

FCC RF Test Report

(NFC)

Applicant: SHENZHEN JESY TECHNOLOGY CO., LTD.

Address of Applicant: Room 201, Building M6, Sinosteel Science and Technology Park, Nanshan District, Shenzhen, Guangdong, China

Equipment Under Test (EUT)

Product Name: JESY Rugged Smartphone

Model No.: JESY J20

FCC ID: 2A649-JESYJ20

Applicable Standards: FCC CFR Title 47 Part 15C (§15.225)

Date of Sample Receipt: 25 Mar., 2022

Date of Test: 26 Mar., to 26 May, 2022

Date of Report Issue: 13 Jul., 2022

Test Result: PASS

Tested by:


Test Engineer

Date:

13 Jul., 2022

Reviewed by:


Project Engineer

Date:

13 Jul., 2022

Approved by:


Manager

Date:

13 Jul., 2022

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

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2 Version

Version No.	Date	Description
00	27 May, 2022	Original
01	13 Jul., 2022	Updated page18/19

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4 General Information

4.1 Client Information

Applicant:	SHENZHEN JESY TECHNOLOGY CO., LTD.
Address:	Room 201, Building M6, Sinosteel Science and Technology Park, Nanshan District, Shenzhen, Guangdong, China
Manufacturer/Factory:	SHENZHEN JESY TECHNOLOGY CO., LTD.
Address:	Room 201, Building M6, Sinosteel Science and Technology Park, Nanshan District, Shenzhen, Guangdong, China

4.2 General Description of E.U.T.

Product Name:	JESY Rugged Smartphone
Model No.:	JESY J20
Operation Frequency:	13.56MHz
Channel Numbers:	1
Modulation Type:	ASK
Antenna Type:	Induction Coil Antenna
Power Supply:	Rechargeable Li-Polymer Battery DC3.85V, 6000mAh
AC Adapter:	Model: XY-PQ018U02 Input: AC100-240V, 50/60Hz, 0.5A Output: DC 5.0V, 3A, DC 9V, 2A, 12V, 1.5A
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

4.3 Test Mode and Environment

Test Mode:	
NFC Tx mode:	Keep the EUT in transmitting mode with modulation
<i>Remark: Pre-scan The EUT was placed on three different polar directions tested: i.e. X axis, Y axis, Z axis, and found Y axis was worse case, so the report only reflects the worse axis tested data.</i>	
Operating Environment:	
Temperature:	15°C ~ 35°C
Humidity:	20 % ~ 75 % RH
Atmospheric Pressure:	1010 mbar

4.4 Description of Support Units

N/A

4.5 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))
Conducted Emission for LISN (9kHz ~ 150kHz)	±3.11 dB
Conducted Emission for LISN (150kHz ~ 30MHz)	±2.62 dB
Radiated Emission (9kHz ~ 30MHz) (3m SAC)	±3.13 dB
Radiated Emission (30MHz ~ 1GHz) (3m SAC)	±4.45 dB
Radiated Emission (30MHz ~ 1GHz) (10m SAC)	±4.32 dB
<i>Note: All the measurement uncertainty value were shown with a coverage k=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.</i>	

4.6 Additions to, Deviations, or Exclusions From the Method

No

4.7 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations: ● FCC - Designation No.: CN1211 JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551. ● ISED – CAB identifier.: CN0021 The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1. ● CNAS - Registration No.: CNAS L15527 JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527. ● A2LA - Registration No.: 4346.01 This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf
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4.8 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd. Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China. Tel: +86-755-23118282, Fax: +86-755-23116366 Email: info-JYTee@lets.com, Website: http://jyt.lets.com

4.9 Test Instruments List

Radiated Emission(3m SAC):					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	ETS	9m*6m*6m	WXJ001-1	04-14-2021	04-13-2024
Loop Antenna	Schwarzbeck	FMZB 1519 B	WXJ002-4	03-07-2022	03-06-2023
BiConiLog Antenna	Schwarzbeck	VULB9163	WXJ002	03-08-2022	03-07-2023
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-2	03-08-2022	03-07-2023
Pre-amplifier (30MHz ~ 1GHz)	Schwarzbeck	BBV9743B	WXJ001-2	01-20-2022	01-19-2023
Pre-amplifier (1GHz ~ 18GHz)	SKET	LNPA_0118G-50	WXJ001-3	01-20-2022	01-19-2023
EMI Test Receiver	Rohde & Schwarz	ESRP7	WXJ003-1	03-05-2022	03-04-2023
Spectrum Analyzer	Rohde & Schwarz	FSP 30	WXJ004	01-20-2022	01-19-2023
Coaxial Cable (30MHz ~ 1GHz)	JYTSZ	JYT3M-1G-NN-8M	WXG001-4	01-20-2022	01-19-2023
Coaxial Cable (1GHz ~ 18GHz)	JYTSZ	JYT3M-18G-NN-8M	WXG001-5	01-20-2022	01-19-2023
Coaxial Cable (9kHz ~ 30MHz)	JYT	JYT3M-1G-BB-5M	WXG001-6	01-20-2022	01-19-2023
Band Reject Filter Group	Tonscend	JS0806-F	WXJ089	N/A	
Test Software	Tonscend	TS+	Version: 3.0.0.1		
EMI Test Software	AUDIX	E3	Version: 6.110919b		

Radiated Emission(10m SAC):					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
10m SAC	ETS	RFSD-100-F/A	WXJ090	04-28-2021	04-27-2024
BiConiLog Antenna	SCHWARZBECK	VULB 9168	WXJ090-1	04-02-2021	04-01-2022
				04-01-2022	03-31-2023
BiConiLog Antenna	SCHWARZBECK	VULB 9168	WXJ090-2	04-02-2021	04-01-2022
				03-31-2022	03-30-2023
EMI Test Receiver	R&S	ESR 3	WXJ090-3	04-08-2021	04-07-2022
				03-30-2022	03-29-2023
EMI Test Receiver	R&S	ESR 3	WXJ090-4	04-08-2021	04-07-2022
				03-30-2022	03-29-2023
Low Pre-amplifier	Bost	LNA 0920N	WXJ090-6	01-20-2022	01-19-2023
Low Pre-amplifier	Bost	LNA 0920N	WXJ090-7	01-20-2022	01-19-2023
Cable	Bost	JYT10M-1G-NN-10M	WXG002-7	01-20-2022	01-19-2023
Cable	Bost	JYT10M-1G-NN-10M	WXG002-8	01-20-2022	01-19-2023
Test Software	R&S	EMC32	Version: 10.50.40		

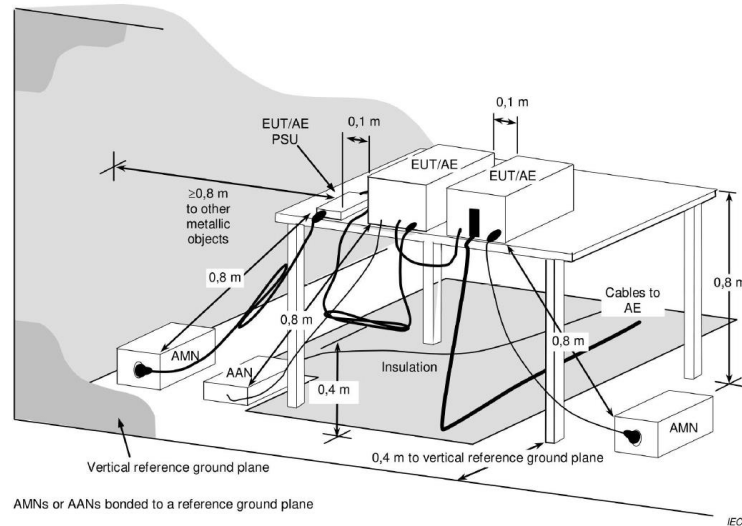
Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
EMI Test Receiver	Rohde & Schwarz	ESR3	WXJ003-2	10-21-2021	10-20-2022
LISN	Schwarzbeck	NSLK 8127	QCJ001-13	02-24-2022	02-23-2023
LISN	Rohde & Schwarz	ESH3-Z5	WXJ005-1	06-18-2020	06-17-2022
				03-30-2022	03-29-2023
LISN Coaxial Cable (9kHz ~ 30MHz)	JYTSZ	JYTCE-1G-NN-2M	WXG003-1	02-24-2022	02-23-2023
RF Switch	TOP PRECISION	RSU0301	WXG003	N/A	
Test Software	AUDIX	E3	Version: 6.110919b		

Conducted method:					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal.Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
EMI Test Receiver	Rohde & Schwarz	FSP 30	WXJ004	01-20-2022	01-19-2023

5 Measurement Setup and Procedure

5.1 Test Setup

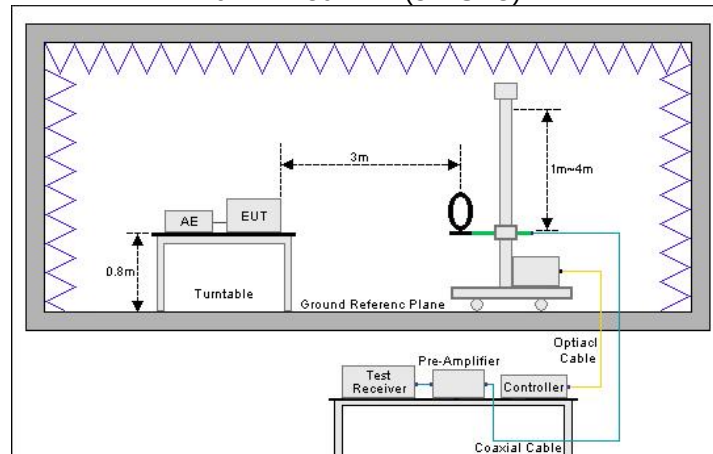
1) Conducted emission measurement:



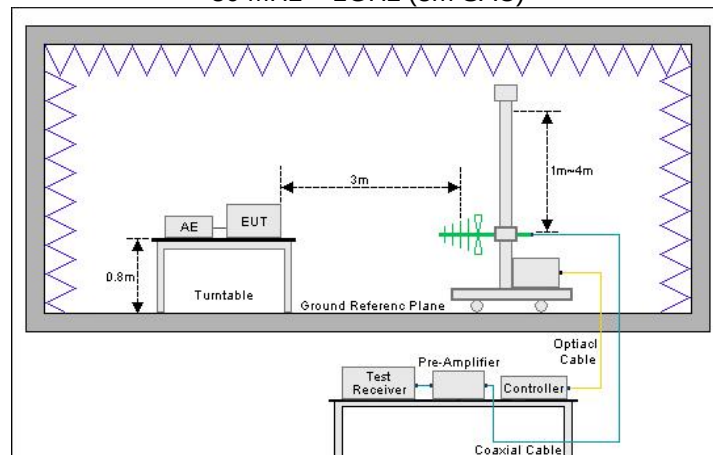
Note: The 0.8 m distance specified between EUT/AE/PSU and AMN/AAN, is applicable only to the EUT being measured. If the device is AE then it shall be >0.8 m.

2) Radiated emission measurement:

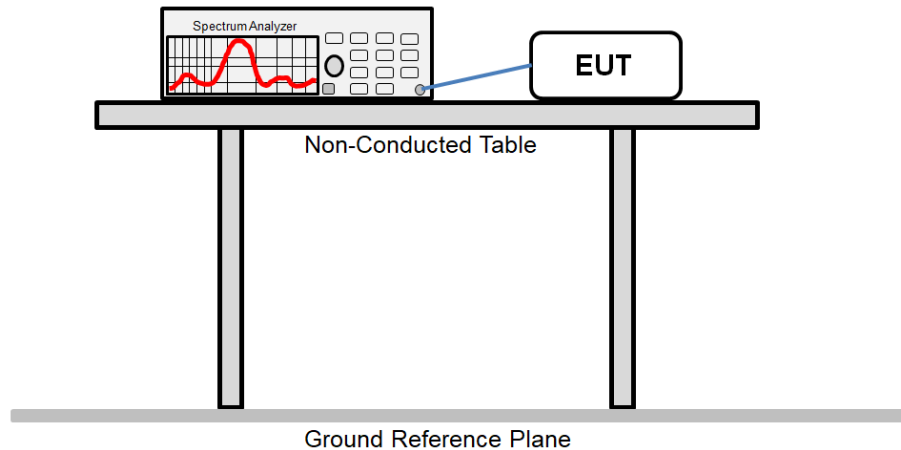
9kHz ~ 30 MHz (3m SAC)



30 MHz ~ 1GHz (3m SAC)



Conducted test method:



5.2 Test Procedure

Test method	Test step
Conducted emission	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. 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.
Radiated emission	1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m. 2. EUT works in each mode of operation that needs to be tested, and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. 3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.
Conducted test method	1. The antenna port of EUT was connected to the RF port of the spectrum analyzer through an RF cable. 2. The EUT is keeping in continuous transmission mode and tested in all modulation modes. 3. The test data is saved by the screenshot function of the spectrum analyzer.

6 Test Results

6.1 Summary

6.1.1 Clause and Data Summary

Test items	Standard clause	Test data	Result
Antenna Requirement	15.203	See Section 6.2	Pass
AC Power Line Conducted Emission	15.207	See Section 6.3	Pass
20dB Bandwidth	15.215(c)	See Section 6.4	Pass
Field Strength of Fundamental	15.225 (a)(b)(c)	See Section 6.5	Pass
Field Strength of Spurious Emissions	15.209 15.225 (d)	See Section 6.6	Pass
Frequency Tolerance	15.225 (e)	See Section 6.7	Pass
Remark: 1. Pass: The EUT complies with the essential requirements in the standard.			
Test Method:	ANSI C63.10-2013		

6.1.2 Test Limit

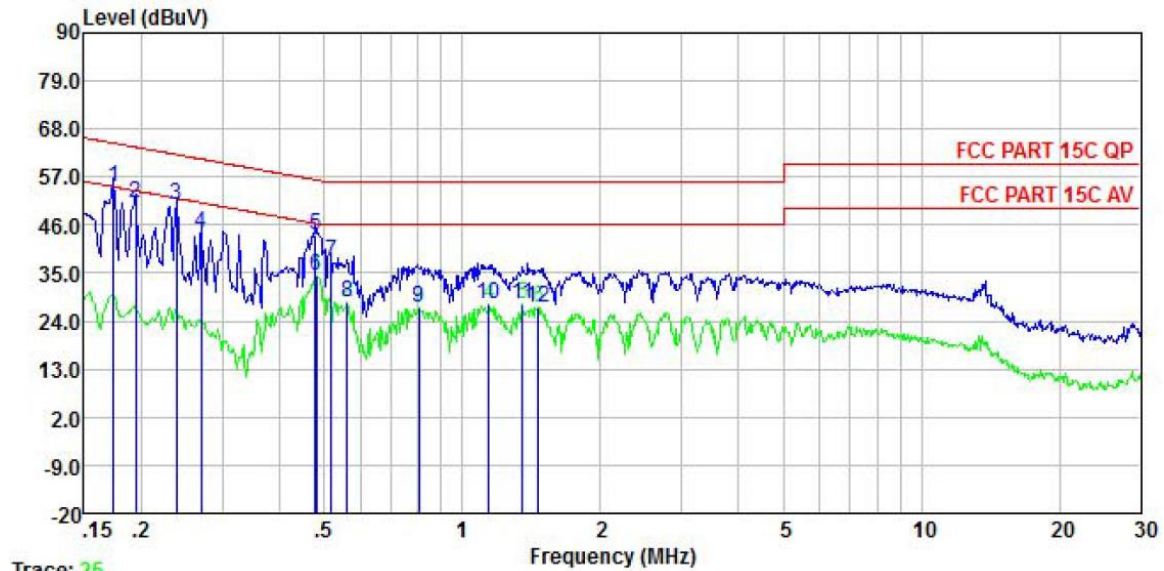
Items	Limit																								
AC Power Line Conducted Emission	<table><tr><th rowspan="2">Frequency (MHz)</th><th colspan="2">Limit (dBµV)</th></tr><tr><th>Quasi-Peak</th><th>Average</th></tr><tr><td>0.15 – 0.5</td><td>66 to 56 Note 1</td><td>56 to 46 Note 1</td></tr><tr><td>0.5 – 5</td><td>56</td><td>46</td></tr><tr><td>5 – 30</td><td>60</td><td>50</td></tr></table> Note 1: The limit level in dBµV decreases linearly with the logarithm of frequency. Note 2: The more stringent limit applies at transition frequencies.	Frequency (MHz)	Limit (dBµV)		Quasi-Peak	Average	0.15 – 0.5	66 to 56 Note 1	56 to 46 Note 1	0.5 – 5	56	46	5 – 30	60	50										
Frequency (MHz)	Limit (dBµV)																								
	Quasi-Peak	Average																							
0.15 – 0.5	66 to 56 Note 1	56 to 46 Note 1																							
0.5 – 5	56	46																							
5 – 30	60	50																							
20dB Bandwidth	N/A																								
Field Strength of Fundamental Field Strength of Spurious Emissions	(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. <table><tr><th>Frequency (MHz)</th><th>Field strength (microvolts/meter)</th><th>Measurement distance (meters)</th></tr><tr><td>0.009 – 0.490</td><td>2400/F (kHz)</td><td>300</td></tr><tr><td>0.490 – 1.705</td><td>24000/F (kHz)</td><td>30</td></tr><tr><td>1.705 – 30.0</td><td>30</td><td>30</td></tr><tr><td>30 – 88</td><td>100**</td><td>3</td></tr><tr><td>88 – 216</td><td>150**</td><td>3</td></tr><tr><td>216 – 960</td><td>200**</td><td>3</td></tr><tr><td>Above 960</td><td>500</td><td>3</td></tr></table> ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.	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	30 – 88	100**	3	88 – 216	150**	3	216 – 960	200**	3	Above 960	500	3
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																							
30 – 88	100**	3																							
88 – 216	150**	3																							
216 – 960	200**	3																							
Above 960	500	3																							
Frequency Tolerance	The frequency tolerance of the carrier signal shall be maintained within ±0.01% 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.																								

6.2 Antenna Requirement

Standard requirement:	FCC Part15 C 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, 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.
E.U.T Antenna:	The EUT make use of an induction coil antenna.

6.3 AC Power Line Conducted Emission

Product name:	JESY Rugged Smartphone	Product model:	JESY J20
Test by:	Mike	Test mode:	NFC TX mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz		

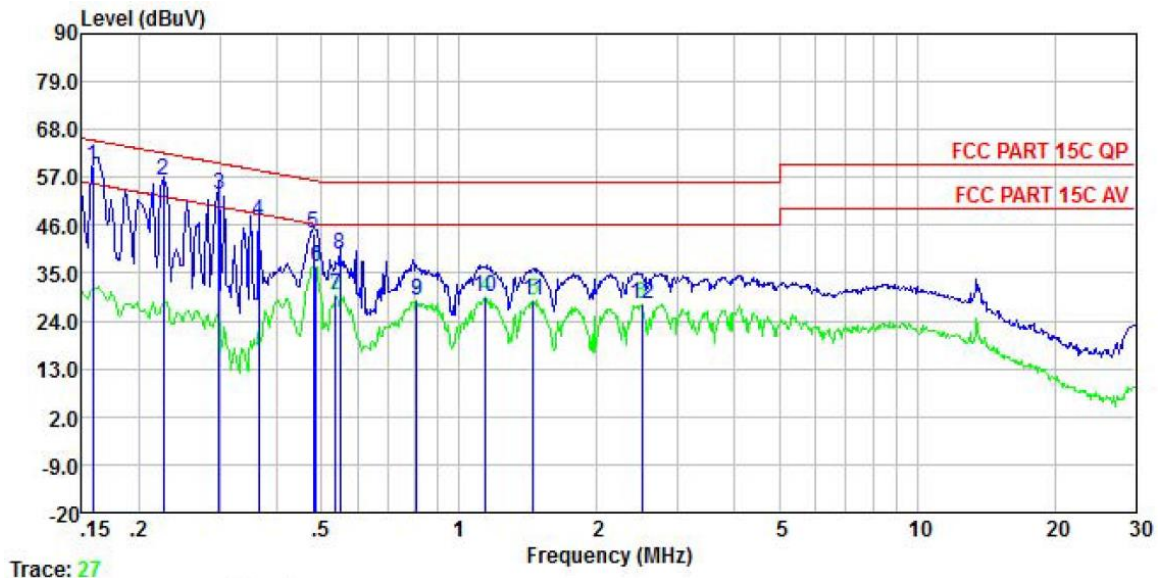


	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.174	54.52	0.04	0.01	54.57	64.77	-10.20	QP
2	0.194	51.00	0.04	0.03	51.07	63.84	-12.77	QP
3	0.238	50.37	0.04	0.02	50.43	62.17	-11.74	QP
4	0.270	44.20	0.04	0.02	44.26	61.12	-16.86	QP
5	0.479	43.66	0.04	0.03	43.73	56.36	-12.63	QP
6	0.481	34.18	0.04	0.03	34.25	46.32	-12.07	Average
7	0.518	37.45	0.04	0.03	37.52	56.00	-18.48	QP
8	0.561	28.22	0.04	0.02	28.28	46.00	-17.72	Average
9	0.804	26.98	0.04	0.03	27.05	46.00	-18.95	Average
10	1.141	27.71	0.05	0.08	27.84	46.00	-18.16	Average
11	1.352	27.80	0.06	0.12	27.98	46.00	-18.02	Average
12	1.464	26.88	0.06	0.14	27.08	46.00	-18.92	Average

Remark:

1. Level = Read level + LISN Factor + Cable Loss.

Product name:	JESY Rugged Smartphone	Product model:	JESY J20
Test by:	Mike	Test mode:	NFC TX mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz		



	Freq	Read	LISN	Cable	Level	Limit	Over	
	MHz	dBuV	Factor	Loss	dBuV	dBuV	dB	Remark
1	0.158	59.65	0.05	0.01	59.71	65.56	-5.85	QP
2	0.226	56.16	0.04	0.02	56.22	62.61	-6.39	QP
3	0.299	52.94	0.04	0.03	53.01	60.28	-7.27	QP
4	0.365	46.93	0.04	0.03	47.00	58.61	-11.61	QP
5	0.481	44.19	0.04	0.03	44.26	56.32	-12.06	QP
6	0.486	36.47	0.04	0.03	36.54	46.23	-9.69	Average
7	0.538	29.83	0.04	0.03	29.90	46.00	-16.10	Average
8	0.549	39.28	0.04	0.02	39.34	56.00	-16.66	QP
9	0.809	28.60	0.04	0.03	28.67	46.00	-17.33	Average
10	1.141	29.27	0.05	0.08	29.40	46.00	-16.60	Average
11	1.449	28.36	0.06	0.13	28.55	46.00	-17.45	Average
12	2.500	27.64	0.07	0.13	27.84	46.00	-18.16	Average

Remark:

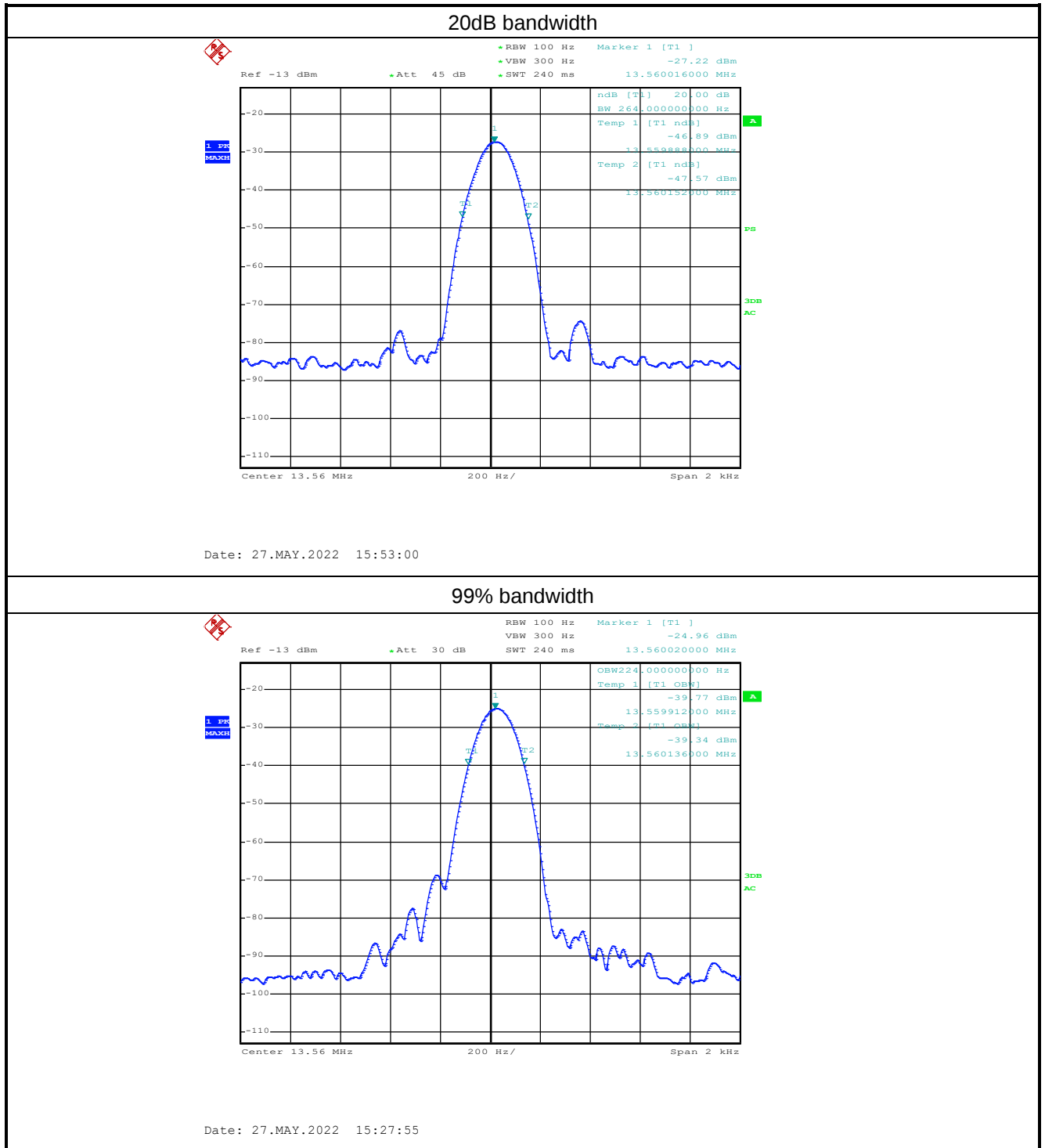
1. Level = Read level + LISN Factor + Cable Loss.

6.4 20dB Bandwidth

20dB bandwidth (kHz)	Limit (kHz)	Results
264	11.2	Passed
99% bandwidth (kHz)	Limit (kHz)	Results
224	11.2	Passed

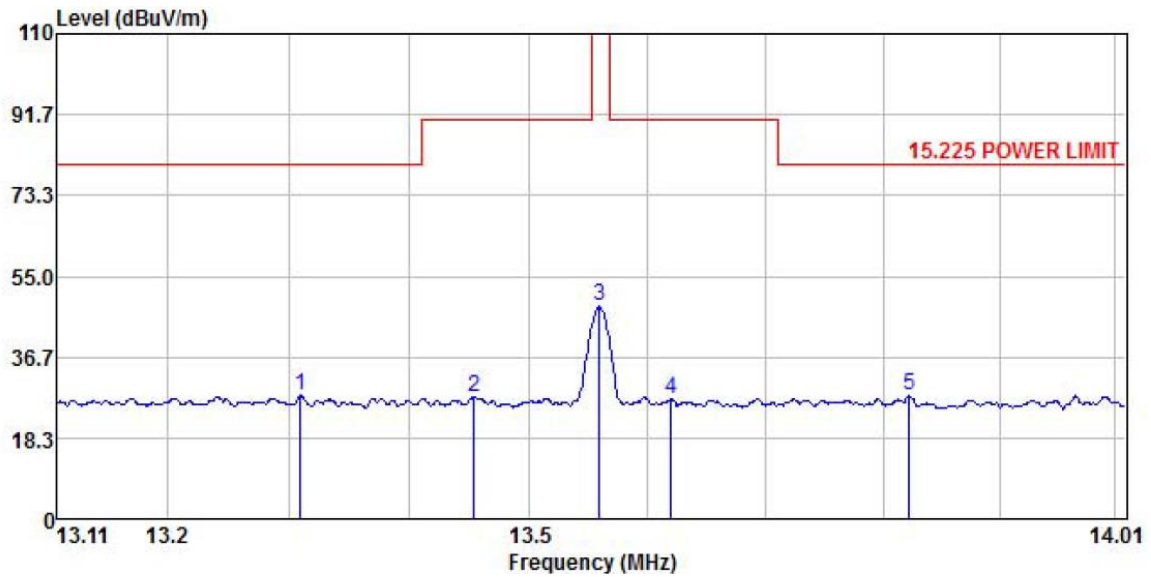
Note: For 13.56MHz, permitted Band is 14 kHz, so the Limit is 11.2 kHz.

Test plot as follows:



6.5 Field Strength of Fundamental

Product Name:	JESY Rugged Smartphone	Product Model:	JESY J20
Test By:	Mike	Test mode:	NFC Tx mode
Test Voltage:	DC 3.85V	Polarization:	Vertical

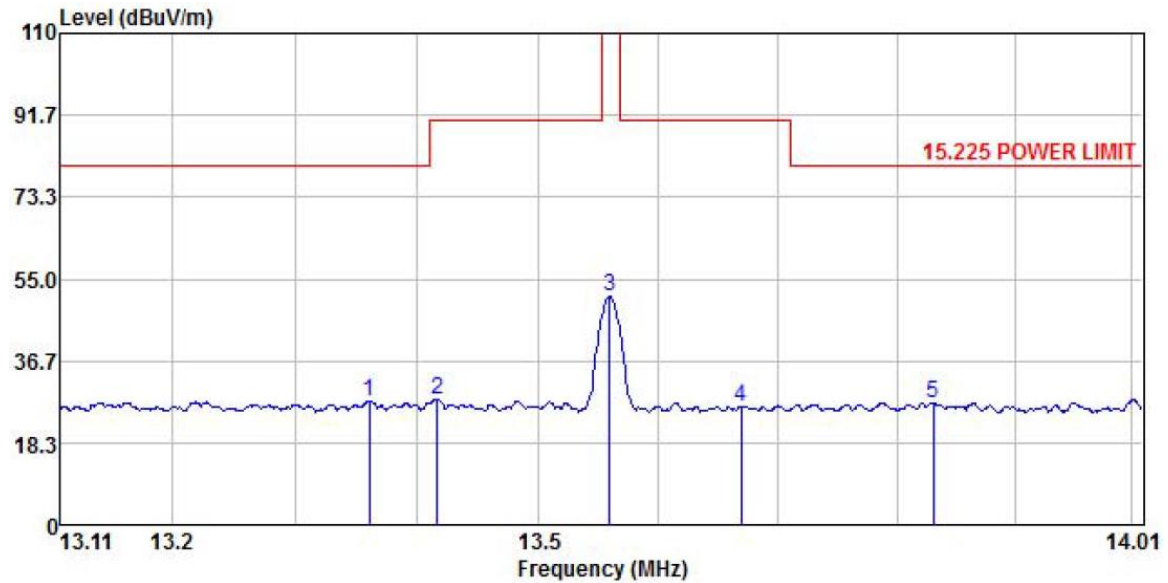


	Freq	Read	Antenna	Cable	Preamp	Level	Limit	Over	Remark
	MHz	Level	Factor	Loss	Factor	dBuV/m	dBuV/m	Limit	
		dBuV	dB/m	dB	dB			dB	
1	13.309	7.86	19.63	0.40	0.00	27.89	80.50	-52.61	
2	13.454	7.50	19.61	0.41	0.00	27.52	90.50	-62.98	
3	13.559	28.18	19.59	0.41	0.00	48.18	124.00	-75.82	
4	13.619	7.20	19.57	0.42	0.00	27.19	90.50	-63.31	
5	13.822	7.84	19.54	0.43	0.00	27.81	80.50	-52.69	

Remark:

1. Level = Read level + Antenna Factor + Cable Loss – Preamplifier Factor.

Product Name:	JESY Rugged Smartphone	Product Model:	JESY J20
Test By:	Mike	Test mode:	NFC Tx mode
Test Voltage:	DC 3.85V	Polarization:	Horizontal



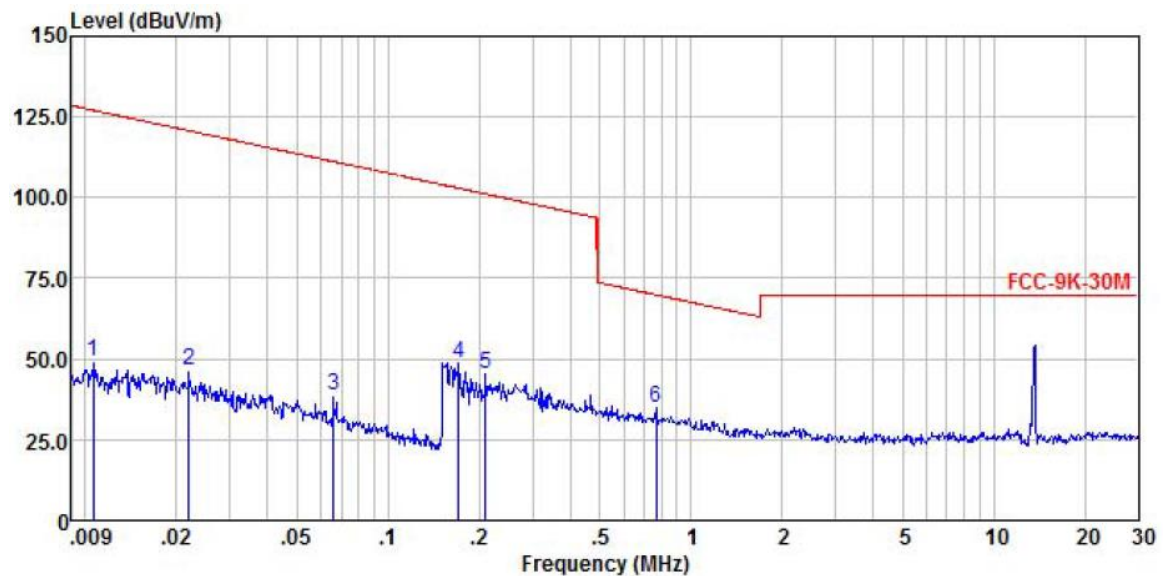
	Freq	Read	Antenna	Cable	Preamp	Level	Limit	Over	Remark
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	13.360	7.64	19.63	0.40	0.00	27.67	80.50	-52.83	
2	13.416	7.98	19.61	0.41	0.00	28.00	90.50	-62.50	
3	13.559	31.22	19.59	0.41	0.00	51.22	124.00	-72.78	
4	13.669	6.59	19.57	0.42	0.00	26.58	90.50	-63.92	
5	13.831	7.39	19.52	0.43	0.00	27.34	80.50	-53.16	

Remark:

1. Level = Read level + Antenna Factor + Cable Loss – Preamplifier Factor.

6.6 Field Strength of Spurious Emissions

Product Name:	JESY Rugged Smartphone	Product Model:	JESY J20
Test By:	Mike	Test mode:	NFC Tx mode
Test Frequency:	90 kHz – 30 MHz	Polarization:	Coxial
Test Voltage:	DC 3.85V		

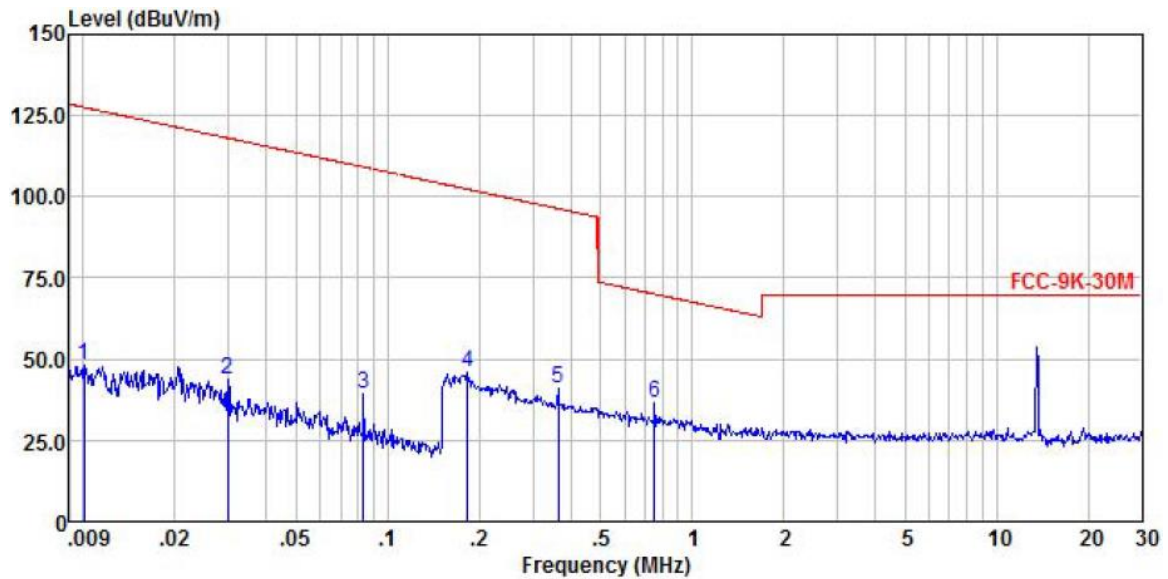


	Freq	Read	Antenna	Cable	Preamp	Level	Limit	Over	
	MHz	Level	Factor	Loss	Factor	dBuV/m	dBuV/m	Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	0.011	28.93	20.48	0.01	0.00	49.42	127.09	-77.67	Peak
2	0.022	26.10	20.28	0.01	0.00	46.39	120.75	-74.36	Peak
3	0.066	18.17	20.52	0.02	0.00	38.71	111.17	-72.46	Peak
4	0.171	28.62	20.26	0.03	0.00	48.91	102.96	-54.05	Peak
5	0.209	24.80	20.37	0.04	0.00	45.21	101.20	-55.99	Peak
6	0.767	14.34	20.62	0.09	0.00	35.05	69.92	-34.87	Peak

Remark:

1. Level = Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of 9 kHz~150 kHz are background noise and very lower than the limit, so not show in test report.

Product Name:	JESY Rugged Smartphone	Product Model:	JESY J20
Test By:	Mike	Test mode:	NFC Tx mode
Test Frequency:	90 kHz – 30 MHz	Polarization:	Coplanar
Test Voltage:	DC 3.85V		

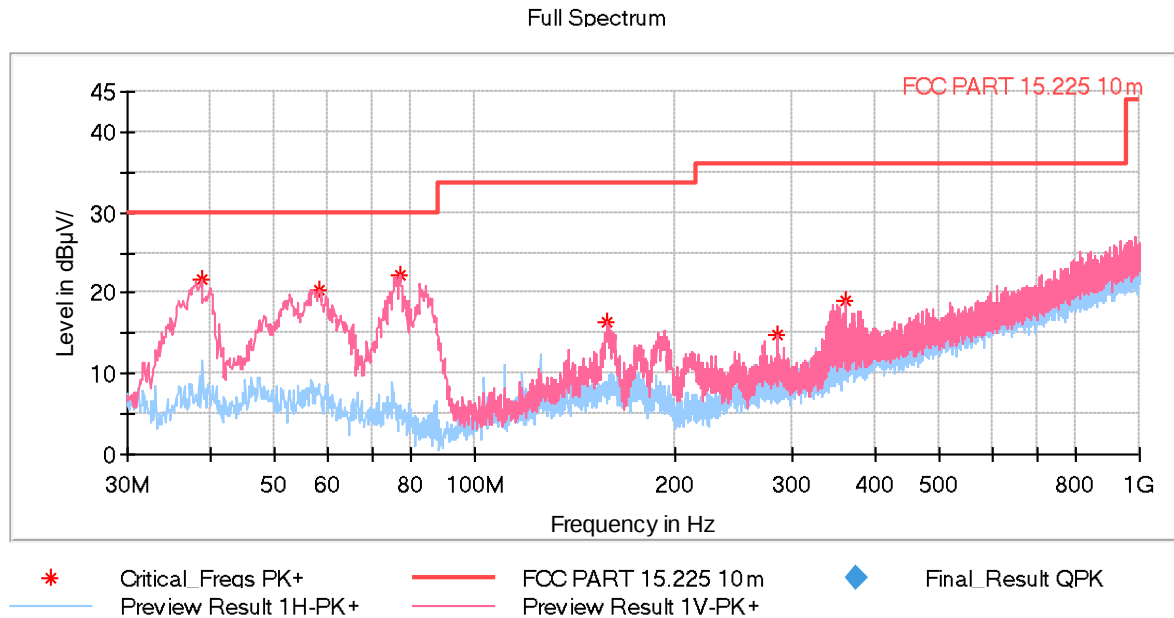


	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit	Over	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	0.010	27.49	20.50	0.01	0.00	48.00	127.51	-79.51	QP
2	0.030	23.30	20.20	0.01	0.00	43.51	118.07	-74.56	QP
3	0.083	18.55	20.64	0.02	0.00	39.21	109.19	-69.98	QP
4	0.182	25.33	20.30	0.04	0.00	45.67	102.40	-56.73	QP
5	0.364	20.35	20.64	0.06	0.00	41.05	96.40	-55.35	QP
6	0.755	15.85	20.62	0.09	0.00	36.56	70.06	-33.50	QP

Remark:

1. Level = Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of 9 kHz~150 kHz are background noise and very lower than the limit, so not show in test report.

Product Name:	JESY Rugged Smartphone	Product Model:	JESY J20
Test By:	Mike	Test mode:	NFC Tx mode
Test Frequency:	30 MHz – 1000 MHz	Polarization:	Vertical & Horizontal
Test Voltage:	DC 3.85V		



Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
38.730000	21.77	30.00	8.23	100.0	V	78.0	-15.9
58.421000	20.50	30.00	9.50	100.0	V	148.0	-16.2
76.948000	22.32	30.00	7.68	100.0	V	17.0	-19.6
157.846000	16.54	33.50	16.96	100.0	V	120.0	-15.4
285.886000	14.85	36.00	21.15	100.0	V	95.0	-14.3
360.576000	19.08	36.00	16.92	100.0	V	107.0	-12.4

Remark:

1. Level = Read level + Factor(Antenna Factor + Cable Loss – Preamplifier Factor).

6.7 Frequency Tolerance

Frequency Stability V.S. Temperature Measurement:

Voltage (Vdc)	Temperature (°C)	Frequency Tolerance (kHz)	Frequency Error (%)	Limit (%)	Results
3.85	-20	0.016	0.00012	±0.01	Pass
	-10	0.011	0.00008	±0.01	Pass
	0	0.013	0.00010	±0.01	Pass
	+10	0.012	0.00009	±0.01	Pass
	+20	0.015	0.00011	±0.01	Pass
	+30	0.014	0.00010	±0.01	Pass
	+40	0.013	0.00010	±0.01	Pass
	+50	0.012	0.00009	±0.01	Pass

Frequency Stability V.S. Voltage Measurement:

Temperature (°C)	Voltage (Vdc)	Frequency Tolerance (kHz)	Frequency Error (%)	Limit (%)	Results
25.0	3.85	0.008	0.00006	±0.01	Pass
	3.5	0.011	0.00008	±0.01	Pass
	4.4	0.014	0.00010	±0.01	Pass

-----End of report-----