

Report No. :EED32L00017402 Page 1 of 50

TEST REPORT

Product : Open Frame Trade mark : OUTFORM

UIO0421B-C02,UIO0418X-XYY,

UIO0424X-XYY, UIO0421X-XYY, The 1st

Model/Type reference X is "A" or "B" represents the agent or

the client; The 2nd X is A-Z represents the color; YY is client number from "01"

to "90"

Serial Number : N/A

Report Number : EED32L00017402

FCC ID : 2AO9X-UIO0421BC02

Date of Issue : May 14, 2019

Test Standards : 47 CFR Part 15Subpart C

Test result : PASS

Prepared for:

Outform Science and Technology Ltd.
No. A103 Medical Appliance and Industry Garden, #1019, Nanhai Road.
Nanshan district ,Shenzhen 518035 China

Prepared by:

Centre Testing International Group Co., Ltd. Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China

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Date: May 14, 2019

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Name Xm

Kevin yang

Check No.:3096381924









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2 Version

Version No.	Date	(6)	Description	9
00	May 14, 2019		Original	
	*	A.S.	793	/3
	(1)	(²)		













































































3 Test Summary

		7 476	
Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15Subpart C Section 15.203/15.247 (c)	ANSI C63.10-2013	PASS
AC Power Line Conducted Emission	47 CFR Part 15Subpart C Section 15.207	ANSI C63.10-2013	PASS
Conducted Peak Output Power	47 CFR Part 15Subpart C Section 15.247 (b)(3)	ANSI C63.10-2013	PASS
6dB Occupied Bandwidth	47 CFR Part 15Subpart C Section 15.247 (a)(2)	ANSI C63.10-2013	PASS
Power Spectral Density	47 CFR Part 15Subpart C Section 15.247 (e)	ANSI C63.10-2013	PASS
Band-edge for RF Conducted Emissions	47 CFR Part 15Subpart C Section 15.247(d)	ANSI C63.10-2013	PASS
RF Conducted Spurious Emissions	47 CFR Part 15Subpart C Section 15.247(d)	ANSI C63.10-2013	PASS
Radiated Spurious Emissions	47 CFR Part 15Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15Subpart C Section 15.205/15.209	ANSI C63.10-2013	PASS

Remark:

Test according to ANSI C63.4-2014 & ANSI C63.10-2013.

The tested sample(s) and the sample information are provided by the client.

Model No.: UIO0421B-C02,UIO0418X-XYY, UIO0424X-XYY, UIO0421X-XYY, The 1st X is "A" or "B" represents the agent or the client; The 2nd X is A-Z represents the color; YY is client number from "01" to "90" Only the model UIO0418X-XYY was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being the color and model names due to difference agent and marketing pruposes.





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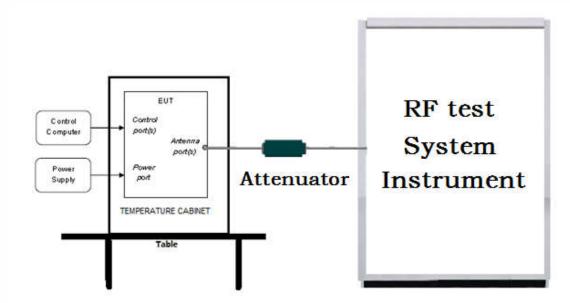


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5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

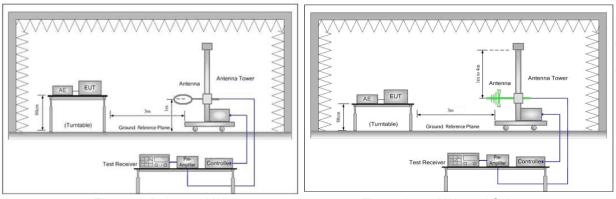


Figure 1. Below 30MHz

Figure 2. 30MHz to 1GHz

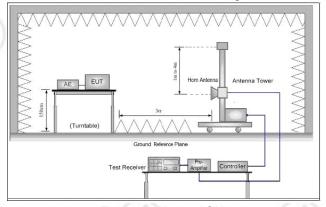
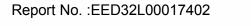


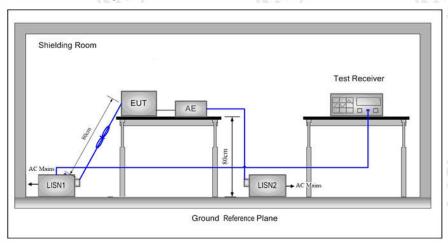
Figure 3. Above 1GHz







5.1.3 For Conducted Emissions test setup **Conducted Emissions setup**



5.2 Test Environment

Operating Environment:		
Temperature:	25.0 °C	
Humidity:	53 % RH	
Atmospheric Pressure:	1010mbar	

5.3 Test Condition

Test channel:

	Test Mode	Tx/Rx	RF Channel				
١		TX/KX	Low(L)	Middle(M)	High(H)		
l	GFSK	0.4001411 0.400.1411	Channel 1	Channel 20	Channel 40		
		2402MHz ~2480 MHz	2402MHz	2440MHz	2480MHz		
	Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.					
			1.00				



























General Information

6.1 Client Information

Applicant:	Outform Science and Technology Ltd.
Address of Applicant:	No. A103 Medical Appliance and Industry Garden, #1019, Nanhai Road. Nanshan district ,Shenzhen 518035 China
Manufacturer:	Outform Science and Technology Ltd.
Address of Manufacturer:	No. A103 Medical Appliance and Industry Garden, #1019, Nanhai Road. Nanshan district ,Shenzhen 518035 China
Factory:	Outform Science and Technology Ltd.
Address of Factory:	No. A103 Medical Appliance and Industry Garden, #1019, Nanhai Road. Nanshan district ,Shenzhen 518035 China

6.2 General Description of EUT

Product Name:	Open Frame					
Model No.(EUT):	X is "A" or '	D2,UIO0418X-XYY, UIO0424X-XYY, UIO6424X-XYY, UIO64X-XYY, UIO6424X-XYY, UIO6424X-XXYY, UIO64X-XXYXXXXXXXXXXXXXXXXXXX	t; The 2nd X is A-Z			
Test Model No.:	UIO0421B-C0)2	0			
Trade mark:	OUTFORM					
EUT Supports Radios application:		BT: 4.0 BT single mode, 2402MHz to 2480MHz WiFi: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz				
Power Supply:	Adapter	Model: EA10681U-120 Input: 100-240VAC~2.0A, 50~60Hz Output: 12V6A				
Sample Received Date:	Jan. 24, 2019					
Sample tested Date:	May 08, 2019	to May 09, 2019				

6.3 Product Specification subjective to this standard

Operation Frequency:	2402MHz~2480MHz	
Bluetooth Version:	4.0	
Modulation Technique:	DSSS	(25)
Modulation Type:	GFSK	
Number of Channel:	40	
Antenna Type and Gain:	Type: omnidirectional antenna Gain: 5dBi	
Test Voltage:	AC 120V,60Hz	(0)

























Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2402MHz	11	2422MHz	21	2442MHz	31	2462MHz
2	2404MHz	12	2424MHz	22	2444MHz	32	2464MHz
3	2406MHz	13	2426MHz	23	2446MHz	33	2466MHz
4	2408MHz	14	2428MHz	24	2448MHz	34	2468MHz
5	2410MHz	15	2430MHz	25	2450MHz	35	2470MHz
6	2412MHz	16	2432MHz	26	2452MHz	36	2472MHz
7	2414MHz	17	2434MHz	27	2454MHz	37	2474MHz
8	2416MHz	18	2436MHz	28	2456MHz	38	2476MHz
9	2418MHz	19	2438MHz	29	2458MHz	39	2478MHz
10	2420MHz	20	2440MHz	30	2460MHz	40	2480MHz

6.4 Description of Support Units

The EUT has been tested independently

6.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted. FCC Designation No.: CN1164

6.6 Deviation from Standards

None.

6.7 Abnormalities from Standard Conditions

None.

6.8 Other Information Requested by the Customer

None.























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

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9 x 10 ⁻⁸
2	DE nouver conducted	0.46dB (30MHz-1GHz)
2	RF power, conducted	0.55dB (1GHz-18GHz)
2	Dedicted Courieus emission test	4.3dB (30MHz-1GHz)
3	Radiated Spurious emission test	4.5dB (1GHz-12.75GHz)
4	Conduction on insign	3.5dB (9kHz to 150kHz)
4	Conduction emission	3.1dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	3.8%
7	DC power voltages	0.026%



















































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7 Equipment List

		RF test	system		
Equipment	Manufacturer	Model No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Signal Generator	Keysight	E8257D	MY53401106	03-01-2019	02-28-2020
Spectrum Analyzer	Keysight	N9010A	MY54510339	03-01-2019	02-28-2020
Signal Generator	Keysight	N5182B	MY53051549	03-01-2019	02-28-2020
High-pass filter	Sinoscite	FL3CX03WG1 8NM12-0398-0 02		01-09-2019	01-08-2020
High-pass filter	MICRO-TRO NICS	SPA-F-63029-4		01-09-2019	01-08-2020
DC Power	Keysight	E3642A	MY54426035	03-01-2019	02-28-2020
PC-1	Lenovo	R4960d	(62.7)	03-01-2019	02-28-2020
BT&WI-FI Automatic control	R&S	OSP120	101374	03-01-2019	02-28-2020
RF control unit	JS Tonscend	JS0806-2	15860006	03-01-2019	02-28-2020
RF control unit	JS Tonscend	JS0806-1	15860004	03-01-2019	02-28-2020
RF control unit	JS Tonscend	JS0806-4	158060007	03-01-2019	02-28-2020
BT&WI-FI Automatic test software	JS Tonscend	JS1120-2		03-01-2019	02-28-2020
Temperature/ Humidity Indicator	biaozhi	HM10	1804186	10-12-2018	10-11-2019











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	(Conducted dist	urbance Tes	st				
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)			
Receiver	R&S	ESCI	100435	05-25-2018	05-24-2019			
Temperature/ Humidity Indicator	Defu	TH128		07-02-2018	07-01-2019			
Communication test set	Δαilent I		GB47050 534	03-01-2019	02-28-2020			
Communication test set	R&S	CMW500	102898	01-18-2019	01-17-2020			
LISN	R&S	ENV216	100098	05-10-2018	05-10-2019			
LISN	schwarzbeck	NNLK8121	8121-529	05-10-2018	05-10-2019			
Voltage Probe	R&S	ESH2-Z3 0299.7810.5 6	100042	06-13-2017	06-11-2020			
Current Probe	R&S	EZ-17 816.2063.03	100106	05-30-2018	05-29-2019			
ISN	TESEQ	ISN T800	30297	01-06-2019	01-15-2020			

































































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	SIVI S	Semi/full-anecho		Cal data	Cal Dua data	
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)	
3M Chamber & Accessory Equipment	TDK	SAC-3		06-04-2016	06-03-2019	
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-401	12-21-2018	12-20-2019	
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-618	07-30-2018	07-29-2019	
Microwave Preamplifier	Agilent	8449B	3008A024 25	08-21-2018	08-20-2019	
Microwave Preamplifier	Tonscend	EMC051845 SE	980380	01-16-2019	01-15-2020	
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-18 69	04-25-2018	04-23-2021	
Horn Antenna	ETS-LINDGRE N	3117	00057410	06-05-2018	06-03-2021	
Double ridge horn antenna	A.H.SYSTEMS	SAS-574	374	06-05-2018	06-04-2021	
Pre-amplifier	A.H.SYSTEMS	PAP-1840-60	6041.604 1	08-08-2018	08-07-2019	
Loop Antenna	ETS	6502	00071730	06-22-2017	06-21-2019	
Spectrum Analyzer	R&S	FSP40	100416	05-11-2018	05-10-2019	
Receiver	R&S	ESCI	100435	05-25-2018	05-24-2019	
Receiver	R&S	ESCI7	100938-0 03	11-23-2018	11-22-2019	
Multi device Controller	maturo	NCD/070/107 11112	-(6)	01-09-2019	01-08-2020	
LISN	schwarzbeck	NNBM8125	81251547	05-11-2018	05-10-2019	
LISN	schwarzbeck	NNBM8125	81251548	05-11-2018	05-10-2019	
Signal Generator	Agilent	E4438C	MY45095 744	03-01-2019	02-28-2020	
Signal Generator	Keysight	E8257D	MY53401 106	03-01-2019	02-28-2020	
Temperature/ Humidity Indicator	Shanghai qixiang	HM10	1804298	10-12-2018	10-11-2019	
Communication test set	Agilent	E5515C	GB47050 534	03-01-2019	02-28-2020	
Cable line	Fulai(7M)	SF106	5219/6A	01-09-2019	01-08-2020	
Cable line	Fulai(6M)	SF106	5220/6A	01-09-2019	01-08-2020	
Cable line	Fulai(3M)	SF106	5216/6A	01-09-2019	01-08-2020	
Cable line Communication test	Fulai(3M)	SF106	5217/6A	01-09-2019	01-08-2020	
set	R&S	CMW500	104466	01-18-2019	01-17-2020	
High-pass filter	Sinoscite	FL3CX03WG 18NM12-039 8-002		01-09-2019	01-08-2020	
High-pass filter	MICRO- TRONICS	SPA-F-63029 -4	/	01-09-2019	01-08-2020	
band rejection filter	Sinoscite	FL5CX01CA0 9CL12-0395- 001		01-09-2019	01-08-2020	
band rejection filter	Sinoscite	FL5CX01CA0 8CL12-0393- 001	-63	01-09-2019	01-08-2020	
band rejection filter	Sinoscite	FL5CX02CA0 4CL12-0396- 002		01-09-2019	01-08-2020	
band rejection filter	Sinoscite	FL5CX02CA0 3CL12-0394- 001		01-09-2019	01-08-2020	







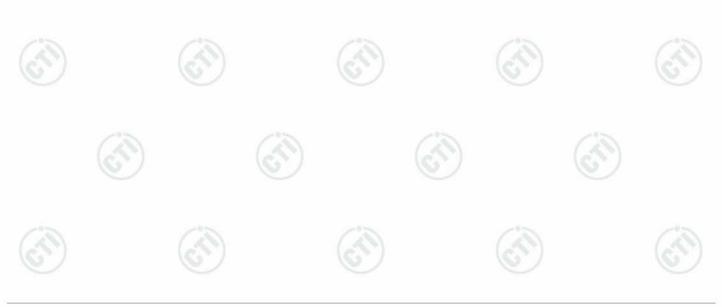
8 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	FCC Part15C	Subpart C-Intentional Radiators
2	ANSI C63.10-2013	American National Standard for Testing Unlicesed Wireless Devices

Test Results List:

Test Requirement	Test method	Test item	Verdict	Note	
Part15C Section 15.247 (a)(2)	ANSI C63.10	6dB Occupied Bandwidth	PASS	Appendix A)	
Part15C Section 15.247 (b)(3)	ANSI C63.10	Conducted Peak Output Power	PASS	Appendix B)	
Part15C Section 15.247(d)	ANSI C63.10	Band-edge for RF Conducted Emissions	PASS	Appendix C)	
Part15C Section 15.247(d)	ANSI C63.10	RF Conducted Spurious Emissions	PASS	Appendix D)	
Part15C Section 15.247 (e)	ANSI C63.10	Power Spectral Density	PASS	Appendix E	
Part15C Section 15.203/15.247 (c)	ANSI C63.10	Antenna Requirement	PASS	Appendix F)	
Part15C Section 15.207	ANSI C63.10	AC Power Line Conducted Emission	PASS	Appendix G)	
Part15C Section 15.205/15.209	ANSI C63.10	Restricted bands around fundamental frequency (Radiated Emission)	PASS	Appendix H)	
Part15C Section 15.205/15.209	ANSI C63.10	Radiated Spurious Emissions	PASS	Appendix I)	







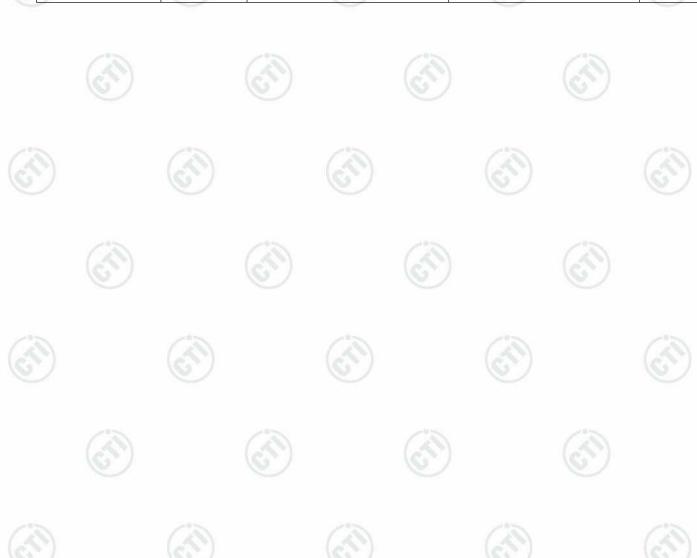




Appendix A): 6dB Occupied Bandwidth

Test Result

		the second secon		
Mode	Channel	6dB Bandwidth [MHz]	99% OBW[MHz]	Verdict
BLE	LCH	0.7192	1.0788	PASS
BLE	МСН	0.7222	1.0776	PASS
BLE	нсн	0.7190	1.0766	PASS































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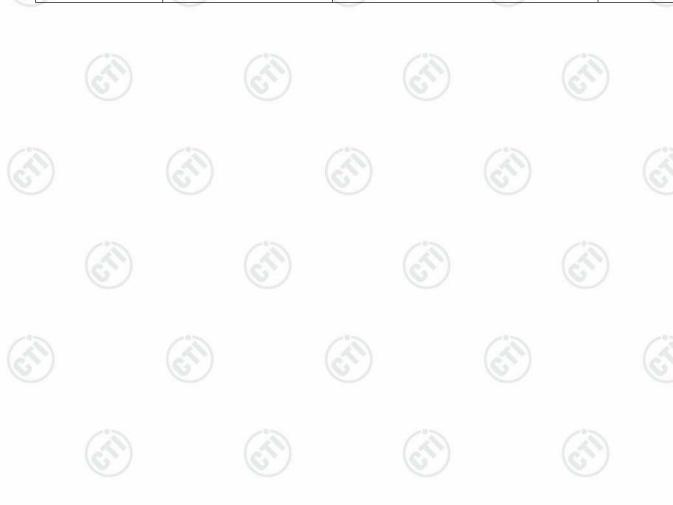




Appendix B): Conducted Peak Output Power

Test Result

Mode	Channel	Conduct Peak Power[dBm]	Verdict
BLE	LCH	-0.495	PASS
BLE	MCH	-0.051	PASS
BLE	HCH	0.162	PASS









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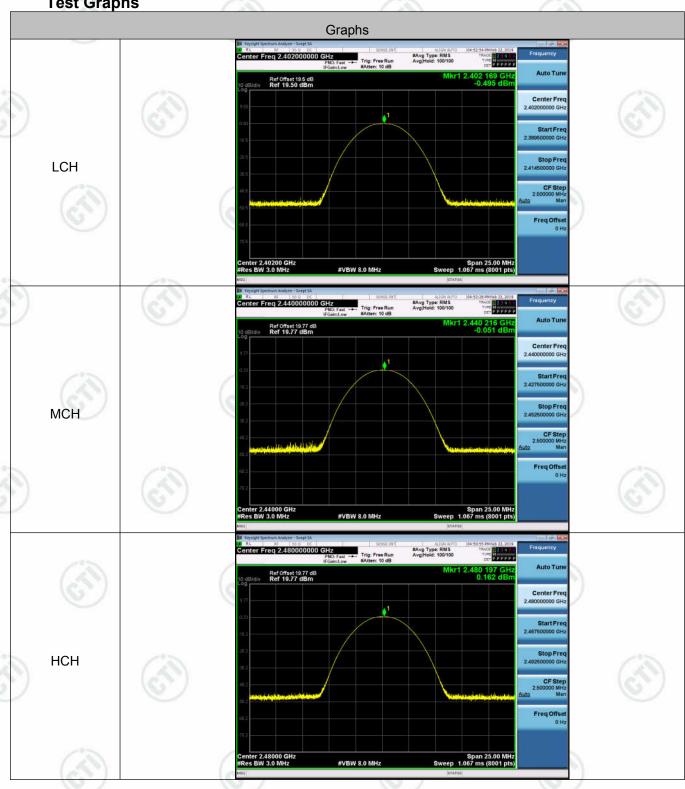








Test Graphs













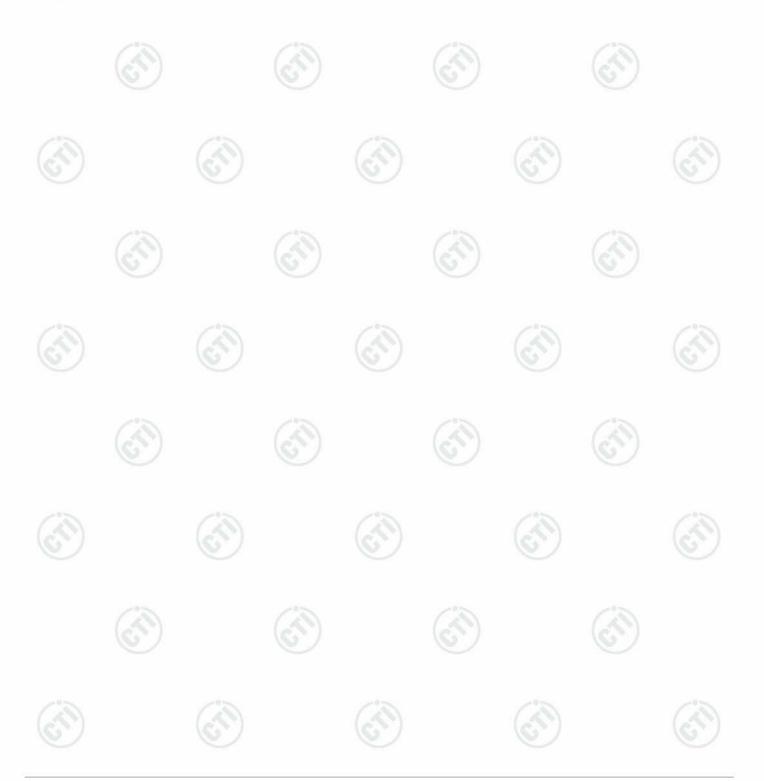


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Appendix C): Band-edge for RF Conducted Emissions

Result Table

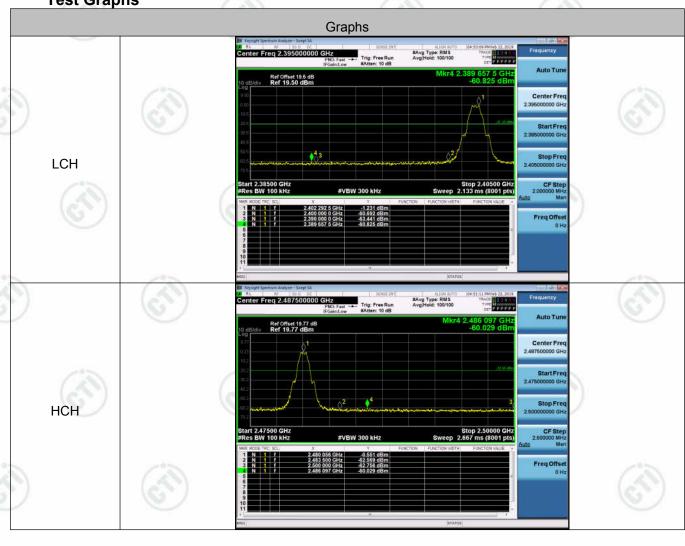
	Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict	
1	BLE	LCH	-1.231	-60.825	-21.23	PASS	
	BLE	HCH	-0.551	-60.029	-20.55	PASS	





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Test Graphs







(4)



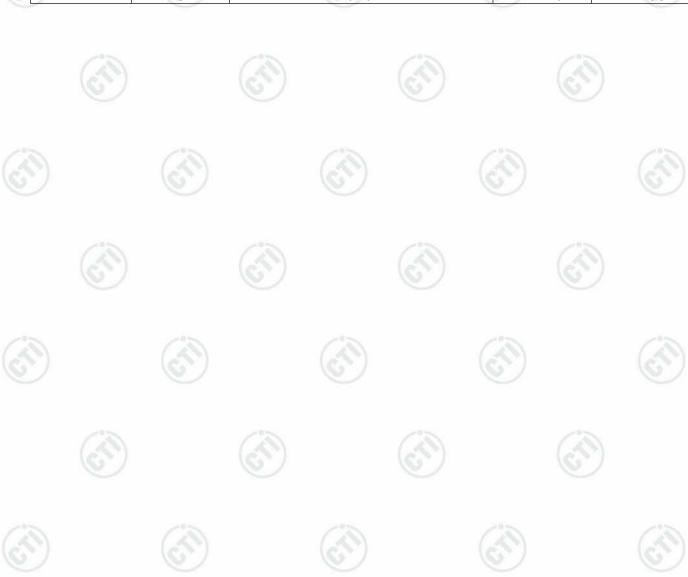


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Appendix D): RF Conducted Spurious Emissions

Result Table

The first of the f					
Mode	Channel	Channel Pref [dBm] Puw[dBm]			
BLE	LCH	-1.442	<limit< td=""><td>PASS</td></limit<>	PASS	
BLE	MCH	-1.003	<limit< td=""><td>PASS</td></limit<>	PASS	
BLE	нсн	-0.794	<limit< td=""><td>PASS</td></limit<>	PASS	



















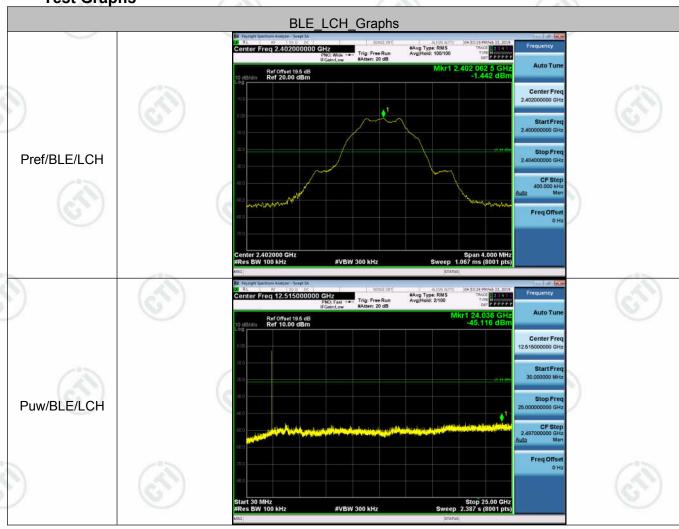


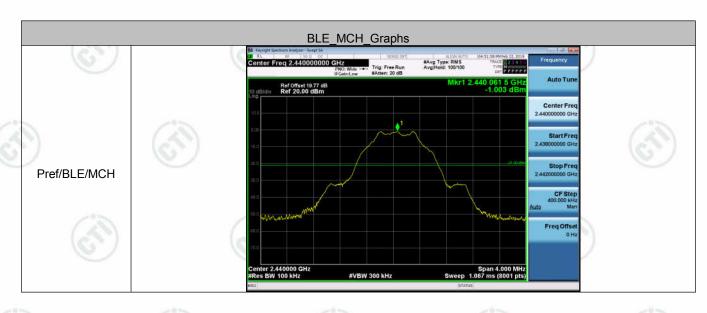




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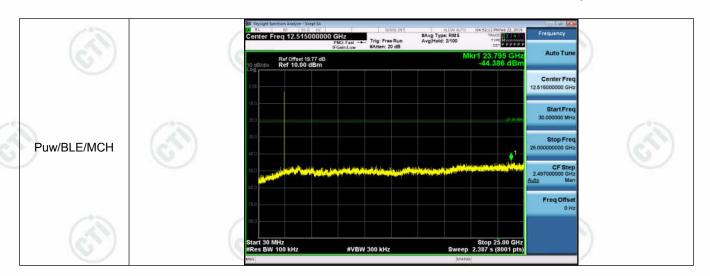


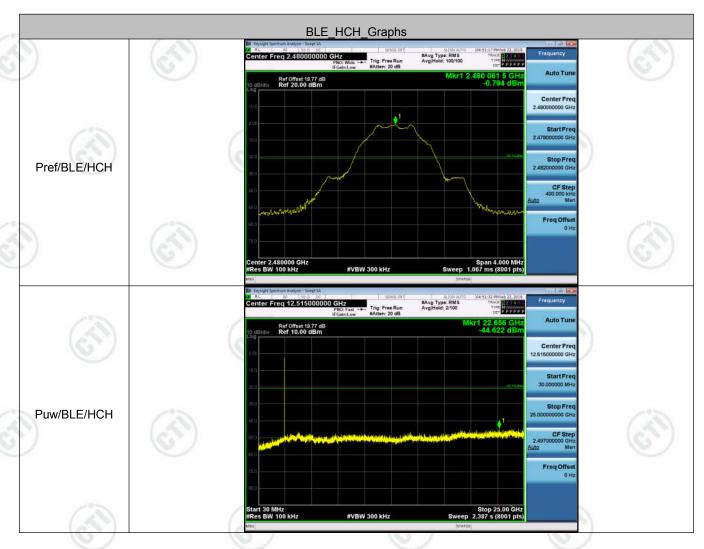


























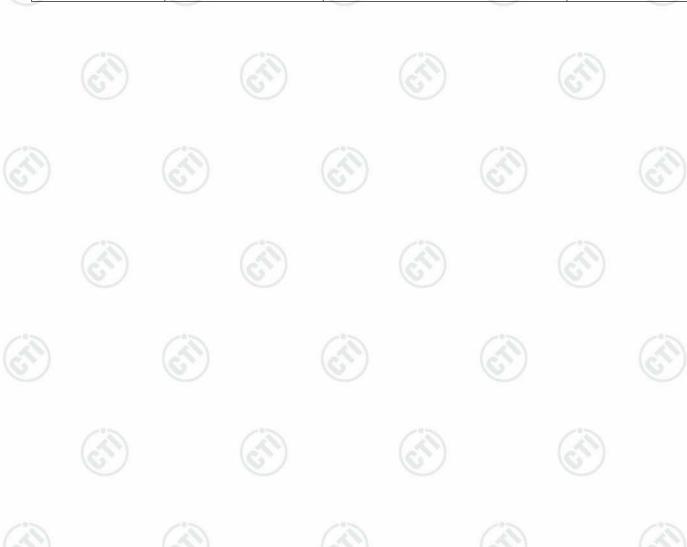




Appendix E): Power Spectral Density

Result Table

1,100			
Mode	Channel	PSD [dBm]	Verdict
BLE	LCH	-14.723	PASS
BLE	MCH	-14.358	PASS
BLE	НСН	-14.053	PASS





















Test Graphs



















Appendix F): Antenna Requirement

15.203 requirement:

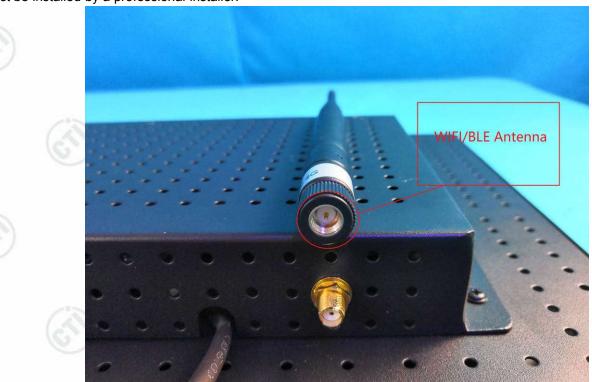
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:

WIFI and BLE use the same external omnidirectional antenna with 5 dBi gain and manufacturer declare the antenna must be installed by a professional installer.













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Appendix G): AC Power Line Conducted Emission

Test Procedure:	Test frequency range :150KHz		0							
	1)The mains terminal disturbance voltage test was conducted in a shielded room.									
	Stabilization Network) which was bonded to the g for the unit being measure	2) The EUT was connected to AC power source through a LISN 1 (Line Impedant Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN which was bonded to the ground reference plane in the same way as the LISN for the unit being 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								
Cil	3)The tabletop EUT was place reference plane. And for flo horizontal ground reference	or-standing arrangen								
	4) The test was performed win EUT shall be 0.4 m from the reference plane was bonded 1 was placed 0.8 m from the ground reference plane for plane. This distance was be All other units of the EUT at LISN 2.	e vertical ground refeed to the horizontal grathe boundary of the our LISNs mounted on etween the closest possible.	rence plane. The veround reference plar unit under test and note to of the ground to of the LISN 1 and to the LISN 1 and the L	rtical ground ne. The LISN bonded to a nd reference and the EUT.						
(chi)	5) In order to find the maximur of the interface cables a conducted measurement.									
Limit:										
	Frequency range (MHz)	Limit (d	dBµV)							
	Trequency range (wiriz)	Quasi-peak	Average	-0-						
	0.15-0.5	66 to 56*	56 to 46*	(4)						
	0.5-5	56	46	(0)						
	5-30	60	50							
	MHz to 0.50 MHz.	The limit decreases linearly with the logarithm of the frequency in the range 0.15								

Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.





















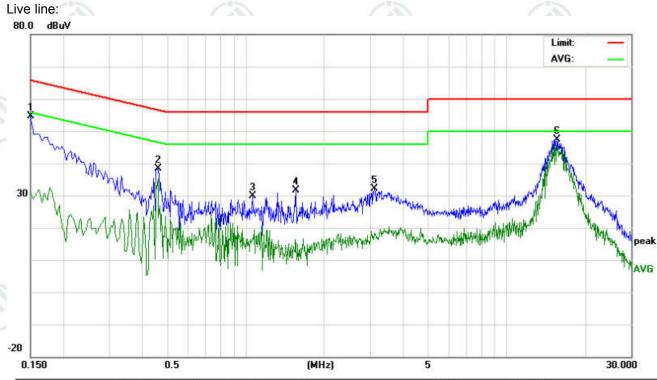








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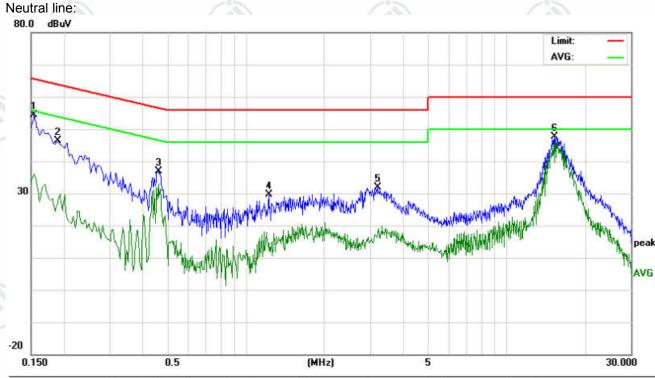
No.	No.	Freq.	Reading_Level (dBuV)		Correct Factor	N	Measurem (dBuV)		nt Limit (dBuV)			Margin (dB)		
	MHz	Peak	QP	AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG	P/F	Comment
1	0.1500	44.84	40.12	20.90	9.91	54.75	50.03	30.81	65.99	55.99	-15.96	-25.18	Р	
2	0.4620	28.60	25.40	25.31	9.89	38.49	35.29	35.20	56.66	46.66	-21.37	-11.46	Р	
3	1.0700	20.08	17.46	7.20	9.80	29.88	27.26	17.00	56.00	46.00	-28.74	-29.00	Р	
4	1.5620	21.89	17.69	5.16	9.76	31.65	27.45	14.92	56.00	46.00	-28.55	-31.08	P	
5	3.1180	22.34	18.78	8.57	9.72	32.06	28.50	18.29	56.00	46.00	-27.50	-27.71	Р	
6	15.5660	37.45	34.20	35.45	9.97	47.42	44.17	45.42	60.00	50.00	-15.83	-4.58	Р	











No.	Freq.		ding_Le	vel	Correct Factor	N	(dBuV)		Lin (dB	nit uV)		rgin dB)		
3	MHz	Peak	QP	AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG	P/F	Comment
1	0.1539	44.38	40.58	26.33	9.91	54.29	50.49	36.24	65.78	55.78	-15.29	-19.54	Р	
2	0.1900	36.49	33.52	17.26	9.91	46.40	43.43	27.17	64.03	54.03	-20.60	-26.86	P	
3	0.4660	27.06	24.01	18.86	9.89	36.95	33.90	28.75	56.58	46.58	-22.68	-17.83	Р	
4	1.2260	19.82	16.47	2.56	9.79	29.61	26.26	12.35	56.00	46.00	-29.74	-33.65	P	
5	3.2180	22.08	18.50	7.81	9.72	31.80	28.22	17.53	56.00	46.00	-27.78	-28.47	Р	
6	15.3459	37.69	33.96	35.89	9.98	47.67	43.94	45.87	60.00	50.00	-16.06	-4.13	Р	

Notes:

- 1. The following Quasi-Peak and Average measurements were performed on the EUT:
- 2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.







Appendix H): Restricted bands around fundamental frequency (Radiated)

(Naulateu)		100		4			
Receiver Setup:		Frequency	Detector	RBW	VBW	Remark	
	3	0MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak	
		Nh 4011-	Peak	1MHz	3MHz	Peak	0
		Above 1GHz	Peak	1MHz	10Hz	Average	(63
Test Procedure:	Below 1	IGHz test proced	ure as helow:	6			16
	a. The at a dete b. The was c. The dete pola d. For the was	EUT was placed a meter semi-ane ermine the position EUT was set 3 meter mounted on the total antenna height is ermine the maximularizations of the an each suspected elantenna was tuned turned from 0 deget test-receiver systems.	on the top of a rochoic camber. To of the highest rates away from op of a variable-lyaried from one um value of the fintenna are set to mission, the EUT of to heights from prees to 360 deg	he table wa adiation. the interfer neight anter meter to for feld strength make the n Γ was arran and 1 meter to rees to find	ence-receinna tower. Four meters Four Both hor Four measurement Four ged to its Four Meters Four Meter	wing antenna above the graizontal and vent. worst case are and the rotate num reading.	to a, wh ounce ertice nd the able
	f. Place freq band	dwidth with Maxim ce a marker at the uency to show cor ds. Save the spect owest and highest	end of the restrice mpliance. Also materials rum analyzer pla	neasure any	emissions	s in the restri	
	Ban f. Place freq ban for le Above for le 18G h. Te i. The	ce a marker at the uency to show cords. Save the spectowest and highest and highest arent between aboutly Anechoic Chart and the distance is set the EUT in the laradiation measurensmitting mode, ar	end of the restrict mpliance. Also make the manalyzer place channel were as below: we is the test site maker change forms 1 meter and table owest channel, ements are performed found the X as	e, change fin table 0.8 le is 1.5 methors the Highestormed in X, xis positioni	remissions for each por from Semi- meter to 1 ter). the channel Y, Z axis p ng which i	Anechoic Ch .5 meter(Abo positioning for	dulat namb ove r
Limit:	Ban f. Place freq ban for le Above for le 18G h. Te i. The	ce a marker at the uency to show cords. Save the spectowest and highest and highest are the set proced erent between aboutly Anechoic Chart and the distance is state EUT in the laradiation measure as mitting mode, are the set above procedures.	end of the restrict mpliance. Also make trum analyzer place channel were as below: eve is the test site mber change form at 1 meter and table owest channel, ements are performed found the X accures until all frequence.	e, change from table 0.8 le is 1.5 me the Highest ormed in X, xis positioniuencies me	remissions for each por rom Semi- meter to 1 ter). t channel Y, Z axis p ng which i	Anechoic Ch .5 meter(Abo positioning for	dulat namb ove r
Limit:	Ban f. Place freq bane for le Above for le 18G h Te i. The Tran j. Rep	ce a marker at the uency to show cords. Save the spectowest and highest and highest arent between aboutly Anechoic Chart and the distance is set the EUT in the laradiation measurensmitting mode, ar	end of the restrict mpliance. Also make the manalyzer place channel were as below: we is the test site maker change forms 1 meter and table owest channel, ements are performed found the X as	e, change from table 0.8 le is 1.5 mer the Highest from din X, xis positioni uencies mer the @3m)	rom Semi- meter to 1 ter). channel Y, Z axis p ng which i	Anechoic Ch.5 meter(Abe	dulat namb ove r
Limit:	Ban f. Place freq band for le Above 7 g. Differ to fu 18G h Te i. The Tran j. Rep	ce a marker at the uency to show cords. Save the spectowest and highest and highest are test procedully Anechoic Charch the distance is state EUT in the laradiation measure as mitting mode, are test above procedured.	end of the restrict mpliance. Also more trum analyzer place channel were as below: the test site of the test	e, change firm table 0.8 le is 1.5 mer the Highest ormed in X, xis positioni uencies mer the Market 10 m @3m)	rom Semi- meter to 1 ter). t channel Y, Z axis p ng which i easured wa	Anechoic Ch. 5 meter (About 15 meter (About 15 meter) Anechoic Ch. 5 meter (About 15 meter) Anechoic Ch. 6 meter (About 15 meter) Anechoic Ch. 7 m	dulat namb ove r
Limit:	Ban f. Place freq bane for le Above ' g. Diffe to fu 18G h Te i. The Tran j. Rep	ce a marker at the uency to show cords. Save the spectowest and highest and highest are the test proced erent between aboully Anechoic Chart and the distance is set the EUT in the laradiation measure as mitting mode, are the test above procedured. Frequency OMHz-88MHz	end of the restrict mpliance. Also more trum analyzer place channel were as below: eve is the test site of the change form of the test and the control of the test are performed found the X as the change of the test are performed found the X as the change of the test are performed found the X as the change of the test are performed found the X as the test are the test are performed found the X as the test are the test	e, change from table 0.8 le is 1.5 mer the Highest from t	rom Semi- meter to 1 ter). channel Y, Z axis p ng which i easured wa Rei Quasi-pe	Anechoic Ch.5 meter(Aboositioning for tis worse cases complete.	dulat namb ove r
Limit:	Ban f. Place freq ban for le Above g. Diffe to fu 18G h Te i. The Tran j. Rep	ce a marker at the uency to show cords. Save the spectowest and highest and highest are the second and the second are the second and the second are the second and the second are the seco	end of the restrict mpliance. Also more trum analyzer place channel were as below: eve is the test site of the change form of a 1 meter and table owest channel, ements are performed found the X are until all frequency Limit (dBµV 40.43.443.445).	e, change firm table 0.8 le is 1.5 me the Highest ormed in X, xis positioni uencies me the Mark (2m @3m)	rom Semi- meter to 1 ter). channel Y, Z axis p ng which i easured wa Rei Quasi-pe Quasi-pe	Anechoic Ch. 5 meter (Above Stioning for tis worse cases complete. mark eak Value eak Value	dulat namb ove r
Limit:	Ban f. Place freq bane for le Above g. Diffe to fu 18G h Te i. The Trar j. Rep 3 88 21	ce a marker at the uency to show cords. Save the spectowest and highest and highest are the test proced erent between aboutly Anechoic Chards the distance is set the EUT in the laradiation measure as mitting mode, are the above procedured above procedured above procedured above procedured above and the test above procedured above procedured above and the test above procedured above	end of the restrict mpliance. Also make the manalyzer place channel were as below: I we as below: I we is the test site of the site of t	e, change from table 0.8 le is 1.5 mer the Highest ormed in X, xis positioni uencies mer the Market of the Market ormed of the Market of the Market ormed of the Market of	remissions for each portion Semi-meter to 1 ter). tehannel Y, Z axis pag which it easured was Remark Quasi-pe Quasi-pe Quasi-pe Quasi-pe Quasi-pe Quasi-pe	Anechoic Ch.5 meter(Aboositioning for tis worse cases complete.	dulat namb ove r



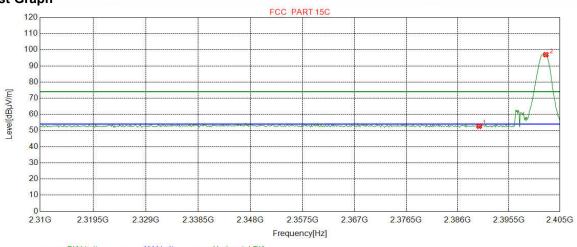


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Test plot as follows:

Mode:	BLE GFSK Transmitting	Channel:	2402
Remark:	PK		

Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	49.48	52.66	74.00	21.34	Pass	Horizontal
2	2402.3842	32.26	13.31	-42.43	93.79	96.93	74.00	-22.93	Pass	Horizontal

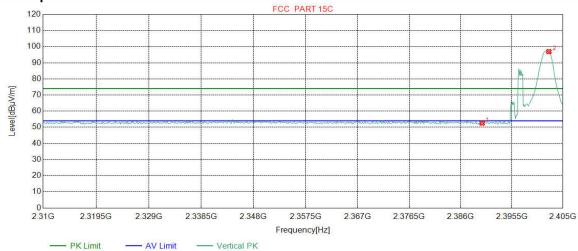
Mode: BLE GFSK Transmitting Channel: 2402

Remark: PK

Test Graph

♠ PK Detector

* AV Detector



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	49.39	52.57	74.00	21.43	Pass	Vertical
2	2402.3842	32.26	13.31	-42.43	93.79	96.93	74.00	-22.93	Pass	Vertical

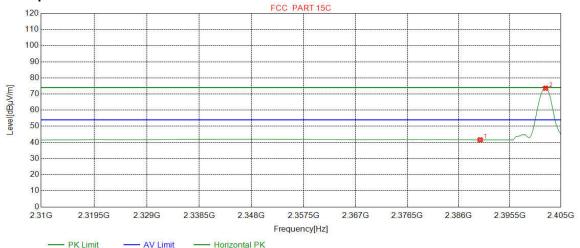






Mode:	BLE GFSK Transmitting	Channel:	2402
Remark:	AV		



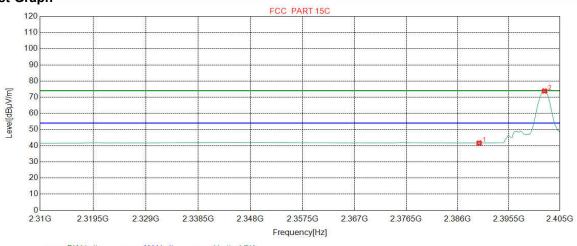


NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	38.42	41.60	54.00	12.40	Pass	Horizontal
2	2402.1464	32.26	13.31	-42.43	70.48	73.62	54.00	-19.62	Pass	Horizontal

Mode: BLE GFSK Transmitting Channel: 2402

Remark: AV

Test Graph



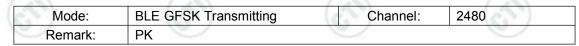
PK Limit
 AV Limit
 Vertical PK
 ★ PK Detector
 ★ AV Detector

NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2390.0000	32.25	13.37	-42.44	38.45	41.63	54.00	12.37	Pass	Vertical
2	2402.1464	32.26	13.31	-42.43	70.69	73.83	54.00	-19.83	Pass	Vertical

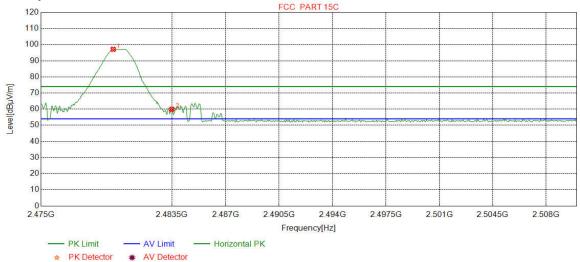




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Test Graph

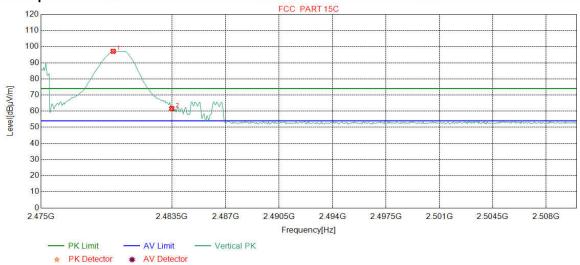


NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2479.6871	32.37	13.39	-42.39	93.73	97.10	74.00	-23.10	Pass	Horizontal
2	2483.5000	32.38	13.38	-42.40	56.57	59.93	74.00	14.07	Pass	Horizontal

Mode: BLE GFSK Transmitting Channel: 2480

Remark: PK

Test Graph



	NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
J	1	2479.6871	32.37	13.39	-42.39	93.73	97.10	74.00	-23.10	Pass	Vertical
(2	2483.5000	32.38	13.38	-42.40	58.22	61.58	74.00	12.42	Pass	Vertical



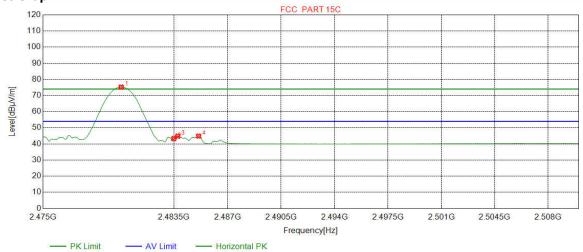


AV Detector

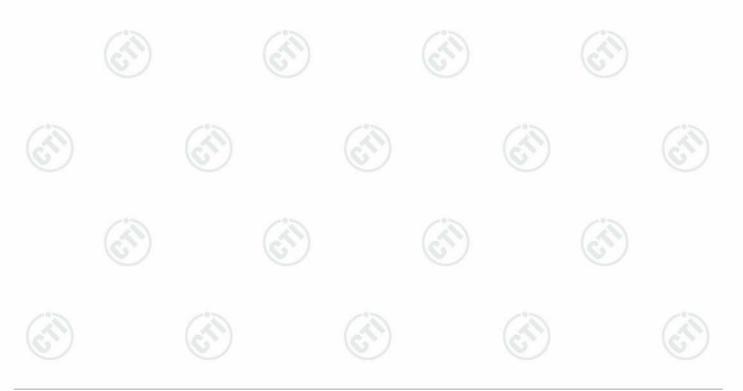


Mode:	BLE GFSK Transmitting	Channel:	2480
Remark:	AV		





Cable Pream Ant Margin Freq. Reading Level Limit gain NO Factor loss Result Polarity [MHz] $[dB\mu V]$ [dBµV/m] [dBµV/m] [dB] [dB] [dB] [dB] 2480.0814 71.90 75.26 1 32.37 13.39 -42.40 54.00 -21.26 **Pass** Horizontal 2483.5000 32.38 13.38 -42.40 39.93 43.29 54.00 10.71 2 **Pass** Horizontal 32.38 13.37 -42.40 54.00 **Pass** 3 2483.7610 41.42 44.77 9.23 Horizontal 4 2485.1189 32.38 13.37 -42.4041.48 44.83 54.00 9.17 **Pass** Horizontal

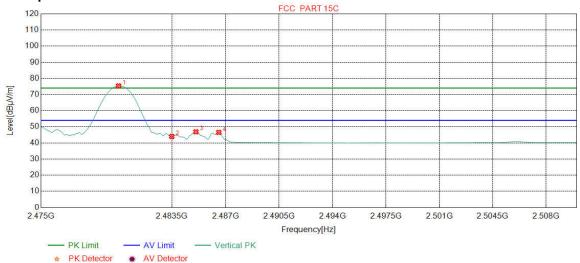




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Mode:	BLE GFSK Transmitting	Channel:	2480
Remark:	AV		

Test Graph



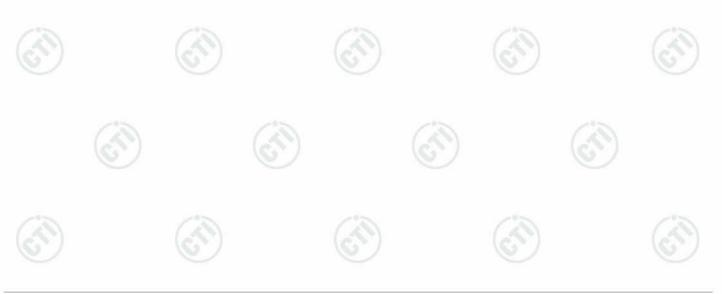
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	2480.0375	32.37	13.39	-42.39	71.98	75.35	54.00	-21.35	Pass	Vertical
2	2483.5000	32.38	13.38	-42.40	40.62	43.98	54.00	10.02	Pass	Vertical
3	2485.0751	32.38	13.37	-42.40	43.54	46.89	54.00	7.11	Pass	Vertical
4	2486.5645	32.38	13.36	-42.39	43.17	46.52	54.00	7.48	Pass	Vertical

Note:

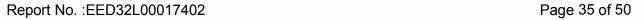
1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading -Correct Factor

Correct Factor = Preamplifier Factor - Antenna Factor - Cable Factor







Appendix I) Radiated Spurious Emissions

eak 10kHz 30kHz Peak
erage 10kHz 30kHz Average
si-peak 10kHz 30kHz Quasi-peak
eak 10kHz 30kHz Peak
erage 10kHz 30kHz Average
si-peak 10kHz 30kHz Quasi-peak
si-peak 120kHz 300kHz Quasi-peak
eak 1MHz 3MHz Peak
eak 1MHz 10Hz Average
si-po si-po eak

Test Procedure:

Below 1GHz test procedure as below:

- a. 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.
- b. The EUT was set 3 meters away from the interference-receiving antenna, whichwas 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 of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable 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 re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

- g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter).
- h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.

Repeat above procedures until all frequencies measured was complete.

j. Ropout above p	roocaarco artar all frequen	loice inicacarca wa	o oompicto.	•	1 40 % 1	
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dBµV/m)	Remark	Measurement distance (m)	
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300	
	0.490MHz-1.705MHz	24000/F(kHz)	-	(3)	30	
	1.705MHz-30MHz	30	-	(0,2)	30	Ċ
	30MHz-88MHz	100	40.0	Quasi-peak	3	1
	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	

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

Temperature: 22℃ Humidity: 51%



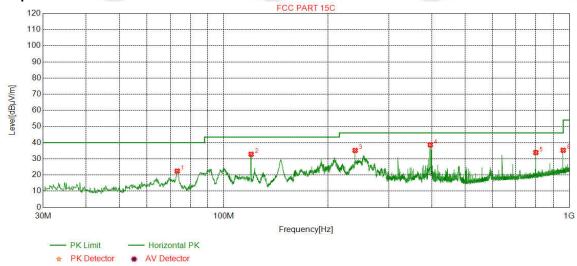
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Radiated Spurious Emissions test Data:

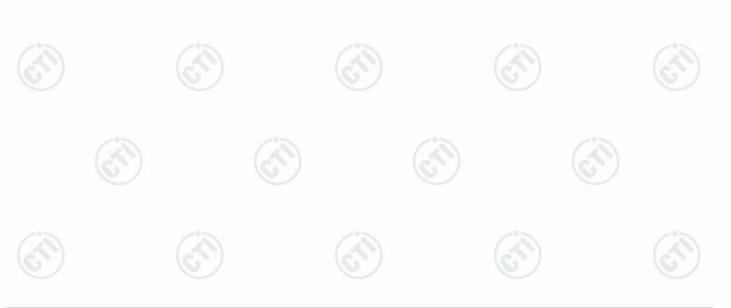
Radiated Emission below 1GHz

Mode:	BLE GFSK Transmitting	Channel:	2402
Remark:	QP		

Test Graph



Suspected List										
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Magin [dB]	Result	Polarity
1	73.3633	8.36	0.99	-32.06	45.13	22.42	40.00	17.58	Pass	Horizontal
2	120.0250	9.20	1.30	-32.07	54.42	32.85	43.50	10.65	Pass	Horizontal
3	240.0260	11.94	1.84	-31.90	53.31	35.19	46.00	10.81	Pass	Horizontal
4	395.9206	15.31	2.37	-31.78	52.78	38.68	46.00	7.32	Pass	Horizontal
5	800.0630	20.90	3.39	-32.03	41.65	33.91	46.00	12.09	Pass	Horizontal
6	960.0320	22.46	3.71	-31.09	40.23	35.31	54.00	18.69	Pass	Horizontal



 $Hot line: 400-6788-333 \\ www.cti-cert.com \\ E-mail: info@cti-cert.com \\ Complaint call: 0755-33681700 \\ Complaint E-mail: complaint@cti-cert.com \\ Complaint call: 0755-33681700 \\ Complaint E-mail: complaint Call: 0755-33681700 \\ Call: 0$



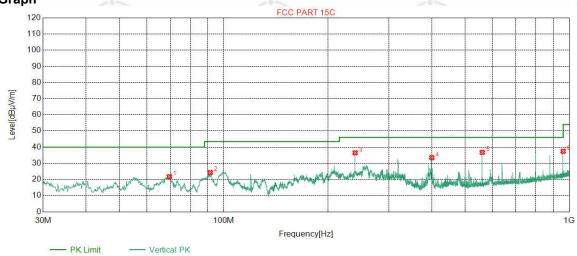


AV Detector

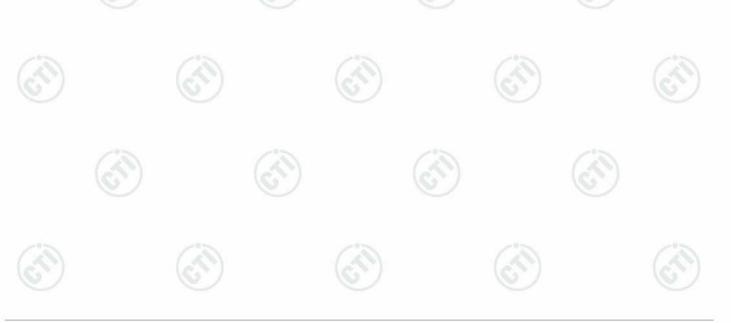
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Mode:	BLE GFSK Transmitting	Channel:	2402
Remark:	QP		





Sus	spected List									
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Magin [dB]	Result	Polarity
1	69.5800	9.11	0.95	-32.05	43.75	21.76	40.00	18.24	Pass	Vertical
2	91.4071	9.63	1.11	-32.10	45.69	24.33	43.50	19.17	Pass	Vertical
3	240.0260	11.94	1.84	-31.90	54.67	36.55	46.00	9.45	Pass	Vertical
4	399.9950	15.40	2.38	-31.76	47.48	33.50	46.00	12.50	Pass	Vertical
5	559.9640	18.20	2.82	-31.98	47.74	36.78	46.00	9.22	Pass	Vertical
6	960.0320	22.46	3.71	-31.09	42.39	37.47	54.00	16.53	Pass	Vertical



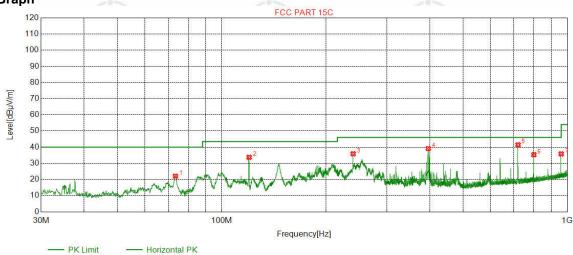




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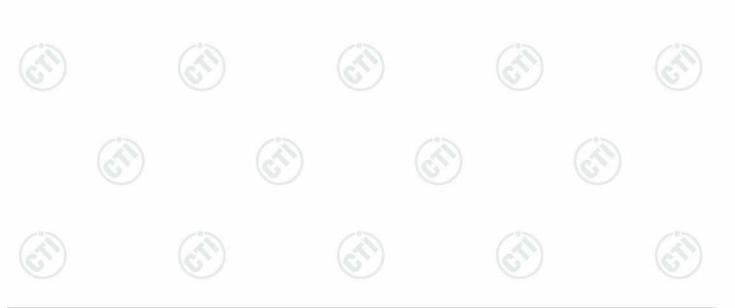
Mode:	BLE GFSK Transmitting	Channel:	2440
Remark:	QP		





AV Detector

Susp	ected List									
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Magin [dB]	Result	Polarity
1	73.4603	8.34	0.99	-32.05	44.78	22.06	40.00	17.94	Pass	Horizontal
2	120.0250	9.20	1.30	-32.07	55.33	33.76	43.50	9.74	Pass	Horizontal
3	240.0260	11.94	1.84	-31.90	54.04	35.92	46.00	10.08	Pass	Horizontal
4	396.0176	15.31	2.37	-31.78	53.22	39.12	46.00	6.88	Pass	Horizontal
5	720.0300	20.02	3.22	-32.07	50.30	41.47	46.00	4.53	Pass	Horizontal
6	800.0630	20.90	3.39	-32.03	43.09	35.35	46.00	10.65	Pass	Horizontal
7	960.0320	22.46	3.71	-31.09	40.78	35.86	54.00	18.14	Pass	Horizontal





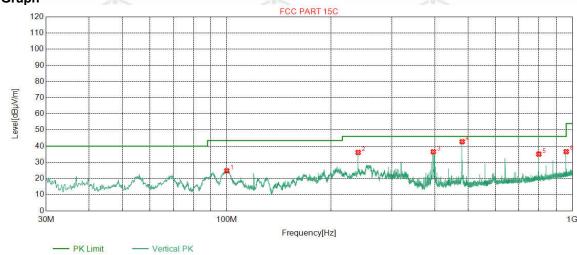


AV Detector

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Mode:	BLE GFSK Transmitting	Channel:	2440
Remark:	QP	·	





Susp	Suspected List										
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Magin [dB]	Result	Polarity	
1	100.0410	11.00	1.17	-32.06	44.69	24.80	43.50	18.70	Pass	Vertical	
2	240.0260	11.94	1.84	-31.90	54.26	36.14	46.00	9.86	Pass	Vertical	
3	396.0176	15.31	2.37	-31.78	50.65	36.55	46.00	9.45	Pass	Vertical	
4	480.0280	16.68	2.61	-31.90	55.38	42.77	46.00	3.23	Pass	Vertical	
5	799.9660	20.90	3.39	-32.03	42.84	35.10	46.00	10.90	Pass	Vertical	
6	960.0320	22.46	3.71	-31.09	41.56	36.64	54.00	17.36	Pass	Vertical	





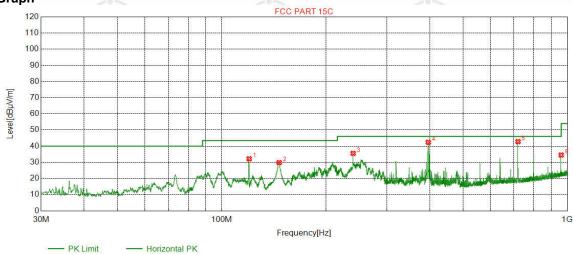


AV Detector

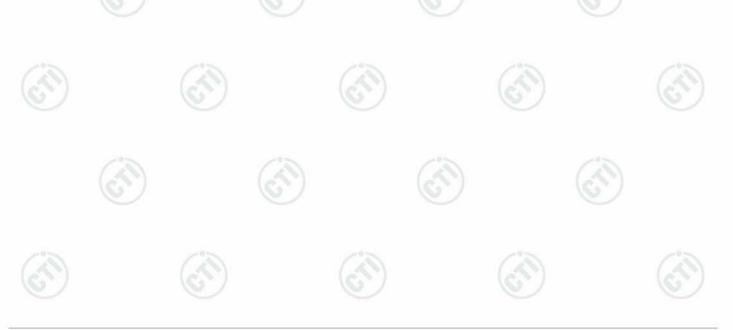
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Mode:	BLE GFSK Transmitting	Channel:	2480
Remark:	QP		





Susp	pected List									
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Magin [dB]	Result	Polarity
1	120.0250	9.20	1.30	-32.07	53.77	32.20	43.50	11.30	Pass	Horizontal
2	146.6057	7.43	1.43	-32.00	53.00	29.86	43.50	13.64	Pass	Horizontal
3	240.0260	11.94	1.84	-31.90	53.67	35.55	46.00	10.45	Pass	Horizontal
4	396.0176	15.31	2.37	-31.78	56.50	42.40	46.00	3.60	Pass	Horizontal
5	720.0300	20.02	3.22	-32.07	51.65	42.82	46.00	3.18	Pass	Horizontal
6	960.0320	22.46	3.71	-31.09	39.44	34.52	54.00	19.48	Pass	Horizontal



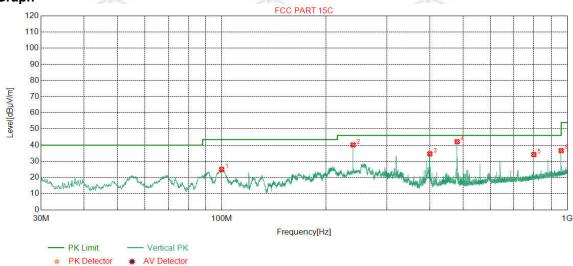




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Mode:	BLE GFSK Transmitting	Channel:	2480
Remark:	QP		





Susp	pected List									
NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Magin [dB]	Result	Polarity
1	99.9440	10.99	1.17	-32.06	44.94	25.04	43.50	18.46	Pass	Vertical
2	240.0260	11.94	1.84	-31.90	58.29	40.17	46.00	5.83	Pass	Vertical
3	400.0920	15.40	2.38	-31.76	48.65	34.67	46.00	11.33	Pass	Vertical
4	480.0280	16.68	2.61	-31.90	54.80	42.19	46.00	3.81	Pass	Vertical
5	799.9660	20.90	3.39	-32.03	41.93	34.19	46.00	11.81	Pass	Vertical
6	960.0320	22.46	3.71	-31.09	41.57	36.65	54.00	17.35	Pass	Vertical





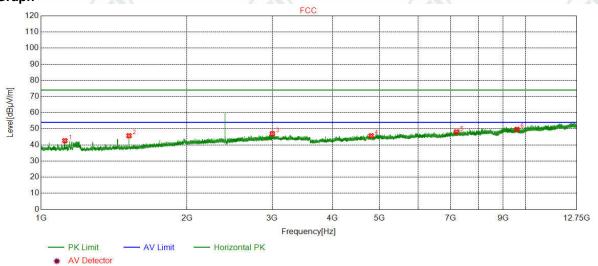


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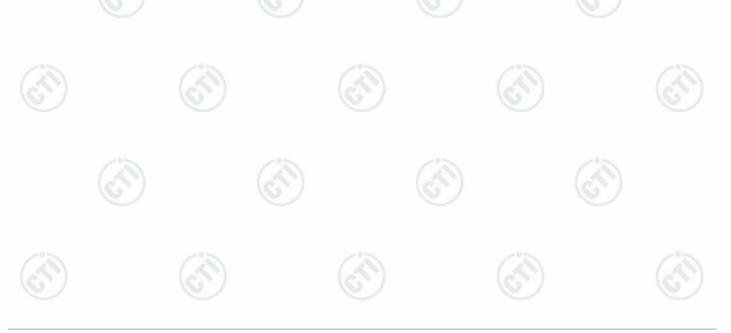
Transmitter Emission above 1GHz

Mode:	BLE GFSK Transmitting	Channel:	2402
Remark:	PK		

Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	1120.0120	28.02	2.61	-42.76	54.76	42.63	74.00	31.37	Pass	Horizontal
2	1519.4519	28.53	3.01	-42.72	56.87	45.69	74.00	28.31	Pass	Horizontal
3	3003.2502	33.20	4.92	-42.11	50.94	46.95	74.00	27.05	Pass	Horizontal
4	4804.0000	34.50	4.55	-40.66	47.29	45.68	74.00	28.32	Pass	Horizontal
5	7206.0000	36.31	5.81	-41.02	46.93	48.03	74.00	25.97	Pass	Horizontal
6	9608.0000	37.64	6.63	-40.76	46.14	49.65	74.00	24.35	Pass	Horizontal



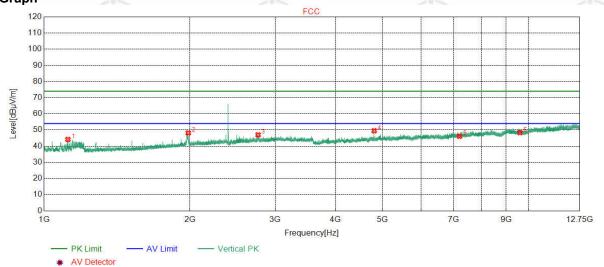




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C-7 /	10.7.1	1600	1627
Mode:	BLE GFSK Transmitting	Channel:	2402
Remark:	PK		

Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	1120.0120	28.02	2.61	-42.76	56.28	44.15	74.00	29.85	Pass	Vertical
2	1985.0985	31.60	3.46	-42.62	55.76	48.20	74.00	25.80	Pass	Vertical
3	2766.3766	32.83	4.18	-42.25	52.26	47.02	74.00	26.98	Pass	Vertical
4	4804.0000	34.50	4.55	-40.66	51.14	49.53	74.00	24.47	Pass	Vertical
5	7206.0000	36.31	5.81	-41.02	45.02	46.12	74.00	27.88	Pass	Vertical
6	9608.0000	37.64	6.63	-40.76	44.85	48.36	74.00	25.64	Pass	Vertical



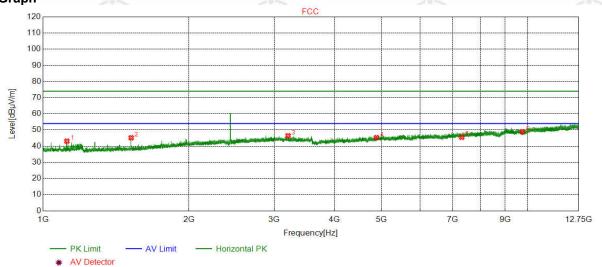




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2.7	125.75	1257.75	127.7
Mode:	BLE GFSK Transmitting	Channel:	2440
Remark:	PK		

Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	1120.0120	28.02	2.61	-42.76	55.25	43.12	74.00	30.88	Pass	Horizontal
2	1520.4520	28.53	3.01	-42.72	56.39	45.21	74.00	28.79	Pass	Horizontal
3	3206.0637	33.28	4.63	-42.00	50.55	46.46	74.00	27.54	Pass	Horizontal
4	4880.0000	34.50	4.80	-40.60	46.60	45.30	74.00	28.70	Pass	Horizontal
5	7320.0000	36.42	5.85	-40.92	44.18	45.53	74.00	28.47	Pass	Horizontal
6	9760.0000	37.70	6.73	-40.62	45.15	48.96	74.00	25.04	Pass	Horizontal



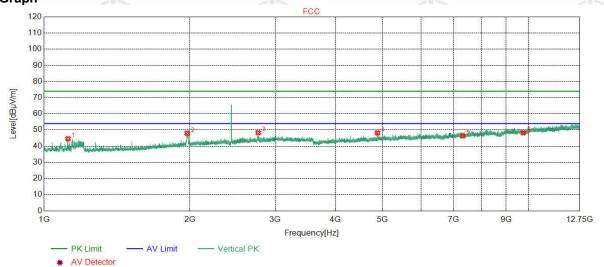




Page	45	of	50
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2.7	125.75	1257.75	127.7
Mode:	BLE GFSK Transmitting	Channel:	2440
Remark:	PK		

Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	1120.4120	28.02	2.61	-42.76	56.76	44.63	74.00	29.37	Pass	Vertical
2	1974.8975	31.53	3.44	-42.61	55.67	48.03	74.00	25.97	Pass	Vertical
3	2768.5769	32.83	4.18	-42.24	53.63	48.40	74.00	25.60	Pass	Vertical
4	4880.0000	34.50	4.80	-40.60	49.53	48.23	74.00	25.77	Pass	Vertical
5	7320.0000	36.42	5.85	-40.92	44.95	46.30	74.00	27.70	Pass	Vertical
6	9760.0000	37.70	6.73	-40.62	44.49	48.30	74.00	25.70	Pass	Vertical

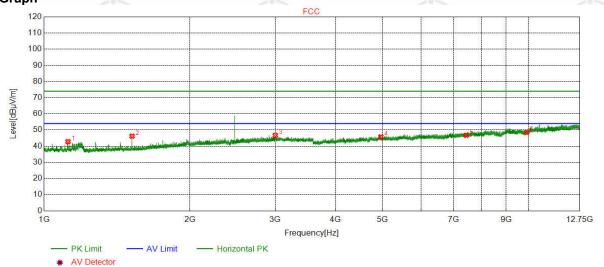






Mode:	BLE GFSK Transmitting	Channel:	2480
Remark:	PK		





NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	1120.6121	28.02	2.61	-42.76	54.96	42.83	74.00	31.17	Pass	Horizontal
2	1519.6520	28.53	3.01	-42.72	57.40	46.22	74.00	27.78	Pass	Horizontal
3	3002.6002	33.20	4.92	-42.11	50.69	46.70	74.00	27.30	Pass	Horizontal
4	4960.0000	34.50	4.82	-40.53	46.95	45.74	74.00	28.26	Pass	Horizontal
5	7440.0000	36.54	5.85	-40.82	45.13	46.70	74.00	27.30	Pass	Horizontal
6	9920.0000	37.77	6.79	-40.48	44.39	48.47	74.00	25.53	Pass	Horizontal

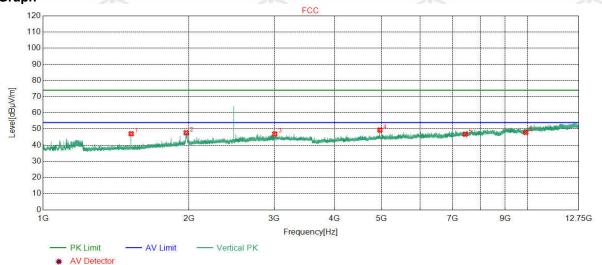




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Mode:	BLE GFSK Transmitting	Channel:	2480
Remark:	PK		

Test Graph



NO	Freq. [MHz]	Ant Factor [dB]	Cable loss [dB]	Pream gain [dB]	Reading [dBµV]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Result	Polarity
1	1520.6521	28.54	3.01	-42.72	58.25	47.08	74.00	26.92	Pass	Vertical
2	1974.6975	31.53	3.44	-42.61	55.34	47.70	74.00	26.30	Pass	Vertical
3	3008.4506	33.20	4.91	-42.11	50.96	46.96	74.00	27.04	Pass	Vertical
4	4960.0000	34.50	4.82	-40.53	50.55	49.34	74.00	24.66	Pass	Vertical
5	7440.0000	36.54	5.85	-40.82	45.21	46.78	74.00	27.22	Pass	Vertical
6	9920.0000	37.77	6.79	-40.48	43.83	47.91	74.00	26.09	Pass	Vertical

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.





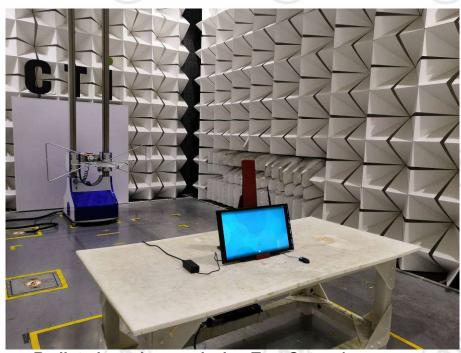






PHOTOGRAPHS OF TEST SETUP

Test Model No.: UIO0421B-C02



Radiated spurious emission Test Setup-1(Below 1GHz)



Radiated spurious emission Test Setup-2(Above 1GHz)













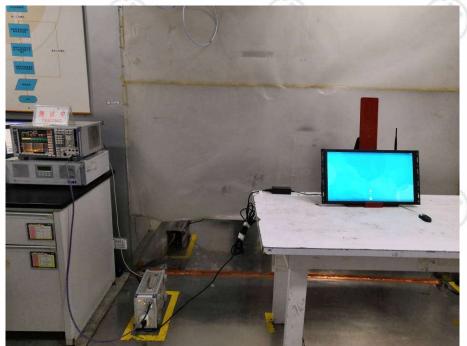


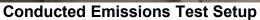




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PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32L00017401 for EUT external and internal photos.

*** End of Report ***

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