

# ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

## INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART E REQUIREMENT

OF

**Product Name:** Rugged Handheld Computer  
**Brand Name:** unitech  
**Model No.:** PA720  
**Model Difference:** N/A  
**FCC ID:** HLEPA720BTNFL  
**Report No.:** ER/2016/60094  
**Issue Date:** Jul. 08, 2016  
**FCC Rule Part:** §15.407  
**Prepared for:** unitech electronics co., ltd.  
5F, No. 136, Lane 235, Pao-Chiao Rd.,  
Hsin-Tien Dist., New Taipei City, Taiwan  
**Prepared by:** SGS Taiwan Ltd.  
Electronics & Communication Laboratory  
No.134, Wu Kung Road, New Taipei  
Industrial Park, Wuku District, New Taipei  
City, Taiwan 24803



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## VERIFICATION OF COMPLIANCE

**Applicant:** unitech electronics co., ltd.  
5F, No. 136, Lane 235, Pao-Chiao Rd., Hsin-Tien Dist., New Taipei City, Taiwan

**Product Name:** Rugged Handheld Computer

**Brand Name:** unitech

**Model No.:** PA720

**Model Difference:** N/A

**FCC ID:** HLEPA720BTNFL

**File Number:** ER/2016/60094

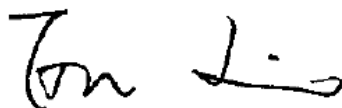
**Date of Test:** Jun. 16, 2016 ~ Jul. 04, 2016

**Date of EUT Received:** Jun. 16, 2016

**We hereby certify that:**

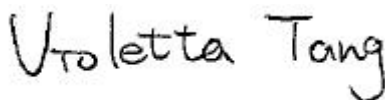
The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10: 2013 and the energy emitted by the sample EUT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

Jul. 08, 2016

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**Tin Lin / Engineer****Prepared By:****Date:**

Jul. 08, 2016

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**Violetta Tang / Clerk****Approved By:****Date:**

Jul. 08, 2016

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**Jim Chang / Asst. Manager**

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## Revision History

Report Number	Revision	Description	Issue Date
ER/2016/60094	Rev.00	Initial creation of document	Jul. 08, 2016

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# Contents

<b>1. GENERAL INFORMATION.....</b>	<b>6</b>
1.1 Product Description.....	6
1.2 Product Feature of Equipment Under Test.....	8
1.3 Test Methodology of Applied Standards.....	9
1.4 Test Facility .....	9
1.5 Special Accessories .....	9
1.6 Equipment Modifications.....	9
<b>2. SYSTEM TEST CONFIGURATION .....</b>	<b>10</b>
2.1 EUT Configuration .....	10
2.2 EUT Exercise .....	10
2.3 Test Procedure.....	10
2.4 Measurement Results Explanation Example .....	10
2.5 Configuration of Tested System .....	11
<b>3. SUMMARY OF TEST RESULT .....</b>	<b>12</b>
<b>4. DESCRIPTION OF TEST MODES.....</b>	<b>13</b>
4.1 Operated in U-NII Bands.....	13
4.2 The Worst Test Modes and Channel Details.....	15
<b>5. MEASUREMENT UNCERTAINTY.....</b>	<b>17</b>
<b>6. CONDUCTED EMISSION TEST.....</b>	<b>18</b>
6.1. Standard Applicable .....	18
6.2. Measurement Equipment Used .....	18
6.3. EUT Setup .....	18
6.4. Test SET-UP .....	19
6.5. Measurement Procedure .....	19
6.6. Measurement Result.....	19
<b>7. DUTY CYCLE TEST SIGNAL.....</b>	<b>22</b>
<b>8. 26dB &amp; 6dB EMISSION BANDWIDTH MEASUREMENT.....</b>	<b>25</b>
8.1 Standard Applicable .....	25
8.2 Measurement Procedure .....	25
8.3 Measurement Equipment Used .....	26
8.4 Test Set-up.....	26
8.5 Measurement Result.....	27

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<b>9. MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT .....</b>	<b>50</b>
9.1 Standard Applicable .....	50
9.2 Measurement Procedure .....	51
9.3 Measurement Equipment Used .....	51
9.4 Test Set-up .....	51
9.5 Measurement Result .....	52
<b>10. PEAK POWER SPECTRAL DENSITY .....</b>	<b>54</b>
10.1 Standard Applicable .....	54
10.2 Measurement Procedure .....	55
10.3 Measurement Equipment Used .....	55
10.4 Test Set-up .....	55
10.5 Measurement Result .....	56
<b>11. UNDESIRABLE RADIATED EMISSION MEASUREMENT .....</b>	<b>78</b>
11.1 Standard Applicable .....	78
11.2 Measurement Equipment Used .....	80
11.3 Test SET-UP .....	81
11.4 Measurement Procedure .....	82
11.5 Field Strength Calculation .....	82
11.6 Test Results of Radiated Spurious Emissions form 9 KHz to 30 MHz .....	83
11.7 Measurement Result .....	83
<b>12. TRANSMISSION IN THE ABSENCE OF DATA .....</b>	<b>179</b>
12.1 Standard Applicable .....	179
12.2 Result .....	179
<b>13. FREQUENCY STABILITY .....</b>	<b>180</b>
13.1 Standard Applicable .....	180
13.2 Measurement Procedure .....	180
13.3 Test SET-UP .....	180
13.4 Measurement Equipment Used: .....	180
13.5 Measurement Result .....	181
<b>14. ANTENNA REQUIREMENT .....</b>	<b>185</b>
14.1 Standard Applicable .....	185
14.2 Antenna Connected Construction .....	185

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# 1. GENERAL INFORMATION

## 1.1 Product Description

General:

Product Name:	Rugged Handheld Computer	
Brand Name:	unitech	
Model No.:	PA720	
Model Difference:	N/A	
Product SW/HW version:	298 / R004	
Radio SW/HW version:	N/A / N/A	
Test SW Version:	N/A	
RF power setting in TEST SW:	N/A	
USB Charging Cable:	Model No.: N/A, Supplier: N/A	
Power Supply:	3.6Vdc from Rechargeable Li-polymer Battery or 5V from AC/DC Adapter	
	Battery:	Model No.: 1400-900035G, Supplier: WELLTECH TECHNOLOGY
	Adapter:	Model No.: PSA10F-050Q, Supplier Phi Hong

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## WLAN 5GHz:

Wi-Fi	Frequency Range	Channels	Rated Power (Avg.)	Modulation Technology
11a	5150~5250	4	12.98dBm	OFDM
	5250~5350	4	12.97dBm	
	5470~5725	12	12.98dBm	
	5725-5850	5	12.99dBm	
11n 20M	HT 20 5150~5250	4	12.97dBm	OFDM
	HT 20 5250~5350	4	12.93dBm	
	HT 20 5470~5725	11	12.99dBm	
	HT 20 5725-5850	5	12.97dBm	
11n 40M	HT 40 5150~5250	2	12.87dBm	OFDM
	HT 40 5250~5350	2	12.96dBm	
	HT 40 5470~5725	5	12.96dBm	
	HT 40 5725-5850	2	12.91dBm	
Antenna Designation		PIFA Antenna, 5GHz Gain: -2.91dBi (5150MHz-5250MHz) 5GHz Gain: -3.25dBi (5250MHz-5350MHz) 5GHz Gain: -3.66dBi (5470MHz-5725MHz) 5GHz Gain: -3.43dBi (5725MHz-5850MHz)		
Modulation type		64QAM, 16QAM, QPSK, BPSK for OFDM		
Transition Rate:		802.11 a: 6/9/12/18/24/36/48/54 Mbps 802.11 n_20MHz: 6.5 – 65Mbps 802.11 n_40MHz: 13.5 – 135Mbps		

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## 1.2 Product Feature of Equipment Under Test

The equipment under Test (Hereafter Called: EUT) is Rugged Handheld Computer, supporting GSM / WCDMA / LTE, Wi-Fi 802.11abgn, Bluetooth and NFC features, and below is details of information.

Product Feature	
Product Name:	Rugged Handheld Computer
Brand Name:	unitech
Model No.:	PA720
Model Difference:	N/A
FCC ID:	HLEPA720BTNFL
GSM Operating Band(s)	GSM 850/1900MHz
GPRS / EGPRS Multi Slot Class	GPRS Class 12
WCDMA Operating Band(s)	FDD Band II / V
WCDMA Rel. Version	Rel.9
LTE Operating Band(s)	FCC Band 5: Part 22. / FCC Band 2: Part 24. FCC Band 7 / 38 / 41: Part 27
LTE Rel. Version	Rel.9
Bluetooth Version	V4.1 dual mode
Wi-Fi- Specification	802.11a/b/g/n
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

ANSI C63.10:2013

Note:

1. All test items have been performed and record as per the above standards.
2. The composite system is compliance with FCC Subpart B is authorized under the certification procedure.

### 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

### 1.5 Special Accessories

There are no special accessories used while test was conducted.

### 1.6 Equipment Modifications

There was no modification incorporated into the EUT.

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## 2. SYSTEM TEST CONFIGURATION

### 2.1 EUT Configuration

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 placed on a 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 30 MHz. 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 placed on a 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 0.3dB, and 10dB attenuator.

SISO mode offset

$$= \text{RF cable loss (dB)} + \text{attenuation factor (dB)} + 10 \log(N_{\text{ANT}}) \text{ dB} = 10.3(\text{dB})$$

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## 2.5 Configuration of Tested System

Fig. 2-1 Radiated Emission

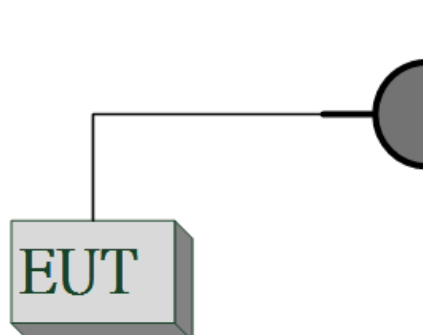


Fig. 2-2 Conducted (Antenna Port) Configuration Emission

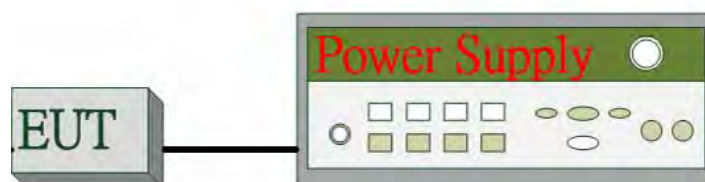


Fig. 2-3 AC Power Line Conducted Emission

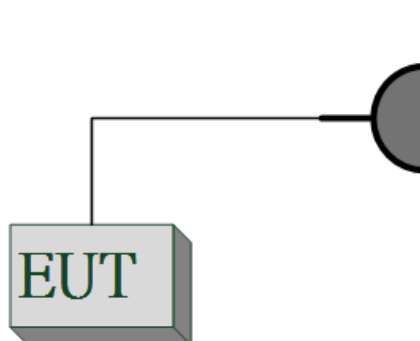


Table 2-1 Equipment Used in Tested System

Item	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	HP	E3640A	KR93300208	N/A	Un-shielded

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### 3. SUMMARY OF TEST RESULT

FCC Rules	Description Of Test	Result
§15.207	AC Power Line Conducted Emission	Compliant
§15.403(i) §15.407(e)	26dB & 6dB 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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## 4. DESCRIPTION OF TEST MODES

### 4.1 Operated in U-NII Bands

Operated band in 5150 MHz ~5250 MHz:

4 channels are provided for 802.11a, 802.11n\_HT20

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

2 channels are provided for 802.11n\_HT40

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

Operated band in 5250 MHz ~5350 MHz:

4 channels are provided for 802.11a, 802.11n\_HT20

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

2 channels are provided for 802.11n\_HT40

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

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Operated band in 5470 MHz ~5725 MHz:

11 channels are provided for 802.11a, 802.11n\_HT20

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz		

5 channels are provided for 802.11n\_HT40

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

Operated band in 5725 MHz ~5850 MHz:

5 channels are provided for 802.11a, 802.11n\_HT20

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

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755 MHz	159	5795 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.

### RADIATED EMISSION TEST:

RADIATED EMISSION TEST (BELOW 1 GHz)						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	5180~5240	36 to 48	44	OFDM	6	MAIN
802.11a	5260~5320	52 to 64	60	OFDM	6	MAIN
802.11a	5500~5720	100 to 140	116	OFDM	6	MAIN
802.11a	5745~5825	149 to 165	157	OFDM	6	MAIN
RADIATED EMISSION TEST (ABOVE 1 GHz)						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	5180~5240	36 to 48	36,44,48	OFDM	6	MAIN
802.11n_HT20				OFDM	MCS0	MAIN
802.11n_HT40	5190~5230	38 to 46	38,46	OFDM	MCS0	MAIN
802.11a	5260~5320	52 to 64	52,60,64	OFDM	6	MAIN
802.11n_HT20				OFDM	MCS0	MAIN
802.11n_HT40	5270~5310	54 to 62	54,62	OFDM	MCS0	MAIN
802.11a	5500~5720	100 to 144	100,116,140	OFDM	6	MAIN
802.11n_HT20				OFDM	MCS0	MAIN
802.11n_HT40	5510~5710	102 to 142	102,110,134	OFDM	MCS0	MAIN
802.11a	5745~5825	149 to 165	149,157,165	OFDM	6	MAIN
802.11n_HT20				OFDM	MCS0	MAIN
802.11n_HT40	5755~5795	151 to 159	151,159	OFDM	MCS0	MAIN

### Note:

The field strength of radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for 802.11a/n WLAN Transmitter for channel Low, Mid and High, the worst case E2 position was reported.

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# ANTENNA PORT CONDUCTED MEASUREMENT:

CONDUCTED TEST						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	5180~5240	36 to 48	36,44,48	OFDM	6	MAIN
802.11n_HT20				OFDM	MCS0	MAIN
802.11n_HT40	5190~5230	38 to 46	38,46	OFDM	MCS0	MAIN
802.11a	5260~5320	52 to 64	52,60,64	OFDM	6	MAIN
802.11n_HT20				OFDM	MCS0	MAIN
802.11n_HT40	5270~5310	54 to 62	54,62	OFDM	MCS0	MAIN
802.11a	5500~5700	100 to 140	100,116,140	OFDM	6	MAIN
802.11n_HT20				OFDM	MCS0	MAIN
802.11n_HT40	5510~5670	102 to 134	102,110,134	OFDM	MCS0	MAIN
802.11a	5745~5825	149 to 165	149,157,165	OFDM	6	MAIN
802.11n_HT20				OFDM	MCS0	MAIN
802.11n_HT40	5755~5795	151 to 159	151,159	OFDM	MCS0	MAIN

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## 5. MEASUREMENT UNCERTAINTY

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:

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

Measurement uncertainty (Polarization : <b>Horizontal</b> )	9kHz-30MHz: +/-2.87dB
	30MHz - 167MHz: +/- 4.22dB
	167MHz -500MHz: +/- 3.44dB
	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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## 6. CONDUCTED EMISSION TEST

### 6.1. Standard Applicable

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

Frequency range MHz	Limits dB(uV)	
	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
<b>Note</b> 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 TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI Test Receiver	R&S	ESC17	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	11/26/2015	11/25/2016

### 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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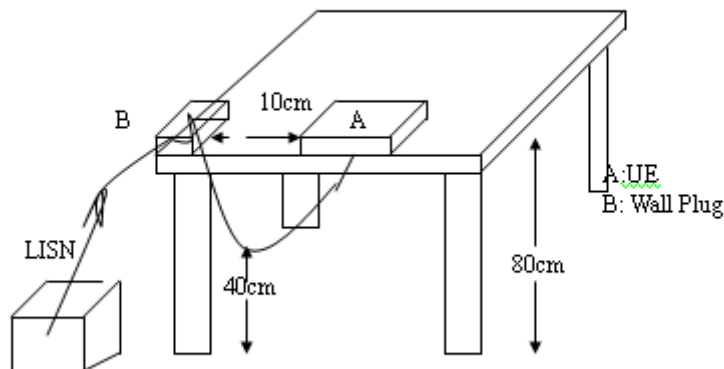
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## 6.4. Test SET-UP



## 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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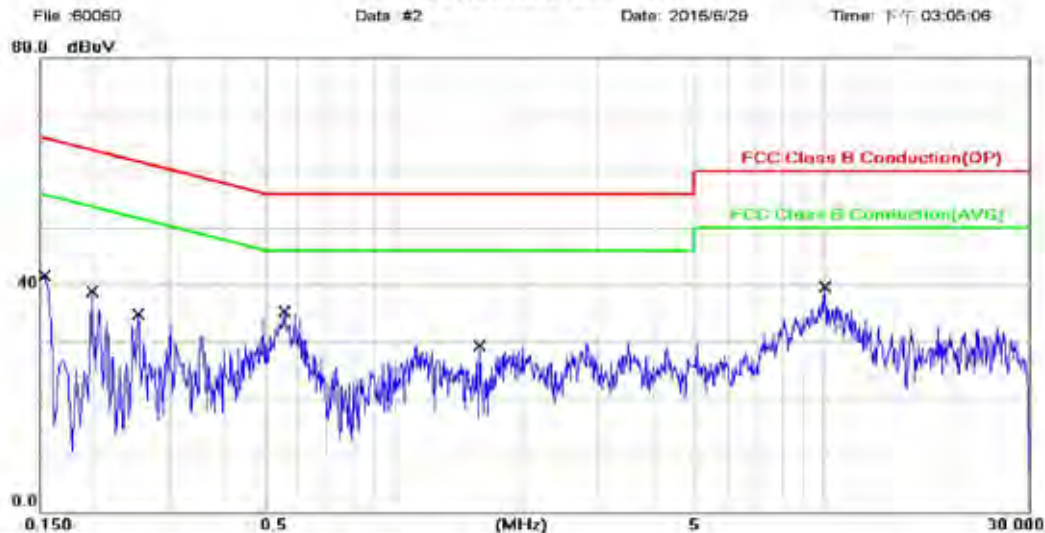
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## AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	Operation mode			Test Date:	Jun. 29, 2016
Temperature:	20	Humidity:	58 %	Test By:	Tin
				Phase:	L1

Site: Conduction Room Phase: **L1** Temperature: 20 °C  
Limit: FCC Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 58 %  
Mode: Operation  
Note: Adapter PSA10F-050Q

## Conducted Emission



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1540	38.30	0.10	38.40	65.78	-27.38	QP	
2		0.1540	21.20	0.10	21.30	55.78	-34.48	AVG	
3		0.1980	32.40	0.10	32.50	63.69	-31.19	QP	
4		0.1980	17.60	0.10	17.70	53.69	-35.99	AVG	
5		0.2540	32.50	0.11	32.61	61.63	-29.02	QP	
6		0.2540	19.30	0.11	19.41	51.63	-32.22	AVG	
7	*	0.5580	31.20	0.13	31.33	56.00	-24.67	QP	
8		0.5580	20.20	0.13	20.33	46.00	-25.67	AVG	
9		1.5860	18.60	0.16	18.76	56.00	-37.24	QP	
10		1.5860	7.40	0.16	7.56	46.00	-38.44	AVG	
11		10.0820	30.10	0.39	30.49	60.00	-29.51	QP	
12		10.0820	20.30	0.39	20.69	50.00	-29.31	AVG	

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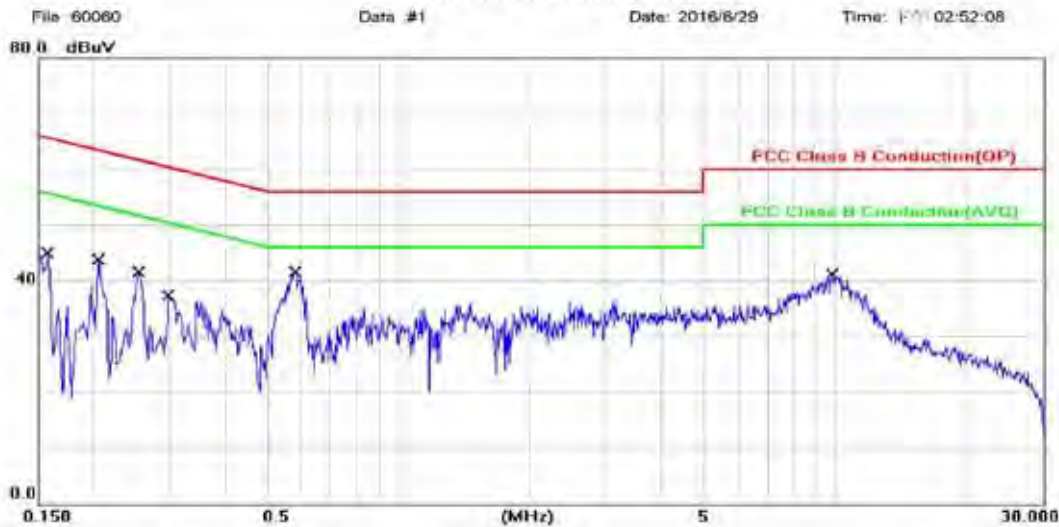
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Site: Conduction Room  
Limit: FCC Class B Conduction(QP)  
Mode: Operation  
Note: Adapter PSA10F-050Q

Phase: **N**  
Power: AC 120V/60Hz

Temperature: 20 ℃  
Humidity: 58 %

## Conducted Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1580	38.40	0.07	38.47	65.57	-27.10	QP	
2		0.1580	23.20	0.07	23.27	55.57	-32.30	AVG	
3		0.2060	38.50	0.08	38.58	63.37	-24.79	QP	
4		0.2060	25.60	0.08	25.68	53.37	-27.69	AVG	
5		0.2540	36.80	0.09	36.89	61.63	-24.74	QP	
6		0.2540	25.00	0.09	25.09	51.63	-26.54	AVG	
7		0.2980	31.70	0.09	31.79	60.30	-28.51	QP	
8		0.2980	20.90	0.09	20.99	50.30	-29.31	AVG	
9 *		0.5820	38.80	0.11	38.91	56.00	-17.09	QP	
10		0.5820	28.60	0.11	28.71	46.00	-17.29	AVG	
11		9.8780	35.20	0.37	35.57	60.00	-24.43	QP	
12		9.8780	25.50	0.37	25.87	50.00	-24.13	AVG	

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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:

$$\text{Duty Cycle} = \text{Ton} / (\text{Ton} + \text{Toff})$$

### 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	89.00	0.51
802.11n_20	88.32	0.54
802.11n_40	79.22	1.01

Duty Cycle Factor:  $10 * \log(1/0.89) = 0.51$

Duty Cycle Factor:  $10 * \log(1/0.8832) = 0.54$

Duty Cycle Factor:  $10 * \log(1/0.7922) = 1.01$

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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. 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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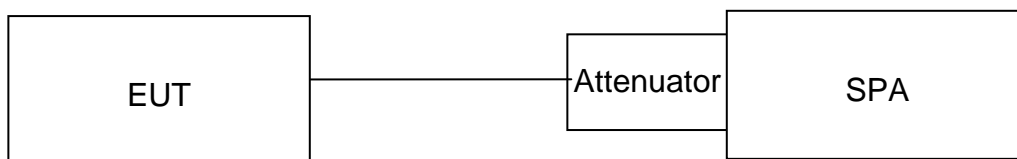
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### 8.3 Measurement Equipment Used

SGS Conducted Room					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Power Meter	Anritsu	ML2495A	1005007	12/09/2015	12/08/2016
Power Sensor	Anritsu	MA2411B	917032	12/09/2015	12/08/2016
Spectrum Analyzer	Agilent	N9010A	MY50420195	12/21/2015	12/20/2016
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	11/05/2015	11/04/2016
Temperature Chamber	TERCHY	MHG-120LF	911009	05/17/2016	05/16/2017

### 8.4 Test Set-up



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## 8.5 Measurement Result

### 26dB Bandwidth

802.11a\_Main

Frequency (MHz)	26dB Bandwidth (MHz)	10 Log (B) (dB)
5180	19.39	12.877
5220	19.44	12.887
5240	19.28	12.851
5260	19.37	12.871
5300	19.51	12.903
5320	19.37	12.871
5500	19.74	12.953
5580	19.53	12.906
5700	19.24	12.842

802.11n\_HT20\_Main

Frequency (MHz)	26dB Bandwidth (MHz)	10 Log (B) (dB)
5180	19.82	12.970
5220	19.78	12.961
5240	19.72	12.948
5260	19.76	12.958
5300	19.61	12.925
5320	19.52	12.905
5500	19.65	12.934
5580	19.77	12.959
5700	19.72	12.950

802.11n\_HT40\_Main

Frequency (MHz)	26dB Bandwidth (MHz)	10 Log (B) (dB)
5190	46.58	16.682
5230	41.87	16.219
5270	40.49	16.073
5310	40.18	16.041
5510	40.48	16.073
5550	41.92	16.224
5670	43.85	16.420

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

### 802.11a\_Main

Frequency (MHz)	6dB Bandwidth (MHz)	10 Log (B) (dB)
5745	15.16	11.807
5785	13.84	11.413
5825	15.30	11.848

### 802.11n\_HT20\_Main

Frequency (MHz)	6dB Bandwidth (MHz)	10 Log (B) (dB)
5745	15.05	11.774
5785	15.12	11.796
5825	13.24	11.217

### 802.11n\_HT40\_Main

Frequency (MHz)	6dB Bandwidth (MHz)	10 Log (B) (dB)
5755	35.18	15.463
5795	35.19	15.464

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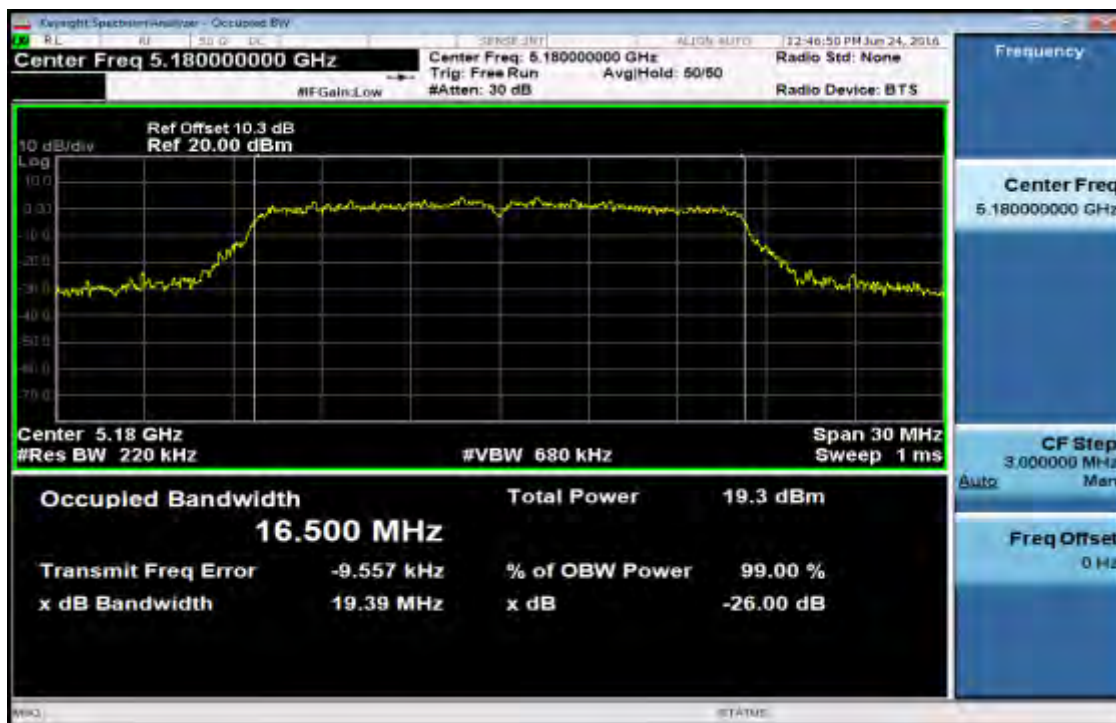
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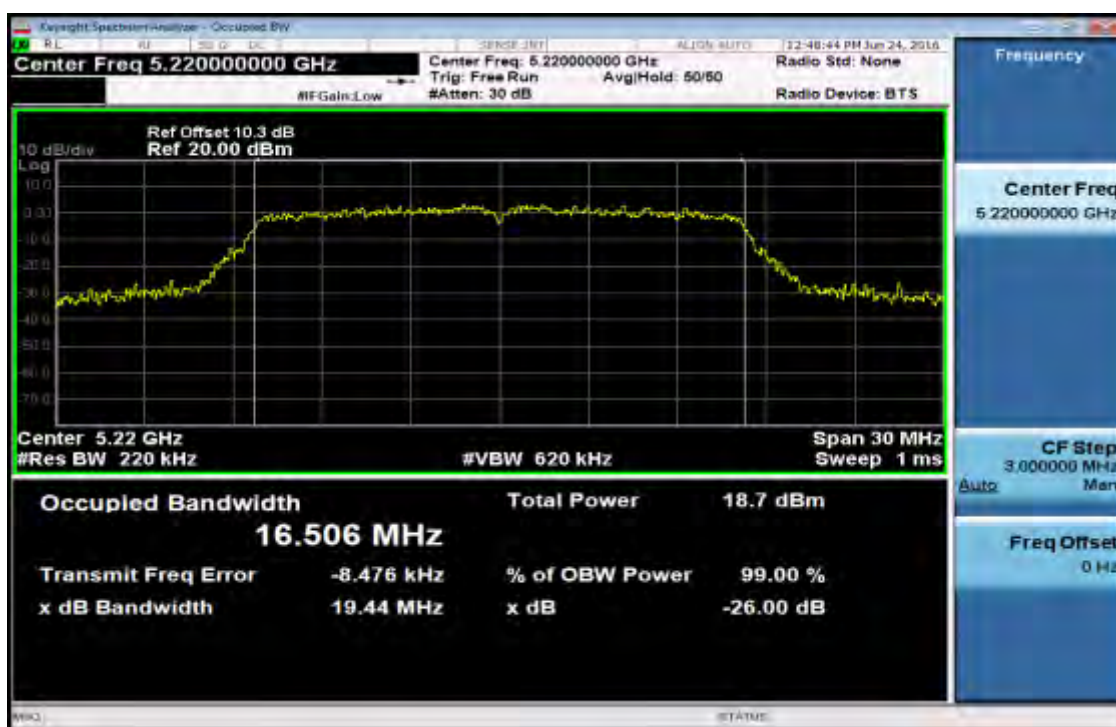
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## 802.11a, 5150~5250 MHz (Main) 26dB Band Width Test Data CH-Low (5180MHz)



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



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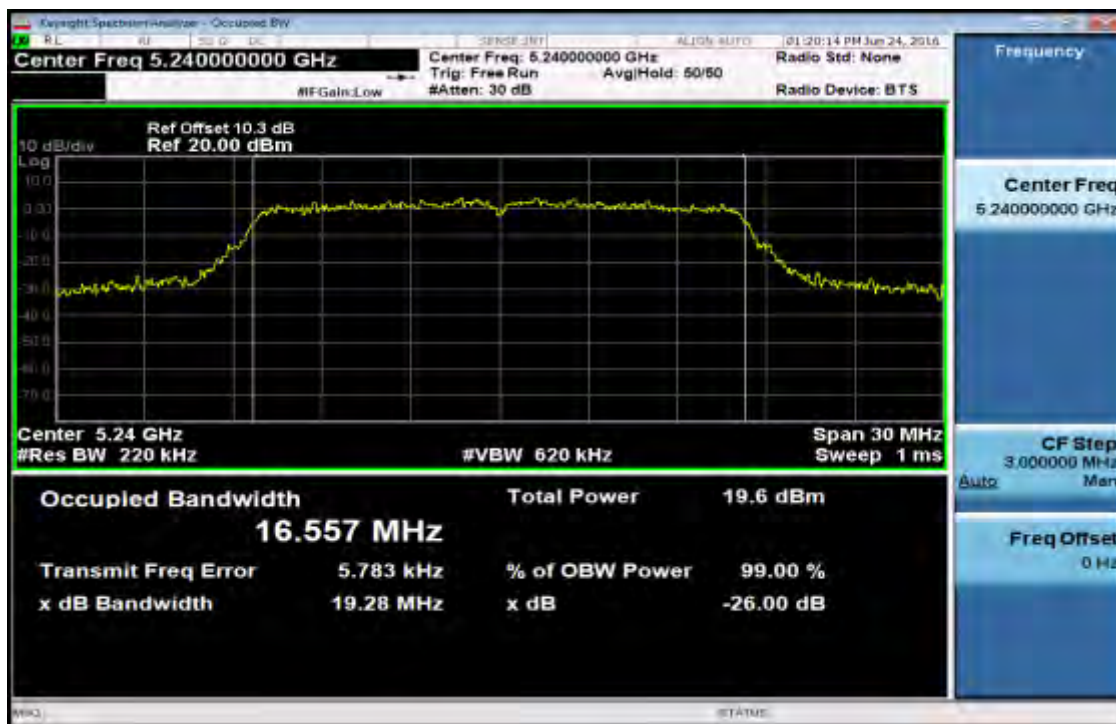
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## 26dB Band Width Test Data CH-High (5240MHz)



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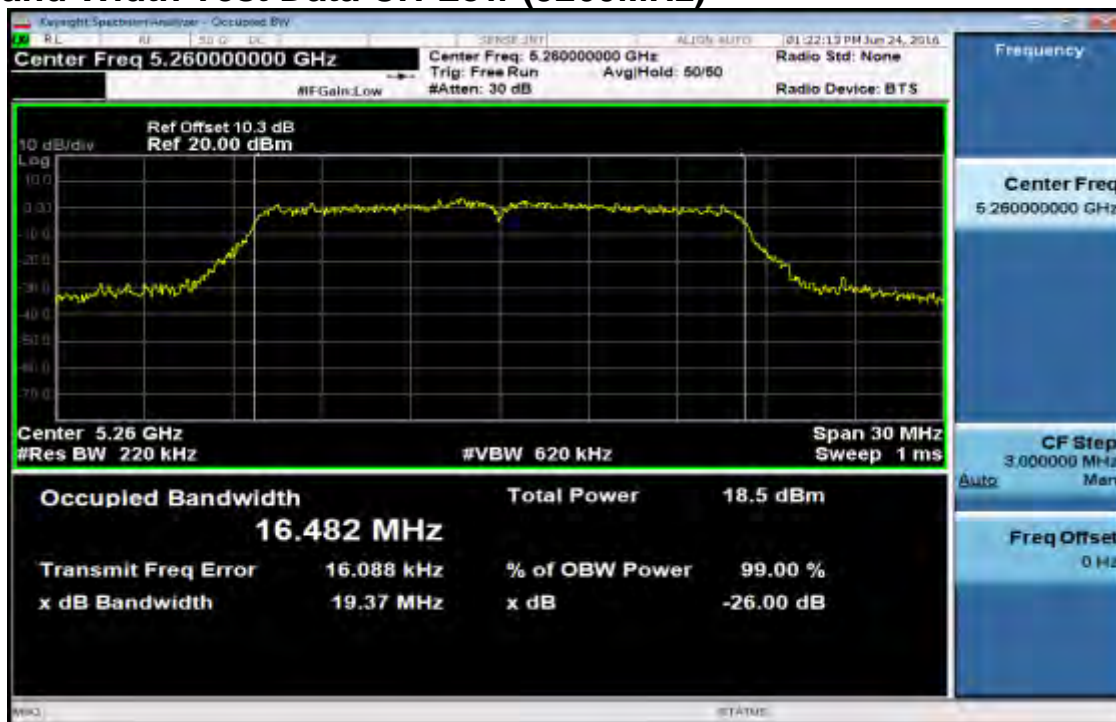
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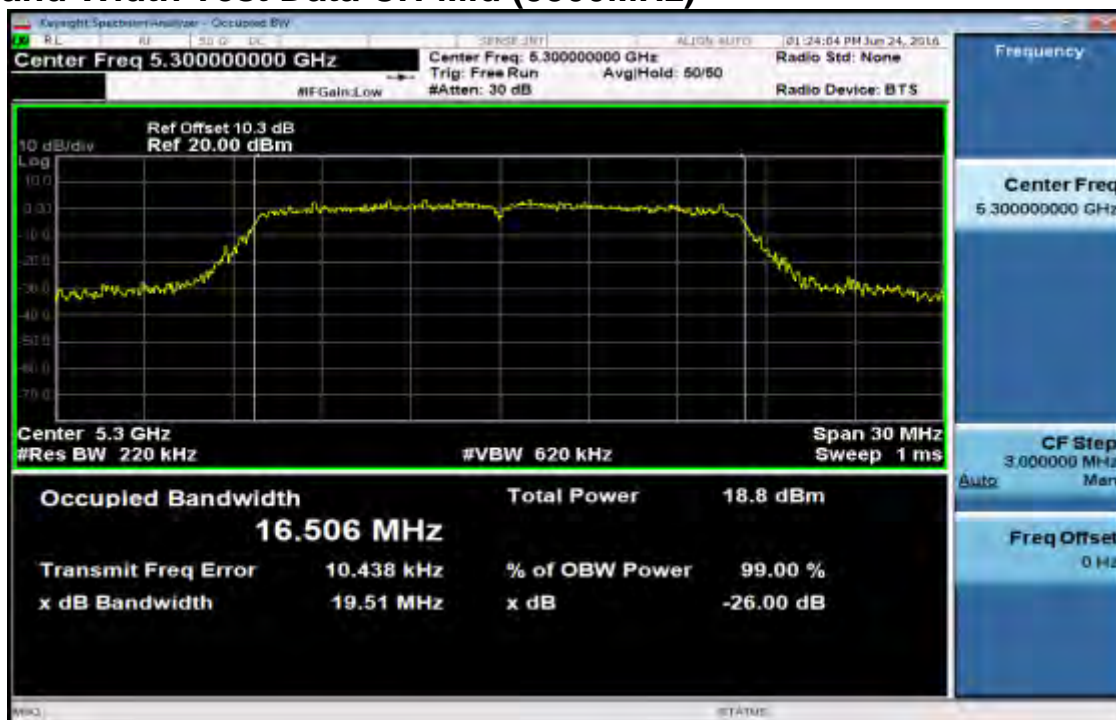
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## 802.11a, 5250~5350 MHz (Main) 26dB Band Width Test Data CH-Low (5260MHz)



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



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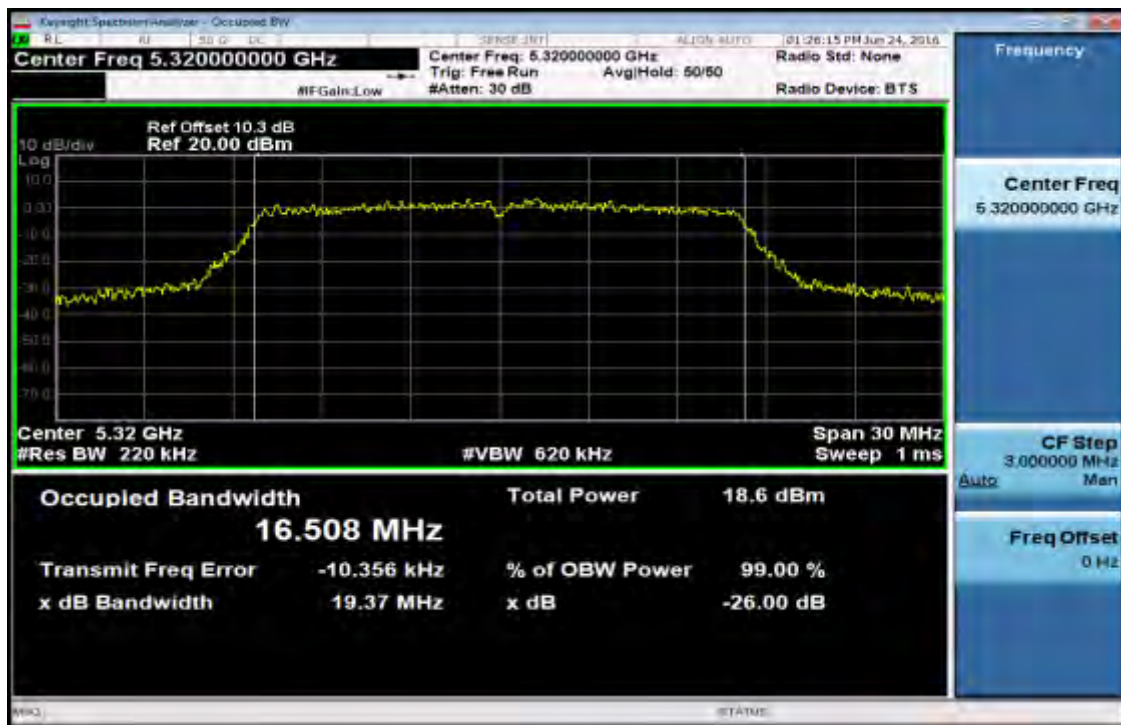
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## 26dB Band Width Test Data CH-High (5320MHz)



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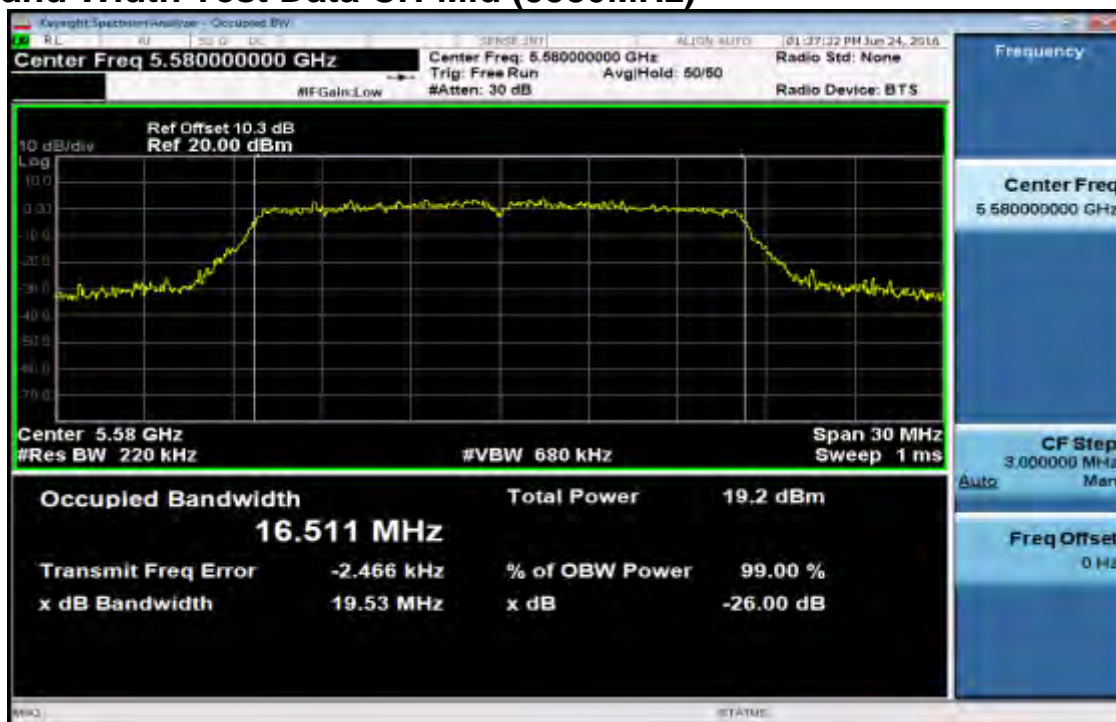
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## 802.11a, 5470~5725 MHz (Main) 26dB Band Width Test Data CH-Low (5500MHz)



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



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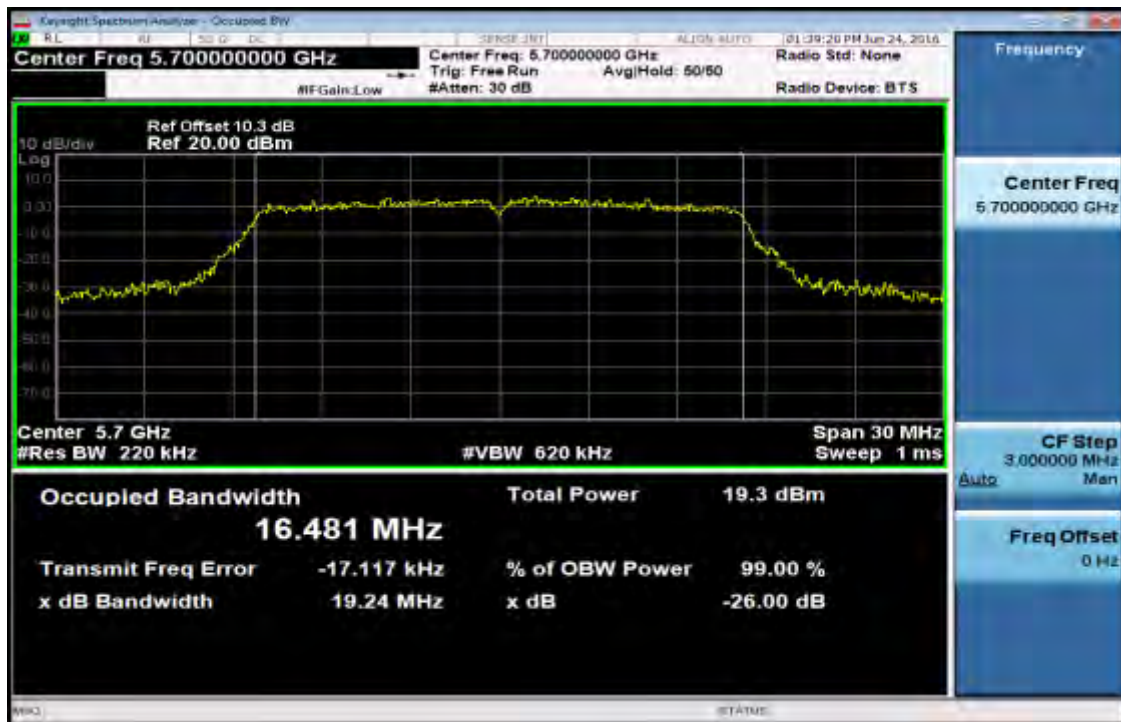
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## 26dB Band Width Test Data CH-High (5700MHz)



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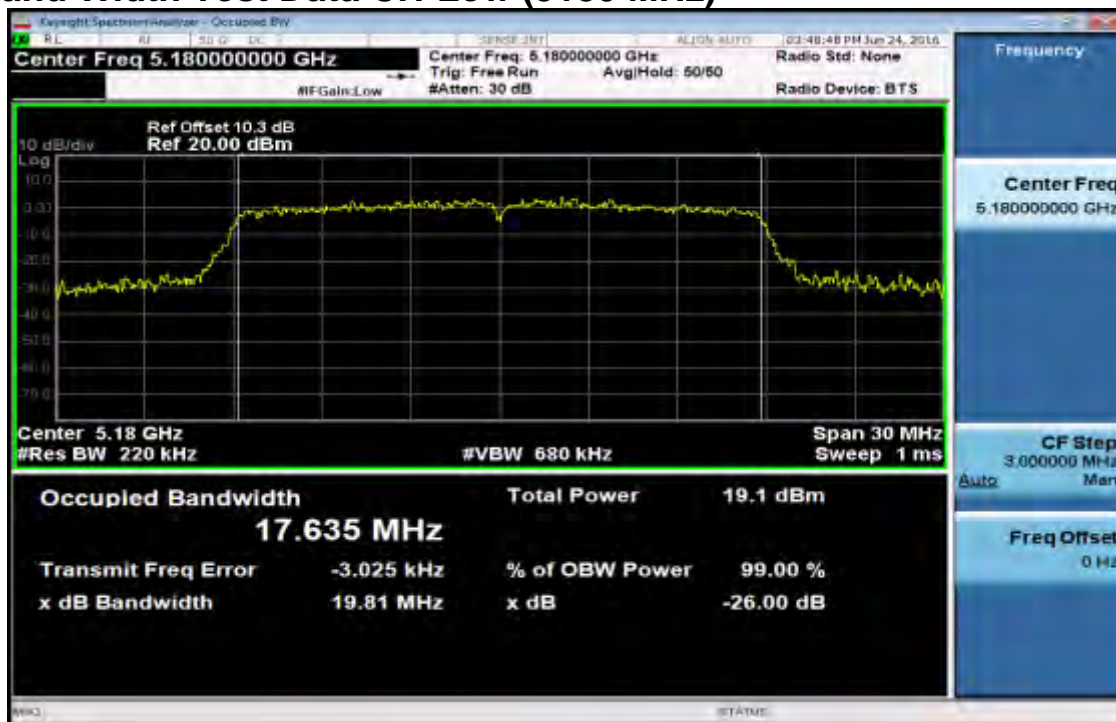
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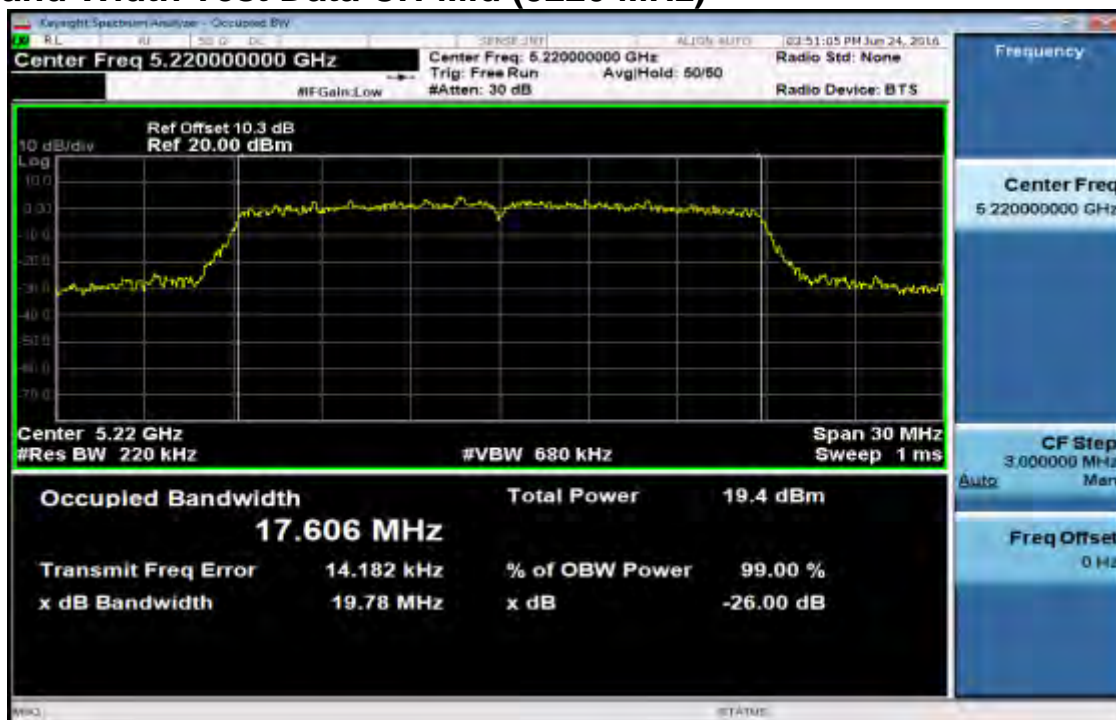
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## 802.11n HT20, 5150~5250 MHz (Main) 26dB Band Width Test Data CH-Low (5180 MHz)



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



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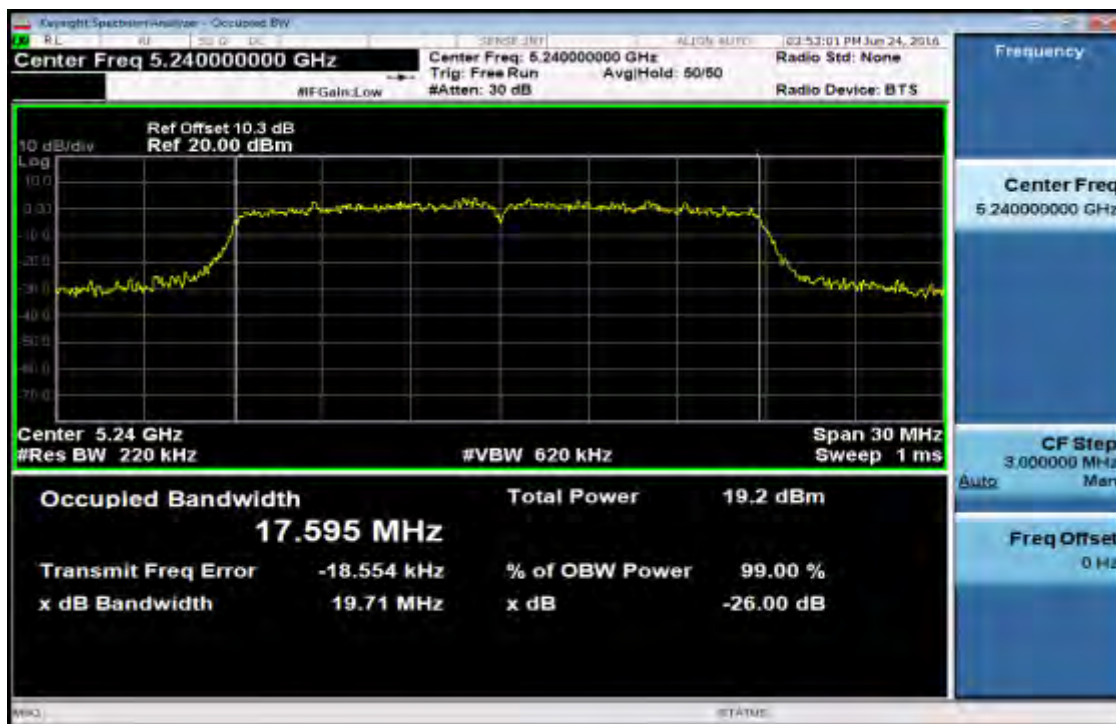
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## 26dB Band Width Test Data CH-High (5240 MHz)



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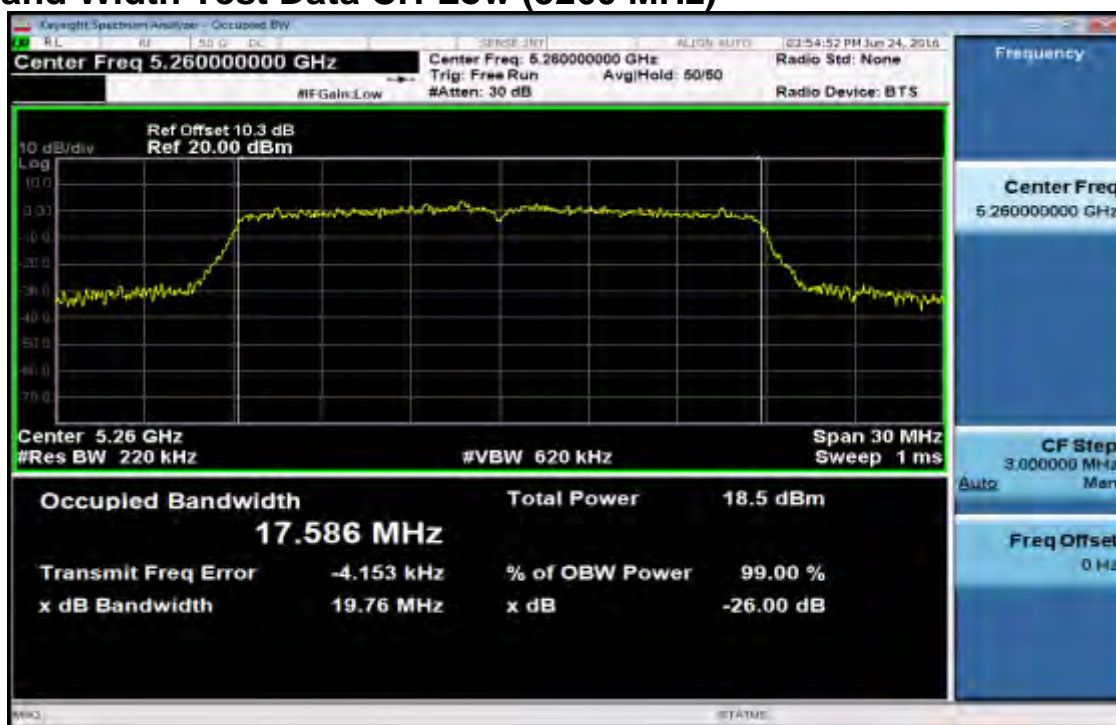
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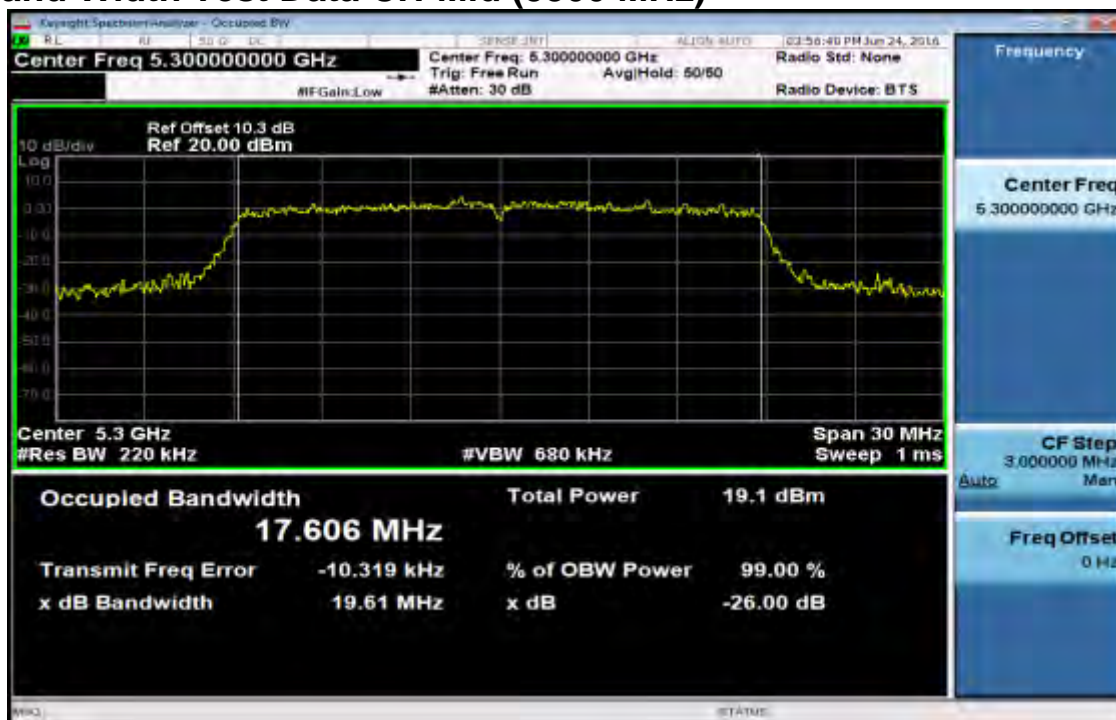
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## 802.11n HT20, 5250~5350 MHz (Main) 26dB Band Width Test Data CH-Low (5260 MHz)



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



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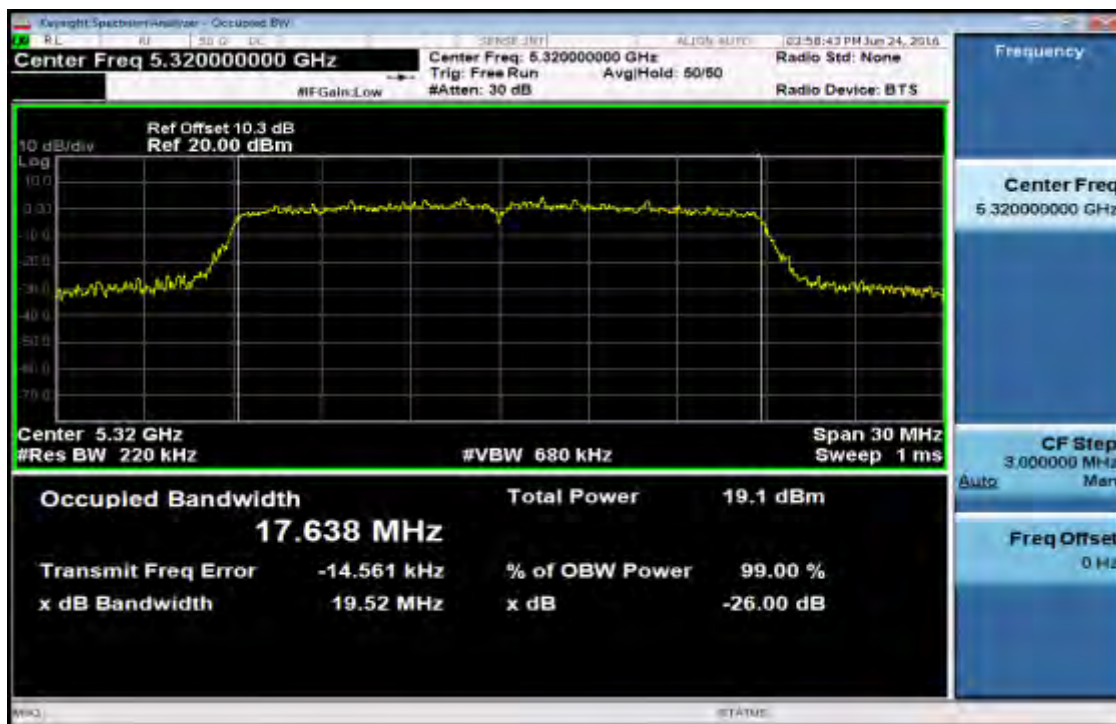
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## 26dB Band Width Test Data CH-High (5320 MHz)



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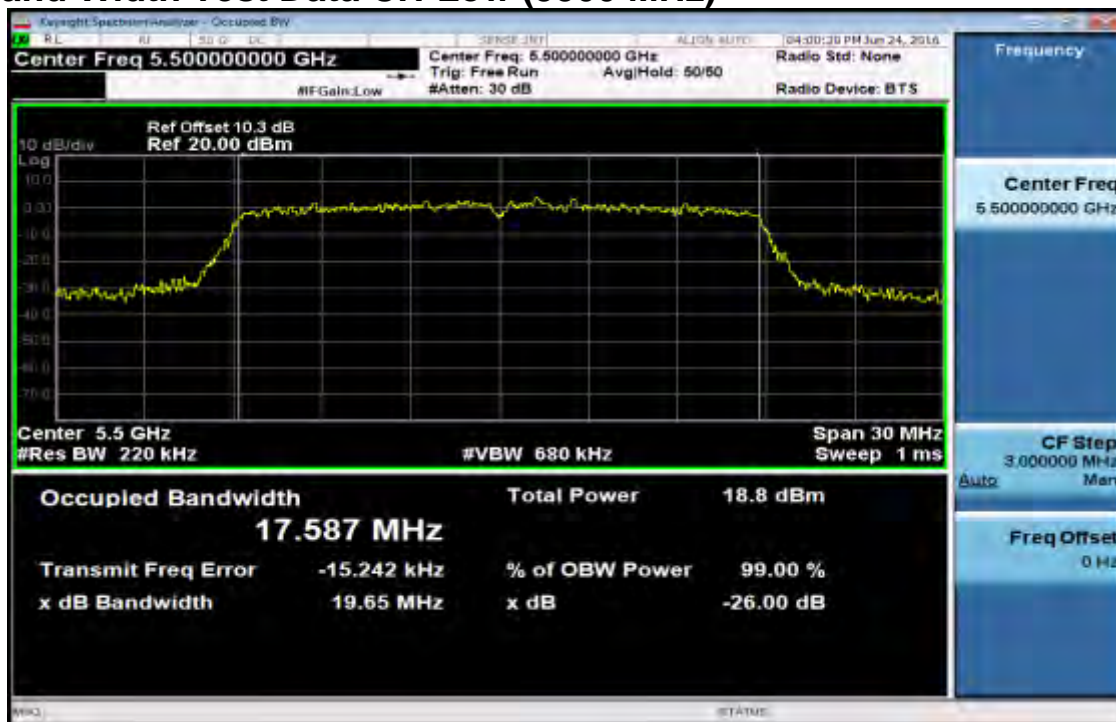
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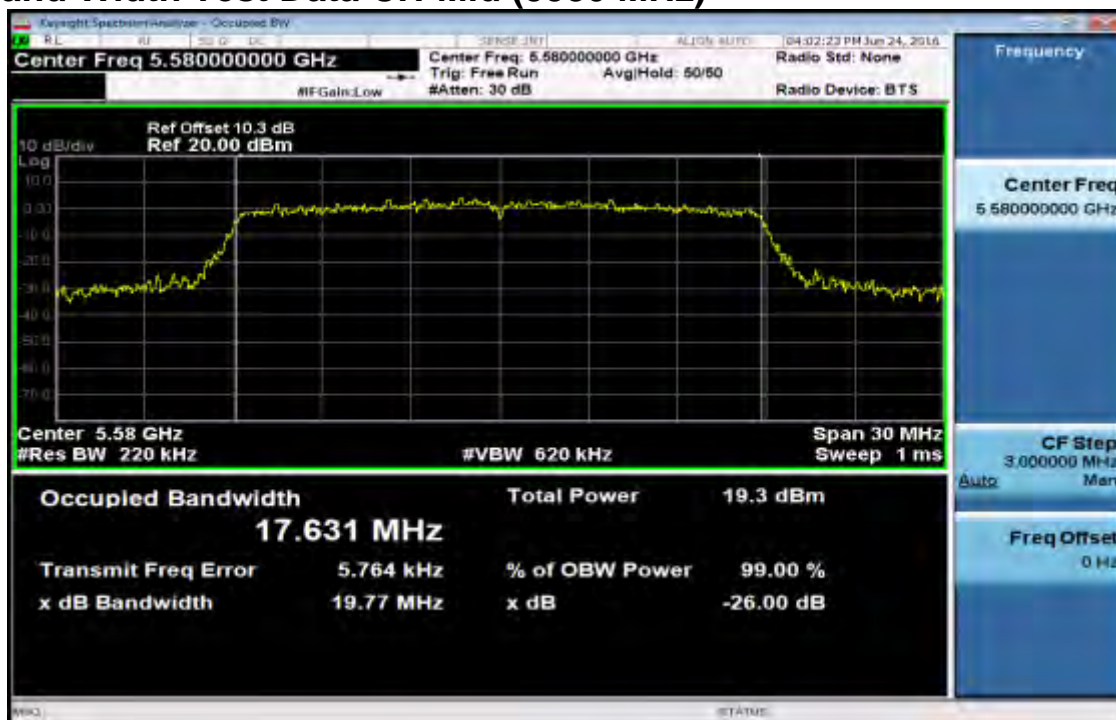
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## 802.11n HT20, 5470~5725 MHz (Main) 26dB Band Width Test Data CH-Low (5500 MHz)



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



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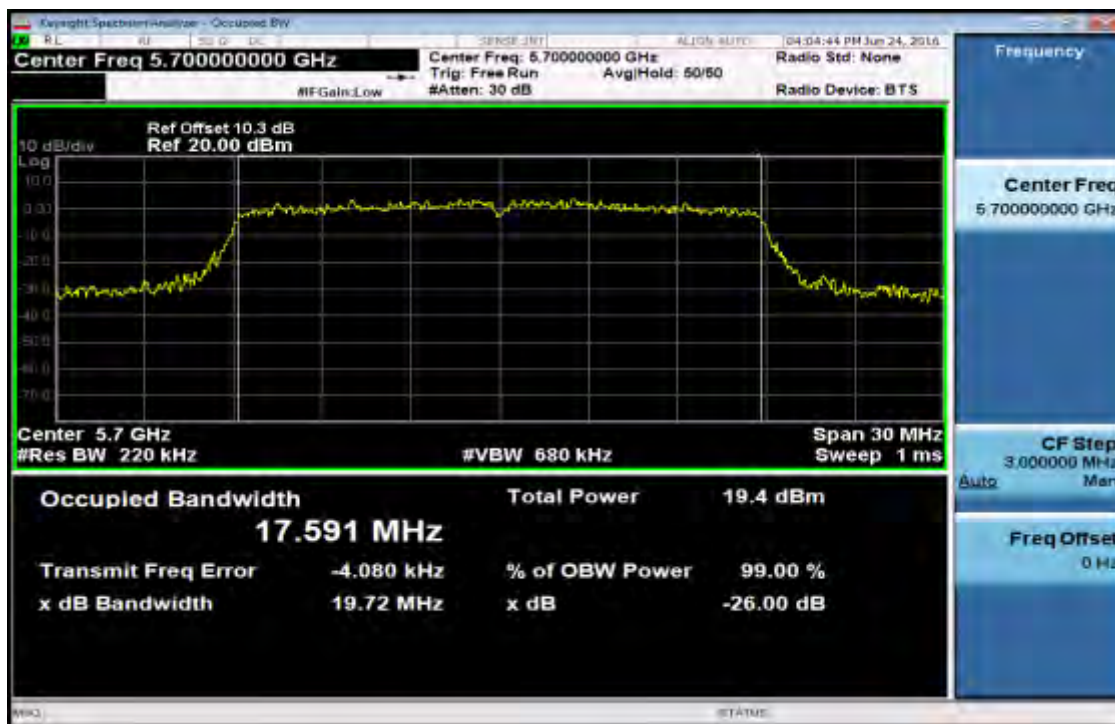
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## 26dB Band Width Test Data CH-High (5700 MHz)



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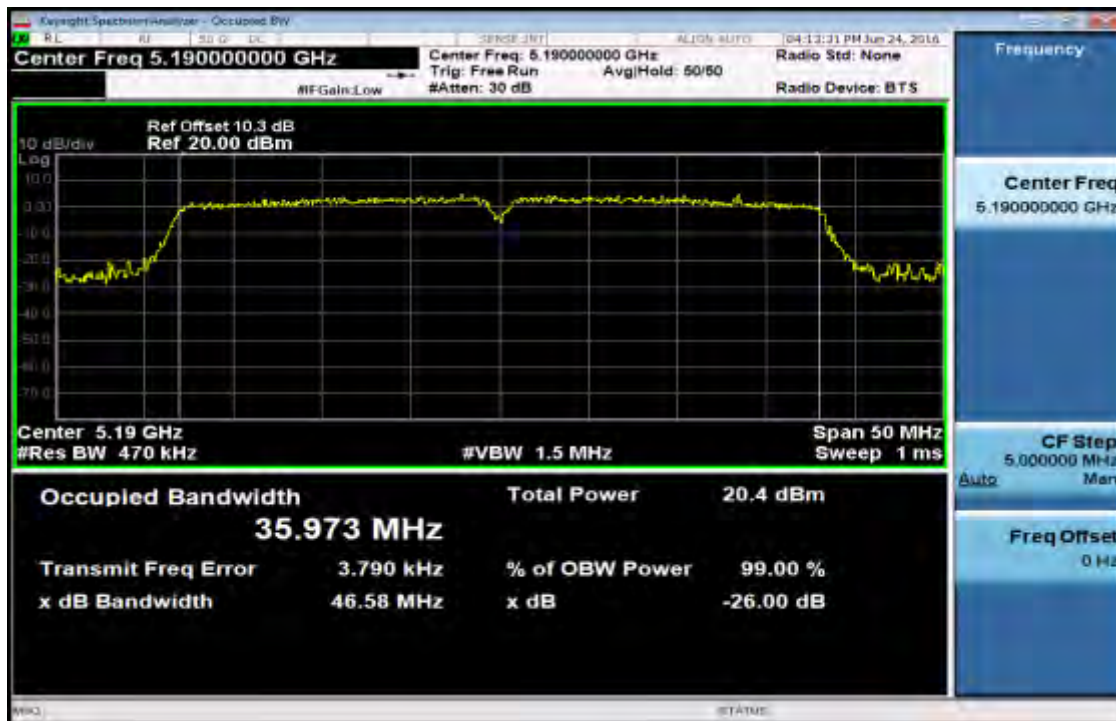
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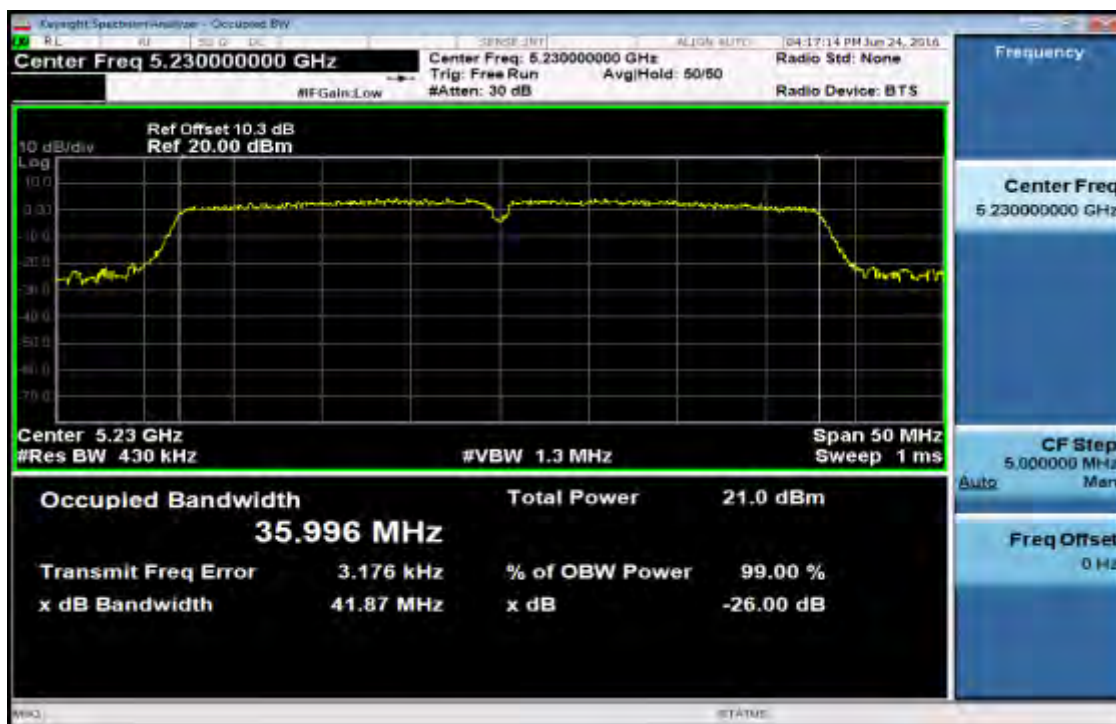
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## 802.11n HT40, 5150~5250 MHz (Main) 26dB Band Width Test Data CH-Low (5190 MHz)



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



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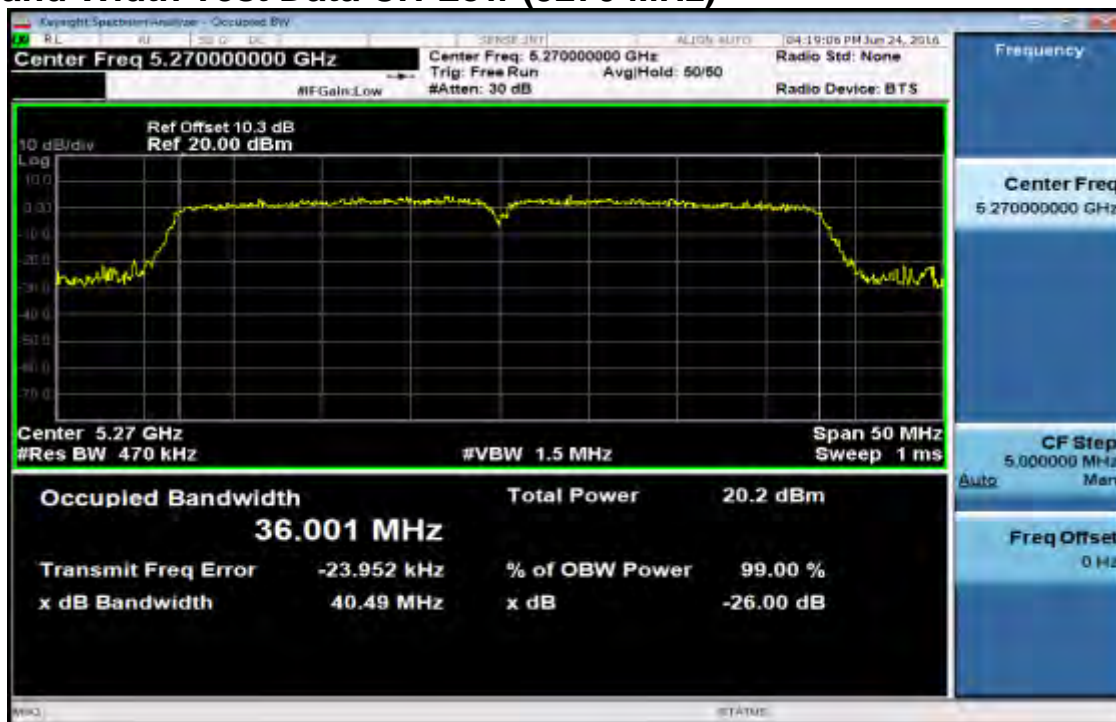
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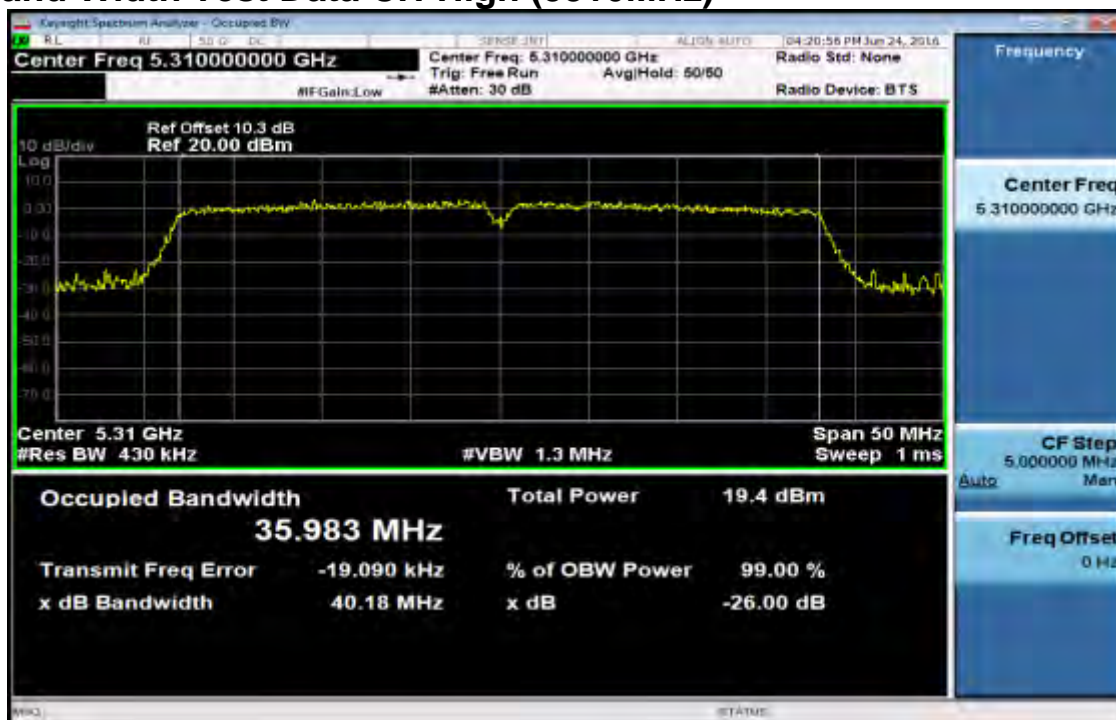
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## 802.11n HT40, 5250~5350 MHz (Main) 26dB Band Width Test Data CH-Low (5270 MHz)



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



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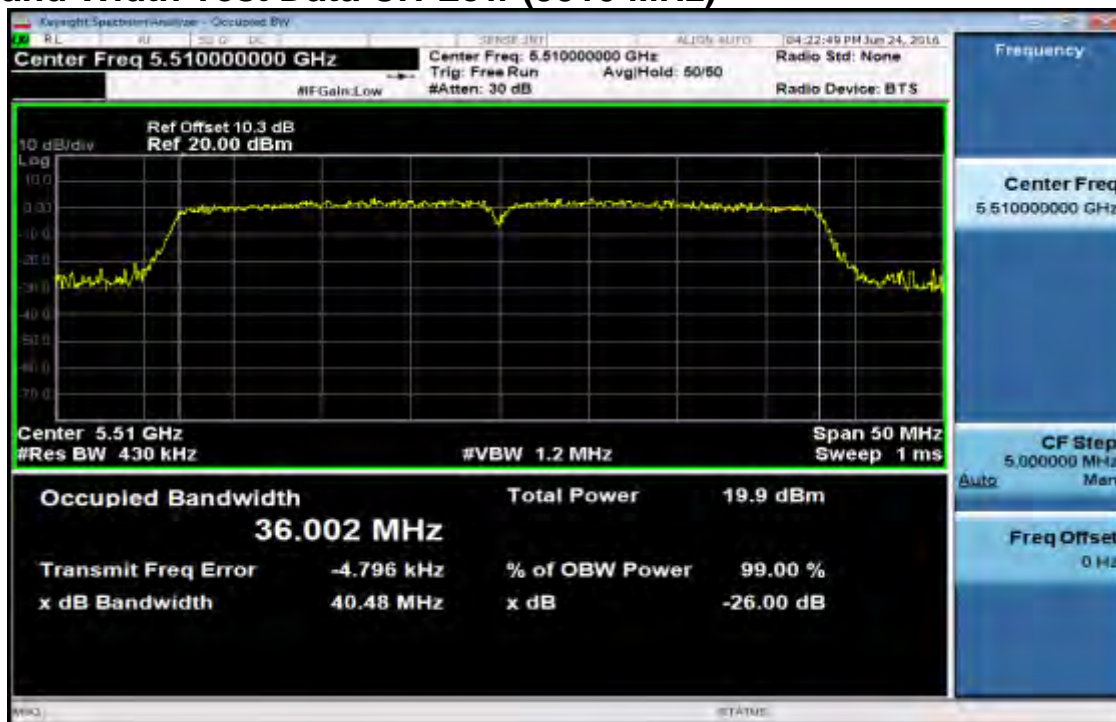
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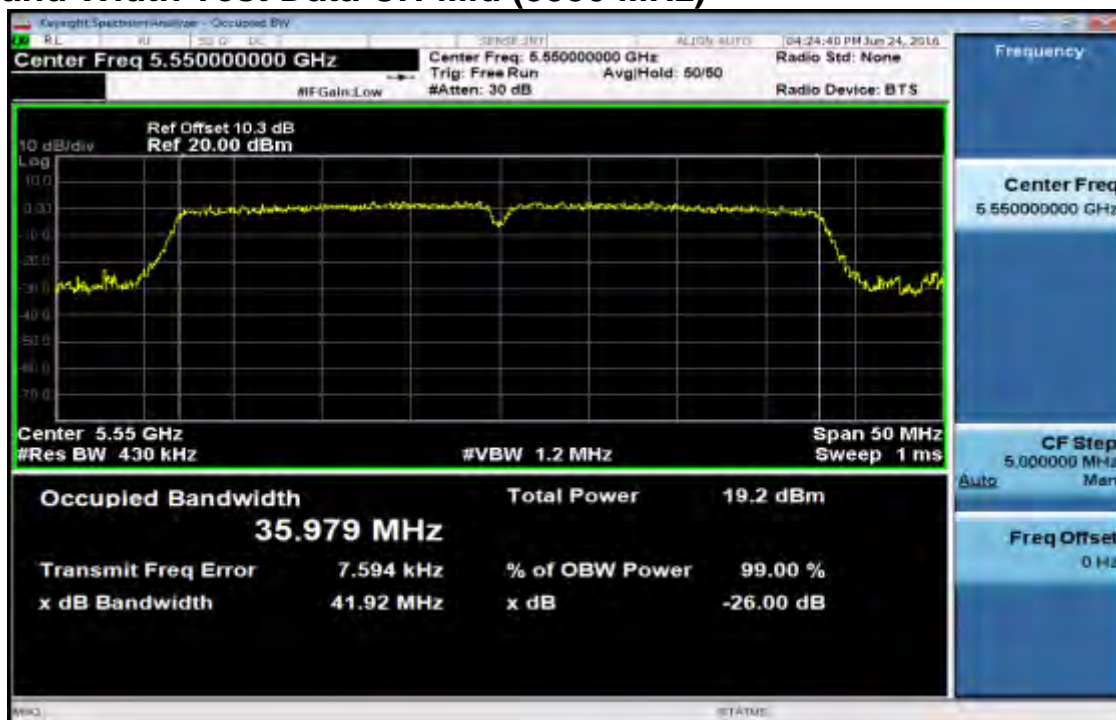
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## 802.11n HT40, 5470~5725 MHz (Main) 26dB Band Width Test Data CH-Low (5510 MHz)



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



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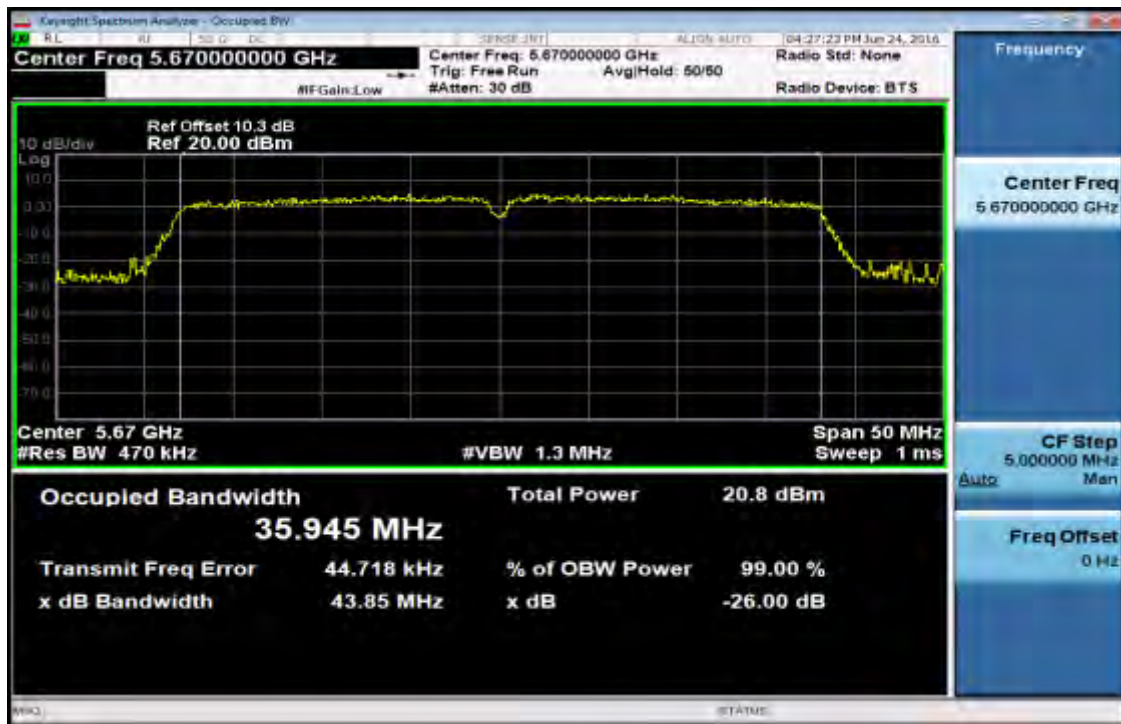
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## 26dB Band Width Test Data CH-High (5670 MHz)



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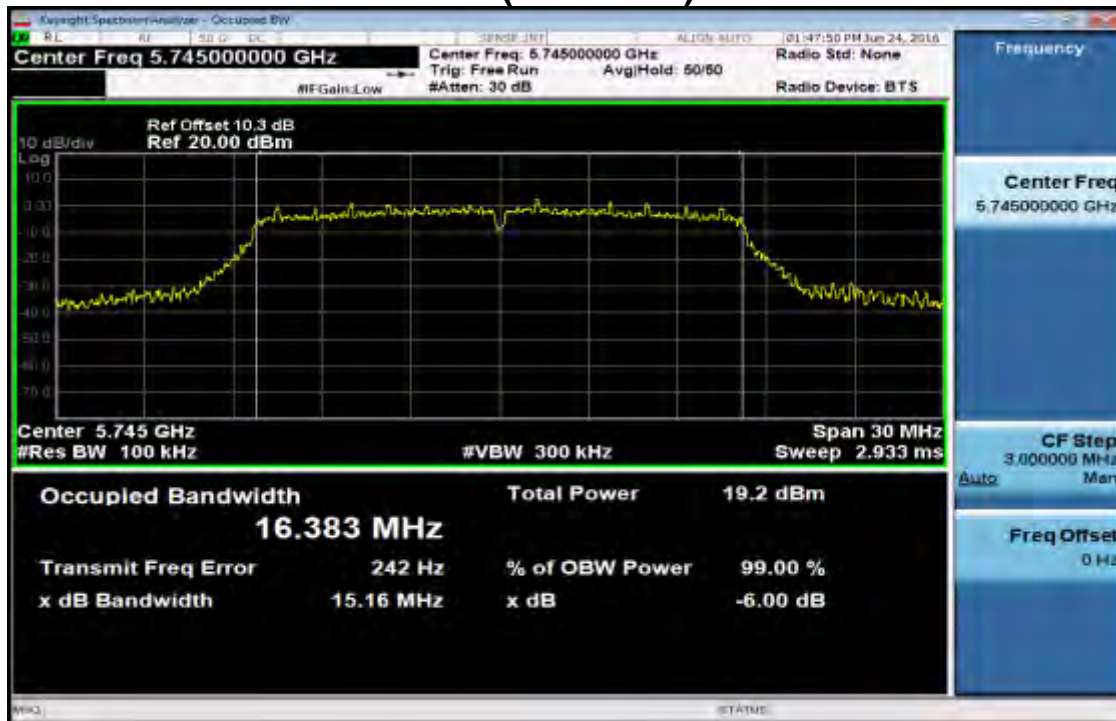
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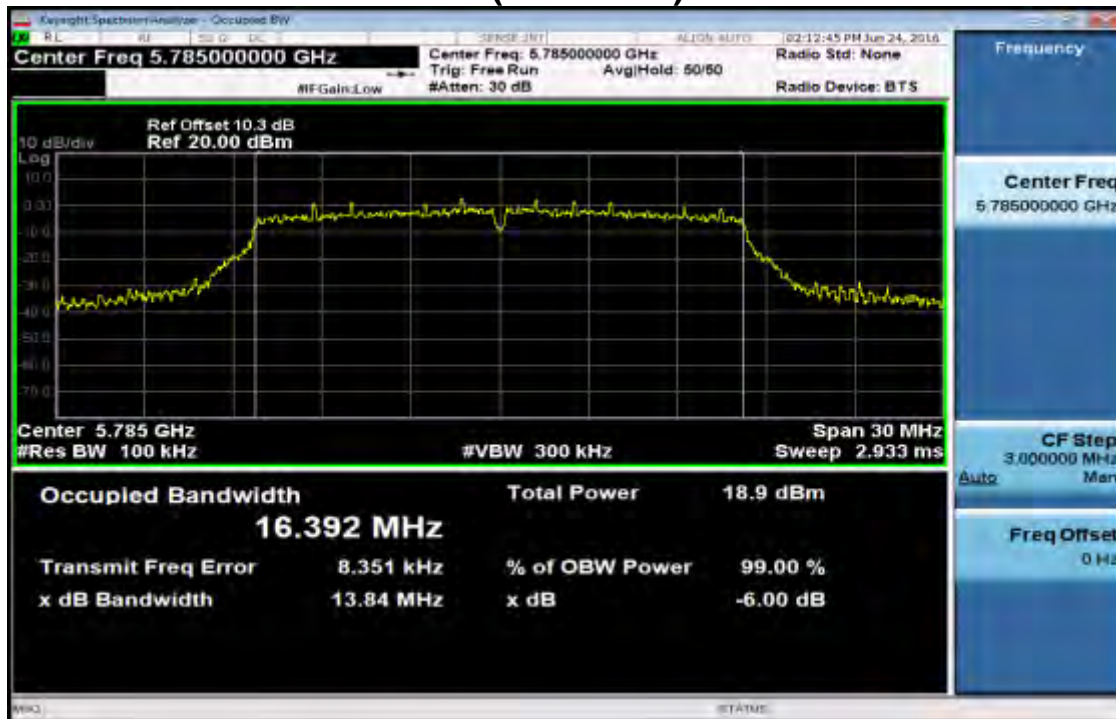
## 6dB Band Width measure with Peak detector for FCC

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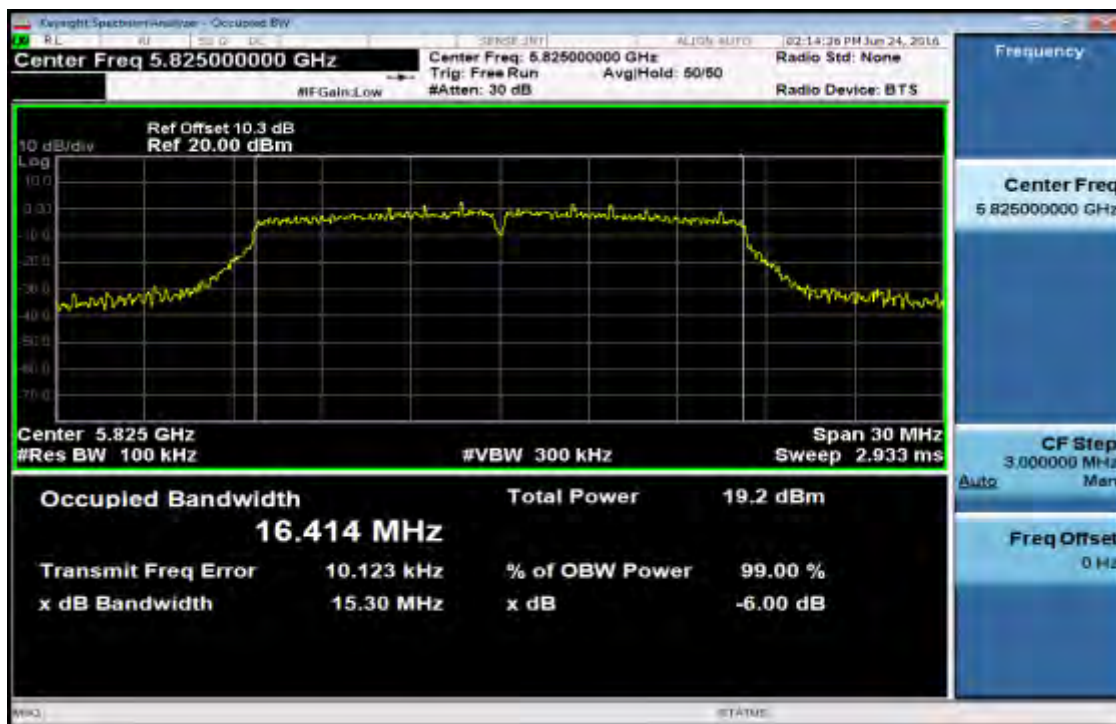
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## 6dB Band Width Test Data CH-High (5825 MHz)



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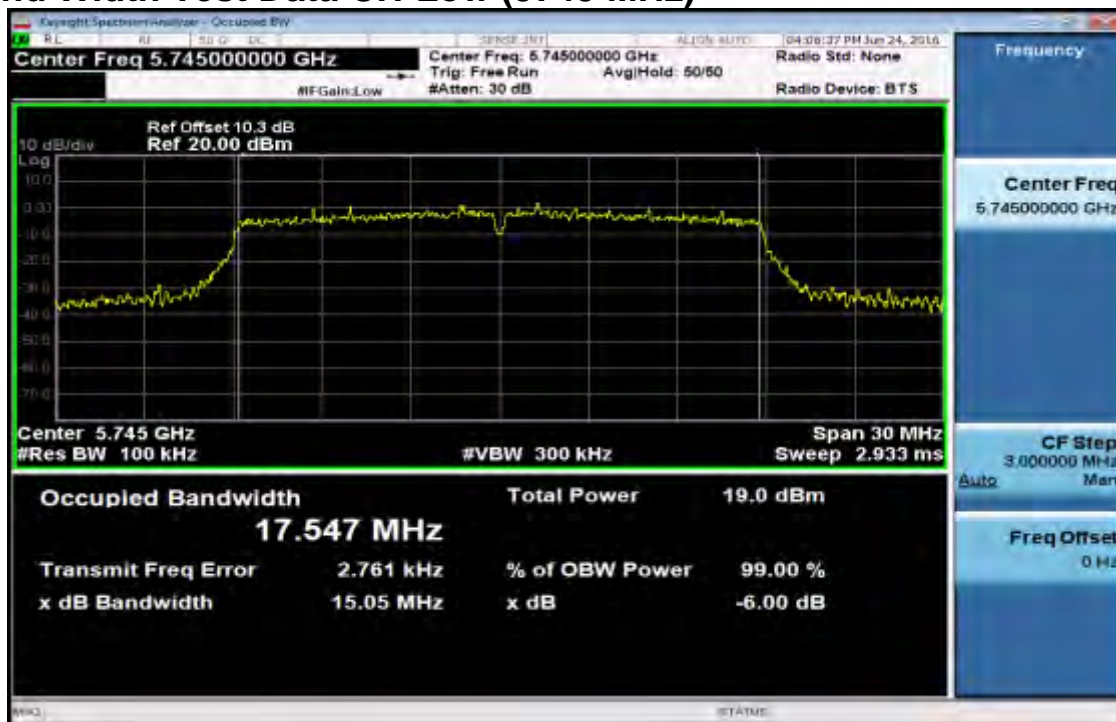
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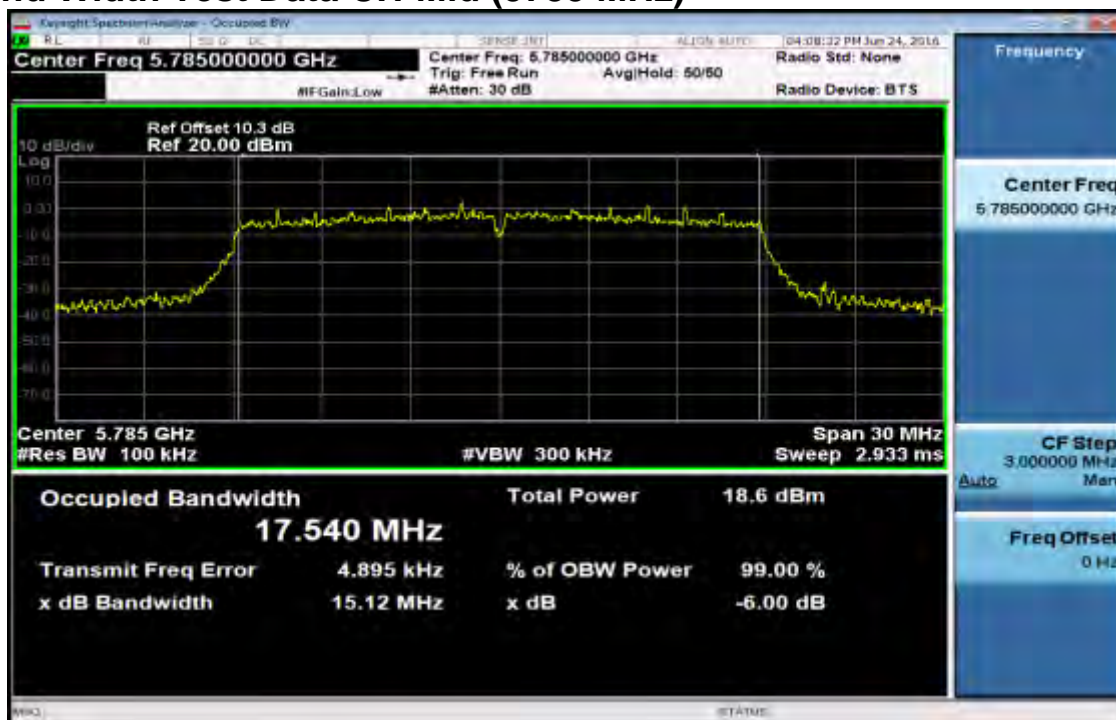
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## 802.11n\_HT20, 5725~5850 MHz (Main) 6dB Band Width Test Data CH-Low (5745 MHz)



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



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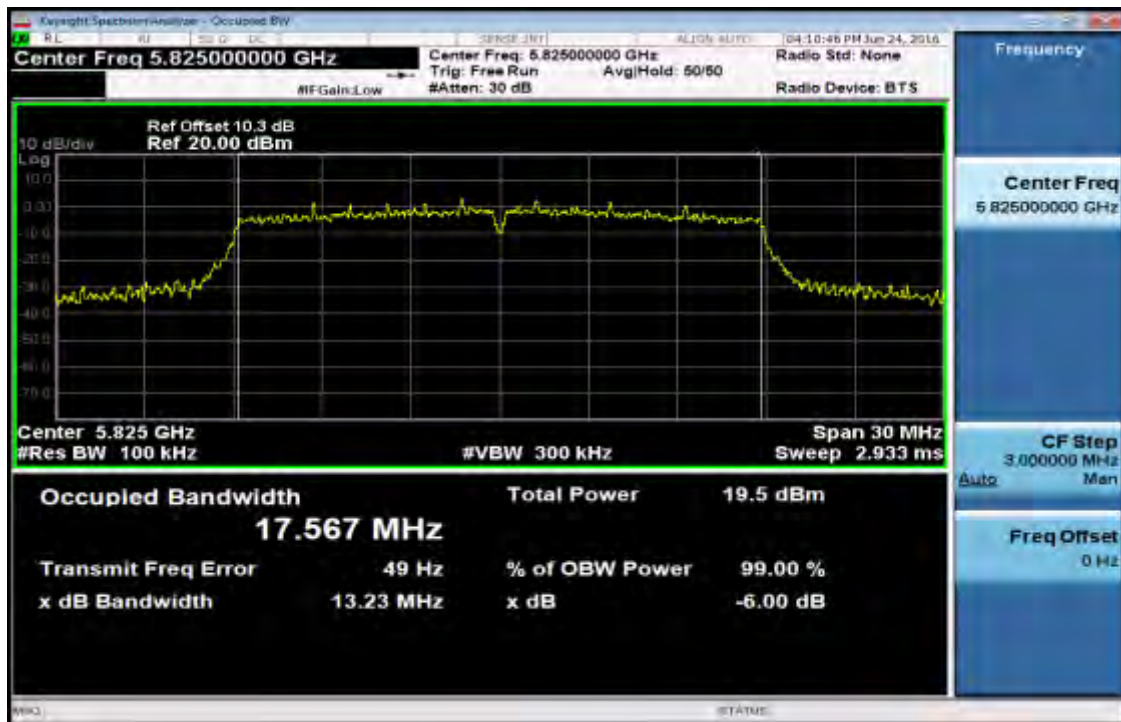
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## 6dB Band Width Test Data CH-High (5825 MHz)



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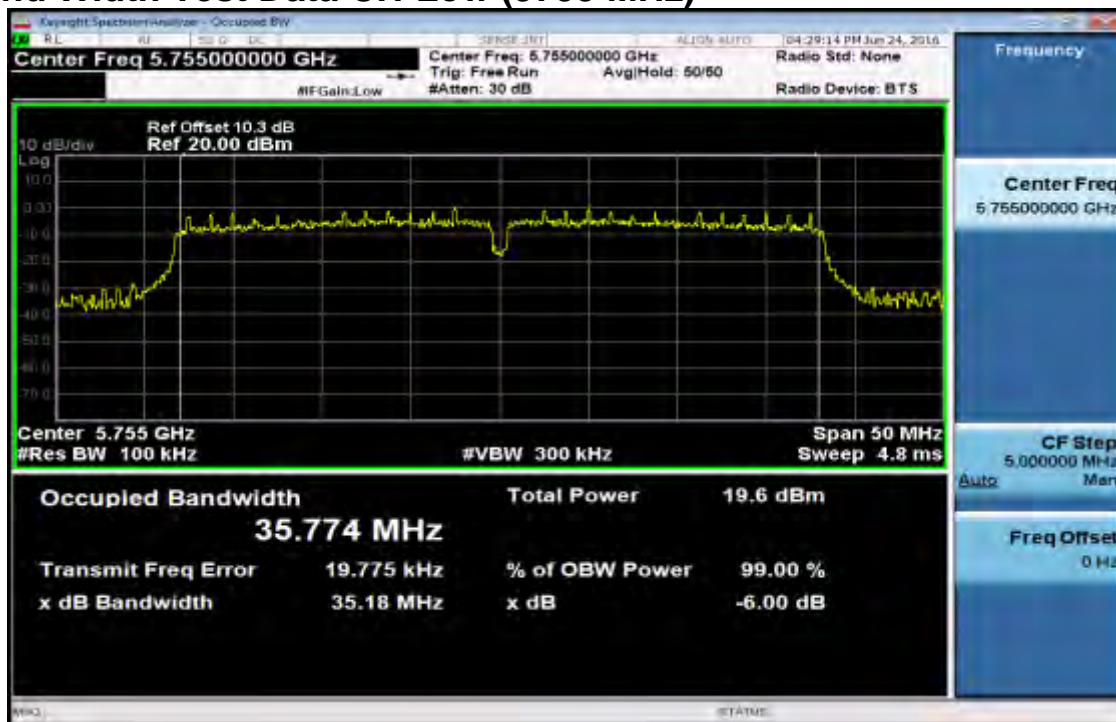
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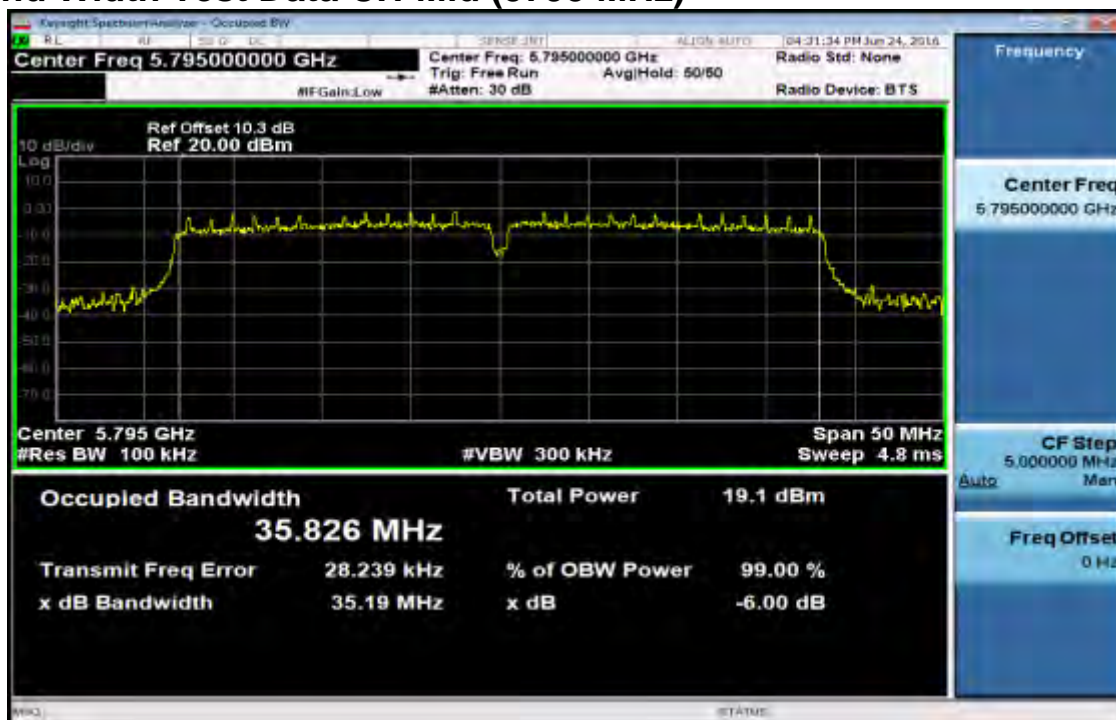
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## 802.11n\_HT40, 5725~5850 MHz (Main) 6dB Band Width Test Data CH-Low (5755 MHz)



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



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## 9. MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

### 9.1 Standard Applicable

OPERZTION Band	EUT CATEGORY		LIMIT
U-NII-1		Access Point (Mater device )	1 Watt(30dBm)
		Fixed point-to-point Acess Ponit	1 Watt(30dBm)
	√	Mobile and portable clinet device	250mW(23.98dBm)
U-NII-2A	√		250mW(23.98dBm) or 11dBm+10 log B
U-NII-2C	√		250mW(23.98dBm) or 11dBm+10 log B
U-NII-3	√		1 Watt(30dBm)

If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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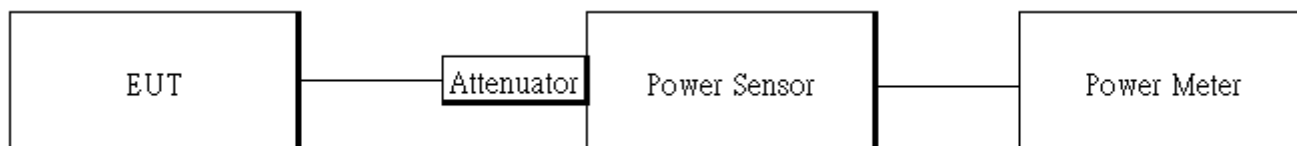
## 9.2 Measurement Procedure

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  $10 \log(1/\text{duty cycle})$ .
6. Repeat above procedures until all frequency (low, middle, and high channel) measured were complete.

## 9.3 Measurement Equipment Used

SGS Conducted Room					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Power Meter	Anritsu	ML2495A	1005007	12/09/2015	12/08/2016
Power Sensor	Anritsu	MA2411B	917032	12/09/2015	12/08/2016
Spectrum Analyzer	Agilent	N9010A	MY50420195	12/21/2015	12/20/2016
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	11/05/2015	11/04/2016
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

CH	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	MCS0	12.97	19.815	23.98	PASS
44	5220	MCS0	12.97	19.815	23.98	PASS
48	5240	MCS0	<b>12.98</b>	<b>19.861</b>	23.98	PASS
52	5260	MCS0	12.83	19.187	23.98 or $11+10\log(B) = 23.87$	PASS
60	5300	MCS0	12.93	19.634	23.98 or $11+10\log(B) = 23.90$	PASS
64	5320	MCS0	<b>12.97</b>	<b>19.815</b>	23.98 or $11+10\log(B) = 23.87$	PASS
100	5500	MCS0	<b>12.98</b>	<b>19.861</b>	23.98 or $11+10\log(B) = 23.95$	PASS
116	5580	MCS0	12.94	19.679	23.98 or $11+10\log(B) = 23.91$	PASS
140	5700	MCS0	12.97	19.815	23.98 or $11+10\log(B) = 23.84$	PASS
149	5745	MCS0	<b>12.99</b>	<b>19.907</b>	30	PASS
157	5785	MCS0	12.94	19.679	30	PASS
165	5825	MCS0	12.88	19.409	30	PASS

#### 802.11n\_HT20\_Main

CH	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	MCS0	12.93	19.634	23.98	PASS
44	5220	MCS0	12.97	19.815	23.98	PASS
48	5240	MCS0	12.94	19.679	23.98	PASS
52	5260	MCS0	12.91	19.543	23.98 or $11+10\log(B) = 23.96$	PASS
60	5300	MCS0	12.93	19.634	23.98 or $11+10\log(B) = 23.92$	PASS
64	5320	MCS0	12.90	19.498	23.98 or $11+10\log(B) = 23.90$	PASS
100	5500	MCS0	12.94	19.679	23.98 or $11+10\log(B) = 23.93$	PASS
116	5580	MCS0	12.97	19.815	23.98 or $11+10\log(B) = 23.96$	PASS
140	5700	MCS0	12.99	19.907	23.98 or $11+10\log(B) = 23.95$	PASS
149	5745	MCS0	12.97	19.815	30	PASS
157	5785	MCS0	12.86	19.320	30	PASS
165	5825	MCS0	12.89	19.454	30	PASS

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### 802.11n\_HT40\_Main

CH	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
38	5190	MCS0	12.86	19.320	23.98	PASS
46	5230	MCS0	12.87	19.364	23.98	PASS
54	5270	MCS0	12.92	19.588	23.98 or $11+10\log(B) = 27.07$	PASS
62	5310	MCS0	12.96	19.770	23.98 or $11+10\log(B) = 27.04$	PASS
102	5510	MCS0	12.83	19.187	23.98 or $11+10\log(B) = 27.07$	PASS
110	5550	MCS0	12.96	19.770	23.98 or $11+10\log(B) = 27.22$	PASS
134	5670	MCS0	12.89	19.454	23.98 or $11+10\log(B) = 27.42$	PASS
151	5755	MCS0	12.84	19.231	30	PASS
159	5795	MCS0	12.91	19.543	30	PASS

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## 10. PEAK POWER SPECTRAL DENSITY

### 10.1 Standard Applicable

OPERZTION Band	EUT CATEGORY		LIMIT
U-NII-1		Access Point (Mater device )	17dBm/ MHz
		Fixed point-to-point Acess Ponit	
	√	Mobile and portable clinet device	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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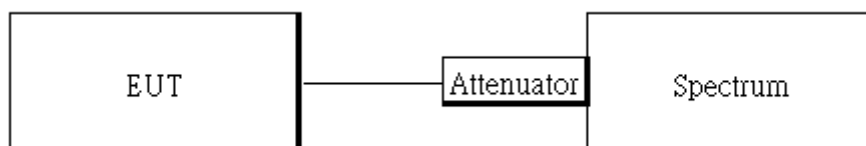
## 10.2 Measurement Procedure

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 $\geq$  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. Use 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.

## 10.3 Measurement Equipment Used

SGS Conducted Room					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum Analyzer	Agilent	N9010A	MY50420195	12/21/2015	12/20/2016
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

## 10.4 Test Set-up



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## 10.5 Measurement Result

POWER DENSITY 802.11a MODE			
Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)
5180	-2.26	17	-19.26
5220	-4.30	17	-21.30
5240	-2.73	17	-19.73
5260	-1.18	11	-12.18
5300	-2.76	11	-13.76
5320	-2.79	11	-13.79
5500	-0.92	11	-11.92
5580	-3.49	11	-14.49
5700	-3.23	11	-14.23
5745	7.58	30	-22.42
5785	7.75	30	-22.25
5825	7.58	30	-22.42

POWER DENSITY 802.11n HT20 MODE			
Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)
5180	0.02	17	-16.98
5220	-1.41	17	-18.41
5240	-3.44	17	-20.44
5260	-5.25	11	-16.25
5300	-3.28	11	-14.28
5320	-3.70	11	-14.70
5500	-3.43	11	-14.43
5580	-4.50	11	-15.50
5700	-2.97	11	-13.97
5745	7.76	30	-22.24
5785	6.16	30	-23.84
5825	6.99	30	-23.01

POWER DENSITY 802.11n HT40 MODE			
Frequency (MHz)	PPSD (dBm)	Limit (dBm)	Margin (dB)
5190	-9.26	17	-26.26
5230	-10.29	17	-27.29
5270	-9.88	11	-20.88
5310	-10.84	11	-21.84
5510	-8.59	11	-19.59
5550	-9.73	11	-20.73
5670	-8.70	11	-19.70
5755	3.86	30	-26.14
5795	3.71	30	-26.29

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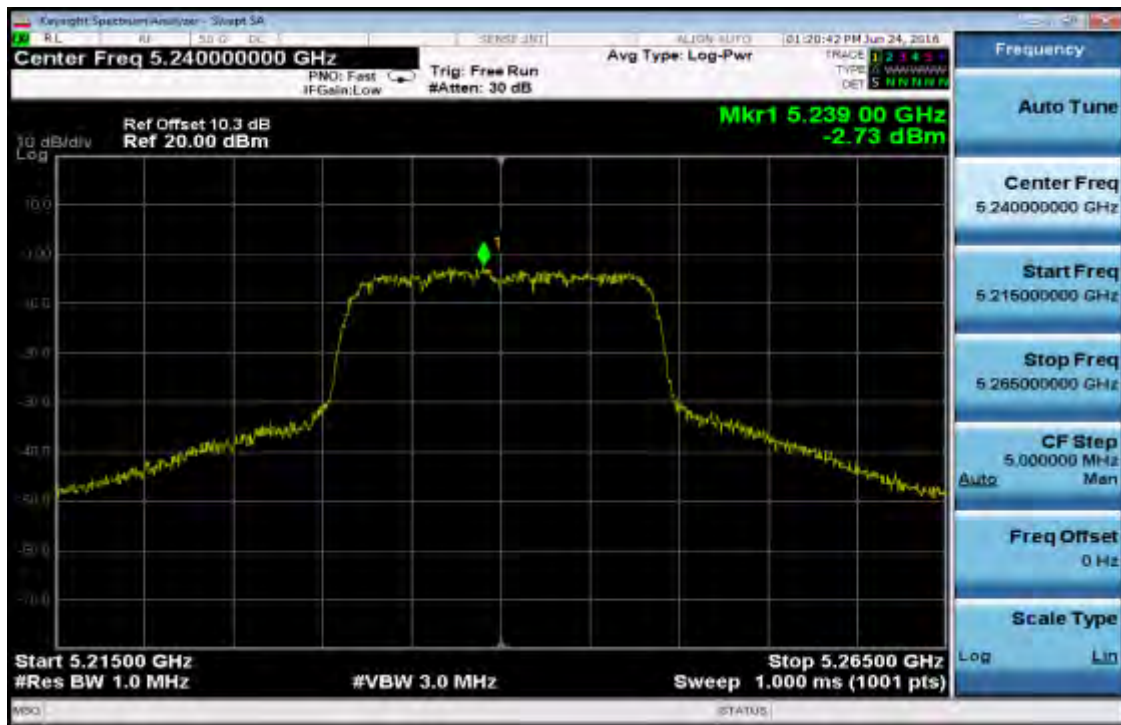
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## Peak Power Spectral Density Data Plot (CH High 5240 MHz)



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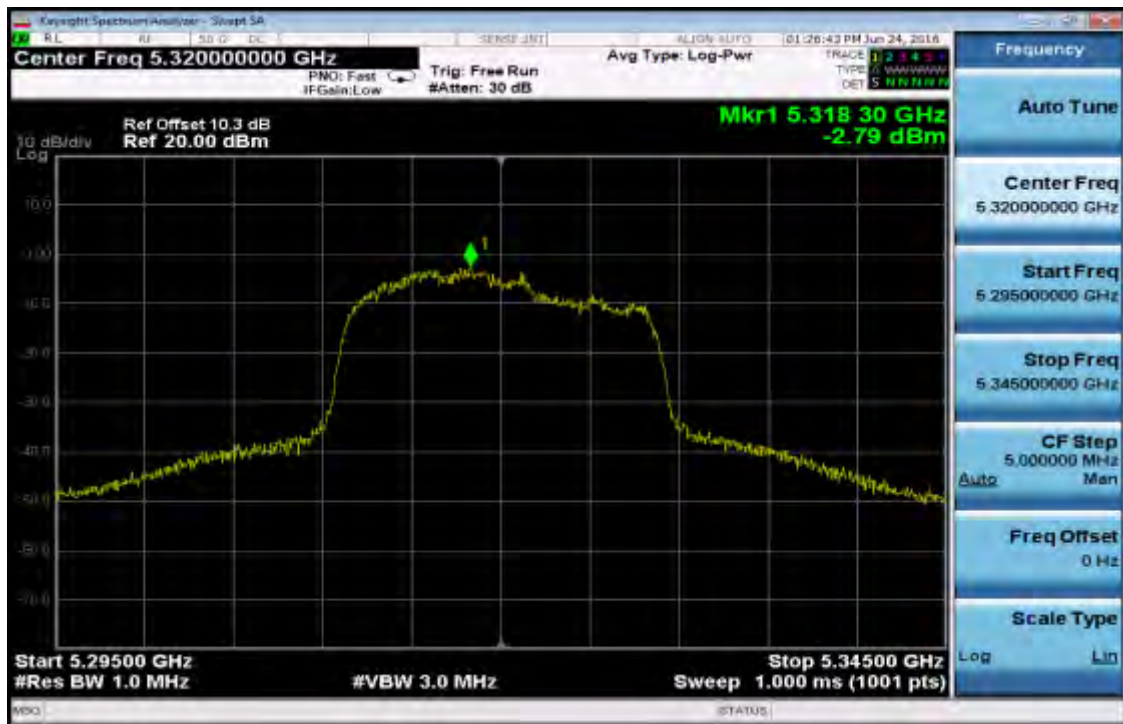
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## Peak Power Spectral Density Data Plot (CH High 5320 MHz)



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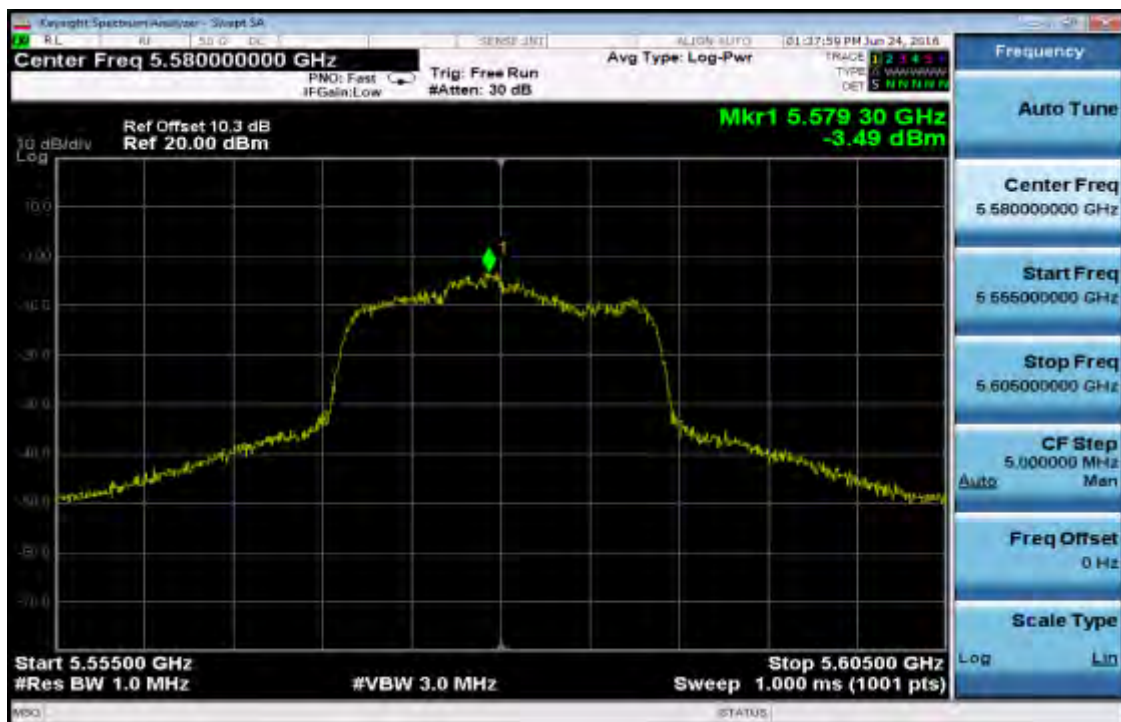
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## 802.11a 5470~5725 MHz

### Peak Power Spectral Density Data Plot (CH Low 5500 MHz)



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



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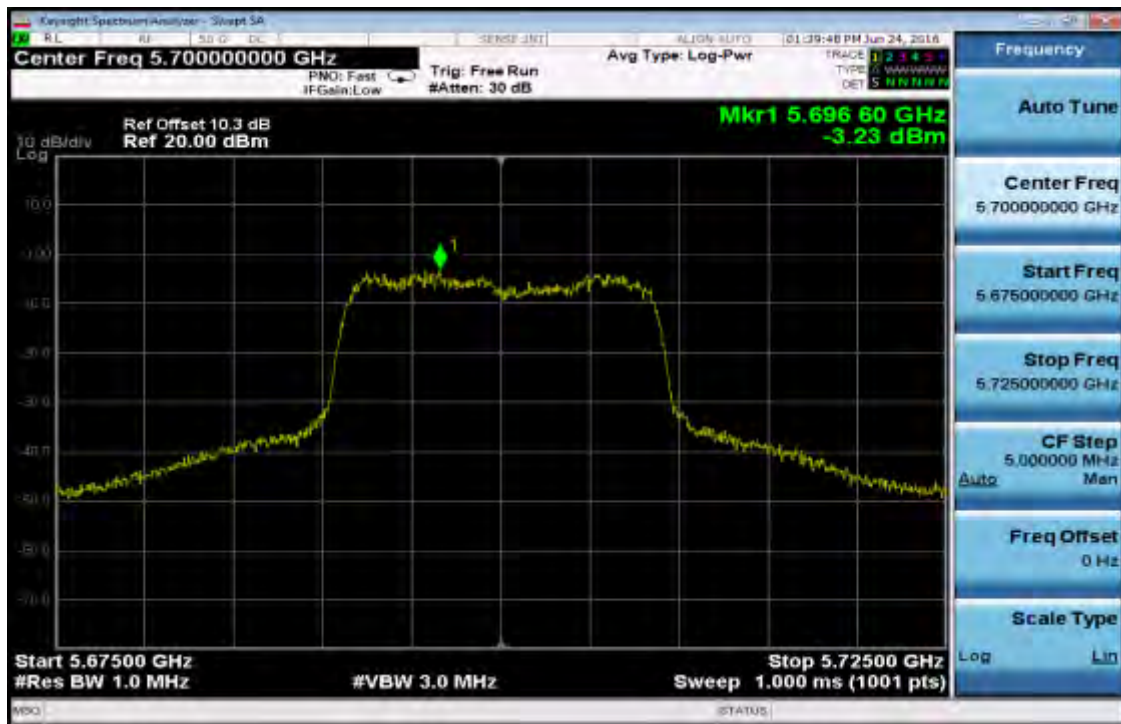
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## Peak Power Spectral Density Data Plot (CH High 5700 MHz)



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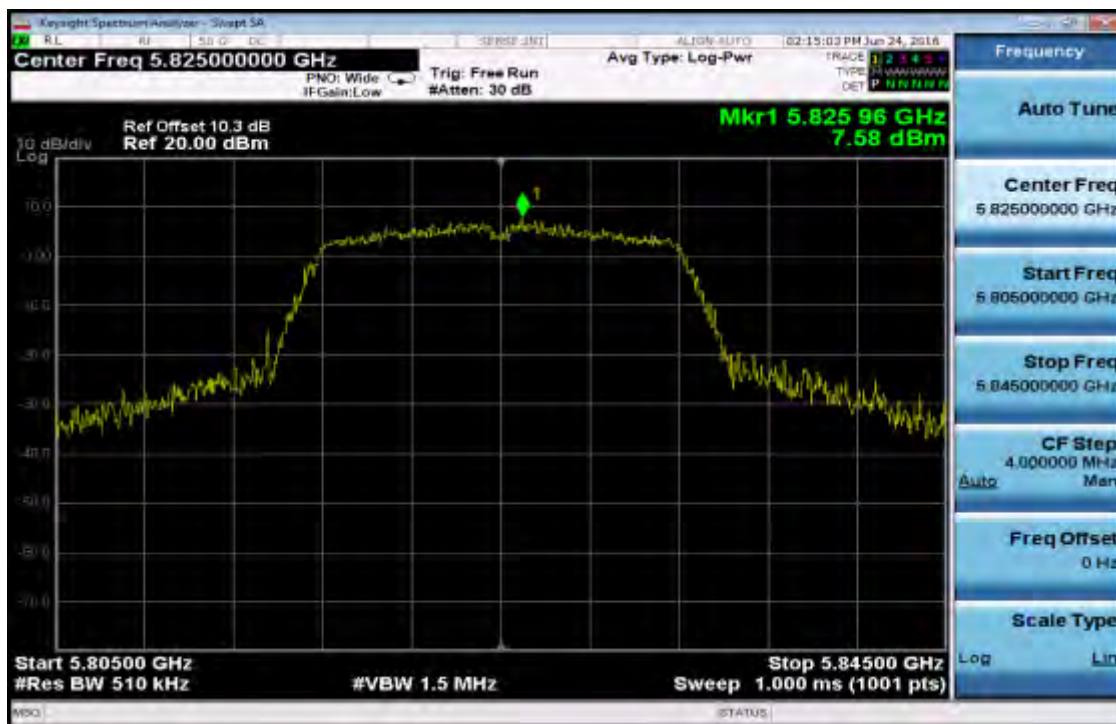
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## Peak Power Spectral Density Data Plot (CH High 5825 MHz)



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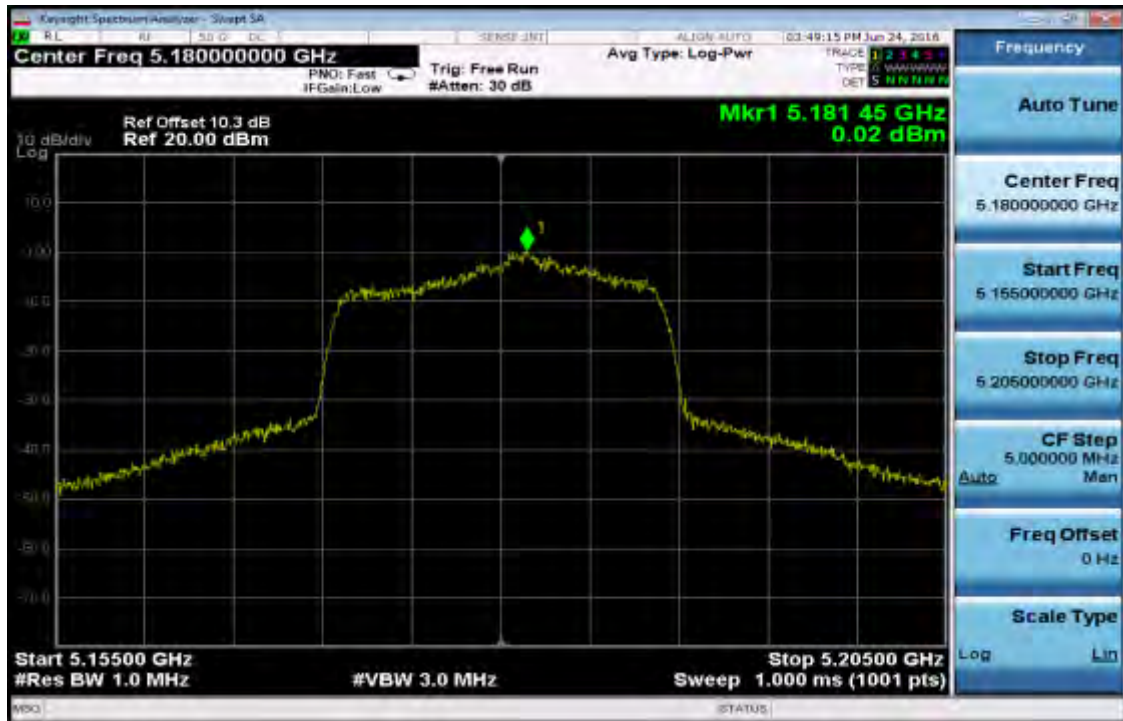
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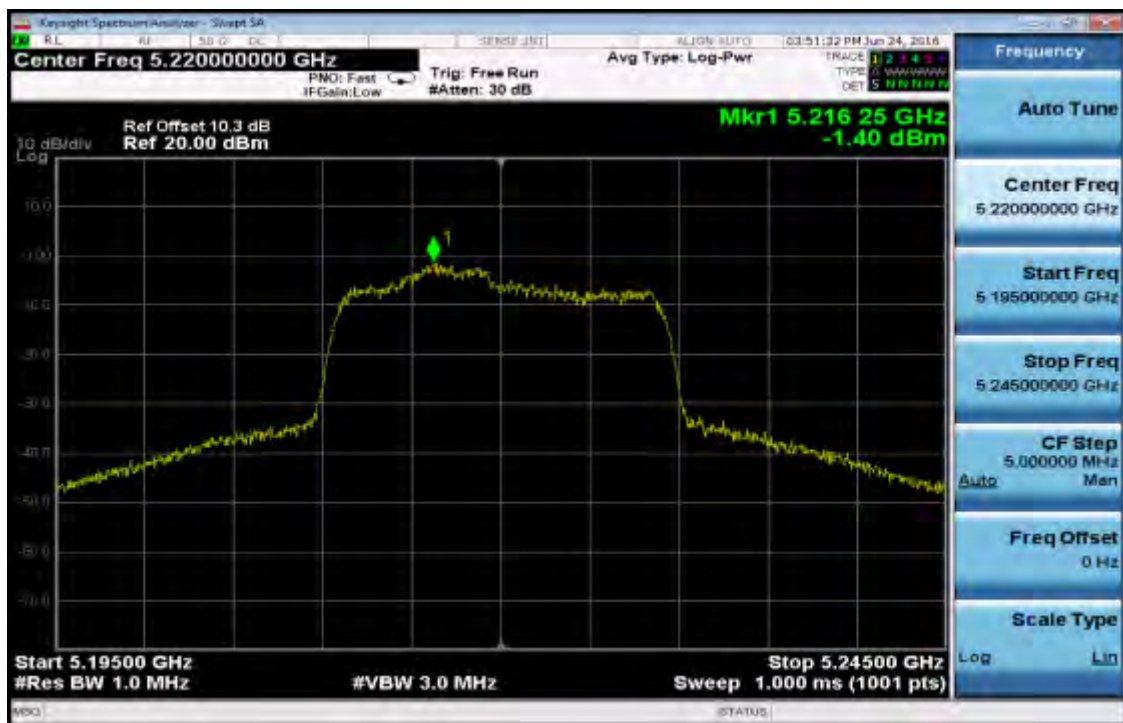
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## 802.11n HT20, 5150~5250 MHz

### Peak Power Spectral Density Data Plot (CH Low 5180 MHz)



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



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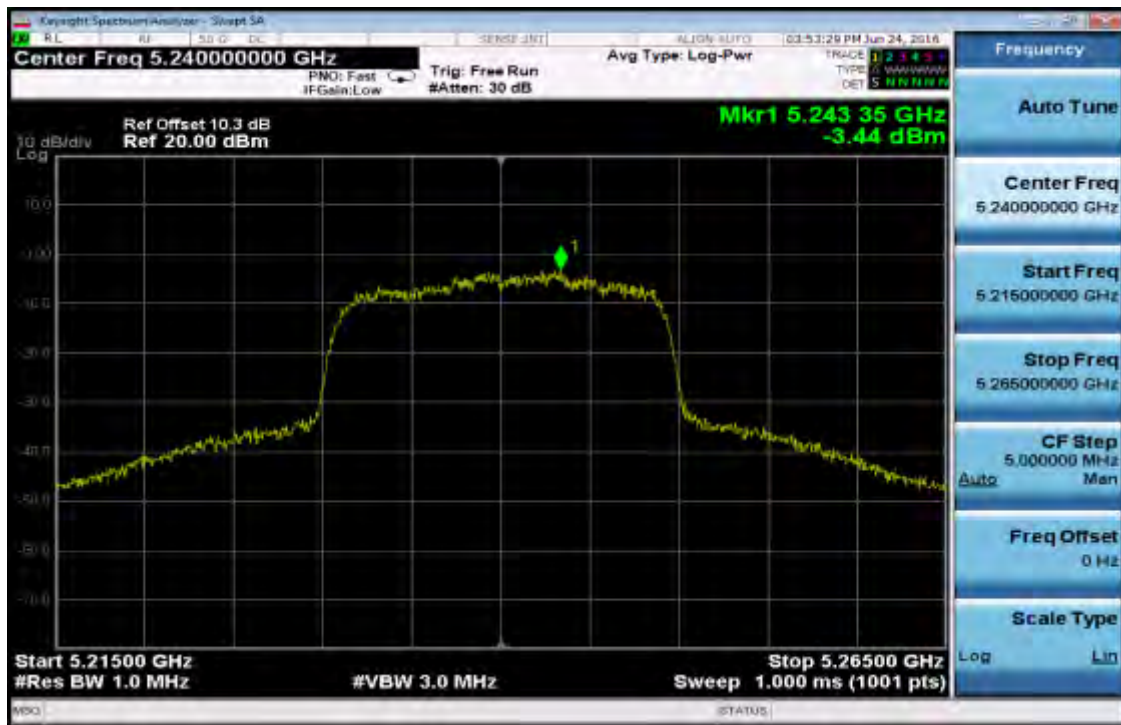
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## Peak Power Spectral Density Data Plot (CH High 5240 MHz)



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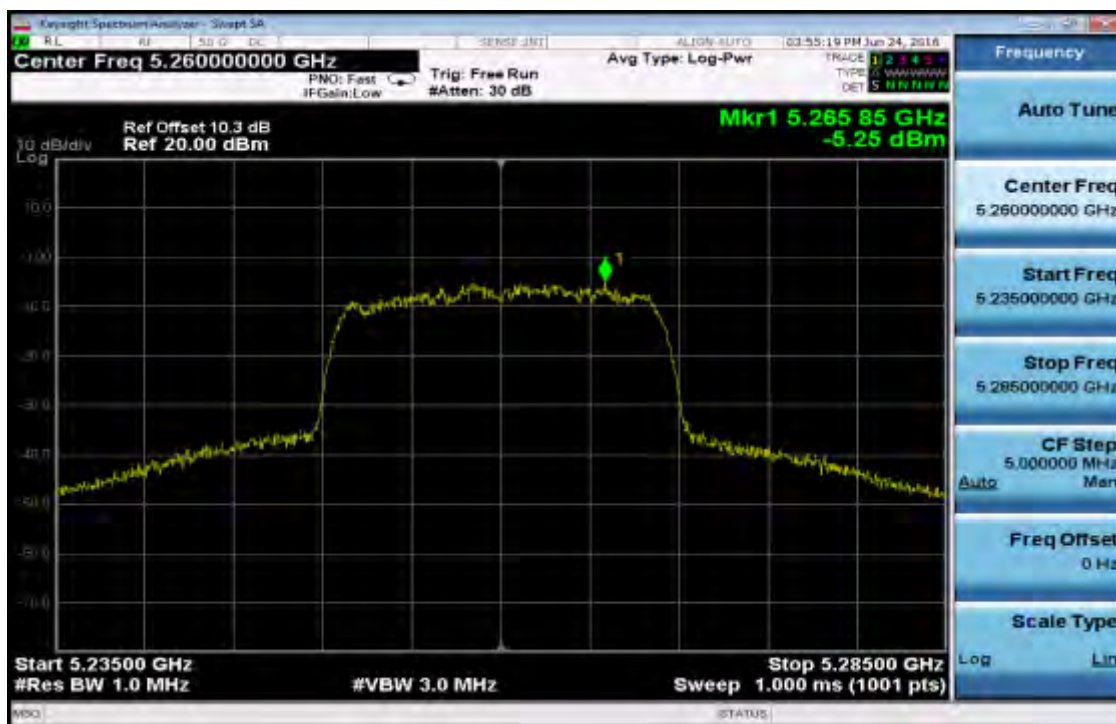
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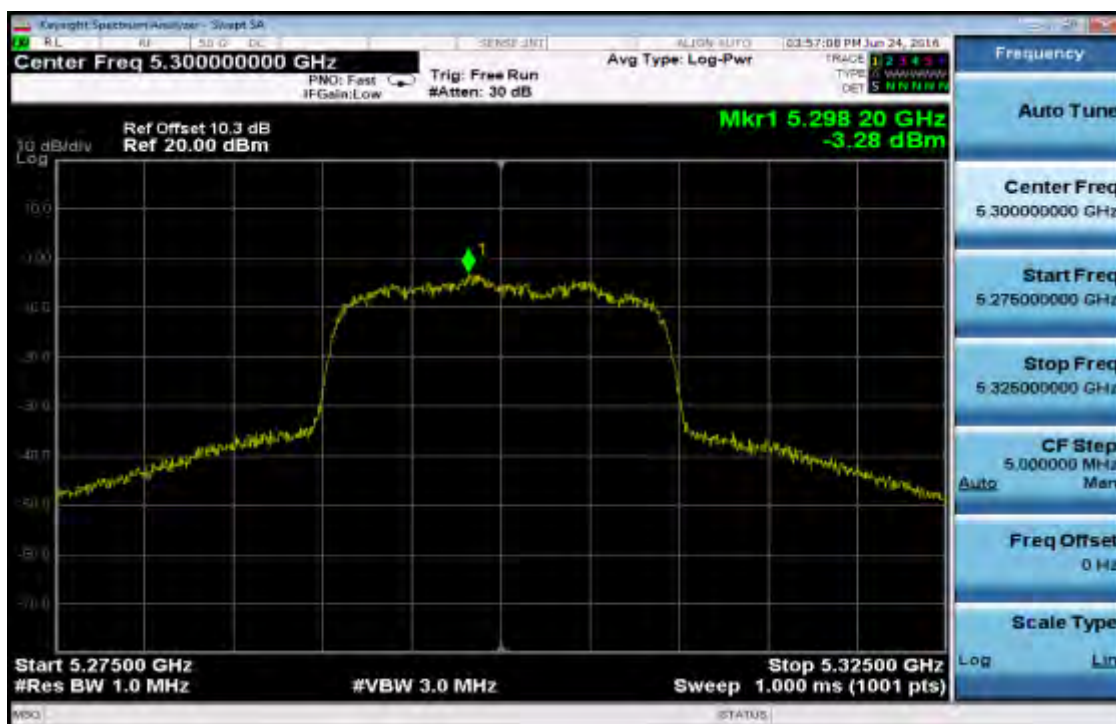


## 802.11n HT20, 5250~5350 MHz

### 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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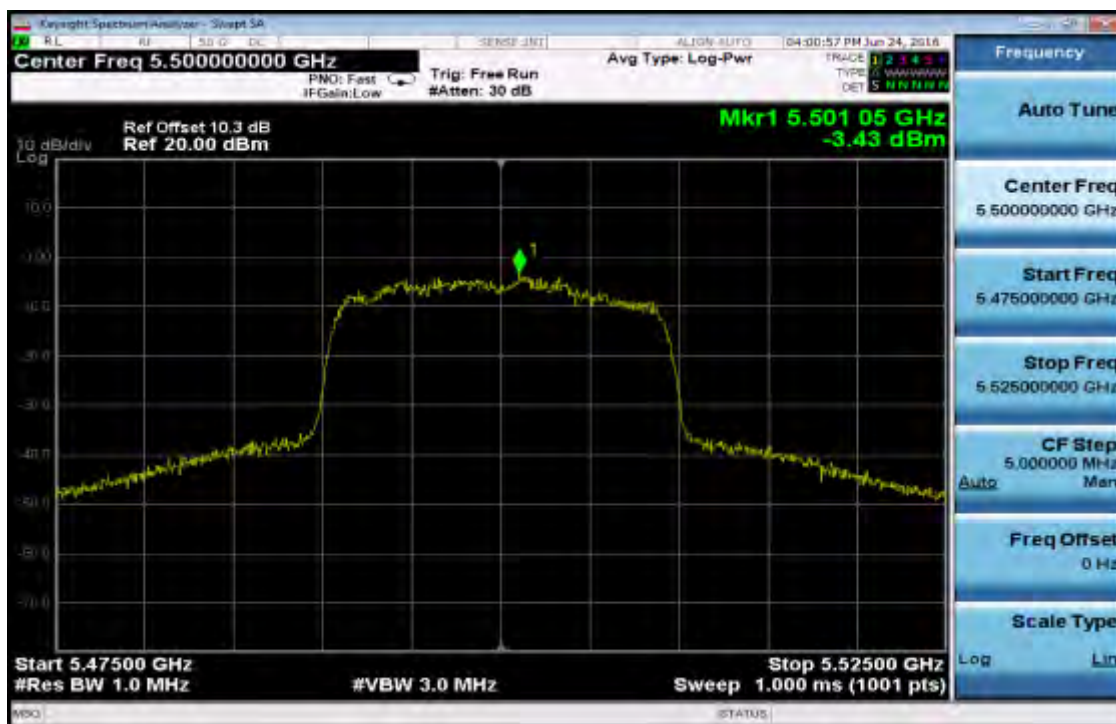
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## 802.11n HT20, 5470~5725 MHz

### Peak Power Spectral Density Data Plot (CH Low 5500 MHz)



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



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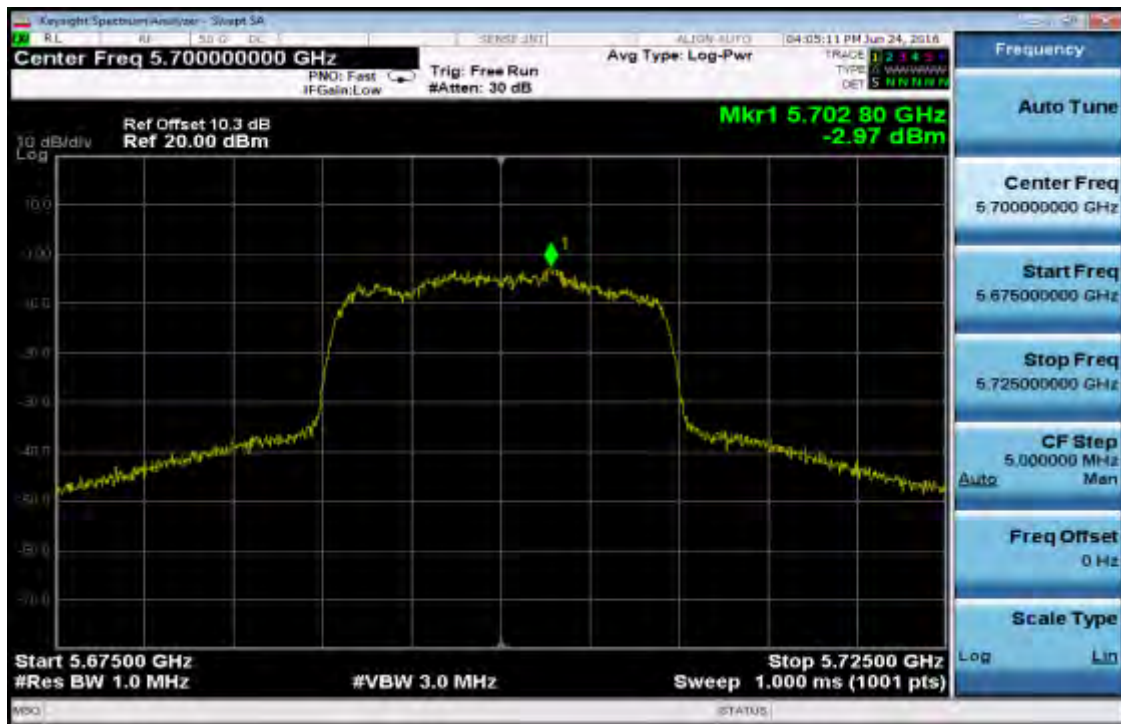
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## Peak Power Spectral Density Data Plot (CH High 5700 MHz)



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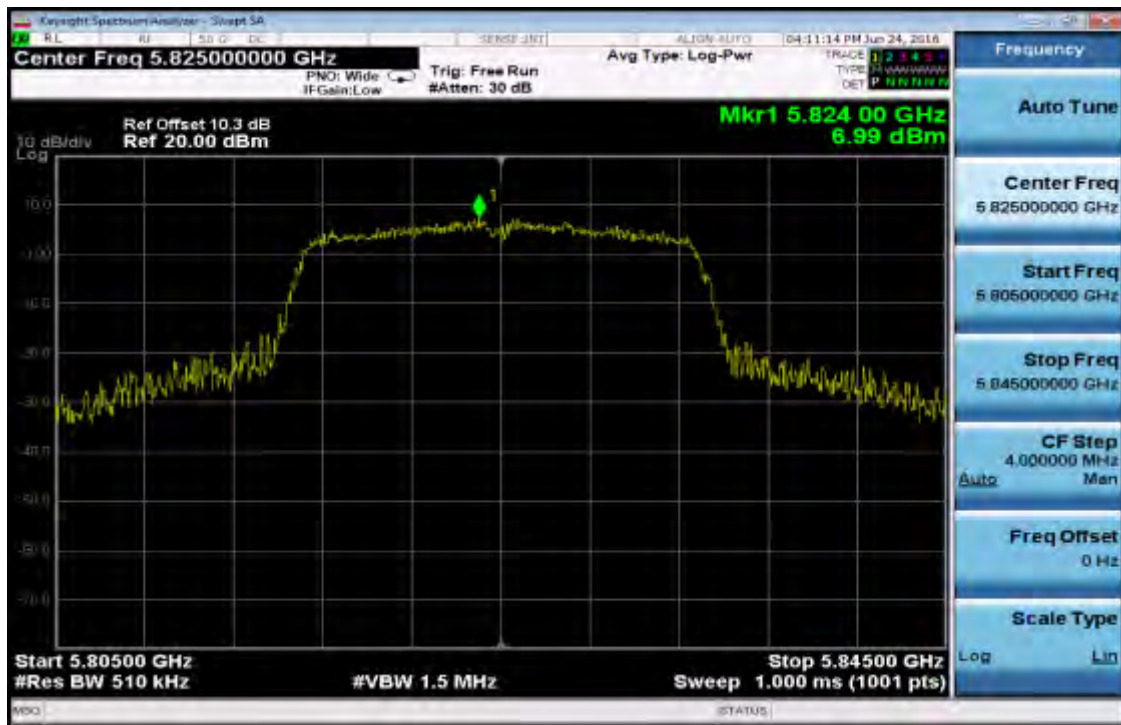
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## Peak Power Spectral Density Data Plot (CH High 5825 MHz)



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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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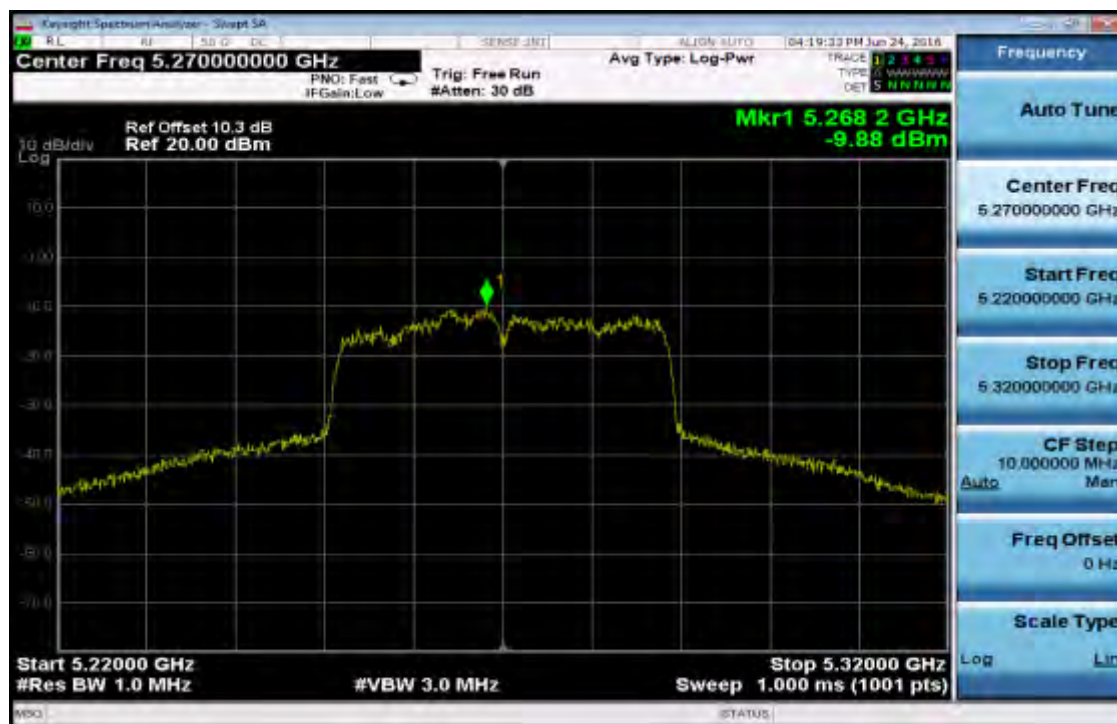
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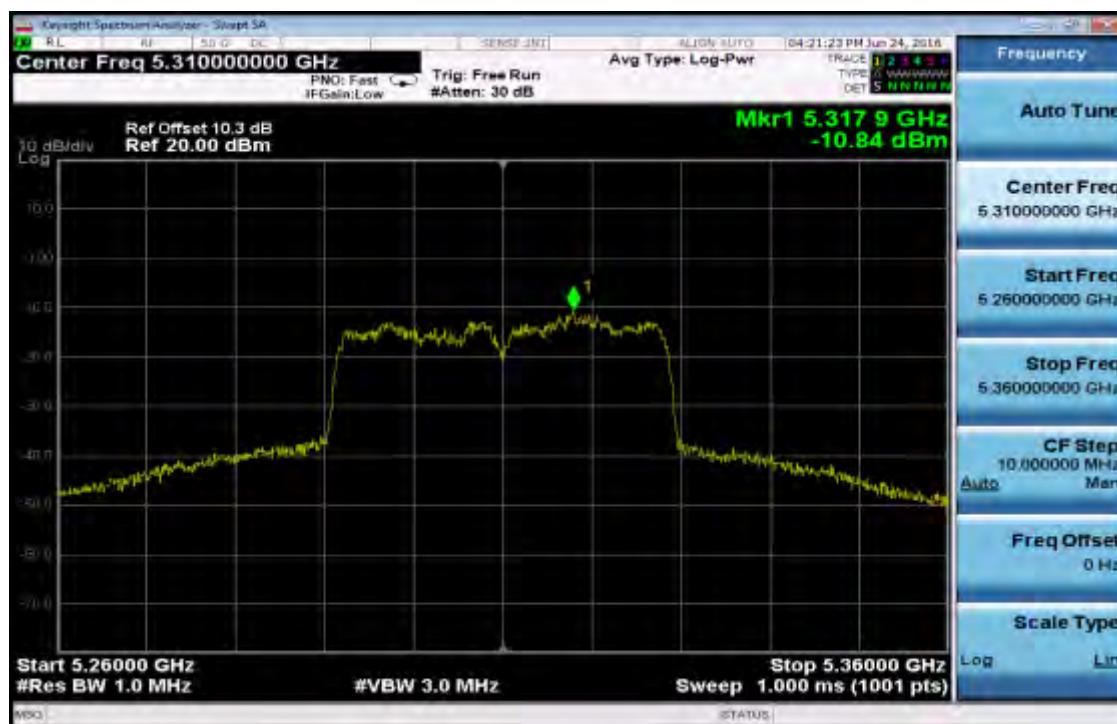


## 802.11n HT40, 5250~5350 MHz

### Peak Power Spectral Density Data Plot (CH Low 5270 MHz)



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



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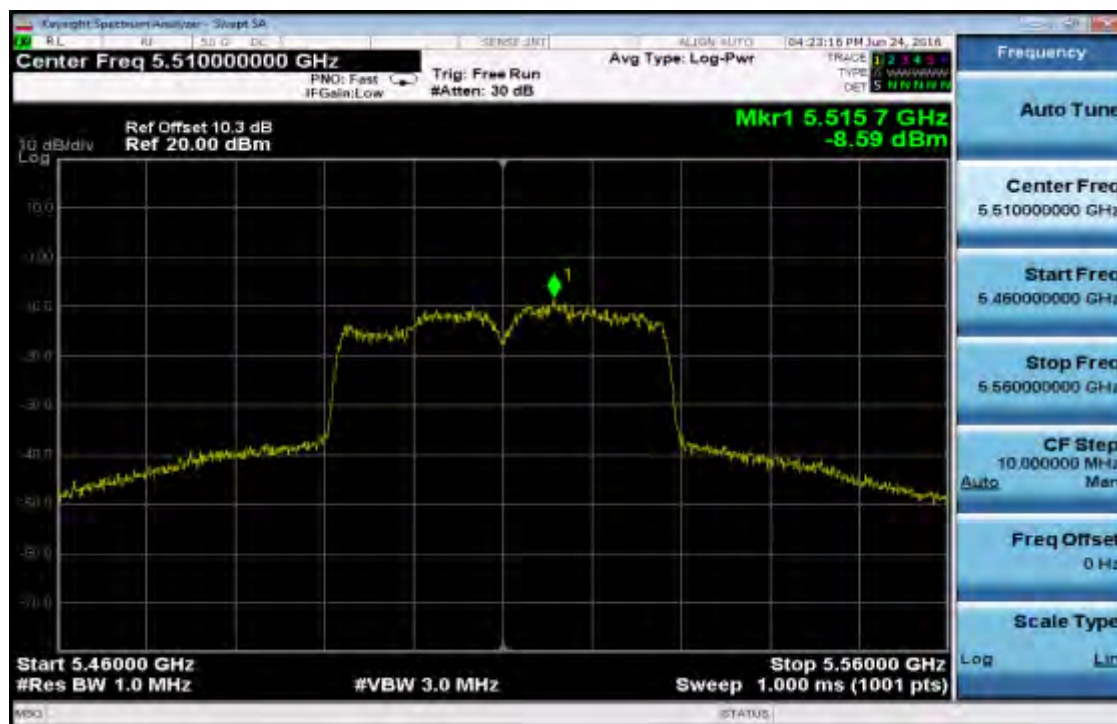
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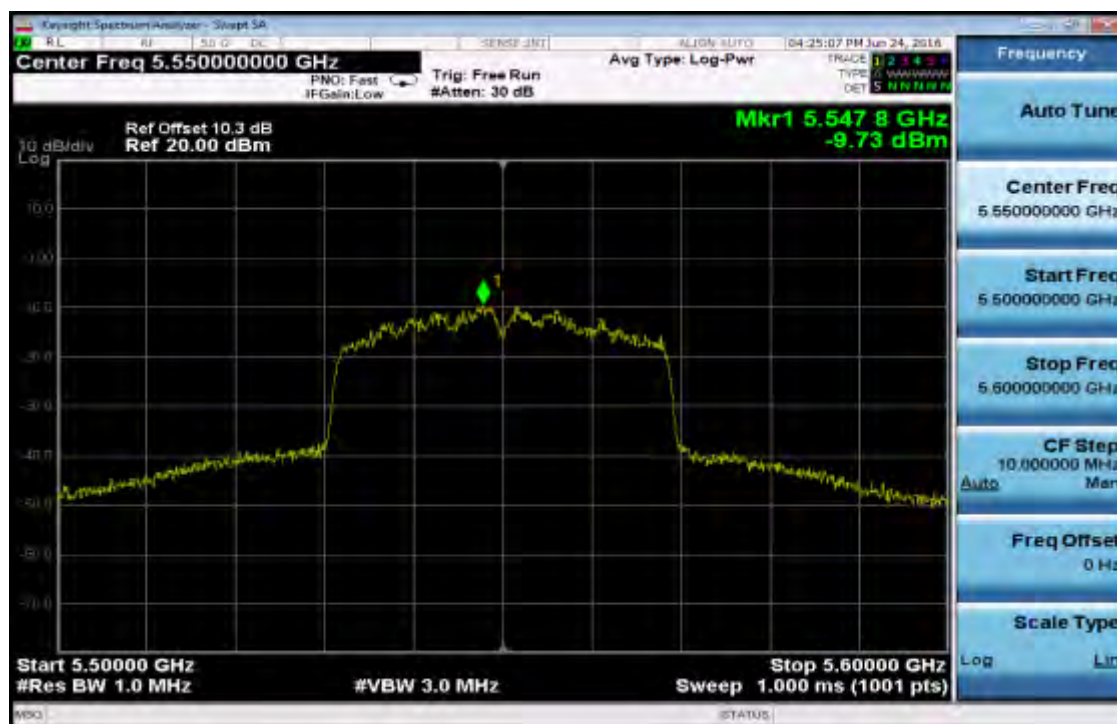
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## 802.11n HT40, 5470~5725 MHz

### Peak Power Spectral Density Data Plot (CH Low 5510 MHz)



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



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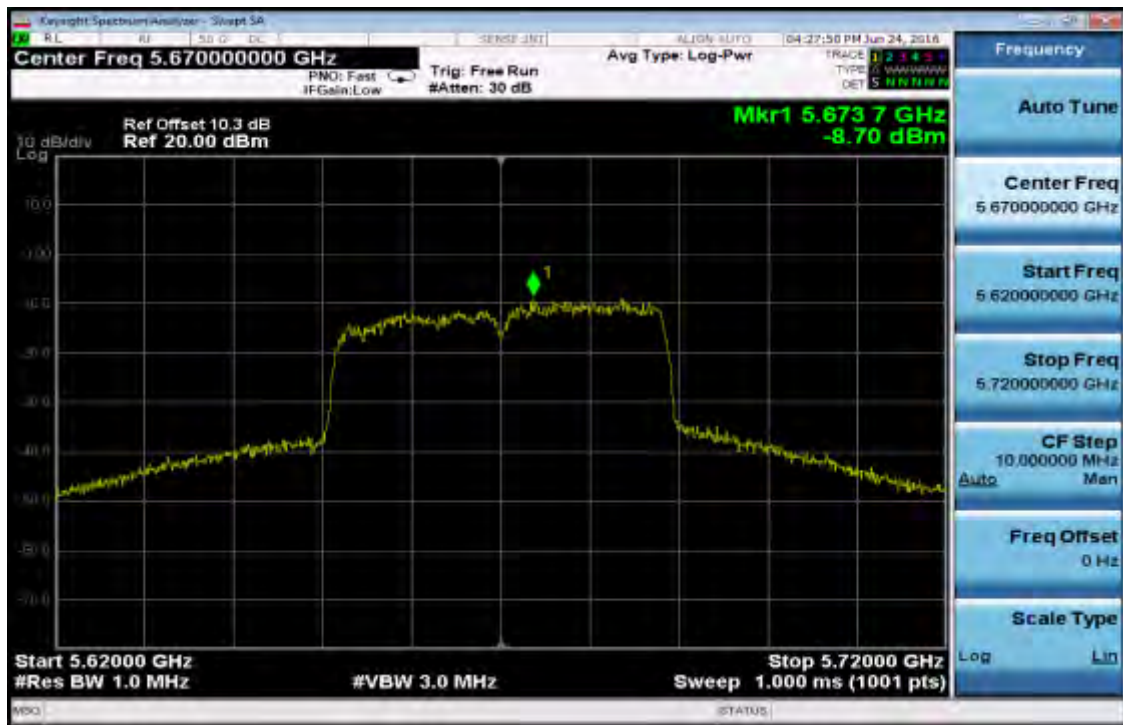
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## Peak Power Spectral Density Data Plot (CH High 5670 MHz)



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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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## 11. UNDESIRABLE RADIATED EMISSION MEASUREMENT

### 11.1 Standard Applicable

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

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APPLICABLE TO	LIMIT	
FCC KDB 789033 D02 General UNII Test Procedures New Rules	FIELD STRENGTH AT 3m	
	PK: 74 (dBμV/m)	AV 54 (dBμV/m)
APPLICABLE TO	EIRP LIMIT	FIELD STRENGTH AT 3m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.3 (dBμV/m)
15.407(b)(2)		
15.407(b)(3)		
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
*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 =  $(E \cdot d)^2 / 30$ , 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:

- The lower limit shall apply at the transition frequencies.
- Emission level (dBμV/m) = 20 log Emission level (dBμV/m)

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## 11.2 Measurement Equipment Used

SGS SAC-III					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
EMI Test Receiver	R&S	ESC17	100760	05/10/2016	05/09/2017
Spectrum Analyzer	Agilent	E4446A	MY51100003	01/29/2016	01/28/2017
Loop Antenna	ETS.LINDGREN	6502	148045	09/07/2015	09/06/2016
Bilog Antenna	SCHWAZBECK	VULB9168	378	12/14/2015	12/13/2016
Horn Antenna	Schwarzbeck	BBHA9120D	1441	08/10/2015	08/09/2016
Pre-Amplifier	Agilent	8447D	2944A07676	01/02/2016	01/01/2017
Pre-Amplifier	EMC Instruments Corp.	EMC0126530	980038	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	07/02/2015	07/01/2016
Low Loss Cable	Huber Suhner	966 TX	1	01/02/2016	01/01/2017
Horn Antenna	Schwarzbeck	BBHA9170	184	12/12/2015	12/11/2016
Pre-Amplifier	EMC Instruments Corp.	EMC184045	980135	01/02/2016	01/01/2017

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

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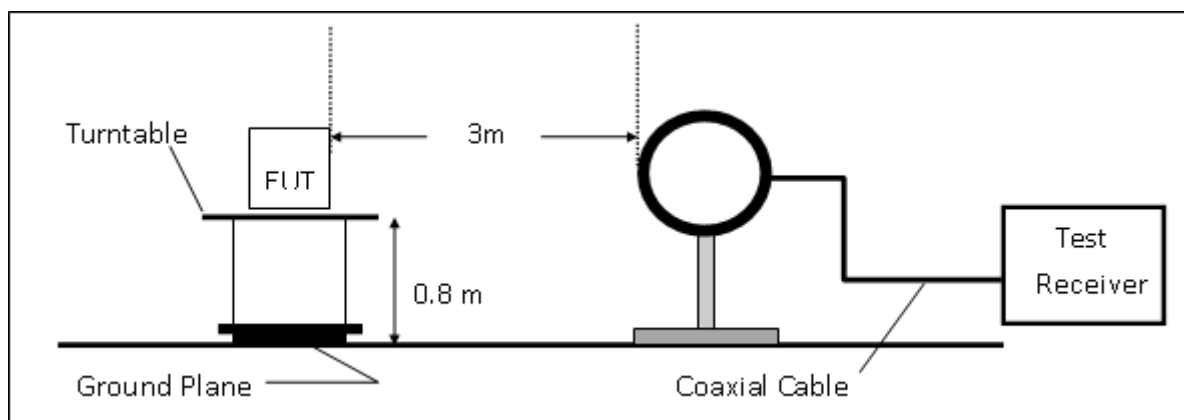
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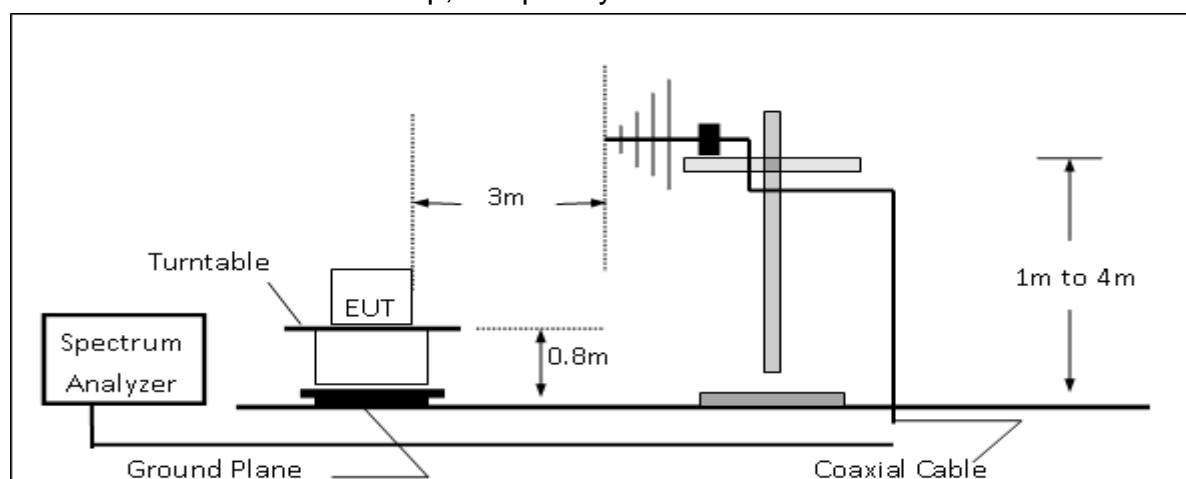
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## 11.3 Test SET-UP

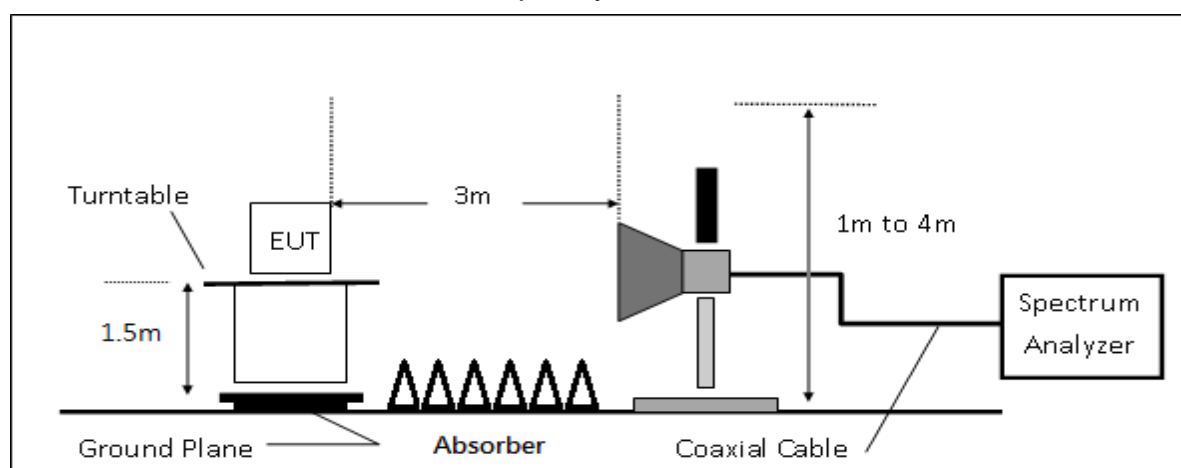
### (A) Radiated Emission Test Set-UP Frequency Below 30MHz.



### (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

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules.
3. The EUT was placed on a turn table with 0.8m for frequency < 1GHz and 1.5m for frequency > 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.
8. Set the spectrum analyzer as RBW=1 MHz, VBW=10 Hz (Duty cycle > 98%) or VBW ≥ 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(dBμV/m) = SPA. Reading level(dBμV) + Factor(dB)

Factor(dB) = Antenna Factor(dBμV/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.

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

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.

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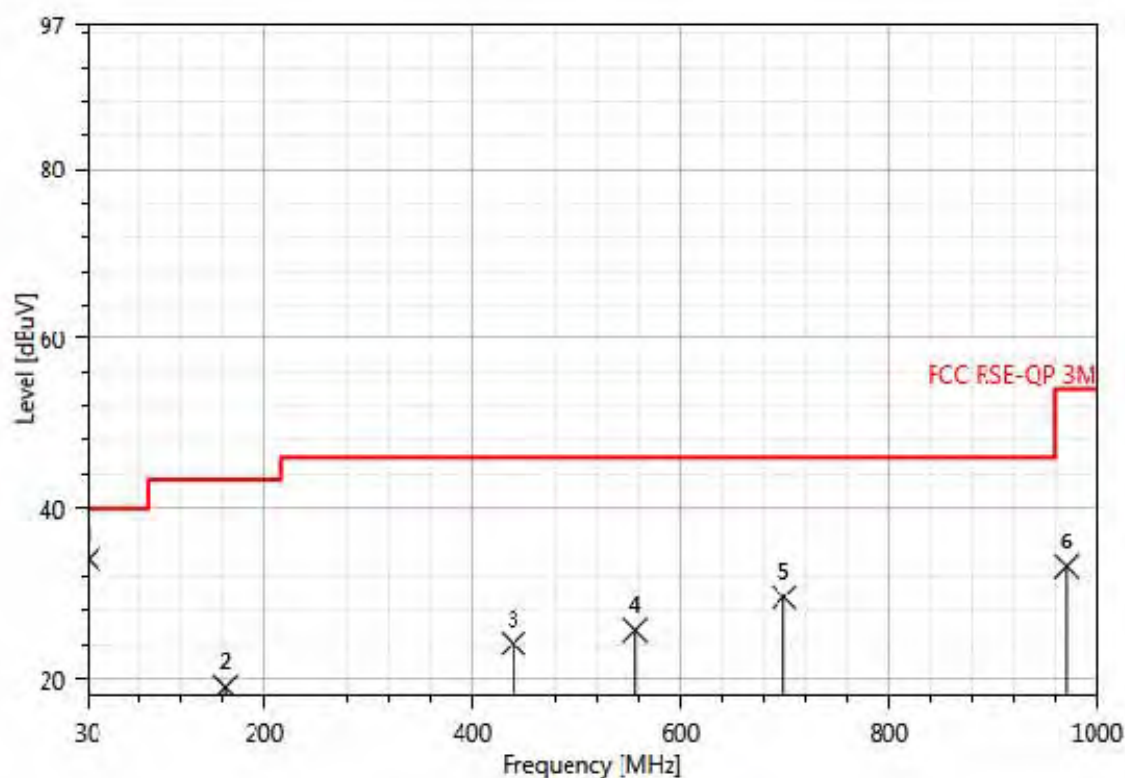


## Radiated Spurious Emission Measurement Result

### Below 1GHz Worst-Case Data:

#### 802.11a 5150~5250 MHz

Operation Mode :	802.11aB1	Test Date :	06/27/2016
Fundamental Frequency :	5220 MHz	Temp. / Humi. :	21 deg_C / 61 RH
Operation Band :	Tx CH MID	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq. MHz	Note F/H/E/S	Decetor Mode QP/AV/PK	Actual Reading Level dBuV/m	Spectrum FS dBuV/m	Factor dB	Limit @3m dBuV/m	Margin dB
30.97	S	Peak	34.04	43.19	-9.15	40.00	-5.96
162.89	S	Peak	19.05	26.53	-7.48	43.50	-24.45
439.34	S	Peak	24.14	27.38	-3.24	46.00	-21.86
556.71	S	Peak	25.75	27.09	-1.34	46.00	-20.25
699.30	S	Peak	29.59	28.14	1.44	46.00	-16.41
970.90	S	Peak	33.21	26.93	6.28	54.00	-20.79

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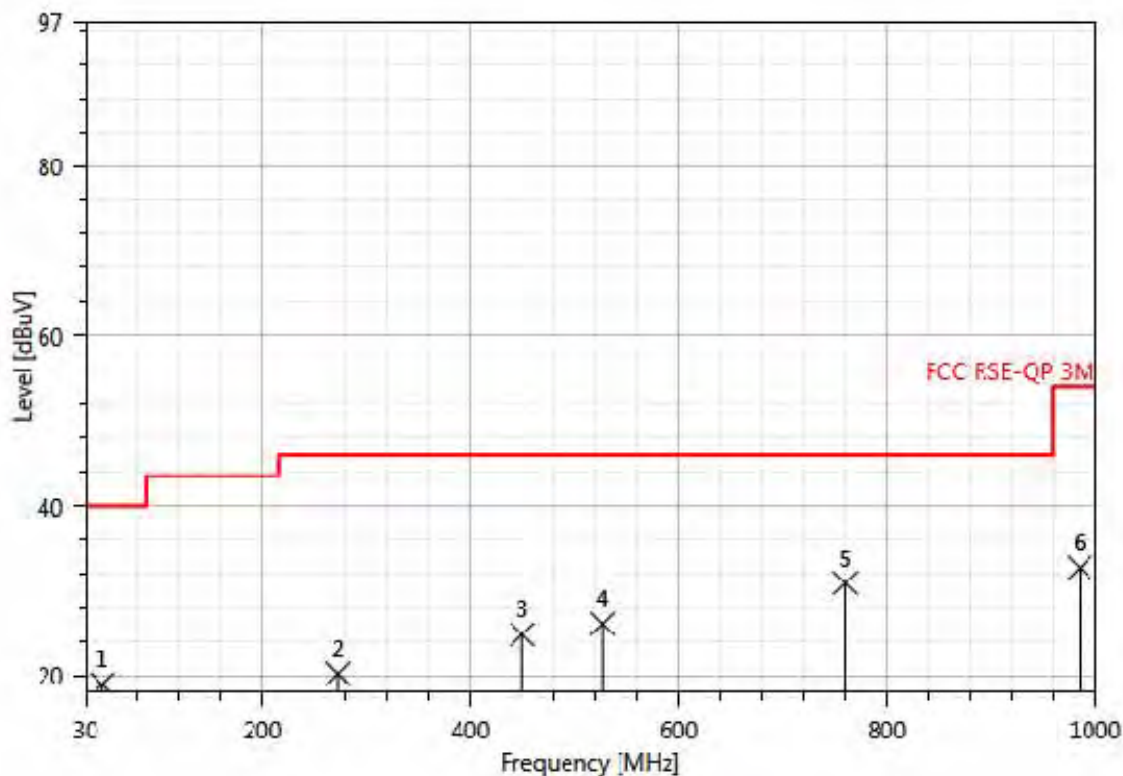
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Operation Mode : 802.11aB1  
 Fundamental Frequency : 5220 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 61 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq. MHz	Note F/H/E/S	Decetor Mode QP/AV/PK	Actual Reading Level dBuV/m	Spectrum FS dBuV/m	Factor dB	Limit @ 3m dBuV/m	Margin dB
46.49	S	Peak	18.96	26.87	-7.91	40.00	-21.04
272.50	S	Peak	20.24	27.01	-6.78	46.00	-25.76
450.01	S	Peak	24.82	27.74	-2.92	46.00	-21.18
526.64	S	Peak	26.12	27.56	-1.44	46.00	-19.88
760.41	S	Peak	30.90	27.95	2.95	46.00	-15.10
985.45	S	Peak	32.72	26.67	6.05	54.00	-21.28

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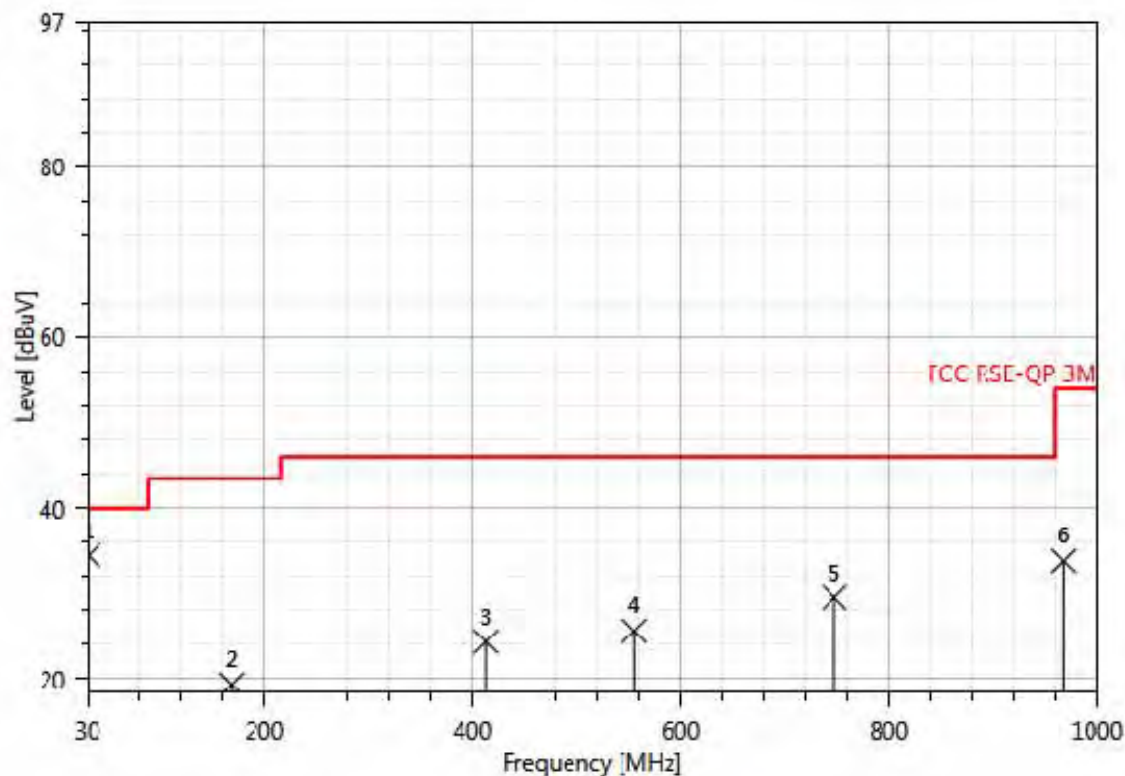
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## 802.11a 5250~5350 MHz

Operation Mode :	802.11aB2	Test Date :	06/27/2016
Fundamental Frequency :	5300 MHz	Temp. / Humi. :	21 deg_C / 61 RH
Operation Band :	Tx CH MID	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq. MHz	Note F/H/E/S	Decetor Mode QP/AV/PK	Actual Reading Level dBuV/m	Spectrum FS dBuV/m	Factor dB	Limit @ 3m dBuV/m	Margin dB
30.97	S	Peak	34.45	43.60	-9.15	40.00	-5.55
168.71	S	Peak	19.32	26.85	-7.53	43.50	-24.18
413.15	S	Peak	24.35	27.74	-3.39	46.00	-21.65
555.74	S	Peak	25.63	26.92	-1.29	46.00	-20.37
747.80	S	Peak	29.49	26.99	2.50	46.00	-16.51
967.99	S	Peak	33.83	27.73	6.10	54.00	-20.17

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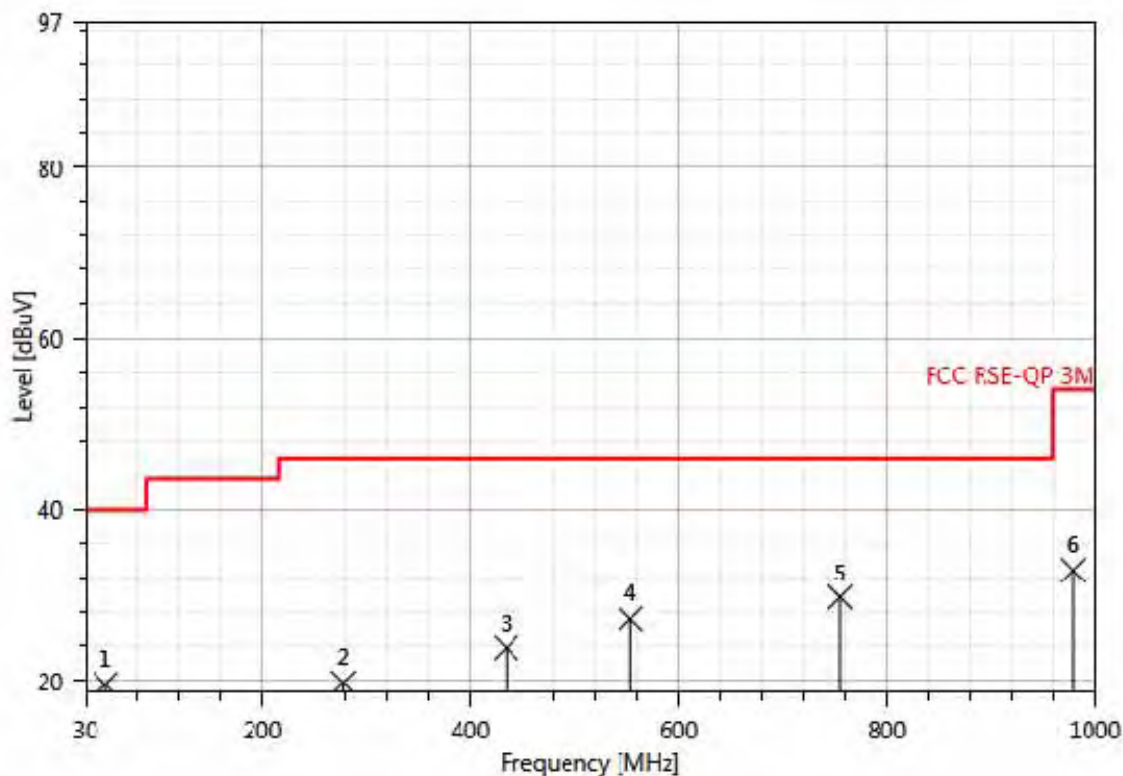
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Operation Mode : 802.11aB2  
 Fundamental Frequency : 5300 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 61 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq. MHz	Note F/H/E/S	Decetor Mode QP/AV/PK	Actual Reading Level dBuV/m	Spectrum FS dBuV/m	Factor dB	Limit @ 3m dBuV/m	Margin dB
49.40	S	Peak	19.56	27.30	-7.74	40.00	-20.44
277.35	S	Peak	19.76	26.31	-6.54	46.00	-26.24
434.49	S	Peak	23.79	27.35	-3.56	46.00	-22.21
553.80	S	Peak	27.28	28.66	-1.38	46.00	-18.72
755.56	S	Peak	29.75	26.95	2.81	46.00	-16.25
978.66	S	Peak	32.88	26.61	6.28	54.00	-21.12

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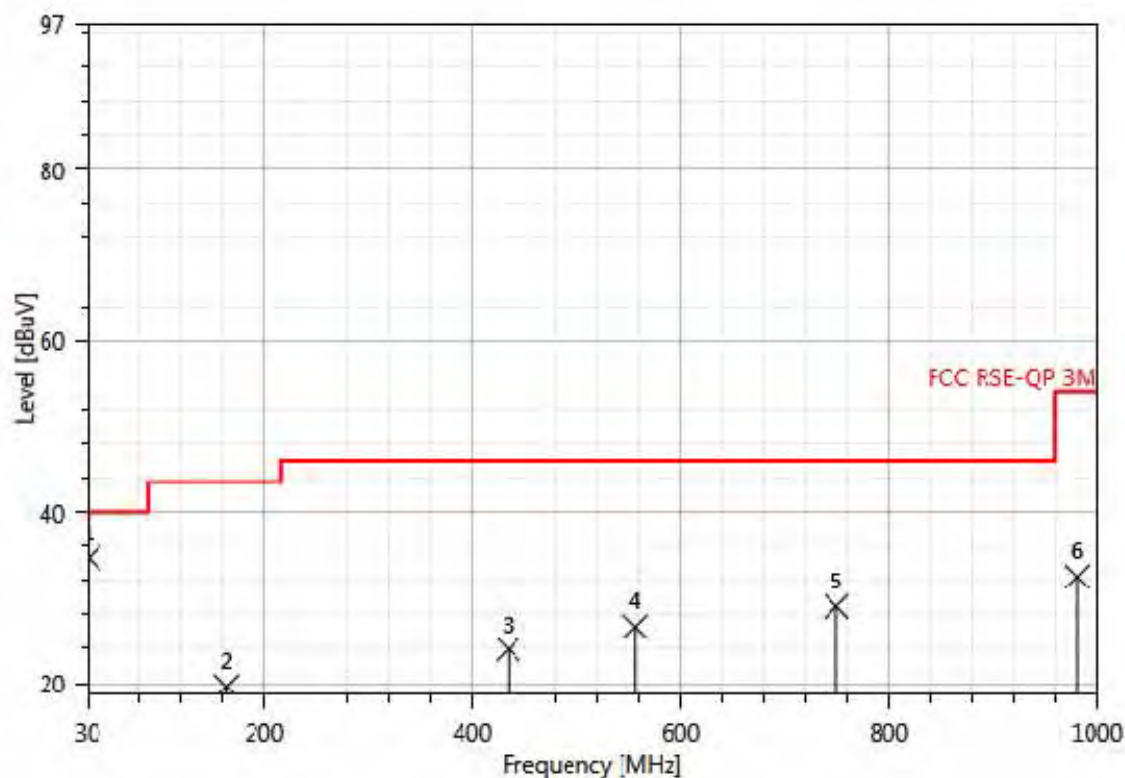
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## 802.11a, 5470~5725 MHz

Operation Mode :	802.11aB3	Test Date :	06/27/2016
Fundamental Frequency :	5580 MHz	Temp. / Humi. :	21 deg_C / 61 RH
Operation Band :	Tx CH MID	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq. MHz	Note F/H/E/S	Decetor Mode QP/AV/PK	Actual Reading Level dBuV/m	Spectrum FS dBuV/m	Factor dB	Limit @ 3m dBuV/m	Margin dB
30.97	S	Peak	34.62	43.77	-9.15	40.00	-5.38
163.86	S	Peak	19.62	27.06	-7.44	43.50	-23.88
434.49	S	Peak	23.97	27.53	-3.56	46.00	-22.03
556.71	S	Peak	26.60	27.94	-1.34	46.00	-19.40
749.74	S	Peak	28.96	26.24	2.72	46.00	-17.04
980.60	S	Peak	32.46	26.34	6.11	54.00	-21.54

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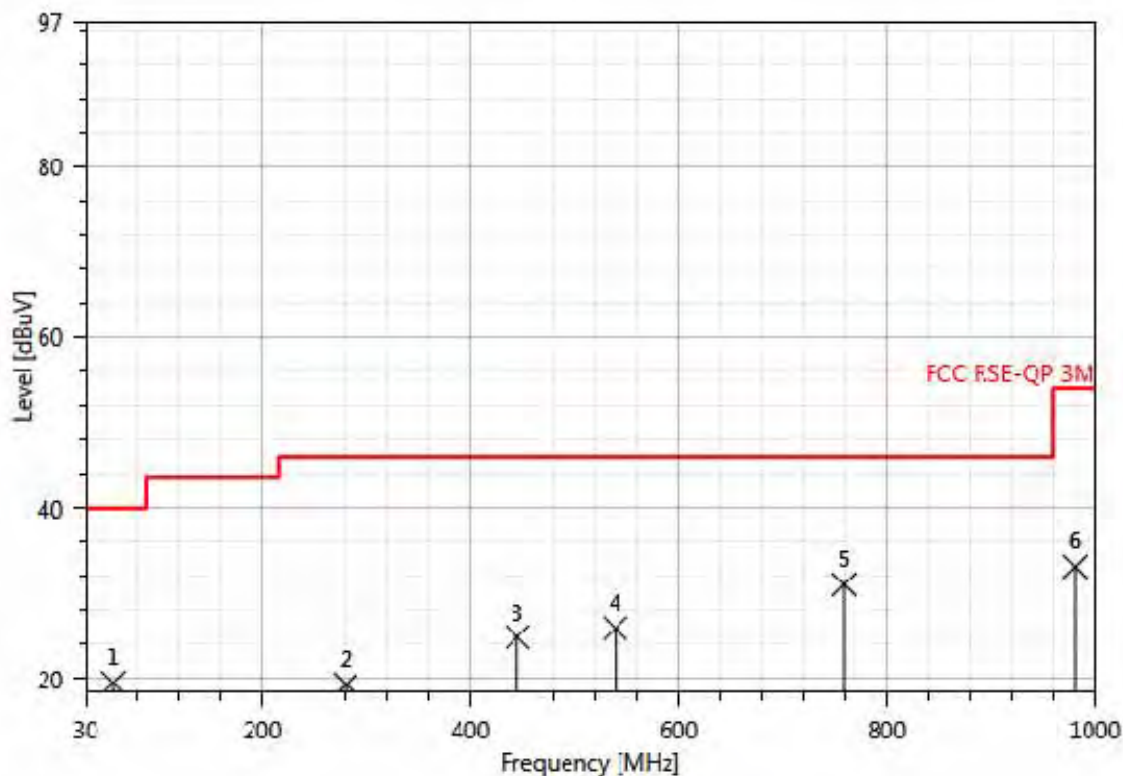
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Operation Mode : 802.11aB3  
 Fundamental Frequency : 5580 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 61 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq. MHz	Note F/H/E/S	Decetor Mode QP/AV/PK	Actual Reading Level dBuV/m	Spectrum FS dBuV/m	Factor dB	Limit @ 3m dBuV/m	Margin dB
57.16	S	Peak	19.50	27.47	-7.97	40.00	-20.50
280.26	S	Peak	19.32	25.67	-6.35	46.00	-26.68
445.16	S	Peak	24.87	27.96	-3.09	46.00	-21.13
539.25	S	Peak	25.90	27.48	-1.58	46.00	-20.10
759.44	S	Peak	31.02	28.01	3.01	46.00	-14.98
980.60	S	Peak	33.12	27.01	6.11	54.00	-20.88

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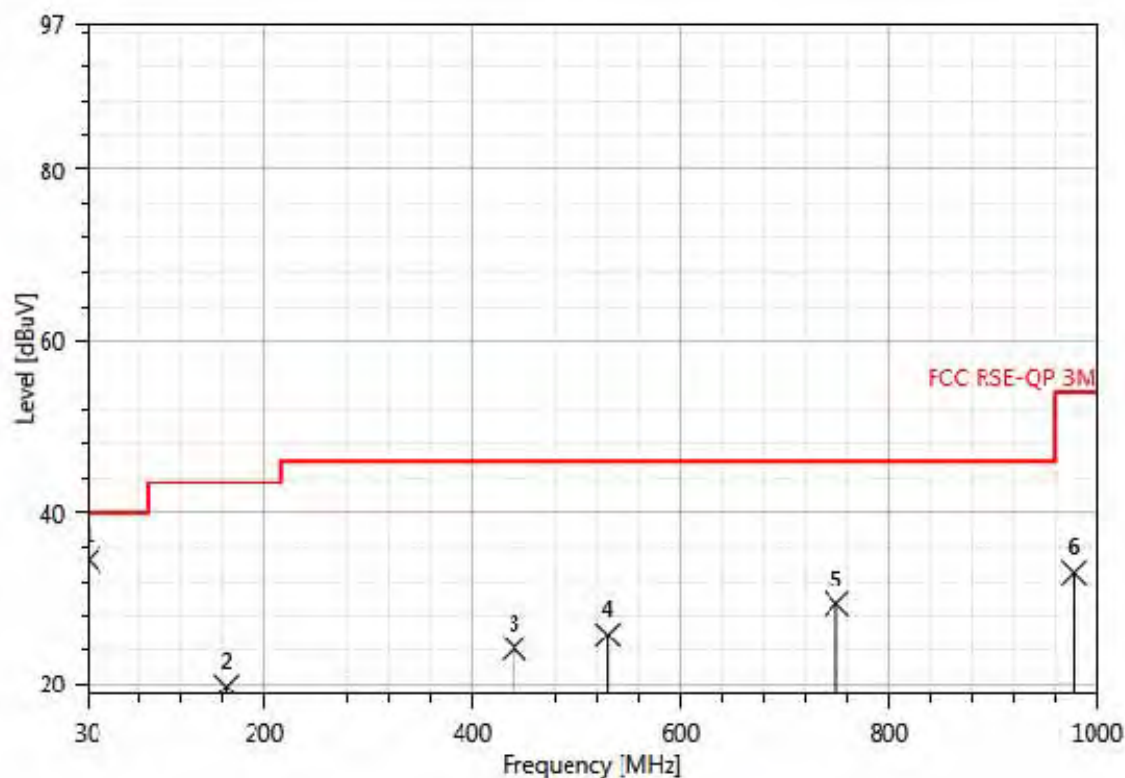
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## 802.11a, 5725~5850 MHz

Operation Mode :	802.11aB4	Test Date :	06/27/2016
Fundamental Frequency :	5785 MHz	Temp. / Humi. :	21 deg_C / 61 RH
Operation Band :	Tx CH MID	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBuV/m	dBuV/m	dB	dBuV/m	dB
30.97	S	Peak	34.50	43.65	-9.15	40.00	-5.50
163.86	S	Peak	19.71	27.16	-7.44	43.50	-23.79
440.31	S	Peak	24.18	27.48	-3.30	46.00	-21.82
529.55	S	Peak	25.72	26.97	-1.25	46.00	-20.28
749.74	S	Peak	29.36	26.64	2.72	46.00	-16.64
977.69	S	Peak	33.03	26.73	6.30	54.00	-20.97

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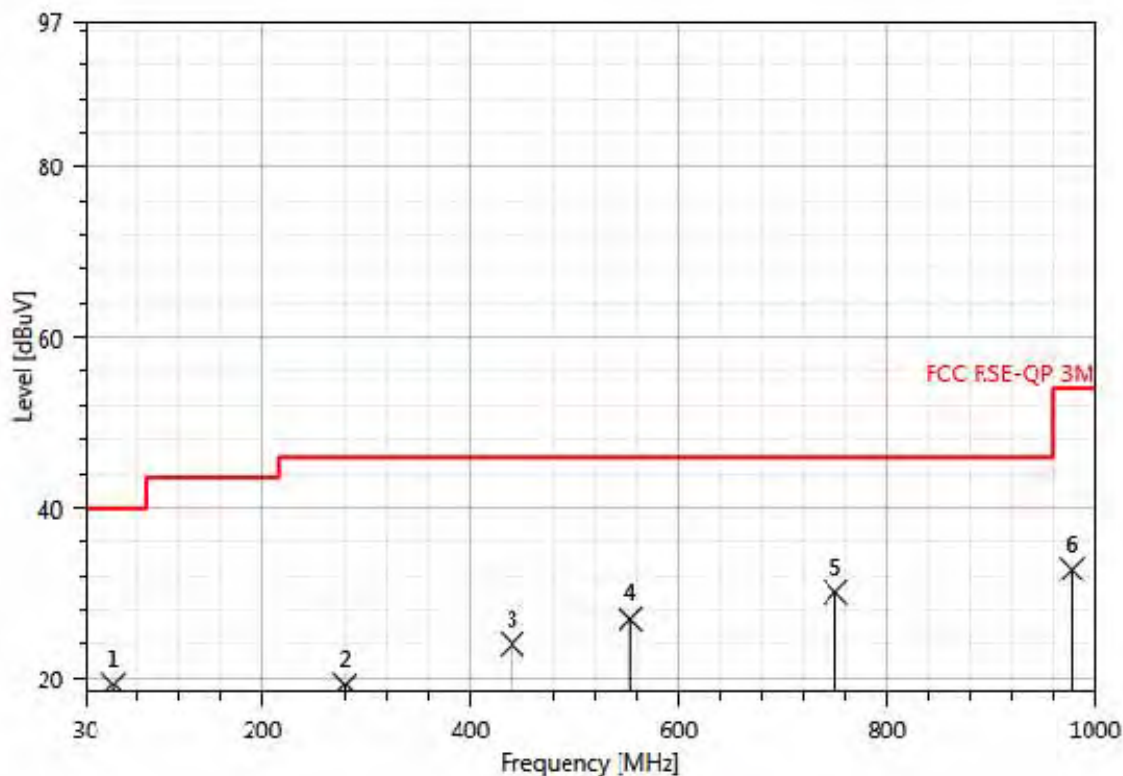
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Operation Mode : 802.11aB4  
 Fundamental Frequency : 5785 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 61 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq. MHz	Note F/H/E/S	Decetor Mode QP/AV/PK	Actual Reading Level dBuV/m	Spectrum FS dBuV/m	Factor dB	Limit @ 3m dBuV/m	Margin dB
57.16	S	Peak	19.37	27.34	-7.97	40.00	-20.63
279.29	S	Peak	19.34	25.76	-6.42	46.00	-26.66
440.31	S	Peak	24.01	27.31	-3.30	46.00	-21.99
553.80	S	Peak	27.03	28.42	-1.38	46.00	-18.97
750.71	S	Peak	30.10	27.34	2.76	46.00	-15.90
977.69	S	Peak	32.83	26.53	6.30	54.00	-21.17

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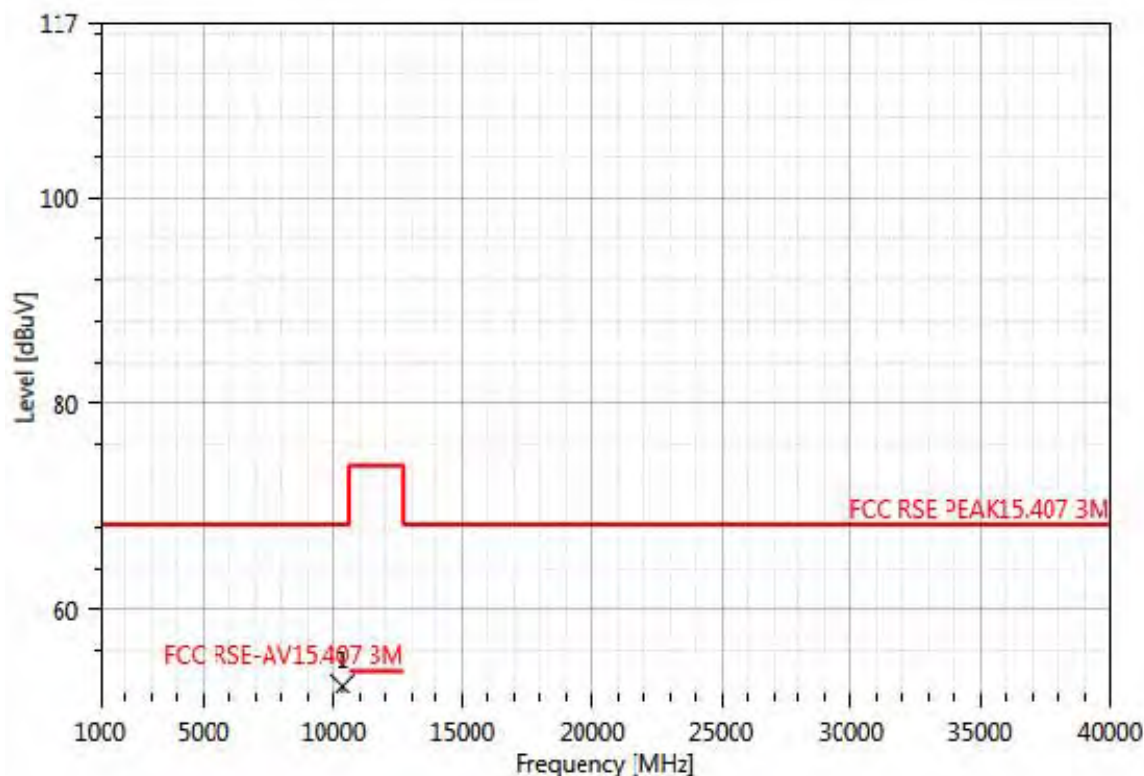
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## Above 1GHz Worst-Case Data:

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

Operation Mode :	802.11aB1	Test Date :	06/27/2016
Fundamental Frequency :	5180 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH LOW	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10360.00	H	Peak	52.58	34.28	18.29	68.30	-15.72

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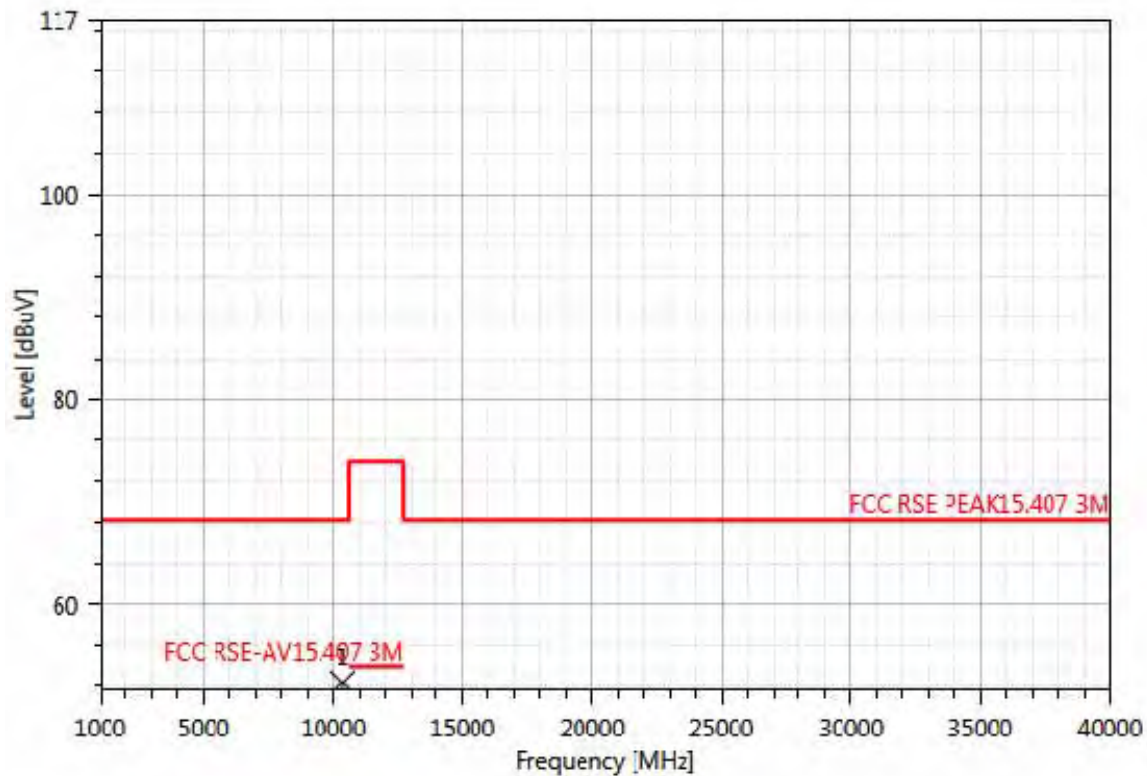
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Operation Mode :	802.11aB1	Test Date :	06/27/2016
Fundamental Frequency :	5180 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH LOW	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10360.00	H	Peak	52.43	34.13	18.29	68.30	-15.87

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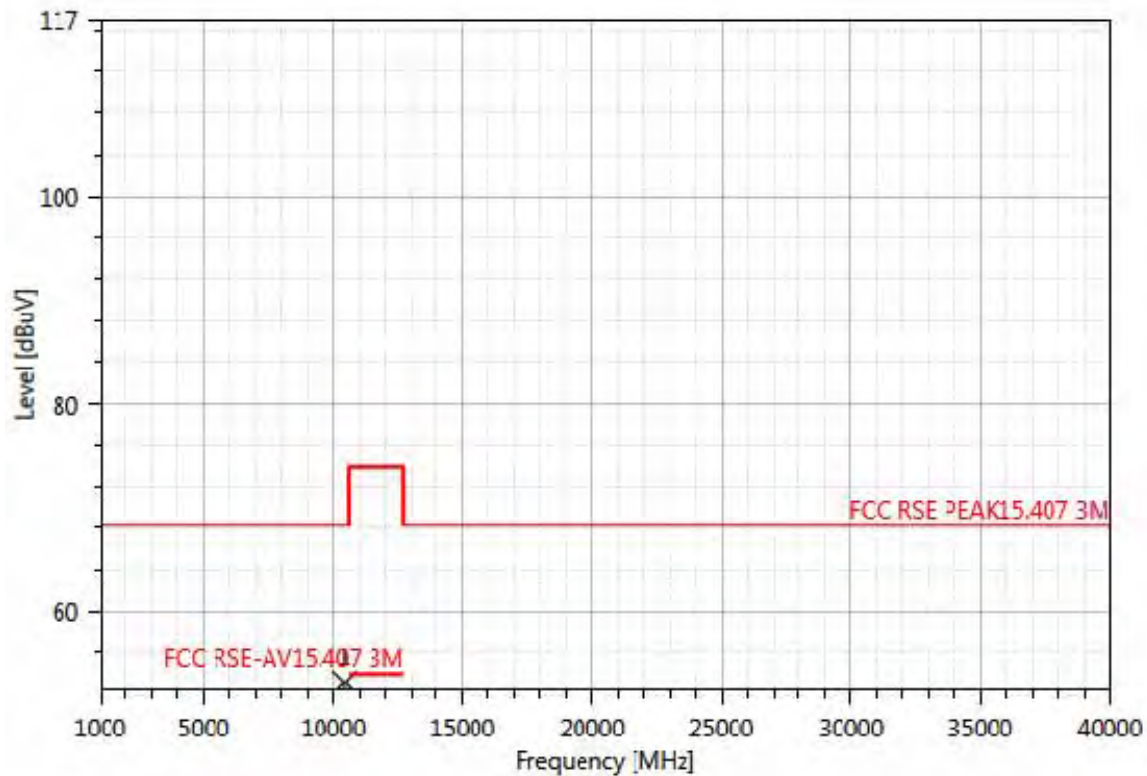
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Operation Mode :	802.11aB1	Test Date :	06/27/2016
Fundamental Frequency :	5220 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH MID	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10440.00	H	Peak	53.16	34.47	18.68	68.30	-15.14

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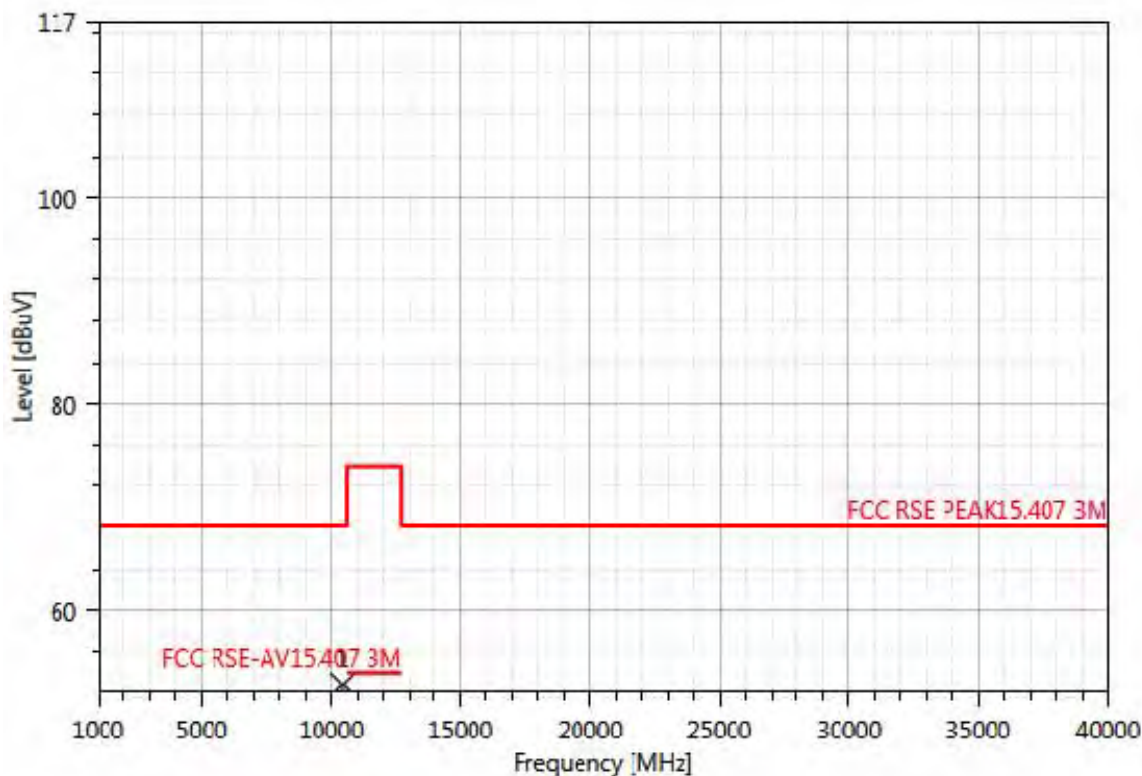
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Operation Mode : 802.11aB1  
 Fundamental Frequency : 5220 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10440.00	H	Peak	52.84	34.15	18.68	68.30	-15.46

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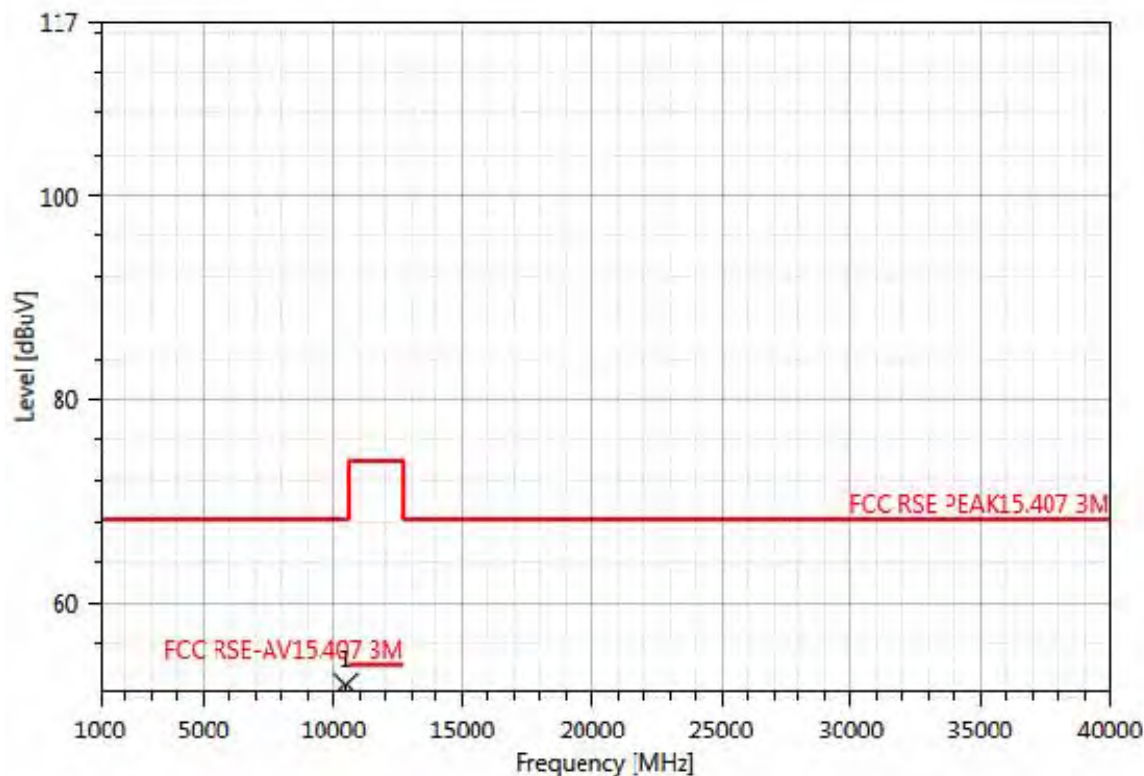
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Operation Mode :	802.11aB1	Test Date :	06/27/2016
Fundamental Frequency :	5240 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH HIGH	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10480.00	H	Peak	52.05	33.76	18.29	68.30	-16.25

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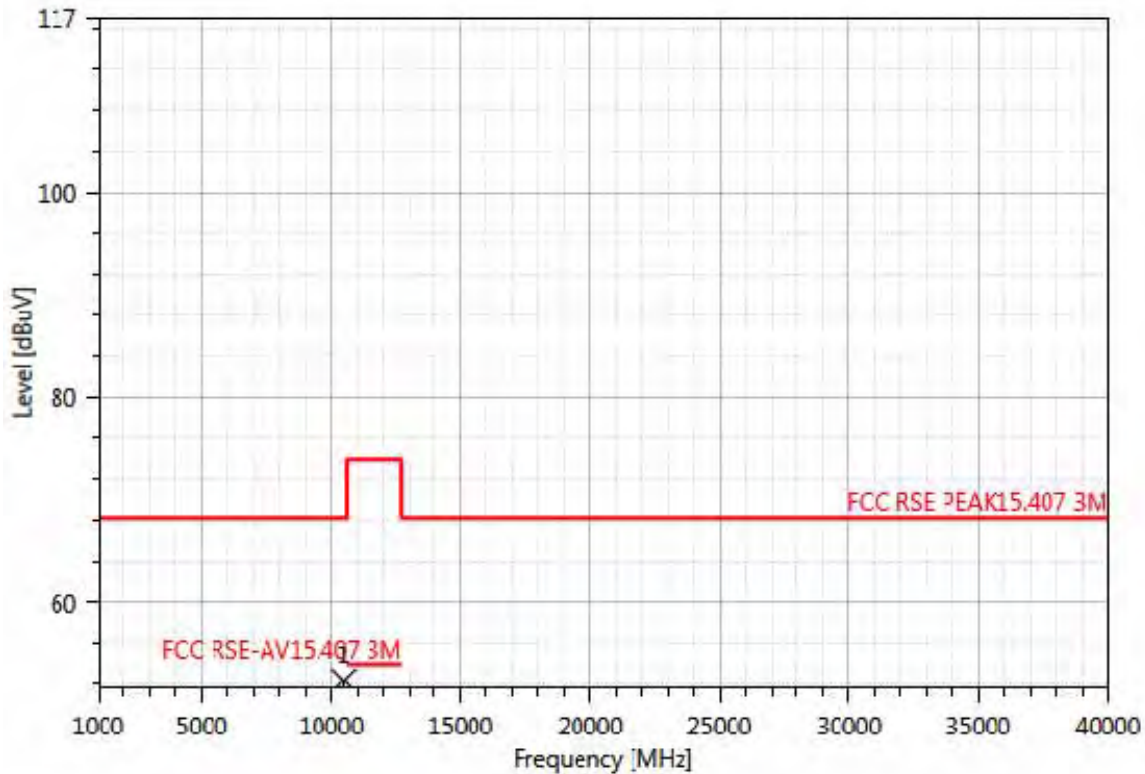
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Operation Mode :	802.11aB1	Test Date :	06/27/2016
Fundamental Frequency :	5240 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH HIGH	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10480.00	H	Peak	52.42	34.13	18.29	68.30	-15.88

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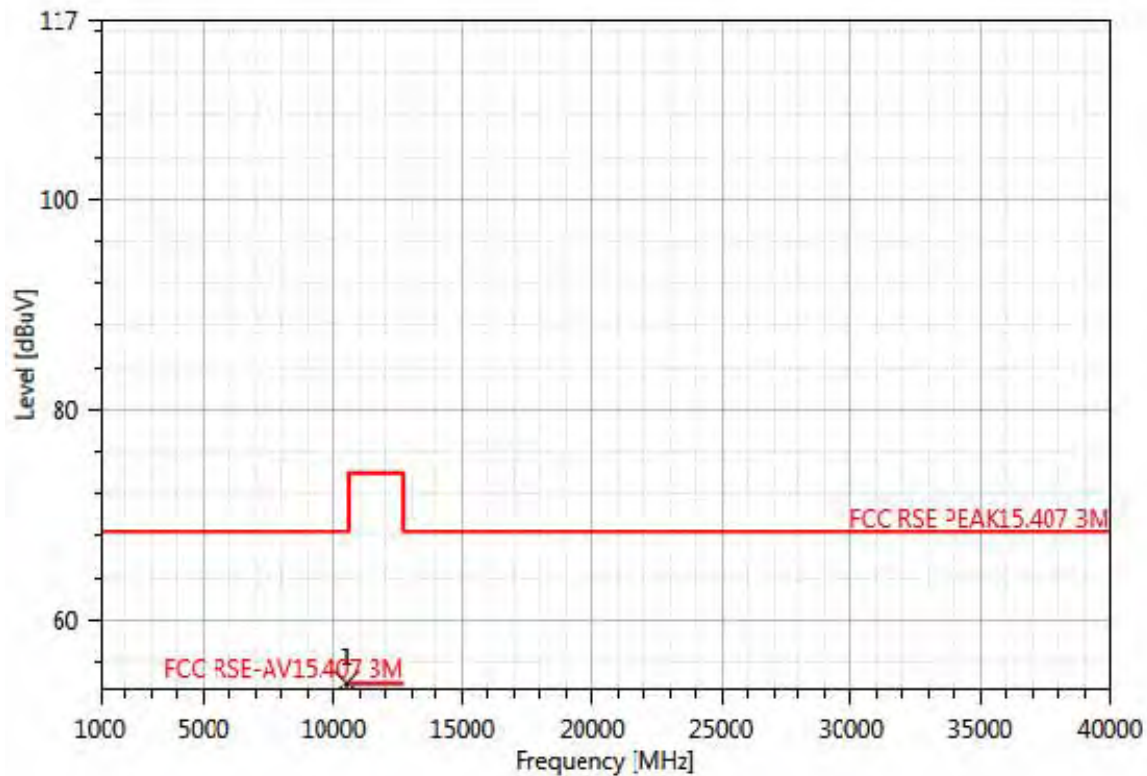
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## Radiated Spurious Emission Measurement Result 802.11a, 5250MHz-5350MHz

Operation Mode :	802.11aB2	Test Date :	06/27/2016
Fundamental Frequency :	5260 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH LOW	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10520.00	H	Peak	54.01	34.63	19.37	68.30	-14.29

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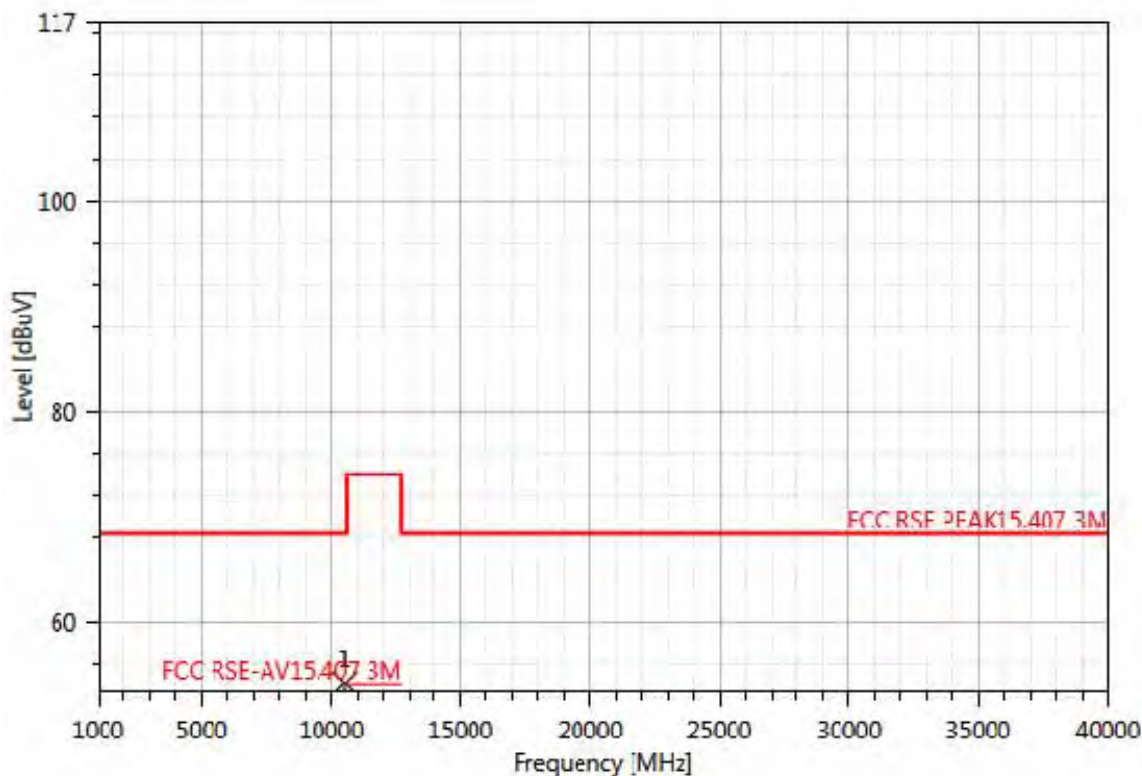
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Operation Mode : 802.11aB2  
 Fundamental Frequency : 5260 MHz  
 Operation Band : Tx CH LOW  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10520.00	H	Peak	54.10	34.73	19.37	68.30	-14.20

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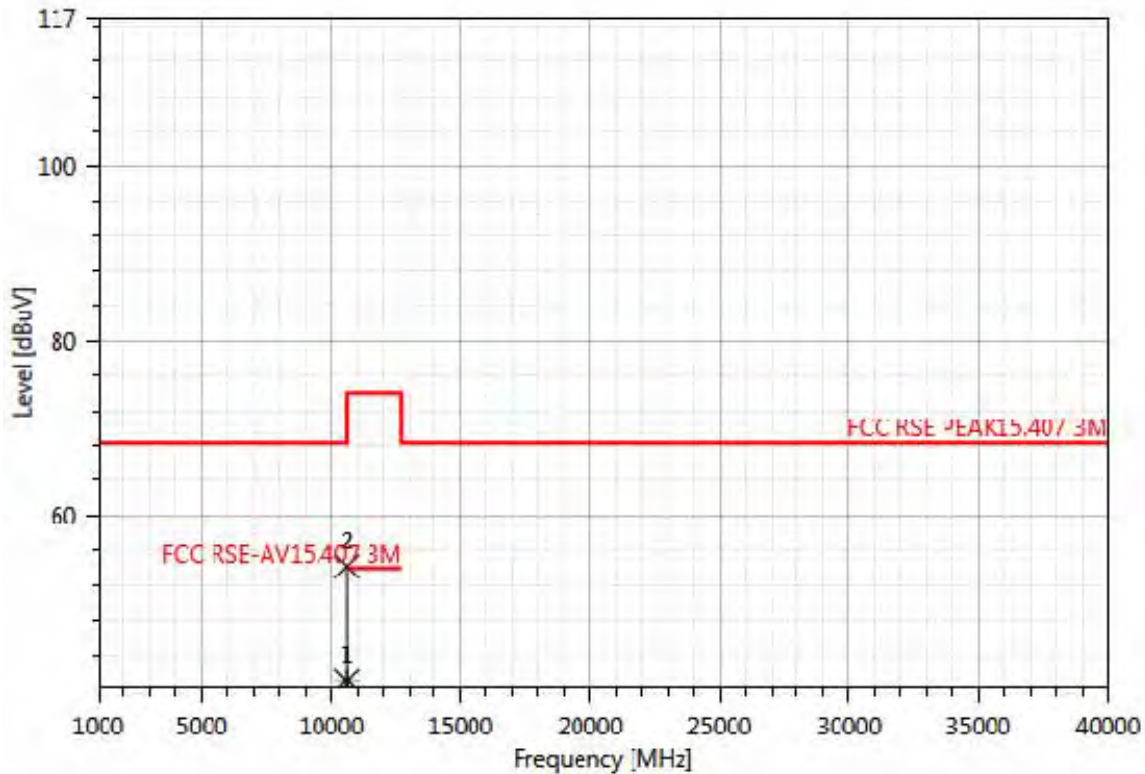
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Operation Mode : 802.11aB2  
 Fundamental Frequency : 5300 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
10600.00	H	Average	41.12	22.21	18.91	54.00	-12.88
10600.00	H	Peak	54.20	35.29	18.91	74.00	-19.80

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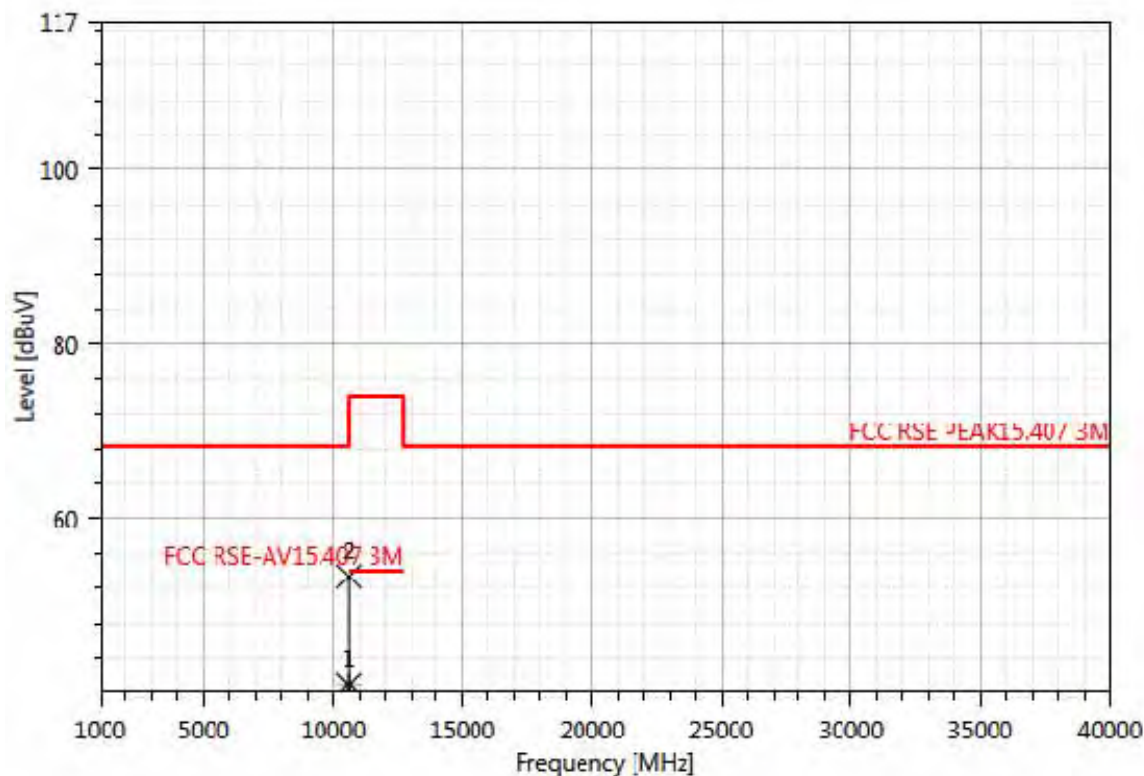
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Operation Mode : 802.11aB2  
 Fundamental Frequency : 5300 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq. MHz	Note F/H/E/S	Decetor Mode QP/AV/PK	Actual Reading Level dBμV/m	Spectrum FS dBμV/m	Factor dB	Limit @ 3m dBuV/m	Margin dB
10600.00	H	Average	40.96	22.05	18.91	54.00	-13.04
10600.00	H	Peak	53.35	34.44	18.91	74.00	-20.65

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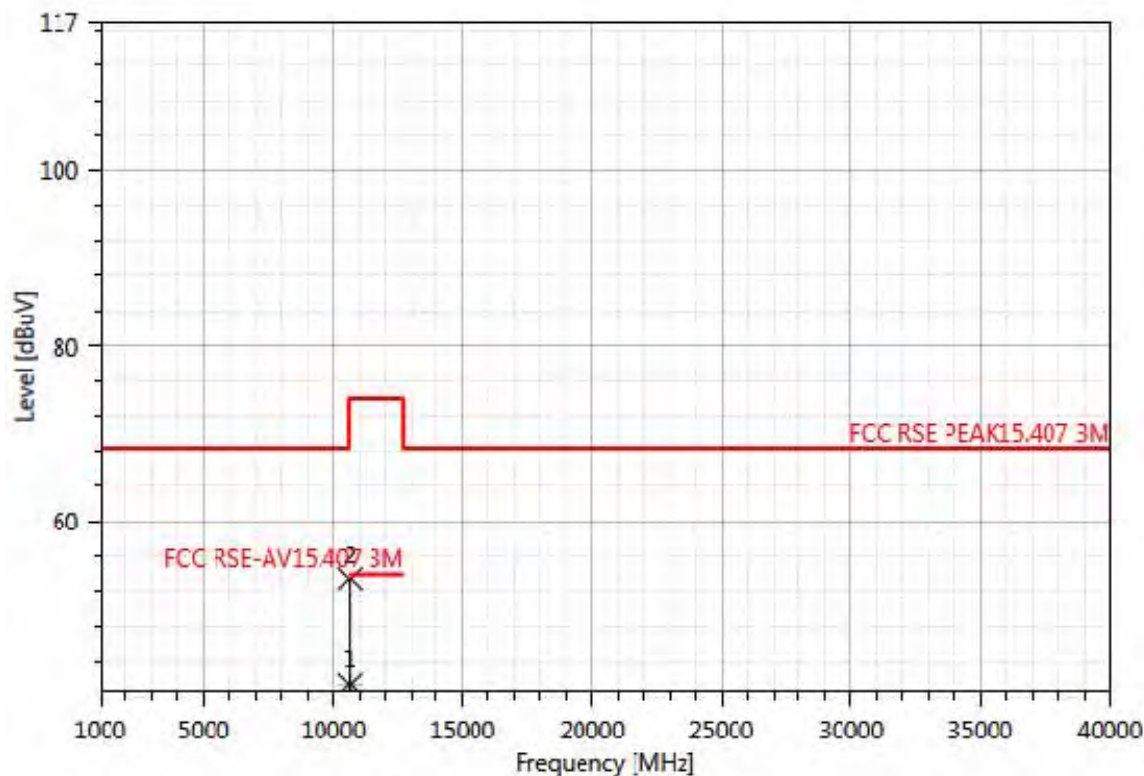
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Operation Mode :	802.11aB2	Test Date :	06/27/2016
Fundamental Frequency :	5320 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH HIGH	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10640.00	H	Average	41.37	22.19	19.18	54.00	-12.63
10640.00	H	Peak	53.41	34.23	19.18	74.00	-20.59

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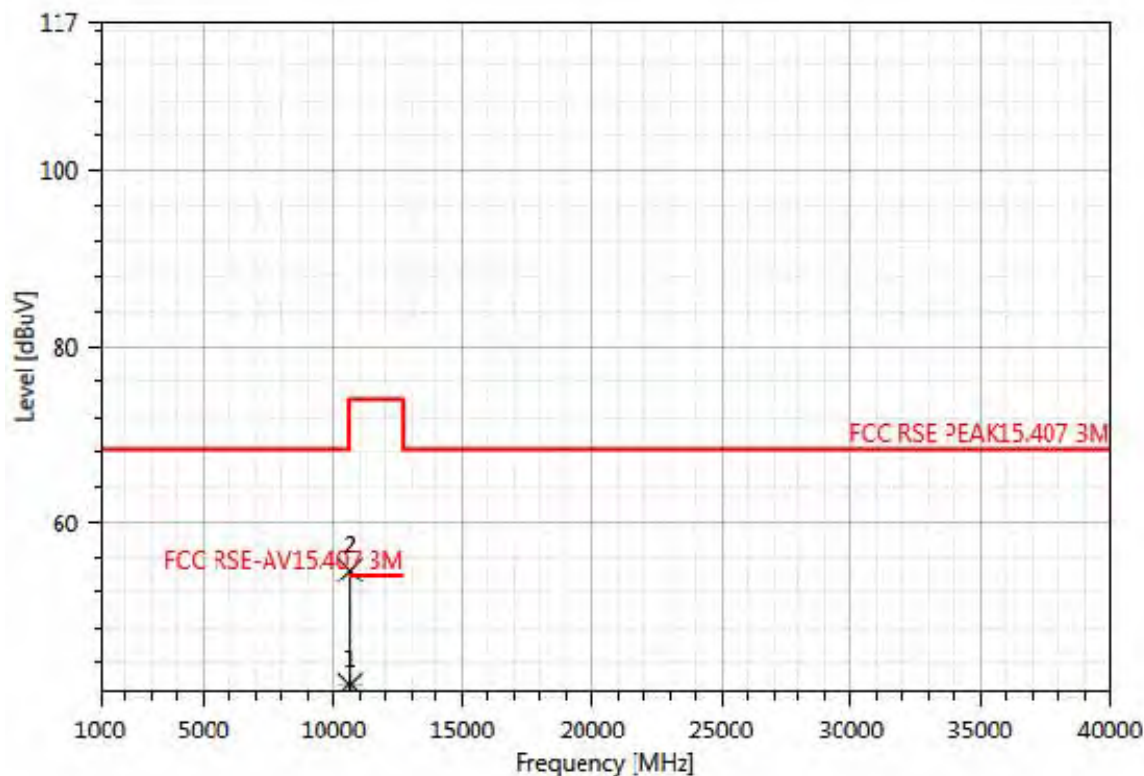
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Operation Mode : 802.11aB2  
 Fundamental Frequency : 5320 MHz  
 Operation Band : Tx CH HIGH  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
10640.00	H	Average	41.50	22.32	19.18	54.00	-12.50
10640.00	H	Peak	54.51	35.32	19.18	74.00	-19.49

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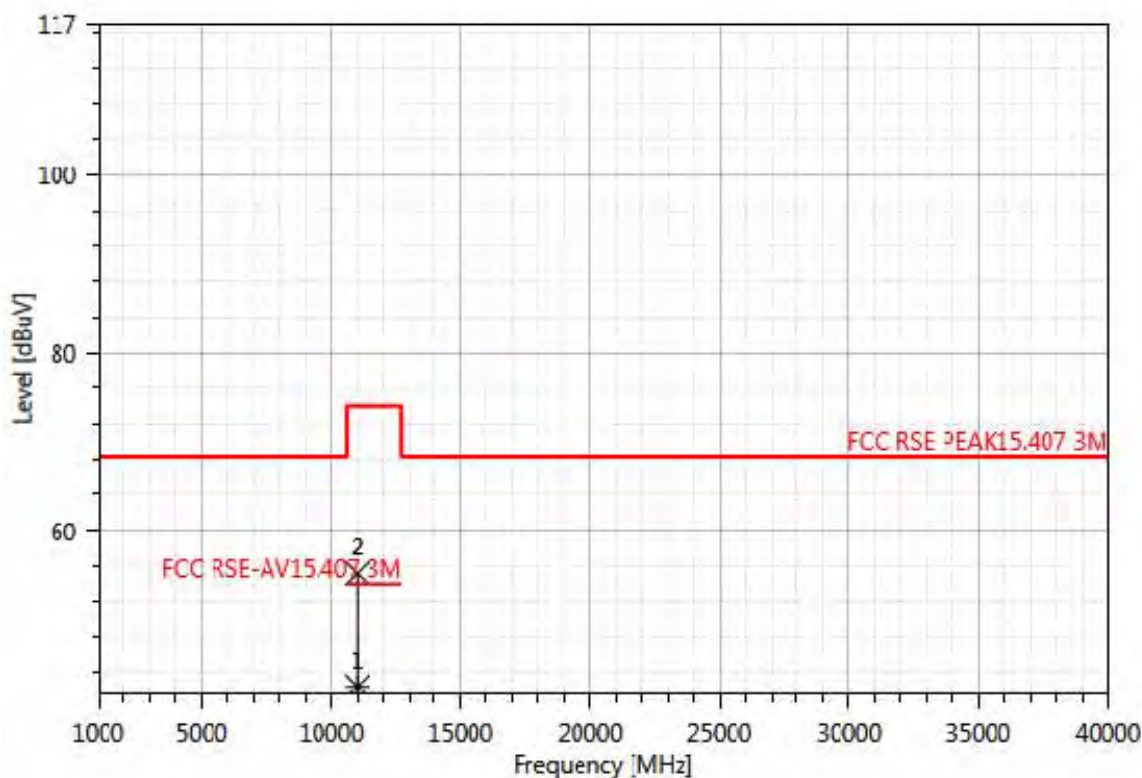
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## Radiated Spurious Emission Measurement Result 802.11a, 5470~5725 MHz

Operation Mode :	802.11aB3	Test Date :	06/27/2016
Fundamental Frequency :	5500 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH LOW	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
11000.00	H	Average	42.42	22.25	20.17	54.00	-11.58
11000.00	H	Peak	55.22	35.05	20.17	74.00	-18.78

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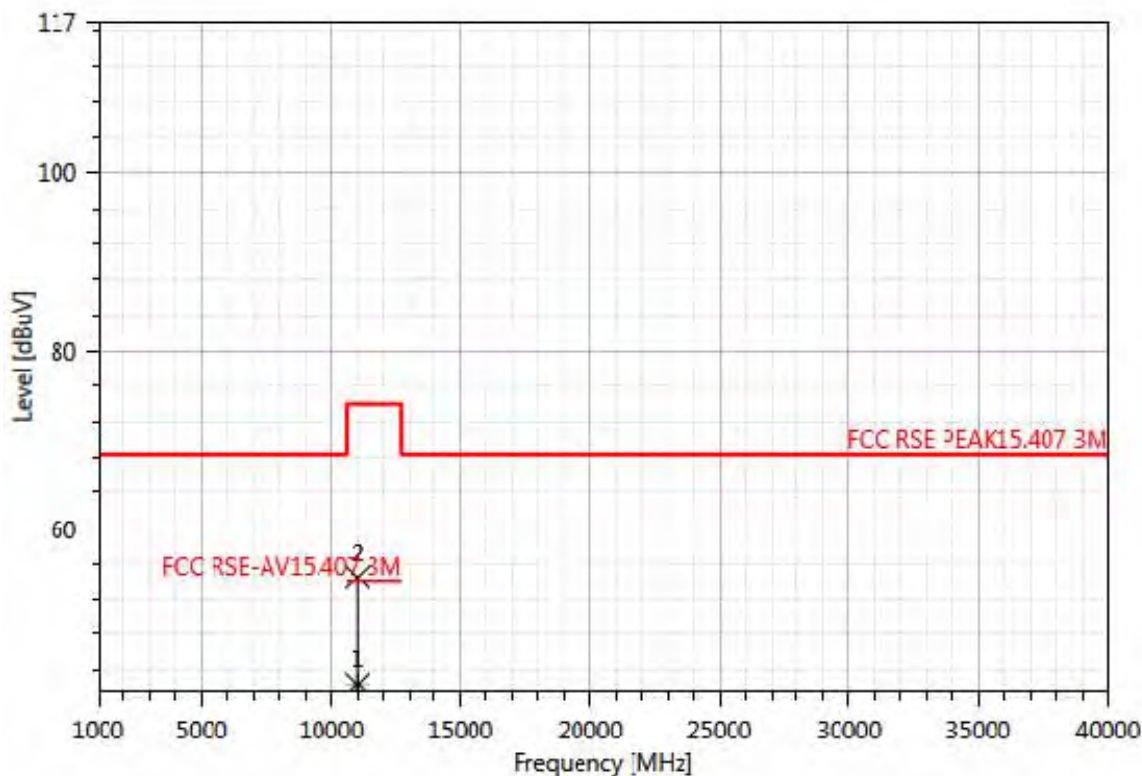
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Operation Mode : 802.11aB3  
 Fundamental Frequency : 5500 MHz  
 Operation Band : Tx CH LOW  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11000.00	H	Average	42.41	22.24	20.17	54.00	-11.59
11000.00	H	Peak	54.48	34.31	20.17	74.00	-19.52

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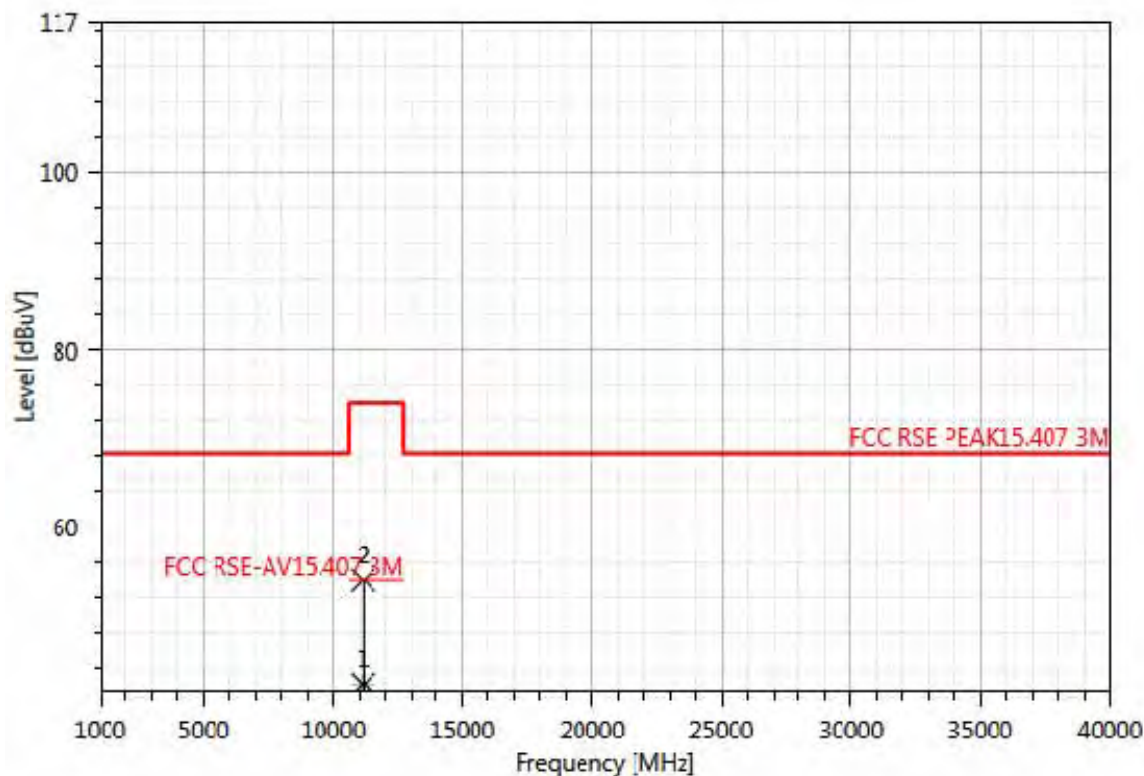
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Operation Mode : 802.11aB3  
 Fundamental Frequency : 5580 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11160.00	H	Average	42.21	21.76	20.45	54.00	-11.79
11160.00	H	Peak	53.97	33.53	20.45	74.00	-20.03

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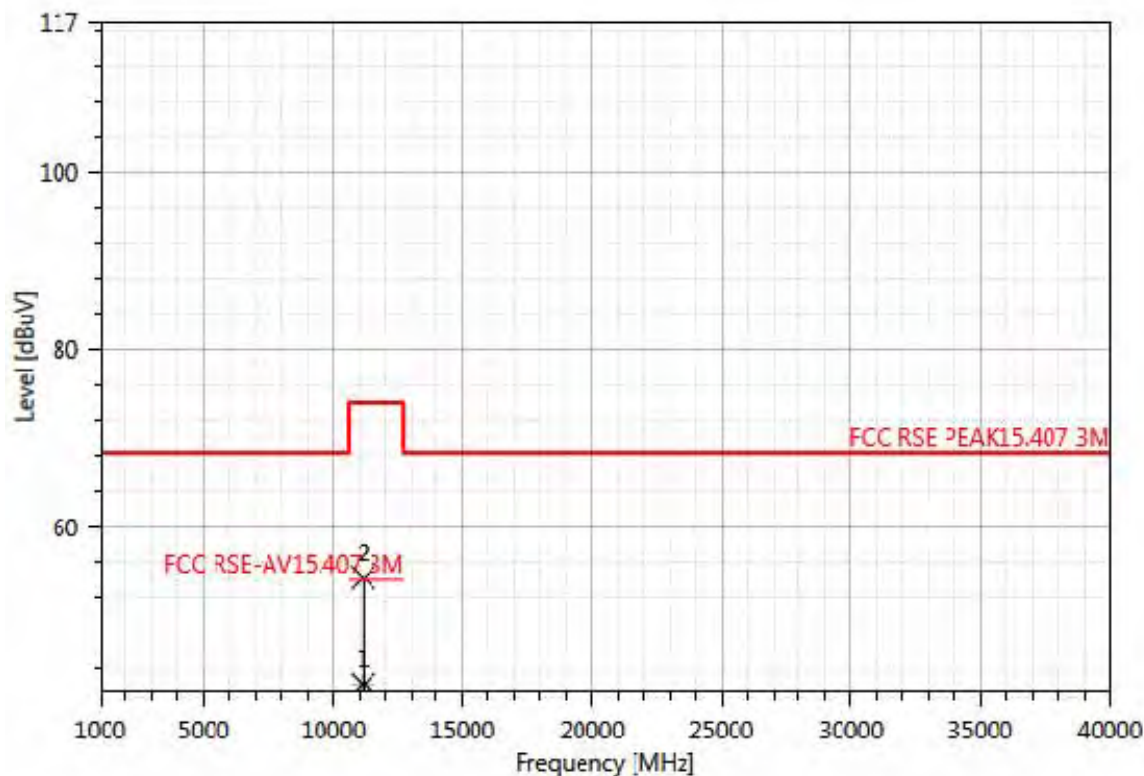
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Operation Mode : 802.11aB3  
 Fundamental Frequency : 5580 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11160.00	H	Average	42.14	21.69	20.45	54.00	-11.86
11160.00	H	Peak	54.18	33.74	20.45	74.00	-19.82

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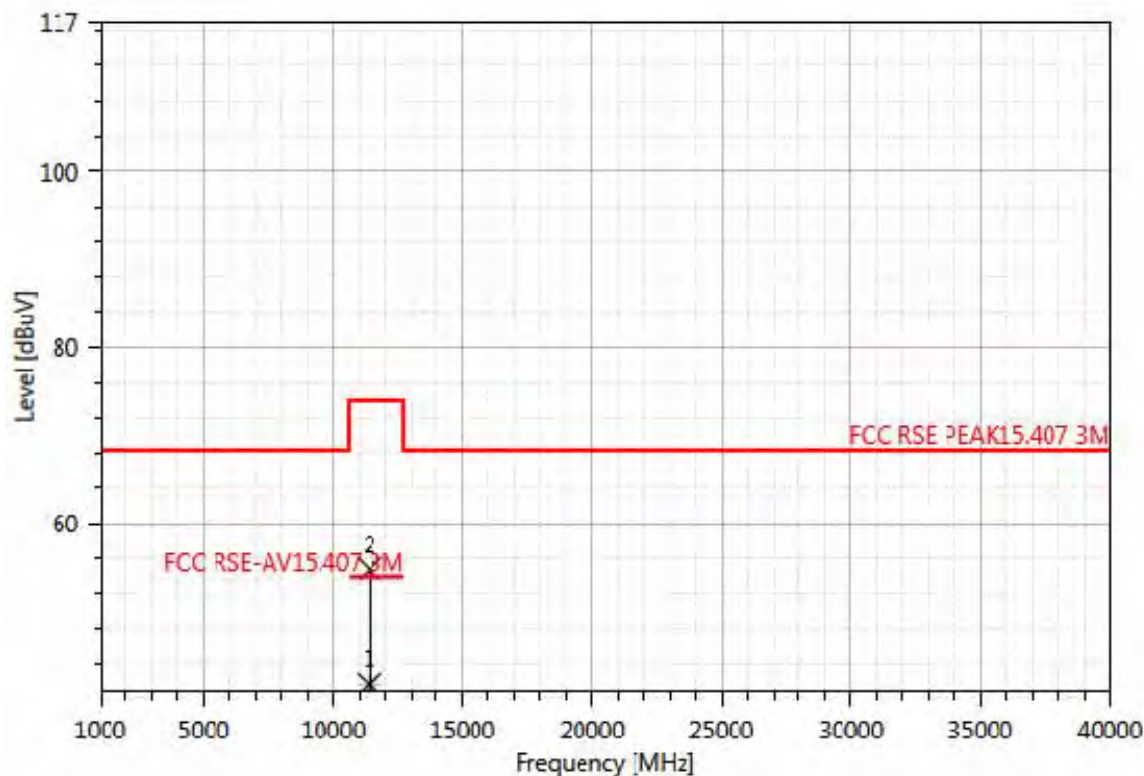
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Operation Mode :	802.11aB3	Test Date :	06/27/2016
Fundamental Frequency :	5700 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH HIGH	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11400.00	H	Average	41.69	21.13	20.56	54.00	-12.31
11400.00	H	Peak	54.82	34.26	20.56	74.00	-19.18

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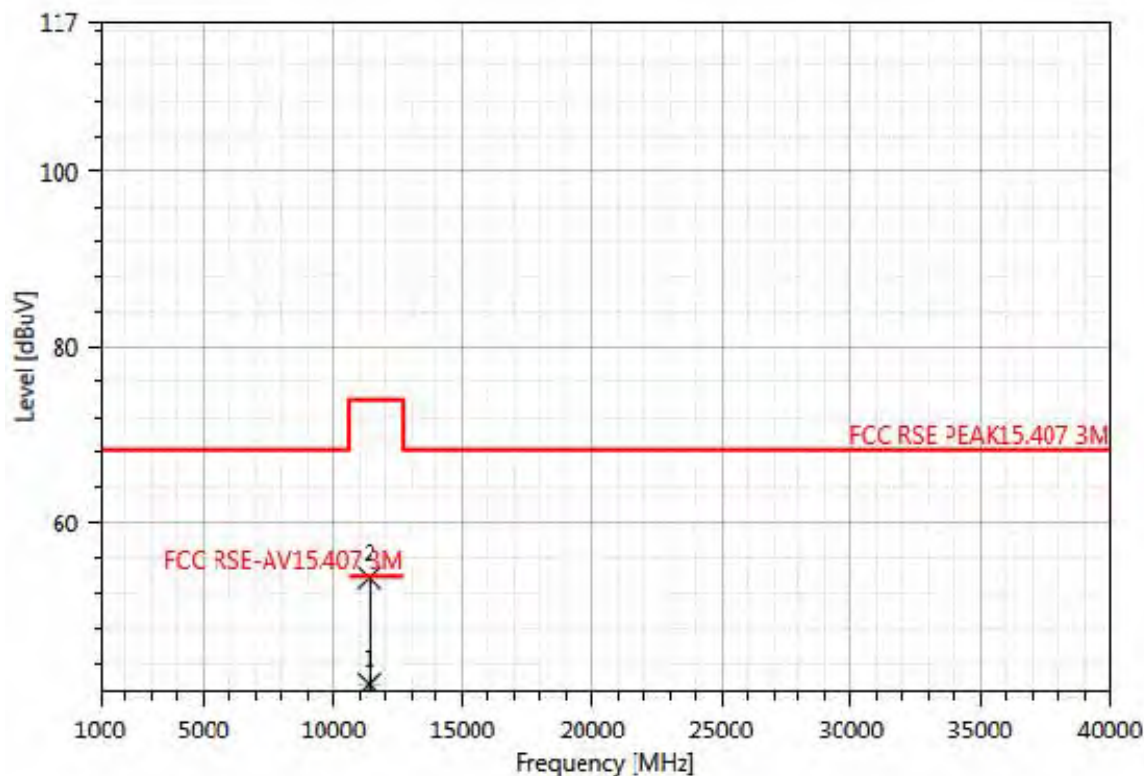
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Operation Mode : 802.11aB3  
 Fundamental Frequency : 5700 MHz  
 Operation Band : Tx CH HIGH  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11400.00	H	Average	41.60	21.04	20.56	54.00	-12.40
11400.00	H	Peak	53.71	33.15	20.56	74.00	-20.29

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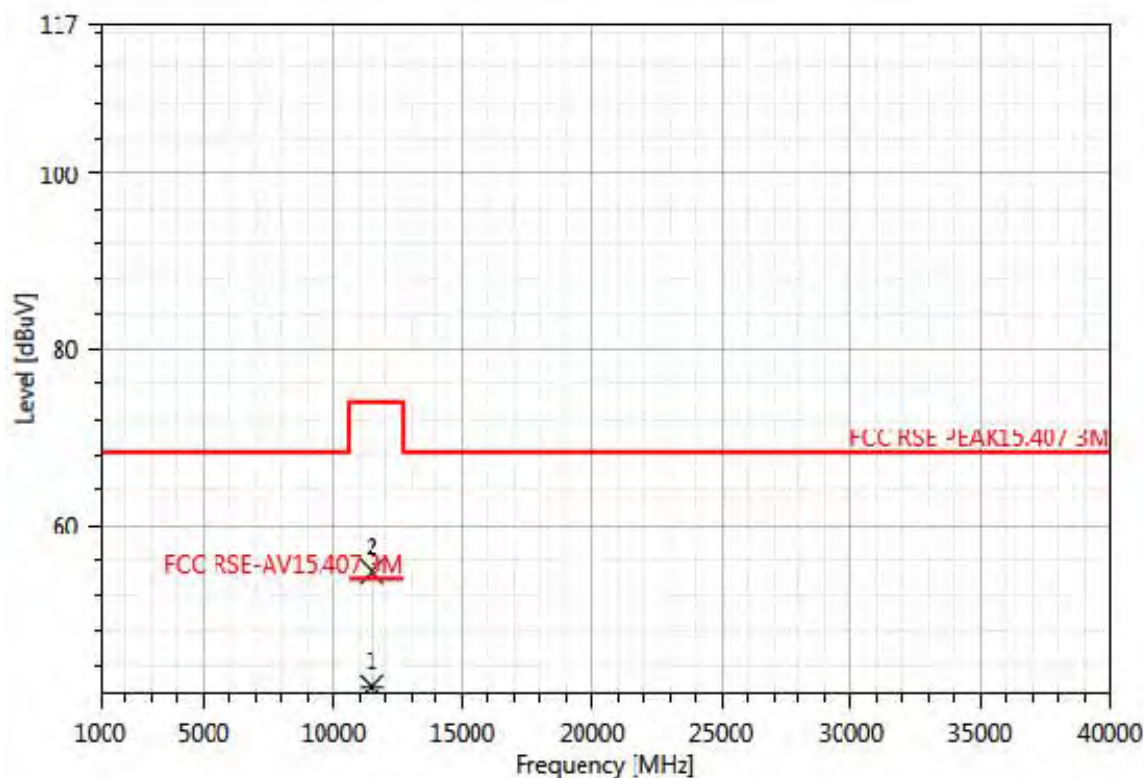
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## Radiated Spurious Emission Measurement Result 802.11a, 5725~5850 MHz

Operation Mode :	802.11aB4	Test Date :	06/27/2016
Fundamental Frequency :	5745 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH LOW	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq. MHz	Note F/H/E/S	Decetor Mode QP/AV/PK	Actual Reading Level dBuV/m	Spectrum FS dBuV/m	Factor dB	Limit @ 3m dBuV/m	Margin dB
11490.00	H	Average	41.66	21.24	20.42	54.00	-12.34
11490.00	H	Peak	54.78	34.36	20.42	74.00	-19.22

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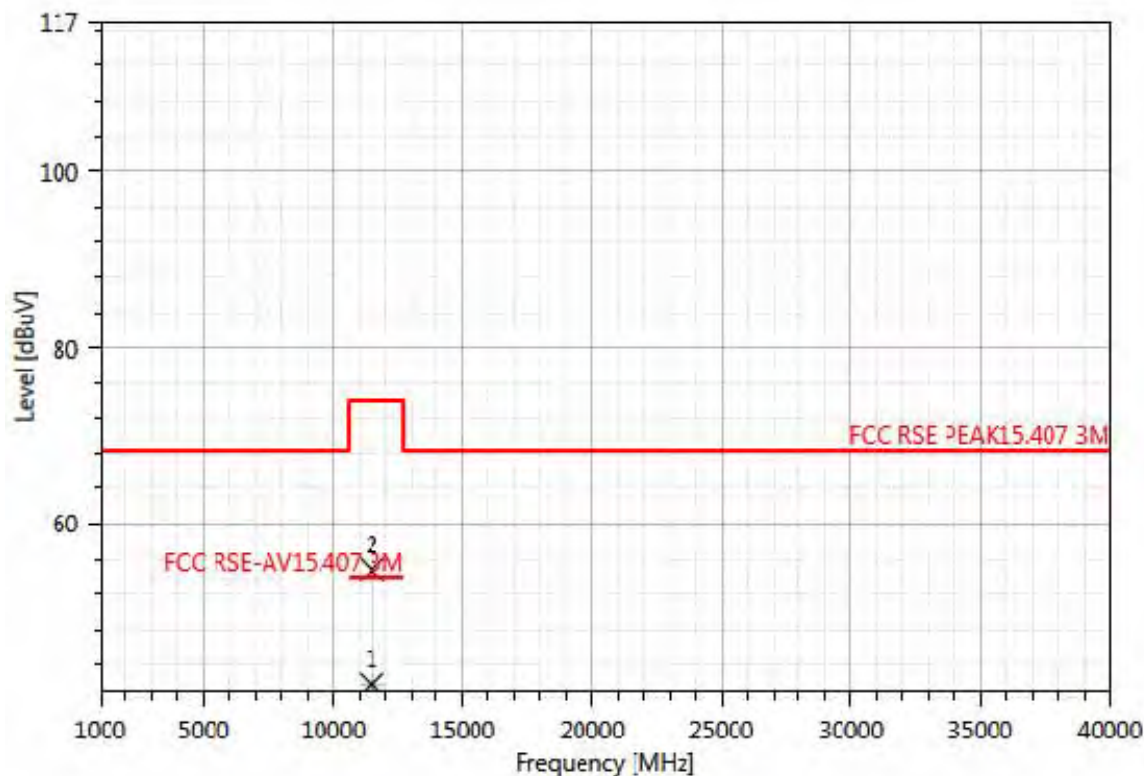
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Operation Mode : 802.11aB4  
 Fundamental Frequency : 5745 MHz  
 Operation Band : Tx CH LOW  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11490.00	H	Average	41.76	21.34	20.42	54.00	-12.24
11490.00	H	Peak	54.77	34.35	20.42	74.00	-19.23

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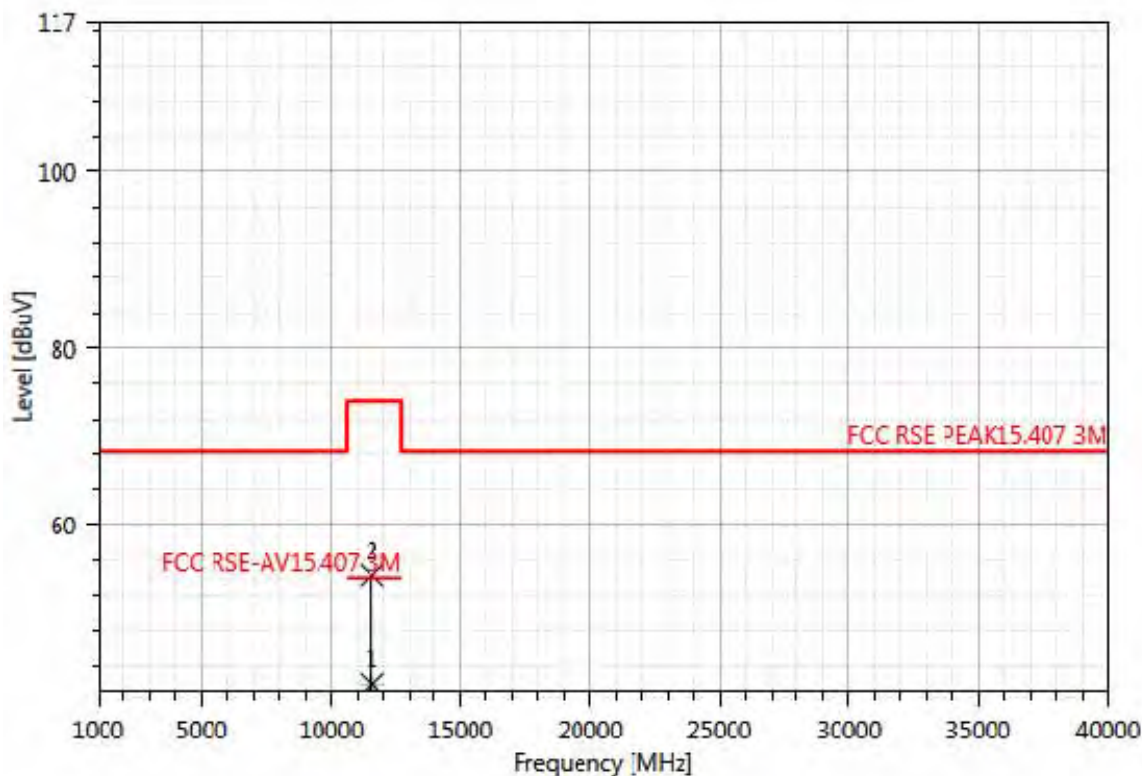
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Operation Mode : 802.11aB4  
 Fundamental Frequency : 5785 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
11570.00	H	Average	41.87	21.28	20.59	54.00	-12.13
11570.00	H	Peak	54.21	33.62	20.59	74.00	-19.79

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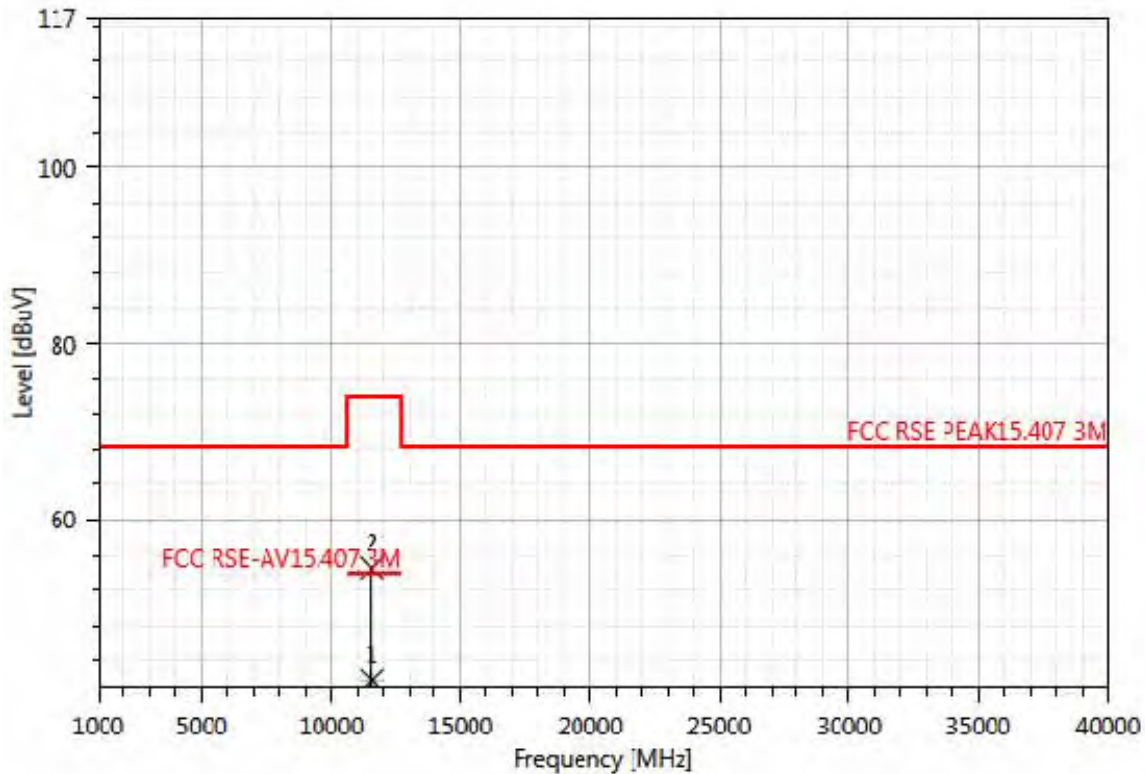
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Operation Mode : 802.11aB4  
 Fundamental Frequency : 5785 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11570.00	H	Average	41.74	21.15	20.59	54.00	-12.26
11570.00	H	Peak	54.46	33.87	20.59	74.00	-19.54

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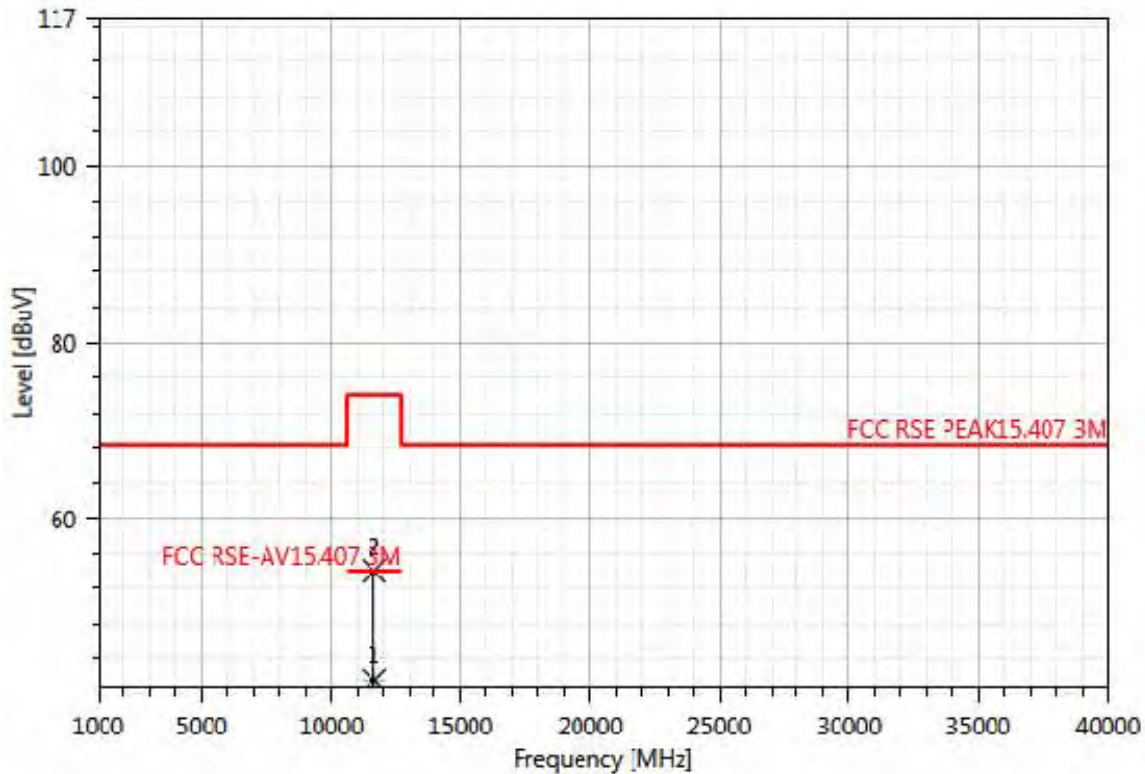
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Operation Mode :	802.11aB4	Test Date :	06/27/2016
Fundamental Frequency :	5825 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH HIGH	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11650.00	H	Average	41.47	21.04	20.43	54.00	-12.53
11650.00	H	Peak	53.95	33.52	20.43	74.00	-20.05

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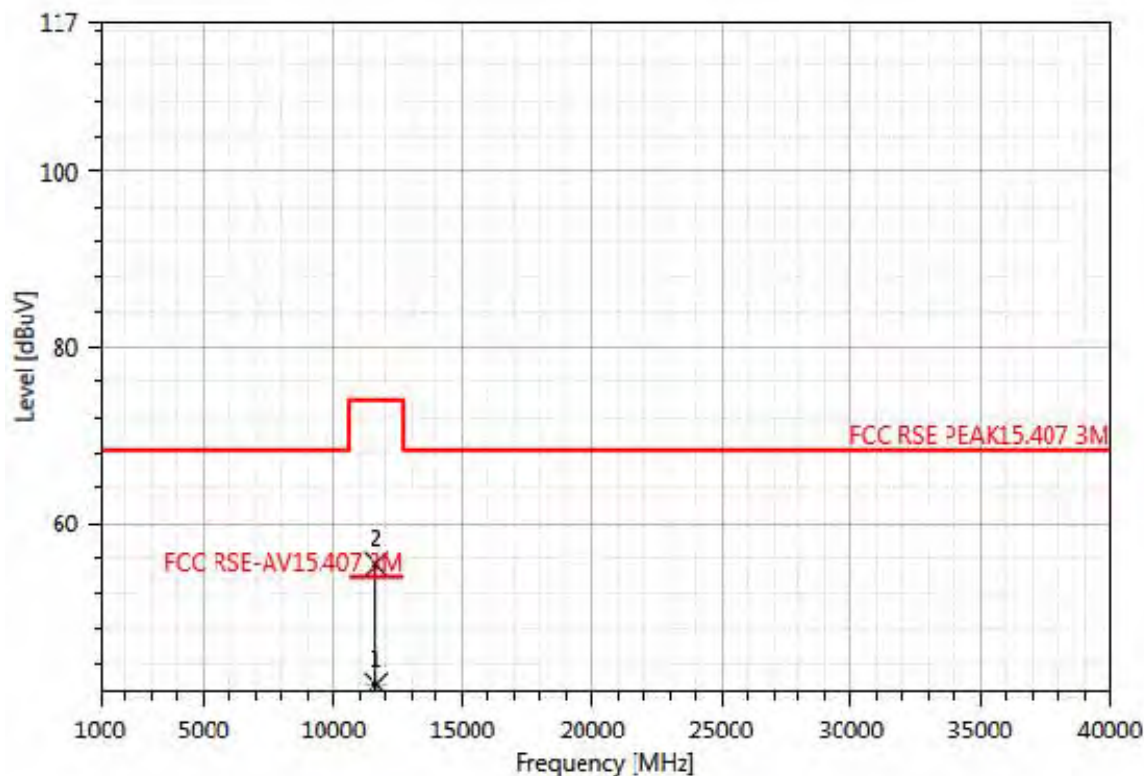
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Operation Mode : 802.11aB4  
 Fundamental Frequency : 5825 MHz  
 Operation Band : Tx CH HIGH  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
11650.00	H	Average	41.66	21.23	20.43	54.00	-12.34
11650.00	H	Peak	55.37	34.93	20.43	74.00	-18.63

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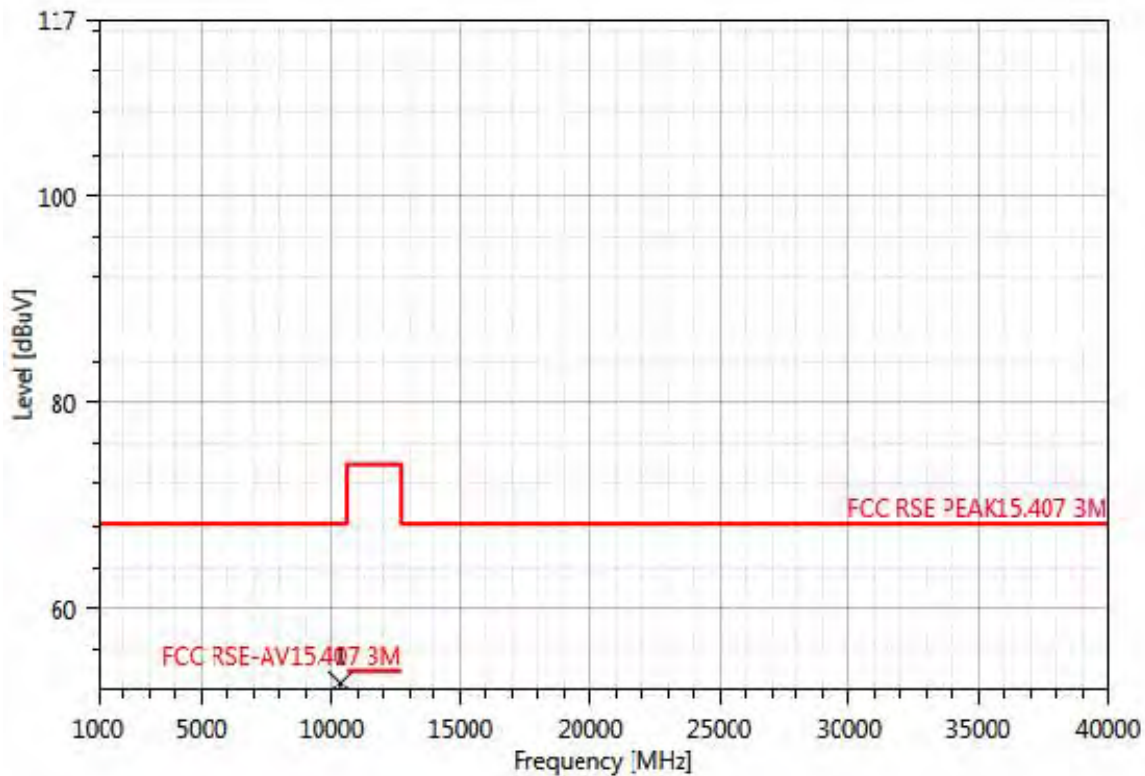
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## Radiated Spurious Emission Measurement Result 802.11n HT20, 5150~5250 MHz

Operation Mode :	802.11n20B1	Test Date :	06/27/2016
Fundamental Frequency :	5180 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH LOW	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10360.00	H	Peak	52.85	34.55	18.29	68.30	-15.45

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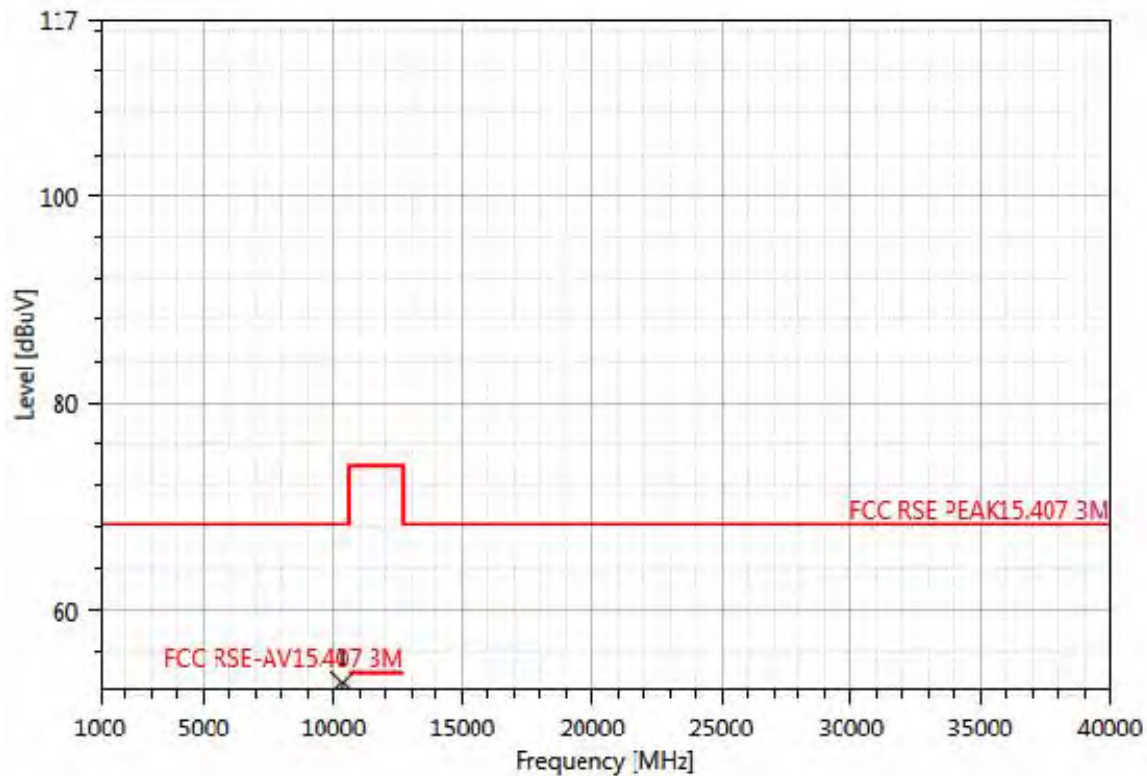
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Operation Mode : 802.11n20B1  
 Fundamental Frequency : 5180 MHz  
 Operation Band : Tx CH LOW  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10360.00	H	Peak	53.00	34.71	18.29	68.30	-15.30

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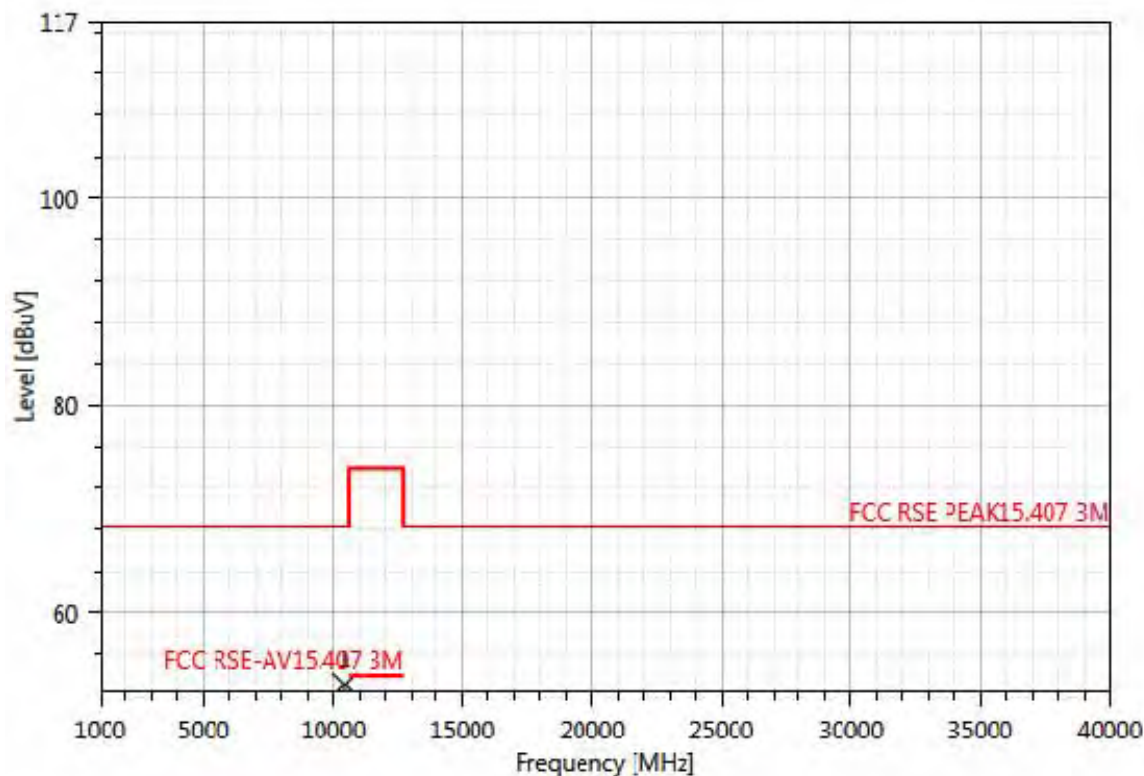
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Operation Mode : 802.11n20B1  
 Fundamental Frequency : 5220 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10440.00	H	Peak	53.10	34.42	18.68	68.30	-15.20

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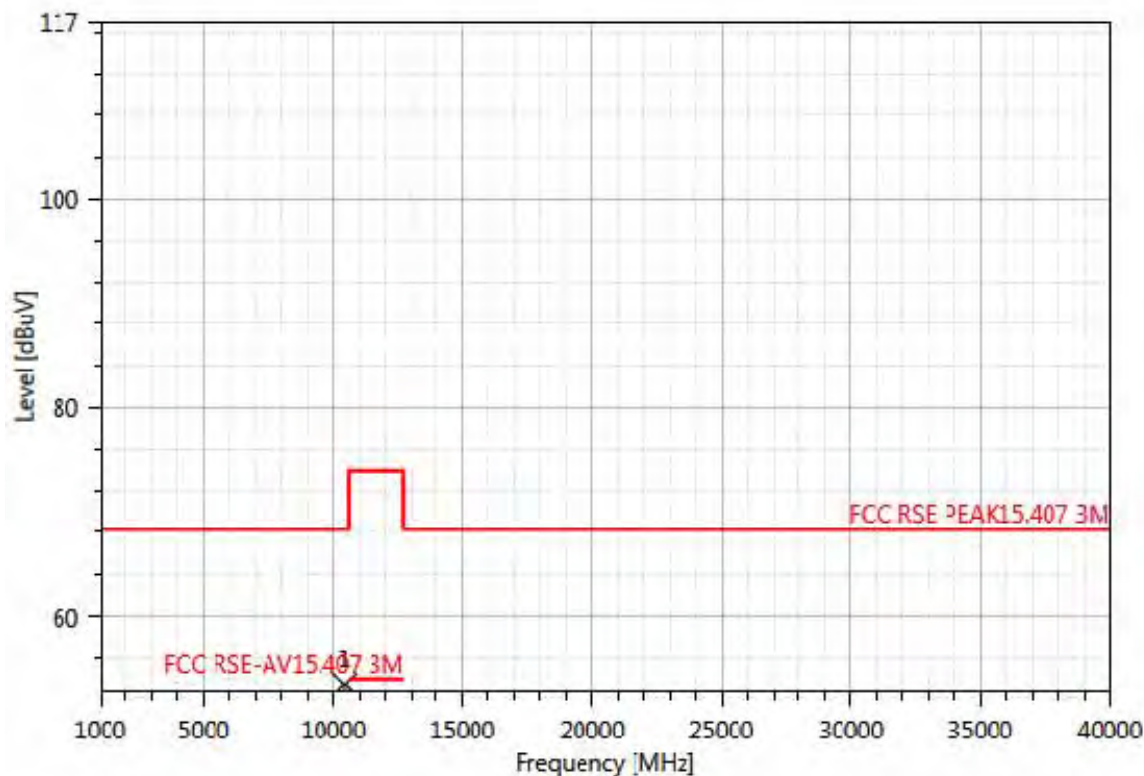
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Operation Mode : 802.11n20B1  
 Fundamental Frequency : 5220 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10440.00	H	Peak	53.44	34.75	18.68	68.30	-14.86

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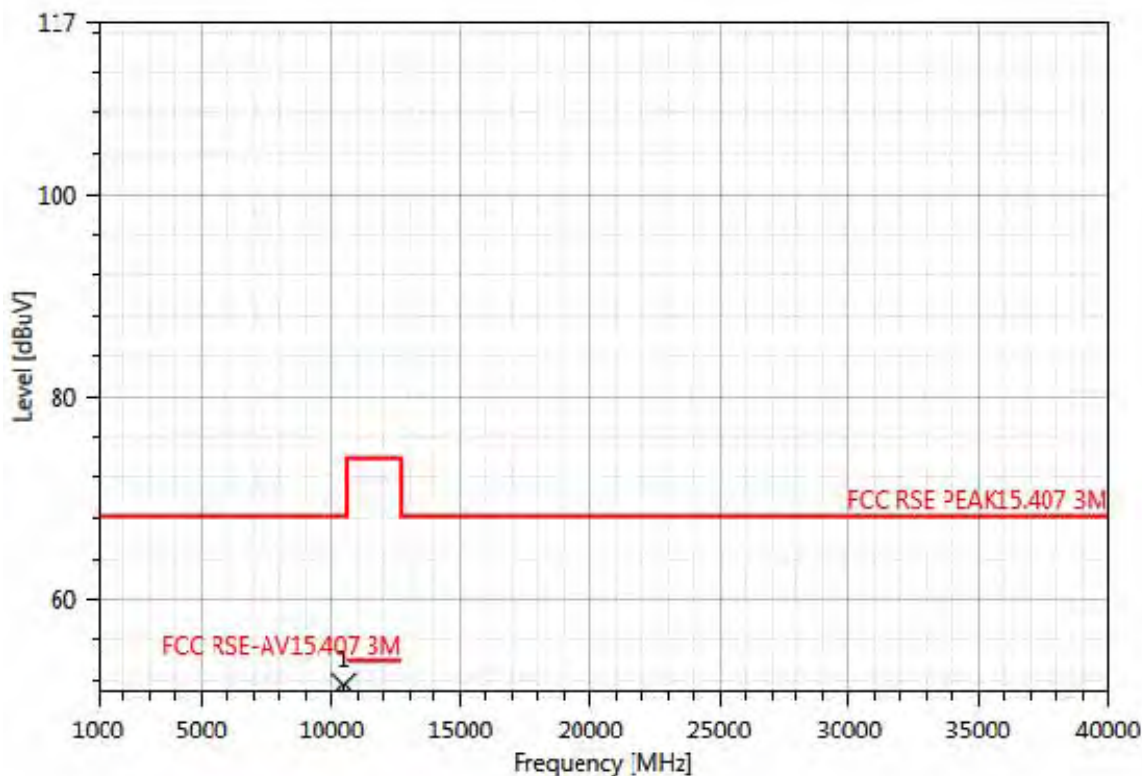
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Operation Mode :	802.11n20B1	Test Date :	06/27/2016
Fundamental Frequency :	5240 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH HIGH	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10480.00	H	Peak	51.65	33.35	18.29	68.30	-16.65

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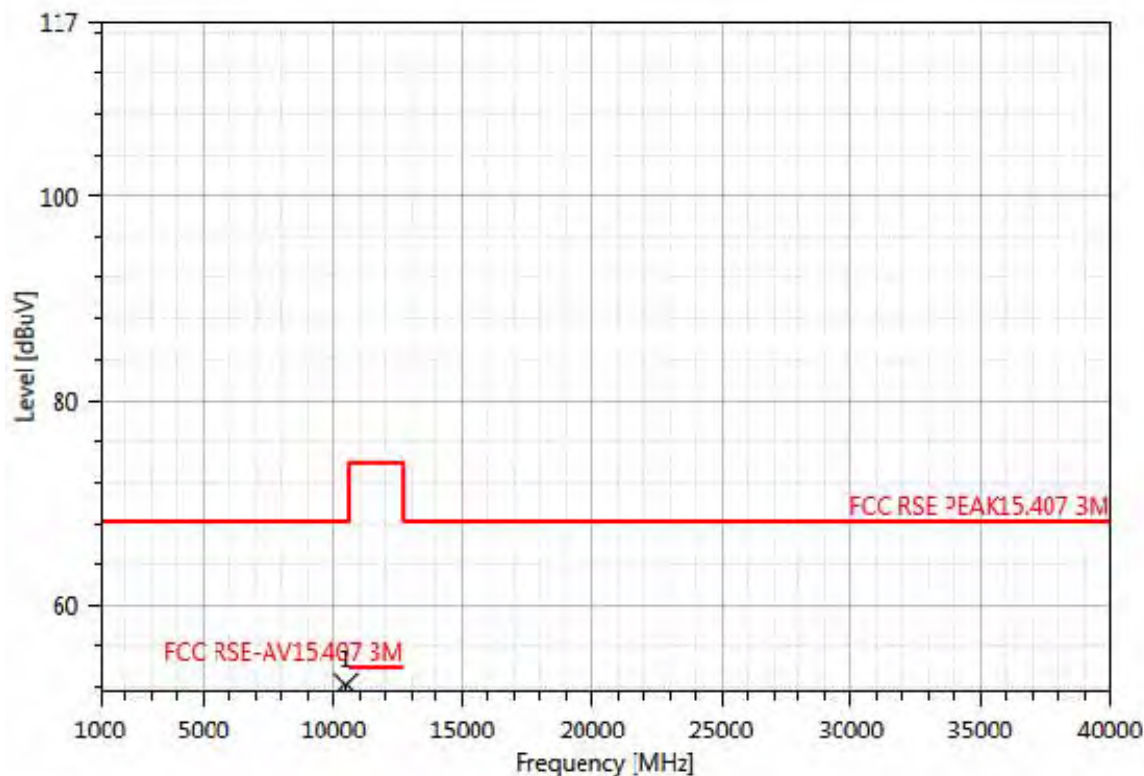
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Operation Mode : 802.11n20B1  
 Fundamental Frequency : 5240 MHz  
 Operation Band : Tx CH HIGH  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10480.00	H	Peak	52.32	34.03	18.29	68.30	-15.98

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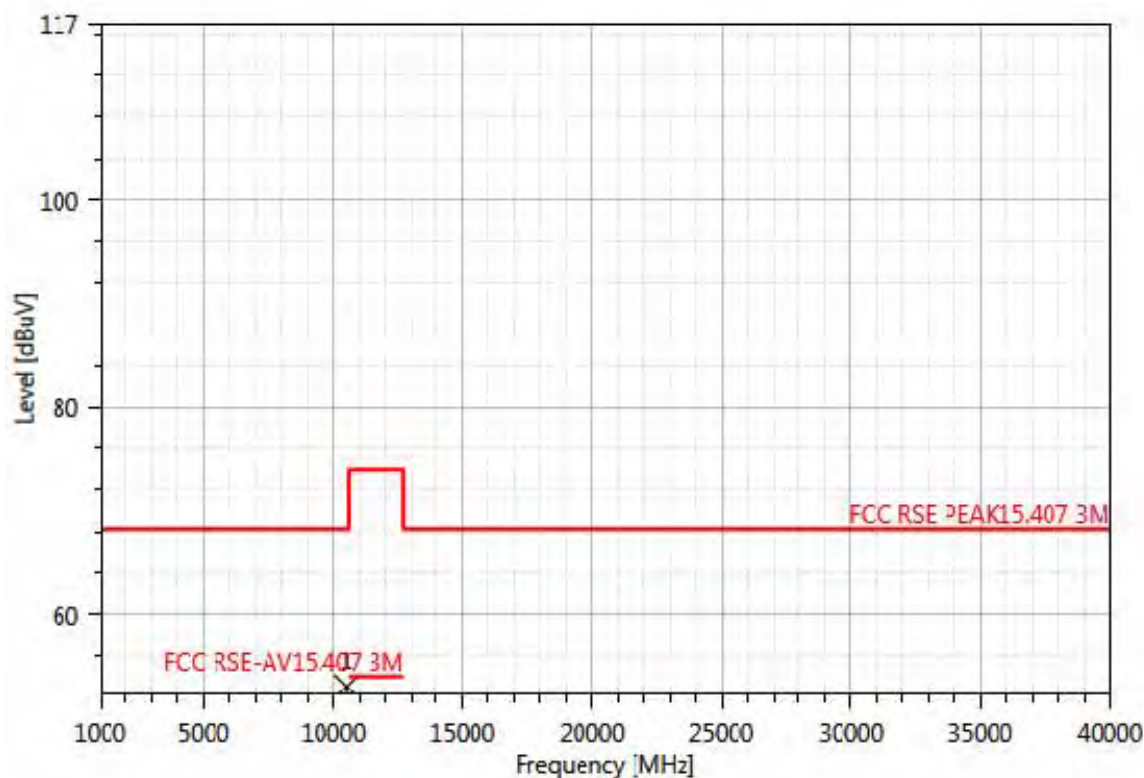
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## Radiated Spurious Emission Measurement Result 802.11n HT20, 5250~5350 MHz

Operation Mode :	802.11n20B2	Test Date :	06/27/2016
Fundamental Frequency :	5260 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH LOW	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
10520.00	H	Peak	53.02	33.65	19.37	68.30	-15.28

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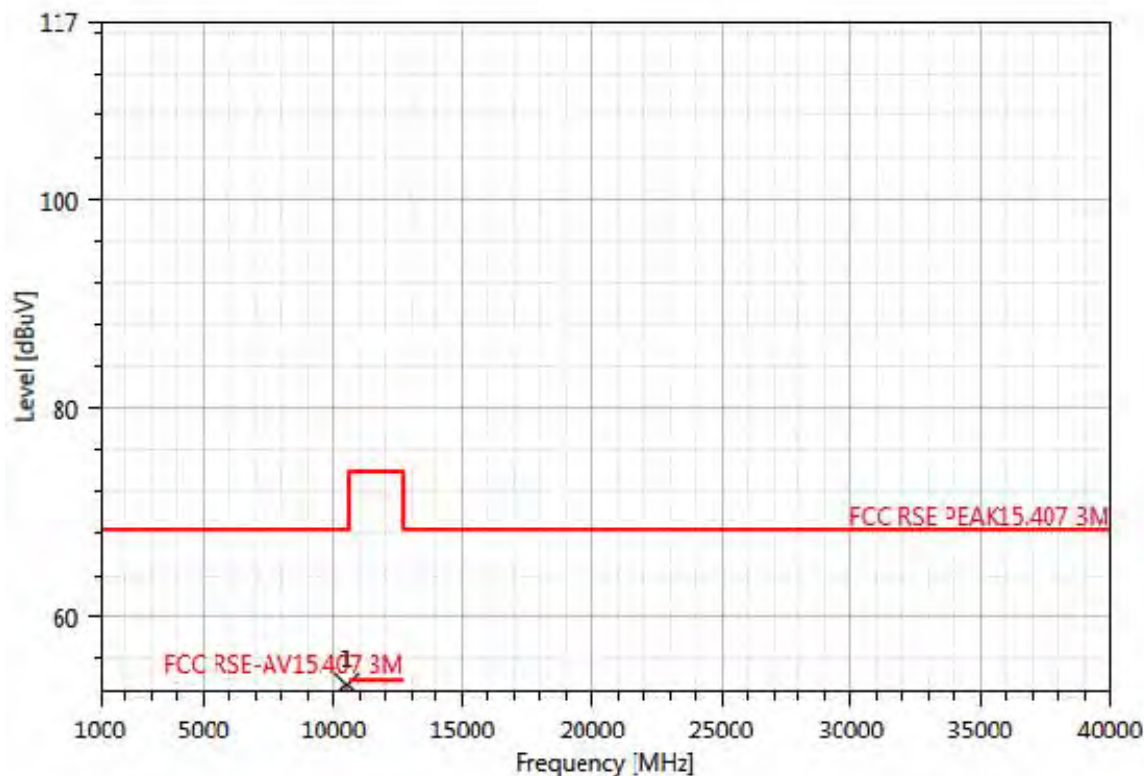
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Operation Mode : 802.11n20B2  
 Fundamental Frequency : 5260 MHz  
 Operation Band : Tx CH LOW  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10520.00	H	Peak	53.53	34.16	19.37	68.30	-14.77

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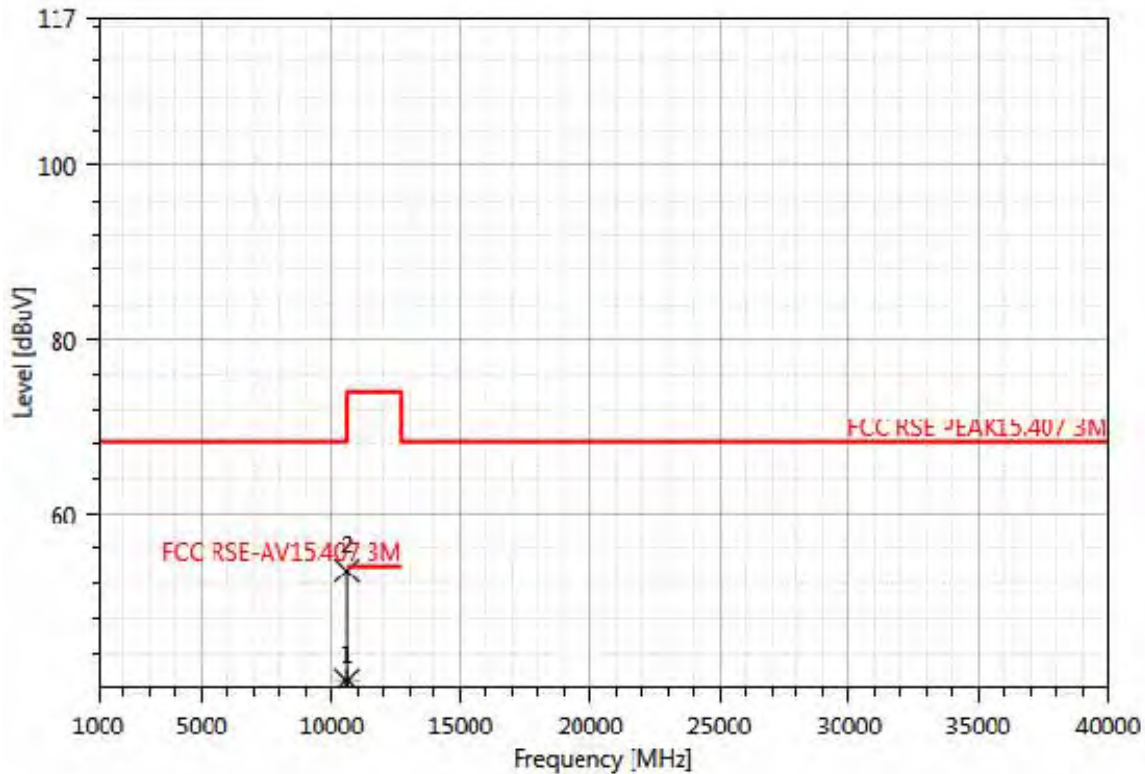
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Operation Mode :	802.11n20B2	Test Date :	06/27/2016
Fundamental Frequency :	5300 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH MID	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
10600.00	H	Average	40.87	21.96	18.91	54.00	-13.13
10600.00	H	Peak	53.47	34.56	18.91	74.00	-20.53

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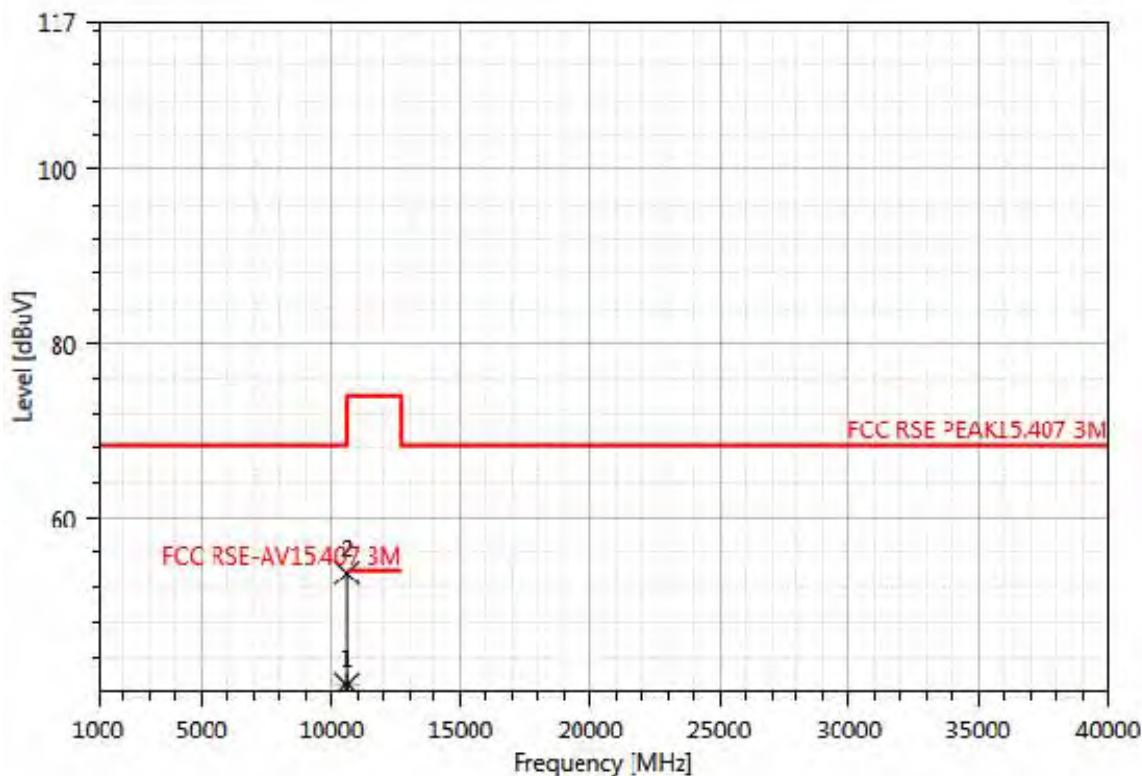
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Operation Mode : 802.11n20B2  
 Fundamental Frequency : 5300 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
10600.00	H	Average	40.86	21.95	18.91	54.00	-13.14
10600.00	H	Peak	53.66	34.75	18.91	74.00	-20.34

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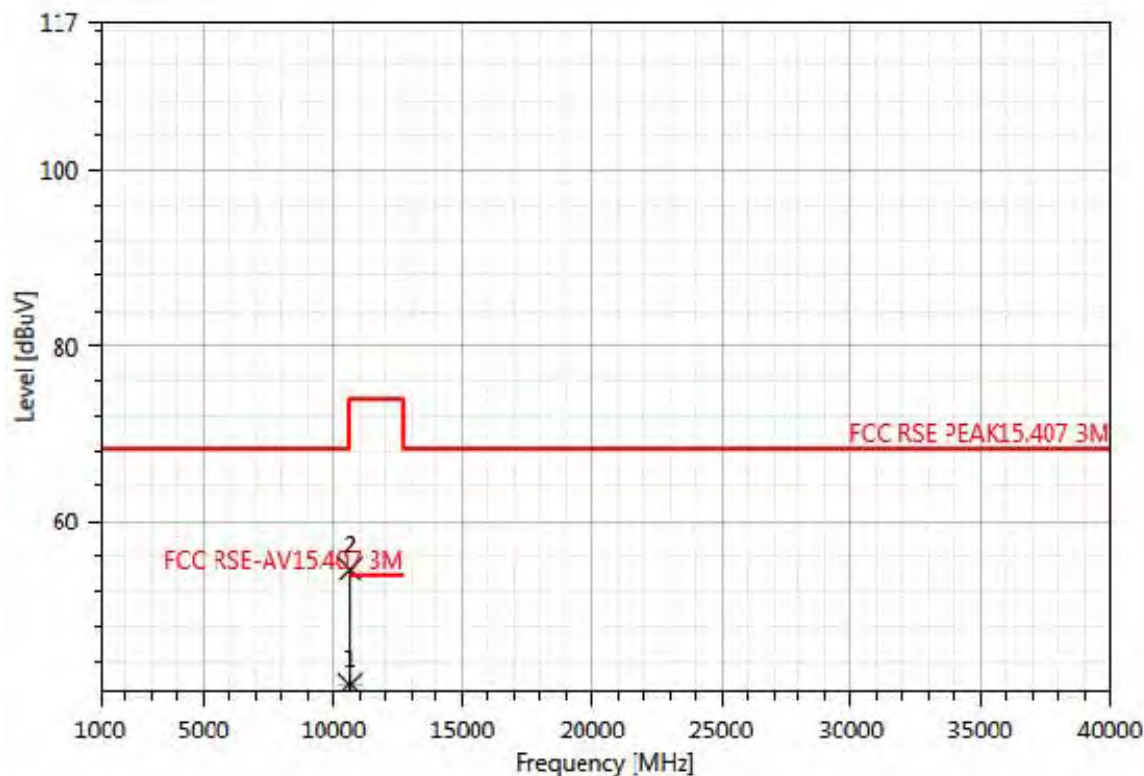
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Operation Mode : 802.11n20B2  
 Fundamental Frequency : 5320 MHz  
 Operation Band : Tx CH HIGH  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
10640.00	H	Average	41.43	22.25	19.18	54.00	-12.57
10640.00	H	Peak	54.59	35.40	19.18	74.00	-19.41

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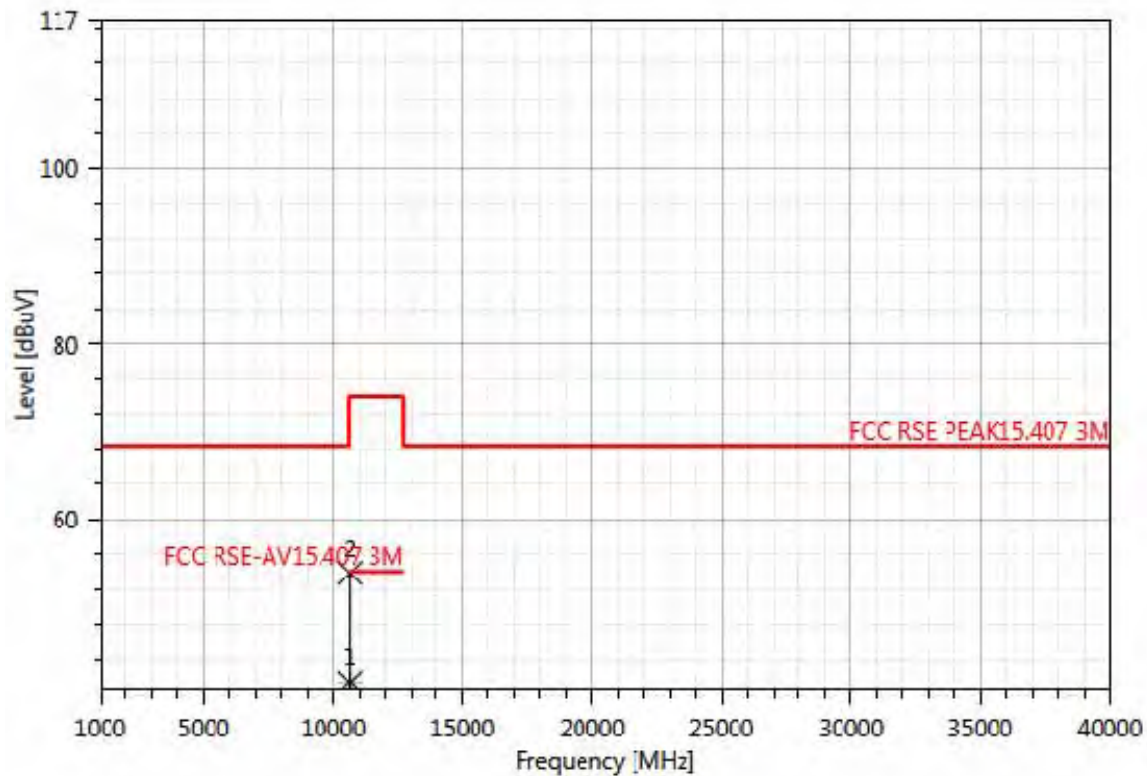
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Operation Mode : 802.11n20B2  
 Fundamental Frequency : 5320 MHz  
 Operation Band : Tx CH HIGH  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
10640.00	H	Average	41.34	22.16	19.18	54.00	-12.66
10640.00	H	Peak	53.83	34.64	19.18	74.00	-20.17

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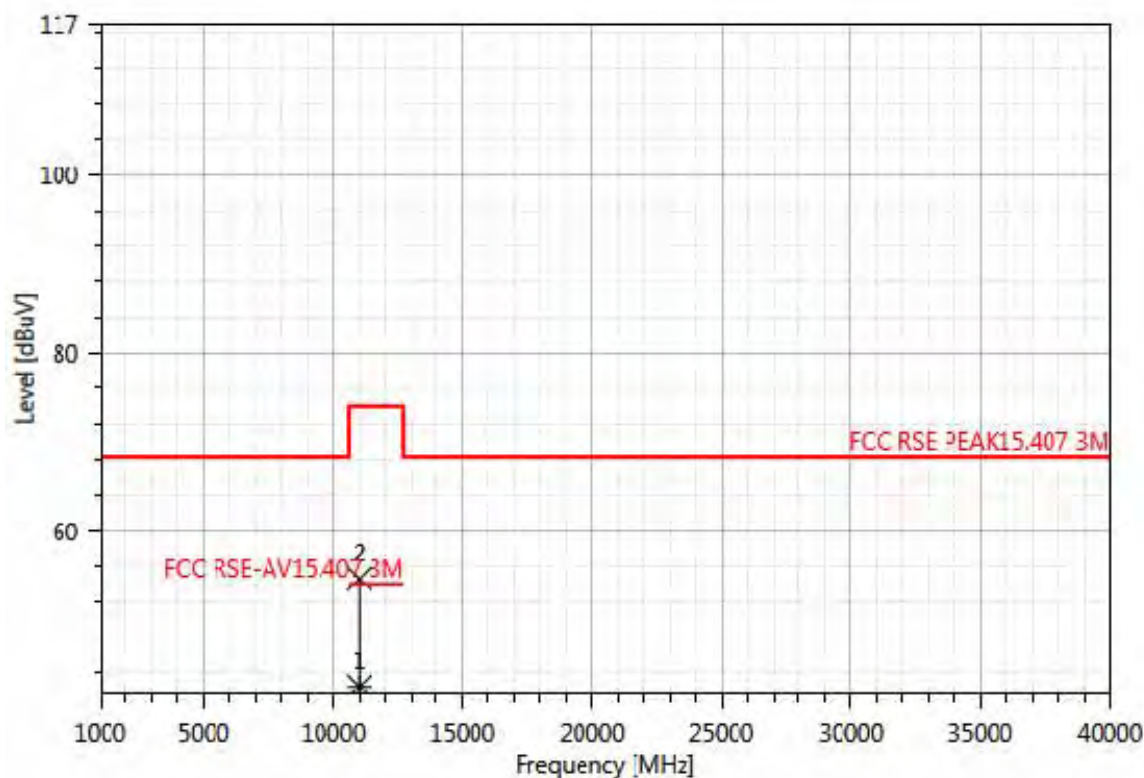
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## Radiated Spurious Emission Measurement Result 802.11n HT20, 5470~5725 MHz

Operation Mode :	802.11n20B3	Test Date :	06/27/2016
Fundamental Frequency :	5500 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH LOW	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
11000.00	H	Average	42.46	22.29	20.17	54.00	-11.54
11000.00	H	Peak	54.60	34.43	20.17	74.00	-19.40

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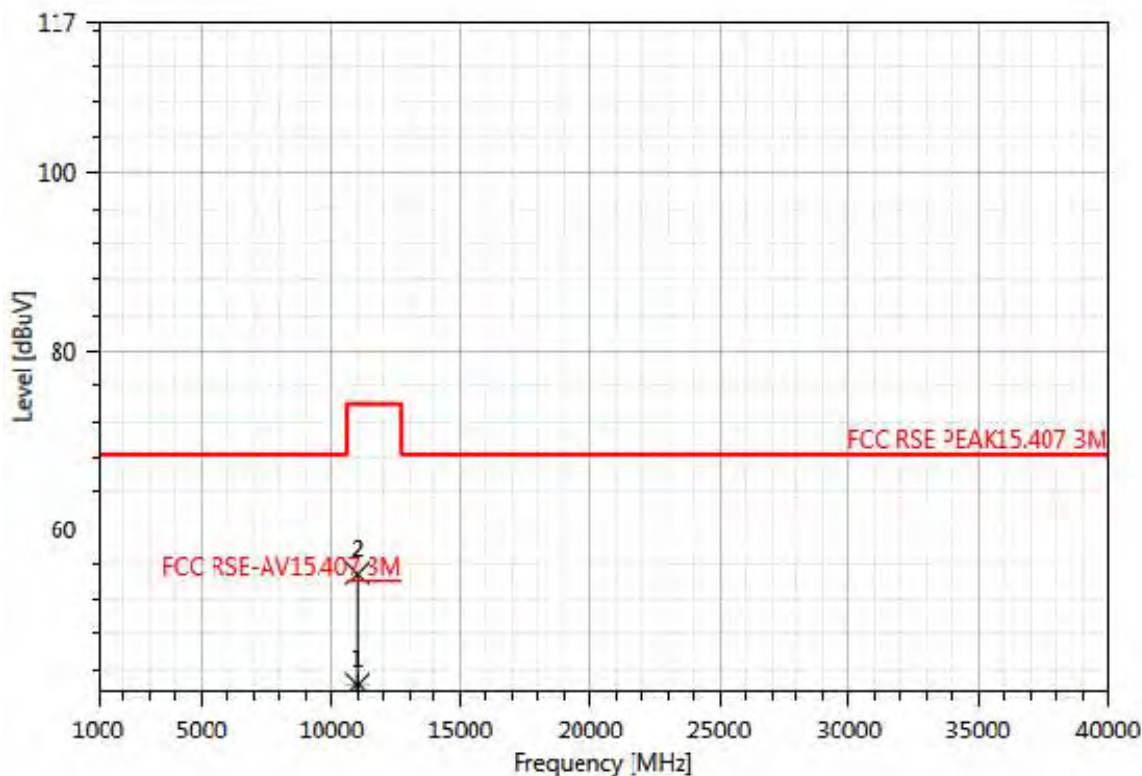
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Operation Mode : 802.11n20B3  
 Fundamental Frequency : 5500 MHz  
 Operation Band : Tx CH LOW  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
11000.00	H	Average	42.40	22.23	20.17	54.00	-11.60
11000.00	H	Peak	54.89	34.73	20.17	74.00	-19.11

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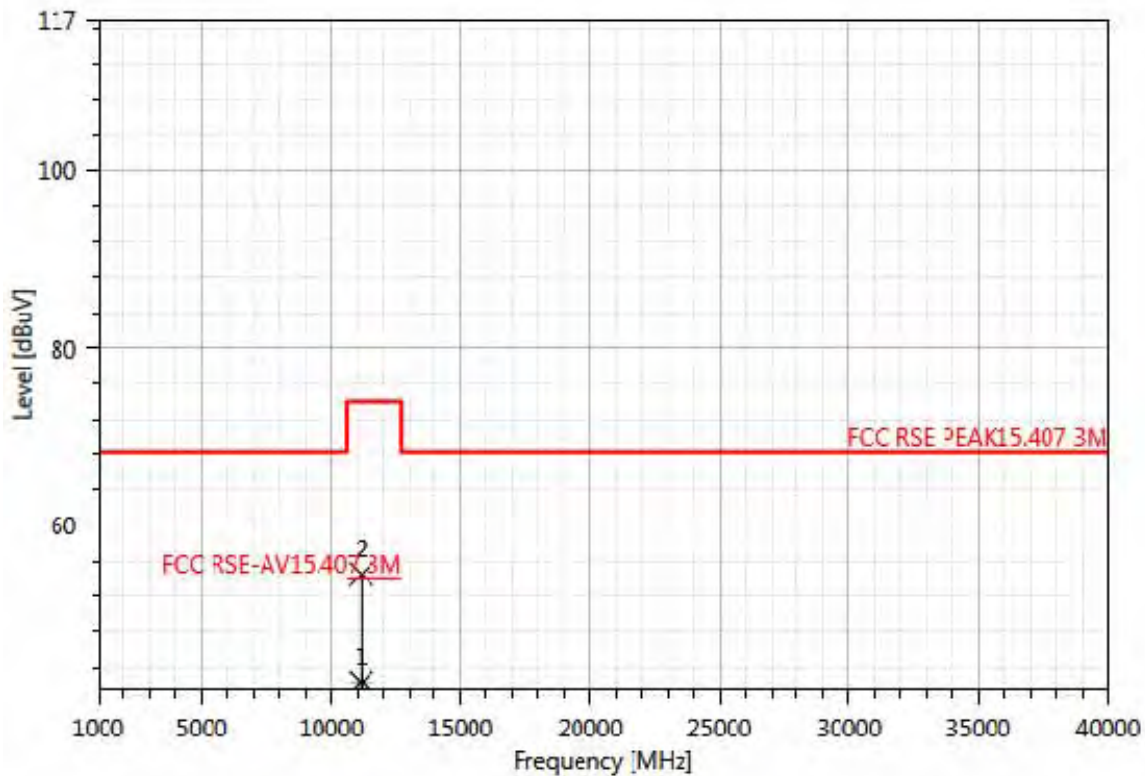
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Operation Mode : 802.11n20B3  
 Fundamental Frequency : 5580 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBuV/m	dBuV/m	dB	dBuV/m	dB
11160.00	H	Average	42.30	21.85	20.45	54.00	-11.70
11160.00	H	Peak	54.51	34.07	20.45	74.00	-19.49

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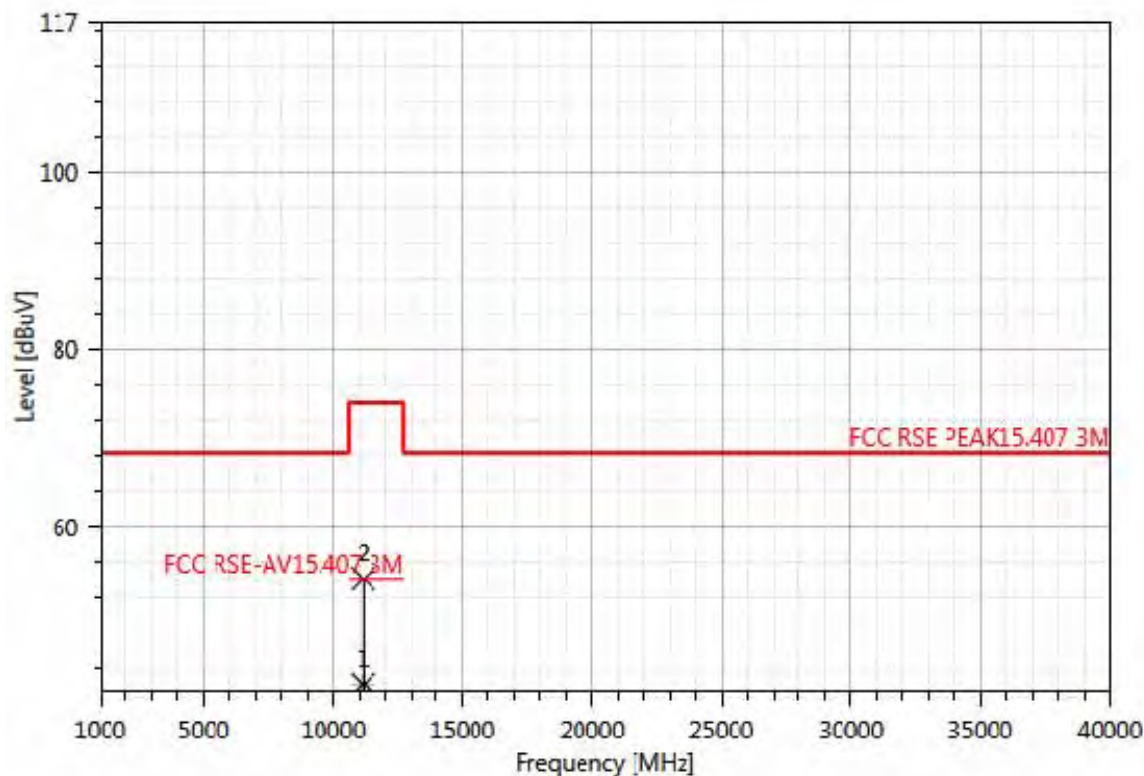
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Operation Mode : 802.11n20B3  
 Fundamental Frequency : 5580 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11160.00	H	Average	42.13	21.68	20.45	54.00	-11.87
11160.00	H	Peak	54.06	33.61	20.45	74.00	-19.94

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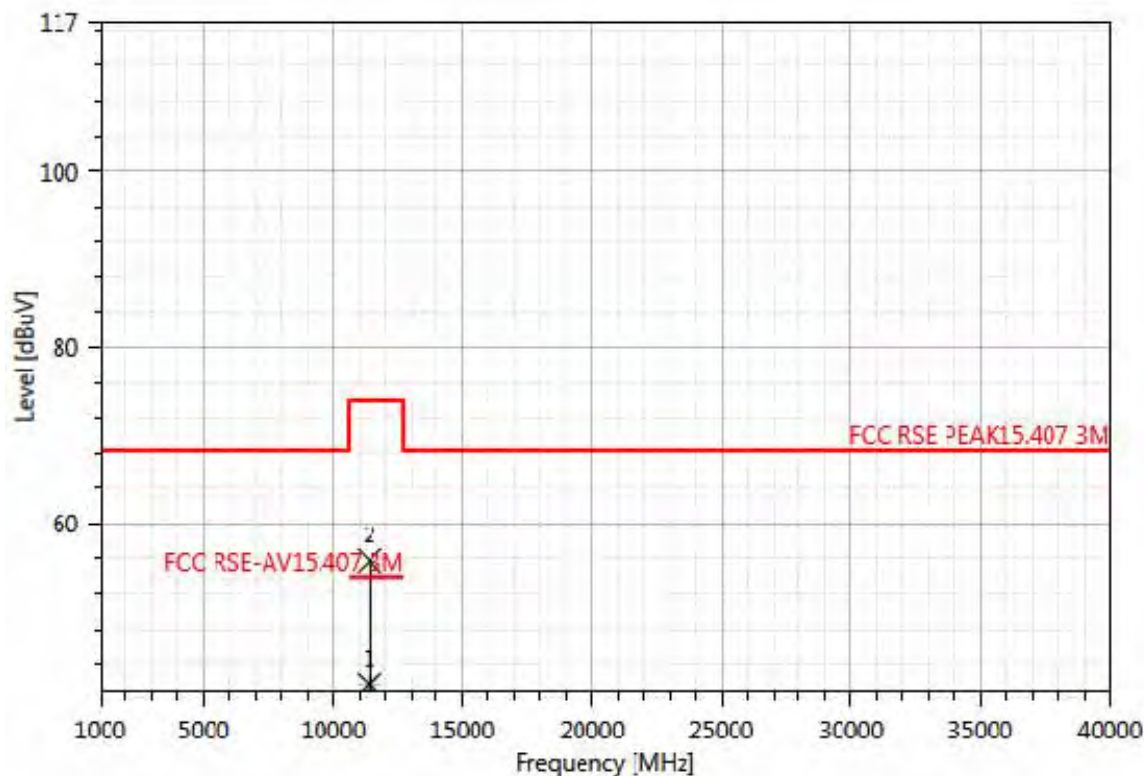
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Operation Mode : 802.11n20B3  
 Fundamental Frequency : 5700 MHz  
 Operation Band : Tx CH HIGH  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
11400.00	H	Average	41.71	21.15	20.56	54.00	-12.29
11400.00	H	Peak	55.78	35.22	20.56	74.00	-18.22

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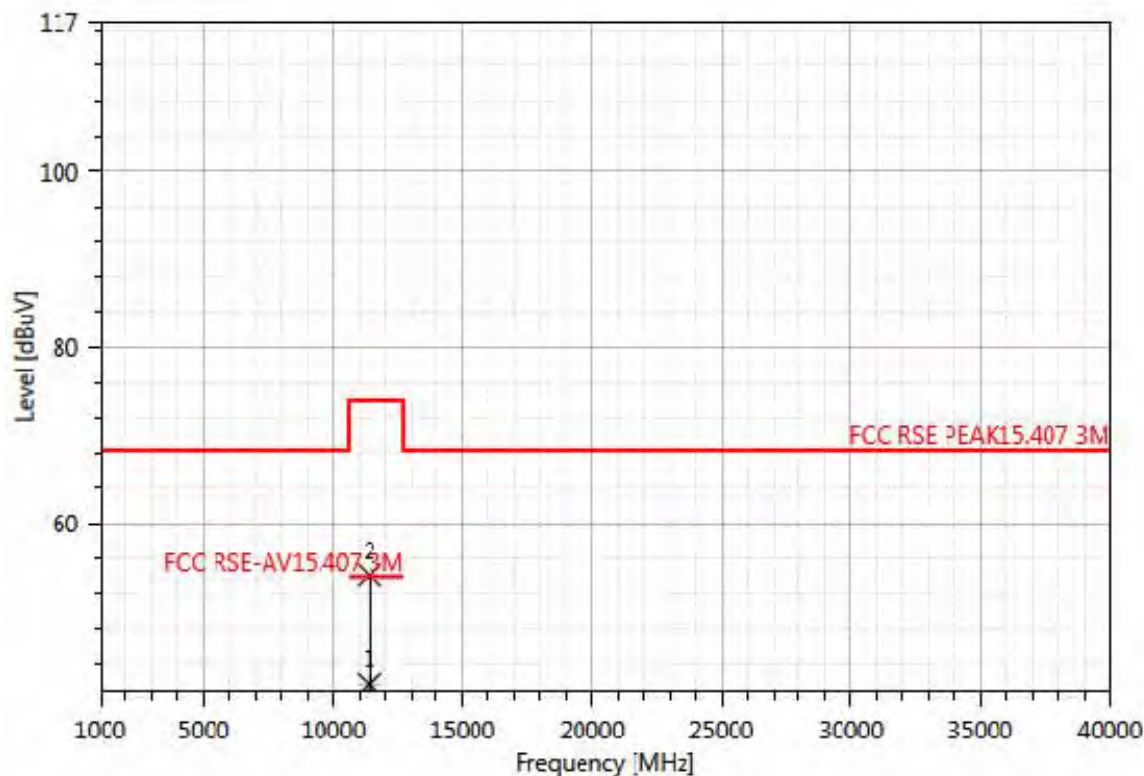
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Operation Mode : 802.11n20B3  
 Fundamental Frequency : 5700 MHz  
 Operation Band : Tx CH HIGH  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11400.00	H	Average	41.68	21.12	20.56	54.00	-12.32
11400.00	H	Peak	54.08	33.52	20.56	74.00	-19.92

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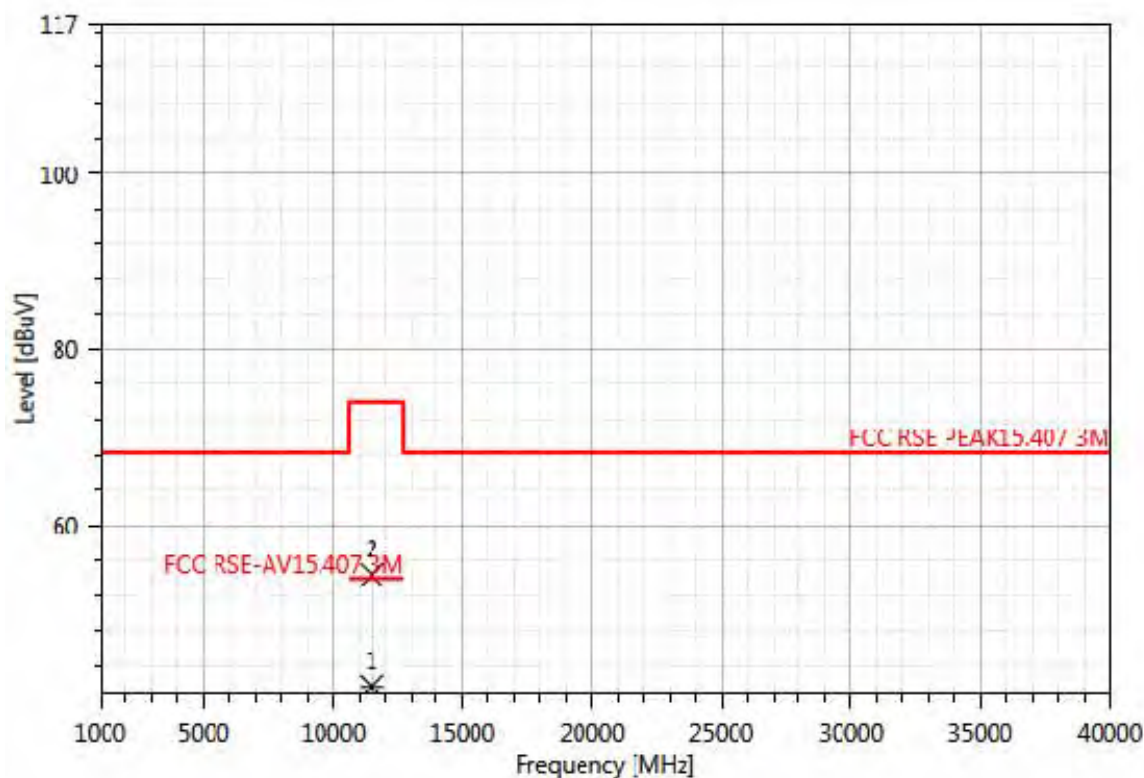
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## Radiated Spurious Emission Measurement Result 802.11n HT20, 5725~5850 MHz

Operation Mode :	802.11n20B4	Test Date :	06/27/2016
Fundamental Frequency :	5745 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH LOW	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
11490.00	H	Average	41.67	21.25	20.42	54.00	-12.33
11490.00	H	Peak	54.38	33.96	20.42	74.00	-19.62

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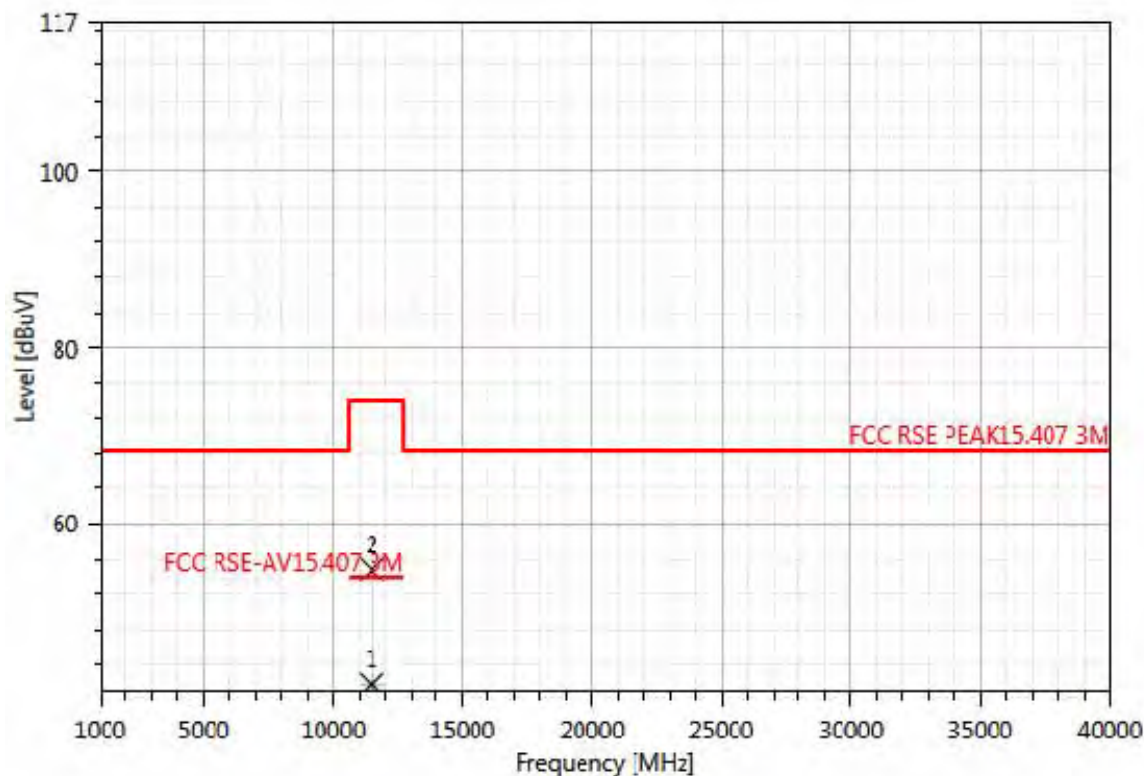
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Operation Mode : 802.11n20B4  
 Fundamental Frequency : 5745 MHz  
 Operation Band : Tx CH LOW  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBuV/m	dBuV/m	dB	dBuV/m	dB
11490.00	H	Average	41.74	21.32	20.42	54.00	-12.26
11490.00	H	Peak	54.78	34.36	20.42	74.00	-19.22

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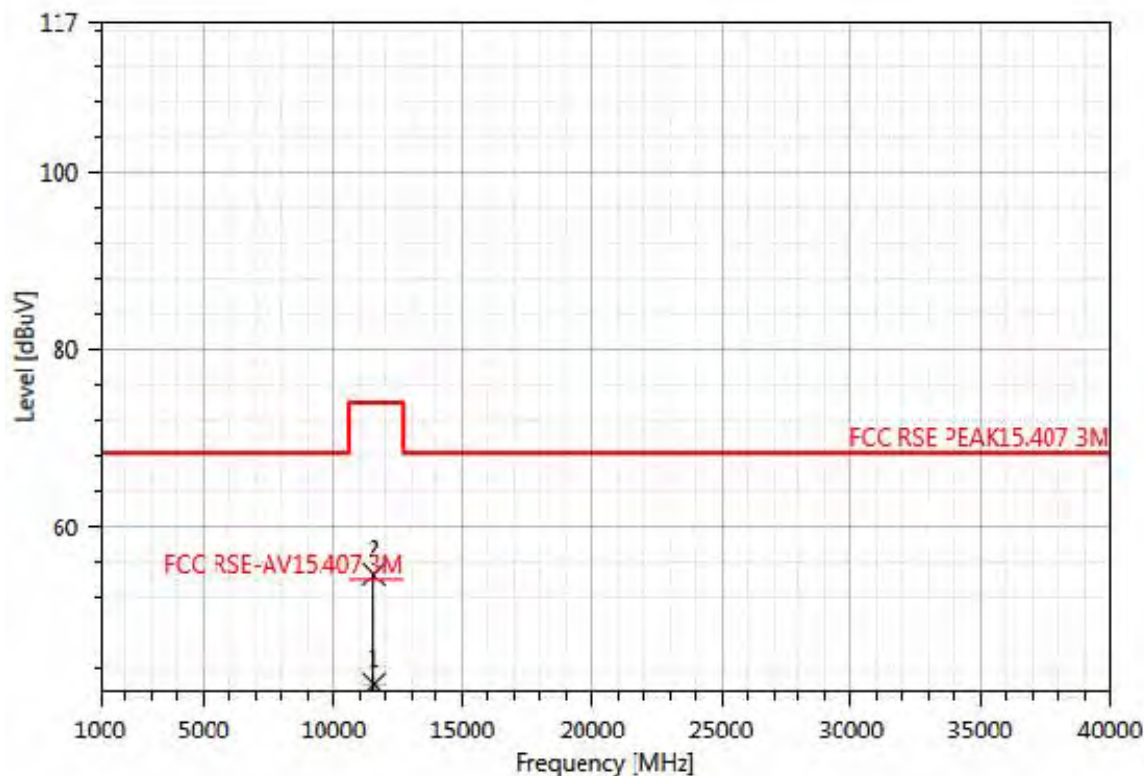
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Operation Mode : 802.11n20B4  
 Fundamental Frequency : 5785 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
11570.00	H	Average	42.15	21.56	20.59	54.00	-11.85
11570.00	H	Peak	54.57	33.99	20.59	74.00	-19.43

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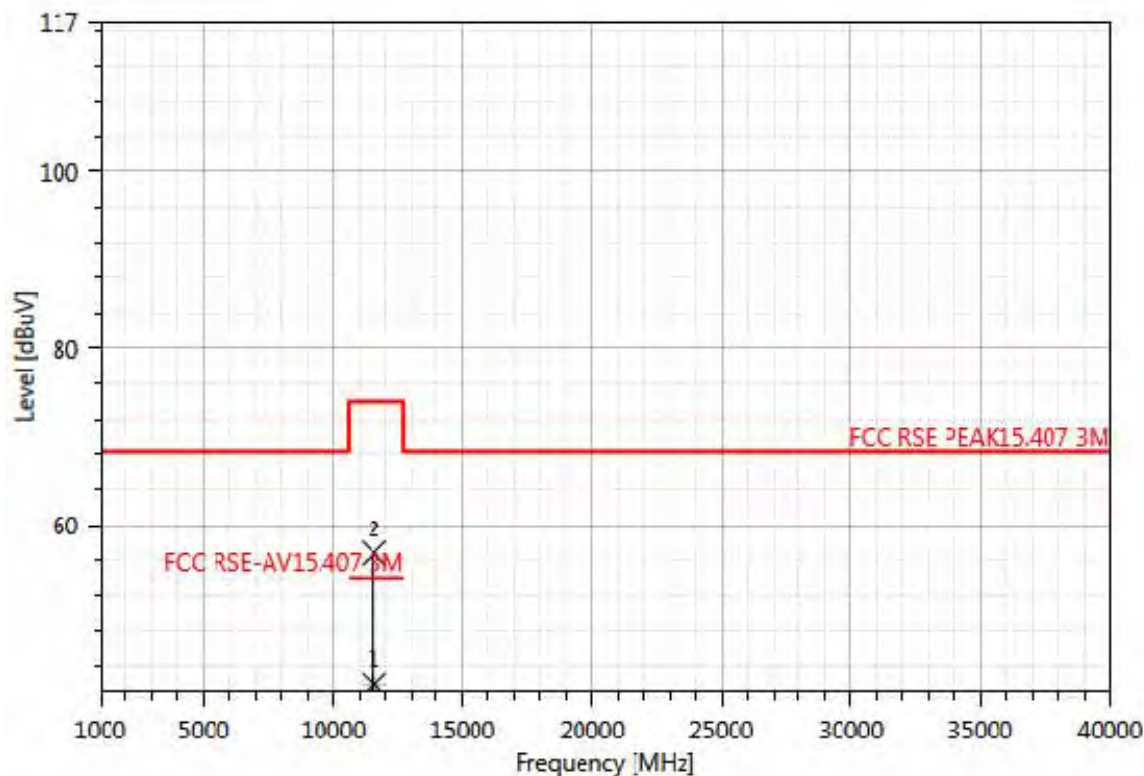
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Operation Mode : 802.11n20B4  
 Fundamental Frequency : 5785 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
11570.00	H	Average	41.93	21.34	20.59	54.00	-12.07
11570.00	H	Peak	56.81	36.22	20.59	74.00	-17.19

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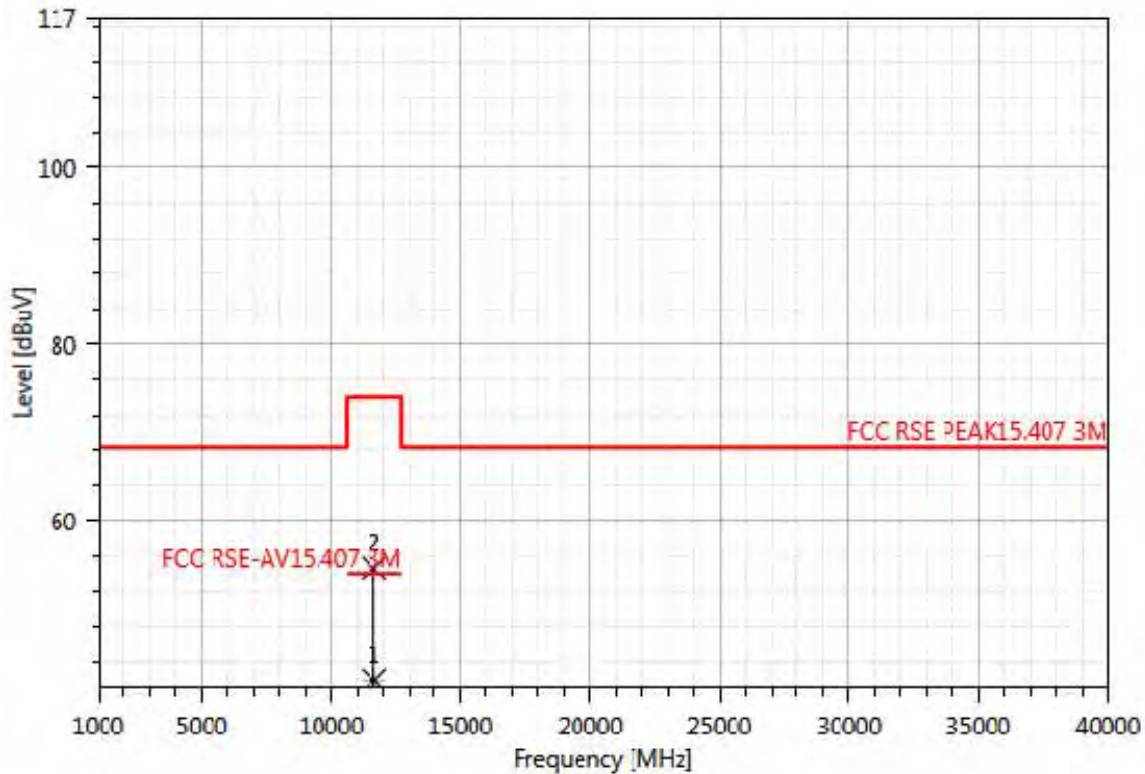
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Operation Mode :	802.11n20B4	Test Date :	06/27/2016
Fundamental Frequency :	5825 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH HIGH	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBμV/m	
11650.00	H	Average	41.85	21.42	20.43	54.00	-12.15
11650.00	H	Peak	54.56	34.12	20.43	74.00	-19.44

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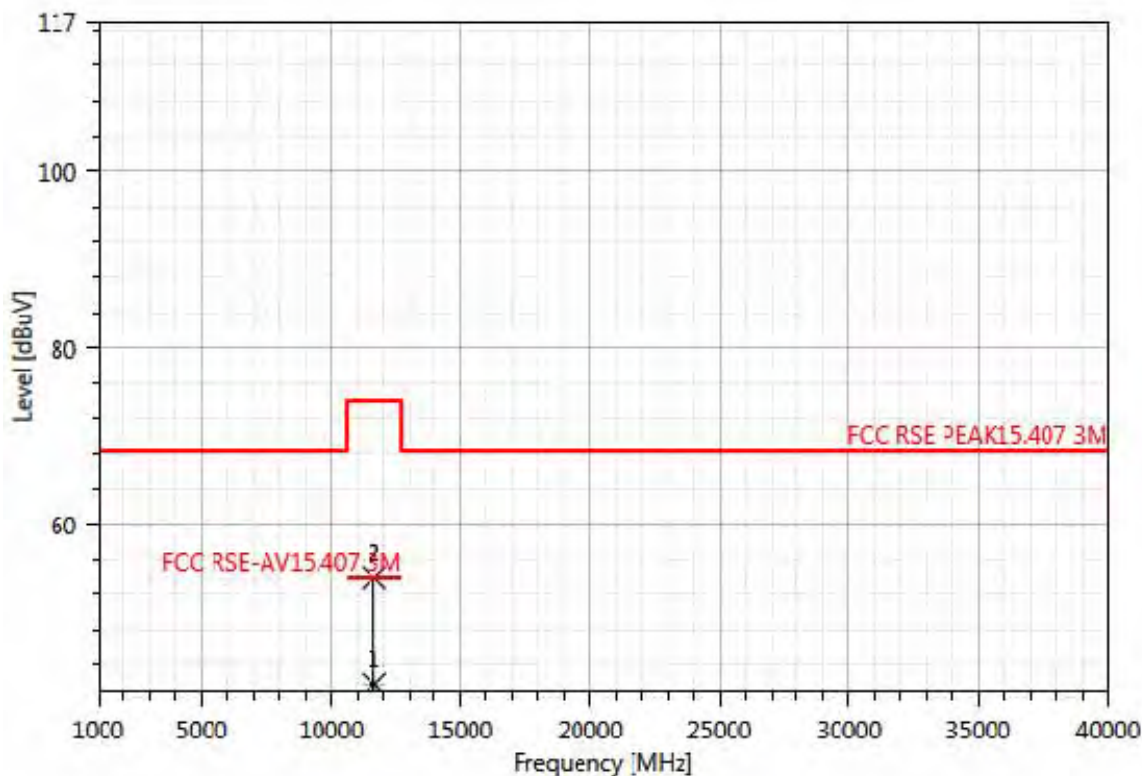
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Operation Mode : 802.11n20B4  
 Fundamental Frequency : 5825 MHz  
 Operation Band : Tx CH HIGH  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
11650.00	H	Average	41.78	21.35	20.43	54.00	-12.22
11650.00	H	Peak	53.87	33.43	20.43	74.00	-20.13

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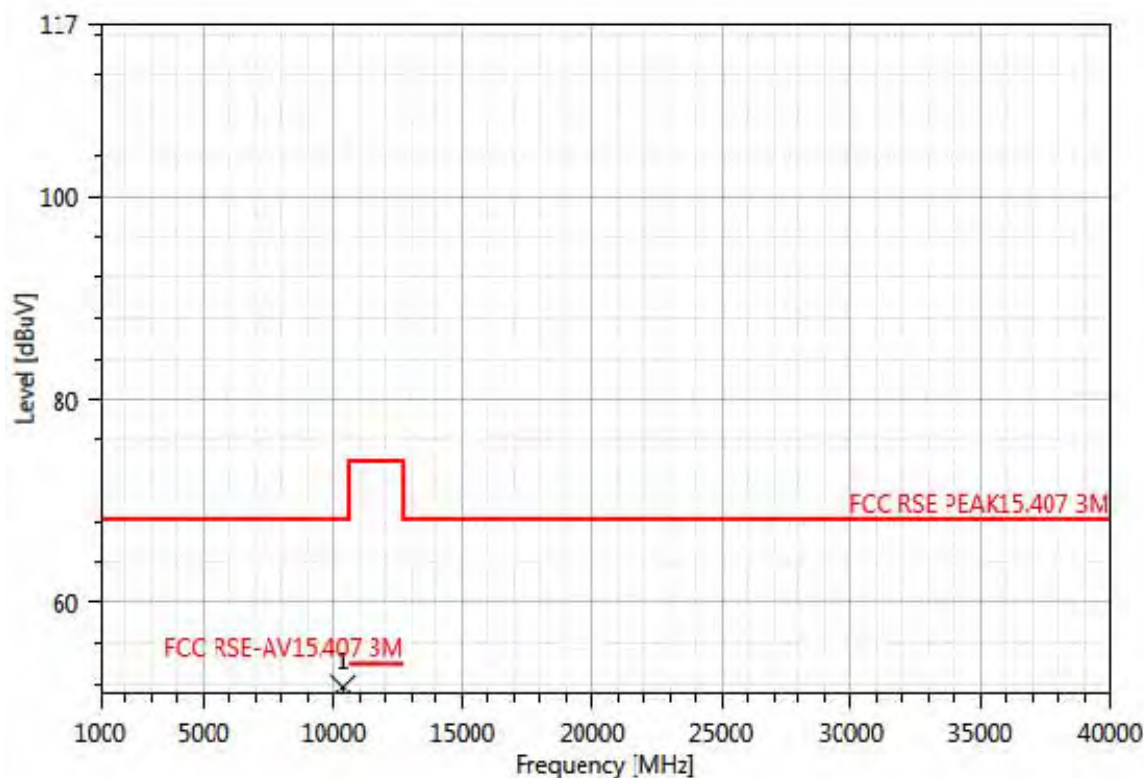
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## Radiated Spurious Emission Measurement Result 802.11n HT40, 5150~5250 MHz

Operation Mode :	802.11n40B1	Test Date :	06/27/2016
Fundamental Frequency :	5190 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH LOW	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
10380.00	H	Peak	51.76	33.64	18.12	68.30	-16.54

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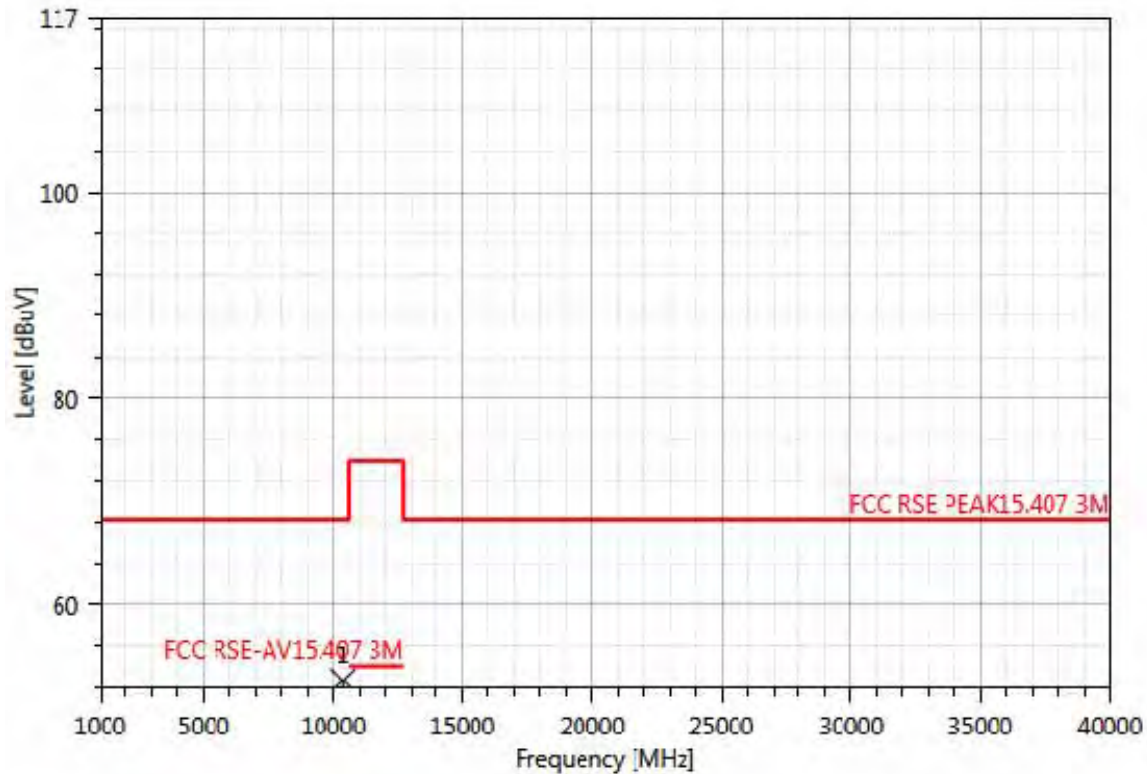
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Operation Mode : 802.11n40B1  
 Fundamental Frequency : 5190 MHz  
 Operation Band : Tx CH LOW  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10380.00	H	Peak	52.60	34.48	18.12	68.30	-15.70

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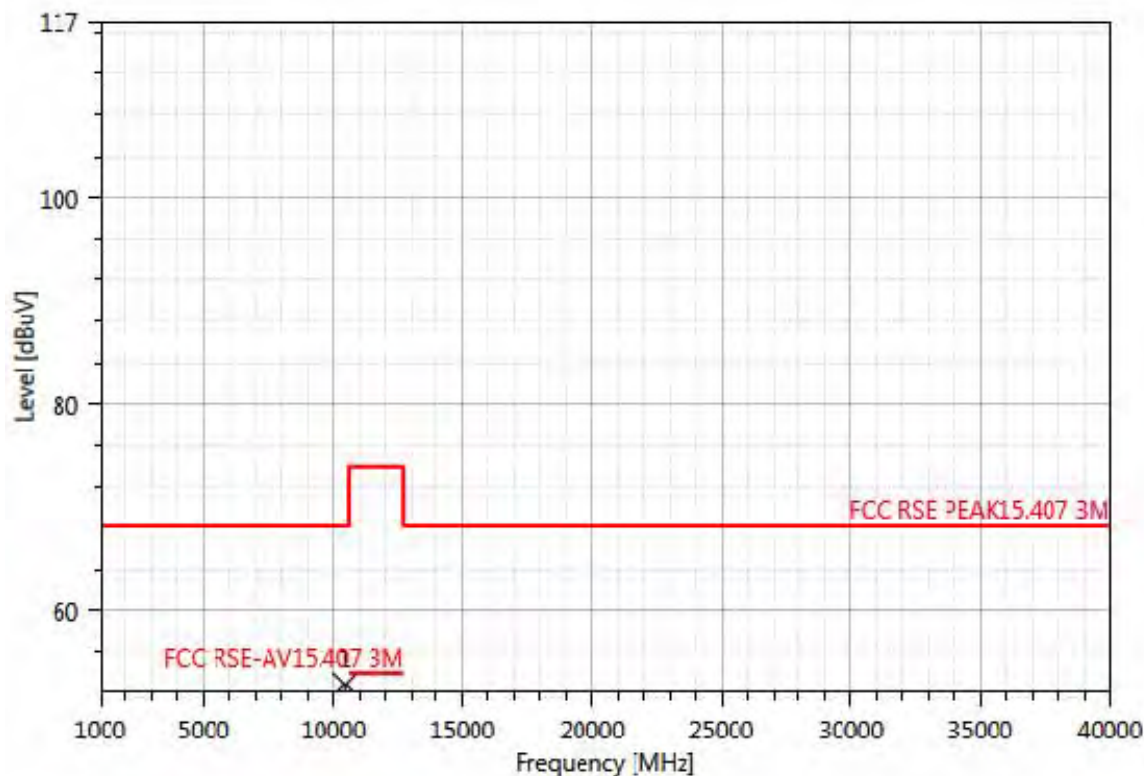
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Operation Mode :	802.11n40B1	Test Date :	06/27/2016
Fundamental Frequency :	5230 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH HIGH	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10460.00	H	Peak	52.87	34.33	18.54	68.30	-15.43

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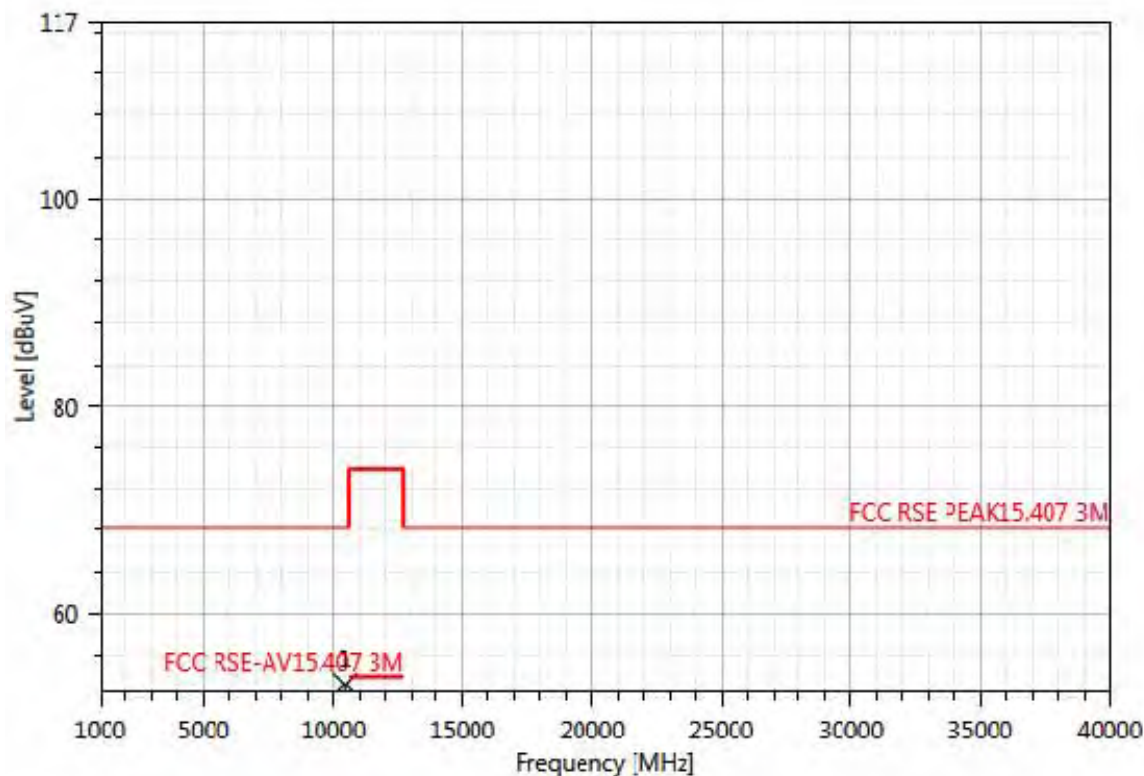
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Operation Mode : 802.11n40B1  
 Fundamental Frequency : 5230 MHz  
 Operation Band : Tx CH HIGH  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10460.00	H	Peak	53.20	34.66	18.54	68.30	-15.10

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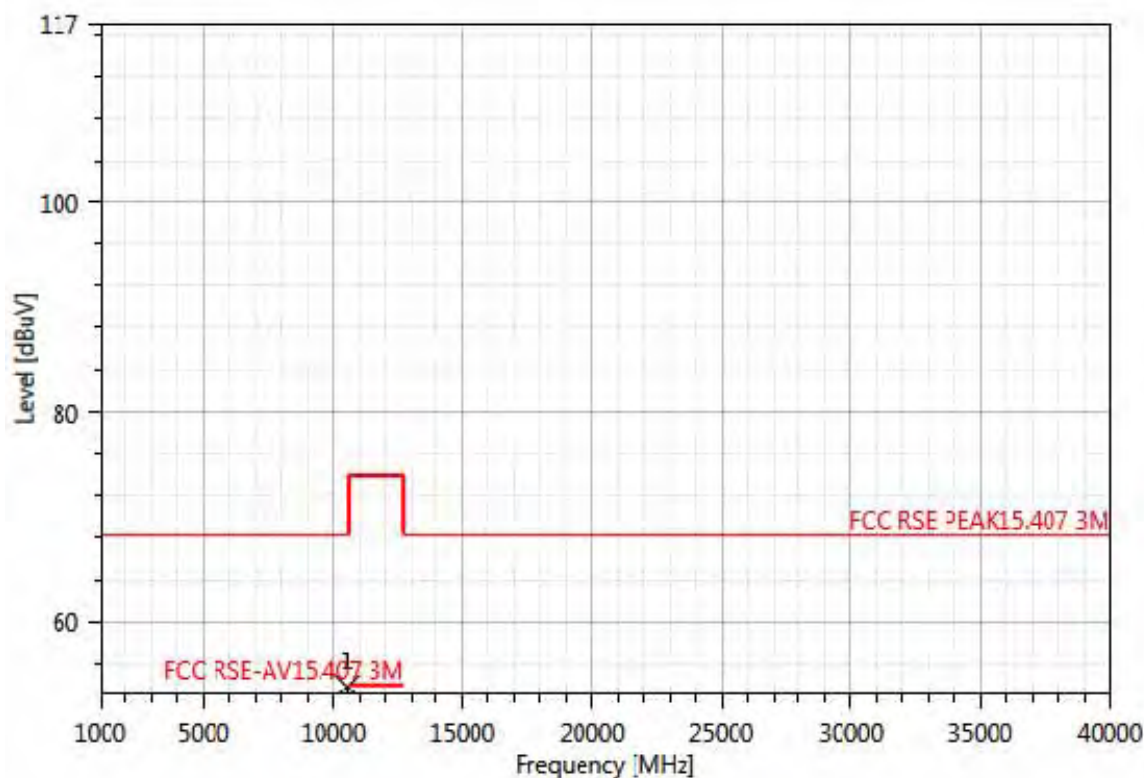
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## Radiated Spurious Emission Measurement Result 802.11n HT40, 5250~5350 MHz

Operation Mode :	802.11n40B2	Test Date :	06/27/2016
Fundamental Frequency :	5270 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH LOW	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
10540.00	H	Peak	53.81	34.64	19.17	68.30	-14.49

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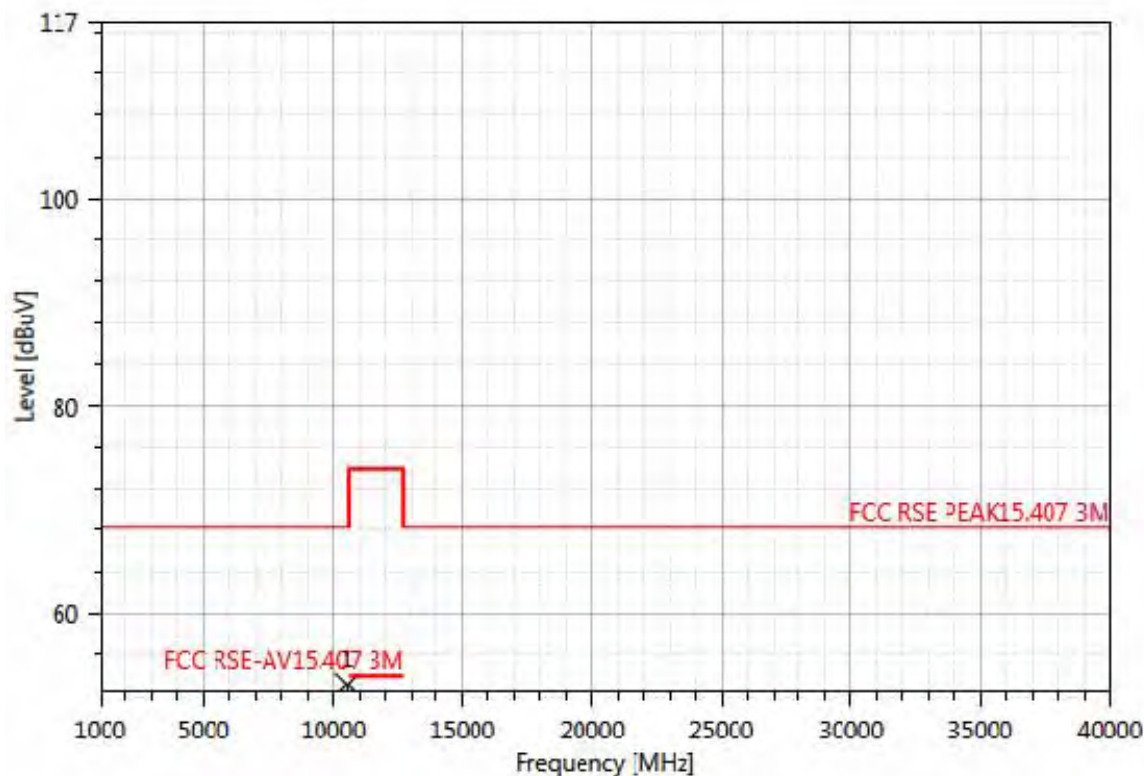
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Operation Mode : 802.11n40B2  
 Fundamental Frequency : 5270 MHz  
 Operation Band : Tx CH LOW  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10540.00	H	Peak	53.14	33.97	19.17	68.30	-15.16

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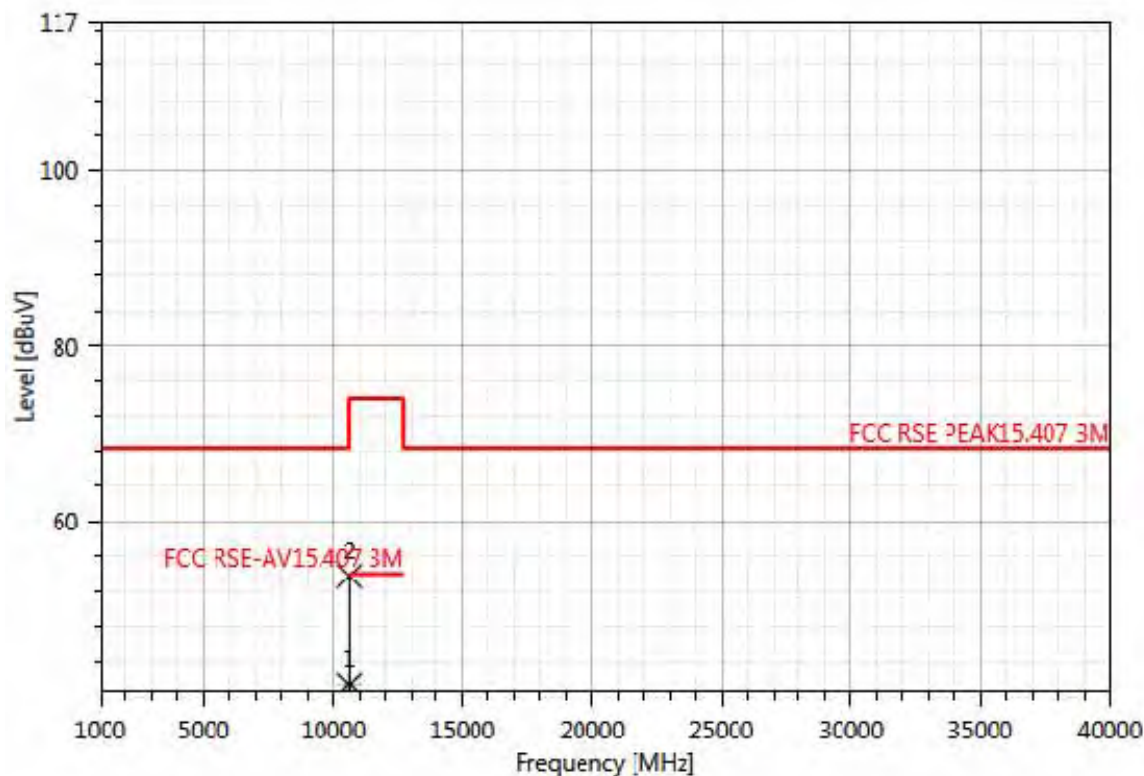
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Operation Mode :	802.11n40B2	Test Date :	06/27/2016
Fundamental Frequency :	5310 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH HIGH	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
10620.00	H	Average	41.36	22.25	19.11	54.00	-12.64
10620.00	H	Peak	53.71	34.61	19.11	74.00	-20.29

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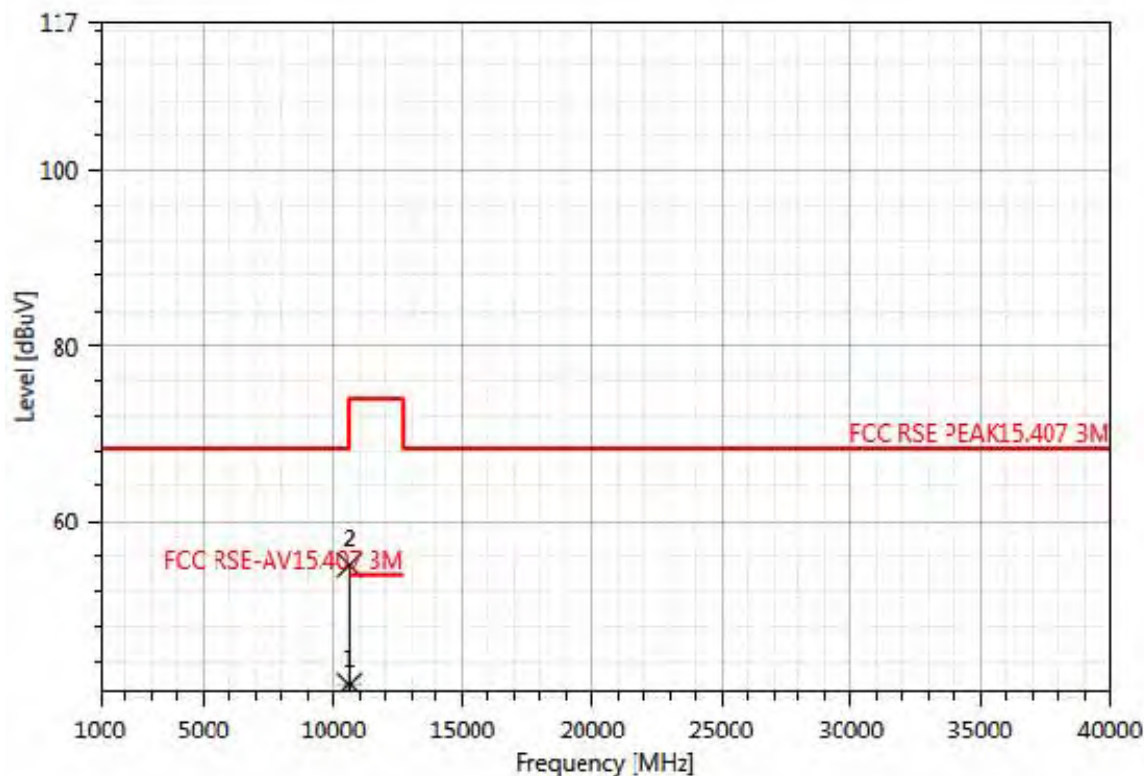
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Operation Mode : 802.11n40B2  
 Fundamental Frequency : 5310 MHz  
 Operation Band : Tx CH HIGH  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
10620.00	H	Average	41.40	22.29	19.11	54.00	-12.60
10620.00	H	Peak	55.06	35.96	19.11	74.00	-18.94

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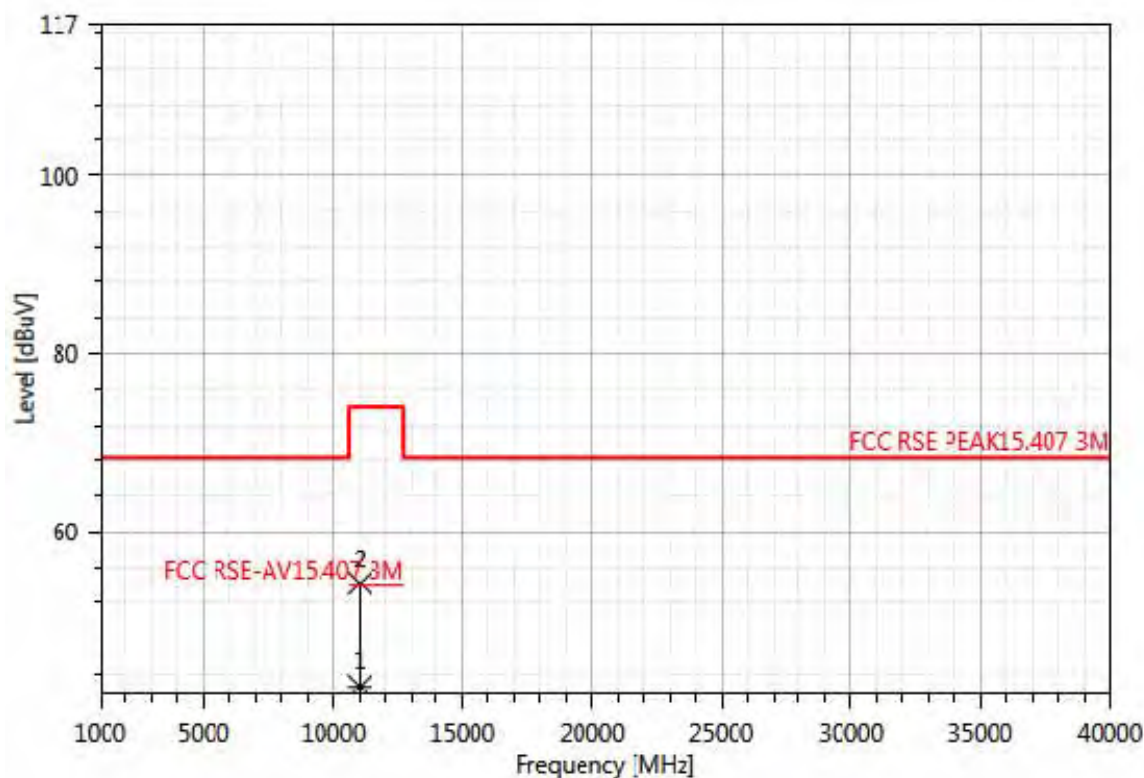
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## Radiated Spurious Emission Measurement Result 802.11n HT40, 5470~5725 MHz

Operation Mode :	802.11n40B3	Test Date :	06/27/2016
Fundamental Frequency :	5510 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH LOW	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq. MHz	Note F/H/E/S	Decetor Mode QP/AV/PK	Actual Reading Level dBuV/m	Spectrum FS dBuV/m	Factor dB	Limit @ 3m dBuV/m	Margin dB
11020.00	H	Average	42.61	22.45	20.16	54.00	-11.39
11020.00	H	Peak	54.20	34.04	20.16	74.00	-19.80

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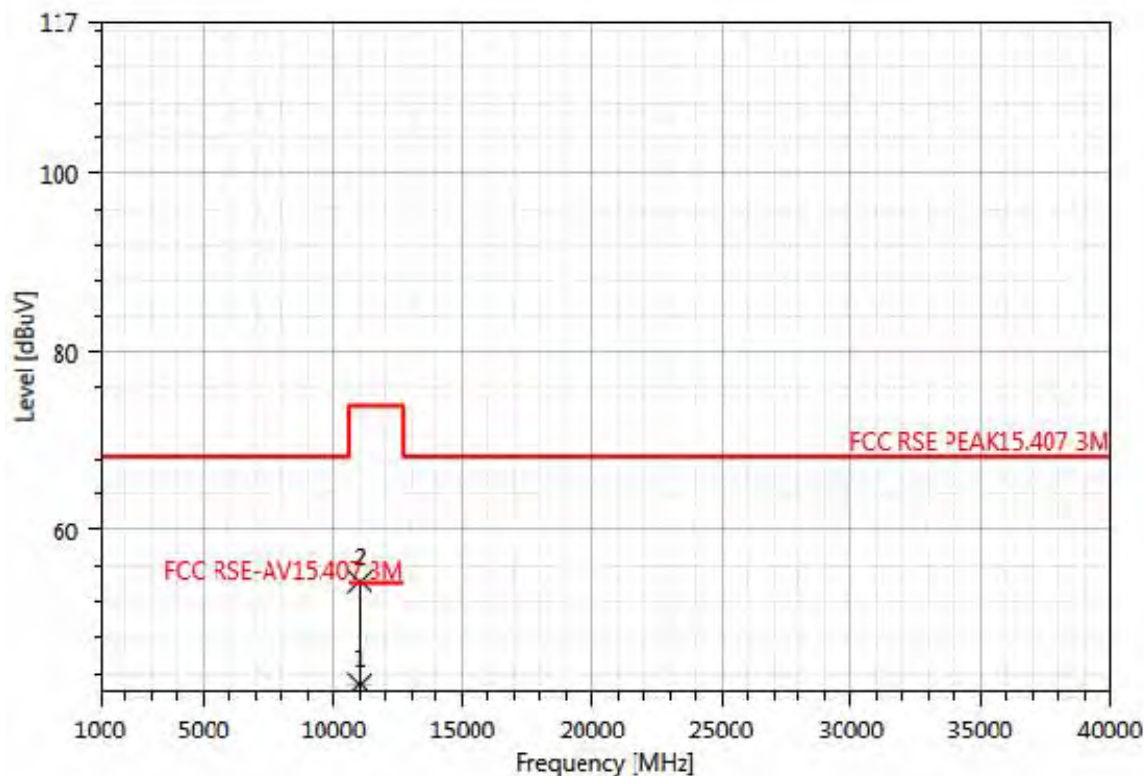
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Operation Mode : 802.11n40B3  
 Fundamental Frequency : 5510 MHz  
 Operation Band : Tx CH LOW  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
11020.00	H	Average	42.73	22.57	20.16	54.00	-11.27
11020.00	H	Peak	54.26	34.10	20.16	74.00	-19.74

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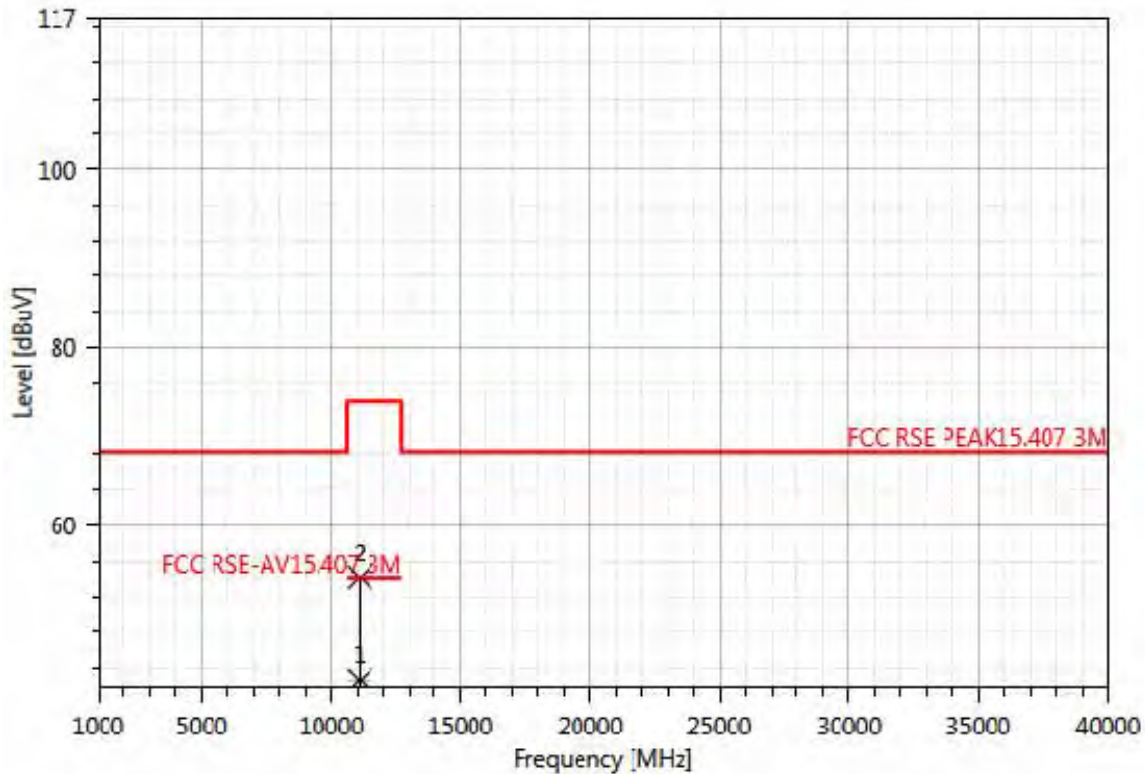
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Operation Mode :	802.11n40B3	Test Date :	06/27/2016
Fundamental Frequency :	5550 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH MID	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11100.00	H	Average	42.63	22.31	20.32	54.00	-11.37
11100.00	H	Peak	54.19	33.87	20.32	74.00	-19.81

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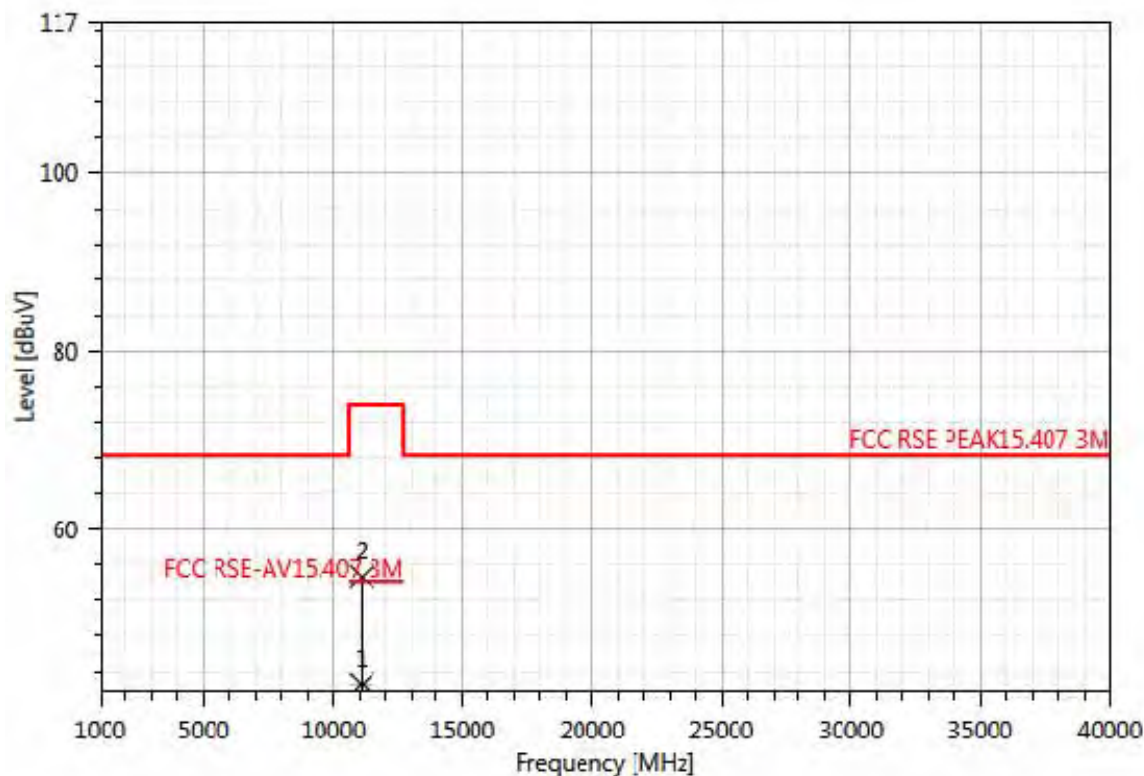
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Operation Mode : 802.11n40B3  
 Fundamental Frequency : 5550 MHz  
 Operation Band : Tx CH MID  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
11100.00	H	Average	42.53	22.21	20.32	54.00	-11.47
11100.00	H	Peak	54.65	34.33	20.32	74.00	-19.35

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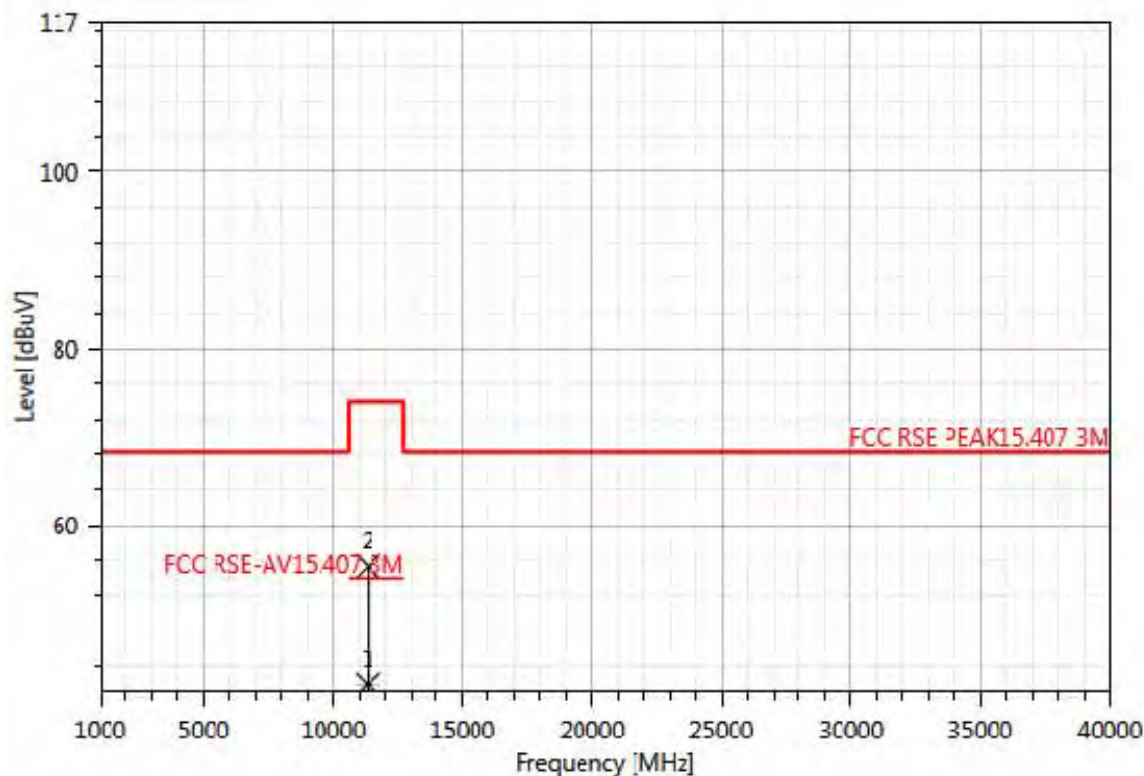
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Operation Mode :	802.11n40B3	Test Date :	06/27/2016
Fundamental Frequency :	5670 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH HIGH	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11340.00	H	Average	41.94	21.56	20.38	54.00	-12.06
11340.00	H	Peak	55.37	34.99	20.38	74.00	-18.63

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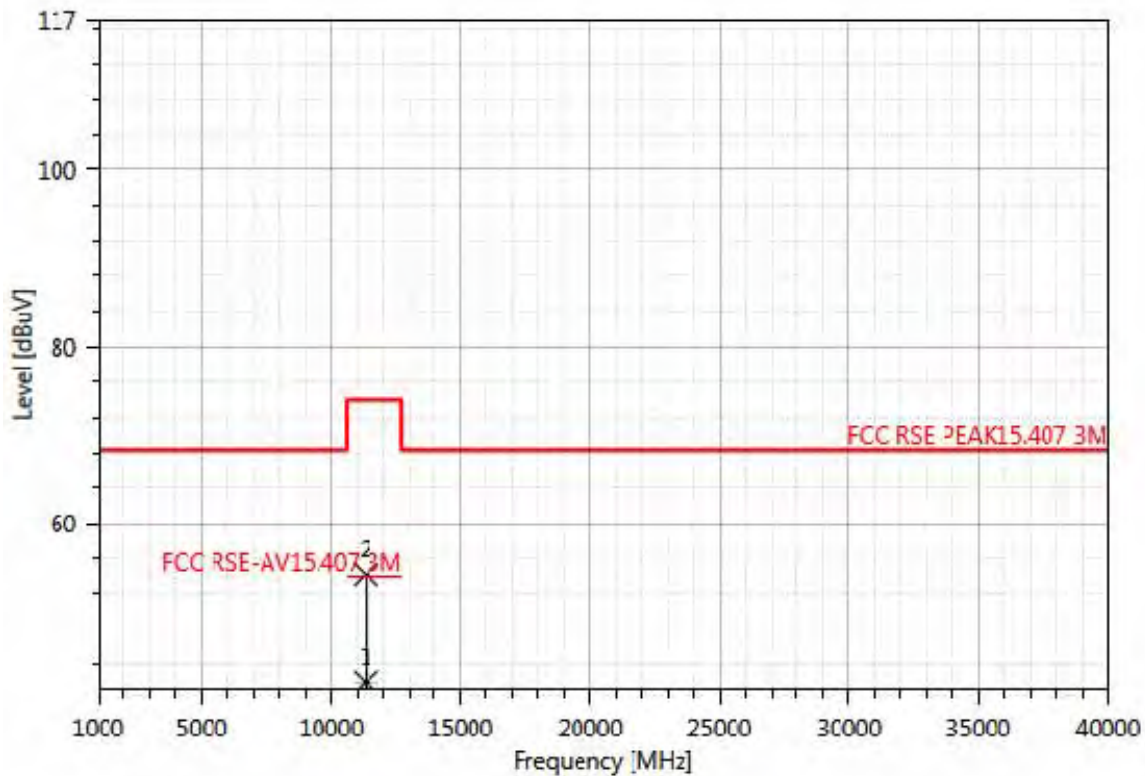
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Operation Mode : 802.11n40B3  
 Fundamental Frequency : 5670 MHz  
 Operation Band : Tx CH HIGH  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11340.00	H	Average	42.00	21.62	20.38	54.00	-12.00
11340.00	H	Peak	54.20	33.81	20.38	74.00	-19.80

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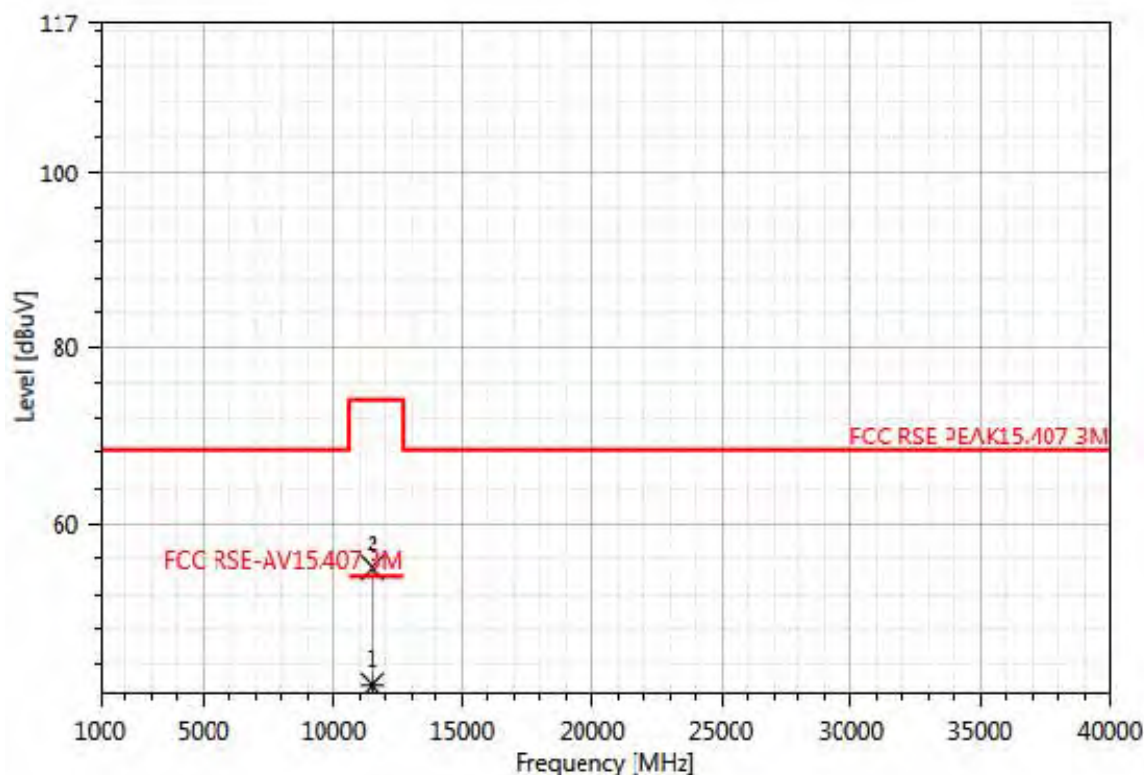
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## Radiated Spurious Emission Measurement Result 802.11n HT40, 5725~5850 MHz

Operation Mode :	802.11n40B4	Test Date :	06/27/2016
Fundamental Frequency :	5755 MHz	Temp. / Humi. :	21 deg_C / 62 RH
Operation Band :	Tx CH LOW	Test Engineer :	Kane
EUT Pol. :	E2 Plane	Measurement Antenna Pol. :	VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11510.00	H	Average	41.61	21.22	20.39	54.00	-12.39
11510.00	H	Peak	54.94	34.56	20.39	74.00	-19.06

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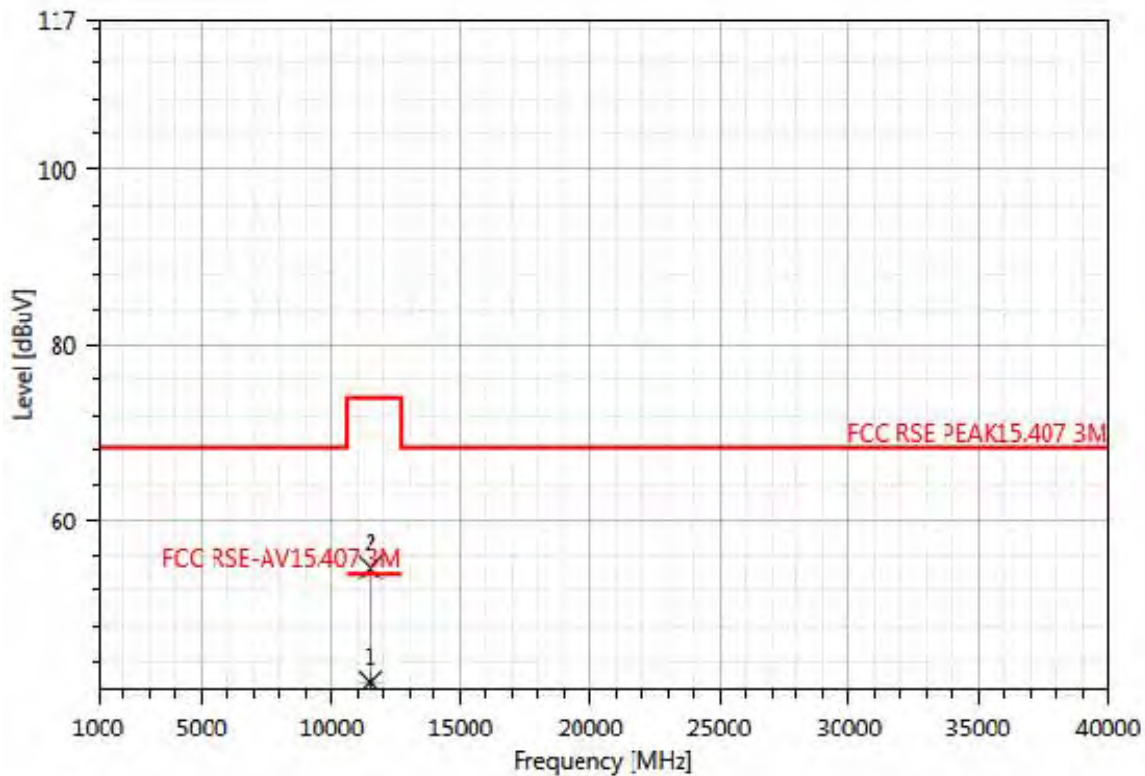
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Operation Mode : 802.11n40B4  
 Fundamental Frequency : 5755 MHz  
 Operation Band : Tx CH LOW  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBuV/m	dBuV/m		dBuV/m	
11510.00	H	Average	41.58	21.19	20.39	54.00	-12.42
11510.00	H	Peak	54.64	34.26	20.39	74.00	-19.36

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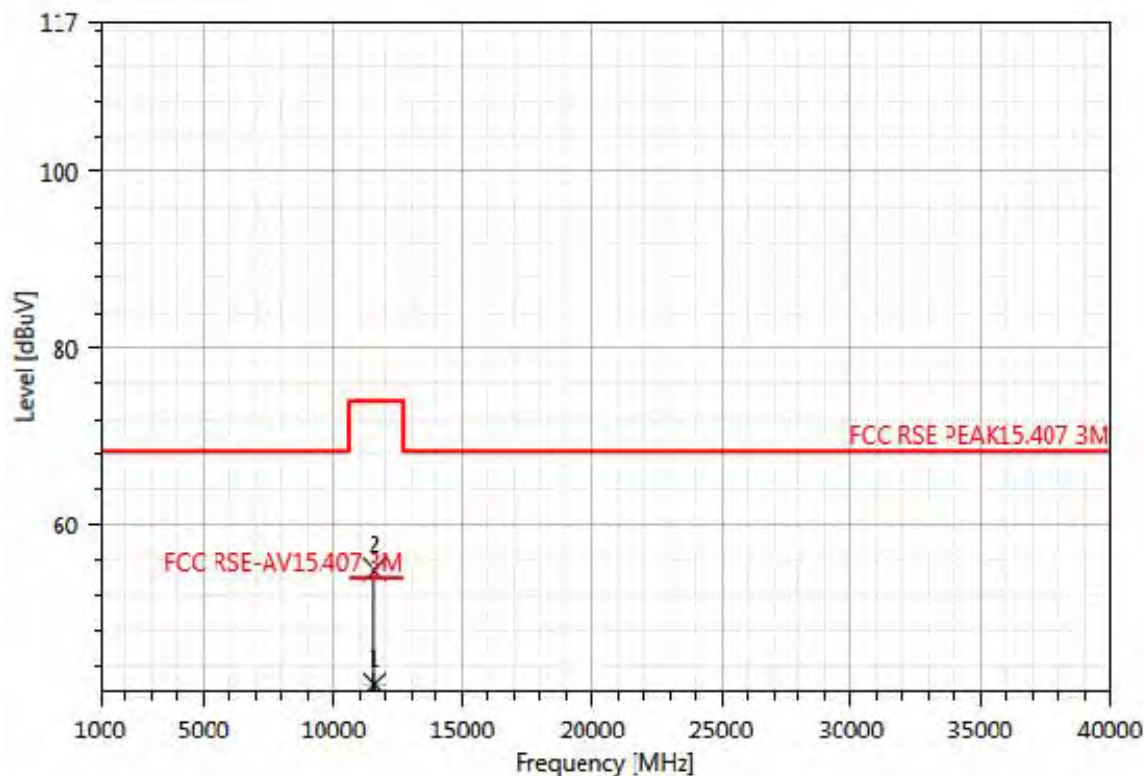
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Operation Mode : 802.11n40B4  
 Fundamental Frequency : 5795 MHz  
 Operation Band : Tx CH HIGH  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : VERTICAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11590.00	H	Average	41.85	21.42	20.43	54.00	-12.15
11590.00	H	Peak	54.85	34.42	20.43	74.00	-19.15

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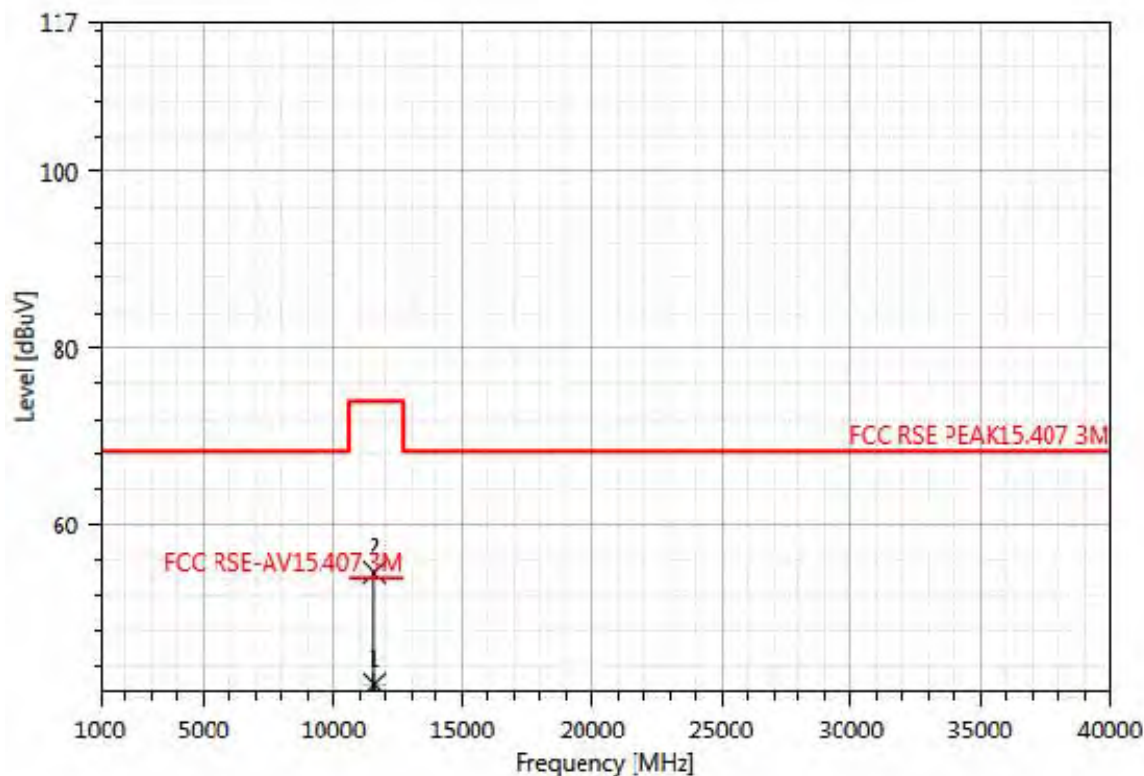
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Operation Mode : 802.11n40B4  
 Fundamental Frequency : 5795 MHz  
 Operation Band : Tx CH HIGH  
 EUT Pol. : E2 Plane

Test Date : 06/27/2016  
 Temp. / Humi. : 21 deg\_C / 62 RH  
 Test Engineer : Kane  
 Measurement Antenna Pol. : HORIZONTAL



Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS	dB	@ 3m	dB
		QP/AV/PK	dBμV/m	dBμV/m		dBuV/m	
11590.00	H	Average	41.88	21.45	20.43	54.00	-12.12
11590.00	H	Peak	54.55	34.12	20.43	74.00	-19.45

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## Band edge falling to restricted band

### 802.11a mode

Operation Mode : 802.11aB1      Test Date : 06/28/2016  
 Fundamental Frequency : 5180 MHz      Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW      Test Engineer : Kane  
 EUT Pol. : E2 Plane      Measurement Antenna Pol. : VERTICAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5150.00	E	Average	45.68	39.80	5.88	54.00	-8.32
5150.00	E	Peak	57.90	52.02	5.88	74.00	-16.10

Operation Mode : 802.11aB1      Test Date : 06/28/2016  
 Fundamental Frequency : 5180 MHz      Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW      Test Engineer : Kane  
 EUT Pol. : E2 Plane      Measurement Antenna Pol. : HORIZONTAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5150.00	E	Average	44.53	38.65	5.88	54.00	-9.47
5150.00	E	Peak	57.30	51.42	5.88	74.00	-16.70

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Operation Mode : 802.11aB2 Test Date : 06/28/2016  
 Fundamental Frequency : 5320 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5350.00	E	Average	44.84	38.69	6.15	54.00	-9.16
5350.00	E	Peak	58.28	52.13	6.15	74.00	-15.72

Operation Mode : 802.11aB2 Test Date : 06/28/2016  
 Fundamental Frequency : 5320 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5350.00	E	Average	43.22	37.07	6.15	54.00	-10.78
5350.00	E	Peak	56.69	50.54	6.15	74.00	-17.31

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Operation Mode : 802.11aB3 Test Date : 06/28/2016  
 Fundamental Frequency : 5500 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5460.00	E	Average	43.64	37.41	6.23	54.00	-10.36
5460.00	E	Peak	57.11	50.88	6.23	74.00	-16.89

Operation Mode : 802.11aB3 Test Date : 06/28/2016  
 Fundamental Frequency : 5500 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5460.00	E	Average	43.46	37.23	6.23	54.00	-10.54
5460.00	E	Peak	56.97	50.73	6.23	74.00	-17.03

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Operation Mode : 802.11aB3 Test Date : 06/28/2016  
 Fundamental Frequency : 5500 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW I Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5470.00	E	Peak	56.79	50.52	6.26	68.30	-11.51

Operation Mode : 802.11aB3 Test Date : 06/28/2016  
 Fundamental Frequency : 5500 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW I Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5470.00	E	Peak	56.78	50.52	6.26	68.30	-11.52

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Operation Mode : 802.11aB3 Test Date : 06/28/2016  
 Fundamental Frequency : 5700 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5725.00	E	Peak	57.35	50.76	6.59	68.30	-10.95

Operation Mode : 802.11aB3 Test Date : 06/28/2016  
 Fundamental Frequency : 5700 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5725.00	E	Peak	57.08	50.49	6.59	68.30	-11.22

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Operation Mode : 802.11aB4 Test Date : 06/28/2016  
 Fundamental Frequency : 5745 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

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
5725.00	E	Peak	60.75	54.15	6.59	122.23	-61.48

Operation Mode : 802.11aB4 Test Date : 06/28/2016  
 Fundamental Frequency : 5745 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

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
5725.00	E	Peak	58.98	52.39	6.59	122.23	-63.25

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Operation Mode : 802.11aB4 Test Date : 06/28/2016  
 Fundamental Frequency : 5825 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

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
5850.00	E	Peak	59.03	51.75	7.28	122.23	-63.20

Operation Mode : 802.11aB4 Test Date : 06/28/2016  
 Fundamental Frequency : 5825 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

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
5850.00	E	Peak	57.95	50.67	7.28	122.23	-64.28

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## 802.11n20 HT mode

Operation Mode : 802.11n20B1 Test Date : 06/28/2016  
 Fundamental Frequency : 5180 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

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
5150.00	E	Average	44.49	38.61	5.88	54.00	-9.51
5150.00	E	Peak	57.62	51.74	5.88	74.00	-16.38

Operation Mode : 802.11n20B1 Test Date : 06/28/2016  
 Fundamental Frequency : 5180 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

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
5150.00	E	Average	43.44	37.56	5.88	54.00	-10.56
5150.00	E	Peak	56.89	51.00	5.88	74.00	-17.11

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Operation Mode : 802.11n20B2 Test Date : 06/28/2016  
 Fundamental Frequency : 5320 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5350.00	E	Average	43.57	37.42	6.15	54.00	-10.43
5350.00	E	Peak	56.84	50.69	6.15	74.00	-17.16

Operation Mode : 802.11n20B2 Test Date : 06/28/2016  
 Fundamental Frequency : 5320 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5350.00	E	Average	44.17	38.02	6.15	54.00	-9.83
5350.00	E	Peak	56.89	50.74	6.15	74.00	-17.11

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Operation Mode : 802.11n20B3 Test Date : 06/28/2016  
 Fundamental Frequency : 5500 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5460.00	E	Average	44.60	38.37	6.23	54.00	-9.40
5460.00	E	Peak	56.69	50.46	6.23	74.00	-17.31

Operation Mode : 802.11n20B3 Test Date : 06/28/2016  
 Fundamental Frequency : 5500 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5460.00	E	Average	43.43	37.20	6.23	54.00	-10.57
5460.00	E	Peak	56.89	50.66	6.23	74.00	-17.11

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Operation Mode : 802.11n20B3 Test Date : 06/28/2016  
 Fundamental Frequency : 5500 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW I Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5470.00	E	Peak	57.51	51.25	6.26	68.30	-10.79

Operation Mode : 802.11n20B3 Test Date : 06/28/2016  
 Fundamental Frequency : 5500 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW I Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

Freq.	Note	Decetor	Actual	Spectrum	Factor	Limit	Margin
MHz	F/H/E/S	Mode	Reading Level	FS		@ 3m	
		QP/AV/PK	dBμV/m	dBμV/m	dB	dBuV/m	dB
5470.00	E	Peak	57.66	51.39	6.26	68.30	-10.64

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Operation Mode : 802.11n20B3 Test Date : 06/28/2016  
 Fundamental Frequency : 5700 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

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
5725.00	E	Peak	58.29	51.70	6.59	68.30	-10.01

Operation Mode : 802.11n20B3 Test Date : 06/28/2016  
 Fundamental Frequency : 5700 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

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
5725.00	E	Peak	57.73	51.14	6.59	68.30	-10.57

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Operation Mode : 802.11n20B4 Test Date : 06/28/2016  
 Fundamental Frequency : 5745 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

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
5725.00	E	Peak	63.35	56.76	6.59	122.23	-58.88

Operation Mode : 802.11n20B4 Test Date : 06/28/2016  
 Fundamental Frequency : 5745 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

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
5725.00	E	Peak	62.97	56.38	6.59	122.23	-59.26

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Operation Mode : 802.11n20B4 Test Date : 06/28/2016  
 Fundamental Frequency : 5825 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

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
5850.00	E	Peak	60.66	53.37	7.28	122.23	-61.57

Operation Mode : 802.11n20B4 Test Date : 06/28/2016  
 Fundamental Frequency : 5825 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

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
5850.00	E	Peak	59.58	52.30	7.28	122.23	-62.65

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## 802.11n40 HT mode

Operation Mode : 802.11n40B1      Test Date : 06/28/2016  
 Fundamental Frequency : 5190 MHz      Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW      Test Engineer : Kane  
 EUT Pol. : E2 Plane      Measurement Antenna Pol. : VERTICAL

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
5150.00	E	Average	50.41	44.53	5.88	54.00	-3.59
5150.00	E	Peak	65.76	59.88	5.88	74.00	-8.24

Operation Mode : 802.11n40B1      Test Date : 06/28/2016  
 Fundamental Frequency : 5190 MHz      Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW      Test Engineer : Kane  
 EUT Pol. : E2 Plane      Measurement Antenna Pol. : HORIZONTAL

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
5150.00	E	Average	48.74	42.86	5.88	54.00	-5.26
5150.00	E	Peak	63.45	57.57	5.88	74.00	-10.55

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Operation Mode : 802.11n40B2 Test Date : 06/28/2016  
 Fundamental Frequency : 5310 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

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
5350.00	E	Average	50.36	44.21	6.15	54.00	-3.64
5350.00	E	Peak	65.28	59.12	6.15	74.00	-8.72

Operation Mode : 802.11n40B2 Test Date : 06/28/2016  
 Fundamental Frequency : 5310 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

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
5350.00	E	Average	48.91	42.76	6.15	54.00	-5.09
5350.00	E	Peak	64.51	58.36	6.15	74.00	-9.49

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Operation Mode : 802.11n40B3 Test Date : 06/28/2016  
 Fundamental Frequency : 5510 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

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
5460.00	E	Average	45.83	39.60	6.23	54.00	-8.17
5460.00	E	Peak	60.43	54.20	6.23	74.00	-13.57

Operation Mode : 802.11n40B3 Test Date : 06/28/2016  
 Fundamental Frequency : 5510 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

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
5460.00	E	Peak	59.34	53.10	6.23	74.00	-14.66

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Operation Mode : 802.11n40B3 Test Date : 06/28/2016  
 Fundamental Frequency : 5510 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW I Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

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
5470.00	E	Peak	67.26	60.99	6.26	68.30	-1.04

Operation Mode : 802.11n40B3 Test Date : 06/28/2016  
 Fundamental Frequency : 5510 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW I Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

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
5470.00	E	Peak	65.11	58.85	6.26	68.30	-3.19

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Operation Mode : 802.11n40B3 Test Date : 06/28/2016  
 Fundamental Frequency : 5670 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

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
5725.00	E	Peak	57.47	50.88	6.59	68.30	-10.83

Operation Mode : 802.11n40B3 Test Date : 06/28/2016  
 Fundamental Frequency : 5670 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

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
5725.00	E	Peak	57.07	50.48	6.59	68.30	-11.23

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Operation Mode : 802.11n40B4 Test Date : 06/28/2016  
 Fundamental Frequency : 5755 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

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
5725.00	E	Peak	65.95	59.36	6.59	122.23	-56.28

Operation Mode : 802.11n40B4 Test Date : 06/28/2016  
 Fundamental Frequency : 5755 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH LOW Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

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
5725.00	E	Peak	63.81	57.22	6.59	122.23	-58.42

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Operation Mode : 802.11n40B4 Test Date : 06/28/2016  
 Fundamental Frequency : 5795 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : VERTICAL

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
5850.00	E	Peak	58.08	50.79	7.28	122.23	-64.15

Operation Mode : 802.11n40B4 Test Date : 06/28/2016  
 Fundamental Frequency : 5795 MHz Temp. / Humi. : 21 deg\_C / 62 RH  
 Operation Band : Bandedge CH HIGH Test Engineer : Kane  
 EUT Pol. : E2 Plane Measurement Antenna Pol. : HORIZONTAL

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
5850.00	E	Peak	57.96	50.68	7.28	122.23	-64.27

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## 12. TRANSMISSION IN THE ABSENCE OF DATA

### 12.1 Standard Applicable

According to §15.407(c)

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

### 12.2 Result

No non-compliance noted:

Refer to the theory of operation.

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## 13. FREQUENCY STABILITY

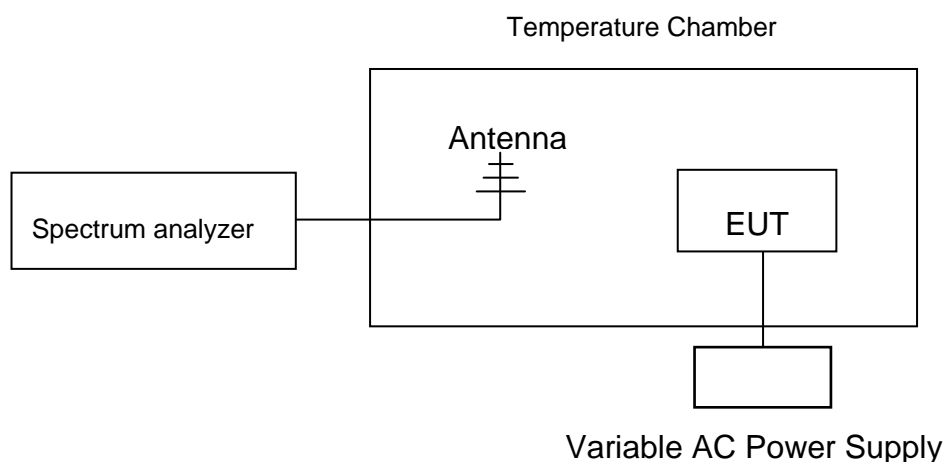
### 13.1 Standard Applicable

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

### 13.2 Measurement Procedure

1. The EUT was placed inside temperature chamber and powered and powered by nominal DC voltage.
2. Set EUT as normal operation.
3. Turn the EUT on and couple its output to spectrum.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT and measure the operating frequency.
6. Repeat step with the temperature chamber set to the lowest temperature.

### 13.3 Test SET-UP



### 13.4 Measurement Equipment Used:

SGS Conducted Room					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum Analyzer	Agilent	N9010A	MY50420195	12/21/2015	12/20/2016
DC Power Supply	Agilent	E3640A	MY52410006	11/05/2015	11/04/2016
Temperature Chamber	TERCHY	MHG-120LF	911009	05/17/2016	05/16/2017

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### 13.5 Measurement Result

Operation Mode	802.11 a	Test Date	2016.6.28
Temperature	:17	Test By	Cooper
Humidity	:65 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
-20	4.14V	36	5180	5,180.00086	-0.00000017
		44	5220	5,220.00085	-0.00000016
		48	5240	5,240.00088	-0.00000017
		52	5260	5,260.00085	-0.00000016
		60	5300	5,300.00083	-0.00000016
		64	5320	5,320.00084	-0.00000016
		100	5500	5,500.00091	-0.00000017
		116	5580	5,580.00093	-0.00000017
		140	5700	5,700.00097	-0.00000017
		149	5745	5,745.00097	-0.00000017
		157	5785	5,785.00101	-0.00000017
		165	5825	5,825.00098	-0.00000017
	3.16V	36	5180	5,180.00080	-0.00000015
		44	5220	5,220.00085	-0.00000016
		48	5240	5,240.00087	-0.00000017
		52	5260	5,260.00084	-0.00000016
		60	5300	5,300.00082	-0.00000015
		64	5320	5,320.00080	-0.00000015
		100	5500	5,500.00090	-0.00000016
		116	5580	5,580.00092	-0.00000016
		140	5700	5,700.00098	-0.00000017
		149	5745	5,745.00096	-0.00000017
		157	5785	5,785.00101	-0.00000017
		165	5825	5,825.00098	-0.00000017

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25	3.6V	36	5180	5,180.00077	-0.00000015
		44	5220	5,220.00083	-0.00000016
		48	5240	5,240.00077	-0.00000015
		52	5260	5,260.00082	-0.00000016
		60	5300	5,300.00080	-0.00000015
		64	5320	5,320.00075	-0.00000014
		100	5500	5,500.00089	-0.00000016
		116	5580	5,580.00091	-0.00000016
		140	5700	5,700.00096	-0.00000017
		149	5745	5,745.00095	-0.00000017
		157	5785	5,785.00100	-0.00000017
		165	5825	5,825.00097	-0.00000017
50	4.14V	36	5180	5,180.00087	-0.00000017
		44	5220	5,220.00085	-0.00000016
		48	5240	5,240.00074	-0.00000014
		52	5260	5,260.00075	-0.00000014
		60	5300	5,300.00084	-0.00000016
		64	5320	5,320.00086	-0.00000016
		100	5500	5,500.00092	-0.00000017
		116	5580	5,580.00092	-0.00000016
		140	5700	5,700.00097	-0.00000017
		149	5745	5,745.00097	-0.00000017
		157	5785	5,785.00102	-0.00000018
		165	5825	5,825.00099	-0.00000017
	3.16V	36	5180	5,180.00087	-0.00000017
		44	5220	5,220.00086	-0.00000016
		48	5240	5,240.00083	-0.00000016
		52	5260	5,260.00087	-0.00000017
		60	5300	5,300.00083	-0.00000016
		64	5320	5,320.00086	-0.00000016
		100	5500	5,500.00091	-0.00000017
		116	5580	5,580.00093	-0.00000017
		140	5700	5,700.00097	-0.00000017
		149	5745	5,745.00097	-0.00000017
		157	5785	5,785.00101	-0.00000017
		165	5825	5,825.00100	-0.00000017

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Operation Mode	802.11 n_HT40	Test Date	2016.6.28
Temperature	:17	Test By	Cooper
Humidity	:65 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
-20	4.14V	38	5190	5,190.00084	-0.00000016
		46	5230	5,230.00090	-0.00000017
		54	5270	5,270.00087	-0.00000017
		62	5310	5,310.00092	-0.00000017
		102	5510	5,510.00092	-0.00000017
		110	5550	5,550.00096	-0.00000017
		134	5670	5,670.00101	-0.00000018
		151	5755	5,755.00101	-0.00000018
		159	5795	5,795.00104	-0.00000018
	3.16V	38	5190	5,190.00081	-0.00000016
		46	5230	5,230.00089	-0.00000017
		54	5270	5,270.00087	-0.00000017
		62	5310	5,310.00092	-0.00000017
		102	5510	5,510.00092	-0.00000017
		110	5550	5,550.00095	-0.00000017
		134	5670	5,670.00102	-0.00000018
		151	5755	5,755.00099	-0.00000017
		159	5795	5,795.00104	-0.00000018

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25	3.6V	38	5190	5,190.00077	-0.00000015
		46	5230	5,230.00087	-0.00000017
		54	5270	5,270.00086	-0.00000016
		62	5310	5,310.00091	-0.00000017
		102	5510	5,510.00092	-0.00000017
		110	5550	5,550.00094	-0.00000017
		134	5670	5,670.00099	-0.00000017
		151	5755	5,755.00096	-0.00000017
		159	5795	5,795.00103	-0.00000018
50	4.14V	38	5190	5,190.00085	-0.00000016
		46	5230	5,230.00089	-0.00000017
		54	5270	5,270.00089	-0.00000017
		62	5310	5,310.00092	-0.00000017
		102	5510	5,510.00093	-0.00000017
		110	5550	5,550.00096	-0.00000017
		134	5670	5,670.00102	-0.00000018
		151	5755	5,755.00101	-0.00000018
		159	5795	5,795.00103	-0.00000018
	3.16V	38	5190	5,190.00085	-0.00000016
		46	5230	5,230.00089	-0.00000017
		54	5270	5,270.00087	-0.00000017
		62	5310	5,310.00093	-0.00000018
		102	5510	5,510.00092	-0.00000017
		110	5550	5,550.00097	-0.00000017
		134	5670	5,670.00101	-0.00000018
		151	5755	5,755.00100	-0.00000017
		159	5795	5,795.00104	-0.00000018

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## 14. ANTENNA REQUIREMENT

### 14.1 Standard Applicable

According to §15.203, an intentional radiator shall be designed to ensure that no antenna other than furnished by the responsible party shall be used with the device.

According to §15.407, If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 14.2 Antenna Connected Construction

PIFA antenna designs are used.

The antenna is designed with permanent attached and no consideration of replacement. Please see EUT photo and antenna spec. for details.

The antenna gain is less than 6dBi. Therefore, it is not necessary to reduce maximum output power limit.

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