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TEST REPORT

Application No.:	KSCR2407001379AT
FCC ID:	2AL8S-0235C8YR
Applicant:	Zhejiang Uniview Technologies Co., Ltd.
Address of Applicant:	No. 369, Xietong Road, Xixing Sub-district, Binjiang District, Hangzhou City, 310051, Zhejiang Province, China
Manufacturer:	Zhejiang Uniview Technologies Co., Ltd.
Address of Manufacturer:	No. 369, Xietong Road, Xixing Sub-district, Binjiang District, Hangzhou City, 310051, Zhejiang Province, China
Factory:	Zhejiang Uniview Systems Technology Co., Ltd.
Address of Factory:	No.1277 South Qingfeng South Road, Tongxiang City, Jiaxing City, Zhejiang Province, China
Equipment Under Test (EUT):	
EUT Name:	Intelligent Recognition Access Control Terminal
Model No.:	OET-573B-HMQR-Z-W-R, OET-573B-HMQR-Z-xxxxxxxx-yyyyyyyy-zzz ("x","y","z" can be 0-9,A-Z,a-z or blank;"-" may be blank)
"	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Standard(s) :	47 CFR Part 15, Subpart C 15.225
Date of Receipt:	2024-07-16
Date of Test:	2024-07-17 to 2024-08-12
Date of Issue:	2024-08-15
Test Result:	Pass*

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

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	Revision Record					
Version	Description	Date	Remark			
00	Original	2024-08-15	/			

Authorized for issue by:			
Tested By	Maker Qi	-	
	Maker_Qi/Project Engineer		
Approved By	Verry Hou		
	Terry Hou /Reviewer		



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2 Test Summary

Radio Spectrum Technical Requirement					
Item	Standard	Method	Requirement	Result	
Antenna Requirement	47 CFR Part 15, Subpart C 15.225	N/A	47 CFR Part 15, Subpart C 15.203	Customer Declaration	

Radio Spectrum Matter Part					
ltem	Standard	Method	Requirement	Result	
Conducted Emissions at Mains Terminals (150kHz-30MHz)		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	47 CFR Part 15, Subpart C 15.215	Pass	
Emission Mask	47 CFR Part 15,	ANSI C63.10 (2013) Section 6.4	47 CFR Part 15, Subpart C 15.225(a)&(b)&(C)	Pass	
Frequency tolerance	Subpart C 15.225	ANSI C63.10 (2013) Section 6.8	47 CFR Part 15, Subpart C 15.225(e)	Pass	
Radiated Emissions (9kHz-30MHz)		ANSI C63.10 (2013) Section 6.4&6.5	47 CFR Part 15, Subpart C 15.225(d) & 15.209	Pass	
Radiated Emissions (30MHz-1GHz)		ANSI C63.10 (2013) Section 6.4&6.5	47 CFR Part 15, Subpart C 15.225(d) & 15.209	Pass	

Declaration of EUT Family Grouping:

Note: There are series models mentioned in this report, and they are identical in electrical and electronic characters. Only the model OET-573B-HMQR-Z-W-R was tested since their differences were the model number and appearance.



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4 General Information

4.1 Details of E.U.T.

Power supply:	DC 12V/2.0A
Test voltage:	AC 120V/60Hz
Operation Frequency:	13.56MHz
Modulation Type:	ASK
Number of Channels:	1
Antenna Type:	FPC Antenna

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
AC Adapter	/	/	/

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty				
1	Radio Frequency	8.4 x 10 ⁻⁸				
2	Occupied Bandwidth	3%				
3	RF Radiated Power	5.2dB (Below 1GHz)				
3	RF Radialed Powel	5.9dB (Above 1GHz)				
		4.2dB (Below 30MHz)				
4	Radiated Spurious Emission Test	4.5dB (30MHz-1GHz)				
4		5.1dB (1GHz-18GHz)				
		5.4dB (Above 18GHz)				
5	Temperature Test	1°C				
6	Humidity Test	3%				
7	Supply Voltages	1.5%				
8	Time	3%				
Note: approx	Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.					



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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



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5 Equipment List

ltem	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date		
Conduc	Conducted Emission at Mains Terminals							
1	EMI Test Receive	R&S	ESCI	KS301101	01/15/2024	01/14/2025		
2	LISN	R&S	ENV216	KS301197	01/15/2024	01/14/2025		
3	LISN	Schwarzbeck	NNLK 8129	KS301091	01/15/2024	01/14/2025		
4	Pulse Limiter	R&S	ESH3-Z2	KUS1902E001	01/15/2024	01/14/2025		
5	CE test Cable	Thermax	/	CZ301102	01/15/2024	01/14/2025		
6	Test Software	Farad	EZ-EMC	/	N.C.R	N.C.R		
RF Rad	iated Test							
1	Spectrum Analyzer	R&S	FSV40	KUS1806E003	08/24/2023	08/23/2024		
2	Universal Radio Communication Tester	R&S	CMW500	KSEM009-1	03/19/2024	03/18/2025		
3	Signal Generator	Agilent	E8257C	KS301066	08/24/2023	08/23/2024		
4	Loop Antenna	COM-POWER	AL-130R	KUS1806E001	03/18/2023	03/17/2025		
5	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E005	06/29/2023	06/28/2025		
6	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E006	03/19/2024	03/18/2025		
7	Horn-antenna(1-18GHz)	Schwarzbeck	BBHA9120D	KS301079	08/24/2023	08/23/2024		
8	Horn-antenna(1-18GHz)	ETS- LINDGREN	3117	KS301186	04/07/2023	04/06/2025		
9	Horn Antenna(18-40GHz)	Schwarzbeck	BBHA9170	CZ301058	01/07/2024	01/06/2026		
10	Amplifier(30MHz~18GHz)	PANSHAN TECHNOLOGY	LNA:1~18G	KSEM010-1	01/15/2024	01/14/2025		
11	Amplifier(18~40GHz)	PANSHAN TECHNOLOGY	LNA180400G40	KSEM038	08/24/2023	08/23/2024		
12	RE Test Cable	REBES MICROWAVE	/	CZ301097	08/24/2023	08/23/2024		
13	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-4	03/19/2024	03/18/2025		
14	Software	Faratronic	EZ_EMC-v 3A1	/	NCR	NCR		
15	Software	ESE	E3_V 6.111221a	1	NCR	NCR		



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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

15.203 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 permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, 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.

EUT Antenna: The antenna is FPC antenna and no consideration of replacement.

Antenna location: Refer to Internal photos



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7 Radio Spectrum Matter Test Results

7.1 Conducted Emissions at Mains Terminals (150kHz-30MHz)

Test Requirement47 CFR Part 15, Subpart C 15.207Test Method:ANSI C63.10 (2013) Section 6.2

Limit:

Frequency renge (MHz)	Limit (d	BuV)
Frequency range (MHz)	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.

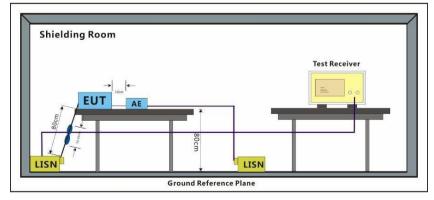
7.1.1 E.U.T. Operation

Operating Enviro	onment:				
Temperature:	23.3 °C	Humidity:	45.6 % RH	Atmospheric Pressure: 1010	mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode with modulation

7.1.3 Test Setup Diagram





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7.1.4 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 + 50hm 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.

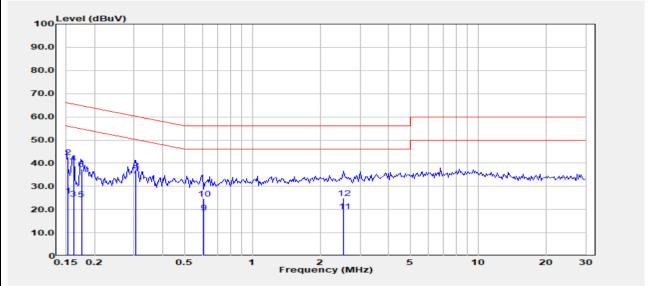
5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

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



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No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1528	5.75	20.24	25.99	55.85	-29.86	Average
2	0.1528	22.43	20.24	42.67	65.85	-23.18	QP
3	0.1613	4.39	20.20	24.59	55.40	-30.81	Average
4	0.1613	19.99	20.20	40.19	65.40	-25.21	QP
5	0.1750	4.28	20.15	24.43	54.72	-30.29	Average
6	0.1750	17.21	20.15	37.36	64.72	-27.36	QP
7	0.3046	14.49	20.08	34.57	50.12	-15.55	Average
8	0.3046	16.79	20.08	36.87	60.12	-23.25	QP
9	0.6067	-1.23	19.87	18.64	46.00	-27.36	Average
10	0.6067	4.82	19.87	24.69	56.00	-31.31	QP
11	2.5420	-0.65	19.95	19.30	46.00	-26.70	Average
12	2.5420	4.90	19.95	24.85	56.00	-31.15	QP

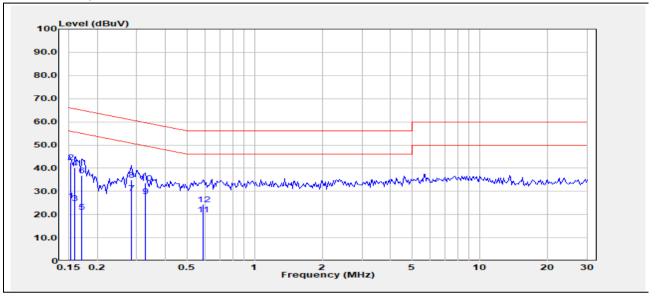
Test Mode: 01; Line: Live line



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Test Mode: 01; Line: Neutral Line



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1530	5.80	20.18	25.98	55.83	-29.85	Average
2	0.1530	22.40	20.18	42.58	65.83	-23.25	QP
3	0.1594	4.64	20.17	24.81	55.49	-30.68	Average
4	0.1594	20.05	20.17	40.22	65.49	-25.27	QP
5	0.1714	1.11	20.15	21.26	54.89	-33.63	Average
6	0.1714	16.81	20.15	36.96	64.89	-27.93	QP
7	0.2846	9.10	20.08	29.18	50.68	-21.50	Average
8	0.2846	14.88	20.08	34.96	60.68	-25.72	QP
9	0.3280	7.73	20.09	27.82	49.50	-21.68	Average
10	0.3280	13.53	20.09	33.62	59.50	-25.88	QP
11	0.5891	0.29	19.88	20.17	46.00	-25.83	Average
12	0.5891	4.40	19.88	24.28	56.00	-31.72	QP



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7.2 20dB Bandwidth

Test Requirement	47 CFR Part 15, Subpart C 15.215
Test Method:	ANSI C63.10 (2013) Section 6.9
Measurement Distance:	3m

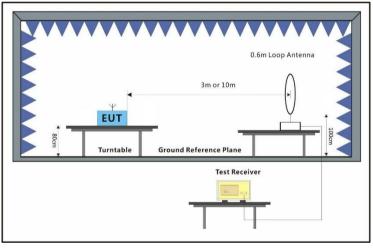
7.2.1 E.U.T. Operation

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

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode with modulation

7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data

The useful radiated emission from the EUT was detected by the spectrum analyser with peak detector.

Please Refer to Appendix for Details



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7.3 Emission Mask

Test Requirement47 CFR Part 15, Subpart C 15.225(a)&(b)&(C)Test Method:ANSI C63.10 (2013) Section 6.4Measurement Distance:3m

Limit:

(a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.

- (b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.
- (c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

(d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in § 15.209.

Below 30MHz

The limit at 30m test distance is below:

$$FS_{\text{limit}} = FS_{\text{max}} - 40 \log \left(\frac{d_{\text{limit}}}{d_{\text{measure}}}\right)$$

where

FS_{limit}	is the calculation of field strength at the limit distance, expressed in $dB\mu V/m$
FS_{max}	is the measured field strength, expressed in $dB\mu V/m$
d_{measure}	is the distance of the measurement point from the EUT
$d_{ m limit}$	is the reference distance or the distance of the $\lambda/2\pi$ point

The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 84dBuV/m at 30 meters.

7.3.1 E.U.T. Operation

Operating Environment:						
Temperature:	23.3 °C	Humidity:	45.2 % RH	Atmospheric Pressure:	1010	mbar

7.3.2 Test Mode Description

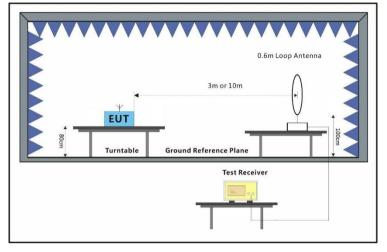
Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode with modulation



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7.3.3 Test Setup Diagram



7.3.4 Measurement Procedure and Data

For testing performed with the loop antenna, the center of the loop was positioned 1 m above the ground and positioned with its plane vertical at the specified distance from the EUT. During testing the loop was rotated about its vertical axis for maximum response at each azimuth and also investigated with the loop positioned in the horizontal plane. Only the worst position of vertical was shown in the report.

Remark: The test level of the fundamental signal is below the limit of general spurious emission, so the test item doesn't be performed.



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7.4 Frequency tolerance

Test Requirement	47 CFR Part 15, Subpart C 15.225(e)
Test Method:	ANSI C63.10 (2013) Section 6.8
Measurement Distance:	3m

Limit:

±0.01

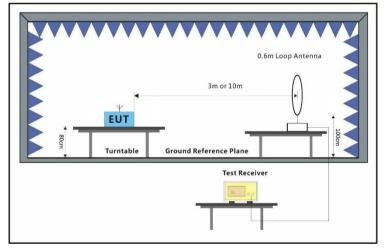
7.4.1 E.U.T. Operation

Operating Enviro	onment:			
Temperature:	23.3 °C	Humidity:	45.2 % RH	Atmospheric Pressure: 1010 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description	
Final test	01	TX mode with modulation	

7.4.3 Test Setup Diagram



7.4.4 Measurement Procedure and Data

The EUT was placed in an environmental test chamber and powered such that control element received normal voltage and the transmitter provided maximum RF output.

Please Refer to Appendix for Details



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7.5 Radiated Emissions (9kHz-30MHz)

Test Requirement	47 CFR Part 15, Subpart C 15.225(d) & 15.209
Test Method:	ANSI C63.10 (2013) Section 6.4&6.5
Measurement Distance:	3m

Limit:

Frequency(MHz)	Field strength	Limit	Detector	Measurement Distance
	(microvolts/meter)	(dBuV/m)	Detector	(meters)
0.009-0.490	2400/F(kHz)	-	-	300
0.490-1.705	24000/F(kHz)	-	-	30
1.705-30	30	-	-	30

Below 30MHz

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):

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

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

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

Remark:

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

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

Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor



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$$FS_{\text{limit}} = FS_{\text{max}} - 40 \log \left(\frac{d_{\text{limit}}}{d_{\text{measure}}}\right)$$

where

FS_{limit}	is the calculation of field strength at the limit distance, expressed in $dB\mu V/m$
FS_{max}	is the measured field strength, expressed in dBµV/m
d_{measure}	is the distance of the measurement point from the EUT
d_{limit}	is the reference distance or the distance of the $\lambda/2\pi$ point

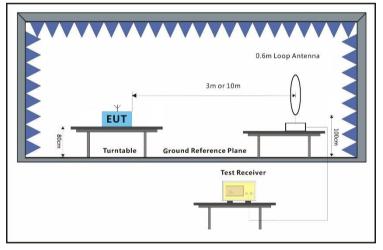
7.5.1 E.U.T. Operation

Operating Enviror	nment:					
Temperature:	23.3 °C	Humidity:	45.2 % RH	Atmospheric Pressure:	1010	mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	01	TX mode with modulation

7.5.3 Test Setup Diagram



7.5.4 Measurement Procedure and Data

For testing performed with the loop antenna, the center of the loop was positioned 1 m above the ground and positioned with its plane vertical at the specified distance from the EUT. During testing the loop was rotated about its vertical axis for maximum response at each azimuth and also investigated with the loop positioned in the horizontal plane. Only the worst position of vertical was shown in the report.

Please Refer to Appendix for Details



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7.6 Radiated Emissions (30MHz-1GHz)

Test Requirement	47 CFR Part 15, Subpart C 15.225(d) & 15.209
Test Method:	ANSI C63.10 (2013) Section 6.4&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 except for the frequency bands above 1000 MHz. Radiated emission limits in these three bands (9-90kHz,110-490kHz and Above 1GHz) 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.

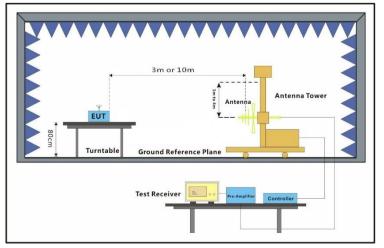
7.6.1 E.U.T. Operation

Operating Environment:Temperature:23.3 °CHumidity:45.2 % RHAtmospheric Pressure:1010mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description	
Final test	01	TX mode with modulation	

7.6.3 Test Setup Diagram





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7.6.4 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 meter semi-anechoic chamber. 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 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. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report. Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Please Refer to Appendix for Details



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8 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2407001379AT

9 EUT Constructional Details (EUT Photos)

Refer to Appendix - Photographs of EUT Constructional Details for KSCR2407001379AT



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10 Appendix

10.1 20dB Bandwidth

20dB bandwidth (kHz)	F∟ (MHz)	F∟ (MHz) F _H (MHz)		Result	
0.263	13.5593	13.5595	13.110 – 14.010	Pass	

Test plot as follows:

Spect	rum										(₩
Ref L	evel 🕴	34.00 0			🔵 RBW 10 Hz						
Att		1	OdB SWT:	189.6 ms	🔵 VBW 30 Hz	Mo	de Auto FF	Г			
∋1Pk M	ах										
80 dBµ\	v——						D3[1]				-0.08 dE
											262.580 H
70 dBµ	v——						M1[1]			10.550	37.47 dBµ\ 250920 MH:
			ма				1	1		10.009	200920 MH
60 dBh	/										
		- /									
50 dBµʻ											
40 dBµʻ		мź									
40 upp	vD	1 37.4	90 dBµV								
30 d8p	74				_						
	-										
20 dBµ ^v	∕——							~			_
											\rightarrow
10 dBµ՝	v——										
0 dBµV∙											
10 JD.											
-10 dBµ											
CF 13.	56 M⊦	lz			3001	pts	· · · · · · · · · · · · · · · · · · ·	I		S	pan 2.0 kHz
Marker											
Туре	Ref		X-valu		Y-value		Function		Fun	ction Resu	lt
M1		1	13.559250		37.47 dBµ						
M2 D3	M1	1	13.559381	.54 MHZ 2.58 Hz	57.49 dBµ -0.08 c						
			20	2,30 12	0.00 (



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10.2 99% Bandwidth

	99% bar	bandwidth (kHz) FL (MH				<u>z</u>)	F _H	(MHz)		Limit(MHz)			Result
	(0.269 13.5593 13.5595 13.110 – 14.01								4.010		Pass	
	Test plot as follows:												
S	Spectrum 🕎												
F • 7	Ref Level Att	74.00 dBµ 10 d		VT 18	9.6 ms =	RBW VBW		Mode Au	ito FFT				
01	Pk Max												
70	dBµV							M	1[1]				I3.48 dBµV
60	dBµV——							0	cc Bw				84210 MHz 585471 Hz
	dBµV	M:											
40	dвµV—		\frown										
30	dBµV	<u></u>	$ \rightarrow $	T 2									
20	dвµ∨	/		Y									
-10	dBpV				~~~~			~~				\langle	
0 (∄ВµV———										<u> </u>		
-1) dвµV					-							
-21) dвµV——												
CF	- 13.56 MF	lz	I				3001 p	ts	I			Spa	in 2.0 kHz
Ma	rker												
<u> </u>	ype Ref			value		Y-Ve		Func	tion		Functior	n Result	
	M1 T1	1	13.55 13.559		1 MHz		48 dBµV 21 dBµV		cc Bw			260 242	585471 Hz
	T2		13.559 13.559				21 авру 02 dBµV					209,243	505471 HZ
)[]) Me	asuring			•



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10.3 Frequency tolerance

Nominal Operation Frequency: 13.56MHz

Test Co	nditions	Test Result	Deviation	Limit	Desult
Temp (℃)	Volt (V AC)	(MHz)	(kHz)	(kHz)	Result
Tnom (-20)	Vnom (120)	13.5606	0.6		Pass
Tnom (-10)	Vnom (120)	13.56.08	0.8		Pass
Tnom (0)	Vnom (120)	13.5605	0.5		Pass
Tnom (10)	Vnom (120)	13.5608	0.8		Pass
Tnom (20)	Vnom (120)	13.5603	0.3	±0.01%	Pass
Tnom (30)	Vnom (120)	13.5601	0.1	(1.3560kHz)	Pass
Tnom (40)	Vnom (120)	13.5602	0.2		Pass
Tnom (50)	Vnom (120)	13.5600	0.0		Pass
Tnom (20)	Vmin (102)	13.5604	0.4		Pass
(20)	Vmax (138)	13.5602	0.2		Pass

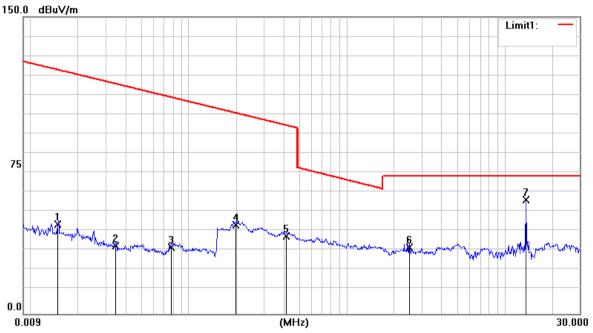
Note: Deviation (kHz) = (Test Result-13.56MHz)*1000



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10.4 Radiated Emissions(9kHz-30MHz)

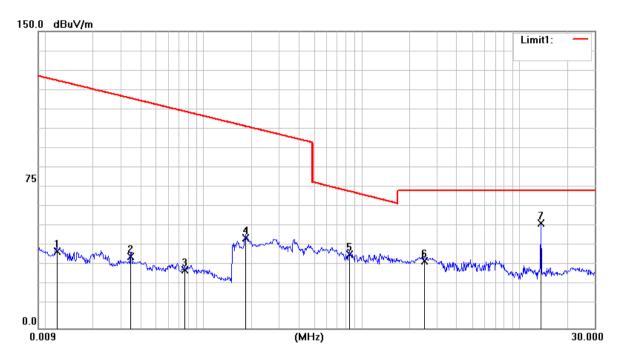


Item	Freq.	Read Level	Correct Factor	Result Level@3 m	Result Level@S PEC	Limit Line@SP EC	Over Limit	Detector	Polarity
(Mark)	(MHz)	(dBµV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)		
1	0.0150	25.14	19.92	45.06	-34.94	43.2	-78.14	QP	Coaxial
2	0.0345	14.48	19.97	34.45	-45.55	36.18	-81.73	QP	Coaxial
3	0.0777	13.42	20.09	33.51	-46.49	29.33	-75.82	QP	Coaxial
4	0.1985	24.38	20.30	44.68	-35.32	21.42	-56.74	QP	Coaxial
5	0.4127	18.80	20.29	39.09	-40.91	15.25	-56.16	QP	Coaxial
6	2.4868	13.21	20.21	33.42	-6.58	29.50	-36.08	QP	Coaxial
7	13.6227	37.93	19.80	57.73	17.73	84.00	-66.27	Peak	Coaxial



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Item	Freq.	Read Level	Correct Factor	Result Level@3 m	Result Level@S PEC	Limit Line@SP EC	Over Limit	Detector	Polarity
(Mark)	(MHz)	(dBµV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)		
1	0.0120	18.79	19.91	38.70	-41.3	45.08	-86.38	QP	Coplanar
2	0.0345	16.10	19.97	36.07	-43.93	36.18	-80.11	QP	Coplanar
3	0.0758	9.27	20.09	29.36	-50.64	29.54	-80.18	QP	Coplanar
4	0.1854	25.13	20.30	45.43	-34.57	22.00	-56.57	QP	Coplanar
5	0.8346	17.05	20.27	37.32	-2.68	29.19	-31.87	QP	Coplanar
6	2.5000	13.70	20.21	33.91	-6.09	29.50	-35.59	QP	Coplanar
7	13.6227	33.14	19.80	52.94	12.94	84.00	-71.06	Peak	Coplanar

Note: SPEC represents the limit of the distance 3m converts to the standard.



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10.5 Below 1GHz

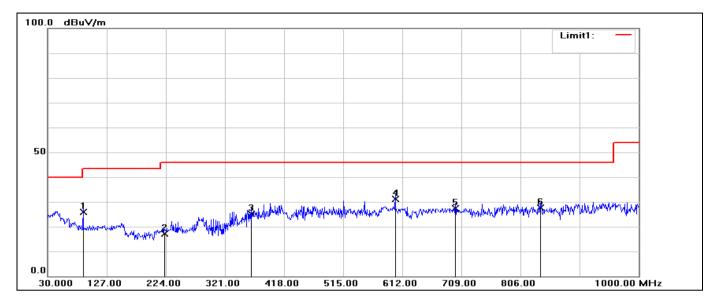


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark	Polarity
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		
1	233.7000	11.02	13.28	24.30	46.00	-21.70	QP	Coaxial
2	363.6800	6.69	17.14	23.83	46.00	-22.17	QP	Coaxial
3	576.1100	2.97	22.44	25.41	46.00	-20.59	QP	Coaxial
4	600.3600	4.73	22.82	27.55	46.00	-18.45	QP	Coaxial
5	742.9500	29.99	2.42	32.41	46.00	-13.59	QP	Coaxial
6	850.6200	27.11	2.15	29.26	46.00	-16.74	QP	Coaxial



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No.	Frequency	Reading Correct		Result	Limit	Margin	Remark	Polarity
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		
1	88.2000	14.60	11.38	25.98	43.50	-17.52	QP	Coplanar
2	222.0600	4.53	12.71	17.24	46.00	-28.76	QP	Coplanar
3	363.6800	8.08	17.14	25.22	46.00	-20.78	QP	Coplanar
4	600.3600	8.21	22.82	31.03	46.00	-14.97	QP	Coplanar
5	699.3000	24.95	2.48	27.43	46.00	-18.57	QP	Coplanar
6	838.9800	25.35	2.17	27.52	46.00	-18.48	QP	Coplanar

- End of the Report -