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ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

Applicant: Quanta Computer Inc.

No. 188, Wenhua 2nd Road, Guishan District, Taoyuan City

33377, Taiwan

Product Name: Dev Board Mini

Brand Name: Google Model No.: KA1 **Model Difference:** N/A

Report Number: E2/2020/50133 FCC ID: HFS-NX2KA1 **FCC Rule Part:** §15.407, Cat: NII

Issue Date: Aug. 11, 2020

Date of Test: May 27, 2020 ~ Jun. 24, 2020

Date of EUT Re-May 27, 2020

ceived:

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Central RF Lab 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.

Approved By:

Jazz Huang / Asst. Supervisor





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Revision History				
Report Number	Revision	Description	Issue Date	Remark
E2/2020/50133	Rev.00	Original.	Aug. 11, 2020	Revised By: Stefanie Yu

Note:

1 · Disclaimer

Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

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GENERAL INFORMATION

1.1 **Product Description**

Product Name:		Dev Board Mini		
Brand Name:		Google		
Model No.:		KA1		
Model Differ	ence:	N/A		
Hardware Version:		N/A		
Software Version:		N/A		
Power Supply:		5Vdc from Host		
Modulation type		64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 802.11ac only		
Transition Rate: 802.11 a: 6/9/12/18/24/36/48/54/802.11 n_20MHz: 6.5 - 72.2Mb/802.11 n_40MHz: 13.5 - 150.0M		20MHz: 6.5 – 72.2Mbps	802.11 ac_20MHz: 6.5 -86.7Mbps 802.11 ac_40MHz: 13.5 -200.0Mbps 802.11 ac_80MHz: 29.3 - 433.3Mbps	

1.2 **Antenna Designation**

Antenna Type	Sup- plier	Antenna Part No.	Freq. (MHz)	Peak Antenna Gain (dBi)
Chip TE			5150~5250	2.4
	TDK	N/A	5250~5350	2.4
	IDK	IN/A	5470~5725	2.3
			5725~5850	2.8

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1.3 **FCC** worst power

Wi-Fi 802.11	Frequency Range	Channels	Rated Power (Avg.) (dBm) (Worst case)	Modulation Technology
	5150~5250	4	12.76	
	5250~5350	4	12.99	OFDM
a	5470~5725	12	12.81	OFDIVI
	5725-5850	5	12.78	
	5150~5250	4	HT: 11.90	
n_HT ac_VHT	5250~5350	4	HT: 11.97	OFDM
20M	5470~5725	12	HT: 11.95	OI DIVI
20	5725-5850	5	HT: 11.58	
n_HT ac VHT	5150~5250	2	HT: 11.98	
	5250~5350	2	HT: 12.15	OFDM
40M	5470~5725	6	HT: 11.97	OI DIVI
10111	5725-5850	2	HT: 12.00	
ac_VHT 80M	5150~5250	1	10.33	
	5250~5350	1	10.56	OFDM
	5470~5725	3	10.51	OI DIVI
	5725-5850	1	10.37	

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1.4 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

1.5 Test Facility

SGS Taiwan Ltd. Central RF Lab (TAF code 3702) No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333

FCC Designation number: TW0028

1.6 Special Accessories

There are no special accessories used while test was conducted.

1.7 Equipment Modifications

There was no modification incorporated into the EUT.

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2 SYSTEM TEST CONFIGURATION

2.1 EUT Configuration

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

2.2 EUT Exercise

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

2.3 Test Procedure

2.3.1 Conducted Emissions

The EUT is a placed on a 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. The two LISNs provide 50uH/50 ohm 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 analyzer 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 a turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plane. 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.

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2.4 Measurement Results Explanation Example

2.4.1 Radiated Emission Test Sites For Measurements From 9 kHz To 30 MHz

Radiated emission below 30MHz is measured in a 9m*9m*6m semi-anechoic chamber, the measurements correspond to those obtained at an open-field test site. There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

2.4.2 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 & Conducted (Antenna Port) Emission Configuration

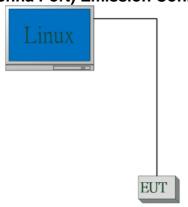


Fig 2-2 Conduction (AC Power Line)
Emission

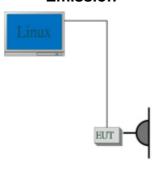


Table 2-1 Equipment Used in Tested System

Ite	m Eq	uipment	Mfr/Brand	Model/Type No.	Series No.	Data Cable	Power Cord
1		AN Test oftware	N/A	N/A	N/A	N/A	N/A
2	. No	otebook	Dell	P66F	28241894594	N/A	N/A

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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, 99%& 6dB Emission Bandwidth	Compliant
§15.407(a)	Maximum Conducted Output Power	Compliant
§15.407(a)	Power Spectral Density	Compliant
§15.205 §15.209 §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

4.1 802.11a/n/ac operated in U-NII Bands

Operated band in 5150 MHz ~5250 MHz:

20 M		
СН	Freq (MHz)	
36	5180	
40	5200	
44	5220	
48	5240	

40 M		
Freq		
(MHz)		
5190		
5230		

ZOU WITZ.		
80 M		
СН	Freq (MHz)	
42	5210	

Operated band in 5250 MHz ~5350 MHz:

Operated t			
20 M			
СН	Freq		
5	(MHz)		
52	5260		
56	5280		
60	5300		
64	5320		

-			
	40 M		
	CH	Freq	
	СП	(MHz)	
	54	5270	
	62	5310	
١			

80 M				
CL	Freq			
СН	(MHz)			
58	5290			

Operated band in 5470 MHz ~5725 MHz:

o poratou b					
2	20 M				
СН	Freq (MHz)				
100	5500				
104	5520				
108	5540				
112	5560				
116	5580				
120	5600				
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				
144	5720				

111 377 0 WII 12				
4	40 M			
СН	Freq			
CH	(MHz)			
102	5510			
110	5550			
118	5590			
126	5630			
134	5670			
142	5710			

80 M				
СН	Freq			
CI	(MHz)			
106	5530			
122	5610			
138	5690			

Operated band in 5725 MHz ~5850 MHz:

20 M					
СН	Freq (MHz)				
149	5745				
153	5765				
157	5785				
161	5805				
165	5825				

U	u 111 37 23 W				
	40 M				
	СН	Freq			
	G	(MHz)			
	151	5755			
	159	5795			

0000				
8	80 M			
СП	Freq			
СН	(MHz)			
155	5775			

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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. The gevin UE is pre-scanned among below modes.

Modulation	Transmission Chain	Multiple Transmission Spatial
⊠ 802.11 a	☐ Ch1 ☐ Ch2 ☐ Ch3	□ 2TX
⊠ 802.11 n	☑ Ch0 ☐ Ch1 ☐ Ch2 ☐ Ch3	☐ MIMO
⋈ 802.11 ac	☐ Ch1 ☐ Ch2 ☐ Ch3	☐ MIMO
□ 802.11 ax	☐ Ch0 ☐ Ch1 ☐ Ch2 ☐ Ch3	☐ MIMO

4. Therefore, below summary is the modes of test configuration that yield the highest reading and generate the highest emission chosen to carry out the relevantly mandatory test items.

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4.2.1 RADIATED EMISSION TEST:

	RADIATED EMISSION TEST (BELOW 1 GHz)					
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	AN- TENNA PORT
	5180~5240	36 to 48	36,44,48			
	5260~5320	52 to 64	52,60,64			
802.11a	5500~5720	100 to 144	100,116,140, 144		6	Ch0
	5745~5825	149 to 165	149,157,165	OFDM		
	5210	42	42			
802 11ac VHI80	5290	58	58	MCS0	MCSO	SISO
	5530~5690	106 to 138	106,122,138		3130	
	5775	155	155			

RADIATED EMISSION TEST (ABOVE 1 GHz)						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	AN- TENNA PORT
	5180~5240	36 to 48	36,44,48			
	5260~5320	52 to 64	52,60,64			
802.11a	5500~5720	100 to 144	100,116,140, 144		6	Ch0
	5745~5825	149 to 165	149,157,165			
	5180~5240	36 to 48	36,44,48	OFDM	MCS 0	SISO
802.11n_HT20 802.11ac_VHT20	5260~5320	52 to 64	52,60,64			
	5500~5700	100 to 144	100,116,140,			
002.1140_711120	5500~5720	100 10 144	144			
	5745~5825	149 to 165	149,157,165			
	5190~5230	38 to 46	38,46			
802.11n_HT40	5270~5310	54 to 62	54,62		MCS 0	SISO
802.11ac_VHT40	5510~5710	102 to 142	102,110,134,142		IVICS U	3130
	5755~5795	151 to 159	151,159			
802.11ac_VHT80	5210	42	42			
	5290	58	58		MCS0	SISO
	5530~5690	106 to 138	106,122,138		IVICSU	3130
	5775	155	155			

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/ac WLAN Transmitter for channel Low, Mid and High, the worst case E2 position was reported.

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ANTENNA PORT CONDUCTED MEASUREMENT: 4.2.2

CONDUCTED TEST						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	AN- TENNA PORT
	5180~5240	36 to 48	36,44,48			
	5260~5320	52 to 64	52,60,64			
802.11a	5500~5720	100 to 144	100,116,140, 144		6	Ch0
	5745~5825	149 to 165	149,157,165			
	5180~5240	36 to 48	36,44,48			
902 11n UT20	5260~5320	52 to 64	52,60,64	OFDM	MCS0	Ch0
802.11n_HT20 / 802.11ac_VHT20	5500~5720	100 to 144	100,116,140, 144			
	5745~5825	149 to 165	149,157,165			
	5190~5230	38 to 46	38,46			
802.11n_HT40	5270~5310	54 to 62	54,62		MCCO	ChO
/ 802.11ac_VHT40	5510~5710	102 to 142	102,110,134,142		MCS0	Ch0
	5755~5795	151 to 159	151,159			
	5210	42	42			
802.11ac_VHT80	5290	58	58		MCS0	Ch0
002.11ac_v1100	5530~5690	106 to 138	106,122,138		MCSU	Cilo
	5775	155	155			

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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 Meas- urement	+/- 0.96 dB
Peak Power Spectral Density Meas- urement	+/- 1.67 dB
Frequency Stability	+/- 123.36 Hz
Temperature	+/- 0.65 °C
Humidity	+/- 4.6 %
DC / AC Power Source	DC= +/- 0.13%, AC=+/- 0.2%

Radiated Spurious Emission Measurement Uncertainty				
	9kHz~30MHz: +-2.3dB			
	30MHz - 180MHz: +/- 3.37dB			
Polarization: Vertical	180MHz -417MHz: +/- 3.19dB			
Polarization. Vertical	0.417GHz-1GHz: +/- 3.19dB			
	1GHz - 18GHz: +/- 4.04dB			
	18GHz - 40GHz: +/- 4.04dB			
	9kHz~30MHz: +-2.3dB			
	30MHz - 167MHz: +/- 4.22dB			
Polarization: Horizontal	167MHz -500MHz: +/- 3.44dB			
Polarization: Horizontal	0.5GHz-1GHz: +/- 3.39dB			
	1GHz - 18GHz: +/- 4.08dB			
	18GHz - 40GHz: +/- 4.08dB			

Note:

- 1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
- 2. The conformity assessment statement in this report is based solely on the test results, measurement uncertainty is excluded.

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CONDUCTED EMISSION TEST

Standard Applicable

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

1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -				
Lin dB(nits uV)			
Quasi-peak	Average			
66 to 56	56 to 46			
56	46			
60	50			
	dB(Quasi-peak 66 to 56 56			

Note

6.2 **Measurement Equipment Used**

	Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.	
LISN	SCHWARZBECK Mess-Elektronik	NSLK812 7	974	03/25/2020	03/24/2021	
EMI Test Receiver	R&S	ESCI	101342	04/28/2020	04/27/2021	
Test Software	audix	e3	Ver. 6.11- 20180419c	N.C.R	N.C.R	

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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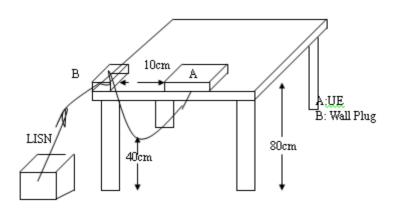
^{1.} The lower limit shall apply at the transition frequencies

^{2.} The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50



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6.4 Test SET-UP



6.5 Measurement Procedure

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

6.6 Measurement Result

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

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

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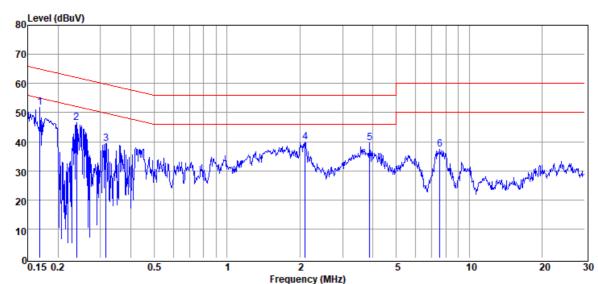
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AC POWER LINE CONDUCTED EMISSION TEST DATA

Report Number **Test Date** :2020-06-19 :E2/2020/50133

Test Mode :WLAN 5G Temp./Humi. :25.2/59 Power :120V/60Hz Engineer :Kailin

Probe :L1



			, , , , , , , , , , , , , , , , , , ,			
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dΒμV	dB	dΒμV	dΒμV	dB
						_
0.17	Peak	41.41	10.22	51.63	65.03	-13.40
0.24	Peak	36.15	10.22	46.37	62.13	-15.76
0.32	Peak	29.09	10.22	39.31	59.80	-20.49
2.10	Peak	29.48	10.45	39.93	56.00	-16.07
3.88	Peak	29.04	10.48	39.52	56.00	-16.48
7.57	Peak	26.63	10.62	37.25	60.00	-22.75

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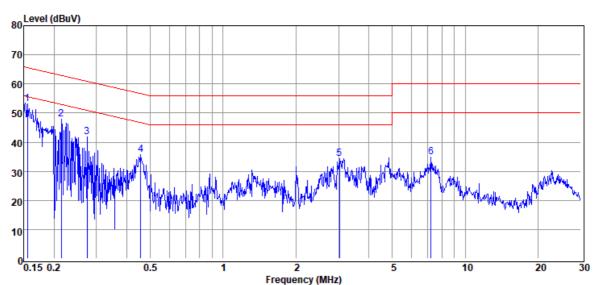


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Report Number **Test Date** :2020-06-19 :E2/2020/50133

Test Mode :WLAN 5G Temp./Humi. :25.2/59 Power :120V/60Hz Engineer :Kailin

Probe :N



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit	Margin
MHz	PK/QP/AV	dBµV	dB	dΒμV	dΒμV	dB
						_
0.16	Peak	43.01	10.21	53.22	65.69	-12.47
0.22	Peak	37.76	10.21	47.97	63.01	-15.04
0.27	Peak	31.51	10.21	41.72	60.98	-19.26
0.46	Peak	25.44	10.22	35.66	56.76	-21.10
3.03	Peak	23.95	10.47	34.42	56.00	-21.58
7.21	Peak	24.21	10.62	34.83	60.00	-25.17

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7 DUTY CYCLE TEST SIGNAL

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle. All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

7.1 Measurement Procedure:

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

Duty Cycle:

Mode	Duty Cycle (%) =Ton / (Ton+Toff)	Duty Factor (dB) =10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
802.11a	93.25	0.30	0.72	1.00
802.11n_20	92.80	0.32	0.77	1.00
802.11ac_20	93.17	0.31	0.76	1.00
802.11n_40	87.01	0.60	1.54	2.00
802.11ac_40	86.86	0.61	1.53	2.00
802.11ac_80	84.29	0.74	3.10	4.00

Duty Cycle Factor: 10 * log(1/0.9325) = 0.3
Duty Cycle Factor: 10 * log(1/0.928) = 0.32
Duty Cycle Factor: 10 * log(1/0.9317) = 0.31
Duty Cycle Factor: 10 * log(1/0.8701) = 0.6
Duty Cycle Factor: 10 * log(1/0.8686) = 0.61
Duty Cycle Factor: 10 * log(1/0.8429) = 0.74

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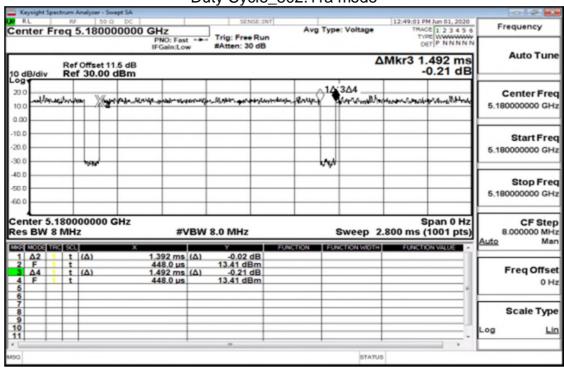
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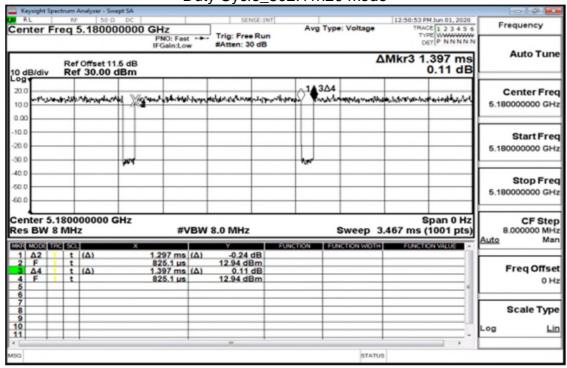
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7.2 **DUTY CYCLE TEST SIGNAL MEASUREMENT RESULT**

Duty Cycle_802.11a mode



Duty Cycle_802.11n20 mode



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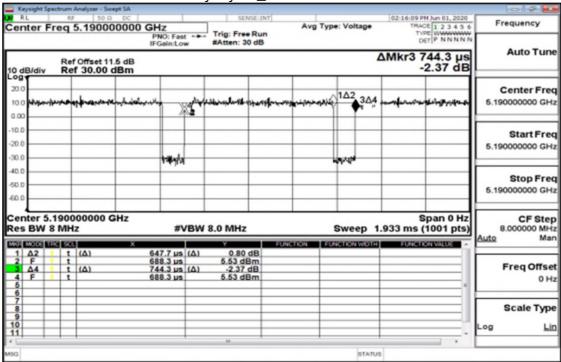
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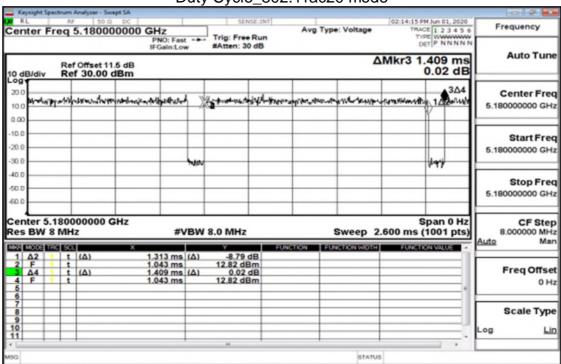


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Duty Cycle_802.11n40 mode



Duty Cycle_802.11ac20 mode



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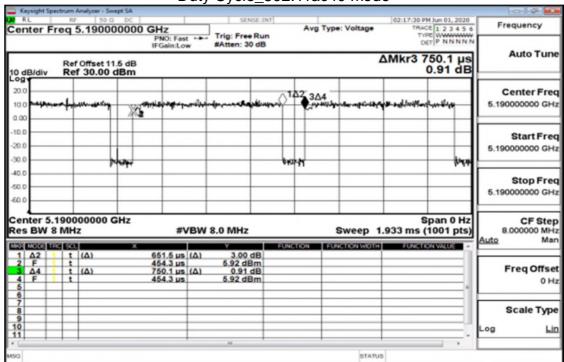
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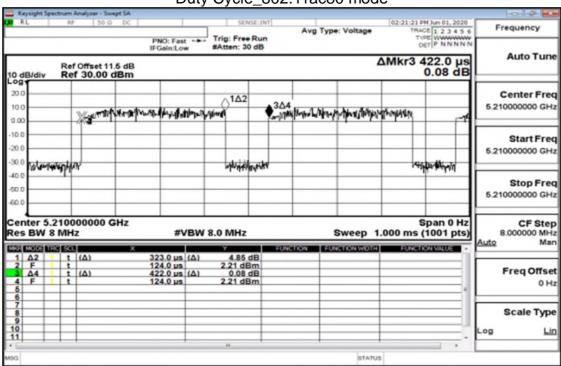


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Duty Cycle 802.11ac40 mode



Duty Cycle_802.11ac80 mode



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26DB, 99% &6DB EMISSION BANDWIDTH MEASUREMENT

Standard Applicable 8.1

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

Measurement Procedure 8.2

- 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.
 - 3.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.

- 3.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. For 99% Bandwidth: Set the spectrum analyzer as

RBW=1%,

VBW = 3*RBW,

Span = 30M/50MHz,

Detector=Sample,

Sweep=auto.

- 7. Turn on the 99% bandwidth function, max reading.
- 8. Repeat above procedures until all frequency of interest measured was complete.

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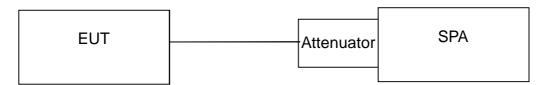


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8.3 **Measurement Equipment Used**

	SGS Conducted Room					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.	
DC Block	PASTER- NACK	PE8210	RF32	11/20/2019	11/19/2020	
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	07/15/2019	07/14/2020	
Attenuator	Marvelous	MVE2213-10	RF31	11/20/2019	11/19/2020	

8.4 **Test Set-up**



8.5 **Measurement Result**

8.5.1 FCC 26dB Bandwidth

802.11a_Ch0

Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	19.63	12.929
5220	19.69	12.942
5240	19.55	12.911
5260	19.41	12.880
5300	19.75	12.956
5320	19.64	12.931
5500	19.69	12.942
5580	19.52	12.905
5700	19.74	12.953
5720	20.11	13.034

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802.11n HT20 Ch0

Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	20.26	13.066
5220	20.05	13.021
5240	20.13	13.038
5260	19.94	12.997
5300	20.02	13.015
5320	19.96	13.002
5500	19.89	12.986
5580	19.91	12.991
5700	20.05	13.021
5720	19.87	12.982

802.11n _HT40_Ch0

Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5190	41.09	16.137
5230	40.44	16.068
5270	40.14	16.036
5310	40.93	16.120
5510	40.29	16.052
5550	40.6	16.085
5670	40.04	16.025
5710	40.31	16.054

802.11ac _VHT80_Ch0

Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5210	81.33	19.103
5290	81.09	19.090
5530	81	19.085
5610	81.42	19.107
5690	80.9	19.079

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8.5.2 6dB Bandwidth (5725 MHz~ 5850 MHz) measure with Peak detector for FCC

802.11a Ch0

Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)		
5745	12.35	10.917		
5785	14.48	11.608		
5825	15.81	11.989		

802.11n_HT20_Ch0

Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	15.11	11.793
5785	16.98	12.299
5825	15.02	11.767

802.11n_HT40_Ch0

Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5755	35.17	15.462
5795	35.1	15.453

802.11ac _VHT80_Ch0

Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5775	75.25	18,765

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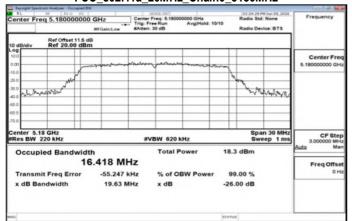
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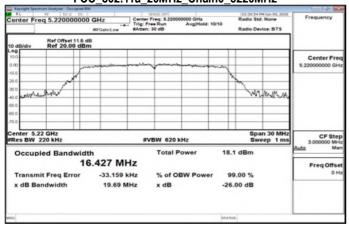
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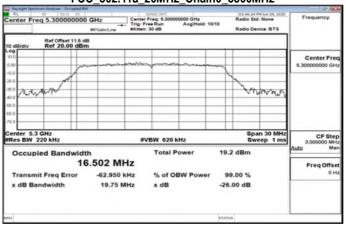
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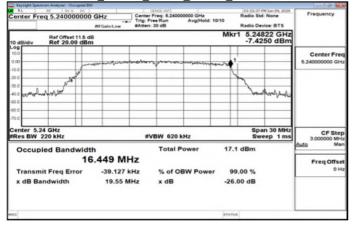
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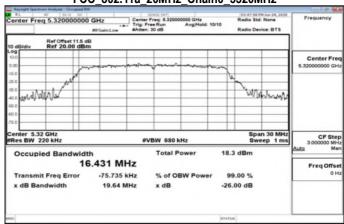
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FCC 802.11a 20MHz Chain0 5240MHz



FCC 802.11a 20MHz Chain0 5320MHz



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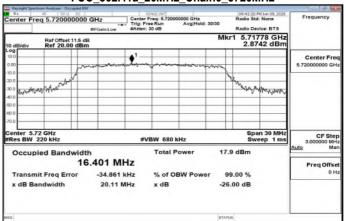


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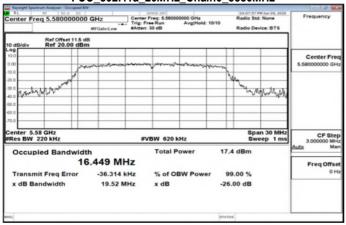
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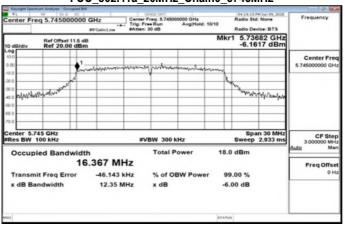
FCC 802.11a 20MHz Chain0 5720MHz



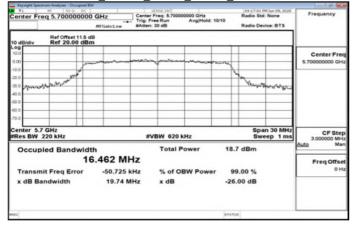
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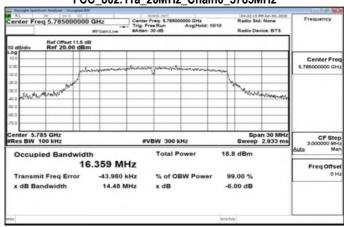
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FCC 802.11a 20MHz Chain0 5700MHz



FCC_802.11a_20MHz_Chain0_5785MHz



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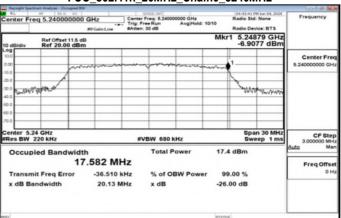


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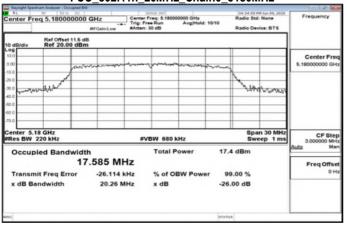
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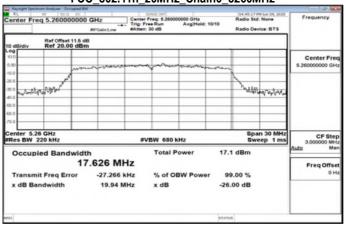
FCC 802.11n 20MHz Chain0 5240MHz



FCC_802.11n_20MHz_Chain0_5180MHz



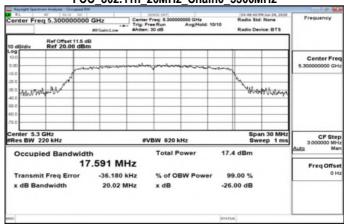
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FCC 802.11n 20MHz Chain0 5220MHz



FCC 802.11n 20MHz Chain0 5300MHz



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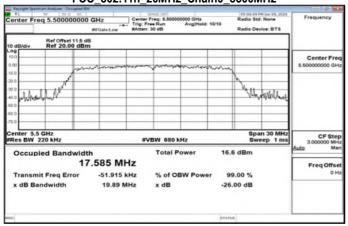
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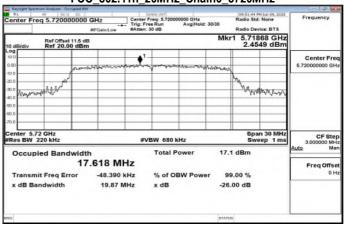
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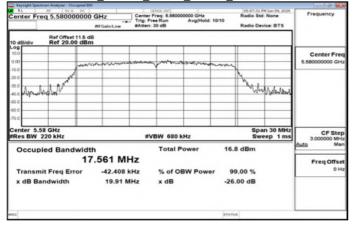
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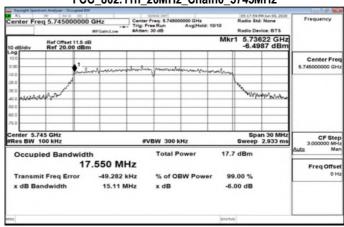
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FCC 802.11n 20MHz Chain0 5580MHz



FCC_802.11n_20MHz_Chain0_5745MHz



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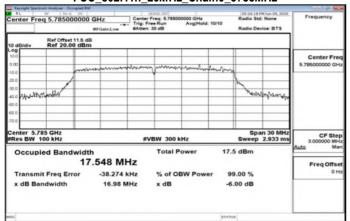
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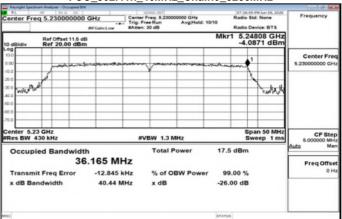


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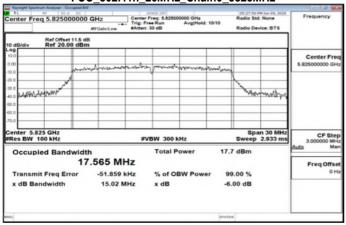
FCC 802.11n 20MHz Chain0 5785MHz



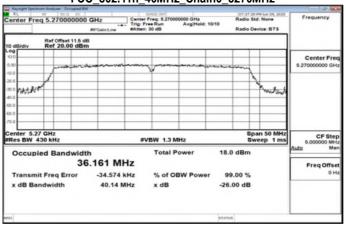
FCC 802.11n 40MHz Chain0 5230MHz



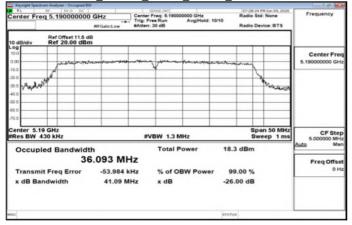
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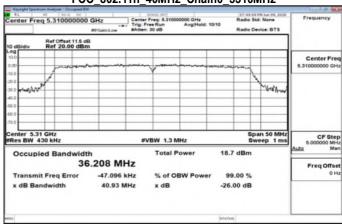
FCC_802.11n_40MHz_Chain0_5270MHz



FCC 802.11n 40MHz Chain0 5190MHz



FCC 802.11n 40MHz Chain0 5310MHz



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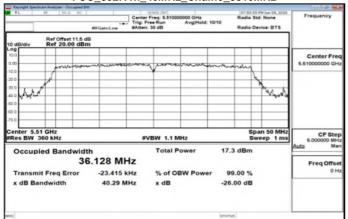
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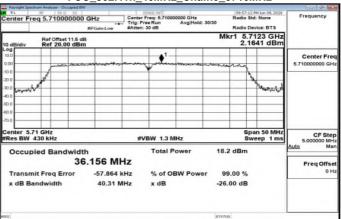


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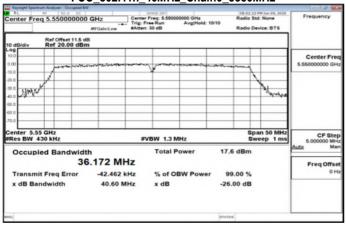
FCC 802.11n 40MHz Chain0 5510MHz



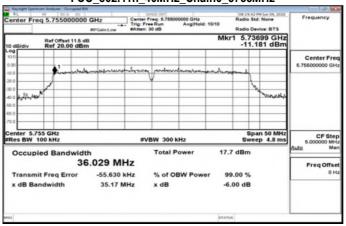
FCC 802.11n 40MHz Chain0 5710MHz



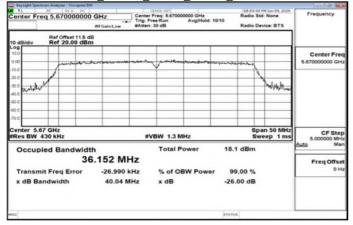
FCC_802.11n_40MHz_Chain0_5550MHz



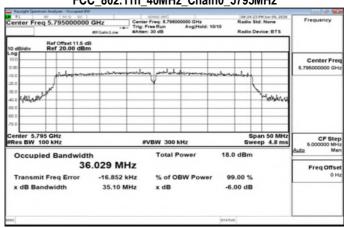
FCC_802.11n_40MHz_Chain0_5755MHz



FCC 802.11n 40MHz Chain0 5670MHz



FCC_802.11n_40MHz_Chain0_5795MHz



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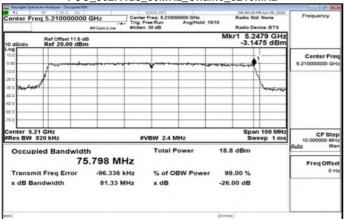
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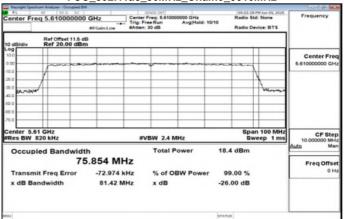


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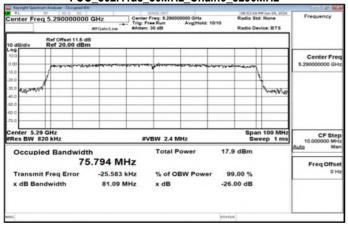
FCC 802.11ac 80MHz Chain0 5210MHz



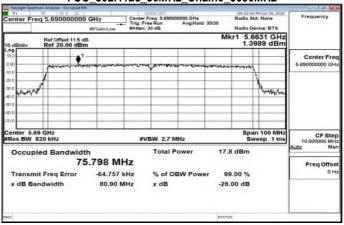
FCC 802.11ac 80MHz Chain0 5610MHz



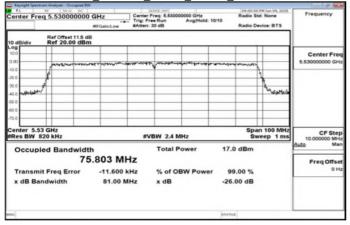
FCC_802.11ac_80MHz_Chain0_5290MHz



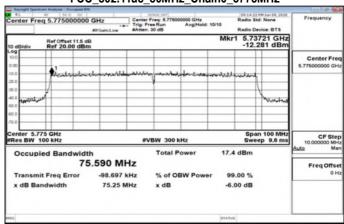
FCC_802.11ac_80MHz_Chain0_5690MHz



FCC 802.11ac 80MHz Chain0 5530MHz



FCC_802.11ac_80MHz_Chain0_5775MHz



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8.5.3 99% BW Verification for DFS Function

802.11a Ch0

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5240	5248.22	< 5250
5745	5736.82	> 5725

802.11n_HT20_Ch0

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5240	5248.79	< 5250
5745	5736.22	> 5725

802.11n _HT40_Ch0

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5230	5248.08	< 5250
5755	5736.99	> 5725

802.11ac _VHT80_Ch0

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5210	5247.90	< 5250
5775	5737.21	> 5725

Please see next page for test plots.

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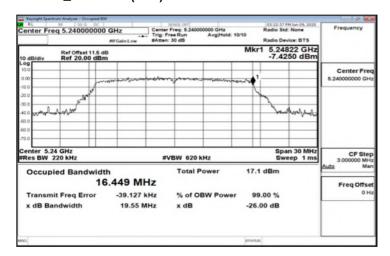
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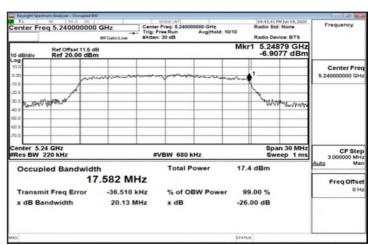


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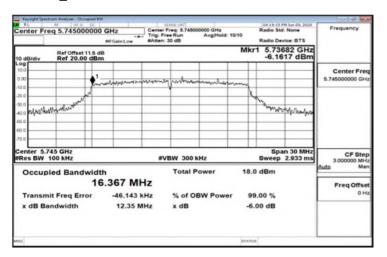
802.11a 5240MHz (Ch0)



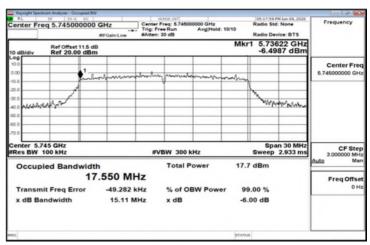
802.11n 20MHz 5240MHz (Ch0)



802.11a 5745MHz



802.11n 20MHz 5745MHz



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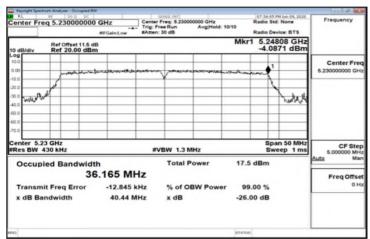
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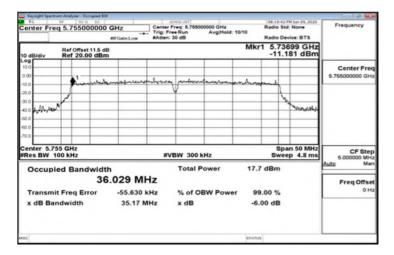


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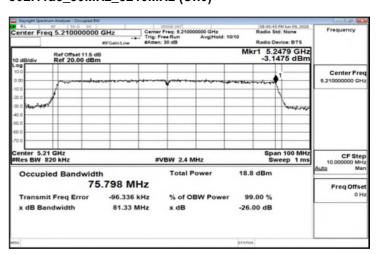
802.11n 40MHz 5230MHz (Ch0)



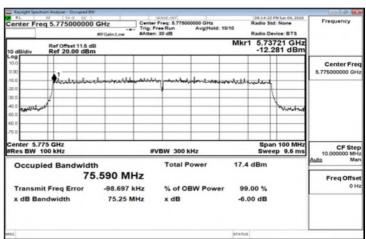
802.11n 40MHz 5755MHz



802.11ac 80MHz 5210MHz (Ch0)



802.11ac 80MHz 5775MHz



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9 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			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.

9.2 Measurement Procedure

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

9.3 Measurement Equipment Used

SGS Conducted Room								
EQUIPMENT TYPE	MFR	MODEL NUM- BER	SERIAL NUMBER	LAST CAL.	CAL DUE.			
Power Meter	Anritsu	ML2496A	1326001	08/05/2019	08/04/2020			
Power Sensor	Anritsu	MA2411B	1315048	08/05/2019	08/04/2020			
Power Sensor	Anritsu	MA2411B	1315049	08/05/2019	08/04/2020			
Attenuator	Marvelous	MVE2213-10	RF31	11/20/2019	11/19/2020			

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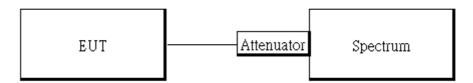
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9.4 **Test Set-up**



Note:

Cable Loss= 11.50dB

9.5 **Measurement Result**

9.5.1 Conducted output power (FCC)

802.11a Ch0

002.11a_0	7110		T0T41	T0T41	1	DEGLUDED		1
	Frequency	Data	TOTAL	TOTAL		REQUIRED		
СН	(MHz)	Rate	POWER	POWER		LIMIT		RESULT
	(1411 12)	Nate	(dBm)	(mW)	(dBm)			
36	5180	6	12.76	18.895		30		PASS
44	5220	6	12.15	16.419		30		PASS
48	5240	6	11.95	15.680		30		PASS
52	5260	6	12.41	17.432	23.98	or 11+10log(B) =	23.88	PASS
60	5300	6	12.95	19.740	23.98	or 11+10log(B) =	23.96	PASS
64	5320	6	12.99	19.923	23.98	or 11+10log(B) =	23.93	PASS
100	5500	6	12.03	15.972	23.98	or 11+10log(B) =	23.94	PASS
116	5580	6	12.19	16.571	23.98	or 11+10log(B) =	23.90	PASS
140	5700	6	12.81	19.114	23.98	or 11+10log(B) =	23.95	PASS
144	5720(U-NII 2C)	6	11.58	14.38	23.98	or 11+10log(B) =	24.03	PASS
144	5720 (U-NII 3)	6	6.84	4.83	30		PASS	
149	5745	6	11.99	15.825	30		PASS	
157	5785	6	12.08	16.157	30			PASS
165	5825	6	12.78	18.982		30		PASS

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802.11n_HT20_Ch0

СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)			RESULT
36	5180	MCS0	11.90	15.504		30		PASS
44	5220	MCS0	11.39	13.786		30		PASS
48	5240	MCS0	11.36	13.692		30		PASS
52	5260	MCS0	11.54	14.271	23.98	or 11+10log(B) =	24.00	PASS
60	5300	MCS0	11.95	15.684	23.98	or 11+10log(B) =	24.01	PASS
64	5320	MCS0	11.97	15.756	23.98	or 11+10log(B) =	24.00	PASS
100	5500	MCS0	11.35	13.660	23.98	or 11+10log(B) =	23.99	PASS
116	5580	MCS0	11.41	13.850	23.98	or 11+10log(B) =	23.99	PASS
140	5700	MCS0	11.95	15.684	23.98	or 11+10log(B) =	24.02	PASS
144	5720(U-NII 2C)	MCS0	10.75	11.90	23.98	or 11+10log(B) =	23.98	PASS
144	5720 (U-NII 3)	MCS0	5.95	3.93	30			PASS
149	5745	MCS0	11.58	14.403	30			PASS
157	5785	MCS0	11.53	14.238	30		PASS	
165	5825	MCS0	11.54	14.271		30		PASS

802.11n HT40 Ch0

СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
38	5190	MCS0	11.98	15.792		30		PASS
46	5230	MCS0	11.42	13.881		30		PASS
54	5270	MCS0	11.96	15.719	23.98	or 11+10log(B) =	27.04	PASS
62	5310	MCS0	12.15	16.422	23.98	or 11+10log(B) =	27.12	PASS
102	5510	MCS0	11.94	15.647	23.98	or 11+10log(B) =	27.05	PASS
110	5550	MCS0	11.31	13.534	23.98	or 11+10log(B) =	27.09	PASS
134	5670	MCS0	11.97	15.755	23.98	or 11+10log(B) =	27.02	PASS
142	5710(U-NII 2C)	MCS0	11.58	14.39	23.98	or 11+10log(B) =	27.05	PASS
142	5710 (U-NII 3)	MCS0	3.24	2.11	30			PASS
151	5755	MCS0	12.00	15.865	30			PASS
159	5795	MCS0	11.98	15.792		30		PASS

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802.11ac VHT80 Ch0

СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)		RESULT	
42	5210	MCS0	10.33	10.795		30		PASS
58	5290	MCS0	10.56	11.382	23.98	or 11+10log(B) =	30.09	PASS
106	5530	MCS0	10.31	10.745	23.98	or 11+10log(B) =	30.08	PASS
122	5610	MCS0	10.51	11.252	23.98	or 11+10log(B) =	30.11	PASS
138	5690(U-NII 2C)	MCS0	10.24	10.57	23.98	or 11+10log(B) =	30.08	PASS
138	5690 (U-NII 3)	MCS0	-1.17	0.76	30		PASS	
155	5775	MCS0	10.37	10.895		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	T/UDITI/ WII IZ
	√	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.

10.2 Measurement Procedure

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

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

For U-NII-3 Band:

Set RBW=500 kHz, VBW≥ 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.

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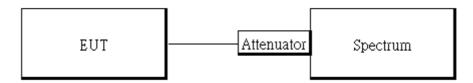


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10.3 **Measurement Equipment Used**

SGS Conducted Room								
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.			
DC Block	PASTER- NACK	PE8210	RF32	11/20/2019	11/19/2020			
Spectrum Ana- lyzer	KEYSIGHT	N9010A	MY51440113	07/15/2019	07/14/2020			
Attenuator	Marvelous	MVE2213-10	RF31	11/20/2019	11/19/2020			

10.4 **Test Set-up**



Note:

Cable Loss= 11.50dB

10.5 **Measurement Result**

10.5.1 **Power spectral density**

	POWER DENSITY 802.11a MODE									
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)					
5180.00	3.68	0.30	3.98	17.00	-13.02					
5220.00	3.01	0.30	3.31	17.00	-13.69					
5240.00	2.69	0.30	2.99	17.00	-14.01					
5260.00	3.30	0.30	3.60	11.00	-7.40					
5300.00	3.09	0.30	3.39	11.00	-7.61					
5320.00	3.41	0.30	3.71	11.00	-7.29					
5500.00	1.98	0.30	2.28	11.00	-8.72					
5580.00	2.58	0.30	2.88	11.00	-8.12					
5700.00	3.90	0.30	4.20	11.00	-6.80					
5720 (U-NII 2C)	3.72	0.30	4.02	11.00	-6.98					
5720 (U-NII 3)	-1.36	0.30	-1.06	30.00	-31.06					
5745.00	0.21	0.30	0.51	30.00	-29.49					
5785.00	-0.02	0.30	0.28	30.00	-29.72					
5825.00	0.62	0.30	0.92	30.00	-29.08					

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	POWER DENSITY 802.11n HT20 MODE									
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)					
5180	2.03	0.32	2.35	17	-14.65					
5220	1.89	0.32	2.21	17	-14.79					
5240	1.56	0.32	1.88	17	-15.12					
5260	2.38	0.32	2.70	11	-8.30					
5300	1.97	0.32	2.29	11	-8.71					
5320	2.35	0.32	2.67	11	-8.33					
5500	1.30	0.32	1.62	11	-9.38					
5580	1.79	0.32	2.11	11	-8.89					
5700	2.75	0.32	3.07	11	-7.93					
5720 (U-NII 2C)	2.75	0.32	3.07	11	-7.93					
5720 (U-NII 3)	-2.62	0.32	-2.30	30	-32.30					
5745	-1.21	0.32	-0.89	30	-30.89					
5785	-0.43	0.32	-0.11	30	-30.11					
5825	-0.43	0.32	-0.11	30	-30.11					

	POWER DENSITY 802.11n HT40 MODE								
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)				
5190	-1.09	0.60	-0.49	17	-17.49				
5230	-1.82	0.60	-1.22	17	-18.22				
5270	-1.3	0.60	-0.70	11	-11.70				
5310	-0.58	0.60	0.02	11	-10.98				
5510	-1.73	0.60	-1.13	11	-12.13				
5550	-1.75	0.60	-1.15	11	-12.15				
5670	-0.91	0.60	-0.31	11	-11.31				
5710 (U-NII 2C)	-1.07	0.60	-0.47	11	-11.47				
5710 (U-NII 3)	-6.06	0.60	-5.46	30	-35.46				
5755	-4.26	0.60	-3.66	30	-33.66				
5795	-4.52	0.60	-3.92	30	-33.92				

POWER DENSITY 802.11ac VHT80 MODE								
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)			
5210	-6.59	0.74	-5.85	17	-22.85			
5290	-6.59	0.74	-5.85	11	-16.85			
5530	-7.06	0.74	-6.32	11	-17.32			
5610	-7.09	0.74	-6.35	11	-17.35			
5690 (U-NII 2C)	-6.15	0.74	-5.41	11	-16.41			
5690 (U-NII 3)	-10.58	0.74	-9.84	30	-39.84			
5775	-9.55	0.74	-8.81	30	-38.81			

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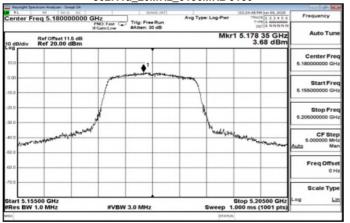
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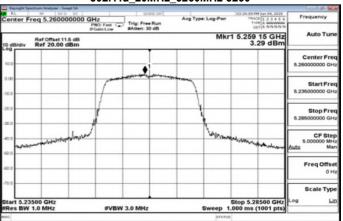


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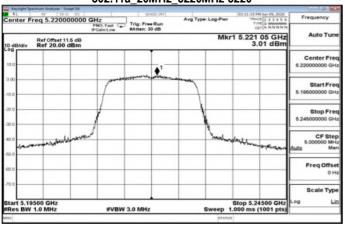
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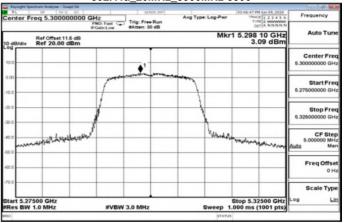
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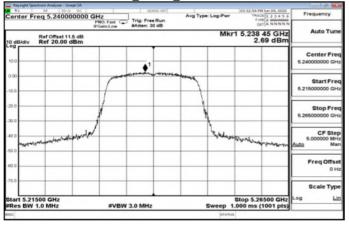
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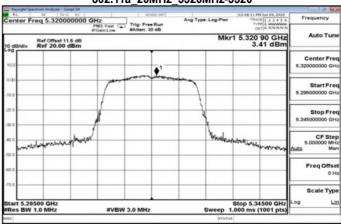
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802.11a 20MHz 5240MHz-5240



802.11a 20MHz 5320MHz-5320



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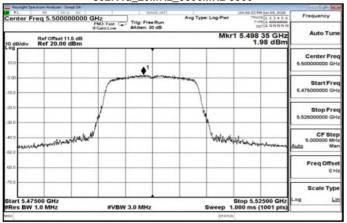
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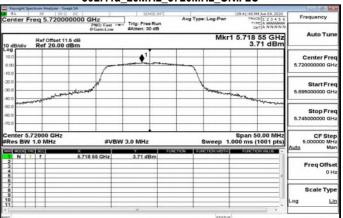


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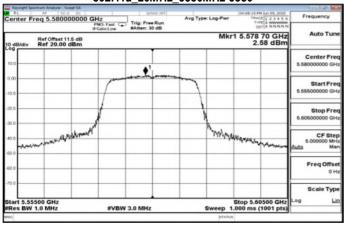
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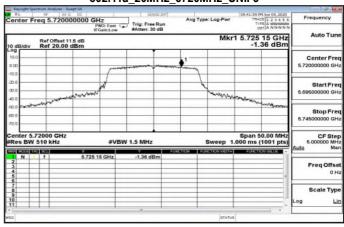
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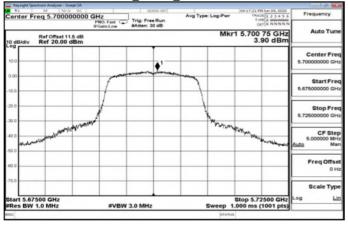
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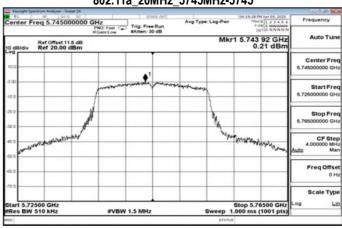
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802.11a 20MHz 5700MHz-5700



802.11a_20MHz_5745MHz-5745



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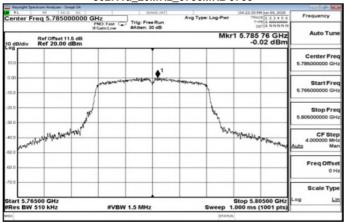
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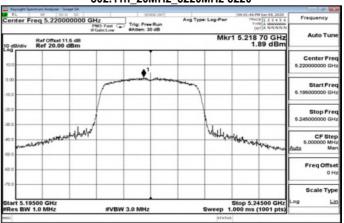


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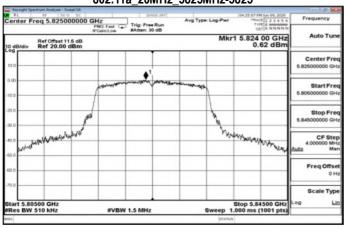
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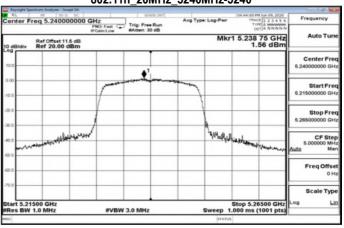
802.11n 20MHz 5220MHz-5220



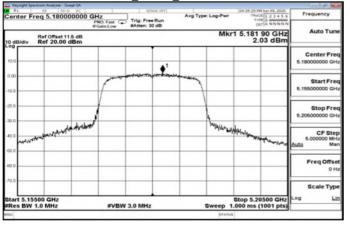
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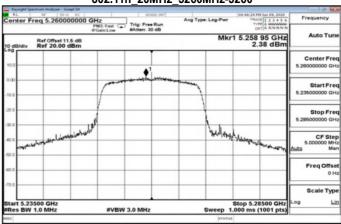
802.11n_20MHz_5240MHz-5240



802.11n 20MHz 5180MHz-5180



802.11n 20MHz 5260MHz-5260



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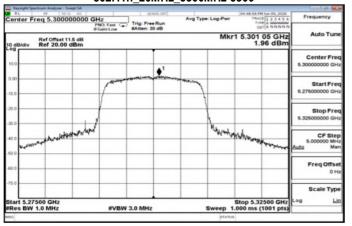
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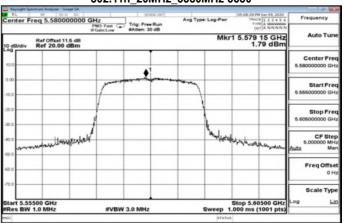


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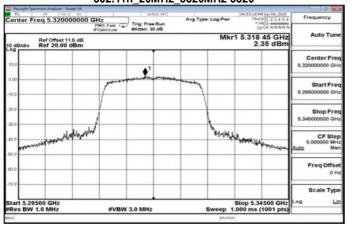
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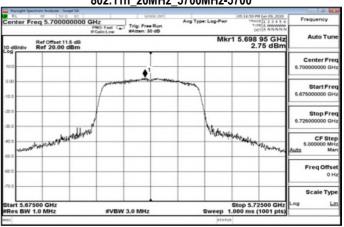
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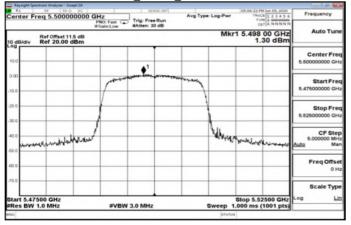
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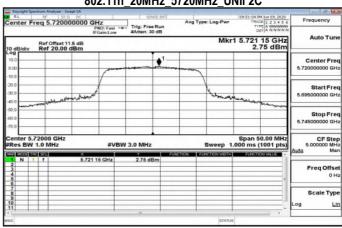
802.11n_20MHz_5700MHz-5700



802.11n 20MHz 5500MHz-5500



802.11n 20MHz 5720MHz UNII 2C



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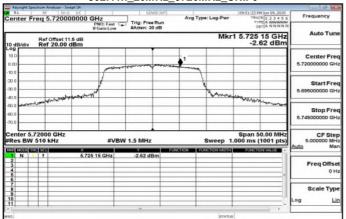
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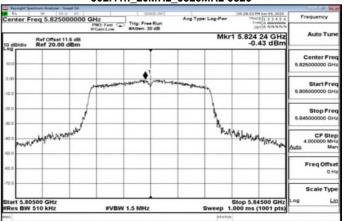


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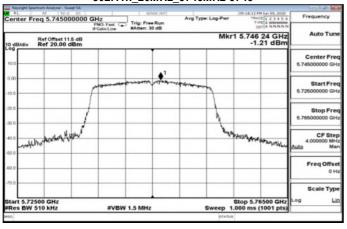
802.11n 20MHz 5720MHz UNII 3



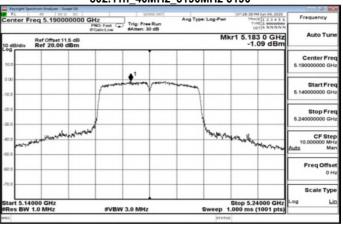
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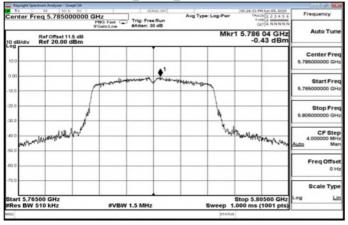
802.11n_20MHz_5745MHz-5745



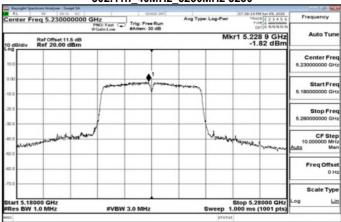
802.11n_40MHz_5190MHz-5190



802.11n_20MHz_5785MHz-5785



802.11n 40MHz 5230MHz-5230



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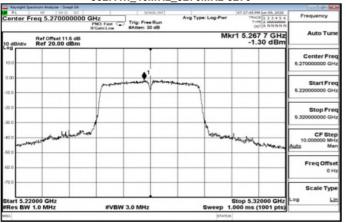
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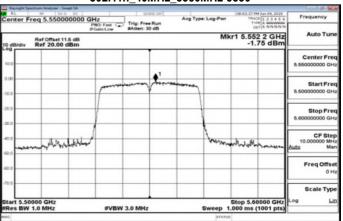


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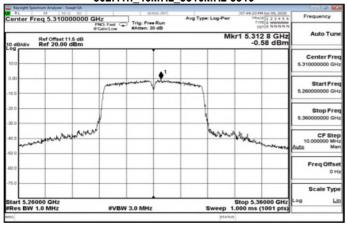
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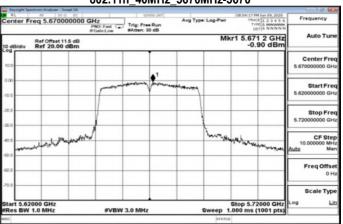
802.11n 40MHz 5550MHz-5550



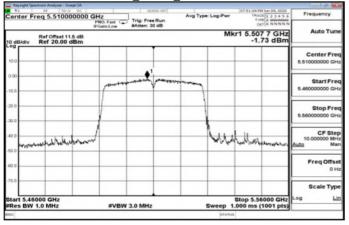
802.11n_40MHz_5310MHz-5310



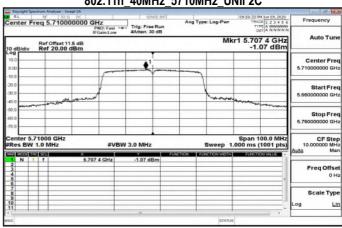
802.11n_40MHz_5670MHz-5670



802.11n 40MHz 5510MHz-5510



802.11n 40MHz 5710MHz UNII 2C



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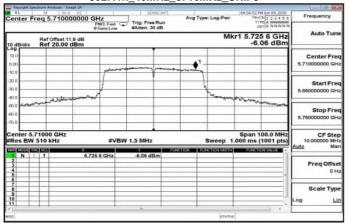
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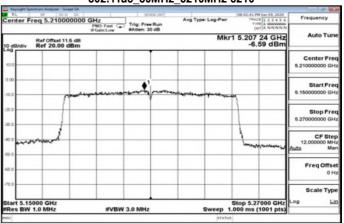


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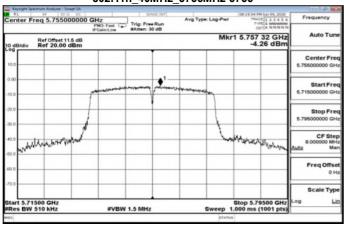
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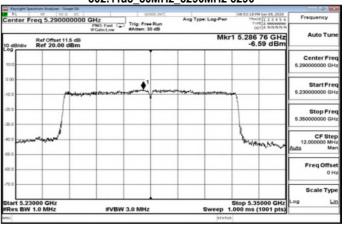
802.11ac 80MHz 5210MHz-5210



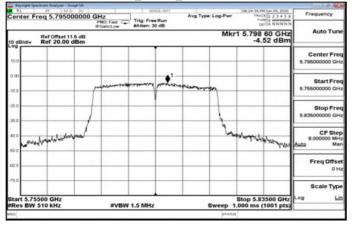
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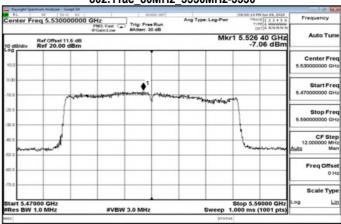
802.11ac_80MHz_5290MHz-5290



802.11n_40MHz_5795MHz-5795



802.11ac 80MHz 5530MHz-5530



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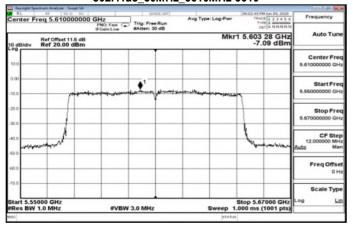
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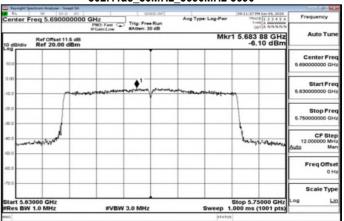


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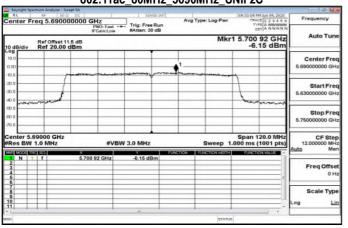
802.11ac_80MHz_5610MHz-5610



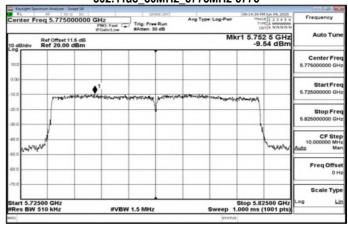
802.11ac 80MHz 5690MHz-5690



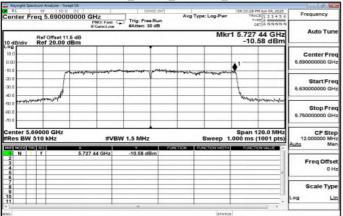
802.11ac_80MHz_5690MHz_UNII 2C



802.11ac_80MHz_5775MHz-5775



802.11ac_80MHz_5690MHz_UNII 3



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11 UNDESIRABLE RADIATED EMISSION MEASUREMENT

11.1 Standard Applicable

11.1.1 Band Edge

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.

APPLICABLE TO	EIRP LIMIT	FIELD STRENGTH AT 3m		
15.407(b)(1) RSS-247 §6.2.1.2 15.407(b)(2)				
RSS-247 §6.2.2.2 15.407(b)(3) RSS-247 §6.2.3.2	PK: -27 (dBm/MHz) PK: 68.3 (dBμV			
15.407(b)(4)(i) RSS-247 §6.2.4.2	PK:-27 (dBm/MHz) *1 PK:10 (dBm/MHz) *2 PK:15.6 (dBm/MHz) *3 PK:27 (dBm/MHz) *4	PK: 68.2(dBµV/m) *1 PK:105.2 (dBµV/m) *2 PK: 110.8(dBµV/m) *3 PK:122.2 (dBµV/m) *4		

^{*1} beyond 75 MHz or more above of the bandedge.

 $EIRP = ((E^*d)^2) / 30$, 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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11.1.2 Spurious Emission

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

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

Note:

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

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11.2 **Measurement Equipment Used**

SGS SAC-III									
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUM- BER	LAST CAL.	CAL DUE.				
Broadband An- tenna	SCHWAZBECK	VULB 9168	9168-617	11/04/2019	11/03/2020				
Horn Antenna	Schwarzbeck	BBHA9170	184	12/25/2019	12/24/2020				
Horn Antenna	Schwarzbeck	BBHA9120D	1187	01/10/2020	01/09/2021				
Loop Antenna	ETS.LINDGREN	6502	143303	04/28/2020	04/27/2021				
3m Site NSA	SGS	966 chamber D	N/A	07/12/2019	07/11/2020				
Spectrum Ana- lyzer	KEYSIGHT	N9010A	MY51440113	07/15/2019	07/14/2020				
Pre-Amplifier	EMC Instruments	EMC184045B	980135	11/20/2019	11/19/2020				
Pre-Amplifier	EMC Instruments	EMC9135	980234	11/20/2019	11/19/2020				
Pre-Amplifier	EMC Instruments	EMC12630SE	980271	11/20/2019	11/19/2020				
Attenuator	Woken	WATT-218FS- 10	RF25	11/20/2019	11/19/2020				
High Pass Filter	R&S	F13 HPF 3GHz	RF64	11/20/2019	11/19/2020				
Low Pass Filter	EWT	EWT-56-0019	RF46	11/20/2019	11/19/2020				
Notch Filter	EWT	EWT-54-0038	RF55	11/20/2019	11/19/2020				
Coaxial Cable	Huber Suhner	SUCOFLEX 104	MY17388/4	11/20/2019	11/19/2020				
Coaxial Cable	Huber Suhner	RG 214/U	W22.03	11/20/2019	11/19/2020				
Coaxial Cable	Huber Suhner	SUCOFLEX 104	MY17413/4	11/20/2019	11/19/2020				

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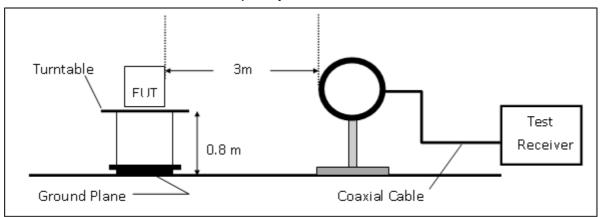
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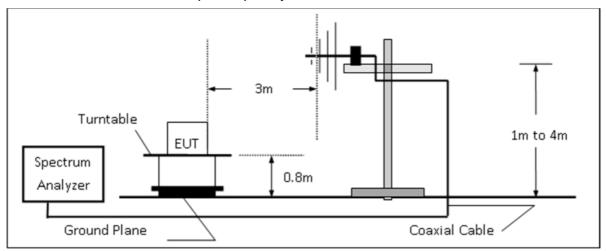
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11.3 Test SET-UP

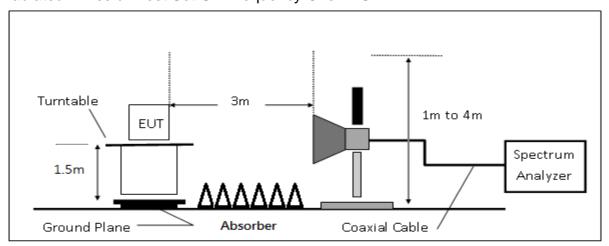
(A) Radiated Emission Test Set-UP Frequency Below 30MHz.



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



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



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11.4 Measurement Procedure

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

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11.5 Field Strength Calculation

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

FS = RA + AF + CL - AG

Where FS = Field Strength

CL = Cable Attenuation Factor (Cable Loss)

RA = *Reading Amplitude*

AG = Amplifier Gain

AF = Antenna Factor

The limit of the emission level is expressed in dBuV/m, which converts 20*log(uV/m)

Actual $FS(dB\mu V/m) = SPA$. Reading level $(dB\mu V) + Factor(dB)$

 $Factor(dB) = Antenna\ Factor(dB\mu V/m) + Cable\ Loss(dB) - Pre_Amplifier\ Gain(dB)$

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

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

Pre-scanned was done at frequency 5.47 GHz and 5.85 GHz for bandedge measurement of straddle channels 138, 142 and 144 which was 20dB lower than the limit per 15.31(o) & RSS-GEN §6.13.2 was not reported.

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11.7 Radiated Spurious Emission Measurement Result

11.7.1 Below 1GHz Worst-Case Data:

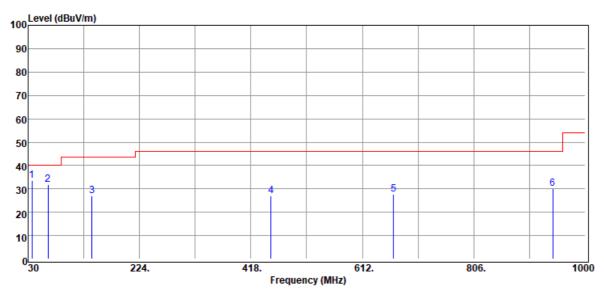
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 1 Test Date :2020-06-20

Test Frequency :5220 MHz Temp./Humi. :21.2/62

Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
36.79	Peak	51.35	-17.92	33.43	40.00	-6.57
64.92	Peak	49.89	-18.23	31.66	40.00	-8.34
141.55	Peak	43.72	-16.79	26.93	43.50	-16.57
452.92	Peak	38.19	-11.32	26.87	46.00	-19.13
666.32	Peak	36.24	-8.54	27.70	46.00	-18.30
943.74	Peak	34.95	-4.70	30.25	46.00	-15.75

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No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279 f (886-2) 2298-0488 www.sgs.com.tw



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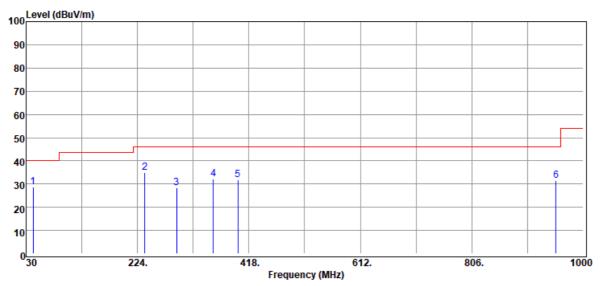
Report Number **Test Site** :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 1 **Test Date** :2020-06-20

Test Frequency :5220 MHz Temp./Humi. :21.2/62

Test Mode :TX CH MID Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
42.61	Peak	45.99	-17.15	28.84	40.00	-11.16
236.61	Peak	52.22	-17.17	35.05	46.00	-10.95
291.90	Peak	44.01	-15.56	28.45	46.00	-17.55
355.92	Peak	46.21	-14.01	32.20	46.00	-13.80
398.60	Peak	44.76	-12.83	31.93	46.00	-14.07
952.47	Peak	35.96	-4.48	31.48	46.00	-14.52

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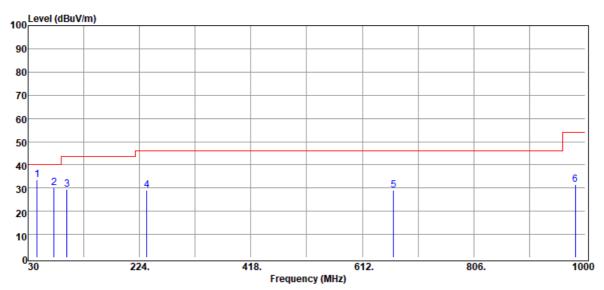
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Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 1 **Test Date** :2020-06-20

Test Frequency :5300 MHz Temp./Humi. :21.2/62 Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
45.52	Peak	50.62	-16.95	33.67	40.00	-6.33
75.59	Peak	50.53	-20.52	30.01	40.00	-9.99
97.90	Peak	51.18	-21.85	29.33	43.50	-14.17
236.61	Peak	46.11	-17.17	28.94	46.00	-17.06
666.32	Peak	37.47	-8.54	28.93	46.00	-17.07
982.54	Peak	35.71	-4.09	31.62	54.00	-22.38

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Test Mode

Report No.: E2/2020/50133

:HORIZONTAL

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Antenna Pol.

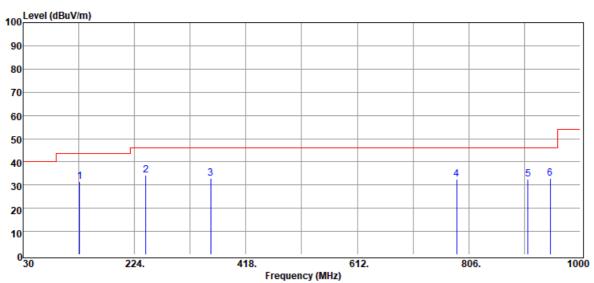
Report Number **Test Site** :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 1 **Test Date** :2020-06-20

Test Frequency :5300 MHz Temp./Humi. :21.2/62

EUT Pol :E2 Plan :Kailin Engineer

:TX CH MID



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
128.94	Peak	49.40	-17.99	31.41	43.50	-12.09
243.40	Peak	51.30	-16.96	34.34	46.00	-11.66
356.89	Peak	46.79	-13.99	32.80	46.00	-13.20
784.66	Peak	38.52	-6.17	32.35	46.00	-13.65
908.82	Peak	37.59	-5.18	32.41	46.00	-13.59
947.62	Peak	37.59	-4.61	32.98	46.00	-13.02

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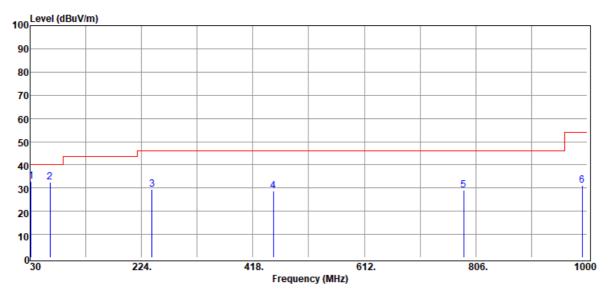
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 1 Test Date :2020-06-20

Test Frequency :5580 MHz Temp./Humi. :21.2/62
Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
Peak	51.10	-18.29	32.81	40.00	-7.19
Peak	50.93	-18.23	32.70	40.00	-7.30
Peak	46.40	-16.96	29.44	46.00	-16.56
Peak	40.09	-11.33	28.76	46.00	-17.24
Peak	35.25	-6.17	29.08	46.00	-16.92
Peak	35.37	-4.07	31.30	54.00	-22.70
	Mode PK/QP/AV Peak Peak Peak Peak Peak	Mode PK/QP/AV Reading Level dBμV Peak 51.10 Peak 50.93 Peak 46.40 Peak 40.09 Peak 35.25	Mode PK/QP/AV Reading Level dBμV dB Peak 51.10 -18.29 Peak 50.93 -18.23 Peak 46.40 -16.96 Peak 40.09 -11.33 Peak 35.25 -6.17	Mode PK/QP/AV Reading Level dBμV FS dBμV/m Peak 51.10 -18.29 32.81 Peak 50.93 -18.23 32.70 Peak 46.40 -16.96 29.44 Peak 40.09 -11.33 28.76 Peak 35.25 -6.17 29.08	Mode PK/QP/AV Reading Level dBμV FS dBμV/m @3m dBμV/m Peak 51.10 -18.29 32.81 40.00 Peak 50.93 -18.23 32.70 40.00 Peak 46.40 -16.96 29.44 46.00 Peak 40.09 -11.33 28.76 46.00 Peak 35.25 -6.17 29.08 46.00

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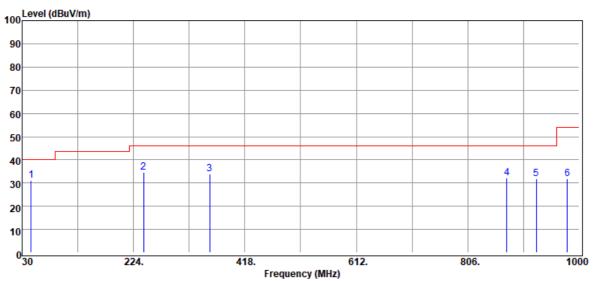
Report Number **Test Site** :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 1 **Test Date** :2020-06-20

Test Frequency :5580 MHz Temp./Humi. :21.2/62

Test Mode :TX CH MID Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
45.52	Peak	48.04	-16.95	31.09	40.00	-8.91
241.46	Peak	51.55	-16.97	34.58	46.00	-11.42
356.89	Peak	47.88	-13.99	33.89	46.00	-12.11
873.90	Peak	37.99	-5.76	32.23	46.00	-13.77
925.31	Peak	36.46	-4.78	31.68	46.00	-14.32
979.63	Peak	35.94	-4.07	31.87	54.00	-22.13

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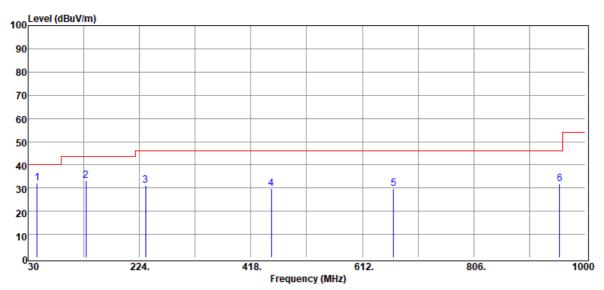
Page: 65 of 201

Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 1 **Test Date** :2020-06-20

Test Frequency :5785 MHz Temp./Humi. :21.2/62 Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
45.52	Peak	49.13	-16.95	32.18	40.00	-7.82
130.88	Peak	50.94	-17.79	33.15	43.50	-10.35
234.67	Peak	48.56	-17.30	31.26	46.00	-14.74
453.89	Peak	41.00	-11.33	29.67	46.00	-16.33
666.32	Peak	38.31	-8.54	29.77	46.00	-16.23
955.38	Peak	36.22	-4.43	31.79	46.00	-14.21

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Test Mode

Report No.: E2/2020/50133

:HORIZONTAL

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Antenna Pol.

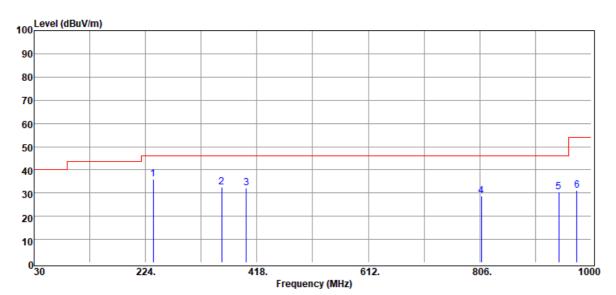
Report Number **Test Site** :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 1 **Test Date** :2020-06-20

Test Frequency :5785 MHz Temp./Humi. :21.2/62

EUT Pol :E2 Plan :Kailin Engineer

:TX CH MID



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
237.58	Peak	53.08	-17.12	35.96	46.00	-10.04
356.89	Peak	46.48	-13.99	32.49	46.00	-13.51
399.57	Peak	44.92	-12.82	32.10	46.00	-13.90
808.91	Peak	34.82	-6.13	28.69	46.00	-17.31
943.74	Peak	35.07	-4.70	30.37	46.00	-15.63
974.78	Peak	35.30	-4.12	31.18	54.00	-22.82

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11.7.2 Above 1GHz Worst-Case Data:

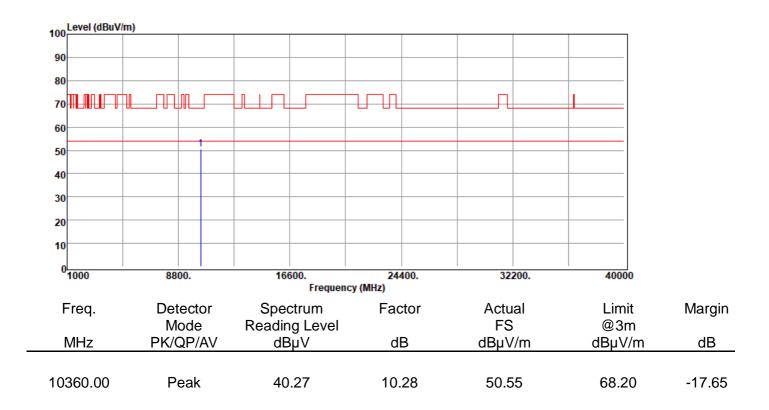
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 1 Test Date :2020-06-22

Test Frequency :5180 MHz Temp./Humi. :24.4/64

Test Mode :TX CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



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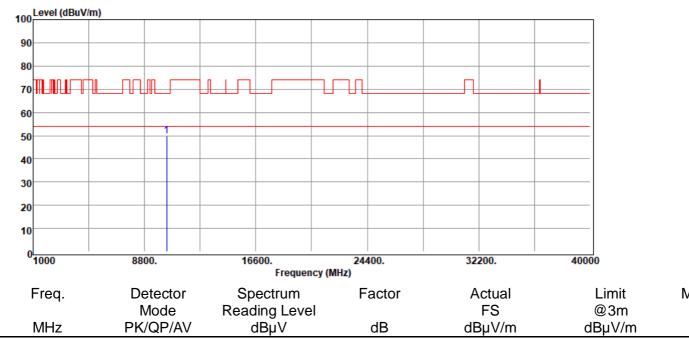
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 1 **Test Date** :2020-06-22

Test Frequency :5180 MHz Temp./Humi. :24.4/64

Test Mode :TX CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



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	39.72	10.28	50.00	68.20	-18.20

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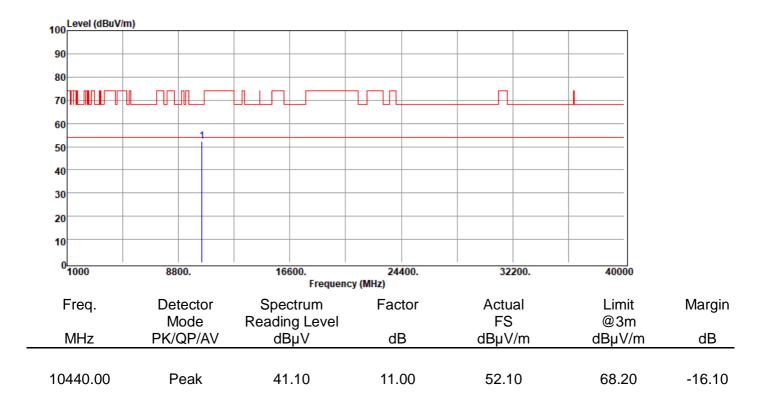
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 1 Test Date :2020-06-22

Test Frequency :5220 MHz Temp./Humi. :24.4/64

Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



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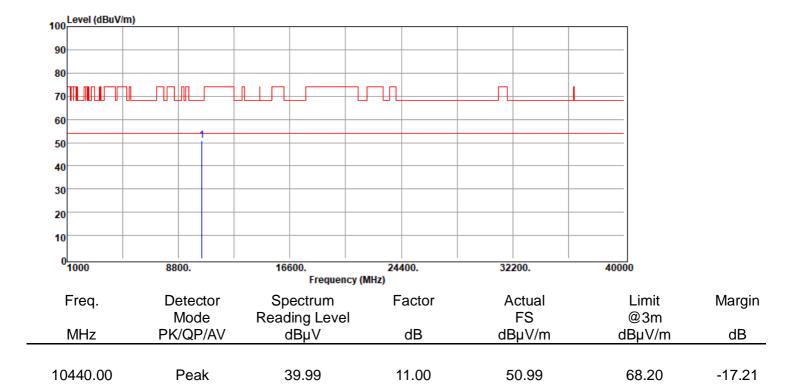
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 1 Test Date :2020-06-22

Test Frequency :5220 MHz Temp./Humi. :24.4/64

Test Mode :TX CH MID Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



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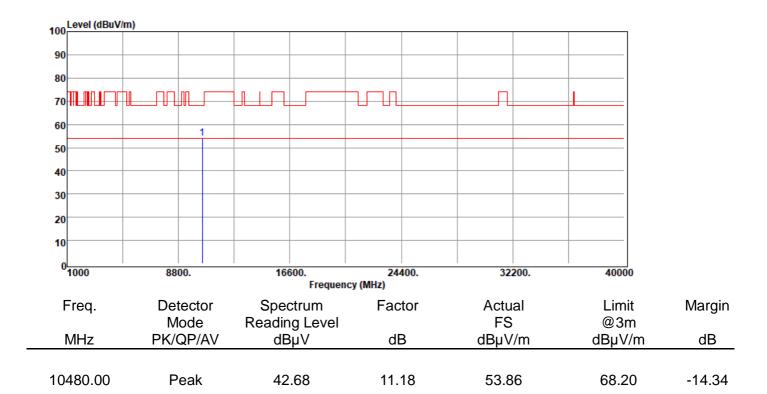
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 1 Test Date :2020-06-22

Test Frequency :5240 MHz Temp./Humi. :24.4/64

Test Mode :TX CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



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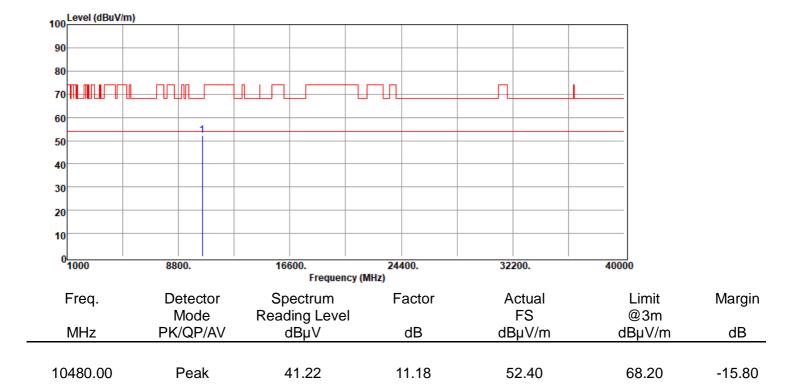
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 1 Test Date :2020-06-22

Test Frequency :5240 MHz Temp./Humi. :24.4/64

Test Mode :TX CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



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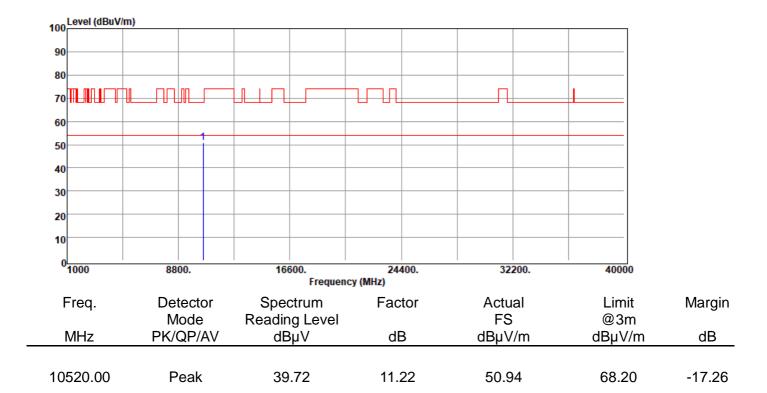
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 2 Test Date :2020-06-22

Test Frequency :5260 MHz Temp./Humi. :24.3/65

Test Mode :TX CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



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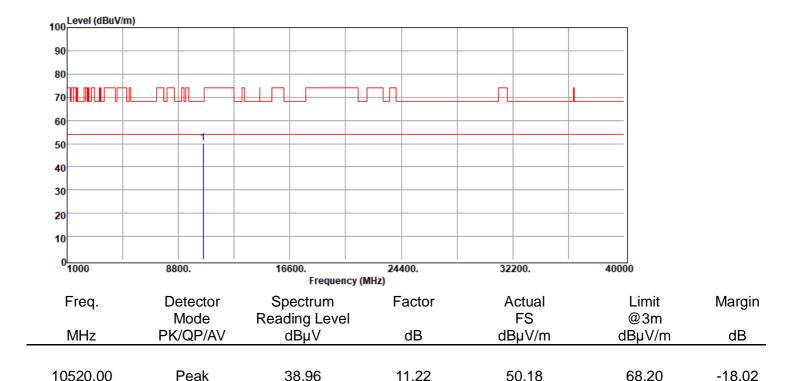
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 2 Test Date :2020-06-22

Test Frequency :5260 MHz Temp./Humi. :24.3/65

Test Mode :TX CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



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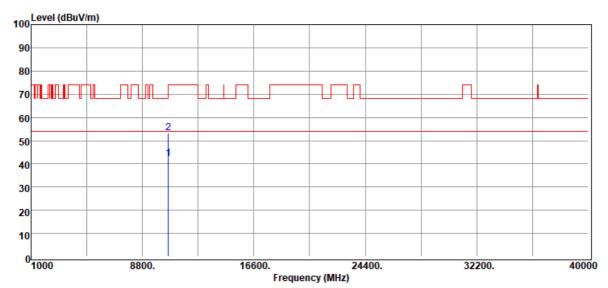
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 2 Test Date :2020-06-22

Test Frequency :5300 MHz Temp./Humi. :24.3/65
Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
10600.00	Average	31.22	11.10	42.32	54.00	-11.68
10600.00	Peak	42.15	11.10	53.25	74.00	-20.75

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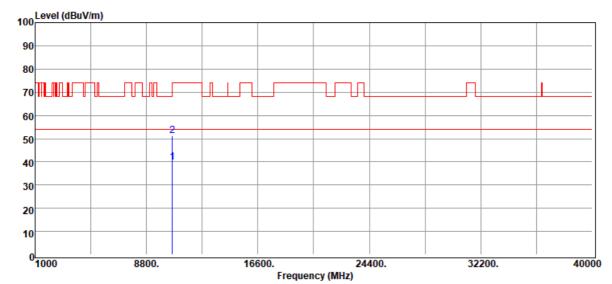
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 2 **Test Date** :2020-06-22

Test Frequency :5300 MHz Temp./Humi. :24.3/65

Test Mode :TX CH MID Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBµV/m	Limit @3m dBuV/m	Margin dB
		<u> </u>	<u> </u>	<u> </u>	«= µ . ,	
10600.00 10600.00	Average Peak	28.58 40.11	11.10 11.10	39.68 51.21	54.00 74.00	-14.32 -22.79

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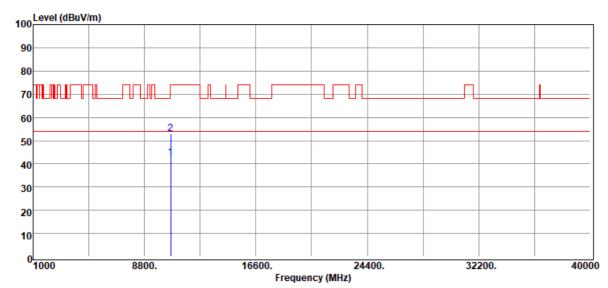
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 2 Test Date :2020-06-22

Test Frequency :5320 MHz Temp./Humi. :24.3/65
Test Mode :TX CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
10640.00	Average	31.45	11.12	42.57	54.00	-11.43
10640.00	Peak	41.80	11.12	52.92	74.00	-21.08

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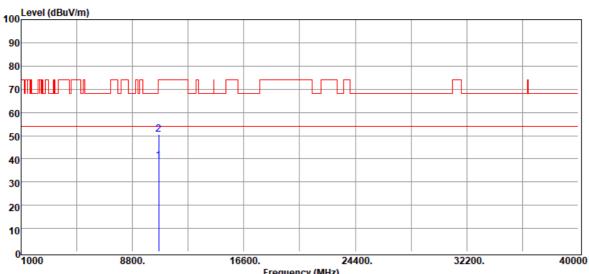
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 2 **Test Date** :2020-06-22

Test Frequency :5320 MHz Temp./Humi. :24.3/65

Test Mode :TX CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



rrequency (Mn2)									
	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin		
	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB		
	10640.00	Average	27.89	11.12	39.01	54.00	-14.99		
	10640.00	Peak	39.44	11.12	50.56	74.00	-23.44		

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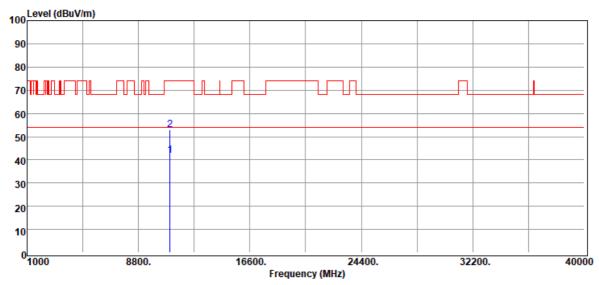
Antenna Pol.

Report Number Test Site :966 Chamber D :E2/2020/50133

:2020-06-22 **Operation Mode** :802.11a / Band 3 **Test Date**

Test Frequency :5500 MHz Temp./Humi. :24.3/65 Test Mode :TX CH LOW :VERTICAL

EUT Pol :E2 Plan :Kailin Engineer



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	31.87	9.88	41.75	54.00	-12.25
11000.00	Peak	43.05	9.88	52.93	74.00	-21.07

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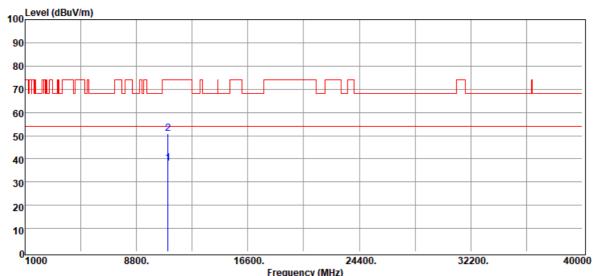
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 3 **Test Date** :2020-06-22

Test Frequency :5500 MHz Temp./Humi. :24.3/65

Test Mode :TX CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



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	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	28.32	9.88	38.20	54.00	-15.80
	11000.00	Peak	40.95	9.88	50.83	74.00	-23.17

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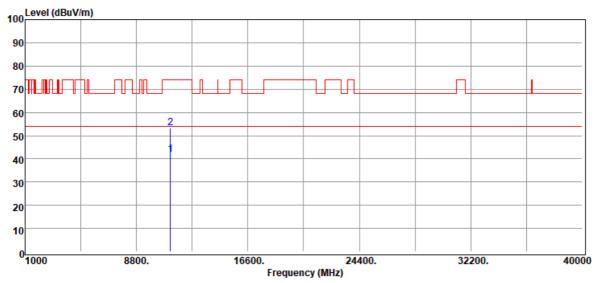
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 3 Test Date :2020-06-22

Test Frequency :5580 MHz Temp./Humi. :24.3/65
Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11160.00	Average	31.62	10.39	42.01	54.00	-11.99
11160.00	Peak	42.79	10.39	53.18	74.00	-20.82

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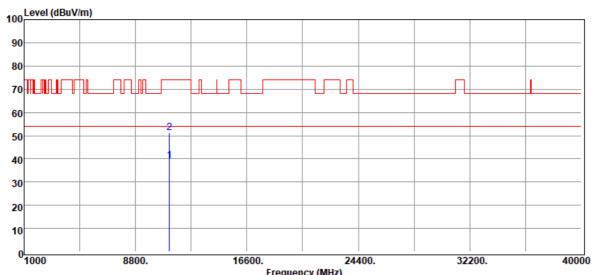
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 3 **Test Date** :2020-06-22

Test Frequency :5580 MHz Temp./Humi. :24.3/65

Test Mode :TX CH MID Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



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	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin		
	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB		
	11160.00	Average	28.79	10.39	39.18	54.00	-14.82		
	11160.00	Peak	40.74	10.39	51.13	74.00	-22.87		

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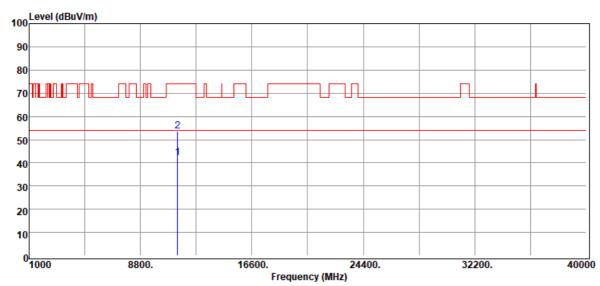
Antenna Pol.

Report Number Test Site :966 Chamber D :E2/2020/50133

:2020-06-22 **Operation Mode** :802.11a / Band 3 **Test Date**

Test Frequency :5700 MHz Temp./Humi. :24.5/63 Test Mode :TX CH HIGH :VERTICAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11400.00	Average	31.05	11.09	42.14	54.00	-11.86
11400.00	Peak	42.59	11.09	53.68	74.00	-20.32

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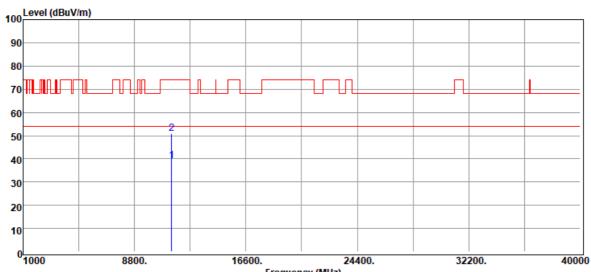
Report Number Test Site :966 Chamber D :E2/2020/50133

Test Date Operation Mode :802.11a / Band 3 :2020-06-22

Test Frequency :5700 MHz Temp./Humi. :24.5/63

Test Mode :TX CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



		Frequency (M	HZ)			
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11400.00	Average	28.07	11.09	39.16	54.00	-14.84
11400.00	Peak	39.89	11.09	50.98	74.00	-23.02

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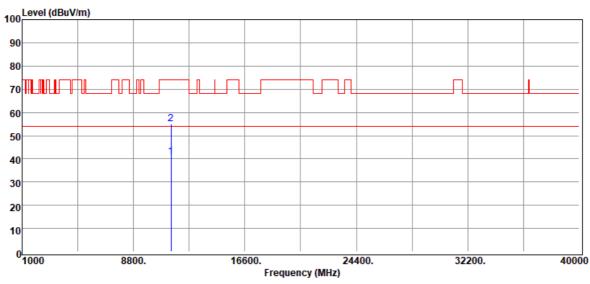
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 3-4 Test Date :2020-06-22

Test Frequency :5720 MHz Temp./Humi. :24.5/63
Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11440.00	Average	28.87	11.81	40.68	54.00	-13.32
11440.00	Peak	43.06	11.81	54.87	74.00	-19.13

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



Test Mode

Report No.: E2/2020/50133

:HORIZONTAL

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Antenna Pol.

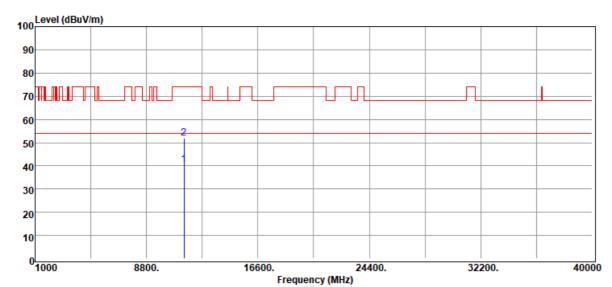
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 3-4 **Test Date** :2020-06-22

Test Frequency :5720 MHz Temp./Humi. :24.5/63

EUT Pol :E2 Plan :Kailin Engineer

:TX CH MID



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11440.00	Average	28.58	11.81	40.39	54.00	-13.61
11440.00	Peak	39.96	11.81	51.77	74.00	-22.23

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



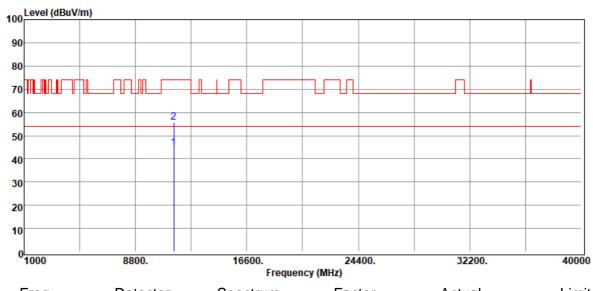
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 4 Test Date :2020-06-22

Test Frequency :5745 MHz Temp./Humi. :24.5/63
Test Mode :TX CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



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	31.85	12.69	44.54	54.00	-9.46
11490.00	Peak	43.11	12.69	55.80	74.00	-18.20

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



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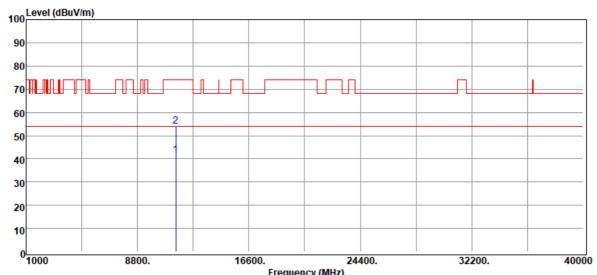
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 4 **Test Date** :2020-06-22

Test Frequency :5745 MHz Temp./Humi. :24.5/63

Test Mode :TX CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



		rrequency (m				
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBμV/m	dB
11490.00	Average	28.84	12.69	41.53	54.00	-12.47
11490.00	Peak	41.22	12.69	53.91	74.00	-20.09

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



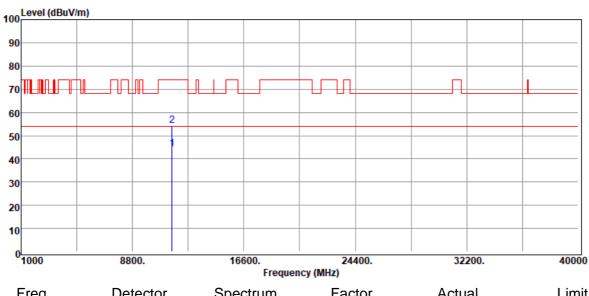
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 4 Test Date :2020-06-22

Test Frequency :5785 MHz Temp./Humi. :24.5/63
Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11570.00	Average	31.79	12.38	44.17	54.00	-9.83
11570.00	Peak	41.98	12.38	54.36	74.00	-19.64

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



:E2 Plan

EUT Pol

Report No.: E2/2020/50133

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:Kailin

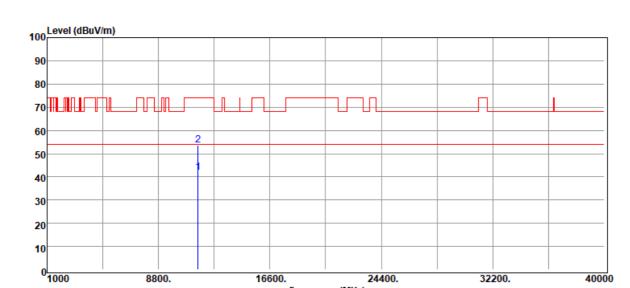
Engineer

Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 4 **Test Date** :2020-06-22

Test Frequency :5785 MHz Temp./Humi. :24.5/63

Test Mode :TX CH MID Antenna Pol. :HORIZONTAL



			rrequency (m	,			
	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
_							
	11570.00	Average	29.41	12.38	41.79	54.00	-12.21
	11570.00	Peak	41.22	12.38	53.60	74.00	-20.40

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



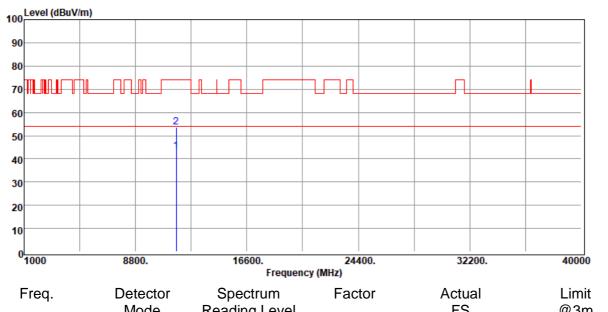
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 4 Test Date :2020-06-22

Test Frequency :5825 MHz Temp./Humi. :24.5/63
Test Mode :TX CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11650.00	Average	31.87	11.21	43.08	54.00	-10.92
11650.00	Peak	42.48	11.21	53.69	74.00	-20.31

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



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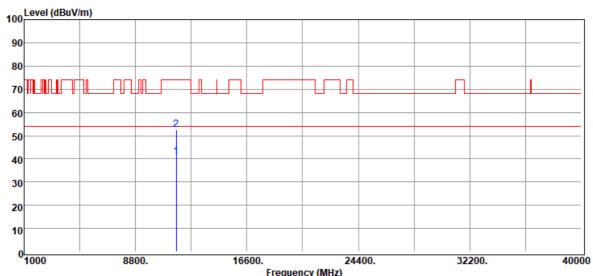
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 4 **Test Date** :2020-06-22

Test Frequency :5825 MHz Temp./Humi. :24.5/63

Test Mode :TX CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



		rroquency (m	,			
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
						_
11650.00	Average	29.74	11.21	40.95	54.00	-13.05
11650.00	Peak	41.53	11.21	52.74	74.00	-21.26

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



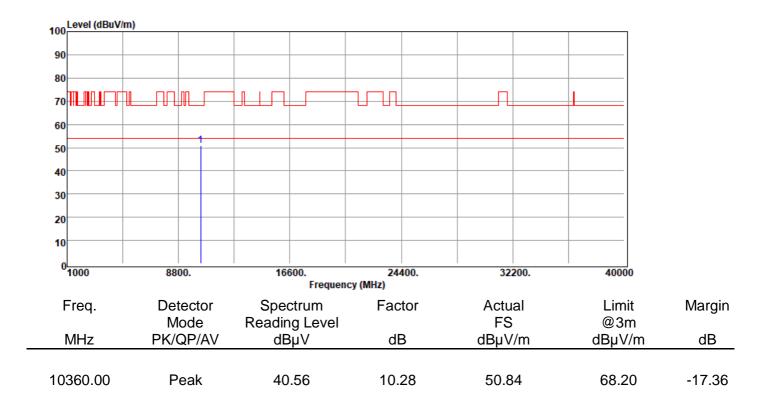
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 1 Test Date :2020-06-22

Test Frequency :5180 MHz Temp./Humi. :24.5/62
Test Mode :TX CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



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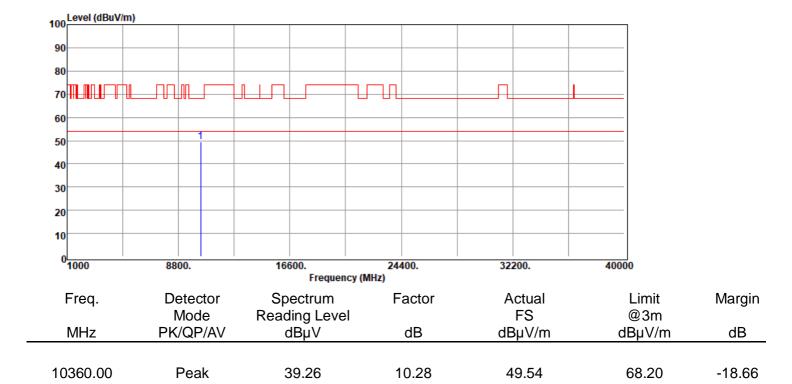
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 1 Test Date :2020-06-22

Test Frequency :5180 MHz Temp./Humi. :24.5/62

Test Mode :TX CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



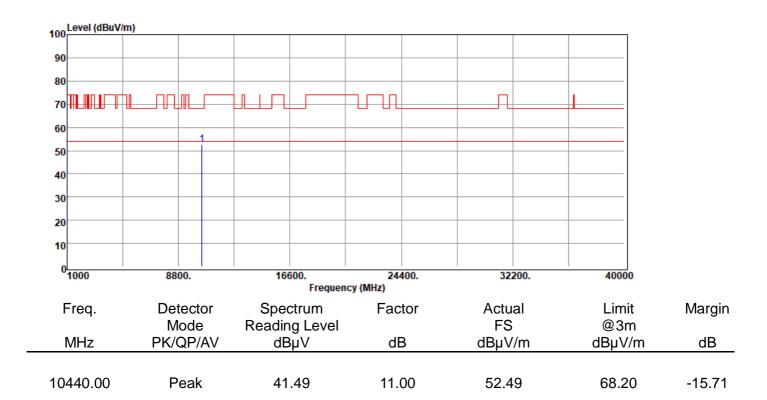
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 1 Test Date :2020-06-22

Test Frequency :5220 MHz Temp./Humi. :24.5/62
Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



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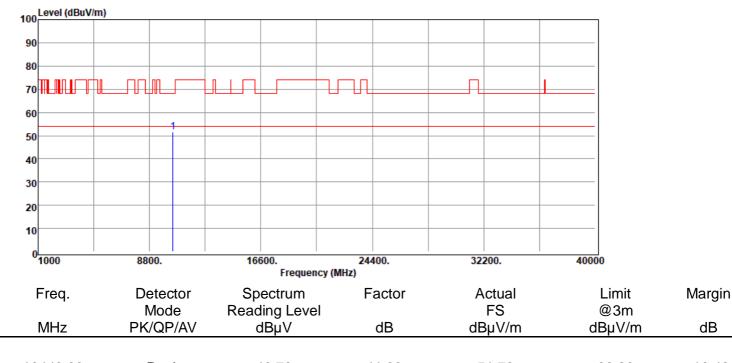
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 1 Test Date :2020-06-22

Test Frequency :5220 MHz Temp./Humi. :24.5/62

Test Mode :TX CH MID Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



10440.00	Peak	40.72	11.00	51.72	68.20	-16.48

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



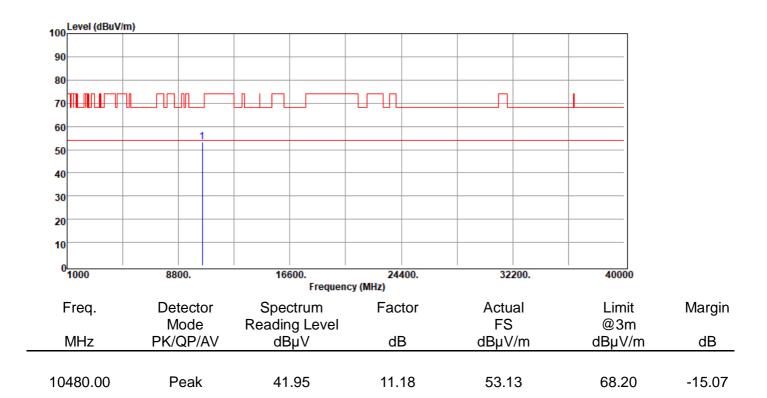
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 1 Test Date :2020-06-22

Test Frequency :5240 MHz Temp./Humi. :24.5/62
Test Mode :TX CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



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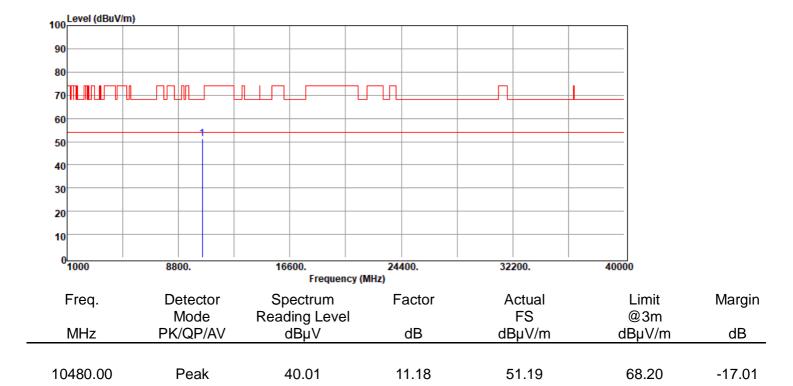
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 1 Test Date :2020-06-22

Test Frequency :5240 MHz Temp./Humi. :24.5/62

Test Mode :TX CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



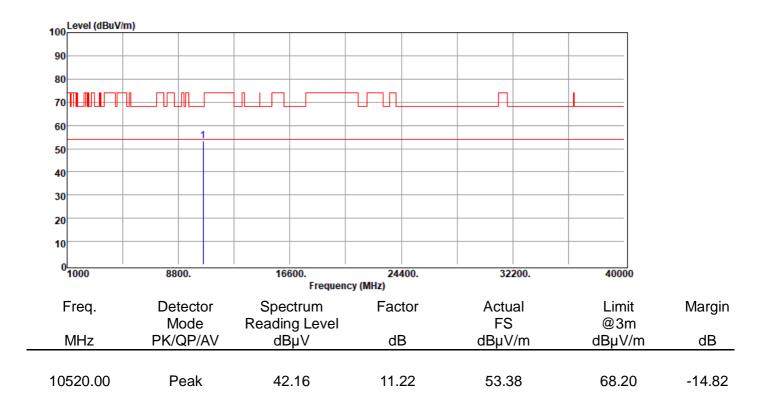
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 2 Test Date :2020-06-22

Test Frequency :5260 MHz Temp./Humi. :24.5/62
Test Mode :TX CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



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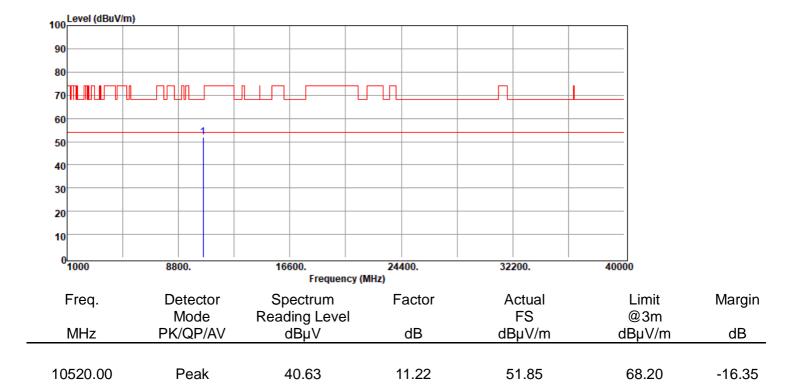
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 2 Test Date :2020-06-22

Test Frequency :5260 MHz Temp./Humi. :24.5/62

Test Mode :TX CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



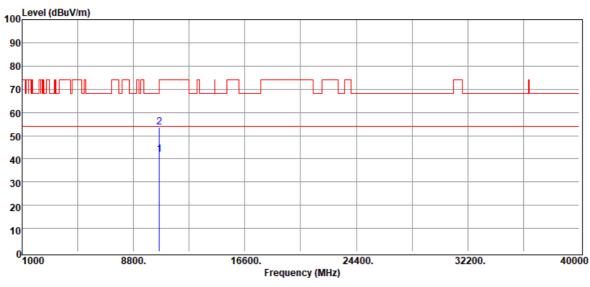
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 2 Test Date :2020-06-22

Test Frequency :5300 MHz Temp./Humi. :24.4/61
Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
10600.00	Average	30.84	11.10	41.94	54.00	-12.06
10600.00	Peak	42.48	11.10	53.58	74.00	-20.42

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

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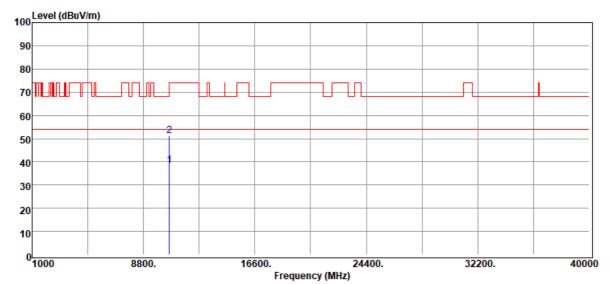
Report Number Test Site :966 Chamber D :E2/2020/50133

:2020-06-22 **Operation Mode** :802.11n20 / Band 2 **Test Date**

Test Frequency :5300 MHz Temp./Humi. :24.4/61

Test Mode :TX CH MID Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
			-	- I	- 1	_
10600.00 10600.00	Average Peak	27.48 40.11	11.10 11.10	38.58 51.21	54.00 74.00	-15.42 -22.79

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



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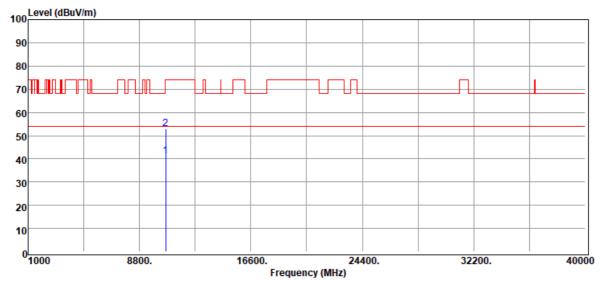
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 2 Test Date :2020-06-22

Test Frequency :5320 MHz Temp./Humi. :24.4/61

Test Mode :TX CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
10640.00	Average	29.89	11.12	41.01	54.00	-12.99
10640.00	Peak	41.95	11.12	53.07	74.00	-20.93

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



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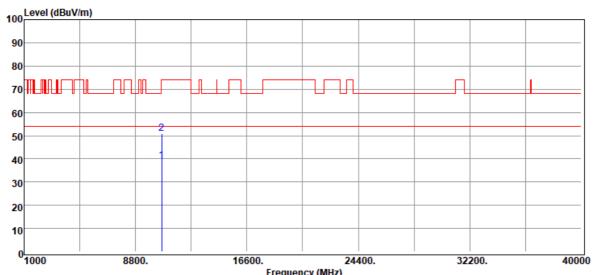
Report Number Test Site :966 Chamber D :E2/2020/50133

:2020-06-22 **Operation Mode** :802.11n20 / Band 2 **Test Date**

Test Frequency :5320 MHz Temp./Humi. :24.4/61

Test Mode :TX CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



		rroquency (m	,			
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
10640.00	Average	27.98	11.12	39.10	54.00	-14.90
10640.00	Peak	39.74	11.12	50.86	74.00	-23.14

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



Test Mode

Report No.: E2/2020/50133

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:VERTICAL

Antenna Pol.

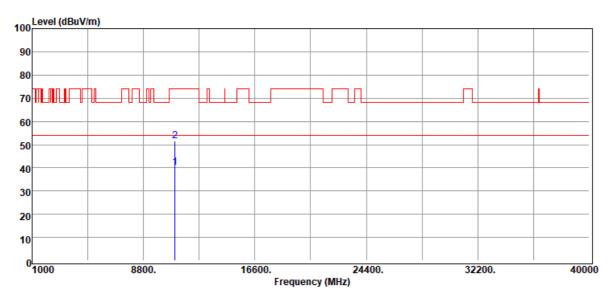
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 3 Test Date :2020-06-22

Test Frequency :5500 MHz Temp./Humi. :24.4/61

EUT Pol :E2 Plan Engineer :Kailin

:TX CH LOW



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	30.41	9.88	40.29	54.00	-13.71
11000.00	Peak	41.73	9.88	51.61	74.00	-22.39

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



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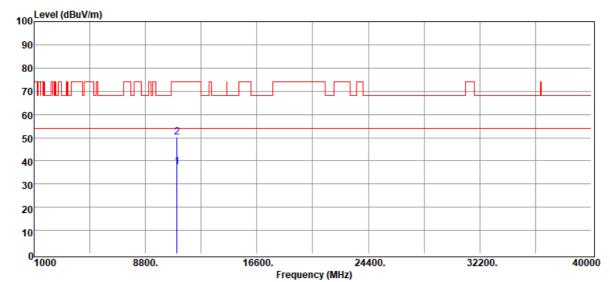
Report Number Test Site :966 Chamber D :E2/2020/50133

:2020-06-22 **Operation Mode** :802.11n20 / Band 3 **Test Date**

Test Frequency :5500 MHz Temp./Humi. :24.4/61

Test Mode :TX CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



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	27.48	9.88	37.36	54.00	-16.64
11000.00	Peak	40.26	9.88	50.14	74.00	-23.86

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



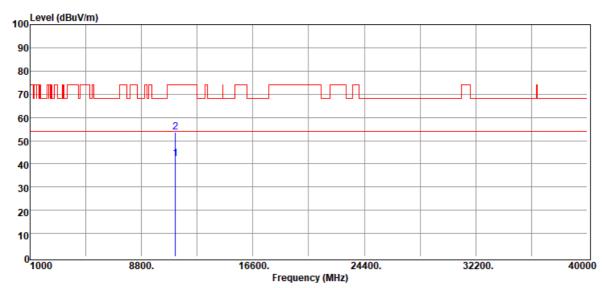
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 3 Test Date :2020-06-22

Test Frequency :5580 MHz Temp./Humi. :24.4/61
Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11160.00	Average	31.71	10.39	42.10	54.00	-11.90
11160.00	Peak	43.15	10.39	53.54	74.00	-20.46

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



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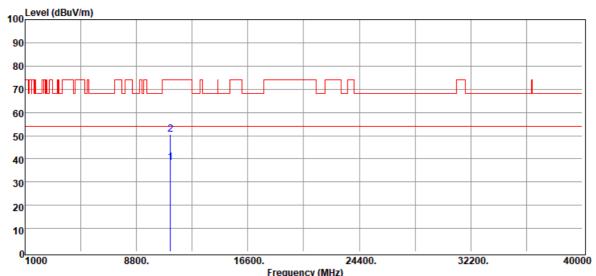
Report Number Test Site :966 Chamber D :E2/2020/50133

:2020-06-22 **Operation Mode** :802.11n20 / Band 3 **Test Date**

Test Frequency :5580 MHz Temp./Humi. :24.4/61

Test Mode :TX CH MID Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



requests (mile)							
	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
	11160.00	Average	27.94	10.39	38.33	54.00	-15.67
	11160.00	Peak	40.05	10.39	50.44	74.00	-23.56

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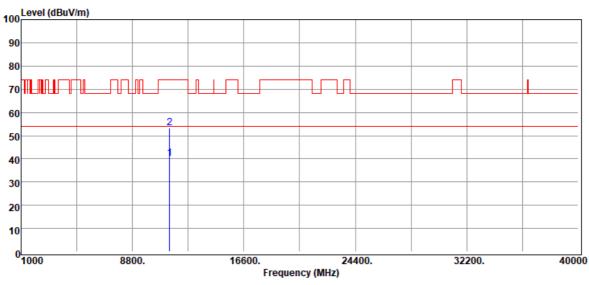
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 3 Test Date :2020-06-22

Test Frequency :5700 MHz Temp./Humi. :24.4/61

Test Mode :TX CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11400.00	Average	29.19	11.09	40.28	54.00	-13.72
11400.00	Peak	42.18	11.09	53.27	74.00	-20.73

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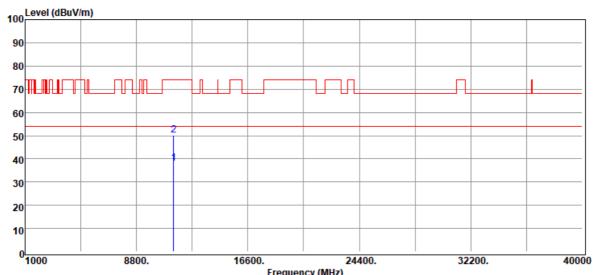
Report Number Test Site :966 Chamber D :E2/2020/50133

:2020-06-22 **Operation Mode** :802.11n20 / Band 3 **Test Date**

Test Frequency :5700 MHz Temp./Humi. :24.4/61

Test Mode :TX CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



requests (minz)									
	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin		
	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB		
	11400.00	Average	27.08	11.09	38.17	54.00	-15.83		
	11400.00	Peak	38.95	11.09	50.04	74.00	-23.96		

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



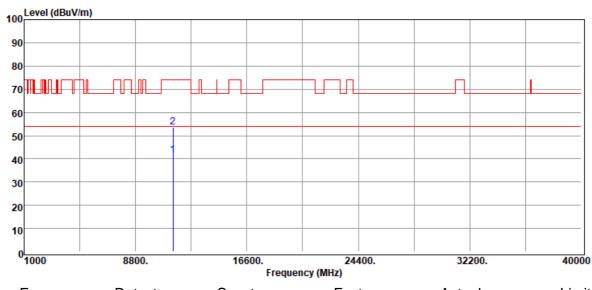
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 3-4 Test Date :2020-06-22

Test Frequency :5720 MHz Temp./Humi. :24.4/62
Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11440.00	Average	29.88	11.81	41.69	54.00	-12.31
11440.00	Peak	41.78	11.81	53.59	74.00	-20.41

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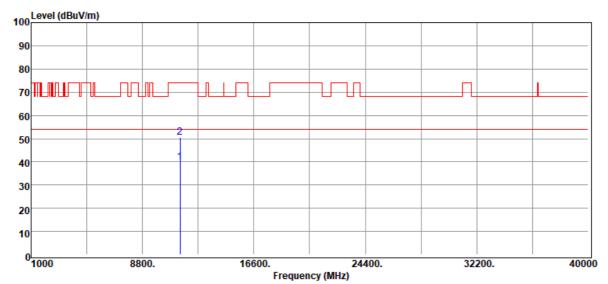
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11n20 / Band 3-4 **Test Date** :2020-06-22

Test Frequency Temp./Humi. :24.4/62 :5720 MHz

Test Mode :TX CH MID Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
11440.00	Average	28.00	11.81	39.81	54.00	-14.19
11440.00	Peak	38.67	11.81	50.48	74.00	-23.52

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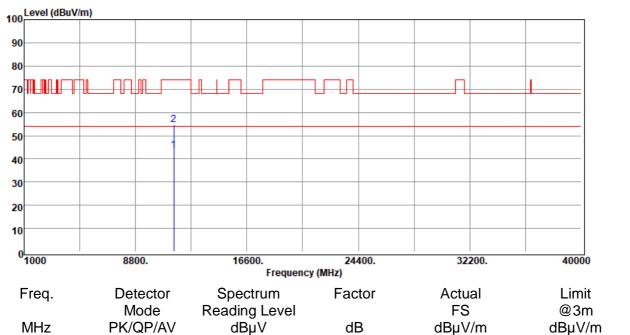
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 4 Test Date :2020-06-22

Test Frequency :5745 MHz Temp./Humi. :24.4/62
Test Mode :TX CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



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	30.77	12.69	43.46	54.00	-10.54
11490.00	Peak	41.92	12.69	54.61	74.00	-19.39

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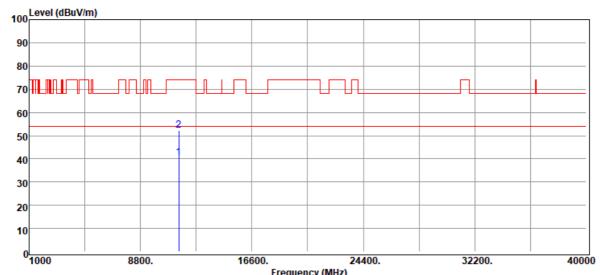
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 4 Test Date :2020-06-22

Test Frequency :5745 MHz Temp./Humi. :24.4/62

Test Mode :TX CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



		rrequency (m	,			
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	27.80	12.69	40.49	54.00	-13.51
11490.00	Peak	39.61	12.69	52.30	74.00	-21.70

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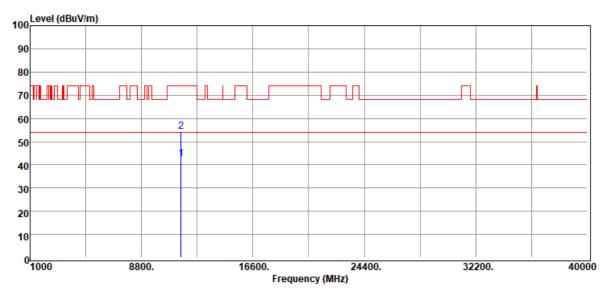
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 4 Test Date :2020-06-22

Test Frequency :5785 MHz Temp./Humi. :24.4/62
Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11570.00	Average	30.07	12.38	42.45	54.00	-11.55
11570.00	Peak	41.80	12.38	54.18	74.00	-19.82

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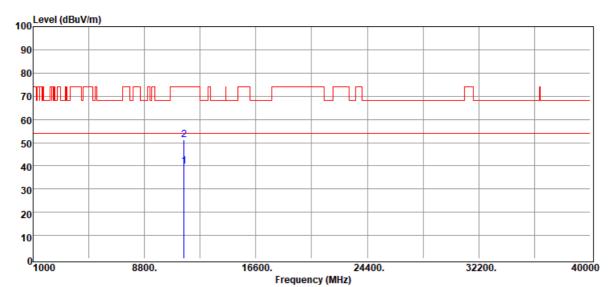
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11n20 / Band 4 **Test Date** :2020-06-22

Test Frequency Temp./Humi. :24.4/62 :5785 MHz

Test Mode :TX CH MID Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11570.00	Average	27.44	12.38	39.82	54.00	-14.18
11570.00	Peak	38.70	12.38	51.08	74.00	-22.92

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



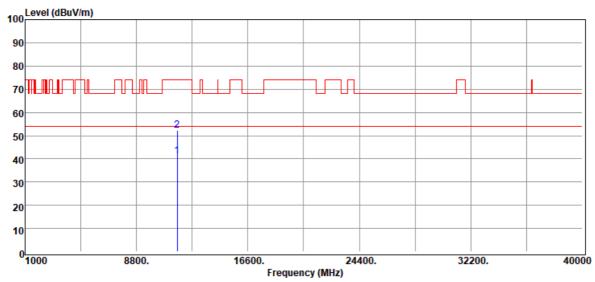
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 4 Test Date :2020-06-22

Test Frequency :5825 MHz Temp./Humi. :24.4/62
Test Mode :TX CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11650.00	Average	29.88	11.21	41.09	54.00	-12.91
11650.00	Peak	40.93	11.21	52.14	74.00	-21.86

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Test Mode

Report No.: E2/2020/50133

:HORIZONTAL

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Antenna Pol.

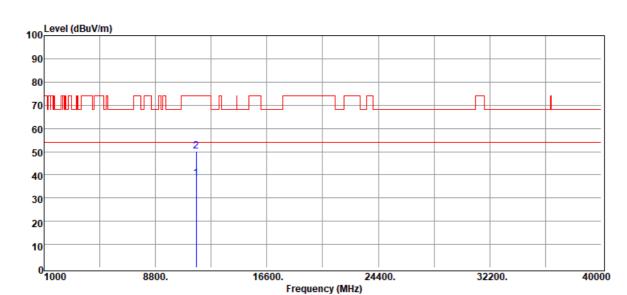
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11n20 / Band 4 **Test Date** :2020-06-22

Test Frequency Temp./Humi. :24.4/62 :5825 MHz

EUT Pol :E2 Plan :Kailin Engineer

:TX CH HIGH



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11650.00	Average	27.03	11.21	38.24	54.00	-15.76
11650.00	Peak	38.79	11.21	50.00	74.00	-24.00

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



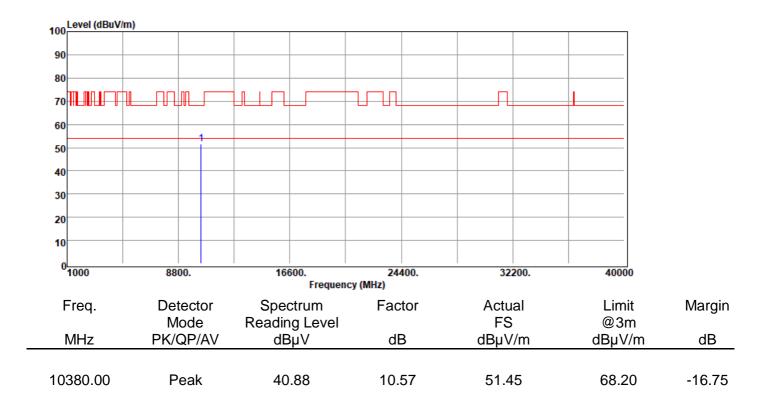
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 1 Test Date :2020-06-22

Test Frequency :5190 MHz Temp./Humi. :24.4/62
Test Mode :TX CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



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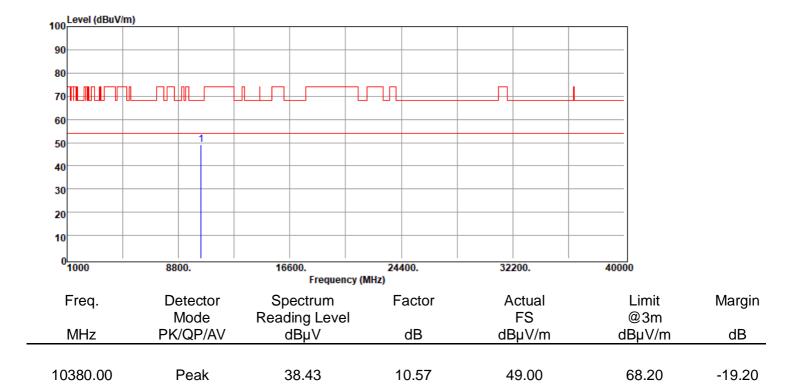
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 1 Test Date :2020-06-22

Test Frequency :5190 MHz Temp./Humi. :24.4/62

Test Mode :TX CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



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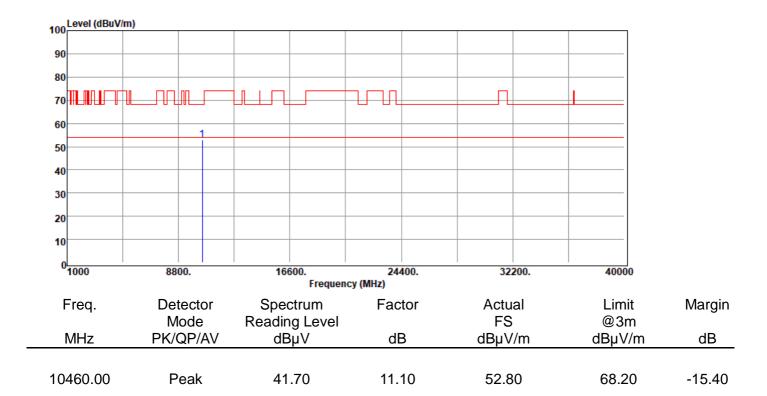
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 1 Test Date :2020-06-22

Test Frequency :5230 MHz Temp./Humi. :24.3/63
Test Mode :TX CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



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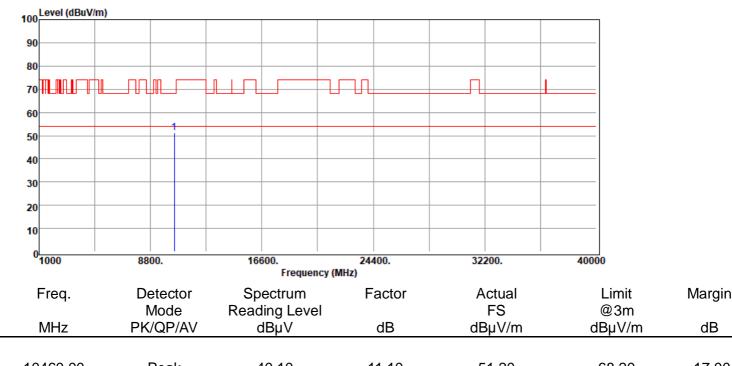
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11n40 / Band 1 **Test Date** :2020-06-22

Test Frequency :5230 MHz Temp./Humi. :24.3/63

Test Mode :TX CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
10460.00	Peak	40.10	11.10	51.20	68.20	-17.00

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



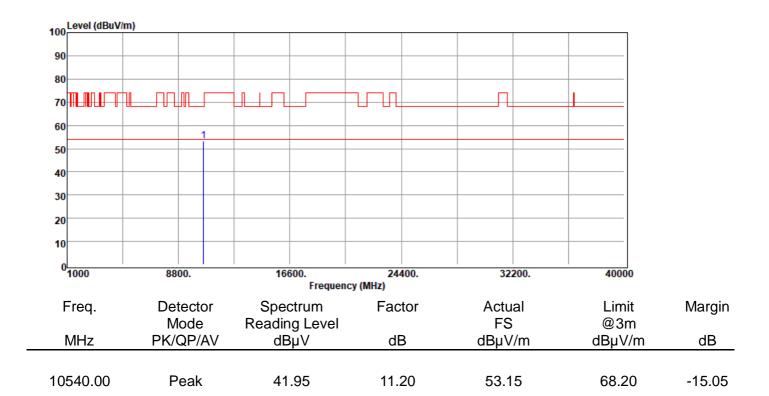
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 2 Test Date :2020-06-22

Test Frequency :5270 MHz Temp./Humi. :24.3/63
Test Mode :TX CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



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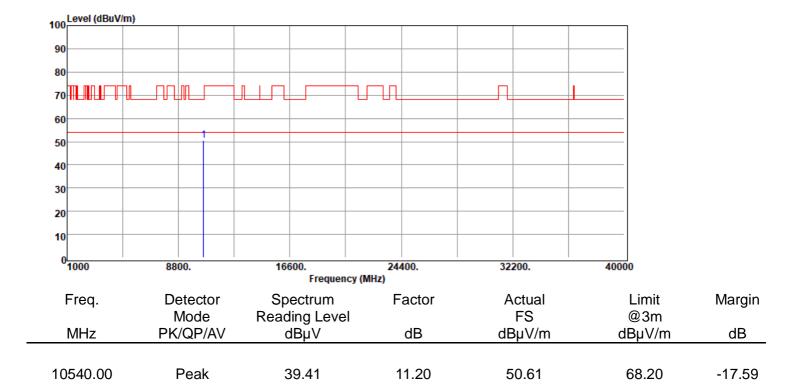
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 2 Test Date :2020-06-22

Test Frequency :5270 MHz Temp./Humi. :24.3/63

Test Mode :TX CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



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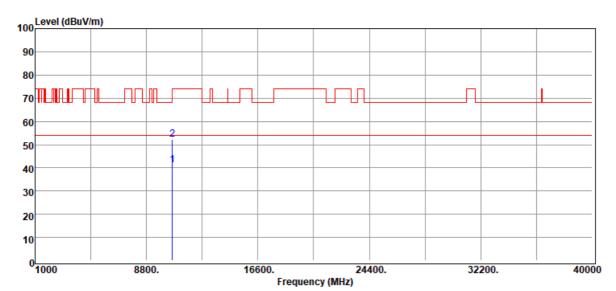
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 2 Test Date :2020-06-22

Test Frequency :5310 MHz Temp./Humi. :24.3/63
Test Mode :TX CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
10620.00	Average	29.99	11.10	41.09	54.00	-12.91
10620.00	Peak	41.23	11.10	52.33	74.00	-21.67

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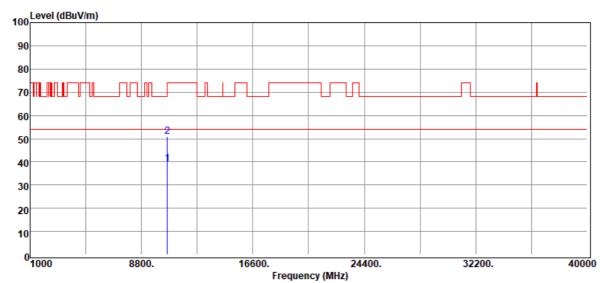
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11n40 / Band 2 **Test Date** :2020-06-22

Test Frequency Temp./Humi. :24.3/63 :5310 MHz

Test Mode :TX CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
10620.00	Average	27.85	11.10	38.95	54.00	-15.05
10620.00	Peak	39.72	11.10	50.82	74.00	-23.18

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



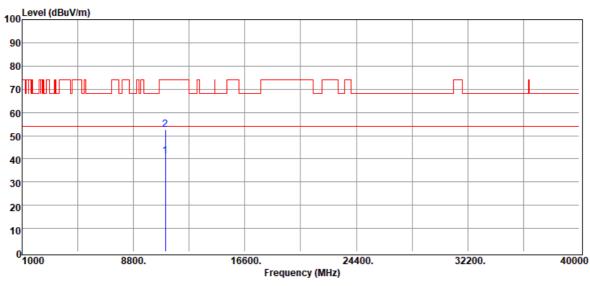
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 3 Test Date :2020-06-22

Test Frequency :5510 MHz Temp./Humi. :24.3/63
Test Mode :TX CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



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	31.25	9.98	41.23	54.00	-12.77
11020.00	Peak	42.61	9.98	52.59	74.00	-21.41

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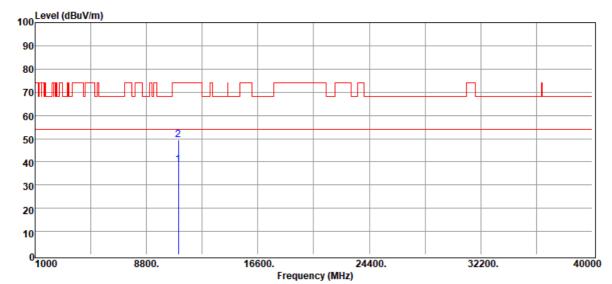
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 3 Test Date :2020-06-22

Test Frequency :5510 MHz Temp./Humi. :24.3/63

Test Mode :TX CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



	rel dB	FS dBµV/m	@3m dBµV/m	dB
11020.00 Average 28.71	9.98	38.69	54.00	-15.31
11020.00 Peak 39.41	9.98	49.39	74.00	-24.61

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



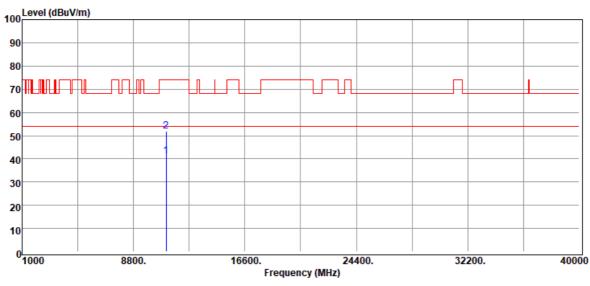
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 3 Test Date :2020-06-22

Test Frequency :5550 MHz Temp./Humi. :24.3/63
Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11100.00	Average	30.81	10.40	41.21	54.00	-12.79
11100.00	Peak	41.52	10.40	51.92	74.00	-22.08

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:E2 Plan

EUT Pol

Report No.: E2/2020/50133

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:Kailin

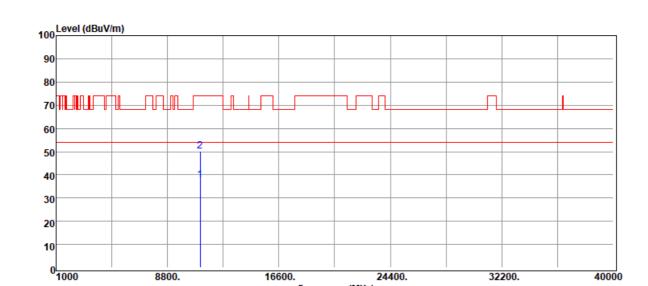
Engineer

Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11n40 / Band 3 **Test Date** :2020-06-22

Test Frequency Temp./Humi. :24.3/63 :5550 MHz

Test Mode :TX CH MID Antenna Pol. :HORIZONTAL



Frequency (Mnz)								
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin		
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB		
11100.00	Average	27.48	10.40	37.88	54.00	-16.12		
11100.00	Peak	39.85	10.40	50.25	74.00	-23.75		
	MHz 11100.00	Mode MHz PK/QP/AV 11100.00 Average	Freq. Detector Spectrum Mode Reading Level MHz PK/QP/AV dBµV 11100.00 Average 27.48	Freq. Detector Spectrum Factor Mode Reading Level dBµV dB 11100.00 Average 27.48 10.40	Freq.Detector Mode PK/QP/AVSpectrum Reading Level dBμVFactor dBActual FS dBμV/m11100.00Average27.4810.4037.88	Freq.Detector Mode PK/QP/AVSpectrum Reading Level dBμVFactor dBActual FS dBμV/mLimit @3m dBμV/m11100.00Average27.4810.4037.8854.00		

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



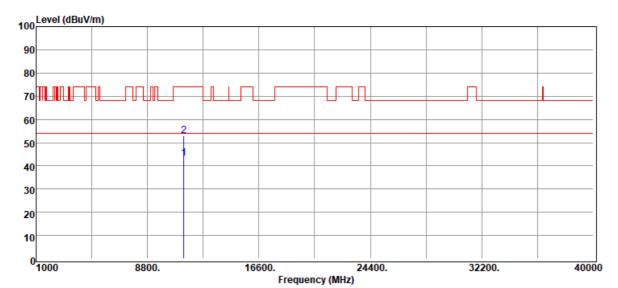
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 3 Test Date :2020-06-22

Test Frequency :5670 MHz Temp./Humi. :24.3/63
Test Mode :TX CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11340.00	Average	31.92	11.26	43.18	54.00	-10.82
11340.00	Peak	41.59	11.26	52.85	74.00	-21.15

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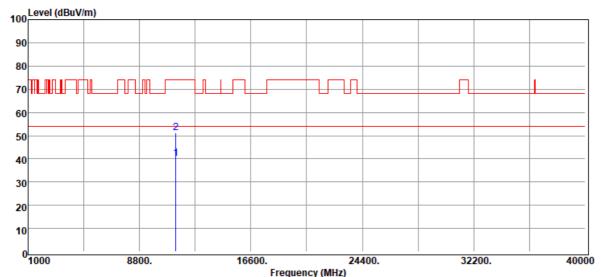
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 3 Test Date :2020-06-22

Test Frequency :5670 MHz Temp./Humi. :24.3/63

Test Mode :TX CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11340.00	Average	28.88	11.26	40.14	54.00	-13.86
11340.00	Peak	39.85	11.26	51.11	74.00	-22.89

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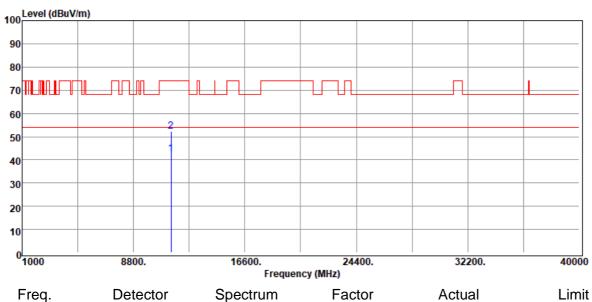
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 3-4 Test Date :2020-06-22

Test Frequency :5710 MHz Temp./Humi. :24.2/64
Test Mode :TX CH MID Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11420.00	Average	30.95	11.45	42.40	54.00	-11.60
11420.00	Peak	40.97	11.45	52.42	74.00	-21.58

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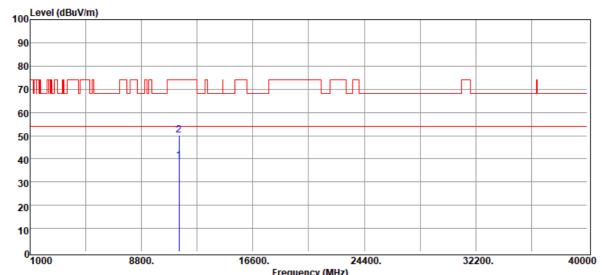
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 3-4 Test Date :2020-06-22

Test Frequency :5710 MHz Temp./Humi. :24.2/64

Test Mode :TX CH MID Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



			rroquency (m	,			
	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
_							
	11420.00	Average	27.49	11.45	38.94	54.00	-15.06
	11420.00	Peak	38.66	11.45	50.11	74.00	-23.89

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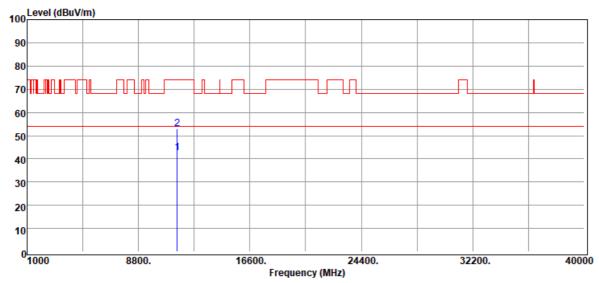
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 4 Test Date :2020-06-22

Test Frequency :5755 MHz Temp./Humi. :24.2/64
Test Mode :TX CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11510.00	Average	29.71	12.80	42.51	54.00	-11.49
11510.00	Peak	40.22	12.80	53.02	74.00	-20.98

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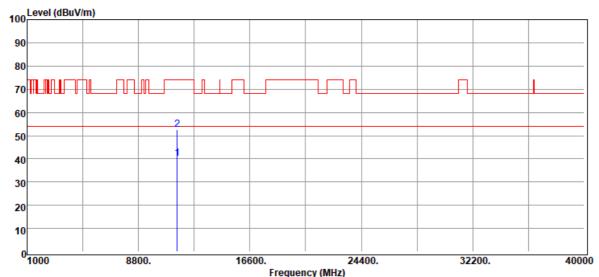
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11n40 / Band 4 **Test Date** :2020-06-22

Test Frequency Temp./Humi. :24.2/64 :5755 MHz

Test Mode :TX CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11510.00	Average	27.41	12.80	40.21	54.00	-13.79
11510.00	Peak	39.71	12.80	52.51	74.00	-21.49

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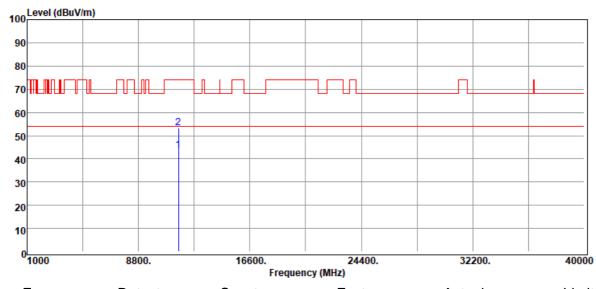
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Report Number Test Site :966 Chamber D :E2/2020/50133

:2020-06-22 **Operation Mode** :802.11n40 / Band 4 **Test Date**

Test Frequency :5795 MHz Temp./Humi. :24.2/64 Test Mode :TX CH HIGH :VERTICAL Antenna Pol.

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11590.00	Average	31.28	12.24	43.52	54.00	-10.48
11590.00	Peak	41.11	12.24	53.35	74.00	-20.65

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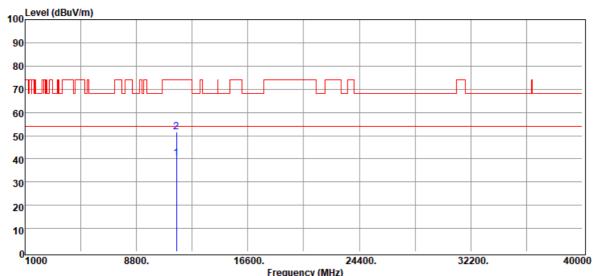
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11n40 / Band 4 **Test Date** :2020-06-22

Test Frequency Temp./Humi. :24.2/64 :5795 MHz

Test Mode :TX CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



requests (mile)							
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB	
11590.00	Average	27.82	12.24	40.06	54.00	-13.94	
11590.00	Peak	39.25	12.24	51.49	74.00	-22.51	

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



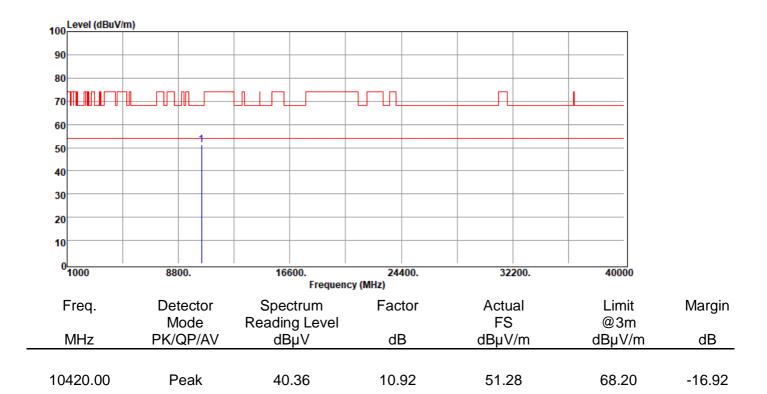
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11ac80 / Band 1 Test Date :2020-06-22

Test Frequency :5210 MHz Temp./Humi. :24.2/64
Test Mode :TX CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



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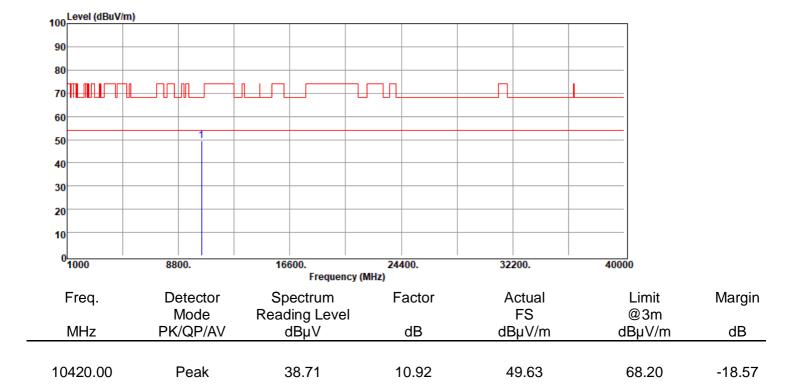
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11ac80 / Band 1 Test Date :2020-06-22

Test Frequency :5210 MHz Temp./Humi. :24.2/64

Test Mode :TX CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



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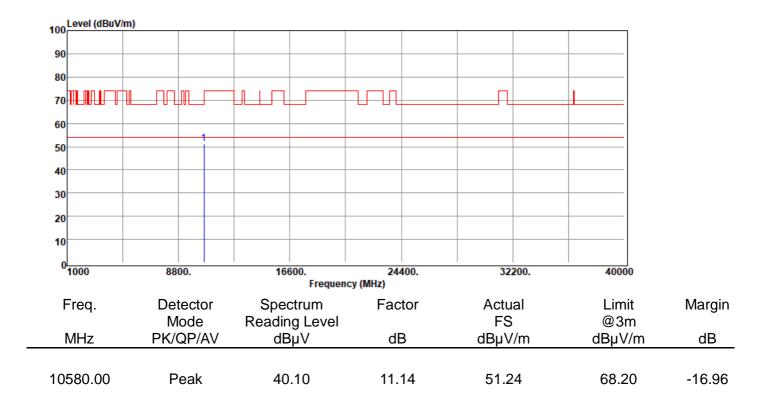
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11ac80 / Band 2 **Test Date** :2020-06-22

Test Frequency :5290 MHz Temp./Humi. :24.2/64

Test Mode :TX CH HIGH :VERTICAL Antenna Pol.

EUT Pol :E2 Plan Engineer :Kailin



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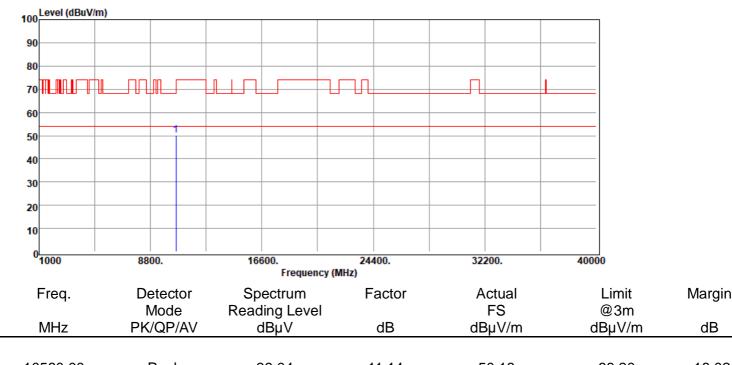
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11ac80 / Band 2 **Test Date** :2020-06-22

Test Frequency :5290 MHz Temp./Humi. :24.2/64

Test Mode :TX CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



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Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
10580.00	Peak	39.04	11.14	50.18	68.20	-18.02
10000.00	1 Call	00.0 -1	11.17	30.10	00.20	10.02

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。



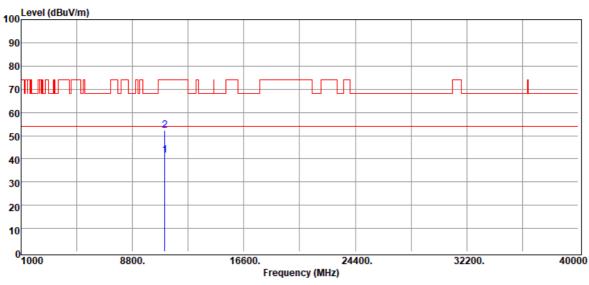
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11ac80 / Band 3 Test Date :2020-06-22

Test Frequency :5530 MHz Temp./Humi. :24.1/63
Test Mode :TX CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11060.00	Average	31.44	10.20	41.64	54.00	-12.36
11060.00	Peak	41.88	10.20	52.08	74.00	-21.92

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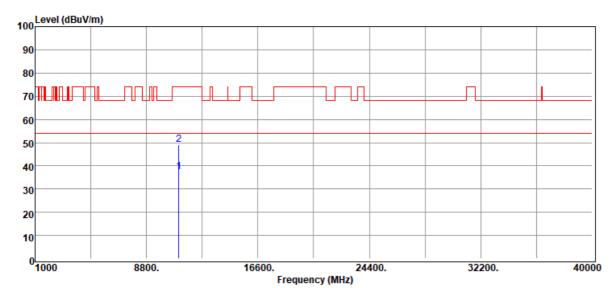
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11ac80 / Band 3 **Test Date** :2020-06-22

Test Frequency :5530 MHz Temp./Humi. :24.1/63

Test Mode :TX CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBµV/m	Limit @3m dBuV/m	Margin dB
-	·	'				
11060.00 11060.00	Average Peak	27.34 38.78	10.20 10.20	37.54 48.98	54.00 74.00	-16.46 -25.02

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.



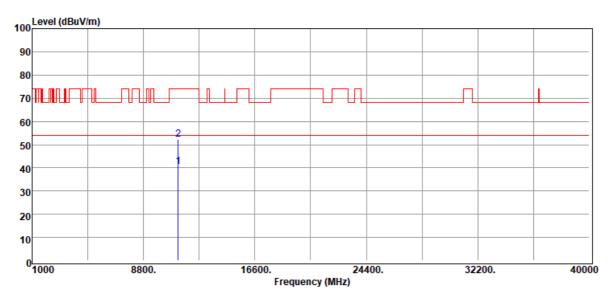
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Report Number Test Site :966 Chamber D :E2/2020/50133

:2020-06-22 **Operation Mode** :802.11ac80 / Band 3 **Test Date**

Test Frequency :5610 MHz Temp./Humi. :24.1/63 Test Mode :TX CH MID :VERTICAL Antenna Pol.

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11220.00	Average	29.94	10.59	40.53	54.00	-13.47
11220.00	Peak	41.72	10.59	52.31	74.00	-21.69

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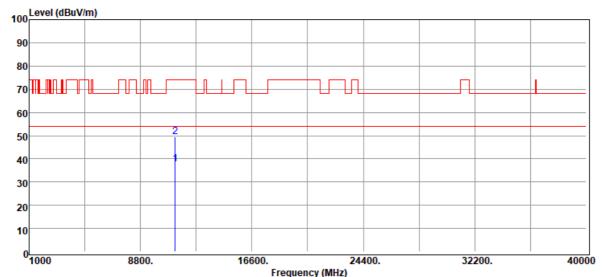
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11ac80 / Band 3 Test Date :2020-06-22

Test Frequency :5610 MHz Temp./Humi. :24.1/63

Test Mode :TX CH MID Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11220.00	Average	27.15	10.59	37.74	54.00	-16.26
11220.00	Peak	38.77	10.59	49.36	74.00	-24.64

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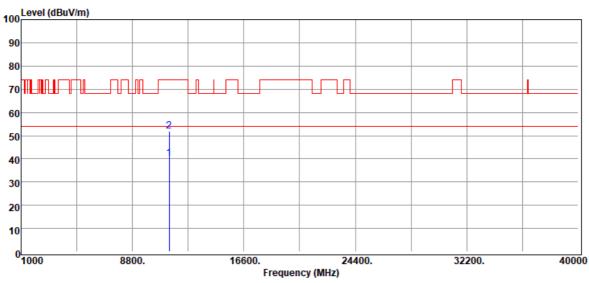
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11ac80 / Band 3 Test Date :2020-06-22

Test Frequency :5690 MHz Temp./Humi. :24.1/63
Test Mode :TX CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11380.00	Average	29.04	11.15	40.19	54.00	-13.81
11380.00	Peak	40.86	11.15	52.01	74.00	-21.99

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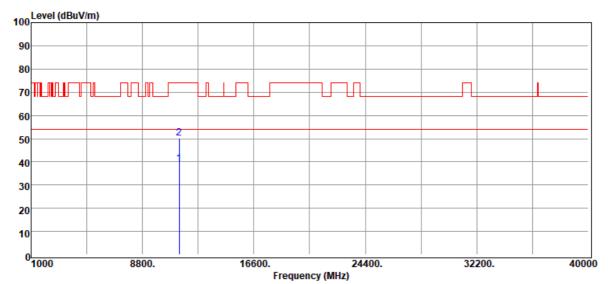
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11ac80 / Band 3 **Test Date** :2020-06-22

Test Frequency :5690 MHz Temp./Humi. :24.1/63

Test Mode :TX CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
11380.00	Average	27.93	11.15	39.08	54.00	-14.92
11380.00	Peak	39.11	11.15	50.26	74.00	-23.74

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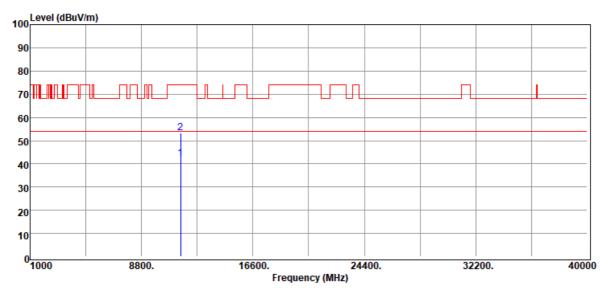
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11ac80 / Band 4 Test Date :2020-06-22

Test Frequency :5775 MHz Temp./Humi. :24.1/63
Test Mode :TX CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11550.00	Average	29.82	12.51	42.33	54.00	-11.67
11550.00	Peak	40.63	12.51	53.14	74.00	-20.86

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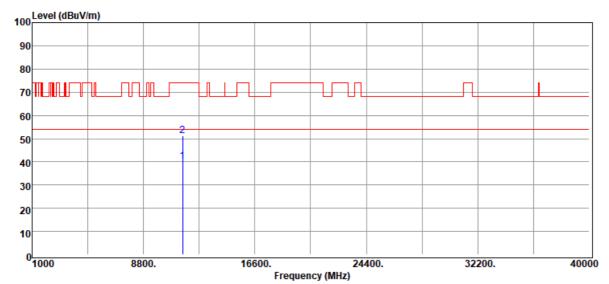
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11ac80 / Band 4 **Test Date** :2020-06-22

Test Frequency Temp./Humi. :24.1/63 :5775 MHz

Test Mode :TX CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBµV/m	Limit @3m dBuV/m	Margin dB
11550.00	Average	27.49	12.51	40.00	54.00	-14.00
11550.00	Peak	38.79	12.51	51.30	74.00	-22.70

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11.7.3 Band edge falling to restricted band

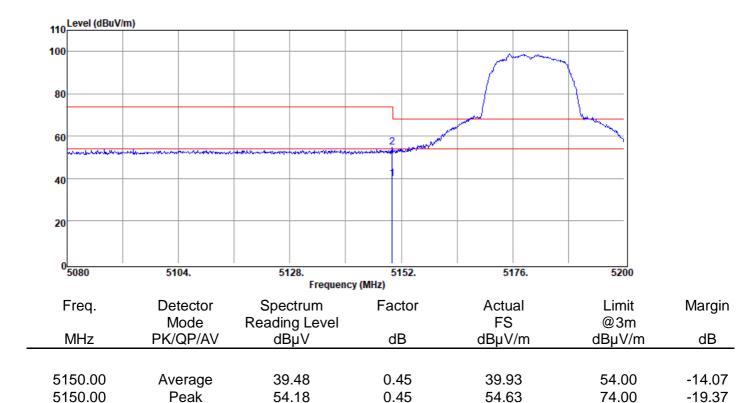
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 1 Test Date :2020-06-20

Test Frequency :5180 MHz Temp./Humi. :21.3/64

Test Mode :BE CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



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Test Mode

Report No.: E2/2020/50133

:HORIZONTAL

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Antenna Pol.

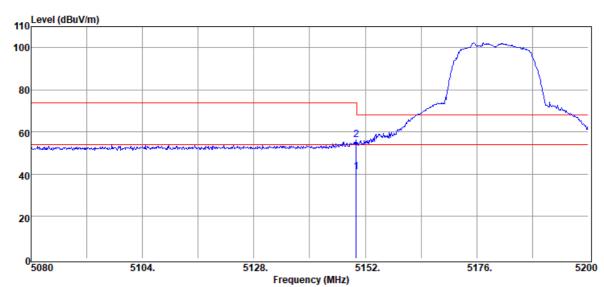
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 1 Test Date :2020-06-20

Test Frequency :5180 MHz Temp./Humi. :21.3/64

EUT Pol :E2 Plan Engineer :Kailin

:BE CH LOW



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	40.65	0.45	41.10	54.00	-12.90
5150.00	Peak	55.78	0.45	56.23	74.00	-17.77

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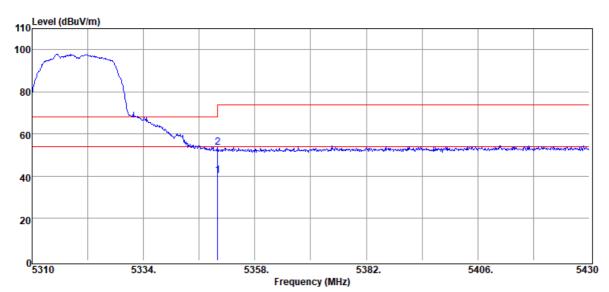
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Test Site Report Number :966 Chamber D :E2/2020/50133

:2020-06-20 **Operation Mode** :802.11a / Band 2 **Test Date**

Test Frequency :5320 MHz Temp./Humi. :21.3/64 Test Mode :BE CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5350.00	Average	40.11	0.17	40.28	54.00	-13.72
5350.00	Peak	53.58	0.17	53.75	74.00	-20.25

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:E2 Plan

EUT Pol

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:Kailin

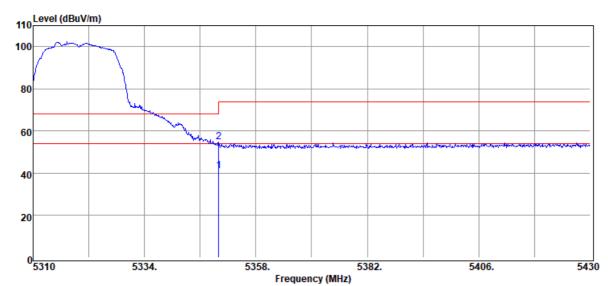
Engineer

Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 2 **Test Date** :2020-06-20

Test Frequency :5320 MHz Temp./Humi. :21.3/64

Test Mode :BE CH HIGH Antenna Pol. :HORIZONTAL



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5350.00	Average	40.84	0.17	41.01	54.00	-12.99
5350.00	Peak	54.81	0.17	54.98	74.00	-19.02

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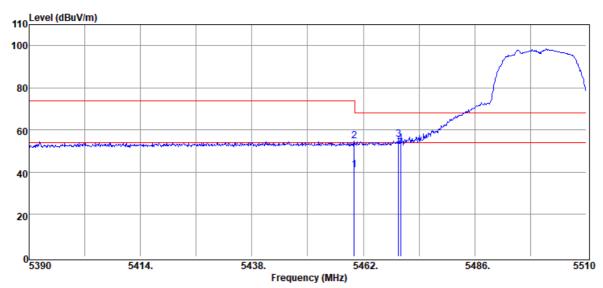
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 3 Test Date :2020-06-20

Test Frequency :5500 MHz Temp./Humi. :21.3/64
Test Mode :BE CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5460.00	Average	39.88	1.28	41.16	54.00	-12.84
5460.00	Peak	53.49	1.28	54.77	74.00	-19.23
5469.56	Peak	54.19	1.35	55.54	68.20	-12.66
5470.00	Peak	52.13	1.36	53.49	68.20	-14.71

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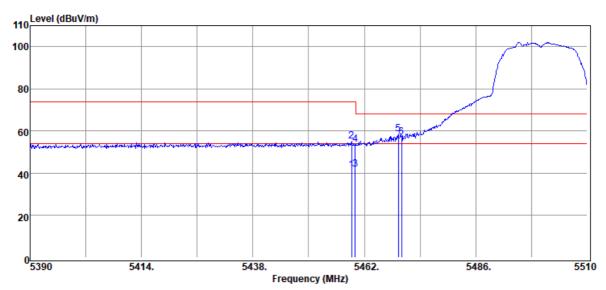
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 3 Test Date :2020-06-20

Test Frequency :5500 MHz Temp./Humi. :21.3/64

Test Mode :BE CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBμV/m	dBμV/m	dB
5459.24	Average	40.15	1.28	41.43	54.00	-12.57
5459.24	Peak	53.74	1.28	55.02	74.00	-18.98
5460.00	Average	40.72	1.28	42.00	54.00	-12.00
5460.00	Peak	52.26	1.28	53.54	74.00	-20.46
5469.32	Peak	57.36	1.35	58.71	68.20	-9.49
5470.00	Peak	55.69	1.36	57.05	68.20	-11.15

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Test Mode

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:VERTICAL

Antenna Pol.

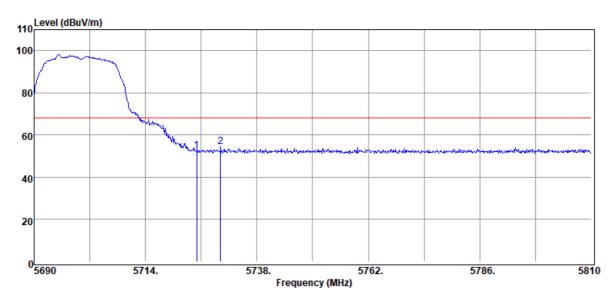
Report Number Test Site :966 Chamber D :E2/2020/50133

:2020-06-20 **Operation Mode** :802.11a / Band 3 **Test Date**

Test Frequency :5700 MHz Temp./Humi. :21.3/64

EUT Pol :E2 Plan :Kailin Engineer

:BE CH HIGH



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
5725.00	Peak	51.37	0.98	52.35	68.20	-15.85
5730.20	Peak	53.42	0.98	54.40	68.20	-13.80

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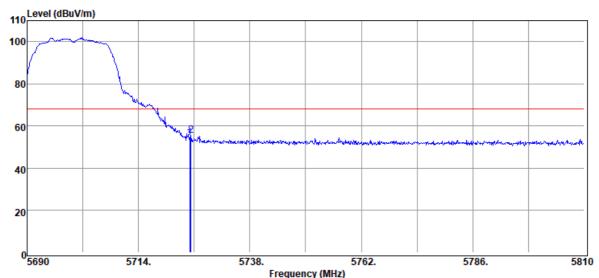
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 3 **Test Date** :2020-06-20

Test Frequency :5700 MHz Temp./Humi. :21.3/64

Test Mode :BE CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5725.00	Peak	53.46	0.98	54.44	68.20	-13.76
5725.28	Peak	54.68	0.98	55.66	68.20	-12.54

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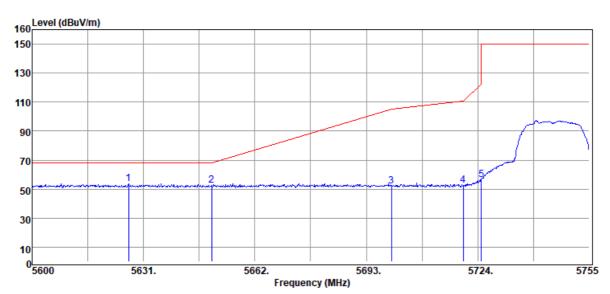
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Test Site Report Number :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 4 **Test Date** :2020-06-20

Test Frequency :5745 MHz Temp./Humi. :21.3/63 Test Mode :BE CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5626.82	Peak	53.20	0.64	53.84	68.20	-14.36
5650.00	Peak	52.18	0.69	52.87	68.20	-15.33
5700.00	Peak	50.83	1.00	51.83	105.20	-53.37
5720.00	Peak	51.65	0.99	52.64	110.80	-58.16
5725.00	Peak	55.47	0.98	56.45	122.20	-65.75

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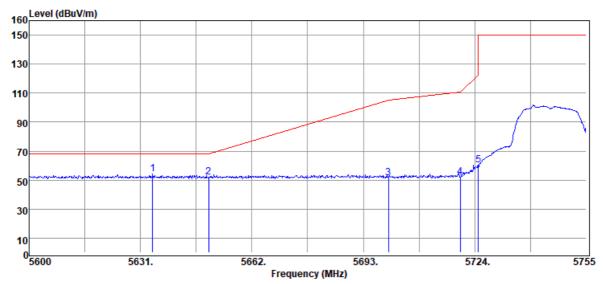
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 4 **Test Date** :2020-06-20

Test Frequency :5745 MHz Temp./Humi. :21.3/63

Test Mode :BE CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5634.41	Peak	53.33	0.66	53.99	68.20	-14.21
5650.00	Peak	51.49	0.69	52.18	68.20	-16.02
5700.00	Peak	50.72	1.00	51.72	105.20	-53.48
5720.00	Peak	51.15	0.99	52.14	110.80	-58.66
5725.00	Peak	59.10	0.98	60.08	122.20	-62.12

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:VERTICAL

Antenna Pol.

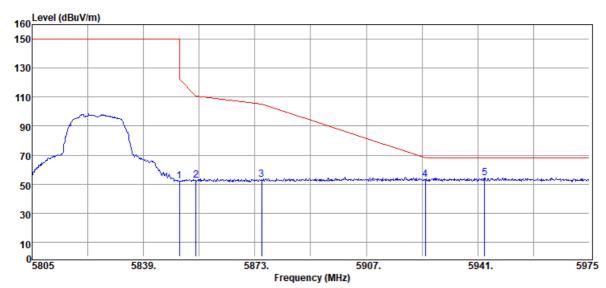
Test Site Report Number :966 Chamber D :E2/2020/50133

Operation Mode :802.11a / Band 4 **Test Date** :2020-06-20

Test Frequency :5825 MHz Temp./Humi. :21.3/63

EUT Pol :E2 Plan :Kailin Engineer

:BE CH HIGH



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5850.00	Peak	50.97	1.13	52.10	122.20	-70.10
5855.00	Peak	51.50	1.16	52.66	110.80	-58.14
5875.00	Peak	51.61	1.31	52.92	105.20	-52.28
5925.00	Peak	51.59	1.37	52.96	68.20	-15.24
5943.04	Peak	53.25	1.28	54.53	68.20	-13.67

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Test Mode

Report No.: E2/2020/50133

:HORIZONTAL

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Antenna Pol.

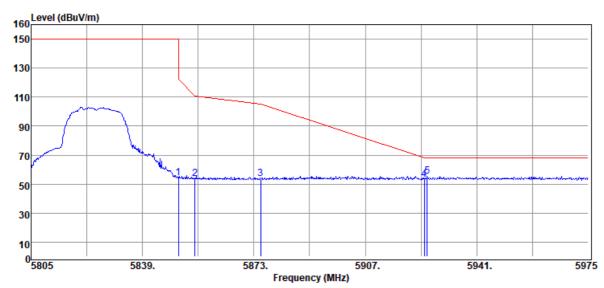
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11a / Band 4 **Test Date** :2020-06-20

Test Frequency :5825 MHz Temp./Humi. :21.3/63

EUT Pol :E2 Plan :Kailin Engineer

:BE CH HIGH



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5850.00	Peak	53.38	1.13	54.51	122.20	-67.69
5855.00	Peak	52.67	1.16	53.83	110.80	-56.97
5875.00	Peak	52.44	1.31	53.75	105.20	-51.45
5925.00	Peak	51.83	1.37	53.20	68.20	-15.00
5925.87	Peak	54.07	1.36	55.43	68.20	-12.77

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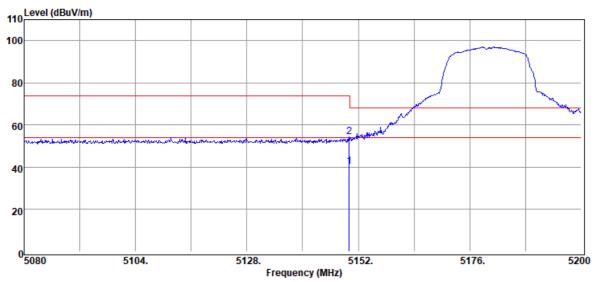
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 1 Test Date :2020-06-20

Test Frequency :5180 MHz Temp./Humi. :21.3/63
Test Mode :BE CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



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	39.89	0.45	40.34	54.00	-13.66
5150.00	Peak	54.04	0.45	54.49	74.00	-19.51

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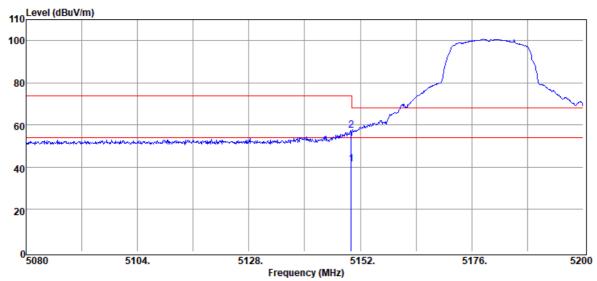
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 1 Test Date :2020-06-20

Test Frequency :5180 MHz Temp./Humi. :21.3/63

Test Mode :BE CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBµV/m	Limit @3m dBuV/m	Margin dB
	·			I		
5150.00 5150.00	Average Peak	40.91 57.07	0.45 0.45	41.36 57.52	54.00 74.00	-12.64 -16.48

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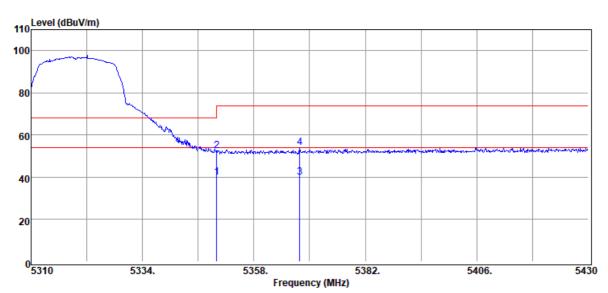
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 2 Test Date :2020-06-20

Test Frequency :5320 MHz Temp./Humi. :21.3/63
Test Mode :BE CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5350.00	Average	39.75	0.17	39.92	54.00	-14.08
5350.00	Peak	52.24	0.17	52.41	74.00	-21.59
5367.84	Average	39.48	0.39	39.87	54.00	-14.13
5367.84	Peak	53.52	0.39	53.91	74.00	-20.09

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Test Mode

Report No.: E2/2020/50133

:HORIZONTAL

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Antenna Pol.

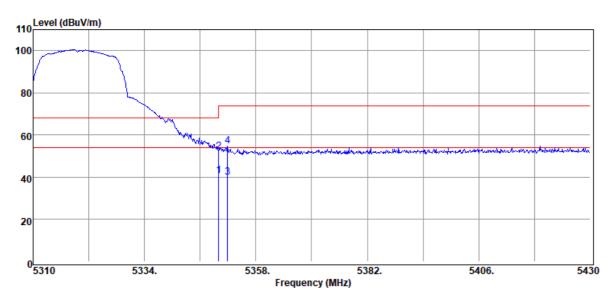
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 2 **Test Date** :2020-06-20

Test Frequency :5320 MHz Temp./Humi. :21.3/63

EUT Pol :E2 Plan :Kailin Engineer

:BE CH HIGH



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5350.00	Average	40.62	0.17	40.79	54.00	-13.21
5350.00	Peak	52.11	0.17	52.28	74.00	-21.72
5351.88	Average	39.75	0.19	39.94	54.00	-14.06
5351.88	Peak	54.50	0.19	54.69	74.00	-19.31

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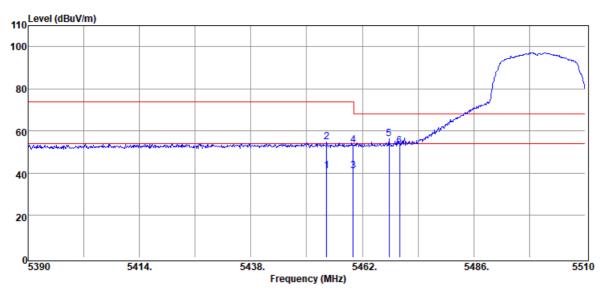
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 3 Test Date :2020-06-20

Test Frequency :5500 MHz Temp./Humi. :21.3/63
Test Mode :BE CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5454.32	Average	39.84	1.25	41.09	54.00	-12.91
5454.32	Peak	53.42	1.25	54.67	74.00	-19.33
5460.00	Average	39.75	1.28	41.03	54.00	-12.97
5460.00	Peak	51.87	1.28	53.15	74.00	-20.85
5467.76	Peak	54.85	1.34	56.19	68.20	-12.01
5470.00	Peak	51.72	1.36	53.08	68.20	-15.12

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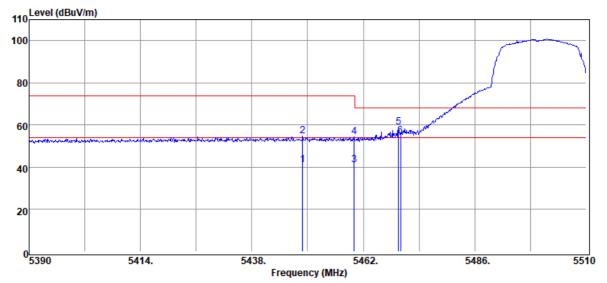
Report Number **Test Site** :966 Chamber D :E2/2020/50133

Test Date Operation Mode :802.11n20 / Band 3 :2020-06-20

Test Frequency :5500 MHz Temp./Humi. :21.3/63

Test Mode :BE CH LOW Antenna Pol. :HORIZONTAL





Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5448.92	Average	39.98	1.21	41.19	54.00	-12.81
5448.92	Peak	53.56	1.21	54.77	74.00	-19.23
5460.00	Average	39.88	1.28	41.16	54.00	-12.84
5460.00	Peak	53.15	1.28	54.43	74.00	-19.57
5469.56	Peak	57.53	1.35	58.88	68.20	-9.32
5470.00	Peak	53.29	1.36	54.65	68.20	-13.55

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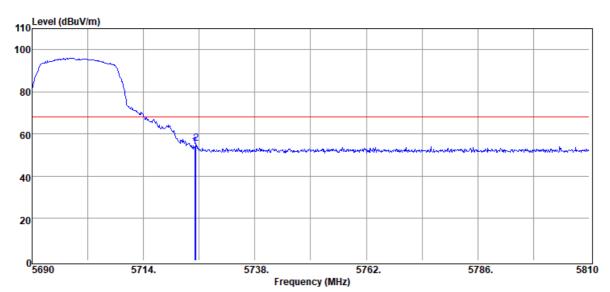
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 3 Test Date :2020-06-20

Test Frequency :5700 MHz Temp./Humi. :21.3/63
Test Mode :BE CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5725.00	Peak	52.92	0.98	53.90	68.20	-14.30
5725.28	Peak	54.44	0.98	55.42	68.20	-12.78

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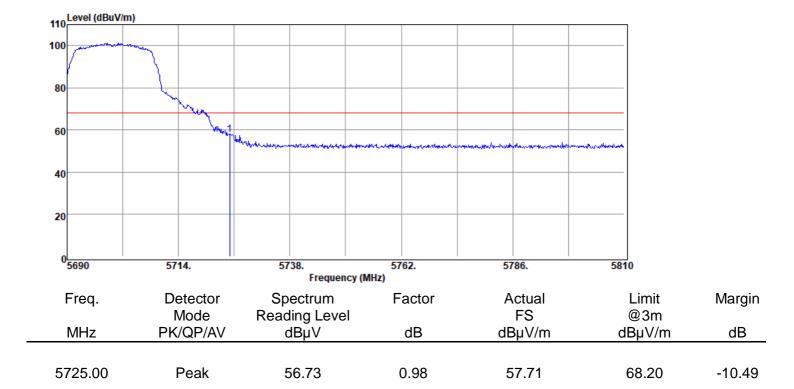
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 3 Test Date :2020-06-20

Test Frequency :5700 MHz Temp./Humi. :21.3/63

Test Mode :BE CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



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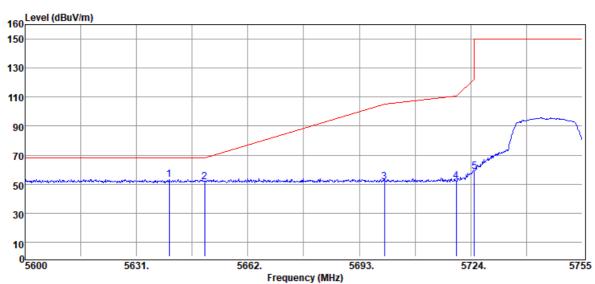
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 4 Test Date :2020-06-20

Test Frequency :5745 MHz Temp./Humi. :21.3/63
Test Mode :BE CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
5640.15	Peak	52.61	0.66	53.27	68.20	-14.93
5650.00	Peak	50.86	0.69	51.55	68.20	-16.65
5700.00	Peak	50.73	1.00	51.73	105.20	-53.47
5720.00	Peak	51.24	0.99	52.23	110.80	-58.57
5725.00	Peak	57.64	0.98	58.62	122.20	-63.58

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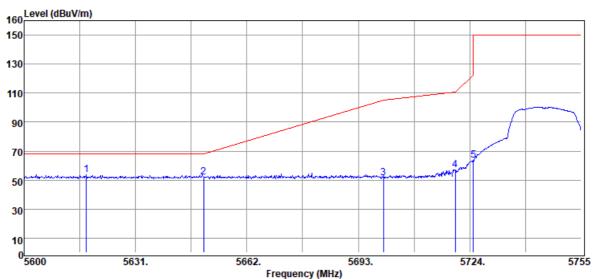
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11n20 / Band 4 **Test Date** :2020-06-20

Test Frequency :5745 MHz Temp./Humi. :21.3/63

Test Mode :BE CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



			,			
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμ̈V	dB	dBµV/m	dBµV/m	dB
5617.36	Peak	52.85	0.62	53.47	68.20	-14.73
5650.00	Peak	51.23	0.69	51.92	68.20	-16.28
5700.00	Peak	50.27	1.00	51.27	105.20	-53.93
5720.00	Peak	56.01	0.99	57.00	110.80	-53.80
5725.00	Peak	62.47	0.98	63.45	122.20	-58.75

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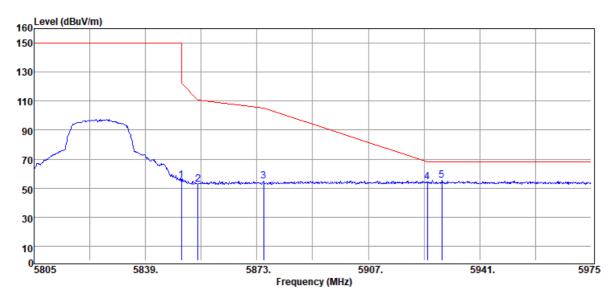
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Test Site Report Number :966 Chamber D :E2/2020/50133

:2020-06-20 **Operation Mode** :802.11n20 / Band 4 **Test Date**

Test Frequency :5825 MHz Temp./Humi. :21.3/63 Test Mode :BE CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5850.00	Peak	54.49	1.13	55.62	122.20	-66.58
5855.00	Peak	51.63	1.16	52.79	110.80	-58.01
5875.00	Peak	53.49	1.31	54.80	105.20	-50.40
5925.00	Peak	52.77	1.37	54.14	68.20	-14.06
5929.44	Peak	53.91	1.35	55.26	68.20	-12.94

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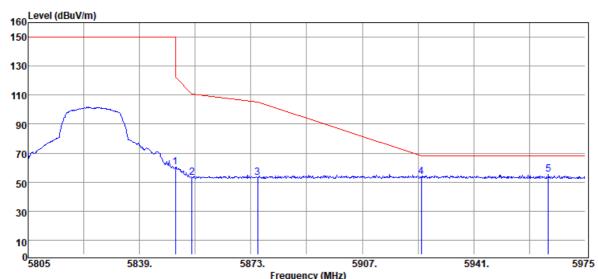
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n20 / Band 4 Test Date :2020-06-20

Test Frequency :5825 MHz Temp./Humi. :21.3/63

Test Mode :BE CH HIGH Antenna Pol. :HORIZONTAL EUT Pol :E2 Plan Engineer :Kailin



	rroquency (m	,			
Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
Peak	58.99	1.13	60.12	122.20	-62.08
Peak	52.08	1.16	53.24	110.80	-57.56
Peak	51.72	1.31	53.03	105.20	-52.17
Peak	52.14	1.37	53.51	68.20	-14.69
Peak	54.43	1.15	55.58	68.20	-12.62
	Mode PK/QP/AV Peak Peak Peak Peak	Detector Mode PK/QP/AV Peak Peak Peak Peak Peak Peak Peak Pea	Mode PK/QP/AV Reading Level dBμV dB Peak 58.99 1.13 Peak 52.08 1.16 Peak 51.72 1.31 Peak 52.14 1.37	Detector Mode PK/QP/AV Spectrum Reading Level ABμV Factor ABμV Actual FS ABμV/m Peak 58.99 1.13 60.12 Peak 52.08 1.16 53.24 Peak 51.72 1.31 53.03 Peak 52.14 1.37 53.51	Detector Mode PK/QP/AV Spectrum Reading Level ABμV Factor ABμV Actual FS Limit @3m ABμV/m Peak 58.99 1.13 60.12 122.20 Peak 52.08 1.16 53.24 110.80 Peak 51.72 1.31 53.03 105.20 Peak 52.14 1.37 53.51 68.20

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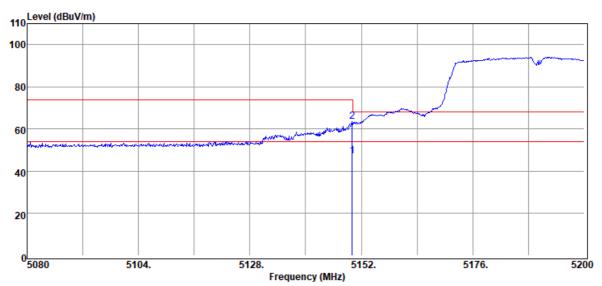
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Test Site Report Number :966 Chamber D :E2/2020/50133

:2020-06-22 **Operation Mode** :802.11n40 / Band 1 **Test Date**

Test Frequency :5190 MHz Temp./Humi. :24.5/64 Test Mode :BE CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan :Kailin Engineer



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	46.83	0.45	47.28	54.00	-6.72
5150.00	Peak	62.98	0.45	63.43	74.00	-10.57

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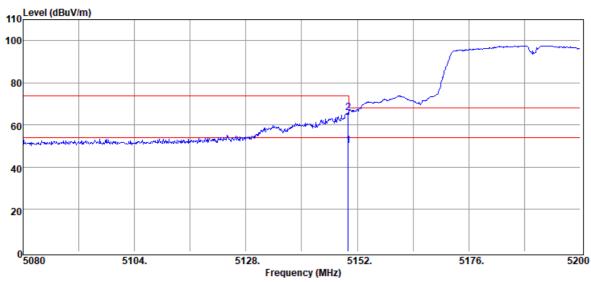
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 1 Test Date :2020-06-22

Test Frequency :5190 MHz Temp./Humi. :24.5/64

Test Mode :BE CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



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	49.77	0.45	50.22	54.00	-3.78
5150.00	Peak	65.22	0.45	65.67	74.00	-8.33

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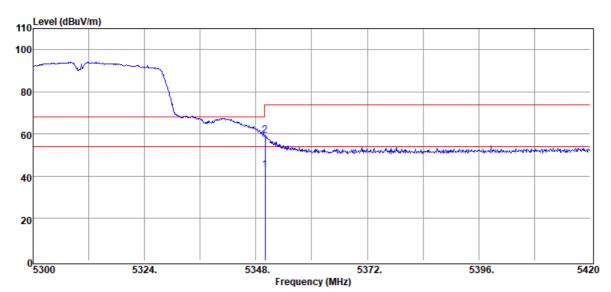
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Report Number Test Site :966 Chamber D :E2/2020/50133

:2020-06-22 **Operation Mode** :802.11n40 / Band 2 **Test Date**

Test Frequency :5310 MHz Temp./Humi. :24.5/64 Test Mode :BE CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5350.00	Average	42.78	0.17	42.95	54.00	-11.05
5350.00	Peak	59.31	0.17	59.48	74.00	-14.52

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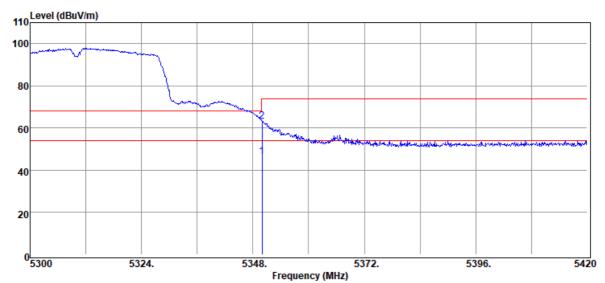
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11n40 / Band 2 **Test Date** :2020-06-22

Test Frequency Temp./Humi. :24.5/64 :5310 MHz

Test Mode :BE CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5350.00	Average	46.33	0.17	46.50	54.00	-7.50
5350.00	Peak	63.06	0.17	63.23	74.00	-10.77

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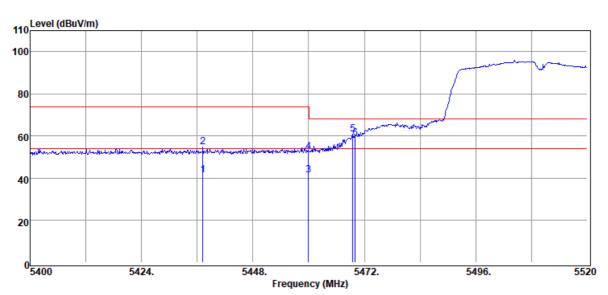
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 3 Test Date :2020-06-22

Test Frequency :5510 MHz Temp./Humi. :24.5/64
Test Mode :BE CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5437.20	Average	40.54	1.11	41.65	54.00	-12.35
5437.20	Peak	53.52	1.11	54.63	74.00	-19.37
5460.00	Average	40.26	1.28	41.54	54.00	-12.46
5460.00	Peak	51.31	1.28	52.59	74.00	-21.41
5469.48	Peak	59.47	1.35	60.82	68.20	-7.38
5470.00	Peak	57.79	1.36	59.15	68.20	-9.05

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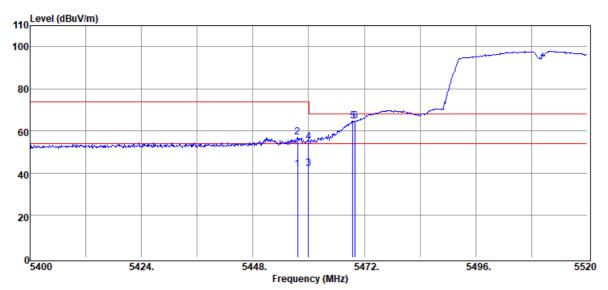
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 3 Test Date :2020-06-22

Test Frequency :5510 MHz Temp./Humi. :24.5/64

Test Mode :BE CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5457.60	Average	40.68	1.28	41.96	54.00	-12.04
5457.60	Peak	55.89	1.28	57.17	74.00	-16.83
5460.00	Average	40.93	1.28	42.21	54.00	-11.79
5460.00	Peak	53.46	1.28	54.74	74.00	-19.26
5469.48	Peak	63.38	1.35	64.73	68.20	-3.47
5470.00	Peak	63.32	1.36	64.68	68.20	-3.52

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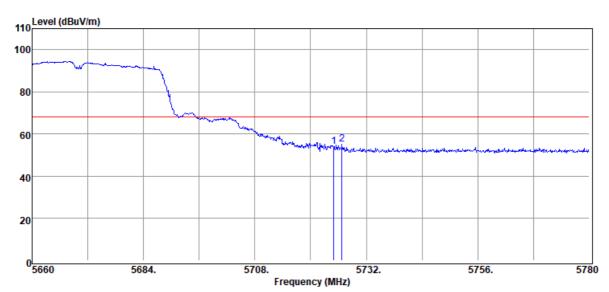
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 3 Test Date :2020-06-22

Test Frequency :5670 MHz Temp./Humi. :24.5/64
Test Mode :BE CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5725.00	Peak	53.06	0.98	54.04	68.20	-14.16
5726.72	Peak	54.37	0.99	55.36	68.20	-12.84

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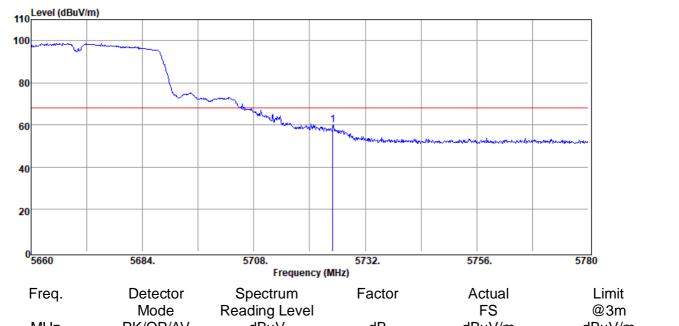
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11n40 / Band 3 **Test Date** :2020-06-22

Test Frequency Temp./Humi. :24.5/64 :5670 MHz

Test Mode :BE CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5725.00	Peak	59.09	0.98	60.07	68.20	-8.13

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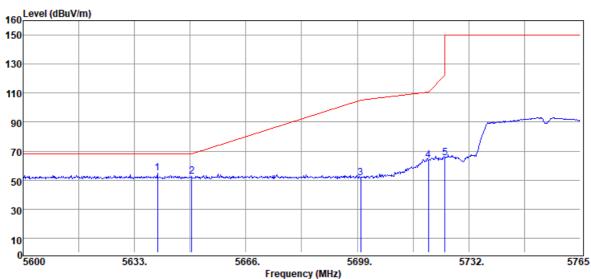
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Test Site Report Number :966 Chamber D :E2/2020/50133

:2020-06-22 **Operation Mode** :802.11n40 / Band 4 **Test Date**

Test Frequency :5755 MHz Temp./Humi. :24.4/65 Test Mode :BE CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin			
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB			
5639.77	Peak	53.89	0.66	54.55	68.20	-13.65			
5650.00	Peak	51.92	0.69	52.61	68.20	-15.59			
5700.00	Peak	50.39	1.00	51.39	105.20	-53.81			
5720.00	Peak	62.94	0.99	63.93	110.80	-46.87			
5725.00	Peak	64.40	0.98	65.38	122.20	-56.82			

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Test Mode

Report No.: E2/2020/50133

:HORIZONTAL

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Antenna Pol.

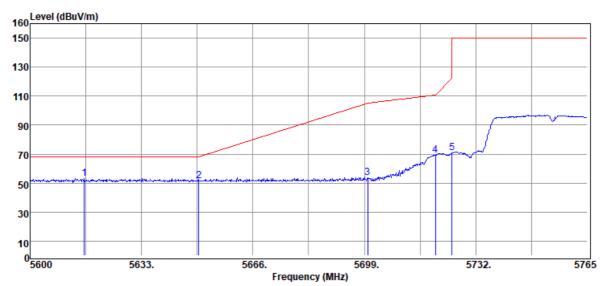
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11n40 / Band 4 **Test Date** :2020-06-22

Test Frequency Temp./Humi. :24.4/65 :5755 MHz

EUT Pol :E2 Plan :Kailin Engineer

:BE CH LOW



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5616.01	Peak	52.60	0.62	53.22	68.20	-14.98
5650.00	Peak	50.58	0.69	51.27	68.20	-16.93
5700.00	Peak	52.66	1.00	53.66	105.20	-51.54
5720.00	Peak	68.48	0.99	69.47	110.80	-41.33
5725.00	Peak	69.97	0.98	70.95	122.20	-51.25

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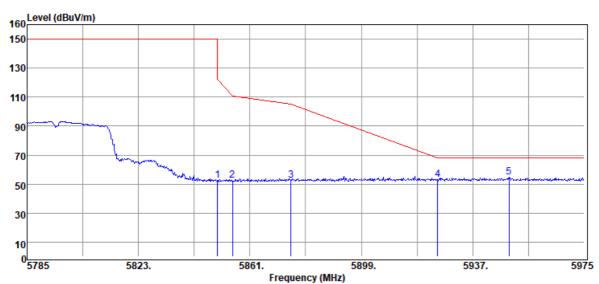
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11n40 / Band 4 Test Date :2020-06-22

Test Frequency :5795 MHz Temp./Humi. :24.4/65
Test Mode :BE CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dΒμV/m	dBµV/m	dB
5850.00	Peak	51.63	1.13	52.76	122.20	-69.44
5855.00	Peak	51.56	1.16	52.72	110.80	-58.08
5875.00	Peak	51.29	1.31	52.60	105.20	-52.60
5925.00	Peak	52.04	1.37	53.41	68.20	-14.79
5949.35	Peak	53.30	1.25	54.55	68.20	-13.65

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:E2 Plan

EUT Pol

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:Kailin

Engineer

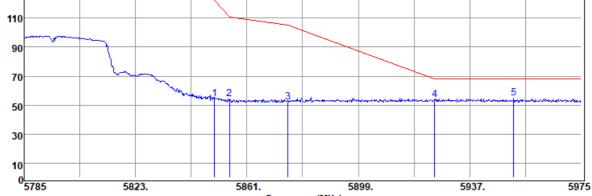
Report Number Test Site :966 Chamber D :E2/2020/50133

Test Date Operation Mode :802.11n40 / Band 4 :2020-06-22

Test Frequency Temp./Humi. :24.4/65 :5795 MHz

Test Mode :BE CH HIGH Antenna Pol. :HORIZONTAL





Frequency (MHZ)									
	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin		
	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB		
	5850.00	Peak	53.23	1.13	54.36	122.20	-67.84		
	5855.00	Peak	52.90	1.16	54.06	110.80	-56.74		
	5875.00	Peak	50.63	1.31	51.94	105.20	-53.26		
	5925.00	Peak	52.59	1.37	53.96	68.20	-14.24		
	5952.01	Peak	53.48	1.23	54.71	68.20	-13.49		

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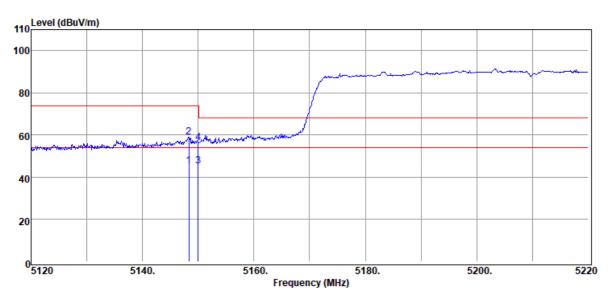
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11ac80 / Band 1 Test Date :2020-06-22

Test Frequency :5210 MHz Temp./Humi. :24.4/65
Test Mode :BE CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5148.30	Average	44.89	0.44	45.33	54.00	-8.67
5148.30	Peak	58.59	0.44	59.03	74.00	-14.97
5150.00	Average	44.68	0.45	45.13	54.00	-8.87
5150.00	Peak	56.02	0.45	56.47	74.00	-17.53

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:E2 Plan

EUT Pol

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:Kailin

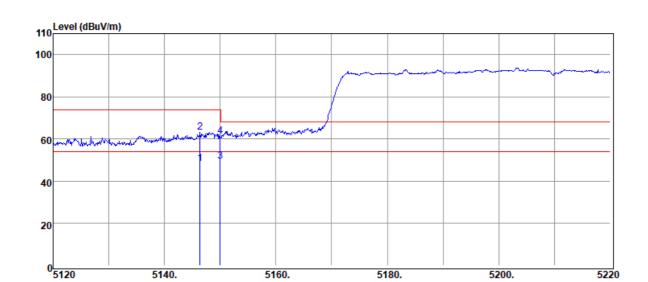
Engineer

Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11ac80 / Band 1 **Test Date** :2020-06-22

Test Frequency :5210 MHz Temp./Humi. :24.4/65

Test Mode :BE CH LOW Antenna Pol. :HORIZONTAL



	Frequency (MHZ)									
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin				
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB				
						_				
5146.40	Average	47.95	0.43	48.38	54.00	-5.62				
5146.40	Peak	62.82	0.43	63.25	74.00	-10.75				
5150.00	Average	48.98	0.45	49.43	54.00	-4.57				
5150.00	Peak	61.01	0.45	61.46	74.00	-12.54				

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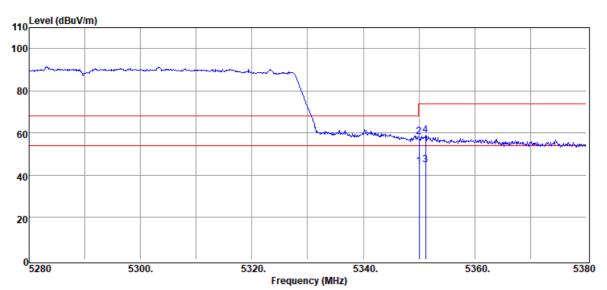
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Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11ac80 / Band 2 Test Date :2020-06-22

Test Frequency :5290 MHz Temp./Humi. :24.4/65
Test Mode :BE CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan Engineer :Kailin



Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
PK/QP/AV	dBμV	dB	dBµV/m	dBµV/m	dB
Average	44.15	0.17	44.32	54.00	-9.68
Peak	57.97	0.17	58.14	74.00	-15.86
Average Peak	44.66 58.92	0.18 0.18	44.84 59.10	54.00 74.00	-9.16 -14.90
	Mode PK/QP/AV Average Peak Average	Mode Reading Level PK/QP/AV dBµV Average 44.15 Peak 57.97 Average 44.66	Mode PK/QP/AV Reading Level dBμV dB Average 44.15 0.17 Peak 57.97 0.17 Average 44.66 0.18	Mode PK/QP/AV Reading Level dBμV FS dBμV/m Average 44.15 0.17 44.32 Peak 57.97 0.17 58.14 Average 44.66 0.18 44.84	Mode PK/QP/AV Reading Level dBμV FS dBμV/m @3m dBμV/m Average 44.15 0.17 44.32 54.00 Peak 57.97 0.17 58.14 74.00 Average 44.66 0.18 44.84 54.00

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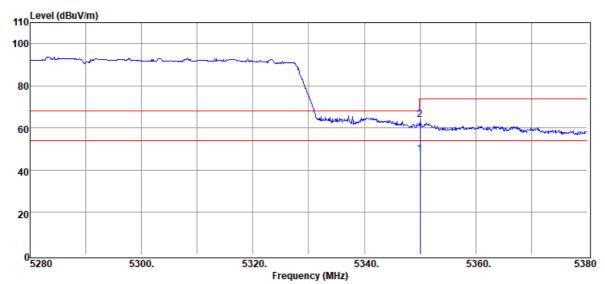
Report Number Test Site :966 Chamber D :E2/2020/50133

Operation Mode :802.11ac80 / Band 2 **Test Date** :2020-06-22

Test Frequency :5290 MHz Temp./Humi. :24.4/65

Test Mode :BE CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBμV	dB	dBµV/m	dBµV/m	dB
5350.00 5350.00	Average Peak	47.55 63.77	0.17 0.17	47.72 63.94	54.00 74.00	-6.28 -10.06

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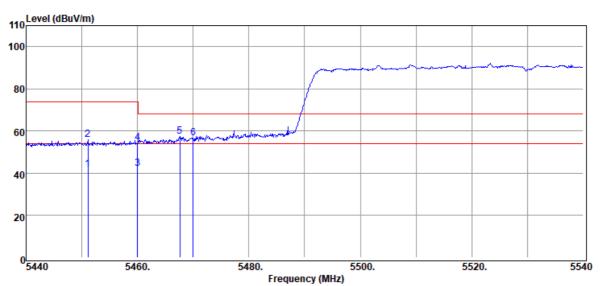
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Report Number **Test Site** :966 Chamber D :E2/2020/50133

:2020-06-22 **Operation Mode** :802.11ac80 / Band 3 **Test Date**

Test Frequency :5530 MHz Temp./Humi. :24.4/64 Test Mode :BE CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
5451.10	Average	40.67	1.22	41.89	54.00	-12.11
5451.10	Peak	54.55	1.22	55.77	74.00	-18.23
5460.00	Average	40.91	1.28	42.19	54.00	-11.81
5460.00	Peak	53.06	1.28	54.34	74.00	-19.66
5467.60	Peak	56.31	1.34	57.65	68.20	-10.55
5470.00	Peak	55.50	1.36	56.86	68.20	-11.34

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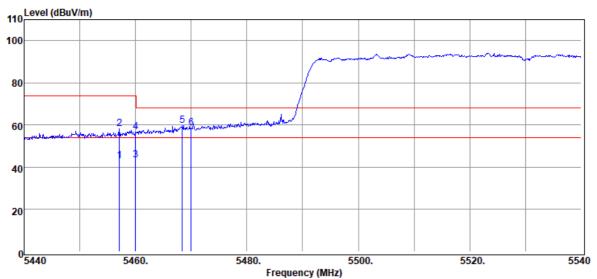
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11ac80 / Band 3 Test Date :2020-06-22

Test Frequency :5530 MHz Temp./Humi. :24.4/64

Test Mode :BE CH LOW Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan Engineer :Kailin



	• • • •								
	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin		
	MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBμV/m	dB		
:	5457.10	Average	41.94	1.26	43.20	54.00	-10.80		
;	5457.10	Peak	56.98	1.26	58.24	74.00	-15.76		
;	5460.00	Average	41.99	1.28	43.27	54.00	-10.73		
	5460.00	Peak	55.29	1.28	56.57	74.00	-17.43		
;	5468.40	Peak	58.34	1.34	59.68	68.20	-8.52		
;	5470.00	Peak	57.12	1.36	58.48	68.20	-9.72		

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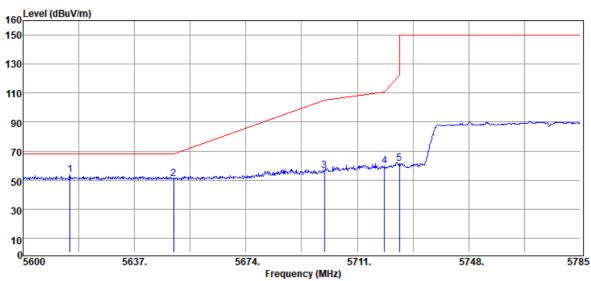
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Test Site Report Number :E2/2020/50133 :966 Chamber D

:2020-06-22 **Operation Mode** :802.11ac80 / Band 4 **Test Date**

Test Frequency :5775 MHz Temp./Humi. :24.4/64 Test Mode :BE CH LOW Antenna Pol. :VERTICAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5615.54	Peak	52.82	0.62	53.44	68.20	-14.76
5650.00	Peak	50.38	0.69	51.07	68.20	-17.13
5700.00	Peak	55.28	1.00	56.28	105.20	-48.92
5720.00	Peak	58.60	0.99	59.59	110.80	-51.21
5725.00	Peak	60.74	0.98	61.72	122.20	-60.48

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Test Mode

Report No.: E2/2020/50133

:HORIZONTAL

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Antenna Pol.

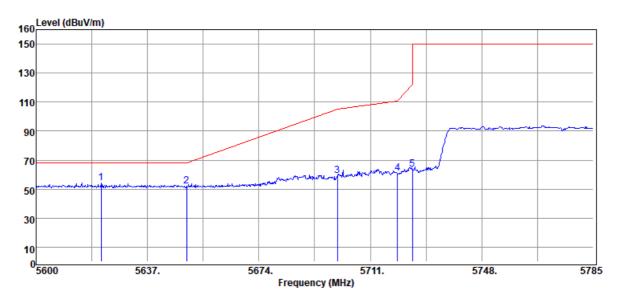
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11ac80 / Band 4 Test Date :2020-06-22

Test Frequency :5775 MHz Temp./Humi. :24.4/64

EUT Pol :E2 Plan Engineer :Kailin

:BE CH LOW



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBμV/m	dB
5621.65	Peak	53.65	0.62	54.27	68.20	-13.93
5650.00	Peak	51.21	0.69	51.90	68.20	-16.30
5700.00	Peak	57.99	1.00	58.99	105.20	-46.21
5720.00	Peak	60.11	0.99	61.10	110.80	-49.70
5725.00	Peak	62.72	0.98	63.70	122.20	-58.50

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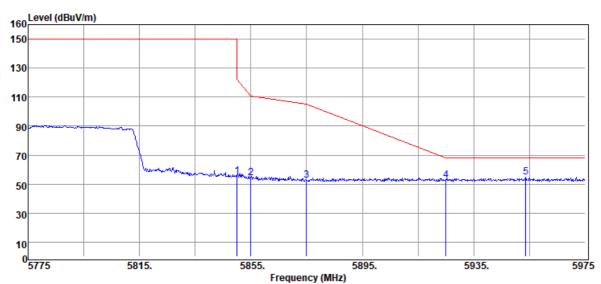
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Test Site Report Number :E2/2020/50133 :966 Chamber D

:2020-06-22 **Operation Mode** :802.11ac80 / Band 4 **Test Date**

Test Frequency :5775 MHz Temp./Humi. :24.4/64 Test Mode :BE CH HIGH Antenna Pol. :VERTICAL

EUT Pol :E2 Plan :Kailin Engineer



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5850.00	Peak	54.46	1.13	55.59	122.20	-66.61
5855.00	Peak	53.10	1.16	54.26	110.80	-56.54
5875.00	Peak	51.42	1.31	52.73	105.20	-52.47
5925.00	Peak	51.46	1.37	52.83	68.20	-15.37
5953.60	Peak	53.45	1.22	54.67	68.20	-13.53

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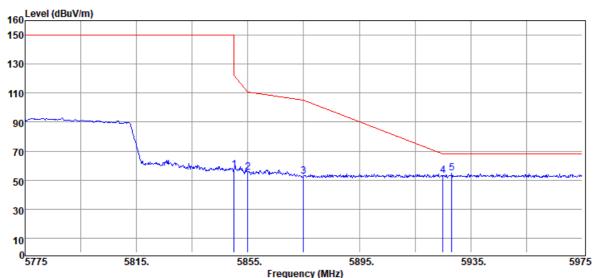
Report Number :E2/2020/50133 Test Site :966 Chamber D

Operation Mode :802.11ac80 / Band 4 **Test Date** :2020-06-22

Test Frequency :5775 MHz Temp./Humi. :24.4/64

Test Mode :BE CH HIGH Antenna Pol. :HORIZONTAL

EUT Pol :E2 Plan :Kailin Engineer



		rroquency (m	,			
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5850.00	Peak	55.89	1.13	57.02	122.20	-65.18
5855.00	Peak	54.29	1.16	55.45	110.80	-55.35
5875.00	Peak	51.49	1.31	52.80	105.20	-52.40
5925.00	Peak	51.86	1.37	53.23	68.20	-14.97
5928.20	Peak	53.47	1.35	54.82	68.20	-13.38

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12 TRANSMISSION IN THE ABSENCE OF DATA

Standard Applicable 12.1

According to §15.407(c)

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

12.2 Result

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

Standard Applicable 13.1

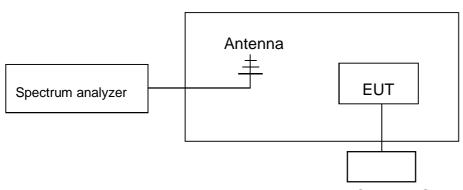
Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

13.2 **Measurement Procedure**

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

13.3 **Test SET-UP**

Temperature Chamber



Variable AC Power Supply

Measurement Equipment Used: 13.4

SGS Conducted Room							
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUM- BER	LAST CAL.	CAL DUE.		
DC Block	PASTERNACK	PE8210	RF32	11/20/2019	11/19/2020		
Spectrum Ana- lyzer	KEYSIGHT	N9010A	MY51440113	07/15/2019	07/14/2020		
Attenuator	Marvelous	MVE2213-10	RF31	11/20/2019	11/19/2020		

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13.5 **Measurement Result**

Start up

Operation Mode	802.11 a	Test Date	20200604
Temperature	: 25.9°C	Test By	Henry
Humidity	: 67%		

Test Temp.(℃)	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
0	5.25	36	5180	5,179.99188	0.00000157
	4.75	36	5180	5,179.99208	0.00000153
25	5	36	5180	5,179.99190	0.00000156
35	5.25	36	5180	5,179.99156	0.00000163
35	4.75	36	5180	5,179.99160	0.00000162

2 minutes

Operation Mode	802.11 a	Test Date	20200604
Temperature	: 25.9°C	Test By	Henry
Humidity	: 67%		

Test Temp.(°C)	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
0	5.25	36	5180	5,179.99181	0.00000158
U	4.75	36	5180	5,179.99146	0.00000165
25	5	36	5180	5,179.99164	0.00000161
35	5.25	36	5180	5,179.99187	0.00000157
33	4.75	36	5180	5,179.99147	0.00000165

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5 minutes

Operation Mode	802.11 a	Test Date	20200604
Temperature	: 25.9℃	Test By	Henry
Humidity	: 67%		

Test Temp.(°C)	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
0	5.25	36	5180	5,179.99156	0.00000163
0	4.75	36	5180	5,179.99204	0.00000154
25	5	36	5180	5,179.99174	0.00000159
35	5.25	36	5180	5,179.99156	0.00000163
33	4.75	36	5180	5,179.99164	0.00000161

10 minutes

Operation Mode	802.11 a	Test Date	20200604
Temperature	: 25.9°C	Test By	Henry
Humidity	: 67%		

Test Temp.(℃)	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
0	5.25	36	5180	5,179.99196	0.00000155
	4.75	36	5180	5,179.99186	0.00000157
25	5	36	5180	5,179.99222	0.00000150
35	5.25	36	5180	5,179.99159	0.00000162
	4.75	36	5180	5,179.99155	0.00000163

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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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