FCC RADIO TEST REPORT

FCC ID	:	**HD5-CT30PL0N**
Equipment	:	**Mobile computer**
Brand Name	:	**Honeywell**
Model Name	:	**CT30PL0N**
Applicant	:	**Honeywell International Inc.** **9680 Old Bailes Road, Fort Mill, SC 29707 USA**
Manufacturer	:	**Honeywell International Inc.** **9680 Old Bailes Road, Fort Mill, SC 29707 USA**
Standard	:	**FCC Part 15 Subpart C §15.247**

The product was received on Nov. 11, 2021 and testing was performed from Jun. 15, 2022 to Jun. 15, 2022. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this variant report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory
No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issue Date
FR1N0506-04	01	Initial issue of report	Jun. 20, 2022

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
-	15.247(a)(2)	6dB Bandwidth	Not Required	See Note
-	2.1049	99% Occupied Bandwidth	Not Required	See Note
3.1	15.247(b)	Power Output Measurement	Pass	-
-	15.247(e)	Power Spectral Density	Not Required	See Note
-	15.247(d)	Conducted Band Edges	Not Required	See Note
		Conducted Spurious Emission	Not Required	See Note
-	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	Not Required	See Note
-	15.207	AC Conducted Emission	Not Required	See Note
3.2	15.203 & 15.247(b)	Antenna Requirement	Pass	-

Note: This is a variant report which by update Power Output Measurement. After assessing, since the test result is not affected by the changes, all the test cases were performed on original report which can be referred to Sporton Report Number FR1N0506C.

Declaration of Conformity:
The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
Comments and Explanations:
The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Wei Chen

Report Producer: Rachel Hsieh

1 General Description

1.1 Product Feature of Equipment Under Test

Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ac, Wi-Fi 5GHz 802.11a/n/ac and NFC.

Product Feature	
Sample 1	with Scanner (S0703)
Sample 2	Non Scanner
HW Version	v1.0
SW Version	OS. 11. 001
Antenna Type	WLAN 5GHz <Ant. 1>: PIFA Antenna WLAN 2.4GHz <Ant. 2>: PIFA Antenna Bluetooth: PIFA Antenna NFC: Loop Antenna

Antenna information		
2400 MHz ~ 2483.5 MHz	Peak Gain (dBi)	2.5

Remark:

1. The above EUT's information is declared by manufacturer. Please refer to Comments and Explanations in report summary.
2. Internal tracking board version is EVT1.5 and SW PN is 311.C0.00.0630-N-DEBUG.

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	TH05-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC designation No.: TW3786

1.4 Applicable Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05r02
- ANSI C63.10-2013

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.

2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		

2.2 Test Mode

The final test modes consider the modulation and the worst data rates as shown in the table below.

Modulation	Data Rate
802.11b	**1 Mbps**
802.11g	**6 Mbps**
802.11n HT20	**MCS0**
802.11n HT40	**MCS0**
802.11ac VHT20 (Covered by HT20)	**MCS0**
802.11ac VHT40 (Covered by HE40)	**MCS0**

2.3 EUT Operation Test Setup

The RF test items, utility “QRCT 4.0.00193.0” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

3 Test Result

3.1 Output Power Measurement

3.1.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5 MHz, the limit for output power is 30 dBm. If transmitting antenna with directional gain greater than 6 dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

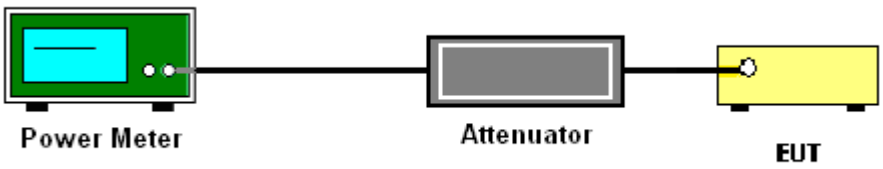
3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.1.3 Test Procedures

1. For Average Power, the testing follows ANSI C63.10 Section 11.9.2.3.2 Method AVGPM-G
2. The RF output of EUT is connected to the power meter by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Measure the conducted output power and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of Average Output Power

Please refer to Appendix A.

3.2 Antenna Requirements

3.2.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 6 dBi, the power shall be reduced by the same level in dB comparing to gain minus 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.2.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.2.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 16, 2021	Jun. 15, 2022	Nov. 15, 2022	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO12 (NO:113)	10MHz~6GHz	Dec. 16, 2021	Jun. 15, 2022	Dec. 15, 2022	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz~40GHz	Aug. 30, 2021	Jun. 15, 2022	Aug. 29, 2022	Conducted (TH05-HY)
Switch Control Mainframe	E-IUSTRUMENT	ETF-1405-0	EC1900067 (BOX7)	N/A	Aug. 12, 2021	Jun. 15, 2022	Aug. 11, 2022	Conducted (TH05-HY)

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Shiming Liu	Temperature:	21.3~22.8	°C
Test Date:	2022/6/15	Relative Humidity:	41.6~56.8	%

TEST RESULTS DATA
Average Output Power

2.4GHz Band Single Antenna																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	1	1	2412	-	17.30		-	30.00	-	2.50	-	19.80	-	36.00	Pass
11b	1Mbps	1	6	2437	-	17.90		-	30.00	-	2.50	-	20.40	-	36.00	Pass
11b	1Mbps	1	11	2462	-	17.50		-	30.00	-	2.50	-	20.00	-	36.00	Pass
11g	6Mbps	1	1	2412	-	15.70		-	30.00	-	2.50	-	18.20	-	36.00	Pass
11g	6Mbps	1	6	2437	-	18.10		-	30.00	-	2.50	-	20.60	-	36.00	Pass
11g	6Mbps	1	11	2462	-	17.10		-	30.00	-	2.50	-	19.60	-	36.00	Pass
HT20	MCS0	1	1	2412	-	15.20		-	30.00	-	2.50	-	17.70	-	36.00	Pass
HT20	MCS0	1	6	2437	-	18.40		-	30.00	-	2.50	-	20.90	-	36.00	Pass
HT20	MCS0	1	11	2462	-	17.10		-	30.00	-	2.50	-	19.60	-	36.00	Pass
HT40	MCS0	1	3	2422	-	13.00		-	30.00	-	2.50	-	15.50	-	36.00	Pass
HT40	MCS0	1	6	2437	-	17.80		-	30.00	-	2.50	-	20.30	-	36.00	Pass
HT40	MCS0	1	9	2452	-	15.10		-	30.00	-	2.50	-	17.60	-	36.00	Pass
VHT20	MCS0	1	1	2412	-	15.10		-	30.00	-	2.50	-	17.60	-	36.00	Pass
VHT20	MCS0	1	6	2437	-	18.30		-	30.00	-	2.50	-	20.80	-	36.00	Pass
VHT20	MCS0	1	11	2462	-	17.00		-	30.00	-	2.50	-	19.50	-	36.00	Pass
VHT40	MCS0	1	3	2422	-	12.90		-	30.00	-	2.50	-	15.40	-	36.00	Pass
VHT40	MCS0	1	6	2437	-	17.70		-	30.00	-	2.50	-	20.20	-	36.00	Pass
VHT40	MCS0	1	9	2452	-	14.90		-	30.00	-	2.50	-	17.40	-	36.00	Pass

Note: Measured power (dBm) has offset with cable loss.