



Report No.: SZEM190601480505

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TEST REPORT

Application No.: SZEM1906014805CR

Applicant: KanDao Technology Co., Ltd

Address of Applicant: 5th Floor, M7 Steel Building, the second way in Technology Road, Nanshan

District, Shenzhen, China

Manufacturer: KanDao Technology Co., Ltd

Address of Manufacturer: 5th Floor, M7 Steel Building, the second way in Technology Road, Nanshan

District, Shenzhen, China

Factory: Sky Light Electronic (Shenzhen) Limited

Address of Factory: No.8 Workshop 1F-5F and NO.9 Workshop 1F-5F, AnTuoShan Gao science

and technology Industrial Park, Shaer community, ShaJing Street, BaoAn

district, Shenzhen city, Guangdong province, China

Equipment Under Test (EUT):

EUT Name: Intelligent360 degree panoramic camera

Model No.: WL0308

Trade mark:

CONXme 慧 易 通

FCC ID: 2ATPV-KDWL

Standard(s): 47 CFR Part 15, Subpart E 15.407

Date of Receipt: 2019-06-04

Date of Test: 2019-06-20 to 2019-06-27

Date of Issue: 2019-07-01

Test Result: Pass*

中国·深圳·科技园中区M-10栋一号厂房

Keny Xu EMC Laboratory Manager



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^{*} In the configuration tested, the EUT complied with the standards specified above.



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	Revision Record						
Version	Version Chapter Date Modifier Rem						
01		2019-07-01		Original			

Authorized for issue by:		
	Robsonti	
	Edison Li /Project Engineer	-
	EvicFu	
	Eric Fu /Reviewer	



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Test Summary

Radio Spectrum Technical Requirement						
Item	Standard	Method	Requirement	Result		
Antenna Requirement	47 CFR Part 15, Subpart E 15.407	N/A	47 CFR Part 15, Subpart C 15.203	Pass		
Transmission in the Absence of Data	47 CFR Part 15, Subpart E 15.407	N/A	47 CFR Part 15, Subpart C 15.407 (c)	Pass		

N/A: Not applicable

Radio Spectrum Matter Part							
Item	Standard	Method	Requirement	Result			
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart E 15.407	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207 & 15.407 b(6)	Pass			
99% Bandwidth	47 CFR Part 15, Subpart E 15.407	KDB 789033 II D	N/A	Pass			
26dB Emission bandwidth	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II C 1	47 CFR Part 15, Subpart C 15.407 (a)	Pass			
Maximum Conducted output power	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II E	47 CFR Part 15, Subpart C 15.407 (a)	Pass			
Peak Power spectrum density	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II F	47 CFR Part 15, Subpart C 15.407 (a)	Pass			
Radiated Emissions	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & 15.407(b)	Pass			
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & 15.407(b)	Pass			
Frequency Stability	47 CFR Part 15, Subpart E 15.407	ANSI C63.10 (2013) Section 6.8	47 CFR Part 15, Subpart C 15.407 (g)	Pass			

N/A: Not applicable



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General Information

Details of E.U.T.

Power supply:	AC Adapter	AC Adapter				
	Model: S042-	1A120350HU				
	Input: AC 100	Input: AC 100-240V, 50/60Hz, 1.0A				
	Output: DC 1	2.0V, 3.5A				
Test voltage:	AC 120V, 60H	Hz				
Cable:	DC cable: 110	6cm with a ferrite core				
	Type-C cable: 144cm unshielded					
Operation Frequency:	Band	Mode	Frequency Range(MHz)	Number of channels		
	UNII Band I	802.11a/n/ac(HT20)	5180-5240	4		
		802.11n/ac(HT40)	5190-5230	2		
		802.11ac(HT80)	5210	1		
Modulation Type:	802.11a: OFE	OM (64QAM, 16QAM, QPS	SK, BPSK)			
	802.11n: OFE	OM (BPSK, QPSK, 16QAN	1, 64QAM)			
	802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)					
Sample Type:	Fixed device					
Antenna Type:	FPCB Antenna					
Antenna Gain:	4dBi					

4.2 Description of Support Units

The EUT has been tested as an independent unit.



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4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	± 7.25 x 10 ⁻⁸
2	Duty cycle	± 0.37%
3	Occupied Bandwidth	± 3%
4	RF conducted power	± 0.75dB
5	RF power density	± 2.84dB
6	Conducted Spurious emissions	± 0.75dB
7	DE Dadiated names	± 4.5dB (below 1GHz)
/	RF Radiated power	± 4.8dB (above 1GHz)
0	Dadieted Courieus amission test	± 4.5dB (Below 1GHz)
8	Radiated Spurious emission test	± 4.8dB (Above 1GHz)
9	Temperature test	± 1 ℃
10	Humidity test	± 3%
11	Supply voltages	± 1.5%
12	Time	± 3%
10	Conduction Emission	± 3.45dB (9kHz to 150kHz)
13	Conduction Emission	± 3.0dB (150kHz to 30MHz)



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4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 Test Facility

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

CNAS (No. CNAS L2929)

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz. Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC -Designation Number: CN1178

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None



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Equipment List

Conducted Emissions at AC Power Line (150kHz-30MHz)						
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date	
Shielding Room	ZhongYu Electron	GB-88	SEM001-06	2019-06-13	2024-06-12	
Measurement Software	AUDIX	e3 V5.4.1221d	N/A	N/A	N/A	
Coaxial Cable	SGS	N/A	SEM024-01	2018-07-12	2019-07-11	
LISN	Rohde & Schwarz	ENV216	SEM007-01	2018-09-25	2019-09-24	
LISN	ETS-LINDGREN	3816/2	SEM007-02	2019-04-01	2020-03-31	
EMI Test Receiver	Rohde & Schwarz	ESCI	SEM004-02	2019-04-01	2020-03-31	

RF Conducted Test						
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date	
Shielding Room	SAEMC	MSR733	SEM001-09	2019-06-13	2024-06-12	
DC Power Supply	ZhaoXin	RXN-305D	SEM011-02	2018-09-25	2019-09-24	
Spectrum Analyzer	Rohde & Schwarz	FSP	SEM004-06	2018-09-27	2019-09-26	
Measurement Software	JS Tonscend	JS1120-2 BT/WIFI V2.	N/A	N/A	N/A	
Coaxial Cable	SGS	N/A	SEM031-02	2018-07-12	2019-07-11	
Attenuator	Weinschel Associates	WA41	SEM021-09	N/A	N/A	
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2018-09-27	2019-09-26	
Power Meter	Rohde & Schwarz	NRVS	SEM014-02	2018-09-25	2019-09-24	

RE in Chamber					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date	Cal. Due date
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2017-08-05	2020-08-04
MXE EMI Receiver (20Hz-8.4GHz)	Agilent Technologies	N9038A	SEM004-05	2018-09-25	2019-09-24
BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEM003-01	2017-06-27	2020-06-26
Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEM005-01	2019-04-01	2020-03-31
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2018-07-12	2019-07-11



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Radiated Emissions which fall in the restricted bands						
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date	
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018-03-13	2021-03-12	
Measurement Software	AUDIX	e3 V8.2014-6- 27	N/A	N/A	N/A	
Coaxial Cable	SGS	N/A	SEM026-01	2018-07-12	2019-07-11	
EXA Spectrum Analyzer	AgilentTechnologies Inc	N9010A	SEM004-12	2019-04-12	2020-04-11	
Horn Antenna (1-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2018-04-13	2021-04-12	
Horn Antenna (15GHz-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2017-10-17	2020-10-16	
Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEM004-11	2018-11-12	2019-11-11	
Pre-amplifier(18-26GHz)	Rohde & Schwarz	CH14-H052	SEM005-17	2019-04-01	2020-03-31	
Pre-amplifier (26GHz-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2019-04-01	2020-03-31	
DC Power Supply	Zhao Xin	RXN-305D	SEM011-02	2018-09-25	2019-09-24	
Active Loop Antenna	ETS-Lindgren	6502	SEM003-08	2017-08-22	2020-08-21	

Radiated Spurious Emissions								
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date			
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018-03-13	2021-03-12			
Measurement Software	AUDIX	e3 V8.2014-6- 27	N/A	N/A	N/A			
Coaxial Cable	SGS	N/A	SEM026-01	2018-07-12	2019-07-11			
EXA Spectrum Analyzer	AgilentTechnologies Inc	N9010A	SEM004-12	2019-04-12	2020-04-11			
Horn Antenna (1-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2018-04-13	2021-04-12			
Horn Antenna (15GHz-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2017-10-17	2020-10-16			
Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEM004-11	2018-11-12	2019-11-11			
Pre-amplifier(18-26GHz)	Rohde & Schwarz	CH14-H052	SEM005-17	2019-04-01	2020-03-31			
Pre-amplifier (26GHz-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2019-04-01	2020-03-31			
DC Power Supply	Zhao Xin	RXN-305D	SEM011-02	2018-09-25	2019-09-24			
Active Loop Antenna	ETS-Lindgren	6502	SEM003-08	2017-08-22	2020-08-21			



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General used equipmen	t				
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-03	2018-09-27	2019-09-26
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2018-09-27	2019-09-26
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2018-09-27	2019-09-26
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2019-04-04	2020-04-03



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Radio Spectrum Technical Requirement 6

Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

6.1.2 Conclusion

Standard 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 antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 4dBi.

Antenna location: Refer to Internal photos.



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6.2 Transmission in the Absence of Data

6.2.1 Test Requirement:

47 CFR Part 15, Subpart C 15.407 (c)

6.2.2 Conclusion

Standard Requirement:

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals.

Applicants shall include in their application for equipment authorization a description of how this requirement is met.

EUT Details:

WIFI chip (BCM43454) support automatically discontinue transmission in case of either absence of information to transmit or operational failure, if the chip detect absence of information to transmit or operational failure, it will be automatically shut off.



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7 Radio Spectrum Matter Test Results

7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207 & 15.407 b(6)

Test Method: ANSI C63.10 (2013) Section 6.2

Limit:

Frequency of	Conducted limit(dBμV)						
emission(MHz)	Quasi-peak	Average					
0.15-0.5	66 to 56*	56 to 46*					
0.5-5	56	46					
5-30	60	50					
*Decreases with the logarithm of the frequency.							

7.1.1 E.U.T. Operation

Operating Environment:

Temperature: 25 °C Humidity: 51 % RH Atmospheric Pressure: 1005 mbar

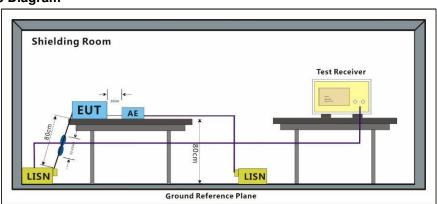
Test mode: g:TX mode (Band 1)_Keep the EUT in continuously transmitting mode with all

modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT80). Only the data of worst case is recorded in the report.

7.1.2 Test Setup Diagram





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7.1.3 Measurement Procedure and Data

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50µH + 50hm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Remark: LISN=Read Level+ Cable Loss+ LISN Factor



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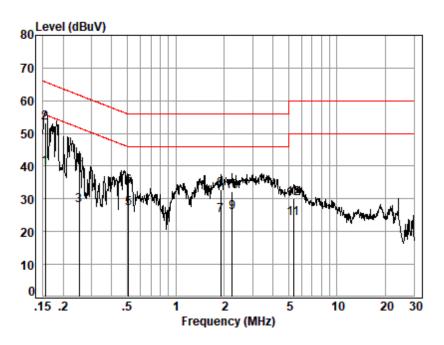
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Mode:g; Line:Live Line



: Shielding Room

Condition: Line Job No. : 14805CR

Test mode: g

		Cable	LISN	Read		Limit	0ver	
	Freq	Loss	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.1548	0.01	9.66	29.78	39.45	55.74	-16.29	Average
2	0.1548	0.01	9.66	43.44	53.11	65.74	-12.63	QP
3	0.2521	0.03	9.67	18.22	27.92	51.69	-23.77	Average
4	0.2521	0.03	9.67	30.15	39.85	61.69	-21.84	QP
5	0.5074	0.06	9.67	17.34	27.07	46.00	-18.93	Average
6	0.5074	0.06	9.67	24.12	33.85	56.00	-22.15	QP
7	1.8979	0.15	9.72	15.03	24.90	46.00	-21.10	Average
8	1.8979	0.15	9.72	22.99	32.86	56.00	-23.14	QP
9	2.2367	0.16	9.71	16.00	25.87	46.00	-20.13	Average
10	2.2367	0.16	9.71	22.39	32.26	56.00	-23.74	QP
11	5.3900	0.17	9.75	14.05	23.97	50.00	-26.03	Average
12	5.3900	0.17	9.75	20.19	30.11	60.00	-29.89	QP



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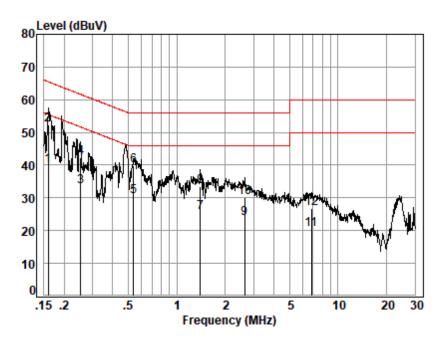
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Mode:g; Line:Neutral Line



: Shielding Room

Condition: Neutral Job No. : 14805CR

Test mode: g

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.1598	0.01	9.64	30.33	39.98	55.47	-15.49	Average
2	0.1598	0.01	9.64	42.65	52.30	65.47	-13.17	QP
3	0.2535	0.03	9.64	23.75	33.42	51.64	-18.22	Average
4	0.2535	0.03	9.64	32.71	42.38	61.64	-19.26	QP
5	0.5407	0.06	9.64	20.86	30.56	46.00	-15.44	Average
6	0.5407	0.06	9.64	30.28	39.98	56.00	-16.02	QP
7	1.4032	0.12	9.70	15.83	25.65	46.00	-20.35	Average
8	1.4032	0.12	9.70	23.72	33.54	56.00	-22.46	QP
9	2.6360	0.16	9.68	13.99	23.83	46.00	-22.17	Average
10	2.6360	0.16	9.68	20.36	30.20	56.00	-25.80	QP
11	6.8412	0.17	9.76	10.46	20.39	50.00	-29.61	Average
12	6.8412	0.17	9.76	16.93	26.86	60.00	-33.14	QP



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7.2 99% Bandwidth

Test Requirement N/A

Test Method: KDB 789033 II D

7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 24.5 °C Humidity: 55 % RH Atmospheric Pressure: 1010 mbar

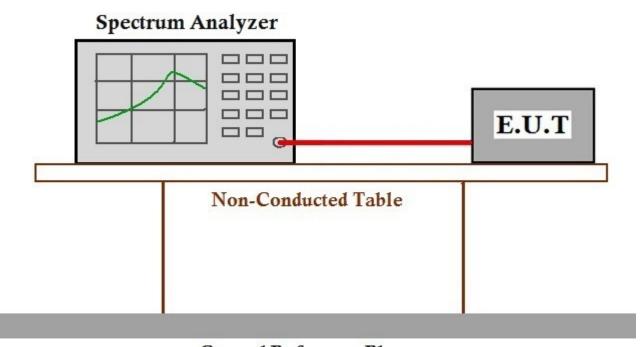
Test mode: g:TX mode (Band 1) Keep the EUT in continuously transmitting mode with all

modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT80). Only the data of worst case is recorded in the report.

7.2.2 Test Setup Diagram



Ground Reference Plane

7.2.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.407



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7.3 26dB Emission bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II C 1

7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 24.5 °C Humidity: 55 % RH Atmospheric Pressure: 1010 mbar

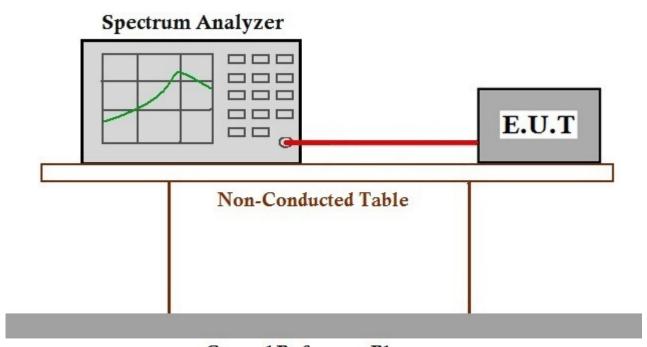
Test mode: g:TX mode (Band 1) Keep the EUT in continuously transmitting mode with all

modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT80). Only the data of worst case is recorded in the report.

7.3.2 Test Setup Diagram



Ground Reference Plane

7.3.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.407



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7.4 Maximum Conducted output power

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II E

Limit:

Frequency band(MHz)	Limit
E1E0 E2E0	≤1W(30dBm) for master device
5150-5250	≤250mW(24dBm) for client device
5250-5350	≤250mW(24dBm) for client device or 11dBm+10logB*
5470-5725	≤250mW(24dBm) for client device or 11dBm+10logB*
5725-5850	≤1W(30dBm)
Remark:	* Where B is the 26dB emission bandwidth in MHz.
	The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 24.5 °C Humidity: 55 % RH Atmospheric Pressure: 1010 mbar

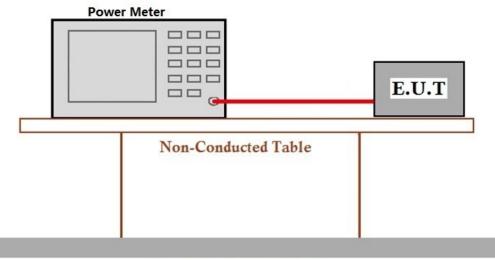
Test mode: g:TX mode (Band 1)_Keep the EUT in continuously transmitting mode with all

modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT80). Only the data of worst case is recorded in the report.

7.4.2 Test Setup Diagram



Ground Reference Plane



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7.4.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.407



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7.5 Peak Power spectrum density

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II F

Limit:

Frequency band(MHz)	Limit
E1E0 E0E0	≤17dBm in 1MHz for master device
5150-5250	≤11dBm in 1MHz for client device
5250-5350	≤11dBm in 1MHz for client device
5470-5725	≤11dBm in 1MHz for client device
5725-5850	≤30dBm in 500 kHz
Remark:	The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test.

7.5.1 E.U.T. Operation

Operating Environment:

Atmospheric Pressure: 1010 mbar Temperature: 24.5 °C Humidity: 55 % RH

g:TX mode (Band 1) Keep the EUT in continuously transmitting mode with all Test mode:

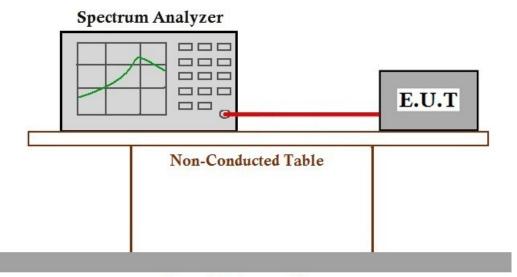
modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT80). Only the data of worst case is recorded in the report.

7.5.2 Test Setup Diagram



Ground Reference Plane



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7.5.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.407



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7.6 Radiated Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.407(b)

Test Method: KDB 789033 D02 II G

Measurement Distance: 3m

Limit:	
For transmitters operating in the 5.15-5.25 GHz band:	All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of –27 dBm/MHz (68.2dBuV/m).
For transmitters operating in the 5.25-5.35 GHz band:	All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of –27 dBm/MHz (68.2dBuV/m).
For transmitters operating in the 5.47-5.725 GHz band:	All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of –27 dBm/MHz (68.2dBuV/m).
For transmitters operating in the 5.725-5.85 GHz band:	(i) All emissions shall be limited to a level of –27 dBm/MHz (68.2dBuV/m) at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz (105.2dBuV/m) at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz (110.8dBuV/m) at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz (122.2dBuV/m) at the band edge.

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		

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, 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.



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7.6.1 E.U.T. Operation

Operating Environment:

24.3 °C Atmospheric Pressure: 1005 mbar Temperature: Humidity: 55 % RH

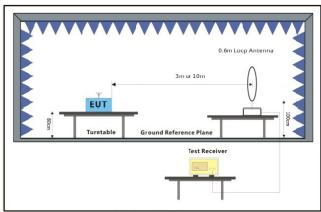
Test mode: g:TX mode (Band 1)_Keep the EUT in continuously transmitting mode with all

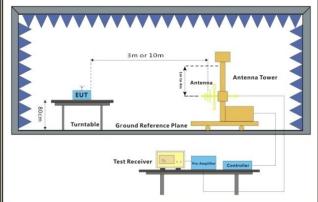
modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT80). Only the data of worst case is recorded in the report.

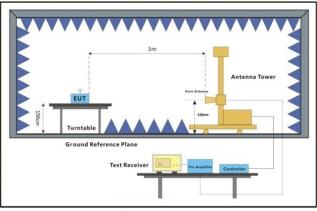
7.6.2 Test Setup Diagram





Below 30MHz

30MHz-1GHz



Above 1GHz



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7.6.3 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. 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.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. 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.
- e. 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.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. 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, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. 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.
- j. Repeat above procedures until all frequencies measured was complete.

Remark:

- 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
- 2. For emission below 1GHz, through the pre-scan found the worst case is the lowest channel of 802.11a. Only the worst case is recorded in the report.
- 3. Scan from 9kHz to 40GHz, the disturbance above 18GHz and below 30MHz 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.
- 4. 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.



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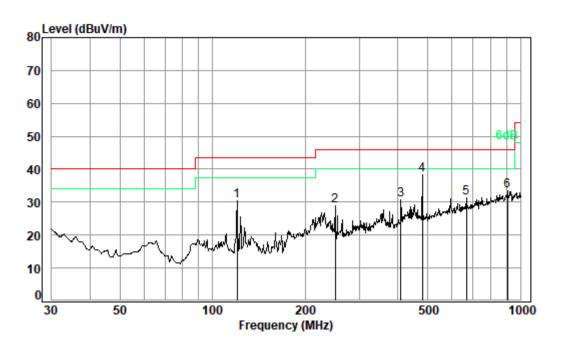


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Radiated emission below 1GHz

Mode:g; Polarization:Horizontal



Condition: 3m HORIZONTAL

Job No. : 14805CR

Test mode: g

					amp Read tor Level Leve			
-	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	120.28	1.25	13.11	27.51	43.43	30.28	43.50	-13.22
2	250.30	1.68	18.96	27.01	35.25	28.88	46.00	-17.12
3	408.95	2.24	22.62	27.46	33.29	30.69	46.00	-15.31
4 pp	480.53	2.53	24.21	27.76	39.49	38.47	46.00	-7.53
5	668.14	2.84	27.51	28.00	28.95	31.30	46.00	-14.70
6	906.48	3.61	29.83	27.27	27.36	33.53	46.00	-12.47



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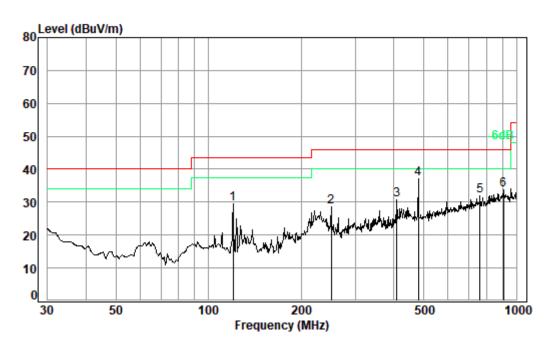
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Mode:g; Polarization:Vertical



Condition: 3m VERTICAL

Job No. : 14805CR

Test mode: g

	Freq			Cable Ant Preamp Freq Loss Factor Factor						
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	120.28	1.25	13.11	27.51	42.63	29.48	43.50	-14.02		
2	250.30	1.68	18.96	27.01	35.03	28.66	46.00	-17.34		
3	408.95	2.24	22.62	27.46	33.34	30.74	46.00	-15.26		
4 pp	480.53	2.53	24.21	27.76	38.16	37.14	46.00	-8.86		
5	760.70	3.09	28.27	27.80	28.28	31.84	46.00	-14.16		
6	909.67	3.61	29.85	27.25	27.42	33.63	46.00	-12.37		



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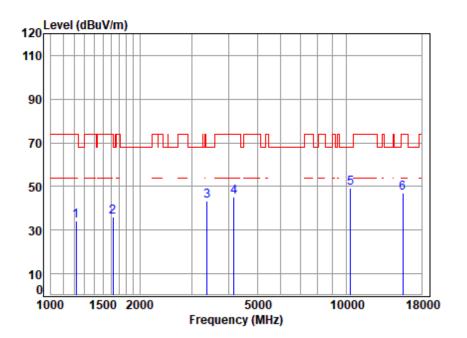


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Transmitter emission above 1GHz

Mode:g; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR Mode : 5180 TX RSE Note : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1217.190	4.49	24.67	40.50	45.53	34.19	74.00	-39.81	peak
2	1625.121	5.32	26.36	40.79	45.28	36.17	74.00	-37.83	peak
3	3376.523	6.35	31.51	41.96	47.31	43.21	68.20	-24.99	peak
4	4169.698	7.18	33.02	42.95	48.12	45.37	74.00	-28.63	peak
5	10360.000	11.19	37.76	37.97	38.16	49.14	68.20	-19.06	peak
6	15540.000	14.30	40.72	40.60	32.43	46.85	74.00	-27.15	peak



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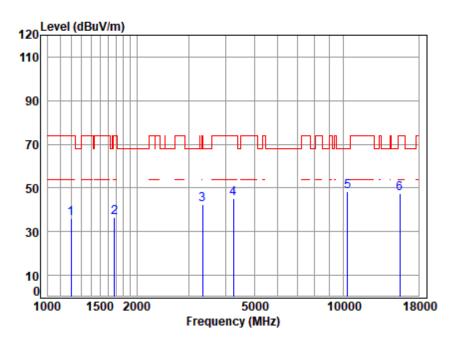
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Mode:g; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:Low



Site : chamber Condition: 3m VERTICAL : 14805CR Job No

Mode : 5180 TX RSE Note : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1199.726	4.42	24.59	40.48	47.74	36.27	74.00	-37.73	peak
2	1682.477	5.25	26.60	40.82	45.59	36.62	74.00	-37.38	peak
3	3347.371	6.32	31.47	41.91	46.52	42.40	74.00	-31.60	peak
4	4242.641	7.27	33.15	43.03	47.69	45.08	74.00	-28.92	peak
5	10360.000	11.19	37.76	37.97	37.23	48.21	68.20	-19.99	peak
6	15540.000	14.30	40.72	40.60	32.89	47.31	74.00	-26.69	peak



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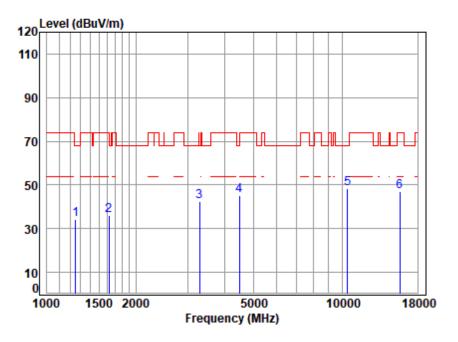
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Mode:g; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:middle



Site : chamber

Condition: 3m HORIZONTAL

: 14805CR Job No

Mode : 5220 TX RSE Note : 5G WIFI 11A

OCC	. 50	AATI T	1177						
		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1252.885	4.62	24.82	40.53	45.21	34.12	68.20	-34.08	peak
2	1620.431	5.32	26.34	40.78	45.13	36.01	74.00	-37.99	peak
3	3289.821	6.27	31.38	41.83	46.39	42.21	68.20	-25.99	peak
4	4482.150	7.54	33.57	43.29	47.43	45.25	68.20	-22.95	peak
5	10440.000	11.25	37.72	38.01	37.22	48.18	68.20	-20.02	peak
6	15660.000	14.48	40.80	40.58	32.33	47.03	74.00	-26.97	peak



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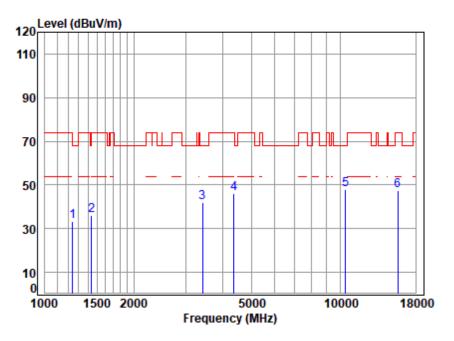
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Report No.: SZEM190601480505

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Mode:g; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:middle



Site : chamber Condition: 3m VERTICAL : 14805CR Job No

Mode : 5220 TX RSE Note : 5G WIFI 11A

o.c.	. 50	****	1177						
		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1242.068	4.58	24.78	40.52	44.63	33.47	68.20	-34.73	peak
2	1439.343	5.28	25.58	40.66	45.75	35.95	74.00	-38.05	peak
3	3425.675	6.39	31.59	42.02	46.22	42.18	68.20	-26.02	peak
4	4367.058	7.41	33.37	43.16	48.24	45.86	74.00	-28.14	peak
5	10440.000	11.25	37.72	38.01	36.98	47.94	68.20	-20.26	peak
6	15660.000	14.48	40.80	40.58	32.76	47.46	74.00	-26.54	peak



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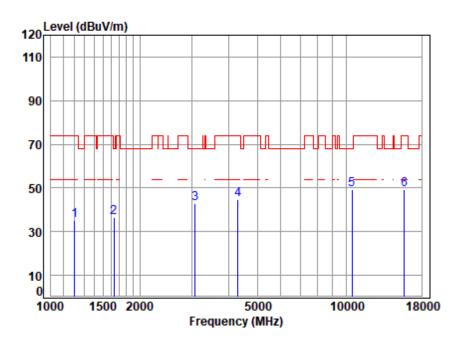
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Mode:g; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

: 14805CR Job No

Mode : 5240 TX RSE Note : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1203.199	4.43	24.60	40.49	46.81	35.35	74.00	-38.65	peak
2	1634.543	5.31	26.40	40.79	45.48	36.40	68.20	-31.80	peak
3	3078.229	6.06	31.03	41.52	47.35	42.92	68.20	-25.28	peak
4	4304.400	7.34	33.26	43.10	47.29	44.79	74.00	-29.21	peak
5	10480.000	11.28	37.71	38.03	38.22	49.18	68.20	-19.02	peak
6	15720.000	14.57	40.83	40.57	34.36	49.19	74.00	-24.81	peak



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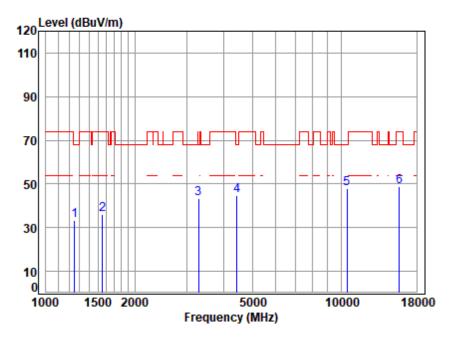
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Mode:g; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:High



Site : chamber Condition: 3m VERTICAL : 14805CR Job No

Mode : 5240 TX RSE Note : 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1249.269	4.61	24.81	40.52	44.57	33.47	68.20	-34.73	peak
2	1551.677	5.41	26.04	40.74	45.13	35.84	74.00	-38.16	peak
3	3289.821	6.27	31.38	41.83	47.57	43.39	68.20	-24.81	peak
4	4430.628	7.48	33.48	43.23	46.88	44.61	68.20	-23.59	peak
5	10480.000	11.28	37.71	38.03	37.13	48.09	68.20	-20.11	peak
6	15720.000	14.57	40.83	40.57	34.03	48.86	74.00	-25.14	peak



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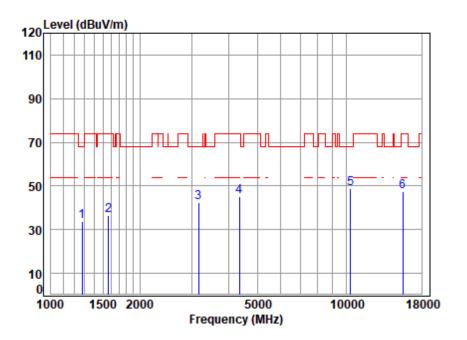
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Mode:g; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

: 14805CR Job No

Mode : 5180 TX RSE : 5G WIFI 11N20 Note

		****	111120						
		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1274.802	4.71	24.92	40.54	44.57	33.66	68.20	-34.54	peak
2	1569.721	5.39	26.12	40.75	45.75	36.51	74.00	-37.49	peak
3	3168.500	6.15	31.18	41.66	46.83	42.50	68.20	-25.70	peak
4	4354.454	7.40	33.35	43.15	47.73	45.33	74.00	-28.67	peak
5	10360.000	11.19	37.76	37.97	37.84	48.82	68.20	-19.38	peak
6	15540.000	14.30	40.72	40.60	33.22	47.64	74.00	-26.36	peak



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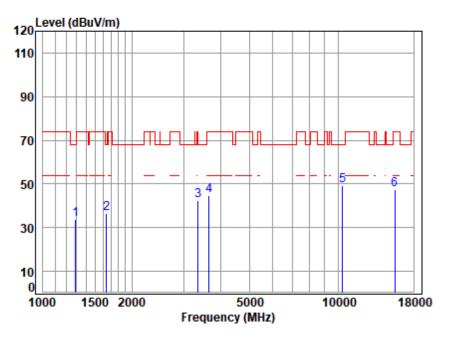
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Mode:g; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:Low



Site : chamber Condition: 3m VERTICAL : 14805CR Job No

Mode : 5180 TX RSE : 5G WIFI 11N20 Note

o.c.	. 50	****	111120						
		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1289.627	4.76	24.98	40.55	44.68	33.87	68.20	-34.33	peak
2	1639.274	5.30	26.42	40.79	45.59	36.52	68.20	-31.68	peak
3	3357.061	6.33	31.48	41.93	46.57	42.45	74.00	-31.55	peak
4	3650.582	6.62	32.02	42.32	48.56	44.88	74.00	-29.12	peak
5	10360.000	11.19	37.76	37.97	38.31	49.29	68.20	-18.91	peak
6	15540.000	14.30	40.72	40.60	32.88	47.30	74.00	-26.70	peak



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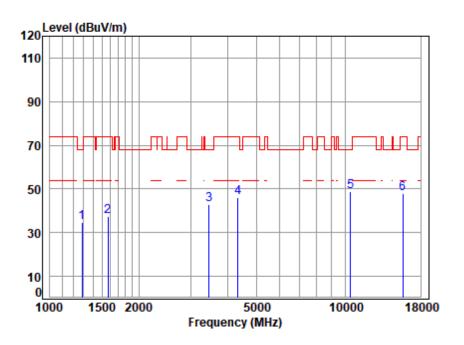
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Mode:g; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:middle



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

Mode : 5220 TX RSE Note : 5G WIFI 11N20

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1285.904	4.75	24.96	40.55	45.40	34.56	68.20	-33.64	peak
2	1574.265	5.38	26.14	40.75	46.54	37.31	74.00	-36.69	peak
3	3465.510	6.43	31.65	42.08	47.09	43.09	68.20	-25.11	peak
4	4341.886	7.38	33.33	43.14	48.39	45.96	74.00	-28.04	peak
5	10440.000	11.25	37.72	38.01	37.86	48.82	68.20	-19.38	peak
6	15660.000	14.48	40.80	40.58	33.22	47.92	74.00	-26.08	peak



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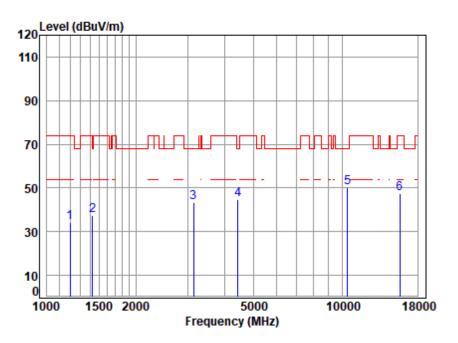
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Mode:g; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:middle



Site : chamber Condition: 3m VERTICAL : 14805CR Job No

Mode : 5220 TX RSE : 5G WIFI 11N20 Note

		***	111120						
		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1199.726	4.42	24.59	40.48	45.80	34.33	74.00	-39.67	peak
2	1426.916	5.24	25.53	40.66	47.30	37.41	74.00	-36.59	peak
3	3141.145	6.12	31.14	41.62	47.89	43.53	68.20	-24.67	peak
4	4430.628	7.48	33.48	43.23	47.18	44.91	68.20	-23.29	peak
5	10440.000	11.25	37.72	38.01	39.08	50.04	68.20	-18.16	peak
6	15660.000	14.48	40.80	40.58	32.89	47.59	74.00	-26.41	peak



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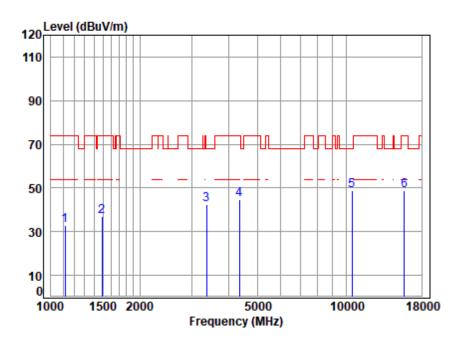
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Mode:g; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

: 14805CR Job No

Mode : 5240 TX RSE Note : 5G WIFI 11N20

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1116.093	4.07	24.20	40.41	45.21	33.07	74.00	-40.93	peak
2	1490.142	5.45	25.76	40.70	46.24	36.75	74.00	-37.25	peak
3	3366.778	6.34	31.50	41.94	46.74	42.64	68.20	-25.56	peak
4	4354.454	7.40	33.35	43.15	47.15	44.75	74.00	-29.25	peak
5	10480.000	11.28	37.71	38.03	37.98	48.94	68.20	-19.26	peak
6	15720.000	14.57	40.83	40.57	34.03	48.86	74.00	-25.14	peak



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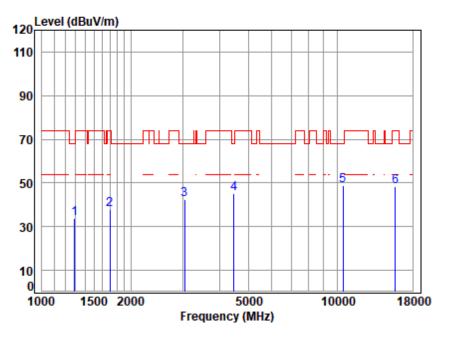
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Mode:g; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:High



Site : chamber Condition: 3m VERTICAL : 14805CR Job No

Mode : 5240 TX RSE Note : 5G WIFI 11N20

000	. 50	AATI T	111120						
		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1289.627	4.76	24.98	40.55	44.74	33.93	68.20	-34.27	peak
2	1697.129	5.23	26.66	40.83	46.76	37.82	74.00	-36.18	peak
3	3042.846	6.02	30.97	41.47	46.83	42.35	68.20	-25.85	peak
4	4469.214	7.53	33.55	43.27	47.27	45.08	68.20	-23.12	peak
5	10480.000	11.28	37.71	38.03	37.81	48.77	68.20	-19.43	peak
6	15720.000	14.57	40.83	40.57	33.61	48.44	74.00	-25.56	peak



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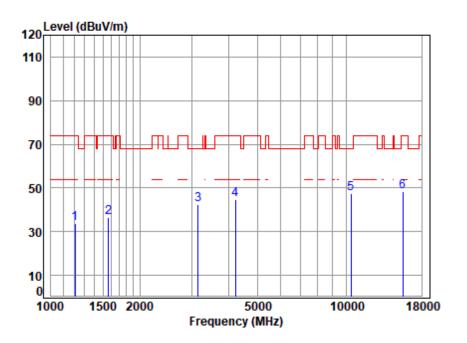
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Mode:g; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

: 14805CR Job No

Mode : 5190 TX RSE Note : 5G WIFI 11N40

		Cable	Ant	Preamp	Read		Limit	0ver		
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark	
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	1206.682	4.44	24.62	40.49	45.17	33.74	74.00	-40.26	peak	
2	1569.721	5.39	26.12	40.75	45.59	36.35	74.00	-37.65	peak	
3	3150.237	6.13	31.15	41.63	46.77	42.42	68.20	-25.78	peak	
4	4218.186	7.24	33.11	43.00	47.37	44.72	74.00	-29.28	peak	
5	10380.000	11.21	37.75	37.98	36.60	47.58	68.20	-20.62	peak	
6	15570.000	14.35	40.74	40.60	33.85	48.34	74.00	-25.66	peak	



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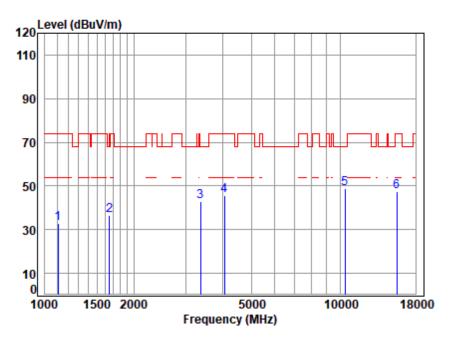
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Mode:g; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:Low



Site : chamber Condition: 3m VERTICAL : 14805CR Job No

Mode : 5190 TX RSE Note : 5G WIFI 11N40

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1109.660	4.05	24.16	40.40	45.09	32.90	74.00	-41.10	peak
2	1653.550	5.28	26.48	40.80	45.38	36.34	68.20	-31.86	peak
3	3366.778	6.34	31.50	41.94	46.83	42.73	68.20	-25.47	peak
4	4050.904	7.04	32.80	42.81	48.37	45.40	74.00	-28.60	peak
5	10380.000	11.21	37.75	37.98	37.66	48.64	68.20	-19.56	peak
6	15570.000	14.35	40.74	40.60	32.91	47.40	74.00	-26.60	peak



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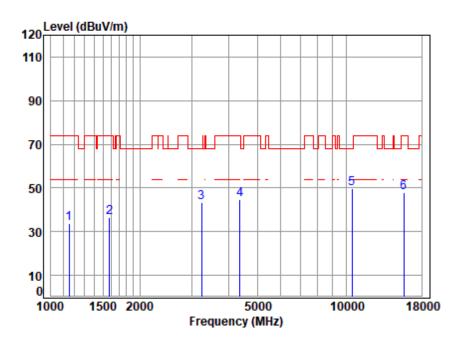
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Mode:g; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

: 14805CR Job No

Mode : 5230 TX RSE Note : 5G WIFI 11N40

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1152.148	4.22	24.37	40.44	45.54	33.69	74.00	-40.31	peak
2	1578.822	5.38	26.16	40.76	45.74	36.52	74.00	-37.48	peak
3	3242.619	6.22	31.30	41.77	47.73	43.48	68.20	-24.72	peak
4	4367.058	7.41	33.37	43.16	47.22	44.84	74.00	-29.16	peak
5	10460.000	11.26	37.72	38.02	38.74	49.70	68.20	-18.50	peak
6	15690.000	14.53	40.82	40.58	33.37	48.14	74.00	-25.86	peak



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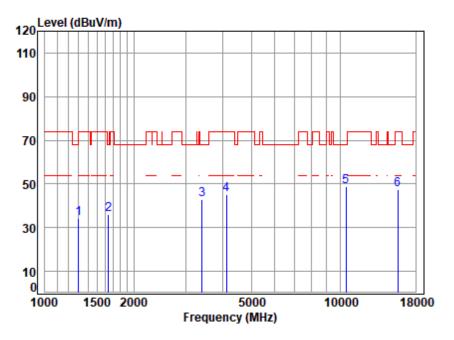
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Mode:g; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:High



Site : chamber Condition: 3m VERTICAL : 14805CR Job No

Mode : 5230 TX RSE : 5G WIFI 11N40 Note

o.c.	. 50	****	111170						
		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1300.858	4.80	25.03	40.56	44.92	34.19	74.00	-39.81	peak
2	1639.274	5.30	26.42	40.79	45.21	36.14	68.20	-32.06	peak
3	3405.929	6.38	31.56	42.00	46.86	42.80	68.20	-25.40	peak
4	4121.768	7.13	32.93	42.89	47.93	45.10	74.00	-28.90	peak
5	10460.000	11.26	37.72	38.02	37.64	48.60	68.20	-19.60	peak
6	15690.000	14.53	40.82	40.58	32.79	47.56	74.00	-26.44	peak



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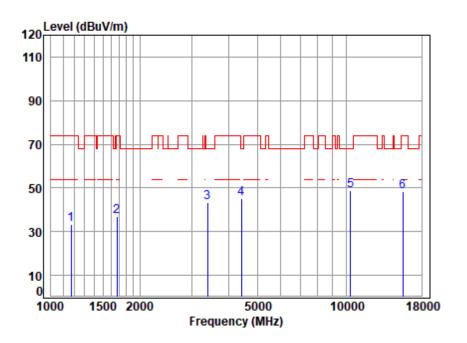
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Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

: 14805CR Job No

Mode : 5180 TX RSE Note

: 5G WIFI 11AC20

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1168.920	4.29	24.45	40.46	45.09	33.37	74.00	-40.63	peak
2	1672.779	5.26	26.56	40.82	45.88	36.88	74.00	-37.12	peak
3	3396.098	6.37	31.54	41.98	47.30	43.23	68.20	-24.97	peak
4	4417.841	7.47	33.46	43.22	47.30	45.01	68.20	-23.19	peak
5	10360.000	11.19	37.76	37.97	37.92	48.90	68.20	-19.30	peak
6	15540.000	14.30	40.72	40.60	33.74	48.16	74.00	-25.84	peak



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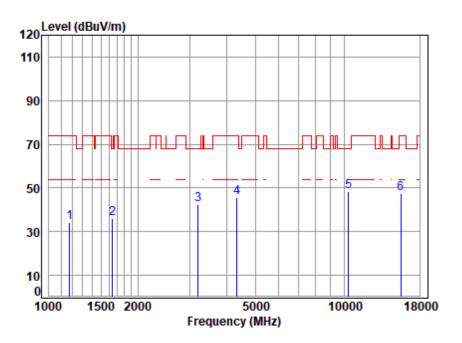
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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber Condition: 3m VERTICAL : 14805CR Job No

Mode : 5180 TX RSE Note : 5G WIFI 11AC20

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	d Bu V/m	dB	
1	1175.697	4.32	24.48	40.46	45.81	34.15	74.00	-39.85	peak
2	1639.274	5.30	26.42	40.79	45.17	36.10	68.20	-32.10	peak
3	3196.094	6.18	31.23	41.70	46.84	42.55	68.20	-25.65	peak
4	4341.886	7.38	33.33	43.14	47.90	45.47	74.00	-28.53	peak
5	10360.000	11.19	37.76	37.97	37.59	48.57	68.20	-19.63	peak
6	15540.000	14.30	40.72	40.60	33.25	47.67	74.00	-26.33	peak



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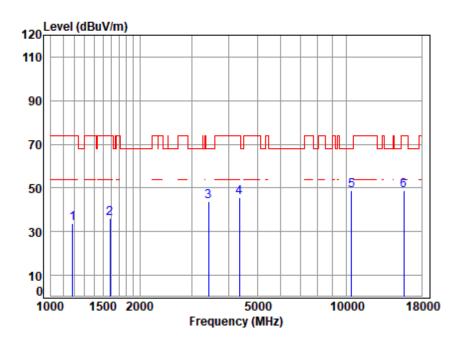
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Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:middle



Site : chamber

Condition: 3m HORIZONTAL

: 14805CR Job No

Mode : 5220 TX RSE

Note : 5G WIFI 11AC20

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
_	4405 036			40.47		22.00	74.00		
1	1185.936	4.36	24.53	40.4/	45.48	33.90	/4.00	-40.10	peak
2	1587.975	5.37	26.20	40.76	45.06	35.87	74.00	-38.13	peak
3	3425.675	6.39	31.59	42.02	47.63	43.59	68.20	-24.61	peak
4	4354.454	7.40	33.35	43.15	47.84	45.44	74.00	-28.56	peak
5	10440.000	11.25	37.72	38.01	37.77	48.73	68.20	-19.47	peak
6	15660.000	14.48	40.80	40.58	33.91	48.61	74.00	-25.39	peak



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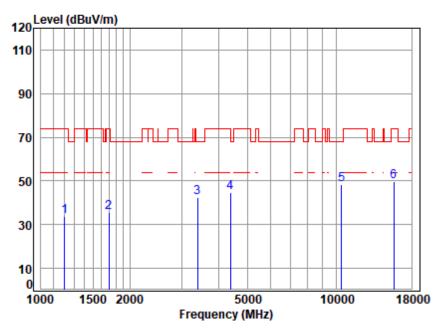
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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:middle



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5220 TX RSE : 5G WIFI 11AC20 Note

Cable Ant Preamp Read Limit 0ver Loss Factor Factor Level Line Limit Remark Frea Level MHz dB dB dBuV dBuV/m dBuV/m dB dB/m 1203.199 4.43 24.60 40.49 45.39 33.93 74.00 -40.07 peak 1 1697.129 5.23 26.66 40.83 44.64 35.70 74.00 -38.30 peak 3 3396.098 6.37 31.54 41.98 46.48 42.41 68.20 -25.79 peak 4 4392.376 7.44 33.42 43.19 47.09 44.76 74.00 -29.24 peak 5 10440.000 11.25 37.72 38.01 37.32 48.28 68.20 -19.92 peak 15660.000 14.48 40.80 40.58 35.17 49.87 74.00 -24.13 peak



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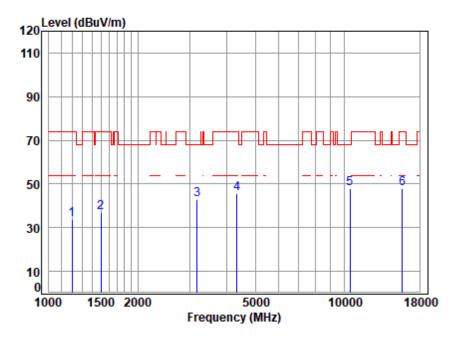
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Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

: 14805CR Job No

Mode : 5240 TX RSE

Note : 5G WIFI 11AC20

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1199.726	4.42	24.59	40.48	45.44	33.97	74.00	-40.03	peak
2	1498.781	5.48	25.80	40.71	46.32	36.89	74.00	-37.11	peak
3	3177.672	6.16	31.20	41.67	47.34	43.03	68.20	-25.17	peak
4	4341.886	7.38	33.33	43.14	48.13	45.70	74.00	-28.30	peak
5	10480.000	11.28	37.71	38.03	37.08	48.04	68.20	-20.16	peak
6	15720.000	14.57	40.83	40.57	33.18	48.01	74.00	-25.99	peak



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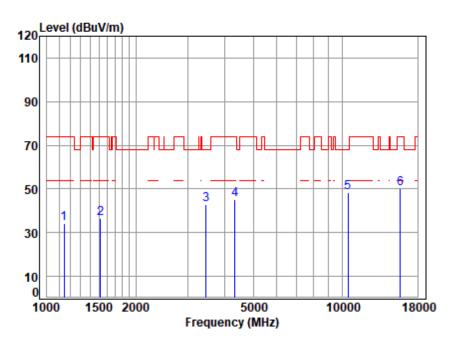
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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:High



Site : chamber Condition: 3m VERTICAL : 14805CR Job No

Mode : 5240 TX RSE Note : 5G WIFI 11AC20

	_			Preamp					
	Freq	Loss	Factor	Factor	revel	Level	Line	Limit	Kemark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
	1145.507	4.20	24.34	40.44	45.98	34.08	74.00	-39.92	peak
2	1520.598	5.45	25.89	40.72	45.95	36.57	74.00	-37.43	peak
;	3465.510	6.43	31.65	42.08	47.02	43.02	68.20	-25.18	peak
ļ	4329.354	7.37	33.30	43.12	47.52	45.07	74.00	-28.93	peak
,	10480.000	11.28	37.71	38.03	37.44	48.40	68.20	-19.80	peak
,	15720.000	14.57	40.83	40.57	35.47	50.30	74.00	-23.70	neak



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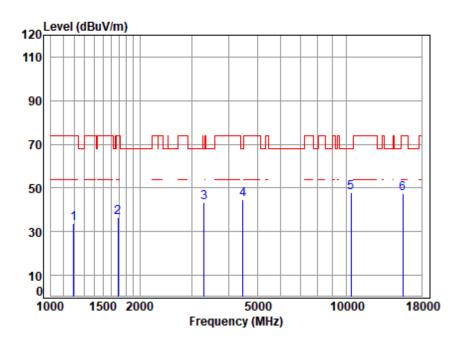
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Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

: 14805CR Job No

Mode : 5190 TX RSE Note

: 5G WIFI 11AC40

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1192.811	/ 1 39	24 56	10 18	/ 15 11	33 58	7/ 00	-10 12	naak
_									•
2	1687.347	5.24	26.62	40.82	45.54	36.58	74.00	-37.42	peak
3	3299.344	6.28	31.39	41.85	47.67	43.49	68.20	-24.71	peak
4	4469.214	7.53	33.55	43.27	46.74	44.55	68.20	-23.65	peak
5	10380.000	11.21	37.75	37.98	36.71	47.69	68.20	-20.51	peak
6	15570.000	14.35	40.74	40.60	33.17	47.66	74.00	-26.34	peak



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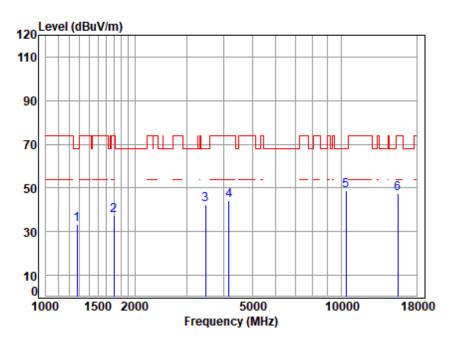
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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:Low



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5190 TX RSE Note : 5G WIFI 11AC40

Cable Ant Preamp Read Limit 0ver Loss Factor Factor Level Line Limit Remark Frea Level MHz dB dB dBuV dBuV/m dBuV/m dB dB/m 1274.802 4.71 24.92 40.54 44.43 33.52 68.20 -34.68 peak 1 1702.042 5.23 26.68 40.83 46.25 37.33 74.00 -36.67 peak 3 3475.541 6.44 31.66 42.09 46.49 42.50 68.20 -25.70 peak 4 7.18 33.02 42.95 47.08 44.33 74.00 -29.67 peak 4169.698 5 10380.000 11.21 37.75 37.98 37.93 48.91 68.20 -19.29 peak 15570.000 14.35 40.74 40.60 33.04 47.53 74.00 -26.47 peak



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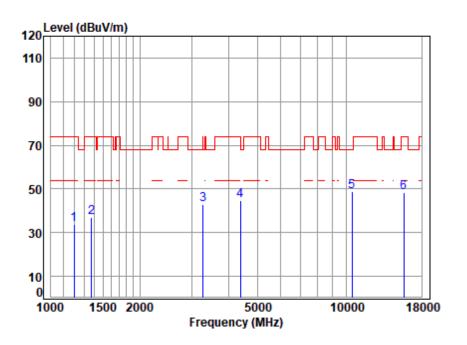
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Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

Mode : 5230 TX RSE Note : 5G WIFI 11AC40

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1196.264	4.40	24.57	40.48	45.33	33.82	74.00	-40.18	peak
2	1374.295	5.06	25.33	40.62	47.35	37.12	74.00	-36.88	peak
3	3280.326	6.26	31.36	41.82	47.11	42.91	68.20	-25.29	peak
4	4379.699	7.43	33.39	43.18	46.88	44.52	74.00	-29.48	peak
5	10460.000	11.26	37.72	38.02	37.84	48.80	68.20	-19.40	peak
6	15690.000	14.53	40.82	40.58	33.51	48.28	74.00	-25.72	peak



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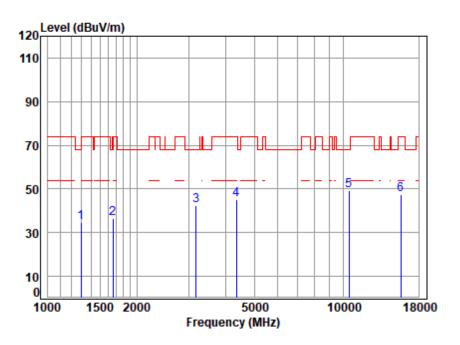
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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:High



Site : chamber Condition: 3m VERTICAL : 14805CR Job No

Mode : 5230 TX RSE : 5G WIFI 11AC40 Note

		***	11/10/10						
		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1293.359	4.77	25.00	40.56	45.37	34.58	68.20	-33.62	peak
2	1663.137	5.27	26.52	40.81	45.74	36.72	74.00	-37.28	peak
3	3177.672	6.16	31.20	41.67	46.73	42.42	68.20	-25.78	peak
4	4354.454	7.40	33.35	43.15	47.79	45.39	74.00	-28.61	peak
5	10460.000	11.26	37.72	38.02	38.37	49.33	68.20	-18.87	peak
6	15690.000	14.53	40.82	40.58	32.68	47.45	74.00	-26.55	peak



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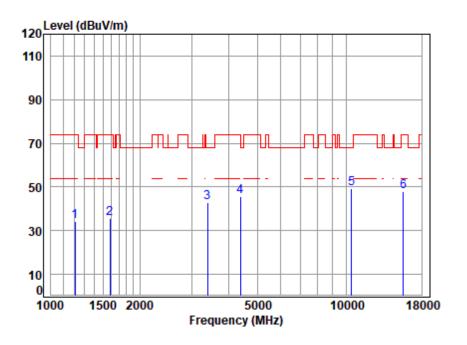
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Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:80MHz; Channel:middle



Site : chamber

Condition: 3m HORIZONTAL

: 14805CR Job No

Mode : 5210 TX RSE

: 5G WIFI 11AC80 Note

		****	11/1000						
		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dR/m	dB		dRuV/m	dBuV/m	dB	
	11112	ub	ub/iii	ub	abav	abav/III	abav/III	ub	
1	1206.682	4.44	24.62	40.49	45.65	34.22	74.00	-39.78	peak
2	1587.975	5.37	26.20	40.76	44.90	35.71	74.00	-38.29	peak
3	3396.098	6.37	31.54	41.98	47.05	42.98	68.20	-25.22	peak
4	4392.376	7.44	33.42	43.19	47.86	45.53	74.00	-28.47	peak
5	10420.000	11.24	37.73	38.00	38.14	49.11	68.20	-19.09	peak
6	15630.000	14.44	40.78	40.59	33.47	48.10	74.00	-25.90	peak



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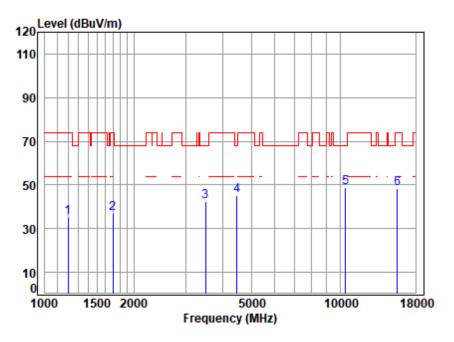
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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:80MHz; Channel:middle



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5210 TX RSE Note : 5G WIFI 11AC80

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	d Bu V/m	dB	
1	1199.726	4.42	24.59	40.48	46.47	35.00	74.00	-39.00	peak
2	1702.042	5.23	26.68	40.83	46.01	37.09	74.00	-36.91	peak
3	3495.691	6.46	31.69	42.12	46.25	42.28	68.20	-25.92	peak
4	4469.214	7.53	33.55	43.27	47.55	45.36	68.20	-22.84	peak
5	10420.000	11.24	37.73	38.00	37.83	48.80	68.20	-19.40	peak
6	15630.000	14.44	40.78	40.59	33.52	48.15	74.00	-25.85	peak



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7.7 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.407(b)

Test Method: KDB 789033 D02 II G

Measurement Distance: 3m

Limit:

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

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, 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.



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7.7.1 E.U.T. Operation

Operating Environment:

Humidity: 54 % RH Atmospheric Pressure: 1010 mbar Temperature: 23 °C

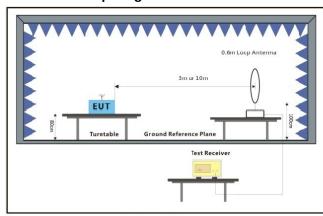
Test mode: g:TX mode (Band 1)_Keep the EUT in continuously transmitting mode with all

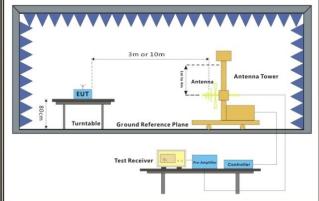
modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT80). Only the data of worst case is recorded in the report.

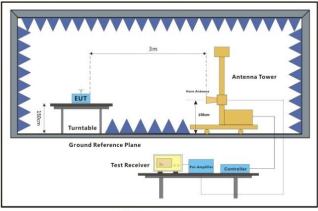
7.7.2 Test Setup Diagram





Below 30MHz

30MHz-1GHz



Above 1GHz



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7.7.3 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. 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.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. 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.
- e. 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.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. 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, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. 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.
- j. Repeat above procedures until all frequencies measured was complete.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

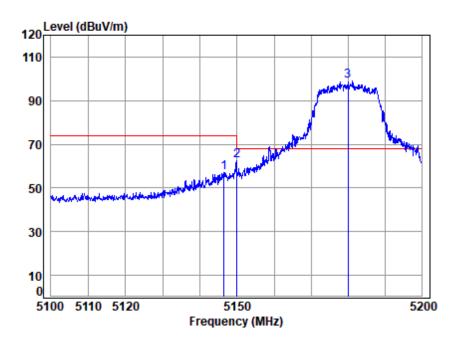




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Mode:g; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

Mode : 5180 Band edge

: 5G WIFI 11A

	Fred			Preamp Factor					Remark
	1164	2033	ractor	raccor	Level	Level	LINE	LIMIC	Kellidi K
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5146.458	8.32	34.32	43.65	58.15	57.14	74.00	-16.86	peak
2	5149.980	8.33	34.32	43.64	63.46	62.47	74.00	-11.53	peak
3 *	5180.000	8.37	34.35	43.61	99.70	98.81	68.20	30.61	peak



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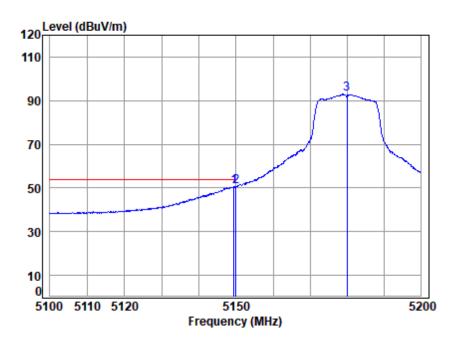
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Mode:g; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

1 2 3

Mode : 5180 Band edge

: 5G WIFI 11A

F			Preamp					Damanla
Freq	LOSS	Factor	Factor	revei	revei	Line	Limit	Kemark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
5149.357	8.32	34.32	43.64	51.82	50.82	54.00	-3.18	Average
5149.980	8.33	34.32	43.64	51.75	50.76	54.00	-3.24	Average
5180.000	8.37	34.35	43.61	93.84	92.95			Average



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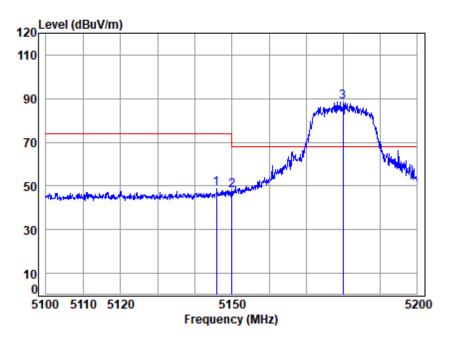
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Mode:g; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:Low



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5180 Band edge

: 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	0ver		
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark	
										_
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
L	5145.859	8.32	34.32	43.65	49.83	48.82	74.00	-25.18	Peak	
2	5149.980	8.33	34.32	43.64	48.88	47.89	74.00	-26.11	Peak	
3	* 5180.000	8.37	34.35	43.61	89.23	88.34	68.20	20.14	Peak	



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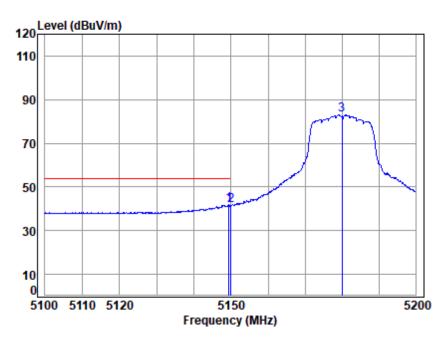
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Mode:g; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:Low



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5180 Band edge

: 5G WIFI 11A

	Cable	Ant	Preamp	Read		Limit	0ver	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
5149.357	8.32	34.32	43.64	42.78	41.78	54.00	-12.22	Average
5149.980	8.33	34.32	43.64	42.50	41.51	54.00	-12.49	Average
5180.000	8.37	34.35	43.61	83.78	82.89			Average



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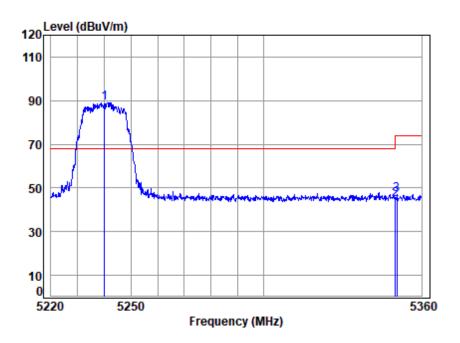
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Mode:g; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

: 14805CR Job No

1 2 3

Mode : 5240 Band edge

: 5G WIFI 11A

Freq			Preamp Factor					Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
* 5240.000 5350.020 5350.504	8.63	34.48	43.44	45.14	44.81	74.00	-29.19	peak



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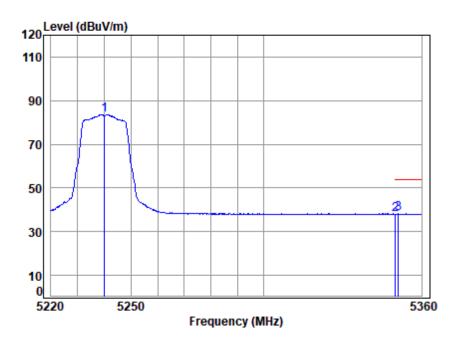
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Mode:g; Polarization:Horizontal; Modulation:802.11a; bandwidth:20MHz; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

1 2 3

Mode : 5240 Band edge

: 5G WIFI 11A

F	req			Preamp Factor					Remark	
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		-
5240. 5350.									Average Average	
5351.	070	8.63	34.48	43.44	38.50	38.17	54.00	-15.83	Average	



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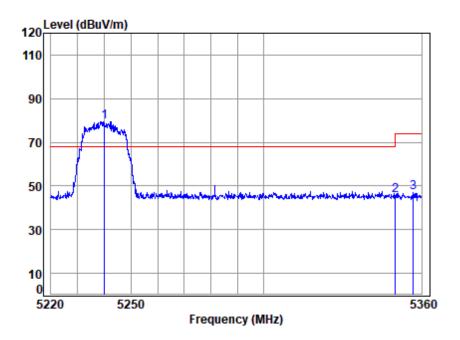
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Mode:g; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:High



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5240 Band edge

: 5G WIFI 11A

		Cable	Ant	Preamp	Read		Limit	0ver		
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark	
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
*	5240.000	8.46	34.40	43.55	80.24	79.55	68.20	11.35	Peak	
	5350.020	8.63	34.48	43.44	46.15	45.82	74.00	-28.18	Peak	
	5356.880	8.64	34.49	43.43	47.28	46.98	74.00	-27.02	Peak	



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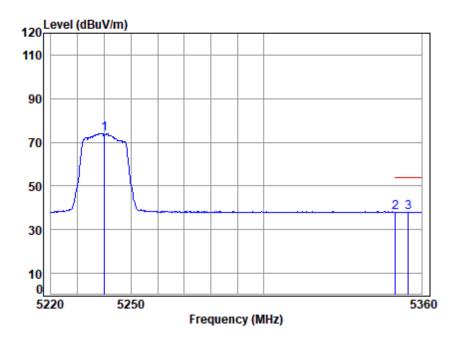
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Mode:g; Polarization:Vertical; Modulation:802.11a; bandwidth:20MHz; Channel:High



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5240 Band edge

: 5G WIFI 11A

	Freq			Preamp Factor					Remark
_	MHz	dB	dB/m	——dB	dBuV	dBuV/m	dBuV/m	——dB	
5	240.000	8.46	34.40	43.55	74.82	74.13			Average
5	350.020	8.63	34.48	43.44	38.35	38.02	54.00	-15.98	Average
5	354.896	8.64	34.49	43.44	38.40	38.09	54.00	-15.91	Average



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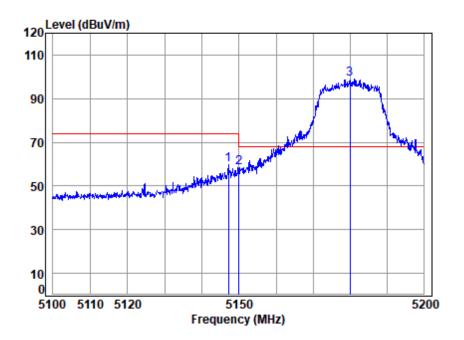
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Mode:g; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

1 2

Mode : 5180 Band edge

: 5G WIFI 11N20

Freq			Preamp Factor					
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
5147.158 5149.980 * 5180.000	8.33	34.32		59.60	58.61	74.00	-15.39	peak



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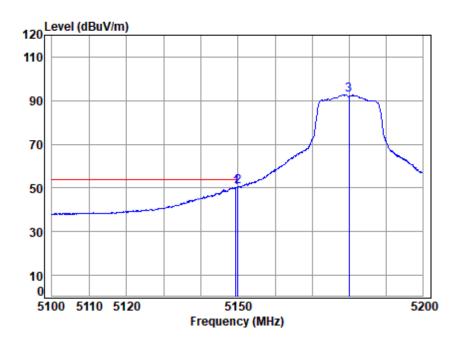
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Report No.: SZEM190601480505

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Mode:g; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

1 2 3

Mode : 5180 Band edge

: 5G WIFI 11N20

F			Preamp					Damanla
Freq	LOSS	Factor	Factor	revei	revei	Line	Limit	Kemark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
5149.458	8.32	34.32	43.64	51.06	50.06	54.00	-3.94	Average
5149.980	8.33	34.32	43.64	51.86	50.87	54.00	-3.13	Average
5180.000	8.37	34.35	43.61	93.42	92.53			Average



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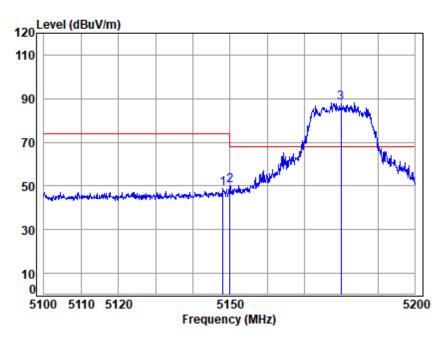
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Mode:g; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:Low



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5180 Band edge

: 5G WIFI 11N20

	Freq			Preamp Factor					Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
	5148.058								
2	5149.980	8.33	34.32	43.64	51.07	50.08	74.00	-23.92	Peak
3 *	5180.000	8.37	34.35	43.61	89.14	88.25	68.20	20.05	Peak



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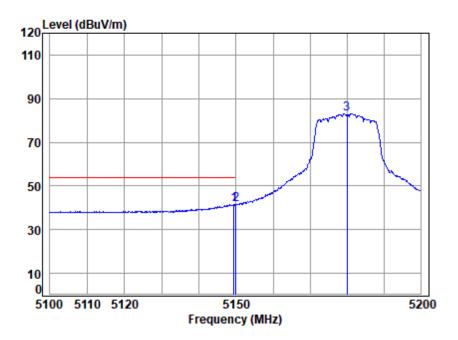
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Mode:g; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:Low



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5180 Band edge

: 5G WIFI 11N20

Freq			Preamp Factor					Remark
1104	2033	raccor	i de coi	LCVCI	LCVCI	LINC	LIMIT	Kellidi K
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
5149.357	8.32	34.32	43.64	42.61	41.61	54.00	-12.39	Average
5149.980	8.33	34.32	43.64	42.56	41.57	54.00	-12.43	Average
5180.000	8.37	34.35	43.61	83.91	83.02			Average



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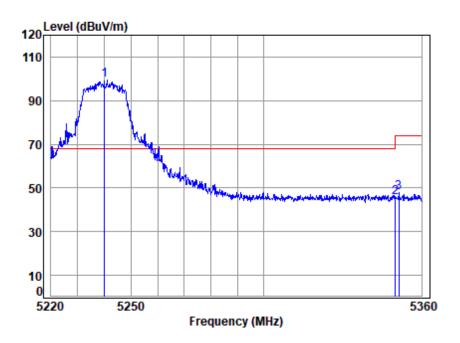
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Mode:g; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

1

3

Mode : 5240 Band edge

: 5G WIFI 11N20

	. 50	AATIT	TINZO							
		Cable	Ant	Preamp	Read		Limit	0ver		
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark	
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
*	5240.000	8.46	34.40	43.55	100.08	99.39	68.20	31.19	peak	
	5350.020	8.63	34.48	43.44	46.10	45.77	74.00	-28.23	peak	
	5351.354	8.63	34.49	43.44	48.08	47.76	74.00	-26.24	peak	



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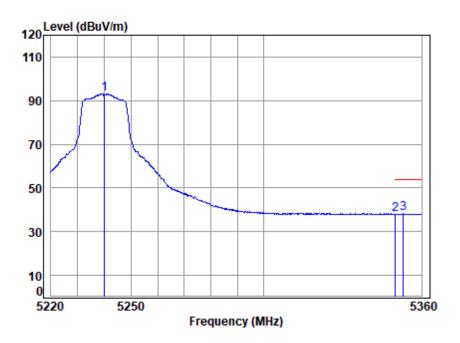
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Report No.: SZEM190601480505

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Mode:g; Polarization:Horizontal; Modulation:802.11n; bandwidth:20MHz; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

1 2 3

Mode : 5240 Band edge

: 5G WIFI 11N20

Freq			Preamp Factor					Remark
MHz	dB	dB/m	——dB	dBuV	dBuV/m	dBuV/m	dB	
5240.000	8.46	34.40	43.55	93.82	93.13			Average
5350.020	8.63	34.48	43.44	38.37	38.04	54.00	-15.96	Average
5353,053	8.63	34.49	43.44	38.50	38.18	54.00	-15.82	Average



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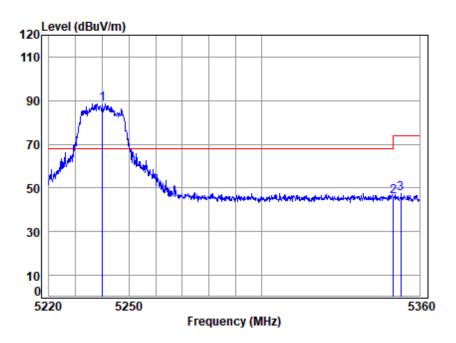
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Mode:g; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:High



Site : chamber Condition: 3m VERTICAL : 14805CR Job No

Mode : 5240 Band edge

: 5G WIFI 11N20

	Freq			Preamp Factor					Remark	
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		-
*	5240.000	8.46	34.40	43.55	89.05	88.36	68.20	20.16	Peak	
	5350.020	8.63	34.48	43.44	46.25	45.92	74.00	-28.08	Peak	
	5352,912	8.63	34.49	43.44	47.67	47.35	74.00	-26.65	Peak	



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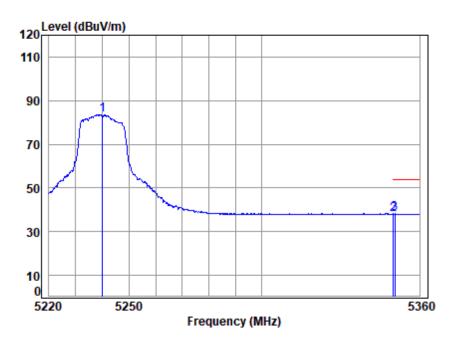
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Mode:g; Polarization:Vertical; Modulation:802.11n; bandwidth:20MHz; Channel:High



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5240 Band edge

: 5G WIFI 11N20

	-			Preamp						
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Kemark	
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
5	240.000	8.46	34.40	43.55	84.20	83.51			Average	
5	350.020	8.63	34.48	43.44	38.41	38.08	54.00	-15.92	Average	
5	350 646	8 63	34 48	43 44	38 45	38 12	54 00	-15 88	Average	



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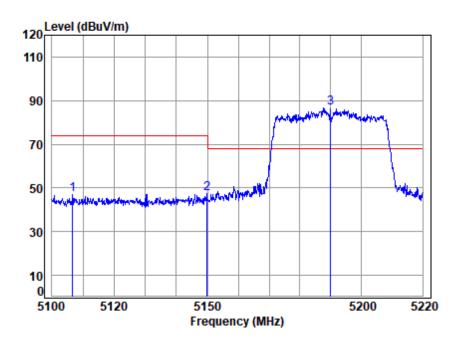
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Mode:g; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

Mode : 5190 Band edge

: 5G WIFI 11N40

	Freq			Preamp Factor					Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
	5106.646								•
2	5149.980	8.33	34.32	43.64	48.44	47.45	74.00	-26.55	peak
3 *	5190.000	8.39	34.36	43.60	87.39	86.54	68.20	18.34	peak



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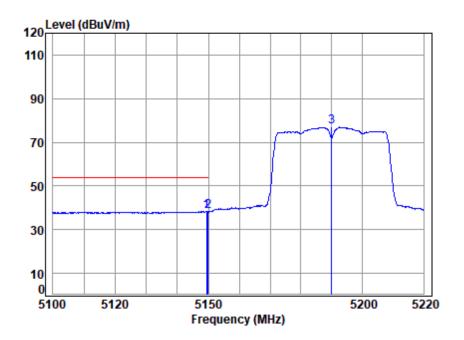
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Mode:g; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

1 2 3

Mode : 5190 Band edge

: 5G WIFI 11N40

Freq			Preamp Factor					Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
5149.461								_
								Average
5190.000	8.39	34.36	43.60	77.73	76.88			Average



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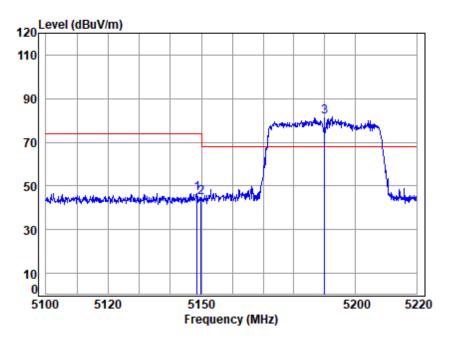
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Report No.: SZEM190601480505

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Mode:g; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:Low



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5190 Band edge

: 5G WIFI 11N40

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
	5148.623	8.32	34.32	43.64	47.69	46.69	74.00	-27.31	peak
	5149.980	8.33	34.32	43.64	45.49	44.50	74.00	-29.50	peak
*	5190.000	8.39	34.36	43.60	82.34	81.49	68.20	13.29	peak



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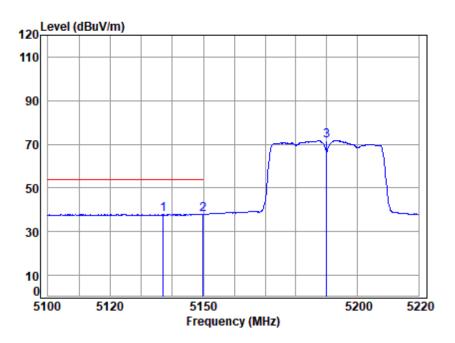
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Report No.: SZEM190601480505

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Mode:g; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:Low



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5190 Band edge

: 5G WIFI 11N40

Frea			Preamp Factor					Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
5137.021	8.31	34.31	43.66	38.99	37.95	54.00	-16.05	Average
5149.980	8.33	34.32	43.64	38.86	37.87	54.00	-16.13	Average
5190.000	8.39	34.36	43.60	72.58	71.73			Average



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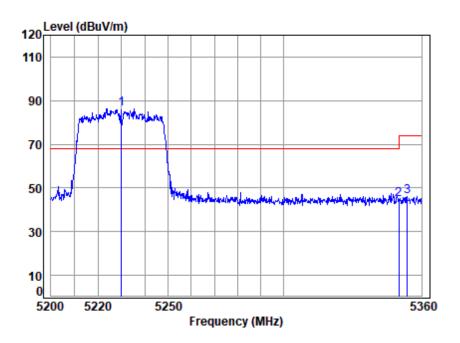
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Report No.: SZEM190601480505

Page: 80 of 138

Mode:g; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

Mode : 5230 Band edge

: 5G WIFI 11N40

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 3	* 5230.000	8.45	34.39	43.56	87.02	86.30	68.20	18.10	peak
2	5350.020	8.63	34.48	43.44	45.03	44.70	74.00	-29.30	peak
	5353.669								•



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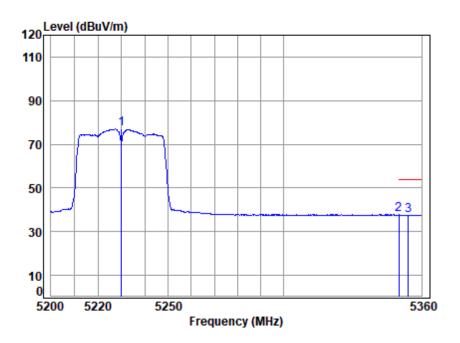
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Report No.: SZEM190601480505

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Mode:g; Polarization:Horizontal; Modulation:802.11n; bandwidth:40MHz; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

1 2 3

Mode : 5230 Band edge

: 5G WIFI 11N40

Freq			Preamp Factor						
MHz	dB	dB/m	——dB	dBuV	dBuV/m	dBuV/m	——dB		
5230.000	8.45	34.39	43.56	77.62	76.90			Average	
5350.020	8.63	34.48	43.44	38.02	37.69	54.00	-16.31	Average	
5354,155	8.64	34.49	43.44	37.87	37.56	54.00	-16.44	Average	



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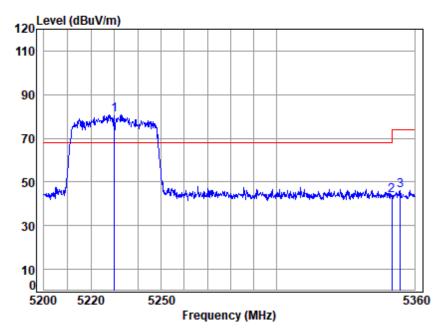
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Report No.: SZEM190601480505

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Mode:g; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:High



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5230 Band edge

: 5G WIFI 11N40

	. 50	****	1111-0							
		Cable	Ant	Preamp	Read		Limit	0ver		
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark	
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
*	5230.000	8.45	34.39	43.56	81.46	80.74	68.20	12.54	peak	
	5350.020	8.63	34.48	43.44	44.11	43.78	74.00	-30.22	peak	
}	5353.831	8.64	34.49	43.44	46.31	46.00	74.00	-28.00	peak	



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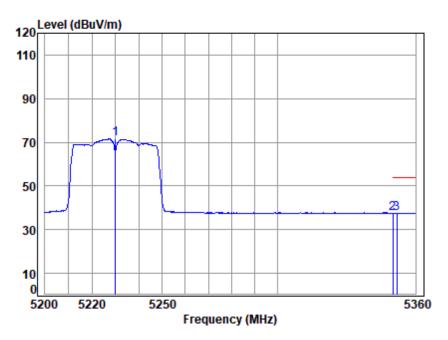
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Report No.: SZEM190601480505

Page: 83 of 138

Mode:g; Polarization:Vertical; Modulation:802.11n; bandwidth:40MHz; Channel:High



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5230 Band edge

: 5G WIFI 11N40

Frea			Preamp Factor					Pomonk	
		-actor			rever			Nelliark	
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
5230.000	8.45	34.39	43.56	72.26	71.54			Average	
5350.020	8.63	34.48	43.44	37.94	37.61	54.00	-16.39	Average	
5351 722	8 63	34 49	43 44	37 91	37 59	54 00	-16 41	Average	



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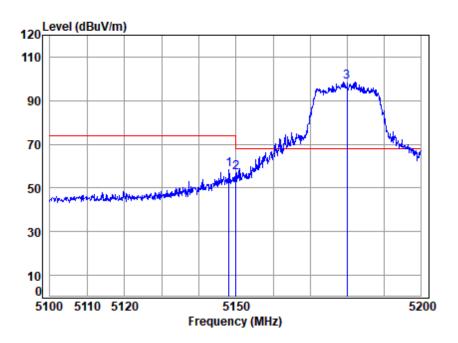
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Report No.: SZEM190601480505

Page: 84 of 138

Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

1

Mode : 5180 Band edge

: 5G WIFI 11AC20

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
	5148.058	8.32	34.32	43.64	59.22	58.22	74.00	-15.78	peak
2	5149.980	8.33	34.32	43.64	57.90	56.91	74.00	-17.09	peak
,	* 5180.000	8.37	34.35	43.61	99.67	98.78	68.20	30.58	peak



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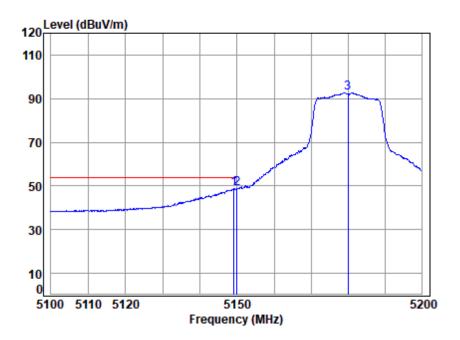
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Report No.: SZEM190601480505

Page: 85 of 138

Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

1 2 3

Mode : 5180 Band edge

: 5G WIFI 11AC20

Fred			Preamp Factor					Remark
1164	LUSS	ractor	ractor	Level	rever	LINE	LIMIC	Kelliai K
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
5440 457	0.30	24.20	42.64	40.00	40.00	F4 00	F 00	
5149.157	8.32	34.32	43.64	49.92	48.92	54.00	-5.08	Average
5149.980	8.33	34.32	43.64	49.93	48.94	54.00	-5.06	Average
5180.000	8.37	34.35	43.61	93.43	92.54			Average



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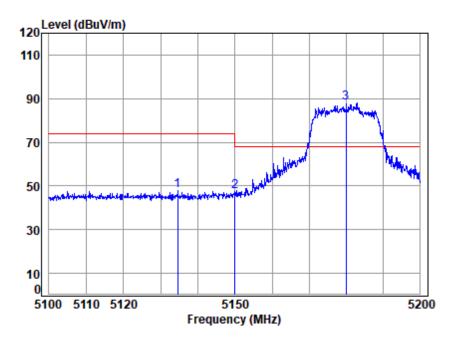
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Report No.: SZEM190601480505

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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5180 Band edge

: 5G WIFI 11AC20

			Preamp					
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	——dB	
5134.580	0 20	2/ 21	12 66	40 00	47 00	74.00	26 12	Doole
5134.360			43.66 43.64					
* 5180 000	8 37	34 35	43 61	88 76	87 87	68 20	19 67	Peak



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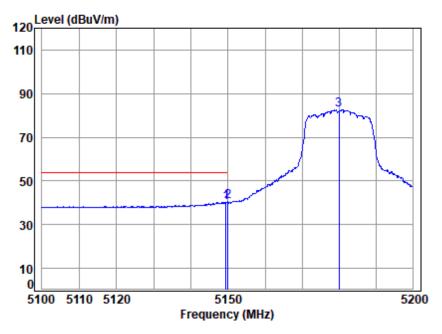
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Report No.: SZEM190601480505

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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:Low



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5180 Band edge

: 5G WIFI 11AC20

	Cable	Ant	Preamp	Read		Limit	0ver	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
5149.357	8.32	34.32	43.64	41.37	40.37	54.00	-13.63	Average
5149.980	8.33	34.32	43.64	41.54	40.55	54.00	-13.45	Average
5180.000	8.37	34.35	43.61	83.57	82.68			Average



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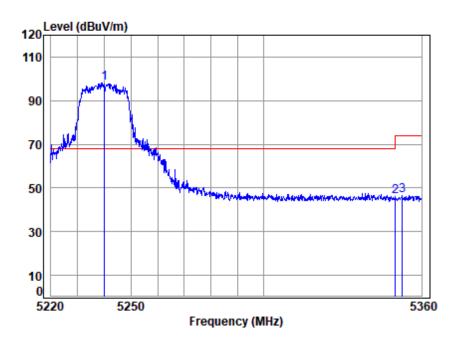
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Report No.: SZEM190601480505

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Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

Mode : 5240 Band edge

: 5G WIFI 11AC20

			11						
		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 *	* 5240.000	8.46	34.40	43.55	98.81	98.12	68.20	29.92	peak
	5350.020								•
	5352.628								•



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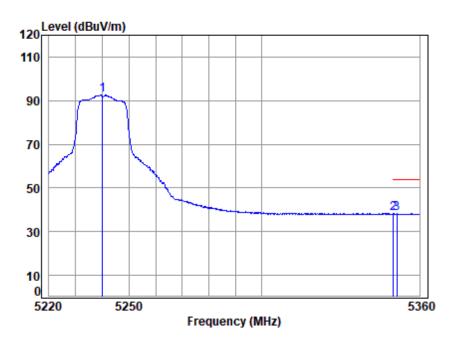
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Report No.: SZEM190601480505

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Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:20MHz; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

1

3

Mode : 5240 Band edge

: 5G WIFI 11AC20

. 50	MATIT	IIACZU						
	Cable	Ant	Preamp	Read		Limit	0ver	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
5240.000	8.46	34.40	43.55	93.19	92.50			Average
5350.020	8.63	34.48	43.44	38.45	38.12	54.00	-15.88	Average
5351.354	8.63	34.49	43.44	38.47	38.15	54.00	-15.85	Average



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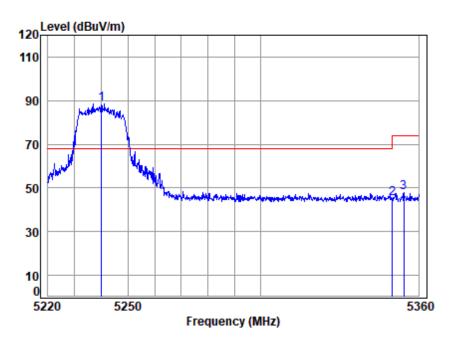
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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:High



Site : chamber Condition: 3m VERTICAL : 14805CR Job No

Mode : 5240 Band edge

: 5G WIFI 11AC20

Freq			Preamp Factor					
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	 -
5240.000 5350.020								
5354.329								



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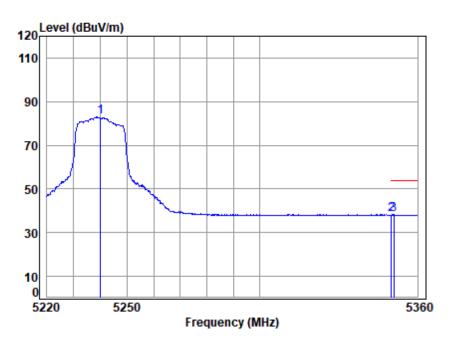
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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:20MHz; Channel:High



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5240 Band edge

: 5G WIFI 11AC20

-			Preamp					ь .	
Freq	Loss	Factor	Factor	revel	revel	Line	Limit	Kemark	
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		_
5240.000	8.46	34.40	43.55	83.61	82.92			Average	
5350.020	8.63	34.48	43.44	38.44	38.11	54.00	-15.89	Average	
5350 929	8 63	34 48	43 44	38 50	38 17	54 00	-15 83	Average	



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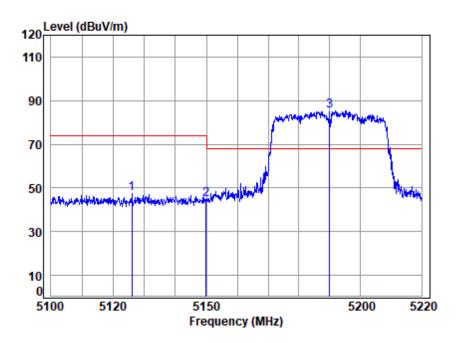
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Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

Mode : 5190 Band edge

: 5G WIFI 11AC40

		Cable	Ant	Preamp	Read		Limit	0ver	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5125.923	8.29	34.30	43.67	48.43	47.35	74.00	-26.65	peak
2	5149.980	8.33	34.32	43.64	45.83	44.84	74.00	-29.16	peak
3 *	5190.000	8.39	34.36	43.60	86.19	85.34	68.20	17.14	peak



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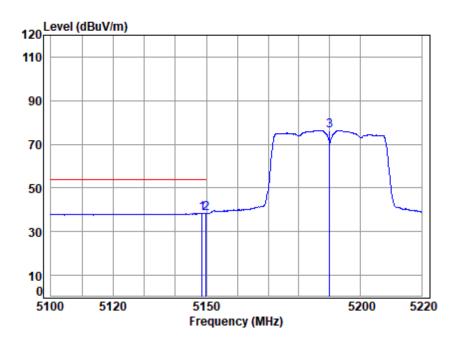
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Report No.: SZEM190601480505

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Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:Low



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

1 2 3

Mode : 5190 Band edge

: 5G WIFI 11AC40

	Cable	Ant	Preamp	Read		Limit	0ver	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
5148.623	8.32	34.32	43.64	39.38	38.38	54.00	-15.62	Average
5149.980								_
5190.000	8.39	34.36	43.60	77.21	76.36			Average



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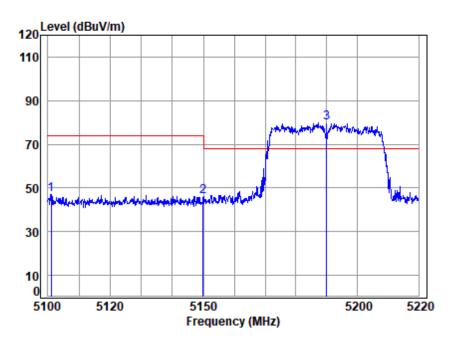
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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:Low



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5190 Band edge

: 5G WIFI 11AC40

	Freq			Preamp Factor					
_	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
	5101.067 5149.980 5190.000	8.33	34.32	43.64	47.09	46.10	74.00	-27.90	peak



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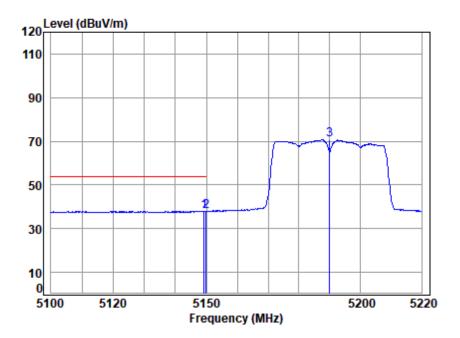
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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:Low



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5190 Band edge

: 5G WIFI 11AC40

	Cable	Ant	Preamp	Read		Limit	0ver	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
5149.342	8.32	34.32	43.64	38.85	37.85	54.00	-16.15	Average
5149.980	8.33	34.32	43.64	38.90	37.91	54.00	-16.09	Average
5190.000	8.39	34.36	43.60	71.61	70.76			Average



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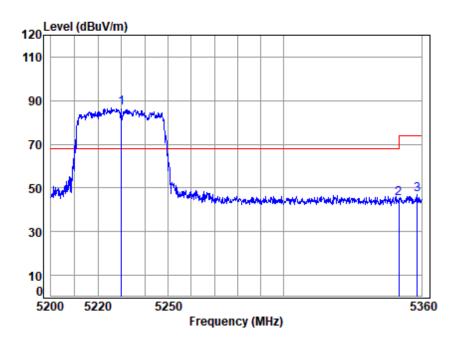
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Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

: 14805CR Job No

1 2 3

Mode : 5230 Band edge

: 5G WIFI 11AC40

_			Preamp					
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
* 5230.000	8.45	34.39	43.56	87.55	86.83	68.20	18.63	peak
5350.020	8.63	34.48	43.44	45.36	45.03	74.00	-28.97	peak
5358 213	8 64	34 49	43 43	47 10	46 80	74 00	-27 20	neak



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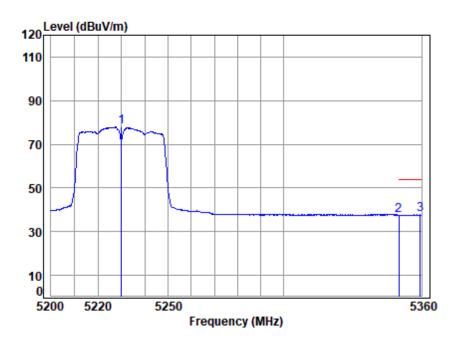
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Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:40MHz; Channel:High



Site : chamber

Condition: 3m HORIZONTAL

Job No : 14805CR

1 2 3

Mode : 5230 Band edge

: 5G WIFI 11AC40

	_			Preamp						
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark	
-	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		-
	5230.000	8.45	34.39	43.56	78.59	77.87			Average	
	5350.020	8.63	34.48	43.44	37.97	37.64	54.00	-16.36	Average	
	5359 513	8 64	34 49	43 43	37 97	37 67	54 00	-16 33	Average	



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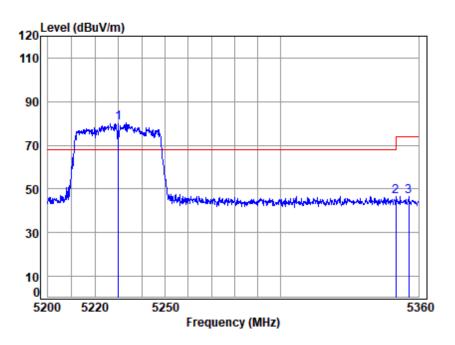
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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:High



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5230 Band edge

: 5G WIFI 11AC40

Freq			Preamp Factor					Remark	
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		-
* 5230.000 5350.020								•	
5355 616								•	



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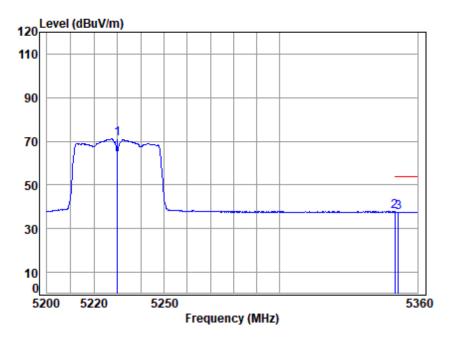
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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:40MHz; Channel:High



Site : chamber Condition: 3m VERTICAL Job No : 14805CR

Mode : 5230 Band edge

: 5G WIFI 11AC40

	Cable	Ant	Preamp	Read		Limit	0ver		
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark	
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		_
5230.000	8.45	34.39	43.56	71.75	71.03			Average	
5350.020	8.63	34.48	43.44	38.02	37.69	54.00	-16.31	Average	
5351 560	8 63	34 49	43 44	37 95	37 63	54 00	-16 37	Average	



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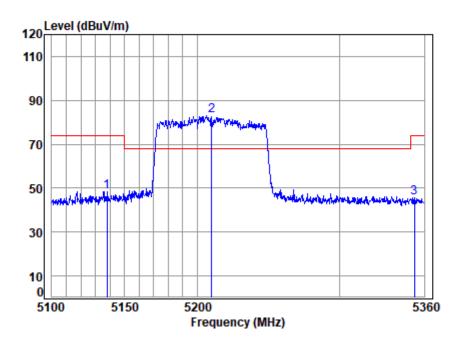
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Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:80MHz; Channel:middle



Site : chamber

Condition: 3m HORIZONTAL

: 14805CR Job No

Mode : 5210 Band edge

: 5G WTFT 11AC80

		. 50	AATIT	TIACOU							
			Cable	Ant	Preamp	Read		Limit	0ver		
		Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark	
		MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1		5137.925	8.31	34.31	43.66	49.44	48.40	74.00	-25.60	peak	
2	*	5210.000	8.42	34.37	43.58	83.65	82.86	68.20	14.66	peak	
3		5353.075	8.63	34.49	43.44	46.12	45.80	74.00	-28.20	neak	



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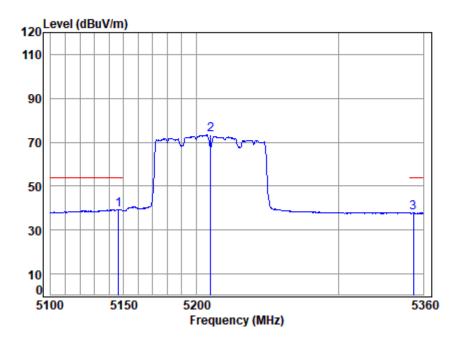
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Mode:g; Polarization:Horizontal; Modulation:802.11ac; bandwidth:80MHz; Channel:middle



Site : chamber

Condition: 3m HORIZONTAL

: 14805CR Job No

Mode : 5210 Band edge

: 5G WTFT 11AC80

		MILIT	TIACOU							
		Cable	Ant	Preamp	Read		Limit	0ver		
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark	
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	5146.363	8.32	34.32	43.65	40.28	39.27	54.00	-14.73	Average	
2	5210.000	8.42	34.37	43.58	74.13	73.34			Average	
3	5353.075	8.63	34.49	43.44	38.14	37.82	54.00	-16.18	Average	



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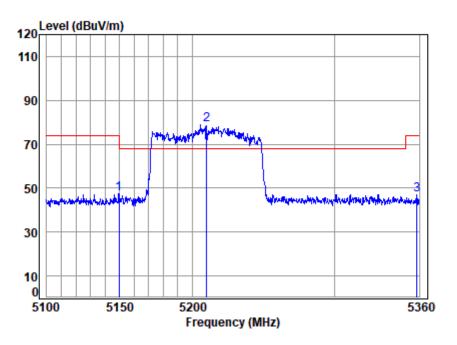
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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:80MHz; Channel:middle



Site : chamber Condition: 3m VERTICAL : 14805CR Job No

Mode : 5210 Band edge

: 5G WIFI 11AC80

	Fred			Preamp Factor					
	11 64	LU33	I ac coi	I ac coi	rever	rever	LINE	LIMIT	Kelliai K
						JD. 377	JD. 3//		
	MHz	ав	ab/m	dB	abuv	abuv/m	abuv/m	dB	
	5149.435	8.32	34.32	43.64	48.36	4/.36	/4.00	-26.64	peak
*	5210.000	8.42	34.37	43.58	79.61	78.82	68.20	10.62	peak
	5358.401	8.64	34.49	43.43	47.09	46.79	74.00	-27.21	peak



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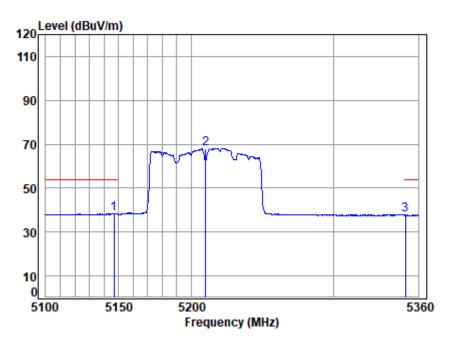
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Mode:g; Polarization:Vertical; Modulation:802.11ac; bandwidth:80MHz; Channel:middle



Site : chamber Condition: 3m VERTICAL : 14805CR Job No

Mode : 5210 Band edge

: 5G WIFI 11AC80

	****	11/1000						
	Cable	Ant	Preamp	Read		Limit	0ver	
Freq	Loss	Factor	Factor	Level	Level	Line	Limit	Remark
MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
5146.619	8.32	34.32	43.65	39.28	38.27	54.00	-15.73	Average
5210.000								
5350.946	8.63	34.48	43.44	38.07	37.74	54.00	-16.26	Average



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7.8 Frequency Stability

Test Requirement 47 CFR Part 15, Subpart C 15.407 (g)
Test Method: ANSI C63.10 (2013) Section 6.8

Limit: The frequency tolerance shall be maintained within the band of operation

frequency over a temperature variation of 0 degrees to 35 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

7.8.1 E.U.T. Operation

Operating Environment:

Temperature: 24.5 °C Humidity: 55 % RH Atmospheric Pressure: 1010 mbar

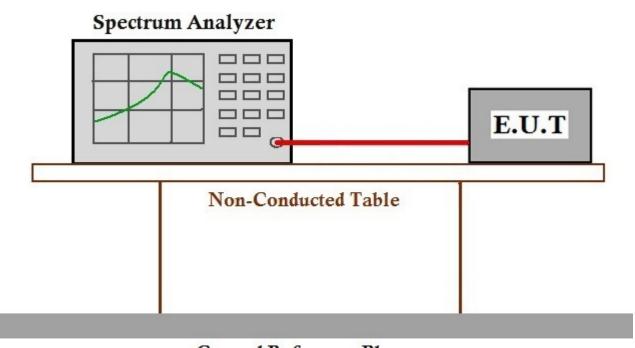
Test mode: g:TX mode (Band 1)_Keep the EUT in continuously transmitting mode with all

modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n(HT20); data rate @ MCS0 is the worst case of IEEE 802.11n(HT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT20); data rate @ MCS0 is the worst case of IEEE 802.11ac(VHT40); data rate @ MCS0 is the worst case of IEEE

802.11ac(VHT80). Only the data of worst case is recorded in the report.

7.8.2 Test Setup Diagram



Ground Reference Plane

7.8.3 Measurement Procedure and Data

The applicant declares that the emissions are maintained within the band of operation under all conditions of normal operation as specified in the user's manual and meets Section 15.407(g) requirements.



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8 **Photographs**

8.1 Test Setup

Please refer to setup photos.

8.2 EUT Constructional Details (EUT Photos)

Please Refer to external and internal photos for details.



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Appendix 9

9.1 Appendix 15.407

1.Emission Bandwidth Measurement

Test Mode	Test Channel	Ant	EBW[MHz]	Limit[MHz]	Verdict
11A	5180	Ant1	37.100		PASS
11A	5220	Ant1	33.000		PASS
11A	5240	Ant1	33.000		PASS
11N20	5180	Ant1	33.400		PASS
11N20	5220	Ant1	30.850		PASS
11N20	5240	Ant1	30.200		PASS
11N40	5190	Ant1	65.500		PASS
11N40	5230	Ant1	60.800		PASS
11AC20	5180	Ant1	32.050		PASS
11AC20	5220	Ant1	33.600		PASS
11AC20	5240	Ant1	30.400		PASS
11AC80	5210	Ant1	133.440		PASS
11AC40	5190	Ant1	67.200		PASS
11AC40	5230	Ant1	62.100		PASS



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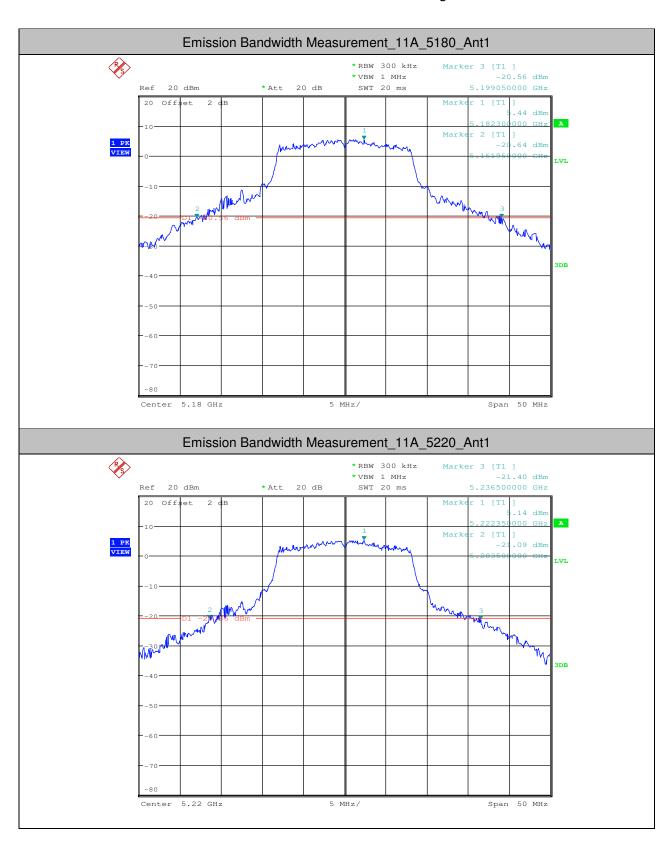
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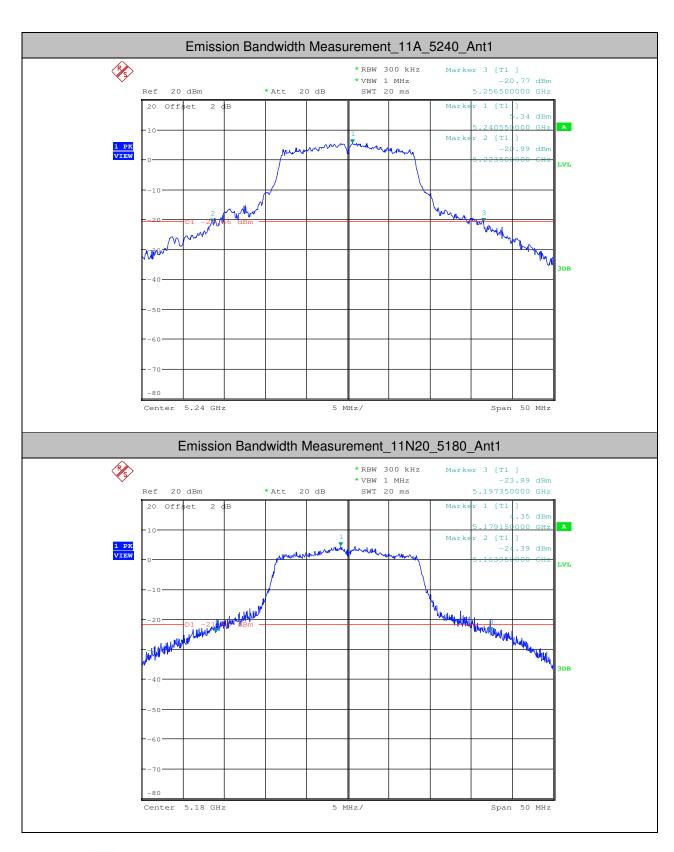
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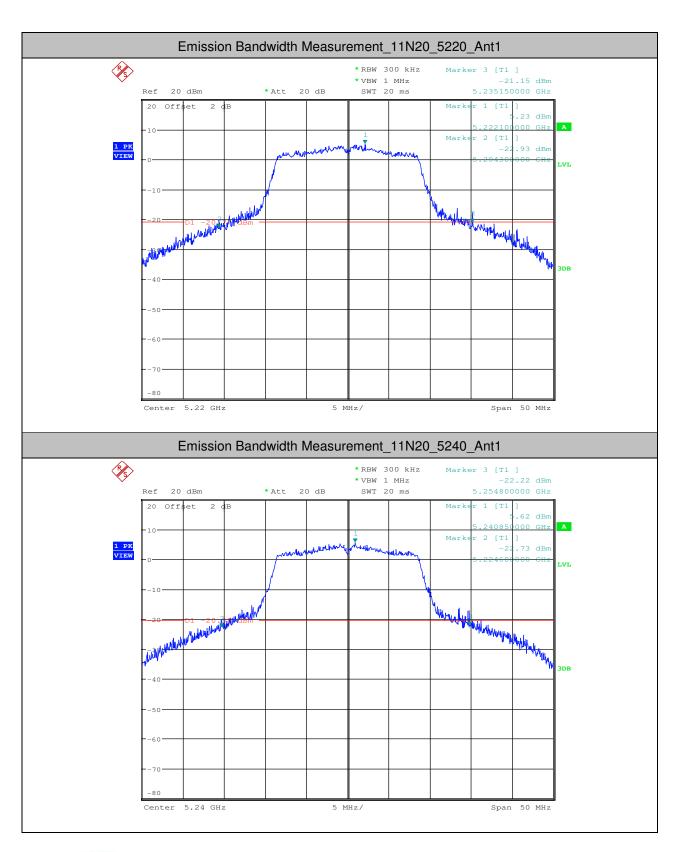
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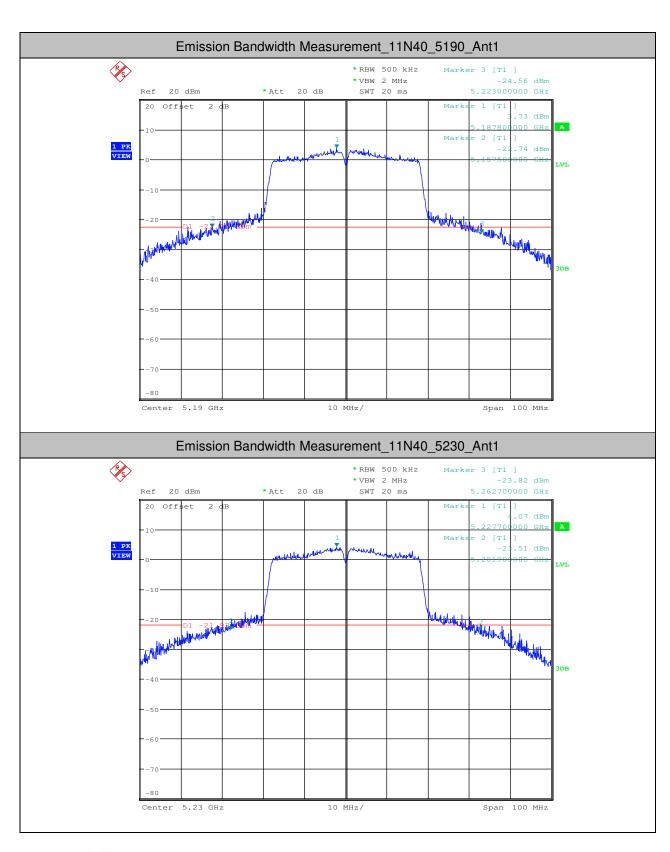
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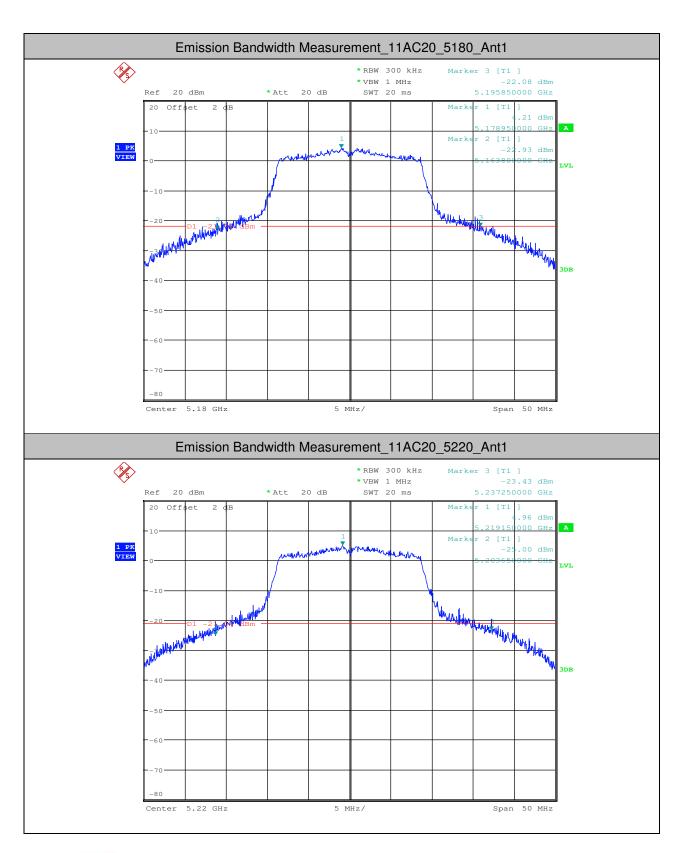
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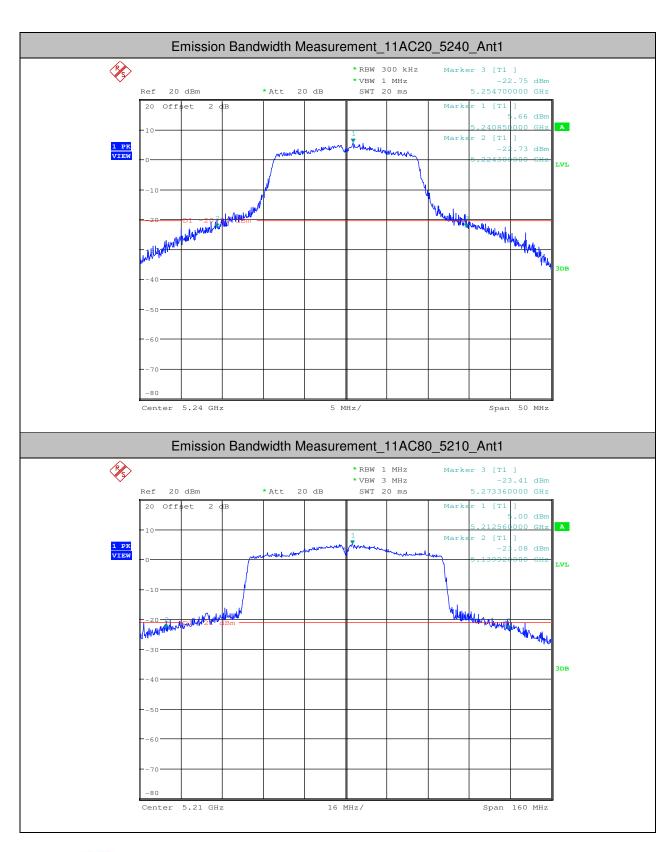
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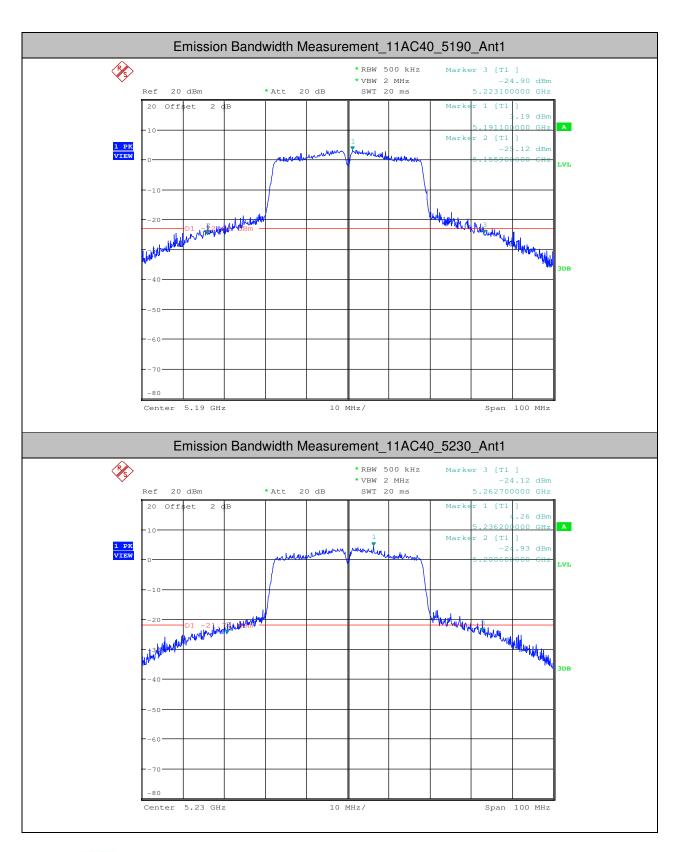
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2.Occupied Bandwidth Measurement

Test Mode	Test Channel	Ant	OBW[MHz]	Limit[MHz]	Verdict
11A	5180	Ant1	21.650		PASS
11A	5220	Ant1	18.650		PASS
11A	5240	Ant1	18.450		PASS
11N20	5180	Ant1	18.850		PASS
11N20	5220	Ant1	18.650		PASS
11N20	5240	Ant1	18.700		PASS
11N40	5190	Ant1	37.200		PASS
11N40	5230	Ant1	36.900		PASS
11AC20	5180	Ant1	18.800		PASS
11AC20	5220	Ant1	18.800		PASS
11AC20	5240	Ant1	18.750		PASS
11AC80	5210	Ant1	76.480		PASS
11AC40	5190	Ant1	37.100		PASS
11AC40	5230	Ant1	36.900		PASS



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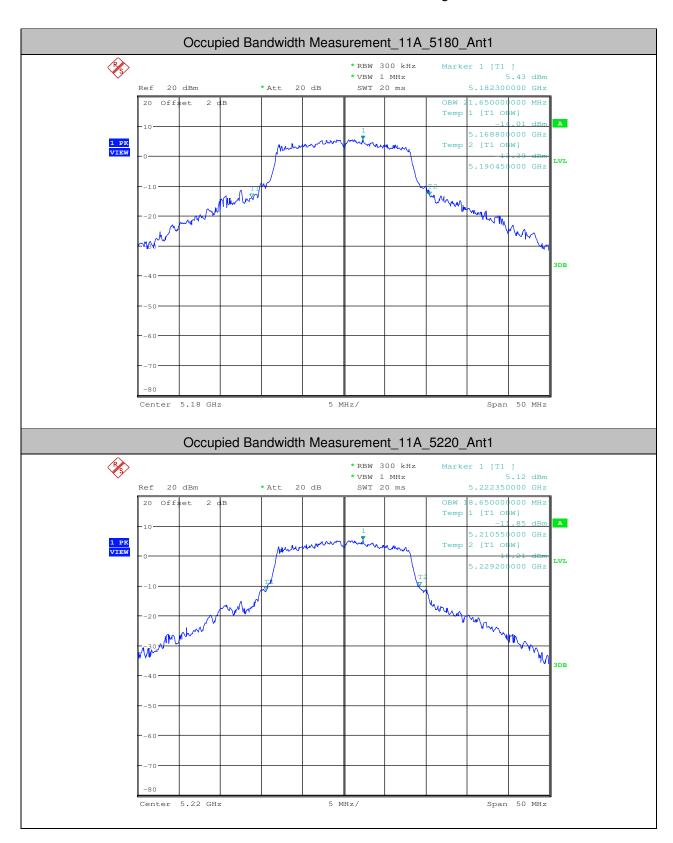
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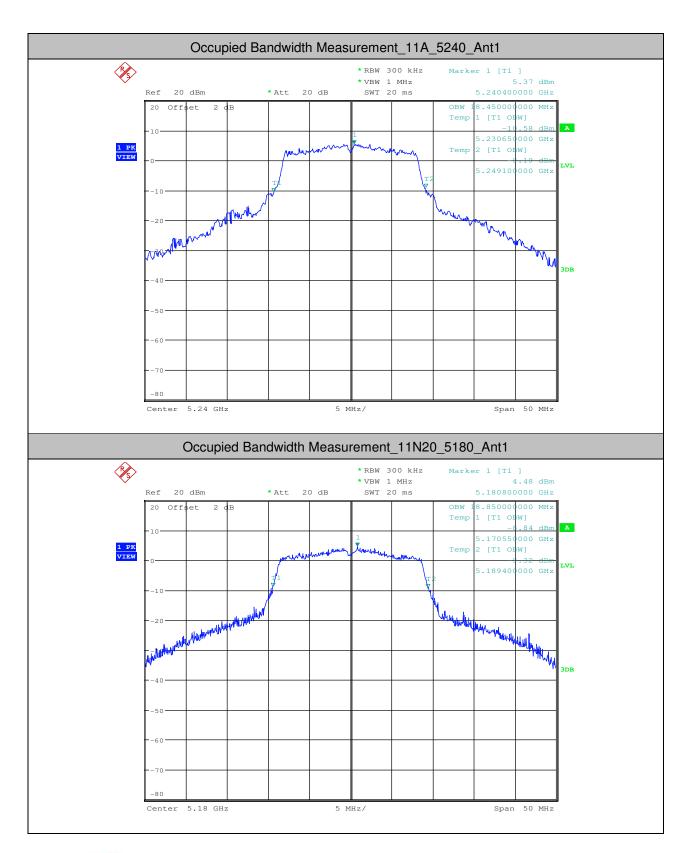
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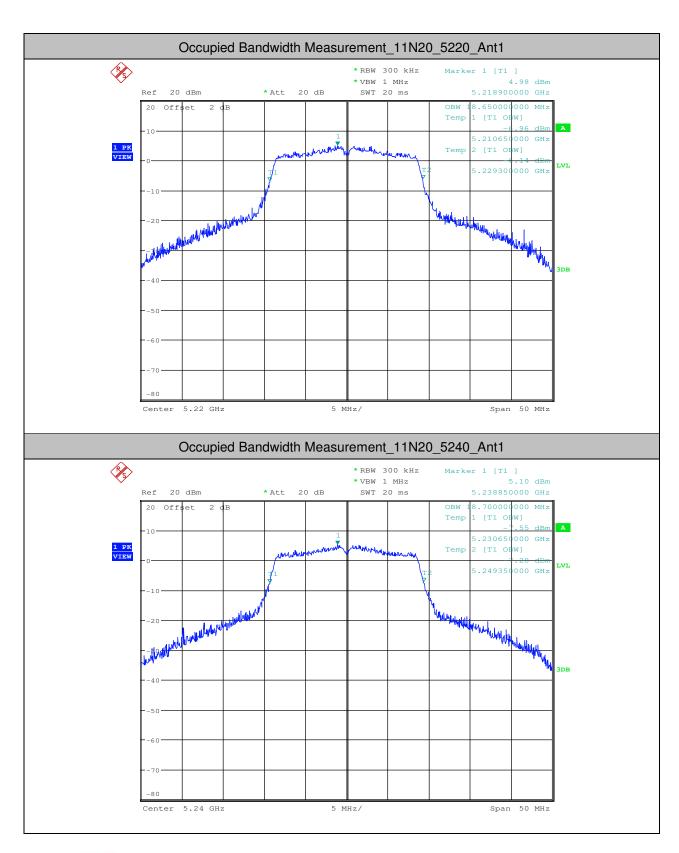
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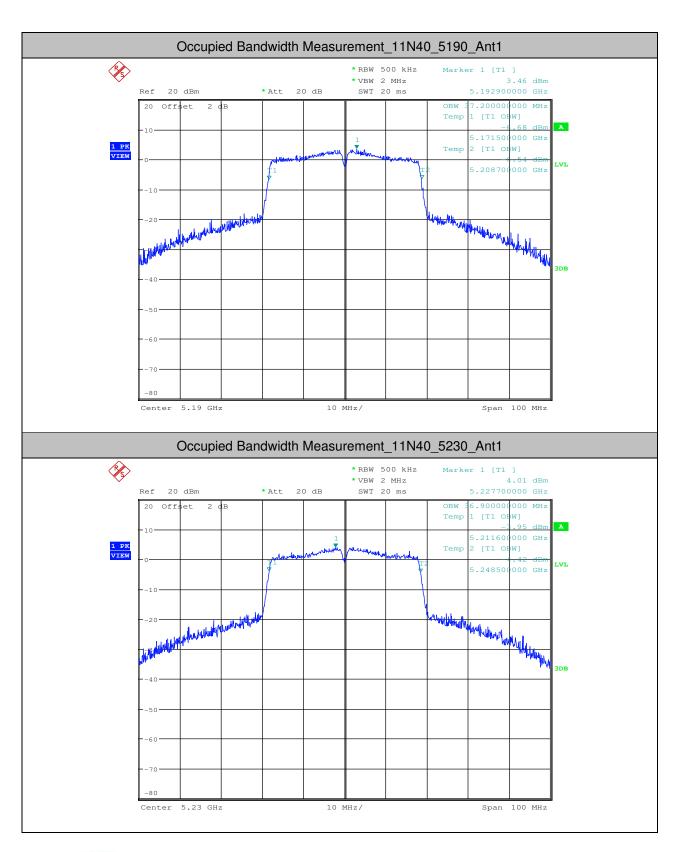
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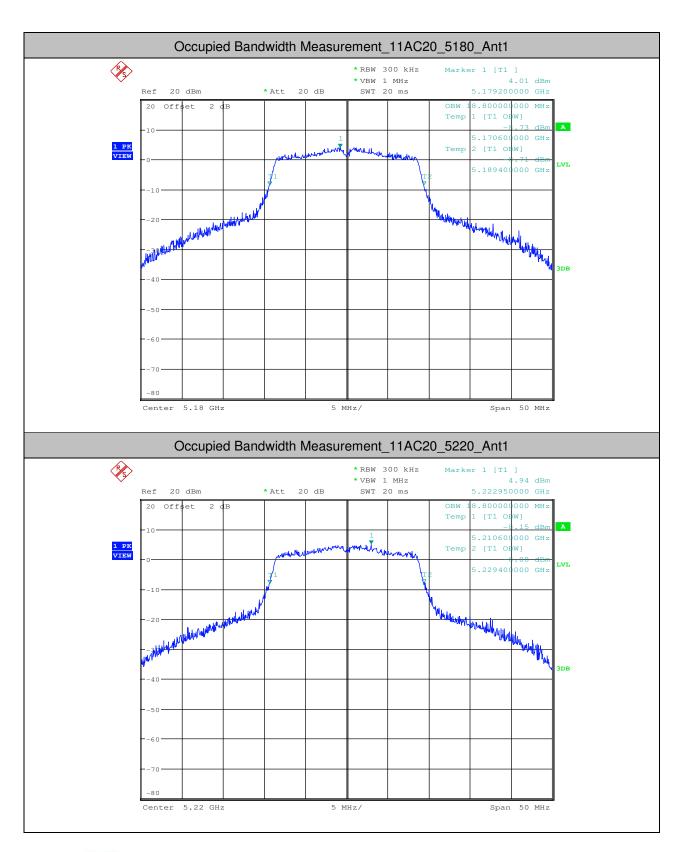
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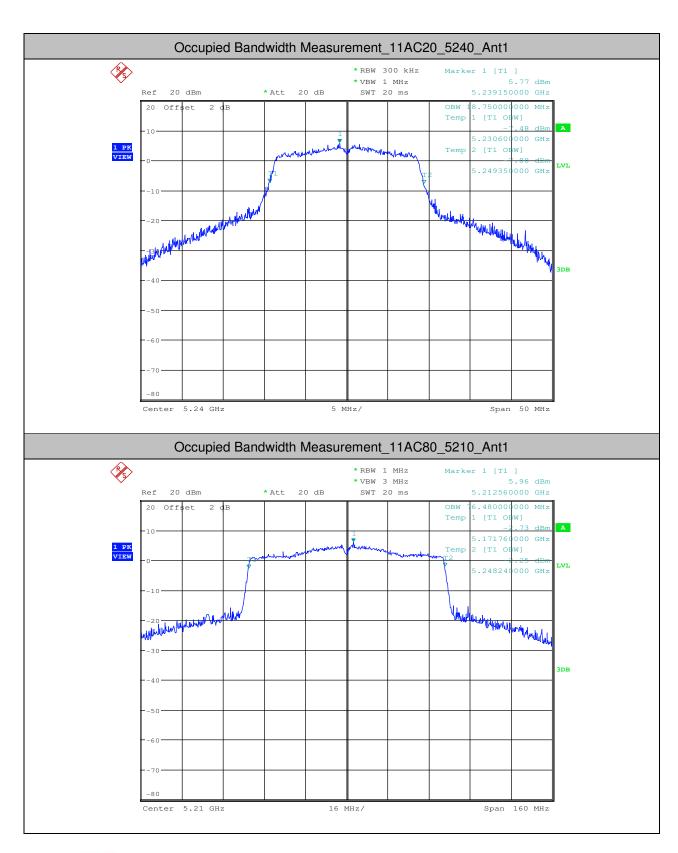
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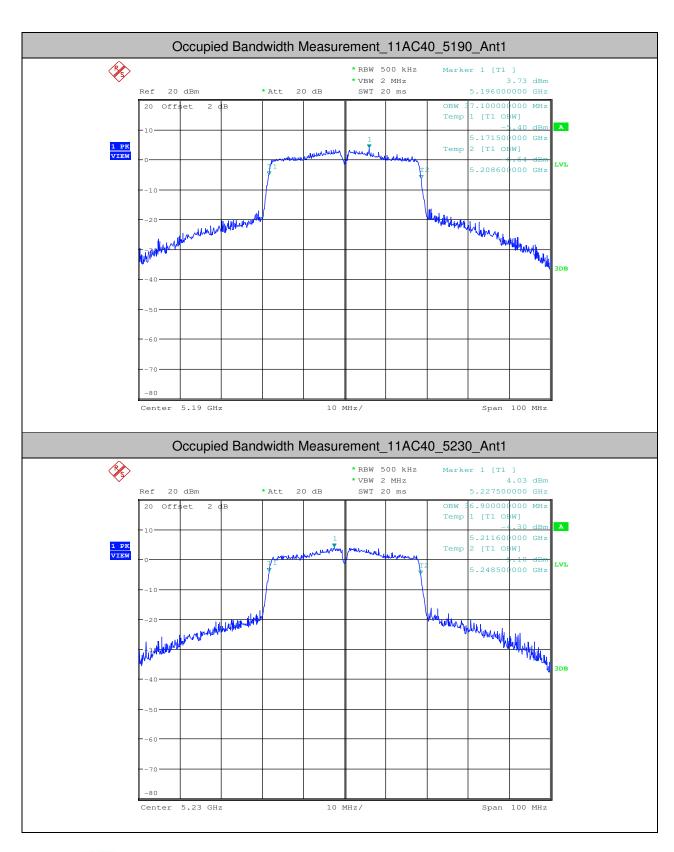
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3.Maximum Conduct Output Power

Test Mode	Test Channel	Ant	Level [dBm]	10log(1/x) Factor [dB]	Power [dBm]	Limit [dBm]	Verdict
11A	5180	Ant1	12.87	0.34	13.21	<30.00	PASS
11A	5220	Ant1	12.6	0.34	12.94	<30.00	PASS
11A	5240	Ant1	12.88	0.34	13.22	<30.00	PASS
11N20	5180	Ant1	11.14	0.36	11.50	<30.00	PASS
11N20	5220	Ant1	11.8	0.36	12.16	<30.00	PASS
11N20	5240	Ant1	12.05	0.36	12.41	<30.00	PASS
11N40	5190	Ant1	10.76	0.66	11.42	<30.00	PASS
11N40	5230	Ant1	11.54	0.68	12.22	<30.00	PASS
11AC20	5180	Ant1	10.99	0.35	11.34	<30.00	PASS
11AC20	5220	Ant1	11.88	0.37	12.25	<30.00	PASS
11AC20	5240	Ant1	12.14	0.35	12.49	<30.00	PASS
11AC80	5210	Ant1	10.97	1.22	12.19	<30.00	PASS
11AC40	5190	Ant1	10.82	0.68	11.50	<30.00	PASS
11AC40	5230	Ant1	11.61	0.68	12.29	<30.00	PASS



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4. Maximum Power Spectral Density

Test Mode	Test Channel	Ant	Level [dBm/MHz]	10log(1/x) Factor [dB]	PSD [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	5180	Ant1	4.33	0.34	4.67	<17.00	PASS
11A	5220	Ant1	3.83	0.34	4.17	<17.00	PASS
11A	5240	Ant1	4.21	0.34	4.55	<17.00	PASS
11N20	5180	Ant1	2.66	0.36	3.02	<17.00	PASS
11N20	5220	Ant1	3.23	0.36	3.59	<17.00	PASS
11N20	5240	Ant1	3.57	0.36	3.93	<17.00	PASS
11N40	5190	Ant1	-0.8	0.66	-0.14	<17.00	PASS
11N40	5230	Ant1	-0.05	0.68	0.63	<17.00	PASS
11AC20	5180	Ant1	2.37	0.35	2.72	<17.00	PASS
11AC20	5220	Ant1	3.37	0.37	3.74	<17.00	PASS
11AC20	5240	Ant1	3.66	0.35	4.01	<17.00	PASS
11AC80	5210	Ant1	-2.88	1.22	-1.66	<17.00	PASS
11AC40	5190	Ant1	-0.56	0.68	0.12	<17.00	PASS
11AC40	5230	Ant1	0.03	0.68	0.71	<17.00	PASS



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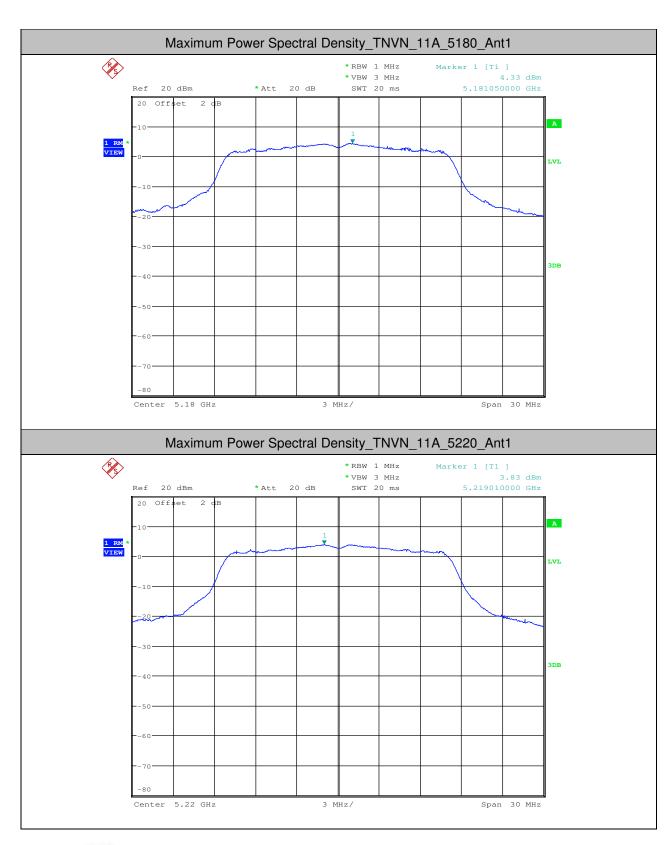
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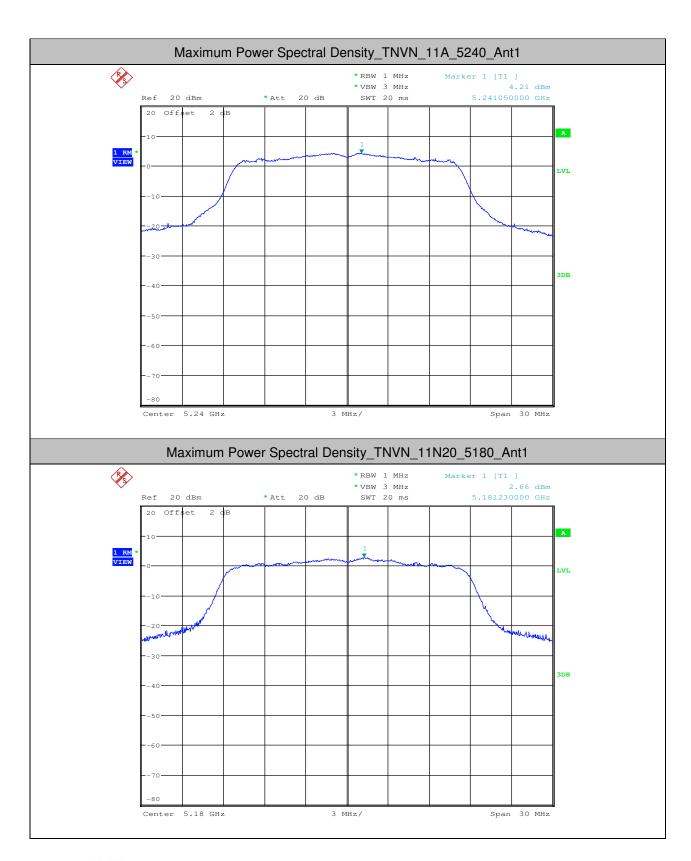
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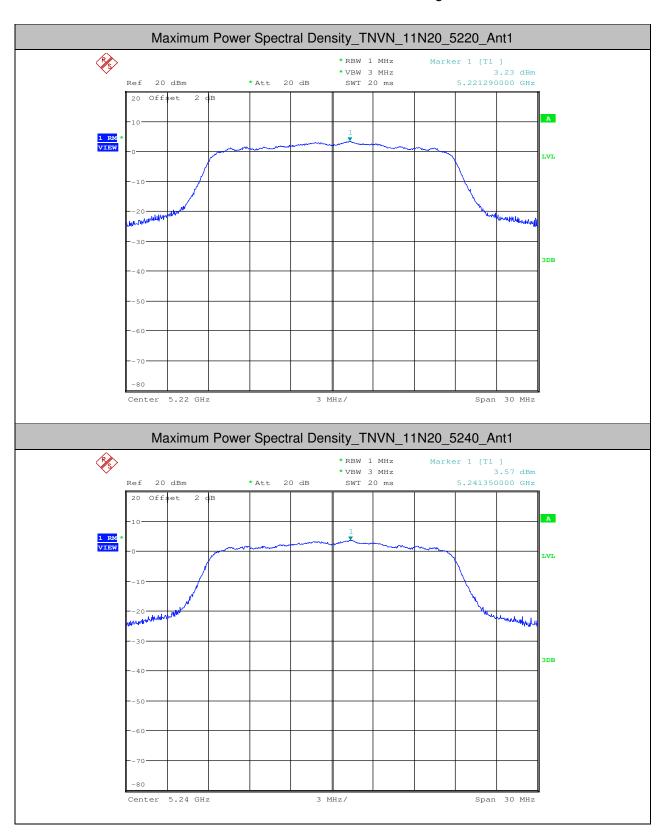
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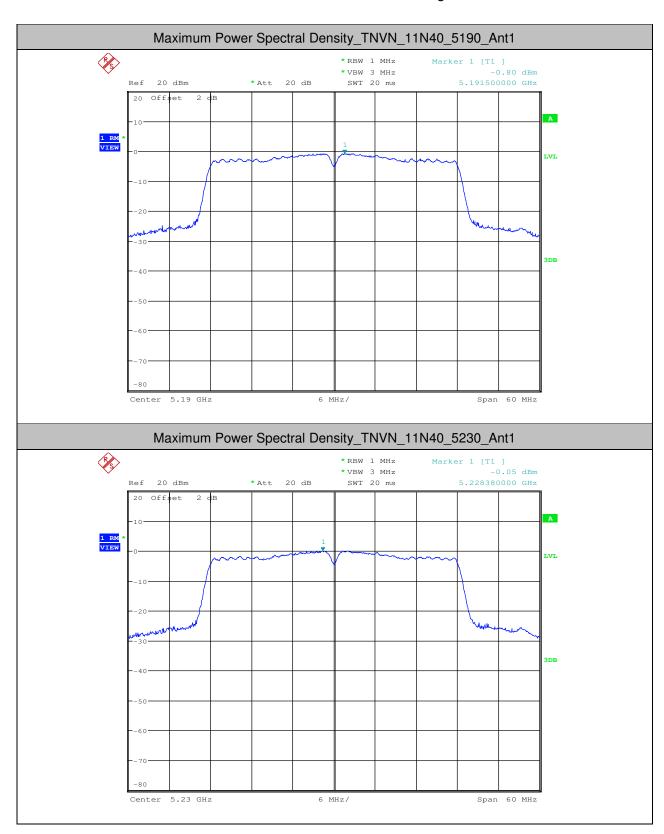
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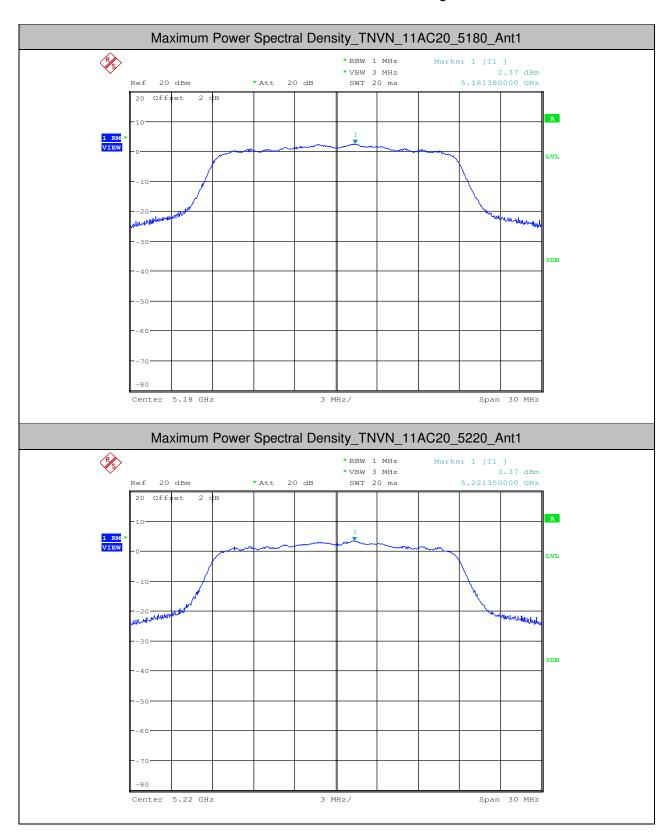
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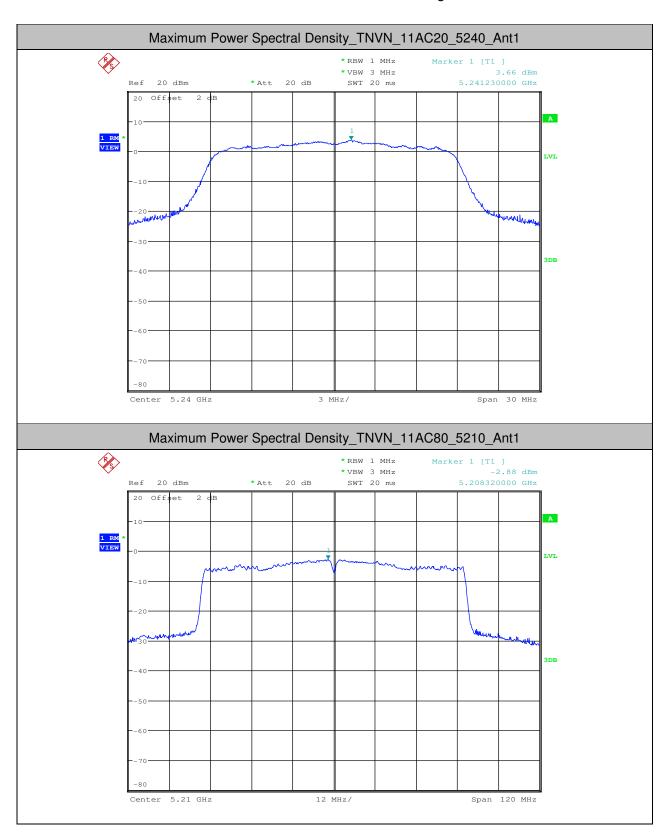
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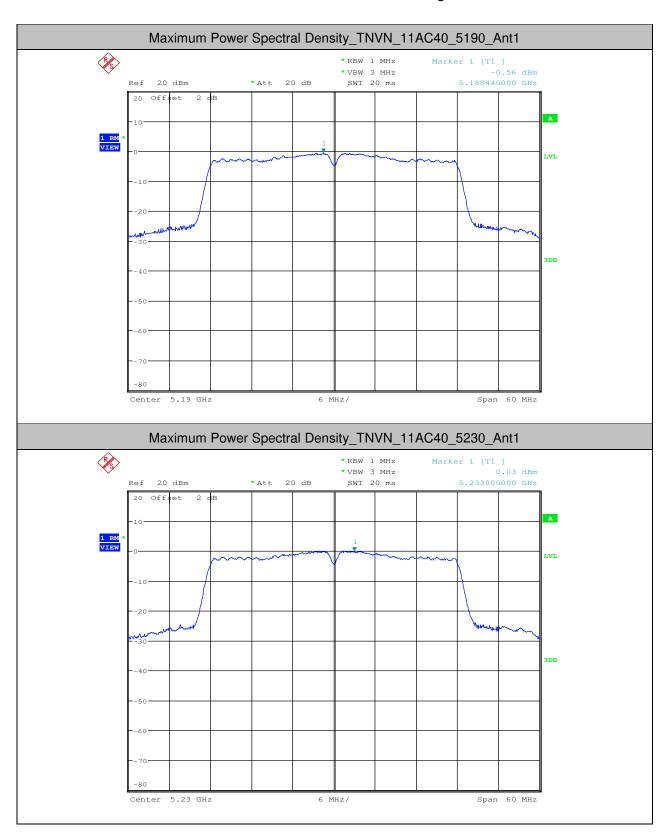
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5.Duty Cycle (x)

Test Mode	Test Channel	Ant	Duty Cycle[%]	10log(1/x) Factor[dB]
11A	5180	Ant1	92.38	0.34
11A	5220	Ant1	92.38	0.34
11A	5240	Ant1	92.38	0.34
11N20	5180	Ant1	91.96	0.36
11N20	5220	Ant1	91.96	0.36
11N20	5240	Ant1	91.96	0.36
11N40	5190	Ant1	85.94	0.66
11N40	5230	Ant1	85.6	0.68
11AC20	5180	Ant1	92.28	0.35
11AC20	5220	Ant1	91.93	0.37
11AC20	5240	Ant1	92.28	0.35
11AC80	5210	Ant1	75.59	1.22
11AC40	5190	Ant1	85.43	0.68
11AC40	5230	Ant1	85.43	0.68



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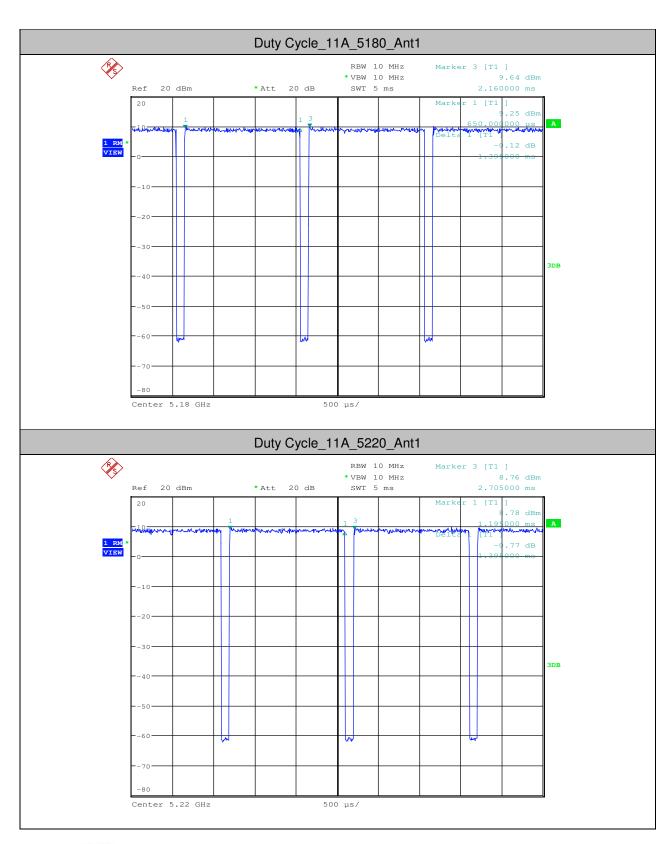
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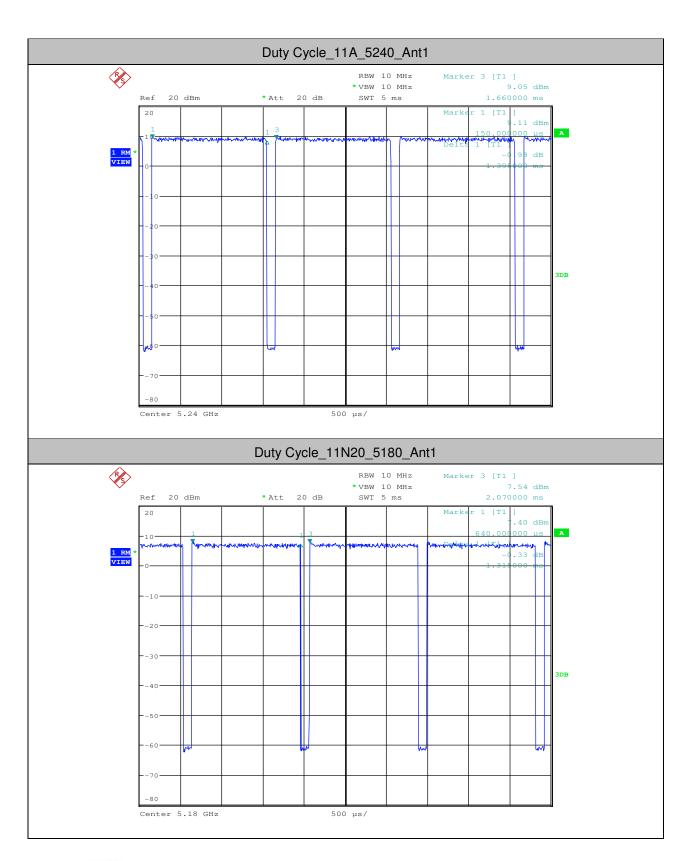
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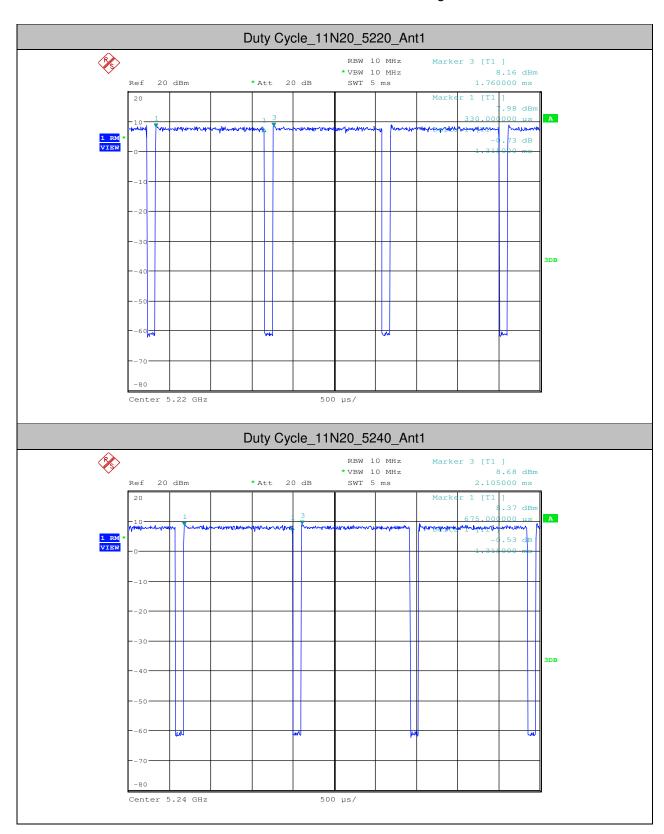
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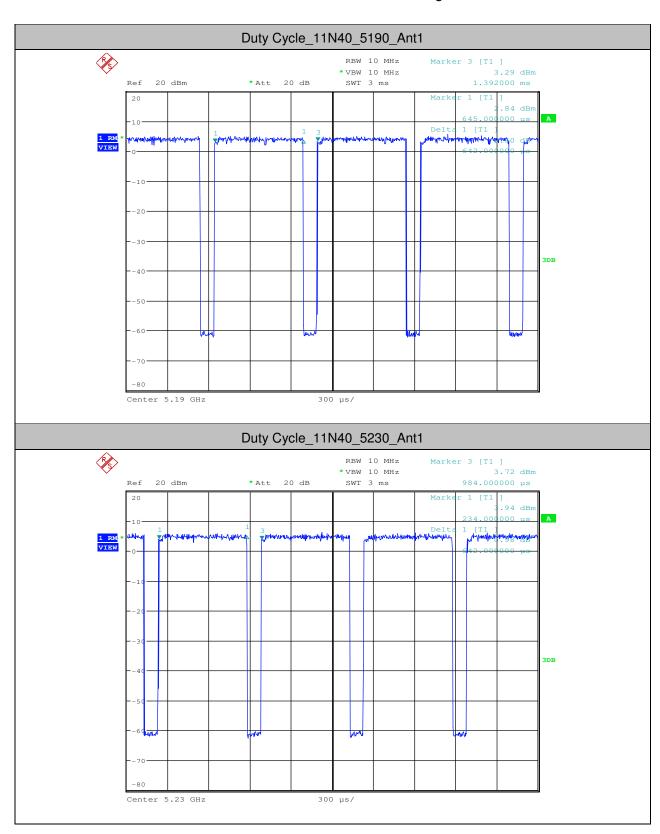
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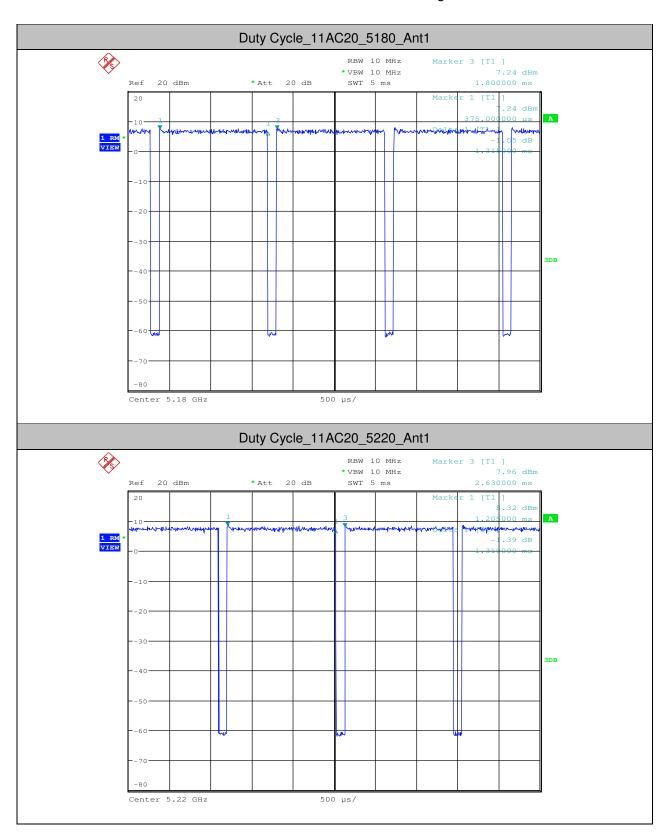
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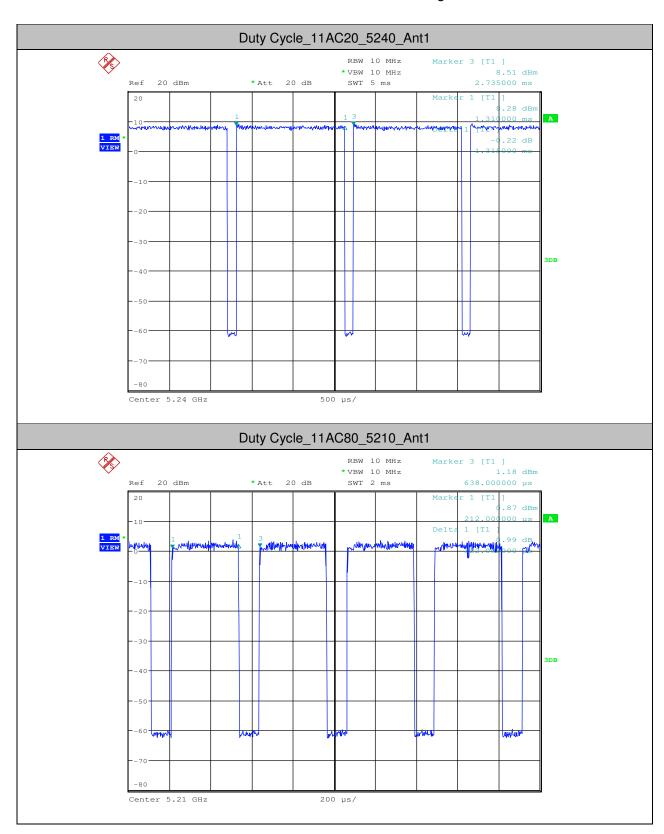
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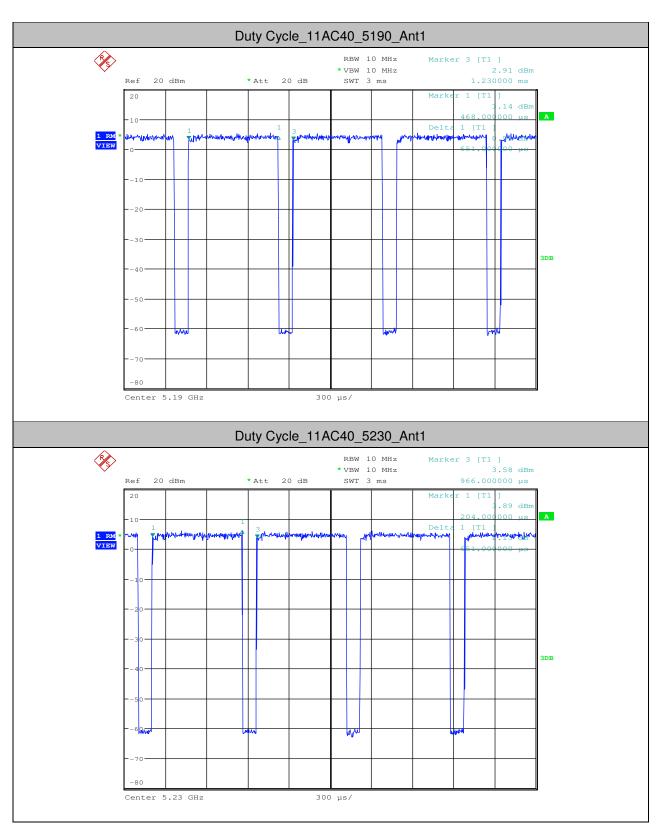
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