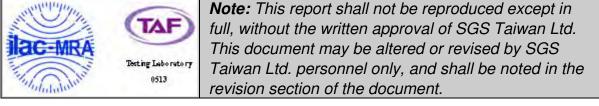


ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART E REQUIREMENT

	OF
Brand Name:	Sony
FCC ID:	PY7-47130J
Report No.:	ER/2016/C0033
Issue Date:	Mar. 10, 2017
FCC Rule Part:	§15.407
Prepared for:	Sony Mobile Communications Inc. 4-12-3, Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002 Japan
Prepared by:	SGS Taiwan Ltd. Electronics & Communication Laboratory No.134, Wu Kung Road, New Taipei Indus- trial Park, Wuku District, New Taipei City, Taiwan 24803
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VERIFICATION OF COMPLIANCE

Applicant:	Sony Mobile Communications Inc. 4-12-3, Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002 Japan
Brand Name:	Sony
FCC ID:	PY7-47130J
File Number:	ER/2016/C0033
Date of Test:	Dec. 12, 2016 ~ Dec. 29, 2016
Date of EUT Received:	Dec. 12, 2016
NAZ 1 1	• •

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10: 2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits.

The test results of this report relate only to the tested sample identified in this report.

Test By:	louis Chen	Date:	Mar. 10, 2017
– Prepared By:	Louis Chen / Engineer Vroletta Tang	Date:	Mar. 10, 2017
Approved By: 	Violetta Tang / Clerk	Date:	Mar. 10, 2017

Jim Chang / Asst. Manager

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Revision History

Report Number	Revision	Description	Issue Date
ER/2016/C0033	Rev.00	Initial creation of document	Jan. 09, 2017
ER/2016/C0033	Rev.01	Provide measurement plot of radiation, please refer to Appendix I.	Jan. 23, 2017
ER/2016/C0033	Rev.02	Update general information & add MPE evaluation.	Feb. 06, 2017
ER/2016/C0033	Rev.03	Add ferrite core & update conduc- tion setup photo.	Mar. 01, 2017
ER/2016/C0033	Rev.04	Update Channel Details on page 14~15 & test results.	Mar. 10, 2017

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1. GENERAL INFORMATION

1.1 Product Description

General:

Brand Name:	Sony			
Hardware Version:	А			
Software Version:	0.20			
Data Cable (USB):	Model No.:	UCB20, Supplier: Sony, Length: 100cm		
BT Headset:	Model No.:	Model No.: MW600, Supplier: Sony		
HDMI Cable:	Model No.:	Model No.: DLC-HEU10A, Supplier: Sony		
Ferrite Core:	Type No.: 2	Type No.: ZCAT-2035-0930A-BK, Supplier: TDK		
	11.1Vdc			
Power Supply:	Battery:	Model No.: N/A, Supplier: N/A		
	Adapter:	Model No.: UCH30C, Supplier: Sony		

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WLAN 5GHz:

Wi-Fi	Frequency Range	Channels	Rated Power (Avg.)	Modulation Technology	
	5150~5250	4	15.33dBm		
11-	5250~5350	4	15.12dBm		
11a	5470~5725	12	16.04dBm	- OFDM	
	5725-5850	5	13.23dBm		
	HT / VHT20 5150~5250	4	HT: 15.05dBm (Worst Case)		
	HT / VHT20 5250~5350	4	HT: 14.84dBm (Worst Case)		
11n / ac_20M	HT / VHT20 5470~5725	11	HT: 15.71dBm (Worst Case)	OFDM	
	VHT20 5720~5720	1	VHT: 11.73dBm (Worst Case)		
	HT / VHT20 5725-5850	5 HT: 12.88dBm (Worst Case)			
	HT / VHT40 5150~5250	2	HT: 14.43dBm (Worst Case)		
11n / ac_40M	HT / VHT40 5250~5350	2	HT: 14.40dBm (Worst Case)		
	HT / VHT40 5470~5725	5	HT: 14.68dBm (Worst Case)	OFDM	
	VHT40 5710~5710	1	VHT: 13.00dBm (Worst Case)		
	HT / VHT40 5725-5850	2	HT: 12.70dBm (Worst Case)		
	VHT80 5150~5250	1	6.73dBm		
	VHT80 5250~5350	1	10.47dBm		
11ac_80M	VHT80 5470~5725	2	9.92dBm	OFDM	
	VHT80 5690	1	10.80dBm		
	VHT80 5725-5850	1	10.83dBm		

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Antenna Designation	PIFA Antenna, 5GHz Gain: -0.2dBi (5150MHz-5250MHz) 5GHz Gain: 2dBi (5250MHz-5350MHz) 5GHz Gain: -0.6dBi (5470MHz-5725MHz) 5GHz Gain: 0.3dBi (5725MHz-5850MHz)
Modulation type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 802.11ac only
Transition Rate:	802.11 a: 6/9/12/18/24/36/48/54 Mbps; 802.11 n_20 / ac VHT20MHz: 6.5 – 65Mbps 802.11 n_40 / ac VHT40MHz: 13.5 – 135Mbps 802.11 ac_80MHz: 29.3 – 292.5Mbps

1.2 Product Feature of Equipment Under Test

The equipment under Test (Hereafter Called: EUT) supports below functions.

Product Feature			
GSM Operating Band(s)	GSM 850/1900MHz		
GPRS / EGPRS Multi Slot Class	GPRS Class 12 / Class 12		
WCDMA Operating Band(s)	FDD Band II / IV / V		
WCDMA Rel. Version	Rel.9		
LTE Operating Band(s)	FCC Band 2 / 4 / 5 / 7 / 12 / 17 / 26 / 41		
LTE Rel. Version	Rel.10		
Bluetooth Version	V4.2 dual mode		
Wi-Fi- Specification	802.11a/b/g/n/ac		
NFC Specification	NFC		

Note: The above EUT information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

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1.3 Test Methodology of Applied Standards

FCC Part 15, Subpart E §15.407

FCC KDB 789033 D02 General UNII Test Procedures New Rules

FCC KDB 644545 D03 Guidance for IEEE 802.11ac v01

Note:

All test items have been performed and record as per the above standards.

1.4 Test Facility

SGS Taiwan Ltd. Electronics & Communication Laboratory No.134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803 (TAF code 0513)

FCC Registration Numbers are: 509634

Canada Registration Number: 4620A-5.

1.5 Special Accessories

There are no special accessories used while test was conducted.

Equipment Modifications 1.6

There was no modification incorporated into the EUT.

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SYSTEM TEST CONFIGURATION 2.

EUT Configuration 2.1

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

An engineering test mode (software/firmware) that applicant provided was utilized to manipulate the EUT into transmit, selection of the test channel, and modulation scheme.

2.3 **Test Procedure**

2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz,. The CISPR Quasi-Peak and Average detector mode is employed according to \$15.207. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

2.3.2 Radiated Emissions

The EUT is a placed on as turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plan. For emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna.

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level. Note:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor. Following shows an offset computation example with cable loss 1dB, and 10dB attenuator. Offset:

= RF cable loss (dB)+ attenuation factor(dB) dB =11dB

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2.5 Configuration of Tested System

Fig. 2-1 Radiated Emission Configuration

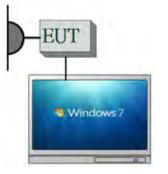


Fig. 2-2 Conducted (Antenna Port) Configuration



Fig. 2-3 AC Power Line Conducted Emission Configuration

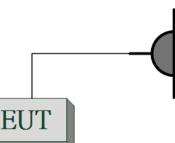


Table 2-1 Equipment Used in Tested System

lte m	Equipment	Mfr/Brand	Model/Type No.	Series No.	Data Cable	Power Cord
1.	WLAN Test Software	N/A	N/A	N/A	N/A	N/A
2.	Notebook	Lenovo	R400	7440AV6	N/A	Un-shield
3.	DC Power Supply	Agilent	E3640A	KR93300208	N/A	N/A

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SUMMARY OF TEST RESULT 3.

FCC Rules	Description Of Test	Result
§15.207	AC Power Line Conducted Emission	Compliant
§15.403(i) §15.407(e)	26 dB & 6dB & 99% Emission Bandwidth	Compliant
§15.407(a)	Maximum Conducted Output Power	Compliant
§15.407(a)	Power Spectral Density	Compliant
§15.407(b)	Undesirable Radiated Emissions	Compliant
§15.407(c)	Transmission in case of Absence of Information	Compliant
§15.407(g)	Frequency Stability	Compliant
§15.203 §15.407(a)	Antenna Requirement	Compliant

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DESCRIPTION OF TEST MODES 4.

4.1 Operated in U-NII Bands

Operated band in 5150 MHz ~5250 MHz:

4 channels are provided for 802.11a, 802.11n HT20, 802.11ac VHT20

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n HT40, 802.11ac VHT40

CHANNEL FREQUENCY		CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac_VHT80

CHANNEL	FREQUENCY	
42	5210 MHz	

Operated band in 5250 MHz ~5350 MHz:

4 channels are provided for 802.11a, 802.11n HT20, 802.11ac VHT20

CHANNEL	CHANNEL FREQUENCY		FREQUENCY	
52	5260 MHz	60	5300 MHz	
56	5280 MHz	64	5320 MHz	

2 channels are provided for 802.11n_HT40, 802.11ac_VHT40

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY	
54	5270 MHz	62	5310 MHz	

1 channel is provided for 802.11ac VHT80

CHANNEL	FREQUENCY	
58	5290 MHz	

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Operated band in 5470 MHz ~5725 MHz:

12 channels are provided for 802.11a, 802.11n HT20, 802.11ac VHT20

FREQUENCY	CHANNEL	FREQUENCY	
5500 MHz	124	5620 MHz	
5520 MHz	128	5640 MHz	
5540 MHz	132	5660 MHz	
5560 MHz	136	5680 MHz	
5580 MHz	140	5700 MHz	
5600 MHz	144	5720 MHz	
	5500 MHz 5520 MHz 5540 MHz 5560 MHz 5580 MHz	5500 MHz1245520 MHz1285540 MHz1325560 MHz1365580 MHz140	

6 channels are provided for 802.11n_HT40, 802.11ac_VHT40

CHANNEL FREQUENCY		CHANNEL	FREQUENCY	
102	5510 MHz	126	5630 MHz	
110	5550 MHz	134	5670 MHz	
118	5590 MHz	142	5710 MHz	

3 channesl are provided for 802.11ac_VHT80

[CHANNEL FREQUENCY		CHANNEL	FREQUENCY
	106	5530 MHz	138	5690 MHz
	122 5610 MHz			

Operated band in 5725 MHz ~5850 MHz:

5 channels are provided for 802.11a, 802.11n_HT20, 802.11ac_VHT20

CHANNEL FREQUENCY		CHANNEL	FREQUENCY	
149	5745 MHz	161	5805 MHz	
153	5765 MHz	165	5825 MHz	
157	5785 MHz			

2 channels are provided for 802.11n HT40, 802.11ac VHT40

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac VHT80

CHANNEL	FREQUENCY	
155	5775 MHz	

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4.2 The Worst Test Modes and Channel Details

- 1. The EUT has been tested under operating condition.
- 2. Test program used to control the EUT for staying in continuous transmitting mode is programmed.
- 3. Investigation has been done on all the possible configurations for searching the worst case.
- 4. The given UE is pre-scanned among 802.11n and ac modes, and 802.11n yields the highest reading that generates the highest emission. Therefore, 802.11n as the mode of test configuration is chosen to carry out the relevantly mandatory test items.

	RADIATED EMISSION TEST (BELOW 1 GHz)							
MODE	BAND (MHz)	CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT		
802.11a	5180~5240	36 to 48	36,44,48	OFDM	6	MAIN		
802.11ac_VHT80	5210	42	42	OFDM	MCS0	MAIN		
802.11a	5260~5320	52 to 64	52,60,64	OFDM	6	MAIN		
802.11ac_VHT80	5290	58	58	OFDM	MCS0	MAIN		
802.11a	5500~5720	100 to 140	100,116,140	OFDM	6	MAIN		
802.11ac_VHT80	5530~5690	106 to 138	106,122	OFDM	MCS0	MAIN		
802.11a	5745~5825	149 to 165	149,157,165	OFDM	6	MAIN		
802.11ac_VHT80	5775	155	155	OFDM	MCS0	MAIN		
	RADI	ATED EMISS	ION TEST (A	BOVE 1 GHz)				
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT		
802.11a	E100 E040	00 to 10	00 44 40	OFDM	6	MAIN		
802.11n_HT20	5180~5240	36 to 48	36,44,48	OFDM	MCS0	MAIN		
802.11n_HT40	5190~5230	38 to 46	38,46	OFDM	MCS0	MAIN		
802.11ac_VHT80	5210	42	42	OFDM	MCS0	MAIN		
802.11a		50 to 04		OFDM	6	MAIN		
802.11n_HT20	5260~5320	52 to 64	52,60,64	OFDM	MCS0	MAIN		
802.11n_HT40	5270~5310	54 to 62	54,62	OFDM	MCS0	MAIN		
802.11ac_VHT80	5290	58	58	OFDM	MCS0	MAIN		

RADIATED EMISSION TEST:

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MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a				OFDM	6	MAIN
802.11n_HT20	5500~5720	100 to 144	100,116,140	OFDM	MCS0	MAIN
802.11ac_VHT20	5720	144	144	OFDM	MCS0	MAIN
802.11n_HT40	5510~5670	102 to 134	102,110,134	OFDM	MCS0	MAIN
802.11ac_VHT40	5710	142	142	OFDM	MCS0	MAIN
802.11ac_VHT80	5530~5690	106 to 138	106,122,138	OFDM	MCS0	MAIN
802.11a				OFDM	6	MAIN
802.11n_HT20	5745~5825	149 to 165	149,157,165	OFDM	MCS0	MAIN
802.11n_HT40	5755~5795	151 to 159	151,159	OFDM	MCS0	MAIN
802.11ac_VHT80	5775	155	155	OFDM	MCS0	MAIN

Note:

The field strength of radiation emission was measured as 802.11a/n/ac WLAN Transmitter for channel Low, Mid and High, the worst case was reported.

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ANTENNA PORT CONDUCTED MEASUREMENT:

		CON	DUCTED TEST			
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a		00 += 40	00 44 40	OFDM	6	MAIN
802.11n_HT20	5180~5240	36 to 48	36,44,48	OFDM	MCS0	MAIN
802.11n_HT40	5190~5230	38 to 46	38,46	OFDM	MCS0	MAIN
802.11ac_VHT80	5210	42	42	OFDM	MCS0	MAIN
802.11a			50.00.04	OFDM	6	MAIN
802.11n_HT20	5260~5320	52 to 64	52,60,64	OFDM	MCS0	MAIN
802.11n_HT40	5270~5310	54 to 62	54,62	OFDM	MCS0	MAIN
802.11ac_VHT80	5290	58	58	OFDM	MCS0	MAIN
802.11a	5500~5720	100 to 144	100,116,140,144	OFDM	6	MAIN
802.11n_HT20	5500~5720	100 (0 144	100,110,140,144	OFDM	MCS0	MAIN
802.11n_HT40	5510~5710	102 to 142	102,110,134,142	OFDM	MCS0	MAIN
802.11ac_VHT80	5530~5690	106 to 138	106,122,138	OFDM	MCS0	MAIN
802.11a				OFDM	6	MAIN
802.11n_HT20	5745~5825	149 to 165	149,157,165	OFDM	MCS0	MAIN
802.11n_HT40	5755~5795	151 to 159	151,159	OFDM	MCS0	MAIN
802.11ac_VHT80	5775	155	155	OFDM	MCS0	MAIN

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MEASUREMENT UNCERTAINTY 5.

Test Items	Uncertainty
AC Power Line Conducted Emission	+/- 2.586 dB
26dB & 6dB Emission Bandwidth	+/- 123.36 Hz
The Maximum Output Power Measurement	+/- 0.96 dB
Peak Power Spectral Density Measurement	+/- 1.67 dB
Frequency Stability	+/- 123.36 Hz
Temperature	+/- 0.65 °C
Humidity	+/- 4.6 %
DC / AC Power Source	DC= +/- 0.13%, AC=+/- 0.2%

Radiated Spurious Emission:

	9kHz-30MHz: +/-2.87dB
	30MHz - 180MHz: +/- 3.37dB
Measurement uncertainty	180MHz -417MHz: +/- 3.19dB
(Polarization : Vertical)	0.417GHz-1GHz: +/- 3.19dB
	1GHz - 18GHz: +/- 4.04dB
	18GHz - 40GHz: +/- 4.04dB

	9kHz-30MHz: +/-2.87dB
	30MHz - 167MHz: +/- 4.22dB
Measurement uncertainty	167MHz -500MHz: +/- 3.44dB
(Polarization : Horizontal)	0.5GHz-1GHz: +/- 3.39dB
	1GHz - 18GHz: +/- 4.08dB
	18GHz - 40GHz: +/- 4.08dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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CONDUCTED EMISSION TEST 6.

6.1. Standard Applicable

Frequency range within 150 kHz to 30 MHz shall not exceed the Limit table as below.

Frequency range	Limits dB(uV)						
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					
Note	Note						
1. The lower limit shall apply at the transition frequencies							
2.The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50							
MHz.							

6.2. Measurement Equipment Used

Conducted Emission Test Site									
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.				
ТҮРЕ		NUMBER	NUMBER	CAL.					
EMI Test Receiver	R&S	ESCI7	100760	05/10/2016	05/09/2017				
LISN	SCHWARZBECK	NSLK 8127	8127-649	05/16/2016	05/15/2017				
LISN	MESS TEC	FCC-LISN-50/250 -25-2-01	4034	05/16/2016	05/15/2017				
Coaxial Cables	N/A	WK CE Cable	N/A	11/26/2016	11/25/2017				

6.3. EUT Setup

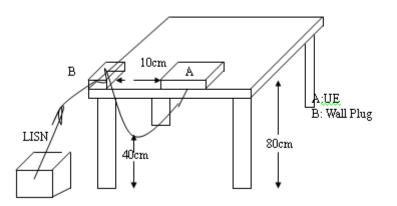
- 1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.10:2013.
- 2. The AC/DC Power adaptor of EUT was plug-in LISN. The rear of the EUT and peripherals were placed flushed with the rear of the tabletop.
- 3. The LISN was connected with 120Vac/60Hz power source.

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6.4. Test SET-UP



6.5. Measurement Procedure

- 1. The EUT was placed on a table which is 0.8m above ground plane.
- 2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 3. Repeat above procedures until all phases of power being supplied by given UE are completed.

6.6. Measurement Result

Note: Refer to next page for measurement data and plots. Note2: The * reveals the worst-case results that closet to the limit

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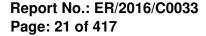
AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode: Operation mode Temperature: 20

Test Date: Dec. 27, 2016

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Temperature.

Humidity:

20 1

58 %



Site Conduction Room

Limit FCC Class B Conduction(QP)

Mode: Operation Conducted Emission File :C0035 Data #1 Date: 2016/12/27 Time: T= 11:40:00 88.8 dBuV FCC Class B Conduction(OP)

Phase

Power:

N

AC 120V/60Hz

	0.0	1		0.5	1	(MHz)		5		30.000
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV	dBuV	₫B	Detector	Comment	
1	•	0.1620	56.40	0.07	56.47	65.36	-8.89	QP		
2		0.1620	37.80	0.07	37.87	55.36	-17.49	AVG		
3		0 1860	51.00	0.08	51.08	64.21	-13.13	QP		
4		0.1860	32.40	0.08	32.48	54.21	-21.73	AVG		
5		0.2300	47.50	0.08	47.58	82.45	-14.87	QP		
6		0.2300	29.60	0.08	29.68	52.45	-22.77	AVG		
7		0.2500	45.92	0.09	46.01	61.76	-15.75	peak		
8		0.8660	36.83	0.12	36.95	56.00	-19.05	peak		
9		1.9700	39,21	0.15	39.36	56.00	-16.64	peak		

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7. DUTY CYCLE TEST SIGNAL

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle.

All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

Formula:

Duty Cycle = Ton / (Ton+Toff)

Measurement Procedure:

- 1. Set span = Zero
- 2. RBW = 8MHz
- 3. VBW = 8MHz,
- 4. Detector = Peak

Duty Cycle:

Mode	Duty Cycle (%)	Duty Factor (dB) =10*log (1/Duty Cycle)
802.11a	99.36	0.03
802.11n_20	99.14	0.04
802.11n_40	97.56	0.11
802.11ac_80	96.99	0.13

Duty Cycle Factor: $10 * \log(1/0.9936) = 0.03$ Duty Cycle Factor: $10 * \log(1/0.9914) = 0.04$ Duty Cycle Factor: $10 * \log(1/0.9756) = 0.11$ Duty Cycle Factor: $10 * \log(1/0.9699) = 0.13$

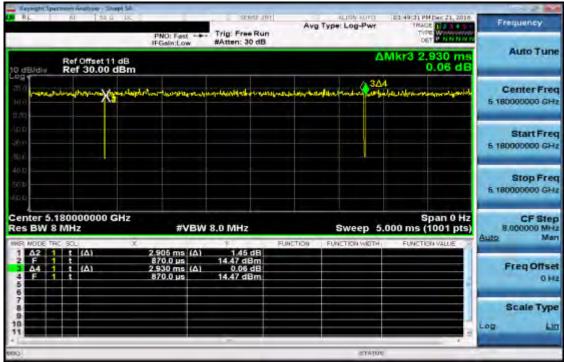
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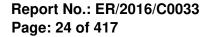
DUTY CYCLE TEST SIGNAL Measurement Result 802.11a



802.11n HT20



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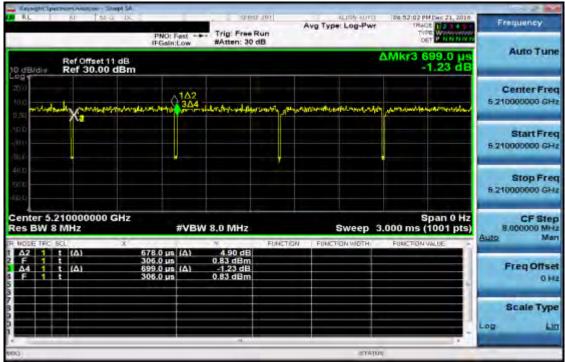




802.11n HT 40

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			8.0 MHz	#VBW	z	z	N 8 MI	s BW
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802.11 ac VHT 80



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8. 26dB & 6dB EMISSION BANDWIDTH MEASUREMENT

8.1 Standard Applicable

There is no limit bandwidth for U-NII-1, U-NII-2-A and U-NII-2-C. The minimum of 6dB Bandwidth measurement is 0.5 MHz for U-NII-3

8.2 Measurement Procedure

- 1. Place the EUT on the table and set it in transmitting mode.
- 2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules.
- 3. Remove the antenna from the EUT and then connect a low loss RF cable from the Antenna port to the spectrum analyzer.
 - a. 26dB Band width Measurement: Set the spectrum analyzer as 1% of emission BW Sweep=auto, Detector = Peak, Trace Mode = Max Hold, Manually readjust RBW until the RBW/EBW ratio is 1% based on EBW as observed on the result of pre-sequence measurement.
 - b. Mark the peak frequency and -26dB (upper and lower) frequency.
- 4. Repeat the procedures as list above until all test default channels (low, middle, and high) are completed.
- 5. Minimum Emission Bandwidth for the band 5.725-5.850GHz.
 - a. Set the spectrum analyzer as RBW = 100 kHz, VBW = 3*RBW, Span = 30M/50MHz, Detector=Peak,

Sweep=auto

- b. Mark the peak frequency and -6dB (upper and lower) frequency.
- 6. Repeat above procedures until all test default channel measured were complete.

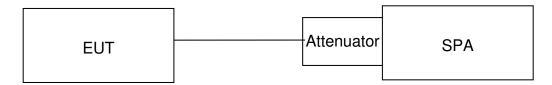
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8.3 Measurement Equipment Used

	SGS Conducted Room								
EQUIPMENT	MFR	MFR MODEL SERIAL		LAST	CAL DUE.				
TYPE		NUMBER	NUMBER	CAL.					
Power Meter	Anritsu	ML2495A	1005007	12/15/2016	12/14/2017				
Power Sensor	Anritsu	MA2411B	917032	12/15/2016	12/14/2017				
EXA Spectrum Analyzer	Agilent	N9030A	MY53120760	02/26/2016	02/25/2017				
DC Block	Mini-Circuits	BLK-18-S+	1	01/02/2016	01/01/2017				
Coaxial Cable	HUBER+SUHNER	SUCOFLEX 102	23670/2	01/02/2016	01/01/2017				
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2016	01/01/2017				
Splitter	Agilent	11636B	N/A	01/02/2016	01/01/2017				
DC Power Supply	Agilent	E3640A	MY52410006	11/21/2016	11/20/2017				
Temperature Chamber	TERCHY	MHG-120LF	911009	05/17/2016	05/16/2017				

Test Set-up 8.4



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8.5 Measurement Result 26dB Bandwidth

802.11a_Main

Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	21.29	13.282
5220	21.41	13.306
5240	20.96	13.214
5260	21.37	13.298
5300	21.11	13.245
5320	21.24	13.272
5500	21.19	13.261
5580	24.28	13.852
5700	20.95	13.212

802.11n _HT40_Main

Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5190	39.64	15.981
5230	39.46	15.962
5270	40.07	16.028
5310	39.40	15.955
5510	39.64	15.981
5550	39.76	15.994
5670	39.70	15.988

802.11n_HT20_Main

Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	21.36	13.296
5220	22.91	13.600
5240	22.01	13.426
5260	21.71	13.367
5300	22.95	13.608
5320	21.40	13.304
5500	21.21	13.265
5580	21.53	13.330
5700	21.33	13.290

802.11 ac _VHT 80_Main

Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5210	80.63	19.065
5290	80.95	19.082
5530	81.07	19.089
5610	80.80	19.074

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802.11ac VHT20 Main

Frequency (MHz)	26dB Bandwidth (MHz)	10 Log (B) (dB)
5720 (UNII-2C)	15.640	11.94
5720 (UNII-3)	5.640	7.51

802.11ac VHT40 Main

Frequency (MHz)	26dB Bandwidth (MHz)	10 Log (B) (dB)
5710 (UNII-2C)	34.840	15.42
5710 (UNII-3)	4.840	6.85

802.11ac VHT80_Main

Frequency (MHz)	26dB Bandwidth (MHz)	10 Log (B) (dB)
5690 (UNII-2C)	75.300	18.77
5690 (UNII-3)	5.200	7.16

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6dB Bandwidth (5725 MHz~ 5850 MHz) measure with Peak detector for FCC

802.11a_Main

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	16.32	12.126
5785	16.35	12.134
5825	16.35	12.135

802.11n_HT20_Main

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	17.56	12.446
5785	17.30	12.381
5825	17.58	12.449

802.11n_HT40_Main

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5755	35.65	15.521
5795	35.14	15.458

802.11 ac VHT80 Main

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5775	75.26	18.766

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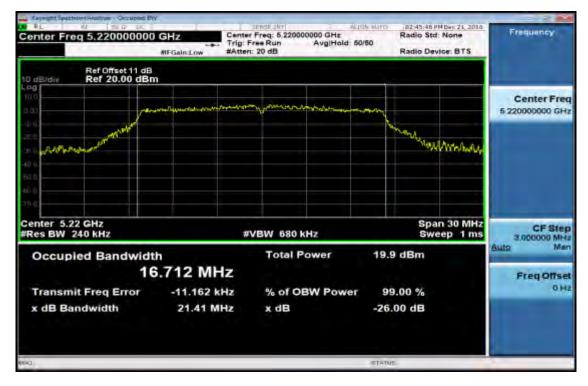
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802.11a, 5150~5250 MHz (Main) 26dB Band Width Test Data CH-Low (5180MHz)



26dB Band Width Test Data CH-Mid (5220MHz)



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26dB Band Width Test Data CH-High (5240MHz)

Supergitt Spactners Analyzer - Occupied By		a second a second a second				
Center Freq 5.24000000	GHz Center Trig: F	rFreq: 5.240000000 GHz Free Run Avg Hold : 20 dB	d: 50/50	Radio Std		Frequency
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and another and			M.		Margan	
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-66.0 -76.0						
Center 5.24 GHz #Res BW 240 kHz	#	VBW 680 kHz			n 30 MHz ep 1 ms	CF Step 3.000000 MH
Occupied Bandwidt	h 5.732 MHz	Total Power	20.0 0	dBm		Auto Mar Freq Offse
Transmit Freq Error x dB Bandwidth	-2.755 kHz 20.96 MHz	% of OBW Pow x dB	er 99.0 -26.00	00 % 0 dB		OH
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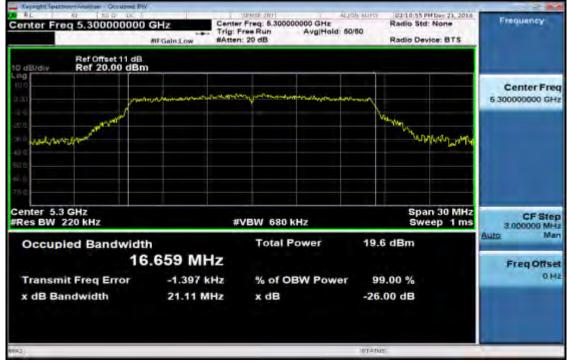
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802.11a, 5250~5350 MHz (Main) 26dB Band Width Test Data CH-Low (5260MHz)



26dB Band Width Test Data CH-Mid (5300MHz)

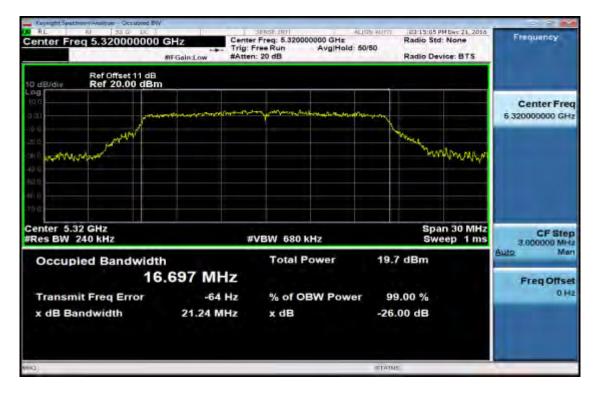


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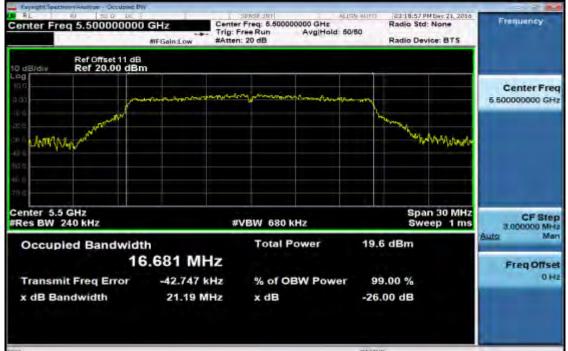
26dB Band Width Test Data CH-High (5320MHz)



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802.11a, 5470~5725 MHz (Main) 26dB Band Width Test Data CH-Low (5500MHz)



26dB Band Width Test Data CH-Mid (5580MHz)



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26dB Band Width Test Data CH-High (5700MHz)

Segnight Spectromenance - Occupies B	W.	South States	-			
Center Freq 5.70000000	Trig:	r Freq: 5.700000000 GHz Free Run AvgiHol n: 20 dB	d: 50/50	Radio Std		Frequency
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and production of the second				when	Allimitrum	
61 0 						
Center 5.7 GHz #Res BW 240 kHz	10	VBW 680 kHz			n 30 MHz eep 1 ms	CF Step 3.000000 MH
Occupied Bandwid	th 6.703 MHz	Total Power	19.7	dBm		Auto Mar Freq Offse
Transmit Freq Error x dB Bandwidth	-47.861 kHz 20.95 MHz	% of OBW Pow x dB	ver 99. -26.0	00 % 0 dB		0.H
- CO			STATUS			-

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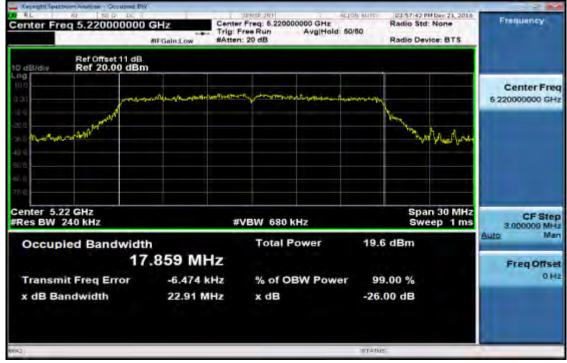
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802.11n HT20, 5150~5250 MHz (Main) 26dB Band Width Test Data CH-Low (5180 MHz)



26dB Band Width Test Data CH-Mid (5220 MHz)



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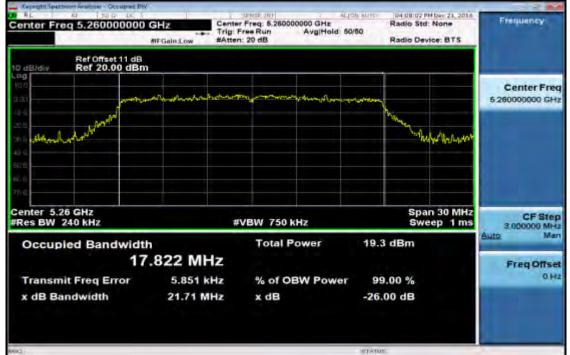
26dB Band Width Test Data CH-High (5240 MHz)

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10 dB/div Ref 20.00 dBm								
Center Freg 5.240000000	GHZ MFGain:Low			AvgiHold	50/50	Radio St Radio De	d: None evice: BTS	Frequency

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802.11n HT20, 5250~5350 MHz (Main) 26dB Band Width Test Data CH-Low (5260 MHz)



26dB Band Width Test Data CH-Mid (5300 MHz)

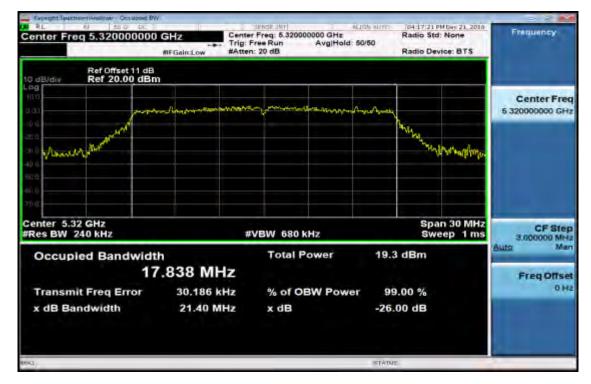


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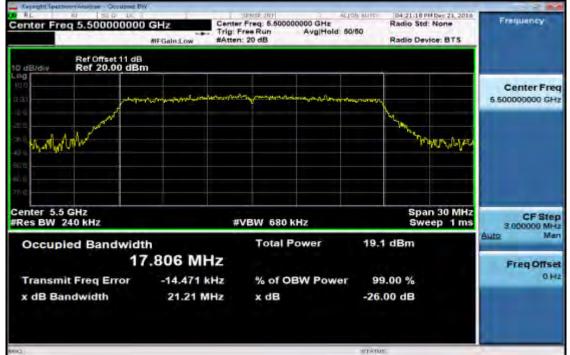
26dB Band Width Test Data CH-High (5320 MHz)



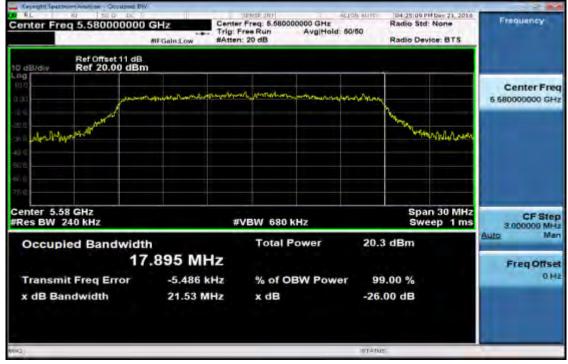
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802.11n HT20, 5470~5725 MHz (Main) 26dB Band Width Test Data CH-Low (5500 MHz)



26dB Band Width Test Data CH-Mid (5580 MHz)



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26dB Band Width Test Data CH-High (5700 MHz)



802.11ac VHT20, 5470~5725 MHz (Main) 26dB Band Width Test Data CH-High (5720 MHz)



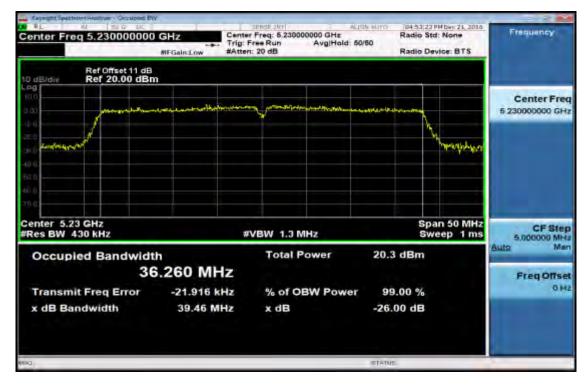
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802.11n HT40, 5150~5250 MHz (Main) 26dB Band Width Test Data CH-Low (5190 MHz)



26dB Band Width Test Data CH-High (5230 MHz)



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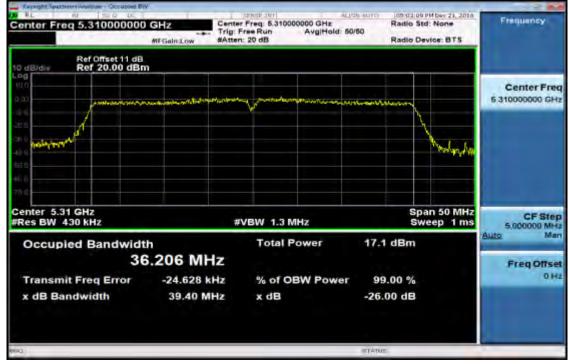
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802.11n HT40, 5250~5350 MHz (Main) 26dB Band Width Test Data CH-Low (5270 MHz)



26dB Band Width Test Data CH-High (5310MHz)



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802.11n HT40, 5470~5725 MHz (Main) 26dB Band Width Test Data CH-Low (5510 MHz)



26dB Band Width Test Data CH-Mid (5550 MHz)



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26dB Band Width Test Data CH-High (5670 MHz)



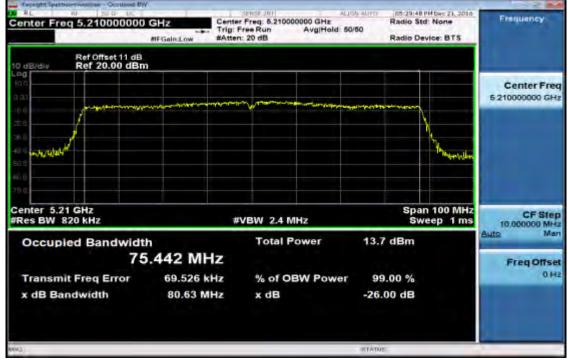
802.11ac VHT40, 5470~5725 MHz (Main) 26dB Band Width Test Data CH-Low (5710 MHz)



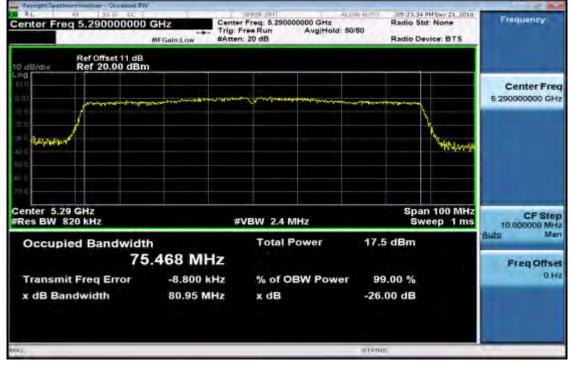
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802.11ac VHT80, 5150~5250 MHz (Main) 26dB Band Width Test Data CH-Mid (5210 MHz)



802.11ac VHT80, 5250~5350 MHz 26dB Band Width Test Data CH-Mid (5290 MHz)



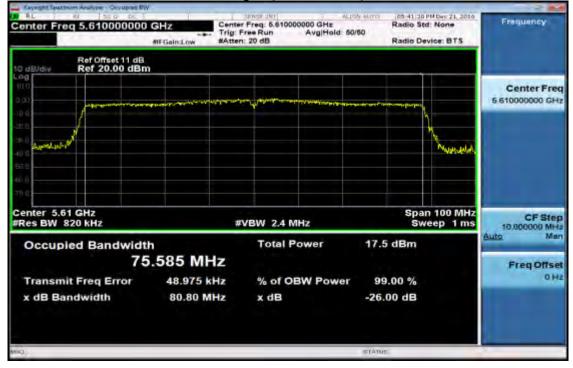
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802.11ac VHT80, 5470~5725 MHz (Main) 26dB Band Width Test Data CH-Low (5530 MHz)



802.11ac VHT80, 5470~5725 MHz (Main) 26dB Band Width Test Data CH-High (5610 MHz)



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26dB Band Width Test Data CH-Low (5690 MHz)



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802.11a, 5725~5850 MHz (Main) 6dB Band Width Test Data CH-Low (5745 MHz)



6dB Band Width Test Data CH-Mid (5785 MHz)



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6dB Band Width Test Data CH-High (5825 MHz)



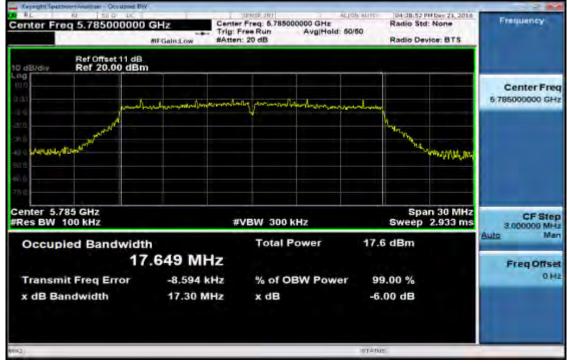
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802.11n HT20, 5725~5850 MHz (Main) 6dB Band Width Test Data CH-Low (5745 MHz)



6dB Band Width Test Data CH-Mid (5785 MHz)



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6dB Band Width Test Data CH-High (5825 MHz)

Center Freq 5.8250000	00 GHz	Center Freq: 5.825 Trig: Free Run #Atten: 20 dB		50/50	Radio St	evice: BTS	Frequency
10 dB/div Ref Offset 11 Ref 20.00 d							
-10 4	Margana	Surgers of the providence	ana na mana ang sa				Center Fred 5 825000000 GHz
372 500 400 800 800					Werner way	uncontrolants	
Center 5.825 GHz #Res BW 100 kHz		#VBW 300) kHz			an 30 MHz 2.933 ms	CF Step 3.000000 MH
Occupied Bandw	idth 17.675 MH		Power	17.5	dBm		Auto Mar Freq Offse
Transmit Freq Error x dB Bandwidth	-170 17.58 M		OBW Powe		0.00 % 00 dB		0.04
Cart				TAN	6		

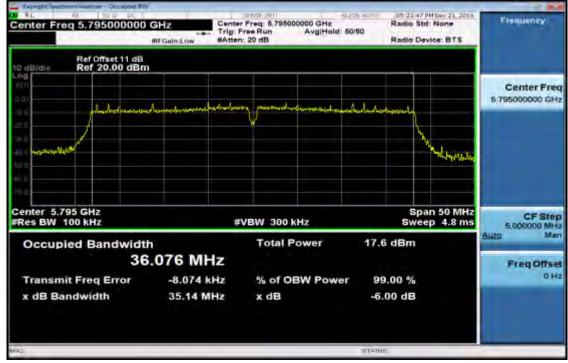
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802.11n HT40, 5725~5850 MHz (Main) 6dB Band Width Test Data CH-Low (5755 MHz)



6dB Band Width Test Data CH-Mid (5795 MHz)



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802.11ac VHT80, 5725~5850 MHz (Main) 6dB Band Width Test Data CH-Low (5775 MHz)

Center Freq 5.775000000	-t- Trig	tter Freq: 5.775000000 GHz ; Free Run AvgiHold ten: 20 dB	Radio S 50/50	td: None evice: BTS	Frequency
10 dB/div Ref Offset 11 dB Ref 20.00 dBn	n				
100 100 100 100	المعاملين المعالم	and particulation	ومرا الأوا وتعارفه		Center Fred 5 775000000 GHz
27.2 (31.0) 40.0 (51.2) (61.0)				Lawrence	
Center 5.775 GHz #Res BW 100 kHz		#VBW 300 kHz		an 100 MHz ep 9.6 ms	CF Step 10.000000 MHz
Occupied Bandwidt 75	h 5.308 MHz	Total Power	17.5 dBm		Auto Man Freq Offset
Transmit Freq Error x dB Bandwidth	-48.948 kHz 75.26 MHz	% of OBW Powe x dB	er 99.00 % -6.00 dB		0 Hz
enc.			TANE		1

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MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT 9.

Standard Applicable 9.1

FCC

OPERZTION Band	EUT CATEGORY	LIMIT
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U-NII-1

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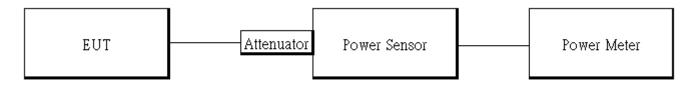
9.2 Measurement Procedure

- 1. Place the EUT on the table and set it in transmitting mode.
- 2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules.
- 3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter
- 4. Power Meter is used as the auxiliary test equipment to conduct the output power measurement.
- 5. Record the max. reading and add 10 log(1/duty cycle).
- 6. Repeat above procedures until all frequency (low, middle, and high channel) measured were complete.

9.3 Measurement Equipment Used

	SGS Conducted Room							
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.			
Power Meter	Anritsu	ML2495A	1005007	12/15/2016	12/14/2017			
Power Sensor	Anritsu	MA2411B	917032	12/15/2016	12/14/2017			
EXA Spectrum Analyzer	Agilent	N9030A	MY53120760	02/26/2016	02/25/2017			
DC Block	Mini-Circuits	BLK-18-S+	1	01/02/2016	01/01/2017			
Coaxial Cable	HUBER+SUHNER	SUCOFLEX 102	23670/2	01/02/2016	01/01/2017			
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2016	01/01/2017			
Splitter	Agilent	11636B	N/A	01/02/2016	01/01/2017			
DC Power Supply	Agilent	E3640A	MY52410006	11/21/2016	11/20/2017			
Temperature Chamber	TERCHY	MHG-120LF	911009	05/17/2016	05/16/2017			

9.4 Test Set-up



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9.5 Measurement Result

Conducted output power

802.11a_Main

СН	Frequency	Data	TOTAL POWER	TOTAL POWER	REQUIRED LIMIT		RESULT	
	(MHz)	Rate	(dBm)	(mW)		(dBm)		
36	5180	MCS0	13.64	23.121		23.98		PASS
44	5220	MCS0	15.30	33.884		23.98		PASS
48	5240	MCS0	15.33	34.119		23.98		PASS
52	5260	MCS0	15.05	31.989	23.98	or 11+10log(B) =	24.30	PASS
60	5300	MCS0	15.12	32.509	23.98	or $11+10\log(B) =$	24.24	PASS
64	5320	MCS0	15.06	32.063	23.98	or 11+10log(B) =	24.27	PASS
100	5500	MCS0	14.84	30.479	23.98	or $11+10\log(B) =$	24.26	PASS
116	5580	MCS0	16.04	40.179	23.98	or 11+10log(B) =	24.85	PASS
140	5700	MCS0	15.21	33.189	23.98	or 11+10log(B) =	24.21	PASS
149	5745	MCS0	13.23	21.038	30		PASS	
157	5785	MCS0	12.97	19.815	30		PASS	
165	5825	MCS0	12.99	19.907		30		PASS

802.11n_HT20_Main

СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
36	5180	MCS0	13.19	20.845		23.98		PASS
44	5220	MCS0	15.05	31.989		23.98		PASS
48	5240	MCS0	15.04	31.915		23.98		PASS
52	5260	MCS0	14.84	30.479	23.98	or 11+10log(B) =	24.37	PASS
60	5300	MCS0	14.80	30.200	23.98	or 11+10log(B) =	24.61	PASS
64	5320	MCS0	14.74	29.785	23.98	or 11+10log(B) =	24.30	PASS
100	5500	MCS0	15.01	31.696	23.98	or 11+10log(B) =	24.27	PASS
116	5580	MCS0	15.71	37.239	23.98	or 11+10log(B) =	24.33	PASS
140	5700	MCS0	14.86	30.620	23.98	or 11+10log(B) =	24.29	PASS
144	5720 (U-NII 2C)	MCS0	11.73	14.894	23.98	or 11+10log(B) =	22.94	PASS
144	5720 (U-NII 3)	MCS0	4.23	2.649		30		PASS
149	5745	MCS0	12.88	19.409	30		PASS	
157	5785	MCS0	12.83	19.187	30		PASS	
165	5825	MCS0	12.69	18.578		30		PASS

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802.11n_HT40_Main

сн	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)		RESULT	
38	5190	MCS0	10.12	10.280		23.98		PASS
46	5230	MCS0	14.43	27.733		23.98		PASS
54	5270	MCS0	14.40	27.542	23.98	or 11+10log(B) =	27.03	PASS
62	5310	MCS0	11.49	14.093	23.98	or 11+10log(B) =	26.95	PASS
102	5510	MCS0	13.05	20.184	23.98	or 11+10log(B) =	26.98	PASS
110	5550	MCS0	14.56	28.576	23.98	or 11+10log(B) =	26.99	PASS
134	5670	MCS0	14.68	29.376	23.98	or 11+10log(B) =	26.99	PASS
142	5710 (U-NII 2C)	MCS0	13.00	19.966	23.98	or 11+11log(B) =	26.42	PASS
142	5710 (U-NII 3)	MCS0	1.81	1.516	30		PASS	
151	5755	MCS0	12.54	17.947	30		PASS	
159	5795	MCS0	12.70	18.621		30		PASS

802.11ac VHT80 Main

СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)		RESULT	
42	5210	MCS0	6.73	4.710		23.98		PASS
58	5290	MCS0	10.47	11.143	23.98	or 11+10log(B) =	30.08	PASS
106	5530	MCS0	8.86	7.691	23.98	or 11+10log(B) =	30.09	PASS
122	5610	MCS0	9.92	9.817	23.98	or $11+10\log(B) =$	30.07	PASS
138	5690 (U-NII 2C)	MCS0	10.80	12.031	23.98	or 11+10log(B) =	29.77	PASS
138	5690 (U-NII 3)	MCS0	0.75	1.187	30		PASS	
155	5775	MCS0	10.83	12.106		30		PASS

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10. PEAK POWER SPECTRAL DENSITY

10.1 Standard Applicable

FCC

OPERZTION Band	EUT CATEGORY	LIMIT
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U-NII-1

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10.2 Measurement Procedure

- 1. Place the EUT on the table and set it in transmitting mode.
- 2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules.
- 3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to Spectrum.
- 4. For U-NII1, U-NII-2A, U-NII-2C Band:

Set RBW=1MHz, VBW=3MHz, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth) **For U-NII-3 Band**:

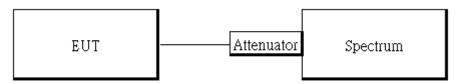
Set RBW=500 kHz, VBW \ge 3RBW, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)

- 5. User the cursor on spectrum to peak search the highest level of trace
- 6. Record the max. reading and add 10 log(1/duty cycle).
- 7. Repeat above procedures until all default test channel (low, middle, and high) was complete.

	SGS Conducted Room							
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.			
TYPE		NUMBER	NUMBER	CAL.				
EXA Spectrum Analyzer	Agilent	N9030A	MY53120760	02/26/2016	02/25/2017			
DC Block	Mini-Circuits	BLK-18-S+	1	01/02/2016	01/01/2017			
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2016	01/01/2017			

10.3 Measurement Equipment Used

10.4 Test Set-up



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10.5 Measurement Result

POWER DENSITY 802.11a MODE							
Frequency (MHz)	PPSD (dBm)	Limit (d Bm)	Margin (dB)				
5180	1.73	11	-9.27				
5220	3.44	11	-7.56				
5240	3.95	11	-7.05				
5260	3.70	11	-7.30				
5300	3.31	11	-7.69				
5320	2.91	11	-8.09				
5500	3.37	11	-7.63				
5580	3.69	11	-7.31				
5700	3.72	11	-7.28				
5745	6.27	30	-23.73				
5785	5.64	30	-24.36				
5825	5.90	30	-24.10				

POWER DENSITY 802.11n HT20 MODE				
Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)	
5180	0.78	11	-10.22	
5220	2.94	11	-8.06	
5240	2.86	11	-8.14	
5260	2.88	11	-8.12	
5300	1.91	11	-9.09	
5320	2.39	11	-8.61	
5500	2.17	11	-8.83	
5580	3.40	11	-7.60	
5700	3.47	11	-7.53	
5720 (UNII-2C)	3.83	11	-7.18	
5720 (UNII-3)	1.28	30	-28.72	
5745	6.05	30	-23.95	
5785	5.40	30	-24.60	
5825	6.86	30	-23.14	

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POWER DENSITY 802.11n HT40 MODE				
Frequency	PPSD	Limit	Margin	
(MHz)	(dBm)	(dBm)	(dB)	
5190	-5.32	11	-16.32	
5230	-0.84	11	-11.84	
5270	-1.13	11	-12.13	
5310	-4.43	11	-15.43	
5510	-3.44	11	-14.44	
5550	-1.46	11	-12.46	
5670	-0.52	11	-11.52	
5710 (UNII-2C)	-0.83	11	-11.83	
5710 (UNII-3)	-3.52	30	-33.52	
5755	2.87	30	-27.13	
5795	2.41	30	-27.59	

POWER DENSITY 802.11ac VHT80 MODE				
Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)	
5210	-10.95	11	-21.95	
5290	-7.32	11	-18.32	
5530	-8.98	11	-19.98	
5610	-6.77	11	-17.77	
5690(UNII-2C)	-6.70	11	-17.70	
5690(UNII-3)	-11.19	11	-22.19	
5775	-0.74	30	-30.74	

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802.11a 5150~5250 MHz Peak Power Spectral Density Data Plot (CH Low 5180 MHz)



Peak Power Spectral Density Data Plot (CH Mid 5220 MHz)



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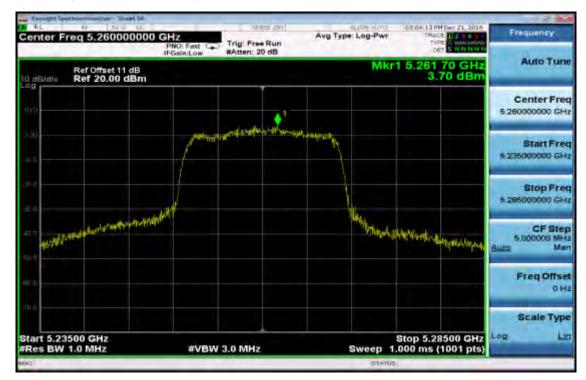
Peak Power Spectral Density Data Plot (CH High 5240 MHz)



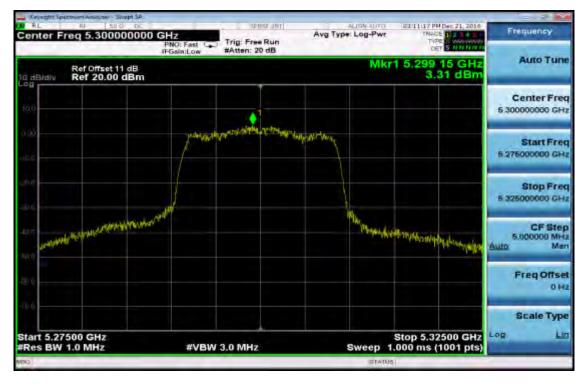
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802.11a 5250~5350 MHz Peak Power Spectral Density Data Plot (CH Low 5260 MHz)



Peak Power Spectral Density Data Plot (CH Mid 5300 MHz)



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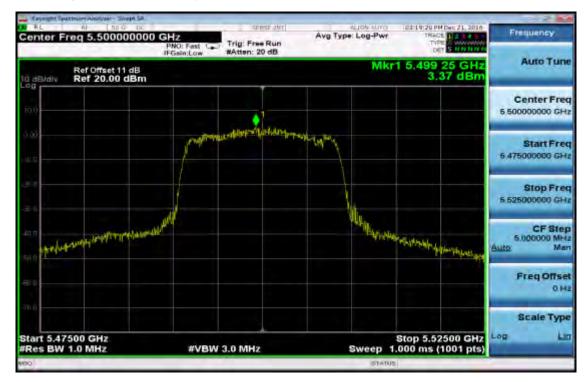


Peak Power Spectral Density Data Plot (CH High 5320 MHz)



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802.11a 5470~5725 MHz Peak Power Spectral Density Data Plot (CH Low 5500 MHz)



Peak Power Spectral Density Data Plot (CH Mid 5580 MHz)

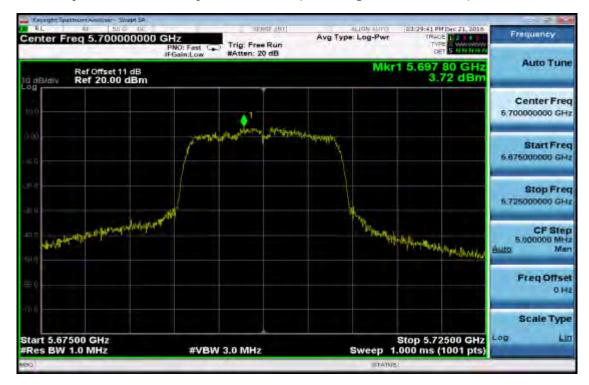


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Peak Power Spectral Density Data Plot (CH High 5700 MHz)



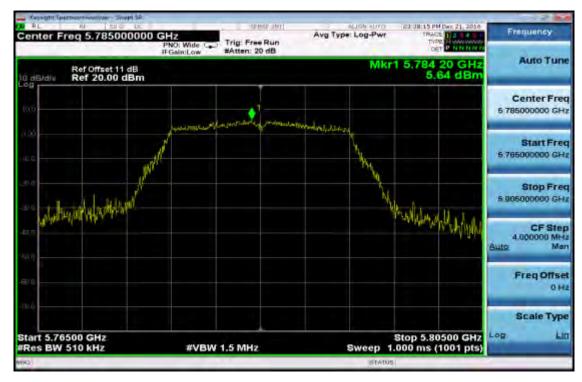
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802.11a 5725~5850 MHz Peak Power Spectral Density Data Plot (CH Low 5745 MHz)



Peak Power Spectral Density Data Plot (CH Mid 5785 MHz)



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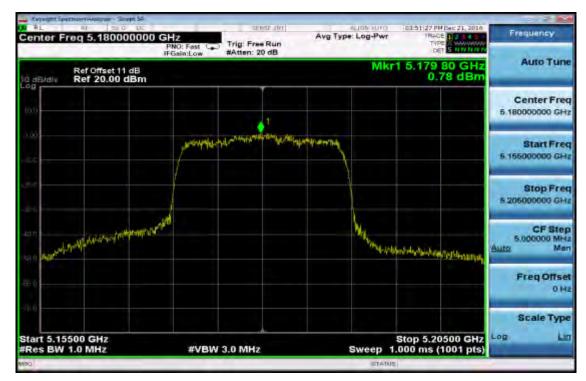
Peak Power Spectral Density Data Plot (CH High 5825 MHz)



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802.11n HT20, 5150~5250 MHz Peak Power Spectral Density Data Plot (CH Low 5180 MHz)



Peak Power Spectral Density Data Plot (CH Mid 5220 MHz)



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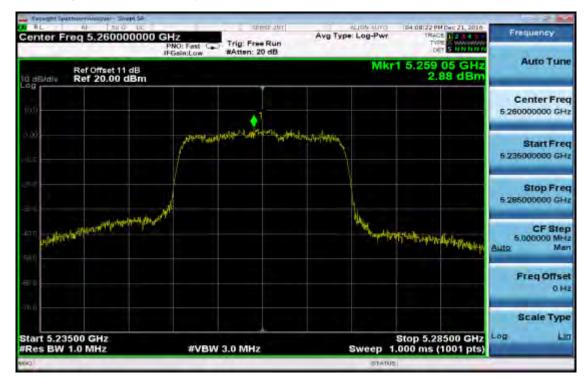
Peak Power Spectral Density Data Plot (CH High 5240 MHz)



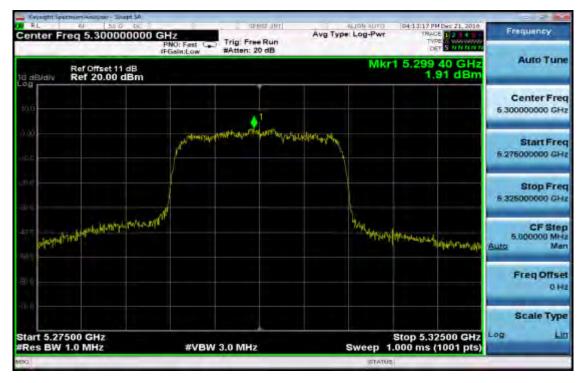
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802.11n HT20, 5250~5350 MHz Peak Power Spectral Density Data Plot (CH Low 5260MHz)



Peak Power Spectral Density Data Plot (CH Mid 5300 MHz)



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Peak Power Spectral Density Data Plot (CH High 5320 MHz)

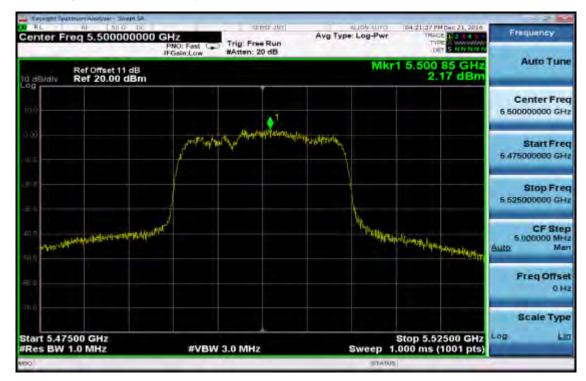
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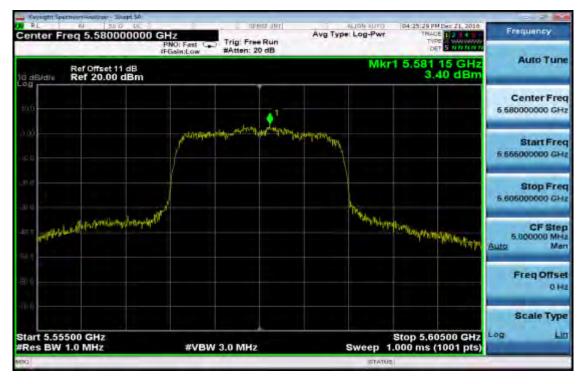
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802.11n HT20, 5470~5725 MHz Peak Power Spectral Density Data Plot (CH Low 5500 MHz)



Peak Power Spectral Density Data Plot (CH Mid 5580MHz)

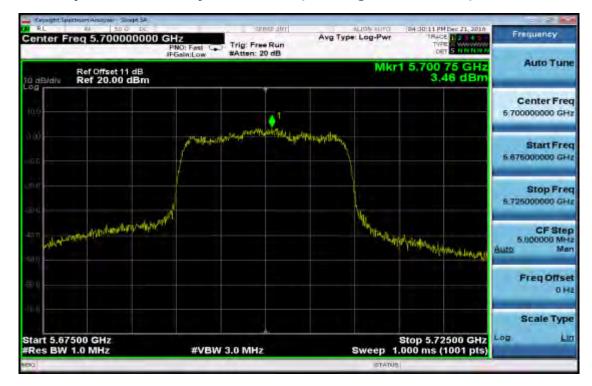


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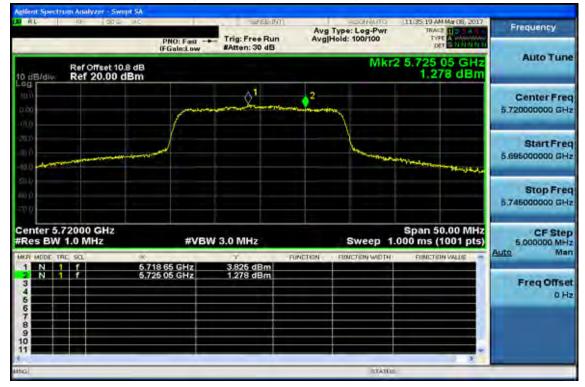
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Peak Power Spectral Density Data Plot (CH High 5700 MHz)



Peak Power Spectral Density Data Plot (CH High 5720 MHz)



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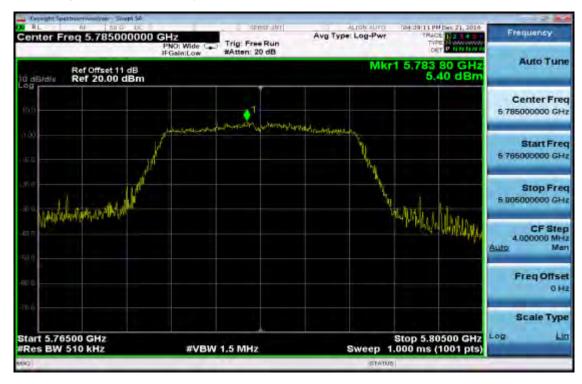
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802.11n HT20, 5725~5850 MHz Peak Power Spectral Density Data Plot (CH Low 5745 MHz)



Peak Power Spectral Density Data Plot (CH Mid 5785 MHz)



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Peak Power Spectral Density Data Plot (CH High 5825 MHz)



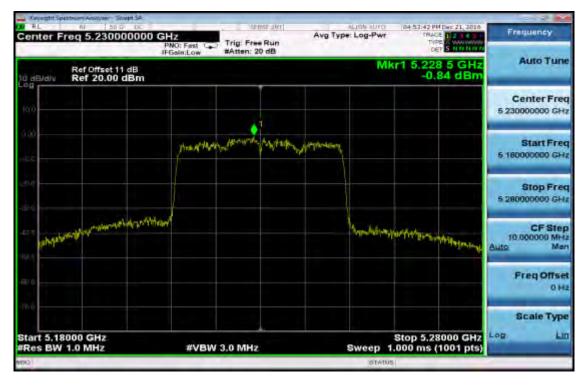
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802.11n HT40, 5150~5250 MHz Peak Power Spectral Density Data Plot (CH Low 5190 MHz)



Peak Power Spectral Density Data Plot (CH High 5230 MHz)

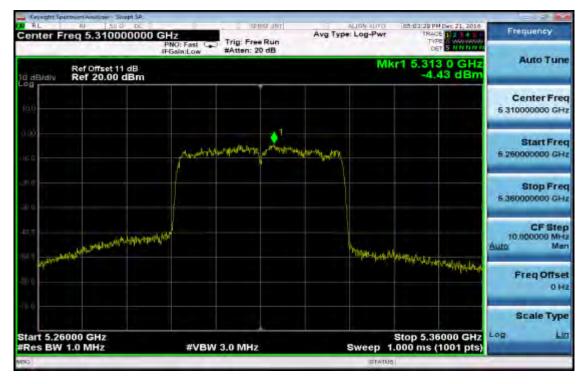


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802.11n HT40, 5250~5350 MHz Peak Power Spectral Density Data Plot (CH Low 5270 MHz)



Peak Power Spectral Density Data Plot (CH High 5310 MHz)

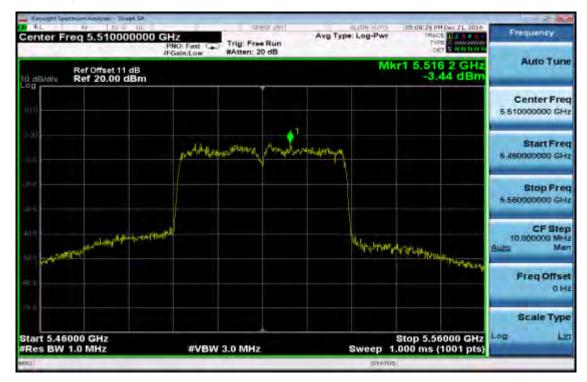


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802.11n HT40, 5470~5725 MHz Peak Power Spectral Density Data Plot (CH Low 5510 MHz)



Peak Power Spectral Density Data Plot (CH Mid 5550 MHz)

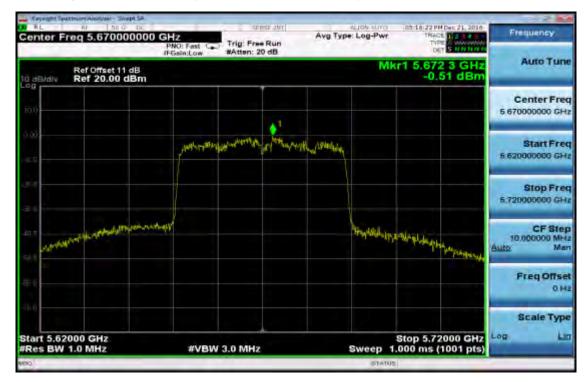


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Peak Power Spectral Density Data Plot (CH High 5670 MHz)

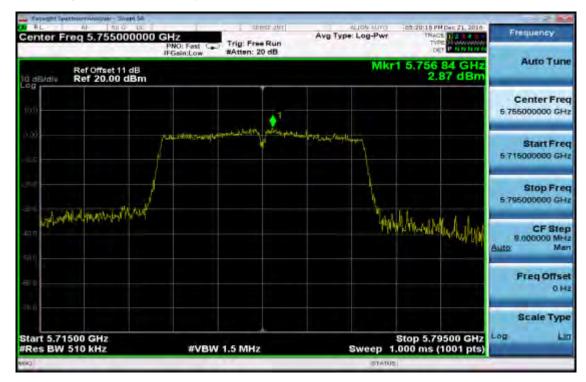


Peak Power Spectral Density Data Plot (CH High 5710 MHz)

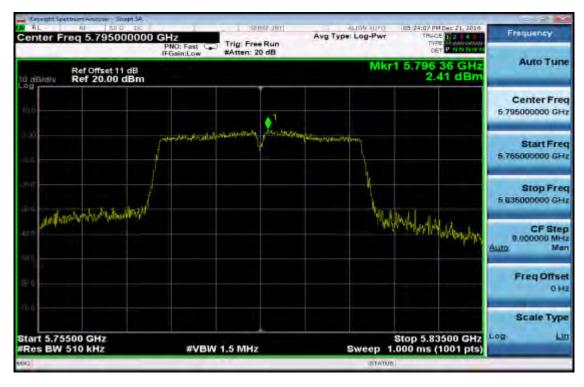


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802.11n HT40, 5725~5850 MHz Peak Power Spectral Density Data Plot (CH Low 5755 MHz)



Peak Power Spectral Density Data Plot (CH High 5795 MHz)



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802.11ac VHT80, 5150~5250 MHz Peak Power Spectral Density Data Plot (CH Mid 5210 MHz)



802.11ac VHT80, 5250~5350 MHz Peak Power Spectral Density Data Plot (CH Mid 5290 MHz)



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802.11ac VHT80, 5470~5725 MHz Peak Power Spectral Density Data Plot (CH Low 5530 MHz)



Peak Power Spectral Density Data Plot (CH High 5610 MHz)



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Peak Power Spectral Density Data Plot (CH High 5690 MHz)



802.11ac VHT80, 5725~5850 MHz Peak Power Spectral Density Data Plot (CH Mid 5775 MHz)





11. UNDESIRABLE RADIATED EMISSION MEASUREMENT1

Standard Applicable 11.1

The maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- 1. 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.
- 2. 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.
- 3. 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.
- 4. For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.

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APPLICABLE TO	LIMIT						
FCC KDB 789033 D02 General UNII Test Procedures New Rules	FIELD STRENGTH AT 3m						
v01r01	PK: 74 (dBμV/m)	AV 54 (dBμV/m)					
APPLICABLE TO	EIRP LIMIT	FIELD STRENGTH AT 3m					
15.407(b)(1)							
15.407(b)(2)	PK: -27 (dBm/MHz)	PK: 68.3 (dBμV/m)					
15.407(b)(3)							
15.407(b)(4)	PK: -27 (dBm/MHz) PK: -17 (dBm/MHz)	PK: 68.3 (dBμV/m) PK: 78.2 (dBμV/m)					
15.407(b)(4)(i)	PK:-27 (dBm/MHz) *1 PK:10 (dBm/MHz) *2 PK:15.6 (dBm/MHz) *3 PK:27 (dBm/MHz) *4	PK: 68.2(dBµV/m) *1 PK:105.2 (dBµV/m) *2 PK: 110.8(dBµV/m) *3 PK:122.2 (dBµV/m) *4					
 PK:27 (dBm/MHz) *4 PK:122.2 (dBµV/m) *4 *1 beyond 75 MHz or more above of the bandedge. *2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above. *3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above. *4 from 5 MHz above or below the band edge increasing linearly to a level of 27 							

dBm/MHz at the band edge.

 $EIRP = ((E^*d)^2) / 30$, where E is the field in V/m, d is the measurement distance (3m), EIRP is the equivalent isotropically radiated power in Watts.



Unwanted spurious emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

Frequency (MHz)	Field strength (microvolts/meter)	Distance (meters)
0.009-0.490	2400/F(KHz)	300
0.490-1.705	24000/F(KHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Note:

1. The lower limit shall apply at the transition frequencies.

2. Emission level $(dB\mu V/m) = 20 \log Emission level (dB\mu V/m)$

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11.2 Measurement Equipment Used

SGS SAC-III									
EQUIPMENT	MFR	MODEL	SERIAL	LAST	CAL DUE.				
ТҮРЕ		NUMBER	NUMBER	CAL.					
EMI Test Receiver	R&S	ESCI7	100760	05/10/2016	05/09/2017				
Spectrum Analyzer	Agilent	E4446A	MY51100003	01/29/2016	01/28/2017				
Loop Antenna	ETS-Lindgren	6502	148045	09/20/2016	09/19/2017				
Bilog Antenna	SCHWAZBECK	VULB9168	378	12/19/2016	12/18/2017				
Horn Antenna	Schwarzbeck	BBHA9120D	1441	08/01/2016	07/31/2017				
Pre-Amplifier	Agilent	8447D	2944A07676	01/02/2016	01/01/2017				
Dro Amplifiar	EMC Instru-	EMC0126530	980038	01/02/2016	01/01/2017				
Pre-Amplifier	ments Corp.	EIMC0126530	960036	01/02/2016	01/01/2017				
Turn Table	HD	DT420	N/A	N.C.R	N.C.R				
Antenna Tower	ChamPro	AM-BS-4500-B	060776-ABS	N.C.R	N.C.R				
Controller	ChamPro	EM1000	60776	N.C.R	N.C.R				
Low Loss Cable	Huber Suhner	966_RX	9	01/02/2016	01/01/2017				
3m Site NSA	SGS	966 chamber	N/A	07/01/2016	06/30/2017				
Low Loss Cable	Huber Suhner	966 TX	1	01/02/2016	01/01/2017				
Horn Antenna	Schwarzbeck	BBHA9170	184	12/12/2016	12/11/2017				
Dro Amplifica	EMC Instru-		000105	01/06/2010	01/05/0017				
Pre-Amplifier	ments Corp.	EMC184045	980135	01/06/2016	01/05/2017				

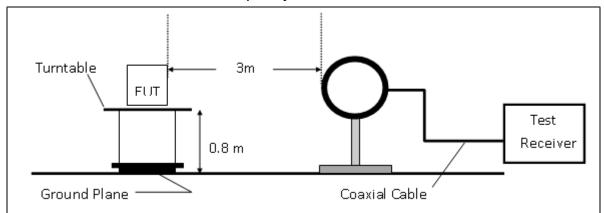
Note: N.C.R refers to Not Calibrated Required.

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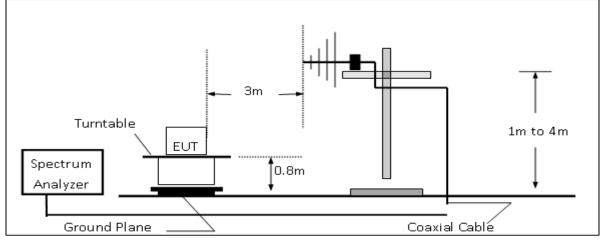


11.3 Test SET-UP

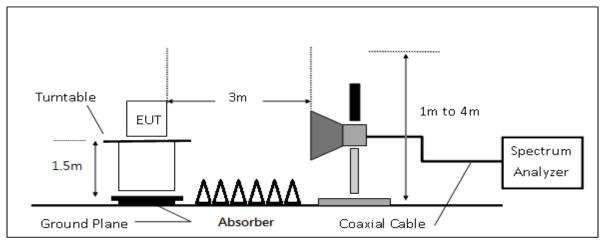
(A) Radiated Emission Test Set-UP Frequency Below 30MHz.



(B) Radiated Emission Test Set-Up, Frequency form 30MHz to 1000MHz



(C) Radiated Emission Test Set-UP Frequency Over 1 GHz



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11.4 Measurement Procedure

- The EUT was placed on a turn table which is 0.8m above ground plane. 1.
- The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules. 2.
- The EUT was placed on a turn table with 0.8m for frequency< 1GHz and 1.5m for frequen-3. cy> 1GHz above ground plane.
- 4. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
- 5. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
- 6. Set the spectrum analyzer as RBW=120 kHz and VBW=300 kHz for Peak Detector (PK) and Quasi-peak (QP) at frequency below 1 GHz.
- 7. Set the spectrum analyzer as RBW=1 MHz, VBW=3 MHz for Peak Detector at frequency above 1 GHz.
- Set the spectrum analyzer as RBW=1 MHz, VBW=10 Hz (Duty cycle > 98%) or VBW ≥ 8. 1/T (Duty cycle < 98%) for Average Detector at frequency above 1 GHz.
- 9. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 10. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 11. Repeat above procedures until all frequency measured were complete.

11.5 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

Actual FS(dB μ V/m) = SPA. Reading level(dB μ V) + Factor(dB) Factor(dB) = Antenna Factor(dB μ V/m) + Cable Loss(dB) – Pre Amplifier Gain(dB)

Note :

"F" : denotes Fundamental Frequency. ; "H" : denotes Harmonic Frequency. "E" : denotes Band Edge Frequency. ; "S" : denotes Spurious Frequency.

Test Results of Radiated Spurious Emissions form 9 kHz to 30 MHz 11.6

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit per 15.31(o) was not reported.

11.7 Measurement Result

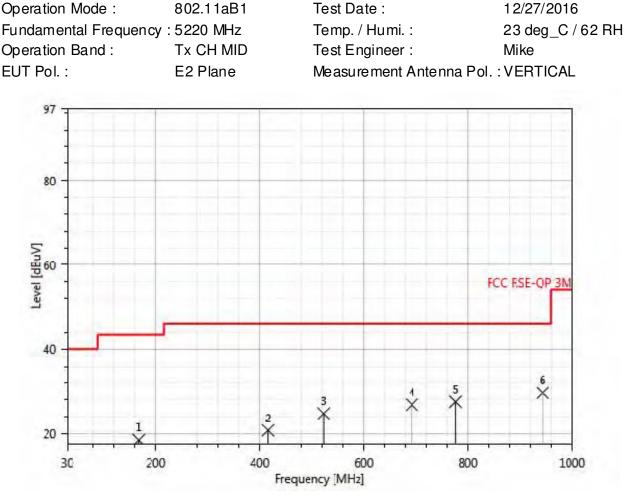
Note: Refer to next page spectrum analyzer data chart and tabular data sheets. Note: For measurement plot of radiation revealing the compliance of 15.407, please refer to Appendix I.

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Radiated Spurious Emission Measurement Result Below 1GHz Worst-Case Data: 802.11a 5150~5250 MHz

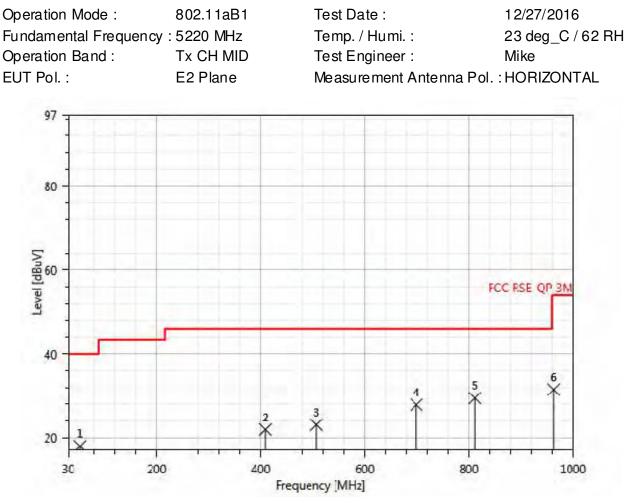


Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
167.74	S	Peak	18.51	25.98	-7.46	43.50	-24.99
416.06	S	Peak	20.80	24.06	-3.27	46.00	-25.20
522.76	S	Peak	24.75	26.41	-1.66	46.00	-21.25
692.51	S	Peak	26.83	25.36	1.47	46.00	-19.17
775.93	S	Peak	27.52	24.86	2.67	46.00	-18.48
943.74	S	Peak	29.67	24.36	5.31	46.00	-16.33

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Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
53.28	S	Peak	18.04	25.83	-7.79	40.00	-21.96
409.27	S	Peak	21.98	25.55	-3.57	46.00	-24.02
507.24	S	Peak	23.13	25.46	-2.33	46.00	-22.87
699.30	S	Peak	27.89	26.45	1.44	46.00	-18.11
811.82	S	Peak	29.51	26.20	3.31	46.00	-16.49
963.14	S	Peak	31.52	25.46	6.06	54.00	-22.48

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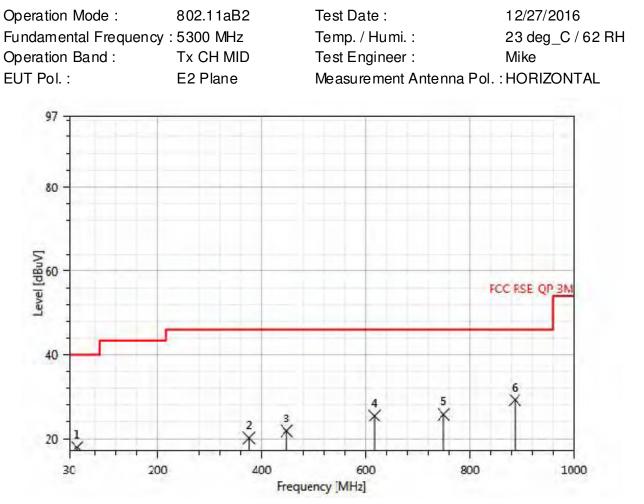


802.11a 5250~5350 MHz

Operation Fundamer Operation EUT Pol. :	ntal Frequency Band :	802.11aB2 5300 MHz Tx CH MID E2 Plane		Test Da Temp. / Test Eng Measure	Humi. : gineer :	enna Pol	12/27/2016 23 deg_C / 62 RH Mike . : VERTICAL
97 - - - 80							
Level [dBuV] 8							FCC RSE-QP 3M
40 -							6 ×
20 - 3	1 X C 200	2 2 2 40	3 *		4 ×	× 800	1000
_			Freque	ncy [MHz]		_	

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
60.07	S	Peak	18.18	26.23	-8.05	40.00	-21.82
401.51	S	Peak	21.70	25.65	-3.95	46.00	-24.30
474.26	S	Peak	23.02	25.50	-2.48	46.00	-22.98
679.90	S	Peak	26.14	25.38	0.75	46.00	-19.86
761.38	S	Peak	26.88	23.96	2.92	46.00	-19.12
965.08	S	Peak	31.13	25.18	5.95	54.00	-22.87





Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
45.52	S	Peak	17.96	25.95	-7.98	40.00	-22.04
375.32	S	Peak	20.20	24.74	-4.54	46.00	-25.80
448.07	S	Peak	21.80	24.78	-2.97	46.00	-24.20
616.85	S	Peak	25.49	25.65	-0.17	46.00	-20.51
749.74	S	Peak	25.83	23.11	2.72	46.00	-20.17
886.51	S	Peak	29.19	24.78	4.41	46.00	-16.81

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802.11a, 5470~5725 MHz

802.11aB3 cy : 5580 MHz Tx CH MID E2 Plane	Test Date : Temp. / Humi. : Test Engineer : Measurement Antenr	12/27/2016 23 deg_C / 62 RH Mike na Pol. : VERTICAL
		FCC FSE-QP 3M
-		
2 3 X 200 400	4 7 600 5 7 7 600	800 1000
	cy : 5580 MHz Tx CH MID E2 Plane	cy : 5580 MHz Tx CH MID E2 Plane Measurement Antenn

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
63.95	S	Peak	17.32	26.26	-8.93	40.00	-22.68
247.28	S	Peak	17.83	25.83	-8.00	46.00	-28.17
378.23	S	Peak	19.52	23.95	-4.43	46.00	-26.48
522.76	S	Peak	23.69	25.35	-1.66	46.00	-22.31
714.82	S	Peak	25.71	24.31	1.40	46.00	-20.29
843.83	S	Peak	27.77	24.36	3.41	46.00	-18.23



Operation Mode : 802.11aB3 Test Date : 12/27/2016 Fundamental Frequency : 5580 MHz Temp. / Humi. : 23 deg C / 62 RH **Operation Band :** Tx CH MID Test Engineer : Mike EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL 97 80 Level [dBuV] FCC RSE-QP 3M 40 6 4 20 200 600 800 30 400 1000 Frequency [MHz]

Freq.	Note	Decetor Mode	Actual Reading Level	Spectrum FS	Factor	Limit @3m	Margin
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
54.25	S	Peak	18.30	26.12	-7.82	40.00	-21.70
402.48	S	Peak	20.59	24.55	-3.96	46.00	-25.41
479.11	S	Peak	22.94	25.34	-2.39	46.00	-23.06
624.61	S	Peak	26.55	26.40	0.15	46.00	-19.45
739.07	S	Peak	26.87	24.94	1.92	46.00	-19.13
894.27	S	Peak	28.80	24.31	4.50	46.00	-17.20

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802.11a, 5725~5850 MHz

Operation Fundame Operation EUT Pol.	ntal Freq Band :	uency:5 T	02.11aB4 785 MHz x CH MID 2 Plane	Test Date Temp. / Hu Test Engin Measurem	ımi. :	Mike	J_C / 62 RH
97 - 80 -	-						
Level [dBuV]						FCC RSE-Q	P 3M
40 -							
20 -	1 *	2	3 *	4 ×	5 *	×	
3	30	200	400	600 Frequency [MHz]	8	00	1000

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
56.19	S	Peak	17.74	25.65	-7.92	40.00	-22.26
185.20	S	Peak	15.07	24.13	-9.06	43.50	-28.43
351.07	S	Peak	19.35	24.34	-5.00	46.00	-26.65
557.68	S	Peak	22.95	24.37	-1.42	46.00	-23.05
732.28	S	Peak	26.84	25.01	1.83	46.00	-19.16
882.63	S	Peak	28.75	24.29	4.46	46.00	-17.25



Operation Mode : 802.11aB4 Test Date : 12/27/2016 Fundamental Frequency : 5785 MHz Temp. / Humi. : 23 deg C / 62 RH **Operation Band :** Tx CH MID Test Engineer : Mike EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL 97 80 Level [dBuV] FCC RSE-QP 3M 40 6 2 20 200 600 800 30 400 1000 Frequency [MHz]

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
52.31	S	Peak	17.78	25.55	-7.77	40.00	-22.22
365.62	S	Peak	20.85	25.55	-4.70	46.00	-25.15
476.20	S	Peak	21.95	24.40	-2.45	46.00	-24.05
599.39	S	Peak	24.97	25.25	-0.28	46.00	-21.03
735.19	S	Peak	26.39	24.38	2.01	46.00	-19.61
904.94	S	Peak	29.89	24.99	4.90	46.00	-16.11

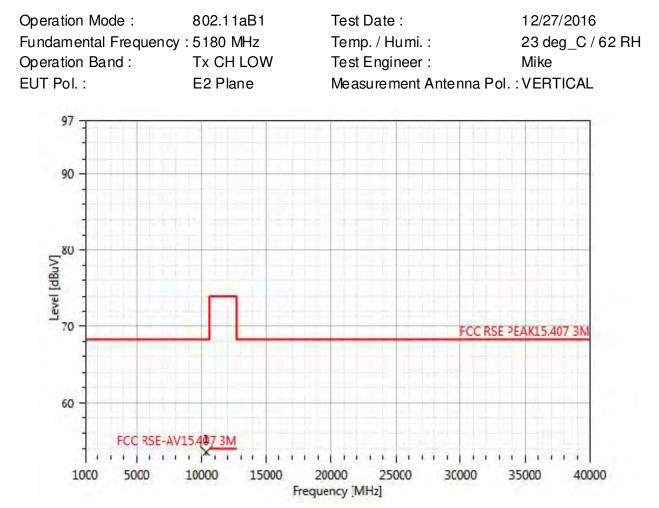
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Above 1GHz Worst-Case Data:

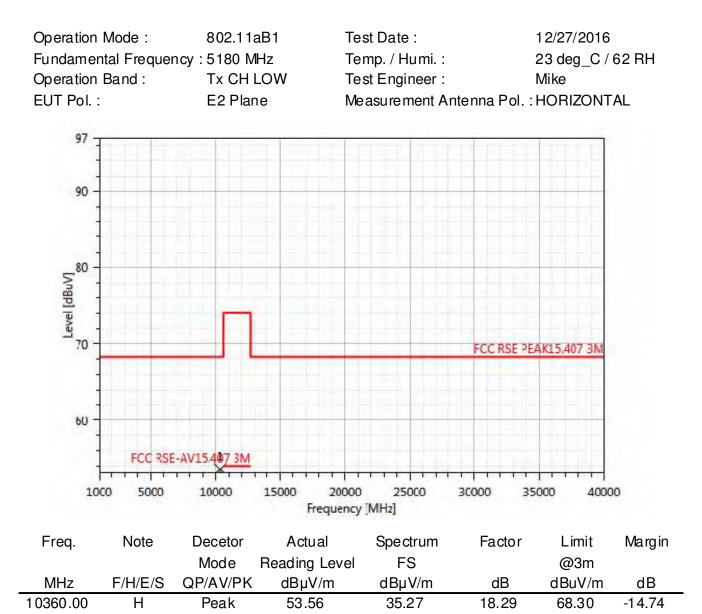
Radiated Spurious Emission Measurement Result 802.11a, 5150~5250 MHz



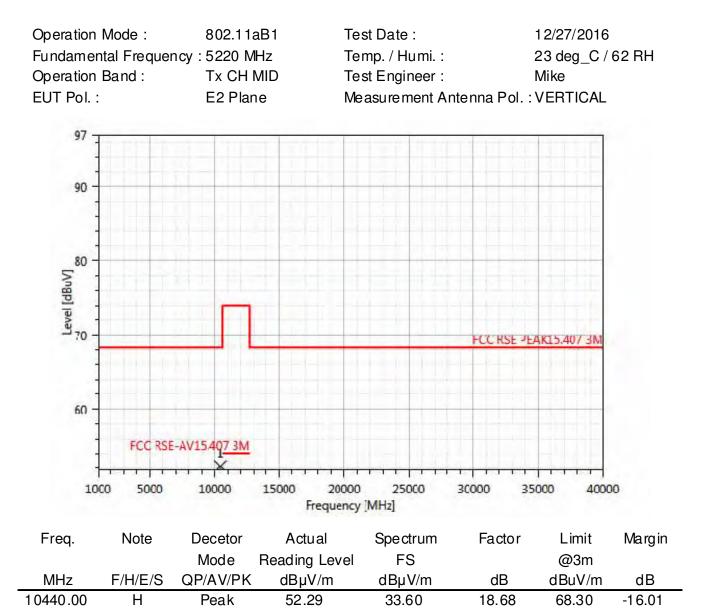
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
10360.00	Н	Peak	53.55	35.26	18.29	68.30	-14.75

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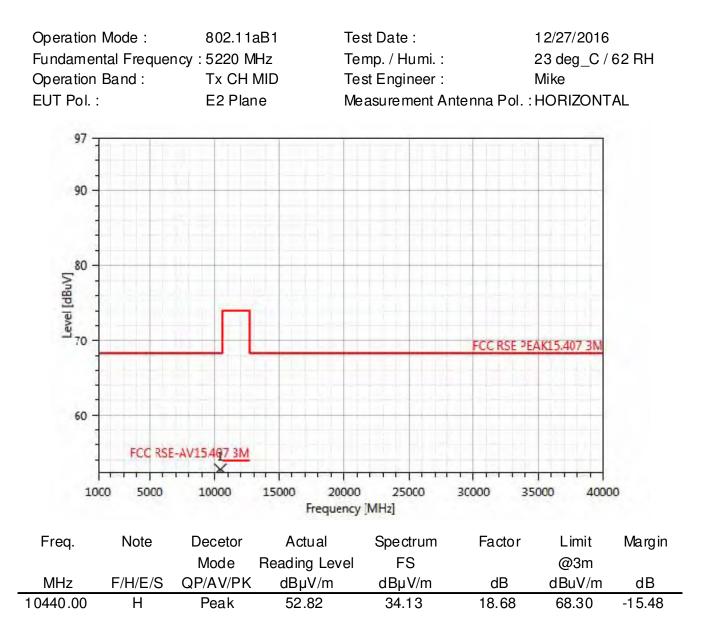




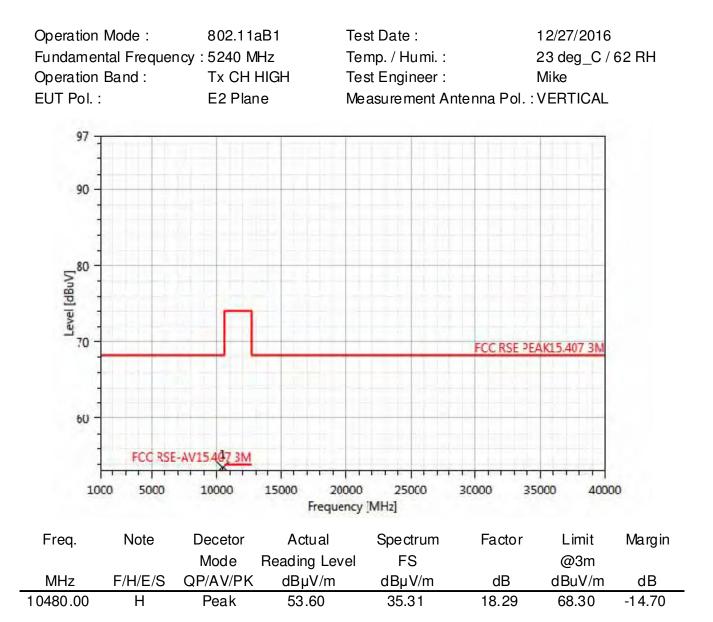




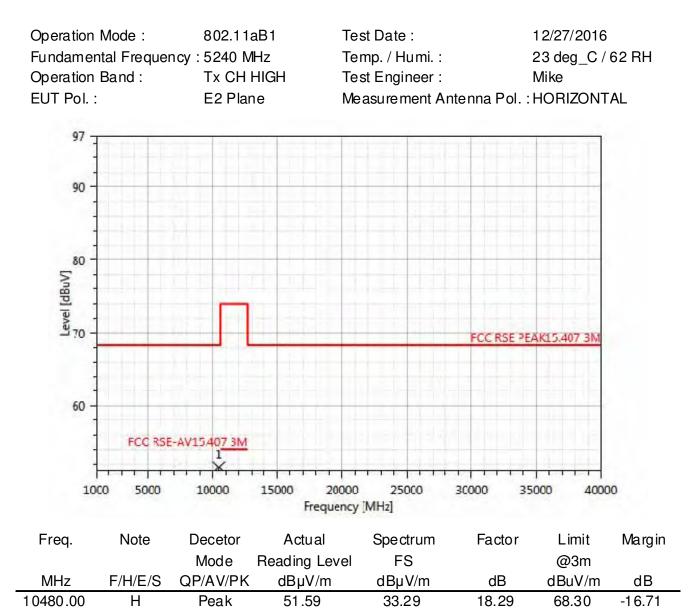














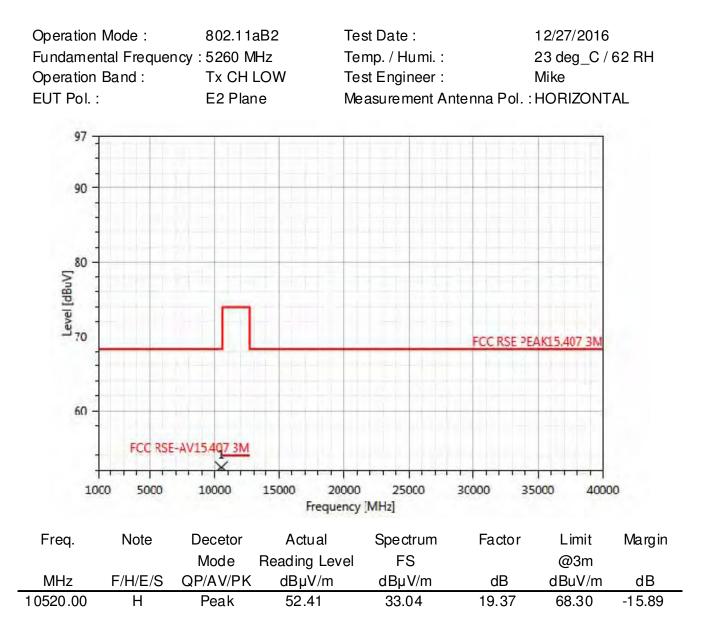
Radiated Spurious Emission Measurement Result 802.11a, 5250MHz-5350MHz

Operation I Fundamen Operation I EUT Pol. :	tal Freque	802.11; ncy : 5260 M Tx CH I E2 Plar	Hz LOW	Test Date : Temp. / Hum Test Enginee Measuremen		12/27/2016 23 deg_C Mike I. : VERTICAL	/ 62 RH
97 T	1.111						
90							
80 Fevel [dBuV]					FCC RSE	PEAK15.407 3M	
60 -							
-	FCC RSE	-AV15.407 3M					
100	0 5000	10000		0000 25000 ency [MHz]	30000	35000 400	00
Freq.	Note	Decetor Mode	Actual Reading Le	Spectrui vel FS	m Facto	r Limit @3m	Margin
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/n	n dB	dBuV/m	dB
10520.00	Н	Peak	52.78	33.40	19.37	68.30	-15.52

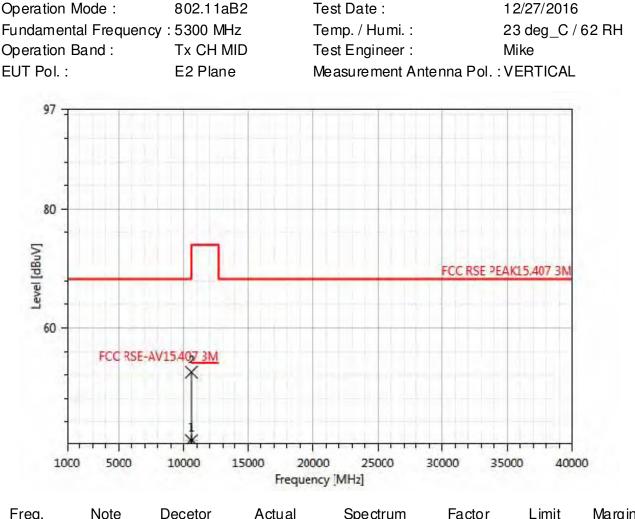
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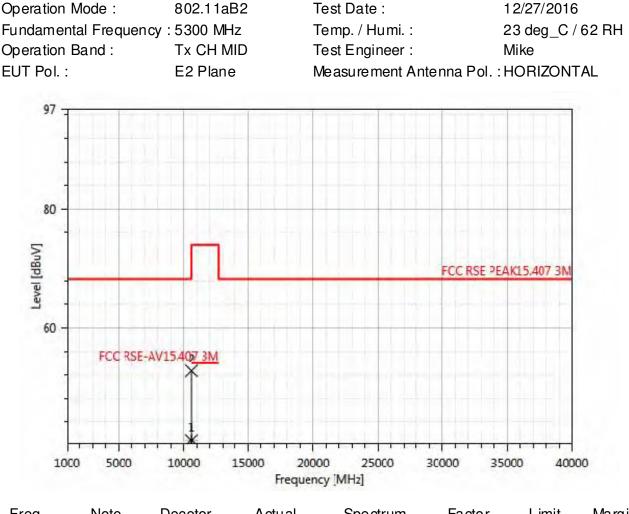




Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
10600.00	Н	Average	40.98	22.07	18.91	54.00	-13.02
10600.00	Н	Peak	52.46	33.55	18.91	74.00	-21.54

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Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin	
		Mode	Reading Level	FS		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
10600.00	Н	Average	40.98	22.07	18.91	54.00	-13.02	_
10600.00	Н	Peak	52.70	33.79	18.91	74.00	-21.30	



Operation Mode : 802.11aB2 Test Date : 12/27/2016 Fundamental Frequency : 5320 MHz Temp. / Humi. : 23 deg C / 62 RH **Operation Band :** Tx CH HIGH Test Engineer : Mike EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL 97 80 Level [dBuV] FCC RSE PEAK15.407 3M 60 FCC RSE-AV15.407 3M 15000 20000 25000 30000 1000 5000 10000 35000 40000 Frequency [MHz] Freq. Note Spectrum Factor Limit Margin Decetor Actual N 4 - - I -<u></u>

		Node	Reading Level	FS		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
10640.00	Н	Average	41.21	22.03	19.18	54.00	-12.79	_
10640.00	Н	Peak	52.79	33.61	19.18	74.00	-21.21	

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Operation Mode : 802.11aB2 Test Date : 12/27/2016 Fundamental Frequency : 5320 MHz Temp. / Humi. : 23 deg C / 62 RH **Operation Band :** Mike Tx CH HIGH Test Engineer : EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL 97 80 Level [dBuV] FCC RSE PEAK15.407 3N 60 FCC RSE-AV15.407.3M 15000 20000 25000 30000 1000 5000 10000 35000 40000 Frequency [MHz] Frea. Note Decetor Actual Spectrum Factor Limit Margin

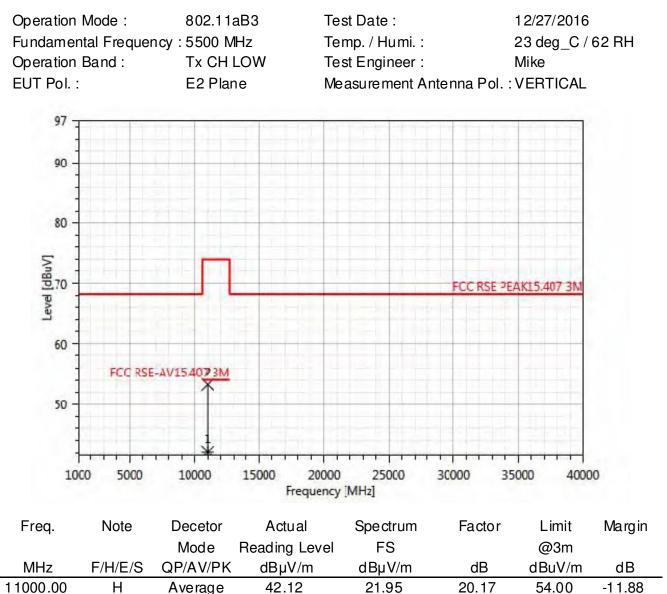
•				•			0
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
10640.00	Н	Average	41.21	22.03	19.18	54.00	-12.79
10640.00	Н	Peak	53.28	34.10	19.18	74.00	-20.72



11000.00

Н

Radiated Spurious Emission Measurement Result 802.11a, 5470~5725 MHz



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53.25

Peak

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33.08

20.17

74.00

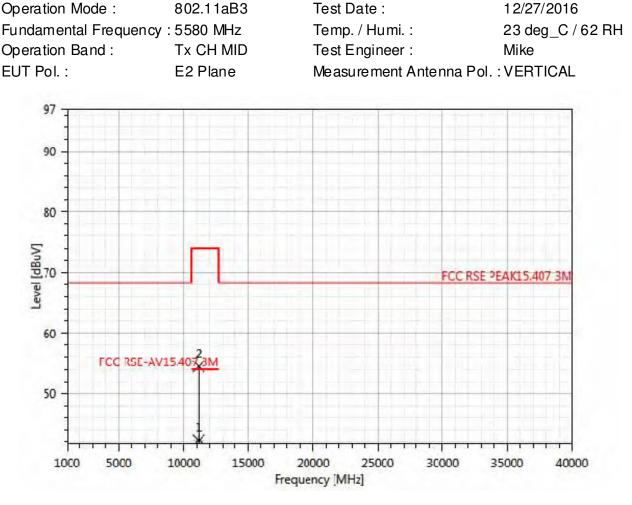
-20.75





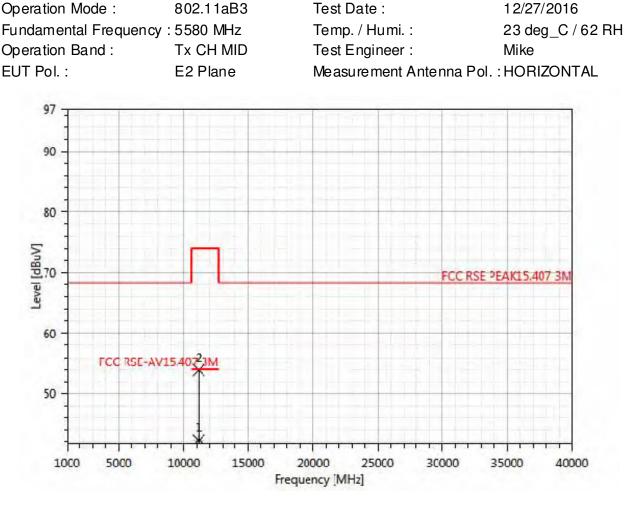
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11000.00	Н	Average	42.11	21.94	20.17	54.00	-11.89
11000.00	Н	Peak	53.90	33.73	20.17	74.00	-20.10





Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11160.00	Н	Average	42.32	21.87	20.45	54.00	-11.68
11160.00	Н	Peak	54.50	34.05	20.45	74.00	-19.50





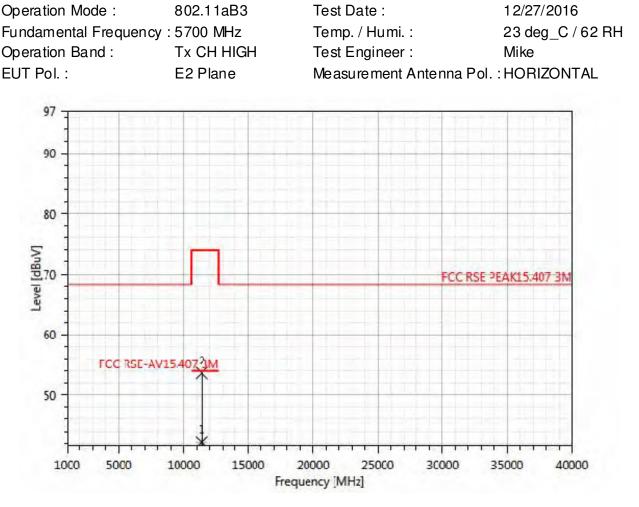
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11160.00	Н	Average	42.34	21.89	20.45	54.00	-11.66
11160.00	Н	Peak	53.90	33.46	20.45	74.00	-20.10





Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11400.00	Н	Peak	54.15	33.59	20.56	74.00	-19.85
11400.00	Н	Peak	42.22	21.66	20.56	74.00	-31.78





Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11400.00	Н	Average	42.23	21.67	20.56	54.00	-11.77
11400.00	Н	Peak	53.67	33.12	20.56	74.00	-20.33



Radiated Spurious Emission Measurement Result 802.11a, 5725~5850 MHz

Operation Fundamen Operation EUT Pol. :	ntal Freque Band :	802.11a ncy : 5745 MH Tx CH L E2 Plane	lz Te OW Te	est Date : emp. / Humi. : est Engineer : easurement A	atoppa Pol	12/27/2016 23 deg_C / Mike	62 RH
201 FOI 97 न							
Level [dBuV]					FCC RSE PI	EAK15.407 3M	
60 - -	FCC RSI	-AV15.40 <u>7 8M</u>					
-		1 		<u>i i i i i i i i i i i i i i i i i i i </u>		1111	
100	0 5000	10000	15000 20000 Frequency		30000 3	5000 4000	0
Freq.	Note	Decetor Mode I	Actual Reading Level	Spectrum FS	Factor	Limit @3m	Margin
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11490.00	Н	Average	41.38	20.96	20.42	54.00	-12.62

Peak

52.84

Н

11490.00

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32.42

20.42

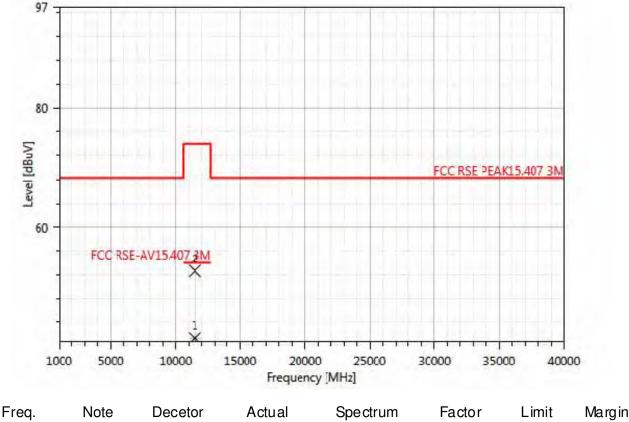
74.00

-21.16



Operation Mode : 802.11aB4 Test Date : Fundamental Frequency : 5745 MHz **Operation Band :** Tx CH LOW EUT Pol. : E2 Plane

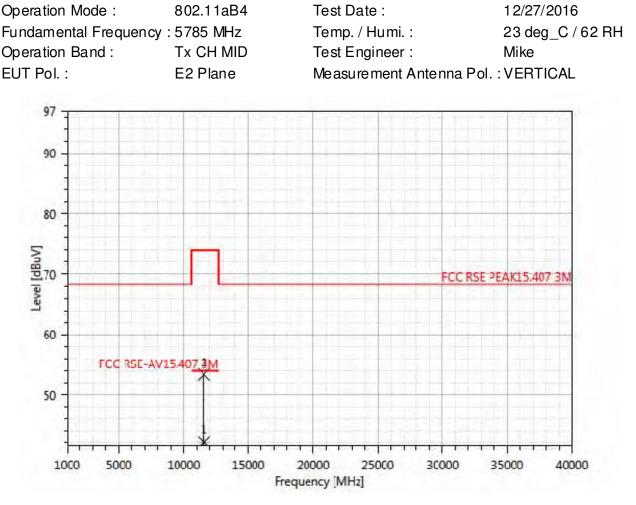
12/27/2016 Temp. / Humi. : 23 deg C / 62 RH Mike Test Engineer : Measurement Antenna Pol. : HORIZONTAL



•				•			0
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11490.00	Н	Average	41.34	20.92	20.42	54.00	-12.66
11490.00	Н	Peak	52.66	32.24	20.42	74.00	-21.34

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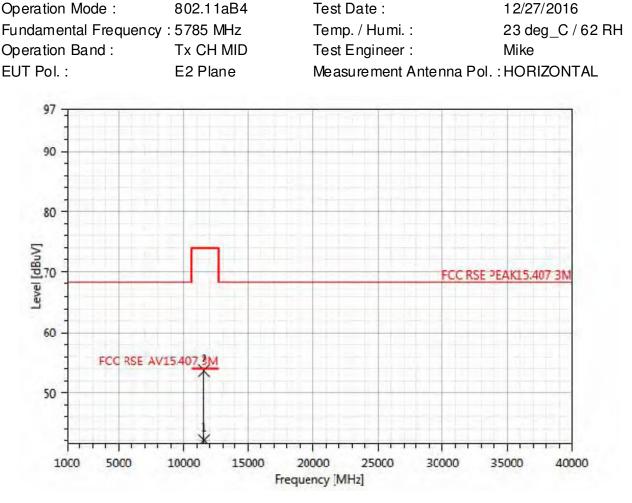




Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11570.00	Н	Average	42.21	21.62	20.59	54.00	-11.79
11570.00	Н	Peak	53.41	32.82	20.59	74.00	-20.59

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Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin	
		Mode	Reading Level	FS		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	_
11570.00	Н	Average	42.19	21.60	20.59	54.00	-11.81	
11570.00	Н	Peak	53.67	33.08	20.59	74.00	-20.33	



11650.00

н

Operation Mode : 802.11aB4 Test Date : 12/27/2016 Fundamental Frequency : 5825 MHz Temp. / Humi. : 23 deg C / 62 RH **Operation Band :** Mike Tx CH HIGH Test Engineer : EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL 97 90 80 Level [dBuV] CC RSE PEAK15.407 3N 60 FCC RSE-AV15/107 50 10000 15000 20000 25000 30000 1000 5000 35000 40000 Frequency [MHz] Freq. Note Decetor Actual Spectrum Factor Limit Margin Mode Reading Level FS @3m F/H/E/S QP/AV/PK dBµV/m dBµV/m dBuV/m MHz dB dB 11650.00 Н 41.99 21.56 20.43 54.00 -12.01 Average

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Peak

54.31

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33.87

20.43

74.00

-19.69



11650.00

н

Operation Mode : 802.11aB4 Test Date : 12/27/2016 Fundamental Frequency : 5825 MHz Temp. / Humi. : 23 deg C / 62 RH **Operation Band :** Tx CH HIGH Test Engineer : Mike EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL 97 90 80 Level [dBuV] CC RSE PEAK15.407 3N 60 FCC RSE-AV15/107 2 50 10000 15000 20000 25000 30000 1000 5000 35000 40000 Frequency [MHz] Freq. Note Decetor Actual Spectrum Factor Limit Margin Mode Reading Level FS @3m F/H/E/S QP/AV/PK dBµV/m dBµV/m dBuV/m MHz dB dB 11650.00 Н 41.99 21.56 20.43 54.00 -12.01 Average

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Peak

53.87

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33.43

20.43

74.00

-20.13



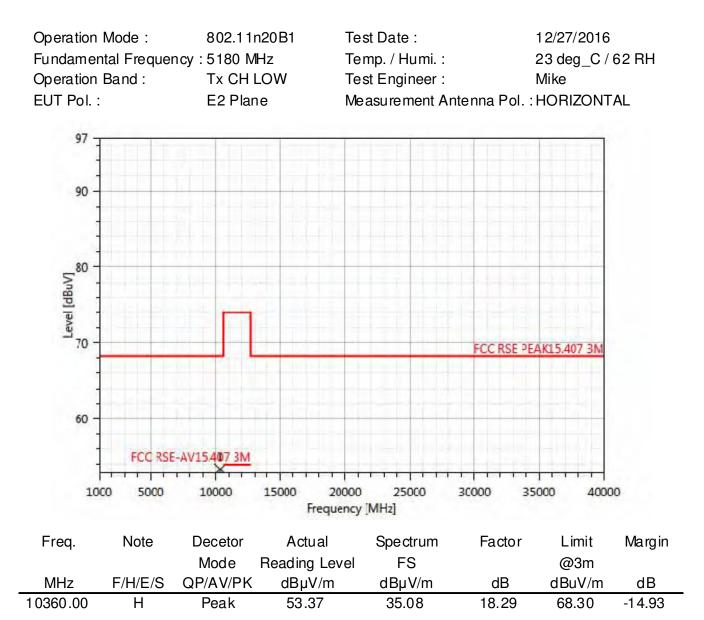
Radiated Spurious Emission Measurement Result 802.11n HT20, 5150~5250 MHz

Operation Fundame Operation EUT Pol.	ntal Freque Band :	802.11 ncy : 5180 M Tx CH E2 Plar	Hz T LOW T	ēst Date : ēmp. / Humi. : ēst Engineer : <i>I</i> easurement A	ntenna Pol.	12/27/2016 23 deg_C / Mike : VERTICAL	62 RH
97 -							
90 -							
Fevel [dBuy]					FCC RSE P	EAK15.407 3M	
60 -	FCC RSI	E-AV15.4 <u>97 3M</u>					
10	$\left \cdot \cdot \cdot \right $		15000 2007		2000 7		10
10	00 5000	10000	15000 2000 Frequence	00 25000 cy [MHz]	30000 3	5000 4000	
Freq.	Note	Decetor Mode	Actual Reading Leve	Spectrum I FS	Factor	Limit @3m	Margin
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
10360.00	Н	Peak	52.91	34.62	18.29	68.30	-15.39

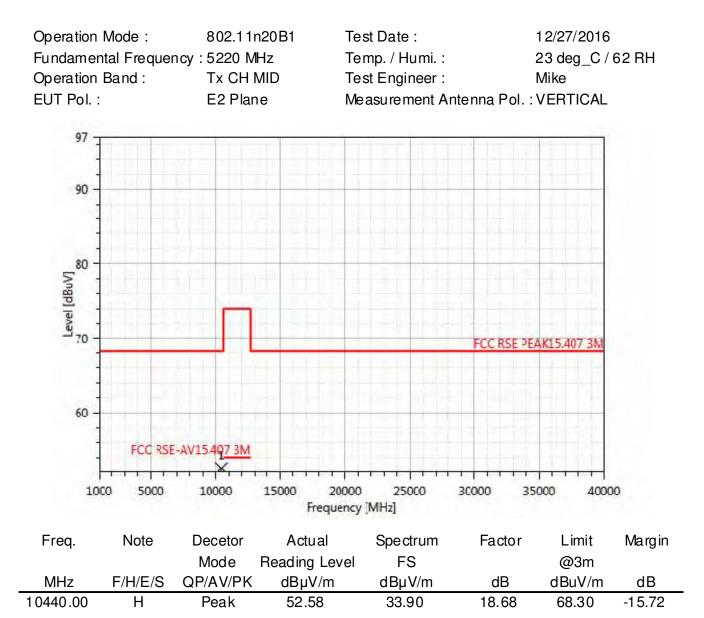
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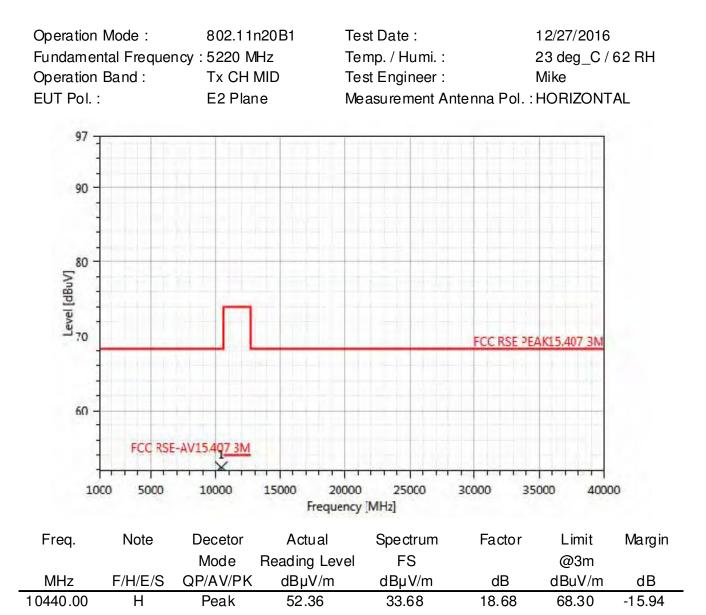




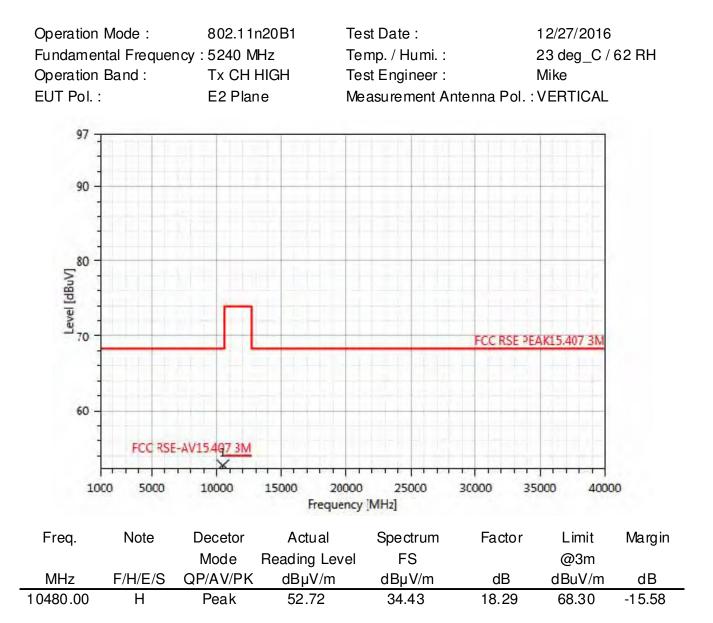




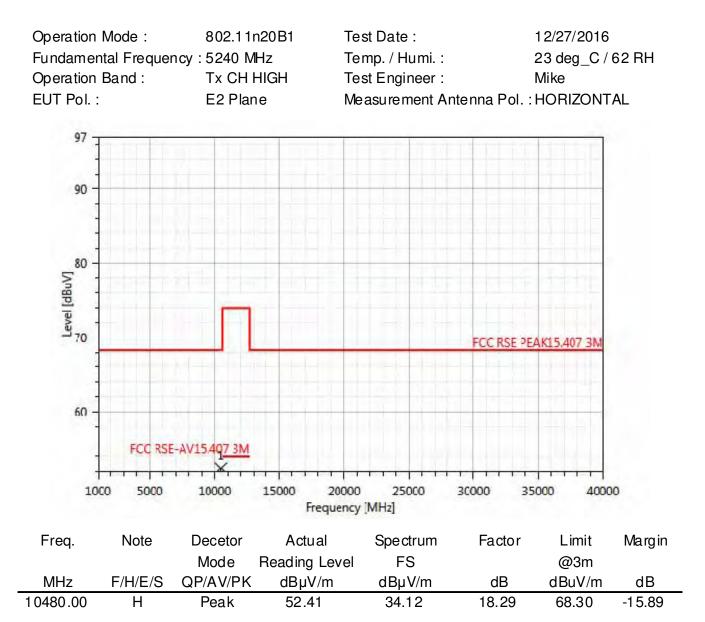














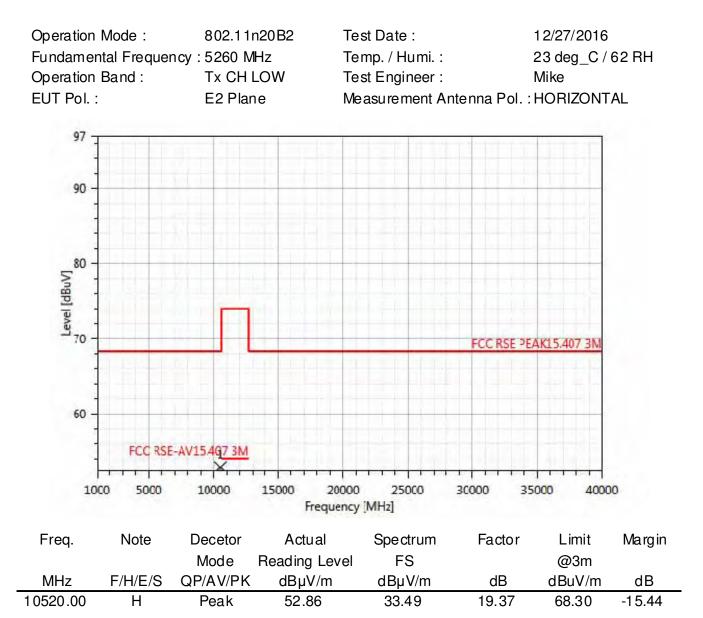
Radiated Spurious Emission Measurement Result 802.11n HT20, 5250~5350 MHz

Operation Fundame Operation EUT Pol. :	ntal Frequei Band :	802.111 ncy : 5260 M Tx CH E2 Plar	Hz LOW	Test Date : Temp. / Humi. : Test Engineer : Measurement A		12/27/2016 23 deg_C / Mike : VERTICAL	62 RH
97 -							
90 -							
Kingb] Level [Jubb] - 0.					FCC RSE P	EAK15.407 3M	
60 -	FCC RSE	:-AV154d7 3M					
10	11111	10000	15000 200	00 25000	3C000 3	35000 4000	n
10		10000		icy [MHz]	5000 5		
Freq.	Note	Decetor Mode	Actual Reading Leve	Spectrum el FS	Factor	Limit @3m	Margin
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
10520.00	Н	Peak	54.21	34.83	19.37	68.30	-14.09

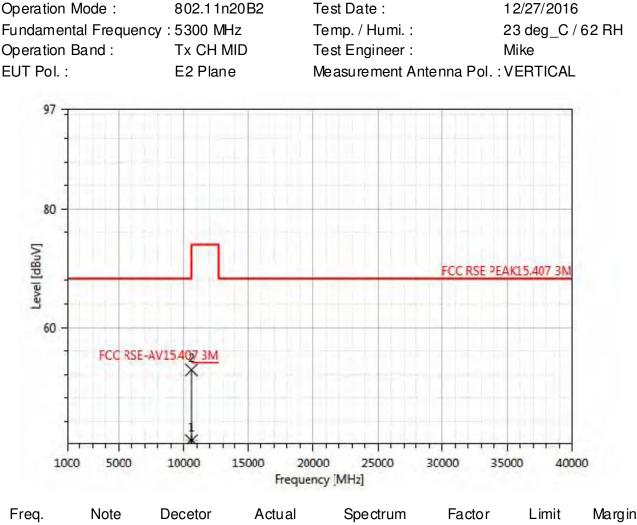
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	11010	2000101	, loca al	opoolaini	1 4 6 6 7	=	margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
10600.00	Н	Average	40.88	21.97	18.91	54.00	-13.12
10600.00	Н	Peak	52.75	33.85	18.91	74.00	-21.25

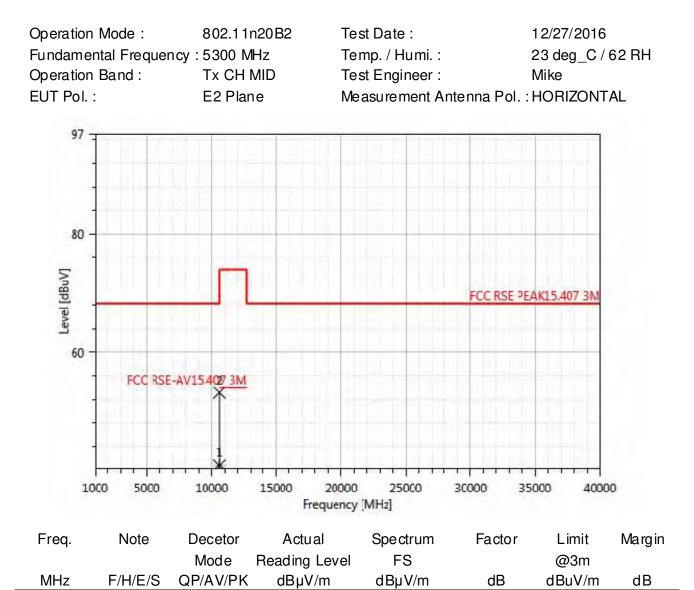


10600.00

10600.00

Н

н



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40.86

53.14

Average

Peak

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21.95

34.24

18.91

18.91

-13.14

-20.86

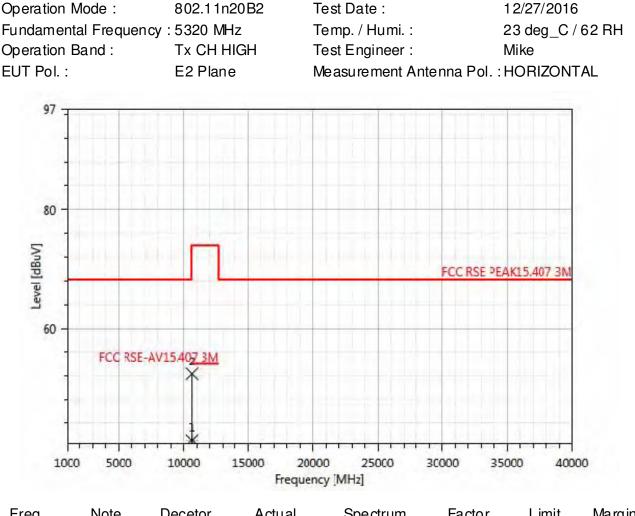
54.00

74.00



Operation Mode : 802.11n20B2 Test Date : 12/27/2016 Fundamental Frequency : 5320 MHz Temp. / Humi. : 23 deg C / 62 RH Mike **Operation Band**: **Tx CH HIGH** Test Engineer : EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL 97 80 Level [dBuV] FCC RSE PEAK15.407 3M 60 FCC RSE-AV15.407 3M 15000 20000 25000 1000 5000 10000 30000 35000 40000 Frequency [MHz] Freq. Note Spectrum Factor Limit Margin Decetor Actual Modo ding Lovo ລາກ

		wode	Reading Level	F9		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
10640.00	Н	Average	41.13	21.95	19.18	54.00	-12.87	
10640.00	Н	Peak	52.74	33.56	19.18	74.00	-21.26	



⊢req.	INOTE	Decetor	Actual	Spectrum	Factor	Limit	iviargin	
		Mode	Reading Level	FS		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
10640.00	Н	Average	41.15	21.97	19.18	54.00	-12.85	_
10640.00	Н	Peak	52.35	33.17	19.18	74.00	-21.65	



Radiated Spurious Emission Measurement Result 802.11n HT20, 5470~5725 MHz

Operation Fundamer Operation EUT Pol. :	ntal Freque Band :	802.11r ncy : 5500 M Tx CH I E2 Plar	Hz LOW	Test Date : Temp. / Humi. : Test Engineer : Measurement A	ntenna Pol.	12/27/2016 23 deg_C / Mike : VERTICAL	62 RH
97 -							
90 -							
80 -							
Level [dBuV]					FCC RSE PI	AK15.407 3M	
60 -	FCC RSI	E-AV154073M					
50 - - -		i.					
7 10	co 50CO	10000		000 25000 ncy [MHz]	3C000 3	5000 4000	10
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Lev			@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11000.00	Н	Average	42.13	21.96	20.17	54.00	-11.87

Peak

53.92

Н

11000.00

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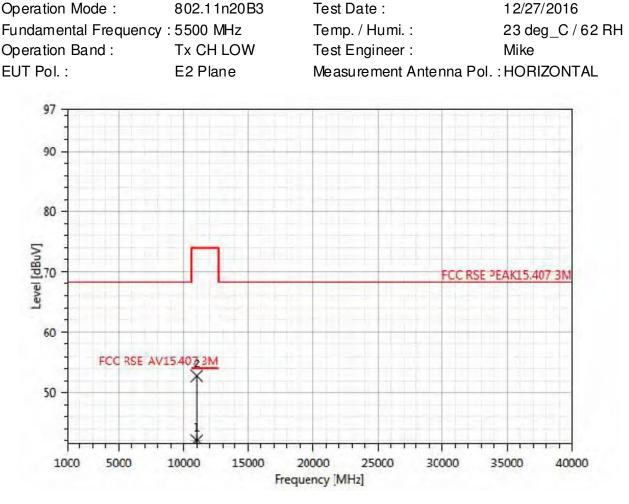
33.76

20.17

74.00

-20.08

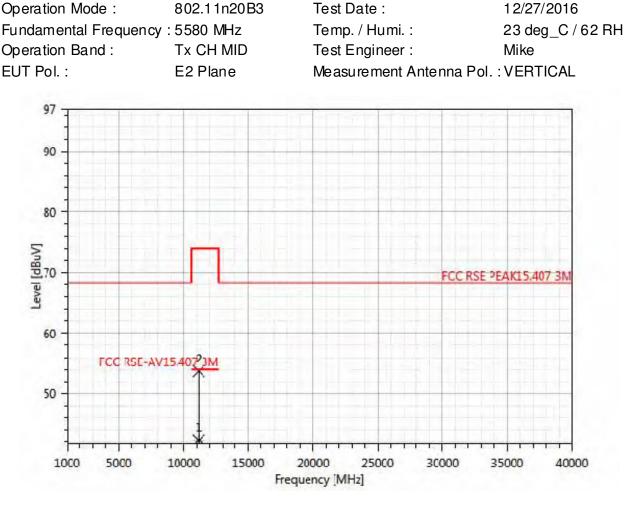




Note	Decetor	Actual	Spectrum	Factor	Limit	Margin	
	Mode	Reading Level	FS		@3m		
F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
Н	Average	42.12	21.95	20.17	54.00	-11.88	
Н	Peak	52.76	32.60	20.17	74.00	-21.24	
	F/H/E/S H	ModeF/H/E/SQP/AV/PKHAverage	ModeReading LevelF/H/E/SQP/AV/PKdBµV/mHAverage42.12	ModeReading LevelFSF/H/E/SQP/AV/PKdBµV/mdBµV/mHAverage42.1221.95	ModeReading LevelFSF/H/E/SQP/AV/PKdBµV/mdBµV/mdBHAverage42.1221.9520.17	Mode Reading Level FS @3m F/H/E/S QP/AV/PK dBµV/m dBµV/m dB dBuV/m H Average 42.12 21.95 20.17 54.00	Mode Reading Level FS @3m F/H/E/S QP/AV/PK dBμV/m dBμV/m dB dBuV/m dB H Average 42.12 21.95 20.17 54.00 -11.88

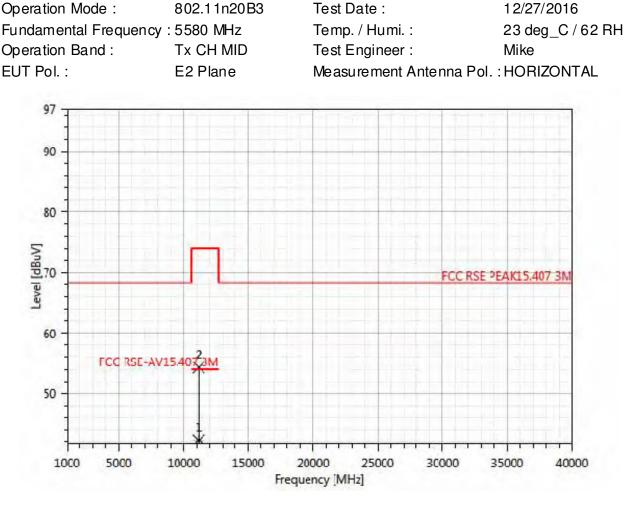
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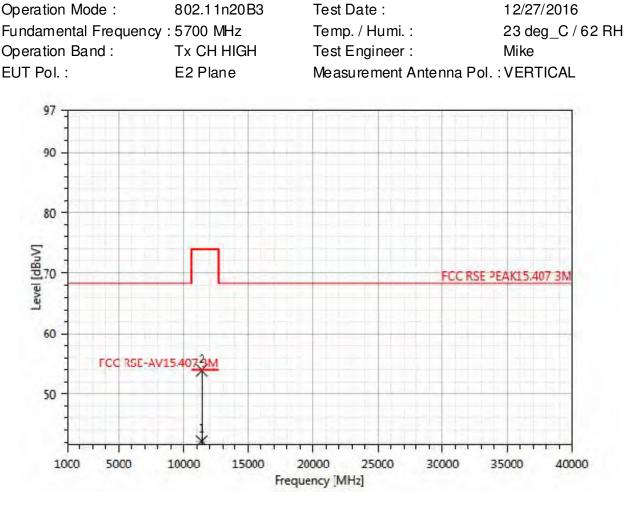
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11160.00	Н	Average	42.35	21.90	20.45	54.00	-11.65
11160.00	Н	Peak	53.73	33.29	20.45	74.00	-20.27





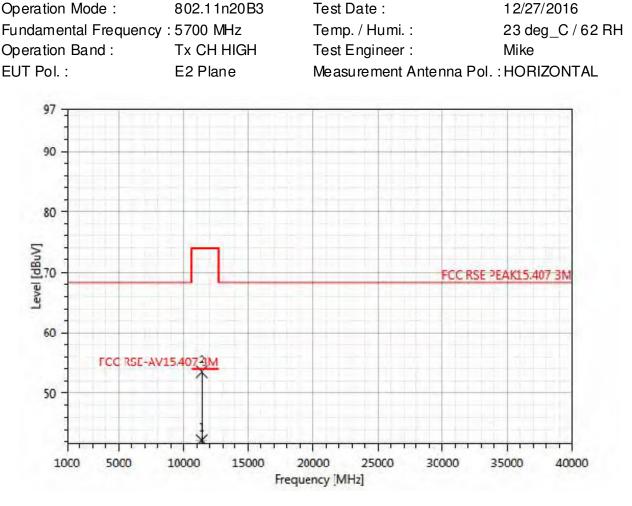
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11160.00	Н	Average	42.33	21.88	20.45	54.00	-11.67
11160.00	Н	Peak	54.35	33.90	20.45	74.00	-19.65





Actual Spectrum Factor Limit Margin	
ding Level FS @3m	
BµV/m dBµV/m dB dBuV/m dB	_
42.22 21.66 20.56 54.00 -11.78	-
53.91 33.35 20.56 74.00 -20.09	
d E	ing Level FS @3m 3μV/m dBμV/m dB dBuV/m dB 2.22 21.66 20.56 54.00 -11.78

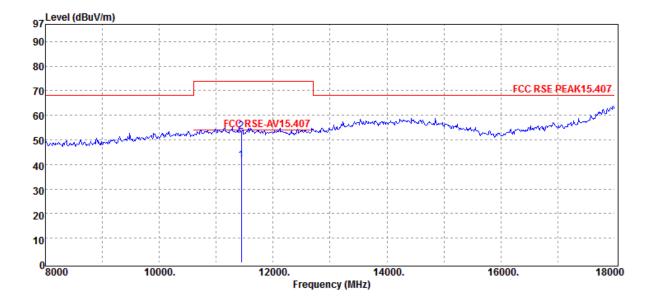




Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11400.00	Н	Average	42.25	21.69	20.56	54.00	-11.75
11400.00	Н	Peak	53.54	32.98	20.56	74.00	-20.46



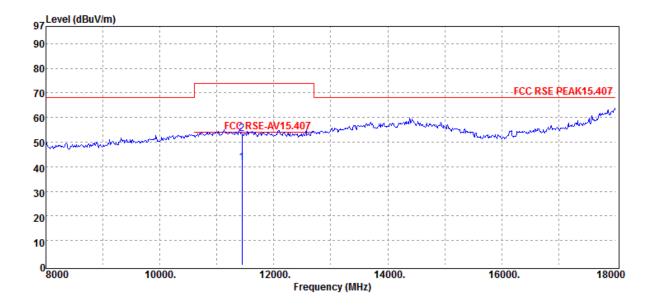
Operation Mode :	802.11ac20B3	Test Date :	12/27/2016
Fundamental Frequency	: 5720 MHz	Temp. / Humi. :	23 deg_C / 62 RH
Operation Band :	Tx CH High	Test Engineer :	Mike
EUT Pol. :	E2 Plane	Measurement Antenna Pol.	: VERTICAL



Freq.	Note	Detector	Spectrum	Factor	Actual	Limit	Safe
		Mode	Reading Level		FS	@3m	Margin
MHz	F/H/E/S	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11440.00	Н	Average	21.09	20.44	41.53	54.00	-12.47
11440.00	Н	Peak	33.00	20.44	53.44	74.00	-20.56



Operation Mode :	802.11ac20B3	Test Date :	12/27/2016
Fundamental Frequency	: 5720 MHz	Temp. / Humi. :	23 deg_C / 62 RH
Operation Band :	Tx CH High	Test Engineer :	Mike
EUT Pol. :	E2 Plane	Measurement Antenna Pol.	: HORIZONTAL



Freq.	Note	Detector	Spectrum	Factor	Actual	Limit	Safe
		Mode	Reading Level		FS	@3m	Margin
MHz	F/H/E/S	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11440.00	Н	Average	21.06	20.44	41.50	54.00	-12.50
11440.00	Н	Peak	33.04	20.44	53.48	74.00	-20.52



Radiated Spurious Emission Measurement Result 802.11n HT20, 5725~5850 MHz

Operation Fundamen Operation EUT Pol. :	ital Freque	802.11r ncy : 5745 M Tx CH L E2 Plan	Hz ·	Test Date : Temp. / Humi. : Test Engineer : Measurement Ar	ntenna Pol. :	12/27/2016 23 deg_C / Mike VERTICAL	62 RH
97 - 97 - 97 - 97 - 97 - 97 - 97 - 97 -					FCC RSE PE	AK15.407 3M	
- - 100 Freq.		-AV15407 3M	15000 200 Frequer Actual	00 25000 hcy [MHz] Spectrum	30000 3! Factor	5000 4000 Limit	0 Margin
Freq.	Note		Reading Leve	•	Facior	@3m	waryin
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11490.00	Н	Average	41.15	20.73	20.42	54.00	-12.85

Peak

Н

11490.00

52.85

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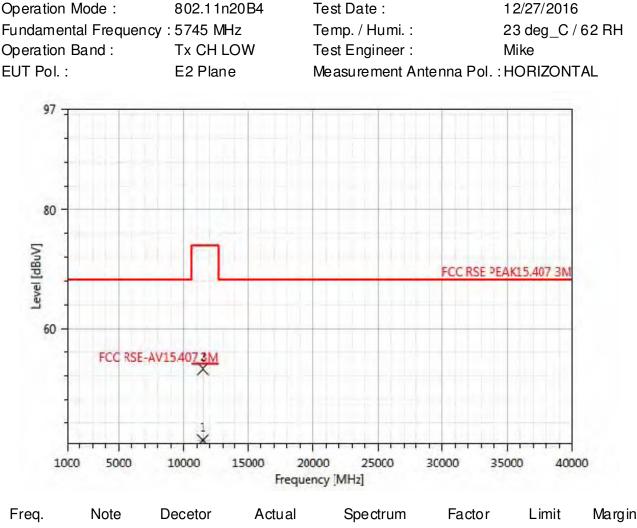
32.43

20.42

74.00

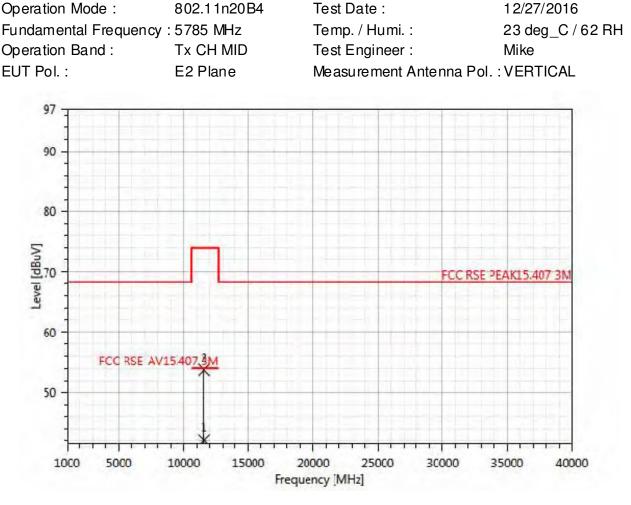
-21.15





						0
	Mode	Reading Level	FS		@3m	
F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
Н	Average	41.18	20.76	20.42	54.00	-12.82
Н	Peak	53.17	32.75	20.42	74.00	-20.83
	Н	F/H/E/S QP/AV/PK H Average	F/H/E/SQP/AV/PKdBµV/mHAverage41.18	F/H/E/S QP/AV/PK dBμV/m dBμV/m H Average 41.18 20.76	F/H/E/S QP/AV/PK dBµV/m dBµV/m dB H Average 41.18 20.76 20.42	F/H/E/S QP/AV/PK dBμV/m dBμV/m dB μV/m dB μV/m H Average 41.18 20.76 20.42 54.00

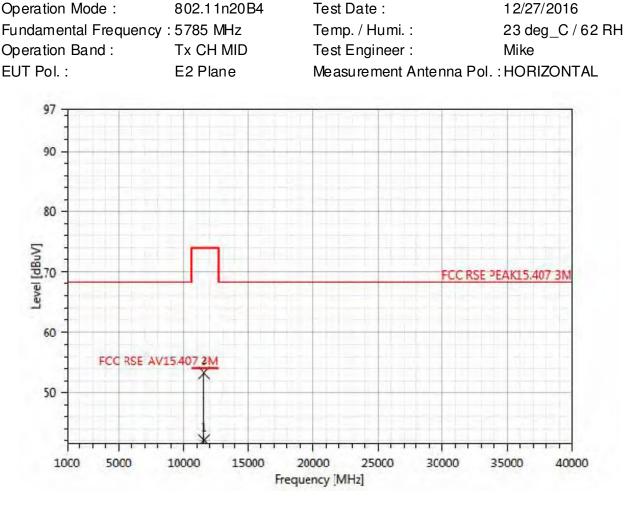




Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11570.00	Н	Average	42.11	21.52	20.59	54.00	-11.89
11570.00	Н	Peak	53.74	33.15	20.59	74.00	-20.26

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Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11570.00	Н	Average	42.13	21.54	20.59	54.00	-11.87
11570.00	Н	Peak	53.26	32.67	20.59	74.00	-20.74

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11650.00

11650.00

Н

н

Operation Mode : 802.11n20B4 Test Date : 12/27/2016 Fundamental Frequency : 5825 MHz Temp. / Humi. : 23 deg C / 62 RH **Operation Band :** Mike **Tx CH HIGH** Test Engineer : EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL 97 90 80 Level [dBuV] CC RSE PEAK15.407 3N 60 FCC RSE-AV15/107 50 10000 15000 20000 25000 30000 1000 5000 35000 40000 Frequency [MHz] Freq. Note Decetor Actual Spectrum Factor Limit Margin Mode Reading Level FS @3m F/H/E/S QP/AV/PK dBµV/m dBµV/m dBuV/m MHz dB dB

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41.99

54.92

Average

Peak

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21.56

34.49

20.43

20.43

54.00

74.00

-12.01

-19.08



11650.00

11650.00

Н

н

Operation Mode : 802.11n20B4 Test Date : 12/27/2016 Fundamental Frequency : 5825 MHz Temp. / Humi. : 23 deg C / 62 RH **Operation Band : Tx CH HIGH** Test Engineer : Mike EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL 97 90 80 Level [dBuV] CC RSE PEAK15.407 3N 60 2 FCC RSE AV15:407 XM 50 15000 20000 25000 30000 1000 5000 10000 35000 40000 Frequency [MHz] Freq. Note Decetor Actual Spectrum Factor Limit Margin Mode Reading Level FS @3m F/H/E/S QP/AV/PK dBµV/m dBµV/m dBuV/m MHz dB dB

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42.01

55.27

Average

Peak

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21.58

34.84

20.43

20.43

54.00

74.00

-11.99

-18.73



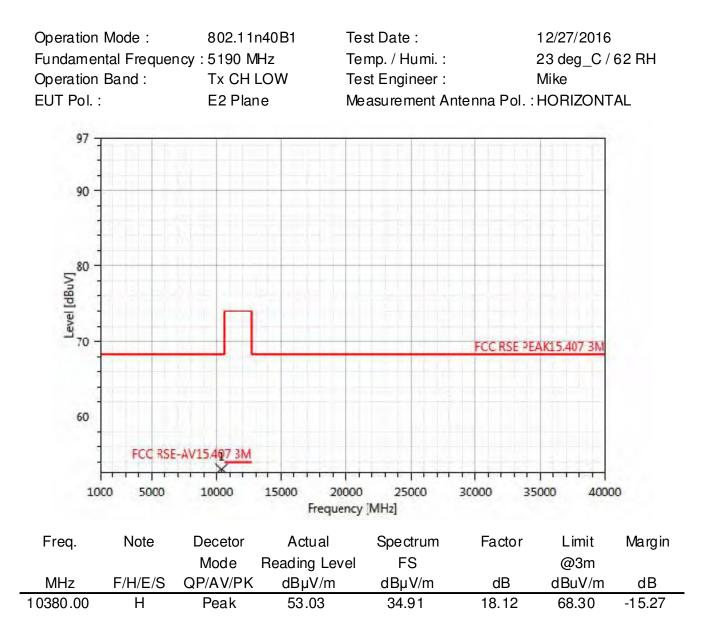
Radiated Spurious Emission Measurement Result 802.11n HT40, 5150~5250 MHz

Operation Fundame Operation EUT Pol.	ntal Frequer Band :	802.111 ncy : 5190 M Tx CH E2 Plar	Hz LOW	Test Date : Temp. / Humi. : Test Engineer : Measurement A	ntenna Pol.	12/27/2016 23 deg_C / Mike : VERTICAL	
97 -	-		1			TITI	
90 -							
Level [dBuV]					FCC RSE 2	EAK15.407 3M	
60 -							
	FCC RSE	-AV15.497 3M					
10	00 5000	10000	15000 200 Freque	00 25000 ncy [MHz]	30000 3	5000 4000	00
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Lev	el FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
10380.00	Н	Peak	52.74	34.61	18.12	68.30	-15.56

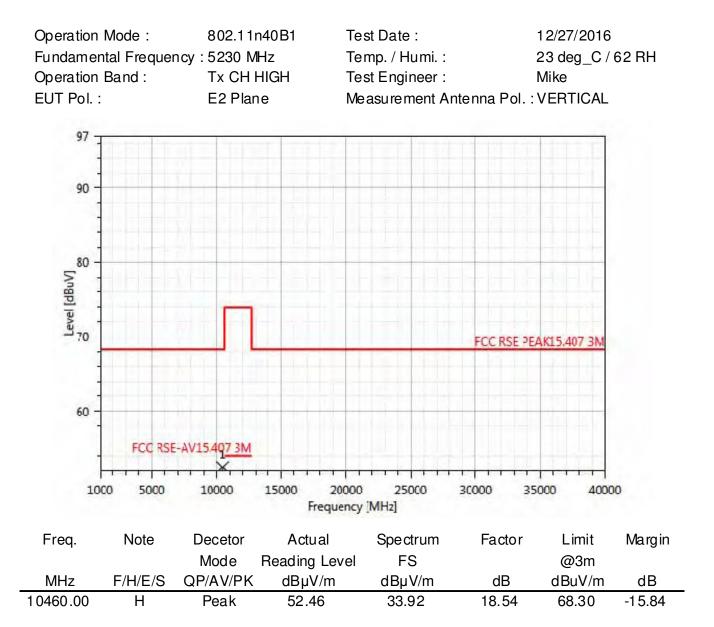
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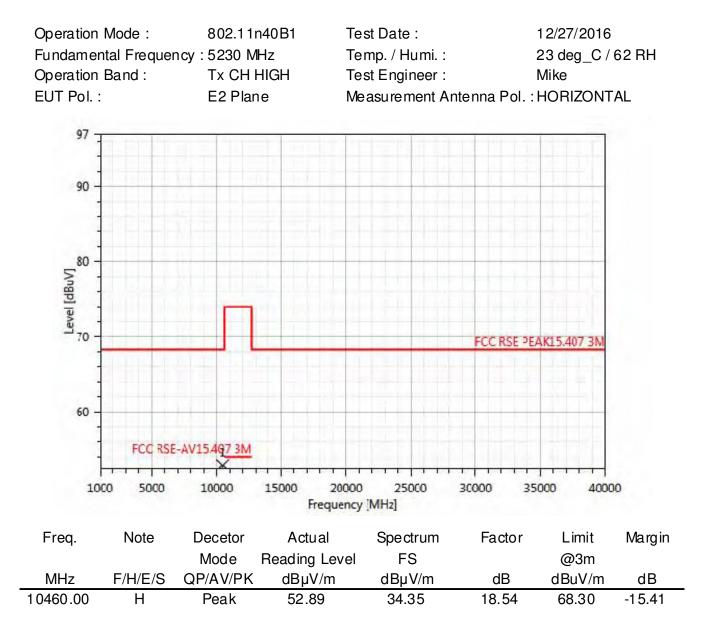






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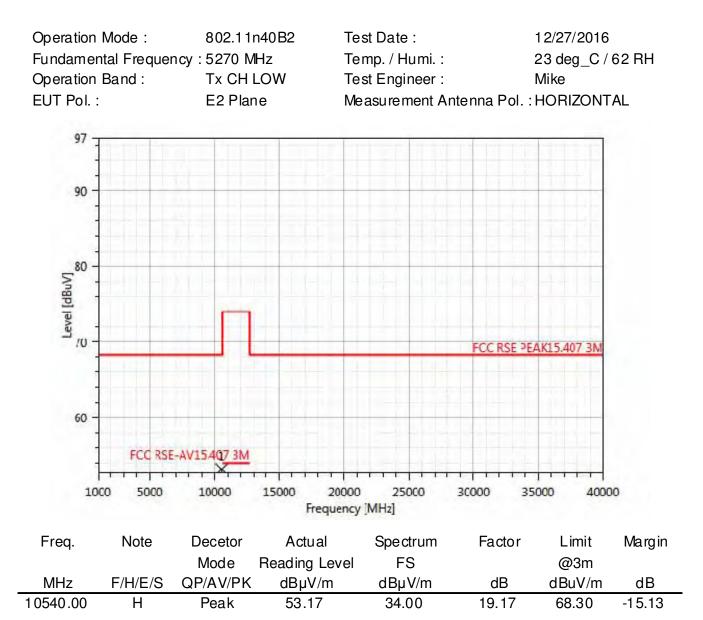


Radiated Spurious Emission Measurement Result 802.11n HT40, 5250~5350 MHz

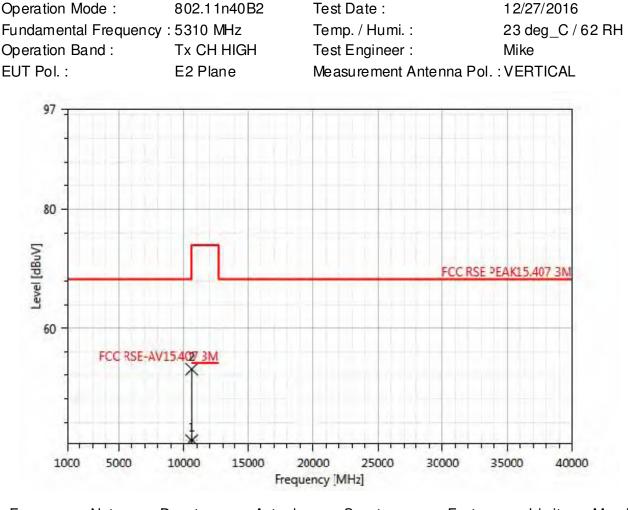
Operation Fundame Operation EUT Pol.	ntal Frequei Band :	802.111 ncy : 5270 M Tx CH E2 Plar	Hz LOW	Temp Test	Date : b. / Humi. : Engineer : surement A	ntenna Po	Mike	g_C / 6	2 RH
97 -							111		
90 -	-								
- 08 Buy				-					
Level [dBuV]				-					
- 70 -						FCC RSE	PEAK15.40	7 3M	
60 -	-								
	FCC RSE	-AV15.4Q <u>7 3M</u>							
10	000 5000	10000		20000 uency [M	25000 Hz]	3C000	35000	40000	
Freq.	Note	Decetor	Actual	:	Spectrum	Facto	r Li	nit	Margin
		Mode	Reading Le		FS		-	3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	۱	dBµV/m	dB		V/m	dB
10540.00	Н	Peak	52.47		33.30	19.17	68	30	-15.83

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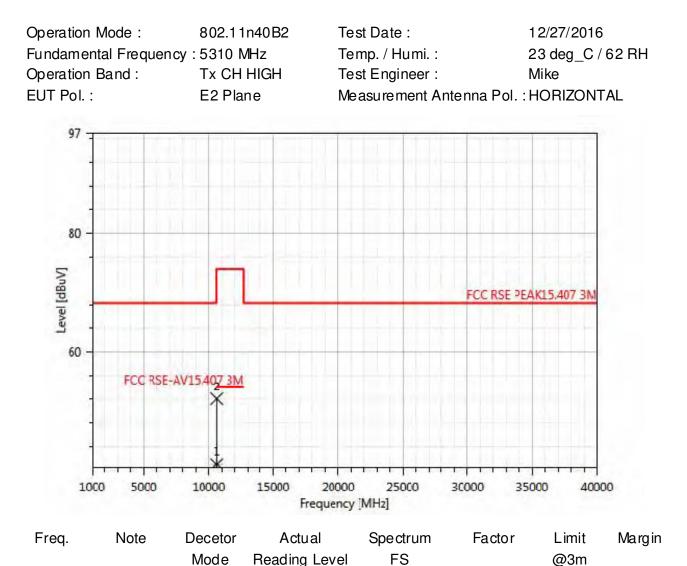




gin
3
95
00
3

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QP/AV/PK

Average

Peak

dBµV/m

41.01

52.09

F/H/E/S

Н

н

MHz

10620.00

10620.00

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dBµV/m

21.90

32.98

dBuV/m

54.00

74.00

dB

-12.99

-21.91

dB

19.11

19.11



11020.00

11020.00

Н

Н

Radiated Spurious Emission Measurement Result 802.11n HT40, 5470~5725 MHz

Operation Mode :	802.11n40B3	Test Date :	-	12/27/2016	
Fundamental Frequency		Temp. / Humi. :		23 deg_C /	62 RH
Operation Band :	Tx CH LOW	Test Engineer :		Mike	
EUT Pol. :	E2 Plane	Measurement Ante	nna Pol. : \	VERTICAL	
97 -		Part of the second s			
-					
80					
5					
Level [dBuV]			FCC RSE PEA	K15.407 3M	
Lev.					
60 -			-	1111	
FCC RSF-A	V154033M				
				_	
	1 1				
1000 5000		20000 25000 3(juency [MHz]	000 350	200 4000	0
Freq. Note	Decetor Actual	•	Factor	Limit	Margin
MHz F/H/E/S C	Mode Reading L QP/AV/PK dBµV/r		dB	@3m dBuV/m	dB

Average

Peak

41.88

53.04

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21.72

32.88

20.16

20.16

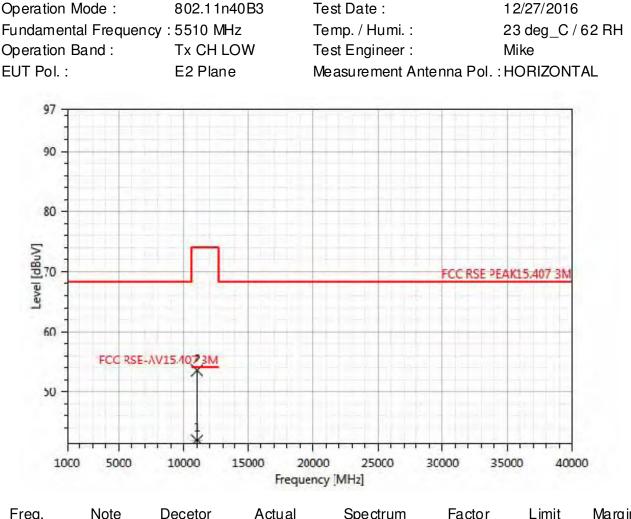
54.00

74.00

-12.12

-20.96

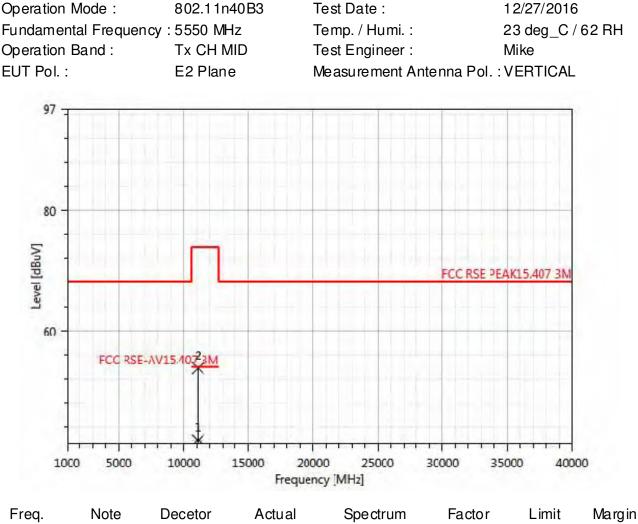




Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11020.00	Н	Average	41.91	21.75	20.16	54.00	-12.09
11020.00	Н	Peak	53.49	33.33	20.16	74.00	-20.51

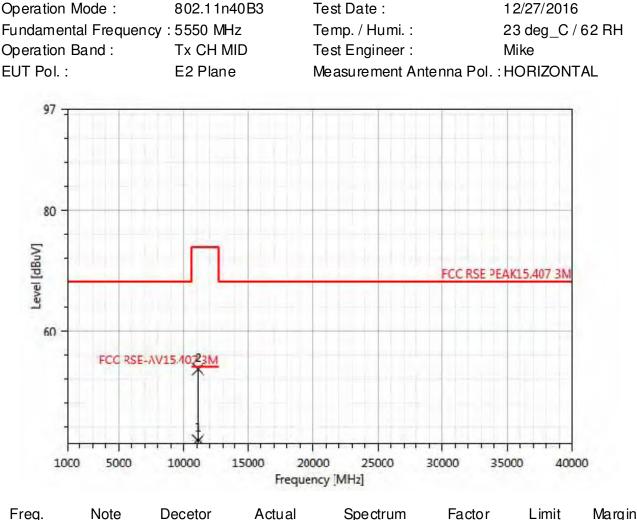
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		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11100.00	Н	Average	41.80	21.48	20.32	54.00	-12.20
11100.00	Н	Peak	53.77	33.45	20.32	74.00	-20.23



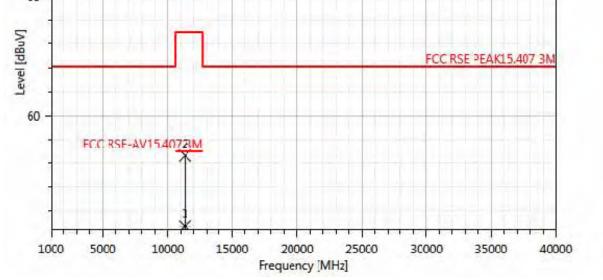


				000000000			
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11100.00	Н	Average	41.81	21.49	20.32	54.00	-12.19
11100.00	Н	Peak	53.60	33.28	20.32	74.00	-20.40

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Operation Mode : 802.11n40B3 Test Date : 12/27/2016 Fundamental Frequency : 5670 MHz Temp. / Humi. : 23 deg C / 62 RH **Operation Band :** Tx CH HIGH Test Engineer : Mike EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL 97 80



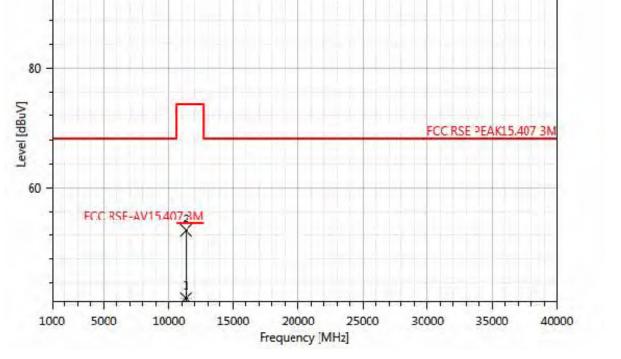
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11340.00	Н	Average	41.47	21.09	20.38	54.00	-12.53
11340.00	Н	Peak	53.30	32.92	20.38	74.00	-20.70

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Operation Mode : 802.11n40B3 Test Date : 12/27/2016 Fundamental Frequency : 5670 MHz Temp. / Humi. : 23 deg C / 62 RH **Operation Band :** Tx CH HIGH Test Engineer : Mike EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL 97



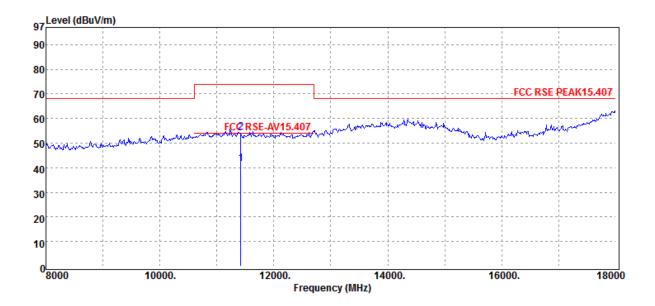
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11340.00	Н	Average	41.47	21.09	20.38	54.00	-12.53
11340.00	Н	Peak	52.83	32.45	20.38	74.00	-21.17

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RH

Operation Mode :	802.11ac40B3	Test Date :	12/27/2016
Fundamental Frequency	: 5710 MHz	Temp. / Humi. :	23 deg_C / 62
Operation Band :	Tx CH High	Test Engineer :	Mike
EUT Pol. :	E2 Plane	Measurement Antenna Pol.	: VERTICAL

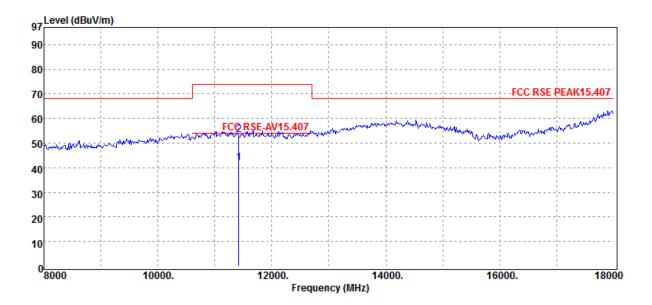


Freq.	Note	Detector	Spectrum	Factor	Actual	Limit	Safe
		Mode	Reading Level		FS	@3m	Margin
MHz	F/H/E/S	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11420.00	Н	Average	21.25	20.44	41.69	54.00	-12.31
11420.00	Н	Peak	33.90	20.44	54.34	74.00	-19.66

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Operation Mode :	802.11ac40B3	Test Date :	12/27/2016
Fundamental Frequency	: 5710 MHz	Temp. / Humi. :	23 deg_C / 62 RH
Operation Band :	Tx CH High	Test Engineer :	Mike
EUT Pol. :	E2 Plane	Measurement Antenna Pol.	: HORIZONTAL

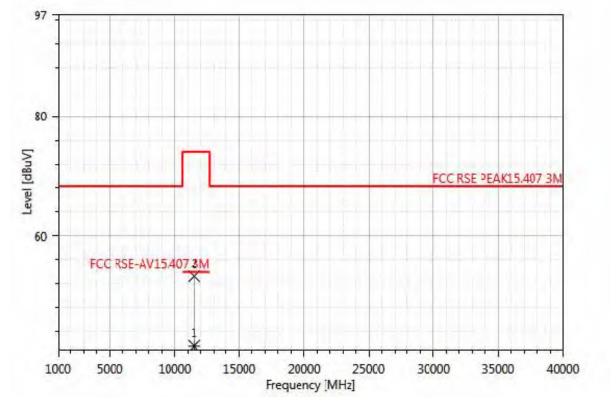


Freq.	Note	Detector	Spectrum	Factor	Actual	Limit	Safe
		Mode	Reading Level		FS	@3m	Margin
MHz	F/H/E/S	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11420.00	Н	Average	21.35	20.44	41.79	54.00	-12.21
11420.00	Н	Peak	32.95	20.44	53.39	74.00	-20.61



Radiated Spurious Emission Measurement Result 802.11n HT40, 5725~5850 MHz

Operation Mode :	802.11n40B4	Test Date :	12/27/2016
Fundamental Frequency	:5755 MHz	Temp. / Humi. :	23 deg_C / 62 RH
Operation Band :	Tx CH LOW	Test Engineer :	Mike
EUT Pol. :	E2 Plane	Measurement Antenna Pol.	: VERTICAL

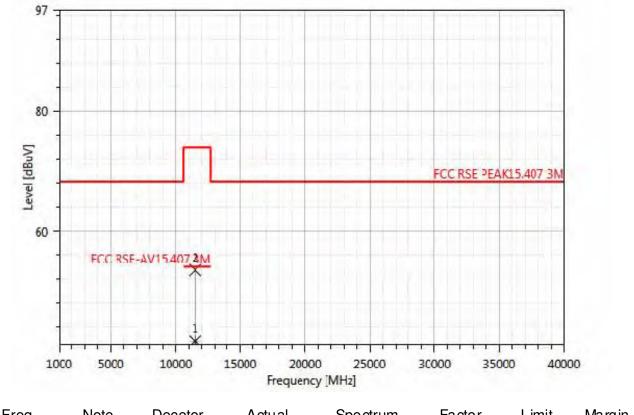


Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11510.00	Н	Average	41.54	21.15	20.39	54.00	-12.46
11510.00	Н	Peak	53.24	32.85	20.39	74.00	-20.76

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Operation Mode : 802.11n40B4 Test Date : 12/27/2016 Fundamental Frequency : 5755 MHz Temp. / Humi. : 23 deg C / 62 RH **Operation Band :** Tx CH LOW Test Engineer : Mike EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL



⊢req.	INOTE	Decetor	Actual	Spectrum	Factor	Limit	iviargin	
		Mode	Reading Level	FS		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
11510.00	Н	Average	41.55	21.16	20.39	54.00	-12.45	_
11510.00	Н	Peak	53.45	33.06	20.39	74.00	-20.55	

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11590.00

н

Operation Mode : 802.11n40B4 Test Date : 12/27/2016 Fundamental Frequency : 5795 MHz Temp. / Humi. : 23 deg C / 62 RH **Operation Band :** Mike **Tx CH HIGH** Test Engineer : EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL 97 90 80 Level [dBuV] CC RSE PEAK15.407 3N 60 FCC RSE AV15.407. 50 10000 15000 20000 25000 30000 1000 5000 35000 40000 Frequency [MHz] Freq. Note Decetor Actual Spectrum Factor Limit Margin Mode Reading Level FS @3m F/H/E/S QP/AV/PK dBµV/m dBµV/m dBuV/m dB MHz dB 11590.00 Н 42.02 21.59 20.43 54.00 -11.98 Average

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Peak

53.72

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33.29

20.43

74.00

-20.28



11590.00

н

Operation Mode : 802.11n40B4 Test Date : 12/27/2016 Fundamental Frequency : 5795 MHz Temp. / Humi. : 23 deg C / 62 RH **Operation Band : Tx CH HIGH** Test Engineer : Mike EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL 97 90 80 Level [dBuV] FCC RSE PEAK15.407 3M 60 FCC RSE-AV15 407, 3M 50 10000 15000 20000 25000 30000 1000 5000 35000 40000 Frequency [MHz] Freq. Note Decetor Actual Spectrum Factor Limit Margin Mode Reading Level FS @3m F/H/E/S QP/AV/PK dBµV/m dBµV/m dBuV/m MHz dB dB 11590.00 Н 41.98 21.55 20.43 54.00 -12.02 Average

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Peak

53.56

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33.13

20.43

74.00

-20.44



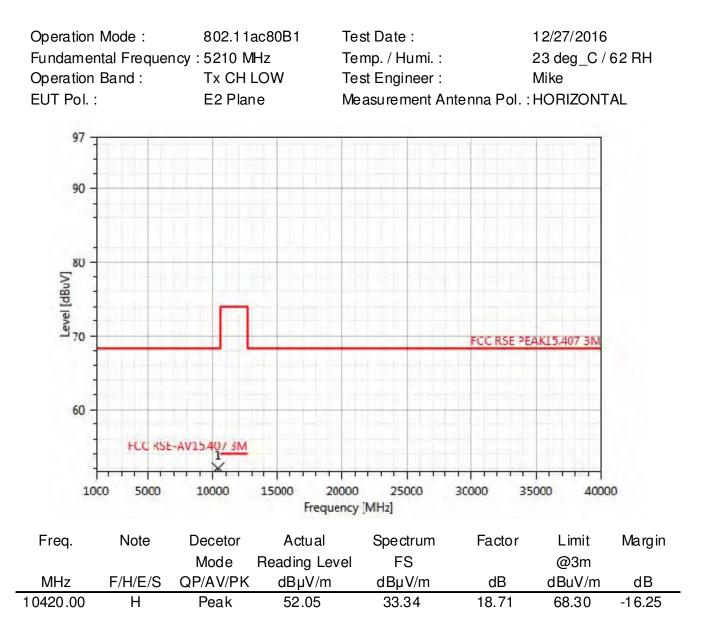
Radiated Spurious Emission Measurement Result 802.11ac VHT80, 5150~5250 MHz

Operation Mode : Fundamental Frequency Operation Band : EUT Pol. :		802.11; ncy : 5210 M Tx CH E2 Plar	Hz 1 LOW 1	Fest Date : Femp. / Humi. : Fest Engineer : Measurement A		12/27/2016 23 deg_C / 62 RH Mike : VERTICAL		
97 -				11 - 1 - 1 - 1				
90 -	-							
60 Level [dBuy]								
		N		11414	FUC KSE P	EAK15.407 3M		
60 -								
	FCC RSE	-AV15.497 3M						
10	000 5000	10000	15000 200 Frequen	00 25000 cy [MHz]	30000 3	35000 4000	0	
Freq.	Note	Decetor Mode	Actual Reading Leve	Spectrum	Factor	Limit @3m	Margin	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
10420.00	Н	Peak	52.45	33.74	18.71	68.30	-15.85	

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Radiated Spurious Emission Measurement Result 802.11ac VHT80, 5250~5350 MHz

Operation Mode : Fundamental Frequency Operation Band : EUT Pol. :		802.11; ncy : 5290 M Tx CH I E2 Plar	IHz To HIGH To	est Date : emp. / Humi. : est Engineer : leasurement A		12/27/2016 23 deg_C / 62 RH Mike : VERTICAL		
97 -			1					
90 -								
- 08 - 07 - 07 - 07					FCC RSE 2	EAK15:407 3M		
60 -	FCC RSE	5-AV15.4Q <u>7 3M</u>						
		· · · · · ·				++++++		
10	0 5000	10000	15000 2000 Frequenc	T	30000 3	5000 4000	00	
Freq.	Note	Decetor Mode	Actual Reading Level	Spectrum FS	Factor	Limit @3m	Margin	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
10580.00	Н	Peak	52.18	33.30	18.88	68.30	-16.12	

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Operation Fundamer Operation EUT Pol. :	ntal Freque Band :	802.11; ncy : 5290 M Tx CH E2 Plar	Hz - HIGH -	Fest Date : Femp. / Humi. Fest Engineer Measurement	:	12/27/2016 23 deg_C / 62 RH Mike : HORIZONTAL	
97 -							
- 90 - -							
Level [dBuV] 05							
					FCC RSE	PEAK15.407 3M	
60 -							
-	FCC RSI	E-AV15407 3M					
10	co 5000	10000	15000 200 Frequen	00 25000 cy [MHz]	30000	35000 4000	0
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Leve			@3m	
MHz	F/H/E/S	QP/AV/PK		dBµV/m	dB	dBuV/m	dB
10580.00	Н	Peak	52.68	33.81	18.88	68.30	-15.62



11060.00

Н

Radiated Spurious Emission Measurement Result 802.11ac VHT80, 5470~5725 MHz

Operation Fundamen Operation	tal Freque	802.11a ncy : 5530 M Tx CH I	Hz	Test Date : Temp. / Humi. : Test Engineer :		12/27/2016 23 deg_C / Mike	
EUT Pol. :		E2 Plar	ne	Measurement A	ntenna Pol.	VERTICAL	
97							
80 -						_	
Level [dBuV]					FCC RSE PE	AK15.407 3M	
60 -	FCC RSI	E-AV15.40 <u>23M</u>					
100	0 5000	10000	15000 200		3C000 3	5000 4000	00
			Frequer	ncy [MHz]			
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Leve			@3m	
MHz 11060.00	F/H/E/S H	QP/AV/PK Average	dBµV/m 41.57	dBµV/m 21.31	dB 20.26	dBuV/m 54.00	dB -12.43
11000.00		, woruge	11.07	21.01	20.20	01.00	12.10

53.28

Peak

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33.01

20.26

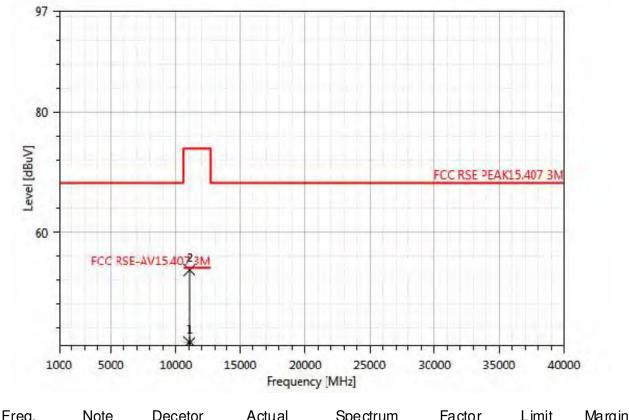
-20.72

74.00



RH

Operation Mode :	802.11ac80B3	Test Date :	12/27/2016
Fundamental Frequency :	:5530 MHz	Temp. / Humi. :	23 deg_C / 62 l
Operation Band :	Tx CH LOW	Test Engineer :	Mike
EUT Pol. :	E2 Plane	Measurement Antenna Pol.	: HORIZONTAL

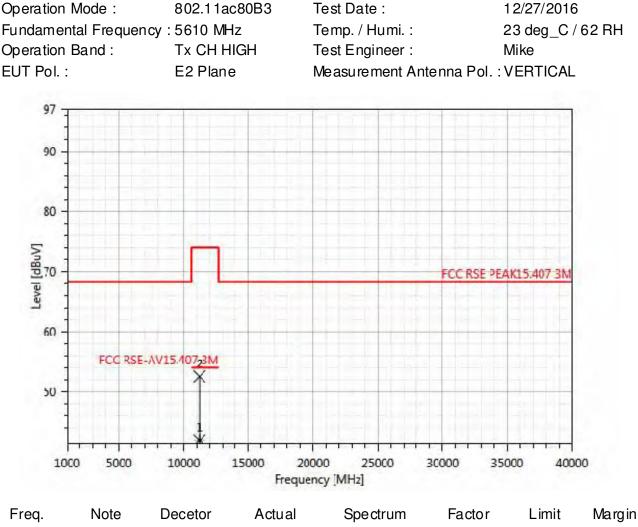


1109.		Decetor	notau	opeourum	1 40101	E 11110	margin	
		Mode	Reading Level	FS		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
11060.00	Н	Average	41.60	21.34	20.26	54.00	-12.40	_
11060.00	Н	Peak	53.63	33.37	20.26	74.00	-20.37	

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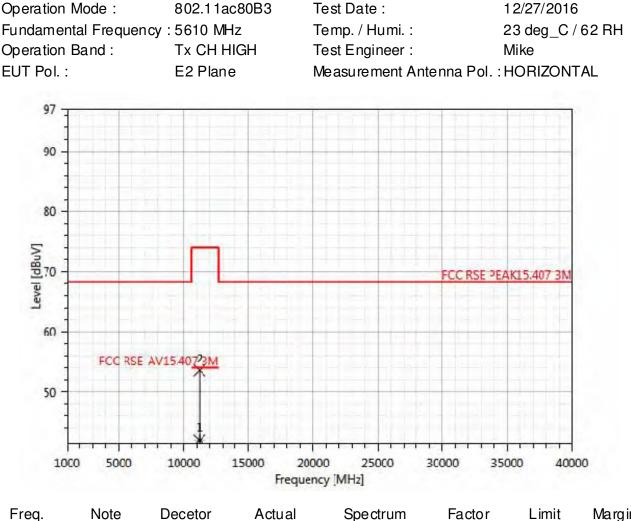
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		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
11220.00	Н	Average	41.97	21.49	20.48	54.00	-12.03
11220.00	Н	Peak	52.56	32.09	20.48	74.00	-21.44



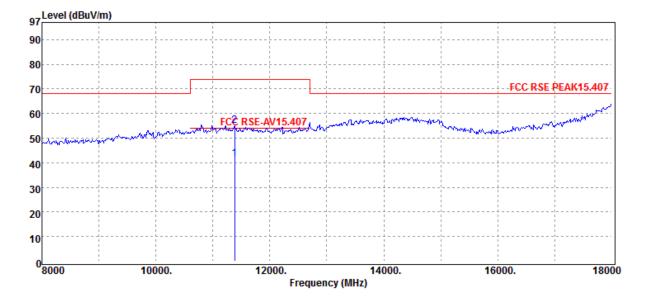


⊢req.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin	
		Mode	Reading Level	FS		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
11220.00	Н	Average	42.00	21.52	20.48	54.00	-12.00	-
11220.00	Н	Peak	53.58	33.10	20.48	74.00	-20.42	

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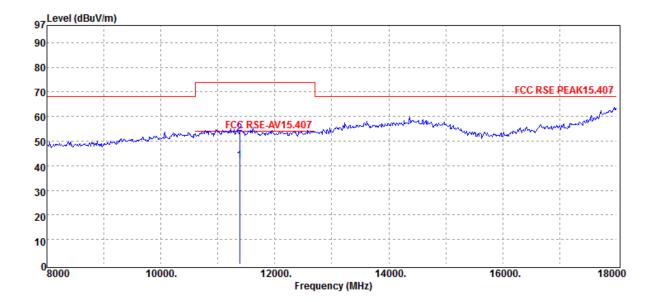
Operation Mode :	802.11ac80B3	Test Date :	12/27/2016
Fundamental Frequency	: 5690 MHz	Temp. / Humi. :	23 deg_C / 62 RH
Operation Band :	Tx CH High	Test Engineer :	Mike
EUT Pol. :	E2 Plane	Measurement Antenna Pol.	: VERTICAL



Freq.	Note	Detector	Spectrum	Factor	Actual	Limit	Safe
		Mode	Reading Level		FS	@3m	Margin
MHz	F/H/E/S	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11380.00	Н	Average	21.27	20.50	41.77	54.00	-12.23
11380.00	Н	Peak	34.64	20.50	55.14	74.00	-18.86



Operation Mode :	802.11ac80B3	Test Date :	12/27/2016
Fundamental Frequency	: 5690 MHz	Temp. / Humi. :	23 deg_C / 62 RH
Operation Band :	Tx CH High	Test Engineer :	Mike
EUT Pol. :	E2 Plane	Measurement Antenna Pol.	: HORIZONTAL



Freq.	Note	Detector	Spectrum	Factor	Actual	Limit	Safe
		Mode	Reading Level		FS	@3m	Margin
MHz	F/H/E/S	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11380.00	Н	Average	21.45	20.50	41.95	54.00	-12.05
11380.00	Н	Peak	32.65	20.50	53.15	74.00	-20.85

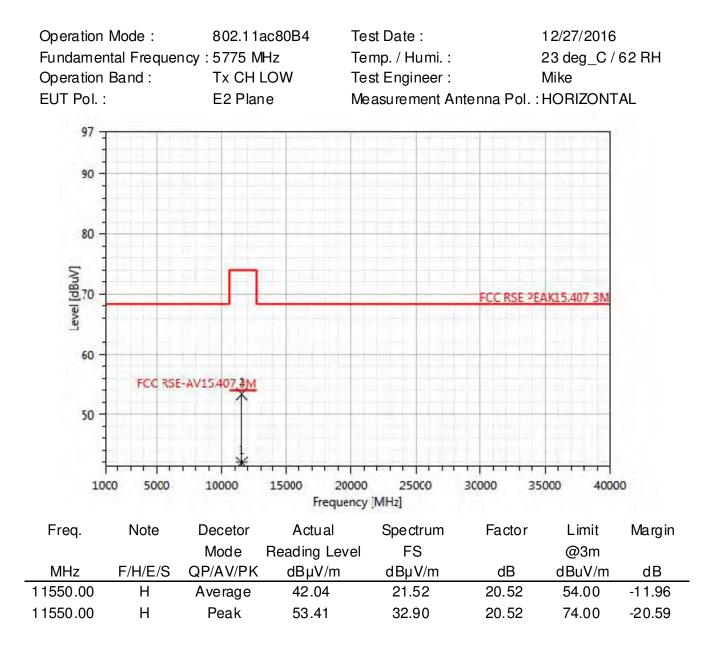


Radiated Spurious Emission Measurement Result 802.11ac VHT80, 5725~5850 MHz

Operation Fundame Operation EUT Pol.	ntal Frequer Band :	802.11; ncy : 5775 M Tx CH I E2 Plar	Hz Te LOW Te	est Date : emp. / Humi. : est Engineer : easurement A	ntenna Pol.	12/27/2016 23 deg_C / Mike : VERTICAL	62 RH
97 -	1						
90 -							
80 -							
Level [dEuV]		Π			FCC RSE 2	EAK15.407 3M	
60 -	FCC RSE	-AV1540 <u>7 3M</u>					
50 -		÷					
10	1 5000	10000	15000 2000 Frequenc		30000 3	5000 4000	0
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode QP/AV/PK	Reading Level dBµV/m	FS dBµV/m	dB	@3m dBuV/m	dB
11550.00	H	Average	42.06	21.54	20.52	54.00	-11.94
11550.00	Н	Peak	53.10	32.59	20.52	74.00	-20.90

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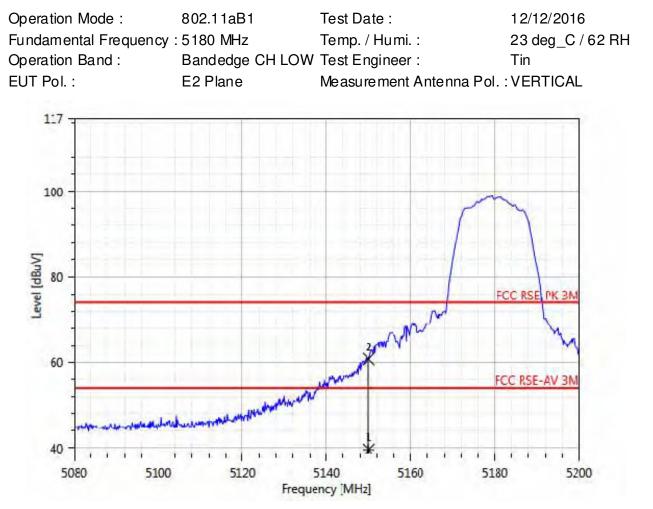
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Band edge falling to restricted band

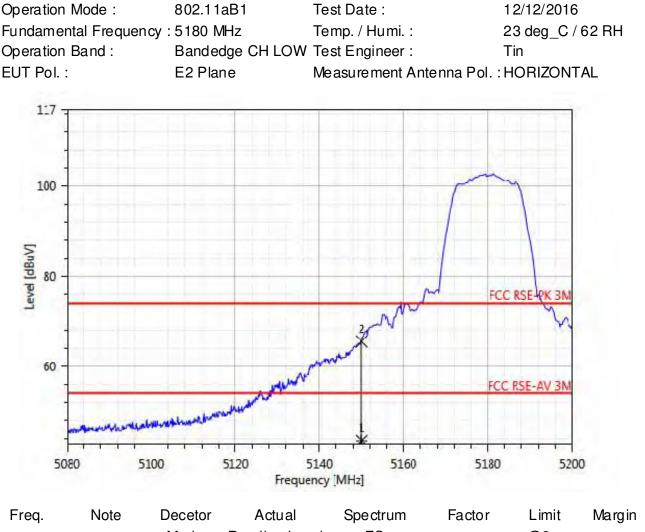
802.11a mode



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
5150.00	Е	Average	39.57	33.69	5.88	54.00	-14.43
5150.00	Е	Peak	60.77	54.89	5.88	74.00	-13.23

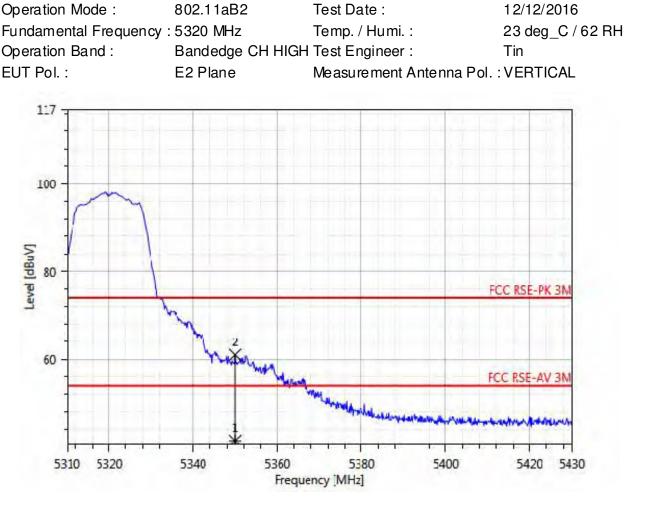
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>www.sgs.com/terms and conditions.htm</u> and, for elec-tronic format documents, subject to Terms and Conditions for Electronic Documents at <u>www.sgs.com/terms e-document.htm</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law





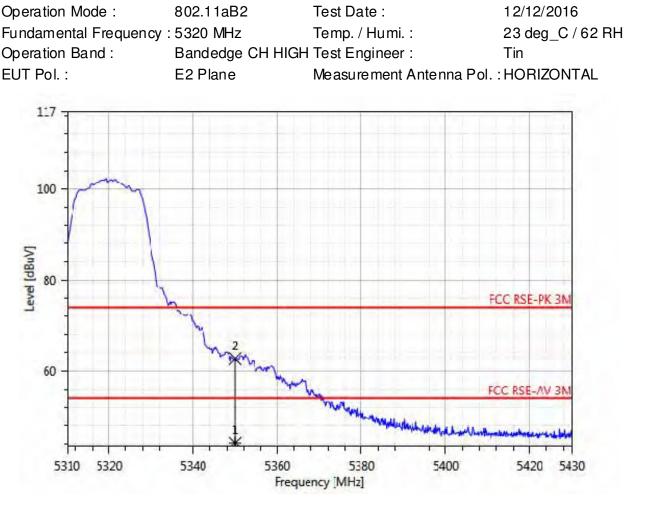
	Freq.	NOLE	Deceloi	Aciual	Spectrum	Facior		Maryin	
			Mode	Reading Level	FS		@3m		
	MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
-	5150.00	Е	Average	43.50	37.62	5.88	54.00	-10.50	_
	5150.00	Е	Peak	65.54	59.66	5.88	74.00	-8.46	





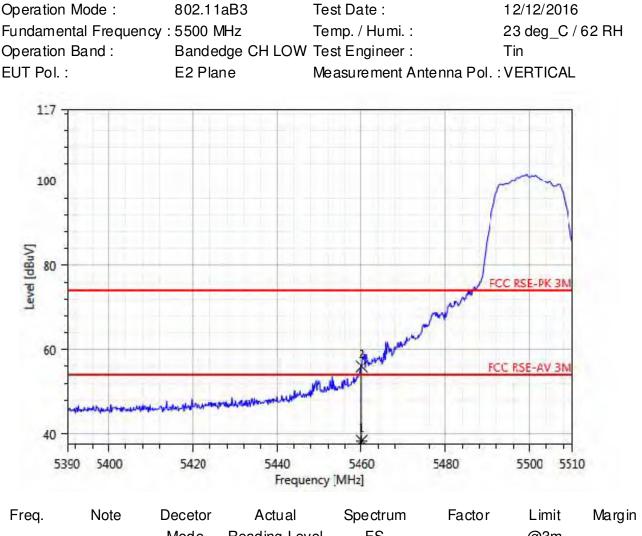
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin	
		Mode	Reading Level	FS		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
5350.00	E	Average	41.37	35.22	6.15	54.00	-12.63	-
5350.00	Е	Peak	61.03	54.88	6.15	74.00	-12.97	





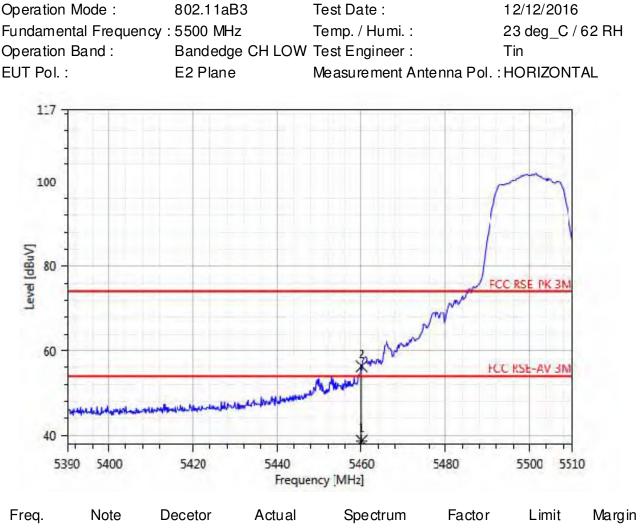
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
5350.00	Е	Average	44.25	38.10	6.15	54.00	-9.75
5350.00	Е	Peak	62.76	56.61	6.15	74.00	-11.24





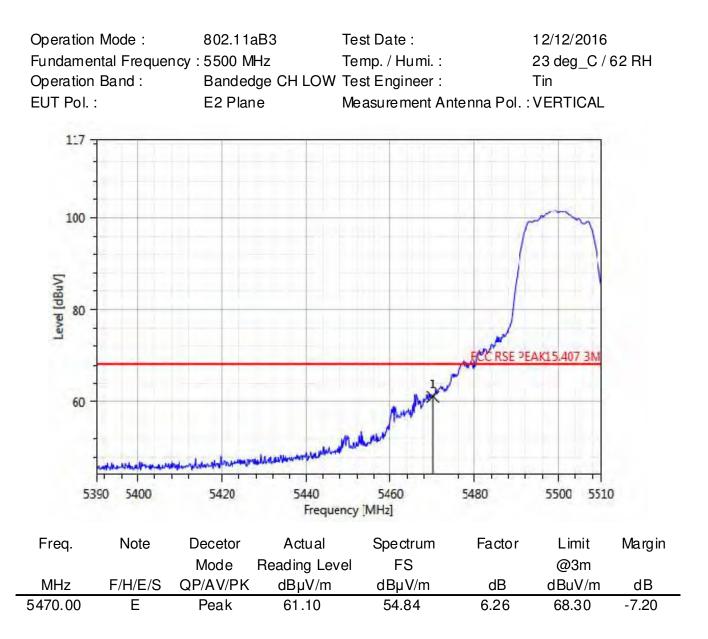
	1109.	Note	Decetor	notau	opeolium	1 4 0 10 1	E 11111	Margin	
			Mode	Reading Level	FS		@3m		
_	MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
	5460.00	Е	Average	38.34	32.11	6.23	54.00	-15.66	
	5460.00	Е	Peak	56.00	49.76	6.23	74.00	-18.00	



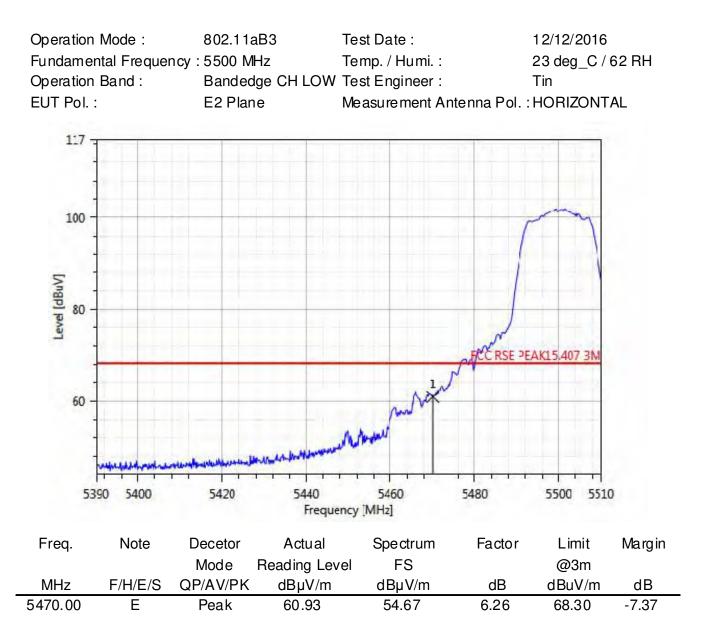


rieq.	NOLC	Decetor	Aciual	opeculum	racior	L	margin	
		Mode	Reading Level	FS		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
5460.00	Е	Average	38.77	32.54	6.23	54.00	-15.23	-
5460.00	Е	Peak	56.36	50.13	6.23	74.00	-17.64	

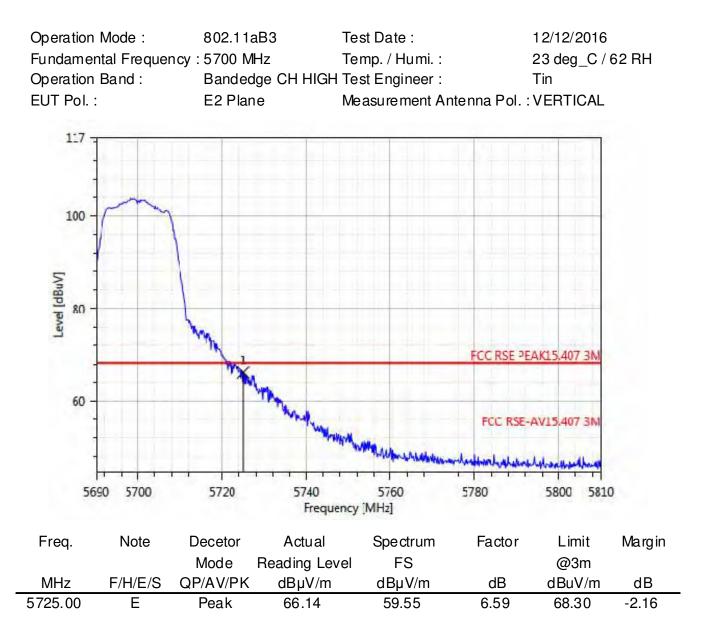




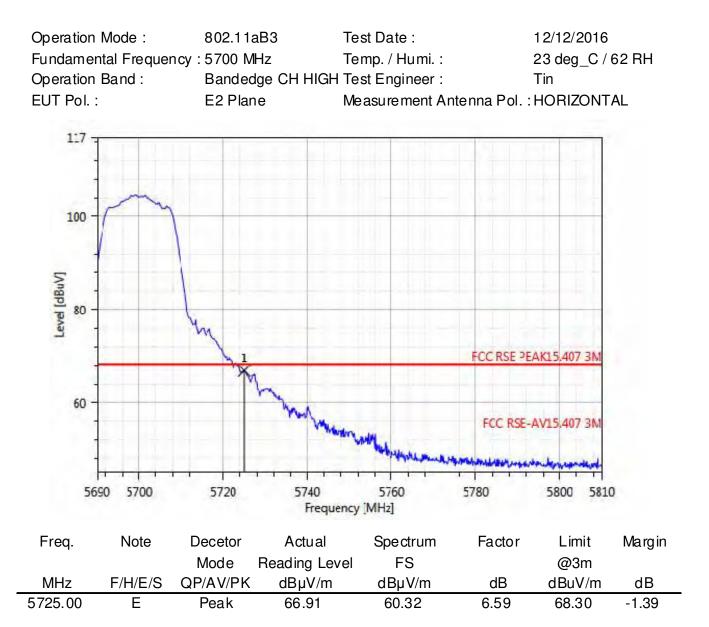




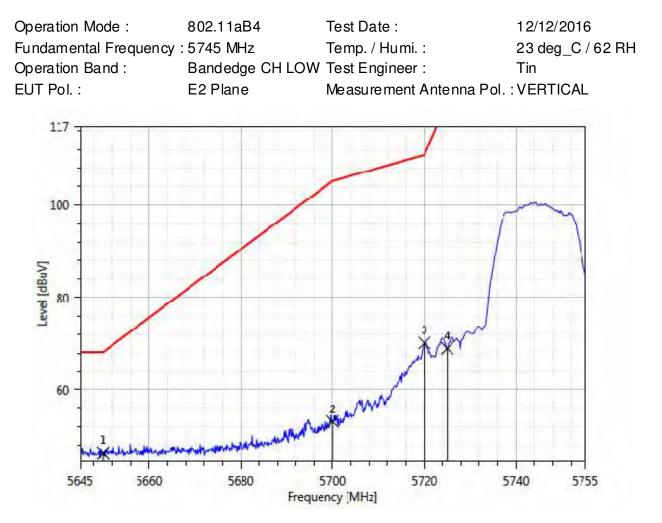






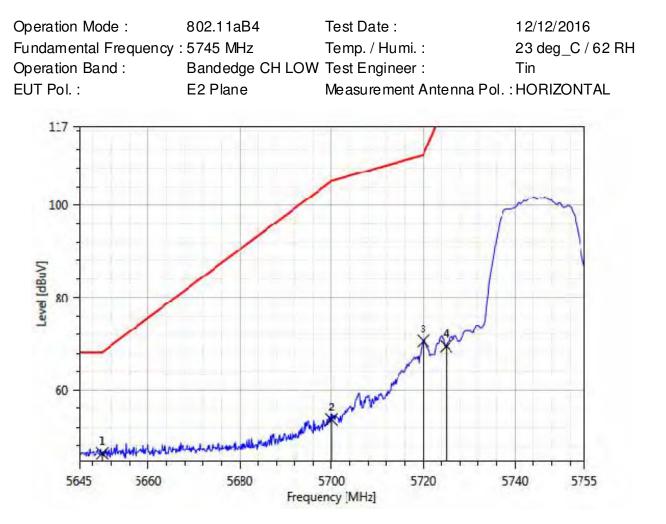






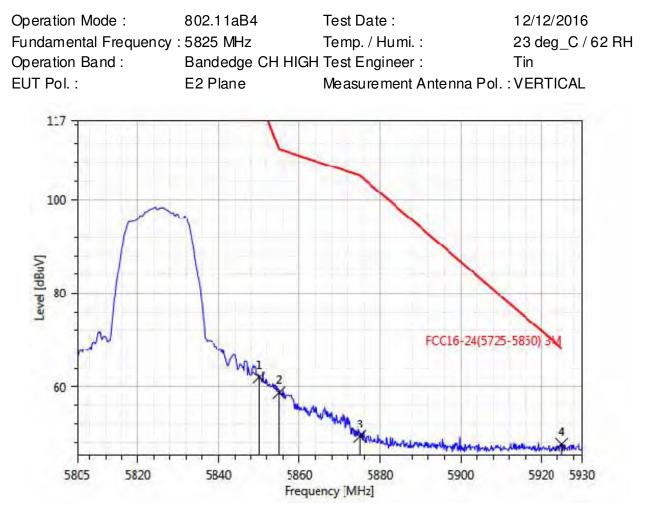
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
5650.00	E	Peak	46.38	39.90	6.48	68.23	-21.85
5700.00	Е	Peak	53.22	46.55	6.68	105.23	-52.01
5720.00	Е	Peak	70.18	63.58	6.60	110.83	-40.65
5725.00	Е	Peak	69.03	62.44	6.59	122.23	-53.20





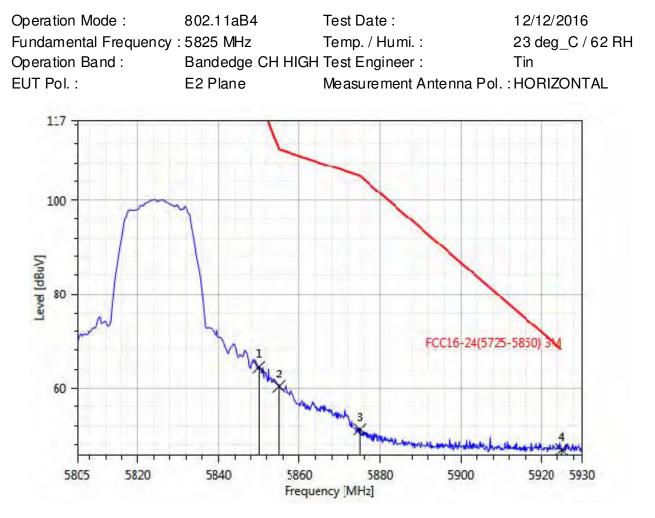
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
5650.00	Е	Peak	46.38	39.89	6.48	68.23	-21.85
5700.00	Е	Peak	53.66	46.98	6.68	105.23	-51.57
5720.00	Е	Peak	70.64	64.04	6.60	110.83	-40.19
5725.00	Е	Peak	69.54	62.95	6.59	122.23	-52.69





Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
5850.00	E	Peak	61.95	54.67	7.28	122.23	-60.28
5855.00	Е	Peak	58.74	51.42	7.32	110.83	-52.09
5875.00	Е	Peak	49.32	41.95	7.37	105.23	-55.91
5925.00	Е	Peak	47.68	40.29	7.39	68.23	-20.55

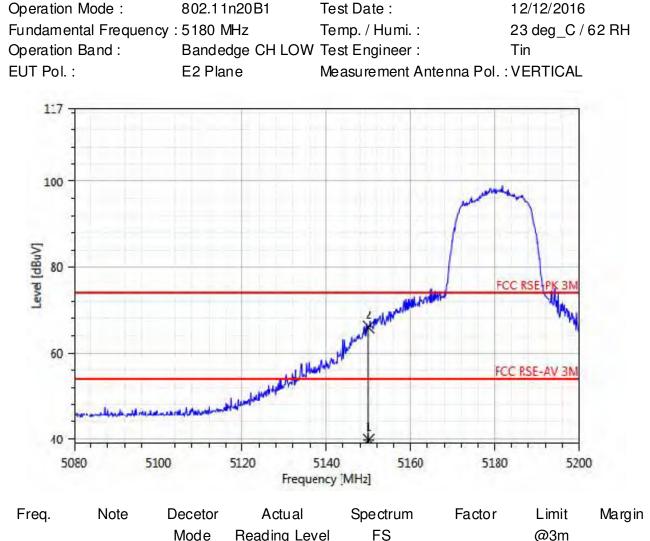




Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
5850.00	Е	Peak	64.56	57.28	7.28	122.23	-57.67
5855.00	Е	Peak	60.38	53.06	7.32	110.83	-50.45
5875.00	Е	Peak	51.25	43.88	7.37	105.23	-53.98
5925.00	Е	Peak	46.94	39.55	7.39	68.23	-21.29



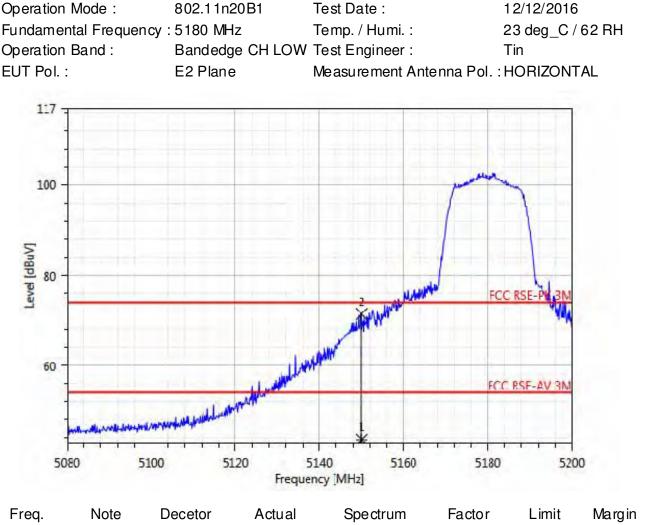
802.11n20 HT mode



NOLE	Decelui	Aciuai	opeculum	racior		Margin	
	Mode	Reading Level	FS		@3m		
F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
Е	Average	39.78	33.90	5.88	54.00	-14.22	
Е	Peak	66.07	60.19	5.88	74.00	-7.93	
	E	Mode F/H/E/S QP/AV/PK E Average	ModeReading LevelF/H/E/SQP/AV/PKdBµV/mEAverage39.78	ModeReading LevelFSF/H/E/SQP/AV/PKdBµV/mdBµV/mEAverage39.7833.90	ModeReading LevelFSF/H/E/SQP/AV/PKdBµV/mdBµV/mEAverage39.7833.905.88	Mode Reading Level FS @3m F/H/E/S QP/AV/PK dBµV/m dBµV/m dB dBuV/m E Average 39.78 33.90 5.88 54.00	Mode Reading Level FS @3m F/H/E/S QP/AV/PK dBµV/m dBµV/m dB dBuV/m dB E Average 39.78 33.90 5.88 54.00 -14.22

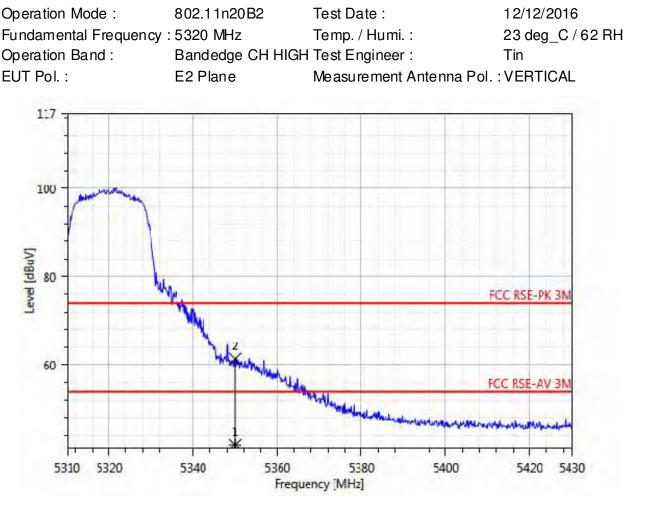
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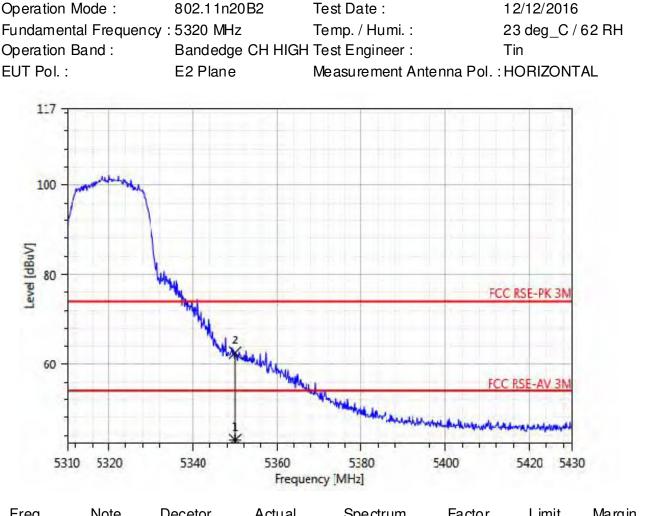
Freq.	NOLE	Decelui	Actual	Spectrum	Facior		Maryin	
		Mode	Reading Level	FS		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
5150.00	E	Average	43.53	37.65	5.88	54.00	-10.47	_
5150.00	E	Peak	71.43	65.55	5.88	74.00	-2.57	





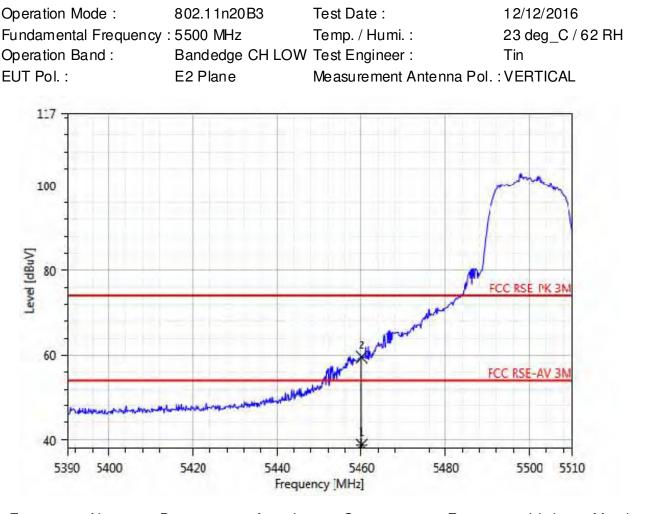
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
5350.00	Е	Average	41.88	35.73	6.15	54.00	-12.12
5350.00	Е	Peak	61.38	55.23	6.15	74.00	-12.62





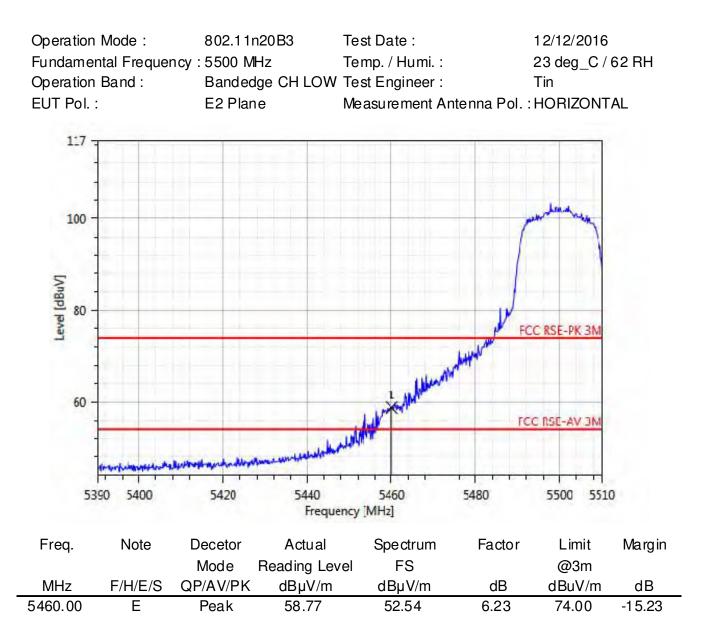
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin	
		Mode	Reading Level	FS		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
5350.00	Е	Average	43.13	36.98	6.15	54.00	-10.87	
5350.00	Е	Peak	62.55	56.40	6.15	74.00	-11.45	



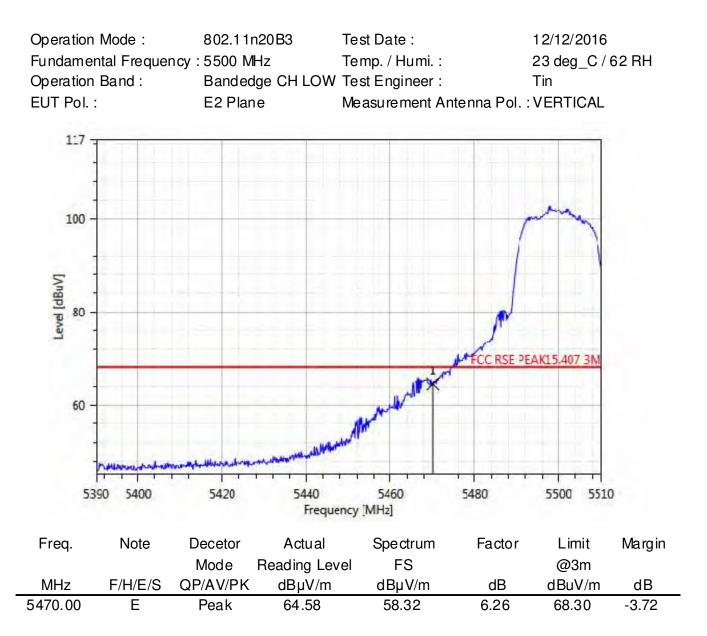


Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin	
		Mode	Reading Level	FS		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
5460.00	Е	Average	38.85	32.62	6.23	54.00	-15.15	-
5460.00	Е	Peak	59.54	53.31	6.23	74.00	-14.46	

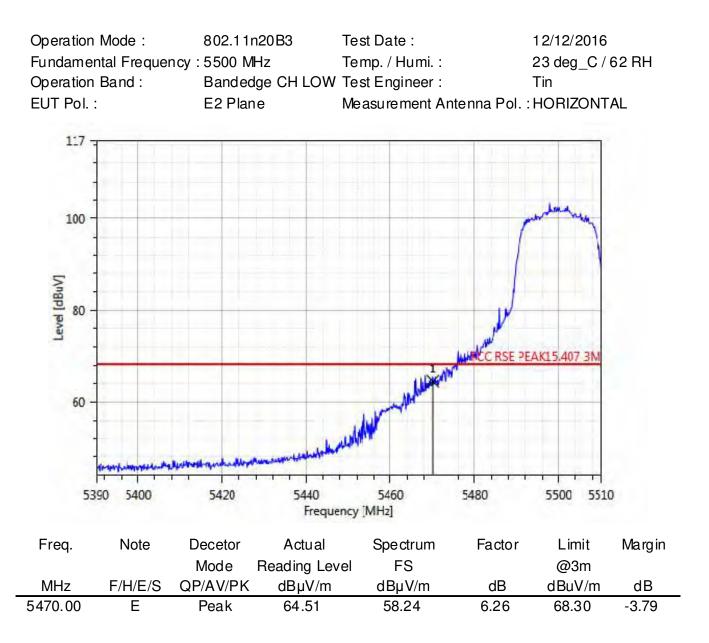




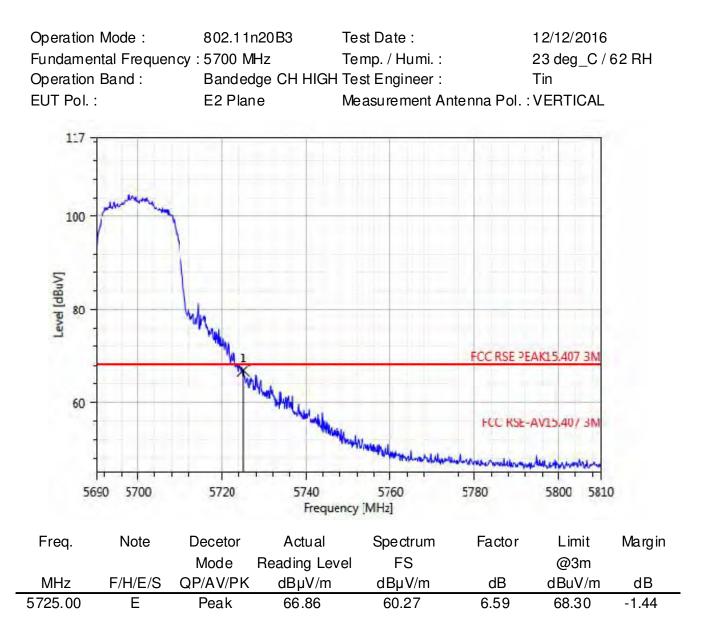




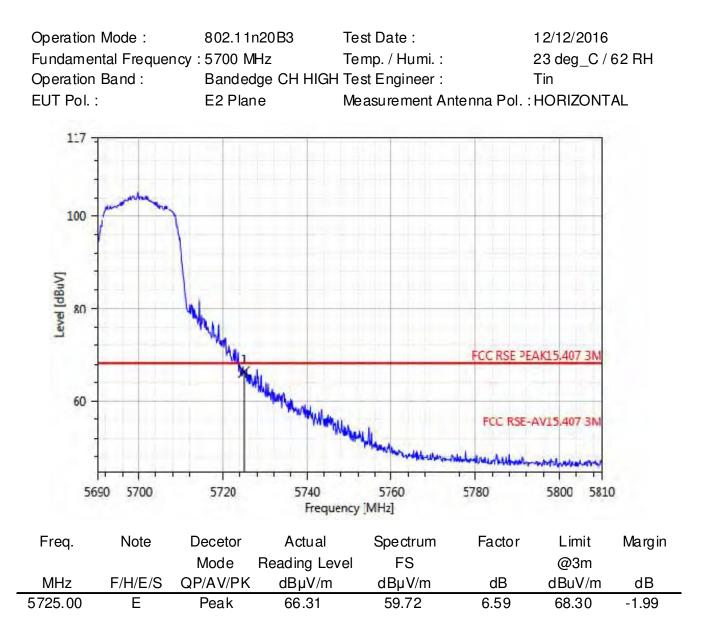




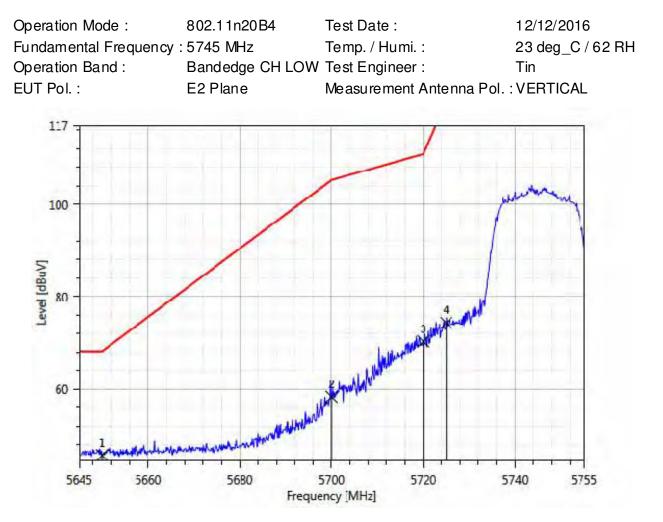






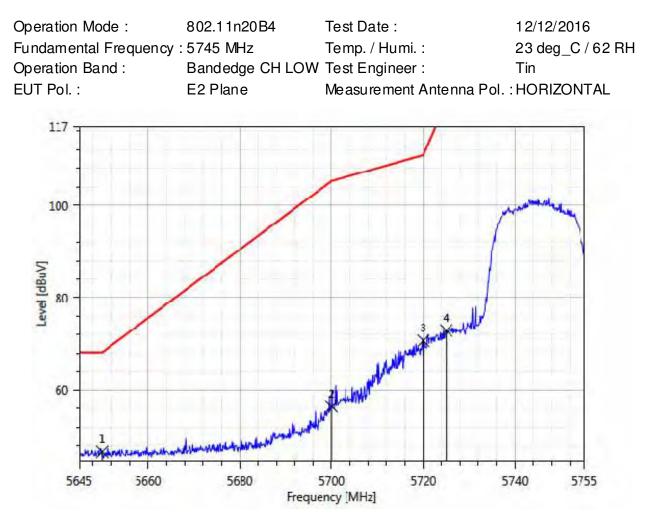






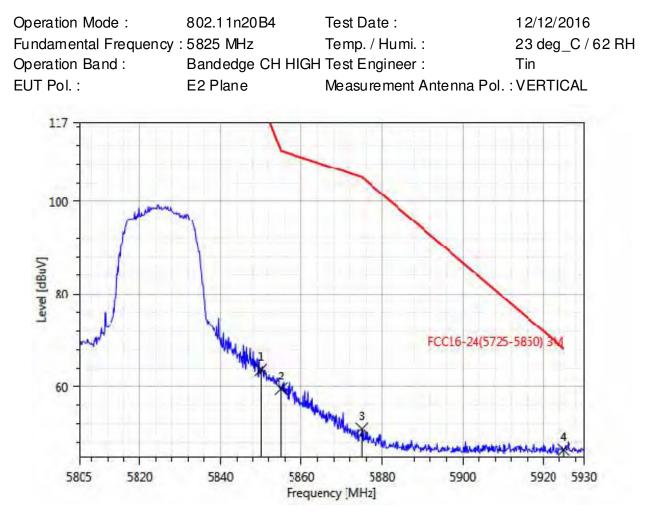
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
5650.00	Е	Peak	45.71	39.23	6.48	68.23	-22.52
5700.00	Е	Peak	58.38	51.71	6.68	105.23	-46.85
5720.00	Е	Peak	70.38	63.78	6.60	110.83	-40.45
5725.00	Е	Peak	74.35	67.76	6.59	122.23	-47.88





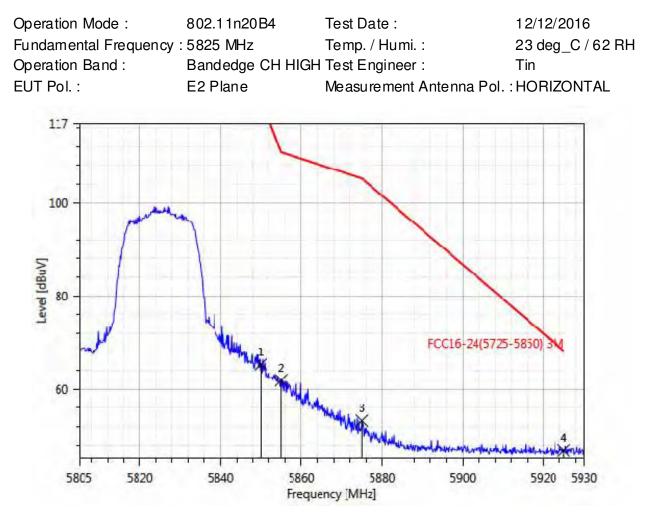
Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
5650.00	Е	Peak	46.75	40.27	6.48	68.23	-21.48
5700.00	Е	Peak	56.54	49.86	6.68	105.23	-48.69
5720.00	Е	Peak	70.74	64.14	6.60	110.83	-40.09
5725.00	Е	Peak	72.95	66.36	6.59	122.23	-49.28





Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
5850.00	Е	Peak	63.70	56.42	7.28	122.23	-58.53
5855.00	Е	Peak	59.52	52.21	7.32	110.83	-51.31
5875.00	Е	Peak	50.95	43.58	7.37	105.23	-54.28
5925.00	Е	Peak	46.38	38.99	7.39	68.23	-21.85

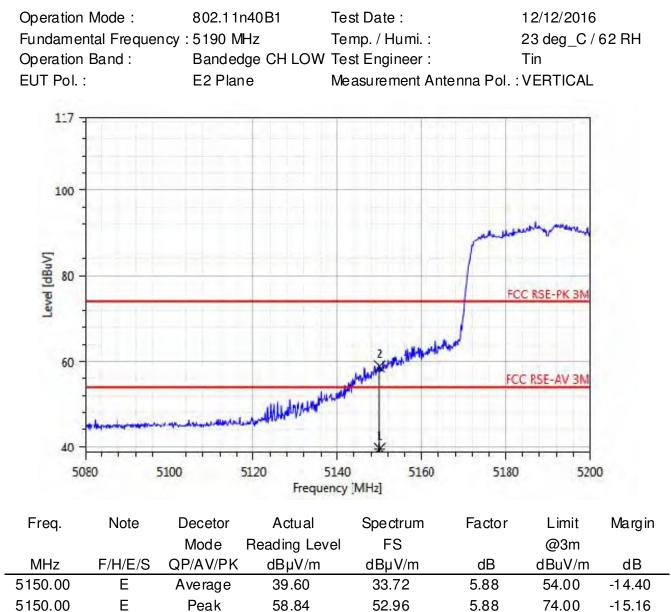




Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
		Mode	Reading Level	FS		@3m	
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB
5850.00	E	Peak	65.36	58.08	7.28	122.23	-56.87
5855.00	Е	Peak	61.93	54.61	7.32	110.83	-48.90
5875.00	Е	Peak	53.27	45.90	7.37	105.23	-51.96
5925.00	Е	Peak	46.89	39.50	7.39	68.23	-21.34



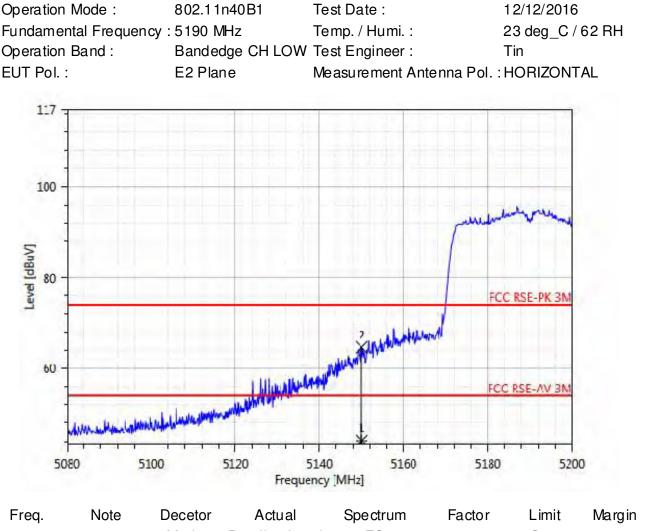
802.11n40 HT mode



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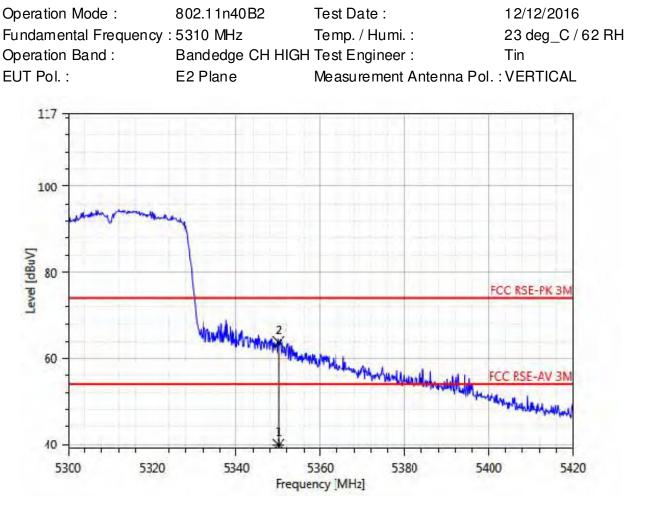
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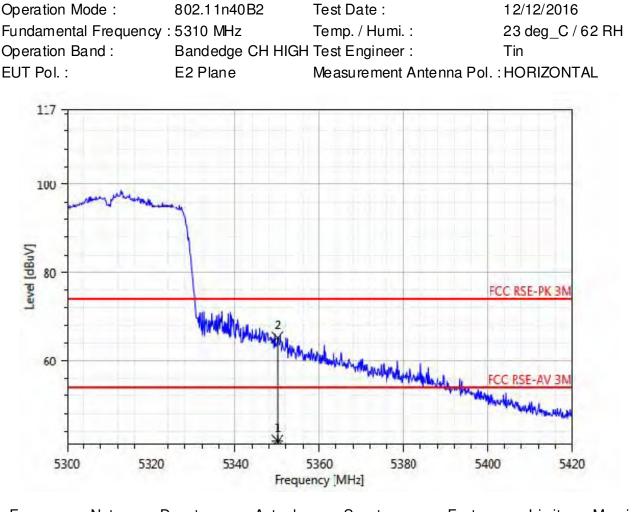
1109.	Note	Decetor	71010101	opeourum	1 40101	E 11111	Margin	
		Mode	Reading Level	FS		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
5150.00	Е	Average	44.07	38.19	5.88	54.00	-9.93	-
5150.00	Е	Peak	64.63	58.75	5.88	74.00	-9.37	





Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin	
		Mode	Reading Level	FS		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
5350.00	Е	Average	39.85	33.70	6.15	54.00	-14.15	
5350.00	Е	Peak	63.78	57.63	6.15	74.00	-10.22	





⊢req.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin	
		Mode	Reading Level	FS		@3m		
MHz	F/H/E/S	QP/AV/PK	dBµV/m	dBµV/m	dB	dBuV/m	dB	
5350.00	E	Average	41.81	35.66	6.15	54.00	-12.19	_
5350.00	Е	Peak	65.25	59.10	6.15	74.00	-8.75	