

RF REPORT

FCC ID: 2AZFE-AN1

On Behalf of

Shenzhen Shadow Crown Technology Co., Ltd.

LED Projector

Model No.: An1, An2, An3, E88, LU-1, An2 Pro, E88 Pro, NX-2, NS-1, NS-1 PRO

Prepared for Address		r Crown Technology Co.,Ltd. or, Industrial Building,Longwang Miao, Fuyong District , dong, P.R.China.
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	Report Number :	A2303044-C01-R03
	Date of Receipt :	March 23, 2023
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	Version Number :	VO

TABLE OF CONTENTS

Description

Page

1	Gene	eral Information	5
	1.1 1.2	Description of Device (EUT) Test Lab information	
2	Sumr	mary of test	6
	2.1 2.2 2.3 2.4 2.5	Test Standard description: Summary of test Test Mode Description Measurement Uncertainty (95% confidence levels, k=2) Test Equipment.	6 7 7
3	Evalu	uation Results (Evaluation)	9
	3.1	Antenna requirement	9
		3.1.1 Conclusion:	9
4	Radio	o Spectrum Matter Test Results (RF)1	10
	4.1	Conducted Emission at AC power line	10
		4.1.1 E.U.T. Operation: 1 4.1.2 Test Setup Diagram: 1 4.1.3 Test Result: 1	10
	4.2	Maximum conducted output power1	13
		4.2.1 E.U.T. Operation:	
	4.3	Power spectral density	16
		4.3.1 E.U.T. Operation: 1 4.3.2 Test Result: 1	
	4.4	Emission bandwidth and occupied bandwidth	28
		4.4.1 E.U.T. Operation: 2 4.4.2 Test Result: 3	
	4.5	Band edge emissions (Radiated)	18
		4.5.1 E.U.T. Operation: 4 4.5.2 Test Setup Diagram: 5 4.5.3 Test Result: 5	50
	4.6	Undesirable emission limits (below 1GHz)	55
		4.6.1 E.U.T. Operation: 5 4.6.2 Test Setup Diagram: 5 4.6.3 Test Result: 5	57 58
	4.7	Undesirable emission limits (above 1GHz)	
		4.7.1 E.U.T. Operation: 6 4.7.2 Test Result: 6	
5 6		Setup Photos	

Applicant	Shenzhen	Shenzhen Shadow Crown Technology Co.,Ltd.				
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Manufacturer	Shenzhen	Shad	ow Crown Technology Co.,Ltd.			
Address		A9 East 5th Floor, Industrial Building,Longwang Miao, Fuyong District , Shenzhen, Guangdong, P.R.China.				
EUT Description	LED Projec	tor				
(A)	Model No.	:	An1, An2, An3, E88, LU-1, An2 Pro, E88 Pro, NX-2, NS-1, NS-1 PRO			
(B)	Trademark	:	N/A			
Moncurement Stan	Massurement Standard Lload:					

TEST REPORT DECLARATION

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart E

The device described above is tested by Shenzhen Alpha Product Testing Co., Ltd. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The test results are contained in this test report and Shenzhen Alpha Product Testing Co., Ltd. is assumed full responsibility for the accuracy and completeness of test. Also, this report shows that the EUT is technically compliant with above listed standard(s) requirements.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen Alpha Product Testing Co., Ltd.

Yannis Wen Tested by (name + signature): :

Project Engineer

Jannis wen

Reak Yang Approved by (name + signature): : **Project Manager**

Date of issue: April 13, 2023

Revision History

Revision	Issue Date	Revisions	Revised By
V0	April 13, 2023	Initial released Issue	Yannis Wen

1 General Information

1.1 Description of Device (EUT)

Product Name	:	LED Projector		
Trademark	:	N/A		
Model Number	•••	An1, An2, An3, E88, LU-1, An2 Pro, E88 Pro, NX-2, NS-1, NS-1 PRO		
DIFF	:	There is no difference between the models except the appearance color. So all the test were performed on the model An1.		
Operation Frequency	••	802.11a/n(HT20): U-NII Band 1: 5180MHz to 5240MHz; U-NII Band 3: 5745MHz to 5825MHz; 802.11n(HT40): U-NII Band 1: 5190MHz to 5230MHz; U-NII Band 3: 5755MHz to 5795MHz;		
Number of Channels		802.11a/n(HT20): U-NII Band 1: 4; U-NII Band 3: 5; 802.11n(HT40): U-NII Band 1: 2; U-NII Band 3: 2;		
Modulation Type	•	802.11a: OFDM(BPSK, QPSK, 16QAM, 64QAM); 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM);		
Antenna Type	•••	FPC antenna		
Antenna Gain	:	: 3.54dBi (Max)		

1.2 Test Lab information

Shenzhen Alpha Product Testing Co., Ltd Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103, Shenzhen, Guangdong, China June 21, 2018 File on Federal Communication Commission Registration Number: 293961 Designation Number: CN1236 July 15, 2019 Certificated by IC Registration Number: CN0085

2 Summary of test

2.1 Test Standard description:

The tests were performed according to following standards:

FCC Part 15E: Unlicensed National Information Infrastructure Devices

2.2 Summary of test

Item	Requirement	Method	Result
Antenna requirement	Part 15.203		Pass
Conducted Emission at AC power line	FCC Part 15.207(a)	ANSI C63.10-2013 section 6.2	Pass
Maximum conducted output power	FCC Part 15.407(a)(1)(i) FCC Part 15.407(a)(1)(ii) FCC Part 15.407(a)(1)(iii) FCC Part 15.407(a)(1)(iv) FCC Part 15.407(a)(3)(i)	ANSI C63.10-2013, section 12.3	Pass
Power spectral density	FCC Part 15.407(a)(1)(i) FCC Part 15.407(a)(1)(ii) FCC Part 15.407(a)(1)(iii) FCC Part 15.407(a)(1)(iv) FCC Part 15.407(a)(3)(i)	ANSI C63.10-2013, section 12.5	Pass
Emission bandwidth and occupied bandwidth	U-NII 1, U-NII 2A, U-NII 2C: No limits, only for report use. FCC Part 15.407(e)	ANSI C63.10-2013, section 6.9.3 & 12.4 KDB 789033 D02, Clause C.2	Pass
Band edge emissions (Radiated)	FCC Part 15.407(b)(1) FCC Part 15.407(b)(4) FCC Part 15.407(b)(10)	ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6	Pass
Undesirable emission limits (below 1GHz)	FCC Part 15.407(b)(9)	ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6	Pass
Undesirable emission limits (above 1GHz)	FCC Part 15.407(b)(1) FCC Part 15.407(b)(4) FCC Part 15.407(b)(10)	ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6	Pass

No	Title	Description		
TM1	802.11a mode	Keep the EUT connect to AC power line and works in continuously transmitting mode with 802.11a modulation type. All data rates has been tested and found the data rate @ 6Mbps is the worst case. Only the data of worst case is recorded in the report.		
TM2	802.11n mode	Keep the EUT connect to AC power line and works in continuously transmitting mode with 802.11n modulation type. All bandwidth and data rates has been tested and found the data rate @ MCS0 is the worst case. Only the data of worst case is recorded in the report.		

2.3 Test Mode Description

2.4 Measurement Uncertainty (95% confidence levels, k=2)

Item	Uncertainty
Uncertainty for Power point Conducted Emissions Test	1.63dB
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	3.5dB
Uncertainty for Radiation Emission test in 3m chamber	3.74dB(Polarize: V)
(30MHz to 1GHz)	3.76dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber	3.77dB(Polarize: V)
(1GHz to 25GHz)	3.80dB(Polarize: H)
Uncertainty for radio frequency	5.06×10 ⁻⁸ GHz
Uncertainty for conducted RF Power	0.40dB
Uncertainty for temperature	0.2 °C
Uncertainty for humidity	1%
Uncertainty for DC and low frequency voltages	0.06%

2.5 Test Equipment

Equipment	Manufacture	Model No.	Firmware version	Serial No.	Last cal.	Cal Interval
9*6*6 anechoic chamber	CHENYU	9*6*6	/	N/A	2022.05.17	3Year
Spectrum analyzer	ROHDE&SCHWARZ	FSV40-N	2.3	102137	2022.08.22	1Year
Spectrum analyzer	Agilent	N9020A	A.14.16	MY499100060	2022.08.22	1Year
Receiver	ROHDE&SCHWARZ	ESR	2.28 SP1	1316.3003K03- 102082-Wa	2022.08.22	1Year
Receiver	R&S	ESCI	4.42 SP1	101165	2022.08.22	1Year
Bilog Antenna	Schwarzbeck	VULB 9168	/	VULB 9168#627	2021.08.30	2Year
Horn Antenna	SCHWARZBECK	BBHA 9120 D	/	2106	2021.08.30	2Year
Active Loop Antenna	SCHWARZBECK	FMZB 1519B	/	00059	2021.08.30	2Year
RF Cable	Resenberger	Cable 1	/	RE1	2022.08.22	1Year
RF Cable	Resenberger	Cable 2	/	RE2	2022.08.22	1Year
RF Cable	Resenberger	Cable 3	/	CE1	2022.08.22	1Year
Pre-amplifier	HP	HP8347A	/	2834A00455	2022.08.22	1Year
Pre-amplifier	Agilent	8449B	/	3008A02664	2022.08.22	1Year
L.I.S.N.#1	Schwarzbeck	NSLK8126	/	8126-466	2022.08.22	1Year
L.I.S.N.#2	ROHDE&SCHWARZ	ENV216	/	101043	2022.08.23	1 Year
Horn Antenna	SCHWARZBECK	BBHA9170	/	00946	2021.08.30	2 Year
Preamplifier	SKET	LNPA_1840 -50	/	SK2018101801	2022.08.22	1 Year
Power Meter	Agilent	E9300A	/	MY41496628	2022.08.22	1 Year
Power Sensor	DARE	RPR3006W	/	15100041SNO91	2022.08.22	1 Year
Temp. & Humid. Chamber	Weihuang	WHTH- 1000-40- 880	/	100631	2022.08.22	1 Year
Switching Mode Power Supply	JUNKE	JK12010S	/	20140927-6	2022.08.22	1 Year
Adjustable attenuator	MWRFtest	N/A	/	N/A	N/A	N/A
10dB Attenuator	Mini-Circuits	DC-6G	/	N/A	N/A	N/A

Software Information					
Test Item Software Name Manufacturer Version					
RE	EZ-EMC	farad	Alpha-3A1		
CE	EZ-EMC	farad	Alpha-3A1		
RF-CE	MTS 8310	MWRFtest	2.0.0.0		

3 Evaluation Results (Evaluation)

3.1 Antenna requirement

Test Requirement:	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.
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3.1.1 Conclusion:

The antenna is FPC antenna. The best case gain of the antenna is 3.54dBi, for 5180~5240MHz; 5745~5825MHz

4 Radio Spectrum Matter Test Results (RF)

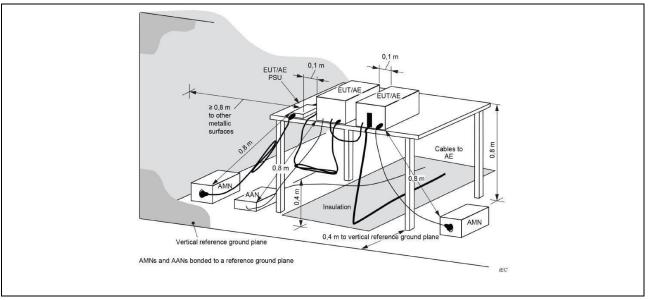
4.1 Conducted Emission at AC power line

Test Requirement:	FCC Part 15.207(a)				
Test Limit:	Frequency of emission (MHz)	Conducted limit (dE	3μV)		
		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 Method:	Refer to ANSI C63.10-2013 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices				

4.1.1 E.U.T. Operation:

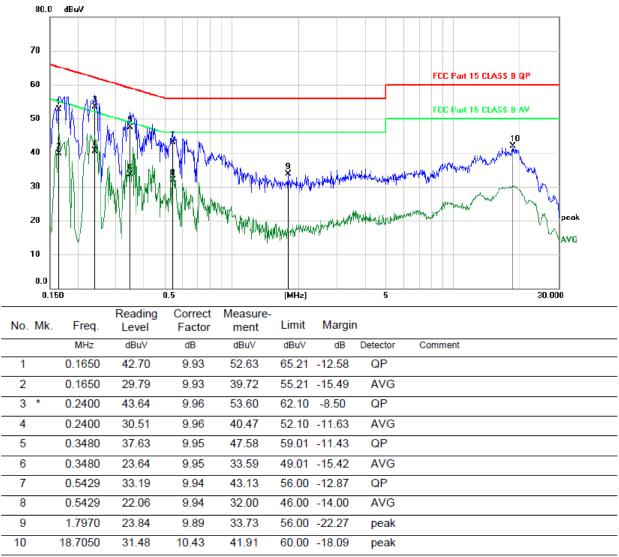
Operating Environment:								
Temperature:	23.8 °C		Humidity:	54.2 %	Atmospheric Pressure:	101.6 kPa		
Pre test mode: TM1		TM1						
Final test mode: TM1								

4.1.2 Test Setup Diagram:



4.1.3 Test Result:

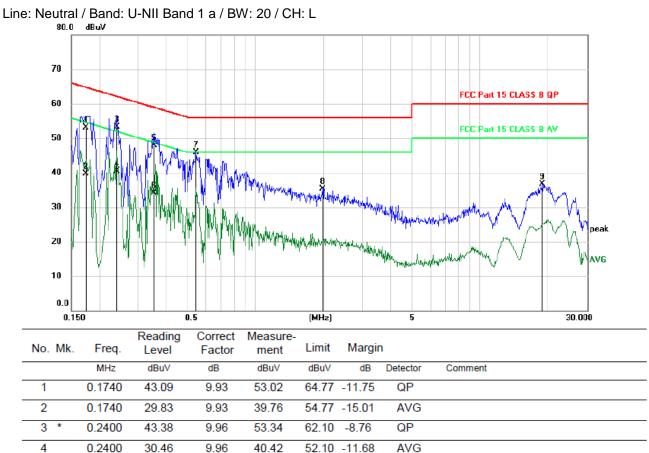
Line: Line / Band: U-NII Band 1 a / BW: 20 / CH: L



*:Maximum data x:Over limit !:over margin

(Reference Only

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable



*:Maximum data x:Over limit I:over margin Alternation of the line of the lin

58.94 -11.06

48.94 -14.85

56.00 -10.19

56.00 -20.61

60.00 -23.33

QP

AVG

peak

peak

peak

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

This Report only show the test plots of the worst case (U-NII-1).

5

6

7

8

9

0.3509

0.3509

0.5429

1.9830

19.0200

37.93

24.14

35.87

25.51

26.23

9.95

9.95

9.94

9.88

10.44

47.88

34.09

45.81

35.39

36.67

4.2 Maximum conducted output power

Test Requirement:	FCC Part 15.407(a)(1)(i) FCC Part 15.407(a)(1)(ii) FCC Part 15.407(a)(1)(iii) FCC Part 15.407(a)(1)(iv) FCC Part 15.407(a)(3)(i)
Test Limit:	For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
	For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
	For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to
	 23 dBi without any corresponding reduction in the maximum conducted output power. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
	For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
	For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high
Test Method:	gain directional antennas are used exclusively for fixed, point-to-point operations. ANSI C63.10-2013, section 12.3
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Procedure:	Method SA-1
	a) Set span to encompass the entire 26 dB EBW or 99% OBW of the signal.
	b) Set RBW = 1 MHz.
	c) Set VBW >= 3 MHz.
	d) Number of points in sweep >= [2 × span / RBW]. (This gives bin-to-bin spacing <= RBW / 2, so
	that narrowband signals are not lost between frequency bins.)
	e) Sweep time = auto.
	 f) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
	 g) If transmit duty cycle < 98%, use a video trigger with the trigger level set to enable triggering
	only on full power pulses. The transmitter shall operate at maximum power control level for the
	entire duration of every sweep. If the EUT transmits continuously (i.e., with no OFF intervals) or
	at duty cycle $\stackrel{'}{>}=$ 98%, and if each transmission is entirely at the maximum power control level,
	then the trigger shall be set to "free run."
	h) Trace average at least 100 traces in power averaging (rms) mode.
	i) Compute power by integrating the spectrum across the 26 dB EBW or 99% OBW of the signal
	using the instrument's band power measurement function, with band limits set
	equal to the
	EBW or OBW band edges. If the instrument does not have a band power function, then sum the
	spectrum levels (in power units) at 1 MHz intervals extending across the 26 dB EBW or 99%
	OBW of the spectrum.

4.2.1 E.U.T. Operation:

Operating Environment:								
Temperature:	23.8 °	С	Humidity:	54.2 %	Atmospheric Pressure:	101.6 kPa		
Pre test mode: All mo			des					
Final test mode: All mo			des					

4.2.2 Test Result:

Band 1 (5180-5240 MHz)

Condition	Mode	Frequency	Antenna	Conducted Power	Duty Factor	Limit	Verdict
		(MHz)		(dBm)	(dB)	(dBm)	
NVNT	а	5180	Ant1	16.656	0	24	Pass
NVNT	а	5200	Ant1	16.415	0	24	Pass
NVNT	а	5240	Ant1	16.607	0	24	Pass
NVNT	n20	5180	Ant1	16.584	0	24	Pass
NVNT	n20	5200	Ant1	16.214	0	24	Pass
NVNT	n20	5240	Ant1	16.383	0	24	Pass
NVNT	n40	5190	Ant1	16.587	0	24	Pass
NVNT	n40	5230	Ant1	16.711	0	24	Pass

Band 4 (5745 - 5825)

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Limit (dBm)	Verdict
NVNT	а	5745	Ant1	16.579	0	30	Pass
NVNT	а	5785	Ant1	17.341	0	30	Pass
NVNT	а	5825	Ant1	15.483	0	30	Pass
NVNT	n20	5745	Ant1	16.103	0	30	Pass
NVNT	n20	5785	Ant1	15.552	0	30	Pass
NVNT	n20	5825	Ant1	15.753	0	30	Pass
NVNT	n40	5755	Ant1	15.928	0	30	Pass
NVNT	n40	5795	Ant1	15.683	0	30	Pass

4.3 Power spect	ral density
Test Requirement:	FCC Part 15.407(a)(1)(i) FCC Part 15.407(a)(1)(ii) FCC Part 15.407(a)(1)(iii) FCC Part 15.407(a)(1)(iv) FCC Part 15.407(a)(3)(i)
Test Limit:	For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
	For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
	For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
	For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
Toot Math a di	For the band 5.725-5.850 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
Test Method:	ANSI C63.10-2013, section 12.5
Procedure:	 a) Create an average power spectrum for the EUT operating mode being tested by following the instructions in 12.3.2 for measuring maximum conducted output power using a spectrum analyzer or EMI receiver; that is, select the appropriate test method (SA-1, SA-2,

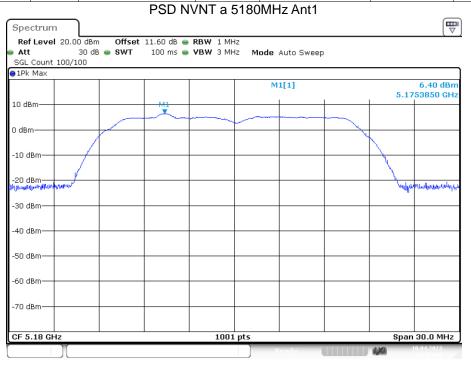
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	SA-3, or their
	respective alternatives) and apply it up to, but not including, the step labeled,
	"Compute
	power" (This procedure is required even if the maximum conducted output
	power
	measurement was performed using the power meter method PM.)
	b) Use the peak search function on the instrument to find the peak of the
	spectrum.
	c) Make the following adjustments to the peak value of the spectrum, if applicable:
	1) If method SA-2 or SA-2A was used, then add [10 log (1 / D)], where D is the
	duty
	cycle, to the peak of the spectrum.
	2) If method SA-3A was used and the linear mode was used in step h) of 12.3.2.7,
	add
	1 dB to the final result to compensate for the difference between linear averaging
	and
	power averaging.
	d) The result is the PPSD.
	e) The procedure in item a) through item c) requires the use of 1 MHz resolution
	bandwidth to
	satisfy the 1 MHz measurement bandwidth specified by some regulatory
	authorities.This
	requirement also permits use of resolution bandwidths less than 1 MHz "provided
	that the
	measured power is integrated to show the total power over the measurement
	bandwidth" (i.e.,
	1 MHz). If measurements are performed using a reduced resolution bandwidth
	and integrated
	over 1 MHz bandwidth, the following adjustments to the procedures apply:
	1) Set RBW $\geq 1 / T$, where T is defined in 12.2 a).
	2) Set VBW >= $[3 \times \text{RBW}]$.
	3) Care shall be taken such that the measurements are performed during a period
	of continuous transmission or are corrected upward for duty cycle.
431 FUT Operation	

4.3.1 E.U.T. Operation:

Operating Environment:								
Temperature:	23.8 °C		Humidity:	54.2 %	Atmospheric Pressure:	101.6 kPa		
Pre test mode: All mo			des					
Final test mode: All mod			des					

4.3.2 Test Result:

	Band 1 (5180-5240 MHz)									
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict				
NVNT	а	5180	Ant1	6.402	11	Pass				
NVNT	а	5200	Ant1	6.22	11	Pass				
NVNT	а	5240	Ant1	6.299	11	Pass				
NVNT	n20	5180	Ant1	4.88	11	Pass				
NVNT	n20	5200	Ant1	4.659	11	Pass				
NVNT	n20	5240	Ant1	4.919	11	Pass				
NVNT	n40	5190	Ant1	2.273	11	Pass				
NVNT	n40	5230	Ant1	2.358	11	Pass				



Date: 10.APR.2023 11:54:16

PSD NVNT a 5200MHz Ant1



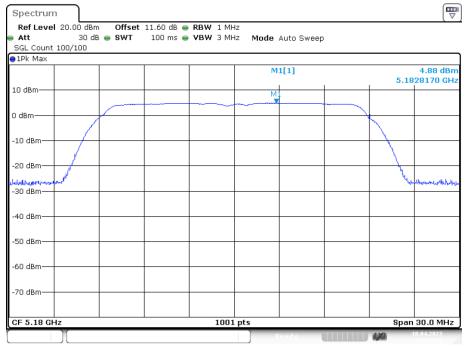
Date: 10.APR.2023 12:01:56

PSD NVNT a 5240MHz Ant1

Spectrum						
Ref Level 20.		11.65 dB 👄 RBV				
Att SGL Count 100,	30 dB 👄 SWT	100 ms 😑 🛛	W 3 MHz Mode	Auto Sweep		
SGE Count 100, 1Pk Max	/100					
			м	1[1]	5.23	6.30 dBm 352950 GHz
10 dBm		M1			_	
0 dBm						
-10 dBm					-	
-20 dBm	/				have	halindhudahurpun hurbadan
-30 dBm						
-40 dBm						
-50 dBm						
-60 dBm						
-70 dBm						
CF 5.24 GHz			1001 pts		Spar	30.0 MHz
				Ready	4/0	10.04.2023

Date: 10.APR.2023 12:06:20

PSD NVNT n20 5180MHz Ant1



Date: 10.APR.2023 12:26:40

PSD NVNT n20 5200MHz Ant1

Spectrum						
Ref Level 20.00 df Att 30 SGL Count 100/100	3m Offset 1 dB e SWT	1.46 dB 👄 RBW 100 ms 👄 VBW		Auto Sweep		
1Pk Max						
_			м	1[1]	5.203	4.66 dBm 1170 GHz
10 dBm			1	11		
0 dBm						
-10 dBm	, 				-	
-20 dBm						
ukuhanbahan dal -30 dBm						ladence or subject
-40 dBm						
-50 dBm						
-60 dBm						
-70 dBm						
CF 5.2 GHz			1001 pts		Span 3	30.0 MHz
				Ready	4,40	.04.2023

Date: 10.APR.2023 12:34:28

PSD NVNT n20 5240MHz Ant1

	PSD INVINT NZU S		_
Spectrum			(E
Att 30 dB = SWT SGL Count 100/100	et 11.65 dB 👄 RBW 1 MHz 100 ms 👄 VBW 3 MHz	Mode Auto Sweep	, , , , , , , , , , , , , , , , , , ,
1Pk Max		M1[1]	4.92 dBn
		mili	5.2456940 GHz
10 dBm		M1	
0 dBm		~	
-10 dBm			
-20 dBm			
salun sell A ster Manager and have			August aller and
-30 dBm			
-40 dBm			
-50 dBm			
-60 dBm			
-70 dBm			
CF 5.24 GHz	1001 p	ts	Span 30.0 MHz
		Ready	10.04.2023

Date: 10.APR.2023 12:40:04

PSD NVNT n40 5190MHz Ant1

Spectrum	ן			
Ref Level 20.0		11.50 dB 😑 RBW 1 MH		
Att	30 dB 😑 SWT	100 ms 👄 VBW 3 Mł	Iz Mode Auto Sweep	
SGL Count 100/	100			
●1Pk Max				
			M1[1]	2.27 dBm 5.1843060 GHz
10 dBm				
		N11		
0 dBm		4		
-10 dBm				
-20 dBm	/			
manderstarteration	Ý			and particular development of the second in
-30 dBm				
-40 dBm				
-50 dBm				
00 40.00				
-60 dBm				
-70 dBm				
CF 5.19 GHz	I	1001	l pts	Span 60.0 MHz
			Ready	10.04.2023 12:17:15

Date: 10.APR.2023 12:47:06

PSD NVNT n40 5230MHz Ant1

	PSD NVNT n40 5	o230MHz Ant1	
Spectrum			
Att 30 dB 👄 SWT SGL Count 100/100	11.60 dB ● RBW 1 MHz 100 ms ● VBW 3 MHz	Mode Auto Sweep	()
1Pk Max	1 1		a ac in-
		M1[1]	2.36 dBm 5.2243660 GHz
10 dBm			
	N11		
) dBm			
10 dBm			
-20 dBm			
Will Make the state of the stat			hand the state of the second
30 dBm			
-40 dBm			
-50 dBm			
60 dBm			
-70 dBm			
CF 5.23 GHz	1001 p	ts	Span 60.0 MHz
		Ready	10.04.2023

Date: 10.APR.2023 12:51:48

	Band 4 (5745 - 5825)								
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict			
NVNT	а	5745	Ant1	2.269	30	Pass			
NVNT	а	5785	Ant1	3.029	30	Pass			
NVNT	а	5825	Ant1	1.331	30	Pass			
NVNT	n20	5745	Ant1	1.154	30	Pass			
NVNT	n20	5785	Ant1	0.484	30	Pass			
NVNT	n20	5825	Ant1	0.569	30	Pass			
NVNT	n40	5755	Ant1	-1.206	30	Pass			
NVNT	n40	5795	Ant1	-1.938	30	Pass			

					010	•		7 11 1			1.00		0	•
						PSD	NVN	IT a !	574	5M⊢	lz Ant1			
Spe	ctrun													
		1 20.00) dBm	of	fset	12.01 dB	e RB	W 500	kHz					(v
Att				. S\		100 ms				Mode	Auto Swe	ер		
		100/1	00											
⊖1Pk	Max													
										M	1[1]		5.74	2.27 dBm 00250 GHz
10 dE	3m						+							
						M1								
0 dBr	n				~~~		~ ~~~	- w			<u>~~~~</u> ,	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
-10 d	D cos			/										
-10 u	вп													
-20 d	Bm-		/										N.	
		1	′											
-30 d	հ աղծավ IBm	all											HJUNK	Meder My Holeway
-40 d	Bm—													
-50 d	Bm—						_							
-60 d	Bm—													
-70 d	Bm—													
CF 5	.745 0	GHz						1001	l pts			11	Span	30.0 MHz
_)(eady		4,40	11.04.2023

Date: 11.APR.2023 14:53:58

PSD NVNT a 5785MHz Ant1

	PSD INVINT a 57		
Spectrum			
Ref Level 20.00 dBm Offse Att 30 dB SWT SGL Count 100/100	t 11.73 dB 👄 RBW 500 kHz 100 ms 👄 VBW 2 MHz		(
1Pk Max			
		M1[1]	3.03 dBn 5.7799950 GH:
10 dBm	M1		
0 dBm			<u> </u>
-10 dBm			\mathbf{X}
-20 dBm			N
-30 dBm			Chardeland and and and and and and and and and
-40 dBm			
-50 dBm			
-60 dBm			
-70 dBm			
CF 5.785 GHz	1001 pt	s	Span 30.0 MHz

Date: 11.APR.2023 14:59:03

PSD NVNT a 5825MHz Ant1

Spectrum					₽
Ref Level 20.00 a Att 30 SGL Count 100/100) dB 😑 SWT 🛛 100 m	B B RBW 500 kHz s B VBW 2 MHz	Mode Auto Sweep		
●1Pk Max					
			M1[1]	1.33 c 5.8201150	
10 dBm	M1				
0 dBm				~~	
-10 dBm					
-20 dBm	/				
-30 dBm				When and the second	dhulli
-40 dBm					
-50 dBm					
-60 dBm					
-70 dBm					
CF 5.825 GHz		1001 pts		Span 30.0 M	Hz
			Ready 🚺	11.04.2023	

Date: 11.APR.2023 15:03:43

PSD NVNT n20 5745MHz Ant1

	F SD INVINT HZ	J 5745IVIAZ ANTI	
Spectrum			
● Att 30 dB ● 3 SGL Count 100/100	Offset 12.01 dB ● RBW 500 SWT 100 ms ● VBW 2	i kHz MHz Mode Auto Sweep	
●1Pk Max		544 F + 1	1.15 dBm
		M1[1]	5.7391860 GHz
10 dBm			
	111		
0 dBm	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
-10 dBm			
-20 dBm			
the second second			Ween mark see the sources
-30 dBm			and a superstanding of the
-40 dBm			
-50 dBm			
-60 dBm			
-70 dBm			
		▲	
CF 5.745 GHz	100	1 pts	Span 30.0 MHz
		Ready	

Date: 11.APR.2023 15:09:43

PSD NVNT n20 5785MHz Ant1

Spectrum									
Ref Level Att SGL Count 1	30 dB	Offset SWT	11.73 dB 👄 100 ms 👄			e Auto Swee	p		(
⊖1Pk Max									
					М	1[1]		5.79	0.48 dBm 04850 GHz
10 dBm						M1			
0 dBm		~~~~	~~~~	~~~~	m	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m		
-10 dBm		r						<u>\</u>	
-20 dBm								\rightarrow	
-30 dBm	North ^{an}							ad the hold of the	own
-40 dBm									
-50 dBm									
-60 dBm									
-70 dBm									
CF 5.785 G	Hz			1001	pts			Span	30.0 MHz
)[]					leady (4,70	11.04.2023

Date: 11.APR.2023 15:14:27

PSD NVNT n20 5825MHz Ant1

	PSD INVINT NZU	J 5825IVIAZ ANTI	
Spectrum			
🛛 🗛 🖌 🖌 🖌 🖌 🖌 🖌	Offset 11.81 dB ● RBW 500 SWT 100 ms ● VBW 2	kHz MHz Mode Auto Sweep	
SGL Count 100/100			
●1Pk Max		M1[1]	0.57 dBm 5.8278770 GHz
10 dBm			3.0270770 GHz
0 dBm		MI mi	~
-10 dBm			
-20 dBm			\
Huyuluvahanganlarin -30 dBm			mar mar and a start a
-40 dBm			
-50 dBm			
-60 dBm			
-70 dBm			
CF 5.825 GHz	100	1 pts	Span 30.0 MHz
		Ready	11.04.2023 15.115.11

Date: 11.APR.2023 15:18:40

PSD NVNT n40 5755MHz Ant1

Spectrun	1 I								
Ref Leve	20.00 dBn	n Offset	11.83 dB 🔵	RBW 500	kHz				
Att 🗧	30 dB	B 👄 SWT	100 ms 😑	VBW 21	/Hz Mode	Auto Swee	ер		
SGL Count	100/100								
⊖1Pk Max									
					M	1[1]			-1.21 dBm 27720 GHz
10 dBm									
0 dBm		м	L						
		mon	m	man	mon	man	m		
-10 dBm									
-20 dBm	the second second							A Reason	lander
raigination and the second sec	WARMONIN .							0.00 460	Changer (The Property day
-40 dBm									
-50 dBm									
-60 dBm									
-70 dBm									
CF 5.755 0	247			1001	nte			Snan	60.0 MHz
01 0.700 0)(1001	, prs	_			1.04.2023
						eady		1)A	

Date: 11.APR.2023 16:08:20

PSD NVNT n40 5795MHz Ant1

Spectrum			
Att 30 dB 👄 S SGL Count 100/100	ffset 11.80 dB ● RBW WT 100 ms ● VBW	2 MHz Mode Auto Swee	ер
)1Pk Max		M1[1]	-1.94 dBm 5.7985960 GHz
10 dBm			
) dBm	-	M1	muning
-10 dBm		Ψ	
20 dBm			
30 aBm			With the and the bard
40 dBm			
50 dBm			
60 dBm			
70 dBm			
CF 5.795 GHz		1001 pts	Span 60.0 MHz

Date: 11.APR.2023 16:18:26

4.4 Emission b	andwidth and occupied bandwidth
T (D) ()	U-NII 1, U-NII 2A, U-NII 2C: No limits, only for report use.
Test Requirement:	U-NII 3, U-NII 4: FCC Part 15.407(e)
Test Limit:	U-NII 1, U-NII 2A, U-NII 2C: No limits, only for report use.
	U-NII 3, U-NII 4: Within the 5.725-5.850 GHz and 5.850-5.895 GHz bands, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.
Test Method:	ANSI C63.10-2013, section 6.9.3 & 12.4 KDB 789033 D02, Clause C.2
Procedure:	 Emission bandwidth: a) Set RBW = approximately 1% of the emission bandwidth. b) Set the VBW > RBW. c) Detector = peak. d) Trace mode = max hold. e) Measure the maximum width of the emission that is 26 dB down from the peak
	of the emission. Compare this with the RBW setting of the instrument. Readjust RBW and repeat
	measurement as needed until the RBW/EBW ratio is approximately 1%.
	Occupied bandwidth: a) The instrument center frequency is set to the nominal EUT channel center
	frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
	 b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW,
	and VBW shall be approximately three times the RBW, unless otherwise specified by the
	applicable requirement. c) Set the reference level of the instrument as required, keeping the signal from exceeding the
	maximum input mixer level for linear operation. In general, the peak of the spectral envelope
	shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.
	d) Step a) through step c) might require iteration to adjust within the specified range.
	e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode
	shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be
	used. f) Use the 99% power bandwidth function of the instrument (if available) and report the measured
	bandwidth. g) If the instrument does not have a 99% power bandwidth function, then the trace
	data points are recovered and directly summed in linear power terms. The recovered amplitude data points,
	beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached;
	that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the
	total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is
	the difference between these two frequencies.

 h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).
 6 dB emission bandwidth: a) Set RBW = 100 kHz. b) Set the video bandwidth (VBW) ≥ 3 >= RBW. c) Detector = Peak. d) Trace mode = max hold. e) Sweep = auto couple. f) Allow the trace to stabilize. g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

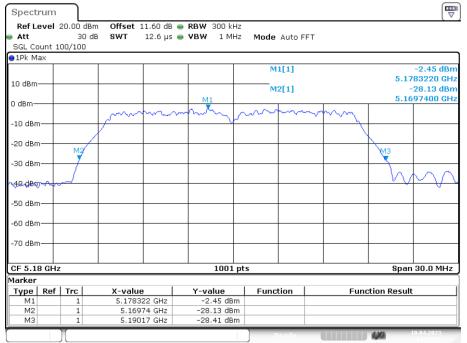
4.4.1 E.U.T. Operation:

Operating Envir	Operating Environment:										
Temperature:23.8 °CHumidity:54.2 %Atmospheric Pressure:101.6 kPa											
Pre test mode:		All mod	des								
Final test mode: All modes											

4.4.2 Test Result:

Band 1 (5150-5250 MHz)

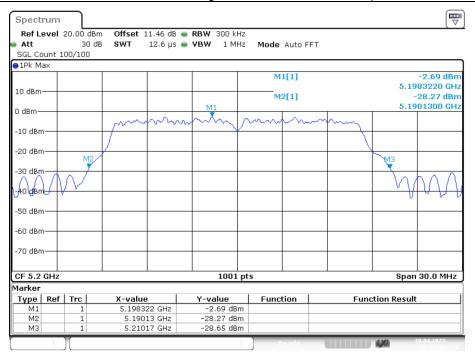
-26dB Bar	ndwidth			. ,		
Condition	Mode	Frequency	Antenna	-26 dB Bandwidth	Limit -26 dB Bandwidth	Verdict
		(MHz)		(MHz)	(MHz)	
NVNT	а	5180	Ant1	20.43	0.5	Pass
NVNT	а	5200	Ant1	20.04	0.5	Pass
NVNT	а	5240	Ant1	20.31	0.5	Pass
NVNT	n20	5180	Ant1	20.61	0.5	Pass
NVNT	n20	5200	Ant1	20.49	0.5	Pass
NVNT	n20	5240	Ant1	20.7	0.5	Pass
NVNT	n40	5190	Ant1	39.72	0.5	Pass
NVNT	n40	5230	Ant1	40.02	0.5	Pass



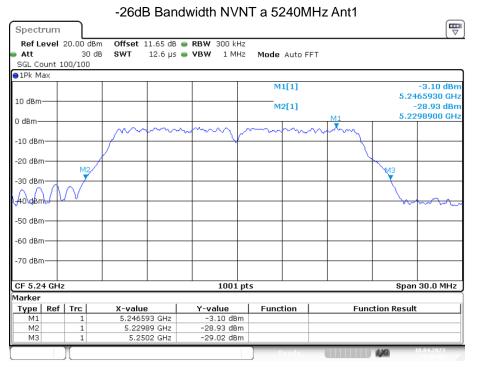
-26dB Bandwidth NVNT a 5180MHz Ant1

Date: 10.APR.2023 11:53:57

-26dB Bandwidth NVNT a 5200MHz Ant1

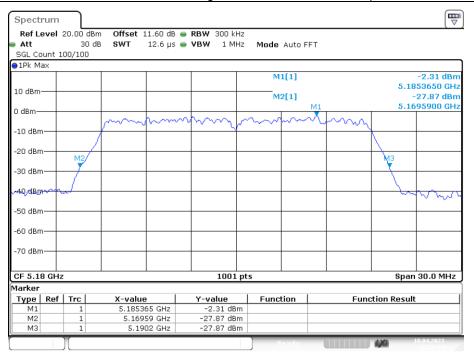


Date: 10.APR.2023 12:01:37

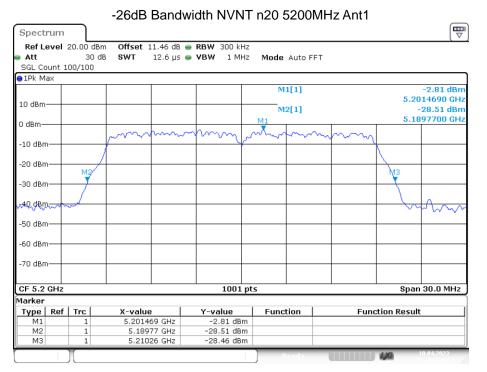


Date: 10.APR.2023 12:06:00

-26dB Bandwidth NVNT n20 5180MHz Ant1



Date: 10.APR.2023 12:26:18



Date: 10.APR.2023 12:34:06

-26dB Bandwidth NVNT n20 5240MHz Ant1

Spect	rum										
Ref Le	evel	20.00 dBm	Offset 1	1.65 dB	RBW 300	Hz					
🔵 Att		30 dB	SWT	12.6 µs	VBW 1 N	1Hz	Mode	Auto FF	т		
SGL Co	ount 1	.00/100									
😑 1Pk Ma	ax]
							M	1[1]			-2.17 dBm
10 dBm-											28770 GHz
10 000								2[1]			27.84 dBm
0 dBm—							M	1		5.22	96500 GHz
				m	mm	~	$\sim \sim \sim$	m	mma		
-10 dBm	∩	,	74°° 47			<u> </u>					
		/								Ν	
-20 dBm	∩_+									1	
		M2								МЗ	
-30 dBm	ν +	_/				-		<u> </u>			
- <u>49 dBr</u>) series	<u>_</u> **				-				- m~	m v v v
50 JD											
-50 dBm	ד י										
-60 dBm											
-00 UBII	-										
-70 dBm											
70 abii	·										
CF 5.24	4 GHz	2			100	1 pts	5			Span	30.0 MHz
Marker											
Туре	Ref	Trc	X-value		Y-value		Func	tion	Fun	ction Result	
M1		1	5.2428		-2.17 d						
M2		1		55 GHz	-27.84 d						
МЗ		1	5.250	35 GHz	-28.05 d	3m					
		TT T					E E	te a d y		120	10.04.2023

Date: 10.APR.2023 12:39:40

-26dB Bandwidth NVNT n40 5190MHz Ant1

Spect	rum									
Ref L	evel	20.00 dB	m Offset	11.50 dB	🔵 RBW 300 k	Hz				
e Att		30 c	B SWT	25.3 µs	😑 VBW 1 M	Hz Mode	Auto FFT			
-		LOO/100								
⊖1Pk M	ax .									
						M	1[1]			-4.66 dBm
10 dBm	\rightarrow						0[1]			778920 GHz
						IM	2[1]			-30.56 dBm 700200 GHz
0 dBm-			- N	-					5.1	
			amound	mm	mon	mon	man	man		
-10 dBn	1		A manual and	Ver	1 1	/	100.044			
-20 dBr			/			ŕ			$\left(\right)$	
-20 UBII									ИЗ	
-30 dBr	n	M2							Y	
40 dBn	nan	LAN .			_				000	hum
	·	~~~								- 40 M 40 W
-50 dBr	∩—+									
co do-										
-60 dBri										
-70 dBm										
-70 001	' I									
CF 5.1										60.01
	9 GH	2			1001	. prs			spar	1 60.0 MHz
Marker	Def	Trc	Y uslu		V uslue	Func	tion	Fun	tion Resul	• •
Type M1	Kef	1	X-value	92 GHz	<u>Y-value</u> -4.66 dB		uon	Fund	cion Resul	<u>ــــــــــــــــــــــــــــــــــــ</u>
M2		1		02 GHz	-30.56 dB					
M3		1		74 GHz	-30.09 dB					
		1					i andu	7	4.46	10.04.2023
									a de la compañía de la	

Date: 10.APR.2023 12:46:40

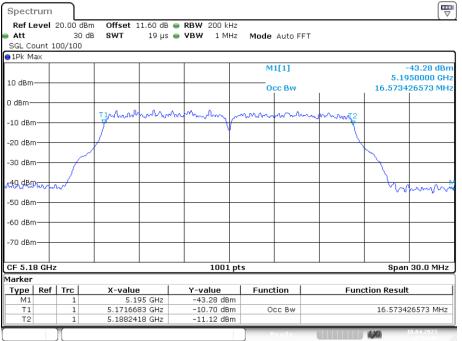
-26dB Bandwidth NVNT n40 5230MHz Ant1

Ref Level 20.00 dBm Offset 11.60 dB RBW 300 kHz Att 30 dB SWT 25.3 µs VBW 1 MHz Mode Auto FFT SGL Count 100/100 Subscription Subscription Su	Spectrum									
SGL Count 100/100 • 1Pk Max M1[1] -5.02 dBm 10 dBm M2[1] -30.10 dBm 0 dBm M1[1] -30.20 dBm -10 dBm M1 -30.10 dBm -20 dBm M1 -30.20 dBm -30 dBm M1 -40.00 dBm -30 dBm -40.00 dBm -40.00 dBm -30 dBm -40.00 dBm -40.00 dBm -70 dBm -40.00 dBm -50.02 dBm -70 dBm -40.00 dBm -40.00 dBm	Ref Level	20.00	dBm Offset 11.	.60 dB 👄 RE	BW 300 kH	z				
IPk Max M1[1] -5.02 dBm 10 dBm M2[1] -30.10 dBm 0 dBm M1 5.2099600 GHz -10 dBm M1 5.2099600 GHz -20 dBm M1 5.2099600 GHz -30 dBm M3 -30 dBm -30 dBm M3 -30 dBm -30 dBm M3 -30 dBm -70 dBm -30 dBm -5.02 dBm -70 dBm -30 dBm -5.02 dBm -70 dBm -30 dBm -5.02 dBm	Att	30	dB SWT 2	5.3 µs 👄 ۷	BW 1 MH	z Mode	Auto FFT			
10 dBm		100/100								
10 dBm 5.2204100 GHz 0 dBm M2[1] 0 dBm M1 -10 dBm M1 -20 dBm M2 -30 dBm M2 -30 dBm M2 -30 dBm M3 -30 dBm M3 -30 dBm M3 -30 dBm M2 -50 dBm - -70 dB	●1Pk Max									
10 dBm M2[1] -30.10 dBm 0 dBm M1 S.2099600 GHz -10 dBm M1 M2[1] -20 dBm M1 -20 dBm M3 -30 dBm M3 -30 dBm M3 -30 dBm M3 -50 dBm M3 -60 dBm M2 -70 dBm M2						M	l[1]			
0 dBm M1 5.2099600 GHz -10 dBm M1 5.2099600 GHz -20 dBm M2 10 -30 dBm M2 10 -50 dBm -50 -50 -70 dBm -50.20 dBm -50.02 dBm -70 dBm -50.20 dBm -50.02 dBm	10 dBm									
0 dBm M1 -10 dBm M1 -20 dBm M3 -30 dBm M3 -50 dBm M1 -60 dBm M1 -70 dBm M1 -70 dBm M1 1 5.22041 GHz -5.02 dBm M1 M1 1 5.22041 GHz -5.02 dBm M1 1 5.2096 GHz -30.10 dBm						M:	2[1]			
-20 dBm -30 dBm -30 dBm -30 dBm -30 dBm -50 dBm -50 dBm -50 dBm -70 dBm -70 dBm -70 dBm -70 dBm -70 dBm -70 dBm -70 dBm -70 dBm -70 dBm -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	0 dBm			M1					5.20	99600 GHZ
-20 dBm -20 dBm -30 dBm -30 dBm -30 dBm -50 dBm -50 dBm -70				mere and		mound	MARA	A		
-30 dBm	-10 dBm		- pro	~ U WYY	10		000 000	r www.marr		
-30 dBm					Ý				\ I	
-30 dBm	-20 dBm									
-50 dBm	20 dBm	M	£						M3	
-50 dBm -60 dBm -70	-30 ubiii	1								
-50 dBm -60 dBm -70	-40 dBm	- N								
-60 dBm -60 dBm Image: Constraint of the second se	and reason the	www							5 WV2	a manua
-70 dBm Image: CF 5.23 GHz 1001 pts Span 60.0 MHz Odd pts Span 60.0 MHz Market Span 60.0 MHz Market Span 60.0 MHz Market Span 60.0 MHz Market Function Result M1 1 5.2041 GHz -5.02 dBm Span 60.0 MHz M1 1 5.20941 GHz -5.02 dBm Span 60.0 MHz	-50 dBm									
-70 dBm Image: CF 5.23 GHz 1001 pts Span 60.0 MHz Odd pts Span 60.0 MHz Market Span 60.0 MHz Market Span 60.0 MHz Market Span 60.0 MHz Market Function Result M1 1 5.2041 GHz -5.02 dBm Span 60.0 MHz M1 1 5.20941 GHz -5.02 dBm Span 60.0 MHz										
CF 5.23 GHz 1001 pts Span 60.0 MHz Marker Marker Span 60.0 MHz Marker Span 60.0 MHz Marker Marker Span 60.0 MHz Span 60.0 MHz Marker Span 60.0 MHz Span 60.0 MHz M1 1 S.22041 GHz -S.02 dBm M2 1 S.20996 GHz -30.10 dBm	-60 dBm									
CF 5.23 GHz 1001 pts Span 60.0 MHz Marker Marker Span 60.0 MHz Marker Span 60.0 MHz Marker Marker Span 60.0 MHz Span 60.0 MHz Marker Span 60.0 MHz Span 60.0 MHz M1 1 S.22041 GHz -S.02 dBm M2 1 S.20996 GHz -30.10 dBm										
Marker Yupe Ref Trc X-value Y-value Function Function Result M1 1 5.22041 GHz -5.02 dBm -5.02 dBm -5.02 dBm M2 1 5.20996 GHz -30.10 dBm -30.10 dBm -30.10 dBm	-70 dBm									
Marker Yupe Ref Trc X-value Y-value Function Function Result M1 1 5.22041 GHz -5.02 dBm -5.02 dBm -5.02 dBm M2 1 5.20996 GHz -30.10 dBm -30.10 dBm -30.10 dBm										
Type Ref Trc X-value Y-value Function Function Result M1 1 5.22041 GHz -5.02 dBm M2 1 5.20996 GHz -30.10 dBm	CF 5.23 GH	lz			1001	pts			Span	60.0 MHz
M1 1 5.22041 GHz -5.02 dBm M2 1 5.20996 GHz -30.10 dBm	Marker									
M2 1 5.20996 GHz -30.10 dBm	Type Ref	Trc	X-value	N	r-value	Funct	ion	Func	tion Result	
M3 1 5.24998 GHz -30.92 dBm		-								
	МЗ	1	5.24998	GHz	-30.92 dBr	n				
Ready 10.04.2023						R	e a d y		44	0.04.2023

Date: 10.APR.2023 12:51:21

Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	а	5180	Ant1	16.573
NVNT	а	5200	Ant1	16.813
NVNT	а	5240	Ant1	16.663
NVNT	n20	5180	Ant1	17.802
NVNT	n20	5200	Ant1	17.772
NVNT	n20	5240	Ant1	17.742
NVNT	n40	5190	Ant1	36.264
NVNT	n40	5230	Ant1	36.384



OBW NVNT a 5180MHz Ant1

Date: 10.APR.2023 11:53:48

OBW NVNT a 5200MHz Ant1

Spect	rum									
Ref L	evel	20.00 dBm	Offset	11.46 dB 🧉	• RBW 200 k	Hz				
🗕 Att		30 dB	SWT	19 µs 🧉	• VBW 1 M	Hz Mode	Auto FFT			
SGL Co	ount 1	.00/100								
😑 1Pk M	ax									
						M	1[1]		-	39.36 dBm
10 dBm									5.21	50000 GHz
TO UBIII						0	cc Bw		16.8131	86813 MHz
0 dBm-										
o abiii										
-10 dBm	1		Thomas	how	mond	mon	~~~~~	man 2		
10 0.011	·		l Y			·		y 1		
-20 dBr	n——		/		_					
		1								
-30 dBrr	n——									
										M
-40 dBn		<u> </u>							$\rightarrow \Lambda$	
www	r yn	yw.							- V	\lor \lor \lor
-50 dBrr	n——									
-60 dBrr	n——									
-70 dBm	n									
CF 5.2	GHz				1001	pts			Span	30.0 MHz
Marker										
Type	Ref	Trc	X-value	.	Y-value	Fund	tion	Fund	tion Result	1
M1		1	5.2	15 GHz	-39.36 dB	m				
T1		1	5.19157	84 GHz	-12.58 dB	m O	CC BW		16.81318	36813 MHz
T2		1	5.20839	16 GHz	-12.76 dB	m				
)(Ready		4/4	0.04.2023

Date: 10.APR.2023 12:01:27

OBW NVNT a 5240MHz Ant1

Spectru	m										[₩
Ref Lev	el 20.00) dBm	Offset 1	11.65 dB (RBW	200 kHz					
Att 🗧		30 dB	SWT	19 µs (VBW	1 MHz	Mode	Auto FFT			
SGL Coun	t 100/10	00									
⊖1Pk Max											
							M	1[1]			-42.52 dBm
10 dBm					_			_			550000 GHz
							0	CC BW	1	16.6633	36663 MHz
0 dBm					-						
			Thomas	mar	m	m	mm	mm	mmm 2		
-10 dBm—	+		1						- -		
									1		
-20 dBm—			/								
-30 dBm—											
-30 ubiii—											
-40 dBm-	1										h
www	now									Jun	mini
-50 dBm—	+										
-60 dBm—	-				-						-
-70 dBm—	+				-						
CF 5.24 G	Hz					1001 pt	s			Spar	30.0 MHz
Marker											
	ef Trc		X-value		Y-va		Func	tion	Fund	tion Resul	t
M1	1	-		55 GHz		52 dBm					
T1	1		5.23163			58 dBm	0	cc Bw		16.6633	36663 MHz
T2	1		5.24830	17 GHz	-11	11 dBm					
							R	te a d y		100	10.04.2023

Date: 10.APR.2023 12:05:48

OBW NVNT n20 5180MHz Ant1

Spect	rum										
Ref L	evel	20.00 dBr	n Offset 1	L1.60 dB	RBW 200) kHz					
🗕 Att		30 di	B SWT	19 µs	VBW 1	MHz	Mode	Auto FFT			
SGL Co	ount 1	.00/100									
😑 1Pk M	ax										
							M	1[1]			-43.47 dBm
10 dBm										5.19	950000 GHz
TO UDIII							0	cc Bw		17.8021	97802 MHz
0 dBm-											
o abiii			A								
-10 dBn	n		Bunn	www	~ mmm	γ / γ	mm	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	mmm	?	
			Í.			Υ					
-20 dBn	n——	/				_				\	
										\mathbf{X}	
-30 dBn	n——	-+			_	_			_	<u> </u>	
. ⊿ 40,dBn	mod	1~			_	_					0.00 M
00.00		V ·								~~	
-50 dBn	n-+-					_					
-60 dBn	n-+-										
-70 dBn	n					_					
CF 5.1	8 GHz	2			10	01 pts	5			Spar	30.0 MHz
Marker											
Туре	Ref	Trc	X-value	.	Y-value	- 1	Func	tion	Func	tion Result	t
M1		1		95 GHz	-43.47						
T1		1	5.17106	89 GHz	-11.00	dBm	0	cc Bw		17.8021	97802 MHz
T2		1	5.18887	11 GHz	-11.23	dBm					
)[P	eady		4,40	10.04.2023

Date: 10.APR.2023 12:26:06

OBW NVNT n20 5200MHz Ant1

Spectrur	n								[₩
Ref Leve	el 20.00	dBm Offset	11.46 dB	🖷 RBW 200 kHz	2				
Att 🛛	-	odb SWT	19 µs -	VBW 1 MH2	Mode Au	uto FFT			
SGL Coun	t 100/10	0							
⊖1Pk Max									
					M1[:	1]			45.86 dBm
10 dBm									50000 GHz
					Occ	BW		17.7722	27772 MHz
0 dBm									
		TIMM	man	mm	mon	mon	mont	2	
-10 dBm—			0	The second se			1		
		Λ							
-20 dBm—								\	
-30 dBm—									
-30 ubiii									
-40 dBm			_						
www	m								mm
-50 dBm—									
-60 dBm—									
-70 dBm—									
CF 5.2 GH	lz			1001 p	its			Span	30.0 MHz
Marker									
	ef Trc	X-valı		Y-value	Functio	n	Func	tion Result	
M1	1		215 GHz	-45.86 dBm				13 3300	
T1 T2	1		689 GHz	-11.14 dBm -11.31 dBm		BW		17.7722	27772 MHz
12		5.2088	912 GH2	-11.31 UBM					
	Л				Rea	dy (4,40	10.04.2023

Date: 10.APR.2023 12:33:53

OBW NVNT n20 5240MHz Ant1

Spect	rum										
Ref L	evel	20.00 dBm	Offset 1	1.65 dB 🧉	RBW 200 k	Hz					
🗕 Att		30 dB	SWT	19 µs 🧉	VBW 1 M	Hz	Mode	Auto FFT			
SGL Co	ount 1	00/100									
😑 1Pk M	ax										
							M	1[1]			-42.50 dBm
10 dBm										5.23	550000 GHz
TO UBIII							0	cc Bw		17.7422	57742 MHz
0 dBm-											
o abiii											
-10 dBn			1 mm	www	how	m	m	mm	mmm		
10 000	"		ſ			4			1		
-20 dBn	n	/								Δ	
-30 dBn	n——									<u> </u>	
-40 dBn	n									h	M
min	m	\sim								- Vi	W WWW
-50 dBn	n——										
-60 dBn	n——								_		
-70 dBn	n_+										
CF 5.2	4 CU				1001	nte					1 30.0 MHz
Marker	T GEZ	-			1001	pes				əhai	1 30.0 MHZ
	D -4	l True I	N	1			F		-		
Type M1	Ref		X-value		Y-value		Func	tion	Func	tion Resul	τ
T1		1	5.231068	55 GHz	-42.50 dB -11.02 dB		0	CC BW		17 7400	57742 MHz
T2		1	5.231068		-10.35 dB		0			17.7422	57742 MH2
		· · · ·	3.24001.		-10,33 UE						
		П					R	e a d y		4,70	10.04.2023

Date: 10.APR.2023 12:39:25

OBW NVNT n40 5190MHz Ant1

Spectru	im					
Ref Lev	el 20.00 de	m Offset 11.50 d	3 🖷 RBW 500 kHz			
Att 🛛	30	dB SWT 15.1 μ	s 🔵 VBW 🛛 2 MHz	Mode Auto FF	т	
	nt 100/100					
⊖1Pk Max	_					
				M1[1]		-41.22 dBm
10 dBm—						5.2200000 GHz
				Occ Bw	I	36.263736264 MHz
0 dBm—		T .			-	0
		turn	mm	m	mon	7
-10 dBm—			- V			
-20 dBm—		/				
LO GDIII	/					
-30 dBm—						
~40~dBm ~	- var					- marine
-50 dBm-						
-30 ubiii—						
-60 dBm-						
-70 dBm—						
CF 5.19	GHz		1001 pt	s		Span 60.0 MHz
Marker						
Type F	Ref Trc	X-value	Y-value	Function	Fund	ction Result
M1	1	5.22 GHz	-41.22 dBm			
T1	1	5.1718981 GHz	-7.97 dBm	Occ Bw		36.263736264 MHz
T2		5.2081618 GHz	-7.72 dBm			
	П			Ready		10.04.2023

Date: 10.APR.2023 12:46:23

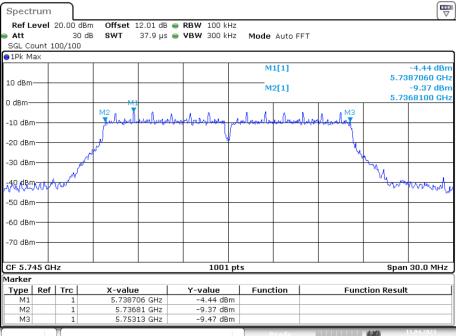
OBW NVNT n40 5230MHz Ant1

Spectrum										
Ref Level	20.00 dBm	n Offset	11.60 dB 😑	RBW 500) kHz					
Att	30 dE	SWT	15.1 µs 👄	VBW 2	MHz	Mode	Auto Ff	Ŧ		
SGL Count 1	.00/100									
∋1Pk Max										
						M	1[1]			-42.21 dBm
10 dBm										500000 GHz
						0	CC BW		36.3836	16384 MHz
0 dBm										
	т	mm	form	hm	n M	m	m	mmmm	12	
-10 dBm		f		+	Ψ			· •		
	/									
-20 dBm		-								
									$ \rangle$	
-30 dBm										
-40 dBm	n								here	mon - M
510-00-01- VV										h A.A
-50 dBm					_		<u> </u>		_	
-60 dBm					_					
-70 dBm				-	_					
CF 5.23 GHz	2	1		10	01 pt	s			Spar	60.0 MHz
Marker										
Type Ref	Trc	X-valu	e	Y-value	,	Func	tion	Fui	nction Resul	t
M1	1		26 GHz	-42.21						
T1	1	5.21177		-9.31 dBm				16384 MHz		
T2	1	5.24816	18 GHz	-8.12	dBm					
						R	te a d y		44	10.04.2023

Date: 10.APR.2023 12:51:02

Band 4(5745-5825MHz): -6dB Bandwidth

Condition	Mode	Frequency	Antenna	-6 dB Bandwidth	Limit -6 dB Bandwidth	Verdict
		(MHz)		(MHz)	(MHz)	
NVNT	а	5745	Ant1	16.32	0.5	Pass
NVNT	а	5785	Ant1	16.44	0.5	Pass
NVNT	а	5825	Ant1	16.56	0.5	Pass
NVNT	n20	5745	Ant1	17.79	0.5	Pass
NVNT	n20	5785	Ant1	17.58	0.5	Pass
NVNT	n20	5825	Ant1	17.58	0.5	Pass
NVNT	n40	5755	Ant1	36.3	0.5	Pass
NVNT	n40	5795	Ant1	36.54	0.5	Pass



-6dB Bandwidth NVNT a 5745MHz Ant1

Date: 11.APR.2023 14:53:40

-6dB Bandwidth NVNT a 5785MHz Ant1

Spectrum	·								
	20.00 dBn			• RBW 100 ki					
Att	30 dE	SWT	37.9 µs 🧉	• VBW 300 ki	Hz Mode	Auto Fl	FT		
SGL Count	100/100								
DIPK Max									-5.43 dBm
					IVI	1[1]		5.77	-5.43 aBm 99650 GHz
10 dBm					M	2[1]			11.33 dBm
						2[1]			67200 GHz
0 dBm			MI						
-10 dBm		Mernon	mound	nonformation	MAMAALA	mohre	M3		
-10 0500					[· · · · · ·				
-20 dBm		L.		¥	1		<u>\</u>		
		4N					າ	m.	
-30 dBm	ر مر							Viq.	
adorden MA-	ww							MM Joy	MARANA
-50 dBm									
-60 dBm									
-70 dBm									
, o abiii									
CF 5.785 G	Hz			1001	pts			Span	30.0 MHz
Marker									
Type Ref	Trc	X-value	.	Y-value	Func	tion	Fund	tion Result	
M1	1	5.7799		-5.43 dB					
M2	1		72 GHz	-11.33 dB					
M3	1	5.793	16 GHz	-10.10 dB	m				
	Υ				R	te a d y		1,70	11.04.2023

Date: 11.APR.2023 14:58:44

-6dB Bandwidth NVNT a 5825MHz Ant1

Spectrum								₩
Ref Level	20.00 di	Bm Offset	11.81 dB (• RBW 100 kH	z			
Att 🗧	30	dB SWT	37.9 µs	🖢 VBW 300 kH	z Mode Auto Fl	FT		
SGL Count 1	100/100							
●1Pk Max								
					M1[1]		-8	.03 dBn
10 dBm								650 GH:
10 0.0111					M2[1]			.11 dBn
0 dBm							5.8166	900 GH2
			M1					
-10 dBm		Man		mout the truter .	wownown	M3		
				- I - W				
-20 dBm				Y				
		N				ר	4.	
-30 dBm	N						-vy	
40 -	الكعمية الم						Mr. and	
799.980000	00.0						Winnerfor	mar
-50 dBm		_						
00 00								
-60 dBm								
-70 dBm-+								
CF 5.825 GH	lz			1001	pts		Span 30	.0 MHz
Marker								
Type Ref	Trc	X-valu	ie	Y-value	Function	Fun	ction Result	
M1	1		965 GHz	-8.03 dBn				
M2	1		669 GHz	-13.11 dBn				
M3	1	5.83	325 GHz	-13.68 dBn	n			
					Ready		11.0	1.2023

Date: 11.APR.2023 15:03:22

-6dB Bandwidth NVNT n20 5745MHz Ant1

Spectrum									
Ref Level 2	20.00 dB	m Offset	12.01 dB 👄	RBW 100 kH	lz				()
Att	30 0	IB SWT	37.9 µs 👄	VBW 300 kH	z Mode	Auto FFT			
SGL Count 10	00/100								
⊖1Pk Max									
					M	1[1]			-8.45 dBm
10 dBm									12240 GHz
					M	2[1]			13.74 dBm
0 dBm							1	5.73	60600 GHz
1			M1						
-10 dBm		Mar was	and the state of t	and the amount	ראלאריילטיילא	porte and the state of the stat	mound when the	P	
		1		1 V					
-20 dBm									
-30 dBm		м						5	
-30 0611	ي م							2	
-40 dBm	V	_						N.	
AO dBm	(M)							- Gran	harrow
-50 dBm									
1									
-60 dBm									
-70 dBm									
CF 5.745 GH	lz			1001	pts			Span	30.0 MHz
Marker									
Type Ref	Trc	X-valu		Y-value	Func	tion	Fund	tion Result	
M1	1		24 GHz	-8.45 dB					
M2	1		06 GHz	-13.74 dB					
M3	1	5.753	85 GHz	-14.20 dB	n				
	П					te a d y		1,70	1.04.2023

Date: 11.APR.2023 15:09:21

-6dB Bandwidth NVNT n20 5785MHz Ant1

Spectro	um										
Ref Le	vel :	20.00 dBi	m Offset	11.73 dB	RBW 100) kHz					
🗎 Att		30 d	B SWT	37.9 µs	👄 VBW 300) kHz	Mode	Auto FFT			
SGL Cou		00/100									
⊖1Pk Ma	×										
							M	1[1]			-5.81 dBm
10 dBm-	_						<u> </u>	0141			374880 GHz
							M	2[1]			-11.24 dBm /61800 GHz
0 dBm	-						MI			3.77	01000 GH2
			M2				л Т	8 1	A 1 M	3	
-10 dBm-	-		Job Uniter	AND THE PARTY	www.ml.mm	m por	ماليكيمهم	mburb	month and		
-20 dBm-						V.					
-20 ubiii			r l							N	
-30 dBm-		/								W.	
		م م								1	
79,49.07.	- W	n or t								- Va	hman
										v	
-50 dBm-	+										
-60 dBm-											
-60 aBm-											
-70 dBm-											
70 abiii											
CF 5.78	5 CU	17			10	01 pt:	F				30.0 MHz
Marker	o an	2			10	orpe	,			opai	00.0 MHZ
	Pof	Trc	X-valu	•	Y-value		Func	tion	Eupo	ction Result	. 1
M1	Kel	1		488 GHz	-5.81		Tune		Fund	alon Kesun	L
M2		1		518 GHz	-11.24						
M3		1	5.793	376 GHz	-10.98	dBm					
] ;	e adv		436	11.04.2023
)				

Date: 11.APR.2023 15:14:04

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-6dB Bandwidth NVNT n20 5825MHz Ant1

Spectrum									
Ref Level 2	20.00 dBi	m Offset :	11.81 dB 🧉	• RBW 100 ki	Ηz				
Att 🛛	30 d	B SWT	37.9 µs 🧉	• VBW 300 kł	-Iz Mode	Auto FFT			
SGL Count 10	00/100								
⊖1Pk Max									
					M	1[1]			-6.16 dBm
10 dBm									74880 GHz
					M	2[1]			10.93 dBm
0 dBm					M1		1	5.81	61800 GHz
		M2			. 7		A Ma		
-10 dBm		Transtant	mapping	machiganutor	woodward	altractory	10 1		
		1		1 1	/ ·		(· · ·)		
-20 dBm		4							
-30 dBm	J.	'						5	
-30 ubiii	N							No.	
ALCHOR BOOK	moul							Jac And	A A A
Materia .									1.00-03.000.00
-50 dBm									
-60 dBm									
-70 dBm									
CF 5.825 GH	z			1001	pts			Span	30.0 MHz
Marker									
Type Ref	Trc	X-value	e	Y-value	Func	tion	Fund	tion Result	
M1	1	5.8274		-6.16 dB					
M2	1		18 GHz	-10.93 dB					
M3	1	5.833	76 GHz	-11.09 dB	m				
					R	e a d y		1,70	11.04.2023

Date: 11.APR.2023 15:18:15

-6dB Bandwidth NVNT n40 5755MHz Ant1

Ref Leve Att SGL Count 1Pk Max	з	O dB SWT		 RBW 100 ki VBW 300 ki 					
SGL Count 1Pk Max	-		75.8 μs (VBW 300 ki					
●1Pk Max	: 100/10	0			Hz Mode	Auto FF	т		
-									
10 dBm	1								
10 dBm	1				M	1[1]			-8.05 dBm
to ubiii									475070 GHz
					M	2[1]			-13.92 dBm
0 dBm								5.73	368200 GHz
o abiii			M	1					
-10 dBm		_M2	* • • 7					3	
		Jaylounder	ppPlantaetappinghanthappi	whentrolection	providenterio	monter	with hours with the	7	
-20 dBm								A	+
		1		4	r			К	
-30 dBm		1						14.	+
		v"						14	
-40 dBm	1.11								
~40 UBIII-	mar							- Warner	hannon
-50 dBm									+
-60 dBm—									
-70 dBm									
-70 UBIII									
CF 5.755 (GHz			1001	pts			Spar	n 60.0 MHz
Marker									
	ef Trc	X-val		Y-value	Funct	tion	Fun	ction Resul	t
M1	1		7507 GHz	-8.05 dB					
M2	1		3682 GHz	-13.92 dB					
M3	1	5.77	7312 GHz	-13.87 dB	m				
					R	e a d y		100	11.04.2023

Date: 11.APR.2023 16:07:52

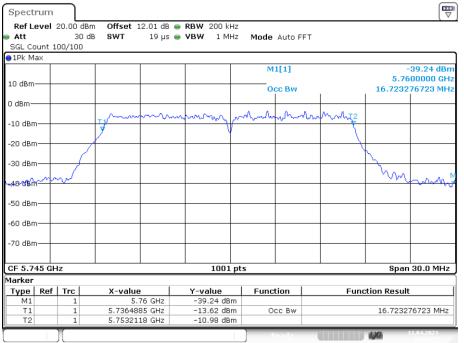
-6dB Bandwidth NVNT n40 5795MHz Ant1

Spectr	um												
Ref Le	vel	20.00	dBm	Offset 1	11.80 dB	RBW	100 k	Hz					
e Att		30) dB	SWT	75.8 µs	🕳 увж	300 k	Hz	Mode	Auto FFT			
SGL Co	unt 1	00/100)										
😑 1 Pk Ma	х												
									M	1[1]		-	11.25 dBm
10 dBm-													05740 GHz
TO UBIII-									M	2[1]			16.86 dBm
0 dBm—												5.77	67000 GHz
o abiii									MI				
-10 dBm	\rightarrow					_							
				Multingeterment	garaperparts	newannes	man	pour	recently and	rytan Ukiryan yaan	mound	¥	
-20 dBm	+		-#										
			- /1				۲	ſ				N .	
-30 dBm	-		1									1	
		N	7									×.	
-40 dBm _የ ዛሊ/ኦ۹ሎች	mally	Must										Window	mannan
-50 dBm													a a Abbuille at
-SU UBIII													
-60 dBm													
00 00111													
-70 dBm	_												
CF 5.79		17					1001	nte				 Snan	60.0 MHz
Marker	J GH	2					1001	. pts				əpan	
	Ref	Trc		X-value		v	alue	- 1	Fund	tion 1	Fund	ction Result	
Type M1	ĸer	11		5.8005			aiue 1.25 dB	m	Func		Fund	cuon Result	
M2		1			67 GHz		5.86 dB						
M3		1			24 GHz		5.84 dB						
								1				4.4%	11.04.2023
		Л										Ly Li	

Date: 11.APR.2023 16:17:58

Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	а	5745	Ant1	16.723
NVNT	а	5785	Ant1	16.603
NVNT	а	5825	Ant1	16.633
NVNT	n20	5745	Ant1	17.742
NVNT	n20	5785	Ant1	17.742
NVNT	n20	5825	Ant1	17.802
NVNT	n40	5755	Ant1	36.324
NVNT	n40	5795	Ant1	36.324



OBW NVNT a 5745MHz Ant1

Date: 11.APR.2023 14:53:31

OBW NVNT a 5785MHz Ant1

		OD,		/ 0010112 / 0101		
Spectrum						
Ref Level	20.00 di	3m Offset 11.73 dB	😑 RBW 200 kHz			
Att	30	dB SWT 19 µs	VBW 1 MHz	Mode Auto FF	т	
SGL Count	100/100					
⊖1Pk Max						
				M1[1]		-36.00 dBm
10 10-						5.8000000 GHz
10 dBm				Occ Bw		16.603396603 MHz
0 dBm						
		TIMM	mon	mont	mmmy2	
-10 dBm						
			۳.			
-20 dBm						
	6					
-30 dBm	\rightarrow					
W	mu					Frommy
-40 dBm						· · · ·
-50 dBm						
-60 dBm						
-70 dBm						
CF 5.785 G	Hz		1001 pt	s		Span 30.0 MHz
Marker						
Type Ref	Trc	X-value	Y-value	Function	Fund	tion Result
M1	1	5.8 GHz	-36.00 dBm			
T1	1	5.7766683 GHz	-10.94 dBm	Occ Bw		16.603396603 MHz
T2	1	5.7932717 GHz	-10.73 dBm			
	1			Dondu		11.04.2023
	11			Recordly		14-58-24 //

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OBW NVNT a 5825MHz Ant1

Spectrun	n								
Ref Leve	20.00	dBm Offset 1	11.81 dB (RBW 200 kH	z				
Att 🛛		db SWT	19 µs (■ VBW 1 MH	z Mode	Auto FF	т		
SGL Count	100/100)							
∋1Pk Max									
					M	1[1]			36.39 dBm
10 dBm									-00000 GHa
					0	CC BW	1	16.6333	66633 MH: I
0 dBm									
		T100	0.0.0.00	mmm			mmm 12		
-10 dBm—		- Proprieto	J 100 10 800 100	and the second	porte porte est	A	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
				ľ					
-20 dBm—									
-30 dBm									
-30 ubiii								2	
14016BA	Your Contraction							·~	m
-50 dBm									
-60 dBm—									
70 40									
-70 dBm									
CF 5.825 (GHz			1001	pts			Span	30.0 MHz
larker									
	f Trc	X-value		Y-value	Func	tion	Fund	tion Result	
M1 T1	1	5.81666	84 GHz	-36.39 dBn -12.05 dBn		cc Bw		16 6222	56633 MHz
T2	1	5.83330		-12.05 dBr		LUDW		10.0333	00033 MHZ
14	7	5.65550	21 0112	10,20 001					14 04 2022
					R				0H04H2025

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OBW NVNT n20 5745MHz Ant1

Spect	rum										
Ref L	evel	20.00 dBm	Offset 12.0	1 dB 😑	RBW 200 k	Ηz					
👄 Att		30 dB	SWT 1	.9 µs 😑	VBW 1 M	-Iz r	Mode	Auto FFT			
		00/100									
😑 1Pk M	ax]
							M1	[1]			40.40 dBm
10 dBm											00000 GHz
10 0.0.00							00	c Bw		17.7422	57742 MHz
0 dBm-											
		-	100 0 0 0 0 0				0	unn	10 0 0 0T	,	
-10 dBm	n		1 mm	and the	monty	press of	www	www	www.mi		
)				1			· · · ·		
-20 dBr	n-+-										
										$\langle \rangle$	
-30 dBn	1-1-									<u> </u>	
1-40 dBh	n.h	work								~h.	No. AM
Men and	J									- Un	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
-50 dBr											
-30 ubii	'										
-60 dBm	-										
00 000	.										
-70 dBr	n——								_		
CF 5.7	45.04	17			1001	nte					30.0 MHz
Marker	10 GF				1001	pro				opan	00.0 1012
Type	Ref	Trc	X-value	1	Y-value	-	Funct	on I	Eup	tion Result	1
M1	Rei	1	5.76 (GHZ	-40.40 dB		Funct		Fund	Alon Result	
T1		1	5.7360689 (-11.70 dB		Oc	c Bw		17.74225	57742 MHz
T2		1	5.7538112 (-11.26 dB						
)(Re	a d y		4)41	1.04.2023

Date: 11.APR.2023 15:09:08

OBW NVNT n20 5785MHz Ant1

Spectrum	ī					
Ref Level	1 20.00 d	Bm Offset 11.73 dB) 🔵 RBW 200 kHz			
Att		dB SWT 19 μs	s 👄 VBW 🛛 1 MHz	Mode Auto Fl	FT	
SGL Count	100/100					
⊖1Pk Max			<u>.</u>			
				M1[1]		-41.51 dBm
10 dBm-						5.8000000 GHz
				Occ Bw	1	17.742257742 MHz
0 dBm						
		thomas		mon	M	T.0
-10 dBm-		Propriet 100mo			· · · · · · · · · · · · · · · · · · ·	\ \
-20 dBm						
-20 aBm						
-30 dBm-	(-				
	/					
~~aevageur	Nr -					how
-50 dBm						
-60 dBm-						
-70 dBm						
-70 UBIII						
CF 5.785 G	Hz		1001 pt	s		Span 30.0 MHz
Marker		•				
	f Trc	X-value	Y-value	Function	Fur	nction Result
M1 T1	1	5.8 GHz 5.7761289 GHz	-41.51 dBm -11.46 dBm	Occ Bw		17.742257742 MHz
T2	1	5.7938711 GHz	-12.99 dBm	OCC BW		17.742257742 MHz
	1 4	011000111 0112	22.00 0000	,		11.04.2022
				Ready		4,20

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OBW NVNT n20 5825MHz Ant1

			```				00201011271111						
Spectru	um												
Ref Lev	vel :	20.00 dBm	Offset 1	L1.81 dB	e RB	<b>W</b> 200 k	Hz						
Att		30 dE	SWT	19 µs	VB ²	<b>W</b> 1 M	Hz	Mode	Auto Ff	FT			
SGL Cou	int 1	00/100											
⊖1Pk Ma>	к												
								M	1[1]				-39.18 dBm
10 dBm—												5.8	400000 GHz
TO UDIII-								0	cc Bw			17.8021	L97802 MHz
0 dBm													
0 0.0111													
-10 dBm-	_	1	Jamm	m	m	mm	,~~~	m	m	www	J. mm	<u>[</u> 2	
			ľ			1	/					۹	
-20 dBm-	_	/										<u>↓</u>	
-30 dBm-	-											+	
· · · · ·	har	w.										1 72	mmA
-40 aBM-	17				_								u anna nt
-50 dBm-	-											+	
-60 dBm-	+												
-													
-70 dBm-													
CF 5.825	5 ĠH	lz				1001	pts					Spar	n 30.0 MHz
Marker													
Type   I	Ref	Trc	X-value	,	Y-	value		Func	tion		Fun	ction Resul	t
M1		1	5.8	84 GHz	-	39.18 dB	m						
Τ1		1	5.81606			12.33 dB		0	cc Bw			17.8021	.97802 MHz
T2		1	5.83387	11 GHz	-	12.82 dB	m						
									eady	11		4,00	11.04.2023

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### OBW NVNT n40 5755MHz Ant1

Spectrun	n					
Ref Leve	20.00 dB	m Offset 11.83 dB	🔵 RBW 500 kHz			
Att 🛛	30 c	iB <b>SWT</b> 15.1 μs	VBW 2 MHz	Mode Auto FF	т	
SGL Count	100/100					
⊖1Pk Max						
				M1[1]		-40.31 dBm
10 dBm				Occ Bw		5.7850000 GHz 36.323676324 MHz
					1	0.020070024 6112
0 dBm		-				
-10 dBm			- many -	munun	mm	7
		/	Y Y			
-20 dBm—	/					
00 IR						$ \lambda $
-30 dBm						
40 dBm-	m					mond
-50 dBm						
-60 dBm						
-ou ubili						
-70 dBm						
CF 5.755 (	GHz		1001 pt	s		Span 60.0 MHz
Marker						
	f Trc	X-value	Y-value	Function	Fun	ction Result
M1	1	5.785 GHz	-40.31 dBm	0.00		06 000676004 MUL
T1 T2	1	5.7367782 GHz 5.7731019 GHz	-9.39 dBm -9.99 dBm	Occ Bw		36.323676324 MHz
		0.1101019 012	5155 dbiii	,	4	11 04 2022
				Ready		10.07.133

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## OBW NVNT n40 5795MHz Ant1

		ODII		// 00//// 12/	une i	_
Spectrum						
Ref Level	20.00 dBm	Offset 11.80 dB	😑 RBW 500 kHz			
Att	30 dB	SWT 15.1 μs	VBW 2 MHz	Mode Auto F	FT	
SGL Count 1	.00/100					
⊖1Pk Max						
				M1[1]		-38.71 dBm
10 dBm						5.8250000 GHz
10 0811				Occ Bw		36.323676324 MHz
0 dBm						
0 0.0	т		0.0000	A		12
-10 dBm		mun			mp mm	7
			V V			
-20 dBm	/					
-30 dBm						
anna						mont
~40 dBm						
-50 dBm						
-60 dBm						
-60 dBm						
-70 dBm						
-70 ubiii						
CF 5.795 GH	lz		1001 pt	5		Span 60.0 MHz
Marker						
Type Ref		X-value	Y-value	Function	Fun	ction Result
M1	1	5.825 GHz	-38.71 dBm			
T1	1	5.7767782 GHz	-10.27 dBm	Occ Bw		36.323676324 MHz
T2	1	5.8131019 GHz	-8.77 dBm			
	Л			Ready		11.04.2023

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# 4.5 Band edge emissions (Radiated)

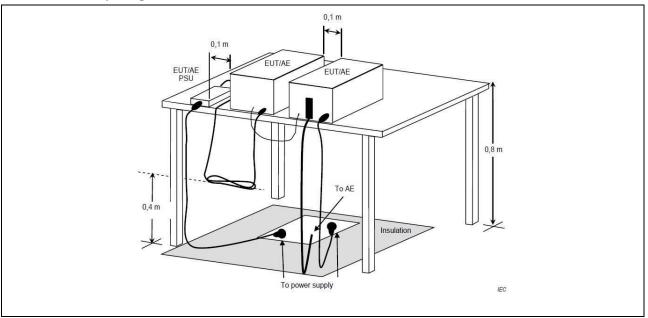
Test Limit:         For transmitters operating in the 5.15-5.25 GHz band: All emissions outside 5.15-5.35 GHz band shall not exceed an e.t.p. of -27 dBm/MHz.           For transmitters operating solely in the 5.755-5.850 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 25 MHz obver or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge, from 5 MHz above or below the band edge.           MHz         MHz         MHz         GHz           0.090-0.110         16.42-16.423         399.9-410         4.55-15           10.495-0.505         16.69475-16.69525         608-614         5.35-5.46           2.1735-2.1905         16.80425-16.80475         960-1240         7.25-7.75           4.125-4.128         25.5-25.67         1300-1427         8.025-8.5           4.17725-4.17775         37.5-38.25         1435-1626.5         9.0-9.2           4.20725-4.20775         73-74.6         1646.5         9.0-9.2           4.20725-6.218         74.8-75.2         1660-1710         10.6-12.7           6.2175-6.218         74.8-75.2         1660-1710         10.6-12.7           6.31175-6.31225         123-138         2200-2300         15.35-16.2           8.362-8.366         156.52475-         2483.5-2500         17.7-21.4           8.3625-8.38675         156.7-171.
For transmitters operating solely in the 5.725-5.850 GHz band: All emissions shall be limited to a level of $-27$ dBm/MHz at 25 MHz above below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above below the band edge and from 25 MHz above or below the band edge increa- linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. $\frac{MHz}{0.090-0.110} \frac{16.42+16.423}{16.69475} \frac{399.9-410}{399.9-410} \frac{4.5-5.15}{4.55-5.15} \frac{10.49475-16.69525}{10.49525-16.69525} \frac{608-614}{1.725-7.75} \frac{4.125-4.128}{4.20725-4.17775} \frac{37.5-38.25}{7.3-74.6} \frac{14645.5}{1646.5} \frac{10.9-9.2}{9.3-9.2} \frac{4.20725-4.20775}{4.20725-4.20775} \frac{73.74.6}{7.3-74.6} \frac{1645.5}{1646.5} \frac{10.9-9.2}{9.3-9.5} \frac{1435-16226}{1660-1710} \frac{10.6-12.7}{10.6-12.7} \frac{10.6-12.7}{6.26775-6.26825} \frac{108-121.94}{1722.2} \frac{177.8}{1722.2} \frac{13.2-13.8}{156.52275} \frac{2200-2300}{2300} \frac{14.47-14.5}{15.35-14.2} \frac{13.25-13.4}{1722.2} \frac{17.7-21.4}{1.56.52225} \frac{156.7-156.9}{2310-2390} \frac{15.35-16.2}{15.35-16.2} \frac{8.362-8.366}{156.52475-} \frac{156.7-156.9}{2483.5-2500} \frac{22.01-23.12}{1.7.7-21.4} \frac{156.52225}{12.57675-12.52025} \frac{240-285}{23345.8-3358} \frac{33.6-3.26}{24.0} \frac{12.29-12.293}{12.291.2293} \frac{167.72-17.32}{167.72-17.32} \frac{3322-3338}{3322-3339} \frac{31.2-31.8}{32.6-24.0} \frac{12.57675-12.52025}{12.5775-12.52025} \frac{240-285}{2335.4} \frac{3600-4400}{10} \frac{1}{1} \frac{1}{1}$ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz. ² Above 38.6 The field strength of emissions appearing within these frequency bands shall exceed the limits shown in § 15.209.At frequencies equal to or less than 100 MHz, compliance with the emission limits in § 15.2095hall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Abo 1000 MHz, compliance with the emission limits in § 15.2095hall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Abo 1000 MHz, compliance with the emission
MHzMHzMHzGHz0.090-0.11016.42-16.423399.9-4104.5-5.150.495-0.50516.69475-16.69525608-6145.35-5.462.1735-2.190516.80425-16.80475960-12407.25-7.754.125-4.12825.5-25.671300-14278.025-8.54.17725-4.1777537.5-38.251435-1626.59.0-9.24.20725-4.2077573-74.61645.59.3-9.56.215-6.21874.8-75.21660-171010.6-12.76.26775-6.26825108-121.941718.8-13.25-13.41722.2123-1382200-230014.47-14.58.291-8.294149.9-150.052310-239015.36-16.28.362-8.366156.52475-2483.5-250017.7-21.4156.5252518.37625-8.38675156.7-156.92690-290022.01-23.128.41425-8.41475162.0125-167.173260-326723.6-24.012.29-12.293167.72-173.23332-333931.2-31.812.51975-12.52025240-2853345.8-335836.43-36.512.57675-12.57725322-335.43600-4400(')13.36-13.411111111111111111111111111111111111111111111111<
$0.090-0.110$ 16.42-16.423399.9-4104.5-5.15 $10.495-0.505$ 16.69475-16.69525608-6145.35-5.46 $2.1735-2.1905$ 16.80425-16.80475960-12407.25-7.75 $4.125-4.128$ 25.5-25.671300-14278.025-8.5 $4.20725-4.20775$ 73-74.61645.59.0-9.2 $4.20725-4.20775$ 73-74.61666.51646.5 $6.215-6.218$ 74.8-75.21660-171010.6-12.7 $6.26775-6.26825$ 108-121.941718.8-13.25-13.4 $1722.2$ 11722.21 $6.31175-6.31225$ 123-1382200-230014.47-14.5 $8.291-8.294$ 149.9-150.052310-239015.35-16.2 $8.362-8.366$ 156.52475-2483.5-250017.7-21.4 $15.62525$ 156.7-156.92690-290022.01-23.12 $8.41425-8.41475$ 162.0125-167.173260-326723.6-24.0 $12.29-12.293$ 167.72-173.23332-333931.2-31.8 $12.51975-12.52025$ 240-2853345.8-335836.43-36.5 $12.57675-12.52025$ 240-2853345.8-335836.43-36.5 $12.57675-12.57725$ 322-335.43600-4400()11111 1 Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz. 2 Above 38.6The field strength of emissions appearing within these frequency bands shalexceed the limits shown in § 15.209. At frequencies equal to or less than 100MHz, compliance with the limits in § 15.209shall be demonstrated using measurement instrumentation empl
$10.495-0.505$ $16.69475-16.69525$ $608-614$ $5.35-5.46$ $2.1735-2.1905$ $16.80425-16.80475$ $960-1240$ $7.25-7.75$ $4.125-4.128$ $25.5-25.67$ $1300-1427$ $8.025-8.5$ $4.17725-4.17775$ $37.5-38.25$ $1435-1626.5$ $9.0-9.2$ $4.20725-4.20775$ $73.74.6$ $1645.5$ $9.3-9.5$ $6.215-6.218$ $74.8-75.2$ $1660-1710$ $10.6-12.7$ $6.26775-6.26825$ $108-121.94$ $1718.8$ $13.25-13.4$ $6.31175-6.31225$ $123-138$ $2200-2300$ $14.47-14.5$ $8.291-8.294$ $149.9-150.05$ $2310-2390$ $15.35-16.2$ $8.362-8.366$ $156.52475 2483.5-2500$ $17.7-21.4$ $8.37625-8.38675$ $156.7-156.9$ $2690-2900$ $22.01-23.12$ $8.41425-8.41475$ $162.0125-167.17$ $2326-3267$ $23.6-24.0$ $12.29-12.293$ $16.7-2173.2$ $3332-3339$ $31.2-31.8$ $12.51975-12.52025$ $240-285$ $3345.8-3358$ $36.43-36.5$ $12.57675-12.57725$ $322-335.4$ $3600-4400$ (') $13.36-13.41$ $10.499.0.510$ MHz. 2 Above $38.6$ The field strength of emissions appearing within these frequency bands shall exceed the limits shown in § 15.209. At frequencies equal to or less than 100 MHz, compliance with the limits in § 15.209shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Abo 1000 MHz, compliance with the emission limits in § 15.209shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Abo 1000 MHz, compliance with the emissions. The provisions in § 15.35ap
2.1735-2.1905         16.80425-16.80475         960-1240         7.25-7.75           4.125-4.128         25.5-25.67         1300-1427         8.025-8.5           4.17725-4.17775         37.5-38.25         1435-1626.5         9.0-9.2           4.20725-4.20775         73-74.6         1645.5         9.3-9.5           1646.5         1646.5         1646.5         1646.5           6.215-6.218         74.8-75.2         1660-1710         10.6-12.7           6.26775-6.26825         108-121.94         1718.8         13.25-13.4           1722.2         16.31175-6.31225         123-138         2200-2300         14.47-14.5           8.291-8.294         149.9-150.05         2310-2390         15.35-16.2           8.362-8.366         156.52475         2483.5-2500         17.7-21.4           156.5225         167.712.17         3260-3267         23.6-24.0           12.29-12.293         167.72-173.2         3332-3339         31.2-31.8           12.57675-12.57725         322-335.4         3600-4400         (^1           13.36-13.41         1         1         1           1         1         1         1         1           1         1         1         1         1
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$
4.17725-4.17775 $37.5-38.25$ $1435-1626.5$ $9.0-9.2$ $4.20725-4.20775$ $73-74.6$ $1645.5$ $9.3-9.5$ $6.215-6.218$ $74.8-75.2$ $1660-1710$ $10.6-12.7$ $6.26775-6.26825$ $108-121.94$ $1718.8$ $13.25-13.4$ $1722.2$ $123-138$ $2200-2300$ $14.47-14.5$ $8.291-8.294$ $149.9-150.05$ $2310-2390$ $15.35-16.2$ $8.362-8.366$ $156.52475 2483.5-2500$ $17.7-21.4$ $156.52525$ $156.7-156.9$ $2690-2900$ $22.01-23.12$ $8.41425-8.41475$ $162.0125-167.17$ $3260-3267$ $23.6-24.0$ $12.29-12.293$ $167.72-173.2$ $3332-3339$ $31.2-31.8$ $12.51975-12.52025$ $240-285$ $345.8-3358$ $36.43-36.5$ $12.57675-12.57725$ $322-335.4$ $3600-4400$ ( ⁷ ) $13.36-13.41$ $1$ $1$ $1$ $1$ $1$ $1$ $1$ $1$ $1$ $15.209$ -hall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Abo $1000$ MHz, compliance with the emission limits in § 15.209-hall be demonstrated using measurement. $15.35aply$ to these measurements.Except as provided elsewhere in this subpart, the emissions from an intentio
$4.17725-4.17775$ $37.5-38.25$ $1435-1626.5$ $9.0-9.2$ $4.20725-4.20775$ $73-74.6$ $1645.5$ $9.3-9.5$ $6.215-6.218$ $74.8-75.2$ $1660-1710$ $10.6-12.7$ $6.26775-6.26825$ $108-121.94$ $1718.8$ $13.25-13.4$ $1722.2$ $123-138$ $2200-2300$ $14.47-14.5$ $8.291-8.294$ $149.9-150.05$ $2310-2390$ $15.35-16.2$ $8.362-8.366$ $156.52475$ - $2483.5-2500$ $17.7-21.4$ $156.52525$ $156.7-156.9$ $2690-2900$ $22.01-23.12$ $8.41425-8.41475$ $162.0125-167.17$ $32260-3267$ $23.6-24.0$ $12.29-12.293$ $167.72-173.2$ $3332-3339$ $31.2-31.8$ $12.51975-12.52025$ $240-285$ $345.8-3358$ $36.43-36.5$ $12.57675-12.57725$ $322-335.4$ $3600-4400$ ( ⁷ ) $13.36-13.41$ $1$ $1$ $1$ $1$ $1$ $1$ $15.2098$ hall be 0.490-0.510 MHz. 2 Above $38.6$ $36.43$ $15.2098$ hall be 0.490-0.510 MHz. 2 Above $38.6$ $36.238.6$ $15.2098$ hall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Abo 1000 MHz, compliance with the emission limits in § 15.2098 hall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Abo 1000 MHz, compliance with the emission limits in § 15.2098 hall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Abo 1000 MHz, compliance with the emission limits in § 15.2098 hall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Abo 1000 MHz, compliance with the emiss
4.20725-4.2077573-74.61645.5- 1646.59.3-9.56.215-6.21874.8-75.21660-171010.6-12.76.26775-6.26825108-121.941718.8- 1722.213.25-13.46.31175-6.31225123-1382200-230014.47-14.58.291-8.294149.9-150.052310-239015.35-16.28.362-8.366156.52475- 156.525252483.5-250017.7-21.48.37625-8.38675156.7-156.92690-290022.01-23.128.41425-8.41475162.0125-167.173260-326723.6-24.012.29-12.293167.72-173.23332-333931.2-31.812.51975-12.52025240-2853345.8-335836.43-36.512.57675-12.57725322-335.43600-4400( ⁷ )13.36-13.41
6.215-6.218         74.8-75.2         1660-1710         10.6-12.7           6.26775-6.26825         108-121.94         1718.8-         13.25-13.4           1722.2         1175-6.31225         123-138         2200-2300         14.47-14.5           8.291-8.294         149.9-150.05         2310-2390         15.35-16.2           8.362-8.366         156.52475-         2483.5-2500         17.7-21.4           156.52525         156.7-156.9         2690-2900         22.01-23.12           8.41425-8.41475         162.0125-167.17         3260-3267         23.6-24.0           12.29-12.293         167.72-173.2         3332-3339         31.2-31.8           12.51975-12.52025         240-285         3345.8-3358         36.43-36.5           12.57675-12.57725         322-335.4         3600-4400         ( ¹ )           13.36-13.41         1         1         1 ¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz. ² ² Above 38.6         15.209. At frequencies equal to or less than 100           MHz, compliance with the limits in § 15.209shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Abo 1000 MHz, compliance with the emission limits in § 15.209shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Abo 1000 MHz, compliance wi
6.26775-6.26825         108-121.94         1718.8- 1722.2         13.25-13.4           6.31175-6.31225         123-138         2200-2300         14.47-14.5           8.291-8.294         149.9-150.05         2310-2390         15.35-16.2           8.362-8.366         156.52475- 156.52525         2483.5-2500         17.7-21.4           8.37625-8.38675         156.7-156.9         2690-2900         22.01-23.12           8.41425-8.41475         162.0125-167.17         3260-3267         23.6-24.0           12.29-12.293         167.72-173.2         3332-3339         31.2-31.8           12.51975-12.52025         240-285         3345.8-3358         36.43-36.5           12.57675-12.57725         322-335.4         3600-4400         ( ² )           13.36-13.41         1         1         1           1vntil February 1, 1999, this restricted band shall be 0.490-0.510 MHz.         2 ² Above 38.6         The field strength of emissions appearing within these frequency bands shall exceed the limits shown in § 15.209. At frequencies equal to or less than 100 MHz, compliance with the limits in § 15.209shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Abo 1000 MHz, compliance with the emission limits in § 15.209shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Abo 1000 MHz, compliance with the emission limits in § 15.209shall be demonstrated using
6.31175-6.31225         123-138         2200-2300         14.47-14.5           8.291-8.294         149.9-150.05         2310-2390         15.35-16.2           8.362-8.366         156.52475-         2483.5-2500         17.7-21.4           156.52525         2690-2900         22.01-23.12           8.41425-8.41475         162.0125-167.17         3260-3267         23.6-24.0           12.29-12.293         167.72-173.2         332-3339         31.2-31.8           12.51975-12.52025         240-285         3345.8-3358         36.43-6.5           12.57675-12.57725         322-335.4         3600-4400         ( ⁴ )           13.36-13.41         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1
8.291-8.294         149.9-150.05         2310-2390         15.35-16.2           8.362-8.366         156.52475- 156.52525         2483.5-2500         17.7-21.4           8.37625-8.38675         156.7-156.9         2690-2900         22.01-23.12           8.41425-8.41475         162.0125-167.17         3260-3267         23.6-24.0           12.29-12.293         167.72-173.2         3332-3339         31.2-31.8           12.51975-12.52025         240-285         3345.8-3358         36.43-36.5           12.57675-12.57725         322-335.4         3600-4400         ( ² )           13.36-13.41
8.362-8.366       156.52475- 156.52525       2483.5-2500       17.7-21.4         8.37625-8.38675       156.7-156.9       2690-2900       22.01-23.12         8.41425-8.41475       162.0125-167.17       3260-3267       23.6-24.0         12.29-12.293       167.72-173.2       3332-3339       31.2-31.8         12.51975-12.52025       240-285       3345.8-3358       36.43-36.5         12.57675-12.57725       322-335.4       3600-4400       ( ² )         13.36-13.41
8.37625-8.38675156.7-156.92690-290022.01-23.128.41425-8.41475162.0125-167.173260-326723.6-24.012.29-12.293167.72-173.23332-333931.2-31.812.51975-12.52025240-2853345.8-335836.43-36.512.57675-12.57725322-335.43600-4400(²)13.36-13.41
12.29-12.293167.72-173.23332-333931.2-31.812.51975-12.52025240-2853345.8-335836.43-36.512.57675-12.57725322-335.43600-4400(²)13.36-13.41
12.51975-12.52025240-2853345.8-335836.43-36.512.57675-12.57725322-335.43600-4400( ² )13.36-13.411111111111111111111111111111111111111111111111111111111111111111111111111111111111111112Above 38.6111111111111111111111111111111111111111111111111111111111111111
12.51975-12.52025240-2853345.8-335836.43-36.512.57675-12.57725322-335.43600-4400(²)13.36-13.411111111111111111111111111111111111111111111111111111111111111111111111111111111111111112222333311111111111111111111111111111111111111111111111111111111
12.57675-12.57725       322-335.4       3600-4400       (²)         13.36-13.41       1       1       1         1       1       1       1       1         1       1       1       1       1       1         1       1       1       1       1       1       1         1       1       1       1       1       1       1       1         1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1
13.36-13.41 ¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz. ² Above 38.6         The field strength of emissions appearing within these frequency bands shall exceed the limits shown in § 15.209. At frequencies equal to or less than 100 MHz, compliance with the limits in § 15.209shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Abor 1000 MHz, compliance with the emission limits in § 15.209shall be demonstrated using based on the average value of the measured emissions. The provisions in § 15.35apply to these measurements.         Except as provided elsewhere in this subpart, the emissions from an intention
¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz. ² Above 38.6 The field strength of emissions appearing within these frequency bands shal exceed the limits shown in § 15.209. At frequencies equal to or less than 100 MHz, compliance with the limits in § 15.209shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. About 1000 MHz, compliance with the emission limits in § 15.209shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. About 1000 MHz, compliance with the emission limits in § 15.209shall be demonstrated based on the average value of the measured emissions. The provisions in § 15.35apply to these measurements. Except as provided elsewhere in this subpart, the emissions from an intention
Except as provided elsewhere in this subpart, the emissions from an intentio
Frequency (MHz)     Field strength (microvolts/meter)     Measurement distance
(meters)
0.009-0.490 2400/F(kHz) 300
0.490-1.705 24000/F(kHz) 30
1.705-30.0   30   30
30-88 100 ** 3

216-960         200 **         3           Test Method:         ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6           Procedure:         Above 1GHz:         a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 methabove the ground at a 3 meter fully-anechoic chamber. The table was rotated 3 degrees to determine the position of the highest radiation.           b. The EUT was set 3 meters away from the interference-receiving antenna, was mounted on the top of a variable-height antenna tower.         c. The antenna height is varied from one meter to four meters above the ground determine the maximum value of the field strength. Both horizontal and vertica polarizations of the antenna are set to make the measurement.           d. For each suspected emission, the EUT was arranged to its worst case and 1 the antenna was tuned to heights from 1 meter to 4 meters (for the test freque of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.           e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.           f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would reported. Otherwise the emissions that did not have 10dB margin would be retested one by one using peak or average method as specified and then report in a data sheet.           g. Test the EUT in the lowest channel, the middle channel, the Highest channel h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedu	 	-			
Test Method:       ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6         Procedure:       Above 1GHz:         a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 methabove the ground at a 3 meter fully-anechoic chamber. The table was rotated 3 degrees to determine the position of the highest radiation.         b. The EUT was set 3 meters away from the interference-receiving antenna, w was mounted on the top of a variable-height antenna tower.         c. The antenna height is varied from one meter to four meters above the grour determine the maximum value of the field strength. Both horizontal and vertica polarizations of the antenna are set to make the measurement.         d. For each suspected emission, the EUT was arranged to its worst case and 1 the antenna was tuned to heights from 1 meter to 4 meters (for the test freque of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.         e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.       f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would reported. Otherwise the emissions that did not have 10dB margin would be retested one by one using peak or average method as specified and then report in a data sheet.         g. Test the EUT in the lowest channel, the middle channel, the Highest channer h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.					_
Procedure:       Above 1GHz:         a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 methabove the ground at a 3 meter fully-anechoic chamber. The table was rotated degrees to determine the position of the highest radiation.         b. The EUT was set 3 meters away from the interference-receiving antenna, we was mounted on the top of a variable-height antenna tower.         c. The antenna height is varied from one meter to four meters above the grour determine the maximum value of the field strength. Both horizontal and verticat polarizations of the antenna are set to make the measurement.         d. For each suspected emission, the EUT was arranged to its worst case and the antenna was tuned to heights from 1 meter to 4 meters (for the test freque of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.         e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.         f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would reported. Otherwise the emissions that did not have 10dB margin would be retested one by one using peak or average method as specified and then report in a data sheet.         g. Test the EUT in the lowest channel, the middle channel, the Highest channer.         h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.				3	
<ul> <li>a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 methabove the ground at a 3 meter fully-anechoic chamber. The table was rotated a degrees to determine the position of the highest radiation.</li> <li>b. The EUT was set 3 meters away from the interference-receiving antenna, we was mounted on the top of a variable-height antenna tower.</li> <li>c. The antenna height is varied from one meter to four meters above the ground determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>d. For each suspected emission, the EUT was arranged to its worst case and the antenna was tuned to heights from 1 meter to 4 meters (for the test freque of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would reported. Otherwise the emissions that did not have 10dB margin would be retested one by one using peak or average method as specified and then report in a data sheet.</li> <li>g. Test the EUT in the lowest channel, the middle channel, the Highest channer h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.</li> </ul>	Test Method:	ANSI C63.10-2013, section	12.7.4, 12.7.5, 12.7.6		
<ul> <li>Remark:</li> <li>1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor</li> <li>2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. T points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the lin need not be reported.</li> <li>3. As shown in this section, for frequencies above 1GHz, the field strength limit are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.</li> <li>4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had be displayed.</li> </ul>		Above 1GHz: a. For above 1GHz, the EU above the ground at a 3 me degrees to determine the po b. The EUT was set 3 meter was mounted on the top of a c. The antenna height is var determine the maximum val polarizations of the antenna d. For each suspected emist the antenna was tuned to he of below 30MHz, the antenri table was turned from 0 deg e. The test-receiver system Bandwidth with Maximum H f. If the emission level of the specified, then testing could reported. Otherwise the emit tested one by one using pea- in a data sheet. g. Test the EUT in the lowes h. The radiation measureme Transmitting mode, and four i. Repeat above procedures Remark: 1. Level= Read Level+ Cabl 2. Scan from 18GHz to 40G points marked on above plot testing, so only above points emissions from the radiator need not be reported. 3. As shown in this section, are based on average limits shall not exceed the maximum than 20 dB under any condi level is lower than the average report. 4. The disturbance above 14 highest point could be found	T was placed on the top of a rot ter fully-anechoic chamber. The osition of the highest radiation. rs away from the interference-re a variable-height antenna tower ried from one meter to four meter ue of the field strength. Both ho are set to make the measurem ision, the EUT was arranged to eights from 1 meter to 4 meters ha was tuned to heights 1 meter grees to 360 degrees to find the was set to Peak Detect Function old Mode. EUT in peak mode was 10dB I be stopped and the peak value issions that did not have 10dB r ak or average method as specified at channel, the middle channel, the ents are performed in X, Y, Z axis nd the X axis positioning which is until all frequencies measured Hz, the disturbance above 18G its are the highest emissions co is had been displayed. The amp which are attenuated more thar for frequencies above 1GHz, th the disturbance field streng um permitted average limits spec- tion of modulation. For the emis- age limit, only the peak measured 8GHz were very low and the ha	e table was rotated 3 eceiving antenna, where are above the ground rizontal and vertical ent. its worst case and the (for the test frequent) and the rotatable maximum reading. In and Specified ower than the limit are of the EUT would hargin would be re- led and then reported the Highest channel is positioning for it is the worst case. was complete. In p Factor Hz was very low. The uld be found when litude of spurious in 20dB below the limit of any emission ecified above by more spons whose peak ement is shown in the trononics were the	60 hich d to hen cy be d

## 4.5.1 E.U.T. Operation:

Operating Environment:						
Temperature:	23.8 °	С	Humidity:	54.2 %	Atmospheric Pressure:	101.6 kPa
Pre test mode: All modes						
Final test mode	:	All mod	des			

## 4.5.2 Test Setup Diagram:



## 4.5.3 Test Result: Band1

Bandi								
Мс	ode:	802	.11a	Frequ	iency:	5180MHz		
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector	
Н	5150.00	34.47	17.18	51.65	68.20	-16.55	PK	
V	5150.00	35.03	17.18	52.21	68.20	-15.99	PK	
		000	44 -	E		5400	N 41 1	
IVIC	ode:		.11a		iency:	5180	MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector	
Н	5150.00	24.65	17.18	41.83	54.00	-12.17	AV	
V	5150.00	26.24	17.18	43.42	54.00	-10.58	AV	
Мс	ode:	802	.11a	Frequ	iency:	5240	MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector	
Н	5350.00	37.86	17.18	55.04	68.20	-13.16	PK	
V	5350.00	36.15	17.18	53.33	68.20	-14.87	PK	
Мс	ode:	802	.11a	Frequ	iency:	5240	MHz	
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector	
Н	5350.00	25.76	17.18	42.94	54.00	-11.06	AV	
V	5350.00	23.63	17.18	40.81	54.00	-13.19	AV	

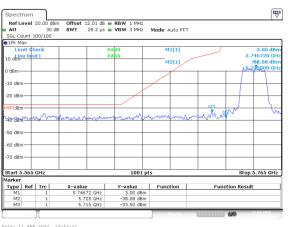
Page52 of67

Report No.: A2303044-C01-R03

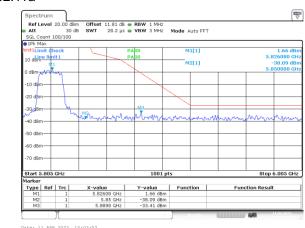
IVIO	ode:	802.11r	n(HT20)	Frequ	iency:	5180	MHz
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
Н	5150.00	37.47	17.21	54.68	68.20	-13.52	PK
V	5150.00	35.58	17.21	52.79	68.20	-15.41	PK
Мо	ode:	802.11r	n(HT20)	Frequ	iency:	5180	MHz
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
Н	5150.00	26.88	17.21	44.09	54.00	-9.91	AV
V	5150.00	25.95	17.21	43.16	54.00	-10.84	AV
				_			
Mo	ode:	802.11r	n(HT20)	Frequ	iency:	5240	MHz
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector
Antenna		Level		Level	-		
Antenna Pol.	(MHz)	Level (dBuV)	(dB/m)	Level (dBuV/m)	(dBuV/m)	limit(dB)	Detector
Antenna Pol. H	(MHz) 5350.00	Level (dBuV) 38.48	(dB/m) 17.21	Level (dBuV/m) 55.69	(dBuV/m) 68.20	limit(dB) -12.51	Detector PK
Antenna Pol. H V	(MHz) 5350.00	Level (dBuV) 38.48 37.98	(dB/m) 17.21	Level (dBuV/m) 55.69	(dBuV/m) 68.20 68.20	limit(dB) -12.51 -13.01	Detector PK
Antenna Pol. H V	(MHz) 5350.00 5350.00	Level (dBuV) 38.48 37.98	(dB/m) 17.21 17.21	Level (dBuV/m) 55.69 55.19	(dBuV/m) 68.20 68.20	limit(dB) -12.51 -13.01	Detector PK PK
Antenna Pol. H V Mo	(MHz) 5350.00 5350.00 ode: Frequency	Level (dBuV) 38.48 37.98 802.11r Reading Level	(dB/m) 17.21 17.21 h(HT20) Factor	Level (dBuV/m) 55.69 55.19 Frequ Measure Level	(dBuV/m) 68.20 68.20 ency:	limit(dB) -12.51 -13.01 5240 Over	Detector PK PK MHz

M	ode:	802.11r	n(HT40)	Frequ	iency:	5190	MHz			
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector			
Н	5150.00	34.07	17.18	51.25	68.20	-16.95	PK			
V	5150.00	35.16	17.18	52.34	68.20	-15.86	PK			
M	ode:	802.11r	n(HT40)	Frequ	iency:	5190	MHz			
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector			
Н	5150.00	26.06	17.18	43.24	54.00	-10.76	AV			
V	5150.00	26.02	17.18	43.20	54.00	-10.80	AV			
M	ode:	802.11r	n(HT40)	Frequ	iency:	5230MHz				
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector			
н	5350.00	37.84	17.18	55.02	68.20	-13.18	PK			
V	5350.00	34.39	17.18	51.57	68.20	-16.63	PK			
M	Mode:		802.11n(HT40)		Frequency:		MHz			
Antenna Pol.	Frequency (MHz)	Reading Level (dBuV)	Factor (dB/m)	Measure Level (dBuV/m)	Limit (dBuV/m)	Over limit(dB)	Detector			
Н	5350.00	26.83	17.18	44.01	54.00	-9.99	AV			
V	5350.00	26.65	17.18	43.83	54.00	-10.17	AV			

## Band4



802.11a



Date: 11.APR.2023 14:54:11

### Low: 5745MHz

Date: 11.APR.2023 15:03:57

### High: 5825MHz

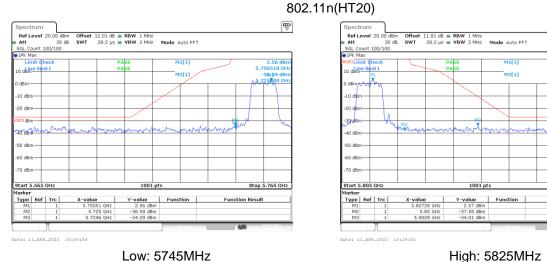
5.78

955 GH

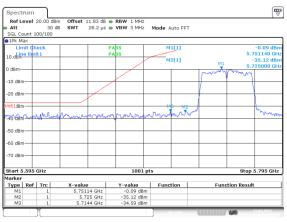
Function Result

2.57 dB 5.827280 GF -37.58 dB

Function Result



## Low: 5745MHz



Date: 11.APR.2023 16:08:42



Date: 11.APR.2023 16:18:50

Type Ref Trc

802.11n(HT40)

LO deme it 1

dBm

20 dBn -30 dBm-

٨٨

50 dB

50 dB

art 5.7

M1

High: 5795MHz

M2[1]

m

M2

 X-value
 Y-value
 Function

 5.78827 GHz
 -0.09 dBm

 5.8664 GHz
 -36.21 dBm

Test Requirement:	FCC Part 15.407(b)(9)								
Test Limit:	Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.								
		Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:							
	Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)						
	0.009-0.490	2400/F(kHz)	300						
	0.490-1.705	24000/F(kHz)	30						
	1.705-30.0	30	30						
	30-88	100 **	3						
	88-216	150 **	3						
	216-960	200 **	3						
	Above 960	500	3						
Test Method: Procedure:	ANSI C63.10-2013, sectio	n 12.7.4, 12.7.5, 12.7.6							
	<ul> <li>b. The EUT was set 3 or 1 which was mounted on the c. The antenna height is v determine the maximum v polarizations of the antenna d. For each suspected em the antenna was tuned to of below 30MHz, the anten table was turned from 0 de e. The test-receiver system Bandwidth with Maximum f. If the emission level of the specified, then testing courreported. Otherwise the entested one by one using q data sheet.</li> <li>g. Test the EUT in the low h. The radiation measurem Transmitting mode, and for i. Repeat above procedure Remark:</li> <li>1. Level= Read Level+ Ca</li> <li>2. Scan from 9kHz to 30M points marked on above p testing, so only above point emissions from the radiation need not be reported.</li> <li>3. The disturbance below point could be found wher displayed.</li> <li>Above 1GHz:</li> <li>a. For above 1GHz, the El above the ground at a 3 m degrees to determine the b. The EUT was set 3 meters.</li> </ul>	position of the highest radiation 0 meters away from the interfe- e top of a variable-height anter aried from one meter to four m alue of the field strength. Both ha are set to make the measur- ission, the EUT was arranged heights from 1 meter to 4 meter na was tuned to heights 1 me egrees to 360 degrees to find t m was set to Peak Detect Fund Hold Mode. ne EUT in peak mode was 10d ld be stopped and the peak var missions that did not have 10d uasi-peak method as specified est channel, the middle channel nents are performed in X, Y, Z bund the X axis positioning whi es until all frequencies measure ble Loss+ Antenna Factor- Pre Hz, the disturbance below 30N lots are the highest emissions nts had been displayed. The an or which are attenuated more t 1GHz was very low and the ha a testing, so only the above hat the testing, so only the above hat the testing, so only the above hat the testing from the interference of a variable-height antenna tow	erence-receiving antenna, ina tower. heters above the ground to horizontal and vertical ement. to its worst case and then ers (for the test frequency eter) and the rotatable the maximum reading. ction and Specified IB lower than the limit alues of the EUT would be B margin would be re- d and then reported in a el, the Highest channel. axis positioning for ch it is the worst case. ed was complete. eamp Factor MHz was very low. The could be found when mplitude of spurious han 20dB below the limit armonics were the highest rmonics had been						

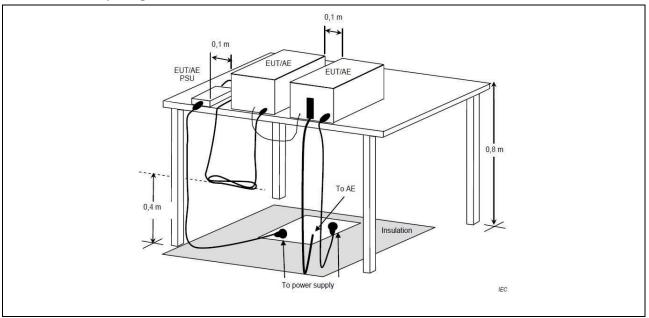
# 4.6 Undesirable emission limits (below 1GHz)

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical
polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then
the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency
of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable
table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified
Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit
specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-
tested one by one using peak or average method as specified and then reported
in a data sheet.
g. Test the EUT in the lowest channel, the middle channel, the Highest channel.
h. The radiation measurements are performed in X, Y, Z axis positioning for
Transmitting mode, and found the X axis positioning which it is the worst case.
i. Repeat above procedures until all frequencies measured was complete.
Remark:
1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The
points marked on above plots are the highest emissions could be found when
testing, so only above points had been displayed. The amplitude of spurious
emissions from the radiator which are attenuated more than 20dB below the limit
need not be reported.
3. As shown in this section, for frequencies above 1GHz, the field strength limits
are based on average limits. However, the peak field strength of any emission
shall not exceed the maximum permitted average limits specified above by more
than 20 dB under any condition of modulation. For the emissions whose peak
level is lower than the average limit, only the peak measurement is shown in the
report.
4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been
displayed.
diopidyod.

## 4.6.1 E.U.T. Operation:

Operating Environment:								
Temperature:	23.8 °C		Humidity:	54.2 %	Atmospheric Pressure:	101.6 kPa		
Pre test mode: All mo			des					
Final test mode: U-NII-								

## 4.6.2 Test Setup Diagram:

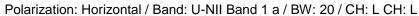


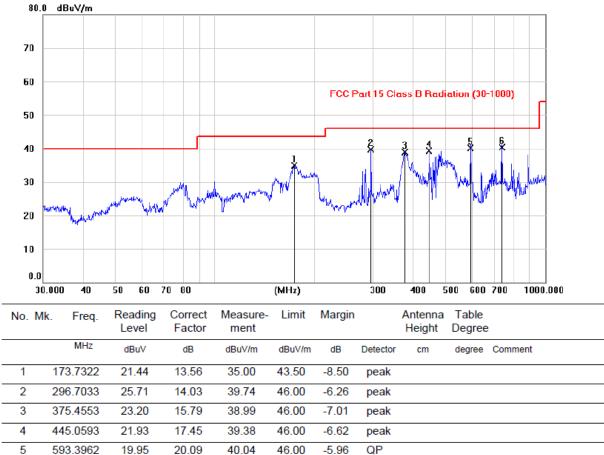
### 4.6.3 Test Result:

6

*

741.8250





Note:1. *:Maximum data; x:Over limit; I:over margin.

17.94

22.29

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

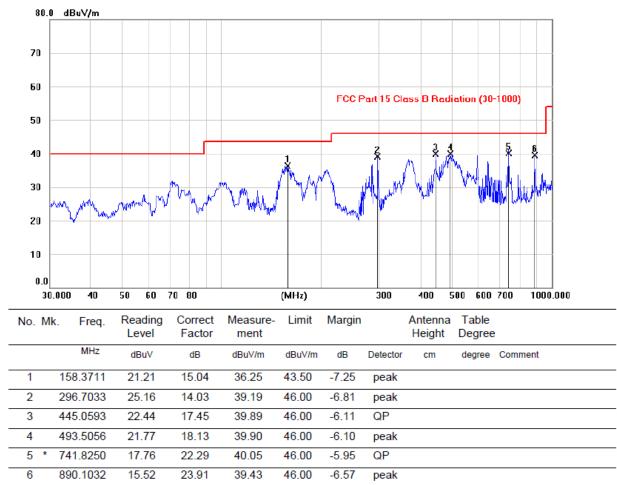
40.23

46.00

-5.77

QP

Polarization: Vertical / Band: U-NII Band 1 a / BW: 20 / CH: L CH: L



Note:1. *: Maximum data; x: Over limit; I: over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

### Note:

1. The test trace is same as the ambient noise (the test frequency range: 18GHz~40GHz), therefore no data appear in the report.

2. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

3. This Report only show the test plots of the worst case (U-NII-1).

Test Requirement:	FCC Part 15.407(b)(1) FCC Part 15.407(b)(4) FCC Part 15.407(b)(10)							
Test Limit:	For transmitters operati 5.15-5.35 GHz band sh							
	For transmitters operati All emissions shall be li or below the band edge below the band edge, a linearly to a level of 15. from 5 MHz above or be dBm/MHz at the band e	ng solely in the 5.725- mited to a level of -27 a increasing linearly to and from 25 MHz above 6 dBm/MHz at 5 MHz a elow the band edge inc	5.850 GHz ban dBm/MHz at 75 10 dBm/MHz at e or below the b above or below	d: 5 MHz or more above t 25 MHz above or band edge increasing the band edge, and				
	MHz	MHz	MHz	GHz				
	0.090-0.110	16.42-16.423	399.9-410	4.5-5.15				
	10.495-0.505	16.69475-16.69525	608-614	5.35-5.46				
	2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75				
	4.125-4.128	25.5-25.67	1300-1427	8.025-8.5				
	4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2				
	4.20725-4.20775	73-74.6	1645.5- 1646.5	9.3-9.5				
	6.215-6.218	74.8-75.2	1660-1710	10.6-12.7				
	6.26775-6.26825	108-121.94	1718.8- 1722.2	13.25-13.4				
	6.31175-6.31225	123-138	2200-2300	14.47-14.5				
	8.291-8.294	149.9-150.05	2310-2390	15.35-16.2				
	8.362-8.366	156.52475- 156.52525	2483.5-2500	17.7-21.4				
	8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12				
	8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0				
	12.29-12.293	167.72-173.2	3332-3339	31.2-31.8				
	12.51975-12.52025	240-285	3345.8-3358	36.43-36.5				
	12.57675-12.57725	322-335.4	3600-4400	$\binom{2}{2}$				
	13.36-13.41							
	¹ Until February 1, 1999 ² Above 38.6 The field strength of emexceed the limits showr MHz, compliance with t measurement instrume 1000 MHz, compliance based on the average v 15.35apply to these me	nissions appearing with n in § 15.209. At freque he limits in § 15.209sh ntation employing a CI with the emission limit value of the measured	in these freque encies equal to all be demonstr SPR quasi-pea s in § 15.209sh	ency bands shall not or less than 1000 rated using k detector. Above all be demonstrated				
	Except as provided else radiator shall not excee Frequency (MHz)	ewhere in this subpart,	els specified in					
				(meters)				
	0.009-0.490	2400/F(kHz)	2400/F(kHz)					
	0.490-1.705	24000/F(kHz)		300 30				
	1.705-30.0	30		30				
	30-88	100 **		3				
	88-216	150 **	150 **					

# 4.7 Undesirable emission limits (above 1GHz)

216-960         200 **         3           Test Method:         ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6           Procedure:         ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6           Procedure:         a. For above 1GHz; the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.           b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.           c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.           d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.           e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.           f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be retested one by one using peak or average method as specified and then reported in a data sheet.           g. Test the EUT in the lowest channel, the middle channel, the Highest channel. h. The radiation measurements are performed in X,
Test Method:       ANSI C63.10-2013, section 12.7.4, 12.7.5, 12.7.6         Procedure:       Above 1GHz;       a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.         b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.       c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.         d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.         f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be retested one by one using peak or average method as specified and then reported in a data sheet.         g. Test the EUT in the lowest channel, the middle channel, the Highest channel. h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. I. Repeat above procedures until all frequencies measured was complete. Remark:
<ul> <li>Procedure:</li> <li>Above 1GHz:</li> <li>a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be retested one by one using peak or average method as specified and then reported in a data sheet.</li> <li>g. Test the EUT in the lowest channel, the middle channel, the Highest channel. h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.</li> <li>i. Repeat above procedures until all frequencies measured was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need hot be reported.</li> <li>3. As shown in this sect</li></ul>
<ul> <li>a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be retested one by one using peak or average method as specified and then reported in a data sheet.</li> <li>g. Test the EUT in the lowest channel, the middle channel, the Highest channel.</li> <li>h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.</li> <li>i. Repeat above procedures until all frequencies measured was complete. Remark:</li> <li>1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor</li> <li>2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissi</li></ul>

## 4.7.1 E.U.T. Operation:

Operating Environment:								
Temperature:	23.8 °C		Humidity:	54.2 %	Atmospheric Pressure:	101.6 kPa		
Pre test mode: All mo			des					
Final test mode: U-NII-								

## 4.7.2 Test Result: Above 1GHz:

				1a(HT20) 51	80MHz				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization	
10360.63	28.91	11.25	14.62	32.65	22.13	74	-51.87	Vertical	
15540.03	31.16	11.93	17.66	34.46	26.29	74	-47.71	Vertical	
10360.57	32.71	9.4	14.62	32.65	24.08	74	-49.92	Horizontal	
15540.92	31.74	8.5	17.66	34.46	23.44	74	-50.56	Horizontal	
			802.1	1a(HT20) 52	00MHz				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization	
10360.01	29.03	11.25	14.62	32.65	22.25	74	-51.75	Vertical	
15540.32	30.85	11.93	17.66	34.46	25.98	74	-48.02	Vertical	
10360.07	32.37	9.4	14.62	32.65	23.74	74	-50.26	Horizontal	
15540.57	31.62	8.5	17.66	34.46	23.32	74	-50.68	Horizontal	
			802.1	1a(HT20) 52	40MHz				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization	
10360.19	28.88	11.25	14.62	32.65	22.10	74	-51.90	Vertical	
15540.18	30.38	11.93	17.66	34.46	25.51	74	-48.49	Vertical	
10360.41	32.82	9.4	14.62	32.65	24.19	74	-49.81	Horizontal	
15540.66	31.87	8.5	17.66	34.46	23.57	74	-50.43	Horizontal	
			802.1	1n(HT20) 51	80MHz				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization	
10360.50	28.25	11.25	14.62	32.65	21.47	74	-52.53	Vertical	
15540.78	30.27	11.93	17.66	34.46	25.40	74	-48.60	Vertical	
10360.45	32.08	9.4	14.62	32.65	23.45	74	-50.55	Horizontal	
15540.57	31.45	8.5	17.66	34.46	23.15	74	-50.85	Horizontal	

Page63 of67

				0		•		
<del>_</del>				In(HT20) 52	00MHz		T	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.34	28.20	11.25	14.62	32.65	21.42	74	-52.58	Vertical
15540.39	31.17	11.93	17.66	34.46	26.30	74	-47.70	Vertical
10360.92	32.16	9.4	14.62	32.65	23.53	74	-50.47	Horizontal
15540.30	31.73	8.5	17.66	34.46	23.43	74	-50.57	Horizontal
				In(HT20) 52	40MHz		-	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.10	28.82	11.25	14.62	32.65	22.04	74	-51.96	Vertical
15540.05	30.70	11.93	17.66	34.46	25.83	74	-48.17	Vertical
10360.35	33.05	9.4	14.62	32.65	24.42	74	-49.58	Horizontal
15540.48	32.22	8.5	17.66	34.46	23.92	74	-50.08	Horizontal
			802.11	In(HT40) 51	90MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.69	28.58	11.25	14.62	32.65	21.80	74	-52.20	Vertical
15540.36	30.30	11.93	17.66	34.46	25.43	74	-48.57	Vertical
10360.01	32.75	9.4	14.62	32.65	24.12	74	-49.88	Horizontal
15540.27	32.00	8.5	17.66	34.46	23.70	74	-50.30	Horizontal
				In(HT40) 52	30MHz			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
10360.89	28.92	11.25	14.62	32.65	22.14	74	-51.86	Vertical
15540.40	31.06	11.93	17.66	34.46	26.19	74	-47.81	Vertical
10360.50	32.50	9.4	14.62	32.65	23.87	74	-50.13	Horizontal
15540.14	32.13	8.5	17.66	34.46	23.83	74	-50.17	Horizontal

Page64 of67

802.11ac(HT40) 5190MHz										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization		
10360.18	28.50	11.25	14.62	32.65	21.72	74	-52.28	Vertical		
15540.21	30.21	11.93	17.66	34.46	25.34	74	-48.66	Vertical		
10360.02	32.48	9.4	14.62	32.65	23.85	74	-50.15	Horizontal		
15540.24	32.21	8.5	17.66	34.46	23.91	74	-50.09	Horizontal		

Note:

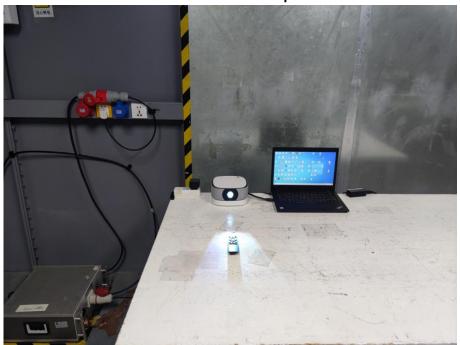
1. Level = Read Level + Antenna Factor+ Cable loss- Preamp Factor.

2. The test trace is same as the ambient noise (the test frequency range: 18GHz~40GHz), therefore no data appear in the report.

3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

4. This Report only show the test plots of the worst case (U-NII-1).

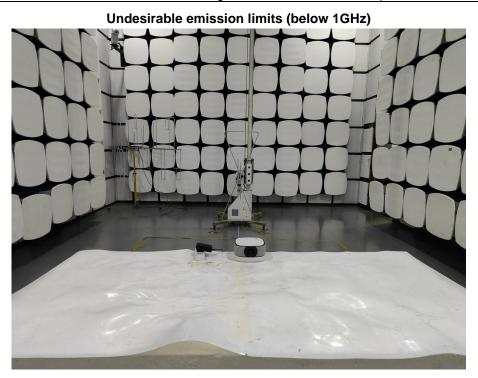
# 5 Test Setup Photos



Conducted Emission at AC power line

Band edge emissions (Radiated) Undesirable emission limits (above 1GHz)





# 6 EUT Constructional Details (EUT Photos)

Please refer to the report A2303044-C01-R01. ----- END OF REPORT------