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ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART E REQUIREMENT

Panasonic Corporation of North America **FCC Applicant:**

Two Riverfront Plaza, 9th Floor, Newark, NJ 07102-5490

Product Name: Tablet Computer

Brand Name: Panasonic

Marketing Name: FZ-L1

FZ-L1AA Model No.:

Model Difference: N/A

FCC ID: ACJFZL1B

Report Number: ER/2018/B0033 **FCC Rule Part:** §15.407, Cat:NII Issue Date: Dec. 20, 2018

Date of Test: Nov. 15, 2018 ~ Nov. 27, 2018

Date of EUT Received: Nov. 15, 2018

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.

Tested By:

Louis Chen / Sr. Engineer

Approved By:

Jazz Huang / Asst. Supervisor





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Revision History

Report Number	Revision	Description	Effected Page	Issue Date	Revised By
ER/2018/B0033	Rev.00	Initial creation of docu- ment	All	Dec. 12, 2018	Violetta Tang
ER/2018/B0033	Rev.01	Update information for chapter 1	4	Dec. 20, 2018	Violetta Tang

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GENERAL INFORMATION

1.1 Product Description

General:

ilciai.			
Product Name:	Tablet Computer		
Brand Name:	Panasonic		
Model No.:	FZ-L1AA		
Model Difference:	N/A		
Product HW/SW version:	C-NA-002 / 15-02-521-008		
Radio HW/SW version:	N/A / MSM8909.LA.3.0.1		
	3.8V from Rechargeable Li-ion Battery or 5V from AC/DC Adapter		
Power Supply:	Battery:	Model No.: FZ-VZSUT10U, Supplier: Panasonic	
Tower Suppry.	Adapter:	 Model No.: FZ-AAE184EE, Supplier: Panasonic Model No.: FZ-AAE184EG, Supplier: Panasonic Model No.: FZ-AAE184EM, Supplier: Panasonic 	

FCC WLAN 5GHz:

WLAN	Frequency Range	Channels	Avg. Power (dBm)	Modulation Technology	
	5150~5250	4	12.67		
110 20	5250~5350	4	15.75	OFDM	
11a_20	5470~5725	12	15.81	OFDIVI	
	5725~5850	5	15.77		
	5150~5250	4	12.75		
11n UT20M	5250~5350	4	14.77	OFDM	
11n_HT20M	5470~5725	11	14.84		
	5725~5850	5	14.86		
	5150~5250	2	12.83	OFDM	
11n UT40M	5250~5350	2	12.93		
11n_HT40M	5470~5725	5	12.53		
	5725~5850	2	12.64		
Modulation type		64QAM, 16QAM, QPSK, BPSK for OFDM			
		802.11 a: 6/9/12/18/24/36/48/54 Mbps			
Transition Rate:		802.11 n_20MHz: 6.5 - 72.2Mbps			
		802.11 n_40MHz: 13.5 - 150Mbps			
Antenn	Antenna Designation:		Monopole Antenna, Gain: 0dBi		

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1.2 Test Methodology of Applied Standards

FCC Part 15, Subpart E §15.407

FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10:2013

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

1.3 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 / TW0001

1.4 Special Accessories

There are no special accessories used while test was conducted.

1.5 Equipment Modifications

There was no modification incorporated into the EUT.

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

2.3.2 Conducted Test (RF)

The active antenna port of the unlicensed wireless device is connected to the spectrum an-alyzer with attenuator to protect the instrumentation. If a second antenna port is available, it is tested at one operating frequency, with other port(s) appropriately terminated, to verify it has similar output characteristics as the fully tested port.

2.3.3 **Radiated Emissions**

The EUT is a placed on as turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plan. For emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this 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

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.

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2.5 Configuration of Tested System

Fig. 2-1 Radiated Emission Configuration

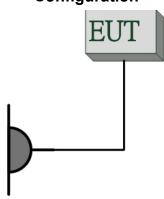


Fig.2-3 Conducted Emission (Antenna Port) Configuration

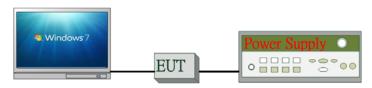


Fig. 2-2 Conduction Emission (AC Power Line) Configuration



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	Lenovo	L430	R9-X11BG	Shielded	Unshielded
3.	DC Power Supply	Anritsu	E3640A	KR93300208	N/A	Unshielded

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SUMMARY OF TEST RESULT

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

4.1 Operated in U-NII Bands

Operated band in 5150 MHz ~5250 MHz:

operated balla ill o loo ill			
802.11a / n HT20 Mode			
Channel	Frequency		
36	5180		
40	5200		
44	5220		
48	5240		

802.11 n HT40 Mode			
channel	Frequency		
38	5190		
46	5230		

Operated band in 5250 MHz ~5350 MHz:

oporatoa barra ili ozoo ili			
802.11a / n HT20 Mode			
channel	Frequency		
52	5260		
56	5280		
60	5300		
64	5320		

802.11 n HT40 Mode			
channel	Frequency		
54	5270		
62	5310		

Operated band in 5470 MHz ~5725 MHz:

802.11a / n HT20 Mode		
Channel	Frequency	
100	5500	
104	5520	
108	5540	
112	5560	
116	5580	
120	5600	
124	5620	
128	5640	
132	5660	
136	5680	
140	5700	

802.11 n HT40 Mode			
channel	Frequency		
102	5510		
110	5550		
118	5590		
126	5630		
134	5670		

Operated band in 5745 MHz ~5850 MHz:

802.11a / n HT20 Mode						
Channel	Frequency					
149	5745					
153	5765					
157	5785					
161	5805					
165	5825					

802.11 n HT40 Mode						
channel	Frequency					
151	5755					
159	5795					

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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.

DADIATED EMISSION TEST.

RADIATED EMISS	SION TEST:					
	RADIA	ATED EMISSION	N TEST (BELC	OW 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
	RADIA	ATED EMISSIO	N TEST (ABO	VE 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	3160~3240	30 10 40	30,44,46	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	5200~5320	52 10 04	52,00,04	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	3300 3700	100 to 140	100,110,140	OFDM	MCS0	Main
802.11n_HT40	5510~5670	102 to 134	102,110,134	OFDM	MCS0	Main
802.11a	5745 500F	440 +- 405	440 457 405	OFDM	6	Main
802.11n_HT20	5745~5825	149 to 165	149,157,165	OFDM	MCS0	Main
802.11n_HT40	5755~5795	151 to 159	151,159	OFDM	MCS0	Main

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		TESTED	MODULATION	DATA RATE	ANTENNA				
	BAND (MHz)	CHANNEL	CHANNEL		(Mbps)	PORT				
802.11a	5400 5040	20 to 40	20.44.40	OFDM	6	Main				
802.11n_HT20	5180~5240	36 to 48	36,44,48	OFDM	MCS0	Main				
802.11n_HT40	5190~5230	38 to 46	38,46	OFDM	MCS0	Main				
802.11a	F260 F220	50 to 04	F0 C0 C4	OFDM	6	Main				
802.11n_HT20	5260~5320	52 to 64	52,60,64	OFDM	MCS0	Main				
802.11n_HT40	5270~5310	54 to 62	54,62	OFDM	MCS0	Main				
802.11a	5500~5700	100 to 140	100,116,140	OFDM	6	Main				
802.11n_HT20	3500~5700	100 to 140	100,110,140	OFDM	MCS0	Main				
802.11n_HT40	5510~5670	102 to 134	102,110,134	OFDM	MCS0	Main				
802.11a	E74E E00E	140 to 165	140 157 165	OFDM	6	Main				
802.11n_HT20	5745~5825	149 to 165	149,157,165	OFDM	MCS0	Main				
802.11n_HT40	5755~5795	151 to 159	151,159	OFDM	MCS0	Main				

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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:

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

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

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

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CONDUCTED EMISSION TEST

6.1 Standard Applicable

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

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

Note

- 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	ESCI7	100335	02/02/2018	02/01/2019					
LISN	SCHWARZBECK	NSLK 8127	8127-649	05/18/2018	05/17/2019					
Notebook	Lenovo	T440P	P0000564	N/A	N/A					

6.3 EUT Setup

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

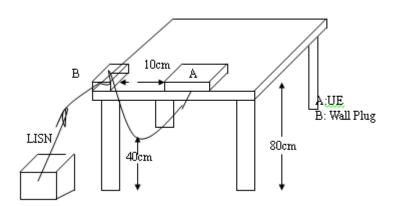
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6.4 Test SET-UP



6.5 Measurement Procedure

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

6.6 Measurement Result

Note: Refer to next page for measurement data and plots.

Note2: The * reveals the worst-case results that closet to the limit

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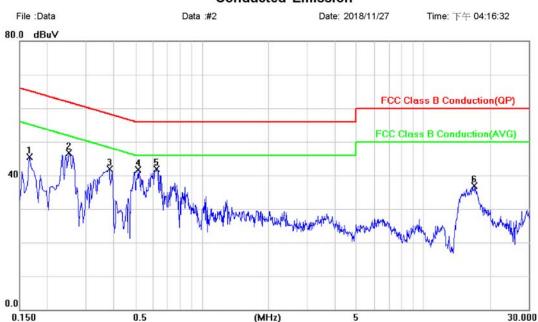
AC POWER LINE CONDUCTED EMISSION TEST DATA

25 ℃ Temperature: Site Conduction Room Phase: L1 Power: AC 120V/60Hz Humidity: 85 %

Limit: FCC Class B Conduction(QP) Mode: Operation

Note:

Conducted Emission



Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
0.1660	45.47	0.03	45.50	65.16	-19.66	peak	
0.2500	46.74	0.03	46.77	61.76	-14.99	peak	
0.3820	41.83	0.04	41.87	58.24	-16.37	peak	
0.5140	41.68	0.04	41.72	56.00	-14.28	peak	
0.6260	41.81	0.04	41.85	56.00	-14.15	peak	
17.0700	36.56	0.37	36.93	60.00	-23.07	peak	
	MHz 0.1660 0.2500 0.3820 0.5140 0.6260	MHz dBuV 0.1660 45.47 0.2500 46.74 0.3820 41.83 0.5140 41.68 0.6260 41.81	MHz dBuV dB 0.1660 45.47 0.03 0.2500 46.74 0.03 0.3820 41.83 0.04 0.5140 41.68 0.04 0.6260 41.81 0.04	MHz dBuV dB dBuV 0.1660 45.47 0.03 45.50 0.2500 46.74 0.03 46.77 0.3820 41.83 0.04 41.87 0.5140 41.68 0.04 41.72 0.6260 41.81 0.04 41.85	MHz dBuV dB dBuV dBuV 0.1660 45.47 0.03 45.50 65.16 0.2500 46.74 0.03 46.77 61.76 0.3820 41.83 0.04 41.87 58.24 0.5140 41.68 0.04 41.72 56.00 0.6260 41.81 0.04 41.85 56.00	MHz dBuV dB dBuV dBuV dB 0.1660 45.47 0.03 45.50 65.16 -19.66 0.2500 46.74 0.03 46.77 61.76 -14.99 0.3820 41.83 0.04 41.87 58.24 -16.37 0.5140 41.68 0.04 41.72 56.00 -14.28 0.6260 41.81 0.04 41.85 56.00 -14.15	MHz dBuV dB dBuV dBuV dB Detector 0.1660 45.47 0.03 45.50 65.16 -19.66 peak 0.2500 46.74 0.03 46.77 61.76 -14.99 peak 0.3820 41.83 0.04 41.87 58.24 -16.37 peak 0.5140 41.68 0.04 41.72 56.00 -14.28 peak 0.6260 41.81 0.04 41.85 56.00 -14.15 peak

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Site Conduction Room Phase: Temperature:

AC 120V/60Hz Humidity: Limit: FCC Class B Conduction(QP) 85 % Power:

Mode: Operation

Note:

Conducted Emission File :Data Data:#1 Date: 2018/11/27 Time: 下午 04:14:35 80.0 dBuV FCC Class B Conduction(QP) FCC Class B Conduction(AVG) 0.0 0.150 0.5 (MHz) 5 30.000

No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1	0.1700	41.22	0.04	41.26	64.96	-23.70	peak		
2	0.2380	40.18	0.04	40.22	62.17	-21.95	peak		
3	0.3620	34.47	0.04	34.51	58.68	-24.17	peak		
4	0.5260	31.15	0.04	31.19	56.00	-24.81	peak		
5	2.5620	32.50	0.10	32.60	56.00	-23.40	peak		
6 *	16.5540	37.81	0.38	38.19	60.00	-21.81	peak		

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DUTY CYCLE TEST SIGNAL

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

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

Formula:

Duty Cycle = Ton / (Ton+Toff)

Measurement Procedure:

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

Duty Cycle:

Mode	Duty Cycle (%)	Duty Factor (dB) =10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
802.11a	87.24	0.59	0.73	1.00
802.11n_20	86.64	0.62	0.78	1.00
802.11n_40	76.24	1.18	1.57	2.00

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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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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 frequency of interest measured was complete.

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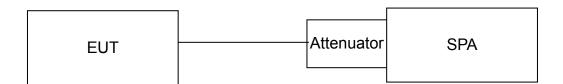


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8.3 Measurement Equipment Used

	• •						
SGS Conducted Room							
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.		
EXA Spectrum Analyzer	Agilent	N9010A	MY50420195	05/03/2018	05/02/2019		
DC Power Supply	Agilent	E3640A	KR93300208	08/15/2018	08/14/2019		
Temperature Chamber	TERCHY	MHG-120LF	911009	05/18/2018	05/17/2019		
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2018	01/01/2019		
DC Block	Mini-Circuits	BLK-18-S+	1	01/02/2018	01/01/2019		
Coaxial Cables	N/A	WK CE Cable	N/A	01/02/2018	01/01/2019		
Notebook	Lenovo	L430	R9-X11BG	N/A	N/A		

8.4 Test Set-up



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8.5 Measurement Result

26dB and 6dB Bandwidth

802.11a Ch0

002.11a_0110		
Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	22.29	13.481
5220	22.03	13.431
5240	22.31	13.486
5260	21.71	13.367
5300	21.77	13.379
5320	22.03	13.429
5500	22.20	13.463
5580	22.36	13.495
5700	22.15	13.454

802.11a_Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	16.42	12.155
5785	16.42	12.153
5825	16.43	12.157

802.11n HT20 Ch0

002.1111_11120_0110					
Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)			
5180	22.45	13.513			
5220	22.38	13.499			
5240	22.45	13.511			
5260	22.34	13.490			
5300	22.32	13.486			
5320	22.52	13.526			
5500	22.23	13.469			
5580	22.62	13.545			
5700	22.33	13.489			

802.11n_HT20_Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	17.64	12.464
5785	17.63	12.462
5825	17.61	12.458

802.11n HT40 Ch0

Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5190	44.06	16.441
5230	44.53	16.487
5270	43.21	16.356
5310	43.10	16.345
5510	43.19	16.354
5550	43.54	16.389
5670	42.89	16.323

802.11n_HT40_Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5755	35.42	15.492
5795	35.19	15.464

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Acrossband Signals

802.11a_Ch0

802.11n_HT20_Ch0

Frequency (MHz)	Measured Frequency (MHz)	Limit (MHz)	imit (MHz) Frequency (MHz)		Limit (MHz)
5240	5248.43	< 5250	5240	5238.94	< 5250
5745	5736.63	> 5725	5745	5736.12	> 5725

802.11n _HT40_Ch0

Frequency (MHz)	Measured Frequency (MHz)	Limit (MHz)
5230	5248.10	< 5250
5755	5736.90	> 5725

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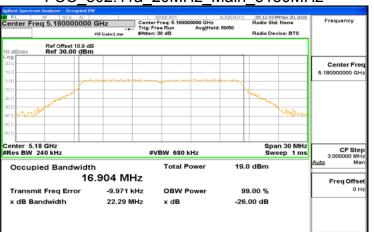
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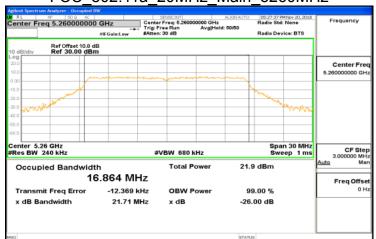


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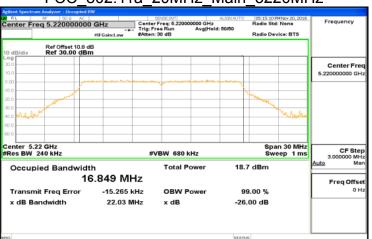
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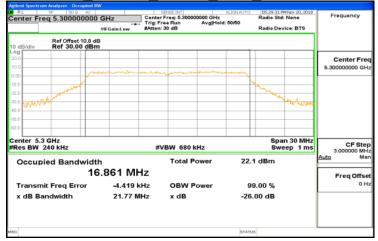
FCC 802.11a 20MHz Main 5260MHz



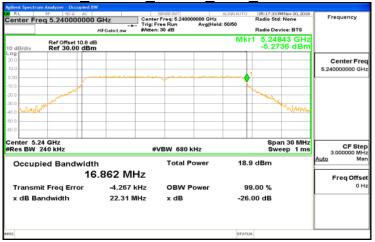
FCC 802.11a 20MHz Main 5220MHz



FCC 802.11a 20MHz Main 5300MHz



FCC 802.11a 20MHz Main 5240MHz



FCC 802.11a 20MHz Main 5320MHz



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FCC 802.11a 20MHz Main 5500MHz



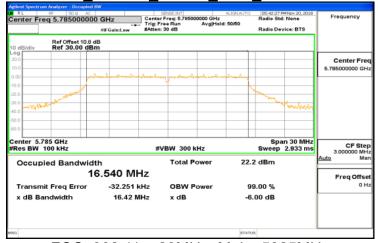
FCC 802.11a 20MHz Main 5745MHz



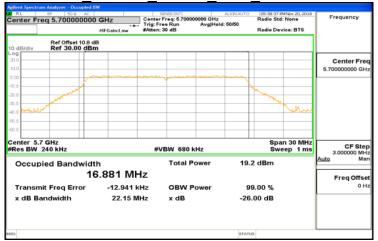
FCC 802.11a 20MHz Main 5580MHz



FCC 802.11a 20MHz Main 5785MHz



FCC 802.11a 20MHz Main 5700MHz



FCC 802.11a 20MHz Main 5825MHz



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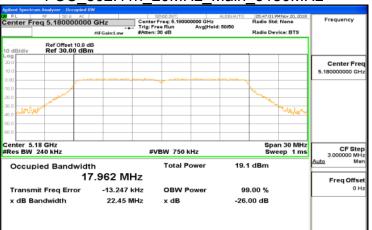
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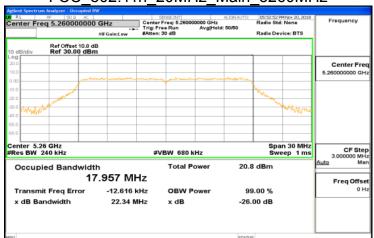


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FCC 802.11n 20MHz Main 5180MHz



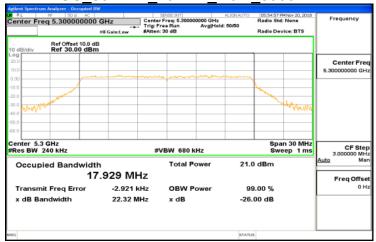
FCC 802.11n 20MHz Main 5260MHz



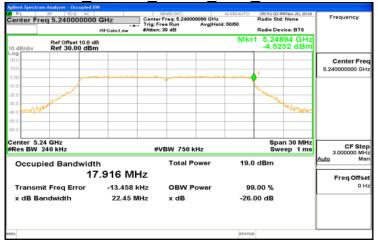
FCC 802.11n 20MHz Main 5220MHz



FCC 802.11n 20MHz Main 5300MHz



FCC 802.11n 20MHz Main 5240MHz



FCC 802.11n 20MHz Main 5320MHz



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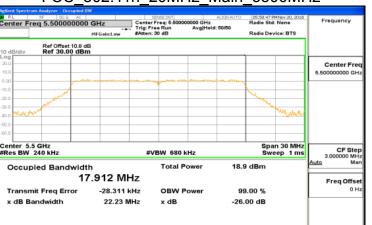
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FCC 802.11n 20MHz Main 5500MHz



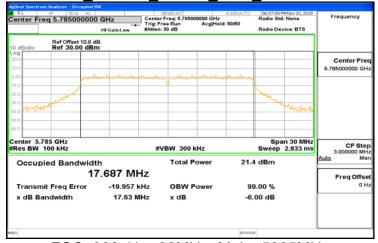
FCC 802.11n 20MHz Main 5745MHz



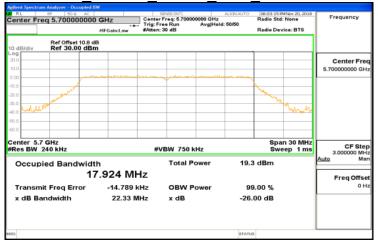
FCC 802.11n 20MHz Main 5580MHz



FCC 802.11n 20MHz Main 5785MHz



FCC 802.11n 20MHz Main 5700MHz



FCC 802.11n 20MHz Main 5825MHz



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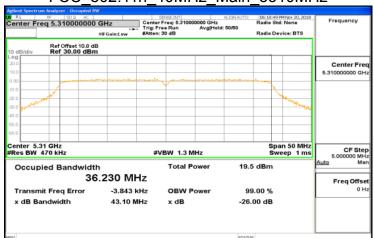


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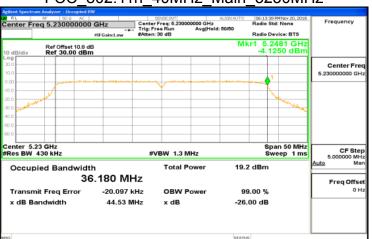
FCC 802.11n 40MHz Main 5190MHz

Center Fre CF Step 5.000000 MH Ma enter 5.19 GHz Res BW 470 kHz Span 50 MHz Sweep 1 ms #VBW 1.3 MHz 19.0 dBm Total Power Occupied Bandwidth 36.207 MHz Freq Offs Transmit Freg Error -5.426 kHz ORW Power 99.00 % 0 H x dB Bandwidth 44.06 MHz x dB -26.00 dB

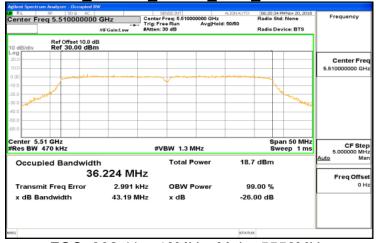
FCC 802.11n 40MHz Main 5310MHz



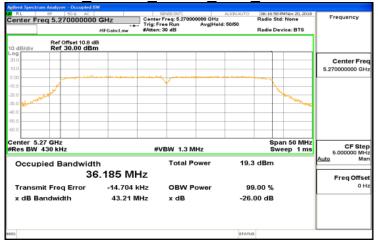
FCC 802.11n 40MHz Main 5230MHz



FCC 802.11n 40MHz Main 5510MHz



FCC 802.11n 40MHz Main 5270MHz



FCC 802.11n 40MHz Main 5550MHz



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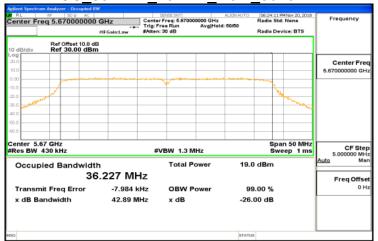
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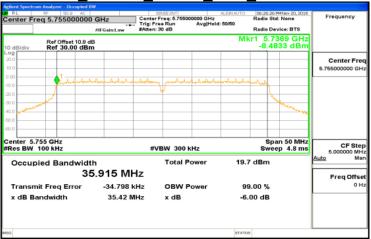


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FCC 802.11n 40MHz Main 5670MHz



FCC 802.11n 40MHz Main 5755MHz



FCC 802.11n 40MHz Main 5795MHz



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MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

9.1 Standard Applicable

FCC

OPERZTION Band	EUT CATEGORY		LIMIT
		Access Point (Master device)	1 Watt(30dBm)
U-NII-1		Fixed point-to-point Access Ponit	1 Watt(30dBm)
		Mobile and portable client 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	\checkmark		1 Watt(30dBm)

If transmitting antennas of directional gain greater than 6 dBi are used, the Maximum transmit power shall be reduced by the amount in dB that the direction-al gain of the antenna exceeds 6 dBi.

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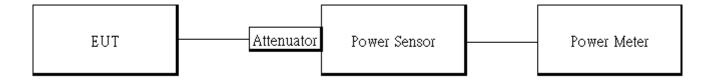
9.2 Measurement Procedure

- 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.
- 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.
- Record the max. reading and add 10 log(1/duty cycle). 5.
- Repeat above procedures until all frequency (low, middle, and high channel) measured were complete.

9.3 Measurement Equipment Used

SGS Conducted Room							
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.		
Power Meter	Anritsu	ML2496A	1804001	02/01/2018	01/31/2019		
Power Sensor	Anritsu	MA2411B	1726104	02/01/2018	01/31/2019		
DC Power Supply	Agilent	E3640A	KR93300208	08/15/2018	08/14/2019		
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2018	01/01/2019		
Coaxial Cables	N/A	WK CE Cable	N/A	01/02/2018	01/01/2019		
Notebook	Lenovo	L430	R9-X11BG	N/A	N/A		

9.4 Test Set-up



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9.5 Measurement Result

Conducted output power (FCC)

802 11a Ch0

СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
36	5180	6	12.54	17.959		23.98		PASS
44	5220	6	12.67	18.505		23.98		PASS
48	5240	6	12.62	18.293		23.98		PASS
52	5260	6	15.67	36.922	23.98	or 11+10log(B) =	24.37	PASS
60	5300	6	15.75	37.608	23.98	or 11+10log(B) =	24.38	PASS
64	5320	6	12.55	18.000	23.98	or 11+10log(B) =	24.43	PASS
100	5500	6	12.87	19.377	23.98	or 11+10log(B) =	24.46	PASS
116	5580	6	15.81	38.132	23.98	or 11+10log(B) =	24.49	PASS
140	5700	6	12.88	19.422	23.98	or 11+10log(B) =	24.45	PASS
149	5745	6	15.76	37.695		30		PASS
157	5785	6	15.56	35.998		30		PASS
165	5825	6	15.77	37.782		30		PASS

802.11n HT20 Ch0

СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
36	5180	MCS0	12.56	18.042		23.98		PASS
44	5220	MCS0	12.60	18.209		23.98		PASS
48	5240	MCS0	12.75	18.849		23.98		PASS
52	5260	MCS0	14.77	30.011	23.98	or 11+10log(B) =	24.49	PASS
60	5300	MCS0	14.74	29.804	23.98	or 11+10log(B) =	24.49	PASS
64	5320	MCS0	12.73	18.762	23.98	or 11+10log(B) =	24.53	PASS
100	5500	MCS0	12.79	19.023	23.98	or 11+10log(B) =	24.47	PASS
116	5580	MCS0	14.84	30.499	23.98	or 11+10log(B) =	24.54	PASS
140	5700	MCS0	12.98	19.874	23.98	or 11+10log(B) =	24.49	PASS
149	5745	MCS0	14.80	30.219		30		PASS
157	5785	MCS0	14.59	28.793		30		PASS
165	5825	MCS0	14.86	30.639		30		PASS

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802.11n HT40 Ch0

СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
38	5190	MCS0	12.55	17.981		23.98		PASS
46	5230	MCS0	12.83	19.179		23.98		PASS
54	5270	MCS0	12.93	19.625	23.98	or 11+10log(B) =	27.36	PASS
62	5310	MCS0	12.86	19.312	23.98	or 11+10log(B) =	27.35	PASS
102	5510	MCS0	12.52	17.857	23.98	or 11+10log(B) =	27.35	PASS
110	5550	MCS0	12.53	17.899	23.98	or 11+10log(B) =	27.39	PASS
134	5670	MCS0	12.51	17.816	23.98	or 11+10log(B) =	27.32	PASS
151	5755	MCS0	12.59	18.148		30		PASS
159	5795	MCS0	12.64	18.358		30		PASS

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10 MAXIMUM POWER SPECTRAL DENSITY

10.1 Standard Applicable

FCC

OPERZTION Band	EUT CATEGORY	LIMIT
	Access Point (Master device)	17dBm/ MHz
U-NII-1	Fixed point-to-point Access Ponit	
	 Mobile and portable client 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, the Maximum 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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10.2Measurement 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:

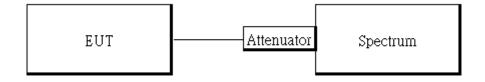
Set RBW=500 kHz, VBW≥ 3RBW, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)

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

10.3 Measurement Equipment Used

SGS Conducted Room									
EQUIPMENT TYPE	I MER I		IODEL SERIAL JMBER NUMBER		CAL DUE.				
EXA Spectrum Analyzer	Agilent	N9010A	MY50420195	05/03/2018	05/02/2019				
DC Power Supply	Agilent	E3640A	KR93300208	08/15/2018	08/14/2019				
Temperature Chamber	TERCHY	MHG-120LF	911009	05/18/2018	05/17/2019				
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2018	01/01/2019				
DC Block	Mini-Circuits	BLK-18-S+	1	01/02/2018	01/01/2019				
Coaxial Cables	N/A	WK CE Cable	N/A	01/02/2018	01/01/2019				
Notebook	Lenovo	L430	R9-X11BG	N/A	N/A				

10.4Test Set-up



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10.5Measurement Result

POWER DENSITY 802.11a MODE									
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Offset	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)			
5180	-5.27	10.80	0.59	-4.68	11	-15.68			
5220	-5.32	10.80	0.59	-4.73	11	-15.73			
5240	-6.53	10.80	0.59	-5.94	11	-16.94			
5260	-1.43	10.80	0.59	-0.84	11	-11.84			
5300	-1.28	10.80	0.59	-0.69	11	-11.69			
5320	-4.94	10.80	0.59	-4.35	11	-15.35			
5500	-7.35	10.80	0.59	-6.76	11	-17.76			
5580	-1.53	10.80	0.59	-0.94	11	-11.94			
5700	-6.71	10.80	0.59	-6.12	11	-17.12			
5745	9.46	10.80	-	9.46	30	-20.54			
5785	9.01	10.80	-	9.01	30	-20.99			
5825	9.49	10.80	-	9.49	30	-20.51			

POWER DENSITY 802.11n HT20 MODE									
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Offset	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)			
5180	-6.31	10.80	0.62	-5.69	11	-16.69			
5220	-5.02	10.80	0.62	-4.40	11	-15.40			
5240	-5.17	10.80	0.62	-4.55	11	-15.55			
5260	-3.73	10.80	0.62	-3.11	11	-14.11			
5300	-2.83	10.80	0.62	-2.21	11	-13.21			
5320	-6.41	10.80	0.62	-5.79	11	-16.79			
5500	-4.87	10.80	0.62	-4.25	11	-15.25			
5580	-3.77	10.80	0.62	-3.15	11	-14.15			
5700	-5.18	10.80	0.62	-4.56	11	-15.56			
5745	7.53	10.80	-	7.53	30	-22.47			
5785	7.83	10.80	-	7.83	30	-22.17			
5825	8.39	10.80	-	8.39	30	-21.61			

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POWER DENSITY 802.11n HT40 MODE									
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Offset	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)			
5190	-12.64	10.80	1.18	-11.46	11	-22.46			
5230	-13.73	10.80	1.18	-12.55	11	-23.55			
5270	-11.71	10.80	1.18	-10.53	11	-21.53			
5310	-12.96	10.80	1.18	-11.78	11	-22.78			
5510	-14.56	10.80	1.18	-13.38	11	-24.38			
5550	-13.07	10.80	1.18	-11.89	11	-22.89			
5670	-12.01	10.80	1.18	-10.83	11	-21.83			
5755	2.98	10.80	-	2.98	30	-27.02			
5795	3.22	10.80	-	3.22	30	-26.78			

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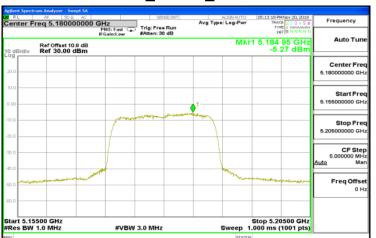
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802.11a 20MHz 5180MHz



802.11a 20MHz 5260MHz



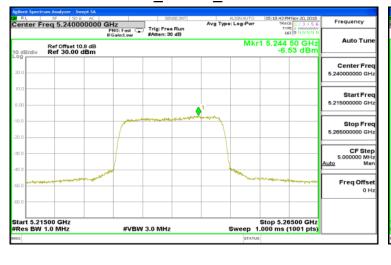
802.11a 20MHz 5220MHz



802.11a 20MHz 5300MHz



802.11a 20MHz 5240MHz



802.11a_20MHz_5320MHz



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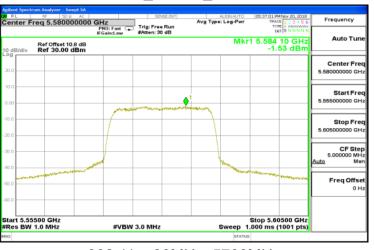
802.11a 20MHz 5500MHz

ALIGNAUTO Avg Type: Log-Pwr Mkr1 5.493 80 GH -7.35 dBr Ref Offset 10.8 dB Center Fre Start Fre Stop Free CF Step Stop 5.52500 GHz Sweep 1.000 ms (1001 pts) #VBW 3.0 MHz

802.11a 20MHz 5745MHz



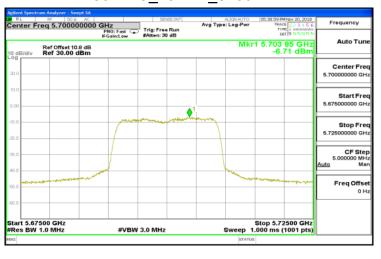
802.11a 20MHz 5580MHz



802.11a 20MHz 5785MHz



802.11a_20MHz_5700MHz



802.11a_20MHz_5825MHz



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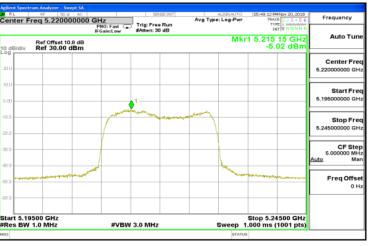
802.11n 20MHz 5180MHz

ALIGNAUTO Avg Type: Log-Pwr 175 45 GH -6.31 dBr Ref Offset 10.8 dB Center Fre Start Fre Stop Free CF Step Stop 5.20500 GHz Sweep 1.000 ms (1001 pts) #VBW 3.0 MHz

802.11n 20MHz 5260MHz



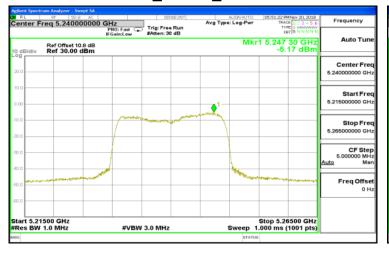
802.11n 20MHz 5220MHz



802.11n 20MHz 5300MHz



802.11n 20MHz 5240MHz



802.11n_20MHz_5320MHz



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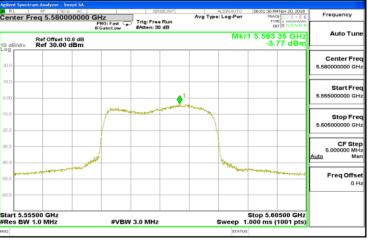
802.11n 20MHz 5500MHz

ALIGNAUTO Avg Type: Log-Pwr Mkr1 5.505 30 GH: -4.87 dBn Ref Offset 10.8 dB Center Fre Start Fre Stop Free CF Step Stop 5.52500 GHz Sweep 1.000 ms (1001 pts) #VBW 3.0 MHz

802.11n 20MHz 5745MHz



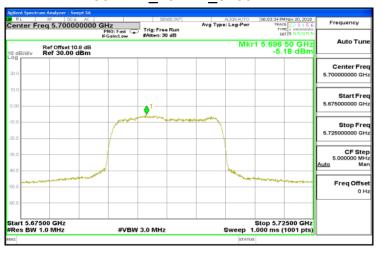
802.11n 20MHz 5580MHz



802.11n 20MHz 5785MHz



802.11n_20MHz_5700MHz



802.11n_20MHz_5825MHz



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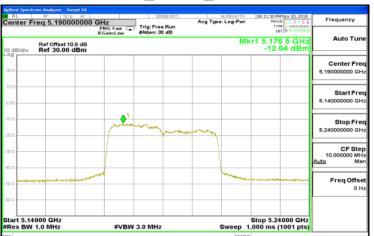
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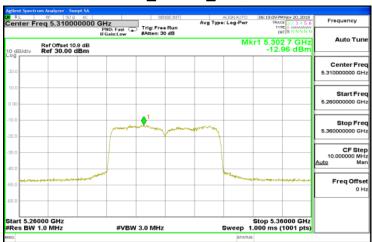


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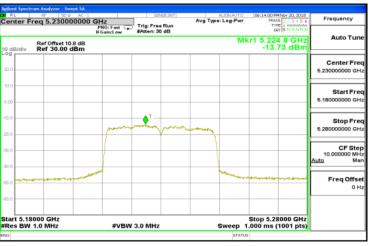
802.11n 40MHz 5190MHz



802.11n 40MHz 5310MHz



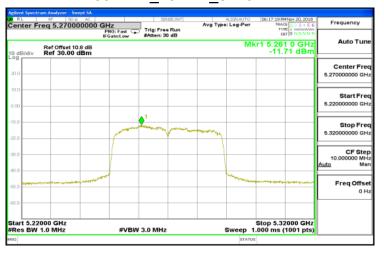
802.11n 40MHz 5230MHz



802.11n 40MHz 5510MHz



802.11n_40MHz_5270MHz



802.11n_40MHz_5550MHz



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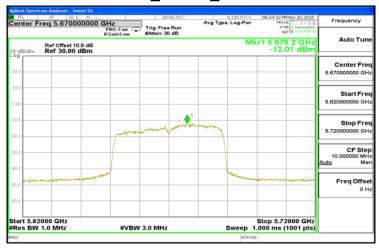
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802.11n 40MHz 5670MHz



802.11n 40MHz 5755MHz



802.11n 40MHz 5795MHz



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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 5.725-5.85 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.

	abilition 2 at the band bage.						
APPLICABLE TO	LI	MIT					
FCC KDB 789033 D02 General UNII Test Procedures New Rules	FIELD STRENGTH AT 3m						
	FIELD STR PK: 74 (dBµV/m) EIRP LIMIT PK: -27 (dBm/MHz) PK:-27 (dBm/MHz) *1 PK:10 (dBm/MHz) *2	AV 54 (dBµV/m)					
APPLICABLE TO	EIRP LIMIT	FIELD STRENGTH AT 3m					
15.407(b)(1)							
15.407(b)(2)	PK: -27 (dBm/MHz)	PK: 68.3 (dBµV/m)					
15.407(b)(3)							
15.407(b)(4)(i)	PK:10 (dBm/MHz) *2 PK:15.6 (dBm/MHz) *3	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.

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

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^{*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.



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

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

Note:

- 1. The lower limit shall apply at the transition frequencies.
- 2. Emission level $(dB\mu V/m) = 20 \log Emission level (dB\mu V/m)$

11.2Measurement Equipment Used

SGS SAC-III								
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.			
Bi-log Antenna	SCHWAZBECK	VULB9168	378	12/29/2017	12/28/2018			
Horn Antenna	Schwarzbeck	BBHA9120D	1441	08/16/2018	08/15/2019			
Horn Antenna	Schwarzbeck	BBHA9170	184	12/12/2017	12/11/2018			
Loop Antenna	ETS.LINDGREN	6502	148045	10/08/2018	10/07/2019			
3m Site NSA	SGS	966 chamber	N/A	01/02/2018	01/01/2019			
Spectrum Analyzer	Agilent	E4446A	MY51100003	05/15/2018	05/14/2019			
EMI Test Receiver	R&S	ESCI7	100335	02/02/2018	02/01/2019			
Pre-Amplifier	HP	8449B	3008A00578	01/02/2018	01/01/2019			
Pre-Amplifier	HP	8447D	2944A07676	01/02/2018	01/01/2019			
Pre-Amplifier	EMC Instru- ments	EMC184045B	980135	10/02/2018	10/01/2019			
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2018	01/01/2019			
2GHz High Pass Filter	Micro-Tronics	HPM50110	36	01/02/2018	01/01/2019			
Filter 5150-5350 MHz	Micro-Tronics	BRM50703	1	01/02/2018	01/01/2019			
Low Loss Cable	Huber Suhner	966_RX	9	01/02/2018	01/01/2019			
Notebook	Lenovo	T440P	P0000564	N/A	N/A			

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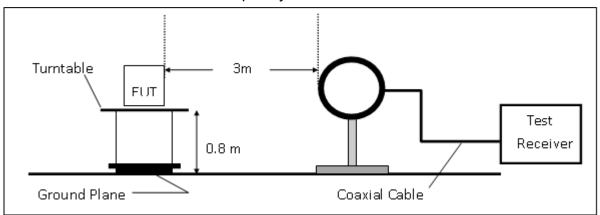
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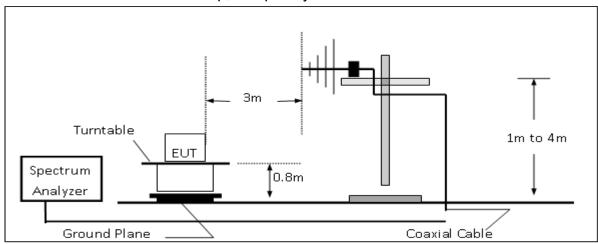
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11.3Test SET-UP

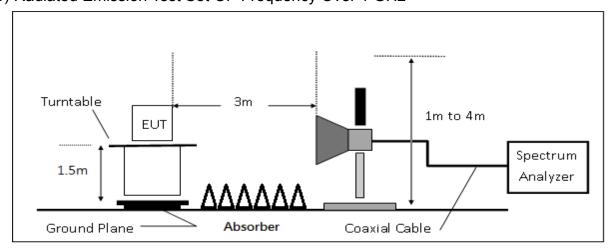
(A) Radiated Emission Test Set-UP Frequency Below 30MHz.



(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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11.4Measurement Procedure

- 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.
- The EUT was placed on a turn table with 0.8m for frequency< 1GHz and 1.5m for frequency> 3. 1GHz above ground plane.
- The turn table shall rotate 360 degrees to determine the position of maximum emission level. 4.
- 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.
- Set the spectrum analyzer as RBW=1 MHz, VBW=3 MHz for Peak Detector at frequency 7. above 1 GHz.
- Set the spectrum analyzer as RBW=1 MHz, VBW=10 Hz (Duty cycle > 98%) or VBW ≥ 1/T 8. (Duty cycle < 98%) for Average Detector at frequency above 1 GHz.
- 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.

11.5Field 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	S .	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

Actual FS(dB μ V/m) = SPA. Reading level(dB μ V) + Factor(dB)

Factor(dB) = Antenna Factor(dB μ V/m) + Cable Loss(dB) – Pre Amplifier Gain(dB)

11.6Test 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.

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11.7 Radiated Spurious Emission Measurement Result

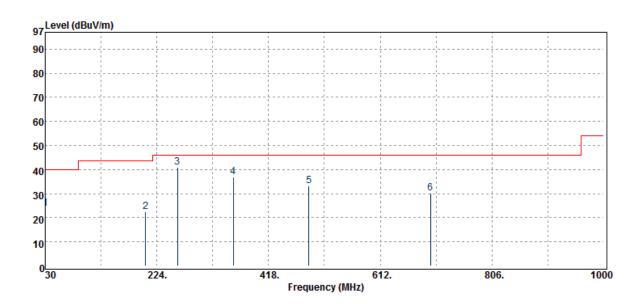
Below 1GHz Worst-Case Data:

802.11a 5150~5250 MHz

Operation Band :802.11aB1 **Test Date** :2018-11-22

Fundamental Frequency :5220 MHz Temp./Humi. :23 deg C / 62 RH **Operation Mode** :Tx CH MID :Kane

Engineer EUT Pol. :E2 Plane Measurement Antenna Pol. :VERTICAL



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
30.00	Peak	32.93	-8.96	23.97	40.00	-16.03
204.60	Peak	31.75	-9.26	22.49	43.50	-21.01
259.89	Peak	48.03	-7.03	41.00	46.00	-5.00
356.89	Peak	41.29	-4.21	37.08	46.00	-8.92
487.84	Peak	35.75	-2.49	33.26	46.00	-12.74
699.30	Peak	28.63	1.74	30.37	46.00	-15.63

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

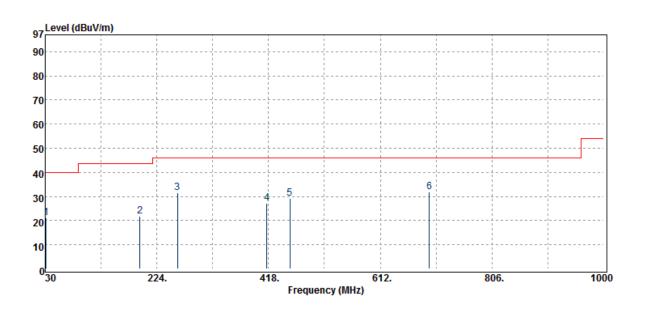
:802.11aB1 :5220 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi. Engineer

:2018-11-22

:23 deg_C / 62 RH :Kane

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
31.94	Peak	29.97	-8.88	21.09	40.00	-18.91
194.90	Peak	31.11	-9.13	21.98	43.50	-21.52
259.89	Peak	38.72	-7.03	31.69	46.00	-14.31
415.09	Peak	30.18	-2.95	27.23	46.00	-18.77
454.86	Peak	31.64	-2.33	29.31	46.00	-16.69
697.36	Peak	30.57	1.33	31.90	46.00	-14.10

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802.11a 5250~5350 MHz

Operation Band :802.11aB2 Fundamental Frequency :5300 MHz

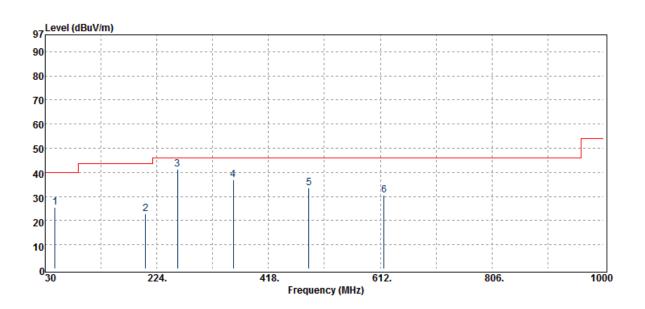
Operation Mode EUT Pol.

:Tx CH MID :E2 Plane

Test Date :2018-11-22

Temp./Humi. :23 deg_C / 62 RH Engineer :Kane

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
47.46	Peak	33.02	-7.64	25.38	40.00	-14.62
204.60	Peak	32.02	-9.26	22.76	43.50	-20.74
259.89	Peak	48.33	-7.03	41.30	46.00	-4.70
356.89	Peak	41.30	-4.21	37.09	46.00	-8.91
487.84	Peak	36.08	-2.49	33.59	46.00	-12.41
618.79	Peak	30.22	0.28	30.50	46.00	-15.50

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

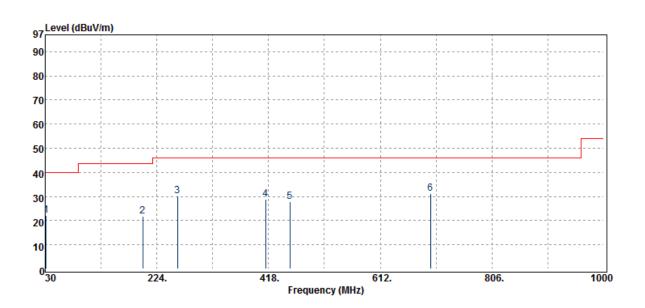
:802.11aB2 :5300 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi. Engineer

:2018-11-22 :23 deg_C / 62 RH

:Kane

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
31.94	Peak	31.12	-8.88	22.24	40.00	-17.76
199.75	Peak	31.21	-9.26	21.95	43.50	-21.55
259.89	Peak	37.37	-7.03	30.34	46.00	-15.66
413.15	Peak	31.82	-2.95	28.87	46.00	-17.13
454.86	Peak	30.22	-2.33	27.89	46.00	-18.11
699.30	Peak	29.64	1.74	31.38	46.00	-14.62

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802.11a, 5470~5725 MHz

Operation Band :802.11aB3 Fundamental Frequency :5580 MHz **Operation Mode** :Tx CH MID

EUT Pol.

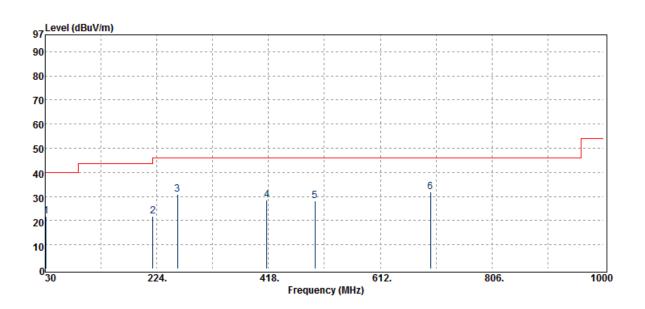
:E2 Plane

Test Date Temp./Humi. Engineer

:2018-11-22

:23 deg_C / 62 RH :Kane

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
31.94	Peak	30.74	-8.88	21.86	40.00	-18.14
217.21	Peak	31.05	-9.12	21.93	46.00	-24.07
259.89	Peak	37.93	-7.03	30.90	46.00	-15.10
415.09	Peak	31.61	-2.95	28.66	46.00	-17.34
498.51	Peak	30.57	-2.53	28.04	46.00	-17.96
699.30	Peak	30.14	1.74	31.88	46.00	-14.12

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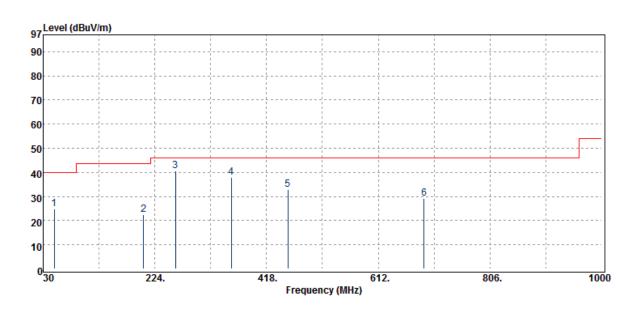
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB4 :5785 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi.

:2018-11-22 :23 deg_C / 62 RH

Engineer :Kane :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
49.40	Peak	32.17	-7.48	24.69	40.00	-15.31
204.60	Peak	31.60	-9.26	22.34	43.50	-21.16
259.89	Peak	47.79	-7.03	40.76	46.00	-5.24
356.89	Peak	42.14	-4.21	37.93	46.00	-8.07
454.86	Peak	35.35	-2.33	33.02	46.00	-12.98
691.54	Peak	27.66	1.57	29.23	46.00	-16.77

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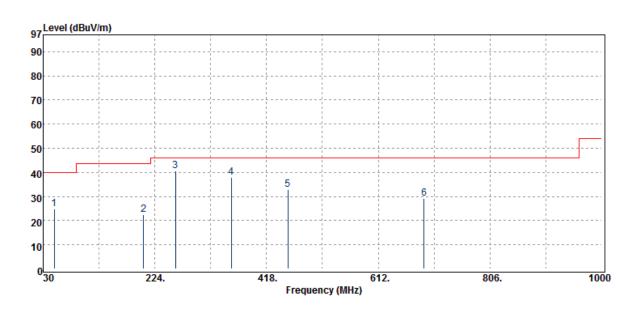
802.11a, 5725~5850 MHz

Operation Band :802.11aB4 Fundamental Frequency :5785 MHz :Tx CH MID

Operation Mode EUT Pol. :E2 Plane **Test Date** Temp./Humi. :2018-11-22 :23 deg_C / 62 RH

:Kane

Engineer :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
49.40	Peak	32.17	-7.48	24.69	40.00	-15.31
204.60	Peak	31.60	-9.26	22.34	43.50	-21.16
259.89	Peak	47.79	-7.03	40.76	46.00	-5.24
356.89	Peak	42.14	-4.21	37.93	46.00	-8.07
454.86	Peak	35.35	-2.33	33.02	46.00	-12.98
691.54	Peak	27.66	1.57	29.23	46.00	-16.77

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

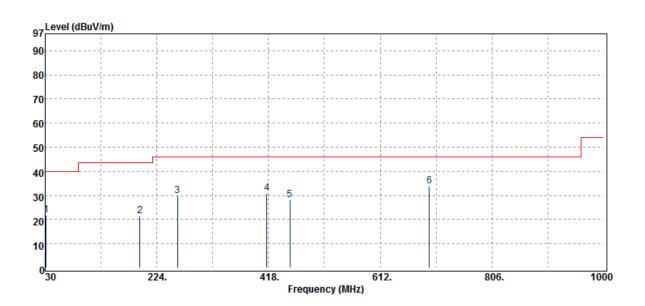
:802.11aB4 :5785 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi. Engineer

:2018-11-22

:23 deg_C / 62 RH :Kane

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
31.94	Peak	30.57	-8.88	21.69	40.00	-18.31
194.90	Peak	30.45	-9.13	21.32	43.50	-22.18
259.89	Peak	37.06	-7.03	30.03	46.00	-15.97
415.09	Peak	33.82	-2.95	30.87	46.00	-15.13
454.86	Peak	30.62	-2.33	28.29	46.00	-17.71
697.36	Peak	32.53	1.33	33.86	46.00	-12.14

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Measurement Antenna Pol.

Above 1GHz Worst-Case Data:

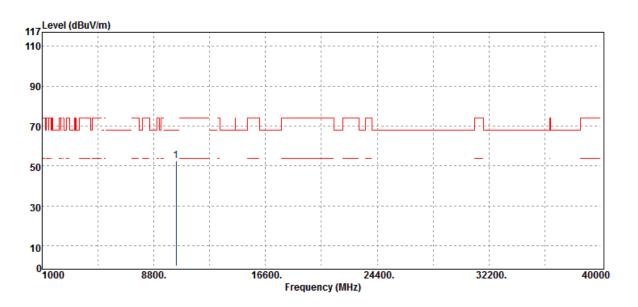
Radiated Spurious Emission Measurement Result

802.11a, 5150~5250 MHz

Operation Band :802.11aB1 **Test Date** :2018-11-21

Fundamental Frequency Temp./Humi. :5180 MHz :21 deg_C / 62 RH

Operation Mode :Tx CH LOW Engineer :Tin EUT Pol. :E2 Plane :VERTICAL



	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
	MHz	PK/QP/AV	dΒμ̈V	dB	dBμV/m	dBμV/m	dB
_	10360.00	Peak	32.10	20.41	52.51	68.20	-15.69

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Operation Band Fundamental Frequency **Operation Mode**

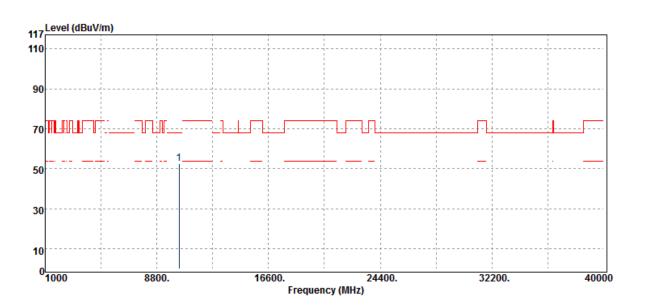
EUT Pol.

:802.11aB1 :5180 MHz :Tx CH LOW :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@3m	-	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10360.00	Peak	32.10	20.41	52.51	68.20	-15.69	_

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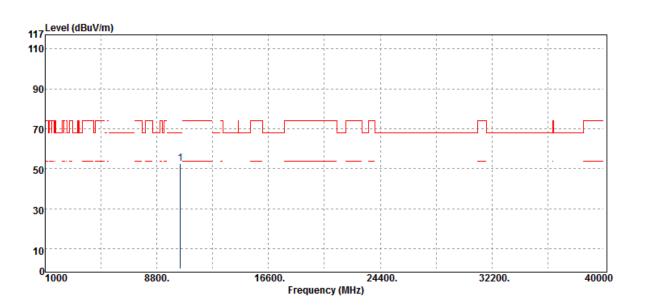


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Operation Band :802.11aB1 **Test Date** :2018-11-21

Fundamental Frequency :5220 MHz Temp./Humi. :21 deg_C / 62 RH

Operation Mode :Tx CH MID Engineer EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@3m		
 MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dΒμV/m	dB	
10440.00	Peak	31.78	20.75	52.53	68.20	-15.67	_

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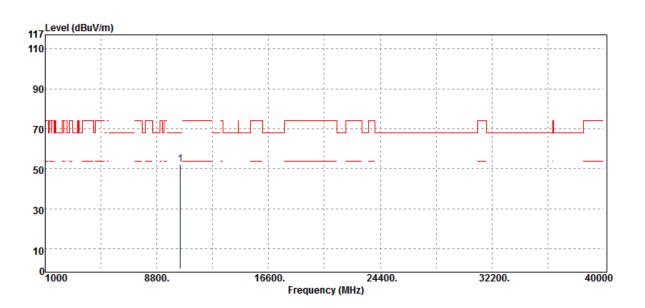


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Operation Band :802.11aB1 **Test Date** :2018-11-21

Fundamental Frequency :5220 MHz Temp./Humi. :21 deg_C / 62 RH **Operation Mode** :Tx CH MID Engineer

EUT Pol. :E2 Plane :HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m	-	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dΒμV/m	dB	
_	10440.00	Peak	31.29	20.75	52.04	68.20	-16.16	_

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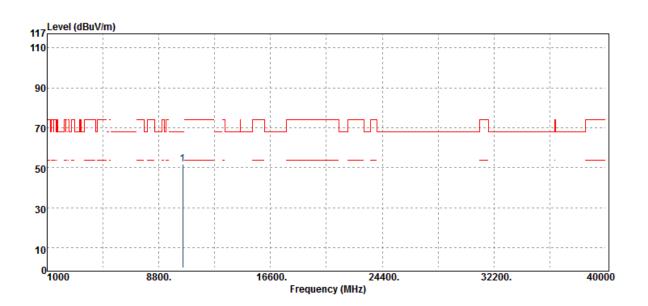
Operation Band Fundamental Frequency

Operation Mode EUT Pol. :E2 Plane

:802.11aB1 :5240 MHz :Tx CH HIGH **Test Date** Temp./Humi. :2018-11-21 :21 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m		
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
_	10480.00	Peak	31.06	20.79	51.85	68.20	-16.35	_

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Operation Band Fundamental Frequency **Operation Mode**

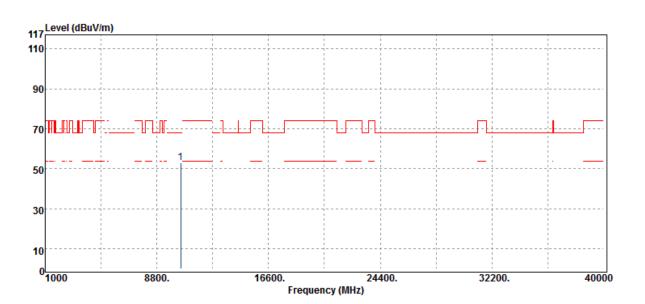
EUT Pol.

:802.11aB1 :5240 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m	-	
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
_	10480.00	Peak	32.19	20.79	52.98	68.20	-15.22	_

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No.134, WuKungRoad, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd.

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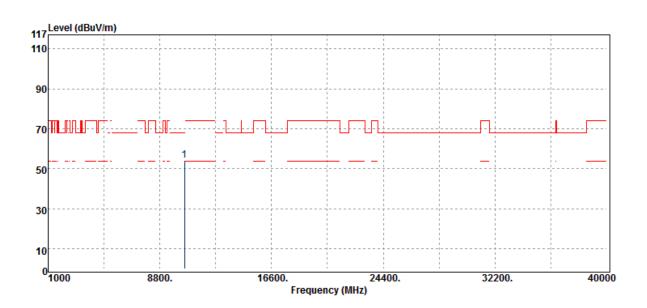
Radiated Spurious Emission Measurement Result 802.11a, 5250MHz-5350MHz

Operation Band :2018-11-21 :802.11aB2 **Test Date**

Fundamental Frequency Temp./Humi. :21 deg_C / 62 RH :5260 MHz

Operation Mode :Tx CH LOW Engineer :Tin

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dΒμV/m	dB
	10520.00	Peak	33.64	20.78	54.42	68.20	-13.78

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Operation Band Fundamental Frequency

Operation Mode

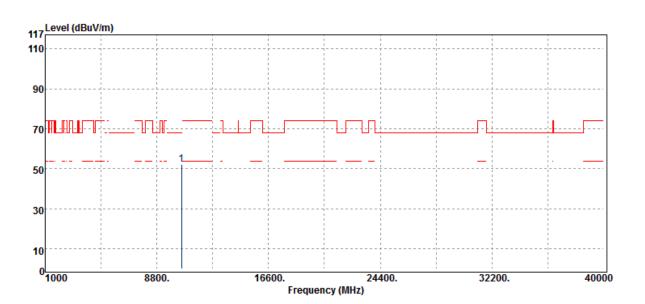
EUT Pol.

:802.11aB2 :5260 MHz :Tx CH LOW :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@3m		
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10520.00	Peak	31.47	20.78	52.25	68.20	-15.95	_

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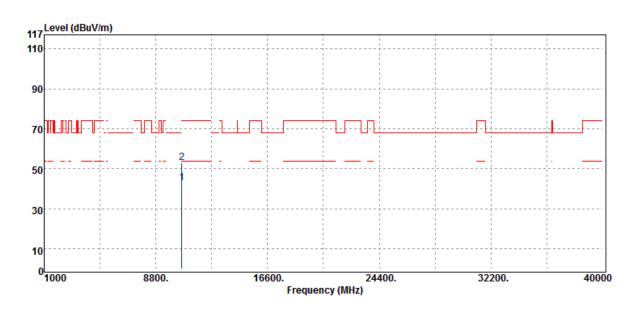
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Operation Band :802.11aB2 **Test Date** :2018-11-21

Fundamental Frequency :5300 MHz Temp./Humi. :21 deg_C / 62 RH

Operation Mode :Tx CH MID Engineer

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
10600.00	Average	21.56	21.18	42.74	54.00	-11.26
10600.00	Peak	32.04	21.18	53.22	74.00	-20.78

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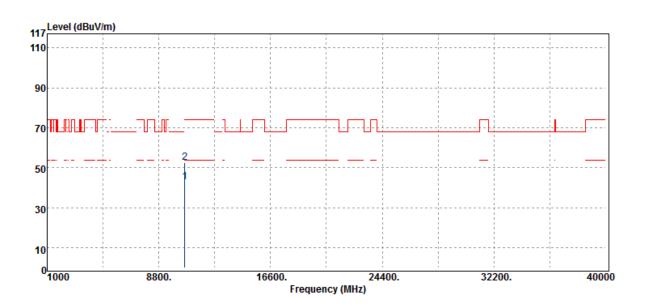


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Operation Band :802.11aB2 **Test Date** :2018-11-21

Fundamental Frequency :5300 MHz Temp./Humi. :21 deg_C / 62 RH **Operation Mode** :Tx CH MID Engineer

EUT Pol. :E2 Plane :HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10600.00	Average	21.66	21.18	42.84	54.00	-11.16
10600.00	Peak	31.65	21.18	52.83	74.00	-21.17

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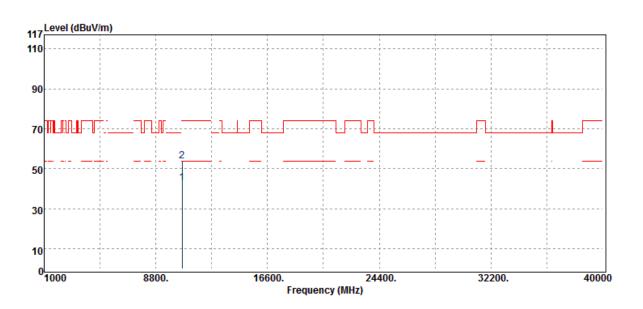
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Operation Band :802.11aB2 **Test Date** :2018-11-21

Fundamental Frequency :5320 MHz Temp./Humi. :21 deg_C / 62 RH

Operation Mode :Tx CH HIGH Engineer

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
10640.00	Average	21.79	21.24	43.03	54.00	-10.97
10640.00	Peak	32.68	21.24	53.92	74.00	-20.08

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Operation Band Fundamental Frequency **Operation Mode**

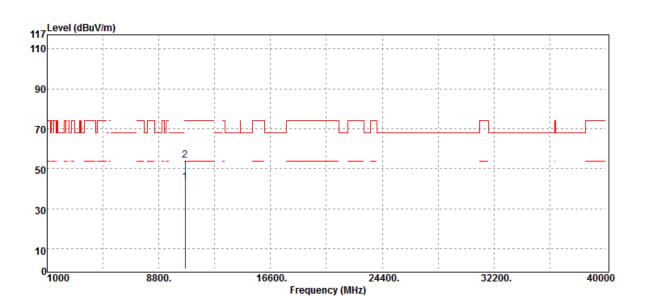
EUT Pol.

:802.11aB2 :5320 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10640.00	Average	21.96	21.24	43.20	54.00	-10.80
10640.00	Peak	32.94	21.24	54.18	74.00	-19.82

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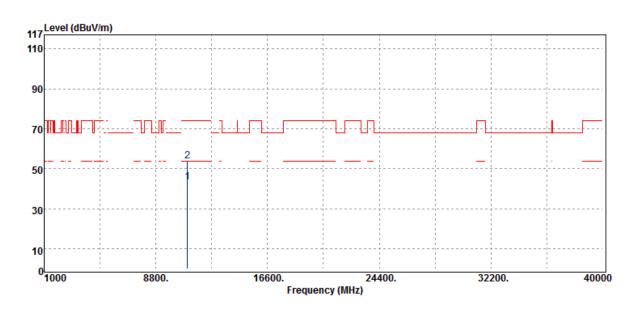
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Radiated Spurious Emission Measurement Result 802.11a, 5470~5725 MHz

Operation Band :2018-11-21 :802.11aB3 **Test Date**

Fundamental Frequency Temp./Humi. :21 deg_C / 62 RH :5500 MHz Operation Mode :Tx CH LOW Engineer :Tin

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
 MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dΒμV/m	dB
11000.00	Average	21.19	22.17	43.36	54.00	-10.64
11000.00	Peak	31.68	22.17	53.85	74.00	-20.15

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Operation Band Fundamental Frequency **Operation Mode**

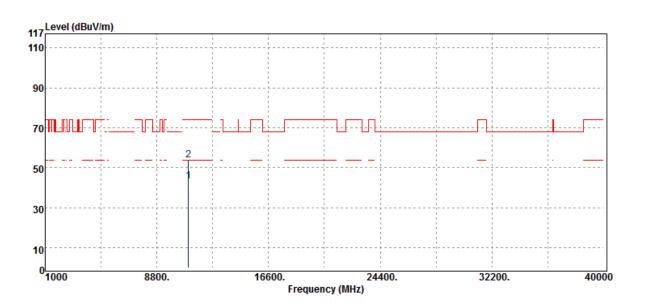
EUT Pol.

:802.11aB3 :5500 MHz :Tx CH LOW :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11000.00	Average	21.28	22.17	43.45	54.00	-10.55
11000.00	Peak	31.68	22.17	53.85	74.00	-20.15

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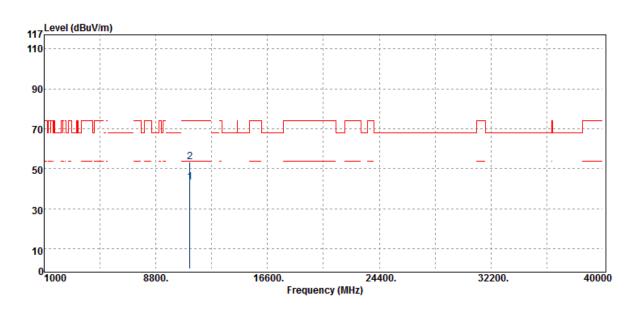
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Operation Band :802.11aB3 **Test Date** :2018-11-21

Fundamental Frequency :5580 MHz Temp./Humi. :21 deg_C / 62 RH

Operation Mode :Tx CH MID Engineer

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11160.00	Average	20.85	22.31	43.16	54.00	-10.84
11160.00	Peak	31.16	22.31	53.47	74.00	-20.53

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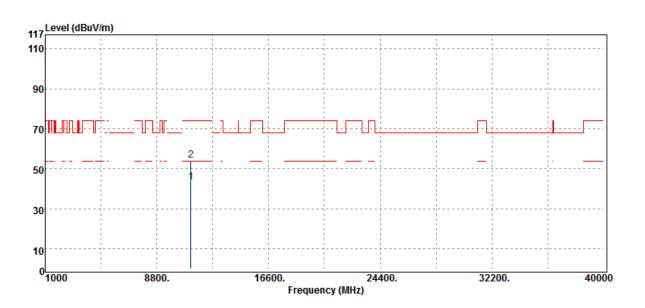


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Operation Band :802.11aB3 **Test Date** :2018-11-21

Fundamental Frequency :5580 MHz Temp./Humi. :21 deg_C / 62 RH **Operation Mode** :Tx CH MID Engineer

EUT Pol. :E2 Plane :HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11160.00	Average	21.08	22.31	43.39	54.00	-10.61
11160.00	Peak	31.76	22.31	54.07	74.00	-19.93

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Operation Band Fundamental Frequency

Operation Mode

EUT Pol.

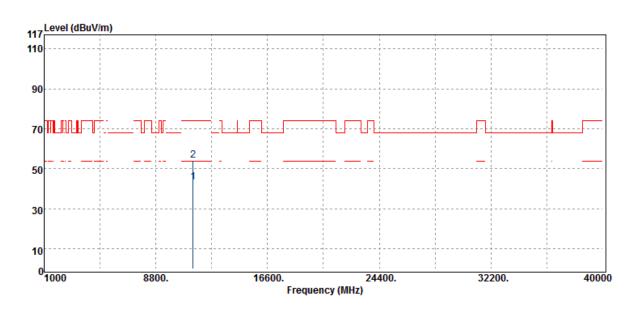
:802.11aB3 :5700 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-11-21

Temp./Humi. :21 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11400.00	Average	20.76	22.42	43.18	54.00	-10.82
11400.00	Peak	31.80	22.42	54.22	74.00	-19.78

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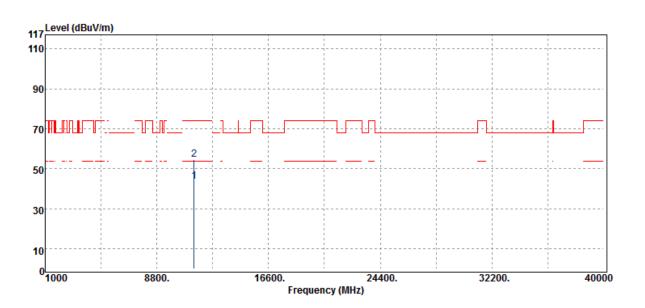
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB3 :5700 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11400.00	Average	21.15	22.42	43.57	54.00	-10.43
11400.00	Peak	32.18	22.42	54.60	74.00	-19.40

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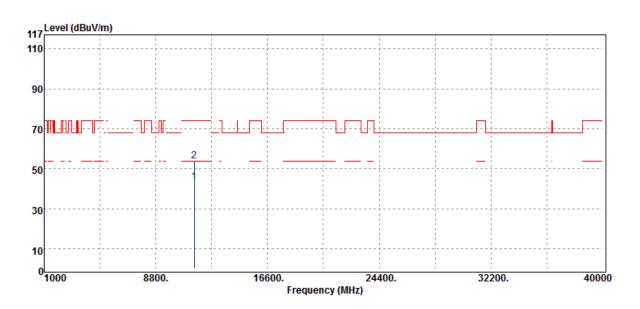
Radiated Spurious Emission Measurement Result

802.11a, 5725~5850 MHz

Operation Band :2018-11-21 :802.11aB4 **Test Date**

Fundamental Frequency Temp./Humi. :21 deg_C / 62 RH :5745 MHz Operation Mode :Tx CH LOW Engineer :Tin

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11490.00	Average	20.93	22.41	43.34	54.00	-10.66
11490.00	Peak	31.35	22.41	53.76	74.00	-20.24

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Operation Band Fundamental Frequency **Operation Mode**

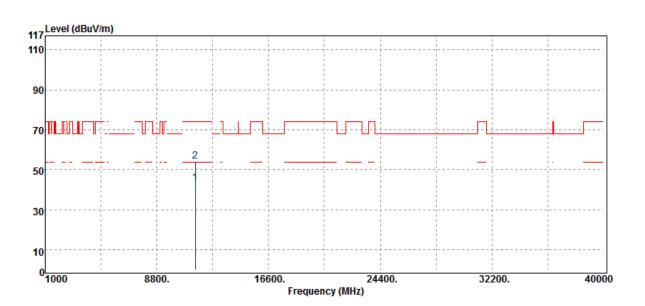
:802.11aB4 :5745 MHz :Tx CH LOW EUT Pol. :E2 Plane

Test Date :2018-11-21

Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11490.00	Average	21.07	22.41	43.48	54.00	-10.52
11490.00	Peak	31.86	22.41	54.27	74.00	-19.73

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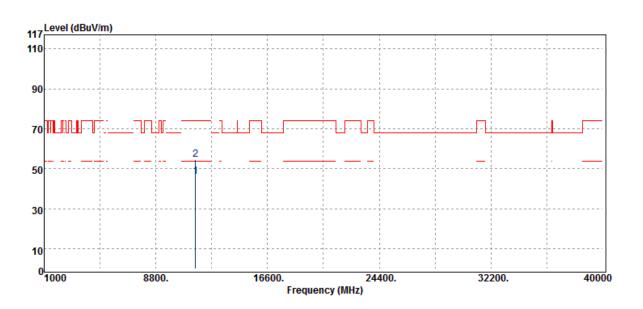
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Operation Band :802.11aB4 **Test Date** :2018-11-21

Fundamental Frequency Temp./Humi. :21 deg_C / 62 RH :5785 MHz

Operation Mode :Tx CH MID Engineer

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11570.00	Average	23.53	22.43	45.96	54.00	-8.04
11570.00	Peak	32.09	22.43	54.52	74.00	-19.48

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Operation Band :802.11aB4 Fundamental Frequency :5785 MHz

Operation Mode

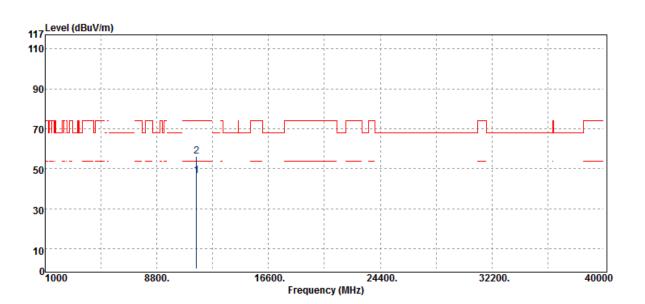
:Tx CH MID EUT Pol. :E2 Plane

Test Date :2018-11-21

Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11570.00	Average	24.32	22.43	46.75	54.00	-7.25
11570.00	Peak	33.65	22.43	56.08	74.00	-17.92

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Operation Band Fundamental Frequency

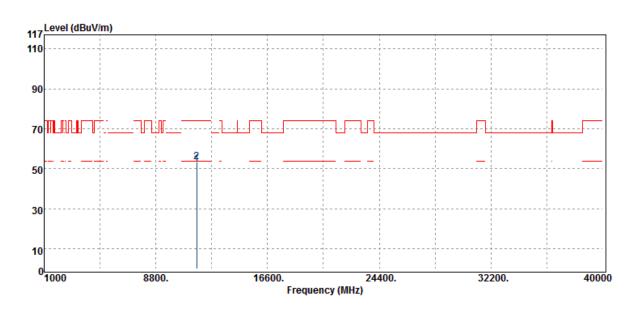
Operation Mode EUT Pol.

:802.11aB4 :5825 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11650.00	Average	30.00	22.30	52.30	54.00	-1.70
11650.00	Peak	31.31	22.30	53.61	74.00	-20.39

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Operation Band Fundamental Frequency

Operation Mode

EUT Pol.

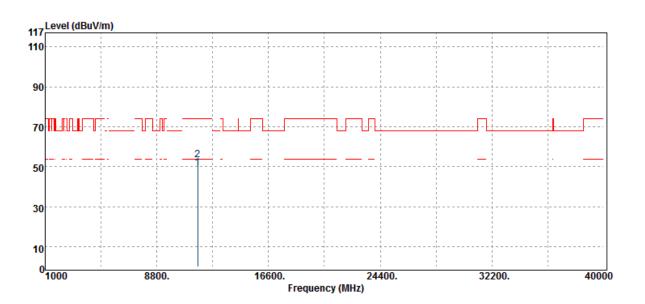
:802.11aB4 :5825 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-11-21

Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11650.00	Average	26.92	22.30	49.22	54.00	-4.78
11650.00	Peak	31.11	22.30	53.41	74.00	-20.59

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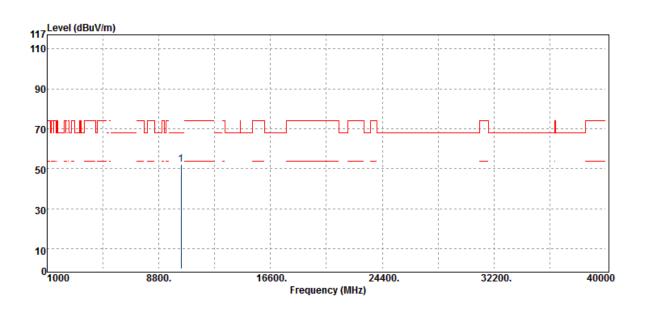
Radiated Spurious Emission Measurement Result

802.11n HT20, 5150~5250 MHz

:2018-11-21 **Operation Band** :802.11n20B1 **Test Date**

Fundamental Frequency Temp./Humi. :21 deg_C / 62 RH :5180 MHz **Operation Mode** :Tx CH LOW Engineer :Tin

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
_	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
•	10360.00	Peak	31.74	20.41	52.15	68.20	-16.05

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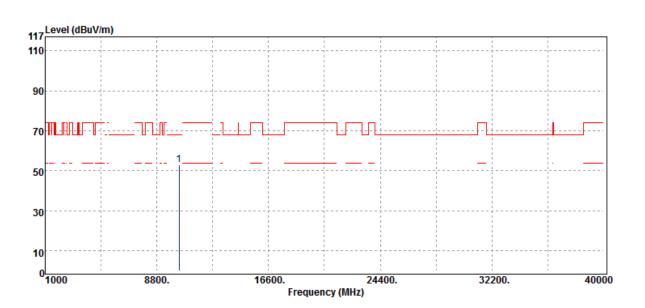
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B1 :5180 MHz :Tx CH LOW :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m	-	
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
_	10360.00	Peak	32.71	20.41	53.12	68.20	-15.08	_

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Operation Band Fundamental Frequency **Operation Mode**

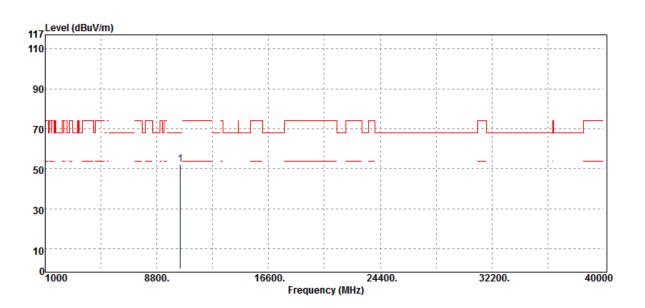
EUT Pol.

:802.11n20B1 :5220 MHz :Tx CH MID :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@3m		
 MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10440.00	Peak	31.37	20.75	52.12	68.20	-16.08	_

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Operation Band Fundamental Frequency **Operation Mode**

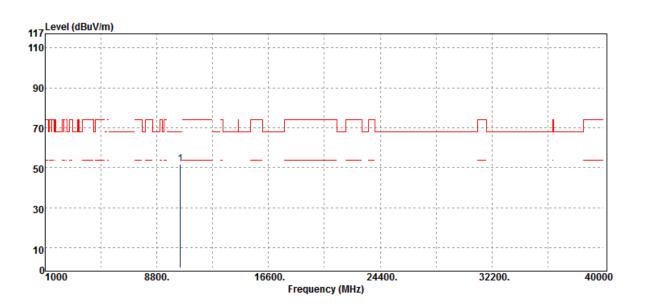
EUT Pol.

:802.11n20B1 :5220 MHz :Tx CH MID :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m	-	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
_	10440.00	Peak	31.09	20.75	51.84	68.20	-16.36	_

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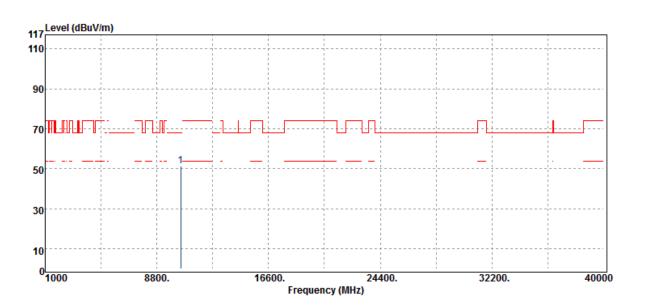
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B1 :5240 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	_
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
10480.00	Peak	30.71	20.79	51.50	68.20	-16.70

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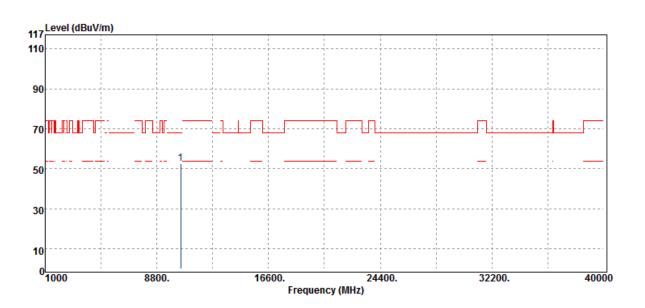
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B1 :5240 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m	-	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dΒμV/m	dB	
_	10480.00	Peak	31.81	20.79	52.60	68.20	-15.60	_

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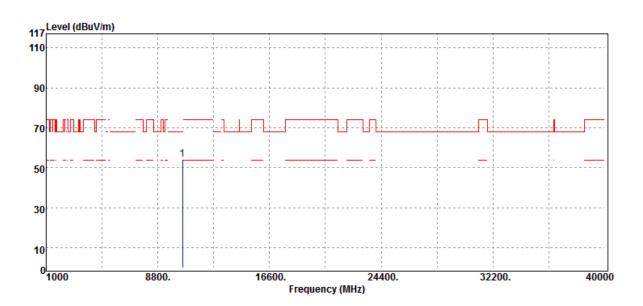
Radiated Spurious Emission Measurement Result

802.11n HT20, 5250~5350 MHz

:2018-11-21 **Operation Band** :802.11n20B2 **Test Date** Fundamental Frequency Temp./Humi. :21 deg_C / 62 RH

:5260 MHz **Operation Mode** :Tx CH LOW Engineer :Tin

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10520.00	Peak	33.27	20.78	54.05	68.20	-14.15

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f (886-2) 2298-0488



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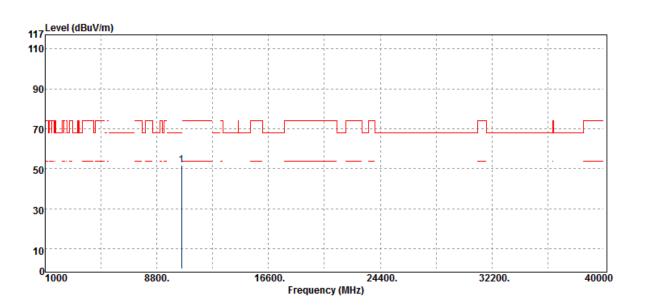
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B2 :5260 MHz :Tx CH LOW :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@3m	_	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dΒμV/m	dB	
10520.00	Peak	31.15	20.78	51.93	68.20	-16.27	

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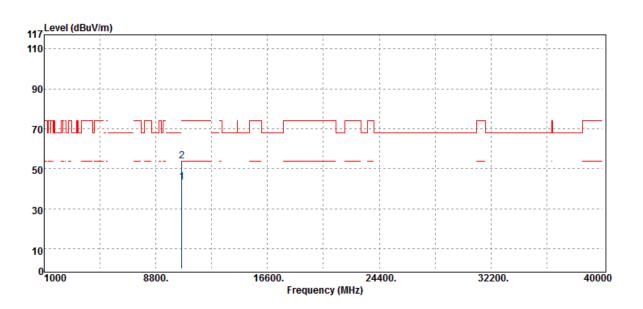
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B2 :5300 MHz :Tx CH MID :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
10600.00	Average	22.14	21.18	43.32	54.00	-10.68
10600.00	Peak	32.51	21.18	53.69	74.00	-20.31

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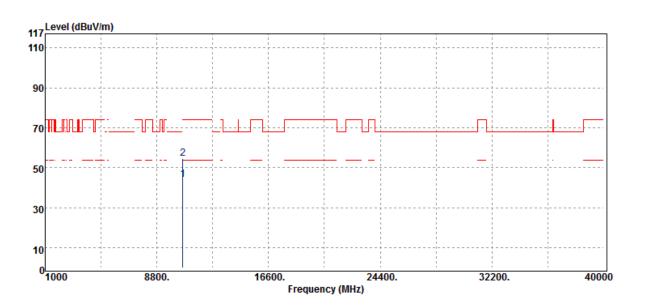
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B2 :5300 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi. :2018-11-21 :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
10600.00	Average	23.05	21.18	44.23	54.00	-9.77
10600.00	Peak	33.30	21.18	54.48	74.00	-19.52

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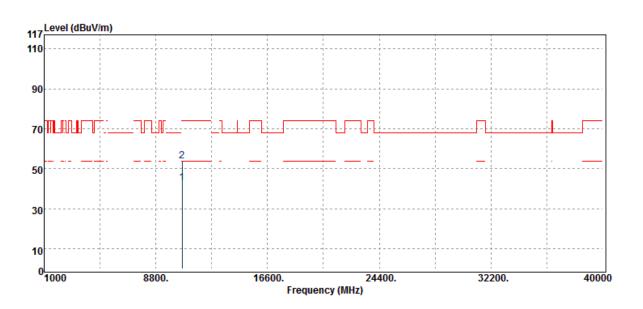
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B2 :5320 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10640.00	Average	21.87	21.24	43.11	54.00	-10.89
10640.00	Peak	32.40	21.24	53.64	74.00	-20.36

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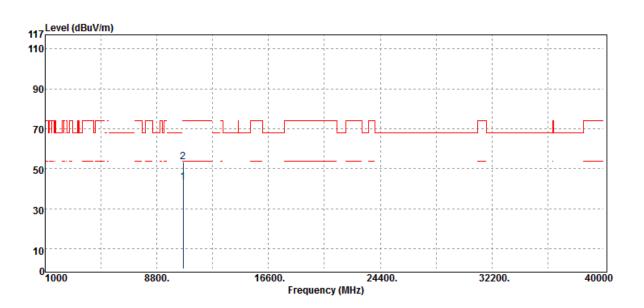
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B2 :5320 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
10640.00	Average	21.98	21.24	43.22	54.00	-10.78
10640.00	Peak	32.27	21.24	53.51	74.00	-20.49

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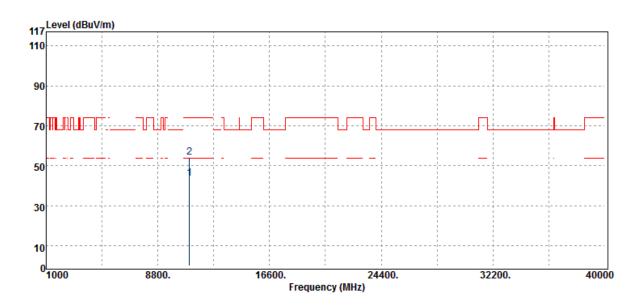
Radiated Spurious Emission Measurement Result

802.11n HT20, 5470~5725 MHz

:2018-11-21 **Operation Band** :802.11n20B3 Test Date **Fundamental Frequency** Temp./Humi. :21 deg_C / 62 RH :5500 MHz

Operation Mode :Tx CH LOW Engineer :Tin

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
_	11000.00	Average	21.46	22.17	43.63	54.00	-10.37
	11000.00	Peak	31.95	22.17	54.12	74.00	-19.88

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:2018-11-21

:21 deg_C / 62 RH

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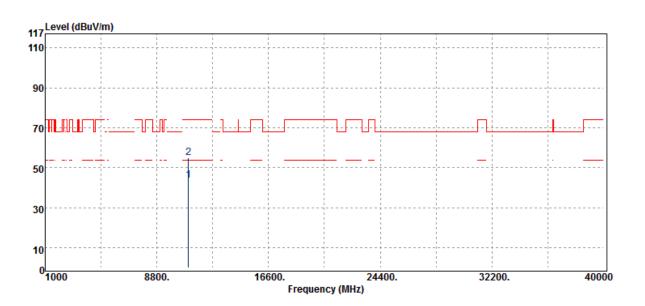
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B3 :5500 MHz :Tx CH LOW :E2 Plane

Test Date Temp./Humi.

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11000.00	Average	21.69	22.17	43.86	54.00	-10.14
11000.00	Peak	32.74	22.17	54.91	74.00	-19.09

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Operation Band Fundamental Frequency **Operation Mode**

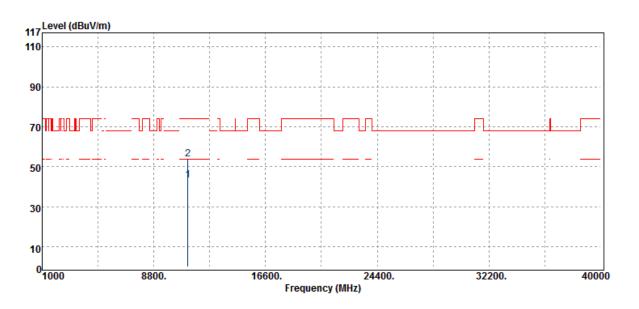
EUT Pol.

:802.11n20B3 :5580 MHz :Tx CH MID :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11160.00	Average	21.18	22.31	43.49	54.00	-10.51
11160.00	Peak	31.64	22.31	53.95	74.00	-20.05

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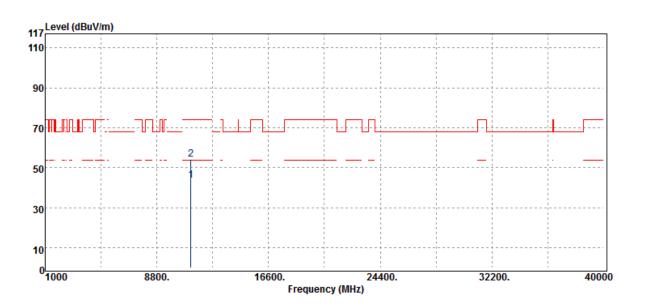
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B3 :5580 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi. :2018-11-21 :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11160.00	Average	21.40	22.31	43.71	54.00	-10.29
11160.00	Peak	31.85	22.31	54.16	74.00	-19.84

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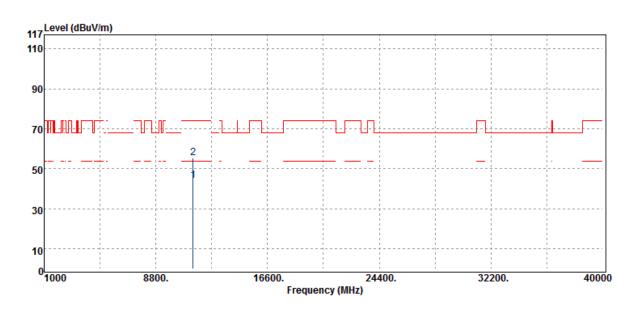
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B3 :5700 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11400.00	Average	21.71	22.42	44.13	54.00	-9.87
11400.00	Peak	32.90	22.42	55.32	74.00	-18.68

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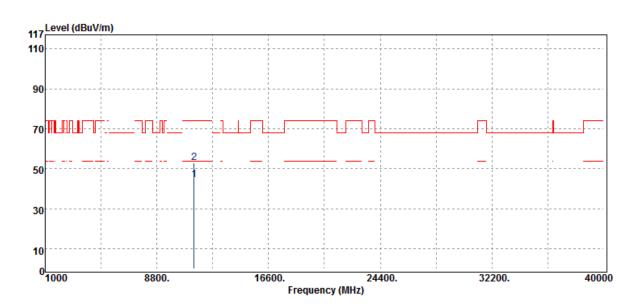
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B3 :5700 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11400.00	Average	22.05	22.42	44.47	54.00	-9.53
11400.00	Peak	30.56	22.42	52.98	74.00	-21.02

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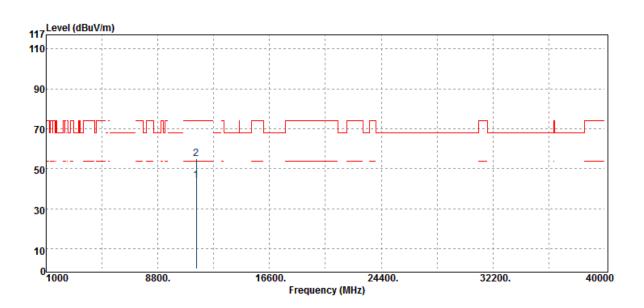
Radiated Spurious Emission Measurement Result

802.11n HT20, 5725~5850 MHz

:2018-11-21 **Operation Band** :802.11n20B4 Test Date

Fundamental Frequency Temp./Humi. :21 deg_C / 62 RH :5745 MHz Operation Mode :Tx CH LOW Engineer :Tin

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11490.00	Average	21.87	22.41	44.28	54.00	-9.72
11490.00	Peak	32.51	22.41	54.92	74.00	-19.08

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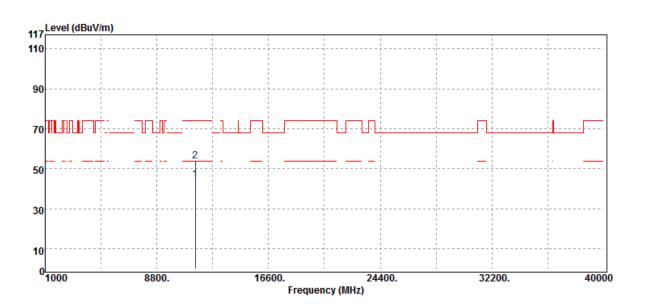
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B4 :5745 MHz :Tx CH LOW :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11490.00	Average	22.12	22.41	44.53	54.00	-9.47
11490.00	Peak	31.63	22.41	54.04	74.00	-19.96

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Operation Band Fundamental Frequency **Operation Mode**

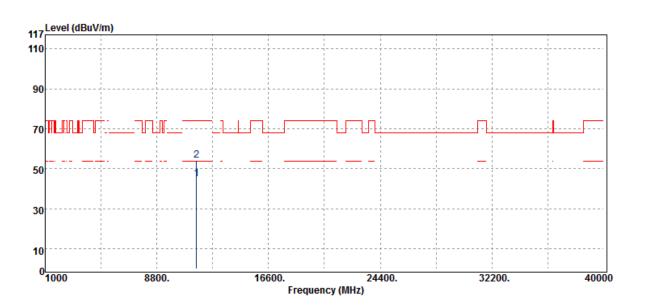
EUT Pol.

:802.11n20B4 :5785 MHz :Tx CH MID :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11570.00	Average	22.32	22.43	44.75	54.00	-9.25
11570.00	Peak	31.73	22.43	54.16	74.00	-19.84

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:2018-11-21

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Operation Band Fundamental Frequency **Operation Mode**

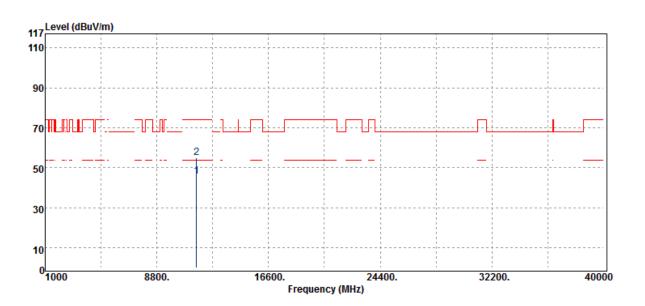
EUT Pol.

:802.11n20B4 :5785 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi.

:21 deg_C / 62 RH Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11570.00	Average	23.14	22.43	45.57	54.00	-8.43
11570.00	Peak	32.57	22.43	55.00	74.00	-19.00

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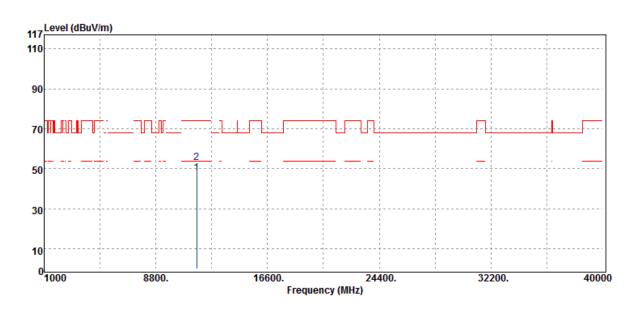
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B4 :5825 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11650.00	Average	25.55	22.30	47.85	54.00	-6.15
11650.00	Peak	30.66	22.30	52.96	74.00	-21.04

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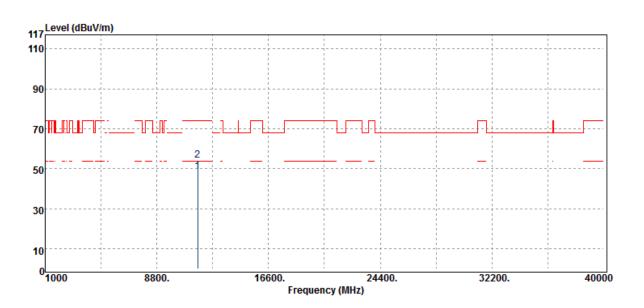
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B4 :5825 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11650.00	Average	26.12	22.30	48.42	54.00	-5.58
11650.00	Peak	32.04	22.30	54.34	74.00	-19.66

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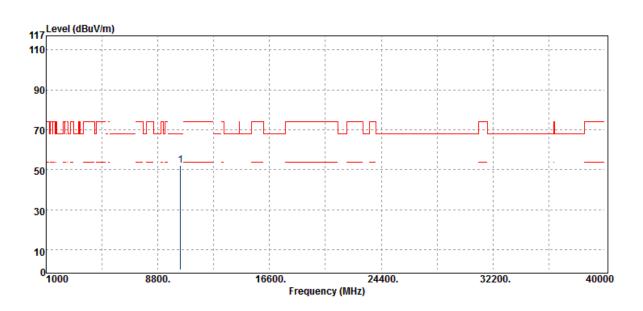
Radiated Spurious Emission Measurement Result

802.11n HT40, 5150~5250 MHz

:2018-11-21 **Operation Band** :802.11n40B1 Test Date

Fundamental Frequency Temp./Humi. :21 deg_C / 62 RH :5190 MHz **Operation Mode** :Tx CH LOW Engineer :Tin

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
_	MHz	PK/QP/AV	dΒμ̈V	dB	dBμV/m	dBμV/m	dB
•	10380.00	Peak	31.65	20.48	52.13	68.20	-16.07

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SGS Taiwan Ltd.



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Operation Band Fundamental Frequency **Operation Mode**

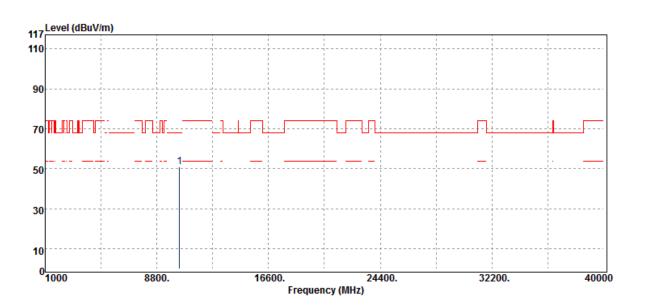
EUT Pol.

:802.11n40B1 :5190 MHz :Tx CH LOW :E2 Plane

Test Date :2018-11-21 Temp./Humi. :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m	-	
	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
_	10380.00	Peak	30.70	20.48	51.18	68.20	-17.02	_

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

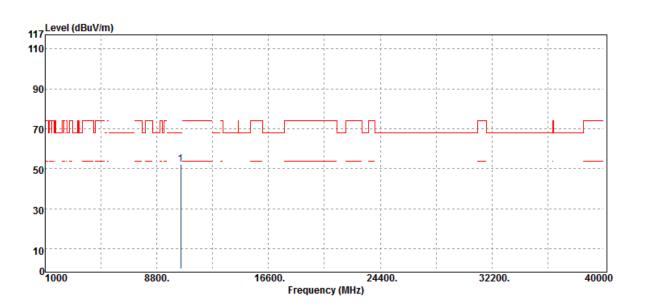
:802.11n40B1 :5230 MHz :Tx CH HIGH :E2 Plane

Test Date Temp./Humi. :2018-11-22

:21 deg_C / 62 RH Engineer

Measurement Antenna Pol.

:VERTICAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
10460.00	Peak	31.60	20.77	52.37	68.20	-15.83

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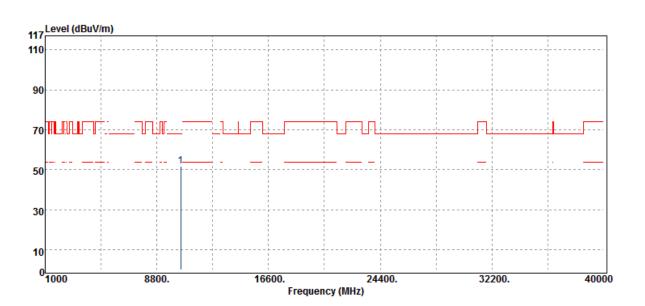
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B1 :5230 MHz :Tx CH HIGH :E2 Plane

Test Date Temp./Humi. :2018-11-22 :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@3m	_	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10460.00	Peak	31.12	20.77	51.89	68.20	-16.31	

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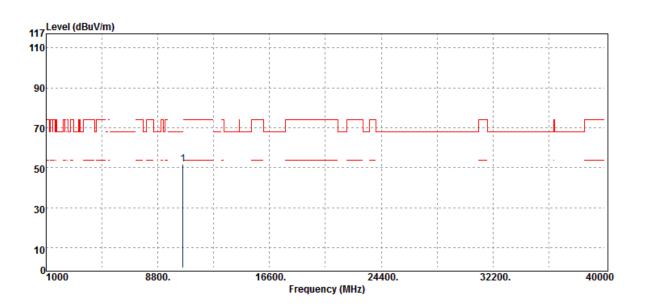
Radiated Spurious Emission Measurement Result

802.11n HT40, 5250~5350 MHz

:2018-11-22 **Operation Band** :802.11n40B2 **Test Date**

Fundamental Frequency Temp./Humi. :21 deg_C / 62 RH :5270 MHz **Operation Mode** :Tx CH LOW Engineer :Tin

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
10540.00	Peak	31.03	20.82	51.85	68.20	-16.35

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No.134, WuKungRoad, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 SGS Taiwan Ltd.

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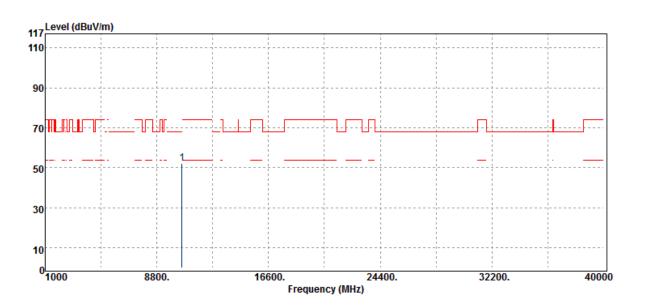
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B2 :5270 MHz :Tx CH LOW :E2 Plane

Test Date Temp./Humi. :2018-11-22 :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
	10540.00	Peak	31.51	20.82	52.33	68.20	-15.87

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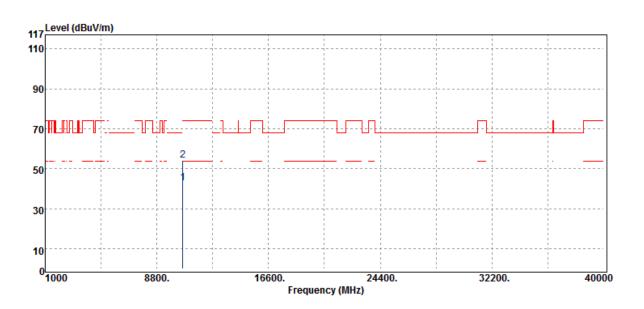
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B2 :5310 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-11-22 Temp./Humi. :21 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10620.00	Average	21.82	21.21	43.03	54.00	-10.97
10620.00	Peak	33.24	21.21	54.45	74.00	-19.55

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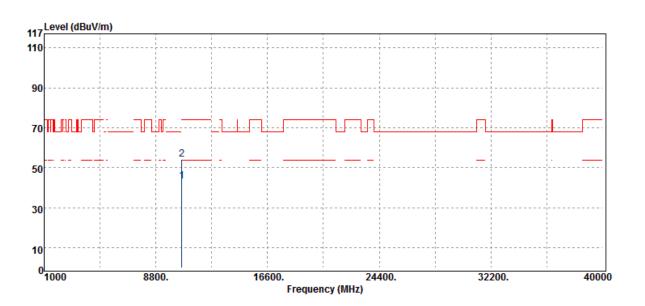
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B2 :5310 MHz :Tx CH HIGH :E2 Plane

Test Date Temp./Humi. Engineer

:2018-11-22 :21 deg_C / 62 RH

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dΒμV/m	dB
10620.00	Average	22.19	21.21	43.40	54.00	-10.60
10620.00	Peak	33.02	21.21	54.23	74.00	-19.77

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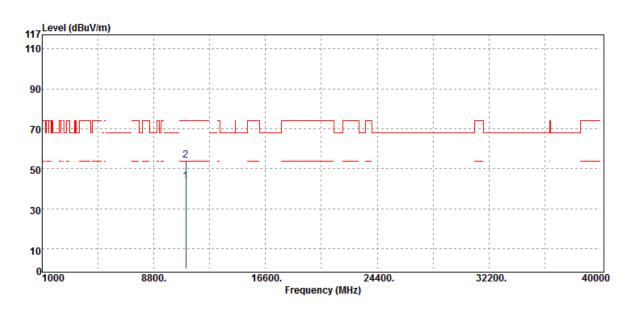
Radiated Spurious Emission Measurement Result

802.11n HT40, 5470~5725 MHz

:2018-11-22 **Operation Band** :802.11n40B3 Test Date :21 deg_C / 62 RH

Temp./Humi. **Fundamental Frequency** :5510 MHz **Operation Mode** :Tx CH LOW Engineer :Tin

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11020.00	Average	21.45	22.28	43.73	54.00	-10.27
11020.00	Peak	31.77	22.28	54.05	74.00	-19.95

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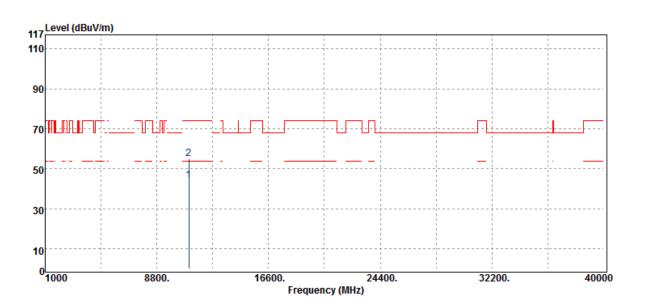
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B3 :5510 MHz :Tx CH LOW :E2 Plane

Test Date Temp./Humi. Engineer

:2018-11-22 :21 deg_C / 62 RH

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11020.00	Average	21.87	22.28	44.15	54.00	-9.85
11020.00	Peak	32.77	22.28	55.05	74.00	-18.95

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

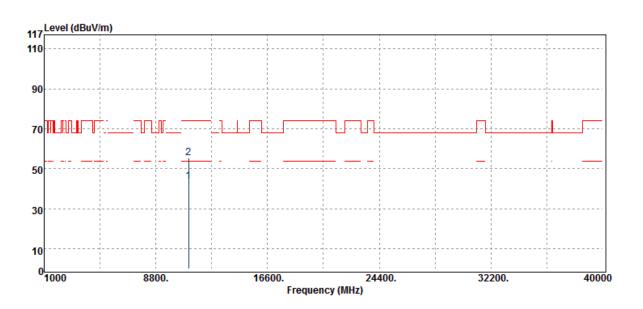
:802.11n40B3 :5550 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi. :2018-11-22

:21 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11100.00	Average	21.38	22.38	43.76	54.00	-10.24
11100.00	Peak	32.99	22.38	55.37	74.00	-18.63

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

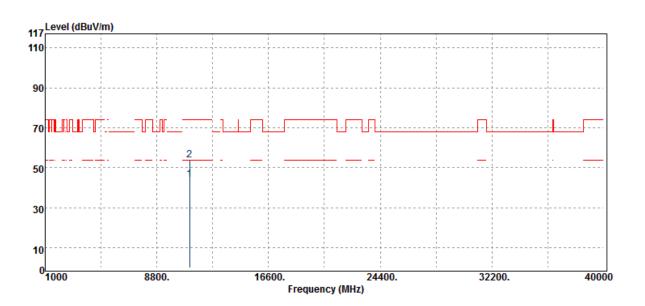
:802.11n40B3 :5550 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi. :2018-11-22

:21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11100.00	Average	21.94	22.38	44.32	54.00	-9.68
11100.00	Peak	31.46	22.38	53.84	74.00	-20.16

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

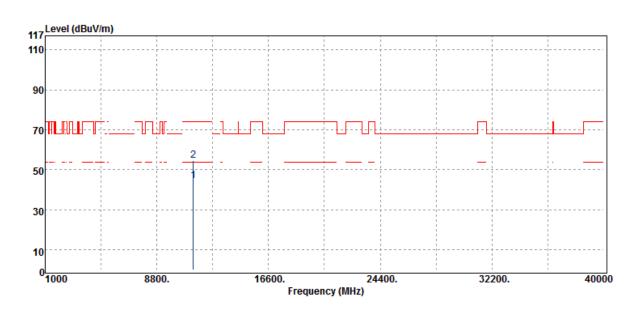
:802.11n40B3 :5670 MHz :Tx CH HIGH :E2 Plane

Test Date Temp./Humi. Engineer

:2018-11-22

:21 deg_C / 62 RH

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11340.00	Average	22.09	22.34	44.43	54.00	-9.57
11340.00	Peak	32.15	22.34	54.49	74.00	-19.51

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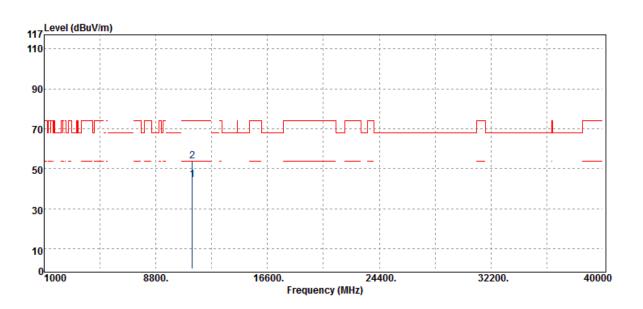
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B3 :5670 MHz :Tx CH HIGH :E2 Plane

Test Date Temp./Humi. Engineer

:2018-11-22 :21 deg_C / 62 RH

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11340.00	Average	22.29	22.34	44.63	54.00	-9.37
11340.00	Peak	31.45	22.34	53.79	74.00	-20.21

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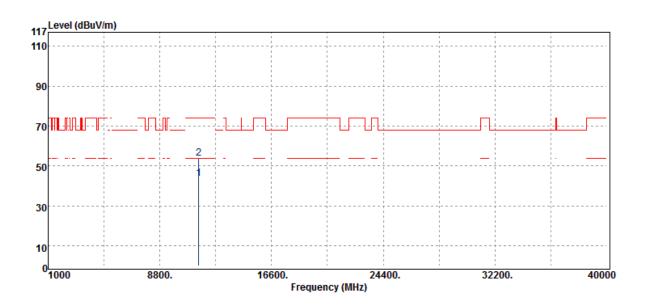
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Radiated Spurious Emission Measurement Result 802.11n HT40, 5725~5850 MHz

Operation Band :802.11n40B4 **Test Date** :2018-11-22

Fundamental Frequency :5755 MHz Temp./Humi. :21 deg_C / 62 RH **Operation Mode** :Tx CH LOW Engineer :Tin

EUT Pol. :E2 Plane :VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@ 3m	
 MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11510.00	Average	21.17	22.46	43.63	54.00	-10.37
11510.00	Peak	31.57	22.46	54.03	74.00	-19.97

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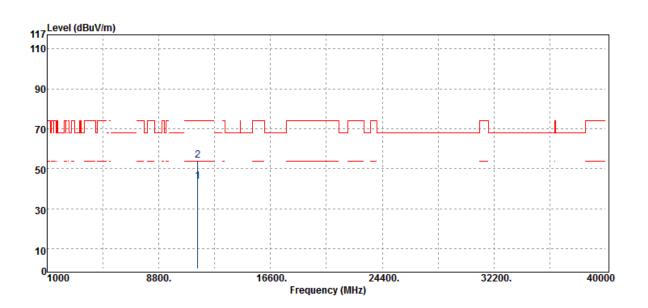
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B4 :5755 MHz :Tx CH LOW :E2 Plane

Test Date Temp./Humi. :2018-11-22 :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11510.00	Average	21.24	22.46	43.70	54.00	-10.30
11510.00	Peak	31.99	22.46	54.45	74.00	-19.55

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B4 :5795 MHz :Tx CH HIGH :E2 Plane

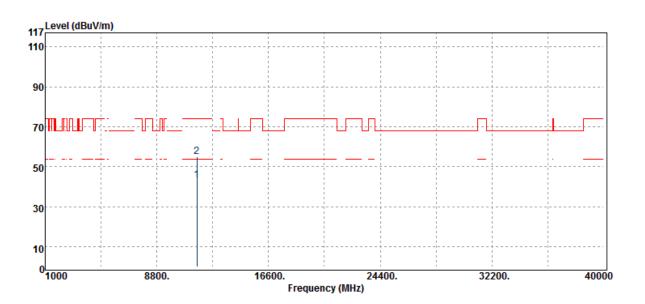
Test Date Temp./Humi.

Measurement Antenna Pol.

:2018-11-22

:21 deg_C / 62 RH Engineer

:VERTICAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11590.00	Average	21.11	22.39	43.50	54.00	-10.50
11590.00	Peak	32.48	22.39	54.87	74.00	-19.13

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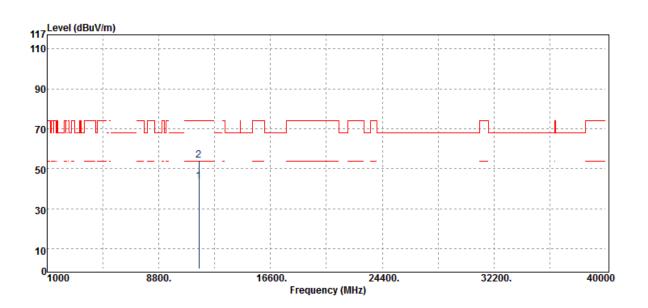
Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B4 :5795 MHz :Tx CH HIGH :E2 Plane

Test Date Temp./Humi. :2018-11-22 :21 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11590.00	Average	21.44	22.39	43.83	54.00	-10.17
11590.00	Peak	31.70	22.39	54.09	74.00	-19.91

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Band edge falling to restricted band

802.11a mode

Operation Band :802.11aB1 **Fundamental Frequency** :5180 MHz

Operation Mode :Bandedge CH LOW

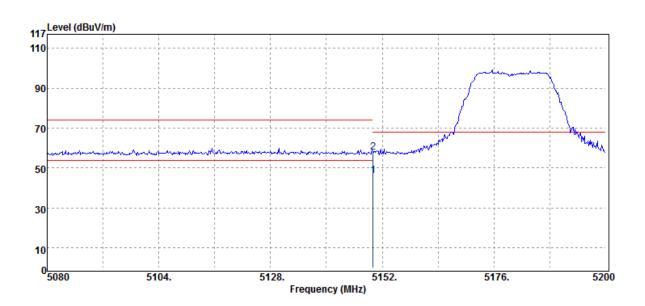
EUT Pol. :E2 Plane

:2018-11-20 **Test Date**

Temp./Humi. :23 deg_C / 62 RH

Engineer :Tin

:VERTICAL Measurement Antenna Pol.



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
5150.00	Average	37.81	8.32	46.13	54.00	-7.87
5150.00	Peak	49.60	8.32	57.92	74.00	-16.08

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB1 :5180 MHz

:Bandedge CH LOW

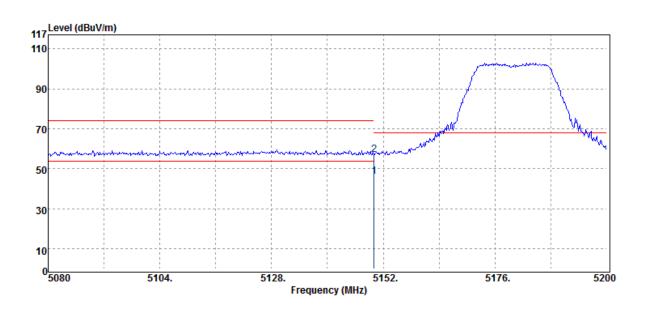
:E2 Plane

Test Date Temp./Humi. Engineer

:2018-11-20

:23 deg_C / 62 RH

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5150.00	Average	37.67	8.32	45.99	54.00	-8.01
5150.00	Peak	48.87	8.32	57.19	74.00	-16.81

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB2 :5320 MHz

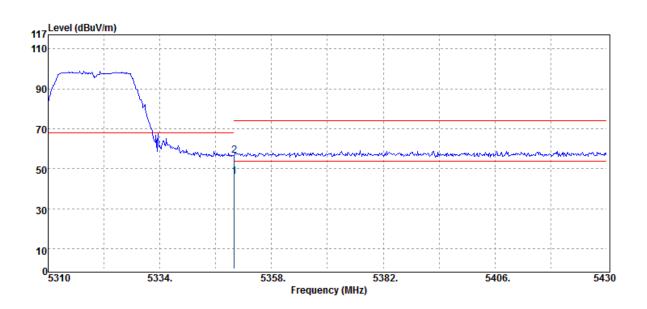
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-11-20 Temp./Humi. :23 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
5350.00	Average	37.50	8.63	46.13	54.00	-7.87
5350.00	Peak	48.21	8.63	56.84	74.00	-17.16

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB2 :5320 MHz

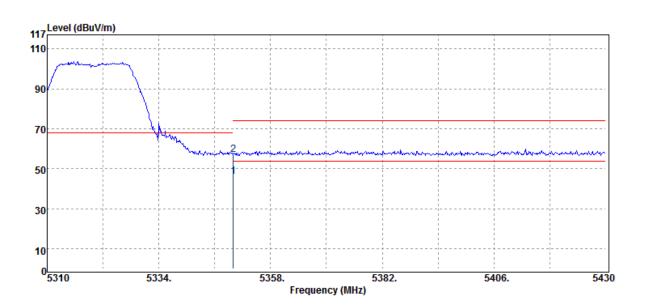
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-11-20 Temp./Humi. :23 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5350.00	Average	37.52	8.63	46.15	54.00	-7.85
5350.00	Peak	48.44	8.63	57.07	74.00	-16.93

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB3 :5500 MHz

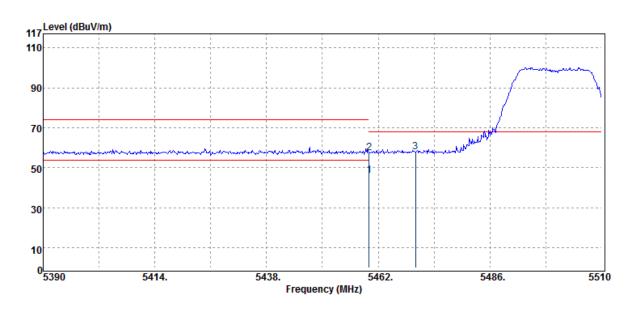
:Bandedge CH LOW

:E2 Plane

Test Date :2018-11-20 Temp./Humi. :23 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5460.00	Average	37.51	8.75	46.26	54.00	-7.74
5460.00	Peak	48.93	8.75	57.68	74.00	-16.32
5470.00	Peak	48.99	8.74	57.73	68.20	-10.47

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB3 :5500 MHz

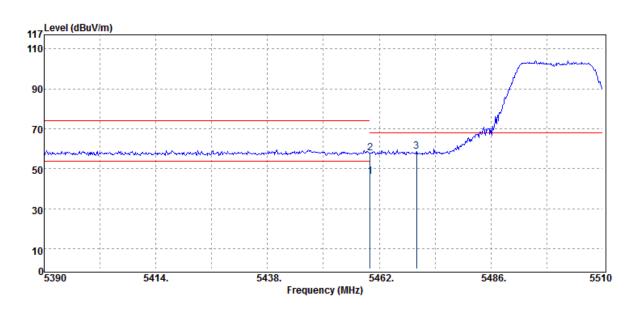
:Bandedge CH LOW

:E2 Plane

Test Date Temp./Humi. Engineer

:2018-11-20 :23 deg_C / 62 RH

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5460.00	Average	37.50	8.75	46.25	54.00	-7.75
5460.00	Peak	49.34	8.75	58.09	74.00	-15.91
5470.00	Peak	49.92	8.74	58.66	68.20	-9.54

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB3 :5700 MHz

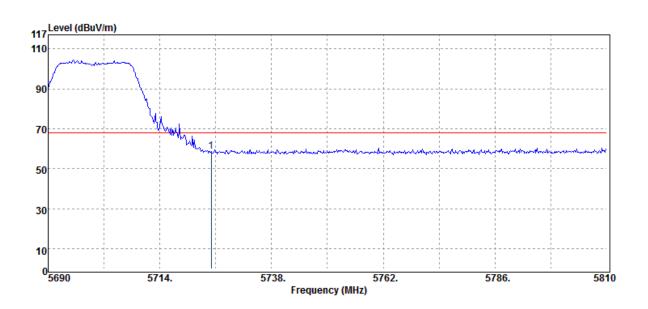
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-11-20 Temp./Humi. :23 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@3m	-	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB	
5725.00	Peak	49.09	9.44	58.53	68.20	-9.67	

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB3 :5700 MHz

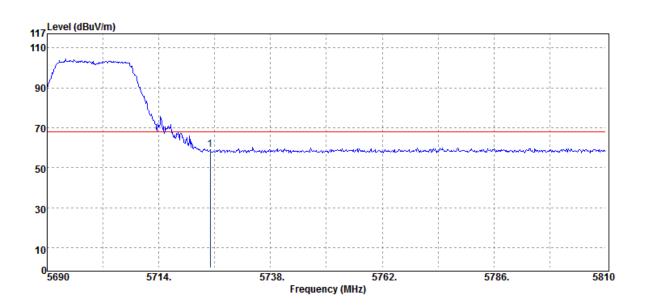
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-11-20 Temp./Humi. :23 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@3m		
 MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
5725.00	Peak	49.77	9.44	59.21	68.20	-8.99	_

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB4 :5745 MHz

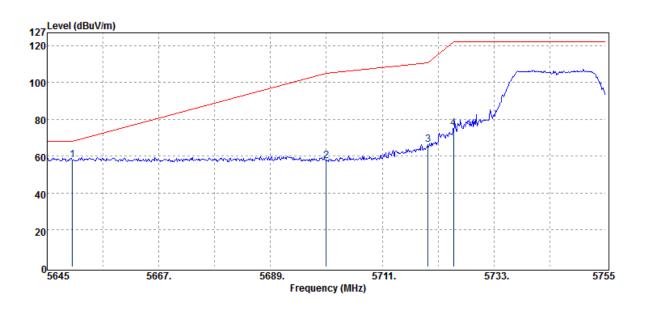
:Bandedge CH LOW

:E2 Plane

Test Date :2018-11-20 Temp./Humi. :23 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5650.00	Peak	48.79	9.20	57.99	68.23	-10.24
5700.00	Peak	48.29	9.35	57.64	105.23	-47.59
5720.00	Peak	56.83	9.43	66.26	110.83	-44.57
5725.00	Peak	65.82	9.44	75.26	122.23	-46.97

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB4 :5745 MHz

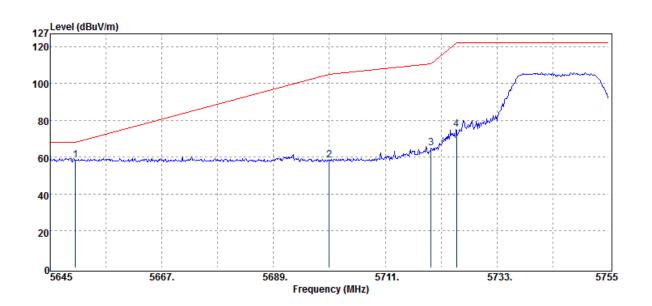
:Bandedge CH LOW

:E2 Plane

Test Date Temp./Humi. Engineer

:2018-11-20 :23 deg_C / 62 RH

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5650.00	Peak	49.06	9.20	58.26	68.23	-9.97
5700.00	Peak	49.16	9.35	58.51	105.23	-46.72
5720.00	Peak	55.62	9.43	65.05	110.83	-45.78
5725.00	Peak	65.82	9.44	75.26	122.23	-46.97

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB4 :5825 MHz

:Bandedge CH HIGH

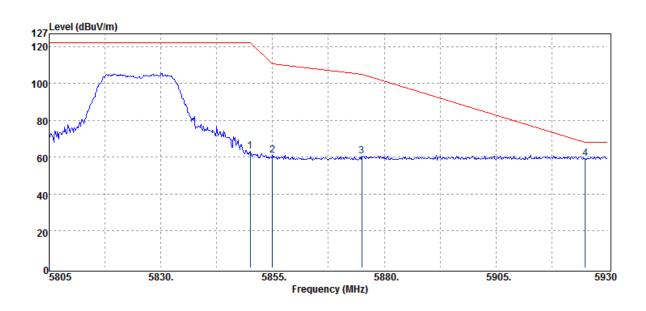
:E2 Plane

Test Date Temp./Humi. :2018-11-20

:23 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5850.00	Peak	53.30	9.77	63.07	122.23	-59.16
5855.00	Peak	51.23	9.78	61.01	110.83	-49.82
5875.00	Peak	50.76	9.82	60.58	105.23	-44.65
5925.00	Peak	49.24	9.98	59.22	68.23	-9.01

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11aB4 :5825 MHz

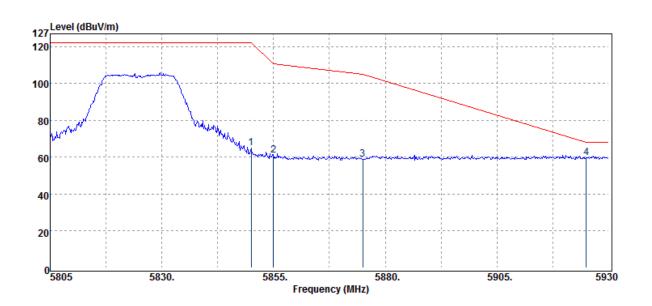
:Bandedge CH HIGH

:E2 Plane

Test Date Temp./Humi. Engineer

:2018-11-20 :23 deg_C / 62 RH

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5850.00	Peak	55.25	9.77	65.02	122.23	-57.21
5855.00	Peak	51.50	9.78	61.28	110.83	-49.55
5875.00	Peak	49.20	9.82	59.02	105.23	-46.21
5925.00	Peak	49.80	9.98	59.78	68.23	-8.45

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802.11n20 HT mode

Operation Band Fundamental Frequency Operation Mode EUT Pol.

:802.11n20B1 :5180 MHz

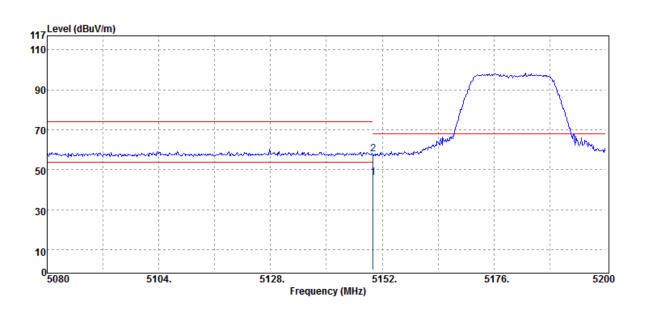
:Bandedge CH LOW

:E2 Plane

Test Date :2018-11-20 Temp./Humi. :23 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5150.00	Average	37.71	8.32	46.03	54.00	-7.97
5150.00	Peak	49.56	8.32	57.88	74.00	-16.12

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B1 :5180 MHz

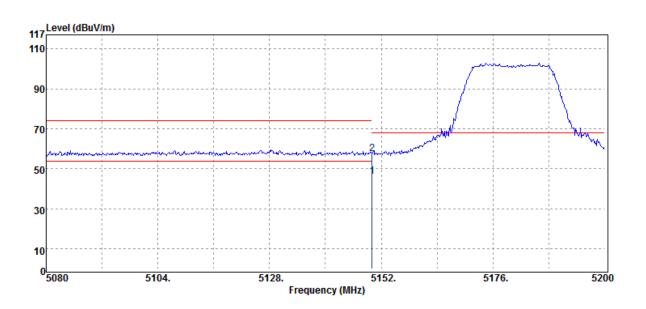
:Bandedge CH LOW

:E2 Plane

Test Date :2018-11-20 Temp./Humi. :23 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5150.00	Average	37.79	8.32	46.11	54.00	-7.89
5150.00	Peak	49.32	8.32	57.64	74.00	-16.36

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B1 :5320 MHz

:Bandedge CH HIGH

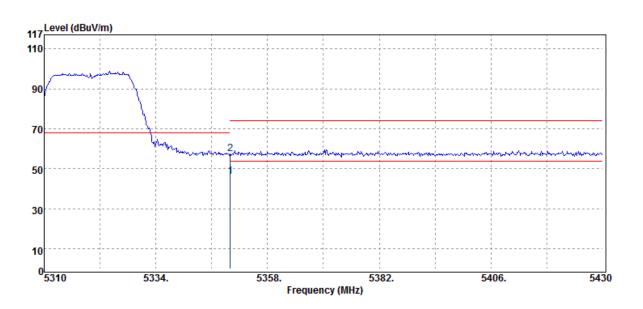
:E2 Plane

Test Date :2018-11-21

Temp./Humi. :23 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@ 3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5350.00	Average	37.43	8.63	46.06	54.00	-7.94
5350.00	Peak	48.70	8.63	57.33	74.00	-16.67

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B1 :5320 MHz

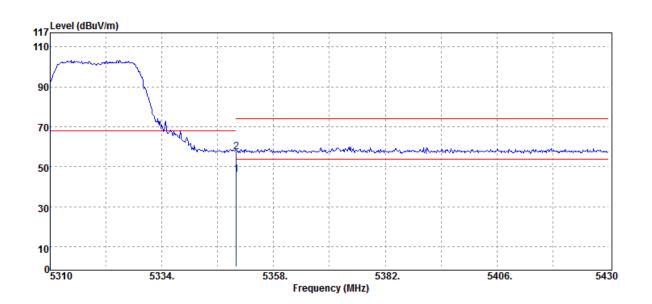
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-11-21 Temp./Humi. :23 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@ 3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5350.00	Average	37.37	8.63	46.00	54.00	-8.00
5350.00	Peak	49.03	8.63	57.66	74.00	-16.34

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

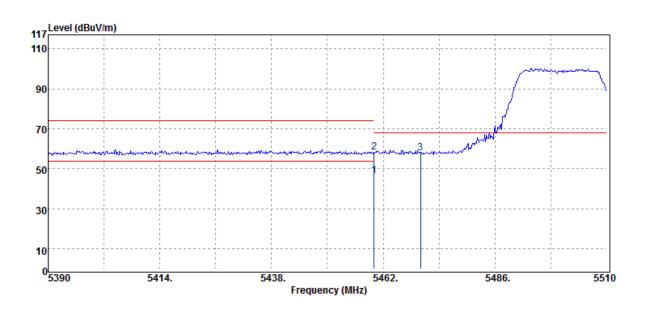
:802.11n20B3 :5500 MHz :Bandedge CH LOW

:E2 Plane

Test Date Temp./Humi. Engineer

:2018-11-21 :23 deg_C / 62 RH

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5460.00	Average	37.63	8.75	46.38	54.00	-7.62
5460.00	Peak	49.40	8.75	58.15	74.00	-15.85
5470.00	Peak	49.08	8.74	57.82	68.20	-10.38

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

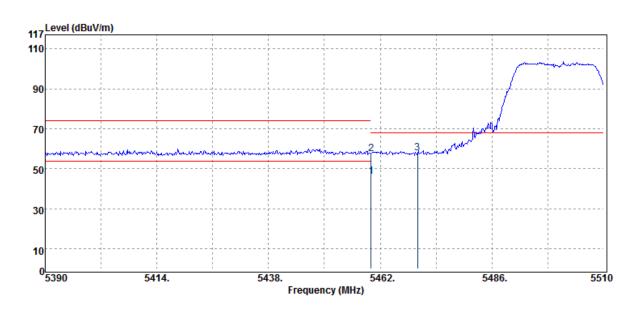
:802.11n20B3 :5500 MHz :Bandedge CH LOW

:E2 Plane

Test Date :2018-11-21 Temp./Humi. :23 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5460.00	Average	37.54	8.75	46.29	54.00	-7.71
5460.00	Peak	48.68	8.75	57.43	74.00	-16.57
5470.00	Peak	49.04	8.74	57.78	68.20	-10.42

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B3 :5700 MHz

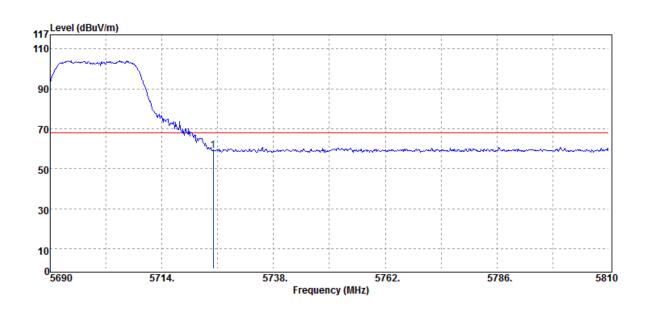
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-11-21 Temp./Humi. :23 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
5725.00	Peak	49.65	9.44	59.09	68.20	-9.11

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Page: 141 of 173

Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B3 :5700 MHz

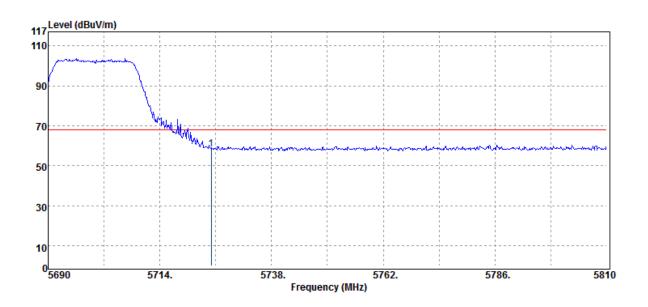
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-11-21 Temp./Humi. :23 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
	5725.00	Peak	48.79	9.44	58.23	68.20	-9.97

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Unless otherwise stated the results shown in this test report teer only to the sample(s) tested and such as a feet and the sample states are stated and such as the sample state and the sample states are stated and such as the sample state and samples teached and sample state and samples teached and sample st may be prosecuted to the fullest extent of the law.



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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B4 :5745 MHz

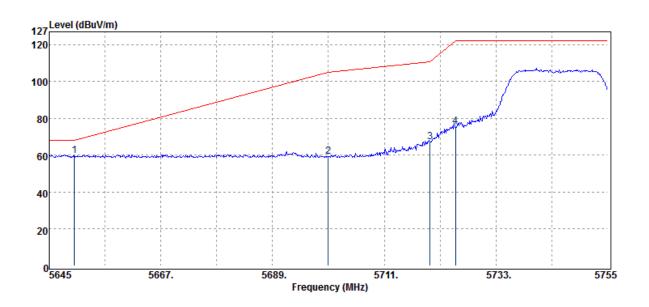
:Bandedge CH LOW

:E2 Plane

Test Date :2018-11-21 Temp./Humi. :23 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5650.00	Peak	50.77	9.20	59.97	68.23	-8.26
5700.00	Peak	50.01	9.35	59.36	105.23	-45.87
5720.00	Peak	57.68	9.43	67.11	110.83	-43.72
5725.00	Peak	66.05	9.44	75.49	122.23	-46.74

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Page: 143 of 173

Operation Band Fundamental Frequency **Operation Mode**

:802.11n20B4 :5745 MHz :Bandedge CH LOW

Temp./Humi.

Test Date

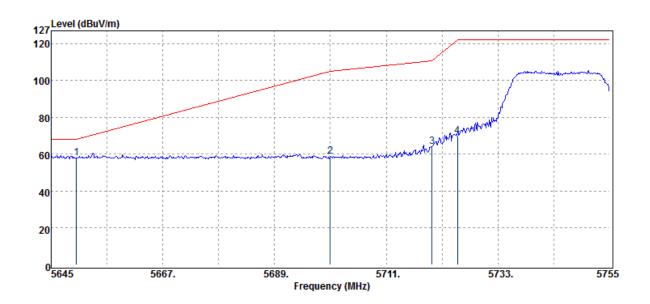
:2018-11-21 :23 deg_C / 62 RH

Engineer

:HORIZONTAL

EUT Pol. :E2 Plane

Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5650.00	Peak	49.00	9.20	58.20	68.23	-10.03
5700.00	Peak	49.73	9.35	59.08	105.23	-46.15
5720.00	Peak	54.60	9.43	64.03	110.83	-46.80
5725.00	Peak	60.58	9.44	70.02	122.23	-52.21

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B4 :5825 MHz

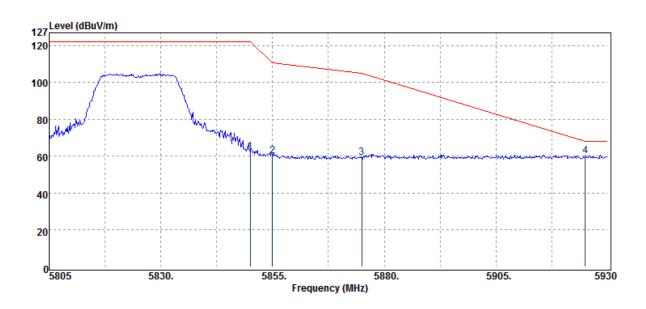
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-11-21 Temp./Humi. :23 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5850.00	Peak	52.60	9.77	62.37	122.23	-59.86
5855.00	Peak	50.34	9.78	60.12	110.83	-50.71
5875.00	Peak	49.71	9.82	59.53	105.23	-45.70
5925.00	Peak	50.23	9.98	60.21	68.23	-8.02

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n20B4 :5825 MHz

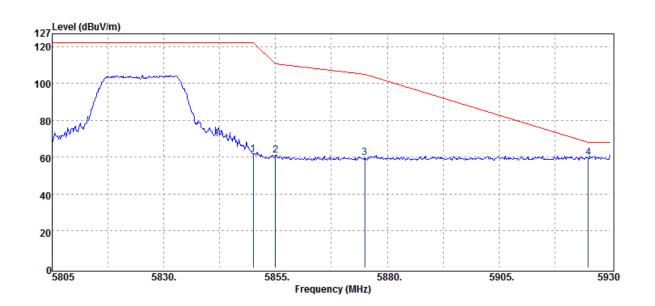
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-11-21 Temp./Humi. :23 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5850.00	Peak	51.91	9.77	61.68	122.23	-60.55
5855.00	Peak	51.18	9.78	60.96	110.83	-49.87
5875.00	Peak	49.76	9.82	59.58	105.23	-45.65
5925.00	Peak	49.79	9.98	59.77	68.23	-8.46

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802.11n40 HT mode

Operation Band Fundamental Frequency Operation Mode EUT Pol.

:802.11n40B1 :5190 MHz

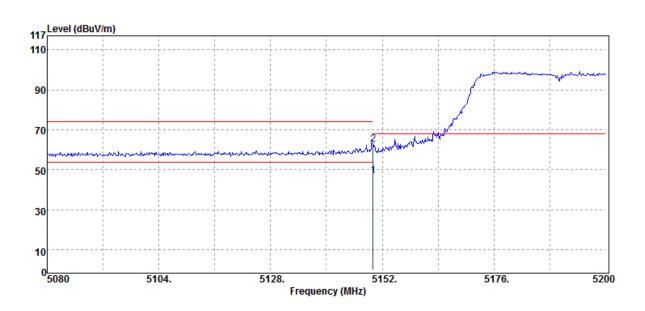
:Bandedge CH LOW

:E2 Plane

Test Date :2018-11-21 Temp./Humi. :23 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5150.00	Average	38.79	8.32	47.11	54.00	-6.89
5150.00	Peak	54.26	8.32	62.58	74.00	-11.42

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B1 :5190 MHz

:Bandedge CH LOW

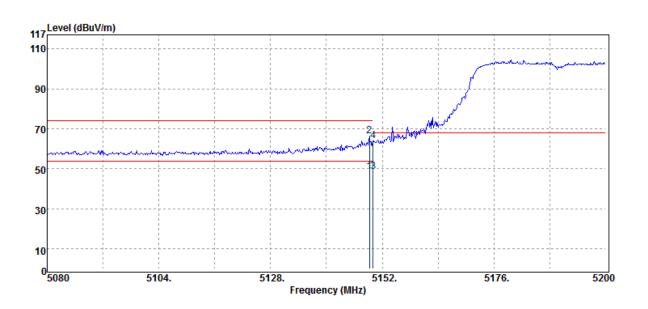
:E2 Plane

Test Date Temp./Humi. :2018-11-21

:23 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5149.24	Average	40.36	8.30	48.66	54.00	-5.34
5149.24	Peak	57.89	8.30	66.19	74.00	-7.81
5150.00	Average	40.45	8.32	48.77	54.00	-5.23
5150.00	Peak	55.66	8.32	63.98	74.00	-10.02

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B2 :5310 MHz

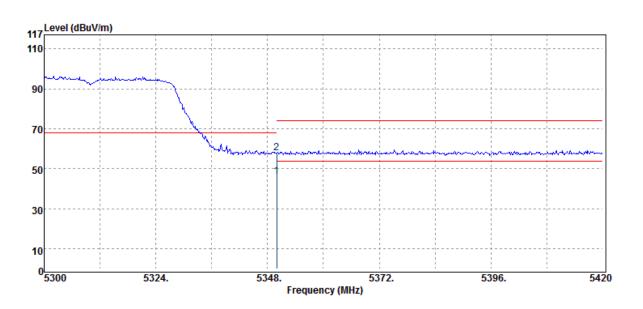
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-11-21 Temp./Humi. :23 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
5350.00	Average	37.56	8.63	46.19	54.00	-7.81
5350.00	Peak	49.43	8.63	58.06	74.00	-15.94

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B2 :5310 MHz

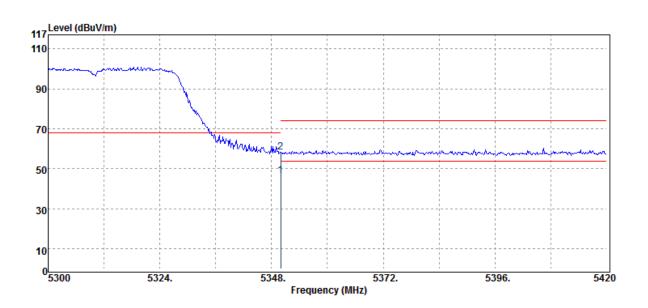
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-11-21 Temp./Humi. :23 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5350.00	Average	37.75	8.63	46.38	54.00	-7.62
5350.00	Peak	49.51	8.63	58.14	74.00	-15.86

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B3 :5510 MHz

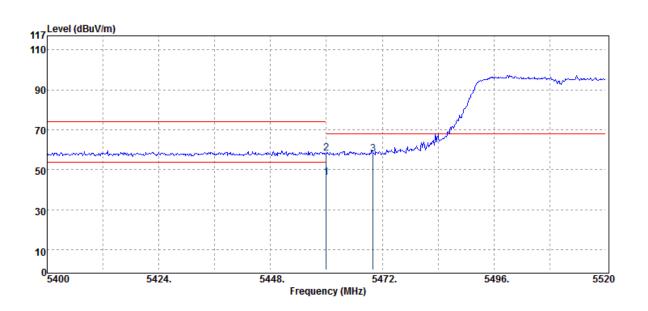
:Bandedge CH LOW

:E2 Plane

Test Date :2018-11-21 Temp./Humi. :23 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5460.00	Average	37.56	8.75	46.31	54.00	-7.69
5460.00	Peak	49.38	8.75	58.13	74.00	-15.87
5470.00	Peak	49.32	8.74	58.06	68.20	-10.14

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

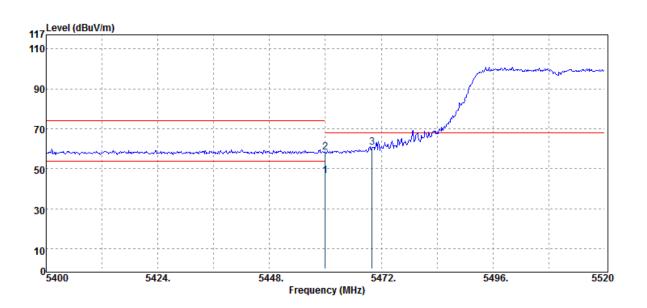
:802.11n40B3 :5510 MHz :Bandedge CH LOW

Engineer

:E2 Plane

Test Date :2018-11-21 Temp./Humi. :23 deg_C / 62 RH

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
5460.00	Average	37.71	8.75	46.46	54.00	-7.54
5460.00	Peak	49.37	8.75	58.12	74.00	-15.88
5470.00	Peak	52.06	8.74	60.80	68.20	-7.40

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B3 :5670 MHz

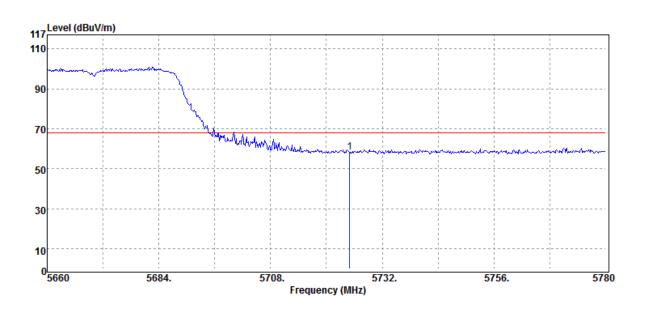
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-11-21 Temp./Humi. :23 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5725.00	Peak	48.67	9.44	58.11	68.20	-10.09

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B3 :5670 MHz

:Bandedge CH HIGH

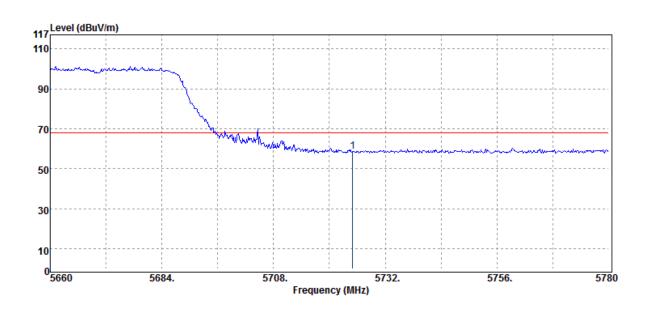
:E2 Plane

Test Date Temp./Humi. :2018-11-21

:23 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5725.00	Peak	49.45	9.44	58.89	68.20	-9.31

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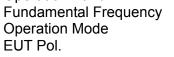
Operation Band Operation Mode :802.11n40B4 :5755 MHz

Test Date Temp./Humi. :2018-11-21 :23 deg_C / 62 RH

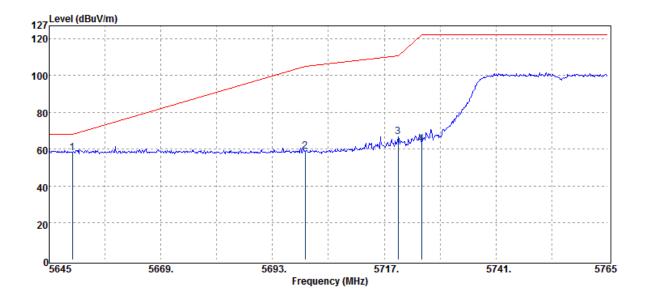
Engineer

Measurement Antenna Pol.

:VERTICAL



:Bandedge CH LOW :E2 Plane



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5650.00	Peak	49.02	9.20	58.22	68.23	-10.01
5700.00	Peak	49.42	9.35	58.77	105.23	-46.46
5720.00	Peak	57.23	9.43	66.66	110.83	-44.17
5725.00	Peak	53.26	9.44	62.70	122.23	-59.53

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B4 :5755 MHz

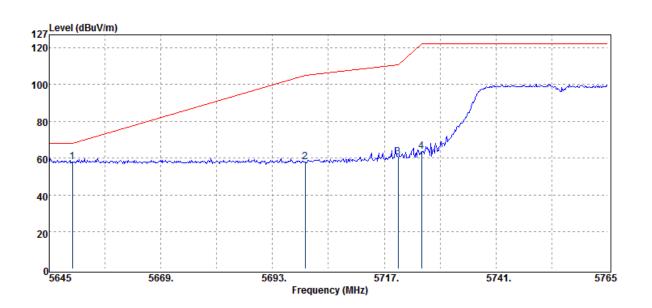
:Bandedge CH LOW

:E2 Plane

Test Date :2018-11-21 Temp./Humi. :23 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5650.00	Peak	48.76	9.20	57.96	68.23	-10.27
5700.00	Peak	48.75	9.35	58.10	105.23	-47.13
5720.00	Peak	51.23	9.43	60.66	110.83	-50.17
5725.00	Peak	54.41	9.44	63.85	122.23	-58.38

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B4 :5795 MHz

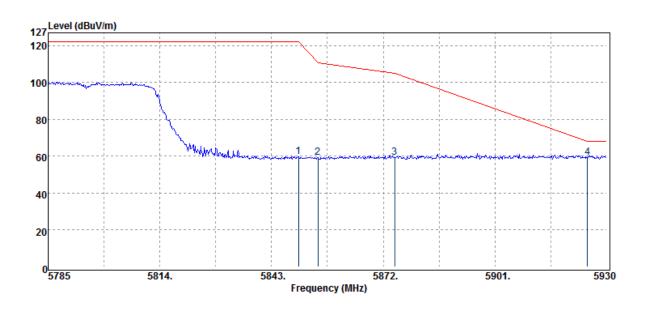
:Bandedge CH HIGH

:E2 Plane

Test Date :2018-11-21 Temp./Humi. :23 deg_C / 62 RH

Engineer

:VERTICAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5850.00	Peak	49.86	9.77	59.63	122.23	-62.60
5855.00	Peak	49.66	9.78	59.44	110.83	-51.39
5875.00	Peak	49.49	9.82	59.31	105.23	-45.92
5925.00	Peak	49.34	9.98	59.32	68.23	-8.91

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Operation Band Fundamental Frequency **Operation Mode** EUT Pol.

:802.11n40B4 :5795 MHz

:Bandedge CH HIGH

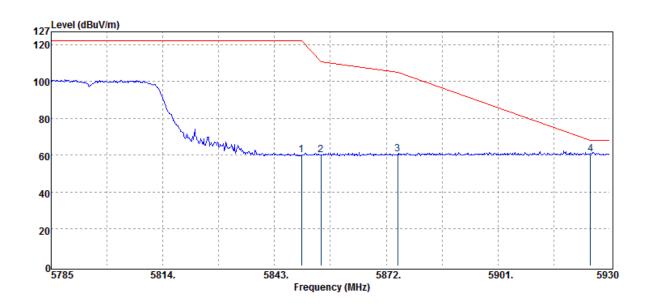
:E2 Plane

Test Date Temp./Humi. :2018-11-21

:23 deg_C / 62 RH

Engineer

:HORIZONTAL Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5850.00	Peak	50.35	9.77	60.12	122.23	-62.11
5855.00	Peak	50.53	9.78	60.31	110.83	-50.52
5875.00	Peak	50.79	9.82	60.61	105.23	-44.62
5925.00	Peak	50.66	9.98	60.64	68.23	-7.59

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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.

12.2Result

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ASK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

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13 FREQUENCY STABILITY

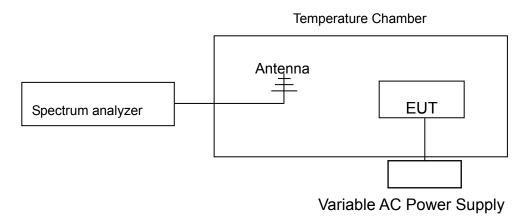
13.1 Standard Applicable

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.

13.2Measurement 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.

13.3Test SET-UP



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13.4Measurement Equipment Used:

SGS Conducted Room							
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.		
EXA Spectrum Analyzer	Agilent	N9010A	MY50420195	05/03/2018	05/02/2019		
DC Power Supply	Agilent	E3640A	KR93300208	08/15/2018	08/14/2019		
Temperature Chamber	TERCHY	MHG-120LF	911009	05/18/2018	05/17/2019		
Attenuator	Mini-Circuit	BW-S10W2+	2	01/02/2018	01/01/2019		
DC Block	Mini-Circuits	BLK-18-S+	1	01/02/2018	01/01/2019		
Coaxial Cables	N/A	WK CE Cable	N/A	01/02/2018	01/01/2019		
Notebook	Lenovo	L430	R9-X11BG	N/A	N/A		

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13.5Measurement Result

Startup:

Operation Mode	802.11 a	Test Date	2018.11.11
Temperature	:23 ℃	Test By	Gary
Humidity	:68 %		

Test Temp.(°C)	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
		36	5180	5,179.99983	0.00000003
		44	5220	5,220.00579	-0.00000111
		48	5240	5,239.99179	0.00000157
		52	5260	5,259.99689	0.00000059
		60	5300	5,299.99110	0.00000168
	4.2	64	5320	5,319.99671	0.00000062
		100	5500	5,500.00776	-0.00000141
		116	5580	5,580.00961	-0.00000172
		140	5700	5,699.99102	0.00000158
		149	5745	5,744.99393	0.00000106
		157	5785	5,784.99427	0.00000099
		165	5825	5,825.00286	-0.00000049
-10		36	5180	5,179.99417	0.00000112
		44	5220	5,219.99437	0.00000108
		48	5240	5,240.00749	-0.00000143
		52	5260	5,260.00229	-0.00000044
		60	5300	5,300.00630	-0.00000119
	3.4	64	5320	5,319.99545	0.00000086
		100	5500	5,500.00802	-0.00000146
		116	5580	5,579.99740	0.00000047
		140	5700	5,700.00782	-0.00000137
		149	5745	5,744.99081	0.00000160
		157	5785	5,785.00955	-0.00000165
		165	5825	5,824.99175	0.00000142

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			1		
		36	5180	5,179.99858	0.00000027
		44	5220	5,220.00574	-0.00000110
		48	5240	5,240.00200	-0.0000038
		52	5260	5,260.00285	-0.0000054
		60	5300	5,299.99710	0.00000055
25	3.8	64	5320	5,319.99146	0.00000160
		100	5500	5,499.99255	0.00000136
		116	5580	5,579.99909	0.0000016
		140	5700	5,699.99624	0.00000066
		149	5745	5,745.00581	-0.00000101
		157	5785	5,785.00844	-0.00000146
		165	5825	5,825.00551	-0.00000095
		2/	F100	F 170 00011	0.00000150
		36	5180	5,179.99211	0.00000152
		44	5220	5,220.00299	-0.00000057
		48	5240	5,239.99556	0.00000085
		52	5260	5,259.99731	0.00000051
		60	5300	5,300.00189	-0.00000036
		64	5320	5,320.00919	-0.00000173
	4.2	100	5500	5,500.00796	-0.00000145
		116	5580	5,580.00474	-0.00000085
		140	5700	5,700.00857	-0.00000150
		149	5745	5,745.00203	-0.0000035
		157	5785	5,784.99530	0.00000081
		165	5825	5,825.00530	-0.00000091
50		36	5180	5,180.00356	-0.00000069
		44	5220	5,219.99632	0.00000071
		48	5240	5,240.00008	-0.00000001
		52	5260	5,259.99090	0.00000173
		60	5300	5,299.99809	0.00000036
	3.4	64	5320	5,320.00649	-0.00000122
		100	5500	5,500.00902	-0.00000164
		116	5580	5,579.99428	0.00000102
		140	5700	5,700.00025	-0.00000004
		149	5745	5,744.99879	0.00000021
		157	5785	5,784.99921	0.00000014
		165	5825	5,824.99692	0.00000053
	1			<u> </u>	1

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Operation Mode	802.11 n_HT40	Test Date	2018.11.11
Temperature	:23 ℃	Test By	Gary
Humidity	:68 %		

Test Temp.(°C)	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
		38	5190	5,189.99878	0.00000024
		46	5230	5,229.99788	0.00000041
		54	5270	5,270.00294	-0.0000056
		62	5310	5,309.99448	0.00000104
	4.2	102	5510	5,509.99166	0.00000151
		110	5550	5,550.00632	-0.00000114
		134	5670	5,670.00992	-0.00000175
		151	5755	5,754.99878	0.00000021
-10		159	5795	5,794.99957	0.0000007
		38	5190	5,190.00456	-0.00000088
		46	5230	5,229.99574	0.00000081
		54	5270	5,270.00822	-0.00000156
		62	5310	5,309.99493	0.00000095
	3.4	102	5510	5,509.99164	0.00000152
		110	5550	5,549.99280	0.00000130
		134	5670	5,669.99136	0.00000152
		151	5755	5,754.99380	0.00000108
		159	5795	5,794.99342	0.00000114

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		38	5190	5,190.00995	-0.00000192
		46	5230	5,229.99434	0.00000108
		54	5270	5,270.00136	-0.00000026
		62	5310	5,309.99380	0.00000117
25	3.8	102	5510	5,509.99132	0.00000157
		110	5550	5,549.99793	0.00000037
		134	5670	5,670.00333	-0.00000059
		151	5755	5,754.99078	0.00000160
		159	5795	5,794.99381	0.00000107
		38	5190	5,189.99882	0.00000023
		46	5230	5,229.99177	0.00000157
	4.2	54	5270	5,269.99393	0.00000115
		62	5310	5,310.00033	-0.00000006
		102	5510	5,510.00270	-0.00000049
		110	5550	5,550.00022	-0.0000004
		134	5670	5,670.00201	-0.0000035
		151	5755	5,754.99566	0.00000075
		159	5795	5,794.99603	0.00000068
50		38	5190	5,189.99797	0.00000039
		46	5230	5,230.00701	-0.00000134
		54	5270	5,269.99011	0.00000188
		62	5310	5,310.00624	-0.00000118
	3.4	102	5510	5,510.00959	-0.00000174
		110	5550	5,550.00404	-0.00000073
		134	5670	5,669.99861	0.00000024
		151	5755	5,755.00118	-0.00000020
		159	5795	5,794.99452	0.00000095

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5 Minutes:

Operation Mode	802.11 a	Test Date	2018.11.11
Temperature	:23 ℃	Test By	Gary
Humidity	:68 %		

Test Temp.(°C)	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
		36	5180	5,179.99370	0.00000122
		44	5220	5,220.00903	-0.00000173
		48	5240	5,240.00804	-0.00000153
		52	5260	5,260.00210	-0.00000040
		60	5300	5,300.00537	-0.00000101
	4.2	64	5320	5,320.00105	-0.00000020
		100	5500	5,500.00690	-0.00000125
		116	5580	5,579.99935	0.00000012
		140	5700	5,700.00391	-0.00000069
		149	5745	5,744.99957	0.00000008
		157	5785	5,785.00239	-0.00000041
		165	5825	5,824.99238	0.00000131
-10		36	5180	5,180.00403	-0.00000078
		44	5220	5,219.99545	0.00000087
		48	5240	5,240.00846	-0.00000161
		52	5260	5,260.00217	-0.00000041
		60	5300	5,300.00452	-0.00000085
	3.4	64	5320	5,320.00387	-0.00000073
		100	5500	5,500.00270	-0.00000049
		116	5580	5,579.99623	0.00000068
		140	5700	5,700.00194	-0.00000034
		149	5745	5,744.99697	0.00000053
		157	5785	5,785.00586	-0.00000101
		165	5825	5,824.99738	0.00000045

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		36	5180	5,180.00987	-0.00000190
		44	5220	5,219.99299	0.00000134
		48	5240	5,239.99341	0.00000126
		52	5260	5,259.99613	0.00000074
		60	5300	5,299.99610	0.00000074
25	3.8	64	5320	5,320.00202	-0.00000038
		100	5500	5,499.99823	0.00000032
		116	5580	5,579.99567	0.00000078
		140	5700	5,700.00853	-0.00000150
		149	5745	5,745.00999	-0.00000174
		157	5785	5,785.00895	-0.00000155
		165	5825	5,825.00746	-0.00000128
		2,	F100	F 470 00007	0.00000477
		36	5180	5,179.99087	0.00000176
		44	5220	5,219.99161	0.00000161
		48	5240	5,239.99962	0.00000007
		52	5260	5,260.00052	-0.00000010
		60	5300	5,299.99192	0.00000152
		64	5320	5,320.00556	-0.00000105
	4.2	100	5500	5,500.00864	-0.00000157
		116	5580	5,580.00092	-0.00000017
		140	5700	5,700.00388	-0.00000068
		149	5745	5,745.00645	-0.00000112
		157	5785	5,784.99844	0.00000027
		165	5825	5,824.99674	0.00000056
50		36	5180	5,179.99623	0.00000073
		44	5220	5,220.00375	-0.00000072
		48	5240	5,239.99325	0.00000129
		52	5260	5,259.99645	0.00000068
		60	5300	5,299.99501	0.00000094
	3.4	64	5320	5,319.99629	0.00000070
		100	5500	5,500.00369	-0.00000067
		116	5580	5,579.99054	0.00000170
		140	5700	5,700.00767	-0.00000135
		149	5745	5,744.99348	0.00000114
		157	5785	5,785.00349	-0.00000060
		165	5825	5,824.99733	0.00000046

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Operation Mode	802.11 n_HT40	Test Date	2018.11.11
Temperature	:23 ℃	Test By	Gary
Humidity	:68 %		

Test Temp.(℃)	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
		38	5190	5,189.99107	0.00000172
		46	5230	5,229.99782	0.00000042
		54	5270	5,269.99754	0.00000047
		62	5310	5,310.00345	-0.00000065
	4.2	102	5510	5,509.99530	0.00000085
		110	5550	5,549.99001	0.00000180
		134	5670	5,670.00722	-0.00000127
		151	5755	5,755.00569	-0.00000099
-10		159	5795	5,794.99267	0.00000126
	3.4	38	5190	5,190.00265	-0.00000051
		46	5230	5,229.99203	0.00000152
		54	5270	5,270.00414	-0.00000079
		62	5310	5,310.00725	-0.00000136
		102	5510	5,510.00737	-0.00000134
		110	5550	5,550.00277	-0.00000050
		134	5670	5,669.99099	0.00000159
		151	5755	5,754.99562	0.00000076
		159	5795	5,794.99777	0.00000039

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		38	5190	5,189.99168	0.00000160
		46	5230	5,230.00607	-0.00000116
		54	5270	5,269.99471	0.00000100
		62	5310	5,309.99948	0.00000010
25	3.8	102	5510	5,510.00806	-0.00000146
		110	5550	5,549.99089	0.00000164
		134	5670	5,669.99364	0.00000112
		151	5755	5,755.00687	-0.00000119
		159	5795	5,794.99646	0.00000061
		38	5190	5,189.99620	0.00000073
		46	5230	5,229.99485	0.00000098
		54	5270	5,270.00488	-0.00000093
	4.2	62	5310	5,309.99288	0.00000134
		102	5510	5,509.99365	0.00000115
		110	5550	5,549.99624	0.00000068
		134	5670	5,669.99298	0.00000124
		151	5755	5,755.00481	-0.0000084
		159	5795	5,795.00711	-0.00000123
50		38	5190	5,189.99510	0.00000095
		46	5230	5,230.00750	-0.00000143
	3.4	54	5270	5,270.00234	-0.0000044
		62	5310	5,309.99633	0.00000069
		102	5510	5,510.00602	-0.00000109
		110	5550	5,549.99988	0.00000002
		134	5670	5,670.00822	-0.00000145
		151	5755	5,754.99390	0.00000106
		159	5795	5,794.99407	0.00000102

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10 Minutes:

Operation Mode	802.11 a	Test Date	2018.11.11
Temperature	:23 ℃	Test By	Gary
Humidity	:68 %		

Test Temp.(℃)	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
		36	5180	5,180.00837	-0.00000162
		44	5220	5,219.99760	0.00000046
		48	5240	5,240.00877	-0.00000167
		52	5260	5,259.99983	0.00000003
		60	5300	5,300.00246	-0.0000046
	4.2	64	5320	5,319.99468	0.00000100
		100	5500	5,499.99770	0.00000042
		116	5580	5,579.99706	0.00000053
		140	5700	5,699.99413	0.00000103
		149	5745	5,745.00608	-0.00000106
		157	5785	5,785.00561	-0.00000097
		165	5825	5,825.00119	-0.00000020
-10		36	5180	5,179.99039	0.00000186
		44	5220	5,220.00589	-0.00000113
	3.4	48	5240	5,240.00487	-0.00000093
		52	5260	5,259.99372	0.00000119
		60	5300	5,300.00973	-0.00000184
		64	5320	5,320.00242	-0.0000046
		100	5500	5,500.00148	-0.0000027
		116	5580	5,580.00103	-0.00000019
		140	5700	5,700.00135	-0.00000024
		149	5745	5,745.00929	-0.00000162
		157	5785	5,785.00426	-0.00000074
		165	5825	5,824.99384	0.00000106

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	T	T		T	1
		36	5180	5,180.00972	-0.00000188
		44	5220	5,220.00768	-0.00000147
		48	5240	5,239.99307	0.00000132
		52	5260	5,259.99390	0.00000116
		60	5300	5,299.99004	0.00000188
25	3.8	64	5320	5,320.00220	-0.00000041
		100	5500	5,500.00269	-0.00000049
		116	5580	5,580.00382	-0.00000068
		140	5700	5,699.99436	0.00000099
		149	5745	5,745.00166	-0.00000029
		157	5785	5,784.99036	0.00000167
		165	5825	5,824.99853	0.00000025
	1				
		36	5180	5,180.00382	-0.00000074
		44	5220	5,219.99615	0.00000074
		48	5240	5,240.00632	-0.00000121
		52	5260	5,260.00358	-0.00000068
		60	5300	5,299.99813	0.00000035
		64	5320	5,319.99623	0.00000071
	4.2	100	5500	5,499.99840	0.00000029
		116	5580	5,580.00434	-0.00000078
		140	5700	5,700.00700	-0.00000123
		149	5745	5,745.00819	-0.00000143
		157	5785	5,785.00822	-0.00000142
		165	5825	5,825.00632	-0.00000108
50		36	5180	5,180.00596	-0.00000115
		44	5220	5,220.00687	-0.00000132
		48	5240	5,240.00184	-0.00000035
		52	5260	5,260.00105	-0.00000020
		60	5300	5,299.99978	0.00000004
	3.4	64	5320	5,319.99467	0.00000100
		100	5500	5,499.99162	0.00000152
		116	5580	5,580.00284	-0.00000051
		140	5700	5,700.00198	-0.00000035
		149	5745	5,745.00636	-0.00000111
		157	5785	5,784.99067	0.00000161
		165	5825	5,825.00619	-0.00000106
			_		

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Operation Mode	802.11 n_HT40	Test Date	2018.11.11
Temperature	:23 °C	Test By	Gary
Humidity	:68 %		

Test Temp.(℃)	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
		38	5190	5,190.00226	-0.00000044
		46	5230	5,230.00032	-0.00000006
		54	5270	5,270.00139	-0.00000026
		62	5310	5,310.00996	-0.00000187
	4.2	102	5510	5,509.99256	0.00000135
		110	5550	5,549.99088	0.00000164
		134	5670	5,670.00837	-0.00000148
		151	5755	5,755.00172	-0.00000030
-10		159	5795	5,794.99552	0.00000077
	3.4	38	5190	5,189.99279	0.00000139
		46	5230	5,229.99963	0.00000007
		54	5270	5,269.99617	0.00000073
		62	5310	5,310.00133	-0.00000025
		102	5510	5,509.99381	0.00000112
		110	5550	5,549.99377	0.00000112
		134	5670	5,670.00678	-0.00000120
		151	5755	5,755.00158	-0.00000028
		159	5795	5,794.99589	0.00000071

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	T	T	T	1	1
		38	5190	5,189.99277	0.00000139
		46	5230	5,229.99356	0.00000123
		54	5270	5,269.99807	0.0000037
		62	5310	5,310.00076	-0.0000014
25	3.8	102	5510	5,509.99660	0.00000062
		110	5550	5,549.99138	0.00000155
		134	5670	5,670.00564	-0.00000099
		151	5755	5,755.00100	-0.0000017
		159	5795	5,794.99003	0.00000172
		38	5190	5,190.00869	-0.00000167
		46	5230	5,230.00313	-0.00000060
	4.2	54	5270	5,269.99107	0.00000170
		62	5310	5,310.00047	-0.00000009
		102	5510	5,510.00583	-0.0000106
		110	5550	5,550.00886	-0.00000160
		134	5670	5,670.00914	-0.00000161
		151	5755	5,755.00801	-0.00000139
		159	5795	5,795.00639	-0.00000110
50	3.4	38	5190	5,190.00442	-0.00000085
		46	5230	5,229.99647	0.00000068
		54	5270	5,270.00479	-0.00000091
		62	5310	5,310.00279	-0.0000053
		102	5510	5,510.00444	-0.00000081
		110	5550	5,550.00600	-0.00000108
		134	5670	5,669.99174	0.00000146
		151	5755	5,755.00487	-0.00000085
		159	5795	5,795.00657	-0.00000113

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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

The antenna is designed with unique RF connector and no consideration of replacement. Please see EUT photo for details.

~ End of Report ~

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