

WSET

TEST REPORT

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

Product: True Wireless Earbuds

Model No.: OTW-323P

Trade Mark: oraimo

Report No.: WSCT-ANAB-R&E250300015A-BT

Issued Date: 14 March 2025

Issued for:

WSCT

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

WSET

Issued By:

WSI

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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Report No.: WSCT-ANAB-R&E250300015A-BT

Test Certification

Product:

True Wireless Earbuds W5 17

Model No.:

OTW-323P

Additional Man

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Model:

ORAIMO TECHNOLOGY LIMITED Applicant:

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

SHAN MEI STREET FOTAN NT HONGKONG

ORAIMO TECHNOLOGY LIMITED

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

SHAN MEI STREET FOTAN NT HONGKONG

Date of receipt: 03 March 2025

Date of Test: 04 March 2025 ~ 13 March 2025

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:

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(Wang Xiang)

Checked By:

(Qin Shuiquan)

Approved By:

(Li Huaibi)

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Test Result Summary 2.

	free free		Annual Land	A
/	Requirement	CFR 47 Section	Result	W5LT
	Antenna Requirement	§15.203/§15.247 (c)	PASS	
7	AC Power Line Conducted Emission	W5CT §15.207 W5CT	N/AW5ET	$\overline{}$
	Maximum conducted output power ws c	§15.247 (b)(1) §2.1046	W 5 L PASS	WSET
	20dB Occupied Bandwidth	§15.247 (a)(1) §2.1049	PASS	
	Carrier Frequencies Separation	§15.247 (a)(1)	PASS	\forall
	Hopping Channel Number	§15.247 (a)(1)	PASS	WSET
/	Dwell Time	§15.247 (a)(1)	PASS	
	Radiated Emission	§15.205/§15.209 W §2.1053, §2.1057 W 5 C T	PASS, 5.77	
	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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EUT Description 3.

	Product Name:	True Wireless Earbuds 7 W5 [7]
\times	Model :	OTW-323P
	Trade Mark:	oraimo
WSL7	Frequency Range:	2402-2480MHz(TX/RX)
	Channel Separation:	1MHz
	Number of Channel:	797 WSCT WSCT VSCT
\times	Modulation Type:	GFSK, π/4-DQPSK, 8-DPSK
WSET	Antenna Type	Chip Antenna
	Antenna Gain:	1.73dBi
\times	Operating Voltage	Li-ion Polymer Battery: 451012 Nominal Voltage: 3.7V Rated Capacity: 35mAh/0.1295Wh Charging Box: 802035 Nominal Voltage: 3.7V Capacity:500mAh/3.7V/1.85Wh
W5.77	Remark:	N/A.
	V	× × ×

Note:

WSE

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

	Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	J
	WO: 27	2402MHz	20	2422MHz	40	2442MHz	60	2462MHz	ľ
/	1	2403MHz	21	2423MHz	41	2443MHz	61	2463MHz	
		X		X		X		X	
	10	2412MHz	30	2432MHz	50	2452MHz	70	2472MHz	
	11	2413MHz	31	2433MHz	51	2453MHz	71	2473MHz	1
	X		X						
	18	2420MHz	38	2440MHz	58	2460MHz	78	2480MHz	
	M19 CT	2421MHz	4/39	2441MHz	59	2461MHz	W5E	7	ľ
1	Dans ander A	Ob a superal O	0.70 %		41 4 0			2DCI/	

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

X	modulation mode.	X	· · · · · · · · · · · · · · · · · · ·		X
WSCT	WSE	T WSE	Ws	ET	WSCT
	WSET	WSCT	WSET	WSET	WSET
WSGT	WSE	WSE	W/S	IT	WSET
	WSET	WSET	WSET	WSET	WSET
WSGI	\times	$\langle \times$			WSET
	WSET	WSCI	WSGT	WSET	WSET
WSET	\times	$(\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	$\langle \ \rangle$		WSET
	WSET	WSGT	WSET	WSET	X
WSET	\times	$\langle \times$	$\langle \ \rangle$		WSCT Shenzhell

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4. Genera Information

4.1. Test environment and mode

	Operating Environment:		
\	Temperature:	25.0 °C	
	Humidity: Wald	56 % RH W5L/	
	Atmospheric Pressure:	1010 mbar	\times
_	Test Mode:		W5 L
	Engineering mode:	Keep the EUT in continuous transmitting	
-		by select channel and modulations with 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.

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.

100	Equipment	Model No.	Serial No.	FCC ID	Trade Name
		X	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, 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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5. Facilities and Accreditations

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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WSE 5.3. 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 %.

		into or applications of the	
X	No.	Item	MU
WSET	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
	5	All emissions, radiated(>1GHz)	±4.7dB
WSET	6	Temperature W5CT W5CT	±0.5°CV5[7]
	7	Humidity	±2.0%

/ 11/1/	o Temperatur			±0.5 €	/
	7 Humidity	X	X	±2.0%	$\square \times$
	WSET	WSET	WSET	WSET	WSET
		\sim	\times		
WSET	WSCI	WSCT	WSI	WS	
711713					
_					
	WSET	WSET	WSET	WSET	WSET
X	X	X	×	$\langle \hspace{0.1cm} \rangle$	
WSET	WSET	WSET	WSI	T WS	7
	\times	X	\times	X	X
	WSET	WSET	WSET	WSET	WSET
			$\langle \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$		
WSET	WSCI	WSET	WSI	T WS	
7116					
_					
	WSET	WSET	WSET	WSET	WSCT
X	X	X	X	notion (WSCT

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5.4. MEASUREMENT INSTRUMENTS

O.4. MEAGOREMENT INOT			COMPLETIO		\wedge		\nearrow
	NAME OF EQUIPMENT	MANUFACTURER	MODEL	SERIAL NUMBER	Calibration Date	Calibration Due.	<u>'5 l</u>
<	Test software	-	EZ-EMC	CON-03A	-	X-	
_	Test software	A	MTS8310	W/C PT	- /	75.7	
7/	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/
<	Universal Radio Communication Tester	R&S	CMU 200	1100.0008.02	11/05/2024	11/04/2025	
r,	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	\nearrow
	Pre Amplifier	H.P.CT	HP8447E 57	2945A02715	11/05/2024	11/04/2025	15
/	Pre-Amplifier	CDSI	PAP-1G18-38		11/05/2024	11/04/2025	
	Bi-log Antenna	SCHWARZBECK	VULB9168	01488	07/29/2024	07/28/2025	
	9*6*6 Anechoic	ET V	VSLT.	W.S.CT	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	15
,	Cable	TIME MICROWAVE	LMR-400	N-TYPE04	11/05/2024	11/04/2025	
\langle	System-Controller	ccs	N/A	N/A	N.C.R	N.C.R	
r,	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	
	Loop Antenna	EMCO	6502W51	00042960	11/05/2024	11/04/2025	75
1	Horn Antenna	SCHWARZBECK	BBHA 9170	1123	11/05/2024	11/04/2025	
	Power meter	Anritsu	ML2487A	6K00003613	11/05/2024	11/04/2025	
47	Power sensor	Anritsu	MX248XD	WSEI	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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Conducted Emission 6.2.

	6.2.1. Test Specification	T WSCT WSCT	W5ET
	Test Requirement:	FCC Part15 C Section 15.207	
LT.	Test Method:	ANSI C63.10:2014 W5.77	
	Frequency Range:	150 kHz to 30 MHz	\vee
	Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto	
ET.	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 CT
	X	Reference Plane	X
	WSCT WSC	40cm 80cm LISN	WSET
G	Test Setup: WSCT WSCT	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
	Test Mode:	Refer to item 4.1	
CT	WSCT WSC	 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. The peripheral devices are also connected to the main 	WSET
67	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).	1126
	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	
7	11019	ANSI C63.10:2014 on conducted measurement.	San G

N/A

Test Result:



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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.

	WSET	WSCT	WSET	WSLT	WSCT
WSCT	Test data	by battery not applicable	$\langle \ \rangle$		
	WSCT	WSET	WSET	WSET	WSET
WSET	WSGI	WSG	WS	WS	
	WSET	WSET	WSET	WSCI	WSET
WSCIT	Wister	WSE	WSI	7 WS	
	WSET	WSET	WSET	WSET	WSCT
WSLT	WSCI	\times	$\langle \ \rangle$		
	WSET	WSET	WSET	\times	X
X	X	\times	$\langle \ \rangle$	rdization	WSET Shear

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Conducted Output Power 6.3.

6.3.1. Test Specification

Y Y		
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.	WSI
Test Setup:	Spectrum Analyzer EUT	WSI
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.	WSI
Test Result:	PASS	
WELL	777	10

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6.3.2. Test Data

	GFSK mode									
7	Test channel	Maximum conducted output power (dBm)	Limit (dBm)	Result						
1	Lowest	-0.8	21	PASS						
A	Middle	-0.14	21	PASS						
	Highest	-0.11	21	PASS						

7	Pi/4DQPSK mode							
	Test channel	Maximum conducted output power (dBm)	Limit (dBm)	Result				
	Lowest	-0.535	215 []	PASS				
	Middle	0.09	21	PASS				
	Highest	0.14	21	PASS				

7				
	Test channel	Maximum conducted output power (dBm)	Limit (dBm)	Result
ant.	Lowest	-0.4	21	PASS
	Middle	0.22	21	PASS
	Highest	0.29	21	PASS

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	WSCT	WSET	WSET	WSET	WSCT
\vee	X		\times	\times	X

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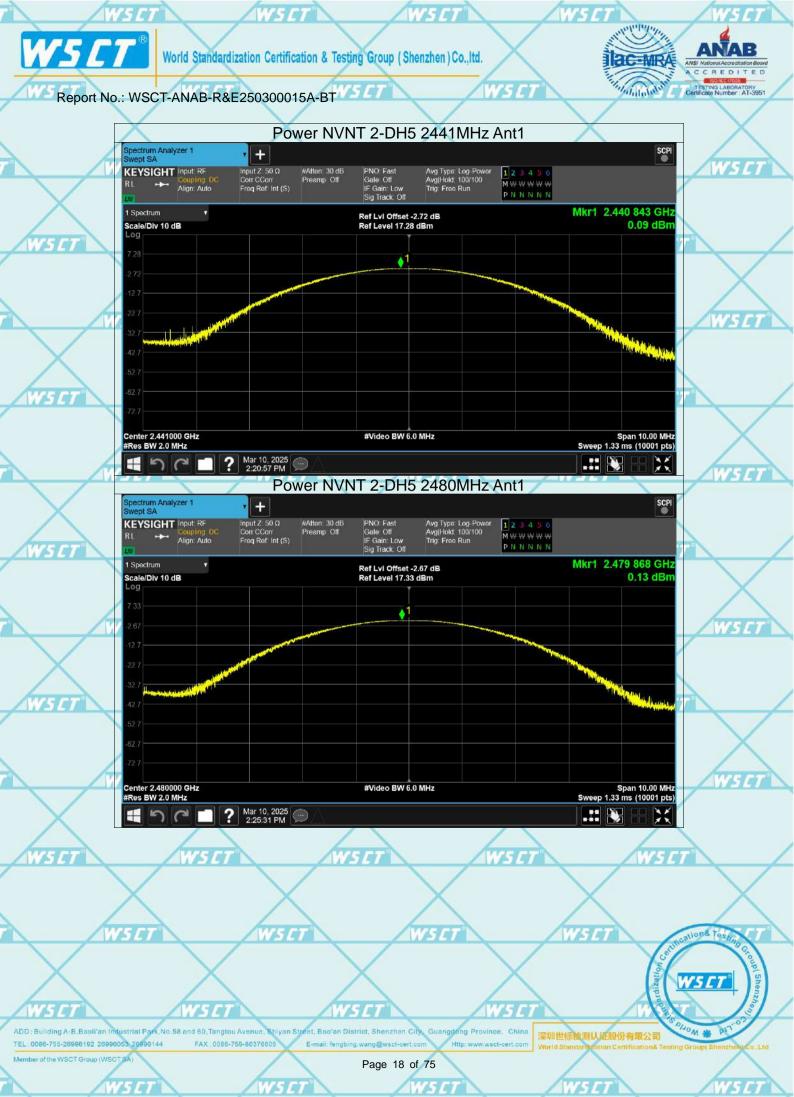
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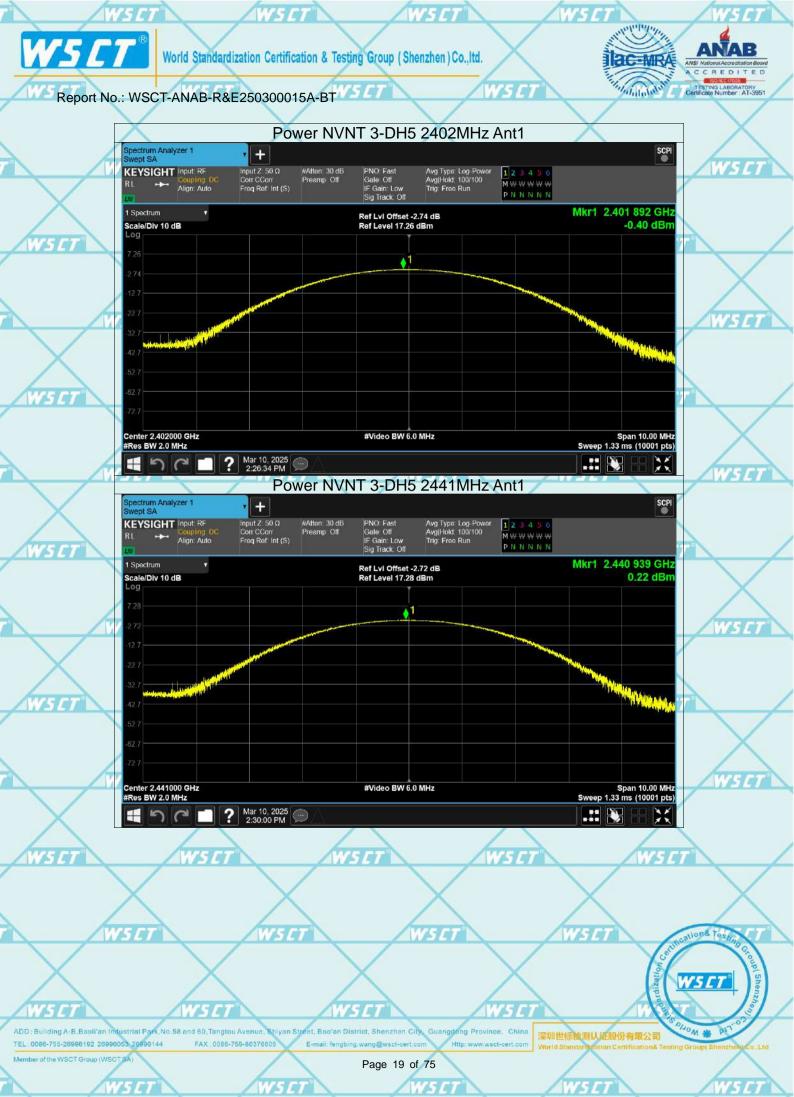
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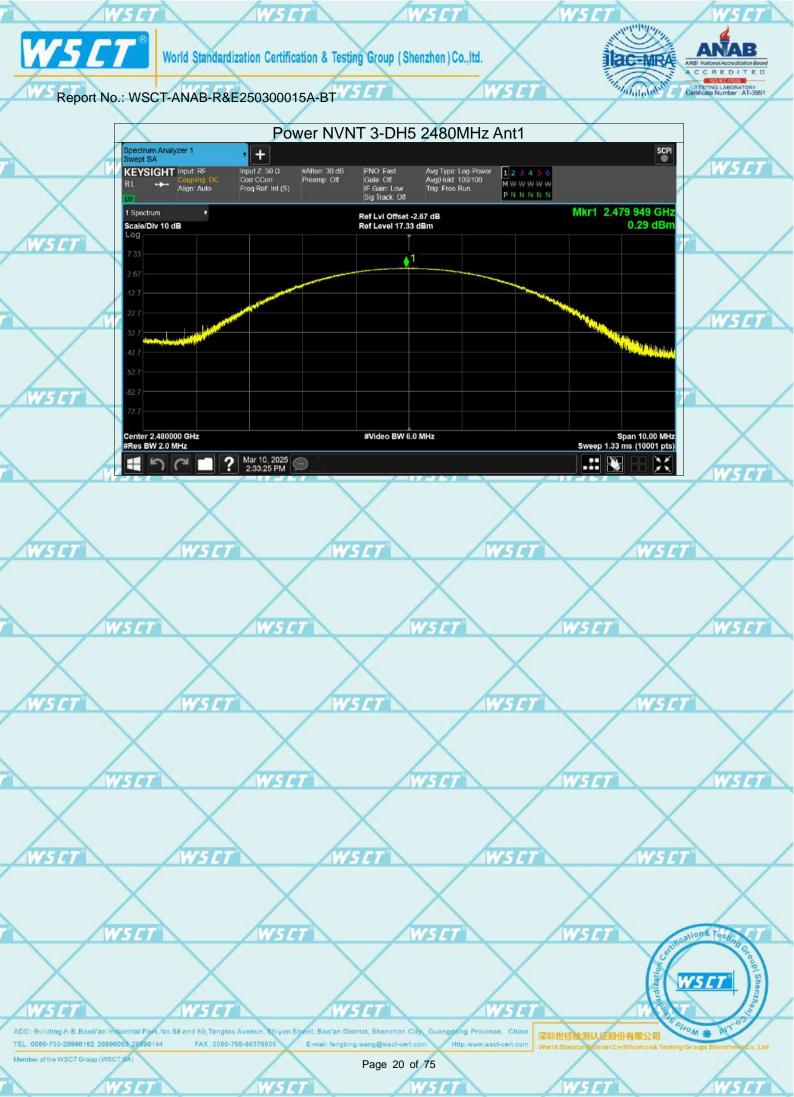
VSET WSET















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20dB Occupy Bandwidth 6.4.

6.4.1. Test Specification

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			_
X	Test Requirement:	FCC Part15 C Section 15.247 (a)(1)	
WSET	Test Method:	ANSI C63.10:2014 W5	
	Limit:	N/A	\bigvee
\times	Test Setup:	Spectrum Analyzer EUT	WSET
WSET	Test Mode:	Transmitting mode with modulation	
WSET	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. 	WSET
	Test Result:	PASS	
		X	X

	WSLT	WSLT	WSLI	W-51-1	- W547
X	X		X .	X	X
				1	
AWSLIN			ET W	31/	WSET
	\ /				

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W5 CT

6.4.2. Test data

7	Test channel	20dB Occupy Bandwidth (MHz)						
_	rest charmer	GFSK	π/4-DQPSK	8DPSK	Conclusion			
	Lowest	0.9527	1.330	1.288	PASS			
	Middle	0.9405	1.327	1.339	PASS			
/	Highest	0.9557	1.336	1.317	PASS			
- 0	^		_		_			

WSET	Middle	0.9405	1.327	1.339	PASS		/
	Highest	0.9557	1.336	1.317	PASS		
	plots as follows:	WSET	WSET	M	VS CT	WSI	1
X	X	\geq		X	\geq		
WSET	WSET	WSI		WSET	W5		\neq
<u></u>	EIII /	WSET	WSET	/	BET	WST	
			11010			/ 1114	
WSLT	WSLT	WSI	7	WSET	W.S	-	/
	SET	WSCT	WSET		VSET	WSG	_
WSET	WSET	WSI		WSET	WS		
	YSCT .	WSET	WSET		VSET	WSG	
WSET	WSET	WSL		WELL	WS		/
	SET	WSCT	WSET		\times	\times	
					V.	incations testing Co	

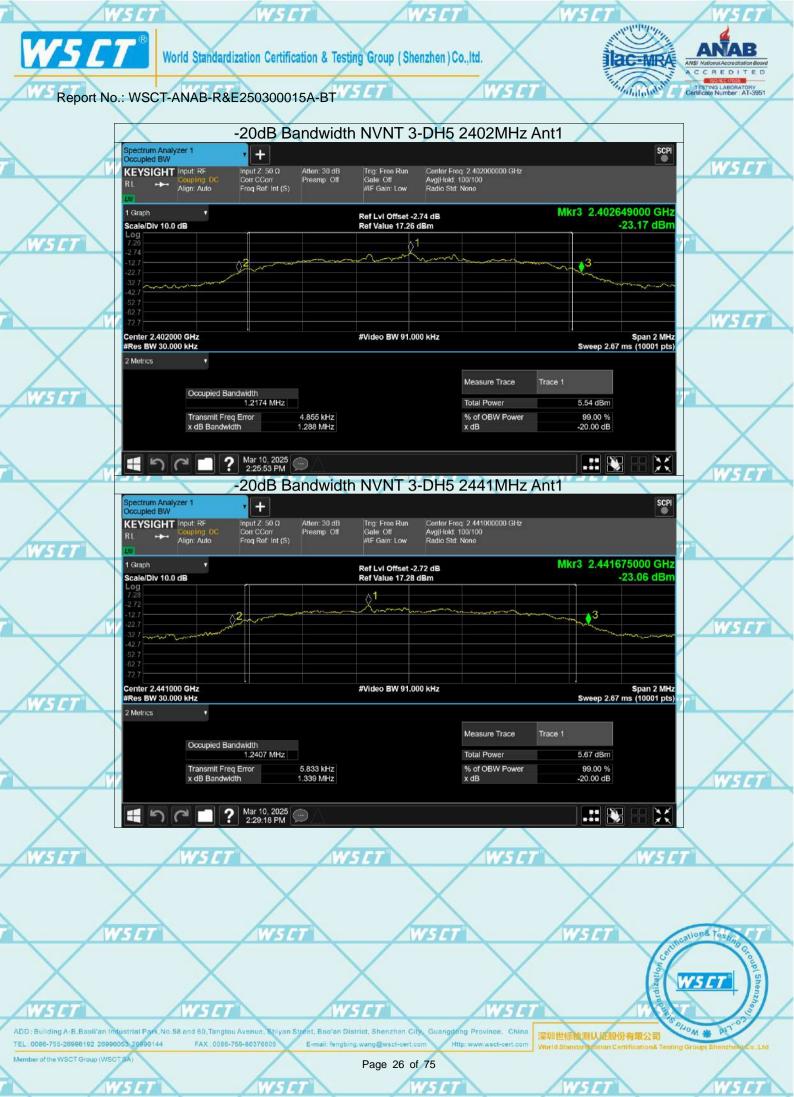
TEL 0086-755-26996192 26996053 26996144 FAX:0086-755-86376605

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Report No.: WSCT-ANAB-R&E250300015A-BT

Carrier Frequencies Separation 6.5.

6.5.1.	Test S	pecification

WSET

X	Test Requirement:	FCC Part15 C Section 15.247 (a)(1)	
WSLT	Test Method:	ANSI C63.10:2014 W5 [7]	
	Limit:	Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.	WSET
WSCI	Test Setup:	Spectrum Analyzer EUT W5///	
	Test Mode:	Hopping mode	\vee
WSCT	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 = 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. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. Record the value in report. 	W5ET
	Test Result:	PASS	
		^ X X	X

WSG WSG WSG WSG	TAW S L I
X X X X X X	X
WSET WSET WSET W	SET

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WSET

6.5.2. Test data

	1777333			ALC: A	WSIT	
1	GFSK mode					
\	Test channel	Carrier Frequencies Separation (MHz)	Limit ((2/3*20dB BW MHz))	Result		
	Lowest	0.996	0.635	PASS 77		
	Middle	1.004	0.627	PASS	X	
	Highest	1.004	0.637	PASS		
	/ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				1 A 7 40 M	

W5E

W5 E7

	Pi/4 DQPSK mode				
0	Test channel	Carrier Frequencies Separation (MHz)	Limit ((2/3*20dB BW MHz))	Result	
	Lowest	0.996	0.887	PASS	
	Middle	0.994	0.885	PASS	
	Highest	WSET 1 W	5 C7 0.891	5 CT PASS	

W5 CT

8DPSK mode				
Test channel	Carrier Frequencies Separation (MHz)	Limit ((2/3*20dB BW MHz))	Result	
Lowest	0.992	0.859	PASS	
Middle	1.002	0.893	PASS	
Highest	1.01	0.878	PASS	

Test plots as follows:

WSET WSE WS ET

WSET WSE WSEI WSEI

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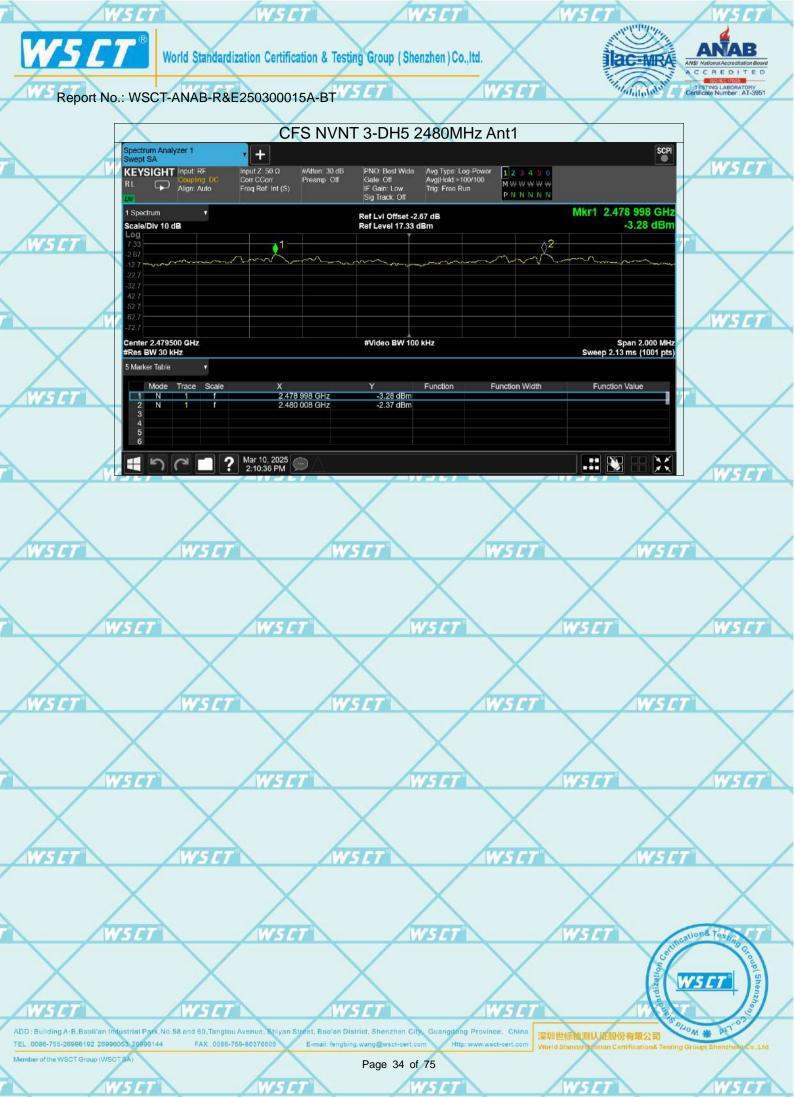
WSET











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WSET



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WSCT

Report No.: WSCT-ANAB-R&E250300015A-BT

W5 CT

6.6. Hopping Channel Number

6.6.1. Test Specification

_			_
	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.	\times
7	Test Setup:		W.5/1
CT"		Spectrum Analyzer EUT	
	Test Mode:	Hopping mode	
		 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. 	WS
	Test Procedure:	 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. 7. Record the measurement data in report. 	\
	Test Result:	PASS	

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WS ET

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WSET

WSET

WSET

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WELT

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177.3







Report No.: WSCT-ANAB-R&E250300015A-BT

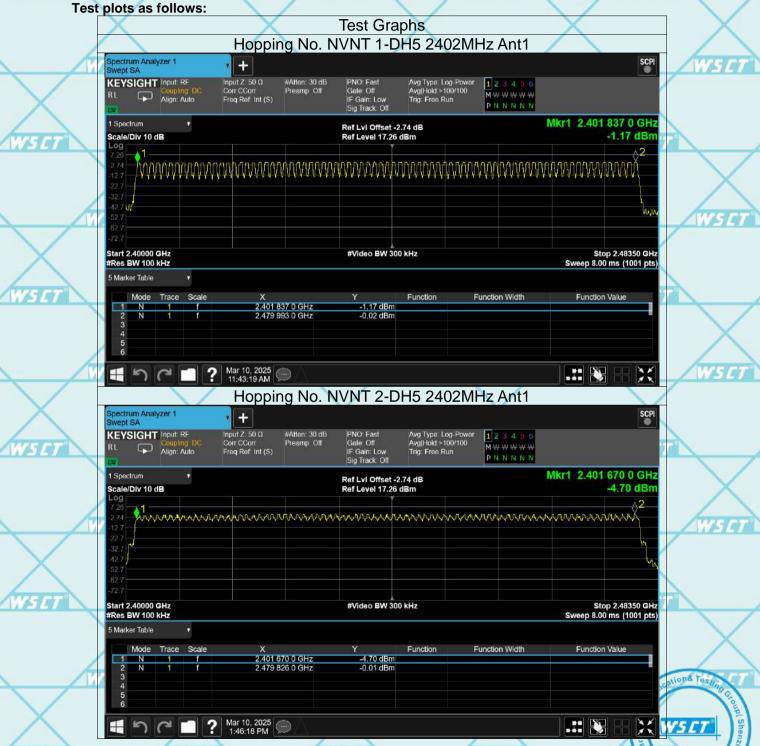
WSET

Test data

WS ET

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

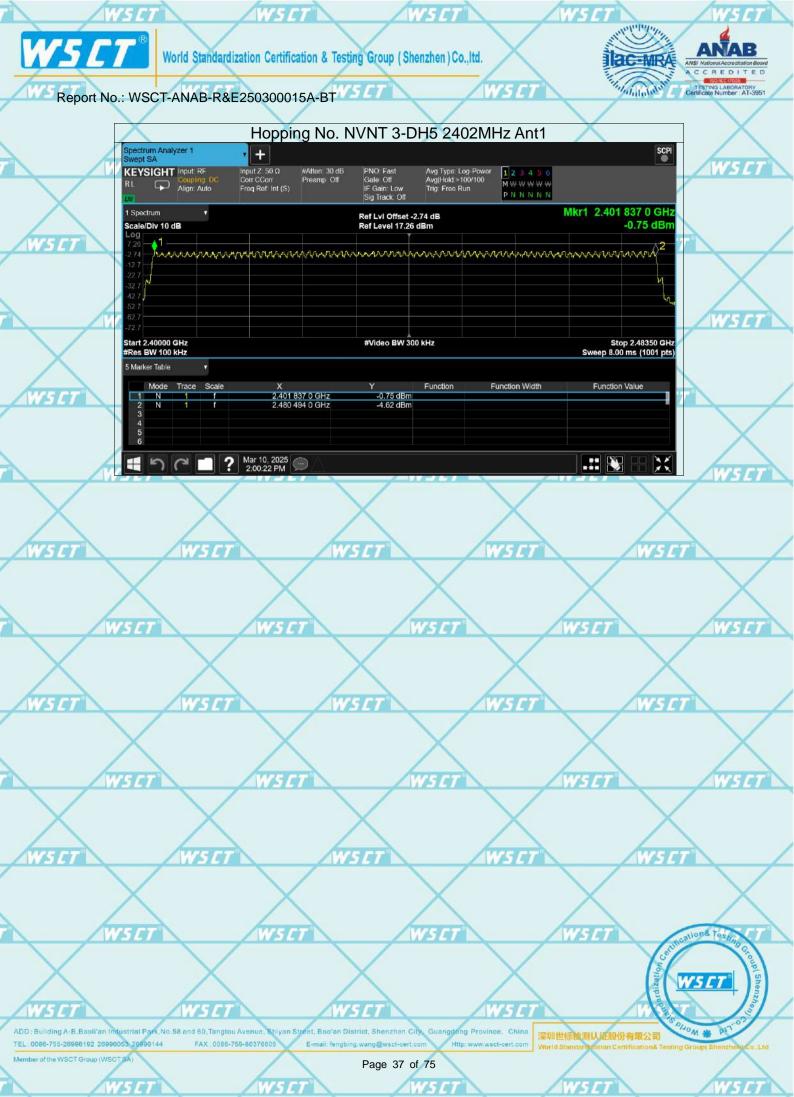
Tost plate as follows:



nail: fengbing.wang@wsct-cert.com Http://www.wsct-cert.com

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A C C R E D I T E D

TESTING LABORATORY
Certificials Number: AT-3951

Report No.: WSCT-ANAB-R&E250300015A-BT

6.7. Dwell Time

6.7.1. Test Specification 5

WSET 1

AWS LT

WSCT

X	Test Requirement:	FCC Part15 C Section 15.247 (a)(1)	
WSET	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	
WSET	Test Mode:	Hopping mode WSLT WSLT	
WSET	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	
	WE11	WELL WELL	W-14A

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WSET

WSET

WS ET

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WSET

WSCT

WSET

WSET

WSCT.

WSIT

WELT

WELT

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Report No.: WSCT-ANAB-R&E250300015A-BT

WSET

6.7.2. Test Data

			A		- 76			
7	Mode	Frequency	Pulse Time	Total Dwell Time	Burst	Period Time	Limit	Verdict
-		(MHz)	(ms)	(ms)	Count	(ms)	(ms)	
	1-DH1	2402	0.382	121.858	319	31600	400	Pass
	1-DH1	2441	0.384	122.496	319	31600	400	Pass
	1-DH1	2480	0.383	121.794	318	31600	400	Pass
	1-DH3	2402	1.638	276.822	169	31600	400	Pass
C	1-DH3	2441	1.64	259.12	158	31600	400	Pass
)	1-DH3	2480	1.639	276.991	169	31600	400	Pass
	1-DH5	2402	2.888	297.464	103	31600	400	Pass
	1-DH5	2441	2.887	334.892	116	31600	400	Pass
	1-DH5	2480	2.887	291.587	101	31600	400	Pass

WSCT

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

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

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

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

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

WSET"

Test plots as follows:

W	507	WSCT	WSET	WSET	WSET
WSLT	WSET	WSET	WSCI	W	ET
		WSET	WSET	WSET	WSET
X	X	X	X		

W5E

WS CT

AWELT

WSET

WSET

WSIT

WEST

WELT

1W5E7

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WSET

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Report No.: WSCT-ANAB-R&E250300015A-BT

Test Graphs

Dwell NVNT 1-DH1 2402MHz Ant1 One Burst

Spectrum Analyzer 1
Swept SA

KEYSIGHT Input: RF

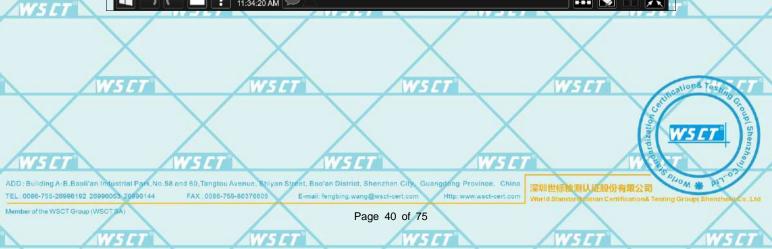
Input: 50 0 #Atten: 30 dB

PNO: Fast

Avg Type: Log-Power 12 3 4 5 0











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Report No.: WSCT-ANAB-R&E250300015A-BT

Dwell NVNT 1-DH3 2402MHz Ant1 One Burst

Spectrum Analyzer 1
Swept SA







WSET World Standardization Certification & Testing Group (Shenzhen) Co., ltd. ac-MRA The Intelligent Report No.: WSCT-ANAB-R&E250300015A-BT Dwell NVNT 1-DH3 2441MHz Ant1 One Burst 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 Trig: Video Trig Delay: -500.0 µs KEYSIGHT Input: RF 1 2 3 4 5 6 WWWWW Align: Auto ΔMkr1 1.640 ms Ref LvI Offset -2.72 dB Ref Level 17.28 dBm 4.23 dE Scale/Div 10 dB



iona Tes W5 CT FAX: 0086-755-86376605 Page 44 of 75

WSET World Standardization Certification & Testing Group (Shenzhen) Co., Itd. ac-MRA "Infalalatate Report No.: WSCT-ANAB-R&E250300015A-BT Dwell NVNT 1-DH3 2480MHz Ant1 One Burst 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 Trig: Video Trig Delay: -500.0 µs KEYSIGHT Input: RF 1 2 3 4 5 6 Align: Auto ΔMkr1 1.639 ms 1 Spectrum



WSET World Standardization Certification & Testing Group (Shenzhen) Co., ltd. ac-MRA "Infalalatate Report No.: WSCT-ANAB-R&E250300015A-BT Dwell NVNT 1-DH5 2402MHz Ant1 One Burst 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 Trig: Video Trig Delay: -500.0 µs KEYSIGHT Input: RF 1 2 3 4 5 6 WWWWW Align: Auto ΔMkr1 2.888 ms Ref LvI Offset -2.74 dB Ref Level 17.26 dBm 3.01 dB Scale/Div 10 dB **▲1**Δ2 والمرابع ويعتم والمواجعة والمناس المعاوية والمرابع والمرابع والمرابع والمرابع والمعاول والمعاول المعاول والمعاول والمعاو Center 2.402000000 GHz Res BW 1.0 MHz #Video BW 3.0 MHz Span 0 Hz Sweep 10.0 ms (10001 pts) Function Value Function Width 2.888 ms (Δ) 3.01 dB -8.72 dBm ? Mar 10, 2025 11:43:25 AM X ... 💸 Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated 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 #Atten: 30 dB Preamp: Off Avg Type: Log-Po Trig: Free Run KEYSIGHT Input: RF 1 2 3 4 5 6 W ₩ ₩ ₩ ₩ P N N N N N 1 Spectrum Ref Lvi Offset -2.74 dB Ref Level 17.26 dBm Scale/Div 10 dB Loa Center 2.402000000 GHz Res BW 1.0 MHz Span 0 Hz Sweep 31.6 s (10001 pts) #Video BW 3.0 MHz ? Mar 10, 2025 🐺 iona Tes W5C1 FAX: 0086-755-86376605 Page 46 of 75











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6.8. **Pseudorandom Frequency Hopping Sequence**

FCC Part15 C Section 15.247 (a)(1) requirement: Test Requirement:

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is

Alternatively. Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a Pseudorandom ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

EUT Pseudorandom Frequency Hopping Sequence

The pseudorandom sequence may be generated in a nine-stage shift register whose 5th and 9th stage outputs are added in a modulo-two addition stage. And the result is fed back to the input of the first stage. The sequence begins with the first one of 9 consecutive ones; i.e. the shift register is initialized with nine ones.

- Number of shift register stages: 9
- Length of pseudo-random sequence: 29-1 = 511 bits
- Longest sequence of zeros: 8 (non-inverted signal)

WS Linear Feedback Shift Register for Generation of the PRBS sequence

An example of Pseudorandom Frequency Hopping Sequence as follow:

2 62 64 78 73 75 77

Each frequency used equally on the average by each transmitter. The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.

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WSE



W5 E

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ILAC-MRA

Report No.: WSCT-ANAB-R&E250300015A-BT

Conducted Band Edge Measurement 6.9.

6.9.1. Test Specification

WSET

WSET

			_
	Test Requirement:	FCC Part15 C Section 15.247 (d)	
7	Test Method:	ANSI C63.10:2014 W5 [7] W5 [7]	
7	Limit:	In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.	WSCT
	Test Setup:	Spectrum Analyzer EUT	\searrow
	Test Mode:	Transmitting mode with modulation	
	Test Procedure:	 The testing follows the guidelines in Band-edge Compliance of RF Conducted Emissions of ANSI C63.10:2014 Measurement Guidelines. Set to the maximum power setting and enable the EUT transmit continuously. Set RBW = 100 kHz (≥1% span=10MHz), VBW = 300 kHz (≥RBW). Band edge emissions must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100kHz RBW. The attenuation shall be 30 dB instead of 20 dB when RMS conducted output power procedure is used. Enable hopping function of the EUT and then repeat step 2 and 3. Measure and record the results in the test report. 	WSET
	Test Result:	PASS	
-	WEIGHT WEIGHT	11777	175747

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WSET

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W5CT° World Standardization Certification & Testing Group (Shenzhen) Co., ltd. ac-MRA "Infalalatala Report No.: WSCT-ANAB-R&E250300015A-BT **Test Data GFSK Modulation** (the worst case) Test Graphs Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref SCPI + KEYSIGHT Input: RF Input Z: 50 Ω #Atten: 30 dB Preamp: Off 1 2 3 4 5 6 75 F.T MWWWWW

Avg Type: Log-Power Avg|Hold: 2000/2000 Trig: Free Run Corr CCorr Freq Ref. Int (S) PNNNNN Mkr1 2.402 176 GHz Ref LvI Offset -2.74 dB Ref Level 17.26 dBm 1 Spectrum Scale/Div 10 dB -0.72 dBm Center 2.402000 GHz #Res BW 100 kHz #Video BW 300 kHz Span 8.000 MHz Sweep 1.00 ms (1001 pts) ... 💸 Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission Spectrum Analyzer 1 Swept SA + Input Z: 50 \O Corr CCorr Freq Ref: Int (S) #Atten: 30 dB Preamp: Off Avg Type: Log-Power Avg|Hold: 2000/2000 Trig: Free Run KEYSIGHT Input: RF Gate Off IF Gain: Low Sig Track: Off MWWWW Mkr1 2.405 9 GHz 1 Spectrum Ref LvI Offset -2.74 dB Ref Level 17.26 dBm Scale/Div 10 dB -1.18 dBm Stop 2.40600 GHz Sweep 9.60 ms (1001 pts) Start 2.30600 GHz #Video BW 300 kHz #Res BW 100 kHz Function Width 2.390 0 GHz 2.367 9 GHz -62.01 dBm -57.18 dBm

| WS ET | WS E

WSCT" World Standardization Certification & Testing Group (Shenzhen) Co., ltd. ac-MRA The Intelligent Report No.: WSCT-ANAB-R&E250300015A-BT Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref 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: 2000/2000 Trig: Free Run KEYSIGHT Input RF 123456 M W W W W W P N N N N N Align: Auto Mkr1 2.479 896 GHz Ref LvI Offset -2.67 dB -0.50 dBm Ref Level 17.33 dBm Scale/Div 10 dB Span 8.000 MHz Sweep 1.00 ms (1001 pts) Center 2.480000 GHz #Res BW 100 kHz #Video BW 300 kHz 4 9 6 1 ? Mar 10, 2025 9 ... Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission pectrum Analyzer 1 SCPI + Avg Type: Log-Power Avg|Hold: 2000/2000 Trig: Free Run Input Z: 50 Ω #Atten: 30 dB Preamp: Off KEYSIGHT Input: RF 1 2 3 4 5 6 Corr CCorr Freq Ref. Int (S) MWWWWW Align: Auto PNNNN Mkr1 2.480 0 GHz 1 Spectrum Ref Lvi Offset -2.67 dB Ref Level 17.33 dBm -0.32 dBm Scale/Div 10 dB Stop 2.57600 GHz Sweep 9.60 ms (1001 pts) Start 2.47600 GHz #Res BW 100 kHz #Video BW 300 kHz Function Width Function Value -0.32 dBm -48.22 dBm -58.13 dBm 2.483 5 GHz 2.500 0 GHz * ? T. 3 iona Tes W5 CT TEL:0088-755-26996192 26996053 26996144 FAX: 0086-755-86376805 Page 52 of 75



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WSCI

Report No.: WSCT-ANAB-R&E250300015A-BT

Conducted Spurious Emission Measurement 6.10.

6.10.1. **Test Specification**

WSET WSET

	Test Requirement:	FCC Part15 C Section 15.247 (d)	
	Test Method:	ANSI C63.10:2014	
7	Limit:	In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits.	WSET
7	Test Setup:	Spectrum Analyzer EUT	
	Test Mode:	Transmitting mode with modulation	\searrow
	Limit: In any 100 kHz bandwidth outside the intentional radiation frequency band, the radio frequency power shall be at least 20 dB below the highest level of the radiated power. In addition, radiated emissions which fa in the restricted bands must also comply with the radiated emission limits. Test Setup: Test Setup: FUT FUT		
	Test Result:	PASS	
	The same of the sa	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAM	1111111111

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6.11. Radiated Spurious Emission Measurement

6.11.1. Test Specification

Web / Web	TUPIA TUPIA	
Test Requirement:	FCC Part15 C Section 15.209	
Test Method:	ANSI C63.10:2014	

Frequency Range: 9 kHz to 25 GHz

Measurement Distance: 3 m

Horizontal & Vertical **Antenna Polarization:**

		9kHz- 150kHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value
		150kHz-	Quasi-peak	9kHz	30kHz	Quasi-peak Value
	Receiver Setup:	30MHz				
,	WSET	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak Value
		Above 4011	Peak	1MHz	3MHz	Peak Value
		Above 1GHz	Peak	1MHz	10Hz	Average Value

Frequency Detector RBW VBW

	Frequency	Field Strength	Measurement
WSCT WSCI	Frequency	(microvolts/meter)	Distance (meters)
	0.009-0.490	2400/F(KHz)	300
	0.490-1.705	24000/F(KHz)	30
	1.705-30	30	30
(1)	30-88	100	3
W5CT	88-216	150	1337
Limit:	216-960	200	3
Y	Above 060	500	2

WSET	Frequency	Field Strength (microvolts/meter)	Measurement Distance (meters)	Detector
	4011-	500	3	Average
	Above 1GHz	5000		

Distance = 3m

For radiated emissions below 30MHz

Pre -Amplifier Test setup: EUT Receiver

30MHz to 1GHz

FAX: 0086-755-86376805

Ground Plane

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Pre-amplifier Coaxial cable (1m) Above 1GHz Receiver Test Mode: Transmitting mode with modulation The testing follows the guidelines in **Spurious** Radiated **Emissions** of ANSI C63.10:2014 Measurement Guidelines. For the radiated emission test below 1GHz: The EUT was placed on a turntable with 0.8 meter above ground. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high PASS filter are used for the test in order to get better signal level.

WSET

Test Procedure:

Place the measurement antenna on a turntable with 1.5 meter above ground, which is away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which

For the radiated emission test above 1GHz:

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maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

- Set to the maximum power setting and enable the EUT transmit continuously.
- Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 kHz for f < 1 GHz, RBW=1MHz for f>1GHz; VBW≥RBW; Sweep = auto; Detector function = peak; Trace = max hold for peak
 - (3) For average measurement: use duty cycle correction factor method per 15.35(c). Duty cycle = On time/100 milliseconds On time =N1*L1+N2*L2+...+Nn-1*LNn-1+Nn*Ln Where N1 is number of type 1 pulses, L1 is length of type 1 pulses, etc. Average Emission Level = Peak Emission

Level + 20*log(Duty cycle)

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

Test results: **PASS**

WSE





Report No.: WSCT-ANAB-R&E250300015A-BT

WSET I

6.11.2. Test Data

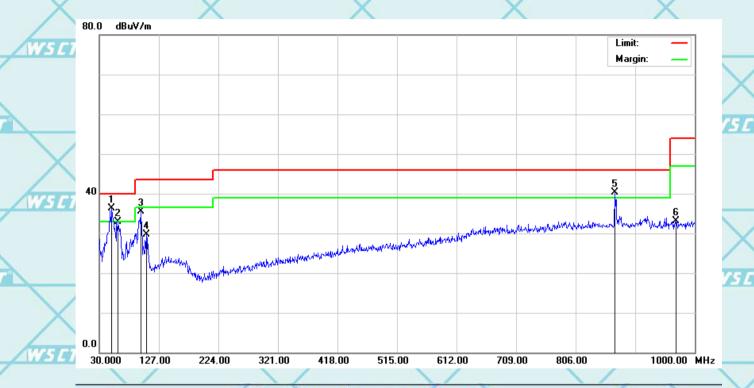
Please refer to following diagram for individual

W5ET Below 1GHz ET

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WSLT

Horizontal:



	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	HA.	VSTEE
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	
X	1	*	50.3700	38.39	-2.14	36.25	40.00	-3.75	QP	
WSLI	2	1	60.0700	35.80	-2.82	32.98	40.00	-7.02	QP	_/
	3		97.9000	41.11	-5.68	35.43	43.50	-8.07	QP	X
	4		106.6300	34.55	-4.90	29.65	43.50	-13.85	QP	VSET
	74.5	1	870.0200	33.26	7.14	40.40	46.00	-5.60	QP	
	6	(969.9300	24.86	8.24	33.10	54.00	-20.90	QP	
THE PARTY NAMED IN										

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WSET

SET WSE

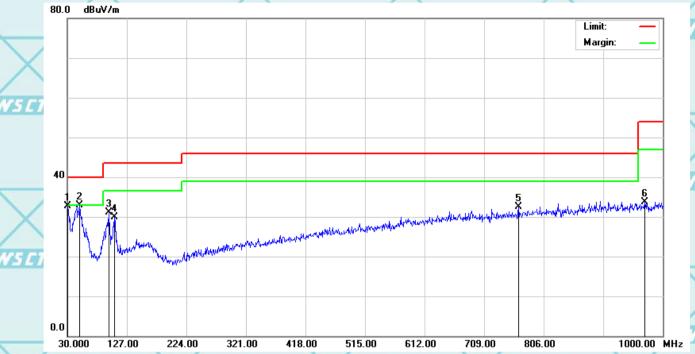




Report No.: WSCT-ANAB-R&E250300015A-BT







WSE	No. Mk	. Freq.	Level	Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	
	1	30.0000	35.33	-2.60	32.73	40.00	-7.27	QP	\triangle
	2,*	50.3700	35.02	-2.14	32.88	40.00	-7.12	QP	V5 E7
X	3	97.9000	36.72	-5.68	31.04	43.50	-12.46	QP	
WSE	4	106.6300	34.90	-4.90	30.00	43.50	-13.50	QP	
	45	765.2600	26.65	5.80	32.45	46.00	-13.55	QP	X
	6	970.9000	25.37	8.26	33.63	54.00	-20.37	QP	//
		-		-		-			15 111

Note1:

Freq. = Emission frequency in MHz

Reading level $(dB\mu V)$ = Receiver reading

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

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

Limit $(dB\mu V)$ = Limit stated in standard

Margin (dB) = Measurement (dB μ V) – Limits (dB μ V)

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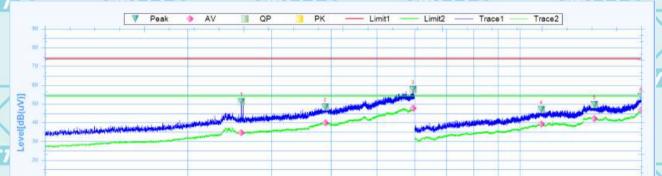
Above 1GHz

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:



Freq[GHz]

Susp	uted Data Lis	t .) W			83 N	V	W s	į	20 5
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2594.3750	51.1	6.27	44.83	74	-22.9	274.6	Horizontal	PK	Pass
1	2594.3750	34.59	6.27	28.32	54	-19.41	274.6	Horizontal	AV	Pass
2	3892.5000	48.25	11.67	36.58	74	-25.75	237.7	Horizontal	PK	Pass
2	3892.5000	39.91	11.67	28.24	54	-14.09	237.7	Horizontal	AV	Pass
3	5958.7500	57.65	21.94	35.71	74	-16.35	327.3	Horizontal	PK	Pass
3	5958.7500	47.62	21.94	25.68	54	-6.38	327.3	Horizontal	AV	Pass
4	11094.0000	46.95	39.42	7.53	74	-27.05	3.4	Horizontal	PK	Pass
4	11094.0000	39.35	39.42	-0.07	54	-14.65	3.4	Horizontal	AV	Pass
5	14346.0000	49.55	41.05	8.5	74	-24.45	259.9	Horizontal	PK	Pass
5	14346.0000	42.17	41.05	1.12	54	-11.83	259.9	Horizontal	AV	Pass
6	17997.0000	53.84	46.48	7.36	74	-20.16	132	Horizontal	PK	Pass
6	17997.0000	46.81	46.48	0.33	54	-7.19	132	Horizontal	AV	Pass

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Report No.: WSCT-ANAB-R&E250300015A-BT





\times					Freq[GHz]						
	puted Data Lis	it									ĺ
S C I	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict	
1	2402.5000	45.69	7.58	38.11	74	-28.31	53.5	Vertical	PK	Pass	1
1	2402.5000	37.16	7.58	29.58	54	-16.84	53.5	Vertical	AV	Pass	
2	3955.6250	48.59	11.92	36.67	74	-25.41	359.5	Vertical	PK	Pass	L
2	3955.6250	39.83	11.92	27.91	54	-14.17	359.5	Vertical	AV	Pass	
3	5945.6250	56.08	22.08	34	74	-17.92	283	Vertical	PK	Pass	1
3	5945.6250	47.24	22.08	25.16	54	-6.76	283	Vertical	AV	Pass	1
4	11464.5000	47.06	39.08	7.98	74	-26.94	1	Vertical	PK	Pass	1
4	11464.5000	39.39	39.08	0.31	54	-14.61	1	Vertical	AV	Pass	
5	13959.0000	49.88	41.39	8.49	74	-24.12	0.6	Vertical	PK	Pass	
5	13959.0000	42.36	41.39	0.97	54	-11.64	0.6	Vertical	AV	Pass	1
6	17955.0000	54.31	46.2	8.11	74	-19.69	0.9	Vertical	PK	Pass	
6	17955.0000	46.68	46.2	0.48	54	-7.32	0.9	Vertical	AV	Pass	15

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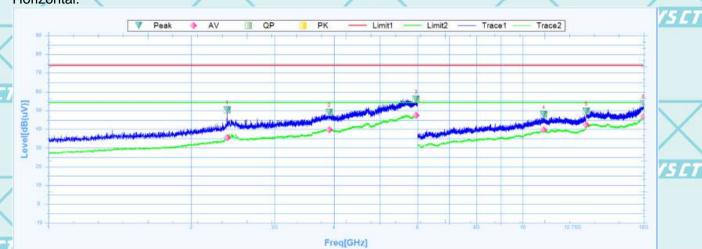




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W5 CT

Middle channel: 2441MHz Horizontal:



Suspi	uted Data Lis	t								
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2380.6250	50.36	7.03	43.33	74	-23.64	245	Horizontal	PK	Pass
1	2380.6250	35.54	7.03	28.51	54	-18.46	245	Horizontal	AV	Pass
2	3910.0000	48.92	11.81	37.11	74	-25.08	142.2	Horizontal	PK	Pass
2	3910.0000	39.76	11.81	27.95	54	-14.24	142.2	Horizontal	AV	Pass
3	5963.7500	56.12	21.89	34.23	74	-17.88	221.1	Horizontal	PK	Pass
3	5963.7500	47.41	21.89	25.52	54	-6.59	221.1	Horizontal	AV	Pass
4	11082.0000	47.89	39.43	8.46	74	-26.11	292	Horizontal	PK	Pass
4	11082.0000	39.66	39.43	0.23	54	-14.34	292	Horizontal	AV	Pass
5	13614.0000	49.61	40.5	9.11	74	-24.39	78.1	Horizontal	PK	Pass
5	13614.0000	42.31	40.5	1.81	54	-11.69	78.1	Horizontal	AV	Pass
6	17986.5000	53.54	46.41	7.13	74	-20.46	2.6	Horizontal	PK	Pass
6	17986.5000	46.75	46.41	0.34	54	-7.25	2.6	Horizontal	AV	Pass

WSET	WSET	WSET	WSET	WSET	
			\times	X	X
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WSET	WSET	WSLT	WSET	WSET	
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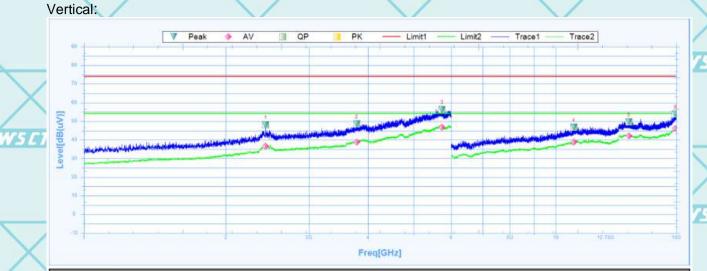
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Report No.: WSCT-ANAB-R&E250300015A-BT

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_	Suspu	ited Data Lis	t								
Ż	NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
	1	2426.8750	48.2	7.66	40.54	74	-25.8	96.6	Vertical	PK	Pass
	1	2426.8750	36.64	7.66	28.98	54	-17.36	96.6	Vertical	AV	Pass
	2	3785.0000	48.6	10.91	37.69	74	-25.4	0.1	Vertical	PK	Pass
)	2	3785.0000	38.78	10.91	27.87	54	-15.22	0.1	Vertical	AV	Pass
	3	5740.0000	56.37	21.17	35.2	74	-17.63	281.9	Vertical	PK	Pass
\	3	5740.0000	46.87	21.17	25.7	54	-7.13	281.9	Vertical	AV	Pass
1	4	10915.5000	46.73	39.38	7.35	74	-27.27	360.1	Vertical	PK	Pass
L	4	10915.5000	38.75	39.38	-0.63	54	-15.25	360.1	Vertical	AV	Pass
	5	14274.0000	49.62	41.14	8.48	74	-24.38	161.9	Vertical	PK	Pass
	5	14274.0000	42.11	41.14	0.97	54	-11.89	161.9	Vertical	AV	Pass
	6	17935.5000	53.8	46.07	7.73	74	-20.2	12.1	Vertical	PK	Pass
	6	17935.5000	46.17	46.07	0.1	54	-7.83	12.1	Vertical	AV	Pass

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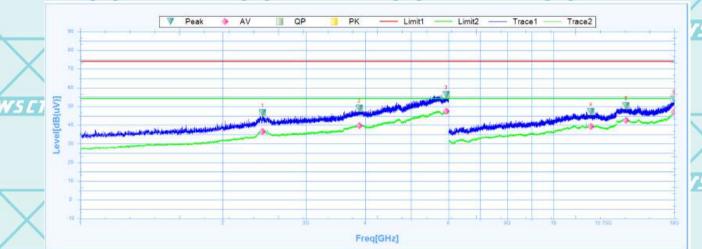




Report No.: WSCT-ANAB-R&E250300015A-BT

High channel: 2480MHz

Horizontal:



Susputed Data List Freq. [MHz] Reading Factor Level Limit Margin Deg NO. **Polarity** Verdict Trace [dB(uV)] [dB(uV)] [dB] [dB] [dB] ["] 74 PK 2426.2500 46.48 7.66 38.82 -27.52 53.5 Horizontal Pass 2426.2500 36.65 7.66 28.99 54 -17.35 53.5 AV Horizontal Pass 74 2 3886.8750 49.06 11.63 37.43 -24.94 PK 0 Horizontal Pass Pass 2 3886.8750 39.7 11.63 28.07 54 -14.3 0 Horizontal AV 3 5932.5000 56.31 21.98 34.33 74 -17.69 192.2 Horizontal PK Pass 3 5932.5000 47.44 25.46 54 -6.56 192.2 ΑV 21.98 Horizontal Pass 4 11998.5000 47.27 38.6 8.67 74 -26.73 212 Horizontal PK Pass 4 11998.5000 39.31 38.6 0.71 54 -14.69 212 Horizontal AV Pass 5 14236.5000 50.35 9.16 74 -23.65 360 41.19 Horizontal PK Pass 5 14236.5000 42.55 1.36 -11.45 41.19 54 360 Horizontal ΑV Pass 6 53.94 7.48 -20.06 17994.0000 46.46 74 224 PK Pass Horizontal 6 17994.0000 47.08 46.46 0.62 54 -6.92 224 Horizontal AV Pass

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			rict, Shenzhen City, Guangdong Province	深圳巴尔西洲从准胜7万号	開公司 SPHOM ※ PITOS	/

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Vertical:



NO.	Freq.	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2425.6250	47.77	7.66	40.11	74	-26.23	359.2	Vertical	PK	Pass
1	2425.6250	36.2	7.66	28.54	54	-17.8	359.2	Vertical	AV	Pass
2	3873.1250	49.46	11.51	37.95	74	-24.54	10	Vertical	PK	Pass
2	3873.1250	39.71	11.51	28.2	54	-14.29	10	Vertical	AV	Pass
3	5648.7500	56.77	21.04	35.73	74	-17.23	357.7	Vertical	PK	Pass
3	5648.7500	47.32	21.04	26.28	54	-6.68	357.7	Vertical	AV	Pass
4	11143.5000	46.45	39.37	7.08	74	-27.55	98.4	Vertical	PK	Pass
4	11143.5000	39.42	39.37	0.05	54	-14.58	98.4	Vertical	AV	Pass
5	14130.0000	50.14	41.33	8.81	74	-23.86	32.6	Vertical	PK	Pass
5	14130.0000	42.59	41.33	1.26	54	-11.41	32.6	Vertical	AV	Pass
6	17940.0000	53.89	46.1	7.79	74	-20.11	359.9	Vertical	PK	Pass
6	17940.0000	47	46.1	0.9	54	-7	359.9	Vertical	AV	Pass

Note:

- 1. The emission levels of other frequencies are very lower than the limit and not show in test report.
- 2. Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency.
 - 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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Report No.: WSCT-ANAB-R&E250300015A-BT



6.11.3. **Restricted Bands Requirements**

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

			~		~		
Frequency	Reading	Correct Factor	Emission Level	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
			Low Cha	nnel			
2387	63.72	-8.76	54.96	74	19.04	H	PK
2387	55.87	-8.76	47.11	54	6.89	HV5	AV
2387	60.56	-8.73	51.83	74	22.17	V	PK
2387	56.96	-8.73	48.23	54	5.77	V	AV
2390	61.83	-8.76	53.07	74	20.93	Н	PK
2390	55.50	-8.76	46.74	54	7.26	I	AV
2390	62.75	-8.73	54.02	74	19.98	V	PK
2390	56.71	-8.73	47.98	54	6.02	V	AV
WSLI		ZWSLT	High Cha	nnel		111-7	
2483.5	62.84	-8.17	54.67	74	19.33	Н	PK
2483.5	53.34	-8.17	45.17	54	8.83	Н	AV
2483.5	62.63	-8.17	54.46	74	19.54	V	PK
2483.5	53.90	-8.17	45.73	54	8.27	V	AV
	2387 2387 2387 2387 2387 2390 2390 2390 2390 2483.5 2483.5 2483.5	(MHz) (dBuV/m) 2387 63.72 2387 55.87 2387 60.56 2387 56.96 2390 61.83 2390 55.50 2390 62.75 2390 56.71 2483.5 62.84 2483.5 53.34 2483.5 62.63	(MHz) (dBuV/m) Factor 2387 63.72 -8.76 2387 55.87 -8.76 2387 60.56 -8.73 2387 56.96 -8.73 2390 61.83 -8.76 2390 55.50 -8.76 2390 62.75 -8.73 2390 56.71 -8.73 2483.5 62.84 -8.17 2483.5 62.63 -8.17 2483.5 53.90 -8.17	(MHz) (dBuV/m) dB/m (dBuV/m) Low Cha 2387 63.72 -8.76 54.96 2387 55.87 -8.76 47.11 2387 60.56 -8.73 51.83 2387 56.96 -8.73 48.23 2390 61.83 -8.76 53.07 2390 55.50 -8.76 46.74 2390 62.75 -8.73 54.02 2390 56.71 -8.73 47.98 High Cha 2483.5 62.84 -8.17 54.67 2483.5 62.63 -8.17 54.46 2483.5 53.90 -8.17 45.73	(MHz) (dBuV/m) dB/m (dBuV/m) (dBuV/m) Low Channel 2387 63.72 -8.76 54.96 74 2387 55.87 -8.76 47.11 54 2387 60.56 -8.73 51.83 74 2387 56.96 -8.73 48.23 54 2390 61.83 -8.76 53.07 74 2390 55.50 -8.76 46.74 54 2390 62.75 -8.73 54.02 74 2390 56.71 -8.73 47.98 54 High Channel 2483.5 62.84 -8.17 54.67 74 2483.5 53.34 -8.17 54.46 74 2483.5 53.90 -8.17 45.73 54	(MHz) (dBuV/m) dB/m (dBuV/m) (d	Factor Level

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 (dBμV) - Limits (dBμV)

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