

	Product Trade mark Model/Type reference Serial Number Report Number FCC ID Date of Issue	 PowerEgg PowerE PEX20 N/A EED39N80 2AKBMPE July 15, 20 	99[™] 0209404 X20	
	Test Standards		Results	
	47 CFR Part 15 Subpar	rt E	PASS	
	(\mathcal{O})	$\langle \mathcal{O} \rangle$	65)	67)
		Prepared for:		
	Centre Testing In		uzhou) CO., LTD	
	Centre Testing In ing 18, Zhihui New Io Jinyang East Road, E	Prepared by: ternational (S wn Ecologica	uzhou) CO., LTD I Industrial Park nshan, Jiangsu,	, No. 1206,
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			Modificatior	n Record		
No.	Last Report	t No.	Modificatior	n Descriptio	'n	
1	EED39N80	209404	First report			
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Test Summary 1

Test Item	Test Requirement	Test method	Result
26dB Emission Bandwidth	Part15E Section 15.407 (a)	ANSI C63.10-2013	PASS
Min 6dB emission bandwidth	Part15E Section 15.407 (e)	ANSI C63.10-2013	PASS
Occupied channel bandwidth	Part15E Section 15.407	ANSI C63.10-2013	PASS
Maximum Conduct Output Power	Part15E Section 15.407 (a)(1)(2)(4)(h)(1)	ANSI C63.10-2013	PASS
Power Spectral Density	Part15E Section 15.407 (a)(1)(2)(5)	ANSI C63.10-2013	PASS
Frequency stability	Part15E Section 15.407 (g)	ANSI C63.10-2013	PASS
Duty cycle	Part15E Section 15.407	ANSI C63.10-2013	1
Antenna Requirement	Part15C Section 15.203	ANSI C63.10-2013	PASS
Operation in the absence of information to the transmit	Part15E Section 15.407 (c)	47 CFR Part 15 Subpart E	PASS
AC Power Line Conducted Emission	Part15E Section 15.407 (b)(6)	ANSI C63.10-2013	N/A
Restricted bands around fundamental frequency (Radiated Emission)	Part15E Section 15.407 (b)(6)(7)(8)	ANSI C63.10-2013	PASS
Unwanted Emissions in the Restricted Bands	Part15E Section 15.407 (b)(6)(7)(8)	ANSI C63.10-2013	PASS
Unwanted Emissions that fall Outside of the Restricted Bands	Part15E Section 15.407 (b)(1)(2)(3)(5)	ANSI C63.10-2013	PASS



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2 Test Requirement

2.1 Test Environment

Operating Environment:			
Temperature:	22.3 °C		100
Humidity:	48.7 % RH	(\mathcal{A})	
Atmospheric Pressure:	1010mbar	<pre> </pre>	()

2.2 Test Condition

Test channel:

Test Mode	Tx/Rx	RF Channel		
Test Mode	TX/KX	Low(L)	Middle(M)	High(H)
Other	5740MHz ~5830 MHz	5740MHz	5780MHz	5830MHz

General Information 3

3.1 Client Information

Applicant:	Powervisio	n Tech Inc.					
Address of Applicant:		Zone E,Ocean Venture Valley, No.40, Yangguang Rd, Nanhai new District, Weihai, Shandong,China. 264200					
Manufacturer:	Powervisio	n Tech Inc.					
Address of Manufacturer:		Zone E,Ocean Venture Valley, No.40, Yangguang Rd, Nanhai new District, Weihai, Shandong,China. 264200					
Factory:	Powervisio	n (Suzhou) Techno	ology Co.,Ltd.	9			
Address of Factory:	Building 3,No.15, Zhujing Road,Changshu High-tech Industria Development Zone,Suzhou,China						
2 General Description		(i)		(3			
Product Name:	PowerEgg X	(8K	(\mathcal{C})	6			
Model No.(EUT):	PEX20						
Serial Model:	/						
Trade Mark:	PowerE	gg™	0	2			
EUT Supports Radios application:	2.4G WIFI: IEEE802.11 5G WIFI: IEEE802.0t 2.4G: 2406N	b/g/n(20MHz), 2412N her/an(HT20)5725-58 /IHz~2466MHz z~5830MHz) (2			
Power Supply:	Adapter:	Model:PAD20 INPUT:100-240V OUTPUT:DC 13.3 DC 5V 2	3V 3.76A	C.			
	Potton	Model: PEMIB10 Rated voltage:11.4	4V	0			
(C)	Battery:	Rated capacity:38		9			
Sample Received Date: Sample tested Date:	2021.05.14						

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3.3 Product Specification subjective to this standard

Operation Frequency:	5740MHz ~5830 MHz	67	6	
Channel Numbers:	10 channel			
Type of Modulation:	BPSK/QPSK/16QAM/640	QAM		
Sample Type:	Mobile production			(3)
Test Software of EUT:	Artosyn8020PCTool (ma	nufacturer declare)		6)
Antenna Type :	PCB antenna	\sim		\smile
Antenna Type and Gain [®] :	ANT1 Gain :0.25dBi ANT2 Gain :0.25dBi		101	
Test Voltage:	DC 11.4V			

Note: 1 The antenna gain is provided by the client and we Centre Testing International (Suzhou) CO., LTD. test lab is not responsible for the accuracy of the antenna gain information.

3.4 Description of Support Units

The EUT has been tested with associated equipment below.

1) support equipment

Description	Manufacturer	Model No.	Certification	Supplied by
NB	ThinkPad	E490	FCC ID and DOC	СТІ

3.5 Test Location

All test facilities used to collect the test data are located at Building 18, Zhihui New Town Ecological Industrial Park, No. 1206, Jinyang East Road, Lujia Town, Kunshan, Jiangsu, China.

3.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

A2LA-Lab Cert. No. 5734.01

Centre Testing International (Suzhou) CO., LTD. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration. Laboratories and any additional program requirements in the identified field of testing.

FCC-Designation No.:CN1290

Centre Testing International Group Co., Ltd EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The American association for Centre Testing International Group Co., Ltd. EMC laboratory accreditation Designation No.:CN1290

3.7 Deviation from Standards

None.

3.8 Abnormalities from Standard Conditions

None.

3.9 Other Information Requested by the Customer

None.

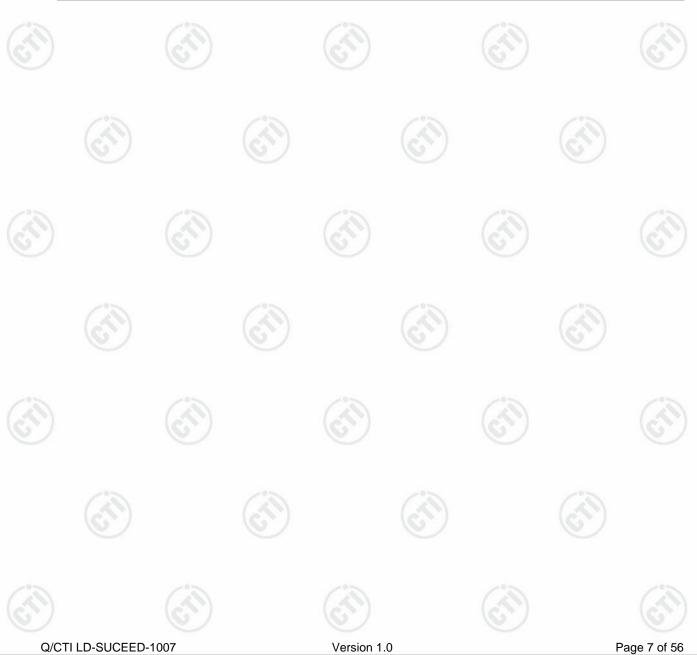
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3.10 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9 x 10 ⁻⁸
2	Occupied Bandwidth	0.56%
3	RF Power conducted	0.59 dB
4	Power Spectral Density, conducted	2.37 dB
5	Unwanted Emission, conducted	2.68 dB
		4.41 dB(30MHz-1GHz)
6	All Emission, radiated	4.99 dB(1GHz-18GHz)
~°>>		5.307 dB(18GHz-40GHz)
7	Temperature test	0.54°C
8	Humidity test	1.62%
9	DC and low frequency voltages test	1.14%





4 Equipment List

		RF test	system		
Equipment	Manufacturer	Mode No.	Serial Number	Cal. Date (yyyy-mm-dd)	Cal. Due date (yyyy-mm-dd)
Signal Generator	R&S	SMB100A	182002	2020-10-23	2021-10-22
Communication test set	R&S	CMW500	107929	2021-04-29	2022-04-28
Spectrum Analyzer	R&S	FSV40	101588	2020-10-23	2021-10-22
Vector signal generator	R&S	SMBV100B	101985	2020-10-23	2021-10-22
Temperature/ Humidity Indicator	testo	608-H1	1945222628	2020-11-09	2021-11-08
Switch Automatic control	R&S	OSP-B157W8	101111	2020-10-23	2021-10-22
High-low temperature chamber	GIANT FORCE	GTH-800-40-CP	MAA1908-003	2020-12-08	2021-12-07
Automatic test software	Shenzhen JS TONSCEND	1	V2.6.77.0518	1	/

		966 Semi-anec	hoic Chamber		
Equipment	Manufacturer	Mode No.	Serial Number	Cal. Date (yyyy-mm-dd)	Cal. Due date (yyyy-mm-dd)
Receiver	R&S	ESU8	100537	2020-12-10	2021-12-09
Spectrum analyzer	R&S	FSV40	101185	2020-12-10	2021-12-09
Preamplifier (30MHz~1GHz)	SONOMA	317	393347	2020-12-04	2021-12-03
Preamplifier (1GHz~18GHz)	R&S	SCU-18D	1987397	2020-12-10	2021-12-09
Preamplifier (18GHz~40GHz)	1	MTLNA1804003 0235	12009007	2020-10-23	2021-10-22
Loop Antenna (9kHz~30MHz)	TESEQ	HLA6121	54575	2021-02-27	2022-02-26
Antenna (30MHz~1GHz)	SCHWARZBEC K	VULB9163	9163-965	2020-10-16	2021-10-15
Antenna (1GHz~18GHz)	R&S	HF907	102524	2020-12-15	2021-12-14
Antenna (18GHz~40GHz)	R&S	BBHA9170	1032	2020-10-23	2021-10-22
Band rejection filter	Xi'an xingbo	XBLBQ-DZA81	200827-1-02	1	/
Band rejection filter	Xi'an xingbo	XBLBQ-DZA104	200827-1-11	/	1
Band rejection filter	Xi'an xingbo	XBLBQ-DZA118	200827-1-10	/	/
Band rejection filter	Xi'an xingbo	XBLBQ-DZA105	200827-1-12		1

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5.1 Reference Documents for Testing

	No.	Identity	Document Title
10	1	FCC Part15E	Subpart C-Intentional Radiators
స్)	2	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices
\smile	3	KDB789033 D02 General UNII	Guidelines for compliance testing of unlicensed national
	5	Test Procedures New Rules v01	information infrastructure (U-NII) device part 15 subpart E

5.2 Test Results List

			6	
Test Requirement	Test method	Test item	Verdict	Note
Part15E Section 15.407 (e)	ANSI C63.10-2013	Min 6dB emission bandwidth	PASS	Appendix A)
Part15E Section 15.407	ANSI C63.10-2013	Occupied channel bandwidth	1	Appendix B)
Part15E Section 15.407 (a)(1)(2)(4)(h)(1)	ANSI C63.10-2013	Maximum Conduct Output Power	PASS	Appendix C)
Part15E Section 15.407 (a)(1)(2)(5)	ANSI C63.10-2013	Power Spectral Density	PASS	Appendix D)
Part15E Section 15.407 (g)	ANSI C63.10-2013	Frequency stability	PASS	Appendix E)
Part15E Section 15.407	ANSI C63.10-2013	Duty cycle) /	Appendix F)
Part15C Section 15.203	ANSI C63.10-2013	Antenna Requirement	PASS	Appendix G)
Part15E Section 15.407 (c)	47 CFR Part 15 Subpart E	Operation in the absence of information to the transmit	PASS	Appendix H)
Part15E Section 15.407 (b)(6)	ANSI C63.10-2013	AC Power Line Conducted Emission	PASS	Appendix I)
Part15E Section 15.407 (b)(6)(7)(8)	ANSI C63.10-2013	Restricted bands around fundamental frequency (Radiated Emission)	PASS	Appendix J)
Part15E Section 15.407 (b)(6)(7)(8)	ANSI C63.10-2013	Unwanted Emissions in the Restricted Bands	PASS	Appendix K)
Part15E Section 15.407 (b)(1)(2)(3)(5)	ANSI C63.10-2013	Unwanted Emissions that fall Outside of the Restricted Bands	PASS	Appendix L)





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Appendix A): Min 6dB emission bandwidth

	47.0ED Dart 150. Continue 15, 407 (a)				
Test Requirement:	47 CFR Part 15C Section 15.407 (e)				
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C				
Test Setup:	Control Computer Control Computer Control Power Supply Table RF test System Instrument				
Test Procedure:	Remark: Offset=Cable loss+ attenuation factor. 1. KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6dB bandwidth must be greater than 500 kHz. 4. Measure and record the results in the test report.				
Limit:	≥ 500 kHz				
Test Mode:	Transmitting mode with modulation				
Test Results:	Pass				

Result Table

Result Table:						
Test Mode	Antenna	Channel	6db EBW [MHz]	Limit[MHz]	Verdict	
		5740	9.32	0.5	PASS	
	Ant1	5780	9.32	0.5	PASS	
0//	(\checkmark)	5830	9.38	0.5	PASS	
Other	O	5740	9.32	0.5	PASS	
12.9 2	Ant2	5780	9.32	0.5	PASS	
		5830	9.21	0.5	PASS	
(\mathbf{r})		(\mathcal{C}^{*})	(C ⁺)		57	





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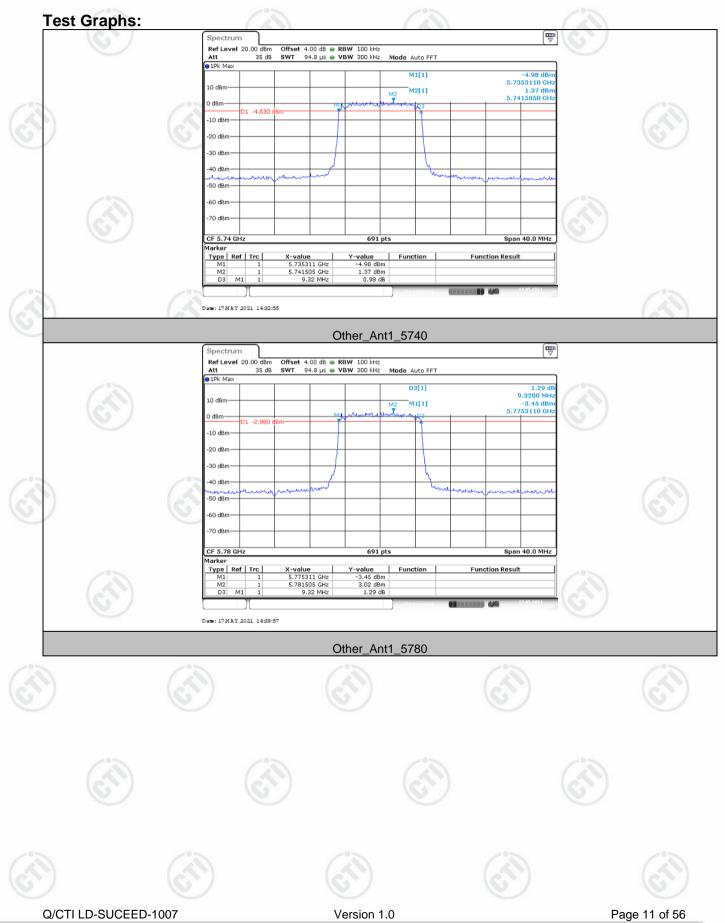




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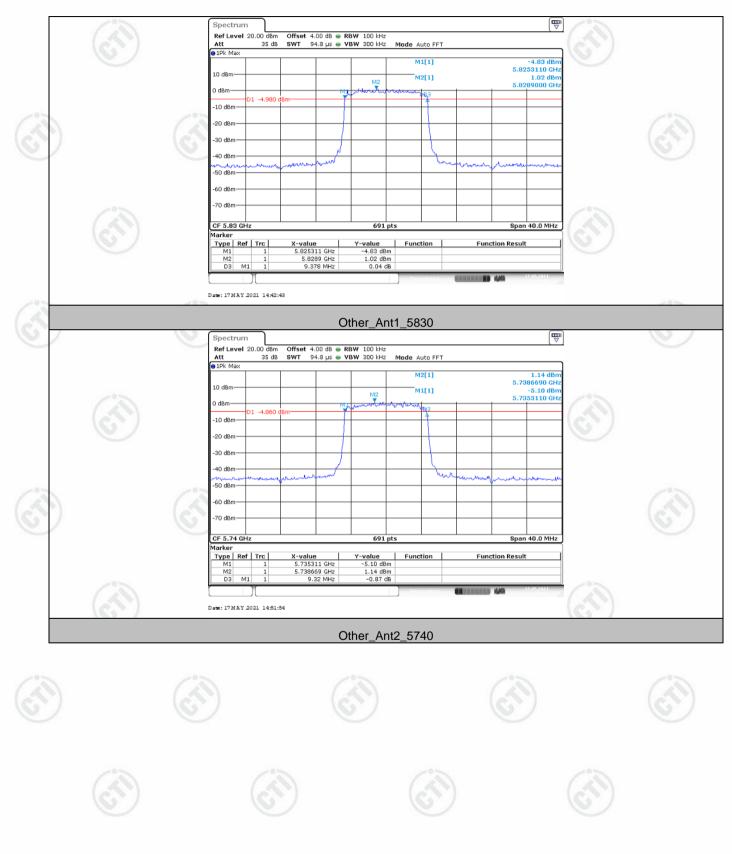














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Appendix B): Occupied channel bandwidth

101/	-			1				
Test Requirer	nent:	47 CFR Part 150	Section 15.407	(a)				
Test Method:		KDB789033 D0 Section D	2 General UNII	Test Procedures	New Rules	v02r0		
Test Setup:		Section D						
		 Remark: Offset=Cable loss+ attenuation factor. 1. Set center frequency to the nominal EUT channel center frequency. 2. Set span = 1.5 times to 5.0 times the OBW. 3. Set RBW = 1% to 5% of the OBW 4. Set VBW ≥ 3 RBW 5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used. 6. Use the 99% power bandwidth function of the instrument (if available). 7. If the instrument does not have a 99% power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency 						
Test Procedu	re:	 Use the 99% p If the instrume trace data points recovered amplit placed in a runni is recorded as th of the total is rea 	until the trace sta power bandwidth ant does not have are recovered ar ude data points, k ng sum until 0.5% e lower frequency ched; that freque	bilizes) shall be us function of the inst a 99% power band d directly summed beginning at the low of the total is read y. The process is re	ed. rument (if ava dwidth functio d in power uni west frequenc ched; that free epeated until the upper fre	ailable). on, the its. The cy, are quency 99.5% quency		
Test Procedu	re:	6. Use the 99% p 7. If the instrume trace data points recovered amplit placed in a runni is recorded as th of the total is rea The 99% occupie	until the trace sta power bandwidth ont does not have are recovered ar ude data points, k ng sum until 0.5% e lower frequency ched; that freque ed bandwidth is th	bilizes) shall be us function of the inst a 99% power band directly summed beginning at the low of the total is read y. The process is re ncy is recorded as	ed. rument (if ava dwidth functio d in power uni west frequenc ched; that free epeated until the upper fre	ailable). on, the its. The cy, are quency 99.5% oquency		
	re:	 6. Use the 99% p 7. If the instrume trace data points recovered amplit placed in a runni is recorded as th of the total is rea The 99% occupie frequencies. No restriction lim 	until the trace sta power bandwidth ont does not have are recovered ar ude data points, k ng sum until 0.5% e lower frequency ched; that freque ed bandwidth is th	bilizes) shall be us function of the inst a 99% power band directly summed beginning at the low of the total is read y. The process is re ncy is recorded as he difference betwee	ed. rument (if ava dwidth functio d in power uni west frequenc ched; that free epeated until the upper fre	ailable). on, the its. The cy, are quency 99.5% quency		
Limit:	re:	 6. Use the 99% p 7. If the instrume trace data points recovered amplit placed in a runni is recorded as th of the total is rea The 99% occupie frequencies. No restriction lim 	until the trace sta power bandwidth ant does not have are recovered ar ude data points, k ng sum until 0.5% e lower frequency ched; that freque ed bandwidth is th its	bilizes) shall be us function of the inst a 99% power band directly summed beginning at the low of the total is read y. The process is re ncy is recorded as he difference betwee	ed. rument (if ava dwidth functio d in power uni west frequenc ched; that free epeated until the upper fre	ailable). on, the its. The cy, are quency 99.5% quency		
Limit: Test Mode:		 6. Use the 99% p 7. If the instrume trace data points recovered amplit placed in a runni is recorded as th of the total is rea The 99% occupie frequencies. No restriction lime Transmitting mod 	until the trace sta power bandwidth ant does not have are recovered ar ude data points, k ng sum until 0.5% e lower frequency ched; that freque ed bandwidth is th its	bilizes) shall be us function of the inst a 99% power band directly summed beginning at the low of the total is read y. The process is re ncy is recorded as he difference betwee	ed. rument (if ava dwidth functio d in power uni west frequenc ched; that free epeated until the upper fre	ailable). on, the its. The cy, are quency 99.5% quency		
Limit: Test Mode: Test Results:		 6. Use the 99% p 7. If the instrume trace data points recovered amplit placed in a runni is recorded as th of the total is rea The 99% occupie frequencies. No restriction lime Transmitting mod 	until the trace sta power bandwidth ant does not have are recovered ar ude data points, k ng sum until 0.5% e lower frequency ched; that freque ed bandwidth is th its	bilizes) shall be us function of the inst a 99% power band ad directly summed beginning at the low of the total is read y. The process is read ne difference between n	ed. rument (if ava dwidth function d in power uni west frequence ched; that free epeated until the upper free een these two	ailable). on, the its. The cy, are quency 99.5% quency		
Limit: Test Mode: Test Results: Result Table	:	 6. Use the 99% p 7. If the instrume trace data points recovered amplit placed in a runni is recorded as th of the total is rea The 99% occupie frequencies. No restriction lime Transmitting mode Pass 	until the trace sta power bandwidth ant does not have are recovered ar ude data points, k ng sum until 0.5% e lower frequency ched; that freque ed bandwidth is th its de with modulatio	bilizes) shall be us function of the inst a 99% power band ad directly summed beginning at the low of the total is read y. The process is read ne difference between n	eed. rument (if ava dwidth functio d in power uni west frequenc ched; that free epeated until the upper fre een these two MHz] V	ailable). on, the its. The cy, are quency 99.5% quency		
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Limit: Test Mode: Test Results: Result Table Test Mode	: Antenna	6. Use the 99% p 7. If the instrume trace data points recovered amplit placed in a runni is recorded as th of the total is rea The 99% occupie frequencies. No restriction lim Transmitting mod Pass Channel 5740	until the trace sta power bandwidth ont does not have are recovered ar ude data points, k ng sum until 0.5% e lower frequency ched; that freque ed bandwidth is th its de with modulatio OCB [MHz 9.44	bilizes) shall be us function of the inst a 99% power band ad directly summed beginning at the low of the total is read y. The process is read y. The process is read y. The process is read y. The process is read ne difference between n	ed. rument (if ava dwidth functio d in power uni west frequent ched; that free epeated until the upper fre een these two MHz] V - F	Ailable). on, the its. The cy, are quency 99.5% oquency o /erdict		
Limit: Test Mode: Test Results: Result Table	: Antenna	6. Use the 99% p 7. If the instrume trace data points recovered amplit placed in a runni is recorded as th of the total is rea The 99% occupie frequencies. No restriction lim Transmitting mod Pass Channel 5740 5780	until the trace sta power bandwidth ant does not have are recovered ar ude data points, k ng sum until 0.5% e lower frequency ched; that freque ed bandwidth is th its de with modulatio OCB [MHz 9.44 9.44	bilizes) shall be us function of the inst a 99% power band ad directly summed beginning at the low of the total is read y. The process is re- ncy is recorded as ne difference between n	ed. rument (if avaid dwidth function d in power uni- west frequence ched; that fre- epeated until the upper fre- een these two MHz] V - F - F - F	ailable). on, the its. The cy, are quency 99.5% oquency o / / / / / / / / / / / / / / / / / /		
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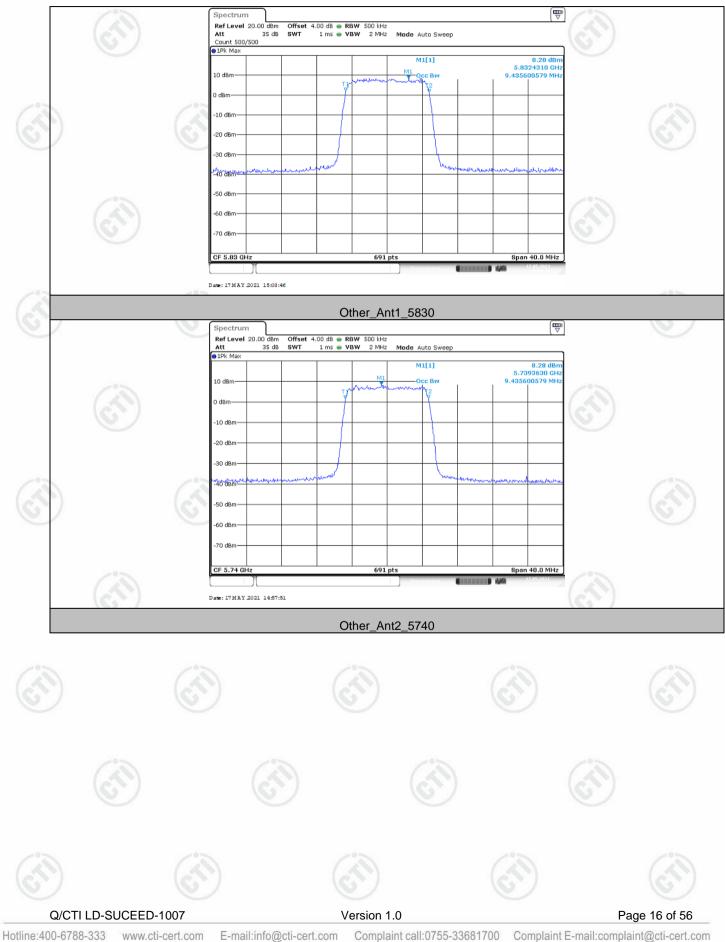






















Appendix C): Maximum Conduct Output Power

Test Requirement:	47 CFR Part 15C Section 15.407 (a)			
Test Method:	KDB789033 D02 General UNII Test Section E	Procedures Ne	ew Rules v	/02r0 ⁻
Test Setup:	Control Computer pot(b) Actemps pot(b)	RF test System strument		Cr Cr
	 The testing follows the Measurement General UNII Test Procedures New Rul The RF output of EUT was connected and attenuator. The path loss was com 	es v02r01 Section d to the power m	on E, 3, a neter by RF	cable
Test Procedure:	 and attendation. The path loss was confirmed attendation. The path loss was confirmed attended attende	nd enable the EL	JT transmit	
Test Procedure:	measurement. 3. Set to the maximum power setting an continuously. 4. Measure the conducted output power report. Frequency band (MHz) 5150-5250 ≤1W(30dBm) for max ≤250mW(24dBm) for 11dBm+10logB* 5470-5725 ≤250mW(24dBm) for 11dBm+10logB* 5725-5850 ≤1W(30dBm) Remark: * Where B is the 26 The maximum cond measured over any	aster device or client device of client device of dB emission ban fucted output povi interval of contir	JT transmit results in th sor	ne tes
	measurement. 3. Set to the maximum power setting an continuously. 4. Measure the conducted output power report. Frequency Limit 5150-5250 ≤1W(30dBm) for max ≤250mW(24dBm) for 5250-5350 ≤250mW(24dBm) for 5470-5725 ≤250mW(24dBm) for 5725-5850 ≤1W(30dBm) Remark: * Where B is the 26 The maximum cond	aster device or client device of client device of client device of dB emission ban ucted output povinterval of contir instrumentation of	JT transmit results in th sor	ne tes IHz

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Result Table:

Roodit Tubioi					
Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
		5740	15.66	<=30	PASS
	Ant1	5780	17.54	<=30	PASS
9		5830	16.90	<=30	PASS
2		5740	15.01	<=30	PASS
Other	Ant2	5780	17.83	<=30	PASS
~		5830	16.97	<=30	PASS
(\mathcal{C}^{\prime})		5740	18.36	<=30	PASS
	Total	5780	20.70	<=30	PASS
		5830	19.95	<=30	PASS

Note : The Duty Cycle Factor is compensated in the graph.



















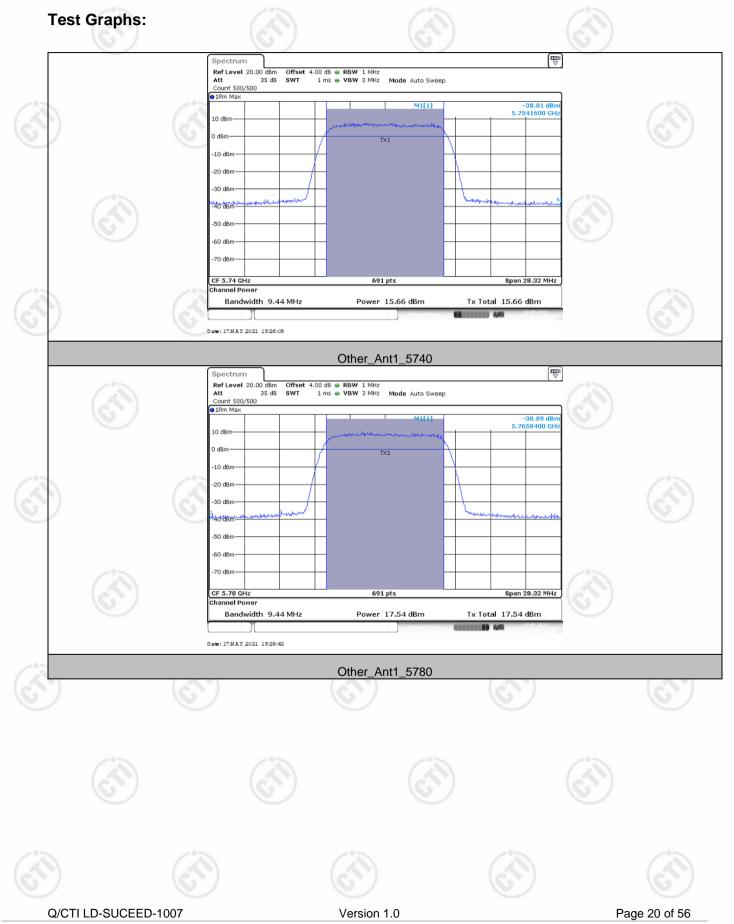








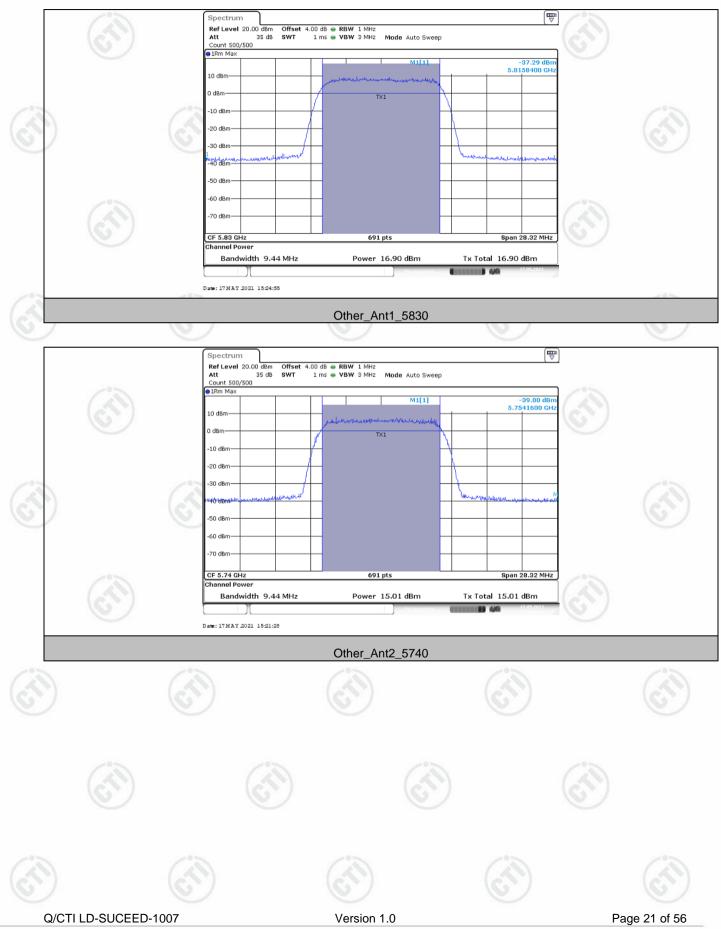








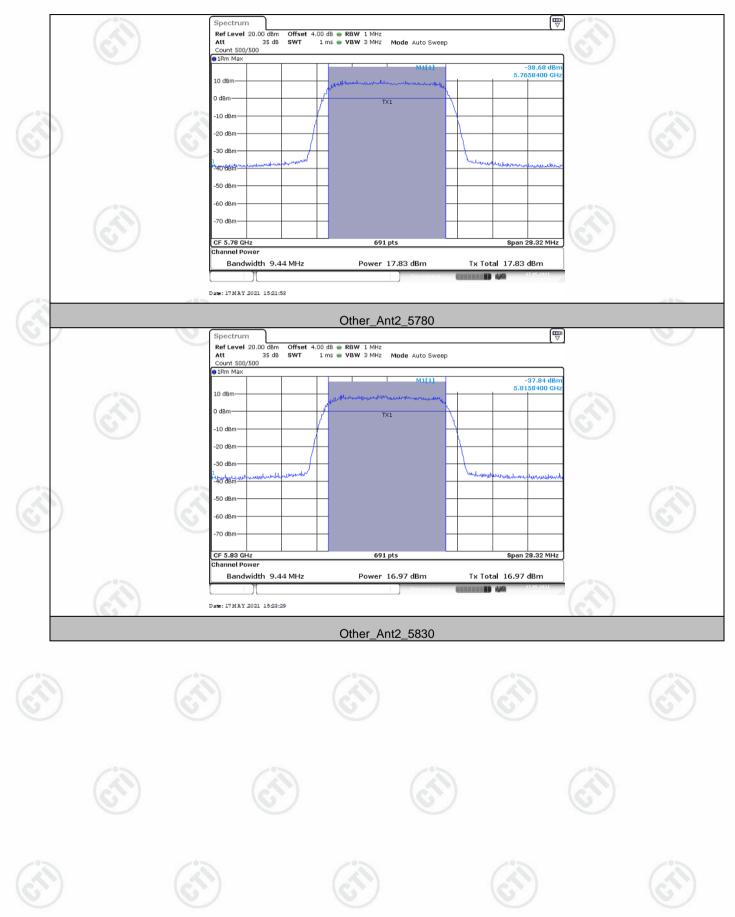












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Appendix D): Power Spectral Density

Test Requirement:	47 CFR Part 15C S	Section 15.407	(a)		\sim		
Test Method:	KDB789033 D02 Section F	General UNII	Test	Procedures	New	Rules	v02r0′
	64				1		
Test Setup:	Control Control Computer Power Supply TEMPERATURE CABI	Attenuator	- 8	RF test System strument	10)		
	Remark: Offset=Ca	able loss+ atten	uation	n factor.			(\mathcal{A})
	1. Set the spectrur emission bandwidt						
Test Procedure:	Sweep time = Auto 2. Allow the sweep 3. Use the peak m level.	o, Detector = RM os to continue u	MS. ntil the	e trace stabiliz	zes.		
Test Procedure:	 Allow the sweep Use the peak m 	o, Detector = RM os to continue u	MS. ntil the	e trace stabiliz	zes.		
Test Procedure:	2. Allow the sweep 3. Use the peak m level.	o, Detector = RN os to continue u arker function to	MS. ntil the o dete	e trace stabiliz	zes. Iximum		
Test Procedure:	2. Allow the sweep 3. Use the peak m level. Frequency band (MHz)	b, Detector = RM bs to continue u arker function to Limit	MS. ntil the o dete	e trace stabiliz rmine the ma	zes. Iximum		
	2. Allow the sweep 3. Use the peak m level. Frequency band (MHz)	b, Detector = RM bis to continue u arker function to Limit ≤17dBm in 1M	MS. ntil the o dete 1Hz fo 1Hz fo	e trace stabiliz rmine the ma r master devi r client device	zes. iximum ce e		
Test Procedure:	2. Allow the sweep 3. Use the peak m level. Frequency band (MHz) 5150-5250	b, Detector = RM bis to continue u arker function to Limit ≤17dBm in 1M ≤11dBm in 1M	MS. ntil the o dete 1Hz fo 1Hz fo 1Hz fo	e trace stabili rmine the ma r master devi r client device r client device	zes. iximum ce e		
	2. Allow the sweep 3. Use the peak m level. Frequency band (MHz) 5150-5250 5250-5350	b, Detector = RN bis to continue unarker function to Limit ≤ 17 dBm in 1N ≤ 11 dBm in 1N ≤ 11 dBm in 1N	MS. ntil the o dete <u>1Hz fo</u> 1Hz fo 1Hz fo	e trace stabili rmine the ma r master devi r client device r client device	zes. iximum ce e		
	2. Allow the sweep 3. Use the peak m level. Frequency band (MHz) 5150-5250 5250-5350 5470-5725	b, Detector = RN bis to continue u arker function to Limit ≤17dBm in 1N ≤11dBm in 1N ≤11dBm in 1N ≤11dBm in 1N	MS. ntil the o dete dete <u>1Hz fo</u> 1Hz fo 1Hz fo 0kHz o powe d emis	e trace stabiliz rmine the ma r master devi r client device r client device r client device er spectral de ssion by direc	zes. iximum ice e e e nsity is ct conne	measu	ured of a
	2. Allow the sweep 3. Use the peak m level. Frequency band (MHz) 5150-5250 5250-5350 5470-5725 5725-5850	b, Detector = RM bs to continue u arker function to Limit ≤17dBm in 1M ≤11dBm in 1M ≤11dBm in 1M ≤30dBm in 50 The maximum as a conducte calibrated test test.	MS. ntil the o dete dete 1Hz fo 1Hz fo 1Hz fo 0KHz n powe d emis i instru	e trace stabiliz rmine the ma r master devi r client device r client device r client device er spectral de ssion by direc	zes. iximum ice e e e nsity is ct conne	measu	ude



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Result Table:

Roodit Tublet					
Test Mode	Antenna	Channel	Result [dBm/500kHz]	Limit[dBm/500kHz]	Verdict
		5740	6.28	<=30	PASS
	Ant1	5780	8.34	<=30	PASS
6		5830	8.55	<=30	PASS
/	(C)	5740	6.53	<=30	PASS
Other	Ant2	5780	8.99	<=30	PASS
~°>>		5830	8.22	<=30	PASS
(3)	(5740	9.42	<=30	PASS
	Total	5780	11.69	<=30	PASS
		5830	11.40	<=30	PASS

Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725-5.85 GHz. 2. The Duty Cycle Factor and RBW Factor is compensated in the graph.





























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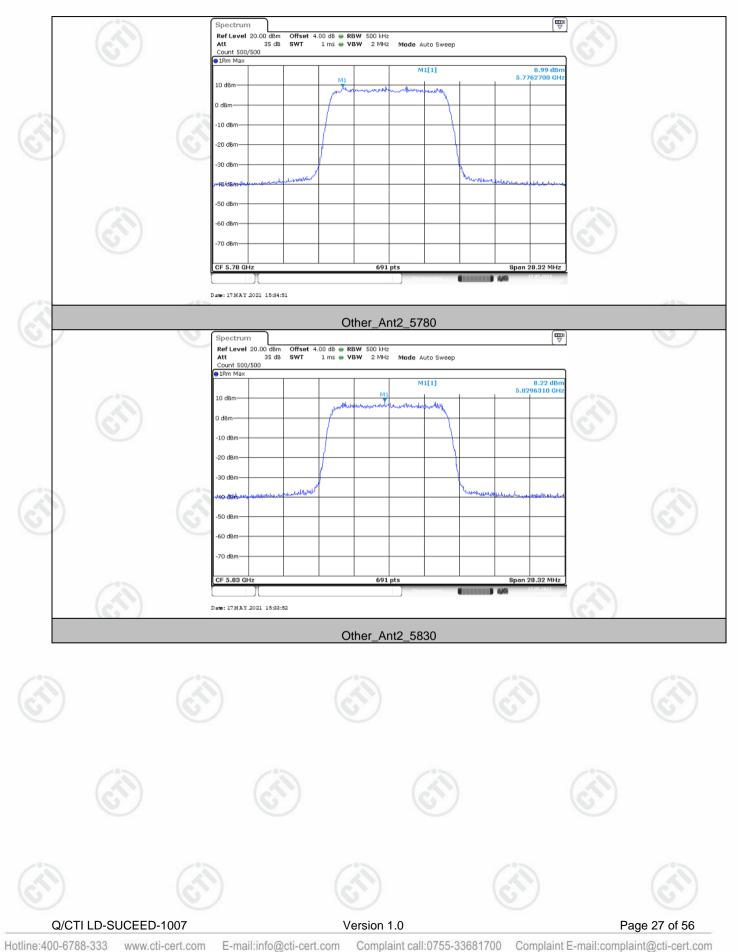














Appendix E): Frequency Stability

Test Requirement:	47 CFR Part 15C Section 15.407 (g) ANSI C63.10: 2013						
Test Method:							
Tool Colum	Control Computer Computer Computer Port(P) Por						
Test Setup:	Remark: Offset=Cable loss+ attenuation factor.						
Test Procedure:	 The EUT was placed inside the environmental test chamber and powered by nominal AC/DC voltage. Turn the EUT on and couple its output to a spectrum analyzer. Turn the EUT off and set the chamber to the highest temperature specified. d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record. 						
Limit:	The frequency tolerance shall be maintained within the band of operation frequency over a temperature variation of 0 degrees to 45 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.						
Test Mode:	Transmitting mode with modulation						
Test Results:	Pass						



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				Voltage				-
Test Mode	Antenna	Channel	Voltage [Vdc]	Temperat ure (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdic
1		0	NV	NT	-13000	-2.264808	20	PASS
)		5740	LV	NT	-13000	-2.264808	20	PASS
			HV	NT	-13000	-2.264808	20	PASS
			NV	NT	-10000	-1.730104	20	PASS
	Ant1	5780	LV	NT	-6000	-1.038062	20	PAS
C.		Q	HV	NT	0	0	20	PASS
			NV	NT	-10000	-1.715266	20	PAS
		5830	LV	NT	-5000	-0.857633	20	PASS
Other	(2		HV	NT	1000	0.171527	20	PASS
Other			NV	NT	3000	0.522648	20	PASS
		5740	LV	NT	12000	2.090592	20	PASS
13		1	HV	NT	23000	4.006969	20	PASS
6		(6	NV	NT	-14000	-2.422145	20	PASS
e e	Ant2	5780	LV	NT	-14000	-2.422145	20	PASS
			HV	NT	-13000	-2.249135	20	PASS
N		6	NV	NT	33000	5.660377	20	PASS
)		5830	LV	NT	38000	6.51801	20	PASS
			ΗV	NT	43000	7.375643	20	PASS



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				(9	
Test Mode	Antenna	Channel	Voltage [Vdc]	Temperature Temperat ure (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdic
6	12	6	NV	-30	-12000	-2.090592	20	PASS
2	G	9	NV	-20	-10000	-1.74216	20	PASS
			NV	-10	-7000	-1.219512	20	PASS
			NV	0	-3000	-0.522648	20	PASS
	1	5740	NV	10	1000	0.174216	20	PASS
C.		Q	NV	20	5000	0.87108	20	PASS
			NV	30	10000	1.74216	20	PASS
	10		NV	40	16000	2.787456	20	PASS
	6		NV	50	20000	3.484321	20	PASS
/	Q		NV	-30	6000	1.038062	20	PASS
			NV	-20	14000	2.422145	20	PASS
13		1	NV	-10	20000	3.460208	20	PASS
	•)	(ć	NV	0	28000	4.844291	20	PASS
	Ant1	5780	NV	10	35000	6.055363	20	PASS
			NV	20	42000	7.266436	20	PASS
01	17	2	NV	30	49000	8.477509	20	PASS
Other	6	·)	NV	40	55900	9.67128	20	PASS
			NV	50	60900	10.536332	20	PASS
			NV	-30	7000	1.200686	20	PASS
(3)	N	0	NV	-20	14000	2.401372	20	PASS
G)	G	NV	-10	20000	3.430532	20	PASS
			NV	0	26000	4.459691	20	PASS
		5830	NV	10	31000	5.317324	20	PASS
0		0	NV	20	37000	6.346484	20	PASS
2	C	\mathcal{D}	NV	30	42000	7.204117	20	PASS
			NV	40	45000	7.718696	20	PASS
			NV	50	49000	8.404803	20	PASS
			NV	-30	33000	5.749129	20	PASS
e		e e	NV	-20	43000	7.491289	20	PASS
	Ant2	5740	NV	-10	51900	9.041812	20	PASS
	10	S	NV	0	58900	10.261324	20	PASS
	6	()	NV	10	65900	11.480836	20	PASS

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	(3)	(NV	20	71900	12.526132	20	PASS
	(\mathcal{O})	(c)	NV	30	78900	13.745645	20	PASS
			NV	40	83900	14.616725	20	PASS
			NV	50	88900	15.487805	20	PASS
			NV	-30	-10000	-1.730104	20	PASS
9			NV	-20	-4000	-0.692042	20	PASS
			NV	-10	2000	0.346021	20	PASS
-	~		NV	0	10000	1.730104	20	PASS
	(\sim)	5780	NV	10	18000	3.114187	20	PASS
		0	NV	20	26000	4.49827	20	PASS
			NV	30	34000	5.882353	20	PASS
			NV	40	39000	6.747405	20	PASS
<u>(</u>		(37)	NV	50	47000	8.131488	20	PASS
			NV	-30	47000	8.06175	20	PASS
			NV	-20	50900	8.730703	20	PASS
		0	NV	-10	55900	9.588336	20	PASS
	(\mathcal{O})	G	NV	0	59900	10.274443	20	PASS
		5830	NV	10	62900	10.789022	20	PASS
3			NV	20	66900	11.475129	20	PASS
			NV	30	69900	11.989708	20	PASS
		(C)	NV	40	72900	12.504288	20	PASS
			NV	50	75900	13.018868	20	PASS



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Appendix F): Duty cycle

Test Requirement:	47 CFR Part15C Section 15.407					
Test Method:	ANSI C63.10 2013					
Test Setup:	Control Compute Power Supply Temperature CABNET Table					
Test Procedure:	 Remark: Offset=Cable loss+ attenuation factor. a) Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value. b) Set VBW ≥ RBW. c) detector = peak or average. 					
	 d) The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T, where T is defined in II.B.1.a), and the number of sweep points across duration T exceeds 100. 					
Limit:						
Test Mode:	Refer to clause 2.2					
Test Results:	Pass					

Test Result:			((ii)	
Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	5740	10.23	13.96	73.28
	Ant1	5780	10.23	13.97	73.23
Other		5830	10.23	13.97	73.23
Other	-	5740	10.24	13.97	73.30
	Ant2	5780	10.22	13.94	73.31
$(c^{(n)})$		5830	10.22	13.94	73.31







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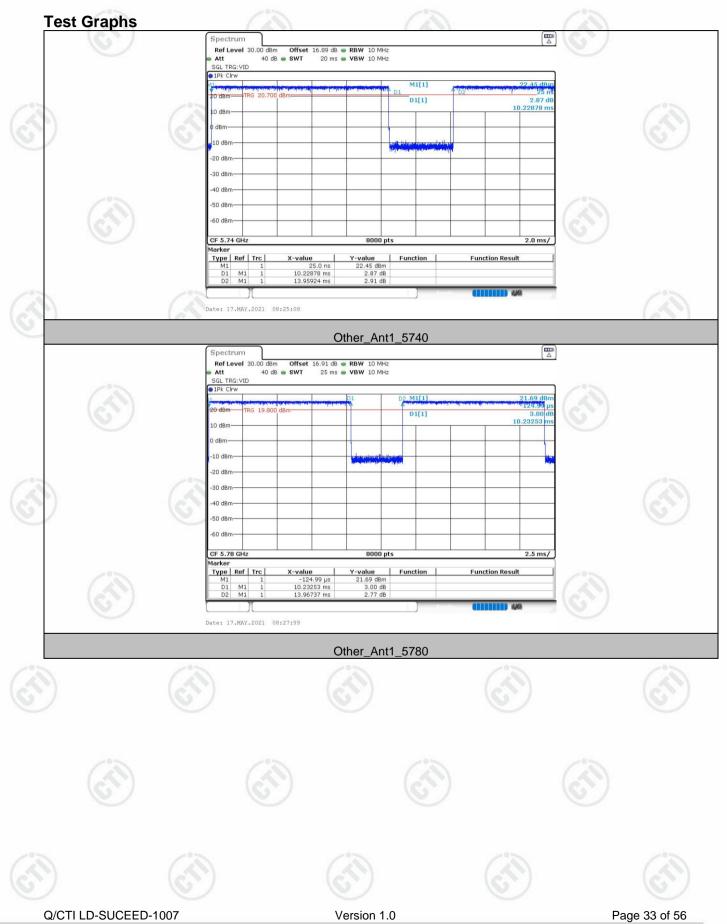


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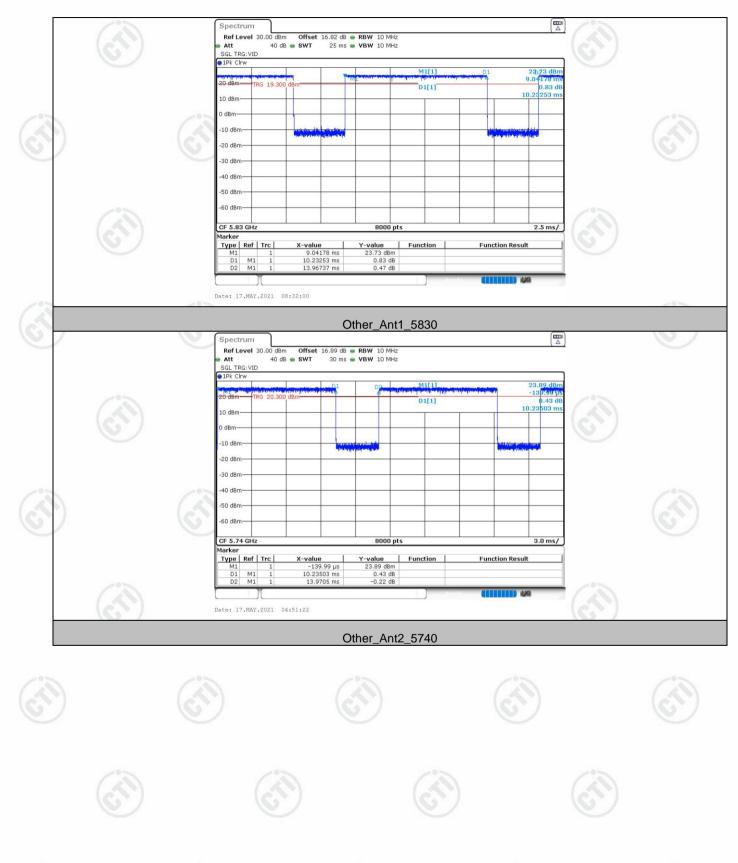














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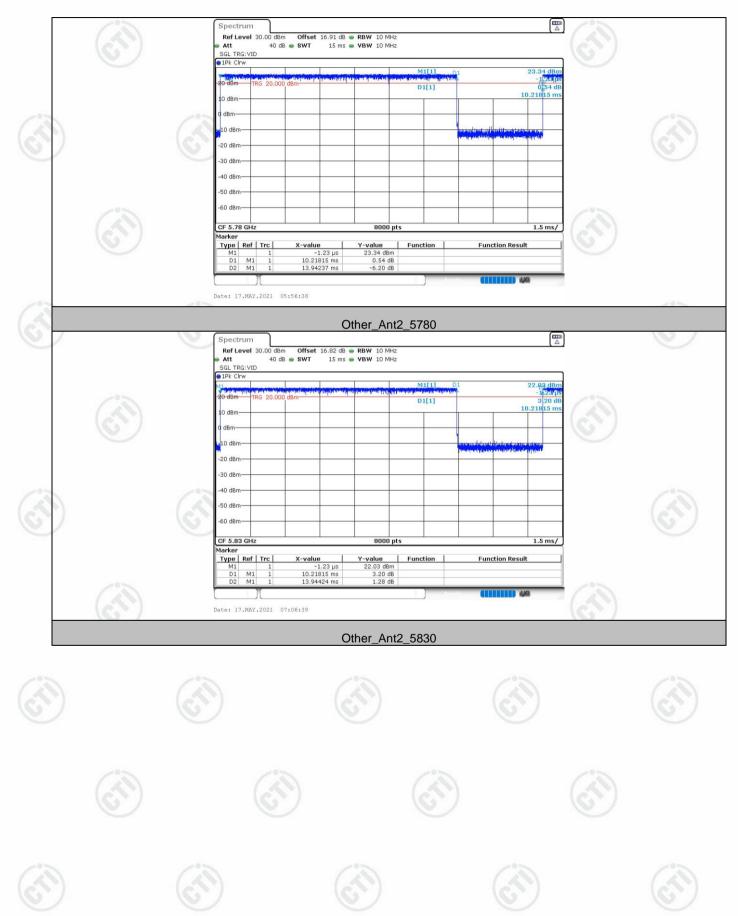
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## **Appendix G): Antenna Requirement**

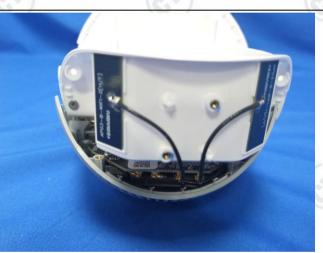
#### 15.203 requirement:

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, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

#### 15.407(a)(1) (2) requirement:

The conducted output power limit specified in paragraph (a) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (a) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power and the peak power spectral density shall be reduced by the by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

**EUT Antenna:** 



The antenna is integrated on the main PCB and no consideration of replacement.



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## Appendix H): Operation in the absence of information to the transmit

### 15.407(c) requirement:

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signal ling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

#### Operation in the absence of information to the transmit

Operation never ceases as information from cell town is always present. (manufacturer declare )



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# Appendix I): AC Power Line Conducted Emission

Test Method:       ANSI C63.10: 2013         Test Frequency Range:       150kHz to 30MHz         Receiver setup:       RBW=9 kHz, VBW=30 kHz, Sweep time=auto         Limit:       Imit (dBuV)         Clussi-peak       Average         0.15-0.5       66 to 56*         0.5-5       56         0.5-5       56         0.5-5       56         0.5-5       56         0.5-5       56         0.5-5       56         0.5-5       56         0.5-5       56         0.5-5       56         0.5-5       56         0.5-5       56         0.5-5       56         0.5-5       56         0.5-5       56         0.5-5       56         10       Tecreases with the logarithm of the frequency.         Test Setup:       Image: monuting the logarithm of the frequency.         Image: impedance in the same way as the log and Release of the same way as the log and Release of the same way as the log and Release of the same way as the log and Release of the same way as the LISN 1 (Lin impedance Stabilization Network) which provides a 500/50µH + 50 linear impedance. The power cables of all other units of the EUT was a connected to AC power source through a LISN 1 (Lin impedance Stabilization Network) which provides a 500/50µH + 50 lin	Test Requirement:	47 CFR Part 15C Section 1	5.207						
Test Procedure:       RBW=9 kHz, VBW=30 kHz, Sweep time=auto         Imit:       Frequency range (MHz)       Limit (dBuV)         Quasi-peak       Average         0.15-0.5       66 to 56*       56 to 46*         0.5-5       56       46         0.5-30       60       50         * Decreases with the logarithm of the frequency.         Imit:       Imit (dBuV)         Imit (dBur)       Imit (dBur)         Imit (dBur)       I	Test Method:	ANSI C63.10: 2013							
Receiver setup:       RBW=9 kHz, VBW=30 kHz, Sweep time=auto         Limit:       Frequency range (MHz)       Limit (dBuV)         0.15-0.5       66 to 56'       56 to 46'         0.5-5       56       46         5-30       60       50         * Decreases with the logarithm of the frequency.         Test Setup:         1) The mains terminal disturbance voltage test was conducted in shielded room.         1) The mains terminal disturbance voltage test was conducted in shielded room.         Test Procedure:         1) The mains terminal disturbance voltage test was conducted in shielded room.         1) The mains terminal disturbance voltage test was conducted in shielded room.         Oncourd Releves Plane         1) The mains terminal disturbance voltage test was conducted in shielded room.         1) The mains terminal disturbance voltage test was conducted in shielded room.         1) The mains terminal disturbance voltage test was conducted in shielded room.         1) The mains terminal disturbance voltage test was conducted in shielded room.         1) The termina disturbance voltage test was conducted in shielded room.         1) The termina disturbance voltage test was conducted in shielded room.         1) The termina disturbance vol	Test Frequency Range:	150kHz to 30MHz							
Limit:       Frequency range (MHz)       Limit (dBuV)         Quasi-peak       Average         0.15-0.5       66 to 56*       56 to 46*         0.5-5       56       46         0.5-30       60       50         * Decreases with the logarithm of the frequency.       Image: Construction of the frequency.         Test Setup:         1       The mains terminal disturbance voltage test was conducted in shielded room.         2) The EUT was connected to AC power source through a LISN 1 (Lin Impedance Stabilization Network) which provides a 500/500H + 55 linear impedance. The power cables of all other units of the EUT wer connected to a second LISN 2, which was bonded to the groun reference plane in the same way as the LISN 1 for the unit bein measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.         3) The tabletop EUT was placed upon a non-metallic table 0.8m abov the ground reference plane. And for floor-standing arrangement, th EUT was placed on the horizontal ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The bound reference plane. The LISN 1 and the EUT was placed on the horizontal ground reference plane. The ison above the boundary of the unit under test and bonded to a ground reference plane. The ison above the boundary of the unit under test and bonded to a ground reference plane. The ison above the boundary of the unit under test and bonded to a ground reference plane. The tote of the Strip was baced 0.8 m from the		RBW=9 kHz, VBW=30 kHz,	Sweep time=auto	(67)					
Limit:       Quasi-peak       Average         0.15-0.5       66 to 56*       56 to 46*         0.5-5       56       46         5-30       60       50         * Decreases with the logarithm of the frequency.         Test Setup:         1) The mains terminal disturbance voltage test was conducted in shielded room.         1) The EUT was connected to AC power source through a LISN 1 (Lin Impedance Stabilization Network) which provides a 500/50µH + 51 linear impedance. The power cables of all other units of the EUT was connected to a second LISN 2, which was bonded to the groun reference plane in the same way as the LISN 1 for the unit belia measured. A multiple socket outile strip was used to connect multipl power cables to a single LISN provided the rating of the LISN was no exceeded.         30 The test was performed with a vertical ground reference plane. The reacting of the LISN was no exceeded.         The tabletop EUT was placed upon a non-metallic table 0.8m abov the ground reference plane. And for floor-standing arrangement, th EUT was placed on the horizontal ground reference plane. The vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The unit define the out the unit near test and bonded to a ground reference plane. The vertical ground reference plane. The full LISN 1 and the EUT was placed on the horizontal ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The feare of the SNS mounted on top of the ground reference pl	P_		Limit (c	dBuV)					
Limit:       0.5-5       56       46         5-30       60       50         * Decreases with the logarithm of the frequency. <b>Test Setup:</b> Image: Construct of the second of th		Frequency range (MHz)	Quasi-peak	Average					
Test Setup:       0.5-5       56       46         * Decreases with the logarithm of the frequency.         * Decreases with the logarithm of the frequency.         Test Setup:         1) The mains terminal disturbance voltage test was conducted in shielded room.         2) The EUT was connected to AC power source through a LISN 1 (Lin Mpedance Stabilization Network) which provides a 50Ω/50µH + 56 linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was borded to the groun reference plane in the same way as the LISN 1 for the unit bein measured. A multiple socket outlet strip was used to connect multipl power cables to a single LISN provided the rating of the LISN was no exceeded.         3) The tabletop EUT was placed upon a non-metallic table 0.8m abov the ground reference plane. And for floor-standing arrangement, th EUT was placed on the horizontal ground reference plane. The rear of the EUT was placed upon a non-metallic table 0.8m abov the ground reference plane. The LISN 1 was placed 0.8 m for the boundary of the unit under test and bonded to a ground reference plane. The rear of the EUT was placed on the horizontal ground reference plane. The list N was bonded to the ground reference plane. The LISN 1 was placed 0.8 m for the boundary of the unit under test and bonded to a ground reference plane. The uses the use of the LISN 1 and the EUT was between the closest points of the LISN 1 and the EUT was between the closest points of the LISN 1 and the EUT was between the closest points of the LISN 1 and the EUT was between the closest points of the LISN 1 and the EUT was between the closest points of the LISN 1 and the EUT was between the closest points of the LISN 1 and the EUT was between the closest points of the LISN 1 and the EUT was between	1	0.15-0.5	66 to 56*	56 to 46*					
* Decreases with the logarithm of the frequency.         Test Setup:         Image: the set of the set	Limit:	0.5-5 56 46							
<ul> <li>Test Setup:</li> <li> <b>Test Setup:</b> </li> <li>         1) The mains terminal disturbance voltage test was conducted in shielded room.         2) The EUT was connected to AC power source through a LISN 1 (Lin Impedance Stabilization Network) which provides a 50Ω/50µH + 5 linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the groun reference plane in the same way as the LISN 1 for the unit beir measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was ne exceeded.         3) The test was performed with a vertical ground reference plane. The rear of the EUT was placed on the horizontal ground reference plane.         4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The outpand reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. The unit bonded to a ground reference plane. The USNs mounted on top of the ground reference plane. The donder to a ground reference plane. The unit should bonded to a ground reference plane. The USN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. The use the closest points of the LISN 1 and the EUT was placed to the source of the ground reference plane. The use the closest points of the LISN 1 and the EUT was placed to the source plane. The USN 1 was placed 0.8 m from the vertical ground reference plane. The use the source of the ground reference plane. The use the closest points of the LISN 1 and the EUT was placed to a source the source of the ground reference plane. The use the closest points of the LISN 1 and the EUT was placed to a the source of the ground reference plane. The use the closest pointhe dot to the ground reference plane. The distance was betwen</li></ul>		5-30	60	50					
Test Setup: Test Setup: I) The mains terminal disturbance voltage test was conducted in shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Lin Impedance Stabilization Network) which provides a 50Ω/50µH + 5 linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the grour reference plane in the same way as the LISN 1 for the unit bein measured. A multiple socket outlet strip was used to connect multip power cables to a single LISN provided the rating of the LISN was ne exceeded. 3) The test was performed with a vertical ground reference plane. The test was performed with a vertical ground reference plane. The vertical ground reference plane. The UISN 1 was placed 0.8 m from the vertical ground reference plane. The UISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. The UISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. The UISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. The UISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. The UISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. The UISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. The UISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. The UISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. The UISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. The UISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. The UISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane. The UI		* Decreases with the logarit	hm of the frequency.	·					
<ul> <li>Test Procedure:</li> <li>2) The EUT was connected to AC power source through a LISN 1 (Lin Impedance Stabilization Network) which provides a 50Ω/50µH + 50 linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the groun reference plane in the same way as the LISN 1 for the unit bein measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.</li> <li>3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.</li> <li>4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The boundary of the unit under test and bonded to a ground reference plane. The distance was between the closest points of the LISN 1 and the EUT</li> </ul>	Test Setup:	AC Mains							
	Test Procedure:	<ul> <li>shielded room.</li> <li>2) The EUT was connected Impedance Stabilization linear impedance. The p connected to a second reference plane in the measured. A multiple sc power cables to a single exceeded.</li> <li>3) The tabletop EUT was placed on the f ground reference place on the f 4) The test was performed rear of the EUT shall k plane. The vertical gran horizontal ground reference the boundary of the unit plane for LISNs mounted distance was between the second stability of the second stability of the second stability of the unit plane for LISNs mounted distance was between the second stability of the second stabi</li></ul>	d to AC power source Network) which prov ower cables of all othe LISN 2, which was same way as the LIS ocket outlet strip was to LISN provided the ra- blaced upon a non-m ane. And for floor-stan norizontal ground refer with a vertical ground reference plane with a vertical ground reference plane nce plane. The LISN 2 under test and bonder d on top of the groun he closest points of the	through a LISN 1 (Lin vides a 50Ω/50µH + 59 er units of the EUT wer bonded to the groun SN 1 for the unit bein used to connect multipl ting of the LISN was no etallic table 0.8m abov anding arrangement, the rence plane. Ind reference plane. The ertical ground reference e was bonded to the 1 was placed 0.8 m from ed to a ground reference and reference plane. The ind reference plane. The etallon 1 and the EUT					









		equipme	to find the ent and all of C63.10: 2013	the interface	cables mus	t be changed	ositions of according
Test Mo	de:	/					
Test Res	sults:	N/A			~~~~		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
	<b>ment Data</b> luct is supplied b	y DC power.					
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## Appendix J): Restricted bands around fundamental frequency (Radiated Emission)

lethod:	ANSI C63.10 2013				,			
		1	2	1	13	4	1	
		6	/	1		)	G	
	Frequency	$\smile$	Detector	RBV		VBW	Remark	
	0.009MHz-0.090MH		Peak	10kH		30kHz	Peak	
	0.009MHz-0.090MH	Ηz	Average	10k⊦		30kHz	Average	
	0.090MHz-0.110MHz		Quasi-peak	/		30kHz	Quasi-peal	
ver Setup:	0.110MHz-0.490MH	Ηz	Peak	10k⊢	lz	30kHz	Peak	
-	0.110MHz-0.490Mł	Ηz	Average	10k⊦	lz	30kHz	Average	
	0.490MHz -30MH	z	Quasi-peak	10k⊦	łz	30kHz	Quasi-peal	
	30MHz-1GHz		Quasi-peak	100 k	Hz	300kHz	Quasi-peal	
	Above 1GHz		Peak	1MH	lz	3MHz	Peak	
	Above TGHZ		Peak	∋ak 1M⊦		10kHz	Average	
	Frequency		0	Limit dBuV/m	F	Remark	Measuremer distance (m	
	0.009MHz-0.490MHz	24	100/F(kHz)	-		-	300	
	0.490MHz-1.705MHz	24000/F(kHz)		-	-		30	
	1.705MHz-30MHz	30		- /	2	<u>)</u> -	30	
	30MHz-88MHz	5	100	40.0	Qu	lasi-peak	3 🕥	
	88MHz-216MHz		150	43.5	Qu	lasi-peak	3	
	216MHz-960MHz		200	46.0	Qu	lasi-peak	3	
	960MHz-1GHz		500	54.0	Qu	lasi-peak	3	
	Above 1GHz		500	54.0	A	verage	3	
	er Setup:	0.110MHz-0.490MH           0.490MHz -30MH           30MHz-1GHz           Above 1GHz           Above 1GHz           0.009MHz-0.490MHz           0.490MHz-1.705MHz           1.705MHz-30MHz           30MHz-1.705MHz           1.705MHz-30MHz           1.705MHz-1.705MHz           30MHz-88MHz           88MHz-216MHz           960MHz-1GHz	0.110MHz-0.490MHz           0.490MHz -30MHz           30MHz-1GHz           Above 1GHz           Frequency           Fie           0.009MHz-0.490MHz           0.490MHz-1.705MHz           24           1.705MHz-30MHz           30MHz-1.705MHz           24           1.705MHz-30MHz           216MHz-960MHz           960MHz-1GHz	Image: Note of the sector of the se	Image: Note of the sector of the se	Image: Note:         0.110MHz-0.490MHz         Average         10kHz           0.490MHz -30MHz         Quasi-peak         10kHz         30MHz-1GHz         Quasi-peak         10kHz           30MHz-1GHz         Quasi-peak         100 kHz         Above 1GHz         Peak         1MHz           Above 1GHz         Peak         1MHz         Peak         1MHz           0.009MHz-0.490MHz         2400/F(kHz)         -         0.490MHz-1.705MHz         2400/F(kHz)         -           0.490MHz-1.705MHz         24000/F(kHz)         -         0.490MHz-1.705MHz         24000/F(kHz)         -         0.490MHz-1.705MHz         24000/F(kHz)         -         0.490MHz-1.705MHz         24000/F(kHz)         -         0.490MHz-1.705MHz         2000/F(kHz)         -         0.490MHz-1.705MHz         300         -         -         30MHz-88MHz         100         40.0         Qu         88MHz-216MHz         150         43.5         Qu         216MHz-960MHz         200         46.0         Qu         960MHz-1GHz         500         54.0         Qu	Image: Setup:         0.110MHz-0.490MHz         Average         10kHz         30kHz           0.490MHz -30MHz         Quasi-peak         10kHz         30kHz         30kHz           30MHz-1GHz         Quasi-peak         100 kHz         300kHz         300kHz           Above 1GHz         Peak         1MHz         3MHz         10kHz         30kHz           Above 1GHz         Peak         1MHz         10kHz         30Hz           Peak         1MHz         10kHz         10kHz           0.009MHz-0.490MHz         2400/F(kHz)         -         -           0.490MHz-1.705MHz         24000/F(kHz)         -         -           1.705MHz-30MHz         30         -         -           30MHz-88MHz         100         40.0         Quasi-peak           88MHz-216MHz         150         43.5         Quasi-peak           216MHz-960MHz         200         46.0         Quasi-peak           960MHz-1GHz         500         54.0         Quasi-peak	

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C	Remark: The emission limits shown in the above table are based on neasurements employing a CISPR quasi-peak detector except for the requency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB ander any condition of modulation. Note: i) EIRP = ((E*d)^2) / 30 where: E is the field strength in V/m; d is the measurement distance in meters; EIRP is the equivalent isotropically radiated power in watts. ii) Working in dB units, the above equation is equivalent to: EIRP[dBm] = E[dB $\mu$ V/m] + 20 log(d[meters]) - 104.77 iii) Or, if d is 3 meters: EIRP[dBm] = E[dB $\mu$ V/m] - 95.2
Test Setup:	
() () () () () () () () () () () () () (	RX Antenna Ground Plane Receiver Figure 1. Below 30MHz
AE EUT (Turntable) Ground R Test Receiver	Antenna Tower Hom Antenna Tower
Figure 2. 30MHz	o 1GHz Figure 3. Above 1 GHz
Test Procedure:	<ul> <li>a. 1) Below 1G: The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>2) Above 1G: The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic camber. The</li> </ul>
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Hotline:400-6788-333 www.cti-cert.com E-mail:info@cti-cert.com Complaint call:0755-33681700 Complaint E-mail:complaint@cti-cert.com

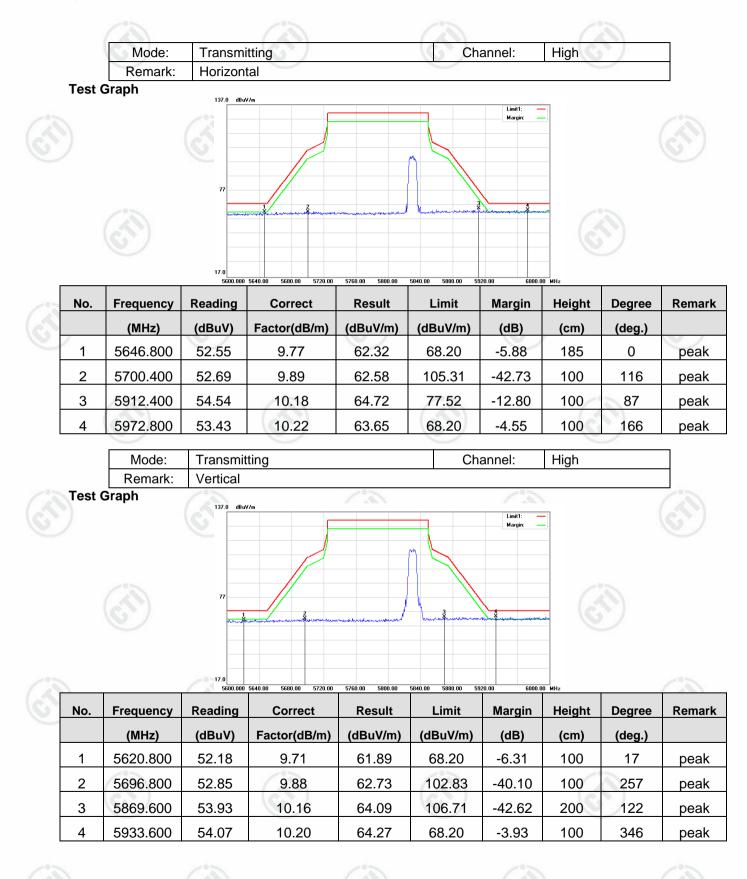


est p	lot as follows	5:							
	Mode:	Transm	itting		Ch	annel:	Low	9—	
	Remark:	Horizon					LOW		
Test	Graph	137.0 dBu							
		77				Linit1: - Margin: -			
No.	Frequency	17.0 5600.000 Reading	5640.00 5680.00 5720.00 Correct	5760.00 5800.00 Result	5840.00 5880.00 55 Limit	120.00 6000.0 Margin	MHz Height	Degree	Rem
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	5641.200	52.34	9.75	62.09	68.20	-6.11	200	87	pea
2	5683.200	52.92	9.85	62.77	92.77	-30.00	200	328	pe
3	5906.000	53.49	10.18	63.67	82.26	-18.59	100	232	pe
4	5928.400	53.35	10.10	63.54	68.20	-4.66	100	144	pe
Test	Mode: Remark: Graph	Transmi           Vertical           137.0         dBu           77	V/n			Annel:	Low	Ð	
	Ereguenov	5600.000		5760.00 5800.00			MHz	Degree	Dam
Na	Frequency	Reading	Correct	Result		Margin	Height	Degree	Rem
No.	(8411-)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m) 68.20	(dB) -6.40	(cm)	(deg.)	
	(MHz)		0.75	64.00		-0.40	200	241	pea
1	5640.000	52.05	9.75	61.80			1.4		
1 2	5640.000 5681.600	52.05 52.63	9.84	62.47	91.58	-29.11	200	241	pe
1	5640.000	52.05					1.4		pea pea pea

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## Appendix K): Unwanted Emissions in the Restricted Bands (Radiated Emission)

Test Requirement:	47 CFR Part 15C Sec	ction	15.209 and 1	15.407 (b)			
Test Method:	ANSI C63.10 2013	10	_		0		
	Frequency	R	Detector	RBW	VBW	Remark	
	0.009MHz-0.090MHz		Peak	10kHz	30kHz	Peak	
	0.009MHz-0.090MH	Ηz	Average	10kHz	30kHz	Average	
	0.090MHz-0.110MH	Ηz	Quasi-peak	10kHz	30kHz	Quasi-peak	
Receiver Setup:	0.110MHz-0.490MHz		Peak	10kHz	30kHz	Peak	
	0.110MHz-0.490MH	Ηz	Average	10kHz	30kHz	Average	
	0.490MHz -30MH	z	Quasi-peak	10kHz	30kHz	Quasi-peak	
	30MHz-1GHz	1	Quasi-peak	100 kHz	z 300kHz	Quasi-peak	
	Above 4011-	6	Peak	1MHz	3MHz	Peak	
	Above 1GHz	Y	Peak	1MHz	10kHz	Average	
	Frequency		ld strength rovolt/meter)	Limit (dBuV/m)	Remark	Measuremen distance (m)	
	0.009MHz-0.490MHz	· · · · · · · · · · · · · · · · · · ·		-	- (ć	300	
	0.490MHz-1.705MHz	24	000/F(kHz)	-	-	30	
	1.705MHz-30MHz		30	-	-	30	
	30MHz-88MHz	100		40.0	Quasi-peak	3	
	88MHz-216MHz	150		43.5	Quasi-peak	3	
	216MHz-960MHz		200	46.0	Quasi-peak	3	
	960MHz-1GHz	500		54.0	Quasi-peak	3	
	Above 1GHz		500	54.0	Average	3	
Limit:	<ul> <li>*(1) For transmitters outside of the 5.15 dBm/MHz.</li> <li>(2) For transmitters of of the 5.15-5.35 GHz</li> <li>(3) For transmitters outside of the 5.47- dBm/MHz.</li> <li>(4) For transmitters of</li> <li>(i) All emissions shall above or below the b above or below the b</li> </ul>	-5.35 pera band ope -5.72 be l band band irly to from 7 dB	5 GHZ band ting in the 5.2 d shall not ex rating in the 5 GHZ band ting in the 5.7 imited to a le edge increa l edge, and to a level of 1 n 5 MHZ abo m/MHZ at the	I shall no 25-5.35 GF ceed an e.i 5.47-5.72 d shall no 725-5.85 Gi vel of −27 sing linearl from 25 M 5.6 dBm/N ove or belo e band edg	t exceed an Iz band: All e i.r.p. of -27 d 25 GHz band t exceed an Hz band: dBm/MHz at y to 10 dBm/ Hz above or IHz at 5 MHz ow the band e.	e.i.r.p. of -2 missions outsid Bm/MHz. d: All emission e.i.r.p. of -2 75 MHz or mo /MHz at 25 MH below the bar above or belo edge increasin	
	Remark: The emiss measurements empl frequency bands 9-	ion	limits show	n in the	above table		

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	<ul> <li>emission limits in these three bands are based on measure average detector, the peak field strength of any emission maximum permitted average limits specified above by more any condition of modulation.</li> <li>Note: <ul> <li>(i) EIRP = ((E*d)^2) / 30</li> <li>where:</li> <li>E is the field strength in V/m;</li> <li>d is the measurement distance in meters;</li> <li>EIRP is the equivalent isotropically radiated power in wat</li> </ul> </li> </ul>	shall not exceed the bre than 20 dB under
	<ul> <li>(ii) Working in dB units, the above equation is equivalent to EIRP[dBm] = E[dBµV/m] + 20 log(d[meters]) - 104.7</li> <li>(iii) Or, if d is 3 meters:</li> <li>EIRP[dBm] = E[dBµV/m] - 95.2</li> </ul>	
Test Setup:	RX Antenna BUT Turn Table Ground Plane	
	Receiver Figure 1. Below 30MHz	(I)
	Antenna Tower Antenna Tower Antenna Tower Antenna Tower Antenna Tower Cound Reference Plane Cound Reference Plane Test Receiver	Horn Antenna Tower
Figure 2. 30Mł		12
Test Procedure:	<ul> <li>a. 1) Below 1G: The EUT was placed on the top of meters above the ground at a 3 meter semi-aned table was rotated 360 degrees to determine the highest radiation.</li> <li>2) Above 1G: The EUT was placed on the top of meters above the ground at a 3 meter semi-aned table was rotated 360 degrees to determine the highest radiation.</li> </ul>	choic camber. The position of the a rotating table 1.5 choic camber. The
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[		Note: For the radiated emission test above 1GHz:
		<ul> <li>Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.</li> <li>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.</li> </ul>
No.		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.
		<ul> <li>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 of 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.</li> <li>e. The test-receiver system was set to Peak Detect Function and</li> </ul>
S.		<ul> <li>Specified Bandwidth with Maximum Hold Mode.</li> <li>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 re-tested one by one using peak, quasipeak or average method as specified and then reported in a data sheet.</li> </ul>
		<ul> <li>g. Test the EUT in the lowest channel, the middle channel and the highest channel</li> <li>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.</li> </ul>
		<ul> <li>Repeat above procedures until all frequencies measured was complete.</li> </ul>
6	Test Mode:	Transmitting mode with modulation
	Test Results:	Pass



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## **Radiated Spurious Emissions test Data:**

## **Radiated Emission below 1GHz:**

Mode:	Trans	mitting		Channel:	Low		
Remark	. /	2	(3)		13		1
	6				(2)		6
Frequency (MHz)	Ant. Pol. (H/V)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
76.5600	V	53.26	-27.96	25.30	40.00	-14.70	QP
240.4900	V	47.51	-21.42	26.09	46.00	-19.91	QP
389.8700	V	42.59	-18.20	24.39	46.00	-21.61	QP
600.3600	V	38.94	-13.48	25.46	46.00	-20.54	QP
800.1800	V	45.57	-11.66	33.91	46.00	-12.09	QP
996.1200	v	43.25	-9.17	34.08	54.00	-19.92	QP
			$\sim$		$\sim$		
76.5600	Н	64.15	-27.96	36.19	40.00	-3.81	QP
144.4600	н	57.54	-24.23	33.31	43.50	-10.19	QP
201.6900	Эн	54.69	-22.55	32.14	43.50	-11.36	QP
239.5200	Н	56.58	-21.45	35.13	46.00	-10.87	QP
372.4100	Н	48.91	-18.84	30.07	46.00	-15.93	QP
800.1800	н	47.88	-11.66	36.22	46.00	-9.78	QP

#### Notes:

1) Through Pre-scan then find the CH low is the worst case mode and only the worst data was recorded.





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### **Transmitter Emission above 1GHz** U-NII-3

Mode:	Transmitting	Channel:	Low
Remark:			

10	Horizontal									
No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark	
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)		
1	11064.000	30.37	16.62	46.99	74.00	-27.01	120	360	peak	
2	15977.000	29.48	23.58	53.06	74.00	-20.94	200	151	peak	

### Vertical

	No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
/		(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
Ś	1	11710.000	29.08	17.13	46.21	74.00	-27.79	100	70	peak
	2	14821.000	30.38	22.87	53.25	74.00	-20.75	147	360	peak

Mode:	Transmitting	Channel: M	id 💦
Remark:		$(c, \gamma)$	

	Horizontal										
No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark		
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)			
1	11251.000	29.51	16.91	46.42	74.00	-27.58	200	331	peak		
2	15977.000	29.54	23.58	53.12	74.00	-20.88	200	122	peak		

	Vertical											
No.	Frequency	y Reading Correct I		Result	Limit Margin		Height	Degree	Remark			
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)				
1	11200.000	29.72	16.85	46.57	74.00	-27.43	100	331	peak			
2	16079.000	29.52	23.66	53.18	74.00	-20.82	199	360	peak			
100								1	100			

Vertical















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Mode:	Transmitting	igh 💮
Remark:		

_	Horizontal											
	No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark		
¢		(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)			
	1	11574.000	29.08	17.26	46.34	74.00	-27.66	200	153	peak		
	2	16980.000	27.31	25.61	52.92	74.00	-21.08	100	155	peak		

||______

No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	12118.000	29.32	17.38	46.70	74.00	-27.30	100	317	peak
2	16555.000	29.70	24.21	53.91	74.00	-20.09	200	0	peak

### Note:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor- Antenna Factor-Cable Factor

2) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics 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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## Appendix L): Unwanted Emissions that fall Outside of the **Restricted Bands**

Test Requirement:	47 CFR Part 15C Sec	tion	15.209 and 1	5.407 (b)				
Test Method:	ANSI C63.10 2013	12	0		No.	(3		
	<u>}</u>	C		6	(2)	(G)		
	Frequency	~	Detector	RBW	VBW	Remark		
	0.009MHz-0.090MH	Ηz	Peak	10kHz	30kHz	Peak		
	0.009MHz-0.090MH	Ηz	Average	10kHz	30kHz	Average		
	0.090MHz-0.110MH	Ηz	Quasi-peak	10kHz	30kHz	Quasi-peak		
Receiver Setup:	0.110MHz-0.490MH	Ηz	Peak	10kHz	30kHz	Peak		
	0.110MHz-0.490MH	Ηz	Average	10kHz	30kHz	Average		
	0.490MHz -30MH;	z	Quasi-peak	10kHz	30kHz	Quasi-peak		
	30MHz-1GHz	( A	Quasi-peak	100 kHz	z 300kHz	Quasi-peak		
		0	Peak	1MHz	3MHz	Peak		
	Above 1GHz		Peak	1MHz	10kHz	Average		
	Frequency		ld strength rovolt/meter)	Limit (dBuV/m)	Remark	Measuremen distance (m)		
	0.009MHz-0.490MHz	24	100/F(kHz)	/ _	- 6	300		
	0.490MHz-1.705MHz	24	000/F(kHz)	-	-	30		
	1.705MHz-30MHz		30	-	-	30		
	30MHz-88MHz	64	100	40.0	Quasi-peak	3		
	88MHz-216MHz	150		43.5	Quasi-peak	3		
	216MHz-960MHz	200		46.0	Quasi-peak	3		
	960MHz-1GHz		500	54.0	Quasi-peak	3		
	Above 1GHz	500		54.0	Average	3		
Limit:	<ul> <li>*(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.</li> <li>(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.</li> <li>(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.</li> <li>(4) For transmitters operating in the 5.725-5.85 GHz band:</li> <li>(a) For transmitters operating in the 5.725-5.85 GHz band:</li> </ul>							
	(4) For transmitters operating in the 5.725-5.85 GHz band:							

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	frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. emission limits in these three bands are based on measurements emp average detector, the peak field strength of any emission shall not ex maximum permitted average limits specified above by more than 20 of any condition of modulation.	loying an ceed the
	Note: (i) EIRP = ((E*d)^2) / 30 where: • E is the field strength in V/m; • d is the measurement distance in meters;	(A)
	<ul> <li>EIRP is the equivalent isotropically radiated power in watts.</li> <li>(ii) Working in dB units, the above equation is equivalent to: EIRP[dBm] = E[dBµV/m] + 20 log(d[meters]) - 104.77</li> <li>(iii) Or, if d is 3 meters: EIRP[dBm] = E[dBµV/m] - 95.2</li> </ul>	
Test Setup:		
	RX Antenna Brun Table Ground Plane	
(R)	Receiver Figure 1. Below 30MHz	
	Antenna Tower Antenna Tower Jam Jam Jam Jam Jam Jam Jam Jam	wer
Test Re		
Figure 2. 30M	Hz to 1GHz       Figure 3. Above 1 GHz         a. 1) Below 1G: The EUT was placed on the top of a rotating ta meters above the ground at a 3 meter semi-anechoic cambe table was rotated 360 degrees to determine the position of th highest radiation.         2) Above 1G: The EUT was placed on the top of a rotating ta meters above the ground at a 3 meter semi-anechoic cambe table was rotated 360 degrees to determine the position of the highest radiation.         2) Above 1G: The EUT was placed on the top of a rotating ta meters above the ground at a 3 meter semi-anechoic cambe table was rotated 360 degrees to determine the position of the table was rotated 360 degrees to determine the position of the table was rotated 360 degrees to determine the position of the table was rotated 360 degrees to determine the position of the table was rotated 360 degrees to determine the position of the table was rotated 360 degrees to determine the position of the table was rotated 360 degrees to determine the position of the table was rotated 360 degrees to determine the position of the table was rotated 360 degrees to determine the position of the table was rotated 360 degrees to determine the position of the table was rotated 360 degrees to determine the position of the table was rotated 360 degrees to determine the position of the table was rotated 360 degrees to determine the position of the table was rotated 360 degrees to determine table was rotated 360 degrees table was rotated 360 degr	r. The ne Ible 1.5 r. The
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Test Results:	Pass
Test Mode:	i. Repeat above procedures until all frequencies measured was complete.     Transmitting mode with modulation
	<ul> <li>g. Test the EUT in the lowest channel, the middle channel and the highest channel</li> <li>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.</li> </ul>
ŝ	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 re-tested one by one using peak, quasi- peak or average method as specified and then reported in a data sheet.
	<ul> <li>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 of 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.</li> <li>e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> </ul>
Ś	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.
	<ul> <li>Note: For the radiated emission test above 1GHz:</li> <li>Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.</li> <li>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.</li> </ul>

















### Test Data:

For the all emission out-of-band emission that complies with both the peak and average limits of § 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz maximum emission limit. Refer to test item"Unwanted Emissions in the Restricted Bands (Radiated Emission)" test result.

### U-NII-3

Mode:	Transmitting	Channel:	Low	
Remark:				

	Horizontai												
No.	Frequency Reading Correct		Result Limit N		Margin	Height	Degree	Remark					
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)					
1	11064.000	30.37	16.62	46.99	68.20	-21.21	120	360	peak				
2	15977.000	29.48	23.58	53.06	68.20	-15.14	200	151	peak				

Vertical										
8	No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
		(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
	1	11710.000	29.08	17.13	46.21	68.20	-21.99	100	70	peak
	2	14821.000	30.38	22.87	53.25	68.20	-14.95	147	360	peak

	Mode:	Transmitt	ing		Channel:	Mid			
	Remark:			200					
(D)	Horizontal							6	(D)
No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	11251.000	29.51	16.91	46.42	68.20	-21.78	200	331	peak
2	15977.000	29.54	23.58	53.12	68.20	-15.08	200	122	peak

_	vertical									
	No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
1		(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
Ś	1	11200.000	29.72	16.85	46.57	68.20	-21.63	100	331	peak
	2	16079.000	29.52	23.66	53.18	68.20	-15.02	199	360	peak

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Mode:	Transmitting	Channel:	High	
Remark:				

	Horizontal										
No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark		
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)			
4	11574.000	29.08	17.26	46.34	68.20	-21.86	200	153	peak		
2	16980.000	27.31	25.61	52.92	68.20	-15.28	100	155	peak		

...

			vertical						
No.	Frequency	Reading	Correct	Result	Limit	Margin	Height	Degree	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	(cm)	(deg.)	
1	12118.000	29.32	17.38	46.70	68.20	-21.50	100	317	peak
2	16555.000	29.70	24.21	53.91	68.20	-14.29	200	0	peak

rtiaal

























## **APPENDIX 1 PHOTOGRAPHS OF TEST SETUP**

Refer to Report No. EED39N80209401 for test setup photos.

## **APPENDIX 2 PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS**

Refer to Report No. EED39N80209401 for EUT external and internal photos.

The testing data and results in this report are just for scientific research, education, internal quality control and product development etc.

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

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