

RF EXPOSURE REPORT

Product: OBU

Model Name: AT41

FCC ID: 2AHR8-AT41BT

Applicant: OCTO Telematics S.p.A

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Manufacturer: Gosuncn Technology Group Co., Ltd.

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Report No.: SA180302W004

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA180302W004	Original release	Mar. 27, 2018



Test Report No.: SA180302W004

1 CERTIFICATION

PRODUCT: OBU
BRAND NAME: OCTO
MODEL NAME: AT41
APPLICANT: OCTO Telematics S.p.A
TESTED: Mar. 02, 2018 ~ Mar. 13, 2018
TEST SAMPLE: Identical Prototype
STANDARDS: FCC Part 2 (Section 2.1091)
FCC OET Bulletin 65, Supplement C (01-01)
KDB 447498 D01 General RF Exposure Guidance v06
IEEE C95.1

The above equipment has been tested by **Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Roger, **DATE:** Mar. 27, 2018
(Roger Li/ Engineer)

APPROVED BY : Sam Tung, **DATE:** Mar. 27, 2018
(Sam Tung / Manager)

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	OBU	
MODEL NAME	AT41	
NOMINAL VOLTAGE	DC 12V 3.7Vdc (Li-ion, battery)	
OPERATING TEMPERATURE RANGE	-30 ~ 75°C	
MODULATION TYPE	GSM	GMSK
	WCDMA	BPSK/QPSK
	LTE	QPSK/16QAM
OPERATING FREQUENCY	GSM	824.2MHz ~ 848.8MHz (FOR GSM 850) 1850.2MHz ~ 1909.8MHz (FOR GSM 1900)
	WCDMA	1852.4MHz ~ 1907.6MHz (FOR WCDMA Band 2) 826.4MHz ~ 846.6MHz (FOR WCDMA Band 5)
	LTE	1850.7MHz ~ 1909.3MHz (FOR LTE Band2) 1710.7MHz ~ 1754.3MHz (FOR LTE Band4) 824.7MHz ~ 848.3MHz (FOR LTE Band5) 699MHz ~ 716MHz (FOR LTE Band12)
ANTENNA TYPE	Fixed Internal Antenna for WWAN PIFA Antenna for BT	
ANTENNA GAIN	0dBi for GSM 850/ WCDMA V/ LTE B5 3.1dBi for GSM 1900/ WCDMA II/ LTE B2 2.9dBi for LTE B4 -1dBi for LTE B12 2.5dBi for BT	
HW VERSION	AT41_MB_B	
SW VERSION	ME3631U1AV1.0B06	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	N/A	

NOTE:

- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

3 RF EXPOSURE

3.1 LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

3.2 MPE CALCULATION FORMULA

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

3.3 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile device**.

3.4 CONDUCTED POWER

Bluetooth

GFSK

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
0	2402	-0.14	N/A
39	2441	-0.35	N/A
78	2480	-0.36	N/A

$\pi/4$ DQPSK

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
0	2402	0.08	N/A
39	2441	-0.11	N/A
78	2480	-0.28	N/A

8DPSK

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
0	2402	0.23	N/A
39	2441	0.04	N/A
78	2480	-0.25	N/A

BT-LE (GFSK)

CHANNEL	CHANNEL FREQUENCY (MHz)	AVERAGE POWER (dBm)	PASS/FAIL
0	2402	-1.92	N/A
19	2440	-0.85	N/A
39	2480	-1.31	N/A

Band	GSM850		
Channel	128	189	251
Frequency (MHz)	824.2	836.4	848.8
GPRS 8	33.65	33.54	32.94
GPRS 10	33.33	33.22	32.62
GPRS 11	33.00	32.89	32.29
GPRS 12	32.61	32.50	31.90
EDGE 8 (MCS9)	26.50	26.39	25.79
EDGE 10 (MCS9)	26.28	26.17	25.57
EDGE 11 (MCS9)	25.97	25.86	25.26
EDGE 12 (MCS9)	25.65	25.54	24.94

Band	GSM1900		
Channel	512	661	810
Frequency (MHz)	1850.2	1880.0	1909.8
GPRS 8	29.73	29.57	29.50
GPRS 10	29.65	29.49	29.42
GPRS 11	29.59	29.43	29.36
GPRS 12	29.46	29.30	29.23
EDGE 8 (MCS9)	25.74	25.58	25.51
EDGE 10 (MCS9)	25.60	25.44	25.37
EDGE 11 (MCS9)	25.48	25.32	25.25
EDGE 12 (MCS9)	25.31	25.15	25.08

Band	WCDMA II		
Channel	9262	9400	9538
Frequency (MHz)	1852.4	1880.0	1907.6
RMC 12.2K	22.75	23.01	22.94
HSPA			
HSDPA Subtest-1	21.86	22.12	22.05
HSDPA Subtest-2	21.83	22.09	22.02
HSDPA Subtest-3	21.42	21.68	21.61
HSDPA Subtest-4	21.37	21.63	21.56
HSUPA Subtest-1	21.80	22.06	21.99
HSUPA Subtest-2	19.95	20.21	20.14
HSUPA Subtest-3	20.92	21.18	21.11
HSUPA Subtest-4	19.92	20.18	20.11
HSUPA Subtest-5	21.92	22.18	22.11

Band	WCDMA V		
Channel	4132	4182	4233
Frequency (MHz)	826.4	836.4	846.6
RMC 12.2K	23.98	22.62	23.74
HSPA			
HSDPA Subtest-1	23.07	21.71	22.83
HSDPA Subtest-2	23.04	21.68	22.80
HSDPA Subtest-3	22.65	21.29	22.41
HSDPA Subtest-4	22.60	21.24	22.36
HSUPA Subtest-1	23.01	21.65	22.77
HSUPA Subtest-2	21.14	19.78	20.90
HSUPA Subtest-3	22.08	20.72	21.84
HSUPA Subtest-4	21.10	19.74	20.86
HSUPA Subtest-5	23.25	21.89	23.01

LTE BAND 2

LTE Band 2							
BW	Modulation	RB Size	RB Offset	Low CH 18607	Mid CH 18900	High CH 19193	3GPP MPR (dB)
				Frequency 1850.7 MHz	Frequency 1880 MHz	Frequency 1909.3 MHz	
1.4MHz	QPSK	1	0	22.17	22.56	22.60	0
		1	2	22.07	22.46	22.50	0
		1	5	22.04	22.43	22.47	0
		3	0	22.16	22.55	22.59	0
		3	1	22.06	22.45	22.49	0
		3	3	22.03	22.42	22.46	0
		6	0	21.01	21.40	21.44	1
	16QAM	1	0	20.93	21.32	21.36	1
		1	2	20.91	21.30	21.34	1
		1	5	20.82	21.21	21.25	1
		3	0	20.91	21.30	21.34	1
		3	1	20.89	21.28	21.32	1
		3	3	20.80	21.19	21.23	1
		6	0	20.06	20.45	20.49	2
BW	Modulation	RB Size	RB Offset	Low CH 18615	Mid CH 18900	High CH 19185	3GPP MPR (dB)
				Frequency 1851.5 MHz	Frequency 1880 MHz	Frequency 1908.5 MHz	
3 MHz	QPSK	1	0	22.20	22.59	22.63	0
		1	7	22.10	22.49	22.53	0
		1	14	22.07	22.46	22.50	0
		8	0	21.20	21.59	21.63	1
		8	3	21.16	21.55	21.59	1
		8	7	21.14	21.53	21.57	1
		15	0	21.04	21.43	21.47	1
	16QAM	1	0	20.96	21.35	21.39	1
		1	7	20.94	21.33	21.37	1
		1	14	20.85	21.24	21.28	1
		8	0	20.33	20.72	20.76	2
		8	3	20.29	20.68	20.72	2
		8	7	20.26	20.65	20.69	2
		15	0	20.09	20.48	20.52	2

LTE Band 2							
BW	Modulation	RB Size	RB Offset	Low CH 18625	Mid CH 18900	High CH 19175	3GPP MPR (dB)
				Frequency 1852.5 MHz	Frequency 1880 MHz	Frequency 1907.5 MHz	
5 MHz	QPSK	1	0	22.23	22.62	22.66	0
		1	12	22.13	22.52	22.56	0
		1	24	22.10	22.49	22.53	0
		12	0	21.23	21.62	21.66	1
		12	6	21.19	21.58	21.62	1
		12	13	21.17	21.56	21.60	1
		25	0	21.07	21.46	21.50	1
	16QAM	1	0	20.99	21.38	21.42	1
		1	12	20.97	21.36	21.40	1
		1	24	20.88	21.27	21.31	1
		12	0	20.36	20.75	20.79	2
		12	6	20.32	20.71	20.75	2
		12	13	20.29	20.68	20.72	2
		25	0	20.12	20.51	20.55	2
BW	Modulation	RB Size	RB Offset	Low CH 18650	Mid CH 18900	High CH 19150	3GPP MPR (dB)
				Frequency 1855 MHz	Frequency 1880 MHz	Frequency 1905 MHz	
10 MHz	QPSK	1	0	22.25	22.64	22.68	0
		1	24	22.15	22.54	22.58	0
		1	49	22.12	22.51	22.55	0
		25	0	21.25	21.64	21.68	1
		25	12	21.21	21.60	21.64	1
		25	25	21.19	21.58	21.62	1
		50	0	21.09	21.48	21.52	1
	16QAM	1	0	21.01	21.40	21.44	1
		1	24	20.99	21.38	21.42	1
		1	49	20.90	21.29	21.33	1
		25	0	20.38	20.77	20.81	2
		25	12	20.34	20.73	20.77	2
		25	25	20.31	20.70	20.74	2
		50	0	20.14	20.53	20.57	2

LTE Band 2							
BW	Modulation	RB Size	RB Offset	Low CH 18675	Mid CH 18900	High CH 19125	3GPP MPR (dB)
				Frequency 1857.5 MHz	Frequency 1880 MHz	Frequency 1902.5 MHz	
15 MHz	QPSK	1	0	22.28	22.67	22.71	0
		1	37	22.18	22.57	22.61	0
		1	74	22.15	22.54	22.58	0
		36	0	21.28	21.67	21.71	1
		36	19	21.24	21.63	21.67	1
		36	39	21.22	21.61	21.65	1
		75	0	21.12	21.51	21.55	1
	16QAM	1	0	21.04	21.43	21.47	1
		1	37	21.02	21.41	21.45	1
		1	74	20.93	21.32	21.36	1
		36	0	20.41	20.80	20.84	2
		36	19	20.37	20.76	20.80	2
		36	39	20.34	20.73	20.77	2
		75	0	20.17	20.56	20.60	2
BW	Modulation	RB Size	RB Offset	Low CH 18700	Mid CH 18900	High CH 19100	3GPP MPR (dB)
				Frequency 1860 MHz	Frequency 1880 MHz	Frequency 1900 MHz	
20MHz	QPSK	1	0	22.33	22.72	22.76	0
		1	50	22.23	22.62	22.66	0
		1	99	22.20	22.59	22.63	0
		50	0	21.33	21.72	21.76	1
		50	25	21.29	21.68	21.72	1
		50	50	21.27	21.66	21.70	1
		100	0	21.17	21.56	21.60	1
	16QAM	1	0	21.09	21.48	21.52	1
		1	50	21.07	21.46	21.50	1
		1	99	20.98	21.37	21.41	1
		50	0	20.46	20.85	20.89	2
		50	25	20.42	20.81	20.85	2
		50	50	20.39	20.78	20.82	2
		100	0	20.22	20.61	20.65	2

LTE BAND 4

LTE Band 4							
BW	Modulation	RB Size	RB Offset	Low CH 19957	Mid CH 20175	High CH 20393	MPR
				Frequency 1710.7 MHz	Frequency 1732.5 MHz	Frequency 1754.3 MHz	
1.4MHz	QPSK	1	0	21.85	22.13	22.42	0
		1	2	21.83	22.11	22.40	0
		1	5	21.80	22.08	22.37	0
		3	0	21.83	22.11	22.40	0
		3	1	21.81	22.09	22.38	0
		3	3	21.78	22.06	22.35	0
		6	0	20.68	20.96	21.25	1
	16QAM	1	0	20.61	20.89	21.18	1
		1	2	20.60	20.88	21.17	1
		1	5	20.41	20.69	20.98	1
		3	0	20.60	20.88	21.17	1
		3	1	20.59	20.87	21.16	1
		3	3	20.40	20.68	20.97	1
		6	0	19.76	20.04	20.33	2
BW	Modulation	RB Size	RB Offset	Low CH 19965	Mid CH 20175	High CH 20385	MPR
				Frequency 1711.5 MHz	Frequency 1732.5 MHz	Frequency 1753.5 MHz	
3 MHz	QPSK	1	0	21.86	22.14	22.43	0
		1	7	21.84	22.12	22.41	0
		1	14	21.81	22.09	22.38	0
		8	0	20.88	21.16	21.45	1
		8	3	20.79	21.07	21.36	1
		8	7	20.77	21.05	21.34	1
		15	0	20.69	20.97	21.26	1
	16QAM	1	0	20.62	20.90	21.19	1
		1	7	20.61	20.89	21.18	1
		1	14	20.42	20.70	20.99	1
		8	0	19.91	20.19	20.48	2
		8	3	19.85	20.13	20.42	2
		8	7	19.82	20.10	20.39	2
		15	0	19.77	20.05	20.34	2

LTE Band 4							
BW	Modulation	RB Size	RB Offset	Low CH 19975	Mid CH 20175	High CH 20375	MPR
				Frequency 1712.5 MHz	Frequency 1732.5 MHz	Frequency 1752.5 MHz	
5 MHz	QPSK	1	0	21.89	22.17	22.46	0
		1	12	21.87	22.15	22.44	0
		1	24	21.84	22.12	22.41	0
		12	0	20.91	21.19	21.48	1
		12	6	20.82	21.10	21.39	1
		12	13	20.80	21.08	21.37	1
		25	0	20.72	21.00	21.29	1
	16QAM	1	0	20.65	20.93	21.22	1
		1	12	20.64	20.92	21.21	1
		1	24	20.45	20.73	21.02	1
		12	0	19.94	20.22	20.51	2
		12	6	19.88	20.16	20.45	2
		12	13	19.85	20.13	20.42	2
		25	0	19.80	20.08	20.37	2
BW	Modulation	RB Size	RB Offset	Low CH 20000	Mid CH 20175	High CH 20350	MPR
				Frequency 1715 MHz	Frequency 1732.5 MHz	Frequency 1750 MHz	
10 MHz	QPSK	1	0	21.93	22.21	22.50	0
		1	24	21.91	22.19	22.48	0
		1	49	21.88	22.16	22.45	0
		25	0	20.95	21.23	21.52	1
		25	12	20.86	21.14	21.43	1
		25	25	20.84	21.12	21.41	1
		50	0	20.76	21.04	21.33	1
	16QAM	1	0	20.69	20.97	21.26	1
		1	24	20.68	20.96	21.25	1
		1	49	20.49	20.77	21.06	1
		25	0	19.98	20.26	20.55	2
		25	12	19.92	20.20	20.49	2
		25	25	19.89	20.17	20.46	2
		50	0	19.84	20.12	20.41	2

LTE Band 4							
BW	Modulation	RB Size	RB Offset	Low CH 20025	Mid CH 20175	High CH 20325	MPR
				Frequency 1717.5 MHz	Frequency 1732.5 MHz	Frequency 1747.5 MHz	
15 MHz	QPSK	1	0	21.99	22.27	22.56	0
		1	37	21.97	22.25	22.54	0
		1	74	21.94	22.22	22.51	0
		36	0	21.01	21.29	21.58	1
		36	19	20.92	21.20	21.49	1
		36	39	20.90	21.18	21.47	1
		75	0	20.82	21.10	21.39	1
	16QAM	1	0	20.75	21.03	21.32	1
		1	37	20.74	21.02	21.31	1
		1	74	20.55	20.83	21.12	1
		36	0	20.04	20.32	20.61	2
		36	19	19.98	20.26	20.55	2
		36	39	19.95	20.23	20.52	2
		75	0	19.90	20.18	20.47	2
BW	Modulation	RB Size	RB Offset	Low CH 20050	Mid CH 20175	High CH 20300	MPR
				Frequency 1720 MHz	Frequency 1732.5 MHz	Frequency 1745 MHz	
20MHz	QPSK	1	0	22.02	22.30	22.59	0
		1	50	22.00	22.28	22.57	0
		1	99	21.97	22.25	22.54	0
		50	0	21.04	21.32	21.61	1
		50	25	20.95	21.23	21.52	1
		50	50	20.93	21.21	21.50	1
		100	0	20.85	21.13	21.42	1
	16QAM	1	0	20.78	21.06	21.35	1
		1	50	20.77	21.05	21.34	1
		1	99	20.58	20.86	21.15	1
		50	0	20.07	20.35	20.64	2
		50	25	20.01	20.29	20.58	2
		50	50	19.98	20.26	20.55	2
		100	0	19.93	20.21	20.50	2

LTE BAND 5

Band/BW	Modulation	RB Size	RB Offset	Low CH 20407	Mid CH 20525	High CH 20643	3GPP MPR (dB)
				Frequency 824.7 MHz	Frequency 836.5 MHz	Frequency 848.3 MHz	
5/1.4	QPSK	1	0	21.90	22.73	22.51	0
		1	2	21.86	22.69	22.47	0
		1	5	21.49	22.32	22.10	0
		3	0	21.88	22.71	22.49	0
		3	1	21.84	22.67	22.45	0
		3	3	21.47	22.30	22.08	0
		6	0	20.97	21.80	21.58	1
	16QAM	1	0	20.40	21.23	21.01	1
		1	2	20.36	21.19	20.97	1
		1	5	19.39	20.22	20.00	1
		3	0	20.39	21.22	21.00	1
		3	1	20.35	21.18	20.96	1
		3	3	19.38	20.21	19.99	1
		6	0	20.07	20.90	20.68	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20415	Mid CH 20525	High CH 20635	3GPP MPR (dB)
				Frequency 825.5 MHz	Frequency 836.5 MHz	Frequency 847.5 MHz	
5/3	QPSK	1	0	21.94	22.77	22.55	0
		1	7	21.90	22.73	22.51	0
		1	14	21.53	22.36	22.14	0
		8	0	21.31	22.14	21.92	1
		8	3	21.26	22.09	21.87	1
		8	7	20.88	21.71	21.49	1
		15	0	21.01	21.84	21.62	1
	16QAM	1	0	20.44	21.27	21.05	1
		1	7	20.40	21.23	21.01	1
		1	14	19.43	20.26	20.04	1
		8	0	20.38	21.21	20.99	2
		8	3	20.37	21.20	20.98	2
		8	7	19.76	20.59	20.37	2
		15	0	20.11	20.94	20.72	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20425	Mid CH 20525	High CH 20625	3GPP MPR (dB)
				Frequency 826.5 MHz	Frequency 836.5 MHz	Frequency 846.5 MHz	
5/5	QPSK	1	0	22.00	22.83	22.61	0
		1	12	21.96	22.79	22.57	0
		1	24	21.59	22.42	22.20	0
		12	0	21.37	22.20	21.98	1
		12	6	21.32	22.15	21.93	1
		12	13	20.94	21.77	21.55	1
		25	0	21.07	21.90	21.68	1
	16QAM	1	0	20.50	21.33	21.11	1
		1	12	20.46	21.29	21.07	1
		1	24	19.49	20.32	20.10	1
		12	0	20.44	21.27	21.05	2
		12	6	20.43	21.26	21.04	2
		12	13	19.82	20.65	20.43	2
		25	0	20.17	21.00	20.78	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20450	Mid CH 20525	High CH 20600	3GPP MPR (dB)
				Frequency 829 MHz	Frequency 836.5 MHz	Frequency 844 MHz	
5/10	QPSK	1	0	22.03	22.86	22.64	0
		1	24	21.99	22.82	22.60	0
		1	49	21.62	22.45	22.23	0
		25	0	21.40	22.23	22.01	1
		25	12	21.35	22.18	21.96	1
		25	25	20.97	21.80	21.58	1
		50	0	21.10	21.93	21.71	1
	16QAM	1	0	20.53	21.36	21.14	1
		1	24	20.49	21.32	21.10	1
		1	49	19.52	20.35	20.13	1
		25	0	20.47	21.30	21.08	2
		25	12	20.46	21.29	21.07	2
		25	25	19.85	20.68	20.46	2
		50	0	20.20	21.03	20.81	2

LTE BAND 12

LTE Band 12							
BW	Modulation	RB Size	RB Offset	Low CH 23017	Mid CH 23095	High CH 23173	MPR
				Frequency 699.7 MHz	Frequency 707.5 MHz	Frequency 715.3 MHz	
1.4 MHz	QPSK	1	0	23.08	23.29	23.17	0
		1	2	23.00	23.21	23.09	0
		1	5	22.91	23.12	23.00	0
		3	0	23.06	23.27	23.15	0
		3	1	22.98	23.19	23.07	0
		3	3	22.89	23.10	22.98	0
		6	0	22.02	22.23	22.11	1
	16QAM	1	0	21.70	21.91	21.79	1
		1	2	21.68	21.89	21.77	1
		1	5	21.28	21.49	21.37	1
		3	0	21.69	21.90	21.78	1
		3	1	21.67	21.88	21.76	1
		3	3	21.27	21.48	21.36	1
		6	0	21.03	21.24	21.12	2
LTE Band 12							
BW	Modulation	RB Size	RB Offset	Low CH 23025	Mid CH 23095	High CH 23165	MPR
				Frequency 700.5 MHz	Frequency 707.5 MHz	Frequency 714.5 MHz	
3 MHz	QPSK	1	0	23.12	23.33	23.21	0
		1	7	23.04	23.25	23.13	0
		1	14	22.95	23.16	23.04	0
		8	0	22.16	22.37	22.25	1
		8	3	22.13	22.34	22.22	1
		8	7	22.10	22.31	22.19	1
		15	0	22.06	22.27	22.15	1
	16QAM	1	0	21.74	21.95	21.83	1
		1	7	21.72	21.93	21.81	1
		1	14	21.32	21.53	21.41	1
		8	0	21.20	21.41	21.29	2
		8	3	21.17	21.38	21.26	2
		8	7	21.12	21.33	21.21	2
		15	0	21.07	21.28	21.16	2

LTE Band 12							
BW	Modulation	RB Size	RB Offset	Low CH 23035	Mid CH 23095	High CH 23155	MPR
				Frequency 701.5 MHz	Frequency 707.5 MHz	Frequency 713.5 MHz	
5 MHz	QPSK	1	0	23.18	23.39	23.27	0
		1	12	23.10	23.31	23.19	0
		1	24	23.01	23.22	23.10	0
		12	0	22.22	22.43	22.31	1
		12	6	22.19	22.40	22.28	1
		12	13	22.16	22.37	22.25	1
		25	0	22.12	22.33	22.21	1
	16QAM	1	0	21.80	22.01	21.89	1
		1	12	21.78	21.99	21.87	1
		1	24	21.38	21.59	21.47	1
		12	0	21.26	21.47	21.35	2
		12	6	21.23	21.44	21.32	2
		12	13	21.18	21.39	21.27	2
		25	0	21.13	21.34	21.22	2
LTE Band 12							
BW	Modulation	RB Size	RB Offset	Low CH 23060	Mid CH 23095	High CH 23130	MPR
				Frequency 704 MHz	Frequency 707.5 MHz	Frequency 711 MHz	
10 MHz	QPSK	1	0	23.21	23.42	23.30	0
		1	24	23.13	23.34	23.22	0
		1	49	23.04	23.25	23.13	0
		25	0	22.25	22.46	22.34	1
		25	12	22.22	22.43	22.31	1
		25	25	22.19	22.40	22.28	1
		50	0	22.15	22.36	22.24	1
	16QAM	1	0	21.83	22.04	21.92	1
		1	24	21.81	22.02	21.90	1
		1	49	21.41	21.62	21.50	1
		25	0	21.29	21.50	21.38	2
		25	12	21.26	21.47	21.35	2
		25	25	21.21	21.42	21.30	2
		50	0	21.16	21.37	21.25	2

3.5 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

TUNE-UP POWER TABLE

Band	Frequency (MHz)	Operating Mode	Tune-Up Power And Tolerance (dBm)
Bluetooth	2402	BT_8DPSK	0 ± 0.5
GSM850	824.2	GPRS12	33.5 ± 0.5
PCS1900	1850.2	GPRS12	29.5 ± 0.5
WCDMA II	1880	RMC12.2K	23.0 ± 0.5
WCDMA V	826.4	RMC12.2K	24.0 ± 0.5
LTE Band2	1900	QPSK	22.5 ± 0.5
LTE Band4	1745	QPSK	22.5 ± 0.5
LTE Band5	836.5	QPSK	23.0 ± 0.5
LTE Band12	707.5	QPSK	23.5 ± 0.5

BT

Band	Frequency (MHz)	Operating Mode	Antenna Gain (dBi)	Tune-up Power (dBm)	E.I.R.P Power (mW)	Power Density (mW/cm ²)	limit (mW/cm ²)	PASS / FAIL
Bluetooth	2402	BT_8DPSK	2	0.5	1.778	0.000	1.00	PASS

GSM

Band	Frequency (MHz)	Operating Mode	Antenna Gain (dBi)	Tune-up Power (dBm)	E.I.R.P Power (mW)/8	Power Density (mW/cm ²)	limit (mW/cm ²)	PASS / FAIL
GSM850	824.2	GPRS12	0	34.0	313.986	0.062	0.55	PASS
PCS1900	1850.2	GPRS12	3.1	30.0	255.217	0.051	1.00	PASS

WCDMA

Band	Frequency (MHz)	Operating Mode	Antenna Gain (dBi)	Tune-up Power (dBm)	E.I.R.P Power (mW)	Power Density (mW/cm ²)	limit (mW/cm ²)	PASS / FAIL
WCDMA II	1880	RMC12.2K	3.1	23.5	457.088	0.091	1.00	PASS
WCDMA V	826.4	RMC12.2K	0	24.5	281.838	0.056	0.55	PASS

LTE

Band	Frequency (MHz)	Operating Mode	Antenna Gain (dBi)	Tune-up Power (dBm)	E.I.R.P Power (mW)	Power Density (mW/cm ²)	limit (mW/cm ²)	PASS / FAIL
Band2	1900	QPSK	3.1	23.0	407.380	0.081	1.00	PASS
Band4	1745	QPSK	2.9	23.0	389.045	0.077	1.00	PASS
Band5	836.5	QPSK	0	23.5	223.872	0.045	0.56	PASS
Band12	707.5	QPSK	-1	24.0	199.526	0.040	0.47	PASS

3.6 CONCLUSION OF SIMULTANEOUS TRANSMITTER

Both of the WLAN and plug-in device can transmit simultaneously, the formula of calculated the MPE is:

$$CPD1/LPD1+CPD2/LPD2+.....etc. < 1$$

CPD = Calculation power density

LPD = Limit of power density

Therefore the worst-case situation is

$0.000/1.00+0.062/0.55+0.051/1.00+0.091/1.00+0.056/0.55+0.081/1.00+0.077/1.00+0.045/0.56+0.040/0.47=0.68$, which is less than "1", This confirmed that the device comply with FCC 1.1310 MPE limit.

--END--