TEST REPORT

Application No.:	KSCR2503000568AT
FCC ID:	2APYS-LPS15WPK
Applicant:	Lanto Electronic Ltd
Address of Applicant:	No 399, Baisheng Road, Jinxi Town, Kunshan City, Jiangsu , China 215234
Manufacturer:	Lanto Electronic Ltd
Address of Manufacturer:	No 399, Baisheng Road, Jinxi Town, Kunshan City, Jiangsu , China 215234
Equipment Under Test (EUT):	
EUT Name:	Wireless Charger Module
Model No.:	LPS-15WP K
Standard(s) :	47 CFR Part 15, Subpart C
Date of Receipt:	2025-03-27
Date of Test:	2025-05-09 to 2025-05-09
Date of Issue:	2025-05-13
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Revision Record			
Version	**Description**	***Date***	***Remark***
00	Original	2025-05-13	/

Authorized for issue by:				
Tested By				
		Eric Liu /Project Engineer		
Approved By				
		Terry Hou /Reviewer		

2 Test Summary

Radio Spectrum Technical Requirement				
Item	**Standard**	**Method**	**Requirement**	**Result**
Antenna Requirement	47 CFR Part 15, Subpart C	N/A	47 CFR Part 15, Subpart C 15.203	Customer Declaration

Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Conducted Emissions at Mains Terminals (150kHz-30MHz)	47 CFR Part 15, Subpart C	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass
20dB Bandwidth		ANSI C63.10 (2013) Section 6.9.2	47 CFR Part 15, Subpart C 15.215	Pass
Radiated Emissions (9kHz-30MHz)		ANSI C63.10 (2013) Section 6.4	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Emissions (30MHz-1GHz)		ANSI C63.10 (2013) Section 6.5	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass

3 Contents

4 General Information

4.1 Details of E.U.T.

Power supply:	DC 20V by adapter Model: ADL135SDC3A Input: 100-240V~ 50/60Hz Output: 20.0V, 6.75A
Test Voltage:	AC 120V/60Hz
Operation frequency:	110-148kHz
Wireless Output:	15W Max.
Modulation Type:	Load Modulation
Antenna Type:	Coil Antenna
Host:	IdeaCentre AIO 24AKP10 ThinkCentre neo 55a 24 Gen 6

Note: The differences between the two hosts are the model number and shell material.
IdeaCentre AIO 24AKP10: Plastic shell
ThinkCentre neo 55a 24 Gen 6: Plastic shell with sputtering deposition

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Load	--	--	--

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4×10^{-8}
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	5.2dB (Below 1GHz)
		5.9dB (Above 1GHz)
9	Radiated Spurious Emission Test	4.2dB (Below 30MHz)
		4.5dB (30MHz-1GHz)
		5.1dB (1GHz-18GHz)
		5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%
Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.		

4.4 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).

2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).

3. Sample source: sent by customer.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

• FCC

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

• ISED

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 2324E

• VCCI

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

5 Equipment List

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
Conducted Emission at Mains Terminals						
1	EMI Test Receive	R&S	ESCI	KS301196	08/01/2024	07/31/2025
2	LISN	R&S	ENV216	KS301197	01/15/2025	01/14/2026
3	LISN	Schwarzbeck	NNLK 8129	KS301091	01/15/2025	01/14/2026
4	Pulse Limiter	R&S	ESH3-Z2	KUS1902E001	12/05/2024	12/04/2025
5	CE test Cable	Thermax	/	CZ301102	01/14/2025	01/13/2026
6	Test Software	Farad	EZ-EMC	/	N.C.R	N.C.R
RF Radiated Test						
1	Spectrum Analyzer	R&S	FSV40	KUS1806E003	08/06/2024	08/05/2025
2	Universal Radio Communication Tester	R&S	CMW500	KSEM009-1	02/18/2025	02/17/2026
3	Signal Generator	Agilent	E8257C	KS301066	08/06/2024	08/05/2025
4	Loop Antenna（9KHz-30MHz）	COM-POWER	AL-130R	KUS1806E001	03/01/2025	02/28/2027
5	Bilog Antenna（30MHz-1GHz）	TESEQ	CBL 6112D	KUS1806E005	06/29/2023	06/28/2025
6	Horn-antenna(1-18GHz)	Schwarzbeck	BBHA9120D	KS301079	03/23/2024	03/22/2026
7	Horn Antenna(18-40GHz)	Schwarzbeck	BBHA9170	CZ301058	01/07/2024	01/06/2026
8	Amplifier(30MHz~1GHz)	TST	LNA009100G30	KSEM061	01/15/2025	01/14/2026
9	Amplifier(400MHz~8GHz)	TST	LNA004080G30	KSEM062	01/15/2025	01/14/2026
10	Amplifier(1GHz~18GHz)	TST	LNA010180G45	KSEM039	08/02/2024	08/01/2025
11	Amplifier(18~40GHz)	TST	LNA180400G40	KSEM038	08/12/2024	08/11/2025
12	RE Test Cable	REBES MICROWAVE	/	CZ301097	08/23/2024	08/22/2025
13	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-4	02/26/2025	02/25/2026
14	Software	Faratronic	EZ_EMC-v 3A1	/	NCR	NCR
15	Software	ESE	E3_V 6.111221a	/	NCR	NCR

6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

6.1.2 Conclusion

Standard Requirement:
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 antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:
The antenna is integrated on the main PCB and no consideration of replacement.
Refer to internal photos

7 Radio Spectrum Matter Test Results

7.1 20dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.215
Test Method: ANSI C63.10 (2013) Section 6.9.2
Measurement Distance: 3M

Limit:
For report reference only

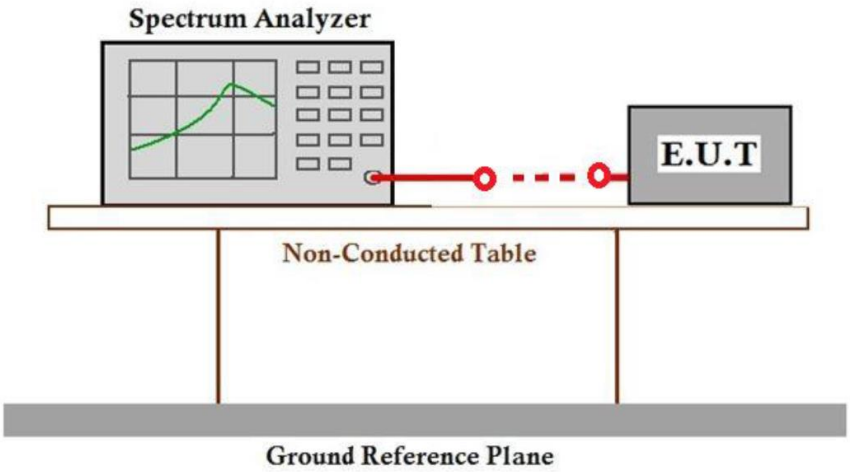
7.1.1 E.U.T. Operation

Operating Environment:
Temperature: 22.5 °C Humidity: 50.2 % RH Atmospheric Pressure: 1010 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Charge mode_Keep the EUT charging(15W)

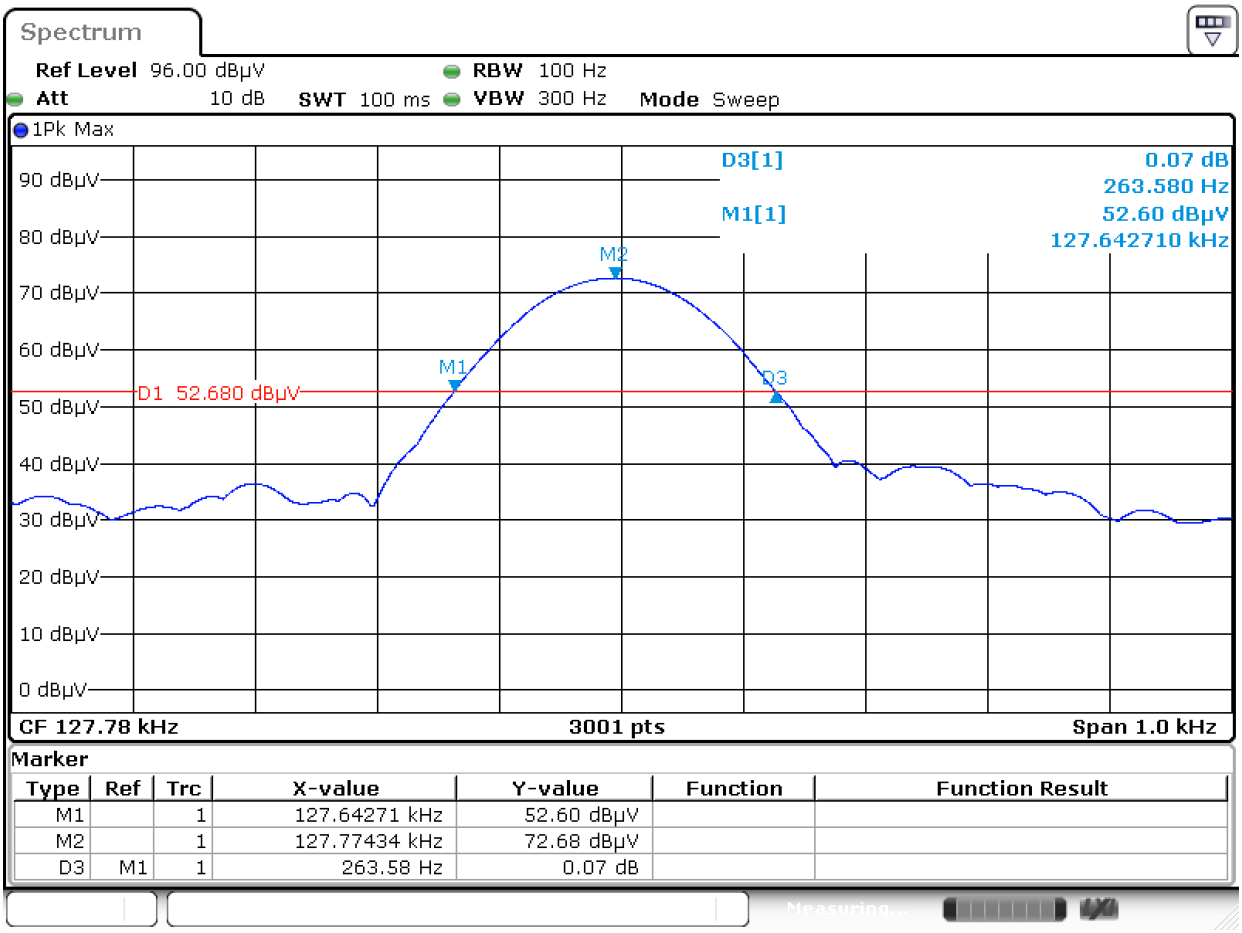
7.1.3 Test Setup Diagram



7.1.4 Measurement Procedure and Data

20dB bandwidth (Hz)	Result
263.58	Pass

Test plot as follows:



7.2 Conducted Emissions at AC Mains Power Port (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207
Test Method: ANSI C63.10 (2013) Section 6.2
Measurement Distance: 3M

Limit:

Frequency of emission(MHz)	Conducted limit(dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
*Decreases with the logarithm of the frequency.		

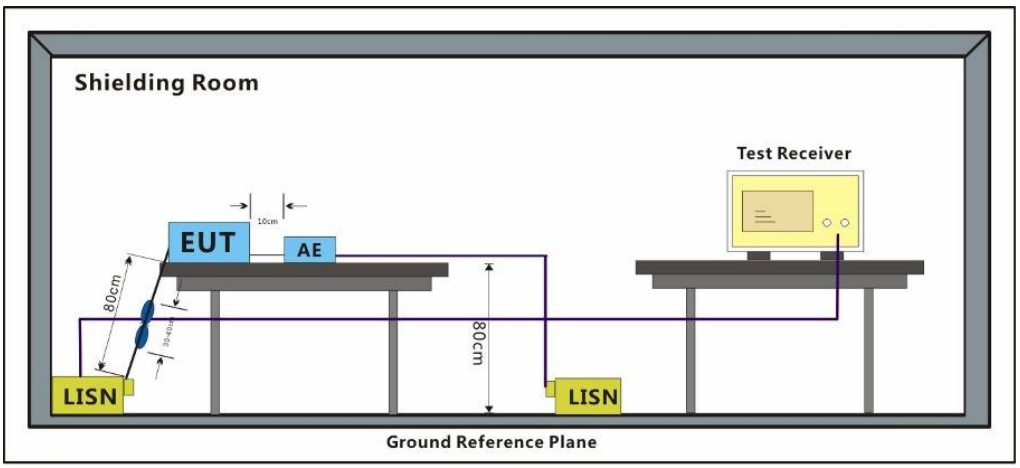
7.2.1 E.U.T. Operation

Operating Environment:
Temperature: 22.5 °C Humidity: 50.2 % RH Atmospheric Pressure: 1010 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Charge mode_Keep the EUT charging(15W)

7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data

1) The mains terminal disturbance voltage test was conducted in a shielded room.

2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.

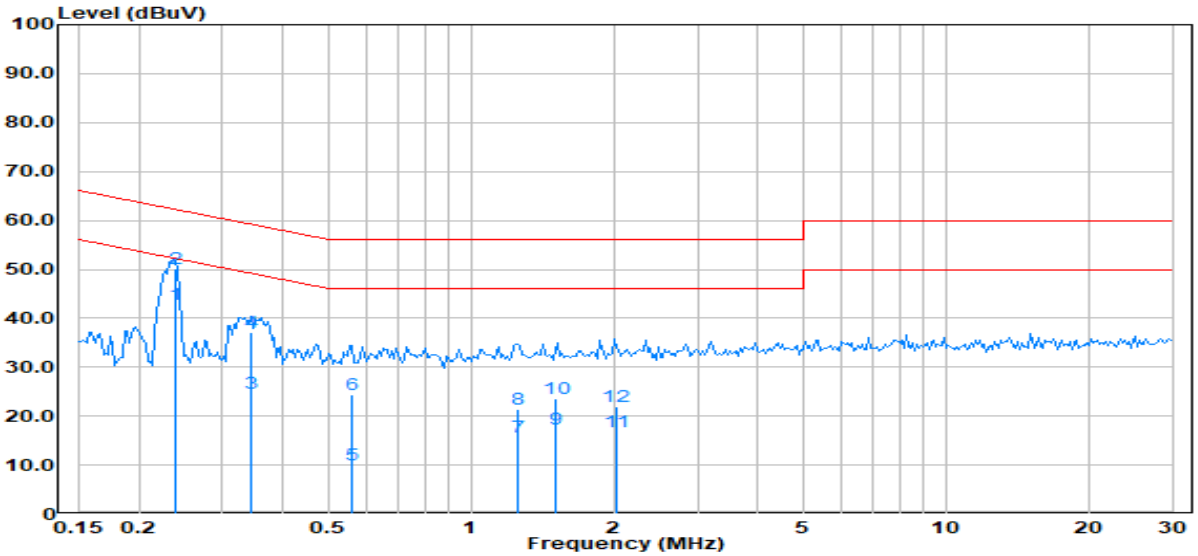
3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,

4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.

5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

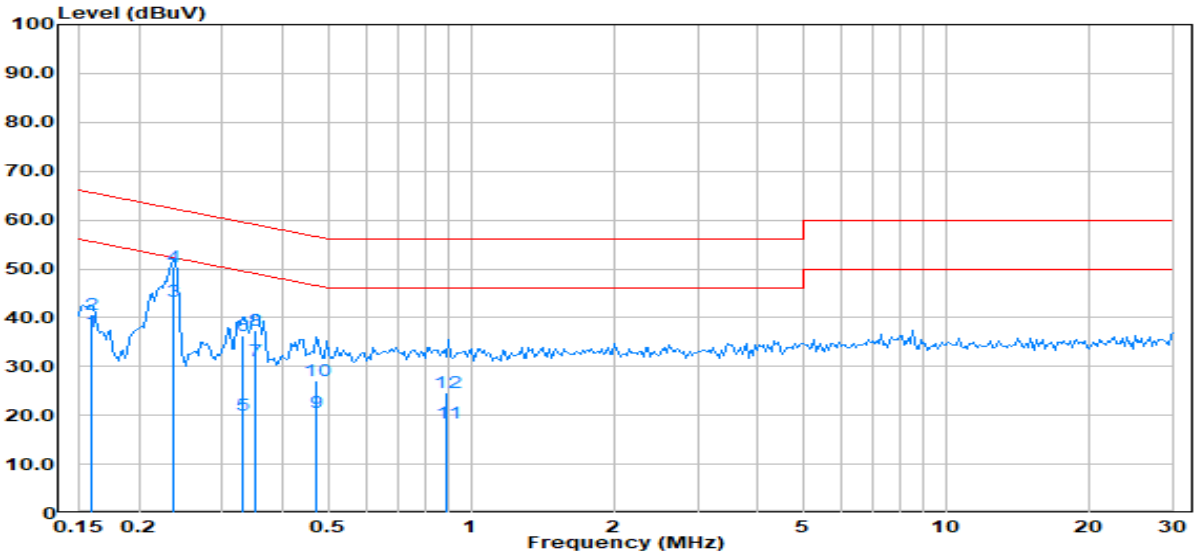
Remark: Level=Read Level+ Cable Loss+ LISN Factor

Test Mode: 00; Line: Live line



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.2384	23.06	19.75	42.81	52.15	-9.34	Average
2	0.2384	30.50	19.75	50.25	62.15	-11.90	QP
3	0.3460	4.98	19.71	24.69	49.06	-24.37	Average
4	0.3460	17.48	19.71	37.19	59.06	-21.87	QP
5	0.5631	-9.69	19.71	10.02	46.00	-35.98	Average
6	0.5631	4.69	19.71	24.40	56.00	-31.60	QP
7	1.2500	-4.14	19.79	15.65	46.00	-30.35	Average
8	1.2500	1.65	19.79	21.44	56.00	-34.56	QP
9	1.5140	-2.34	19.79	17.45	46.00	-28.55	Average
10	1.5140	3.66	19.79	23.45	56.00	-32.55	QP
11	2.0170	-2.96	19.80	16.84	46.00	-29.16	Average
12	2.0170	2.25	19.80	22.05	56.00	-33.95	QP

Test Mode: 00; Line: Neutral Line



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1582	17.32	19.80	37.12	55.56	-18.44	Average
2	0.1582	20.76	19.80	40.56	65.56	-25.00	QP
3	0.2359	23.58	19.77	43.35	52.24	-8.89	Average
4	0.2359	30.59	19.77	50.36	62.24	-11.88	QP
5	0.3294	0.26	19.74	20.00	49.47	-29.47	Average
6	0.3294	16.45	19.74	36.19	59.47	-23.28	QP
7	0.3523	11.40	19.74	31.14	48.91	-17.77	Average
8	0.3523	17.69	19.74	37.43	58.91	-21.48	QP
9	0.4734	0.86	19.71	20.57	46.45	-25.88	Average
10	0.4734	7.27	19.71	26.98	56.45	-29.47	QP
11	0.8925	-1.18	19.73	18.55	46.00	-27.45	Average
12	0.8925	4.86	19.73	24.59	56.00	-31.41	QP

7.3 Radiated Emissions (9kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209
Test Method: ANSI C63.10 (2013) Section 6.4
Measurement Distance: 3M

Limit:

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
Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.		

If field strength is measured at only a single point, then that point shall be at the radial from the EUT that produces the maximum emission at the frequency being measured, as described in 5.4. If that point is closer to the EUT than λ/2π and the limit distance is greater than λ/2π, the measurement shall be extrapolated to the limit distance by conservatively presuming that the field strength decreases at a 40 dB/decade of distance rate to the λ/2π distance, and at a 20 dB/decade of distance rate beyond λ/2π. This shall be accomplished using Equation (2):

$$FS_{(10m)} = FS_{(30/300m)} + 40\log\{d_{(\text{near field})}/d_{(10m)}\} + 20\log\{d_{(30/300m)}/d_{(\text{near field})}\} \quad (2)$$

If the single point measured is at a distance greater than λ/2π, then extrapolation to the limit distance shall be calculated using Equation (3):

$$FS_{(10m)} = FS_{(30/300m)} + 20\log\{d_{(30/300m)}/d_{(10m)}\} \quad (3)$$

If both the single point and the limit distance are equal to or closer to the EUT than λ/2π, then extrapolation to the limit distance shall be calculated using Equation (4):

$$FS_{(10m)} = FS_{(30/300m)} + 40\log\{d_{(30/300m)}/d_{(10m)}\} \quad (4)$$

Remark:

$$d_{\text{near field}} = 47.77 / f_{MHz}$$

where f_{MHz} is the frequency of the emission being measured in MHz.

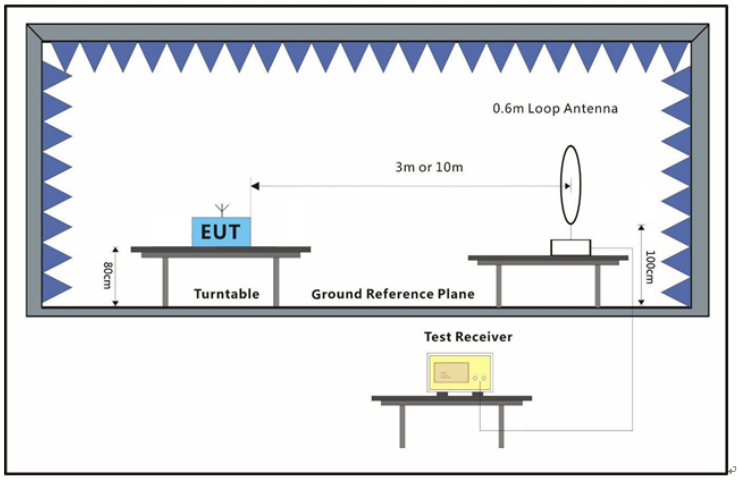
7.3.1 E.U.T. Operation

Operating Environment:
Temperature: 22.5 °C Humidity: 50.2 % RH Atmospheric Pressure: 1010 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Charge mode_Keep the EUT charging(15W)

7.3.3 Test Setup Diagram



7.3.4 Measurement Procedure and Data

a. All radiated emission measurements in terms of magnetic field strength shall be performed with a shielded loop antenna.

b. For all radiated emission measurements in terms of magnetic field strength, the loop antenna were placed such that:

i. its centre shall be at 1.3 m height above the ground plane;

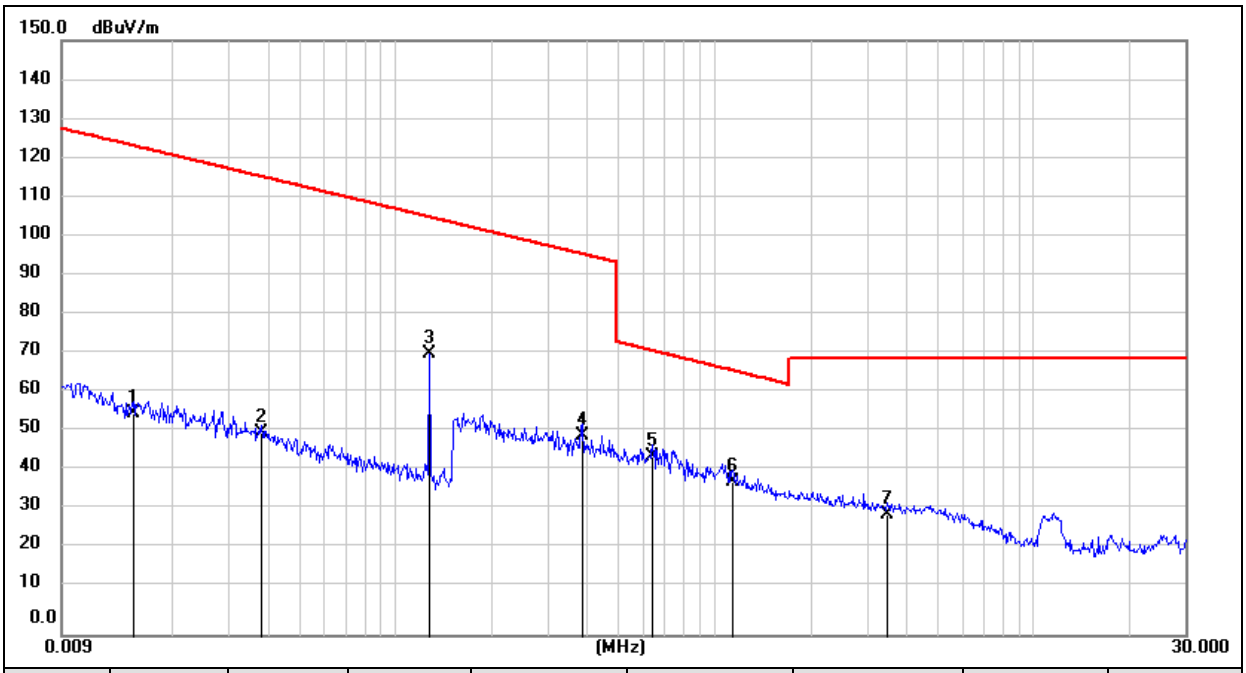
ii. the projection of its centre onto the ground plane shall be at the specified measurement distance from the projection on the ground plane of the closest point on the boundary of the equipment under test (EUT); and

iii. measurements shall be performed with the loop antenna placed vertically, in turn, in two polarizations (the measurement axis specified below is the line segment connecting the projections on the ground plane of the centre of the loop antenna and the centre of the EUT arrangement):

· coaxial (loop plane perpendicular to the ground plane and to the measurement axis); and

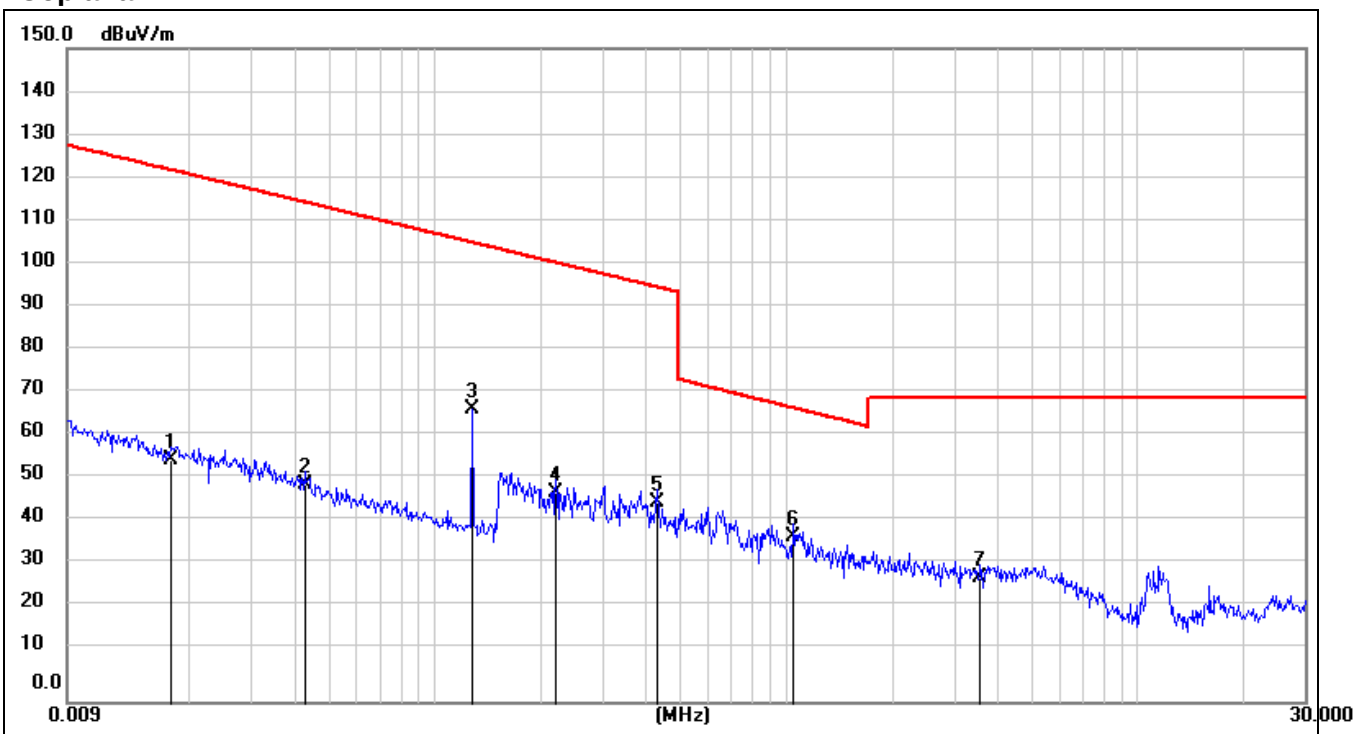
· coplanar (loop plane perpendicular to the ground plane and coplanar with the measurement axis).

Coaxial



Item	Freq.	Read Level	Correct Factor	Result Level@3m	Result Level@SPEC	Limit Line@SPEC	Over Limit	Detector
(Mark)	(MHz)	(dBµV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.0151	40.42	15.60	56.02	123.14	-67.12	0.0151	QP
2	0.0381	35.82	15.28	51.10	115.34	-64.24	0.0381	QP
3	0.1277	56.89	14.03	70.92	105.14	-34.22	0.1277	Peak
4	0.3830	36.10	14.41	50.51	95.88	-45.37	0.3830	QP
5	0.6404	30.76	14.41	45.17	71.48	-26.31	0.6404	QP
6	1.1411	24.40	14.43	38.83	66.48	-27.65	1.1411	QP
7	3.4906	16.08	14.50	30.58	69.50	-38.92	3.4906	QP

Coplanar



Item	Freq.	Read Level	Correct Factor	Result Level@3m	Result Level@SPEC	Limit Line@SPEC	Over Limit	Detector
(Mark)	(MHz)	(dBµV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.0177	40.26	15.57	55.83	121.80	-65.97	0.0177	QP
2	0.0425	34.96	15.22	50.18	114.42	-64.24	0.0425	QP
3	0.1277	53.21	14.03	67.24	105.14	-37.90	0.1277	Peak
4	0.2207	33.95	14.40	48.35	100.53	-52.18	0.2207	QP
5	0.4282	31.70	14.41	46.11	94.94	-48.83	0.4282	QP
6	1.0484	23.65	14.43	38.08	67.21	-29.13	1.0484	QP
7	3.5653	14.22	14.50	28.72	69.50	-40.78	3.5653	QP

7.4 Radiated Emissions (30MHz-1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209
Test Method: ANSI C63.10 (2013) Section 6.5
Measurement Distance: 3M

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3
Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector.		

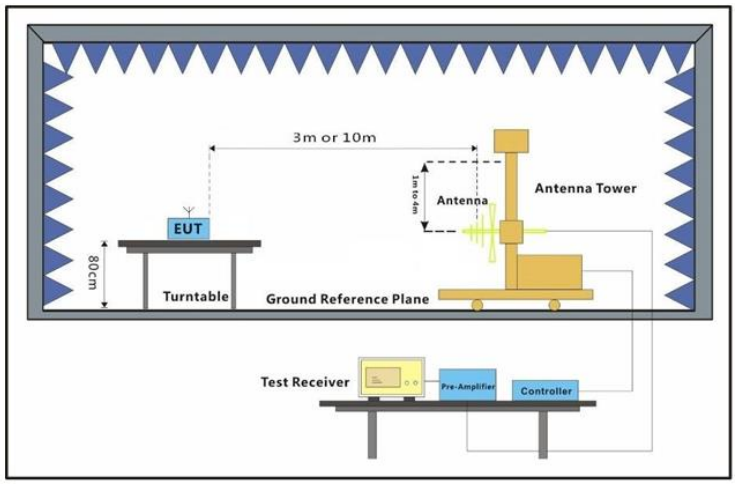
7.4.1 E.U.T. Operation

Operating Environment:
Temperature: 22.5 °C Humidity: 50.2 % RH Atmospheric Pressure: 1010 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Charge mode_Keep the EUT charging(15W)

7.4.3 Test Setup Diagram



7.4.4 Measurement Procedure and Data

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground for below 1GHz at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel,the middle channel,the Highest channel

h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode,And found the X axis positioning which it is worse case.

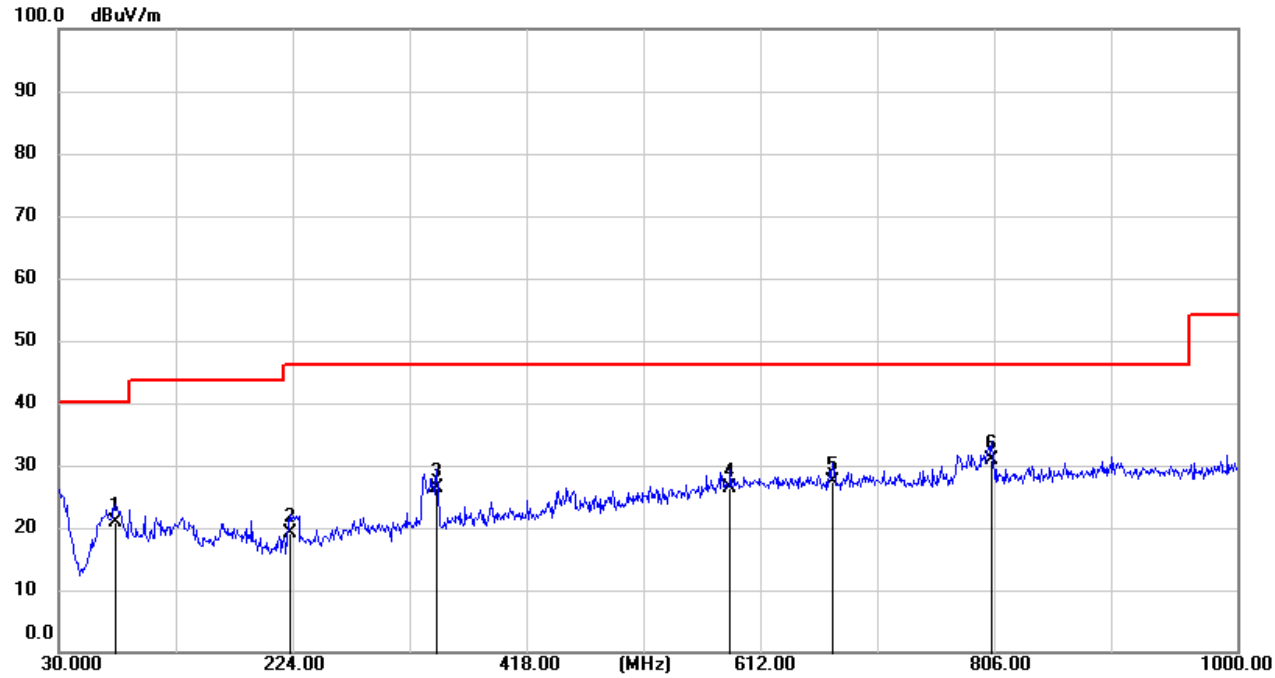
i. Repeat above procedures until all frequencies measured was complete.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Horizontal

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	127.9700	4.45	13.28	17.73	43.50	-25.77	QP
2	219.1500	10.36	11.51	21.87	46.00	-24.13	QP
3	329.7300	6.63	14.37	21.00	46.00	-25.00	QP
4	599.3900	6.16	21.23	27.39	46.00	-18.61	QP
5	898.1500	6.86	23.09	29.95	46.00	-16.05	QP
6	769.1400	10.72	21.79	32.51	46.00	-13.49	QP

Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	76.5600	11.37	9.50	20.87	40.00	-19.13	QP
2	220.1200	6.64	12.50	19.14	46.00	-26.86	QP
3	341.3700	9.97	16.46	26.43	46.00	-19.57	QP
4	582.9000	3.90	22.58	26.48	46.00	-19.52	QP
5	667.2900	3.74	23.71	27.45	46.00	-18.55	QP
6	798.2400	6.36	24.55	30.91	46.00	-15.09	QP

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2503000568AT.

9 EUT Constructional Details (EUT Photos)

Refer to Appendix_Photographs of EUT Constructional Details for KSCR2503000568AT.

- End of the Report -