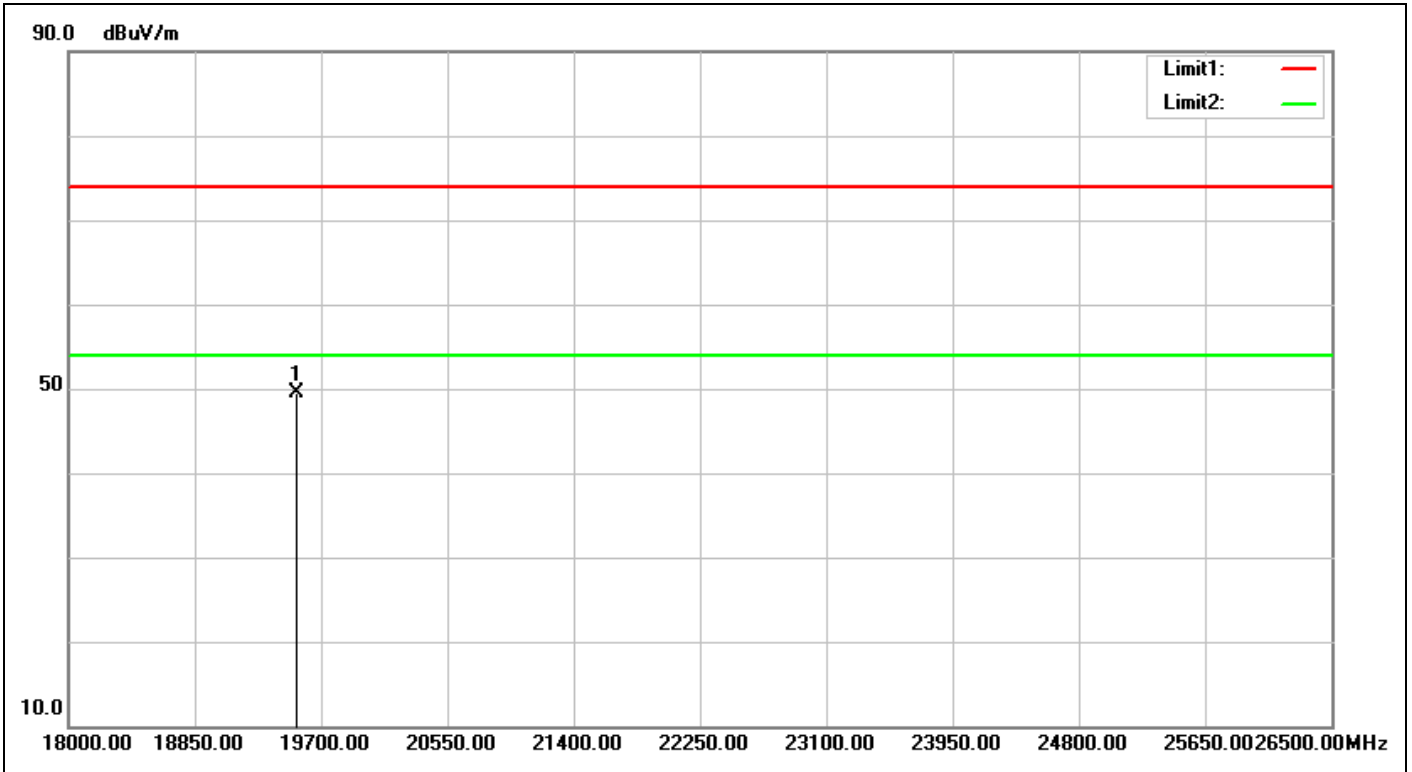
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/4/14 16:47:14
Applicant:	OMRON	Test Rating:	
Product:	Avail™ Wireless Dual Channel TENS	Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	Test Engineer:	George Yang
Test Mode:	2402-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22471.000	32.89	18.45	51.34	74.00	-22.66	peak			



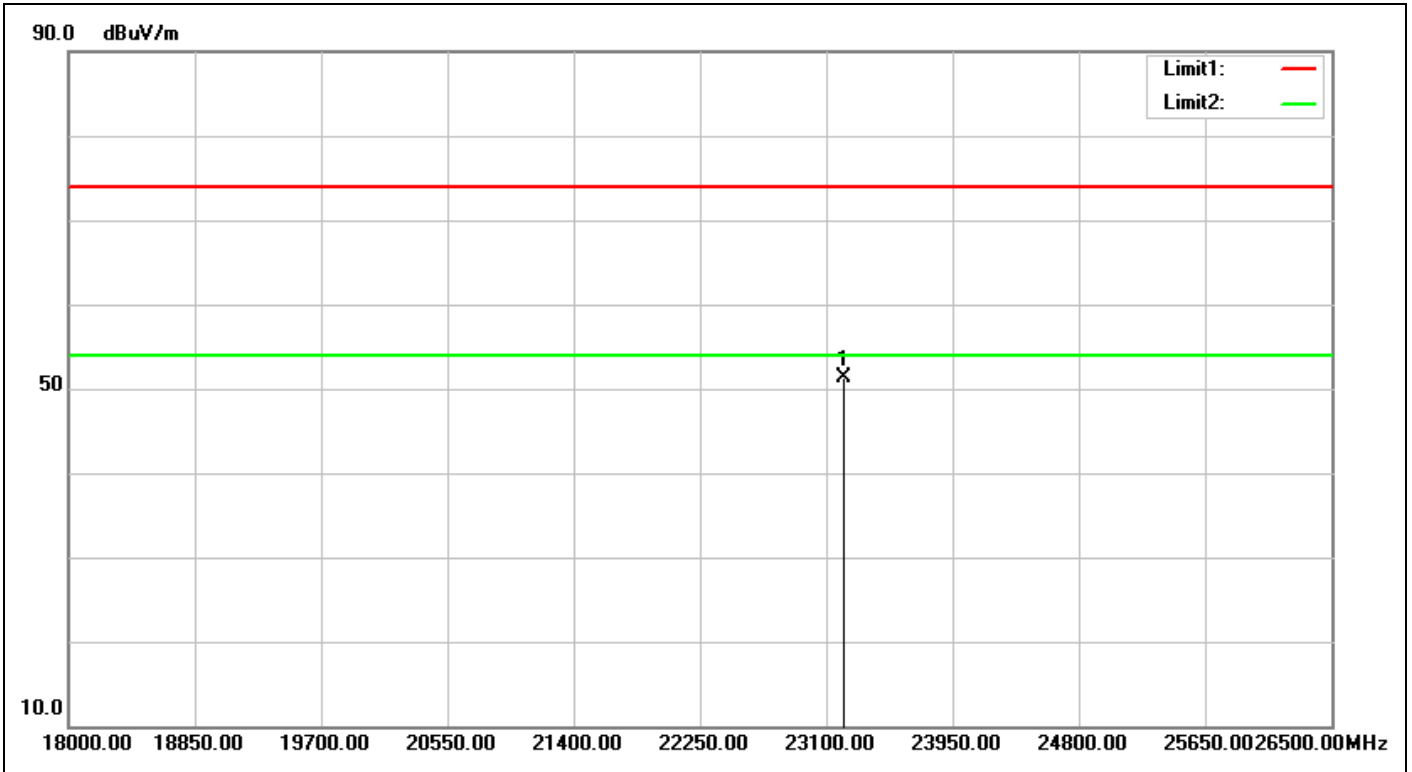
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/4/14 16:47:48
Applicant:	OMRON	Test Rating:	
Product:	Avail™ Wireless Dual Channel TENS	Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	Test Engineer:	George Yang
Test Mode:	2402-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21553.000	32.69	18.84	51.53	74.00	-22.47	peak			



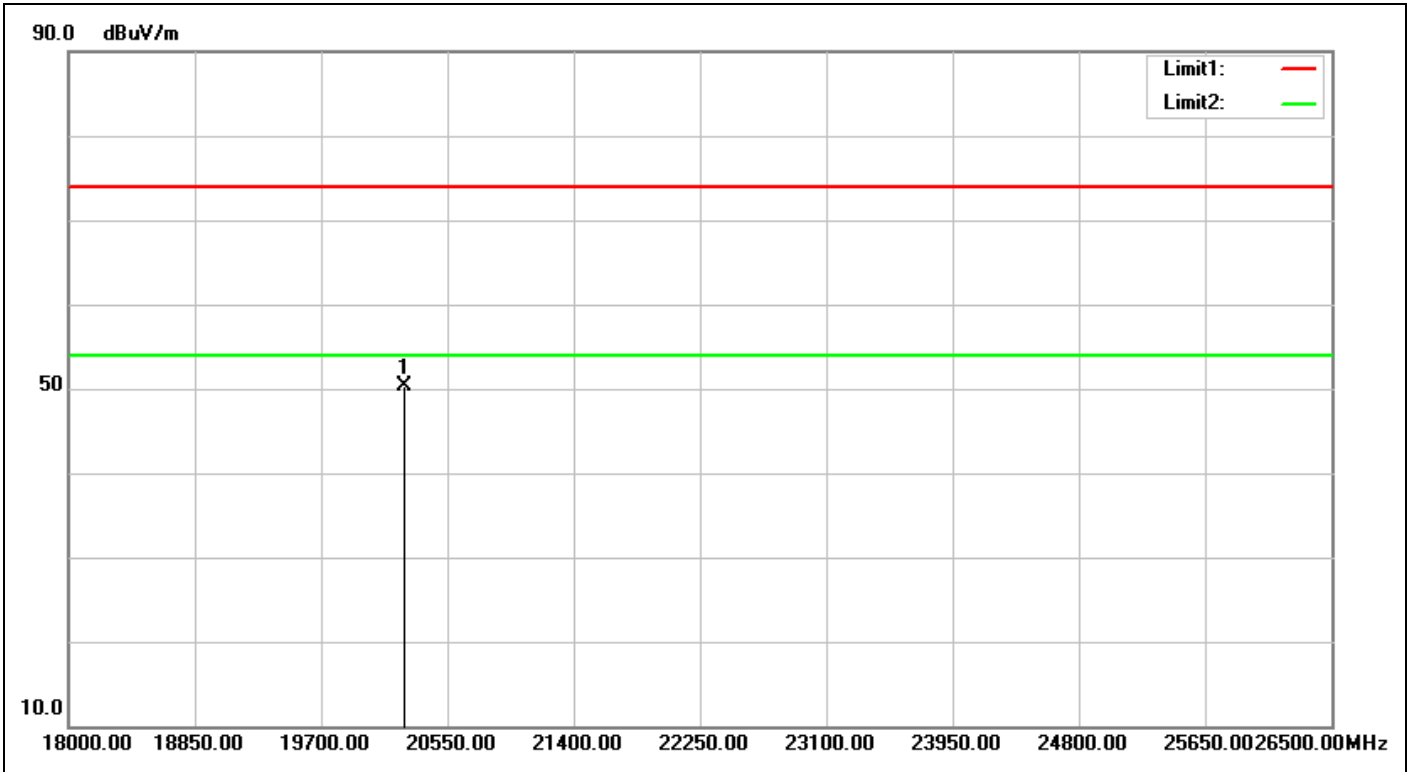
Service No.:	114061922(PM601)-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/4/14 16:48:03
Applicant:	OMRON	Test Rating:	
Product:	Avail™ Wireless Dual Channel TENS	Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	Test Engineer:	George Yang
Test Mode:	2440-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	19538.500	31.24	18.23	49.47	74.00	-24.53	peak			



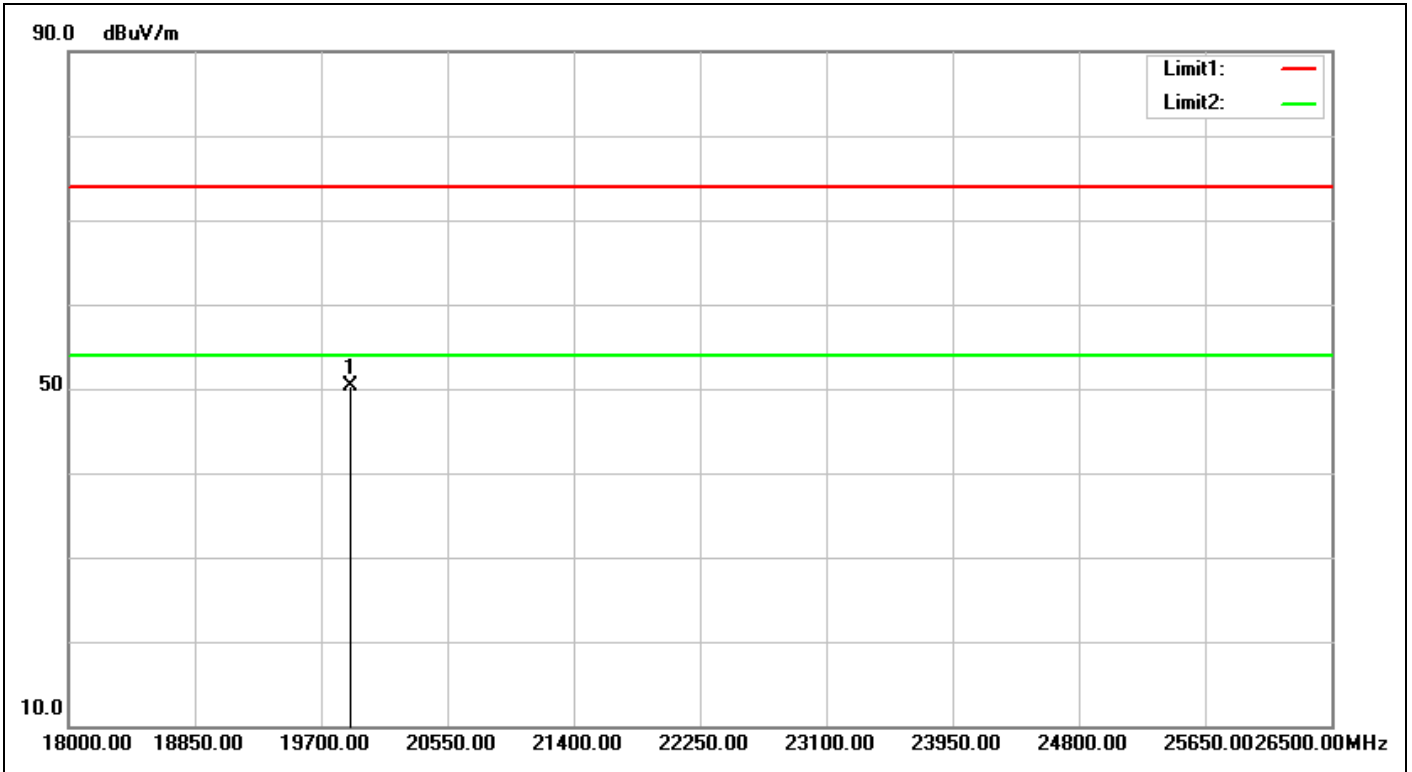
Service No.:	114061922(PM601)-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/4/14 16:48:11
Applicant:	OMRON	Test Rating:	
Product:	Avail™ Wireless Dual Channel TENS	Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	Test Engineer:	George Yang
Test Mode:	2440-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23219.000	32.65	18.60	51.25	74.00	-22.75	peak			



Service No.:	114061922(PM601)-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/4/14 16:48:24
Applicant:	OMRON	Test Rating:	
Product:	Avail™ Wireless Dual Channel TENS	Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	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	20261.000	31.61	18.62	50.23	74.00	-23.77	peak			



Service No.:	114061922(PM601)-FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/4/14 16:48:35
Applicant:	OMRON	Test Rating:	
Product:	Avail™ Wireless Dual Channel TENS	Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	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	19895.500	31.43	18.88	50.31	74.00	-23.69	peak			

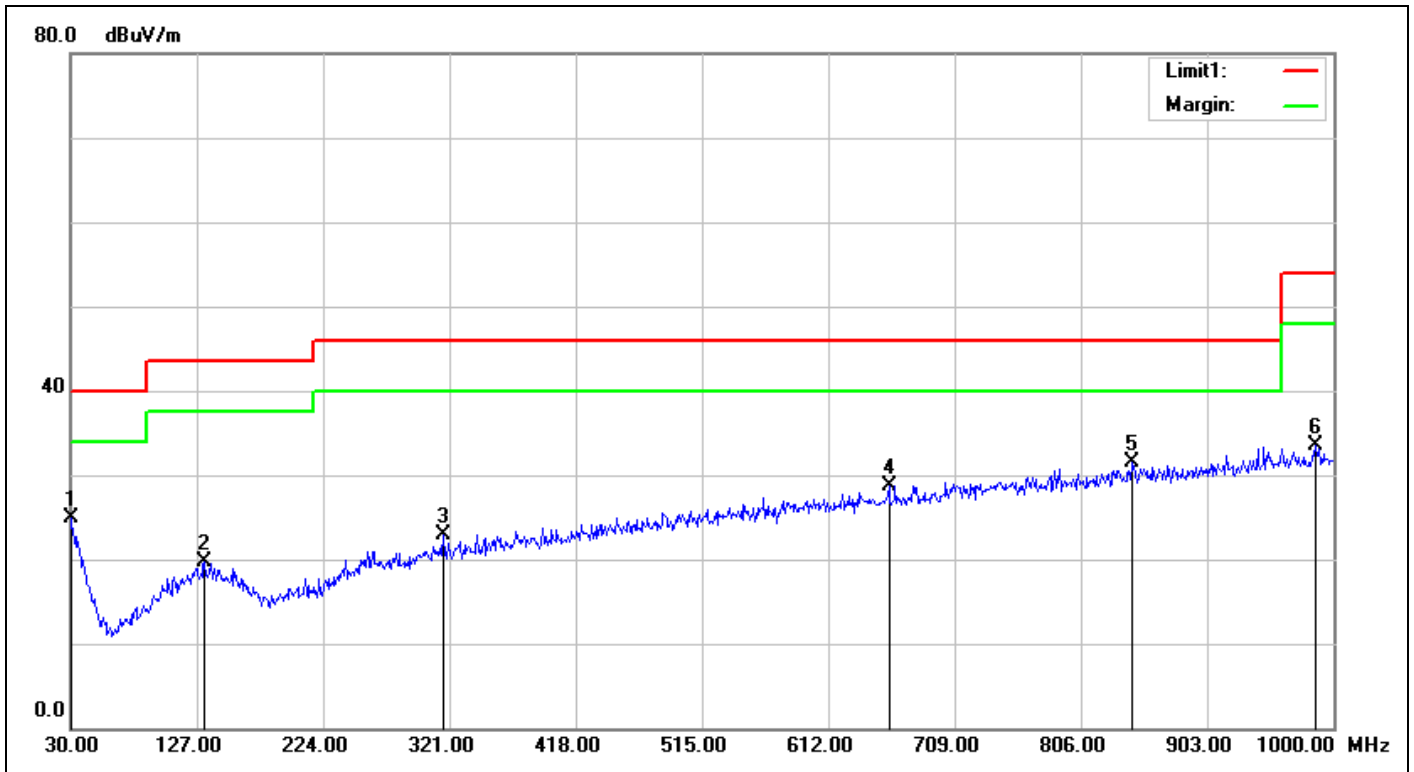
Spurious Emissions, TX Mode, 30M-1G



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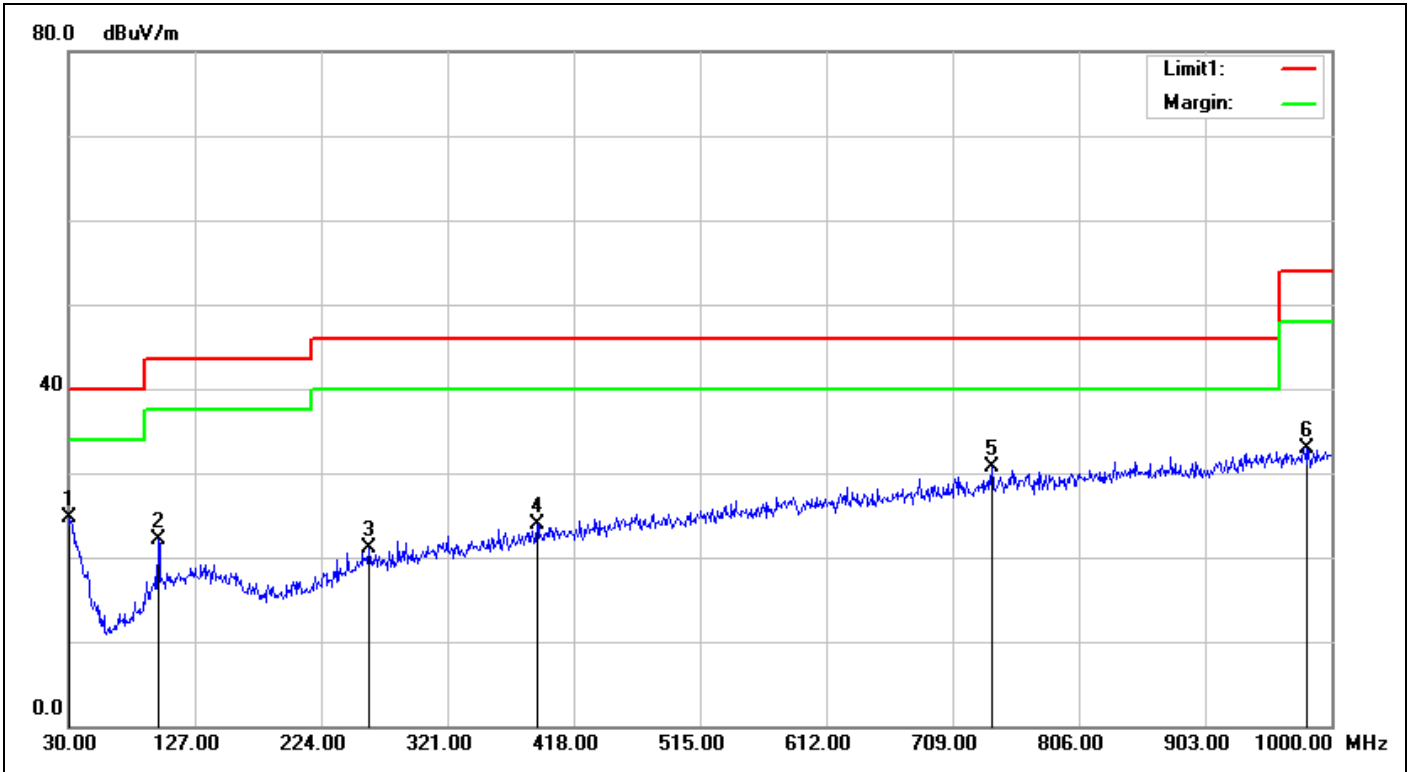
Tel:+886-2172-7000 fax:+886-2528-0018



Service No.:	114061922(PM601)-FCC	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2017/4/14 17:10:48
Applicant:	OMRON	Test Rating:	
Product:	Avail™ Wireless Dual Channel TENS	Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	Test Engineer:	George Yang
Test Mode:	2440-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	24.95	24.88	40.00	-15.12	QP	100	174	
2	132.8200	-6.97	26.65	19.68	43.50	-23.82	QP	100	265	
3	316.1500	-4.15	27.08	22.93	46.00	-23.07	QP	100	171	
4	658.5599	0.64	28.13	28.77	46.00	-17.23	QP	100	161	
5	845.7700	3.61	27.86	31.47	46.00	-14.53	QP	100	105	
6	986.4200	5.72	27.81	33.53	54.00	-20.47	QP	100	119	

Spurious Emissions, TX Mode, 30M-1G



Service No.:	114061922(PM601)-FCC	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2017/4/14 17:11:51
Applicant:	OMRON	Test Rating:	
Product:	Avail™ Wireless Dual Channel TENS	Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	Test Engineer:	George Yang
Test Mode:	2440-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	24.79	24.72	40.00	-15.28	QP	100	236	
2	98.8700	-9.62	31.68	22.06	43.50	-21.44	QP	100	53	
3	260.8600	-4.92	26.06	21.14	46.00	-24.86	QP	100	203	
4	389.8700	-2.81	26.74	23.93	46.00	-22.07	QP	100	136	
5	739.0700	2.07	28.56	30.63	46.00	-15.37	QP	100	45	
6	980.6000	5.66	27.33	32.99	54.00	-21.01	QP	100	83	

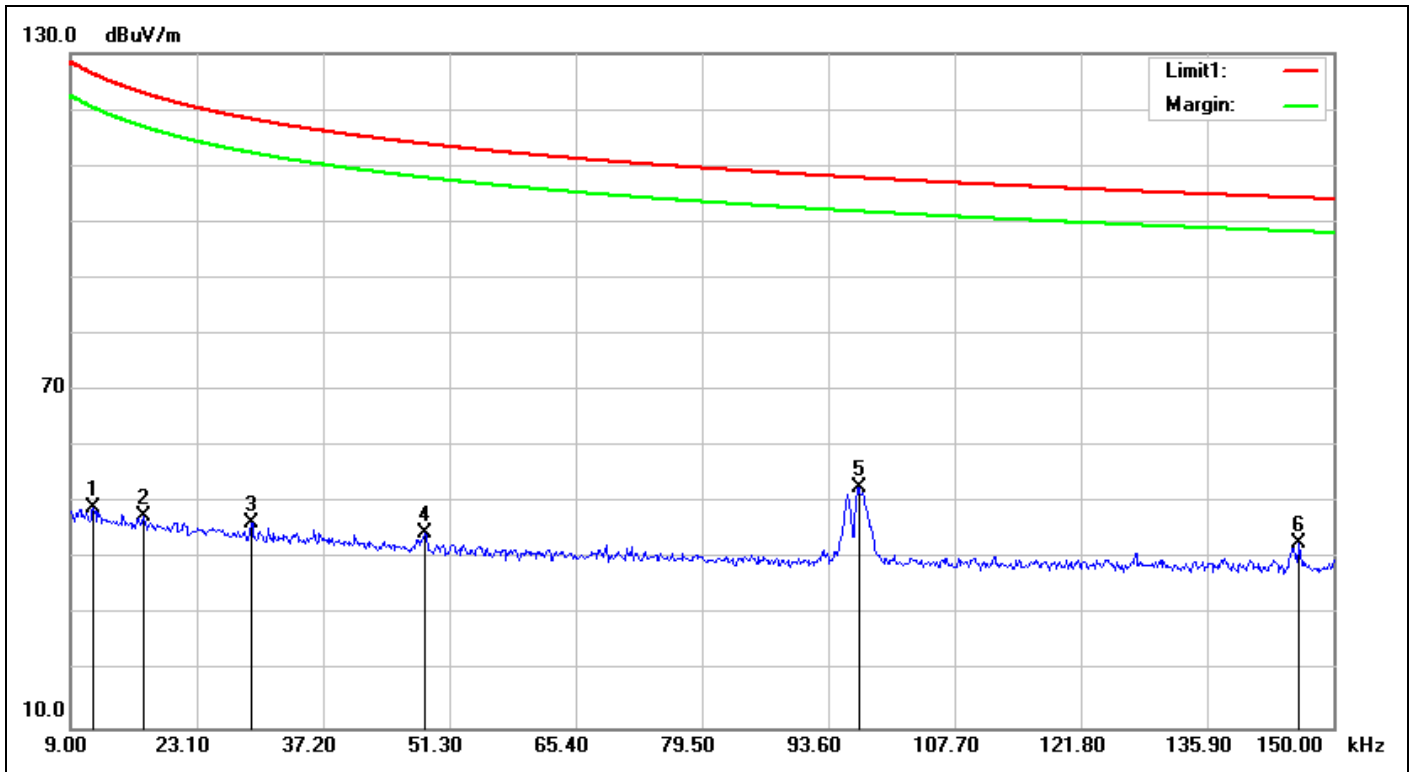
Spurious Emissions, TX Mode, 9k-30M



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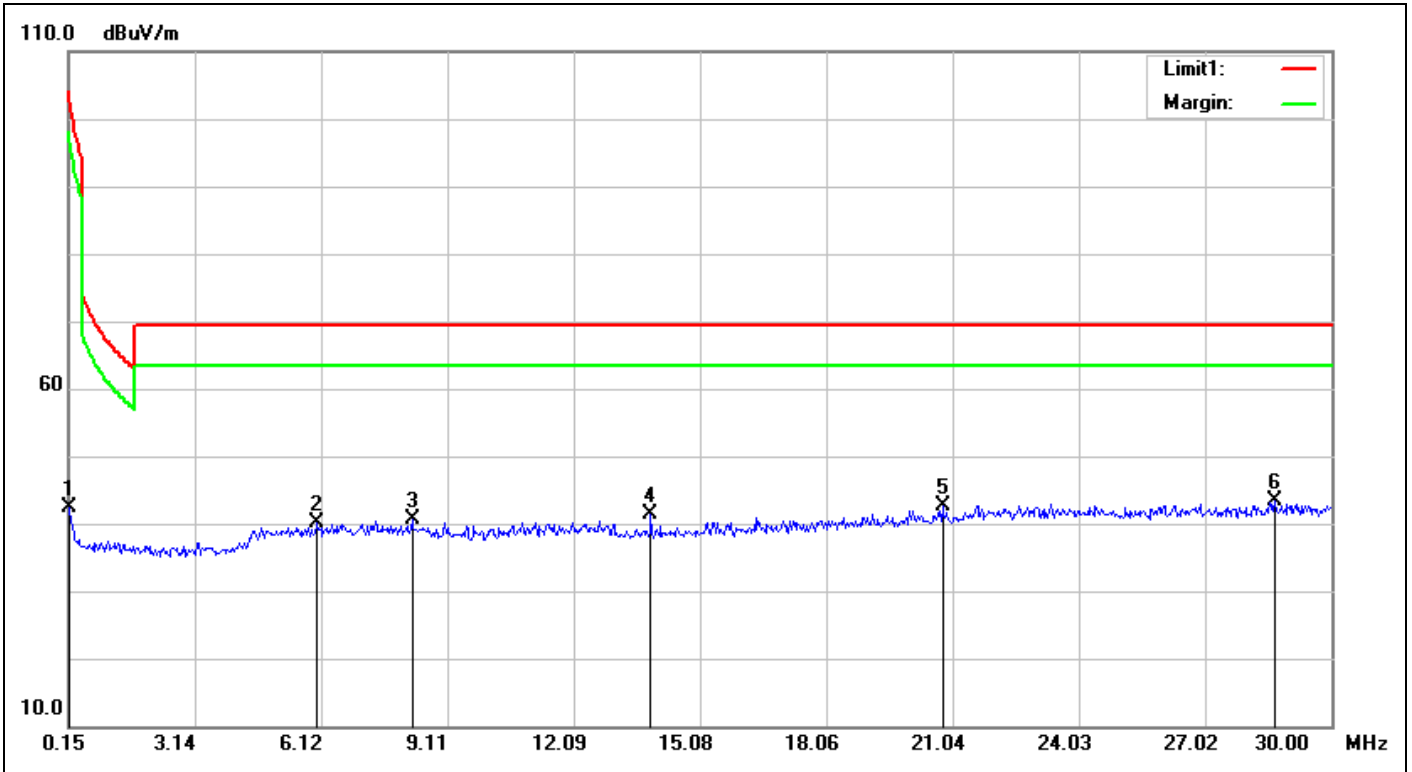
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Service No.:	114061922(PM601)-FCC	Test Distance:	3m
Test Standard:	FCC15.209_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2017/4/14 16:58:16
Applicant:	OMRON	Test Rating:	
Product:	Avail™ Wireless Dual Channel TENS	Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	Test Engineer:	George Yang
Test Mode:	2440-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0115	20.32	28.81	49.13	126.37	-77.24	QP	100	282	
2	0.0171	20.29	27.29	47.58	122.93	-75.35	QP	100	144	
3	0.0291	20.23	26.30	46.53	118.31	-71.78	QP	100	2	
4	0.0486	19.29	25.26	44.55	113.86	-69.31	QP	100	202	
5	0.0969	18.86	33.93	52.79	107.87	-55.08	QP	100	277	
6	0.1461	18.80	24.04	42.84	104.31	-61.47	QP	100	128	

Spurious Emissions, TX Mode, 9k-30M

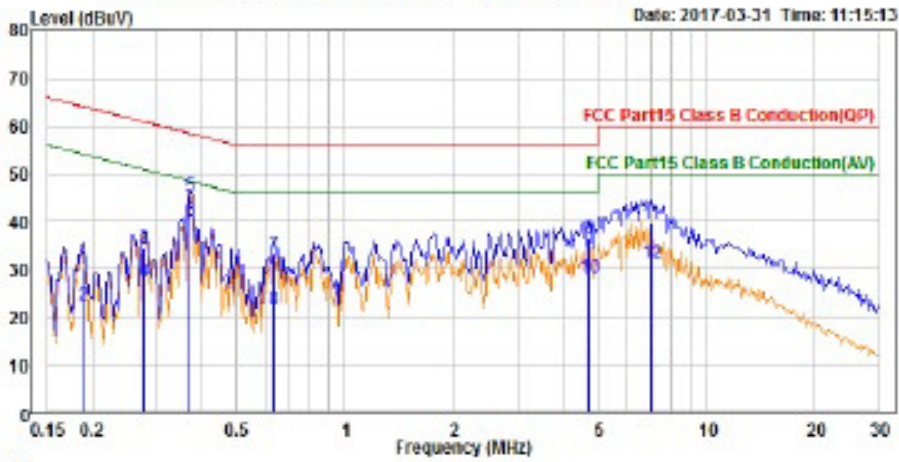


Service No.:	114061922(PM601)-FCC	Test Distance:	3m
Test Standard:	FCC15.209_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2017/4/14 17:01:30
Applicant:	OMRON	Test Rating:	
Product:	Avail™ Wireless Dual Channel TENS	Temp.(°C)/Hum.(%):	21.6(°C)/51%
Model No.:	PM601	Test Engineer:	George Yang
Test Mode:	2440-TX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1798	18.77	23.71	42.48	102.50	-60.02	peak	100	14	
2	6.0304	19.76	20.34	40.10	69.50	-29.40	peak	100	58	
3	8.2692	20.11	20.52	40.63	69.50	-28.87	peak	100	1	
4	13.9108	20.84	20.47	41.31	69.50	-28.19	peak	100	44	
5	20.8062	21.61	20.93	42.54	69.50	-26.96	peak	100	185	
6	28.6567	22.18	21.32	43.50	69.50	-26.00	peak	100	141	

Mains Spurious Emissions

File: C:\EMC\Report\2017\OMRON\114061922\PM601\1_00009.EM

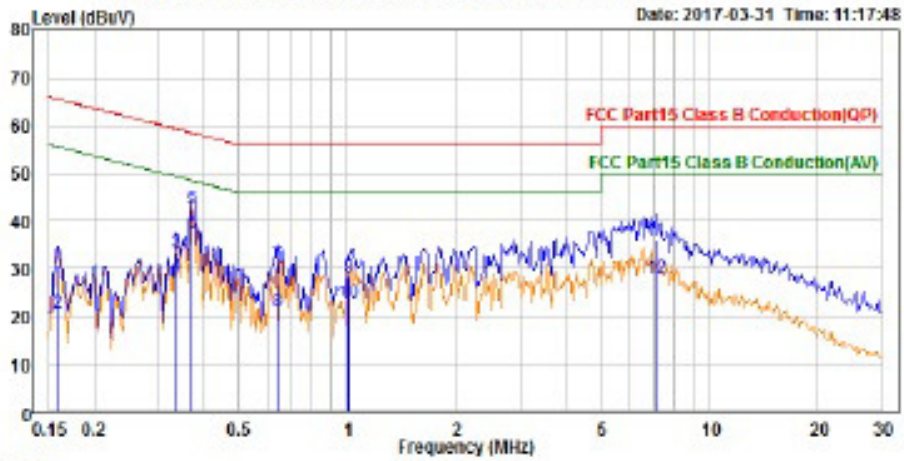


Trace: 1
 Site : Conduction room
 Condition : FCC Part15 Class B Conduction(QP) line1
 Test Engineer: Joe Tien
 Applicant : OMRON
 Product : Wireless Dual Channel TENS
 Model No. : PM601
 Test Rating : 120Vac/60Hz
 Temp/Hum : 26.2°C / 46 %
 Memo : Mains

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	
1	0.187	30.07	20.31	9.76	64.15	-34.08	QP
2	0.187	22.53	12.77	9.76	54.15	-31.62	Average
3	0.277	34.37	24.62	9.75	60.90	-26.53	QP
4	0.277	27.41	17.66	9.75	50.90	-23.49	Average
5	0.373	45.36	35.61	9.75	58.43	-13.07	QP
6	0.373	40.28	30.53	9.75	48.43	-8.15	Average
7	0.634	33.23	23.48	9.75	56.00	-22.77	QP
8	0.634	21.71	11.96	9.75	46.00	-24.29	Average
9	4.746	36.61	26.80	9.81	56.00	-19.39	QP
10	4.746	28.20	18.39	9.81	46.00	-17.80	Average
11	7.025	39.65	29.84	9.81	60.00	-20.35	QP
12	7.025	31.35	21.54	9.81	50.00	-18.65	Average



File: C:\EMC\Report\2017\OMRON\114061922(PM601)\1_00011.EMI



Trace: 1
 Site : Conduction room
 Condition : FCC Part15 Class B Conduction(QP) neutral
 Test Engineer: Joe Tien
 Applicant : OMRON
 Product : Wireless Dual Channel TENS
 Model No. : PM601
 Test Rating : 120Vac/60Hz
 Temp/Hum : 26.2°C / 46 %
 Memo : Mains

	Freq	Level	Read Level	Limit Factor	Limit Line	Over Limit	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	
1	0.158	30.68	20.96	9.72	65.56	-34.88	QP
2	0.158	20.83	11.11	9.72	55.56	-34.73	Average
3	0.336	33.38	23.70	9.68	59.31	-25.93	QP
4	0.336	28.29	18.61	9.68	49.31	-21.02	Average
5	0.373	42.63	32.95	9.68	58.43	-15.80	QP
6	0.373	37.44	27.76	9.68	48.43	-10.99	Average
7	0.641	30.97	21.28	9.69	56.00	-25.03	QP
8	0.641	20.84	11.15	9.69	46.00	-25.16	Average
9	1.010	28.40	18.70	9.70	56.00	-27.60	QP
10	1.010	22.88	13.18	9.70	46.00	-23.12	Average
11	7.100	35.98	26.21	9.77	60.00	-24.02	QP
12	7.100	27.93	18.16	9.77	50.00	-22.07	Average