	<b>达汉</b> J		
	<b>TEST REPOR</b>	RT	
FCC ID:	2A7J2-TWSTP20		
Test Report No::	TCT240718E014		
Date of issue:	Jul. 29, 2024	<i>C</i>	
Testing laboratory: :	SHENZHEN TONGCE TESTI	NG LAB	
Testing location/ address:	2101 & 2201, Zhenchang Fact Subdistrict, Bao'an District, Sh People's Republic of China		
Applicant's name: :	CG Mobile SAS		
Address:	39 rue de Courcelles, 75008 P	Paris, France	
Manufacturer's name :	Mia Technologies Limited		~~~
Address:	RM 601, Building 9, No.19, Gu Fucheng Street, Longhua She	nzhen, Guangdong,	P.R China
Standard(s):	FCC CFR Title 47 Part 15 Sub FCC KDB 558074 D01 15.247 ANSI C63.10:2013	opart C Section 15.24 Meas Guidance v05	17 5r02
Product Name::	Wireless Earphones		
Trade Mark:	GUESS		
Model/Type reference :	Refer to model list of page 3		)
Rating(s):	Rechargeable Li-ion Battery D	0C 3.7V	
Date of receipt of test item	Jul. 18, 2024		
Date (s) of performance of test:	Jul. 18, 2024 ~ Jul. 29, 2024		Š.
Tested by (+signature) :	Onnado YE	Onnado Marigo	E TA
Check by (+signature) :	Beryl ZHAO	BoyCom	TING
Approved by (+signature):	Tomsin	Tomsters	
General disclaimer:	oduced except in full, without t	the written approval	

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TCT 通测检测 TESTING CENTRE TECHNOLOGY

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### **1. General Product Information**

### 1.1. EUT description

Product Name:	Wireless Earphones	$(\mathbf{c}^{*})$		$(\mathbf{c})$
Model/Type reference:	TP20			
Sample Number:	TCT240718E014-0101			
Bluetooth Version:	V5.3		No.	
Operation Frequency:	2402MHz~2480MHz			
Transfer Rate:	1/2 Mbits/s			
Number of Channel:	79			
Modulation Type:	GFSK, π/4-DQPSK			
Modulation Technology:	FHSS			
Antenna Type:	Chip Antenna			
Antenna Gain:	1.75dBi			
Rating(s):	Rechargeable Li-ion Battery DC	3.7V		

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

### 1.2. Model(s) list

No.	Model No.	Tested with
1	TP20	$\boxtimes$
Other models	BMBEMIATP20LOK, BMBEMIATP20LOH, BMBEMIATP20LOO, BMBEMIATP20LOG, BMBEMIATP20LOB, BMBEMIATP20LOR, GUTWSTP2FTK, GUTWSTP2FTP, GUTWSTP2FTD, GUTWSTP2FTU, GUTWSTP2FTE, GUTWSTP2FTH, GUTWSTP2FTA, GUTWSTP2FTG, GUTWSTP2FSK, GUTWSTP2FSP, GUTWSTP2FSD, GUTWSTP2FSU, GUTWSTP2FSE, GUTWSTP2FSH, GUTWSTP2FSA, GUTWSTP2FSG, ASTWSTP2LOK, ASTWSTP2LON, ASTWSTP2LOH, ASTWSTP2LOG, DKTWSTP2LOK, DKTWSTP2LON, DKTWSTP2LOH, DKTWSTP2LOG, HKTWSTP2LOK, HKTWSTP2LOG, HKTWSTP2LOH, HKTWSTP2LOG	
	d model, other models are derivative models. The models are identical in o on the model names. So the test data of TP20 can represent the remainin	
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### 1.3. Operation Frequency

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	20	2422MHz	40	2442MHz	60	2462MHz
G`)1	2403MHz	21	2423MHz	41	2443MHz	61	2463MHz
<i></i>				·		·	
10	2412MHz	30	2432MHz	50	2452MHz	70	2472MHz
11	2413MHz	31	2433MHz	51	2453MHz	71	2473MHz
			9				S
18	2420MHz	38	2440MHz	58	2460MHz	78	2480MHz
19	2421MHz	39	2441MHz	59	2461MHz	~	- 0

Remark: Channel 0, 39 & 78 have been tested for GFSK,  $\pi$ /4-DQPSK modulation mode.



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### 2. Test Result Summary

Requirement	CFR 47 Section	Result
Antenna Requirement	§15.203/§15.247 (c)	PASS
AC Power Line Conducted Emission	§15.207	PASS
Conducted Peak Output Power	§15.247 (b)(1)	PASS
20dB Occupied Bandwidth	§15.247 (a)(1)	PASS
Carrier Frequencies Separation	§15.247 (a)(1)	PASS
Hopping Channel Number	§15.247 (a)(1)	PASS
Dwell Time	§15.247 (a)(1)	PASS
Radiated Emission	§15.205/§15.209	PASS
Band Edge	§15.247(d)	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.

### 3. General Information

### 3.1. Test environment and mode

Operating Environment:		
Condition	Conducted Emission	Radiated Emission
Temperature:	22.7 °C	22.8 °C
Humidity:	52 % RH	51 % RH
Atmospheric Pressure:	1010 mbar	1010 mbar
Test Software:		
Software Information:	FCC_assist_1.0.2.2	
Power Level:	10	
Test Mode <sup>.</sup>		

Test Mode:

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 (Z axis) are shown in Test Results of the following pages.

DH1 DH3 DH5 all have been tested, only worse case DH1 is reported.

### 3.2. 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.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
Adapter	EP-TA200	R37R55T6KL2SE3	/	SAMSUNG

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 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.

# 

### 4. Facilities and Accreditations

### 4.1. Facilities

The test facility is recognized, certified, or accredited by the following organizations:

• FCC - Registration No.: 645098

SHENZHEN TONGCE TESTING LAB

Designation Number: CN1205

The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

### IC - Registration No.: 10668A-1

SHENZHEN TONGCE TESTING LAB

CAB identifier: CN0031

The testing lab has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing.

### 4.2. Location

### SHENZHEN TONGCE TESTING LAB

Address: 2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China TEL: +86-755-27673339

### 4.3. Measurement Uncertainty

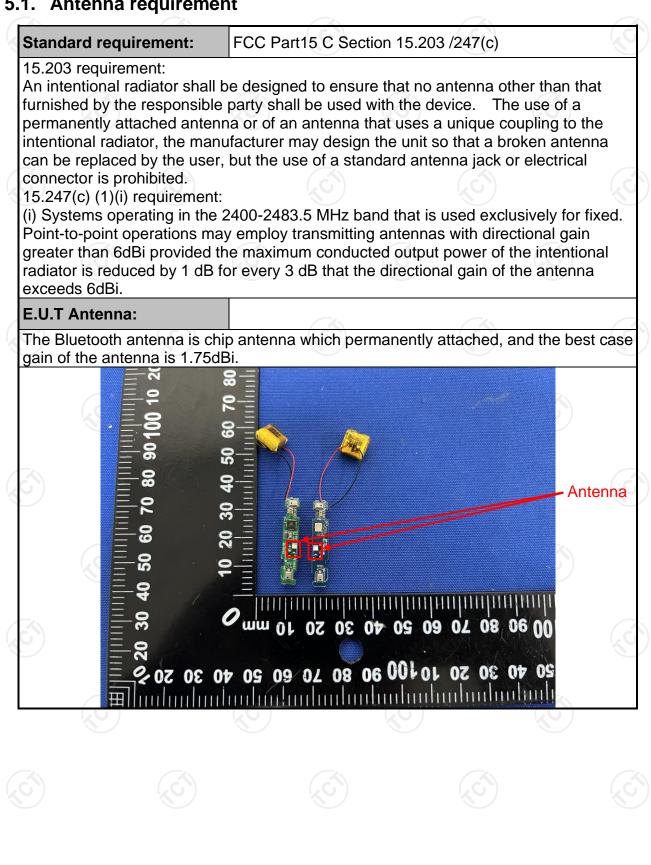
The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	± 3.10 dB
2	RF power, conducted	± 0.12 dB
3	Spurious emissions, conducted	± 0.11 dB
4	All emissions, radiated(<1 GHz)	± 4.56 dB
5	All emissions, radiated(1 GHz - 18 GHz)	± 4.22 dB
6	All emissions, radiated(18 GHz- 40 GHz)	± 4.36 dB



#### 5. Test Results and Measurement Data

### 5.1. Antenna requirement





### 5.2. Conducted Emission

### 5.2.1. Test Specification

Test Requirement: Test Method: Frequency Range: Receiver setup: Limits:	FCC Part15 C Section ANSI C63.10:2013 150 kHz to 30 MHz RBW=9 kHz, VBW=30 Frequency range (MHz) 0.15-0.5 0.5-5 5-30 Reference 40cm	kHz, Sweep time Limit ( Quasi-peak 66 to 56* 56 60 Plane	
Frequency Range: Receiver setup:	150 kHz to 30 MHz RBW=9 kHz, VBW=30 Frequency range (MHz) 0.15-0.5 0.5-5 5-30 Reference 40cm	Limit ( Quasi-peak 66 to 56* 56 60 Plane	dBuV) Average 56 to 46* 46
Receiver setup:	RBW=9 kHz, VBW=30 Frequency range (MHz) 0.15-0.5 0.5-5 5-30 Reference 40cm	Limit ( Quasi-peak 66 to 56* 56 60 Plane	dBuV) Average 56 to 46* 46
	Frequency range (MHz) 0.15-0.5 0.5-5 5-30 Reference	Limit ( Quasi-peak 66 to 56* 56 60 Plane	dBuV) Average 56 to 46* 46
Limits:	(MHz) 0.15-0.5 0.5-5 5-30 Reference	Quasi-peak 66 to 56* 56 60 Plane	Average 56 to 46*
Limits:	0.15-0.5 0.5-5 5-30 Reference	66 to 56* 56 60 Plane	56 to 46* 46
Limits:	0.5-5 5-30 Reference	66 to 56* 56 60 Plane	56 to 46* 46
	0.5-5 5-30 Reference	56 60 Plane	46
	5-30 Reference	Plane	
	40cm	1 80cm LISN	
		80cm LISN	
Test Setup:	Test table/Insulation plane Remark E.U.T: Equipment Under Test LISN: Line Impedence Stabilization Net Test table height=0.8m	ne EMI Receiver	
Test Mode:	Charging + Transmitting	g Mode	
Test Procedure:	<ol> <li>The E.U.T is connect impedance stabilizat provides a 500hm/50 measuring equipment</li> <li>The peripheral device power through a LIS coupling impedance refer to the block photographs).</li> <li>Both sides of A.C. conducted interferent emission, the relative the interface cables r ANSI C63.10:2013 of</li> </ol>	ation network OuH coupling im nt. es are also conne SN that provides with 50ohm term diagram of the line are checke ce. In order to fir positions of equ must be changed	(L.I.S.N.). This pedance for the ected to the main a 50ohm/50uh nination. (Please test setup and ed for maximun nd the maximun ipment and all o according to
Test Result:	PASS		



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http://www.tct-lab.com

Fax: 86-755-27673332

### 5.2.2. Test Instruments

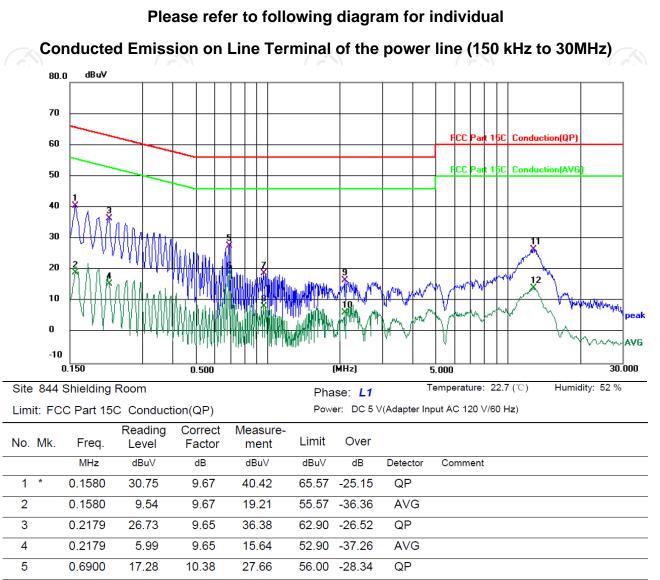
Hotline: 400-6611-140

Tel: 86-755-27673339

Manufacturer			
	Model	Serial Number	Calibration Due
R&S	ESCI3	100898	Jun. 26, 2025
Schwarzbeck	NSLK 8126	8126453	Jan. 31, 2025
N/A	10dB	164080	Jun. 26, 2025
ТСТ	CE-05	/	Jun. 26, 2025
EZ_EMC	EMEC-3A1	1.1.4.2	1
	Schwarzbeck N/A TCT	SchwarzbeckNSLK 8126N/A10dBTCTCE-05	Schwarzbeck         NSLK 8126         8126453           N/A         10dB         164080           TCT         CE-05         /

#### 5.2.3. Test data

Report No.: TCT240718E014



46.00 -27.10

56.00 -37.15

46.00 -37.61

56.00 -39.24

46.00 -39.62

60.00 -33.42

50.00 -35.72

AVG QP

AVG QP

AVG

QP

AVG

Note:
-------

6

7

8

9

10

11

12

0.6900

0.9619

0.9619

2.1018

2.1018

12.8100

12.8100

8.52

8.16

-2.30

6.90

-3.48

16.29

3.99

10.38

10.69

10.69

9.86

9.86

10.29

10.29

18.90

18.85

8.39

16.76

6.38

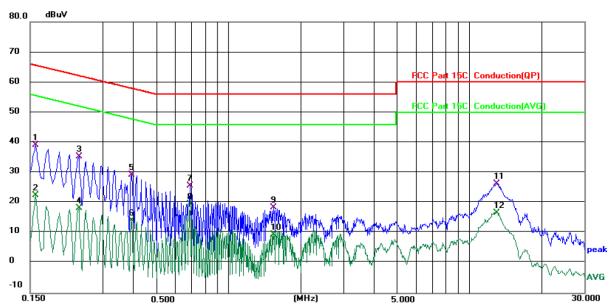
26.58

14.28

Freq. = Emission frequency in MHz Reading level  $(dB\mu V)$  = Receiver reading Corr. Factor (dB) = LISN factor + Cable loss Measurement  $(dB\mu V)$  = Reading level  $(dB\mu V)$  + Corr. Factor (dB)Limit  $(dB\mu V)$  = Limit stated in standard Margin (dB) = Measurement  $(dB\mu V)$  – Limits  $(dB\mu V)$ Q.P. =Quasi-Peak AVG =average

\* is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.

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#### Conducted Emission on Neutral Terminal of the power line (150 kHz to 30MHz)

 Site 844 Shielding Room
 Phase: N
 Temperature: 22.7 (°C)
 Humidity: 52 %

 Limit: FCC Part 15C Conduction(QP)
 Power: DC 5 V(Adapter Input AC 120 V/60 Hz)
 Humidity: 52 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1580	29.40	9.67	39.07	65.57	-26.50	QP	
2		0.1580	12.77	9.67	22.44	55.57	-33.13	AVG	
3		0.2380	25.59	9.65	35.24	62.17	-26.93	QP	
4		0.2380	8.50	9.65	18.15	52.17	-34.02	AVG	
5		0.3940	19.29	10.04	29.33	57.98	-28.65	QP	
6		0.3940	4.09	10.04	14.13	47.98	-33.85	AVG	
7		0.6900	15.29	10.38	25.67	56.00	-30.33	QP	
8	*	0.6900	9.29	10.38	19.67	46.00	-26.33	AVG	
9		1.5380	8.65	9.80	18.45	56.00	-37.55	QP	
10		1.5380	-0.26	9.80	9.54	46.00	-36.46	AVG	
11		13.0300	16.11	10.29	26.40	60.00	-33.60	QP	
12		13.0300	6.32	10.29	16.61	50.00	-33.39	AVG	

#### Note1:

Freq. = Emission frequency in MHz Reading level  $(dB\mu V)$  = Receiver reading Corr. Factor (dB) = LISN factor + Cable loss Measurement  $(dB\mu V)$  = Reading level  $(dB\mu V)$  + Corr. Factor (dB)Limit  $(dB\mu V)$  = Limit stated in standard Margin (dB) = Measurement  $(dB\mu V)$  - Limits  $(dB\mu V)$ Q.P. =Quasi-Peak AVG =average

\* is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.

Note2:

Measurements were conducted in all three channels (high, middle, low) and two modulation (GFSK, Pi/4 DQPSK), and the worst case Mode (Highest channel and Pi/4 DQPSK) was submitted only.

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### 5.3. Conducted Output Power

### 5.3.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247	7 (b)(1)
Test Method:	KDB 558074 D01 v05r02	
Limit:	Section 15.247 (b) The maxim power of the intentional radia following: (1) For frequency h in the 2400-2483.5 MHz band non-overlapping hopping cha hopping systems in the 5725 For all other frequency hopping 2400-2483.5 MHz band 0.125	tor shall not exceed the opping systems operating d employing at least 75 nnels, and all frequency -5850 MHz band: 1 watt. ng systems in the
Test Setup:	Spectrum Analyzer	EUT
Test Mode:	Transmitting mode with modu	ulation
Test Procedure:	Use the following spectrum a Span = approximately 5 tin centered on a hopping chann RBW > the 20 dB bandwidth measured VBW ≥ RBW Sweep = auto Detector function = peak Trace = max hold Allow the trace to stabilize. Use the marker-to-peak funct peak of the emission.	nes the 20 dB bandwidth, el of the emission being
Test Result:	PASS	

### 5.3.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	<b>Calibration Due</b>
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jun. 26, 2025
Combiner Box	Ascentest	AT890-RFB		





### 5.4. 20dB Occupy Bandwidth

#### 5.4.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (a)(1)				
Test Method:	KDB 558074 D01 v05r02				
Limit:	N/A				
Test Setup:	Spectrum Analyzer EUT				
Test Mode:	Transmitting mode with modulation				
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>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.</li> <li>Measure and record the results in the test report.</li> </ol>				
Test Result:	PASS				

### 5.4.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	<b>Calibration Due</b>
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jun. 26, 2025
Combiner Box	Ascentest	AT890-RFB	/	/



### 5.5. Carrier Frequencies Separation

### 5.5.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (a)(1)
Test Method:	KDB 558074 D01 v05r02
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.
Test Setup:	Spectrum Analyzer EUT
Test Mode:	Hopping mode
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>Enable the EUT hopping function.</li> <li>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.</li> <li>Use the marker-delta function to determine the separation between the peaks of the adjacent channels. Record the value in report.</li> </ol>
Test Result:	PASS

#### 5.5.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	<b>Calibration Due</b>
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jun. 26, 2025
Combiner Box	Ascentest	AT890-RFB	<u>(</u> ) /	(G)/



### 5.6. Hopping Channel Number

### 5.6.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (a)(1)
Test Method:	KDB 558074 D01 v05r02
Limit:	Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.
Test Setup:	Spectrum Analyzer EUT
Test Mode:	Hopping mode
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>Enable the EUT hopping function.</li> <li>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.</li> <li>The number of hopping frequency used is defined as the number of total channel.</li> <li>Record the measurement data in report.</li> </ol>
Test Result:	PASS

#### 5.6.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	<b>Calibration Due</b>
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jun. 26, 2025
Combiner Box	Ascentest	AT890-RFB	/	/

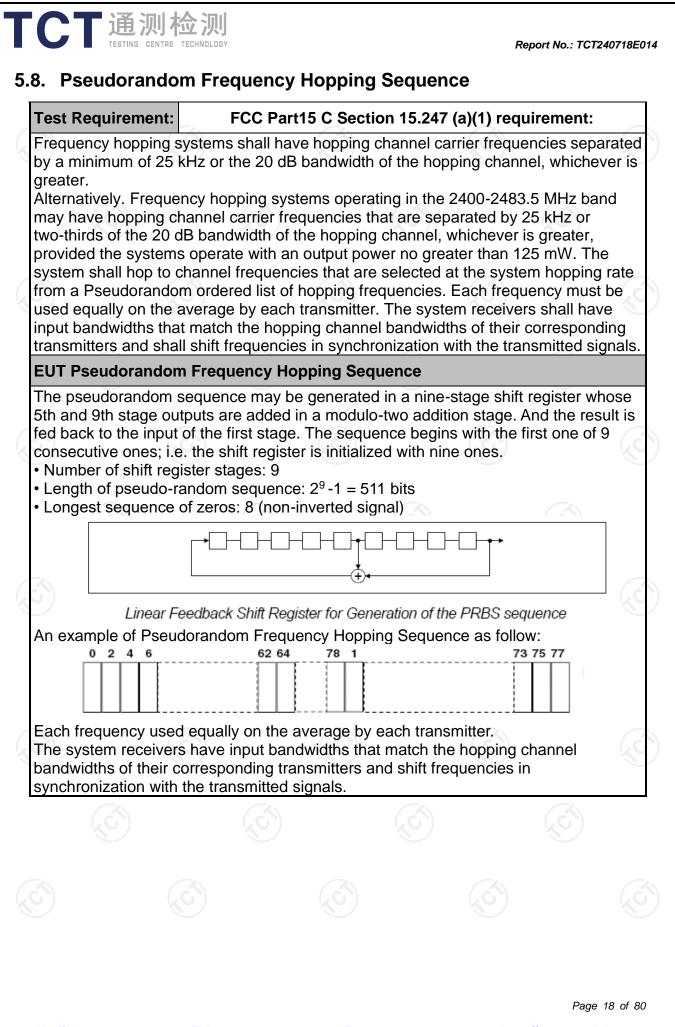
### 5.7. Dwell Time

### 5.7.1. Test Specification

FCC Part15 C Section 15.247 (a)(1)
KDB 558074 D01 v05r02
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.
Spectrum Analyzer EUT
Hopping mode
<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>Enable the EUT hopping function.</li> <li>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 &gt;&gt; 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.</li> <li>Measure and record the results in the test report.</li> </ol>
PASS

#### 5.7.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jun. 26, 2025
Combiner Box	Ascentest	AT890-RFB		





### 5.9. Conducted Band Edge Measurement

#### 5.9.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	KDB 558074 D01 v05r02
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.
Test Setup:	Spectrum Analyzer EUT
Test Mode:	Transmitting mode with modulation
Test Procedure:	<ol> <li>Set to the maximum power setting and enable the EUT transmit continuously.</li> <li>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.</li> <li>Enable hopping function of the EUT and then repeat step 2 and 3.</li> <li>Measure and record the results in the test report.</li> </ol>
Test Result:	PASS

#### 5.9.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	<b>Calibration Due</b>	
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jun. 26, 2025	
Combiner Box	Ascentest	AT890-RFB	/	/	



### 5.10. Conducted Spurious Emission Measurement

### 5.10.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	KDB 558074 D01 v05r02
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.
Test Setup:	Spectrum Analyzer EUT
Test Mode:	Transmitting mode with modulation
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 = 300kHz, scan up through 10th harmonic. All harmonics / spurs must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.</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>
Test Result:	PASS

### 5.10.2. Test Instruments

Name	Name Manufacturer		Serial Number	<b>Calibration Due</b>
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jun. 26, 2025
Combiner Box	Ascentest	AT890-RFB		

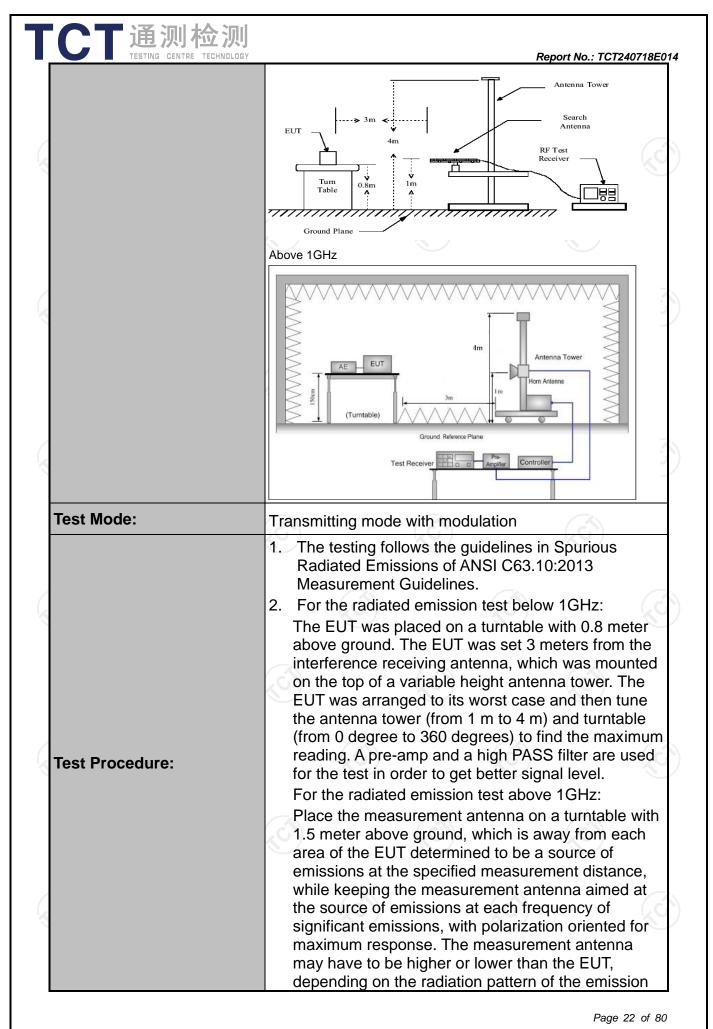


### 5.11. Radiated Spurious Emission Measurement

#### 5.11.1. Test Specification

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Test Requirement:	FCC Part15	C Sectior	n 15.209 👌						
Test Method:	ANSI C63.10	):2013							
Frequency Range:	9 kHz to 25 (	GHz				i i			
Measurement Distance:	3 m								
Antenna Polarization:	Horizontal &	Vertical		S.209         RBW       VBW       Remark         200Hz       1kHz       Quasi-peak V         9kHz       30kHz       Quasi-peak V         120KHz       300KHz       Quasi-peak V         1MHz       30KHz       Quasi-peak V         1MHz       300KHz       Average Va         Field Strength (microvolts/meter)       Measureme Distance (met 2400/F(KHz)       300         30       30       30         30       30       30         100       3       30         150       3       3         200       3       3         500       3       3					
	Frequency	Detector	RBW	VBW	Quasi-peak V         Quasi-peak V         Quasi-peak V         Peak Valu         Average Va         Measureme         Distance (met         300         30      3	Remark			
	9kHz- 150kHz	Quasi-pea							
Receiver Setup:	150kHz- 30MHz	Quasi-pea	k 9kHz	30kHz	Quas	i-peak Value			
	30MHz-1GHz	Quasi-pea							
	Above 1GHz	Peak				/			
		Peak	1MHz	10Hz	Ave	rage Value			
	Frequen	)CV		-					
					Distar				
	0.009-0.4		,						
	0.490-1.7			<u>NUZ)</u>					
	30-88								
	88-216	1							
Limit:	216-96				N.				
	Above 9	500 3			3				
	Frequency		ld Strength ovolts/meter)	Measurer Distan (meter	се	Detector			
	Above 1GH:	z —							
Test setup:	For radiated emis	stance = 3m	4 Plane		Amplifier				



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CT通测检测 TESTING CENTRE TECHNOLOGY	Report No.: TCT240718E
	<ul> <li>and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which 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.</li> <li>3. Set to the maximum power setting and enable the EUT transmit continuously.</li> <li>4. Use the following spectrum analyzer settings: <ul> <li>(1) Span shall wide enough to fully capture the emission being measured;</li> <li>(2) Set RBW=120 kHz for f &lt; 1 GHz, RBW=1MHz for f&gt;1GHz; VBW≥RBW;</li> <li>Sweep = auto; Detector function = peak; Trace = max hold for peak</li> <li>(3) For average measurement: use duty cycle correction factor method per 15.35(c). Duty cycle = On time/100 milliseconds</li> </ul> </li> </ul>
	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
Remark:	Left and right earphone have been tested, only the worst case (right earphone) is reported.
(F)	



#### 5.11.2. Test Instruments

	Radiated En	nission Test Site	e (966)		
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due	
EMI Test Receiver	R&S	ESCI7	100529	Jan. 31, 2025	
Spectrum Analyzer	R&S	FSQ40	200061	Jun. 26, 2025	
Pre-amplifier	SKET	LNPA_0118G- 45	SK2021012 102	Jan. 31, 2025	
Pre-amplifier	SKET	LNPA_1840G- 50	SK2021092 03500	Jan. 31, 2025	
Pre-amplifier	HP	8447D	2727A05017	Jun. 26, 2025	
Loop antenna	Schwarzbeck	FMZB1519B	00191	Jun. 26, 2025	
Broadband Antenna	Schwarzbeck	VULB9163	340	Jun. 28, 2025	
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Jun. 28, 2025	
Horn Antenna	Schwarzbeck	BBHA 9170	00956	Feb. 02, 2025	
Coaxial cable	SKET	RE-03-D	1	Jun. 26, 2025	
Coaxial cable	SKET	RE-03-M	1	Jun. 26, 2025	
Coaxial cable	SKET	RE-03-L	1	Jun. 26, 2025	
Coaxial cable	SKET	RE-04-D	KG)	Jun. 26, 2025	
Coaxial cable	SKET	RE-04-M	/	Jun. 26, 2025	
Coaxial cable	SKET	RE-04-L	1	Jun. 26, 2025	
Antenna Mast	Keleto	RE-AM			
EMI Test Software	EZ_EMC	FA-03A2 RE+	1.1.4.2	/	

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#### 5.11.3. Test Data

#### Please refer to following diagram for individual



Report No.: TCT240718E014

Limit: ECC Part 15C RE 3m

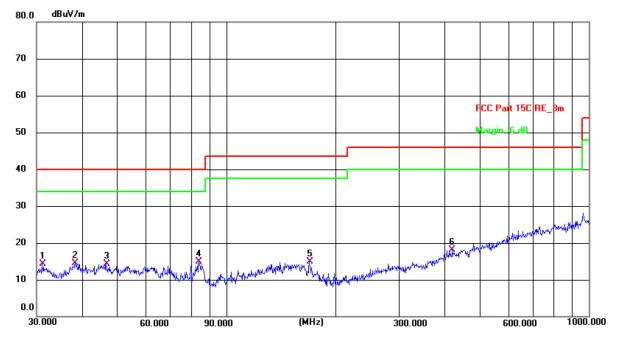
Polarization: Horizontal

Limit: F	FCC Part 15C F	RE_3m			Power:	DC 3.7 V			
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	32.2925	33.42	-19.39	14.03	40.00	-25.97	QP	Ρ	
2 *	38.4809	33.63	-18.59	15.04	40.00	-24.96	QP	Ρ	
3	62.4314	33.29	-19.05	14.24	40.00	-25.76	QP	Ρ	
4	147.4036	32.14	-17.51	14.63	43.50	-28.87	QP	Р	
5	329.0390	32.51	-17.46	15.05	46.00	-30.95	QP	Ρ	
6	545.1826	31.51	-11.57	19.94	46.00	-26.06	QP	Ρ	

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#### Vertical:

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Limit: FCC Part 15C RE\_3m

DC 3.7 V Power: Reading Factor Level Limit Frequency Margin Detector P/F Remark No. (MHz) (dBuV) (dB/m)(dBuV/m) (dBuV/m) (dB) 31.0706 1 33.88 -19.49 14.39 40.00 -25.61 QP Ρ 2 38.3462 33.08 -18.62 14.46 40.00 -25.54 QP Ρ 3 46.6664 32.95 -18.66 14.29 40.00 -25.71 QP Ρ 4 \* 84.1100 37.49 -22.63 14.86 40.00 -25.14 QP Ρ 5 169,5990 32.78 -17.79 14.99 43.50 -28.51 QP Ρ 6 420.5803 32.32 -14.24 18.08 46.00 -27.92 QP Ρ

Note: 1. The low frequency, which started from 9KHz~30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

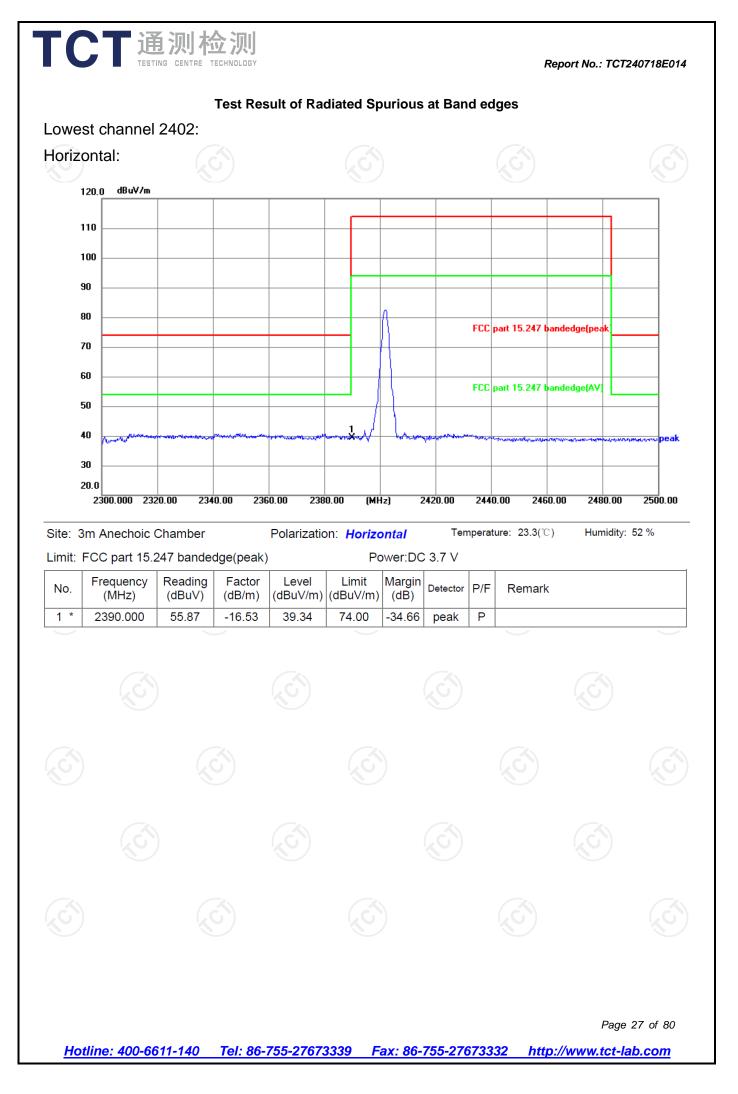
2. Measurements were conducted in all three channels (high, middle, low) and two modulation (GFSK, Pi/4 DQPSK) and the worst case Mode (Highest channel and Pi/4 DQPSK) was submitted only.

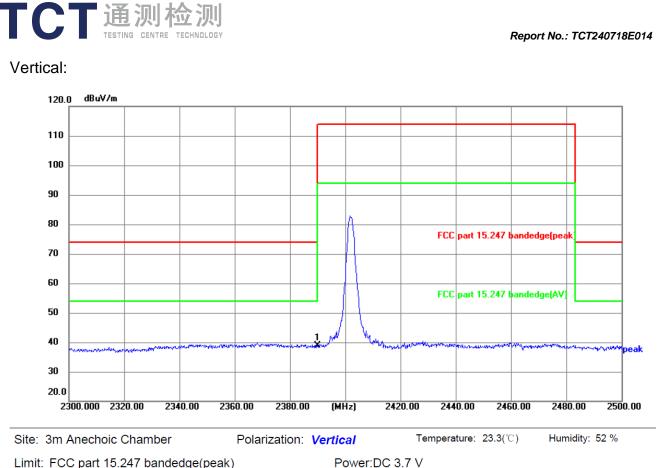
- 3. Freq. = Emission frequency in MHz
- Measurement  $(dB\mu V/m) = Reading \, level \, (dB\mu V) + Corr. Factor \, (dB)$ Correction Factor= Antenna Factor + Cable loss – Pre-amplifier Limit  $(dB\mu V/m) = Limit$  stated in standard
- Over  $(dB) = Measurement (dB\mu V/m) Limits (dB\mu V/m)$

\* is meaning the worst frequency has been tested in the test frequency range.

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Report No.: TCT240718E014





No.	Frequency (MHz)	Reading (dBuV)		Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	2390.000	55.51	-16.53	38.98	74.00	-35.02	peak	Р	



Report No.: TCT240718E014 Highest channel 2480: Horizontal: 120.0 dBuV/m 110 100 90 80 FCC part 15.247 bandedge(pea 70 60 FCC part 15.247 bandedge(AV) 50 M. Mary Peak 40 a hard the second 30

2300.000 2320.00 2340.00 2360.00 2380.00 (MHz) 2420.00 2440.00 2460.00 2480.00 2500.00

Site: 3m Anechoic Chamber Polarization: *Horizontal* Temperature: 23.3(°C) Humidity: 52 %

Limit: FCC part 15.247 bandedge(peak)

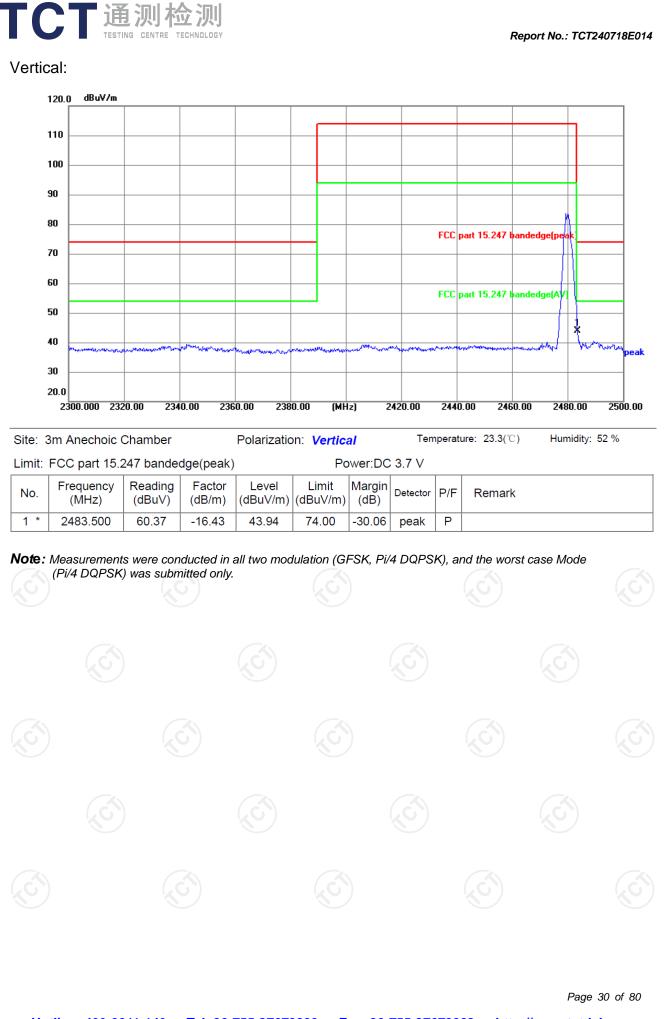
20.0

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1 *	2483.500	60.17	-16.43	43.74	74.00	-30.26	peak	Р	

Power:DC 3.7 V



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#### Above 1GHz

Low channel: 2402 MHz										
	Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Peak		Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
	4804	Н	45.86		0.66	46.52		74	54	-7.48
	7206	Н	35.07		9.50	44.57		74	54	-9.43
		Н					~~			
	(	<b>(()</b> )		<b>(</b> , <b>C</b> )	•)	()	·C`)		$(\mathcal{G})$	
	4804	V	44.37		0.66	45.03		74	54	-8.97
	7206	V	34.51		9.50	44.01		74	54	-9.99
		V								
1										

Middle cha	nnel: 2441	MHz		X.			KU)		K K
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBµV)	Correction Factor (dB/m)		n Level AV (dBµV/m)	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
4882	Н	45.65		0.99	46.64	<u> </u>	74	54	-7.36
7323	KOH)	35.89	-140	9.87	45.76	01	74	54	-8.24
	Ĥ					<u> </u>			
4882	V	45.04		0.99	46.03		74	54	-7.97
7323	V	34.37		9.87	44.24		74	54	-9.76
· · · · ·	V			\	/				

#### High channel: 2480 MHz

nigh chann	IEI. 2400 IN								
Frequency	Ant Pol	Peak	AV	Correction	Emission Level		Peak limit	A\/ limit	Margin
(MHz)	H/V	reading (dBµV)	reading (dBµV)	Factor (dB/m)	Peak (dBµV/m)			(dBµV/m)	(dB)
4960	Н	44.29		1.33	45.62		74	54	-8.38
7440	Н	34.51		10.22	44.73		74	54	-9.27
	Н								
Č)		$(\dot{G})$		(.0			(.c)		(.C
4960	V	45.62		1.33	46.95		74	54	-7.05
7440	V	34.79		10.22	45.01		74	54	-8.99
	V								

#### Note:

N 4

1. Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier

2. Margin (dB) = Emission Level (Peak) (dB $\mu$ V/m)-Average limit (dB $\mu$ V/m)

3. The emission levels of other frequencies are very lower than the limit and not show in test report.

4. Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency.

5. 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.

6. Measurements were conducted in all two modulation (GFSK, Pi/4 DQPSK), and the worst case Mode (Pi/4 DQPSK) was submitted only.

7. All the restriction bands are compliance with the limit of 15.209.

Report No.: TCT240718E014

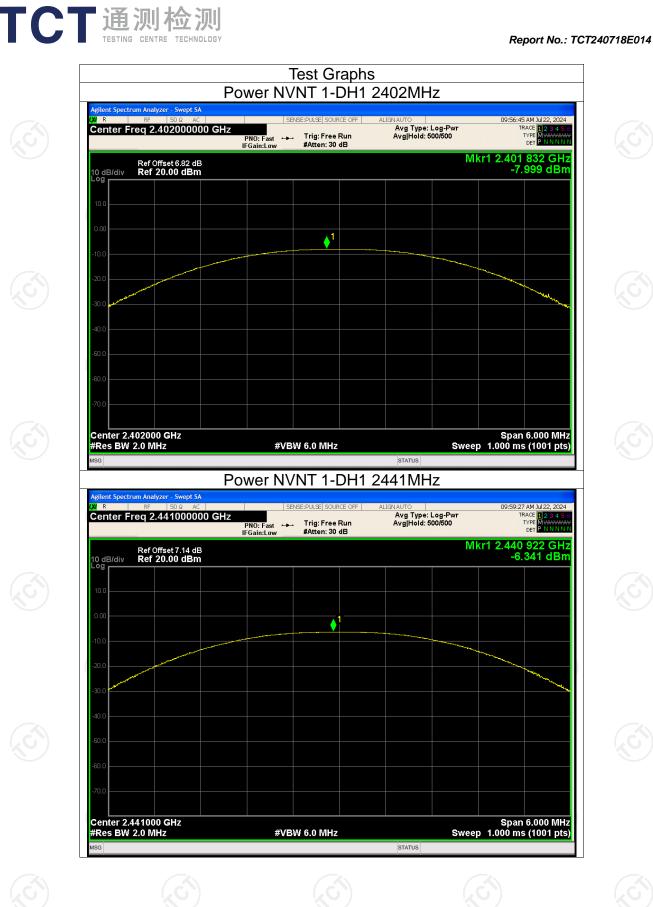


### **Appendix A: Test Result of Conducted Test**

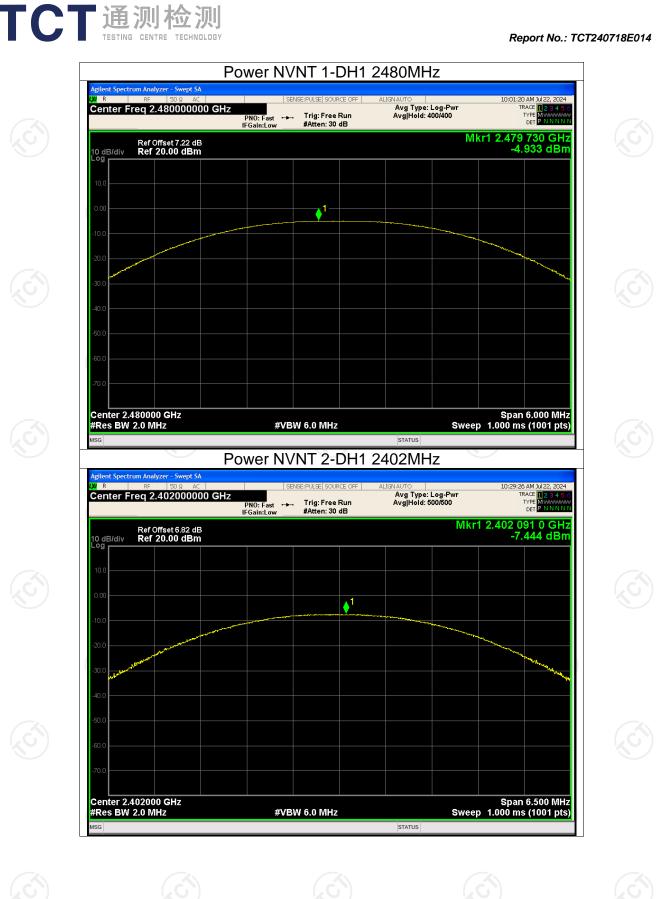
Maximum Conducted Output Power										
Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict					
NVNT	1-DH1	2402	-8.00	21	Pass					
NVNT	1-DH1	2441	-6.34	21	Pass					
NVNT	1-DH1	2480	-4.93	21	Pass					
NVNT	2-DH1	2402	-7.44	21	Pass					
NVNT	2-DH1	2441	-5.86	21	Pass					
NVNT 🔇	2-DH1	2480	-4.52	21	Pass					



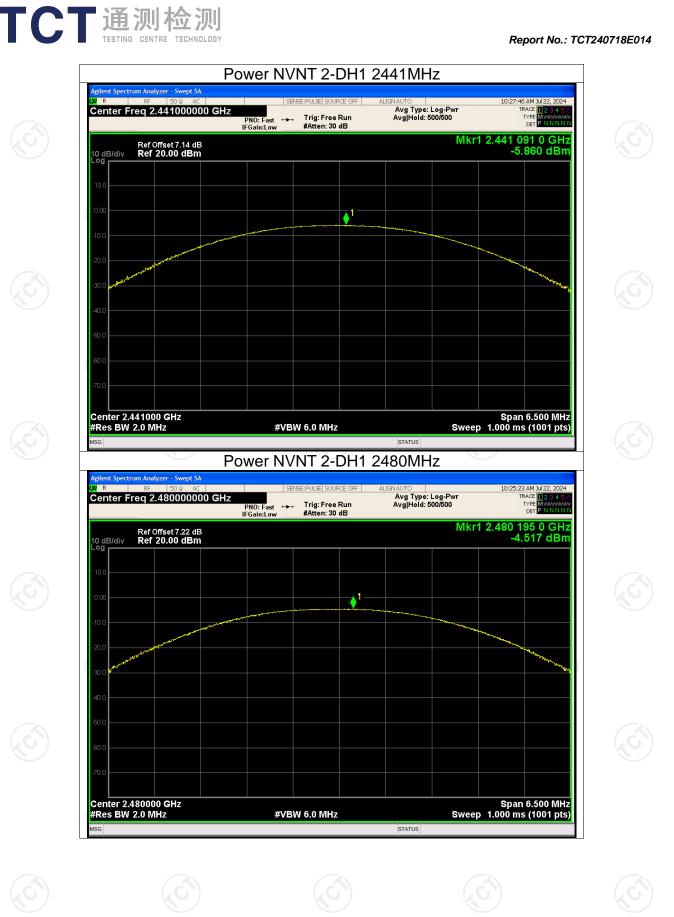
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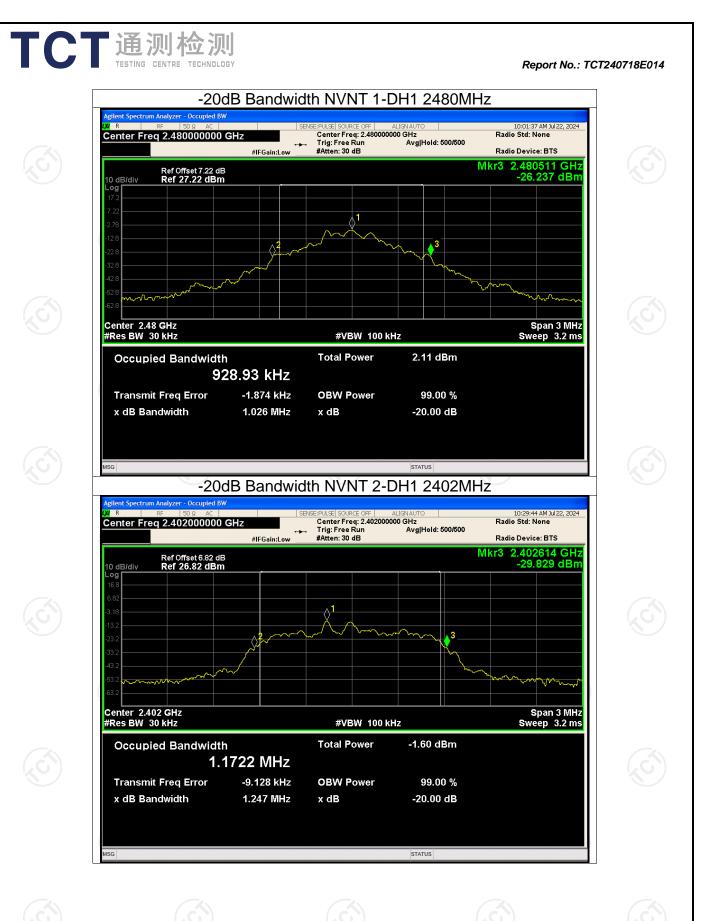


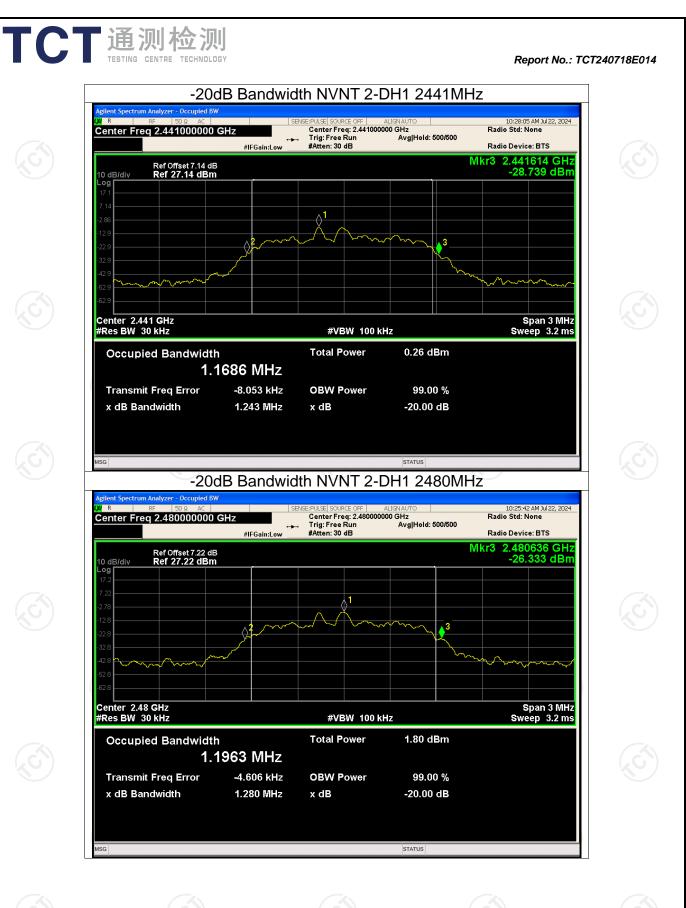
Condition	Mode	Frequency (MHz)	-20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	0.875	Pass
NVNT 🚫	1-DH1	2441	0.989	Pass
NVNT	1-DH1	2480	1.026	Pass
NVNT	2-DH1	2402	1.247	Pass
NVNT	2-DH1	2441	1.243	Pass
NVNT	2-DH1	2480	1.280	Pass

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Hotlin	ne: 400-6611-	<u>140 Tel: 8</u>	36-755-27673	3339 Fax:	<u>86-755-2767</u>	<u>3332 http</u>	Page <mark>:://www.tct-la</mark>	36 of 80 ab.com







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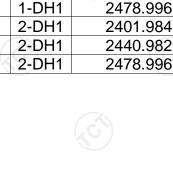
## **Carrier Frequencies Separation**



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Limit

# Mkr1 2.401 998 GHz -8.547 dBm Ref Offset 6.82 dB Ref 20.00 dBm ₹1 $\Diamond^2$ Span 2.000 MHz Sweep 1.000 ms (1001 pts) Center 2.402500 GHz #Res BW 100 kHz #VBW 300 kHz FUNCTION FUNCTION WIDTH -8.547 dBm -8.428 dBm N 1 f N 1 f 2.401 998 GHz 2.402 994 GHz STATUS CFS NVNT 1-DH1 2441MHz ent Spectrum Analyzer - Swept SA 10:19:27 AM Jul 22, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N SENSE:PULSE SOURCE OFF Avg Type: Log-Pwr Avg|Hold:>100/100 PNO: Wide Trig: Free Run IFGain:Low #Atten: 30 dB **∂**<sup>2</sup> 1

Test Graphs CFS NVNT 1-DH1 2402MHz

ENSE:PULSE SOURCE OFF

PNO: Wide Trig: Free Run IFGain:Low #Atten: 30 dB

Avg Type: Log-Pwi Avg|Hold>100/100

Center Freq 2.441500000 GHz Mkr1 2.440 990 GHz -6.737 dBm Ref Offset 7.14 dB Ref 20.00 dBm 10 dB/div Log m Center 2.441500 GHz #Res BW 100 kHz Span 2.000 MHz Sweep 1.000 ms (1001 pts) #VBW 300 kHz FUNCTION WIDTH FUNCTION FUNCTION VALUE -6.737 dBm -6.630 dBm N 1 f N 1 f 2.440 990 GHz 2.441 992 GHz 5 67 8 9 10 11 STATUS

### Report No.: TCT240718E014

15 AM Jul 22, 2024 TRACE 1 2 3 4 5 TYPE MWWWWW DET P N N N N





**U**R

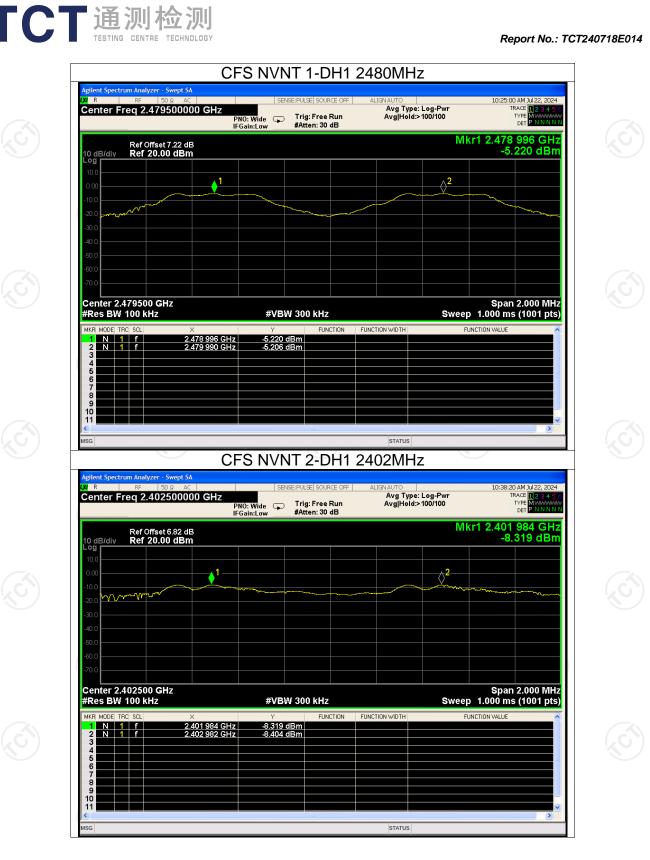
10 a . og

2 3

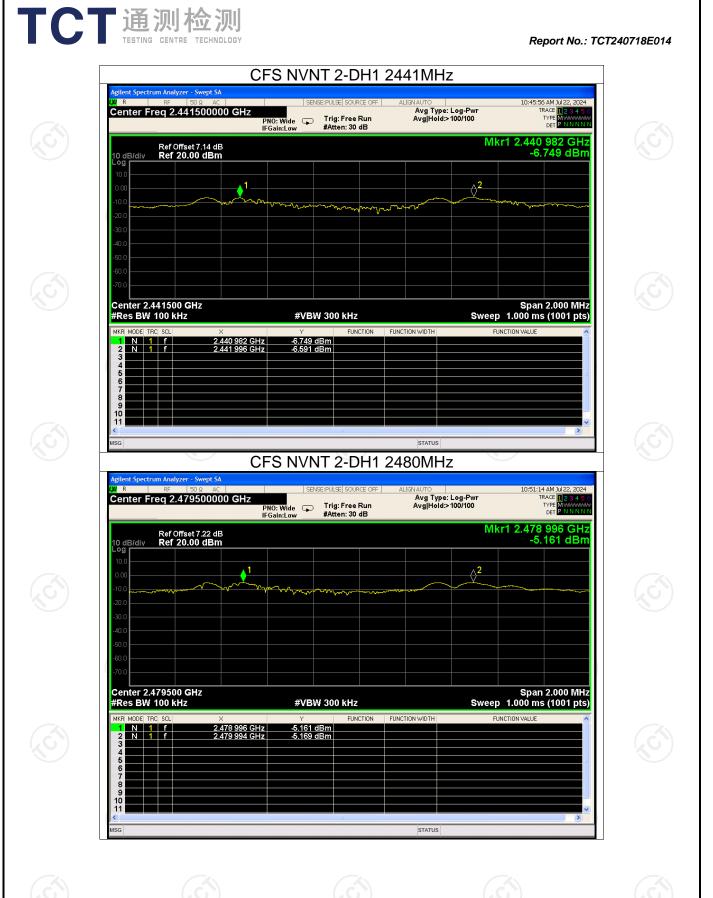
**U** R

ım Analyzer - Swept SA

Center Freq 2.402500000 GHz



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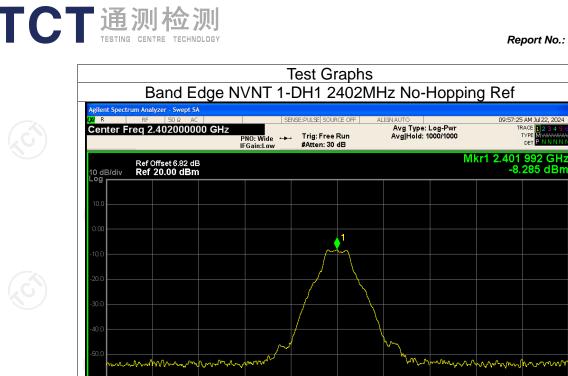


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--	-----------------------	----------------------	----------------------	------------------------

			Band Edge			
Condition	Mode	Frequency (MHz)	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	No-Hopping	-43.09	-20	Pass
NVNT	1-DH1	2480	No-Hopping	-45.62	-20	Pass
NVNT	2-DH1	2402	No-Hopping	-42.02	-20	Pass
NVNT	2-DH1	2480	No-Hopping	-44.64	-20	Pass

## Report No.: TCT240718E014





**U**R

10 dB/div Log

Center 2.402000 GHz #Res BW 100 kHz Span 8.000 MHz Sweep 1.000 ms (1001 pts) #VBW 300 kHz STATUS

# Band Edge NVNT 1-DH1 2402MHz No-Hopping Emission

R	RF	yzer - Swept SA 50 Ω AC .35600000		SE NO: Fast ↔	. Trig: F	SOURCE OFF	ALIG	NAUTO Avg Type: Avg Hold:			2 AM Jul 22, 202 RACE 1 2 3 4 5 TYPE M M M
0 dB/div		Dffset 6.82 dB <b>20.00 dB</b> m		Gain:Low	#Atten	: 30 dB			ſ	/lkr1 2.4 -8.	02 0 GH 249 dBr
<b>°g</b> 10.0											
.00											<b>1</b>
0.0											-28.29 dt
0.0										A 4	
50.0 77		thurmour	<sub>ยนไหก</sub> เหตุรัฐงาน	فيطعرون والعطران	<b>Seall-Shark</b>	free mark	hand the second	hansahanan	MANNAMAN	and the second second	mann a
0.0											
tart 2.30 Res BW				#VB	W 300 I	Hz			Sweep	Stop 2. 9.600 ms	40600 GH s (1001 pt
KR MODE TF	RC  SCL	×		Y		FUNCTION	FUNCTIO	IN WIDTH	FUI	NCTION VALUE	
1 N 1 2 N 1 3 N 1 4 N 1	f f f		2.402 0 GHz 2.400 0 GHz 2.390 0 GHz 2.389 8 GHz	-8.249 -52.466 -53.047 -51.377	dBm dBm						
5 6 7											
8 9											
1					ш						>
G								STATUS			

Report No.: TCT240718E014

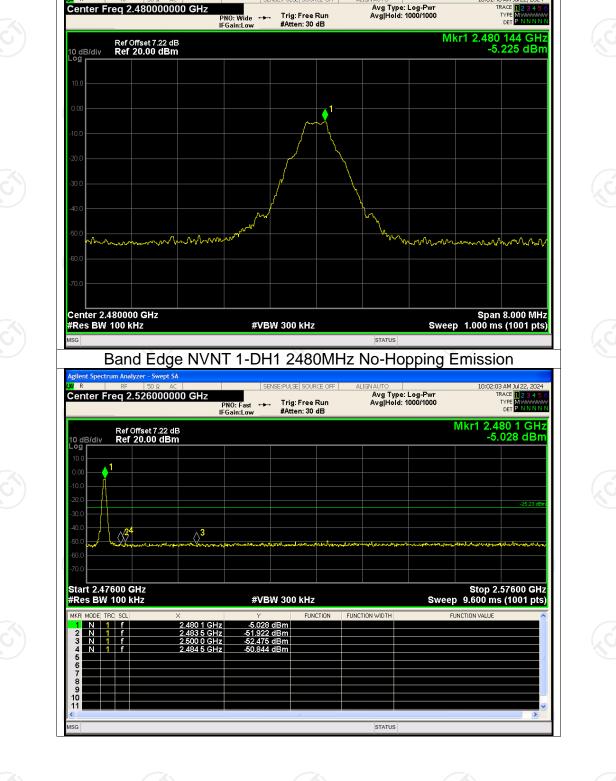
6M 1ul 22 25 AM JUI 22, 2024 TRACE 1 2 3 4 5 1 TYPE M WWWWW DET P N N N N

m m



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Band Edge NVNT 1-DH1 2480MHz No-Hopping Ref

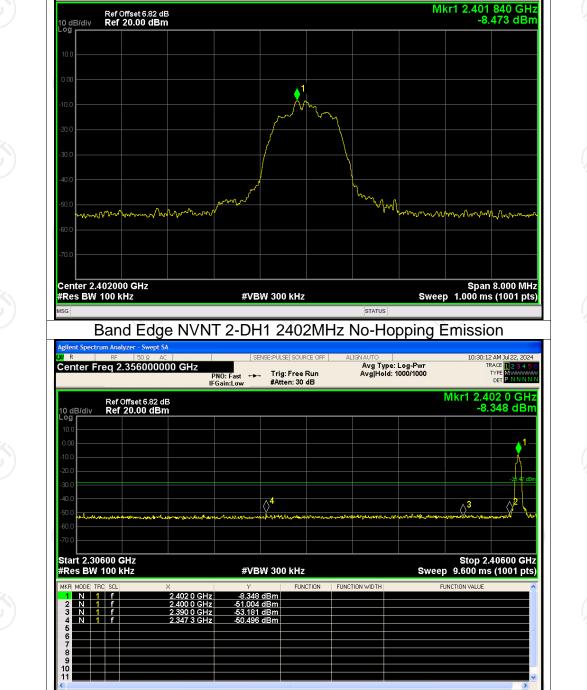
SENSE:PULSE SOURCE OFF

**U**R

### Report No.: TCT240718E014

10:01:46 AM Jul 22, 2024

TRACE



Band Edge NVNT 2-DH1 2402MHz No-Hopping Ref

Avg Type: Log-Pwr Avg|Hold: 1000/1000

SENSE: PULSE SOURCE OFF

PNO: Wide +++ Trig: Free Run IFGain:Low #Atten: 30 dB

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Center Freg 2.402000000 GHz

R

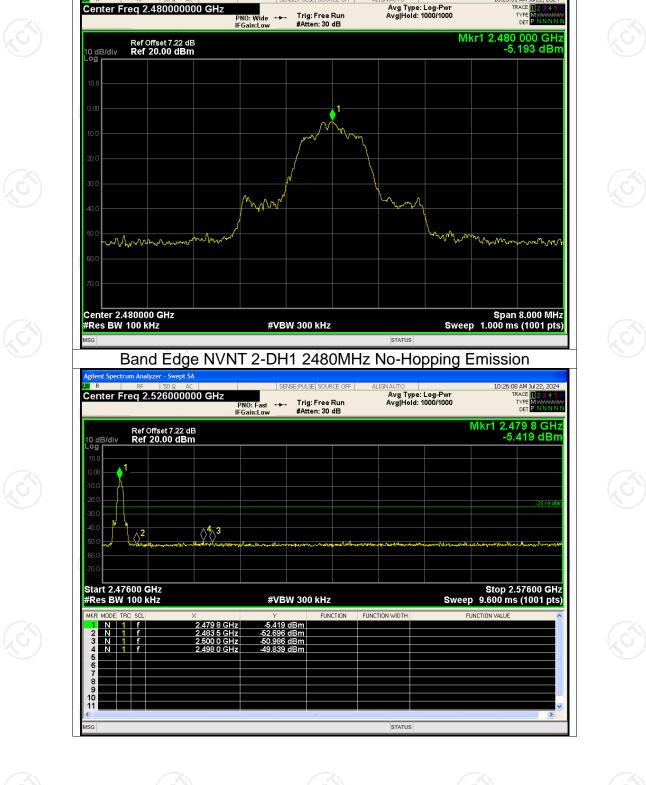
Report No.: TCT240718E014

55 AM Jul 22, 2024

TYPE MWWWWW

(C

STATUS



Band Edge NVNT 2-DH1 2480MHz No-Hopping Ref

SENSE:PULSE SOURCE OFF

**U**R

Report No.: TCT240718E014

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10:25:51 AM Jul 22, 2024

Condition	Mode	Frequency (MHz)	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Hopping	-41.86	-20	Pass
NVNT	1-DH1	2480	Hopping	-44.60	-20	Pass
NVNT	2-DH1	2402	Hopping	-42.54	-20	Pass
NVNT	2-DH1	2480	Hopping	-45.26	-20	Pass

# Band Edge(Hopping)

Report No.: TCT240718E014











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## Band Edge(Hopping) NVNT 1-DH1 2402MHz Hopping Ref nt Spectrum A 29 AM Jul 22, 2024 TRACE **U**R SENSE:PULSE SOURCE OFF Center Freq 2.402000000 GHz Avg Type: Log-Pwr Avg|Hold: 5000/5000 TYPE MWWWWW PNO: Wide ---- Trig: Free Run IFGain:Low #Atten: 30 dB Mkr1 2.406 000 GHz -8.256 dBm Ref Offset 6.82 dB Ref 20.00 dBm 10 dB/div Loa mha <u>م</u>۵. Center 2.402000 GHz #Res BW 100 kHz Span 8.000 MHz Sweep 1.000 ms (1001 pts) #VBW 300 kHz STATUS Band Edge(Hopping) NVNT 1-DH1 2402MHz Hopping Emission ilent Spectrum Analyzer - Swept SA : 49 AM Jul 22, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N B SENSE:PULSE SOURCE OFF Center Freq 2.356000000 GHz Avg Type: Log-Pwr Avg|Hold: 5000/5000 PNO: Fast ---- Trig: Free Run IFGain:Low #Atten: 30 dB Mkr1 2.406 0 GHz -8.290 dBm Ref Offset 6.82 dB Ref 20.00 dBm 10 dB/div Log ĮĮ $\Diamond^4 \diamond^3$ $\Diamond$ Stop 2.40600 GHz Sweep 9.600 ms (1001 pts) Start 2.30600 GHz #Res BW 100 kHz #VBW 300 kHz FUNCTION WIDTH FUNCTION FUNCTION VALUE -52.272 dBm -52.198 dBm -50.129 dBm <u>)Hz</u> )Hz N 5 8 9 10 11 STATUS

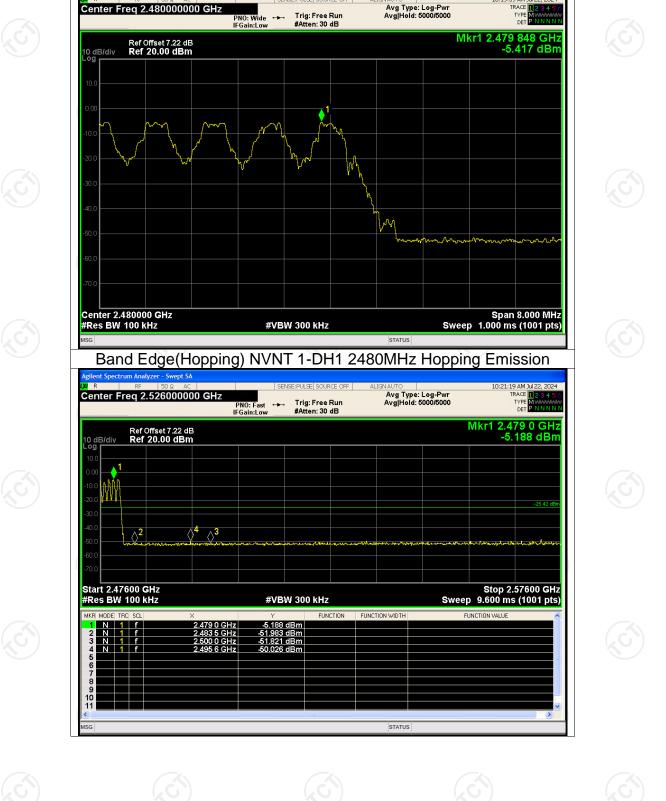
Test Graphs

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TESTING CENTRE TECHNOLOGY

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Band Edge(Hopping) NVNT 1-DH1 2480MHz Hopping Ref

SENSE:PULSE SOURCE OFF

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**U**R

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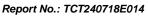
10:19:59 AM Jul 22, 2024

## **U**R SENSE:PULSE SOURCE OFF 35 AM Jul 22, 2024 Center Freg 2.402000000 GHz Avg Type: Log-Pwr Avg|Hold: 5000/5000 PNO: Wide ↔ Trig: Free Run IFGain:Low #Atten: 30 dB TYPE MWWWWW Mkr1 2.406 000 GHz -8.215 dBm Ref Offset 6.82 dB Ref 20.00 dBm 10 dB/div Log WV Mr. nh Center 2.402000 GHz #Res BW 100 kHz Span 8.000 MHz Sweep 1.000 ms (1001 pts) #VBW 300 kHz STATUS Band Edge(Hopping) NVNT 2-DH1 2402MHz Hopping Emission SENSE:PULSE SOURCE OFF ALIGNAUTO Avg Type: Log-Pwr Trig: Free Run Avg|Hold: 5000/5000 10:34:54 AM Jul 22, 2024 TRACE 1 2 3 4 5 TYPE M WWWW DET P N N N N Center Freq 2.356000000 GHz PNO: Fast +++ Trig: Free Run IFGain:Low #Atten: 30 dB Mkr1 2.405 8 GHz -8.277 dBm Ref Offset 6.82 dB Ref 20.00 dBm 10 dB/div Log W $\Diamond^4$ $\Diamond^3$ $\langle \rangle$ Start 2.30600 GHz #Res BW 100 kHz Stop 2.40600 GHz Sweep 9.600 ms (1001 pts) #VBW 300 kHz FUNCTION FUNCTION WIDTH

Band Edge(Hopping) NVNT 2-DH1 2402MHz Hopping Ref

**FCT**通测检测 TESTING CENTRE TECHNOLOGY

-8.277 dBm -50.787 dBm -52.687 dBm -50.755 dBm 2.400 0 GHz 2.390 0 GHz 2.378 3 GHz N STATUS



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# **U**R SENSE:PULSE SOURCE OFF Avg Type: Log-Pwr Avg|Hold: 5000/5000 Center Freg 2.480000000 GHz TRAC PNO: Wide ↔→→ Trig: Free Run IFGain:Low #Atten: 30 dB TYPE MWWWWW Mkr1 2.480 000 GHz -5.184 dBm Ref Offset 7.22 dB Ref 20.00 dBm 10 dB/div Log mound month much h-Wy MM 1 m www. Center 2.480000 GHz #Res BW 100 kHz Span 8.000 MHz Sweep 1.000 ms (1001 pts) #VBW 300 kHz STATUS Band Edge(Hopping) NVNT 2-DH1 2480MHz Hopping Emission 148 AM Jul 22, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N SENSE:PULSE SOURCE OFF ALIGNAUTO AVG Type: Log-Pwr Avg Type: Log-Pwr Trig: Free Run Avg|Hold: 5000/5000 10:47 Center Freq 2.526000000 GHz PNO: Fast +++ Trig: Free Run IFGain:Low #Atten: 30 dB Mkr1 2.480 0 GHz -5.147 dBm Ref Offset 7.22 dB Ref 20.00 dBm 10 dB/div Log $\langle ^4 \rangle^3$ Start 2.47600 GHz #Res BW 100 kHz Stop 2.57600 GHz Sweep 9.600 ms (1001 pts) #VBW 300 kHz FUNCTION WIDTH FUNCTION -5.147 dBm -52.675 dBm -52.204 dBm -50.446 dBm 2.483 5 GHz 2.500 0 GHz 2.497 7 GHz N STATUS

Band Edge(Hopping) NVNT 2-DH1 2480MHz Hopping Ref

**FCT**通测检测 TESTING CENTRE TECHNOLOGY

Report No.: TCT240718E014

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Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	-32.26	-20	Pass
NVNT	1-DH1	2441	-32.87	-20	Pass
NVNT	1-DH1	2480	-34.40	-20	Pass
NVNT	2-DH1	2402	-31.80	-20	Pass
NVNT	2-DH1	2441	-41.90	-20	Pass
NVNT	2-DH1	2480	-34.66	-20	Pass
N.	)			KO/	

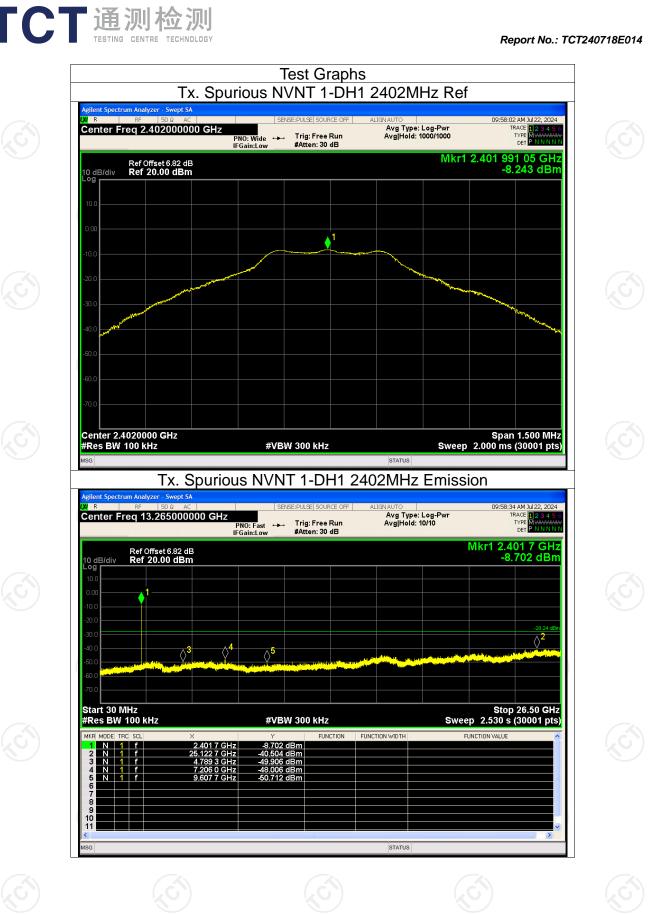
# Conducted RF Spurious Emission

### Report No.: TCT240718E014

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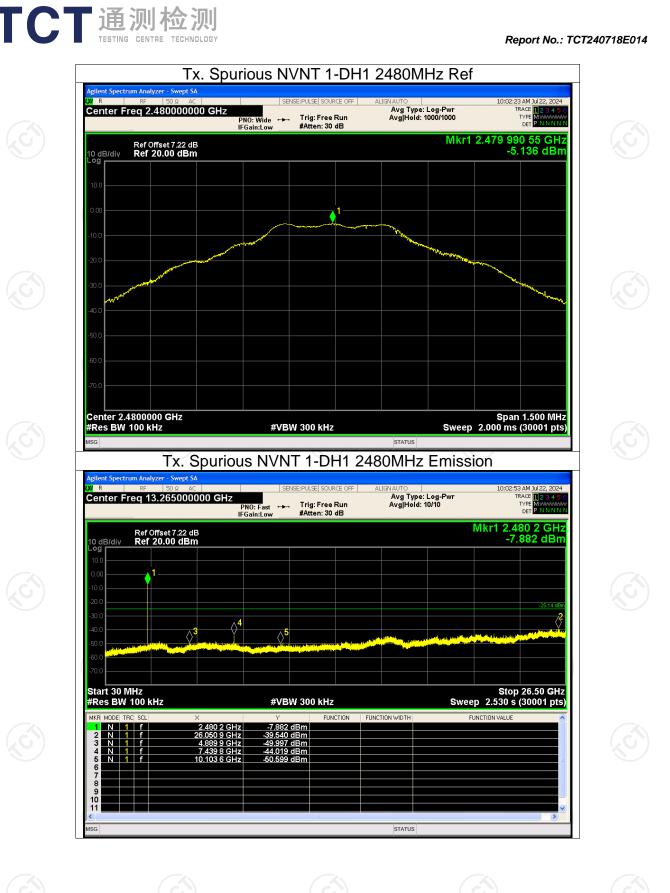
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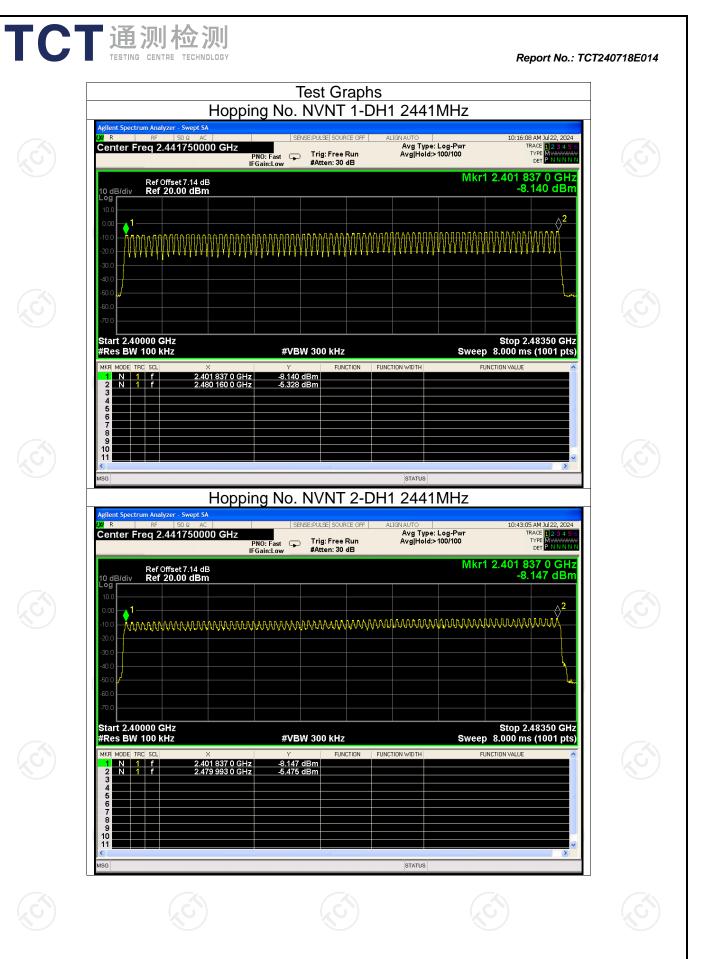


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TC		则检测				Rej	port No.: TCT2	240718E014
	Condition NVNT	<b>Mode</b> 1-DH1	Number o	of Hopping Hopping N 79	g Channel lumber	Limit 15	Verd Pas	
J.	NVNT	2-DH1		79		15	Pas	
<u>Hotli</u>	ne: 400-6611-	<u>140 Tel: 86</u>	- <u>755-27673</u>	1339 Fax:	<u>86-755-2767</u>	<u>3332 http:</u>	Page //www.tct-la	61 of 80 <b>1b.com</b>



NVNT NVNT NVNT NVNT	1-DH3 1-DH5 2-DH1 2-DH3 2-DH5	2441 2441 2441 2441 2441 2441	2.8 0.3 1.6 2.8	9 315.0 9 124.0 4 265.6	01 109 02 318 08 162	31600 31600 31600 31600 31600	400 400 400 400 400	Pass Pass Pass Pass Pass

**Dwell Time** 

Pulse

Time

(ms)

0.38

1.64

Frequency

(MHz)

2441

2441

Total

**Dwell** 

Time

(ms)

121.22

255.84

Mode

1-DH1

1-DH3

Condition

NVNT

NVNT

Report No.: TCT240718E014

Verdict

Pass

Pass

Limit

(ms)

400

400

Period

Time

(ms)

31600

31600

**Burst** 

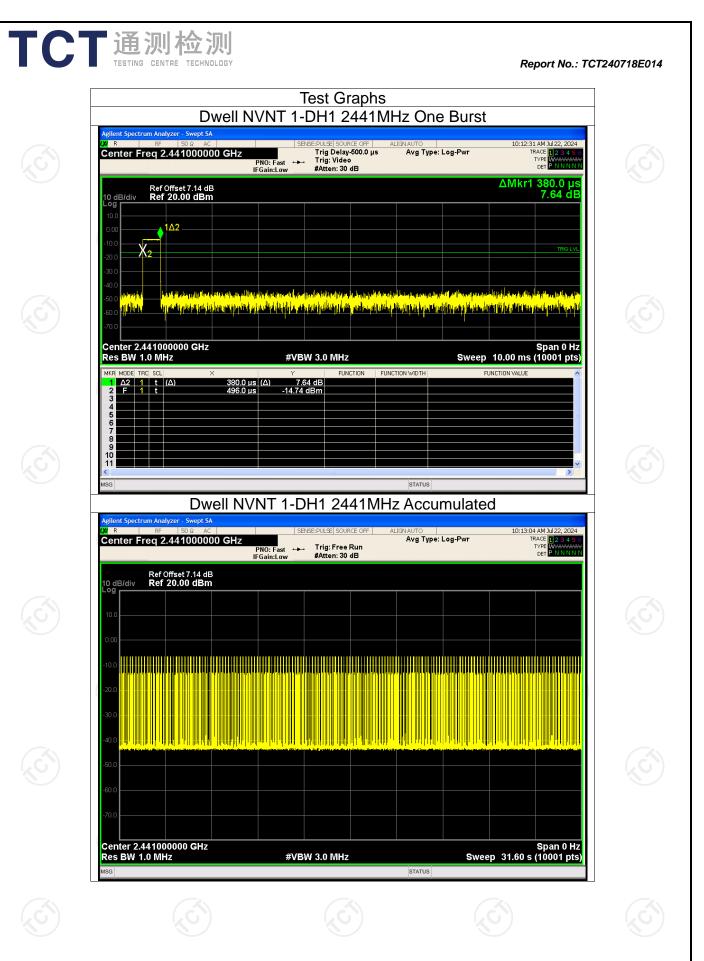
Count

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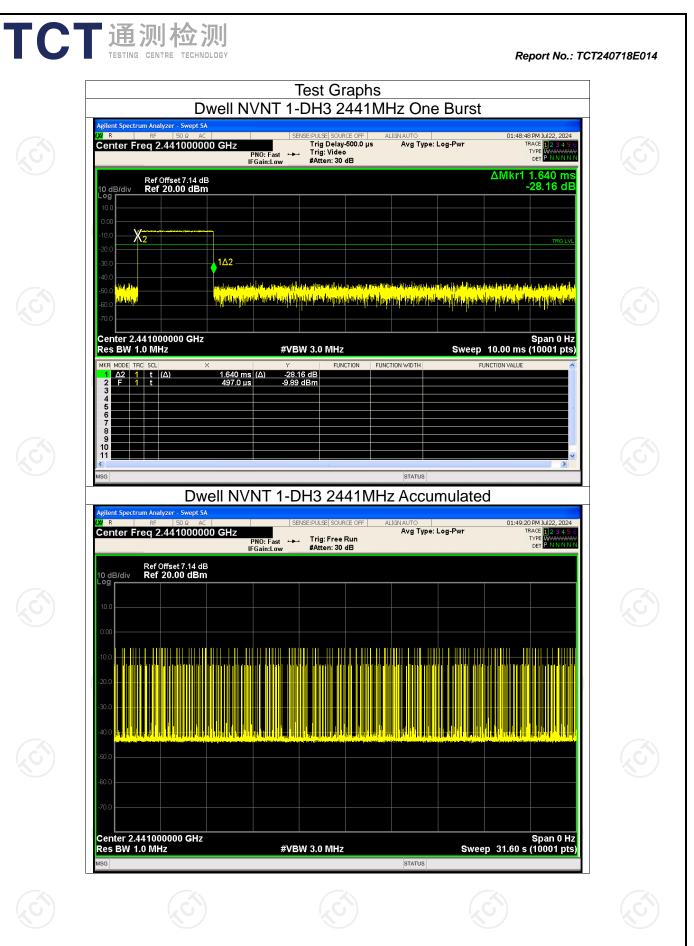
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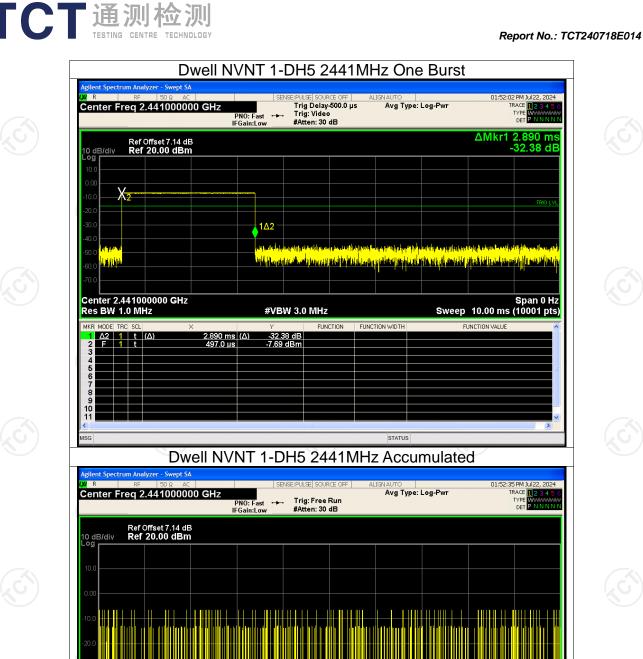
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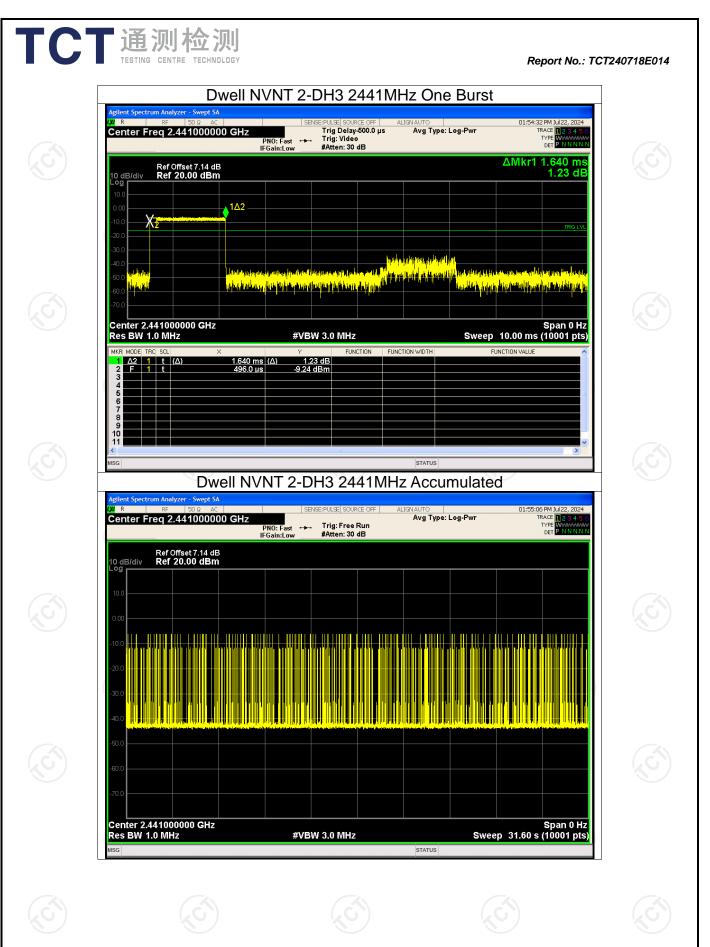


Center 2.441000000 GHz Res BW 1.0 MHz Span 0 Hz Sweep 31.60 s (10001 pts) #VBW 3.0 MHz STATUS

CT通测检测 TESTING CENTRE TECHNOLOGY		Report No.: TCT240718E014
Dwell	NVNT 2-DH1 2441MHz Or	ne Burst
Agilent Spectrum Analyzer - Swept SA W R RF 50 Ω AC Center Freq 2.441000000 GHz	SENSE:PULSE SOURCE OFF ALIGNAUTO Trig Delay-500.0 µs Avg Typ PNO: Fast → Trig: Video IFGain:Low #Atten: 30 dB	10:39:06 AM Jul 22, 2024 be: Log-Pwr TRACE 11 23:34:56 TYPE TRACE 10 23:56 TYPE PRINT DI N
Ref Offset 7.14 dB		ΔMkr1 390.0 μs 6.08 dB
		TROLV
-30.0		
-40.0 -50.0 -60.0 -60.0 -70.0	ster martin en fren 1964 van de finante en finante en finante finante finante en finante finante en finante fi Martin primeir et finante en finant An finante en finante e	ni billen stanske forske slike se beren en kolden konstruktion se berefor Alf ander som forderer billen konstan forfat melsen av film for for bille bille Constant av forderer billen konstan forfat melsen av film for bille bille bille
Center 2.441000000 GHz Res BW 1.0 MHz	#VBW 3.0 MHz	Span 0 Hz Sweep 10.00 ms (10001 pts)
MKR         MODE         TRC         SCL         ×           1         Δ2         1         t         (Δ)         390.0           2         F         1         t         496.0           3         -         -         496.0           4         -         -         -           5         -         -         -           6         -         -         -           7         -         -         -           8         -         -         -           9         -         -         -           10         -         -         -	Y         FUNCTION         FUNCTION WIDTH           D μs         (Δ)         6.03 dB         -           J μs         -14.12 dBm         -         -	FUNCTION VALUE
MSG	STATUS	
Dwell N Agilent Spectrum Analyzer - Swept SA	VNT 2-DH1 2441MHz Acc	umulated
00 R RF 50 2 AC Center Freq 2.441000000 GHz	SBNSE:PULSE SOURCE OFF ALIGNAUTO Avg Typ PNO: Fast IFGain:Low #Atten: 30 dB	10:39:39 AM Jul22, 2024 De: Log-Pwr TRACE 2 2:4 5:6 TYPE WWWWWW DET PININNIN
Ref Offset 7.14 dB 10 dB/div Ref 20.00 dBm		
-10.0		

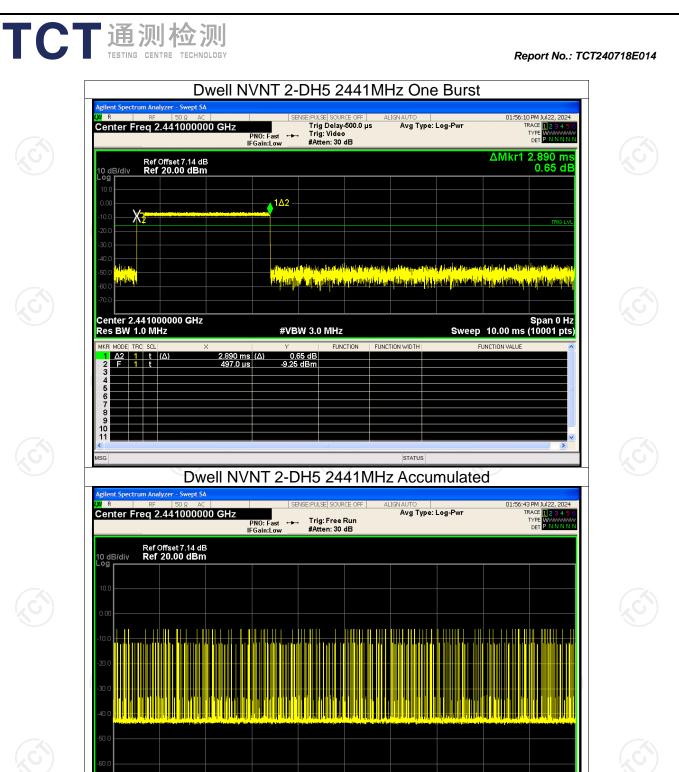
Center 2.441000000 GHz Res BW 1.0 MHz Span 0 Hz Sweep 31.60 s (10001 pts) #VBW 3.0 MHz STATUS

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Span 0 Hz Sweep 31.60 s (10001 pts)

#VBW 3.0 MHz

STATUS

Center 2.441000000 GHz Res BW 1.0 MHz

