



Project No: TM-2108000061P
Report No.: TMWK2203001182KR

FCC ID: 2AGTY-TSC-70-G3

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KDB 447498 D03
47 C.F.R. Part 1, Subpart I, Section 1.1310
47 C.F.R. Part 2, Subpart J, Section 2.1091

RF EXPOSURE REPORT

For

Touchscreen Controller

Model No.: TSC-70-G3, TSC-101-G3



Trade Name:

Issued to

QSC, LLC

1675 MacArthur Blvd. Costa Mesa, CA 92626 United States

Issued by

Compliance Certification Services Inc.

Wugu Laboratory

**No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City 24891, Taiwan.**

Issued Date: July 20, 2023

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.
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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	July 5, 2023	Initial Issue	ALL	Doris Chu
01	July 20, 2023	See the following Note Rev.(01)	P.6	Allison Chen

Note:

Rev.(01)

1. Modify antenna type.



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1. TEST RESULT CERTIFICATION

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
KDB 447498 D03 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091	Compliance
Statements of Conformity	
Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.	

Approved by:

Kevin Tsai
Deputy Manager
Compliance Certification Services Inc.

2. LIMIT

Environmental evaluation and exposure limit according to FCC CFR 47 part 1, 1.1307(b), 1.1310.

§1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of FCC part 2.1093 of the chapter.

TABLE 1 - LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	* 100	6
3.0-30	1842/f	4.89/f	* 900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	* 100	30
1.34-30	824/f	2.19/f	* 180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30


f = frequency in MHz

* = Plane-wave equivalent power density

Note 1 to Table 1: Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when a person is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

Note 2 to Table 2: General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

3. EUT SPECIFICATION

EUT	Touchscreen Controller
Model	TSC-70-G3, TSC-101-G3
Trade Name	
Model Discrepancy	TSC-70-G3: 7 inches TSC-101-G3: 10.1 inches
Frequency band (Operating)	<input checked="" type="checkbox"/> 13.56MHz <input type="checkbox"/> Others
Device category	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others
Exposure classification	<input type="checkbox"/> Occupational/Controlled exposure <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (E=60.77 V/m, E=824/f V/m)
Antenna Specification	Antenna Type: Loop Antenna
Result Power	13.56MHz 52.28 dBuV/m (3m)
Evaluation applied	<input checked="" type="checkbox"/> MPE Evaluation* <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A
HW Version	A101
SW Version	tscg3_dvt2 firmware
EUT Serial #	1
NFC controller IC	STMicroelectronics / ST25R3911B

Remark:

- For more details, please refer to the User's manual of the EUT.
- Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.
- Disclaimer: The variant model numbers / trademarks are assessed as identical in hardware and software to each other, hence all variants are fully covered by the test results in this test report without further verification test.
- The power referred of the test report TMWK2108000306KR for RF Exposure assessment purpose.

4. TEST RESULTS

compliance.

<i>EUT parameter (data from the separate report)</i>	
Result Power in dBuV/m	52.28 dBuV/m (3m)
Limit of E-field strength (V/m)	60.77 V/m

<i>Exposure evaluation</i>	
<p>Given</p> $R = R_3 + 40 \log(3/0.2)$ <p>or</p> $R = R_3 + 40 \log(3/0.15)$ $E = 10^{((R-120)/20)}$	<p>Where:</p> <ul style="list-style-type: none"> ● E: E field Strength ● R₃: Result Power on 3m ● R: Result Power on 0.2m or 0.15m

Evaluation distance (m)	Frq. (MHz)	Result power (dBuV/m)	Electric Field Strength (V/m)	Limit of Electric Field Strength (V/m)
0.2	13.56	52.28	0.09251	60.77

-- End of Test Report --