

(Ho-dong), 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea Tel: +82-31-339-9970 Fax: +82-31-624-9501 www.e-ctk.com

# **TEST REPORT**

According to: FCC 47CFR part 15 subpart C

Test Report No.	:	CTK-2017-00488

Date of Issue : 2017-03-08

FCC ID : 2ALH5-PRESTO-A300FT

Model/Type No. : RT-A300FT

Kind of Product : Wireless Charging Pad

Applicant : RT Tech Co., Ltd.

Applicant Address : 1104, 271, Digital-ro, Guro-gu, Seoul, Korea

Manufacturer : RT Tech Co., Ltd.

Manufacturer Address : 1104, 271, Digital-ro, Guro-gu, Seoul, Korea

Contact Person : Winfred Shin

Telephone : +82-2-830-8660

Received Date : 2017-02-17

Test period : Start : 2017-03-02 End : 2017-03-05

Test Results : ☐ In Compliance ☐ Not in Compliance

The test results presented in this report relate only to the object tested.

Tested by

Reviewed by

Won-Jae, Hwang Test Engineer

Date: 2017-03-08

Young-Joon, Park Technical Manager Date: 2017-03-08

Test Report No.: CTK-2016-01508 Page 1 of 34 Date: 2017-03-08

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J. Pork



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### REPORT REVISION HISTORY

Issued (CTK-2016-01508)	All

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# 1.0 General Product Description

Basic Model/Type No.	RT-A300FT
Serial number	Prototype
EUT condition	Pre-production, not damaged
Antenna type	PCB antenna Gain -9.91 dBi
Frequency Range	2 402 MHz - 2 480 MHz
RF power	-0.061 dBm Peak Conducted
Number of channels	40
Channel Spacing	2 MHz
Type of Modulation	GFSK
Power Source	DC 36 V
Hardware Rev	5
Software Rev	21
Firmware Rev	21

# 1.1 Tested Frequency

	Low	Middle	High
Frequency (MHz)	2 402	2 440	2 480

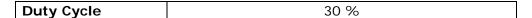
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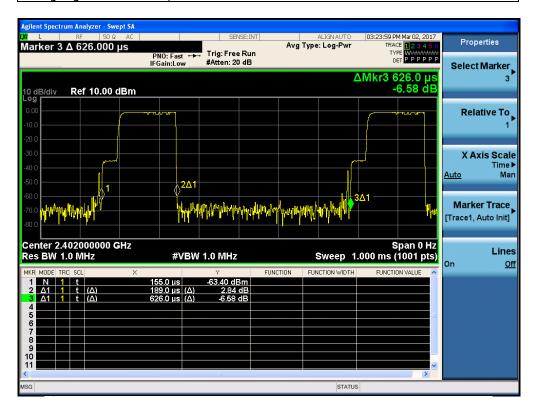


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### 1.2 Duty Cycle

CTK Co., Ltd.





### 1.3 Device Modifications

None

# 1.4 Peripheral Devices

Device	Manufacturer	Model No.	Serial No.
Notebook Computer	НР	HP ProBook 650 G1	5CG5114KD2
AC/DC ADAPTER	НР	PPP012D-S	WCNXF0AAR7S2XX

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### 1.5 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less. All test equipment calibrations are traceable to the Korea Research Institute of Standards and Science (KRISS), therefore, all test data recorded in this report is traceable to KRISS.

### 1.6 Test Facility

The measurement facility is located at 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggido, Korea. The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10 and CISPR Publication 22.

## 1.7 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Registration Number	Logo
USA	FCC	FCC Part 15 & 18 EMI (Electromagnetic Interference / Emission)	805871	P
CANADA	IC	IC EMI (3/10m test site)	8737A-2	*
JAPAN	vccı	VCCI V-3 EMI (Electromagnetic Interference / Emission)	C-986 T-1843 R-3627 G-387	V€I
KOREA	MSIP	EMI (Electromagnetic Interference / Emission) EMS (Electromagnetic Susceptibility / Immunity)	KR0025	

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#### 2.0 **Summary of tests**

FCC Part Section(s)	Parameter	Limit	Test Condition	Status (note 1)
15.247(a)	6 dB Bandwidth	> 500 kHz		С
15.247(b)	Maximum Output Power	< 1 Watt		С
15.247(d)	Conducted Spurious emission	> 20 dBc	Conducted	С
15.247(d)	Band Edge	> 20 dBc		С
15.247(e)	Transmitter Power	< 8 dBm @ 3 kHz		С
10.217(0)	Spectral Density	V O GBITT C O KITZ		С
15.209	Field Strength of Harmonics	15.209(a)	Radiated	С
15.207	AC Conducted Emissions	15.207(a)	Line Conducted	С

NC=Not Complies NT=Not Tested *Note 1*: C=Complies NA=Not Applicable

*Note 2*: The data in this test report are traceable to the national or international standards.

The sample was tested according to the following specification:

- FCC Part 15.247, ANSI C63.10-2013

The tests were performed according to the method of measurements prescribed in KDB No.558074 D01 DTS Meas Guidance v03r05.

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### 2.1 Technical Characteristic Test

### 2.1.1 6dB Bandwidth

### Test Procedures (ANSI C63.10-2013 6.9.2)

Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

### Test Procedures (ANSI C63.10-2013 6.9.3)

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.

Use the 99% power bandwidth function of the instrument and report the measured bandwidth.

### **Test Settings:**

Center frequency = the highest, middle and the lowest channels

a) RBW = 100 kHz

b) VBW  $\geq$  3 x RBW

c) Detector = peak

d) Trace mode = Max hold

- e) Sweep = auto couple
- f) Allow trace to fully stabilize
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

### Minimum Standard:

6 dB Bandwidth > 500kHz

#### Test Data:

Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Result
2 402	0.693	1.056	Complies
2 440	0.689	1.053	Complies
2 480	0.686	1.047	Complies

See next pages for actual measured spectrum plots.

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### Low channel (2 402 MHz)







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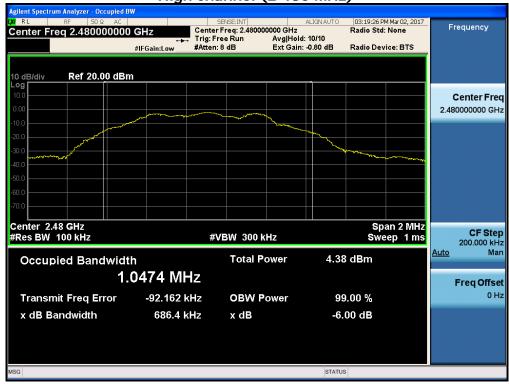
Date: 2017-03-08

Form No.: CTK-D151-06-R101(Rev.0)



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High channel (2 480 MHz)



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### 2.1.2 Maximum Output Power

### **Test Procedures**

Maximum Peak Output Power from the EUT were measured according to the dictates power measurement procedure in section 9.1.1 of KDB 558074 D01 DTS Meas Guidance v03r05.

This procedure shall be used when the measurement instrument has available a resolution bandwidth that is greater than the DTS bandwidth.

### <u>Test Settings:</u>

Center frequency = the highest, middle and the lowest channels

a) RBW ≥ DTS bandwidth

b) VBW  $\geq$  3 x RBW

c) span ≥ 3 x RBW

d) Sweep time = auto couple

e) Detector = peak

f) Trace mode= max hold

- g) Allow trace to fully stabilize
- h) Use peak marker function to determine the peak amplitude level.

### Limit:

Maximum Output Power < 1 W (30 dBm)

#### Test Data:

Eroguenev	Maximum peak Conducted Output Power		
Frequency (MHz)	Output power (dBm)	Output power (mW)	Result
2 402	-0.061	0.99	Complies
2 440	-1.031	0.79	Complies
2 480	-1.996	0.63	Complies

See next pages for actual measured spectrum plots.

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### Low channel (2 402 MHz)







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### 2.1.3 Transmitter Power Spectral Density

#### **Test Procedures**

Power Spectral Density from the EUT were measured according to the dictates PKPSD measurement procedure in 10.2 of KDB 558074 D01 DTS Meas Guidance v03r05.

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance.

### Test Settings:

Center frequency = the highest, middle and the lowest channels

a) RBW :  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ 

b) VBW ≥ 3 x RBW

c) span  $\geq$  1.5 x DTS bandwidth

d) Sweep time = auto couple

e) Detector = peak

f) Trace mode= max hold

g) Allow trace to fully stabilize

h) Use the peak marker function to determine the maximum amplitude level within the RBW.

#### Limit:

Power Spectral Density < 8dBm @ 3 kHz BW

#### Test Data:

Frequency	Power Spectral Density	
(MHz)	dBm	Result
2 402	-14.77	Complies
2 440	-14.82	Complies
2 480	-15.56	Complies

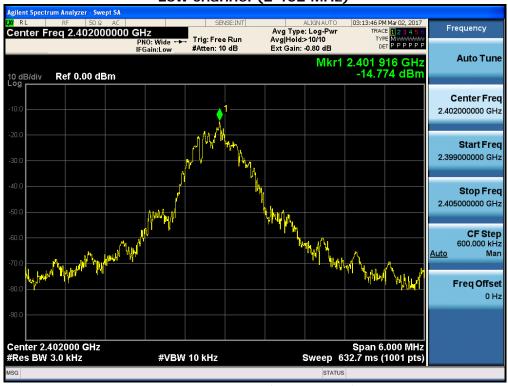
See next pages for actual measured spectrum plots.

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Low channel (2 402 MHz)





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### 2.1.4 Band Edge & Conducted Spurious emission

#### **Test Procedures**

The Unwanted emission from the EUT were measured according to the dictates PKPSD measurement procedure in section 11.11 of ANSI C63.10-2013.

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

### **Test Settings:**

Center frequency = the highest, middle and the lowest channels

a) RBW = 100 kHz

b) VBW  $\geq$  3 x RBW

c) Detector = peak

d) Sweep time = auto couple

- e) Trace mode= max hold
- f) Allow trace to fully stabilize
- g) Use the peak marker function to determine the maximum amplitude level.

#### Limit:

Emission level < 20 dBc

### **Test results: Complies**

 All conducted emission in any 100kHz bandwidth outside of the spread spectrum band was at least 20dB lower than the highest in-band spectral density. Therefore the applying equipment meets the requirement.

See next pages for actual measured spectrum plots.

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### Band-edge





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### **Conducted Spurious emission**

Low channel (2 402 MHz)



Middle channel (2 440 MHz)



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### 2.1.5 Field Strength of Harmonics

ıе	St Location			
$\times$	10 m SAC (test distance : 10 m,	$\boxtimes$	3	m)
$\times$	3 m SAC (test distance : 3 m)			

#### **Test Procedures**

- 1) In the frequency range of 9 kHz to 30 MHz, magnetic field is measured with Loop Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.
- 2) In the frequency rage above 30 MHz, Bi-Log Test Antenna(30 MHz to 1 GHz) and Horn Test Antenna(above 1 GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is carried from 1m to 4m above the ground to determine the maximum value of the field strength. The emissions levels at both horizontal and vertical polarizations should be tested.

### Test Settings:

Frequency Range = 9 kHz ~ 25 GHz (2.4 GHz 10<sup>th</sup> harmonic)

- a) RBW = 1 MHz for  $f \ge 1$  GHz, 100 kHz for f < 1 GHz, 9 kHz for f < 30 MHz
- b) VBW ≥ RBW
- c) Sweep time = auto couple

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#### Limit:

FCC Part 15 § 15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	MHz	MHz	GHz
0.09-0.11	8.37626-8.38675	73-74.6	399.9-410	2690-2900	10.6-12.7
<sup>1</sup> 0.495-0.505	8.41425-8.41475	74.8-75.2	608-614	3260-3267	13.25-13.4
2.1735-2.1905	12.29-12.293	108-121.94	960-1240	3332-3339	14.47-14.5
4.125-4.128	12.51975-12.52025	123-138	1300-1427	3345.8-3358	15.35-16.2
4.17725-4.17775	12.57675-12.57725	149.9-150.05	1435-1626.5	3600-4400	17.7-21.4
4.20725-4.20775	13.36-13.41	156.52475- 156.52525	1645.5-1646.5	4500-5150	22.01-23.12
6.215-6.218	16.42-16.423	156.7-156.9	1660-1710	5350-5460	23.6-24
6.26775-6.26825	16.69475-16.69525	162.0125-167.17	1718.8-1722.2	7250-7750	31.2-31.8
6.31175-6.31225	16.80425-16.80475	167.72-173.2	2200-2300	8025-8500	36.43-36.5
8.291-8.294	25.5-25.67	240-285	2310-2390	9000-9200	<sup>2</sup> Above 38.6
8.362-8.366	37.5-38.25	322-335.4	2483.5-2500	9300-9500	

<sup>&</sup>lt;sup>1</sup> Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

§ 15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown is Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

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<sup>&</sup>lt;sup>2</sup> Above 38.6





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FCC Part 15 § 15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency(MHz)	Field Strength uV/m@3m	Field Strength dBuV/m@3m	Deasurement Distance (meters)
		abav/iiie oiii	,
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	30
1.705-30	30	-	30
30-88	100**	40	3
88-216	150**	43.5	3
216-960	200**	46	3
Above 960	500	54	3

<sup>\*\*</sup> Except as provided in 15.209(g).fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72MHz, 76-88MHz, 174-216MHz, 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g.15.231 and 15.241.

#### Note:

- 1) For above 1 GHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
- 2) For above 1 GHz, limit field strength of harmonics: 54 dBuV/m@3m (AV) and 74 dBuV/m@3m (PK)
- 3) For measurement above 1GHz, the resolution bandwidth is set to 1 MHz and video bandwidth is set to 1 MHz for peak measurement and 10 Hz for average measurement. (Duty Cycle is > 98%,)
- 4) Duty Cycle is < 98%, VBW setting will need to > 1/T.

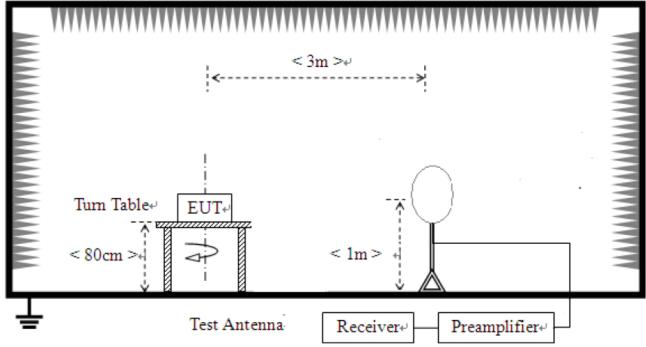
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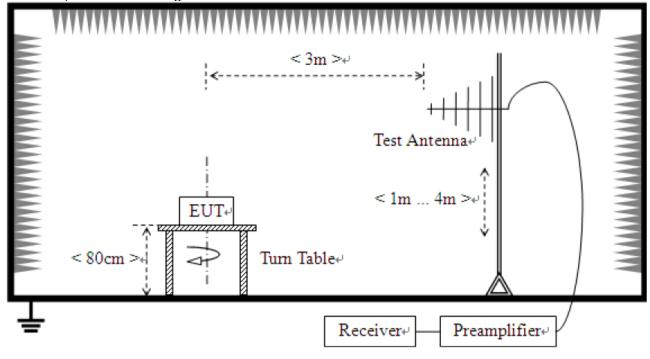
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### **Test Setup:**

1) For field strength of emissions from 9 kHz to 30 MHz



2) For field strength of emissions from 30 MHz to 1 GHz

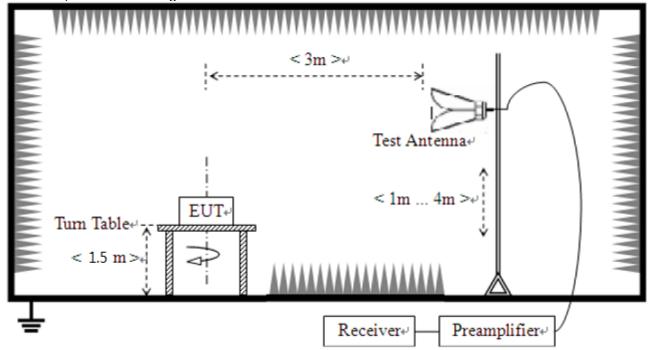


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3) For field strength of emissions above 1 GHz



### **Test results**

### 1) 9 kHz to 30 MHz

EUT	Wireless Charging Pad	Measurement Detail		
Model RT-A300FT		Frequency Range	9 kHz – 30 MHz	
Test mode   Continuous modulated carrier		Detector function	Quasi-Peak	

The requirements are:

### 

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
_	_	-	See note

### Note:

The amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

Distance extrapolation factor = 40 log (specific distance / test distance) (dB)

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### 2) 30 MHz to 1 GHz

Test mode: Transmit, Low Channel (Worst Case)

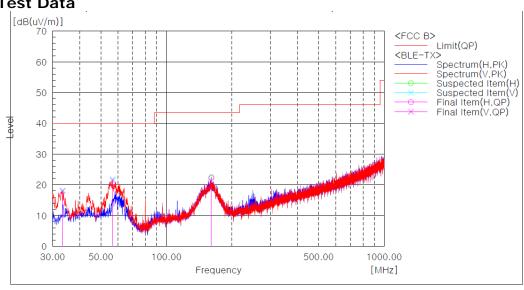
EUT	Wireless Charging Pad	Charging Pad Measurement Detail		
Model RT-A300FT		Frequency Range Below 1 000MHz		
Mode	Transmit, Low Channel	Detector function	Quasi-Peak	

### The requirements are:

□ Complies

Frequency	Measured Data	Margin	Remark
(MHz)	(dBuV/m)	(dB)	
56.551	21.5	18.5	Quasi-Peak

### **Test Data**



### Final Result

No.	Frequency	(P)	Reading	c.f	Result	Limit	Margin	Angle
			QP		QP	QP	QP	
	[MHz]		[dB(uV)]	[dB(1/m)]	[dB(uV/m)]	[dB(uV/m)]	[dB]	[deg]
1	33.300	V	35.6	-17.6	18.0	40.0	22.0	85.7
2	56.551	V	36.5	-15.0	21.5	40.0	18.5	225.9
3	160.757	Н	28.7	-6.5	22.2	43.5	21.3	355.7

#### Remark:

- 1. The Unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
- 2. Result = Reading + Correction factor
- 3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator Amp Gain

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### Test mode: Receive

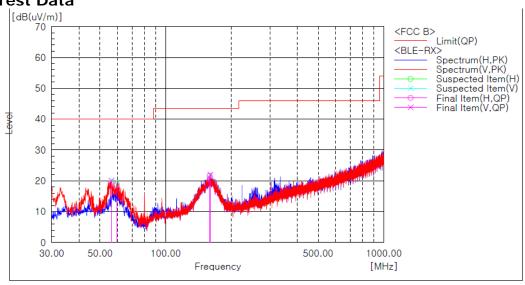
EUT	Wireless Charging Pad	Measurement Detail		
Model	RT-A300FT	Frequency Range	Below 1 000MHz	
Mode	Receive	Detector function	Quasi-Peak	

### The requirements are:

□ Complies

Frequency	Measured Data	Margin	Remark
(MHz)	(dBuV/m)	(dB)	
56.351	20.0	20.0	Quasi-Peak





Final Result

No.	Frequency	(P)	Reading	c.f	Result	Limit	Margin	Angle
			QP		QP	QP	QP	
	[MHz]		[dB(uV)]	[dB(1/m)]	[dB(uV/m)]	[dB(uV/m)]	[dB]	[deg]
1	56.351	V	35.0	-15.0	20.0	40.0	20.0	149.9
2	59.502	Н	33.2	-14.7	18.5	40.0	21.5	306.3
3	158.757	Н	28.1	-6.5	21.6	43.5	21.9	357.5
4	160.107	V	28.5	-6.5	22.0	43.5	21.5	175.2

#### Remark:

- 1. The Unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
- 2. Result = Reading + Correction factor
- 3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator Amp Gain

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### 3) above 1 GHz

Test mode: Transmit

EUT	Wireless Charging Pad	Measurement Detail	
Madal	DT A200FT	Frequency Range	1-25GHz
Model	RT-A300FT	Detector function	Average / Peak

### Remarks

We have tested three mode (X, Y, Z). The worst mode (Z axis) for final test.

The requirements are:

□ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
9 608.00	46.60	7.40	Average

### **Test Data**

Low(2402 MHz)

Frequency	(P)	Limit AV	Limit PK	Level AV	Level PK	Margin AV	Margin PK
[MHz]		[dB(uV/m)]	[dB(uV/m)]	[dB(uV/m)]	[dB(uV/m)]	[dB]	[dB]
4 804.00	Н	54.00	74.00	38.14	50.46	15.86	23.54
4 804.00	V	54.00	74.00	39.42	62.88	14.58	11.12
7 206.00	Ι	54.00	74.00	40.54	62.34	13.46	11.66
7 206.00	V	54.00	74.00	41.33	65.71	12.67	8.29
9 608.00	Η	54.00	74.00	45.26	51.22	8.74	22.78
9 608.00	V	54.00	74.00	46.60	52.53	7.40	21.47
2 390.00	Н	54.00	74.00	26.39	54.66	27.61	19.34
2 390.00	V	54.00	74.00	26.45	57.93	27.55	16.07

Mid(2440 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
4 880.00	Н	54.00	74.00	38.95	60.91	15.05	13.09
4 880.00	V	54.00	74.00	40.16	65.03	13.84	8.97
7 320.00	Н	54.00	74.00	39.25	58.59	14.75	15.41
7 320.00	V	54.00	74.00	40.03	62.30	13.97	11.70
9 760.00	Н	54.00	74.00	45.17	51.07	8.83	22.93
9 760.00	V	54.00	74.00	44.59	51.20	9.41	22.80
2 483.50	Н	54.00	74.00	25.60	53.01	28.40	20.99
2 483.50	V	54.00	74.00	25.63	54.32	28.37	19.68

High(2480 MHz)

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Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
4 960.00	Н	54.00	74.00	38.60	61.61	15.40	12.39
4 960.00	V	54.00	74.00	39.59	65.82	14.41	8.18
7 440.00	Н	54.00	74.00	39.15	56.48	14.85	17.52
7 440.00	V	54.00	74.00	40.32	60.14	13.68	13.86
9 920.00	Н	54.00	74.00	45.19	50.99	8.81	23.01
9 920.00	V	54.00	74.00	43.13	50.72	10.87	23.28
2 483.50	Н	54.00	74.00	26.38	53.34	27.62	20.66
2 483.50	V	54.00	74.00	26.52	54.66	27.48	19.34

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Test mode: Receive

EUT	Wireless Charging Pad	Measurement Detail				
Model I	DT A200FT	Frequency Range	1-25GHz			
	RT-A300FT	Detector function	Average / Peak			

### Remarks

We have tested three mode (X, Y, Z). The worst mode (Z axis) for final test.

The requirements are:

□ Complies

Frequency (MHz)	1 3		Remark
2 747.00	41.53	12.47	Average

### **Test Data**

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
2 747.00	Н	54.00	74.00	37.83	42.99	16.17	31.01
2 747.00	V	54.00	74.00	41.53	45.30	12.47	28.70

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### 2.1.6 AC Conducted Emissions

### Frequency Range of Measurement

150 kHz to 30 MHz

### **Instrument Settings**

IF Band Width: 9 kHz

#### **Test Procedures**

Module has been tested by mounting the End product(Printer).

The EUT was placed on a non-metallic table 0.8m above the metallic, grounded floor and 0.4m from the reference ground plane wall. The distance to other metallic surfaces was at least 0.8m.

Amplitude measurements were performed with a quasi-peak detector and an average detector.

#### Limit

- 15.207(a)

_:0:20; (a)				
Fraguados (MIII)	Conducted Limit (dBuV)			
Frequency (MHz)	Quasi-peak	Average		
0.15 ~ 0.5	66 to 56*	56 to 46*		
0.5 ~ 5	56	46		
5 ~ 30	60	50		

<sup>\*</sup> Decreases with the logarithm of the frequency.

### **Test Data**

The requirements are:

□ Complies

Test mode: Transmit

Frequency (MHz)			Remark	
0.478 500	29.4	27.0	Quasi-Peak	

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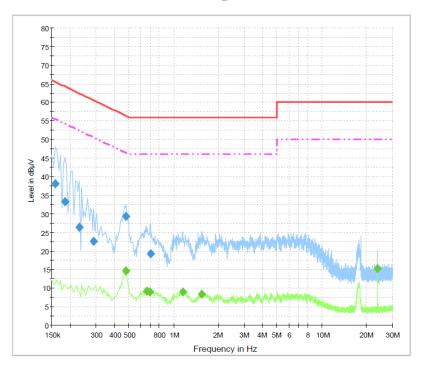
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### **Test Data**

### [LINE]

Class B\_L1



# **Final Result 1**

		Juit	man result i										
Freque (MHz		QuasiPeak (dBµV)	Meas. Time	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)				
			(ms)										
0.159	000	38.1	1000.0	9.000	On	L1	9.8	27.4	65.5				
0.186	0000	33.3	1000.0	9.000	On	L1	9.9	31.0	64.2				
0.231	1000	26.4	1000.0	9.000	On	L1	9.7	36.0	62.4				
0.289	9500	22.6	1000.0	9.000	On	L1	9.7	37.9	60.5				
0.478	3500	29.4	1000.0	9.000	On	L1	9.9	27.0	56.4				
0.699	0000	19.3	1000.0	9.000	On	L1	9.8	36.7	56.0				

# Final Result 2

Frequency (MHz)	CAverage (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.478500	14.7	1000.0	9.000	On	L1	9.9	31.7	46.4
0.658500	9.2	1000.0	9.000	On	L1	9.9	36.8	46.0
0.690000	9.0	1000.0	9.000	On	L1	9.8	37.0	46.0
1.162500	8.9	1000.0	9.000	On	L1	9.7	37.1	46.0
1.549500	8.4	1000.0	9.000	On	L1	9.7	37.6	46.0
23.860500	15.4	1000.0	9.000	On	L1	10.0	34.6	50.0

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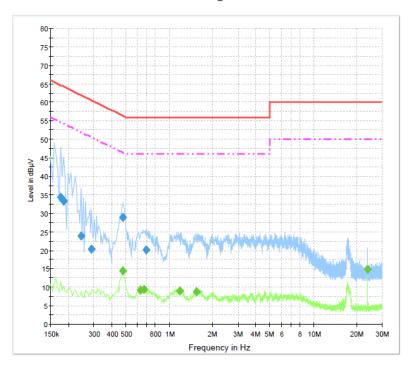


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### [NEUTRAL]

Class B\_N



# Final Result 1

Frequency	QuasiPeak	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)
		(ms)						
0.177000	34.4	1000.0	9.000	On	N	9.8	30.2	64.6
0.186000	33.4	1000.0	9.000	On	N	9.9	30.8	64.2
0.244500	23.9	1000.0	9.000	On	N	9.7	38.1	61.9
0.289500	20.3	1000.0	9.000	On	N	9.7	40.3	60.5
0.474000	29.0	1000.0	9.000	On	N	9.9	27.4	56.4
0.694500	20.0	1000.0	9.000	On	N	9.8	36.0	56.0

# Final Result 2

Frequency (MHz)	CAverage (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.478500	14.5	1000.0	9.000	On	N	9.9	31.8	46.4
0.627000	9.3	1000.0	9.000	On	N	9.9	36.7	46.0
0.667500	9.5	1000.0	9.000	On	N	9.9	36.5	46.0
1.185000	9.0	1000.0	9.000	On	N	9.7	37.0	46.0
1.554000	8.8	1000.0	9.000	On	N	9.7	37.2	46.0
23.860500	14.8	1000.0	9.000	On	N	10.1	35.2	50.0

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# **APPENDIX A – Test Equipment Used For Tests**

	Name of Equipment	Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date
1	Signal Analyzer	Agilent	N9020A	MY48011598	2016-11-01	2017-11-01
2	Signal Generator	Rohde & Schwarz	SMB100A	175528	2016-11-01	2017-11-01
3	EMI Test Receiver	Rohde & Schwarz	ESCI7	100816	2016-10-31	2017-10-31
4	LISN	Rohde & Schwarz	ENV216	101760	2017-02-03	2018-02-03
5	EMI Test Receiver	Rohde & Schwarz	ESCI7	100814	2016-11-01	2017-11-01
6	Bilog Antenna	Schaffner	CBL6111C	2551	2016-05-13	2017-05-13
7	Active Loop Antenna	SCHWARZBECK	FMZB 1513	1513-126	2016-05-16	2018-05-16
8	6dB Attenuator	R&S	DNF	272.4110.50-1	2017-02-03	2018-02-03
9	6dB Attenuator	R&S	DNF	272.4110.50-2	2016-11-01	2017-11-01
10	AMPLIFIER	SONOMA	310	291721	2017-02-02	2018-02-02
11	EMI Test Receiver	Rohde & Schwarz	ESU40	100336	2015-05-14	2017-05-14
12	Preamplifier	Agilent	8449B	3008A02011	2016-12-01	2017-12-01
13	Horn Antenna	ETS-Lindgren	3115	00078894	2015-09-02	2017-09-02
14	Horn Antenna	ETS-Lindgren	3116	00062504	2015-09-04	2017-09-04
15	Horn Antenna	ETS-Lindgren	3116	00062916	2015-04-30	2017-04-30
16	Horn Antenna	ETS-Lindgren	3117	00154525	2015-09-02	2017-09-02

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