		Υ						
FCC ID:	2AUARSCANSR							
Test Report No:	TCT211020E040	TCT211020E040						
Date of issue:	Nov. 11, 2021							
Testing laboratory::	SHENZHEN TONGCE TESTIN							
Testing location/ address:	TCT Testing Industrial Park Fuqiao 5th Industrial Zone, Fuhai Street, Bao'an District Shenzhen, Guangdong, 518103, People' Republic of China							
Applicant's name: :	THINKCAR TECH CO., LTD.		$\langle c' \rangle$					
Address:	2606, building 4, phase II, Tian Bantian, Longgang District, She		nmunity,					
Manufacturer's name :	THINKCAR TECH CO., LTD.							
Address:	2606, building 4, phase II, Tian Bantian, Longgang District, She		nmunity,					
Standard(s):	FCC CFR Title 47 Part 15 Subpart C Section 15.247 FCC KDB 558074 D01 15.247 Meas Guidance v05r02 ANSI C63.10:2013							
Test item description :	THINKSCAN SR, THINKCHEC MUCAR CS	K M70, THINKTOOL R	eader,					
Trade Mark:	THINKCAR, MUCAR							
Model/Type reference :	TKSR6, TKM70, CS6, TKRE7, CS99	TKSR2, TKSR4, CS2, (CS4, CS90,					
Rating(s):	Rechargeable Li-ion battery DC	C 3.7V						
Date of receipt of test item	Oct. 20, 2021							
Date (s) of performance of test:	Oct. 20, 2021 - Nov. 11, 2021							
Tested by (+signature) :	Rleo	Rleyongo						
Check by (+signature) :	Beryl Zhao	Beny that TC	TING					
Approved by (+signature):	Tomsin	Tomsin 35	RAT A					
TONGCE TESTING LAB. TR TESTING LAB personnel on	oduced except in full, without th his document may be altered or ly, and shall be noted in the revi apply to the tested sample.	revised by SHENZHEN	N TONGCE					

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TCT 通测检测 TESTING CENTRE TECHNOLOGY

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1. General Product Information

1.1. EUT description

Test item description:	THINKSCAN SR, THINKCHECK MUCAR CS	M70, THINKTOOL	Reader,
Model/Type reference:	TKSR6		
Sample Number:	TCT211020E040-0101	$\langle \mathcal{C} \rangle$	
Bluetooth Version:	V4.2		
Operation Frequency:	2402MHz~2480MHz		
Transfer Rate:	1/2/3 Mbits/s		S
Number of Channel:	79		
Modulation Type:	GFSK, π/4-DQPSK, 8DPSK		
Modulation Technology:	FHSS		
Antenna Type:	Internal Antenna	(c)	(\mathbf{c})
Antenna Gain:	1dBi		
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

	Tested with							
er models TKM70, CS6, TKRE7, TKSR2, TKSR4, CS2, CS4, CS90, CS99								
nt on the product na								
le l	(C)	(C)						
			Page 3 of 97					
	sted model, other me	CS99 Sted model, other models are derivative models nt on the product names, model names and tra	TKSR6 TKM70, CS6, TKRE7, TKSR2, TKSR4, CS2, CS4, CS90, CS99 sted model, other models are derivative models. The models are identical nt on the product names, model names and trademarks. So the test data					



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
·				·		·	
10	2412MHz	30	2432MHz	50	2452MHz	70	2472MHz
11	2413MHz	31	2433MHz	51	2453MHz	71	2473MHz
			S				
18	2420MHz	38	2440MHz	58	2460MHz	78	2480MHz
19	2421MHz	39	2441MHz	59	2461MHz	-	-
Remark:	Channel 0, 3	89 & 78 h	ave been te	sted for G	FSK, π/4-D	QPSK, 8	DPSK

Remark: Channel 0, 39 & 78 have been tested for GFSK, $\pi/4$ -DQPSK, 8DPSK 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:	27.5 °C	25.1 °C					
Humidity:	56 % RH	52 % RH					
Atmospheric Pressure:	1010 mbar	1010 mbar					
Test Software:							
Software Information: Engineering mode							
Power Level:	Default						
Test Mode:							
Engineering mode: Keep the EUT in continuous transmitting by select channel and modulations with Fully-charged battery							

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.

Adapter JD-050200 2012010907576735 /	JD

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: TCT Testing Industrial Park Fuqiao 5th Industrial Zone, Fuhai Street, 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

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 Internal antenna which permanently attached, and the best case gain of the antenna is 1dBi.



MIFI/ GPS

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Antenna



5.2. Conducted Emission

5.2.1. Test Specification

Test Requirement:	FCC Part15 C Section	15.207	K				
Test Method:	ANSI C63.10:2013						
Frequency Range:	150 kHz to 30 MHz						
Receiver setup:	RBW=9 kHz, VBW=30	kHz, Sweep time	e=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	e Plane					
Test Setup:	E.U.T AC powe	Filter EMI Receiver	AC power				
Toot Mode	Remark: E.U.T: Equipment Under Test LISN: Line Impedence Stabilization N Test table height=0.8m	etwork					
Test Mode:	E.U.T: Equipment Under Test LISN: Line Impedence Stabilization N Test table height=0.8m Refer to item 3.1		or through a life				
	 E.U.T. Equipment Under Test LISN Line Impedence Stabilization Na Test table height=0.8m Refer to item 3.1 1. The E.U.T is connel impedance stabiliz provides a 500hm/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 interferent emission, the relative the interface cables 	cted to an adapte ation network 50uH coupling im nt. ces are also conne ISN that provides with 50ohm tern diagram of the line are checkence. In order to fin e positions of equ must be changed	(L.I.S.N.). This pedance for the acted to the main a 50ohm/50uh nination. (Please test setup and ed for maximum nd the maximum ipment and all o l according to				
Test Mode: Test Procedure: Test Result:	 E.U.T. Equipment Under Test LISN Line Impedence Stabilization N Test table height=0.8m Refer to item 3.1 1. The E.U.T is connel impedance stabiliz provides a 50ohm/s measuring equipme 2. The peripheral device power through a L coupling impedance refer to the block photographs). 3. Both sides of A.C. conducted interferent emission, the relative 	cted to an adapte ation network 50uH coupling im nt. ces are also conne ISN that provides with 50ohm tern diagram of the line are checkence. In order to fin e positions of equ must be changed	(L.I.S.N.). This pedance for the acted to the main a 50ohm/50ul- nination. (Please test setup and ed for maximum nd the maximum ipment and all o l according to				

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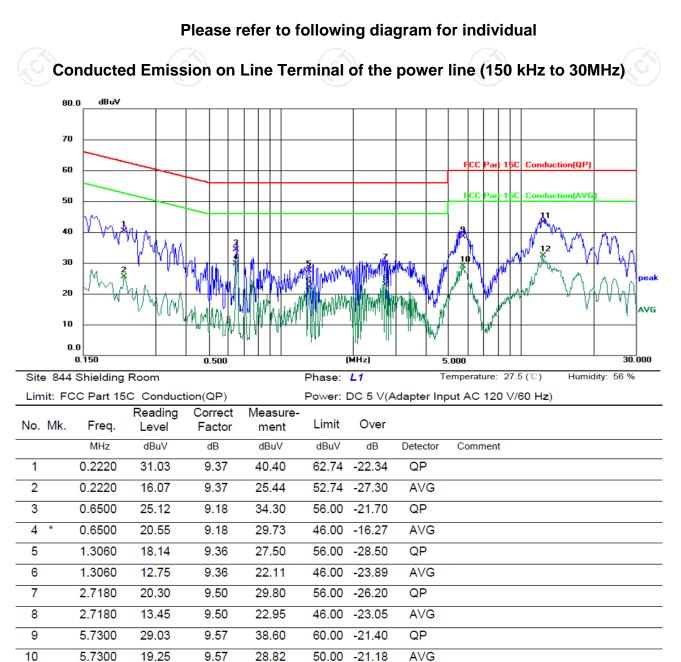
5.2.2. Test Instruments

Conducted Emission Shielding Room Test Site (843)										
Equipment	equipment Manufacturer Model Serial Number		Equipment Manufacturer Model Serial Number C		Calibration Due					
EMI Test Receiver	R&S	ESCI3	100898	Jul. 07, 2022						
Line Impedance Stabilisation Newtork(LISN)	Schwarzbeck	NSLK 8126	8126453	Mar. 11, 2022						
Line-5 TCT		CE-05	N/A	Jul. 07, 2022						
EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A						



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5.2.3. Test data



Report No.: TCT211020E040

Note:

11 12 12.3900

12.3900

33.47

22.77

9.63

9.63

43.10

32.40

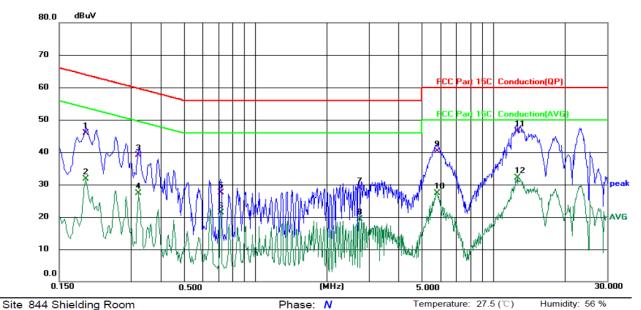
Freq. = Emission frequency in MHz Reading level (dBμV) = Receiver reading Corr. Factor (dB) = LISN factor + Cable loss Measurement (dBμV) = Reading level (dBμV) + Corr. Factor (dB) Limit (dBμV) = Limit stated in standard Margin (dB) = Measurement (dBμV) – Limits (dBμV) Q.P. =Quasi-Peak AVG =average * is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz. Page 11 of 97

60.00 -16.90

50.00 -17.60

QP

AVG



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

Limit: FCC Part 15C Conduction(QP)

TCT通测检测 TECT通测检测

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	0.1940	36.39	9.51	45.90	63.86	-17.96	QP	
2	0.1940	22.20	9.51	31.71	53.86	-22.15	AVG	
3	0.3220	29.86	9.34	39.20	59.66	-20.46	QP	
4	0.3220	17.88	9.34	27.22	49.66	-22.44	AVG	
5	0.7140	18.38	9.22	27.60	56.00	-28.40	QP	
6	0.7140	12.16	9.22	21.38	46.00	-24.62	AVG	
7	2.7220	19.49	9.41	28.90	56.00	-27.10	QP	
8	2.7220	9.89	9.41	19.30	46.00	-26.70	AVG	
9	5.8220	30.90	9.50	40.40	60.00	-19.60	QP	
10	5.8220	17.79	9.50	27.29	50.00	-22.71	AVG	
11 *	12.6100	36.85	9.65	46.50	60.00	-13.50	QP	
12	12.6100	22.51	9.65	32.16	50.00	-17.84	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 three modulation (GFSK, Pi/4 DQPSK, 8DPSK), and the worst case Mode (Highest channel and 8DPSK) 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 (b)(1)				
Test Method:	KDB 558074 D01 v05r02				
Limit:	Section 15.247 (b) The maximum peak conducted outpu 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.				

5.3.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jul. 18, 2022
Combiner Box	Ascentest	AT890-RFB	S N/A	Jul. 07, 2022





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					
Test Mode:	Transmitting mode with modulation					
Test Procedure:	 The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. Use the following spectrum analyzer settings for 20dB Bandwidth measurement. Span = approximately 2 to 5 times the 20 dB bandwidth, centered on a hopping channel; 1%≤RBW≤5% of the 20 dB bandwidth; VBW≥3RBW; Sweep = auto; Detector function = peak; Trace = max hold. Measure and record the results in the test report. 					
Test Result:	PASS					

5.4.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jul. 18, 2022
Combiner Box	Ascentest	AT890-RFB	N/A	Jul. 07, 2022



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:	 The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. Enable the EUT hopping function. Use the following spectrum analyzer settings: Span = wide enough to capture the peaks of two adjacent channels; RBW is set to approximately 30% of the channel spacing, adjust as necessary to best identify the center of each individual channel; VBW≥RBW; Sweep = auto; Detector function = peak; Trace = max hold. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. Record the value in report.
Test Result:	PASS

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5.5.2. Test Instruments

	Name	Manufa	cturer	Model No.	Seria	al Number	Calibratio	on Due
Sp Ar	ectrum nalyzer	Agile	ent	N9020A	MY4	9100619	Jul. 18, 2	2022
	biner Box	Ascer	ntest	AT890-RFE	3	N/A	Jul. 07, 2	2022



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:	 Hopping mode The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. Enable the EUT hopping function. Use the following spectrum analyzer settings: Span = 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. 				
Test Result:	PASS				

5.6.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jul. 18, 2022
Combiner Box	Ascentest	AT890-RFB	N/A	Jul. 07, 2022

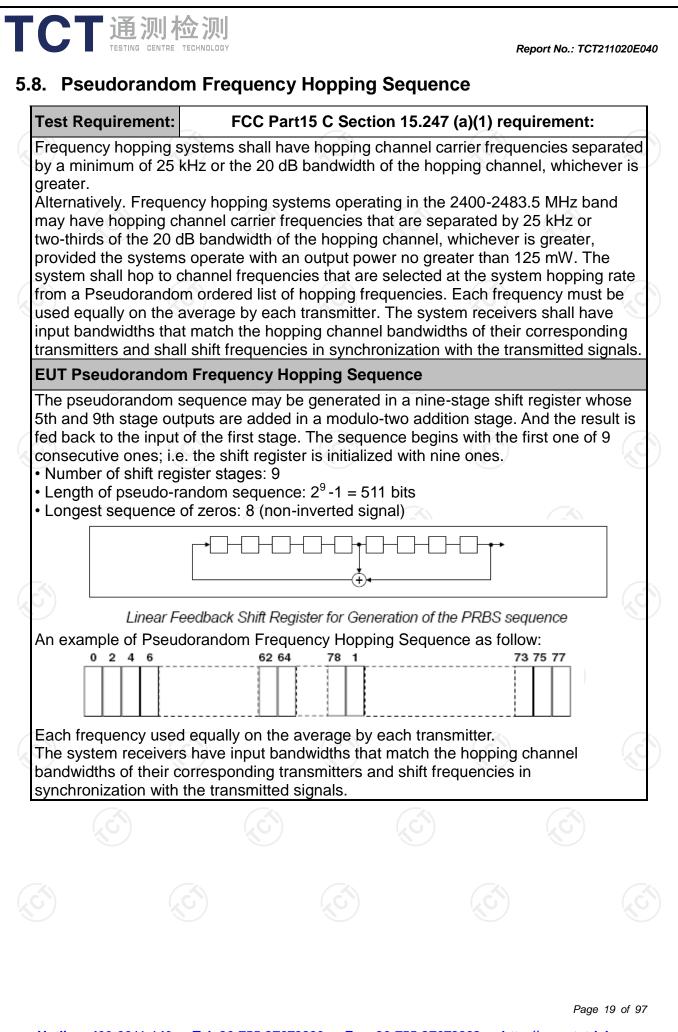
5.7. Dwell Time

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
 The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. Enable the EUT hopping function. Use the following spectrum analyzer settings: Span = zero span, centered on a hopping channel; RBW shall be ≤ channel spacing and where possible RBW should be set >> 1 / T, where T is the expected dwell time per channel; VBW≥RBW; Sweep = as necessary to capture the entire dwell time per hopping channel; Detector function = peak; Trace = max hold. Measure and record the results in the test report.
PASS

5.7.2. Test Instruments

Manufacturer	Model No.	Serial Number	Calibration Due
Agilent	N9020A	MY49100619	Jul. 18, 2022
Ascentest	AT890-RFB	N/A	Jul. 07, 2022
	Agilent	Agilent N9020A	Agilent N9020A MY49100619





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:	 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.
Test Result:	PASS

5.9.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jul. 18, 2022
Combiner Box	Ascentest	AT890-RFB	N/A	Jul. 07, 2022



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:	 The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. Set to the maximum power setting and enable the EUT transmit continuously. 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.
Test Result:	PASS

5.10.2. Test Instruments

Name	Name Manufacturer		Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY49100619	Jul. 18, 2022
Combiner Box	Ascentest	AT890-RFB	N/A	Jul. 07, 2022



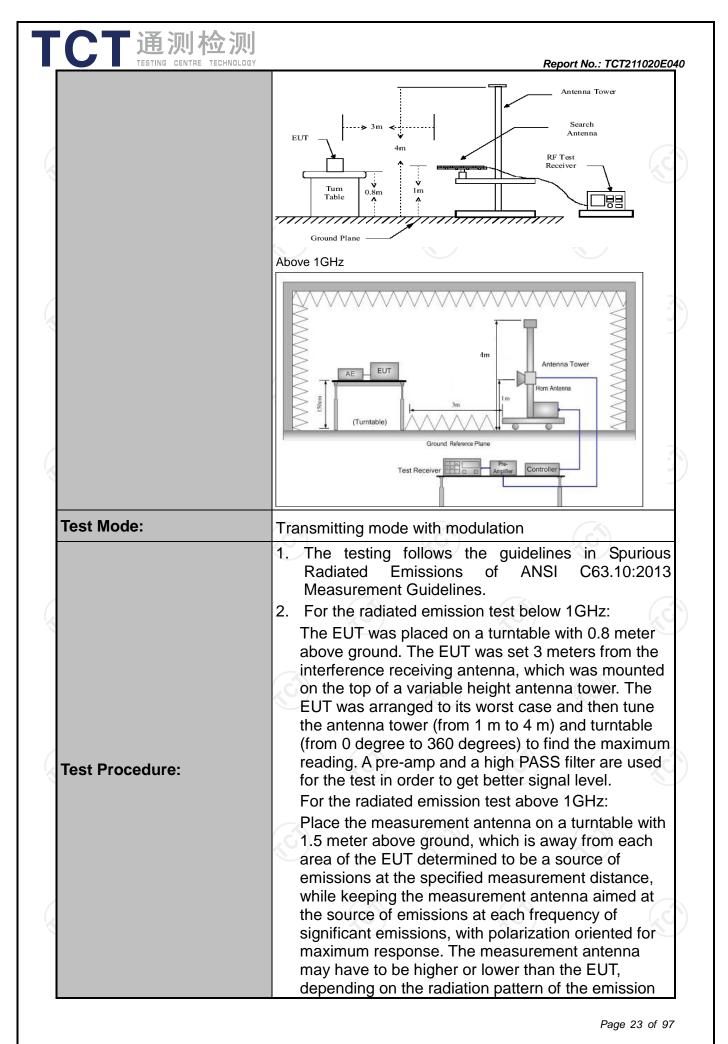


5.11. Radiated Spurious Emission Measurement

5.11.1. Test Specification

TCT通测检测 TESTING CENTRE TECHNOLOGY

Test Requirement:	FCC Part15	C Sectior	n 15.209			<u> </u>		
Test Method:	ANSI C63.10):2013						
Frequency Range:	9 kHz to 25 (GHz			C	6		
Measurement Distance:	3 m	3 m						
Antenna Polarization:	Horizontal &	Vertical						
	Frequency	Detector	RBW	VBW		Remark		
	9kHz- 150kHz	Quasi-pea	k 200Hz	1kHz	Quas	si-peak Value		
Receiver Setup:	150kHz- 30MHz	Quasi-pea	k 9kHz	30kHz	Quas	si-peak Value		
	30MHz-1GHz	Quasi-pea	k 120KHz	300KHz	Quas	si-peak Value		
	Above 1GHz	Peak	1MHz	3MHz		eak Value		
		Peak	1MHz	10Hz	Ave	erage Value		
			Field Stre	ength	Me	asurement		
	Frequen		(microvolts		Dista	nce (meters)		
	0.009-0.4		2400/F(I			300		
	0.490-1.		24000/F((KHz)		30		
	1.705-3		30			<u>30</u> 3		
	88-216		150		3			
Limit:	216-96		200		3			
	Above 9	500		3				
	Frequency Above 1GH:	(micr	Id Strength ovolts/meter) 500 5000	Distan (meter 3 3		Detector Average Peak		
Test setup:	For radiated emis	stance = 3m	d Plane		Compu			



	rece mea max ante rest abo 3. Set EU 4. Use (1) (2)	Set RBW= for f>1GH Sweep = = max ho For avera correction 15.35(c). [aximum si antenna ele emissions. ion for may ange of he ind or refer ximum pov continuous ing spectru wide enou eing meas =120 kHz fo z ; VBW≥R auto; Dete Id for peak	emission s gnal. The evation sha The meas imum emi eights of fro ence grou wer setting ly. um analyze ugh to fully sured; or f < 1 GH BW; ector function rement: us thod per = On time/	final all be that surement ssions sha om 1 m to nd plane. and enal er settings: capture th lz, RBW=1 on = peak on = peak e duty cyc	which all be 4 m ble th ne IMHz ; Trac cle
	Ś	Where N length of Average Level + 2 Corrected	1 is numbe type 1 puls Emission L 0*log(Duty Reading: <i>I</i> ad Level -	er of type 1 ses, etc. .evel = Pea cycle) Antenna Fa	ak Emissic actor + Ca	on ble
est results:	PASS	Where N length of Average Level + 2 Corrected	type 1 puls Emission L 0*log(Duty	er of type 1 ses, etc. .evel = Pea cycle) Antenna Fa	ak Emissic actor + Ca	on ble
est results:	PASS	Where N length of Average Level + 2 Corrected	type 1 puls Emission L 0*log(Duty Reading: A	er of type 1 ses, etc. .evel = Pea cycle) Antenna Fa	ak Emissic actor + Ca	on ble
est results:	PASS	Where N length of Average Level + 2 Corrected	type 1 puls Emission L 0*log(Duty Reading: A	er of type 1 ses, etc. .evel = Pea cycle) Antenna Fa	ak Emissic actor + Ca	on ble
est results:	PASS	Where N length of Average Level + 2 Corrected	type 1 puls Emission L 0*log(Duty Reading: A	er of type 1 ses, etc. .evel = Pea cycle) Antenna Fa	ak Emissic actor + Ca	on ble



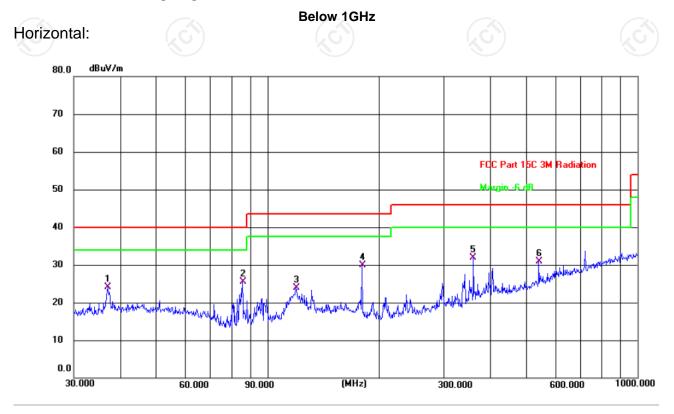
5.11.2. Test Instruments

	Radiated En	nission Test Site	e (966)	
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESIB7	100197	Jul. 07, 2022
Spectrum Analyzer	R&S	FSQ40	200061	Jul. 07, 2022
Pre-amplifier	SKET	LNPA_0118G- 45	SK2021012 102	Mar. 11, 2022
Pre-amplifier	SKET	LNPA_1840G- 50	SK2021092 03500	Apr. 08, 2022
Pre-amplifier	HP	8447D	2727A05017	Jul. 07, 2022
Loop antenna	ZHINAN	ZN30900A	12024	Sep. 05, 2022
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep. 04, 2022
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Sep. 04, 2022
Horn Antenna	Schwarzbeck	BBHA 9170	00956	Apr. 10, 2023
Antenna Mast	Keleto	RE-AM	N/A	N/A
Coaxial cable	SKET	RC_DC18G-N	N/A	Apr. 08, 2022
Coaxial cable	SKET	RC-DC18G-N	N/A	Apr. 08, 2022
Coaxial cable	SKET	RC-DC40G-N	N/A	Jul. 07, 2022
EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A
EMI lest Software		EZ-EMC	N/A	N/A



5.11.3. Test Data

Please refer to following diagram for individual



Site #	#1				Polarization: Horizontal					Temperature: 25.		
Limit:	FCC Part 15	C 3M Rad	iation		Powe	er: Do	C 3.7 V			Humidity:	52 %	
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark			
1	37.0248	10.53	13.67	24.20	40.00	-15.80	QP	P				
2	85.5977	16.32	9.13	25.45	40.00	-14.55	QP	Р				
3	119.4361	11.74	12.08	23.82	43.50	-19.68	QP	Р				
4 *	180.0165	17.95	11.93	29.88	43.50	-13.62	QP	P				
5	360.4476	16.28	15.56	31.84	46.00	-14.16	QP	Р				
6	541.3725	10.96	20.01	30.97	46.00	-15.03	QP	P				

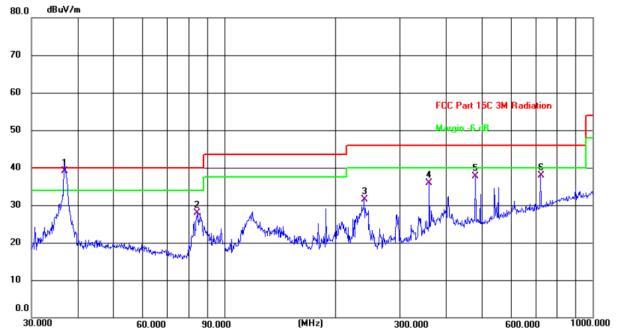


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Vertical:

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Site ; Limit:	#1 : FCC Part 15	5C 3M Rad	iation		Polarization: Vertical Power: DC 3.7 V					Temperature Humidity:	25.1(C)
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark		
1 *	36.7662	25.44	13.65	39.09	40.00	-0.91	QP	Р			
2	84.4054	18.76	9.16	27.92	40.00	-12.08	QP	Р			
3	239.9874	18.77	12.72	31.49	46.00	-14.51	QP	Р			
4	360.4476	20.44	15.56	36.00	46.00	-10.00	QP	Р			
5	480.5276	19.24	18.55	37.79	46.00	-8.21	QP	Р			
6	721.7259	15.11	22.84	37.95	46.00	-8.05	QP	Р			

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.

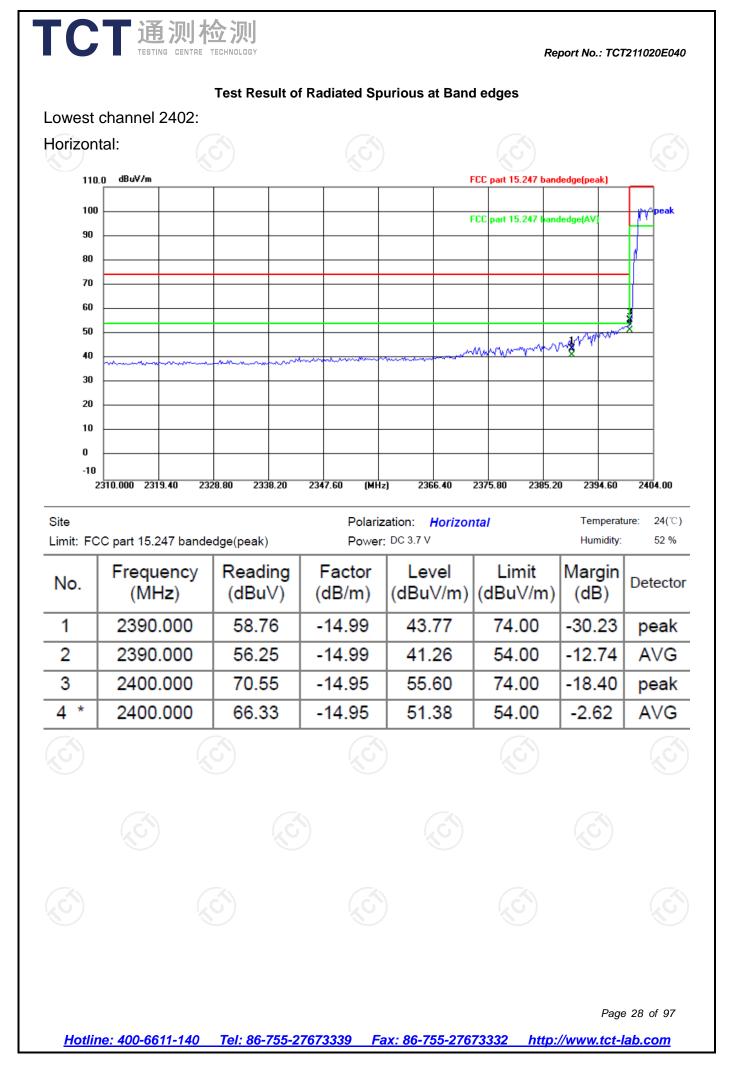
2. Measurements were conducted in all three channels (high, middle, low) and three modulation (GFSK, Pi/4 DQPSK, 8DPSK) and the worst case Mode (Highest channel and 8DPSK) was submitted only.

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

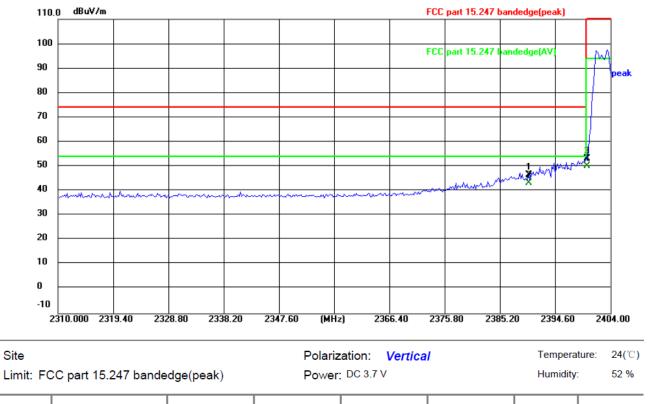
* is meaning the worst frequency has been tested in the test frequency range.



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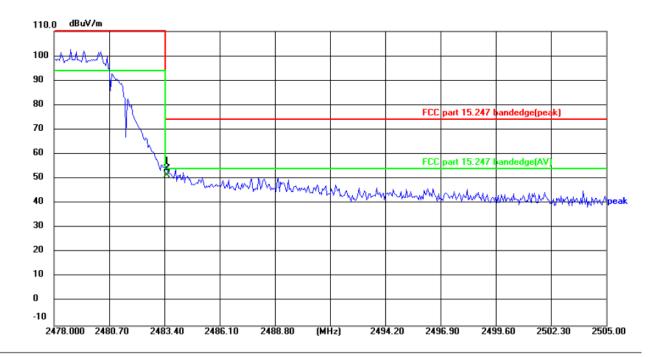
Vertical:



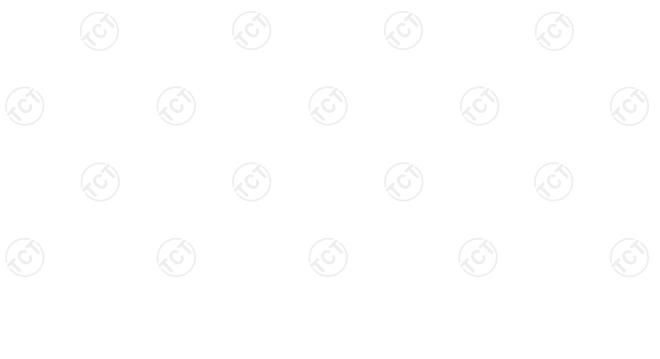
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	61.51	-14.99	46.52	74.00	-27.48	peak
2	2390.000	58.15	-14.99	43.16	54.00	-10.84	AVG
3	2400.000	68.06	-14.95	53.11	74.00	-20.89	peak
4 *	2400.000	<u>65.03</u>	-14.95	50.08	54.00	-3.92	AVG

Highest channel 2480:

Horizontal:

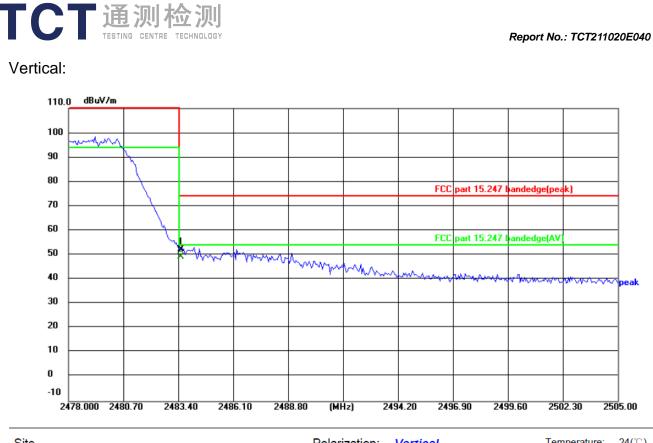


Site Limit: FC	C part 15.247 bande	dge(peak)	Polariz Power:	ation: Horizor DC 3.7 V	Temperat Humidity:		
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	68.70	-14.58	54.12	74.00	-19.88	peak
2 *	2483.500	65.83	-14.58	51.25	54.00	-2.75	AVG



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Site Limit: FC	C part 15.247 bande	dge(peak)	Polariz Power	ation: Vertica	Tempera Humidity:		
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	66.73	-14.58	52.15	74.00	-21.85	peak
2 *	2483.500	63.84	-14.58	49.26	54.00	-4.74	AVG
		- /		7			

Note: Measurements were conducted in all three modulation (GFSK, Pi/4 DQPSK, 8DPSK), and the worst case Mode (8DPSK) was submitted only.

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Above 1GHz

	Modulation	Type: 8D	PSK							
	Low channe	el: 2402 N	IHz							
	Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Peak	n Level AV (dBµV/m)	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
	4804	Н	45.16		0.66	45.82		74	54	-8.18
	7206	Н	35.93		9.50	45.43		74	54	-8.57
		Н					~~~			
	(G		J.J		()	·C`)		(\mathbf{G})	
	4804	V	45.47		0.66	46.13		74	54	-7.87
	7206	V	36.38		9.50	45.88		74	54	-8.12
		V								
(

Middle cha	nnel: 2441	MHz		X)		X ()		Š
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBµV)	Correction Factor (dB/m)	Peak		Peak limit (dBµV/m)		Margin (dB)
4882	Н	45.76		0.99	46.75	·	74	54	-7.25
7323	KOH)	36.25	-120	9.87	46.12		74	54	-7.88
	Ĥ					· · ·			
4882	V	43.99		0.99	44.98		74	54	-9.02
7323	V	35.02		9.87	44.89		74	54	-9.11
/	V			~ X	· /				1

High channel: 2480 MHz

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reading (dBµV)	(dBµV)	Correction Factor (dB/m)	Emissic Peak (dBµV/m)	AV	Peak limit (dBµV/m)	AV limit	Margin
(dBµV)	(dBµV)			AV	(dBu\//m)		margin
		(0.2/)		(dBUV/m)		(aehv/w)	(dĒ)
		1.33	46.87	(uDp (////)	74	54	-7.13
37.21		10.22	47.43		74	54	-6.57
. G		(.((.c)		(.c
46.67		1.33 🔪	48.00		74	54	-6.00
37.49		10.22	47.71		74	54	-6.29

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.

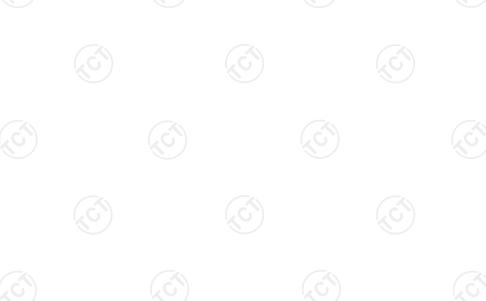
6. Measurements were conducted in all three modulation (GFSK, Pi/4 DQPSK, 8DPSK), and the worst case Mode (8DPSK) was submitted only.

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

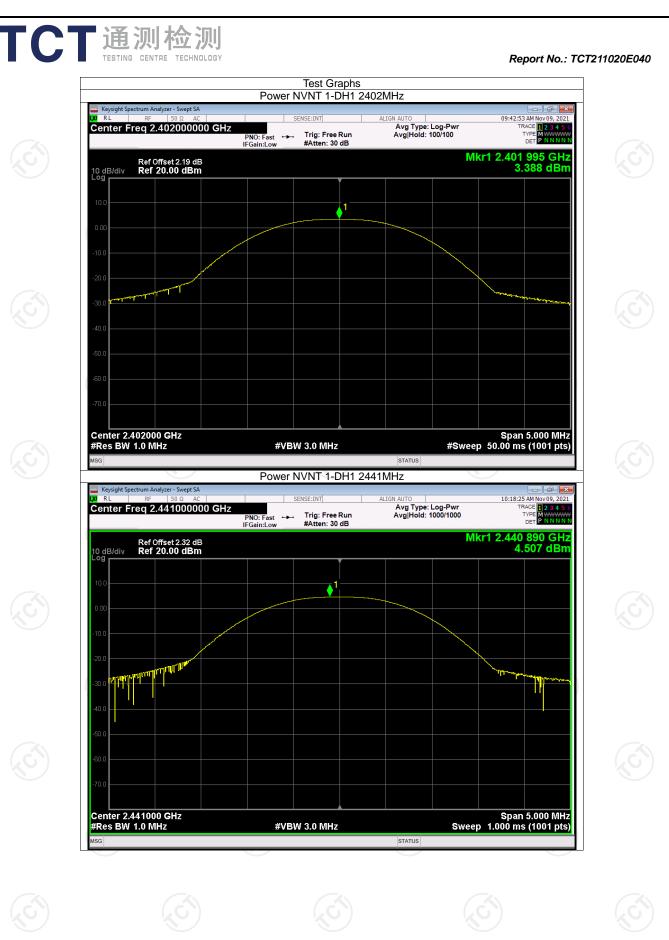


Appendix A: Test Result of Conducted Test

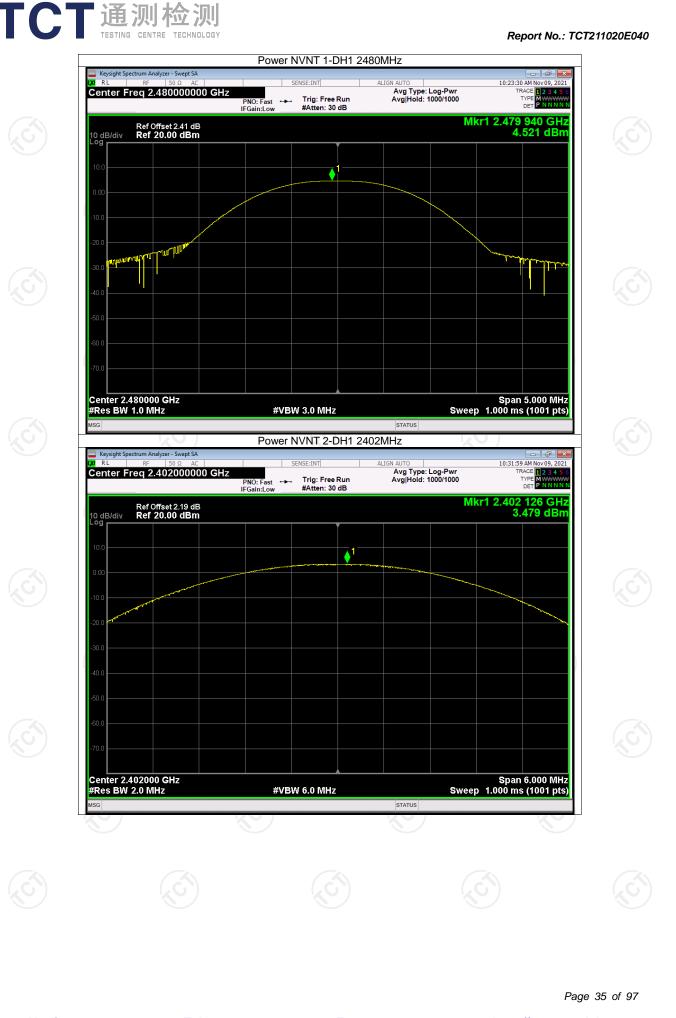
Maximum Conducted Output Power Conducted Frequency Limit Condition Mode Verdict (MHz) Power (dBm) (dBm) NVNT 1-DH1 2402 3.39 30 Pass NVNT 1-DH1 2441 4.51 30 Pass NVNT 1-DH1 2480 Pass 4.52 30 Pass NVNT 2-DH1 2402 3.48 21 **NVNT** 4.34 Pass 2-DH1 2441 21 **NVNT** 2-DH1 2480 4.45 21 Pass NVNT 3-DH1 2402 3.64 21 Pass NVNT 3-DH1 2441 4.30 21 Pass 3-DH1 NVNT 2480 6.93 21 Pass

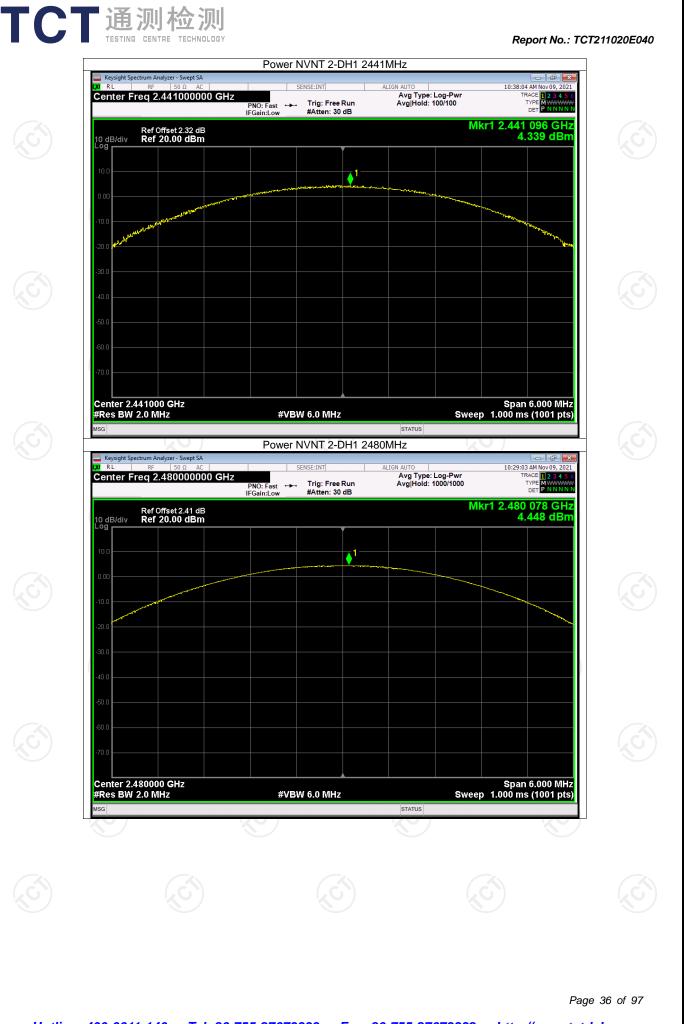




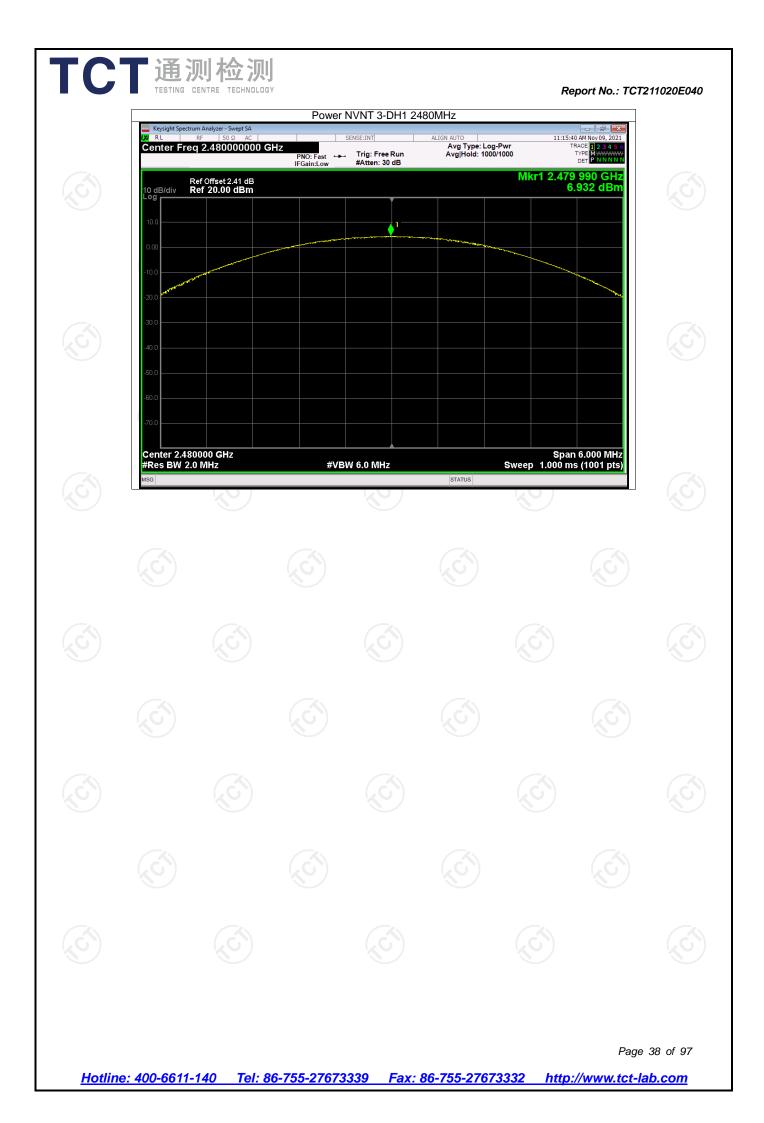


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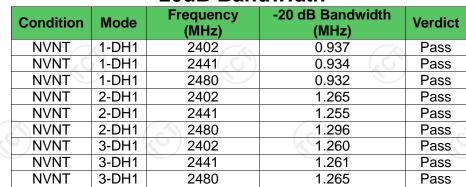




Keysight Spectrum Analyzer - Swept SA	Power NVNT 3-DH1	2402MHz		
Center Freq 2.402000000 GHz	PNO: Fast +++ Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 1000/1000	11:00:11 AM Nov 09, 2021 TRACE 1 2 3 4 5 6 TYPE M WWWW DET P N N N N N	
Ref Offset 2.19 dB 10 dB/div Ref 20.00 dBm	IFGain:Low #Atten: 30 dB	Mkr1	2.401 982 GHz 3.637 dBm	
10 dB/div Ref 20.00 dBm			3.637 UBII	
10.0				
0.00				
-10.0				
-20.0 pt - 20.0				
-30.0				
-40.0				
-50.0				
-60.0				
-70.0				
Center 2.402000 GHz			Span 6.000 MHz	
#Res BW 2.0 MHz	#VBW 6.0 MHz	Sweep 1	.000 ms (1001 pts)	
	Power NVNT 3-DH1	2441MHz		
Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC Center Freq 2.441000000 GHz	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr	11:05:19 AM Nov 09, 2021 TRACE 1 2 3 4 5 6	
	PNO: Fast 🛶 Trig: Free Run IFGain:Low #Atten: 30 dB	Avg Hold: 1000/1000	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N	
Ref Offset 2.32 dB 10 dB/div Ref 20.00 dBm		Mkr1	2.440 988 GHz 4.295 dBm	
10.0				
0.00				
-10.0				
-20.0				
-30.0				
-40.0				
-50.0				
-60.0				
-70.0				
Center 2.441000 GHz #Res BW 2.0 MHz	#VBW 6.0 MHz	Sweep 1	Span 6.000 MHz .000 ms (1001 pts)	
MSG	701	STATUS		



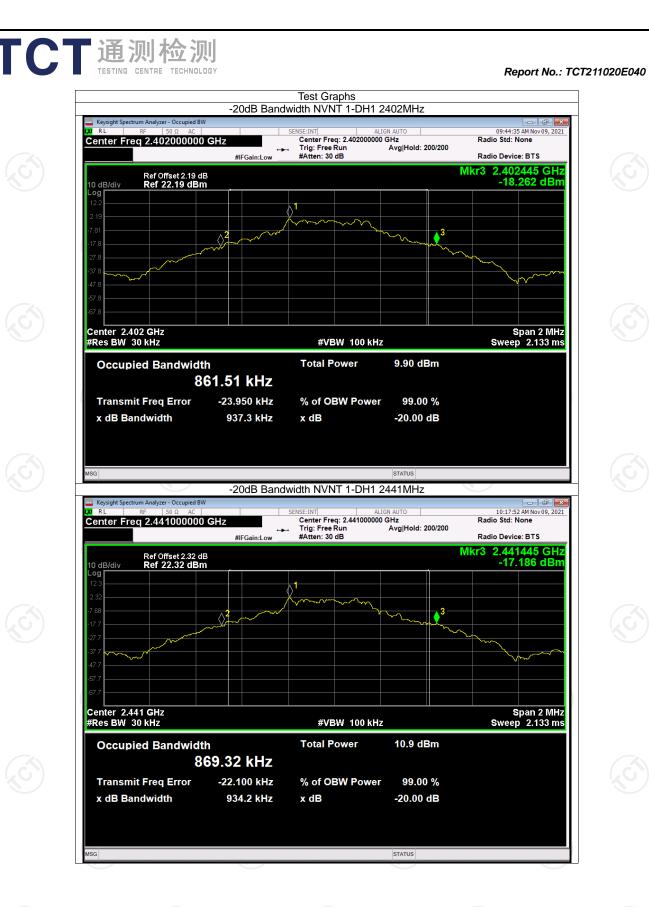
Report No.: TCT211020E040



-20dB Bandwidth

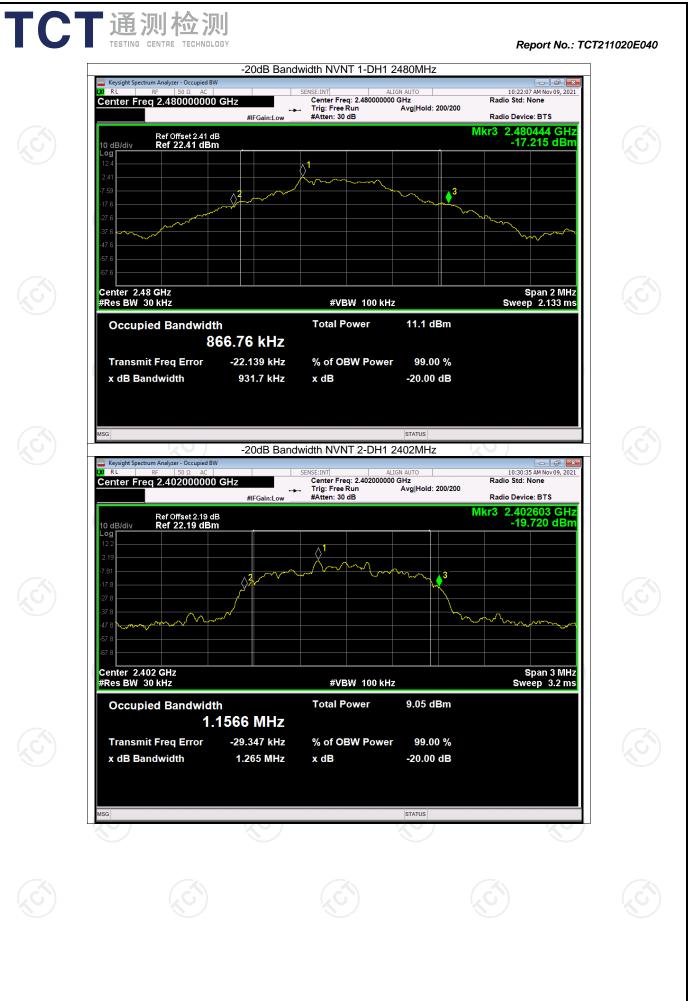




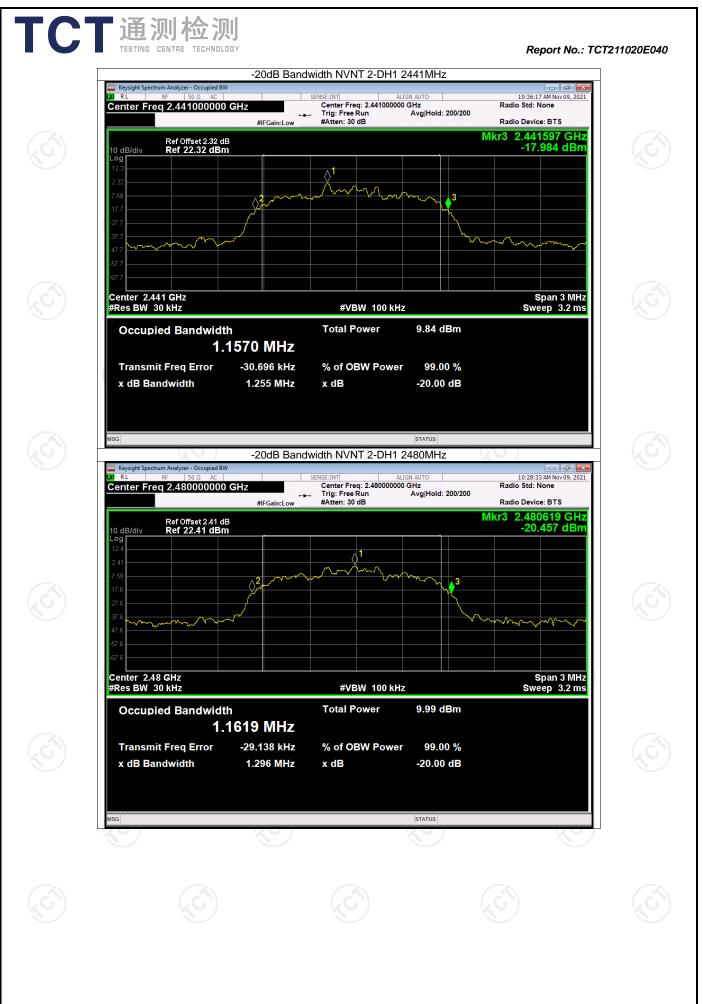


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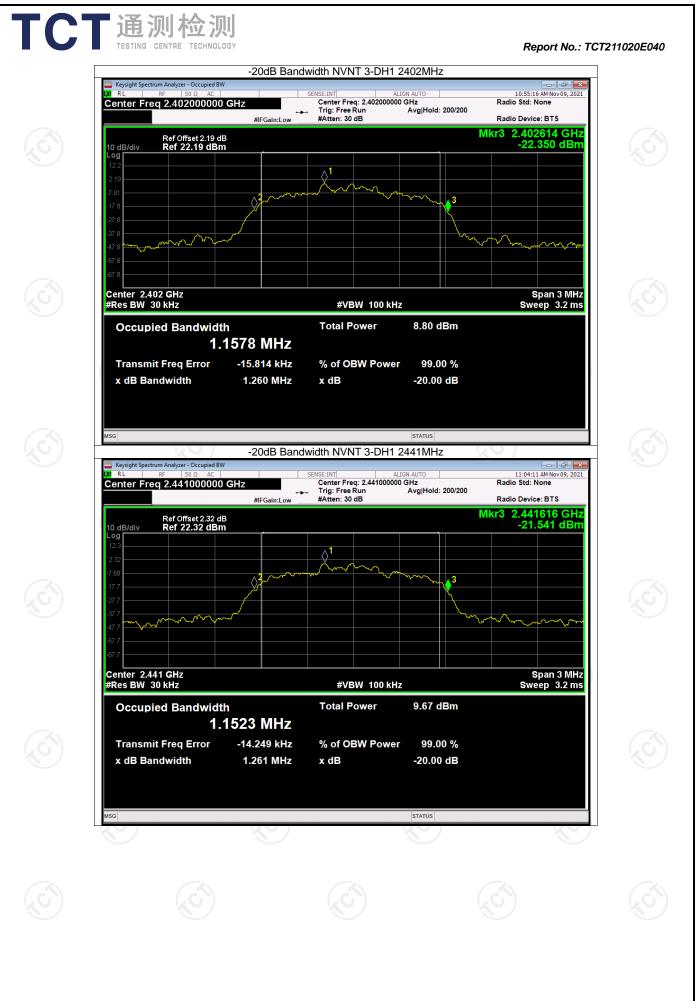
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LXI RL	um Analyzer - Occupied BW RF 50 Ω AC		SENSE:INT	ALIGN AUTO		56 AM Nov 09, 2021	
Center Fre	q 2.480000000	GHz #IFGain:Low	Center Freq: 2.4800 ⊶ Trig: Free Run #Atten: 30 dB	00000 GHz Avg Hold: 200/200	Radio Dev	ice: BTS	
10 dB/div Log	Ref Offset 2.41 dE Ref 22.41 dBm				MKF3 2.48 -21	80615 GHz I.540 dBm	
12.4 2.41 -7.59							
-17.6				3			
-47.6	Martin and a second sec			\ \ \ \ \ \ _	Mar Mar		
-57.6							
Center 2.43 #Res BW 3	i0 kHz		#VBW 100		Sv	Span 3 MHz veep 3.2 ms	
Occupi	ed Bandwidtl 1.1	י 1500 MHz	Total Power	9.80 dBm			
Transmi x dB Bai	it Freq Error ndwidth	-17.382 kHz 1.265 MHz	% of OBW Po x dB	wer 99.00 % -20.00 dB			
MSG	LU I		LOI	STATUS	KG T		

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Carrier	Frec	quen	cies	Sepa	ration

Condition	Mode	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict		
NVNT	1-DH1	2401.816	2402.814	0.998	0.937	Pass		
NVNT	1-DH1	2440.818	2441.810	0.992	0.937	Pass		
NVNT	1-DH1	2478.972	2479.976	1.004	0.937	Pass		
NVNT	2-DH1	2401.814	2402.814	1	0.864	Pass		
NVNT	2-DH1	2440.816	2441.816	1	0.864	Pass		
NVNT	2-DH1	2478.814	2479.814	1	0.864	Pass		
NVNT	3-DH1	2401.826	2402.830	1.004	0.843	Pass		
NVNT	3-DH1	2440.822	2441.816	0.994	0.843	Pass		
NVNT	3-DH1	2478.812	2479.810	0.998	0.843	Pass		







Tel: 86-755-27673339

Fax: 86-755-27673332

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STATUS

kee	ysight Spectrum Analyzer - Swept SA	CFS NVNT 1-DH1 24	80MHz		
l,XI R		PNO: Wide Trig: Free Run IFGain:Low #Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	10:16:04 AM Nov 09, 2021 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N	
10 d	Ref Offset 2.41 dB B/div Ref 20.00 dBm	IPGallicow written: oo ub	Mkr1	2.478 972 GHz 3.150 dBm	
Log 10.0	11	~~~~	2		
-10.0 -20.0					
-30.0 -40.0					
-50.0 -60.0					
-70.0 Cen	ter 2.479500 GHz			Span 2.000 MHz	
MKR	S BW 100 kHz MODE TRC SCL X N 1 f 2.478 972 GH	#VBW 300 kHz Y FUNCTION Iz 3.150 dBm		.000 ms (1001 pts)	
	N 1 f 2.478 972 GF N 1 f 2.479 976 GF	12 3.635 dBm			
6 7 8					
9 10 11				· ·	
MSG	ko)	CFS NVNT 2-DH1 24	status D2MHz		
LXI R	ysight Spectrum Analyzer - Swept SA L RF 50 Ω AC ter Freq 2.402500000 GHz	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr	11:38:10 AM Nov 09, 2021 TRACE 1 2 3 4 5 6	
		PNO: Wide Trig: Free Run IFGain:Low #Atten: 30 dB	Avg Hoid:>100/100	TRACE 123456 TYPE MWWWWW DET PNNNNN 2.401 814 GHZ	
10 d Log 10.0	Ref Offset 2.19 dB B/div Ref 20.00 dBm		<u>2</u>	2.401 814 GHz 2.213 dBm	
0.00 -10.0				Marana and and and and and and and and and	
-20.0					
-40.0 -50.0					
-60.0 -70.0					
#Re	ter 2.402500 GHz s BW 100 kHz	#VBW 300 kHz		Span 2.000 MHz .000 ms (1001 pts)	
MKR 1 2 3	MODE TRC SCL X N 1 f 2.401 814 GH N 1 f 2.402 814 GH	Y FUNCTION Iz 2.213 dBm Iz 2.201 dBm	FUNCTION WIDTH FUNCT	ION VALUE	
4 5 6 7				=E	
8 9 10					
MSG		m	STATUS		

			CFS NVN1	T 2-DH1 244	MHz				
1)	eysight Spectrum Analyzer - Swe RL RF 50 Ω nter Freq 2.44150	AC 00000 GHz	SENSE:I	INT g: Free Run	ALIGN AUTO Avg Type: Lo Avg Hold:>10	og-Pwr	11:37:38 AM Nov (TRACE 1 2 TYPE M DET P N	9,2021 3 4 5 6	
	Ref Offset 2.3	IFG	0:Wide 😱 Tri ain:Low #At	tten: 30 dB	Avginoid.>h		2.440 816 3.009 c		
10 c Log 10.	IB/div Ref 20.00 c	1Bm 1			<mark>2</mark>		3.009 (IBm	
0.0	Al mound of the		and the second sec	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			~	Λ_Λ	
-20. -30.1									
-40.1									
-60. -70.									
Ce #R	nter 2.441500 GHz es BW 100 kHz		#VBW 30	10 kHz			Span 2.000 000 ms (100′	MHz pts)	
МКР 1 2 3	MODE TRC SCL N 1 f N 1 f	X 2.440 816 GHz 2.441 816 GHz	Y 3.009 dBm 3.047 dBm		INCTION WIDTH	FUNCTION	ON VALUE		
4 5 6									
7 8 9 10									
11								-	
MSG				III	STATUS			•	
MSG			CFS NVN1	Т 2-DH1 2480	status DMHz	K0]		
K LXI	eysight Spectrum Analyzer - Swe L RF 50 Ω Nter Freq 2.47950	AC 00000 GHz	SENSE:I	INT g: Free Run		og-Pwr 00/100	11:36:58 AM Nov (TRACE 2 TYPE M	9, 2021	
	ter Freq 2.47950	AC 00000 GHz PN IFG	SENSE:I	INT		00/100	11:36:58 AM Nov (TRACE 1 2 TYPE MW DET P N	9,2021 3 4 5 6 WWW NNNN	
Log 10 d	Ref Offset 2.4 Ref Offset 2.4 (B/div Ref 20.00 c	AC 00000 GHz PN IFG	SENSE:I	INT g: Free Run	ALIGN AUTO Avg Type: Li Avg Hold:>10	00/100	11:36:58 AM Nov (TRACE 1 2 TYPE MW DET P N	9,2021 3 4 5 6 WWW NNNN	
10 g 10 g 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	Ref Offset 2.4 Ref 20.00 c	AC 00000 GHz PN IFG	SENSE:I	INT g: Free Run		00/100	11:36:58 AM Nov (TRACE 1 2 TYPE MW DET P N	9,2021 3 4 5 6 WWW NNNN	
10 Cer 10 Cog 10. 00 -10. -30.	Ref Offset 2.4 Ref 20.00 C	AC 00000 GHz PN IFG	SENSE:I	INT g: Free Run	ALIGN AUTO Avg Type: Li Avg Hold:>10	00/100	11:36:58 AM Nov (TRACE 1 2 TYPE MW DET P N	9,2021 3 4 5 6 WWW NNNN	
10 c Cer 10 c 10. -10. -20. -30. -40. -50.	Ref Offset 2.4 Ref 20.00 c	AC 00000 GHz PN IFG	SENSE:I	INT g: Free Run	ALIGN AUTO Avg Type: Li Avg Hold:>10	00/100	11:36:58 AM Nov (TRACE 1 2 TYPE MW DET P N	9,2021 3 4 5 6 WWW NNNN	
10 0 Cer 10 0 10. 10. 10. 10. 10. 10. 10. 10. 10. 10	Ref Offset 2.4 B/div Ref 20.00 c	AC 00000 GHz PN IFG	SENSE:I	INT g: Free Run	ALIGN AUTO Avg Type: Li Avg Hold:>10	00/100	11:36:58 AM Nov1 TR4CE 112 TYPE MW DET P N 2.4778 814 3.121 c		
10 0 Cer 10 0 10 10 10 10 10 10 10 10 10 10 10 10 10	Ref Offset 2.4 B/div Ref 20.00 d	AC 10000 GHz PN IFG 11 dB 1Bm 1	SENSE:I	g: Free Run tten: 30 dB	ALIGN AUTO Avg Type: Li Avg Hold:>11	00/100 Mkr1	1136:58 AM Nov1 TRACE 12 TYPE MW DET P N 2.478 814 3.121 c	9,2221 3 4 5 0 N N N N BBM IBM	
10 0 Cer 10 0 10 10 10 10 10 10 10 10 10 10 10 10 10	Ref Offset 2.4 B/div Ref 20.00 d	AC 00000 GHz PN IFG	O: Wide ain:Low Tri	g: Free Run tten: 30 dB	ALIGN AUTO Avg Type: Li Avg Hold:>10	00/100 Mkr1	1136:58 AM Nov1 TR4CE 12 TYPE MW DET P N 2.478 814 3.121 c	9,2221 3 4 5 0 N N N N BBM IBM	
10 c Cer 10 c 10 10 10 10 10 10 10 10 10 10 10 10 10	Ref Offset 2.4 Ref Offset 2.4 Ref 20.00 d Ref 20.00 d	AC 10000 GHz PN IFG 11 dB 1Bm 1 1 2 41 dB 1 2 41 dB 1 4 4 4 4 4 4 4 4 4 4 4 4 4	SENSE: O: Wide Tritani ain:Low Tritani #Anticology #VBW 30 Y 3.121 dBm	g: Free Run tten: 30 dB	ALIGN AUTO Avg Type: Li Avg Hold:>11	00/100 Mkr1	1136:58 AM Nov1 TRACE 12 TYPE MW DET P N 2.478 814 3.121 c	9,2221 3 4 5 0 N N N N BBM IBM	
10 g Cer 10 g 10 u 20 u -10 u -20 u	Ref Offset 2.4 Ref Offset 2.4 Ref 20.00 d Ref 20.00 d	AC 10000 GHz PN IFG 11 dB 1Bm 1 1 2 41 dB 1 2 41 dB 1 4 4 4 4 4 4 4 4 4 4 4 4 4	SENSE: O: Wide Tritani ain:Low Tritani #Anticology #VBW 30 Y 3.121 dBm	g: Free Run tten: 30 dB	ALIGN AUTO Avg Type: Li Avg Hold:>11	00/100 Mkr1	1136:58 AM Nov1 TRACE 12 TYPE MW DET P N 2.478 814 3.121 c	9,2221 34 5 0 NNNN GHZ IBM	
10 c Cer 10 c 10 c 10 c 10 c 10 c 10 c 10 c 10 c	Ref Offset 2.4 Ref Offset 2.4 Ref 20.00 d Ref 20.00 d	AC 10000 GHz PN IFG 11 dB 1Bm 1 1 2 41 dB 1 2 41 dB 1 4 4 4 4 4 4 4 4 4 4 4 4 4	SENSE: O: Wide Tritani ain:Low Tritani #Anticology #VBW 30 Y 3.121 dBm	g: Free Run tten: 30 dB	ALIGN AUTO Avg Type: Li Avg Hold:>11	00/100 Mkr1	1136:58 AM Nov1 TRACE 12 TYPE MW DET P N 2.478 814 3.121 c	9,2221 34 5 0 NNNN GHZ IBM	
10 c Cer 10 c 10 10 10 10 10 10 10 10 10 10 10 10 10	Ref Offset 2.4 Ref Offset 2.4 Ref 20.00 d Ref 20.00 d	AC 10000 GHz PN IFG 11 dB 1Bm 1 1 2 41 dB 1 2 41 dB 1 4 4 4 4 4 4 4 4 4 4 4 4 4	SENSE: O: Wide Tritani ain:Low #Art #VBW 30 Y 3.121 dBm	g: Free Run tten: 30 dB	ALIGN AUTO Avg Type: Li Avg Hold:>11	00/100 Mkr1	1136:58 AM Nov1 TRACE 12 TYPE MW DET P N 2.478 814 3.121 c	9,2221 34 5 0 NNNN GHZ IBM	
10 c Cer 10 c 10 10 10 10 10 10 10 10 10 10 10 10 10	Ref Offset 2.4 Ref Offset 2.4 Ref 20.00 d Ref 20.00 d	AC 10000 GHz PN IFG 11 dB 1Bm 1 1 2 41 dB 1 2 41 dB 1 4 4 4 4 4 4 4 4 4 4 4 4 4	SENSE: O: Wide Tritani ain:Low #Art #VBW 30 Y 3.121 dBm	g: Free Run tten: 30 dB	ALIGN AUTO Avg Type: Li Avg Hold:>11	00/100 Mkr1	1136:58 AM Nov1 TRACE 12 TYPE MW DET P N 2.478 814 3.121 c	9,2221 34 5 0 NNNN GHZ IBM	
10 c Cer 10 c 10 10 10 10 10 10 10 10 10 10 10 10 10	Ref Offset 2.4 Ref Offset 2.4 Ref 20.00 d Ref 20.00 d	AC 10000 GHz PN IFG 11 dB 1Bm 1 1 2 41 dB 1 2 41 dB 1 4 4 4 4 4 4 4 4 4 4 4 4 4	SENSE: O: Wide Tritani ain:Low #Art #VBW 30 Y 3.121 dBm	g: Free Run tten: 30 dB	ALIGN AUTO Avg Type: Li Avg Hold:>11	00/100 Mkr1	1136:58 AM Nov1 TRACE 12 TYPE MW DET P N 2.478 814 3.121 c	9,2221 34 5 0 NNNN GHZ IBM	

LXI R	ysight Spectrum Analyzer - Swept SA L RF 50 Ω AC	CFS NVNT 3-DH1 24		11:24:44 AM Nov 09, 2021	
	ter Freq 2.402500000 GI		ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	11:24:44 AM Nov 09, 2021 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N	
10 dl Log	Ref Offset 2.19 dB B/div Ref 20.00 dBm		Mkr1	2.401 826 GHz 2.313 dBm	
10.0 0.00			2 mm mm	h	
-10.0 -20.0		mand when when when we have a second se			
-30.0 -40.0					
-50.0 -60.0 -70.0					
-70.0 Cen	ter 2.402500 GHz	#VENN 200 //11-	Swaan 4	Span 2.000 MHz	
MKR	S BW 100 kHz MODE TRC SCL X N 1 f 2.401 82			000 ms (1001 pts) DN VALUE	
2 3 4	N 1 f 2.401 82 N 1 f 2.402 83	30 GHz 2.169 dBm			
5 6 7 8					
9 10 11					
MSG	EQ 1				
LXI RI	ysight Spectrum Analyzer - Swept SA L RF 50 Ω AC	CFS NVNT 3-DH1 24	ALIGN AUTO	11:35:20 AM Nov 09, 2021	
Cen	ter Freq 2.441500000 G	HZ PNO: Wide Trig: Free Run IFGain:Low #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 123456 TYPE WWWWW DET PNNNNN	
10 di Log	Ref Offset 2.32 dB B/div Ref 20.00 dBm			2.440 822 GHz 2.981 dBm	
10.0 0.00			2 	·	
-10.0 -20.0					
-30.0 -40.0 -50.0					
-50.0					
	ter 2.441500 GHz			Span 2.000 MHz 000 ms (1001 pts)	
-70.0 Cen		#VBW 300 kHz	Sween 1		
-70.0 Cen #Re MKR	S BW 100 KHZ				
-70.0 Cen #Re MKR	S BW 100 KHZ MODE TRC SCL X	Y FUNCTION			
-70.0 Cen #Re MKR 1 2 3 4 5 6 7 8	S BW 100 KHZ	Y FUNCTION			
-70 0 Cen #Re 12 3 4 5 6 7	S BW 100 KHZ	Y FUNCTION			
-70 0 Cen #Re 2 3 4 5 6 7 8 9 9 10	S BW 100 KHZ	Y FUNCTION 22 GHz 2.981 dBm 16 GHz 3.013 dBm			
-70 0 Cen #Re 1 2 3 4 5 6 7 7 8 9 9 10	S BW 100 KHZ	Y FUNCTION 22 GHz 2.981 dBm 16 GHz 3.013 dBm	FUNCTION WIDTH FUNCT		
-70 0 Cen #Re 1 2 3 4 5 6 7 7 8 9 9 10	S BW 100 KHZ	Y FUNCTION 22 GHz 2.981 dBm 16 GHz 3.013 dBm	FUNCTION WIDTH FUNCT		
-70 0 Cen #Re 1 2 3 4 5 6 7 7 8 9 9 10	S BW 100 KHZ	Y FUNCTION 22 GHz 2.981 dBm 16 GHz 3.013 dBm	FUNCTION WIDTH FUNCT		

Keysight Spectrum	Analyzer - Swept SA 50 Ω AC		IVNT 3-DH1 248	ALIGN AUTO	11-26-07	AM Nov 09, 2021	
	2.479500000 G			Avg Type: Log-Pw Avg Hold:>100/100	r TF	ACE 1 2 3 4 5 6 TYPE M WWWWW DET P NNNNN	
10 dB/div Re Log	f Offset 2.41 dB f 20.00 dBm		Ĭ	2	Mkr1 2.478 3.	812 GHz 085 dBm	
0.00			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				
-20.0 -30.0 -40.0							
-50.0							
- ^{70.0} Center 2.4795 #Res BW 100	500 GHz kHz	#VB	W 300 kHz	s	Span weep 1.000 ms	2.000 MHz (1001 pts)	
MKR MODE TRC SCI 1 N 1 f 2 N 1 f	X	Y 12 GHz <u>3.085</u> 10 GHz <u>3.141</u>	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE		
3 4 5 6 7							
8 9 10 11						-	
MSG	<u>k</u> 97			STATUS	KV)		

Report No.: TCT211020E040	Report	No.:	TCT211020E040
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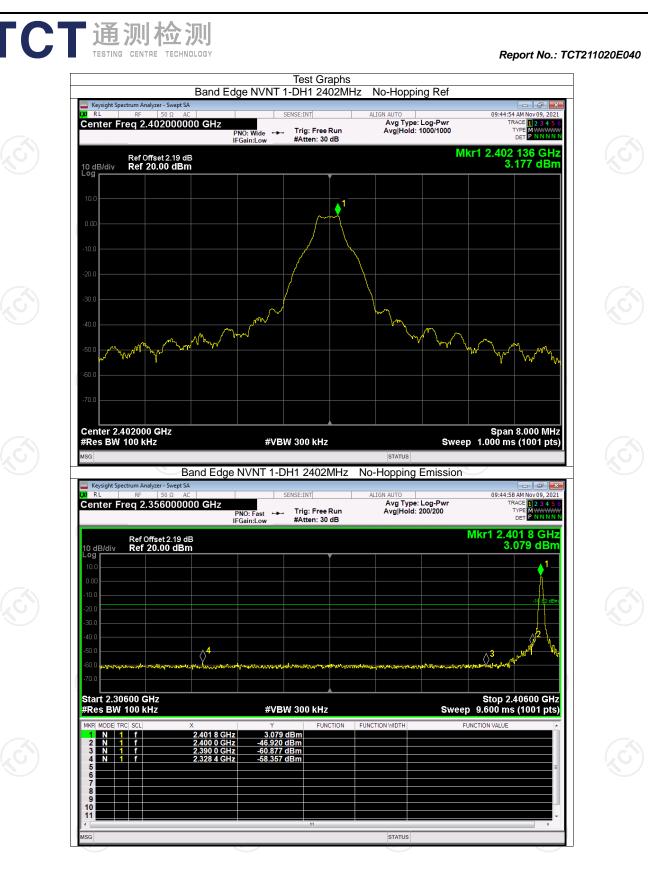
Danu Luge									
Condition	Mode	Frequency (MHz)	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict			
NVNT	1-DH1	2402	No-Hopping	-61.53	-20	Pass			
NVNT	1-DH1	2480	No-Hopping	-32.90	-20	Pass			
NVNT	2-DH1	2402	No-Hopping	-60.73	-20	Pass			
NVNT	2-DH1	2480	No-Hopping	-30.96	-20	Pass			
NVNT	3-DH1	2402	No-Hopping	-51.79	-20	Pass			
NVNT	3-DH1	2480	No-Hopping	-53.65	-20	Pass			
-									

Band Edge



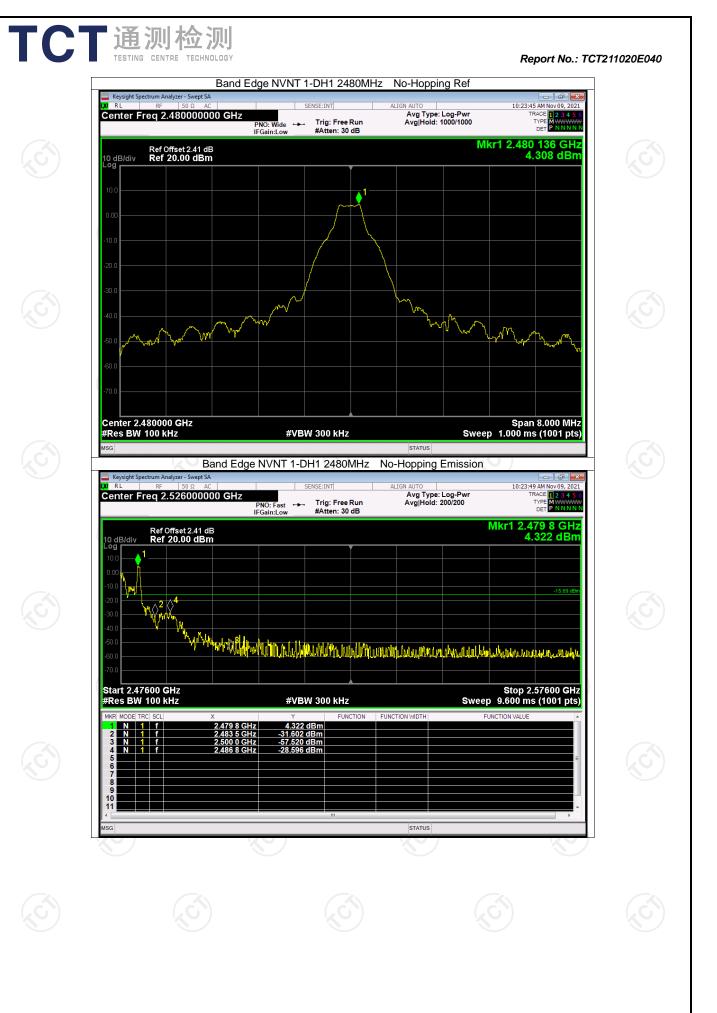
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Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

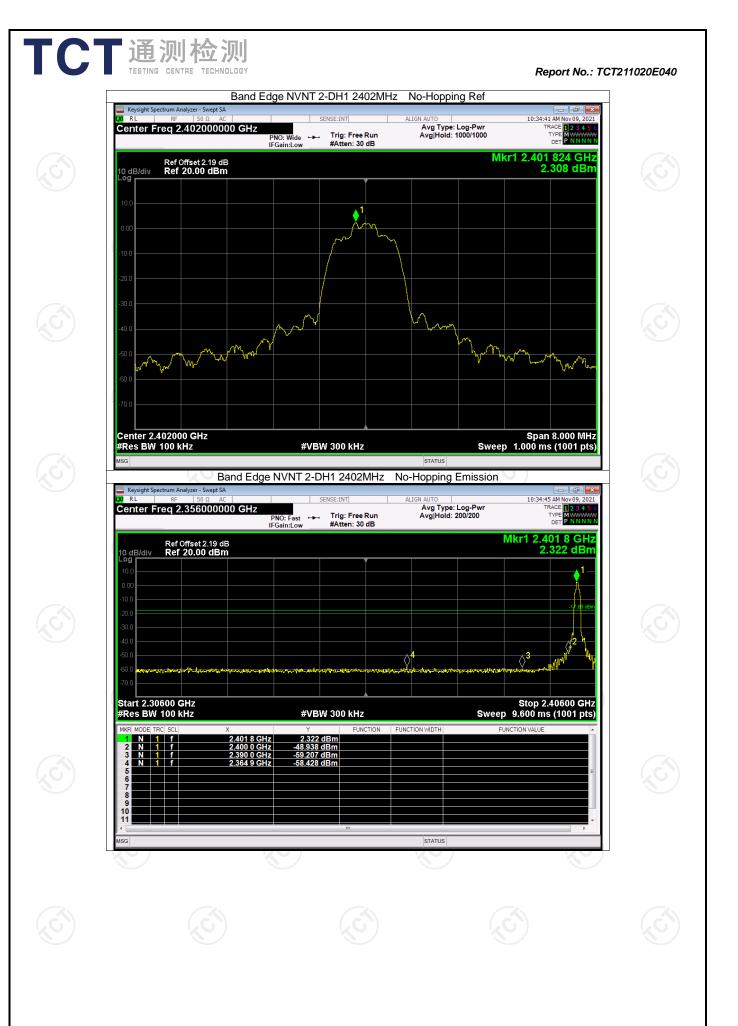


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Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

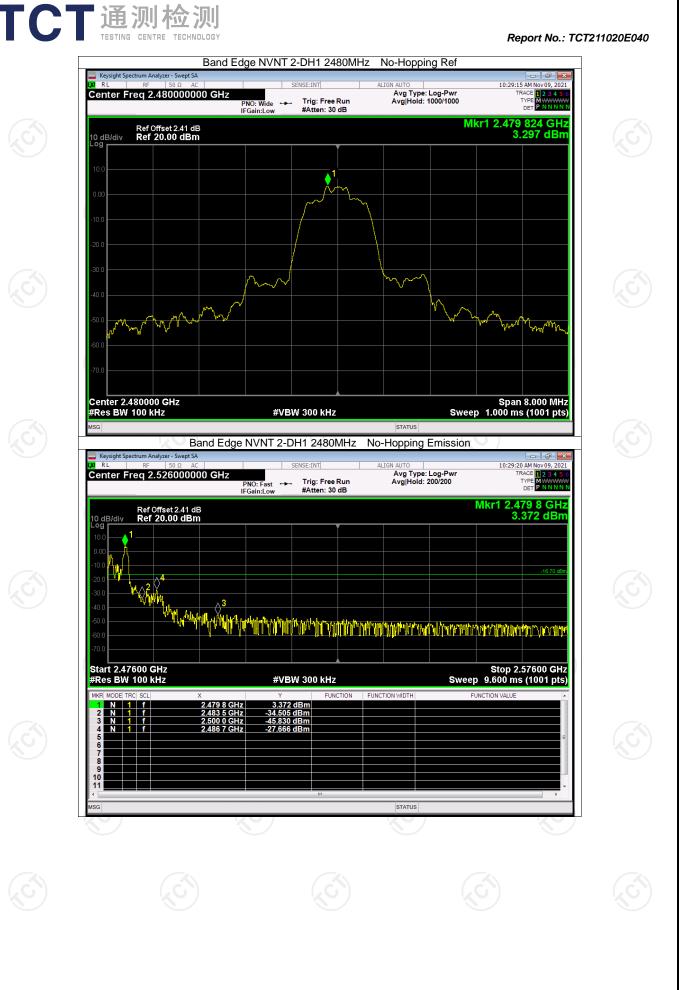


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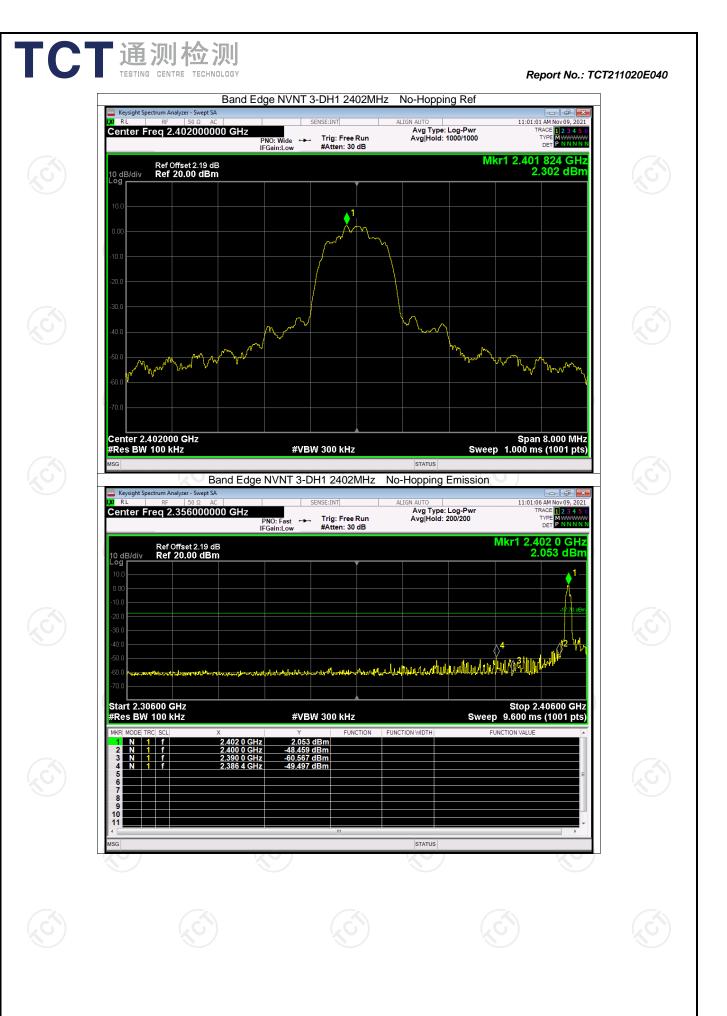


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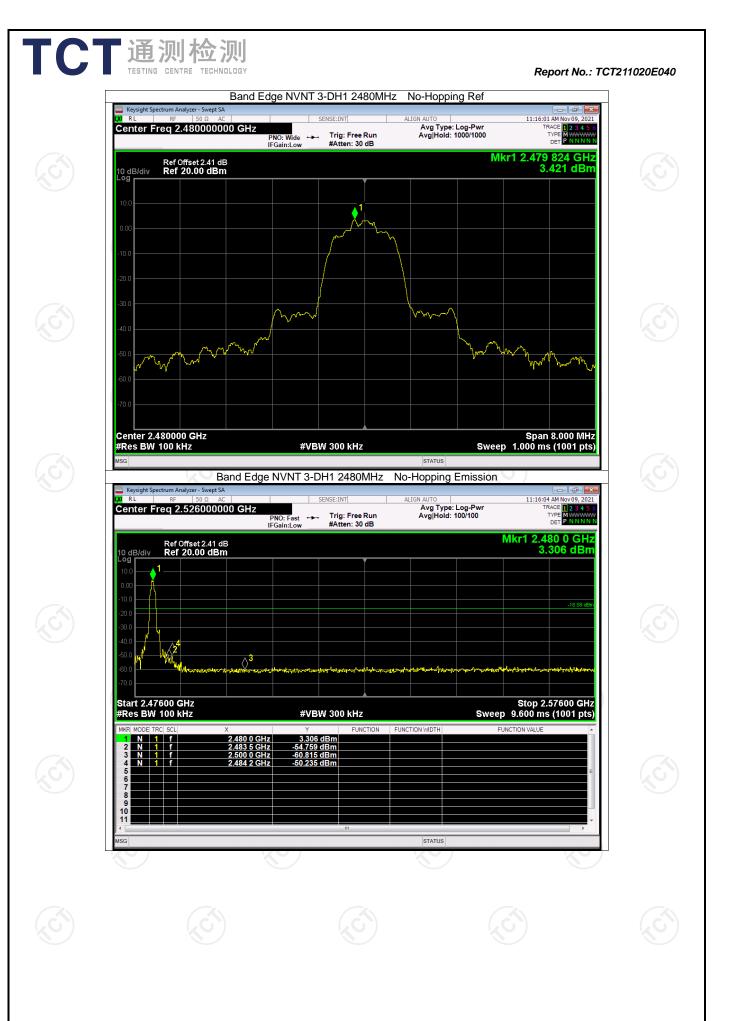
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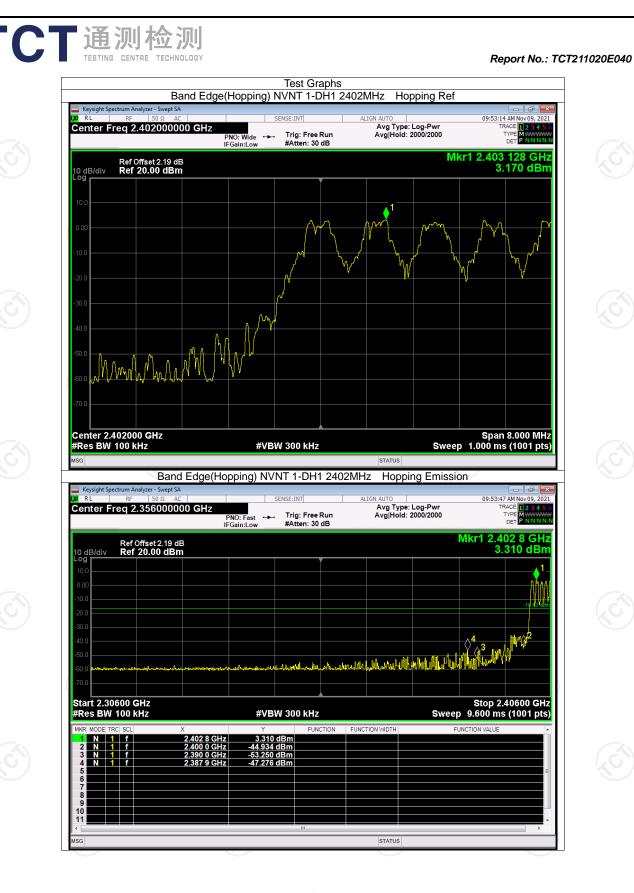
Bane	d Ed	ge(H	lop	pin	g)
			-		

Condition	Mode	Frequency (MHz)	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict			
NVNT	1-DH1	2402	Hopping	-50.44	-20	Pass			
NVNT	1-DH1	2480	Hopping	-30.48	-20	Pass			
NVNT	2-DH1	2402	Hopping	-51.44	-20	Pass			
NVNT	2-DH1	2480	Hopping	-31.71	-20	Pass			
NVNT	3-DH1	2402	Hopping	-48.39	-20	Pass			
NVNT	3-DH1	2480	Hopping	-30.90	-20	Pass			
<u>.</u>									

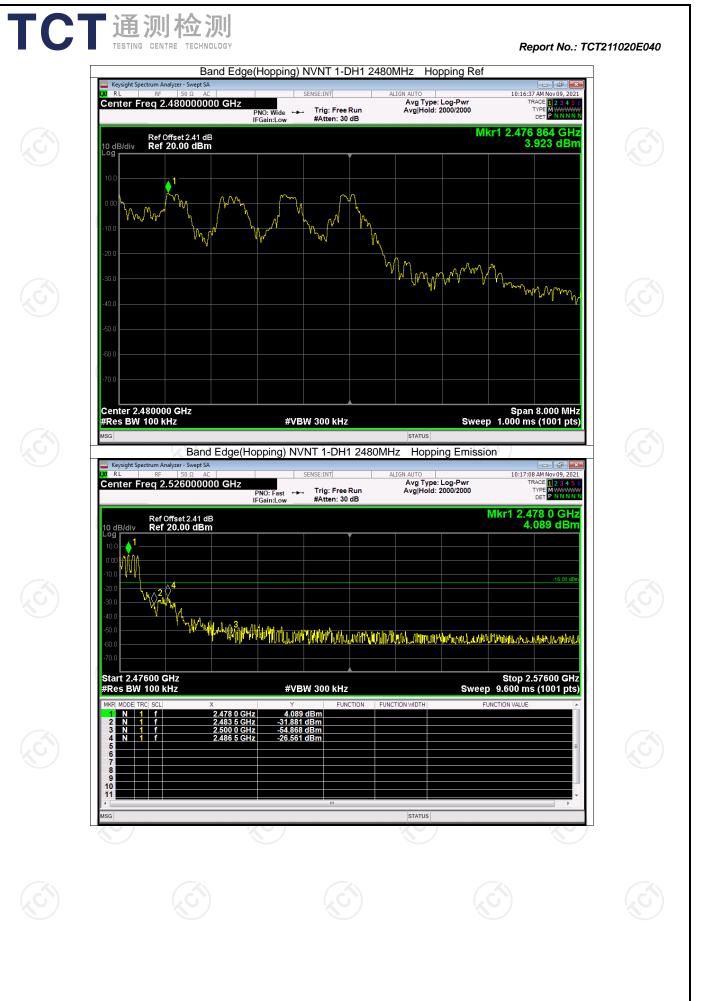


Report No.: TCT211020E040





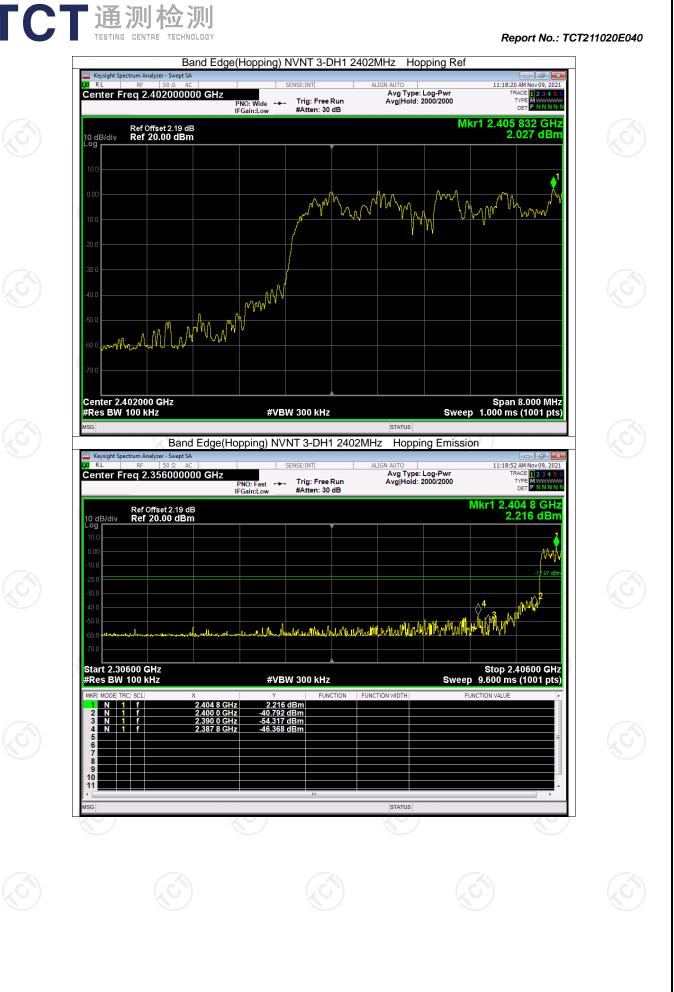




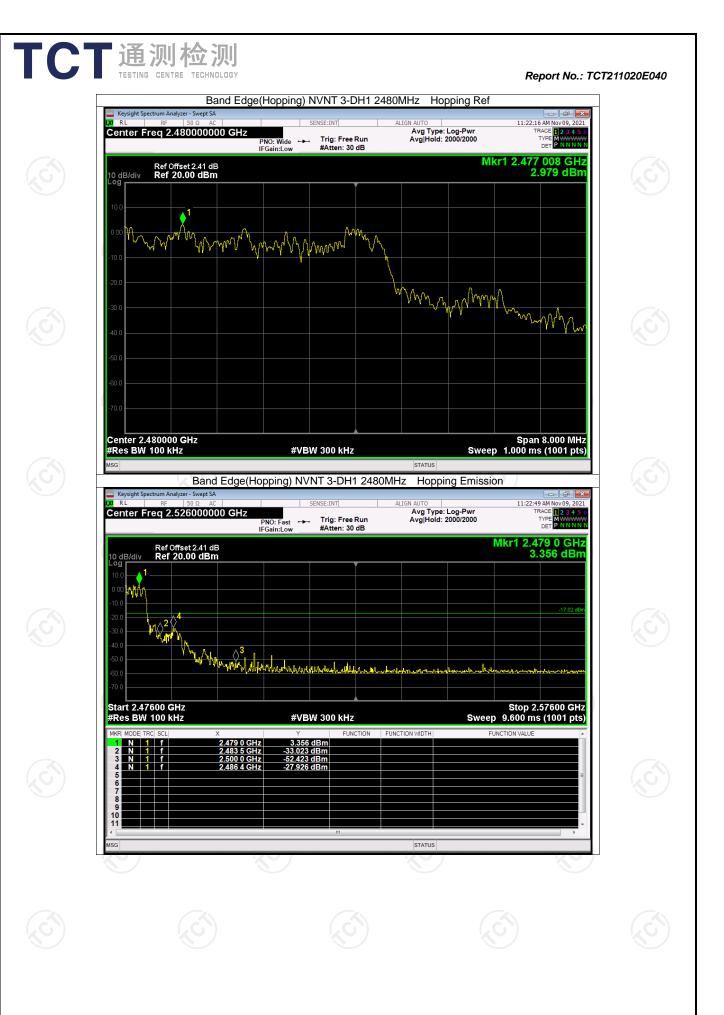
Center Freq 2.402000000	GHz PNO: Wide IFGain:Low	SENSE:INT Trig: Free Run #Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 2000/2000	10:42:44 AM Nov 09, 2021 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N
Ref Offset 2.19 dB I0 dB/div Ref 20.00 dBm	in Gam. Edw		Mkr1	2.403 824 GHz 2.419 dBm
-og				
0.00		- MA		A. M
10.0		M Mww	w.whwwhere	r Munhan
20.0				
30.0				
40.0	Mont	~~ ¹		
	MM			
-60.0 / r 				
				Onen 8 000 Mills
Center 2.402000 GHz #Res BW 100 kHz Isg	#	VBW 300 kHz	Sweep 1	Span 8.000 MHz .000 ms (1001 pts)
	dge(Hopping) I	NVNT 2-DH1 2402	MHz Hopping Emission	
RL RF 50 Ω AC Center Freq 2.356000000	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 2000/2000	10:43:17 AM Nov 09, 2021 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N
Ref Offset 2.19 dB	IFGain:Low	#Atten: 30 dB	Mk	r1 2.405 1 GHz 2.048 dBm
10 dB/div Ref 20.00 dBm				
-10.0				-12 58 dBm
-20.0				ad a 2
-40.0		. at hi	1 11.00.1.00.11.00.10.00.00.00.00.00.00.00	and the second sec
-60.0	ang na mana té dé hara béhléraka	ALCU AND DEPENDENT OF A DEPENDENT OF	ndhaat kaan u Auduu ti aan 0 a tata aan ta ah nu ta	
Start 2.30600 GHz #Res BW 100 kHz	#	VBW 300 kHz		Stop 2.40600 GHz .600 ms (1001 pts)
MKR MODE TRC SCL X 1 N 1 f 2.4 2 N 1 f 2.4	05 1 GHz 2. 00 0 GHz -42.	048 dBm 509 dBm	UNCTION WIDTH FUNCTI	ON VALUE
3 N 1 f 2.3 4 N 1 f 2.3 5	90 0 GHz -59.3 83 8 GHz -49.0	572 dBm 029 dBm		E
7 8 9				
				*
ISG			STATUS	

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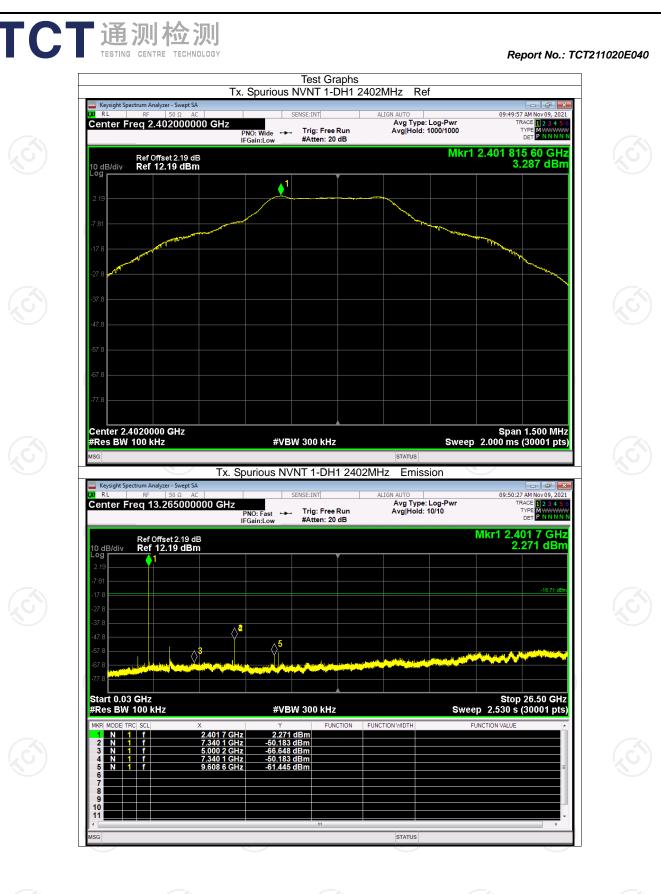


Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	-53.47	-20	Pass
NVNT	1-DH1	2441	-60.37	-20	Pass
NVNT	1-DH1	2480	-58.61	-20	Pass
ŃVNT	2-DH1	2402	-58.01	-20	Pass
NVNT	2-DH1	2441	-53.53	-20	Pass
NVNT	2-DH1	2480	-50.38	-20	Pass
NVNT	3-DH1	2402	-51.44	-20	Pass
NVNT 🔨	3-DH1	2441	-54.38	-20	Pass
NVNT	3-DH1	2480	-55.31	-20	Pass

Report No.: TCT211020E040

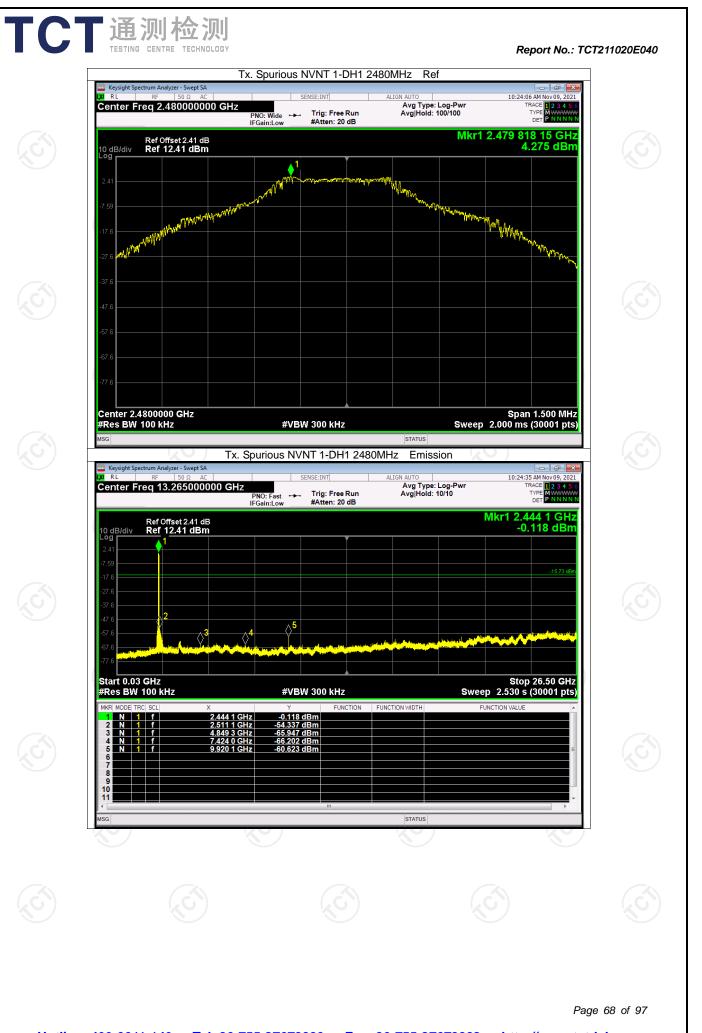
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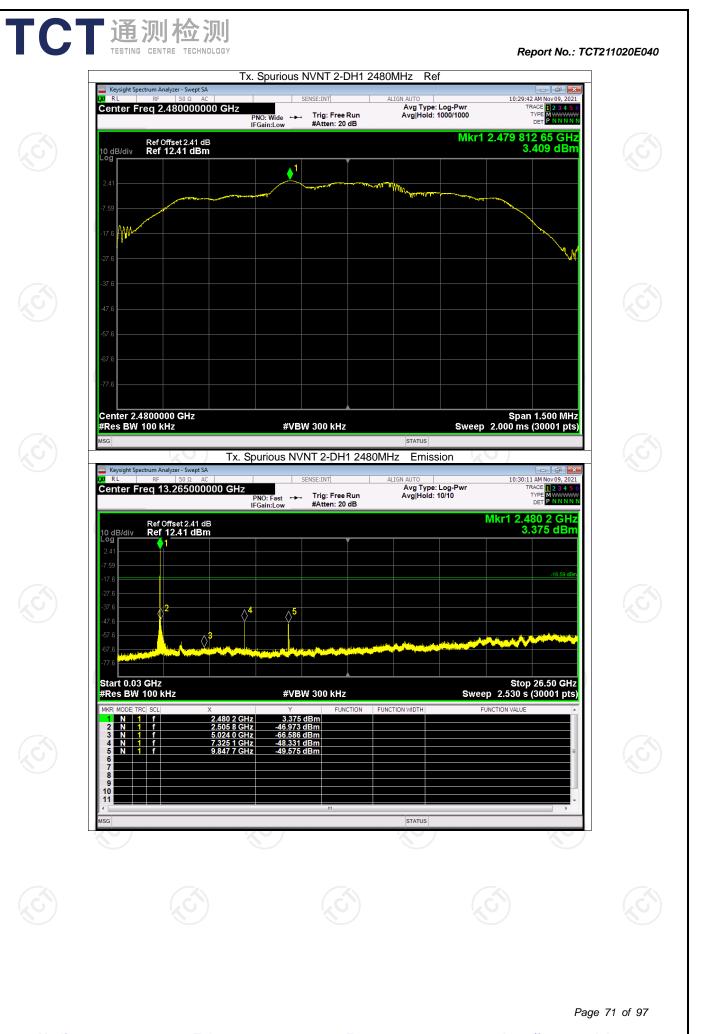
Keysight Spectrum Analyzer - Swept SA	Tx. Spurious NVNT 1-DH1 24		
Center Freq 2.441000000 G	SENSE:INT PNO: Wide ++ Trig: Free Run IFGain:Low #Atten: 20 dB	ALIGN AUTO 1 Avg Type: Log-Pwr Avg Hold: 1000/1000	10:20:32 AM Nov 09, 2021 TRACE 1 2 3 4 5 6 TYPE M WWWWW DET P N N N N N
Ref Offset 2.32 dB 10 dB/div Ref 12.32 dBm	IFGalli.LUW	Mkr1 2.44	0 816 05 GHz 4.205 dBm
2.32			
-7.68			
-17.7			
-27.7			
-37.7			
-47.7			
-67.7			
-6/.7			
Center 2.4410000 GHz			Span 1.500 MHz
Center 2.4410000 GH2 #Res BW 100 kHz	#VBW 300 kHz	Sweep 2.000	Span 1.500 MHz 0 ms (30001 pts)
	Tx. Spurious NVNT 1-DH1 2441		
Registing to gradient and gradient of the state St	PNO: Fast +++ Trig: Free Run	ALIGN AUTO 1 Avg Type: Log-Pwr Avg Hold: 10/10	10:21:01 AM Nov 09, 2021 TRACE 1 2 3 4 5 6 TYPE M 44444444
Ref Offset 2.32 dB	IFGain:Low #Atten: 20 dB	Mkr1	2.440 5 GHz 2.587 dBm
10 dB/div Ref 12.32 dBm Log 1 2.32 1			2.301-0.511
-7.68			-15.80 dBm
-27.7			
-47.7 -57.7 -57.7	4 0 ⁵		
-77.7			
Start 0.03 GHz #Res BW 100 kHz	#VBW 300 kHz	Sweep 2.5	Stop 26.50 GHz 30 s (30001 pts)
MKR MODE TRC SCL X 1 N 1 f 2.44 2 N 1 f 24.82 3 N 1 f 4.97	40 5 GHz 2.587 dBm 29 7 GHz -56.169 dBm	FUNCTION WIDTH FUNCTION	/ALUE
4 N 1 f 7.32 5 N 1 f 9.76 6	76 4 GHz -65.899 dBm 22 5 GHz -64.180 dBm 53 0 GHz -59.021 dBm		=
7 8 9 9 10			
11	m	STATUS	
MSG		314103	
C			
Jenne Contraction (Contraction Contraction			



Ref Offset 2.19 dB Mkr1 2.401 813 40 10 dB/div Ref 12.19 dBm .ºg _1	1 2 3 4 5 6 MWWWWW P N N N N N
o dB/div Ref 12.19 dBm 2.447	
	40 GHz 7 dBm
7.8	
7.8	
7.8	
/8	
7.8	
7.8	
enter 2.4020000 GHz Span 1.50	500 MHz
Res BW 100 kHz #VBW 300 kHz Sweep 2.000 ms (300 a status status	001 pts)
Tx. Spurious NVNT 2-DH1 2402MHz Emission	
RL RF 50.0 AC SENSE:INT ALION AUTO 10:35:50 AM NO enter Freq 13.265000000 GHz Avgly Avgly TRACE PNO: Fast → Trig: Free Run Avgl/Hold: 10/10 Trig:	Nov 09, 2021 1 2 3 4 5 6 M WWWWWW P N N N N N
Bef Offent 2.10 4D Mkr1 2.401 7	7 GHz
D dB/div Ref 12.19 dBm -0.305	5 aBm
	-17.55 dBm
27.8	
17.8 2	
	i de la constante
^{77.8} Stop 26. 5	50 GHz
Res BW 100 kHz #VBW 300 kHz Sweep 2.530 s (300 kHz) Res Model TRCI Scil X Y FUNCTION (FUNCTION WIDTH) FUNCTION VALUE	
1 N 1 f 24017 GHz -0.305 dBm	
2 N 1 f 3.603 5 GHz -55.562 dBm 3 N 1 f 4.903 1 GHz -67.577 dBm 4 N 1 f 7.021 6 GHz -66.260 dBm 5 N 1 f 9.608 6 GHz -64.793 dBm	=
7	
SG STATUS	<u>x</u> u

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	PNO: Wide IFGain:Low #Atten: 20 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 1000/1000	10:39:34 AM Nov 09, 2021 TRACE 1 2 3 4 5 6 TYPE M WWWWW DET P N N N N
dB/div Ref Offset 2.32 dB		MKF1 2.4	40 814 25 GHz 3.257 dBm
32		and the second s	
68			
7.7			
7.7			
7.7			
.7			
7.7			
7.7			
enter 2.4410000 GHz			Span 1.500 MHz
Res BW 100 kHz	#VBW 300 kHz	Sweep 2.1	000 ms (30001 pts)
Keysight Spectrum Analyzer - Swept SA	Tx. Spurious NVNT 2-DH1 24		
RL RF 50 Ω AC enter Freq 13.265000000	PNO: Fast +++ Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	10:40:03 AM Nov 09, 2021 TRACE 1 2 3 4 5 6 TYPE M WWWWW DET P N N N N N
Ref Offset 2.32 dB dB/div Ref 12.32 dBm	IFGain:Low #Atten: 20 dB	Mk	r1 2.440 5 GHz -0.203 dBm
1 dB/div Ref 12.32 dBm			
68			-16.74 dBm
7.7	A		
7.7 3			and the state of the
7.7 7.7			
tart 0.03 GHz Res BW 100 kHz	#VBW 300 kHz	Sweep 2	Stop 26.50 GHz 2.530 s (30001 pts)
R MODE TRC SCL X	Y FUNCTION 10 5 GHz -0.203 dBm 18 3 GHz -50.276 dBm 12 2 GHz -65.836 dBm	FUNCTION WIDTH FUNCTI	DN VALUE
1 N 1 f 2.44 2 N 1 f 9.76			
4 N 1 f 7.25 5 N 1 f 9.76	83 GHz -50.276 dBm 22 2 GHz -65.836 dBm 33 7 GHz -50.950 dBm 83 3 GHz -50.276 dBm		=
4 N 1 f /.25 5 N 1 f 9.76 6 7 7	o3 / GHz -50.950 dBm		
4 N 1 f 7.25 5 N 1 f 9.76 6 7	o3 / GHz -50.950 dBm		
4 N 1 T //25 5 N 1 F 9.76 6 7 8 8 9 9 9 9	-50,950 dBm 18 3 GHz -50.276 dBm	STATUS	•
4 N 1 T 7.25 5 N 1 F 9.76 7 8 8 9 9 9	-50,950 dBm 18 3 GHz -50.276 dBm	STATUS	, ,
4 N 1 T 7.25 5 N 1 F 9.76 7 8 8 9 9 9	-50,950 dBm 18 3 GHz -50.276 dBm	STATUS	



Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC Center Freq 2.402000000	PNO: Wide Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 1000/1000	11:02:25 AM Nov 09, 2021 TRACE 1 2 3 4 5 6 TYPE M WWWWW DET P. N.N.N.N.N
Ref Offset 2.19 dB 10 dB/div Ref 12.19 dBm	IFGain:Low #Atten: 20 dB	Mkr1 2	401 814 50 GHz 2.367 dBm
2.19			
		A REAL PROPERTY AND	
-17.8			
-27.8			
-37.8			
-47.8			
-57.8			
-77.8			
Center 2.4020000 GHz			Span 1.500 MHz
#Res BW 100 kHz	#VBW 300 kHz	Sweep 2	.000 ms (30001 pts)
Keysight Spectrum Analyzer - Swept SA	Tx. Spurious NVNT 3-DH1 2	402MHz Emission	
α RL RF 50Ω AC Center Freq 13.265000000	PNO: Fast ++++ Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	11:02:54 AM Nov 09, 2021 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N
Ref Offset 2.19 dB 10 dB/div Ref 12.19 dBm	IFGain:Low #Atten: 20 dB	М	kr1 2.444 9 GHz 0.164 dBm
-7.81			-17.63 dBm
-27.8 -37.8			
-47.8			
-67.8 -77.8			
Start 0.03 GHz #Res BW 100 kHz	#VBW 300 kHz		Stop 26.50 GHz 2.530 s (30001 pts)
MKR MODE TRC SCL X 1 N 1 f 2.4 2 N 1 f 2.5 3 N 1 f 4.9	Y FUNCTION 44 9 GHz 0.164 dBm 064 9 GHz -49.070 dBm 188 7 GHz -67.338 dBm 106 0 GHz -62.967 dBm	N FUNCTION WIDTH FUNC	TION VALUE
4 N 1 f 7.2 5 N 1 f 9.7	888 7 GHz -67.338 dBm 206 0 GHz -62.967 dBm 208 3 GHz -51.504 dBm		E
7 8 9 10			
11 /	m	STATUS	• •
			N.

KARL RF 50 Ω AC Center Freq 2.441000000 G	HZ PNO: Wide IFGain:Low #Atten: 20 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 1000/1000	11:12:04 AM Nov 09, 2021 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P.NNNNN
Ref Offset 2.32 dB 10 dB/div Ref 12.32 dBm		Mkr1 2	.440 813 80 GHz 3.187 dBm
2.32	↓ 1		
-7.68		and the film and the second	
-17.7			
-27.7			
-37.7			
-47.7			
-57.7			
-67.7			
Center 2.4410000 GHz #Res BW 100 kHz	#VBW 300 kHz		Span 1.500 MHz 2.000 ms (30001 pts)
	Tx. Spurious NVNT 3-DH1 2	441MHz Emission)
Keysight Spectrum Analyzer - Swept SA RL RF 50 Ω AC Center Freq 13.265000000 (ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	11:12:34 AM Nov 09, 2021 TRACE 1 2 3 4 5 6
	PNO: Fast +++ Irig: Free Run IFGain:Low #Atten: 20 dB	Avginola. Torro	
Pof Offset 2 32 dB		Μ	TYPE MWWWW DET PNNNNN kr1 2.441 4 GHz
Ref Offset 2.32 dB 10 dB/div Ref 12.32 dBm og 1 2 32		M	kr1 2.441 4 GHz 2.764 dBm
10 dB/div Ref 12.32 dBm 2 32 -7 68		M	kr1 2.441 4 GHz
10 dB/div Ref 12.32 dBm 2.32		M	kr1 2.441 4 GHz 2.764 dBm
10 dB/div Ref 12.32 dBm 2 32 -7.68 -17.7 -27.7 -37.7 -47.7 22			kr1 2.441 4 GHz 2.764 dBm
10 dB/div Ref 12.32 dBm 2 32 7.68 -17.7 -27.7 -37.7 -47.7 22.	 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓		kr1 2.441 4 GHz 2.764 dBm
10 dB/div Ref 12.32 dBm 2 32 7 68 17 7 27.7 37.7 47.7 47.7 47.7 57.7 -67.7 -67.7 -7.7 Start 0.03 GHz			kr1 2.441 4 GHz 2.764 dBm
10 dB/div Ref 12.32 dBm 0 9 1	#VBW 300 kHz	Sweep	kr1 2.441 4 GHz 2.764 dBm
10 dB/div Ref 12.32 dBm 0'g 1 1 1 1 232 768 1 1 1 27 7 2 2 3 37 2 2 3 3 47 2 3 3 3 57 2 3 3 3 57.7 2 3 3 3 57.7 3 3 3 3 57.7 3 3 3 3 57.7 3 3 3 3 57.7 3 3 3 3 57.7 3 3 3 3 57.7 3 3 3 3 57.7 3 3 3 3 57.7 3 3 3 3 57.7 3 3 3 3 57.7 3 3 3 3 57.7 3 3 3 3 57.7 3 1 1 3 57.7 3 3 3 3 57.7 3 4 4 4 <	#VBW 300 kHz #VBW 300 kHz 14 GHz -51.197 dBm 0 GHz -52.918 dBm 8 GHz -66.859 dBm	Sweep	kr1 2.441 4 GHz 2.764 dBm
10 dB/div Ref 12.32 dBm 0 g 1 1 0 g 1 1 2 32 1 1 7 68 1 1 17 7 27 2 -37 7 2 3 -47 7 2 3 -57 7 -3 3 -67 7 -3 3 -77 7 -3 -3 Start 0.03 GHz -4 -4 Res BW 100 KHz -4 -4 MkR MODE TRC SCL X 1 1 N 1 f 2. N 1 f 2.441 2 N 1 f 3 N 1 f 4 N 1 f 8	#VBW 300 kHz #VBW 300 kHz 14 GHz 2.764 dBm 5 GHz 5-1.197 dBm	Sweep	kr1 2.441 4 GHz 2.764 dBm
10 dB/div Ref 12.32 dBm 2 32 7 68 17 7 27 7 37 7 47.7 57.7	#VBW 300 kHz #VBW 300 kHz 14 GHz -51.197 dBm 0 GHz -52.918 dBm 8 GHz -66.859 dBm	Sweep	kr1 2.441 4 GHz 2.764 dBm
10 dE/div Ref 12.32 dBm 232 1 1 7 68 1 2 17 7 2 2 37.7 2 3 47.7 2 3 57.7 2 3 57.7 2 3 57.7 2 3 57.7 3 3 57.7 3 3 57.7 3 3 57.7 3 3 57.7 3 3 57.7 3 3 57.7 4 3 57.7 4 3 57.7 5 1 6 1 1 7 3 1 8 8 9 9 9 9		Sweep	kr1 2.441 4 GHz 2.764 dBm
10 dB/div Ref 12.32 dBm 0 g 1 1 0 g 1 1 2 32 7.68 1 17 7 27.7 27.7 37 7 22.32 3 47 7 22.33 3 57 7 27.7 3 47 7 22.33 3 57 7 3 3 57 7 3 3 57 7 3 3 57 7 3 3 57 7 3 3 57 7 1 1 57 7 1 1 57 7 1 1 6 1 1 7 1 1 1 1 1 2 1 1 3 1 1 4 1 1 9 9 9 9 9 9 9 9 9 10 1 1		N FUNCTION WIDTH FUNC	kr1 2.441 4 GHz 2.764 dBm
10 dB/div Ref 12.32 dBm 0 g 1 1 0 g 1 1 2 32 7.68 1 17 7 27.7 27.7 37 7 22.32 3 47 7 22.33 3 57 7 27.7 3 47 7 22.33 3 57 7 3 3 57 7 3 3 57 7 3 3 57 7 3 3 57 7 3 3 57 7 1 1 57 7 1 1 57 7 1 1 6 1 1 7 1 1 1 1 1 2 1 1 3 1 1 4 1 1 9 9 9 9 9 9 9 9 9 10 1 1		N FUNCTION WIDTH FUNC	kr1 2.441 4 GHz 2.764 dBm

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Keysight Spectrum Analyzer - Swe RL RF 50 Ω Center Freq 2.48000	ept SA AC	IS NVNT 3-DH1 2	ALIGN AUTO Avg Type: Log-Pwr	11:16:23 AM Nov 09, 20 TRACE 1 2 3 4
	PNO: Wide IFGain:Low	→ Trig: Free Run #Atten: 20 dB	Avg Hold: 1000/1000	TRACE 1234 TYPE MWWW DET PNNN T1 2.479 812 75 GF
Ref Offset 2.4 10 dB/div Ref 12.41 d	IBm			3.412 dB
2.41			www.	
-7.59	and the second s			Mar Bar Bar Bar Bar Bar Bar Bar Bar Bar B
-17.6				
-27.6				γ <mark>ι</mark> λ.
-37.6				
-47.6				
-57.6				
-67.6				
-77.6				
Center 2.4800000 GHz		(BW(200 kH=		Span 1.500 Mi ep 2.000 ms (30001 pi
#Res BW 100 kHz		/BW 300 kHz	STATUS	ep 2.000 ms (30001 pi
	ept SA		0MHz Emission	
ଅ RL RF 50 Ω Center Freq 13.2650	PNO: Fast	SENSE:INT Trig: Free Run #Atten: 20 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 10/10	11:16:53 AM Nov 09, 20 TRACE 1 2 3 4 TYPE MWWW DET P N N N
Ref Offset 2.4	IFGain:Low	writen. 20 dB		Mkr1 2.480 2 GF 1.987 dB
10 dB/div Ref 12.41 c				
-7.59				-16.59 d
-27.6				
-47.6	↓			
-67.6				
Start 0.03 GHz				Stop 26.50 GF
#Res BW 100 kHz	X Y			FUNCTION VALUE
1 N 1 f 2 N 1 f 3 N 1 f 4 N 1 f	9.748 0 GHz -51.9 4.912 0 GHz -65.8	87 dBm 05 dBm 52 dBm		
4 N 1 f 5 N 1 f 6 7	9.748 0 GHz -50.8	63 dBm 05 dBm		
8 9 10				
11		m	STATUS	•
150	K~7		STATUS	<u> </u>
ISG				
ASG				
ISG				
sc C				