

Test Report No.10047908 001

Appendix D: Radiated and Mains Spurious Emission Data

(File: 10047908AppendixD)

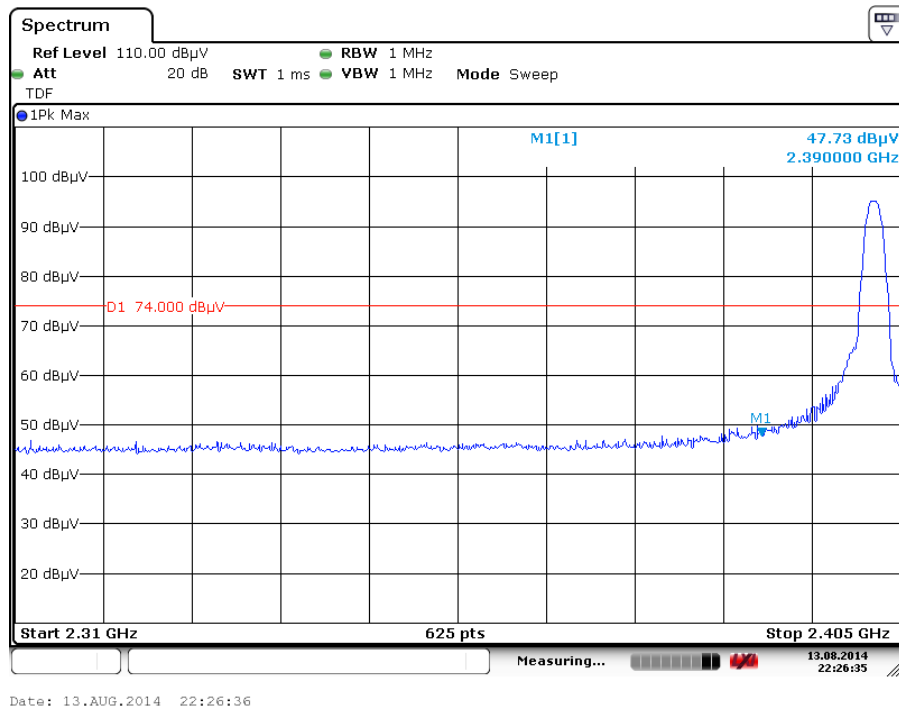
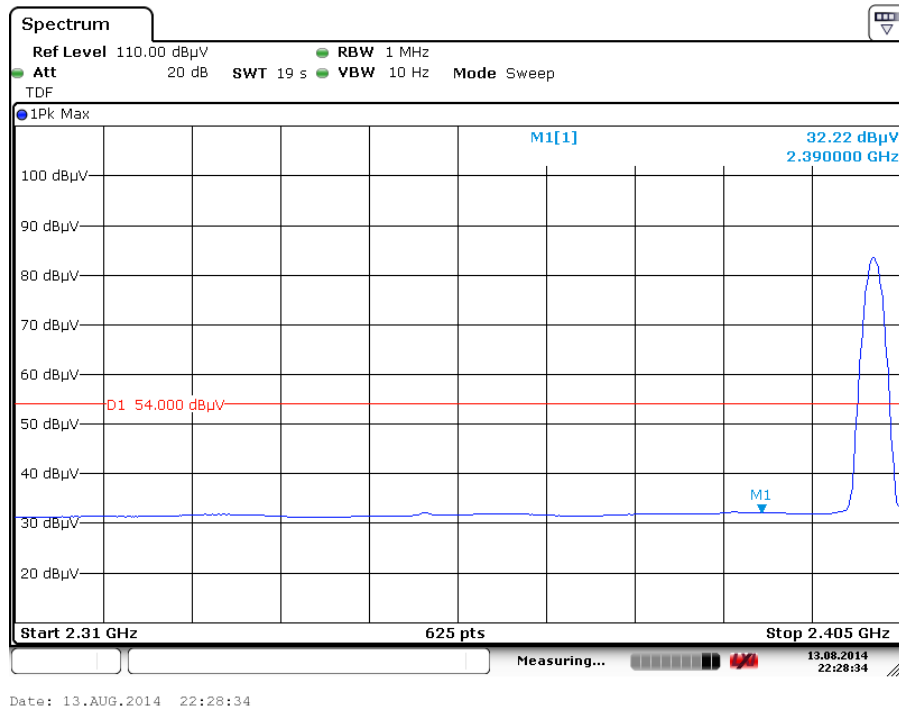
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Spurious Emissions, Band Edges, 2.35-2.5G

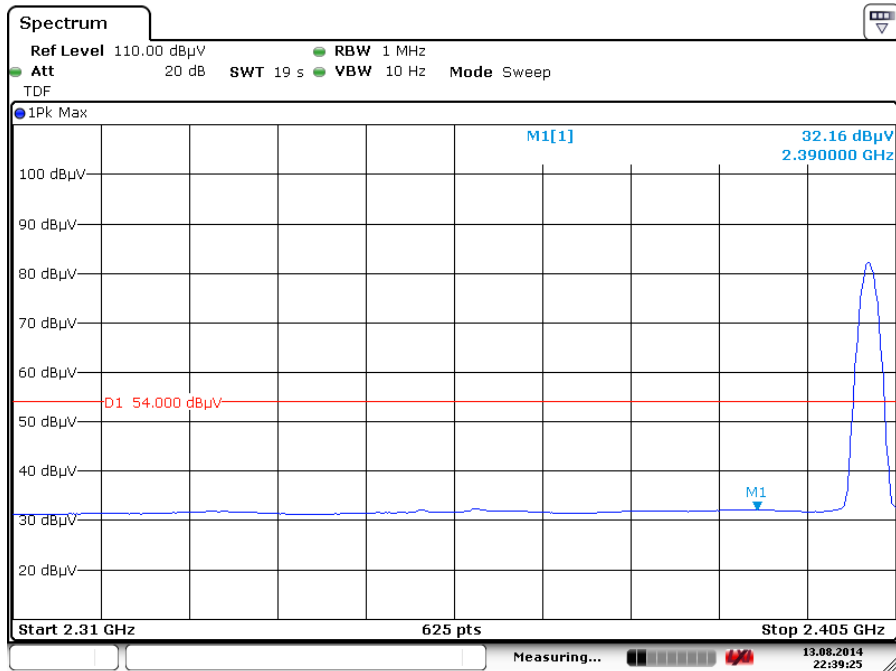
Radiated Bandedge (GFSK)

Low Channel (Hor)

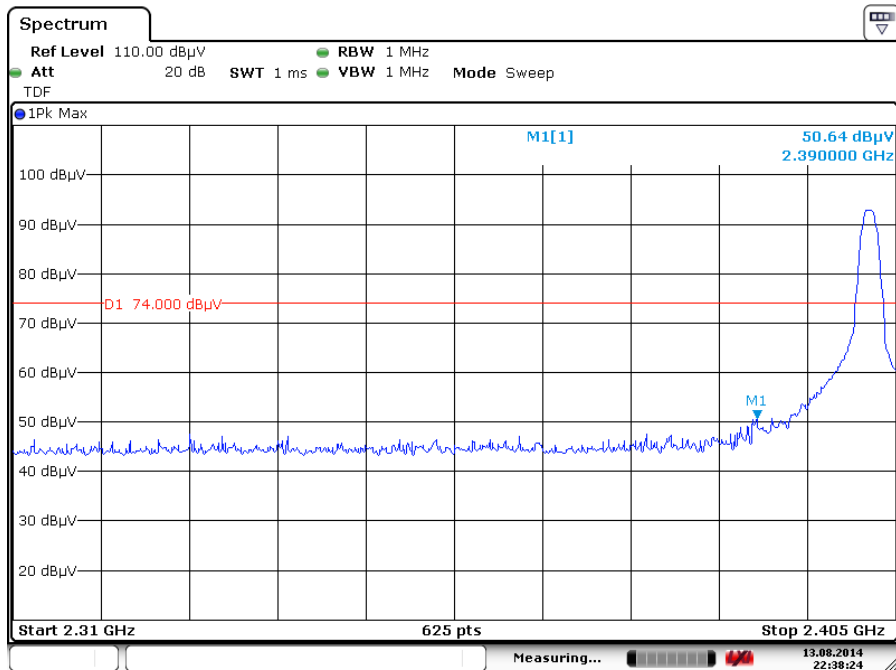


Spurious Emissions, Band Edge, 2.35-2.5G

Low Channel (Ver)



Date: 13.AUG.2014 22:39:25

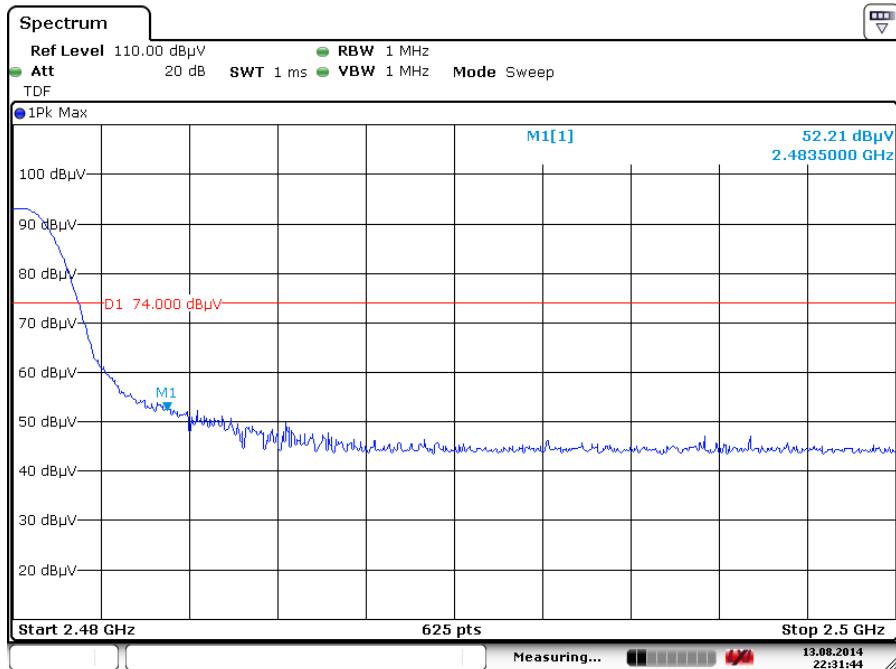
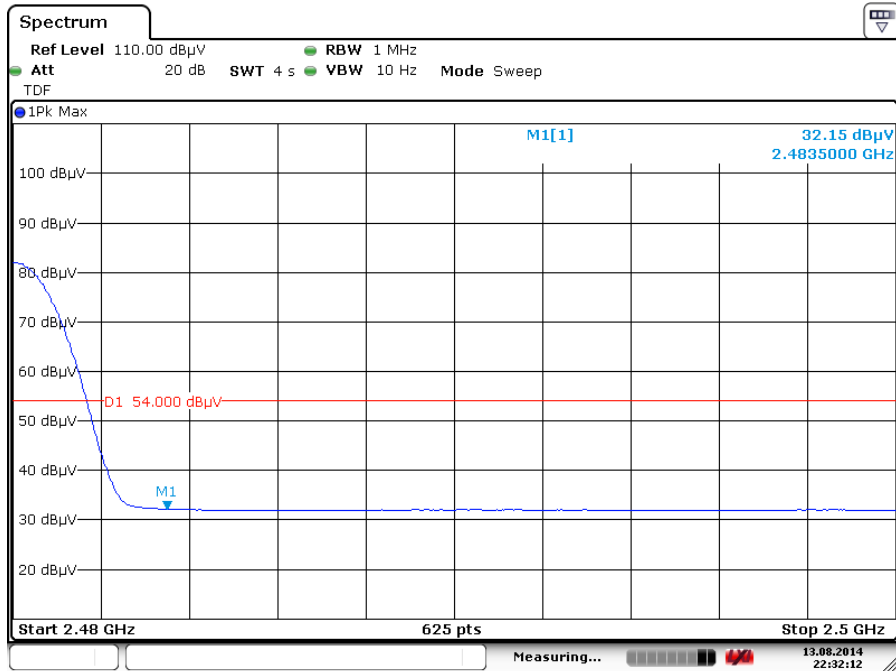


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Spurious Emissions, Band Edge, 2.35-2.5G

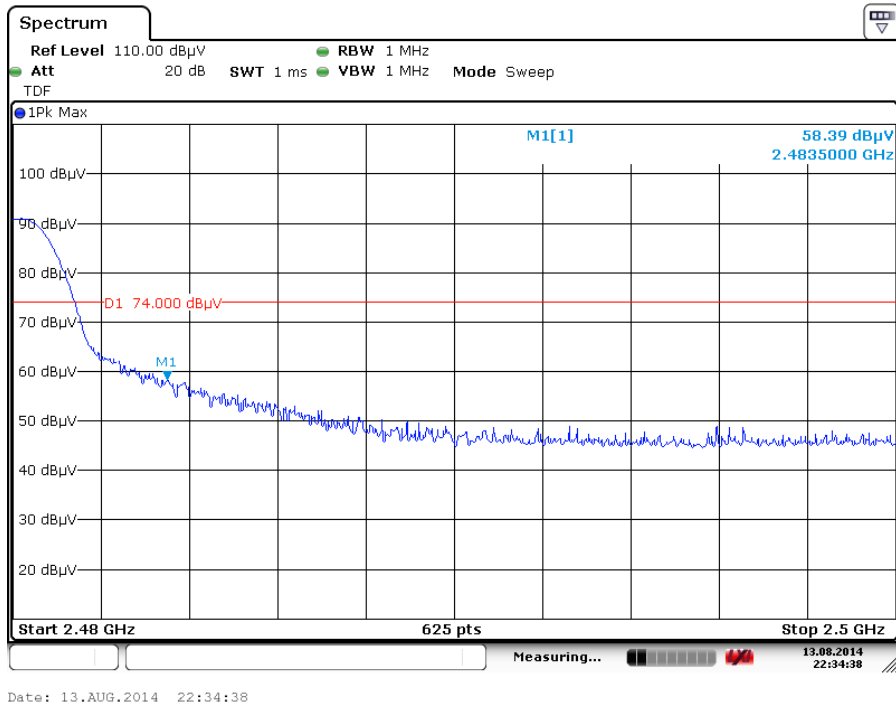
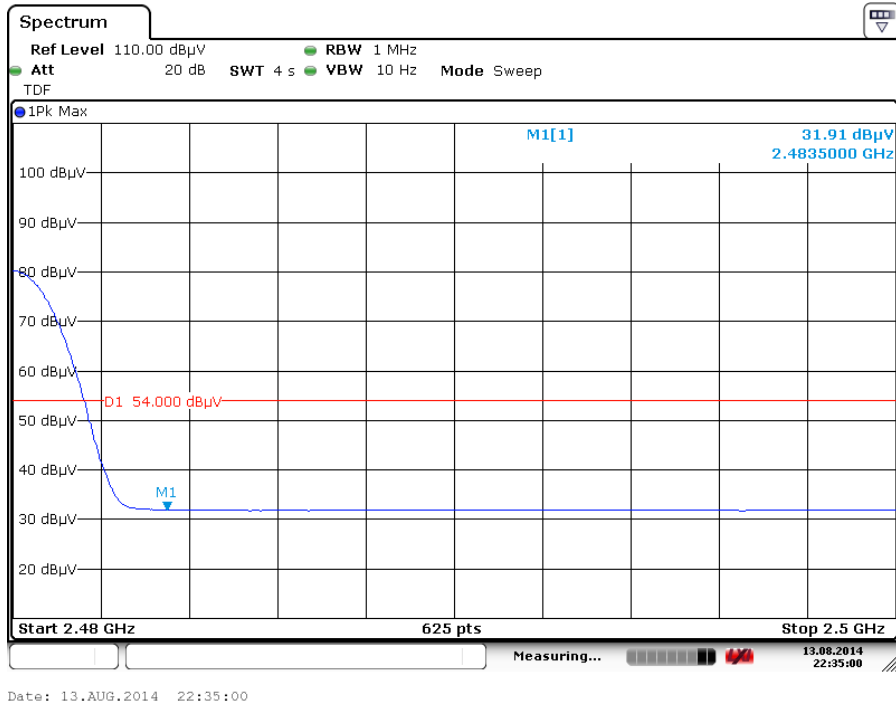
Radiated Bandedge (GFSK)

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

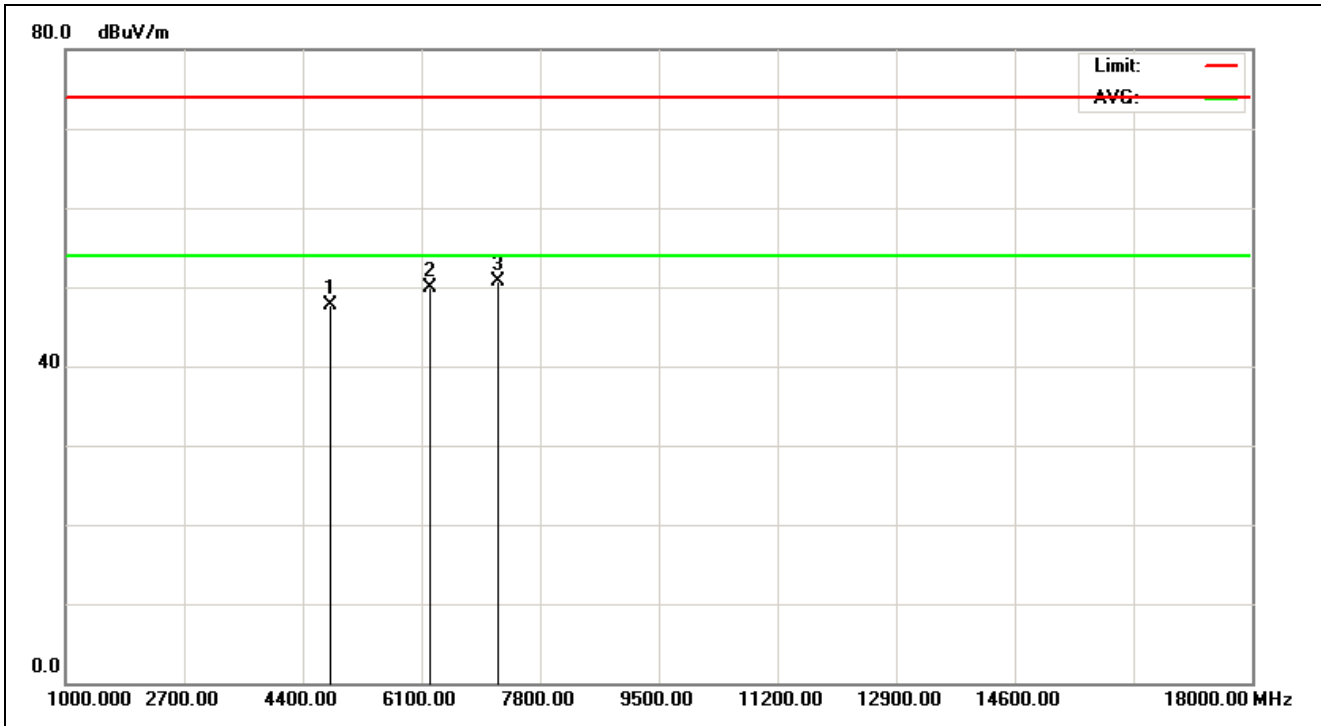


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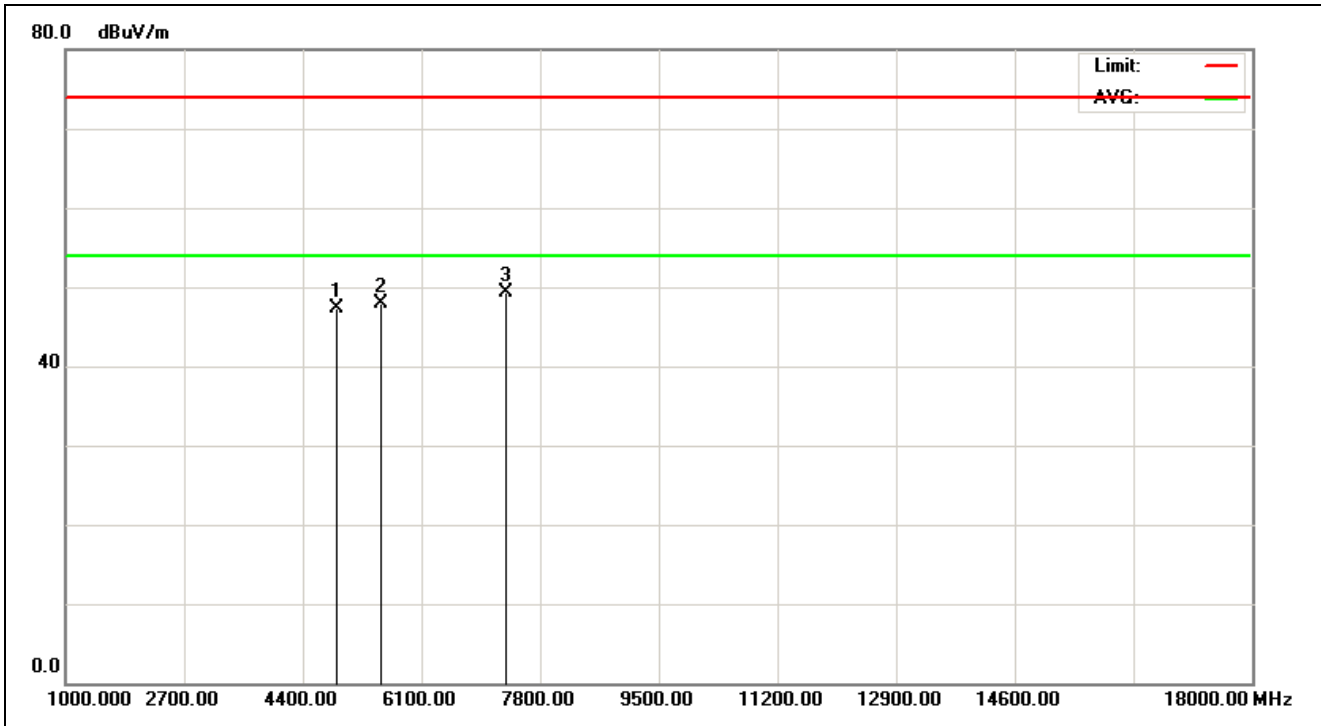
Service No.:	114024887-RF FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2014/8/13 22:36:22
Applicant:	Parex	Test Rating:	DC 5V
Product:	Bluetooth Keyboard	Temp.(°C)/Hum.(%):	22(°C)/54%
Model No.:	BT1311	Test Engineer:	Hugo Chang
Test Mode:	BT-2402		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	3070.513	-6.18	51.80	45.62	74.00	-28.38	peak	100	136	
2	4804.000	-2.59	49.14	46.55	74.00	-27.45	peak			
3	7206.000	5.44	44.79	50.23	74.00	-23.77	peak			



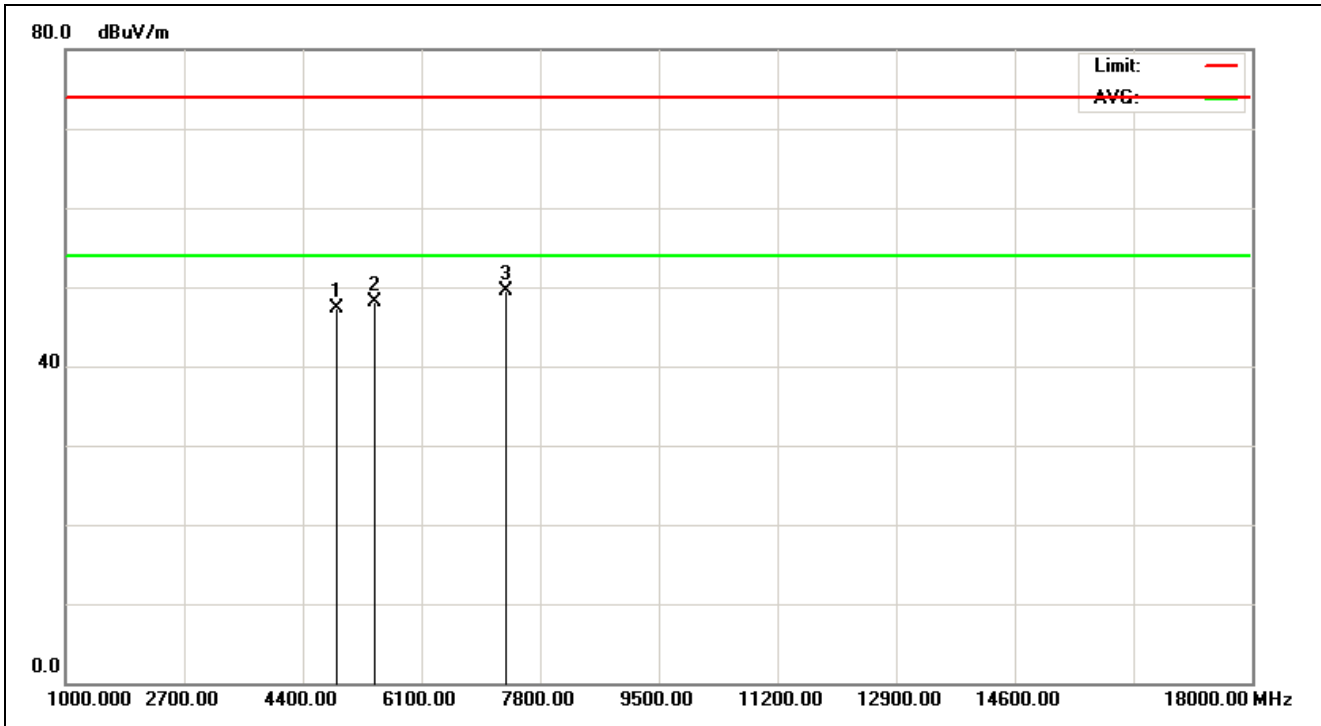
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2014/8/13 22:37:25
Applicant:	Parex	Test Rating:	DC 5V
Product:	Bluetooth Keyboard	Temp.(°C)/Hum.(%):	22(°C)/54%
Model No.:	BT1311	Test Engineer:	Hugo Chang
Test Mode:	BT-2402		
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	-2.59	50.23	47.64	74.00	-26.36	peak			
2	6230.769	4.52	45.36	49.88	74.00	-24.12	peak	100	179	
3	7206.000	5.44	45.23	50.67	74.00	-23.33	peak			



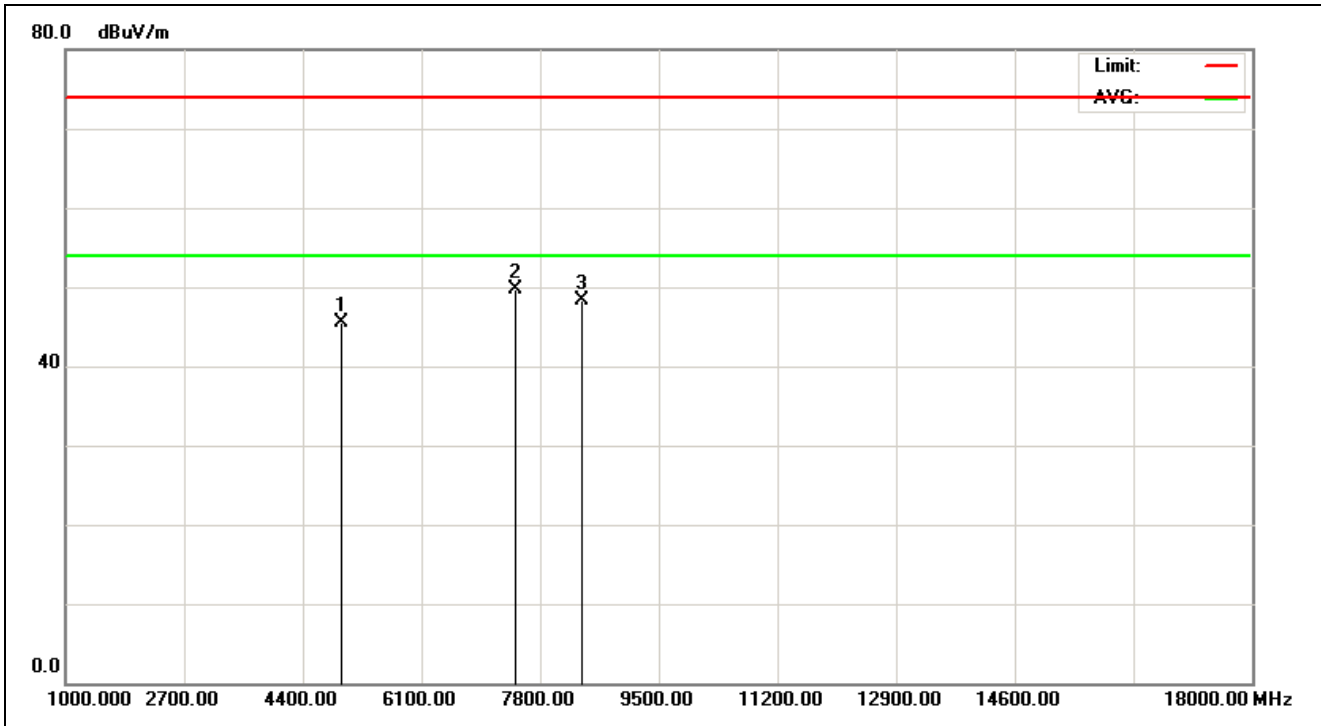
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2014/8/13 22:39:28
Applicant:	Parex	Test Rating:	DC 5V
Product:	Bluetooth Keyboard	Temp.(°C)/Hum.(%):	22(°C)/54%
Model No.:	BT1311	Test Engineer:	Hugo Chang
Test Mode:	BT-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	-2.39	49.75	47.36	74.00	-26.64	peak			
2	5522.436	0.49	47.49	47.98	74.00	-26.02	peak	100	360	
3	7323.000	5.76	43.60	49.36	74.00	-24.64	peak			



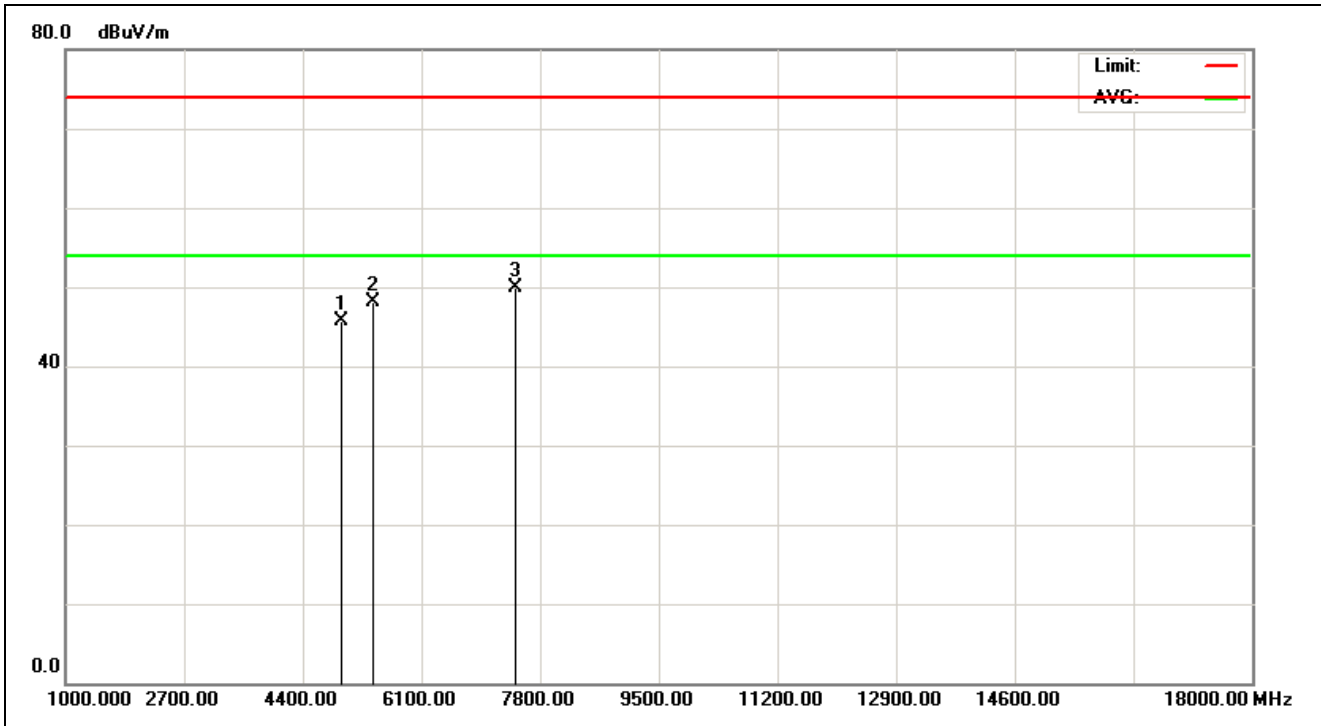
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2014/8/13 22:40:30
Applicant:	Parex	Test Rating:	DC 5V
Product:	Bluetooth Keyboard	Temp.(°C)/Hum.(%):	22(°C)/54%
Model No.:	BT1311	Test Engineer:	Hugo Chang
Test Mode:	BT-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	4882.000	-2.39	49.60	47.21	74.00	-26.79	peak			
2	5440.705	0.06	47.98	48.04	74.00	-25.96	peak	100	322	
3	7323.000	5.76	43.73	49.49	74.00	-24.51	peak			



Service No.:	114024887-RF FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2014/8/13 22:42:14
Applicant:	Parex	Test Rating:	DC 5V
Product:	Bluetooth Keyboard	Temp.(°C)/Hum.(%):	22(°C)/54%
Model No.:	BT1311	Test Engineer:	Hugo Chang
Test Mode:	BT-2480		
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	-2.19	47.65	45.46	74.00	-28.54	peak			
2	7440.000	6.09	43.58	49.67	74.00	-24.33	peak			
3	8410.256	6.36	41.92	48.28	74.00	-25.72	peak	100	48	



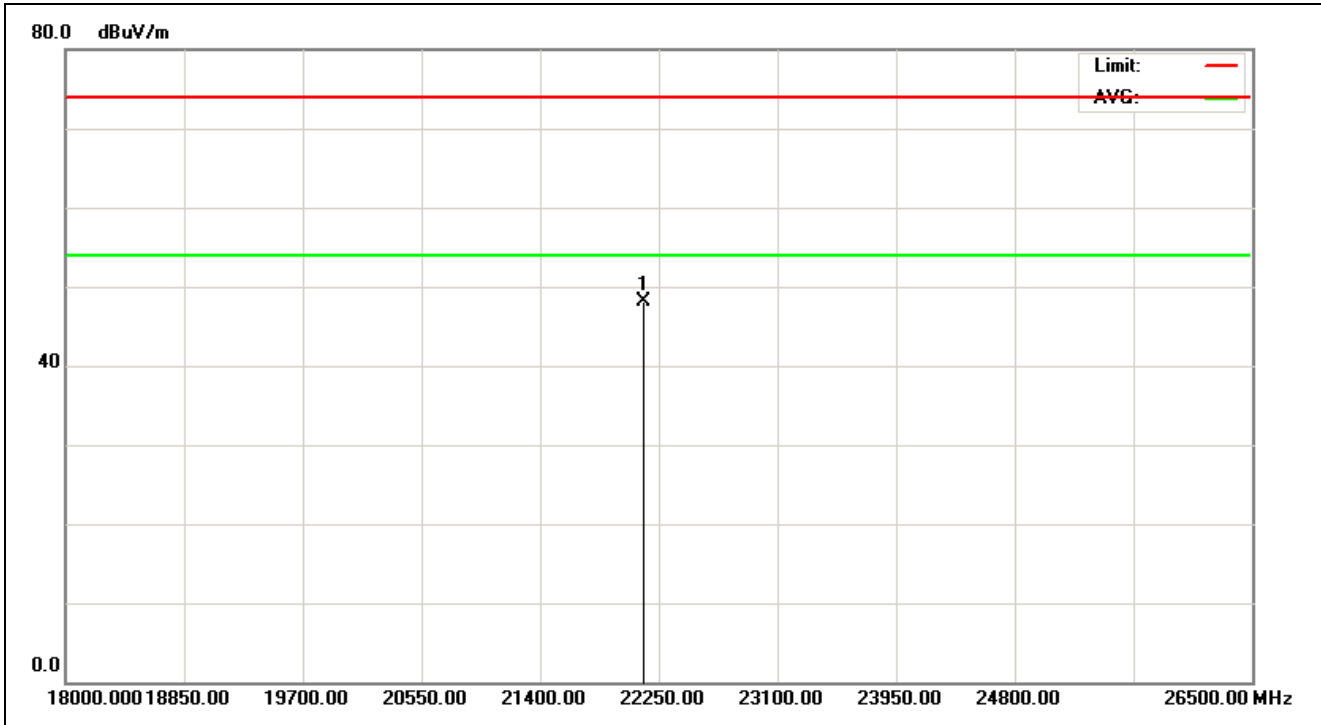
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2014/8/13 22:43:16
Applicant:	Parex	Test Rating:	DC 5V
Product:	Bluetooth Keyboard	Temp.(°C)/Hum.(%):	22(°C)/54%
Model No.:	BT1311	Test Engineer:	Hugo Chang
Test Mode:	BT-2480		
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	-2.19	47.85	45.66	74.00	-28.34	peak			
2	5413.462	-0.09	48.12	48.03	74.00	-25.97	peak	100	155	
3	7440.000	6.09	43.84	49.93	74.00	-24.07	peak			

Spurious Emissions, TX Mode, 18-26G

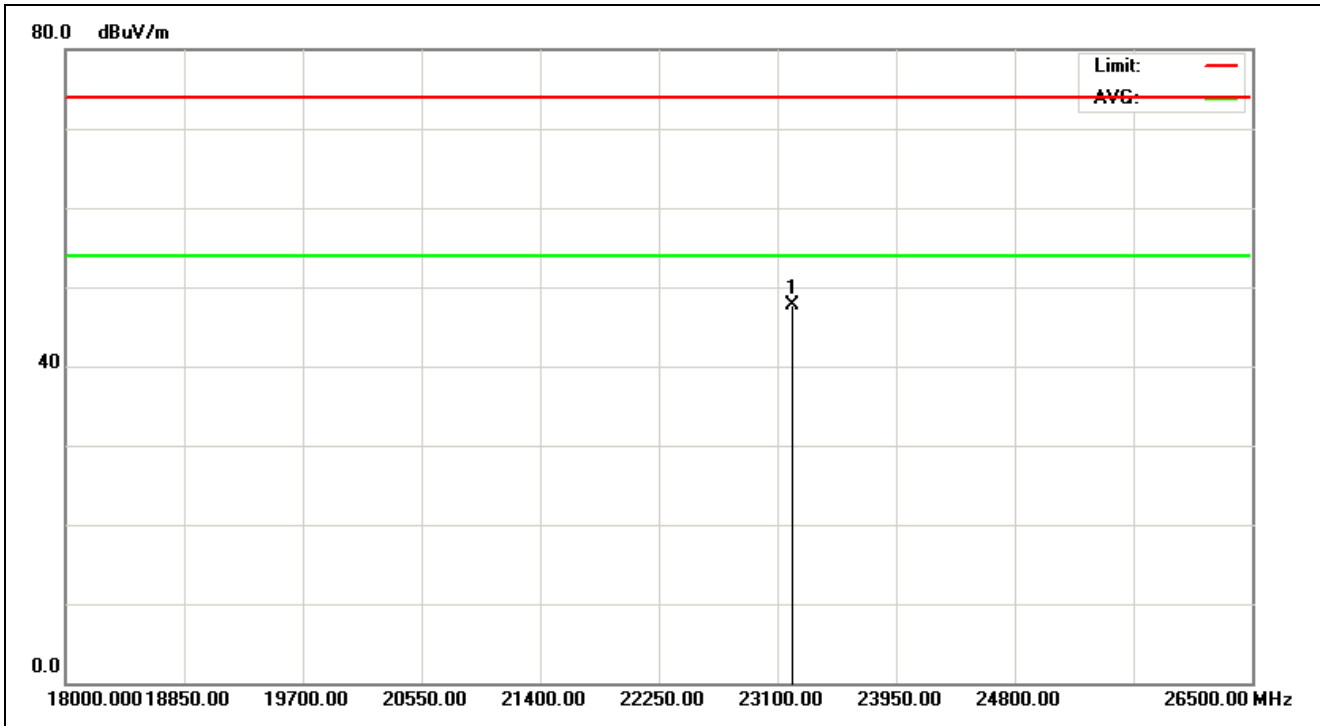


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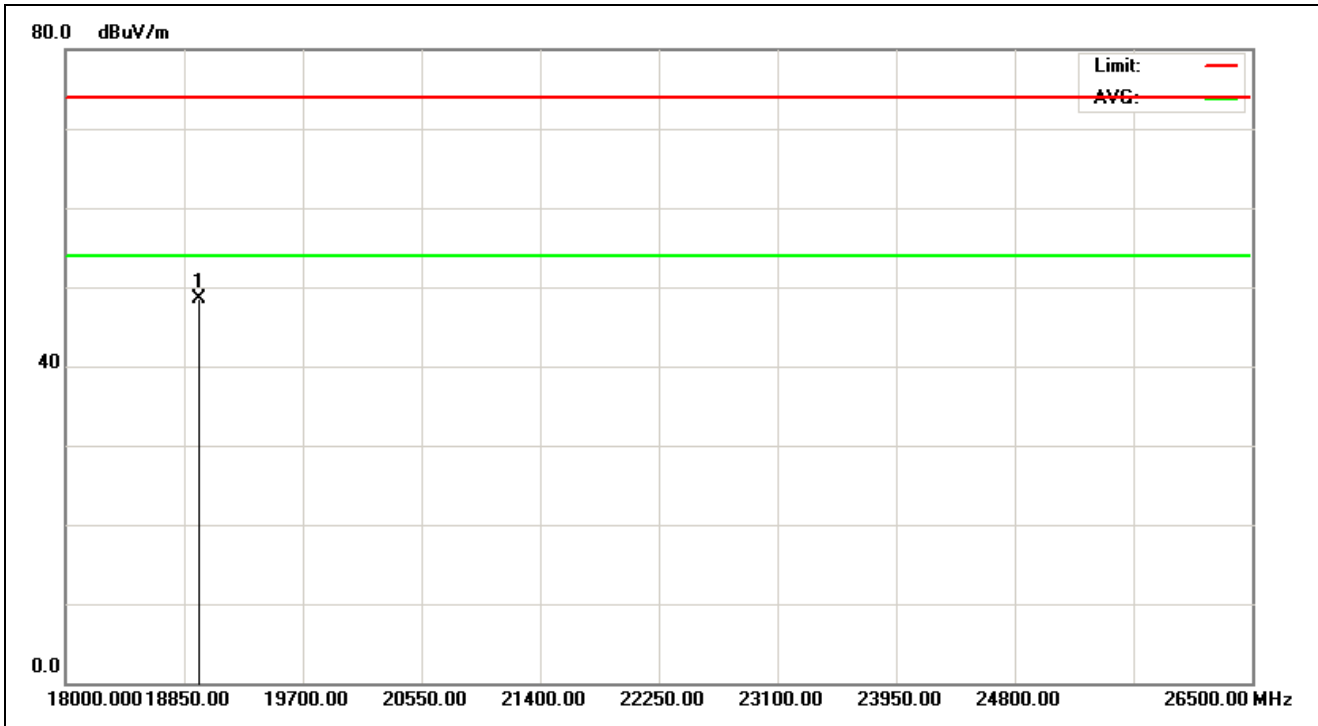
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2014/8/13 22:04:54
Applicant:	Parex	Test Rating:	DC 5V
Product:	Bluetooth Keyboard	Temp.(°C)/Hum.(%):	22(°C)/54%
Model No.:	BT1311	Test Engineer:	Hugo Chang
Test Mode:	BT-2402		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	22141.026	29.28	18.81	48.09	74.00	-25.91	peak			



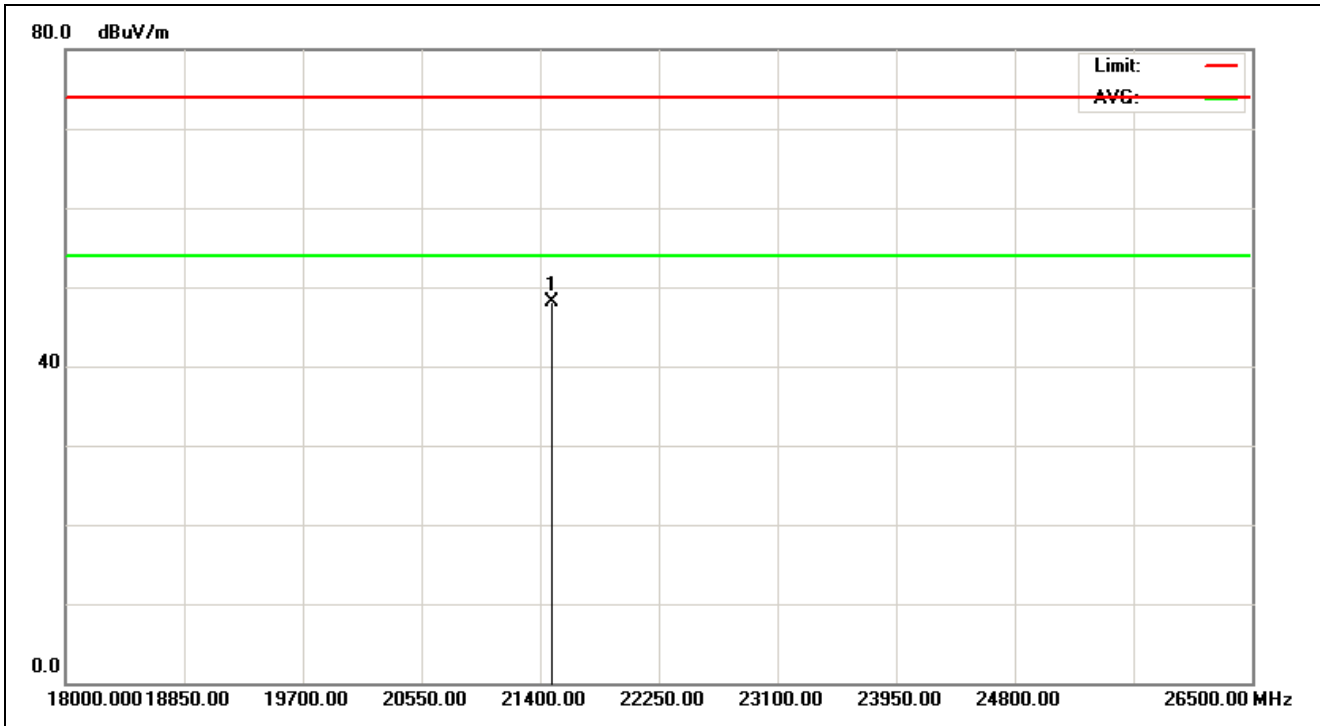
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Test item:	Radiation Emission	Test Time:	2014/8/13 22:05:59
Applicant:	Parex	Test Rating:	DC 5V
Product:	Bluetooth Keyboard	Temp.(°C)/Hum.(%):	22(°C)/54%
Model No.:	BT1311	Test Engineer:	Hugo Chang
Test Mode:	BT-2402		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	23203.526	30.21	17.57	47.78	74.00	-26.22	peak			



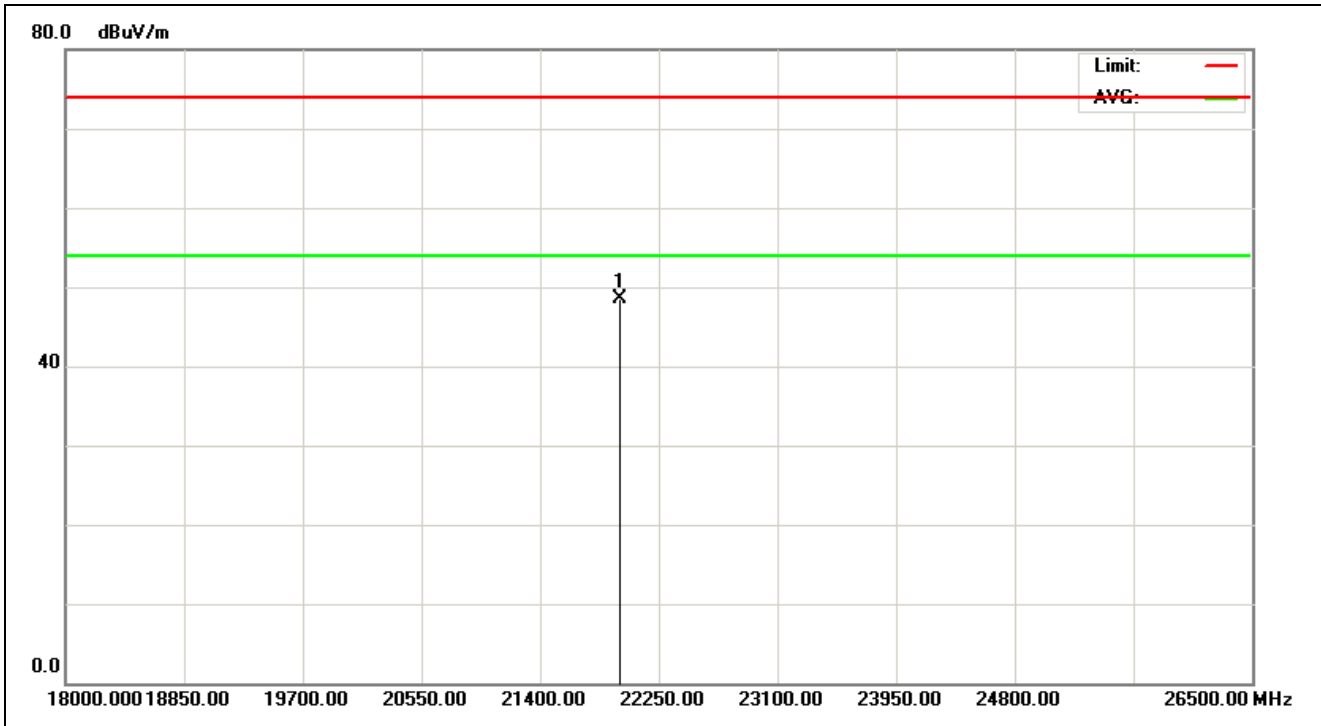
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2014/8/13 22:06:27
Applicant:	Parex	Test Rating:	DC 5V
Product:	Bluetooth Keyboard	Temp.(°C)/Hum.(%):	22(°C)/54%
Model No.:	BT1311	Test Engineer:	Hugo Chang
Test Mode:	BT-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	18953.526	29.84	18.71	48.55	74.00	-25.45	peak			



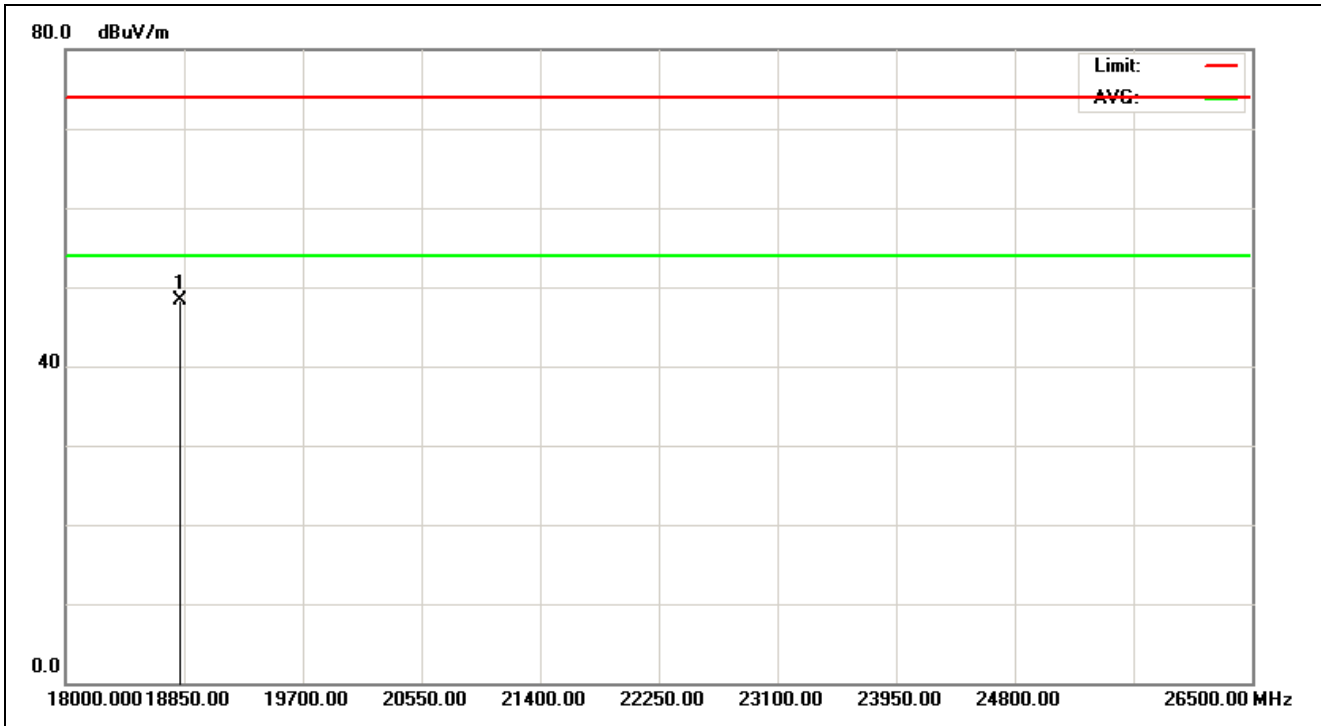
Service No.:	114024887-RF FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2014/8/13 22:06:49
Applicant:	Parex	Test Rating:	DC 5V
Product:	Bluetooth Keyboard	Temp.(°C)/Hum.(%):	22(°C)/54%
Model No.:	BT1311	Test Engineer:	Hugo Chang
Test Mode:	BT-2441		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21487.179	29.44	18.76	48.20	74.00	-25.80	peak			



Service No.:	114024887-RF FCC	Test Distance:	3m
Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2014/8/13 22:08:01
Applicant:	Parex	Test Rating:	DC 5V
Product:	Bluetooth Keyboard	Temp.(°C)/Hum.(%):	22(°C)/54%
Model No.:	BT1311	Test Engineer:	Hugo Chang
Test Mode:	BT-2480		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	21977.564	29.40	19.16	48.56	74.00	-25.44	peak			



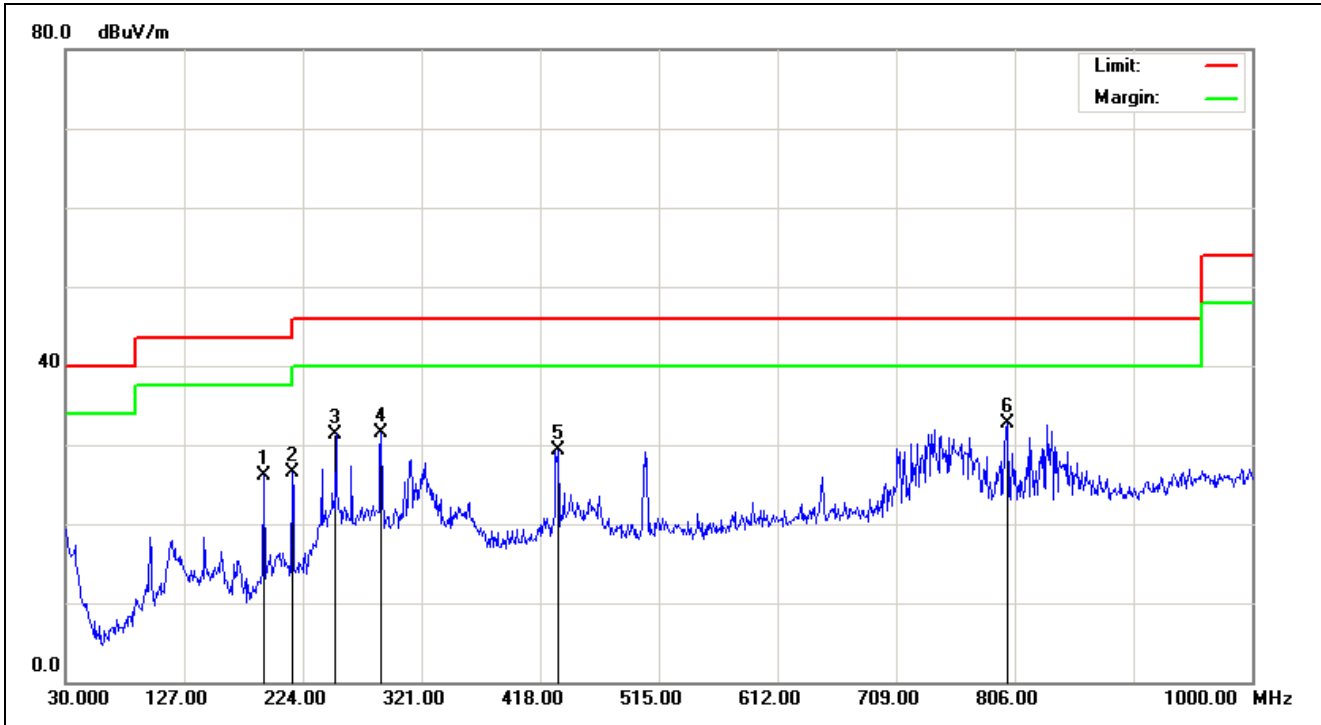
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Test Standard:	FCC Above 1G PEAK	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2014/8/13 22:08:41
Applicant:	Parex	Test Rating:	DC 5V
Product:	Bluetooth Keyboard	Temp.(°C)/Hum.(%):	22(°C)/54%
Model No.:	BT1311	Test Engineer:	Hugo Chang
Test Mode:	BT-2480		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	18817.308	29.42	18.80	48.22	74.00	-25.78	peak			

Spurious Emissions, TX Mode, 30M-1G



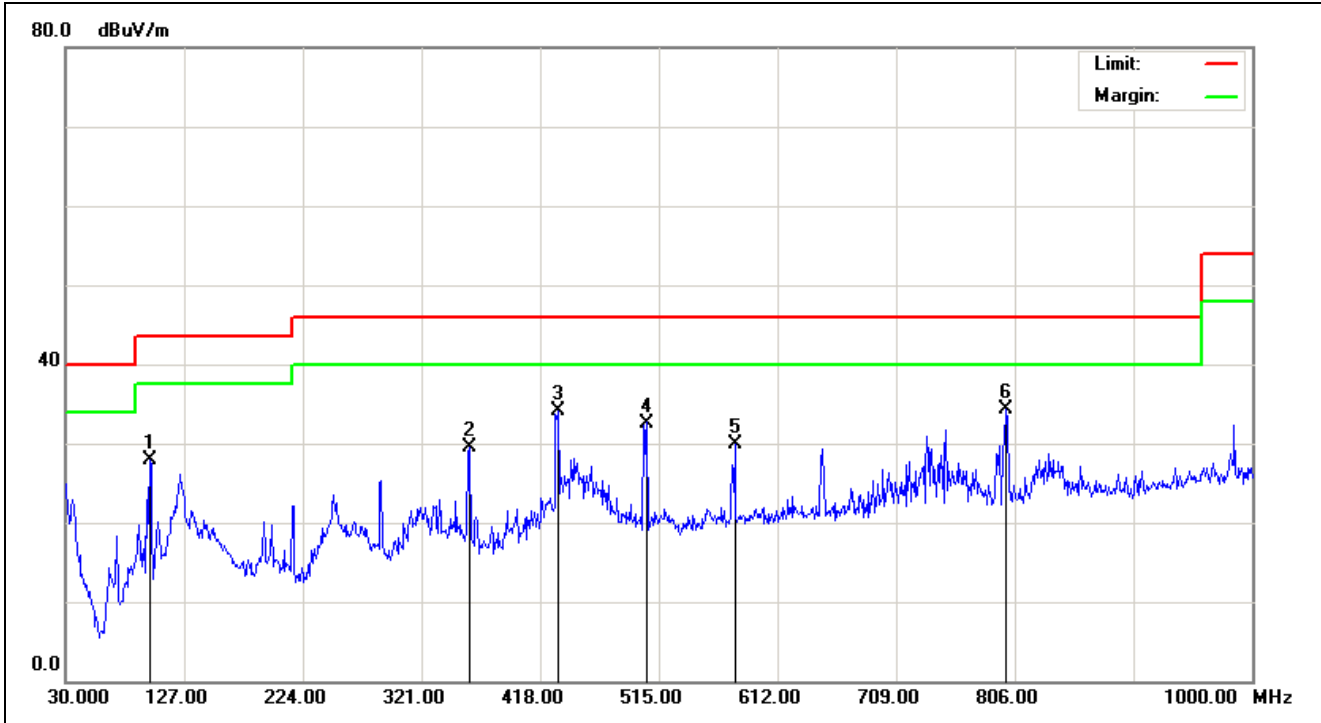
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Service No.:	114024887-RF FCC	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2014/8/13 23:04:11
Applicant:	Parex	Test Rating:	DC 5V
Product:	Bluetooth Keyboard	Temp.(°C)/Hum.(%):	22(°C)/54%
Model No.:	BT1311	Test Engineer:	Hugo Chang
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	191.9900	-15.23	41.33	26.10	43.50	-17.40	QP	100	20	
2	215.2700	-14.31	40.81	26.50	43.50	-17.00	QP	100	0	
3	251.1599	-11.55	42.80	31.25	46.00	-14.75	QP	100	263	
4	288.0199	-10.73	42.28	31.55	46.00	-14.45	QP	100	122	
5	432.5500	-8.28	37.52	29.24	46.00	-16.76	QP	100	84	
6	800.1799	-3.72	36.37	32.65	46.00	-13.35	QP	100	258	

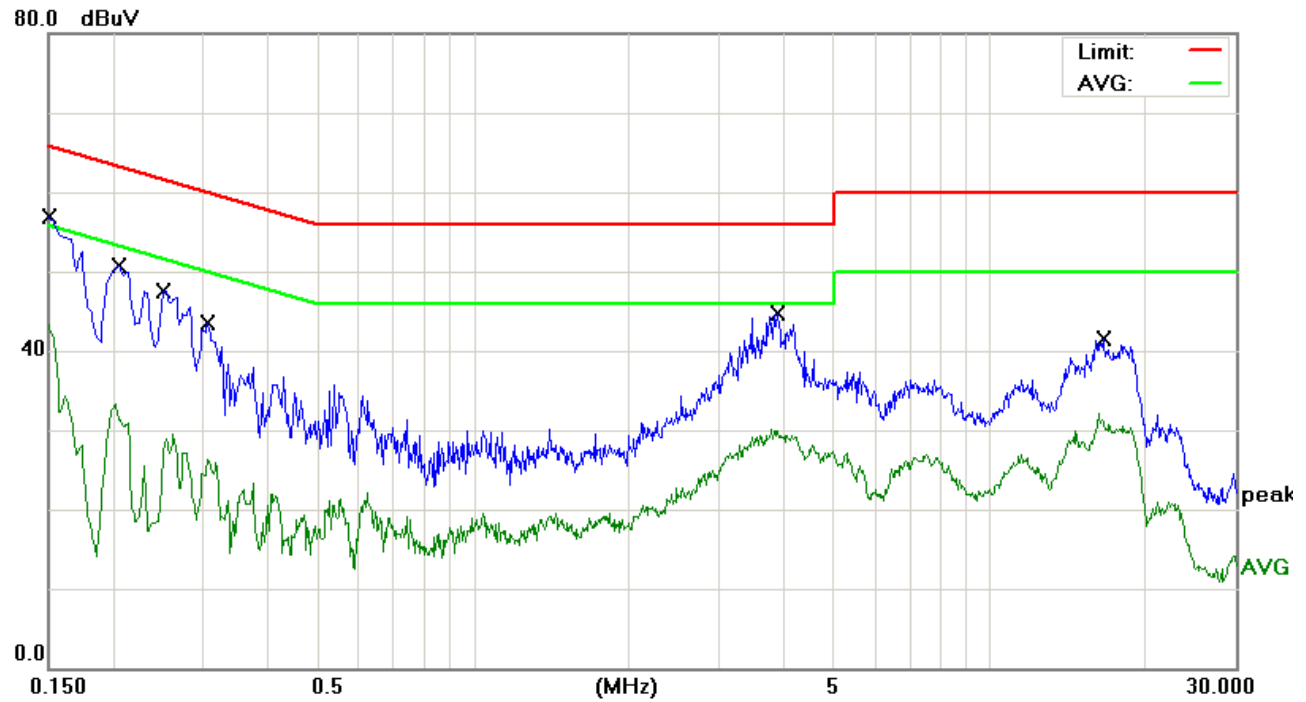
Spurious Emissions, TX Mode, 30M-1G



Service No.:	114024887-RF FCC	Test Distance:	3m
Test Standard:	FCC Class B 3M Radiation	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2014/8/13 23:05:14
Applicant:	Parex	Test Rating:	DC 5V
Product:	Bluetooth Keyboard	Temp.(°C)/Hum.(%):	22(°C)/54%
Model No.:	BT1311	Test Engineer:	Hugo Chang
Test Mode:			
Remark:			

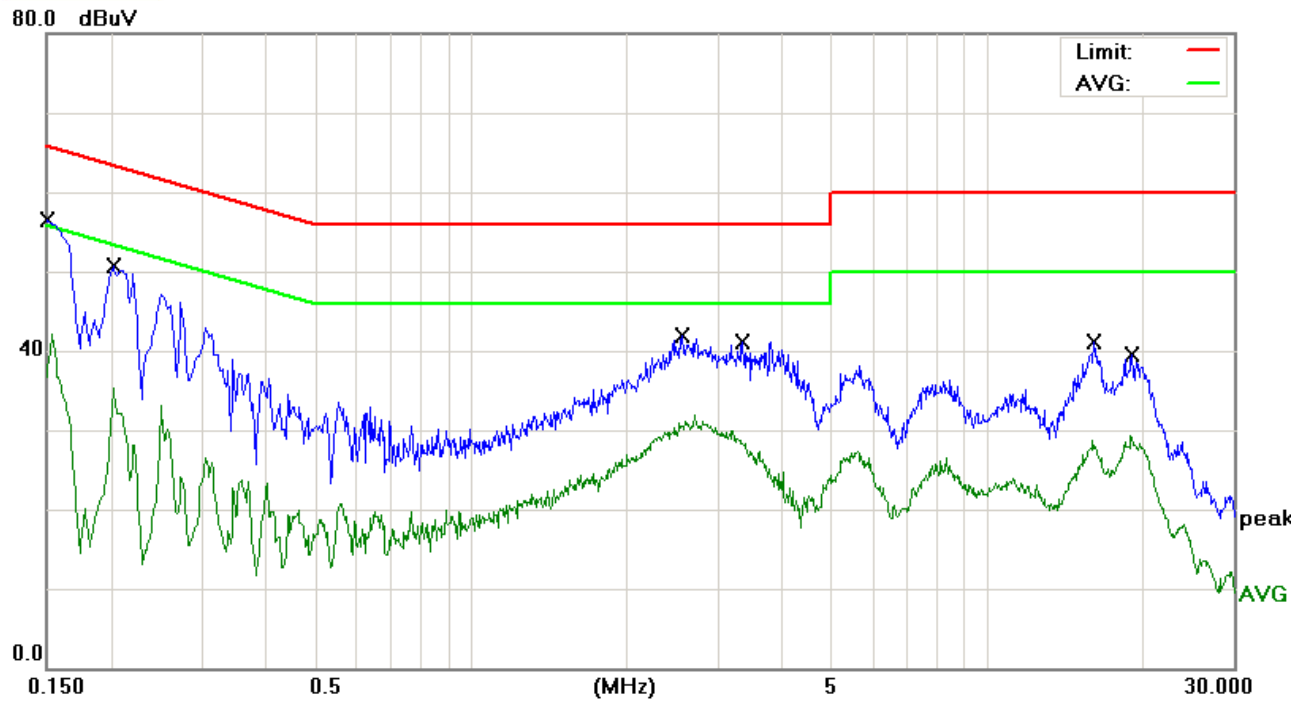
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	98.8700	-14.93	42.88	27.95	43.50	-15.55	QP	100	153	
2	360.7700	-9.25	38.72	29.47	46.00	-16.53	QP	100	209	
3	432.5500	-8.28	42.36	34.08	46.00	-11.92	QP	100	198	
4	505.3000	-7.27	39.87	32.60	46.00	-13.40	QP	100	14	
5	577.0800	-6.43	36.39	29.96	46.00	-16.04	QP	100	359	
6	799.2100	-3.72	38.12	34.40	46.00	-11.60	QP	100	32	

Mains Spurious Emissions



Service No.: 114024887-FCC
 Test Standard: FCC Class B Conduction(QP) Probe: L1
 Test item: Conduction Emission Test Time: 2014/8/18 09:43:10
 Applicant: Parex Test Rating: AC 120V/60Hz
 Product: Bluetooth Keyboard Temp.(°C)/Hum.(%): 31.0(°C)/52%
 Model No.: BT1311 Test Engineer: Hugo Chang
 Test Mode:
 Remark:

No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Remark
1	0.1500	9.65	41.89	51.54	65.99	-14.45	QP	
2	0.1500	9.65	21.37	31.02	55.99	-24.97	AVG	
3	0.2060	9.63	38.15	47.78	63.36	-15.58	QP	
4	0.2060	9.63	20.07	29.70	53.36	-23.66	AVG	
5	0.2500	9.62	34.92	44.54	61.75	-17.21	QP	
6	0.2500	9.62	15.09	24.71	51.75	-27.04	AVG	
7	0.3060	9.63	28.69	38.32	60.08	-21.76	QP	
8	0.3060	9.63	12.38	22.01	50.08	-28.07	AVG	
9	3.8980	9.66	27.25	36.91	56.00	-19.09	QP	
10	3.8980	9.66	19.12	28.78	46.00	-17.22	AVG	
11	16.5900	9.86	26.15	36.01	60.00	-23.99	QP	
12	16.5900	9.86	20.50	30.36	50.00	-19.64	AVG	



Service No.: 114024887-FCC
 Test Standard: FCC Class B Conduction(QP) Probe: N
 Test item: Conduction Emission Test Time: 2014/8/18 09:45:25
 Applicant: Parex Test Rating: AC 120V/60Hz
 Product: Bluetooth Keyboard Temp.(°C)/Hum.(%): 31.0(°C)/52%
 Model No.: BT1311 Test Engineer: Hugo Chang
 Test Mode:
 Remark:

No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Remark
1	0.1500	9.66	44.11	53.77	65.99	-12.22	QP	
2	0.1500	9.66	25.81	35.47	55.99	-20.52	AVG	
3	0.2020	9.65	38.13	47.78	63.52	-15.74	QP	
4	0.2020	9.65	21.68	31.33	53.52	-22.19	AVG	
5	2.5660	9.67	25.07	34.74	56.00	-21.26	QP	
6	2.5660	9.67	19.64	29.31	46.00	-16.69	AVG	
7	3.3460	9.69	24.19	33.88	56.00	-22.12	QP	
8	3.3460	9.69	18.08	27.77	46.00	-18.23	AVG	
9	16.1220	9.91	23.38	33.29	60.00	-26.71	QP	
10	16.1220	9.91	16.20	26.11	50.00	-23.89	AVG	
11	19.0260	9.89	22.48	32.37	60.00	-27.63	QP	
12	19.0260	9.89	16.96	26.85	50.00	-23.15	AVG	