

RF TEST REPORT

For

Dongguan Girlfriend Appeal Adult Supplies Co., Ltd.

Product Name: VIBRATOR
Test Model(s).: GM-0259HT1B

Report Reference No. : DACE240412017RL001

FCC ID : 2BEWC-GM-471

Applicant's Name : Dongguan Girlfriend Appeal Adult Supplies Co., Ltd.

Address Room 301, Building 28, No. 2 Kangle Road, Hengli Town, Dongguan City,

Guangdong Province

Testing Laboratory : Shenzhen DACE Testing Technology Co., Ltd.

Address : 101-102 Building H5 & 1/F., Building H, Hongfa Science & Technology

Park, Tangtou, Shiyan, Bao'an District, Shenzhen, Guangdong, China

Test Specification Standard : 47 CFR Part 15.231

Date of Receipt : April 12, 2024

Date of Test : April 12, 2024 to April 25, 2024

Data of Issue : April 25, 2024

Result : Pass

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Revision History Of Report

Version	Description	REPORT No.	Issue Date
V1.0	Original	DACE240412017RL001	April 25, 2024
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NOTE1:

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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1 TEST SUMMARY

1.1 Test Standards

The tests were performed according to following standards:

47 CFR Part 15.231: Periodic operation in the band 40.66-40.70 MHz and above 70 MHz

1.2 Summary of Test Result

Item	Standard	Method	Requirement	Result
Antenna requirement	47 CFR Part 15.231		47 CFR 15.203	Pass
20dB Bandwidth	47 CFR Part 15.231	ANSI C63.10-2013, section 6.9.2	47 CFR 15.231(c)	Pass
Dwell Time	47 CFR Part 15.231	ANSI C63.10-2013, Section 7.4	47 CFR 15.231(a)(1) & (a)(2)	Pass
Duty Cycle	47 CFR Part 15.231	ANSI C63.10-2013, Section 7.5	47 CFR 15.231(b) & (e)	Pass
Field Strength of The Fundamental Signal	47 CFR Part 15.231	ANSI C63.10-2013, Section 6.5	47 CFR 15.231(b)	Pass
Radiated Emission (below 1GHz)	47 CFR Part 15.231	ANSI C63.10-2013, Section 6.5	47 CFR 15.231	Pass
Radiated Emission (above 1GHz)	47 CFR Part 15.231	ANSI C63.10-2013, Section 6.6	47 CFR 15.231	Pass



2 GENERAL INFORMATION

2.1 Client Information

Applicant's Name : Dongguan Girlfriend Appeal Adult Supplies Co., Ltd.

Address : Room 301, Building 28, No. 2 Kangle Road, Hengli Town, Dongguan City,

Guangdong Province

Manufacturer : Dongguan Girlfriend Appeal Adult Supplies Co., Ltd.

Address : Room 301, Building 28, No. 2 Kangle Road, Hengli Town, Dongguan City,

Guangdong Province

2.2 Description of Device (EUT)

Product Name:	VIBRATOR
Model/Type reference:	GM-0259HT1B
Series Model:	ZDYJ03,ZDYJ02,SJH35-YK,ZD086-YK,GM-427,GM-471,GM-337
Model Difference:	There are many models of this product, only the model and appearance are different. The difference in appearance is mainly reflected in the inconsistent shape of the receiver vibrator. The circuit principle, PCB, electrical structure and other components of the remote control are the same.
Trade Mark:	N.A
Power Supply:	DC3.0V
Operation Frequency:	433.92MHz
Number of Channels:	1
Modulation Type:	ASK
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi
Hardware Version:	V1.0
Software Version:	V1.0

2.3 Description of Test Modes

No	Title	Description
TM1	Transmitting	433.92MHz

2.4 Description of Support Units

The EUT was tested as an independent device.

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2.5 Equipments Used During The Test

Dwell Time,Duty Cycle,20dB Bandwidth					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
RF Test Software	TACHOY	RTS-01	V2.0.0.0	1	/
High Pass filter	ZHINAN	OQHPF1-M1.5- 18G-224	6210075	1	/
Power divider	MIDEWEST	PWD-2533	SMA-79	2023-05-11	2026-05-10
RF Sensor Unit	Tachoy Information Technology(she nzhen) Co.,Ltd.	TR1029-2	000001	/	DAG
Wideband radio communication tester	R&S	CMW500	113410	2023-06-13	2024-06-12
Vector signal generator	Keysight	N5181A	MY48180415	2023-11-09	2024-11-08
Signal generator	Keysight	N5182A	MY50143455	2023-11-09	2024-11-08
Spectrum Analyzer	Keysight	N9020A	MY53420323	2023-12-12	2024-12-11

Field Strength of The Fundamental Signal;Radiated Emission (below 1GHz);Radiated Emission (above 1GHz)

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI Test software	Farad	EZ -EMC	V1.1.42	1	1
Positioning Controller	1	MF-7802	1	1	<u>E</u> 1
High Pass filter	ZHINAN	OQHPF1-M1.5- 18G-224	6210075	1	1
Amplifier(18-40G)	COM-POWER	AH-1840	10100008-1	2022-04-05	2025-04-04
Horn antenna	COM-POWER	AH-1840 (18-40G)	10100008	2023-04-05	2025-04-04
Loop antenna	ZHINAN	ZN30900C	ZN30900C	2021-07-05	2024-07-04
Cable(LF)#2	Schwarzbeck	1	1	2024-02-19	2025-02-18
Cable(LF)#1	Schwarzbeck	1	1	2024-02-19	2025-02-18
Cable(HF)#2	Schwarzbeck	AK9515E	96250	2024-03-20	2025-03-19
Cable(HF)#1	Schwarzbeck	SYV-50-3-1	16	2024-03-20	2025-03-19
Power amplifier(LF)	Schwarzbeck	BBV9743	9743-151	2023-06-13	2024-06-12
Power amplifier(HF)	Schwarzbeck	BBV9718	9718-282	2023-06-13	2024-06-12
Horn Antenna	Sunol Sciences	DRH-118	A091114	2023-05-13	2025-05-12
Broadband Antenna	Sunol Sciences	JB6 Antenna	A090414	2023-05-21	2025-05-20
Test Receiver	R&S	ESCI	102109	2023-06-13	2024-06-12

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Wideband radio communication tester	R&S	CMW500	113410	2023-06-13	2024-06-12
Spectrum Analyzer	R&S	FSP30	1321.3008K40 -101729-jR	2023-06-14	2024-06-13

2.6 Statement Of The Measurement Uncertainty

Test Item	Measurement Uncertainty
Occupied Bandwidth	±3.63%
Duty cycle	±3.1%
Radiated Emission (Below 1GHz)	±5.79dB
Radiated Emission (Above 1GHz)	±5.46dB
N. (// TL:	1.1.4

Note: (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

2.7 Identification of Testing Laboratory

Company Name: Shenzhen DACE Testing Technology Co., Ltd.	
Address:	101-102 Building H5 & 1/F., Building H, Hongfa Science & Technology Park, Tangtou, Shiyan, Bao'an District, Shenzhen, Guangdong, China
Phone Number:	+86-13267178997
Fax Number:	86-755-29113252

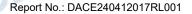
Identification of the Responsible Testing Location

Company Name:	Shenzhen DACE Testing Technology Co., Ltd.		
Address:	101-102 Building H5 & 1/F., Building H, Hongfa Science & Technology Park, Tangtou, Shiyan, Bao'an District, Shenzhen, Guangdong, China		
Phone Number:	+86-13267178997		
Fax Number:	86-755-29113252		
FCC Registration Number:	0032847402		
Designation Number:	CN1342		
Test Firm Registration No.:	778666		
A2LA Certificate Number:	6270.01		

2.8 Announcement

- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by DACE and all revisions are duly noted in the revisions section.
- (5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (6) We hereby declare that the laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant. the laboratory is not responsible for the accuracy of the information provided by the client. When the information provided by the customer may affect the effectiveness of the results, the responsibility lies with the customer, and the laboratory does not assume any responsibility.

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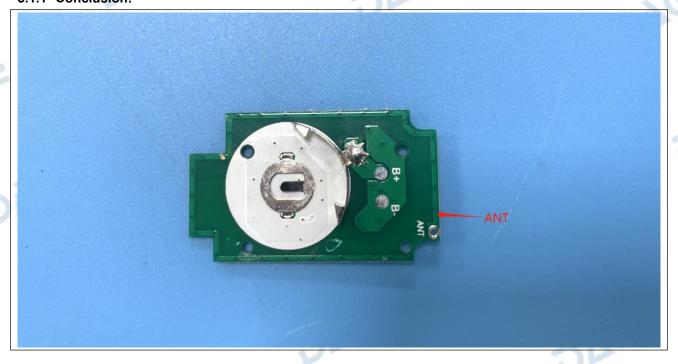
3 Evaluation Results (Evaluation)

3.1 Antenna requirement

Test Requirement:

Refer to 47 CFR Part 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. 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 provisions of this section.

3.1.1 Conclusion:



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4 Radio Spectrum Matter Test Results (RF)

4.1 20dB Bandwidth

Test Requirement:	47 CFR 15.231(c)
Test Limit:	The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.
Test Method:	ANSI C63.10-2013, section 6.9.2
Procedure:	a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW. b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW, unless otherwise specified by the applicable requirement. c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak
Ve -	of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2. d) Steps a) through c) might require iteration to adjust within the specified tolerances. e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target "-xx dB down" requirement; that is, if the requirement calls for measuring the -20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.
DAG	f) Set detection mode to peak and trace mode to max hold. g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value). h) Determine the "-xx dB down amplitude" using [(reference value) - xx]. Alternatively, this calculation may be made by using the marker-delta function of the instrument. i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from
	step g) shall be used for step j). j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "íxx dB down amplitude" determined in step h). If a marker is below this "-xx dB down amplitude" value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the "íxx dB down amplitude" determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission
DIC	bandwidth. k) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

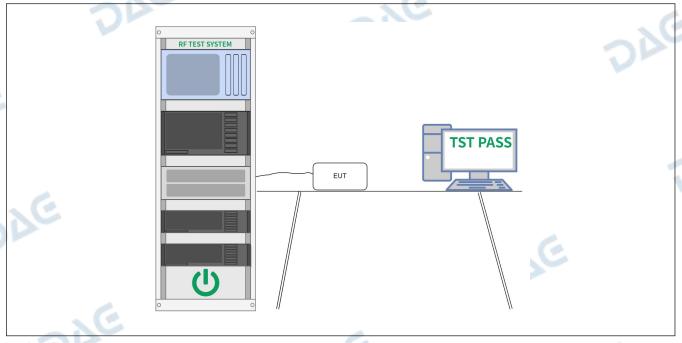


4.1.1 E.U.T. Operation:

V1.0

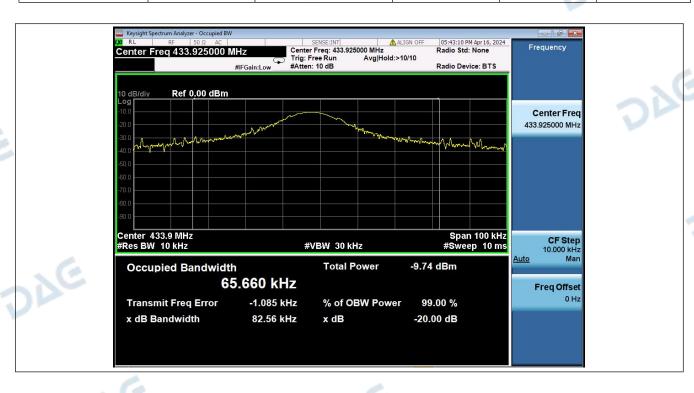
Operating Environment:								
Temperature:	mperature: 23.3 °C		Humidity:	50.9 %		Atmospheric Pressure:	102 kPa	
Pretest mode:		TM1						
Final test mode:		TM1						

4.1.2 Test Setup Diagram:



4.1.3 Test Data:

Condition	Antenna	Frequency (MHz)	20dB BW(kHz)	limit(MHz)	Result
NVNT	ANT1	433.92	82.56	1.0848	Pass



4.2 Duty Cycle

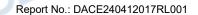
Test Requirement:	47 CFR 15.231(b) & (e)
Test Limit:	No limit, only for Report Use.
Test Method:	ANSI C63.10-2013, Section 7.5
Test Method: Procedure:	ANSI C63.10-2013, Section 7.5 a) Adjust and configure any EUT switches, controls, or input data streams to ensure that the EUT is transmitting or encoded to obtain the "worst-case" pulse ON time. b) Couple the final radio frequency output signal to the input of a spectrum analyzer. This may be performed by a radiated, direct connection (i.e., conducted) or by a "near-field" coupling method. The signal received shall be of sufficient level to trigger adequately the spectrum analyzer sweep display. NOTE—If the bandwidth of the pulse is greater than the RBW of the spectrum analyzer, then a similar measurement may be performed using a wideband digital storage oscilloscope (DSO). c) Adjust the center frequency of the spectrum analyzer to the center of the RF signal. d) Set the spectrum analyzer for ZERO SPAN. e) Adjust the SWEEP TIME to obtain at least a 100 ms period of time on the horizontal display axis of the spectrum analyzer. f) If the pulse train is periodic (i.e., consists of a series of pulses that repeat in a characteristic pattern over a constant time period), and the period (T) is less than or equal to 100 ms, then: 1) Set the TRIGGER on the spectrum analyzer to capture at least one period of the pulse train, including any blanking intervals. 2) Determine the total maximum pulse "ON time" (to _N) over one period of the pulse train. An example of a periodic pulse train and the associated period is shown in Figure 14. If the pulse train contains pulses of different widths, then to _N is determined by summing the duration of all of the pulses within the pulse train [i.e., to _N = Σ (t1 + t2 +tn)]. 3) The duty cycle is then determined by dividing the total maximum "ON time" by the period of the pulse train (to _N /T). g) If the pulse train is nonperiodic or is periodic with a period that exceeds 100 ms, or as an alternative to step f), then: 1) Set the TRIGGER on the spectrum analyzer to capture the greatest amount of pulse "ON time" over 100 ms.
20	3) Determine the duty cycle by dividing the total maximum "ON time" by 100 ms (to _N /100 ms).
	(1014-100-1110).

4.2.1 E.U.T. Operation:

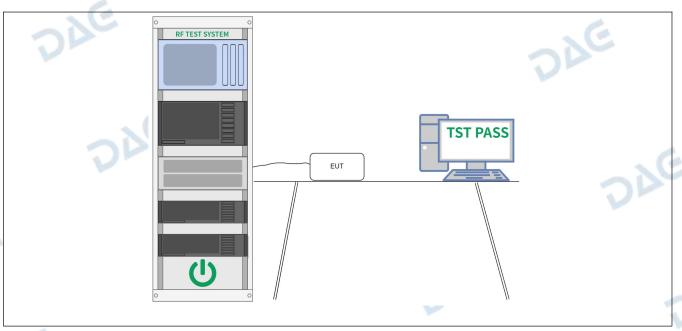
Operating Enviro	Operating Environment:									
Temperature: 23.3 °C			Humidity:	50.9 %	Atmospheric Pressure:	102 kPa				
Pretest mode: T			10		. 6					
Final test mode:		TM1			276					

4.2.2 Test Setup Diagram:

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4.2.3 Test Data:

Condition	Antenna	Frequency (MHz)	Dwell time(s)	limit(s)	Result
NVNT	ANT1	433.92	0.52s	5s	Pass



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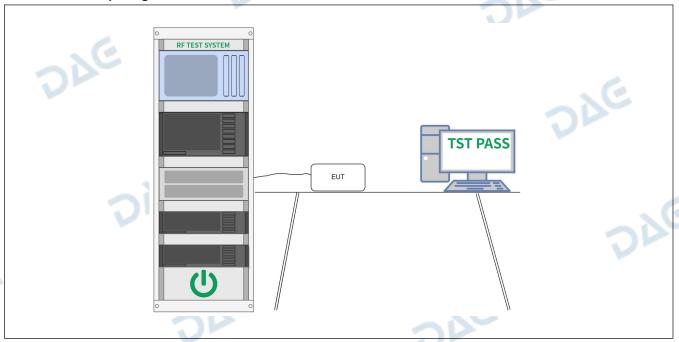
4.3 Average Factor

Procedure:	The output field strengths of specification in accordance with the FCC rules specify measurements with an average detector. During the test, a spectrum analyzer incorporating a peak detector was used. Therefore, a reduction factor can be applied to the resultant peak signal level and compared to the limit for measurement
. (instrumentation incorporating an average detector.
DI	The duty cycle is measured in 100 ms or the repetition cycle period, whichever is a shorter time frame. The
	duty cycle is measured by placing the spectrum analyzer to set zero span at 100kHz resolution bandwidth.
Factor:	Averaging factor in dB =20log (duty cycle)
	Test plot as follows:
	Note: During the 100ms, the amount of pulse and on-time of pulse are the same for every pulse train.

4.3.1 E.U.T. Operation:

Operating Environment:							
Temperature: 22.3 °C			Humidity:	51.7 %	Atmospheric Pressure:	102 kPa	
Pre test mode:		TM1					
Final test mode:		TM1	- 3	C			

4.3.2 Test Setup Diagram:



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Pulse 2 (Wide)

ms

63.7



DAG

4.3.3 Test Data:

433.92

433.92

Frequency (MHz)	Type of Pulse	Width of Pulse (ms)	Quantity of Pulse	Transmission Time (ms)	Total Time (Ton) (ms)
	Pulse 1 (widest)	7.34	1	7.34	

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15.68

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%

50.42

32.12

dB

-5.95

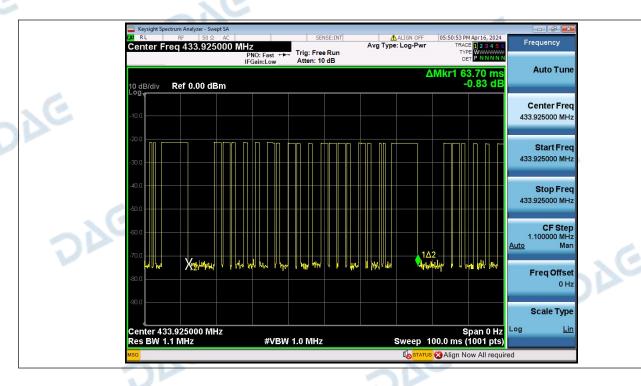
Frequency (MHz)	Test Period ((Tp) Total	Time (Ton)	Duty Cyc	cle D	uty Cycle Factor
			7/10			
1	Pulse 2 (Narrow)	0.91	10		9.1	

ms

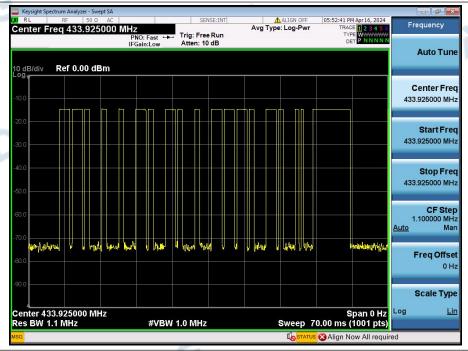
32.12

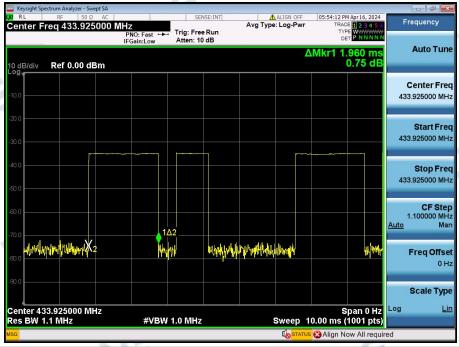
1.96

Remark: Duty Cycle Factor=20*log(Duty Cycle)



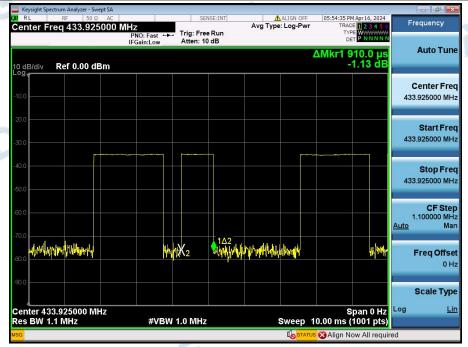


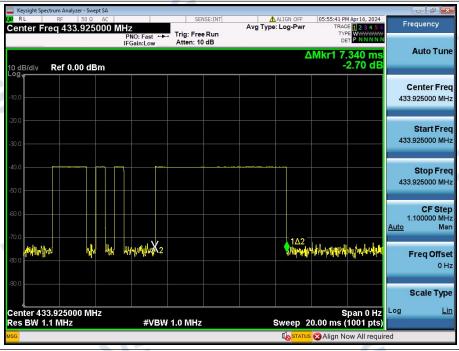




DAG









4.4 Radiated Emission (below 1GHz)

Test Requirement:	47 CFR 15.231		276						
Test Limit:	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)						
	0.009-0.490	2400/F(kHz)	300						
270	0.490-1.705	24000/F(kHz)	30						
	1.705-30.0	30	30						
	30-88	100 **	3						
	88-216	150 **	3						
	216-960	200 **	3						
	Above 960	500	3						
	radiators operating under t 54-72 MHz, 76-88 MHz, 17 these frequency bands is p and 15.241. In the emission table above The emission limits shown employing a CISPR quasi-110–490 kHz and above 10	aragraph (g), fundamental emiss his section shall not be located in 74-216 MHz or 470-806 MHz. However, the tighter limit applies at the limit he above table are based on peak detector except for the free 2000 MHz. Radiated emission limits.	n the frequency bands bwever, operation within f this part, e.g., §§ 15.231 band edges. measurements quency bands 9–90 kHz, its in these three bands						
	are based on measurements employing an average detector.								
Test Method:	ANSI C63.10-2013, Section 6.5								
Procedure: a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 me above the ground at a 3 meter semi-anechoic chamber. The table was rotated degrees to determine the position of the highest radiation. b. The EUT was set 3 or 10 meters away from the interference-receiving ante which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground determine the maximum value of the field strength. Both horizontal and vertice polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and the antenna was tuned to heights from 1 meter to 4 meters (for the test frequibelow 30MHz, the antenna was tuned to heights 1 meter) and the rotatable to was turned from 0 degrees to 360 degrees to find the maximum reading.									
	Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be retested one by one using quasi-peak method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel, the middle channel, the Highest channel. h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete. Remark: 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor 2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.								

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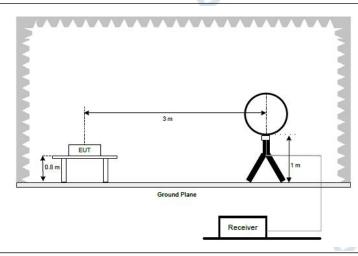
point could be found when testing, so only the above harmonics had been

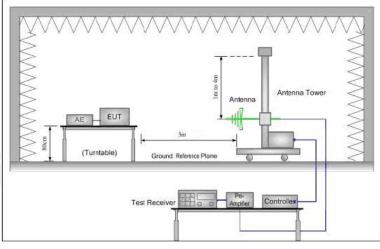
Report No.: DACE240412017RL001

4.4.1 E.U.T. Operation:

Operating Envir	Operating Environment:									
Temperature:	23.3 °C		Humidity:	50.9 %	Atmospheric Pressure:	102 kPa				
Pretest mode:	. (TM1								
Final test mode:		TM1			XC.					

4.4.2 Test Setup Diagram:

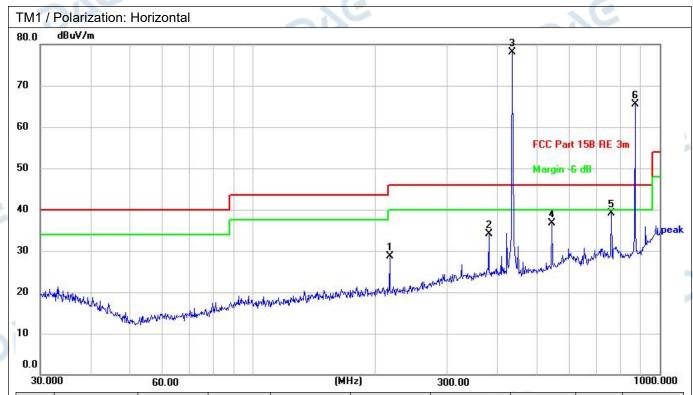




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4.4.3 Test Data:



No	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Dutycycle Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)
1	434.0651	76.91	1.21	N/A	78.12	100.8	-22.68	Peak	100
2	434.0651	N/A	N/A	-5.95	72.17	80.8	-8.63	AV	100
3	869.1302	58.22	7.2	N/A	65.42	80.8	-15.38	Peak	100
4	869.1302	N/A	N/A	-5.95	59.47	60.8	-1.33	AV	100

-18.64

-4.59

Peak

ΑV

100

100

80.8

60.8



3

4

869.1302

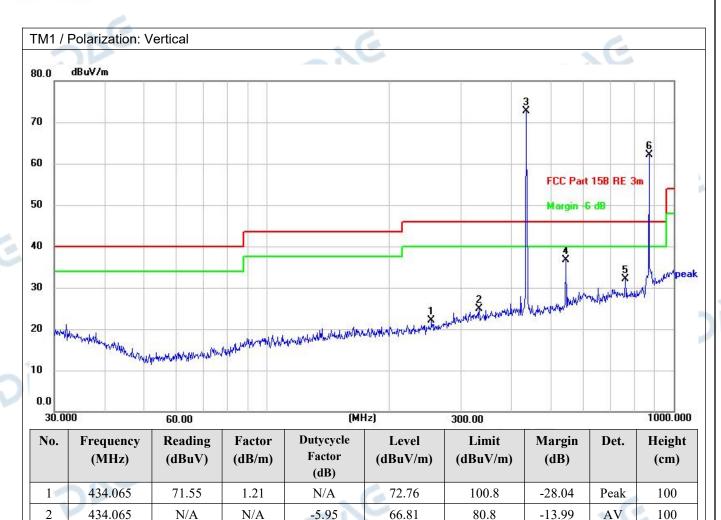
869.1302

55.35

N/A

6.81

N/A



N/A

-5.95

62.16

56.21



4.5 Radiated Emission (above 1GHz)

Test Limit: Frequency (MHz) Field strength (microvolts/meter) Measurement distance (meters)	Test Requirement:	47 CFR 15.231		276						
0.490-1.705 24000/F(kHz) 30 1.705-30.0 30 30 30 30-88 100** 3 88-216 150** 3 216-960 200** 3 Above 960 500 3 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.23 and 15.241. In the emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. Test Method: ANSI C63.10-2013, Section 6.6 Procedure: A. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights 1 metery and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be	Test Limit:	Frequency (MHz)		distance						
1.705-30.0 30 30 30 30 30 30 30 30 30-88 100 *** 3 3 88-216 150 *** 3 216-960 200 *** 3 3 Above 960 500 500 3 3 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.23 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. Test Method: ANSI C63.10-2013, Section 6.6 Procedure: a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency below 30MHz, the antenna was tuned to heights from 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. O		0.009-0.490	2400/F(kHz)	300						
30-88		0.490-1.705	24000/F(kHz)	30						
88-216		1.705-30.0	30	30						
216-960 200 ** 3 Above 960 500 30 **Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.23 and 15:241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. Test Method: ANSI C63.10-2013, Section 6.6 Procedure: a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency, below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading, e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Holid Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be retested one by one		30-88	100 **	3						
Above 960 500 3 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz. or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.23 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. Test Method: ANSI C63.10-2013, Section 6.6 Procedure: a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency-below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be retested one by one using peak or av		88-216	150 **	3						
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.23 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. Test Method: ANSI C63.10-2013, Section 6.6 Procedure: a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency below 30MHz, the antenna was tuned to heights of the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be retested one by one using peak or average method as specified and then reported in adata sheet. g. Test the EUT in the lowest channe		216-960	200 **	3						
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.23 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. Test Method: ANSI C63.10-2013, Section 6.6 Procedure: a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency, below 30MHz, the antenna was tuned to heights from 1 meter (for the test frequency, below 30MHz, the antenna was stuned to heights from 1 meter of 4 meters (for the test frequency, below 30MHz, the antenna was stended to heights from 1 meter to 4 meters (for the test frequency, below 30MHz, the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency, below 30MHz, the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency, below 30MHz, the antenna was tuned to heights from 1 meter to 4 meters (fo			500	3						
Procedure: a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be retested one by one using peak or average method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel, the middle channel, the Highest channel. h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete. Remark: 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor 2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need		radiators operating under 54-72 MHz, 76-88 MHz, 1 these frequency bands is and 15.241. In the emission table above The emission limits shown employing a CISPR quasi 110–490 kHz and above 1	this section shall not be located 74-216 MHz or 470-806 MHz. permitted under other sections we, the tighter limit applies at the in the above table are based peak detector except for the 1000 MHz. Radiated emission	ed in the frequency bands. However, operation within s of this part, e.g., §§ 15.231 he band edges. I on measurements frequency bands 9–90 kHz, limits in these three bands						
Procedure: a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be retested one by one using peak or average method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel, the middle channel, the Highest channel. h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete. Remark: 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor 2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need n	Test Method:									
testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.		degrees to determine the b. The EUT was set 3 met was mounted on the top of c. The antenna height is videtermine the maximum vipolarizations of the antenna d. For each suspected emithe antenna was tuned to below 30MHz, the antenna was turned from 0 degree e. The test-receiver syster Bandwidth with Maximum f. If the emission level of the specified, then testing coureported. Otherwise the eletested one by one using particular data sheet. g. Test the EUT in the low h. The radiation measurer Transmitting mode, and for i. Repeat above procedure Remark: 1. Level= Read Level+ Care 2. Scan from 18GHz to 40	position of the highest radiation of a variable-height antenna to aried from one meter to four numbers of the field strength. Both has are set to make the measurables in the EUT was arranged heights from 1 meter to 4 meters to 360 degrees to find the man was set to Peak Detect Funded Mode. The EUT in peak mode was 100 and the stopped and the peak variations that did not have 100 eak or average method as specific channel, the middle channal ments are performed in X, Y, Zound the X axis positioning where until all frequencies measurable Loss+ Antenna Factor- PrigHz, the disturbance above 100 are sure performed as specific controls.	e-receiving antenna, which wer. neters above the ground to a horizontal and vertical rement. It to its worst case and then ters (for the test frequency of er) and the rotatable table aximum reading. In the control of the EUT would be also be a summer to the EUT would be a summ						
3. As shown in this section, for frequencies above 1GHz, the field strength limits ar		testing, so only above poil emissions from the radiato need not be reported.	nts had been displayed. The a or which are attenuated more	amplitude of spurious than 20dB below the limit						

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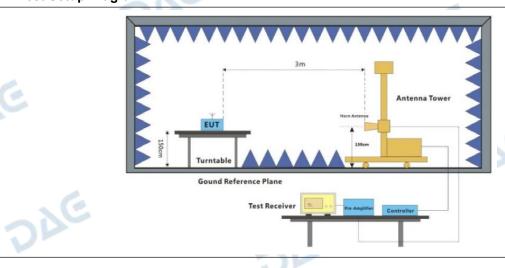
based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

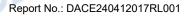
4.5.1 E.U.T. Operation:

Operating Environment:									
Temperature: 23.3 °C			Humidity:	50.9 %	V	Atmospheric Pressure:	102 kPa	00	
Pretest mode:	TM1						V		
Final test mode: TM1									

4.5.2 Test Setup Diagram:

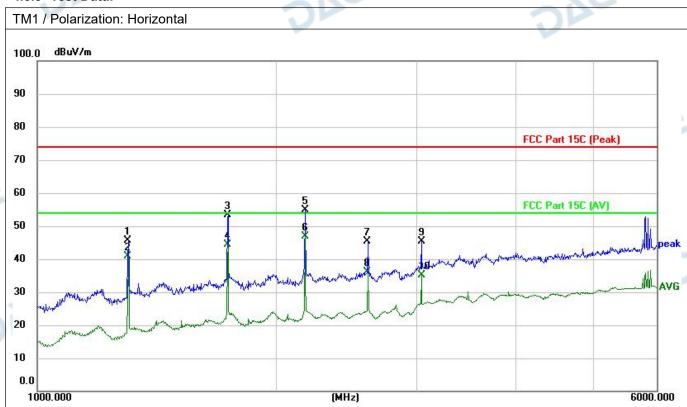


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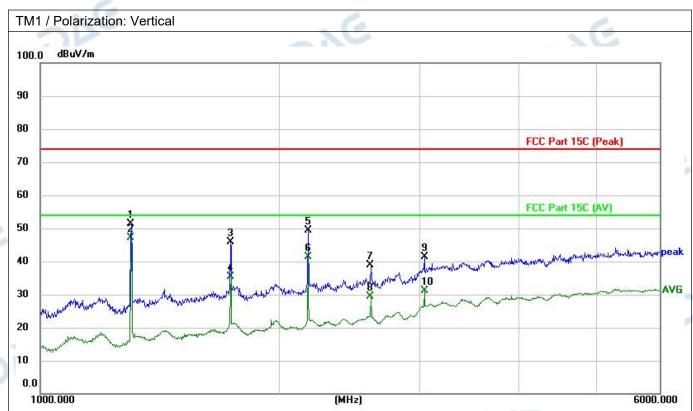


4.5.3 Test Data:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Dutycycle Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	1301.332	53.93	-8.33	N/A	45.6	80.8	-35.2	peak
2	1301.332	N/A	N/A	-5.95	39.65	60.8	-21.15	AVG
3	1736.483	59.18	-5.81	N/A	53.37	80.8	-27.43	peak
4	1736.483	N/A	N/A	-5.95	47.42	60.8	-13.38	AVG
5	2168.51	59.18	-4.31	N/A	54.87	80.8	-25.93	peak
6 *	2168.51	N/A	N/A	-5.95	48.92	60.8	-11.88	AVG
7	2603.351	48.57	-3.26	N/A	45.31	80.8	-35.49	peak
8	2603.351	N/A	N/A	-5.95	39.36	60.8	-21.44	AVG
9	3037.063	47.88	-2.45	N/A	45.43	80.8	-35.37	peak
10	3037.063	N/A	N/A	-5.95	39.48	60.8	-21.32	AVG





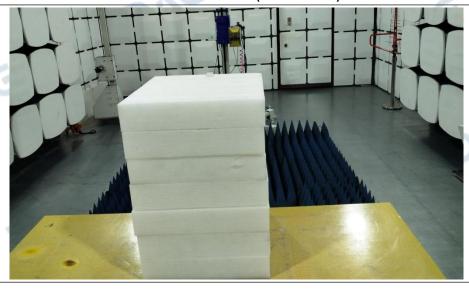
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Dutycycle Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	1301.332	60.99	-9.7	N/A	51.29	80.8	-29.51	peak
2 *	1301.332	N/A	N/A	-5.95	45.34	60.8	-15.46	AVG
3	1733.375	53.5	-7.69	N/A	45.81	80.8	-34.99	peak
4	1736.483	N/A	N/A	-5.95	39.86	60.8	-20.94	AVG
5	2168.51	55.18	-5.79	N/A	49.39	80.8	-31.41	peak
6	2168.51	N/A	N/A	-5.95	43.44	60.8	-17.36	AVG
7	2603.351	42.95	-4.07	N/A	38.88	80.8	-41.92	peak
8	2603.351	N/A	N/A	-5.95	32.93	60.8	-27.87	AVG
9	3037.063	43.77	-2.38	N/A	41.39	80.8	-39.41	peak
10	3037.063	N/A	N/A	-5.95	35.44	60.8	-25.36	AVG



5 TEST SETUP PHOTOS

Radiated Emission (below 1GHz)

Radiated Emission (above 1GHz)





PHOTOS OF THE EUT



External



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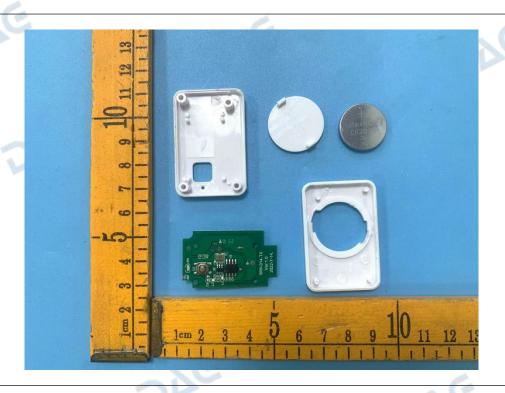


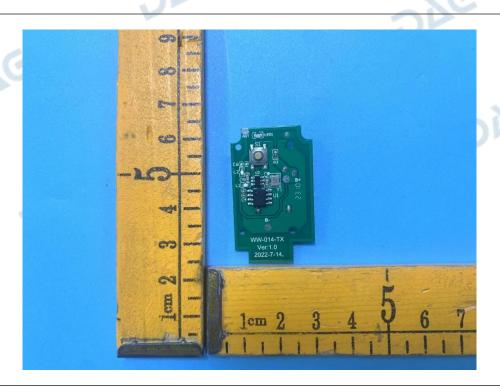


Internal









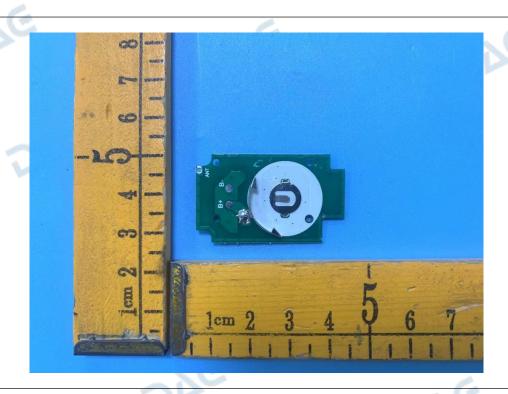
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******************* End of Report **************

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