

# **TEST REPORT**

**Report No.:** 8236EU010313W1

**Applicant:** QUEST USA CORP

Address: 495 Flatbush Ave, Brooklyn, NY 11225, USA

Product Name: 15W 3-IN-1 WIRELESS MAGNETIC CHARGER

Model No.: IJ10375-FB (refer to clause 2.4)

Trademark: IJOY

FCC ID: 2AJQ7TRAVELCHARGER

Test Standard(s): 47 CFR Part 15 Subpart C

Date of Receipt: Dec. 03, 2024

**Test Date:** Dec. 03, 2024 – Jan. 07, 2025

Date of Issue: Jan. 13, 2025

**ISSUED BY:** 

Prepared by:

SHENZHEN EU TESTING LABORATORY LIMIT

Reviewed and Approved by:

Mikey Zhu/ Engineer

Sally Zhang/ Manager



Page 2 of 27 Report No.: 8236EU010313W1

## **Revision Record**

Report Version	Issued Date	Description	Status
V0	Jan. 13, 2025	Original	Valid



### Page 3 of 27 Report No.: 8236EU010313W1

## **Table of Contents**

1	COV	ER PAGE	ER PAGE1		
2	GENI	ERAL INFORMATION	4		
	2.1 2.2 2.3 2.4 2.5	APPLICANT INFORMATION	4		
3	TEST	SUMMARY			
	3.1 3.2 3.3	TEST STANDARD TEST VERDICT TEST LABORATORY	<del>(</del> <del>(</del>		
4	TEST	CONFIGURATION			
	4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8	TEST EQUIPMENT TEST EQUIPMENT DESCRIPTION OF SUPPORT UNIT TEST MODE DESCRIPTION OF CALCULATION MEASUREMENT UNCERTAINTY DEVIATION FROM STANDARDS ABNORMALITIES FROM STANDARD CONDITION	8 8 8		
5	TEST	TITEMS	10		
	5.1	ANTENNA REQUIREMENT	10 10		
	5.2	CONDUCTED EMISSION AT AC POWER LINE			
		5.2.1 Test Requirement	1′ 1′		
	5.3	EMISSIONS BANDWIDTH	14		
		5.3.1 Test Requirement	14 15		
	5.4	FIELD STRENGTH OF FUNDAMENTAL EMISSIONS AND RADIATED EMISSION			
		5.4.1 Test Requirement	18 19		
		TEST SETUP PHOTOS			
		EXTERNAL PHOTOS	26		



Page 4 of 27 Report No.: 8236EU010313W1

## 2 General Information

## 2.1 Applicant Information

Applicant	QUEST USA CORP
Address	495 Flatbush Ave, Brooklyn, NY 11225, USA

#### 2.2 Manufacturer Information

Manufacturer	QUEST USA CORP China Office
Address	601 Bld1, Cloud Park, 233 Bulong Road, Longgang, Shenzhen, China 518112

## 2.3 Factory Information

Factory	QUEST USA CORP China Office
Address	601 Bld1, Cloud Park, 233 Bulong Road, Longgang, Shenzhen, China 518112

## 2.4 General Description of E.U.T.

Product Name	45W 2 IN 4 MIDELESS MACNETIC CHARGED		
	15W 3-IN-1 WIRELESS MAGNETIC CHARGER		
Model No. Under Test	IJ10375-FB		
List Model No.	IJ10374-FB, IJ10375-FB, IJ10376-FB, IJAST419-FB		
Description of Model	All models are same with electrical parameters and internal circuit structure, but		
differentiation	only differ in appearance color and model name.		
	(this information provided by the customer)		
	Smart Phone:		
	Input: 5V==-2A, 9V==-2A		
	Output: 15W(Max)		
Poting(a)	Earphone:		
Rating(s)	Input: 5V==-1A Output: 3W(Max)		
	Apple Watch:		
	Input: 5V==1A		
	Output: 2.5W(Max)		
Product Type	☐ Portable		
	☐ Fix Location		
Test Sample No.	-1/2(Normal Sample), -2/2(Engineering Sample)		
Hardware Version	N/A		
Software Version	N/A		
	1) The above information are declared by the applicant, EU-LAB is not responsible		
Remark	for the information accuracy provided by the applicant.		
Noman	2) For a more detailed features description, please refer to the manufacturer's		
	specifications or the User's Manual.		



Page 5 of 27 Report No.: 8236EU010313W1

### 2.5 Technical Information of E.U.T.

Network and Wireless Connectivity	Wireless Power Transfer
--------------------------------------	-------------------------

The requirement for the following technical information of the EUT was tested in this report:

Technology	WPT
Operating Frequency	110.1-205KHz
Modulation Type	FSK
Antenna Type	Inductive Loop Coil Antenna
Antenna Gain(Peak)	0 dBi
Remark	The above information are declared by the applicant, EU-LAB is not responsible for the information accuracy provided by the applicant.





Page 6 of 27 Report No.: 8236EU010313W1

## 3 Test Summary

#### 3.1 Test Standard

The tests were performed according to following standards:

No.	·	Identity	Document Title
1	47 CFR Part	t 15, Subpart C	Intentional radiators of radio frequency equipment
2	ANSI C63.10	0-2020	American National Standard for Testing Unlicensed Wireless Devices

#### Remark:

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product maybe which result in lowering the emission/immunity should be checked to ensure compliance has been maintained.

#### 3.2 Test Verdict

No.	Description	FCC Part No.	Verdict	Remark
1	Antenna Requirement	15.203	Pass	
2	Conducted Emission at AC Power Line	15.207	Pass	
3	Emissions Bandwidth	15.215	Pass	
4	Radiated Emissions	15.209 /15.215(b)	Pass	

### 3.3 Test Laboratory

Test Laboratory	Shenzhen EU Testing Laboratory Limited		
Address	101, Building B1, Fuqiao Fourth Area, Qiaotou Community, Fuhai Subdistrict, Baoan District, Shenzhen, Guangdong, China		
Designation Number	CN1368		
Test Firm Registration Number	952583		



Page 7 of 27 Report No.: 8236EU010313W1

# 4 Test Configuration

#### 4.1 Test Environment

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

Relative Humidity	30% to 60%		
Atmospheric Pressure	86 kPa to 106 kPa		
Temperature	NT (Normal Temperature)	+15°C to +35°C	
Working Voltage of the EUT	NV (Normal Voltage)	120 VAC, 60Hz	

## 4.2 Test Equipment

Conducted Emission at AC power line							
Equipment	Manufacturer	Model No	Serial No	Cal Date	Cal Due Date		
L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	EE-004	2024/01/09	2025/01/08		
EMI Test Receiver	Rohde & Schwarz	ESCI	EE-005	2024/01/09	2025/01/08		
Test Software	Farad	EZ-EMC	EE-014	N.C.R	N.C.R		

Radiated Emission and RF Test						
Equipment	Manufacturer	Model No	Serial No	Cal Date	Cal Due Date	
EMI Test Receiver	ROHDE & SCHWARZ	ESPI	EE-006	2024/01/09	2025/01/08	
Bilog Broadband Antenna	SCHWARZBECK	VULB 9163	EE-007	2023/01/14	2026/01/13	
Double Ridged Horn Antenna	A-INFOMW	LB-10180-NF	EE-008	2023/01/12	2026/01/11	
Pre-amplifier	Agilent	8447D	EE-009	2024/01/09	2025/01/08	
Pre-amplifier	Agilent	8449B	EE-010	2024/01/09	2025/01/08	
MXA Signal Analyzer	Agilent	N9020A	EE-011	2024/01/09	2025/01/08	
MXG RF Vector Signal Generator	Agilent	N5182A	EE-012	2024/01/09	2025/01/08	
Test Software	Farad	EZ-EMC	EE-015	N.C.R	N.C.R	
MIMO Power Measurement Module	TSTPASS	TSPS 2023R	EE-016	2024/01/09	2025/01/08	
RF Test Software	TSTPASS	TS32893 V2.0	EE-017	N.C.R	N.C.R	
Wideband Radio Communication Tester	ROHDE & SCHWARZ	CMW500	EE-402	2024/02/15	2025/02/14	
Loop Antenna	TESEQ	HLA6121	EE-403	2024/02/15	2025/02/14	
MXG RF Analog Signal Generator	Agilent	N5181A	EE-406	2024/02/15	2025/02/14	
Constant Temperature Humidity Chamber	Guangxin	GXP-401	ES-002	2024/07/30	2025/07/29	



Page 8 of 27 Report No.: 8236EU010313W1

## 4.3 Description of Support Unit

No.	Title	Manufacturer	Model No.	Serial No.
1	Adapter	MI	A232-050200U-CN2	EMC-PJ-004
2	Wireless Charging Load YBZ		ID-ZWX	EMC-PJ-050

#### 4.4 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was prescanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned bellow was evaluated respectively.

	,	
No.	Description	Remark
TM1	Wireless Output (2.5W for Apple Watch) + (3W for Earphone) + (15W for Phone) + Empty Load	
TM2	Wireless Output (2.5W for Apple Watch) + (3W for Earphone) + (15W for Phone) + Half Load	
TM3	Wireless Output (2.5W for Apple Watch) + (3W for Earphone) + (15W for Phone) + Full Load	Record
TM4	Standby	

#### Note:

### 4.5 Description of Calculation

#### 4.5.1. Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

#### FS (dBuV/m) = RA (dBuV) + AF (dB/m) + CL (dB) - AG (dB)

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

<sup>1.</sup> All the conditions have been tested. It is found that TM3 is the worst mode, and the data in the report only reflects the worst mode.



Page 9 of 27 Report No.: 8236EU010313W1

#### 4.5.2. Disturbance Calculation

The AC mains conducted disturbance is calculated by adding the 10dB Pulse Limiter and Cable Factor and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

CD (dBuV) = RA (dBuV) + PL (dB) + CL (dB)

Where CD = Conducted Disturbance	CL = Cable Attenuation Factor (Cable Loss)			
RA = Reading Amplitude	PL = 10 dB Pulse Limiter Factor			

## 4.6 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level

using a coverage factor of k=2.

Test Item	Measurement Uncertainty				
Conducted Emission	2.64 dB				
Occupied Channel Bandwidth	2.8 %				
RF output power, conducted	0.68 dB				
Power Spectral Density, conducted	1.37 dB				
Unwanted Emissions, conducted	1.84 dB				
Radiated Emission (9kHz- 30MHz)	Ur = 2.50 dB				
Radiated Emission	Ur = 2.70 dB (Horizontal)				
(30MHz- 1GHz)	Ur = 2.70 dB (Vertical)				
Radiated Emission	Ur = 3.50 dB (Horizontal)				
(1GHz- 18GHz)	Ur = 3.50 dB (Vertical)				
Radiated Emission	Ur = 5.15 dB (Horizontal)				
(18GHz- 40GHz)	Ur = 5.24 dB (Vertical)				
Temperature	0.8°C				
Humidity	4%				

#### 4.7 Deviation from Standards

None.

### 4.8 Abnormalities from Standard Condition

None.



Page 10 of 27 Report No.: 8236EU010313W1

#### 5 Test Items

### 5.1 Antenna requirement

#### 5.1.1 Test Requirement

**Test Requirement** 

According to FCC §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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

If directional gain of transmitting antennas is greater than 6 dBi, the power shall be

If directional gain of transmitting antennas is greater than 6 dBi, the power shall be reduced by the same level in dB comparing to gain minus 6 dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

#### 5.1.2 Antenna Anti-Replacement Construction

The Antenna Anti-Replacement as following method:

Protected Method	Description
The antenna is embedded in the product.	The EUT has a permanently and irreplaceable inductive loop antenna.

#### 5.1.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi.

Tel: (86)-755-2357-9714 Email: Service@eu-test.com



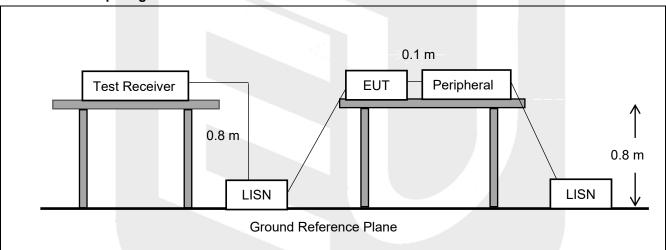
Page 11 of 27 Report No.: 8236EU010313W1

#### 5.2 Conducted Emission at AC Power Line

#### 5.2.1 Test Requirement

Test Requirement:	Except as shown in paragraphs (b)and (c)of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN).						
	Frequency of emission (MHz)						
		Quasi-peak	Average				
+ ·	0.15-0.5	66 to 56*	56 to 46*				
Test Limit	0.5-5	56	46				
	5-30 60 50						
	*Decreases with the logarithm of the frequency.						
Test Method	Refer to ANSI C63.10-2020 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices.						

#### 5.2.2 Test Setup Diagram



#### 5.2.3 Test Procedure

The EUT is put on the plane 0.8 m high above the ground by insulating support and connected to the AC mains through Line Impedance Stability Network (L.I.S.N). This provided a 50ohm coupling impedance for the tested equipment. Both sides of AC line are investigated to find out the maximum conducted emission according to the test standard regulations during conducted emission measurement.

The bandwidth of the field strength meter (R&S Test Receiver ESCI) is set at 9kHz in 150kHz~30MHz. The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

#### 5.2.4 Test Data

PASS.

Only the worst case data was showed in the report, please to see the following pages.

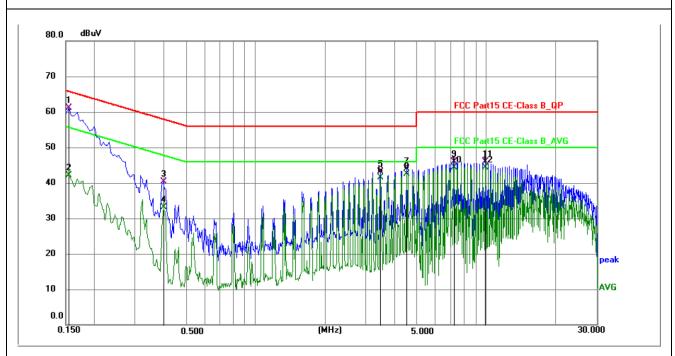


Page 12 of 27 Report No.: 8236EU010313W1

#### **Conducted Emission Test Data**

Test Site: Shielded Room #1

Test Mode: TM3
Comments: Live Line



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1545	51.13	9.96	61.09	65.75	-4.66	QP	Р	
2	0.1545	32.07	9.96	42.03	55.75	-13.72	AVG	Р	
3	0.3975	30.19	10.02	40.21	57.91	-17.70	QP	Р	
4	0.3975	23.16	10.02	33.18	47.91	-14.73	AVG	Р	
5	3.4575	33.04	10.05	43.09	56.00	-12.91	QP	Р	
6	3.4575	31.50	10.05	41.55	46.00	-4.45	AVG	Р	
7	4.5195	33.86	10.04	43.90	56.00	-12.10	QP	Р	
8 *	4.5195	32.44	10.04	42.48	46.00	-3.52	AVG	Р	
9	7.2420	35.97	10.00	45.97	60.00	-14.03	QP	Р	
10	7.2420	34.28	10.00	44.28	50.00	-5.72	AVG	Р	
11	9.8700	35.85	9.96	45.81	60.00	-14.19	QP	Р	
12	9.8700	34.28	9.96	44.24	50.00	-5.76	AVG	Р	

Note: Level = Reading + Factor Margin = Level - Limit



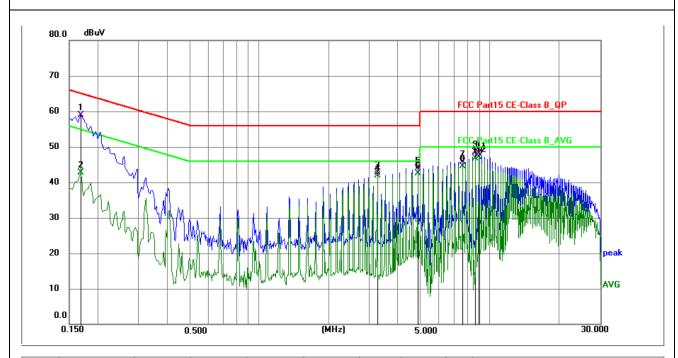
Page 13 of 27 Report No.: 8236EU010313W1

#### **Conducted Emission Test Data**

Test Site: Shielded Room #1

Test Mode: TM7

Comments: Neutral Line



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1680	49.02	9.98	59.00	65.06	-6.06	QP	Р	
2	0.1680	32.79	9.98	42.77	55.06	-12.29	AVG	Р	
3	3.2460	32.68	10.04	42.72	56.00	-13.28	QP	Р	
4	3.2460	31.92	10.04	41.96	46.00	-4.04	AVG	Р	
5	4.8705	33.84	10.05	43.89	56.00	-12.11	QP	Р	
6	4.8705	32.50	10.05	42.55	46.00	-3.45	AVG	Р	
7	7.5750	35.64	10.03	45.67	60.00	-14.33	QP	Р	
8	7.5750	34.47	10.03	44.50	50.00	-5.50	AVG	Р	
9	8.6595	38.43	10.02	48.45	60.00	-11.55	QP	Р	
10	8.6595	36.72	10.02	46.74	50.00	-3.26	AVG	Р	
11	8.9295	38.03	10.02	48.05	60.00	-11.95	QP	Ը	
12 *	8.9295	37.17	10.02	47.19	50.00	-2.81	AVG	Р	

Note: Level = Reading + Factor Margin = Level - Limit



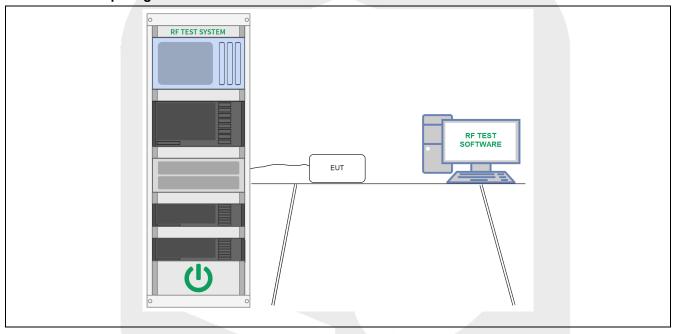
Page 14 of 27 Report No.: 8236EU010313W1

## 5.3 Emissions Bandwidth

### 5.3.1 Test Requirement

Test Requirement	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.
Test Method	ANSI C63.10-2020, section 6.9.2 Occupied bandwidth—relative measurement procedure

### 5.3.2 Test Setup Diagram





Page 15 of 27 Report No.: 8236EU010313W1

#### 5.3.3 Test Procedure

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.
- b) 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, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.
- d) Steps a) through c) might require iteration to adjust within the specified tolerances.
- e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target "-xx dB down" requirement; that is, if the requirement calls for measuring the -20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.
- f) Set detection mode to peak and trace mode to maxhold.
- g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
- h) Determine the "-xx dB down amplitude" using [(reference value) xx]. Alternatively, this calculation may be made by using the marker-delta function of the instrument.
- i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).
- j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "-xx dB down amplitude" determined in step h). If a marker is below this "-xx dB down amplitude" value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the "-xx dB down amplitude" determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.
- k)The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

#### 5.3.4 Test Data

#### PASS.

Please refer to the following pages.

Test Mode	Frequency (KHz)	20dB bandwidth (Hz)	99% bandwidth (Hz)	Result	
TM3	121.3	246	212	Pass	

TRF No.: FCC Part 15 Subpart C\_WPT (A02)



Page 16 of 27 Report No.: 8236EU010313W1

#### TM3





Page 17 of 27 Report No.: 8236EU010313W1

## 5.4 Field Strength of Fundamental Emissions and Radiated Emission

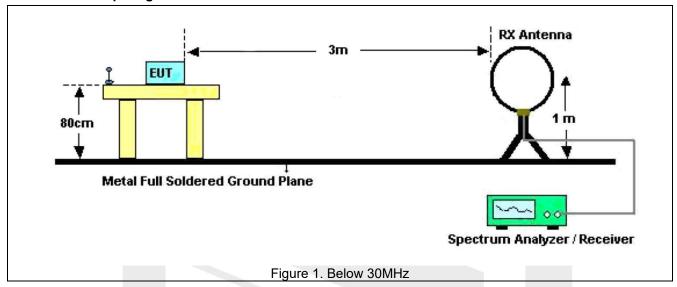
## 5.4.1 Test Requirement

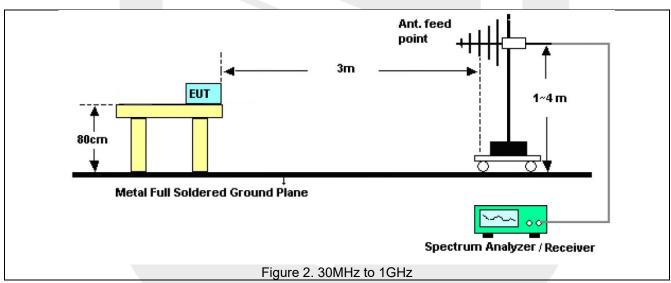
Test Requirement	FCC §15.215; FCC §15.209	ð.								
restricquirement	FCC §15.215(b):									
	In most unwanted emissions outside of the frequency bands shown in these alternative provisions must be attenuated to the emission limits shown in									
	•									
	§15.209.In no case shall the level of the unwanted emissions from an intentional									
	radiator operating under these additional provisions exceed the field strength of									
	fundamental emission.									
	500 845 000									
	FCC §15.209:	5.000 (-)	and the first state of							
	According to FCC section 15.209 (a), except as provided elsewhere in this subpar									
		itional radiator shall not exceed t	he field strength levels							
		specified in the following table:								
	Frequency (MHz)	Field strength	Measurement							
		(microvolts/meter)	distance							
	0.000.0.400	0400/5/141=)	(meters)							
	0.009-0.490	2400/F(kHz)	300							
	0.490-1.705 1.705-30.0	24000/F(kHz) 30	30							
	30-88	100 **	3							
	88-216	150 **	3							
	216-960	200 **	3							
	Above 960	500	3							
Test Limit	** Except as provided in paragraph (g), fundamental emissions from intentional									
	radiators operating under this section shall not be located in the frequency bands									
	54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within									
	these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.  NOTE:									
	<ol> <li>Field Strength (dBμV/m) = 20*log[Field Strength (μV/m)].</li> </ol>									
	2. In the emission tables above, the tighter limit applies at the band edges.									
		performed at a distance								
	closer than that specified in the regulations, when performing measurements									
	•	han specified, the results shall								
	specified distance by either making measurements at a minimum of two									
	distances on at least one radial to determine the proper extrapolation									
	by using the square of an inverse linear distance extrapolation factor (40)									
	dB/decade). For example, at the frequency 9 kHz, limit @3m = 20*log (2400/f)									
	+ 40log (dlimit/dmeasure) where limit = 300m, dmeasure=3m. limit @3m =									
	20*log (2400/9) + 40log (300/3) = 128.52 (dBµV/m).									
	employing a CISPR quasi-peak detector except for the frequency bands 9									
	90kHz,110-490 kHz and above 1000 MHZ Radiated emission limits in these three bands are based on measurements em-ploying an average detector.									
	ANSI C63.10-2020 section	. , ,	ii average uelecior.							
Test Method		0.4, 0.3								
	Radiated emissions tests									



Page 18 of 27 Report No.: 8236EU010313W1

#### 5.4.2 Test Setup Diagram







Page 19 of 27 Report No.: 8236EU010313W1

#### 5.4.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

For 9kHz to 150kHz, Set the spectrum analyzer as:

RBW = 200Hz, VBW =1kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 150kHz to 30MHz, Set the spectrum analyzer as:

RBW = 9KHz, VBW =30kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 30MHz to 1000MHz, Set the spectrum analyzer as:

RBW = 100kHz, VBW =300kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For above 1GHz, Set the spectrum analyzer as:

RBW =1MHz, VBW =1MHz, Detector= Peak, Trace mode= Max hold, Sweep- auto couple.

RBW =1MHz, VBW =10Hz, Detector= Average, Trace mode= Max hold, Sweep- auto couple.

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

#### 5.4.4 Test Data

#### PASS.

Please refer to the following pages.

The frequency range from 9KHz to 1000MHz is checked.

Only the worst case data was showed in the report, please to see the following pages.

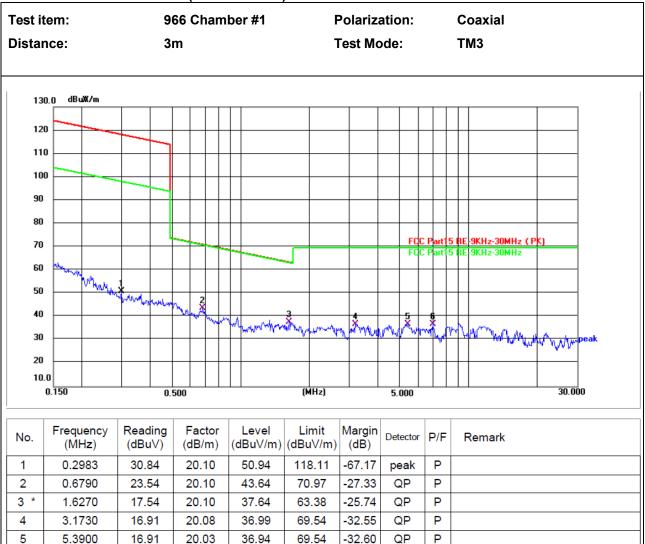
6

6.9508

16.81

Page 20 of 27 Report No.: 8236EU010313W1

### Radiated Emission Test Data (9kHz -150kHz)



Note: Level = Reading + Factor Margin =Level - Limit

36.72

69.54

-32.82

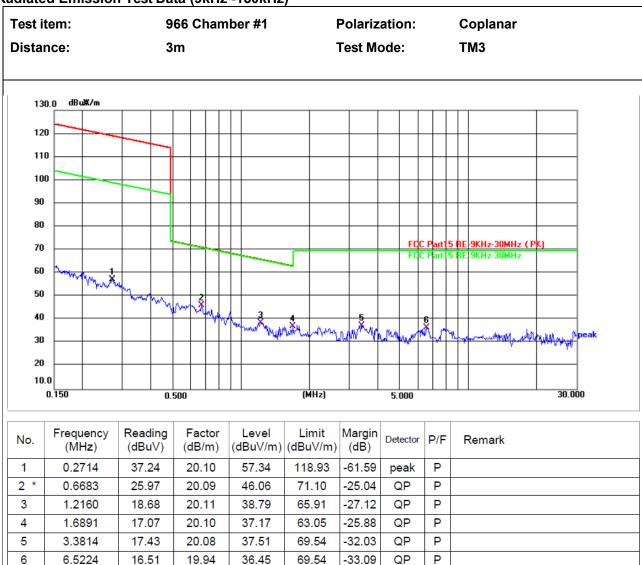
QP

Ρ

19.91

Page 21 of 27 Report No.: 8236EU010313W1

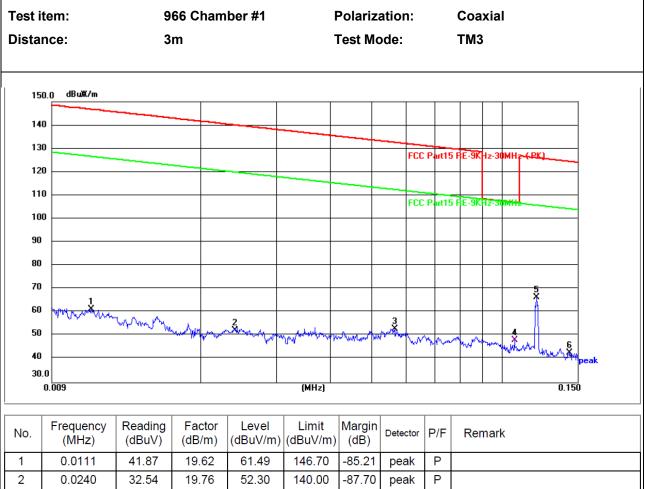
#### Radiated Emission Test Data (9kHz -150kHz)



Note: Level = Reading + Factor Margin =Level - Limit

Page 22 of 27 Report No.: 8236EU010313W1

## Radiated Emission Test Data (150kHz - 30MHz)

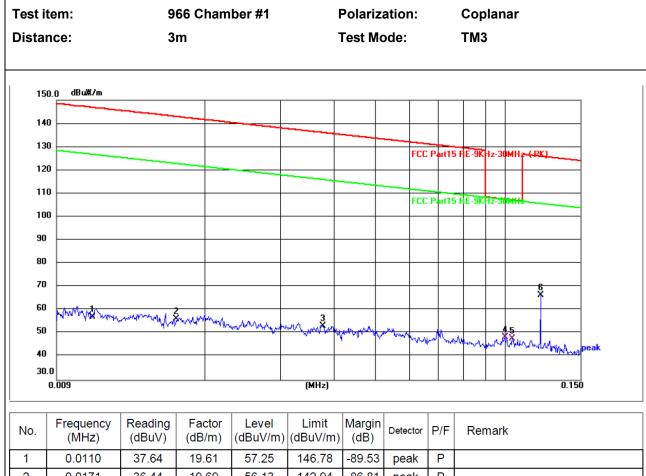


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	0.0111	41.87	19.62	61.49	146.70	-85.21	peak	Р	
2	0.0240	32.54	19.76	52.30	140.00	-87.70	peak	Ъ	
3	0.0563	33.04	19.93	52.97	132.59	-79.62	peak	П	
4 *	0.1070	28.19	20.03	48.22	107.02	-58.80	QP	П	
5	0.1203	46.44	20.00	66.44	126.00	-59.56	peak	Р	
6	0.1433	22.73	20.03	42.76	124.48	-81.72	peak	Р	

Note: Level = Reading + Factor Margin =Level - Limit

Page 23 of 27 Report No.: 8236EU010313W1

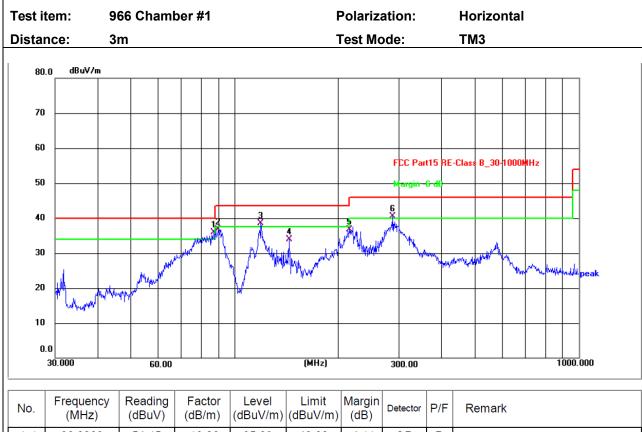
## Radiated Emission Test Data (150kHz - 30MHz)



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	0.0110	37.64	19.61	57.25	146.78	-89.53	peak	Р	
2	0.0171	36.44	19.69	56.13	142.94	-86.81	peak	П	
3	0.0376	33.28	19.87	53.15	136.10	-82.95	peak	П	
4 *	0.1000	28.43	19.99	48.42	107.61	-59.19	QP	J	
5	0.1040	27.78	20.01	47.79	107.27	-59.48	QP	J	
6	0.1210	46.32	20.00	66.32	125.95	-59.63	peak	Р	

Note: Level = Reading + Factor Margin =Level - Limit Page 24 of 27 Report No.: 8236EU010313W1

## Radiated Emission Test Data (30-1000MHz)

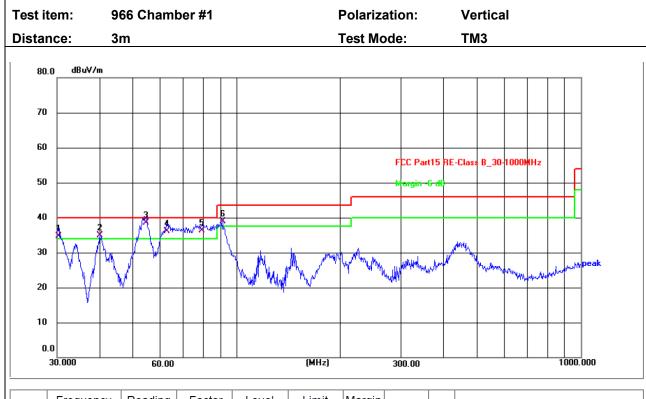


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	86.8068	54.15	-18.26	35.89	40.00	-4.11	QP	Р	
2	89.5899	54.33	-17.53	36.80	43.50	-6.70	QP	J	
3 !	119.0180	55.28	-16.86	38.42	43.50	-5.08	QP	J	
4	143.8295	52.23	-18.33	33.90	43.50	-9.60	QP	J	
5	215.2678	51.28	-14.53	36.75	43.50	-6.75	QP	J	
6 !	287.9904	52.72	-12.31	40.41	46.00	-5.59	QP	Р	

Note: Level = Reading + Factor Margin = Level - Limit

Page 25 of 27 Report No.: 8236EU010313W1

## Radiated Emission Test Data (30-1000MHz)



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1!	30.3173	51.73	-16.93	34.80	40.00	-5.20	QP	Р	
2!	39.9942	50.04	-15.20	34.84	40.00	-5.16	QP	Р	
3 *	54.4516	52.98	-14.48	38.50	40.00	-1.50	QP	J	
4!	62.6507	51.93	-15.83	36.10	40.00	-3.90	QP	J	
5 !	79.2426	55.99	-19.59	36.40	40.00	-3.60	QP	Р	
6!	90.8554	56.20	-17.29	38.91	43.50	-4.59	QP	J	

Note: Level = Reading + Factor Margin =Level - Limit



Page 26 of 27 Report No.: 8236EU010313W1

## ANNEX A TEST SETUP PHOTOS

Please refer to the document "8236EU010313W-AA.PDF"

## ANNEX B EXTERNAL PHOTOS

Please refer to the document "8236EU010313W-AB.PDF"

## **ANNEX C INTERNAL PHOTOS**

Please refer to the document "8236EU010313W-AC.PDF"



Page 27 of 27 Report No.: 8236EU010313W1

#### **STATEMENT**

- 1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
- 2. The report without China inspection body and laboratory Mandatory Approval (CMA) mark has no effect of proving to the society.
- 3. For the report with CNAS mark or A2LA mark, the items marked with "☆" are not within the accredited scope.
- 4. This report is invalid if it is altered, without the signature of the testing and approval personnel, or without the "inspection and testing dedicated stamp" or test report stamp.
- 5. The test data and results are only valid for the tested samples provided by the customer.
- 6. This report shall not be partially reproduced without the written permission of the laboratory.
- 7. Any objection shall be raised to the laboratory within 30 days after receiving the report.

--- End of Report ---

Tel: (86)-755-2357-9714 Email: Service@eu-test.com