



Report No.: TBR-C-202308-0079-2 Page: 1 of 68

RF Test Report

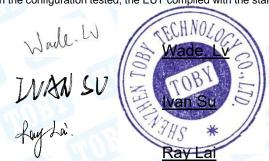
FCC ID: 2AMM6-8822CSE3AA

Report No.	RE	TBR-C-202308-0079-2		
Applicant	:	Earda Technologies Co., Ltd		
Equipment Under T	'est (E	EUT)		
EUT Name	-	WiFi & BT combo module		
Model No.	1	EWN-8822CSE3AA		
Series Model No.	:			
Brand Name	11	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	1	2023-09-06		
Standards		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.		
		out No.		

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-202308-0079-2	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	Earda Technologies Co., Ltd		
Address	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				
Con Con		Operation Frequency:	Bluetooth 5.0(BR+EDR): 2402MHz~2480MHz	
Product Description		Number of Channel:	79 channels	
		Antenna Gain:	5.0dBi PCB Antenna	
		Modulation Type:	GFSK(1Mbps) π/4-DQPSK(2Mbps) 8DPSK(3Mbps)	
Power Rating	-	Input: DC 3.3V		
Software Version		v5.15.0.1-36		
Hardware Version	2	A1.0		
Pomork:				

Remark:

(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.

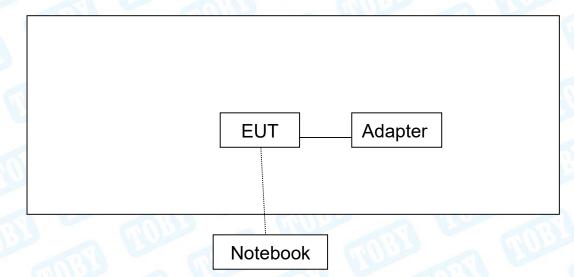


(4)Channel List:

	Bluetooth Channel List				
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	27	2429	54	2456
01	2403	28	2430	55	2457
02	2404	29	2431	56	2458
03	2405	30	2432	57	2459
04	2406	31	2433	58	2460
05	2407	32	2434	59	2461
06	2408	33	2435	60	2462
07	2409	34	2436	61	2463
08	2410	35	2437	62	2464
09	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		



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	alt -	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.

For Conducted Test(AC POWER)				
Final Test Mode Description				
Mode 1 TX GFSK Mode Channel 00				
For	Radiated and RF Conducted Test			
Final Test Mode	Description			
Mode 1	TX GFSK Mode Channel 00			
Mode 2	TX Mode(GFSK) Channel 00/39/78			
Mode 3 TX Mode(π /4-DQPSK) Channel 00/39/78				
Mode 4	TX Mode(8DPSK) Channel 00/39/78			
Mode 5	Hopping Mode(GFSK)			
Mode 6 Hopping Mode(π /4-DQPSK)				
Mode 7 Hopping Mode(8DPSK)				

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:

TX Mode: GFSK (1 Mbps)

TX Mode: π /4-DQPSK (2 Mbps)

TX Mode: 8DPSK (3 Mbps)

- (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.

st Software Version		Bluetooth RF Test T	ool	
Frequency	2402MHz	2441MHz	2480MHz	
GFSK	DEF	DEF	DEF	
π /4-DQPSK	DEF	DEF	DEF	
8DPSK	DEF	DEF	DEF	
Non Link Mode Hopping LE Test RW Channel 0 Packet Type DH5 Payload Type PRBS9 Tx Packet Count 0 Whitening Enable	Ersion :5.3.2.26 RTLBTAPP Version Baudrate=115200 Pkt-Tx (for MP) Exec Stop Item Value Tx bits 000000 Tx Report Tx Report	REALTEK	Hot Key HCI Reset Test Mode Read BD Address GetChipInfo ShowTxPower Read Thermal Power Tracking C OFF Set © ON Get	
Message >>>Det Chip Info is Fail!! >>Get Chip Info is Fail!! >>Get Chip Info is Fail!! >>AsP_bt_Download_PatchCode()-Pre Check to Get Chip >>Get Chip Info is Fail!! >>Get Chip Info is Fail!! >>Get Chip info erol!! Support LE Enhanced Test Command >>pBTInfo is NULLUnknow device!! >>Deen device successfully >>DEt Crystal table is Fail!!! >>XTAL Tracking function (No Support)!! Get Crystal Fail	ip info error!!	E	V Patch Code Load Script Dynamic Log PHY_STAGE	



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 _{Lab})
Conducted Emission	Level Accuracy: 9kHz~150kHz 150kHz to 30MHz	±3.50 dB ±3.10 dB
Radiated Emission	Level Accuracy: 9kHz to 30 MHz	±4.60 dB
Radiated Emission	Level Accuracy: 30MHz to 1000 MHz	±4.50 dB
Radiated Emission	Level Accuracy: Above 1000MHz	±4.20 dB



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	Teet litere		ludamont	Demeril
FCC	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)	99% Occupied Bandwidth & 20dB Bandwidth	HC-C-202308-0079-01-03-2#	PASS	N/A
FCC 15.247(b)(1)	Peak Output Power	HC-C-202308-0079-01-03-2#	PASS	N/A
FCC 15.247(a)(1)	Carrier frequency separation	HC-C-202308-0079-01-03-2#	PASS	N/A
FCC 15.247(a)(1)	Time of occupancy	HC-C-202308-0079-01-03-2#	PASS	N/A
FCC 15.247(b)(1)	Number of Hopping Frequency	HC-C-202308-0079-01-03-2#	PASS	N/A
FCC 15.247(d)	Band Edge	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 15.205	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

Conducted Emiss			1		
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	B)			1.00
RF Switching Unit	Direction Systems	RSU-A4	34403	Jun. 20, 2023	Jun. 19, 2024
TOBU -	Inc	3	Te la		
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	Dahda & Oakuran		400407	hun 00,0000	hum 40,0004
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	6102	N/A	N/A
Highpass Filter	XINBO	XBLBQ-HTA67(8-25G)	22052702-1	N/A	N/A
Antenna Conduct	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
MXA Signal Analyzer	Agilent	N9020A	MY47380425	Aug. 30, 2023	Aug. 29, 2024





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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
(R)	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 Comunication Tester	Rohde & Schwarz	CMW500	144382	Aug. 30, 2023	Aug. 29, 2024
Universal Radio Communication Tester	Rohde&Schwarz	CMW500	168796	Feb. 23, 2023	Feb.22, 2024
Temperature and 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

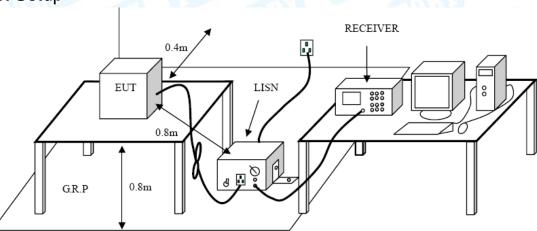
5.1.2 Test Limit

Frequency	Maximum RF Line Voltage (dBμV)		
Frequency	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

General field strength limits at frequencies Below 30MHz		
Frequency (MHz)	Field Strength (microvolt/meter)**	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	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.

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	requencyDistance of 3m (dBuV/m)(MHz)PeakAverage		
(MHz)			
Above 1000	74	54	

Note:

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

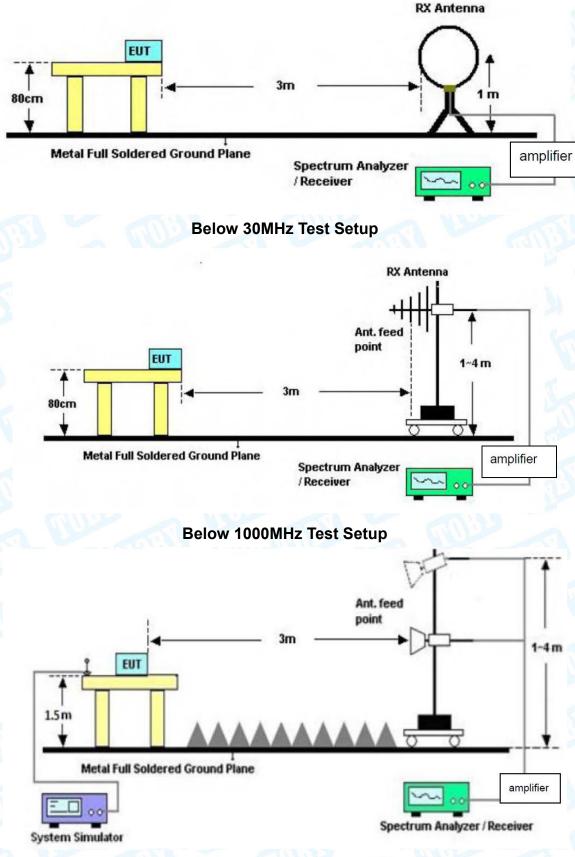
(2) Emission Level(dBuV/m)=20log Emission Level(uV/m)

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.



6.2 Test Setup

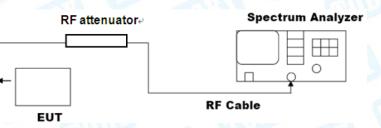
Radiated measurement



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 BT.





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)

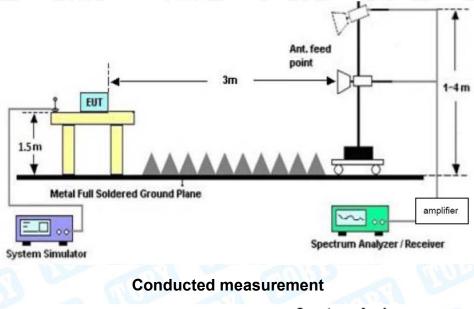
7.1.2 Test Limit

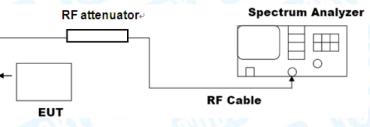
Restricted Frequency	Distance Meters(at 3m)		
Band (MHz)	Peak (dBuV/m)	Average (dBuV/m)	
2310 ~2390	74	54	
2483.5 ~2500	74	54	
	Peak (dBm)see 7.3 e)	Average (dBm) see 7.3 e)	
2310 ~2390	-21.20	-41.20	
2483.5 ~2500	-21.20	-41.20	

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.

Radiated measurement

7.2 Test Setup







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. 99% Occupied and 20dB Bandwidth

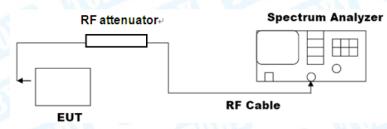
- 8.1 Test Standard and Limit
 - 8.1.1 Test Standard

FCC Part 15.205 & FCC Part 15.247(a)

8.1.2 Test Limit

For an FHSS system operating in the 2400 to 2483.5 MHz band, there are no limits for 20dB bandwidth and 99% occupied bandwidth.

8.2 Test Setup



8.3 Test Procedure

● 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 recorded as the lower frequency is recorded as 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 BT.



9. Peak Output Power Test

9.1 Test Standard and Limit

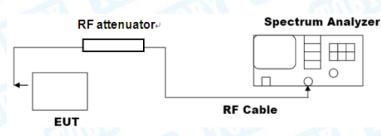
9.1.1 Test Standard

FCC Part 15.247(b)(1)

9.1.2 Test Limit

Test Item	Limit	Frequency Range(MHz)	
Peak Output Power	$P_{max-pk} \le 1 W$ $N_{ch} \ge 75$ $f \ge MAX \{ 25 \text{ kHz, BW20dB} \}$ max. BW20dB not specified $tch \le 0.4 \text{ s for } T = 0.4*Nch$ P max-pk $\le 0.125 W$ $Nch \ge 15$ $f \ge [MAX\{25 \text{ kHz, 0.67*BW20dB}\}$ OR MAX $\{25 \text{ kHz, BW20dB} \}$ max. BW20dB not specified $tch \le 0.4 \text{ s for } T = 0.4*Nch$	2400~2483.5	
	t_{ch} = average time of occupancy; T = period; N_{ch} = # hopping frequencies; BW = bandwidth;		
f = hopping channel carrier frequency separation			

9.2 Test Setup



9.3 Test Procedure

● This is an RF-conducted test to evaluate maximum peak output power. Use a direct connection between the antenna port of the unlicensed wireless device and the spectrum analyzer, through suitable attenuation. The hopping shall be disabled for this test:

- a) Use the following spectrum analyzer settings:
 - 1) Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel.
 - 2) RBW > 20 dB bandwidth of the emission being measured.
 - 3) VBW≥ RBW.
 - 4) Sweep: Auto.
 - 5) Detector function: Peak.
 - 6) Trace: Max hold.
- b) Allow trace to stabilize.
- c) Use the marker-to-peak function to set the marker to the peak of the emission.
- d) The indicated level is the peak output power, after any corrections for external attenuators and cables.
- e) A plot of the test results and setup description shall be included in the test report.

NOTE-A peak responding power meter may be used, where the power meter and sensor system video bandwidth is greater than the occupied bandwidth of the unlicensed wireless device, rather than a spectrum analyzer.





- 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 BT.



10. Carrier frequency separation

10.1 Test Standard and Limit

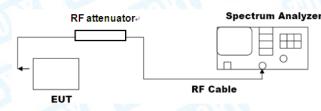
10.1.1 Test Standard

FCC Part 15.247(a)(1)

10.1.2 Test Limit

Test Item	Limit	Frequency Range(MHz)
Carrier frequency separation	$P_{max-pk} \le 1 W$ $N_{ch} \ge 75$ $f \ge MAX \{ 25 \text{ kHz}, BW_{20dB} \}$ $max. BW_{20dB} \text{ not specified}$ $tch \le 0.4 \text{ s for } T = 0.4*N_{ch}$ $P_{max-pk} \le 0.125 W$ $Nch \ge 15$ $f \ge [MAX\{25 \text{ kHz}, 0.67*BW_{20dB}\}$ $OR MAX\{25 \text{ kHz}, BW_{20dB} \}$ $max. BW_{20dB} \text{ not specified}$ $tch \le 0.4 \text{ s for } T = 0.4*N_{ch}$	2400~2483.5
	ccupancy; <i>T</i> = period; <i>N</i> _{ch} = # hopping <i>f</i> = hopping channel carrier frequency	

10.2 Test Setup



10.3 Test Procedure

• The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

a) Span: Wide enough to capture the peaks of two adjacent channels.

b) RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.

- c) Video (or average) bandwidth (VBW) \ge RBW.
- d) Sweep: Auto.
- e) Detector function: Peak.

f) Trace: Max hold.

g) Allow the trace to stabilize.

Use the marker-delta function to determine the separation between the peaks of the adjacent channels.

Compliance of an EUT with the appropriate regulatory limit shall be determined. A plot of the data shall be included in the test report.





- 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 BT.



11. Time of occupancy (dwell time)

11.1 Test Standard and Limit

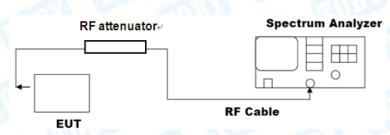
11.1.1 Test Standard

FCC Part 15.247(a)(1)

11.1.2 Test Limit

Test Item	Limit	Frequency Range(MHz)
Time of occupancy (dwell time)	$P_{max-pk} \le 1 W$ $N_{ch} \ge 75$ $f \ge MAX \{ 25 \text{ kHz}, BW_{20dB} \}$ $max. BW_{20dB} \text{ not specified}$ $tch \le 0.4 \text{ s for } T = 0.4^*N_{ch}$ $P_{max-pk} \le 0.125 W$ $N_{ch} \ge 15$ $f \ge [MAX\{25 \text{ kHz}, 0.67^*BW_{20dB}\}$ $OR MAX\{25 \text{ kHz}, BW_{20dB} \}$ $max. BW_{20dB} \text{ not specified}$ $tch \le 0.4 \text{ s for } T = 0.4^*N_{ch}$	2400~2483.5
t_{ch} = average time of occupancy; T = period; N_{ch} = # hopping frequencies; BW = bandwidth;		
	f = hopping channel carrier frequency s	separation

11.2 Test Setup



11.3 Test Procedure

The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

a) Span: Zero span, centered on a hopping channel.

b) RBW shall be \Box channel spacing and where possible RBW should be set >> 1 / T, where T is the expected dwell time per channel.

c) Sweep: As necessary to capture the entire dwell time per hopping channel; where possible use a video trigger and trigger delay so that the transmitted signal starts a little to the right of the start of the plot. The trigger level might need slight adjustment to prevent triggering when the system hops on an adjacent channel; a second plot might be needed with a longer sweep time to show two successive hops on a channel.

- d) Detector function: Peak.
- e) Trace: Max hold.

Use the marker-delta function to determine the transmit time per hop. If this value varies with different modes of operation (data rate, modulation format, number of hopping







channels, etc.), then repeat this test for each variation in transmit time.

Repeat the measurement using a longer sweep time to determine the number of hops over the period specified in the requirements. The sweep time shall be equal to, or less than, the period specified in the requirements. Determine the number of hops over the sweep time and calculate the total number of hops in the period specified in the requirements, using the following equation:

(Number of hops in the period specified in the requirements) =

(number of hops on spectrum analyzer)x(period specified in the requirements / analyzer sweep time)

The average time of occupancy is calculated from the transmit time per hop multiplied by the number of hops in the period specified in the requirements. If the number of hops in a specific time varies with different modes of operation (data rate, modulation format, number of hopping channels, etc.), then repeat this test for each variation.

The measured transmit time and time between hops shall be consistent with the values described in the operational description for the EUT.

- 11.4 Deviation From Test Standard No deviation
- 11.5 Antenna Connected Construction

Please refer to the description of test mode.

11.6 Test Data

Please refer to the external appendix report of BT.



12. Number of hopping frequencies

12.1 Test Standard and Limit

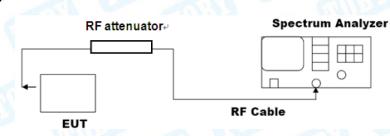
12.1.1 Test Standard

FCC Part 15.247(b)(1)

12.1.2 Test Limit

Test Item	Limit	Frequency Range(MHz)
Carrier frequency separation	$P_{\text{max-pk}} \le 1 \text{ W}$ $N_{ch} \ge 75$ $f \ge MAX \{ 25 \text{ kHz}, BW_{20dB} \}$ $max. BW_{20dB} \text{ not specified}$ $tch \le 0.4 \text{ s for } T = 0.4*Nch$ $P_{\text{max-pk}} \le 0.125 \text{ W}$ $Nch \ge 15$ $f \ge [MAX\{25 \text{ kHz}, 0.67*BW_{20dB}\}$ $OR MAX\{25 \text{ kHz}, BW_{20dB} \}$ $max. BW_{20dB} \text{ not specified}$ $tch \le 0.4 \text{ s for } T = 0.4*Nch$	2400~2483.5
	ccupancy; $T =$ period; $N_{ch} = #$ hopping $f =$ hopping channel carrier frequency	

12.2 Test Setup



12.3 Test Procedure

● The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

a) Span: The frequency band of operation. Depending on the number of channels the device supports, it may be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.

b) RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.

c) VBW ≥ RBW.

d) Sweep: Auto.

e) Detector function: Peak.

f) Trace: Max hold.

g) Allow the trace to stabilize.

It might prove necessary to break the span up into subranges to show clearly all of the hopping frequencies.

Compliance of an EUT with the appropriate regulatory limit shall be determined for the number of hopping channels. A plot of the data shall be included in the test report.

12.4 Deviation From Test Standard

No deviation

12.5 Antenna Connected Construction

Please refer to the description of test mode.





12.6 Test Data

Please refer to the external appendix report of BT.



13. Antenna Requirement

13.1 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.

13.2 Deviation From Test Standard

No deviation

13.3 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.

13.4 Test Data

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

Antenna Type				
Permanent attached antenna				
Unique connector antenna	3			
Professional installation antenna				



Attachment A-- Conducted Emission Test Data

Temperature	: 22.8 ℃	-02	Re	lative Hum	idity:	50%	
Fest Voltage	: AC 120	V/60Hz		1 P	E	ABL.	
Terminal:	Line		CIO.				TO SI
Fest Mode:	Mode 1	an Bu		and	2		190
Remark:	Only wo	orse case is	reported.		GAN	197	-
80.0 dBuV						QP:	
30		× Mun IIII	w. Munduland	MMM	VWV ^{VXM} M www.	Weigen for the former	ПЛ 10 10 10 10 10 10 10 10 10 10 10 10 10
	mark mark	war yo may an a flat for the flat of the start of the sta	WILLIGE AND	a 1 1 1 1 1			
20 0.150 No. Mk	0.5	Reading	(MHz) Correct Factor	5 Measure- ment	Limit	Over	30.000
0.150			Correct	Measure-	Limit	Over	30.000 Detector
0.150	. Freq.	Level	Correct Factor	Measure- ment			
0.150 No. Mk	. Freq. MHz	Level dBuV	Correct Factor dB	Measure- ment dBuV	dBuV	dB -41.65	Detector
0.150 No. Mk	. Freq. MHz 0.1539	Level dBuV 12.92	Correct Factor dB 11.21	Measure- ment dBuV 24.13	dBuV 65.78	dB -41.65	Detector
0.150 No. Mk	. Freq. MHz 0.1539 0.1539	Level dBuV 12.92 -3.21	Correct Factor dB 11.21 11.21	Measure- ment dBuV 24.13 8.00	dBuV 65.78 55.78 58.06	dB -41.65 -47.78	Detector QP AVG
No. Mk	. Freq. MHz 0.1539 0.1539 0.3899	Level dBuV 12.92 -3.21 5.22	Correct Factor dB 11.21 11.21 11.23	Measure- ment dBuV 24.13 8.00 16.45	dBuV 65.78 55.78 58.06	dB -41.65 -47.78 -41.61 -41.00	Detector QP AVG QP
0.150 No. Mk	. Freq. MHz 0.1539 0.1539 0.3899 0.3899	Level dBuV 12.92 -3.21 5.22 -4.17	Correct Factor dB 11.21 11.21 11.23 11.23	Measure- ment dBuV 24.13 8.00 16.45 7.06	dBuV 65.78 55.78 58.06 48.06 56.00	dB -41.65 -47.78 -41.61 -41.00	Detector QP AVG QP AVG QP
No. Mk	. Freq. MHz 0.1539 0.1539 0.3899 0.3899 0.3899 0.7019	Level dBuV 12.92 -3.21 5.22 -4.17 3.97	Correct Factor dB 11.21 11.21 11.23 11.23 11.00	Measure- ment dBuV 24.13 8.00 16.45 7.06 14.97	dBuV 65.78 55.78 58.06 48.06 56.00 46.00	dB -41.65 -47.78 -41.61 -41.00 -41.03	Detector QP AVG QP AVG QP
No. Mk	. Freq. MHz 0.1539 0.1539 0.3899 0.3899 0.3899 0.7019 0.7019	Level dBuV 12.92 -3.21 5.22 -4.17 3.97 -4.20	Correct Factor dB 11.21 11.21 11.23 11.23 11.00 11.00	Measure- ment dBuV 24.13 8.00 16.45 7.06 14.97 6.80	dBuV 65.78 55.78 58.06 48.06 56.00 46.00 56.00	dB -41.65 -47.78 -41.61 -41.00 -41.03 -39.20	Detector QP AVG QP AVG QP AVG QP
No. Mk	. Freq. MHz 0.1539 0.1539 0.3899 0.3899 0.3899 0.7019 0.7019 1.6060	Level dBuV 12.92 -3.21 5.22 -4.17 3.97 -4.20 3.01	Correct Factor dB 11.21 11.21 11.23 11.23 11.00 11.00 10.86	Measure- ment dBuV 24.13 8.00 16.45 7.06 14.97 6.80 13.87	dBuV 65.78 55.78 58.06 48.06 56.00 46.00 56.00	dB -41.65 -47.78 -41.61 -41.00 -41.03 -39.20 -42.13 -39.55	Detector QP AVG QP AVG QP AVG QP
0.150 No. Mk 1 2 3 4 5 6 7 8	. Freq. MHz 0.1539 0.1539 0.3899 0.3899 0.3899 0.7019 0.7019 1.6060 1.6060	Level dBuV 12.92 -3.21 5.22 -4.17 3.97 -4.20 3.01 -4.41	Correct Factor dB 11.21 11.21 11.23 11.23 11.00 11.00 10.86 10.86	Measure- ment dBuV 24.13 8.00 16.45 7.06 14.97 6.80 13.87 6.45	dBuV 65.78 55.78 58.06 48.06 56.00 46.00 46.00	dB -41.65 -47.78 -41.61 -41.00 -41.03 -39.20 -42.13 -39.55 -38.46	Detector QP AVG QP AVG QP AVG QP AVG
0.150 No. Mk 1 2 3 4 5 6 7 8 9	. Freq. MHz 0.1539 0.1539 0.3899 0.3899 0.7019 0.7019 1.6060 1.6060 4.0340	Level dBuV 12.92 -3.21 5.22 -4.17 3.97 -4.20 3.01 -4.41 7.31	Correct Factor dB 11.21 11.21 11.23 11.23 11.00 11.00 10.86 10.86 10.23	Measure- ment dBuV 24.13 8.00 16.45 7.06 14.97 6.80 13.87 6.45 17.54	dBuV 65.78 55.78 58.06 48.06 56.00 46.00 56.00 46.00 46.00	dB -41.65 -47.78 -41.61 -41.00 -41.03 -39.20 -42.13 -39.55 -38.46	Detector QP AVG QP AVG QP AVG QP AVG QP

Remark:

TOBY Part of the Category

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

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



Temperature:	22.8 ℃	Relative Humidity:	50%
Test Voltage:	AC 120V/60Hz	60057	- 50
Terminal:	Neutral		TEL T
Test Mode:	Mode 1		
Remark:	Only worse case is re	ported.	2 100
80.0 dBuV 30 X X X X X X X X X X X X X X X X X X X	× × · · · · · · · · · · · · · · · · · ·	Martine and a contract of the second of the	
20			

MHz 0.1580 0.1580 0.1900	dBuV 11.68 -2.68	dB 11.21 11.21	dBuV 22.89	dBuV 65.56	dB -42.67	Detector
0.1580	-2.68			65.56	-42.67	
		11.21				QP
0.1900	7.00		8.53	55.56	-47.03	AVG
	7.09	11.13	18.22	64.03	-45.81	QP
0.1900	-3.28	11.13	7.85	54.03	-46.18	AVG
0.4340	17.29	11.32	28.61	57.18	-28.57	QP
0.4340	-0.37	11.32	10.95	47.18	-36.23	AVG
0.6060	12.09	11.23	23.32	56.00	-32.68	QP
0.6060	-2.43	11.23	8.80	46.00	-37.20	AVG
8.1620	17.86	10.21	28.07	60.00	-31.93	QP
8.1620	9.70	10.21	19.91	50.00	-30.09	AVG
17.0340	13.50	10.75	24.25	60.00	-35.75	QP
17.0340	8.66	10.75	19.41	50.00	-30.59	AVG
	0.4340 0.4340 0.6060 0.6060 8.1620 8.1620 17.0340	0.4340 17.29 0.4340 -0.37 0.6060 12.09 0.6060 -2.43 8.1620 17.86 8.1620 9.70 17.0340 13.50	0.434017.2911.320.4340-0.3711.320.606012.0911.230.6060-2.4311.238.162017.8610.218.16209.7010.2117.034013.5010.75	0.434017.2911.3228.610.4340-0.3711.3210.950.606012.0911.2323.320.6060-2.4311.238.808.162017.8610.2128.078.16209.7010.2119.9117.034013.5010.7524.25	0.434017.2911.3228.6157.180.4340-0.3711.3210.9547.180.606012.0911.2323.3256.000.6060-2.4311.238.8046.008.162017.8610.2128.0760.008.16209.7010.2119.9150.0017.034013.5010.7524.2560.00	0.4340 17.29 11.32 28.61 57.18 -28.57 0.4340 -0.37 11.32 10.95 47.18 -36.23 0.6060 12.09 11.23 23.32 56.00 -32.68 0.6060 -2.43 11.23 8.80 46.00 -37.20 8.1620 17.86 10.21 28.07 60.00 -31.93 8.1620 9.70 10.21 19.91 50.00 -30.09 17.0340 13.50 10.75 24.25 60.00 -35.75

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

Temperatu	i re: 23	3.3℃	B	2		Relative H	lumidity:	48%	
Test Voltag		C 120	V/60H	z			N.V.	-	
Ant. Pol.	Н	orizon	tal		6	A B	~	MUY	~
Test Mode	: M	lode 1		×		6			0100
Remark:	0	nly wc	orse ca	ase	is reported.		2		
80.0 dBuV/m									
70									
60									
50							(RF)FCC 1 Margin -6	SC 3M Radiatio	"
							maiyin ~	db	+++1
40									+++1
30							5	When Aller March other	humhulphkupeak
20	2 Mm ¹⁴		$\left \right $	3 X	A	Well	S	Chert-Friend	
10	Alona alessanana	www.whyt	a strategy with	me UNder	hardsonensummer	Man all and a start			
0			++						+
-10			$\left \right $						
-20 30.000	6	0.00			(MHz)	3(00.00		1000.000
No. F	requence (MHz)	-	Readir (dBu∖	<u> </u>	Factor (dB/m)	Level (dBuV/m	Limit) (dBuV/m)	Margin (dB)	Detector
1 *	35.6240	2	47.40	٥	-22.90	24.50	40.00	-15.50	peak
2	46.3402	2	40.14	4	-22.66	17.48	40.00	-22.52	peak
3	108.266	7	40.81	1	-24.90	15.91	43.50	-27.59	peak
4	122.404	0	40.93	3	-23.67	17.26	43.50	-26.24	peak
5 4	406.088	0	38.06	δ	-17.72	20.34	46.00	-25.66	peak
6	766.057	1	37.77	7	-9.72	28.05	46.00	-17.95	peak

Remark:

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

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

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



Tempera	ature:	23.3°	C			Relative H	umidity	/: ·	48%	-
Test Vo	tage:	AC 12	20V/60	Hz	27	5	00		-	anne
Ant. Po	l.	Vertic	al	(JU)		21 12		11.5	BJ	
Test Mo	de:	Mode	1			in the second	5	N.S.	-	533
Remark	:	Only	worse	case	is reported	1970 .	05		2 1	No.
80.0 dBu	V/m									
70										
60										
50								IF)FCC 150 argin -6 dE	C 3M Radiation	° с
40										<mark>-</mark> -
									6 X	
30 1 X	<u>v</u> 2			2	4		57		and man work	Manager Beak
20	Marthan	way why	۰.M.	×	Anomorphic	4 deducer work	Mylanumater	MANYANA	n	when you peak
10		1.4	ing here	ANY AN	1	ogeneration of the second				
0			_							
-10										
-20 30.000		60.00			(MHz)	3	00.00			1000.000
No.	Frequ (Mł		Read (dBu	<u> </u>	Factor (dB/m)	Level (dBuV/m		mit ıV/m)	Margin (dB)	Detector
1 *	35.4	993	48.7	70	-22.91	25.79	40	.00	-14.21	peak
2	45.8	553	42.6	63	-22.68	19.95	40	.00	-20.05	peak
3	108.2	2667	43.3	30	-24.90	18.40	43	.50	-25.10	peak
						-				

19.41

25.54

31.63

43.50

46.00

46.00

-24.09

-20.46

-14.37

peak

peak

peak

Remark:

4

5

6

Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
 QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

122.4040

407.5145

760.7036

43.08

43.24

41.47

-23.67

-17.70

-9.84

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



Above 1GHz

Temperature:	26.0℃ Relative Humidi	ty: 54%
Test Voltage:	DC 3.3V	
Ant. Pol.	Horizontal	TOB!
Test Mode:	1DH5 Mode TX 2402 MHz	
Remark:	Only worse case is reported.	~
90.0 dBuV/m		
80		
70	(H+)	FCC PART 15C (PEAK)
60	(RF)	FCC PART 15C (AVG)
50	- Andrew & marken and	manna participe
40		- man - man
30 manufactures and a second s	Jon W.	
20		
10		
-10		

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	11761.000	44.99	-1.05	43.94	74.00	-30.06	peak
2 *	13214.500	44.39	-0.20	44.19	74.00	-29.81	peak
3	14846.500	42.68	0.93	43.61	74.00	-30.39	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.



Ten	nperature:	26.0 ℃		Relative	Humidity:	54%	
Tes	t Voltage:	DC 3.3V	123		2013		
Ant	. Pol.	Vertical			6	ABL -	
Tes	t Mode:	1DH5 Mo	de TX 2402	MHz			
Rer	nark:	Only wors	se case is re	ported.	100		1
90.0	dBuV/m						-
80					(05) 50	C PART 15C (PEAK)	
70							
60					(BF) FC	C PART 15C (AVG)	
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20	Meybrok						
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0 -10							
	00.000 3550.00	6100.00 8650.	00 11200.00	(MHz) 16300.0	0 18850.00 21	1400.00 23950.00 265	500

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	10894.000	45.28	-1.80	43.48	74.00	-30.52	peak
2 *	13418.500	43.32	0.17	43.49	74.00	-30.51	peak
3	14617.000	40.82	0.86	41.68	74.00	-32.32	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)

- $\ensuremath{\mathsf{5}}.$ No report for the emission which below the prescribed limit.
- 6. The peak value<average limit, So only show the peak value.



Ten	nperature:	26.0 ℃			Re	lative Hu	midity:	54%	
Tes	t Voltage:	DC 3.3V	000			000	50		<u>ann</u>
Ant	. Pol.	Horizont	al		120	622	63	197	
Tes	t Mode:	1DH5 M	ode TX	2441MHz	2	1			and i
Rer	mark:	Only wo	rse case	is report	ed.	NOD	2	2	and the second
90.0	dBu∀/m								
80									
70							(RF) FCC	PART 15C (I	PEAK)
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40			1 Allow the	m Autom	Maning C	www.	man MM M	where the street of the	her homened an ope
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No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	10945.000	44.49	-1.80	42.69	74.00	-31.31	peak
2	12143.500	43.35	-0.73	42.62	74.00	-31.38	peak
3 *	14923.000	41.38	1.36	42.74	74.00	-31.26	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)

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



Ten	nperature:	26.0℃			Relative Hu	midity:	54%
Tes	t Voltage:	DC 3.3V	100		00	350	- 60
Ant	. Pol.	Vertical	The second			-11	RU -
Tes	t Mode:	1DH5 Mo	de TX 24	41MHz	1	V	
Ren	nark:	Only wors	se case is	s reported	L M M L		2 100
90.0	dBu¥/m			1			
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70						(RF) FCC F	PART 15C (PEAK)
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20	and the second s						
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No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	10970.500	44.13	-1.82	42.31	74.00	-31.69	peak
2 *	12806.500	43.45	-0.65	42.80	74.00	-31.20	peak
3	14770.000	41.38	0.66	42.04	74.00	-31.96	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)

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



Ten	nperature:	26.0 ℃			Relative H	umidity:	54%	
Tes	t Voltage:	DC 3.3V	·		11.0	BD		(A)
Ant	t. Pol.	Horizont	al		1 P		RD	
Tes	t Mode:	1DH5 M	ode TX 24	80MHz	-	20		AN'S
Rer	mark:	Only wo	rse case is	s reported.	000	2	2	NV-
90.0	dBu¥/m							
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70							ART 15C (P	LANJ
60						(BE) ECC E	ART 15C (A	VG1
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0								
-10	000.000 3550.00	6100.00 865	50.00 11200	.00 (MHz)	16300.00 18	850.00 2140		50.00 2650

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	10868.500	44.68	-1.93	42.75	74.00	-31.25	peak
2 *	13265.500	43.08	-0.20	42.88	74.00	-31.12	peak
3	14413.000	41.79	0.94	42.73	74.00	-31.27	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)

- $\ensuremath{\mathsf{5}}.$ No report for the emission which below the prescribed limit.
- 6. The peak value<average limit, So only show the peak value.



Ten	nperature:	26.0 ℃			Relat	ive Humidity	y: 54%	
Tes	t Voltage:	DC 3.3V	-	51		any by		NU
Ant	t. Pol.	Vertical	ARA		51		18m	
Tes	t Mode:	1DH5 Mo	ode TX	2480MHz	L'ha			1
Rer	mark:	Only wor	se case	is report	ed. 📉	102		NRO-
90.0	dBu¥/m							
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70						(RF) F	CC PART 15C	(PEAK)
60						(BE) E	CC PART 15C	
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-10	000.000 3550.00 6	100.00 8650	100 113	200.00 (MH)	2) 16300.	00 18850.00 3	21400.00 23	3950.00 26500

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	10996.000	45.04	-1.82	43.22	74.00	-30.78	peak
2 *	13418.500	43.13	0.17	43.30	74.00	-30.70	peak
3	14464.000	42.06	0.78	42.84	74.00	-31.16	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)

- $\ensuremath{\mathsf{5}}.$ No report for the emission which below the prescribed limit.
- 6. The peak value<average limit, So only show the peak value.



Ten	nperature:	26.0 ℃			Rela	tive Hu	midity:	54%	
Tes	t Voltage:	DC 3.3V	-	50		(M)	5		an
Ant	t. Pol.	Horizont	al		12	Cores	es	A.B.	
Tes	t Mode:	2DH5 M	ode TX	2402MHz	Store .	-			1
Rer	mark:	Only wo	rse case	e is reporte	ed.	NO		2	1900
90.0	dBuV/m								
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70							(RF) FCC	PART 15C (F	'EAKJ
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No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	10435.000	46.31	-3.67	42.64	74.00	-31.36	peak
2	13240.000	42.78	-0.20	42.58	74.00	-31.42	peak
3	14770.000	41.80	0.66	42.46	74.00	-31.54	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)

- 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:	26.0℃			Relativ	ve Humid	ity:	54%	
Test	t Voltage:	DC 3.3V	The second			and b	2		
Ant	. Pol.	Vertical	and the		51	Contraction of the second	65		
Test	t Mode:	2DH5 Mo	de TX 2	2402MHz			V		
Ren	nark:	Only wors	se case	is report	ed.	000		A 100	
90.0	dBuV/m								-
80							(PE) ECC	PART 15C (PEAK)	
70							(nr) rcc		
60							(RE) FCC	PART 15C (AVG)	
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	00.000 3550.00 6	6100.00 8650	100 112	:00.00 (MH:	z) 16300	0.00 18850.0	in 214	00.00 23950.00 265	500.00

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	10894.000	44.81	-1.80	43.01	74.00	-30.99	peak
2 *	13214.500	43.42	-0.20	43.22	74.00	-30.78	peak
3	14413.000	41.95	0.94	42.89	74.00	-31.11	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)

- $\ensuremath{\mathsf{5}}.$ No report for the emission which below the prescribed limit.
- 6. The peak value<average limit, So only show the peak value.



Tem	nperature:		26.0° ℃			Re	lative Hu	midity:	54%	
Test	t Voltage:		DC 3.3V		12			5		enn.
Ant	. Pol.		Horizont	al		120		G		
Test	t Mode:		2DH5 M	ode TX 2	2441MHz	2				1
Ren	nark:		Only wor	rse case	is report	ed.	NUD	2		No.
90.0	dBu∀/m									
80										
70								(RF) FCC	PART 15C (F	'EAK)
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No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	10664.500	46.01	-3.19	42.82	74.00	-31.18	peak
2	13189.000	42.75	-0.19	42.56	74.00	-31.44	peak
3	14362.000	42.02	0.73	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)

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



Ten	nperature:	26.0℃Relative Humidity:54%
Tes	t Voltage:	DC 3.3V
Ant	. Pol.	Vertical
Tes	t Mode:	2DH5 Mode TX 2441MHz
Rer	nark:	Only worse case is reported.
90.0	dBuV/m	
80		(RF) FCC PART 15C (PEAK)
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-10	00.000 3550.00	6100.00 8650.00 11200.00 (MHz) 16300.00 18850.00 21400.00 23950.00 2650

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1 *	10843.000	45.12	-2.04	43.08	74.00	-30.92	peak
2	13291.000	42.48	-0.21	42.27	74.00	-31.73	peak
3	14872.000	41.19	1.14	42.33	74.00	-31.67	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)

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



Ten	nperature:	26.0 ℃		Relative H	lumidity:	54%
Tes	t Voltage:	DC 3.3V	A. S.		BD	and all
Ant	t. Pol.	Horizontal		20	-	TRU T
Tes	t Mode:	2DH5 Mod	de TX 2480MHz		aV	
Rer	mark:	Only worse	e case is report	ed.		2 100
90.0	dBu¥/m					
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70					(RF) FCC	PART 15C (PEAK)
60					(05) 500	PART 15C (AVG)
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20	and the second s					
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-10						

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	11098.000	45.03	-2.23	42.80	74.00	-31.20	peak
2 *	13979.500	42.66	0.54	43.20	74.00	-30.80	peak
3	15076.000	40.89	1.56	42.45	74.00	-31.55	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)

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



Ten	nperatu	re:	26.0°C			Rela	ative Hu	midity:	54%	
Tes	st Voltag	je:	DC 3.3	/	51		600	50		(AR
Ant	t. Pol.		Vertical	ARA		12	Contraction of the second	A	197	
Tes	t Mode:	:	2DH5 M	lode TX	2480MHz	1. La				1
Rer	mark:		Only wo	orse case	e is report	ed.	100		2	LUL A
90.0	dBu¥/m	1								
80									DIDT 150	
70									PART 15C (I	⁷ EAKJ
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No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	10894.000	44.66	-1.80	42.86	74.00	-31.14	peak
2 *	12118.000	43.74	-0.66	43.08	74.00	-30.92	peak
3	14795.500	41.74	0.58	42.32	74.00	-31.68	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.





Ten	nperature:	26.0 ℃			Rela	ative Hu	midity:	54%	
Tes	t Voltage:	DC 3.3V	'	21		600	3		an
Ant	t. Pol.	Horizont	al		51	Core		R.S.	
Tes	t Mode:	3DH5 M	ode TX 2	2402MHz	Press and				1
Rer	mark:	Only wo	rse case	is report	ed.	ND		2	199
90.0	dBu∀/m								
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0									
-10									

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1 *	10537.000	45.68	-3.56	42.12	74.00	-31.88	peak
2	13214.500	42.29	-0.20	42.09	74.00	-31.91	peak
3	14948.500	40.21	1.37	41.58	74.00	-32.42	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)

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



Ten	nperature:	26.0 ℃			Relative Hu	nidity:	54%	
Tes	t Voltage:	DC 3.3V		50 0	110	50		an
Ant	t. Pol.	Vertical	NU		1		Car	
Tes	t Mode:	3DH5 M	ode TX 2	2402MHz			-	and!
Rer	mark:	Only wo	rse case	is reporte	ed.	9		9
90.0	dBuV/m							
80						(85) 500	PART 15C (PEA	
70						(nr)ree		
60						(RF) FCC	PART 15C (AVC	31
50				2	2 h			
40			A CONTRACT OF A CONTRACTACT OF A CONTRACTACT OF A CONTRACTACT OF A CONTRACTACTACTACTACTACTACTACTACTA	production the state	AN AND MALINA	man when when	month along along	h, dear and had y to Dea
30	where and a group of	man some and many and			W			
20	whenever							
10								
0								
-10								

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	10868.500	44.06	-1.93	42.13	74.00	-31.87	peak
2 *	13265.500	43.81	-0.20	43.61	74.00	-30.39	peak
3	14948.500	40.98	1.37	42.35	74.00	-31.65	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)

- $\ensuremath{\mathsf{5}}.$ No report for the emission which below the prescribed limit.
- 6. The peak value<average limit, So only show the peak value.



Ten	nperature:	26.0 ℃		Relative Humidity:	54%
Tes	t Voltage:	DC 3.3V		ansy	
Ant	. Pol.	Horizontal		2 4 4	TRU T
Tes	t Mode:	3DH5 Mod	e TX 2441MHz	N U	
Rer	nark:	Only worse	e case is reporte	d.	2 19
90.0	dBuV/m				
80					
70				(RF) FCC	PART 15C (PEAK)
60					
50					PART 15C (ÁVG)
40			1 2 3	more and morth which the	Wald May Have morrishing pe
30		water March March March	A AND	Ward and	
20	ub month and	Northeast			
10					
0 -10					

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	10894.000	43.77	-1.80	41.97	74.00	-32.03	peak
2	12730.000	43.31	-0.44	42.87	74.00	-31.13	peak
3 *	14234.500	42.66	0.27	42.93	74.00	-31.07	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)

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



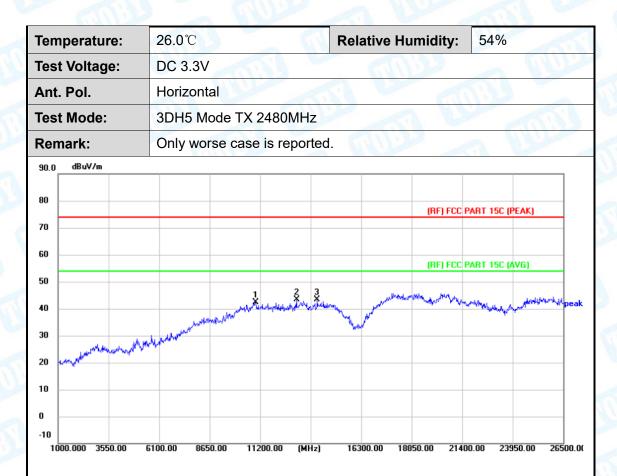
Ten	nperature:	26.0 ℃		Relative Humidity:	54%
Tes	t Voltage:	DC 3.3V	ALL C	an su	
Ant	. Pol.	Vertical			nu -
Tes	t Mode:	3DH5 Mod	e TX 2441MHz	U A	
Ren	nark:	Only worse	e case is reporte	ed.	2 100
90.0	dBu∀/m				
80					
70				(RF) FCC	PART 15C (PEAK)
60					PART 15C (AVG)
50					
40			www.tamman.tam	and the second second	washington when per
30		- marticles Aver marting and a second		"W	
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10					
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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	44.60	-2.04	42.56	74.00	-31.44	peak
2	13418.500	42.46	0.17	42.63	74.00	-31.37	peak
3 *	14387.500	42.05	0.91	42.96	74.00	-31.04	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)

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





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	10970.500	44.11	-1.82	42.29	74.00	-31.71	peak
2	13036.000	43.60	-0.33	43.27	74.00	-30.73	peak
3 *	14081.500	43.10	0.21	43.31	74.00	-30.69	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)

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



Ten	nperature:	26.0°C		Relative Humidity:	54%
Tes	t Voltage:	DC 3.3V		(III)	
4nt	. Pol.	Vertical		51 0	nu -
Гes	t Mode:	3DH5 Mc	de TX 2480MHz	U A U	
Rer	mark:	Only wor	se case is reporte	ed.	2 100
90.0	dBu∀/m				
80					
70					PART 15C (PEAK)
60				(RF) FCC	PART 15C (AVG)
50			1 2	2 Aug 11 an an a	
40		الممد	1 2 and and an arriver and an	man water water water water	Tallow graduate a with a moderal pope
30 20	when a strange when a	www.man			
10					
0					
-10	000.000 3550.00	6100.00 8650).00 11200.00 (MHz	<u>) 16300.00 18850.00 214</u>	00.00 23950.00 26500

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1 *	10919.500	44.47	-1.79	42.68	74.00	-31.32	peak
2	13546.000	42.56	0.02	42.58	74.00	-31.42	peak
3	14846.500	40.95	0.93	41.88	74.00	-32.12	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)

- 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

emper	rature:	23.5	°C		Relative H	lumidity:	46%	and a
est Vo	Itage:	DC :	3.3V					
nt. Po	I.	Hori	zontal	CID .		AU		
est Mo	ode:	1DH	15 Mode TX	2402MHz	610	2		No.
emark	c:	N/A	125	- and		(ANE	9	
20.0 dB	uV/m							
10							Λ	
0								
0						2.4G Restricted	Band-(Peak)	
0							-+	
0	2 X				3 X	2.4G Restricted	Band/(AVG)	
0					\$			pea
o								
o								
0.0 2356.750	0 2361.75	2366.75	2371.75 2	376.75 (MHz)	2386.75 2	2391.75 2396.7	75 2401.75	5 2406.7
2000. r ot								2400.1
No.	Freque (MHz		Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detecto
1 *	2361.9	50	47.00	4.70	51.70	54.00	-2.30	AVG
2	2362.0	50	53.85	4.70	58.55	74.00	-15.45	peak
	00000	000	54.61	4.80	59.41	74.00	-14.59	peak
3	2390.0	00	54.01	4.00	00.41			Poun

Remark:

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)



Temp	perature:	23.5℃	Relative Humidity:46%	
Test	Voltage:	DC 3.3V	an and a second	NUP
Ant.	Pol.	Vertical	The solution	
ſest	Mode:	1DH5 Mode TX 2	2402MHz	
Rem	ark:	N/A		
120.0	dBu¥/m			
110				
100 -				
90 -				
80			2.4G Restricted Band (Peak)	
70				
60 -	2 X		2.4G Restricted Band (AVG)	
50	.×			pea
40				
30				
20.0	60.250 2365.25	2370.25 2375.25 2380	0.25 (MHz) 2390.25 2395.25 2400.25 2405.25	2410.2

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	2362.050	46.27	4.70	50.97	54.00	-3.03	AVG
2	2362.250	54.01	4.70	58.71	74.00	-15.29	peak
3	2390.000	55.10	4.80	59.90	74.00	-14.10	peak
4	2390.000	44.28	4.80	49.08	54.00	-4.92	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:	23.5℃	Relative Humidity:	46%
Fest Voltage:	DC 3.3V	0027	
Ant. Pol.	Horizontal		ABL -
Fest Mode:	1DH5 Mode TX 2480MHz		
Remark:	N/A	6000	2
120.0 dBuV/m			
110			
90 80		2 45 Bestric	ted Band-(Peak)
70 -			
60 1 × 2	Carthy harder and an advantation of the state of the stat	2.4G Restric	ted Band-(AVG)
40			
30			

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	2483.500	53.39	5.15	58.54	74.00	-15.46	peak
2 *	2483.500	46.45	5.15	51.60	54.00	-2.40	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:	23.5℃	Relative Humidity:	46%
Fest Voltage:	DC 3.3V	Caller -	
Ant. Pol.	Vertical		ABL -
Fest Mode:	1DH5 Mode TX 2480M	Hz	- CON
Remark:	N/A	MUDD	2
120.0 dBuV/m			
80		2.46 Restri	cted Band-(Peak)
/0			
		2.4G Restri	cted Band-(AVG)
20.0			

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	54.02	5.15	59.17	74.00	-14.83	peak
2 *	2483.500	46.50	5.15	51.65	54.00	-2.35	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)



Tem	perature:	23.5 ℃		Relative	Humidity:	46%	
Test	t Voltage:	DC 3.3V	1199	6	anus s		an
Ant.	. Pol.	Horizonta	ıl		e e	Can	
Test	t Mode:	2DH5 Mc	de TX 2402M	1Hz			1
Ren	nark:	N/A					NV-
120.0	dBu¥/m						
10							$A \parallel$
00							\rightarrow
0							
0					2.4G Restri	cted Band-(Peak)	
o							-++
0	2 X				3 X 2.4G Restri	cted Band-(AVG)	-+
50	warman X.	and the second and the					pe
io							
30 20.0							
L	55.500 2360.50	2365.50 2370	.50 2375.50	(MHz) 2385.50	2390.50 2	395.50 2400.	.50 2405.

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	2361.850	46.19	4.70	50.89	54.00	-3.11	AVG
2	2362.050	54.13	4.70	58.83	74.00	-15.17	peak
3	2390.000	53.84	4.80	58.64	74.00	-15.36	peak
4	2390.000	44.18	4.80	48.98	54.00	-5.02	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)



Tem	perature:	23.5℃		R	elative Humidi	ty: 46°	%	
Test	t Voltage:	DC 3.3V	1200		600			U
Ant.	Pol.	Vertical	N.V.			- MB	5	
Fest	t Mode:	2DH5 M	ode TX 2402	MHz			-	
Rem	nark:	N/A	(IB)		2000		AR.	
120.0	dBu¥∕m							
110							$-\Lambda$	
100							-	
0								
80					2.46 Re	estricted Band-(Peak)	$\left \right $
70							1	++
50	Š				3 X 2.46 Re	stricted Band-	AVG)	+
50		u an		amp and a		~~~~		pe
40								
30								
20.0	55.500 2360.50	2365.50 237	0.50 2375.50	(MHz) 2	2385.50 2390.50	2395.50	2400.50	2405.9

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	2361.900	45.34	4.70	50.04	54.00	-3.96	AVG
2	2362.250	54.53	4.70	59.23	74.00	-14.77	peak
3	2390.000	53.44	4.80	58.24	74.00	-15.76	peak
4	2390.000	44.02	4.80	48.82	54.00	-5.18	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)

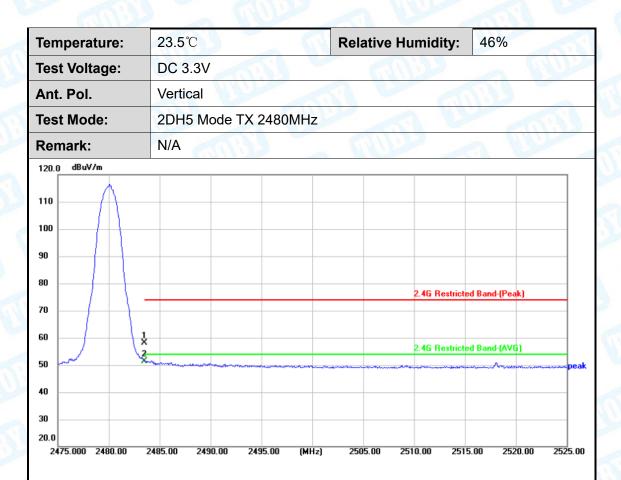


Temperature:	23.5℃ Relative Humidity: 46%
Test Voltage:	DC 3.3V
Ant. Pol.	Horizontal
Test Mode:	2DH5 Mode TX 2480MHz
Remark:	N/A
120.0 dBuV/m	
110	
80	2.4G Restricted Band-(Peak)
70	
60 1 ×	2.4G Restricted Band-(AVG)
50 ×	pear manufacture and an ever an an ever and pear pear pear pear pear pear pear pear
40	
30	
2475.000 2480.00	2485.00 2490.00 2495.00 (MHz) 2505.00 2510.00 2515.00 2520.00 2525.00

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	2483.500	53.65	5.15	58.80	74.00	-15.20	peak
2 *	2483.500	46.15	5.15	51.30	54.00	-2.70	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)





N	No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	2483.500	52.93	5.15	58.08	74.00	-15.92	peak
2	2 *	2483.500	46.34	5.15	51.49	54.00	-2.51	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	perature:	23.5℃		Rela	ative Humidit	:y: 46%		
Test	t Voltage:	DC 3.3V	DC 3.3V					
Ant.	Pol.	Horizontal	Nº S		Core of the second seco	1		
ſest	t Mode:	3DH5 Mod	3DH5 Mode TX 2402MHz					
Rem	nark:	N/A			NODE		AR.	
120.0	dBuV/m							
110							\wedge	
00								
10 -								$\left \right $
- 0					2.4G F	estricted Band-(Peak)	\square
'0 -							1	++
50 -	*				3 2.46 F	estricted Band-	4VG)	+
50 🗖		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Mart and a second s			~~~~	/	pe
10 -								
20.0								_
	55.500 2360.50	2365.50 2370.5	50 2375.50	(MHz) 23	385.50 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	54.35	4.70	59.05	74.00	-14.95	peak
2 *	2362.300	45.68	4.70	50.38	54.00	-3.62	AVG
3	2390.000	53.50	4.80	58.30	74.00	-15.70	peak
4	2390.000	44.64	4.80	49.44	54.00	-4.56	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)



Ten	nperature:	23.5 ℃			Relative	Humidity:	46%		
Tes	t Voltage:	DC 3.3	DC 3.3V						
Ant	. Pol.	Vertica			10	-	28		
Гes	t Mode:	3DH5 N	Mode TX 240	02MHz		A V	1	120	
Rer	nark:	N/A	CAM		112	00		0.00	
20.0	dBu¥/m								
10									
00								+	
0									
0						2.4G Restricte	ed Band-(Peak)	++	
0								\rightarrow	
0	1×					3 × 2.46 Restricte	ed Band-(AVG)	-+-	
0								pe	
0									
0									
0.0	55.500 2360.50	2365.50 23	370.50 2375.50) (MHz)	2385.50	2390.50 239	5.50 2400.50	2405.	

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2362.050	53.85	4.70	58.55	74.00	-15.45	peak
2 *	2362.300	45.42	4.70	50.12	54.00	-3.88	AVG
3	2390.000	52.57	4.80	57.37	74.00	-16.63	peak
4	2390.000	44.45	4.80	49.25	54.00	-4.75	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:	23.5℃	Relative Humidity:	46%
Test Voltage:	DC 3.3V	6000	
Ant. Pol.	Horizontal		ABL T
Fest Mode:	3DH5 Mode TX 2480MH	z	
Remark:	N/A	MUDD	2 19
20.0 dBuV/m			
110 100 90 80		2.46 Restric	cted Band-(Peak)
		2.4G Restric	cted Band-(AVG)
40 30 20.0			

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	52.25	5.15	57.40	74.00	-16.60	peak
2 *	2483.500	46.51	5.15	51.66	54.00	-2.34	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:	23.5℃	Relative Humidity:	46%
Test Voltage:	DC 3.3V	6037	
Ant. Pol.	Vertical		m -
Test Mode:	3DH5 Mode TX 2480MHz	AU	-031
Remark:	N/A	MUDD	2 194
120.0 dBu¥/m			
110			
90			
80		2.4G Restricted	Band-(Peak)
70			
60 50		2.4G Restricted	
40			pea
30			
	2485.00 2490.00 2495.00 (MHz)	2505.00 2510.00 2515.	00 2520.00 2525.00

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	53.51	5.15	58.66	74.00	-15.34	peak
2 *	2483.500	46.59	5.15	51.74	54.00	-2.26	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)

---END OF THE REPORT-----