

FCC CERTIFICATION TEST REPORT FOR

FCC ID: X5B-904005R

Report Reference No.....: 15FAB05022 61

Date of issue: 2015-05-29

Testing Laboratory ATT Product Service Co., Ltd.

No. 3, ChangLianShan Industrial Park, ChangAn Town, Address:

DongGuan City, GuangDong, China.

Applicant's name....:: PERFORMANCE DESIGNED PRODUCTS, LLC

14144 Ventura Blvd, Suite 200, Sherman Oaks, CA 91423 Address....:

U.S.A

Manufacturer.....: PERFORMANCE DESIGNED PRODUCTS, LLC

Test specification:

Report No.: 15FAB05022 61

Test item description.....: WIRELESS DONGLE

Trade Mark.....: rock candy Model/Type reference: 904-005R

Ratings...... DC 5V From USB Port Supply

Responsible Engineer

Approved by

(Rock Huang/ Engineer))

((King Wang /EMC Manager))







2 of 23

TABLE OF CONTENTS

TEST REPORT DECLARE	3
1. SUMMARY OF TEST STANDARDS AND RESULTS	4
2. GENERAL TEST INFORMATION	5
2.1 ACCREDITATIONS	5
2.2DESCRIPTION OF EUT	5
2.3 ACCESSORIES OF EUT	5
2.4 ASSISTANT EQUIPMENT USED FOR TEST	5
2.5 BLOCK DIAGRAM OF EUT CONFIGURATION FOR TEST	6
2.6 TEST ENVIRONMENT CONDITIONS	6
2.7 MEASUREMENT UNCERTAINTY	6
3 20DB BANDWIDTH	7
3.1 TEST EQUIPMENT	7
3.2 BLOCK DIAGRAM OF TEST SETUP	7
3.3 APPLICABLE STANDARD	7
3.4 TEST PROCEDURE	7
3.5 TEST RESULT	8
3.6 ORIGINAL TEST DATA	8
4 RADIATED EMISSION	
4.1 TEST EQUIPMENT	10
4.2 BLOCK DIAGRAM OF TEST SETUP	
4.3 LIMIT	11
4.4 TEST PROCEDURE	13
4.5 TEST RESULT	13
5 ANTENNA REQUIREMENTS	16
5.1 LIMIT	16
5.2 RESULT	16
6 POWER LINE CONDUCTED EMISSION	16
6.1 TEST EQUIPMENT	16
6.2 BLOCK DIAGRAM OF TEST SETUP	16
6.3 POWER LINE CONDUCTED EMISSION LIMITS (CLASS B)	17
6.4 TEST PROCEDURE	17
6.5 TEST RESULT	18
7 FUT TEST PHOTO	20



Report No.: 15FAB05022 61 3 of 23

TEST REPORT DECLARE

Applicant		PERFORMANCE DESIGNED PRODUCTS, LLC	
Address		14144 Ventura Blvd, Suite 200, Sherman Oaks, CA 91423 U.S.	
Equipment under Test		WIRELESS DONGLE	
Model No		904-005R	
Trade Mark		rock candy	
Manufacturer		PERFORMANCE DESIGNED PRODUCTS, LLC	
Address		14144 Ventura Blvd, Suite 200, Sherman Oaks, CA 91423 U.S.A	

Test Standard Used: FCC Rules and Regulations Part 15 Subpart C: 2013

Test procedure used: ANSI C63.10:2009; ANSI C63.4: 2009

We Declare:

The equipment described above is tested by ATT Product Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and ATT Product Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After test and evaluation X/Y/Z axis of the EUT. will record worst case in this report. our opinion is that the equipment provided for test compliance with the requirement of the above FCC standards.

Report No:	15FAB05022 61		
Date of Test:	2015-05-20 to 2015-05-26	Date of Report:	2015-05-29

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of ATT Product Service Co., Ltd.



Report No.: 15FAB05022 61 4 of 23

1. Summary of test Standards and results

The EUT have been tested according to the applicable standards as referenced below.

Description of Test Item	Standard	Results
20dB Bandwidth	&15. 215(c) ANSI C63.10 :2013	PASS
Radiated Emission	15.209,&15.205,&15.249 ANSI C63.10 :2013	PASS
Conducted Emissions	&15.207(a) ANSI C63.10 :2013	PASS
Antenna requirement	&15.203	PASS
Outside of Band Emission	&15.249(d)	PASS



Report No.: 15FAB05022 61 5 of 23

2. General test information

2.1 ACCREDITATIONS

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

FCC USA **Registration Number:923232** Canada **INDUSTRY CANADA Registration Number 11033A**

2.2Description of EUT

EUT* Name	:	WIRELESS DONGLE
Model Number	:	904-005R
Trade Mark	:	rock candy
EUT function description	:	Please reference user manual of this device
Power supply	:	DC 5V From USB Port Supply
Operation frequency	:	2402MHz - 2480MHz
Modulation	:	GFSK
Data rate	:	1Mpbs
Antenna Type	:	PCB Antenna, Max gain -0.26 dBi.
Date of Receipt	:	2015-05-20
Sample Type	:	Single

2.3 Accessories of EUT

Description of Accessories	Manufacturer	Model number or Type	Other	
/	/	/	/	

2.4 Assistant equipment used for test

Manufacturer	Model number or Type	FCCID / FCC DOC	Other
lenovo	7457	FCC DOC	7457A82
keyboard Lenovo		FCC DOC	2C087729
		approved	20001129
Epson	P952B	FCC DOC	AXQ0018586
	lenovo Lenovo	Manufacturer or Type lenovo 7457 Lenovo JME7053	Manufacturer or Type FCC DOC lenovo 7457 FCC DOC Lenovo JME7053 FCC DOC approved FCC DOC

ATT Product Service Co., Ltd. (CBTL Lab of UL/Demko)

No. 3, ChangLianShan Industrial Park, ChangAn Town, DongGuan City, GuangDong, China. Phone: 86-769-8509 8000; Fax: 86-769-8509 8777 E-mail:att@attps.cn



Report No.: 15FAB05022 61 6 of 23

2.5 Block diagram of EUT configuration for test

Tested mode, channel, information						
Test Mode	Channel	Frequency (MHz)				
Tx Mode	Low	2402				
	Middle	2441				
	High	2480				

2.6 Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-25 ℃
Humidity range:	40-75%
Pressure range:	86-106kPa

2.7 Measurement uncertainty

Test Item	Uncertainty	
Uncertainty for Conduction emission test	2.44dB	
Uncertainty for Radiation Emission test (150KHz-30MHz)	3.21dB	
Uncertainty for Radiation Emission test	3.42 dB (Polarize: V)	
(30MHz-200MHz)	3.52 dB (Polarize: H)	
Uncertainty for Radiation Emission test	3.52 dB (Polarize: V)	
(200MHz-1GHz)	3.54 dB (Polarize: H)	
Uncertainty for Rediction Emission test (10Hz to 250Hz)	4.20 dB (Polarize: V)	
Uncertainty for Radiation Emission test (1GHz to 25GHz)	4.20 dB (Polarize: H)	
Uncertainty for radio frequency	1×10-9	
Uncertainty for conducted RF Power	0.65dB	

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

ATT Product Service Co., Ltd. (CBTL Lab of UL/Demko)

No. 3, ChangLianShan Industrial Park, ChangAn Town, DongGuan City, GuangDong, China.

Phone: 86-769-8509 8000; Fax: 86-769-8509 8777 E-mail:att@attps.cn



Report No.: 15FAB05022 61 7 of 23

3 20dB Bandwidth

3.1 Test equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal Due.	Cal. Interval
1	EMI Test Receiver	R&S	ESCI	101307	2015/12/26	1Y
2	Attenuator	Mini-Circuits	BW-S10W2	101109	2015/12/26	1Y
3	RF Cable	Micable	C10-01-01-1	100309	2015/12/26	1Y

3.2 Block diagram of test setup



3.3 Applicable Standard

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated...

3.4 Test Procedure

- 1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- 2. Position the EUT on the test table without connection to measurement instrument. Turn on the EUT. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
- 3. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
- 4. Repeat above procedures until all frequencies measured were complete..



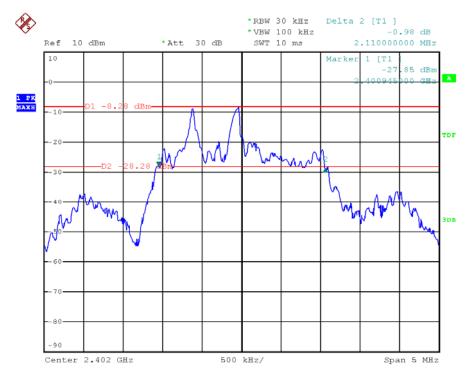




3.5 Test Result

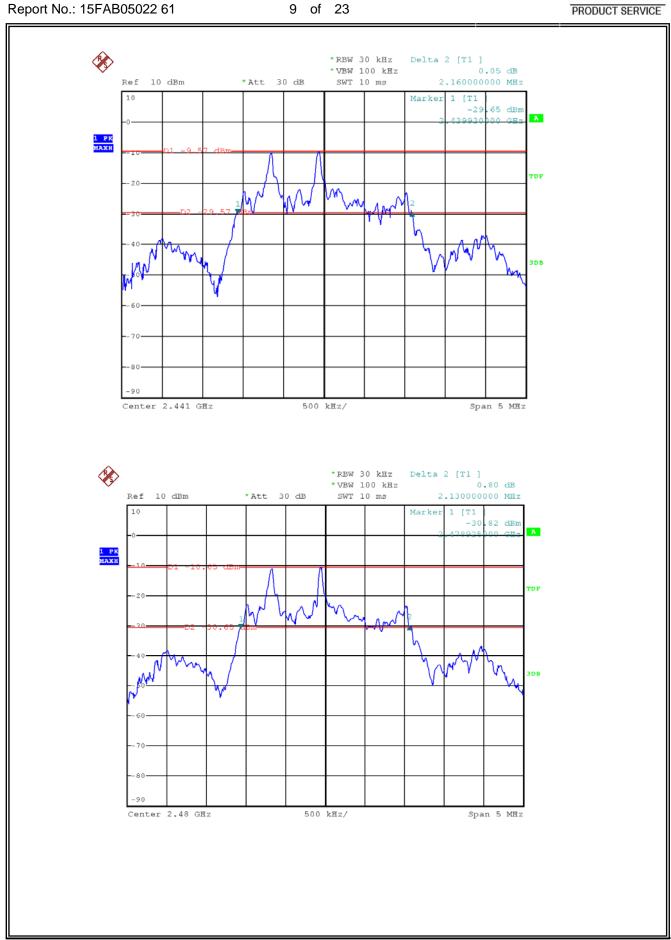
EUT: Rock Car	ndy Wireless Dongl	е	M/N: 904-005R		
Mode Freq (MHz)		Result (MHz)	Limit (MHz)	Margin (MHz)	Conclusion
	2402	2.11	/	/	PASS
Tx	2441	2.16	/	/	PASS
	2480	2.13	/	/	PASS

3.6 Original test data











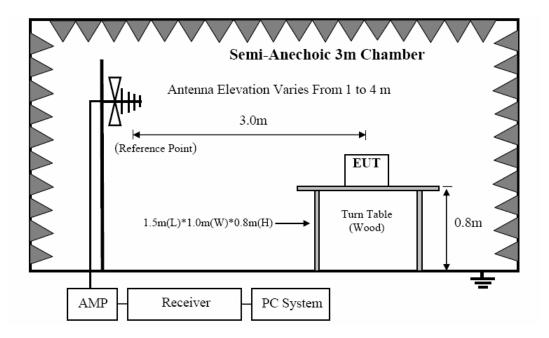
4 Radiated emission

4.1 Test equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal Due.	Cal. Interval
1	EMI Test Receiver	R&S	ESCI	101307	2015/12/26	1Y
2	Spectrum analyzer	Agilent	E4407B	US40240708	2015/07/11	1Y
3	Loop antenna	Chase	HLA6120	20129	2015/12/26	1Y
4	Trilog Broadband Antenna	Schwarzbeck	VULB9163	9163-462	2015/12/26	1Y
5	Double Ridged Horn Antenna	R&S	HF907	100276	2015/12/26	1Y
6	Pre-Amplifier	R&S	SCU-01	10049	2015/12/26	1Y
7	Pre-amplifier	A.H.	PAM0-0118	360	2015/12/26	1Y
8	RF Cable	R&S	R01	10403	2015/12/26	1Y
9	RF Cable	R&S	R02	10512	2015/12/26	1Y
10	Horn Antenna	EMCO	3116	9608-4877	2015/12/26	1Y

4.2 Block diagram of test setup

In 3m Anechoic Chamber Test Setup Diagram for below 1GHz

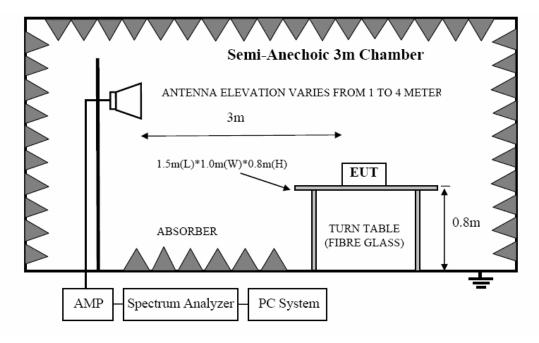


ATT Product Service Co., Ltd. (CBTL Lab of UL/Demko)

No. 3, ChangLianShan Industrial Park, ChangAn Town, DongGuan City, GuangDong, China. Phone: 86-769-8509 8000; Fax: 86-769-8509 8777 E-mail:att@attps.cn

Report No.: 15FAB05022 61 11 of 23

In 3m Anechoic Chamber Test Setup Diagram for frequency above 1GHz



Note: For harmonic emissions test a appropriate high pass filter was inserted in the input port of AMP.

4.3 Limit

4.3.1 FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)



Report No.: 15FAB05022 61 12 of 23

4.3.2 FCC 15.209 Limit

FREQUENCY	DISTANCE	FIELD STRENGTHS LIMIT		
MHz	Meters	μV/m	dB(μV)/m	
30 ~ 88	3	100	40.0	
88 ~ 216	3	150	43.5	
216 ~ 960	3	200	46.0	
960 ~ 1000	3	500	54.0	
Abovo 1000	0	74.0 dB(μV)/m (Peak)		
Above 1000	3	54.0 dB(μV)/m (Average)		

4.3.2 FCC 15.249 Limit

Fundamental	Field strength of fundamental	Field strength of harmonics
frequency	(millivolts/meter)	(microvolts/meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0-24.25 GHz	250	2500

4.3.3 Limit for this EUT

The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.4: 2009. The specification used was the FCC 15.209, and FCC 15.249 limits.



Report No.: 15FAB05022 61 13 of 23

4.4 Test Procedure

- (1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber.
- (2) Setup EUT and assistant system according clause 2.4 and 8.2
- (3) Test antenna was located 3m from the EUT on an adjustable mast. Below pre-scan procedure was first performed in order to find prominent radiated emissions.
 - (a) Change work frequency or channel of device if practicable.
 - (b) Change modulation type of device if practicable.
 - (c) New battery is used during test.
 - (d) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions
- (4) Spectrum frequency from 9MHz to 25GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 9KHz to 30MHz and 18GHz to 25GHz, so below final test was performed with frequency range from 30MHz to 18GHz.
- (5) For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 2013 on Radiated Emission test.
- (6) For emissions from 30MHz to 1GHz, Quasi-Peak values were measured with EMI Receiver and the bandwidth of Receiver is 120 KHz.
- (7) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1MHz, For fundamental frequency ,RBW is set to be 3MHz. VBW is set at 3MHz Peak detector for Peak measure ;RMS detector for AV value.
- (8) After test and evaluation X/Y/Z axis of the EUT. will record worst case in this report.

4.5 Test result

PASS. (See below detailed test result)

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C and section 15.205, 15.209 and 15.249, Vertical and Horizontal mode all have been tested, with the worst margin reading of:

No. 3, ChangLianShan Industrial Park, ChangAn Town, DongGuan City, GuangDong, China.



Report No.: 15FAB05022 61



Radiated Emission Test Result

Test Site	:	3m Chamber			
Test Date		2015-05-21	Tested By		Lake
EUT	:	WIRELESS DONGLE	Model Number	:	904-005R
Power Supply	:	DC 5V From USB Port Supply	Test Mode		Keeping Tx
Condition	:	Temp:24℃,Humi:55%	Antenna/Distance	:	3m

Frequency	Reco	eiver	Ry A	ntenna	Cable	Amplifier	Result	FCC 15	249	
	Reading	PK/QP/	Polar	Factor	Loss	Gain	Level	Limit	Margin	
(MHz)	(dBµV)	AV	(HV)	(dB)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
	Low Channel (2402MHz)									
2402	61.24	PK	Н	28.00	3.65	0.00	92.89	114.00	-21.11	
2402	52.24	AV	Н	28.00	3.65	0.00	83.89	94.00	-10.11	
2402	58.90	PK	V	28.00	3.65	0.00	90.55	114.00	-23.45	
2402	50.32	AV	V	28.00	3.65	0.00	81.97	94.00	-12.03	
2390	13.51	PK	Н	27.80	3.57	0.00	44.88	74.00	-29.12	
2390	7.78	AV	Н	27.80	3.57	0.00	39.15	54.00	-14.85	
2390	9.65	PK	V	27.80	3.57	0.00	41.02	74.00	-32.98	
2390	4.88	AV	V	27.80	3.57	0.00	36.25	54.00	-17.75	
2400	9.83	PK	Η	28.00	3.57	0.00	41.40	74.00	-32.60	
2400	4.20	AV	Ι	28.00	3.57	0.00	35.77	54.00	-18.23	
2400	8.55	PK	V	28.00	3.57	0.00	40.12	74.00	-33.88	
2400	2.28	AV	V	28.00	3.57	0.00	33.85	54.00	-20.15	
4804	48.52	PK	Н	32.30	5.91	31.78	54.95	74.00	-19.05	
4804	40.67	AV	Η	32.30	5.91	31.78	47.10	54.00	-6.90	
4804	49.20	PK	V	32.30	5.91	31.78	55.63	74.00	-18.37	
4804	37.99	AV	V	32.30	5.91	31.78	44.42	54.00	-9.58	
7206	38.97	PK	Н	36.30	6.34	30.97	50.64	74.00	-23.36	
7206	30.26	AV	Н	36.30	6.34	30.97	41.93	54.00	-12.07	
7206	41.43	PK	V	36.30	6.34	30.97	53.10	74.00	-20.90	
7206	32.06	AV	V	36.30	6.34	30.97	43.73	54.00	-10.27	
9608	37.50	PK	Η	37.90	8.01	30.86	52.55	74.00	-21.45	
9608	28.70	AV	Η	37.90	8.01	30.86	43.75	54.00	-10.25	
9608	41.10	PK	V	37.90	8.01	30.86	56.15	74.00	-17.85	
9608	32.43	AV	V	37.90	8.01	30.86	47.48	54.00	-6.52	
533	49.04	QP	Ι	14.20	2.74	27.60	38.38	46.00	-7.62	
533	43.36	QP	V	14.20	2.74	27.60	32.70	46.00	-13.30	
		1		Middle Cha					T	
2441	59.50	PK	Н	28.30	3.69	0.00	91.49	114.00	-22.51	
2441	51.83	AV	Н	28.30	3.69	0.00	83.82	94.00	-10.18	
2441	57.25	PK	V	28.30	3.69	0.00	89.24	114.00	-24.76	
2441	48.60	AV	V	28.30	3.69	0.00	80.59	94.00	-13.41	
4882	43.70	PK	Н	32.90	6.34	31.78	51.16	74.00	-22.84	
4882	35.11	AV	Н	32.90	6.34	31.78	42.57	54.00	-11.43	
4882	44.66	PK	V	32.90	6.34	31.78	52.12	74.00	-21.88	
4882	37.04	AV	V	32.90	6.34	31.78	44.50	54.00	-9.50	
7323	43.83	PK	H	37.10	6.72	30.97	56.68	74.00	-17.32	
7323	33.15	AV	Н	37.10	6.72	30.97	46.00	54.00	-8.00	



15 of 23 Report No.: 15FAB05022 61

							'	'	
7323	42.05	PK	V	37.10	6.72	30.97	54.90	74.00	-19.10
7323	32.60	AV	V	37.10	6.72	30.97	45.45	54.00	-8.55
9764	38.05	PK	Н	38.60	8.43	30.86	54.22	74.00	-19.78
9764	28.91	AV	Н	38.60	8.43	30.86	45.08	54.00	-8.92
9764	42.79	PK	V	38.60	8.43	30.86	58.96	74.00	-15.04
9764	33.67	AV	V	38.60	8.43	30.86	49.84	54.00	-4 .16
533	47.96	QP	Н	14.20	2.74	27.60	37.30	46.00	-8.70
533	43.01	QP	V	14.20	2.74	27.60	32.35	46.00	-13.65
		-		High Cha	nnel (2480	0)			
2480	57.24	PK	Н	28.70	3.72	0.00	89.66	114.00	-24.34
2480	47.84	AV	Н	28.70	3.72	0.00	80.26	94.00	-13.74
2480	55.25	PK	V	28.70	3.72	0.00	87.67	114.00	-26.33
2480	51.24	AV	V	28.70	3.72	0.00	83.66	94.00	-10.34
2483.5	11.00	PK	Н	28.70	3.72	0.00	43.42	74.00	-30.58
2483.5	6.13	AV	Н	28.70	3.72	0.00	38.55	54.00	-15.45
2483.5	10.13	PK	V	28.70	3.72	0.00	42.55	74.00	-31.45
2483.5	3.73	AV	V	28.70	3.72	0.00	36.15	54.00	-17.85
4960	44.67	PK	Н	33.10	6.39	31.78	52.38	74.00	-21.62
4960	34.36	AV	Н	33.10	6.39	31.78	42.07	54.00	-11.93
4960	43.65	PK	V	33.10	6.39	31.78	51.36	74.00	-22.64
4960	38.20	AV	V	33.10	6.39	31.78	45.91	54.00	-8.09
7440	44.50	PK	Н	37.20	6.77	30.97	57.50	74.00	-16.50
7440	35.33	AV	Н	37.20	6.77	30.97	48.33	54.00	-5.67
7440	40.47	PK	V	37.20	6.77	30.97	53.47	74.00	-20.53
7440	31.99	AV	V	37.20	6.77	30.97	44.99	54.00	-9.01
9920	37.91	PK	Н	38.70	8.48	30.86	54.23	74.00	-19.77
9920	27.16	AV	Н	38.70	8.48	30.86	43.48	54.00	-10.52
9920	39.95	PK	V	38.70	8.48	30.86	56.27	74.00	-17.73
9920	34.56	AV	V	38.70	8.48	30.86	50.88	54.00	-3.12
533	46.88	QP	Н	14.20	2.74	27.60	36.22	46.00	-9.78
533	42.41	QP	V	14.20	2.74	27.60	31.75	46.00	-14.25

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor

2. If Peak Result comply with QP limit, QP Result is deemed to comply with QP limit



5 Antenna Requirements

5.1 Limit

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.249 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

5.2 Result

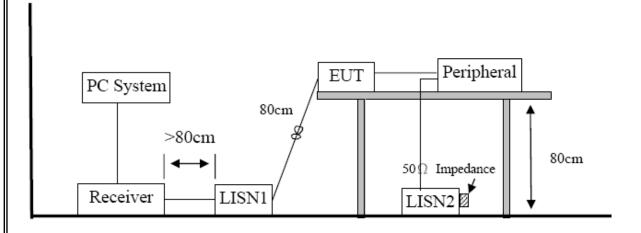
The EUT has an internal chip antenna permanently soldering on the printed circuit board, which complied with 15.203, the maximum gain was -0.26 dBi.

6 Power Line Conducted Emission

6.1 Test equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal Due.	Cal. Interval
1	Test Receiver	R&S	ESCI	101308	2015/12/26	1 Year
2	LISN 1	AFJ	LS16	16011103219	2015/12/26	1 Year
3	LISN 2	R&S	ESH2-Z5	100309	2015/12/26	1 Year
4	Pulse Limiter	MTS-systemtechnik	MTS-IMP-136	261115-010-0024	2015/12/26	1 Year

6.2 Block diagram of test setup



ATT Product Service Co., Ltd. (CBTL Lab of UL/Demko)

No. 3, ChangLianShan Industrial Park, ChangAn Town, DongGuan City, GuangDong, China.



Report No.: 15FAB05022 61 17 of 23

6.3 Power Line Conducted Emission Limits (Class B)

Frequency	Quasi-Peak Level dB(μV)	Average Level dB(μV)	
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*	
500kHz ~ 5MHz	56	46	
5MHz ~ 30MHz	60	50	

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies

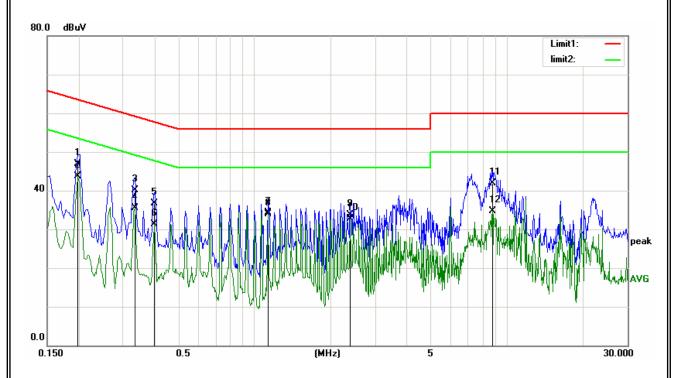
6.4 Test Procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane. Configuration EUT to simulate typical usage as described in clause 2.4 and test equipment as described in clause 10.2 of this report. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4: 2009. All support equipment power received from a second LISN. Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT. The Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes During the above scans, the emissions were maximized by cable manipulation. The test mode(s) described in clause 2.4 were scanned during the preliminary test. After the preliminary scan, we found the test mode producing the highest emission level. The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test. EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test. A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. The test data of the worst-case condition(s) was recorded. The bandwidth of test receiver is set at 9 KHz.

Report No.: 15FAB05022 61 18 of 23

6.5 Test Result

EUT:	WIRELESS DONGLE	Model No.:	904-005R
Temperature:	24 ℃	Relative Humidity:	55%
Probe:	L1	Test Power:	DC 5V From USB port
			supply (AC 120V/60Hz)
Standard:	(CE)FCC PART 15_B	Test Result:	Pass
Test Mode:	Keeping Tx	Test By:	Lake
Note:			



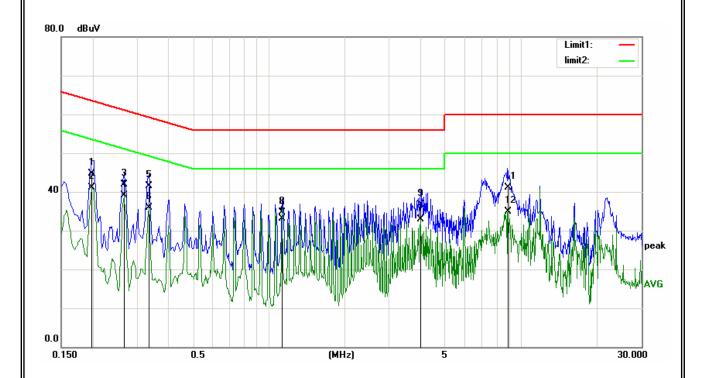
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1980	35.70	11.14	46.84	63.69	-16.85	QP
2	0.1980	32.53	11.14	43.67	53.69	-10.02	AVG
3	0.3339	29.69	10.40	40.09	59.35	-19.26	QP
4	0.3339	25.15	10.40	35.55	49.35	-13.80	AVG
5	0.3980	26.37	10.31	36.68	57.89	-21.21	QP
6	0.3980	21.02	10.31	31.33	47.89	-16.56	AVG
7	1.1300	24.30	10.10	34.40	56.00	-21.60	QP
8	1.1300	23.75	10.10	33.85	46.00	-12.15	AVG
9	2.3900	23.56	10.12	33.68	56.00	-22.32	QP
10	2.3900	22.55	10.12	32.67	46.00	-13.33	AVG
11	8.7660	31.85	10.14	41.99	60.00	-18.01	QP
12	8.7660	24.57	10.14	34.71	50.00	-15.29	AVG







EUT:	WIRELESS DONGLE	Model No.:	904-005R
Temperature:	24℃	Relative Humidity:	55%
Probe:	N	Test Power:	DC 5V From USB port
			supply (AC 120V/60Hz)
Standard:	(CE)FCC PART 15_B	Test Result:	Pass
Test Mode:	Keeping Tx	Test By:	Lake
Note:			

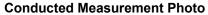


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1980	33.48	11.14	44.62	63.69	-19.07	QP
2	0.1980	29.91	11.14	41.05	53.69	-12.64	AVG
3	0.2660	31.31	10.67	41.98	61.24	-19.26	QP
4	0.2660	28.47	10.67	39.14	51.24	-12.10	AVG
5	0.3339	31.04	10.40	41.44	59.35	-17.91	QP
6	0.3339	25.41	10.40	35.81	49.35	-13.54	AVG
7	1.1300	22.93	10.10	33.03	56.00	-22.97	QP
8	1.1300	24.51	10.10	34.61	46.00	-11.39	AVG
9	3.9860	26.57	10.14	36.71	56.00	-19.29	QP
10	3.9860	22.76	10.14	32.90	46.00	-13.10	AVG
11	8.9020	30.92	10.14	41.06	60.00	-18.94	QP
12	8.9020	24.71	10.14	34.85	50.00	-15.15	AVG

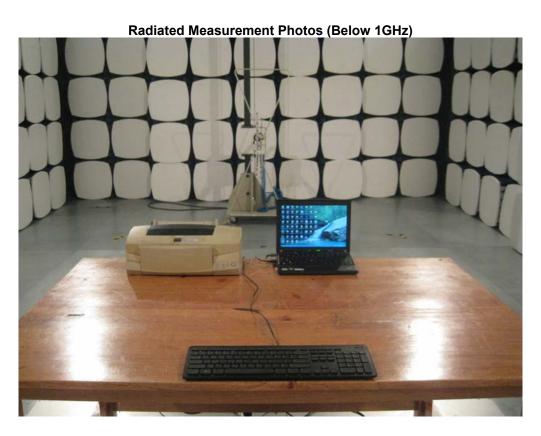


7. EUT TEST PHOTO

Report No.: 15FAB05022 61



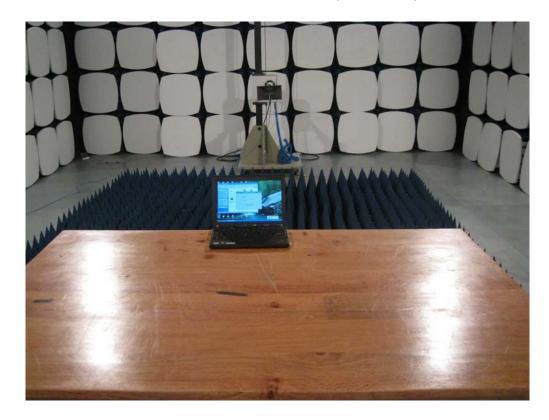






Report No.: 15FAB05022 61 21 of 23

Radiated Measurement Photos (Above1GHz)

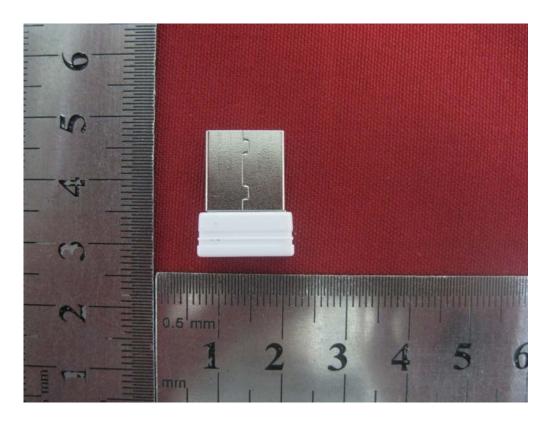


Report No.: 15FAB05022 61 22 of 23



EUT Photos

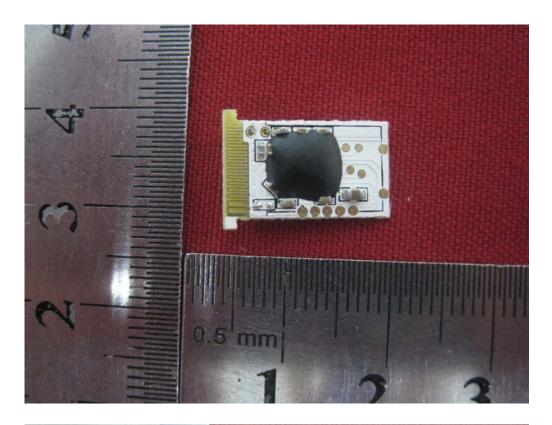


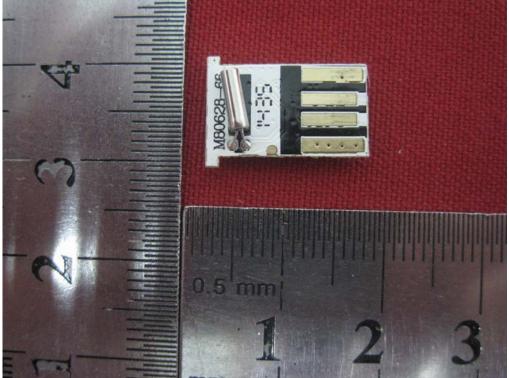


ATT Product Service Co., Ltd. (CBTL Lab of UL/Demko)

No. 3, ChangLianShan Industrial Park, ChangAn Town, DongGuan City, GuangDong, China. Phone: 86-769-8509 8000; Fax: 86-769-8509 8777 E-mail:att@attps.cn







THE END