

Page: 1 of 232

ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART E AND INDUSTRY CANADA RSS 247 REQUIREMENT

OF

Applicant: **GOOGLE LLC**

1600 AMPHITHEATRE PARKWAY MOUNTAIN VIEW, CALIFORNIA 94043

Product Name: Glass Enterprise Edition 2

GLASS Brand Name: GG2 Model No.: N/A **Model Difference:** A4R-GG2

FCC ID: IC: 10395A-GG2 **Report Number:** E2/2018/80050 **FCC Rule Part:** §15.407, Cat:NII

IC Rule: RSS-247 issue 2 Feb. 2017

Issue Date: Nov. 05, 2018

Date of Test: Aug. 08, 2018 ~ Sep. 05, 2018

Date of EUT Received: Aug. 08, 2018

We hereby certify that:

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

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

Tested By:

Approved By:

Blue Yang / Supervisor





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Page: 2 of 232

Revision History

Report Number	Revision	Description	Effected Page	Issue Date	Revised By
E2/2018/80050	Rev.00	Initial creation of docu- ment	All	Sep. 12, 2018	Yuri Tsai
E2/2018/80050	Rev.01	Updated Brand Name	1,4	Nov. 05, 2018	Yuri Tsai

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Page: 3 of 232

Contents

1	GENERAL INFORMATION	4
2	SYSTEM TEST CONFIGURATION	8
3	SUMMARY OF TEST RESULT	10
4	DESCRIPTION OF TEST MODES	11
5	MEASUREMENT UNCERTAINTY	15
6	CONDUCTED EMISSION TEST	16
7	DUTY CYCLE TEST SIGNAL	20
8	26dB & 6dB EMISSION BANDWIDTH MEASUREMENT	23
9	MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT	47
10	PEAK POWER SPECTRAL DENSITY	56
11	UNDESIRABLE RADIATED EMISSION MEASUREMENT	68
12	TRANSMISSION IN THE ABSENCE OF DATA	210
13	FREQUENCY STABILITY	211
14	ANTENNA REQUIREMENT	232

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Page: 4 of 232

GENERAL INFORMATION

1.1 Product Description

General:

Product Name:	Glass Enterprise Edition 2		
Brand Name:	GLASS		
Model No.:	GG2		
Model Difference:	N/A		
Hardware Version:	N/A		
Software Version:	N/A		
USB Cable:	Model No.: ABA-USB-702-P01, Supplier: Lotes		
	3.85Vdc from Rechargeable Li-ion Battery		
Power Supply:	Battery:	Pack Model No.: P-752438 Supplier: Dongguan Amperex Technology Limited	

Antenna Designation	Monopole Antenna, 5150~5250MHz Peak Gain: 1.6dBi 5250~5350MHz Peak Gain: 1.6dBi 5470~5725MHz Peak Gain: 1.6dBi 5725~5850MHz Peak Gain: 1.6dBi
Modulation type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 802.11ac only
Transition Rate:	802.11 a: 6/9/12/18/24/36/48/54 Mbps 802.11 n_20MHz: 6.5 - 72.2Mbps 802.11 n_40MHz: 13.5 - 150Mbps 802.11 ac_20MHz: 6.5 -86.7Mbps 802.11 ac_40MHz: 13.5 -200Mbps 802.11 ac_80MHz: 29.3 - 433.3Mbps

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Page: 5 of 232

FCC WLAN 5GHz:

WLAN JGHZ.					
Wi-Fi	Frequency Range	Channels	Avg. Power (dBm)	Modulation Technology	
	5150~5250	4	12.75		
44 - 00	5250~5350	4	12.96	OFDM	
11a_20	5470~5725	12	12.57	OFDM	
	5725~5850	5	12.96		
	5150~5250	4	HT: 12.95		
11n_HT /	5250~5350	4	HT: 12.75	OEDM	
ac_VHT - 20M _	5470~5725	12	HT: 12.96	OFDM	
	5725~5850	5	HT: 12.93		
11n_HT /	5150~5250	2	HT: 12.84		
	5250~5350	2	HT: 12.91	OEDM	
ac_VHT 40M	5470~5725	6	HT:12.98	OFDM	
40101	5725~5850	2	HT: 12.99		
11ac VHT80M	5150~5250	1	12.51		
	5250~5350	1	12.62	OEDM	
	5470~5725	3	12.77	OFDM	
	5725~5850	1	12.71		

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Page: 6 of 232

IC WLAN 5GHz:

11 00112.					
Wi-Fi	Frequency Range	Channels	Avg. or EIRP	Rated Power(dBm)	Modulation Technology
	5150~5250	4	EIRP	14.35	
11a	5250~5350	4	Avg.	12.96	OFDM
IIa	5470~5725	12	Avg.	12.57	OFDIVI
	5725-5850	5	Avg.	12.96	
	5150~5250	4	EIRP	HT: 14.55	
11n_HT/ ac VHT	5250~5350	4	Avg.	HT: 12.75	OFDM
20M	5470~5725	12	Avg.	HT: 12.96	
2011	5725-5850	5	Avg.	HT: 12.93	
	5150~5250	2	EIRP	HT: 14.44	
11n_HT /	5250~5350	2	Avg.	HT: 12.91	OFDM
ac_VHT 40M	5470~5725	6	Avg.	HT: 12.98	OFDIVI
	5725-5850	2	Avg.	HT: 12.99	
	5210~5210	1	EIRP	14.11	
11ac	5290~5290	1	Avg.	12.62	OFDM
VHT80M	5470~5725	2	Avg.	12.77	OFDIVI
	5775~5775	1	Avg.	12.71	

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Page: 7 of 232

1.2 Test Methodology of Applied Standards

FCC Part 15, Subpart E §15.407

FCC KDB 789033 D02 General UNII Test Procedures New Rules

KDB 789033 D02 v01r04 General UNII Test Procedures New Rules

KDB 644545 D03 v01 Guidance for IEEE 802.11ac

RSS-247 issue 2 Feb. 2017

RSS-Gen. issue 5 Apr. 2018

ANSI C63.10:2013

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

1.3 Test Facility

SGS Taiwan Ltd. Electronics & Communication Laboratory No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333 (TAF code 0513)

FCC Registration Numbers are: 735305 / TW0002

Canada Registration Number: 4620E-1

1.4 Special Accessories

There are no special accessories used while test was conducted.

1.5 Equipment Modifications

There was no modification incorporated into the EUT.

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Page: 8 of 232

SYSTEM TEST CONFIGURATION

2.1 EUT Configuration

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

2.2 EUT Exercise

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

2.3 Test Procedure

2.3.1 **Conducted Emissions**

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

Radiated Emissions 2.3.2

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

2.4 Measurement Results Explanation

For all conducted test items:

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

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Page: 9 of 232

2.5 Configuration of Tested System

Fig. 2-1 Conducted (Antenna Port) Emission Configuration

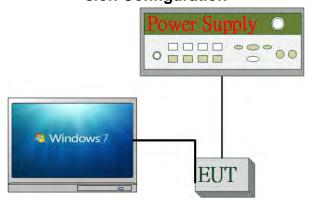


Fig 2-3 Conduction (AC Power Line) Conducted Emission



Fig 2-2 Radiated Emission



Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Data Cable	Power Cord
1.	WLAN Test Software	N/A	N/A	N/A	N/A	N/A
2.	Notebook	Lenovo	L430	R9-WR6X4	Shielded	Unshielded
3.	DC Power Supply	Agilent	E3640A	MY53140006	N/A	Unshielded

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Page: 10 of 232

SUMMARY OF TEST RESULT

FCC Rules	IC Rules	Description Of Test	Result
§15.207	RSS-Gen §8.8	AC Power Line Conducted Emission	Compliant
§15.403(i) §15.407(e)	RSS-247 §6.2.1~ 4 (1) RSS-Gen §6.6	26 dB & 6dB & 99% Emission Bandwidth	Compliant
§15.407(a)	RSS-247 §6.2.1~ 4 (1)	Maximum Conducted Output Power	Compliant
§15.407(a)	RSS-247 §6.2.1~ 4 (1)	Power Spectral Density	Compliant
§15.407(b)	RSS-247 §6.2.1~ 4 (2)	Undesirable Radiated Emissions	Compliant
§15.407(c)	RSS-247 §6.4	Transmission in case of Absence of Information	Compliant
§15.407(g)	RSS-Gen §6.11	Frequency Stability	Compliant
§15.203 §15.407(a)	RSS- Gen §6.8	Antenna Requirement	Compliant

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Page: 11 of 232

DESCRIPTION OF TEST MODES

4.1 Operated in U-NII Bands

Operated band in 5150 MHz ~5250 MHz:

Operated ba	Operated band in 5150 MF		
802.11a / n HT20 Mode,			
802.11ac VHT20 Mode			
Channel	Frequency		
36	5180		
40	5200		
44	5220		
48	5240		

802.11 n HT40 Mode, 802.11ac VHT40 Mode			
channel	Frequency		
38	5190		
46	5230		

802.11ac VHT80 Mode		
channel	Frequency	
42	5210	

Operated band in 5250 MHz ~5350 MHz:

802.11a / n HT20 Mode, 802.11ac VHT20 Mode			
channel	Frequency		
52	5260		
56	5280		
60	5300		
64	5320		

802.11 n HT40 Mode, 802.11ac VHT40 Mode				
channel	Frequency			
54	5270			
62	5310			

802.11ac \	/HT80 Mode
Channel	Frequency
58	5290

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Page: 12 of 232

Operated band in 5470 MHz ~5725 MHz:

Operated band in 5470 Wir				
802.11a / n HT20 Mode,				
802.11ac V	HT20 Mode			
Channel	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			

7 23 MII IZ.					
802.11 n HT40 Mode, 802.11ac VHT40 Mode					
Channel	Freq (MHz)				
102	5510				
110	5550				
118	5590				
126	5630				
134	5670				
142	5710				

802.11ac VHT80 Mode			
Channel	Freq (MHz)		
106	5530		
122	5610		
138	5690		

Operated band in 5745 MHz ~5850 MHz:

802.11a / n HT20 Mode,			
802.11ac V	HT20 Mode		
Channel	Freq (MHz)		
149	5745		
153	5765		
157	5785		
161	5805		

802.11 n HT40 Mode, 802.11ac VHT40 Mode			
channel	Freq (MHz)		
151	5755		
159	5795		

802.11ac VHT80 Mode			
channel	Freq (MHz)		
155	5775		

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Page: 13 of 232

4.2 The Worst Test Modes and Channel Details

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

ADIATED EMISSION TEST

RADIATED EMI	SSION TEST:					
	RADIATED EMISSION TEST (BELOW 1 GHz)					
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	5180~5240	36 to 48	36,44,48	OFDM	6	MAIN
802.11a	5260~5320	52 to 64	52,60,64	OFDM	6	MAIN
802.11a	5500~5720	100 to 140	100,116,140	OFDM	6	MAIN
802.11a	5745~5825	149 to 165	149,157,165	OFDM	6	MAIN
	RADIATED EMISSION TEST (ABOVE 1 GHz)					
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	E100 E210	26 to 49	26 44 49	OFDM	6	MAIN
802.11n_HT20	5180~5240	36 to 48	36,44,48	OFDM	MCS0	MAIN
802.11n_HT40	5190~5230	38 to 46	38,46	OFDM	MCS0	MAIN
802.11ac_VHT80	5210	42	42	OFDM	MCS0	MAIN
802.11a	5260~5320	52 to 64	52 to 64 52,60,64	OFDM	6	MAIN
802.11n_HT20	5260~5520	32 10 64		OFDM	MCS0	MAIN
802.11n_HT40	5270~5310	54 to 62	54,62	OFDM	MCS0	MAIN
802.11ac_VHT80	5290	58	58	OFDM	MCS0	MAIN

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Page: 14 of 232

MODE	FREQUENCY BAND (MHz)		TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	5500~5720	100 to 144	100,116,140	OFDM	6	MAIN
802.11n_HT20	5500~5720	100 to 144	100,116,140	OFDM	MCS0	MAIN
802.11n_HT40	5510~5710	102 to 142	102,110,134	OFDM	MCS0	MAIN
802.11ac_VHT80	5530~5690	106 to 138	106,122,138	OFDM	MCS0	MAIN
802.11a	5745~5825	149 to 165	149,157,165	OFDM	6	MAIN
802.11n_HT20	3743~3623	149 (0 165	149,157,165	OFDM	MCS0	MAIN
802.11n_HT40	5755~5795	151 to 159	151,159	OFDM	MCS0	MAIN
802.11ac_VHT80	5775	155	155	OFDM	MCS0	MAIN

Note:

The field strength of radiation emission was measured as 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.

ANTENNA PORT CONDUCTED MEASUREMENT:

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

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Page: 15 of 232

MEASUREMENT UNCERTAINTY

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

Radiated Spurious Emission:

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

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

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

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Page: 16 of 232

CONDUCTED EMISSION TEST

6.1 Standard Applicable

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

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

Note

6.2 Measurement Equipment Used

Conducted Emission Test Site						
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.	
LISN	TESEQ	NNB 51	36076	2018/02/14	2019/02/13	
EMI Test Receiver	R&S	ESCI	101300	2017/11/02	2018/11/01	

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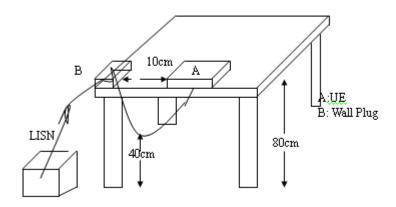
^{1.} The lower limit shall apply at the transition frequencies

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



Page: 17 of 232

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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Page: 18 of 232

AC POWER LINE CONDUCTED EMISSION TEST DATA

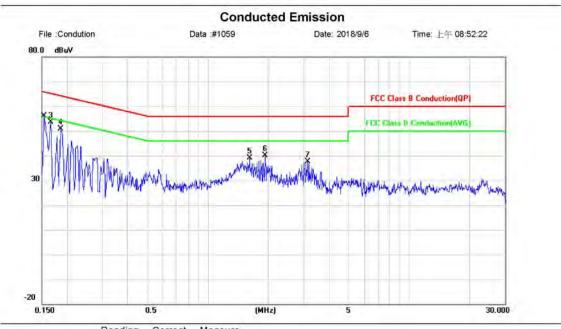
Conduction Room Phase: L1 Temperature: 22 C

Limit: FCC Class B Conduction(QP) Mode:

Power: AC 120V/60Hz

Humidity: 64 %

Note:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment	
1	*	0.1540	34.60	19.65	54.25	65.78	-11.53	QP		
2	-	0.1540	18.00	19.65	37.65	55,78	-18.13	AVG		
3		0.1660	33.87	19.67	53.54	65.16	-11.62	peak		
4	-	0.1860	31.13	19.70	50.83	64.21	-13.38	peak		
5		1.6180	18.82	20.27	39.09	56.00	-16.91	peak		
6	1	1.9380	19.61	20.51	40.12	56.00	-15.88	peak		
7		3.1500	17.20	20.33	37.53	56.00	-18.47	peak		
_										

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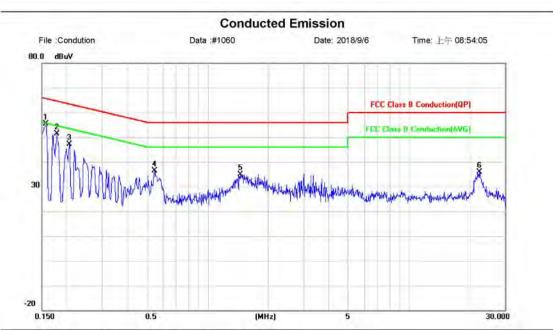
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Page: 19 of 232

Temperature: 22°C Conduction Room Phase: AC 120V/60Hz Humidity: Limit: FCC Class B Conduction(QP) Power:

Mode: Note:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1580	35.75	19.66	55.41	65.57	-10.16	peak	
2	-	0.1780	31.71	19.69	51.40	64.58	-13.18	peak	
3		0.2060	27.46	19.74	47.20	63.37	-16.17	peak	
4		0.5460	16.22	20.19	36.41	56.00	-19.59	peak	
5		1.4500	14.66	20.15	34.81	56.00	-21.19	peak	
6		22.2980	15.67	20.15	35.82	60.00	-24.18	peak	

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Page: 20 of 232

DUTY CYCLE TEST SIGNAL

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

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

Formula:

Duty Cycle = Ton / (Ton+Toff)

Measurement Procedure:

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

Duty Cycle:

Mode	Duty Cycle (%)	Duty Factor (dB) =10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
802.11a	98.37	0.07	0.48	1.00
802.11n_20	98.01	0.09	0.52	1.00
802.11ac_20	98.17	0.08	0.52	1.00
802.11n_40	96.24	0.17	1.06	2.00
802.11ac_40	96.15	0.17	1.05	2.00
802.11ac_80	92.89	0.32	2.16	3.00

Duty Cycle Factor: $10 * \log(1/0.9837) = 0.07$ Duty Cycle Factor: $10 * \log(1/0.9801) = 0.09$ Duty Cycle Factor: $10 * \log(1/0.9817) = 0.08$ Duty Cycle Factor: $10 * \log(1/0.9624) = 0.17$ Duty Cycle Factor: $10 * \log(1/0.9615) = 0.17$ Duty Cycle Factor: $10 * \log(1/0.9289) = 0.32$

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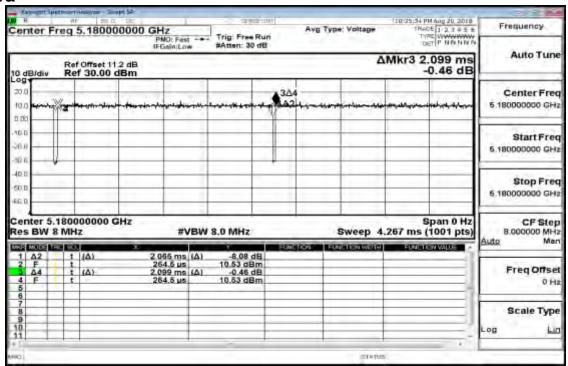
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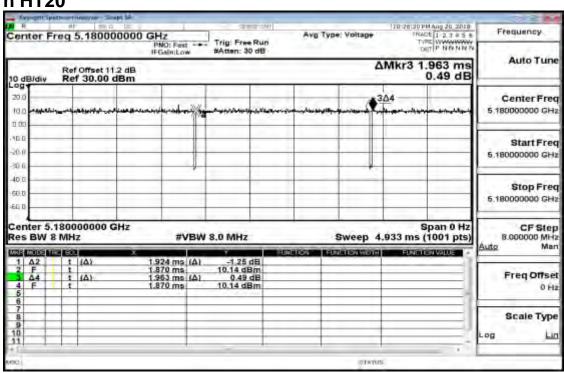


Page: 21 of 232

DUTY CYCLE TEST SIGNAL Measurement Result 802.11a



802.11n HT20



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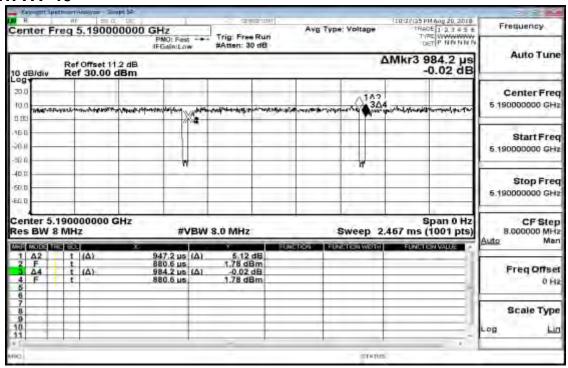
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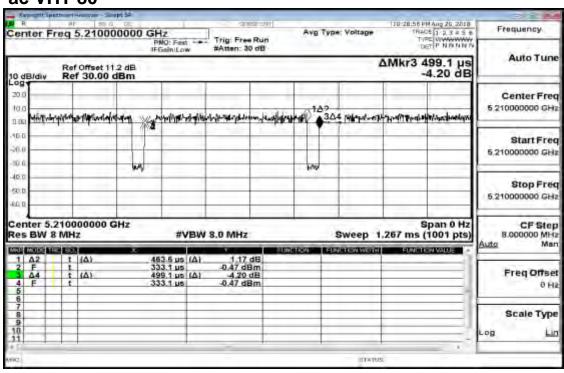


Page: 22 of 232

802.11n HT 40



802.11 ac VHT 80



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Page: 23 of 232

8 26DB & 6DB EMISSION BANDWIDTH MEASUREMENT

8.1 Standard Applicable

There is no limit bandwidth for U-NII-1, U-NII-2-A and U-NII-2-C.

The minimum of 6dB Bandwidth measurement is 0.5 MHz for U-NII-3

8.2 Measurement Procedure

- 1. Place the EUT on the table and set it in transmitting mode.
- 2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules .
- 3. Remove the antenna from the EUT and then connect a low loss RF cable from the Antenna port to the spectrum analyzer.
 - a. 26dB Band width Measurement: Set the spectrum analyzer as 1% of emission BW Sweep=auto, Detector = Peak, Trace Mode = Max Hold, Manually readjust RBW until the RBW/EBW ratio is 1% based on EBW as observed on the result of pre-sequence measurement.
 - b. Mark the peak frequency and –26dB (upper and lower) frequency.
- 4. Repeat the procedures as list above until all test default channels (low, middle, and high) are completed.
- 5. Minimum Emission Bandwidth for the band 5.725-5.850GHz.
 - a. Set the spectrum analyzer as RBW = 100 kHz, VBW = 3*RBW, Span = 30M/50MHz, Detector=Peak,
 - Sweep=auto
 - b. Mark the peak frequency and –6dB (upper and lower) frequency.
- 6. Repeat above procedures until all test default channel measured were complete.

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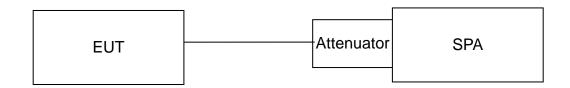


Page: 24 of 232

8.3 Measurement Equipment Used

SGS Conducted Room						
Name of Equip- ment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due	
Spectrum Analyzer	Agilent	N9010A	MY51440113	2018/06/20	2019/06/19	
DC Power Supply	Agilent	E3640A	MY53140006	2018/05/30	2019/05/29	
Attenuator	Marvelous	MVE2213-10	RF30	2017/12/26	2018/12/25	

8.4 Test Set-up



8.5 Measurement Result

26dB and 6dB Bandwidth

802.11a Ch0

_	00.15				
Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)			
5180	21.02	13.226			
5220	21.31	13.285			
5240	21.34	13.292			
5260	21.31	13.285			
5300	21.30	13.283	802.11a_Ch0		
5320	21.30	13.284	F	6dB	40 L o (D)
5500	21.25	13.273	Frequency (MHz)	BW	10 Log (B) (dB)
5580	21.30	13.284	(141112)	(MHz)	(GD)
5700	21.30	13.284	5745	16.28	12.118
5720(U-NII 2C)	12.23	10.873	5785	16.30	12.121
5720 (U-NII 3)	3.80	5.800	5825	16.41	12.151

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Page: 25 of 232

802.11n_HT20_Ch0

Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	21.25	13.274
5220	21.28	13.279
5240	21.43	13.309
5260	21.86	13.396
5300	21.55	13.334
5320	21.29	13.283
5500	21.33	13.290
5580	21.29	13.282
5700	21.41	13.307
5720(U-NII 2C)	12.94	11.118
5720 (U-NII 3)	3.93	5.948

002 445 UT20 Ch0

802.11n_H120_Ch0							
Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)					
5745	15.07	11.782					
5785	16.85	12.265					
5825	17.59	12.451					

802.11n HT40 Ch0

26dB BW (MHz)	10 Log (B) (dB)					
39.20	15.933					
39.22	15.935					
38.92	15.902					
39.13	15.925					
39.41	15.956					
39.44	15.959					
39.43	15.958					
31.36	14.964					
3.73	5.714					
	BW (MHz) 39.20 39.22 38.92 39.13 39.41 39.44 39.43 31.36					

802.11n HT40 Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5755	35.38	15.487
5795	35.18	15.462

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Page: 26 of 232

802.11ac VHT80 Ch0

00211100_111100_0110		
Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5210	80.08	19.035
5290	79.37	18.997
5530	80.02	19.032
5610	79.37	18.997
5690 (U-NII 2C)	74.82	18.740
5690 (U-NII 3)	4.24	6.274

802.11ac _VHT80_Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5775	75.24	18.764

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Page: 27 of 232

99% Bandwidth

802.11a Ch0

Frequency (MHz)	99% BW (MHz)	10 Log (B) (dB)
5180	16.656	12.216
5220	16.675	12.221
5240	16.643	12.212
5260	16.645	12.213
5300	16.653	12.215
5320	16.658	12.216
5500	16.666	12.218
5580	16.627	12.208
5700	16.655	12.215
5720(U-NII 2C)	12.701	11.039
5720 (U-NII 3)	3.950	5.965

802.11a Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	16.24	12.106
5785	16.29	12.118
5825	16.21	12.098

802.11n_HT20_Ch0

Frequency (MHz)	99% BW (MHz)	10 Log (B) (dB)
5180	17.828	12.511
5220	17.832	12.512
5240	17.835	12.513
5260	17.793	12.502
5300	17.797	12.503
5320	17.838	12.513
5500	17.812	12.507
5580	17.862	12.519
5700	17.877	12.523
5720(U-NII 2C)	13.664	11.356
5720 (U-NII 3)	4.155	6.185

802.11n HT20 Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	17.60	12.454
5785	17.37	12.397
5825	17.47	12.422

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Page: 28 of 232

802.11n _HT40_Ch0

Frequency (MHz)	99% BW (MHz)	10 Log (B) (dB)
5190	36.139	15.580
5230	36.143	15.580
5270	36.124	15.578
5310	36.123	15.578
5510	36.123	15.578
5550	36.100	15.575
5670	36.125	15.578
5710(U-NII 2C)	32.291	15.091
5710 (U-NII 3)	3.838	5.841

802.11n HT40 Ch0

002::::::_::::		
Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5755	36.24	15.592
5795	36.29	15.598

802.11ac VHT80 Ch0

Frequency (MHz)	99% BW (MHz)	10 Log (B) (dB)
5210	75.573	18.784
5290	75.576	18.784
5530	75.572	18.784
5610	75.582	18.784
5690(U-NII 2C)	71.510	18.544
5690 (U-NII 3)	4.053	6.078

802.11ac _VHT80_Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5775	75.59	18.784

99% BW Band-Crossing Signals

802.11a_Ch0

Frequency (MHz)	Measured Frequency (MHz)	Limit (MHz)
5240	5248.16	< 5250
5745	5736.69	> 5725

802.11n_HT20_Ch0

Frequency (MHz)	Measured Frequency (MHz)	Limit (MHz)
5240	5248.76	< 5250
5745	5736.09	> 5725

802.11n _HT40_Ch0

Frequency (MHz)	Measured Frequency (MHz)	Limit (MHz)
5230	5248.10	< 5250
5755	5736.85	> 5725

802.11ac _VHT80_Ch0

Frequency (MHz)	Measured Frequency (MHz)	Limit (MHz)
5210	5247.80	< 5250
5775	5737.00	> 5725

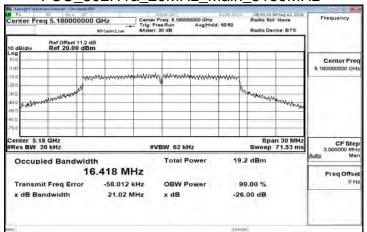
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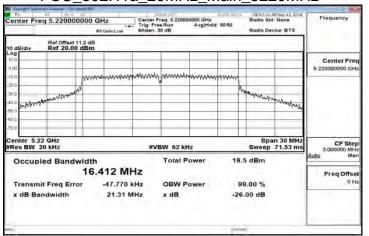


Page: 29 of 232

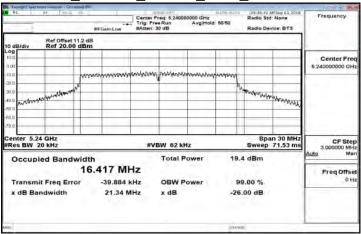
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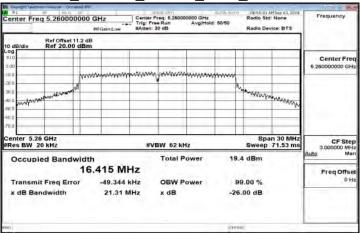
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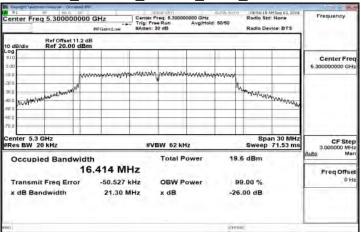
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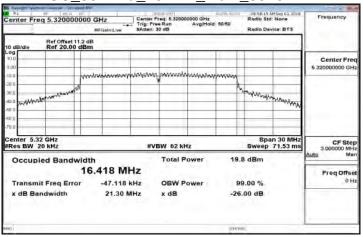
FCC_802.11a_20MHz_Main_5260MHz



FCC 802.11a 20MHz Main 5300MHz



FCC_802.11a_20MHz_Main_5320MHz



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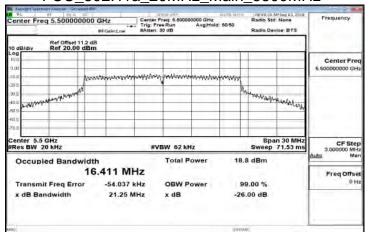
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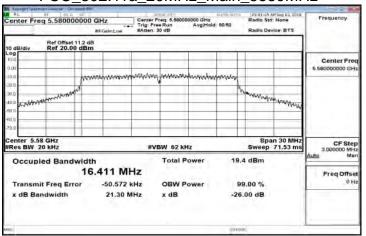


Page: 30 of 232

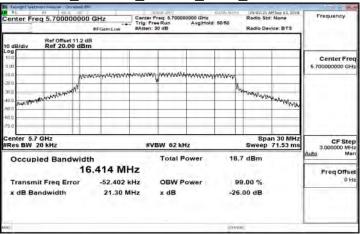
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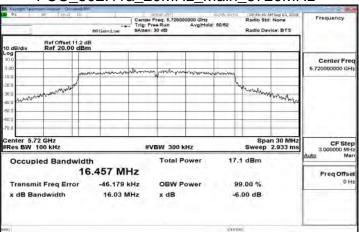
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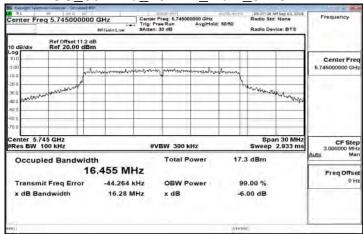
FCC 802.11a 20MHz Main 5700MHz



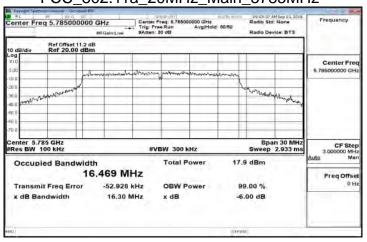
FCC 802.11a 20MHz Main 5720MHz



FCC 802.11a 20MHz Main 5745MHz



FCC_802.11a_20MHz_Main_5785MHz



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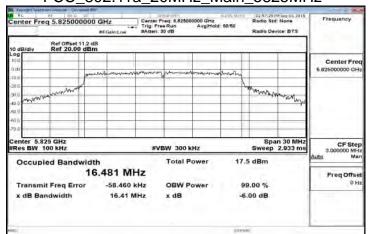
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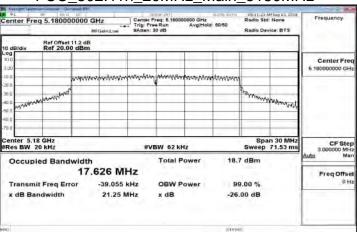


Page: 31 of 232

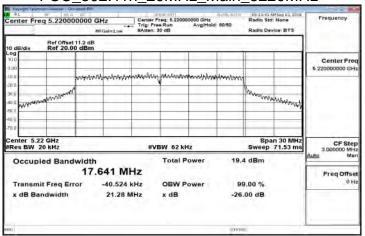
FCC 802.11a 20MHz Main 5825MHz



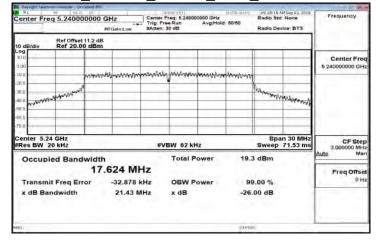
FCC_802.11n_20MHz_Main_5180MHz



FCC 802.11n 20MHz Main 5220MHz



FCC_802.11n_20MHz_Main_5240MHz



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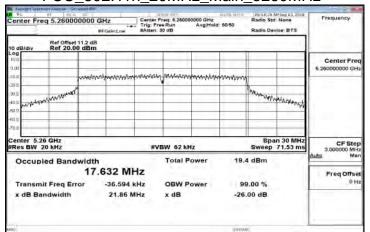
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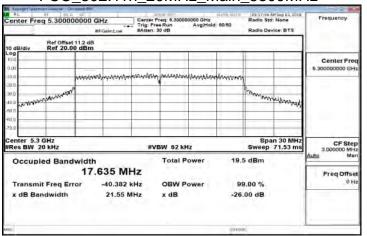


Page: 32 of 232

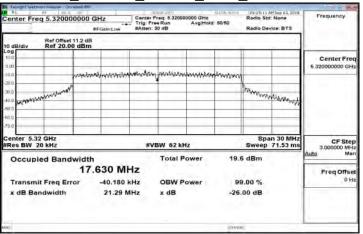
FCC 802.11n 20MHz Main 5260MHz



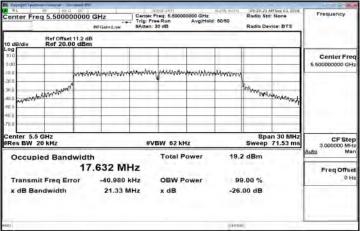
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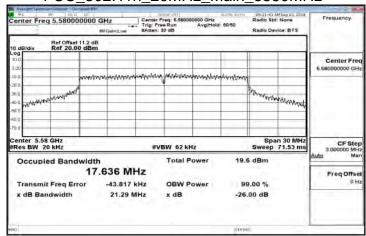
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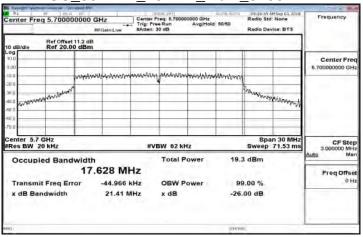
FCC_802.11n_20MHz_Main_5500MHz



FCC_802.11n_20MHz_Main_5580MHz



FCC_802.11n_20MHz_Main_5700MHz



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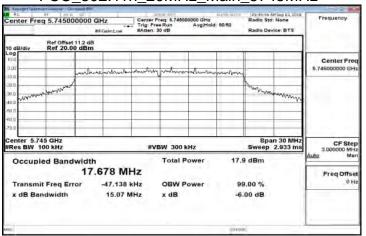


Page: 33 of 232

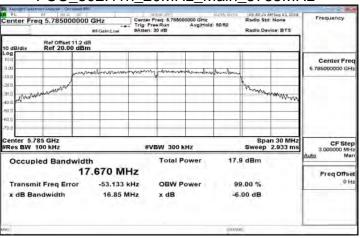
FCC 802.11n 20MHz Main 5720MHz



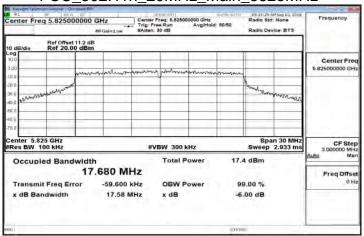
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FCC_802.11n_20MHz_Main_5785MHz



FCC_802.11n_20MHz_Main_5825MHz



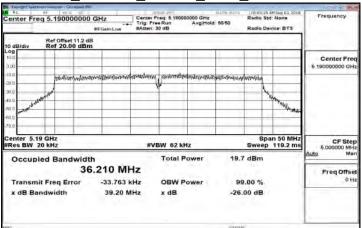
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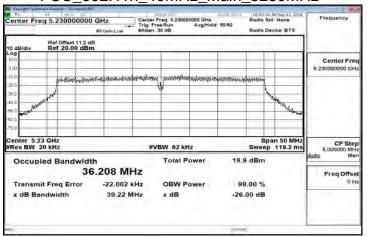


Page: 34 of 232

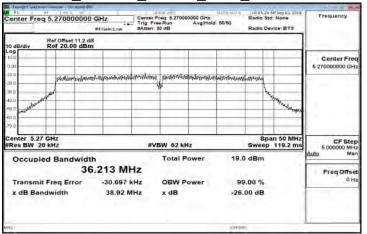
FCC 802.11n 40MHz Main 5190MHz



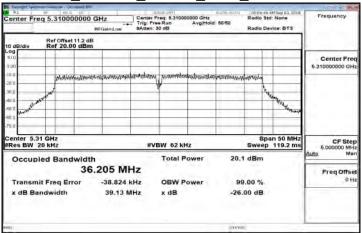
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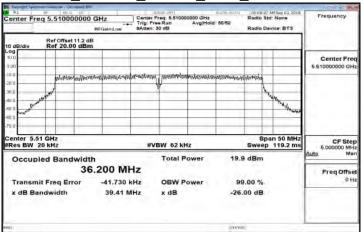
FCC 802.11n 40MHz Main 5270MHz



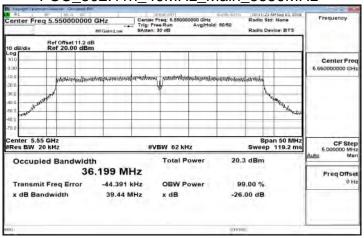
FCC_802.11n_40MHz_Main_5310MHz



FCC_802.11n_40MHz_Main_5510MHz



FCC 802.11n 40MHz Main 5550MHz



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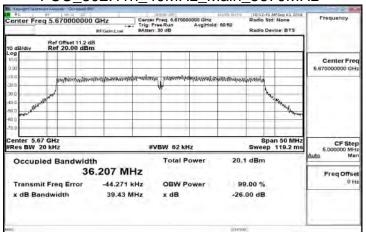
No.134, WuKungRoad, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號

prosecuted to the fullest extent of the law.

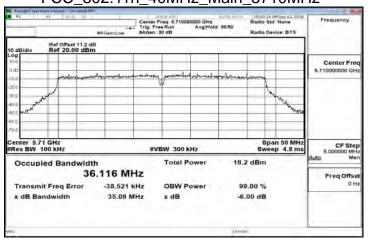


Page: 35 of 232

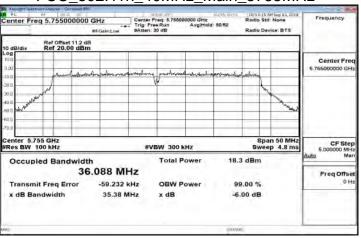
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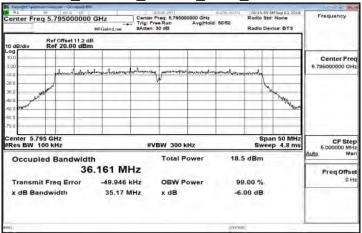
FCC_802.11n_40MHz_Main_5710MHz



FCC_802.11n_40MHz_Main_5755MHz



FCC_802.11n_40MHz_Main_5795MHz



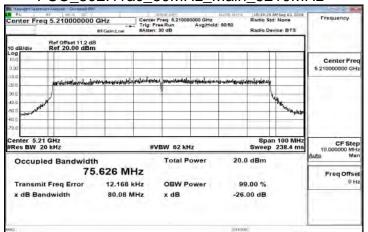
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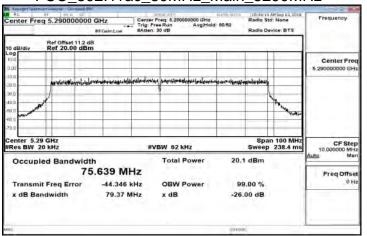


Page: 36 of 232

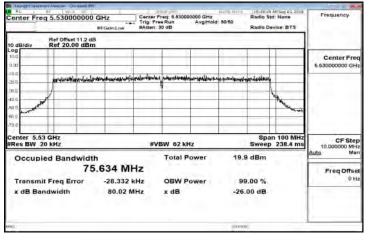
FCC 802.11ac 80MHz Main 5210MHz



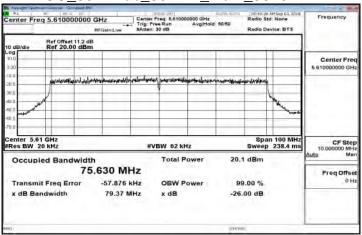
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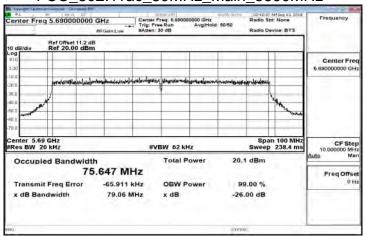
FCC 802.11ac 80MHz Main 5530MHz



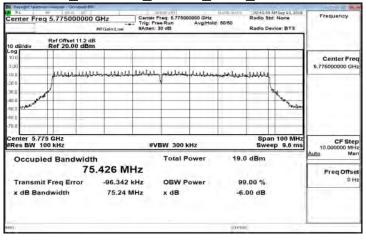
FCC_802.11ac_80MHz_Main_5610MHz



FCC_802.11ac_80MHz_Main_5690MHz



FCC 802.11ac 80MHz Main 5775MHz



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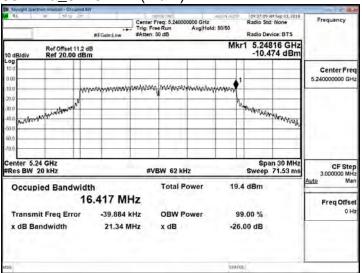
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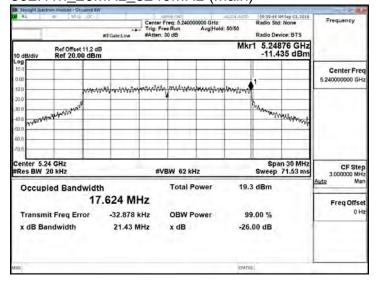
Page: 37 of 232

99% BW to prove that all signals in band I is no over band U-NII-1

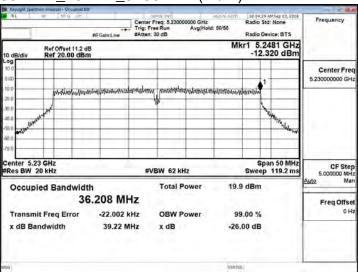
802.11a 5240MHz (Main)



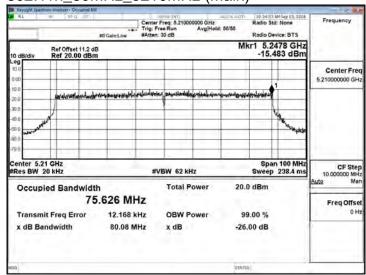
802.11n_20MHz_5240MHz (Main)



802.11n 40MHz 5230MHz (Main)



802.11n_80MHz_5210MHz (Main)



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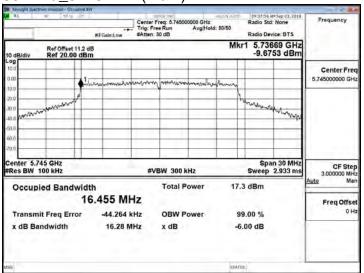
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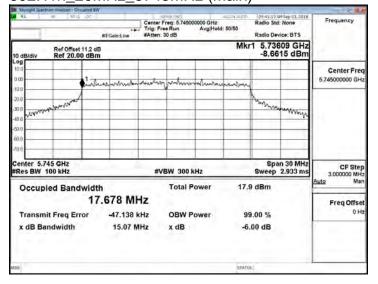
Page: 38 of 232

99% BW to prove that all signals in band I is no over band U-NII-3

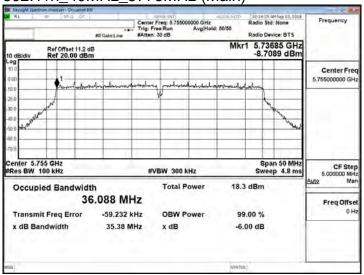
802.11a 5745MHz (Main)



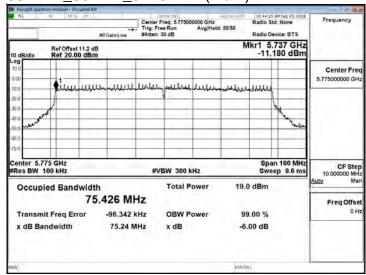
802.11n_20MHz_5745MHz (Main)



802.11n_40MHz_5775MHz (Main)



802.11n_80MHz_5775MHz (Main)



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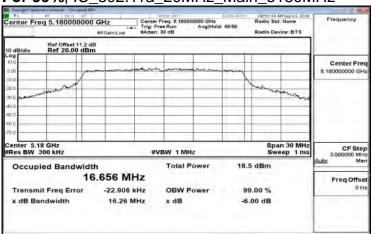
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Page: 39 of 232

For 99%, IC_802.11a_20MHz_Main_5180MHz



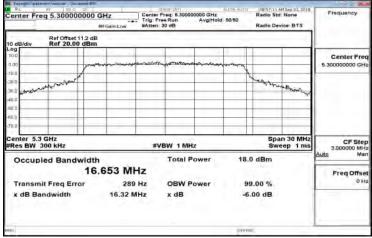
IC 802.11a 20MHz Main 5260MHz



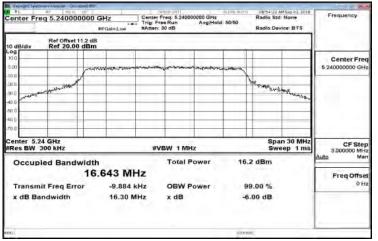
IC_802.11a_20MHz_Main_5220MHz



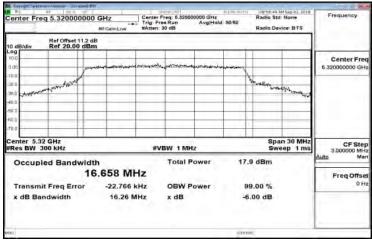
IC_802.11a_20MHz_Main_5300MHz



IC 802.11a 20MHz Main 5240MHz



IC 802.11a 20MHz Main 5320MHz



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Page: 40 of 232

IC 802.11a 20MHz Main 5500MHz

IC 802.11a 20MHz Main 5720MHz

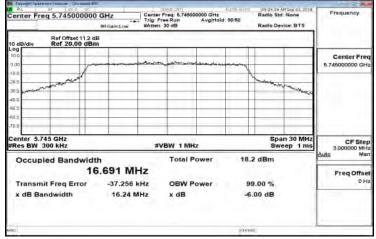




IC_802.11a_20MHz_Main_5580MHz

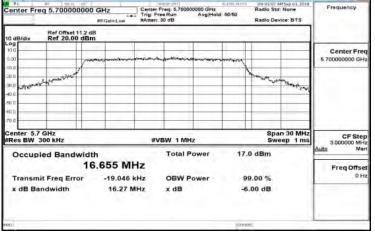
IC_802.11a_20MHz_Main_5745MHz

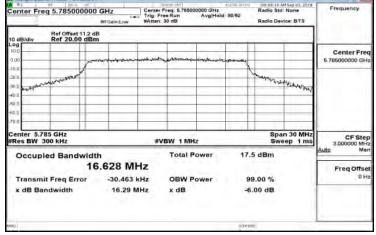




IC_802.11a_20MHz_Main_5700MHz

IC 802.11a 20MHz Main 5785MHz





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Page: 41 of 232

IC_802.11a_20MHz_Main_5825MHz



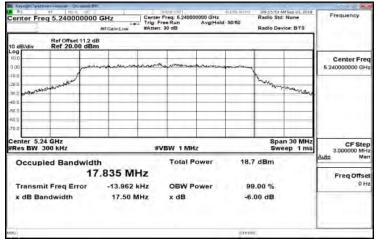
IC_802.11n_20MHz_Main_5180MHz



IC_802.11n_20MHz_Main_5220MHz



IC 802.11n 20MHz Main 5240MHz



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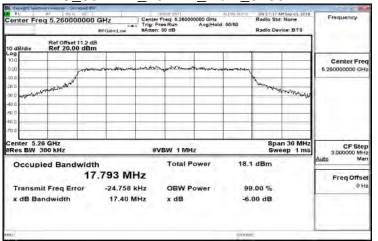
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Page: 42 of 232

IC 802.11n 20MHz Main 5260MHz

IC_802.11n_20MHz_Main_5500MHz

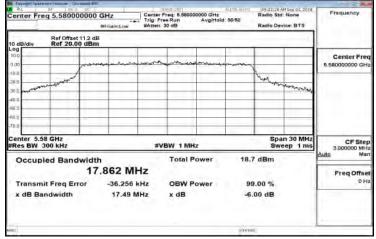




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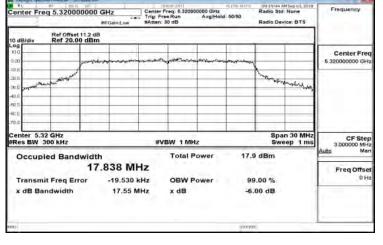
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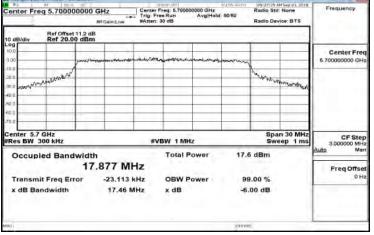




IC_802.11n_20MHz_Main_5320MHz

IC 802.11n 20MHz Main 5700MHz





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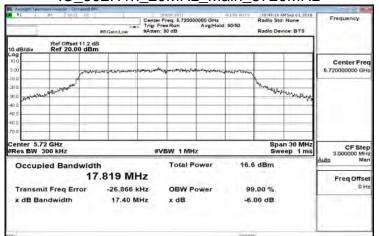
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Page: 43 of 232

IC 802.11n 20MHz Main 5720MHz



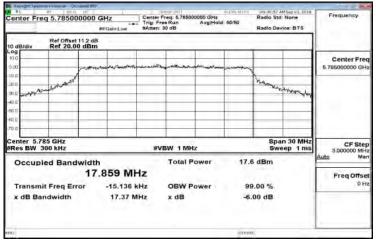
IC_802.11n_20MHz_Main_5825MHz



IC_802.11n_20MHz_Main_5745MHz



IC 802.11n 20MHz Main 5785MHz



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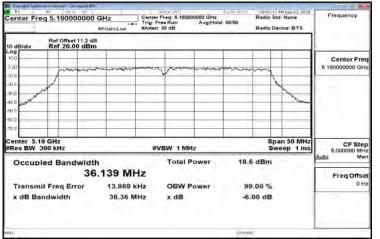
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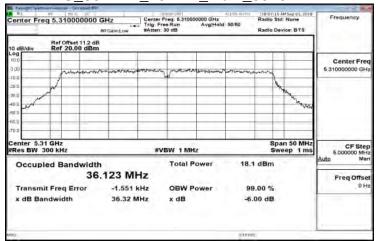


Page: 44 of 232

IC 802.11n 40MHz Main 5190MHz

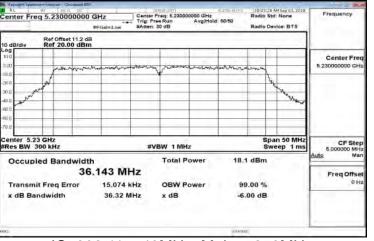
IC 802.11n 40MHz Main 5310MHz

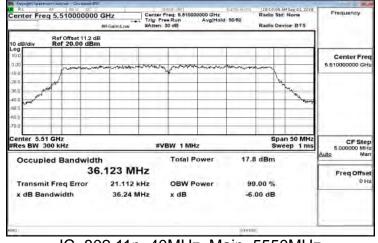




IC_802.11n_40MHz_Main_5230MHz

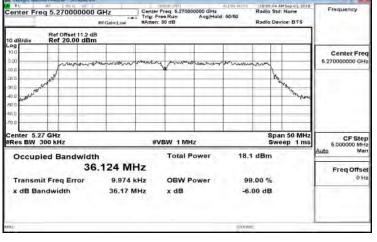
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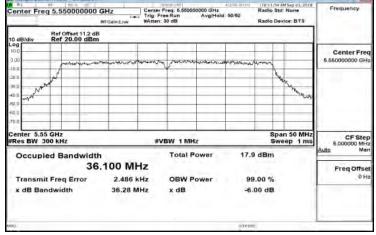




IC_802.11n_40MHz_Main_5270MHz

IC 802.11n 40MHz Main 5550MHz





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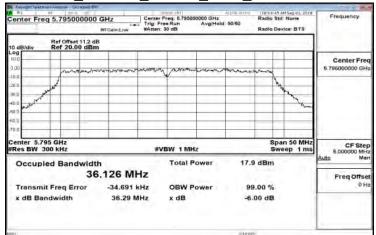


Page: 45 of 232

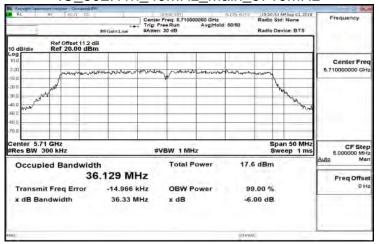
IC 802.11n 40MHz Main 5670MHz



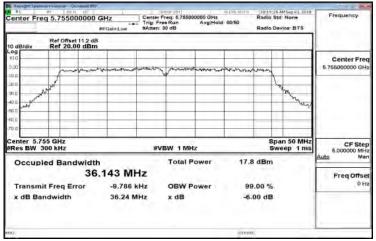
IC_802.11n_40MHz_Main_5795MHz



IC_802.11n_40MHz_Main_5710MHz



IC 802.11n 40MHz Main 5755MHz



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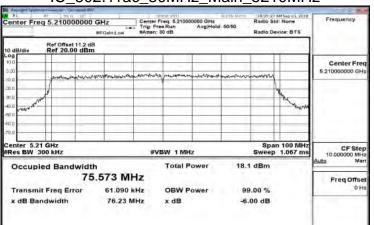
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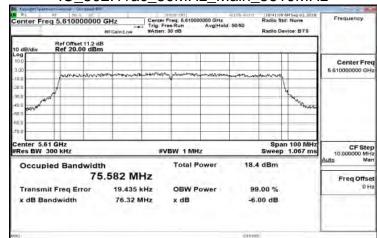


Page: 46 of 232

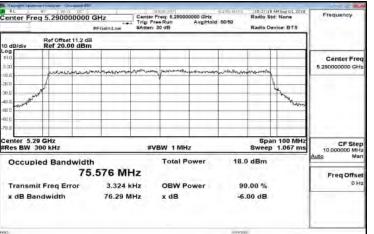
IC 802.11ac 80MHz Main 5210MHz



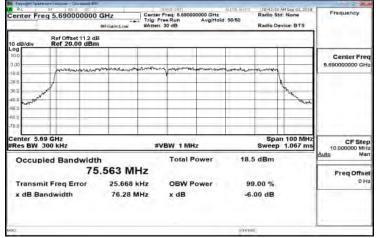
IC_802.11ac_80MHz_Main_5610MHz



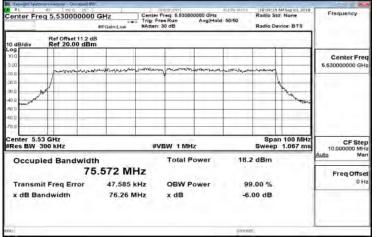
IC_802.11ac_80MHz_Main_5290MHz



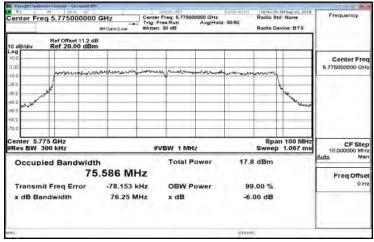
IC_802.11ac_80MHz_Main_5690MHz



IC 802.11ac 80MHz Main 5530MHz



IC_802.11ac_80MHz_Main_5775MHz



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Page: 47 of 232

MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

9.1 Standard Applicable

FCC

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

IC

OPERZTION FREQUENCY BAND	LIMIT
5150~5250 MHz	EIRP shall not exceed 200 mW or 10 + 10 log ₁₀ B, dBm
5250~5350 MHz	Conducted output power shall not exceed 250 mW or 11 +10 log10B EIRP shall not exceed 1.0 W or 17 + 10 log10B, dBm
5470-5600 MHz and 5650-5725 MHz	Conducted output power shall not exceed 250 mW or 11 +10 log ₁₀ B EIRP shall not exceed 1.0 W or 17 + 10 log ₁₀ B, dBm
5725~5850 MHz	Conducted output power shall not exceed 1 W

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Page: 48 of 232

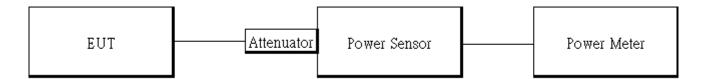
9.2 Measurement Procedure

- Place the EUT on the table and set it in transmitting mode.
- 2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules.
- Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter
- 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).
- Repeat above procedures until all frequency (low, middle, and high channel) measured were complete.

9.3 Measurement Equipment Used

	SGS Conducted Room											
Name of Equip- ment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due							
Power Meter	Anritsu	ML2496A	1326001	2018/08/09	2019/08/02							
Power Sensor	Anritsu	MA2411B	1315048	2018/08/09	2019/08/02							
Power Sensor	Anritsu	MA2411B	1315049	2018/08/09	2019/08/02							
Attenuator	Marvelous	MVE2213-10	RF30	2017/12/26	2018/12/25							
DC Power Supply	Agilent	E3640A	MY53140006	2018/05/30	2019/05/29							

9.4 Test Set-up



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Page: 49 of 232

9.5 Measurement Result

Conducted output power (FCC)

802 11a Ch0

002.11a_			TOTAL	TOTAL		REQUIRED		
СН	Frequency (MHz)	Data Rate	POWER	POWER		LIMIT		RESULT
	, ,		(dBm)	(mW)		(dBm)		
36	5180	6	12.74	18.799		23.98		PASS
44	5220	6	12.75	18.842		23.98		PASS
48	5240	6	12.59	18.161		23.98		PASS
52	5260	6	12.73	18.756	23.98	or 11+10log(B) =	24.29	PASS
60	5300	6	12.91	19.550	23.98	or 11+10log(B) =	24.28	PASS
64	5320	6	12.96	19.776	23.98	or 11+10log(B) =	24.28	PASS
100	5500	6	12.57	18.077	23.98	or 11+10log(B) =	24.27	PASS
116	5580	6	12.54	17.953	23.98	or 11+10log(B) =	24.28	PASS
140	5700	6	12.52	17.871	23.98	or 11+10log(B) =	24.28	PASS
144	5720(U-NII 2C)	6	9.88	9.726	23.98	or 11+10log(B) =	21.87	PASS
144	5720 (U-NII 3)	6	3.07	2.029		30		PASS
149	5745	6	12.81	19.105		30		PASS
157	5785	6	12.96	19.776		30		PASS
165	5825	6	12.82	19.149		30		PASS

802.11n HT20 Ch0

	_		TOTAL	TOTAL		REQUIRED		
СН	Frequency	Data	POWER	POWER		LIMIT		RESULT
	(MHz)	Rate	(dBm)	(mW)		(dBm)		
36	5180	MCS0	12.63	18.312		23.98		PASS
44	5220	MCS0	12.59	18.144		23.98		PASS
48	5240	MCS0	12.95	19.712		23.98		PASS
52	5260	MCS0	12.55	17.978	23.98	or 11+10log(B) =	24.40	PASS
60	5300	MCS0	12.70	18.609	23.98	or 11+10log(B) =	24.33	PASS
64	5320	MCS0	12.75	18.825	23.98	or 11+10log(B) =	24.28	PASS
100	5500	MCS0	12.87	19.352	23.98	or 11+10log(B) =	24.29	PASS
116	5580	MCS0	12.75	18.825	23.98	or 11+10log(B) =	24.28	PASS
140	5700	MCS0	12.96	19.757	23.98	or 11+10log(B) =	24.31	PASS
144	5720(U-NII 2C)	MCS0	9.69	9.313	23.98	or 11+10log(B) =	22.12	PASS
144	5720 (U-NII 3)	MCS0	2.95	1.971		30		PASS
149	5745	MCS0	12.90	19.486		30		PASS
157	5785	MCS0	12.93	19.621	_	30	_	PASS
165	5825	MCS0	12.72	18.695		30		PASS

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Page: 50 of 232

802.11ac VHT20 Ch0

002.1140	_VIIIZU_CIIU							
СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
36	5180	MCS0	12.59	18.156		23.98		PASS
44	5220	MCS0	12.55	17.990		23.98		PASS
48	5240	MCS0	12.93	19.635		23.98		PASS
52	5260	MCS0	12.51	17.825	23.98	or 11+10log(B) =	24.39	PASS
60	5300	MCS0	12.65	18.409	23.98	or 11+10log(B) =	24.36	PASS
64	5320	MCS0	12.70	18.622	23.98	or 11+10log(B) =	24.35	PASS
100	5500	MCS0	12.84	19.232	23.98	or 11+10log(B) =	24.27	PASS
116	5580	MCS0	12.71	18.665	23.98	or 11+10log(B) =	24.34	PASS
140	5700	MCS0	12.90	19.499	23.98	or $11+10\log(B) =$	24.28	PASS
144	5720(U-NII 2C)	MCS0	9.67	9.268	23.98	or 11+10log(B) =	22.12	PASS
144	5720 (U-NII 3)	MCS0	2.94	1.968		30		PASS
149	5745	MCS0	12.84	19.232		30		PASS
157	5785	MCS0	12.88	19.410		30		PASS
165	5825	MCS0	12.69	18.579		30		PASS

802.11n HT40 Ch0

СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
38	5190	MCS0	12.84	19.215		23.98		PASS
46	5230	MCS0	12.60	18.182		23.98		PASS
54	5270	MCS0	12.84	19.215	23.98	or 11+10log(B) =	26.90	PASS
62	5310	MCS0	12.91	19.527	23.98	or 11+10log(B) =	26.92	PASS
102	5510	MCS0	12.96	19.754	23.98	or 11+10log(B) =	26.96	PASS
110	5550	MCS0	12.98	19.845	23.98	or 11+10log(B) =	26.96	PASS
134	5670	MCS0	12.97	19.799	23.98	or 11+10log(B) =	26.96	PASS
142	5710(U-NII 2C)	MCS0	11.58	14.389	23.98	or 11+10log(B) =	25.96	PASS
142	5710 (U-NII 3)	MCS0	1.38	1.373		30		PASS
151	5755	MCS0	12.94	19.663		30		PASS
159	5795	MCS0	12.99	19.890		30		PASS

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Page: 51 of 232

802.11ac VHT40 Ch0

СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
38	5190	MCS0	12.81	19.101		23.98		PASS
46	5230	MCS0	12.58	18.116		23.98		PASS
54	5270	MCS0	12.80	19.057	23.98	or 11+10log(B) =	26.97	PASS
62	5310	MCS0	12.90	19.501	23.98	or 11+10log(B) =	26.97	PASS
102	5510	MCS0	12.94	19.681	23.98	or 11+10log(B) =	26.96	PASS
110	5550	MCS0	12.92	19.591	23.98	or 11+10log(B) =	27.03	PASS
134	5670	MCS0	12.93	19.636	23.98	or 11+10log(B) =	27.02	PASS
142	5710(U-NII 2C)	MCS0	11.54	14.253	23.98	or 11+10log(B) =	25.96	PASS
142	5710 (U-NII 3)	MCS0	1.37	1.371		30		PASS
151	5755	MCS0	12.88	19.411		30		PASS
159	5795	MCS0	12.97	19.818		30		PASS

802.11ac VHT80 Ch0

СН	Frequency (MHz)	Data Rate	TOTAL POWER	TOTAL POWER		REQUIRED LIMIT		RESULT
42	5210	MCS0	(dBm) 12.51	(mW) 17.825		(dBm) 23.98		PASS
58	5290	MCS0	12.62	18.282	23.98	or 11+10log(B) =	30.00	PASS
106	5530	MCS0	12.77	18.925	23.98	or 11+10log(B) =	30.03	PASS
122	5610	MCS0	12.64	18.367	23.98	or 11+10log(B) =	30.00	PASS
138	5690(U-NII 2C)	MCS0	12.12	16.305	23.98	or 11+10log(B) =	29.74	PASS
138	5690 (U-NII 3)	MCS0	0.69	1.171		30		PASS
155	5775	MCS0	12.71	18.665		30		PASS

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Page: 52 of 232

Conducted output power (IC)

802.11a Ch0

002.11a_							
СН	Frequency (MHz)	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
52	5260	12.73	18.756	23.98	or 11+10log(B) =	23.21	PASS
60	5300	12.91	19.550	23.98	or 11+10log(B) =	23.21	PASS
64	5320	12.96	19.776	23.98	or 11+10log(B) =	23.22	PASS
100	5500	12.57	18.077	23.98	or 11+10log(B) =	23.22	PASS
116	5580	12.54	17.953	23.98	or 11+10log(B) =	23.21	PASS
140	5700	12.52	17.871	23.98	or 11+10log(B) =	23.22	PASS
144	5720(U-NII 2C)	9.88	9.726	23.98	or 11+11log(B) =	22.04	PASS
144	5720 (U-NII 3)	3.07	2.029		30		PASS
149	5745	12.81	19.105		30		PASS
157	5785	12.96	19.776		30		PASS
165	5825	12.82	19.149		30		PASS

802.11n_HT20_Ch0

СН	Frequency (MHz)	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
52	5260	12.55	17.978	23.98	or 11+10log(B) =	23.50	PASS
60	5300	12.70	18.609	23.98	or 11+10log(B) =	23.50	PASS
64	5320	12.75	18.825	23.98	or 11+10log(B) =	23.51	PASS
100	5500	12.87	19.352	23.98	or 11+10log(B) =	23.51	PASS
116	5580	12.75	18.825	23.98	or 11+10log(B) =	23.52	PASS
140	5700	12.96	19.757	23.98	or 11+10log(B) =	23.52	PASS
144	5720(U-NII 2C)	9.69	9.313	23.98	or 11+11log(B) =	22.36	PASS
144	5720 (U-NII 3)	2.95	1.971		30		PASS
149	5745	12.90	19.486		30		PASS
157	5785	12.93	19.621		30		PASS
165	5825	12.72	18.695		30		PASS

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Page: 53 of 232

802.11ac_VHT20_Ch0

СН	Frequency (MHz)	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
52	5260	12.51	17.825	23.98	or 11+10log(B) =	23.51	PASS
60	5300	12.65	18.409	23.98	or 11+10log(B) =	23.51	PASS
64	5320	12.70	18.622	23.98	or 11+10log(B) =	23.51	PASS
100	5500	12.84	19.232	23.98	or 11+10log(B) =	23.51	PASS
116	5580	12.71	18.665	23.98	or 11+10log(B) =	23.52	PASS
140	5700	12.90	19.499	23.98	or 11+10log(B) =	23.51	PASS
144	5720(U-NII 2C)	9.67	9.268	23.98	or 11+11log(B) =	22.36	PASS
144	5720 (U-NII 3)	2.94	1.968		30		PASS
149	5745	12.84	19.232		30		PASS
157	5785	12.88	19.410		30		PASS
165	5825	12.69	18.579		30		PASS

802.11n HT40 Ch0

СН	Frequency (MHz)	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)			RESULT
54	5270	12.84	19.215	23.98	or 11+10log(B) =	26.58	PASS
62	5310	12.91	19.527	23.98	or 11+10log(B) =	26.58	PASS
102	5510	12.96	19.754	23.98	or 11+10log(B) =	26.58	PASS
110	5550	12.98	19.845	23.98	or 11+10log(B) =	26.58	PASS
134	5670	12.97	19.799	23.98	or 11+10log(B) =	26.58	PASS
142	30)	11.58	14.389	23.98	or 11+11log(B) =	26.09	PASS
142	5710 (U-NII 3)	1.38	1.373		30		PASS
151	5755	12.94	19.663		30		PASS
159	5795	12.99	19.890		30		PASS

802.11ac_VHT40_Ch0

СН	Frequency (MHz)	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
54	5270	12.80	19.057	23.98	or 11+10log(B) =	26.58	PASS
62	5310	12.90	19.501	23.98	or 11+10log(B) =	26.58	PASS
102	5510	12.94	19.681	23.98	or 11+10log(B) =	26.57	PASS
110	5550	12.92	19.591	23.98	or 11+10log(B) =	26.58	PASS
134	5670	12.93	19.636	23.98	or 11+10log(B) =	26.58	PASS
142	37 10(0-1411	11.54	14.253	23.98	or 11+11log(B) =	26.09	PASS
142	5710 (U-NII 3)	1.37	1.371		30		PASS
151	5755	12.88	19.411		30		PASS
159	5795	12.97	19.818		30	•	PASS

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Page: 54 of 232

802.11ac_VHT80_Ch0

СН	Frequency (MHz)	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)		RESULT	
58	5290	12.62	18.282	23.98	or 11+10log(B) =	29.78	PASS
106	5530	12.77	18.925	23.98	or 11+10log(B) =	29.78	PASS
122	5610	12.64	18.367	23.98	or 11+11log(B) =	29.78	PASS
138	3090(0-1411	12.12	16.305	23.98	or 11+12log(B) =	29.54	PASS
138	5690 (U-NII 3)	0.69	1.171		30		PASS
155	5775	12.71	18.665		30		PASS

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Page: 55 of 232

EIRP

802.11a Ch0

CH	Frequency (MHz)	TOTAL POWER	Antenna Gain	EIRP (dBm)	EIRP (mW)	REQUIRED LIMIT (dBm)			RESULT
36	5180	(dBm) 12.74	(dBi) 1.600	14.34 27.173		23.01	PASS		
44	5220	12.74	1.600	14.34	27.173 27.236	23.01	or 10+10log(B)= or 10+10log(B)=	22.22 22.22	PASS
48	5240	12.73	1.600	14.19	26.250	23.01	or 10+10log(B)=	22.21	PASS
52	5260	12.73	1.600	14.33	27.110	30	or 17+10log(B)=	29.21	PASS
60	5300	12.91	1.600	14.51	28.258	30	or 17+10log(B)=	29.21	PASS
64	5320	12.96	1.600	14.56	28.585	30	or 17+10log(B)=	29.22	PASS
100	5500	12.57	1.600	14.17	26.130	30	or 17+10log(B)=	29.22	PASS
116	5580	12.54	1.600	14.14	25.950	30	or 17+10log(B)=	29.21	PASS
140	5700	12.52	1.600	14.12	25.831	30	or 17+10log(B)=	29.22	PASS

802.11n_HT20_Ch0

СН	Frequency (MHz)	TOTAL POWER (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	REQUIRED LIMIT (dBm)		RESULT	
36	5180	12.63	1.600	14.23	26.469	23.01	or 10+10log(B)=	22.51	PASS
44	5220	12.59	1.600	14.19	26.226	23.01	or 10+10log(B)=	22.51	PASS
48	5240	12.95	1.600	14.55	28.492	23.01	or 10+10log(B)=	22.51	PASS
52	5260	12.55	1.600	14.15	25.985	30	or 17+10log(B)=	29.50	PASS
60	5300	12.70	1.600	14.30	26.899	30	or 17+10log(B)=	29.50	PASS
64	5320	12.75	1.600	14.35	27.210	30	or 17+10log(B)=	29.51	PASS
100	5500	12.87	1.600	14.47	27.972	30	or 17+10log(B)=	29.51	PASS
116	5580	12.75	1.600	14.35	27.210	30	or 17+10log(B)=	29.52	PASS
140	5700	12.96	1.600	14.56	28.558	30	or 17+10log(B)=	29.52	PASS

802.11n_HT40_Ch0

СН	Frequency (MHz)	TOTAL POWER (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	REQUIRED LIMIT (dBm)		RESULT	
38	5190	12.84	1.600	14.44	27.774	23.01	or 10+10log(B)=	25.58	PASS
46	5230	12.60	1.600	14.20	26.281	23.01	or 10+10log(B)=	25.58	PASS
54	5270	12.84	1.600	14.44	27.774	30	or 17+10log(B)=	32.58	PASS
62	5310	12.91	1.600	14.51	28.226	30	or 17+10log(B)=	32.58	PASS
102	5510	12.96	1.600	14.56	28.553	30	or 17+10log(B)=	32.58	PASS
110	5550	12.98	1.600	14.58	28.684	30	or 17+10log(B)=	32.58	PASS
134	5670	12.97	1.600	14.57	28.618	30	or 17+10log(B)=	32.58	PASS

802.11ac_VHT80_Ch0

СН	Frequency (MHz)	TOTAL POWER (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	REQUIRED LIMIT (dBm)			RESULT
42	5210	12.51	1.600	14.11	25.765	23.01	or 10+10log(B)=	28.78	PASS
58	5290	12.62	1.600	14.22	26.426	30	or 17+10log(B)=	35.78	PASS
106	5530	12.77	1.600	14.37	27.355	30	or 17+10log(B)=	35.78	PASS

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Page: 56 of 232

10 PEAK POWER SPECTRAL DENSITY

10.1 Standard Applicable

FCC

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

IC

OPERZTION FREQUENCY BAND	LIMIT		
5150~5250 MHz	EIRP spectral density 10 dBm / MHz		
5250~5350 MHz	11dBm / MHz		
5470-5600 MHz and 5650-5725 MHz	11dBm / MHz		
5725~5850 MHz	30dBm / 500 kHz		

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Page: 57 of 232

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.
- Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to Spectrum.

4. For U-NII1, U-NII-2A, U-NII-2C Band:

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

For U-NII-3 Band:

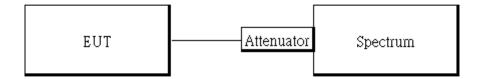
Set RBW=500 kHz, VBW≥ 3RBW, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)

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

10.3 **Measurement Equipment Used**

	SGS Conducted Room										
Name of Equip- ment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due						
Spectrum Analyzer	Agilent	N9010A	MY51440113	2018/06/20	2019/06/19						
DC Power Supply	Agilent	E3640A	MY53140006	2018/05/30	2019/05/29						
Attenuator	Marvelous	MVE2213-10	RF30	2017/12/26	2018/12/25						

Test Set-up 10.4



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Page: 58 of 232

10.5 **Measurement Result**

	POWER	R DENSIT	Y 802.11a	a MODE		
Frequency (MHz)	PPSD W/O Duty Factor (dBm)	Offset	Duty Factor	PPSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)
5180	1.34	11.20	0.07	1.41	11	-9.59
5220	1.25	11.20	0.07	1.32	11	-9.68
5240	-0.60	11.20	0.07	-0.53	11	-11.53
5260	0.95	11.20	0.07	1.02	11	-9.98
5300	0.63	11.20	0.07	0.70	11	-10.30
5320	0.83	11.20	0.07	0.90	11	-10.10
5500	-0.72	11.20	0.07	-0.65	11	-11.65
5580	0.59	11.20	0.07	0.66	11	-10.34
5700	-0.29	11.20	0.07	-0.22	11	-11.22
5720 (U-NII 2C)	-1.67	11.20	0.07	-1.60	11	-12.60
5720 (U-NII 3)	-3.76	11.20	0.07	-3.69	30	-33.69
5745	6.17	11.20	-	6.17	30	-23.83
5785	5.13	11.20	-	5.13	30	-24.87
5825	5.72	11.20	-	5.72	30	-24.28

	POWER D	ENSITY 8	02.11n H	T20 MODE		
Frequency (MHz)	PPSD W/O Duty Factor (dBm)	Offset	Duty Factor	PPSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)
5180	-0.73	11.20	0.09	-0.64	11	-11.64
5220	0.23	11.20	0.09	0.32	11	-10.68
5240	0.64	11.20	0.09	0.73	11	-10.27
5260	0.28	11.20	0.09	0.37	11	-10.63
5300	0.54	11.20	0.09	0.63	11	-10.37
5320	-0.01	11.20	0.09	0.08	11	-10.92
5500	-0.22	11.20	0.09	-0.13	11	-11.13
5580	0.54	11.20	0.09	0.63	11	-10.37
5700	0.39	11.20	0.09	0.48	11	-10.52
5720 (U-NII 2C)	-0.87	11.20	0.09	-0.79	11	-11.79
5720 (U-NII 3)	-2.93	11.20	0.09	-2.84	30	-32.84
5745	5.64	11.20	-	5.64	30	-24.36
5785	5.64	11.20	-	5.64	30	-24.36
5825	4.95	11.20	-	4.95	30	-25.05

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Page: 59 of 232

	POWER DENSITY 802.11n HT40 MODE					
Frequency (MHz)	PPSD W/O Duty Factor (dBm)	Offset	Duty Factor	PPSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)
5190	-1.9	11.20	0.17	-1.73	11	-12.73
5230	-3.15	11.20	0.17	-2.98	11	-13.98
5270	-2.65	11.20	0.17	-2.48	11	-13.48
5310	-1.97	11.20	0.17	-1.80	11	-12.80
5510	-2.75	11.20	0.17	-2.58	11	-13.58
5550	-3.18	11.20	0.17	-3.01	11	-14.01
5670	-1.95	11.20	0.17	-1.78	11	-12.78
5710 (U-NII 2C)	-3.38	11.20	0.17	-3.21	11	-14.21
5710 (U-NII 3)	-7.77	11.20	0.17	-7.60	30	-37.60
5755	2.03	11.20	-	2.03	30	-27.97
5795	2.13	11.20	-	2.13	30	-27.87

	POWER DENSITY 802.11ac VHT80 MODE					
Frequency (MHz)	PPSD W/O Duty Factor (dBm)	Offset	Duty Factor	PPSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)
5210	-6.50	11.20	0.32	-6.18	11	-17.18
5290	-6.92	11.20	0.32	-6.60	11	-17.60
5530	-6.25	11.20	0.32	-5.93	11	-16.93
5610	-6.41	11.20	0.32	-6.09	11	-17.09
5690 (U-NII 2C)	-6.42	11.20	0.32	-6.10	11	-17.10
5690 (U-NII 3)	-11.78	11.20	0.32	-11.46	30	-41.46
5775	-1.37	11.20	-	-1.37	30	-31.37

E	EIRP spectral density 802.11a MODE					
Freq. (MHz)	PPSD (dBm)	Ant. Gain (dBi)	EIRP SD (dBm)	Limit (dBm)	Margin (dB)	
5180	1.41	1.60	3.01	10	-6.99	
5220	1.32	1.60	2.92	10	-7.08	
5240	-0.53	1.60	1.07	10	-8.93	

EIR	EIRP spectral density 802.11n HT20 MODE					
Freq. (MHz)	PPSD (dBm)	Ant. Gain (dBi)	EIRP SD (dBm)	Limit (dBm)	Margin (dB)	
5180	-0.64	1.60	0.96	10	-9.04	
5220	0.32	1.60	1.92	10	-8.08	
5240	0.73	1.60	2.33	10	-7.67	

EIR	EIRP spectral density 802.11n HT40 MODE					
Freq. (MHz)	PPSD (dBm)	Ant. Gain (dBi)	EIRP SD (dBm)	Limit (dBm)	Margin (dB)	
5180	-1.73	1.60	-0.13	10	-10.13	
5220	-2.98	1.60	-1.38	10	-11.38	

EIRP	EIRP spectral density 802.11ac VHT80 MODE					
Freq. (MHz)	PPSD (dBm)	Ant. Gain (dBi)	EIRP SD (dBm)	Limit (dBm)	Margin (dB)	
5210	-6.18	1.60	-4.58	10	-14.58	

Note:

SISO offset=

11.2

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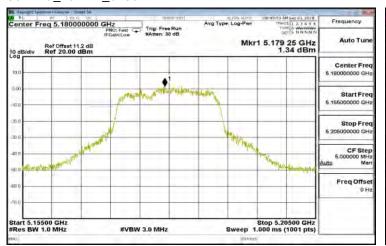
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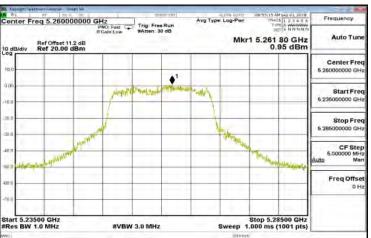


Page: 60 of 232

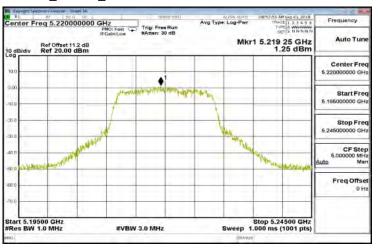
802.11a 20MHz 5180MHz



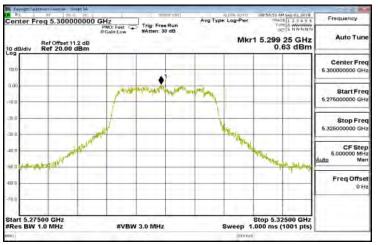
802.11a 20MHz 5260MHz



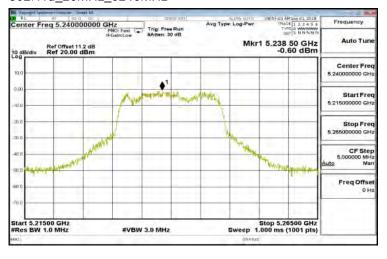
802.11a_20MHz_5220MHz



802.11a_20MHz_5300MHz



802.11a_20MHz_5240MHz



802.11a_20MHz_5320MHz



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Page: 61 of 232

802.11a 20MHz 5500MHz



802.11a 20MHz 5745MHz



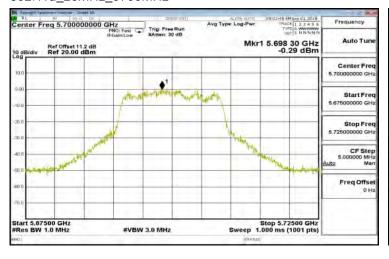
802.11a_20MHz_5580MHz



802.11a_20MHz_5785MHz



802.11a_20MHz_5700MHz



802.11a_20MHz_5825MHz



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Page: 62 of 232

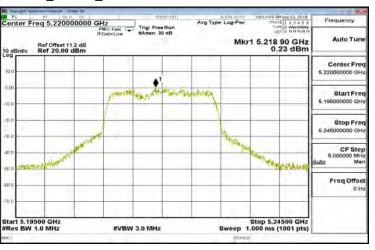
802.11n 20MHz 5180MHz



802.11n 20MHz 5260MHz



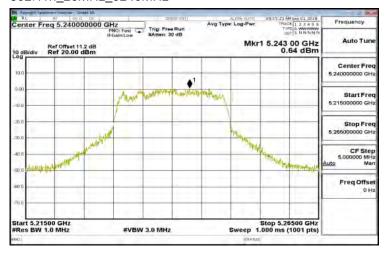
802.11n_20MHz_5220MHz



802.11n_20MHz_5300MHz



802.11n_20MHz_5240MHz



802.11n_20MHz_5320MHz



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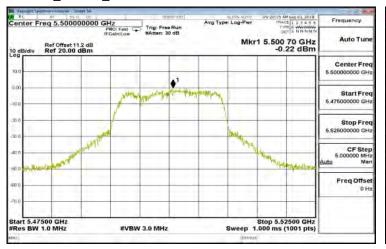
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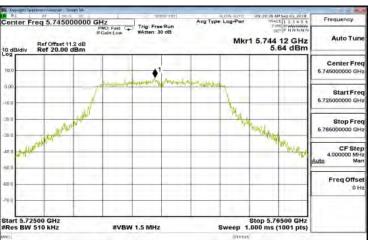


Page: 63 of 232

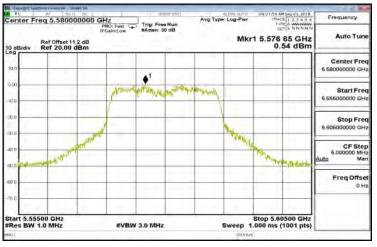
802.11n 20MHz 5500MHz



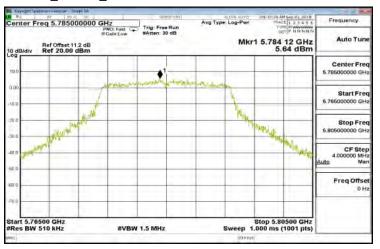
802.11n 20MHz 5745MHz



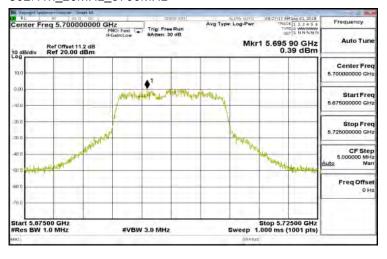
802.11n_20MHz_5580MHz



802.11n_20MHz_5785MHz



802.11n_20MHz_5700MHz



802.11n_20MHz_5825MHz



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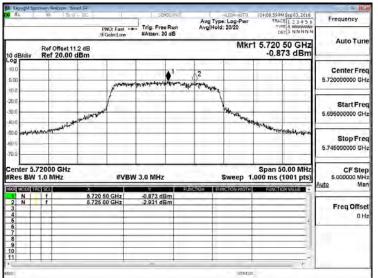
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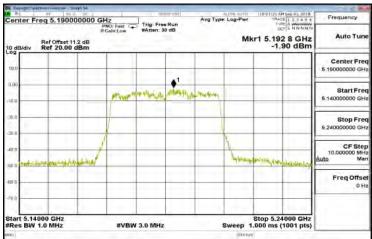


Page: 64 of 232

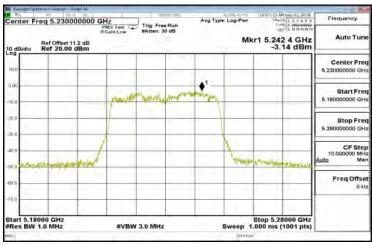
802.11n 20MHz 5720MHz



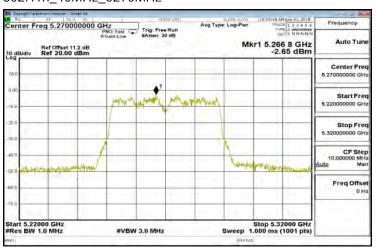
802.11n 40MHz 5190MHz



802.11n_40MHz_5230MHz



802.11n_40MHz_5270MHz



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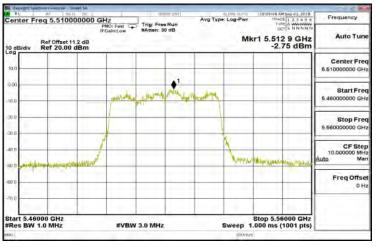


Page: 65 of 232

802.11n 40MHz 5310MHz

802.11n_40MHz_5510MHz

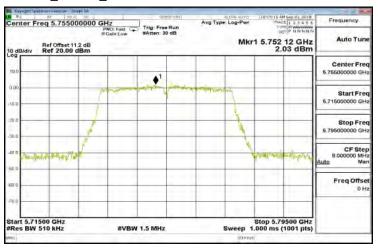




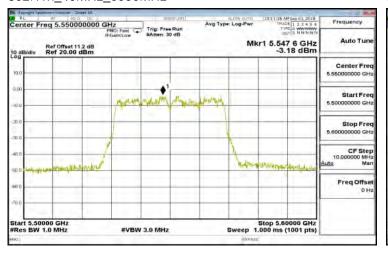
802.11n 40MHz 5670MHz



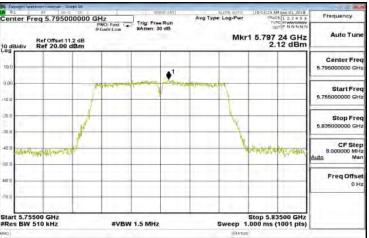
802.11n_40MHz_5755MHz



802.11n_40MHz_5550MHz



802.11n_40MHz_5795MHz



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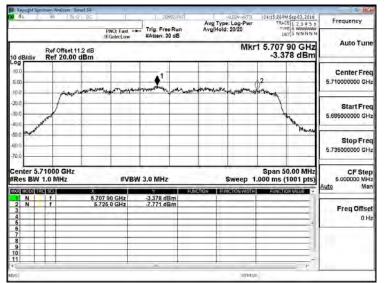
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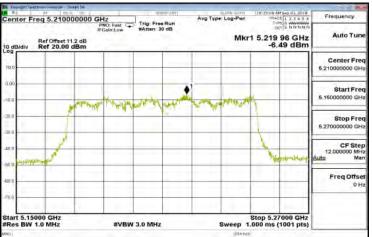


Page: 66 of 232

802.11n 40MHz 5710MHz



802.11ac 80MHz 5210MHz



802.11ac_80MHz_5290MHz



802.11ac_80MHz_5530MHz



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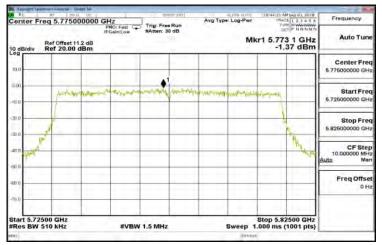


Page: 67 of 232

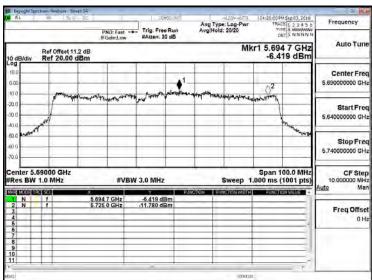
802.11ac 80MHz 5610MHz



802.11ac_80MHz_5775MHz



802.11ac 80MHz 5690MHz



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Page: 68 of 232

11 UNDESIRABLE RADIATED EMISSION MEASUREMENT

11.1 Standard Applicable

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

- 1. For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
- 2. For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

APPLICABLE TO	LIMIT			
FCC KDB 789033 D02 General UNII Test Procedures New Rules	FIELD STRENGTH AT 3m			
	PK: 74 (dBμV/m)	AV 54 (dBµV/m)		
APPLICABLE TO	EIRP LIMIT	FIELD STRENGTH AT 3m		
15.407(b)(1) RSS-247 6.2.1.2 15.407(b)(2) RSS-247 6.2.2.2 15.407(b)(3)	PK: -27 (dBm/MHz)	PK: 68.3 (dBμV/m)		
RSS-247 6.2.3.2 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.



Page: 69 of 232

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

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

Note:

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

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Page: 70 of 232

11.2 **Measurement Equipment Used**

SGS SAC-III					
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Broadband An- tenna	TESEQ	CBL 6112D	35243	2017/11/10	2018/11/09
Horn Antenna	Schwarzbeck	BBHA9120D	1187	2018/01/04	2019/01/03
Horn Antenna	SCHWAZBECK	BBHA9170	184	2017/12/12	2018/12/11
Loop Antenna	ETS.LINDGREN	6502	148045	2017/09/26	2018/09/25
EMI Test Receiv- er	R&S	ESU 40	100363	2018/04/11	2019/04/10
Pre-Amplifier	EMC Instru- ments	EMC330	980096	2017/12/26	2018/12/25
Pre-Amplifier	EMC Instru- ments	EMC0011830	980199	2017/12/26	2018/12/25
Pre-Amplifier	EMC Instru- ments	EMC184045B	980135	2017/10/27	2018/10/26
Attenuator	Marvelous	WATT-218FS-10	RF246	2017/12/26	2018/12/25
Band Rejection Filter	Micro-Tronics	G015	RF100	2017/12/26	2018/12/25
Band Rejection Filter	Micro-Tronics	G016	RF101	2017/12/26	2018/12/25
Band Rejection Filter	Micro-Tronics	G021	RF102	2017/12/26	2018/12/25
Coaxial Cable	Huber+Suhner	RG 214/U	W21.01	2017/12/26	2018/12/25
Coaxial Cable	Huber Suhner	EMC106-SM-SM-7200	150703	2017/12/26	2018/12/25
Coaxial Cable	Huber Suhner	SUCOFLEX 104	MY17388/4	2017/12/26	2018/12/25
Coaxial Cable	Huber Suhner	RG 214/U	W22.03	2017/12/26	2018/12/25

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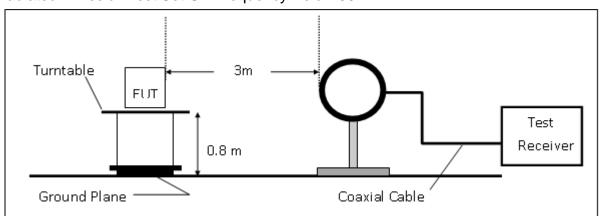
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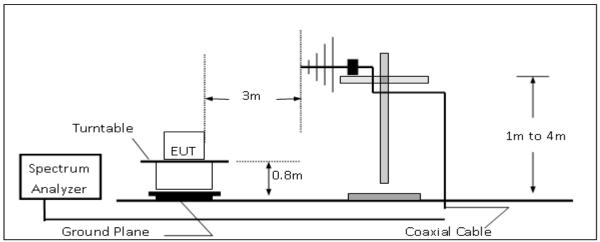
Page: 71 of 232

11.3 **Test SET-UP**

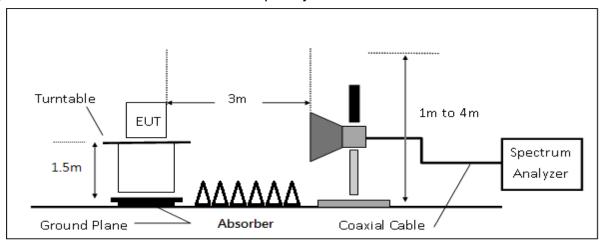
(A) Radiated Emission Test Set-UP Frequency Below 30MHz.



(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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Page: 72 of 232

11.4 **Measurement Procedure**

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

11.5 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 Stre	ength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading A	mplitude	AG = Amplifier Gain
AF = Antenna F	actor	

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

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

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Page: 73 of 232

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

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

11.7 **Measurement Result**

Refer to next page for tabular data sheets.

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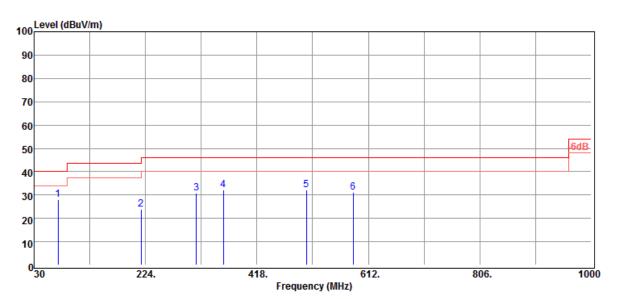


Page: 74 of 232

Radiated Spurious Emission Measurement Result Below 1GHz Worst-Case Data:

802.11a 5150~5250 MHz

Operation Mode :802.11a / Band 1 **Test Date** :2018-08-27 Test Mode :TX CH MID Temp./Humi. :25/60 **EUT Pol** :E2 Plan Antenna Pol. :VERTICAL **Test Channel** :5220 MHz Engineer :Enzo



Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
Peak	45.74	-17.71	28.03	40.00	-11.97
Peak	36.51	-12.77	23.74	46.00	-22.26
Peak	40.22	-9.44	30.78	46.00	-15.22
Peak	39.71	-7.61	32.10	46.00	-13.90
Peak	36.13	-4.12	32.01	46.00	-13.99
Peak	34.45	-3.20	31.25	46.00	-14.75
	Mode PK/QP/AV Peak Peak Peak Peak Peak Peak Peak	Mode PK/QP/AV Reading Level dBμV Peak 45.74 Peak 36.51 Peak 40.22 Peak 39.71 Peak 36.13	Mode PK/QP/AV Reading Level dBμV dB Peak 45.74 -17.71 Peak 36.51 -12.77 Peak 40.22 -9.44 Peak 39.71 -7.61 Peak 36.13 -4.12	Mode PK/QP/AVReading Level dBμVFS dBμV/mPeak45.74-17.7128.03Peak36.51-12.7723.74Peak40.22-9.4430.78Peak39.71-7.6132.10Peak36.13-4.1232.01	Mode PK/QP/AV Reading Level dBμV FS dBμV/m @3m dBμV/m Peak 45.74 -17.71 28.03 40.00 Peak 36.51 -12.77 23.74 46.00 Peak 40.22 -9.44 30.78 46.00 Peak 39.71 -7.61 32.10 46.00 Peak 36.13 -4.12 32.01 46.00

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Page: 75 of 232

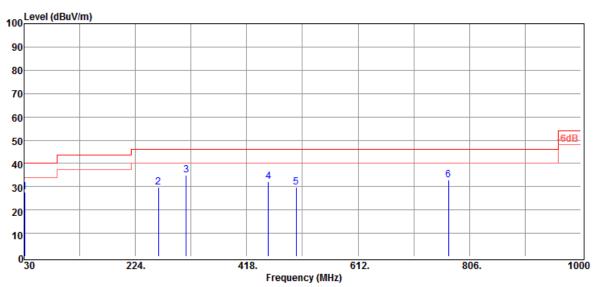
Operation Mode Test Mode

:802.11a / Band 1 :TX CH MID

EUT Pol :E2 Plan Test Channel :5220 MHz **Test Date** :2018-08-27 Temp./Humi. :25/60

Antenna Pol. :HORIZONTAL

Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
						_
30.97	Peak	31.71	-4.16	27.55	40.00	-12.45
263.77	Peak	39.84	-10.09	29.75	46.00	-16.25
312.27	Peak	44.45	-9.44	35.01	46.00	-10.99
455.83	Peak	37.52	-5.25	32.27	46.00	-13.73
504.33	Peak	33.81	-4.12	29.69	46.00	-16.31
769.14	Peak	33.96	-0.96	33.00	46.00	-13.00

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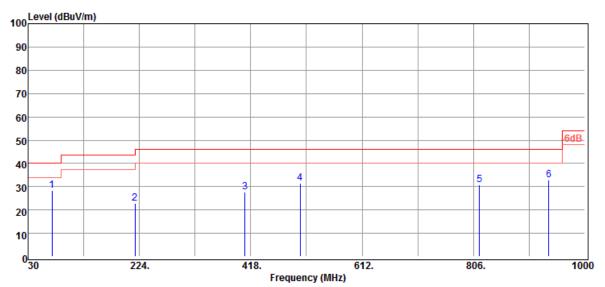
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Page: 76 of 232

802.11a 5250~5350 MHz

Operation Mode :802.11a / Band 2 **Test Date** :2018-08-27 Test Mode :TX CH MID Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :VERTICAL Test Channel :5300 MHz Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
						_
71.71	Peak	46.01	-17.71	28.30	40.00	-11.70
216.24	Peak	35.76	-12.77	22.99	46.00	-23.01
408.30	Peak	33.67	-5.94	27.73	46.00	-18.27
504.33	Peak	35.59	-4.12	31.47	46.00	-14.53
816.67	Peak	30.69	0.02	30.71	46.00	-15.29
936.95	Peak	31.22	1.82	33.04	46.00	-12.96

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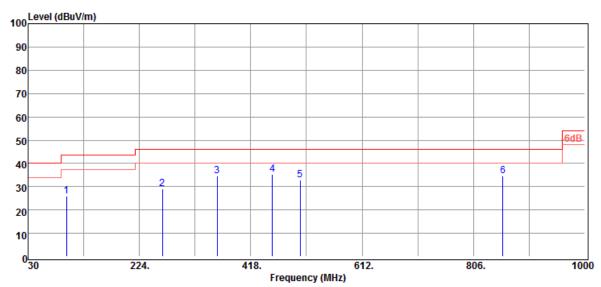


Page: 77 of 232

Operation Mode :802.11a / Band 2 **Test Date** :2018-08-27 Test Mode :TX CH MID Temp./Humi. :25/60

EUT Pol Antenna Pol. :E2 Plan :HORIZONTAL Test Channel :5300 MHz

Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
96.93	Peak	41.34	-15.26	26.08	43.50	-17.42
263.77	Peak	39.04	-10.09	28.95	46.00	-17.05
359.80	Peak	42.21	-7.61	34.60	46.00	-11.40
455.83	Peak	40.42	-5.25	35.17	46.00	-10.83
504.33	Peak	36.82	-4.12	32.70	46.00	-13.30
857.41	Peak	33.66	0.80	34.46	46.00	-11.54

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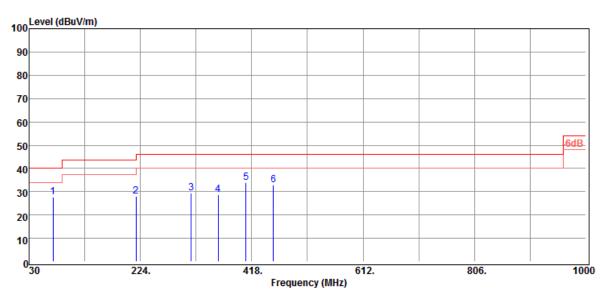
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Page: 78 of 232

802.11a, 5470~5725 MHz

Operation Mode :802.11a / Band 3 **Test Date** :2018-08-27 Test Mode :TX CH MID Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :VERTICAL Test Channel :5580 MHz Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
71.71	Peak	45.26	-17.71	27.55	40.00	-12.45
216.24	Peak	40.77	-12.77	28.00	46.00	-18.00
312.27	Peak	38.76	-9.44	29.32	46.00	-16.68
359.80	Peak	36.34	-7.61	28.73	46.00	-17.27
408.30	Peak	39.71	-5.94	33.77	46.00	-12.23
455.83	Peak	37.98	-5.25	32.73	46.00	-13.27

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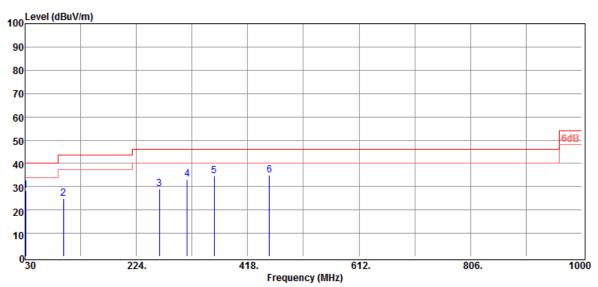


Page: 79 of 232

Operation Mode :802.11a / Band 3 **Test Date** :2018-08-27 Test Mode :TX CH MID Temp./Humi.

:25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL





Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
						_
30.97	Peak	32.45	-4.16	28.29	40.00	-11.71
96.93	Peak	40.14	-15.26	24.88	43.50	-18.62
263.77	Peak	39.05	-10.09	28.96	46.00	-17.04
312.27	Peak	42.66	-9.44	33.22	46.00	-12.78
359.80	Peak	42.15	-7.61	34.54	46.00	-11.46
455.83	Peak	40.37	-5.25	35.12	46.00	-10.88

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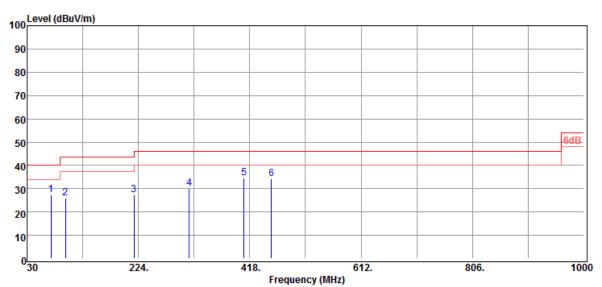


Page: 80 of 232

802.11a, 5725~5850 MHz

Operation Mode :802.11a / Band 4 **Test Date** :2018-08-27 Test Mode :TX CH MID Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :VERTICAL

Test Channel :5785 MHz Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
71.71	Peak	45.04	-17.71	27.33	40.00	-12.67
96.93	Peak	41.29	-15.26	26.03	43.50	-17.47
216.24	Peak	40.23	-12.77	27.46	46.00	-18.54
312.27	Peak	39.71	-9.44	30.27	46.00	-15.73
408.30	Peak	40.39	-5.94	34.45	46.00	-11.55
455.83	Peak	39.54	-5.25	34.29	46.00	-11.71

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Page: 81 of 232

Operation Mode Test Mode

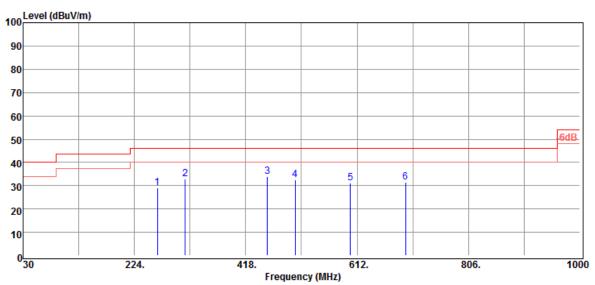
:802.11a / Band 4

:TX CH MID

EUT Pol :E2 Plan Test Channel :5785 MHz **Test Date** :2018-08-27 Temp./Humi. :25/60

Antenna Pol. :HORIZONTAL

Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
						_
263.77	Peak	39.30	-10.09	29.21	46.00	-16.79
312.27	Peak	42.48	-9.44	33.04	46.00	-12.96
455.83	Peak	39.19	-5.25	33.94	46.00	-12.06
504.33	Peak	36.77	-4.12	32.65	46.00	-13.35
600.36	Peak	34.27	-3.22	31.05	46.00	-14.95
696.39	Peak	33.19	-1.63	31.56	46.00	-14.44

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Page: 82 of 232

Above 1GHz Worst-Case Data:

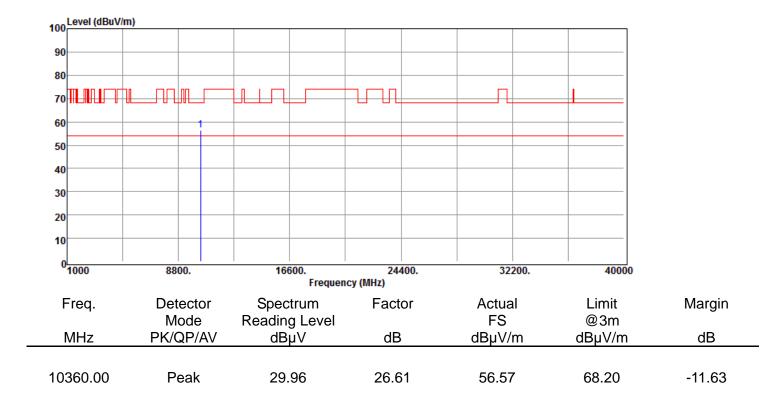
Radiated Spurious Emission Measurement Result 802.11a, 5150~5250 MHz

Operation Mode :802.11a / Band 1 Test Date :2018-09-04

Test Mode :TX CH LOW Temp./Humi. :25/60

EUT Pol :E2 Plan Antenna Pol. :VERTICAL

Test Channel :5180 MHz Engineer :Enzo



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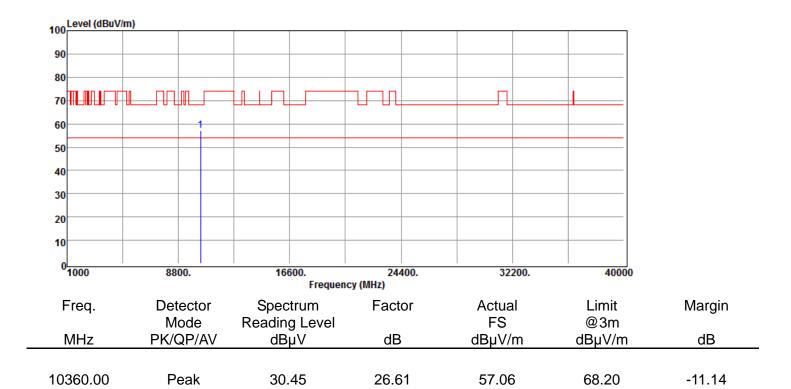


Page: 83 of 232

Operation Mode :802.11a / Band 1 **Test Date** :2018-09-04

Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5180 MHz Engineer :Enzo



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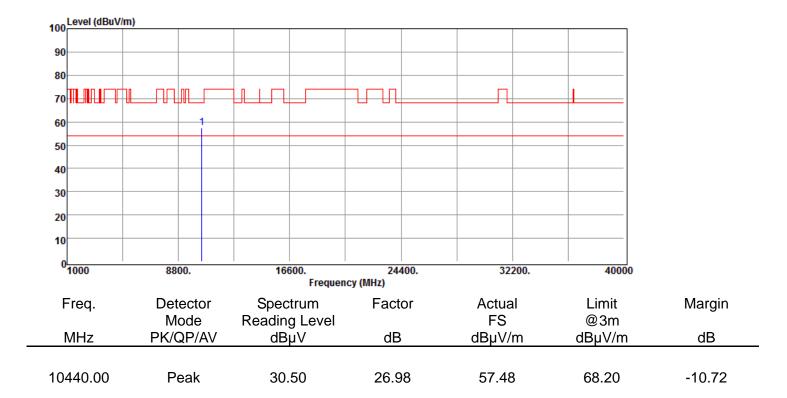
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Page: 84 of 232

Operation Mode :802.11a / Band 1 Test Mode :TX CH MID **EUT Pol** :E2 Plan Test Channel :5220 MHz

Test Date :2018-09-04 Temp./Humi. :25/60 Antenna Pol. :VERTICAL Engineer :Enzo



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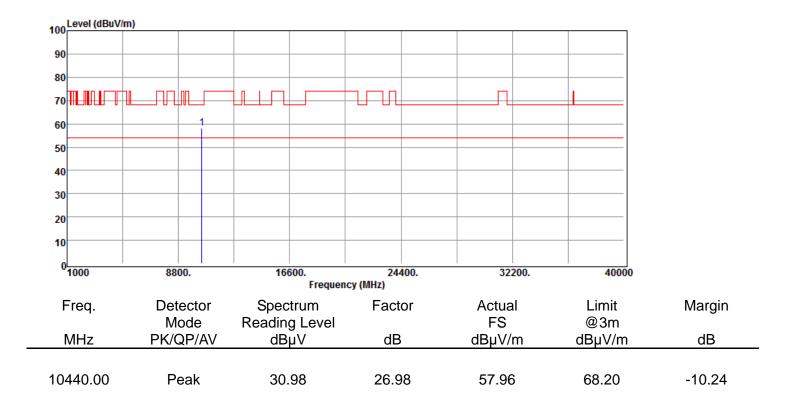


Page: 85 of 232

Operation Mode :802.11a / Band 1 **Test Date** :2018-09-04

Test Mode :TX CH MID Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5220 MHz Engineer :Enzo



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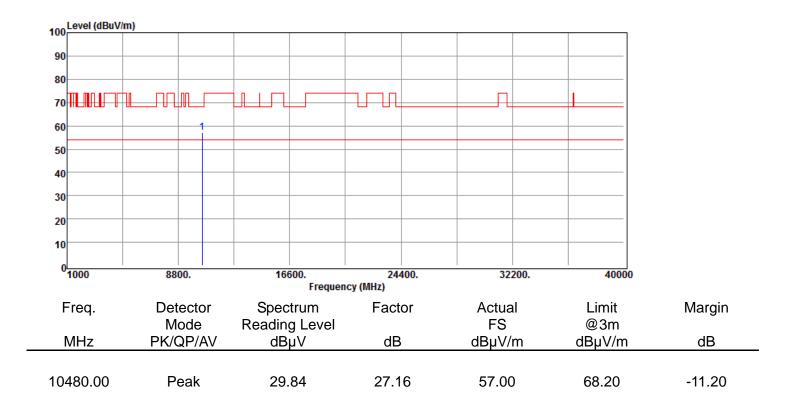
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Page: 86 of 232

Operation Mode :802.11a / Band 1 Test Mode :TX CH HIGH **EUT Pol** :E2 Plan Test Channel :5240 MHz

Test Date :2018-09-04 Temp./Humi. :25/60 Antenna Pol. :VERTICAL Engineer :Enzo



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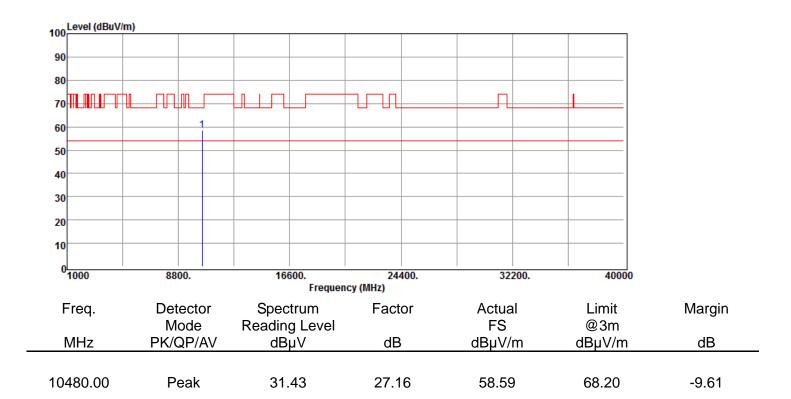


Page: 87 of 232

Operation Mode :802.11a / Band 1 **Test Date** :2018-09-04

Test Mode :TX CH HIGH Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5240 MHz Engineer :Enzo



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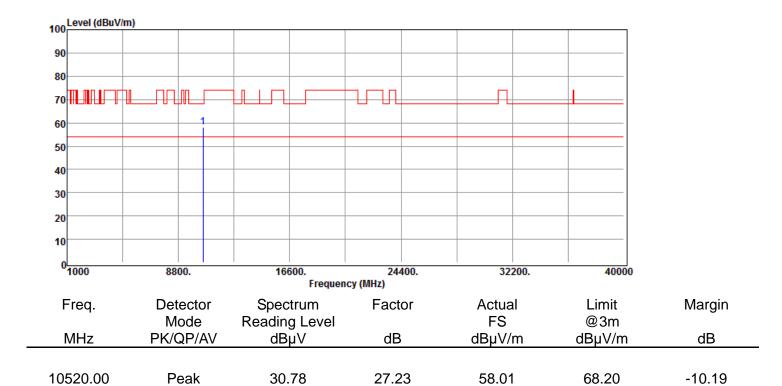
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Page: 88 of 232

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

Operation Mode :802.11a / Band 2 **Test Date** :2018-09-04 Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** :E2 Plan Antenna Pol. :VERTICAL Test Channel :5260 MHz Engineer :Enzo



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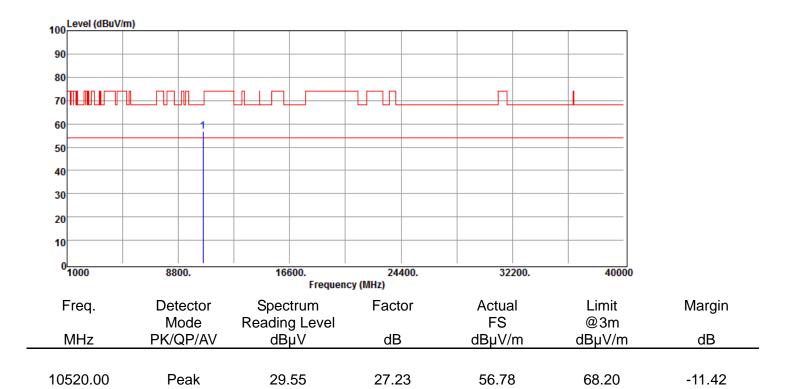


Page: 89 of 232

Operation Mode :802.11a / Band 2 **Test Date** :2018-09-04

Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5260 MHz Engineer :Enzo



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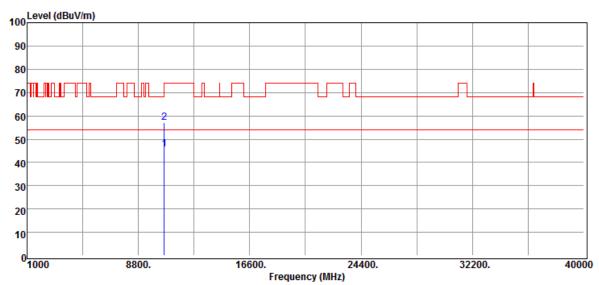
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Page: 90 of 232

Operation Mode :802.11a / Band 2 Test Mode :TX CH MID **EUT Pol** :E2 Plan Test Channel :5300 MHz

Test Date :2018-09-04 Temp./Humi. :25/60 Antenna Pol. :VERTICAL Engineer :Enzo



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	18.62	27.21	45.83	54.00	-8.17
10600.00	Peak	29.94	27.21	57.15	68.20	-11.05

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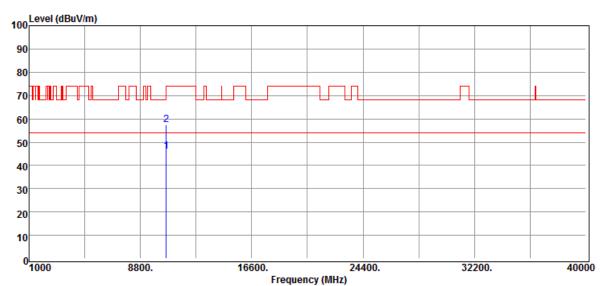


Page: 91 of 232

Operation Mode :802.11a / Band 2 **Test Date** :2018-09-04

Test Mode :TX CH MID Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5300 MHz Engineer :Enzo



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	18.87	27.21	46.08	54.00	-7.92
10600.00	Peak	30.28	27.21	57.49	68.20	-10.71

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Page: 92 of 232

Operation Mode Test Mode **EUT Pol**

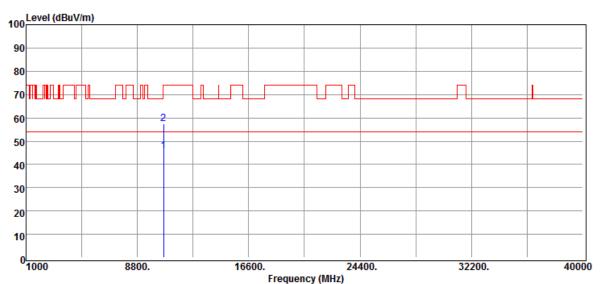
Test Channel

:802.11a / Band 2 :TX CH HIGH :E2 Plan :5320 MHz

Test Date Temp./Humi. Antenna Pol. :2018-09-04

:25/60 :VERTICAL

Engineer :Enzo



	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	18.65	27.20	45.85	54.00	-8.15
	10640.00	Peak	30.23	27.20	57.43	74.00	-16.57

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Test Channel

Report No.: E2/2018/80050

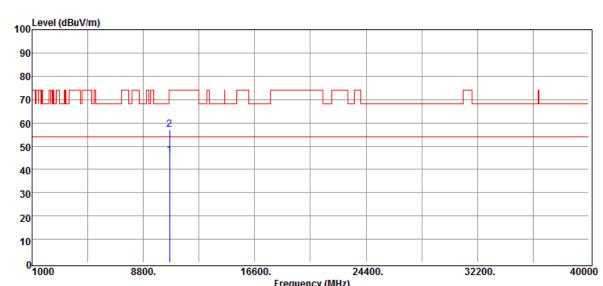
:Enzo

Page: 93 of 232

Operation Mode :802.11a / Band 2 **Test Date** :2018-09-04 Test Mode :TX CH HIGH :25/60

Engineer

Temp./Humi. **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL



:5320 MHz

			Troquenc	y (minz)				
	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	18.81	27.20	46.01	54.00	-7.99	
	10640.00	Peak	29.74	27.20	56.94	74.00	-17.06	

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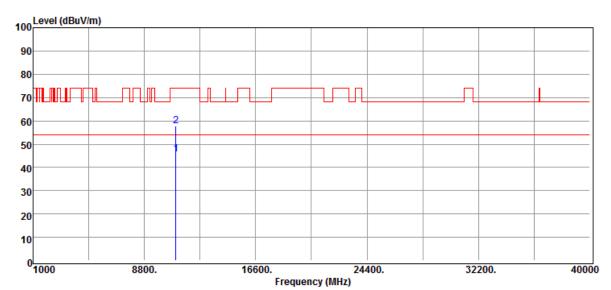
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Page: 94 of 232

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

Operation Mode :802.11a / Band 3 **Test Date** :2018-09-04 Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** :E2 Plan Antenna Pol. :VERTICAL Test Channel :5500 MHz Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11000.00	Average	18.67	27.09	45.76	54.00	-8.24
11000.00	Peak	30.54	27.09	57.63	74.00	-16.37

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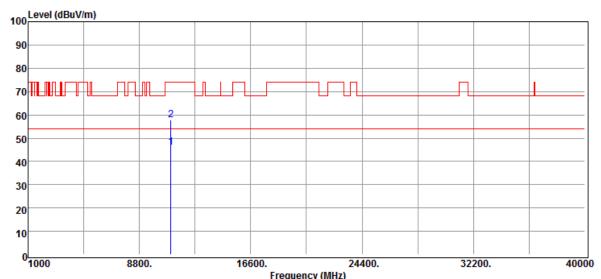


Page: 95 of 232

Operation Mode :802.11a / Band 3 **Test Date** :2018-09-04

Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5500 MHz Engineer :Enzo



		rroqueno	y ()				
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	18.79	27.09	45.88	54.00	-8.12	
11000.00	Peak	30.57	27.09	57.66	74.00	-16.34	

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:2018-09-04

:25/60

Page: 96 of 232

Operation Mode Test Mode **EUT Pol** Test Channel

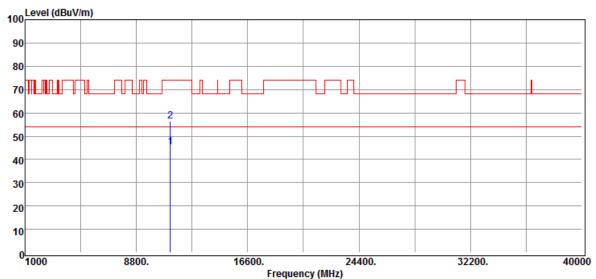
:802.11a / Band 3 :TX CH MID :E2 Plan

:5580 MHz

Test Date Temp./Humi. Antenna Pol.

:VERTICAL :Enzo

Engineer



· ·····									
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	18.63	26.67	45.30	54.00	-8.70			
11160.00	Peak	29.57	26.67	56.24	74.00	-17.76			

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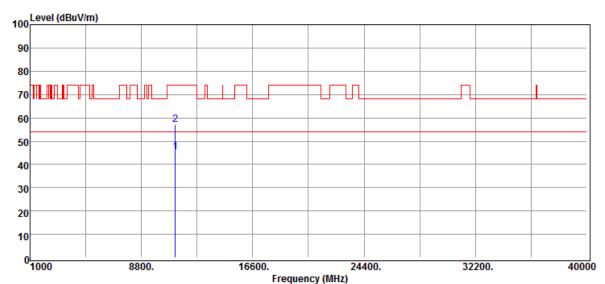


Page: 97 of 232

Operation Mode :802.11a / Band 3 **Test Date** :2018-09-04 Test Mode :TX CH MID Temp./Humi. :25/60

EUT Pol Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5580 MHz Engineer :Enzo



· · · · ·									
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	18.77	26.67	45.44	54.00	-8.56			
11160.00	Peak	30.26	26.67	56.93	74.00	-17.07			

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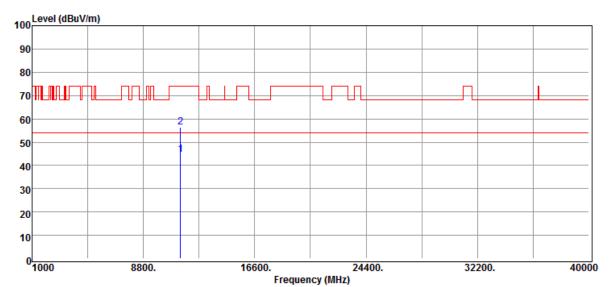
Page: 98 of 232

Operation Mode :802.11a / Band 3 Test Mode :TX CH HIGH **EUT Pol** :E2 Plan Test Channel :5700 MHz

Test Date Temp./Humi. Antenna Pol. Engineer

:2018-09-04 :25/60 :VERTICAL

:Enzo



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	18.65	26.07	44.72	54.00	-9.28
11400.00	Peak	30.45	26.07	56.52	74.00	-17.48

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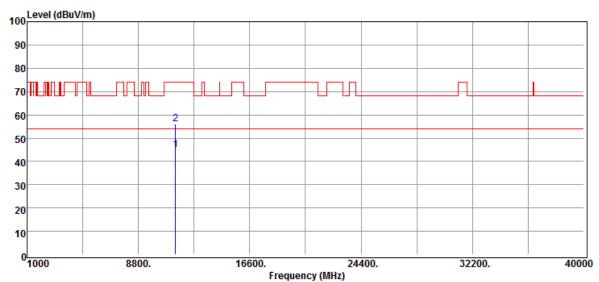


Page: 99 of 232

Operation Mode :802.11a / Band 3 **Test Date** :2018-09-04 Test Mode :TX CH HIGH Temp./Humi. :25/60

EUT Pol Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5700 MHz Engineer :Enzo



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	18.81	26.07	44.88	54.00	-9.12
11400.00	Peak	29.98	26.07	56.05	74.00	-17.95

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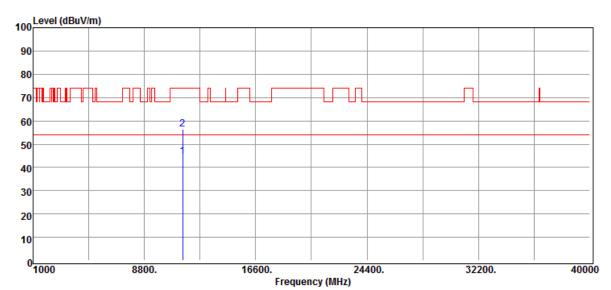
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Page: 100 of 232

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

Operation Mode :802.11a / Band 4 **Test Date** :2018-09-04 Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** :E2 Plan Antenna Pol. :VERTICAL Test Channel :5745 MHz Engineer :Enzo



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	18.65	25.83	44.48	54.00	-9.52
11490.00	Peak	30.66	25.83	56.49	74.00	-17.51

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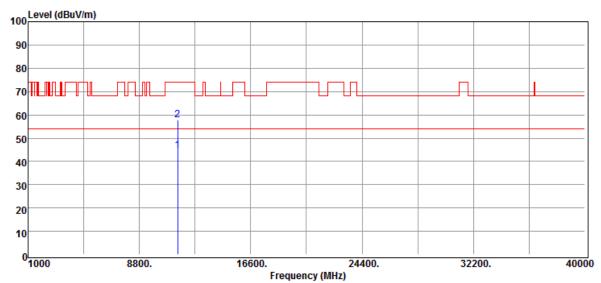


Page: 101 of 232

Operation Mode :802.11a / Band 4 **Test Date** :2018-09-04 Test Mode :TX CH LOW Temp./Humi. :25/60

EUT Pol Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5745 MHz Engineer :Enzo



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	18.87	25.83	44.70	54.00	-9.30
11490.00	Peak	31.96	25.83	57.79	74.00	-16.21

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Page: 102 of 232

Operation Mode Test Mode **EUT Pol**

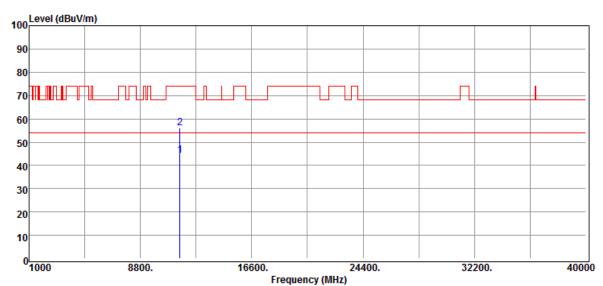
Test Channel

:802.11a / Band 4 :TX CH MID

:E2 Plan :5785 MHz **Test Date** :2018-09-04 Temp./Humi. :25/60

Antenna Pol. :VERTICAL

Engineer :Enzo



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	18.59	25.87	44.46	54.00	-9.54
11570.00	Peak	30.08	25.87	55.95	74.00	-18.05

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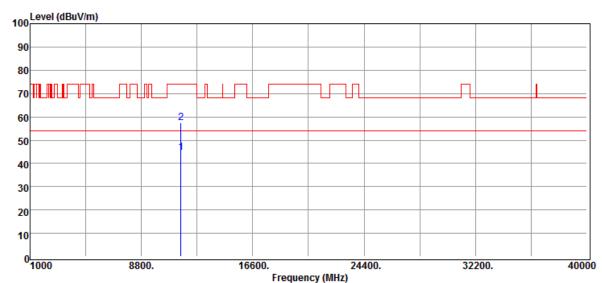


Page: 103 of 232

Operation Mode :802.11a / Band 4 **Test Date** :2018-09-04 Test Mode

:TX CH MID Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5785 MHz Engineer :Enzo



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	18.82	25.87	44.69	54.00	-9.31		
11570.00	Peak	31.50	25.87	57.37	74.00	-16.63		

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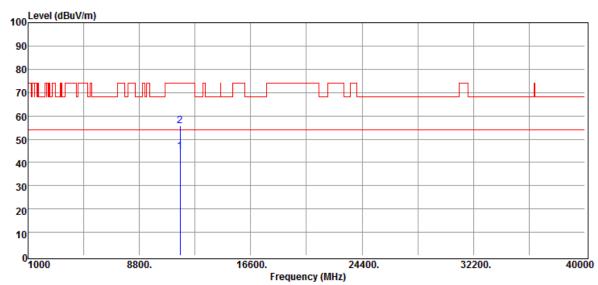
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Page: 104 of 232

Operation Mode :802.11a / Band 4 Test Mode :TX CH HIGH **EUT Pol** :E2 Plan Test Channel :5825 MHz

Test Date :2018-09-04 Temp./Humi. :25/60 Antenna Pol. :VERTICAL Engineer :Enzo



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	18.67	25.94	44.61	54.00	-9.39
11650.00	Peak	29.80	25.94	55.74	74.00	-18.26

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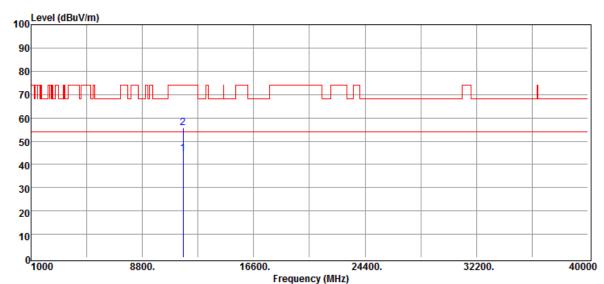


Page: 105 of 232

Operation Mode :802.11a / Band 4 **Test Date** :2018-09-04 Test Mode :TX CH HIGH Temp./Humi. :25/60

EUT Pol Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5825 MHz Engineer :Enzo



· ····											
	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	18.86	25.94	44.80	54.00	-9.20				
	11650.00	Peak	29.81	25.94	55.75	74.00	-18.25				

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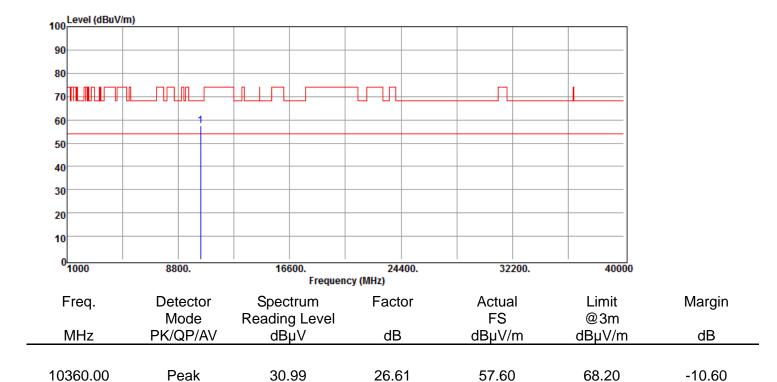
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Page: 106 of 232

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

Operation Mode :802.11n20 / Band 1 Test Date :2018-09-04 Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** :E2 Plan Antenna Pol. :VERTICAL Test Channel :5180 MHz Engineer :Enzo



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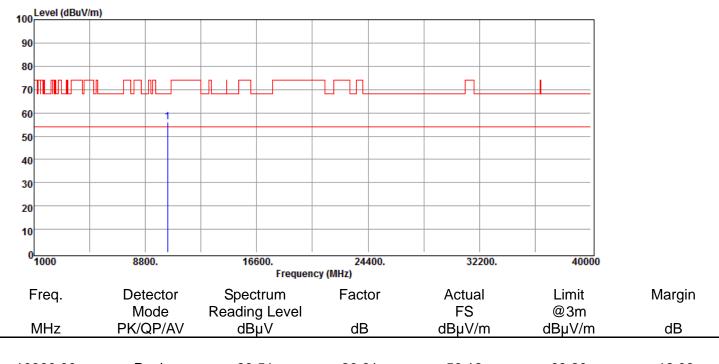


Page: 107 of 232

Operation Mode :802.11n20 / Band 1 **Test Date** :2018-09-04

Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5180 MHz Engineer :Enzo



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	29.51	26.61	56.12	68.20	-12.08

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Page: 108 of 232

Operation Mode Test Mode

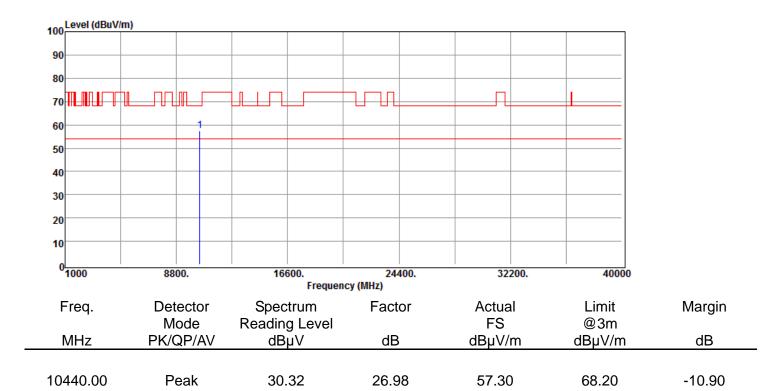
:802.11n20 / Band 1

:TX CH MID

EUT Pol :E2 Plan Test Channel :5220 MHz **Test Date** Temp./Humi. Antenna Pol. :2018-09-04

:25/60 :VERTICAL

Engineer :Enzo



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

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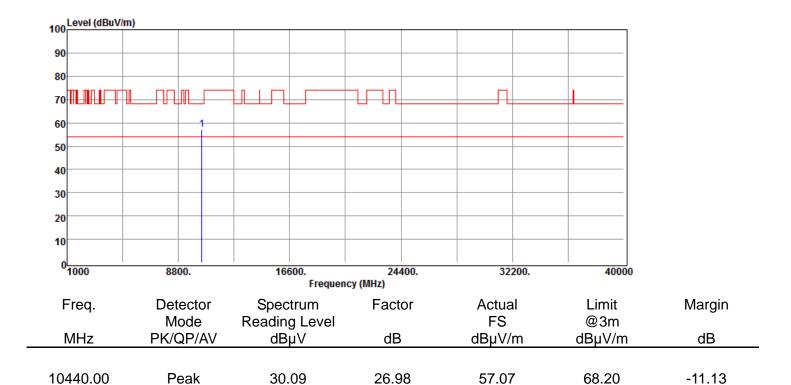


Page: 109 of 232

Operation Mode :802.11n20 / Band 1 **Test Date** :2018-09-04

Test Mode :TX CH MID Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5220 MHz Engineer :Enzo



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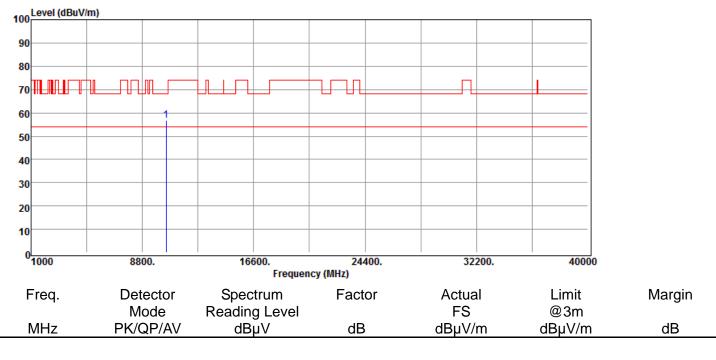
Page: 110 of 232

Operation Mode :802.11n20 / Band 1 Test Mode :TX CH HIGH **EUT Pol** :E2 Plan Test Channel :5240 MHz

Test Date Temp./Humi. Antenna Pol.

:2018-09-04 :25/60 :VERTICAL

Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
10480.00	Peak	29.49	27.16	56.65	68.20	-11.55

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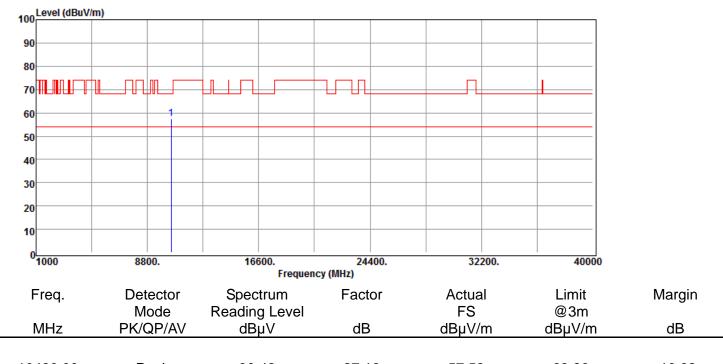


Page: 111 of 232

Operation Mode :802.11n20 / Band 1 **Test Date** :2018-09-04

Test Mode :TX CH HIGH Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5240 MHz Engineer :Enzo



	Mode	Reading Level	1 00.01	FS	@3m	.viai g.i.i
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10480.00	Peak	30.42	27.16	57.58	68.20	-10.62

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Test Channel

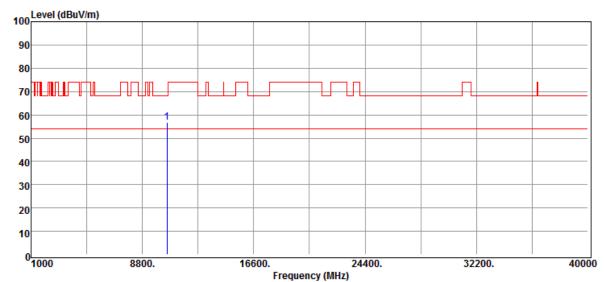
Report No.: E2/2018/80050

Page: 112 of 232

Operation Mode :802.11n20 / Band 2 Test Mode :TX CH LOW **EUT Pol**

:E2 Plan :5260 MHz **Test Date** :2018-09-04 Temp./Humi. :25/60 Antenna Pol. :VERTICAL

Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBμV/m	dB
10520.00	Peak	29.58	27.23	56.81	68.20	-11.39

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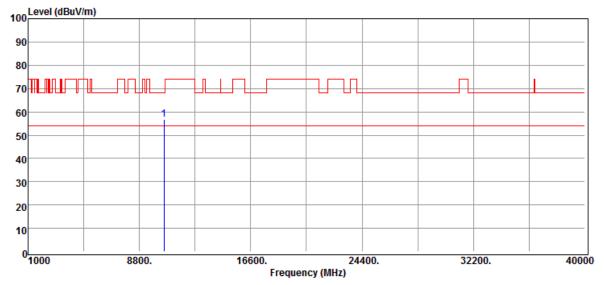
Page: 113 of 232

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

Operation Mode :802.11n20 / Band 2 **Test Date** :2018-09-04 Test Mode :TX CH LOW Temp./Humi. :25/60

EUT Pol :E2 Plan Antenna Pol. :HORIZONTAL

Test Channel :5260 MHz Engineer :Enzo



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				
10520.00	Peak	29.40	27.23	56.63	68.20	-11.57				

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:VERTICAL

Page: 114 of 232

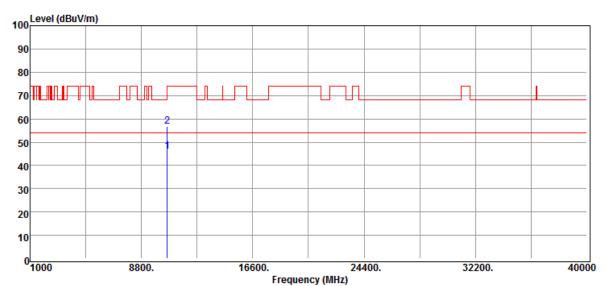
Operation Mode Test Mode **EUT Pol**

:802.11n20 / Band 2

:TX CH MID :E2 Plan

Test Channel :5300 MHz **Test Date** :2018-09-04 Temp./Humi. :25/60 Antenna Pol.

Engineer :Enzo



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	18.67	27.21	45.88	54.00	-8.12
10600.00	Peak	29.46	27.21	56.67	68.20	-11.53

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Page: 115 of 232

Operation Mode Test Mode

:802.11n20 / Band 2

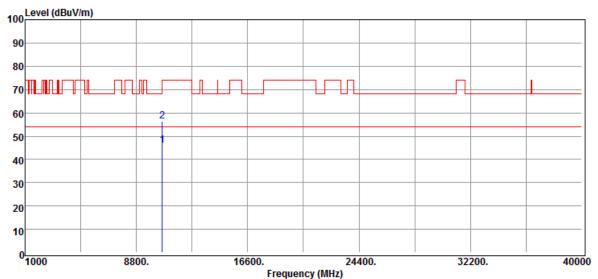
:TX CH MID

EUT Pol Test Channel :E2 Plan :5300 MHz **Test Date** Temp./Humi.

:25/60 Antenna Pol. :HORIZONTAL

:2018-09-04

Engineer :Enzo



· ····										
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	18.72	27.21	45.93	54.00	-8.07				
10600.00	Peak	29.02	27.21	56.23	68.20	-11.97				

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:2018-09-04

:25/60

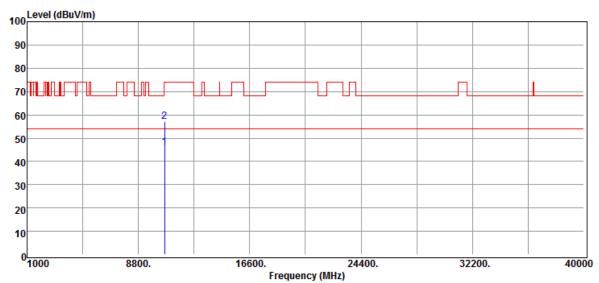
Page: 116 of 232

Operation Mode Test Mode **EUT Pol** Test Channel

:802.11n20 / Band 2 :TX CH HIGH

:E2 Plan :5320 MHz **Test Date** Temp./Humi. Antenna Pol.

:VERTICAL Engineer :Enzo



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	18.69	27.20	45.89	54.00	-8.11
10640.00	Peak	29.74	27.20	56.94	74.00	-17.06

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Page: 117 of 232

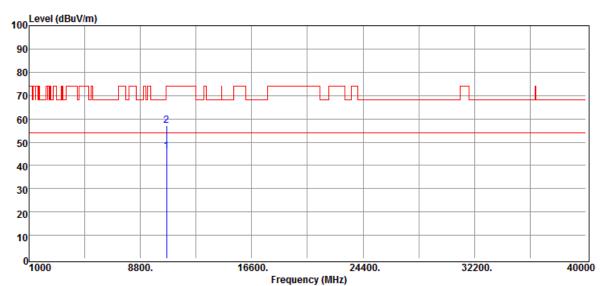
Operation Mode :802.11n20 / Band 2 Test Mode

:TX CH HIGH **EUT Pol** :E2 Plan Test Channel :5320 MHz

Test Date :2018-09-04 Temp./Humi. :25/60

Antenna Pol. :HORIZONTAL

Engineer :Enzo



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	18.75	27.20	45.95	54.00	-8.05
10640.00	Peak	30.00	27.20	57.20	74.00	-16.80

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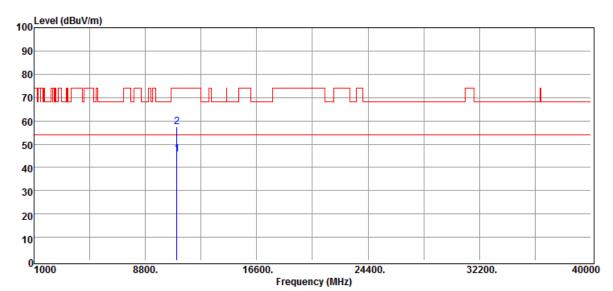
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Page: 118 of 232

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

Operation Mode :802.11n20 / Band 3 **Test Date** :2018-09-04 Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** :E2 Plan Antenna Pol. :VERTICAL Test Channel :5500 MHz Engineer :Enzo



	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	18.67	27.09	45.76	54.00	-8.24
	11000.00	Peak	30.41	27.09	57.50	74.00	-16.50

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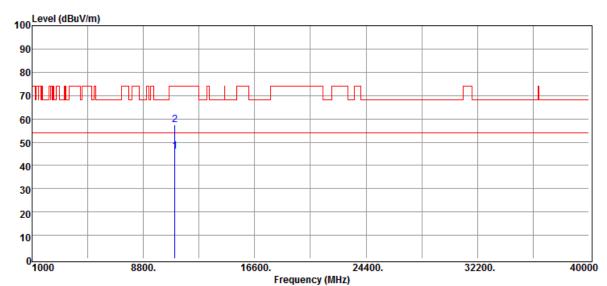


Page: 119 of 232

Operation Mode :802.11n20 / Band 3 **Test Date** :2018-09-04

Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5500 MHz Engineer :Enzo



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	18.81	27.09	45.90	54.00	-8.10
11000.00	Peak	30.43	27.09	57.52	74.00	-16.48

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Page: 120 of 232

Operation Mode Test Mode **EUT Pol**

Test Channel

:802.11n20 / Band 3

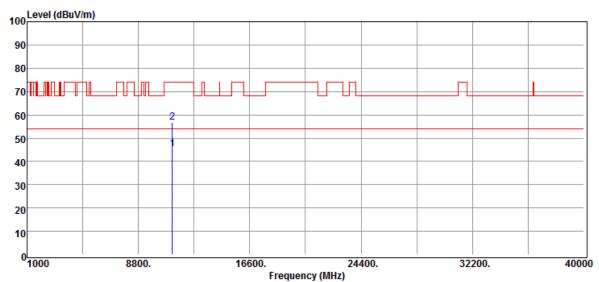
:TX CH MID :E2 Plan

:5580 MHz

Test Date :2018-09-04 Temp./Humi. :25/60

Antenna Pol. :VERTICAL

Engineer :Enzo



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	18.65	26.67	45.32	54.00	-8.68
11160.00	Peak	30.02	26.67	56.69	74.00	-17.31

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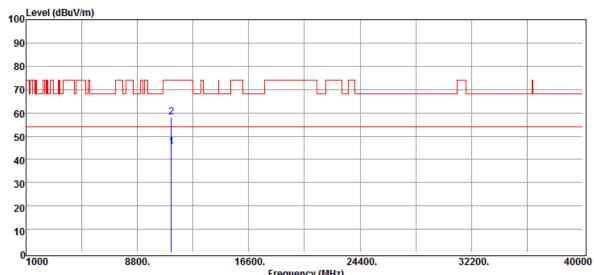


Page: 121 of 232

Operation Mode :802.11n20 / Band 3 **Test Date** :2018-09-04

Test Mode :TX CH MID Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5580 MHz Engineer :Enzo



		riequenc	y (MMZ)				
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	18.82	26.67	45.49	54.00	-8.51	
11160.00	Peak	31.34	26.67	58.01	74.00	-15.99	

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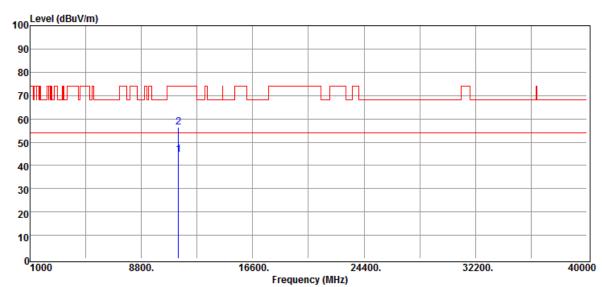
Page: 122 of 232

Operation Mode Test Mode **EUT Pol** Test Channel

:802.11n20 / Band 3 :TX CH HIGH

:E2 Plan :5700 MHz **Test Date** :2018-09-04 Temp./Humi. :25/60 Antenna Pol. :VERTICAL

Engineer :Enzo



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	18.60	26.07	44.67	54.00	-9.33
11400.00	Peak	30.18	26.07	56.25	74.00	-17.75

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Page: 123 of 232

Operation Mode Test Mode

:802.11n20 / Band 3

:TX CH HIGH

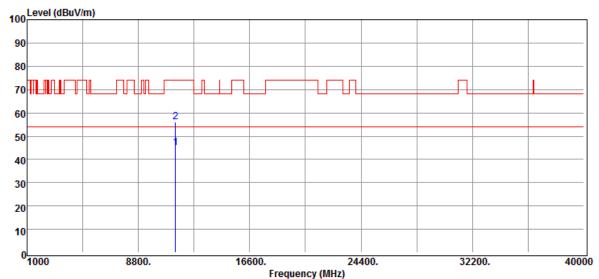
EUT Pol Test Channel :E2 Plan :5700 MHz **Test Date** Temp./Humi.

Antenna Pol. :HORIZONTAL

:2018-09-04

:25/60

Engineer :Enzo



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	18.85	26.07	44.92	54.00	-9.08	
11400.00	Peak	29.92	26.07	55.99	74.00	-18.01	

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Page: 124 of 232

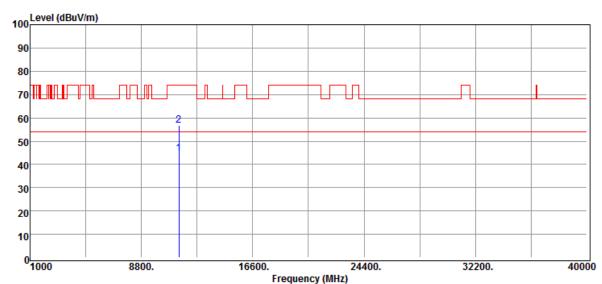
Operation Mode :802.11n20 / Band 3-4

Test Mode :TX CH 144 **EUT Pol** :E2 Plan Test Channel :5720 MHz

Test Date Temp./Humi. Antenna Pol. :2018-09-04

:25/60 :VERTICAL

Engineer :Enzo



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	18.66	25.96	44.62	54.00	-9.38
11440.00	Peak	30.64	25.96	56.60	74.00	-17.40

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Page: 125 of 232

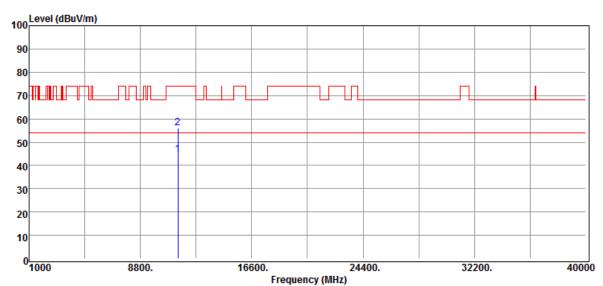
Operation Mode :802.11n20 / Band 3-4

Test Mode :TX CH 144

EUT Pol :E2 Plan Test Channel :5720 MHz **Test Date** :2018-09-04

Temp./Humi. :25/60 Antenna Pol. :HORIZONTAL

Engineer :Enzo



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	18.76	25.96	44.72	54.00	-9.28
11440.00	Peak	29.96	25.96	55.92	74.00	-18.08

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Page: 126 of 232

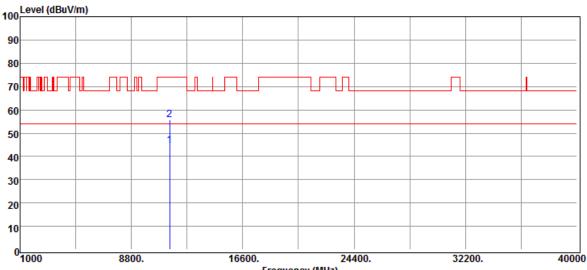
Radiated Spurious Emission Measurement Result 802.11n HT20, 5725~5850 MHz

Operation Mode :802.11n20 / Band 4 Test Date :2018-09-04

Test Mode :TX CH LOW Temp./Humi. :25/60

EUT Pol :E2 Plan Antenna Pol. :VERTICAL

Test Channel :5745 MHz Engineer :Enzo



		Frequenc	y (MHZ)			
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	18.64	25.83	44.47	54.00	-9.53
11490.00	Peak	29.82	25.83	55.65	74.00	-18.35

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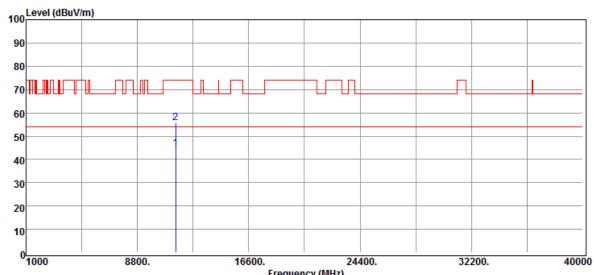


Page: 127 of 232

Operation Mode :802.11n20 / Band 4 **Test Date** :2018-09-04

Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5745 MHz Engineer :Enzo



	Frequency (MITZ)								
	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	18.76	25.83	44.59	54.00	-9.41		
	11490.00	Peak	30.01	25.83	55.84	74.00	-18.16		

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:2018-09-04

:VERTICAL

:25/60

Page: 128 of 232

Operation Mode Test Mode **EUT Pol**

Test Channel

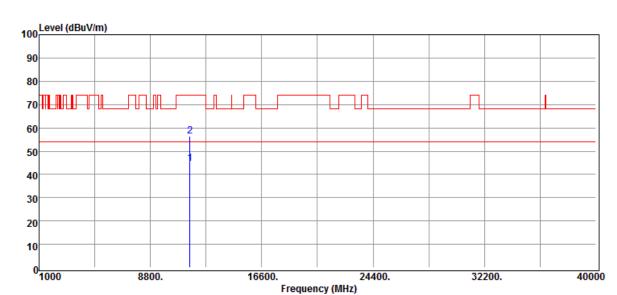
:802.11n20 / Band 4

:TX CH MID

:E2 Plan :5785 MHz

Test Date Temp./Humi. Antenna Pol.

Engineer :Enzo



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	18.64	25.87	44.51	54.00	-9.49
11570.00	Peak	30.64	25.87	56.51	74.00	-17.49

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Page: 129 of 232

Operation Mode :802.11n20 / Band 4

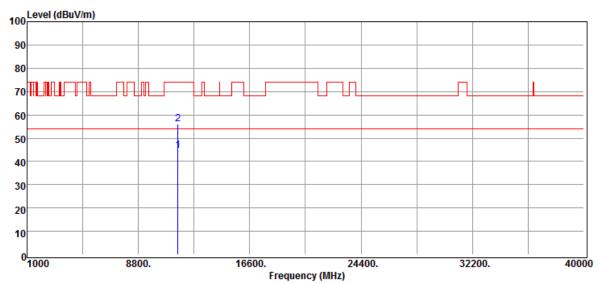
Test Mode :TX CH MID

EUT Pol :E2 Plan Test Channel :5785 MHz **Test Date** :2018-09-04

Temp./Humi. :25/60

Antenna Pol. :HORIZONTAL

Engineer :Enzo



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	18.76	25.87	44.63	54.00	-9.37
11570.00	Peak	30.10	25.87	55.97	74.00	-18.03

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Page: 130 of 232

Operation Mode Test Mode **EUT Pol** Test Channel

:802.11n20 / Band 4

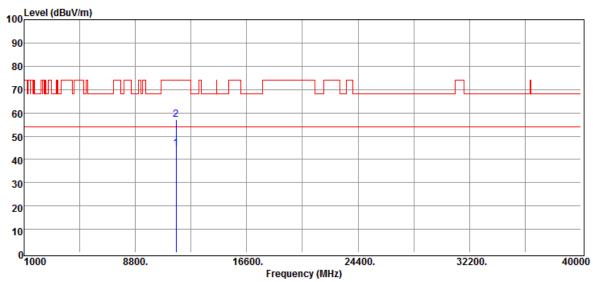
:TX CH HIGH

:E2 Plan :5825 MHz **Test Date** Temp./Humi. Antenna Pol. :2018-09-04

:25/60

:VERTICAL

Engineer :Enzo



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	18.68	25.94	44.62	54.00	-9.38
11650.00	Peak	30.99	25.94	56.93	74.00	-17.07

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Page: 131 of 232

Operation Mode Test Mode

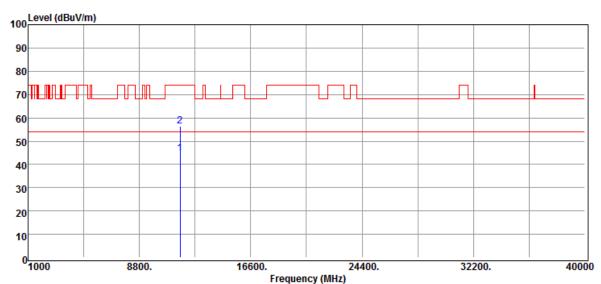
:802.11n20 / Band 4

:TX CH HIGH

EUT Pol Test Channel :E2 Plan :5825 MHz **Test Date** :2018-09-04 Temp./Humi. :25/60

Antenna Pol. :HORIZONTAL

Engineer :Enzo



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	18.78	25.94	44.72	54.00	-9.28	
11650.00	Peak	30.62	25.94	56.56	74.00	-17.44	

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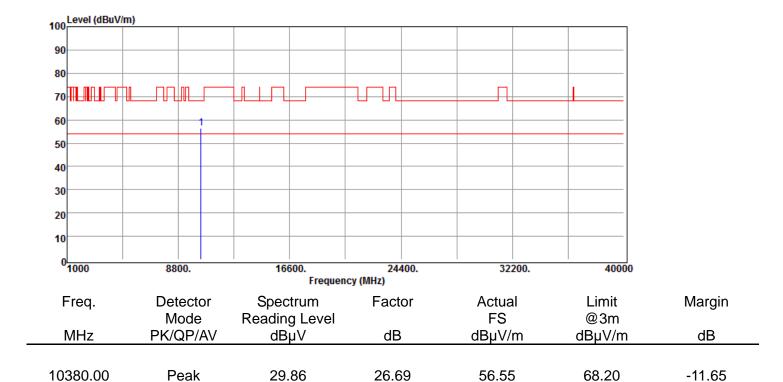
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Page: 132 of 232

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

Operation Mode :802.11n40 / Band 1 **Test Date** :2018-09-04 Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** :E2 Plan Antenna Pol. :VERTICAL Test Channel :5190 MHz Engineer :Enzo



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:2018-09-04

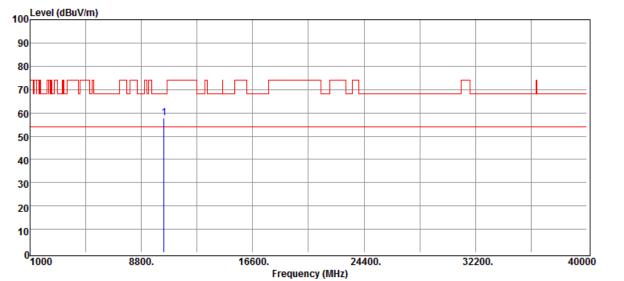
Page: 133 of 232

Operation Mode :802.11n40 / Band 1

Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Date

Test Channel :5190 MHz Engineer :Enzo



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
10380.00	Peak	31.20	26.69	57.89	68.20	-10.31

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:VERTICAL

Page: 134 of 232

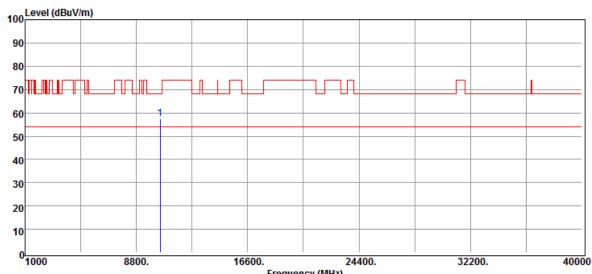
Operation Mode Test Mode **EUT Pol**

Test Channel

:802.11n40 / Band 1 :TX CH HIGH

:E2 Plan :5230 MHz **Test Date** :2018-09-04 Temp./Humi. :25/60 Antenna Pol.

Engineer :Enzo



		Frequenc	y (WITZ)			
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	30.38	27.06	57.44	68.20	-10.76

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Page: 135 of 232

Operation Mode Test Mode

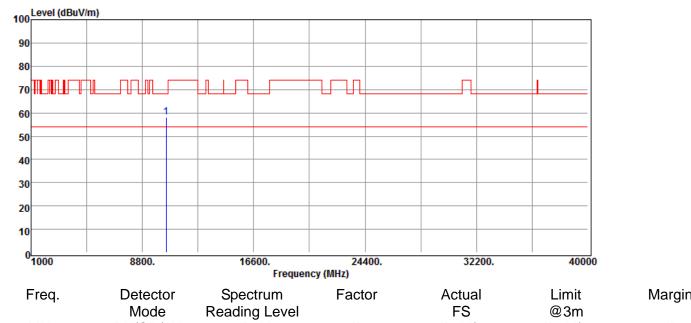
:802.11n40 / Band 1

:TX CH HIGH

EUT Pol :E2 Plan Test Channel :5230 MHz **Test Date** :2018-09-04 Temp./Humi. :25/60

Antenna Pol. :HORIZONTAL

Engineer :Enzo



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	31.16	27.06	58.22	68.20	-9.98

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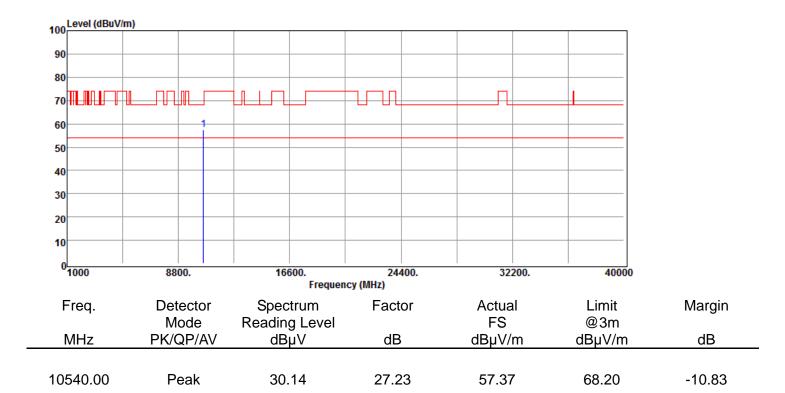
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Page: 136 of 232

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

Operation Mode :802.11n40 / Band 2 **Test Date** :2018-09-04 Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** :E2 Plan Antenna Pol. :VERTICAL Test Channel :5270 MHz Engineer :Enzo



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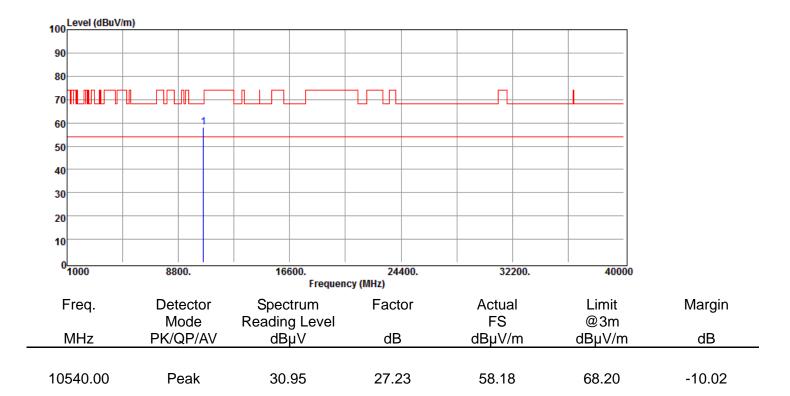


Page: 137 of 232

Operation Mode :802.11n40 / Band 2 **Test Date** :2018-09-04

Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5270 MHz Engineer :Enzo



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Page: 138 of 232

Operation Mode Test Mode **EUT Pol** Test Channel

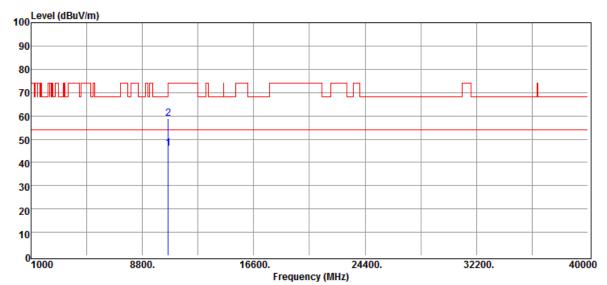
:802.11n40 / Band 2 :TX CH HIGH

:E2 Plan :5310 MHz **Test Date** Temp./Humi. Antenna Pol.

:25/60 :VERTICAL

:2018-09-04

Engineer :Enzo



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	18.72	27.20	45.92	54.00	-8.08
10620.00	Peak	31.74	27.20	58.94	74.00	-15.06

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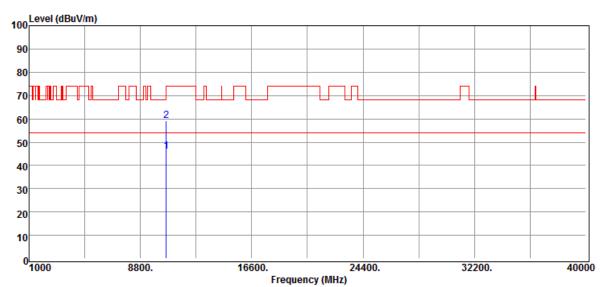


Page: 139 of 232

Operation Mode :802.11n40 / Band 2 **Test Date** :2018-09-04

Test Mode :TX CH HIGH Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5310 MHz Engineer :Enzo



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	18.74	27.20	45.94	54.00	-8.06
10620.00	Peak	31.88	27.20	59.08	74.00	-14.92

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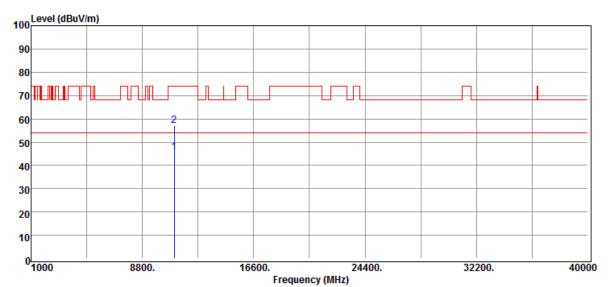
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Page: 140 of 232

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

Operation Mode :802.11n40 / Band 3 **Test Date** :2018-09-04 Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** :E2 Plan Antenna Pol. :VERTICAL Test Channel :5510 MHz Engineer :Enzo



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	18.73	27.04	45.77	54.00	-8.23
11020.00	Peak	30.22	27.04	57.26	74.00	-16.74

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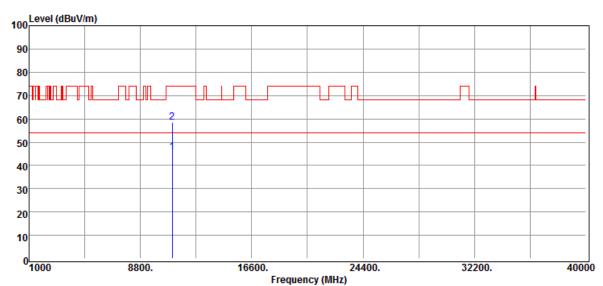


Page: 141 of 232

Operation Mode :802.11n40 / Band 3 **Test Date** :2018-09-04

Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5510 MHz Engineer :Enzo



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	18.76	27.04	45.80	54.00	-8.20
11020.00	Peak	31.38	27.04	58.42	74.00	-15.58

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Page: 142 of 232

Operation Mode Test Mode **EUT Pol** Test Channel

:802.11n40 / Band 3

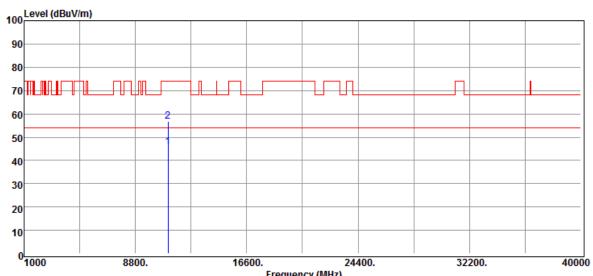
:TX CH MID :E2 Plan

:5550 MHz

Test Date Temp./Humi. Antenna Pol. :2018-09-04 :25/60

:VERTICAL

Engineer :Enzo



		Frequenc	y (MHZ)			
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	18.69	26.83	45.52	54.00	-8.48
11100.00	Peak	30.07	26.83	56.90	74.00	-17.10

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Page: 143 of 232

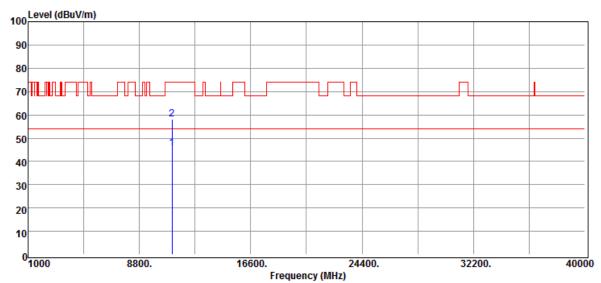
Operation Mode :802.11n40 / Band 3

Test Mode :TX CH MID

EUT Pol :E2 Plan Test Channel :5550 MHz **Test Date** :2018-09-04 Temp./Humi. :25/60

Antenna Pol. :HORIZONTAL

Engineer :Enzo



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	18.71	26.83	45.54	54.00	-8.46
11100.00	Peak	31.34	26.83	58.17	74.00	-15.83

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:2018-09-04

:25/60

Page: 144 of 232

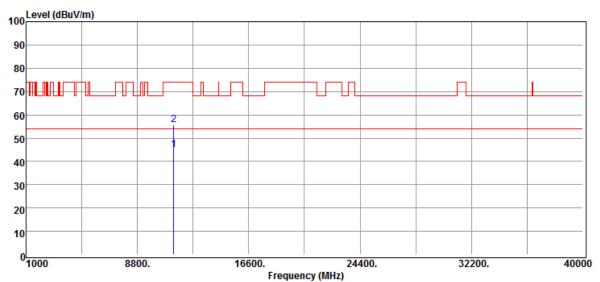
Operation Mode Test Mode **EUT Pol** Test Channel

:802.11n40 / Band 3 :TX CH HIGH

:E2 Plan :5670 MHz **Test Date** Temp./Humi. Antenna Pol.

:VERTICAL :Enzo

Engineer



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	18.66	26.21	44.87	54.00	-9.13
11340.00	Peak	29.52	26.21	55.73	74.00	-18.27

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Page: 145 of 232

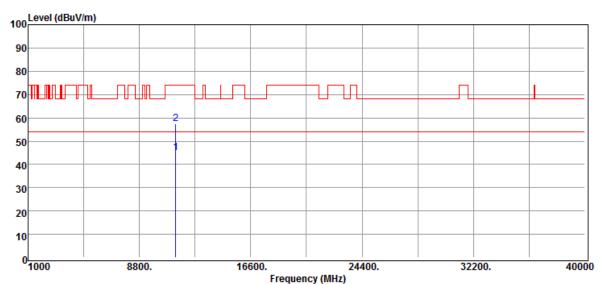
Operation Mode Test Mode

:802.11n40 / Band 3 :TX CH HIGH

EUT Pol :E2 Plan Test Channel :5670 MHz **Test Date** :2018-09-04 Temp./Humi. :25/60

Antenna Pol. :HORIZONTAL

Engineer :Enzo



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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		
11340.00	Average	18.72	26.21	44.93	54.00	-9.07		
11340.00	Peak	31.37	26.21	57.58	74.00	-16.42		

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Test Channel

Report No.: E2/2018/80050

Page: 146 of 232

Operation Mode :802.11n40 / Band 3-4

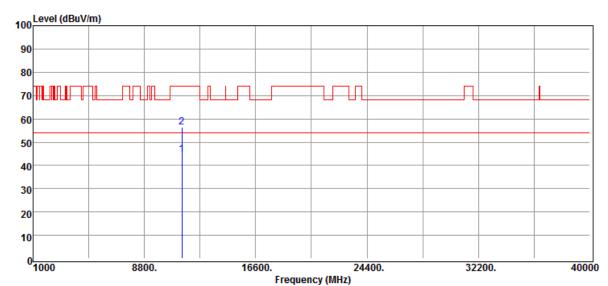
:5710 MHz

Test Mode :TX CH 142 **EUT Pol** :E2 Plan

Test Date Temp./Humi. Antenna Pol. :2018-09-04

:25/60 :VERTICAL

Engineer :Enzo



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	18.64	26.01	44.65	54.00	-9.35
11420.00	Peak	30.23	26.01	56.24	74.00	-17.76

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:2018-09-04

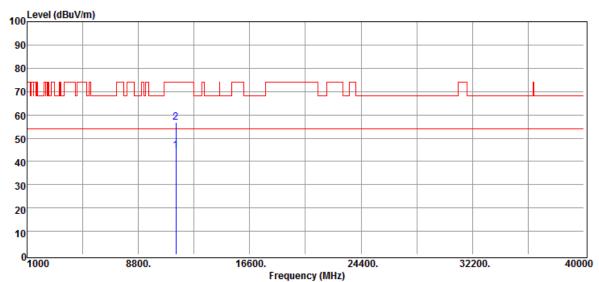
Page: 147 of 232

Operation Mode :802.11n40 / Band 3-4 **Test Date**

Test Mode :TX CH 142 Temp./Humi. :25/60

EUT Pol Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5710 MHz Engineer :Enzo



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	18.73	26.01	44.74	54.00	-9.26
11420.00	Peak	30.88	26.01	56.89	74.00	-17.11

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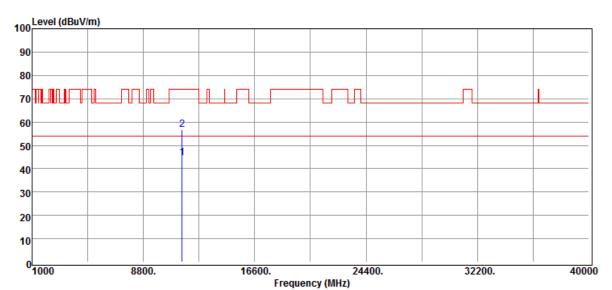
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Page: 148 of 232

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

Operation Mode :802.11n40 / Band 4 **Test Date** :2018-09-04 Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** :E2 Plan Antenna Pol. :VERTICAL Test Channel :5755 MHz Engineer :Enzo



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	18.67	25.82	44.49	54.00	-9.51
11510.00	Peak	30.97	25.82	56.79	74.00	-17.21

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Page: 149 of 232

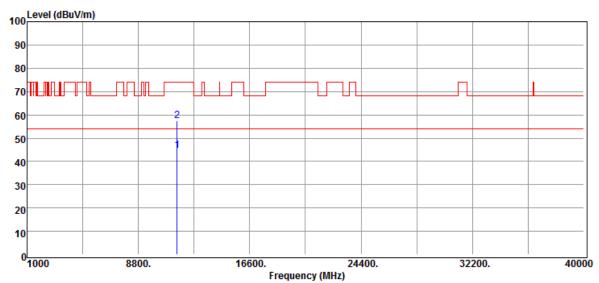
Operation Mode Test Mode

:802.11n40 / Band 4 :TX CH LOW

EUT Pol :E2 Plan Test Channel :5755 MHz **Test Date** :2018-09-04 Temp./Humi. :25/60

Antenna Pol. :HORIZONTAL

Engineer :Enzo



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	18.76	25.82	44.58	54.00	-9.42
11510.00	Peak	31.64	25.82	57.46	74.00	-16.54

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:2018-09-04

:25/60

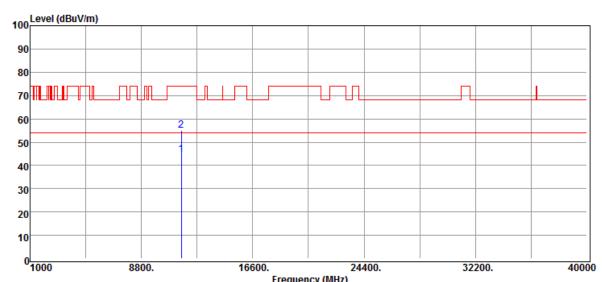
Page: 150 of 232

Operation Mode Test Mode **EUT Pol** Test Channel

:802.11n40 / Band 4 :TX CH HIGH

:E2 Plan :5795 MHz **Test Date** Temp./Humi. Antenna Pol.

:VERTICAL Engineer :Enzo



Trequency (mitz)									
	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	18.65	25.89	44.54	54.00	-9.46		
	11590.00	Peak	29.24	25.89	55.13	74.00	-18.87		

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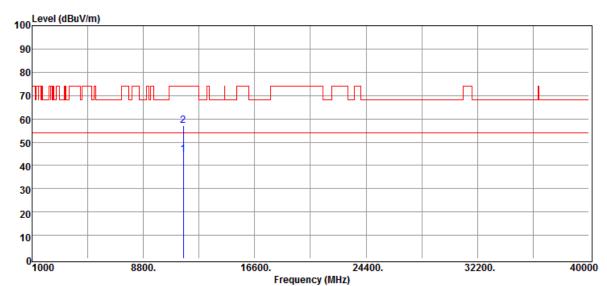
:2018-09-04

Page: 151 of 232

Operation Mode :802.11n40 / Band 4 **Test Date**

Test Mode :TX CH HIGH Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5795 MHz Engineer :Enzo



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	18.77	25.89	44.66	54.00	-9.34
11590.00	Peak	31.21	25.89	57.10	74.00	-16.90

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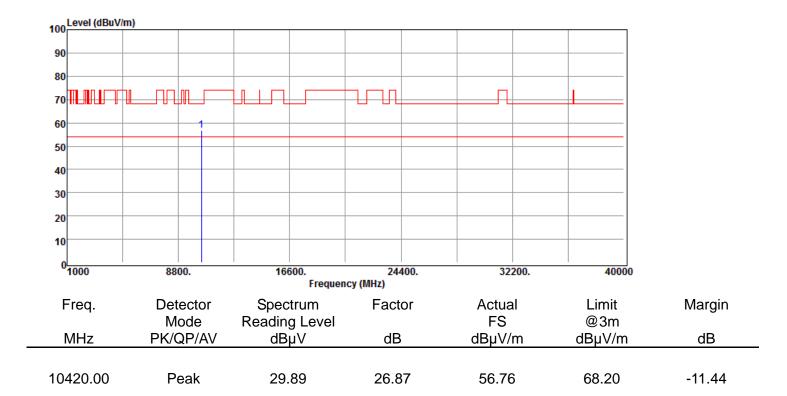
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Page: 152 of 232

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

Operation Mode :802.11ac80 / Band 1 **Test Date** :2018-09-04 Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** :E2 Plan Antenna Pol. :VERTICAL Test Channel :5210 MHz Engineer :Enzo



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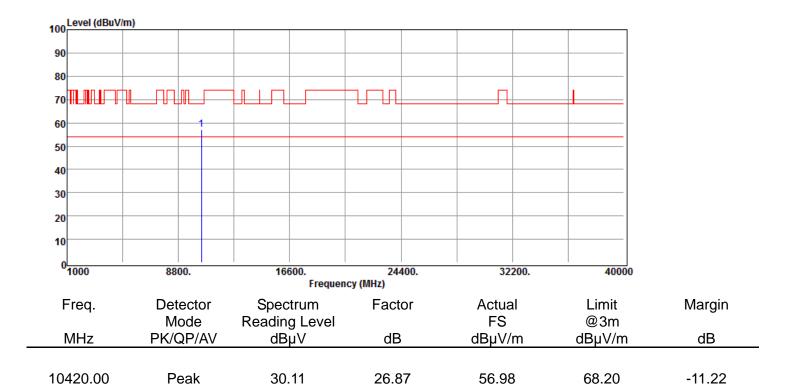


Page: 153 of 232

Operation Mode :802.11ac80 / Band 1 **Test Date** :2018-09-04

Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5210 MHz Engineer :Enzo



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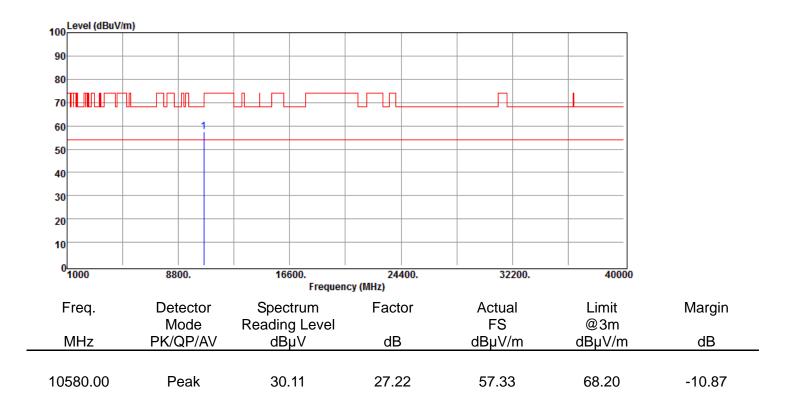
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Page: 154 of 232

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

Operation Mode :802.11ac80 / Band 2 **Test Date** :2018-09-04 Test Mode :TX CH HIGH Temp./Humi. :25/60 **EUT Pol** :E2 Plan Antenna Pol. :VERTICAL Test Channel :5290 MHz Engineer :Enzo



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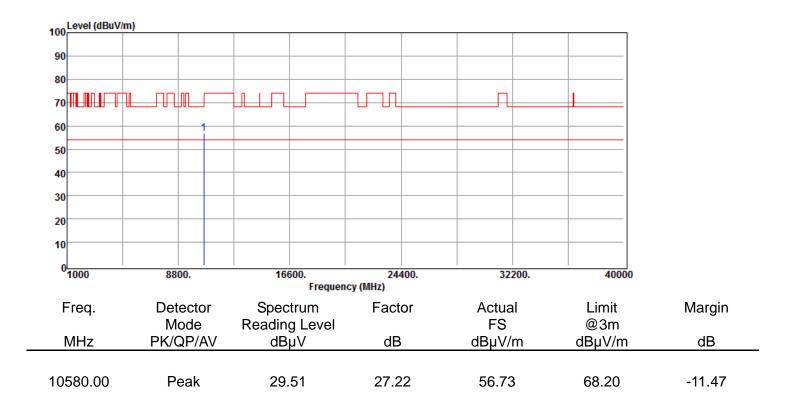


Page: 155 of 232

Operation Mode :802.11ac80 / Band 2 **Test Date** :2018-09-04

Test Mode :TX CH HIGH Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5290 MHz Engineer :Enzo



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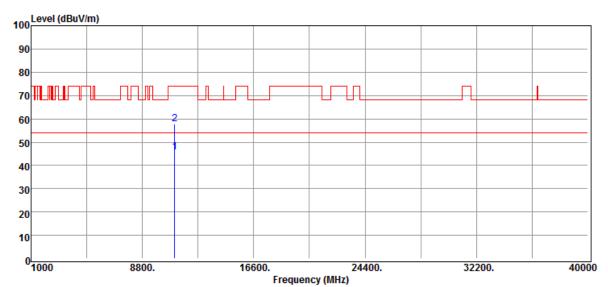
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Page: 156 of 232

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

Operation Mode :802.11ac80 / Band 3 **Test Date** :2018-09-04 Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** :E2 Plan Antenna Pol. :VERTICAL Test Channel :5530 MHz Engineer :Enzo



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	18.75	26.94	45.69	54.00	-8.31
11060.00	Peak	30.89	26.94	57.83	74.00	-16.17

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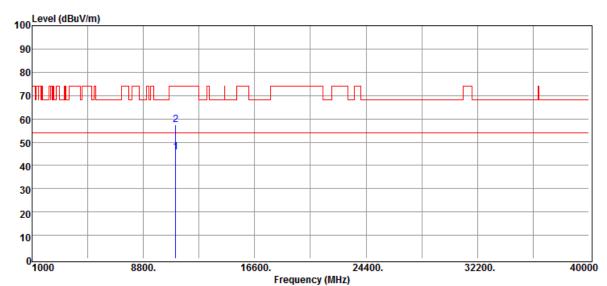


Page: 157 of 232

Operation Mode :802.11ac80 / Band 3 **Test Date** :2018-09-04

Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5530 MHz Engineer :Enzo



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	18.89	26.94	45.83	54.00	-8.17
11060.00	Peak	30.37	26.94	57.31	74.00	-16.69

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Page: 158 of 232

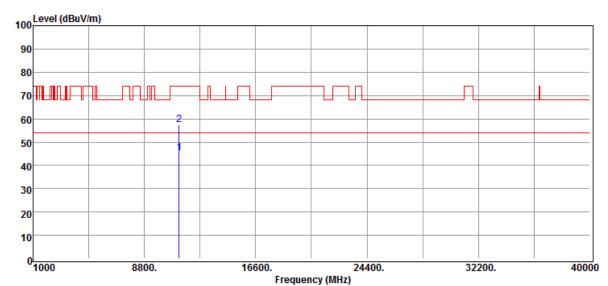
Operation Mode :802.11ac80 / Band 3

Test Mode :TX CH MID **EUT Pol** :E2 Plan Test Channel :5610 MHz

Test Date Temp./Humi. Antenna Pol. :2018-09-04

:25/60 :VERTICAL

Engineer :Enzo



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	18.77	26.52	45.29	54.00	-8.71
11220.00	Peak	30.75	26.52	57.27	74.00	-16.73

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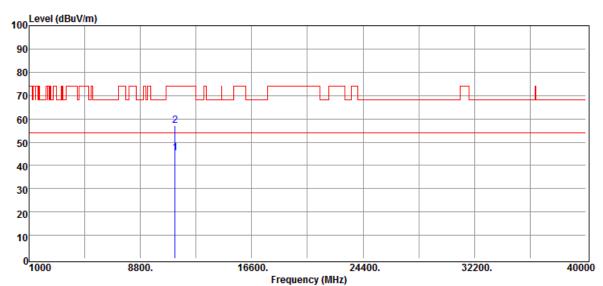


Page: 159 of 232

Operation Mode :802.11ac80 / Band 3 **Test Date** :2018-09-04

Test Mode :TX CH MID Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5610 MHz Engineer :Enzo



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	18.92	26.52	45.44	54.00	-8.56
11220.00	Peak	30.71	26.52	57.23	74.00	-16.77

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Page: 160 of 232

Operation Mode Test Mode **EUT Pol**

Test Channel

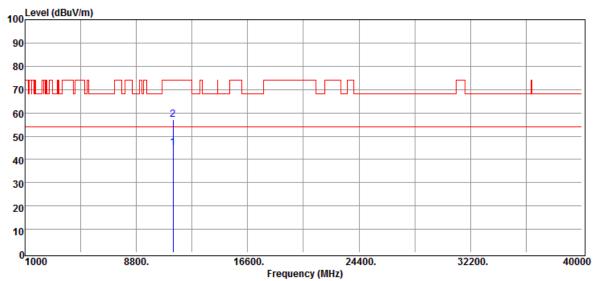
:802.11ac80 / Band 3

:TX CH HIGH

:E2 Plan :5690 MHz **Test Date** :2018-09-04 Temp./Humi. :25/60

Antenna Pol. :VERTICAL





Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
11380.00	Average	18.75	26.11	44.86	54.00	-9.14
11380.00	Peak	30.84	26.11	56.95	74.00	-17.05

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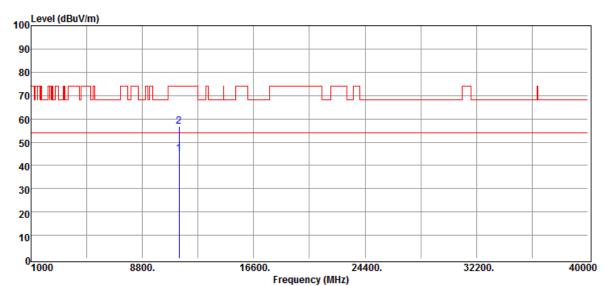


Page: 161 of 232

Operation Mode :802.11ac80 / Band 3 **Test Date** :2018-09-04

Test Mode :TX CH HIGH Temp./Humi. :25/60 **EUT Pol** Antenna Pol. :E2 Plan :HORIZONTAL

Test Channel :5690 MHz Engineer :Enzo



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	18.89	26.11	45.00	54.00	-9.00
11380.00	Peak	30.69	26.11	56.80	74.00	-17.20

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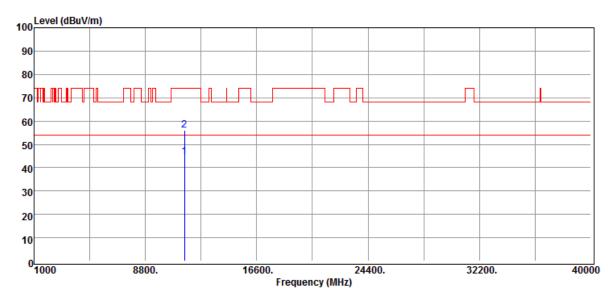
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Page: 162 of 232

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

Operation Mode :802.11ac80 / Band 4 **Test Date** :2018-09-04 Test Mode :TX CH LOW Temp./Humi. :25/60 **EUT Pol** :E2 Plan Antenna Pol. :VERTICAL Test Channel :5775 MHz Engineer :Enzo



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	18.79	25.85	44.64	54.00	-9.36
11550.00	Peak	30.34	25.85	56.19	74.00	-17.81

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:2018-09-04

Page: 163 of 232

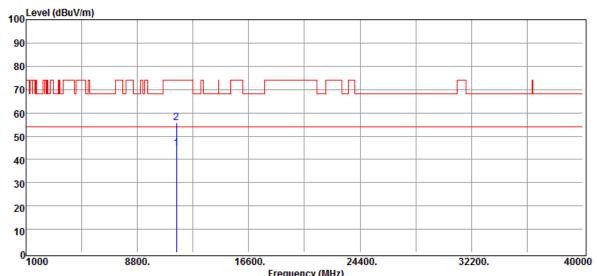
Operation Mode :802.11ac80 / Band 4

Test Mode :TX CH LOW Temp./Humi. :25/60

EUT Pol Antenna Pol. :E2 Plan :HORIZONTAL

Test Date





ricquency (mile)										
	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	18.91	25.85	44.76	54.00	-9.24			
	11550.00	Peak	29.86	25.85	55.71	74.00	-18.29			

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Page: 164 of 232

Band edge falling to restricted band

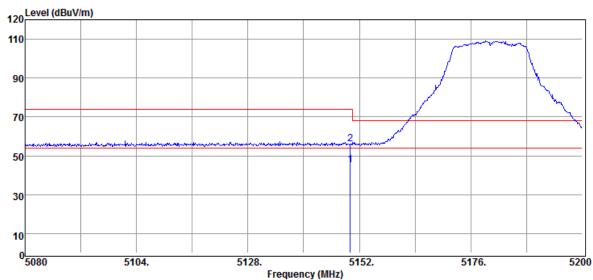
802.11a mode

Operation Mode :802.11a / Band 1 Test Date :2018-08-28

Test Mode :BE CH LOW Temp./Humi. :24/69

EUT Pol :E2 Plan Antenna Pol. :VERTICAL

Test Channel :5180 MHz Engineer :Enzo



			, ,,				
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	31.76	13.65	45.41	54.00	-8.59	
5150.00	Peak	42.25	13.65	55.90	74.00	-18.10	

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Page: 165 of 232

Operation Mode Test Mode

:802.11a / Band 1

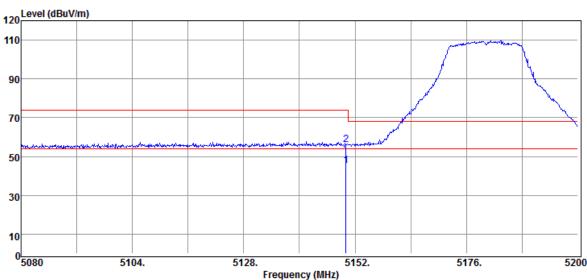
EUT Pol Test Channel

:BE CH LOW :E2 Plan :5180 MHz

Test Date Temp./Humi. Antenna Pol. :2018-08-28 :24/69

:HORIZONTAL

Engineer :Enzo



Trequency (minz)											
	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	31.80	13.65	45.45	54.00	-8.55				
	5150.00	Peak	42.57	13.65	56.22	74.00	-17.78				

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Page: 166 of 232

Operation Mode Test Mode **EUT Pol**

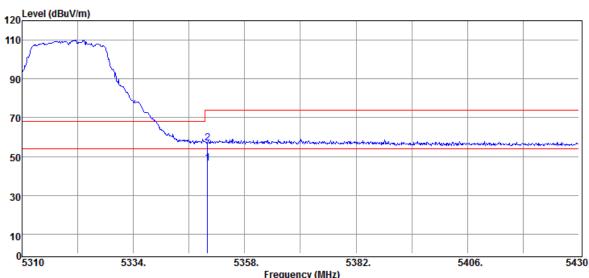
Test Channel

:802.11a / Band 2 :BE CH HIGH :E2 Plan

:5320 MHz

Test Date :2018-08-28 Temp./Humi. :24/69 Antenna Pol. :VERTICAL

Engineer :Enzo



rioquonoj (ilitz)										
	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	32.34	14.16	46.50	54.00	-7.50			
	5350 00	Peak	42 66	14 16	56 82	74 00	-17 18			

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Page: 167 of 232

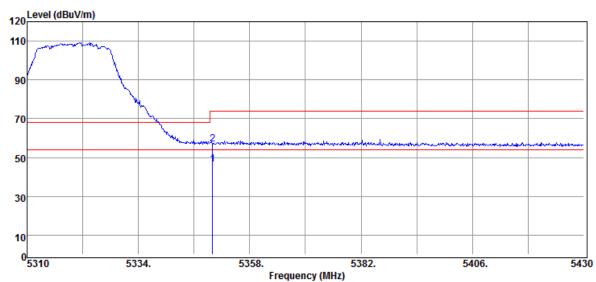
Operation Mode Test Mode

:802.11a / Band 2 :BE CH HIGH

EUT Pol Test Channel :E2 Plan :5320 MHz **Test Date** :2018-08-28 Temp./Humi. :24/69

Antenna Pol. :HORIZONTAL

Engineer :Enzo



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	32.23	14.16	46.39	54.00	-7.61
5350.00	Peak	42.75	14.16	56.91	74.00	-17.09

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Page: 168 of 232

Operation Mode Test Mode **EUT Pol**

Test Channel

:802.11a / Band 3 :BE CH LOW :E2 Plan

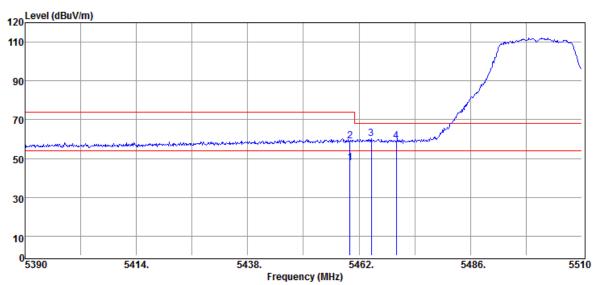
:5500 MHz

Test Date Temp./Humi. Antenna Pol. Engineer

:2018-08-28

:24/69 :VERTICAL

:Enzo



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	33.41	14.31	47.72	54.00	-6.28
5460.00	Peak	44.45	14.31	58.76	74.00	-15.24
5464.64	Peak	45.81	14.32	60.13	68.20	-8.07
5470.00	Peak	44.81	14.31	59.12	68.20	-9.08

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Page: 169 of 232

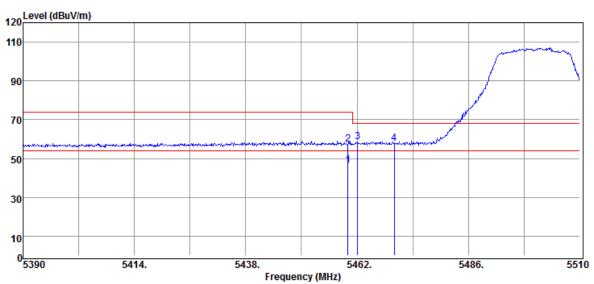
Operation Mode Test Mode

:802.11a / Band 3 :BE CH LOW

EUT Pol Test Channel :E2 Plan :5500 MHz **Test Date** Temp./Humi. Antenna Pol. :2018-08-28 :24/69

:HORIZONTAL

Engineer :Enzo



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	32.17	14.31	46.48	54.00	-7.52
5460.00	Peak	42.91	14.31	57.22	74.00	-16.78
5462.12	Peak	44.29	14.32	58.61	68.20	-9.59
5470.00	Peak	43.48	14.31	57.79	68.20	-10.41

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Page: 170 of 232

Operation Mode Test Mode **EUT Pol**

Test Channel

:802.11a / Band 3 :BE CH HIGH :E2 Plan

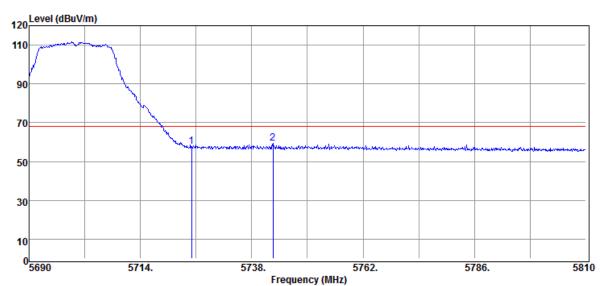
:5700 MHz

Test Date Temp./Humi. Antenna Pol. Engineer

:2018-08-28

:24/69 :VERTICAL

:Enzo



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	43.27	14.50	57.77	68.20	-10.43
5742.56	Peak	44.78	14.52	59.30	68.20	-8.90

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Page: 171 of 232

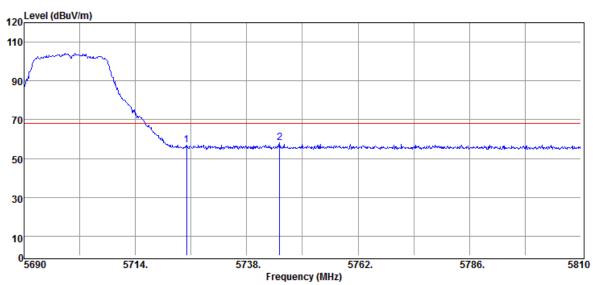
Operation Mode Test Mode

:802.11a / Band 3 :BE CH HIGH :E2 Plan

EUT Pol Test Channel :5700 MHz **Test Date** :2018-08-28 Temp./Humi. :24/69

Antenna Pol. :HORIZONTAL

Engineer :Enzo



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	42.35	14.50	56.85	68.20	-11.35
5745.08	Peak	43.49	14.52	58.01	68.20	-10.19

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Page: 172 of 232

Operation Mode Test Mode **EUT Pol**

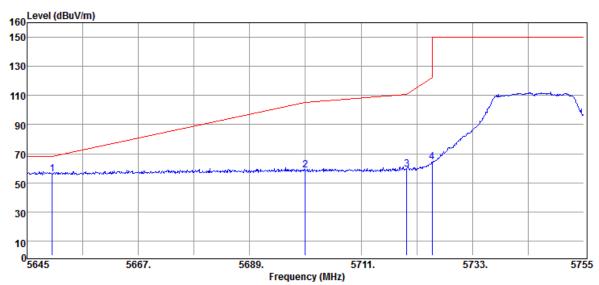
Test Channel

:802.11a / Band 4 :BE CH LOW :E2 Plan

:5745 MHz

Test Date :2018-08-28 Temp./Humi. :24/69 Antenna Pol. :VERTICAL





Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5650.00	Peak	41.33	14.42	55.75	68.20	-12.45
5700.00	Peak	44.26	14.47	58.73	105.20	-46.47
5720.00	Peak	44.48	14.49	58.97	110.80	-51.83
5725.00	Peak	49.59	14.50	64.09	122.20	-58.11

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Page: 173 of 232

Operation Mode Test Mode

:802.11a / Band 4

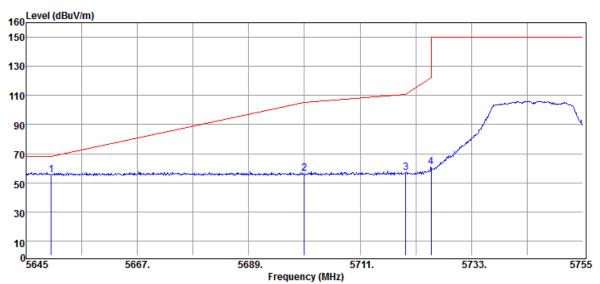
EUT Pol Test Channel

:BE CH LOW :E2 Plan :5745 MHz

Test Date :2018-08-28 Temp./Humi. :24/69

Antenna Pol. :HORIZONTAL

Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5650.00	Peak	41.20	14.42	55.62	68.20	-12.58
5700.00	Peak	41.77	14.47	56.24	105.20	-48.96
5720.00	Peak	42.39	14.49	56.88	110.80	-53.92
5725.00	Peak	46.17	14.50	60.67	122.20	-61.53

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Page: 174 of 232

Operation Mode Test Mode **EUT Pol** Test Channel

:802.11a / Band 4 :BE CH HIGH :E2 Plan

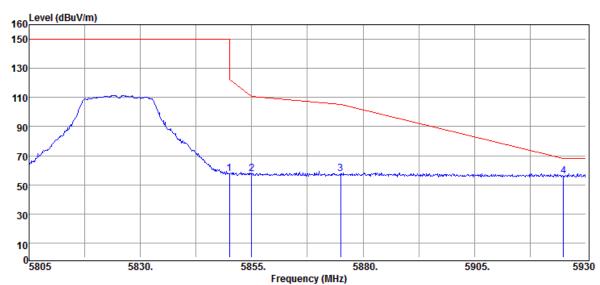
:5825 MHz

Test Date Temp./Humi. Antenna Pol. Engineer

:2018-08-28

:24/69 :VERTICAL

:Enzo



	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	42.98	14.72	57.70	122.20	-64.50
	5855.00	Peak	43.12	14.73	57.85	110.80	-52.95
	5875.00	Peak	42.66	14.78	57.44	105.20	-47.76
	5925.00	Peak	41.05	14.91	55.96	68.20	-12.24

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Page: 175 of 232

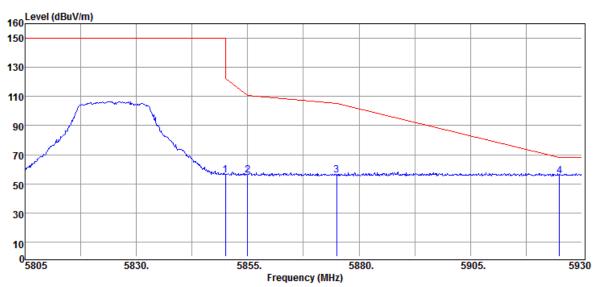
Operation Mode Test Mode

:802.11a / Band 4 :BE CH HIGH

EUT Pol :E2 Plan Test Channel :5825 MHz **Test Date** :2018-08-28 Temp./Humi. :24/69

Antenna Pol. :HORIZONTAL

Engineer :Enzo



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	41.39	14.72	56.11	122.20	-66.09
5855.00	Peak	40.95	14.73	55.68	110.80	-55.12
5875.00	Peak	41.36	14.78	56.14	105.20	-49.06
5925.00	Peak	40.69	14.91	55.60	68.20	-12.60

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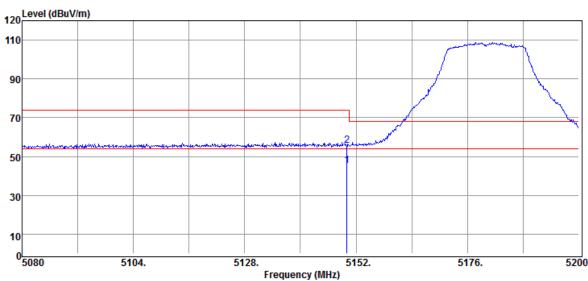


Page: 176 of 232

802.11n20 HT mode

:802.11n20 / Band 1 **Operation Mode** Test Mode :BE CH LOW **EUT Pol** :E2 Plan Test Channel :5180 MHz

Test Date :2018-08-28 Temp./Humi. :24/69 Antenna Pol. :VERTICAL Engineer :Enzo



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	31.76	13.65	45.41	54.00	-8.59	
5150.00	Peak	41 87	13 65	55.52	74 00	-18 48	

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Page: 177 of 232

Operation Mode Test Mode

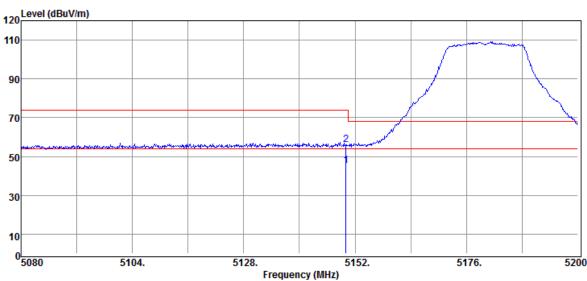
:802.11n20 / Band 1

:BE CH LOW

EUT Pol :E2 Plan Test Channel :5180 MHz **Test Date** :2018-08-28 Temp./Humi. :24/69

Antenna Pol. :HORIZONTAL

Engineer :Enzo



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	31.77	13.65	45.42	54.00	-8.58
5150.00	Peak	42.41	13.65	56.06	74.00	-17.94

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Page: 178 of 232

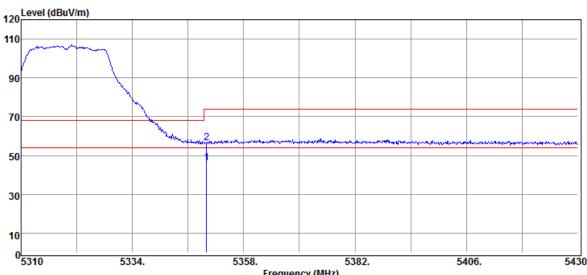
Operation Mode Test Mode **EUT Pol**

Test Channel

:802.11n20 / Band 2 :BE CH HIGH

:E2 Plan :5320 MHz **Test Date** :2018-08-28 Temp./Humi. :24/69 Antenna Pol. :VERTICAL

Engineer :Enzo



Frequency (MITZ)								
	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	32.12	14.16	46.28	54.00	-7.72	
	5350.00	Peak	42.21	14.16	56.37	74.00	-17.63	

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Page: 179 of 232

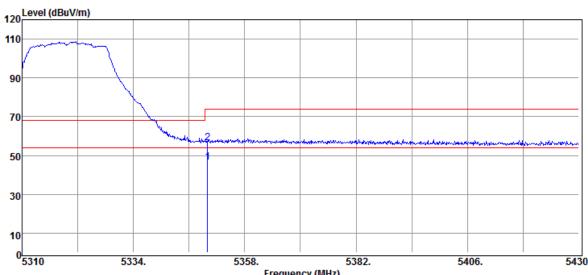
Operation Mode Test Mode

:802.11n20 / Band 2 :BE CH HIGH

EUT Pol :E2 Plan Test Channel :5320 MHz **Test Date** :2018-08-28 Temp./Humi. :24/69

Antenna Pol. :HORIZONTAL

Engineer :Enzo



Frequency (winz)								
	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	32.45	14.16	46.61	54.00	-7.39	
	5350.00	Peak	42.40	14.16	56.56	74.00	-17.44	

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Page: 180 of 232

Operation Mode Test Mode **EUT Pol**

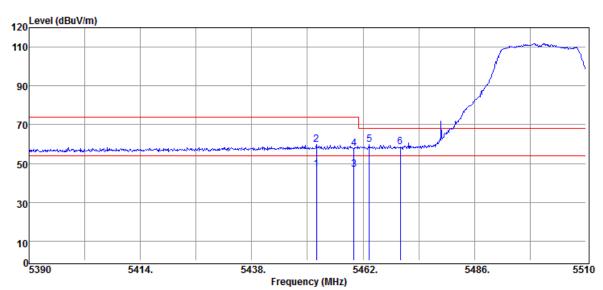
Test Channel

:802.11n20 / Band 3 :BE CH LOW

:E2 Plan :5500 MHz **Test Date** Temp./Humi. Antenna Pol. :2018-08-28

:24/69 :VERTICAL

Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
5451.92	Average	32.48	14.30	46.78	54.00	-7.22
5451.92	Peak	45.53	14.30	59.83	74.00	-14.17
5460.00	Average	32.44	14.31	46.75	54.00	-7.25
5460.00	Peak	43.47	14.31	57.78	74.00	-16.22
5463.32	Peak	45.31	14.31	59.62	68.20	-8.58
5470.00	Peak	44.10	14.31	58.41	68.20	-9.79

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Page: 181 of 232

Operation Mode Test Mode

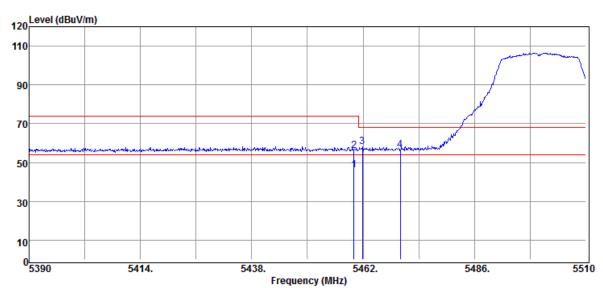
:802.11n20 / Band 3

:BE CH LOW

EUT Pol :E2 Plan Test Channel :5500 MHz **Test Date** Temp./Humi. Antenna Pol. :2018-08-28 :24/69

:HORIZONTAL

Engineer :Enzo



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	31.88	14.31	46.19	54.00	-7.81
5460.00	Peak	41.91	14.31	56.22	74.00	-17.78
5461.88	Peak	43.66	14.31	57.97	68.20	-10.23
5470.00	Peak	42.29	14.31	56.60	68.20	-11.60



Page: 182 of 232

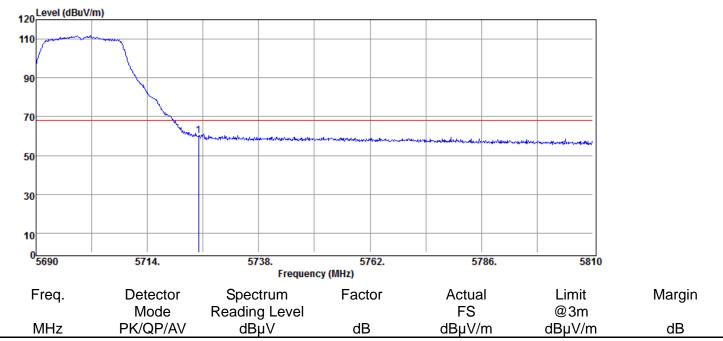
Operation Mode Test Mode **EUT Pol**

Test Channel

:802.11n20 / Band 3 :BE CH HIGH

:E2 Plan :5700 MHz **Test Date** :2018-08-28 Temp./Humi. :24/69 Antenna Pol. :VERTICAL





Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5725.00	Peak	45.76	14.50	60.26	68.20	-7.94

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Page: 183 of 232

Operation Mode Test Mode

Test Channel

EUT Pol

:802.11n20 / Band 3

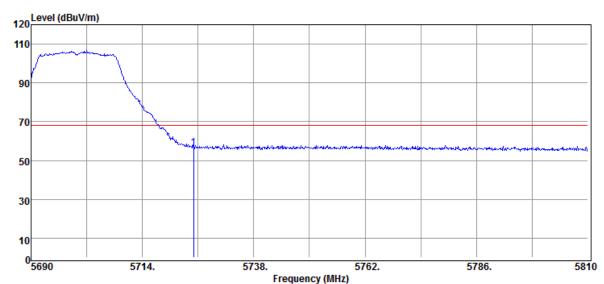
:BE CH HIGH :E2 Plan :5700 MHz

Test Date Temp./Humi. Antenna Pol.

:24/69 :HORIZONTAL

:2018-08-28

Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin			
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBμV/m	dB			
5725.00	Peak	42.09	14.50	56.59	68.20	-11.61			

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Page: 184 of 232

Operation Mode Test Mode **EUT Pol** Test Channel

:802.11n20 / Band 4

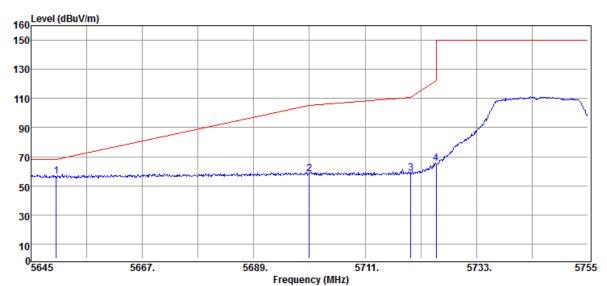
:BE CH LOW

:E2 Plan :5745 MHz **Test Date** Temp./Humi. Antenna Pol. :2018-08-28

:24/69

:VERTICAL

Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5650.00	Peak	41.95	14.42	56.37	68.20	-11.83
5700.00	Peak	43.55	14.47	58.02	105.20	-47.18
5720.00	Peak	44.33	14.49	58.82	110.80	-51.98
5725.00	Peak	50.78	14.50	65.28	122.20	-56.92

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Page: 185 of 232

Operation Mode Test Mode

:802.11n20 / Band 4

:BE CH LOW

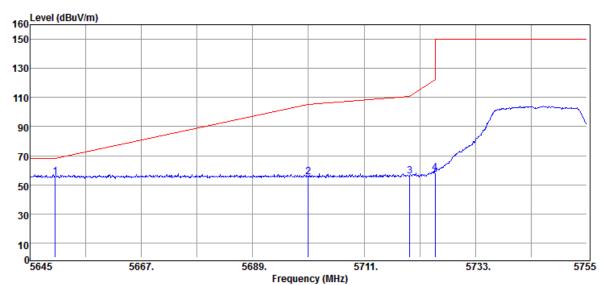
:5745 MHz

:E2 Plan

EUT Pol Test Channel **Test Date** Temp./Humi. Antenna Pol. :2018-08-28 :24/69

:HORIZONTAL

Engineer :Enzo



	Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin	
	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB	
	5650.00	Peak	41.08	14.42	55.50	68.20	-12.70	
	5700.00	Peak	41.04	14.47	55.51	105.20	-49.69	
	5720.00	Peak	41.17	14.49	55.66	110.80	-55.14	
	5725.00	Peak	43.76	14.50	58.26	122.20	-63.94	



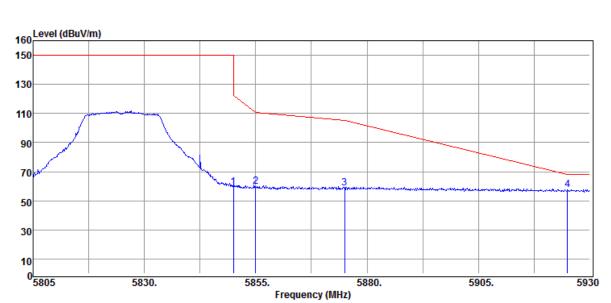
Page: 186 of 232

Operation Mode Test Mode **EUT Pol** Test Channel

:802.11n20 / Band 4

:BE CH HIGH

:E2 Plan :5825 MHz **Test Date** :2018-08-29 Temp./Humi. :24/69 Antenna Pol. :VERTICAL Engineer :Enzo



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	44.28	14.72	59.00	122.20	-63.20
5855.00	Peak	44.89	14.73	59.62	110.80	-51.18
5875.00	Peak	43.78	14.78	58.56	105.20	-46.64
5925.00	Peak	42.43	14.91	57.34	68.20	-10.86

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Page: 187 of 232

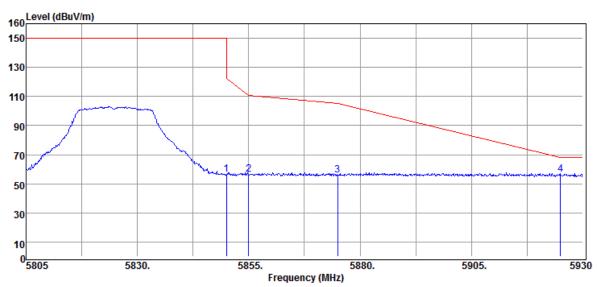
Operation Mode Test Mode

:802.11n20 / Band 4 :BE CH HIGH

EUT Pol :E2 Plan Test Channel :5825 MHz **Test Date** :2018-08-28 Temp./Humi. :24/69

Antenna Pol. :HORIZONTAL

Engineer :Enzo



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	41.62	14.72	56.34	122.20	-65.86
5855.00	Peak	41.68	14.73	56.41	110.80	-54.39
5875.00	Peak	41.20	14.78	55.98	105.20	-49.22
5925.00	Peak	41.62	14.91	56.53	68.20	-11.67

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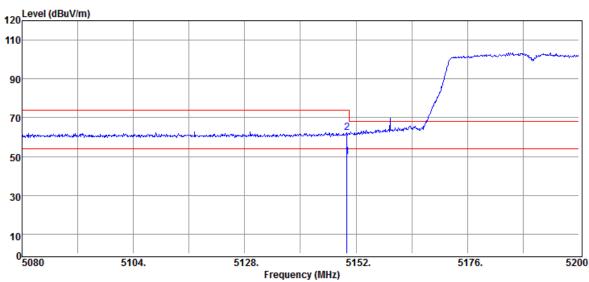


Page: 188 of 232

802.11n40 HT mode

:802.11n40 / Band 1 **Operation Mode** Test Mode :BE CH LOW **EUT Pol** :E2 Plan Test Channel :5190 MHz

Test Date :2018-09-03 Temp./Humi. :24/69 Antenna Pol. :VERTICAL Engineer :Enzo



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	36.21	13.65	49.86	54.00	-4.14
5150.00	Peak	48.82	13.65	62.47	74.00	-11.53

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Page: 189 of 232

Operation Mode Test Mode

EUT Pol

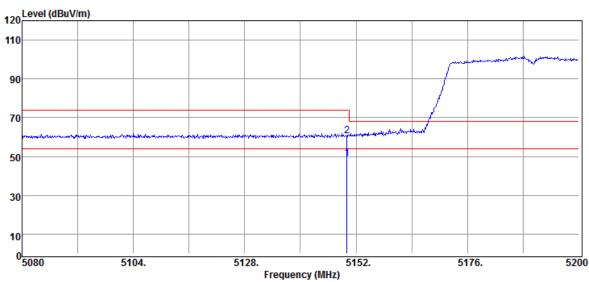
:802.11n40 / Band 1

:BE CH LOW :E2 Plan

Test Channel :5190 MHz **Test Date** :2018-09-03 Temp./Humi. :24/69

Antenna Pol. :HORIZONTAL

Engineer :Enzo



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	35.32	13.65	48.97	54.00	-5.03
5150.00	Peak	47.06	13.65	60.71	74.00	-13.29

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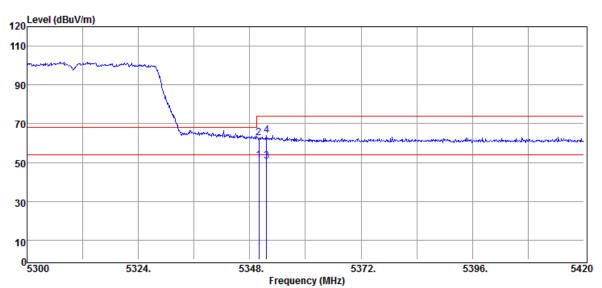


Page: 190 of 232

Operation Mode Test Mode **EUT Pol** Test Channel

:802.11n40 / Band 2 :BE CH HIGH

:E2 Plan :5310 MHz **Test Date** :2018-09-03 Temp./Humi. :24/69 Antenna Pol. :VERTICAL Engineer :Enzo



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	36.87	14.16	51.03	54.00	-2.97
5350.00	Peak	48.65	14.16	62.81	74.00	-11.19
5351.60	Average	36.38	14.17	50.55	54.00	-3.45
5351.60	Peak	49.74	14.17	63.91	74.00	-10.09

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Page: 191 of 232

Operation Mode Test Mode

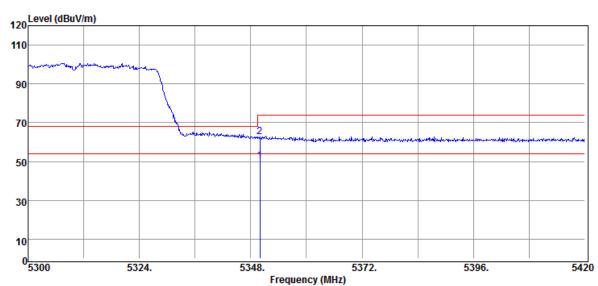
:802.11n40 / Band 2

:BE CH HIGH

EUT Pol :E2 Plan Test Channel :5310 MHz **Test Date** :2018-09-03 Temp./Humi. :24/69

Antenna Pol. :HORIZONTAL

Engineer :Enzo



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	36.21	14.16	50.37	54.00	-3.63
5350.00	Peak	48.45	14.16	62.61	74.00	-11.39

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:2018-09-03

Page: 192 of 232

Operation Mode Test Mode **EUT Pol**

Test Channel

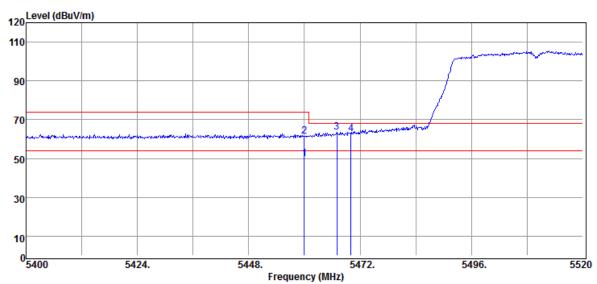
:802.11n40 / Band 3

:BE CH LOW

:E2 Plan :5510 MHz **Test Date** Temp./Humi.

:24/69 Antenna Pol. :VERTICAL

Engineer :Enzo



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	35.45	14.31	49.76	54.00	-4.24
5460.00	Peak	47.35	14.31	61.66	74.00	-12.34
5466.96	Peak	49.32	14.32	63.64	68.20	-4.56
5470.00	Peak	48.59	14.31	62.90	68.20	-5.30



Page: 193 of 232

Operation Mode Test Mode

:802.11n40 / Band 3

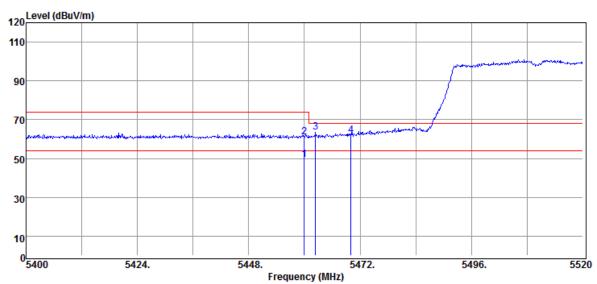
:BE CH LOW

EUT Pol Test Channel :E2 Plan :5510 MHz **Test Date** Temp./Humi. Antenna Pol. :2018-09-03

:24/69

:HORIZONTAL

Engineer :Enzo



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	35.23	14.31	49.54	54.00	-4.46
5460.00	Peak	46.81	14.31	61.12	74.00	-12.88
5462.40	Peak	49.25	14.32	63.57	68.20	-4.63
5470.00	Peak	47.49	14.31	61.80	68.20	-6.40

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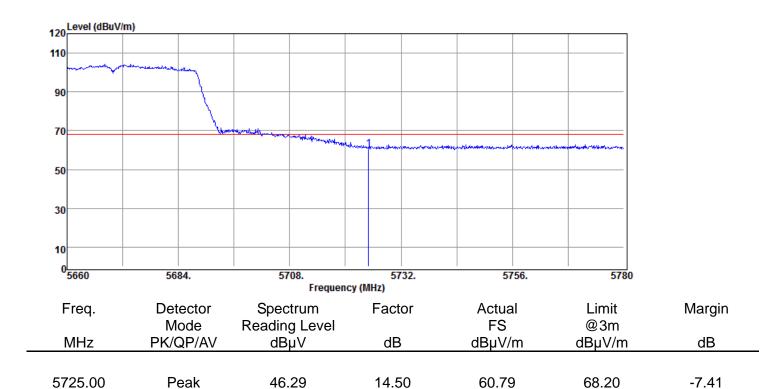
Page: 194 of 232

Operation Mode Test Mode **EUT Pol**

Test Channel

:802.11n40 / Band 3 :BE CH HIGH

:E2 Plan :5670 MHz **Test Date** :2018-09-03 Temp./Humi. :24/69 Antenna Pol. :VERTICAL Engineer :Enzo



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Page: 195 of 232

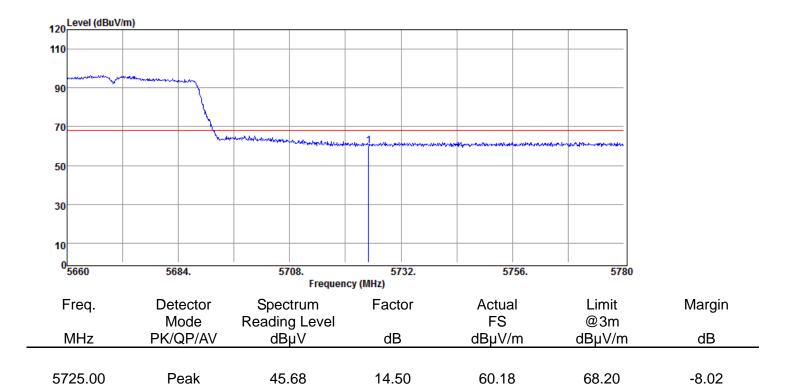
Operation Mode Test Mode

:802.11n40 / Band 3 :BE CH HIGH

EUT Pol :E2 Plan Test Channel :5670 MHz **Test Date** :2018-09-03 Temp./Humi. :24/69

Antenna Pol. :HORIZONTAL

Engineer :Enzo



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Page: 196 of 232

Operation Mode Test Mode **EUT Pol**

Test Channel

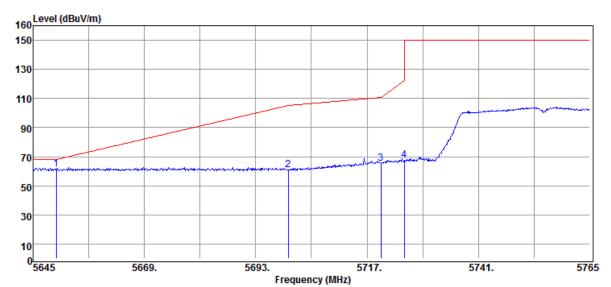
:802.11n40 / Band 4

:BE CH LOW

:E2 Plan :5755 MHz **Test Date** Temp./Humi. Antenna Pol. :2018-09-03 :24/69

:VERTICAL

Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5650.00	Peak	47.20	14.42	61.62	68.20	-6.58
5700.00	Peak	46.16	14.47	60.63	105.20	-44.57
5720.00	Peak	50.86	14.49	65.35	110.80	-45.45
5725.00	Peak	53.13	14.50	67.63	122.20	-54.57



Page: 197 of 232

Operation Mode Test Mode

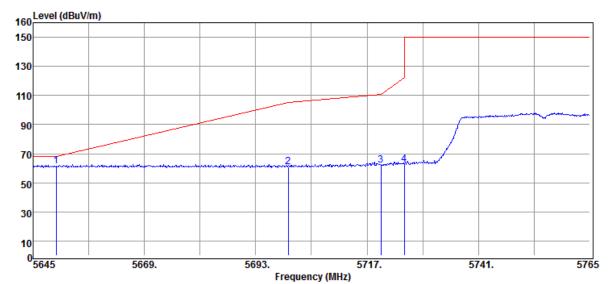
:802.11n40 / Band 4

:BE CH LOW

EUT Pol Test Channel :E2 Plan :5755 MHz **Test Date** Temp./Humi. Antenna Pol. :2018-09-03

:24/69 :HORIZONTAL

Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
						_
5650.00	Peak	47.16	14.42	61.58	68.20	-6.62
5700.00	Peak	46.18	14.47	60.65	105.20	-44.55
5720.00	Peak	47.52	14.49	62.01	110.80	-48.79
5725.00	Peak	48.27	14.50	62.77	122.20	-59.43



Page: 198 of 232

Operation Mode Test Mode **EUT Pol**

Test Channel

:802.11n40 / Band 4

:BE CH HIGH :E2 Plan

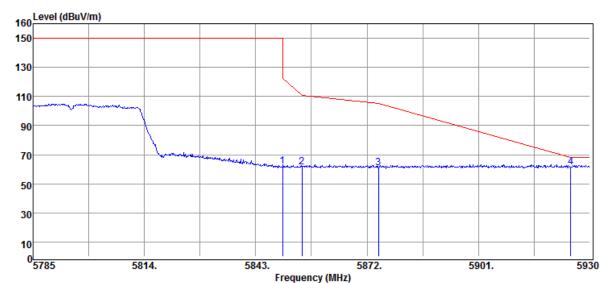
:5795 MHz

Test Date Temp./Humi. Antenna Pol.

Engineer

:2018-09-03 :24/69

:VERTICAL :Enzo



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	47.26	14.72	61.98	122.20	-60.22	
5855.00	Peak	46.69	14.73	61.42	110.80	-49.38	
5875.00	Peak	46.35	14.78	61.13	105.20	-44.07	
5925.00	Peak	46.55	14.91	61.46	68.20	-6.74	



Page: 199 of 232

Operation Mode Test Mode

:802.11n40 / Band 4

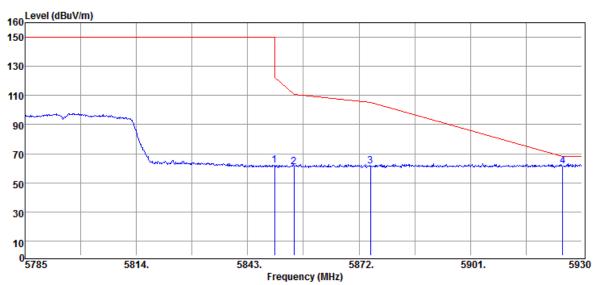
EUT Pol Test Channel

:BE CH HIGH :E2 Plan :5795 MHz

Test Date Temp./Humi. Antenna Pol. :2018-09-03 :24/69

:HORIZONTAL

Engineer :Enzo



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	47.13	14.72	61.85	122.20	-60.35
5855.00	Peak	46.35	14.73	61.08	110.80	-49.72
5875.00	Peak	46.50	14.78	61.28	105.20	-43.92
5925.00	Peak	46.74	14.91	61.65	68.20	-6.55



Page: 200 of 232

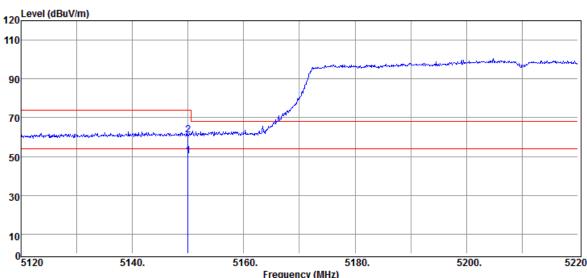
802.11ac80 VHT mode

:802.11ac80 / Band 1 **Operation Mode**

Test Mode :BE CH LOW **EUT Pol** :E2 Plan

Test Channel :5210 MHz **Test Date** :2018-09-03 Temp./Humi. :24/69 Antenna Pol. :VERTICAL

Engineer :Enzo



rrequency (minz)									
	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	36.48	13.65	50.13	54.00	-3.87		
	5150.00	Peak	47.31	13.65	60.96	74.00	-13.04		

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Page: 201 of 232

Operation Mode

:802.11ac80 / Band 1

Test Mode **EUT Pol**

:BE CH LOW :E2 Plan

Test Channel

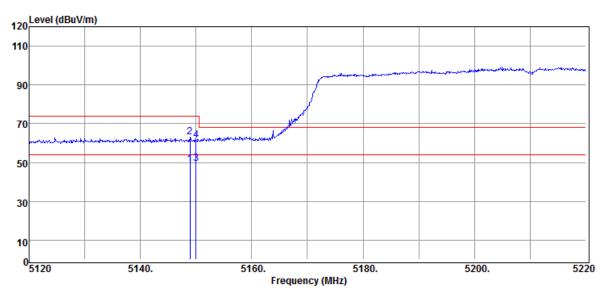
:5210 MHz

Test Date Temp./Humi. :2018-09-03 :24/69

Antenna Pol.

:HORIZONTAL

Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
5148.90	Average	35.33	13.63	48.96	54.00	-5.04
5148.90	Peak	49.54	13.63	63.17	74.00	-10.83
5150.00	Average	35.81	13.65	49.46	54.00	-4.54
5150.00	Peak	47.80	13.65	61.45	74.00	-12.55

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f (886-2) 2298-0488 www.tw.sqs.com



Page: 202 of 232

Operation Mode Test Mode **EUT Pol**

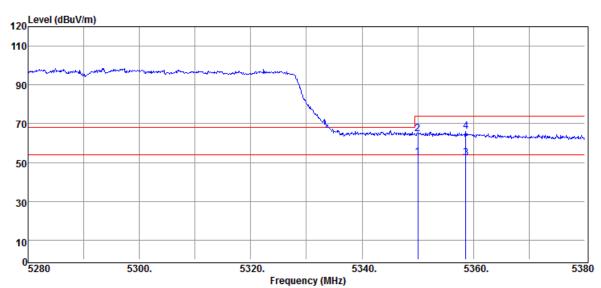
Test Channel

:802.11ac80 / Band 2 :BE CH HIGH

:E2 Plan :5290 MHz **Test Date** Temp./Humi. Antenna Pol. :2018-09-03

:24/69 :VERTICAL

Engineer :Enzo



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	38.68	14.16	52.84	54.00	-1.16
5350.00	Peak	50.56	14.16	64.72	74.00	-9.28
5358.60	Average	38.22	14.18	52.40	54.00	-1.60
5358.60	Peak	51.69	14.18	65.87	74.00	-8.13

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Page: 203 of 232

Operation Mode Test Mode

:802.11ac80 / Band 2

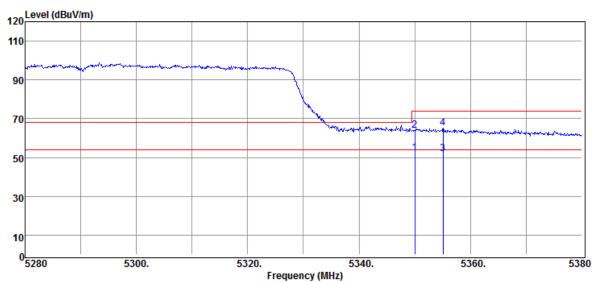
:BE CH HIGH

EUT Pol Test Channel :E2 Plan :5290 MHz **Test Date** Temp./Humi.

:24/69 Antenna Pol. :HORIZONTAL

:2018-09-03

Engineer :Enzo



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	38.35	14.16	52.51	54.00	-1.49
5350.00	Peak	49.64	14.16	63.80	74.00	-10.20
5355.10	Average	37.82	14.18	52.00	54.00	-2.00
5355.10	Peak	51.15	14.18	65.33	74.00	-8.67



Page: 204 of 232

Operation Mode Test Mode **EUT Pol**

Test Channel

:802.11ac80 / Band 3

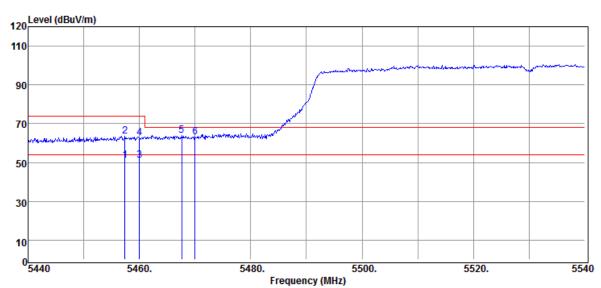
:BE CH LOW

:E2 Plan :5530 MHz **Test Date** Temp./Humi. Antenna Pol. :2018-09-03

:24/69

:VERTICAL

Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5457.40	Average	36.61	14.31	50.92	54.00	-3.08
5457.40	Peak	49.24	14.31	63.55	74.00	-10.45
5460.00	Average	36.67	14.31	50.98	54.00	-3.02
5460.00	Peak	48.46	14.31	62.77	74.00	-11.23
5467.60	Peak	49.76	14.32	64.08	68.20	-4.12
5470.00	Peak	48.67	14.31	62.98	68.20	-5.22

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Page: 205 of 232

Operation Mode Test Mode

:802.11ac80 / Band 3

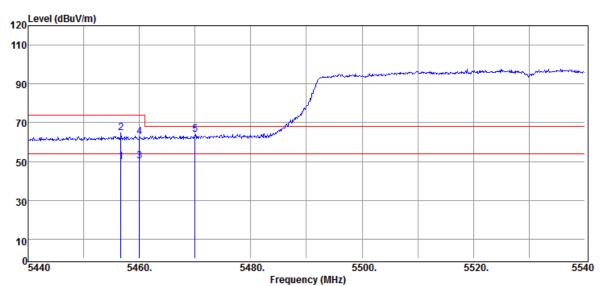
:BE CH LOW

EUT Pol Test Channel :E2 Plan :5530 MHz **Test Date** Temp./Humi. Antenna Pol. :2018-09-03

:24/69

:HORIZONTAL

Engineer :Enzo



Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
Average	35.55	14.31	49.86	54.00	-4.14
Peak	50.27	14.31	64.58	74.00	-9.42
Average	35.82	14.31	50.13	54.00	-3.87
Peak	48.22	14.31	62.53	74.00	-11.47
Peak	49.72	14.31	64.03	68.20	-4.17
	Mode PK/QP/AV Average Peak Average Peak	Mode Reading Level PK/QP/AV dBµV Average 35.55 Peak 50.27 Average 35.82 Peak 48.22	Mode PK/QP/AV Reading Level dBμV dB Average Peak 35.55 14.31 Peak 50.27 14.31 Average Average 35.82 14.31 Peak 48.22 14.31	Mode PK/QP/AV Reading Level dB μV FS dB μV/m Average 35.55 14.31 49.86 Peak 50.27 14.31 64.58 Average 35.82 14.31 50.13 Peak 48.22 14.31 62.53	Mode PK/QP/AV Reading Level dBμV FS dBμV/m @3m dBμV/m Average 35.55 14.31 49.86 54.00 Peak 50.27 14.31 64.58 74.00 Average 35.82 14.31 50.13 54.00 Peak 48.22 14.31 62.53 74.00

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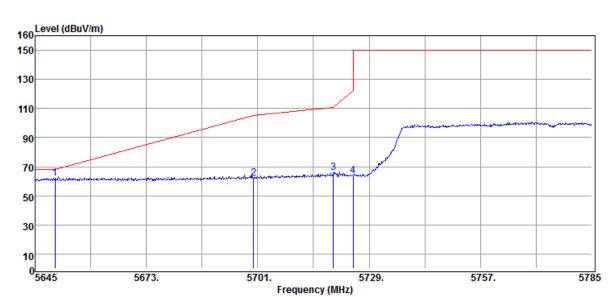
Page: 206 of 232

Operation Mode Test Mode

:802.11ac80 / Band 4

:BE CH LOW

EUT Pol :E2 Plan Test Channel :5775 MHz **Test Date** :2018-09-03 Temp./Humi. :24/69 Antenna Pol. :VERTICAL Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
5650.00	Peak	47.49	14.42	61.91	68.20	-6.29
5700.00	Peak	47.63	14.47	62.10	105.20	-43.10
5720.00	Peak	51.46	14.49	65.95	110.80	-44.85
5725.00	Peak	49.42	14.50	63.92	122.20	-58.28



Page: 207 of 232

Operation Mode Test Mode

:802.11ac80 / Band 4

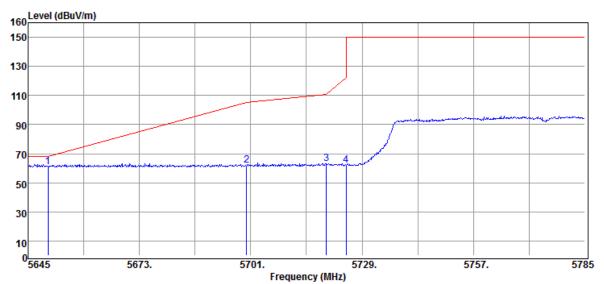
:BE CH LOW

EUT Pol Test Channel :E2 Plan :5775 MHz

Test Date Temp./Humi. Antenna Pol. :2018-09-03 :24/69

:HORIZONTAL

Engineer :Enzo



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
						_
5650.00	Peak	46.50	14.42	60.92	68.20	-7.28
5700.00	Peak	47.32	14.47	61.79	105.20	-43.41
5720.00	Peak	48.60	14.49	63.09	110.80	-47.71
5725.00	Peak	47.56	14.50	62.06	122.20	-60.14



Page: 208 of 232

Operation Mode Test Mode **EUT Pol**

Test Channel

:802.11ac80 / Band 4

:BE CH HIGH

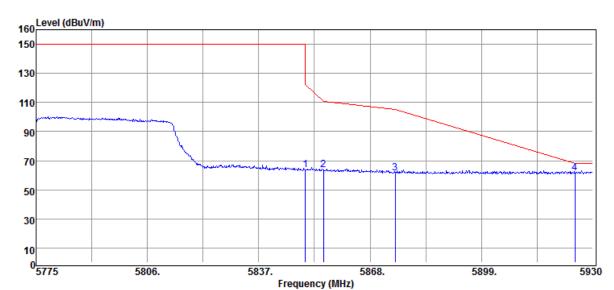
:E2 Plan :5775 MHz **Test Date** Temp./Humi. Antenna Pol.

Engineer

:2018-09-03

:24/69

:VERTICAL :Enzo



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	48.73	14.72	63.45	122.20	-58.75
5855.00	Peak	48.88	14.73	63.61	110.80	-47.19
5875.00	Peak	46.78	14.78	61.56	105.20	-43.64
5925.00	Peak	46.73	14.91	61.64	68.20	-6.56



Page: 209 of 232

Operation Mode Test Mode

:802.11ac80 / Band 4

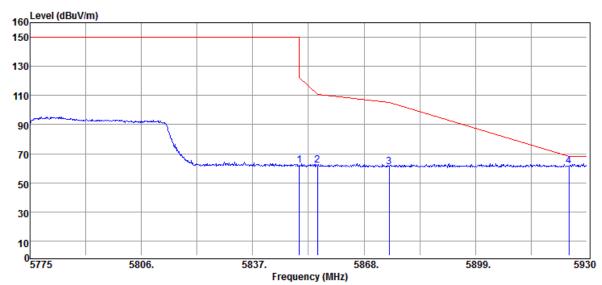
:BE CH HIGH

EUT Pol :E2 Plan Test Channel :5775 MHz **Test Date** Temp./Humi.

:24/69 Antenna Pol. :HORIZONTAL

:2018-09-03

Engineer :Enzo



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	47.27	14.72	61.99	122.20	-60.21
5855.00	Peak	47.26	14.73	61.99	110.80	-48.81
5875.00	Peak	46.10	14.78	60.88	105.20	-44.32
5925.00	Peak	46.80	14.91	61.71	68.20	-6.49

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Page: 210 of 232

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.

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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Page: 211 of 232

13 FREQUENCY STABILITY

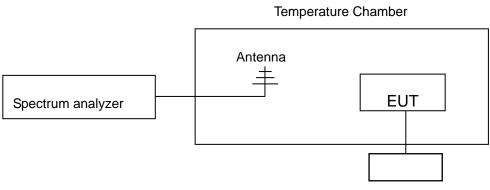
Standard Applicable 13.1

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.

Test SET-UP 13.3



Variable AC Power Supply

Measurement Equipment Used: 13.4

SGS Conducted Room								
Name of Equip- ment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due			
Spectrum Analyzer	Agilent	N9010A	MY51440113	2018/06/20	2019/06/19			
DC Power Supply	Agilent	E3640A	MY53140006	2018/05/30	2019/05/29			
Attenuator	Marvelous	MVE2213-10	RF30	2017/12/26	2018/12/25			

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Page: 212 of 232

13.5 **Measurement Result**

Startup:

Operation Mode	802.11 a	Test Date	2018.09.03
Temperature	:25 ℃	Test By	Henry
Humidity	:67 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	Δ Frequency (MHz)
		36	5180	5,179.94060	0.00001147
		44	5220	5,219.94225	0.00001106
		48	5240	5,239.94323	0.00001083
		52	5260	5,259.94302	0.00001083
		60	5300	5,299.94271	0.00001081
	4.42V	64	5320	5,319.94246	0.00001082
		100	5500	5,499.97424	0.00000468
		116	5580	5,579.94163	0.00001046
		140	5700	5,699.93966	0.00001059
		144	5720	5,719.94169	0.00001019
		149	5745	5,744.94011	0.00001042
		157	5785	5,784.97220	0.00000481
		165	5825	5,824.93974	0.00001034
-10 °C		36	5180	5,179.94072	0.00001144
		44	5220	5,219.94270	0.00001098
		48	5240	5,239.94306	0.00001087
		52	5260	5,259.94242	0.00001095
		60	5300	5,299.94296	0.00001076
	3.4V	64	5320	5,319.94277	0.00001076
		100	5500	5,499.97441	0.00000465
		116	5580	5,579.94118	0.00001054
		140	5700	5,699.93946	0.00001062
		144	5720	5,719.94157	0.00001022
		149	5745	5,744.94057	0.00001034
		157	5785	5,784.97246	0.00000476
		165	5825	5,824.93962	0.00001036

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Page: 213 of 232

.					
	_	36	5180	5,179.94149	0.00001130
		44	5220	5,219.94272	0.00001097
		48	5240	5,239.94377	0.00001073
		52	5260	5,259.94314	0.00001081
		60	5300	5,299.94300	0.00001075
25 ℃	3.85V	64	5320	5,319.94293	0.00001073
		100	5500	5,499.97449	0.00000464
		116	5580	5,579.94175	0.00001044
		140	5700	5,699.94036	0.00001046
		144	5720	5,719.94219	0.00001011
		149	5745	5,744.94085	0.00001030
		157	5785	5,784.97274	0.00000471
		165	5825	5,824.94006	0.00001029
		36	5180	5,179.94064	0.00001146
		44	5220	5,219.94252	0.00001101
		48	5240	5,239.94302	0.00001087
		52	5260	5,259.94260	0.00001091
	4.42V	60	5300	5,299.94217	0.00001091
		64	5320	5,319.94271	0.00001077
		100	5500	5,499.97404	0.00000472
		116	5580	5,579.94162	0.00001046
		140	5700	5,699.94017	0.00001050
		144	5720	5,719.94178	0.00001018
		149	5745	5,744.94065	0.00001033
		157	5785	5,784.97238	0.00000477
		165	5825	5,824.94002	0.00001030
55 ℃		36	5180	5,179.94089	0.00001141
		44	5220	5,219.94225	0.00001106
		48	5240	5,239.94332	0.00001082
		52	5260	5,259.94262	0.00001091
		60	5300	5,299.94233	0.00001088
	3.4V	64	5320	5,319.94275	0.00001076
		100	5500	5,499.97385	0.00000475
		116	5580	5,579.94101	0.00001057
		140	5700	5,699.93983	0.00001056
		144	5720	5,719.94136	0.00001025
		149	5745	5,744.93998	0.00001045
		157	5785	5,784.97210	0.00000482
		165	5825	5,824.93928	0.00001042

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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SGS Taiwan Ltd. No.134, WuKung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan 24803/新北市五股區新北產業園區五工路 134 號 t (886-2) 2299-3279



Page: 214 of 232

Operation Mode	802.11 n_HT40	Test Date	2018.09.03
Temperature	:25 ℃	Test By	Henry
Humidity	:67 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	Δ Frequency (MHz)
		38	5190	5,189.94597	0.00001041
		46	5230	5,229.94519	0.00001048
		54	5270	5,269.91281	0.00001654
		62	5310	5,309.94523	0.00001031
	4.42V	102	5510	5,509.94291	0.00001036
		110	5550	5,549.94102	0.00001063
		134	5670	5,669.93961	0.00001065
		142	5710	5,709.94179	0.00001019
		151	5755	5,754.93905	0.00001059
-10 °C		159	5795	5,794.93902	0.00001052
		38	5190	5,189.94588	0.00001043
		46	5230	5,229.94520	0.00001048
		54	5270	5,269.91264	0.00001658
		62	5310	5,309.94529	0.00001030
	3.4V	102	5510	5,509.94250	0.00001044
		110	5550	5,549.94091	0.00001065
		134	5670	5,669.93977	0.00001062
		142	5710	5,709.94120	0.00001030
		151	5755	5,754.93842	0.00001070
		159	5795	5,794.93925	0.00001048

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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SGS Taiwan Ltd. No.134, WuKung Road, New Taipeilndustrial Park, Wuku District, New TaipeiCity, Taiwan 24803/新北市五股區新北產業園區五工路 134 號



Page: 215 of 232

38 5190 5,189.94630 0.00001035 46 5230 5,229.94586 0.00001035 54 5270 5,269.91296 0.00001052 62 5310 5,309.94542 0.00001028 102 5510 5,509.94298 0.00001035 110 5550 5,549.94155 0.00001050 1142 5710 5,709.94200 0.00001050 151 5755 5,754.93928 0.00001051 159 5795 5,794.93933 0.00001047 162 5310 5,309.9467 0.00001037 46 5230 5,229.94578 0.00001047 46 5230 5,229.94578 0.00001047 46 5230 5,229.94578 0.00001047 442 5710 5,509.9429 0.00001047 110 5550 5,549.9406 0.00001042 4.42V 102 5510 5,509.9429 0.00001047 110 5550 5,549.94076 0.00001047 110 5550 5,549.94076 0.00001047 1110 5550 5,549.94076 0.00001047 112 5710 5,709.94126 0.00001066 159 5795 5,754.93867 0.00001065 159 5795 5,794.93864 0.00001059 55°C 38 5190 5,189.94582 0.00001044 3.4V 102 5510 5,509.9429 0.00001044 3.4V 102 5510 5,509.9429 0.00001043 3.4V 102 5510 5,509.9454 0.00001043 3.4V 102 5510 5,509.9450 0.00001054 134 5670 5,669.94026 0.00001054 134 5670 5,669.94026 0.00001054 134 5670 5,669.94026 0.00001054						
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62 5310 5,309,94542 0.00001028 102 5510 5,509,94298 0.00001035 110 5550 5,549,94155 0.00001050 142 5710 5,709,94200 0.00001050 142 5710 5,709,94200 0.00001055 151 5755 5,754,93928 0.00001047 38 5190 5,189,94617 0.00001037 46 5230 5,229,94578 0.00001037 54 5270 5,269,91233 0.00001042 4.42V 102 5510 5,509,94229 0.00001042 4.42V 102 5510 5,509,9429 0.00001047 110 5550 5,549,94076 0.00001047 110 5550 5,549,94076 0.00001066 142 5710 5,709,94126 0.00001067 134 5670 5,669,93966 0.00001069 151 5755 5,754,93867 0.00001069 152 5705 5,794,93864 0.00001049 153 5755 5,794,93864 0.00001044 46 5230 5,229,94577 0.00001064 46 5230 5,229,94577 0.00001043 56 5230 5,229,94577 0.00001043 57 5795 5,794,93864 0.00001043 58 5190 5,189,94582 0.00001043 59 5795 5,794,93864 0.00001043 59 5795 5,794,93864 0.00001043 50 520 5,269,91276 0.00001043 50 550 5,549,94152 0.00001043 51 5750 5,569,94254 0.00001043 110 5550 5,569,94026 0.00001054 110 5550 5,569,94026 0.00001054 110 5550 5,569,94026 0.00001054 110 5550 5,569,94026 0.00001054 110 5550 5,5754,93872 0.00001054			46	5230	5,229.94586	0.00001035
25 °C 3.85V 102 5510 5,509,94298 0.00001035 110 5550 5,549,94155 0.00001050 142 5710 5,709,94200 0.00001050 142 5710 5,709,94200 0.00001016 151 5755 5,754,93928 0.00001047 38 5190 5,189,94617 0.00001037 46 5230 5,229,94578 0.00001047 4.42V 102 5510 5,509,94229 0.00001047 110 5550 5,549,94169 0.00001047 110 5550 5,549,94076 0.00001047 110 5550 5,549,94076 0.00001047 110 5550 5,549,94076 0.00001047 110 5550 5,794,93966 0.00001047 110 5550 5,794,93867 0.00001066 142 5710 5,709,94126 0.00001069 151 5755 5,754,93867 0.00001044 46 5230 5,229,94547 0.00001043 54 54 5270 5,269,91276 0.00001043 54 5270 5,269,91276 0.00001043 3.4V 102 5510 5,509,94254 0.00001043 3.4V 102 5510 5,509,94254 0.00001043 110 5550 5,549,94152 0.00001043 134 5670 5,669,94026 0.00001054 134 5670 5,669,94026 0.00001054 142 5710 5,709,94192 0.00001054			54	5270	5,269.91296	0.00001652
110 5550 5,549,94155 0.00001053 134 5670 5,669,94045 0.00001050 142 5710 5,709,94200 0.00001016 151 5755 5,754,93928 0.00001055 159 5795 5,794,93933 0.00001047 38 5190 5,189,94617 0.00001037 46 5230 5,229,94578 0.00001037 54 5270 5,269,91233 0.00001042 4.42V 102 5510 5,509,94229 0.00001047 110 5550 5,549,94076 0.00001047 110 5550 5,549,94076 0.00001067 134 5670 5,669,93966 0.00001064 142 5710 5,709,94126 0.00001064 142 5710 5,709,94126 0.00001069 159 5795 5,794,93864 0.00001059 55 °C 38 5190 5,189,94582 0.00001044 46 5230 5,229,94547 0.00001043 54 5270 5,269,91276 0.00001043 54 5270 5,269,91276 0.00001043 54 5270 5,269,91276 0.00001043 3.4V 102 5510 5,509,94254 0.00001043 3.4V 102 5510 5,509,94254 0.00001043 110 5550 5,549,94152 0.00001043 134 5670 5,669,94026 0.00001054 134 5670 5,669,94026 0.00001054 134 5670 5,669,94026 0.00001054 142 5710 5,709,94192 0.00001071 151 5755 5,754,93872 0.00001075			62	5310	5,309.94542	0.00001028
134 5670 5,669,94045 0.00001050 142 5710 5,709,94200 0.00001016 151 5755 5,754,93928 0.00001055 159 5795 5,794,93933 0.00001047 38 5190 5,189,94617 0.00001037 46 5230 5,229,94578 0.00001047 54 5270 5,269,91233 0.00001664 62 5310 5,309,94469 0.00001047 110 5550 5,549,94076 0.00001047 110 5550 5,549,94076 0.00001064 142 5710 5,709,94126 0.00001064 142 5710 5,709,94126 0.00001066 159 5795 5,754,93867 0.00001066 159 5795 5,794,93864 0.00001049 54 5230 5,229,94547 0.00001049 46 5230 5,229,94547 0.00001044 54 5270 5,269,91276 0.00001043 54 5270 5,269,91276 0.00001043 54 5270 5,269,91276 0.00001043 54 5270 5,269,91276 0.00001043 3.4V 102 5510 5,509,9454 0.00001043 3.4V 102 5510 5,509,9454 0.00001043 110 5550 5,549,94152 0.00001054 134 5670 5,669,94026 0.00001054 134 5670 5,669,94026 0.00001054 134 5670 5,669,94026 0.00001054 142 5710 5,709,94192 0.00001075 134 5670 5,669,94026 0.00001054	25 ℃	3.85V	102	5510	5,509.94298	0.00001035
142 5710 5,709.94200 0.00001016 151 5755 5,754.93928 0.00001055 159 5795 5,794.93933 0.00001047 38 5190 5,189.94617 0.00001037 46 5230 5,229.94578 0.00001037 54 5270 5,269.91233 0.00001664 62 5310 5,309.94469 0.00001042 110 5550 5,549.94076 0.00001067 134 5670 5,669.93966 0.00001064 142 5710 5,709.94126 0.00001066 159 5795 5,754.93867 0.00001066 159 5795 5,794.93864 0.00001059 55 ℃ 38 5190 5,189.94582 0.00001049 46 5230 5,229.94547 0.00001049 54 5270 5,269.91276 0.00001043 54 5270 5,269.91276 0.00001043 54 5270 5,269.91276 0.00001043 3.4V 102 5510 5,509.94254 0.00001043 3.4V 102 5510 5,509.94254 0.00001043 110 5550 5,549.94152 0.00001043 110 5550 5,549.94152 0.00001054 134 5670 5,669.94026 0.00001054 134 5670 5,669.94026 0.00001054 142 5710 5,709.94192 0.00001077 151 5755 5,754.93872 0.00001065			110	5550	5,549.94155	0.00001053
151 5755 5,754,93928 0.00001055 159 5795 5,794,93933 0.00001047 38 5190 5,189,94617 0.00001037 46 5230 5,229,94578 0.00001037 54 5270 5,269,91233 0.00001664 62 5310 5,309,94469 0.00001047 110 5550 5,549,94076 0.00001067 134 5670 5,669,93966 0.00001064 142 5710 5,709,94126 0.00001064 142 5710 5,709,94126 0.00001069 151 5755 5,754,93867 0.00001066 159 5795 5,794,93864 0.00001059 55 ℃ 38 5190 5,189,94582 0.00001044 46 5230 5,229,94547 0.00001043 54 5270 5,269,91276 0.00001043 54 5270 5,269,91276 0.00001043 3.4V 102 5510 5,509,94254 0.00001043 110 5550 5,549,94152 0.00001043 110 5550 5,549,94152 0.00001054 134 5670 5,669,94026 0.00001054 142 5710 5,709,94192 0.00001054 142 5710 5,709,94192 0.00001077 151 5755 5,754,93872 0.00001065			134	5670	5,669.94045	0.00001050
159 5795 5,794.93933 0.00001047 38 5190 5,189.94617 0.00001037 46 5230 5,229.94578 0.00001037 54 5270 5,269.91233 0.00001664 62 5310 5,309.94469 0.00001042 4.42V 102 5510 5,509.94229 0.00001047 110 5550 5,549.94076 0.00001067 134 5670 5,669.93966 0.00001064 142 5710 5,709.94126 0.00001064 142 5710 5,799.94126 0.00001059 151 5755 5,754.93867 0.00001059 55 ℃ 38 5190 5,189.94582 0.00001044 46 5230 5,229.94547 0.00001043 54 5270 5,269.91276 0.00001043 54 5270 5,269.91276 0.00001043 3.4V 102 5510 5,509.94254 0.00001043 110 5550 5,549.94152 0.00001054 134 5670 5,669.94026 0.00001054 134 5670 5,669.94026 0.00001054 142 5710 5,709.94192 0.00001077 151 5755 5,754.93872 0.00001065			142	5710	5,709.94200	0.00001016
38 5190 5,189.94617 0.00001037 46 5230 5,229.94578 0.00001037 54 5270 5,269.91233 0.00001664 62 5310 5,309.94469 0.00001042 110 5550 5,549.94076 0.00001067 134 5670 5,669.93966 0.00001064 142 5710 5,709.94126 0.00001069 151 5755 5,754.93867 0.00001069 159 5795 5,794.93864 0.00001059 55 ℃ 38 5190 5,189.94582 0.00001044 46 5230 5,229.94547 0.00001043 54 5270 5,269.91276 0.00001043 54 5270 5,269.91276 0.00001043 54 5270 5,309.94462 0.00001043 3.4V 102 5510 5,509.94254 0.00001054 110 5550 5,549.94152 0.00001054 134 5670 5,669.94026 0.00001054 134 5670 5,669.94026 0.00001054 142 5710 5,709.94192 0.00001077 151 5755 5,754.93872 0.00001065			151	5755	5,754.93928	0.00001055
46 5230 5,229,94578 0.00001037 54 5270 5,269,91233 0.00001664 62 5310 5,309,94469 0.00001042 4.42V 102 5510 5,509,94229 0.00001047 110 5550 5,549,94076 0.00001067 134 5670 5,669,93966 0.00001064 142 5710 5,709,94126 0.00001029 151 5755 5,754,93867 0.00001059 159 5795 5,794,93864 0.00001059 159 5795 5,794,93864 0.00001059 159 5795 5,189,94582 0.00001044 46 5230 5,229,94547 0.00001043 54 5270 5,269,91276 0.00001655 62 5310 5,309,94462 0.00001043 3.4V 102 5510 5,509,94254 0.00001043 110 5550 5,549,94152 0.00001054 134 5670 5,669,94026 0.00001054 142 5710 5,709,94192 0.00001017 151 5755 5,754,93872 0.00001065			159	5795	5,794.93933	0.00001047
54 5270 5,269.91233 0.00001664 62 5310 5,309.94469 0.00001042 102 5510 5,509.94229 0.00001047 110 5550 5,549.94076 0.00001067 134 5670 5,669.93966 0.00001064 142 5710 5,709.94126 0.00001029 151 5755 5,754.93867 0.00001059 159 5795 5,794.93864 0.00001059 159 5795 5,794.93864 0.00001059 159 5795 5,794.93864 0.00001043 150 5230 5,229.94547 0.00001043 150 550 5,269.91276 0.00001043 150 550 5,509.94254 0.00001043 150 5550 5,549.94152 0.00001054 150 5550 5,549.94152 0.00001054 151 5755 5,709.94192 0.00001054 151 5755 5,754.93872 0.00001065			38	5190	5,189.94617	0.00001037
4.42V 102 5510 5,309.94469 0.00001047 110 5550 5,549.94076 0.00001067 134 5670 5,669.93966 0.00001064 142 5710 5,709.94126 0.00001029 151 5755 5,754.93867 0.00001059 159 5795 5,794.93864 0.00001059 55°C 38 5190 5,189.94582 0.00001043 54 5270 5,269.91276 0.00001043 3.4V 102 5510 5,509.94254 0.00001043 110 5550 5,549.94152 0.00001054 134 5670 5,669.94026 0.00001054 142 5710 5,709.94192 0.00001057 151 5755 5,754.93872 0.00001055			46	5230	5,229.94578	0.00001037
4.42V 102 5510 5,509,94229 0.00001047 110 5550 5,549,94076 0.00001067 134 5670 5,669,93966 0.00001064 142 5710 5,709,94126 0.00001029 151 5755 5,754,93867 0.00001059 159 5795 5,794,93864 0.00001059 159 5795 5,794,93864 0.00001059 150 5,189,94582 0.00001044 160 5230 5,229,94547 0.00001043 170 5550 5,309,94462 0.00001043 180 5550 5,549,94152 0.00001054 180 5550 5,549,94152 0.00001054 180 5570 5,669,94026 0.00001054 180 5755 5,754,93872 0.00001017 151 5755 5,754,93872 0.00001065			54	5270	5,269.91233	0.00001664
110 5550 5,549.94076 0.00001067 134 5670 5,669.93966 0.00001064 142 5710 5,709.94126 0.00001029 151 5755 5,754.93867 0.00001066 159 5795 5,794.93864 0.00001059 159 5795 5,794.93864 0.00001059 150 5,189.94582 0.00001044 160 5230 5,229.94547 0.00001043 170 5550 5,309.94462 0.00001043 180 550 5,509.94254 0.00001043 180 5670 5,669.94026 0.00001054 180 5670 5,669.94026 0.00001054 180 5755 5,754.93872 0.00001017 151 5755 5,754.93872 0.00001065		4.42V	62	5310	5,309.94469	0.00001042
134 5670 5,669.93966 0.00001064 142 5710 5,709.94126 0.00001029 151 5755 5,754.93867 0.00001066 159 5795 5,794.93864 0.00001059 55 ℃ 38 5190 5,189.94582 0.00001044 46 5230 5,229.94547 0.00001043 54 5270 5,269.91276 0.00001655 62 5310 5,309.94462 0.00001043 3.4V 102 5510 5,509.94254 0.00001043 110 5550 5,549.94152 0.00001054 134 5670 5,669.94026 0.00001054 142 5710 5,709.94192 0.00001017 151 5755 5,754.93872 0.00001065			102	5510	5,509.94229	0.00001047
142 5710 5,709.94126 0.00001029 151 5755 5,754.93867 0.00001066 159 5795 5,794.93864 0.00001059 38 5190 5,189.94582 0.00001044 46 5230 5,229.94547 0.00001043 54 5270 5,269.91276 0.00001655 62 5310 5,309.94462 0.00001043 3.4V 102 5510 5,509.94254 0.00001043 110 5550 5,549.94152 0.00001054 134 5670 5,669.94026 0.00001054 142 5710 5,709.94192 0.00001017 151 5755 5,754.93872 0.00001065			110	5550	5,549.94076	0.00001067
151 5755 5,754.93867 0.00001066 159 5795 5,794.93864 0.00001059 55 °C 38 5190 5,189.94582 0.00001044 46 5230 5,229.94547 0.00001043 54 5270 5,269.91276 0.00001655 62 5310 5,309.94462 0.00001043 3.4V 102 5510 5,509.94254 0.00001043 110 5550 5,549.94152 0.00001054 134 5670 5,669.94026 0.00001054 142 5710 5,709.94192 0.00001017 151 5755 5,754.93872 0.00001065			134	5670	5,669.93966	0.00001064
55 °C 38 5190 5,794.93864 0.00001059 46 5230 5,229.94547 0.00001043 54 5270 5,269.91276 0.00001655 62 5310 5,309.94462 0.00001043 3.4V 102 5510 5,509.94254 0.00001043 110 5550 5,549.94152 0.00001054 134 5670 5,669.94026 0.00001054 142 5710 5,709.94192 0.00001065 151 5755 5,754.93872 0.00001065			142	5710	5,709.94126	0.00001029
38 5190 5,189.94582 0.00001044 46 5230 5,229.94547 0.00001043 54 5270 5,269.91276 0.00001655 62 5310 5,309.94462 0.00001043 3.4V 102 5510 5,509.94254 0.00001043 110 5550 5,549.94152 0.00001054 134 5670 5,669.94026 0.00001054 142 5710 5,709.94192 0.00001017 151 5755 5,754.93872 0.00001065			151	5755	5,754.93867	0.00001066
46 5230 5,229.94547 0.00001043 54 5270 5,269.91276 0.00001655 62 5310 5,309.94462 0.00001043 3.4V 102 5510 5,509.94254 0.00001043 110 5550 5,549.94152 0.00001054 134 5670 5,669.94026 0.00001054 142 5710 5,709.94192 0.00001017 151 5755 5,754.93872 0.00001065			159	5795	5,794.93864	0.00001059
54 5270 5,269.91276 0.00001655 62 5310 5,309.94462 0.00001043 3.4V 102 5510 5,509.94254 0.00001043 110 5550 5,549.94152 0.00001054 134 5670 5,669.94026 0.00001054 142 5710 5,709.94192 0.00001017 151 5755 5,754.93872 0.00001065	55 ℃		38	5190	5,189.94582	0.00001044
3.4V 5310 5,309.94462 0.00001043 5510 5,509.94254 0.00001043 110 5550 5,549.94152 0.00001054 134 5670 5,669.94026 0.00001054 142 5710 5,709.94192 0.00001017 151 5755 5,754.93872 0.00001065			46	5230	5,229.94547	0.00001043
3.4V 102 5510 5,509.94254 0.00001043 110 5550 5,549.94152 0.00001054 134 5670 5,669.94026 0.00001054 142 5710 5,709.94192 0.00001017 151 5755 5,754.93872 0.00001065			54	5270	5,269.91276	0.00001655
110 5550 5,549.94152 0.00001054 134 5670 5,669.94026 0.00001054 142 5710 5,709.94192 0.00001017 151 5755 5,754.93872 0.00001065			62	5310	5,309.94462	0.00001043
134 5670 5,669.94026 0.00001054 142 5710 5,709.94192 0.00001017 151 5755 5,754.93872 0.00001065		3.4V	102	5510	5,509.94254	0.00001043
142 5710 5,709.94192 0.00001017 151 5755 5,754.93872 0.00001065			110	5550	5,549.94152	0.00001054
151 5755 5,754.93872 0.00001065			134	5670	5,669.94026	0.00001054
			142	5710	5,709.94192	0.00001017
159 5795 5,794.93844 0.00001062			151	5755	5,754.93872	0.00001065
			159	5795	5,794.93844	0.00001062

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Page: 216 of 232

Operation Mode	802.11 ac_VHT80	Test Date	2018.09.03
Temperature	:25 ℃	Test By	Henry
Humidity	:67 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	Δ Frequency (MHz)
		42	5210	5,209.94459	0.00001064
		58	5290	5,289.94486	0.00001042
	4.42V	106	5530	5,529.90849	0.00001655
		122	5610	5,609.94082	0.00001055
		138	5690	5,689.93930	0.00001067
-10 °C		155	5775	5,774.97152	0.00000493
		42	5210	5,209.94422	0.00001071
		58	5290	5,289.94403	0.00001058
	3.4V	106	5530	5,529.90879	0.00001649
		122	5610	5,609.94039	0.00001063
		138	5690	5,689.93940	0.00001065
		155	5775	5,774.97184	0.00000488
		42	5210	5,209.94460	0.00001063
		58	5290	5,289.94490	0.00001042
25 ° C	3.85V	106	5530	5,529.90914	0.00001643
		122	5610	5,609.94097	0.00001052
	[138	5690	5,689.93985	0.00001057
	[155	5775	5,774.97197	0.00000485
		42	5210	5,209.94458	0.00001064
		58	5290	5,289.94446	0.00001050
	4.42V	106	5530	5,529.90858	0.00001653
		122	5610	5,609.94086	0.00001054
		138	5690	5,689.93918	0.00001069
55 ° C		155	5775	5,774.97166	0.00000491
		42	5210	5,209.94446	0.00001066
		58	5290	5,289.94472	0.00001045
	3.4V	106	5530	5,529.90855	0.00001654
		122	5610	5,609.94060	0.00001059
		138	5690	5,689.93927	0.00001067
		155	5775	5,774.97108	0.00000501

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Page: 217 of 232

2 Minutes:

Operation Mode	802.11 a	Test Date	2018.09.03
Temperature	:25 ℃	Test By	Henry
Humidity	:67 %		

Test Temp.	Test Voltage	Channel	Measured Frequency	Spectrum Frequency	ΔFrequency
rest remp.	Test voltage	Chamilei	(MHz)	(MHz)	(MHz)
		36	5180	5,179.94121	0.00001135
		44	5220	5,219.94232	0.00001105
		48	5240	5,239.94310	0.00001086
		52	5260	5,259.94263	0.00001091
		60	5300	5,299.94263	0.00001082
	4.42V	64	5320	5,319.94260	0.00001079
		100	5500	5,499.97362	0.00000480
		116	5580	5,579.94134	0.00001051
		140	5700	5,699.93967	0.00001058
		144	5720	5,719.94131	0.00001026
		149	5745	5,744.94061	0.00001034
		157	5785	5,784.97238	0.00000477
		165	5825	5,824.93955	0.00001038
-10 ℃		36	5180	5,179.94076	0.00001144
		44	5220	5,219.94220	0.00001107
		48	5240	5,239.94292	0.00001089
		52	5260	5,259.94300	0.00001084
		60	5300	5,299.94235	0.00001088
	3.4V	64	5320	5,319.94265	0.00001078
		100	5500	5,499.97392	0.00000474
		116	5580	5,579.94125	0.00001053
		140	5700	5,699.93973	0.00001057
		144	5720	5,719.94176	0.00001018
		149	5745	5,744.94042	0.00001037
		157	5785	5,784.97252	0.00000475
		165	5825	5,824.93917	0.00001044

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Page: 218 of 232

		36	5180	5,179.94096	0.00001140
		44	5220	5,219.94190	0.00001113
		48	5240	5,239.94314	0.00001085
		52	5260	5,259.94225	0.00001098
		60	5300	5,299.94285	0.00001078
25 ℃	3.85V	64	5320	5,319.94248	0.00001081
		100	5500	5,499.97441	0.00000465
		116	5580	5,579.94118	0.00001054
		140	5700	5,699.94000	0.00001053
		144	5720	5,719.94195	0.00001015
		149	5745	5,744.94077	0.00001031
		157	5785	5,784.97207	0.00000483
		165	5825	5,824.93974	0.00001034
		36	5180	5,179.94109	0.00001137
		44	5220	5,219.94239	0.00001104
		48	5240	5,239.94317	0.00001085
		52	5260	5,259.94226	0.00001098
		60	5300	5,299.94257	0.00001084
		64	5320	5,319.94276	0.00001076
	4.42V	100	5500	5,499.97364	0.00000479
		116	5580	5,579.94121	0.00001054
		140	5700	5,699.93950	0.00001061
		144	5720	5,719.94196	0.00001015
		149	5745	5,744.94030	0.00001039
		157	5785	5,784.97184	0.00000487
		165	5825	5,824.93990	0.00001032
55 ℃		36	5180	5,179.94077	0.00001143
		44	5220	5,219.94256	0.00001100
		48	5240	5,239.94289	0.00001090
		52	5260	5,259.94308	0.00001082
		60	5300	5,299.94232	0.00001088
	3.4V	64	5320	5,319.94287	0.00001074
		100	5500	5,499.97421	0.00000469
		116	5580	5,579.94150	0.00001048
		140	5700	5,699.94015	0.00001050
		144	5720	5,719.94148	0.00001023
		149	5745	5,744.94044	0.00001037
		157	5785	5,784.97198	0.00000484
		165	5825	5,824.93999	0.00001030

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Page: 219 of 232

Operation Mode	802.11 n_HT40	Test Date	2018.09.03
Temperature	:25 ℃	Test By	Henry
Humidity	:67 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	Δ Frequency (MHz)
		38	5190	5,189.94562	0.00001048
		46	5230	5,229.94507	0.00001050
		54	5270	5,269.91281	0.00001654
		62	5310	5,309.94507	0.00001034
	4.42V	102	5510	5,509.94279	0.00001038
		110	5550	5,549.94140	0.00001056
		134	5670	5,669.94034	0.00001052
		142	5710	5,709.94160	0.00001023
		151	5755	5,754.93849	0.00001069
-10 °C		159	5795	5,794.93868	0.00001058
		38	5190	5,189.94560	0.00001048
		46	5230	5,229.94507	0.00001050
		54	5270	5,269.91236	0.00001663
		62	5310	5,309.94516	0.00001033
	3.4V	102	5510	5,509.94215	0.00001050
		110	5550	5,549.94066	0.00001069
		134	5670	5,669.93968	0.00001064
		142	5710	5,709.94130	0.00001028
	[151	5755	5,754.93918	0.00001057
		159	5795	5,794.93929	0.00001048

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Page: 220 of 232

		38	5190	5,189.94572	0.00001046
		46	5230	5,229.94541	0.00001044
		54	5270	5,269.91209	0.00001668
		62	5310	5,309.94536	0.00001029
25 ℃	3.85V	102	5510	5,509.94285	0.00001037
		110	5550	5,549.94098	0.00001063
		134	5670	5,669.93976	0.00001062
		142	5710	5,709.94174	0.00001020
		151	5755	5,754.93843	0.00001070
		159	5795	5,794.93850	0.00001061
		38	5190	5,189.94579	0.00001045
		46	5230	5,229.94534	0.00001045
		54	5270	5,269.91219	0.00001666
		62	5310	5,309.94464	0.00001043
	4.42V	102	5510	5,509.94285	0.00001037
		110	5550	5,549.94126	0.00001058
		134	5670	5,669.94037	0.00001052
		142	5710	5,709.94132	0.00001028
		151	5755	5,754.93904	0.00001059
		159	5795	5,794.93865	0.00001059
55 ℃		38	5190	5,189.94587	0.00001043
		46	5230	5,229.94526	0.00001047
		54	5270	5,269.91211	0.00001668
		62	5310	5,309.94455	0.00001044
	3.4V	102	5510	5,509.94291	0.00001036
		110	5550	5,549.94070	0.00001068
		134	5670	5,669.94009	0.00001057
		142	5710	5,709.94113	0.00001031
		151	5755	5,754.93850	0.00001069
		159	5795	5,794.93886	0.00001055

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Page: 221 of 232

Operation Mode	802.11 ac_VHT80	Test Date	2018.09.03
Temperature	:25 ℃	Test By	Henry
Humidity	:67 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	Δ Frequency (MHz)
		42	5210	5,209.94454	0.00001064
		58	5290	5,289.94404	0.00001058
	4.42V	106	5530	5,529.90835	0.00001657
		122	5610	5,609.94079	0.00001055
	[138	5690	5,689.93921	0.00001068
-10 °C		155	5775	5,774.97145	0.00000494
		42	5210	5,209.94450	0.00001065
		58	5290	5,289.94451	0.00001049
	3.4V	106	5530	5,529.90827	0.00001659
		122	5610	5,609.94015	0.00001067
		138	5690	5,689.93929	0.00001067
		155	5775	5,774.97119	0.00000499
		42	5210	5,209.94408	0.00001073
	[58	5290	5,289.94434	0.00001052
25 °C	3.85V	106	5530	5,529.90883	0.00001649
		122	5610	5,609.94015	0.00001067
		138	5690	5,689.93946	0.00001064
		155	5775	5,774.97111	0.00000500
		42	5210	5,209.94446	0.00001066
		58	5290	5,289.94410	0.00001057
	4.42V	106	5530	5,529.90900	0.00001646
		122	5610	5,609.94056	0.00001060
		138	5690	5,689.93975	0.00001059
55 ℃		155	5775	5,774.97114	0.00000500
		42	5210	5,209.94399	0.00001075
	[58	5290	5,289.94467	0.00001046
	3.4V	106	5530	5,529.90892	0.00001647
		122	5610	5,609.94063	0.00001058
	[138	5690	5,689.93976	0.00001059
		155	5775	5,774.97113	0.00000500

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Page: 222 of 232

5 Minutes:

Operation Mode	802.11 a	Test Date	2018.09.03
Temperature	:25 ℃	Test By	Henry
Humidity	:67 %		

			Measured	Spectrum	ΔFrequency
Test Temp.	Test Voltage	Channel	Frequency	Frequency	(MHz)
			(MHz)	(MHz)	(IVII IZ)
		36	5180	5,179.94123	0.00001135
		44	5220	5,219.94186	0.00001114
		48	5240	5,239.94334	0.00001081
		52	5260	5,259.94242	0.00001095
		60	5300	5,299.94258	0.00001083
	4.42V	64	5320	5,319.94267	0.00001078
		100	5500	5,499.97399	0.00000473
		116	5580	5,579.94136	0.00001051
		140	5700	5,699.93954	0.00001061
		144	5720	5,719.94168	0.00001020
		149	5745	5,744.93998	0.00001045
		157	5785	5,784.97233	0.00000478
		165	5825	5,824.93977	0.00001034
-10 °C		36	5180	5,179.94111	0.00001137
		44	5220	5,219.94213	0.00001109
		48	5240	5,239.94336	0.00001081
		52	5260	5,259.94251	0.00001093
		60	5300	5,299.94274	0.00001080
	3.4V	64	5320	5,319.94256	0.00001080
		100	5500	5,499.97386	0.00000475
		116	5580	5,579.94091	0.00001059
		140	5700	5,699.94003	0.00001052
		144	5720	5,719.94182	0.00001017
		149	5745	5,744.94077	0.00001031
		157	5785	5,784.97246	0.00000476
		165	5825	5,824.93969	0.00001035

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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Page: 223 of 232

36 5180 5,179,94081 0,00001143 44 5220 5,219,94217 0,00001108 48 5240 5,239,94335 0,00001081 52 5260 5,259,94231 0,00001087 60 5300 5,299,94263 0,00001083 100 5500 5,499,97441 0,00000465 116 5580 5,579,94107 0,00001056 140 5700 5,699,9389 0,00001084 144 5720 5,719,94178 0,00001081 145 5785 5,784,97240 0,00000477 165 5825 5,824,93960 0,00001037 165 5825 5,824,93960 0,00001081 48 5240 5,239,94312 0,00001081 48 5240 5,239,94312 0,00001081 48 5240 5,239,94312 0,00001085 52 5260 5,259,94259 0,00001085 52 5260 5,259,94259 0,00001084 48 5240 5,319,94231 0,00001084 48 5240 5,319,94231 0,00001084 48 5240 5,319,94231 0,00001084 48 5240 5,319,94231 0,00001084 55 2 5260 5,579,94151 0,00001084 140 5700 5,699,93975 0,00001087 165 5885 5,784,97270 0,000001087 165 5825 5,824,93923 0,00001047 165 5825 5,824,93923 0,00001047 165 5825 5,824,93923 0,00001087 165 5825 5,824,93923 0,00001087 165 5825 5,824,93923 0,00001087 165 5825 5,824,93923 0,00001087 165 5825 5,824,93923 0,00001087 165 5825 5,824,93923 0,00001087 165 5825 5,824,93923 0,00001087 165 5825 5,824,93923 0,00001087 165 5825 5,824,93923 0,00001084 165 5805 5,779,94116 0,00001086 160 5300 5,299,94289 0,00001086 170 5500 5,499,97417 0,00001086 170 5500 5,499,97417 0,00001086 170 5500 5,499,97417 0,00001086 170 5500 5,499,97417 0,00001086 170 5500 5,499,97417 0,00001086 170 5500 5,499,97417 0,00001086 170 5500 5,499,97417 0,00001086 170 5500 5,499,97417 0,00001090 171 5580 5,579,94156 0,00001090 171 5580 5,579,94156 0,00001090 171 5580 5,579,94156 0,00001090 171 5580 5,579,94156 0,00001081 171 5580 5,579,94156 0,00001081						
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52			44	5220	5,219.94217	0.00001108
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144 5720 5,719.94178 0.00001018 149 5745 5,744.94006 0.00001043 157 5785 5,784.97240 0.00000477 165 5825 5,824.93960 0.00001037 36 5180 5,179.94119 0.00001135 44 5220 5,219.94218 0.00001085 48 5240 5,239.94312 0.00001085 52 5260 5,259.94259 0.00001092 60 5300 5,299.94274 0.00001080 64 5320 5,319.94231 0.00001080 64 5320 5,319.94231 0.00001080 64 5320 5,319.94231 0.00001080 116 5580 5,579.94151 0.00001047 116 5580 5,579.94151 0.00001048 140 5700 5,699.93975 0.00001057 144 5720 5,719.94185 0.00001017 149 5745 5,744.94061 0.00001034 157 5785 5,784.97270 0.00001043 157 5785 5,824.93923 0.00001043 157 5785 5,824.93923 0.00001043 158 5240 5,239.94201 0.00001087 144 5220 5,219.94211 0.00001109 148 5240 5,239.94306 0.00001087 152 5260 5,259.94286 0.00001087 164 5320 5,319.94246 0.00001087 176 5580 5,579.94117 0.00001087 186 5580 5,579.94117 0.00001082 186 5580 5,579.94117 0.00001082 186 5580 5,579.94117 0.00001082 186 5580 5,579.94117 0.00001082 186 5580 5,579.94117 0.00001082 186 5580 5,579.94117 0.00001082 186 5580 5,579.94117 0.00001082 187 5785 5,744.94018 0.00001082 189 5745 5,744.94018 0.00001041 189 5745 5,744.94018 0.00001041 157 5785 5,784.97207 0.00000483			116	5580	5,579.94107	0.00001056
149 5745 5,744.94006 0.00001043 157 5785 5,784.97240 0.00000477 165 5825 5,824.93960 0.00001037 36 5180 5,179.94119 0.00001135 44 5220 5,219.94218 0.00001085 48 5240 5,239.94312 0.00001085 52 5260 5,259.94259 0.00001092 60 5300 5,299.94274 0.00001080 64 5320 5,319.94231 0.00001084 48 5240 5,339.9431 0.00001084 40 5500 5,499.97417 0.00000470 116 5580 5,579.94151 0.00001048 140 5700 5,699.93975 0.00001057 144 5720 5,719.94185 0.00001034 157 5785 5,784.97270 0.00001043 157 5785 5,824.93923 0.00001043 157 5785 5,824.93923 0.00001043 158 5240 5,239.94211 0.00001145 48 5240 5,239.94211 0.00001109 48 5240 5,239.94211 0.00001087 52 5260 5,259.94286 0.00001087 52 5260 5,259.94286 0.00001087 53 52 5260 5,259.94286 0.00001087 54 52 5260 5,259.94286 0.00001087 55 52 5260 5,259.94286 0.00001087 55 52 5260 5,259.94286 0.00001087 166 5580 5,379.9417 0.00001082 176 5580 5,579.9417 0.00001082 177 5785 5,799.9417 0.00001054 187 5700 5,699.94006 0.00001082 188 5740 5,719.94156 0.00001082 189 5745 5,744.94018 0.00001041 189 5745 5,744.94018 0.00001041 189 5745 5,744.94018 0.00001041 189 5745 5,744.94018 0.00001041			140	5700	5,699.93989	0.00001054
157 5785 5,784.97240 0.00000477 165 5825 5,824.93960 0.00001037 36 5180 5,179.94119 0.00001135 44 5220 5,219.94218 0.00001085 48 5240 5,239.94312 0.00001085 52 5260 5,259.94259 0.00001092 60 5300 5,299.94274 0.00001080 64 5320 5,319.94231 0.00001084 4.42V 100 5500 5,499.97417 0.00001084 116 5580 5,579.94151 0.00001087 116 5580 5,579.94151 0.00001087 144 5720 5,719.94185 0.00001077 149 5745 5,744.94061 0.00001034 157 5785 5,784.97270 0.00000472 165 5825 5,824.93923 0.00001043 157 5785 5,784.97270 0.0000143 158 5240 5,239.94306 0.00001109 48 5240 5,239.94306 0.00001087 52 5260 5,259.94286 0.00001087 53 525 5,260 5,259.94286 0.00001087 54 5320 5,319.94246 0.00001082 100 5500 5,499.97413 0.00001082 100 5500 5,499.97413 0.00001082 100 5500 5,499.97413 0.00001082 140 5700 5,699.94006 0.00001082 144 5720 5,719.94156 0.00001052 144 5720 5,719.94156 0.00001052 144 5720 5,719.94156 0.00001022 149 5745 5,744.94018 0.00001041			144	5720	5,719.94178	0.00001018
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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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t (886-2) 2299-3279



Page: 224 of 232

Operation Mode	802.11 n_HT40	Test Date	2018.09.03
Temperature	:25 ℃	Test By	Henry
Humidity	:67 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	Δ Frequency (MHz)
		38	5190	5,189.94573	0.00001046
		46	5230	5,229.94545	0.00001043
	l [54	5270	5,269.91282	0.00001654
		62	5310	5,309.94495	0.00001037
	4.42V	102	5510	5,509.94250	0.00001044
	l [110	5550	5,549.94146	0.00001055
		134	5670	5,669.93999	0.00001058
		142	5710	5,709.94172	0.00001021
		151	5755	5,754.93925	0.00001056
-10 °C		159	5795	5,794.93860	0.00001059
		38	5190	5,189.94616	0.00001037
		46	5230	5,229.94563	0.00001040
		54	5270	5,269.91287	0.00001653
		62	5310	5,309.94462	0.00001043
	3.4V	102	5510	5,509.94265	0.00001041
		110	5550	5,549.94084	0.00001066
		134	5670	5,669.94032	0.00001053
		142	5710	5,709.94152	0.00001024
	[151	5755	5,754.93848	0.00001069
		159	5795	5,794.93880	0.00001056

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Page: 225 of 232

		38	5190	5,189.94592	0.00001042
		46	5230	5,229.94580	0.00001036
		54	5270	5,269.91265	0.00001657
		62	5310	5,309.94506	0.00001035
25 ° C	3.85V	102	5510	5,509.94297	0.00001035
		110	5550	5,549.94124	0.00001059
		134	5670	5,669.93961	0.00001065
		142	5710	5,709.94194	0.00001017
		151	5755	5,754.93843	0.00001070
		159	5795	5,794.93848	0.00001062
		38	5190	5,189.94592	0.00001042
		46	5230	5,229.94523	0.00001047
		54	5270	5,269.91255	0.00001659
	4.42V	62	5310	5,309.94511	0.00001034
		102	5510	5,509.94294	0.00001036
		110	5550	5,549.94096	0.00001064
		134	5670	5,669.93992	0.00001060
		142	5710	5,709.94132	0.00001028
		151	5755	5,754.93878	0.00001064
		159	5795	5,794.93846	0.00001062
55 ℃		38	5190	5,189.94605	0.00001039
		46	5230	5,229.94558	0.00001041
		54	5270	5,269.91276	0.00001655
		62	5310	5,309.94506	0.00001035
	3.4V	102	5510	5,509.94263	0.00001041
		110	5550	5,549.94077	0.00001067
		134	5670	5,669.94036	0.00001052
		142	5710	5,709.94133	0.00001027
		151	5755	5,754.93884	0.00001063
		159	5795	5,794.93927	0.00001048

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Page: 226 of 232

Operation Mode	802.11 ac_VHT80	Test Date	2018.09.03
Temperature	:25 ℃	Test By	Henry
Humidity	:67 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
		42	5210	5,209.94434	0.00001068
		58	5290	5,289.94454	0.00001048
	4.42V	106	5530	5,529.90862	0.00001652
		122	5610	5,609.94095	0.00001053
		138	5690	5,689.93945	0.00001064
-10 °C		155	5775	5,774.97129	0.00000497
		42	5210	5,209.94428	0.00001070
		58	5290	5,289.94457	0.00001048
	3.4V	106	5530	5,529.90893	0.00001647
		122	5610	5,609.94016	0.00001067
		138	5690	5,689.93966	0.00001060
		155	5775	5,774.97182	0.00000488
		42	5210	5,209.94412	0.00001073
	3.85V	58	5290	5,289.94486	0.00001042
25 ℃		106	5530	5,529.90867	0.00001651
		122	5610	5,609.94044	0.00001062
		138	5690	5,689.93918	0.00001069
		155	5775	5,774.97184	0.00000488
		42	5210	5,209.94410	0.00001073
		58	5290	5,289.94406	0.00001058
	4.42V	106	5530	5,529.90860	0.00001653
		122	5610	5,609.94021	0.00001066
		138	5690	5,689.93935	0.00001066
55 ℃		155	5775	5,774.97126	0.00000498
		42	5210	5,209.94384	0.00001078
		58	5290	5,289.94437	0.00001052
	3.4V	106	5530	5,529.90824	0.00001659
	[122	5610	5,609.94018	0.00001066
		138	5690	5,689.93973	0.00001059
		155	5775	5,774.97185	0.00000487

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Page: 227 of 232

10 Minutes:

Operation Mode	802.11 a	Test Date	2018.09.03
Temperature	:25 ℃	Test By	Henry
Humidity	:67 %		

Test Temp.	Test Voltage	Channel	Measured Frequency	Spectrum Frequency	Δ Frequency (MHz)
			(MHz)	(MHz)	. ,
		36	5180	5,179.94097	0.00001140
		44	5220	5,219.94182	0.00001115
		48	5240	5,239.94342	0.00001080
		52	5260	5,259.94279	0.00001088
		60	5300	5,299.94228	0.00001089
	4.42V	64	5320	5,319.94260	0.00001079
		100	5500	5,499.97365	0.00000479
		116	5580	5,579.94129	0.00001052
		140	5700	5,699.93992	0.00001054
		144	5720	5,719.94216	0.00001011
		149	5745	5,744.94021	0.00001041
		157	5785	5,784.97249	0.00000476
		165	5825	5,824.93955	0.00001038
-10 °C		36	5180	5,179.94074	0.00001144
		44	5220	5,219.94231	0.00001105
		48	5240	5,239.94306	0.00001087
		52	5260	5,259.94277	0.00001088
		60	5300	5,299.94241	0.00001087
	3.4V	64	5320	5,319.94280	0.00001075
		100	5500	5,499.97438	0.00000466
		116	5580	5,579.94155	0.00001048
		140	5700	5,699.94018	0.00001050
		144	5720	5,719.94214	0.00001011
		149	5745	5,744.94075	0.00001031
		157	5785	5,784.97255	0.00000474
		165	5825	5,824.93936	0.00001041

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Page: 228 of 232

			_		
		36	5180	5,179.94095	0.00001140
		44	5220	5,219.94258	0.00001100
		48	5240	5,239.94348	0.00001079
		52	5260	5,259.94285	0.00001086
		60	5300	5,299.94292	0.00001077
25 ° C	3.85V	64	5320	5,319.94234	0.00001084
		100	5500	5,499.97434	0.00000467
		116	5580	5,579.94101	0.00001057
		140	5700	5,699.94021	0.00001049
		144	5720	5,719.94179	0.00001018
		149	5745	5,744.94053	0.00001035
		157	5785	5,784.97205	0.00000483
		165	5825	5,824.93931	0.00001042
		36	5180	5,179.94133	0.00001133
		44	5220	5,219.94182	0.00001115
		48	5240	5,239.94347	0.00001079
		52	5260	5,259.94296	0.00001084
		60	5300	5,299.94223	0.00001090
		64	5320	5,319.94212	0.00001088
	4.42V	100	5500	5,499.97391	0.00000474
		116	5580	5,579.94105	0.00001056
		140	5700	5,699.93956	0.00001060
		144	5720	5,719.94177	0.00001018
		149	5745	5,744.94039	0.00001038
		157	5785	5,784.97244	0.00000476
		165	5825	5,824.93929	0.00001042
55 ℃		36	5180	5,179.94100	0.00001139
		44	5220	5,219.94265	0.00001099
		48	5240	5,239.94328	0.00001082
		52	5260	5,259.94265	0.00001090
		60	5300	5,299.94268	0.00001082
	3.4V	64	5320	5,319.94245	0.00001082
		100	5500	5,499.97361	0.00000480
		116	5580	5,579.94149	0.00001049
		140	5700	5,699.94018	0.00001050
		144	5720	5,719.94177	0.00001018
-		149	5745	5,744.94058	0.00001034
		157	5785	5,784.97242	0.00000477

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Page: 229 of 232

Operation Mode	802.11 n_HT40	Test Date	2018.09.03
Temperature	:25 ℃	Test By	Henry
Humidity	:67 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	Δ Frequency (MHz)
		38	5190	5,189.94548	0.00001050
		46	5230	5,229.94540	0.00001044
		54	5270	5,269.91270	0.00001656
		62	5310	5,309.94515	0.00001033
	4.42V	102	5510	5,509.94251	0.00001043
		110	5550	5,549.94117	0.00001060
		134	5670	5,669.94028	0.00001053
		142	5710	5,709.94193	0.00001017
		151	5755	5,754.93866	0.00001066
-10 °C		159	5795	5,794.93905	0.00001052
	3.4V	38	5190	5,189.94548	0.00001051
		46	5230	5,229.94567	0.00001039
		54	5270	5,269.91293	0.00001652
		62	5310	5,309.94503	0.00001035
		102	5510	5,509.94257	0.00001042
		110	5550	5,549.94103	0.00001063
		134	5670	5,669.93990	0.00001060
		142	5710	5,709.94147	0.00001025
		151	5755	5,754.93881	0.00001063
		159	5795	5,794.93861	0.00001059

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Page: 230 of 232

		38	5190	5,189.94590	0.00001042
		46	5230	5,229.94538	0.00001044
		54	5270	5,269.91286	0.00001654
		62	5310	5,309.94465	0.00001042
25 ° C	3.85V	102	5510	5,509.94285	0.00001037
		110	5550	5,549.94143	0.00001055
		134	5670	5,669.93962	0.00001065
		142	5710	5,709.94168	0.00001021
		151	5755	5,754.93875	0.00001064
		159	5795	5,794.93928	0.00001048
		38	5190	5,189.94577	0.00001045
		46	5230	5,229.94505	0.00001051
		54	5270	5,269.91214	0.00001667
	4.42V	62	5310	5,309.94491	0.00001037
		102	5510	5,509.94273	0.00001039
		110	5550	5,549.94107	0.00001062
		134	5670	5,669.94002	0.00001058
		142	5710	5,709.94149	0.00001025
		151	5755	5,754.93867	0.00001066
		159	5795	5,794.93911	0.00001051
55 ° C		38	5190	5,189.94579	0.00001045
		46	5230	5,229.94508	0.00001050
		54	5270	5,269.91247	0.00001661
		62	5310	5,309.94496	0.00001036
	3.4V	102	5510	5,509.94290	0.00001036
		110	5550	5,549.94069	0.00001069
		134	5670	5,669.94017	0.00001055
		142	5710	5,709.94173	0.00001020
		151	5755	5,754.93866	0.00001066
		159	5795	5,794.93913	0.00001050

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Page: 231 of 232

Operation Mode	802.11 ac_VHT80	Test Date	2018.09.03
Temperature	:25 ℃	Test By	Henry
Humidity	:67 %		

Test Temp.	Test Voltage	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	Δ Frequency (MHz)
		42	5210	5,209.94442	0.00001067
		58	5290	5,289.94432	0.00001053
	4.42V	106	5530	5,529.90856	0.00001653
		122	5610	5,609.94064	0.00001058
		138	5690	5,689.93913	0.00001070
-10 °C		155	5775	5,774.97162	0.00000491
		42	5210	5,209.94384	0.00001078
		58	5290	5,289.94487	0.00001042
	3.4V	106	5530	5,529.90867	0.00001651
		122	5610	5,609.94085	0.00001054
		138	5690	5,689.93902	0.00001072
		155	5775	5,774.97110	0.00000501
		42	5210	5,209.94377	0.00001079
	3.85V	58	5290	5,289.94477	0.00001044
25 ℃		106	5530	5,529.90860	0.00001653
		122	5610	5,609.94037	0.00001063
		138	5690	5,689.93918	0.00001069
		155	5775	5,774.97143	0.00000495
		42	5210	5,209.94384	0.00001078
		58	5290	5,289.94480	0.00001043
	4.42V	106	5530	5,529.90831	0.00001658
		122	5610	5,609.94041	0.00001062
		138	5690	5,689.93966	0.00001061
55 ℃		155	5775	5,774.97166	0.00000491
		42	5210	5,209.94434	0.00001068
		58	5290	5,289.94458	0.00001048
	3.4V	106	5530	5,529.90881	0.00001649
		122	5610	5,609.94012	0.00001067
		138	5690	5,689.93938	0.00001065
		155	5775	5,774.97155	0.00000493

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Page: 232 of 232

14 ANTENNA REQUIREMENT

Standard Applicable 14.1

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.

Antenna Connected Construction 14.2

The antenna is designed as permanently attached and no consideration of replacement. Please see EUT photo for details.

~ End of Report ~

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