TEST REPORT						
FCC ID :	2A2IWITA-FBS200					
Test Report No::	TCT210615E015					
Date of issue:	Jun. 24, 2021					
Testing laboratory: :	SHENZHEN TONGCE TESTING	3 LAB				
Testing location/ address:	TCT Testing Industrial Park Fuq Street, Bao'an District Shenzher Republic of China	iao 5th Industrial Zone, Fuhai n, Guangdong, 518103, People's				
Applicant's name::	Dongguan ITA Intelligent Manufa	acturing Technology Co., Ltd				
Address:	No.20, Nange West Road, Daoji	ao Town, Dongguan, China				
Manufacturer's name :	Dongguan ITA Intelligent Manufa	acturing Technology Co., Ltd				
Address:	No.20, Nange West Road, Daoji	ao Town, Dongguan, China				
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 :	Bluetooth body fat scale					
Trade Mark:	N/A					
Model/Type reference :	ITA-FBS200, ITA-FBS210, ITA-F ITA-FBS240, ITA-FBS250, ITA-F					
Rating(s):	DC 6V(4*AAA Battery)					
Date of receipt of test item	Jun. 15, 2021					
Date (s) of performance of test:	See dates for each test case					
Tested by (+signature) :	Aaron Mo	Laron ho ongce				
Check by (+signature) :	Beryl Zhao	Beny the TCT				
Approved by (+signature):	Tomsin	Tomsin 345 54				
General disclaimer:	S S					

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TCT通测检测 1. General Product Information

1.1. EUT description

Test item description:	Bluetooth body fat scale			
Model/Type reference:	ITA-FBS200			
Sample Number:	TCT210615E015-0101			
Bluetooth Version:	V5.0			
Operation Frequency:	2402MHz~2480MHz			
Channel Separation:	2MHz			
Number of Channel:	40			
Modulation Type:	GFSK			
Antenna Type:	PCB Antenna		No.	
Antenna Gain:	1.5dBi			
Rating(s):	DC 6V(4*AAA Battery)	$\langle \mathcal{C} \rangle$		
Remark:	1			

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

1.2. Model(s) list

No.	Model No.	Tested with
	ITA-FBS200	\boxtimes
Other models	ITA-FBS210, ITA-FBS220, ITA-FBS230, ITA-FBS240, ITA-FBS250, ITA-FBS260	

Note: ITA-FBS200 is tested model, other models are derivative models. The models are identical in circuit and PCB layout, only different on the model names. So the test data of ITA-FBS200 can represent the remaining models.

1.3. Operation Frequency

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz
1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz
	∇_{\dots}						
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz
Remark:	Channel 0, 1	9 & 39 ha	ave been tes	sted.	X		XC

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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	N/A
Conducted Peak Output Power	§15.247 (b)(3)	PASS
6dB Emission Bandwidth	§15.247 (a)(2)	PASS
Power Spectral Density	§15.247 (e)	PASS
Band Edge	§15.247(d)	PASS
Spurious Emission	§15.205/§15.209	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.
- 5. After pre-testing the two earphones, the two earphones are left and right ears respectively; we found that the left earphone is the worst case, so the results are recorded in this report.

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3. General Information

3.1. Test environment and mode

Operating Environment:						
Condition	Conducted Emission	Radiated Emission				
Temperature:	25.0 °C	25.0 °C				
Humidity:	55 % RH	55 % RH				
Atmospheric Pressure:	1010 mbar	1010 mbar				
Test Software:						
Software Information:	BK RF Test_V1.8					
Power Level:	3					
Test Mode:						
Engineering mode: Keep the EUT in continuous transmitting by select						

channel and modulations

The sample was placed 0.8m & 1.5m for the measurement below & above 1GHz above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case(Z axis) are shown in Test Results of the following pages.

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
				/

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, 6dB Emission Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

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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

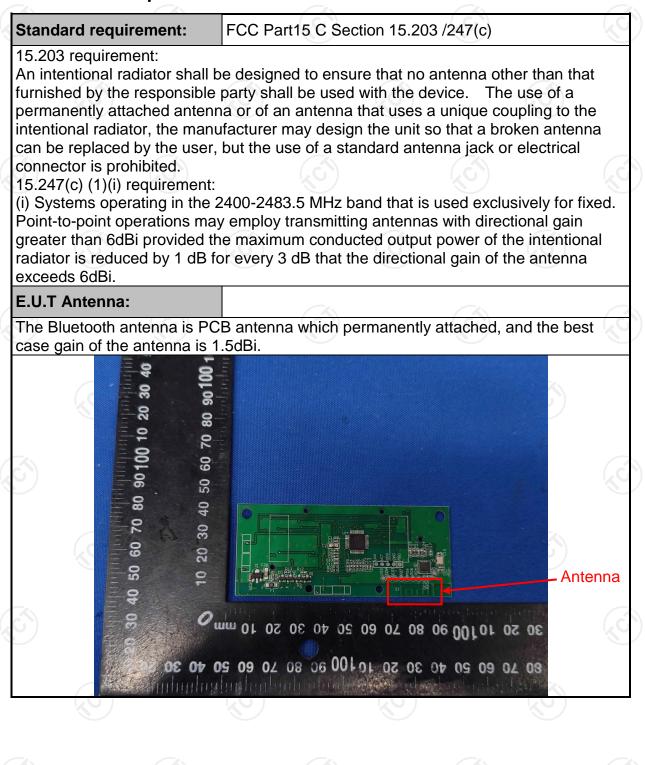
The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

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





5.2. Conducted Emission

5.2.1. Test Specification

Test Requirement:	FCC Part15 C Section	15.207			
Test Method:	ANSI C63.10:2013				
Frequency Range:	150 kHz to 30 MHz	(C)	(\mathcal{C})		
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		
	Refere	nce Plane			
Test Setup:	E.U.T Adap Test table/Insulation pla Remarkc E.U.T: Equipment Under Test LISN: Line Impedence Stabilization Test table height=0.8m	ne			
Test Mode:	Charging + Transmittir	ng Mode			
Test Procedure:	 The E.U.T is connected to an adapter through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to 				
Test Results:	 ANSI C63.10: 2013 on conducted measurement. N/A; Because the EUT is powered by the battery, so the item is not applicable. 				



5.3. Conducted Output Power

5.3.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	KDB 558074 D01 v05r02
Limit:	30dBm
Test Setup:	
Teet Meder	Spectrum Analyzer EUT
Test Mode:	Refer to item 4.1
Test Procedure:	 Set spectrum analyzer as following: a) Set the RBW ≥ DTS bandwidth. b) Set VBW ≥ 3 × RBW. c) Set span ≥ 3 × RBW d) Sweep time = auto couple. e) Detector = peak. f) Trace mode = max hold. g) Allow trace to fully stabilize. h) Use peak marker function to determine the peak amplitude level.
Test Result:	PASS

5.3.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY49100619	Sep. 11, 2021
4 Ch. Simultaneous Sampling 14 Bits 2 MS/s	Agilent	U2531A	N/A	Sep. 02, 2021
Combiner Box	Ascentest	AT890-RFB	N/A	Sep. 02, 2021

5.4. Emission Bandwidth

5.4.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	KDB 558074 D01 v05r02
Limit:	>500kHz
Test Setup:	Spectrum Analyzer EUT
Test Mode:	Refer to item 4.1
Test Procedure:	 Set to the maximum power setting and enable the EUT transmit continuously. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6dB bandwidth must be greater than 500 kHz. 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			MY49100619	Sep. 11, 2021	
4 Ch. Simultaneous Sampling 14 Bits 2 MS/s	Agilent	U2531A	N/A	Sep. 02, 2021	
Combiner Box	Ascentest	AT890-RFB	N/A	Sep. 02, 2021	







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5.5. Power Spectral Density

5.5.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	KDB 558074 D01 v05r02
Limit:	The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.
Test Setup:	
	Spectrum Analyzer EUT
Test Mode:	Refer to item 4.1
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. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW): 3 kHz ≤ RBW ≤ 100 kHz. Video bandwidth VBW ≥ 3 x RBW. In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW) Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level. Measure and record the results in the test report.
Test Result:	PASS

5.5.2. Test Instruments

Manufacturer	Model No.	Serial Number	Calibration Due
Agilent	N9020A	MY49100619	Sep. 11, 2021
Agilent	U2531A	N/A	Sep. 02, 2021
Ascentest	AT890-RFB	N/A	Sep. 02, 2021
	Agilent Agilent	Agilent N9020A Agilent U2531A	AgilentN9020AMY49100619AgilentU2531AN/A

5.6. Conducted Band Edge and Spurious Emission Measurement

5.6.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	KDB 558074 D01 v05r02
Limit:	In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).
Test Setup:	
	Spectrum Analyzer EUT
Test Mode:	Refer to item 4.1
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=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per
	 15.247(d). 4. Measure and record the results in the test report. 5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

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5.6.2. Test Instruments

Name	Manufacturer	Model No.	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	N9020A	MY49100619	Sep. 11, 2021
4 Ch. Simultaneous Sampling 14 Bits 2 MS/s	Agilent	U2531A	N/A	Sep. 02, 2021
Combiner Box	Ascentest	AT890-RFB	N/A	Sep. 02, 2021



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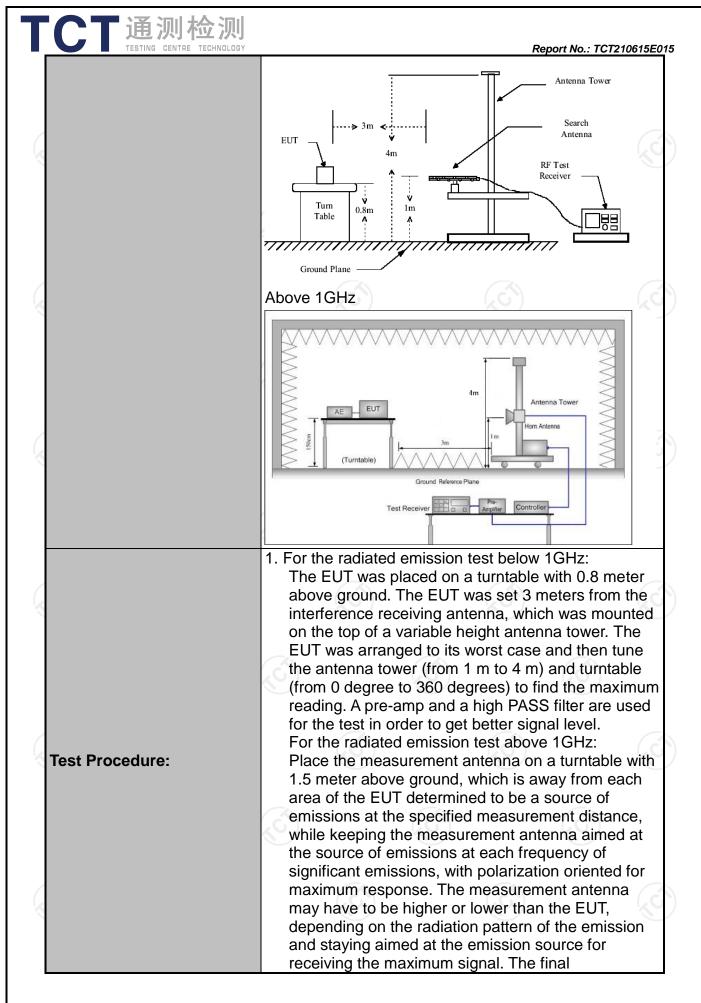
5.7. Radiated Spurious Emission Measurement

5.7.1. Test Specification

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Test Requirement:	FCC Part15 C Section 15.209							
Test Method:	ANSI C63.10): 2013						
Frequency Range:	9 kHz to 25 (GHz						
Measurement Distance:	3 m	X	9		S.			
Antenna Polarization:	Horizontal &	Vertical						
Operation mode:	Refer to item							
	Frequency 9kHz- 150kHz	Detector Quasi-peak		VBW 1kHz	Remark Quasi-peak Valu			
Receiver Setup:	150kHz- 30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Valu			
	30MHz-1GHz	Quasi-peak		300KHz	Quasi-peak Valu			
	Above 1GHz	Peak Peak	1MHz 1MHz	3MHz 10Hz	Peak Value Average Value			
			Field Str		Measurement			
	Frequen		(microvolts	/meter)	Distance (meters			
	0.009-0.4		2400/F(,	300			
	0.490-1.7		24000/F	(\\\\\\Z)	30 30			
	30-88		100)	3			
	88-216		150	3				
Limit:	216-96		200	3				
	Above 9	60	500	3				
	Frequency		Field Strength icrovolts/meter) Measur Dista (met		ince Detector			
	Above 101		500	3	Average			
	Above 1GHz	2	5000	3	Peak			
	For radiated	emissions	s below 30	OMHz				
	Di	stance = 3m			Computer			
	Pre -Amplifier							
Test setup:	EUT Turn table							
		Ground	i Plane	χ ω ")				
	30MHz to 10							

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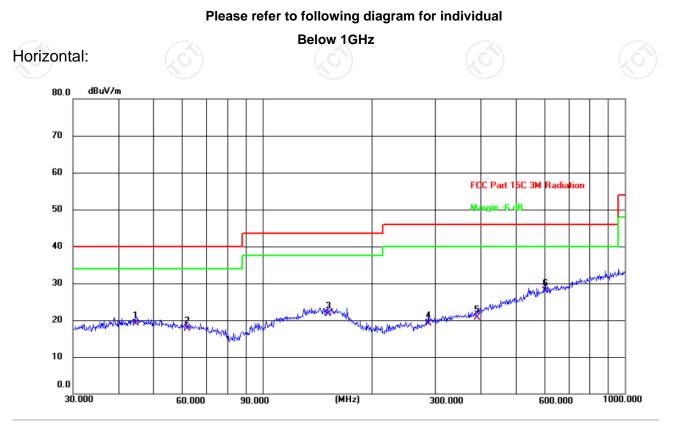
「 」一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一	泂」
TESTING CENTRE TECH	 Report No.: TCT210615E measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported. Use the following spectrum analyzer settings: Set RBW=120 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold; Set RBW = 1 MHz, VBW= 3MHz for f >1 GHz for peak measurement. For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. VBW ≥ 1/T,
Test mode:	when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation. Refer to section 4.1 for details
Test results:	PASS

5.7.2. Test Instruments

Radiated Emission Test Site (966)								
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due				
Test Receiver	ROHDE&SCHW ARZ	ESIB7	100197	Jul. 27, 2021				
Spectrum Analyzer	ROHDE&SCHW ARZ	FSQ40	200061	Sep. 11, 2021				
Pre-amplifier	EM Electronics Corporation CO.,LTD	EM30265	07032613	Sep. 02, 2021				
Pre-amplifier	HP	8447D	2727A05017	Sep. 02, 2021				
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	A-INFO	LB-180400-KF	J211020657	Sep. 04, 2022				
Antenna Mast	Keleto	RE-AM	N/A	N/A				
Line-4	тст	RE-high-04	N/A	Sep. 02, 2021				
Line-8	тст	RE-01	N/A	Jul. 27, 2021				
EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A				
(C)								

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5.7.3. Test Data



Site					Polari	zation:	Horizo	ntal	Temperature: 23.6(C)
Limit:	FCC Part 150	Part 15C 3M Radiation Power: DC 6 V						Humidity: 48 %	
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	44.7433	5.18	13.89	19.07	40.00	-20.93	QP	Р	
2	61.7780	5.35	12.31	17.66	40.00	-22.34	QP	Р	
3	151.5972	8.10	13.59	21.69	43.50	-21.81	QP	Р	
4	286.9823	5.40	13.73	19.13	46.00	-26.87	QP	Р	
5	392.0950	4.35	16.37	20.72	46.00	-25.28	QP	Р	
6 *	603.5391	6.46	21.43	27.89	46.00	-18.11	QP	Р	
	1	1		1	1	1			

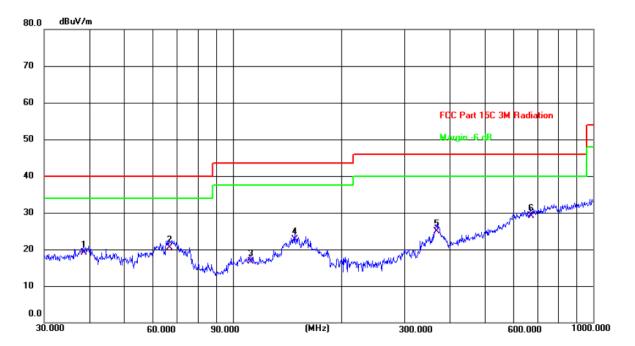
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Vertical:

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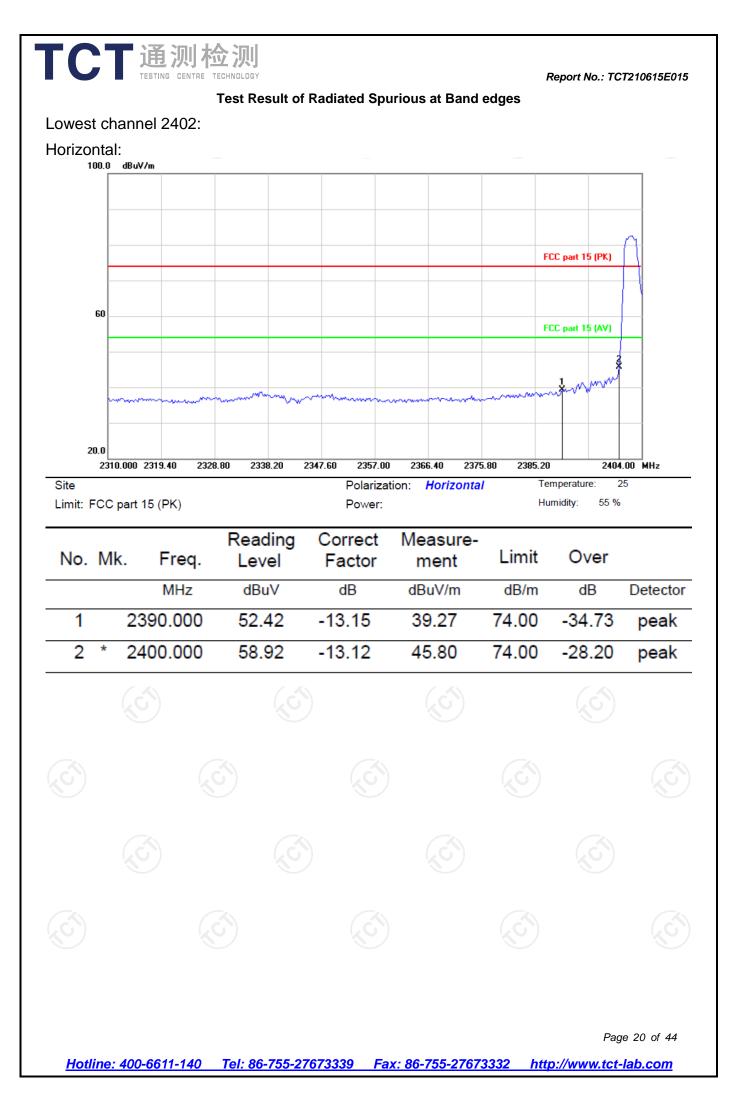
Site					Polari	zation:	Vertica	a/	Temperature: 23.6(C)
Limit: FCC Part 15C 3M Radiation					Power	: DC	6 V		Humidity: 48 %
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F	Remark
1	38.4809	5.37	13.83	19.20	40.00	-20.80	QP	Ρ	
2	66.7325	8.91	11.69	20.60	40.00	-19.40	QP	Р	
3	111.7380	5.32	11.42	16.74	43.50	-26.76	QP	Р	
4	148.4410	9.13	13.48	22.61	43.50	-20.89	QP	Р	
5	368.1116	9.06	15.75	24.81	46.00	-21.19	QP	Ρ	
6 *	670.4893	6.94	22.14	29.08	46.00	-16.92	QP	Ρ	

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

- 2. Measurements were conducted in all three channels (high, middle, low), and the worst case Mode (Lowest channel) 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 μ V/m) = Limit stated in standard
 - Margin (dB) = Measurement (dB μ V/m) Limits (dB μ V/m)
 - * is meaning the worst frequency has been tested in the test frequency range

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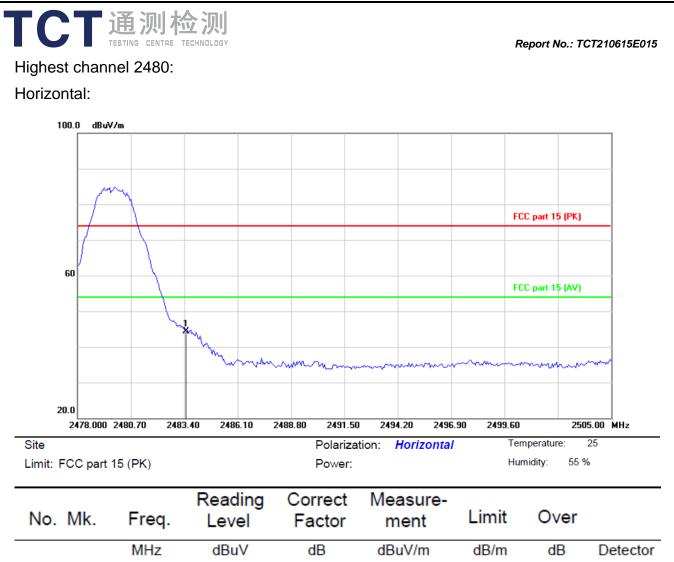
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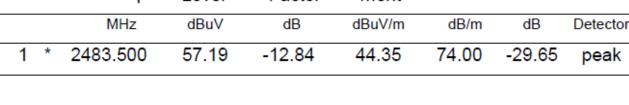


1	100.0	dBuV/m							
							F	CC part 15 (PK)	A
	60						F	CC part 15 (AV)	
	_								
	~	www.	wwww	www.mpm	www.	, marine marine and the second se	man	no market	
2	20.0	.000 2319.4	10 2328	.80 2338.20	2347.60 2357.00) 2366.40 2375	.80 2385.20	240	4.00 MHz
Site Limit:	FCC	part 15 (P	K)		Polariza Power:	tion: Vertical		mperature: imidity: 55 %	25 6
No.	Mk	. F	req.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		Ν	1Hz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		2390	.000	50.54	-13.15	37.39	74.00	-36.61	peak
	*	2400	.000	58.81	-13.12	45.69	74.00	-28.31	peak
2			0						Ĩ
2									

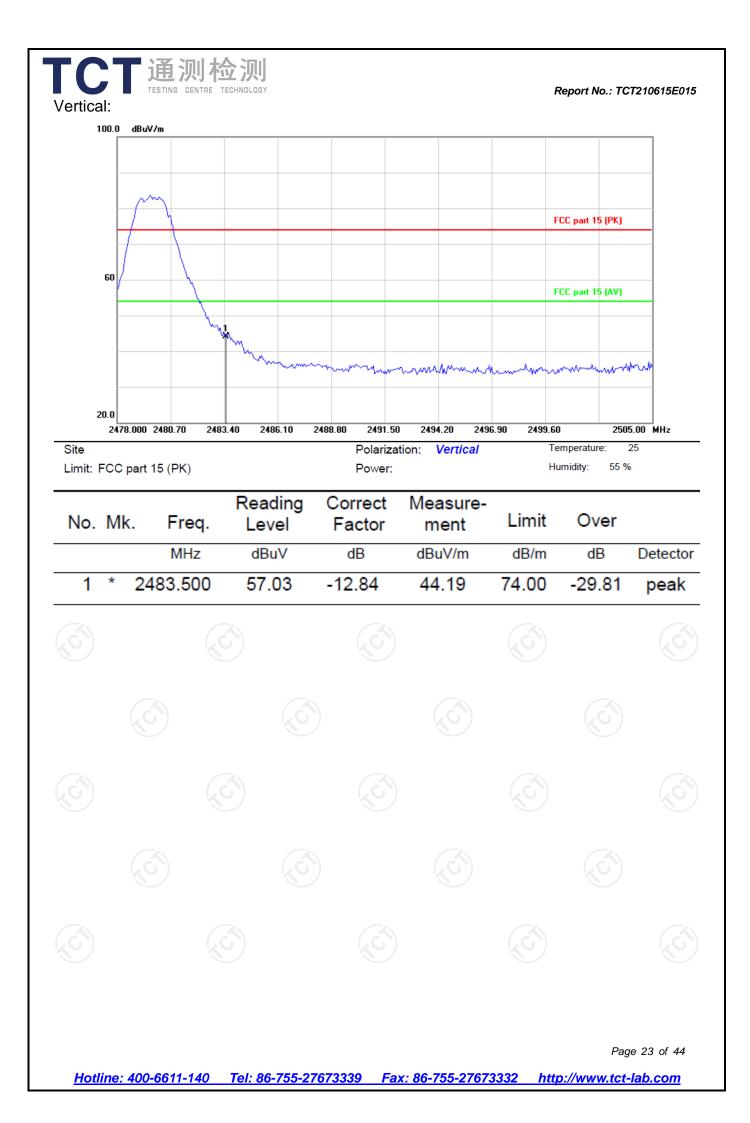
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Above 1GHz

Low channe	el: 2402 M	lHz							
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Emissic Peak (dBµV/m)	n Level AV (dBµV/m)	Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
4804	Н	47.17		0.66	47.83		74	54	-6.17
7206	Н	36.48		9.50	45.98		74	54	-8.02
	Н								
4804	V	44.01		0.66	44.67		74	54	-9.33
7206	V	35.22		9.50	44.72	<u>U</u>	74	54	-9.28
	V								

Middle channel: 2440 MHz

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Frequency		Peak reading	AV reading	Correction Factor	Emissic Peak	Peak limit		Margin
(MHz)	H/V	(dBµV)	(dBµV)	(dB/m)	(dBµV/m)	(abhr/w)	(dBµV/m)	(dB)
4880	Н	45.09		0.99	46.08	 74	54	-7.92
7320	Н	35.36		9.87	45.23	 74	54	-8.77
	H			~	(
			N.)				
4880	V	46.64		0.99	47.63	 74	54	-6.37
7320	V	37.92		9.87	47.79	 74	54	-6.21
	V					 		

High channel: 2480 MHz

Frequency	Ant Pol	Peak	AV	Correction	Emissic	on Level	Peak limit	AV limit (dBµV/m)	Margin
(MHz)	H/V	reading (dBµV)	reading (dBµV)	Factor (dB/m)	Peak (dBµV/m)				(dB)
4960	Н	44.91	-6.0	1.33	46.24	<u>.</u>	74	54	-7.76
7440	H	35.86		10.22	46.08	<u> </u>	74	54	-7.92
	Н								
			-			-			
4960	V	46.18		1.33	47.51		74	54	-6.49
7440	V	36.59		10.22	46.81		74	54	-7.19
J	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.

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

Appendix A: Test Result of Conducted Test

Maximum Conducted Output Power

Condition	Frequency (MHz)	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	2402	2.986	0	2.986	30	Pass
NVNT	2440	2.529	0	<u> </u>	30	Pass
NVNT	2480	2.287	0	2.287	30	Pass



Power NVNT 2402MHz

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gilent Spectrum Analyzer - Swept SA G R RF 50 Ω AC	Power NVNT 24		05:34:07 PM Jun 24, 2021
Center Freq 2.440000000 G		Avg Type: Log-Pwr Avg Hold: 1000/1000	TRACE 123456 TYPE MWWWWW DET PNNNNN
Ref Offset 7.36 dB 0 dB/div Ref 20.00 dBm		Mkr1	2.439 550 GHz 2.529 dBm
- og 10.0			
0.00	↓ 1		
10.0			
20.0			
30.0			
40.0			
50.0			
60.0			
70.0			
Center 2.440000 GHz ≉Res BW 2.0 MHz	#VBW 6.0 MHz	Sweep 1	Span 6.000 MHz .000 ms (1001 pts)
ISG		STATUS	
Agilent Spectrum Analyzer - Swept SA	Power NVNT 24	80MHz)
^{C R} RF 50 Ω AC Center Freq 2.480000000 G	PNO: Fast +++ Irig: Free Run	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 1000/1000	05:30:17 PM Jun 24, 2021 TRACE 1 2 3 4 5 6 TYPE M
Ref Offset 7.33 dB	IFGain:Low #Atten: 30 dB	Mkr1	2.479 616 GHz 2.287 dBm
l0 dB/div Ref 20.00 dBm			2.207 (15)
10.0	1		
10.0			
20.0			
30.0			
40.0			
40.0			
50.0			
50.0 60.0 70.0 Center 2.480000 GHz			Span 6.000 MHz
50 0 60 0 70 0	#VBW 6.0 MHz	Sweep 1	Span 6.000 MHz .000 ms (1001 pts)
50.0 70.0 Center 2.480000 GHz Res BW 2.0 MHz	#VBW 6.0 MHz		
50.0 70.0 Center 2.480000 GHz Res BW 2.0 MHz	#VBW 6.0 MHz		
50 0 60 0 70 0 Center 2.480000 GHz Res BW 2.0 MHz	#VBW 6.0 MHz		

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ГСТ	通测检 TESTING CENTRE TECH	沪リ Nology	Report No.: TCT
		-6dB Bandwi	dth
Condition	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)
NVNT	2402	0.788	0.5
NVNT	2440	0.797	0.5
NVNT	2480	0.802	0.5
	<u></u>		

-6dB Bandwidth NVNT 2402MHz

Center Freq 2.40200000		ENSE:PULSE Center Freq: 2.402000 Trig: Free Run #Atten: 30 dB	Avg Hold: 1000/1000	05:37:37 PM Jun 24, 20 Radio Std: None Radio Device: BTS
Ref Offset 7.28 10 dB/div Ref 27.28 dB Log	n m			Mkr3 2.402362 GH -3.5099 dB
17.3 7.28 -2.72		¢1	3	
-12.7				
-42.7 -52.7				Marken
-62.7 Center 2.402 GHz #Res BW 100 kHz		#VBW 300 k	Hz	Span 3 MI Sweep 1 n
Occupied Bandwid		Total Power	9.08 dBm	
1 Transmit Freq Error	.1762 MHz -32.190 kHz	OBW Power	99.00 %	
x dB Bandwidth	-32.190 kHz 787.7 kHz	x dB	-6.00 dB	
MSG			STATUS	A 3 1

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Report No.: TCT210615E015

Verdict

Pass Pass

Pass



ISG

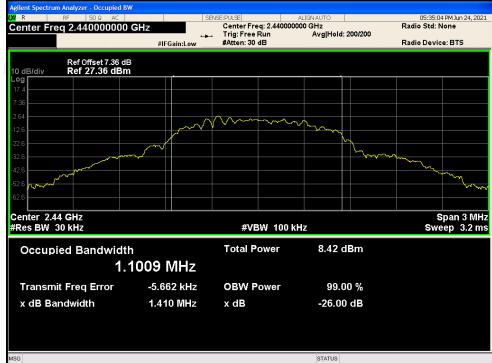
Condition	Frequency (MHz)	99% OBW (MHz)
NVNT	2402	1.098964507
NVNT	2440	1.100937047
NVNT	2480	1.10531862





OBW NVNT 2440MHz

STATUS



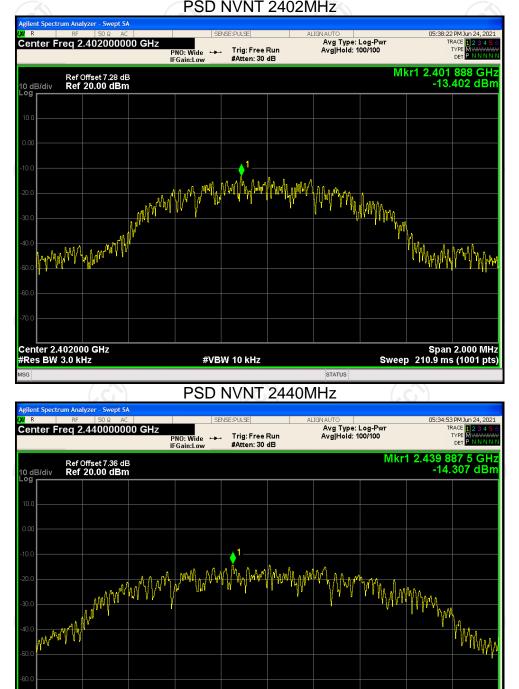
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Maximum Power Spectral Density Level Condition Frequency (MHz) Max PSD (dBm) Limit (dBm) Vordict

Center 2.4400000 GHz #Res BW 3.0 kHz

Condition	Frequency (MHz)	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	2402	-13.402	8	Pass
NVNT	2440	-14.307	8	Pass
NVNT	2480	-14.329	8	Pass



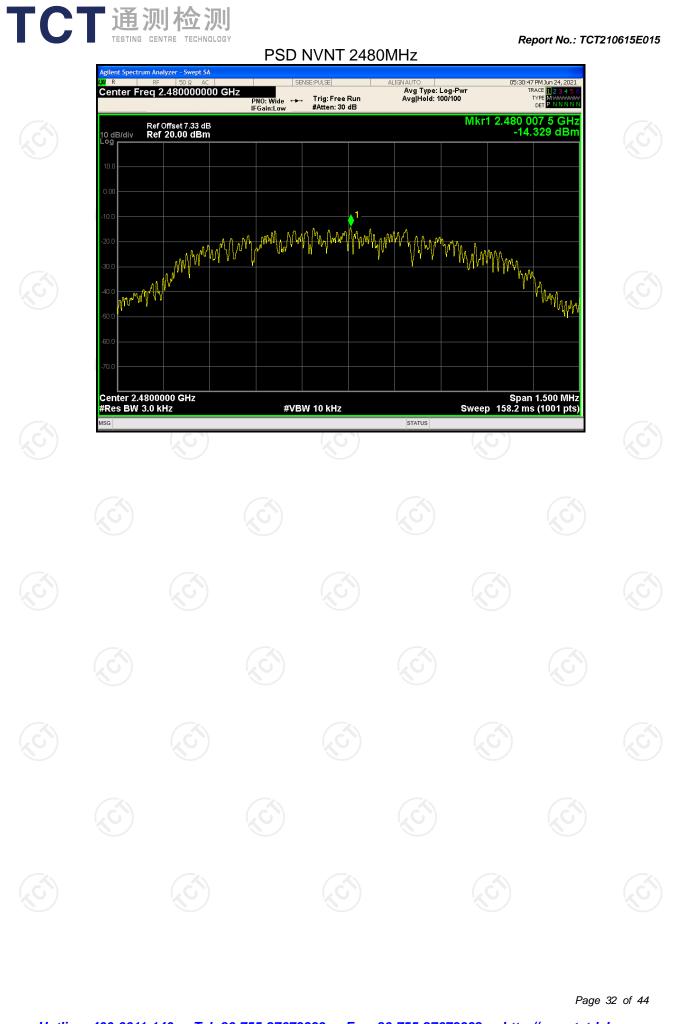
PSD NVNT 2402MHz

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Span 1.500 MHz Sweep 158.2 ms (1001 pts)

STATUS

#VBW 10 kHz



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

Verdict

Pass

Pass



Г2	۲ 2402MHz Ref							
	ALIGNAUTO	05:3						
	Avg Typ	e: Log-Pwr						

Limit (dBc)

-20

-20



Band Edge NVNT 2402MHz Emission

Agilent Spectrum Analyzer - Swept SA			
X/ R RF 50 Ω AC Center Freq 2.356000000 GHz	PNO: Fast + Trig: Free I IFGain:Low #Atten: 30	Run Avg Hold:	05:38:51 PM Jun 24, 2021 : Log-Pwr TRACE 1 2 3 4 5 6 : 100/100 TYPE M
Ref Offset 7.28 dB 10 dB/div Ref 20.00 dBm			Mkr1 2.401 7 GHz 1.530 dBm
10.0			
-10.0			
-30.0			
-40.0 -50.0 -สามารถสายเป็นสามารถสายเหตุการสายเป็นหน้าเป็นหน้าเป็นหน้าเป็นหน้าเป็นหน้าเป็นหน้าเป็นหน้าเป็นหน้าเป็นหน้าเป็นหน	Authen Martin Martine Martine		upensen market and a start
-60.0			
Start 2.30600 GHz #Res BW 100 kHz	#VBW 300 kHz		Stop 2.40600 GHz Sweep 9.600 ms (1001 pts)
MKR MODE TRC SCL X 1 N 1 f 2.4017 GH 2 N 1 f 2.400 0 GH	z 1.530 dBm	CTION FUNCTION WIDTH	FUNCTION VALUE
3 N 1 f 2.390 0 GH 4 N 1 f 2.368 5 GH 5	z -55.296 dBm		
6 7 8			
9 10 11 11			×
MSG		STATUS	



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 N
 1
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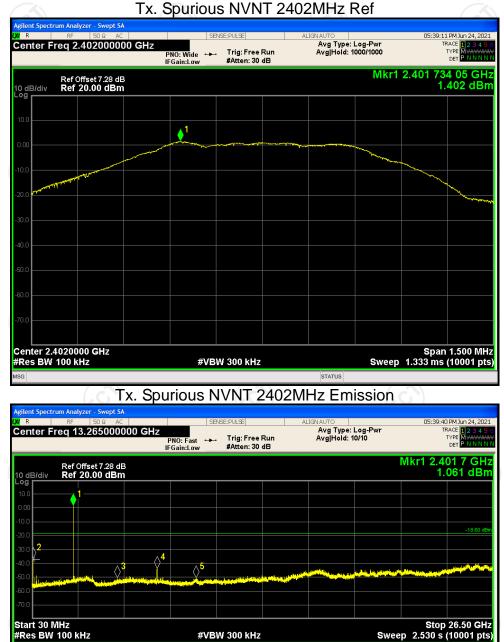
 N
 1
 f

 N
 1
 f

 N
 1
 f

Condition	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	2402	-38.62	-20	Pass
NVNT	2440	-38.11	-20	Pass
NVNT	2480	-37.8	-20	Pass

Conducted RF Spurious Emission



 Y
 FUNCTION
 FUNCTION width
 FUNCTION val

 2.401 7 GHz
 1.061 dBm
 962 MHz
 37.221 dBm
 94919 0 GHz
 41010 GHz
 94919 0 GHz
 51.071 dBm
 9453 3 GHz
 9453 3 GHz

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Center Freq 2.		SENSE:PULSE	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 1000/1000	05:36:30 PM Jun 24, 2021 TRACE 1 2 3 4 5 6 TYPE M WWWWW DET P N N N N N
Ref 0 10 dB/div Ref 2	IFGa ffset 7.36 dB 20.00 dBm	in:Low #Atten: 30 dB	Mkr1 2.	439 736 00 GHz 0.936 dBm
10.0				
0.00		1		
-10.0				
-20.0				and the second se
-40.0				
-50.0				
-60.0				
-70.0				
Center 2.440000 #Res BW 100 kl		#VBW 300 kHz	Sweep 1	Span 1.500 MHz .333 ms (10001 pts)
Agilent Spectrum Analy		ous NVNT 2440	MHz Emission	
LXI R RF	50 Ω AC 8.265000000 GHz	SENSE:PULSE	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	05:36:59 PM Jun 24, 2021 TRACE 1 2 3 4 5 6 TYPE M WWWWW DET P. N.N.N.N.N
Ref 0 10 dB/div Ref 2	IFGa ffset 7.36 dB 20.00 dBm	in:Low #Atten: 30 dB	М	kr1 2.441 4 GHz -0.729 dBm
10.0 0.00				
-10.0				-19.06 dBm
-20.0				
-30.0 2 -40.0	34	5	المراجع المراجع والمراجع	
-30.0 2				
-30.0 52 -40.0 5- -50.0 10		#VBW 300 kHz	Sweep	Stop 26.50 GHz 2.530 s (10001 pts)
	Hanna (1997) Hz 2.441 4 GHz 96 2 MHz	#VBW 300 kHz 7 FUNCTION -0.729 dBm -37.178 dBm		Stop 26.50 GHz
-30 0 2 -40 0 -50 0 -60 0 -77 0 Start 30 MHz #Res BW 100 ki MKR MODE TRC SCL 1 1 1 1	Hz 2.441 4 GHz	#VBW 300 kHz 7 FUNCTION -0.729 dBm		Stop 26.50 GHz 2.530 s (10001 pts)
	Hz 2.441 4 GHz 96.2 MHz 5.056 7 GHz 7.319 8 GHz	#VBW 300 kHz Y FUNCTION -0.729 dBm -37.178 dBm -31.214 dBm -49.154 dBm		Stop 26.50 GHz 2.530 s (10001 pts)
-30.0 2 -40.0 -50.0 -50.0 -70.	Hz 2.441 4 GHz 96.2 MHz 5.056 7 GHz 7.319 8 GHz	#VBW 300 kHz Y FUNCTION -0.729 dBm -37.178 dBm -31.214 dBm -49.154 dBm		Stop 26.50 GHz 2.530 s (10001 pts)
-30.0 2 -40.0 -50.0 -50.0 -70.0 Start 30 MHz #Res BW 100 kl MKR MODE TRC Scl 1 1 1 1 2 N 1 f 3 N 1 f 4 N 1 f 5 N 1 f 6 N 1 f 6 N 1 f 6 N 1 f 7 7 7 8 9 9 10 11 5 1 5 1 5 1 5 1 5 1 5 1 5 1	Hz 2.441 4 GHz 96.2 MHz 5.056 7 GHz 7.319 8 GHz	#VBW 300 kHz Y FUNCTION -0.729 dBm -37.178 dBm -31.214 dBm -49.154 dBm	FUNCTION WIDTH FUNC	Stop 26.50 GHz 2.530 s (10001 pts) TION VALUE
-30.0 2 -40.0 -50.0 -50.0 -70.0 Start 30 MHz #Res BW 100 kl MKR MODE TRC Scl 1 1 1 1 2 N 1 f 3 N 1 f 4 N 1 f 5 N 1 f 6 N 1 f 6 N 1 f 6 N 1 f 7 7 7 8 9 9 10 11 5 1 5 1 5 1 5 1 5 1 5 1 5 1	Hz 2.441 4 GHz 96.2 MHz 5.056 7 GHz 7.319 8 GHz	#VBW 300 kHz Y FUNCTION -0.729 dBm -37.178 dBm -31.214 dBm -49.154 dBm	FUNCTION WIDTH FUNC	Stop 26.50 GHz 2.530 s (10001 pts) TION VALUE
-30.0 2 -40.0 -50.0 -50.0 -70.0 Start 30 MHz #Res BW 100 kl MKR MODE TRC Scl 1 1 1 1 2 N 1 f 3 N 1 f 4 N 1 f 5 N 1 f 6 N 1 f 6 N 1 f 6 N 1 f 7 7 7 8 9 9 10 11 5 1 5 1 5 1 5 1 5 1 5 1 5 1	Hz 2.441 4 GHz 96.2 MHz 5.056 7 GHz 7.319 8 GHz	#VBW 300 kHz Y FUNCTION -0.729 dBm -37.178 dBm -31.214 dBm -49.154 dBm	FUNCTION WIDTH FUNC	Stop 26.50 GHz 2.530 s (10001 pts) TION VALUE

	Agilent Spectrum Analyzer - Swept SA M R RF 50 Ω AC Center Freq 2.480000000 C	SENSE:PULSE	ALIGNAUTO Avg Type: Log-Pwr	05:40:19 PM Jun 24, 2021 TRACE 1 2 3 4 5 6 TYPE M MMMMM DET P N N N N N	
<u> </u>	Paf Offeat 7 33 dP	PNO: Wide Trig: Free Run IFGain:Low #Atten: 30 dB	Avg Hold: 1000/1000 Mkr1 2	479 739 15 GHz	
\mathbf{G}	Ref Offset 7.33 dB 10 dB/div Ref 20.00 dBm			0.684 dBm	
	10.0	▲1			
	0.00				
	-10.0			and the second sec	
	-20.0			and the second second	
C ⁽)	-40.0				
	-50.0				
	-60.0				
	-70.0				
	Center 2.4800000 GHz #Res BW 100 kHz	#VBW 300 kHz	Sweep 1	Span 1.500 MHz .333 ms (10001 pts)	
	MSG		STATUS		
9	Agilent Spectrum Analyzer - Swept SA W/ R RF 50 Ω AC	Spurious NVNT 248		05:40:48 PMJun 24, 2021	
	Center Freq 13.265000000	GHz PNO: Fast Trig: Free Run IFGain:Low #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold: 10/10	TRACE 1 2 3 4 5 6 TYPE M WWW DET P N N N N N	
	Ref Offset 7.33 dB 10 dB/div Ref 20.00 dBm		Μ	kr1 2.481 1 GHz -2.890 dBm	
	10.0				
	-10.0			-19.32 dBm	
	-20.0				
\mathbf{G}	-30.0 2	<u>^4</u>			
<u>c</u>)	-40.0			and a sub-	
Ś	-40.0				
S)	-40.0 -60.0 -70.0 Start 30 MHz #Res BW 100 kHz	#VBW 300 KHz	-	Stop 26.50 GHz 2.530 s (10001 pts)	
	-40.0 -60.0 -60.0 -70.0 Start 30 MHz #Res BW 100 kHz MKR MODEL TRC SCL X	#VBW 300 kHz	-	Stop 26.50 GHz	
(ý) (ý)	40.0 50.0 50.0 50.0 70.0 Start 30 MHz #Res BW 100 kHz MKR MODE TRC SCL X 1 N 1 f 2.46 2 N 1 f 5.00 4 N 1 f 7.44 5 N 1 f 10.10	#VBW 300 kHz	-	Stop 26.50 GHz 2.530 s (10001 pts)	
	40.0 50.0 50.0 70.0 Start 30 MHz #Res BW 100 kHz MRR MODEL TRC SCL 1 N 1 f 2 N 1 f 3 N 1 f 5.00 4 N 1 f 7.00 7 0 8 N 1 f 1 0.10 7 0 9 9	#VBW 300 kHz 11 GHz -2.890 dBm 36.2 MHz -37.127 dBm 37.2 GHz -51.204 dBm	-	Stop 26.50 GHz 2.530 s (10001 pts)	
	40.0 50.0 50.0 70.0 Start 30 MHz #Res BW 100 kHz MKR MODE TRC SCL X 1 N 1 f 2.48 2 N 1 f 2.48 3 N 1 f 5.06 4 N 1 f 7.44 5 N 1 f 10.10 6 7 0 9 0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	#VBW 300 kHz 11 GHz -2.890 dBm 36.2 MHz -37.127 dBm 37.2 GHz -51.204 dBm	FUNCTION WIDTH FUNC	Stop 26.50 GHz 2.530 s (10001 pts)	
	40.0 50	#VBW 300 kHz 11 GHz -2.890 dBm 36.2 MHz -37.127 dBm 37.2 GHz -51.204 dBm	-	Stop 26.50 GHz 2.530 s (10001 pts)	
	40.0 50.0 50.0 70.0 Start 30 MHz #Res BW 100 kHz MKR MODE TRC SCL X 1 N 1 f 2.48 2 N 1 f 2.48 3 N 1 f 5.06 4 N 1 f 7.44 5 N 1 f 10.10 6 7 0 9 0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	#VBW 300 kHz 11 GHz -2.890 dBm 36.2 MHz -37.127 dBm 37.2 GHz -51.204 dBm	FUNCTION WIDTH FUNC	Stop 26.50 GHz 2.530 s (10001 pts)	
	40.0 50.0 50.0 70.0 Start 30 MHz #Res BW 100 kHz MKR MODE TRC SCL X 1 N 1 f 2.48 2 N 1 f 2.48 3 N 1 f 5.06 4 N 1 f 7.44 5 N 1 f 10.10 6 7 0 9 0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	#VBW 300 kHz 11 GHz -2.890 dBm 36.2 MHz -37.127 dBm 37.2 GHz -51.204 dBm	FUNCTION WIDTH FUNC	Stop 26.50 GHz 2.530 s (10001 pts)	
	40.0 50.0 50.0 70.0 Start 30 MHz #Res BW 100 kHz MKR MODE TRC SCL X 1 N 1 f 2.48 2 N 1 f 2.48 3 N 1 f 5.06 4 N 1 f 7.44 5 N 1 f 10.10 6 7 0 9 0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	#VBW 300 kHz 11 GHz -2.890 dBm 36.2 MHz -37.127 dBm 37.2 GHz -51.204 dBm	FUNCTION WIDTH FUNC	Stop 26.50 GHz 2.530 s (10001 pts)	









40 30 50 10 300 a0 80 10 50 40 30 50 10 50 40 30 50 40 30 50 40 30 50 40 30 50 40 30 50 10 mm



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