PELOTON INTERACTIVE, INC.

TEST REPORT

SCOPE OF WORK:
47 CFR FCC Part 15.247 – Radio Spectrum report

Model:
PLTN-TC1VS-2

REPORT NUMBER
210500069THC-001

ISSUE DATE
May 31, 2021

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DOCUMENT CONTROL NUMBER
GFT-OP-10h (28-Nov-2018)

FCC TEST REPORT
(Spot Check)

Applicant:	**PELOTON INTERACTIVE, INC.** **125 West 25th street, FL11, New York, NY 10001, USA**
Product:	**Peloton Tread Tablet**
Model No.:	**PLTN-TC1VS-2**
FCC ID:	**2AA3N- TC1VS2**
Test Method/ Standard:	**47 CFR FCC Part 15.247 & ANSI C63.10 2013** **KDB 558074 D01 v05r02**
Test By:	**Intertek Testing Services Taiwan Ltd.,** **Hsinchu Laboratory** **No. 11, Lane 275, Ko-Nan 1 Street, Chia-Tung Li,** **Shiang-Shan District, Hsinchu City, Taiwan**

Testing Laboratory
0597

Zero Chen
Engineer

Durant Wei
Reviewer

Revision History

Report No.	Issue Date	Revision Summary
180300421TWN-001	Jul.12, 2018	Original report (FCC ID: 2AA3N- TC1VS)
210500069THC-001	May 31, 2021	The NFC module was removed from the EUT. Based on engineering judgement, spot testing was deemed necessary.

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Summary of Test Data

Test Requirement	Applicable Rule (Section 15.247)	Result
Minimum 6 dB Bandwidth	15.247(a)(2)	Verified (Note)
Maximum Peak Conducted Output Power	15.247(b)(3)	Pass Verified (Note)
Power Spectral Density	15.247(e)	Verified (Note)
Emissions In Non-Restricted Frequency Bands	15.247(d)	Pass Verified (Note)
Emissions In Restricted Frequency Bands (Radiated emission measurements)	15.247(d), 15.205, 15.209	Verified (Note)
Emission On The Band Edge	15.247(d), 15.205	Pass Verified (Note)
AC Power Line Conducted Emission	15.207	Verified (Note)
Antenna Requirement	15.203	Pass
Note: After evaluation, the test data refer to the report number: 180300421TWN-001, dated Jul.12, 2018.		

Note: Please note that the test results with statement of conformity, the decision rules which are based on: Safety Testing: the specification, standard or IEC Guide 115.
Other Testing: the specification, standard and not taking into account the measurement uncertainty.

1. General Information

1.1 Identification of the EUT

Product:	Peloton Tread Tablet
Model No.:	PLTN-TC1VS-2
Operating Frequency:	2412 MHz ~ 2462 MHz for 802.11b, 802.11g, 802.11n HT20
Channel Number:	11 channels
Frequency of Each Channel:	2412+5 k, k＝0 ~ 10 for 802.11b, 802.11g, 802.11n HT20
Rated Power:	DC 12V from adapter
Power Cord:	N/A
Sample receiving date:	2021/05/05
Sample condition:	Workable
Test Date(s):	2021/05/14 ~ 2021/05/17

1.2 Description of the EUT

Modulation mode	Transmit path	
	Chain 0	Chain 1
802.11b	V	V
802.11g	V	V
802.11n (HT20)	V	V

1.3 Antenna description

Antenna 1

Antenna Gain : 1.9 dBi
Antenna Type : PIFA antenna
Connector Type : I-Pex

Antenna 2

Antenna Gain : 2.3 dBi
Antenna Type : PIFA antenna
Connector Type : I-Pex

1.4 Operation mode

The EUT used “AMPAK RFTestTool.apk ” to select different frequency and modulation. With individual verifying, the maximum output power was found out 6 Mbps data rate for 802.11b mode, the final tests were executed under these conditions recorded in this report individually.

1.5 Peripherals equipment

Peripherals	Brand	Model No.	Serial No.	Data cable
Adapter	EDAC	EA10681V-240	N/A	N/A

2. Maximum Peak Conducted Output Power

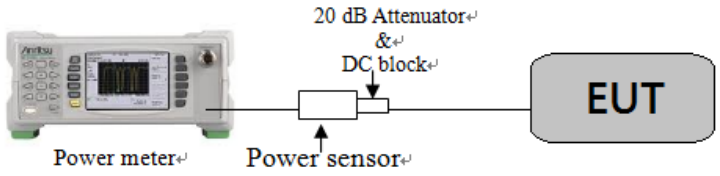
2.1 Instrument Setting

Power Meter Parameter	Setting
Bandwidth	65MHz bandwidth is greater than the EUT emission bandwidth
Detector	Peak & Average

2.2 Test Procedure

The preferred methodology is to use integrated average power measurements, as described in 11.9.2 and 11.13.3 of ANSI C63.10. The peak integrated band power methods of 11.9.1.2 and 11.13.3.2 of ANSI C63.10 are not applicable for FCC compliance testing purposes.

2.3 Test Diagram



2.4 Limit

For systems using digital modulation in the 2400-2483.5 MHz: 1 Watt (30dBm)

2.5 Test Results

Temperature (℃) :	26
Relative Humidity (%) :	56
Test date :	2021/5/17

Chain 0

Mode	Channel	Frequency (MHz)	Output Power (AV) (dBm)	Total Power (AV) (mW)	Maximum power (PK) (dBm)	Maximum power (PK) (mW)	Limit (dBm)	Margin (dB)
802.11b	1	2412	14.93	31.12	18.05	63.83	30	-11.95
	6	2437	14.81	30.27	17.90	61.66	30	-12.10
	11	2462	14.32	27.04	17.36	54.45	30	-12.64
802.11g	1	2412	15.76	37.67	23.35	216.27	30	-6.65
	6	2437	15.25	33.50	22.50	177.83	30	-7.50
	11	2462	14.91	30.97	22.22	166.72	30	-7.78

Chain 1

Mode	Channel	Frequency (MHz)	Output Power (AV) (dBm)	Total Power (AV) (mW)	Maximum power (PK) (dBm)	Maximum power (PK) (mW)	Limit (dBm)	Margin (dB)
802.11b	1	2412	16.05	40.27	19.12	81.66	30	-10.88
	6	2437	16.47	44.36	19.51	89.33	30	-10.49
	11	2462	16.25	42.17	19.35	86.10	30	-10.65
802.11g	1	2412	16.70	46.77	25.21	331.89	30	-4.79
	6	2437	16.98	49.89	25.16	328.10	30	-4.84
	11	2462	16.82	48.08	24.78	300.61	30	-5.22

Mode	Channel	Frequency (MHz)	Output Power (dBm)				Output Power (mW)			
			Chain 0		Chain 1		Chain 0		Chian 1	
			AV	PK	AV	PK	AV	PK	AV	PK
802.11n (HT20)	1	2412	13.27	16.78	13.24	16.87	21.23	47.64	21.09	48.64
	6	2437	12.52	16.40	13.55	16.61	17.86	43.65	22.65	45.81
	11	2462	12.36	16.22	13.66	16.45	17.22	41.88	23.23	44.16

Mode	Total Power (dBm)				Limit (dBm)	Margin (dB)
	AV		PK			
	Chain 0+1 (mW)	Chain 0+1 (dBm)	Chain 0+1 (mW)	Chain 0+1 (dBm)		
802.11n (HT20)	42.32	16.27	96.28	19.84	30	-10.16
	40.51	16.08	89.47	19.52	30	-10.48
	40.45	16.07	86.04	19.35	30	-10.65

3. Emissions in Non-Restricted Frequency Bands

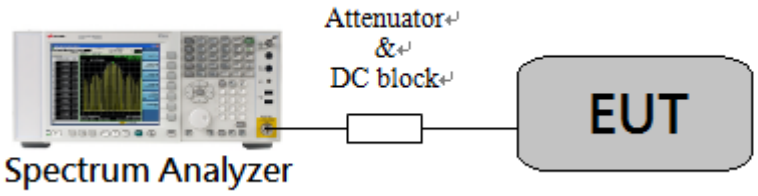
3.1 Instruments Setting

Spectrum Function	Setting (Reference Level)	Setting (Emission Level)
Detector	Peak	Peak
RBW	≧ 100 kHz	≧ 100 kHz
VBW	≧ 3 x RBW	≧ 3 x RBW
Sweep	Auto couple	Auto couple
Trace	Max hold	Max hold
Span	≧ 1.5 time 6dB bandwidth	
Attenuation	Auto	Auto

3.2 Test Procedure

Step 1 The procedure was used in antenna-port conducted and connected to the spectrum analyzer.
Step 2 Set instrument center frequency to center frequency.
Step 3 Use the parameter configured in subclause 11.11 of ANSI C63.10 to measure.
Step 4 Use the peak marker function to determine the maximum amplitude level.

3.3 Test Diagram



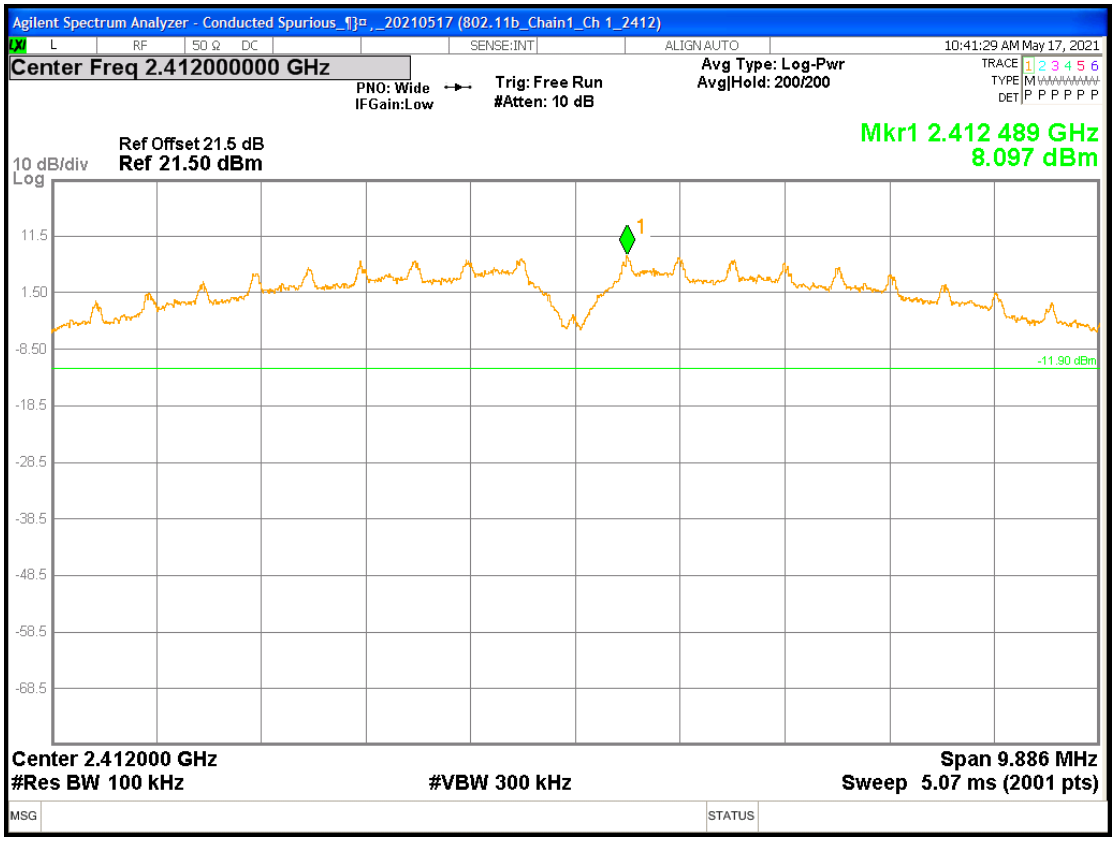
3.4 Limit

The peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz

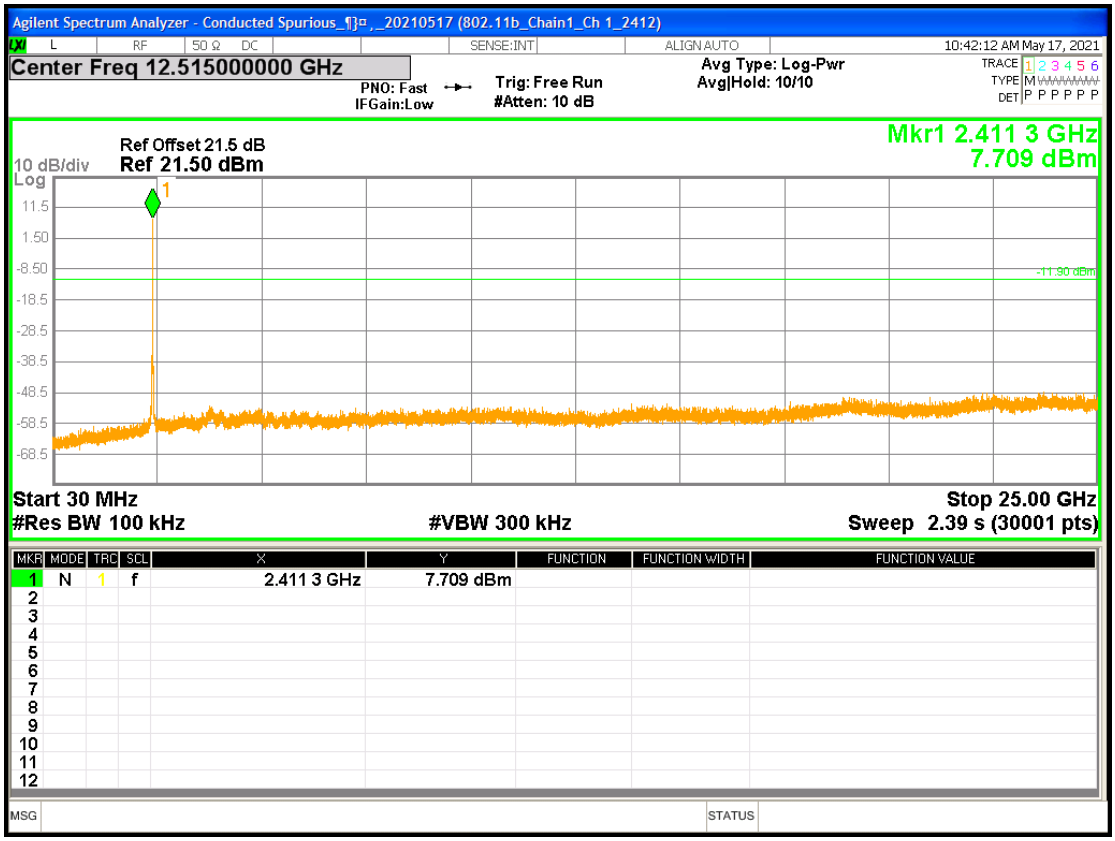
3.5 Test Results

Temperature (℃) :	26
Relative Humidity (%) :	56
Test date :	2021/5/17

Chain1 : Conducted Spurious @ 802.11b mode Ch 1



Chain1 : Conducted Spurious @ 802.11b mode Ch 1



4. Emission on Band Edge

4.1 Instrument Setting

Spectrum Function	Setting
Detector	Peak ; Average
RBW	1MHz
VBW	3 MHz ; 1/T Minimum kHz
Sweep	Auto couple
Restrict bands	2310 MHz ~ 2390 MHz 2483.5 MHz ~ 2500 MHz
Attenuation	Auto

4.2 Test Procedure

The test procedure is the same as Emissions in Restricted Frequency Bands (Radiated emission measurements).

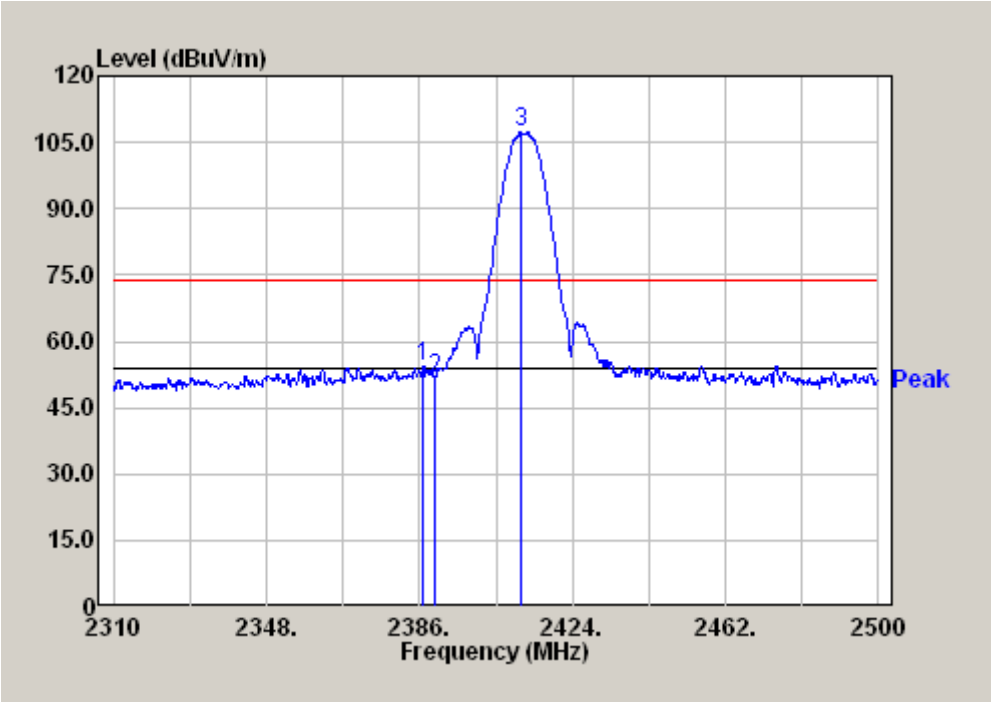
4.3 Test Results

Temperature (℃) :	27
Relative Humidity (%) :	57
Test date :	2021/5/14

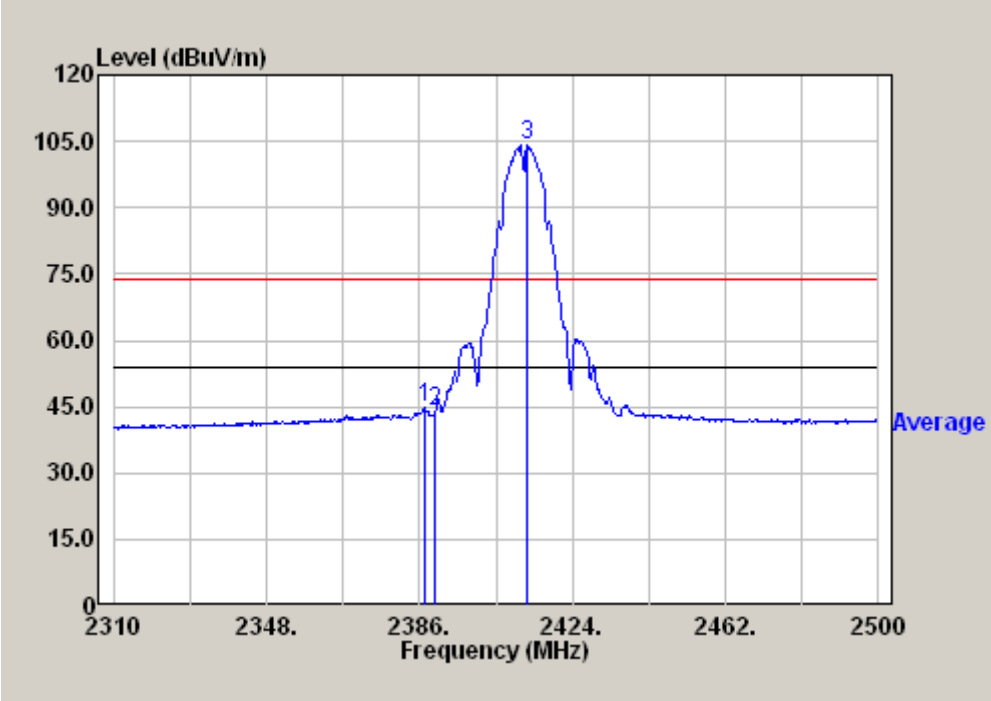
Mode	Frequency (MHz)	Spectrum Analyzer Detector	Ant. Pol. (H/V)	Correction Factor (dB/m)	Reading (dBμV)	Corrected Reading (dBμV/m)	Limit @ 3 m (dBμV/m)	Margin (dB)	Restricted band (MHz)
802.11b Chain1 Channel 1	2386.95	PK	V	34.29	20.01	54.30	74	-19.70	2310~2390
	2387.14	AV	V	34.29	10.35	44.64	54	-9.36	

Remark: Correction Factor = Antenna Factor + Cable Loss

Chain1 : Restricted Band Bandedge @ 802.11b Mode Ch1 PK



Chain1 : Restricted Band Bandedge @ 802.11b Mode Ch1 AV



Appendix A: Test equipment list

Test Equipment/ Test site	Brand	Model No.	Serial No.	Calibration Date	Next Calibration Date
EMI Test Receiver	Rohde & Schwarz	ESR7	101822	2020/08/18	2021/08/17
Signal Analyzer	Agilent	N9030A	MY51380492	2020/08/17	2021/08/16
Horn Antenna	SHWARZBECK	BBHA 9120 D	9120D-456	2021/01/11	2022/01/10
Power Meter	Anritsu	ML2495A	0844001	2020/10/28	2021/10/27
Power Sensor	Anritsu	MA2411B	0738452	2020/10/28	2021/10/27
966-2(A) Cable	SUHNER	SUCOLEX 104	295105/4	2021/03/08	2022/03/07
966-2(B) Cable	SUHNER	SUCOFLEX 104P	CB0005	2021/03/08	2022/03/07
RF Cable	SUHNER	SUCOFLEX 104P	CB0006	2021/04/29	2022/04/28
966-2_3m Semi-Anechoic Chamber	966_2	CEM-966_2	N/A	2021/01/15	2022/01/14
20dB Attenuator	Mini-Circuits	BW-S20W5+	N/A	2020/05/27	2021/05/26
Test software	Audix	e3	V9	NCR	NCR

Note: No Calibration Required (NCR).

Appendix B: Measurement Uncertainty

This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.

Item	Uncertainty
Emission on the Band Edge Test	4.32 dB
RF Antenna Conducted Spurious Test	1.27 dB
Maximum Output Power Test	0.44 dB