

# Test Report No.50258012 001

## Appendix D: Radiated and Mains Spurious Emission Data

(File: 50258012AppendixD)

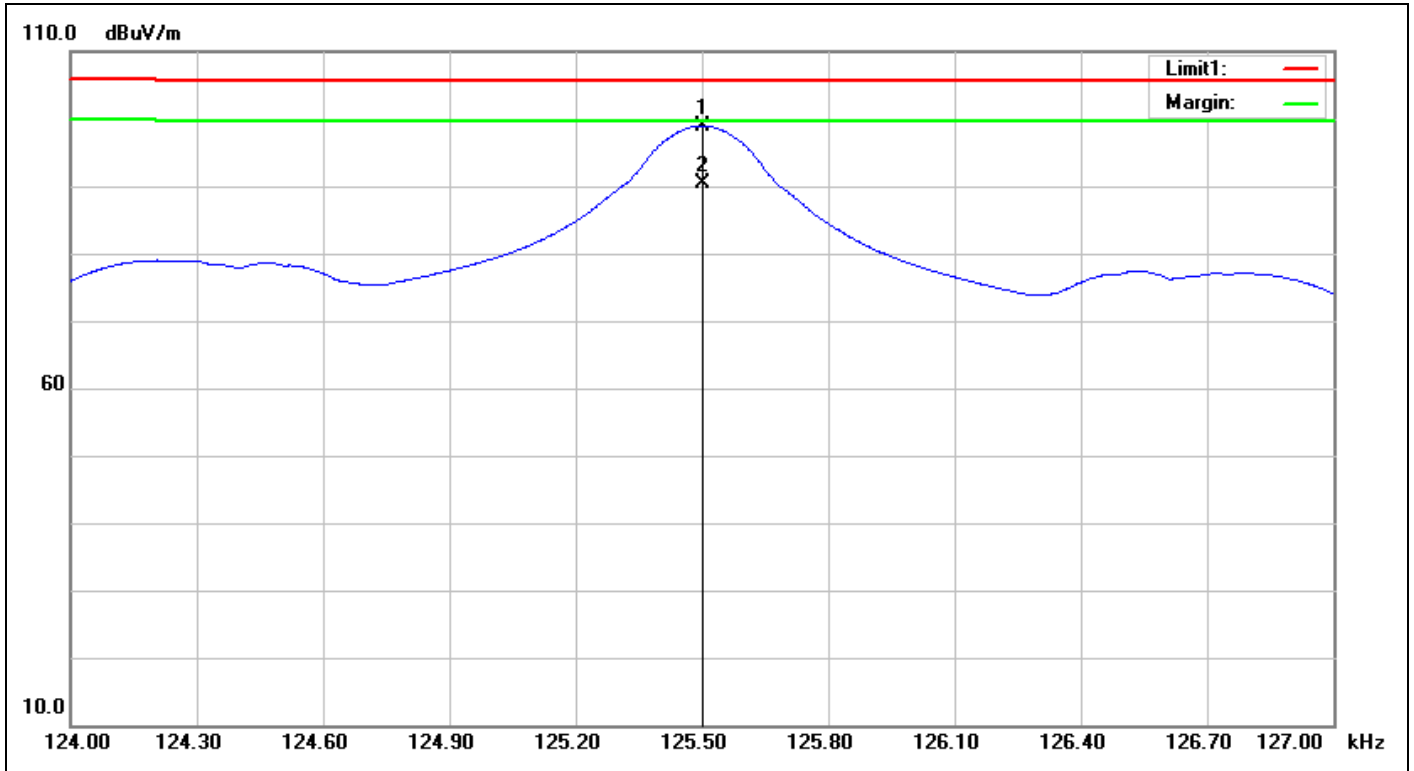
### Contents

Emissions, Fundamental.....	2
Spurious Emissions, TX Mode, 30M-1G .....	3
Spurious Emissions, TX Mode, 9kHz-30M .....	5
Spurious Emissions, RX Mode, 30M-1G.....	7
Spurious Emissions, RX Mode, 9kHz-30M .....	9

# Emissions, Fundamental



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<b>Service No.:</b>	<b>238101688</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>FCC 15.209_9k-30M_3m(dBuV/m)</b>	<b>Ant. Polarization:</b>	
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2019/5/7 14:44:56</b>
<b>Applicant:</b>	<b>WHETRON ELECTRONICS CO.,LTD</b>	<b>Test Rating:</b>	<b>DC 12V</b>
<b>Product:</b>		<b>Temp.(°C)/Hum.(%):</b>	<b>22(°C)/50%</b>
<b>Model No.:</b>	<b>S100324800T</b>	<b>Test Engineer:</b>	<b>Curry Chen</b>
<b>Test Mode:</b>	<b>125k-Fundamental</b>		
<b>Remark:</b>	<b>2Wheel Smart Keyless Main System_AGE2</b>		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.1250	18.34	80.65	98.99	105.67	-6.68	peak	100	196	
2	0.1250	18.34	72.06	90.40	105.67	-15.27	QP	100	196	

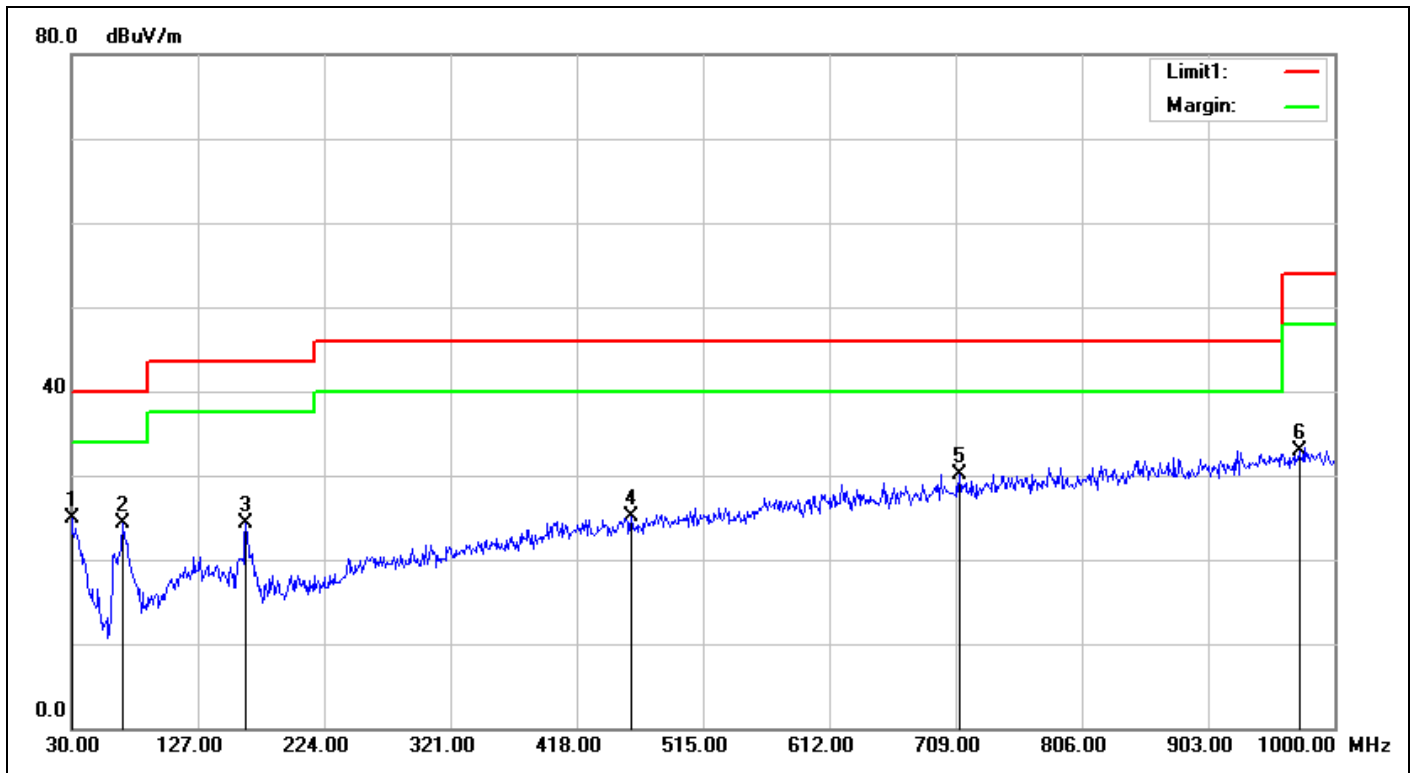
# Spurious Emissions, TX Mode, 30M-1G



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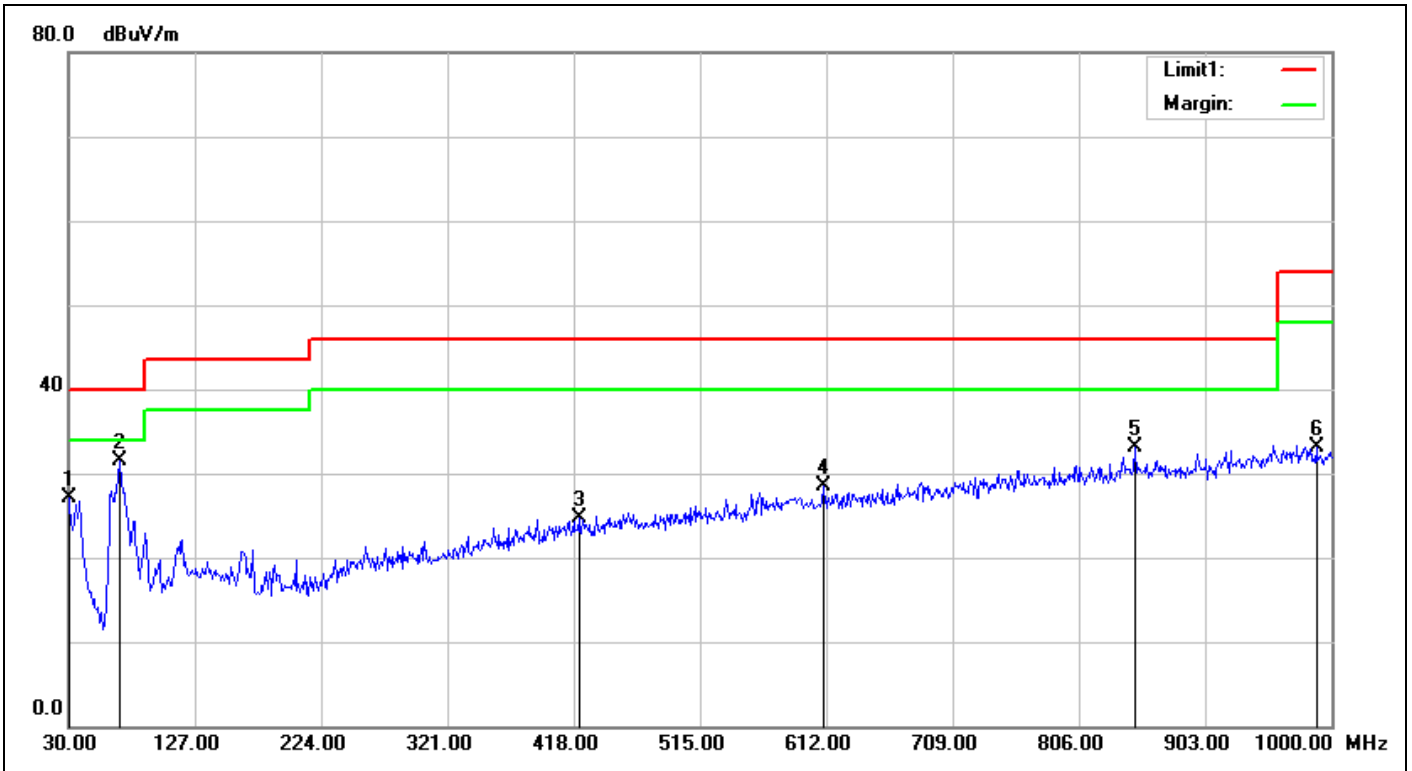
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<b>Service No.:</b>	<b>238101688</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>FCC Class B 3M Radiation</b>	<b>Ant. Polarization:</b>	<b>Horizontal</b>
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2019/5/7 13:29:14</b>
<b>Applicant:</b>	<b>WHETRON ELECTRONICS CO.,LTD</b>	<b>Test Rating:</b>	<b>DC 12V</b>
<b>Product:</b>		<b>Temp.(°C)/Hum.(%):</b>	<b>22(°C)/50%</b>
<b>Model No.:</b>	<b>S100324800T</b>	<b>Test Engineer:</b>	<b>Curry Chen</b>
<b>Test Mode:</b>	<b>125k-TX</b>		
<b>Remark:</b>	<b>2Wheel Smart Keyless Main System_AGE2</b>		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	30.0000	-0.03	24.88	24.85	40.00	-15.15	QP	100	33	
2	68.8000	-13.12	37.45	24.33	40.00	-15.67	QP	100	283	
3	163.8600	-8.38	32.70	24.32	43.50	-19.18	QP	100	115	
4	459.7100	-1.82	26.92	25.10	46.00	-20.90	QP	100	360	
5	711.9100	1.47	28.71	30.18	46.00	-15.82	QP	100	72	
6	972.8400	5.89	27.09	32.98	54.00	-21.02	QP	100	210	

# Spurious Emissions, TX Mode, 30M-1G



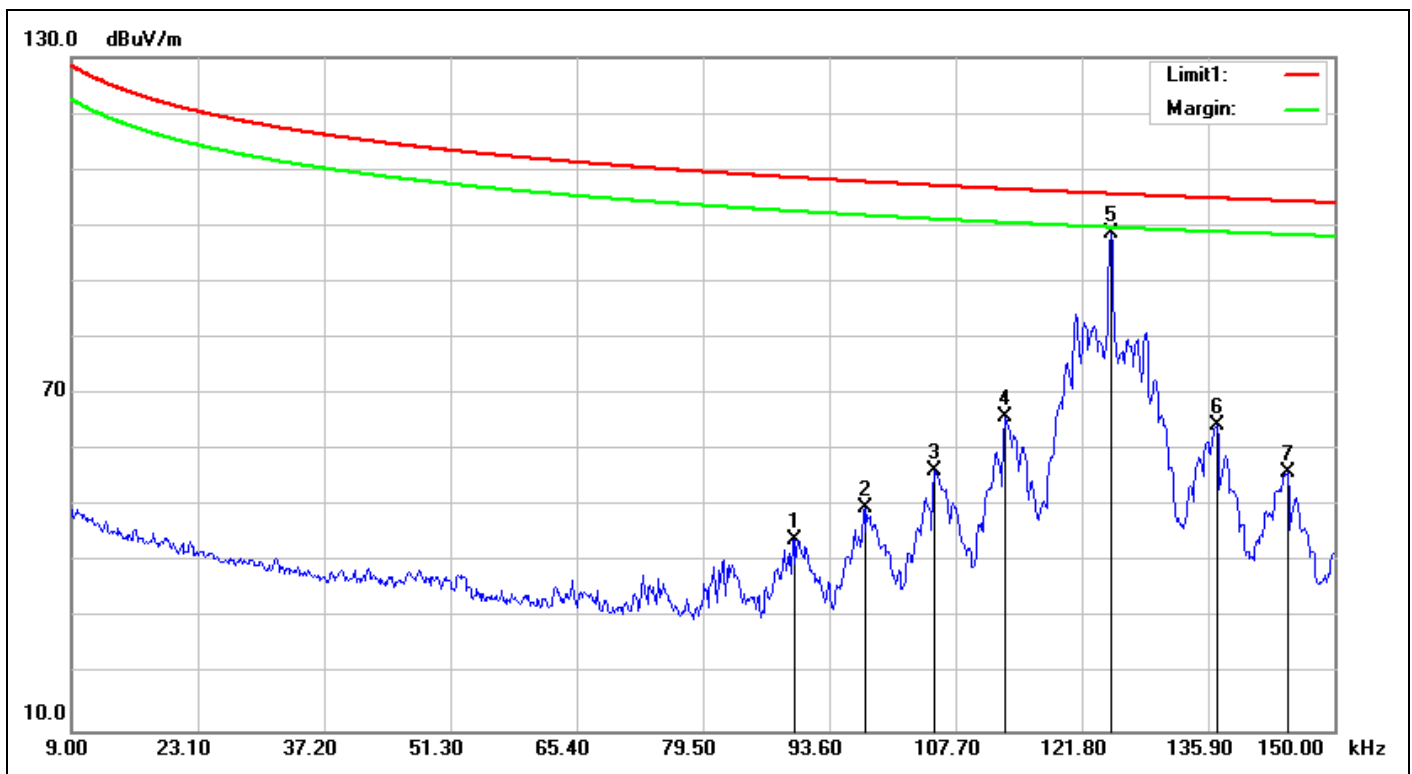
<b>Service No.:</b>	<b>238101688</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>FCC Class B 3M Radiation</b>	<b>Ant. Polarization:</b>	<b>Vertical</b>
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2019/5/7 13:30:07</b>
<b>Applicant:</b>	<b>WHETRON ELECTRONICS CO.,LTD</b>	<b>Test Rating:</b>	<b>DC 12V</b>
<b>Product:</b>		<b>Temp.(°C)/Hum.(%):</b>	<b>22(°C)/50%</b>
<b>Model No.:</b>	<b>S100324800T</b>	<b>Test Engineer:</b>	<b>Curry Chen</b>
<b>Test Mode:</b>	<b>125k-TX</b>		
<b>Remark:</b>	<b>2Wheel Smart Keyless Main System_AGE2</b>		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	30.0000	-0.03	27.22	27.19	40.00	-12.81	QP	100	275	
2	69.7700	-13.03	44.48	31.45	40.00	-8.55	QP	100	101	
3	421.8800	-1.96	26.62	24.66	46.00	-21.34	QP	100	298	
4	610.0600	0.24	28.28	28.52	46.00	-17.48	QP	100	111	
5	848.6800	3.86	29.17	33.03	46.00	-12.97	QP	100	186	
6	988.3600	5.91	27.29	33.20	54.00	-20.80	QP	100	242	

# Spurious Emissions, TX Mode, 9kHz-30M



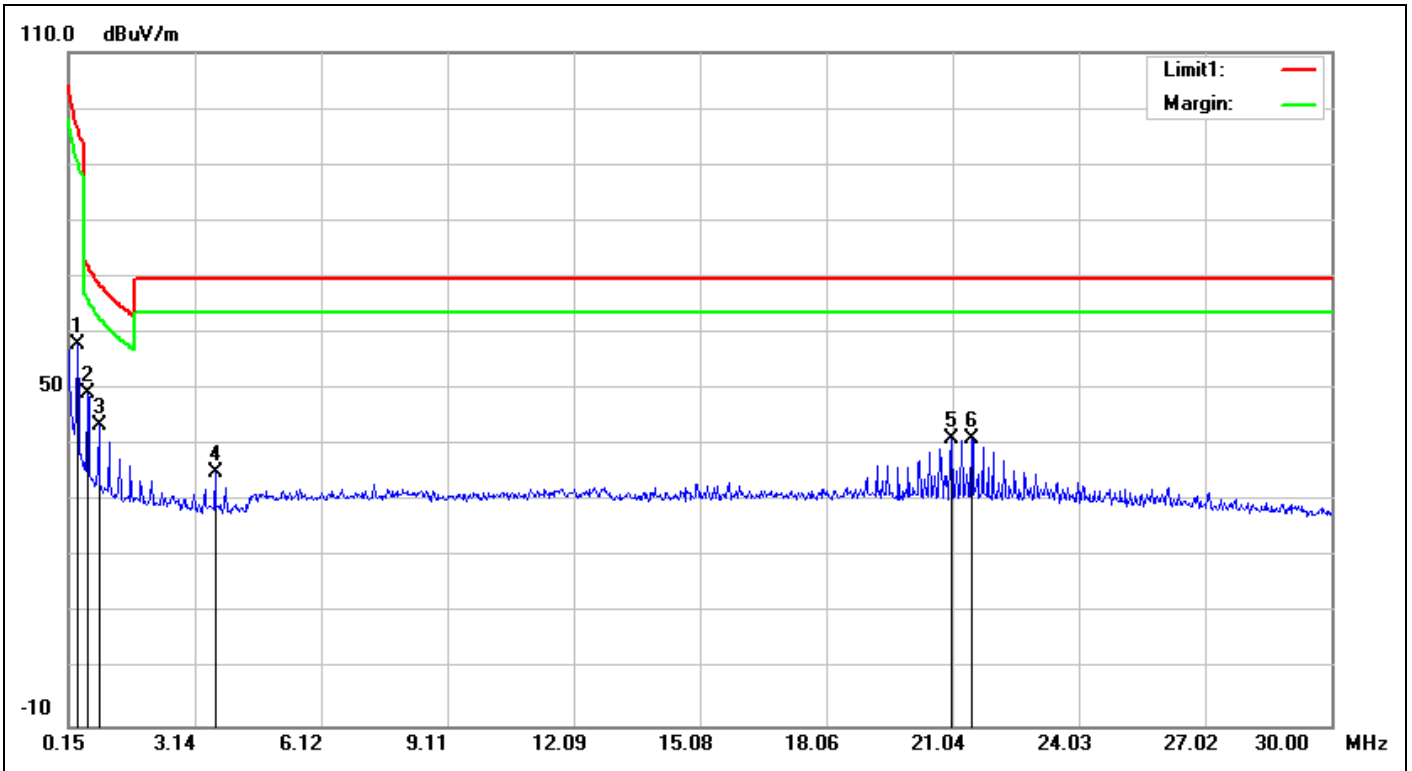
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<b>Service No.:</b>	<b>238101688</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>FCC 15.209_9k-30M_3m(dBuV/m)</b>	<b>Ant. Polarization:</b>	
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2019/5/7 15:28:53</b>
<b>Applicant:</b>	<b>WHETRON ELECTRONICS CO.,LTD</b>	<b>Test Rating:</b>	<b>DC 12V</b>
<b>Product:</b>		<b>Temp.(°C)/Hum.(%):</b>	<b>22(°C)/50%</b>
<b>Model No.:</b>	<b>S100324800T</b>	<b>Test Engineer:</b>	<b>Curry Chen</b>
<b>Test Mode:</b>	<b>125k-TX</b>		
<b>Remark:</b>	<b>2Wheel Smart Keyless Main System_AGE2</b>		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0897	18.44	25.60	44.04	108.55	-64.51	QP	100	194	
2	0.0975	18.36	31.35	49.71	107.82	-58.11	QP	100	194	
3	0.1053	18.33	38.01	56.34	107.16	-50.82	QP	100	194	
4	0.1132	18.34	47.61	65.95	106.53	-40.58	QP	100	194	
5	0.1250	18.34	80.38	98.72	105.67	-6.95	QP	100	204	TX
6	0.1369	18.35	46.22	64.57	104.88	-40.31	QP	100	194	
7	0.1448	18.35	37.69	56.04	104.39	-48.35	QP	100	194	

# Spurious Emissions, TX Mode, 9kHz-30M



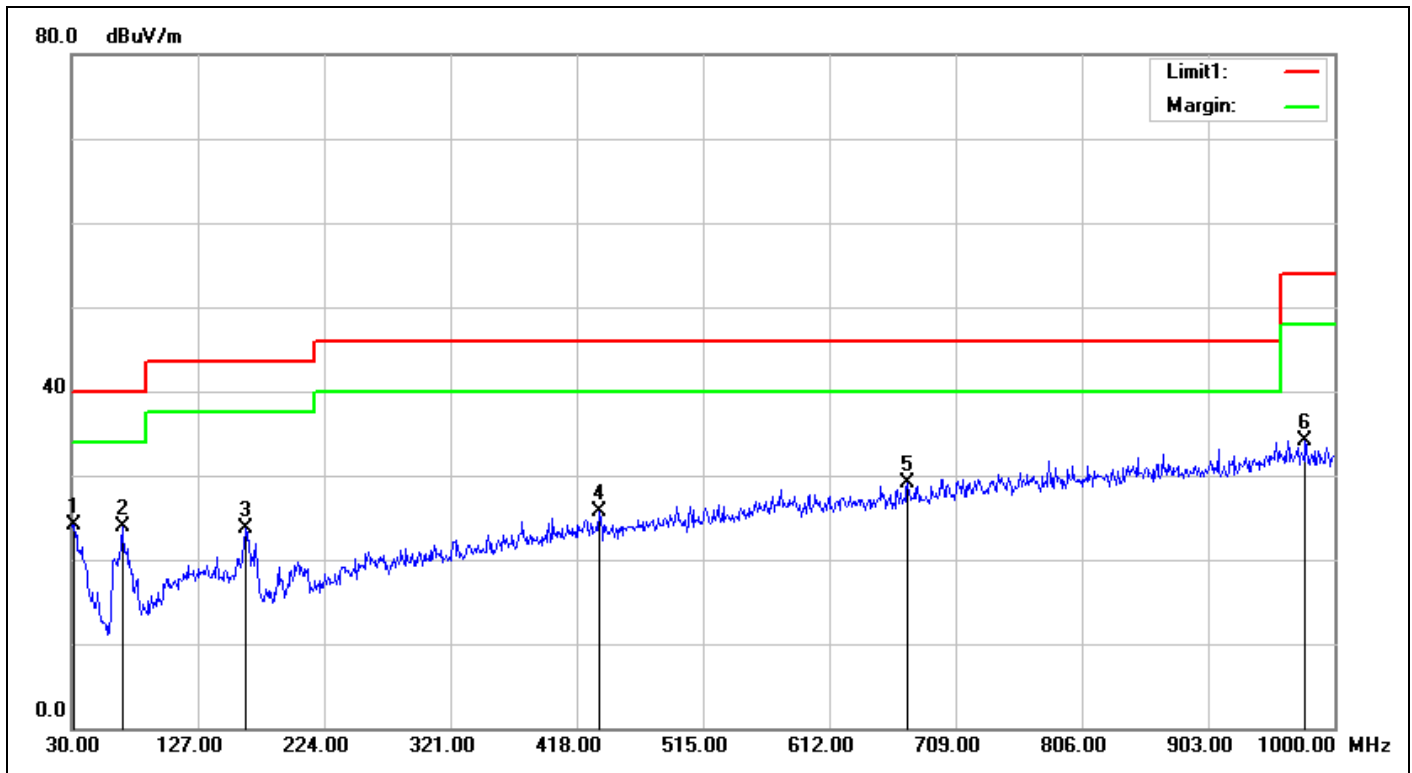
<b>Service No.:</b>	<b>238101688</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>FCC 15.209_9k-30M_3m(dBuV/m)</b>	<b>Ant. Polarization:</b>	
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2019/5/7 15:23:02</b>
<b>Applicant:</b>	<b>WHETRON ELECTRONICS CO.,LTD</b>	<b>Test Rating:</b>	<b>DC 12V</b>
<b>Product:</b>		<b>Temp.(°C)/Hum.(%):</b>	<b>22(°C)/50%</b>
<b>Model No.:</b>	<b>S100324800T</b>	<b>Test Engineer:</b>	<b>Curry Chen</b>
<b>Test Mode:</b>	<b>125k-TX</b>		
<b>Remark:</b>	<b>2Wheel Smart Keyless Main System_AGE2</b>		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.3589	18.50	39.58	58.08	96.50	-38.42	QP	100	141	
2	0.5977	18.66	30.64	49.30	72.08	-22.78	QP	100	141	
3	0.8664	18.67	24.94	43.61	68.86	-25.25	QP	100	141	
4	3.6126	18.82	16.29	35.11	69.54	-34.43	QP	100	141	
5	21.0151	21.64	19.37	41.01	69.54	-28.53	QP	100	141	
6	21.4927	21.65	19.42	41.07	69.54	-28.47	QP	100	285	

# Spurious Emissions, RX Mode, 30M-1G



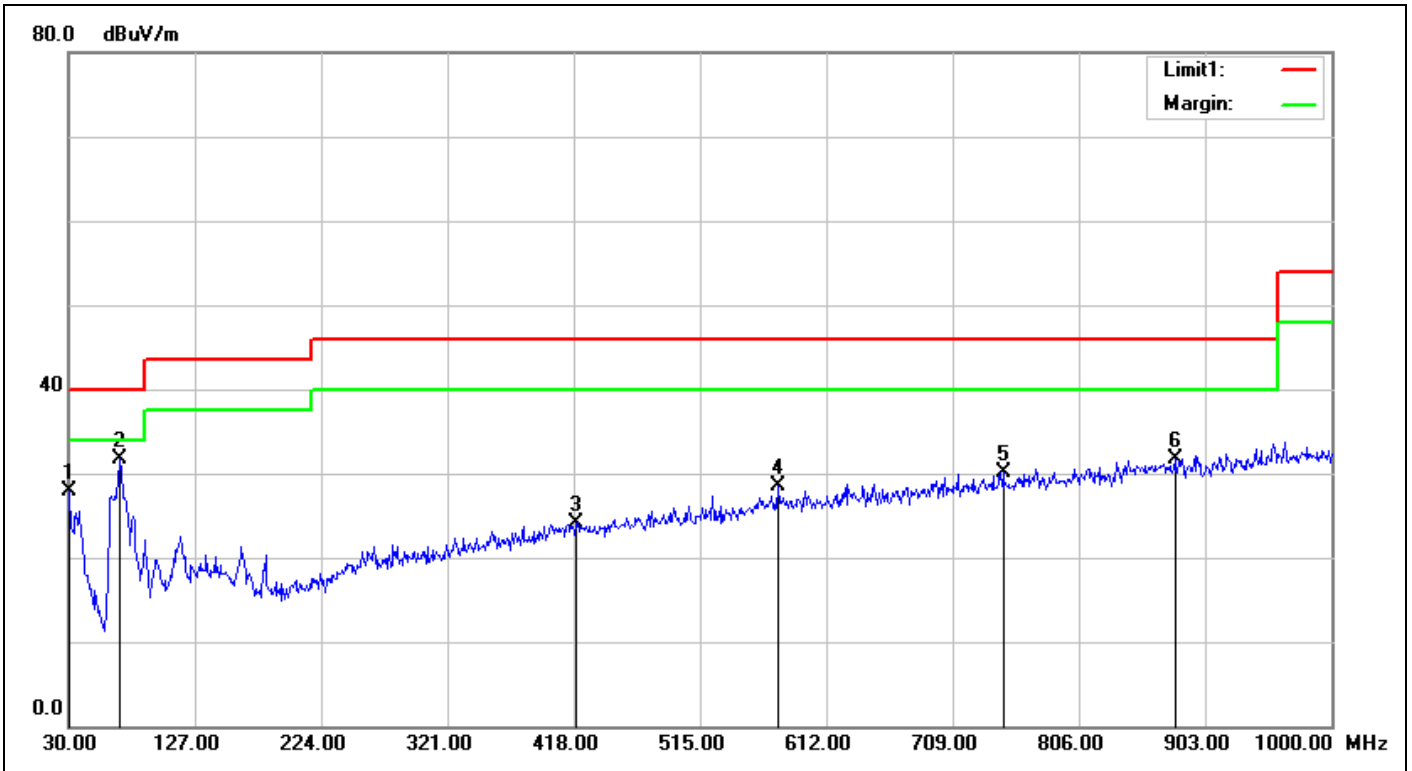
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<b>Service No.:</b>	<b>238101688</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>FCC Class B 3M Radiation</b>	<b>Ant. Polarization:</b>	<b>Horizontal</b>
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2019/5/7 13:31:40</b>
<b>Applicant:</b>	<b>WHETRON ELECTRONICS CO.,LTD</b>	<b>Test Rating:</b>	<b>DC 12V</b>
<b>Product:</b>		<b>Temp.(°C)/Hum.(%):</b>	<b>22(°C)/50%</b>
<b>Model No.:</b>	<b>S100324800T</b>	<b>Test Engineer:</b>	<b>Curry Chen</b>
<b>Test Mode:</b>	<b>125k-RX</b>		
<b>Remark:</b>	<b>2Wheel Smart Keyless Main System_AGE2</b>		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	31.9400	-1.08	25.15	24.07	40.00	-15.93	QP	100	85	
2	68.8000	-13.12	37.03	23.91	40.00	-16.09	QP	100	283	
3	163.8600	-8.38	32.18	23.80	43.50	-19.70	QP	100	109	
4	435.4600	-2.08	27.78	25.70	46.00	-20.30	QP	100	111	
5	672.1400	1.06	28.03	29.09	46.00	-16.91	QP	100	194	
6	977.6900	5.90	28.27	34.17	54.00	-19.83	QP	100	237	

# Spurious Emissions, RX Mode, 30M-1G



<b>Service No.:</b>	<b>238101688</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>FCC Class B 3M Radiation</b>	<b>Ant. Polarization:</b>	<b>Vertical</b>
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2019/5/7 13:32:34</b>
<b>Applicant:</b>	<b>WHETRON ELECTRONICS CO.,LTD</b>	<b>Test Rating:</b>	<b>DC 12V</b>
<b>Product:</b>		<b>Temp.(°C)/Hum.(%):</b>	<b>22(°C)/50%</b>
<b>Model No.:</b>	<b>S100324800T</b>	<b>Test Engineer:</b>	<b>Curry Chen</b>
<b>Test Mode:</b>	<b>125k-RX</b>		
<b>Remark:</b>	<b>2Wheel Smart Keyless Main System_AGE2</b>		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	30.0000	-0.03	27.98	27.95	40.00	-12.05	QP	100	295	
2	69.7700	-13.03	44.65	31.62	40.00	-8.38	QP	100	179	
3	419.9400	-1.90	26.03	24.13	46.00	-21.87	QP	100	202	
4	575.1400	0.13	28.34	28.47	46.00	-17.53	QP	100	308	
5	747.8000	2.39	27.73	30.12	46.00	-15.88	QP	100	48	
6	879.7200	4.07	27.57	31.64	46.00	-14.36	QP	100	288	



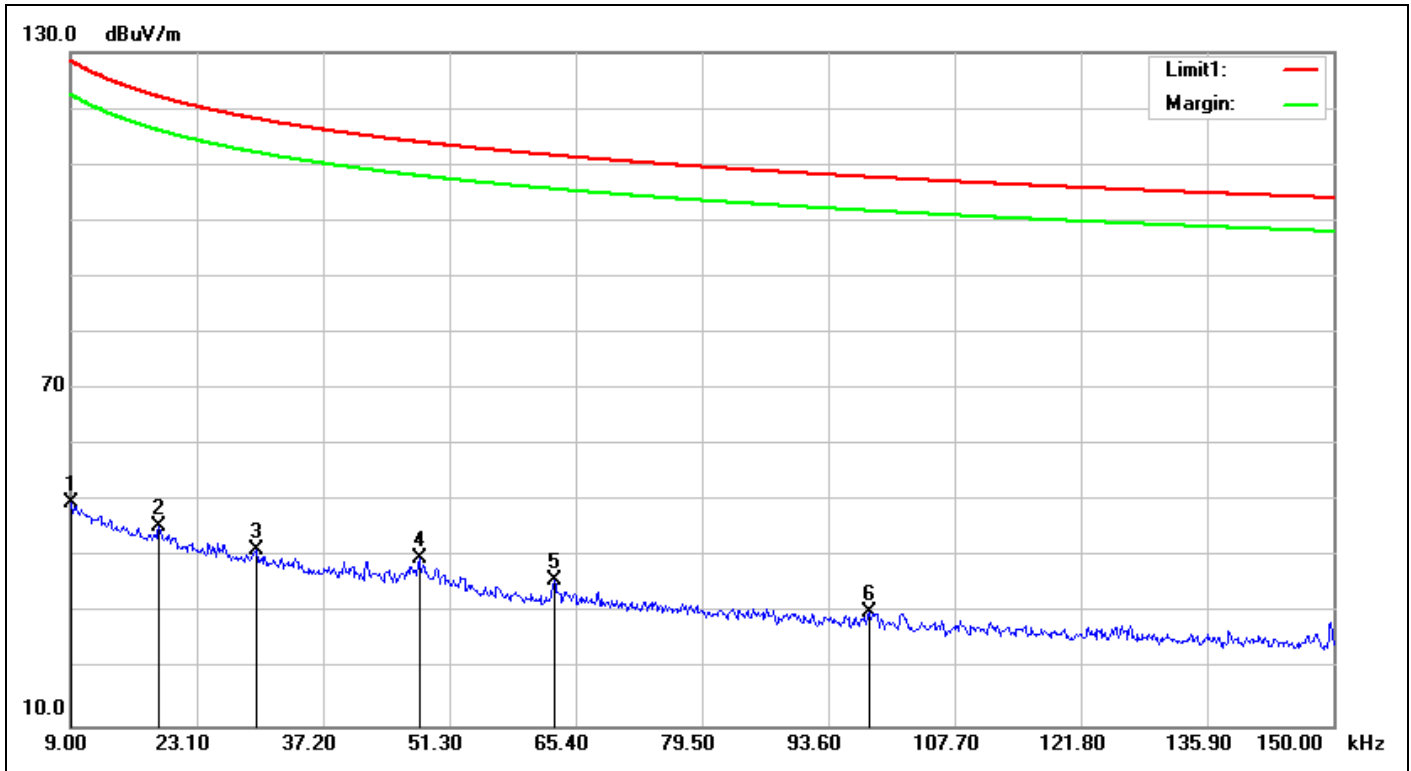
# Spurious Emissions, RX Mode, 9kHz-30M



**TUV Rheinland Taiwan Ltd.**

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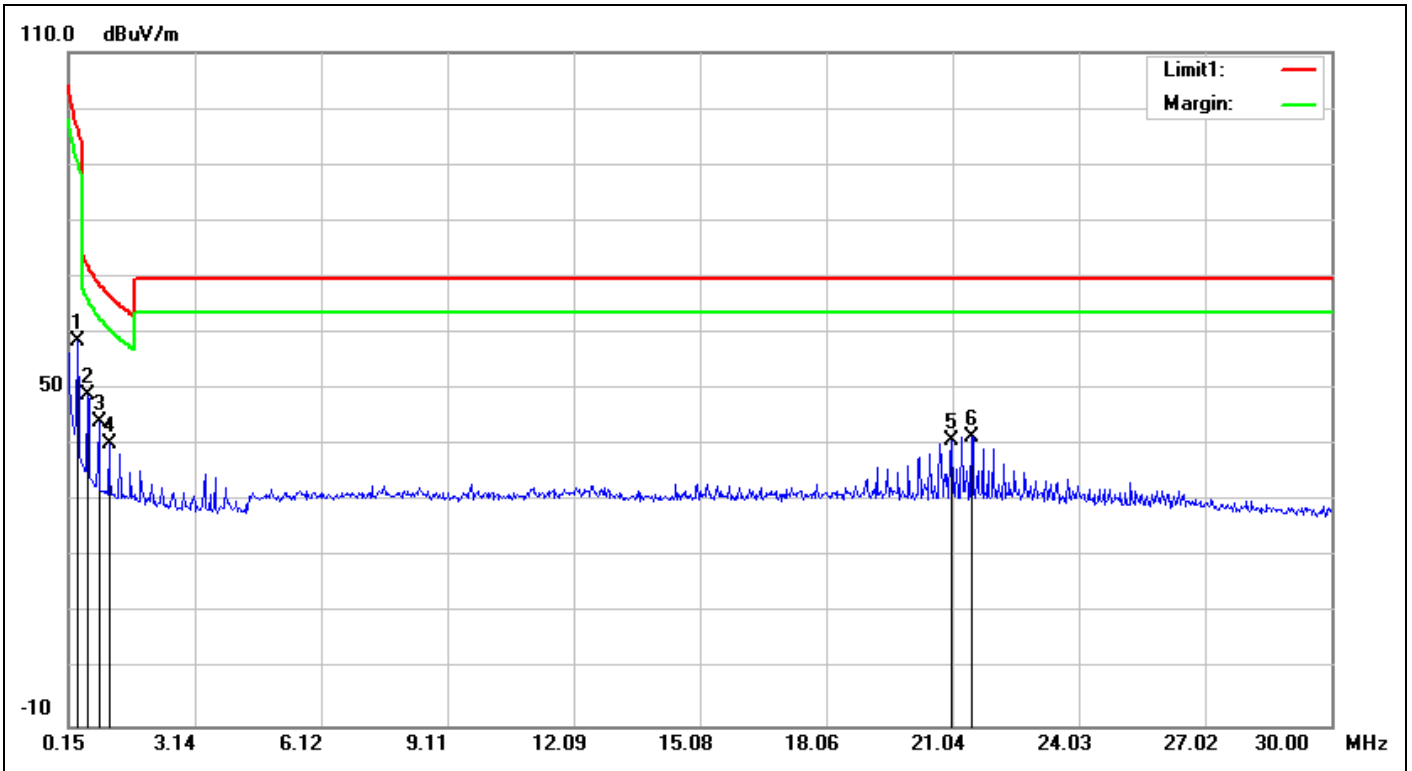
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<b>Service No.:</b>	<b>238101688</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>FCC 15.209_9k-30M_3m(dBuV/m)</b>	<b>Ant. Polarization:</b>	
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2019/5/7 15:32:14</b>
<b>Applicant:</b>	<b>WHETRON ELECTRONICS CO.,LTD</b>	<b>Test Rating:</b>	<b>DC 12V</b>
<b>Product:</b>		<b>Temp.(°C)/Hum.(%):</b>	<b>22(°C)/50%</b>
<b>Model No.:</b>	<b>S100324800T</b>	<b>Test Engineer:</b>	<b>Curry Chen</b>
<b>Test Mode:</b>	<b>125k-RX</b>		
<b>Remark:</b>	<b>2Wheel Smart Keyless Main System_AGE2</b>		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0090	18.32	31.48	49.80	128.52	-78.72	QP	100	262	
2	0.0189	18.88	26.64	45.52	122.08	-76.56	QP	100	338	
3	0.0297	19.31	22.05	41.36	118.15	-76.79	QP	100	357	
4	0.0479	18.96	20.86	39.82	114.00	-74.18	QP	100	360	
5	0.0630	18.76	17.20	35.96	111.62	-75.66	QP	100	111	
6	0.0981	18.35	12.03	30.38	107.77	-77.39	QP	100	262	

# Spurious Emissions, RX Mode, 9kHz-30M



<b>Service No.:</b>	<b>238101688</b>	<b>Test Distance:</b>	<b>3m</b>
<b>Test Standard:</b>	<b>FCC 15.209_9k-30M_3m(dBuV/m)</b>	<b>Ant. Polarization:</b>	
<b>Test item:</b>	<b>Radiation Emission</b>	<b>Test Time:</b>	<b>2019/5/7 15:24:36</b>
<b>Applicant:</b>	<b>WHETRON ELECTRONICS CO.,LTD</b>	<b>Test Rating:</b>	<b>DC 12V</b>
<b>Product:</b>		<b>Temp.(°C)/Hum.(%):</b>	<b>22(°C)/50%</b>
<b>Model No.:</b>	<b>S100324800T</b>	<b>Test Engineer:</b>	<b>Curry Chen</b>
<b>Test Mode:</b>	<b>125k-RX</b>		
<b>Remark:</b>	<b>2Wheel Smart Keyless Main System_AGE2</b>		

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.3589	18.50	39.90	58.40	96.50	-38.10	QP	100	219	
2	0.5977	18.66	30.39	49.05	72.08	-23.03	QP	100	219	
3	0.8664	18.67	25.42	44.09	68.86	-24.77	QP	100	219	
4	1.1052	18.67	21.52	40.19	66.76	-26.57	QP	100	360	
5	21.0151	21.64	19.07	40.71	69.54	-28.83	QP	100	360	
6	21.4927	21.65	19.76	41.41	69.54	-28.13	QP	100	360	