

Application for FCC Certification
On behalf of

Freescale Semiconductor, Inc.

Product Name: Qi Wireless Charging Transmitter

Model No.: WCT-5WTXAUTO

FCC ID: RUN-WCT-5WTXAUTO

(RF Exposure Report)

Prepared For : Freescale Semiconductor, Inc.
Corporate Headquarters, 6501 William Cannon Drive
West Austin, Texas 78735 USA

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Report No. : ACI-F14072
Date of Test : Apr. 25, 2014
Date of Report : Apr. 29, 2014

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TEST REPORT FOR HUMAN EXPOSURE

Applicant : Freescale Semiconductor, Inc.
Manufacturer : Freescale Semiconductor (China) Limited Shanghai Branch Office
Factory : Trivo (Taicang) Technologies Co., Ltd.

EUT Description : Qi Wireless Charging Transmitter
(A) Model No. : WCT-5WTXAUTO
(B) Power Supply : AC100~240V/50-60Hz
(C) Test Voltage : AC 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 1 SECTION 1.1310 and
KDB 680106 D01 v02*

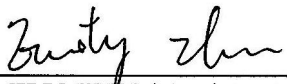
The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the RF Exposure levels emanating from the device. The RF Exposure levels are compared to the FCC Part 1.1310.

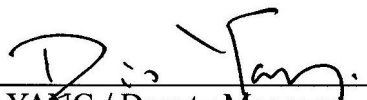
The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report also shows that the EUT (M/N: WCT-5WTXAUTO), which was tested on Apr. 25, 2014 is technically compliance with the FCC limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

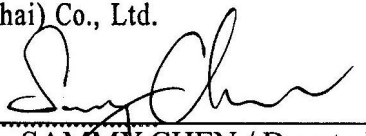
This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Apr. 25, 2014 Date of Report : Apr. 29, 2014

Producer : 
EMILY ZHU / Assistant

Review : 
DIO YANG / Deputy Manager

 For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Signatory : 
Authorized Signature EMC SAMMY CHEN / Deputy Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

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

Description of Test Item	Standard	Limits	Results
RF Exposure	FCC RULES AND REGULATIONS PART 1.1310 AND KDB 680106 D01 V02	1.1310	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description : Qi Wireless Charging Transmitter

Model Number : WCT-5WTXAUTO

Type of EUT : ☒ Production ☐ Pre-product ☐ Pro-type

Charge Freq. : 110kHz

Applicant : Freescale Semiconductor, Inc.
Corporate Headquarters, 6501 William Cannon
Drive West Austin, Texas 78735 USA

Manufacturer : Freescale Semiconductor (China) Limited Shanghai
Branch
No. 192 Liangjing Rd., Pudong New Area,
Shanghai 201203, P.R. China

Factory : Trivo (Taicang) Technologies Co., Ltd.
Building A10, Taicang Foreign Industry Park,
No.105 East Shanghai Road, Taicang, Jiangsu,
China, 215400

2.2 Description of Test Facility

Site Description (Semi-Anechoic Chamber)	: Sept. 17, 1998 file on Mar 16, 2012 Renewed Federal Communications Commission FCC Engineering Laboratory 7435 Oakland Mills Road Columbia, MD 21046, USA
Name of Firm	: Audix Technology (Shanghai) Co., Ltd.
Site Location	: 3 F 34 Bldg 680 Guiping Rd., Caohejing Hi-Tech Park, Shanghai 200233, China
FCC registration Number	: 91789
Accredited by NVLAP, Lab Code	: 200371-0

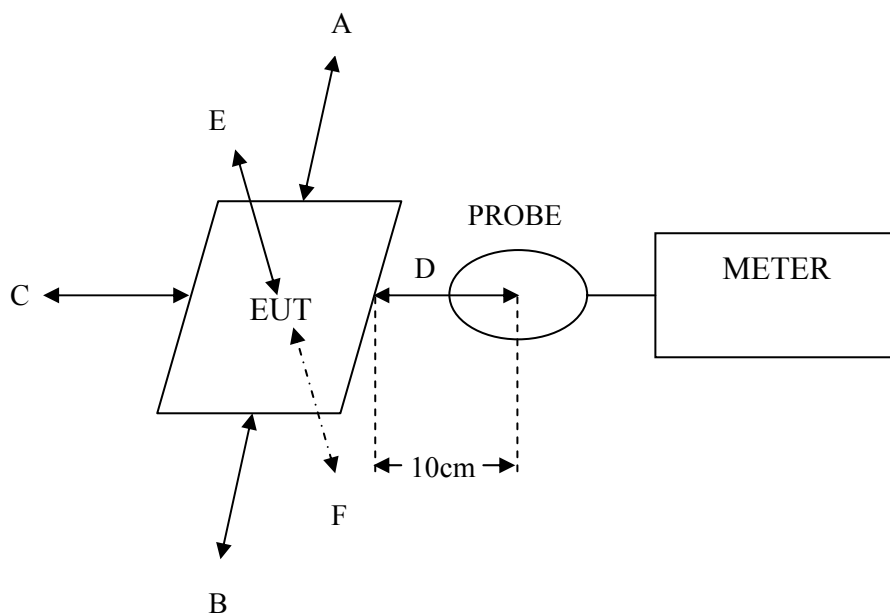
3 SUMMARY OF STANDARDS AND RESULTS

3.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Broadband Field Meter	NARDA	NBM-550	E-0716	Dec 26, 2013	Dec 26, 2014
2.	Magnetic Field Meter	NARDA	ELT-400	N-0163	Dec 26, 2013	Dec 26, 2014
3.	Magnetic Probe	NARDA	HF-3061	D-0227	Dec 26, 2013	Dec 26, 2014
4.	E-Field Probe	NARDA	EF-0391	D-0608	Dec 26, 2013	Dec 26, 2014

3.2 Test Setup



3.3 Applicable Standard

FCC Part 1.1310 & KDB 680106 D01 v02 (3)(3)

3.4 Specification Limits

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/150	30
1500-100,000	--	--	1.0	30

f = frequency in MHz

*Plane-wave equivalent power density

KDB 680106 D01(3)(3):

For devices designed for typical desktop applications, such a wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of 10 cm. E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 10 cm measured from the center of the probe(s) to the edge of the device. Emissions between 100 kHz to 300 kHz should be assessed versus the limits at 300 kHz in Table 1 of Section 1.1310: 614 V/m and 1.63 A/m.

3.5 Operating Condition of EUT

The EUT was setup on the Charging test mode and then test.

3.6 Test Result

3.6.1 Electric Field Strength at 10 cm from the edges surrounding the EUT

Test Position	Test distance (cm)	Test result (v/m)	Limit (v/m)
A: Front	10	1.17	614.00
B: Back	10	3.00	614.00
C: Left	10	2.04	614.00
D: Right	10	1.77	614.00
E: Top	10	3.80	614.00
F: Bottom	10	5.23	614.00
Conclusion		Pass	

3.6.2 Magnetic Field Strength at 10 cm from the edges surrounding the EUT

Test Position	Test distance (cm)	Test result (A/m)	Limit (A/m)
A: Front	10	0.1286	1.63
B: Back	10	0.2018	1.63
C: Left	10	0.1042	1.63
D: Right	10	0.0781	1.63
E: Top	10	0.3164	1.63
F: Bottom	10	0.5913	1.63
Conclusion		Pass	