

# CTC Laboratories, Inc.

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TEST REPORT					
Report No	CTC20220995E03				
FCC ID:	2AC88-GLMG21A01				
IC:	24230-GLMG21A01				
Applicant:	HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED				
Address	Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong				
Manufacturer	HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED				
Address	Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong				
Product Name:	4G Wireless Data Terminal				
Trade Mark	GlocalMe				
Model/Type reference :	GLMG21A01				
Listed Model(s)	1				
Standard:	FCC Part 15 Subpart E 15. 407				
Date of receipt of test sample:	May. 18, 2022				
Date of testing	May. 18, 2022 to Jun. 10, 2022				
Date of issue	Jun. 11, 2022				
Result	PASS				
Compiled by:					
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Testing Laboratory Name:	CTC Laboratories, Inc.				
Address	1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China				
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EN

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# 1. TEST SUMMARY

# 1.1. Test Standards

The tests were performed according to following standards:

<u>FCC Part 15, Subpart E(15.407)</u> — for 802.11a/n/ac, the test procedure follows the FCC KDB 789033 D02 General UNII Test Procedures New Rules V02r01.

<u>RSS-247\_Issue 2 February 2017</u> — Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices

<u>RSS-Gen</u> — General Requirements for Compliance of Radio Apparatus KDB 662911 D01: Multiple Transmitter Output v02r01.

# 1.2. Report version

Revised No.	Date of issue	Description
01	Jun. 11, 2022 Original	



# 1.3. Test Description

FCC Part 15 Subpart E (15.407) / RSS-247 Issue 2 February 2017						
Test Item	Test re	equire	Decult	Test		
rest item	FCC IC		Result	Engineer		
Antenna Requirement	15.203	/	Pass	Alicia Liu		
Conducted Emission	15.207	RSS-Gen 8.8	Pass	Eva Feng		
Band Edge Emissions	15.407(b)	RSS-247 6.2.1.2 RSS-247 6.2.2.2 RSS-247 6.2.4.2	Pass	Alicia Liu		
26dB Bandwidth & 99% Bandwidth	15.407(a) (5)	RSS-247 6.2.1.2	Pass	Alicia Liu		
6dB Bandwidth (only for UNII-3)	15.407(e)	RSS-247 6.2.4.1	Pass	Alicia Liu		
Peak Output Power	15.407(a)	RSS-247 6.2.1.1 RSS-247 6.2.4.1	Pass	Alicia Liu		
Power Spectral Density	15.407(a)	RSS-247 6.2	Pass	Alicia Liu		
Transmitter Radiated Spurious Emission	15.407(b) &15.209	RSS-Gen 8.9 RSS-247 6.2.1.2 RSS-247 6.2.4.2	Pass	Alicia Liu		
Frequency Stability	15.407(g)	/	Pass	Alicia Liu		
Dynamic Frequency Selection (DFS)	15.407(h)	RSS-247 6.3	N/A	N/A		

Note: "N/A" is not applicable.

The measurement uncertainty is not included in the test result.





# 1.4. Test Facility

## CTC Laboratories, Inc.

Add: 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

## Laboratory accreditation

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

## CNAS-Lab Code: L5365

CTC Laboratories, Inc. 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) f or the Competence of Testing and Calibration Laboratories.

## A2LA-Lab Cert. No.: 4340.01

CTC Laboratories, Inc. 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.

## Industry Canada (Registration No.: 9783A, CAB Identifier: CN0029)

CTC Laboratories, Inc. EMC Laboratory has been registered by Certification and Engineer Bureau of Indus try Canada for the performance of with Registration NO.: 9783A on Jan, 2016.

## FCC (Registration No.: 951311, Designation Number CN1208)

CTC Laboratories, Inc. 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 inour files. Registration 951311, Aug 26, 2017.

# 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 radio equipment characteristics; Part 2" 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 CTC Laboratories, Inc. quality 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 CTC Laboratories, Inc.



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	3.08 dB	(1)
Radiated Emissions 30~1000MHz	4.51 dB	(1)
Radiated Emissions 1~18GHz	5.84 dB	(1)
Radiated Emissions 18~40GHz	6.12 dB	(1)
Occupied Bandwidth		(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

	Temperature	22 °C ~ 28°C
Normal Condition	Relative humidity	50% ~ 65%
Condition	Voltage	The equipment shall be the nominal voltage for which the equipment was designed.
Extreme	Temperature	Measurements shall be made over the extremes of the operating temperature range as declared by the manufacturer
Condition	Voltage	Measurements shall be made over the extremes of the operating voltage range as declared by the manufacturer

Normal Condition	T <sub>N</sub> =Normal Temperature	22 °C ~ 28°C
Extreme Condition	T <sub>L</sub> =Lower Temperature	0°C
	T <sub>H</sub> =Higher Temperature	45 °C



# 2. GENERAL INFORMATION

# 2.1. Client Information

Applicant:	HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED
Address:	Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong
Manufacturer:	HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED
Address:	Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong
Factory:	Shenzhen uCloudlink Network Technology Co., Ltd.
Address:	3rd Floor, A part of Building 1, Shenzhen Software Industry Base, Nanshan District Xuefu Road, 518057 Shenzhen City, Guangdong, China

# 2.2. General Description of EUT

Product Name:	4G Wireless	Data Terminal					
Trade Mark:	GlocalMe	GlocalMe					
Model/Type reference:	GLMG21A0	1					
Listed Model(s):	1						
Power supply:		n USB Cable n 3900mAh Li-i	on Battery				
Hardware version:	G40_MB_VE	3					
Software version:	G40_TSV0.0	0.000.000.2204	26				
Antenna type:	Internal Ante	enna					
Antenna gain:	U-NII-1: 0.19 U-NII-3: 0.7						
Technical index for 5G WIFI							
Operation Band:	⊠U-NII-1	□U-NII-2A	U-NII-2C		⊠U-NII	-3	
Operation Frequency Range:	U-NII-1:	5150MHz~52	50MHz				
	U-NII-3:	5725MHz~58	50MHz	1			
	802.11a	🛛 20MHz					
Support bandwidth:	802.11n	🛛 20MHz	🛛 40MHz				
	802.11ac	🛛 20MHz	🛛 40MHz	$\boxtimes$	80MHz	🗌 160MHz	
Modulation:	802.11a: OFDM (BIT/SK, QPSK, BPSK, 16QAM) 802.11n: OFDM (BIT/SK, QPSK, BPSK, 16QAM, 64QAM) 802.11ac: OFDM (BIT/SK, QPSK, BPSK, 16QAM, 64QAM, 256QAM)						
Bit Rate of Transmitter:	802.11a: 6/9/12/18/24/36/48/54 Mbps 802.11n: up to 300Mbps 802.11ac: at most 866.7 Mbps						



# 2.3. Accessory Equipment information

Equipment Information							
Name	me Model		Manufacturer				
Notebook	ThinkBook 14G3 ACL	MP246QDR	Lenovo				
1	1	1	1				
Cable Information	Cable Information						
Name	Shielded Type Ferrite		Length				
Type-C Cable	ype-C Cable With		1M				
Test Software Information	Test Software Information						
Name Versions / /							
QRCT4.exe	V4.0.00172.0	1	1				



# 2.4. Operation state

Operation Frequency List:

	20MHz Bandwidth		40MHz Bandwidth		80MHz Bandwidth	
Band (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
	36	5180	20	<b>F100</b>		
U-NII-1	40	5200	38	5190	42	5210
U-INII-T	44	5220	46	5230		
	48	5240	40	5230		
	149	5745	151	5755		5775
	153	5765	151	5755	155	
U-NII-3	157	5785	159 5795	159 5795		
	161	5805				
	165	5825				

## Test channel is below:

Operating	Test	20MHz		40MHz		80MHz	
Band	Channel	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
	CH∟	36	5180	38	5190	/	/
U-NII-1	CH <sub>M</sub>	40	5200	/	/	42	5210
	CH <sub>H</sub>	48	5240	46	5230	/	/
	CH∟	149	5745	151	5755	/	/
U-NII-3	CH <sub>M</sub>	157	5785	/	/	155	5775
	CH <sub>H</sub>	165	5825	159	5795	/	/

## Data Rated

Preliminary tests were performed in different data rate, and found which the below bit rate is worst case mode, so only show data which it is a worst case mode.

Mode	Data rate (worst mode)
802.11a	6Mbps
802.11n(HT20)/ 802.11n(HT40)	HT-MCS0
802.11ac(VHT20)/ 802.11ac(VHT40)/ 802.11ac(VHT80)	VHT-MCS0



Test mode

For RF test items

The engineering test program was provided and enabled to make EUT continuous transmit.

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. The EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data Recorded in the report.

For DFS test items

The EUT has been tested under test mode condition. The Applicant provides software to control the EUT for staying in DFS mode for testing.



# 2.5. Measurement Instruments List

Tonsce	Tonscend JS0806-2 Test system										
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until						
1	Spectrum Analyzer	Rohde & Schwarz	FSU26	100105	Dec. 23, 2022						
2	Spectrum Analyzer	Rohde & Schwarz	FUV40-N	101331	Mar. 15, 2023						
3	MXG Vector Signal Generator	Agilent	N5182A	MY47420864	Dec. 23, 2022						
4	Signal Generator	Agilent	E8257D	MY46521908	Dec. 23, 2022						
5	Power Sensor	Agilent	U2021XA	MY5365004	Mar. 15, 2023						
6	Power Sensor	Agilent	U2021XA	MY5365006	Mar. 15, 2023						
7	High and low temperature box	ESPEC	MT3035	N/A	Mar. 15, 2023						
8	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	102414	Dec. 23, 2022						
9	300328 v2.2.2 test system	TONSCEND	v2.6	/	/						

Radiat	Radiated emission(3m chamber 2)											
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated Until							
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	9168-1013	Jan. 12, 2023							
2	Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-647	Dec. 23, 2022							
3	Spectrum Analyzer	R&S	FSU26	100105	Dec. 23, 2022							
4	Spectrum Analyzer	R&S	FSV40-N	101331	Mar. 15, 2023							
5	Pre-Amplifier	SONOMA	310	186194	Dec. 23, 2022							
6	Low Noise Pre-Amplifier	EMCI	EMC051835	980075	Dec. 23, 2022							
7	Test Receiver	R&S	ESCI7	100967	Dec. 23, 2022							

Radiate	Radiated emission(3m chamber 3)										
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated Until						
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	9168-759	Nov. 09, 2022						
2	Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-647	Dec. 23, 2022						
3	Test Receiver	Keysight	N9038A	MY56400071	Dec. 23, 2022						
4	Broadband Premplifier	SCHWARZBECK	BBV9743B	259	Dec. 23, 2022						
5	Mirowave Broadband Amplifier	SCHWARZBECK	BBV9718C	111	Dec. 23, 2022						

Condu	Conducted Emission										
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until						
1	LISN	R&S	ENV216	101112	Dec. 23, 2022						
2	LISN	R&S	ENV216	101113	Dec. 23, 2022						
3	EMI Test Receiver	R&S	ESCS30	100353	Dec. 23, 2022						

Note: 1. The Cal. Interval was one year.

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



# 3. TEST ITEM AND RESULTS

# 3.1. Conducted Emission

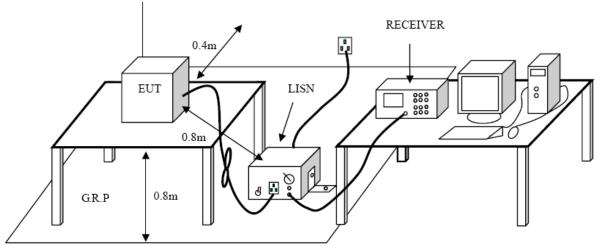
# <u>Limit</u>

# FCC CFR Title 47 Part 15 Subpart C Section 15.207/ RSS – Gen 8.8:

	Limit (d	BuV)
Frequency range (MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

\* Decreases with the logarithm of the frequency.

# Test Configuration



# Test Procedure

- 1. The EUT was setup according to ANSI C63.10:2013 requirements.
- 2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
- 3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment.

The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)

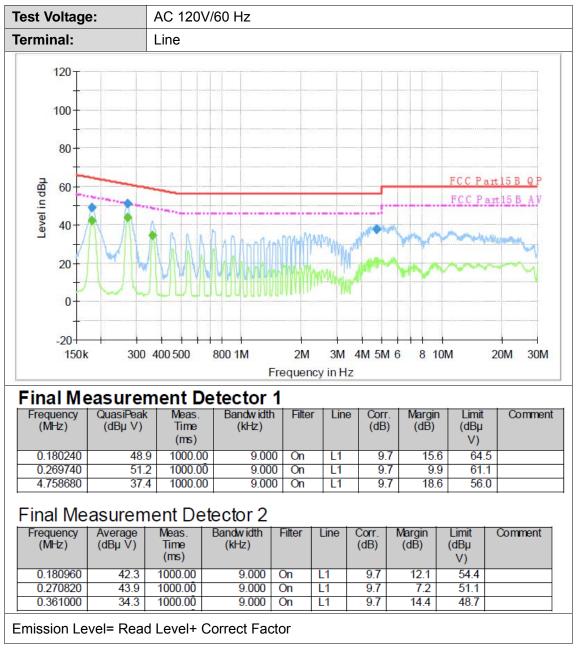
- 4. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
- 5. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
- 6. Conducted Emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
- 7. During the above scans, the emissions were maximized by cable manipulation.

#### Test Mode

Please refer to the clause 2.4.

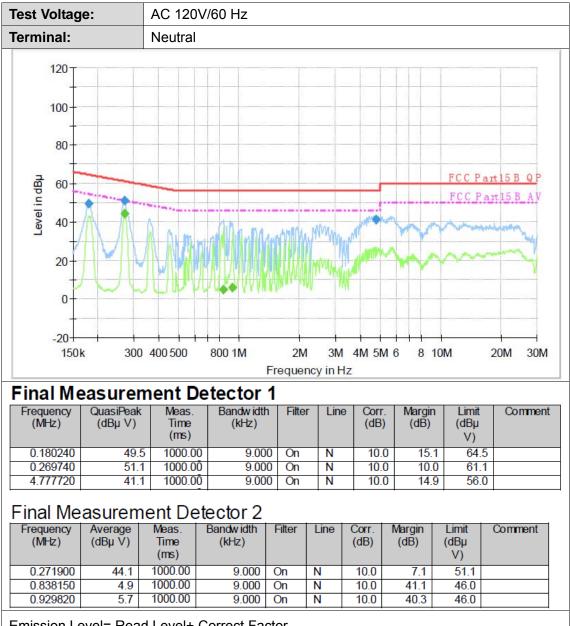


FN





FN



Emission Level= Read Level+ Correct Factor



# 3.2. Radiated Emission

<u>Limit</u>

## FCC CFR Title 47 Part 15 Subpart C Section 15.209/ RSS-Gen 8.9

Frequency	Limit (dBuV/m @3m)	Value
30 MHz ~ 88 MHz	40.00	Quasi-peak
88 MHz ~ 216 MHz	43.50	Quasi-peak
216 MHz ~ 960 MHz	46.00	Quasi-peak
960 MHz ~ 1 GHz	54.00	Quasi-peak
	54.00	Average
Above 1 GHz	74.00	Peak

#### Note:

(1) The tighter limit applies at the band edges.

(2) Emission Level (dBuV/m)= 20log Emission Level (uV/m).

# Limits of unwanted emission out of the restricted bands FCC CFR Title 47 Part 15 Subpart C Section 15.407(b)/ RSS-247 6.2.1.2 & RSS-247 6.2.4.2

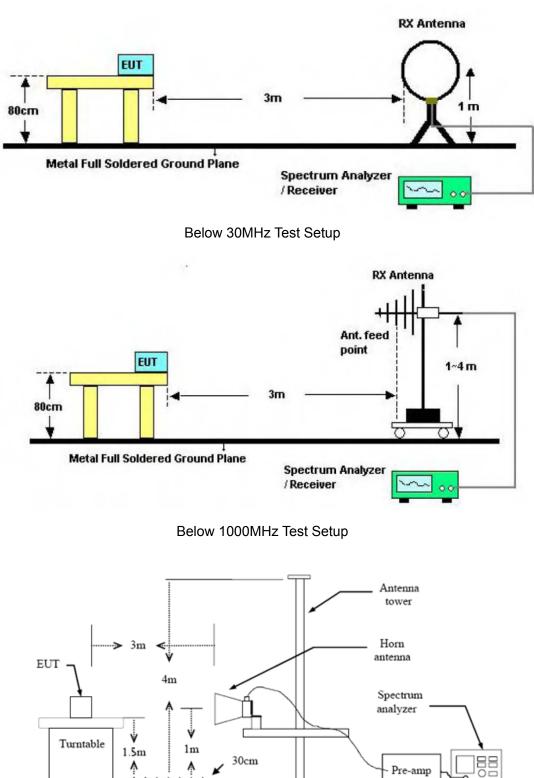
Frequency (MHz)	EIRP Limits (dBm)	Equivalent Field Strength at 3m (dBuV/m)
5150~5250	-27	68.2
5250~5350	-27	68.2
5470~5725	-27	68.2
	-27(Note 2)	68.2
E70E, E00E	10(Note 2)	105.2
5725~5825	15.6(Note 2)	110.8
	27(Note 2)	122.2

Note: 1. The following formula is used to convert the equipment isotropic radiated power (eirp) to field  $1000000\sqrt{30P}$ 

strength:  $E = \frac{1000000\sqrt{30P}}{2}$  uV/m, where P is the eirp (Watts)

2. According to FCC 16-24, All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27dBm/MHz at the band edge.





Above 1GHz Test Setup

## **Test Procedure**

- 1. The EUT was setup and tested according to ANSI C63.10:2013
- 2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.



- 3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
- 4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
- 5. Set to the maximum power setting and enable the EUT transmit continuously.
- 6. Use the following spectrum analyzer settings
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Below 1 GHz:

RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;

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.

(3) From 1 GHz to 40GHz:

RBW=1MHz, VBW=3MHz Peak detector for Peak value.

RBW=1MHz, VBW $\ge$ 1/T Peak detector for Average value.

Note 1: For the 1/T& Duty Cycle please refer to clause Duty Cycle.

## Test Mode

Please refer to the clause 2.4.

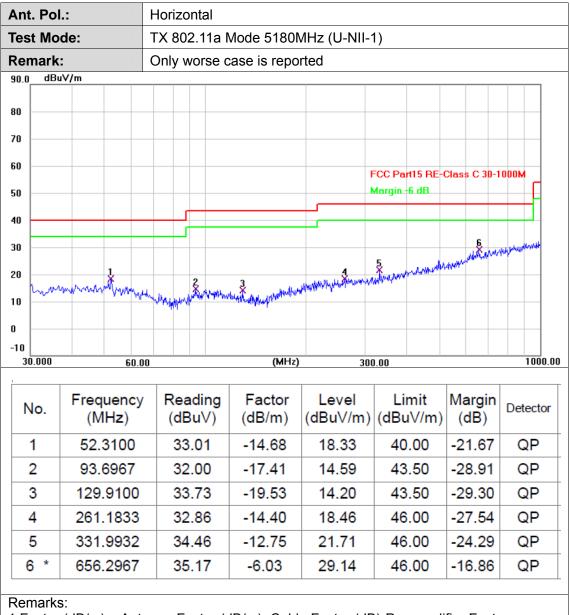
## Test Result

#### 9 KHz~30 MHz

From 9 KHz to 30 MHz: Conclusion: PASS

Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.





1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value



	ol.:	Verti	Vertical							
Fest M	ode:	TX 8	TX 802.11a Mode 5180MHz (U-NII-1)							
Remark:         Only worse case is reported										
90.0 dl	BuV/m									
80	D									
70										
60										
50						FCC Part15 RE-C Margin -6 dB	Jass C 30-1			
					++					
40							_			
30						5	1 may 2 and 1 and 1	Mourantha		
20	So alway allo 3			3	A Muhan Muhan Muhan Muran	MANIN MANY MANY AND	WALL			
10	mannanging	when	der ware and	3 Harwyddiadyndynwlli	yu)nduri karananladapinan	rynatur million (San				
10 ////×		.00	de la verse ma	3 Miles Miles Miles Miles Miles (MHz)		////where // ////////////////////////////////		1000.0		
10 ////×		 y Re	eading	(MHz)		Limit	Margin (dB)	1000.0		
	Frequenc	.00 y Re (0	eading	(MHz)	) 30 Level	Limit	Margin	1000.		
10 0 -10 30.000 No.	Frequenc (MHz)	.00 y Re (0	eading dBuV)	(MHz) Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	1000.1		
10 0 -10 30.000 No.	Frequenc (MHz) 34.2033	y Re (0	eading dBuV) 32.75	(MHz) Factor (dB/m) -16.05	)30 Level (dBuV/m) 16.70	Limit (dBuV/m) 40.00	Margin (dB) -23.30	1000.1 Detector		
10 0 -10 30.000 No. 1 2	Frequenc (MHz) 34.2033 57.8067	y Re (0 3 3 0 3	eading dBuV) 32.75 31.44	(MHz) Factor (dB/m) -16.05 -15.55	) 30 Level (dBuV/m) 16.70 15.89	Limit (dBuV/m) 40.00 40.00	Margin (dB) -23.30 -24.11	Detector QP QP		
10 0 -10 30.000 No. 1 2 3	Frequenc (MHz) 34.2033 57.8067 117.3000	y Re (c	eading dBuV) 32.75 31.44 32.43	(MHz) Factor (dB/m) -16.05 -15.55 -17.63	Level (dBuV/m) 16.70 15.89 14.80	Limit (dBuV/m) 40.00 40.00 43.50	Margin (dB) -23.30 -24.11 -28.70	Detector QP QP QP		

Remarks:

EN

1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value



EN

DO. 00 MH
tector
beak
٩VG



~								-					-			
	Ant. Pol.: Test Mode:				Vertical											
-					TX 802.11a Mode 5180MHz (U-NII-1)											
ł	Rer	nark	:		No r pres	eport cribe	t for th d limit	ie emi: t.	ssion v	vhich n	nore t	han 10	) dB k	pelow the	;	
	120.0	) dBu	V/m													
												FCC F	Part15 C	- Above 1G P	ĸ	
	60															
	00				1							FCC F	Part15 C	- Above 1G A	v	
					2	;										
	0.0															
		00.000	4900.00	88	00.00	1270	0.00 1	6600.00	20500.0	0 2440	0.00 2	28300.00	32200	.00	40000.00 MHz	:
	N	o.		quen			actor		ading	Lev		Lim		Margin	Detector	ſ
		0.	A)	/Hz)		(dl	3/m)	(dE	BuV)	(dBu\	√/m)	(dBu\	//m)	(dB)	Delector	
		1	103	60.0	63	13	3.60	41	.74	55.	34	74.	00	-18.66	peak	

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Remarks:

EN

2

10360.131

13.60

1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value

27.66

41.26

54.00

-12.74

AVG



Ant. Po	J.:	Hori	Horizontal								
Fest Mo	ode:	TX 8	TX 802.11a Mode 5200MHz (U-NII-1)								
Remark	<b>c</b> :		eport for t	he emission v it.	vhich more t	han 10 dB t	pelow the	;			
120.0 dBu	JV/m										
60							- Above 1G F				
0.0											
	4900.00	8800.00	12700.00	16600.00 20500.0	0 24400.00	28300.00 32200	0.00	40000.00 MH			
No.	Frequ (Mł		Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector			
1	1039	9.699	13.67	40.69	54.36	74.00	-19.64	peak			
2	1040	0.366	13.67	26.55	40.22	54.00	-13.78	AVG			



e:	No re		de 5200MHz e emission v		han 10 dB l	pelow the	<u>,</u>
n				vhich more t	han 10 dB l	below the	;
n							
						About 16 P	
						- Above ru r	<u>~</u>
	1				FCC Part15 C	- Above 1G A	v
	*						
00.00 9	200.00	12700.00 16	600.00 20500.0	0 24400.00 3	0000 00 00000	00	40000.00 MH;
Freque	ncv	Factor	Reading	Level	Limit	Margin	
		(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	Detector
10399.	655	13.67	40.66	54.33	74.00	-19.67	peak
10399.	943	13.67	26.88	40.55	54.00	-13.45	AVG
	Freque (MHz 10399.	Frequency (MHz) 10399.655 10399.943	Frequency (MHz)         Factor (dB/m)           10399.655         13.67	Frequency (MHz)         Factor (dB/m)         Reading (dBuV)           10399.655         13.67         40.66	Frequency (MHz)         Factor (dB/m)         Reading (dBuV)         Level (dBuV/m)           10399.655         13.67         40.66         54.33	Image: Sector with the sector withe sector with the sector with the sector with the sec	Frequency (MHz)         Factor (dB/m)         Reading (dBuV)         Level (dBuV/m)         Limit (dBuV/m)         Margin (dB)           10399.655         13.67         40.66         54.33         74.00         -19.67

Remarks:

EN

1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value



Test Mode:       TX 802.11a Mode 5240MHz (U-NII-1)         Remark:       No report for the emission which more than 10 dB below the prescribed limit.         120.0       dBuV/m         60       FCC Part15 C - Above 16 PK         60       FCC Part15 C - Above 16 AV	
prescribed limit.           120.0 dBuV/m           I20.0 dBu	
120.0 dBuV/m	
60	
0.0	
No Frequency Factor Reading Level Limit Margin	<u>ооо. оо мн</u>
$(MHZ) \qquad (dB/m) \qquad (dBuV) \qquad (dBuV/m) \qquad (dBuV/m) \qquad (dB)$	
1 10479.665 13.80 40.56 54.36 74.00 -19.64	peak
2 10479.878 13.80 27.57 41.37 54.00 -12.63	AVG



Ant	. Pol	.:	Verti	cal										
[es	t Mo	de:	TX 8	02.11	a Moo	de 5240	MHz	: (U-N	ll-1)					
Ren	nark:			eport cribec		e emissi	on w	hich ı	more t	han 10	) dB b	pelow th	е	
20.0	dBu¥	7m												
							_							
										FCC	Part15 C	- Above 1G	РК	
60														
										FCC	Part15 C	- Above 1G	AV	
			2											
							_							
0.0	00 000	4900.00	8800.00	12700.	00 10	600.00 20	500.0	244	0.00 2	28300.00	32200	00	40000.00 M	
		Frequ	ency	Fa	ctor	Readi	ng	Le	vel	Lir	nit	Margir		
Р	<b>l</b> o.	(MH		(dB	/m)	(dBu		(dBu	ıV/m)	(dBu	V/m)		Detecto	)r
	1	10479	9.981	13	.80	39.4	6	53	.26	74	.00	-20.74	l peak	C
	2	10480	0.034	13	.80	27.7	3	41	.53	54	.00	-12.47	AVG	ì
.Fa		: (dB/m) = value =				dB/m)+C	Cable	e Fact	or (dB	)-Pre-	ampli	fier Fact	or	



An	t. Pol	.:	Hori	zonta	al								
Tes	st Mo	de:	ТХ 8	302.1	1n(HT	20) M	ode 51	80MI	Hz (U-I	NII-1)			
Re	mark	:			t for th ed limit		ssion v	vhich	more t	han 10	) dB b	pelow the	9
120.0	) dBu\	//m											
60												- Above 16 P	
0.0 10	00.000	4900.00 8	800.00	1270	0.00 16	600.00	20500.0	) 244(	00.00 2	8300.00	32200.	00	40000.00 MHz
1	No.	Freque (MH:	-		actor B/m)		ading 3uV)		evel iV/m)	Lin (dBu)		Margin (dB)	Detector
	1	10360	331	1	3.59	41	1.26	54	.85	74.	00	-19.15	peak
	2	10360	362	1	3.59	26	6.55	40	.14	54.	00	-13.86	AVG
	marks	s: (dB/m) =	Anten	ina F	actor (	dB/m	)+Cabl	e Fac	tor (dP	()_Pro	amoli	fier Fact	or
		(uB/III) = 1 value = l									ampii		

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Ant. Po	l.:	Vert	ical									
Fest Mo	ode:	TX 8	302.11n(HT	20) Mode	e 51	80MHz	(U-N	VII-1)				
Remark	<b>c</b> :		eport for th		on w	hich mo	ore t	han 10 c	IB b	pelow th	e	
120.0 dBu	iV/m	1 p. ee		•								
60										- Above 16 - Above 16		
0.0												
1000.000	4900.00	8800.00	12700.00 1	6600.00 20	500.00	24400.0	02	8300.00 3	2200	.00	40000.00	мн
No.		uency Hz)	Factor (dB/m)	Readir (dBu\		Leve (dBuV/		Limit (dBuV/r		Margir (dB)	Detect	or
1	1035	9.965	13.60	41.00	6	54.66	6	74.00	)	-19.34	l pea	ĸ
2	1036	0.103	13.60	26.58	5	40.1	5	54.00	)	-13.85	5 AVG	3
	1036											

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2.Margin value = Level -Limit value

EN



No.         Frequency (MHz)         Factor (dB/m)         Reading (dBuV)         Level (dBuV/m)         Limit (dBuV/m)         Margin (dB)	nt. Po	ol.:	Horizontal					
Interview         Interview <t< th=""><th>est Mo</th><th>ode:</th><th>TX 802.11n(HT20)</th><th>Mode 52</th><th>00MHz (U-1</th><th>NII-1)</th><th></th><th></th></t<>	est Mo	ode:	TX 802.11n(HT20)	Mode 52	00MHz (U-1	NII-1)		
60         FCC Part15 C - Above 1G PK           60         2           60         2           7         FCC Part15 C - Above 1G AV           80         2           1000.000 4900.00         8800.00           12700.00         16600.00           20500.00         24400.00           20500.00         24400.00           20500.00         32200.00           40000.00         8800.00           12700.00         16600.00           20500.00         24400.00           20500.00         32200.00           40000.00         8800.00	emarl	k:		nission w	hich more t	han 10 dB t	pelow the	;
60         2         FCC Part15 C - Above 16 AV           0.0         1	20.0 dB	uV/m						
No.         Frequency (MHz)         Factor (dB/m)         Reading (dBuV)         Level (dBuV/m)         Limit (dBuV/m)         Margin (dB)         Detect	60		2					
No. (MHz) (dB/m) (dBuV) (dBuV/m) (dBuV/m) (dB) Detect		) 4900.00 84	1 * 0.00 12700.00 16600.00	20500.00	24400.00 2	8300.00 32200.	.00	40000.00 MHz
	No.		•					Detector
1 $1$ $1$ $1$ $1$ $1$ $1$ $1$ $1$ $1$	4		· · · ·			· · · ·		A) (O
	-							AVG
2 10400.369 13.67 40.50 54.17 74.00 -19.83 pea	2	10400.	69 13.67 4	0.50	54.17	74.00	-19.83	peak
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor			ntenna Factor (dB/n	n)+Cable	Eactor (dB	)-Pre-ampli	fier Facto	)r

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2.Margin value = Level -Limit value

EN



EN

Ant.	Pol.:	:	Vert	cal					
Test	Mod	e:		•	,	200MHz (U-I	•		
Rem	ark:			eport for the cribed limit.		vhich more t	han 10 dB b	elow the	;
120.0	dBuV/	'n							
							FCC Part15 C	- Above 1G P	ĸ
60									
			2 X				FCC Part15 C	- Above 1G A	v
			1						
			Î						
0.0									
1000	0.000 4	900.00	8800.00	12700.00 16	600.00 20500.0	0 24400.00 2	28300.00 32200	.00	40000.00 MH
						-			
No	<b>)</b> .	Frequ (MH	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1		10399	9.474	13.67	25.89	39.56	54.00	-14.44	AVG
2	2	10399	9.674	13.67	41.01	54.68	74.00	-19.32	peak
Rema	arks:								

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1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value



Ant	t. Pol	.:	Horiz	zontal						
Tes	st Mo	de:	TX 8	02.11n(H	HT20) M	ode 524	OMHz (U	I-NII-1)		
Rei	mark	:		eport for cribed lir		ssion wh	ich more	e than 10	dB below	the
120.0	0 dBu/	//m								
								FCC F	Part15 C - Above	1G PK
60			<u>ş</u>					FCC F	art15 C - Above	1G AV
			*							
0.0										
10	000.000	4900.00	8800.00	12700.00	16600.00	20500.00	24400.00	28300.00	32200.00	40000.00 MHz

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No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)		Margin (dB)	Detector
1	10479.626	13.80	26.37	40.17	54.00	-13.83	AVG
2	10480.262	13.80	40.23	54.03	74.00	-19.97	peak

Remarks:

EN

1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value



Ant	. Pol	.:		Vert	ical										
Tes	t Mo	de:		TX	302.´	11n(ŀ	HT2	20) Mo	ode 5	240MF	Hz (U-	NII-1)			
Ren	nark	:			repor			emis	sion	which	more	han 1	0 dB	below the	9
120.0	dBu	//m													
-												FCC	: Part15 C	C - Above 1G I	PK
60				~	<							FCC	Part15 C	: - Above 1G /	AV
-					• 										
0.0	00 000	4900.0	0 89	00.00	1270	0.00	166	500.00	20500.	10 244	00.00	28300.00	3220	1 00	40000.00 MHz
		Fre	equer	ncv	F	acto	r	Rea	ding	Le	vel	Li	mit	Margin	11
N	lo.		MHz	-		B/m			uV)		V/m)		iV/m)		Detector
	1	10	479.9	958	1	3.80	)	41	.46	55	.26	74	.00	-18.74	peak
	2	10	480.2	231	1	3.80	)	25	.75	39	.55	54	.00	-14.45	AVG
1.Fa		(dB/	m) = / ie = L					lB/m)	+Cab	e Fac	tor (dE	3)-Pre	-ampl	ifier Fact	or

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An	t. Pol	.:	Hori	zonta										
Tes	st Mo	de:	ТХ 8	302.11	lac(VI	HT20)	Mode	5180	MHz (	U-NII-′	1)			
Re	mark	:			for th d limit		ssion v	vhich	more t	han 10	) dB I	below the	9	
120.0	) dBu¥	//m												
										FCC I	Part15 C	- Above 1G P	K	
60			3							FCC	Part15 C	- Above 1G A	v	
			*											
0.0	00.000	4900.00 8	800.00	12700	00 10	600.00	20500.0	0 244	00.00 2	28300.00	32200	00	40000.00 MH	-
Г	No.	Freque			ictor		iding		vel	Lin		Margin	Detector	T
Ľ		(MH	1	`	3/m)		8uV)	×	ıV/m)	(dBu\		(dB)		Ļ
	1	10359			3.60		.43		.03	54.		-13.97	AVG	ļ
	2	10359	.963	13	3.60	40	.63	54	.23	74.	00	-19.77	peak	
Rei	marks	5:												
1.F	actor	(dB/m) = value =					+Cabl	e Fac	tor (dE	3)-Pre-	ampli	fier Facto	or	

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An	t. Pol	:	Verti	cal					
Tes	st Moo	de:	TX 8	02.11ac(VH	IT20) Mode	5180MHz (	U-NII-1)		
Rei	mark:			eport for the cribed limit.	emission w	hich more t	han 10 dB k	pelow the	;
120.0	D dBuV	/m							
							FCC Part15 C	- Above 1G Pl	ĸ
60			1 ¥				FCC Part15 C	- Above 1G A	/
			2						
			Ť						
0.0									
10	000.000	4900.00 84	800.00	12700.00 166	00.00 20500.00	) 24400.00 2	8300.00 32200.	00	40000.00 MHz
Г		Freque	ncy	Factor	Reading	Level	Limit	Margin	
Ľ	No.	(MH		(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	Detector
	1	10359.	990	13.60	40.76	54.36	74.00	-19.64	peak
	2	10360.	033	13.60	26.43	40.03	54.00	-13.97	AVG
Rer	marks	:	-						

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EN

1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value



Ant. F	Pol.:		Horizontal										
Test Mode:			TX 802.11ac(VHT20) Mode 5200MHz (U-NII-1)										
Remark:			No report for the emission which more than 10 dB below the prescribed limit.										
120.0	dBu¥/m								1				
										FCC Par	t15 C	- Above 1G P	K
60		2								FCC Par	115 C	- Above 1G A	v
			*										
0.0	000 4900		00.00		0.00 16	600.00	20500.0		00.00 2	28300.00	32200		40000.00 MHz
								_					
No		requer (MHz	)	(d	actor B/m)	(d	ading BuV)	(dBu	vel V/m)	Limit (dBuV/	m)	Margin (dB)	Detector
1		10399.962			13.67		26.56		40.23		0	-13.77	AVG
2	1	0400.0	)45	1	3.67	4	0.69	54	.36	74.0	0	-19.64	peak
Rema													
		3/m) = A lue = L					ı)+Cabl	e Fact	tor (dE	s)-Pre-ar	npli	fier Facto	or

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Ant	t. Po	l.:	Vertical											
Test Mode:			TX 8	TX 802.11ac(VHT20) Mode 5200MHz (U-NII-1)										
Remark:				No report for the emission which more than 10 dB below the prescribed limit.										
120.0	dBu'	√/m												
										FCC	Part15 C	- Above 1G P	K	
60			1							FCC	Part15 C	- Above 1G A	v	
			*											
0.0		1000.00		10700	00 40						00000		40000 00 111	
1000.000 4900.00 8800.00 12700.00 16600.00 20500.00 24400.00 28300.00 32200.00 40000.00 MHz														
Ν	lo.	Freque (MH	-	Fac (dB	ctor /m)	Read (dBu	-		vel V/m)	Lin (dBu)		Margin (dB)	Detector	
	1	10399.283		13.67		40.69		54.36		74.00		-19.64	peak	
	2	10399	.850	13	.67	26.4	18	40	.15	54.	00	-13.85	AVG	
1.F		s: <sup>·</sup> (dB/m) = ı value =				dB/m)+	Cabl	e Fac	tor (dE	3)-Pre-	ampli	fier Facto	or	

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EN

An	t. Po	l.:	Hori	Horizontal										
Test Mode:			ТХ 8	TX 802.11ac(VHT20) Mode 5240MHz (U-NII-1)										
Re	mark	:		No report for the emission which more than 10 dB below the prescribed limit.										
120.0	) dBu/	//m												
											FCC F	'art15 C	C - Above 1G I	×
60			1	<u>,                                     </u>							FCC F	art15 C	C - Above 1G /	NV
			×											
0.0														
1000.000 4900.00 8800.00 12700.00 16600.00 20500.00 24400.00 28300.00 32200.00 40000.00 MHz														
١	No.	Freque (MH	-		actor B/m)		Reading (dBuV)		Lev (dBu		Lim (dBu∨		Margin (dB)	Detector
L	1	10479.695		1	13.80		40.52		54.32		74.0	00	-19.68	peak
	2	10479	.697	1	3.80		26.53		40.	33	54.0	00	-13.67	AVG
De	mark	<u></u>												
1.F	actor	s: (dB/m) = 1 value =					B/m)+Ca	ble	e Fact	or (dE	8)-Pre-a	mpli	ifier Fact	or

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	Pol.:		V	ertic	cal										
est N	Mode:		Т	X 80	02.1	1ac(V	'HT20	) Moc	de	5240	MHz (	U-NII-	1)		
ema	rk:					t for th d limit		ission	۱W	hich	more t	han 1	0 dB l	below th	е
20.0	dBu¥/m					<u>a mm</u>									
60				2										- Above 1G - Above 1G	
0.0	000 4900	1.00	8800.0		1270	0.00 1	6600.00	2050	0 00	244	00.00 2	28300.00	32200	0.00	40000.00 M
	,   F	requ		У		actor		eading			vel		mit	Margir	Detecto
No		(Mł	Hz)		· ·	B/m)		lBuV)	)		ıV/m)	•	lV/m)	(dB)	
No	_				4	3.80	2	7.72	- 1	41	.52	54	.00	-12.48	B AVG
No 1	1	047	9.96	1	1	3.80									/ /

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2.Margin value = Level -Limit value



Ant	. Pol	.:	Horiz	zontal					
Tes	t Mo	de:	TX 8	02.11n(HT	40) Mode 51	90MHz (U-1	VII-1)		
Ren	nark:			eport for the cribed limit.		vhich more t	han 10 dB b	elow the	
120.0	dBuV	7m							
60 - - -							FCC Part15 C		
0.0	00.000	4900.00 88	00.00	12700.00 16	600.00 20500.0	0 24400.00 2	8300.00 32200.	00	40000.00 MHz
N	<b>l</b> o.	Frequer (MHz	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	10379.0	, 697	13.63	26.22	39.85	54.00	-14.15	AVG
	2	10380.3	365	13.63	40.67	54.30	74.00	-19.70	peak
Ren	narks					e Factor (dB		I	

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2.Margin value = Level -Limit value

EN



Ant	t. Po	l.:	Vert	ical										
Tes	t Mo	de:	TX 8	302.1	1n(H	IT4	0) Mode	51	90MF	lz (U-l	NII-1)			
Rer	nark	:		eport cribe			emissio	n v	vhich r	nore t	han 1	) dB l	pelow the	9
120.0	) dBu	V/m	i					_						
											FCC	Part15 C	: - Above 1G I	<u>эк</u>
60			1								FCC	Part15 C	- Above 1G /	NV
			2											
0.0														
10	00.000	4900.00	8800.00	1270	0.00	166	00.00 205	00.0	0 2440	00.00	28300.00	3220	D.00	40000.00 MHz
Ν	<b>l</b> o.	Frequ (MF	-		actor 3/m)		Readin (dBuV	-	Lev		Lin (dBu)		Margin (dB)	Detector
$\vdash$	1	10359	,		3.60	-	41.06		(ubu 54.		(ubu 74		-19.34	peak
$\vdash$	2	10359			3.60	-	27.02		40.		54		-13.38	AVG
1.Fa		-					B/m)+Ca	able	e Fact	or (dE	3)-Pre-	ampli	fier Facto	Dr

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Int. Pol.:       Horizontal         est Mode:       TX 802.11n(HT40) Mode 5230MHz (U-NII-1)         emark:       No report for the emission which more than 10 dB below the											
Test Mode	e:	TX 8	302.11n(	(HT4	0) Mode	52	30MF	lz (U-ľ	VII-1)		
Remark:			eport fo		emissior	n w	/hich r	nore t	han 10 dB l	below the	•
20.0 dBu∀/m	1										
60	00.00 88	2 2 3 3 3 00.00	12700.00	166	00.00 2050		) 2440	0.00 2		- Above 16 P	
No.	Freque (MHz	-	Facto (dB/n		Readin (dBuV	- I	Le (dBu	vel V/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	10459.	/	13.7	'	25.78	<i>'</i>	×	.55	54.00	-14.45	AVG
2	10460.	031	13.7	7	40.31	┥	54	.08	74.00	-19.92	peak



Ant. Po	l.:	Vert	ical					
Test Mo	ode:	TX 8	302.11n(HT	40) Mode 52	230MHz (U-	NII-1)		
Remark	K:		eport for th	e emission v	which more	than 10 dB l	below the	9
120.0 dBu	ıV/m							
60							- Above 1G F	
0.0								
1000.000	4900.00	8800.00	12700.00 1	6600.00 20500.0	0 24400.00	28300.00 32200	).00	40000.00 MH
No.	Frequ (MI	Hz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1046	0.121	13.77	41.46	55.23	74.00	-18.77	peak
2	1046	0.635	13.77	27.49	41.26	54.00	-12.74	AVG
Remark	e.							

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2.Margin value = Level -Limit value



Ant	. Po	l.:	Hori	zontal									
Tes	t Mo	de:	TX 8	302.11	ac(VI	HT40) N	/lode	5190	MHz (	U-NII-1	)		
	nark			eport cribec			ion v	vhich i	more t	han 10	dB b	pelow the	;
120.0	) dBu	V/m											
										FCC P	art15 C	- Above 1G P	K
60										FCC P	art15 C	- Above 1G A	v
			•1										
			2										
0.0	00.000	4000.00	0000.00	10700	00 10	600.00 2	20500.0	0 044	0.00 2	8300.00	32200	00	40000.00 MHz
N	lo.	Freque (MH		Fa (dB	ctor /m)	Read (dBu	-		vel V/m)	Lim (dBu∖		Margin (dB)	Detector
	1	10379	.748	13	.63	40.3	39	54	.02	74.0	00	-19.98	peak
	2	10379	.898	13	.63	26.3	39	40	.02	54.(	00	-13.98	AVG
1.Fa		s: (dB/m) = n value =				dB/m)+	Cabl	e Fact	or (dB	)-Pre-a	impli <sup>.</sup>	fier Facto	or

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Ant. Pol	.:	Vert	cal					
Fest Mo	de:	TX 8	302.11ac(VF	IT40) Mode	5190MHz (	U-NII-1)		
Remark			eport for the cribed limit.	e emission w	hich more t	han 10 dB t	pelow the	;
120.0 dBu\	//m							
60		2 2 1				FCC Part15 C		
0.0	4900.00	8800.00	12700.00 16	600.00 20500.00	) 24400.00 2	8300.00 32200.	.00	40000.00 MHz
No.	Frequ		Factor	Reading	Level	Limit	Margin	Detector
	(MI	,	(dB/m)	(dBuV)	(dBuV/m)	· ·	· ·	
1		9.562	13.63	26.99	40.62	54.00	-13.38	AVG
2	1038	0.415	13.63	41.03	54.66	74.00	-19.34	peak
Remarks			na Factor (d					

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	l.:	Hori	izontal									
est Mo	de:	TX	802.11a	ic(VH	IT40) M	ode	5230	MHz (	U-NII-′	I)		
Remark	:		report fo		emissi	on w	hich	more t	han 10	) dB b	pelow the	;
20.0 dBu\	//m	1 p. c.										
60		2									- Above 16 P - Above 16 A	
0.0	4900.00 {	3800.00	12700.00	) 166	00.00 20	500.00	) 244(	00.00 2	8300.00	32200	.00	40000.00 MH
											_	_
No.	Freque (MH		Fac (dB/		Readi (dBu	-		vel iV/m)	Lin (dBu <sup>\</sup>		Margin (dB)	Detector
1	10459	.777	13.	77	26.5	9	40	.36	54.	00	-13.64	AVG
2	10460	.363	13.	77	40.3	4	54	.11	74	00	-19.89	peak



:	Verti	ical					
le:	TX 8	302.11ac(Vł	HT40) Mode	5230MHz (	U-NII-1)		
				vhich more t	han 10 dB t	pelow the	;
/m	1 10.00						
1300.00	8800.00	12700.00 16	600.00 20500.0	0 24400.00	FCC Part15 C	- Above 1G A	
	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
10459	· ·	13.77	26.56	40.33	54.00	-13.67	AVG
	0.140	13.77	40.89	54.66	74.00	-19.34	peak
	ISO0.00	/m /// / / / / / / / / / / / / / / / / /	/m ////	Immunol         Immunol           Immunol         <	Immunol         Immunol <t< td=""><td>Imm         Imm           Imm</td><td>/m       FCC Part15 C - Above 16 P         FCC Part15 C - Above 16 A         2       FCC Part15 C - Above 16 A         2       FCC Part15 C - Above 16 A         3       FCC Part15 C - Above 16 A         4       FCC Part15 C - Above 16 A         4       FCC Part15 C - Above 16 A         5       FCC Part15 C - Above 16 A         4       FCC Part15 C - Above 16 A         5       FCC Part15 C - Above 16 A         4       FCC Part15 C - Above 16 A         5       FCC Part15 C - Above 16 A         6       FCC Part15 C - Above 16 A         6       FCC Part15 C - Above 16 A         7       FCC Part15 C - Above 16 A         800.00       12700.00         16600.00       20500.00       28300.00         7       FCC Part15 C - Above 16 A         800.00       12700.00       16600.00       20500.00         800.00       12700.00       16600.00       20500.00       28300.00         800.00       12700.00       16600.00       20500.00       28300.00       32200.00</td></t<>	Imm         Imm           Imm	/m       FCC Part15 C - Above 16 P         FCC Part15 C - Above 16 A         2       FCC Part15 C - Above 16 A         2       FCC Part15 C - Above 16 A         3       FCC Part15 C - Above 16 A         4       FCC Part15 C - Above 16 A         4       FCC Part15 C - Above 16 A         5       FCC Part15 C - Above 16 A         4       FCC Part15 C - Above 16 A         5       FCC Part15 C - Above 16 A         4       FCC Part15 C - Above 16 A         5       FCC Part15 C - Above 16 A         6       FCC Part15 C - Above 16 A         6       FCC Part15 C - Above 16 A         7       FCC Part15 C - Above 16 A         800.00       12700.00         16600.00       20500.00       28300.00         7       FCC Part15 C - Above 16 A         800.00       12700.00       16600.00       20500.00         800.00       12700.00       16600.00       20500.00       28300.00         800.00       12700.00       16600.00       20500.00       28300.00       32200.00

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2.Margin value = Level -Limit value



Ant	t. Pol	.:	Hori	zontal					
Tes	t Mo	de:	TX 8	802.11ac(VF	IT80) Mode	5210MHz (	U-NII-1)		
Rer	mark	:		eport for the cribed limit.		which more t	han 10 dB l	below the	3
120.0	) dBu¥	//m							
60							FCC Part15 C		
0.0									
10	00.000	4900.00	8800.00	12700.00 16	600.00 20500.0	0 24400.00 2	8300.00 32200	.00	40000.00 MHz
1	No.	Frequ (Mi	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1041	9.033	13.70	40.49	54.19	74.00	-19.81	peak
	2	1041	9.654	13.70	26.58	40.28	54.00	-13.72	AVG
	narks		- Anton	na Factor (/		e Factor (dE	) Pro omali	fior East	

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		Vert	ical									
est Mode	:	TX 8	302.11	ac(Vł	HT80)	Mode	5210	MHz (	U-NII-′	1)		
Remark:		No r	eport	for the	e emis	sion w	/hich	more t	han 1(	) dB l	below th	ne
20.0 dBuV/m												
60		2									- Above 16 - Above 16	
0.0												
1000.000 490	DO.OO 8	8800.00	12700.	00 16	600.00	20500.0	) 244(	00.00 2	8300.00	32200	).00	40000.00
INO.	Freque (MH	z)	(dB	ctor 3/m)	(dB	ading 8uV)	(dBu	vel iV/m)	Lin (dBu\	//m)	Margir (dB)	Delect
1	10419	.440	13	.70	27	.56	41	.26	54.	00	-12.74	4 AVG
	10420	.141	13	.70	40	.66	54	.36	74.	00	-19.64	1 peal

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2.Margin value = Level -Limit value



ht. P	ol.:		H	orizo	ntal										
est N	lode	:	T	X 80	2.11a	Мос	de 574	5MHz	: (U-N	III-3)					
Rema	rk:				ort fo ibed li		e emis	sion v	/hich	more	than 10	) dB l	below th	е	
20.0 d	_ Freque														
	. Frequ (Mł 1148										FUU	Part15 C	- Above 1G	PK	
60	IBuV/m			2							FCC	0	- Above 1G		
		0 4900.00 88 Frequer (MHz 11489.9		2							FLL	Partis L	- Above TG	AV	
	dBuW/m dBuW/m 00.000 4900.00 00.000 4900.00 Frequencies Io. [Frequencies] (M 1 1148		*												
	dBuV/m 														
	000.000 4900.														
0.0															
1000.0	00 490	0.00	8800.0	JO 1	2700.00	16	600.00	20500.0	) 244	00.00	28300.00	32200	.00	40000.00 N	41
No.	F			У	Facto (dB/n		Rea (dB	ding uV)		vel V/m)	Lin (dBu)		Margir (dB)	Detecto	
1	1	1148	9.95	6	15.0		26.	.22	41	.22	54.		-12.78	AVG	;
2	1	148	9.96	6	15.0	0	39.	.74	54	.74	74.	00	-19.26	b peak	(
											•		•	•	

2.Margin value = Level -Limit value

EN



	ol.:	Verti	Vertical									
lest M	ode:	TX 8	02.11a Mo	de 5745MHz	: (U-NII-3)							
Remar	k:		eport for the cribed limit.	e emission w	hich more t	han 10 dB b	elow the					
20.0 dB	¦uV/m											
						FCC Part15 C -	Above 1G PK					
60			Ş			FCC Part15 C -	Above 1G AV	,				
			*									
0.0												
1000.00	0 4900.00	8800.00	12700.00 16	600.00 20500.00	24400.00 2	8300.00 32200.	00	40000.00 MHz				
No.		uency Hz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector				
1	,	<u>_</u> , 9.766	15.00	24.52	39.52	54.00	-14.48	AVG				
2	1149	0.335	15.01	39.32	54.33	74.00	-19.67	peak				
	•											

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00.00 MH
etector
beak
٩VG



	Pol.	:	Vert	ical									
est	Мос	le:	TX	302.11	a Mod	le 57851	MHz	(U-N	II-3)				
lem	nark:			eport f		emissio	on w	hich ı	more t	han 10	dB k	pelow the	;
20.0	dBuV∕	'n											
60 0.0 1000	0.000 4		8800.00	2	0 166	00.00 20	500.00	244(	00.00			- Above 16 F	
N	<b>o</b> .	Frequ	-		tor	Readi	_		vel	Lim		Margin	Detector
		(MI	Hz)	(dB	/m)	(dBu∖	/)	(dBu	V/m)	(dBu∖	//m)	(dB)	
	o. 1 2	(MI 1156	-	(dB) 15			/) 6	(dBu 40			//m) 00		Detector AVG peak



Ant.	Pol.	:	Horiz	zontal					
<b>Fest</b>	Мо	de:	TX 8	802.11a M	ode 5825MH	z (U-NII-3)			
Rem	ark:			eport for t cribed lim	he emission v it.	which more t	than 10 dB l	below the	9
120.0	dBuV	/7m							
-									
							FCC Part15 C	- Above 1G P	K
60				2			ECC Part15 C	- Above 1G A	v
				2 X					
-				1 X					
0.0									
100	0.000	4900.00	8800.00	12700.00	16600.00 20500.	00 24400.00	28300.00 32200	0.00	40000.00 MH
N	o.		uency Hz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1164	9.963	15.13	25.49	40.62	54.00	-13.38	AVG
	2	1165	0.666	15.14	39.72	54.86	74.00	-19.14	peak

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Remarks:

EN



	d.:	Verti	cal									
Test Mo	ode:	TX 8	302.11	a Moo	de 5825	MHz	z (U-N	III-3)				
Remark	<b>c</b> :			for the		on v	vhich	more	than 10	) dB l	pelow th	е
120.0 dBu	i¥/m	1 10.000			1							
60											- Above 16 - Above 16	
	<b>1 4900.00 8</b>	800.00	12700.	00 16	600.00 20	0500.0	0 244	00.00	28300.00	32200	).00	40000.00 MH
No.	Freque (MH:	-		ctor /m)	Readi (dBu)	-		vel V/m)	Lin (dBu\		Margin (dB)	Detector
1	11650	,	`	.14	39.0	'	<b>`</b>	.16	74.	,	-19.84	peak
	44050	020	15	.14	24.5	2	39	.66	54.	00	-14.34	AVG
2	11650	.920	15									



2			Faye 54	4 01 134		Repu	<i>IT NO</i>	
Ant	. Pol.:	Horizont	al					
Tes	t Mode:	TX 802.	11n(HT20) N	Mode 5745N	IHz (U-NI	I-3)		
Rer	nark:	No repo		ission which	n more tha	an 10 dB	below th	ne
120.0	) dBuV/m							
						ECC Davide	C - Above 10	DK
						FCC Faitry	C - ADUYE II	
60								
60		Ş				FCC Part15	C - Above 10	AV
		*						

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No.	Frequency	Factor	Reading	Level	Limit	Margin	Detector
INO.	(MHz)	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	Delector
1	11490.363	15.01	25.11	40.12	54.00	-13.88	AVG
2	11490.636	15.01	39.10	54.11	74.00	-19.89	peak

20500.00

24400.00

28300.00

32200.00

40000.00 MHz

Remarks:

FN

0.0

1000.000 4900.00

8800.00

12700.00

16600.00



Ant	. Pol	.:	Verti	cal										
Tes	t Mo	de:	TX 8	02.11n(ŀ	HT20)	) Mode	57	45MF	lz (U-ľ	VII-3)				
Ren	nark	:		eport for cribed lir		missio	n w	/hich I	more t	han 10	) dB k	pelow th	е	
120.0	dBu¥	//m												
- - - -										FCC F	Part15 C	- Above 1G	PK	
60				2 X						FCC F	art15 C	- Above 1G	AV	
-				*										
0.0														
	00.000	4900.00	8800.00	12700.00	16600.	.00 205	00.00	2440	0.00 2	8300.00	32200	.00	40000.00 M	Hz
N	10.		uency Hz)	Facto (dB/m		Readin (dBuV			vel V/m)	Lin (dBu\		Margir (dB)	Detecto	or
⊢	1	· · ·	9.251	15.00	<i>'</i>	25.15	·		.15	(aba 54.		-13.85	5 AVG	-
	2	1148	9.895	15.00		40.14		55	.14	74.	00	-18.86	b peak	:
	narks			na Facto										

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nt. Pol.:		Horizontal										
st Mod	e:	TX 8	02.11	1n(HT2	20) Moc	le 57	85MH	z (U-1	VII-3)			
emark:				for the d limit.		ion w	/hich r	nore t	han 10	dB t	pelow the	9
).0 dBu¥/i	m											
									FCC P	art15 C	- Above 1G I	э <u>к</u>
0			1						FCC P	art15 C	- Above 1G /	AV
			2									
0	900.00 88	100.00	12700	100 16	600.00 2	20500.0	n 244(	0.00 2	8300.00	32200	00	40000.00 MH;
	Frequer	ncv	Fa	actor	Read	ina	Le	vel	Lim	it	Margin	1
No.	(MHz	-		3/m)	(dBu		(dBu		(dBu∖		(dB)	Detector
1	11569.0		15	5.06	39.0	)7	54.	.13	74.(	00	-19.87	peak
2	11570.0	625	15	5.07	25.0	8(	40.	15	54.0	00	-13.85	AVG
-	11569.0	5) 636	(dE 15	5.06	39.0	(V) )7	54.	V/m) 13	74.0	//m) 00	-19.87	pe

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2.Margin value = Level -Limit value

EN



Ant. Po	l.:	Verti	cal					
Test Mo	de:	TX 8	02.11n(HT	20) Mode 5	785MHz (U-	NII-3)		
Remark			eport for th cribed limit	e emission v	which more t	than 10 dB l	below the	e
120.0 dBu	W/m							
						FCC Part15 C	- Above 1G F	ν <u>κ</u>
60			1			FCC Part15 C	- Above 1G A	N
			2					
0.0								
1000.000	4900.00	8800.00	12700.00 1	6600.00 20500.0	00 24400.00 :	28300.00 32200	<u>J. UU</u>	40000.00 MHz
No.	Frequ (MF	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	11569	9.698	15.06	39.51	54.57	74.00	-19.43	peak
2	11570	0.326	15.07	24.94	40.01	54.00	-13.99	AVG
Remarks								
			na Factor ( Limit value	(dB/m)+Cabl e	e Factor (dE	3)-Pre-ampli	fier Fact	or

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Ant. Pol.:       Horizontal         Test Mode:       TX 802.11n(HT20) Mode 5825MHz (U-NII-3)         Remark:       No report for the emission which more than 10 dB below the prescribed limit.         120.0       dBuV/m         120.0       dBuV/m         60       7         3       FCC Part15 C - Above 16 PK         60       3       FCC Part15 C - Above 16 AV         0.0       4       4       4       4									
Remark:     No report for the emission which more than 10 dB below the prescribed limit.       120.0     dBuV/m       60     2       60     2       2     FCC Part15 C - Above 16 AV	Ant.	Pol.:	Hori	zontal					
prescribed limit.           120.0         dBuV/m	Test	Mode:	TX 8	302.11n(HT	20) Mode 58	825MHz (U-1	VII-3)		
120.0 dBuV/m	Rem	ark:			e emission v	hich more t	han 10 dB b	elow the	
60 60 60 60 60 60 60 60 60 60 60 60 60 6	120.0	dBuV/m	pres	cribed limit.					
	60			2					
1000.000 4900.00 8800.00 12700.00 16600.00 20500.00 24400.00 28300.00 32200.00 40000.00 MHz	L - E	0.000 4900.00	8800.00	12700.00 16	600.00 20500.0	0 24400.00 2	8300.00 32200.	00	40000.00 MHz
		(IV	,		. ,	S 7	х - 7	· · ·	
No. (MHz) (dB/m) (dBuV) (dBuV/m) (dBuV/m) (dB) Detector									AVG
(MHz)         (dB/m)         (dBuV)         (dBuV/m)         (dBuV/m)         (dBuV/m)           1         11649.965         15.13         25.10         40.23         54.00         -13.77         AVG	2	2 116	50.205	15.14	39.22	54.36	74.00	-19.64	peak

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Remarks:

FN



Ant. P	ol.:	Vert	cal					
Test M	lode:	TX 8	302.11n(HT2	20) Mode 58	325MHz (U-	NII-3)		
Remai	rk:		eport for the cribed limit.		which more t	han 10 dB t	pelow the	;
120.0 d	lBu¥/m							
60							- Above 16 P	
0.0								
	00 4900.00	8800.00	12700.00 16	600.00 20500.0	0 24400.00	28300.00 32200	.00	40000.00 MHz
No.		uency IHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	1164	49.669	15.13	39.52	54.65	74.00	-19.35	peak
2	1164	49.699	15.13	24.90	40.03	54.00	-13.97	AVG
	or (dB/m)		na Factor ( Limit value	dB/m)+Cabl	e Factor (dE	3)-Pre-ampli	fier Facto	Dr

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Ant. Po	l.:	Hori	zontal							
Test Mo	de:	TX 8	302.11a	c(VHT20	)) Mode	e 5745	MHz (	U-NII-3)		
Remark	:		eport fo cribed I		nission	which	more t	han 10 dB	below the	;
20.0 dBu	V/m	1 0100								
								FCC Part15 C	- Above 1G P	K
60			1					FCC Part15 C	- Above 1G A	v
			\$							
0.0										
1000.000	4900.00	8800.00	12700.00	16600.00	20500.0	0 2440	00.00 2	8300.00 32200	.00	40000.00 MH
No.	Frequ (MH	lz)	Fact (dB/n	n) (d	eading IBuV)	(dBu		Limit (dBuV/m)	Margin (dB)	Detector
1	11490	0.038	15.0	1 3	9.06	54	.07	74.00	-19.93	peak
2	11490	).127	15.0	1 2	5.32	40	.33	54.00	-13.67	AVG



Ant. Pol.:	Verti	cal					
Test Mode:	TX 8	02.11ac(VH	IT20) Mode	5745MHz (	U-NII-3)		
Remark:		eport for the cribed limit.	emission w	hich more t	han 10 dB t	elow the	•
120.0 dBuV/m					FCC Part15 C		
0.0	0 8800.00	12700.00 166	00.00 20500.00	1 24400.00 2	8300.00 32200.	00	40000.00 MHz
	equency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	489.415	(dB/m) 15.00	25.23	40.23	54.00	-13.77	AVG
	489.844	15.00	39.32	54.32	74.00	-19.68	peak
2 11 Remarks:	489.844	15.00	39.32	94.32	74.00	-19.68	реак

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FN



An	t. Pol	•	Hori	zont	al							
Tes	st Mo	de:				HT20)	Mode	5785	MHz (	U-NII-3)		
Re	mark	:	No r	ероі	•	e emis			•	than 10 dB	below the	;
120.0	) dBu\	//m										
										FCC Part15 0	- Above 16 F	ĸ
60 60 1 50 50 50 50 50 50 50 50 50 50												
				XX								
0.0	00.000	4900.00 8	800.00	1270	00.00 16	600.00	20500.0	0 244	0.00	28300.00 3220	0.00	40000.00 MHz
I	No.	Freque (MHz	-		actor B/m)		ading BuV)		vel V/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	11569.	666	1	5.06	39	.60	54	.66	74.00	-19.34	peak
	2	11570.	023	1	5.07	25	.18	40	.25	54.00	-13.75	AVG
1.F							+Cabl	e Fac	tor (dE	3)-Pre-ampl	ifier Fact	or

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An	t. Po	l.:		Verti	cal										
Tes	st Mo	de:		TX 8	02.	11ac	(VF	IT20)	Mode	5785	MHz (	U-NII-	3)		
Re	mark			No re				e emis	ssion v	vhich	more t	han 1	0 dB I	below the	e
120.0	D dBu\	//m		10.00											
												FCC	Part15 C	- Above 1G F	<u>к</u>
60					1							FCC	Part15 C	- Above 1G A	NV
					2 X										
0.0	000 000	4900.00	880	0.00	127	00.00	166	600.00	20500.0	0 244	00.00 2	28300.00	32200	1 00	40000.00 MHz
١	No.	Frec (N	quer (Hz)			acto IB/m			ading 3uV)		evel iV/m)	Lir (dBu		Margin (dB)	Detector
	1	115	69.9	963	1	15.0	6	39	.56	54	.62	74	.00	-19.38	peak
	2	115	70.5	542	1	15.0	7	25	.16	40	.23	54	.00	-13.77	AVG
Rei	mark	S:													
1.F	actor							dB/m)	+Cabl	e Fac	tor (dE	3)-Pre-	ampli	fier Fact	or

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Ant. Po	l.:	Horiz	zontal					
Test Mo	de:	TX 8	802.11ac(VI	HT20) Mode	5825MHz (	U-NII-3)		
Remark	:		eport for the cribed limit.		which more f	than 10 dB l	below the	e
120.0 dB	ıV/m							
						FCC Part15 C	- Above 1G P	K
60			1			FCC Part15 C	- Above 1G A	v
			2					
0.0	) 4900.00	8800.00	12700.00 16	600.00 20500.0	10 24400.00 2	28300.00 32200	.00	40000.00 MH
No.	Freque (MH	-	Factor (dB/m)	Reading (dBu∀)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	11649	.667	15.13	38.90	54.03	74.00	-19.97	peak
2	11650	.030	15.13	24.61	39.74	54.00	-14.26	AVG



Ant. P	ol.:	Verti	cal					
Test N	lode:	TX 8	02.11ac(VF	HT20) Mode	5825MHz (	U-NII-3)		
Rema	rk:		eport for the cribed limit.	e emission w	hich more t	han 10 dB b	elow the	!
120.0 c	lBuV/m	1 10.000						
60			2			FCC Part15 C		
0.0			1 X					
1000.0	000 4900.00	8800.00		600.00 20500.0		8300.00 32200		40000.00 MHz
No.	Frequ (MF	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	11649	9.985	15.13	25.23	40.36	54.00	-13.64	AVG
2	11650	).451	15.14	40.48	55.62	74.00	-18.38	peak
Remai		A			e Factor (dB			

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nt. Pol.:		Horiz	zonta	I								
est Mode:		TX 8	02.11	In(HT	40) Mod	e 57	755M⊦	lz (U-	NII-3)			
emark:				for the		on v	vhich ı	nore f	than 10	dB I	below the	9
20.0 dBuV/m												
60			1, 								- Above 1G F	
).0												
1000.000 4900	0.00 8	800.00	12700	.00 16	600.00 20	500.0	0 2440	0.00	28300.00	32200	0.00	40000.00 MH
No. F	reque (MHz			ctor /m)	Readi (dBu\	-	Le <sup>v</sup> (dBu		Lim (dBu∖		Margin (dB)	Detector
1 1	1509.	625	15	.00	39.2	6	54.	26	74.0	00	-19.74	peak
2 1	1510.	032	15	.01	25.0	7	40.	08	54.0	00	-13.92	AVG
1 1	(MHz 1509.	2) 625	(dB 15	/m) .00	(dBu) 39.2	/) 6	(dBu 54.	V/m) 26	(dBu∖ 74.(	//m) 00	(dB) -19.74	pea



Ant. Po	l.:	Vert	ical					
Test Mo	ode:	TX 8	302.11n(H <sup>-</sup>	T40) Mode 5	755MHz (U-	NII-3)		
Remark	<b>K:</b>		eport for t	he emission it.	which more	than 10 dB l	below the	9
120.0 dB	JV/m							
60							C - Above 16 F	
0.0								
1000.00	) 4900.00	8800.00	12700.00	16600.00 20500.	00 24400.00	28300.00 3220	0.00	40000.00 MHz
No.	Freque (MH:	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	11510	.121	15.01	39.22	54.23	74.00	-19.77	peak
2	11510	.142	15.01	25.65	40.66	54.00	-13.34	AVG
Remark		Anten	na Factor	(dB/m)+Cab	le Factor (di	3)-Pre-ampli	ifier Facto	or

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Ant	t. Pol	.:	Horiz	zont	al							
Tes	t Mo	de:	TX 8	02.1	11n(HT4	0) Mode	57	'95MF	lz (U-ľ	VII-3)		
Rei	nark	:			t for the ed limit.	emissio	n v	vhich	more t	han 10 dB	below the	;
120.0	) dBu\	//m										
60				2							C - Above 1G P C - Above 1G A	
0.0 10	00.000	4900.00 88	00.00	1270	00.00 166	<u>500.00 2050</u>	)0.0	) 244(	0.00 2	8300.00 3220	0.00	40000.00 MHz
1	No.	Freque (MHz	-		actor B/m)	Readin (dBuV	-		vel V/m)	Limit (dBuV/m	Margin ) (dB)	Detector
	1	11590.	/		5.09	25.03	/	•	.12	54.00	-13.88	AVG
	2	11590.	132	1	5.09	39.98		55	.07	74.00	-18.93	peak
1.F						IB/m)+Ca	able	e Fact	tor (dB	)-Pre-amp	lifier Facto	or

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2.Margin value = Level -Limit value



Ant. F	Pol.:		Vert	cal										
Test I	Mode	:	TX 8	302. <sup>-</sup>	11n(HT4	40) Mo	ode 57	′95Mŀ	lz (U-	NII-3)				
Rema	ark:				rt for the ed limit.		sion v	vhich	more	han 1	0 dB l	below th	e	
120.0	dBu¥/m													
										FCC	Part15 C	- Above 1G	PK	
60				2 X						FCC	Part15 C	- Above 1G	AV	
				*										
0.0	.000 490	0.00 9	3800.00	127	0.00 16	600.00	20500.0	1 244	0.00 2	8300.00	32200	00	40000.00 M	H-2
No	. F	reque			actor B/m)		ding uV)		vel V/m)		nit V/m)	Margir (dB)	Detecto	or
1	1	11589	/		5.08	· ·	.54	•	.62		.00	-13.38	AVG	_
2	1	11589	.745	1	5.08	39.	.61	54	.69	74	.00	-19.31	peak	
Rema	arke:													

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An	t. Pol	.:	Horiz	zonta	al							
Tes	st Mo	de:	TX 8	02.1	I1ac(VH	IT40) Mc	de	5755	MHz (	U-NII-3)		
Re	mark	:			t for the ed limit.	emissio	n w	/hich	more t	han 10 dB I	below the	9
120.	0 dBu¥	//m										
										FCC Part15 C	- Above 1G Pl	K
60				2						FCC Part15 C	- Above 1G A	/
				1 X								
0.0												
	00.000	4900.00 88	00.00	1270	0.00 166	00.00 2050	00.00	2440	0.00 2	8300.00 32200	.00	40000.00 MHz
Г		Freque	ncv	F	actor	Readir	na	Le	vel	Limit	Margin	
	No.	(MHz	2)	(d	B/m)	(dBuV	')	(dBu	ıV/m)	(dBuV/m)	(dB)	Detector
	1	11509.		-	5.00	25.63			.63	54.00	-13.37	AVG
	2	11510.	051	1	5.01	39.15	5	54	.16	74.00	-19.84	peak
Re	marks	<u>.</u>										
1.F	actor					IB/m)+Ca	able	e Fac	tor (dB	)-Pre-ampl	ifier Facto	or

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Ant	. Pol	.:	Verti	cal					
Tes	t Mo	de:	TX 8	02.11ac(	VHT40) Mode	e 5755MHz (	U-NII-3)		
Rer	nark	:		eport for cribed lim	the emission hit.	which more	than 10 dB I	below the	Э
120.0	) dBu\	//m	_	1					
							FCC Part15 C	: - Above 1G F	РК.
60				2 X			FCC Part15 C	C - Above 1G A	W
				*					
0.0									
10	00.000	4900.00	8800.00	12700.00	16600.00 20500.	00 24400.00	28300.00 32200	D.00	40000.00 MHz
1	No.	Frequ (MF		Factor (dB/m)	· · · ·	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	11509	9.451	15.00	25.51	40.51	54.00	-13.49	AVG
	2	11509	9.656	15.00	39.66	54.66	74.00	-19.34	peak
1.Fa		(dB/m) =		na Facto Limit valu	r (dB/m)+Cab Je	le Factor (dE	3)-Pre-ampl	ifier Fact	or

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	Ant. Pol.:				Horizontal											
Fest Mode: Remark:			Т	TX 802.11ac(VHT40) Mode 5795MHz (U-NII-3) No report for the emission which more than 10 dB below the prescribed limit.												
20.0	dBuV	/m														
											FCC F	°art15 C	: - Above 1G	PK		
60					1						FCC Part15 C		- Above 1G	AV		
					ž											
0.0	n 000 .	4900.00	8800	00	1270	0.00 16	600.00	20500 0	D 2440	0.00 2	8300.00	32200	1.00	40000.00 MI		
No			Hz)	-	(dl	actor B/m)	•	uV)	Le (dBu	V/m)	Lim (dBu\	//m)	Margir (dB)	Delector		
1	1	11589.660		0	15.08		40.28		55.36		74.	00	-18.64	4 peak		
2	2	11590.140		0	15.09		24.94		40.03		54.	00	-13.9	7 AVG		

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2.Margin value = Level -Limit value

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Ant	t. Pol	.:	Verti	Vertical										
Tes	st Mo	de:	TX 8	02.11ac	:(VH	T40) M	ode	5795	MHz (	U-NII-3	)			
Rer	nark	:		eport fo cribed li		emissio	on v	vhich	more	han 10	dB	below th	ne	
120.0	) dBu\	//m	1 10.00			1								1
										FCC P	art15 C	- Above 16	РК	
60				Ş						FCC P	art15 C	- Above 1G	AV	
				×			_							
							_							
0.0	00.000	4900.00	8800.00	12700.00	166	00.00 20	500.0	0 2440	0.00	28300.00	32200	).00	40000.00	MHz
1	No.	Frequ (Mł		Facto (dB/m		Readir (dBu\		Le <sup>.</sup> (dBu	vel V/m)	Lim (dBu∖		Margin (dB)	Detect	or
Г	1	11589	9.561	15.0	8	25.28	в	40.	.36	54.0	00	-13.64	AVO	;
	2	11590	0.011	15.0	9	39.17	7	54.	.26	74.0	00	-19.74	peal	<
	narks	s: (dB/m) :												

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2.Margin value = Level -Limit value



Ant	. Pol	l.:	Horiz	Horizontal										
Tes	t Mo	de:	TX 8	02.1	1ac(VF	IT80)	Mode	5775	MHz (	U-NII-	3)			
Rer	nark	:			t for the ed limit.	e emis	sion w	/hich	more t	han 1	0 dB t	elow th	e	
120.0	) dBu\	//m												
	60									FCC	Part15 C	- Above 1G	PK	
60										FCC	Part15 C	Above 1G	AV	
				*										
0.0	00.000	4900.00 8	800.00	1270	0.00 100	600.00	20500.00	2440	0.00 2	8300.00	32200.	00	40000.00 MH	
														_
Ν	lo.	Freque (MH:			actor B/m)	Rea (dB	ding uV)		vel V/m)	Lir (dBu		Margir (dB)	Detector	r
	1	11550.	105	1	5.05	39.	.31	54	.36	74	.00	-19.64	1 peak	
	2	11550.	300	1	5.05	25.	.11	40	.16	54	.00	-13.84	4 AVG	
Rer	narks	6:												

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Ant. Pol.	:	Verti	cal									
Test Mod	le:	TX 8	02.11ac(V⊦	IT80) Mode	5775MHz (	J-NII-3)						
Remark:			No report for the emission which more than 10 dB below the prescribed limit.									
120.0 dBu¥	/m	1 10 10 0										
60			2 2 1			FCC Part15 C						
0.0	4900.00 8	3800.00	12700.00 16	600.00 20500.00	) 24400.00 2	8300.00 32200.	.00	40000.00 MI				
No.	Freque (MH	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detecto				
1	11550	'	15.05	25.31	40.36	54.00	-13.64	AVG				
2	11550		15.05	39.21	54.26	74.00	-19.74	peak				
2	11000	.501	15.05	55.21	07.20	74.00	-13.74	Peak				

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2.Margin value = Level -Limit value

# 3.3. Band Edge Emissions

<u>Limit</u>

## Limits of unwanted emission out of the restricted bands

#### FCC CFR Title 47 Part 15 Subpart C Section 15.407(b)/ RSS-247 6.2.1.2 & RSS-247 6.2.4.2

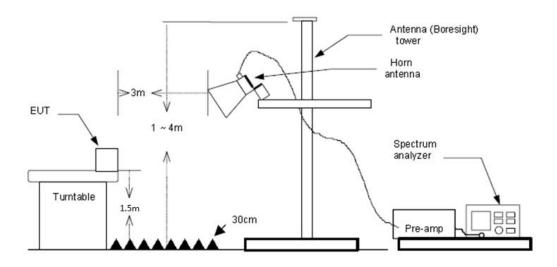
Frequency (MHz)	EIRP Limits (dBm)	Equivalent Field Strength at 3m (dBuV/m)
5150~5250	-27	68.2
5250~5350	-27	68.2
5470~5725	-27	68.2
	-27(Note 2)	68.2
5725~5825	10(Note 2)	105.2
0720~0020	15.6(Note 2)	110.8
	27(Note 2)	122.2

Note: 1. The following formula is used to convert the equipment isotropic radiated power (eirp) to field  $1000000 \sqrt{30R}$ 

strength:  $E = \frac{1000000\sqrt{30P}}{3}$  uV/m, where P is the eirp (Watts)

2. According to FCC 16-24, All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27dBm/MHz at the band edge.

## **Test Configuration**



## Test Procedure

- 1. The EUT was setup and tested according to ANSI C63.10:2013 requirements.
- 2. The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
- 3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
- 4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.



The receiver set as follow: 5.

RBW=1MHz, VBW=3MHz PEAK detector for Peak value. RBW=1MHz, VBW see note 1 with Peak Detector for Average Value.

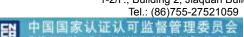
Note 1: For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements. For the Duty Cycle please refer to clause Appendix E: Duty Cycle

#### Test Mode

Please refer to the clause 2.4.

#### **Test Results**

Ant. Pol.	:	Hori	Horizontal										
Test Mod	le:	TX 8	302.11	a Mo	de 518	0MHz	z (U-N	II-1)					
Remark:			eport cribec			sion v	vhich ı	more	than 1	0 dB l	pelow the	;	
120.0 dBuV/	/m												-
60											- Above 16 P	t	-
0.0 5002.000 §		)42.00	5062.0		82.00	5102.00	5122		5142.00	5162.		5202.00	
·	Freque		Ea	ctor	Read	ling		vel	I	nit	Margin		
No.	(MHz	-		/m)	(dBu	-	(dBu			V/m)	(dB)	Detect	or
1	5150.0	000	2.	93	55.3	33	58	.26	74	.00	-15.74	pea	k
2	5150.0	000	2.	93	43.	85	46	.78	54	.00	-7.22	AVC	3
Remarks 1.Factor 2.Margin	(dB/m) =				dB/m)+	Cable	e Fact	or (dE	3)-Pre	-ampli	fier Facto	or	





Ant. Po	l.:	Verti	cal					
Test Mo	ode:	TX 8	802.11a Mo	de 5180MHz	z (U-NII-1)			
Remark	<b>K:</b>		eport for the cribed limit.	e emission v	which more	than 10 dB I	pelow the	e
20.0 dBu	iV/m	1 10.00						
60							- Above 1G F - Above 1G A	
0.0	5015.00	5035.00	5055.00 50	75.00 5095.00	5115.00	5135.00 5155.		5195.00 MH
No.	Freque (MH		Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5150.	000	2.93	50.73	53.66	74.00	-20.34	peak
2	5150.	000	2.93	39.88	42.81	54.00	-11.19	AVG
Remark								



	.:	Hori	Horizontal									
est Mo	de:	TX 8	302.11a N	lode 5240I	MHz	(U-NII-	1)					
Remark	:		report for scribed lim	the emission	on w	hich mo	ore t	han 10	) dB l	pelow the	е	
120.0 dBu'	V/m	1 0100										
60							1			- Above 1G		
5223.000	5243.00	263.00	5283.00	5303.00 53	323.00	5343.00		363.00	5383.	00	5423.00	
	5243.00 S		5283.00 Factor			5343.00 Leve		363.00 Lim		oo Margin		
		ncy		· Readi	ng		I		nit	Margin		
5223.000	Freque	ncy :)	Factor	· Readi	ng /)	Leve	l m)	Lim	nit //m)	Margin	Detect	

2.Margin value = Level -Limit value



Ant. Po	ol.:	Verti	Vertical									
Test Mo	ode:	TX 8	02.11a Mod	le 5240MHz	2 (U-NII-1)							
Remarl	<b>K</b> :		No report for the emission which more than 10 dB below the prescribed limit.									
120.0 dB	uV/m	110.000										
60						FCC Part15 C						
0.0	D 5244.00 F	264.00	5284.00 530	M 00 5324 00	5344.00 5	364 00 5384 (	10	5424.00 M				
	Freque		5284.00 530 Factor (dB/m)	84.00 5324.00 Reading (dBuV)	5344.00 5	<u>364.00 5384.0</u> Limit (dBuV/m)	Margin (dB)	5424.00 M				
INO.	<b>`</b>	/	(ub/iii) 3.43	(dBdV) 37.42	40.85	(dBd v/m) 74.00	-33.15	neek				
	E3E0		5.45	51.42	40.85	74.00 54.00		peak AVG				
1	5350. 5350.		3.43	26.10	29.53		-24.47					



	l.:	Hori	zontal					
est Mo	de:	TX 8	302.11n(HT	20) Mode 5	180MHz (U-I	NII-1)		
Remark	:		report for th scribed limit	e emission v	which more t	han 10 dB t	pelow the	;
20.0 dBu	iV/m							
60						FCC Part15 C		T
0.0	5019.00	5039.00	5059.00 5(	079.00 5099.00	5119.00	5139.00 5159.0		5199.00 MH
	Freque (MH	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
No.	(1111)	Z)	(GD/III)	(4.2.4.7)	(aba mi)	(		
No. 1	5150.	1	2.93	56.20	59.13	74.00	-14.87	peak

2.Margin value = Level -Limit value



Ant. Pol	l.:	Verti	cal					
est Mo	de:	TX 8	02.11n(HT	20) Mode 5	180MHz (U-	NII-1)		
Remark			eport for th cribed limit		which more t	than 10 dB l	below the	9
120.0 dBu	W/m							
								$\sim$
						FCC Part15 0	C - Above 1G I	PK
60						FCC Part15 0	- Above 1G	av h
						3		
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		and the state of t	the strength of the state of th	to a start of the second second				
0.0								
4995.000	5015.00	5035.00	5055.00 5	075.00 5095.0	0 5115.00	5135.00 5155	.00	5195.00 MH
No.	Frequ (Mł	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5150	.000	2.93	49.71	52.64	74.00	-21.36	peak
2	5150	.000	2.93	40.56	43.49	54.00	-10.51	AVG

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	:	Horiz	zontal					
Fest Mod	de:	TX 8	02.11n(HT2	0) Mode 52	40MHz (U-N	VII-1)		
Remark:			eport for the cribed limit.	emission w	hich more t	han 10 dB t	pelow the	e
120.0 dBuV	Vm	1 0100						
60	5245.00 5	265.00	5285.00 530	5.00 5325.00	5345.00 53	FCC Part15 C FCC Part15 C	- Above 16 A	
			<b>F</b> actor	Reading	Level	Limit	Margin	
No.	Freque (MH		Factor (dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	Detector
No.		z)		<b>•</b>				Detector

2.Margin value = Level -Limit value



Ant. Po	l.:	Vert	ical					
Test Mo	de:	TX 8	302.11n(HT	20) Mode 52	240MHz (U-	NII-1)		
Remark	:		eport for th cribed limit	e emission v	which more	than 10 dB I	pelow the	;
120.0 dBu	W/m							
						FCC Part15 C	- Above 1G P	K
60	<u> </u>	man and a second				FCC Part15 C	- Above 1G A	v
			~		1			
				manna	****			whether a particular and the state of the st
0.0								
5222.000	5242.00	5262.00	5282.00 5	302.00 5322.00	5342.00	5362.00 5382.	UU	5422.00 MHz
No.	Frequ (MF	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5350	.000	3.43	36.02	39.45	74.00	-34.55	peak
2	5350	.000	3.43	26.84	30.27	54.00	-23.73	AVG
	(dB/m)		na Factor ( Limit value	dB/m)+Cabl	e Factor (dE	3)-Pre-ampli	fier Facto	or

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	.:	Hori	zontal	Horizontal									
est Mod	de:	TX 8	302.11a	c(VF	HT20) M	ode	5180	MHz (	U-NII-	1)			
Remark:			eport fo			on v	vhich	more	than 1	0 dB I	below the	Э	
120.0 dBuV	//m	1 0100	onbod										
60											- Above 16 P		
0.0	5019.00 5	5039.00	5059.00	50	79.00 50	99.00	5119	3.00 <b>!</b>	5139.00	5159.0	00	5199.00 MH	
No.	Freque (MHz		Fact (dB/r		Readi (dBu\	-		vel V/m)	Lin (dBu)		Margin (dB)	Detector	
1	5150.0	000	2.9	3	54.3	3	57	.26	74	.00	-16.74	peak	
2	5150.0	000	2.9	3	43.64	4	46	.57	54	.00	-7.43	AVG	



Ant. F	Pol.:	Verti	Vertical									
lest N	Node:			HT20) Mode		-						
Rema	ırk:		eport for the cribed limit.		which more f	than 10 dB t	pelow the	9				
120.0	dBuV/m											
							6	m				
						FCC Part15 C	- Above 1G P	ĸ				
60						FCC Part15 C	- Above 1G A	v (				
						×	and the second s					
							4					
		hum	and a state of the	-	+ martine and the second second							
0.0												
4994.	000 5014.00	5034.00	5054.00 50	74.00 5094.00	5114.00	5134.00 5154.0	JU	5194.00 MH				
No	Frequ		Factor	Reading			Margin	Detector				
	· (MF	1	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)					
1	5150		2.93	47.71	50.64	74.00	-23.36					
2	5150	.000	2.93	35.96	38.89	54.00	-15.11	AVG				

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FN



	l.:	Hori	zontal					
est Mo	de:	TX 8	302.11ac(VF	IT20) Mode	5240MHz (	U-NII-1)		
Remark	:		eport for the cribed limit.		which more t	han 10 dB t	pelow the	9
20.0 dBu	V/m	1 1						
60	5244.00 5	264.00	5284.00 530	04.00 5324.00	5344.00 5	FCC Part15 C -	Above 16 AV	
			<b>F</b> astan	Reading	Level	Limit	Margin	Detector
No.	Freque (MHz	-	Factor (dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	Detector
No. 1		z)						peak

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2.Margin value = Level -Limit value



Ant. Pol.	:	Verti	cal								
Test Mod	le:	TX 8	302.11ac	(VHT20	)) Mode	5240M	Hz (I	U-NII-1)			
Remark:			eport for cribed lin		iission v	hich mo	ore t	han 10 (	dB below	the	
120.0 dBuV/	'n										7
	~							FCC Par	t15 C - Above 1	IG PK	
60							1	FCC Par	t15 C - Above 1	IG AV	
			hanna ann		****		2	Sec. March and	Antonio	erten anderen ander an	~~
0.0	244.00	5264.00	5284.00	5304.00	5324.00	5344.00	) 5	364.00 !	5384.00	5424.00	MHz
	Frequ	ency	Facto	or Re	ading	Leve	1	Limi	Marg	in	
No.	(MF		(dB/m		BuV)	(dBuV		(dBuV/			tor
1	5350	.000	3.43	3 3	7.83	41.2	6	74.0	0 -32.	74 pea	ak
2	5350	.000	3.43	3 2	5.96	29.3	9	54.0	0 -24.6	61 AV	G
	5350	.000	3.43	3 3	7.83	41.2	6	74.0	0 -32.	74 pea	

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EN



	) <b>l.:</b>	Hori	zontal		Horizontal									
est Mo	ode:	TX 8	302.11n(HT	40) Mode 51	90MHz (U-1	NII-1)								
Remark	<b>c</b> :		eport for the cribed limit	e emission w	vhich more t	han 10 dB t	pelow the	;						
20.0 dBu	ıV/m	1 0100		·										
60	5036.00	5056.00	5076.00 50	96.00 5116.00	5136.00 5	FCC Part15 C	- Above 16 A							
No.	Freque (MH		Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector						
No.		z)		-			-	Detector peak						

2.Margin value = Level -Limit value



Ant. Pol.:		Vertic	al						
Test Mode	<b>:</b>			40) M	ode 51	90MHz (U-I	NII-1)		
Remark:	-	No re		e emis		hich more t		below the	<u>;</u>
60								C - Above 1G Pl	
0.0 5015.000 50	)35.00 50	55.00	5075.00 50	95.00	5115.00	5135.00 5	155.00 5175	.00	5215.00 MHz
No.	Freque (MHz		Factor (dB/m)		ading BuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5150.0	000	2.93	51	.72	54.65	74.00	-19.35	peak
2	5150.0	000	2.93	38	3.75	41.68	54.00	-12.32	AVG
Remarks:									

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EN



	Hori	Horizontal							
est Mode:	TX 8	302.11n(HT4	10) Mode 52	230MHz (U-N	VII-1)				
Remark:		eport for the cribed limit.	emission w	vhich more t	han 10 dB b	elow the			
20.0 dBuV/m									
60	5243.00	5263.00 52	83.00 5303.00	5323.00 5	FCC Part15 C	- Above 16 A			
	uency Hz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector		
INO. (M			-				Detector peak		

2.Margin value = Level -Limit value



nt. Pol	I.: Vertical								
est Mo	de:	TX 8	02.11n(HT4	10) Mode 52	30MHz (U-I	NII-1)			
emark	:		eport for the cribed limit.	emission v	which more t	than 10 dB I	below the	9	
20.0 dBu/	√/m								
	mm	~							
	- Y					FCC Part15 C	- Above 1G I	РК	
60						FCC Part15 C	- Above 1G /	AV	
ru -		h.	more						
			and a second and a second as	and the second sec		1 X			
				Marcaret	we wanter and the second		- and the second states and the second se	wetnesser.	
D.0									
5206.000	5226.00	5246.00	5266.00 52	86.00 5306.00	5326.00	5346.00 5366.	.00	5406.00 Mi	
No.	Freque (MH		Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	
1	5350	.000	3.43	35.98	39.41	74.00	-34.59	peak	
2	5350	.000	3.43	26.23	29.66	54.00	-24.34	AVG	

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FN



	l.:	Horiz	zontal						t. Pol.: Horizontal								
lest Mo	de:	TX 8	302.11ac(	VHT4	) Mode	5190M	Hz (	U-NII-1	)								
Remark	:		eport for cribed lin		nission v	vhich m	ore t	han 10	dB t	pelow the	;						
20.0 dBu	V/m																
60	5035.00	5055.00	5075.00	5095.00	5115.00	5135.0	0 5		1	- Above 1G Pl - Above 1G A							
No.	Freque (MF		Facto (dB/m		eading dBuV)	Leve (dBuV		Lim (dBu∖		Margin (dB)	Detector						
1	5150	.000	2.93	Ę	55.50	58.4	3	74.(	00	-15.57	peak						
	5150	000	2.93	4	12.03	44.9	96	54.0	00	-9.04	AVG						



Ant. Pol.:	Vertical								
Test Mode:	TX 802.11ac(VF	HT40) Mode	5190MHz (I	U-NII-1)					
Remark:	No report for the prescribed limit.		hich more t	han 10 dB b	elow the	ļ			
60 0.0			5 	FCC Part 5 C					
	055.00 5075.00 50	95.00 5115.00	5135.00 5	5155.00 5175.0	0	5215.00 MHz			
No. Freque		Reading (dBu∀)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector			
1 5150.0	2.93	45.70	48.63	74.00	-25.37	peak			
2 5150.0	2.93	35.66	38.59	54.00	-15.41	AVG			

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An	t. Pol	.:	Horiz	zontal										
Tes	st Mo	de:	TX 8	02.11a	c(V⊦	IT40) M	ode	5230	MHz (	J-NI	I-1)			
Re	mark:	:		eport fo cribed l		e emissio	on w	/hich	more t	han	10 dB k	pelow the	;	
120.	0 dBuV	//m		1					-					
60											C Part15 C	- Above 16 P - Above 16 A		
0.0 52	204.000	5224.00	244.00	5264.00	528	4.00 53	D4.00	5324	4.00 5	> 344.00	5364.0		5404.00 M	IHz
	No.	Freque (MH	-	Fac (dB/i		Readi (dBu	-	(dBu	evel ₄V/m)		imit uV/m)	Margin (dB)	Detecto	or
	1	5350.		3.4	-	39.1	5		2.58		4.00	-31.42		-
	2	5350.	000	3.4	3	28.5	0	31	.93	5	4.00	-22.07	AVG	i
1.F		: (dB/m) = value =				IB/m)+C	able	e Fac	tor (dB	)-Pre	e-ampli	fier Facto	or	

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802.11ac(VH report for the scribed limit.		•	,	elow the	
	emission w	/hich more t	han 10 dB b	elow the	
5266.00 528	6.00 5306.00	5326.00 5	*	Above 16 AV	
Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
3.43	36.43	39.86	74.00	-34.14	peak
3.43	25.77	29.20	54.00	-24.80	AVG
	Factor (dB/m) 3.43	Factor (dB/m)Reading (dBuV)3.4336.43	Factor (dB/m)         Reading (dBuV)         Level (dBuV/m)           3.43         36.43         39.86	Factor (dB/m)         Reading (dBuV)         Level (dBuV/m)         Limit (dBuV/m)           3.43         36.43         39.86         74.00	Factor         Reading (dB/m)         Level (dBuV)         Limit (dBuV/m)         Margin (dBuV/m)           3.43         36.43         39.86         74.00         -34.14

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2.Margin value = Level -Limit value



An	t Mode: TX 802.11ac(VHT80) Mode 5210MHz (U-NII-1)													
Tes	st Mo	de:	TX 8	302.11a	ac(V⊦	IT80)	Mode	5210I	MHz (	U-NII-	1)			
Re	mark:			eport fo cribed		e emis	sion v	/hich r	nore t	han 10	) dB I	below t	he	
120.0	0 dBuV	//m								ĺ				7
60			1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2					Marmin	None conception for	FCC	Part15 (	C - Above 1		
0.0														
50	090.000	5120.00	5150.00	5180.00	52	10.00	5240.00	5270	).00	5300.00	5330	.00	5390.00	MHz
Г	No.	Freque	ency	Fac	tor	Rea	ding	Le	vel	Lin	nit	Margi	n <sub>Detect</sub>	or
	NO.	(MH	z)	(dB/	m)	(dB	uV)	(dBu	V/m)	(dBu\	√/m)	(dB)	Delect	
	1	5150.	000	2.9	93	54.	53	57.	46	74.	00	-16.5	4 peal	k
	2	5150	000	2.9	93	45.	80	48.	73	54.	00	-5.27	AVG	3
	3	5350.	000	3.4	13	40.	22	43.	65	74.	00	-30.3	5 peal	k
	4	5350.	000	3.4	13	31.	82	35.	25	54.	00	-18.7	5 AVG	3
	marks			-		-						-	•	<b>-</b> _

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Remarks:

EN



Ant. Po	est Mode: TX 802.11ac(VHT80) Mode 5210MHz (U-NII-1)										
Test Mo	de:	TX 8	02.11ac(	VHT80) N	lode	5210	MHz (	U-NII-1)			
Remark			eport for cribed lim		ion w	/hich I	more t	han 10 dB	below the	e	
120.0 dBu	V/m										
								FCC Part15 C	: - Above 1G P	ĸ	
60		1						FCC Part15 C	- Above 1G A	v	
		2	1			hame					
m	and the second					hannon	and a second and and and and and and and and and a	and the way and a second		and the set	
-											
0.0											
5090.000	5120.00	5150.00	5180.00	5210.00 5	240.00	5270	.00 5	300.00 5330.	00	5390.00 MHz	
No.	Frequ (Mł		Facto (dB/m)		-		vel V/m)	Limit (dBuV/m)	Margin (dB)	Detector	
1	5150	000.	2.93	50.	73	53	.66	74.00	-20.34	peak	
2	5150	000.	2.93	41.0	00	43	.93	54.00	-10.07	AVG	
3	5350	000.	3.43	35.	72	39	.15	74.00	-34.85	peak	
4	5350	.000.	3.43	27.8	35	31	.28	54.00	-22.72	AVG	
L	1					1			1	<u> </u>	

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Remarks:

FN



Ant. Pol	.:	Horizontal
Test Mo	de:	TX 802.11a Mode 5745MHz (U-NII-3)
Remark	:	No report for the emission which more than 10 dB below the prescribed limit.
130.0 dBu\	√/m	
70 http://www.huke 10.0 5650.000		5.00 5732.50 5760.00 5787.50 5815.00 5842.50 5870.00 5925.00 MHz
No.	Freque (MHz	
1	5725.0	00 4.54 52.19 56.73 122.20 -65.47 peak
	(dB/m) =	ntenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor evel -Limit value



Ant. Po	l.:	Vertica							
Test Mode:TX 802.11a Mode 5745MHz (U-NII-3)Remark:No report for the emission which more than 10 dB below the									
Remark	<b>K:</b>		ort for the bed limit.		vhich more t	han 10 dB b	pelow the		
130.0 dBu	iV/m								
10.0	Avrilulumplation 1 5677.50 5		732.50 576	50.00 5787.50			15.407 U-NII-3 Margin -6 dB Мимим Миминији уми 0 5925.00 MHz		
No.	Freque (MHz		Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB) Detector		
1	5725.0	000	4.54	53.23	57.77	122.20	-64.43 peak		
	r (dB/m) =		Factor (c	dB/m)+Cabl	e Factor (dB	)-Pre-ampli	fier Factor		



	.:	Horiz	zontal							
Test Mo	de:	TX 8	02.11a Mod	de 5825MHz	2 (U-NII-3)					
Remark:		No report for the emission which more than 10 dB below the prescribed limit.								
130.0 dBu\	//m	1 0.00								
70 		MA		60.00 5787.50		FCC Par		6 dB		
No.	Freque (MH	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector		
	5850.	000	4.95	51.94	56.89	122.20	-65.31	peak		



Test Mode: Remark:			2 (U-NII-3)								
	<b>Remark:</b> No report for the emission which more than 10 dB below the										
	prescribed li	No report for the emission which more than 10 dB below the prescribed limit.									
130.0 dBu¥/m	[ p. coc										
10.0	705.00 5732.50	5760.00 5787.50		FCC Par							
No. Freque			Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)						
1 5850.0	,		44.86	122.20	-77.34 peak						
INO. (MHz	z) (dB/n	n) (dBuV)́	(dBuV/m)	(dBuV/m)	(dB) Detec						



Ant. Pol.:	Horizontal					
Test Mode:	TX 802.11n(H	T20) Mode 57	'45MHz (U-I	VII-3)		
Remark:	No report for t		which more t	han 10 dB t	pelow the	;
130.0 dBu¥/m						
70 10.0 5650.000 5677.50	AMM AMM 5705.00 5732.50	5760.00 5787.50	MIM			6 dB
No. Freque	-		Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 5725.	000 4.54	60.96	65.50	122.20	-56.70	peak



Ant. Pol	.:	Vertical						
Test Mode:TX 802.11n(HT20) Mode 5745MHz (U-NII-3)Remark:No report for the emission which more than 10 dB below the								
Remark	:	No repo prescrib		emission v	hich more t	han 10 dB b	elow the	
130.0 dBu\	//m							
70 	11/10/14/14/14/14/14/14/14/14/14/14/14/14/14/		2.50 576	50.00 5787.50			15.407 U-NII-3 Margin -6 dB	
No.	Freque (MHz	-	actor dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB) Detector	
1	5725.0	000	4.54	50.06	54.60	122.20	-67.60 peak	
				dB/m)+Cable	e Factor (dB	)-Pre-ampli	fier Factor	



Ant. Pol	.:	Horiz	zontal						
Test Mode:TX 802.11n(HT20) Mode 5825MHz (U-NII-3)Remark:No report for the emission which more than 10 dB below the									
Remark:			eport for the cribed limit.		vhich more t	than 10 dB l	below the		
130.0 dBuV	//m								
		/	1				< T		
					Marine				
	//								
70					N	FCC Pa	rt15.407 U-NII-		
				non-manterial and	M.	Μ.,	Margin -(	5 dB	
					J. C.	MAL.			
			ا	in a sound state of the state	ψ·	Myna			
mound	infragentine and	all how while	har halan mahana har	Mar and a line of		177	Warnammaning	cological and a	
10.0									
5650.000	5677.50	5705.00	5732.50 57	60.00 5787.50	5815.00	5842.50 5870.	00	5925.00 MHz	
No.	Freque		Factor	Reading	Level	Limit	Margin	Detector	
	(MH	1	(dB/m)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	5850.	000	4.95	51.74	56.69	122.20	-65.51	peak	
Remarks	:								
I.Factor	(dB/m) =			dB/m)+Cabl	e Factor (dE	3)-Pre-ampli	fier Facto	r	
2.Margin	value =	Level -	Limit value						



	l.:	Vertic	al							
Test Mo	de:	TX 80	)2.11n(HT2	20) Mode 58	325MHz (U-N	<b>√II-</b> 3)				
Remark		No report for the emission which more than 10 dB below the prescribed limit.								
130.0 dBu	V/m									
70		Am May	/	Ingmungmungmungh			15.407 U-NII-3 Margin -6 dB			
5650.000	5677.50 57	705.00	5732.50 576	60.00 5787.50	5815.00 5	842.50 5870.0	10 5925.00 MHz			
	Frequer	ncy	Factor	Reading	Level	Limit	Margin			
No.	Frequer (MHz	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB) Detector			
No.		)		-						



Ant. Pol.:	Horizontal
Test Mode:	TX 802.11ac(VHT20) Mode 5745MHz (U-NII-3)
Remark:	No report for the emission which more than 10 dB below the prescribed limit.
130.0 dBuV/m	
70 10.0 5650.000 5677.5	ECC Part15.407 U-NII-3 Margin -6 dB Margin -6 dB 0 5705.00 5732.50 5760.00 5787.50 5815.00 5842.50 5870.00 5925.00 MHz
	equency Factor Reading Level Limit Margin (MHz) (dB/m) (dBuV) (dBuV/m) (dBuV/m) (dBuV/m) (dB) Detector
1 5	725.000 4.54 57.42 61.96 122.20 -60.24 peak
	m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor ie = Level -Limit value



Ant. Po	l.:	Vertica	al								
Test Mo	Test Mode:TX 802.11ac(VHT20) Mode 5745MHz (U-NII-3)Remark:No report for the emission which more than 10 dB below the										
Remark	:		ort for the		vhich more t	han 10 dB b	elow the				
130.0 dBu	V/m										
70	5677.50 5			50.00 5787.50	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			6 dB			
No.	Freque (MHz	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector			
1	5725.0	000	4.54	48.88	53.42	122.20	-68.78	peak			
				dB/m)+Cable	e Factor (dB	)-Pre-ampli	fier Facto	pr			



	Horiz	zontal				Horizontal										
Fest Mode:	TX 8	802.11ac(VH	IT20) Mode	5825MHz (	U-NII-3)											
Remark:		eport for the cribed limit.	emission v	vhich more t	han 10 dB t	pelow the	;									
30.0 dBuV/m	1 1															
70 		ylyyy tyllyyy tyllyy tyllyy tyllyy tyllyy tyllyy tyllyy tyllyy tyllyy tyllyy tylly t	0.00 5787.50		MAR AND	15.407 U-NII- Margin - Margin -	6 dB									
	equency MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector									
1 58	350.000	4.95	48.43	53.38	122.20	-68.82	peak									

2.Margin value = Level -Limit value



70         FCC Part15.407 U-NII-3           70         FCC Part15.407 U-NII-3           Margin -6 dB         Margin -6 dB           Margin -6 dB         Margin -6 dB	Ant. Pol	.:	Verti	rtical									
prescribed limit. 130.0 dBwV/m 130.0 dBwV/m 130.0 dBwV/m 130.0 dBwV/m 130.0 dBwV/m 150.0 dBwV/m 150.0 dBwV/m 150.0 577.50 5705.00 5732.50 5760.00 5787.50 5015.00 5042.50 5070.00 5925.00 MHz No. Frequency Factor Reading Level Limit Margin (dBwV/m) (dBwV/m	Test Mo	de:	TX 8	802.11a	c(V⊦	IT20) N	lode	5825	MHz (	U-NII-3	3)		
$\frac{130.0  494 \text{W/m}}{100} = \frac{1}{100} =$	Remark	:				e emiss	ion w	vhich	more t	han 10	) dB b	elow the	е
$\frac{1}{100} \frac{1}{100} \frac{1}$	130.0 dBu	//m											
$\frac{1}{100} \frac{1}{100} \frac{1}$				_									
$\frac{1}{100} \frac{1}{100} \frac{1}$				/									
$\frac{1}{100} \frac{1}{100} \frac{1}$				/						7			
$\frac{1}{100} \frac{1}{100} \frac{1}$												$\mathbf{\mathbf{X}}$	
No.         Frequency (MHz)         Factor (dB/m)         Reading (dBuV)         Level (dBuV/m)         Limit (dBuV/m)         Margin (dBuV/m)         Detector           1         5850.000         5732.50         5760.00         5787.50         5815.00         5842.50         5870.00         5925.00         MHz           No.         Frequency (MHz)         Factor (dB/m)         Reading (dBuV)         Level (dBuV/m)         Limit (dBuV/m)         Margin (dB)         Detector           1         5850.000         4.95         45.54         50.49         122.20         -71.71         peak									withhing				
No.         Frequency (MHz)         Factor (dB/m)         Reading (dBuV)         Level (dBuV/m)         Limit (dBuV/m)         Margin (dBuV/m)         Detector           1         5850.000         5732.50         5760.00         5787.50         5815.00         5842.50         5870.00         5925.00         MHz           No.         Frequency (MHz)         Factor (dB/m)         Reading (dBuV)         Level (dBuV/m)         Limit (dBuV/m)         Margin (dB)         Detector           1         5850.000         4.95         45.54         50.49         122.20         -71.71         peak									$\left\{ - \right\}$				
$\frac{10.0}{5650.000} \frac{10.0}{5677.50} \frac{10.0}{5705.00} \frac{10.0}{5732.50} \frac{10.0}{5760.00} \frac{10.0}{5787.50} \frac{10.0}{5815.00} \frac{10.0}{5842.50} \frac{10.0}{5870.00} \frac{10.0}{5925.00} 1$	70										FCC Part		
												Maryin	
								hand		MA 1			
No.       Frequency (MHz)       Factor (dB/m)       Reading (dBuV)       Level (dBuV/m)       Limit (dBuV/m)       Margin (dB)       Detector         1       5850.000       4.95       45.54       50.49       122.20       -71.71       peak	h th	No					1.1	"JYA '		1 NO	. he		المراجعة المراجعة
No.       Frequency (MHz)       Factor (dB/m)       Reading (dBuV)       Level (dBuV/m)       Limit (dBuV/m)       Margin (dB)       Detector         1       5850.000       4.95       45.54       50.49       122.20       -71.71       peak         Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor		ezholiologia	(eense and the state of the second	ndagh dhar (1724))	w.Alley/	4nh-vappy	L~~~\/ <b>**4</b> (4)****			- District	wadautha	atulkher-tyv <sup>an</sup> uk	adarat davat
1       5850.000       4.95       45.54       50.49       122.20       -71.71       peak         Remarks:       1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor	10.0								5.00 5			•	5925.00 MH
Remarks: 1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor	10.0	5677.50 5	705.00 NCY	5732.50 Fact	576	Read	787.50	5815	evel	842.50	5870.00	Margin	
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor	10.0 5650.000	5677.50 57 Freque (MH2	705.00 NCY Z)	5732.50 Fact (dB/r	576 tor m)	Reac (dBu	787.50 ling ıV)	5815 Le	evel iV/m)	B42.50	5870.0	0 Margin (dB)	Detecto
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor	10.0 5650.000	5677.50 57 Freque (MH2	705.00 NCY Z)	5732.50 Fact (dB/r	576 tor m)	Reac (dBu	787.50 ling ıV)	5815 Le	evel iV/m)	B42.50	5870.0	0 Margin (dB)	Detecto
	10.0 5650.000	5677.50 57 Freque (MH2	705.00 NCY Z)	5732.50 Fact (dB/r	576 tor m)	Reac (dBu	787.50 ling ıV)	5815 Le	evel iV/m)	B42.50	5870.0	0 Margin (dB)	Detecto
	10.0 5650.000	5677.50 57 Freque (MHz 5850.0	ncy z)	5732.50 Fact (dB/r 4.9	576 tor m) 5	Read (dBu 45.5	787.50 IN IV) 54	Le (dBu 50	evel IV/m) 1.49	842.50 Lin (dBu) 122	5870.0 nit √/m) 2.20	Margin (dB) -71.71	Detector peak



est Mode:	Horizontal					
	TX 802.11n(HT	40) Mode 57	'55MHz (U-	NII-3)		
Remark:	No report for the prescribed limit.		which more	than 10 dB I	below the	è
30.0 dBuV/m	•					
70 				FCC Par		6 dB
No. Frequer	•	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 5725.0	/ /	49.30	53.84	122.20	-68.36	peak



dB 4
)etector
peak



Ant. Pol.:	Horizontal						
Test Mode:	TX 802.11n(HT40) Mode 5795MHz (U-NII-3)						
Remark:	No report for the emission which more than 10 dB below the prescribed limit.						
130.0 dBuV/m							
70 ////////////////////////////////////	5705.00 5732.50 5760.00 5787.50 5815.00 5842.50 5870.00 5925.00 MHz						
	uency Factor Reading Level Limit Margin (Hz) (dB/m) (dBuV) (dBuV/m) (dBuV/m) (dB) Detector						
1 585	50.000 4.95 40.27 45.22 122.20 -76.98 peak						
	) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor = Level -Limit value						



	:	Verti	cal					
Test Mod	e:	TX 8	02.11n(HT	40) Mode 57	795MHz (U·	-NII-3)		
Remark:			eport for the cribed limit.		which more	than 10 dB I	below the	;
130.0 dBuV/	m	1 0.00						
70 		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	5732.50 57			FCC Pa		-6 dB
No.	Freque (MHz		Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	5850.0	000	4.95	35.54	40.49	122.20	-81.71	peak



Ant. Pol.:	Horizontal							
Test Mode:	TX 802.11ac(VHT40) Mode 5755MHz (U-NII-3)							
Remark:	No report for prescribed	or the emission limit.	which more	than 10 dB	below the			
130.0 dBuV/m		-						
70 n,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M,M	705.00 5732.50	5760.00 5787.5			115.407 U-NII-3 Margin -6 dB			
No. Freque			Level (dBuV/m)	Limit (dBuV/m)	Margin (dB) Detector			
1 5725.0	00 4.5	4 51.94	56.48	122.20	-65.72 peak			



(VHT40) Mode the emission w mit.				
	hich more t	han 10 dD k		
			pelow the	:
		mdunuumulunu	Margin -	6 dB
<b>u</b>	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
, <u>,</u> ,	54.13	122.20	-68.07	peak
	5760.00 5787.50	5760.00 5787.50 5815.00 or Reading Level n) (dBuV) (dBuV/m)	FCC Par           5760.00         5787.50         5815.00         5842.50         5870.0           or         Reading (dBuV)         Level (dBuV/m)         Limit (dBuV/m)	FCC Part15.407 U-NII           Margin           Margin           5760.00         5787.50           5815.00         5842.50           5870.00           Or         Reading (dBuV)         Level (dBuV/m)         Limit (dBuV/m)         Margin (dBuV/m)



Ant. Pol.:	Horiz	ontal					
Test Mode:	TX 8	02.11ac(VH	T40) Mode	5795MHz (	J-NII-3)		
Remark:		port for the ribed limit.	emission w	hich more t	han 10 dB b	pelow the	!
130.0 dBuV/m							
	705.00				FCC Part		S dB
No. Freque (MH		Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 5850.	000	4.95	43.10	48.05	122.20	-74.15	peak



Ant. Pol.	:	Vertic	al					
Test Mod	de:	TX 80	)2.11ac(VH	T40) Mode	5795MHz (	U-NII-3)		
Remark:			port for the ribed limit.	emission w	hich more t	han 10 dB b	pelow the	
130.0 dBuV	/m							_
70				for the second s	manny	FCC Par	t15.407 U-NII-3	
				with the second s			Margin -6 dB	
walkand	uppen-mandalann	nonyoyb	www.www.www.	holy <sup>ton</sup>		Manganhananan	Monteleventer	-
10.0 5650.000	5677.50 57	05.00	5732.50 576	0.00 5787.50	5815.00 5	842.50 5870.0	00 5925.00	 MHz
No.	Freque (MHz	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	tor
1	5850.0	000	4.95	37.96	42.91	122.20	-79.29 pea	ık
Remarks								
1.Factor	(dB/m) = /		a Factor (d ₋imit value	IB/m)+Cable	e Factor (dB	)-Pre-ampli	fier Factor	



	Horizon	tal					
Test Mode:	TX 802.	11ac(VF	IT80) Mode	5775MHz (	U-NII-3)		
Remark:		ort for the ed limit.	e emission v	which more	than 10 dB t	below the	e
130.0 dBuV/m							
70	Northold Providence	WY			FCC Pa	rt15.407 U-NII Margin	-6 dB
10.0							
5650.000 5677.50 5	705.00 57	32.50 57	60.00 5787.50	5815.00	5842.50 5870.	00	5925.00 M
No. Freque	-	actor B/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 5725.0	000	4.54	56.73	61.27	122.20	-60.93	peak
	000	4.95	47.34	52.29	122.20	-69.91	peak

EN

1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor 2.Margin value = Level -Limit value



EN

Ant. Po	l.:	Vertica	ertical									
Test Mo	ode:	TX 80	2.11ac(VF	IT80) Mode	5775MHz (	U-NII-3)						
Remark	<b>K:</b>		oort for the ribed limit.	emission v	hich more f	than 10 dB b	elow the					
130.0 dBu	W/m											
70	Murry Rubbrusch				Maland Ka		t <mark>15.407 U-NII</mark> - Margin -	6 dB				
5650.000	5677.50 57	705.00	5732.50 57	60.00 5787.50	5815.00	5842.50 5870.0	0	5925.00 MH				
No.	Freque (MHz	-	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector				
1	5725.0	00	4.54	49.86	54.40	122.20	-67.80	peak				
2	5850.0	00	4.95	40.28	45.23	122.20	-76.97	peak				
Remark	s: ^ (dB/m) = /											

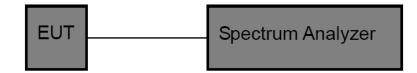


# 3.4. Bandwidth Test

## <u>Limit</u>

FCC Part 15 Subpart C(15.407)/ RSS-247			
Test Item Limit Frequency Range (MHz)			
		5150~5250	
26 Bandwidth		5250~5350	
		5500~5700	
6 dB Bandwidth	>500kHz	5725~5850	

## **Test Configuration**



## Test Procedure

EN

Please refer to According to KDB789033 D02, for the measurement methods.

### The setting of the spectrum analyser as below:

26dB Bandwidth Test		
Spectrum Parameters	Setting	
Attenuation	Auto	
Span	>26 dB Bandwidth	
RBW	Approximately 1% of the emission bandwidth	
VBW	VBW>RBW	
Detector	Peak	
Trace	Max Hold	
Sweep Time	Auto	



6dB Bandwidth Test		
Spectrum Parameters	Setting	
Attenuation	Auto	
Span	>6 dB Bandwidth	
RBW	100 kHz	
VBW	VBW>=3*RBW	
Detector	Peak	
Тгасе	Max Hold	
Sweep Time	Auto	
99% Occupied Bandwidth Test		
Spectrum Parameters	Setting	
Attenuation	Auto	
RBW	1% to 5% of the OBW	
VBW	≥ 3RBW	
Detector	Peak	
Тгасе	Max Hold	

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 2.4.

### Test Results

Please see the Appendix A1, A2, A3.



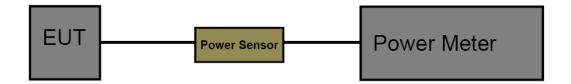
# 3.5. Output Power Test

## <u>Limit</u>

FCC Part 15 Subpart E (15.407)			
Test Item Limit Frequenc		Frequency Range(MHz)	
	Fixed: 1 Watt (30dBm) Mobile and Portable: 250mW (24dBm)	5150~5250	
Conducted Output Power	250mW (24dBm)	5250~5350	
	250mW (24dBm)	5500~5700	
	1 Watt (30dBm)	5725~5850	

	IC Power&PSD Limit				
Frequency	Type of devices	Maximum Conducted	EIRP Output Power	Conducted Power	EIRP Power
,		Output Power		Spectral Density	Spectral Density
5150MHz-5250MHz	in vehicles		30mW or 1.76 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)	$\ge$	$\ge$
	Other Devices		200mW or 10 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)	$\geq$	10dBm/MHz
	in vehicles		30mW or 1.76 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)		
5250MHz-5350MHz	Other Devices	250mW or 11 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)	1W or 17 + 10 ×log10B dBm, whichever is less (B=99% OBW in MHr)	11dBm/Mhz	
5470MHz-5600MHz 5850MHz-5725MHz	ALL Devices	250mW or 11 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)	1W or 17 + 10 ×log10B dBm, whichever is less (B=99% OBW in MHz)	11 dBm/Mhz	$\searrow$
5725MHz-5850MHz	ALL Devices	1₩		30 dBm/500 KHz	

## **Test Configuration**







## **Test Procedure**

The measurement is according to section 3 of KDB 789033 D02 General UNII Test Procedures New Rules V02r01.

## Test Mode

Please refer to the clause 2.4.

## **Test Result**

FR

Please see the Appendix B.



# 3.6. Power Spectral Density Test

## Limit

## FCC Part 15 Subpart E(15.407)/ RSS-247

For the 5.15~5.25GHz band:

Outdoor AP

The peak power spectral density (PSD) shall not exceed the lesser of 17dBm/MHz. If  $G_{Tx}$ >6dBi, then PSD =17-( $G_{Tx}$ -6).

Indoor AP

The peak power spectral density (PSD) shall not exceed the lesser of 17dBm/MHz. If  $G_{Tx}$ >6dBi, then PSD =17-( $G_{Tx}$ -6).

Point-to-point AP

The peak power spectral density (PSD) shall not exceed the lesser of 17dBm/MHz. If  $G_{Tx}$ >23dBi, then PSD =17-( $G_{Tx}$ -23).

Client devices

The peak power spectral density (PSD) shall not exceed the lesser of 11dBm/MHz. If  $G_{Tx}$ >6dBi, then PSD =11-( $G_{Tx}$ -6).

## For the 5.25~5.35GHz band:

The peak power spectral density (PSD) shall not exceed the lesser of 11dBm/MHz. If  $G_{Tx}$ >6dBi, then PSD =11-( $G_{Tx}$ -6).

For the 5.47~5.725GHz band:

The peak power spectral density (PSD) shall not exceed the lesser of 11dBm/MHz. If  $G_{Tx}$ >6dBi, then PSD =11-( $G_{Tx}$ -6).

## For the 5.725~5.85GHz band:

- Point-to-multipoint systems (P2M) The peak power spectral density (PSD) shall not exceed the lesser of 30dBm/500kHz. If  $G_{Tx}$ >6dBi, then PSD =30-( $G_{Tx}$ -6).
- Point-to-point systems (P2P)

The peak power spectral density (PSD) shall not exceed the lesser of 30dBm/500kHz.

Note: G <sub>Tx</sub> : EL	JT Antenna	gain.
----------------------------	------------	-------

	IC Power@PSD Limit				
Frequency	Type of devices	Maximum Conducted Output Power	EIRP Output Power	Conducted Power Spectral Density	EIRP Power Spectral Density
5150MHz-5250MHz	in vehicles		30mW or 1.76 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)		
	Other Devices		200mW or 10 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)		10dBm/MHz
	in vehicles		30mW or 1.76 + 10 × log:0B dBm, whichever is less (B=99% OBW in MHz)		
5250MHz-5350MHz	Other Devices	250mW or 11 + 10 × log:0B dBm, whichever is less (B=99% OBW in MHz)	1W or 17 + 10 ×logioB dBm, whichever is less (B=99% OBW in MHz)	11dBm/Mhz	
5470MHz-5600MHz 5650MHz-5725MHz	ALL Devices	250mW or 11 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)	1W or 17 + 10 ×log10B dBm, whichever is less (B=99% OBW in MHz)	11 dBm/Mhz	
5725MHz-5850MHz	ALL Devices	1₩		30 dBm/500KHz	

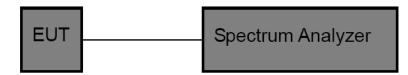
CTC Laboratories, Inc.



1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China Fax: (86)755-27521011 Http://www.sz-ctc.org.cn For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : yz.cnca.cn



## Test Configuration



### Test Procedure

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement is according to KDB 789033 D02 General UNII Test Procedures New Rules V02r01.

(1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.

- (2) Set analyzer center frequency to transmitting frequency.
- (3) Set the span to encompass the entire emissions bandwidth (EBW)(alternatively, the entire 99% OBW) of the signal.
- (4) RBW=1MHz for devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz RBW=500kHz for devices operating in the band 5.725-5.85 GHz
- (5) Set the VBW to:  $\geq$  3 RBW
- (6) Detector: AVG
- (7) Trace: Max Hold and View
- (7) Sweep time: auto
- (8) Trace average at least 100 traces in power averaging.
- (9) User the peak marker function to determine the maximum amplitude level within the RBW. Apply correction to the result if different RBW is used.

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 2.4.

### Test Result

Please see the Appendix C.

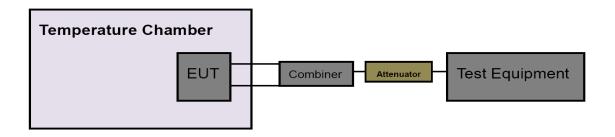


## 3.7. Frequency Stability Measurement

## Limit

FCC Part 15 Subpart C(15.407)				
Test Item	Frequency Range(MHz)			
	Specified in the user's manual,	5150~5250		
Peak Excursion Measurement	the transmitter center frequency tolerance shall be ±20 ppm maximum for the 5 GHz band (IEEE 802.11n specification)	5250~5350		
		5500~5700		
		5725~5850		

## **Test Configuration**



## **Test Procedure**

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above.

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) Set analyzer center frequency to transmitting frequency.
- (3) Set the span to encompass the entire emissions bandwidth (EBW) of the signal.
- (4) Set the RBW to: 10MHz, VBW=10MHz with peak detector and maxhold settings.
- (5) The test extreme voltage is to change the primary supply voltage from 3.465V to 4.235V percent of the nominal value.
- (6) Extreme temperature is 0°C~45°C

NOTE: The EUT was set to continuously transmitting in continuously un-modulation transmitting mode.

### **Test Mode**

Please refer to the clause 2.4.

### **Test Result**

Please see the Appendix D.



3.8. Antenna Requirement

### Standard 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.

### <u>Test Result</u>

The directional gain of the antenna U-NII-1: 8.58dBi, U-NII-3: 8.90dBi, please refer to the EUT internal photographs antenna photo.



# 3.9. Dynamic Frequency Selection(DFS)

## **Requirement**

Table 1: Applicability of DFS Requirements Prior to Use of a Channel

	Operational Mode		
Requirement	Master	Client Without Radar Detection	Client With Radar Detection
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes Not required Not required		Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

	Operational Mode		
Requirement	Master Device or Client with Radar Detection	Client Without Radar Detection	
DFS Detection Threshold	Yes	Not required	
Channel Closing Transmission Time	Yes	Yes	
Channel Move Time	Yes	Yes	
U-NII Detection Bandwidth	Yes	Not required	

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar Detection	Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required

Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.



## 1. DFS Detection Thresholds

Table 3: DFS Detection Thresholds for Master Devices and Client Devices With Radar Detection

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm

Note 1: This is the level at the input of the receiver assuming a 0dBi receive antenna.

Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

### 2. DFS Response Requirements

Parameter	Value				
Non-occupancy period	Minimum 30 minutes				
Channel Availability Check Time	60 seconds				
Channel Move Time	10 seconds See Note 1.				
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.				
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.				
<ul> <li>Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.</li> <li>Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required facilitating a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.</li> <li>Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each</li> </ul>					

## with no data traffic. **RADAR TEST WAVEFORMS**

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

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Table 5 Short Pulse Radar Test Waveforms
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Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials	
0	1	1428	18	See Note 1	See Note 1	
		Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a	$\operatorname{Roundup} \left\{ \begin{matrix} \left( \frac{1}{360} \right) \\ \left( \frac{19 \cdot 10^6}{\operatorname{PRI}_{\mu \operatorname{sec}}} \right) \end{matrix} \right\}$			
11Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A			60%	30		
2	1-5	150-230	23-29	60%	30	
3	6-10	200-500	16-18	60%	30	
4	11-20	200-500 12-16		60%	30	
		gregate (Radar Types 1	80%	120		
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.						

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B.

For example if in Short Pulse Radar Type 1 Test B a PRI of 3066 µsec is selected, the number of pulses

$$\left\{ \left(\frac{1}{360}\right) \cdot \left(\frac{19 \cdot 10^6}{3066}\right) \right\}$$

would be Round up

= Round up {17.2} = 18.

Pulse Repetition Frequency Number	Pulse Repetition Frequency (Pulses Per Second)	Pulse Repetition Interval (Microseconds) 518	
1	1930.5		
2	1858.7	538	
3	1792.1	558	
4	1730.1	578	
5	1672.2	598	
6	1618.1	618	
7	1567.4	638	
8	1519.8	658	
9	1474.9	678	
10	1432.7	698	

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11	1392.8	718	
12	1355	738	
13	1319.3	758	
14	1285.3	778 798	
15	1253.1		
16	1222.5	818	
17	1193.3	838	
18	1165.6	858	
19	1139	878	
20	1113.6	898	
21	1089.3	918	
22	1066.1	938	
23	326.2	3066	

#### Table 6 – Long Pulse Radar Test Waveform

Radar Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number of Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

The parameters for this waveforms are randomly chosen. Thirty unique waveforms are required for the Long Pulse Radar Type waveforms. If more than 30 waveforms are used for the Long Pulse Radar Type wave forms, then each additional waveform must also be unique and not repeated from the previous waveforms.

Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number of Trials
6	1	333	9	0.333	300	70%	30

For the Frequency Hopping Radar Type, the same Burst parameters are used for each wave form. The hopping sequence is different for each wave form and a 100-length segment is selected from the hopping sequence defined by the following algorithm:

The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250–5724MHz.Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. This process continues until all 475 frequencies are chosen for the set. For selection of a random frequency, the frequencies remaining within the group are always treated as equally likely.

### Calibration of Radar Waveform

Radar Waveform Calibration Procedure

- 1) A 50 ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to place of the master
- 2) The interference Radar Detection Threshold Level is -62dBm + 0dBi +1dB = -61dBm that had been taken into account the output power range and antenna gain.
- 3) The following equipment setup was used to calibrate the conducted radar waveform. A vector signal generator was utilized to establish the test signal level for radar type 0. During this process there were no transmissions by either the master or client device. The spectrum analyzer was switched to the zero spans (time domain) at the frequency of the radar waveform generator. Peak detection was

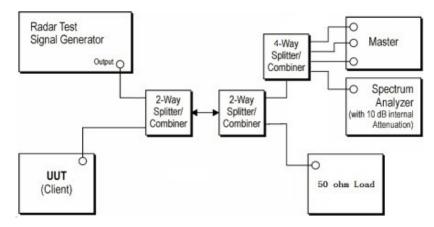


used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to 3

MHz. The spectrum analyzer had offset -1.0dB to compensate RF cable loss 1.0dB.

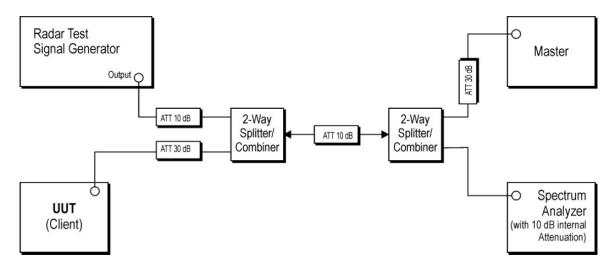
4) The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was - -62dBm + 0dBi +1dB = -61dBm. Capture the spectrum analyzer plots on short pulse radar waveform.

### **Conducted Calibration Setup**



## **Test Configuration**

Setup for Client with injection at the Master



## **Radar Waveform Calibration Result**



#### Test Procedure

- 1. The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- 2. The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device
- 3. A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- 4. EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.
- 5. When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- 6. Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type
- 7. Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: Dwell (0.3ms) =S (12000ms) / B (4000); where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: C (ms)= N X Dwell (0.3ms); where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
- 8. Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

### Test Mode

Please refer to the clause 2.4.

#### Test Results

Passed

Not Applicable