

WSET

TEST REPORT

FCC ID: 2AXYP-OSW-832N

Product: Smart Watch

Model No.: OSW-832N

Trade Mark: oraimo

Report No.: WSCT-ANAB-R&E241100064A-BT

Issued Date: 28 November 2024

WSC

Issued for:

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

WSET

Issued By:

WSET

WSE

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.

TEL: +86-755-26996192

FAX: +86-755-86376605

W5 ET

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ANSI National Accreditation Board
A C C R E D I T E D



Report No.: WSCT-ANAB-R&E241100064A-BT

W5CT

1. Test Certification

Product: Smart Watch W5 [7] W5 [7] W5 [7]

Model No.: OSW-832N

W5CT Additional W5 Toraimo W5CT W5CT W5CT

ORAIMO TECHNOLOGY LIMITED

Model:

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

SHAN MEI STREET FOTAN NT HONGKONG

ORAIMO TECHNOLOGY LIMITED

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

SHAN MEI STREET FOTAN NT HONGKONG

Date of receipt: 14 November 2024

Date of Test: 15 November 2024 ~ 27 November 2024

Applicable Standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

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.

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Tested By: Checked By: (Qin Shuiquan)

Approved By: Date: 28 November 2010

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

| Fax: 0086-755-26996192 26996053 26996144 | Fax: 0086-755-86376605 | E-mail: fengbing.wang@wsct-cert.com | Http://www.wsct-cert.com | World Standardization Certification & Total Control of the Control

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Test Result Summary 2.

	ATT		A TOTAL OF THE PARTY OF THE PAR	1777
	Requirement	CFR 47 Section	Result	W51
X	Antenna Requirement	§15.203/§15.247 (c)	PASS	
5 <i>CT</i> [°]	AC Power Line Conducted Emission	W5 ET §15.207	N/AW5ET	
	Maximum conducted output power ws L	§15.247 (b)(1) §2.1046	W5 C PASS	W5 L
SET"	20dB Occupied Bandwidth	§15.247 (a)(1) §2.1049	PASS	
	Carrier Frequencies Separation	§15.247 (a)(1)	PASS	\searrow
	Hopping Channel Number	§15.247 (a)(1)	WS PASS	W5
$\overline{}$	Dwell Time	§15.247 (a)(1)	PASS	
SET°	Radiated Emission	§15.205/§15.209 W-§2.1053, §2.1057 W-5 CT	PASS _{V5ET}	
	Band Edge	§15.247(d) §2.1051, §2.1057	PASS	

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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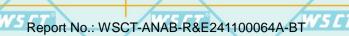
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W5 CT



EUT Description 3.

	Product Name:	Smart Watch WSET WSET	V5CT°
\times	Model :	OSW-832N	
	Trade Mark:	oraimo	
AWS ET	Software version:	V1.0	
	Hardware version:	Z1650 V2.0	\times
	Frequency Range:	2402-2480MHz(TX/RX)	V5CT
\times	Channel Separation:	1MHz	
WSET	Number of Channel:	79	
aw 3 L I	Modulation Type:	GFSK, π/4-DQPSK, 8-DPSK	
	Antenna Type	FPC Antenna	\triangle
	Antenna Gain:	-5.2dBi	N5 CT L
WSET	Operating Voltage	Li-ion Polymer Battery: 552123V Capacity:300mAh/3.8V/1.140Wh Limited Charge Votage:4.35	
	Remark:	N/A.	
			-

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

W5 2. Antenna gain provided by the applicant

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Operation Frequency each of channel for GFSK, π/4-DQPSK, 8DPSK

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	
W05 [7	2402MHz	V20 [7	2422MHz	40 [2442MHz	6057	2462MHz	
1	2403MHz	21	2423MHz	41	2443MHz	61	2463MHz	
	X		X		X			
10	2412MHz	30	2432MHz	50	2452MHz	70	2472MHz	
11	2413MHz	31	2433MHz	51	2453MHz	71	2473MHz	
						×		
18	2420MHz	38	2440MHz	58	2460MHz	78	2480MHz	
V19 <i>[T</i>	2421MHz	V39 [7	2441MHz	59 C	2461MHz	W5E	7°-	
Domark:	Demands Channel 0, 20, 9.70 house been tested for CECK T/A DODCK ODDCK							

Remark: Channel 0, 39 &78 have been tested for GFSK, π/4-DQPSK, 8DPSK modulation mode.

				lodulation mode.	mo
	WS ET"	W5CT°	WSET	W5CT°	WSET
WSCT	\times	\times	\times	\times	
	WSET	WS ET*	WSET	W5 ET	WSET
WSET	WSET	\times		\times	
	WSET	WSET	WSCT	WSET	WSET
WSLT	WSCT	\times	SET	\times	
	WS ET*	WSET	WSCT	WSET	WSET
& Testo T	\times	\times	\times	\times	
ET Shenzhe	ws.	WSCT	WSET	WSET	WSET

Keep the EUT in continuous transmitting by select channel and modulations with



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Genera Information 4.

Engineering mode:

Test environment and mode

	Operating Environment:	
1	Temperature:	25.0 °C
9	Humidity: 34	56 % RH
	Atmospheric Pressure:	1010 mbar
	Test Mode:	

Fully-charged battery The sample was placed 0.8m & 1.5m for the measurement below & 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.

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
	\times	X	\times	1	/
	Adapter	ws LT°	WSLT	1 W	SET

Note:

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended
- 3. For conducted measurements (Output Power, 20dB Occupied Bandwidth, Carrier Frequencies Separation, Hopping Channel Number, Dwell Time, 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

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 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 %.

X	No.	Item	MU
W5 CT	1	Conducted Emission Test W 5 [7] W 5 [7]	±3.2dB/5 [7]
	2	RF power, conducted	±0.16dB
	3	Spurious emissions, conducted	±0.21dB
	4	All emissions, radiated(<1GHz)	±4.7dB
X	5	All emissions, radiated(>1GHz)	±4.7dB
W5CT [®]	6	Temperature W5CT W5CT	±0.5°CV5
	7	Humidity	±2.0%

	7 Humidity	X	X	±2.0%	X
	WSET	WSET	W5 CT°	WSET	W5ET*
		\times	\backslash	$\langle \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	
W5CT*	WSCT	WSCI	W5 E	WSD	7
			X		
	WSCT	WSET	W5 ET	WSET	WSET"
WSET	WSCT	WSCI	W5 L	T WS L	7°
	W5 CT°	WSET	WSET	WSET	WSET
WSET	WSCT	WSEI	W5 E	WSI	
WSLI	William	154	WS.	Walter	
	X	X	X	X	X

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5.4. MEASUREMENT INSTRUMENTS

	0.11.11.27.100	I TEINE I T					
	NAME OF EQUIPMENT	MANUFACTURER	MODEL	SERIAL NUMBER	Calibration Date	Calibration Due.	'5 L
\langle	Test software	-	EZ-EMC	CON-03A	-	X-	
	Test software		MTS8310	WELT	- 4	75 C T	
_	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	'5 C
<	Universal Radio Communication Tester	R&S	CMU 200	1100.0008.02	11/05/2024	11/04/2025	
7	Coaxial cable	Megalon	LMR400	N/A	11/05/2024	11/04/2025	
	GPIB cable	Megalon	GPIB	N/A	11/05/2024	11/04/2025	
	Spectrum Analyzer	R&S	FSU	100114	11/05/2024	11/04/2025	
	Pre Amplifier	vH.P.CT	HP8447E 5 /	2945A02715	11/05/2024	11/04/2025	75 L
	Pre-Amplifier	CDSI	PAP-1G18-38		11/05/2024	11/04/2025	
	Bi-log Antenna	SCHWARZBECK	VULB9168	01488	7/29/2024	7/28/2025	
5	9*6*6 Anechoic	ET - V	VS CT°.	W.5 CT°	11/05/2024	11/04/2025	
	Horn Antenna	COMPLIANCE ENGINEERING	CE18000	-	11/05/2024	11/04/2025	X
	Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-631	11/05/2024	11/04/2025	/ E /
	Cable	TIME MICROWAVE	LMR-400	N-TYPE04	11/05/2024	11/04/2025	
	System-Controller	ccs	N/A	N/A	N.C.R	N.C.R	
4	Turn Table	ccs	N/A	N/A	N.C.R	N.C.R	
	Antenna Tower	ccs	N/A	N/A	N.C.R	N.C.R	
	RF cable	Murata	MXHQ87WA300 0	-	11/05/2024	11/04/2025	X
	Loop Antenna	EMCO	6502W5L	00042960	11/05/2024	11/04/2025	15 E
1	Horn Antenna	SCHWARZBECK	BBHA 9170	1123	11/05/2024	11/04/2025	
1	Power meter	Anritsu	ML2487A	6K00003613	11/05/2024	11/04/2025	
4	Power sensor	Anritsu	MX248XD	WSLI	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. 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 Wire Antenna. it meets the standards, and the best case gain of the antenna is -5.2dBi.

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Conducted Emission 6.2.

6.2.1. Test Specification

	6.2.1. Test Specification 5	T WSET WSET	W5CT
X	Test Requirement:	FCC Part15 C Section 15.207	
WSET	Test Method:	ANSI C63.10:2014 W5 [7] W5 [7]	
	Frequency Range:	150 kHz to 30 MHz	\mathbf{X}
	Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto	Western
WSET	Limits:	Frequency range (MHz) Limit (dBuV) 0.15-0.5 66 to 56* 56 to 46* 0.5-5 56 46 5-30 60 50	WS ET*
		Reference Plane	
	WSET [®] WSE	40cm 80cm LISN Filter AC power	W5 CT
WSET	Test Setup: WS CT	E.U.T AC power Test table/Insulation plane Remark: E.U.T. Equipment Under Test LISN: Line Impedence Stabilization Network Test table height=0.8m	WSET
X	Test Mode:	Refer to item 4.1	
WSET	WSET	1. The E.U.T is connected to an adapter through a line	
	WSCT WSC	 impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH 	WSET
WSCT	Test Procedure:	coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).	
	WSET WSE	3. Both sides of A.C. line are checked for maximum 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.	Testing Co.ou
X	Test Result:	N/A	p(She



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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.

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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.

WSET WSET WSET WSET

Test data

Note: EUT powered by battery not applicable

WSET WSET WSET

WSCT WSCT WSCT WSCT WSCT

WSET WSET WSET WSET

WSCT WSCT WSCT WSCT

WSCT WSCT WSCT WSCT

WSCT WSCT WSCT WSCT WSCT

Continue Testing Contin

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Conducted Output Power 6.3.

6.3.1. Test Specification

X	<u></u>	
Test Requirement:	FCC Part15 C Section 15.247 (b)(3)	
Test Method:	ANSI C63.10:2014	_
Limit:	Section 15.247 (b) The maximum peak conducted output power of the intentional radiator shall not exceed the following: (1) For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band 0.125 watts.	W.S
Test Setup:	Spectrum Analyzer EUT	W5
Test Mode:	Transmitting mode with modulation	
Test Procedure:	Use the following spectrum analyzer settings: Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel RBW > the 20 dB bandwidth of the emission being measured VBW ≥ RBW Sweep = auto Detector function = peak Trace = max hold Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission.	W5
		/
	Test Method: Limit: Test Setup: Test Mode:	Test Method: ANSI C63.10:2014 Section 15.247 (b) The maximum peak conducted output power of the intentional radiator shall not exceed the following: (1) For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band 0.125 watts. Test Setup: Test Mode: Transmitting mode with modulation Use the following spectrum analyzer settings: Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel RBW > the 20 dB bandwidth of the emission being measured VBW ≥ RBW Test Procedure: Test Procedure: Test Procedure: Use the marker to the

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6.3.2. Test Data



Pi/4DQPSK mode Maximum conducted Test channel Limit (dBm) Result output power (dBm) PASS 9.065 215 *[T*] Lowest 9.51 21 **PASS** Middle Highest 9.08 21 **PASS** WSE

8DPSK mode Maximum conducted Test channel Limit (dBm) Result output power (dBm) 9.05 21 **PASS** Lowest **PASS** Middle 9.52 21 Highest 9.07 21 **PASS**

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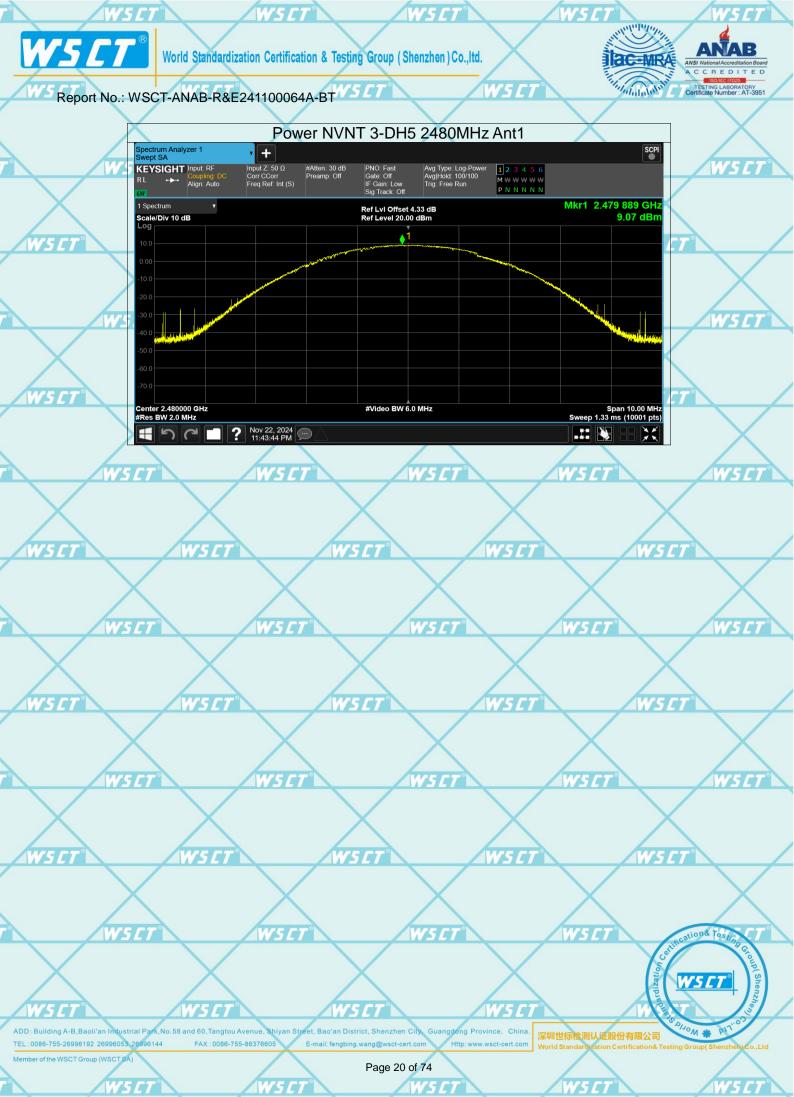
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20dB Occupy Bandwidth 6.4.

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X	Test Requirement:	FCC Part15 C Section 15.247 (a)(1)	
WSET	Test Method:	ANSI C63.10:2014 W5 [7] W5 [7]	
	Limit:	N/A	\mathbf{X}
X	Test Setup:	Spectrum Analyzer EUT	WS ET*
WSET	Test Mode:	Transmitting mode with modulation	
WS ET	Test Procedure:	 The testing follows ANSI C63.10:2014 Measurement Guidelines. 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. Set to the maximum power setting and enable the EUT transmit continuously. Use the following spectrum analyzer settings for 20dB Bandwidth measurement. Span = approximately 2 to 5 times the 20 dB bandwidth, centered on a hopping channel; 1%≤ RBW ≤ 5% of the 20 dB bandwidth; VBW≥3RBW; Sweep = auto; Detector function = peak; Trace = max hold. Measure and record the results in the test report. 	WS ET
	Test Result:	PASS	

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6.4.2. Test data

Test channel	20dB Occupy Bandwidth (MHz)				
rest charmer	GFSK	π/4-DQPSK	8DPSK	Conclusion	
Lowest	0.9661	1.200	1.241	PASS	
Middle	0.9564	1.184	1.181	PASS	
Highest	0.9542	1.258	1.241	PASS	
	X				

WSET	Middle	0.9564	1.184	1.181	PASS	77 °
	Highest	0.9542	1.258	1.241	PASS	
Test p	olots as follows:	WS ET	WSET	/v	VS CT°	W5CT*
		X				
W5ET*	WS ET"	W5 L	7	WSET	W5	GT [*]
	/	X				
W	ET	WS ET°	W5 CT°	/	VS ET®	W5 CT°
	V	X				
WSET	WSET	WS	7	WS CT	W.S	CT°
	X	X	X		X	
W	ET	WSET	WSET	<u></u>	VS ET	WS ET"
X	X	X		X		
WSET	WSET	W5L	7	W5CT°	W.S	ET .
	/	\times			\times	
W	ET	WSET	WSET		VS ET	WSLT
X	\times	\rightarrow		X		
WSET	WSCT	W5L	7°	W5 ET	W.5	CT°
	X	\times	X		X	X
W	ET	WSET	WSET		VSCT	rication& Testing

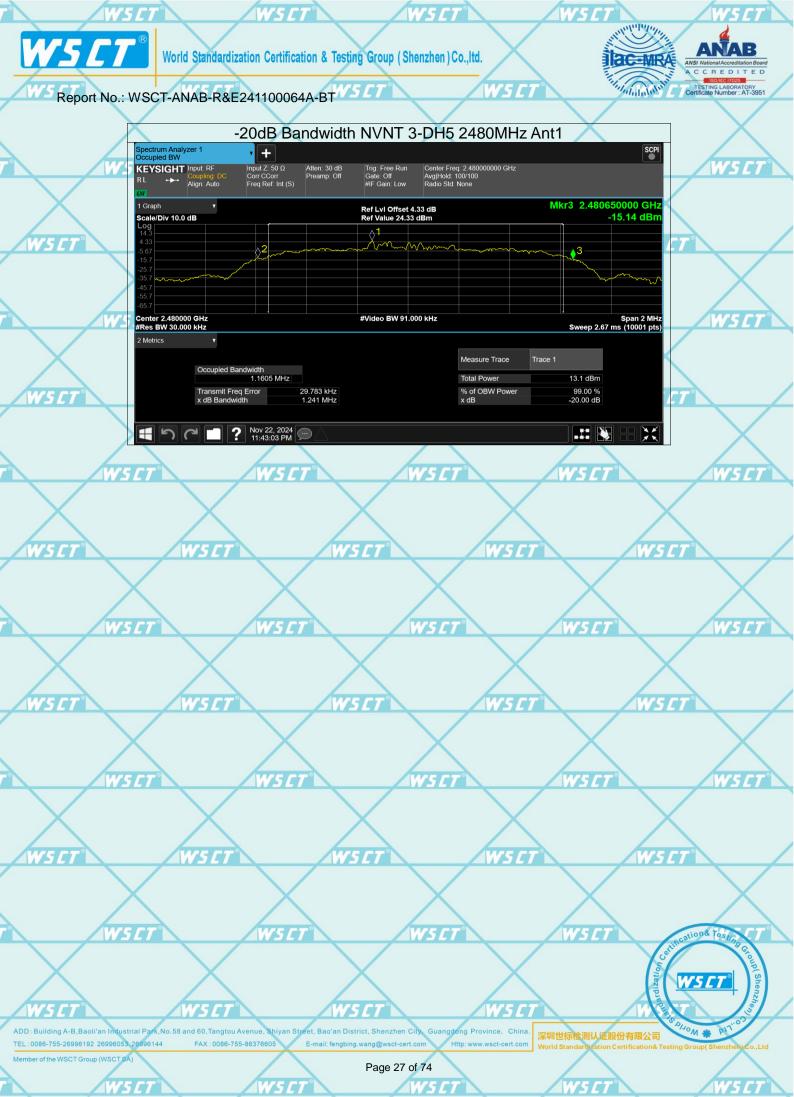
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W5 ET

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

W5 C1



Report No.: WSCT-ANAB-R&E241100064A-BT

Carrier Frequencies Separation 6.5.

	6.5.1. Test Specification	/ WSLI WSLI	VSLI
	Test Requirement:	FCC Part15 C Section 15.247 (a)(1)	
7 °	Test Method:	ANSI C63.10:2014 W5 [7]	
	Limit:		WS CT
\ \ 7°	Test Setup:	channel, whichever is greater. Spectrum Analyzer EUT WS ET	
	Test Mode:	Hopping mode	$ egthinspace{-2mm}$
7		 The testing follows ANSI C63.10:2014 Measurement Guidelines. 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. Set to the maximum power setting and enable the EUT 	WSET

	4. Enable the EUT hopping function.
Test Procedure:	5. Use the following spectrum analyzer settings:
	Span = wide enough to capture the peaks of two adjacent
	channels; RBW is set to approximately 30% of the channel
	spacing, adjust as necessary to best identify the center of
	each individual channel; VBW≥RBW; Sweep = auto;
	Detector function = peak; Trace = max hold.
	6. Use the marker-delta function to determine the separation
	between the peaks of the adjacent channels. Record the

transmit continuously.

WELT	WEET	MEET	Weet	WEET

value in report.

PASS

WSCT	W5ET*	W	SET WS	ET Cations Testin
				Column Series
	X	X	X	WE CT Q

Test Result:



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15 CT

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W5 CT

6.5.2. Test data

-	WE ET					
1	GFSK mode					
	Test channel	Carrier Frequencies Separation (MHz)	Limit ((2/3*20dB BW MHz))	Result		
	Lowest	0.994	0.644	PASS		
	Middle	1.010	0.638	PASS		
	Highest	1.008	0.636	PASS		

WS ET

W5 C7

	Pi/4 DQPSK mode					
	Test channel	Carrier Frequencies Separation (MHz)	Limit ((2/3*20dB BW MHz))	Result		
-	Lowest	0.998	0.800	PASS		
	Middle	0.996	0.789	PASS		
	Highest	W5 [7 1.002 N	5 CT 0.839	5 ET PASS		

W5 CT

		8DPSK mode					
	Test channel	Carrier Frequencies Separation (MHz)	Limit ((2/3*20dB BW MHz))	Result			
Lowest		1.004	0.827	PASS			
	Middle	1.004	0.787	PASS			
	Highest	0.992	0.827	PASS			

Test plots as follows:

W5 CI W5 CI W5C W5 CT

W5C1 W5 C1 W5 CT W5 E7

W5 CT

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W5 CT

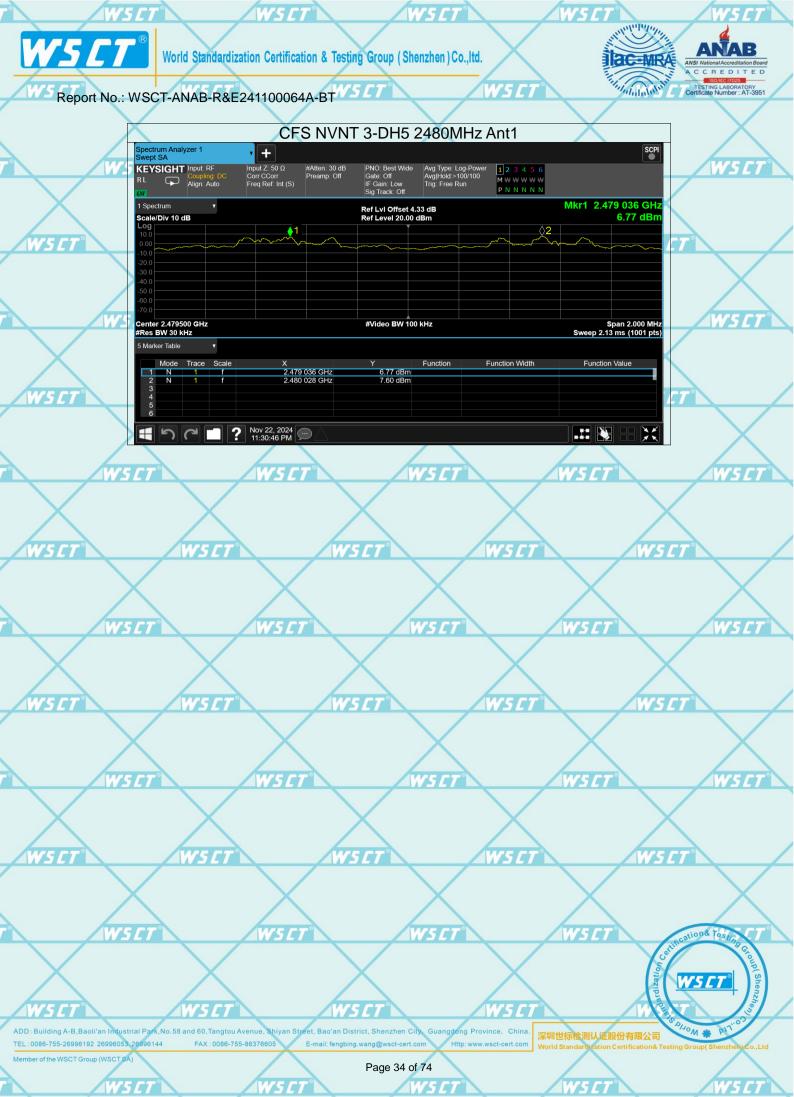
W5CT













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W5 C1



Hopping Channel Number 6.6.

W5CT

W5CT

W5CT

6.6.1. Test Specification

Weer	Test Requirement:	FCC Part15 C Section 15.247 (a)(1)		
	Test Method:	ANSI C63.10:2014		
	Limit:	Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.	\triangle	
WSET	Test Setup:	Spectrum Analyzer EUT	WS CT	
	Test Mode:	Hopping mode		
WSET		 The testing follows ANSI C63.10:2014 Measurement Guidelines. 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. Set to the maximum power setting and enable the 	WSET	
WSET	Test Procedure:	 EUT transmit continuously. 4. Enable the EUT hopping function. 5. Use the following spectrum analyzer settings: Span = the frequency band of operation; set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller; VBW≥RBW; Sweep = auto; Detector function = peak; Trace = max hold. 6. The number of hopping frequency used is defined as the number of total channel. 		
	Test Result:	7. Record the measurement data in report. PASS	Was	
	A Part		WELL	

W5CT

W5 ET

W5 E7

W5C1

W5 CT

W5CT

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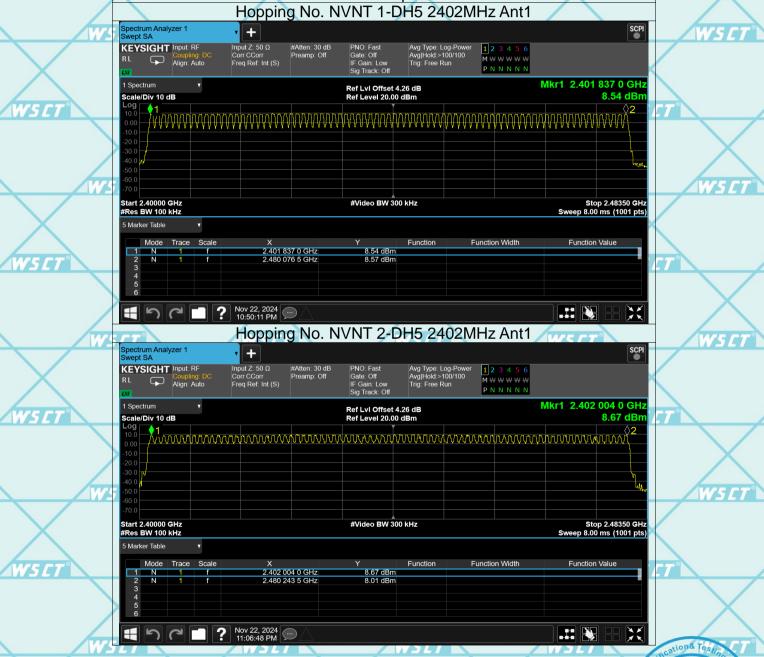


Report No.: WSCT-ANAB-R&E241100064A-BT

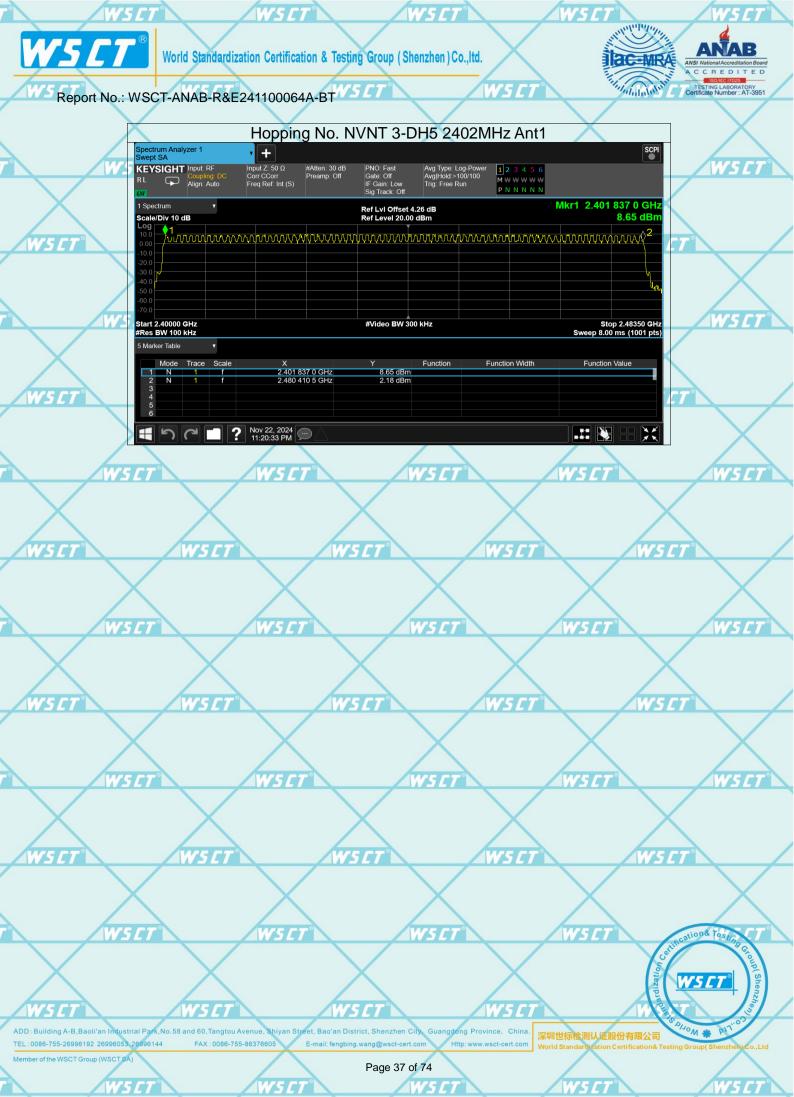
Test data

_	Mode	Hopping channel numbers	Limit	Result	W5 CT
	GFSK, P/4-DQPSK, 8DPSK	79	15	PASS	

NS CT Test plots as follows: Test Graphs



W5C1



W5 E1

W5 C



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IAC MRA



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6.7. Dwell Time

6.7.1. Test S	pecification 5 5 7

WSET"

W5CT°

W5 CT

X	Test Requirement:	FCC Part15 C Section 15.247 (a)(1)	
W5 ET	Test Method:	ANSI C63.10:2014 W5 [7]	
	Limit:	The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.	WSET
X	Test Setup:	Spectrum Analyzer EUT	
W5 CT	Test Mode:	Hopping mode W5 [7] W5 [7]	
W5 CT	Test Procedure:	 The testing follows ANSI C63.10:2014 Measurement Guidelines. 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. Set to the maximum power setting and enable the EUT transmit continuously. Enable the EUT hopping function. Use the following spectrum analyzer settings: Span = zero span, centered on a hopping channel; RBW shall be ≤ channel spacing and where possible RBW should be set >> 1 / T, where T is the expected dwell time per channel; VBW≥RBW; Sweep = as necessary to capture the entire dwell time per hopping channel; Detector function = peak; Trace = max hold. Measure and record the results in the test report. 	WSET
	Test Result:	PASS	
	WEST	The Wall	WSLT

4W5L1

AWS CT

WS CT

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WELL

WSET

WSET

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W5 CT

WSCT[®]

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深圳世标检测认证股份有限公司 World Standard Standar

District Baolian Industrial Park, No.58 and 60, Tangtou Avenue, Shiyan Street, Bao'an District, Shenzhen City, Guangdong Province, Chin 1086-755-26996192 26996053 26996144 FAX: 0086-755-86376605 E-mail: fengbing.wang@wsct-cert.com Http://www.wsct-cert.com



W5 CT

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6.7.2. Test Data

1	Mode	Frequency (MHz)	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
İ	1-DH1	2402	0.405	129.195	319	31600	400	Pass
	1-DH1	2441	0.405	128.79	318	31600	400	Pass
Ī	1-DH1	2480	0.404	128.472	318	31600	400	Pass
Ì	1-DH3	2402	1.661	242.506	146	31600	400	Pass
	1-DH3	2441	1.661	252.472	152	31600	400	Pass
_	1-DH3	2480	1.66	267.26	161	31600	400	Pass
Ī	1-DH5	2402	2.91	299.73	103	31600	400	Pass
Ì	1-DH5	2441	2.909	308.354	106	31600	400	Pass
	1-DH5	2480	2.908	296.616	102	31600	400	Pass

Note: 1. In normal mode, hopping rate is 1600 hops/s with 6 slots in 79 hopping channels.

WSE

For DH1, With channel hopping rate (1600 / 2 / 79) in Occupancy Time Limit (0.4 x 79) (s), Hops Over Occupancy Time comes to $(1600 / 2 / 79) \times (0.4 \times 79) = 320 \text{ hops}$

For DH3, With channel hopping rate (1600 / 4 / 79) in Occupancy Time Limit (0.4 x 79) (s), Hops Over Occupancy Time comes to (1600 / 4 / 79) x (0.4 x 79) = 160 hops // 5

For DH5, With channel hopping rate (1600 / 6 / 79) in Occupancy Time Limit (0.4 x 79) (s), Hops Over Occupancy Time comes to (1600 / 6 / 79) x (0.4 x 79) = 106.67 hops

2. Dwell Time(s) = Hops Over Occupancy Time (hops) x Package Transfer Time

Test plots as follows:

W5	ET W.	TET W	SET W	YSCT	WSET
WSET	WSET	W5 CT	WSET	WSET	
W5				YSCT [®]	WSET
WSET	WSCT	W5 CT	WSET	WSCT	

WS CI

W5 C

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W5CT