KSIGN KSIGN (Guangdong) Testing Co., Ltd. West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park,

Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, People's Republic of China Tel.: + (86)755-29852678 Fax: + (86)755-29852397 E-mail: info@gdksign.cn Website: www.gdksign.com

	TEAT DEDODT			
	TEST REPORT			
Report No:	KS2103S0650E			
FCC ID······;	2AXAV-NTG150W			
Applicant·····:	Shenzhen Teslong Technology Co.,Ltd			
Address	2nd Floor, Block 4, Jinhuafa Industrial Park, East of Donghuan 2 avenue, Longhua, Shenzhen,Chian			
Manufacturer	Shenzhen Teslong Technology Co.,Ltd			
Address	2nd Floor, Block 4, Jinhuafa Industrial Park, East of Donghuan 2 avenue, Longhua, Shenzhen,Chian			
Product Name	Borescope			
Trade Mark······:	1			
Model/Type reference	NTG150W			
Listed Model(s)	NTG150HW, NTG100HW, WF150			
Standard·····:	FCC CFR Title 47 Part 15 Subpart C Section 15.247			
Date of receipt of test sample:	Mar. 30, 2021			
Date of testing	Mar. 30, 2021~Jun.03, 2021			
Date of issue	Jun. 0 3 , 2021			
Test Result:	PASS			
Compiled by: (Printed name+signature)	Rory Huang			
Supervised by: (Printed name+signature)	Eder Zhan			
Approved by: (Printed name+signature)	Neil Wan			
Testing Laboratory Name:	KSIGN(Guangdong) Testing Co., Ltd.			
Address	West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, People's Republic of China			
This test year out more here down the stand	an analytical standard standard with the annual of the second state it is a state of the			

This test report may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by KSIGN. The test results in the report only apply to the tested sample. The test report shall be invalid without all the signatures of testing engineers, reviewer and approver. Any objections must be raised to KSIGN within 15 days since the date when the report is received. It will not be taken into consideration beyond this limit. The test report merely corresponds to the test sample.

TABLE OF CONTENTS

Page

TEST SUMMARY	
1.1. Test Standards	
1.2. REPORT VERSION	
1.3. Test Description	4
1.4. Test Facility	5
1.5. Measurement Uncertainty	6
1.6. Environmental conditions	6
2. GENERAL INFORMATION	
2.1. GENERAL DESCRIPTION OF EUT	
2.2. OPERATION STATE.	
2.3. MEASUREMENT INSTRUMENTS LIST	
2.5. TEST SOFTWARE	
3. TEST ITEM AND RESULTS	11
3.1. Antenna requirement	
3.2. PEAK OUTPUT POWER.	
3.3. Power Spectral Density	
3.4. Bandwidth	
3.5. BAND EDGE AND SPURIOUS EMISSION (CONDUCTED)	
3.6. BAND EDGE EMISSIONS(RADIATED)	
3.7. Spurious Emission (Radiated)	
3.8. Conducted Emission	63
4. EUT TEST PHOTOS	
5. PHOTOGRAPHS OF EUT CONSTRUCTIONAL	



TEST SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.247: Operation within the bands of 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz.

ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.

KDB 558074 D01 : The measurement guidance provided herein is applicable only to Digital Transmission System (DTS) devices operating in the 902-928 MHz. 2400-2483.5 MHz and/or 5725-5850 MHz bands under §15.247 of the FCC rules (Title 47 of the Code of Federal Regulations).

1.2. Report version

Revised No.	Date of issue	Description	
01	Jun. 03, 2021	Original	
	× 24		



1.3. Test Description

FCC Part 15 Subpart C(15.247)					
	Standard Section		Test		
Test Item	FCC	Result	Engineer		
Antenna Requirement	15.203	Pass	Rory Huang		
Conducted Emission	15.207	Pass	Rory Huang		
6dB&99% Bandwidth	15.247(a)(2)	Pass	Rory Huang		
Peak Output Power	15.247(b)	Pass	Rory Huang		
Power Spectral Density	15.247(e)	Pass	Rory Huang		
Restricted Band	15.247(d)/15.205	Pass	Rory Huang		
Band Edge and Spurious Emission(Conducted)	15.247(d)	Pass	Rory Huang		
Spurious Emission(Radiated)	15.247(d)&15.209	Pass	Rory Huang		

Note: The measurement uncertainty is not included in the test result.



1.4. Test Facility

Address of the report laboratory

KSIGN(Guangdong) Testing Co., Ltd.

West Side of 1/F., Building C, Zone A, Fuyuan New Factory, Jiujiu Industrial Park, Minzhu, Shatou, Shajing, Bao'an District, Shenzhen, Guangdong, People's Republic of China

Laboratory accreditation

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

CNAS-Lab Code: L13261

KSIGN(Guangdong) Testing Co., Ltd. has been assessed and proved to be in Compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No.: 5457.01

KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

IC Registration No.: CN0096

The 3m alternate test site of KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: CN0096

FCC-Registration No.: CN1272

KSIGN(Guangdong) Testing Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.



1.5. Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01" Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 2 " and is documented in the KSIGN(Guangdong) Testing Co., Ltd. system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device. Below is the best measurement capability for KSIGN(Guangdong) Testing Co., Ltd.

Test Items	Measurement Uncertainty	Notes
Transmitter power conducted	0.42 dB	(1)
Transmitter power Radiated	2.14 dB	(1)
Conducted spurious emissions 9kHz~40GHz	1.60 dB	(1)
Radiated spurious emissions 9kHz~40GHz	2.20 dB	(1)
Conducted Emissions 9kHz~30MHz	3.20 dB	(1)
Radiated Emissions 30~1000MHz	4.70 dB	(1)
Radiated Emissions 1~18GHz	5.00 dB	(1)
Radiated Emissions 18~40GHz	5.54 dB	(1)
Occupied Bandwidth	2.80 dB	(1)

Note (1): This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

1.6. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35°C
Relative Humidity:	30~60 %
Air Pressure:	950~1050mba



2. GENERAL INFORMATION

2.1. General Description of EUT

Test Sample Number:	1-1-1(Normal Sample),1-1-2(Engineering Sample)
Product Name:	Borescope
Trade Mark:	1
Model/Type reference:	NTG150W
Listed Model(s):	NTG150HW, NTG100HW, WF150
Model Different:	The difference between product models only depends on the appearance color and the model naming is different. Other power supply methods, safety structure and key components are the same, which do not affect the safety and electromagnetic compatibility performance.
Power supply(Adapter):	Model No:WF150 INPUT:DC 5V-= 500mA
Power supply(Battery):	DC 3.7V; 9.62Wh; 2600mAh
Hardware version:	V1.0
Software version:	V1.0.0
2.4GHz WIFI	
Modulation:	802.11b: DSSS(CCK, DQPSK, DBPSK) 802.11g/n: OFDM(BPSK,QPSK,16QAM,64QAM)
Operation frequency:	802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
Max Peak Output Power:	802.11b: 15.97 dBm 802.11g: 14.27 dBm 802.11n (HT20): 14.30 dBm 802.11n (HT40): 13.85 dBm
Channel number:	802.11b/g/n(HT20):11 channels 802.11n(HT40):7 channels
Test frequency:	CH01/03: 2412MHz/2422MHz; CH06: 2437MHz; CH09/11: 2452MHz/2462MHz
Channel separation:	5MHz
Antenna type:	Wire Antenna
Antenna gain:	1.0dBi



2.2. Operation State

Operation Frequency List: The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing.

Operation Frequency List:

Channel	Frequency (MHz)
01	2412
02	2417
03	2422
04	2427
05	2432
06	2437
07	2442
08	2447
09	2452
10	2457
11	2462

Note: 1.CH 01~CH 11 for 802.11b/g/n(HT20), CH03~CH09 for 802.11n(HT40). 2.The display in grey were the channel selected for testing.

Test mode

For RF test items

The engineering test program was provided and enabled to make EUT continuous transmit (duty cycle>98%).

For AC power line conducted emissions:

The EUT was set to connect with the WLAN AP under large package sizes transmission.

For Radiated spurious emissions test item:

The engineering test program was provided and enabled to make EUT continuous transmit(duty cycle>98%). The EUT in each of three orthogonal axis emissions had been tested ,but only the worst case (X axis) data Recorded in the report.



2.3. Measurement Instruments List

	Tonscend JS0806-2 Test system				
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
1	Spectrum Analyzer	R&S	FSV40-N	101798	03/22/2022
2	Vector Signal Generator	Agilent	N5182A	MY50142520	03/18/2022
3	Analog Signal Generator	HP	83752A	3344A00337	03/18/2022
4	Power Sensor	Agilent	E9304A	MY50390009	03/18/2022
5	Power Sensor	Agilent	E9300A	MY41498315	03/18/2022
6	Wideband Radio Communication Tester	R&S	CMW500	157282	03/18/2022
7	Climate Chamber	Angul	AGNH80L	1903042120	03/18/2022
8	Dual Output DC Power Supply	Agilent	E3646A	MY40009992	03/18/2022
9	RF Control Unit	Tonscend	JS0806-2	1	03/18/2022

Transmitter spurious emissions & Receiver spurious emissions					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
1	EMI Test Receiver	R&S	ESR	102525	03/18/2022
2	High Pass Filter	Chengdu E-Microwave	OHF-3-18-S	0E01901038	03/22/2022
3	High Pass Filter	Chengdu E-Microwave	OHF-6.5-18-S	0E01901039	03/22/2022
4	Spectrum Analyzer	HP	8593E	3831U02087	03/22/2022
5	Ultra-Broadband logarithmic period Antenna	Schwarzbeck	VULB 9163	01230	03/29/2023
6	Loop Antenna	Beijin ZHINAN	ZN30900C	18050	03/27/2022
7	Spectrum Analyzer	R&S	FSV40-N	101798	03/22/2022
8	Horn Antenna	Schwarzbeck	BBHA 9120 D	2023	03/29/2023
9	Pre-Amplifier	Schwarzbeck	BBV 9745	9745#129	03/22/2022
10	Pre-Amplifier	EMCI	EMC051835S E	980662	03/22/2022
11	Pre-Amplifier	Schwarzbeck	BBV-9721	57	04/06/2022
12	Horn Antenna	Schwarzbeck	BBHA 9170	00939	03/28/2022

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	LISN	R&S	ENV432	1326.6105.02	03/18/2022
2	EMI Test Receiver	R&S	ESR	102524	03/18/2022
3	Manual RF Switch	JS TOYO	1	MSW-01/002	03/18/2022

Note:

1)The Cal. Interval was one year.

2)The cable loss has calculated in test result which connection between each test instruments.



2.5. Test Software

Software name	Model	Version
Conducted emission Measurement Software	EZ-EMC	EMC-Con 3A1.1
Radiated emission Measurement Software	EZ-EMC	FA-03A.2.RE
Bluetooth and WIFI Test System	JS1120-3	2.5.77.0418



3. TEST ITEM AND RESULTS

3.1. Antenna requirement

Requirement

FCC CFR Title 47 Part 15 Subpart C Section 15.203:

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.

FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i):

(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.

Test Result

The directional gain of the antenna less than 6dBi, please refer to the EUT internal photographs antenna photo.

Note: The antenna is permanently fixed to the EUT

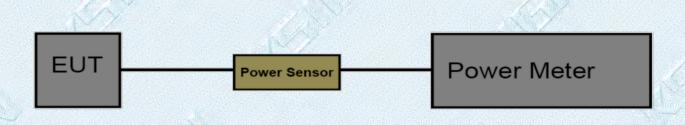


3.2. Peak Output Power

Limit

Test Item	Limit	Frequency Range(MHz)
Peak Output Power	1 Watt or 30 dBm	2400~2483.5

Test Configuration



Test Procedure

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator.
- 2. The measurement is according to ANSI C63.10 (2013) for compliance to FCC 47CFR 15.247 requirements.
- 3. Spectrum Setting:

Set analyser center frequency to DTS channel center frequency.

Set the RBW to: 1MHz Set the VBW to: 3MHz

Detector: peak

Sweep time: auto

Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

4. The power sensor video bandwidth is greater than or equal to the DTS bandwidth of the equipment.

Test Mode

Please refer to the clause 2.2

Test Result

Page 13 of 74

				®
	KE	ill	5N	20
—				

Mode	Channel frequency (MHz)	Test Result (dBm)	Limit (dBm)
	2412	15.35	
802.11b	2437	15.97	
	2462	15.41	
0.0	2412	14.00	
802.11g	2437	14.27	den a
CAR -	2462	13.63	30
	2412	13.74	30
802.11n (HT20)	2437	14.30	
	2462	13.81	
	2422	13.64	
802.11n (HT40)	2437	13.85	
20	2452	13.76	



3.3. Power Spectral Density

Limit

FCC I	Part 15 Subpart C(15.247)	
Test Item	Limit	Frequency Range(MHz)
Power Spectral Density	8dBm(in any 3 kHz)	2400~2483.5

Test Configuration

EUT	1000 A	Power Sensor	Power Meter
	a de la compañía de la		

Test Procedure

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator.

2.The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to ANSI C63.10 (2013) for compliance to FCC 47CFR 15.247 requirements.

3. Spectrum Setting:

Set analyser center frequency to DTS channel center frequency.

Set the span to 1.5 times the DTS bandwidth.

Set the RBW to: 10 kHz

Set the VBW to: 30 kHz

- Detector: peak
- Sweep time: auto

Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

Test Mode

Please refer to the clause 2.2

Test Result

Note:

Power Density(dBm/3kHz)=Power Density(dBm/10kHz)-10*Log(10/3)

Page 15 of 74

KSIGN®

est Mode:	802.11b	Mode			
Channel Frequ (MHz)	ency	Power Density (dBm/10kHz)	Power Density (dBm/3kHz)	y Limit (dBn	
2412		-8.19	-13.42		
2437	2	-7.74	-12.97	8dBm/3l	kHz
2462		-8.27	-13.50		
		24	12 MHz	6.1.9	
Spectrur Ref Leve	1 28.23 dBm	Offset 8.23 dB ● RBW 10 SWT 948 µs ● VBW 30)
Count 94/		940 pr 🖉 46 m 30	KHZ MUUE AULU FFI		
20 dBm-			M1[1]	-8.19 dBm 2.412690360 GHz	
10 dBm					
0 dBm			M1		
-10 dBm—		Name and a state of the state o	Man Managara Managara	uh Lunh I.,	2
-20 dBm-	NHANNAN MAN		Y	W NAME AND ALLAS	
-30 dBm-				V. MANANA ANA ANA ANA ANA ANA ANA ANA ANA	
-50 dBm—					
-60 dBm—					
-70 dBm CF 2.412	GHz	3	0000 pts	Span 18.32 MHz	
][]		Measuring	03.06.2021	COMES NO

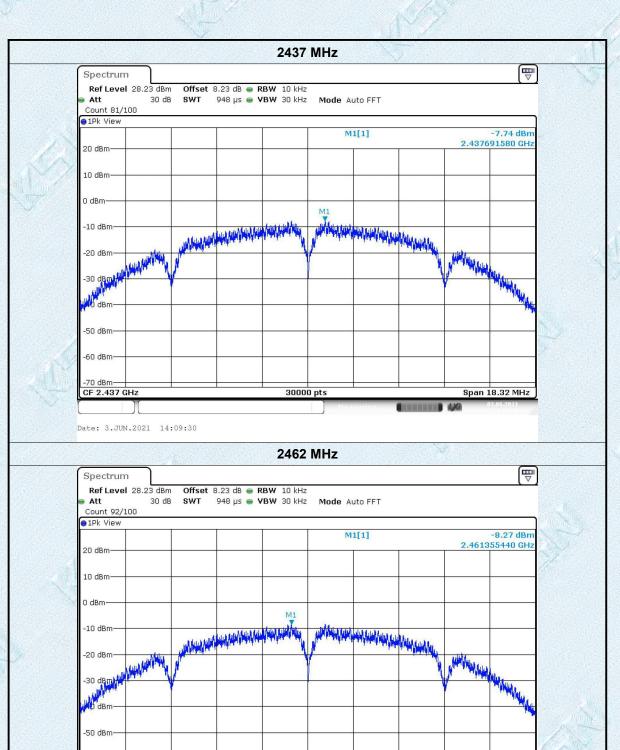
-60 dBm· -70 dBm·

CF 2.462 GHz

Date: 3.JUN.2021 14:10:55

Page 16 of 74

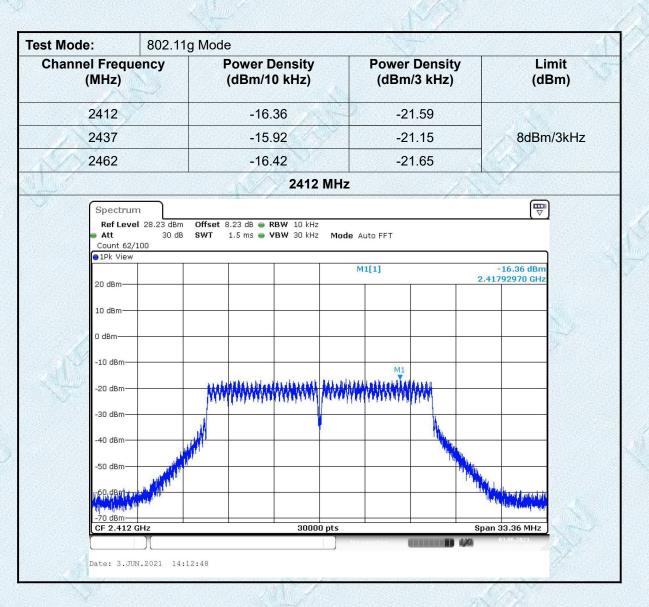
Span 18.32 MHz



30000 pts

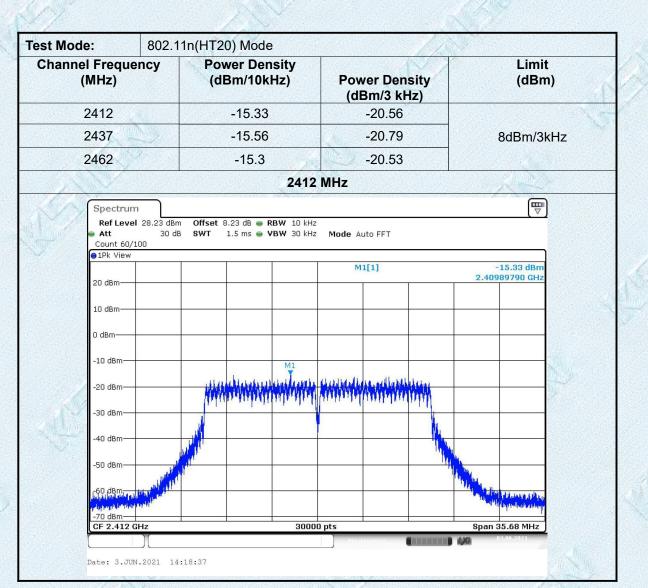
Page 17 of 74





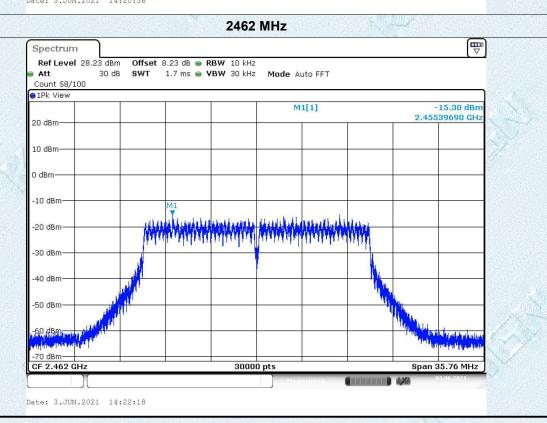
Page 18 of 74

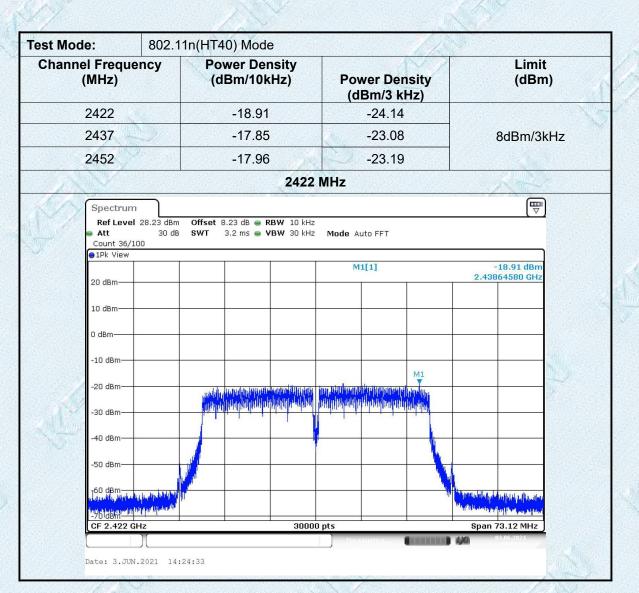
2437 MHz Spectrum Ref Level 28.23 dBm Offset 8.23 dB 👄 RBW 10 kHz Att 30 dB SWT 1.5 ms 👄 🗸 🗛 30 kHz Mode Auto FFT Count 62/100 ⊖1Pk View -15.92 dBm 2.43892970 GHz M1[1] 20 dBm· 10 dBm 0 dBm 10 dBm -20 dBm 30 dBm 40 dBm· 50 dBm 169. dBm dille to to the 4 martineta fa 70 dBm· 30000 pts Span 33.28 MHz CF 2.437 GHz Date: 3.JUN.2021 14:14:43 2462 MHz Spectrum Ref Level 28.23 dBm Offset 8.23 dB 🖷 RBW 10 kHz Att 30 dB SWT 1.5 ms 👄 **VBW** 30 kHz Mode Auto FFT Count 61/100 ●1Pk View M1[1] -16.42 dBn 2.46392990 GHz 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm-40 dBm 50 dBm· D.dBm the factor 70 dBm· 30000 pts Span 33.36 MHz CF 2.462 GHz Date: 3.JUN.2021 14:16:16



Page 20 of 74

2437 MHz Spectrum Ref Level 28.23 dBm Offset 8.23 dB 🖷 RBW 10 kHz 30 dB SWT 1.5 ms 👄 VBW 30 kHz 🛛 Mode Auto FFT Att Count 60/100 ●1Pk View -15.56 dBm 2.43477180 GHz M1[1] 20 dBm 10 dBm 0 dBm -10 dBm ANNAL TRANSPORT -20 dBm 111 -30 dBm 40 dBm -50 dBm 50 dBm+ d lades by 70 dBm· 30000 pts CF 2.437 GHz Span 35.68 MHz Date: 3.JUN.2021 14:20:36

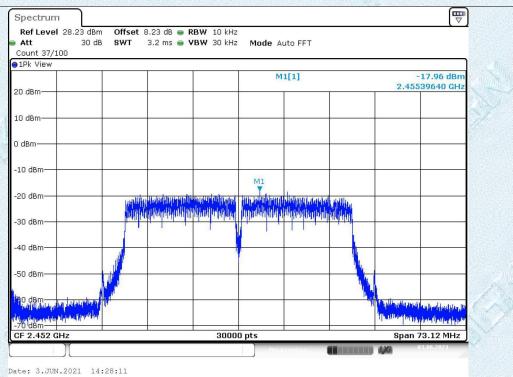




Page 22 of 74

2437 MHz Spectrum Ref Level 28.23 dBm Offset 8.23 dB 👄 RBW 10 kHz 30 dB SWT 3.2 ms 👄 VBW 30 kHz 🛛 Mode Auto FFT Att Count 37/100 ●1Pk View -17.85 dBm 2.42914570 GHz M1[1] 20 dBm 10 dBm 0 dBm -10 dBm М -20 dBm 10 PHOT INT hhanh 11.14 -30 dBm 40 dBm -50 dBm -60 dBm Lillul 78 dBm a series of the 30000 pts CF 2.437 GHz Span 73.12 MHz Date: 3.JUN.2021 14:26:40





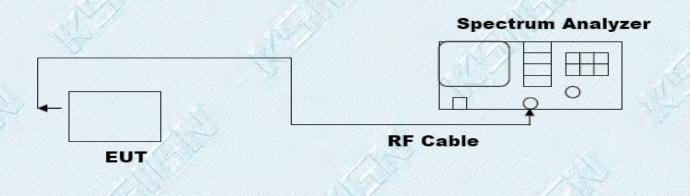


3.4. Bandwidth

Limit

Test Item	Limit	Frequency Range(MHz)
Bandwidth	>=500 KHz (6dB bandwidth)	2400~2483.5

Test Configuration



Test Procedure

1.Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator: 6db Bandwidth

- (1) Set RBW = 100 kHz.
- (2) Set the video bandwidth (VBW) \ge 3 RBW.
- (3) Detector = Peak.
- (4) Trace mode = Max hold.
- (5) Sweep = Auto couple.

NOTE: The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

Test Mode

Please refer to the clause 2.2.

Test Results

Test Mode:	802.11b Mod	le	1997			
Channel frequency (MHz)	6d		Limit (MHz)			
2412		9.160				- \5
2437		9.160			>=0.5	
2462		9.160				
	2412 M	Hz			N. C.	
Spectrum	ocorro: Anno digenerati decorro				P	
111111115-00-00-00	 RBW 100 kHz VBW 300 kHz 	Mode Auto FFT				
10 dBm	M				-5.22 dBm 74400 GHz 2.49 dBm 30400 GHz	
0 dBm D1 -3.505 dBm -10 dBm -20 dBm -2	Maranan M	Mu the	1			
-30 dBm			4			
-50 dBm			- Vin	Aren a mar	Munnenaltille	
-60 dBm						
CF 2.412 GHz	1001 pts	l		Span	40.0 MHz	
Marker Type Ref Trc X-value M1 1 2.40744 GHz M2 1 2.41304 GHz D3 M1 9.16 MHz		Function	Fund	tion Result		
Date: 3.JUN.2021 14:07:30		Measuring		4,49	3.06.2021	

Page 25 of 74

2437 MHz Spectrum Ref Level 30.00 dBm Offset 8.23 dB 👄 RBW 100 kHz 40 dB SWT 56.9 µs 👄 **VBW** 300 kHz Att Mode Auto FFT Count 100/100 ●1Pk View M1[1] 4.40 dBn 2.4324400 GHz 20 dBm· M2[1] 3.21 dBn 2.4375200 GHz 10 dBm· Maria MANN 0 dBm-D1 -2.791 dBm A.L. -10 dBm N 4 1 -20 dBm -30 dBm -40 dBm-monuman wh whitehlamen -50 dBm -60 dBm· CF 2.437 GHz 1001 pts Span 40.0 MHz Marker Type | Ref | Trc | X-value Y-value Function Function Result 2.43244 GHz 2.43752 GHz 4.40 dBm 3.21 dBm M2 1 D3 М1 9.16 MHz 0.23 dB 1.0 Date: 3.JUN.2021 14:09:13 2462 MHz Spectrum Ref Level 30.00 dBm Offset 8.23 dB 🖷 RBW 100 kHz 56.9 µs 👄 **VBW** 300 kHz Att 40 dB SWT Mode Auto FFT Count 100/100 ●1Pk View M1[1] -4.94 dBn 2.4574400 GHz 20 dBm M2[1] 2.60 dBm 2.4630400 GHz 10 dBm м2 Ма trula 0 dBm D D1 -3.396 dBm -10 dBm N ليهار -20 dBm -30 dBm 40 dBm manderson and a second mulliphen marine -50 dBm· -60 dBm-Span 40.0 MHz CF 2.462 GHz 1001 pts Marker Function Result Type Ref Trc X-value Y-value Function 2.45744 GHz -4.94 dBm M1 M2 2.46304 GHz 2.60 dBm M1 D3 9.16 MHz 0.22 dB 1

Date: 3.JUN.2021 14:10:37

KSIGN(Guangdong) Testing Co., Ltd.

III 4X

Page 26 of 74

KSIGN®

Test Mode:		802.11g Mode					
nannel frequency	(MHz)	6dB	Lim (MH:				
2412		(MHz) 16.68 16.64					
2437					>=0		
2462			16.68				
X		2412 MI	Ηz			$\langle \rangle$	
Spectrum				the second second second	an Addie seglice Re	(The second seco	
Att 40 da Count 100/100 IPk View	3 SWT 56.9 µs 👄	VBW 300 kHz	Mode Auto FFT			-16.74 dBm	
20 dBm		M2[1]			2.4036800 GHz -8.31 dBm		
10 dBm					2.4	161600 GHz	
0 dBm			M12	-			
-10 dBm-D1 -14.315	dBm M	marine a prime	anamisik Anulany	Name DB			
-20 dBm-				4			
-30 dBm	when			JAN W			
1.111	10			w	marking	multiment	
-40 dBm					treed & a		
-40 dBm					1		
-40 dBm							
-40 dBm rullwayhenwenner -50 dBm-		1001 pts				n 40.0 MHz	
-40 dBm -40 dBm -50 dBm -60 dBm -60 dBm -60 dBm CF 2.412 GHz Marker					Spai	1 40.0 MHz	
-40 dBm 	X-value	Y-value	Function	Fur		1 40.0 MHz	
-40 dBm -40 dBm -50 dBm -60 dBm -60 dBm -60 dBm CF 2.412 GHz Marker	X-value 2.40368 GHz 2.41616 GHz			Fur	Spai	1 40.0 MHz	

Page 27 of 74

2437 MHz

Spectrum	1								
Ref Leve			dB 👄 RBW 100						
Att		dB SWT 56.9	µs 👄 VBW 300 k	:Hz	Mode Au	to FFT			
Count 100,	/100								,
1Pk View									
					M1[1]			16.12 dBm
20 dBm				—				2.42	86800 GHz
					M2[1]			-7.78 dBm
10 dBm				_				2.43	45200 GHz
0 dBm			M2	+					<u> </u>
			manunanunan		merminent				
-10 dBm	D1 -13.7		Warden and a start of the start	1000	www.sumformethe	Marker OF	1 43		
	DI -13.7			¥			Ť		
-20 dBm							1		
-30 dBm		A					2 miles		
SO GDIII		N.					What is		
-40 dBm		martel		_			m		
Monor	mound	ndro						"Mundum	man
-50 dBm				—					
-60 dBm				+					
CF 2.437 C	Hz		100	01 pts				Span	40.0 MHz
1arker									
Type Re	f Trc	X-value	Y-value		Functio	in	Fun	ction Result	: 1
M1	1	2.42868 G	Hz -16.12 (dBm					
M2	1	2.43452 G							
D3 M	1 1	16.64 M	Hz 2.13	dB					

Date: 3.JUN.2021 14:14:25

Ref Lo Att Count					Mode Auto FFT			
1Pk Vi 20 dBm·	ew				M1[1]		2.45	17.42 dBm 36800 GHz -8.25 dBm 95200 GHz
) dBm— 10 dBm				M2				
20 dBm	D	1 -14.2	247 dBm		^ֈ ՠֈՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠՠ	A 3		
30 dBm 40 dBm		or which	multi manual			Made Month	man	walnu
50 dBm 60 dBm								
CF 2.40	52 GH	z		1001 pts	5		Span	40.0 MHz
larker Type	Ref	Trc	X-value	Y-value	Function	Fun	ction Result	
M1 M2 D3	M1	1 1 1	2.45368 GHz 2.45952 GHz 16.68 MHz	-17.42 dBm -8.25 dBm 0.15 dB				

Date: 3.JUN.2021 14:15:59

19								
	Test Mo	ode:		80	2.11n(H ⁻	Г20) Мс	ode	
Ch	Channel frequency (MHz)			6dB Bandwidth (MHz)				
	2412			17	.840			
	2437	7		17	.840		>=0.5	
	2462	2		17	.880			
			2412 M	Hz			J. S.	
12	Spectrum							
	Count 100/100 1Pk View			M1[1]			-14.04 dBm	
	20 dBm			M1[1]		2.4	1031200 GHz	
	10 dBm			M2[1]		2.4	-7.82 dBm 1091600 GHz	
	0 dBm		M2					
	-10 dBm-D1 -13	3.817 dBm	www.weitersterstersterstersterstersterstersters	where where the second second	ul u			
	-20 dBm				t l			
	-30 dBm	and the second s			and the second			
	-40 dBm-	whellowpoul			v1		under home the	
	-50 dBm							
Ser.	-60 dBm							
	CF 2.412 GHz		1001 pt	s		Spa	in 40.0 MHz	
9.36 81 824	Marker Type Ref Trc	X-value	Y-value	Function	Fur	nction Resu	ilt	
			-14.04 dBm					
	M1 1							
	M1 1	1 2.40916 GHz	-7.82 dBm					

Page 29 of 74

				2437 N	/Hz				
Spectrum							10180		E
Ref Level		Offset 8.	.23 dB 👄	RBW 100 kHz					
👄 Att	40 dB			VBW 300 kHz	Mode Auto	D FFT			
Count 100/	100								
					M1[1]	1			13.18 dBm
20 dBm					M2[1]	1		2.42	281200 GHz -7.15 dBm
10 dBm								2.43	841600 GHz
0 dBm									
0 dBm				M2					
-10 dBm-(01 -13.151	dBm Min	And the state of t	and a grant and a grant and a grant and a grant a g	and and the second	Male working a			
-20 dBm				-		4			
-30 dBm		"كالع				Ч	4		
10 10		. Walt					Nerver		
-40 dBm-	hankard	100 C					n.	Mr. Marchant	hamman
-50 dBm									
-60 dBm				+ +					
								_	
CF 2.437 G Marker	-lz			1001 p	ts			Span	40.0 MHz
Type Ref		X-value		Y-value	Function	1	Funct	ion Result	t l
M1 M2	1	2.4281		-13.18 dBm -7.15 dBm					
D3 M1	1		4 MHz	-1.25 dB					
-							the state of the s	4.144	03.06.2021
Date: 3.JUN	.2021 14	:20:18	Ň	2462 M	Neasuri AHz				1420.18
		:20:18		2462 N	Neasuri				
Spectrum					Measuri ЛНz				
		Offset 8.		RBW 100 kHz				22	
Spectrum Ref Level Att Count 100/	30.00 dBm 40 dB	Offset 8.						//	 Ţ
Spectrum Ref Level Att	30.00 dBm 40 dB	Offset 8.		RBW 100 kHz	Mode Auto) FFT		23	
Spectrum Ref Level Att Count 100/	30.00 dBm 40 dB	Offset 8.		RBW 100 kHz	Mode Auto	o FFT		12	-16.12 dBm 530800 GHz
Spectrum Ref Level Att Count 100/ 1Pk View 20 dBm	30.00 dBm 40 dB	Offset 8.		RBW 100 kHz	Mode Auto	o FFT		2.45	-16.12 dBm
Spectrum Ref Level Att Count 100/ 1Pk View	30.00 dBm 40 dB	Offset 8.		RBW 100 kHz	Mode Auto	o FFT		2.45	-16.12 dBm 530800 GHz -7.71 dBm
Spectrum Ref Level Att Count 100/ 1Pk View 20 dBm	30.00 dBm 40 dB	Offset 8.		RBW 100 kHz	Mode Auto	o FFT		2.45	-16.12 dBm 530800 GHz -7.71 dBm
Spectrum Ref Level Att Count 100/ 1Pk View 20 dBm 10 dBm -10 dBm	30.00 dBm 40 dB	Offset 8. SWT 50		RBW 100 kHz VBW 300 kHz	Mode Auto	o FFT		2.45	-16.12 dBm 530800 GHz -7.71 dBm
Spectrum Ref Level Att Count 100/ 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm	30.00 dBm 40 dB	Offset 8. SWT 50	6.9 µs 👄	RBW 100 kHz VBW 300 kHz	Mode Auto	o FFT		2.45	-16.12 dBm 530800 GHz -7.71 dBm
Spectrum Ref Level Att Count 100/ 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm	30.00 dBm 40 dB	Offset 8. SWT 50	6.9 µs 👄	RBW 100 kHz VBW 300 kHz	Mode Auto	D FFT		2.45	-16.12 dBm 530800 GHz -7.71 dBm
Spectrum Ref Level Att Count 100/ 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm	30.00 dBm 40 dB	Offset 8. SWT 50	6.9 µs 👄	RBW 100 kHz VBW 300 kHz	Mode Auto	D FFT		2.45	-16.12 dBm 530800 GHz -7.71 dBm
Spectrum Ref Level Att Count 100/ 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm	30.00 dBm 40 dB 100	dBm Mpt	6.9 µs 👄	RBW 100 kHz VBW 300 kHz	Mode Auto	D FFT		2.45	-16.12 dBm 330800 GHz -7.71 dBm 91600 GHz
Spectrum Ref Level Att Count 100/ PIPk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	30.00 dBm 40 dB 100	dBm Mpt	6.9 µs 👄	RBW 100 kHz VBW 300 kHz	Mode Auto	D FFT		2.45	-16.12 dBm 530800 GHz -7.71 dBm
Spectrum Ref Level Att Count 100/ 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm	30.00 dBm 40 dB 100	dBm Mpt	6.9 µs 👄	RBW 100 kHz VBW 300 kHz	Mode Auto	D FFT		2.45	-16.12 dBm 330800 GHz -7.71 dBm 91600 GHz
Spectrum Ref Level Att Count 100/ 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	30.00 dBm 40 dE 100	dBm Mpt	6.9 µs 👄	RBW 100 kHz VBW 300 kHz	Mode Auto	D FFT		2.45	-16.12 dBm 330800 GHz -7.71 dBm 91600 GHz
Spectrum Ref Level Att Count 100/ 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm	30.00 dBm 40 dE 100	dBm Mpt	6.9 µs 👄	RBW 100 kHz VBW 300 kHz	Mode Auto	D FFT		2.45 2.45	-16.12 dBm 330800 GHz -7.71 dBm 91600 GHz
Spectrum Ref Level Att Count 100/ IPk View 20 dBm 10 dBm 0 dBm -20 dBm -20 dBm -30 dBm -40 dBm -60 dBm -60 dBm CF 2.462 G Marker	30.00 dBm 40 dE 100 01 -13.707 m/w/~/w/~~//	dBm Mgrad	6.9 μs 📦 	RBW 100 kHz VBW 300 kHz	Mode Auto	D FFT	And a start of the	2.45 2.45 2.45 Span	16.12 dBm 530800 GHz -7.71 dBm 591600 GHz
Spectrum Ref Level Att Count 100/ 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -60 dBm -60 dBm	30.00 dBm 40 dE 100 01 -13.707 m/w/~/w/~~//	dBm Method Market Market Market Market Market Market Market Market Market Market X-value	6.9 µs 📦	RBW 100 kHz VBW 300 kHz	Mode Auto	D FFT	And a start of the	2.45 2.45	16.12 dBm 530800 GHz -7.71 dBm 591600 GHz
Spectrum Ref Level Att Count 100/ IPk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -60 dBm CF 2.462 GI Marker Type Marker M2	30.00 dBm 40 dE 00 01 -13.707 אرالالرسال	Contraction of the second seco	6.9 μs	RBW 100 kHz VBW 300 kHz	Mode Auto	D FFT	And a start of the	2.45 2.45 2.45 Span	16.12 dBm 530800 GHz -7.71 dBm 591600 GHz
Spectrum Ref Level Att Count 100/ 1Pk View 20 dBm 10 dBm -10 dBm -10 dBm -20 dBm -30 dBm -50 dBm -50 dBm -60 dBm -60 dBm CF 2.462 GI Marker Type Ref M1	30.00 dBm 40 dE 00 01 -13.707 אرالالرسال	Contraction of the second seco	6.9 μs	RBW 100 kHz VBW 300 kHz	Mode Auto	D FFT	And a start of the	2.45 2.45 Span	16.12 dBm 530800 GHz -7.71 dBm 591600 GHz

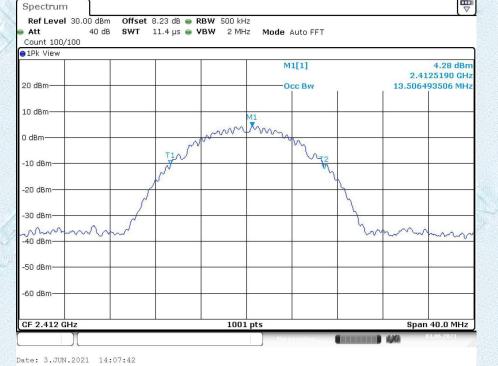
Page 30 of 74



Page 31 of 74

1			2437 MHz		X	
	Gaustin				The second se	ה
	Spectrum Ref Level 30.00 dB Att 40 c Count 100/100		RBW 100 kHz VBW 300 kHz Mode A	uto FFT]
	1Pk View 20 dBm		MI	[1]	-17.98 dBm 2.4187600 GHz	A MARCHINE PROVIDE
	10 dBm-		M2	2[1]	-10.76 dBm 2.4405200 GHz	201422 012 V V V V V
	0 dBm		M2			
	-20 dBm D1 -16.75	9 dBm	chementational performance	man man and the second se		
ijus -	-30 dBm			h.		
	-40 dBm- Winghoweryn yn wrain yn	Mushultur		lm,	www.anandlockstananal	- -
	-60 dBm					-
	CF 2.437 GHz Marker Type Ref Trc	X-value	1001 pts Y-value Funct	ion	Span 80.0 MHz	
	M1 1 M2 1 D3 M1	2.41876 GHz 2.44052 GHz 36.56 MHz	-17.98 dBm -10.76 dBm -0.52 dB			2005
		30.30 MH2	-0.32 UB 	suring	03.06.2021	
10	Date: 3.JUN.2021 1	4:26:23				
the Mari		No.	2452 MHz		128	
10	Spectrum)
	Ref Level 30.00 dB Att 40 c Count 100/100		RBW 100 kHz VBW 300 kHz Mode A	uto FFT		
	1Pk View		MI	.[1]	-17.51 dBm	
	20 dBm			2[1]	2.4337600 GHz -11.39 dBm 2.4472800 GHz	
	10 dBm					
	-10 dBm	The second se	M2	un norman and manufactures		X
	-20 dBm		V	1		<u> </u>
	-40 dBm	mater			Un manufacture and and an	, ,
	-50 dBm					
	CF 2.452 GHz		1001 pts		Span 80.0 MHz	J
	Marker Type Ref Trc M1 1	X-value 2.43376 GHz	Y-value Funct	ion Fu	inction Result	
						and a construction of the local states of the
	M2 1 D3 M1 1	2.44728 GHz 36.56 MHz	-11.39 dBm -0.86 dB			1
		36.56 MHz		aving) (2 03.05.2021	$\langle \rangle$

Test Mode:	802.11b Mode	Э
Channel frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	13.506	
2437	13.427	>=0.5
2462	13.506	
	2412 MHz	



Page 33 of 74

			2437	MHz			
	Spectrum					E	
	Ref Level 30.00 d		dB 🖷 RBW 500 kHz				
	Att 40 Count 100/100	dB SWT 11.4	µs 👄 VBW 2 MHz	MOGE AUTO FFT			
	●1Pk View	1 1	· · ·			and the second	
				M1[1]		4.78 dBm 2.4375190 GHz	
	20 dBm			Occ Bw		26573427 MHz	
	10 dBm			11 Xmm			
	0 dBm		m	min			
120		т	w	· √Ţ2			
16.7	-10 dBm	~	7	h			
10	-20 dBm-				N.		
		5			5		
	-30 dBm				4		
	-40 dBm	m			mm	m	
	-50 dBm				+		
	co dom						
	-60 dBm						
						40.01	
	CF 2.437 GHz		1001	prs	5	pan 40.0 MHz	
	Date: 3.JUN.2021	14:09:24					
<u>n</u>	Date: 3.JUN.2021	14:09:24	0400	M11-			
	Date: 3.JUN.2021	14:09:24	2462	MHz	1	XX_	
	Spectrum						
	Spectrum Ref Level 30.00 d	Bm Offset 8.23	dB 🖷 RBW 500 kHz		1	(THE STREET	
P	Spectrum Ref Level 30.00 d Att 40 Count 100/100	Bm Offset 8.23					
	Spectrum Ref Level 30.00 d Att 40	Bm Offset 8.23	dB 🖷 RBW 500 kHz	Mode Auto FFT	/		
ţ	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View	Bm Offset 8.23	dB 🖷 RBW 500 kHz	Mode Auto FFT M1[1]		4.23 dBm 2.4625190 GHz	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100	Bm Offset 8.23	dB 🖷 RBW 500 kHz	Mode Auto FFT		4.23 dBm	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View	Bm Offset 8.23	dB • RBW 500 kHz μs • VBW 2 MHz	Mode Auto FFT M1[1] Occ Bw		4.23 dBm 2.4625190 GHz	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View 20 dBm 10 dBm	Bm Offset 8.23	dB • RBW 500 kHz μs • VBW 2 MHz	Mode Auto FFT M1[1] OCC Bw		4.23 dBm 2.4625190 GHz	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View 20 dBm	Bm Offset 8.23 dB SWT 11.4	dB • RBW 500 kHz µs • VBW 2 MHz	Mode Auto FFT M1[1] Occ Bw		4.23 dBm 2.4625190 GHz	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View 20 dBm 10 dBm 0 dBm	Bm Offset 8.23 dB SWT 11.4	dB ● RBW 500 kHz µs ● VBW 2 MHz	Mode Auto FFT M1[1] Occ Bw		4.23 dBm 2.4625190 GHz	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View 20 dBm 10 dBm	Bm Offset 8.23 dB SWT 11.4	dB • RBW 500 kHz µs • VBW 2 MHz	Mode Auto FFT 		4.23 dBm 2.4625190 GHz	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View 20 dBm 10 dBm 0 dBm	Bm Offset 8.23 dB SWT 11.4	dB • RBW 500 kHz µs • VBW 2 MHz	Mode Auto FFT 		4.23 dBm 2.4625190 GHz	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	Bm Offset 8.23 dB SWT 11.4	dB • RBW 500 kHz µs • VBW 2 MHz	Mode Auto FFT 		4.23 dBm 2.4625190 GHz	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	Bm Offset 8.23 dB SWT 11.4	dB • RBW 500 kHz µs • VBW 2 MHz	Mode Auto FFT 		4.23 dBm 2.4625190 GHz	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	Bm Offset 8.23 dB SWT 11.4	dB • RBW 500 kHz µs • VBW 2 MHz	Mode Auto FFT 		4.23 dBm 2.4625190 GHz	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	Bm Offset 8.23 dB SWT 11.4	dB • RBW 500 kHz µs • VBW 2 MHz	Mode Auto FFT 		4.23 dBm 2.4625190 GHz	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	Bm Offset 8.23 dB SWT 11.4	dB • RBW 500 kHz µs • VBW 2 MHz	Mode Auto FFT 		4.23 dBm 2.4625190 GHz	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -50 dBm	Bm Offset 8.23 dB SWT 11.4	dB • RBW 500 kHz µs • VBW 2 MHz	Mode Auto FFT 		4.23 dBm 2.4625190 GHz	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	Bm Offset 8.23 dB SWT 11.4	dB • RBW 500 kHz µs • VBW 2 MHz	Mode Auto FFT 		4.23 dBm 2.4625190 GHz	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -50 dBm -60 dBm	Bm Offset 8.23 dB SWT 11.4	dB • RBW 500 kHz µs • VBW 2 MHz	Mode Auto FFT M1[1] Occ Bw 11 Multiple		4.23 dBm 2.4625190 GHz 06493506 MHz	
	Spectrum Ref Level 30.00 d Att 40 Count 100/100 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -50 dBm	Bm Offset 8.23 dB SWT 11.4	dB • RBW 500 kHz µs • VBW 2 MHz	Mode Auto FFT M1[1] Occ Bw 11 Multiple		4.23 dBm 2.4625190 GHz	



Test Mode:	802.11	g Mode
Channel frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	17.303	
2437	17.423	>=0.5
2462	17.263	
24	12 MHz	
Spectrum		P
Ref Level 30.00 dBm Offset 8.23 dB • RBW 50 • Att 40 dB SWT 11.4 μs • VBW Count 100/100	10 kHz 2 MHz – Mode Auto FFT	
1Pk View		
20 dBm	M1[1] Occ Bw 17	-1.22 dBm 2.4135580 GHz 7.302697303 MHz
10 dBm		
0 dBm	M1	
-10 dBm		
-20 dBm-		
-30 dBm		
-40 dBm	M	mm
-50 dBm		
-60 dBm-		
CF 2.412 GHz	1001 pts	Span 40.0 MHz
	Measuring	03.06.2021

Page 35 of 74

2437 MHz



Channel frequency (MHz) (MHz) (MH 2412 18.262 2437 18.262 >=0. 2437 18.262 >=0. 2462 18.302 >=0. 2462 18.302 2412 MHz Image: Constant of the state of the st	Test Mode:	802.11n	(HT20) Mode
2437 18.262 >=0. 2462 18.302 2412 MHz 2412 MHz Image: Constraint of the second	Channel frequency (MHz)		Limit (MHz
2462 2412 MHz Spectrum Ref Level 30.00 dbm Offset 8.23 db • RBW 500 kHz Att 0db SWT 11.4 µs • VBW 2 MHz Mode Auto FFT Count 100/100 • IPk View 0 dbm 0 dbm 0 dbm -10 dbm -20 dbm -30 dbm -50 dbm -50 dbm	2412	18.262	
2412 MHz Spectrum Ref Level 30.00 dBm Offset 8.23 dB e RBW 500 kHz Att 40 dB SWT 11.4 µs VBW 2 MHz Mode Auto FFT Count 100/100 IPk View 20 dBm 0 dBm 0 dBm 0 dBm -0 dBm -0 dBm -0 dBm -0 dBm -0 dBm -0 dBm	2437	18.262	>=0.5
Spectrum Mile Ref Level 30.00 dBm Offset 8.23 dB • RBW 500 kHz Att 40 dB SWT 11.4 µs VBW 2 MHz Mode Auto FFT Count 100/100 • IPk View MI[1] -0.92 dBr 2.4072050 GH 20 dBm Occ Bw 18.261738262 MH 0 18.261738262 MH 10 dBm MI - - - - -0 dBm MI - - - - -0 dBm MI - - - - -0 dBm - - - - - - -0 dBm - - - - - - - -0 dBm - - - - - - - -0 dBm - - - - - - - -0 dBm - - - - - - -	2462	18.302	- And
Ref Level 30.00 dBm Offset 8.23 dB RBW 500 kHz Att 40 dB SWT 11.4 µs VBW 2 MHz Mode Auto FFT Count 100/100 Image: state stat		2412 MHz	- AR
20 dBm -0.92 dBr 20 dBm Occ Bw 10 dBm M1 0 dBm M1 -10 dBm -0.92 dBr -20 dBm -0.92 dBr -20 dBm -0.92 dBr -30 dBm -0.92 dBr -50 dBm -0.92 dBr	Ref Level 30.00 dBm Offset 8.23 dB R Att 40 dB SWT 11.4 µs V Count 100/100		
0 dBm -10 dBm -20 dBm -30 dBm -50 dBm -50 dBm			-0.92 dBm 2.4072050 GHz 18.261738262 MHz
0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm			
-30 dBm -40 dBm -50 dBm	0 dBm	the second s	
-50 dBm	-20 dBm		
			home
-60 dBm	-50 dBm		
	-60 dBm		
CF 2.412 GHz 1001 pts Span 40.0 MHz	GF 2.412 GHz	1001 pts	Span 40.0 MHz

Page 37 of 74

Spectrum)						E
Ref Level 30.0	0 dBm Offset :			Mode Auto FFT			
Count 100/100	IC CD DAI	11.1 ps 🖕 10	2 1002	Mode Adto PPT			
●1Pk View				M1[1]			-0.72 dBm
20 dBm				Occ Bw			36430 GHz 38262 MHz
10 dBm							
0 dBm		m	11	mann.	~		
-10 dBm	T1		ur .		72		
-20 dBm							
-30 dBm							
-40 dBm	~~					m	www
-50 dBm							
-60 dBm							
CF 2.437 GHz			1001 pt	S Measuring			40.0 MHz
	1 14:20:29		1001 pt	S Measuring			40.0 MHz
CF 2.437 GHz	1 14:20:29			Measuring	••••••		40.0 MHz 13.06.2021
	1 14:20:29		1001 pt	Measuring			13.06.2021
Date: 3.JUN.202)		2462 N	Measuring			40.0 MH2 3.06.2021
Date: 3.JUN.202	0 dBm Offset :		2462 N w 500 kHz	Measuring			13.06.2021
Date: 3.JUN.202 Spectrum Ref Level 30.0	0 dBm Offset :		2462 N w 500 kHz	Measuring			13.06.2021
Date: 3.JUN.202 Spectrum Ref Level 30.0 Att Count 100/100	0 dBm Offset :		2462 N w 500 kHz	Measuring			-0.91 dBm
Date: 3.JUN.202 Spectrum Ref Level 30.0 Att Count 100/100	0 dBm Offset :		2462 N w 500 kHz	Measuring.		2.45	33.06.2023 } }
Date: 3.JUN.202 Spectrum Ref Level 30.0 • Att Count 10D/100 • 1Pk View	0 dBm Offset :		2462 N w 500 kHz	Mode Auto FFT		2.45	-0.91 dBm 71650 GHz
Date: 3.JUN.202 Date: 3.JUN.202 Spectrum Ref Level 30.0 Att Count 100/100 1Pk View 20 dBm 10 dBm	0 dBm Offset :		2462 N w 500 kHz	Mode Auto FFT		2.45	-0.91 dBm 71650 GHz
Date: 3.JUN.202 Spectrum Ref Level 30.0 • Att Count 100/100 • 1Pk View 20 dBm	0 dBm Offset 1 40 dB SWT	11.4 µs • VB	2462 N w 500 kHz	Mode Auto FFT MI[1] Occ Bw		2.45	-0.91 dBm 71650 GHz
Date: 3.JUN.202 Date: 3.JUN.202 Spectrum Ref Level 30.0 Att Count 100/100 1Pk View 20 dBm 10 dBm	0 dBm Offset :	11.4 μs • VB	2462 N w 500 kHz w 2 MHz	Mode Auto FFT MI[1] Occ Bw		2.45	-0.91 dBm 71650 GHz
Date: 3.JUN.202 Date: 3.JUN.202 Spectrum Ref Level 30.0 Att Count 10D/100 1Pk View 20 dBm 10 dBm 0 dBm	0 dBm Offset 1 40 dB SWT	11.4 μs • VB	2462 N w 500 kHz w 2 MHz	Mode Auto FFT MI[1] Occ Bw		2.45	-0.91 dBm 71650 GHz
Date: 3.JUN.202 Date: 3.JUN.202 Spectrum Ref Level 30.0 Att Count 100/100 1Pk View 20 dBm 10 dBm 10 dBm 10 dBm -10 dBm -20 dBm	0 dBm Offset 1 40 dB SWT	11.4 μs • VB	2462 N w 500 kHz w 2 MHz	Mode Auto FFT MI[1] Occ Bw		2.45	-0.91 dBm 71650 GHz
Date: 3.JUN.202 Date: 3.JUN.202 Spectrum Ref Level 30.0 Att Count 100/100 1Pk View 20 dBm 10 dBm 10 dBm 10 dBm -10 dBm	0 dBm Offset 1 40 dB SWT	11.4 μs • VB	2462 N w 500 kHz w 2 MHz	Mode Auto FFT MI[1] Occ Bw		2.45 18.3016	-0.91 dBm 71650 GHz 98302 MHz
Date: 3.JUN.202 Date: 3.JUN.202 Spectrum Ref Level 30.0 Att Count 100/100 1Pk View 20 dBm 10 dBm 10 dBm 10 dBm -10 dBm -20 dBm	0 dBm Offset 1 40 dB SWT	11.4 μs • VB	2462 N w 500 kHz w 2 MHz	Mode Auto FFT MI[1] Occ Bw		2.45 18.3016	-0.91 dBm 71650 GHz
Date: 3.JUN.202 Date: 3.JUN.202 Spectrum Ref Level 30.0 Att Count 100/100 IPk View 20 dBm 10 dBm 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm	0 dBm Offset 1 40 dB SWT	11.4 μs • VB	2462 N w 500 kHz w 2 MHz	Mode Auto FFT MI[1] Occ Bw		2.45 18.3016	-0.91 dBm 71650 GHz 98302 MHz
Date: 3.JUN.202	0 dBm Offset 1 40 dB SWT	11.4 μs • VB	2462 N w 500 kHz w 2 MHz	Mode Auto FFT MI[1] Occ Bw		2.45 18.3016	-0.91 dBm 71650 GHz 98302 MHz
Date: 3.JUN.202 Date: 3.JUN.202 Spectrum Ref Level 30.0 Att Count 100/100 IPk View 20 dBm 10 dBm 10 dBm 20 dBm -10 dBm -20 dBm -30 dBm -40 dBm	0 dBm Offset 1 40 dB SWT	11.4 μs • VB	2462 N w 500 kHz w 2 MHz	Mode Auto FFT MI[1] Occ Bw		2.45 18.3016	-0.91 dBm 71650 GHz 98302 MHz

Test Mode:	802.11n(H	T40) Mode
Channel frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz
2422	36.284	
2437	36.444	>=0.5
2452	36.284	
128	2422 MHz	
Spectrum	a de la companya de La companya de la comp	
1 50° (010)	B RBW 1 MHz s VBW 3 MHz Mode Auto FFT	
20 dBm-	M1[1] Occ Bw	-0.74 dBm 2.4250370 GHz 36.283716284 MHz
10 dBm		
0 dBm	mm mm mm	
-10 dBm		
-20 dBm		
-30 dBm		mmm
-40 dBm		
-50 dBm		
-60 dBm		
CF 2.422 GHz	1001 pts	Span 80.0 MHz

Page 39 of 74

			1000	2437	IVINZ		100			`
Spectru										
Ref Lev	el 30.00 dBm 40 dB		8.23 dB 👄 R 11.4 us 👄 V	BW 1 MHz BW 3 MHz	Mode AL	to FFT				
Count 10	0/100				Hode Ho					
●1Pk Viev	(5.4	4541			0.06 dp	
					IVI	1[1]		2.44	-0.36 dBm 23550 GHz	
20 dBm-					0	CC BW			56444 MHz	
10 dBm-										
TO UBIII-										
0 dBm	_			harm	M1	2.0.00				
1.2		Ţ	MAL.		[~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	12			
-10 dBm—							1			
-20 dBm-										
20 dbm										
-30 dBm-	-									
mm	m	1					N	mm	m	
-40 dBm-										
-50 dBm-										
-60 dBm-										
										4022
CF 2.437	GHz			1001	pts			Span	80.0 MHz	ACCORT.
	UN.2021 14	:26:34	X	séar papraliterar	Moa	suring		4/0	13.06.2021	
Date: 3.J	JN.2021 14	:26:34		2452	Moa	suring			13.06.2021	
Date: 3.J			3.23 dB 🖷 R	2452	Moa	suring			13.06.2021]
Date: 3.J	m el 30.00 dBm 40 dB	Offset 8		2452	MHz				13.06.2021]
Date: 3.J	m 81 30.00 dBm 40 dB 0/100	Offset 8		2452 BW 1 MHz	MHz				13.06.2021]
Date: 3.J Date: 3.J Spectru Ref Lev Att Count 10	m 81 30.00 dBm 40 dB 0/100	Offset 8		2452 BW 1 MHz	MHZ Mode Au			/ 3	-0.65 dBm	
Date: 3.J Date: 3.J Spectru Ref Lev Att Count 10	m 81 30.00 dBm 40 dB 0/100	Offset 8		2452 BW 1 MHz	MHZ Mode Au	to FFT		2.45	•	
Date: 3.J Spectru Ref Lev Att Count 10 9 1Pk View	m 81 30.00 dBm 40 dB 0/100	Offset 8		2452 BW 1 MHz	MHZ Mode Au	to FFT		2.45	-0.65 dBm 41580 GHz	
Date: 3.J Spectru Ref Lev Att Count 10 9 1Pk View	m 81 30.00 dBm 40 dB 0/100	Offset 8		2452 BW 1 MHz	MHZ Mode Au	to FFT		2.45	-0.65 dBm 41580 GHz	
Date: 3.J Date: 3.J Ref Lev Att Count 10 1Pk View 20 dBm- 10 dBm-	m 81 30.00 dBm 40 dB 0/100	Offset 8		2452 BW 1 MHz	MHZ Mode Au	to FFT		2.45	-0.65 dBm 41580 GHz	
Date: 3.J Date: 3.J Ref Lev Att Count 10 1Pk View 20 dBm—	m 81 30.00 dBm 40 dB 0/100	Offset 8	11.4 μs • V	2452 BW 1 MHz	MHz Mode Au	to FFT 1[1] CC BW		2.45	-0.65 dBm 41580 GHz	
Date: 3.J Date: 3.J Ref Lev Att Count 10 1Pk View 20 dBm- 10 dBm-	m 81 30.00 dBm 40 dB 0/100	Offset 8 SWT 1	11.4 μs • V	2452 BW 1 MHz	MHz Mode Au	to FFT 1[1] CC Bw		2.45	-0.65 dBm 41580 GHz	
Date: 3.J Date: 3.J Ref Lev Att Count 10 1Pk View 20 dBm- 10 dBm- -10 dBm-	m 81 30.00 dBm 40 dB 0/100	Offset 8 SWT 1	11.4 μs • V	2452 BW 1 MHz	MHz Mode Au	to FFT 1[1] CC Bw		2.45	-0.65 dBm 41580 GHz	
Date: 3.J Date: 3.J Ref Lev Att Count 10 1Pk View 20 dBm- 10 dBm- 0 dBm-	m 81 30.00 dBm 40 dB 0/100	Offset 8 SWT 1	11.4 μs • V	2452 BW 1 MHz	MHz Mode Au	to FFT 1[1] CC Bw		2.45	-0.65 dBm 41580 GHz	
Date: 3.J Date: 3.J Ref Lev Att Count 10 1Pk View 20 dBm- 10 dBm- 10 dBm- -10 dBm- -20 dBm-	m 81 30.00 dBm 40 dB 0/100	Offset 8 SWT 1	11.4 μs • V	2452 BW 1 MHz	MHz Mode Au	to FFT 1[1] CC Bw		2.45	-0.65 dBm 41580 GHz	
Date: 3.J Date: 3.J Ref Lev Att Count 10 1Pk View 20 dBm- 10 dBm- -10 dBm-		Offset 8 SWT 1	11.4 μs • V	2452 BW 1 MHz	MHz Mode Au	to FFT 1[1] CC Bw		2.45 36.2837	-0.65 dBm 41580 GHz	
Date: 3.J Date: 3.J Ref Lev Att Count 10 1Pk View 20 dBm— 10 dBm— 10 dBm— -10 dBm— -20 dBm— -30 dBm—		Offset 8 SWT 1	11.4 μs • V	2452 BW 1 MHz	MHz Mode Au	to FFT 1[1] CC Bw		2.45	-0.65 dBm 41580 GHz 16284 MHz	
Date: 3.J Date: 3.J Ref Lev Att Count 10 1 Pk View 20 dBm- 10 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm- -40 dBm-		Offset 8 SWT 1	11.4 μs • V	2452 BW 1 MHz	MHz Mode Au	to FFT 1[1] CC Bw		2.45 36.2837	-0.65 dBm 41580 GHz 16284 MHz	
Date: 3.J Date: 3.J Ref Lev Att Count 10 1 Pk View 20 dBm- 10 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm-		Offset 8 SWT 1	11.4 μs • V	2452 BW 1 MHz	MHz Mode Au	to FFT 1[1] CC Bw		2.45 36.2837	-0.65 dBm 41580 GHz 16284 MHz	
Date: 3.J Date: 3.J Ref Lev Att Count 10 1 Pk View 20 dBm- 10 dBm- 10 dBm- -10 dBm- -20 dBm- -30 dBm- -40 dBm-		Offset 8 SWT 1	11.4 μs • V	2452 BW 1 MHz	MHz Mode Au	to FFT 1[1] CC Bw		2.45 36.2837	-0.65 dBm 41580 GHz 16284 MHz	
Date: 3.J Date: 3.J Ref Lev Att Count 10 1Pk View 20 dBm— 10 dBm— 10 dBm— -10 dBm— -20 dBm— -30 dBm— -40 dBm— -50 dBm—		Offset 8 SWT 1	11.4 μs • V	2452 BW 1 MHz	MHz Mode Au	to FFT 1[1] CC Bw		2.45 36.2837	-0.65 dBm 41580 GHz 16284 MHz	
Date: 3.J Date: 3.J Ref Lev Att Count 10 1Pk View 20 dBm— 10 dBm— 10 dBm— -10 dBm— -20 dBm— -30 dBm— -40 dBm— -50 dBm—	UN.2021 14:	Offset 8 SWT 1	11.4 μs • V	2452 BW 1 MHz	MHZ Mode Au	to FFT 1[1] CC BW		2.45 36.2837	-0.65 dBm 41580 GHz 16284 MHz	





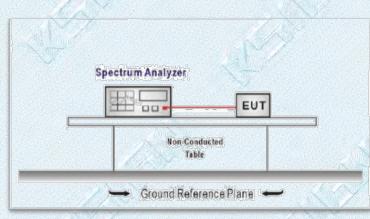
3.5. Band edge and Spurious Emission (Conducted)

Limit

FCC CFR Title 47 Part 15 Subpart C Section15.247 (d):

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

Test Configuration



Test Procedure

1. Connect EUT RF Output port to the Spectrum Analyzer through an RF attenuator.

2. Spectrum Setting: RBW=100KHz VBW=300KHz. Detector function: Peak. Trace: Max hold. Sweep = Auto couple.

Allow the trace to stabilize.

Test Mode

Please refer to the clause 2.2.

Test Results