TEST REPORT

Product	:	4G Dongle
Trade mark	:	N/A
Model/Type reference	:	See section 5.2
Serial Number	:	N/A
Report Number	:	EED32Q81423101
FCC ID	:	2BL6B-U255AUX
Date of Issue	:	Dec. 02, 2024
Test Standards	:	47 CFR Part 2 47 CFR Part 27
Test result	:	PASS

Prepared for:

Huizhou Skyline Intelligent Technology Co., Ltd.
The 3rd and 4th floor, Unit 2, E2-2 Factory Building, Group Yileng Manufacturing Industrial Park, No. 1, Xingyuan South Road, Zhongkai High-tech Zone, Huizhou, China and Korea Huizhou Industrial Park; The 4th floor, Unit 1, E2-2 factory building

Prepared by:

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Date of Issue: Dec. 02, 2024

Check No.: 7240110924

CENTRE TESTING INTERNATIONAL GROUP CO.,LTD. CTI Report Seal

1 Version

Version No.	Date	Description
00	Dec. 02, 2024	Original

2 Test Summary

Test Item	Test Requirement	Test method	Result
FCC Part 27 (LTE Band 7)			
Conducted output power	Part 2.1046(a) /Part 27.50(d)	TIA-603-E-2016&KDB 971168 D01v03r01	PASS
Effective Radiated Power of Transmitter(EIRP)	Part 2.1046(a) / Part 27.50(d)	TIA-603-E-2016&KDB 971168 D01v03r01	PASS
peak-to-average ratio	Part 27.50(d)	KDB 971168 D01v03r01	PASS
99% &26dBOccupied Bandwidth	Part 2.1049(h)	Part 27.53(h) &KDB 971168 D01v03r01	PASS
Band Edge at antenna terminals	Part 2.1051/ Part 27.53(h)	Part 27.53(h) &KDB 971168 D01v03r01	PASS
Spurious emissions at antenna terminals	Part 2.1051/ Part 27.53(h)	TIA-603-E-2016&KDB 971168 D01v03r01	PASS
Field strength of spurious radiation	Part 2.1053/ Part 27.53(h)	TIA-603-E-2016&KDB 971168 D01v03r01	PASS
Frequency stability	Part 2.1055/Part 27.54	TIA-603-E-2016&KDB 971168 D01v03r01	PASS

Remark:
Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.

Tx: In this whole report Tx (or tx) means Transmitter.
Rx: In this whole report Rx (or rx) means Receiver.
RF: In this whole report RF means Radiated Frequency.
CH: In this whole report CH means channel.
Volt: In this whole report Volt means Voltage.
Temp: In this whole report Temp means Temperature.
Humid: In this whole report Humid means humidity.
Press: In this whole report Press means Pressure.
N/A: In this whole report not application

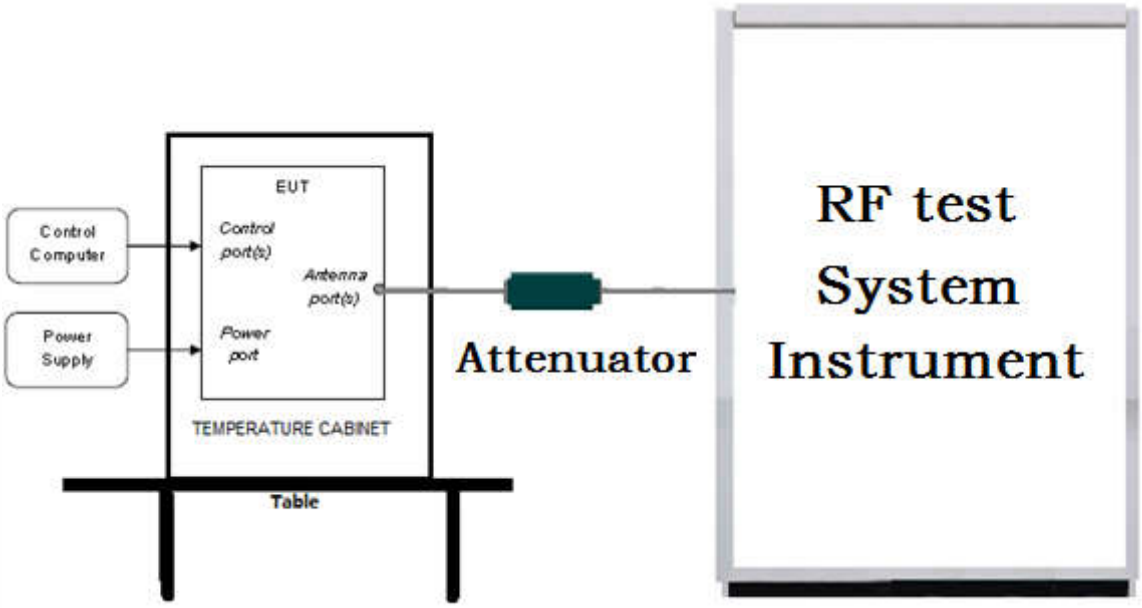
Model No.: EC25-AUX, U266G, U355G, U255EC, U255AUX, U911NAX, U255AFX, U255EUX, U255J, 255E, U255EU, U255V, U255A, U255AFXD, U255MX, U255AU, U255AUT, U255KL, U911E, U911EX, U911NAXD, U911NA, U911VX, U911AUX
Only the model EC25-AUX was tested. Their electrical circuit design, layout, components used and internal wiring are identical. Only the color of the appearance is different.

3 Content

4 Test Requirement

4.1 Test setup

4.1.1 For Conducted test setup



4.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

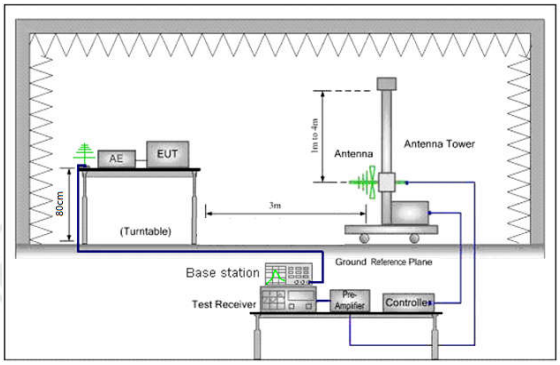


Figure 1.30MHz to 1GHz

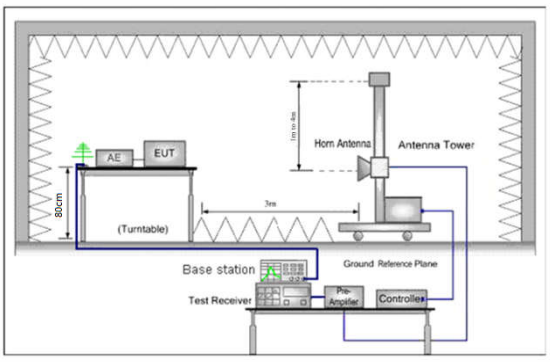


Figure 2. above 1GHz

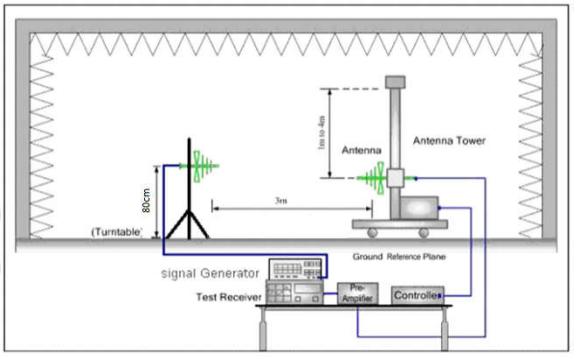


Figure 1. 30MHz to 1GHz

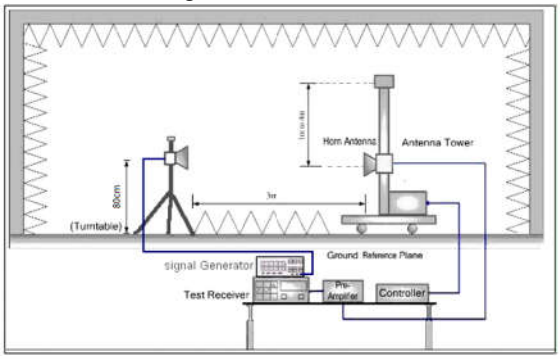


Figure 2. above 1GHz

4.2 Test Environment

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010mbar

5 General Information

5.1 Client Information

Applicant:	Huizhou Skyline Intelligent Technology Co., Ltd.
Address of Applicant:	The 3rd and 4th floor, Unit 2, E2-2 Factory Building, Group Yileng Manufacturing Industrial Park, No. 1, Xingyuan South Road, Zhongkai High-tech Zone, Huizhou, China and Korea Huizhou Industrial Park; The 4th floor, Unit 1, E2-2 factory building
Manufacturer:	Huizhou Skyline Intelligent Technology Co., Ltd.
Address of Manufacturer:	The 3rd and 4th floor, Unit 2, E2-2 Factory Building, Group Yileng Manufacturing Industrial Park, No. 1, Xingyuan South Road, Zhongkai High-tech Zone, Huizhou, China and Korea Huizhou Industrial Park; The 4th floor, Unit 1, E2-2 factory building
Factory:	Huizhou Skyline Intelligent Technology Co., Ltd.
Address of Factory:	The 3rd and 4th floor, Unit 2, E2-2 Factory Building, Group Yileng Manufacturing Industrial Park, No. 1, Xingyuan South Road, Zhongkai High-tech Zone, Huizhou, China and Korea Huizhou Industrial Park; The 4th floor, Unit 1, E2-2 factory building

5.2 General Description of EUT

Product Name:	4G Dongle	
Model No.:	EC25-AUX, U266G, U355G, U255EC, U255AUX, U911NAX, U255AFX, U255EUX, U255J, 255E, U255EU, U255V, U255A, U255AFXD, U255MX, 255AU, U255AUT, U255KL, U911E, U911EX, U911NAXD, U911NA, 911VX, U911AUX	
Test Model No.:	EC25-AUX	
Trade Mark:	N/A	
Product Type:	☐ Mobile ☐ Portable ☒ Fixed Location	
Frequency Band:	FDD band 7:UL:2500−2570MHz,DL:2620−2690MHz	
Modulation Type:	QPSK,16QAM,64QAM	
Antenna Type:	Internal Antenna	
Antenna Gain:	-0.91 dBi,	
Power Supply:	Adapter:	DC 5V
Test Voltage:	DC 5V	
Sample Received Date:	Oct. 17, 2024	
Sample tested Date:	Oct. 17, 2024 to Oct. 24, 2024	

5.3 Description of Support Units

The EUT has been tested independently.

5.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd
Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China
Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385
No tests were sub-contracted.
FCC Designation No.: CN1164

5.5 Deviation from Standards

None.

5.6 Abnormalities from Standard Conditions

None.

5.7 Other Information Requested by the Customer

None.

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

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.46dB (30MHz-1GHz)
		0.55dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.3dB (30MHz-1GHz)
		4.5dB (1GHz-12.75GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	3.8%
7	DC power voltages	0.026%

6 Equipment List

2G/3G/4G Communication RF test system					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. Date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Spectrum Analyzer	Agilent	E4440A	MY46185649	10-23-2023 10-22-2024	10-22-2024 10-21-2025
Signal Generator	Keysight	E8257D	MY53401106	12-14-2023	12-13-2024
Signal Generator	Agilent	E4438C	MY45095744	12-11-2023	12-10-2024
Communication test set	R&S	CMW500	120765	12-14-2023	12-13-2024
DC Power	Keysight	E3642A	MY56376035	12-11-2023	12-10-2024
RF control unit	JS Tonscend	JS0806-1	158060004	12-14-2023	12-13-2024
DC power Box	JS Tonscend	JS0806-4	158060007	---	---
High-low temperature test chamber	Dong Guang Qin Zhuo	LK-80GA	QZ20150611879	12-11-2023	12-10-2024
Temperature/ Humidity Indicator	biaozhi	HM10	1804186	05-29-2024	05-28-2025
Automatic test software	JS Tonscend	JS1120	V2.6.9.0518	---	---
Band rejection filter	Sinoscite	FL5CX01CA09CL12-0395-001	---	---	---
Band rejection filter	Sinoscite	FL5CX01CA08CL12-0393-001	---	---	---
Band rejection filter	Sinoscite	FL5CX02CA04CL12-0396-002	---	---	---
Band rejection filter	Sinoscite	FL5CX02CA03CL12-0394-001	---	---	---
Band rejection filter	Sinoscite	FL5CX02CA03CL12-0397-002	---	---	---
High-pass filter	Sinoscite	FL3CX03WG18NM12-0398-002	---	---	---

3M Semi-anechoic Chamber (2)- Radiated disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
3M Chamber & Accessory Equipment	TDK	SAC-3	---	05/22/2022	05/21/2025
Receiver	R&S	ESCI7	100938-003	09/07/2024	09/06/2025
Spectrum Analyzer	R&S	FSV40	101200	07/18/2024	07/17/2025
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	9163-618	05/22/2022	05/21/2025
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	04/16/2024	04/15/2025
Microwave Preamplifier	Tonscend	EMC051845SE	980380	12/14/2023	12/13/2024
Horn Antenna	A.H.SYSTEMS	SAS-574	374	07/02/2023	07/01/2026
Horn Antenna	ETS-LINGREN	BBHA 9120D	9120D-1869	04/16/2024	04/15/2025
Preamplifier	Agilent	11909A	12-1	03/22/2024	03/21/2025
Preamplifier	CD	PAP-1840-60	6041.6042	06/19/2024	06/18/2025
Test software	Fara	EZ-EMC	EMEC-3A1-Pre	---	---
Cable line	Fulai(7M)	SF106	5219/6A	---	---
Cable line	Fulai(6M)	SF106	5220/6A	---	---
Cable line	Fulai(3M)	SF106	5216/6A	---	---
Cable line	Fulai(3M)	SF106	5217/6A	---	---

3M full-anechoic Chamber					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. Date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Fully Anechoic Chamber	TDK	FAC-3	---	01-09-2024	01-08-2027
Receiver	Keysight	N9038A	MY57290136	01-09-2024	01-08-2025
Spectrum Analyzer	Keysight	N9020B	MY57111112	01-29-2024	01-28-2025
Spectrum Analyzer	Keysight	N9030B	MY57140871	01-23-2024	01-22-2025
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	9163-1148	04-28-2024	04-27-2025
Horn Antenna	Schwarzbeck	BBHA 9170	9170-832	04-16-2024	04-15-2025
Horn Antenna	ETS-LINDGREN	3117	57407	07-03-2024	07-02-2025
Preamplifier	EMCI	EMC001330	980563	03-08-2024	03-07-2025
Preamplifier	Tonscend	TAP-011858	AP21B806112	07-18-2024	07-17-2025
Preamplifier	Tonscend	EMC051845SE	980380	12-14-2023	12-13-2024
Communication test set	R&S	CMW500	102898	12-14-2023	12-13-2024
Temperature/ Humidity Indicator	biaozhi	GM1360	EE1186631	04-07-2024	04-06-2025
RSE Automatic test software	JS Tonscend	JS36-RSE	V4.0.0.0	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0001		---
Cable line	Times	SFT205-NMSM-2.50M	394812-0002	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0003	---	---
Cable line	Times	SFT205-NMSM-2.50M	393495-0001	---	---
Cable line	Times	EMC104-NMNM-1000	SN160710	---	---
Cable line	Times	SFT205-NMSM-3.00M	394813-0001	---	---
Cable line	Times	SFT205-NMNM-1.50M	381964-0001	---	---
Cable line	Times	SFT205-NMSM-7.00M	394815-0001	---	---
Cable line	Times	HF160-KMKM-3.00M	393493-0001	---	---

7 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	PART 22	PART 22 – PUBLIC MOBILE SERVICES Subpart H – Cellular Radiotelephone Service
2	PART 24	PART 24 – PERSONAL COMMUNICATIONS SERVICES Subpart E – Broadband PCS
3	PART 27	PART 27 – MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES Subpart C – Technical Standards
4	PART 90	PART 90—PRIVATE LAND MOBILE RADIO SERVICES
5	PART 2	Frequency allocations and radio treaty matters; general rules and regulations
6	TIA-603-E-2016	Land Mobile FM or PM -Communications Equipment -Measurement and Performance Standards
7	KDB971168 D01	KDB971168 D01 Power Meas License Digital Systems v02r02
8	ANSI C63.26-2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

Test Results List:

Test Method:		Test Descriptions &Test Conditions	Verdict	Note
ANSI C63.26-2015	Clause 5.2	RF output power		Note 1
		NT/NV	PASS	
ANSI C63.26-2015	Clause 5.4	99% & 26dB Occupied Bandwidth		Note 1
		NT/NV	PASS	
ANSI C63.26-2015	Clause 5.2	Peak to average power ratio		Note 1
		NT/NV	PASS	
ANSI C63.26-2015	Clause 5.5	Spurious emissions		Appendix A)
		NT/NV	PASS	
ANSI C63.26-2015	Clause 5.7	Spurious emissions at antenna terminals		Note 1
		NT/NV	PASS	
ANSI C63.26-2015	Clause 5.6	Frequency stability		Note 1
		NT/NV	PASS	
		LT/LV	PASS	
		LT/HV	PASS	
		HT/LV	PASS	
		HT/HV	PASS	

Note 1:
The test data please refer to
Appendix: LTE Band7 of EED32Q81423101

Appendix A) Field strength of spurious radiation

<table>
<tr><td>Receiver Setup:</td><td>
<table>
<tr><th>Frequency</th><th>Detector</th><th>RBW</th><th>VBW</th><th>Remark</th></tr>
<tr><td>0.009MHz-30MHz</td><td>Peak</td><td>10kHz</td><td>30kHz</td><td>Peak</td></tr>
<tr><td>30MHz-1GHz</td><td>Peak</td><td>120kHz</td><td>300kHz</td><td>Peak</td></tr>
<tr><td>Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak</td></tr>
</table>
</td></tr>
<tr><td>Measurement Procedure:</td><td>
1. Scan up to 10th harmonic, find the maximum radiation frequency to measure.
2. The technique used to find the Spurious Emissions of the transmitter was the antenna substitution method. Substitution method was performed to determine the actual ERP/EIRP emission levels of the EUT.
Test procedure as below:
1) The EUT was powered ON and placed on a 0.8m hight table at a 3 meter fully Anechoic Chamber. The antenna of the transmitter was extended to its maximum length. modulation mode and the measuring receiver shall be tuned to the frequency of the transmitter under test.
2) The EUT was set 3 meters(above 18GHz the distance is 1 meter) away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3) The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made.
4) Steps 1) to 3) were performed with the EUT and the receive antenna in both vertical and horizontal polarization.
5) The transmitter was then removed and replaced with another antenna. The center of the antenna was approximately at the same location as the center of the transmitter.
6) A signal at the disturbance was fed to the substitution antenna by means of a non-radiating cable. With both the substitution and the receive antennas horizontally polarized, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver. The level of the signal generator was adjusted until the measured field strength level in step 3) is obtained for this set of conditions.
7) The output power into the substitution antenna was then measured.
8) Steps 6) and 7)were repeated with both antennas polarized.
9) Calculate power in dBm by the following formula:
ERP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBd)
EIRP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBi)
EIRP=ERP+2.15dB
where:
Pg is the generator output power into the substitution antenna.
10) Test the EUT in the lowest channel, the middle channel the Highest channel
11) The radiation measurements are performed in X, Y, Z axis positioning for EUT operation mode, And found the X axis positioning which it is worse case.
12) Repeat above procedures until all frequencies measured was complete.
</td></tr>
<tr><td>Limit:</td><td>Attenuated at least 43+10log(P)</td></tr>
</table>

Measurement Data:

Remark: Only the worst case data was recorded in the report.

Mode	LTE Traffic mode	Remark	
Band	Band=7 BW=20MHz	Channel	21100

Suspected List								
NO.	Freq. [MHz]	Height [cm]	Azimuth [deg]	Level [dBm]	Limit [dBm]	Margin [dB]	Result	Polarity
1	65.5091	150	314	-55.03	-13.00	42.03	PASS	Horizontal
2	179.4099	150	286	-64.12	-13.00	51.12	PASS	Horizontal
3	727.5695	150	3	-58.25	-13.00	45.25	PASS	Horizontal
4	1695.0695	150	248	-41.12	-13.00	28.12	PASS	Horizontal
5	6389.2695	150	88	-47.41	-13.00	34.41	PASS	Horizontal
6	10997.8374	150	0	-42.17	-13.00	29.17	PASS	Horizontal
7	54.6429	150	3	-52.26	-13.00	39.26	PASS	Vertical
8	177.0814	150	195	-68.00	-13.00	55.00	PASS	Vertical
9	626.2813	150	213	-74.02	-13.00	61.02	PASS	Vertical
10	1624.4624	150	213	-39.77	-13.00	26.77	PASS	Vertical
11	4505.4753	150	357	-48.92	-13.00	35.92	PASS	Vertical
12	11250.375	150	2	-41.89	-13.00	28.89	PASS	Vertical

Mode	LTE Idle mode	Remark	
Band	Band=7 BW=20MHz	Channel	21100

Suspected List								
NO.	Freq. [MHz]	Height [cm]	Azimuth [deg]	Level [dBm]	Limit [dBm]	Margin [dB]	Result	Polarity
1	54.4489	150	3	-59.32	-13.00	46.32	PASS	Horizontal
2	179.6039	150	265	-70.48	-13.00	57.48	PASS	Horizontal
3	728.5397	150	3	-72.88	-13.00	59.88	PASS	Horizontal
4	1747.9165	150	304	-51.53	-13.00	38.53	PASS	Horizontal
5	5355.107	150	35	-60.97	-13.00	47.97	PASS	Horizontal
6	11249.7	150	224	-52.75	-13.00	39.75	PASS	Horizontal
7	54.6429	150	3	-52.94	-13.00	39.94	PASS	Vertical
8	160.006	150	3	-69.11	-13.00	56.11	PASS	Vertical
9	625.117	150	316	-73.15	-13.00	60.15	PASS	Vertical
10	1660.1773	150	234	-50.92	-13.00	37.92	PASS	Vertical
11	4506.8005	150	176	-59.53	-13.00	46.53	PASS	Vertical
12	11989.4493	150	88	-52.65	-13.00	39.65	PASS	Vertical