

W5CT

# **TEST REPORT**

FCC ID: 2AXYP-OTW-323P-L

**Product: True Wireless Earbuds** 

WSET

Model No.: OTW-323P

Trade Mark: oraimo

Report No.: WSCT-ANAB-R&E250300014A-LE

Issued Date: 14 March 2025

Issued for:

ORAIMO TECHNOLOGY LIMITED FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG

Issued By:

World Standardization Certification & Testing Group(Shenzhen) Co., Ltd. Building A-B, Baoli'an Industrial Park, No. 58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China.

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### **Test Certification**

Product: True Wireless Earbuds

WSET

Model No.:

**OTW-323P** 

Additional

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W5ET

Model:

WSCT

ORAIMO TECHNOLOGY LIMITED

**Applicant:** 

FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25

SHAN MEI STREET FOTAN NT HONGKONG WS LT

**ORAIMO TECHNOLOGY LIMITED** 

Manufacturer:

FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25

SHAN MEI STREET FOTAN NT HONGKONG

03 March 2025 Date of receipt:

**Date of Test:** 

04 March 2025 ~ 13 March 2025

**Applicable** 

FCC CFR Title 47 Part 15 Subpart C Section 15.247

KDB 558074 D01 DTS Meas Guidance v04 Standards:

The above equipment has been tested by World Standardization Certification & Testing Group(Shenzhen)Co., Ltd. and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Nang Tested By: W5 L

Checked By:

( Qin Shuiquan)

W5 CT°

Approved By:

(Wang Xiang)

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W5 C7 (Li Huaibi)

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#### **Test Result Summary** 2.

				TALL CT.
/	Requirement	CFR 47 Section	Result	W5CT°
	Antenna requirement	§15.203/§15.247 (c)	PASS	
2	AC Power Line Conducted Emission	<b>W5</b> [T] §15.207	N/A N/A	
	Maximum conducted output ws r power ws r	§15.247 (b)(3) §2.1046	PASS	W5CT°
	6dB Emission Bandwidth	§15.247 (a)(2) §2.1049	PASS	
	Power Spectral Density	§15.247 (e)	PASS	
	Band Edge WS C	1§5.247(d) \$2.1051, §2.1057	PASS W5 C7	WSET
	Spurious Emission	§15.205/§15.209 §2.1053, §2.1057	PASS	
1000				

Note:

1. PASS: Test item meets the requirement.

2. Fail: Test item does not meet the requirement.

3. N/A: Test case does not apply to the test object.

4. The test result judgment is decided by the limit of test standard.

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W5 C1 W5 E7 W5 C1 W5C1

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#### **EUT Description** 3.

	Product Name:	True Wireless Earbuds W5.17	15CT
	Model :	OTW-323P	
/	Trade Mark:	oraimo	
7	Frequency Range:	1M/2M:2402-2480MHz(TX/RX)	
	Channel Separation:	2MHz	X
	Number of Channel:	40 <sub>T</sub> WSET WSET	15 CT
	Modulation Technology:	GFSK	
7	Antenna Type	Chip Antenna	
	Antenna Gain:	1.73dBi	
	W5CT W	Li-ion Polymer Battery: 451012 Nominal Voltage: 3.7V Rated Capacity: 35mAh/0.1295Wh	V5 E T
/	Operating Voltage	Charging Box: 802035	
		Nominal Voltage: 3.7V Capacity:500mAh/3.7V/1.85Wh	
7	Remark:	N/A. WSET WSET WSET	

Note: 1. N/A stands for no applicable.

2. Antenna gain provided by the applicant.

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**Operation Frequency each of channel** 

	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	ı
	0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz	İ
	1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz	7
									ĺ
	8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz	
	w9: c7	2420MHz	W19	2440MHz	29	2460MHz	39-	2480MHz	f
/	Remark: Channel 0, 19 & 39 have been tested.								

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#### 4. Genera Information

#### 4.1. Test environment and mode

_			ARTI
	Operating Environment:		
/	Temperature:	25.0 °C	
9	Humidity: 54	56 % RH	
	Atmospheric Pressure:	1010 mbar	$\rightarrow$
	Test Mode:		W5.
9	Engineering mode:  W5CT W5CT	Keep the EUT in continuous transmitting by select channel and modulations(The value of duty cycle is 98.46%) with Fully-charged battery.	
		Tany onargoa battory.	

The sample was placed (0.1m below 1GHz, 1.5m above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

### 4.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

0	Equipment	Model No.	Serial No.	FCC ID	Trade Name
	X	1	X	/	/

#### Note:

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
- 3. For conducted measurements (Output Power, 6dB Emission Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

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#### Facilities and Accreditations 5.

#### 5.1. Facilities

W5CT<sup>®</sup>

All measurement facilities used to collect the measurement data are located at

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Building A-B, Baoli'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China.

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

#### 5.2. ACCREDITATIONS

**CNAS - Registration Number: L3732** 

China National Accreditation Service for Conformity Assessment, The test firm Registration

Number: L3732

FCC - Designation Number: CN1303

World Standardization Certification & Testing Group(Shenzhen) CO., LTD. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test 15 C firm Designation Number: CN1303.

ANAB - Certificate Number: AT-3951

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (ANAB), Certification Number: AT-3951

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#### 5.3. Measurement Uncertainty

The reported uncertainty of measurement y ± 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 %.

	No.	Item	MU	
W5 CT	1	Conducted Emission Test	±3.2dB	
	2	RF power, conducted	±0.16dB	X
	3 <sub>W5 [</sub>	Spurious emissions, conducted	±0.21dB	W5 ET
	4	All emissions, radiated(<1GHz)	±4.7dB	
	5	All emissions, radiated(>1GHz)	±4.7dB	
W5CT1	6	Temperature	±0.5°C	
	7	Humidity	±2.0%	X

WSET	WSCT	WS	T° WS	WS CT°

WSET	WSET	WSET	WSET	WSET	
X			X	X	X

		<b>V</b>

1	NS ET	W5 CT	W5 CT	W5CT°	W5 CT°	

W5ET°	W5	W.	SET W	cations Testion
	X	X	X	WSET Shenz

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### **5.4.MEASUREMENT INSTRUMENTS**

5.4.IVILAGOREWENT INSTRUM			ILITIO X	*	X		
	NAME OF EQUIPMENT	MANUFACTURER	MODEL	SERIAL NUMBER	Calibration Date	Calibration Due.	'5 L
1	Test software	-	EZ-EMC	CON-03A	-	<del>\ \ -</del>	
	Test software	- /	MTS8310		- /		
5 2	EMI Test Receiver	R&S	ESCI	100005	11/05/2024	11/04/2025	
	LISN	AFJ	LS16	16010222119	11/05/2024	11/04/2025	X
	LISN(EUT)	Mestec	AN3016	04/10040	11/05/2024	11/04/2025	7-7
	Universal Radio Communication Tester	R&S	CMU 200	1100.0008.02	11/05/2024	11/04/2025	2/4
	Coaxial cable	Megalon	LMR400	N/A	11/05/2024	11/04/2025	
4	GPIB cable	Megalon	GPIB	N/A	11/05/2024	11/04/2025	
	Spectrum Analyzer	R&S	FSU	100114	11/05/2024	11/04/2025	X
	Pre Amplifier	H.P.	HP8447E	2945A02715	11/05/2024	11/04/2025	rs 1
/	Pre-Amplifier	CDSI	PAP-1G18-38	1	11/05/2024	11/04/2025	
	Bi-log Antenna	SCHWARZBECK	VULB9168	01488	07/29/2024	07/28/2025	
5 1	9*6*6 Anechoic	- N	(SCT	WSLT	11/05/2024	11/04/2025	
	Horn Antenna	COMPLIANCE ENGINEERING	CE18000	-	11/05/2024	11/04/2025	×
	Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-631	11/05/2024	11/04/2025	
	Cable	TIME MICROWAVE	LMR-400 5 L	N-TYPE04	11/05/2024	11/04/2025	'5 L
(	System-Controller	ccs	N/A	N/A	N.C.R	N.C.R	
_	Turn Table	ccs	N/A	N/A	N.C.R	N.C.R	
7	Antenna Tower	ccs	N/A	N/A	N.C.R	N.C.R	
	RF cable	Murata	MXHQ87WA300 0	-	11/05/2024	11/04/2025	×
	Loop Antenna	EMCO	6502 <sub>W5</sub> [	00042960	11/05/2024	11/04/2025	75 L
/	Horn Antenna	SCHWARZBECK	BBHA 9170	1123	11/05/2024	11/04/2025	
1	Power meter	Anritsu	ML2487A	6K00003613	11/05/2024	11/04/2025	
51	Power sensor / 5	Anritsu	MX248XD	WSLT	11/05/2024	11/04/2025	
	Spectrum Analyzer	Keysight	N9010B	MY60241089	11/05/2024	11/04/2025	X

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#### Test Results and Measurement Data 6.

## 6.1. Antenna requirement

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Standard requirement:

FCC Part15 C Section 15.203 /247(c)

15.203 requirement:

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

15.247(c) (1)(i) requirement:

(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

E.U.T Antenna:

The Bluetooth antenna is a Chip Antenna. it meets the standards, and the best case gain of the antenna is 1.73dBi.

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### 6.2. Conducted Emission

### 6.2.1 Test Specification 5.5

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6.	2.1. Test Specification	W3LI W3LI	WYSLI
X	Test Requirement:	FCC Part15 C Section 15.207	
WSET	Test Method: 5	ANSI C63.10:2014 W5 ET	
	Frequency Range:	150 kHz to 30 MHz	$\bigvee$
	Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto	
WSET	Limits: WSET	Frequency range (MHz)         Limit (dBuV)           0.15-0.5         66 to 56*         56 to 46*           0.5-5         56         46           5-30         60         50	W5 CT*
	X	Reference Plane	X
	WSET WSE	40cm 10cm LISN	W5CT
WSET	Test Setup:	E.U.T Adapter  Test table/Insulation plane  Remark E.U.T: Equipment Under Test LISN: Line Impedence Stabilization Network Test table height=0,8m	WS ET
$\times$	Test Mode:	Charging + Transmitting Mode	
WSET	WSCT	<ol> <li>The E.U.T is connected to an adapter through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment.</li> </ol>	$\bigvee$
	WSCT WSCT	2. The peripheral devices are also connected to the main	WE CT <sup>®</sup>
WSET	Test Procedure:	power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).  3. Both sides of A.C. line are checked for maximum	
	WSET WSE	conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2014 on conducted measurement.	Testin
X	Test Result:	N/A	O Group (S

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#### 6.2.2. Test data

The EUT is working in the Normal link mode. All modes have been tested and normal link mode is worst.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

	Configuration (120 VAC, 60 Hz	snown nere.	X	
	WSET WSE	W5E	T WS ET	WSET
$\times$	Test data Note: EUT powered by battery	not applicable	$\times$	$\times$
WSET	WSET*	W5CT	WSLT	WSCT
_				
	WSET WS	TT WSE	T° WS CT	W5 ET
X	X	X	X	X
WSET	WSCT	WSET	WSET	WSET
	$\times$	$\langle \hspace{1cm} 1cm$	$\sim$	$\times$
	WSET WSE	WSE	WSEI	WSET"
WSET	WSET	WSET	WSCT	W5 CT°
	X	X	X	X
	WS CT WS L	WSE	T WS CI	WSLT
$\times$	$\times$	$\times$	$\times$	$\times$
WSET	WSET	WSET	WSET	W5 CT°
	$\triangle$			
	WSET	W5E	T WS CT	Will.
X	X	X	X	Solo WSET
WSET	WSET	W5 ET	W5 CT	
ADD: Building A-B, Baoli	'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan	Street, Bao'an District, Shenzhen City, Guang	dong Province, China.	BLO 左图公司

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# 6.3. Conducted Output Power

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U.J.	4. ES	รเ อมษับ	Julanc	100	

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7	o. i. rest opecinication		
X	Test Requirement:	FCC Part15 C Section 15.247 (b)(3)	
W5 CT°	Test Method:	KDB558074 W5 [7] W5 [7]	
	Limit:	30dBm	$\mathbf{X}$
	Test Setup:		WSET
X		Spectrum Analyzer EUT	
W5 CT	Test Mode:	Refer to item 4.1	
		<ol> <li>The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v04.</li> <li>Set spectrum analyzer as following:</li> </ol>	WSET
WSCT	Test Procedure:	<ul> <li>a) Set the RBW ≥ DTS bandwidth.</li> <li>b) Set VBW ≥ 3 x RBW.</li> <li>c) Set span ≥ 3 x RBW</li> <li>d) Sweep time = auto couple.</li> </ul>	
		e) Detector = peak. f) Trace mode = max hold. g) Allow trace to fully stabilize. h) Use peak marker function to determine the peak	WSCT
		amplitude level.	
X	Test Result:	PASS	
WELT	WSCT	WSCT WSCT WSCT	

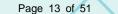
W5C7

W5 CT

W5 E7

W5C1

W5CT



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#### 6.3.2. Test Data

BLE 1M					
Test channel	Maximum Conducted Output Power (dBm)	Limit (dBm)	Result		
Lowest	-2.26	30.00	PASS		
Middle	-1.46	30.00	PASS	$\overline{}$	
Highest	-1.73	30.00	PASS	$\rightarrow$	

		And the second s				
1	BLE 2M					
	Test channel	Maximum Conducted Output Power (dBm)	Limit (dBm)	Result		
7	Lowest	-2.275	30.00	PASS		
	Middle	-1.49	30.00	PASS		
	Highest	-1.85	30.00	PASS		

Test plots as follows:

W5 E1 W5 C1 W5E7 W5C1 W5 E1

W5 CT W5 C1 W5 CT W5 CT W5 CT

W5C

W5 C W5 CI W5E W5 C

W5E1

W5C1 W5 C1 W5 C1 W5 C1 tion& Testi

FAX: 0086-755-86376605

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W5 ET® W5CT" Intellibrials In W5CT® World Standardization Certification & Testing Group (Shenzhen)Co..ltd. **ac-MRA** "Infalalalate WSC Certificate Number: AT-395 Report No.: WSCT-ANAB-R&E250300014A-LE Power NVNT BLE 2M 2440MHz Ant1 Spectrum Analyzer 1 Swept SA SCPI + Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Avg Type: Log-Power Avg|Hold: 100/100 Trig: Free Run KEYSIGHT Input: RF 1 2 3 4 5 6 M ₩ ₩ ₩ ₩ Align: Auto PNNNNN Mkr1 2.440 046 GHz Ref Lvl Offset 4.28 dB Ref Level 20.00 dBm -1.49 dBm Scale/Div 10 dB 15 ET مارال 40.0 #Video BW 6.0 MHz Span 10.00 MHz Sweep 1.33 ms (10001 pts) Center 2.440000 GHz #Res BW 2.0 MHz # 5 Power NVNT BLE 2M 2480MHz Ant1 Spectrum Analyzer 1 Swept SA SCPI + Avg Type: Log-Power Avg|Hold: 100/100 Trig: Free Run KEYSIGHT Input: RF Input Z: 50 Ω #Atten: 30 dB Preamp: Off Corr CCorr Freq Ref: Int (S) \_\_\_ M ₩ ₩ ₩ ₩ ₩ Align: Auto PNNNN Mkr1 2.479 435 GHz 1 Spectrum Ref LvI Offset 4.33 dB Ref Level 20.00 dBm -1.85 dBm Scale/Div 10 dB The second secon **\_1** Span 10.00 MHz Sweep 1.33 ms (10001 pts) Center 2.480000 GHz #Res BW 2.0 MHz #Video BW 6.0 MHz ? Mar 04, 2025 8:21:37 PM W5E tion& Testin W5 C1 ADD: Building A-B,Baoli'an Industrial Park,No.58 and 60,Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guang 深圳世标检测认证股份有限公司 TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605 Page 17 of 51 W5 C1



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### 6.4. Emission Bandwidth

6.4	11	Test	Sne	cifica	ation	W5	LT°
0.4.	348.4	1621	She	CILICO	นเเบเ		

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X	Test Requirement:	FCC Part15 C Section 15.247 (a)(2)	
WSCT	Test Method:	KDB558074 W5 [7] W5 [7]	
	Limit:	>500kHz	$\searrow$
	Test Setup:		WSET
X		Spectrum Analyzer EUT	
WSET	Test Mode:	Refer to item 4.1	
		<ol> <li>The testing follows FCC KDB Publication No. 558074         DTS D01 Meas. Guidance v04.     </li> <li>Set to the maximum power setting and enable the         EUT transmit continuously.     </li> </ol>	WSET
WSET	Test Procedure:	3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6dB bandwidth must	
		be greater than 500 kHz.  4. Measure and record the results in the test report.	X
	Test Result:	PASS	
	WSI	WHAT WHAT	WSCT

W5 CT W5C

W5C7 W5 ET W5 E7 W5E7

FAX: 0086-755-86376605

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W5C1

W5 CT

W5CT





VS CI

Report No.: WSCT-ANAB-R&E250300014A-LEV5 [7]

WSET

6.4.2. Test data

BLE 1M

		1 ' 14		
			177	

Test channel	6dB Emission Bandwidth (kHz)				
rest channel	BT LE mode	Limit Result			
Lowest	514.3	ws>500k			
Middle	500.8	>500k PASS			
Highest	517.9	>500k			

BLE 2M

W5 CT

W5 E1

WSET WSET

Test channel	6dB Emission Bandwidth (kHz)				
rest chamilei	BT LE mode	Limit	Result		
Lowest	847.5	>500k	/ 11-19-11		
Middle	846.6	>500k	PASS		
Highest	845.3 WS CT	>500k			

Test plots as follows:

/	W5CT"	W5 CT	W5 CT	W5CT°	W5CT°

W5ET"	W5 CT	WSET	WSET	WSCT
	Wall	We L		W-LI

- 4					_		
1	W5FT°	WSIT	WSFT	WSFT		W5FT"	

			All the second		
W5 CT	WSIT	V5 FT°	WSIT®	WSLT	

-					
	W5 CT	WSCT	WSCT	WSCT	W5CT

WS CT°	W5 CT	WSET	W5 CT	cation& Testin
			6	Stell Seg

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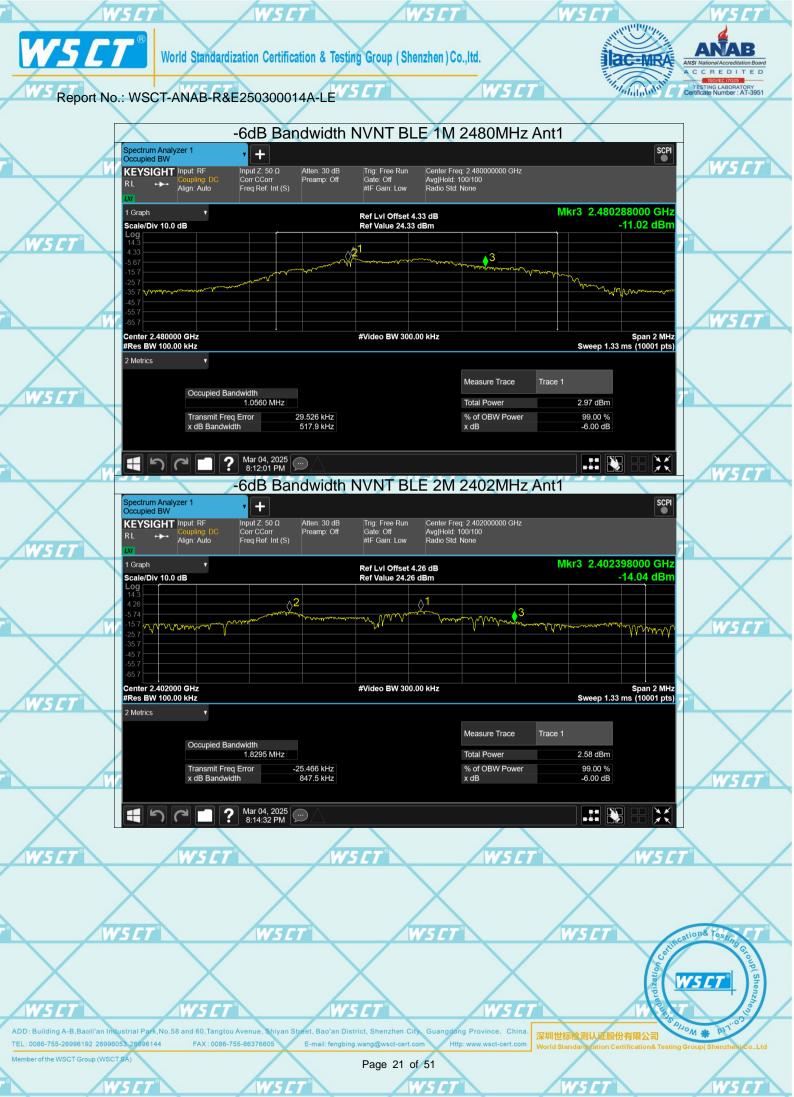
FAX: 0086-755-86376605

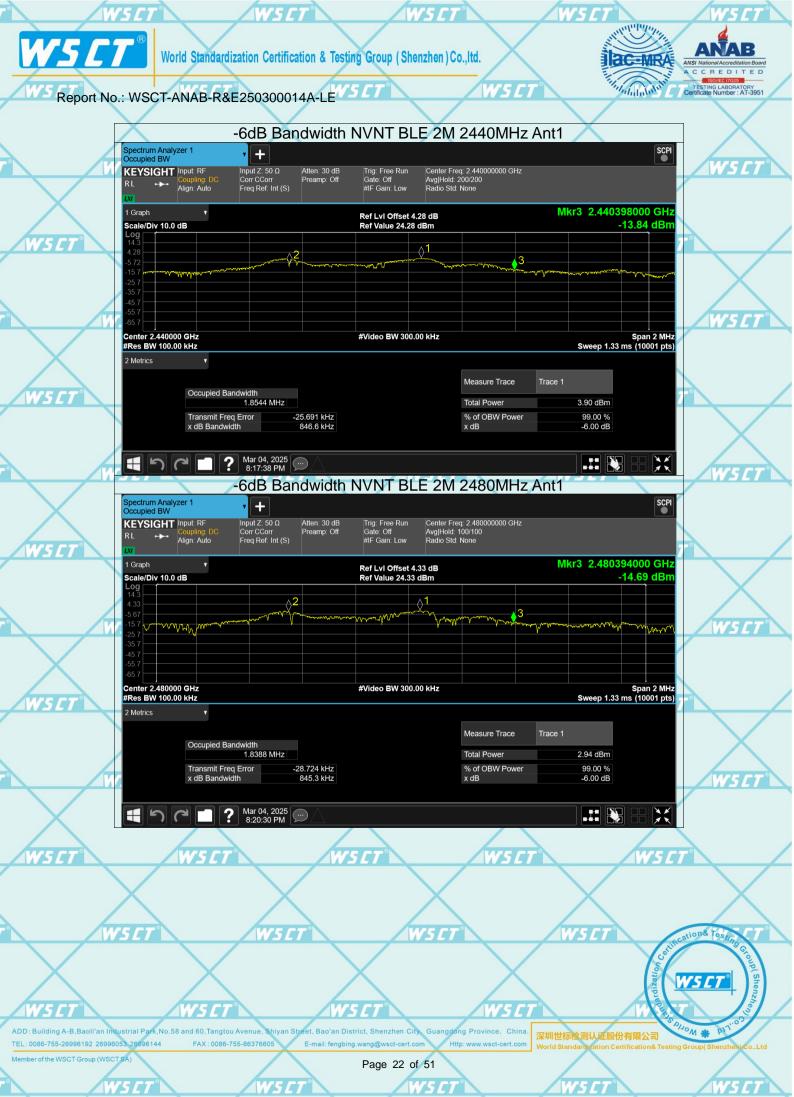
WSET°

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W5 CT











W5 CT

Report No.: WSCT-ANAB-R&E250300014A-LE

# 6.5. Power Spectral Density

6.5.1. Test Specification

J.	AME ET AME	TET WEET	WSIT
	Test Requirement:	FCC Part15 C Section 15.247 (e)	
	Test Method:	KDB558074	
W5 ET	Limit:	The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.	
	Test Setup:	Spectrum Analyzer EUT	WSET
	Test Mode:	Refer to item 4.1	
WSCT	Test Procedure:	<ol> <li>The testing follows Measurement Procedure 10.2         Method PKPSD of FCC KDB Publication No.558074         D01 DTS Meas. Guidance v04</li> <li>The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.</li> <li>Set to the maximum power setting and enable the EUT transmit continuously.</li> <li>Make the measurement with the spectrum analyzer's resolution bandwidth (RBW): 3 kHz ≤ RBW ≤ 100 kHz. Video bandwidth VBW ≥ 3 x RBW. In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)</li> <li>Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.</li> <li>Measure and record the results in the test report.</li> </ol>	WS ET
	Test Result:	PASS	X
	Westers West	We er	

W5CT W5 CT W5 CT W5C1

FAX: 0086-755-86376605

W5CT

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W5 CT

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W5 CT



W5 ET

W5C1

World Standardization Certification & Testing Group (Shenzhen) Co., ltd.

Report No.: WSCT-ANAB-R&E250300014A-LE

W5CT°



	Test channel	Power Spectral D	ensity (dBm/3kl	Hz)
1	rest charmer	BLE 1M	Limit	Result
	Lowest	-21.64	8 dBm/3kHz	X
	Middle	-20.70	8 dBm/3kHz	PASS
	Highest	-20.95	8 dBm/3kHz	

Test channel	Power Spectral D	ensity (dBm/3kl	Hz)	W5CT
rest charmer	BLE 2M	Limit	Result	
Lowest	-22.82	8 dBm/3kHz		
Middle	W-22.18	8 dBm/3kHz	PASS	
Highest	-22.79	8 dBm/3kHz		

Test plots as follows: W5 CT W5 CT W5 CT W5 CT

WSCT WSCT WSCT WSCT WSCT

WSCT WSCT WSCT WSCT

WSET WSET WSET WSET

WSCT WSCT WSCT WSCT WSCT

WSCT WSCT WSCT WSCT WSCT

WS CT WS CT WS CT WS CT

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W5CT

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WSCT











Report No.: WSCT-ANAB-R&E250300014A-LE

W5CT

# 6.6. Conducted Band Edge and Spurious Emission Measurement

6.6.1. Test Specification

6.	6.1. Test Specification	WSET WSET	W5CT"
	Test Requirement:	FCC Part15 C Section 15.247 (d)	
	Test Method:	KDB558074	
WSET	Limit:	In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB and 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).	WSCT
	Test Setup:	Spectrum Analyzer EUT	WS CT
	Test Mode:	Refer to item 4.1	
WSCT	Test Procedure:	<ol> <li>The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.</li> <li>Set to the maximum power setting and enable the EUT transmit continuously.</li> <li>Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).</li> <li>Measure and record the results in the test report.</li> <li>The RF fundamental frequency should be excluded against the limit line in the operating frequency band.</li> </ol>	WSCT
	Test Result:	PASS	X

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W5 CT°

W567

IWS CT

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WSET

SCT WSCT





W5ET" Interior of the World Standardization Certification & Testing Group (Shenzhen) Co., ltd. ac-MRA Report No.: WSCT-ANAB-R&E250300014A-LE Band Edge NVNT BLE 2M 2402MHz Ant1 Ref Spectrum Analyzer 1 Swept SA SCPI + Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off Avg Type: Log-Power Avg|Hold: 100/100 Trig: Free Run KEYSIGHT Input: RF M ₩ ₩ ₩ ₩ PNNNNN Mkr1 2.402 048 GHz Ref LvI Offset 4.26 dB Ref Level 20.00 dBm Scale/Div 10 dB -3.23 dBm 15 ET 60.0 many Mary Mary monton Center 2.402000 GHz #Res BW 100 kHz #Video BW 300 kHz Span 8.000 MHz Sweep 1.00 ms (1001 pts) ? Mar 04, 2025 8:14:56 PM 150 Band Edge NVNT BLE 2M 2402MHz Ant1 Emission Spectrum Analyzer 1 Swept SA **+** SCPI Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) Avg Type: Log-Power Avg|Hold: 100/100 Trig: Free Run KEYSIGHT Input: RF #Atten: 30 dB Preamp: Off <u>M</u> ₩ ₩ ₩ ₩ Align: Auto PNNNN Mkr1 2.402 1 GHz 1 Spectrum Ref LvI Offset 4.26 dB Ref Level 20.00 dBm -2.42 dBm Scale/Div 10 dB Stop 2.40600 GHz Sweep 9.60 ms (1001 pts) Start 2.30600 GHz #Res BW 100 kHz #Video BW 300 kHz Function Function Width Function Value -2.42 dBm -35.97 dBm -35.97 dBm 2.400 0 GHz 2.400 0 GHz N 2.400 0 GHz -35.97 dBm ? Mar 04, 2025 8:14:59 PM \*\* tion& Testin W5 CI W5 C1 ADD: Building A-B, Baoli'an Industrial Park, No. 58 and 60, Tangtou Avenue 深圳世标检测认证股份有限公司 TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605 Page 31 of 51





W5ET" W5CT Intelligiation of World Standardization Certification & Testing Group (Shenzhen) Co., ltd. ac-MRA "Intalalatala Report No.: WSCT-ANAB-R&E250300014A-LE WSC Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref Spectrum Analyzer 1 Swept SA SCPI + Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off Avg Type: Log-Power Avg|Hold: 100/100 Trig: Free Run KEYSIGHT Input: RF 1 2 3 4 5 6 M ₩ ₩ ₩ ₩ PNNNNN Mkr1 2.439 781 0 GHz Ref LvI Offset 4.28 dB Ref Level 20.00 dBm -1.58 dBm Scale/Div 10 dB 15 ET **≬**1 Myh Center 2.4400000 GHz #Res BW 100 kHz #Video BW 300 kHz Span 1.500 MHz Sweep 1.00 ms (1001 pts) ? Mar 04, 2025 8:11:02 PM 150 Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission Spectrum Analyzer 1 Swept SA SCPI + Avg Type: Log-Pow Avg|Hold: 10/10 Trig: Free Run KEYSIGHT Input: RF Input Z: 50 Ω #Atten: 30 dB Preamp: Off Corr CCorr Freq Ref: Int (S) <u>M</u> ₩ ₩ ₩ ₩ Align: Auto PNNNN Mkr1 2.439 7 GHz 1 Spectrum Ref Lvi Offset 4.28 dB Ref Level 20.00 dBm -1.69 dBm Scale/Div 10 dB DL1 -21.58 dB <u>∆4</u> Stop 26.50 GHz Sweep ~2.53 s (30001 pts) Start 30 MHz #Res BW 100 kHz #Video BW 300 kHz Function Function Width Function Value 2.439 7 GHz -1.69 dBm 26.335 9 GHz 5.028 4 GHz 7.242 2 GHz 9.760 4 GHz -47.40 dBm -51.83 dBm -53.57 dBm -51.65 dBm ZZZZ

? Mar 04, 2025 .... 8:11:33 PM \*\* 

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W5ET" Intelligiation of W5CT® World Standardization Certification & Testing Group (Shenzhen)Co..ltd. ac-MRA "Intalalatala WSC Report No.: WSCT-ANAB-R&E250300014A-LE Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref Spectrum Analyzer 1 Swept SA SCPI + Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off Avg Type: Log-Power Avg|Hold: 100/100 Trig: Free Run KEYSIGHT Input: RF M ₩ ₩ ₩ ₩ PNNNNN Mkr1 2.479 787 0 GHz Ref LvI Offset 4.33 dB Ref Level 20.00 dBm -2.03 dBm Scale/Div 10 dB 15 ET Center 2.4800000 GHz #Res BW 100 kHz #Video BW 300 kHz Span 1.500 MHz Sweep 1.00 ms (1001 pts) ? Mar 04, 2025 8:12:27 PM 150 Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission Spectrum Analyzer 1 Swept SA SCPI + Avg Type: Log-Pov Avg|Hold: 10/10 Trig: Free Run KEYSIGHT Input: RF Input Z: 50 Ω #Atten: 30 dB Preamp: Off Corr CCorr Freq Ref: Int (S) <u>M</u> ₩ ₩ ₩ ₩ Align: Auto PNNNN Mkr1 2.479 4 GHz 1 Spectrum Ref Lvl Offset 4.33 dB Ref Level 20.00 dBm -4.93 dBm Scale/Div 10 dB DL1 -22.03 dB δ3 Stop 26.50 GHz Sweep ~2.53 s (30001 pts) Start 30 MHz #Res BW 100 kHz #Video BW 300 kHz Function Function Width Function Value 2.479 4 GHz -4.93 dBm 2.671 7 GHz 5.087 5 GHz 7.627 8 GHz 9.743 6 GHz -46.76 dBm -51.75 dBm -52.85 dBm -53.16 dBm ZZZ ? Mar 04, 2025 .... 8:12:58 PM \*\* tion& Testin W5 CI W5 C1 ADD: Building A-B, Baoli'an Industrial Park, No. 58 and 60, Tangtou Avenue Shiyan Street, Bao'an District, Shenzhen City, Guang 深圳世标检测认证股份有限公司 TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605 Page 35 of 51

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W5ET" Interior of the World Standardization Certification & Testing Group (Shenzhen) Co., ltd. ac-MRA "Intalalatala Report No.: WSCT-ANAB-R&E250300014A-LE Tx. Spurious NVNT BLE 2M 2480MHz Ant1 Ref Spectrum Analyzer 1 Swept SA SCPI + Input Z: 50 Ω Corr CCorr Freq Ref: Int (S) PNO: Best Wide Gate: Off IF Gain: Low Sig Track: Off Avg Type: Log-Power Avg|Hold: 100/100 Trig: Free Run KEYSIGHT Input: RF M ₩ ₩ ₩ ₩ PNNNNN Mkr1 2.480 042 GHz Ref LvI Offset 4.33 dB Ref Level 20.00 dBm -2.18 dBm Scale/Div 10 dB 15 ET 1

> Center 2.480000 GHz #Res BW 100 kHz Span 3.000 MHz Sweep 1.00 ms (1001 pts) ? Mar 04, 2025 8:21:00 PM 150 Tx. Spurious NVNT BLE 2M 2480MHz Ant1 Emission Spectrum Analyzer 1 Swept SA SCPI + Avg Type: Log-Pov Avg|Hold: 10/10 Trig: Free Run KEYSIGHT Input: RF Input Z: 50 Ω #Atten: 30 dB Preamp: Off Corr CCorr Freq Ref: Int (S) <u>M</u> ₩ ₩ ₩ ₩ Align: Auto PNNNN Mkr1 2.480 2 GHz 1 Spectrum Ref LvI Offset 4.33 dB Ref Level 20.00 dBm -3.32 dBm Scale/Div 10 dB DI 1 -22 18 dB **⊘**2 **∆**4 **∆**5 Stop 26.50 GHz Sweep ~2.53 s (30001 pts) Start 30 MHz #Res BW 100 kHz #Video BW 300 kHz Function Function Width Function Value 2.480 2 GHz -3.32 dBm 25.518 0 GHz 5.091 1 GHz 7.335 7 GHz 10.056 8 GHz -47.65 dBm -52.50 dBm ZZZ -51.77 dBm -52.13 dBm ? Mar 04, 2025 .... 8:21:31 PM \*\*

#Video BW 300 kHz

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Report No.: WSCT-ANAB-R&E250300014A-LE

# 6.7. Radiated Spurious Emission Measurement

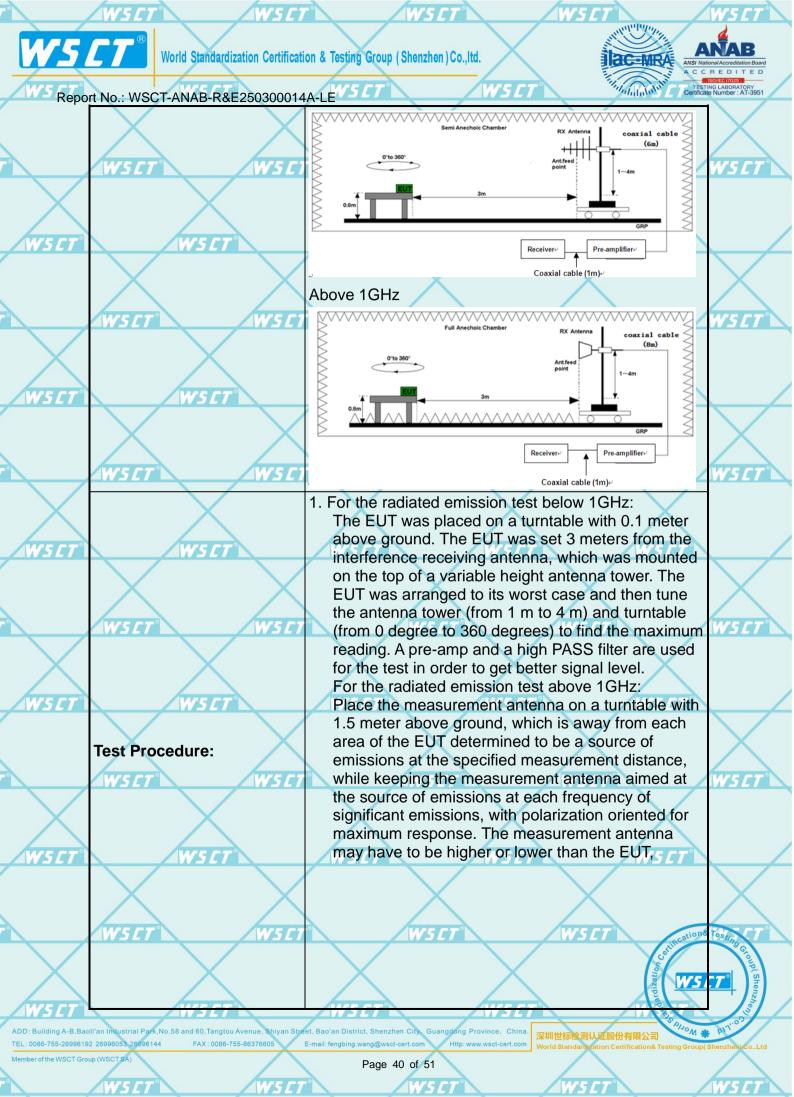
World Standardization Certification & Testing Group (Shenzhen) Co.,ltd.

6.7.1. Test Spec	ification 15 [7]
------------------	------------------

6.	7.1. Test Specification 75.1.		W5 CT		W5	7	W5 CT
$\times$	Test Requirement:	FCC Part15	C Section	n 15.209		X	
W5ET°	Test Method:	ANSI C63.10	0:2014	WSET		WSCT	
AW-151	Frequency Range:	9 kHz to 25 (	GHz				
	Measurement Distance:	3 m	X		X		X
	Antenna Polarization: V5 [7]	Horizontal &	Vertical		W5		WSET
	Operation mode:	Refer to item	4.1				
		Frequency	Detector		VBW	Remark	
W5CT°	WSET	9kHz- 150kHz 150kHz-	Quasi-pea Quasi-pea		1kHz 30kHz	Quasi-peak Value Quasi-peak Value	
	Receiver Setup:	30MHz	Gudoi pot	ar Orriz	OOM 12	Quadi pour value	
		30MHz-1GHz	Quasi-pea		300KHz	Quasi-peak Value	
	WSET WSET	Above 1GHz	Peak Peak	1MHz 1MHz	3MHz 10Hz	Peak Value Average Value	WSCT
			11223411				7 11 2 6 1
X	X	Frequen	су	Field Stre (microvolts)	-	Measurement Distance (meters)	
		0.009-0.4	190	2400/F(h		300	_
W5CT"	W5 CT	0.490-1.7		24000/F(	THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TW	305 - 1	
		1.705-3		30		30	
	X	30-88		100		3	- X
	Limit:	88-216 216-96		150 200		3 3	
$\overline{}$	WSET	Above 9		500		3	W5CT°
			Fie	eld Strength	Measure		
WSET	WSET	Frequency		rovolts/meter)	Distan (mete		
ZV-L-/		Above 1GHz		500	3	Average	
	$\times$	Above 1GHz		5000	3	Peak	$\perp$
		For radiated	emission	s below 30	MHz		
$\overline{}$	WS CT WS CT	Tor radiated	WSLT	000000	W5		W5CT"
		Di	stance = 3m			Computer	
		†	<b></b>		Pre	-Amplifier	
W5CT°	Test setup:		. (	$\mathcal{A}$ [			
	i cot cotapi	EUT	_				
			Turn table		Г		
			*		━ └┤	Receiver	

30MHz to 1GHz

Ground Plane





World Standardization Certification & Testing Group (Shenzhen) Co., ltd.

Repor	rt No.: WSCT-ANAB-R&E250300014	A-LE Certificate	NG LABORATORY Number : AT-3951
	X	depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final	X
	W5CT W5CI	measurement antenna elevation shall be that which	<i>W5 [T</i> ]
		maximizes the emissions. The measurement	
		antenna elevation for maximum emissions shall be	
Auren		restricted to a range of heights of from 1 m to 4 m	
W5CT <sup>°</sup>	W5 ET*	above the ground or reference ground plane.	$\overline{}$
		2. Corrected Reading: Antenna Factor + Cable Loss +	
	$\lambda$	Read Level - Preamp Factor = Level	
		3. For measurement below 1GHz, If the emission level	
	WSCT <sup>®</sup> WSCI		WSCT"
		lower than the applicable limit, the peak emission	
X	X	level will be reported. Otherwise, the emission	
		measurement will be repeated using the quasi-peak	
W5CT"	W5ET°	detector and reported vs r	
		4. Use the following spectrum analyzer settings:	
	X	(1) Span shall wide enough to fully capture the	X
		emission being measured;	
	WSCT° WSC1	(2) Set RBW=100 kHz for f < 1 GHz; VBW ≥RBW;	WSET"
		Sweep = auto; Detector function = peak; Trace = max hold;	
		(3) Set RBW = 1 MHz, VBW= 3MHz for f 1 GHz for	
		peak measurement.	
W5CT <sup>®</sup>	W5ET°	For average measurement: VBW = 10 Hz, when	
		duty cycle is no less than 98 percent. VBW $\geq 1/T$ ,	
		when duty cycle is less than 98 percent where T is	
	(max)	the minimum transmission duration over which the	4
	WS CT WS CT	transmitter is on and is transmitting at its maximum	W5CT"
		power control level for the tested mode of operation.	
X	Test mode:	Refer to section 4.1 for details	
	100t model	Troid to doction 4.1 for dotallo	

Note: Freq. = Emission frequency in MHz Reading level (dB $\mu$ V) = Receiver reading Corr. Factor (dB) = Attenuation factor + Cable loss

Level  $(dB\mu V)$  = Reading level  $(dB\mu V)$  + Corr. Factor (dB)Limit  $(dB\mu V)$  = Limit stated in standard Margin (dB) = Level (dB $\mu$ V) – Limits (dB $\mu$ V)

PASS -

WSET

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Test results:

W5 ET

W5 ET

W5 ET

W5C1

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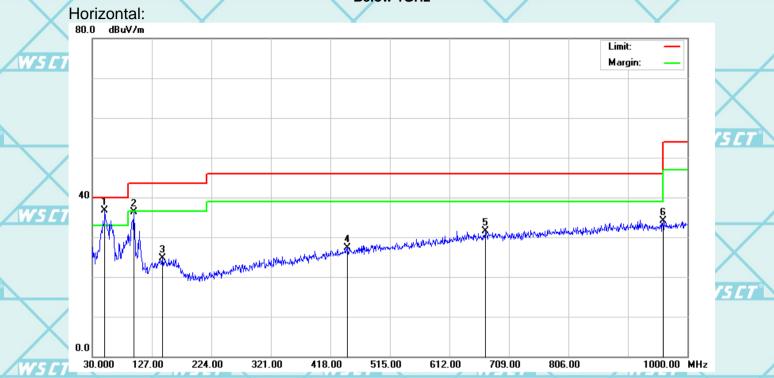
Report No.: WSCT-ANAB-R&E250300014A-LE

#### 6.7.2. Test Data

Please refer to following diagram for individual

Below 1GHz

W5 CT



	No.	Mk. Freq	Level	Factor	Measure	Limit	Over	THE .	X
W5		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	WS ET"
	1	* 50.3700	38.81	-2.14	36.67	40.00	-3.33	QP	
	2	97.9000	42.06	-5.68	36.38	43.50	-7.12	QP	
WSET	3	144.4600	26.81	-2.07	24.74	43.50	-18.76	QP	ET.
	4	445.1600	26.53	0.87	27.40	46.00	-18.60	QP	
	5	671.1700	26.50	5.06	31.56	46.00	-14.44	QP	
W5	6	960.2300	25.80	8.22	34.02	54.00	-19.98	QP	W5ET*
		1 7	4	-		1 7			

WSCT WSCT WSCT WSCT WSCT

VSCT WSCT WSCT WS

SET WSET WSET

ADD: Building A-B, Baoil'an Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, China TEL: 0086-755-26996192 26996053 26996144 FAX: 0086-755-86376605 E-mail: fengbing.wang@wscl-cert.com Http: www.wsct-cert.com

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World Standard attion Certification & Testing Group( Shenzhen)

W5 CT

WELT

WSET

W5 CT

WSCT

World Standardization Certification & Testing Group (Shenzhen) Co.,ltd.

Report No.: WSCT-ANAB-R&E250300014A-LE





W5CT"

Vertical:
30.0 dBuV/m

Limit:
Margin:

40

WSET

X	No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	4	
W5 CT		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	LT°
	1 *	50.3700	35.06	-2.14	32.92	40.00	-7.08	QP	
	2/1	97.9000	36.94	-5.68	31.26	43.50	-12.24	QP	
W5	3	106.6300	34.63	-4.90	29.73	43.50	-13.77	QP	WSET
	4	553.8000	25.98	2.70	28.68	46.00	-17.32	QP	
	5	789.5100	25.79	6.30	32.09	46.00	-13.91	QP	
WSET	6	959.2600	25.66	8.21	33.87	46.00	-12.13	QP	CT°
							-	#	

515.00

612.00

709.00

806.00

Note1:

0.0

30.000

127.00

224.00

321.00

418.00

Freq. = Emission frequency in MHz

Reading level (dBµV) = Receiver reading

Corr. Factor (dB) = Antenna factor + Cable loss - Amplifier factor.

Measurement ( $dB\mu V$ ) = Reading level ( $dB\mu V$ ) + Corr. Factor (dB)

Limit (dBµV) = Limit stated in standard

Margin (dB) = Measurement (dBμV) – Limits (dBμV)

<u>awsli</u>

AWS CT

W5 CT°

1000.00 MHz

W5CT°

W5 CT

WSET

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WSCT

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WSIT

WSET

4W5E7

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Report No.: WSCT-ANAB-R&E250300014A-LE

W5C1

### **Above 1GHz**

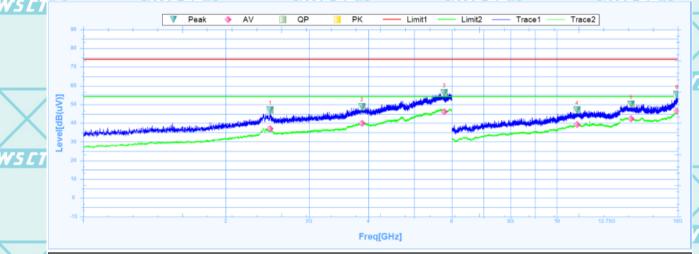
Note 1: The marked spikes near 2400 MHz with circle should be ignored because they are Fundamental

Note 2: The spurious above 18G is noise only, do not show on the report.

#### **GFSK**

Low channel: 2402MHz

Horizontal:



MEE ET	
	Г

/	Suspu	ited Data Lis	st									
	NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict	
И	1	2480.6250	46.91	7.84	39.07	74	-27.09	359.5	Horizontal	PK	Pass	
	1	2480.6250	37.16	7.84	29.32	54	-16.84	359.5	Horizontal	AV	Pass	
	2	3878.1250	48.7	11.55	37.15	74	-25.3	133.5	Horizontal	PK	Pass	١
	2	3878.1250	39.95	11.55	28.4	54	-14.05	133.5	Horizontal	AV	Pass	
	3	5786.2500	56.19	20.91	35.28	74	-17.81	162.2	Horizontal	PK	Pass	7
7	3	5786.2500	46.13	20.91	25.22	54	-7.87	162.2	Horizontal	AV	Pass	
	4	11023.5000	46.95	39.48	7.47	74	-27.05	329.3	Horizontal	PK	Pass	
/	4	11023.5000	39.31	39.48	-0.17	54	-14.69	329.3	Horizontal	AV	Pass	
	5	14355.0000	50.08	41.04	9.04	74	-23.92	96.2	Horizontal	PK	Pass	
4	5	14355.0000	42.33	41.04	1.29	54	-11.67	96.2	Horizontal	AV	Pass	
	6	17928.0000	55.41	46.02	9.39	74	-18.59	0.5	Horizontal	PK	Pass	
	6	17928.0000	46.62	46.02	0.6	54	-7.38	0.5	Horizontal	AV	Pass	

W5 C1 W5 ET W5E1 W5 C1

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W5 CT

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W5CT"





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W5 CT

## Vertical:



WSE

W5E

Si	Susputed Data List											
N	10.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict	
1		2480.6250	45.76	7.84	37.92	74	-28.24	334.5	Vertical	PK	Pass	
1		2480.6250	36.85	7.84	29.01	54	-17.15	334.5	Vertical	AV	Pass	
2		3941.2500	50.44	11.92	38.52	74	-23.56	217.3	Vertical	PK	Pass	
2		3941.2500	39.65	11.92	27.73	54	-14.35	217.3	Vertical	AV	Pass	
3		5887.5000	56.18	21.42	34.76	74	-17.82	181.4	Vertical	PK	Pass	
3		5887.5000	46.34	21.42	24.92	54	-7.66	181.4	Vertical	AV	Pass	
4		11239.5000	47.05	39.28	7.77	74	-26.95	189.4	Vertical	PK	Pass	
4		11239.5000	38.74	39.28	-0.54	54	-15.26	189.4	Vertical	AV	Pass	
5		13900.5000	50.22	41.24	8.98	74	-23.78	175	Vertical	PK	Pass	
5		13900.5000	42.27	41.24	1.03	54	-11.73	175	Vertical	AV	Pass	
6		17970.0000	53.38	46.3	7.08	74	-20.62	319.7	Vertical	PK	Pass	
6		17970.0000	46.7	46.3	0.4	54	-7.3	319.7	Vertical	AV	Pass	

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W5 CI

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W5C1

W5 CT

W5 C1

W5 [7

W5 C7

W5CT

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W5 CT

W5 CT

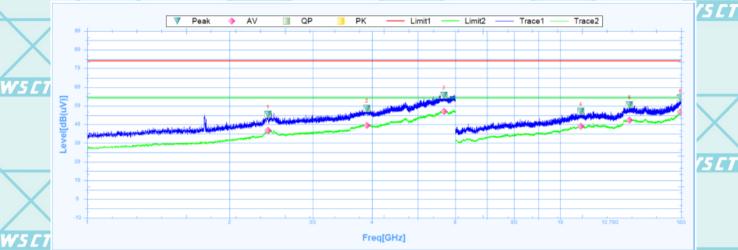




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W5 CT

Middle channel: 2440MHz Horizontal:



	Suspu	ıted Data Lis	st									
	NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict	/
	1	2409.3750	45.35	7.6	37.75	74	-28.65	16.6	Horizontal	PK	Pass	1
/	1	2409.3750	36.74	7.6	29.14	54	-17.26	16.6	Horizontal	AV	Pass	
	2	3901.2500	48.66	11.74	36.92	74	-25.34	58.4	Horizontal	PK	Pass	
	2	3901.2500	39.44	11.74	27.7	54	-14.56	58.4	Horizontal	AV	Pass	
7	3	5673.1250	55.73	21.16	34.57	74	-18.27	0.1	Horizontal	PK	Pass	
	3	5673.1250	46.92	21.16	25.76	54	-7.08	0.1	Horizontal	AV	Pass	
	4	11049.0000	46.98	39.46	7.52	74	-27.02	324.6	Horizontal	PK	Pass	
	4	11049.0000	39.1	39.46	-0.36	54	-14.9	324.6	Horizontal	AV	Pass	1
	5	14008.5000	50.47	41.49	8.98	74	-23.53	360.1	Horizontal	PK	Pass	
	5	14008.5000	42.34	41.49	0.85	54	-11.66	360.1	Horizontal	AV	Pass	7
1	6	17970.0000	54.15	46.3	7.85	74	-19.85	107	Horizontal	PK	Pass	
	6	17970.0000	46.84	46.3	0.54	54	-7.16	107	Horizontal	AV	Pass	

WSET	WSET	WSET	W5CT°	WS ET°	
			$\wedge$		$\wedge$
	W5 CT	W5 CT	W5CT°	W5 ET	W5 CT
WS CT	WSCT	WSCT	WSCT	W5CT"	

W5 CT°	WSET	W	(SET°	WSET	acation& Testin
X	X	X	X	ardization,	WSCT School Shenz

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W5CT



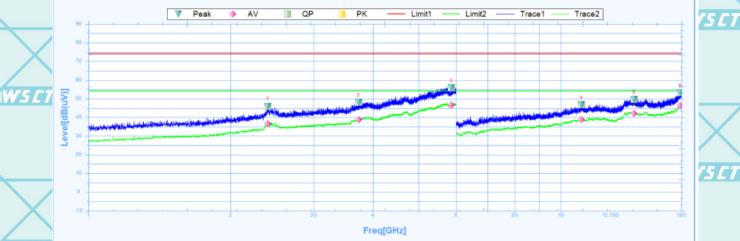


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Report No.: WSCT-ANAB-R&E250300014A-LE

W5 C7

#### Vertical:



W5 C

W5 E

	Suspu	ted Data Lis	st								
	NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
	1	2397.5000	46	7.56	38.44	74	-28	32	Vertical	PK	Pass
	1	2397.5000	36.54	7.56	28.98	54	-17.46	32	Vertical	AV	Pass
/	2	3730.0000	48.18	10.61	37.57	74	-25.82	202.9	Vertical	PK	Pass
	2	3730.0000	38.82	10.61	28.21	54	-15.18	202.9	Vertical	AV	Pass
	3	5868.1250	55.89	21.19	34.7	74	-18.11	341.7	Vertical	PK	Pass
7	3	5868.1250	46.48	21.19	25.29	54	-7.52	341.7	Vertical	AV	Pass
	4	11052.0000	46.75	39.45	7.3	74	-27.25	360	Vertical	PK	Pass
	4	11052.0000	38.92	39.45	-0.53	54	-15.08	360	Vertical	AV	Pass
	5	14274.0000	49.7	41.14	8.56	74	-24.3	136.7	Vertical	PK	Pass
	5	14274.0000	42.25	41.14	1.11	54	-11.75	136.7	Vertical	AV	Pass
	6	17896.5000	53.2	45.81	7.39	74	-20.8	322.1	Vertical	PK	Pass
/	6	17896.5000	46.26	45.81	0.45	54	-7.74	322.1	Vertical	AV	Pass

W5C

W5 CI W5 CT W5E W5 CT

W5 E1

W5C1 W5 C1 W5 [7 W5 C7

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W5 CT

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Report No.: WSCT-ANAB-R&E250300014A-LE

W5CT°

High channel: 2480MHz Horizontal:



	Susputed Data List										
	NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
	1	2480.6250	46.91	7.84	39.07	74	-27.09	359.5	Horizontal	PK	Pass
1	1	2480.6250	37.16	7.84	29.32	54	-16.84	359.5	Horizontal	AV	Pass
	2	3878.1250	48.7	11.55	37.15	74	-25.3	133.5	Horizontal	PK	Pass
	2	3878.1250	39.95	11.55	28.4	54	-14.05	133.5	Horizontal	AV	Pass
57	3	5786.2500	56.19	20.91	35.28	74	-17.81	162.2	Horizontal	PK	Pass
	3	5786.2500	46.13	20.91	25.22	54	-7.87	162.2	Horizontal	AV	Pass
	4	11023.5000	46.95	39.48	7.47	74	-27.05	329.3	Horizontal	PK	Pass
	4	11023.5000	39.31	39.48	-0.17	54	-14.69	329.3	Horizontal	AV	Pass
	5	14355.0000	50.08	41.04	9.04	74	-23.92	96.2	Horizontal	PK	Pass
	5	14355.0000	42.33	41.04	1.29	54	-11.67	96.2	Horizontal	AV	Pass
1	6	17928.0000	55.41	46.02	9.39	74	-18.59	0.5	Horizontal	PK	Pass
	6	17928.0000	46.62	46.02	0.6	54	-7.38	0.5	Horizontal	AV	Pass

| WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET | WSET |

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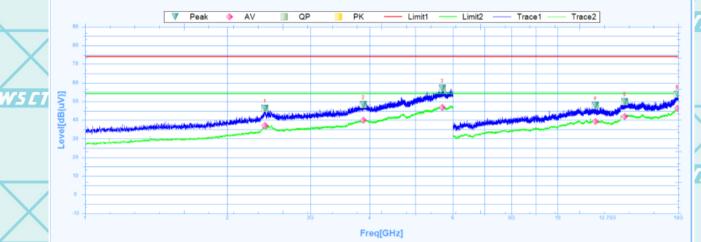
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Report No.: WSCT-ANAB-R&E250300014A-LE

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#### Vertical:



WSCI

Sus	Susputed Data List									
NO	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2401.8750	46.31	7.58	38.73	74	-27.69	240	Vertical	PK	Pass
1	2401.8750	37	7.58	29.42	54	-17	240	Vertical	AV	Pass
2	3878.1250	48.38	11.55	36.83	74	-25.62	317.7	Vertical	PK	Pass
2	3878.1250	40.03	11.55	28.48	54	-13.97	317.7	Vertical	AV	Pass
3	5696.8750	57.06	21.27	35.79	74	-16.94	201.7	Vertical	PK	Pass
3	5696.8750	46.8	21.27	25.53	54	-7.2	201.7	Vertical	AV	Pass
4	12010.5000	47.88	38.6	9.28	74	-26.12	35.2	Vertical	PK	Pass
4	12010.5000	39.35	38.6	0.75	54	-14.65	35.2	Vertical	AV	Pass
5	13863.0000	49.92	41.14	8.78	74	-24.08	222.8	Vertical	PK	Pass
5	13863.0000	42.03	41.14	0.89	54	-11.97	222.8	Vertical	AV	Pass
6	17913.0000	53.77	45.92	7.85	74	-20.23	170.2	Vertical	PK	Pass
6	17913.0000	46.25	45.92	0.33	54	-7.75	170.2	Vertical	AV	Pass

#### Note:

- 1. The emission levels of other frequencies are very lower than the limit and not show in test report.
- WS [72.] Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency. WS [7]
  - 3. Data of measurement shown "-"in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.
  - 4. Measurements were conducted in all three modulation (GFSK, Pi/4 DQPSK, 8DPSK), and the worst case Mode (GFSK) was submitted only.
  - 5. EUT has been tested in unfolded states, and the report only reflects data in the unfolded state (worst-case scenario)

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## 6.7.3. Restricted Bands Requirements

Report No.: WSCT-ANAB-R&E250300014A-LE

Bluetooth (GFSK, Pi/4-DQPSK, 8DPSK) mode have been tested, and the worst result GFSK model was report

	as below								
$\langle$	Frequency	Reading	Correct Factor	Emission Level	Limit	Margin	Polar	Detector	
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V		
		/ WPIS		Low Cha	nnel				
	2387	60.04	-8.76	51.28	74	22.72	Н	PK	$\times$
	2387	55.21	-8.76	46.45	54	7.55	H	AV	
	2387	60.92	-8.73	52.19	V745 C1	21.81	VV 5	7 PK	W5 ET
	2387	56.52	-8.73	47.79	54	6.21	V	AV	
	2390	63.01	-8.76	54.25	74	19.75	Н	PK	
C 7	2390	56.38	-8.76	47.62	54	6.38	H	AV <sub>V</sub> 5	ET °
	2390	62.49	-8.73	53.76	74	20.24	V	PK	
	2390	54.81	-8.73	46.08	54	7.92	V	AV	X
	Auren	High Channel							
	2483.5	60.73	-8.17	52.56	74	21.44	HA	PK	W5 C1
	2483.5	54.34	-8.17	46.17	54	7.83	Н	AV	
	2483.5	64.16	-8.17	55.99	74	18.01	V	PK	
<u> </u>	2483.5	53.47	-8.17	45.30	54	8.70 C	V	AV//5	ET°
	Note: From - E	micrion frogues	ovin MILIT						

Note: Freq. = Emission frequency in MHz Reading level (dBµV) = Receiver reading

Corr. Factor (dB) = Attenuation factor + Cable loss

Level  $(dB\mu V)$  = Reading level  $(dB\mu V)$  + Corr. Factor (dB)

Limit  $(dB\mu V)$  = Limit stated in standard Margin (dB) = Level  $(dB\mu V)$  – Limits  $(dB\mu V)$ 

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