

FCC RF Test Report

(NFC)

Applicant: Shen Zhen Conquest Communication Equipment Co., Ltd.

Address of Applicant: 2nd Floor, Building B, Yong xiang Street East on the 17th, Bantian Street, Longgang District, Shen Zhen, Guangdong, China

Equipment Under Test (EUT)

Product Name: 5G digital mobile phone

Model No.: conquest-S20

Trade Mark: CONQUEST

FCC ID: 2AWTK-S20

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

Date of Sample Receipt: 09 Mar., 2022

Date of Test: 10 Mar., to 17 Apr., 2022

Date of Report Issue: 26 Apr., 2022

Test Result: PASS

Tested by:

Mike Ou
Test Engineer

Date:

26 Apr., 2022

Reviewed by:

Wenxian Zhao
Project Engineer
检验检测专用章

Date:

26 Apr., 2022

Approved by:

Yiwei Zhang
Manager

Date:

26 Apr., 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.

This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

2 Version

Version No.	Date	Description
00	18 Apr., 2022	<i>Original</i>
01	26 Apr., 2022	<i>Updated page 17 test data</i>

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4 General Information

4.1 Client Information

Applicant:	Shen Zhen Conquest Communication Equipment Co., Ltd.
Address:	2nd Floor, Building B, Yong xiang Street East on the 17th, Bantian Street, Longgang District, Shen Zhen, Guangdong, China
Manufacturer/Factory:	Shen Zhen Conquest Communication Equipment Co., Ltd.
Address:	2nd Floor, Building B, Yong xiang Street East on the 17th, Bantian Street, Longgang District, Shen Zhen, Guangdong, China

4.2 General Description of E.U.T.

Product Name:	5G digital mobile phone
Model No.:	conquest-S20
Operation Frequency:	13.56MHz
Channel Numbers:	1
Modulation Type:	ASK
Antenna Type:	Induction Coil Antenna
Power Supply:	Rechargeable Li-ion Polymer Battery DC3.85V, 8000mAh
AC Adapter:	Model: HJ-FC001K7-US Input: AC100-240V, 50/60Hz, 0.6A Output: DC 5.0V, 3.0A or 9.0V, 2.0A or 12.0V, 1.5A
Wireless Charger:	Input: DC 12.0V, 2.0A or 9.0V, 2.0A or 5.0V, 2A Output: 15W/ 10W/ 7.5W/ 5W
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

4.3 Test Mode and Environment

Test Mode:	
Transmitting 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

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
N/A	N/A	N/A	N/A	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) (10m SAC)	±4.32 dB

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.

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>

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	01-19-2021	01-18-2024
BiConiLog Antenna	Schwarzbeck	VULB9163	WXJ002	02-17-2022	02-16-2023
Loop Antenna	Schwarzbeck	FMZB 1519 B	WXJ002-4	02-17-2022	02-16-2023
Pre-amplifier (30MHz ~ 1GHz)	Schwarzbeck	BBV9743B	WXG001-7	02-17-2022	02-16-2023
EMI Test Receiver	Rohde & Schwarz	ESRP7	WXJ003-1	02-17-2022	02-16-2023
Coaxial Cable (30MHz ~ 1GHz)	JYTSZ	JYT3M-1G-NN-8M	WXG001-4	02-17-2022	02-16-2023
Coaxial Cable (9kHz ~ 30MHz)	JYT	JYT3M-1G-BB-5M	WXG001-6	02-17-2022	02-16-2023
Band Reject Filter Group	Tonscend	JS0806-F	WXJ089	N/C	
Test Software	Tonscend	TS+	Version: 3.0.0.1		

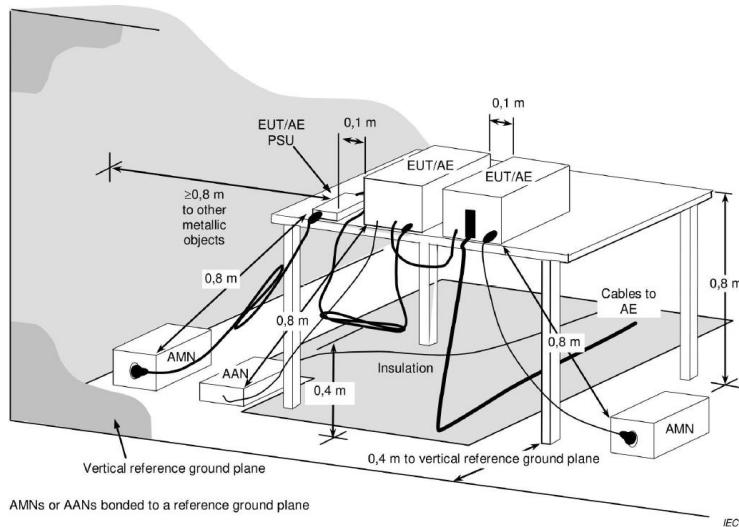
Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal.Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
EMI Test Receiver	Rohde & Schwarz	ESCI 3	WXJ003	02-17-2022	02-16-2023
LISN	Rohde & Schwarz	ENV432	WXJ005-2	02-17-2022	02-16-2023
LISN	Rohde & Schwarz	ESH3-Z5	WXJ005-1	06-18-2021	06-17-2022
LISN Coaxial Cable (9kHz ~ 30MHz)	JYTSZ	JYTCE-1G-NN-2M	WXG003-1	02-17-2022	02-16-2023
RF Switch	TOP PRECISION	RSU0301	WXG003	N/C	
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)
Spectrum Analyzer	KEYSIGHT	N9010B	WXJ004-2	11-27-2021	11-26-2022

5 Measurement Setup and Procedure

5.1 Test Setup

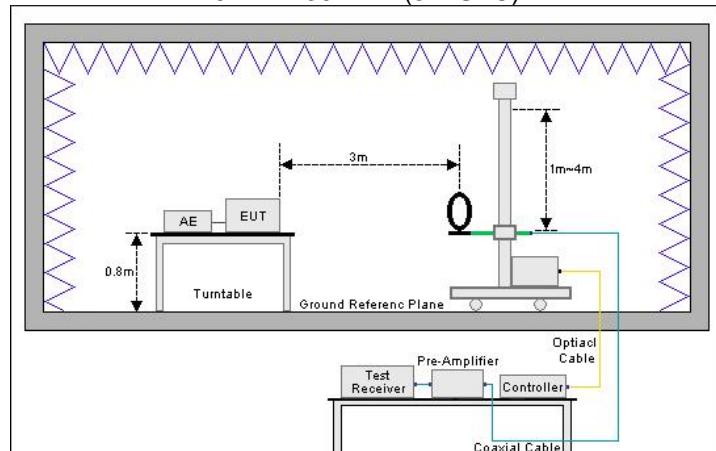
1) Conducted emission measurement:



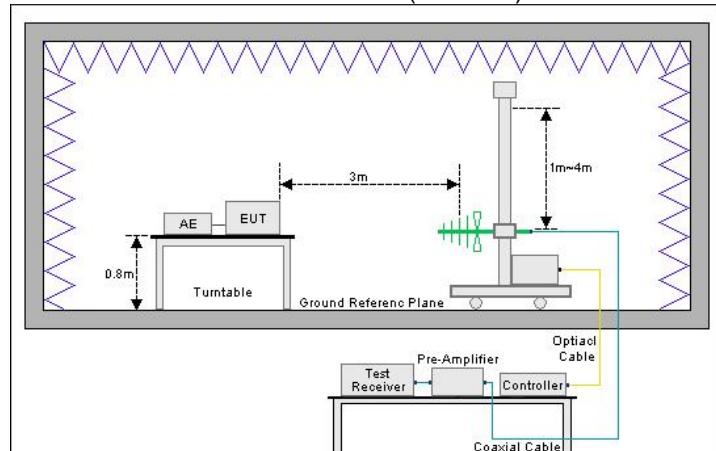
Note: The 0.8 m distance specified between EUT/AE/PSU and AMN/AAN, is applicable only to the EUT being measured. If the device is AE then it shall be >0.8 m.

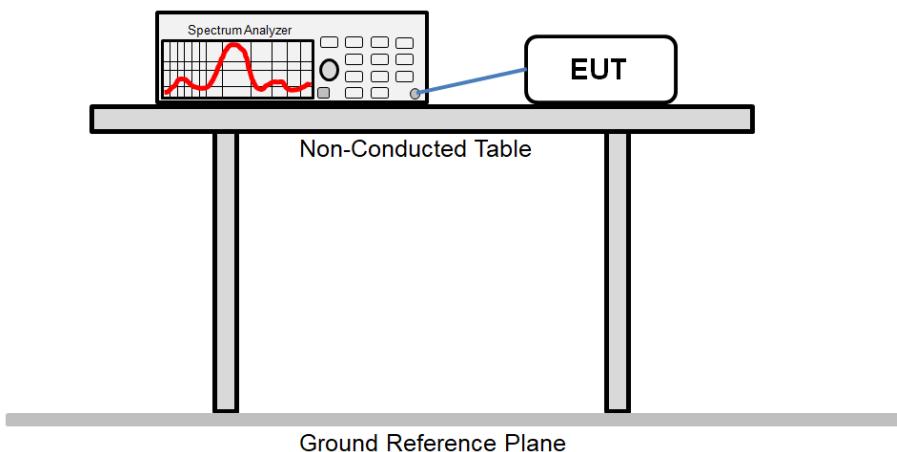
2) Radiated emission measurement:

9kHz ~ 30 MHz (3m SAC)



30 MHz ~ 1GHz (3m SAC)



Conducted test method:**5.2 Test Procedure**

Test method	Test step
Conducted emission	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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. 2. N/A: Not Applicable.			
Test Method:	ANSI C63.4-2014 ANSI C63.10-2013		

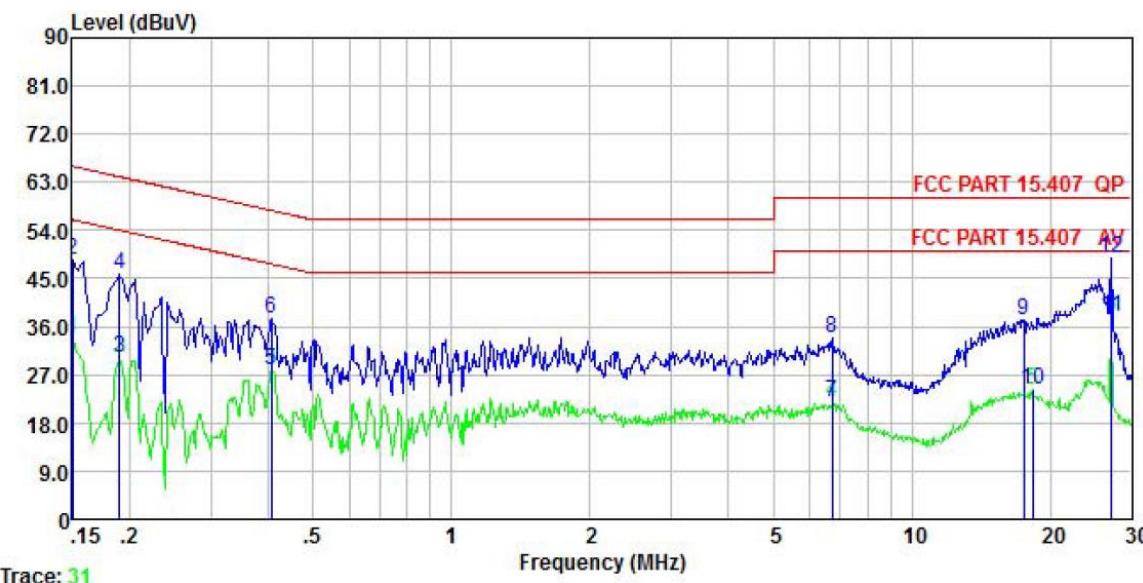
6.1.2 Test Limit

Items	Limit																										
AC Power Line Conducted Emission	Frequency (MHz)	Limit (dB μ V)																									
	0.15 – 0.5	Quasi-Peak	Average																								
	0.5 – 5	56	46																								
	5 – 30	60	50																								
<p>Note 1: The limit level in dBμV decreases linearly with the logarithm of frequency.</p> <p>Note 2: The more stringent limit applies at transition frequencies.</p>																											
20dB Bandwidth	N/A																										
Field Strength of Fundamental	<p>(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.</p> <p>(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.</p> <p>(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.</p> <p>(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.</p>																										
Field Strength of Spurious Emissions	<table border="1"> <thead> <tr> <th>Frequency (MHz)</th> <th>Field strength (microvolts/meter)</th> <th>Measurement distance (meters)</th> </tr> </thead> <tbody> <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> </tbody> </table> <p>** 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.</p>			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)																									
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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 $\pm 0.01\%$ 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.																										

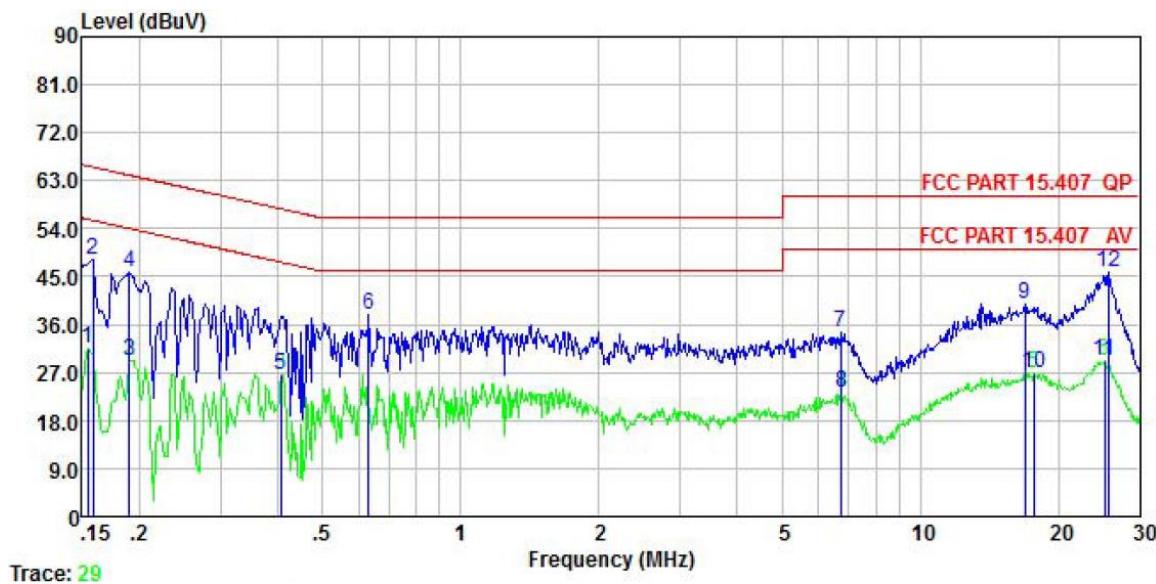
6.2 Antenna Requirement

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:	5G digital mobile phone		Product model:	conquest-S20																																																																																																																	
Test by:	Mike		Test mode:	NFC mode																																																																																																																	
Test frequency:	150 kHz ~ 30 MHz		Phase:	Line																																																																																																																	
Test voltage:	AC 120 V/60 Hz																																																																																																																				
 <p>Level (dBuV)</p> <p>Frequency (MHz)</p> <p>Trace: 31</p>																																																																																																																					
<table border="1"> <thead> <tr> <th>Freq</th> <th>Read Level</th> <th>LISN Factor</th> <th>Cable Loss</th> <th>Level</th> <th>Limit Line</th> <th>Over Limit</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>MHz</td> <td>dBuV</td> <td>dB</td> <td>dB</td> <td>dBuV</td> <td>dBuV</td> <td>dB</td> <td></td> </tr> <tr> <td>1</td> <td>0.150</td> <td>33.96</td> <td>0.04</td> <td>0.01</td> <td>34.01</td> <td>56.00</td> <td>-21.99 Average</td> </tr> <tr> <td>2</td> <td>0.150</td> <td>48.59</td> <td>0.04</td> <td>0.01</td> <td>48.64</td> <td>66.00</td> <td>-17.36 QP</td> </tr> <tr> <td>3</td> <td>0.190</td> <td>30.07</td> <td>0.04</td> <td>0.03</td> <td>30.14</td> <td>54.02</td> <td>-23.88 Average</td> </tr> <tr> <td>4</td> <td>0.190</td> <td>45.70</td> <td>0.04</td> <td>0.03</td> <td>45.77</td> <td>64.02</td> <td>-18.25 QP</td> </tr> <tr> <td>5</td> <td>0.406</td> <td>27.83</td> <td>0.04</td> <td>0.04</td> <td>27.91</td> <td>47.73</td> <td>-19.82 Average</td> </tr> <tr> <td>6</td> <td>0.406</td> <td>37.36</td> <td>0.04</td> <td>0.04</td> <td>37.44</td> <td>57.73</td> <td>-20.29 QP</td> </tr> <tr> <td>7</td> <td>6.698</td> <td>21.62</td> <td>0.15</td> <td>0.10</td> <td>21.87</td> <td>50.00</td> <td>-28.13 Average</td> </tr> <tr> <td>8</td> <td>6.698</td> <td>33.61</td> <td>0.15</td> <td>0.10</td> <td>33.86</td> <td>60.00</td> <td>-26.14 QP</td> </tr> <tr> <td>9</td> <td>17.475</td> <td>36.83</td> <td>0.30</td> <td>0.15</td> <td>37.28</td> <td>60.00</td> <td>-22.72 QP</td> </tr> <tr> <td>10</td> <td>18.328</td> <td>23.70</td> <td>0.30</td> <td>0.15</td> <td>24.15</td> <td>50.00</td> <td>-25.85 Average</td> </tr> <tr> <td>11</td> <td>27.127</td> <td>37.26</td> <td>0.38</td> <td>0.20</td> <td>37.84</td> <td>50.00</td> <td>-12.16 Average</td> </tr> <tr> <td>12</td> <td>27.127</td> <td>48.21</td> <td>0.38</td> <td>0.20</td> <td>48.79</td> <td>60.00</td> <td>-11.21 QP</td> </tr> </tbody> </table>						Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	MHz	dBuV	dB	dB	dBuV	dBuV	dB		1	0.150	33.96	0.04	0.01	34.01	56.00	-21.99 Average	2	0.150	48.59	0.04	0.01	48.64	66.00	-17.36 QP	3	0.190	30.07	0.04	0.03	30.14	54.02	-23.88 Average	4	0.190	45.70	0.04	0.03	45.77	64.02	-18.25 QP	5	0.406	27.83	0.04	0.04	27.91	47.73	-19.82 Average	6	0.406	37.36	0.04	0.04	37.44	57.73	-20.29 QP	7	6.698	21.62	0.15	0.10	21.87	50.00	-28.13 Average	8	6.698	33.61	0.15	0.10	33.86	60.00	-26.14 QP	9	17.475	36.83	0.30	0.15	37.28	60.00	-22.72 QP	10	18.328	23.70	0.30	0.15	24.15	50.00	-25.85 Average	11	27.127	37.26	0.38	0.20	37.84	50.00	-12.16 Average	12	27.127	48.21	0.38	0.20	48.79	60.00	-11.21 QP
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<p>Remark:</p> <p>1. Level = Read level + LISN Factor + Cable Loss.</p>																																																																																																																					

Product name:	5G digital mobile phone	Product model:	conquest-S20
Test by:	Mike	Test mode:	NFC mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz		



Freq	Read	LISN	Cable	Limit	Over	Line	Limit	Remark
	Level	Factor	Loss					
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.154	31.63	0.05	0.01	31.69	55.78	-24.09	Average
2	0.158	48.18	0.05	0.01	48.24	65.56	-17.32	QP
3	0.190	29.17	0.04	0.03	29.24	54.02	-24.78	Average
4	0.190	45.72	0.04	0.03	45.79	64.02	-18.23	QP
5	0.406	26.48	0.04	0.04	26.56	47.73	-21.17	Average
6	0.630	37.67	0.04	0.02	37.73	56.00	-18.27	QP
7	6.698	34.31	0.13	0.10	34.54	60.00	-25.46	QP
8	6.733	23.05	0.14	0.10	23.29	50.00	-26.71	Average
9	16.928	39.53	0.27	0.16	39.96	60.00	-20.04	QP
10	17.661	26.48	0.28	0.15	26.91	50.00	-23.09	Average
11	25.188	28.71	0.36	0.19	29.26	50.00	-20.74	Average
12	25.727	45.31	0.36	0.21	45.88	60.00	-14.12	QP

Remark:

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

6.4 20dB Bandwidth

20dB bandwidth (kHz)	Limit (kHz)	Results
0.247	11.2	Passed

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

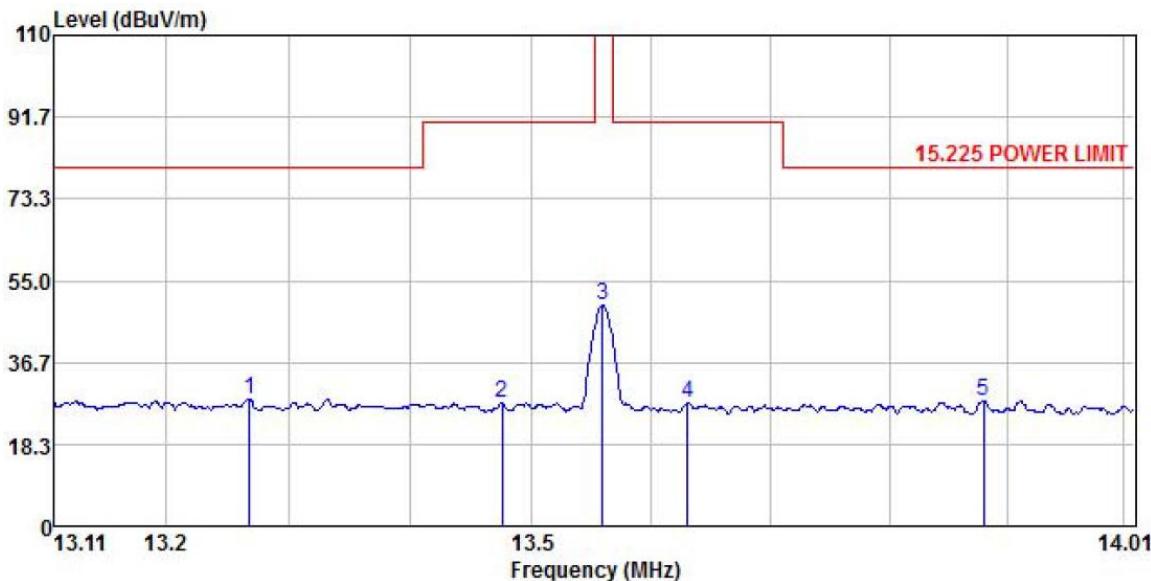
Test plot as follows:



6.5 Field Strength of Fundamental

Product Name:	5G digital mobile phone		Product Model:	conquest-S20																																																																							
Test By:	Mike		Test mode:	NFC Tx mode																																																																							
Test Voltage:	AC 120/60Hz		Polarization:	Vertical																																																																							
<table border="1"> <thead> <tr> <th>Freq</th> <th>ReadAntenna Level</th> <th>Antenna Factor</th> <th>Cable Loss</th> <th>Preamp Factor</th> <th>Level</th> <th>Limit Line</th> <th>Over Line</th> <th>Over Limit</th> <th>Remark</th> </tr> <tr> <th>MHz</th> <th>dBuV</th> <th>dB/m</th> <th>dB</th> <th>dB</th> <th>dBuV/m</th> <th>dBuV/m</th> <th>dBuV/m</th> <th>dB</th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>13.282</td> <td>7.92</td> <td>19.63</td> <td>0.40</td> <td>0.00</td> <td>27.95</td> <td>80.50</td> <td>-52.55</td> <td></td> </tr> <tr> <td>2</td> <td>13.474</td> <td>8.11</td> <td>19.61</td> <td>0.41</td> <td>0.00</td> <td>28.13</td> <td>90.50</td> <td>-62.37</td> <td></td> </tr> <tr> <td>3</td> <td>13.558</td> <td>25.23</td> <td>19.59</td> <td>0.41</td> <td>0.00</td> <td>45.23</td> <td>124.00</td> <td>-78.77</td> <td></td> </tr> <tr> <td>4</td> <td>13.641</td> <td>7.87</td> <td>19.57</td> <td>0.42</td> <td>0.00</td> <td>27.86</td> <td>90.50</td> <td>-62.64</td> <td></td> </tr> <tr> <td>5</td> <td>13.862</td> <td>7.43</td> <td>19.52</td> <td>0.43</td> <td>0.00</td> <td>27.38</td> <td>80.50</td> <td>-53.12</td> <td></td> </tr> </tbody> </table>						Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Line	Over Limit	Remark	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dBuV/m	dB		1	13.282	7.92	19.63	0.40	0.00	27.95	80.50	-52.55		2	13.474	8.11	19.61	0.41	0.00	28.13	90.50	-62.37		3	13.558	25.23	19.59	0.41	0.00	45.23	124.00	-78.77		4	13.641	7.87	19.57	0.42	0.00	27.86	90.50	-62.64		5	13.862	7.43	19.52	0.43	0.00	27.38	80.50	-53.12	
Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Line	Over Limit	Remark																																																																		
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dBuV/m	dB																																																																			
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5	13.862	7.43	19.52	0.43	0.00	27.38	80.50	-53.12																																																																			
Remark:																																																																											
1. Level = Read level + Antenna Factor + Cable Loss – Preamplifier Factor.																																																																											

Product Name:	5G digital mobile phone	Product Model:	conquest-S20
Test By:	Mike	Test mode:	NFC Tx mode
Test Voltage:	AC 120/60Hz	Polarization:	Horizontal

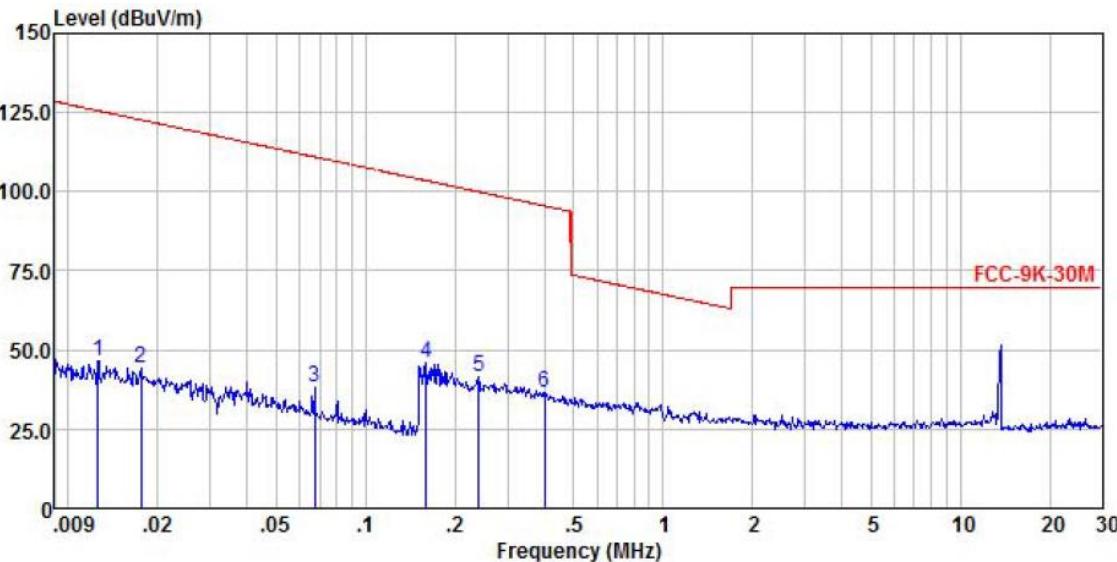


Freq	ReadAntenna		Cable Preamp		Limit	Over Line	Over Limit	Remark
	Freq	Level	Antenna Factor	Cable Loss				
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	13.268	8.41	19.66	0.39	0.00	28.46	80.50	-52.04
2	13.475	7.61	19.61	0.41	0.00	27.63	90.50	-62.87
3	13.559	29.50	19.59	0.41	0.00	49.50	124.00	-74.50
4	13.630	7.50	19.57	0.42	0.00	27.49	90.50	-63.01
5	13.880	8.16	19.52	0.43	0.00	28.11	80.50	-52.39

Remark:

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

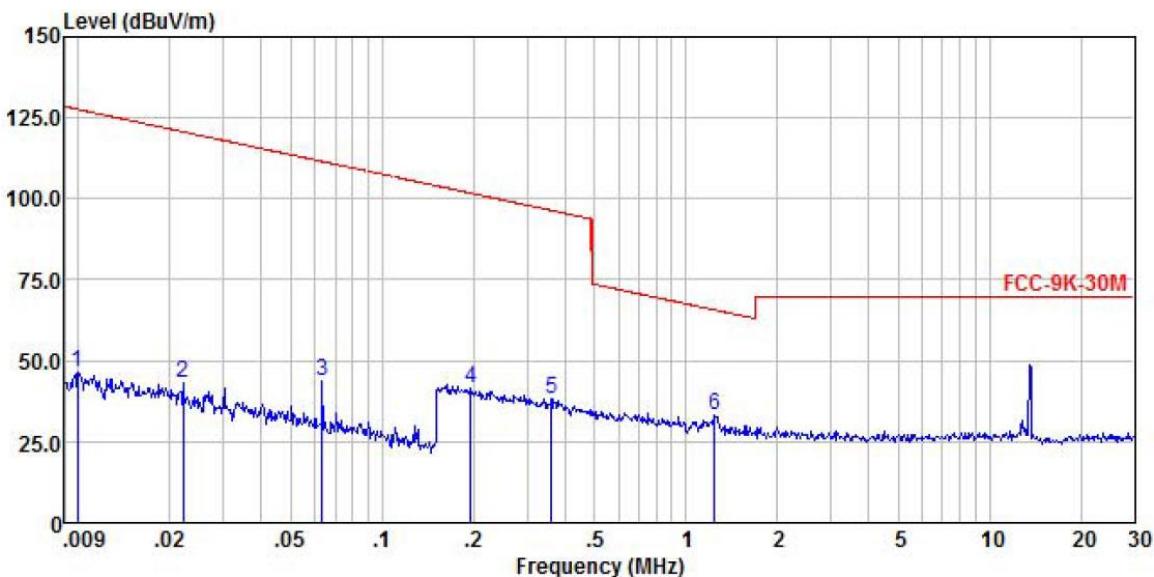
6.6 Field Strength of Spurious Emissions

Product Name:	5G digital mobile phone		Product Model:	conquest-S20																																																																									
Test By:	Mike		Test mode:	NFC Tx mode																																																																									
Test Frequency:	150 kHz – 30 MHz		Polarization:	Vertical																																																																									
Test Voltage:	AC 120/60Hz																																																																												
																																																																													
<table border="1"> <thead> <tr> <th>Freq</th> <th>ReadAntenna Level</th> <th>Antenna Factor</th> <th>Cable Loss</th> <th>Preamp Factor</th> <th>Level</th> <th>Limit Line</th> <th>Over Limit</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>MHz</td> <td>dBuV</td> <td>dB/m</td> <td>dB</td> <td>dB</td> <td>dBuV/m</td> <td>dBuV/m</td> <td>dB</td> <td></td> </tr> <tr> <td>1</td> <td>0.013</td> <td>25.85</td> <td>20.44</td> <td>0.01</td> <td>0.00</td> <td>46.30</td> <td>125.61</td> <td>-79.31</td> </tr> <tr> <td>2</td> <td>0.018</td> <td>23.81</td> <td>20.35</td> <td>0.01</td> <td>0.00</td> <td>44.17</td> <td>122.72</td> <td>-78.55</td> </tr> <tr> <td>3</td> <td>0.067</td> <td>17.42</td> <td>20.51</td> <td>0.02</td> <td>0.00</td> <td>37.95</td> <td>111.03</td> <td>-73.08</td> </tr> <tr> <td>4</td> <td>0.160</td> <td>25.72</td> <td>20.23</td> <td>0.03</td> <td>0.00</td> <td>45.98</td> <td>103.52</td> <td>-57.54</td> </tr> <tr> <td>5</td> <td>0.240</td> <td>21.17</td> <td>20.44</td> <td>0.05</td> <td>0.00</td> <td>41.66</td> <td>100.00</td> <td>-58.34</td> </tr> <tr> <td>6</td> <td>0.401</td> <td>15.82</td> <td>20.69</td> <td>0.06</td> <td>0.00</td> <td>36.57</td> <td>95.55</td> <td>-58.98</td> </tr> </tbody> </table>						Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		1	0.013	25.85	20.44	0.01	0.00	46.30	125.61	-79.31	2	0.018	23.81	20.35	0.01	0.00	44.17	122.72	-78.55	3	0.067	17.42	20.51	0.02	0.00	37.95	111.03	-73.08	4	0.160	25.72	20.23	0.03	0.00	45.98	103.52	-57.54	5	0.240	21.17	20.44	0.05	0.00	41.66	100.00	-58.34	6	0.401	15.82	20.69	0.06	0.00	36.57	95.55	-58.98
Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark																																																																					
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB																																																																						
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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:	5G digital mobile phone	Product Model:	conquest-S20
Test By:	Mike	Test mode:	NFC Tx mode
Test Frequency:	150 kHz – 30 MHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz		



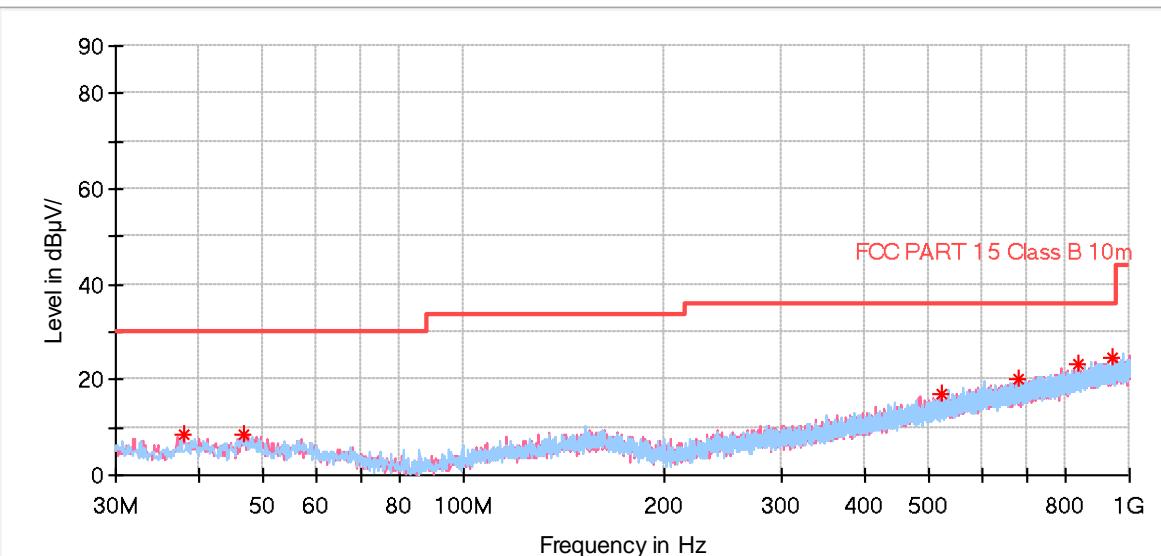
Freq	Read	Antenna	Cable	Preamp	Limit	Over	Over	
	Freq	Level	Factor	Loss				Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	0.010	26.19	20.48	0.01	0.00	46.68	127.65	-80.97 Peak
2	0.022	23.02	20.28	0.01	0.00	43.31	120.68	-77.37 Peak
3	0.064	23.15	20.53	0.02	0.00	43.70	111.52	-67.82 Peak
4	0.196	21.10	20.33	0.04	0.00	41.47	101.76	-60.29 Peak
5	0.361	17.44	20.64	0.06	0.00	38.14	96.47	-58.33 Peak
6	1.248	12.32	20.48	0.17	0.00	32.97	65.70	-32.73 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:	5G digital mobile phone	Product Model:	conquest-S20
Test By:	Mike	Test mode:	NFC Tx mode
Test Frequency:	30 MHz – 1000 MHz	Polarization:	Vertical & Horizontal
Test Voltage:	AC 120/60Hz		

Full Spectrum



Frequency (MHz)	MaxPeak (dB μV/m)	Limit (dB μV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
681.161000	19.97	36.00	16.03	100.0	H	312.0	-5.4
522.760000	17.20	36.00	18.80	100.0	V	170.0	-8.6
941.024000	24.52	36.00	11.48	100.0	V	213.0	-0.8
37.857000	8.31	30.00	21.69	100.0	V	323.0	-16.0
46.878000	8.52	30.00	21.48	100.0	V	327.0	-15.8
839.659000	23.23	36.00	12.77	100.0	V	349.0	-2.4

Remark:

1. Level = Read level + 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	0.012	0.0001	±0.01	Pass
	-10	0.021	0.0002	±0.01	Pass
	0	-0.182	-0.0013	±0.01	Pass
	+10	-0.586	-0.0043	±0.01	Pass
	+20	0.148	0.0011	±0.01	Pass
	+30	0.260	0.0019	±0.01	Pass
	+40	-0.511	-0.0038	±0.01	Pass
	+50	0.698	0.0051	±0.01	Pass

Frequency Stability V.S. Voltage Measurement:

Temperature (°C)	Voltage (Vdc)	Frequency Tolerance (kHz)	Frequency Error (%)	Limit (%)	Results
25.0	3.85	0.458	0.0034	±0.01	Pass
	3.50	0.254	0.0019	±0.01	Pass
	4.40	0.147	0.0011	±0.01	Pass

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