

# **FCC Test Report**

Report No.: AGC02931200605FE08

FCC ID : PODTH-9000DV2

**PRODUCT DESIGNATION**: Mobile Radio

**BRAND NAME** : TYT

MODEL NAME : TH-9000D

**APPLICANT** : TYT ELECTRONICS CO., LTD

**DATE OF ISSUE** : Jul. 14, 2020

**STANDARD(S)** : FCC Part 15 Rules

**REPORT VERSION** : V 1.0

# Attestation of Global Compliance (Shenzhen) Co., Ltd

#### CAUTION:

This report shall not be reproduced except in full without the written permission of the test laboratory and shall not be quoted out of context.



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the specificated restriction of stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGE. The test resurresented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 2 of 26

**Report Revise Record** 

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	9 /	Jul. 14, 2020	Valid	Initial Release

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Resting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 3 of 26

# **TABLE OF CONTENTS**

1. VERIFICATION OF COMPLIANCE	4
2. PRODUCT INFORMATION	5
3. IDENTIFICATION OF THE RESPONSIBLE TESTING LOCATION	6
4. SUPPORT EQUIPMENT LIST	8
5. SYSTEM DESCRIPTION	8
6. SUMMARY OF TEST RESULTS	9
7. FCC RADIATED EMISSION TEST	10
7.1. TEST EQUIPMENT OF RADIATED EMISSION	10
7.2. LIMITS OF RADIATED EMISSION TEST	
7.3 BLOCK DIAGRAM OF RADIATED EMISSION TEST	10
7.4 PROCEDURE OF RADIATED EMISSION TEST	12
7.5 TEST RESULT OF RADIATED EMISSION TEST	13
8. CONDUCTED EMISSION TEST	17
8.1 PROVISIONS APPLICABLE	17
8.2 MEASUREMENT PROCEDURE	
8.3 TEST SETUP BLOCK DIAGRAM	
8.4 TEST RESULT	19
9. ANTENNA CONDUCTED POWER FOR RECEIVERS	21
10. SANNING RECEIVERS AND FREQUENCY CONVERTERS USED WITH SANN	IING RECEIVERS 24
ADDENDIY 1 DUOTOGDADUS OF TEST SETUD	25

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Festing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 4 of 26

# 1. VERIFICATION OF COMPLIANCE

Applicant	TYT ELECTRONICS CO., LTD
Address	Block 39-1, Optoelectronics-information industry base, Nan'an, Quanzhou, Fujian, China.
Manufacturer	TYT ELECTRONICS CO., LTD
Address	Block 39-1, Optoelectronics-information industry base, Nan'an, Quanzhou, Fujian, China.
Factory	TYT ELECTRONICS CO., LTD
Address	Block 39-1, Optoelectronics-information industry base, Nan'an, Quanzhou, Fujian, China.
Product	Mobile Radio
Brand Name	TYT
Test Model	TH-9000D
Hardware Version	TH-9000D-VHF-136-174
Software Version	V1.0
Measurement	ANSI C63.4: 2014
Date of test	Jun. 16, 2020~Jul. 14, 2020
Deviation	No any deviation from the test method.
Condition of Test	Normal
T	1

The above equipment was tested by Attestation Of Global Compliance (Shenzhen) Co., Ltd. for compliance with the requirements set forth in the FCC Rules and Regulations Part 15, the measurement procedure according to ANSI C63.4:2014. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements. The test results of this report relate only to the tested sample identified in this report.

Calvin Liu
(Project Engineer)

Reviewed By

Max Zhang
(Reviewer)

Approved By

Forrest Lei
(Authorized Officer)

Jul. 14, 2020

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pestud/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



Page 5 of 26

#### 2. PRODUCT INFORMATION

The EUT is a **Mobile Radio** designed for voice communication. It is designed by way of utilizing the F3E modulation achieves the system operating.

A major technical description of EUT is described as following:

Communication Type	Voice / Tone only
Modulation	FM
RX Frequency Range	RX: 220MHz -260MHz
Emission Type	F3E
Antenna Designation	Detachable
Antenna type	External antenna
Antenna Gain	0dBi
Power Supply	DC 13.8V

I/O Port Information (⊠Applicable ☐Not Applicable)

I/O Port of EUT					
I/O Port Type Q'TY Cable Tested with					
Antenna Connect Port	<sub>®</sub> 1	0 0	1		

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Sedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 6 of 26

# 3. IDENTIFICATION OF THE RESPONSIBLE TESTING LOCATION

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd	
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China	
Designation Number	CN1259	
FCC Test Firm Registration Number	975832	
A2LA Cert. No.	5054.02	
Description	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA	

# **List Of Test Equipment:**

# TEST EQUIPMENT OF CONDUCTED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	100096	Jul. 12, 2019	Jul. 11, 2020
TEST RECEIVER	R&S	ESCI	100096	Jul. 10, 2020	Jul. 09, 2021
AMN/LISN	R&S	ESH2-Z5	100086	Aug. 22, 2019	Aug. 21, 2020
TEST SOFTWARE	FR	EZ-EMC	AGC-CON03 A	ů - ,	

#### TEST EQUIPMENT OF RADIATED EMISSION TEST

TEST EQUIPMENT O	F KADIATED EIIII33	ION IEST			
Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESPI	101206	May 15, 2020	May 14, 2022
ANTENNA	SCHWARZBECK	VULB9168	494	Jan. 09, 2019	Jan. 08, 2021
TEST RECEIVER	R&S	ESCI	100694	June 27, 2019	June 26,2020
TEST RECEIVER	R&S	ESCI	100694	June 25,2020	June 24,2021
ANTENNA	SCHWARZBECK	VULB9168	D69250	Sep. 20, 2019	Sep. 19, 2020
POSITIONING CONTROLLER	MF	MF-7802	MF780208285	,°	-
HORN ANTENNA	ETS LINDGREN	3117	00034609	May. 16, 2019	May. 15, 2021
RF Communication Test Set	НР	8920B	GC - GC	Jul. 12, 2019	Jul. 11, 2020
RF Communication Test Set	HP	8920B	5 - 6	Jul. 10, 2020	Jul. 09, 2021
Vector Analyzer	Agilent	E4440A	0	Feb. 25, 2019	Feb. 24, 2021
Attenuator	Weinachel Corp	58-30-33	ML030	Jul. 12, 2019	Jul. 11, 2020

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Passing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGE. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 7 of 26

Attenuator Weinach	el Corp 58-30-33	ML030	Jul. 10, 2020	Jul. 09, 2021
--------------------	------------------	-------	---------------	---------------

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the special pedicated fresh dynaspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter appropriation of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 8 of 26

# 4. SUPPORT EQUIPMENT LIST

Device Type	Manufacturer	Model Name	Serial No.	Data Cable	Power Cable
50ohm dummy load		Co.	<u>C</u>	-	
Hand microphone		·	-0	0.15m	

#### 5. SYSTEM DESCRIPTION

# **EUT** test procedure:

- 1. Connect EUT and peripheral devices.
- 2. Power on the EUT, the EUT begins to work.
- 3. Make sure the EUT normal working.

#### **EMC TEST MODES**

No.	TEST MODES			
1,60	Scanning mode			
2	Scanning stopped/Receiving at low channel of 220 MHz -260MHz			
3	Scanning stopped/Receiving at middle channel of 220 MHz -260MHz			
4 Scanning stopped/Receiving at high channel of 220 MHz -260MHz				

Note: Only the result of the worst case was recorded in the report.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Pest no/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 9 of 26

# 6. SUMMARY OF TEST RESULTS

		(%)
FCC Rules	Description Of Test	Result
§15.107	Conduction Emission	Compliant
§15.109	Radiated Emission	Compliant
§15.111	Antenna Conducted Power for receivers	Compliant
§15.121(b)	Scanning receivers and frequency converters used with scanning receivers	Compliant

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Restriction Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written application of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



Page 10 of 26

#### 7. FCC RADIATED EMISSION TEST

#### 7.1. TEST EQUIPMENT OF RADIATED EMISSION

#### 7.2. LIMITS OF RADIATED EMISSION TEST

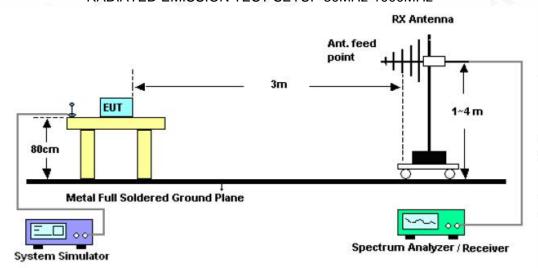
Frequency	Distance	Maximum Field Strength Limit (dBuV/m/ Q.P.)		
(MHz)	(m)			
30~88	3	40.0		
88~216	3	43.5		
216~960	3	46.0		
ABOVE 960	3	54.0		

Frequency (MHz)	Distance (m)	Maximum Field Strength Limit (dBuV/m/ P.K.)	Maximum Field Strength Limit (dBuV/m/ A.V.)
ABOVE 1G	3	74	54

<sup>\*\*</sup>Note: The lower limit shall apply at the transition frequency. Because the EUT RX frequency range up to 174 MHz, so the upper the frequency range up to 2 GHz.

# 7.3 BLOCK DIAGRAM OF RADIATED EMISSION TEST

#### RADIATED EMISSION TEST SETUP 30MHz-1000MHz

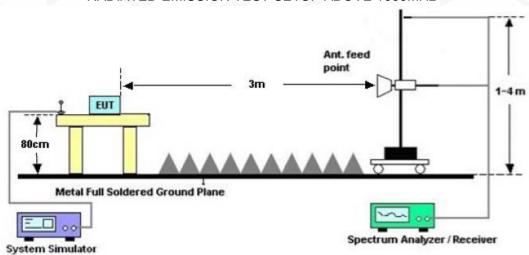


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the condicated resting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC, where the test result presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 11 of 26

# RADIATED EMISSION TEST SETUP ABOVE 1000MHz



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the specificated resting/inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 12 of 26

#### 7.4 PROCEDURE OF RADIATED EMISSION TEST

- 1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2) Support equipment, if needed, was placed as per ANSI C63.4.
- 3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- 4) The EUT received power by DC 13.80V.
- 5) The antenna was placed at 3 meter away from the EUT as stated in FCC Part 15. The antenna connected to the Analyzer via a cable and at times a pre-amplifier would be used.
- 6) The Analyzer / Receiver quickly scanned from 30MHz to 1000MHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- 7) The test mode(s) were scanned during the test:
- 8) Recorded at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and Q.P./Peak reading is presented. For emissions below 1GHz, use 120KHz RBW and VBW>=3RBW for QP reading.
  - 9) For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
  - 10) When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
  - 11)If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
  - 12) For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
  - 13) In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.
    - 14) The test data of the worst case condition (mode 1) was reported on the following Data page

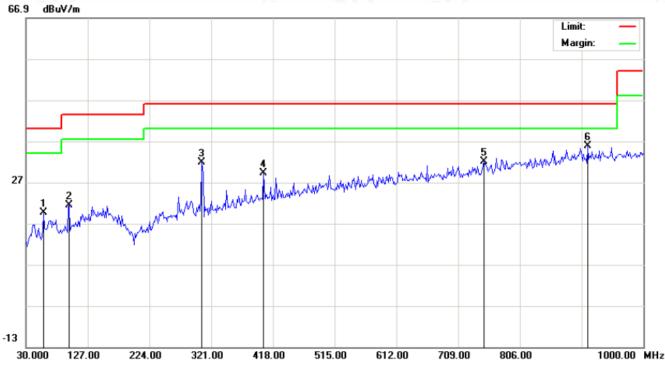
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the conditional reports and the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 13 of 26

#### 7.5 TEST RESULT OF RADIATED EMISSION TEST

#### Radiated Emission Test -Horizontal -3m Below 1G



No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1		57.4833	4.24	15.33	19.57	40.00	-20.43	peak
2		97.9000	5.69	15.79	21.48	43.50	-22.02	peak
3		306.4500	12.10	19.70	31.80	46.00	-14.20	peak
4		403.4500	6.21	23.05	29.26	46.00	-16.74	peak
5		749.4167	2.64	29.27	31.91	46.00	-14.09	peak
6	*	912.7000	3.95	31.81	35.76	46.00	-10.24	peak

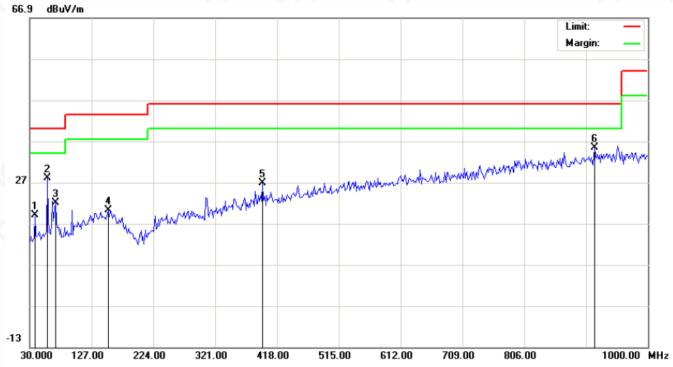
**RESULT: PASS** 

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written appropriation of AGE. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 14 of 26

#### Radiated Emission Test -Vertical -3m Below 1G



No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	l
	•	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1		38.0833	4.90	14.03	18.93	40.00	-21.07	peak	Ī
2		57.4833	12.70	15.33	28.03	40.00	-11.97	peak	Ī
3		70.4167	5.00	17.02	22.02	40.00	-17.98	peak	I
4		152.8667	1.09	19.20	20.29	43.50	-23.21	peak	I
5		395.3667	3.93	22.82	26.75	46.00	-19.25	peak	
6	*	915.9333	3.64	31.84	35.48	46.00	-10.52	peak	

#### **RESULT: PASS**

Note: 1. Factor=Antenna Factor + Cable loss - Amplifier gain, Margin=Measurement-Limit.

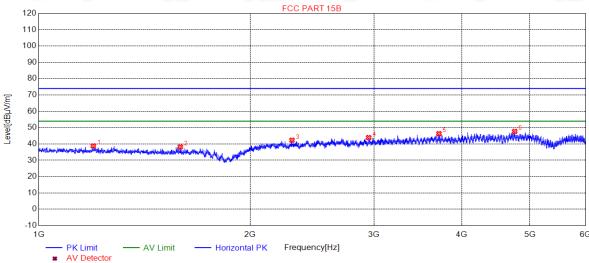
2. The "Factor" value can be calculated automatically by software of measurement system.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test result presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 15 of 26

#### Radiated Emission Test -Horizontal -3m ABOVE 1G



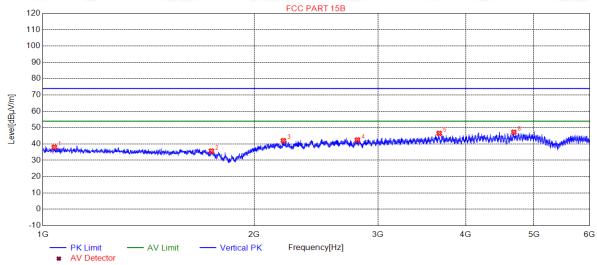
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	
1	1196.0196	38.82	-16.83	74.00	35.18	100	332	Horizontal	
2	1590.5591	38.20	-16.17	74.00	35.80	100	133	Horizontal	
3	2293.6294	42.31	-10.59	74.00	31.69	100	358	Horizontal	
4	2948.6949	43.93	-9.37	74.00	30.07	100	84	Horizontal	
5	3712.2712	46.33	-7.13	74.00	27.67	100	173	Horizontal	
6	4758.3758	47.71	-4.95	74.00	26.29	100	124	Horizontal	

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the specificated resting/inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 16 of 26

#### Radiated Emission Test -Vertical -3m ABOVE 1G



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1039.0039	38.03	-16.68	74.00	35.97	100	109	Vertical
2	1738.5739	35.70	-14.60	74.00	38.30	100	49	Vertical
3	2200.6201	42.05	-10.98	74.00	31.95	100	247	Vertical
4	2805.1805	42.47	-9.48	74.00	31.53	100	227	Vertical
5	3667.2667	46.54	-7.23	74.00	27.46	100	109	Vertical
6	4683.3683	47.22	-5.02	74.00	26.78	100	1	Vertical

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the specificated resting/inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 17 of 26

#### 8. CONDUCTED EMISSION TEST

#### **8.1 PROVISIONS APPLICABLE**

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequencies within the band 150 KHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50uH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the

power terminal. The lower limit applies at the boundary between the frequencies ranges.

Frequency of Emission (MHz)	Conducted	Limit(dBuV)
r requerity of Emission (Wills)	Quasi-Peak	Average
0.15 – 0.5	66 to 56 *	56 to 46 *
0.5 – 5	56	46
5 – 30	60	50

<sup>\*</sup> Decreases with the logarithm of the frequency.

#### **8.2 MEASUREMENT PROCEDURE**

- (1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- (2) Support equipment, if needed, was placed as per ANSI C63.4.
- (3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- (4) The EUT received DC 13.80V power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
- (5) All support equipments received AC power from a second LISN, if any.
- (6) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- (7) Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.

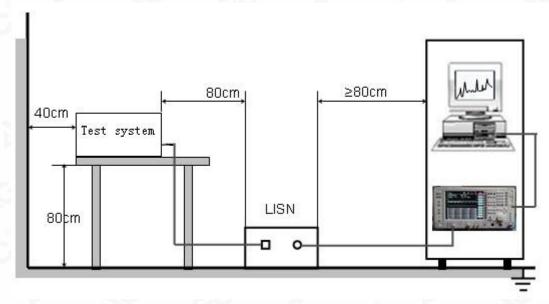
During the above scans, the emissions were maximized by cable manipulation.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the /Inspection he test results Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter apthorization of AG presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15da/\$\subseteq\$ after he test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 18 of 26

# 8.3 TEST SETUP BLOCK DIAGRAM



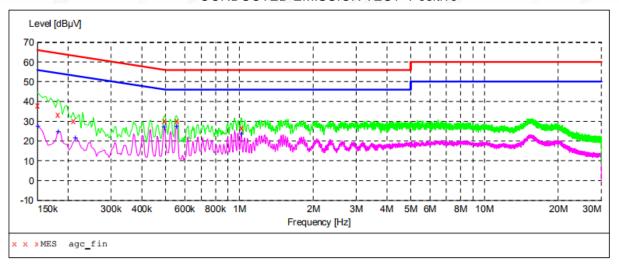
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the specificated resting/inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 19 of 26

#### **8.4 TEST RESULT**

#### CONDUCTED EMISSION TEST-Positive



#### MEASUREMENT RESULT: "agc fin"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000 0.182000	38.10 33.50	10.6 10.8	66 64	27.9 30.9	QP OP	L1 L1	FLO FLO
0.210000	30.60	10.8	63	32.6	QP	L1	FLO
0.494000	30.50	11.0	56	25.6	QP	L1	FLO
0.554000	30.20	10.8	56	25.8	QP	L1	FLO
1.014000	26.80	11.2	56	29.2	QP	L1	FLO

#### MEASUREMENT RESULT: "agc fin2"

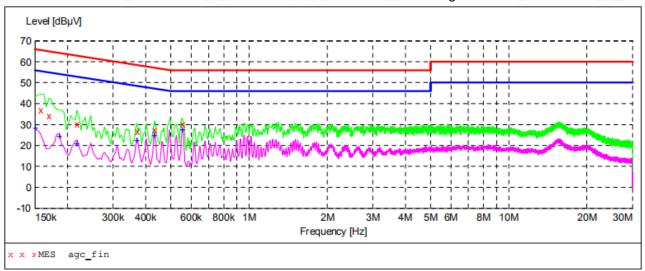
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000 0.182000 0.214000	27.60 24.60 21.50	10.6 10.8 10.8	56 54 53	29.8 31.5	AV AV AV	L1 L1 L1	FLO FLO
0.494000 0.554000	27.30 27.60	11.0 10.8	46 46	18.8 18.4	AV AV	L1 L1	FLO FLO
1.018000	23.80	11.2	46	22.2	AV	L1	FLO

**RESULT: PASS** 

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the specificated resting/inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



# CONDUCTED EMISSION TEST-Negative



#### MEASUREMENT RESULT: "agc fin"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.158000 0.170000 0.218000 0.370000 0.434000 0.554000	36.90 34.20 30.60 26.70 27.60 30.10	10.7 10.7 10.8 10.4 10.5	66 65 63 59 57 56	28.7 30.8 32.3 31.8 29.6 25.9	QP QP QP QP QP QP	N N N N N	FLO FLO FLO FLO FLO

#### MEASUREMENT RESULT: "agc fin2"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000 0.186000	28.20 24.30	10.6 10.8	56 54	27.8 29.9	AV AV	N N	FLO FLO
0.218000	21.10	10.8	53	31.8	AV	N	FLO
0.370000	22.30	10.4	49	26.2	AV	N	FLO
0.434000	25.00	10.5	47	22.2	AV	N	FLO
0.554000	27.50	10.8	46	18.5	AV	N	FLO

**RESULT: PASS** 

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written appropriation of AGE. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 21 of 26

# 9. ANTENNA CONDUCTED POWER FOR RECEIVERS

# **LIMIT**

The antenna conducted power of the receiver as defined in §15.111 shall not exceed the values given in the following tables

Frequency Range	9 KHz to 2GHz
Limit	2.0 nW (-57 dBm )

# **TEST CONFIGURATION**



# **TEST PROCEDURE**

- 1. The receiver antenna terminal connected to a spectrum analyzer.
- 2. The test data of the worst case condition (mode 1) was reported on the following Data page.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Restrict/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuence of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.

The test results

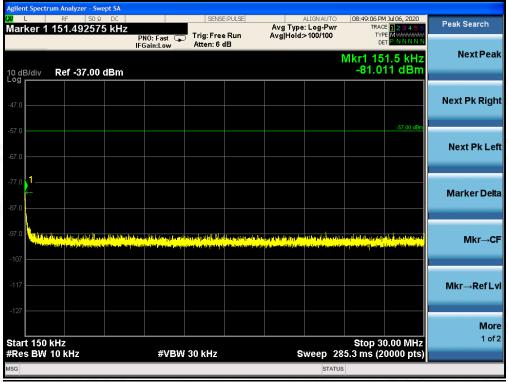


#### **TEST RESULTS**

Conducted Measurement (9 KHz to 150 KHz)



#### Conducted Measurement (150 KHz to 30MHz)

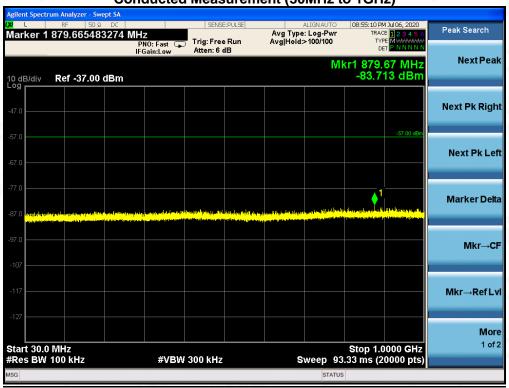


Compliance Strag/Inspection Any report having not been signed by authorized approver, or having been altered without authorization, or naving not been signed by authorized approver, or having been altered without authorization, or naving not been signed by according to the test results of the report is not permitted without the written authorization of AGC. The test results are the insulated by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

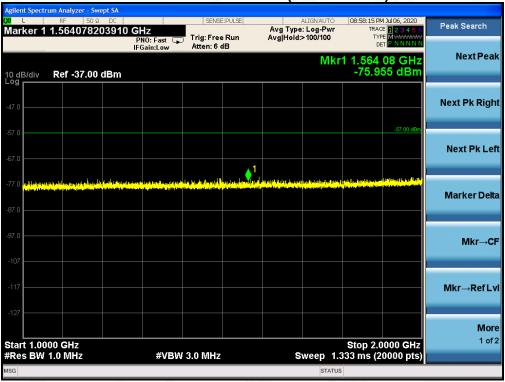
Attestation of Global Compliance(Shenzhen)Co., Ltd Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Web: http://cn.agc-cert.com/



Conducted Measurement (30MHz to 1GHz)







# **PASS**

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Dedicated Pestho/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC he test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



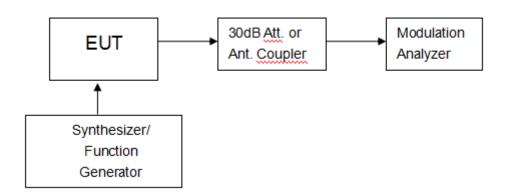
Page 24 of 26

# 10. SANNING RECEIVERS AND FREQUENCY CONVERTERS USED WITH SANNING RECEIVERS.

#### LIMIT

Except as provided in paragraph (c) of this section, scanning receivers shall reject any signals from the Cellular Radiotelephone Service frequency bands that are 38 dB or lower based upon a 12 dB SINAD measurement, which is considered the threshold where a signal can be clearly discerned from any interference that may be present.

#### **TEST CONFIGURATION**



#### **TEST PROCEDURE**

Please review the FCC Part 15.121 b section requirements to meet the testing process

#### **TEST RESULTS**

Frequency Range(MHz)	Channel	Measurement Result (dB)	Limit(dB)	Result
220-260	Bottom	45	>38	Pass
220-260	Middle	43	>38	Pass
220-260	Тор	44	>38	Pass

Note:1. This device meets the requirements of FCC PART 15.121.b

2. The test report only shows the worst test results

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Bedicated restrou/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



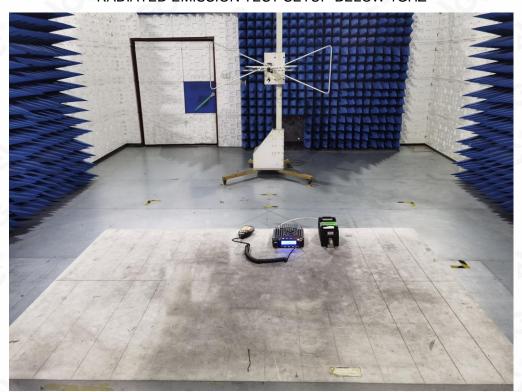
Page 25 of 26

# **APPENDIX 1 PHOTOGRAPHS OF TEST SETUP**

CONDUCTED EMISSION TEST SETUP



RADIATED EMISSION TEST SETUP-BELOW 1GHZ



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Festing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written appropriation of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 26 of 26

# RADIATED EMISSION TEST SETUP-ABOVE 1GHZ



----END OF REPORT----

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the specificated resting/inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.