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1 Cover Page

FCC Part 15E TEST REPORT

Application No.:	SHEM1405000984RF					
Applicant:	GE Healthcare					
FCC ID:	2ACSS-IDR3543					
Equipment Under Test NOTE: The following sa	t (EUT): ample(s) submitted was/were identified on behalf of the client as					
Product Name:	Digital X-ray Image Detector					
Model No.(EUT):	iDR3543					
Standards:	FCC PART 15 Subpart E: 2014					
Date of Receipt:	May 05, 2014					
Date of Test:	August 01, 2014 to August 30, 2014					
Date of Issue:	December 22, 2014					
Test Result:	Pass*					

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

Tony Wu E&E/Section Manager

SGS-CSTC (Shanghai) Co., Ltd.

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

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2 Version

	Revision Record								
Version	Chapter	Date	Modifier	Remark					
00	1	December 22, 2014	/	Original					

Authorized for issue by:		
Engineer	Eddy Zong	Eddy Zong
	Print Name	
Clerk	Susie Liu Print Name	Suire Liv
Reviewer	Keny Xu Print Name	Kony. Ku



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3 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	15.203 & 15.407 a(1)&(3)	-	PASS
AC Power Line Conducted Emission	15.407 b(6)	ANSI C63.10 (2009) Clause 6.2	N/A ¹
26 dB Emission bandwidth	15.403 i	ANSI C63.10 (2009) Clause 6.9.1	PASS
Minimum 6 dB bandwidth (5.725-5.85 GHz band)	15.407 (e)	ANSI C63.10 (2009) Clause 6.9.1	PASS
Maximum Conducted output power	15.407 a(1)&(3)	ANSI C63.10 (2009) Clause 6.10.2	PASS
Transmitter Power Control	15.407 (h)(1)	ANSI C63.10 (2009) Clause 6.10.2	N/A ²
Peak Power spectrum density	15.407 a(1)&(3)	ANSI C63.10 (2009) Clause 6.11.1.2.1	PASS
Radiated Spurious emissions and Band-edge	15.209 & 15.407	ANSI C63.10 (2009) Section 6.4&6.5&6.6	PASS
Frequency Stability	15.407 (g)	ANSI C63.10 (2009) Clause 6.8	PASS

Notes: 1. This EUT is powered by battery only; therefore the test on mains terminals is not applicable.

2. Transmit Power Control was not tested as the maximum EIRP is less than 500mW(27dBm)



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5 General Information

5.1 Client Information

Applicant: GE Healthcare

Address of Applicant: GE, Building 3, Talents Union, No.3 Xixin Avenue, West District of Hi-tech

Zone, Chengdu, Sichuan, CN. (Zipcode: 611731)

Manufacturer: GE HEALTHCARE (TIANJIN) COMPANY LIMITED

Address of Manufacturer: No.266 Jingsan Road, Tianjin Airport Economic Area TIANJIN 300308

CHINA

Factory: GE HEALTHCARE (TIANJIN) COMPANY LIMITED

Address of Factory: No.266 Jingsan Road, Tianjin Airport Economic Area TIANJIN 300308

CHINA

5.2 General Description of E.U.T.

Product Description: Digital X Ray Imaging System-detector part

Battery: Type: Li-on Rechargeable Battery

Model No.: S617

Technical Spec.: DC 12V 2800mAh

Remark: Supply the EUT with fully charged battery during the testing.

5.3 Technical Specifications

Operation Frequency: 802.11 a/n(HT20): U-NII-1: 5180-5240MHz, U-NII-3: 5745-5825MHz

802.11 n(HT40): U-NII-1: 5190-5230MHz, U-NII-3: 5755-5795MHz

Modulation Technique: OFDM(64QAM, 16QAM, QPSK, BPSK)
Data Rate: 802.11a: 6/9/12/18/24/36/48/54Mbps

802.11n(HT20): 6.5/13/19.5/26/39/52/58.5/65Mbps 802.11n(HT40): 13.5/27/40.5/54/81/108/121.5/135Mbps

Support TPC:

☐ Yes ☐ No

Antenna Type Integral (Remark: the two PIFA antennas are not working simultaneously.)

Antenna Gain U-NII-1: 5.03dBi, U-NII-3: 3.49dBi

Number of Channel: 802.11 a/n(HT20): 9 Channel 36, 40, 44, 48, 149, 153, 157, 161, 165

802.11 n(HT40): 4 Channel 38, 46, 151, 159

Operation Frequency:

602.11 II(11 10). 1 Griainioi 66, 16, 161, 166							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)		
36	5180	48	5240	159	5795		
38	5190	149	5745	161	5805		
40	5200	151	5755	165	5825		
44	5220	153	5765				
46	5230	157	5785		-		



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5.4 Test Mode

Test Mode	Description of Test Mode
Engineering mode	Using test software to control EUT working in continuous transmitting, and select
Linginicening mode	channel and modulation type.

5.5 Test Channel

Preliminary tests were performed in all tests in different data rata and antenna configurations at lowest channel, the data rates of worse case as below were chosen for final test.

Onami	charmer, the data rates of worse case as below were chosen for final test.									
		802.11 a		8	802.11 n(HT20)			802.11 n(HT40)		
Band	Channel	Frequency	Data rate	Channel	Frequency	Data rate	Channel	Frequency	Data rate	
	CH36	5180MHz	6Mbps	CH36	5180MHz	6.5Mbps	CH38	5190MHz	13.5Mbps	
U-NII-1	CH40	5200MHz	6Mbps	CH40	5200MHz	6.5Mbps	CH46	5230MHz	13.5Mbps	
	CH48	5240MHz	6Mbps	CH48	5240MHz	6.5Mbps		-		
	CH149	5745MHz	6Mbps	CH149	5745MHz	6.5Mbps	CH151	5755MHz	13.5Mbps	
U-NII-3	CH157	5785MHz	6Mbps	CH157	5785MHz	6.5Mbps	CH159	5795MHz	13.5Mbps	
	CH165	5825MHz	6Mbps	CH165	5825MHz	6.5Mbps		-		

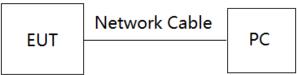
5.6 Description of Support Units

The EUT has been tested with support equipments as below.

Description	Manufacturer	Model No.	Supplied By
PC	HP	Z400	Client

Software name	Manufacturer	Version	Supplied By
ADEPT EngApp	GE	2.0.0	Client

Description of connection:



5.7 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

No.588 West Jindu Road, Songjiang District, Shanghai, China.201612.

Tel: +86 21 6191 5666 Fax: +86 21 6191 5678



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5.8 Test Facility

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

CNAS (No. CNAS L0599)

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. 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. Date of expiry: 2017-07-14.

FCC – Registration No.: 402683

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered and fully described in a report filed with the Federal Communications Commission (FCC). The acceptance letter from the FCC is maintained in our files. Registration No.: 402683, Expiry Date: 2017-09-16.

Industry Canada (IC) – IC Assigned Code: 8617A

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1. Expiry Date: 2017-06-18.

VCCI (Member No.: 3061)

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-3868 and C-4336 respectively. Date of Registration: 2012-05-29. Date of Expiry: 2015-05-28.

5.9 Measurement Uncertainty

No.	Parameter	Measurement Uncertainty
1	Radio Frequency	< ±1 x 10 ⁻⁵
2	Total RF power, conducted	< ±1.5 dB
3	RF power density, conducted	< ±3 dB
4	Spurious emissions, conducted	< ±3 dB
5	All emissions, radiated	< ±6 dB (30MHz - 1GHz) < ±6 dB (above 1GHz)
6	Temperature	< ±1°C
7	Humidity	< ±5 %
8	DC and low frequency voltages	< ±3 %



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6 Equipments Used during Test

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due date
1	EMI test receiver	Rohde & Schwarz	ESCS30	100086	2014-02-13	2015-02-12
2	Line impedance stabilization network	SCHWARZBECK	NSLK8127	8127490	2014-02-13	2015-02-12
3	Line impedance stabilization network	ETS	3816/2	00034161	2014-02-13	2015-02-12
4	Spectrum Analyzer	Rohde & Schwarz	FSP-30	2705121009	2014-02-13	2015-02-12
5	EMI test receiver	Rohde & Schwarz	ESU40	100109	2014-02-13	2015-02-12
6	Active Loop Antenna (9kHz to 30MHz)	Rohde & Schwarz	FMZB 1519	1519-034	2014-03-19	2015-03-18
7	Broadband UHF-VHF ANTENNA (25MHz to 2GHz)	SCHWARZBECK	VULB9168	9168-313	2014-02-13	2015-02-12
8	Ultra broadband antenna (25MHz to3GHz)	Rohde & Schwarz	HL562	100227	2014-08-30	2015-08-29
9	Horn Antenna (1GHz to 18GHz)	Rohde & Schwarz	HF906	100284	2014-02-13	2015-02-12
10	Horn Antenna (1GHz to 18GHz)	SCHWARZBECK	BBHA9120D	9120D-679	2014-02-13	2015-02-12
11	Horn Antenna (14GHz to 40GHz)	SCHWARZBECK	BBHA 9170	BBHA9170373	2014-02-13	2015-02-12
12	Pre-amplifier (9KHz – 2GHz)	LNA6900	TESEQ	71033	2014-02-13	2015-02-12
13	Pre-amplifier (1GHz – 26.5GHz)	Rohde & Schwarz	SCU-F0118-G40- BZ4-CSS(F)	10001	2014-02-13	2015-02-12
14	Pre-amplifier (14GHz – 40GHz)	Rohde & Schwarz	SCU-F1840-G35- BZ3-CSS(F)	10001	2014-02-13	2015-02-12
15	Tunable Notch Filter	Wainwright instruments Gmbh	WRCT800.0/880.	9170397	2014-06-02	2015-06-01
16	High pass Filter	FSCW	HP 12/2800- 5AA2	19A45-02	2014-06-02	2015-06-01
17	High-low temperature cabinet	Suzhou Zhihe	TL-40	50110050	2014-09-11	2015-09-10
18	AC power stabilizer	WOCEN	6100	51122	2014-06-02	2015-06-01
19	DC power	QJE	QJ30003SII	611145	2014-06-02	2015-06-01
20	Signal Generator (Interferer)	Agilent	SMR40	100555	2014-02-14	2015-02-13
21	Signal Generator (Blocker)	Rohde & Schwarz	SMJ100A	02.20.360.142	2014-02-13	2015-02-12
22	Splitter	Anritsu	MA1612A	M12265	/	/
23	Coupler	e-meca	803-S-1	900-M01	/	/



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7 Test Results

7.1 E.U.T. Test Conditions

Test Power: DC 12V

Requirements: 15.31(e) For intentional radiators, measurements of the variation of the input

power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. For battery operated equipment, the equipment tests shall be performed using a

new battery.

Operating Environment:

non ballory.				
Temperature:	20.0 -25.0 °C			
Humidity:	35-75 % RH			
Atmospheric Pressure:	99.2 -102.0 kPa			

Test frequencies:

According to the 15.31(m) Measurements on intentional radiators or receivers, other than TV broadcast receivers, shall be performed and. if required reported for each band in which the device can be operated with the device operating at the number of frequencies in each band specified in the following table:

Frequency range over	Number of	Location in the range of	
which device operates	frequencies	operation	
1 MHz or less	1	Middle	
1 to 10 MHz	2	1 near top and 1 near bottom	
More than 10 MHz	3	1 near top. 1 near middle and 1 near bottom	

Pursuant to Part 15.31(c) For swept frequency equipment, measurements shall be made with the frequency sweep stopped at those frequencies chosen for the measurements to be reported



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7.2 Antenna Requirement

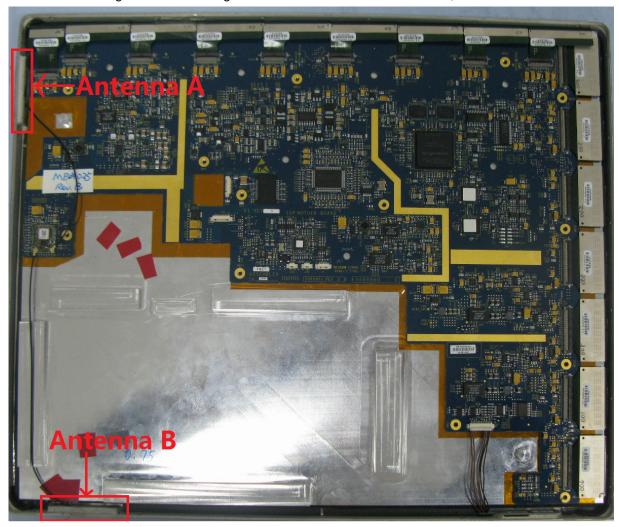
Standard requirement:

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited

EUT Antenna:

The antenna is Plug-in antenna. The gain is less than 5.03dBi for 5.2G band, 3.49dBi for 5.8G band.





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7.3 Conducted Emissions on Mains Terminals

Frequency Range: 150 KHz to 30 MHz

Class/Severity: Class B

Limit:

Frequency range	Class B Limits: dB (μV)		
MHz	Quasi-peak	Average	
0.15 to 0.50	66 to 56	56 to 46	
0.50 to 5	56	46	
5 to 30	60	50	

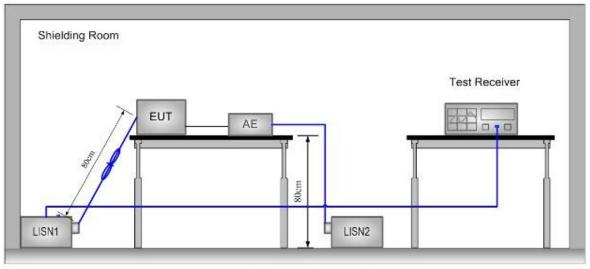
Note1: The limit decreases linearly with the logarithm of the frequency in the range

0.15 MHz to 0.50MHz.

Note2: The lower limit is applicable at the transition frequency.

Test site/setup: Test instrumentation set-up:

Frequency Range	Detector	RBW	VBW
9KHz to 150Hz	Quasi-peak	200Hz	500Hz
150KHz to 30MHz	Quasi-peak	9kHz	30kHz



Ground Reference Plane

Test Procedure:

- a) The mains terminal disturbance voltage was measured with the EUT in a shielded room.
- b) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides $50\Omega/50\mu H + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN, which was bonded to the ground reference plane in the same way as the LISN 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
- c) 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, but separated from metallic contact with the ground reference plane by 0.1m of insulation.

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d) 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 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISN mounted on top of the ground reference plane. This distance was between the closest points of the LISN and the EUT. The mains lead of EUT excess 0.8m was folded back and forth parallel to the lead so as to form a horizontal bundle with a length between 0.3m and 0.4m. All other units of the EUT and associated equipment were at least 0.8 m from the LISN.

Test Result: N/A

Test Data:

This EUT is powered by battery only; therefore the AC Conducted Emission test is not applicable.



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7.4 Duty Cycle

In order to assist with the determination of the average level of fundamental and spurious emissions field strength, measurements were made of duty cycle to determine the transmission duration and the silent period time of the transmitter. The transmitter duty cycle was measured using a spectrum analyser in the time domain and calculated by using the following calculation:

Duty cycle= T on time / Period

Duty factor = 10 * log (1/Duty cycle)

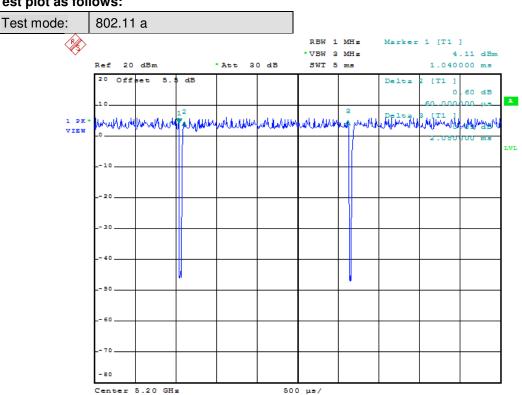
If duty cycle of test signal is > 98%, duty factor is not required.

If duty cycle of test signal is < 98%, duty factor shall be considered.

Test Data:

Test Mode	T on time(ms)	Period(ms)	Duty Cycle	Duty Factor
802.11 a	2.02	2.08	97.12%	0.13
802.11 n(HT20)	1.90	1.97	96.45%	0.16
802.11 n(HT40)	0.908	0.984	92.28%	0.20

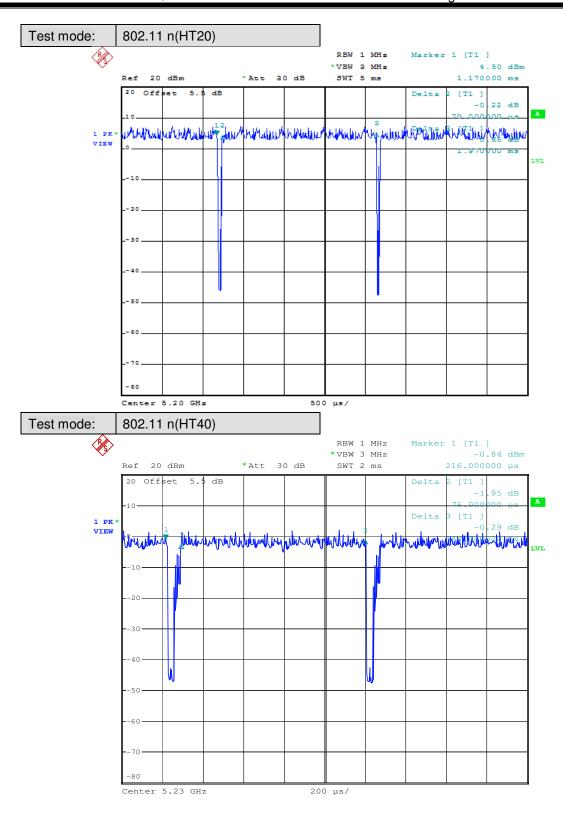
Test plot as follows:





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7.5 26dB Emission Bandwidth

For purposes of this subpart the emission bandwidth shall be determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 26 dB down relative to the maximum level of the modulated carrier. Determination of the emissions bandwidth is based on the use of measurement instrumentation employing a peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

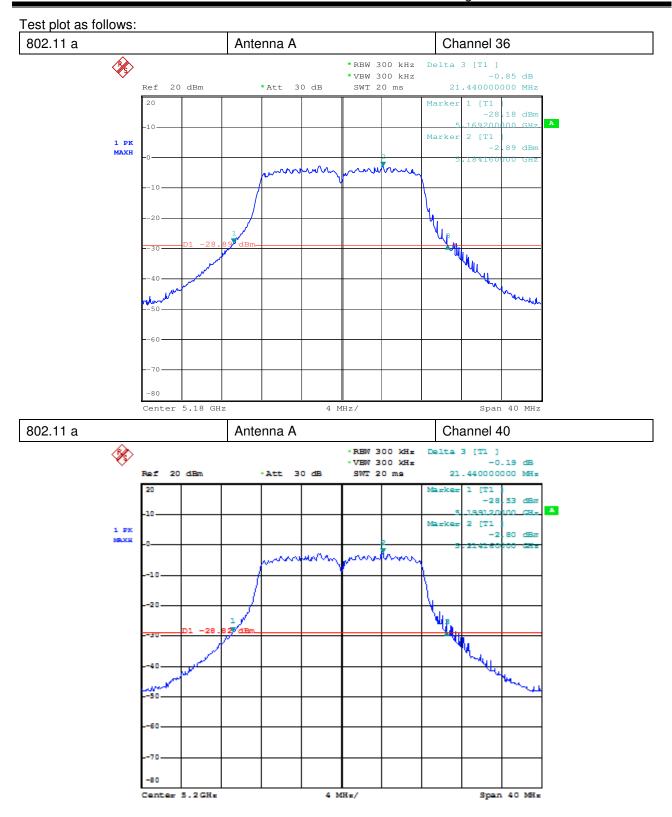
Test Data:

Antenna	Test Mode	Band	CH	Frequency (MHz)	Bandwidth (MHz)
		U-NII-1	36	5180	21.44
			40	5200	21.44
			48	5240	21.44
	802.11a	U-NII-3	149	5745	21.76
			157	5785	21.44
			165	5825	21.68
			36	5180	22.40
		U-NII-1	40	5200	22.72
Α			48	5240	22.16
	802.11n(HT20)		149	5745	22.56
		U-NII-3	157	5785	22.56
			165	5825	22.24
		LI NIII 1	38	5190	43.52
		U-NII-1	46	5230	43.36
	802.11n(HT40)	LI NIII 2	151	5755	44.32
		U-NII-3	159	5795	44.00
		U-NII-1	36	5180	21.68
			40	5200	21.60
			48	5240	21.44
	802.11a	U-NII-3	149	5745	21.60
			157	5785	21.68
			165	5825	21.60
		U-NII-1	36	5180	22.40
			40	5200	22.72
В			48	5240	22.40
	802.11n(HT20)	U-NII-3	149	5745	22.48
			157	5785	22.08
			165	5825	22.48
		U-NII-1	38	5190	43.68
	802.11n(HT40)		46	5230	43.36
		U-NII-3	151	5755	43.20
			159	5795	43.36



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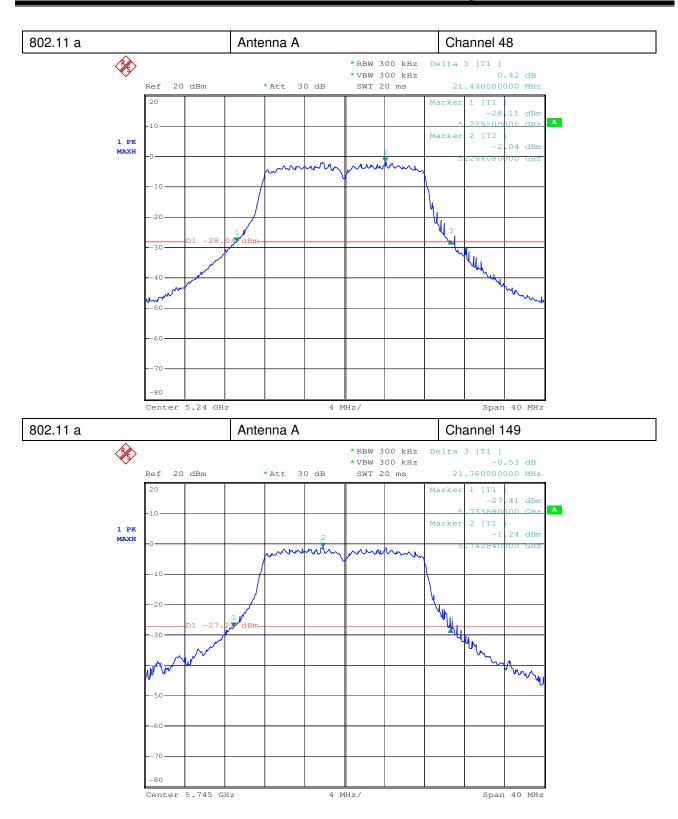


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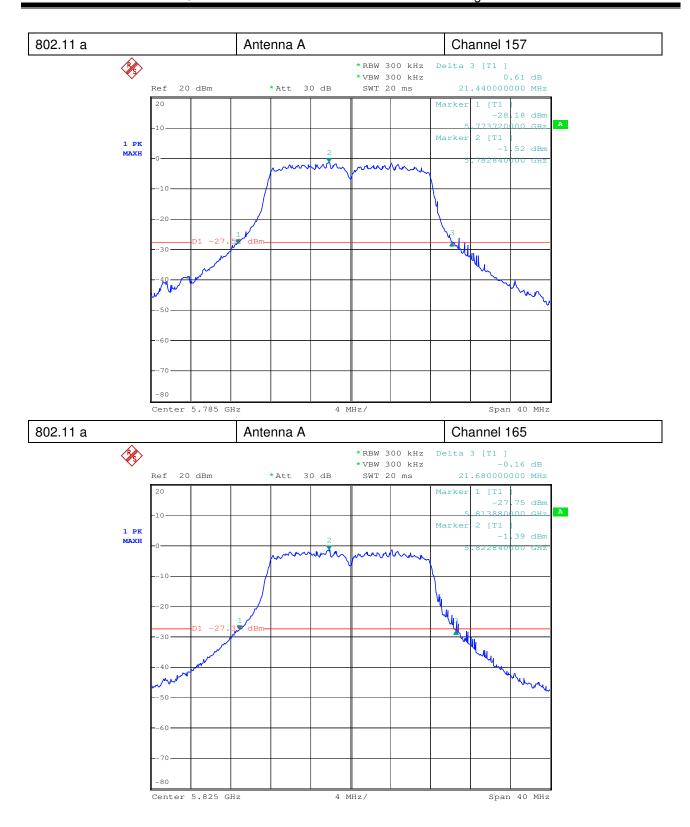


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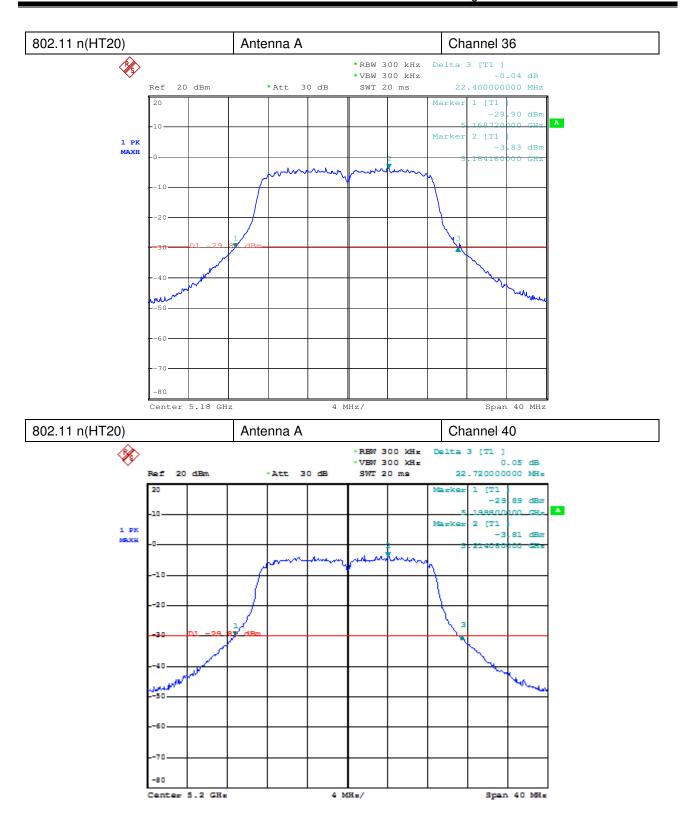


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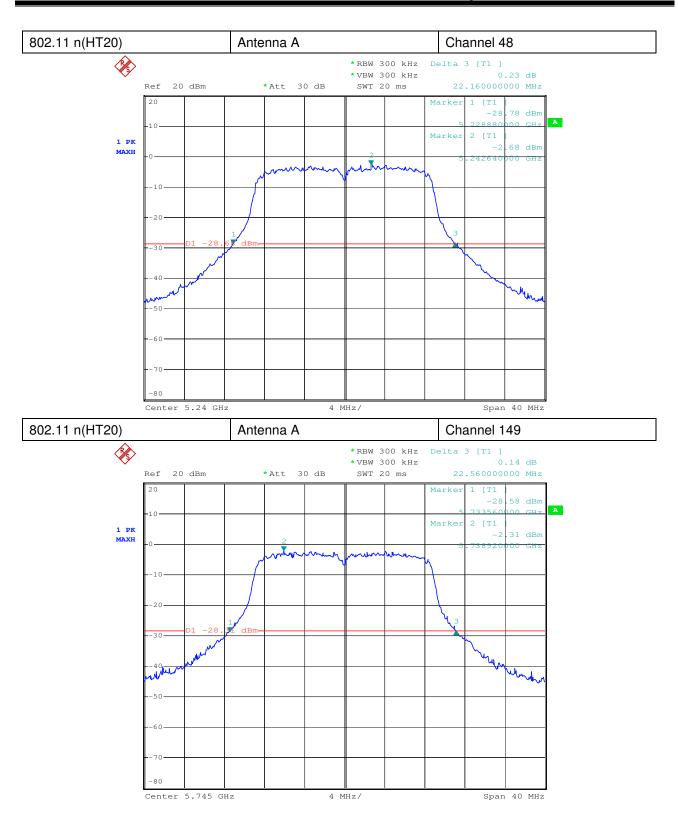


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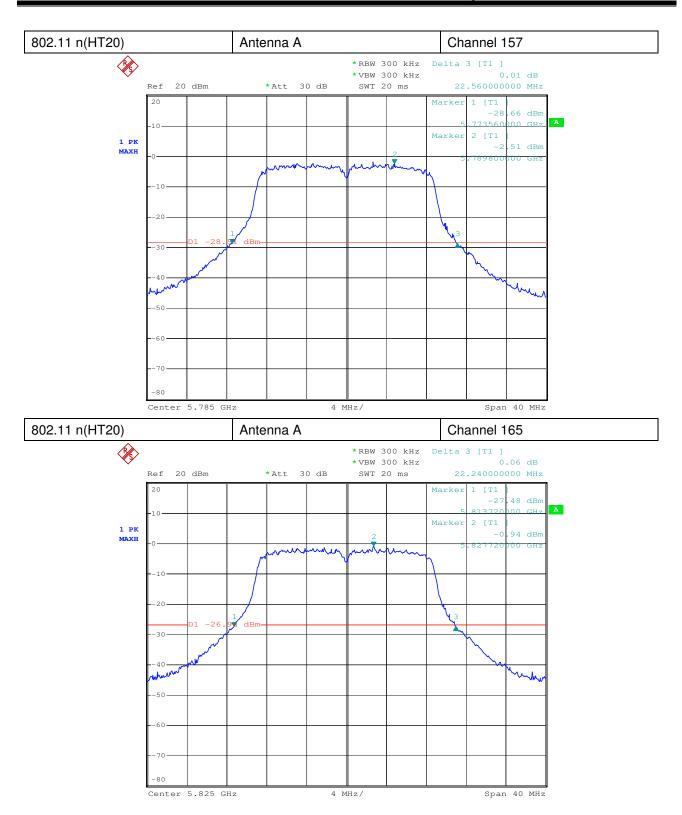


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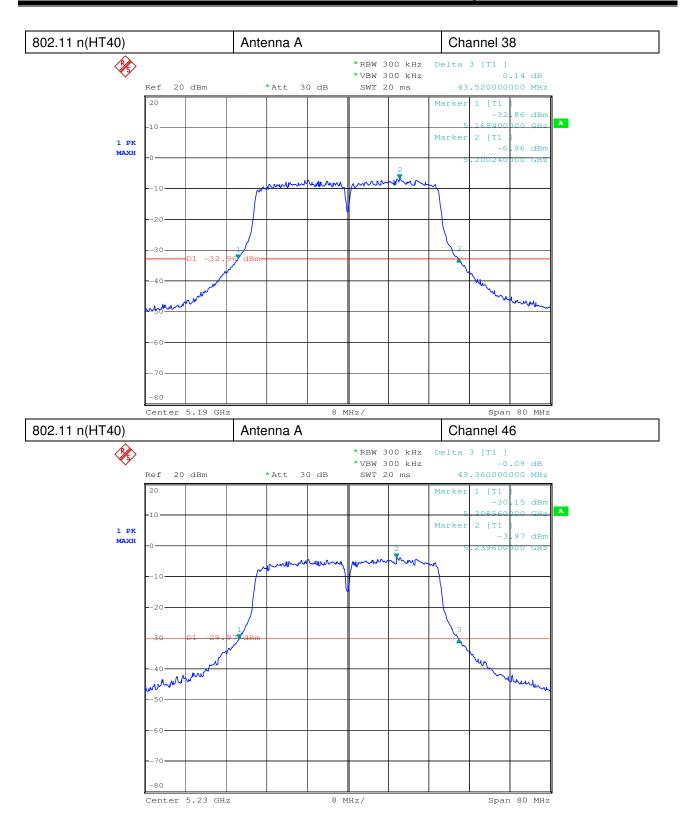


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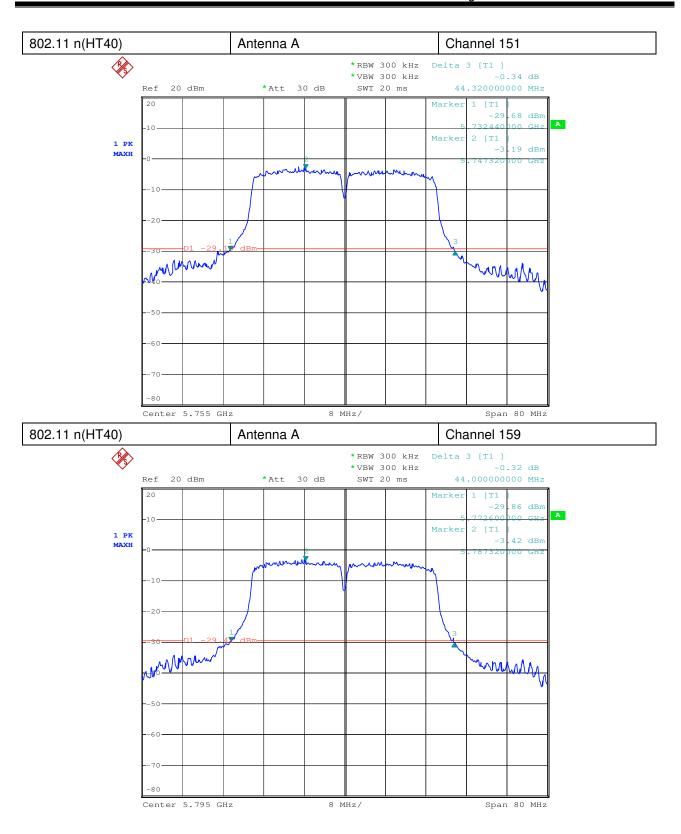


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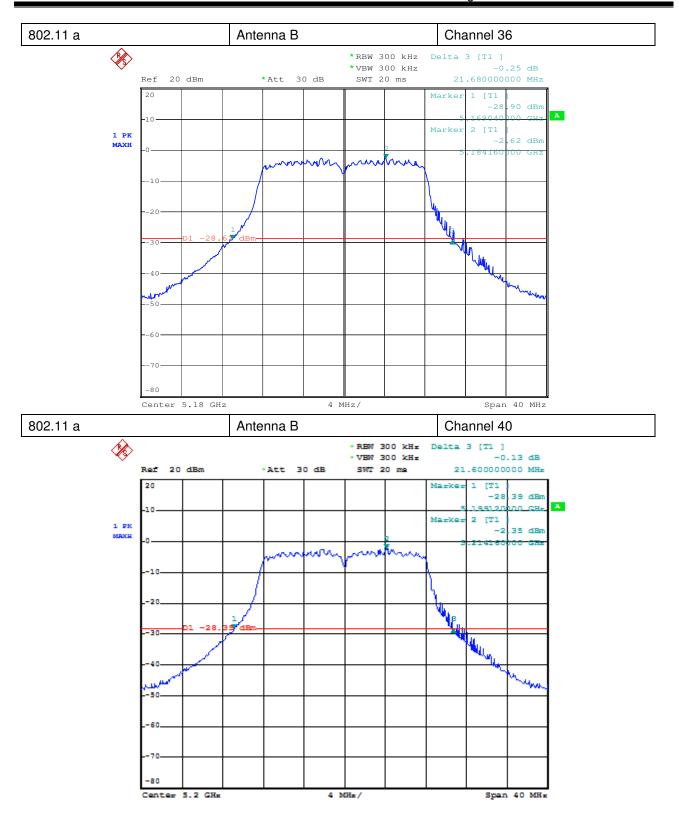


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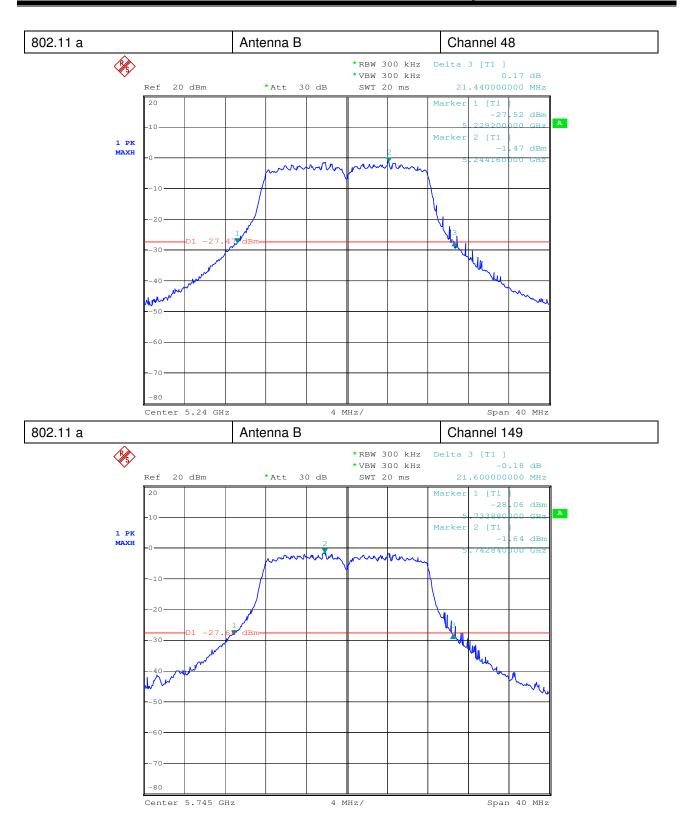


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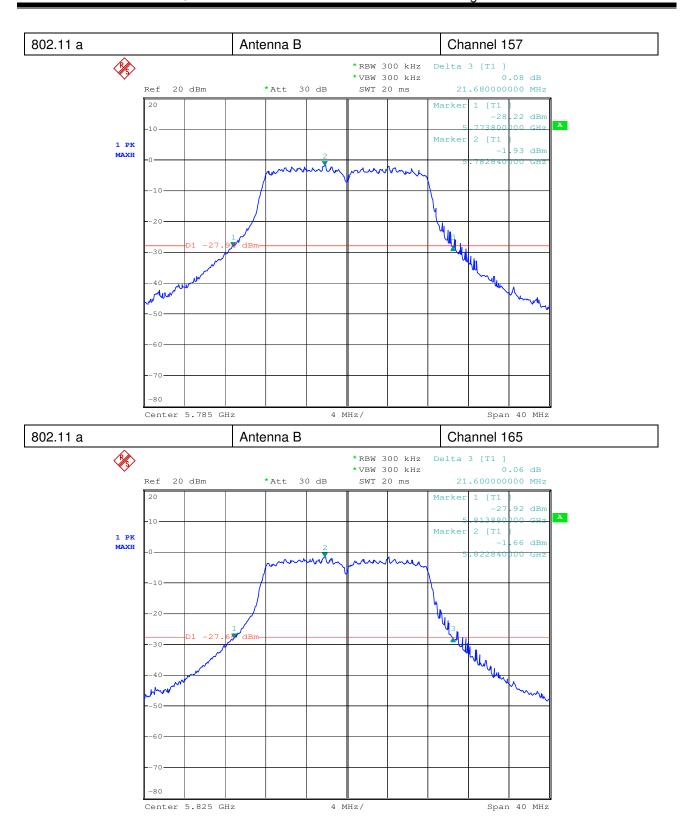


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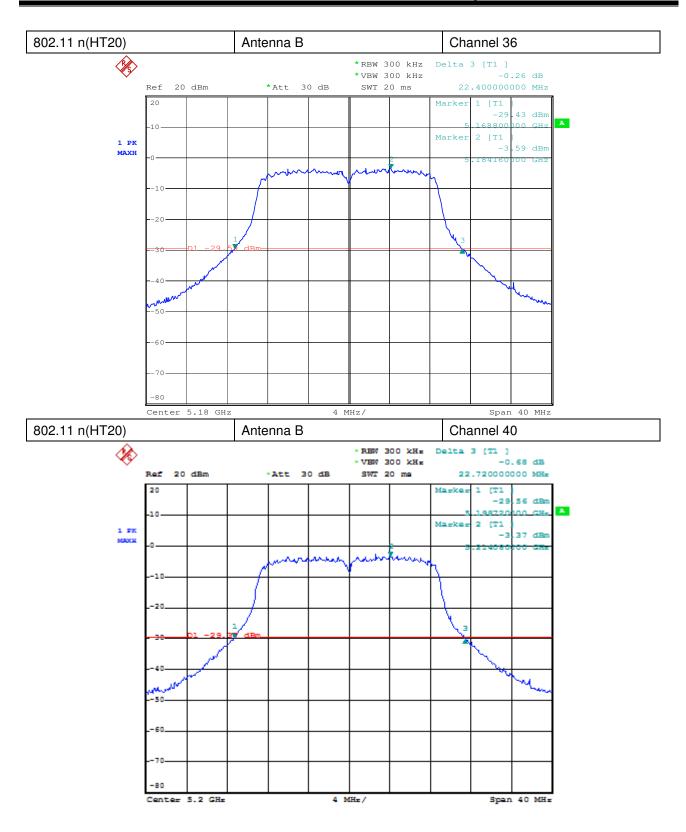


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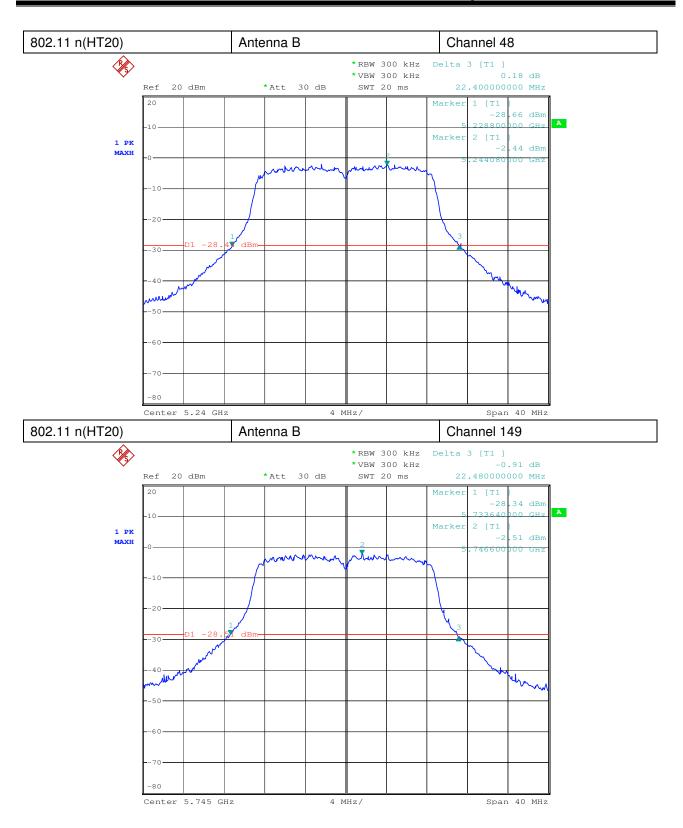


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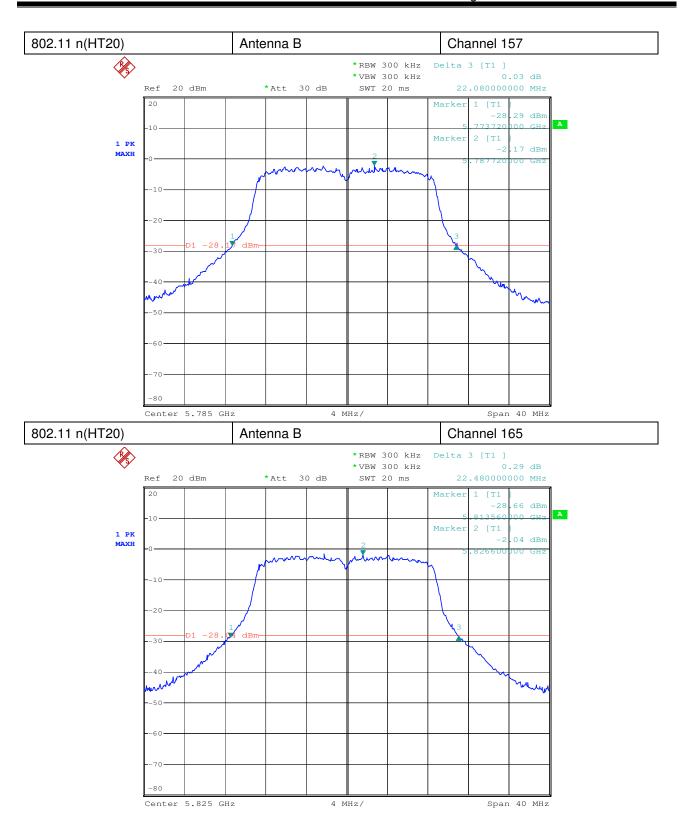


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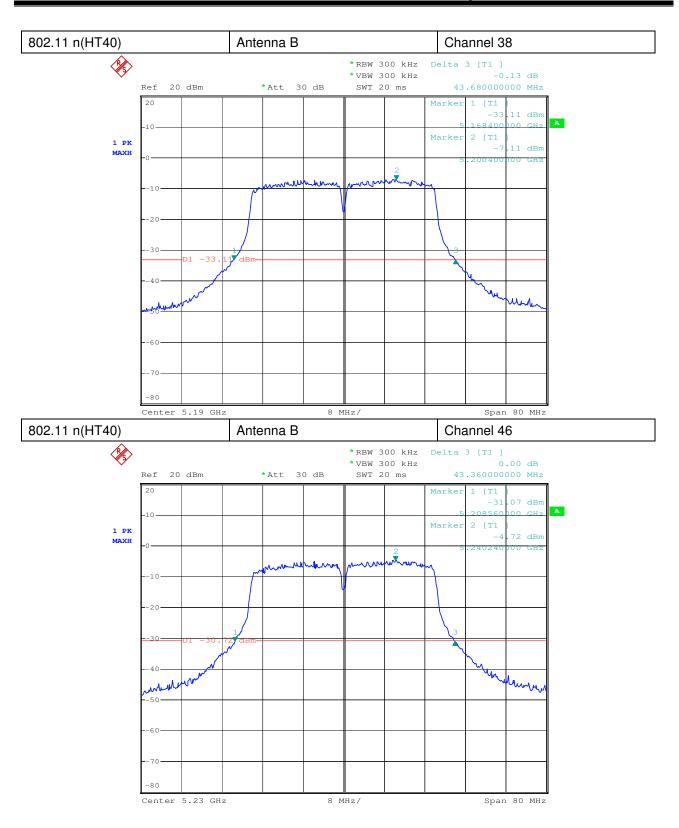


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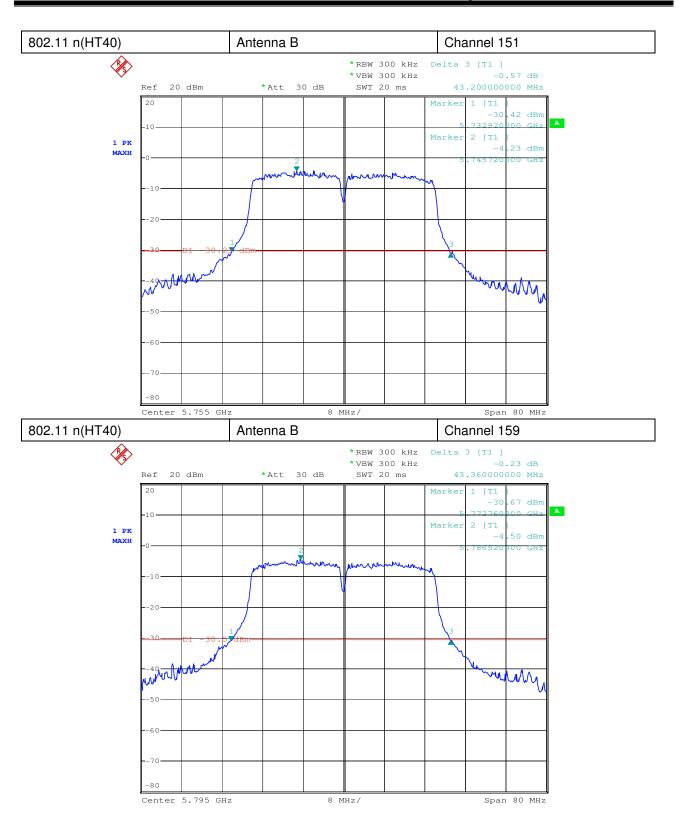


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7.6 Minimum 6 dB bandwidth

Test Configuration:

EUT cable Spectrum
(Antenna Port Analyzer

Test Procedure:

- a) Place the EUT on the table and set it in transmitting mode.
- b) Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
- c) Set the spectrum analyzer as RBW=300KHz, VBW≥3* RBW, Span=40/80MHz, Sweep=auto
- d) Mark the peak frequency and -6dB (upper and lower) frequency.
- e) Repeat above procedures until all frequency measured was complete.

Limit: ≥ 500 kHz (For 5.725-5.85 GHz band)

Test Result: Pass

Test Data:

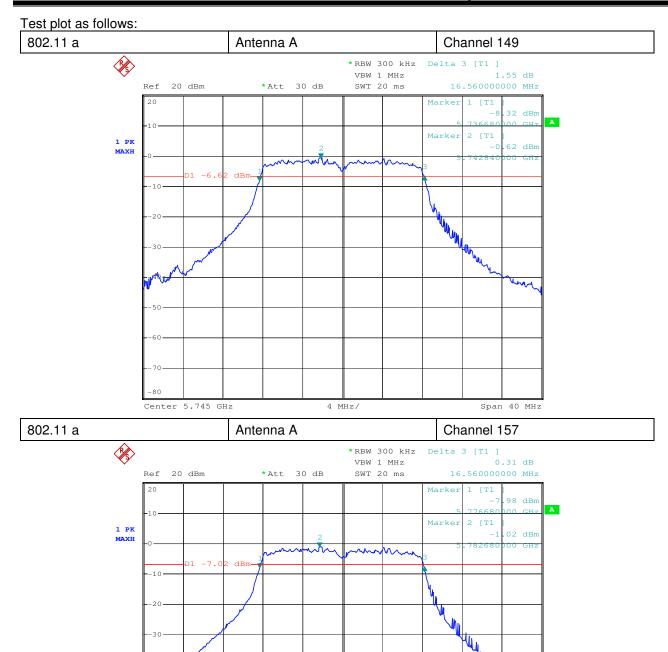
Band	Antenna	Test Mode	Channel	Frequency (MHz)	Bandwidth (MHz)
		149	5745	16.56	
		802.11a	157	5785	16.56
			165	5825	16.48
	Λ		149	5745	17.76
	Α	802.11n(HT20)	157	5785	17.68
			165	5825	17.68
		802.11n(HT40)	151	5755	36.32
U-NII-3			159	5795	36.48
		802.11a	149	5745	16.56
			157	5785	16.56
			165	5825	16.56
	В	802.11n(HT20)	149	5745	17.68
			157	5785	17.68
			165	5825	17.76
		000 11 m/LIT40)	151	5755	36.64
	802.11n(HT40)	159	5795	23.64	



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Span 40 MHz



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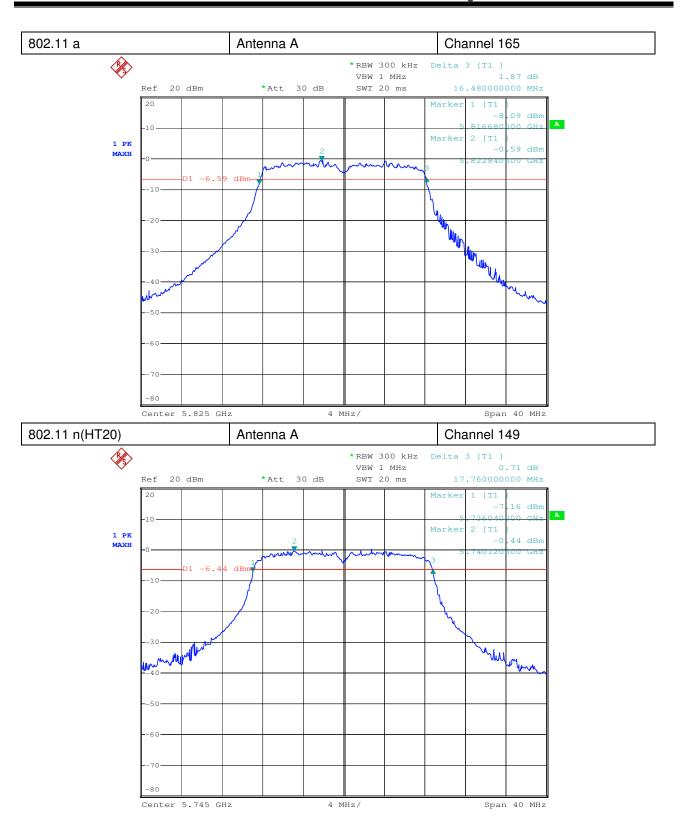
4 MHz/

Center 5.785 GHz



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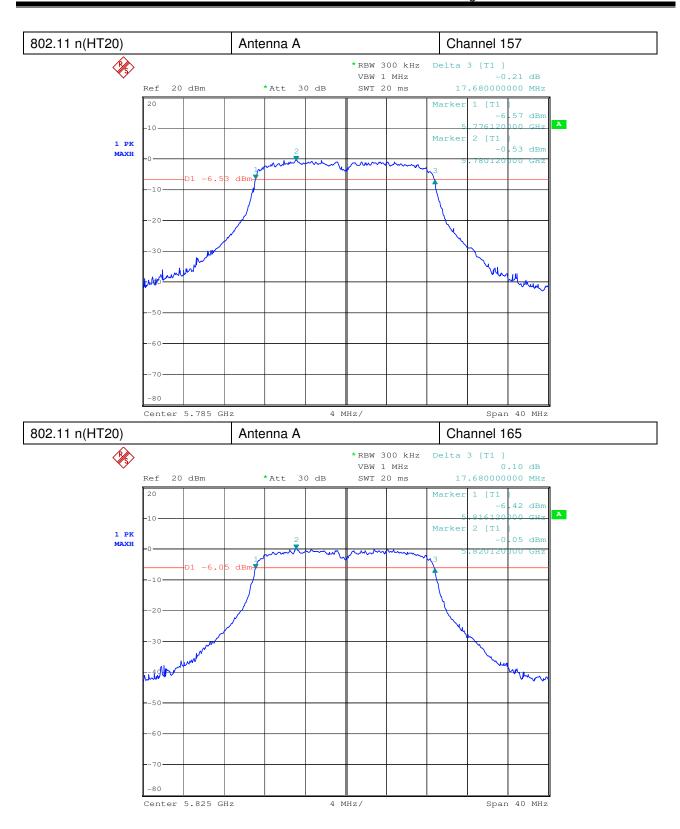


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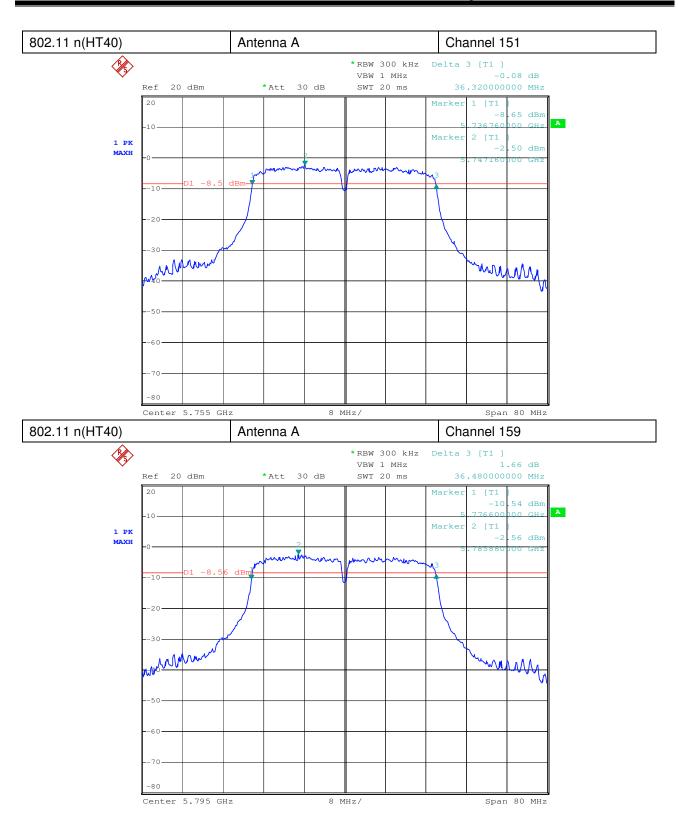


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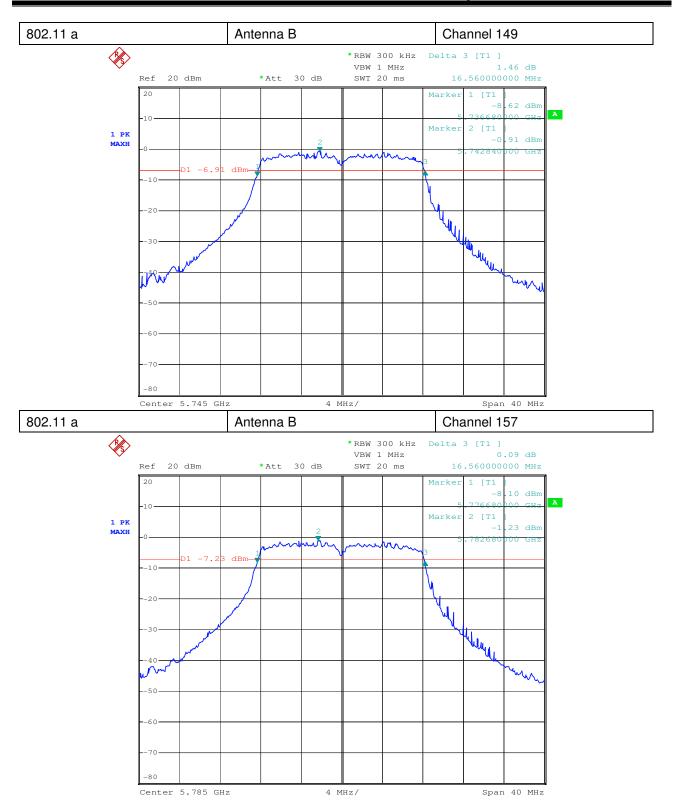


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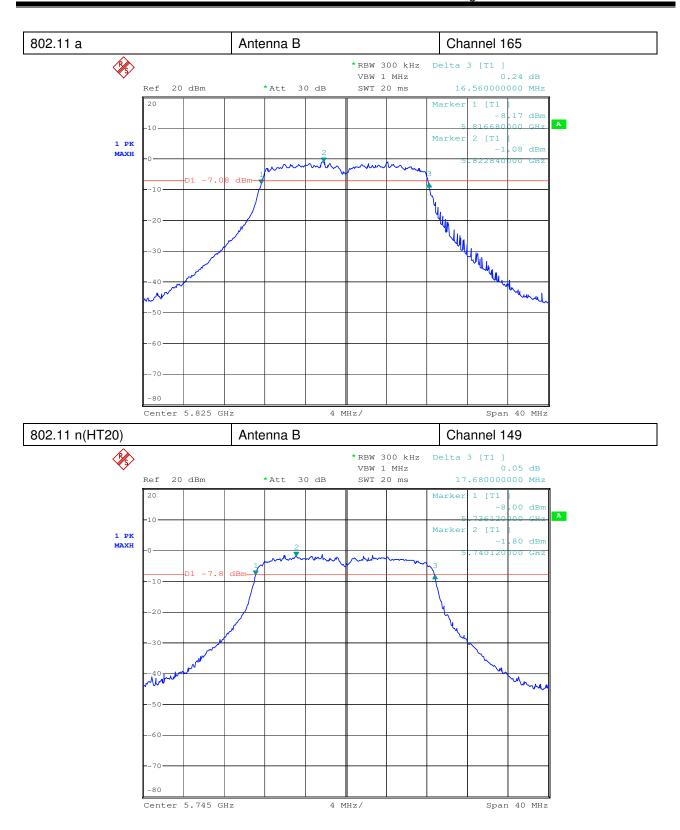


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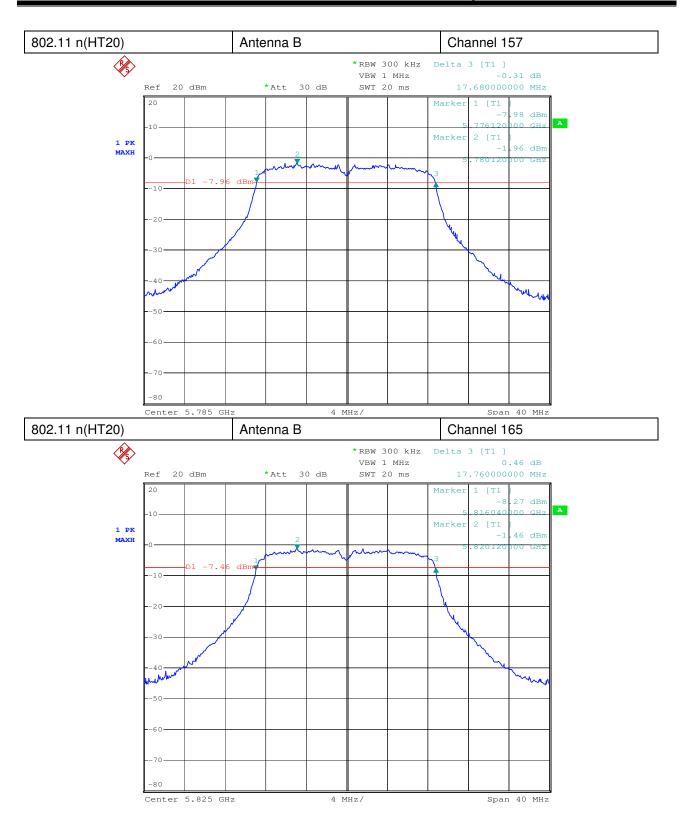


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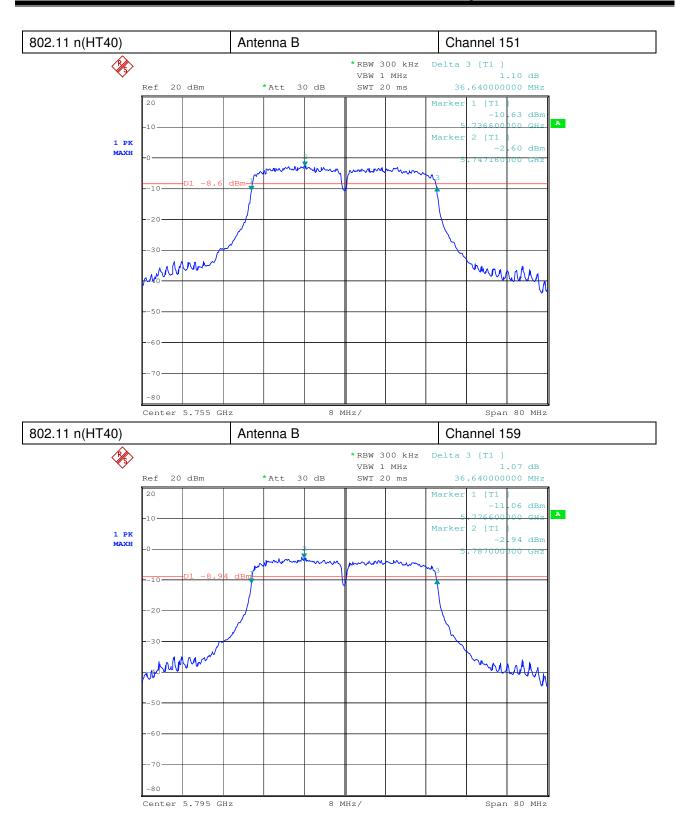


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7.7 Maximum Conducted output power

Test Setup:		connected	
	EUT (Antenna Port	cable	Spectrum Analyzer

Test Procedure:

- a) Place the EUT on the table and set it in transmitting mode.
- b) Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum.
- c) Set the occur band to the entire emission 26dB bandwidth of the signal.
- d) Record the max. Power channel reading.
- e) Repeat above procedures until all the frequency measured were complete

Test Limit:

e) Repeat above procedures until all the frequency measured were complete.							
Frequency Band	EUT Category	Limit					
	Outdoor Access Point	1W(30dBm) The maximum e.i.r.p≤125 mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon.					
U-NII-1	Fixed Point-to-point Access Point	1W(30dBm)					
	☐ Indoor Access Point						
		250mW (24dBm)					
U-NII-2a		Lesser of 250mW (24dBm) or 11dBm +					
U-NII-2c	-	10log B*					
U-NII-3		1W (30dBm)					
Note: *Whe	Note: *Where B is the 26dB emission bandwidth in MHz.						

Test Result: Pass



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Test Data: Antenna A:

Test Mode	Band	СН	Frequency (MHz)	Reading (dBm)	Cable Loss(dB)	Duty Cycle CF(dB)	Power (dBm)	Power (mW)	Limit (dBm)	Result
		36	5180	6.45	0.5		11.98	15.78		PASS
	U-NII-1	40	5200	6.62	0.5		12.15	16.41	24	PASS
		48	5240	7.19	0.5	0.13	12.72	18.71		PASS
802.11a		149	5745	7.87	0.5	0.13	11.86	15.35		PASS
	U-NII-3	157	5785	8.04	0.5		12.03	15.92	30	PASS
		165	5825	7.85	0.5		11.84	15.28	1	PASS
		36	5180	7.02	0.5		12.55	17.99	24	PASS
	U-NII-1	40	5200	7.18	0.5		12.71	18.66		PASS
802.11n		48	5240	7.21	0.5	0.16	12.74	18.79		PASS
(HT20)		149	5745	8.49	0.5	0.10	12.48	17.70		PASS
	U-NII-3	157	5785	8.85	0.5		12.84	19.23	30	PASS
		165	5825	9.40	0.5		13.39	21.83		PASS
	U-NII-1	38	5190	4.52	0.5		10.05	10.12	24	PASS
802.11n	O-MII-1	46	5230	7.32	0.5	0.20	12.85	19.28	24	PASS
(HT40)	U-NII-3	151	5755	9.39	0.5	0.20	13.38	21.78	30	PASS
	0-1111-3	159	5795	9.54	0.5		13.53	22.54	30	PASS

Antenna B:

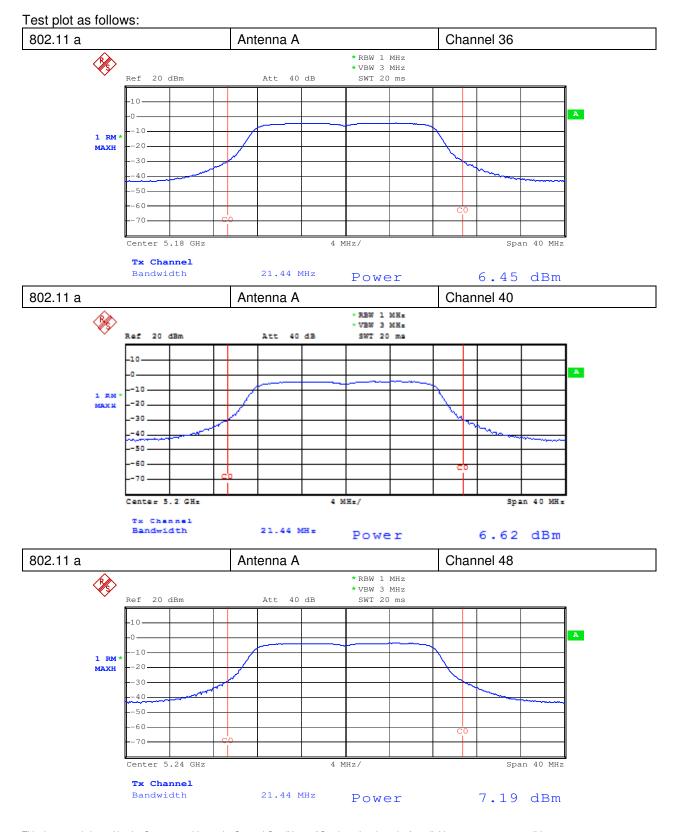
Test Mode	Band	СН	Frequency (MHz)	Reading (dBm)	Cable Loss(dB)	Duty Cycle CF(dB)	Power (dBm)	Power (mW)	Limit (dBm)	Result
		36	5180	6.38	0.5		11.91	15.52		PASS
	U-NII-1	40	5200	6.87	0.5		12.4	17.38	24	PASS
		48	5240	7.51	0.5	0.13	13.04	20.14		PASS
802.11a		149	5745	7.35	0.5	0.13	11.34	13.61		PASS
	U-NII-3	157	5785	7.4	0.5		11.39	13.77	30	PASS
		165	5825	7.49	0.5		11.48	14.06		PASS
		36	5180	6.31	0.5		11.84	15.28	24	PASS
	U-NII-1	40	5200	6.48	0.5		12.01	15.89		PASS
802.11n		48	5240	7.27	0.5	0.16	12.8	19.05		PASS
(HT20)		149	5745	7.24	0.5	0.16	11.23	13.27		PASS
	U-NII-3	157	5785	7.28	0.5		11.27	13.40	30	PASS
		165	5825	7.82	0.5		11.81	15.17		PASS
	U-NII-1	38	5190	5.33	0.5		10.86	12.19	24	PASS
802.11n	O-IVII- I	46	5230	8.4	0.5	0.00	13.93	24.72	24	PASS
(HT40)	I I NIII 2	151	5755	8.97	0.5	0.20	12.96	19.77	20	PASS
	U-NII-3	159	5795	9.12	0.5		13.11	20.46	30	PASS

Remark: Output Peak Power = Reading Power + Cable loss+ Duty Cycle Correction Factor



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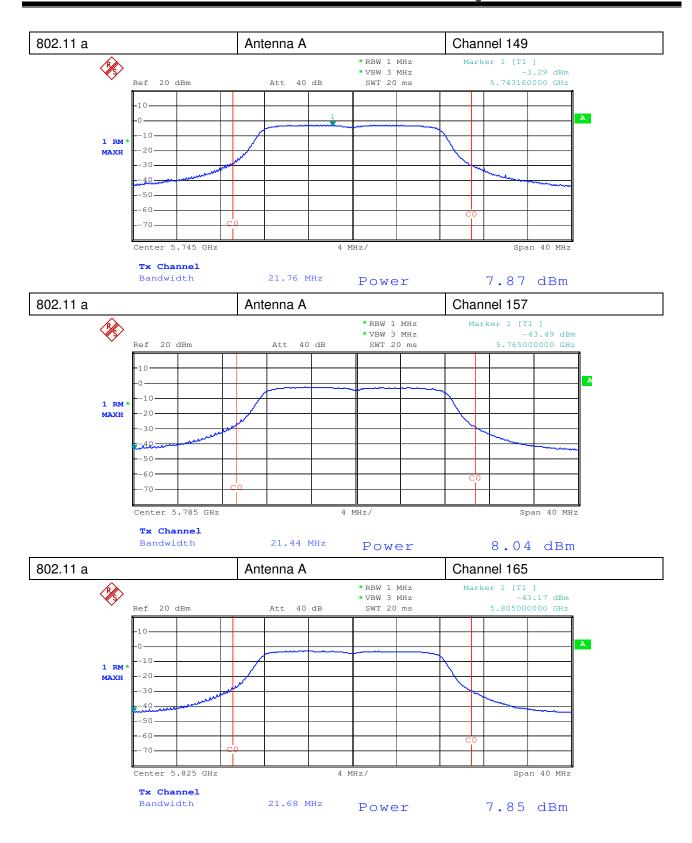


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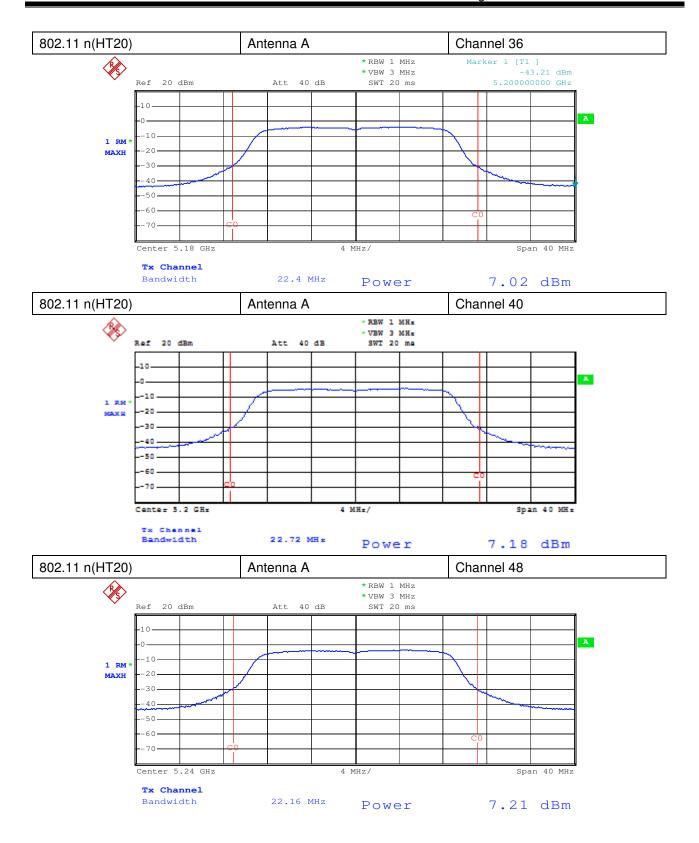


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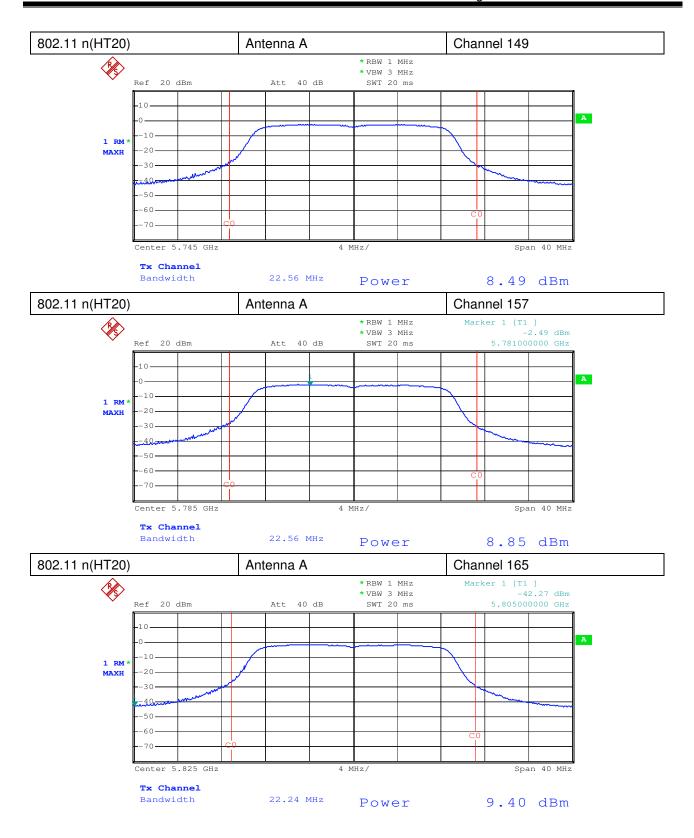


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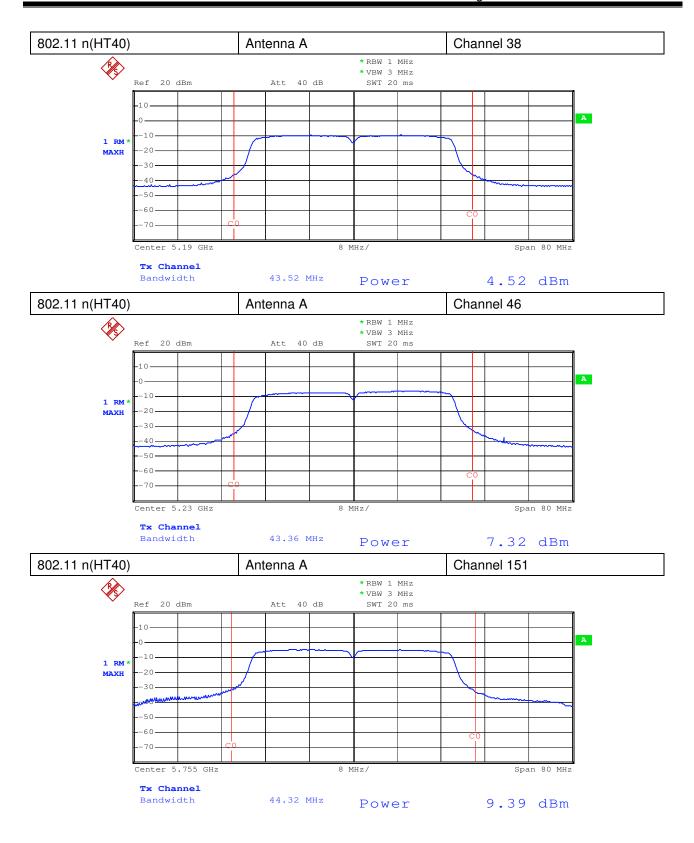


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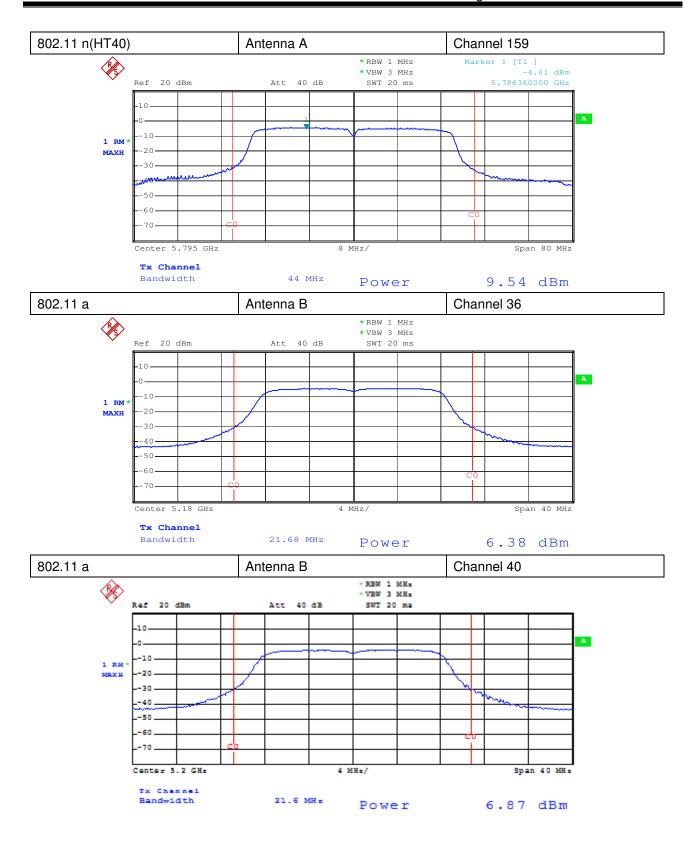


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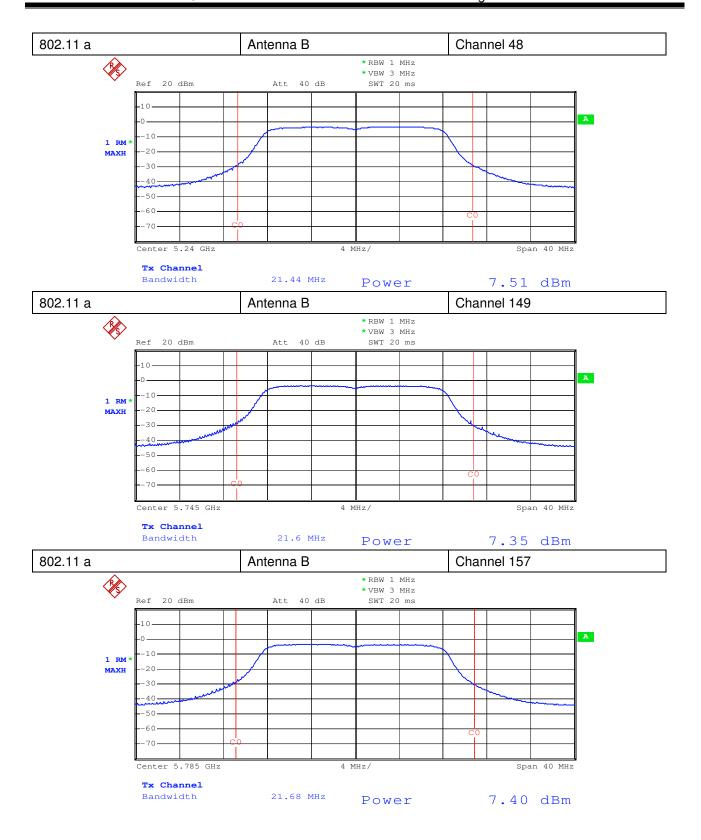


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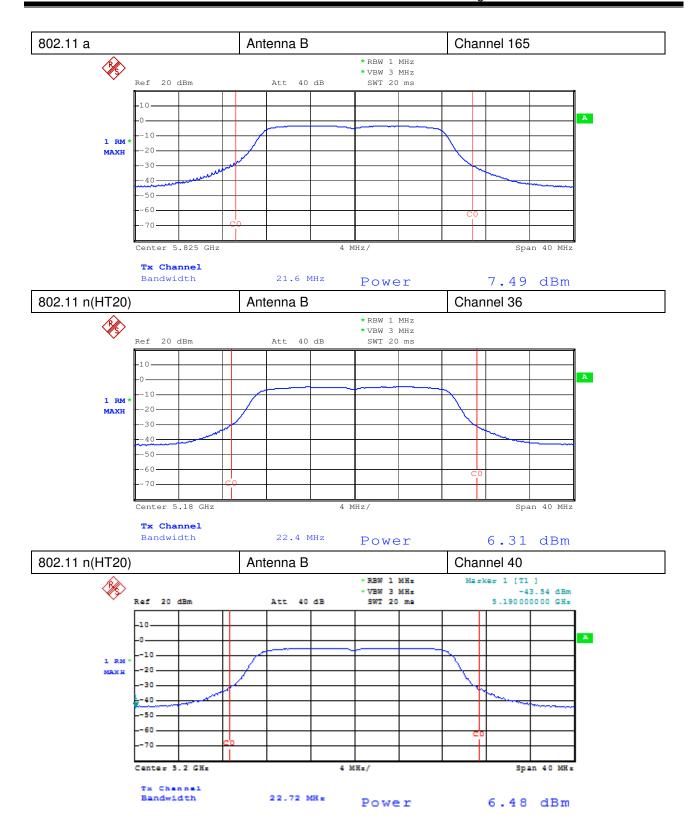


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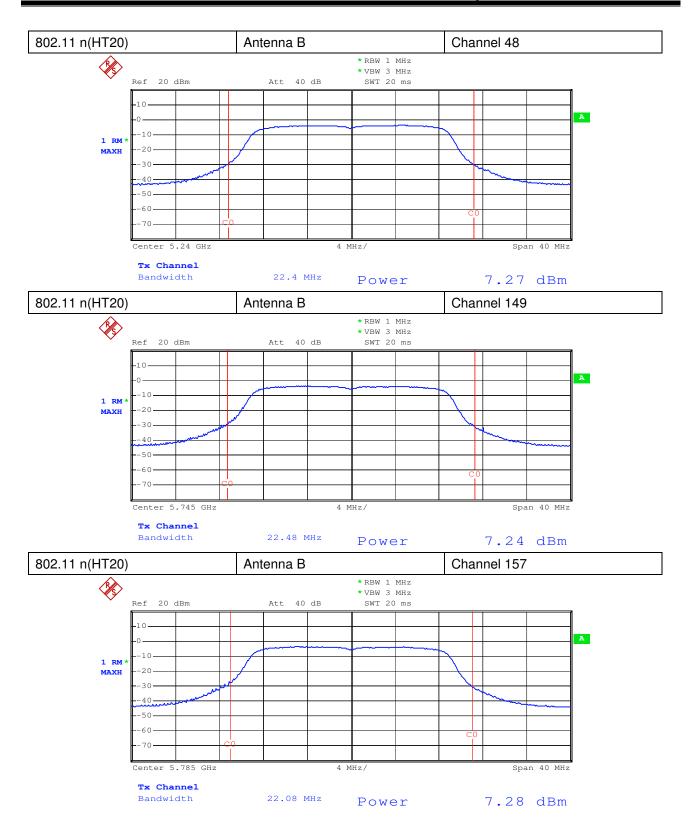


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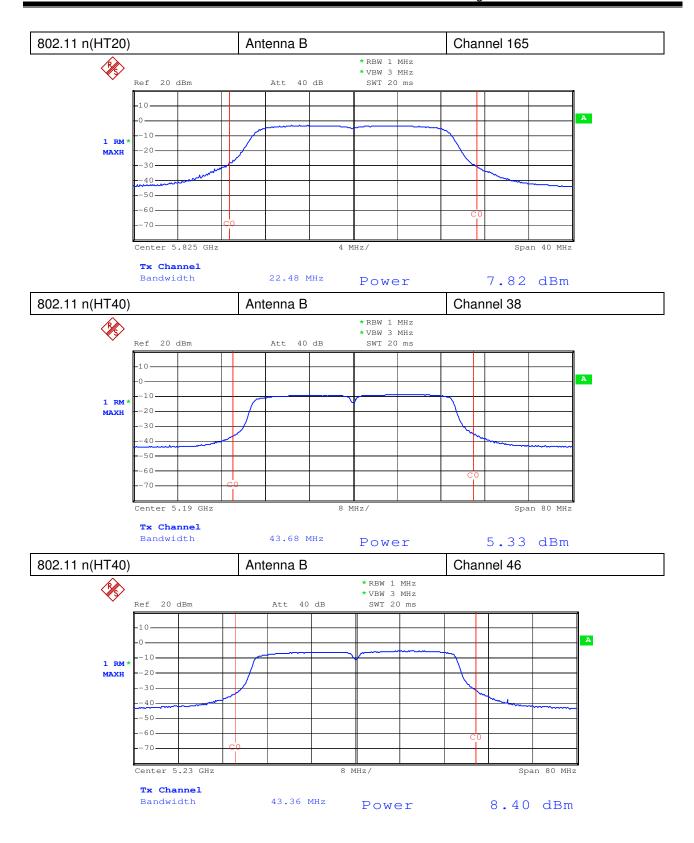


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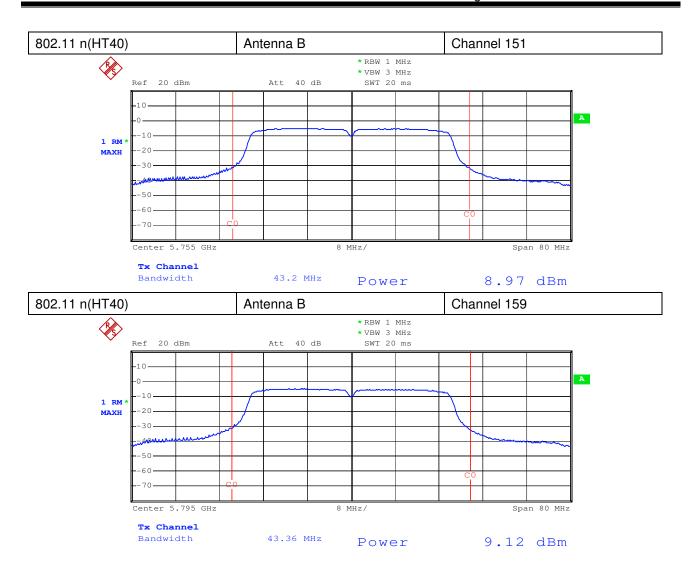


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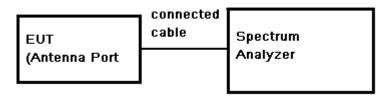


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7.8 Peak Power Spectral Density

Test Setup:



Test Procedure:

- a) Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
- b) Set the spectrum analyzer: Center Frequency= Channel Frequency, RBW = 3 kHz VBW = 10 kHz. Span= fully encompass the bandwidth, Sweep = auto; Detector Function = Peak Trace mode=max hold,
- c) Set MKR=Center Frequency, Trace=Clear Write.
- d) Adjust the Span = 300 kHz, Sweep Time=100s, Trace=Max Hold, MKR=Peak Search.
- e) Record the marker level for the particular mode.

f) Repeat these steps for other channel and device modes.

Test Limit:

Frequency Band	EUT Category	Limit
	Outdoor Access Point	17dBm/MHz
U-NII-1	☐ Fixed Point-to-point Access Point	11 dBm/MHz
O-IVII-1	☐ Indoor Access Point	
		11 dBm/MHz
U-NII-2a		11 dBm/MHz
U-NII-2c	-	I I UDIII/IVITZ
U-NII-3		30 dBm/MHz

Test Result:

Pass



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Test Data: Antenna A:

Test Mode	Band	СН	Frequency (MHz)	Reading (dBm/MHz)	Cable Loss (dB)	Duty Cycle C F (dB)	PPSD (dBm/M)	Limit (dBm/M)	Result
		36	5180	-0.27	0.5		5.26		PASS
	U-NII-1	40	5200	0.01	0.5		5.54	11	PASS
		48	5240	0.80	0.5	0.13	6.33		PASS
802.11a		149	5745	-0.29	0.5	0.13	3.70		PASS
	U-NII-3	157	5785	-0.23	0.5		3.76	30	PASS
		165	5825	0.08	0.5		4.07		PASS
		36	5180	0.45	0.5		5.98	11	PASS
	U-NII-1	40	5200	0.58	0.5		6.11		PASS
802.11n		48	5240	1.52	0.5	0.16	7.05		PASS
(HT20)		149	5745	0.28	0.5	0.10	4.27		PASS
	U-NII-3	157	5785	0.41	0.5		4.40		PASS
		165	5825	1.11	0.5		5.10		PASS
	U-NII-1	38	5190	-4.35	0.5		1.18	11	PASS
802.11n	U-INII-1	46	5230	-1.44	0.5	0.20	4.09	11	PASS
(HT40)	U-NII-3	151	5755	-2.73	0.5	0.20	1.26	20	PASS
	0-1111-3	159	5795	-2.67	0.5		1.32	30	PASS

Antenna B:

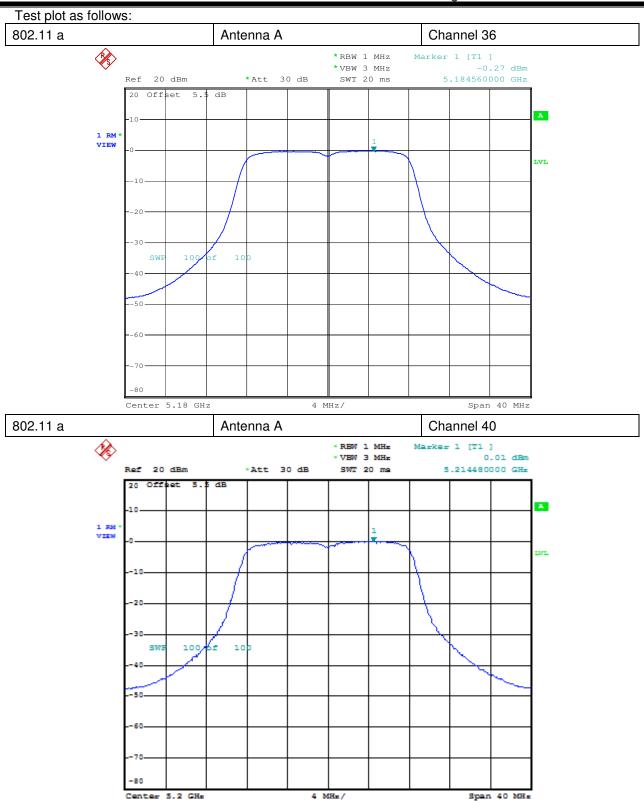
Antenn									
Test Mode	Band	СН	Frequency (MHz)	Reading (dBm/MHz)	Cable Loss (dB)	Duty Cycle C F (dB)	PPSD (dBm/M)	Limit (dBm/M)	Result
		36	5180	0.40	0.5		5.93		PASS
	U-NII-1	40	5200	0.69	0.5		6.22	11	PASS
		48	5240	1.45	0.5	0.10	6.98		PASS
802.11a		149	5745	-0.85	0.5	0.13	3.14		PASS
	U-NII-3	157	5785	-0.87	0.5		3.12	30	PASS
		165	5825	-0.77	0.5		3.22		PASS
		36	5180	0.03	0.5		5.56	11	PASS
	U-NII-1	40	5200	0.34	0.5		5.87		PASS
802.11n		48	5240	1.21	0.5	0.16	6.74		PASS
(HT20)		149	5745	-1.40	0.5	0.16	2.59		PASS
	U-NII-3	157	5785	-1.31	0.5		2.68		PASS
		165	5825	-0.57	0.5		3.42		PASS
	1 1 NIII 4	38	5190	-3.84	0.5		1.69	11	PASS
802.11n U-NII-1	U-INII- I	46	5230	-1.64	0.5	0.20	3.89	11	PASS
(HT40)	U-NII-3	151	5755	-3.23	0.5	0.20	0.76	0.76	PASS
	0-1111-3	159	5795	-3.24	0.5		0.75	30	PASS

Remark: RF Power Density = Reading + Cable loss + Antenna Gain



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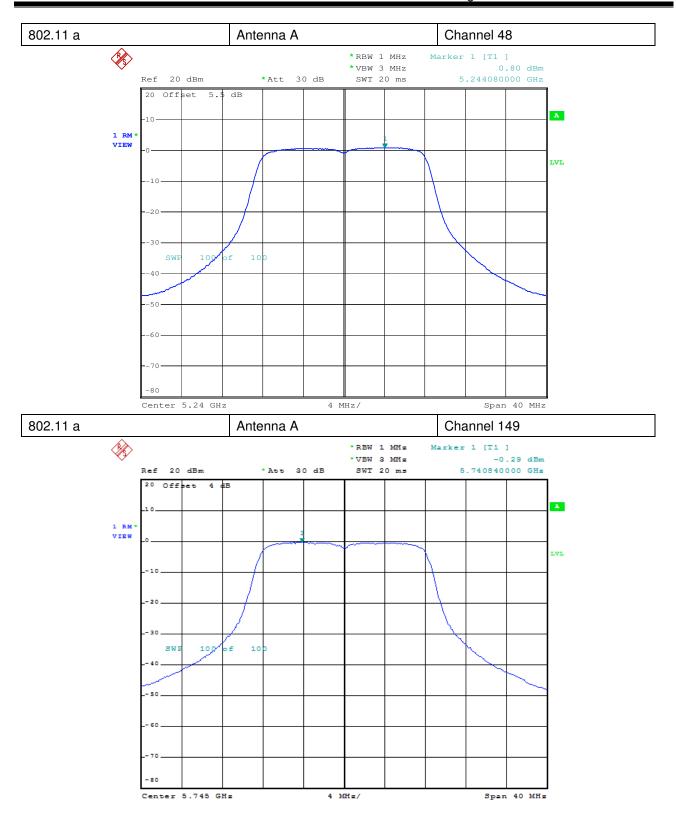


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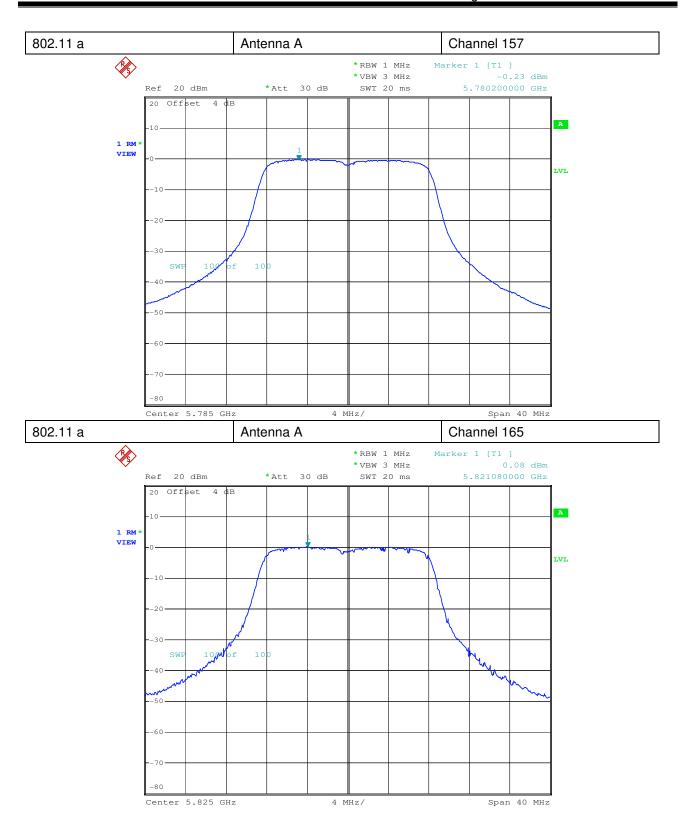


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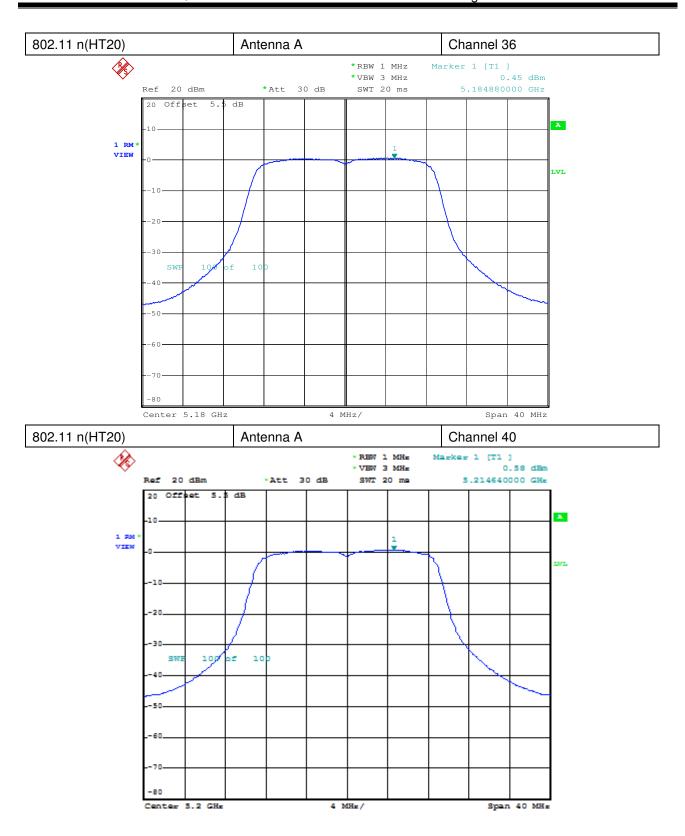


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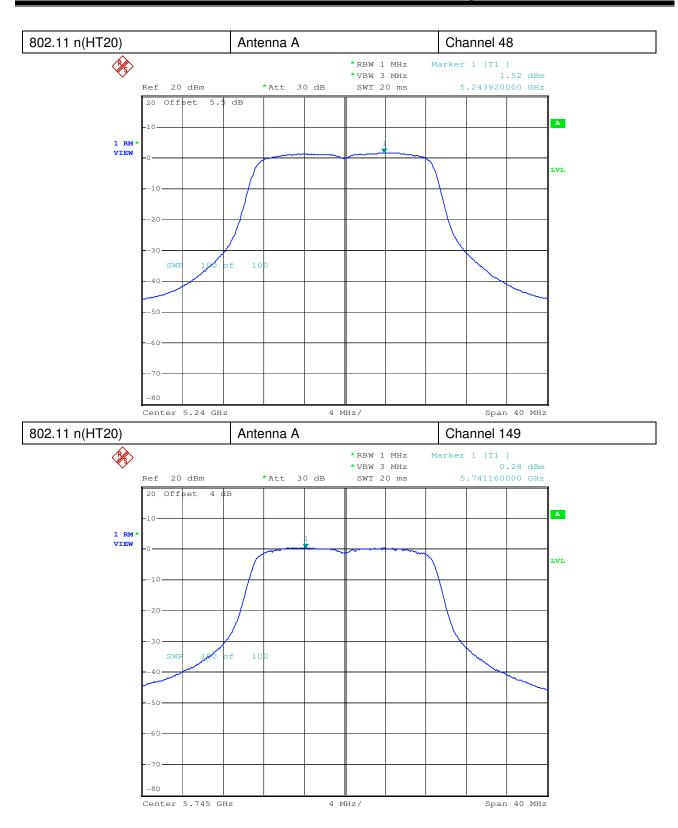


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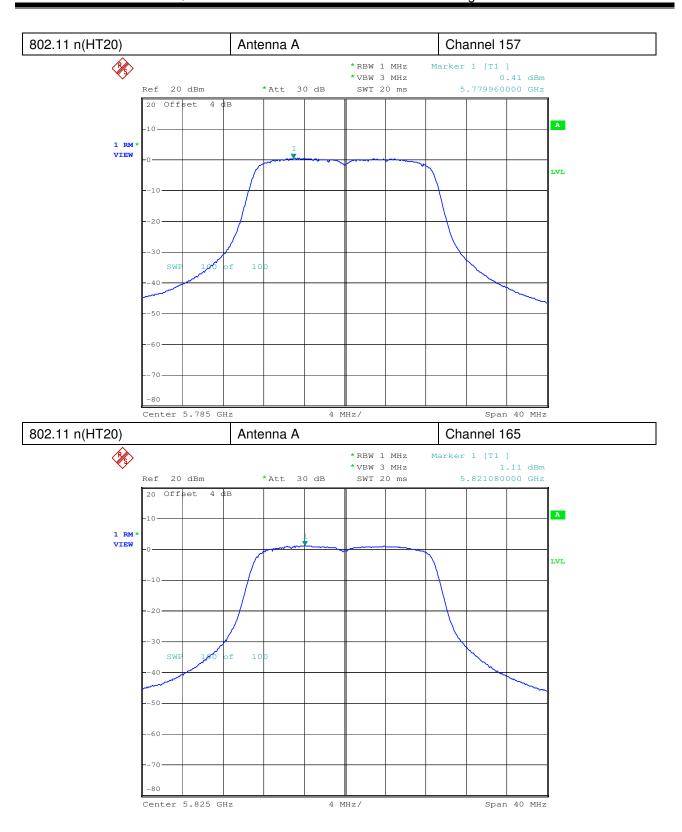


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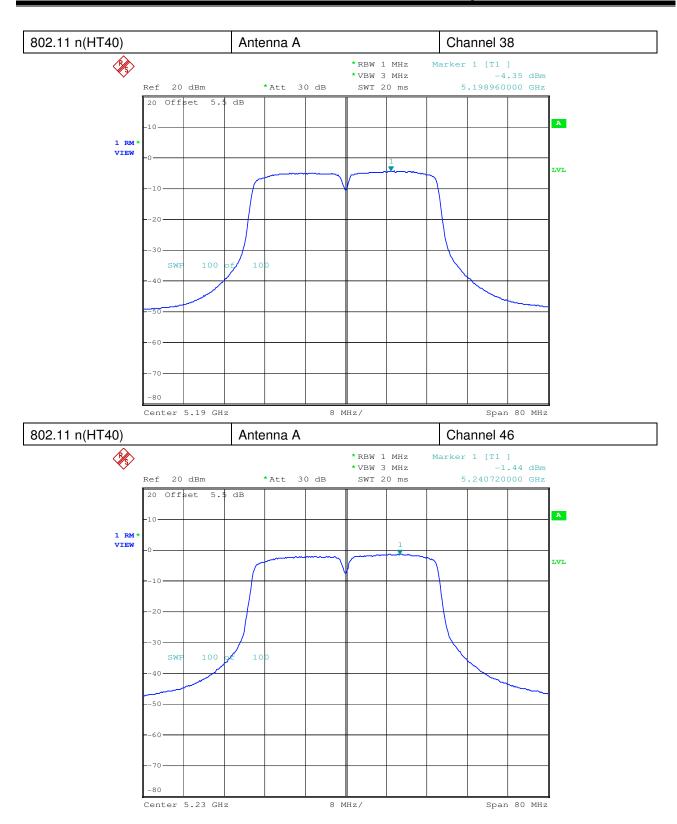


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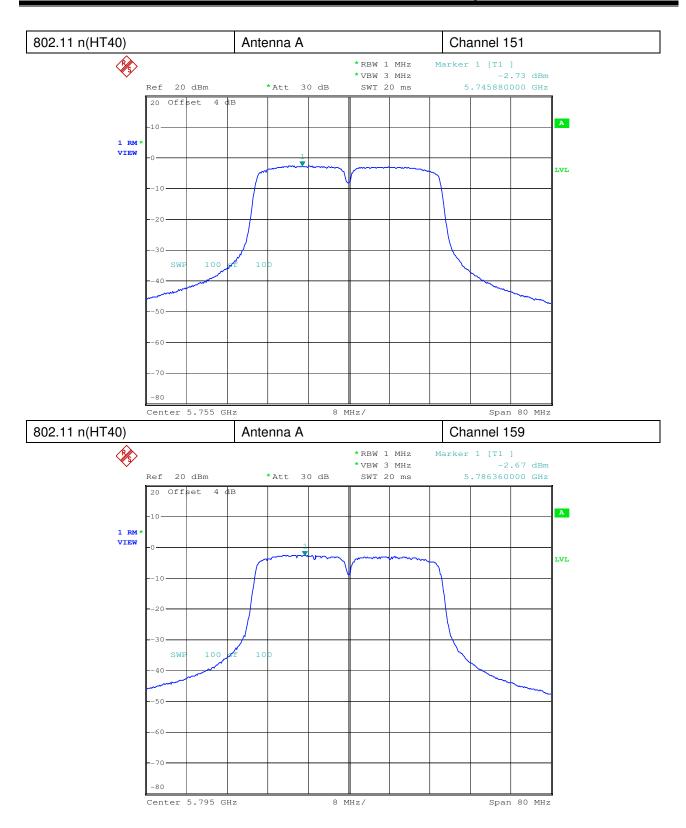


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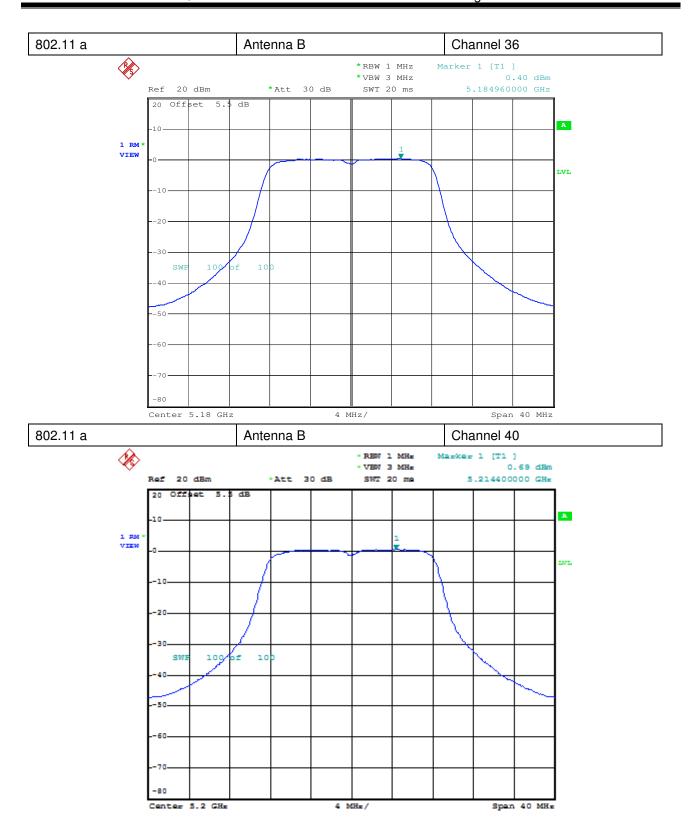


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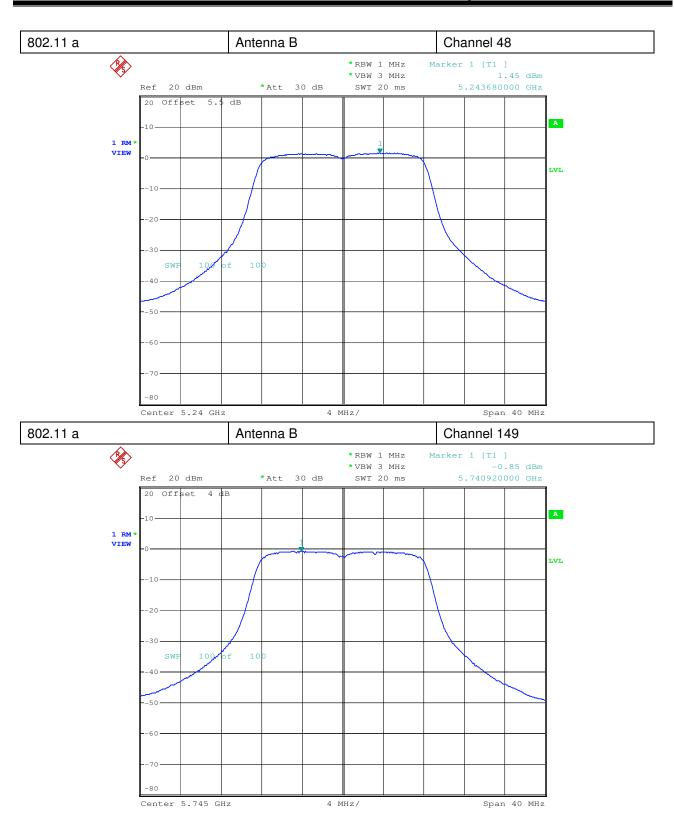


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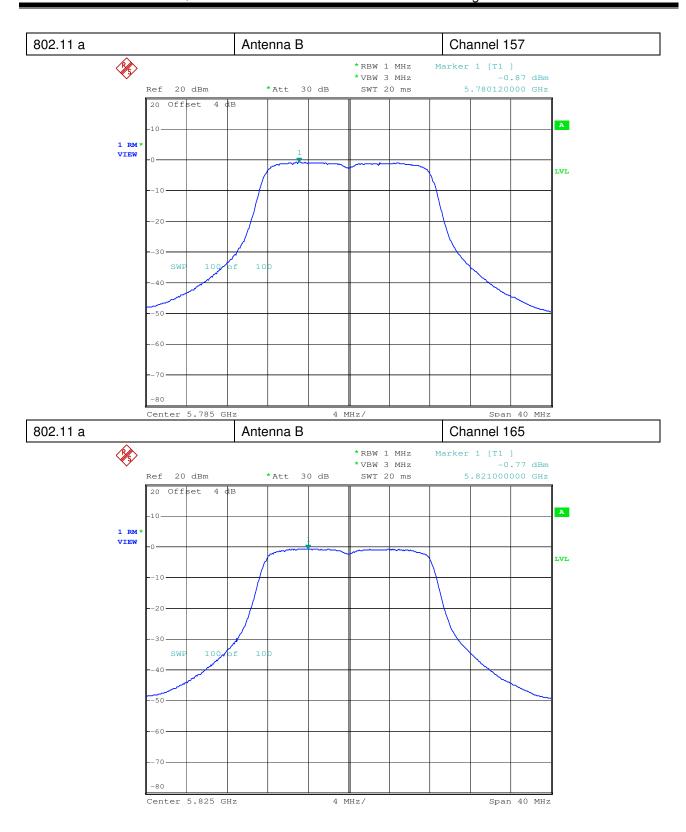


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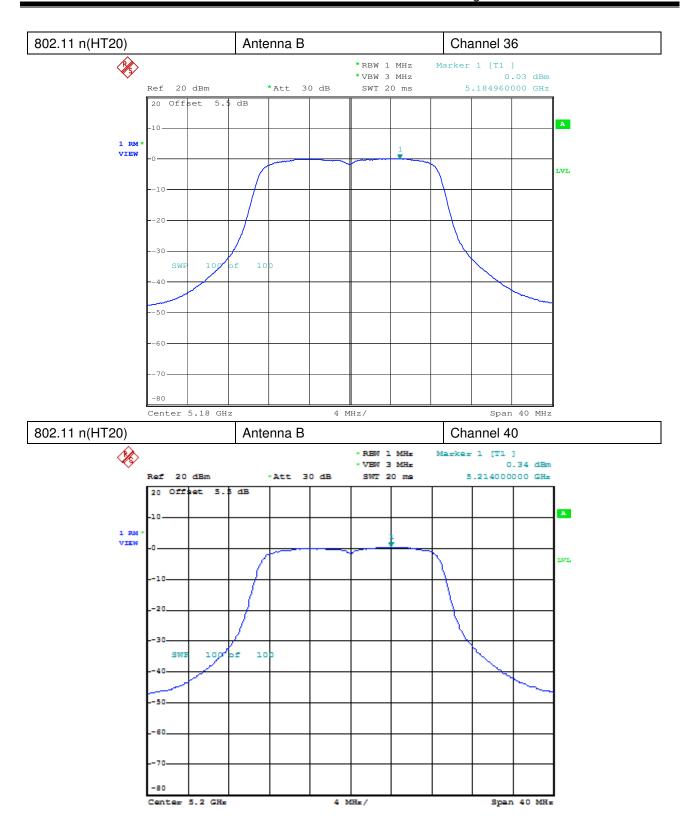


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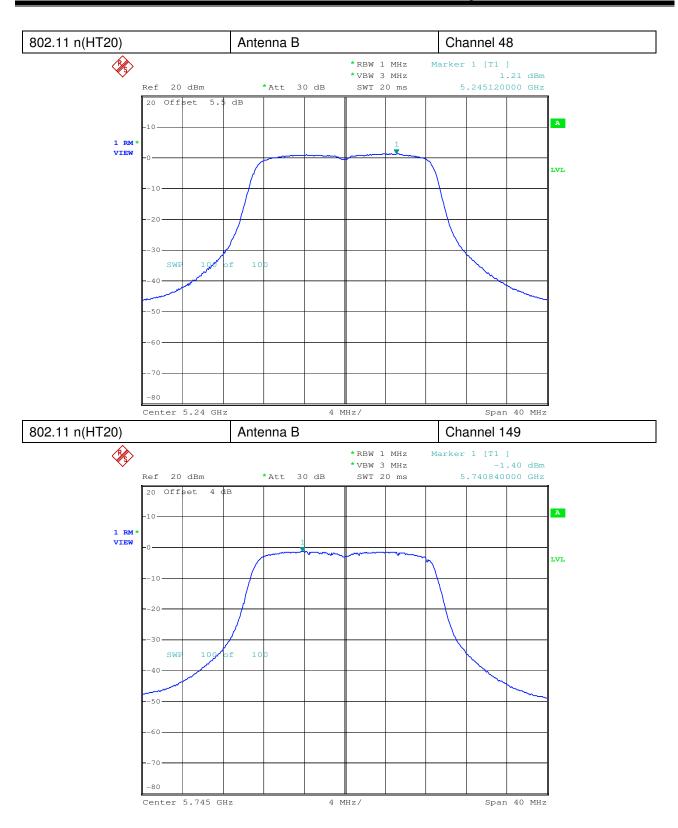


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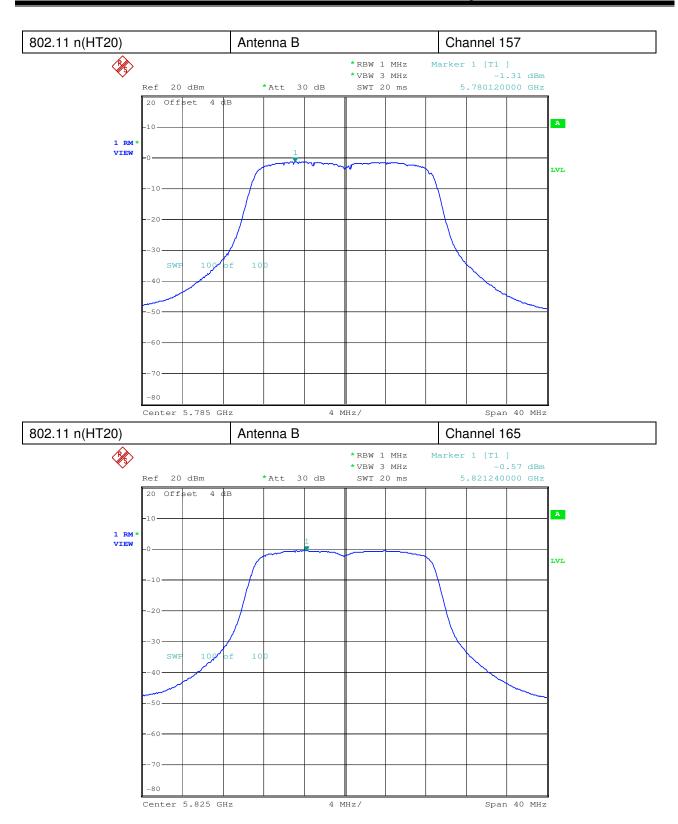


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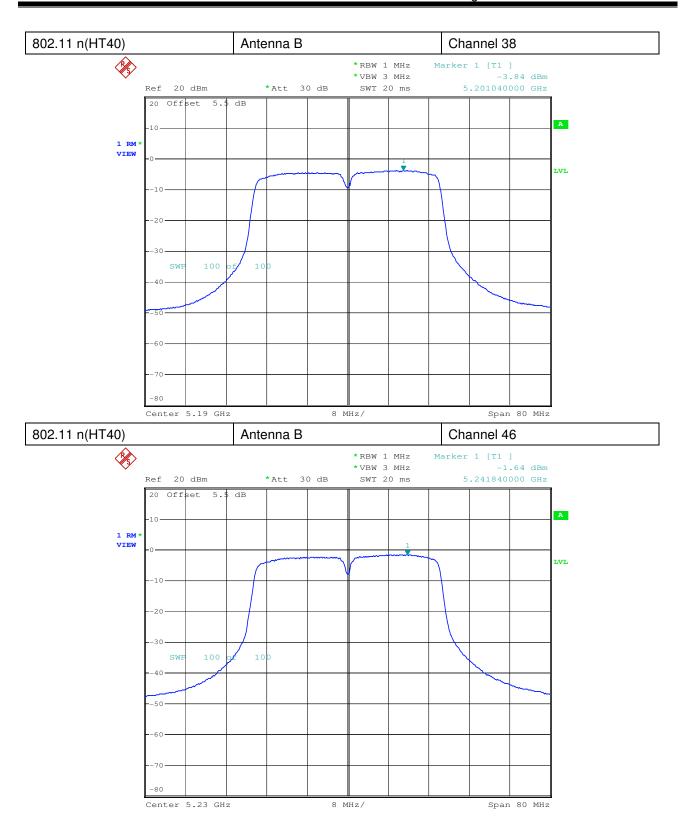


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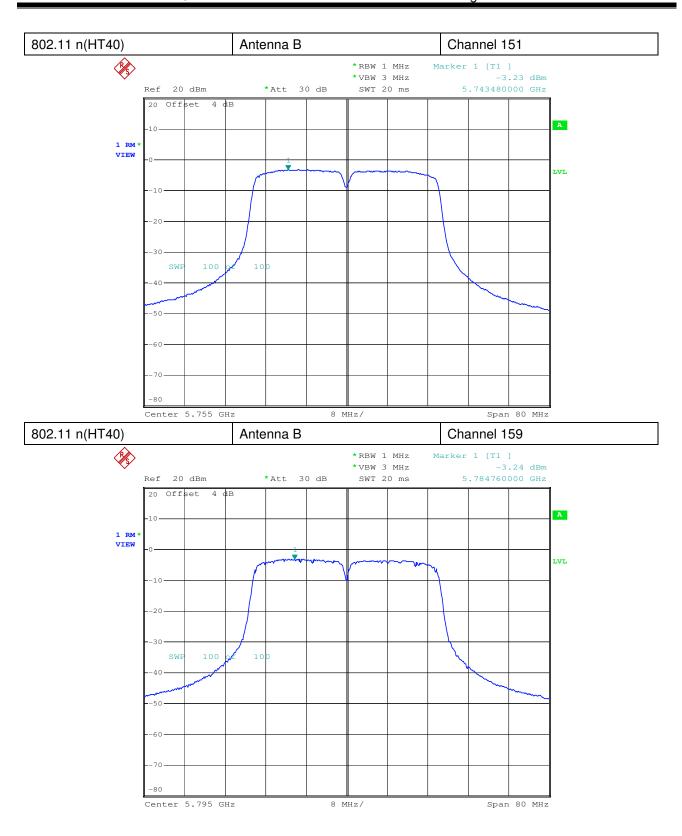


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7.9 Radiated Spurious Emissions and Band-edge

Frequency Range: 9KHz to 40GHz

Test site/setup: Measurement Distance: 3m (Semi-Anechoic Chamber)

Test instrumentation set-up:

Frequency Range(MHz)	Detector	RBW	VBW
0.009-0.090	Peak	10kHz	30kHz
0.009-0.090	Average	10kHz	30kHz
0.090-0.110	Quasi-peak	10kHz	30kHz
0.110-0.490MHz	Peak	10kHz	30kHz
0.110-0.490	Average	10kHz	30kHz
0.490 -30	Quasi-peak	10kHz	30kHz
30-1000	Quasi-peak	100kHz	300kHz
Above 1000	Peak	RBW=1MHz	VBW≥RBW
Above 1000	Average	HDVV=11VIHZ	VBW=10Hz

Sweep=Auto

15.209 Limit:

•	
Frequency(MHz)	Limit (dBuV/m)
0.009-0.490	128.5 ~ 93.8
0.490-1.705	73.8 ~63.0
1.705-30	69.5
30-88	40.0
88-216	43.5
216-960	46.0
960-1000	54.0
Above 1000	54.0

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

15.407 Limit:

Operation Frequency (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength (dBµV/m)
5150-5250		
5250-5350	-27	68.3
5470-5725		
5725-5850	-27* ¹	68.3* ¹
3723-3630	-17* ²	78.3* ²

Note: The following formula is used to convert the EIRP to field strength

E=^{10000000√30F}/₃ uV/m, where P is the EIRP (Watts).

Remark: *1 Without 10MHz of band edge; *2 Within 10MHz of band edge

Test Setup:

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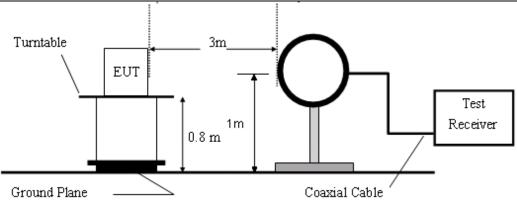


Figure 1. Below 30MHz radiated emissions test configuration

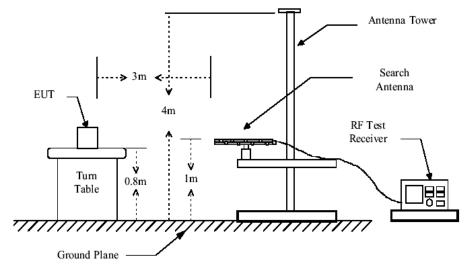


Figure 2. 30MHz to 1GHz radiated emissions test configuration

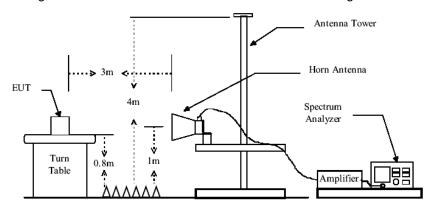


Figure 3. Above 1GHz radiated emissions test configuration



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Test Procedure:

- 1) The procedure used was ANSI Standard C63.10:2009. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed for in peak detection mode using the receiver. The EUT was measured for both the Horizontal and Vertical polarities and performed a pre-test three orthogonal planes. For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. The worst case emissions were reported.
- 2) Low noise amplifier was used below 1GHz, High pass Filter was used above 3GHz. We did not use any amplifier or filter between 1G and 3GHz.
- 3) Test were performed for their spatial orthogonal(X, Y, Z), the worst test data (X orthogonal) was submitted.
 - a) For this intentional radiator operates below 25 GHz. the spectrum shall be investigated to the tenth harmonic of the highest fundamental frequency. And above the third harmonic of this intentional radiator, the disturbance is very low. So the test result only displays to 5rd harmonic.
 - b) As shown in Section, for frequencies above 1000MHz. the above 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.
- 4) The test only perform the EUT in transmitting status since the test frequencies were over 1GHz only required transmitting status.

Test Result: Pass



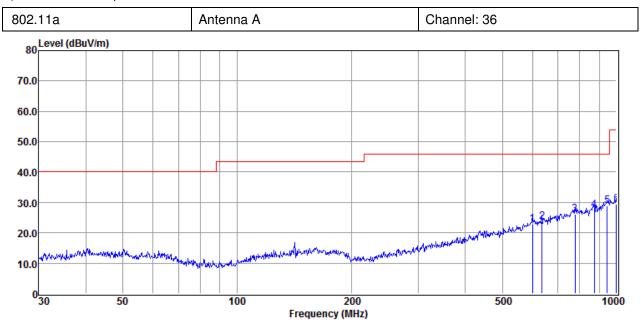
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7.9.1 Radiated Spurious Emissions

30MHz-1GHz:

Pretest under all modes on Antenna A and Antenna B; choose the worst case mode (802.11a on Antenna A) record on the report.



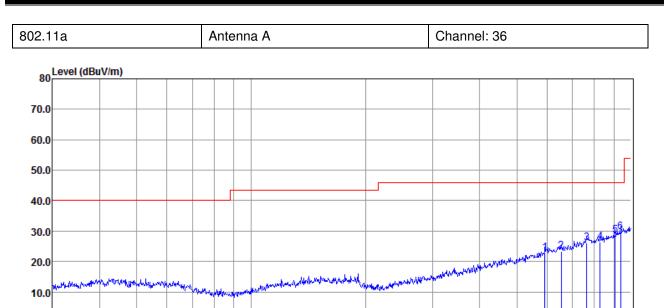
Item	Freq.	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Result Level	Limit Line	Over Limit	Detector	Polarization
(Mark)	(MHz)	(dBµV)	(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
1	600.310	22.50	19.60	23.81	2.72	22.73	46.00	-23.27	QP	Vertical
2	636.804	23.57	19.49	23.83	2.81	23.72	46.00	-22.28	QP	Vertical
3	778.842	22.95	22.24	23.91	3.16	26.13	46.00	-19.87	QP	Vertical
4	873.377	23.26	22.30	23.93	3.38	27.54	46.00	-18.46	QP	Vertical
5	945.971	23.46	23.61	23.94	3.56	28.78	46.00	-17.22	QP	Vertical
6	1000.00	22.96	24.50	23.94	3.71	29.53	54.00	-24.47	QP	Vertical



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	Frequency (MHz)											
Item	Freq.	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Result Level	Limit Line	Over Limit	Detector	Polarization		
(Mark)	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)				
1	593.716	23.12	19.30	23.80	2.69	22.81	46.00	-23.19	QP	Horizontal		
2	654.390	22.76	19.71	23.84	2.85	23.44	46.00	-22.56	QP	Horizontal		
3	765.157	23.08	21.89	23.91	3.14	26.13	46.00	-19.87	QP	Horizontal		
4	828.824	23.09	21.94	23.93	3.26	26.38	46.00	-19.62	QP	Horizontal		
5	907.197	24.08	22.70	23.94	3.45	28.46	46.00	-17.54	QP	Horizontal		
6	939.276	24.34	23.44	23.94	3.56	29.57	46.00	-16.43	QP	Horizontal		

200



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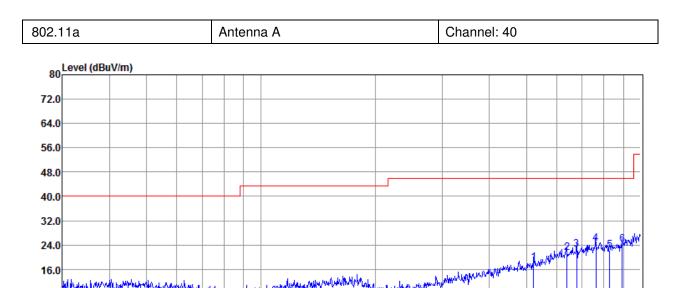
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Item	Freq.	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Result Level	Limit Line	Over Limit	Detector	Polarization
(Mark)	(MHz)	(dBµV)	(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
1	522.569	22.48	16.95	23.75	2.51	18.19	46.00	-27.81	QP	Vertical
2	639.779	22.82	19.53	23.83	2.81	21.33	46.00	-24.67	QP	Vertical
3	678.874	23.47	20.14	23.86	2.91	22.66	46.00	-23.34	QP	Vertical
4	761.717	23.49	21.75	23.91	3.14	24.47	46.00	-21.53	QP	Vertical
5	828.247	20.90	21.94	23.93	3.26	22.17	46.00	-23.83	QP	Vertical
6	894.326	22.28	22.44	23.94	3.42	24.20	46.00	-21.80	QP	Vertical

200

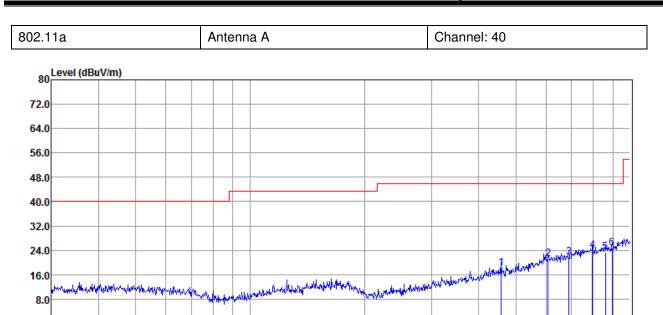


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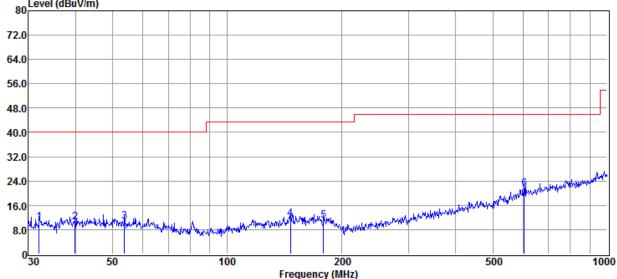
Frequency (MHz)											
Item	Freq.	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Result Level	Limit Line	Over Limit	Detector	Polarization	
(Mark)	(MHz)	(dBµV)	(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)			
1	457.864	23.39	16.13	23.72	2.33	18.13	46.00	-27.87	QP	Horizontal	
2	608.087	22.66	19.52	23.81	2.74	21.11	46.00	-24.89	QP	Horizontal	
3	689.818	22.55	20.23	23.87	2.94	21.85	46.00	-24.15	QP	Horizontal	
4	796.362	22.65	21.86	23.92	3.20	23.79	46.00	-22.21	QP	Horizontal	
5	860.162	21.84	22.24	23.93	3.33	23.48	46.00	-22.52	QP	Horizontal	
6	897.091	22.79	22.47	23.94	3.42	24.74	46.00	-21.26	QP	Horizontal	



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Item	Freq.	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Result Level	Limit Line	Over Limit	Detector	Polarization
(Mark)	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
1	32.067	21.45	12.54	23.71	0.13	10.41	40.00	-29.59	QP	Vertical
2	39.854	20.69	13.08	23.70	0.27	10.34	40.00	-29.66	QP	Vertical
3	53.693	21.79	12.24	23.69	0.46	10.80	40.00	-29.20	QP	Vertical
4	146.888	21.87	12.11	23.64	1.16	11.50	43.50	-32.00	QP	Vertical
5	179.386	21.15	12.11	23.63	1.33	10.96	43.50	-32.54	QP	Vertical
6	605.659	22.87	19.54	23.81	2.74	21.34	46.00	-24.66	QP	Vertical



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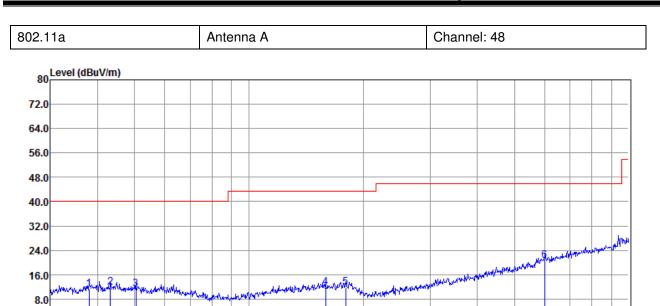
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	Frequency (MHZ)										
Item	Freq.	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Result Level	Limit Line	Over Limit	Detector	Polarization	
(Mark)	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)			
1	37.945	21.96	12.90	23.71	0.24	11.39	40.00	-28.61	QP	Horizontal	
2	43.202	22.04	13.10	23.70	0.31	11.75	40.00	-28.25	QP	Horizontal	
3	50.409	21.96	12.65	23.69	0.42	11.34	40.00	-28.66	QP	Horizontal	
4	159.225	21.80	12.30	23.63	1.22	11.69	43.50	-31.81	QP	Horizontal	
5	180.016	22.02	12.10	23.63	1.33	11.82	43.50	-31.68	QP	Horizontal	
6	601.427	22.25	19.58	23.81	2.72	20.74	46.00	-25.26	QP	Horizontal	

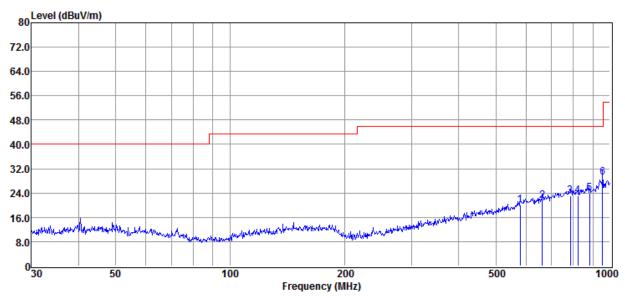
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Item	Freq.	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Result Level	Limit Line	Over Limit	Detector	Polarization
(Mark)	(MHz)	(dBµV)	(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
1	580.204	22.66	18.40	23.79	2.68	19.95	46.00	-26.05	QP	Vertical
2	662.462	22.68	19.88	23.85	2.87	21.58	46.00	-24.42	QP	Vertical
3	785.975	21.89	22.05	23.92	3.18	23.20	46.00	-22.80	QP	Vertical
4	822.445	21.96	21.89	23.93	3.26	23.18	46.00	-22.82	QP	Vertical
5	881.886	22.17	22.36	23.93	3.39	23.99	46.00	-22.01	QP	Vertical
6	955.572	25.86	23.77	23.94	3.58	29.27	46.00	-16.73	QP	Vertical



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32.0 24.0 16.0

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802.11a Antenna A Channel: 149

80 Level (dBuV/m)

72.0 64.0 48.0 40.0

200	
Frequency (MHz)	

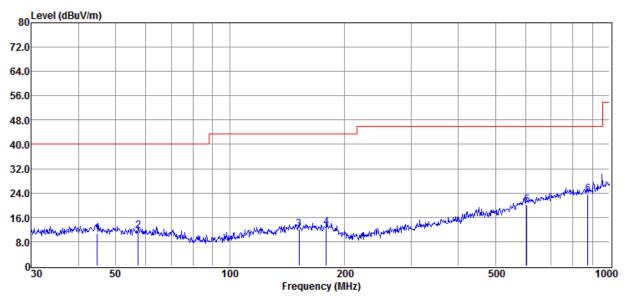
					ricqu	circy (miriz)				
Item	Freq.	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Result Level	Limit Line	Over Limit	Detector	Polarization
(Mark)	(MHz)	(dBµV)	(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
1	43.296	21.37	13.10	23.70	0.31	11.08	40.00	-28.92	QP	Horizontal
2	596.759	22.25	19.45	23.81	2.72	20.61	46.00	-25.39	QP	Horizontal
3	702.174	22.36	20.36	23.87	2.98	21.83	46.00	-24.17	QP	Horizontal
4	773.627	22.10	22.30	23.91	3.16	23.65	46.00	-22.35	QP	Horizontal
5	852.351	22.29	22.21	23.93	3.33	23.90	46.00	-22.10	QP	Horizontal
6	955.478	24.17	23.77	23.94	3.58	27.58	46.00	-18.42	QP	Horizontal



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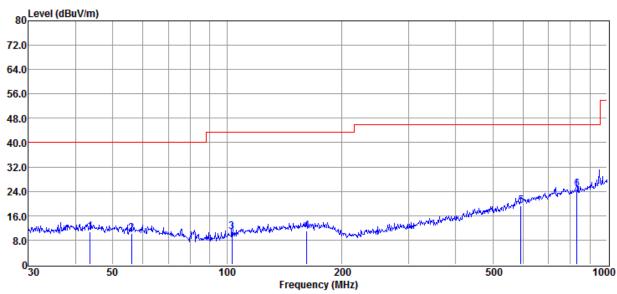
Item	Freq.	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Result Level	Limit Line	Over Limit	Detector	Polarization
(Mark)	(MHz)	(dBµV)	(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
1	44.743	20.94	13.10	23.70	0.32	10.66	40.00	-29.34	QP	Vertical
2	57.392	22.67	12.10	23.69	0.50	11.58	40.00	-28.42	QP	Vertical
3	152.130	22.22	12.30	23.64	1.19	12.07	43.50	-31.43	QP	Vertical
4	179.386	22.89	12.11	23.63	1.33	12.70	43.50	-30.80	QP	Vertical
5	604.670	21.68	19.56	23.81	2.74	20.17	46.00	-25.83	QP	Vertical
6	876.345	21.78	22.33	23.93	3.38	23.56	46.00	-22.44	QP	Vertical



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802.11a Antenna A Channel: 157



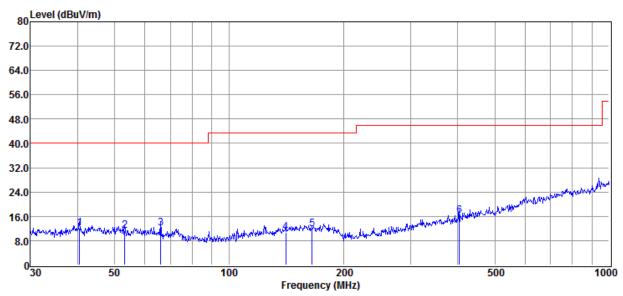
Item	Freq.	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Result Level	Limit Line	Over Limit	Detector	Polarization
(Mark)	(MHz)	(dBµV)	(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
1	43.659	21.02	13.10	23.70	0.31	10.73	40.00	-29.27	QP	Horizontal
2	56.001	21.23	12.10	23.69	0.49	10.13	40.00	-29.87	QP	Horizontal
3	103.080	23.70	9.61	23.66	0.94	10.59	43.50	-32.91	QP	Horizontal
4	162.041	21.16	12.28	23.63	1.24	11.05	43.50	-32.45	QP	Horizontal
5	593.050	20.93	19.30	23.80	2.69	19.12	46.00	-26.88	QP	Horizontal
6	833.317	23.25	22.03	23.93	3.30	24.65	46.00	-21.35	QP	Horizontal



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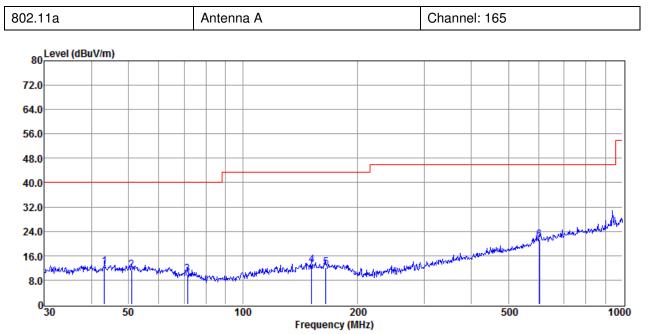


Item	Freq.	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Result Level	Limit Line	Over Limit	Detector	Polarization
(Mark)	(MHz)	(dBμV)	(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
1	40.417	22.53	13.10	23.70	0.27	12.20	40.00	-27.80	QP	Vertical
2	53.131	22.07	12.32	23.69	0.45	11.15	40.00	-28.85	QP	Vertical
3	66.034	23.89	11.21	23.68	0.56	11.98	40.00	-28.02	QP	Vertical
4	140.835	21.63	11.74	23.64	1.13	10.86	43.50	-32.64	QP	Vertical
5	165.487	21.97	12.24	23.63	1.26	11.84	43.50	-31.66	QP	Vertical
6	403.250	23.19	14.43	23.70	2.21	16.13	46.00	-29.87	QP	Vertical



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Item	Freq.	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Result Level	Limit Line	Over Limit	Detector	Polarization
(Mark)	(MHz)	(dBµV)	(dB/m)	(dB)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
1	43.202	22.64	13.10	23.70	0.31	12.35	40.00	-27.65	QP	Horizontal
2	50.942	21.96	12.59	23.69	0.43	11.29	40.00	-28.71	QP	Horizontal
3	71.581	22.92	10.01	23.68	0.61	9.86	40.00	-30.14	QP	Horizontal
4	151.597	22.96	12.30	23.64	1.17	12.79	43.50	-30.71	QP	Horizontal
5	165.487	22.30	12.24	23.63	1.26	12.17	43.50	-31.33	QP	Horizontal
6	603.539	22.71	19.56	23.81	2.74	21.20	46.00	-24.80	QP	Horizontal

Remark: Result Level = Read Level + Antenna Factor + Cable loss - Preamp Factor



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Above 1GHz

802.11a Antenna A Channel: 36

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	6924	33.50	9.23	42.73	54	-11.27	peak	Horizontal
2	10360	26.29	10.31	36.60	54	-17.40	peak	Horizontal
3	15540	32.56	12.03	44.59	54	-9.41	peak	Horizontal
4	10360	26.32	10.31	36.63	54	-17.37	peak	Vertical
5	15540	31.70	12.03	43.73	54	-10.27	peak	Vertical
6	17896	33.95	12.00	45.95	54	-8.05	peak	Vertical

802.11a Antenna A Channel: 40

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Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	10420	25.91	10.32	36.23	54	-17.77	peak	Horizontal
2	15630	31.46	12.01	43.47	54	-10.53	peak	Horizontal
3	16726	33.06	12.07	45.13	54	-8.87	peak	Horizontal
4	10420	26.04	10.32	36.36	54	-17.64	peak	Vertical
5	15630	32.16	12.01	44.17	54	-9.83	peak	Vertical
6	17337	33.09	12.05	45.14	54	-8.86	peak	Vertical

802.11a Antenna A Channel: 48

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	10480	26.05	10.33	36.38	54	-17.62	peak	Horizontal
2	15720	30.22	11.98	42.20	54	-11.80	peak	Horizontal
3	17883	34.41	11.98	46.39	54	-7.61	peak	Horizontal
4	10480	26.33	10.33	36.66	54	-17.34	peak	Vertical
5	13853	34.27	11.30	45.57	54	-8.43	peak	Vertical
6	15720	30.6	11.98	42.58	54	-11.42	peak	Vertical

802.11a Antenna A Channel: 149

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	11490	27.77	10.21	37.98	54	-16.02	peak	Horizontal
2	15322	34.04	12.04	46.08	54	-7.92	peak	Horizontal
3	17235	32.32	11.89	44.21	54	-9.79	peak	Horizontal
4	11490	25.33	10.21	35.54	54	-18.46	peak	Vertical
5	16687	31.53	12.02	43.55	54	-10.45	peak	Vertical
6	17235	31.88	11.89	43.77	54	-10.23	peak	Vertical

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802.11a Antenna A Channel: 157

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	11570	27.11	10.31	37.42	54	-16.58	peak	Horizontal
2	15465	33.87	12.04	45.91	54	-8.09	peak	Horizontal
3	17355	32.72	12.08	44.80	54	-9.20	peak	Horizontal
4	11570	25.85	10.31	36.16	54	-17.84	peak	Vertical
5	14997	32.37	11.82	44.19	54	-9.81	peak	Vertical
6	17355	30.22	12.08	42.30	54	-11.70	peak	Vertical

802.11a Antenna A Channel: 165

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Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	11650	26.91	10.43	37.34	54	-16.66	peak	Horizontal
2	15322	34.06	12.04	46.10	54	-7.90	peak	Horizontal
3	17475	31.57	12.26	43.83	54	-10.17	peak	Horizontal
4	11590	27.54	10.34	37.88	54	-16.12	peak	Vertical
5	15257	33.72	12.03	45.75	54	-8.25	peak	Vertical
6	17385	32.3	12.12	44.42	54	-9.58	AV	Vertical

802.11 n(HT20) Antenna A Channel: 36

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	10360	24.63	10.31	34.94	54	-19.06	peak	Horizontal
2	13827	33.55	11.29	44.84	54	-9.16	peak	Horizontal
3	15540	30.89	12.03	42.92	54	-11.08	peak	Horizontal
4	10360	26.73	10.31	37.04	54	-16.96	peak	Vertical
5	15540	31.71	12.03	43.74	54	-10.26	peak	Vertical
6	17272	33.89	11.95	45.84	54	-8.16	peak	Vertical

802.11 n(HT20) Antenna A Channel: 40

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	10420	25.53	10.32	35.85	54	-18.15	peak	Horizontal
2	13879	33.38	11.30	44.68	54	-9.32	peak	Horizontal
3	15630	29.68	12.01	41.69	54	-12.31	peak	Horizontal
4	10420	24.64	10.32	34.96	54	-19.04	peak	Vertical
5	15630	29.94	12.01	41.95	54	-12.05	peak	Vertical
6	14438	31.92	11.83	43.75	54	-10.25	peak	Vertical

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802.11 n(HT20) Antenna A Channel: 48

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	10480	25.9	10.33	36.23	54	-17.77	peak	Horizontal
2	15244	33.75	12.02	45.77	54	-8.23	peak	Horizontal
3	15720	29.37	11.98	41.35	54	-12.65	peak	Horizontal
4	6170	32.46	9.54	42.00	54	-12.00	peak	Vertical
5	10480	25.18	10.33	35.51	54	-18.49	peak	Vertical
6	15720	29.16	11.98	41.14	54	-12.86	peak	Vertical

802.11 n(HT20) Antenna A Channel: 149

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Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	11490	24.38	10.21	34.59	54	-19.41	peak	Horizontal
2	15270	33.52	12.03	45.55	54	-8.45	peak	Horizontal
3	17235	31.78	11.89	43.67	54	-10.33	peak	Horizontal
4	11490	25.26	10.21	35.47	54	-18.53	peak	Vertical
5	14906	32.38	11.67	44.05	54	-9.95	peak	Vertical
6	17235	30.41	11.89	42.30	54	-11.70	AV	Vertical

802.11 n(HT20) Antenna A Channel: 157

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	11570	25.37	10.31	35.68	54	-18.32	peak	Horizontal
2	13606	34.69	11.22	45.91	54	-8.09	peak	Horizontal
3	17355	31.78	12.08	43.86	54	-10.14	peak	Horizontal
4	11570	27.41	10.31	37.72	54	-16.28	peak	Vertical
5	15283	33.77	12.03	45.80	54	-8.20	peak	Vertical
6	17355	31.14	12.08	43.22	54	-10.78	peak	Vertical

802.11 n(HT20) Antenna A Channel: 165

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	11645	25.53	10.42	35.95	54	-18.05	peak	Horizontal
2	14308	33.59	11.88	45.47	54	-8.53	peak	Horizontal
3	17470	30.83	12.25	43.08	54	-10.92	peak	Horizontal
4	11650	27.1	10.43	37.53	54	-16.47	peak	Vertical
5	15127	32.77	12.00	44.77	54	-9.23	peak	Vertical
6	17475	29.90	12.26	42.16	54	-11.84	peak	Vertical



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802.11 n(HT40) Antenna A Channel: 38

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	10380	25.72	10.31	36.03	54	-17.97	peak	Horizontal
2	15570	32.61	12.02	44.63	54	-9.37	peak	Horizontal
3	17090	33.31	12.00	45.31	54	-8.69	peak	Horizontal
4	10380	24.64	10.31	34.95	54	-19.05	peak	Vertical
5	14373	31.83	11.86	43.69	54	-10.31	peak	Vertical
6	15570	29.80	12.02	41.82	54	-12.18	peak	Vertical

802.11 n(HT40) Antenna A Channel: 46

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	10460	25.60	10.33	35.93	54	-18.07	peak	Horizontal
2	15690	29.13	11.99	41.12	54	-12.88	peak	Horizontal
3	16986	32.05	12.15	44.20	54	-9.80	peak	Horizontal
4	10460	27.73	10.33	38.06	54	-15.94	peak	Vertical
5	14828	33.91	11.54	45.45	54	-8.55	peak	Vertical
6	15690	31.11	11.99	43.10	54	-10.90	peak	Vertical

802.11 n(HT40) Antenna A Channel: 151

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	11510	24.99	10.22	35.21	54	-18.79	peak	Horizontal
2	16778	32.27	12.13	44.40	54	-9.60	peak	Horizontal
3	17265	32.33	11.94	44.27	54	-9.73	peak	Horizontal
4	11510	26.83	10.22	37.05	54	-16.95	peak	Vertical
5	15374	33.23	12.05	45.28	54	-8.72	peak	Vertical
6	17265	30.90	11.94	42.84	54	-11.16	peak	Vertical

802.11 n(HT40) Antenna A Channel: 159

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	11590	25.72	10.34	36.06	54	-17.94	peak	Horizontal
2	15179	33.42	12.01	45.43	54	-8.57	peak	Horizontal
3	17385	31.58	12.12	43.70	54	-10.30	peak	Horizontal
4	11590	26.98	10.34	37.32	54	-16.68	peak	Vertical
5	17385	30.94	12.12	43.06	54	-10.94	peak	Vertical
6	15140	32.52	12.00	44.52	54	-9.48	peak	Vertical

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802.11a Antenna B Channel: 36

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	10360	58.66	-23.51	35.15	54	-18.85	peak	Horizontal
2	13680	67.55	-22.96	44.59	54	-9.41	peak	Horizontal
3	15540	65.02	-21.53	43.49	54	-10.51	peak	Horizontal
4	10360	59.46	-23.51	35.95	54	-18.05	peak	Vertical
5	15540	63.92	-21.53	42.39	54	-11.61	peak	Vertical
6	17200	65.68	-20.94	44.74	54	-9.26	peak	Vertical

802.11a Antenna B Channel: 40

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	10420	58.63	-23.60	35.03	54	-18.97	peak	Horizontal
2	15630	63.10	-21.69	41.41	54	-12.59	peak	Horizontal
3	17840	66.52	-20.85	45.67	54	-8.33	peak	Horizontal
4	10420	59.62	-23.60	36.02	54	-17.98	peak	Vertical
5	15056	67.37	-22.49	44.88	54	-9.12	peak	Vertical
6	15630	63.59	-21.69	41.90	54	-12.10	peak	Vertical

802.11a Antenna B Channel: 48

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	10480	58.96	-23.68	35.28	54	-18.72	peak	Horizontal
2	15360	66.79	-21.43	45.36	54	-8.64	peak	Horizontal
3	15720	63.14	-21.8	41.34	54	-12.66	peak	Horizontal
4	10480	60.54	-23.68	36.86	54	-17.14	peak	Vertical
5	15720	63.15	-21.80	41.35	54	-12.65	peak	Vertical
6	16808	65.57	-20.76	44.81	54	-9.19	peak	Vertical

802.11a Antenna B Channel: 149

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization	
1	11480	59.97	-24.77	35.20	54	-18.80	peak	Horizontal	
2	15264	67.20	-21.78	45.42	54	-8.58	peak	Horizontal	
3	17235	64.60	-21.05	43.55	54	-10.45	peak	Horizontal	
4	11490	61.79	-24.79	37.00	54	-17.00	peak	Vertical	
5	15072	67.85	-22.45	45.40	54	-8.60	peak	Vertical	
6	17235	64.07	-21.05	43.02	54	-10.98	peak	Vertical	



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802.11a Antenna B Channel: 157

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	11570	60.98	-24.98	36.00	54	-18.00	peak	Horizontal
2	15264	67.20	-21.78	45.42	54	-8.58	peak	Horizontal
3	17355	64.60	-21.42	43.18	54	-10.82	peak	Horizontal
4	11570	61.71	-24.98	36.73	54	-17.27	peak	Vertical
5	16688	65.96	-20.98	44.98	54	-9.02	peak	Vertical
6	17355	65.95	-21.42	44.53	54	-9.47	peak	Vertical

802.11a Antenna B Channel: 165

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Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization	
1	11650	61.14	-25.20	35.94	54	-18.06	peak	Horizontal	
2	15264	67.20	-21.78	45.42	54	-8.58	peak	Horizontal	
3	17475	64.90	-21.80	43.10	54	-10.90	peak	Horizontal	
4	11650	61.75	-25.20	36.55	54	-17.45	peak	Vertical	
5	13800	68.57	-22.84	45.73	54	-8.27	peak	Vertical	
6	17475	65.10	-21.80	43.30	54	-10.70	AV	Vertical	

802.11 n(HT20) Antenna B Channel: 36

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	10360	59.43	-23.51	35.92	54	-18.08	peak	Horizontal
2	13840	67.79	-22.81	44.98	54	-9.02	peak	Horizontal
3	15540	64.8	-21.53	43.27	54	-10.73	peak	Horizontal
4	10360	59.52	-23.51	36.01	54	-17.99	peak	Vertical
5	13784	67.97	-22.85	45.12	54	-8.88	peak	Vertical
6	15540	64.43	-21.53	42.90	54	-11.1	peak	Vertical

802.11 n(HT20) Antenna B Channel: 40

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	10420	58.68	-23.60	35.08	54	-18.92	peak	Horizontal
2	13840	67.79	-22.81	44.98	54	-9.02	peak	Horizontal
3	15630	63.74	-21.69	42.05	54	-11.95	peak	Horizontal
4	10420	59.10	-23.60	35.50	54	-18.50	peak	Vertical
5	13976	67.25	-22.82	44.43	54	-9.57	peak	Vertical
6	15630	64.55	-21.69	42.86	54	-11.14	peak	Vertical



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802.11 n(HT20) Antenna B Channel: 48

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	10480	59.25	-23.68	35.57	54	-18.43	peak	Horizontal
2	15720	63.65	-21.80	41.85	54	-12.15	peak	Horizontal
3	17856	67.00	-20.71	46.29	54	-7.71	peak	Horizontal
4	10480	61.17	-23.68	37.49	54	-16.51	peak	Vertical
5	13784	67.97	-22.85	45.12	54	-8.88	peak	Vertical
6	15720	64.14	-21.80	42.34	54	-11.66	peak	Vertical

802.11 n(HT20) Antenna B Channel: 149

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Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization	
1	11490	61.09	-24.79	36.30	54	-17.70	peak	Horizontal	
2	15328	66.87	-21.55	45.32	54	-8.68	peak	Horizontal	
3	17235	65.03	-21.05	43.98	54	-10.02	peak	Horizontal	
4	11490	61.28	-24.79	36.49	54	-17.51	peak	Vertical	
5	15344	67.26	-21.49	45.77	54	-8.23	peak	Vertical	
6	17235	65.46	-21.05	44.41	54	-9.59	AV	Vertical	

802.11 n(HT20) Antenna B Channel: 157

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	11570	61.92	-24.98	36.94	54	-17.06	peak	Horizontal
2	13832	67.6	-22.81	44.79	54	-9.21	peak	Horizontal
3	17355	65.15	-21.42	43.73	54	-10.27	peak	Horizontal
4	11570	62.04	-24.98	37.06	54	-16.94	peak	Vertical
5	15344	67.26	-21.49	45.77	54	-8.23	peak	Vertical
6	17355	65.48	-21.42	44.06	54	-9.94	peak	Vertical

802.11 n(HT20) Antenna B Channel: 165

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	11650	62.18	-25.20	36.98	54	-17.02	peak	Horizontal
2	15328	66.87	-21.55	45.32	54	-8.68	peak	Horizontal
3	17475	66.06	-21.80	44.26	54	-9.74	peak	Horizontal
4	11650	60.47	-25.20	35.27	54	-18.73	peak	Vertical
5	15488	66.53	-21.44	45.09	54	-8.91	peak	Vertical
6	17475	63.95	-21.80	42.15	54	-11.85	peak	Vertical

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802.11 n(HT40) Antenna B	Channel: 38
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Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	10380	58.54	-23.54	35.00	54	-19.00	peak	Horizontal
2	13808	68.61	-22.84	45.77	54	-8.23	peak	Horizontal
3	15570	65.29	-21.59	43.70	54	-10.30	peak	Horizontal
4	10380	26.52	10.31	36.83	54	-17.17	peak	Vertical
5	13853	33.86	11.30	45.16	54	-8.84	peak	Vertical
6	15570	31.06	12.02	43.08	54	-10.92	peak	Vertical

802.11 n(HT40) Antenna B Channel: 46

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	10460	59.76	-23.65	36.11	54	-17.89	peak	Horizontal
2	14960	67.73	-22.76	44.97	54	-9.03	peak	Horizontal
3	15690	65.46	-21.80	43.66	54	-10.34	peak	Horizontal
4	10460	26.35	10.33	36.68	54	-17.32	peak	Vertical
5	15023	33.09	11.86	44.95	54	-9.05	peak	Vertical
6	15690	30.48	11.99	42.47	54	-11.53	peak	Vertical

802.11 n(HT40) Antenna B Channel: 151

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	11510	60.57	-24.82	35.75	54	-18.25	peak	Horizontal
2	15304	68.63	-21.63	47.00	54	-7.00	peak	Horizontal
3	17265	64.18	-21.14	43.04	54	-10.96	peak	Horizontal
4	11510	26.53	10.22	36.75	54	-17.25	peak	Vertical
5	16765	32.36	12.11	44.47	54	-9.53	peak	Vertical
6	17265	32.99	11.94	44.93	54	-9.07	peak	Vertical

802.11 n(HT40) Antenna B Channel: 159

Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	11590	60.97	-25.04	35.93	54	-18.07	peak	Horizontal
2	15312	67.11	-21.61	45.50	54	-8.50	peak	Horizontal
3	17385	64.12	-21.52	42.60	54	-11.40	peak	Horizontal
4	11590	25.60	10.34	35.94	54	-18.06	peak	Vertical
5	15283	32.51	12.03	44.54	54	-9.46	peak	Vertical
6	17385	30.14	12.12	42.26	54	-11.74	peak	Vertical

Remark: 1. Test Level = Receiver Reading + Antenna Factor + Cable Loss - Preamplifier Factor.

- 2. No any other emissions level which are attenuated less than 20dB below the limit. According to 15.31(o), the amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part. Hence there no other emissions have been reported.
- 3. If the Peak value below the AV Limit, the AV test doesn't perform for this submission.

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7.9.2 Radiated Band edge

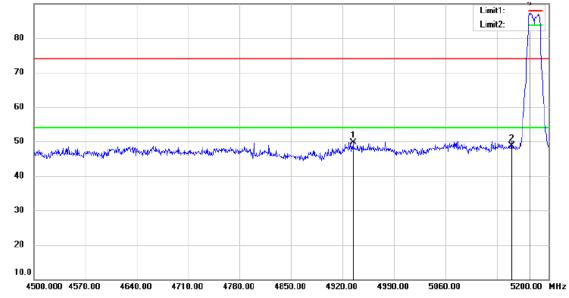
90.0

dBuV/m

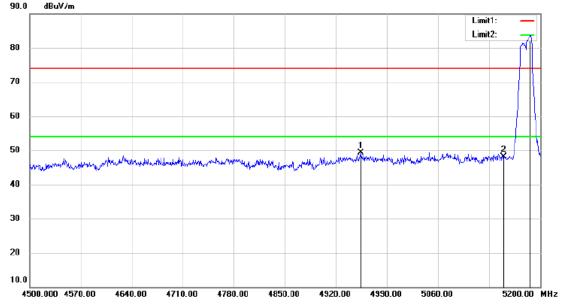
802.11 a Antenna A Channel: 36

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	4934	43.21	6.51	49.72	54	-4.28	Peak	Horizontal
2	5150	42.39	6.41	48.80	54	-5.20	Peak	Horizontal
3	5174.1	80.87	6.40	87.27	54	33.27	Peak	Horizontal
1	4954.3	42.86	6.50	49.36	54	-4.64	Peak	Vertical
2	5150	41.78	6.35	48.13	54	-5.87	Peak	Vertical
3	5186.7	77.45	6.30	83.75	54	29.75	Peak	Vertical





Vertical



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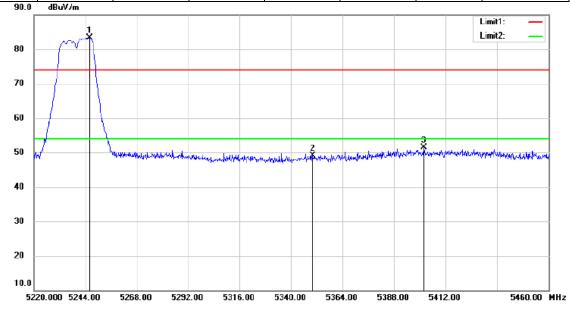
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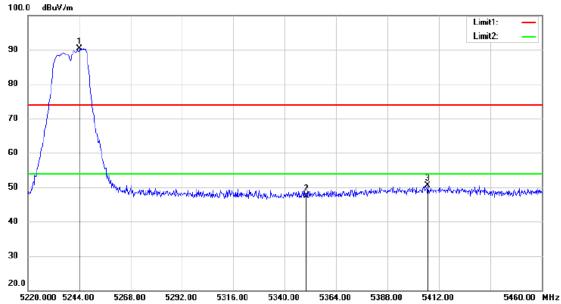
802.11 a Antenna A Channel: 48

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5246.16	76.97	6.43	83.40	54	29.40	Peak	Horizontal
2	5350	42.54	6.54	49.08	54	-4.92	Peak	Horizontal
3	5401.92	44.81	6.60	51.41	54	-2.59	Peak	Horizontal
1	5244	83.94	6.33	90.27	54	36.27	Peak	Vertical
2	5350	41.05	6.40	47.45	54	-6.55	Peak	Vertical
3	5406.72	44.02	6.45	50.47	54	-3.53	Peak	Vertical

Horizontal



Vertical



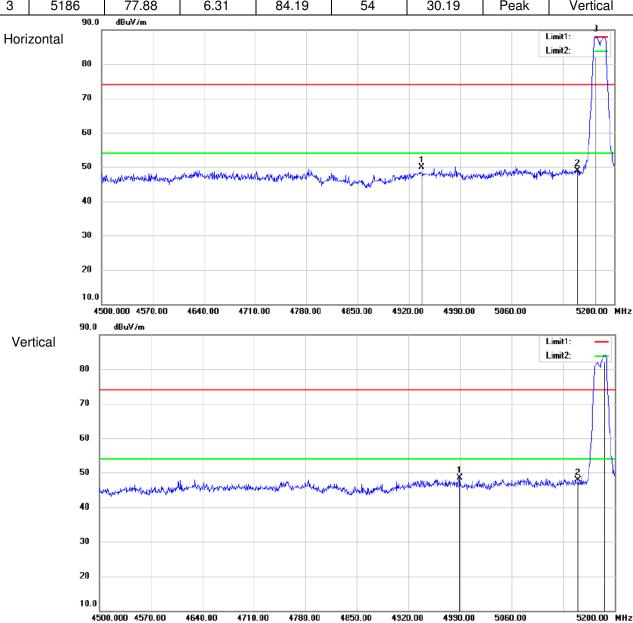
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802.	.11 n(HT20)		Antenna A			Channel: 36			
MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization	
1	4937.5	43.34	6.50	49.84	54	-4.16	Peak	Horizontal	
2	5150	42.51	6.41	48.92	54	-5.08	Peak	Horizontal	
3	5174.8	81.80	6.40	88.20	54	34.20	Peak	Horizontal	
1	4989.3	41.88	6.55	48.43	54	-5.57	Peak	Vertical	
2	5150	41.55	6.35	47.90	54	-6.10	Peak	Vertical	
2	5186	77 88	6.31	9/110	54	20.10	Poak	Vortical	



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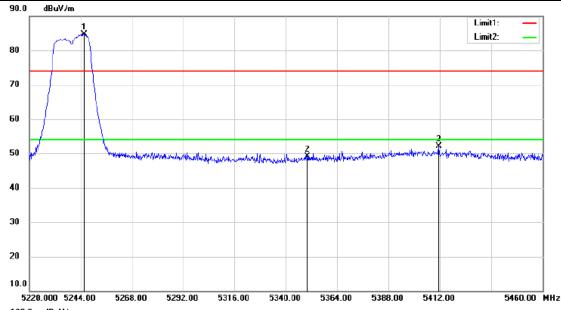
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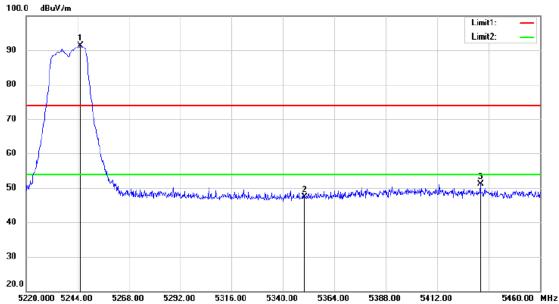
Channel: 48

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5245.68	78.33	6.42	84.75	54	30.75	Peak	Horizontal
2	5350	42.63	6.54	49.17	54	-4.83	Peak	Horizontal
3	5411.52	45.43	6.62	52.05	54	-1.95	Peak	Horizontal
1	5245.44	84.95	6.32	91.27	54	37.27	Peak	Vertical
2	5350	40.87	6.40	47.27	54	-6.73	Peak	Vertical
3	5432.16	44.74	6.46	51.20	54	-2.80	Peak	Vertical

Horizontal



Vertical



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10.0

4500.000 4573.00

4646.00

4719.00

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802	.11 n(HT40)		Antenna A			Channel: 38			
MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization	
1	4651.84	44.85	4.52	49.37	54	-4.63	Peak	Horizontal	
2	5150	41.54	6.41	47.95	54	-6.05	Peak	Horizontal	
3	5194.23	77.71	6.38	84.09	54	30.09	Peak	Horizontal	
1	4783.97	43.47	5.49	48.96	54	-5.04	Peak	Vertical	
2	5150	41.92	6.35	48.27	54	-5.73	Peak	Vertical	
	1			· · · · · · · · · · · · · · · · · · ·			_		

5202.26 77.86 6.30 84.16 54 30.16 Peak Vertical 90.0 dBuV/m Limit1: Horizontal Limit2: 80 70 60 40 30 20 4500.000 4573.00 4646.00 4719.00 4792.00 4865.00 4938.00 5011.00 5084.00 5230.00 MHz 90.0 dBuV/m Limit1: Vertical Limit2: 80 70 60 50 40 30 20

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4792.00

4865.00

4938.00

5011.00

5084.00

5230.00 MHz



90.0

dBuV/m

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Report No.: SHEM140500098405

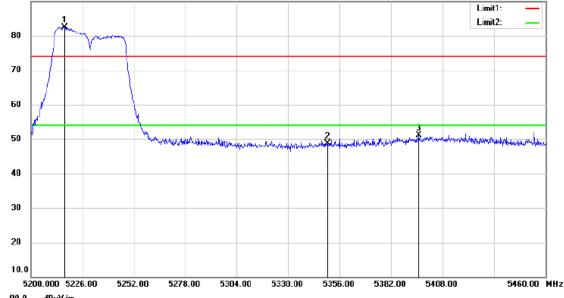
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802.	11 n(H140)			Antenna A		(Channel: 46	Ó
MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Pola

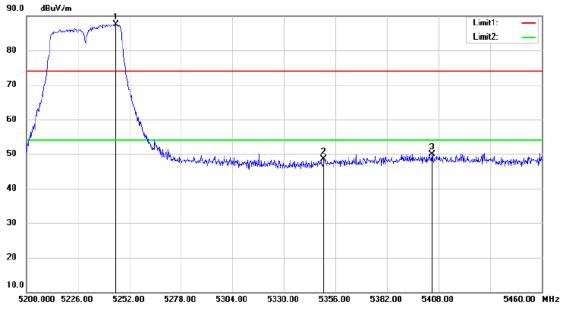
IVIT.	(MHz)	(dBuV/m)	factor(dB)	(dBuV/m)	(dBuV/m)	(dB)	Detector	Polarization
1	5217.16	76.12	6.38	82.50	54	28.50	Peak	Horizontal
2	5350	42.07	6.54	48.61	54	-5.39	Peak	Horizontal
3	5396.04	44.51	6.6	51.11	54	-2.89	Peak	Horizontal
1	5245.24	81.25	6.32	87.57	54	33.57	Peak	Vertical
2	5350	42.13	6.40	48.53	54	-5.47	Peak	Vertical
3	5404.62	43.49	6.44	49.93	54	-4.07	Peak	Vertical



000 44 (LIT40)



Vertical



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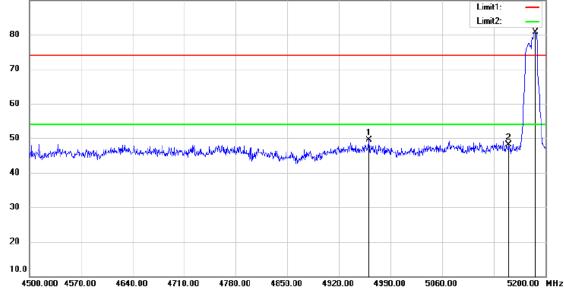
Report No.: SHEM140500098405

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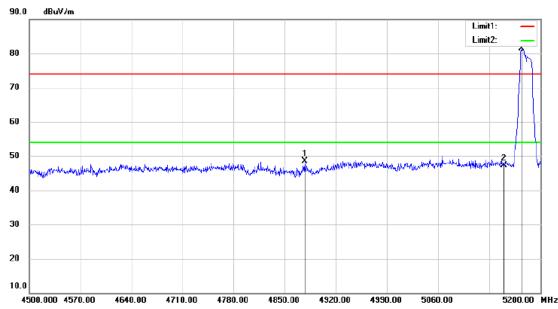
802.11 a	Antenna B	Channel: 36
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MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	4960.6	42.88	6.53	49.41	54	-4.59	Peak	Horizontal
2	5150	41.71	6.41	48.12	54	-5.88	Peak	Horizontal
3	5186.7	74.3	6.38	80.68	54	26.68	Peak	Horizontal
1	4877.3	42.17	6.25	48.42	54	-5.58	Peak	Vertical
2	5150	40.88	6.35	47.23	54	-6.77	Peak	Vertical
3	5174.1	75.15	6.33	81.48	54	27.48	Peak	Vertical
	90.0	dBuV/m	•			•		





Vertical



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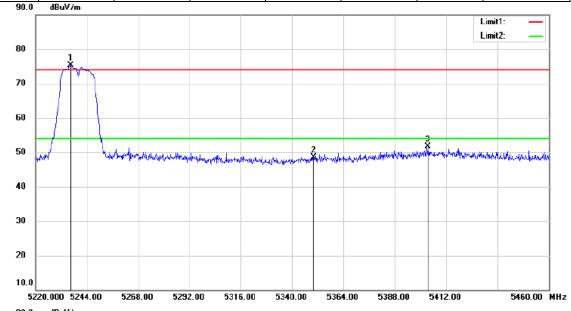
Report No.: SHEM140500098405

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802.11 a	Antenna B	Channel: 48
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MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5236.56	68.82	6.41	75.23	54	21.23	Peak	Horizontal
2	5350	41.90	6.54	48.44	54	-5.56	Peak	Horizontal
3	5403.6	45.04	6.61	51.65	54	-2.35	Peak	Horizontal
1	5233.44	76.25	6.31	82.56	54	28.56	Peak	Vertical
2	5350	42.31	6.4	48.71	54	-5.29	Peak	Vertical
3	5400	44.46	6.44	50.90	54	-3.10	Peak	Vertical

Horizontal



Vertical



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90.0

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

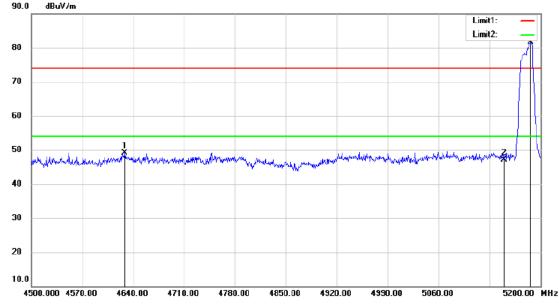
Report No.: SHEM140500098405

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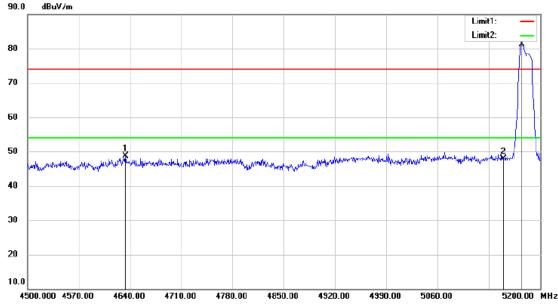
802.11 n(HT20)				Antenna B	Channel: 36			
MK	Frequency	Reading	Corrected	Result	Limit	Over Limit	Detector	1

MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	4628.1	44.76	4.33	49.09	54	-4.91	Peak	Horizontal
2	5150	40.78	6.41	47.19	54	-6.81	Peak	Horizontal
3	5186.7	75.24	6.38	81.62	74	7.62	Peak	Horizontal
1	4633.7	44.47	4.25	48.72	54	-5.28	Peak	Vertical
2	5150	41.51	6.35	47.86	54	-6.14	Peak	Vertical
3	5174.8	74.97	6.33	81.30	54	27.30	Peak	Vertical









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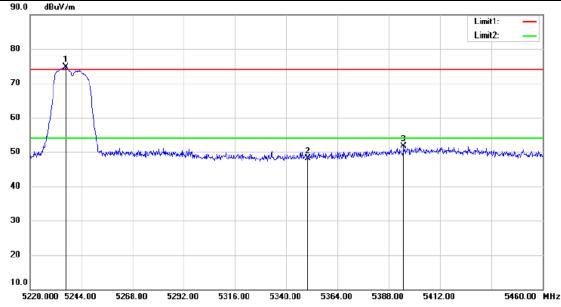
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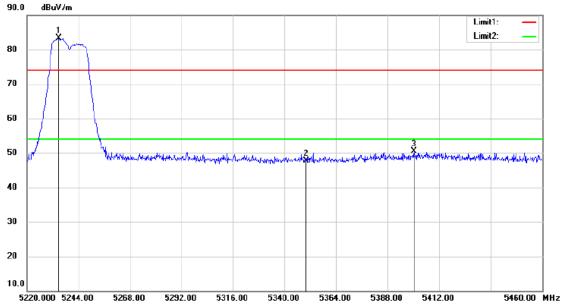
802.11 n(HT20) Antenna B Cha	annel: 48
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MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5236.8	68.2	6.41	74.61	54	20.61	Peak	Horizontal
2	5350	41.64	6.54	48.18	54	-5.82	Peak	Horizontal
3	5394.96	45.06	6.60	51.66	54	-2.34	Peak	Horizontal
1	5234.88	77.05	6.32	83.37	54	29.37	Peak	Vertical
2	5350	41.31	6.40	47.71	54	-6.29	Peak	Vertical
3	5400.24	44.03	6.44	50.47	54	-3.53	Peak	Vertical

Horizontal



Vertical



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802	.11 n(HT40)	Antenna B Channel: 38					3	
MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	4777.4	44.19	5.51	49.70	54	-4.30	Peak	Horizontal
2	5150	42.80	6.41	49.21	54	-4.79	Peak	Horizontal
3	5199.34	73.40	6.37	79.77	54	25.77	Peak	Horizontal
1	4780.32	43.46	5.45	48.91	54	-5.09	Peak	Vertical
2	5150	40.67	6.35	47.02	54	-6.98	Peak	Vertical
3	5205.18	70.88	6.29	77.17	54	23.17	Peak	Vertical

90.0 dBuV/m Limit1: Horizontal Limit2: 80 70 60 50 40 30 20 10.0 4500.000 4573.00 5230.00 MHz 90.0 dBuV/m Vertical Limit1: Limit2: 80 70 60 50 40 30 20 10.0 4500.000 4573.00 4646.00 4719.00 4792.00 4865.00 4938.00 5011.00 5084.00 5230.00 MHz

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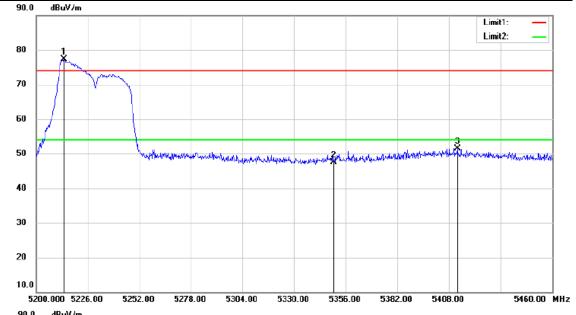


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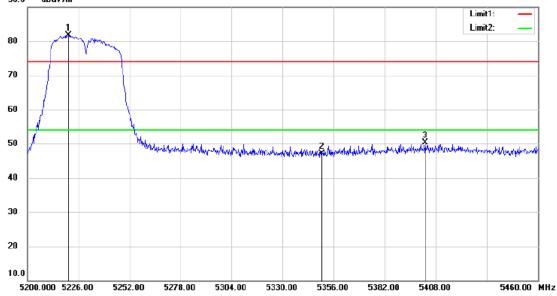
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MK.	Frequency (MHz)	Reading (dBuV/m)	Corrected factor(dB)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Polarization
1	5214.04	70.84	6.39	77.23	54	23.23	Peak	Horizontal
2	5350	41.01	6.54	47.55	54	-6.45	Peak	Horizontal
3	5412.16	44.95	6.62	51.57	54	-2.43	Peak	Horizontal
1	5220.8	75.44	6.31	81.75	54	27.75	Peak	Vertical
2	5350	40.78	6.40	47.18	54	-6.82	Peak	Vertical
3	5402.54	43.94	6.45	50.39	54	-3.61	Peak	Vertical

Horizontal



Vertical



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Remark: 1. Test Level = Receiver Reading + Antenna Factor + Cable Loss- Preamplifier Factor

- 2. No any other emission which falls in restricted bands can be detected and be reported.
- 3. If the Peak value below the AV Limit, the AV test doesn't perform for this submission.

All frequencies within the "Restricted bands" have been evaluated to compliance. Section 15.205 Restricted bands of operation.

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.5 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	
13.36 - 13.41			

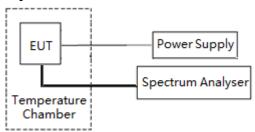


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7.10 Frequency stability

Test setup:



Test Procedure:

- a) The EUT was place in the temperature chamber, the DC leads and RF output cable exited the chamber though an opening made for that purpose.
- b) After operate the equipment in standby conditions for 15 minutes before proceeding. The temperature was varied from 0°C to +35°C at intervals of not more than 10°C The frequency stability was read from the spectrum analyzer at 20°C the input voltage was varied from DC8V to DC 12.6V, the frequency stability and input voltage was record.

Test Limit:

The frequency of carrier signal shall be maintained within the band of operation

Test Data:

Test Antenna	Test Conditions Volt (V DC) Temp (°C)		Nominal Frequency(MHz)	Measured Frequency(MHz)	Frequency Dev (ppm)	Limit (GHz)	Result
А	, ,	Extreme(0)		5180.0071		5.15-5.25	Pass
	November (10)	Extreme(10)		5179.9748			Pass
	Normal(12)	Extreme(20)	5180	5179.9731			Pass
		Extreme(35)		5179.9780			Pass
	Extreme(8.0)	Norma (20)		5179.9789			Pass
	Extreme(12.6)	Norma(20)		5179.9971			Pass
	Normal(12)	Extreme(0)	5180	5180.0241			Pass
		Extreme(10)		5179.9761			Pass
В		Extreme(20)		5179.9778			Pass
В		Extreme(35)		5179.9735			Pass
	Extreme(8.0)	Norma(20)		5179.9778			Pass
	Extreme(12.6)	Norma(20)		5179.9973			Pass

Remark: Frequency Dev=1000000 * (Measured Frequency- Nominal Frequency)/ Nominal Frequency



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8 Test Setup Photographs

Refer to the < iDR3543 _Test Setup photos-FCC>.

9 EUT Constructional Details

Refer to the < iDR3543 _External Photos-FCC > & < iDR3543 _Internal Photos-FCC>.

-- End of the Report--