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ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
INTENTIONAL RADIATOR CERTIFICATION TO
FCC PART 15 SUBPART C REQUIREMENT

OF

Saltillo Corporation

Wireless Charging Base

MODEL No.: WCB

FCC ID: 2AF3H-WCB

Trademark: N/A

REPORT NO: ES150530377E1

ISSUE DATE: September 25, 2015

Prepared for

Saltillo Corporation

2143 Township Road #112 Millersburg OH 44654

Prepared by
EMTEK (SHENZHEN) CO., LTD.

Bldg 69, Majialong Industry Zone, Nanshan District,
Shenzhen, Guangdong, China
TEL: 86-755-26954280
FAX: 86-755-26954282

VERIFICATION OF COMPLIANCE

Applicant:	Saltillo Corporation 2143 Township Road #112 Millersburg OH 44654
Manufacturer:	Saltillo Corporation 2143 Township Road #112 Millersburg OH 44654
Product product:	Wireless Charging Base
Model Number:	WCB
Trademark:	N/A
File Number:	ES150530377E1
Date of Test:	September 5, 2015 to September 25, 2015

We hereby certify that:

The above equipment was tested by EMTEK (SHENZHEN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15C.

The test results of this report relate only to the tested sample identified in this report.

Date of Test : September 5, 2015 to September 25, 2015

Prepared by : Joe Xia
Joe Xia/Editor

Reviewer : Jack. Li
Jack Li/Supervisor

Approve & Authorized Signer :
Lisa Wang/Manager

Table of Contents

1 General Information

1.1 Product Description

Characteristics	Description
Product	Wireless Charging Base
Model Number	WCB
Power Supply	DC12.0V from adapter
AC adapter	Model: MTP451UL-120300B Input: AC 100-240V 50/60Hz 1.5A Output: DC 12.0V, 3.0A
Output	Coil: DC 5V/1.5A
Receiver Frequency	130 KHz
Modulation	ASK
Antenna Type	Induction coil

1.2 Related Submittal(s) / Grant(s)

This submittal(s) (test report) is intended for FCC ID: 2AF3H-WCB filing to comply with FCC Part 15, Subpart C Rules.
The system with mutil-fuction is compliance with Subpart B is authorized under a DOC procedure

1.3 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013). Radiated testing was performed at an antenna to EUT distance 3 meters.

1.4 Special Accessories

Not available for this EUT intended for grant.

1.5 Equipment Modifications

Not available for this EUT intended for grant.

1.6 Test Facility

Site Description

EMC Lab. : Accredited by CNAS, 2013.10.29
The certificate is valid until 2016.10.28
The Laboratory has been assessed and proved to be in compliance with CNAS-CL01:2006 (identical to ISO/IEC 17025:2005)
The Certificate Registration Number is L2291.

Accredited by TUV Rheinland Shenzhen 2015.4
The Laboratory has been assessed according to the requirements ISO/IEC 17025.

Accredited by FCC, April 17, 2013
The Certificate Registration Number is 709623.

Accredited by FCC, July 24, 2013
The Certificate Registration Number is 406365.

Accredited by Industry Canada, November 29, 2012
The Certificate Registration Number is 4480A.

Name of Firm : EMTEK (SHENZHEN) CO., LTD.

Site Location : Bldg 69, Majialong Industry Zone,
Nanshan District, Shenzhen, Guangdong, China

2 System Test Configuration

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

2.3 Test Procedure

2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode.

2.3.2 Radiated Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013.

2.4 Configuration of Tested System

Fig. 2-1 Configuration of Tested System

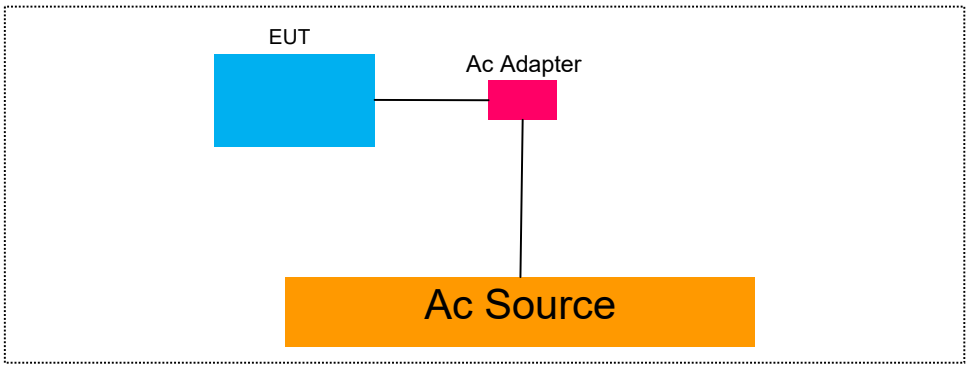


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note

Note:
(1) Unless otherwise denoted as EUT in『Remark』column, device(s) used in tested system is a support equipment.

3 Summary of Test Results

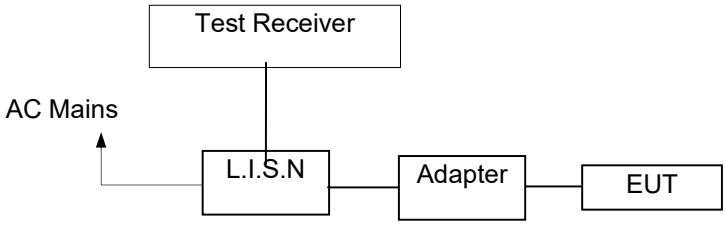
FCC Rules	Description Of Test	Result
§15.207	AC Power Conducted Emission	Pass
§15.209	Radiated Emission	Pass

4 Conducted Emissions Test

4.1 Measurement Procedure

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured was complete.

4.2 Test SET-UP (Block Diagram of Configuration)



4.3 Measurement Equipment Used

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Test Receiver	Rohde & Schwarz	ESCS30	828985/018	05/17/2015	05/16/2016
L.I.S.N.	Schwarzbeck	NNLK8129	8129203	05/17/2015	05/16/2016
50Ω Coaxial Switch	Anritsu	MP59B	M20531	N/A	N/A
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	05/17/2015	05/16/2016
Voltage Probe	Rohde & Schwarz	TK9416	N/A	05/17/2015	05/16/2016
I.S.N	Rohde & Schwarz	ENY22	1109.9508.02	05/17/2015	05/16/2016

4.4 Conducted Emission Limit

Conducted Emission

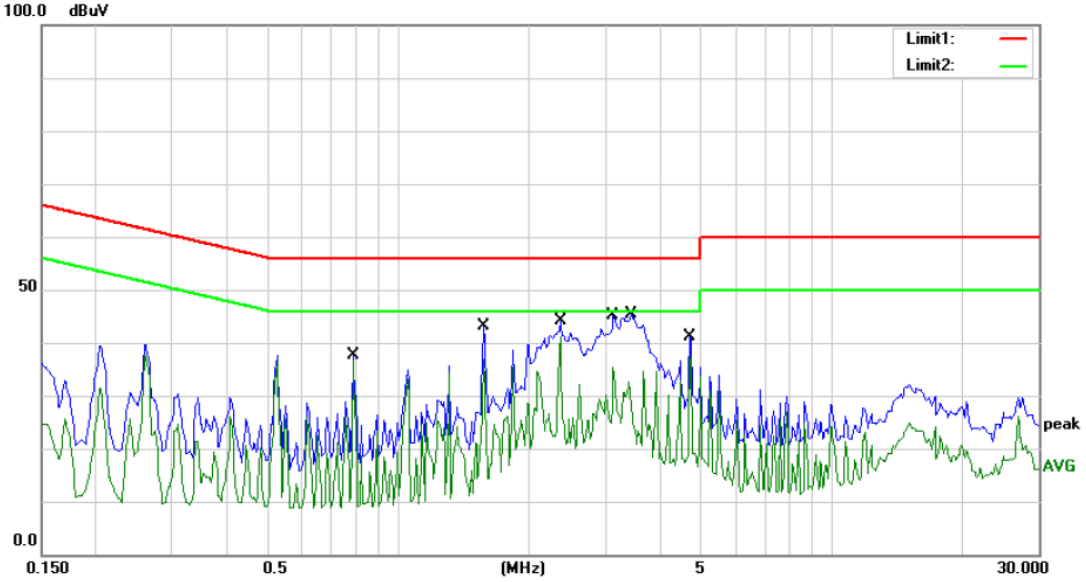
Frequency(MHz)	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.5 Measurement Result

We pretest three mode (max load, mid load, min load) for EUT. The worst mode (min load) test data see follow the table.

We test the EUT at 120V and 240V, and show the worst result as bellow.



Site Conduction #2 Phase: L1 Temperature: 22

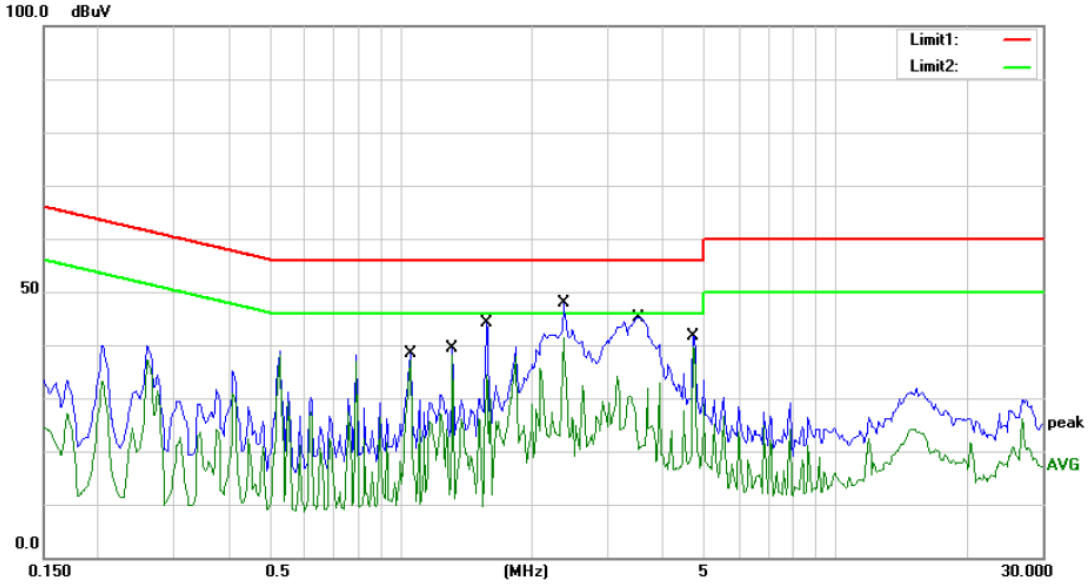
Limit: (CE)FCC PART 15 class B_QP Power: Humidity: 53 %

Mode: Min Load

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.7850	37.54	0.00	37.54	56.00	-18.46	QP	
2		0.7850	36.73	0.00	36.73	46.00	-9.27	AVG	
3		1.5700	43.17	0.00	43.17	56.00	-12.83	QP	
4		1.5700	36.82	0.00	36.82	46.00	-9.18	AVG	
5		2.3600	44.14	0.00	44.14	56.00	-11.86	QP	
6	*	2.3600	41.23	0.00	41.23	46.00	-4.77	AVG	
7		3.1397	44.98	0.00	44.98	56.00	-11.02	QP	
8		3.1397	35.27	0.00	35.27	46.00	-10.73	AVG	
9		3.4450	45.33	0.00	45.33	56.00	-10.67	QP	
10		3.4450	32.73	0.00	32.73	46.00	-13.27	AVG	
11		4.7200	41.15	0.00	41.15	56.00	-14.85	QP	
12		4.7200	37.30	0.00	37.30	46.00	-8.70	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: CSL



Site Conduction #2 Phase: N Temperature: 22

Limit: (CE)FCC PART 15 class B_QP Power: Humidity: 53 %

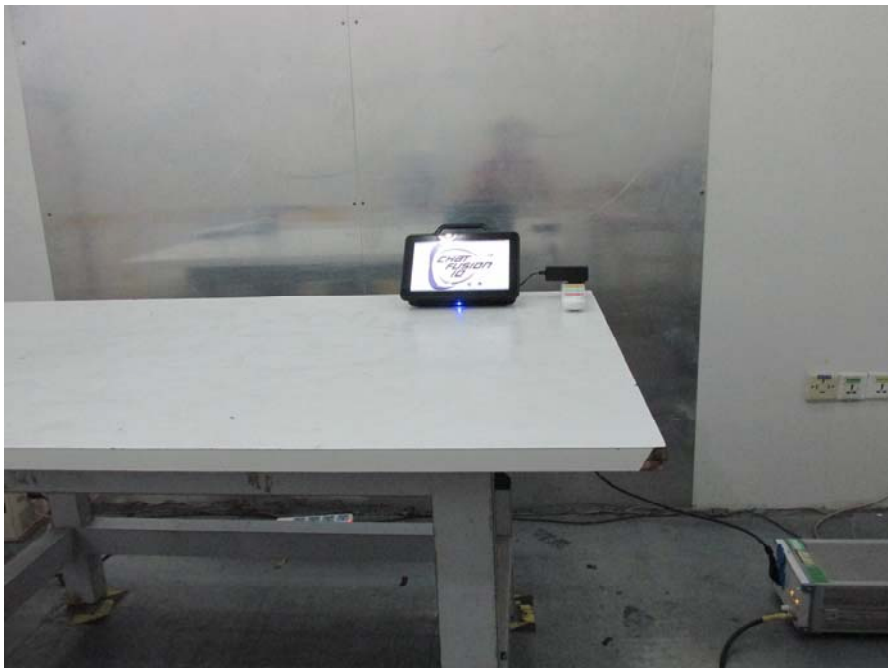
Mode: Min Load

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		1.0500	38.41	0.00	38.41	56.00	-17.59	QP	
2		1.0500	37.03	0.00	37.03	46.00	-8.97	AVG	
3		1.3100	39.49	0.00	39.49	56.00	-16.51	QP	
4		1.3100	38.15	0.00	38.15	46.00	-7.85	AVG	
5		1.5750	44.02	0.00	44.02	56.00	-11.98	QP	
6		1.5750	34.43	0.00	34.43	46.00	-11.57	AVG	
7		2.3600	47.95	0.00	47.95	56.00	-8.05	QP	
8	*	2.3600	41.28	0.00	41.28	46.00	-4.72	AVG	
9		3.5200	45.19	0.00	45.19	56.00	-10.81	QP	
10		3.5200	20.96	0.00	20.96	46.00	-25.04	AVG	
11		4.7200	41.72	0.00	41.72	56.00	-14.28	QP	
12		4.7200	39.62	0.00	39.62	46.00	-6.38	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: CSL

4.6 Conducted Measurement Photo



5 Radiated Emission Test

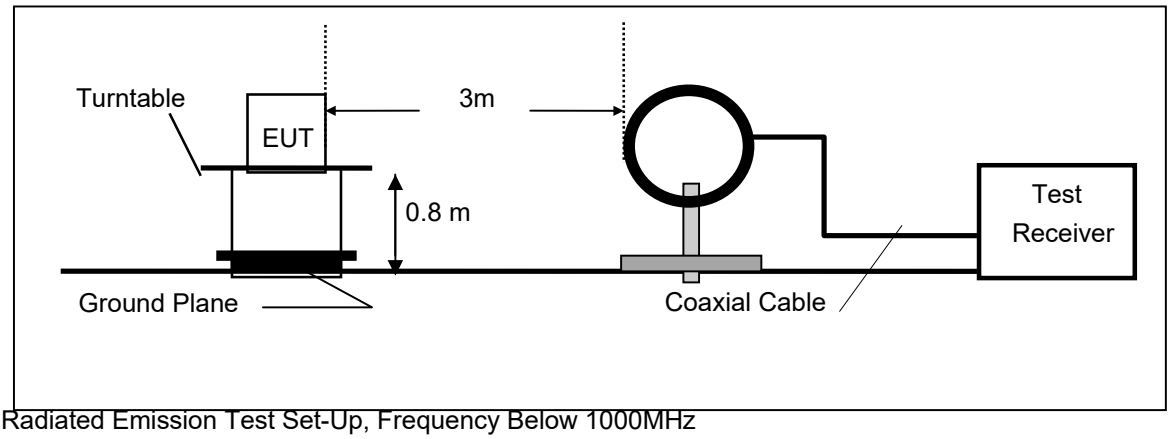
5.1 Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measured were complete.
5. Use the following receiver/spectrum analyzer settings:

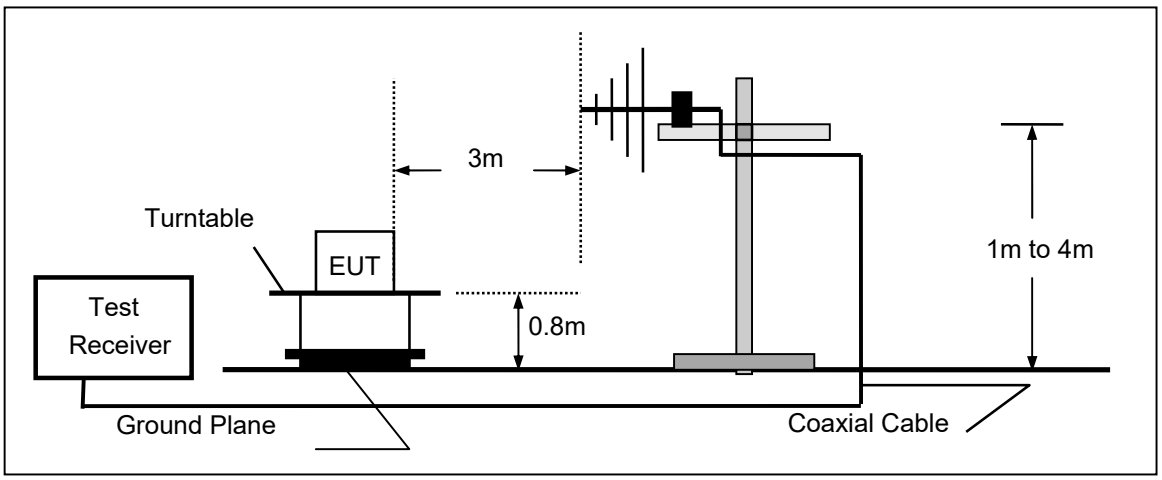
Span = wide enough to fully capture the emission being measured
RBW=200Hz for 9KHz to 150KHz,
RBW=9kHz for 150KHz to 30MHz,
RBW=120KHz for 30MHz to 1GHz
VBW ≥ 3*RBW
Sweep = auto
Detector function = QP
Trace = max hold

5.2 Test SET-UP (Block Diagram of Configuration)

(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency Below 1000MHz



5.3 Measurement Equipment Used

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI Test Receiver	Rohde & Schwarz	ESU	1302.6005.26	05/17/2015	05/16/2016
Pre-Amplifier	HP	8447D	2944A07999	05/17/2015	05/16/2016
Bilog Antenna	Schwarzbeck	VULB9163	142	05/17/2015	05/16/2016
Loop Antenna	ARA	PLA-1030/B	1029	05/17/2015	05/16/2016
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170399	05/17/2015	05/16/2016
Horn Antenna	Schwarzbeck	BBHA 9120	D143	05/17/2015	05/16/2016
Cable	Schwarzbeck	AK9513	ACRX1	05/17/2015	05/16/2016
Cable	Rosenberger	N/A	FP2RX2	05/17/2015	05/16/2016
Cable	Schwarzbeck	AK9513	CRPX1	05/17/2015	05/16/2016
Cable	Schwarzbeck	AK9513	CRRX2	05/17/2015	05/16/2016

5.4 Radiated Emission Limit

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table 15.209(a):

FCC Part 15.209				
Frequency (MHz)	Field Strength Limitation		Field Strength Limitation Frequency tion at 3m Measurement Dist	
	(uV/m)	Dist	(uV/m)	(dBuV/m)
0.009 – 0.490	2400 / F(KHz)	300m	10000 * 2400/F(KHz)	20log 2400/F(KHz) + 80
0.490 – 1.705	24000 / F(KHz)	30m	100 * 24000/F(KHz)	20log 24000/F(KHz) + 40
1.705 – 30.00	30	30m	100* 30	20log 30 + 40
30.0 – 88.0	100	3m	100	20log 100
88.0 – 216.0	150	3m	150	20log 150
216.0 – 960.0	200	3m	200	20log 200
Above 960.0	500	3m	500	20log 500

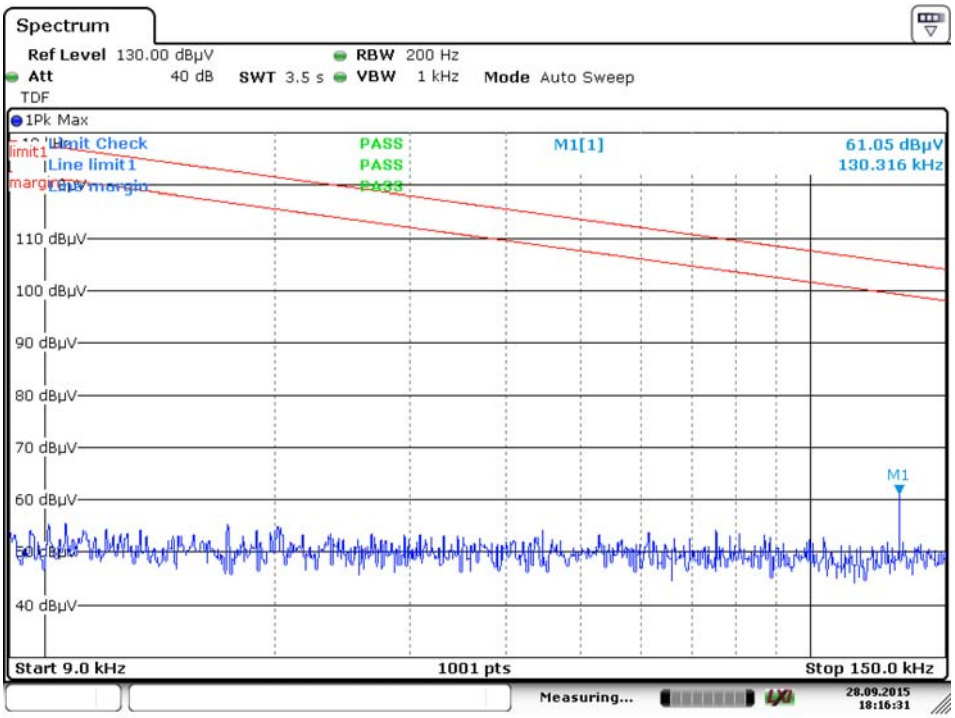
15.205 Restricted bands of operation

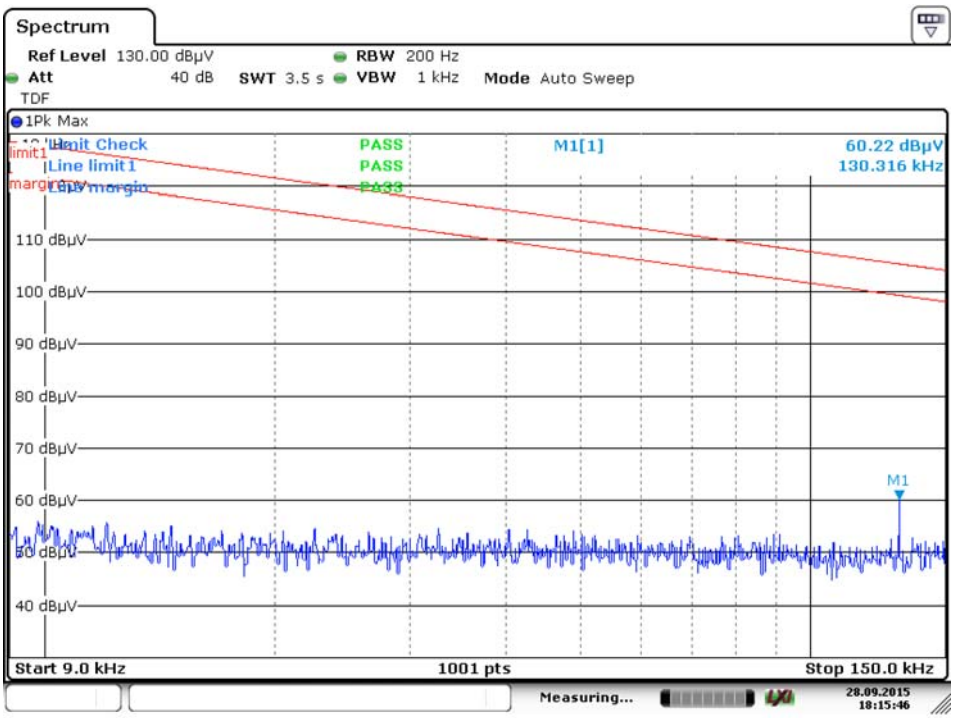
MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 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])

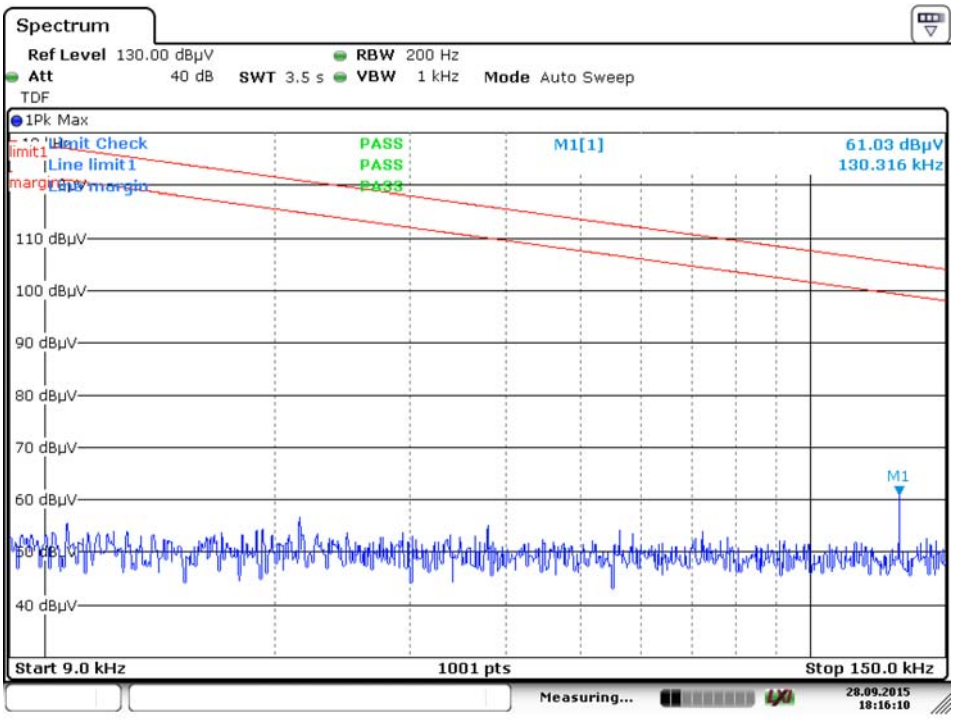
Remark: 1. Emission level in dBuV/m=20 log (uV/m)
2. Measurement was performed at an antenna to the closed point of EUT distance of meters.
3. Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of ξ 15.205, and the emissions located in restricted bands also comply with 15.209 limit.

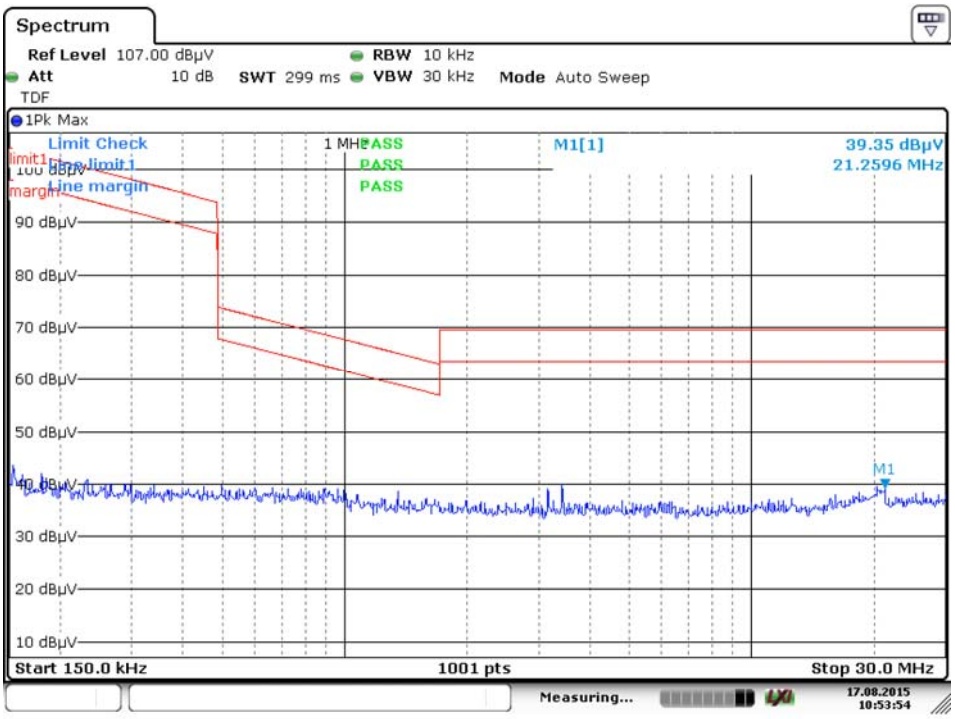
5.5 Measurement Result

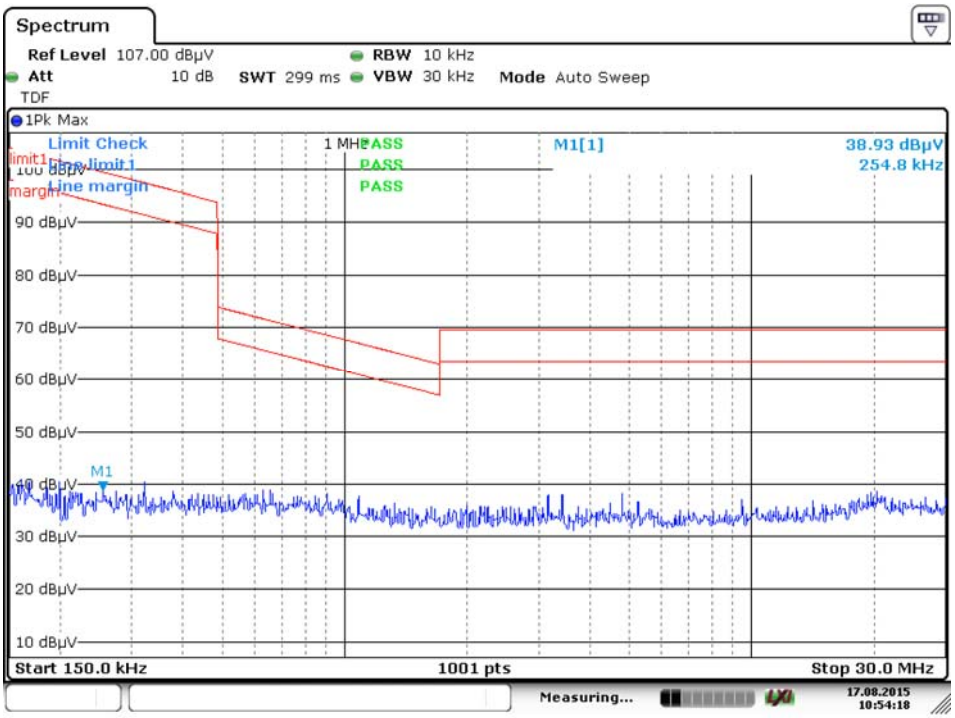
We pretest three mode (max load, mid load, min load) for EUT. The worst mode (min load) test data see follow the table.

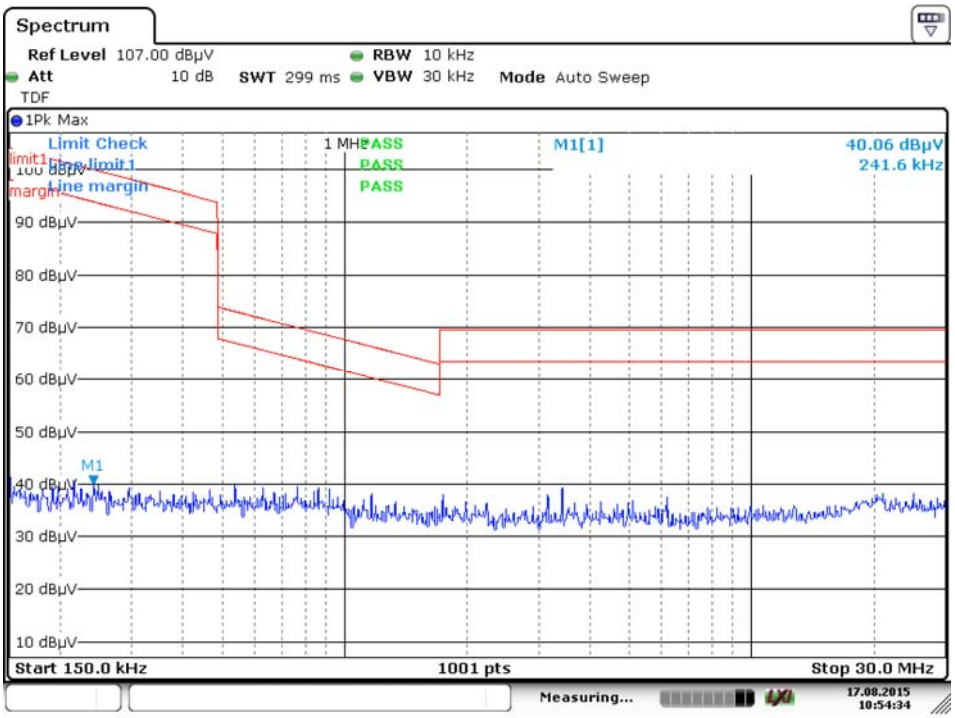


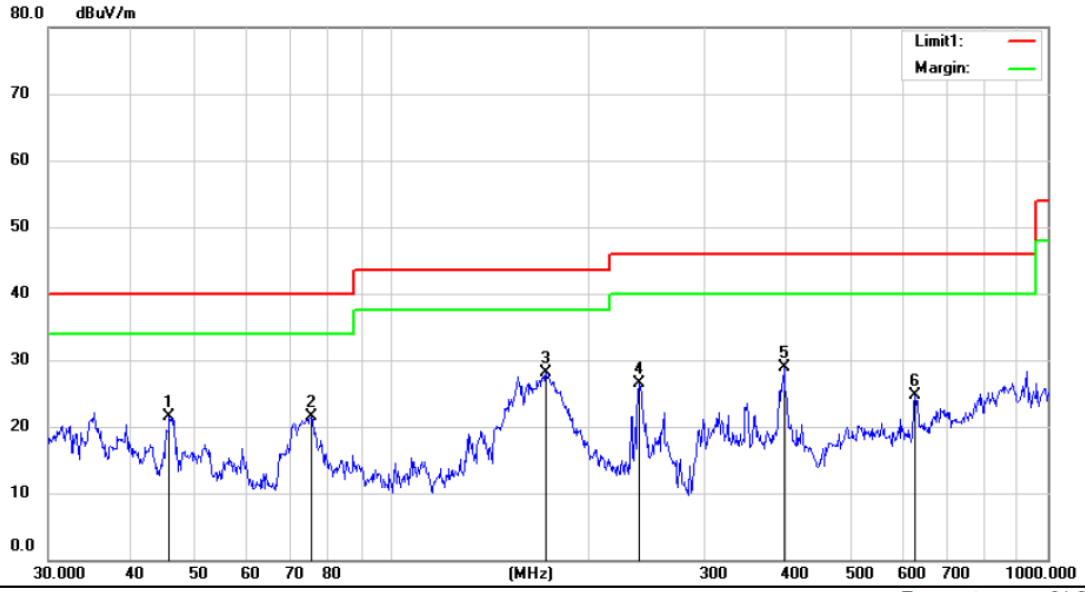



Spectrum
Ref Level 130.00 dBµV
RBW 200 Hz
Att 40 dB
SWT 3.5 s
VBW 1 kHz
Mode Auto Sweep
TDF
1Pk Max
Limit Check PASS
Line limit1 PASS
Line margin PASS
M1[1]
61.03 dBµV
130.316 kHz
110 dBµV
100 dBµV
90 dBµV
80 dBµV
70 dBµV
60 dBµV
50 dBµV
40 dBµV
M1
Start 9.0 kHz
1001 pts
Stop 150.0 kHz
Measuring...
28.09.2015
18:16:10


Spectrum
Ref Level 107.00 dBµV
RBW 10 kHz
Att 10 dB
SWT 299 ms
VBW 30 kHz
Mode Auto Sweep
TDF
1Pk Max
Limit Check PASS
Line limit1 PASS
Line margin PASS
M1[1]
39.35 dBµV
21.2596 MHz
90 dBµV
80 dBµV
70 dBµV
60 dBµV
50 dBµV
40 dBµV
30 dBµV
20 dBµV
10 dBµV
M1
Start 150.0 kHz
1001 pts
Stop 30.0 MHz
Measuring...
17.08.2015
10:53:54


Spectrum
Ref Level 107.00 dBµV
RBW 10 kHz
Att 10 dB
SWT 299 ms
VBW 30 kHz
Mode Auto Sweep
TDF
1Pk Max
Limit Check PASS
Line Limit 1 PASS
Line margin PASS
M1[1]
38.93 dBµV
254.8 kHz
90 dBµV
80 dBµV
70 dBµV
60 dBµV
50 dBµV
40 dBµV
30 dBµV
20 dBµV
10 dBµV
M1
Start 150.0 kHz
1001 pts
Stop 30.0 MHz
Measuring...
17.08.2015
10:54:18


Spectrum
Ref Level 107.00 dBµV
RBW 10 kHz
Att 10 dB
SWT 299 ms
VBW 30 kHz
Mode Auto Sweep
TDF
1Pk Max
Limit Check PASS
Line Limit 1 PASS
Line margin PASS
M1[1]
40.06 dBµV
241.6 kHz
90 dBµV
80 dBµV
70 dBµV
60 dBµV
50 dBµV
40 dBµV
30 dBµV
20 dBµV
10 dBµV
M1
Start 150.0 kHz
1001 pts
Stop 30.0 MHz
Measuring...
17.08.2015
10:54:34



Site 3m Chamber #3 Polarization: *Horizontal* Temperature: 24 C

Limit: (RE)FCC PART 15 Class B Power: AC 120V/60Hz Humidity: 53 %

EUT: Wireless Charging Base

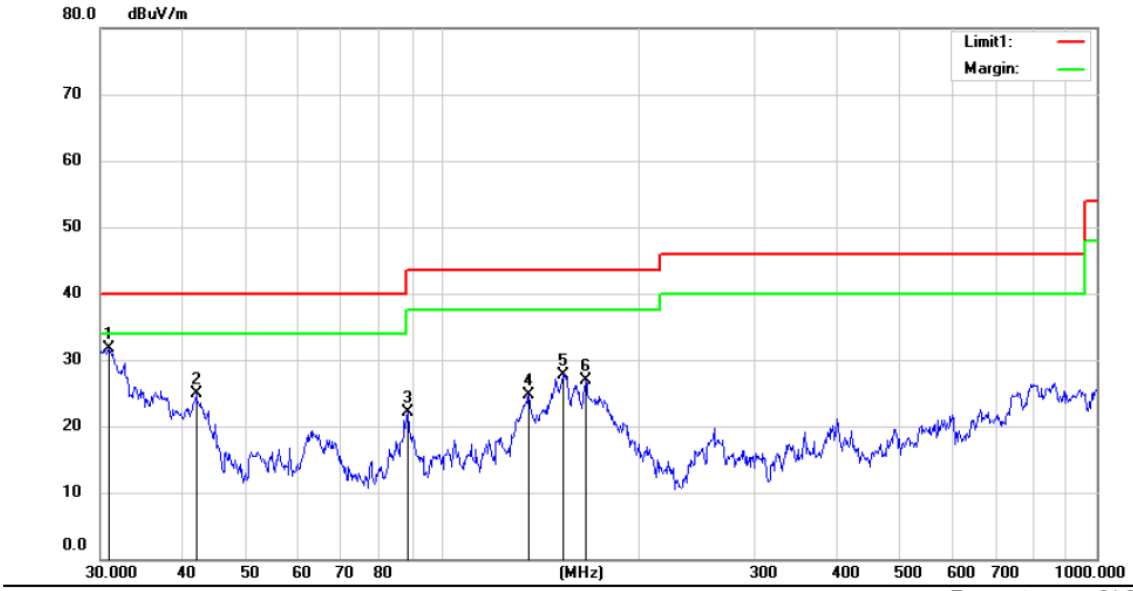
M/N: CF10

Mode: min load

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		45.8551	35.27	-13.84	21.43	40.00	-18.57	QP			
2		75.4462	40.92	-19.50	21.42	40.00	-18.58	QP			
3	*	171.9945	47.49	-19.35	28.14	43.50	-15.36	QP			
4		238.3101	40.61	-14.05	26.56	46.00	-19.44	QP			
5		396.2414	38.02	-9.08	28.94	46.00	-17.06	QP			
6		627.2736	31.38	-6.72	24.66	46.00	-21.34	QP			

*:Maximum data x:Over limit !:over margin Operator: KK



Site 3m Chamber #3
Limit: (RE)FCC PART 15 Class B
EUT: Wireless Charging Base
M/N: CF10
Mode:min load
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	30.9618	47.83	-16.13	31.70	40.00	-8.30	QP			
2		42.0065	37.81	-12.95	24.86	40.00	-15.14	QP			
3		88.3421	39.48	-17.44	22.04	43.50	-21.46	QP			
4		135.5061	42.26	-17.55	24.71	43.50	-18.79	QP			
5		153.2002	46.09	-18.29	27.80	43.50	-15.70	QP			
6		165.4866	46.02	-19.11	26.91	43.50	-16.59	QP			

*:Maximum data x:Over limit !:over margin

Operator: KK

5.6 Radiated Measurement Photos