	΄ /Υ(') HNOLOGY					
	TEST REPOR	Т				
FCC ID	2ALNA-OWS01					
Test Report No::	TCT240820E012		(c)			
Date of issue:	Aug. 23, 2024					
Testing laboratory: :	SHENZHEN TONGCE TESTING	G LAB				
Testing location/ address:	2101 & 2201, Zhenchang Factory Renshan Industrial Zone, Fuha Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China					
Applicant's name::	Shenzhen Thousandshores Tech	nnology Co., Ltd.				
Address::	Room 1101, Building B, Lotus Plaza, No. 3186, Nanshan Avenue Majialong Community, Nantou Street, Nanshan District, Shenzhen, China					
Manufacturer's name :	Shenzhen Thousandshores Tech	nnology Co., Ltd.				
Address:	Room 1101, Building B, Lotus Plaza, No. 3186, Nanshan Avenue Majialong Community, Nantou Street, Nanshan District, Shenzhen, China					
Standard(s):	FCC CFR Title 47 Part 15 Subpa FCC KDB 558074 D01 15.247 M ANSI C63.10:2013					
Product Name::	Wireless Headphones	(jú)				
Trade Mark:	iClever					
Model/Type reference :	OWS01	(\vec{c})	(3)			
Rating(s):	Rechargeable Li-ion Battery DC	3.7V				
Date of receipt of test item	Aug. 20, 2024					
Date (s) of performance of test:	Aug. 20, 2024 ~ Aug. 23, 2024					
Tested by (+signature) :	Ronaldo LUO	Runald, ABBOCE PE				
Check by (+signature) :	Beryl ZHAO	Boy 20 TCT	TING			
Approved by (+signature):	Tomsin	Toms in 130 84				

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1. General Product Information

1.1. EUT description

Product Name:	Wireless Headphones		
Model/Type reference:	OWS01		
Sample Number	TCT240820E012-0101		
Bluetooth Version:	V5.4	(S)	
Operation Frequency:	2402MHz~2480MHz		
Transfer Rate:	1/2 Mbits/s	$\left(\mathcal{C} \right)$	
Number of Channel:	79		
Modulation Type:	GFSK, π/4-DQPSK		
Modulation Technology:	FHSS		
Antenna Type:	Chip Antenna		
Antenna Gain:	2.67dBi	(C)	S)
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

None.



1.3. Operation Frequency

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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
<u> </u>		·		·		U	
10	2412MHz	30	2432MHz	50	2452MHz	70	2472MHz
11	2413MHz	31	2433MHz	51	2453MHz	71	2473MHz
	S						S
18	2420MHz	38	2440MHz	58	2460MHz	78	2480MHz
19	2421MHz	39	2441MHz	- 59	2461MHz		-
Remark: mode	Channel 0, 3	89 & 78 ha	ave been te	sted for G	GFSK, π/4-D	QPSK m	odulation



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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

Condition	Conducted Emission	Radiated Emission		
Temperature:	25.3 °C	24.8 °C		
Humidity:	52 % RH	52 % RH		
Atmospheric Pressure:	1010 mbar	1010 mbar		
Test Software:				
Software Information:	FCC Assist 1.0.1.1			
Power Level:	10			
Test Mode:				
Engineer mode: Keep the EUT in continuous transmitting by select channel and modulations with Fully-charged battery				
above the ground plane of 3 polarities were performed. I the EUT continuously work axis (X, Y & Z) and cor manipulating interconnectin from 1m to 4m in both worst-case(Z axis) are	8m & 1.5m for the measure of chamber. Measurements in During the test, each emissio ing, investigated all operating insidered typical configuration og cables, rotating the turnta horizontal and vertical po- shown in Test Results in tested, only worse case DH	n both horizontal and vertica n was maximized by: having g modes, rotated about all 3 n to obtain worst position ble, varying antenna heigh plarizations. The emissions of the following pages		

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	R37M4PR7QD4SE3	/	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
- SHENZHEN TONGCE TESTING LAB
- CAB identifier: CN0031

The testing lab has been registered by Innovation, Science and Economic Development 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, conducte	± 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

Standard requirement:FCC Part15 C Section 15.203 /247(c)15.203 requirement:

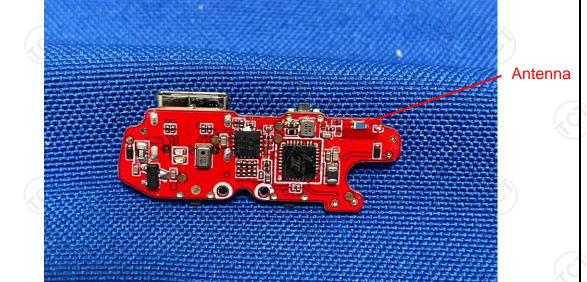
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit 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 Chip antenna which permanently attached, and the best case gain of the antenna is 2.67dBi.



5.2. Conducted Emission

5.2.1. Test Specification

Test Requirement:	FCC Part15 C Section	15.207				
Test Method:	ANSI C63.10:2013	ANSI C63.10:2013				
Frequency Range:	150 kHz to 30 MHz					
Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto					
	Frequency range	Limit (dBuV)			
	(MHz)	Quasi-peak	Average			
Limits:	0.15-0.5	66 to 56*	56 to 46*			
	0.5-5	56	46			
	5-30	60	50			
	Referenc	-G 1	(,G)			
Test Setup:	Image: Second					
Test Mode:	Charging + Transmitting Mode					
		<u> </u>				
Test Procedure:	 The E.U.T is connerimpedance stabilizing provides a 500hm/5 measuring equipme The peripheral device power through a Licoupling impedance refer to the block photographs). Both sides of A.C. conducted interferer emission, the relative the interface cables ANSI C63 10:2013 (2013) 	ation network 50uH coupling im nt. ces are also conne ISN that provides with 50ohm tern diagram of the line are checken nce. In order to fin e positions of equi must be changed	(L.I.S.N.). Thi apedance for the ected to the mains a 500hm/50uh nination. (Please test setup and ed for maximum nd the maximum ipment and all of l according to			
Test Procedure: Test Result:	 impedance stabiliz provides a 50ohm/s measuring equipme 2. The peripheral device power through a LI coupling impedance refer to the block photographs). 3. Both sides of A.C. conducted interferer emission, the relativ 	ation network 50uH coupling im nt. ces are also conne ISN that provides with 50ohm tern diagram of the line are checken nce. In order to fin e positions of equi must be changed	(L.I.S.N.). Thi apedance for the ected to the mains a 500hm/50uh nination. (Please test setup and ed for maximum nd the maximum ipment and all of l according to			

5.2.2. Test Instruments

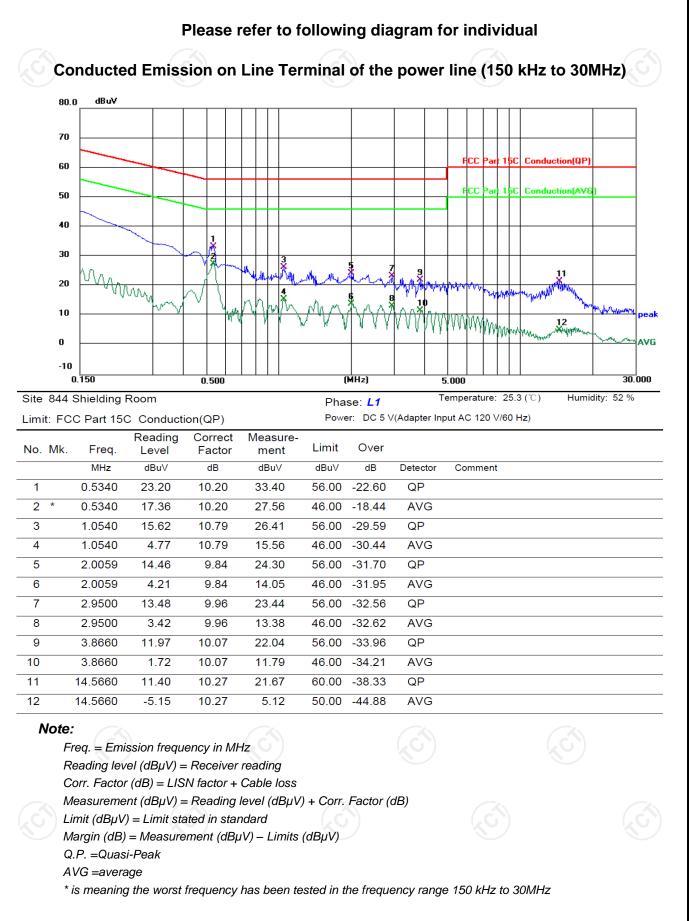
Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESCI3	100898	Jun. 26, 2025
LISN	Schwarzbeck	NSLK 8126	8126453	Jan. 31, 2025
Attenuator	N/A	10dB	164080	Jun. 26, 2025
Line-5	тст	CE-05	1	Jun. 26, 2025
EMI Test Software	EZ_EMC	EMEC-3A1	1.1.4.2	1

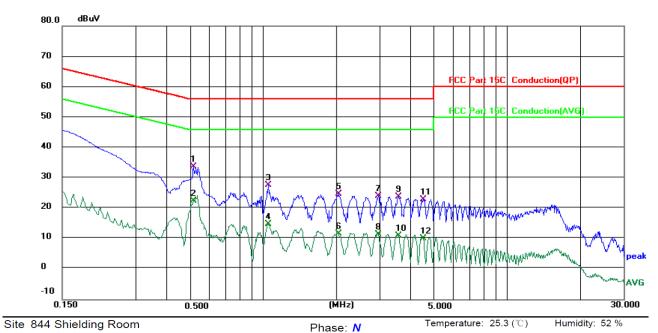


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5.2.3. Test data

TCT通测检测 TCT通测检测





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

Limit: FCC Part 15C Conduction(QP)

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Power: DC 5 V(Adapter Input AC 120 V/60 Hz)

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.5180	23.59	10.17	33.76	56.00	-22.24	QP	
2		0.5180	12.44	10.17	22.61	46.00	-23.39	AVG	
3		1.0540	16.91	10.75	27.66	56.00	-28.34	QP	
4		1.0540	4.10	10.75	14.85	46.00	-31.15	AVG	
5		2.0379	14.89	9.80	24.69	56.00	-31.31	QP	
6		2.0379	1.84	9.80	11.64	46.00	-34.36	AVG	
7		2.9620	14.18	9.90	24.08	56.00	-31.92	QP	
8		2.9620	1.56	9.90	11.46	46.00	-34.54	AVG	
9		3.5859	13.91	9.96	23.87	56.00	-32.13	QP	
10		3.5859	1.10	9.96	11.06	46.00	-34.94	AVG	
11		4.5300	12.90	10.06	22.96	56.00	-33.04	QP	
12		4.5300	-0.03	10.06	10.03	46.00	-35.97	AVG	

Note1:

 Freq. = Emission frequency in MHz

 Reading level (dBμV) = Receiver reading

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

 Measurement (dBμV) = Reading level (dBμV) + Corr. Factor (dB)

 Limit (dBμV) = Limit stated in standard

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

 Q.P. =Quasi-Peak

 AVG =average

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

 Note2:

 1. Measurements were conducted in all three channels (high, middle, low) and two modulation (GFSK,

Pi/4 DQPSK), and the worst case Mode (Middle channel and Pi/4 DQPSK) was submitted only.



5.3. Conducted Output Power

5.3.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (b)(1)
Test Method:	KDB 558074 D01 v05r02
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.
Test Setup:	Spectrum Analyzer EUT
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.
Test Result:	PASS

5.3.2. Test Instruments

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



5.4. 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 C
Test Setup:	Spectrum Analyzer EUT
Test Mode:	Transmitting mode with modulation
Test Procedure:	 The RF output of EUT was connected to the spectrum analyzer by RF cable. 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.
Test Result:	PASS

5.4.2. Test Instruments

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





5.5. 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 shall have hopping channel carrier frequencies separated by a minimum of 25 kHz of the 20 dB bandwidth of the hopping channel, whichever is greater. 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.
Test Setup:	Spectrum Analyzer EUT
Test Mode:	Hopping mode
Test Procedure:	 The RF output of EUT was connected to the spectrum analyzer by RF cable. 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.
Test Result:	PASS

5.5.2. Test Instruments

		1	20	
Name	Manufacturer	Model No.	Serial Number	Calibration Due
Spectrum	Agilent	N9020A	MY49100619	Jun. 26, 2025
Combiner Box	Ascentest	AT890-RFB		/

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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:	 The RF output of EUT was connected to the spectrum analyzer by RF cable. 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 = 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. The number of hopping frequency used is defined as the number of total channel. Record the measurement data in report.
Test Result:	PASS

5.6.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jun. 26, 2025
Combiner Box	Ascentest	AT890-RFB	/	1

5.7.1. Test Specification

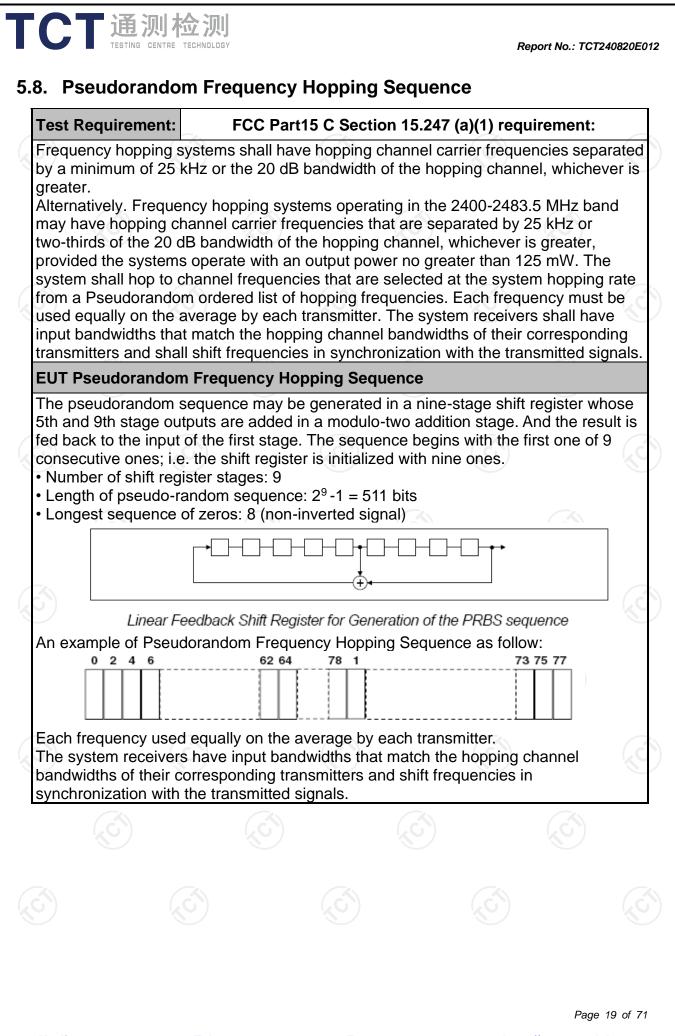
TCT 通测检测 TESTING CENTRE TECHNOLOGY

Test Requirement:	FCC Part15 C Section 15.247 (a)(1)
Test Method:	KDB 558074 D01 v05r02
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.
Test Setup:	Spectrum Analyzer EUT
Test Mode:	Hopping mode
Test Procedure:	 The RF output of EUT was connected to the spectrum analyzer by RF cable. 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.
Test Result:	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		

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5.9. Conducted Band Edge Measurement

5.9.1. Test Specification

FCC Part15 C Section 15.247 (d)
KDB 558074 D01 v05r02
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.
Spectrum Analyzer EUT
Transmitting mode with modulation
 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.
PASS

5.9.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jun. 26, 2025
Combiner Box	Ascentest	AT890-RFB	6 1	



5.10. Conducted Spurious Emission Measurement

5.10.1. Test Specification

FCC Part15 C Section 15.247 (d)
KDB 558074 D01 v05r02
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.
Spectrum Analyzer EUT
Transmitting mode with modulation
 The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. 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. Measure and record the results in the test report. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
PASS

5.10.2. Test Instruments

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

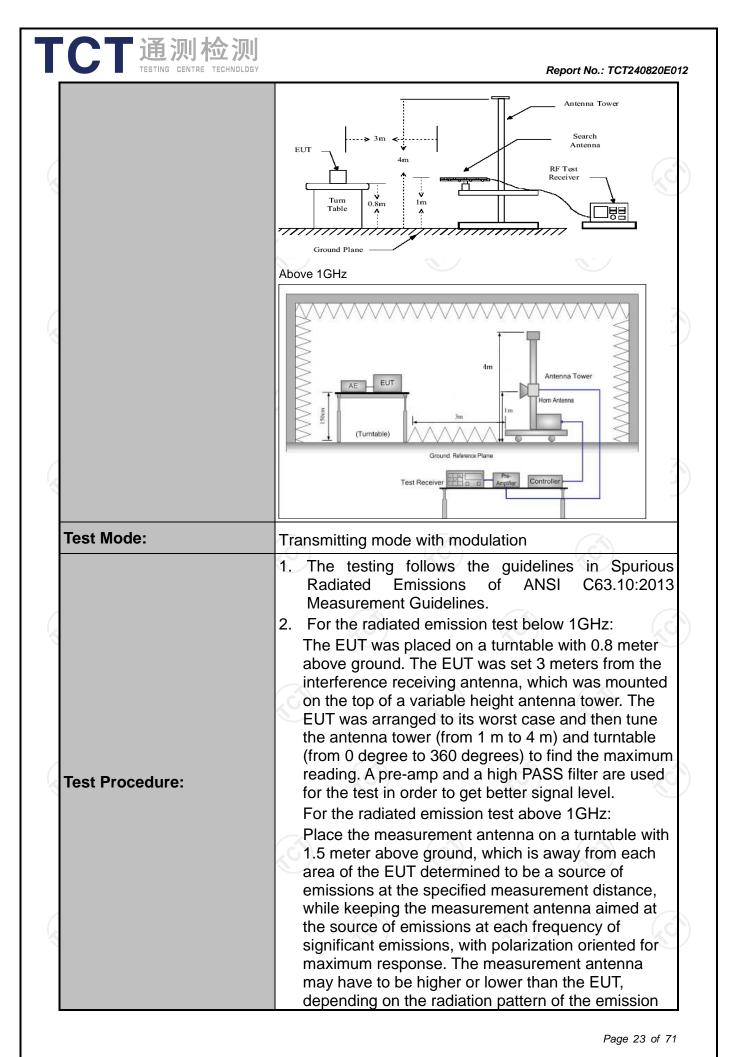
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5.11.1. Test Specification

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Test Requirement:	FCC Part15	C Sectior	n 15.209			K	
Test Method:	ANSI C63.10	0:2013					
Frequency Range:	9 kHz to 25 (GHz					
Measurement Distance:	3 m	X					
Antenna Polarization:	Horizontal &	Vertical					
	Frequency	Detector	RBW	VBW	Remark		
	9kHz- 150kHz	Quasi-pea	k 200Hz	1kHz	Quas	i-peak Value	
Receiver Setup:	150kHz- 30MHz	Quasi-pea	k 9kHz	30kHz	Quas	i-peak Value	
	30MHz-1GHz	Quasi-pea	k 120KHz	300KHz	Quas	i-peak Value	
	Above 1GHz	Peak	1MHz	3MHz		eak Value	
		Peak	1MHz	10Hz	Ave	erage Value	
			Field Str	enath	Me	asurement	
	Frequen	ncy	(microvolts	-		nce (meters)	
	0.009-0.4	490	2400/F(300	
	0.490-1.7	705	24000/F	(KHz)		30	
	1.705-3		30			30	
	30-88	100			3		
imite	88-216 150		3 3 3				
Limit:	216-96 Above 9		<u>200</u> 500				
	Frequency Above 1GH:	(micro	ld Strength ovolts/meter) 500 5000	Measure Distan (mete 3 3	nce	Detector Average Peak	
Test setup:	For radiated emis	stance = 3m	d Plane		Comput		
		-				(



	receiving the max measurement ant maximizes the en antenna elevation restricted to a ran above the ground 3. Set to the maxin EUT transmit cor 4. Use the following (1) Span shall w emission bei (2) Set RBW=12 for f>1GHz ; Sweep = au = max hold (3) For average	d at the emission source imum signal. The final enna elevation shall be hissions. The measurem for maximum emissions ge of heights of from 1 n or reference ground pla num power setting and ntinuously. I spectrum analyzer setti ide enough to fully captu- ng measured; 20 kHz for f < 1 GHz, RB VBW≥RBW; to; Detector function = p	that which ent s shall be n to 4 m ine. enable the ings: ure the W=1MHz peak; Trace
	On time =N1 Where N1 is length of typ Average En Level + 20*	*L1+N2*L2++Nn-1*LN s number of type 1 pulse be 1 pulses, etc. hission Level = Peak Em og(Duty cycle)	es, L1 is iission
Test results:	On time =N1 Where N1 is length of typ Average Em Level + 20*I Corrected Re	s number of type 1 pulse be 1 pulses, etc. hission Level = Peak Em	es, L1 is ission ⊦ Cable
Test results:	On time =N1 Where N1 is length of typ Average Em Level + 20*I Corrected Re Loss + Read	s number of type 1 pulse be 1 pulses, etc. hission Level = Peak Em og(Duty cycle) eading: Antenna Factor +	es, L1 is iission ⊦ Cable
Test results:	On time =N1 Where N1 is length of typ Average Em Level + 20*I Corrected Re Loss + Read	s number of type 1 pulse be 1 pulses, etc. hission Level = Peak Em og(Duty cycle) eading: Antenna Factor +	es, L1 is iission ⊦ Cable
Test results:	On time =N1 Where N1 is length of typ Average Em Level + 20*I Corrected Re Loss + Read	s number of type 1 pulse be 1 pulses, etc. hission Level = Peak Em og(Duty cycle) eading: Antenna Factor +	es, L1 is iission ⊦ Cable



5.11.2. Test Instruments

	Radiated I	Emission Test S	Site (966)		
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due	
EMI Test Receiver	R&S	ESCI7	100529	Jan. 31, 2028	
Spectrum Analyzer	R&S	FSQ40	200061	Jun. 26, 2025	
Pre-amplifier	HP	8447D	2727A05017	Jun. 26, 202	
Pre-amplifier	SKET	LNPA_0118G- 45	SK2021012102	Jan. 31, 202	
Pre-amplifier	SKET	LNPA_1840G- 50	SK20210920350 0	Jan. 31, 202	
Loop antenna	Schwarzbeck	FMZB1519B	00191	Jun. 26, 202	
Broadband Antenna	Schwarzbeck	VULB9163	340	Jun. 28, 2025 Jun. 28, 2025 Feb. 02, 2025 Jun. 26, 2025	
Horn Antenna	Schwarzbeck	BBHA 9120D	631		
Horn Antenna	Schwarzbeck	BBHA 9170	00956		
Coaxial cable	SKET	RE-03-D	/		
Coaxial cable	SKET	RE-03-M	S 1	Jun. 26, 202	
Coaxial cable	SKET	RE-03-L	/	Jun. 26, 202	
Coaxial cable	SKET	RE-04-D	1.0	Jun. 26, 202	
Coaxial cable	SKET	RE-04-M	/	Jun. 26, 202	
Coaxial cable	SKET	RE-04-L		Jun. 26, 202	
Antenna Mast	Keleto	RE-AM	/		
EMI Test Software	EZ_EMC	FA-03A2 RE+	1.1.4.2	/	

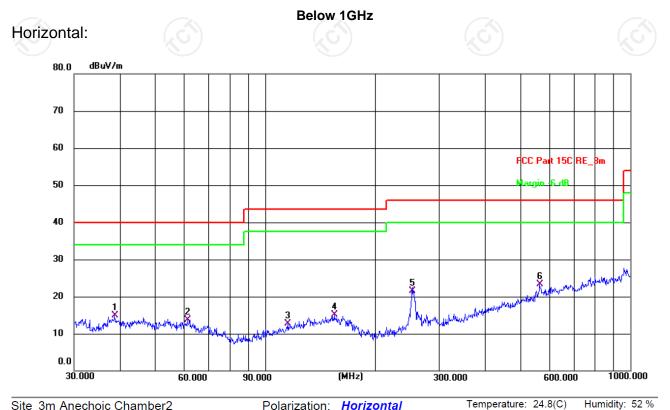
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5.11.3. Test Data

Please refer to following diagram for individual



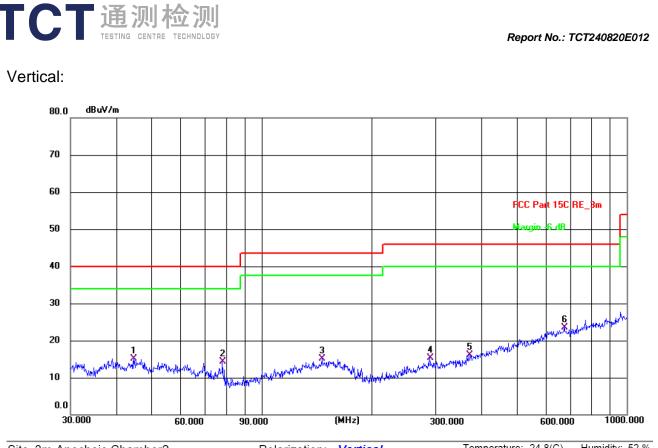
Site 3m Anechoic Chamber2 Limit: ECC Part 15C RE 3m

Polarization: Horizontal

Limi	it: F	CC Part 15C R	RE_3m				Power:	DC 3.7 V		
N	o.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	1	38.7518	33.47	-1 <mark>8</mark> .53	14.94	40.00	-25.06	QP	Ρ	
2	2	61.3463	32.81	-19.01	13.80	40.00	-26.20	QP	Ρ	
3	3	115.7256	32.48	-19.81	12.67	43.50	-30.83	QP	Ρ	
4	1	154.8204	32.02	-16.99	15.03	43.50	-28.47	QP	Ρ	
5	5	252.9482	40.53	-19.11	21.42	46.00	-24.58	QP	Ρ	
6	*	564.6389	34.17	-10.90	23.27	46.00	-22.73	QP	Ρ	



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Site 3m Anechoic Chamber2 Polarization: Vertical Temperature: 24.8(C) Humidity: 52 %

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	44.7433	33.75	-18.59	15.16	40.00	-24.84	QP	Ρ	
2	78.1389	36.13	-21.83	14.30	40.00	-25.70	QP	Ρ	
3	146.3735	32.73	-17.65	15.08	43.50	-28.42	QP	Ρ	
4	289.0021	32.91	-17.51	15.40	46.00	-30.60	QP	Ρ	
5	370.7023	31.93	-15.73	16.20	46.00	-29.80	QP	Ρ	
6 *	675.2080	31.85	-8.25	23.60	46.00	-22.40	QP	Ρ	

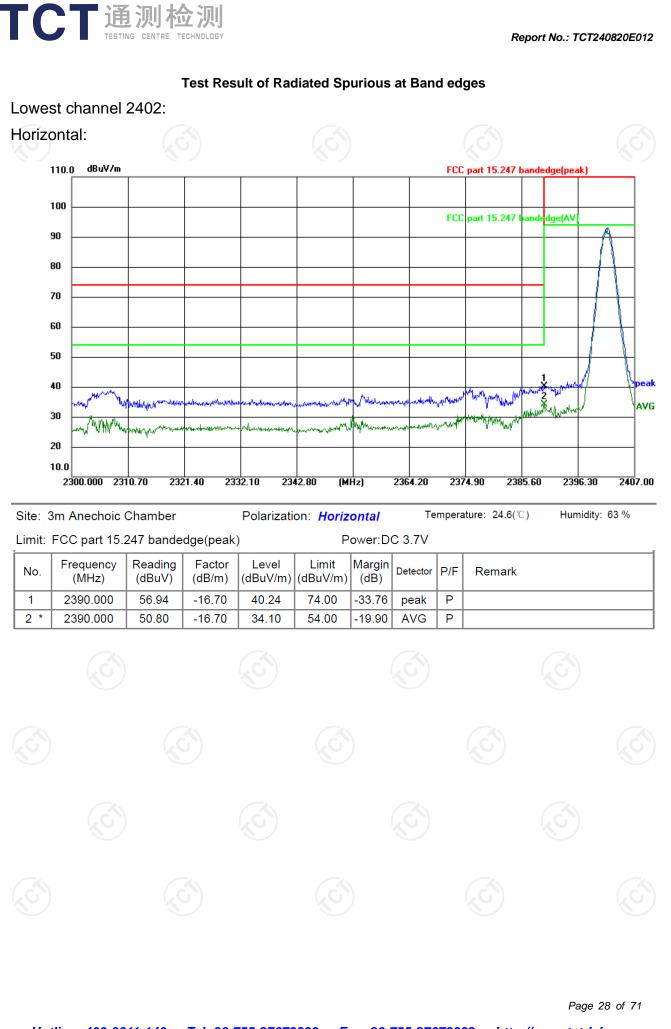
Note: 1. The low frequency, which started from 9KHz~30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

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

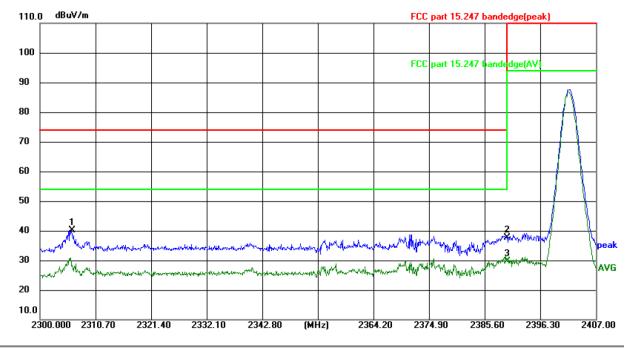
 $Over (dB) = Measurement (dB\mu V/m) - Limits (dB\mu V/m)$

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



Vertical:

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Site: 3m Anechoic Chamber Polarization: Vertical Temperature: 24.6(°C) Humidity: 63 %

Limit: FCC part 15.247 bandedge(peak)

Power:DC 3.7V

-									
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	2306.281	57.04	-16.89	40.15	74.00	-33.85	peak	Ρ	
2	2390.000	54.32	-16.70	37.62	74.00	-36.38	peak	Ρ	
3 *	2390.000	46.32	-16.70	29.62	54.00	-24.38	AVG	Ρ	
		10							

Report No.: TCT240820E012 Highest channel 2480: Horizontal: dBuV/m 110.0 100 90 80 FCC part 15.247 andedge(peak) 70 60 part 15.247 bandedge(AV FCC 50 40 AMA A aberthi Man Jam and a start and the second starts here and a state when a state and the state and the state of the state 30 الاطاق فيالهو والمجاجعا AVG 20 10.0 2475.000 2478.00 2481.00 2484.00 2487.00 (MHz) 2493.00 2496.00 2499.00 2502.00 2505.00 Site: 3m Anechoic Chamber Polarization: Horizontal Temperature: 24.6(℃) Humidity: 63 % Power:DC 3.7V Limit: FCC part 15.247 bandedge(peak) Level Limit Margin Frequency Reading Factor Detector P/F No. Remark (MHz) (dBuV) (dB/m) (dBuV/m) (dBuV/m) (dB) 2483.500 67.14 -16.65 50.49 74.00 -23.51 Ρ 1 peak 2483.500 63.37 46.72 54.00 -7.28 Ρ 2 * -16.65 AVG Page 30 of 71 Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

C	TEST	1)则私 NG CENTRE TE							R	eport No.: 1	CT240820	E0
ertica	d:											
11	0.0 dBuV/m									_		_
10	in											
90												
		page										1
80)							FCC	part 15.247	bandedge(pea	k)	
70		/										-
60	י 							FCC	part 15.247	bandedge(AV)		-
50	· //-											7
40	I DUMANT		, V	1 Marcatherine Long	for which the work	Mary mark	The second s	4-14-1-VI	the way way way	1 were and the street	manning	
30				Mart April and	- Augent willing	man		ing-indust	and the second	ware and the second	the other warmen to	"" P ~~/
20	,											ľ
10												
	2475.000 247	8.00 248	31.00 24	84.00 24	87.00 (M	Hz)	2493.00	249	96.00 24	99.00 250	02.00 25	505
0.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark			
•	2483.500	60.61	-16.65	43.96	74.00	-30.04	peak	P				
*	2483.500 leasurements	57.25	-16.65	40.60	54.00	-13.40	AVG	P	and the we	aret case M	odo	_
	Pi/4 DQPSK)) was subm	ntted only.									
										P	age 31 of	71

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Above 1GHz

Modulation	Type: Pi/4	4 DQPSK							
Low chann	el: 2402 N	1Hz							
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Peak	on Level AV (dBµV/m)	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
4804	Н	43.02		-9.51	33.51		74	54	-20.49
7206	Н	34.93		-1.41	33.52		74	54	-20.48
	Н								
	(\mathcal{G})		J.)		()	.G`)		(.C)	
4804	V	46.14		-9.51	36.63		74	54	-17.37
7206	V	37.36		-1.41	35.95		74	54	-18.05
	V								

Middle cha	nnel: 2441	MHz		XC	5)				N.
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBµV)	Correction Factor (dB/m)	Peak		Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
4882	Н	45.71		-9.36	36.35	<u> </u>	74	54	-17.65
7323	KOĤ)	34.68	- KO	-1.14	33.54	01	74	54	-20.46
	Y								
						1			
4882	V	46.10		-9.36	36.74		74	54	-17.26
7323	V	36.82		-1.14	35.68		74	54	-18.32
<u> </u>	V				/				

High chann	nel: 2480 N	ЛНz							
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBµV)	Correction Factor (dB/m)	Peak	A \ /	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
4960	Н	44.02)	-9.20	34.82		74	54	-19.18
7440	Н	35.31		-0.96	34.35		74	54	-19.65
	Н								
(\mathbf{C})		(\mathbf{G})		((.c)		(.c
4960	V	44.19		-9.20	34.99		74	54	-19.01
7440	V	33.80		-0.96	32.84		74	54	-21.16
	V								

Note:

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

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

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6. Measurements were conducted in all three 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.



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	2.04	30	Pass
NVNT	1-DH1	2441	2.31	30	Pass
NVNT	1-DH1	2480	2.25	30	Pass
NVNT	2-DH1	2402	2.80	21	Pass
NVNT	2-DH1	2441	3.09	21	Pass
NVNT	2-DH1	2480	3.03	21	Pass

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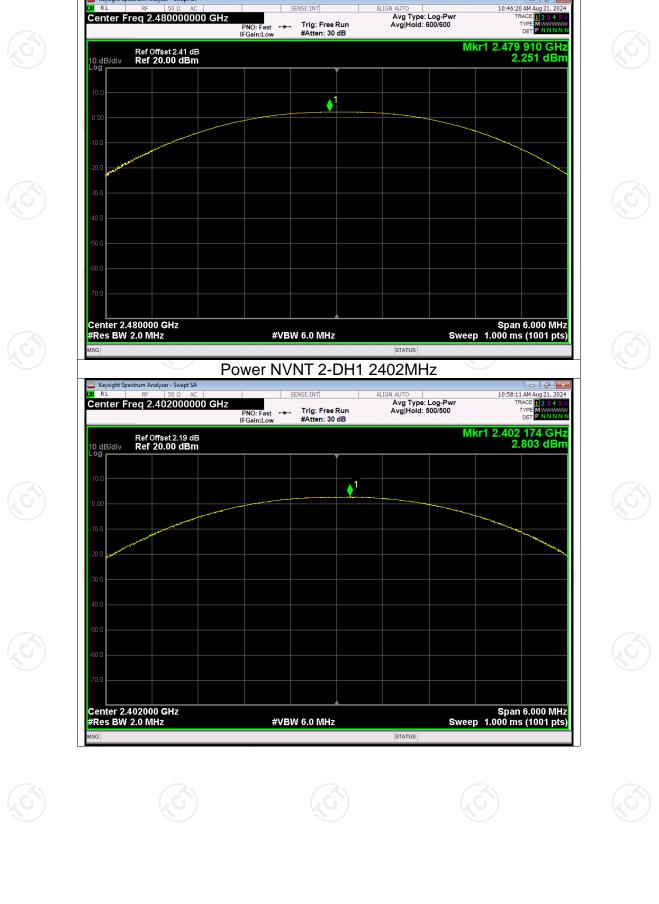
♦¹ Center 2.441000 GHz #Res BW 2.0 MHz Span 6.000 MHz Sweep 1.000 ms (1001 pts) #VBW 6.0 MHz STATUS Page 34 of 71

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

Test Graphs Power NVNT 1-DH1 2402MHz Keysight Spectrum Analyzer - Swept SA 10:38:16 AM Aug 21, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNN SENSE:INT LI IGN AI Avg Type: Log-Pwr Avg|Hold: 600/600 Center Freq 2.402000000 GHz PNO: Fast +++ Trig: Free Run IFGain:Low #Atten: 30 dB Mkr1 2.402 102 GHz 2.041 dBm Ref Offset 2.19 dB Ref 20.00 dBm 10 dB/div Log **♦**¹ Center 2.402000 GHz #Res BW 2.0 MHz Span 6.000 MHz Sweep 1.000 ms (1001 pts) #VBW 6.0 MHz STATUS Power NVNT 1-DH1 2441MHz Keysight Spectrum Analyzer - Swept SA 10:42:43 AM Aug 21, 2024 TRACE 1 2 3 4 5 6 TYPE M Avg Type: Log-Pwr Avg|Hold: 600/600 Center Freq 2.441000000 GHz PNO: Fast ---- Trig: Free Run IFGain:Low #Atten: 30 dB Mkr1 2.441 240 GHz 2.307 dBm Ref Offset 2.32 dB Ref 20.00 dBm 10 dB/div

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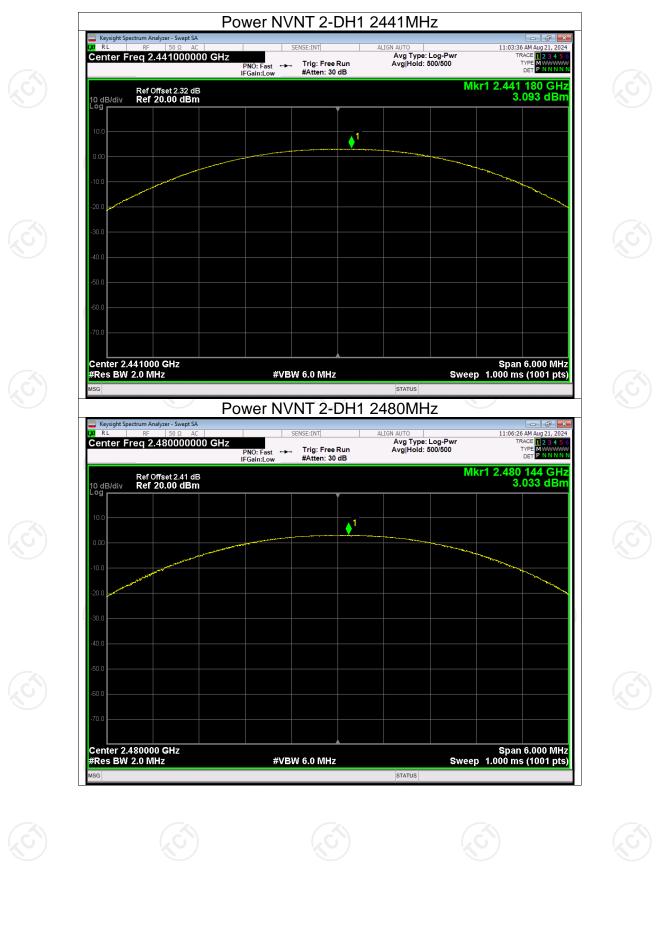


Power NVNT 1-DH1 2480MHz

Keysight Spectrum Analyzer - Swept SA

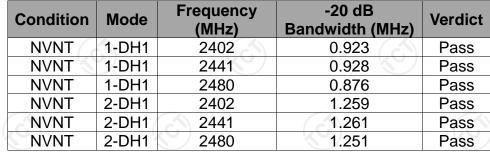
Report No.: TCT240820E012

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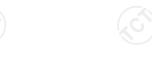


-20dB Bandwidth

































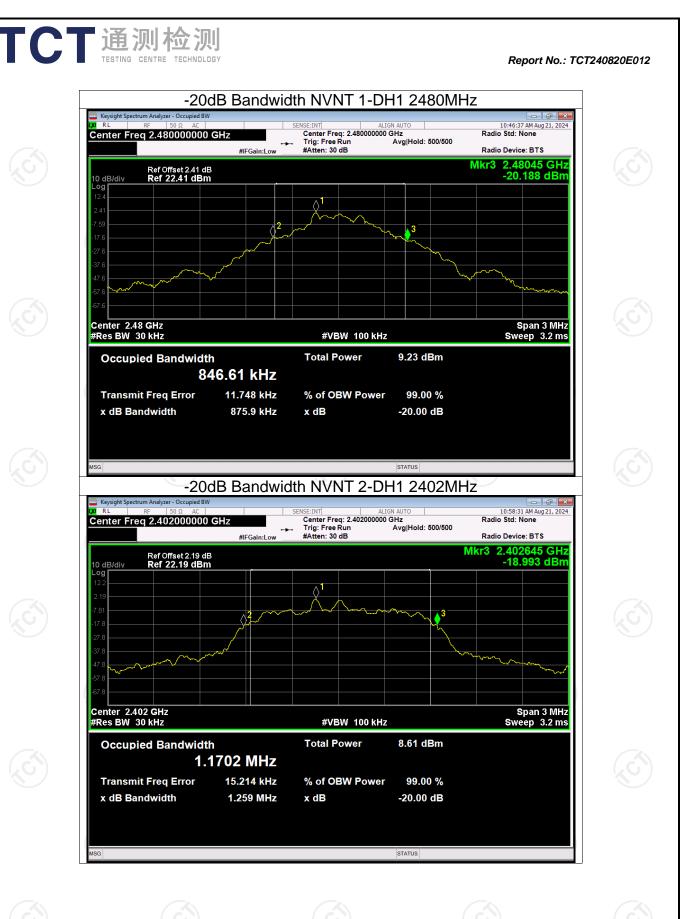


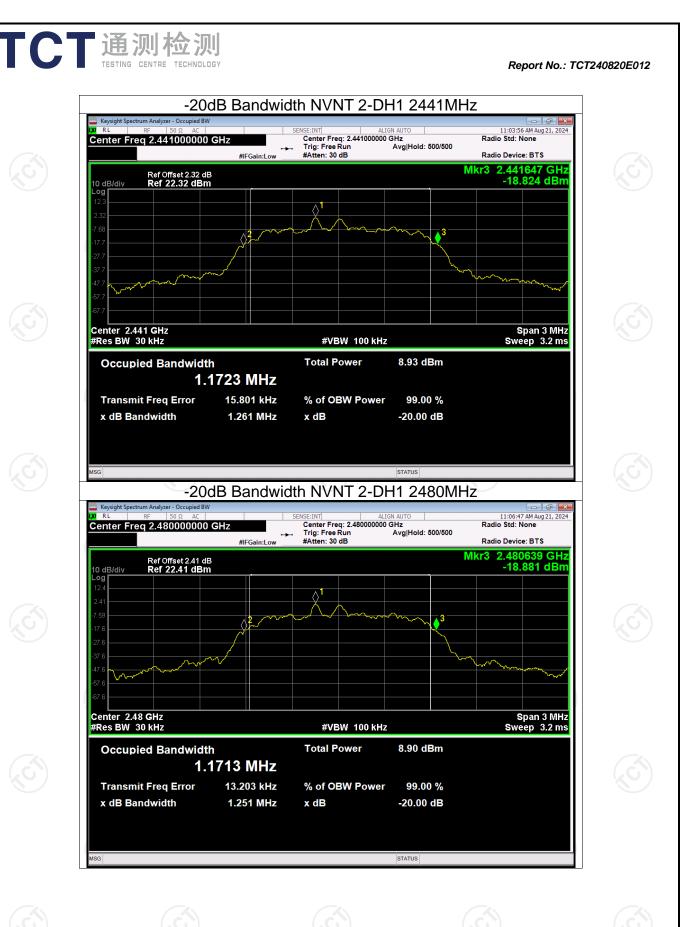


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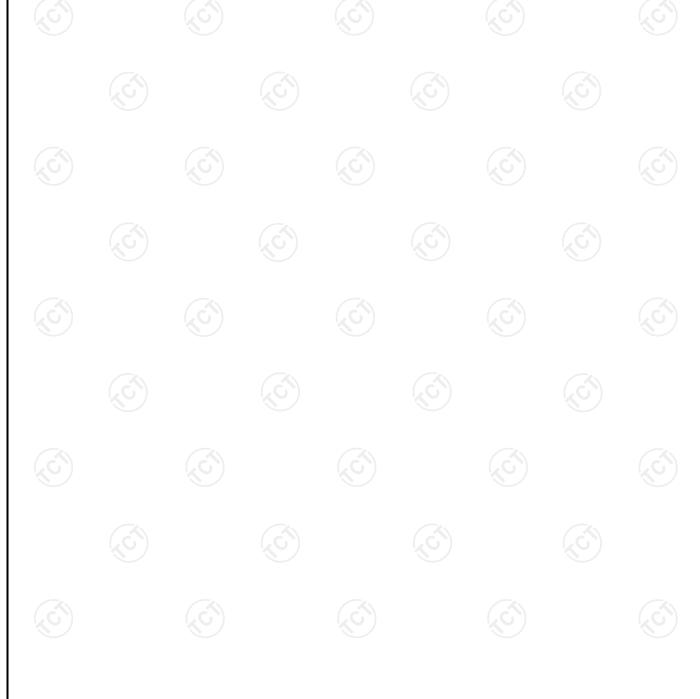
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Report No.: TCT240820E012



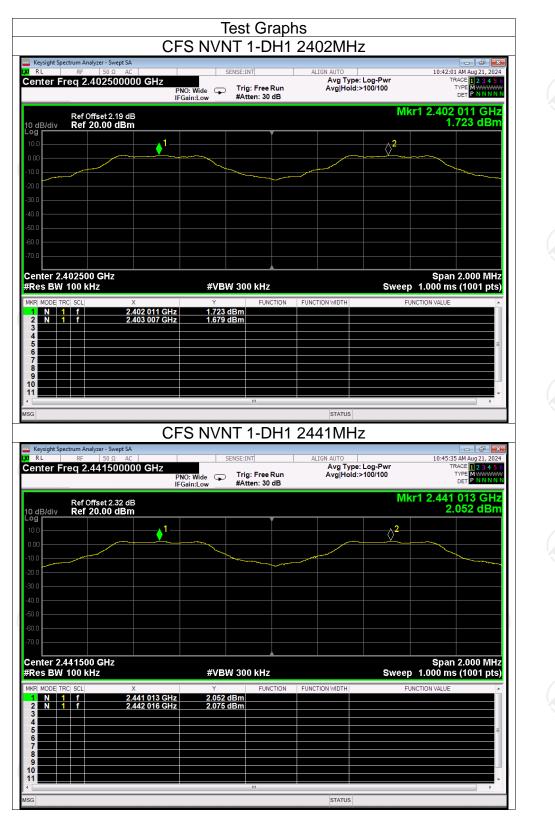
	Carrier i requeriere coparation						
Condition	Mode	Hopping Freq1	Hopping Freq2	HFS	Limit	Verdict	
		(MHz)	(MHz)	(MHz)	(MHz)		
NVNT	1-DH1	2402.011	2403.007	0.996	0.928	Pass	
NVNT	1-DH1	2441.013	2442.016	1.003	0.928	Pass	
NVNT	1-DH1	2479.017	2480.017	1.000	0.928	Pass	
NVNT	2-DH1	2401.854	2402.856	1.002	0.841	Pass	
NVNT 🔇	2-DH1	2440.854	2441.854	1.000	0.841	Pass	
NVNT	2-DH1	2478.856	2479.854	0.998	0.841	Pass	

Carrier Frequencies Separation



Report No.: TCT240820E012

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10:49:41 AM Aug 21, 20 TRACE 1 2 3 4 TYPE MWWW DET P N N N Avg Type: Log-Pwr Avg|Hold:>100/100 Center Freg 2.479500000 GHz Trig: Free Run #Atten: 30 dB PNO: Wide 🖵 IFGain:Low Mkr1 2.479 017 GHz 2.103 dBm Ref Offset 2.41 dB Ref 20.00 dBm 10 d Log **⊘**2 Center 2.479500 GHz #Res BW 100 kHz Span 2.000 MHz Sweep 1.000 ms (1001 pts) #VBW 300 kHz N 1 f N 1 f 2.479 017 GHz 2.480 017 GHz 2.103 dBm 2.070 dBm 234 10 11 CFS NVNT 2-DH1 2402MHz 11:02:37 AM Aug 21, 2024 TRACE 1 2:34 5 G TYPE M WWWWW DET P NNNN Keysight Spectrum Analyzer - Swept SA Avg Type: Log-Pw Avg|Hold:>100/100 Center Freg 2.402500000 GHz Trig: Free Run #Atten: 30 dB PNO: Wide IFGain:Low Mkr1 2.401 854 GHz 1.876 dBm Ref Offset 2.19 dB Ref 20.00 dBm 10 dB/div Log **r** ø **⊘**² Center 2.402500 GHz #Res BW 100 kHz Span 2.000 MHz Sweep 1.000 ms (1001 pts) #VBW 300 kHz FUNCTION WIDTH TION N 1 f N 1 f 2.401 854 GHz 2.402 856 GHz 1.876 dBm 1.871 dBm

ALTGN AL

CFS NVNT 1-DH1 2480MHz

KI RL

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🔤 Keysight Spectrum Analyzer - Swept S



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STATUS



Span 2.000 MHz Sweep 1.000 ms (1001 pts) #VBW 300 kHz 2.440 854 GHz 2.441 854 GHz 2.180 dBm 2.200 dBm STATUS CFS NVNT 2-DH1 2480MHz

I IGN AL

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

⊘2

CFS NVNT 2-DH1 2441MHz

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

Keysight Spectrum Analyzer - Swept SA							
LX RL RF 50 Ω AC		SENSE:IN	T	ALIGN AUTO	. <u>.</u>		AM Aug 21, 202
Center Freq 2.47950000	DO GHZ PNO: Wide IFGain:Low		: Free Run en: 30 dB	Avg Type Avg Hold	e: Log-Pwr :>100/100	т	ACE 1 2 3 4 5 YPE MWWWW DET P N N N N
Ref Offset 2.41 dE 10 dB/div Ref 20.00 dBm Log					M	(r1 2.478 2.	856 GH 122 dBn
10.0					2		
-10.0				~~~~		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
-20.0							
-30.0							
-40.0							
-60.0							
-70.0							
Center 2.479500 GHz #Res BW 100 kHz		#VBW 300	kHz		Sweep	Span 0 1.000 ms	2.000 MH (1001 pts
	x	Y	FUNCTION	FUNCTION WIDTH	FU	JNCTION VALUE	
		2.122 dBm 2.092 dBm					
4 5 6 7 8 9							
10							•
MSG				STATUS			

10 d Log

Keysight Spectrum Analyzer - Swept S
 K
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 RF
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Center 2.441500 GHz #Res BW 100 kHz

N 1 f N 1 f

234

Center Freq 2.441500000 GHz

Ref Offset 2.32 dB Ref 20.00 dBm

♦¹







11:05:42 AM Aug 21, 20 TRACE 1 2 3 4 TYPE MWWW DET P N N N

Mkr1 2.440 854 GHz 2.180 dBm



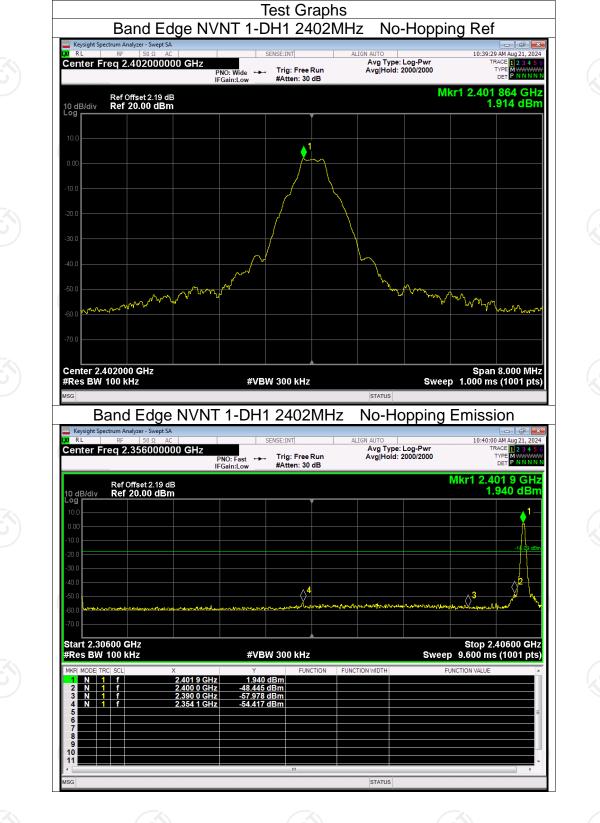
Band Edge							
Condition	Mode	Frequency (MHz)	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict	
NVNT	1-DH1	2402	No-Hopping	-56.32	-20	Pass	
NVNT	1-DH1	2480	No-Hopping	-57.63	-20	Pass	
NVNT	2-DH1	2402	No-Hopping	-57.17	-20	Pass	
NVNT	2-DH1	2480	No-Hopping	-57.53	-20	Pass	
((

			Band Edge		
Condition	Mode	Frequency (MHz)	Hopping Mode	Max Value (dBc)	Limit (dBc)
NVNT	1-DH1	2402	No-Hopping	-56.32	-20
NV/NT	1-DH1	2480	No-Hopping	-57.63	-20

Report No.:	TCT240820E012
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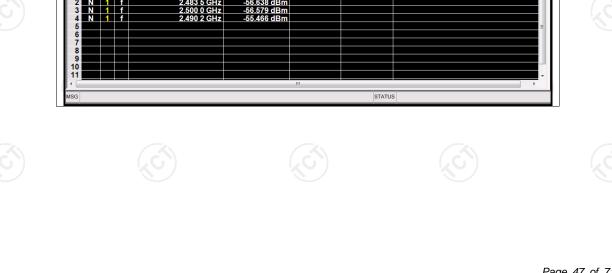
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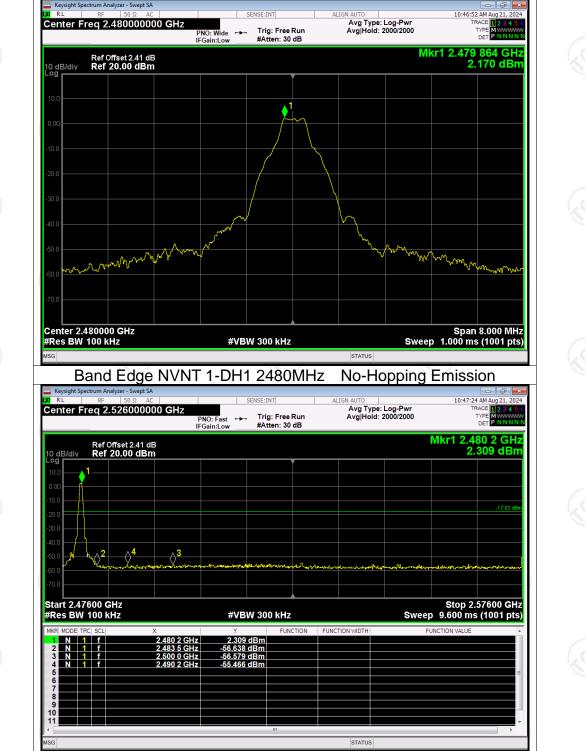




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Report No.: TCT240820E012





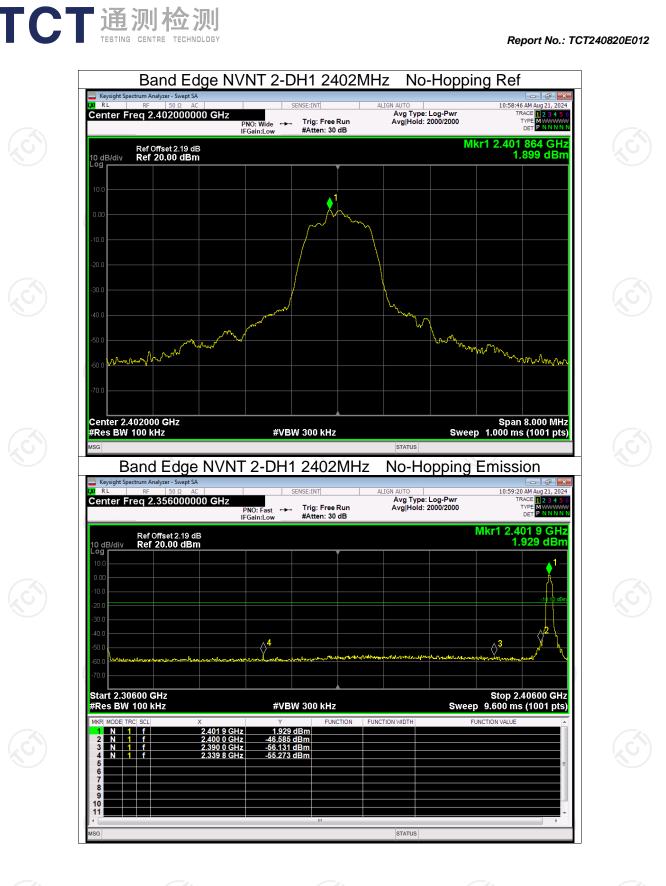
Band Edge NVNT 1-DH1 2480MHz

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

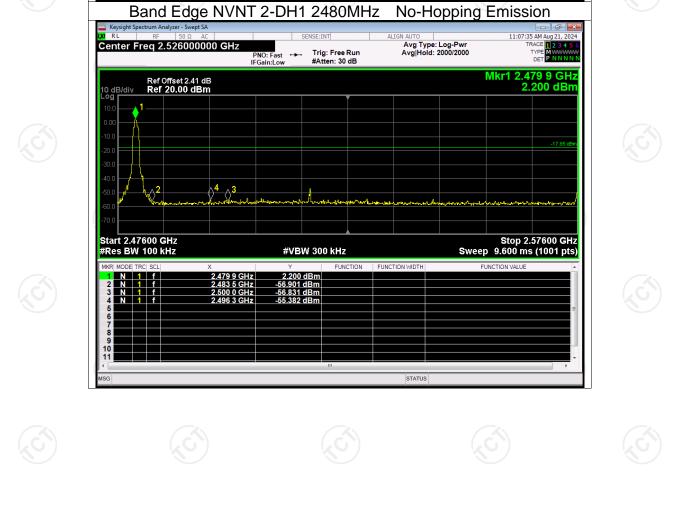
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Report No.: TCT240820E012

No-Hopping Ref



Report No.: TCT240820E012



M $\mathcal{V}_{\mathcal{N}}$ mhr Center 2.480000 GHz #Res BW 100 kHz Span 8.000 MHz Sweep 1.000 ms (1001 pts) #VBW 300 kHz

STATUS

Avg Type: Log-Pwr Avg|Hold: 2000/2000 Center Freq 2.480000000 GHz Trig: Free Run #Atten: 30 dB PNO: Wide IFGain:Low **н**н Ref Offset 2.41 dB Ref 20.00 dBm 10 dB/div Loa ۵

Band Edge NVNT 2-DH1 2480MHz

Keysight

KI RL

Report No.: TCT240820E012

11:07:03 AM Aug 21, 20 TRACE 1 2 3 4 TYPE M WWW DET P N N N

TYP DE

Mkr1 2.479 864 GHz 2.149 dBm

No-Hopping Ref

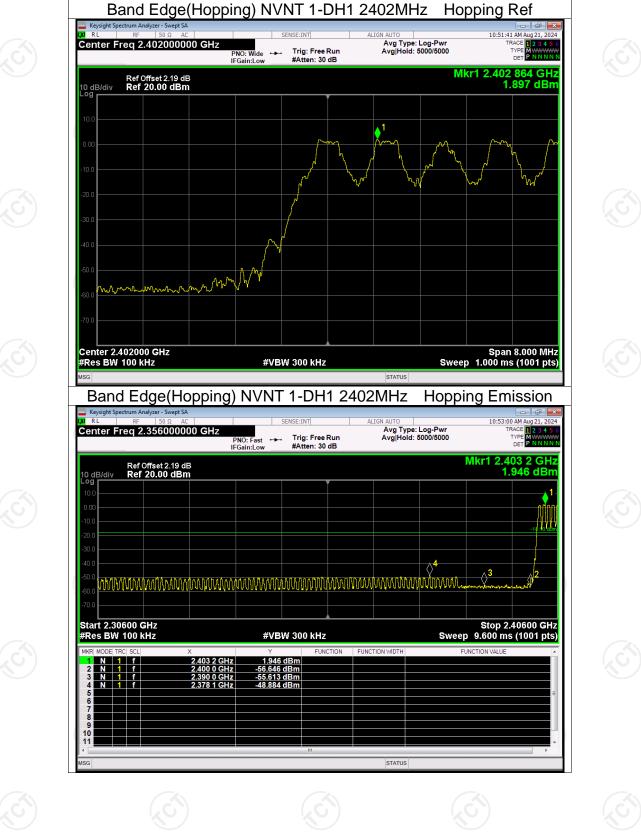
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Band Luge(hopping)						
Condition	Mode	Frequency (MHz)	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Hopping	-50.78	-20	Pass
NVNT	1-DH1	2480	Hopping	-52.13	-20	Pass
NVNT	2-DH1	2402	Hopping	-50.86	-20	Pass
NVNT	2-DH1	2480	Hopping	-51.66	-20	Pass
(

Band Edge(Hopping)

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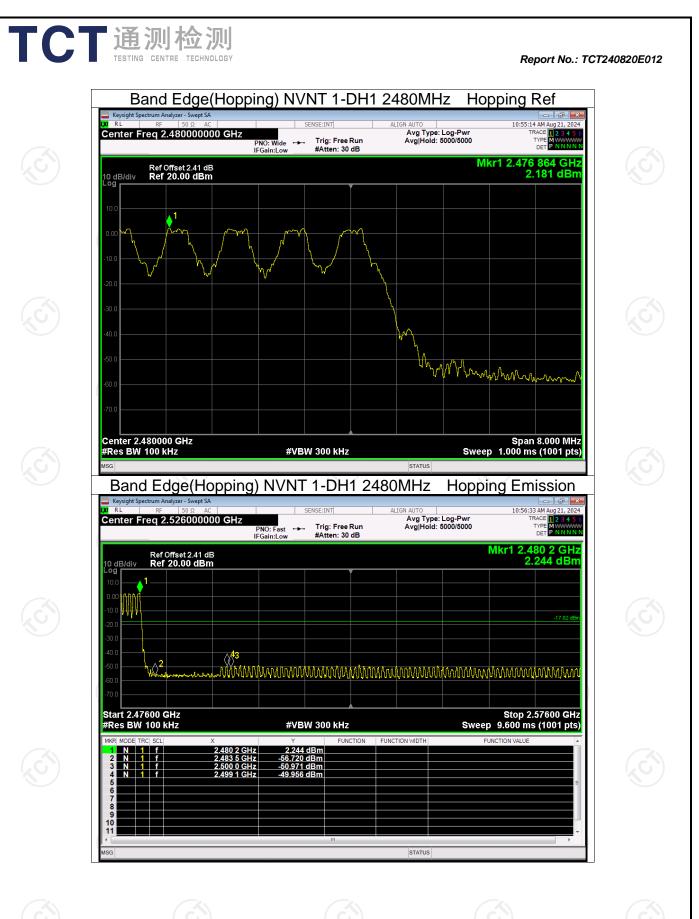


Test Graphs

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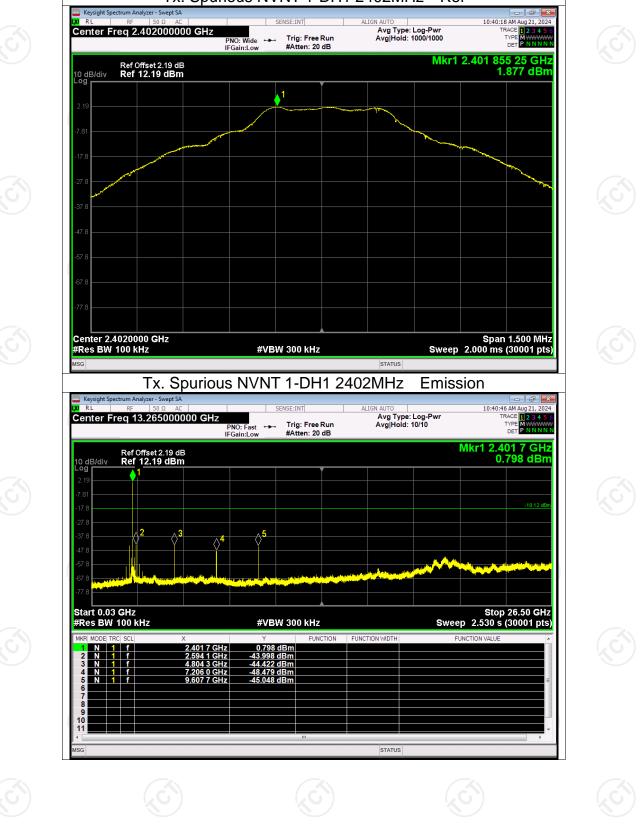
Report No.: TCT240820E012



Conducted RF S	purious Emission

Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	-45.87	-20	Pass
NVNT	1-DH1	2441	-45.26	-20	Pass
NVNT	1-DH1	2480	-46.61	-20	Pass
NVNT	2-DH1	2402	-44.29	-20	Pass
NVNT	2-DH1	2441	-44.30	-20	Pass
NVNT	2-DH1	2480	-44.49	-20	Pass





Test Graphs Tx. Spurious NVNT 1-DH1 2402MHz

TCT通测检测 TESTING CENTRE TECHNOLOGY

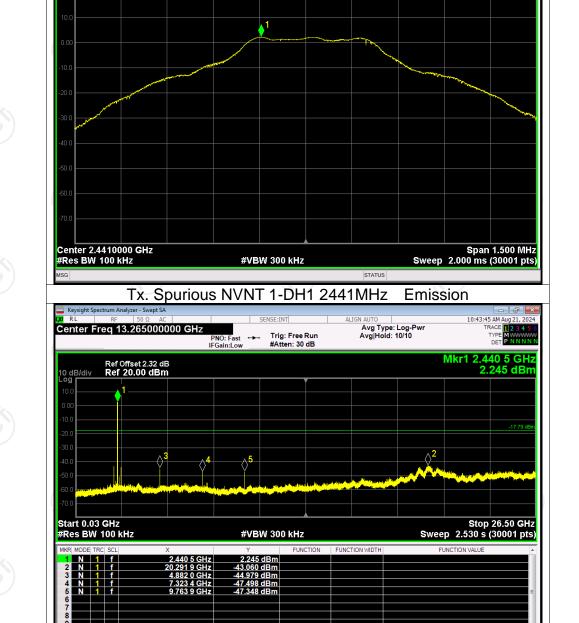
Report No.: TCT240820E012

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- 67 **-** X

Ref





Tx. Spurious NVNT 1-DH1 2441MHz

PNO: Wide IFGain:Low

нн

Trig: Free Run #Atten: 30 dB

TCT通测检测 TESTING CENTRE TECHNOLOGY

🔤 Keysight S

10 dB/div Loa

10 11

Center Freg 2.441000000 GHz

Ref Offset 2.32 dB Ref 20.00 dBm

KI RL



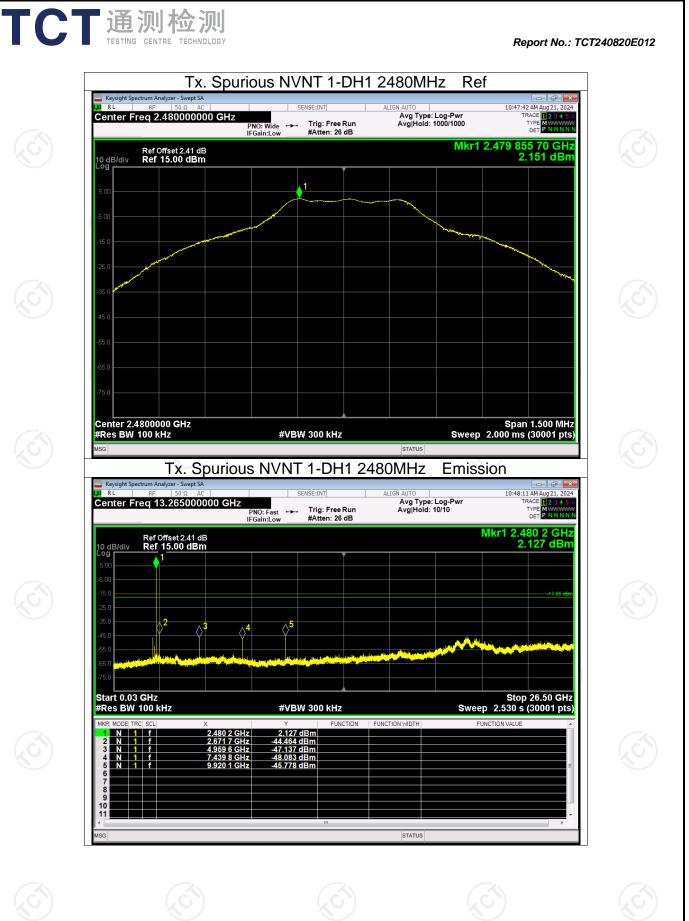


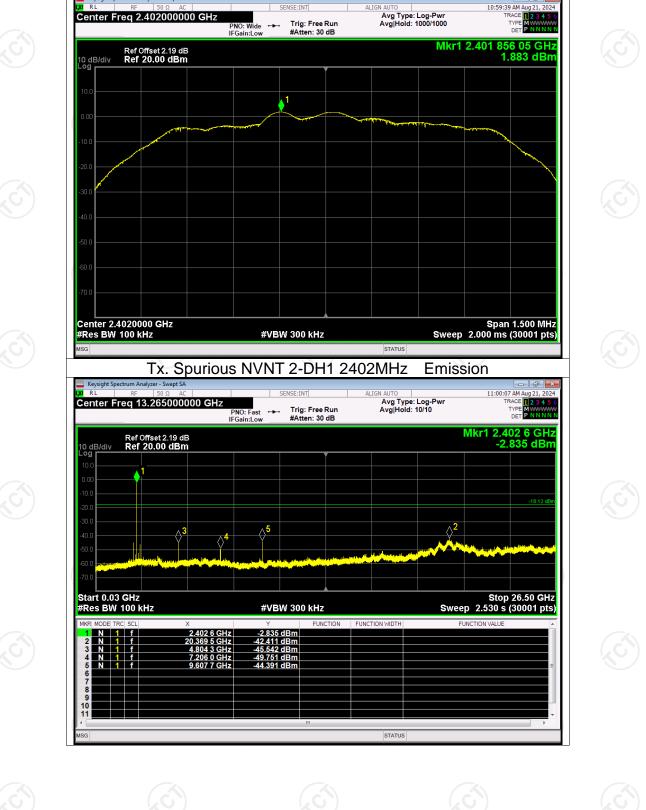
10:43:16 AM Aug 21, 20 TRACE 1 2 3 4 TYPE M WWW DET P N N N

Mkr1 2.440 855 15 GHz 2.213 dBm

Ref

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





Tx. Spurious NVNT 2-DH1 2402MHz

TCT通测检测 TESTING CENTRE TECHNOLOGY

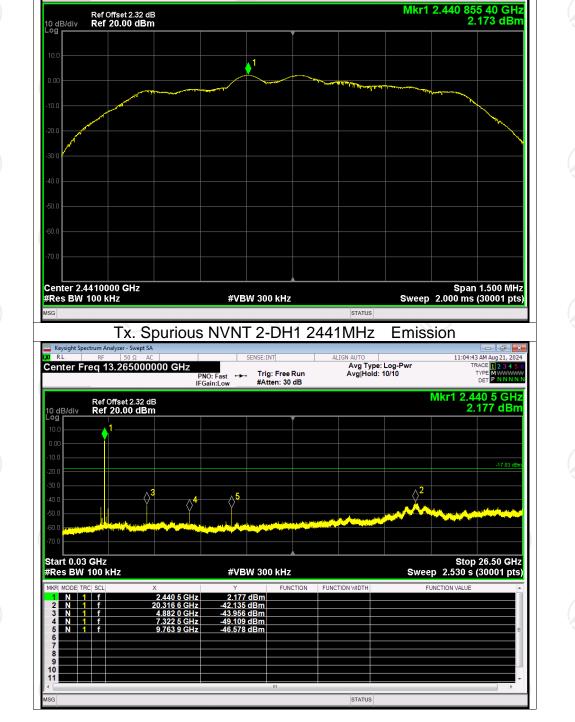
🔤 Keysight S

KI RL

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Ref



Tx. Spurious NVNT 2-DH1 2441MHz

PNO: Wide IFGain:Low

нн

Trig: Free Run #Atten: 30 dB



TCT通测检测 TESTING CENTRE TECHNOLOGY

🔤 Keysight S

Center Freg 2.441000000 GHz

KI RL



11:04:13 AM Aug 21, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N

TYPE DET

Ref

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

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1 Center 2.4800000 GHz #Res BW 100 kHz Span 1.500 MHz Sweep 2.000 ms (30001 pts) #VBW 300 kHz STATUS Tx. Spurious NVNT 2-DH1 2480MHz Emission alyzer - Swept SA Keysight Sp 1:08:23 AM AU U RL Avg Type: Log-Pw Avg|Hold: 10/10 E 1 2 3 4 5 E M WWW T P N N N N Center Freg 13.265000000 GHz Trig: Free Run #Atten: 30 dB TYPE PNO: Fast ↔→ IFGain:Low Mkr1 2.480 2 GHz 1.567 dBm Ref Offset 2.41 dB Ref 20.00 dBm 10 dB/div Log **r** -17.87 d **⊘**² **∆**5 $\langle \rangle$ Start 0.03 GHz #Res BW 100 kHz Stop 26.50 GHz Sweep 2.530 s (30001 pts) #VBW 300 kHz FUNCTION WIDTH 1.567 di TION MODE TRC Solution N 1 f N 1 f N 1 f N 1 f N 1 f N 1 f N 1 f 2.480 2 GHz 20.278 7 GHz 4.960 5 GHz 7.439 8 GHz 9.920 1 GHz 1.567 dBm -42.363 dBm -49.429 dBm -48.620 dBm -44.865 dBm 456780 10 11 STATUS

Trig: Free Run #Atten: 30 dB

PNO: Wide IFGain:Low

нн

Report No.: TCT240820E012

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11:07:53 AM Aug 21, 20 TRACE 1 2 3 4 TYPE M WWW DET P N N N

TYPE DET

Mkr1 2.479 854 00 GHz 2.126 dBm

Tx. Spurious NVNT 2-DH1 2480MHz Ref

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



Center Freg 2.480000000 GHz

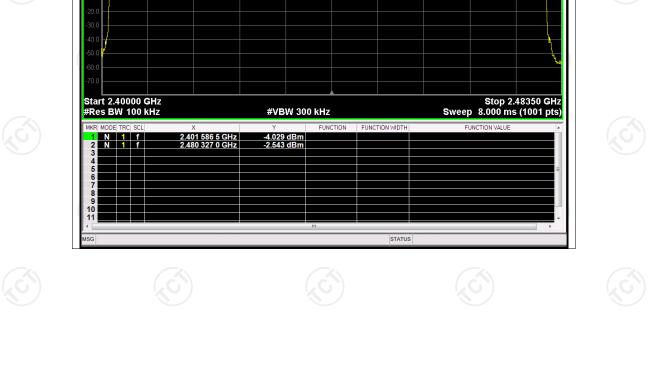
Ref Offset 2.41 dB Ref 20.00 dBm

🔤 Keysight S

10 dB/div Loa

KI RL

Verd Pas	Limit 15	umber	f Hoppin Iopping N 79	e F	Mode 1-DH	Condition NVNT	C
Pas	15		79		2-DH	NVNT	



TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N PNO: Fast Trig: Free Run IFGain:Low #Atten: 30 dB Mkr1 2.401 920 5 GHz 1.732 dBm Ref Offset 2.32 dB Ref 20.00 dBm 10 dB/di Log r Stop 2.48350 GHz Sweep 8.000 ms (1001 pts) Start 2.40000 GHz #Res BW 100 kHz #VBW 300 kHz 2.401 920 5 GHz 2.480 160 0 GHz 1.732 dBm 0.981 dBm N 1 f N 1 f 10 11

Test Graphs Hopping No. NVNT 1-DH1 2441MHz

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

Hopping No. NVNT 2-DH1 2441MHz Avg Type: Log-Pwr Avg|Hold:>100/100 Center Freq 2.441750000 GHz PNO: Fast Trig: Free Run IFGain:Low #Atten: 30 dB

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Report No.: TCT240820E012

- 6 2 10:53:50 AM Aug 21, 2024

11:13:36 AM Aug 21, 2024 TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N

Mkr1 2.401 586 5 GHz -4.029 dBm

Keysight Spectrum Analyzer - Swept SA

Keysight Sp

Ref Offset 2.32 dB Ref 20.00 dBm

10 dB/di Log

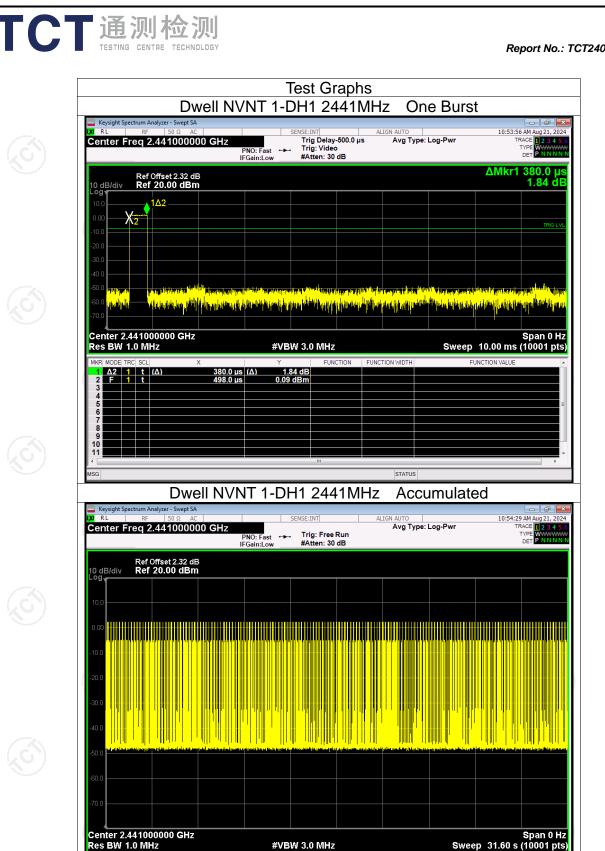
NVVVI

Center Freq 2.441750000 GHz

Dwell Time								
Condition	Mode	Frequency (MHz)	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	0.38	120.08	316	31600	400	Pass
NVNT	1-DH3	2441	1.64	260.76	159	31600	400	Pass
NVNT	1-DH5	2441	2.89	315.01	109	31600	400	Pass
NVNT 🔇	2-DH1	2441	0.39	124.41	319	31600	400	Pass
NVNT	2-DH3	2441	1.64	257.48	157	31600	400	Pass
NVNT	2-DH5	2441	2.89	306.34	106	31600	400	Pass

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



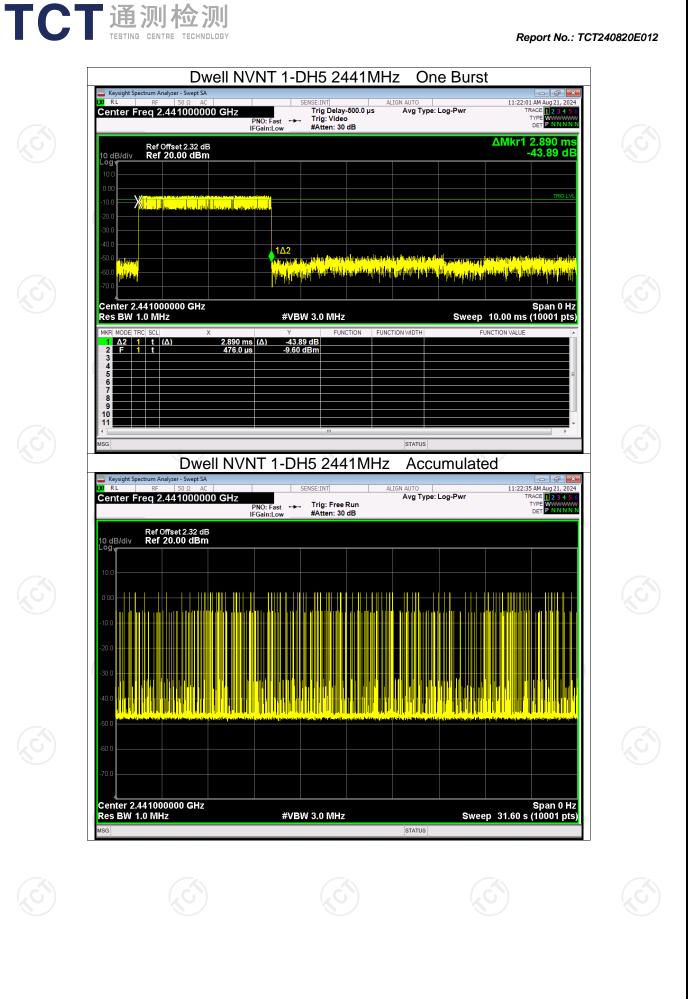
STATUS

Keysight Spectrum Analyzer - Swept SA Keysight Spectrum Analyzer - Swept SA Keysight Spectrum Analyzer - So Q AC Center Freq 2.441000000 GHz PNO: Fasi IFGain.Lot	t 🛶 Trig: Video	Type: Log-Pwr TACE D234 Type: Log-Pwr DET P.N.N	124
Ref Offset 2.32 dB 10 dB/div Ref 20.00 dBm		ΔMkr1 1.640 n -1.71 d	
0.00 -10 0 -20 0 -30 0		TRIC I	<u>v.</u>
	an teach and teach and teach and teach and teach and tea A search and teach and	dan di Seria da Parta da para sera da Sara da A filo da porte da Sara da Sara A filo da porte da Sara	
	#VBW 3.0 MHz	Span 0 Sweep 10.00 ms (10001 p	tz (s)
1 Δ2 1 t (Δ) 1.640 ms (Δ) 2 F 1 t 498.0 μs 4 3 - - 498.0 μs - - 4 - - - - - - 5 -	-1.71 dB -3.21 dBm	POINC HOIR VALUE	E
9 10 11 MSG Dwell NVNT 1 Keysight Spectrum Analyzer - Swept SA			
Website Replaying spectrum range = Swept SA Website Replaying spectrum range = Swept SA Center Freq 2.4410000000 GHz PN0: Fasilifeaint.org Figaint.org Figaint.org	at 🛶 Trig: Free Run	TO 11:18:54 AM Aug 21, 2 g Type: Log-Pwr TRACE 12:34 TYPE WITH UP TRACE 12:34 TYPE WITH UP TRACE 12:34 TYPE WITH UP TRACE 10 TRAC	124
Ref Offset 2.32 dB 10 dB/div Ref 20.00 dBm 10 0 10			
-30.0 -40.0 -50.0			(5)
-70.0 Center 2.441000000 GHz Res BW 1.0 MHz	#VBW 3.0 MHz	Span 0 Sweep 31.60 s (10001 p	12 (5)
	(C)		Ś
			Page 66 of 71

Dwell NVNT 1-DH3 2441MHz One Burst

TCT 通测检测 TESTING CENTRE TECHNOLOGY

Report No.: TCT240820E012



LX.	Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC enter Freq 2.441000000 GHz	SENSE:INT ALIGN AUTO	Dne Burst 11:13:44 AM Aug 21, 2024 Yype: Log-Pwr TRACE 23 4 5 G TYPE WWWWWW DET P NNNNN	
3	Ref Offset 2.32 dB 0 dB/div Ref 20.00 dBm		ΔMkr1 390.0 μs 0.76 dB	
			TRIO LVL	
4				
	40.0 50.0 Hittory (1997) (1997) (1997) (1997) 50.0 <mark>Paghiti taga taga taga taga taga taga taga t</mark>	in the property of the property provides the transmission of t	n filie fil fan en	
	70.0	#VBW 3.0 MHz	Span 0 Hz Sweep 10.00 ms (10001 pts)	
	$\begin{array}{c c} \text{MRR} \text{ MODE TRC} & \text{SCL} & \times \\ \hline 1 & \Delta 2 & 1 & t & (\Delta) & 390.0 \ \mu\text{s} & (\Delta) \\ 2 & F & 1 & t & 430.0 \ \mu\text{s} \\ \hline \end{array}$	Y FUNCTION FUNCTION WIDTH 0.76 dB -9.15 dBm		
	4 5 6 7		=	
		m	· ·	
M	Dwell NVNT	STATU	ccumulated	
LX.	Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC enter Freq 2.441000000 GHz	SENSE:INT ALIGN AUTO	11:14:18 AM Aug 21, 2024 ype: Log-Pwr TRACE 2 3 4 5 6 TYPE WWWWWW	
1	IFGain: Ref Offset 2.32 dB 0 dB/div Ref 20.00 dBm		DET <mark>PINNINN</mark>	
	0.0			
	20.0			
	/0.0			
c	enter 2.441000000 GHz		Span 0 Hz	
	es BW 1.0 MHz	#VBW 3.0 MHz statu	Sweep 31.60 s (10001 pts)	

G	enter Freq 2.441000000 GHz	PNO: Fast +++ Trig: Free Run	التكليم 11:23:30 AM Aug 21, 21 vg Type: Log-Pwr TRACE 12 3 4 TYPE WINT DET P N N N	5 6 WW
10	Ref Offset 2.32 dB 0 dB/div Ref 20.00 dBm	IFGein:Low #Atten: 30 dB		
	0.0			
°				
	0.0			
-4	0.0			
.5		n an fill he de se an fille an de se an fille an transformer de se an fille an fille an fille an fille an fill In anne an transformation and an an fille an	n per la serie de la constante per la constante de la presidencia de la constante de la constante de la constan La constante de la constante de La constante de la constante d	
	0.0			
	enter 2.441000000 GHz		Span 0 l	47
R MS	es BW 1.0 MHz	#VBW 3.0 MHz	Sweep 31.60 s (10001 p	(<mark>s)</mark>
				Page 69 of 71
Hotline: 40	0-6611-140 Tel: 86-7	55-27673339 Fax: 86-75	5-27673332 http://www	.tct-lab.com

NSE:INT ALIGN AUTO Trig Delay-500.0 µs Avg Type: Log-Pwr Trig: Video #Atten: 30 dB TYP DE PNO: Fast ↔→ IFGain:Low ΔMkr1 1.640 m Ref Offset 2.32 dB Ref 20.00 dBm 1.40 dE 10 d Log 1<u>Δ</u>2 Xamph Aligner Aller D Center 2.441000000 GHz Res BW 1.0 MHz Span 0 Hz Sweep 10.00 ms (10001 pts) #VBW 3.0 MHz <u>Δ2</u> F 1 t (Δ) 1 t 1.640 ms 353.0 µs 1.40 dB -9.28 dBm

Dwell NVNT 2-DH3 2441MHz

Dwell NVNT 2-DH3 2441MHz Accumulated Keysight Spectrum Analyzer - Swept SA

STATUS

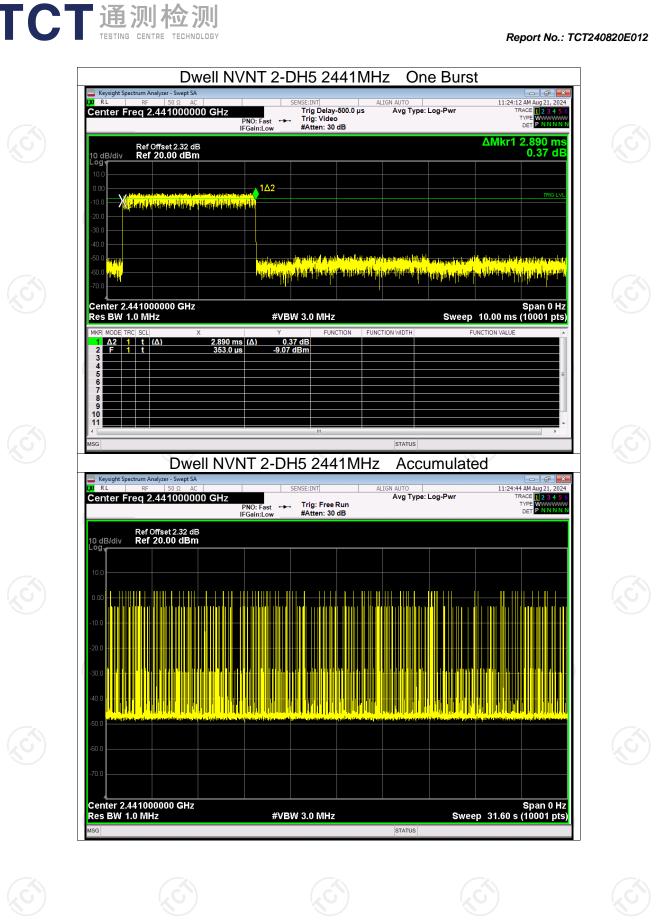
Keysight

Center Freq 2.441000000 GHz

Report No.: TCT240820E012

11:22:58 AM Aug 21, TRACE 1 2 3

One Burst



Report No.: TCT240820E012

