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# **RF Test Report**

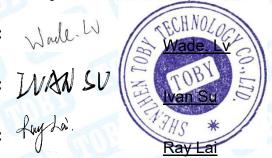
# FCC ID: 2AMM6-8822CSE3AA

Report No.	REL	TBR-C-202308-0079-21
Applicant	:	Earda Technologies Co., Ltd
Equipment Under T	Test (E	EUT)
EUT Name	2:	WiFi & BT combo module
Model No.	1.	EWN-8822CSE3AA
Series Model No.	:	
Brand Name	1.1	EARDATEK
Sample ID		HC-C-202308-0079-01-03-1#& HC-C-202308-0079-01-03-2#
Receipt Date		2023-08-22
Test Date		2023-08-22 to 2023-09-06
Issue Date		2023-09-06
Standards	22	FCC Part 15 Subpart C 15.247
Test Method	:	ANSI C63.10: 2013 KDB 558074 D01 15.247 Meas Guidance v05r02
Conclusions	):	PASS
		In the configuration tested, the EUT complied with the standards specified above.

Witness Engineer

**Engineer Supervisor** 

**Engineer Manager** 



This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

TB-RF-074-1.0



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# **Revision History**

Report No.	Version	Description	Issued Date
TBR-C-202308-0079-21	Rev.01	Initial issue of report	2023-09-06
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# **1. General Information about EUT**

# **1.1 Client Information**

Applicant	-	Earda Technologies Co., Ltd		
Address Block A, LianFeng Creative Industry Park, 2 JiSheng Road HuangGe Town, NanSha District, Guangzhou, PRC.				
Manufacturer		arda Technologies Co., Ltd		
Address	1	Block A, LianFeng Creative Industry Park, 2 JiSheng Road., HuangGe Town, NanSha District, Guangzhou, PRC.		

## 1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	WiFi & BT combo module				
Models No.	-	EWN-8822CSE3AA				
Model Different	:					
	101 101	Operation Frequency:	Bluetooth 5.0(BLE): 2402MHz~2480MHz			
Product		Number of Channel:	Bluetooth 5.0(BLE): 40 channels			
		Antenna Gain:	2dBi PCB Antenna			
Description		Modulation Type:	GFSK			
		Bit Rate of Transmitter:	1Mbps&2Mbps			
Power Rating		Input: DC 3.3V	Input: DC 3.3V			
Software Version		v5.15.0.1-36	v5.15.0.1-36			
Hardware Version	:	A1.0				
Remark:	_		The state of the s			

(1)The antenna gain from the antenna specification and adapter provided by the applicant, the verified for the RF conduction test provided by TOBY test lab.

(2)For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

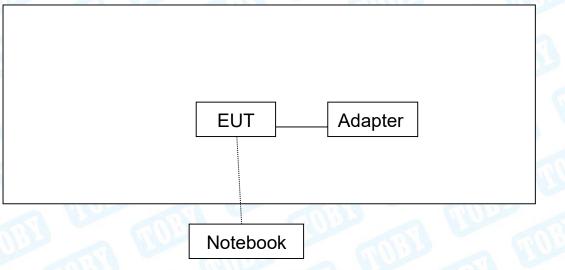
(3) Antenna information provided by the applicant.



## (4)Channel List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	14	2430	28	2458
01	2404	15	2432	29	2460
02	2406	16	2434	30	2462
03	2408	17	2436	31	2464
04	2410	18	2438	32	2466
05	2412	19	2440	33	2468
06	2414	20	2442	34	2470
07	2416	21	2444	35	2472
08	2418	22	2446	36	2474
09	2420	23	2448	37	2476
10	2422	24	2450	38	2478
11	2424	25	2452	39	2480
12	2426	26	2454		
13	2428	27	2456		

# 1.3 Block Diagram Showing the Configuration of System Tested





### 1.4 Description of Support Units

Equipment Information				
Name	Model	S/N	Manufacturer	Used "√"
Notebook	Inspiron 5493	( and a	DELL	~

### 1.5 Description of Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned follow was evaluated respectively.

onducted Test(AC POWER)			
Description			
TX Mode			
ated and RF Conducted Test			
Final Test Mode Description			
TX Mode			
TX 1Mbps Mode (Channel 00/19/39)			
TX 2Mbps Mode (Channel 00/19/39)			

#### Note:

(1) For all test, we have verified the construction and function in typical operation. And all the test modes were carried out with the EUT in transmitting operation in maximum power with all kinds of data rate.

According to ANSI C63.10 standards, the measurements are performed at the highest, middle, lowest available channels, and the worst case data rate as follows:

BLE Mode: GFSK Modulation Transmitting mode.

- (2) During the testing procedure, the continuously transmitting with the maximum power mode was programmed by the customer.
- (3) The EUT is considered a Mobile unit; in normal use it was positioned on X-plane. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.



# 1.6 Description of Test Software Setting

During testing channel& Power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of RF setting.

Software Version	0.0	Bluetooth RF Test	Tool	
Frequency	2402MHz	2440MHz	2480MHz	
BLE 1M	BLE 1M DEF DEF		DEF	
BLE 2M	DEF	DEF	DEF	
Bluetooth RF Test Tool (RtiBluetoothMP.dll V Mode About      Imterface     COM UART      Port 5     Imterface     COM UART      Port 5     Imterface     Non Link Mode) Hopping LE Test RW      LE PKT TX (for MP)     ILE PKT TX (for MP)     Data Len     0x25     Payload Type     Pseudo-Random bit sequence S      Le PKT Count(0:continue Max:254)     I     Le Tx Gain Index     Start     Stop     LE Rx Count     0	Baudrate=115200 🔽 🔮 🔍		Hot Key HCI Reset Test Mode Read BD Address GetChipInfo ShowTxPower Read Thermal Power Tracking C OFF Set © ON Get	
Message           >> Open device finish           >> Get Chip Info is Fail!!           >> Support LE Enhanced Test Command           >> pBTInfo is NULLUnknow device!!           >> Dpen device successfully           >> Get Cystal table is Fail!!	ip info error!!	E	Patch Code     Dynamic Log     PHY_STAGE	

TOBY Part of the Caterna Group

# 1.7 Measurement Uncertainty

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

Test Item	Parameters	Expanded Uncertainty	
		(U <sub>Lab</sub> )	
	Level Accuracy:	±3.50 dB	
Conducted Emission	9kHz~150kHz		
1000 A B	150kHz to 30MHz	±3.10 dB	
Radiated Emission	Level Accuracy:	+4.60 dB	
	9kHz to 30 MHz	<u>+</u> 4.00 dB	
Radiated Emission	Level Accuracy:	+1.50 dB	
Radialed Emission	30MHz to 1000 MHz	±4.50 dB	
Radiated Emission	Level Accuracy:	±4.60 dB ±4.50 dB	
	Above 1000MHz		

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## 1.8 Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1/F., Building 6, Rundongsheng Industrial Zone, Longzhu, Xixiang, Bao'an District, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

### CNAS (L5813)

The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

### A2LA Certificate No.: 4750.01

The laboratory has been accredited by American Association for Laboratory Accreditation(A2LA) to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the technical competence in the field of Electrical Testing. And the A2LA Certificate No.: 4750.01.FCC Accredited Test Site Number: 854351. Designation Number: CN1223.

### IC Registration No.: (11950A)

The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A. CAB identifier: CN0056.



# 2. Test Summary

Standard Section	Test Item	Test Sample(s)	Judgment	Remark
FCC 15.207(a)	Conducted Emission	HC-C-202308-0079-01-03-1#	PASS	N/A
FCC 15.209 & 15.247(d)	Radiated Unwanted Emissions	HC-C-202308-0079-01-03-1#	PASS	N/A
FCC 15.203	Antenna Requirement	HC-C-202308-0079-01-03-2#	PASS	N/A
FCC 15.247(a)(2)	6dB Bandwidth	HC-C-202308-0079-01-03-2#	PASS	N/A
	99% Occupied bandwidth	HC-C-202308-0079-01-03-2#	PASS	N/A
FCC 15.247(b)(3)	Peak Output Power and E.I.R.P	HC-C-202308-0079-01-03-2#	PASS	N/A
FCC 15.247(e)	Power Spectral Density	HC-C-202308-0079-01-03-2#	PASS	N/A
FCC 15.247(d)	Band Edge Measurements	HC-C-202308-0079-01-03-2#	PASS	N/A
FCC 15.207(a)	Conducted Unwanted Emissions	HC-C-202308-0079-01-03-2#	PASS	N/A
FCC 15.247(d)	Emissions in Restricted Bands	HC-C-202308-0079-01-03-2#	PASS	N/A
	On Time and Duty Cycle	HC-C-202308-0079-01-03-2#		N/A

Note: N/A is an abbreviation for Not Applicable.

# 3. Test Software

Test Item	Test Software	Manufacturer	Version No.
Conducted Emission	EZ-EMC	EZ	CDI-03A2
Radiation Emission	EZ-EMC	EZ	FA-03A2RE
Radiation Emission	EZ-EMC	EZ	FA-03A2RE+
RF Conducted Measurement	MTS-8310	MWRFtest	V2.0.0.0
RF Test System	JS1120	Tonscend	V3.2.22



# 4. Test Equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESCI	100321	Jun. 20, 2023	Jun. 19, 2024
	Compliance				
RF Switching Unit	Direction Systems	RSU-A4	34403	Jun. 20, 2023	Jun. 19, 2024
	Inc	200	RU V	0022	
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Jun. 20, 2023	Jun. 19, 2024
LISN	Rohde & Schwarz	ENV216	101131	Jun. 20, 2023	Jun. 19, 2024
ISN	SCHWARZBECK	NTFM 8131	8131-193	Jun. 20, 2023	Jun. 19, 2024
ISN	SCHWARZBECK	CAT3 8158	cat3 5158-0094	Jun. 20, 2023	Jun. 19, 2024
ISN	SCHWARZBECK	NTFM5158	NTFM5158 0145	Jun. 06, 2023	Jun. 05, 2024
ISN	SCHWARZBECK	CAT 8158	cat5 8158-179	Jun. 20, 2023	Jun. 19, 2024
Radiation Emissi	on Test (B Site)				
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	N9020A	MY49100060	Aug. 30, 2023	Aug. 29, 2024
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102197	Jun. 20, 2023	Jun. 19, 2024
EMI Test Receiver	Rohde & Schwarz	ESU-8	100472/008	Feb. 23, 2023	Feb.22, 2024
Bilog Antenna	SCHWARZBECK	VULB 9168	1225	Dec. 05, 2021	Dec. 04, 2023
Horn Antenna	SCHWARZBECK	BBHA 9120 D	2463	Feb. 26, 2022	Feb.25, 2024
Horn Antenna	SCHWARZBECK	BBHA 9170	1118	Jun. 26, 2022	Jun.25, 2024
Loop Antenna	SCHWARZBECK	FMZB 1519 B	1519B-059	Jun. 26, 2022	Jun.25, 2024
HF Amplifier	Tonscend	TAP9E6343	AP21C806117	Aug. 30, 2023	Aug. 29, 2024
HF Amplifier	Tonscend	TAP051845	AP21C806141	Aug. 30, 2023	Aug. 29, 2024
HF Amplifier	Tonscend	TAP0184050	AP21C806129	Aug. 30, 2023	Aug. 29, 2024
Highpass Filter	CD	HPM-6.4/18G		N/A	N/A
Highpass Filter	CD	HPM-2.8/18G		N/A	N/A
Highpass Filter	XINBO	XBLBQ-HTA67(8-25G)	22052702-1	N/A	N/A
Antenna Conduc	ted Emission				
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jun. 20, 2023	Jun. 19, 2024
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102197	Jun. 20, 2023	Jun. 19, 2024
MXA Signal Analyzer	KEYSIGHT	N9020B	MY60110172	Aug. 30, 2023	Aug. 29, 2024





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MXA Signal Analyzer	Agilent	N9020A	MY47380425	Aug. 30, 2023	Aug. 29, 2024
Vector Signal Generator	Agilent	N5182A	MY50141294	Aug. 30, 2023	Aug. 29, 2024
Analog Signal Generator	Agilent	N5181A	MY48180463	Aug. 30, 2023	Aug. 29, 2024
Vector Signal Generator	KEYSIGHT	N5182B	MY59101429	Aug. 30, 2023	Aug. 29, 2024
Analog Signal Generator	KEYSIGHT	N5173B	MY61252685	Aug. 30, 2023	Aug. 29, 2024
	DARE!! Instruments	RadiPowerRPR3006W	17100015SNO26	Aug. 30, 2023	Aug. 29, 2024
	DARE!! Instruments	RadiPowerRPR3006W	17100015SNO29	Aug. 30, 2023	Aug. 29, 2024
RF Power Sensor	DARE!! Instruments	RadiPowerRPR3006W	17100015SNO31	Aug. 30, 2023	Aug. 29, 2024
	DARE!! Instruments	RadiPowerRPR3006W	17100015SNO33	Aug. 30, 2023	Aug. 29, 2024
RF Control Unit	Tonsced	JS0806-1	21C8060380	N/A	N/A
RF Control Unit	Tonsced	JS0806-2	21F8060439	Aug. 30, 2023	Aug. 29, 2024
Power Control Box	Tonsced	JS0806-4ADC	21C8060387	N/A	N/A
Wideband Radio	Data da A. Catava	0141/500	111000	Aug. 20, 0000	Aur 00,0001
Comunication Tester	Rohde & Schwarz	CMW500	144382	Aug. 30, 2023	Aug. 29, 2024
Universal Radio	Dahda & Caburar	CMM/500	400700	Fab. 02, 2002	Eab 02, 2004
Communication Tester	Rohde&Schwarz	CMW500	168796	Feb. 23, 2023	Feb.22, 2024
Temperature and	ZhongHong	7H OTH 1500	742107264	lup 20 2022	lup 10 2024
Humidity Chamber	ZhengHang	ZH-QTH-1500	ZH2107264	Jun. 20, 2023	Jun. 19, 2024



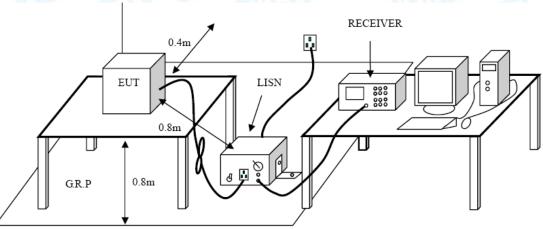
# 5. Conducted Emission

- 5.1 Test Standard and Limit
  - 5.1.1 Test Standard
    - FCC Part 15.207
  - 5.1.2 Test Limit

Frequency	Maximum RF Line Voltage (dBμV)		
	Quasi-peak Level	Average Level	
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *	
500kHz~5MHz	56	46	
5MHz~30MHz	60	50	

#### Notes:

- (1) \*Decreasing linearly with logarithm of the frequency.
- (2) The lower limit shall apply at the transition frequencies.
- (3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
- 5.2 Test Setup



### 5.3 Test Procedure

● The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

● Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

● I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

●LISN at least 80 cm from nearest part of EUT chassis.





- The bandwidth of EMI test receiver is set at 9 kHz, and the test frequency band is from 0.15MHz to 30MHz.
- 5.4 Deviation From Test Standard No deviation
- 5.5 EUT Operating Mode

Please refer to the description of test mode.

5.6 Test Data

Please refer to the Attachment A inside test report.



# 6. Radiated and Conducted Unwanted Emissions

- 6.1 Test Standard and Limit
  - 6.1.1 Test Standard

#### FCC Part 15.209 & FCC Part 15.247(d)

6.1.2 Test Limit

Genera	General field strength limits at frequencies Below 30MHz				
Frequency (MHz)	Field Strength (μA/m)*	Field Strength (microvolt/meter)**	Measurement Distance (meters)		
0.009~0.490	6.37/F (F in kHz)	2400/F(KHz)	300		
0.490~1.705	63.7/F (F in kHz)	24000/F(KHz)	30		
1.705~30.0	0.08	30	30		

**Note:** 1, The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

2, \*is for RSS Standard, \*\*is for FCC Standard.

General field strength limits at frequencies above 30 MHz		
Frequency (MHz)	Field strength (μV/m at 3 m)	Measurement Distance (meters)
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

General field strength limits at frequencies Above 1000MHz			
Frequency	Distance of 3m (dBuV/m)		
(MHz)	Peak	Average	
Above 1000	74	54	

Note:

(1) The tighter limit applies at the band edges.

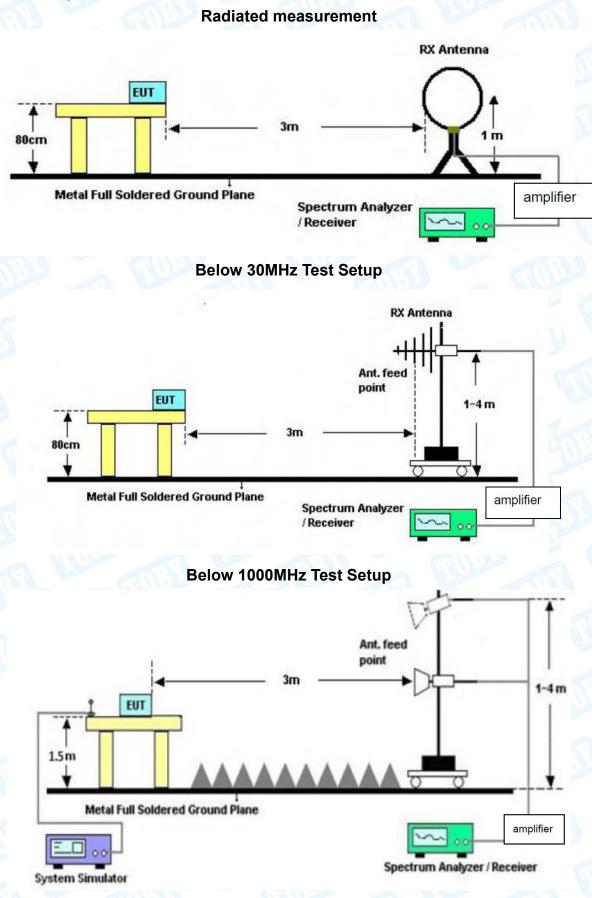
(2) Emission Level(dBuV/m)=20log Emission Level(uV/m)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.



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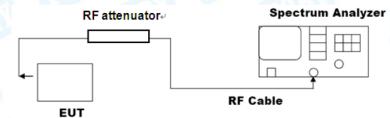
6.2 Test Setup





# Above 1GHz Test Setup

#### Conducted measurement



#### 6.3 Test Procedure

#### ----Radiated measurement

● The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1 GHz. The EUT was placed on a rotating 0.8m high above ground, the table was rotated 360 degrees to determine the position of the highest radiation.

• Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.

• The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.

• The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

● If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Below 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.

● Testing frequency range 30MHz-1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection. Testing frequency range 9KHz-150Hz the measuring instrument use VBW=200Hz with Quasi-peak detection. Testing frequency range 9KHz-30MHz the measuring instrument use VBW=9kHz with Quasi-peak detection.

● Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

• For the actual test configuration, please see the test setup photo.

#### --- Conducted measurement

#### Reference level measurement

Establish a reference level by using the following procedure:

a) Set instrument center frequency to DTS channel center frequency.

- b) Set the span to≥1.5 times the DTS bandwidth.
- c) Set the RBW = 100 kHz.
- d) Set the VBW≥[3\*RBW].
- e) Detector = peak.
- f) Sweep time = auto couple.
- g) Trace mode = max hold.
- h) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the maximum PSD level.

Note that the channel found to contain the maximum PSD level can be used to establish the reference level.

#### • Emission level measurement

Establish an emission level by using the following procedure:

a) Set the center frequency and span to encompass frequency range to be measured. b) Set the RBW = 100 kHz.



- c) Set the VBW≥[3\*RBW].
- d) Detector = peak.

e) Sweep time = auto couple.

f) Trace mode = max hold.g) Allow trace to fully stabilize.

h) Use the peak marker function to determine the maximum amplitude level. Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

### 6.4 Deviation From Test Standard

No deviation

6.5 EUT Operating Mode

Please refer to the description of test mode.

6.6 Test Data

Radiated measurement please refer to the Attachment B inside test report. Conducted measurement please refer to the external appendix report of BLE.



# 7. Restricted Bands and Band Edge Requirement

- 7.1 Test Standard and Limit
  - 7.1.1 Test Standard

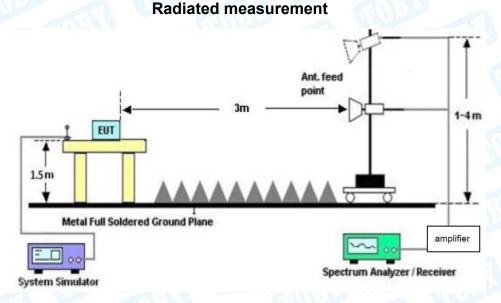
### FCC Part 15.205 & FCC Part 15.247(d)

7.1.2 Test Limit

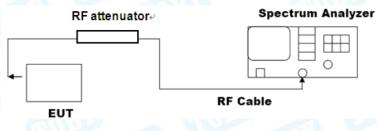
Restricted Frequency	Distance Meters(at 3m)	
Band (MHz)	Peak (dBuV/m)	Average (dBuV/m)
2310 ~2390	74	54
2483.5 ~2500	74	54
	Peak (dBm)see 7.3 e)	Average (dBm) see 7.3 e)
2310 ~2390	-21.20	-41.20
2483.5 ~2500	-21.20	-41.20

Note: According the ANSI C63.10 11.12.2 antenna-port conducted measurements may also be used as an alternative to radiated measurements for determining compliance in the restricted frequency bands requirements. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test forcabinet/case emissions is required.

# 7.2 Test Setup



#### **Conducted measurement**





### 7.3 Test Procedure

#### ---Radiated measurement

• Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.

• The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.

• The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

●The Peak Value and average value both need to comply with applicable limit above 1 GHz.

● Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

• For the actual test configuration, please see the test setup photo.

#### --- Conducted measurement

a) Measure the conducted output power (in dBm) using the detector specified by the appropriate regulatory agency (see 11.12.2.3 through 11.12.2.5 for guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).

b) Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP (see 11.12.2.6 for guidance on determining the applicable antenna gain).

c) Add the appropriate maximum ground reflection factor to the EIRP (6 dB for frequencies

 $\leq$  30 MHz; 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive; and 0 dB for frequencies > 1000 MHz).

d) For MIMO devices, measure the power of each chain and sum the EIRP of all chains in linear terms (i.e., watts and mW).

e) Convert the resultant EIRP to an equivalent electric field strength using the following relationship:

 $E = EIRP-20 \log d + 104.8$ 

where

*E* is the electric field strength in dBuV/m

EIRP is the equivalent isotropically radiated power in dBm

d is the specified measurement distance in m

f) Compare the resultant electric field strength level with the applicable regulatory limit.g) Perform the radiated spurious emission test.

#### 7.4 Deviation From Test Standard

No deviation

#### 7.5 EUT Operating Mode

Please refer to the description of test mode.

#### 7.6 Test Data

Please refer to the Attachment C inside test report.



# 8. Bandwidth Test

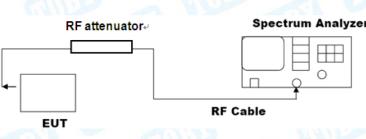
- 8.1 Test Standard and Limit
  - 8.1.1 Test Standard

### FCC Part 15.205 & FCC Part 15.247(d)

8.1.2 Test Limit

Test Item	Limit	Frequency Range(MHz)
-6dB bandwidth (DTS bandwidth )	>=500 KHz	2400~2483.5
99% occupied bandwidth		2400~2483.5

8.2 Test Setup



#### 8.3 Test Procedure

#### ---DTS bandwidth

- The steps for the first option are as follows:
- a) Set RBW = 100 kHz.
- b) Set the VBW≥[3\*RBW].
- c) Detector = peak.
- d) Trace mode = max hold.

e) Sweep = auto couple.

f) Allow the trace to stabilize.

g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

#### ---occupied bandwidth

• The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.

b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.

c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.

d) Step a) through step c) might require iteration to adjust within the specified range. e) 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.

f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. 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 is reached; that frequency is recorded as the lower frequency. The upper frequency. The 99% power bandwidth is the difference between these two frequencies.

h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

#### 8.4 Deviation From Test Standard

No deviation

8.5 EUT Operating Mode

Please refer to the description of test mode.

#### 8.6 Test Data

Please refer to the external appendix report of BLE.



# 9. Peak Output Power

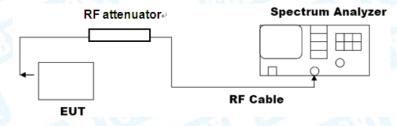
- 9.1 Test Standard and Limit
  - 9.1.1 Test Standard

### FCC Part 15.247(b)(3)

9.1.2 Test Limit

Test Item	Limit	Frequency Range(MHz)
Peak Output Power	not exceed 1 W or 30dBm	2400-2482 5
E.I.R.P	not exceed 4 W or 36dBm	2400~2483.5

9.2 Test Setup



### 9.3 Test Procedure

### ---RBW≥DTS bandwidth

• The following procedure shall be used when an instrument with a resolution bandwidth that is greater than

the DTS bandwidth is available to perform the measurement:

- a) Set the RBW≥DTS bandwidth.
- b) Set VBW≥[3\*RBW].
- c) Set span≥[3\*RBW].
- d) Sweep time = auto couple.
- e) Detector = peak.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use peak marker function to determine the peak amplitude level.

## 9.4 Deviation From Test Standard

No deviation

9.5 EUT Operating Mode

Please refer to the description of test mode.

9.6 Test Data

Please refer to the external appendix report of BLE.





# 10. Power Spectral Density

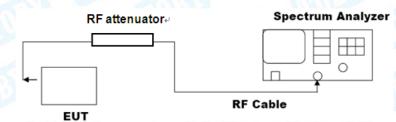
- 10.1 Test Standard and Limit
  - 10.1.1 Test Standard

#### FCC Part 15.247(e)

10.1.2 Test Limit

Test Item	Limit	Frequency Range(MHz)
Power Spectral Density	8dBm(in any 3 kHz)	2400~2483.5

10.2 Test Setup



#### **10.3 Test Procedure**

• The following procedure shall be used if maximum peak conducted output power was used to determine compliance, and it is optional if the maximum conducted (average) output power was used to determine compliance:

a) Set analyzer center frequency to DTS channel center frequency.

b) Set the span to 1.5 times the DTS bandwidth.

c) Set the RBW to 3 kHz≤RBW≤100 kHz.

- d) Set the VBW  $\geq$ [3\*RBW].
- e) Detector = peak.

f) Sweep time = auto couple.

g) Trace mode = max hold.

h) Allow trace to fully stabilize.

i) Use the peak marker function to determine the maximum amplitude level within the RBW.

j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

#### 10.4 Deviation From Test Standard

No deviation

10.5 Antenna Connected Construction

Please refer to the description of test mode.

#### 10.6 Test Data

Please refer to the external appendix report of BLE.





# 11. Antenna Requirement

## 11.1 Test Standard and Limit

11.1.1 Test Standard

### FCC Part 15.203

11.1.2 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 shall be considered sufficient to comply with the provisions of this Section. 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.

## 11.2 Deviation From Test Standard No deviation

## 11.3 Antenna Connected Construction

The gains of the antenna used for transmitting is 5.0dBi, and the antenna de-signed with permanent attachment and no consideration of replacement. Please see the EUT photo for details.

### 11.4 Test Data

The EUT antenna is a PCB Antenna. It complies with the standard requirement.

	Antenna Type	
a much	Permanent attached antenna	0
	Unique connector antenna	3
1000	Professional installation antenna	

# **Attachment A-- Conducted Emission Test Data**

Temperatu	re: 22	.8℃	anti	R	elative Hum	idity:	50%	1
Fest Voltag	e: AC	C 120V/	60Hz			6	165	
Ferminal:	Lin	ie		91U	1			A BI
fest Mode:	Mo	ode 1			MUD		2	11U
Remark:	On	ily wors	e case i	s reported.	1 Con	0	12	
80.0 dBuV							QP	· _ ]
							AV	
ň		+				×		
30	Â. M	×.		x		1. MARCHAN	Media approximate	WHAT AND
- MAAM	MAN Y	han Mah	list	h within Mid	▝▙▞▞▓₩₩₩₩₩	VV Janhal	A CONTRACT	,
	1.1.1.4	Krow Lind	La Miler Marillan	CHANKED FORMED FOR	W ALL I'	N	Mr. Hummer	
phone the	whenman	manne	manufyamanta	en have marked	me have hall hallow when	AND		P
			4.	Martine 14				
vo								
20		0.5		(MHz)	5			30.000
0.150			Reading	(MHz) Correct				30.000
	lk. Fre	R	Reading Level		Measure-	Limit	Over	30.000
0.150	lk. Fre M⊦	R eq.		Correct	Measure-	Limit	Over	30.000 Detector
0.150		R eq. Iz	Level	Correct Factor	Measure- ment		dB	
No. M	MH	R eq. Hz 660	Level dBuV	Correct Factor dB	Measure- ment dBuV	dBuV	dB	Detector
0.150 No. M	M⊦ 0.16	R eq. Hz 660 660	Level dBuV 9.47	Correct Factor dB 11.19	Measure- ment dBuV 20.66	dBuV 65.15	dB -44.49	Detector
0.150 No. M	M⊦ 0.16 0.16	F eq. 12 660 660 660	Level dBuV 9.47 -3.57	Correct Factor dB 11.19 11.19	Measure- ment dBuV 20.66 7.62	dBuV 65.15 55.15 61.24	dB -44.49 -47.53	Detector QP AVG
0.150 No. M 1 2 3	M⊦ 0.16 0.16 0.26	F eq. 12 560 560 560 560	Level dBuV 9.47 -3.57 6.71	Correct Factor dB 11.19 11.19 11.08	Measure- ment dBuV 20.66 7.62 17.79	dBuV 65.15 55.15 61.24 51.24	dB -44.49 -47.53 -43.45	Detector QP AVG QP
0.150 No. M 1 2 3 4	M⊦ 0.16 0.16 0.26 0.26	F eq. 560 560 560 560 560 560	Level dBuV 9.47 -3.57 6.71 -3.93	Correct Factor dB 11.19 11.19 11.08 11.08	Measure- ment dBuV 20.66 7.62 17.79 7.15	dBuV 65.15 55.15 61.24 51.24 57.25	dB -44.49 -47.53 -43.45 -44.09	Detector QP AVG QP AVG
0.150 No. M 1 2 3 4 5	M⊢ 0.16 0.26 0.26 0.43	F eq. 560 560 560 560 560 560 560 560 560 560	Level dBuV 9.47 -3.57 6.71 -3.93 9.44	Correct Factor dB 11.19 11.19 11.08 11.08 11.32	Measure- ment dBuV 20.66 7.62 17.79 7.15 20.76	dBuV 65.15 55.15 61.24 51.24 57.25 47.25	dB -44.49 -47.53 -43.45 -44.09 -36.49	Detector QP AVG QP AVG QP
0.150 No. M 1 2 3 4 5 6	MH 0.16 0.26 0.26 0.43 0.43	F eq. 560 560 560 560 560 560 560 560 560 560	Level dBuV 9.47 -3.57 6.71 -3.93 9.44 -3.38	Correct Factor dB 11.19 11.19 11.08 11.08 11.32 11.32	Measure- ment dBuV 20.66 7.62 17.79 7.15 20.76 7.94	dBuV 65.15 55.15 61.24 51.24 57.25 47.25 56.00	dB -44.49 -47.53 -43.45 -44.09 -36.49 -39.31	Detector QP AVG QP AVG QP AVG
0.150 No. M 1 2 3 4 5 6 7	M⊢ 0.16 0.26 0.26 0.43 0.43 0.43	F eq. 4z 660 660 660 660 660 600 800 80 80	Level dBuV 9.47 -3.57 6.71 -3.93 9.44 -3.38 4.97	Correct Factor dB 11.19 11.19 11.08 11.08 11.32 11.32 11.32	Measure- ment dBuV 20.66 7.62 17.79 7.15 20.76 7.94 16.17	dBuV 65.15 55.15 61.24 51.24 57.25 47.25 56.00 46.00	dB -44.49 -47.53 -43.45 -44.09 -36.49 -39.31 -39.83	Detector QP AVG QP AVG QP AVG QP
0.150 No. M 1 2 3 4 5 6 7 8	M⊢ 0.16 0.26 0.26 0.43 0.43 0.43 0.61	F       1z       60       60       60       60       60       60       60       60       60       60       60       60       60       60       60       60       60       80       80       40	Level dBuV 9.47 -3.57 6.71 -3.93 9.44 -3.38 4.97 -4.38	Correct Factor dB 11.19 11.19 11.08 11.08 11.32 11.32 11.32 11.20 11.20	Measure- ment dBuV 20.66 7.62 17.79 7.15 20.76 7.94 16.17 6.82	dBuV 65.15 55.15 61.24 51.24 57.25 47.25 56.00 46.00	dB -44.49 -47.53 -43.45 -44.09 -36.49 -39.31 -39.83 -39.18	Detector QP AVG QP AVG QP AVG QP AVG
0.150 No. M 1 2 3 4 5 6 7 8 9	MH 0.16 0.26 0.26 0.43 0.43 0.43 0.61 0.61 1.61	F         Iz         600<	Level dBuV 9.47 -3.57 6.71 -3.93 9.44 -3.38 4.97 -4.38 3.25	Correct Factor dB 11.19 11.08 11.08 11.32 11.32 11.32 11.20 11.20 10.86	Measure- ment dBuV 20.66 7.62 17.79 7.15 20.76 7.94 16.17 6.82 14.11	dBuV 65.15 55.15 61.24 51.24 57.25 47.25 56.00 46.00 46.00	dB -44.49 -47.53 -43.45 -44.09 -36.49 -39.31 -39.83 -39.18 -39.18	Detector QP AVG QP AVG QP AVG QP AVG QP

Remark:

1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)

2. Margin (dB) =QuasiPeak/Average (dBuV)-Limit (dBuV)



Temperature:	<b>22.8</b> ℃	Relative Humidity:	50%
Test Voltage:	AC 120V/60Hz	TUP -	~ ~
Terminal:	Neutral	In Un	
Fest Mode:	Mode 1		Con St
Remark:	Only worse case is re	ported.	2 4
30	X X M Mar Mar Mar Mar Mar Mar Mar Mar Mar M	Marth Martin Land Martin Martin Martin	
20	0.5	(MHz) 5	30.000

No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1	0.1700	11.24	11.17	22.41	64.96	-42.55	QP
2	0.1700	-2.61	11.17	8.56	54.96	-46.40	AVG
3	0.2779	12.78	11.07	23.85	60.88	-37.03	QP
4	0.2779	-1.63	11.07	9.44	50.88	-41.44	AVG
5 *	0.4380	16.73	11.33	28.06	57.10	-29.04	QP
6	0.4380	-0.57	11.33	10.76	47.10	-36.34	AVG
7	0.6180	12.01	11.20	23.21	56.00	-32.79	QP
8	0.6180	-2.39	11.20	8.81	46.00	-37.19	AVG
9	8.2299	18.02	10.21	28.23	60.00	-31.77	QP
10	8.2299	9.50	10.21	19.71	50.00	-30.29	AVG
11	17.2340	12.02	10.76	22.78	60.00	-37.22	QP
12	17.2340	8.77	10.76	19.53	50.00	-30.47	AVG
ark:							

Remark: 1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)

2. Margin (dB) =QuasiPeak/Average (dBuV)-Limit (dBuV)



# **Attachment B--Unwanted Emissions Data**

#### ---Radiated Unwanted Emissions

#### 9 KHz~30 MHz

From 9 KHz to 30 MHz: Conclusion: PASS

Note: The amplitude of spurious emissions which are attenuated by more than 20dB Below the permissible value has no need to be reported.

#### 30MHz~1GHz

Temperature:	<b>23.3</b> ℃		Relative H	lumidity:	48%	
Test Voltage:	AC 120V/	60Hz	au		NU2	
Ant. Pol.	Horizontal	- OR		CUD3		
Test Mode:	Mode 2		1200		and	
Remark:	Only wors	e case is reporte	ed.			
80.0 dBu¥/m						
70						
60				1 1	5C 3M Radiation	
50				Margin -6	dB	
40					c	
30 1 X						WWW HIN PE
20 10	ween weather watch and	and marked have been and	manahan	Whenen war	phylochen Address	
0						
-10						
-20						

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	35.4993	47.37	-22.91	24.46	40.00	-15.54	peak
2	47.1599	40.11	-22.62	17.49	40.00	-22.51	peak
3	108.2667	40.84	-24.90	15.94	43.50	-27.56	peak
4	122.4040	41.77	-23.67	18.10	43.50	-25.40	peak
5	230.0985	39.75	-23.44	16.31	46.00	-29.69	peak
6	760.7036	39.68	-9.84	29.84	46.00	-16.16	peak

#### Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. QuasiPeak (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)

3. Margin (dB) = QuasiPeak (dBµV/m)-Limit QPK(dBµV/m)





Temp	erature:	<b>23.3℃</b>	322		Relative	e Humidity:	48%	
Test V	/oltage:	AC 12	0V/60I	Ηz		aus		C.
Ant. P	Pol.	Vertica	al		26	6	10121	-
Test N	/lode:	Mode	2				61	13
Rema	rk:	Only v	vorse o	case is repor	ted.			
80.0	dBu¥/m							
70								
60								
50						(RF)FC Margin	C 15C 3M Radiation	
40			<u> </u>					
30	1 X					E	6	Al-Al-Arpea
20	Mr.	and the for the second s	2	3 4		wawwaymataka	when down all ment we wanted	
10	· · · · · · · · · · · · · · · · · · ·	and the second	Marian	when he had been and	manakan	0000 1000 000 000 000 000 000 000 000 0		
0								
-10								
-20								

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	36.0007	50.05	-22.91	27.14	40.00	-12.86	peak
2	77.0505	44.53	-26.20	18.33	40.00	-21.67	peak
3	108.2667	44.42	-24.90	19.52	43.50	-23.98	peak
4	122.4040	43.86	-23.67	20.19	43.50	-23.31	peak
5	437.1199	40.33	-16.96	23.37	46.00	-22.63	peak
6	760.7036	39.65	-9.84	29.81	46.00	-16.19	peak

- Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
   QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
- 3. Margin (dB) = QuasiPeak (dBµV/m)-Limit QPK(dBµV/m)

#### Above 1GHz

Ten	nperature:	<b>26.0</b> ℃			Relative	Humidity:	54%	
Tes	t Voltage:	DC 3.3V	( GLU			2	10	
Ant	t. Pol.	Horizont	al	11	000			
Tes	t Mode:	BLE(1M	bps) Mo	de TX 240	2 MHz	85	~ {	NU
Rer	mark:	Only wo	rse case	e is reporte	d.	COL.	13	
90.0	dBuV/m							
80								
70						(RF) FCC F	PART 15C (F	EAK)
60						(BE) ECC E	PART 15C (A	VGI
50								
40	Martine and Martine Provident	لير	1 And Marking Marking	when when any her when	With March	normal and the state	- Marking -	www.www.www.pea
30		An and the down with with the			Your			
20	Ned part of the second second second							
10								
0								
-10	00.000 3550.00	6100.00 865	0.00 112	200.00 (MHz)	16300.00	18850.00 2140	0.00 000	50.00 26500.

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	10843.000	44.75	-2.04	42.71	74.00	-31.29	peak
2 *	13571.500	43.10	-0.02	43.08	74.00	-30.92	peak
3	14846.500	42.01	0.93	42.94	74.00	-31.06	peak

#### Remark:

- 1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
- 2. Peak/AVG (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)
- 3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)

4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

- 5. No report for the emission which below the prescribed limit.
- 6. The peak value<average limit, So only show the peak value.



Гет	perature:	<b>26.0</b> ℃			Rela	tive Hun	nidity:	54%		
Test	t Voltage:	DC 3.3V	anti	32		(AU)	250	-	- UU	Þ
Ant.	Pol.	Vertical	620	-1	A		61	NUD		2
<b>Fest</b>	t Mode:	BLE(1M	ops) Mo	de TX 24	02 MH	z			anth	4
Rem	nark:	Only wor	se case	is repor	ted.	NUP		<u>_</u>		
90.0	dBuV/m									1
80										
70							(RF) FCC	PART 15C (F	<sup>2</sup> EAKJ	
50							(BE) ECC	PART 15C (/	VGI	
50			1	2	2					
40			an work the	4-marine Mary	MANT	and the second s	North and And Marker	with mar altight for	Her Hickorkey	pe
30	+ the Maria Maria and	Stan which the start of the			w	<b>v</b>				
20	-									
10										
0										
-10	00.000 3550.00	6100.00 865	0.00 112	00.00 (MF		300.00 188	50.00 214	00.00 239	50.00 265	

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	10894.000	45.07	-1.80	43.27	74.00	-30.73	peak
2	13265.500	42.53	-0.20	42.33	74.00	-31.67	peak
3	14872.000	41.20	1.14	42.34	74.00	-31.66	peak

- 1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
- 2. Peak/AVG (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)
- 3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)
- 4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
- 5. No report for the emission which below the prescribed limit.
- 6. The peak value<average limit, So only show the peak value.



Temperature:	<b>26.0℃</b>	Relative Humidity:	54%
Test Voltage:	DC 3.3V	TUP	14
Ant. Pol.	Horizontal		NUD A
Test Mode:	BLE(1Mbps) Mode TX 24	40 MHz	ani3
Remark:	Only worse case is report	ed.	
90.0 dBu¥/m			
80			PART 15C (PEAK)
70			
60		(RF) FCC	PART 15C (AVG)
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No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	10894.000	44.45	-1.80	42.65	74.00	-31.35	peak
2	12704.500	42.95	-0.37	42.58	74.00	-31.42	peak
3 *	14617.000	42.28	0.86	43.14	74.00	-30.86	peak

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)

3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)

4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

 ${\bf 5.}~{\bf No}$  report for the emission which below the prescribed limit.

6. The peak value  $<\!$  average limit, So only show the peak value.



Tempe	rature:	<b>26.0</b> ℃			Relative I	lumidity:	54%
Test Vo	oltage:	DC 3.3V	anti-		10	1. F	200
Ant. Pol. Vertical							
Test Mode: BLE(1Mbps) Mode TX 2440 MHz							603
Remar	k:	Only wor	se case	is reporte	d.		3 0
90.0 d	Bu∀/m						
80							
70						(RF) FCC	PART 15C (PEAK)
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50							PART 15C (AVG)
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No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	11149.000	44.97	-2.17	42.80	74.00	-31.20	peak
2	12194.500	43.37	-0.88	42.49	74.00	-31.51	peak
3 *	14387.500	42.64	0.91	43.55	74.00	-30.45	peak

Remark:

- 1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
- 2. Peak/AVG (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)
- 3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)

4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value  $<\!$  average limit, So only show the peak value.



Temperature:	<b>26.0℃</b>	Relative Humidity:         54%						
Test Voltage:	DC 3.3V	DC 3.3V						
Ant. Pol.	Horizontal	TEL TOUR						
Test Mode: BLE(1Mbps) Mode TX 2480 MHz								
Remark:	Only worse case is repo	rted.						
90.0 dBu∀/m								
80		(RF) FCC PART 15C (PEAK)						
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60		(RF) FCC PART 15C (AVG)						
50	1 2	3 when when the second						
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No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	10843.000	45.13	-2.04	43.09	74.00	-30.91	peak
2 *	13469.500	43.28	0.13	43.41	74.00	-30.59	peak
3	14438.500	41.86	0.86	42.72	74.00	-31.28	peak

- 1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
- 2. Peak/AVG (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)
- 3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)
- 4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
- 5. No report for the emission which below the prescribed limit.
- 6. The peak value<average limit, So only show the peak value.



Tem	perature		<b>26.0</b> ℃			Relat	tive Hu	midity:	54%	
Test	t Voltage:		DC 3.3\		32		(Up)	1	~	100
Ant.	Ant. Pol. Vertical									
ſest	t Mode:		BLE(1Mbps) Mode TX 2480 MHz							2013
Ren	nark:		Only wo	rse case	is reporte	ed.			1	
90.0	dBuV/m		1							
80									<b>DID</b> 150 (	
70								(RF) FCC	PART 15C (F	<u>PEAKJ</u>
60								(BE) ECC	PART 15C (/	VG)
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No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	10970.500	44.96	-1.82	43.14	74.00	-30.86	peak
2	13163.500	42.72	-0.19	42.53	74.00	-31.47	peak
3	14770.000	41.50	0.66	42.16	74.00	-31.84	peak

- 1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
- 2. Peak/AVG (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)
- 3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)
- 4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
- 5. No report for the emission which below the prescribed limit.
- 6. The peak value<average limit, So only show the peak value.



Tem	perature:	<b>26.0</b> ℃			Rel	ative Hu	midity:	54%		
Test	t Voltage:	DC 3.3V		3.2		(AU)	200		19.00	
Ant.	. Pol.	Horizont	al		CAN .		(II)	NUL		
Test	t Mode:	BLE(2M	bps) Moo	de TX 24	02 MH:	z			503	
Ren	nark:	Only wo	Only worse case is reported.							
90.0	dBuV/m									
80								<b>DID</b> 150 (		
70							(HF) FCC	PART 15C (F	<u>'EAKJ</u>	
60							(BE) ECC	PART 15C (/	WG)	
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30		M. Margared Michael			VA	W <sup>r</sup>				
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-10										

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	10843.000	44.62	-2.04	42.58	74.00	-31.42	peak
2 *	13265.500	42.96	-0.20	42.76	74.00	-31.24	peak
3	14362.000	41.46	0.73	42.19	74.00	-31.81	peak

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)

3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)

4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

 $\ensuremath{\mathsf{5}}.$  No report for the emission which below the prescribed limit.

6. The peak value  $<\!$  average limit, So only show the peak value.



<b>26.0</b> ℃	Relat	ive Humidity:	54%
DC 3.3V	33	CULL -	
Vertical		61	
BLE(2Mbps) M	ode TX 2402 MHz		anis!
Only worse cas	e is reported.		200
		(RF) FCC	PART 15C (PEAK)
			PART 15C (AVG)
	Laparen Santa	Manana	hundre have a stand have a special of the second
nepenblower			
	DC 3.3V Vertical BLE(2Mbps) Mo Only worse cas	DC 3.3V Vertical	DC 3.3V Vertical BLE(2Mbps) Mode TX 2402 MHz Only worse case is reported. (RF) FCC

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	10894.000	43.76	-1.80	41.96	74.00	-32.04	peak
2	13163.500	42.19	-0.19	42.00	74.00	-32.00	peak
3 *	14744.500	41.41	0.74	42.15	74.00	-31.85	peak

- 1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
- 2. Peak/AVG (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)
- 3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)
- 4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
- 5. No report for the emission which below the prescribed limit.
- 6. The peak value<average limit, So only show the peak value.



Tem	perature:	<b>26.0</b> ℃		<b>Relative Humidity:</b>	54%						
Test	t Voltage:	DC 3.3V	137	TUP-	200						
Ant.	Pol.	Horizontal	Horizontal								
Test	t Mode:	BLE(2Mbps)	Mode TX 2440	) MHz	anis)						
Rem	nark:	Only worse of	case is reported	J.	a v						
90.0	dBu¥/m										
80											
70				(RF) FCC	PART 15C (PEAK)						
60											
50					PART 15C (AVG)						
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0											
-10	00.000 3550.00	6100.00 8650.00	11200.00 (MHz)	16300.00 18850.00 214	00.00 23950.00 26500						

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	11327.500	43.33	-1.11	42.22	74.00	-31.78	peak
2 *	13546.000	42.76	0.02	42.78	74.00	-31.22	peak
3	14566.000	41.68	0.79	42.47	74.00	-31.53	peak

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)

3. Margin (dB) = Peak/AVG (dB $\mu$ V/m)-Limit PK/AVG(dB $\mu$ V/m)

4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

 ${\bf 5.}~{\bf No}$  report for the emission which below the prescribed limit.

6. The peak value < average limit, So only show the peak value.



Tem	perature:	<b>26.0</b> ℃			Relativ	e Humidity:	54%	
Test	t Voltage:	DC 3.3V	anti			UPP	~	19.0.
Ant.	Pol.	Vertical	620	-01		10	NUL	
Test	t Mode:	BLE(2M	ops) Moo	de TX 244	0 MHz		-	2013
Rem	nark:	Only wor	se case	is reporte	d.		59.	
90.0	dBuV/m							
80						(05) 500		
70						(RF) FCC	PART 15C (F	PEAKJ
60						(BF) FCC	PART 15C (/	VG)
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0								
-10	00.000 3550.00	6100.00 865	0.00 112	00.00 (MHz)	16300.00	18850.00 214	00.00 239	50.00 26500

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	10817.500	44.81	-2.17	42.64	74.00	-31.36	peak
2	13418.500	42.18	0.17	42.35	74.00	-31.65	peak
3 *	14872.000	41.61	1.14	42.75	74.00	-31.25	peak

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)

3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)

4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value<average limit, So only show the peak value.



Temperature:	<b>26.0</b> ℃			Relative H	umidity:	54%	
Test Voltage:	DC 3.3V	100	5	110	L'ES		And A
Ant. Pol.	Horizonta				n	NUD	
Fest Mode:	BLE(2Mb	ps) Mode	TX 2480 I	MHz	NU	6	and
Remark:	Only wors	se case is	reported.	(TU)		<u> </u>	
90.0 dBuV/m							
80							
70						PART 15C (P	
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50						PART 15C (A)	
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20 Million Martin Martin							
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No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	10843.000	44.09	-2.04	42.05	74.00	-31.95	peak
2	13546.000	42.54	0.02	42.56	74.00	-31.44	peak
3 *	14387.500	42.72	0.91	43.63	74.00	-30.37	peak

- 1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
- 2. Peak/AVG (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)
- 3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)
- 4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
- 5. No report for the emission which below the prescribed limit.
- 6. The peak value  $\leq$  average limit, So only show the peak value.



Ten	nperature:	<b>26.0</b> ℃		<b>Relative Humidity</b>	: 54%
Tes	t Voltage:	DC 3.3V			nus a
Ant	t. Pol.	Vertical	AV		Con B
Tes	t Mode:	BLE(2Mbps	) Mode TX 248	0 MHz	
Remark: Only worse case is reported.					
90.0	dBu∀/m				
80				(85) 57	CC PART 15C (PEAK)
70					
60				(BF) FC	CC PART 15C (AVG)
50			1 0		
40			Martin Samuel	and a second and a second	the manufacture of the second se
30		John Mary Maria Carles		W	
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10					
-					
10 0 -10	100.000 3550.00	6100.00 8650.00	11200.00 (MHz)	16300.00 18850.00 2	1400.00 23950.00 265

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	10945.000	44.19	-1.80	42.39	74.00	-31.61	peak
2	12500.500	43.25	-0.78	42.47	74.00	-31.53	peak
3 *	14336.500	41.96	0.55	42.51	74.00	-31.49	peak

- 1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
- 2. Peak/AVG (dBµV/m)= Corr. (dB/m)+ Read Level (dBµV)
- 3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)
- 4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
- 5. No report for the emission which below the prescribed limit.
- 6. The peak value<average limit, So only show the peak value.



# **Attachment C-- Restricted Bands Data**

		144	120							
Temper	ature:	23.5	5℃	61	32	Rela	ative H	lumidity:	46%	Photo -
Fest Vo	Itage:	DC	3.3V	Che and a start		C.F.		(III)	1933	-
Ant. Po	Ι.	Hori	zonta	al			-		6	66
Fest Mc	ode:	BLE	(1Mb	ops) Mo	de TX 240	2 MHz	NUP		3.6	
Remark	:	N/A			and	3		CALL!		-
120.0 dBu	V/m									
10										$\land$
100									1	
0		_						2.4G Restricte	d Band-(Peak)	
'0								-		$\rightarrow$
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50	3							× 2.4G Restricter	d Band-(AYG)	pe
10										
80										
20.0										
2355.500	2360.50	365.50	2370	.50 23	75.50 (MHz)	238	5.50 2	2390.50 2395	.50 2400.9	50 2405.
No.	Freque (MHz			ading BuV)	Factor (dB/m)		vel iV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	0000.0	50	54	1.78	4.70	59	.48	74.00	-14.52	peak
1	2362.0	50	-							
1 2 *	2362.0		46	6.29	4.70	50	.99	54.00	-3.01	AVG
		50		6.29 2.64	4.70 4.80		.99 .44	54.00 74.00	-3.01 -16.56	AVG peak

# Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB) 2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)



Temperature:	23.5℃	Relative Humidity:         46%
Test Voltage:	DC 3.3V	
Ant. Pol.	Vertical	THE TOUL
Test Mode:	BLE(1Mbps) Mode	TX 2402 MHz
Remark:	N/A	
120.0 dBuV/m		
110		
100		
90		
80		2.4G Restricted Band-(Peak)
70		
60 1 ×		2.4G Restricted Band-(AVG)
50	Care en marine anno anno anno anno anno anno anno an	pe
40		
30		
20.0 2355.500 2360.50	) 2365.50 2370.50 2375.5	50 (MHz) 2385.50 2390.50 2395.50 2400.50 2405.5

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2362.050	54.23	4.70	58.93	74.00	-15.07	peak
2 *	2362.050	45.78	4.70	50.48	54.00	-3.52	AVG
3	2390.000	53.90	4.80	58.70	74.00	-15.30	peak
4	2390.000	44.12	4.80	48.92	54.00	-5.08	AVG

- 1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB) 2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
- 3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)



Temperature:	<b>23.5℃</b>	Relative Humidity:46%	
Test Voltage:	DC 3.3V		22
Ant. Pol.	Horizontal	and another	-
Test Mode:	BLE(1Mbps) Mode	TX 2480 MHz	3
Remark:	N/A		
120.0 dBu∀/m			
110			
100			
80			
80		2.4G Restricted Band-(Peak)	
70			
60	1 X 2	2.4G Restricted Band-(AVG)	
50	**************************************		<b>p</b>
40			
30			
20.0			- I

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	2483.500	52.50	5.15	57.65	74.00	-16.35	peak
2 *	2483.500	46.16	5.15	51.31	54.00	-2.69	AVG

- Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
   Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
- 3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)



Femperature:	<b>23.5℃</b>	Relative Humidity: 46%	
Fest Voltage:	DC 3.3V		395
Ant. Pol.	Vertical	TOBY TODY	-
Fest Mode:	BLE(1Mbps) Mode	TX 2480 MHz	13
Remark:	N/A		
120.0 dBu∀/m			
110			
00			
10			
30		2.4G Restricted Band-(Peak)	
70			
	1 X	2.4G Restricted Band-(AVG)	
50	2		~~~~pe
10			
30			
20.0			

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	2483.500	51.95	5.15	57.10	74.00	-16.90	peak
2 *	2483.500	45.67	5.15	50.82	54.00	-3.18	AVG

- Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
   Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
- 3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)



Temperature:	<b>23.5℃</b>	Relative Humidity:46%
Test Voltage:	DC 3.3V	
Ant. Pol.	Horizontal	TOP TOP
Test Mode:	BLE(2Mbps) Mode T	X 2402MHz
Remark:	N/A	
120.0 dBuV/m		
110		
30		
70		2.4G Restricted Band-(Peak)
60		2.46 Restricted Band (AVG)
50	and a second and a second s	
40		
20.0		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	53.43	4.80	58.23	74.00	-15.77	peak
2 *	2390.000	44.46	4.80	49.26	54.00	-4.74	AVG

- Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
   Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
- 3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)



Tem	nperature:	<b>23.5℃</b>		Relative Humidity	/: 46%
Test	t Voltage:	DC 3.3V	JUPP -	AUDE -	~ 19
Ant	. Pol.	Vertical		83	mus ~
Test	t Mode:	BLE(2Mbps	s) Mode TX 2402	2MHz	COD'S
Ren	nark:	N/A		01U	1
120.0	dBu¥/m				
110					
100					
90   80					
70				2.4G Rest	ricted Band-(Peak)
60	Ž			3 X 2 45 Best	ricted Band (AVG)
50		****			P
40					
30 20.0					
L	55.500 2360.50	2365.50 2370.50	2375.50 (MHz)	2385.50 2390.50 2	2395.50 2400.50 2405.

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	2362.050	44.98	4.70	49.68	54.00	-4.32	AVG
2	2362.350	54.02	4.70	58.72	74.00	-15.28	peak
3	2390.000	52.32	4.80	57.12	74.00	-16.88	peak
4	2390.000	44.34	4.80	49.14	54.00	-4.86	AVG

- 1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB) 2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
- 3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)



Temperature:	<b>23.5℃</b>	Relative Humidity:	: 46%
Fest Voltage:	DC 3.3V	BU TOUR	200
Ant. Pol.	Horizontal		1000
est Mode:	BLE(2Mbps) M	lode TX 2480MHz	and b
Remark:	N/A		
20.0 dBu¥/m			
10			
00			
0			
0			
0		2.4G Re	stricted Band-(Peak)
	1 X		
	8	2.4G Re	stricted Band-(AVG)
50	California and a second	an a	and a second and a second s
0			
0			
20.0			

N	lo.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1	2483.500	54.23	5.15	59.38	74.00	-14.62	peak
2	. *	2483.500	46.30	5.15	51.45	54.00	-2.55	AVG

- Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
   Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
- 3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)

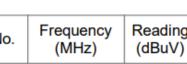




No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	2483.500	52.81	5.15	57.96	74.00	-16.04	peak
2 *	2483.500	46.07	5.15	51.22	54.00	-2.78	AVG

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB) 2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBµV/m)-Limit PK/AVG(dBµV/m)



Temperature:	<b>23.5℃</b>	Relative Humidity:	46%				
Test Voltage:	DC 3.3V						
Ant. Pol.	Vertical BLE(2Mbps) Mode TX 2480MHz						
Fest Mode:							
Remark:	N/A						
120.0 dBuV/m							
110							
		2.4G Restrict	ed Band-(Peak)				
		2.4G Restrict	ed Band-(AVG)				
40							
30							

