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TEST REPORT

Test Result :	PASS *
Date of Issue:	2023/08/25
Date of Test:	2023/08/08 to 2023/08/22
Date of Receipt:	2023/07/31
Standards:	FCC 47 CFR Part 15, Subpart C 15.225
FCC ID:	2AFZZRA50G
Trade Mark:	Redmi
Model No.:	2312DRA50G
EUT Description:	Mobile Phone
Address of Manufacturer:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
Manufacturer:	Xiaomi Communications Co., Ltd.
Address of Applicant:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
Applicant:	Xiaomi Communications Co., Ltd.
Application No.:	SEWM2307000261RG

* In the configuration tested, the EUT detailed in this report complied with the standards specified above.

Authorized Signature:

1 veli

Well Wei Wireless Laboratory Manager



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1 Version

Revision Record						
Version	Chapter	Modifier	Remark			
01		2023/08/25		Original		

Prepared By	(Ives Cheng) / Test Engineer
Checked By	Stone Ju (Stone Gu) / Reviewer



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2 Test Summary

Test Item	FCC Rules No.	Test Method	Test Result	Result
Antenna Requirement	15.203		Clause 4.1	PASS
AC Power Line Conducted Emission	15.207 ANSI C63.10-20 Section 6.2		Clause 4.2	PASS
20dB Spectrum Bandwidth	15.215(c)	ANSI C63.10-2020 Section 6.9.2	Clause 4.3	PASS
Frequency Stability	15.225(e)	ANSI C63.10-2020 Section 6.8	Clause 4.4	PASS
Field Strength of Fundamental Emissions	15.225(a)(b)(c)	ANSI C63.10-2020 Section 6.4.7	Clause 4.5	PASS
Radiated Spurious Emissions	15.225(d)/15.209	ANSI C63.10-2020 Section 6.4/6.5	Clause 4.6	PASS



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3 General Information

3.1 Details of Client

Applicant:	Xiaomi Communications Co., Ltd.
Address of Applicant:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085
Manufacturer:	Xiaomi Communications Co., Ltd.
Address of Manufacturer:	#019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085

3.2 Test Location

Company:	SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.
Address:	South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone
Post code:	215000
Test engineer:	Ives Cheng, King-p Li

3.3 Test Facility

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

A2LA (Certificate No. 6336.01)

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 6336.01.

Innovation, Science and Economic Development Canada

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0120.

IC#: 27594.

• FCC – Designation Number: CN1312

SGS-CSTC STANDARDS TECHNICAL SERVICES (SUZHOU) CO., LTD. has been recognized as an accredited testing laboratory.

Designation Number: CN1312.

Test Firm Registration Number: 717327



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EUT Description: Mobile Phone Model No.: 2312DRA50G Trade Mark: Redmi P2 Hardware Version: Software Version: **MIUI 14** Power Supply: Lithium Battery (3.91V) **RF** Conducted 860949060030548 IMEI: IMEI1: 860949060031322 **RSE & AC power line** IMEI2: 860949060031330 **Operation Frequency:** 13.56MHz Type A, B and F NFC Type: Remark: the EUT has been pre-scanned in NFC Type A, B and F. the worst type(Type F) was recorded in this report if no others remark in the test items. Modulation Type: ASK Antenna Type: Coil antenna Remark: As above information is provided and confirmed by the applicant. SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

3.4 General Description of EUT



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3.5 Test Environment

Environment Parameter	101.0 kPa Selected Values During Tests				
Relative Humidity	44-46 % RH Ambient				
Value	Temperature(°C) Voltage(Vdc)				
NTNV	22~23	3.91			
Remark: The extreme Voltage and extreme Temperature are refer to the test data of Frequency Stability.					

3.6 Description of Support Units

The EUT has been tested as an independent unit.



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4 Test results and Measurement Data

4.1 Antenna Requirement

Standard requirement: 47 CFR Part 15C Section 15.203

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 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.

The antenna of the EUT are permanently attached.

4.2 Worst-case configuration and mode

The fundamental of the EUT was investigated under three orthogonal orientations X, Y, and Z. The Z orientation was determined to be the worst-case orientation.

In addition, Type A, B and F at each supported data rate and with/without a tag were investigated to determine the worst case based on the highest power and spurious emissions. Type F, 106Kbps without tag was determined to be the worst case and therefore Type B, 106Kbps without tag was selected for all final tests.

Although these tests were performed ther than open area test site, adequate comparison measurements were confirmed against 30m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site prduces results that correlate with the ones of tests made in an ope field based on KDB 414788.



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4.3 AC Power Line Conducted Emissions

SC

Test Requirement:	47 CFR Part 15C Section 15.207					
Test Method:	ANSI C63.10-2020 Section 6.2					
Test Frequency Range:	150kHz to 30MHz					
Limit:		Limit (d	lBuV)			
	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 log	arithm of the frequency.				
Test Procedure:	 * Decreases with the logarithm of the frequency. 1) The mains terminal disturbance voltage test was conducted in a room. 2) The EUT was connected to AC power source through a LISN 1 (Impedance Stabilization Network) which provides a 50Ω/50µH impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground plane in the same way as the LISN 1 for the unit being measure multiple socket outlet strip was used to connect multiple power single LISN provided the rating of the LISN was not exceeded. 3) The tabletop EUT was placed upon a non-metallic table 0.8m at ground reference plane. And for floor-standing arrangement, the placed on the horizontal ground reference plane. 4) The test was performed with a vertical ground reference plane. The EUT shall be 0.4 m from the vertical ground reference plane vertical ground reference plane was bonded to the horizontal gr reference plane. The LISN 1 was placed 0.8 m from the boundary unit under test and bonded to a ground reference plane. This distance was the closest points of the LISN 1 and the EUT. All other units of 1 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 					



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Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission



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Data											
NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBµV]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Reading [dBµV]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Verdict
1	0.1545	11.83	26.18	38.01	65.75	27.74	15.41	27.24	55.75	28.51	PASS
2	0.3570	11.61	16.75	28.36	58.80	30.44	4.66	16.27	48.80	32.53	PASS
3	0.6450	11.65	17.23	28.88	56.00	27.12	5.81	17.46	46.00	28.54	PASS
4	2.0445	11.73	11.57	23.30	56.00	32.70	2.42	14.15	46.00	31.85	PASS
5	6.8145	11.88	8.87	20.75	60.00	39.25	3.00	14.88	50.00	35.12	PASS
6	13.5600	11.91	45.24	57.15	-	-	45.68	57.59	-	-	PASS
Rema	ſk:										

1. The following Quasi-Peak and Average measurements were performed on the EUT:

2. Value =Reading[dBµV] + Factor(Lisn factor[dB] + cable loss[dB]).

3. Margin = Limit[$dB\mu V$] – Value[$dB\mu V$]



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	20 10 150k QF	 Limit Detector 	AV Limit - P AV Detector	1M	Fre	quency[Hz]		10	М	30	A DM
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Data Li	20 10 0 150k - QF ist	P Limit —	AV Limit P AV Detector	K QP	Fre	quency[Hz]	AV	AV	AV	30	A DM
Data Li	ist Frequency	P Limit Detector Factor	AV Limit - P AV Detector	K QP Value	Fre QP Limit	quency[Hz]	AV Reading	AV Value	M AV Limit	au AV Margin	Verdia
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Data Li NO.	ist Frequency [MHz] 0.1770	Plimit Detector [dB] 11.73	AV Limit P AV Detector QP Reading [dBµV] 27.06	K QP Value [dBµV] 38.79	QP Limit [dBµV] 64.63	QP Margin [dB] 25.84	AV Reading [dBµV] 22.15	AV Value [dBµV] 33.88	AV Limit [dBµV] 54.63	AV Margin [dB] 20.75	Verdic
Data Li NO.	ist 0.1770 0.3075	Factor [dB] 11.73 11.63	AV Limit P AV Detector QP Reading [dBµV] 27.06 15.54	QP Value [dBµV] 38.79 27.17	Pre QP Limit [dBµV] 64.63 60.04	QP Margin [dB] 25.84 32.87	AV Reading [dBµV] 22.15 4.96	AV Value [dBµV] 33.88 16.59	ΑV Limit [dBμV] 54.63 50.04	AV Margin [dB] 20.75 33.45	Verdia
Data Li NO.	20 10 150k GF ist Frequency [MHz] 0.1770 0.3075 0.6405	Factor [dB] 11.73 11.63 11.65	AV Limit AV Detector QP Reading [dBµV] 27.06 15.54 17.22	QP Value [dBµV] 38.79 27.17 28.87	Fre QP Limit [dBµV] 64.63 60.04 56.00	QP Margin [dB] 25.84 32.87 27.13	AV Reading [dBμV] 22.15 4.96 5.23	AV Value [dBµV] 33.88 16.59 16.88	AV Limit [dBμV] 54.63 50.04 46.00	AV Margin [dB] 20.75 33.45 29.12	Verdic PASS PASS PASS
Data Li NO.	20 10 10 150k arr arr arr arr arr arr arr	Factor [dB] 11.73 11.63 11.65 11.73	AV Limit AV Detector QP Reading [dBµV] 27.06 15.54 17.22 11.66	QP Value [dBμV] 38.79 27.17 28.87 23.39	Pre QP Limit [dBµV] 64.63 60.04 56.00 56.00	QP Margin [dB] 25.84 32.87 27.13 32.61	ΑV Reading [dBμV] 22.15 4.96 5.23 3.27	AV Value [dBµV] 33.88 16.59 16.88 15.00	AV Limit [dBµV] 54.63 50.04 46.00 46.00	AV Margin [dB] 20.75 33.45 29.12 31.00	Verdic PASS PASS PASS PASS
Data Li NO. 1 2 3 4 5	20 10 10 150k GF ist Frequency [MHz] 0.1770 0.3075 0.6405 2.1300 7.8000	Factor [dB] 11.73 11.63 11.65 11.73 11.90	AV Limit AV Detector QP Reading [dBµV] 27.06 15.54 17.22 11.66 7.41	QP Value [dBμV] 38.79 27.17 28.87 23.39 19.31	Pre QP Limit [dBµV] 64.63 60.04 56.00 56.00 60.00	QP Margin [dB] 25.84 32.87 27.13 32.61 40.69	AV Reading [dBµV] 22.15 4.96 5.23 3.27 1.83	AV Value [dBµV] 33.88 16.59 16.88 15.00 13.73	AV Limit [dBμV] 54.63 50.04 46.00 46.00 50.00	AV Margin [dB] 20.75 33.45 29.12 31.00 36.27	Verdic PASS PASS PASS PASS PASS

2. Value =Reading[dBµV] + Factor(Lisn factor[dB] + cable loss[dB]).

3. Margin = Limit[dBµV] – Value[dBµV]



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4.4 20dB Spectrum Bandwidth



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Test Requirement: 47 CFR Part 15C Section 15.225(e) Test Method: ANSI C63.10-2020 Section 6.8 Test Setup: SGS Test system 0 PC 000 -Unit 0 0 9 0 E.U.T Temperature Humidity Chamber \cap DC Pow Ţ **Ground Reference Plane** Instruments Used: Refer to section 6 for details The frequency tolerance of the carrier signal shall be maintained within +/-Limit: 0.01% (100ppm) of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery. While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made. Test Results: Pass The detailed test data see: Appendix

4.5 Frequency Stability



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4.6 Field Strength of Fundamental Emissions

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Test Requirement:	47 CFR Part 15C Section 15.225									
Test Method:	ANSI C63.10-2020 Section 6.4.7									
Test Site:	Measurement Distance:	Measurement Distance: 3m (Semi-Anechoic Chamber)								
Limit:	Frequency	Field Strength (dBµV/m) at 3m								
	1.705~13.110 MHz	30	29.5	48.58	69.5					
	13.110-13.410 MHz	106	40.5	59.58	80.5					
	13.410-13.553 MHz	334	50.5	69.58	90.5					
	13.553-13.567 MHz	15,848	84.0	103.08	124.0					
	13.567-13.710 MHz	334	50.5	69.58	90.5					
	13.710-14.010 MHz	106	40.5	59.58	80.5					
	14.010~30.000 MHz	30	29.5	48.58	69.5					
Test Setup:	14.0 10~30.000 MITZ 30 29.3 48.38 69.5									
Test Procedure:	 a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic camber. 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 									



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	0					
	f. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, And found the Z axis positioning which it is worse case.					
	g. Repeat above procedures until all requencies measured was complete.					
	h. RBW set to 9kHz.					
Exploratory Test	Transmitting with modulation.					
Mode:	Charge + Transmitting mode.					
Final Test Mode:	Transmitting with modulation. Pretest the EUT at Charge + Transmitting mode.Only the worst case is recorded in					
	the report.					
Instruments Used:	Refer to section 6 for details					
Test Results:	Pass					
The detailed test data	see: Appendix					



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4.7 Radiated Spurious Emissions

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Test Requirement:	47 CFR Part 15C Section 15.209 and 15.225								
Test Method:	ANSI C63.10-2020 Section 6.4&6.5								
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)								
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)				
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300				
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30				
	1.705MHz-30MHz	30	-	-	30				
	30MHz-88MHz	100	40.0	Quasi-peak	3				
	88MHz-216MHz	150	43.5	Quasi-peak	3				
	216MHz-960MHz	200	46.0	Quasi-peak	3				
	Above 960MHz	500	54.0	Quasi-peak	3				
	employing a CISPR qua 110-490kHz and above based on measurements any emission shall not e by more than 20 dB und	si-peak detector ex 1000 MHz. Radiate s employing an ave xceed the maximu er any condition of	above table scept for the ed emission erage detect m permitted	are based on n frequency ban limits in these or, the peak fie average limits	ds 9-90kHz, three bands are d strength of specified above				
Test Setup:									
Test Rec	Antenna 3m = ound Reterorce Plane		E EUT (Turntable) Grox Test Rece	Antenna 3m and Reference Plane	Antenna Tower				
Fig	ure 1. Below 30MHz		Figure 2.	Above 30MHz	<u>:</u>				
Test Procedure:	est Procedure: i. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. j. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. k. 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.								



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	 the antenna was tuned to heights from of below 30MHz, the antenna was to table was turned from 0 degrees to m. The test-receiver system was set to Bandwidth with Maximum Hold Moc n. The radiation measurements are performed to the procedures until all from the table and the table and the table was the table was turned from table was table was turned from table was turned from table was turned from table was table w	om 1 meter to uned to height 360 degrees to Peak Detect F le. erformed in X, ' z axis positioni requencies me	4 meters(for the test frequency is 1 meter) and the rotatable o find the maximum reading. Function and Specified Y, Z axis positioning for ing which it is worse case. easured was complete.
Exploratory Test Mode:	Transmitting with modulation. Charge + Transmitting mode.		
Final Test Mode:	Transmitting with modulation. Pretest the EUT at Charge + Transmitt the report.	ting mode.Only	y the worst case is recorded in
Instruments Used:	Refer to section 6 for details		
Test Results:	Pass		
The detailed test data	see: Appendix		



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Measurement Uncertainty (95% confidence levels, k=2) 5

No.	Item	Measurement Uncertainty
1	Radio Frequency	±1.0 %
2	Occupied Bandwidth	±1.0 %
3	Conduction Emission	± 2.90dB (150kHz to 30MHz)
4	Dedicted Emission	± 3.13dB (9k -30MHz)
4	Radiated Emission	± 4.8dB (30M -1GHz)
Remark:		

S

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.



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6 Equipment List

RF Test Equipment										
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy/mm/dd)	Cal.Due date (yyyy/mm/dd)					
Shielding Room	Brilliant-emc	N/A	SUWI-04-01-06	2021/05/08	2024/05/07					
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-07	2023/02/06	2024/02/05					
Measurement Software	Tonscend	JS1120-3 Test System V 3.3.20	SUWI-02-09-09	NCR	NCR					
Signal Analyzer	ROHDE& SCHWARZ	FSW43	SUWI-01-02-04	2023/05/11	2024/05/10					
Temperature Chamber	ESPEC	SU-242	SUWI-01-13-01	2023/02/06	2024/02/05					
Wideband Radio Communication Tester	ROHDE&SCHWARZ	CMW500	SUWI-01-16-05	2023/02/06	2024/02/05					
DC Power Supply	HYELEC	HY3005B	SUWI-01-18-01	2023/02/06	2024/02/05					
Power meter	Anritsu	ML2495A	SUWI-01-31-01	2022/11/23	2023/11/22					
Pulse power sensor	Anritsu	MA2411B	SUWI-01-32-01	2022/11/23	2023/11/22					
MXG Vector signal genitor	KEYSIGHT	N5182B	SUWI-01-38-01	2023/02/06	2024/02/05					
Signal Generator	ROHDE&SCHWARZ	SMM100A	SN:101716	2023/02/22	2024/02/21					



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	Con	duction Test	Equipment		
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. date (yyyy/mm/dd)	Cal.Due date (yyyy/mm/dd)
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	2023/02/08	2024/02/07
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-06	2023/02/07	2024/02/06
Artificial network	ROHDE&SCHWARZ	ENV216	SUWI-01-19-03	2023/02/08	2024/02/07
Artificial network	ROHDE&SCHWARZ	ENV216	SUWI-01-19-04	2023/02/08	2024/02/07
Measurement Software	Tonscend	JS32-CE V4.0.0.2	SUWI-02-09-05	NCR	NCR

RE Test System										
Equipment	pment Manufacturer Model No. Inventory No. Cal Date Cal Du (yyyy/mm/dd) (yyyy/r									
Semi-Anechoic Chamber	Brilliant-emc	N/A	SUWI-04-02-01	2021/05/08	2024/05/07					
Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-05	2023/02/07	2024/02/06					
Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	2023/02/08	2024/02/07					
Receiving antenna	SCHWRZBECK MESS- ELEKTRONIK	VULB 9163	SUWI-01-11-01	2023/05/13	2024/05/12					
Active Loop Antenna	SCHWRZBECK MESS- ELEKTRONIK	FMZB 1519B	SUWI-01-21-01	2023/05/13	2024/05/12					
Amplifier	Tonscend	TAP9K3G40	SUWI-01-14-01	2023/02/06	2024/02/05					
Measurement Software	Tonscend	JS32-RE 4.0.0.0	SUWI-02-09-04	NCR	NCR					



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7 Photographs - Setup Photos

Refer to Appendix A.4 NFC Setup Photos.



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Appendix



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Note:

Because the measured signal is CW or CW-like adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.



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Frequency tolerance

Declared Frequency (MHz) 13.56					13.56N	ЛНz		
	Startup							
Temperature (°C)	Voltage(Vdc)	N Fre	/leasurement equency(MHz)	Frequ Toleran	ency ce (%)	Limit (%)	Result	
50			13.55993	0.00	05		Pass	
40			13.55993	0.00	05		Pass	
30			13.55996	0.00	03	.0.01	Pass	
20	2.01		13.55996	0.00	03		Pass	
10	5.91		13.55995	0.00	04		Pass	
0			13.55993	0.00	05	±0.01	Pass	
-10			13.55993	0.00	05		Pass	
-20			13.55996	0.00	03		Pass	
00	4.35		13.55995	0.00	04		Pass	
20	3.50		13.55995	0.00	04		Pass	

Declared Fre	equency (MHz)			13.56	MHz			
2mins								
Temperature (°C)	Voltage(Vdc)	N Fre	/leasurement equency(MHz)	Frequency Tolerance (%)	Limit (%)	Result		
50			13.55994	0.0004		Pass		
40			13.55993	0.0005		Pass		
30			13.55994	0.0004		Pass		
20	2.01		13.55996	0.0003		Pass		
10	5.91		13.55995	0.0004	+0.01	Pass		
0			13.55995	0.0004	±0.01	Pass		
-10			13.55993	0.0005		Pass		
-20			13.55996	0.0003		Pass		
20	4.35		13.55994	0.0004		Pass		
20	3.50		13.55995	0.0004		Pass		



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Declared Fre	equency (MHz)		13.56MHz						
5mins									
Temperature (°C)	Voltage(Vdc)	N Fr	/leasurement equency(MHz)	Frequency Tolerance (%)	Limit (%)	Result			
50			13.55993	0.0005		Pass			
40			13.55993	0.0005		Pass			
30			13.55994	0.0004	-	Pass			
20	2.01		13.55993	0.0005		Pass			
10	3.91		13.55995	0.0004	+0.01	Pass			
0		13.55994		0.0004	±0.01	Pass			
-10		13.55994		0.0004		Pass			
-20		13.55995		0.0004		Pass			
20	4.35	13.55993		0.0005		Pass			
20	3.50		13.55993	0.0005		Pass			

Declared Fre	equency (MHz)		13.56MHz							
10mins										
Temperature (°C)	Voltage(Vdc)	dc Measurement Frequency Frequency(MHz) Tolerance (%) Limit (%)		Limit (%)	Result					
50			13.55995	0.0004		Pass				
40			13.55993	0.0005		Pass				
30			13.55994	0.0004		Pass				
20	2.01		13.55993	0.0005		Pass				
10	3.31		13.55995	0.0004	+0.01	Pass				
0			13.55993	0.0005	10.01	Pass				
-10			13.55994	0.0004		Pass				
-20			13.55995	0.0004		Pass				
20	4.35		13.55995	0.0004		Pass				
	3.50		13.55993	0.0005		Pass				



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Field Strength of Fundamental Emissions

NFC_Emission Mask(Type 2)

3. Factor=Cable loss.



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olarizatio	on: Ve	ertical								
140 130 120 110 90 (W/1 (b) 90 70 70 70 90 90 40 30 20 10 13	11M 13 OP Limit OP Detector	2M 132	ексинарцийн ЭМ 13.3 РК	IBM 13-4	17M 13.56M Frequency[H	13.65M z]	13.74M	13.83M	13.92M	14.01M
Data Li	st									
NO. F	requency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margir [dB]	Height [cm]	Angle [°]	Polarit
1	13.5599	34.72	19.80	0.69	55.21	124.00	68.79	100	170	Vertica
Remark: . The Qu . Value =	asi-Peak	measurem + Antenna	nents wer a Factor +	e perform - Factor.	ned on the I	EUT.		1	I	L



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Radiated Spurious Emissions



2. Value = Reading + Antenna Factor + Factor.

3. Factor=Cable loss.



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2. Value = Reading + Antenna Factor + Factor.

3. Factor=Cable loss.



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Polariz	ation:	Horizontal								
u u										
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	31.8785	35.20	18.13	-34.01	19.32	40.00	20.68	117	355	Horizontal
2	90.7581	41.63	14.75	-33.56	22.82	43.50	20.68	220	0	Horizontal
3	121.0046	36.33	17.38	-33.33	20.38	43.50	23.12	208	117	Horizontal
4	208.0612	38.30	15.65	-32.64	21.31	43.50	22.19	106	36	Horizontal
5	386.4816	29.04	20.90	-31.59	18.35	46.00	27.65	207	360	Horizontal
6	646.6868	24.64	25.72	-30.43	19.93	46.00	26.07	118	65	Horizontal
Remark 1. The (2. Final	Remark: 1. The Quasi-Peak measurements were performed on the EUT. 2. Final Value Level = Reading + Antenna Factor + Factor.									

NFC_RE(Type 2)

3. Factor=Cable loss – Preamplifier Factor.



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3. Factor=Cable loss – Preamplifier Factor.

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