

TEST REPORT

Application No.:	SUCR2505000449AT
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:	2025-05-20 to 2025-05-20
Date of Issue:	2025-05-23

Test Result:	Pass*
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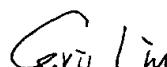
* In the configuration tested, the EUT complied with the standards specified above.

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Revision Record			
Version	Description	Date	Remark
00	Original	2025-05-23	/

Authorized for issue by:			
Tested By			
		Eric Liu /Project Engineer	
Approved By			
		Micheal Niu /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

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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 27AKP10

4.2 Description of Support Units

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

4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions (9kHz-150KHz)	± 2.4dB
Conducted Emissions (150kHz-30MHz)	± 2.9dB
Conducted Emission at telecommunication port using AAN	± 4.0 dB
Radiated Power	±3.2dB
Radiated Emissions (30MHz-1GHz)	± 4.8dB
Radiated Emissions (Above 1GHz)	±4.8dB
Voltage Fluctuations and Flicker	± 0.12%
Radiated Immunity (80MHz-6GHz)	± 2.8dB
Surge open-circuit voltage front time (TfV)	±0.16ns
Surge open-circuit voltage peak value (VP)	±0.332KV
Surge open-circuit voltage duration (Td)	±0.247ns
Conducted Immunity (150kHz-80MHz)	± 2.71dB
Electrostatic Discharge	± 5%
EFT/B voltage rise time (tr)	± 0.296ns
EFT/B peak voltage value (VP)	± 0.44KV
EFT/B voltage pulse width (tw)	± 2.8ns

Remark:
The U_{lab} (lab Uncertainty) is less than $U_{cispr/ETSI}$ (CISPR/ETSI Uncertainty), so the test results
– compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
– non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Suzhou Branch
No. 2, Tongsheng Road, Wuzhong District, Suzhou, Jiangsu, China.

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**

SGS-CSTC Standards Technical Services Co., Ltd. Suzhou Branch is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 6706.01.

- **FCC**

SGS-CSTC Standards Technical Services Co., Ltd. Suzhou Branch has been recognized as an accredited testing laboratory. Designation Number: CN1387.

- **ISED**

SGS-CSTC Standards Technical Services Co., Ltd. Suzhou Branch has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 32369

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

5 Equipment List

9*6*6 Test Equipment					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Semi-Anechoic Chamber	Brilliant-emc	N/A	SUWI-04-02-01	6/3/2023	6/2/2026
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-05	2/13/2025	2/12/2026
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	1/15/2025	1/14/2026
Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	VULB 9168	SUWI-01-11-04	8/22/2024	8/21/2026
Active Loop Antenna	SCHWRZBECK MESS-ELEKTRONIK	FMZB 1519B	SUWI-01-21-01	5/7/2025	5/6/2027
Amplifier	Tonscend	TAP9K3G40	SUWI-01-14-01	1/16/2025	1/15/2026
Measurement Software	Tonscend	JS32-RE	SUWI-02-09-04	NCR	NCR
		V4.0.0.0			
Conduction Test Equipment					
Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	1/15/2025	1/14/2026
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-06	2/13/2025	2/12/2026
Artificial network	ROHDE&SCHWARZ	ENV216	SUWI-01-19-03	5/8/2025	5/7/2026
Artificial network	ROHDE&SCHWARZ	ENV216	SUWI-01-19-04	5/8/2025	5/7/2026
Measurement Software	Tonscend	JS32-CE	SUWI-02-09-05	NCR	NCR
		4.0.0.2			

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

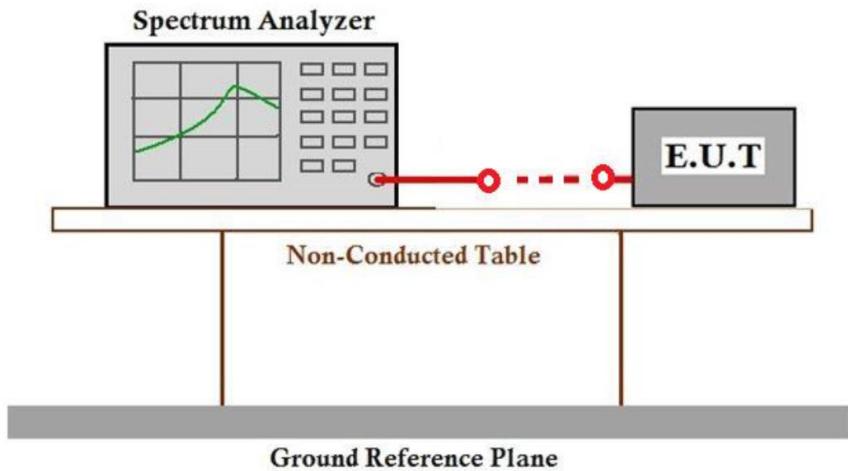
Operating Environment:

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)

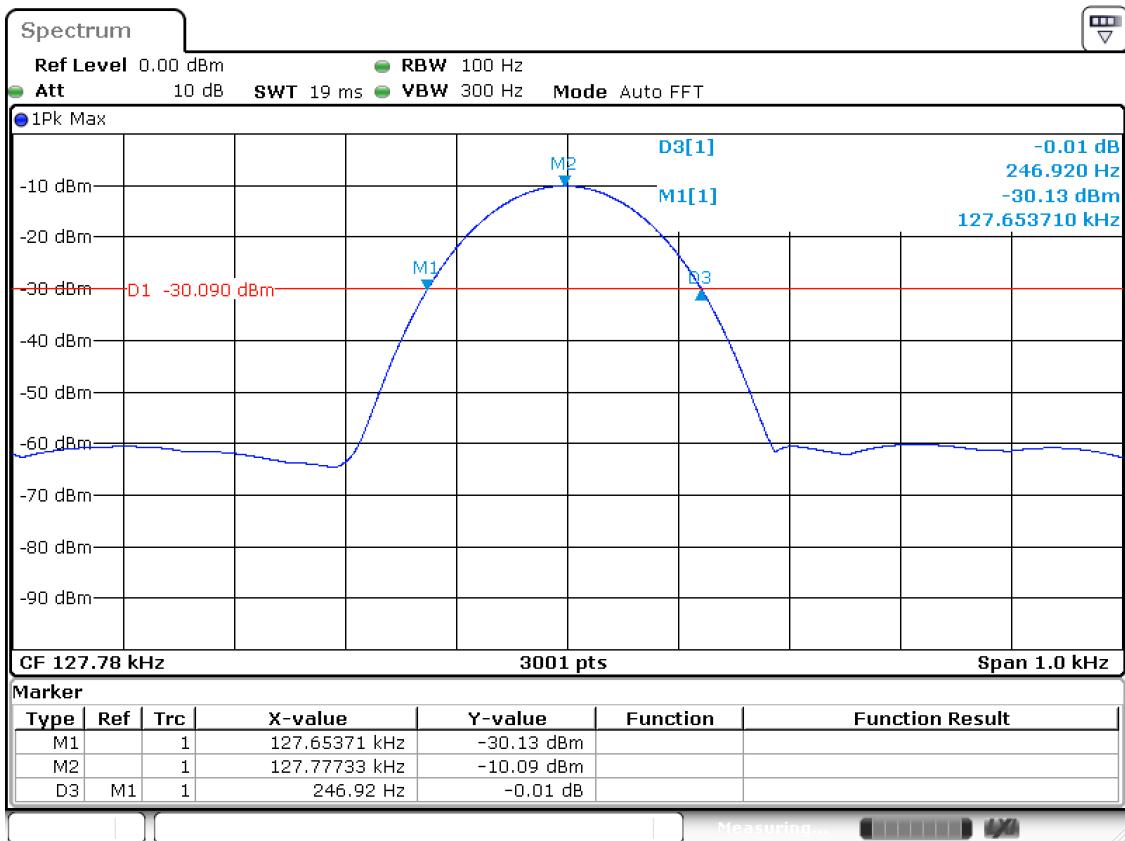
7.1.3 Test Setup Diagram



7.1.4 Measurement Procedure and Data

20dB bandwidth (Hz)	Result
246.92	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(dB μ V)	
	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

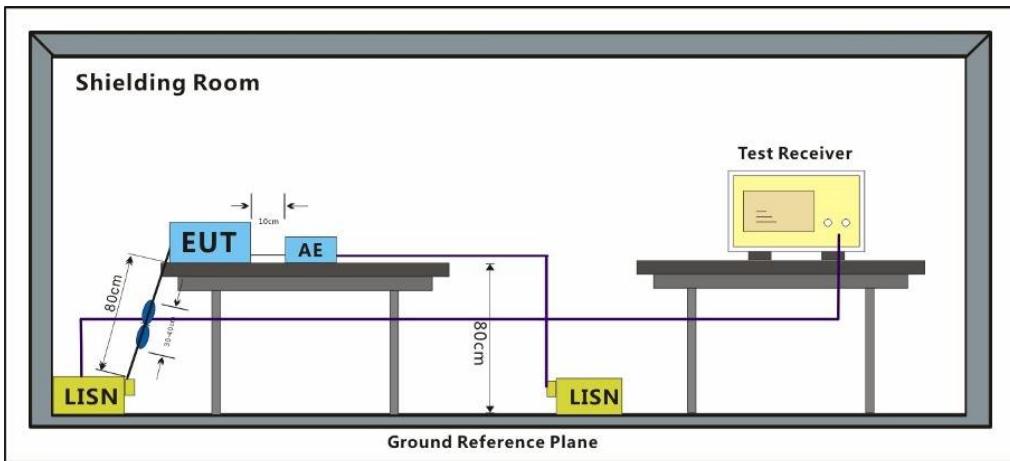
Operating Environment:

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

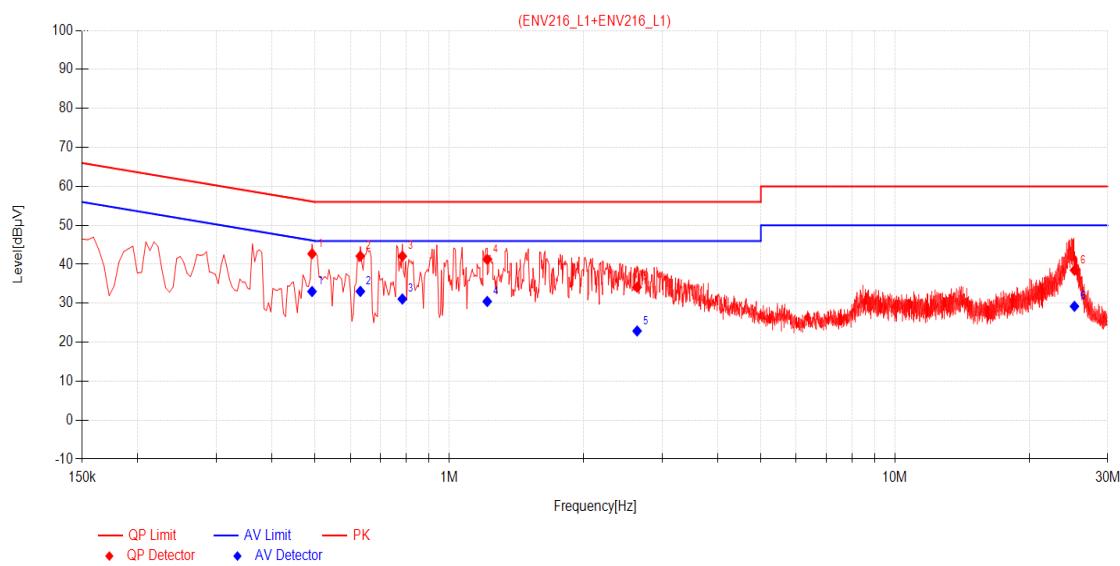


7.2.4 Measurement Procedure and Data

- 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/50 μ H + 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

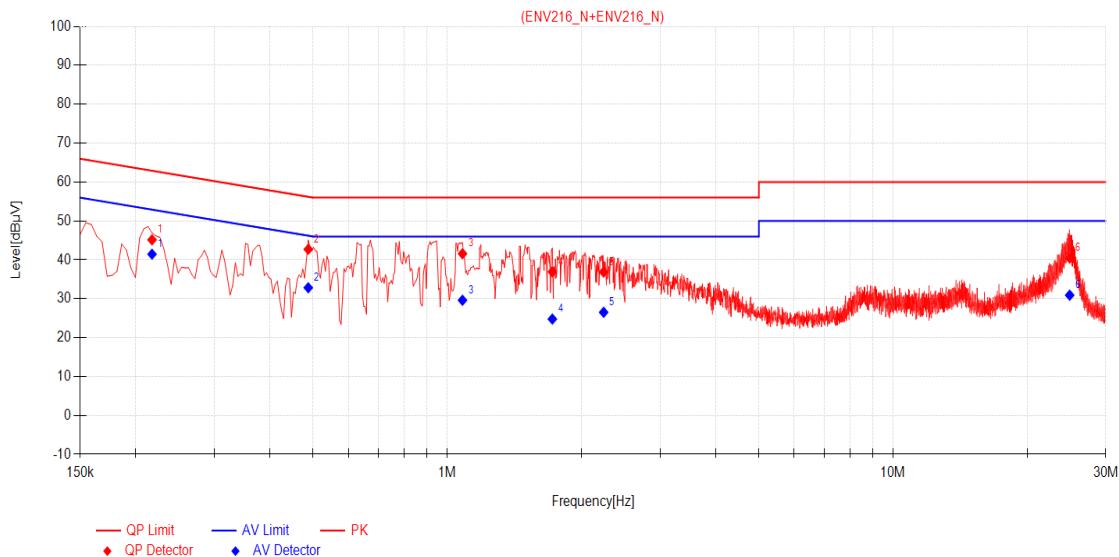
Test Mode: 00; Line: Live line



Final Data List

NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBuV]	QP Value	QP Limit	QP Margin	AV Reading [dBuV]	AV Value	AV Limit	AV Margin	Verdict
1	0.4920	10.07	32.63	42.70	56.13	13.43	22.95	33.02	46.13	13.11	PASS
2	0.6315	10.06	32.05	42.11	56.00	13.89	22.99	33.05	46.00	12.95	PASS
3	0.7845	10.04	32.04	42.08	56.00	13.92	21.05	31.09	46.00	14.91	PASS
4	1.2165	9.92	31.33	41.25	56.00	14.75	20.54	30.46	46.00	15.54	PASS
5	2.6385	9.83	24.29	34.12	56.00	21.88	13.06	22.89	46.00	23.11	PASS
6	25.2690	9.66	28.83	38.49	60.00	21.51	19.56	29.22	50.00	20.78	PASS

Test Mode: 00; Line: Neutral Line



Final Data List

NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBuV]	QP Value	QP Limit	QP Margin	AV Reading [dBuV]	AV Value	AV Limit	AV Margin	Verdict
1	0.2175	10.08	35.07	45.15	62.91	17.76	31.37	41.45	52.91	11.46	PASS
2	0.4875	10.06	32.66	42.72	56.21	13.49	22.77	32.83	46.21	13.38	PASS
3	1.0815	9.95	31.64	41.59	56.00	14.41	19.66	29.61	46.00	16.39	PASS
4	1.7205	9.92	26.99	36.91	56.00	19.09	14.86	24.78	46.00	21.22	PASS
5	2.2425	9.90	26.97	36.87	56.00	19.13	16.61	26.51	46.00	19.49	PASS
6	24.9090	9.66	30.76	40.42	60.00	19.58	21.25	30.91	50.00	19.09	PASS

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 $\lambda/2\pi$ and the limit distance is greater than $\lambda/2\pi$, 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 $\lambda/2\pi$ distance, and at a 20 dB/decade of distance rate beyond $\lambda/2\pi$. This shall be accomplished using Equation (2):

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

If the single point measured is at a distance greater than $\lambda/2\pi$, 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 $\lambda/2\pi$, 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:

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

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

7.3.1 E.U.T. Operation

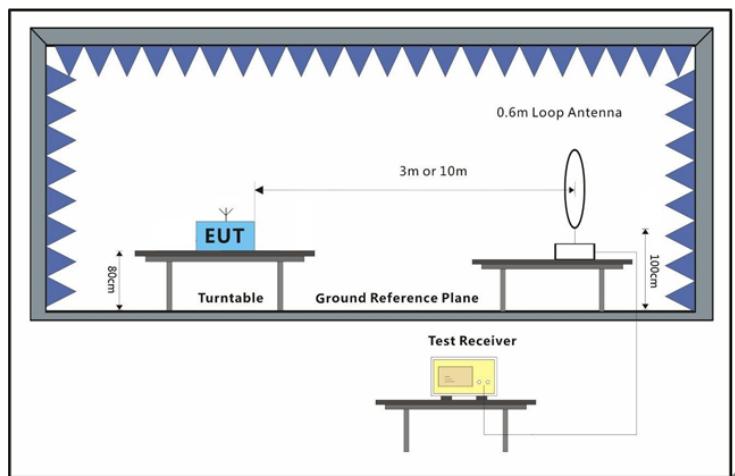
Operating Environment:

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)

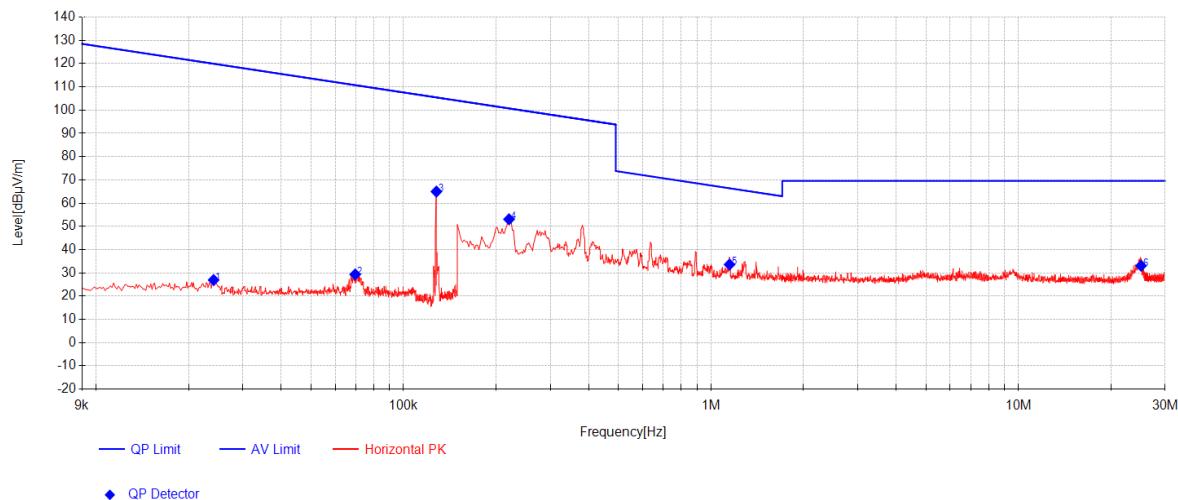
7.3.3 Test Setup Diagram



7.3.4 Measurement Procedure and Data

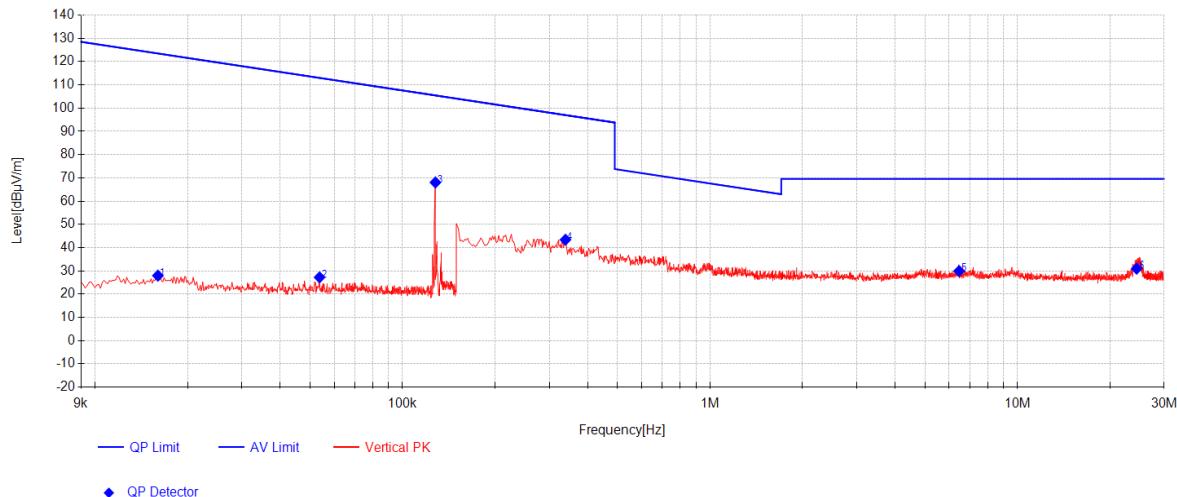
- All radiated emission measurements in terms of magnetic field strength shall be performed with a shielded loop antenna.
- For all radiated emission measurements in terms of magnetic field strength, the loop antenna were placed such that:
 - its centre shall be at 1.3 m height above the ground plane;
 - 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
 - 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



Final Data List										
NO.	Frequency [MHz]	Reading [dB μ V]	AF [dB/m]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
5	1.149	13.25	19.89	0.45	33.59	66.40	32.81	100	123	Coaxial
6	25.06	12.05	20.09	0.91	33.05	69.54	36.49	100	358	Coaxial
NO.	Frequency [MHz]	Reading [dB μ V]	AF [dB/m]	Factor [dB]	AV Value [dB μ V/m]	AV Limit [dB μ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	0.0241	6.42	20.06	0.43	26.91	119.96	93.05	100	127	Coaxial
2	0.0696	8.72	20.20	0.43	29.35	110.75	81.40	100	26	Coaxial
3	0.1279	44.34	20.21	0.43	64.98	105.46	40.48	100	137	Coaxial
4	0.2203	32.35	20.28	0.43	53.06	100.74	47.68	100	0	Coaxial

Coplanar



Final Data List										
NO.	Frequency [MHz]	Reading [dB μ V]	AF [dB/m]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
5	6.464	9.35	20.02	0.55	29.92	69.54	39.62	100	32	Coplanar
6	24.422	10.06	19.98	0.89	30.94	69.54	38.60	100	356	Coplanar
NO.	Frequency [MHz]	Reading [dB μ V]	AF [dB/m]	Factor [dB]	AV Value [dB μ V/m]	AV Limit [dB μ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	0.016	7.53	20.00	0.43	27.96	123.51	95.55	100	16	Coplanar
2	0.0537	6.68	20.12	0.43	27.23	113.00	85.77	100	297	Coplanar
3	0.1279	47.39	20.21	0.43	68.03	105.46	37.43	100	133	Coplanar
4	0.3387	22.72	20.25	0.44	43.40	97.01	53.61	100	360	Coplanar

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

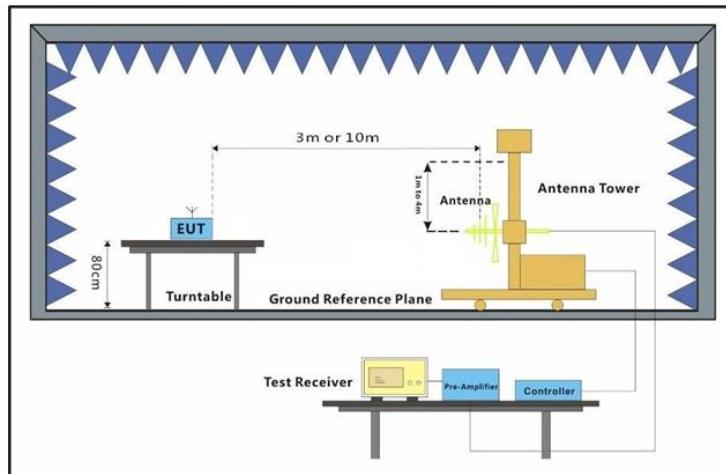
Operating Environment:

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

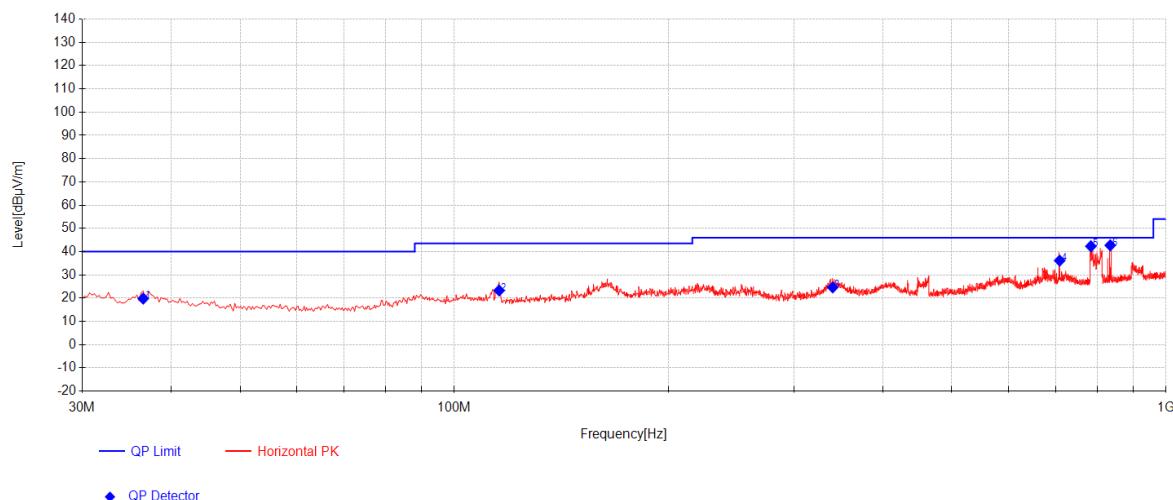


7.4.4 Measurement Procedure and Data

- 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

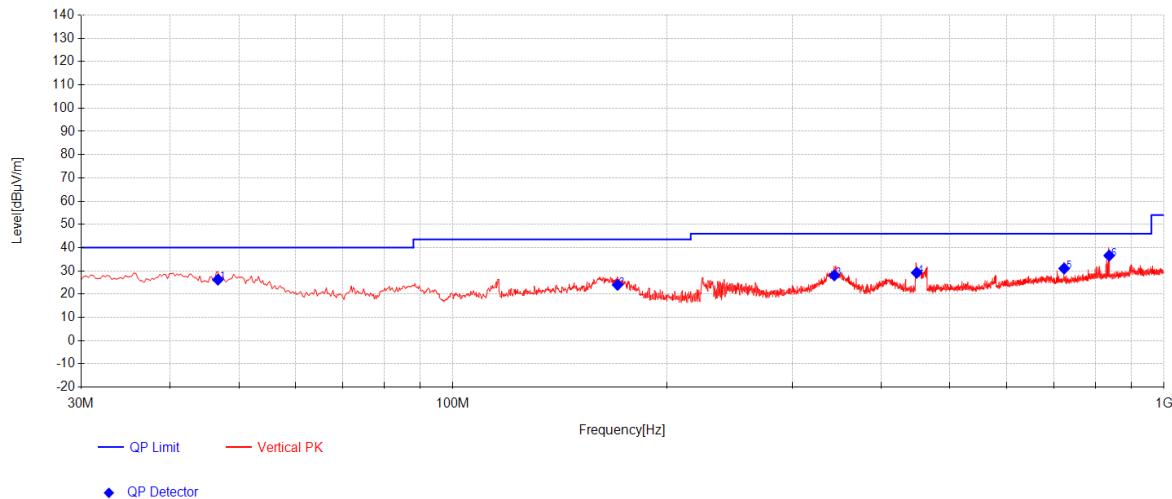
Horizontal



Final Data List

NO.	Frequency [MHz]	Reading [dB μ V]	AF [dB/m]	Factor [dB]	QP Value [dB μ V/m]	QP Limit [dB μ V/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.5475	35.32	18.41	-33.92	19.81	40.00	20.19	163	339	Horizontal
2	115.6025	40.03	16.22	-32.95	23.30	43.50	20.20	254	266	Horizontal
3	340.1575	36.85	19.21	-31.43	24.63	46.00	21.37	185	22	Horizontal
4	708.7575	40.05	25.50	-29.41	36.14	46.00	9.86	263	22	Horizontal
5	784.175	45.12	26.37	-29.16	42.32	46.00	3.68	254	282	Horizontal
6	834.8575	44.32	27.30	-28.90	42.72	46.00	3.28	118	129	Horizontal

Vertical



Final Data List										
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	46.7325	41.05	18.95	-33.75	26.26	40.00	13.74	196	319	Vertical
2	170.4075	38.26	18.14	-32.42	23.98	43.50	19.52	254	319	Vertical
3	343.795	40.06	19.43	-31.41	28.08	46.00	17.92	174	162	Vertical
4	448.7975	38.26	21.55	-30.62	29.19	46.00	16.81	185	234	Vertical
5	723.55	34.63	25.74	-29.36	31.02	46.00	14.98	263	141	Vertical
6	837.04	38.24	27.22	-28.89	36.57	46.00	9.43	224	322	Vertical

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for SUCR2505000449AT.

9 EUT Constructional Details (EUT Photos)

Refer to Appendix_Photos of EUT Constructional Details for SUCR2505000449AT.

- End of the Report -