FCC Test Report FCC ID: 055182722

Product: 1.8 inch 2G Bar Phone

Trade Mark: LOGIC, iSWAG, UNONU

Model Number: A5

Family Model: FUSION, Q5

Report No.: STR220722003004E

Prepared for

SWAGTEK

10205 NW 19th Street STE101 Miami, FL 33172

Prepared by

Shenzhen NTEK Testing Technology Co., Ltd.

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TEST RESULT CERTIFICATION

Applicant's name SWAGTEK

Manufacturer's Name...... SWAGTEK

Product description

Product name...... 1.8 inch 2G Bar Phone

Model and/or type reference .: A5

Family Model..... FUSION, Q5

Standards FCC Part15B ANSI C63.4:2014

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with Part 15 of FCC Rules. And it is applicable only to the tested sample identified in the report.

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Test Sample Number....: STR220722001

Date of Test

Date (s) of performance of tests Jul 22. 2022 ~ Aug 24. 2022

Date of Issue Aug 24. 2022

Test Result Pass

Testing Engineer

(Mary Hu)

Authorized Signatory:

(Alex Li)

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1. TEST SUMMARY

Test procedures according to the technical standards:

EMC Emission						
Standard	Test Item	Limit	Judgment	Remark		
FCC Part15B	Conducted Emission	Class B	PASS			
ANSI C63.4: 2014	Radiated Emission	Class B	PASS			

NOTE:

- (1) 'N/A' denotes test is not applicable in this Test Report
- (2) For client's request and manual description, the test will not be executed.

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Report No.: STR220722003004E

1.1 TEST FACILITY

Shenzhen NTEK Testing Technology Co., Ltd

Add.: 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District,

Shenzhen 518126 P.R. China.

IC-Registration The Certificate Registration Number is 9270A.

CAB identifier:CN0074

FCC- Accredited Test Firm Registration Number: 463705.

Designation Number: CN1184

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $\mathbf{y} \pm \mathbf{U}$, where expended uncertainty \mathbf{U} is based on a standard uncertainty multiplied by a coverage factor of $\mathbf{k=2}$, providing a level of confidence of approximately 95 %.

A. Conducted Measurement:

Test Site	Site Method Measurement Frequency Range		U, (dB)	NOTE
NTEKC01	ANSI	150 KHz ~ 30MHz	±2.80dB	

B. Radiated Measurement:

Test Site Method		Measurement Frequency Range	U, (dB)	NOTE
NTEKA01 ANSI		30MHz~1000MHz	±2.64dB	
		1GHz~6GHz	±2.40dB	
		6GHz~26.5GHz	±2.52dB	

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2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	1.8 inch 2G Bar Phone	1.8 inch 2G Bar Phone			
Trade Mark	ulefone				
Model Name	A5				
Family Model	FUSION, Q5				
Model Difference	All models are the same circu	uit and RF module, except the Model name.			
Product Description Adapter	Micro USB, Earphone 2.4GHz features, or specification exhibited in User's ered as an ITE/Computing Device. More details tion, please refer to the User's Manual.				
Battery	DC 3.7V,600mAh				
Power supply	DC 3.7V from battery or DC 5V from Adapter.				
HW Version	E301_V2.0_20200618				
SW Version	UNONU_Q5_GENERIC_V3.	UNONU_Q5_GENERIC_V3.0_26072022			

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2.1.1 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Model 1	USB Data Transmission
Model 2	TF card Playing
Model 3	REC
Model 4	FM
Model 5	GPS
Mode 6	BT Link mode
Mode 7	GSM / GPRS / EGPRS 850 / 1900

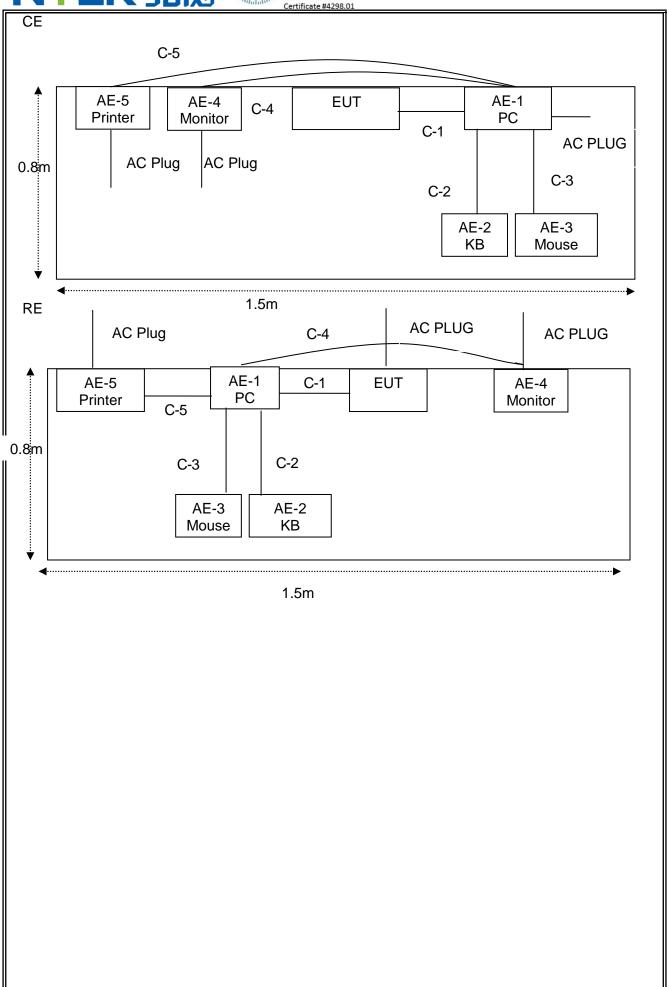
For Conducted Test					
Final Test Mode	Description				
Model 1	USB Data Transmission				
Model 2	TF card Playing				
Model 3	REC				
Model 4	FM				
Model 5	BT Link mode				
Mode 6	GSM / GPRS 850 / 1900				

For Radiated Test				
Final Test Mode	Description			
Model 1	USB Data Transmission			
Model 2	TF card Playing			
Model 3	REC			
Model 4	FM			
Model 5	BT Link mode			
Mode 6	GSM / GPRS 850 / 1900			

Note: Final Test Mode: Through Pre-scan, find the model 1 is the worst case. Only the worst case mode is recorded in the report.

2.2 DESCRIPTION OF TEST SETUP

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2.3 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	m Equipment Brand		Model/Type No.	Series No.	Note
AE-1	PC	DELL	FT4Y23X	N/A	Peripherals
AE-2	KB	N/A	N/A	N/A	Peripherals
AE-3	Mouse	DELL	MS111-P	N/A	Peripherals
AE-4	Monitor	DELL	IN2020MB	N/A	Peripherals
AE-5	Printer	Canon	L11121E	N/A	Peripherals
AE-6 Earphone		N/A	N/A	N/A	Peripherals

Item	Cable Type	Shielded Type	Ferrite Core	Length	Note
C-1	USB Cable	NO	NO	1.0m	
C-2	USB Cable	NO	NO	1.2m	
C-3	USB Cable	NO	NO	1.2m	
C-4	HDMI Cable	YES	YES	1.0m	
C-5	USB Cable	NO	NO	1.2m	
C-6	Earphone Cable	NO	NO	1.5m	

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- For detachable type I/O cable should be specified the length in cm in <code>"Length_"</code> column.
- (3) "YES" means "shielded" "with core"; "NO" means "unshielded" "without core".

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2.4 MEASUREMENT INSTRUMENTS LIST

Radiation Test equipment

Tradiation Test equipment							
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibratio n period
1	Spectrum Analyzer	Agilent	E4407B	MY4510804 0	2022.04.06	2023.04.05	1 year
2	Test Receiver	R&S	ESPI	101318	2022.04.06	2023.04.05	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2022.03.30	2023.03.29	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	620026441 6	2020.05.11	2023.05.10	3 year
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	2021.04.27	2022.04.26	1 year
6	Horn Antenna	EM	EM-AH-101 80	2011071402	2022.03.31	2023.03.30	1 year
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2021.11.07	2022.11.06	1 year
8	Amplifier	EMC	EMC05183 5SE	980246	2022.06.17	2023.06.16	1 year
9	Loop Antenna	ARA	PLA-1030/B	1029	2022.04.06	2023.04.05	1 year
10	Power Meter	DARE	RPR3006W	15I00041S NO84	2022.06.16	2023.06.15	1 year
11	Power Sensor	R&S	URV4-Z4	0395.1619. 05	2022.06.16	2023.06.15	1 year
12	Test Cable (30MHz-1GH z)	N/A	R-02	N/A	2022.06.17	2025.06.16	3 year
13	High Test Cable(1G-40 GHz)	N/A	R-03	N/A	2022.06.17	2025.06.16	3 year
14	High Test Cable(1G-40 GHz)	N/A	R-04	N/A	2022.06.17	2025.06.16	3 year
15	Test Receiver	R&S	ESCI	101160	2022.04.06	2023.04.05	1 year

AC Conduction Test equipment

	Vind of	1 - 1	Tura Na	Carial Na	Loot	Calibratad	Calibratia
Item	Kind of	Manufactu	Type No.	Serial No.	Last	Calibrated	Calibratio
	Equipment	rer			calibration	until	n period
1	Test Receiver	R&S	ESCI	101160	2022.04.06	2023.04.05	1 year
2	LISN	R&S	ENV216	101313	2022.04.06	2023.04.05	1 year
3	LISN	SCHWAR ZBECK	NNLK 8129	8129245	2022.04.06	2023.04.05	1 year
4	50Ω Coaxial Switch	ANRITSU CORP	MP59B	620098370 4	2020.05.11	2023.05.10	3 year
5	Test Cable (9KHz-30MHz)	N/A	C01	N/A	2020.05.11	2023.05.10	3 year
6	Test Cable (9KHz-30MHz)	N/A	C02	N/A	2020.05.11	2023.05.10	3 year
7	Test Cable (9KHz-30MHz)	N/A	C03	N/A	2020.05.11	2023.05.10	3 year

Note: Each piece of equipment is scheduled for calibration once a year except the Test Cable which is scheduled for calibration every 3 years.

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3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION (Frequency Range 150KHz-30MHz)

	Class A (dBuV)		Class B (dBuV)	
FREQUENCY (MHz)	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

The following table is the setting of the receiver				
Receiver Parameters	Setting			
Attenuation	10 dB			
Start Frequency	0.15 MHz			
Stop Frequency	30 MHz			
IF Bandwidth	9 kHz			

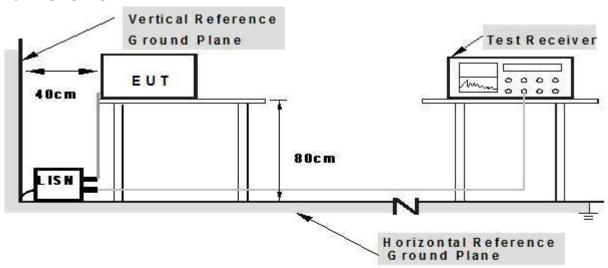
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3.1.2 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

3.1.3 TEST SETUP



Note: 1.Support units were connected to second LISM.

2.Both of LISMs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.

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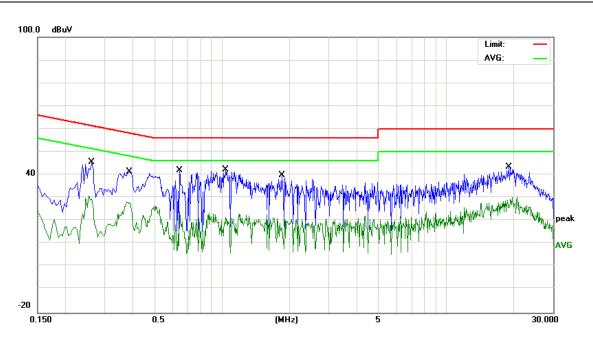


3.1.5 TEST RESULTS

EUT:	1.8 inch 2G Bar Phone	Model Name.:	A5	
Temperature:	24.5 ℃	Relative Humidity:	52%	
Pressure:	1010hPa	Test Date:	2022-5-25	
Test Mode:	Mode 1	Phase :	L	
Test Voltage: DC 5V from PC AC 120V/60Hz				

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
0.2620	36.04	9.63	45.67	61.36	-15.69	QP
0.2620	21.14	9.63	30.77	51.36	-20.59	AVG
0.3860	31.65	9.65	41.30	58.15	-16.85	QP
0.3860	18.40	9.65	28.05	48.15	-20.10	AVG
0.6460	32.22	9.67	41.89	56.00	-14.11	QP
0.6460	14.33	9.67	24.00	46.00	-22.00	AVG
1.0380	32.70	9.68	42.38	56.00	-13.62	QP
1.0380	13.27	9.68	22.95	46.00	-23.05	AVG
1.8500	30.18	9.68	39.86	56.00	-16.14	QP
1.8500	11.57	9.68	21.25	46.00	-24.75	AVG
19.0819	33.18	10.16	43.34	60.00	-16.66	QP
19.0819	20.08	10.16	30.24	50.00	-19.76	AVG

Remark:



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All readings are Quasi-Peak and Average values.
 Factor = Insertion Loss + Cable Loss.

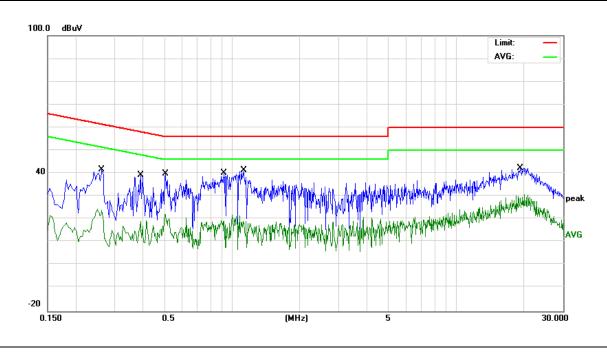


	Certificate #4298	.01	
EUT:	1.8 inch 2G Bar Phone	Model Name.:	A5
Temperature:	24.5 ℃	Relative Humidity:	52%
Pressure:	1010hPa	Test Date:	2022-5-25
Test Mode:	Mode 1	Phase :	N
Test Voltage:	DC 5V from PC AC 120V/60Hz		

Frequency	Reading Level	Correct Factor	Measure-ment	Limits	Margin	Remark
(MHz)	(dBµV)	(dB)	(dBµV)	(dBµV)	(dB)	Remark
0.2620	32.11	9.62	41.73	61.36	-19.63	QP
0.2620	14.84	9.62	24.46	51.36	-26.90	AVG
0.3899	29.62	9.66	39.28	58.06	-18.78	QP
0.3899	9.80	9.66	19.46	48.06	-28.60	AVG
0.5060	30.08	9.66	39.74	56.00	-16.26	QP
0.5060	12.54	9.66	22.20	46.00	-23.80	AVG
0.9220	30.34	9.69	40.03	56.00	-15.97	QP
0.9220	9.51	9.69	19.20	46.00	-26.80	AVG
1.1260	31.63	9.68	41.31	56.00	-14.69	QP
1.1260	9.53	9.68	19.21	46.00	-26.79	AVG
19.3539	32.22	10.14	42.36	60.00	-17.64	QP
19.3539	20.70	10.14	30.84	50.00	-19.16	AVG

Remark:

- 1. All readings are Quasi-Peak and Average values.
- 2. Factor = Insertion Loss + Cable Loss.



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3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

	Class A (at 10m)	Class B (at 3m)	
FREQUENCY (MHz)	dBuV/m	dBuV/m	
30 ~ 88	39.0	40.0	
88 ~ 216	43.5	43.5	
216 ~ 960	46.5	46.0	
Above 960	49.5	54.0	

Notes:

- (1) The limit for radiated test was performed according to as following: FCC PART 15B /ICES-003.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

3.2.2 TEST PROCEDURE

Test Arrangement for Radiated Emissions up to 1 GHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited test facility. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its 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 and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

Note: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for quasi-peak detection (QP) at frequency below 1GHz.

Test Arrangement for Radiated Emissions above 1 GHz.

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna can be varied from one meter to four meters, the height of adjustment depends on the EUT height and the antenna 3dB beamwidth both, to detect 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 and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

Note: For the hand-held device, the EUT should be measured for all 3 axes and only the worst case is recorded in the report

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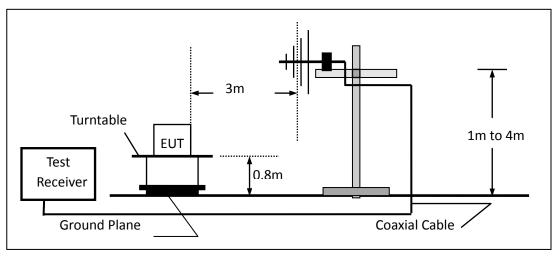


During the radiated emission test, according to ANSI C63.4-2014(4.2), the Spectrum Analyzer was set with the following configurations:

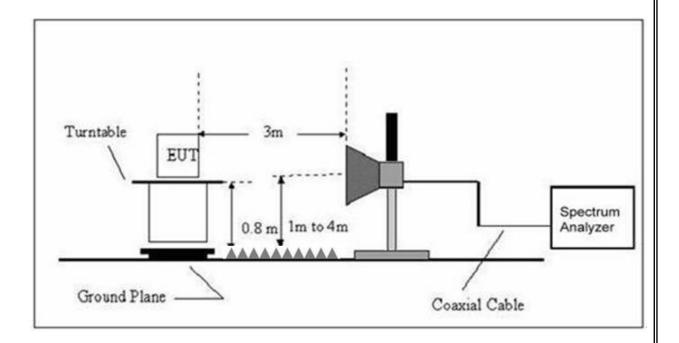
Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
	Peak	1 MHz	3 MHz
Above 1000	Avg	1 MHz	10 Hz

3.2.3 TEST SETUP

For Radiated Emission 30~1000MHz



(B) Radiated Emission Test Set-Up Frequency Above 1GHz



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3.2.4 TEST RESULTS

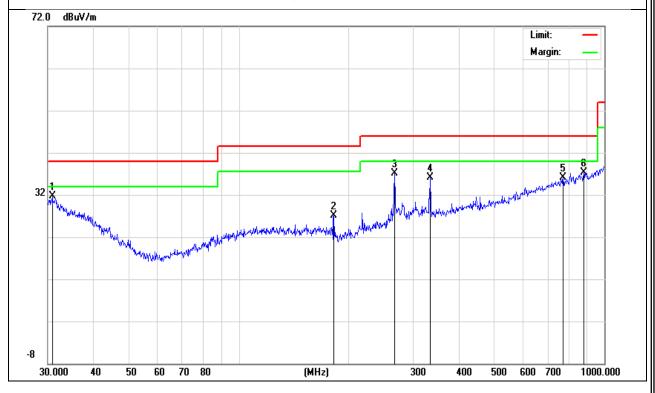
TEST RESULTS (30~1000 MHz)

EUT:	1.8 inch 2G Bar Phone	Model Name:	A5
Temperature:	24.5 ℃	Relative Humidity:	55%
Pressure:	1010 hPa	Test Date :	2022-8-07
Test Mode:	Mode 1	Polarization :	Horizontal
Test Power:	DC 5V from PC AC 120V/60Hz		

Polar	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
(H/V)	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	T CONTON TO
Н	30.8535	5.86	25.83	31.69	40.00	-8.31	QP
Н	181.9202	10.62	16.50	27.12	43.50	-16.38	QP
Н	266.6089	17.60	19.54	37.14	46.00	-8.86	QP
Н	333.6867	14.82	21.19	36.01	46.00	-9.99	QP
Н	771.4486	7.31	28.84	36.15	46.00	-9.85	QP
Н	878.3214	7.02	30.33	37.35	46.00	-8.65	QP

Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.



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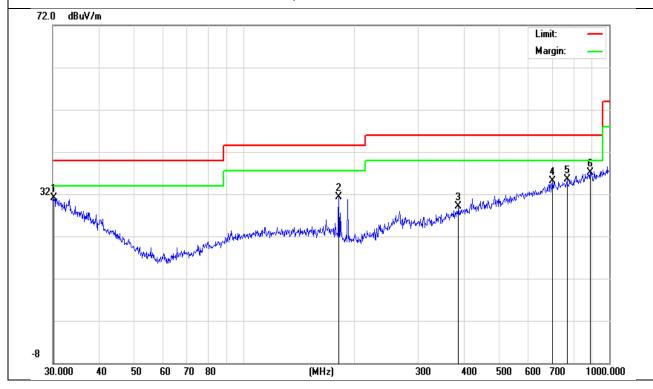


EUT:	1.8 inch 2G Bar Phone	Model Name :	A5
Temperature:	24.5 ℃	Relative Humidity:	55%
Pressure:	1010 hPa	Test Date :	2022-8-07
Test Mode:	Mode 1	Polarization :	Vertical
Test Power:	DC 5V from PC AC 120V/60Hz		

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	r.c.mar.k
V	30.2110	5.23	25.81	31.04	40.00	-8.96	QP
V	181.9202	14.90	16.50	31.40	43.50	-12.10	QP
V	386.6338	6.12	22.97	29.09	46.00	-16.91	QP
V	699.3046	7.18	27.91	35.09	46.00	-10.91	QP
V	766.0571	6.46	29.01	35.47	46.00	-10.53	QP
V	887.6099	6.79	30.41	37.20	46.00	-8.80	QP

Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.



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3.2.5 TEST RESULTS(1000~18000MHz)

EUT:	1.8 inch 2G Bar Phone	Model Name :	A5
Temperature:	24.5 ℃	Relative Humidity:	55%
Pressure:	1010 hPa	Test Date :	2022-8-07
Test Mode:	Mode 1		
Test Power:	DC 5V from PC AC 120V/60Hz		

All the modulation modes have been tested, and the worst result was report as below:

Polar (H/V)	Frequency	Reading	Correct	Result	Limit	Over Limit	Remark	
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)		
V	4825.000	35.54	19.83	55.37	74.00	-18.63	peak	
V	4825.000	21.04	19.83	40.87	54.00	-13.13	AVG	
V	10605.000	33.94	26.14	60.08	74.00	-13.92	peak	
V	10605.000	17.89	26.14	44.03	54.00	-9.97	AVG	
V	14557.500	32.48	29.46	61.94	74.00	-12.06	peak	
V	14557.500	15.12	29.46	44.58	54.00	-9.42	AVG	
Н	4952.500	36.45	19.36	55.81	74.00	-18.19	peak	
Н	4952.500	21.21	19.36	40.57	54.00	-13.43	AVG	
Н	10605.000	34.03	26.14	60.17	74.00	-13.83	peak	
Н	10605.000	19.03	26.14	45.17	54.00	-8.83	AVG	
Н	14430.000	32.58	29.45	62.03	74.00	-11.97	peak	
Н	14430.000	16.42	29.45	45.87	54.00	-8.13	AVG	

Remark:

Result = Reading + Correct, Over Limit= Result - Limit

Note: Only the worst results data points are reported in the report.

Other emissions are attenuated 20dB below the limit that does not recorded in the report.

END OF REPORT

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