



TEST REPORT

Applicant Name: Shenzhen TCL Smart Home Technology Co., Ltd.
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Report Number: 2604P02236E-RF-00G
FCC ID: 2BG9T-TCLD2BM

Test Standard (s)

FCC PART 2.1091

Sample Description

Product Name: D2 Series Smart Door Lock
Model No.: D2 Pro-M
Trade Mark: TCL
Date Received: 2026-02-02
Report Date: 2026-04-07

Test Result:	The EUT complied with the standards above.
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Prepared and Checked By:

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Approved By:

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Note: This report must not be used by the customer to claim product certification, approval, or endorsement by A2LA, or any agency of the Federal Government. The information marked "#" is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included but no need marked.
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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
Rev.00	2604P22998E-RF-00G	Original Report	2026-04-07

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product Name	D2 Series Smart Door Lock
Tested Model	D2 Pro-M
Voltage Range [#]	DC 3.635 V from battery
Note 1: The device (D2 Series Smart Door Lock) has two parts: Exterior Assembly and Interior Assembly. Note 2: The Exterior Assembly has BLE / NFC / 5.8G Radar function. Note 3: The Interior Assembly has a WIFI module with BLE/2.4G WIFI function and a Thread module with BLE/2.4G Thread function.	

Frequency Range	NFC: 13.56MHz BLE: 2402-2480MHz 2.4G Wi-Fi: 2412-2462MHz 2.4G Thread: 2405-2480MHz 5.8G Radar 5780-5840MHz
Maximum Conducted Output Peak Power (actual test result)	Exterior Assembly: BLE: -3.69dBm
	Interior Assembly: WIFI module: BLE: 2.35dBm, 2.4G Wi-Fi: 15.96dBm Thread module: BLE: 8.15dBm, 2.4G Thread: 3.83dBm
Maximum E-field Strength (actual test result)	NFC: 67.51dBuV/m@3m 5.8G Radar: 80.55dBuV/m@3m
Antenna Specification [#]	Exterior Assembly: BLE: PCB Antenna, Gain: 2.7dBi 5.8G Radar: Patch Antenna, Gain: 2.0dBi NFC: LOOP Antenna
	Interior Assembly: WIFI module: BLE&2.4G Wi-Fi: PCB Antenna, Gain: 4.54dBi Thread module: BLE&2.4G Thread: PCB Antenna, Gain: 4.44dBi (The antenna gain is provided by the applicant.)
Sample/EUT Status	Good condition

Objective

This test report is in accordance with Part 2-Subpart J, Radiofrequency Radiation Exposure of the Federal Communication Commission rules.

The tests were performed in order to determine compliance with FCC §2.1091 rules.

Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the Floor 1, KuMaKe Building, Dongzhou Community, Guangming Street, Guangming District, Shenzhen, Guangdong, China.

Accredited by American Association for Laboratory Accreditation (A2LA).The Certificate Number is 4297.01.

RF EXPOSURE

Applicable Standard

According to subpart 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (Minutes)
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
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

MPE Calculated Formulary:

- Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm²)

P = power input to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

- For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

Calculated Result

Exterior Assembly:

Radio	Frequency (MHz)	Tune up conducted power [#] (dBm)	Antenna Gain [#] (dBi)	EIRP		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
				(dBm)	(mW)			
BLE	2402-2480	-3.0	2.7	-0.3	0.933	20	0.0002	1.0
NFC	13.56	/	/	-27.69	0.002	20	0.0000003	0.98
5.8G Radar	5780-5840	/	/	-14.65	0.034	20	0.0000068	1.0

Note 1: The tune-up power and antenna gain are declared by the applicant.

Note 2: EIRP= Tune up conducted power + Antenna Gain

Note 3: E[dBμV/m] = EIRP[dBm] + 95.2 for d = 3 m.

For NFC EIRP= 67.51 dBuV/m@3m - 95.2 = -27.69 dBm

For 5.8G Radar EIRP= 80.55 dBuV/m@3m - 95.2 = -14.65 dBm

Note 4: The BLE, NFC and 5.8G Radar can transmission simultaneously.

Interior Assembly:

Radio	Frequency (MHz)	Tune up conducted power [#] (dBm)	Antenna Gain [#] (dBi)	EIRP		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
				(dBm)	(mW)			
BLE (Chain 0)	2402-2480	2.8	4.54	7.34	5.420	20	0.0011	1.0
2.4G Wi-Fi	2412-2462	16.5	4.54	21.04	127.057	20	0.0253	1.0
BLE (Chain 1)	2402-2480	8.6	4.44	13.04	20.137	20	0.0040	1.0
2.4G Thread	2405-2480	4.2	4.44	8.64	7.311	20	0.0015	1.0

Note 1: The tune-up power and antenna gain are declared by the applicant.

Note 2: EIRP= Tune up conducted power + Antenna Gain

Note 3: The BLE (Chain 0) and 2.4G Wi-Fi can't transmission simultaneously.

Note 4: The BLE (Chain 1) and 2.4G Thread can't transmission simultaneously.

Note 5: Simultaneous transmission of any one wireless function from the WiFi module and any one wireless function from the Thread module.

The Exterior Assembly and Interior Assembly can transmission simultaneously.

Simultaneous transmitting consideration (worst case):

$$\begin{aligned}
 \text{The ratio} &= \text{BLE/Limit} + \text{NFC/Limit} + \text{5.8G Radar/Limit} + \text{2.4G Wi-Fi/Limit} + \text{BLE (Chain 1)/Limit} \\
 &= 0.0002/1.0 + 0.0000003/0.98 + 0.0000068/1.0 + 0.0253/1.0 + 0.0040/1.0 \\
 &= 0.0295 \\
 &< 1.0
 \end{aligned}$$

Result: Compliance. The device compliant Simultaneous transmission at 20cm distances.

EXHIBIT A-EUT PHOTOGRAPHS

Please refer to the Attachment No.1 2604P22998E-RF EUT External Photos and Attachment No.2 2604P22998E-RF EUT Internal Photos.

***** END OF REPORT *****