



# FCC Test Report

**FCC ID** : 2AWX9-Q05W1  
**Product Designation** : Wireless Charger  
**Trade mark** : N/A  
**Model Name** : KS-Q05W-1  
**Serial Model** : 45481,46832,46488,3xxxx(0-99),4xx  
: xx(0-99),5xxxx(0-99),6xxxx(0-99),7x  
xxx(0-99),8xxxx(0-99),9xxxx(0-99)  
**Applicant** : Vietnam Kingsun Company Limited  
**Date of Issue** : July 28, 2020  
**Standard(s)** : FCC Part 15 Subpart C  
**Report No** : S20080703501001

## Prepared for

Vietnam Kingsun Company Limited  
No.B7-1,1 Road,Hai Son(GD3-4) industrial park, Duc Hoa Ha Ward,Duc Hoa  
District,Long An, Vietnam

## Prepared by

Shenzhen NTEK Testing Technology Co., Ltd.  
1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street,  
Bao'an District, Shenzhen P.R. China  
Tel.: +86-0755-61156588 Fax.: +86-0755-61156599  
Website: [www.ntek.org.cn](http://www.ntek.org.cn)

## TEST RESULT CERTIFICATION

**Applicant's name**.....: Vietnam Kingsun Company Limited

Address.....: No.B7-1,1 Road,Hai Son(GD3-4) industrial park, Duc Hoa Ha Ward,Duc Hoa District,Long An, Vietnam

**Manufacturer's Name1**.....: Vietnam Kingsun Company Limited

Address.....: No.B7-1,1 Road,Hai Son(GD3-4) industrial park, Duc Hoa Ha Ward,Duc Hoa District,Long An, Vietnam

**Manufacturer's Name2**.....: NINGBO FENGHUA KINGSUN WIRE&CABLE CO LTD

Address.....: No.9, Dayuan Road, Xiachen village, Chunhu town, Fenghua, Ningbo 315528 China

### Product description

Product name.....: Wireless Charger

KS-Q05W-1,45481,46832,46488,3xxxx(0-99),4xxxx(0-9

Model and/or type reference ....: 9),5xxxx(0-99),6xxxx(0-99),7xxxx(0-99),8xxxx(0-99),9xx  
xx(0-99)

FCC Rules and Regulations Part 15 Subpart C Section

**Standards**.....: 15.207, 15.209, 15.203

ANSI C63.10:2013

This device described above has been tested by Shenzhen NTEK Testing Technology Co., Ltd., and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report. This report shall not be reproduced except in full, without the written approval of Shenzhen NTEK Testing Technology Co., Ltd., this document may be altered or revised by Shenzhen NTEK Testing Technology Co., Ltd., personnel only, and shall be noted in the revision of the document.

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

**Date of Test**.....:

Date (s) of performance of tests.....: July 17.2020 ~ July 28.2020

Date of Issue.....: July 28.2020

Test Result.....: **Pass**

Testing Engineer

:



(Leo. Zhu)

Technical Manager

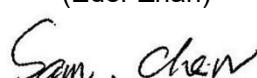
:



(Eder Zhan)

Authorized Signatory

:



(Sam Chen)

**Report Revise Record**

Report No	Revise Time	Issued Date	Valid Version	Notes
S20080703501001	/	July 28, 2020	Valid	Initial Release

**Table of Contents**

1. TEST SUMMARY.....	4
1.1 FACILITIES AND ACCREDITATIONS.....	5
1.2 LABORATORY ACCREDITATIONS AND LISTINGS.....	5
1.3 MEASUREMENT UNCERTAINTY.....	5
2. GENERAL INFORMATION.....	6
2.1 GENERAL DESCRIPTION OF EUT.....	6
2.2 DESCRIPTION OF TEST MODES.....	7
2.3 DESCRIPTION OF TEST SETUP.....	8
2.4 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL.....	9
2.5 MEASUREMENT INSTRUMENTS LIST.....	10
3. EMC EMISSION TEST.....	11
3.1 CONDUCTED EMISSION MEASUREMENT.....	11
POWER LINE CONDUCTED EMISSION.....	11
3.1.1 TEST PROCEDURE.....	12
3.1.2 TEST SETUP.....	12
3.1.3 EUT OPERATING CONDITIONS.....	12
3.1.4 TEST RESULTS.....	13
3.2 RADIATED EMISSION MEASUREMENT.....	15
3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT.....	15
3.2.2 TEST PROCEDURE.....	16
3.2.3 TEST SETUP.....	17
3.2.4 TEST RESULTS.....	18
4. BANDWIDTH.....	23
4.1. MEASUREMENT PROCEDURE.....	23
4.2. MEASUREMENT RESULTS.....	23
5. ANTENNA APPLICATION.....	24
5.1. Antenna Requirement.....	24
5.2. Result.....	24

## 1. TEST SUMMARY

Test procedures according to the technical standards:

EMC Emission					
Standard	Test Item	FCC Rules	Limit	Judgment	Remark
FCC part 15C ANSI C63.10:2013	Conducted Emission	§15.207	Class B	PASS	
	Radiated Emission	§15.209	Class B	PASS	
	ANTENNA APPLICATION	§15.203	/	PASS	

NOTE:

- (1) 'N/A' denotes test is not applicable in this Test Report
- (2) For client's request and manual description, the test will not be executed.

## 1.1 FACILITIES AND ACCREDITATIONS

All measurement facilities used to collect the measurement data are located at

1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China.

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10 and CISPR Publication 22.

## 1.2 LABORATORY ACCREDITATIONS AND LISTINGS

### Site Description

CNAS-Lab. : 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 L5516.

IC-Registration : The Certificate Registration Number is 9270A-1.

FCC- Accredited : Test Firm Registration Number: 463705.  
Designation Number: CN1184

A2LA-Lab. : The Certificate Registration Number is 4298.01  
This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories.  
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system  
(refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).

Name of Firm : Shenzhen NTEK Testing Technology Co., Ltd.

Site Location : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen 518126 P.R. China.

## 1.3 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95 %.

### A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
NTEKC01	ANSI	150 KHz ~ 30MHz	3.2	

### B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	U, (dB)	NOTE
NTEKA01	ANSI	30MHz ~ 1000MHz	4.7	
		1GHz ~12.4GHz	5.0	

## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

Product Feature and Specification	
Equipment	Wireless Charger
Test Model	KS-Q05W-1
Operating Frequency	123.4KHz
Modulation Technique	Induction
Antenna Type	Induction coil
Power supply	Input:DC 5V 1.5A . (total)Wireless Charger Output: 5W Max
HW Version	1.0
SW Version	1.0

## 2.2 DESCRIPTION OF TEST MODES

### 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.

### EUT Exercise

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

The following summary table is showing all test modes to demonstrate in compliance with the standard.

MODE	TEST MODE DESCRIPTION
1	Wireless charging Mode(Full load)
2	Wireless charging Mode(half load)
3	Wireless charging Mode(Null load)

Note:

1. The mode 1 was the worst case and only the data of the worst case record in this report.

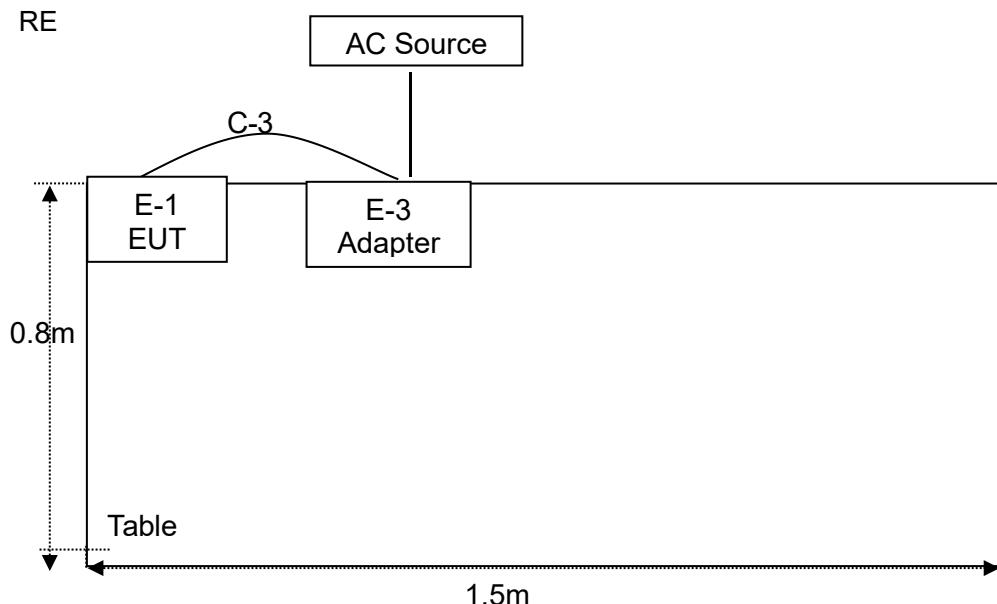
**(\*)EUT can only access the specified load, can not adjust the size of the load**

Carrier Frequency and Channel list:

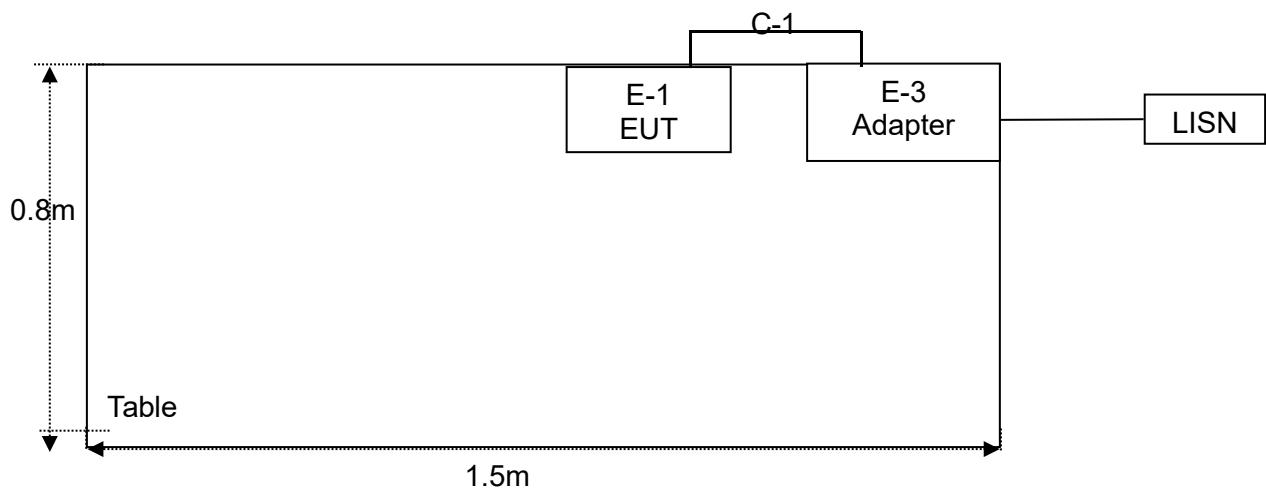
Channel	Frequency(MHz)
1	0.1110
2	0.1245
3	0.2040

### 2.3 DESCRIPTION OF TEST SETUP

RE



CE



## 2.4 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
  - (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
  - (3) "YES" means "shielded" "with core"; "NO" means "unshielded" "without core".

## 2.5 MEASUREMENT INSTRUMENTS LIST

## Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4407B	MY45108040	2020.06.05	2021.06.04	1 year
2	Spectrum Analyzer	Agilent	N9020A	MY49100060	2019.10.26	2020.10.25	1 year
4	Test Receiver	R&S	ESPI	101318	2020.06.05	2021.06.04	1 year
5	Bilog Antenna	TESEQ	CBL6111D	31216	2020.04.08	2021.04.07	1 year
6	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2020.06.05	2021.06.04	1 year
7	Amplifier	EMC	EMC051835 SE	980246	2020.08.09	2021.08.08	1 year
8	Amplifier	MITEQ	TTA1840-35 -HG	177156	2020.06.05	2021.06.04	1 year
9	Loop Antenna	ARA	PLA-1030/B	1029	2020.06.05	2021.06.04	1 year
10	Test Cable (9KHz-30MHz)	N/A	R-01	N/A	2020.04.21	2023.04.20	3 year
11	Test Cable (30MHz-1GHz)	N/A	R-02	N/A	2020.04.21	2023.04.20	3 year

## Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2020.06.05	2021.06.04	1 year
2	LISN	R&S	ENV216	101313	2020.04.18	2021.04.17	1 year
3	LISN	SCHWARZBECK	NNLK 8129	8129245	2020.06.05	2021.06.04	1 year
4	50Ω Coaxial Switch	ANRITSU CORP	MP59B	6200983704	2020.06.05	2021.06.04	1 year
5	Test Cable (9KHz-30MHz)	N/A	C01	N/A	2020.04.21	2023.04.20	3 year
6	Test Cable (9KHz-30MHz)	N/A	C02	N/A	2020.04.21	2023.04.20	3 year
7	Test Cable (9KHz-30MHz)	N/A	C03	N/A	2020.04.21	2023.04.20	3 year

### 3. EMC EMISSION TEST

#### 3.1 CONDUCTED EMISSION MEASUREMENT

POWER LINE CONDUCTED EMISSION

(Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	limit	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

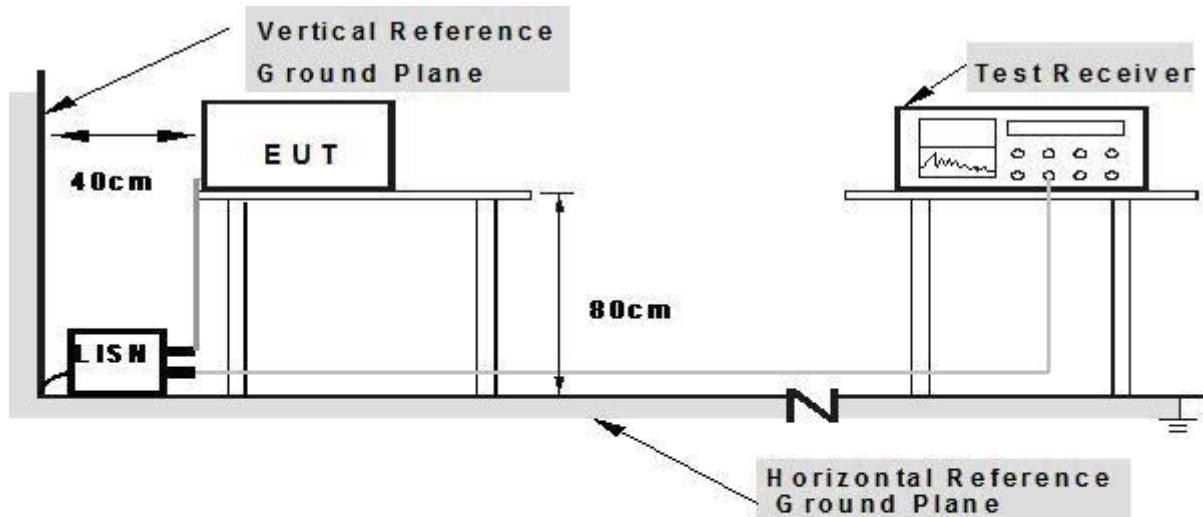
The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

### 3.1.1 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

### 3.1.2 TEST SETUP



**Note: 1. Support units were connected to second LISN.**

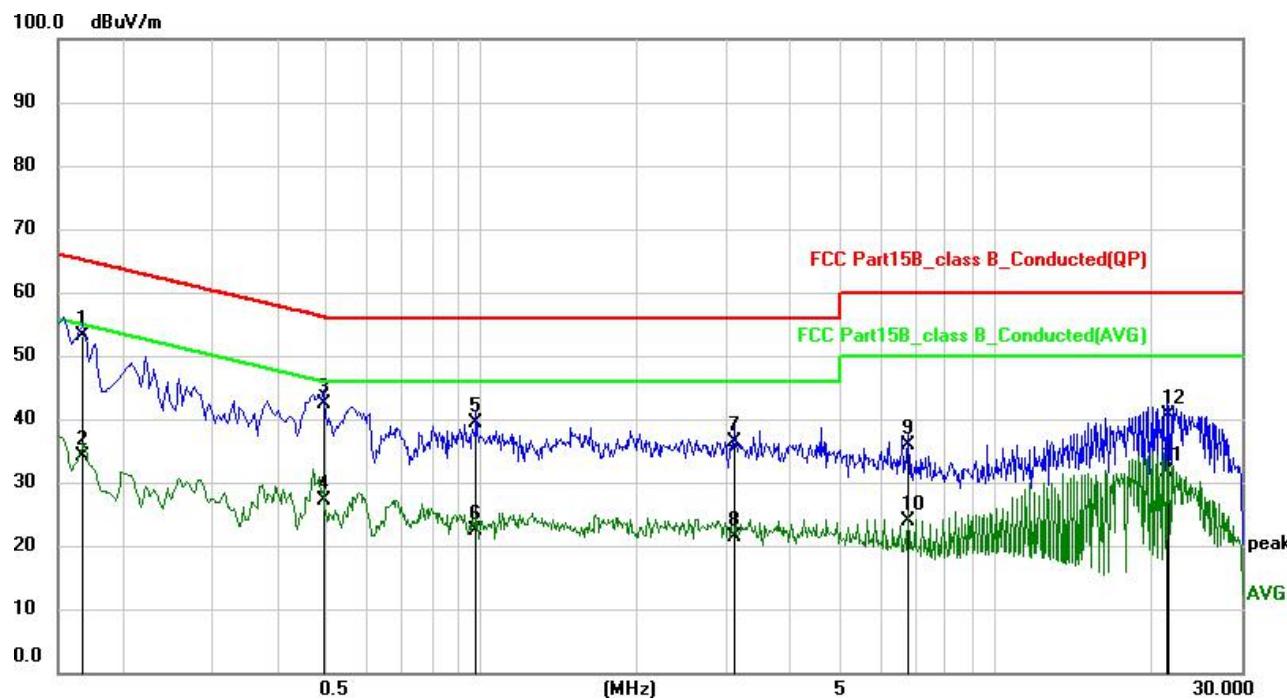
**2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes**

### 3.1.3 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.

## 3.1.4 TEST RESULTS

EUT :	Wireless Charger	Model Name. :	KS-Q05W-1
Temperature:	25.3 °C	Relative Humidity:	53.6%
Pressure:	1010hPa	Test Date:	2020-07-25
Test Mode:	Mode 1	Phase :	L
Test Voltage:	Output: DC 5V, Input: Adapter AC 120V 50/60Hz		

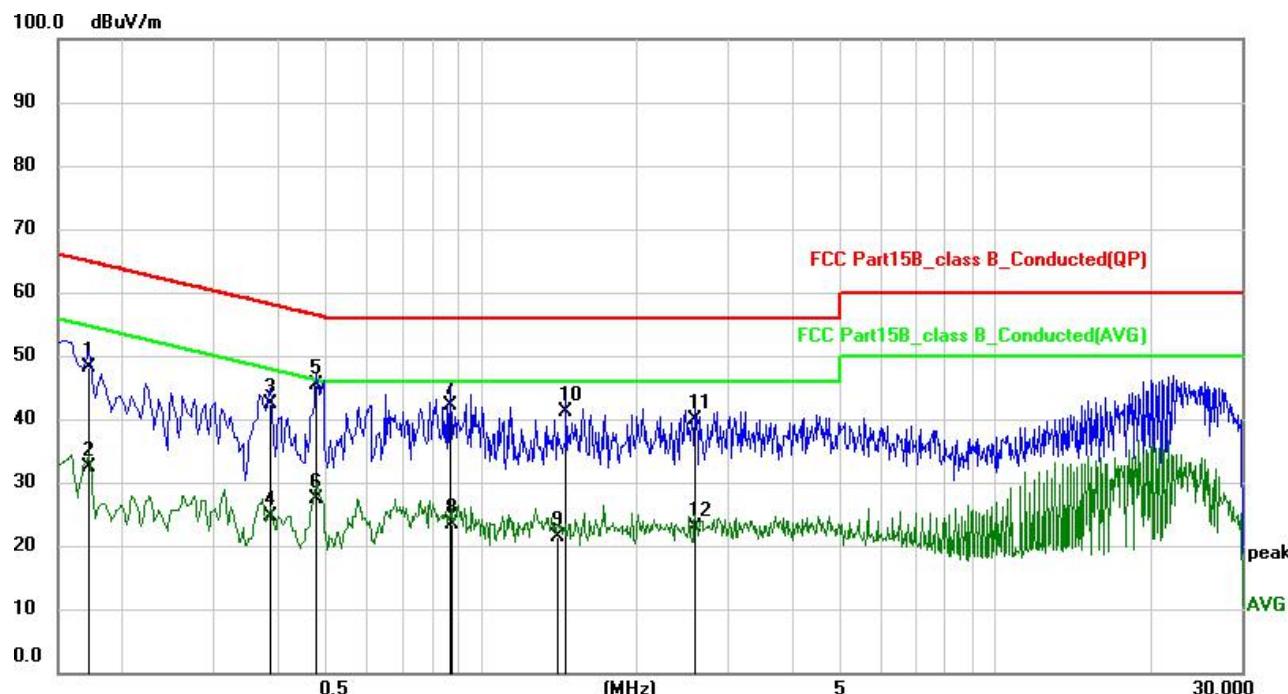


## Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
						dB	Detector	Comment
1 *	0.1680	43.19	9.93	53.12	65.06	-11.94	QP	
2	0.1680	24.18	9.93	34.11	55.06	-20.95	AVG	
3	0.4920	32.39	9.93	42.32	56.13	-13.81	QP	
4	0.4920	17.30	9.93	27.23	46.13	-18.90	AVG	
5	0.9780	29.48	9.97	39.45	56.00	-16.55	QP	
6	0.9780	12.35	9.97	22.32	46.00	-23.68	AVG	
7	3.1065	26.34	10.11	36.45	56.00	-19.55	QP	
8	3.1199	11.34	10.11	21.45	46.00	-24.55	AVG	
9	6.7470	25.29	10.49	35.78	60.00	-24.22	QP	
10	6.7470	13.40	10.49	23.89	50.00	-26.11	AVG	
11	21.3855	18.60	13.05	31.65	50.00	-18.35	AVG	
12	21.6150	27.61	13.04	40.65	60.00	-19.35	QP	

EUT :	Wireless Charger	Model Name. :	KS-Q05W-1
Temperature:	23 °C	Relative Humidity:	52%
Pressure:	1010hPa	Test Date:	2020-07-17
Test Mode:	Mode 1	Phase :	N
Test Voltage:	Output: DC 5V, Input: Adapter AC 120V 50/60Hz		



#### Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		Comment
							MHz	dBuV/m	dB
1		0.1725	38.19	9.93	48.12	64.84	-16.72	QP	
2		0.1725	22.52	9.93	32.45	54.84	-22.39	AVG	
3		0.3885	32.39	9.93	42.32	58.10	-15.78	QP	
4		0.3885	14.73	9.93	24.66	48.10	-23.44	AVG	
5	*	0.4785	35.38	9.94	45.32	56.37	-11.05	QP	
6		0.4785	17.51	9.94	27.45	46.37	-18.92	AVG	
7		0.8700	32.25	9.97	42.22	56.00	-13.78	QP	
8		0.8790	13.36	9.97	23.33	46.00	-22.67	AVG	
9		1.4100	11.45	10.00	21.45	46.00	-24.55	AVG	
10		1.4640	31.23	10.00	41.23	56.00	-14.77	QP	
11		2.6070	29.81	10.08	39.89	56.00	-16.11	QP	
12		2.6070	12.70	10.08	22.78	46.00	-23.22	AVG	

**RESULT: PASS**

### 3.2 RADIATED EMISSION MEASUREMENT

#### 3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

#### 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
10.495-0.505	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)
13.36-13.41			

Notes:

- (1) Measurement was performed at an antenna to the closed point of EUT distance of meters.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).
- (3) Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of 15.205, and the emissions located in restricted bands also comply with 15.209 limit.
- (4) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector

### 3.2.2 TEST PROCEDURE

#### **Test Arrangement for Radiated Emissions up to 1 GHz**

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited test facility. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna(Blow 30M, use loop antenna), and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

Note: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for quasi-peak detection (QP) at frequency below 1GHz.

#### **Test Arrangement for Radiated Emissions above 1 GHz.**

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna can be varied from one meter to four meters, the height of adjustment depends on the EUT height and the antenna 3dB beamwidth both, to detect the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

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  $\geq$  3\*RBW

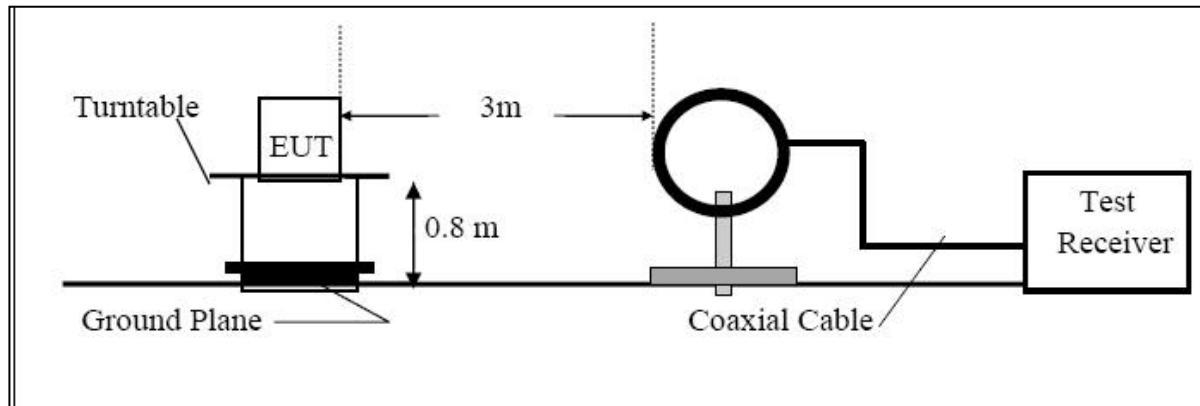
Sweep = auto

Detector function = QP

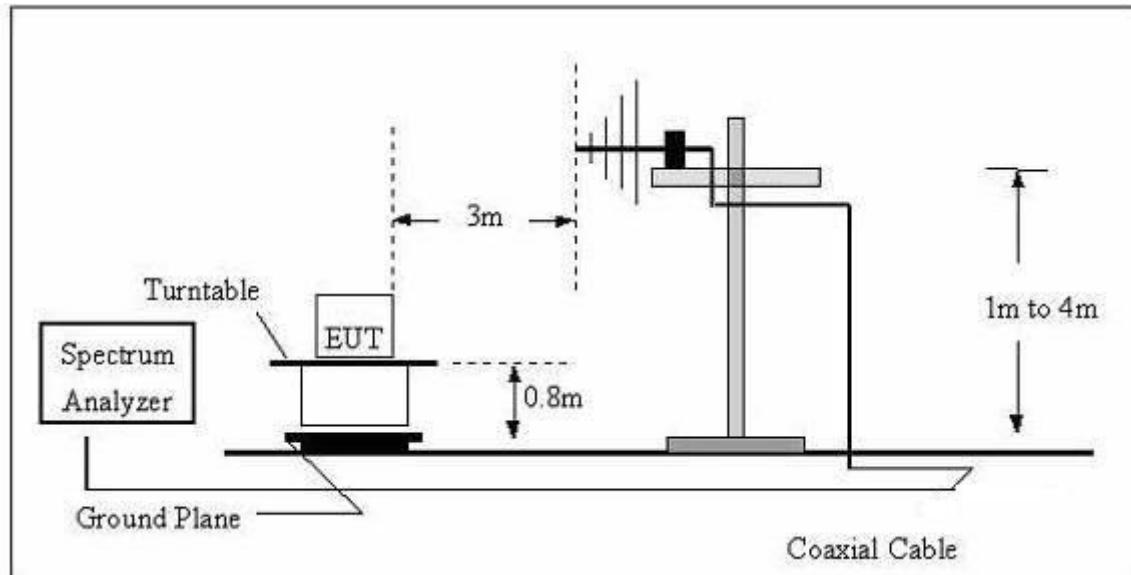
Trace = max hold

### 3.2.3 TEST SETUP

For Radiated Emission Test Set-Up, Frequency Below 30MHz



For Radiated Emission 30~1000MHz



## 3.2.4 TEST RESULTS

## TEST RESULTS (9KHz~30MHz)

EUT :	Wireless Charger	Model Name. :	KS-Q05W-1
Temperature:	23 .3°C	Relative Humidity:	53.9%
Pressure:	1010 hPa	Test Date :	2020-07-25
Test Mode :	Mode 1 (Full load)	Polarization :	X
Test Power :	Output: DC 5V, Input: Adapter AC 120V 50/60Hz		

Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.

Frequency (MHz)	Ant.Pol.	Reading Level	Factor	Emission Level	Limits	Margin	Remark
		(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
0.0995	X	37.719	10.268	47.987	107.645	-59.66	QP
0.1234	X	80.962	10.642	91.604	105.778	-14.17	PK(fundamental frequency)
0.4123	X	35.127	10.649	45.775	75.301	-29.53	PK
2.0513	X	28.567	11.526	40.092	61.363	-21.27	QP
3.2815	X	24.170	12.936	37.106	69.542	-32.44	QP
9.5715	X	20.363	13.353	33.716	69.542	-35.83	QP

## Note:

Below 30MHz, Pre-test the X, Y, Z axis to find X axis is worst case, so only record X axis test data.

X: Field strength which this device generates since the position of the charging coil and loop antenna differ by 0 degrees.

Y: Field strength which this device generates since the position of the charging coil and loop antenna differ by 90 degrees.

Z: Field strength which this device generates since the position of the charging coil and loop antenna differ by 180 degrees.

EUT :	Wireless Charger	Model Name. :	KS-Q05W-1
Temperature:	23.3 °C	Relative Humidity:	53.8%
Pressure:	1010 hPa	Test Date :	2020-07-25
Test Mode :	Mode 2 (half load)	Polarization :	X
Test Power :	Output: DC 5V, Input: Adapter AC 120V 50/60Hz		

## Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.

Frequency (MHz)	Ant.Pol.	Reading Level	Factor	Emission Level	Limits	Margin	Remark
		(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
0.050	X	37.299	9.788	47.086	113.684	-66.60	PK
0.111	X	55.229	10.525	65.754	106.698	-40.94	PK(fundamental frequency)
0.826	X	36.330	11.266	47.596	69.259	-21.66	QP
4.468	X	29.444	12.001	41.445	54.602	-13.16	QP
7.662	X	31.456	12.593	44.049	69.542	-25.49	QP
20.097	X	22.822	15.160	37.981	69.542	-31.56	QP

## Note:

Below 30MHz, Pre-test the X, Y, Z axis to find X axis is worst case, so only record X axis test data.

X: Field strength which this device generates since the position of the charging coil and loop antenna differ by 0 degrees.

Y: Field strength which this device generates since the position of the charging coil and loop antenna differ by 90 degrees.

Z: Field strength which this device generates since the position of the charging coil and loop antenna differ by 180 degrees.

EUT :	Wireless Charger	Model Name. :	KS-Q05W-1
Temperature:	23.3 °C	Relative Humidity:	53.8%
Pressure:	1010 hPa	Test Date :	2020-07-25
Test Mode :	Mode 3 (Null load)	Polarization :	X
Test Power :	Output: DC 5V , Input: Adapter AC 120V 50/60Hz		

Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.

Frequency (MHz)	Ant.Pol.	Reading Level	Factor	Emission Level	Limits	Margin	Remark
		(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
0.073	X	34.066	9.602	43.668	110.2978	-66.63	QP
0.204	X	70.049	10.123	80.171	101.4116	-21.24	PK(fundamental frequency)
1.026	X	33.146	10.894	44.040	67.385	-23.34	QP
2.051	X	25.525	11.918	37.443	61.363	-23.92	QP
5.123	X	27.645	12.437	40.082	69.542	-29.46	QP
10.246	X	24.904	12.949	37.852	69.542	-31.69	QP

Note:

Below 30MHz, Pre-test the X, Y, Z axis to find X axis is worst case, so only record X axis test data.

X: Field strength which this device generates since the position of the charging coil and loop antenna differ by 0 degrees.

Y: Field strength which this device generates since the position of the charging coil and loop antenna differ by 90 degrees.

Z: Field strength which this device generates since the position of the charging coil and loop antenna differ by 180 degrees.

## TEST RESULTS (30MHz ~1000MHz)

EUT :	Wireless Charger	Model Name. :	KS-Q05W-1
Temperature:	24.3 °C	Relative Humidity:	54.6%
Pressure:	1010 hPa	Test Date :	2020-07-25
Test Mode :	Mode1	Polarization :	Horizontal
Test Power :	Output: DC 5V, Input: Adapter AC 120V 50/60Hz		



Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over		Antenna	Table	
			Level	Factor	ment		dB/m	Detector			
		MHz	dB <sub>uV</sub>	dB	dB <sub>uV/m</sub>				cm	degree	Comment
1		37.0411	51.15	-24.01	27.14	40.00	-12.86	QP			
2		45.3158	51.16	-26.82	24.34	40.00	-15.66	QP			
3 *		81.3542	63.23	-29.58	33.65	40.00	-6.35	QP			
4		137.2998	55.48	-25.37	30.11	43.50	-13.39	QP			
5		163.6115	58.09	-26.64	31.45	43.50	-12.05	QP			
6		236.6447	58.44	-25.46	32.98	46.00	-13.02	QP			

EUT :	Wireless Charger	Model Name. :	KS-Q05W-1
Temperature:	25.2 °C	Relative Humidity:	53%
Pressure:	1010 hPa	Test Date :	2020-07-25
Test Mode :	Mode 1	Polarization :	Vertical
Test Power :	Output: DC 5V ,Input: Adapter AC 120V 50/60Hz		



## Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	Comment
							dB	dB/m			
1		36.8791	57.78	-24.00	33.78	40.00	-6.22	QP			
2		44.5868	57.47	-26.49	30.98	40.00	-9.02	QP			
3	!	70.3365	66.25	-32.13	34.12	40.00	-5.88	QP			
4	*	80.8566	63.63	-28.98	34.65	40.00	-5.35	QP			
5	!	164.3301	63.94	-25.82	38.12	43.50	-5.38	QP			
6		236.8523	57.51	-25.29	32.22	46.00	-13.78	QP			

**RESULT: PASS**

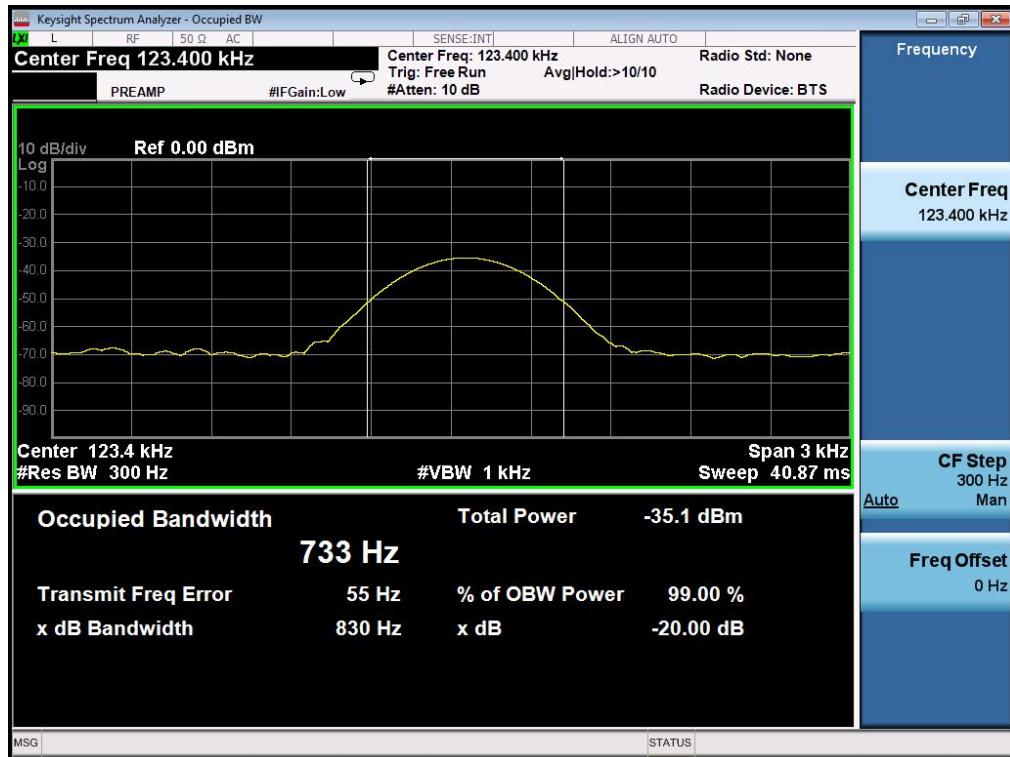
## 4. BANDWIDTH

#### 4.1. MEASUREMENT PROCEDURE

1. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
  2. Set the EUT Work on operation frequency.
  3. Set Span = approximately 2 to 5 times the 20 dB bandwidth, centered on a channel  
The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW; Sweep = auto; Detector function = peak
  4. Set SPA Trace 1 Max hold, then View.

## 4.2. MEASUREMENT RESULTS

Frequency (KHz)	Test Data (Hz) 99% Bandwidth	Test Data (Hz) -20dB Bandwidth	Criteria
123.4	733	830	PASS



Note: All channels have been tested and the worst mode data is recorded in the report

**5. ANTENNA APPLICATION****5.1. Antenna Requirement**

15.203 requirement: For intentional device, according to 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.

**5.2. Result**

The EUT antenna is permanent attached antenna. It comply with the standard requirement.

-----END REPORT-----