

Test Report No.50182725 001

Appendix D: Radiated Spurious Emission Data

(File: 50182725 001Appendix D)

Contents

Emissions, Fundamental Mask	2
Spurious Emissions, TX+RX Mode, 9K-30M	3
Spurious Emissions, TX+RX Mode,30M-1G	5
Spurious Emissions, Main	7

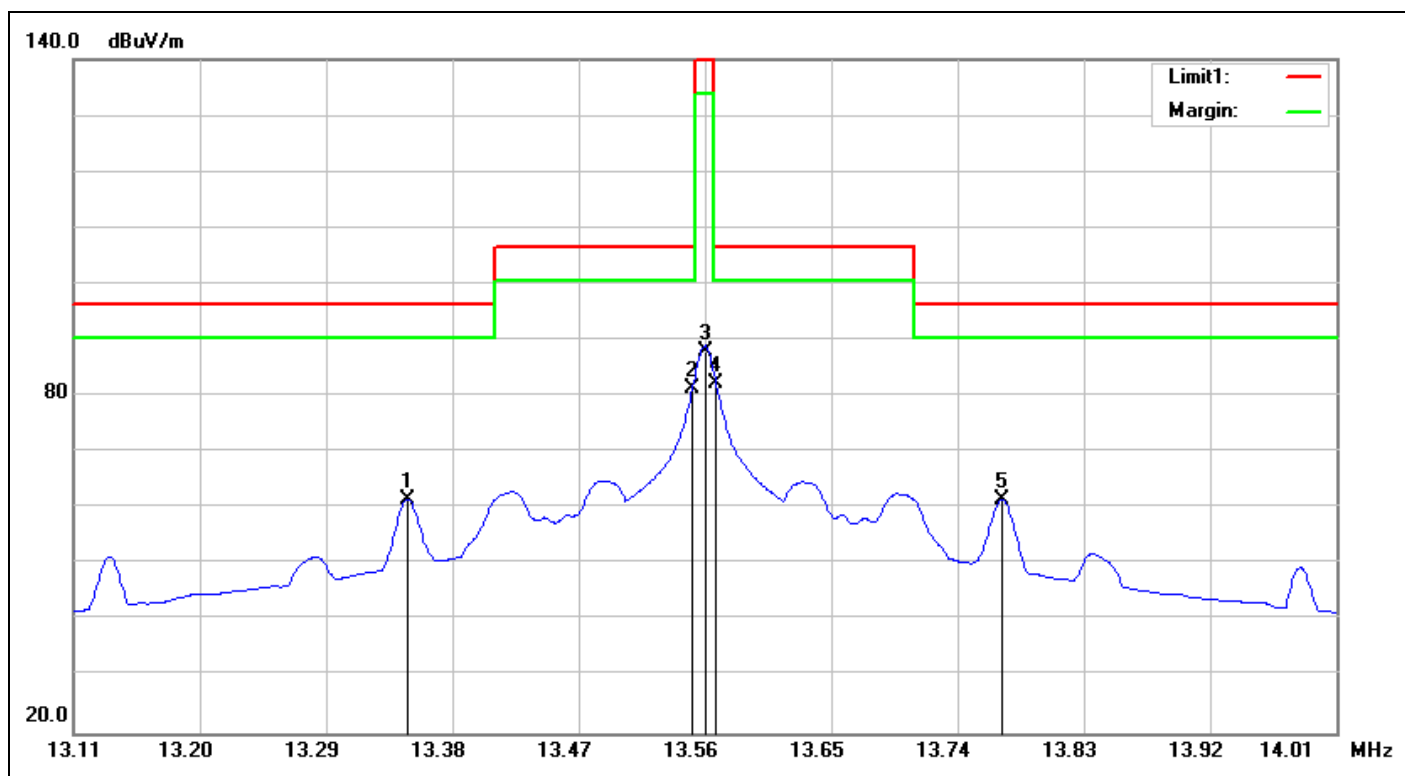
Emissions, Fundamental Mask



TUV Rheinland Taiwan Ltd.

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

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



Service No.:	114080743	Test Distance:	1.2m
Test Standard:	FCC 15.225_Fundamental_1.2m(dBuV/m)	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2018/9/13 21:28:28
Applicant:	Pamex	Test Rating:	DC 12V
Product:	Wall Reader	Temp.(°C)/Hum.(%)	21.2(°C)/56%
Model No.:	Kapture KA-WR1N	Test Engineer:	Kevin Kuo
Test Mode:	Mask		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	13.3476	20.83	40.82	61.65	96.40	-34.75	QP	100	35	
2	13.5510	20.85	60.58	81.43	106.40	-24.97	QP	100	201	
3	13.5600	20.85	67.25	88.10	139.90	-51.80	QP	100	337	
4	13.5681	20.85	61.31	82.16	106.40	-24.24	QP	100	189	
5	13.7715	20.87	40.72	61.59	96.40	-34.81	QP	100	54	

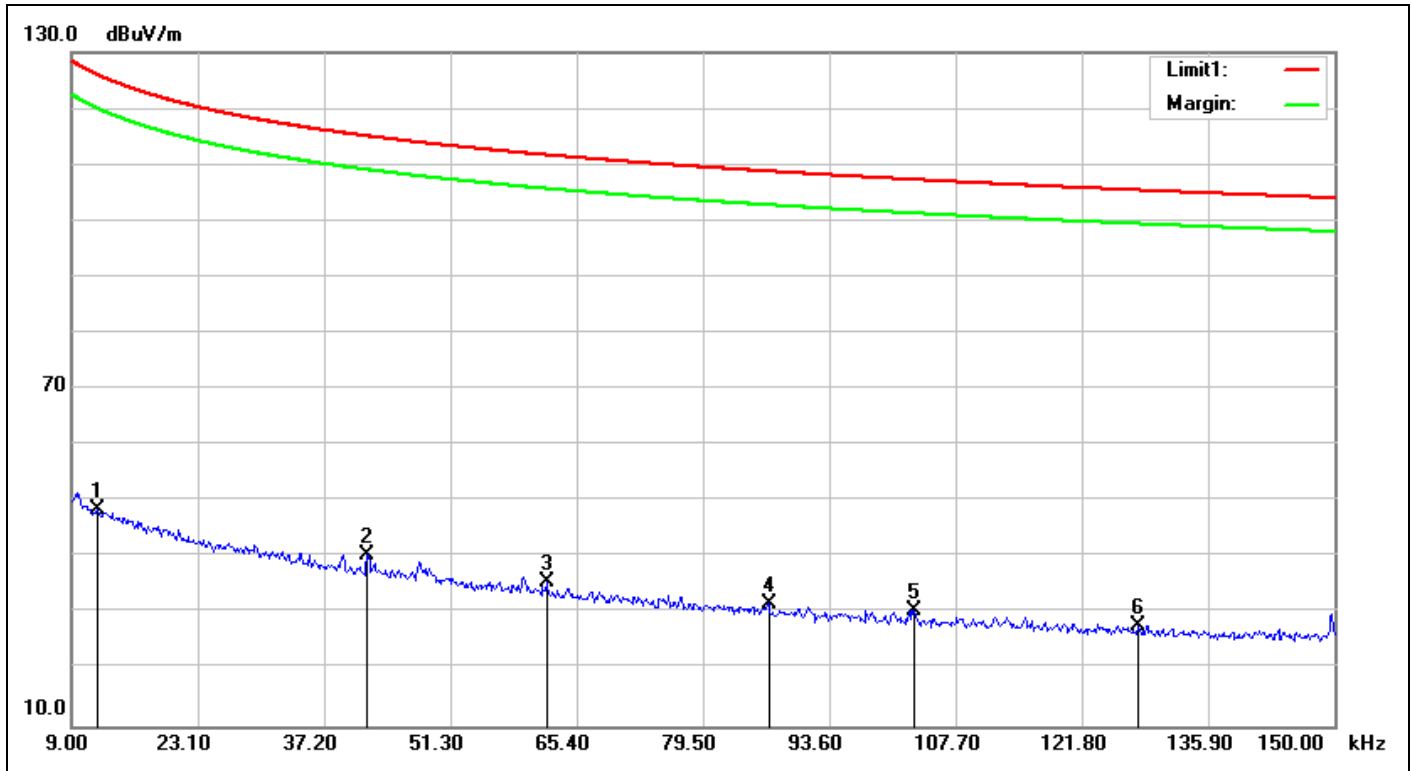
Spurious Emissions, TX+RX Mode, 9K-30M



TUV Rheinland Taiwan Ltd.

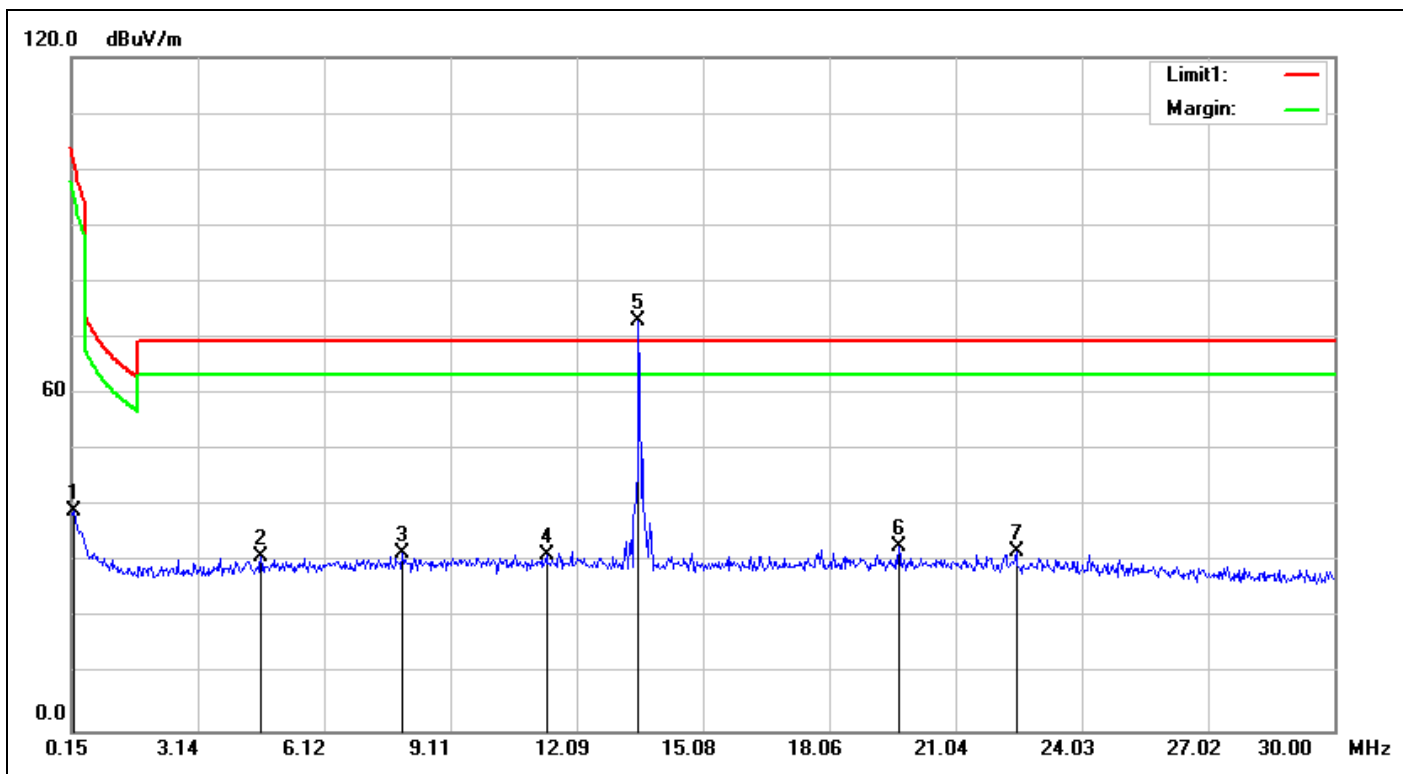
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114080743	Test Distance:	3m
Test Standard:	FCC15.209_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2018/9/11 21:05:01
Applicant:	Pamex	Test Rating:	DC 12V
Product:	Wall Reader	Temp.(°C)/Hum.(%)	19(°C)/51%
Model No.:	Kapture KA-WR1N	Test Engineer:	Kevin Kuo
Test Mode:	13.56-TX+RX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.0120	18.60	29.96	48.56	125.91	-77.35	QP	100	18	
2	0.0420	19.08	21.41	40.49	115.07	-74.58	QP	100	39	
3	0.0620	18.78	16.78	35.56	111.70	-76.14	QP	100	224	
4	0.0868	18.48	13.37	31.85	108.78	-76.93	QP	100	58	
5	0.1030	18.33	12.27	30.60	107.30	-76.70	QP	100	317	
6	0.1280	18.34	9.55	27.89	105.42	-77.53	QP	100	12	



Service No.:	114080743	Test Distance:	3m
Test Standard:	FCC15.209_9k-1G_3m	Ant. Polarization:	
Test item:	Radiation Emission	Test Time:	2018/9/11 21:06:57
Applicant:	Pamex	Test Rating:	DC 12V
Product:	Wall Reader	Temp.(°C)/Hum.(%):	19(°C)/51%
Model No.:	Kapture KA-WR1N	Test Engineer:	Kevin Kuo
Test Mode:	13.56-TX+RX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	0.2097	18.39	20.81	39.20	101.15	-61.95	QP	100	13	
2	4.6275	19.29	11.66	30.95	69.50	-38.55	QP	100	109	
3	7.9707	20.04	11.49	31.53	69.50	-37.97	QP	100	27	
4	11.3736	20.60	10.78	31.38	69.50	-38.12	QP	100	144	
5	13.5600	20.85	52.11	72.96	69.50	3.46	QP	100	69	Fundamental
6	19.7018	21.57	11.16	32.73	69.50	-36.77	QP	100	288	
7	22.4778	21.69	10.20	31.89	69.50	-37.61	QP	100	156	

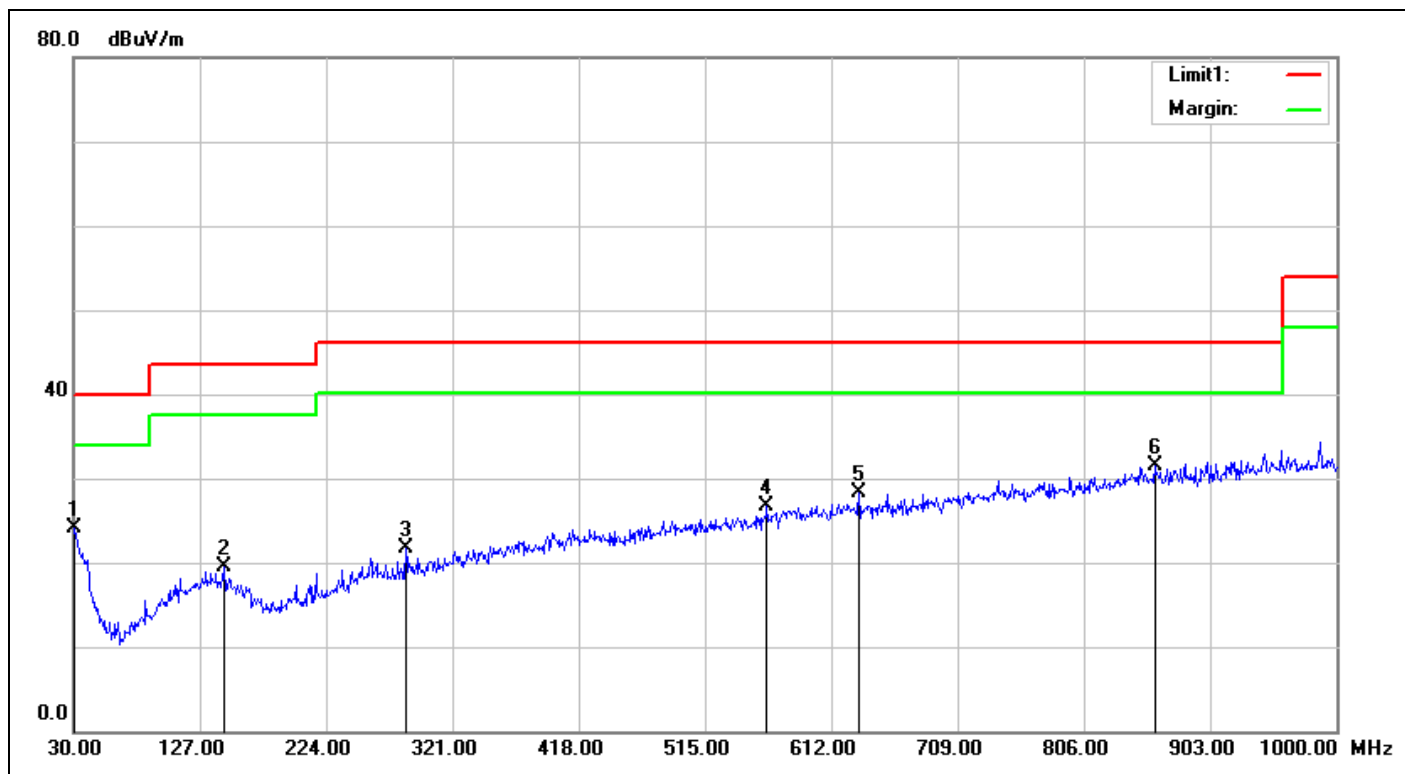
Spurious Emissions, TX+RX Mode,30M-1G



TUV Rheinland Taiwan Ltd.

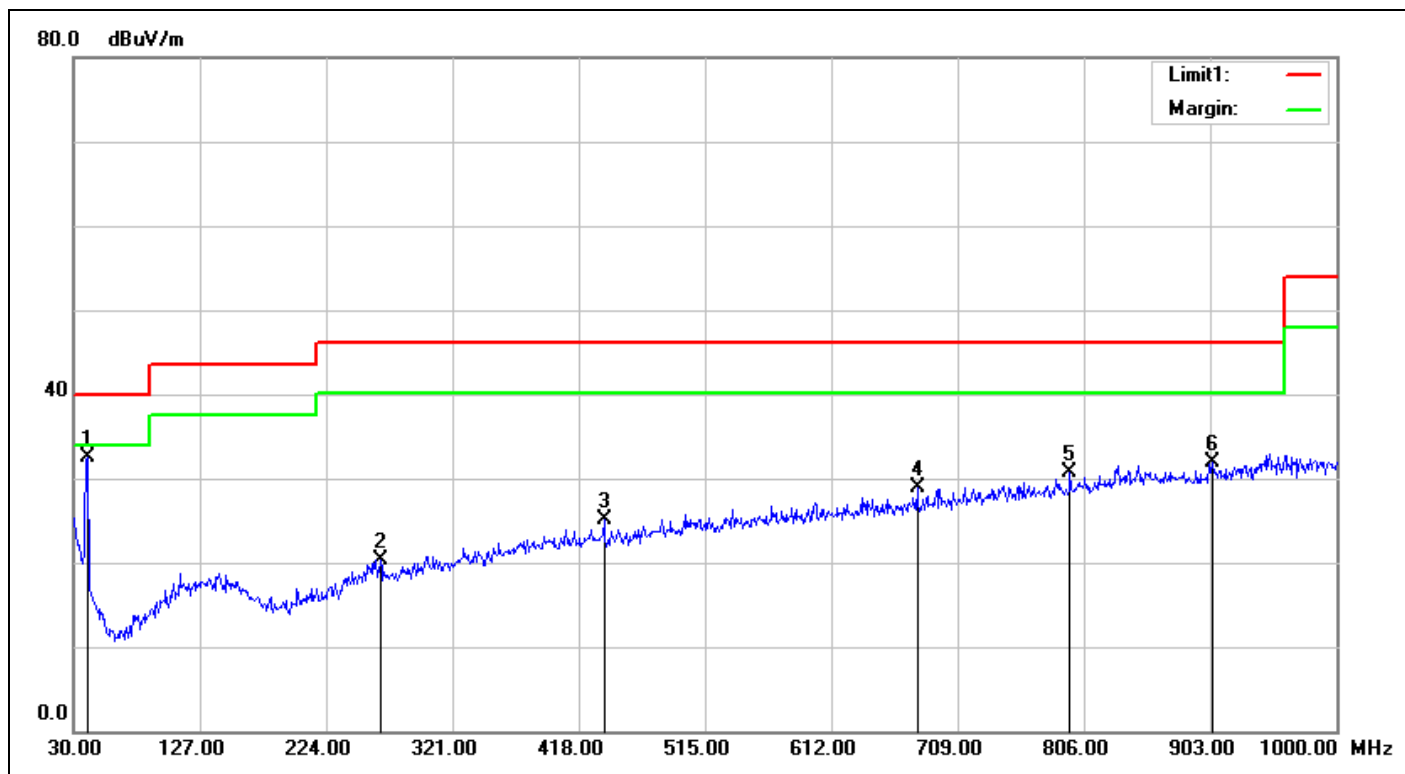
11F., No.758, Sec.4 Bade Road. Songshan Dist, Taipei City 105

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



Service No.:	114080743	Test Distance:	3m
Test Standard:	FCC 15.209_30M-40G_3m	Ant. Polarization:	Horizontal
Test item:	Radiation Emission	Test Time:	2018/9/11 21:23:10
Applicant:	Pamex	Test Rating:	DC 12V
Product:	Wall Reader	Temp.(°C)/Hum.(%):	19(°C)/51%
Model No.:	Kapture KA-WR1N	Test Engineer:	Kevin Kuo
Test Mode:	13.56-TX+RX		
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	23.94	24.01	40.00	-15.99	QP	100	142	
2	145.4299	-7.13	26.69	19.56	43.52	-23.96	QP	100	70	
3	285.1099	-4.97	26.63	21.66	46.02	-24.36	QP	100	0	
4	562.5299	-0.36	26.97	26.61	46.02	-19.41	QP	100	158	
5	633.3400	0.47	27.74	28.21	46.02	-17.81	QP	100	245	
6	860.3200	4.41	27.13	31.54	46.02	-14.48	QP	100	33	



Service No.:	114080743	Test Distance:	3m
Test Standard:	FCC 15.209_30M-40G_3m	Ant. Polarization:	Vertical
Test item:	Radiation Emission	Test Time:	2018/9/11 21:24:14
Applicant:	Pamex	Test Rating:	DC 12V
Product:	Wall Reader	Temp.(°C)/Hum.(%):	19(°C)/51%
Model No.:	Kapture KA-WR1N	Test Engineer:	Kevin Kuo
Test Mode:	13.56-TX+RX		
Remark:			

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (°)	Remark
1	40.6699	-6.02	38.57	32.55	40.00	-7.45	QP	100	224	
2	265.7100	-5.20	25.58	20.38	46.02	-25.64	QP	100	189	
3	437.4000	-2.14	27.25	25.11	46.02	-20.91	QP	100	1	
4	677.9600	1.08	27.78	28.86	46.02	-17.16	QP	100	360	
5	795.3300	3.05	27.57	30.62	46.02	-15.40	QP	100	51	
6	904.9400	4.75	27.20	31.95	46.02	-14.07	QP	100	256	

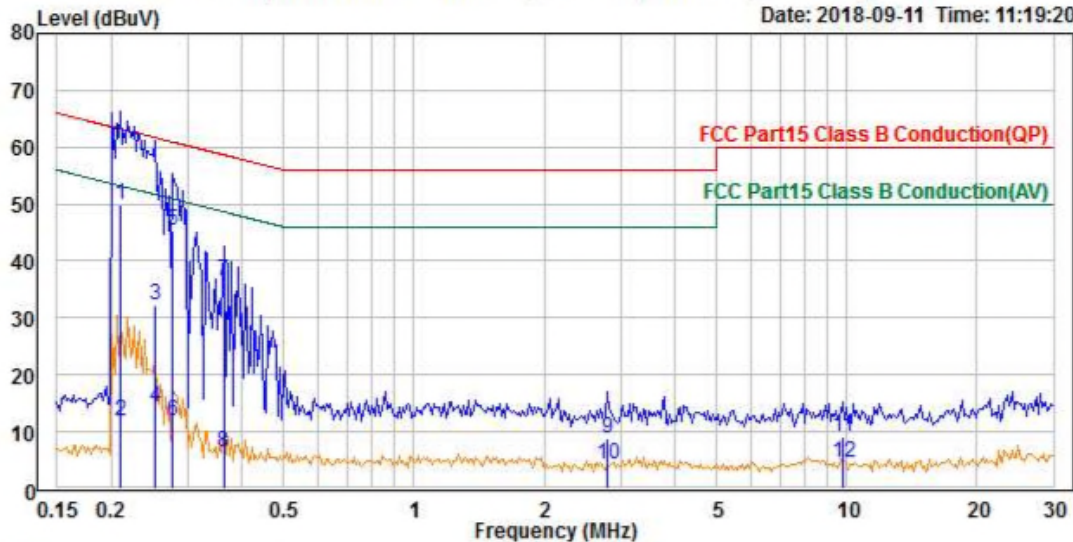
Spurious Emissions, Main



TUV Rheinland Taiwan Ltd.
11F., No.758, Sec.4 Bade Road, Songshan Dist, Taipei City 105
Tel:+886-2172-7000 Fax:+886-2528-0018

File: C:\EMC\Report\2018\ALZK\114080733(KA-WR1N)\114080733(KA-WR1N)_00005.EMI

Date: 2018-09-11 Time: 11:19:20



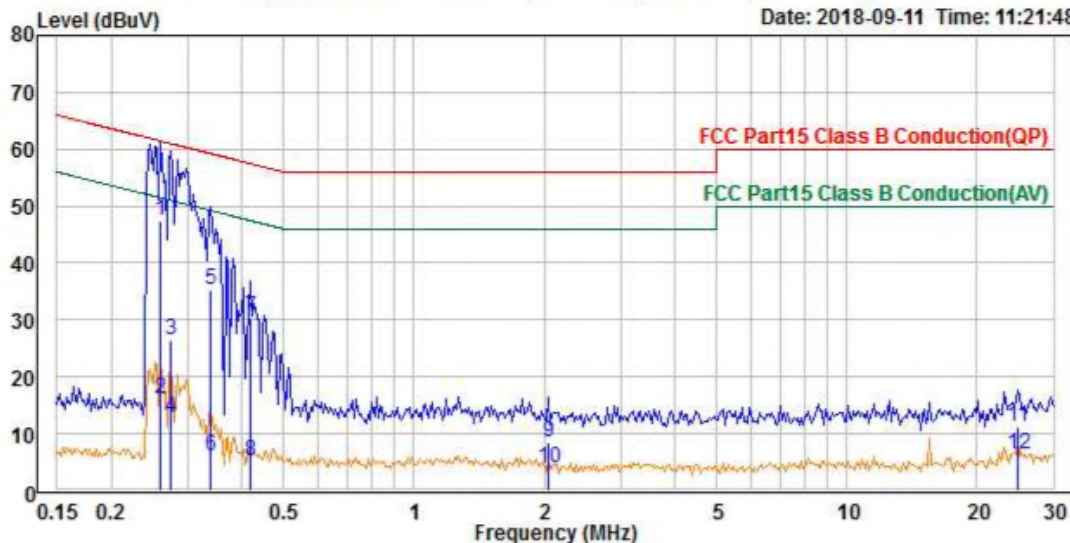
Trace: 1

Site : Conduction room
Condition : FCC Part15 Class B Conduction(QP) line1
Test Engineer: Joe Tien
Applicant : Pamex
Product :
Model No. : Kapture KA-WR1N
Test Rating : 120Vac/60Hz
Tmp/Hum : 22.8 °C / 43 %
Memo : RFID tag +WIFI link

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.210	40.18	9.68	49.86	63.19	-13.33	QP
2	0.210	2.10	9.68	11.78	53.19	-41.41	Average
3	0.252	22.55	9.68	32.23	61.71	-29.48	QP
4	0.252	4.60	9.68	14.28	51.71	-37.43	Average
5	0.278	35.64	9.68	45.32	60.88	-15.56	QP
6	0.278	2.04	9.68	11.72	50.88	-39.16	Average
7	0.363	26.88	9.69	36.57	58.65	-22.08	QP
8	0.363	-3.25	9.69	6.44	48.65	-42.21	Average
9	2.788	-0.95	9.73	8.78	56.00	-47.22	QP
10	2.788	-5.59	9.73	4.14	46.00	-41.86	Average
11	9.756	-0.64	9.83	9.19	60.00	-50.81	QP
12	9.756	-5.38	9.83	4.45	50.00	-45.55	Average

File: C:\EMC\Report\2018\ALZK\114080733(KA-WR1N)\114080733(KA-WR1N)_00007.EMI

Date: 2018-09-11 Time: 11:21:48



Trace: 1
Site : Conduction room
Condition : FCC Part15 Class B Conduction(QP) neutral
Test Engineer: Joe Tien
Applicant : Pamex
Product :
Model No. : Kapture KA-WR1N
Test Rating : 120Vac/60Hz
Tmp/Hum : 22.8 °C / 43 %
Memo : RFID tag +WIFI link

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.259	37.82	9.68	47.50	61.46	-13.96	QP
2	0.259	6.35	9.68	16.03	51.46	-35.43	Average
3	0.275	16.76	9.68	26.44	60.96	-34.52	QP
4	0.275	3.08	9.68	12.76	50.96	-38.20	Average
5	0.339	25.56	9.67	35.23	59.23	-24.00	QP
6	0.339	-3.61	9.67	6.06	49.23	-43.17	Average
7	0.418	20.61	9.68	30.29	57.50	-27.21	QP
8	0.418	-4.51	9.68	5.17	47.50	-42.33	Average
9	2.049	-1.18	9.72	8.54	56.00	-47.46	QP
10	2.049	-5.67	9.72	4.05	46.00	-41.95	Average
11	24.837	1.40	9.94	11.34	60.00	-48.66	QP
12	24.837	-3.44	9.94	6.50	50.00	-43.50	Average