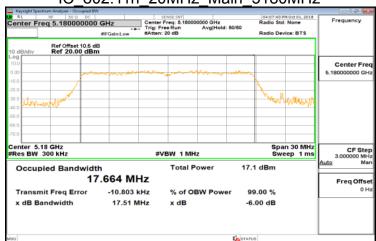


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IC 802.11a 20MHz Main 5745MHz

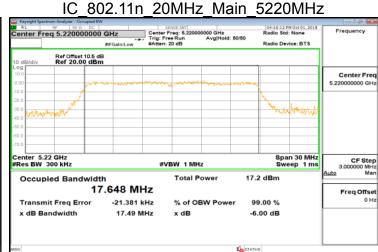
IC 802.11n 20MHz Main 5180MHz





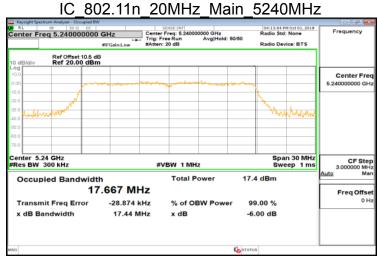
IC 802.11a 20MHz Main 5785MHz





IC 802.11a 20MHz Main 5825MHz

enter Freq 5.825000000 GHz Center Fre CF Step 3.000000 MHz Man #VBW 1 MHz Occupied Bandwidth Total Power 17.0 dBm 16.653 MHz Freq Offse 2.011 kHz Transmit Freq Error % of OBW Power -6.00 dB



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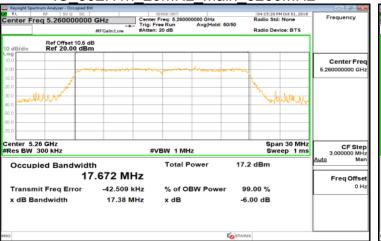
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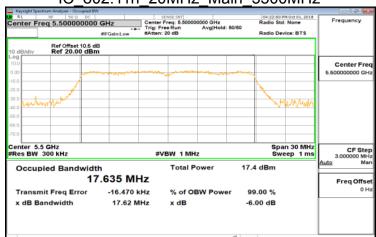


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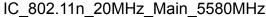
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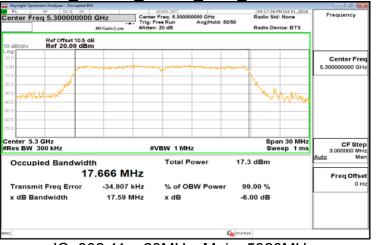
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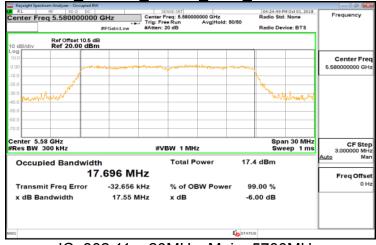




IC 802.11n 20MHz Main 5300MHz

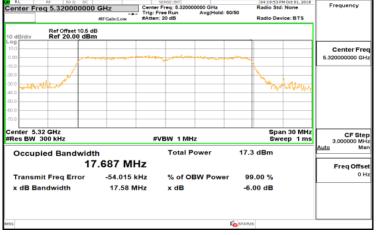


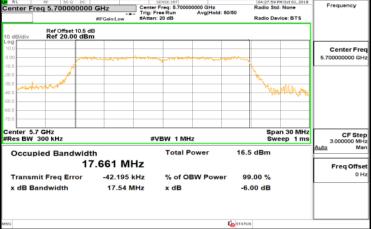




IC 802.11n 20MHz Main 5320MHz

IC 802.11n 20MHz Main 5700MHz





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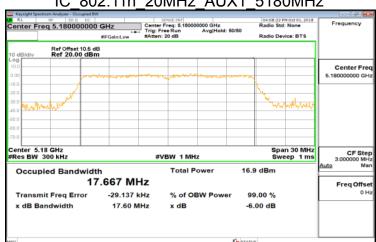


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IC 802.11n 20MHz Main 5745MHz

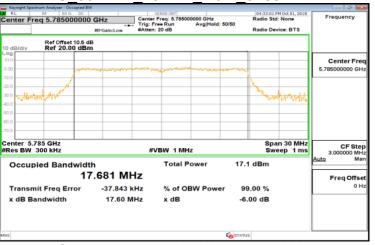
IC 802.11n 20MHz AUX1 5180MHz

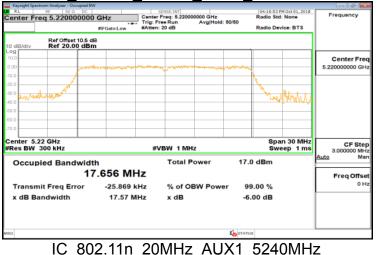




IC 802.11n 20MHz Main 5785MHz

IC 802.11n 20MHz AUX1 5220MHz



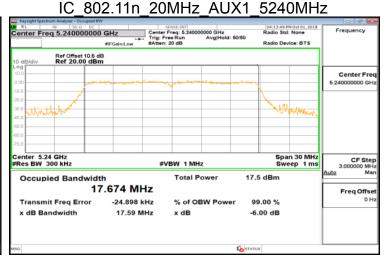


IC 802.11n 20MHz Main 5825MHz

Center Freq 5.825000000 GHz

Center Freq 5.825000000 GHz

Trig: Free Run Avg|Hol Center Fre المالميلالة Span 30 MHz CF Step 3.000000 MHz Man #VBW 1 MHz Occupied Bandwidth **Total Power** 17.8 dBm 17.672 MHz Transmit Freq Error -59.818 kHz % of ORW Pov 99 00 % x dB Bandwidth 17.57 MHz x dB -6.00 dB



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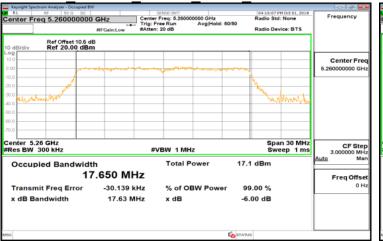
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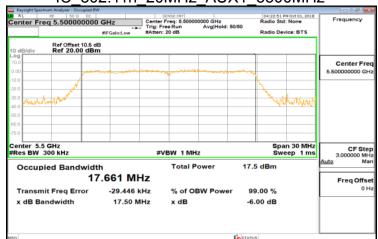


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IC 802.11n 20MHz AUX1 5260MHz

IC 802.11n 20MHz AUX1 5500MHz

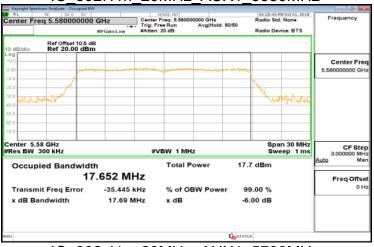




IC 802.11n 20MHz AUX1 5300MHz

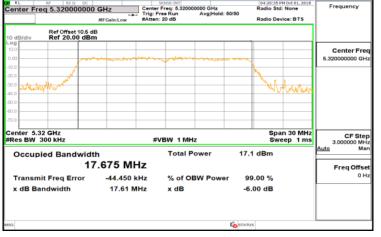
IC 802.11n 20MHz AUX1 5580MHz





IC 802.11n 20MHz AUX1 5320MHz

IC 802.11n 20MHz AUX1 5700MHz





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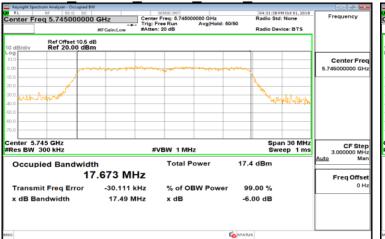
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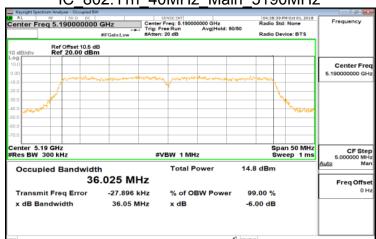


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IC 802.11n 20MHz AUX1 5745MHz

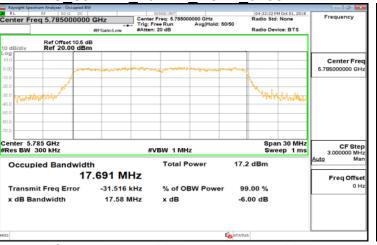
IC 802.11n 40MHz Main 5190MHz

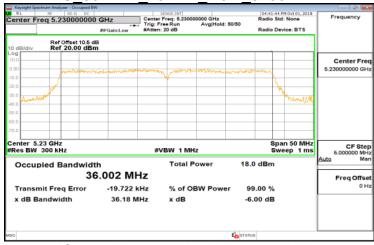




IC 802.11n 20MHz AUX1 5785MHz

IC 802.11n 40MHz Main 5230MHz





IC 802.11n 20MHz AUX1 5825MHz

IC 802.11n 40MHz Main 5270MHz





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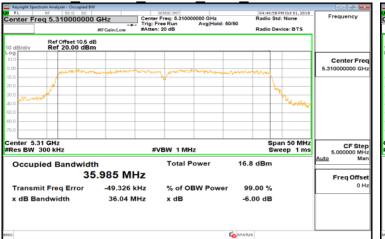
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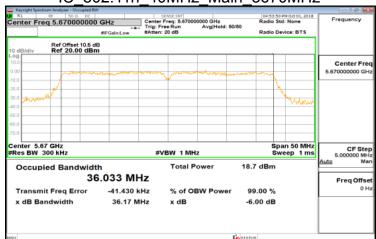


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IC 802.11n 40MHz Main 5310MHz

IC 802.11n 40MHz Main 5670MHz

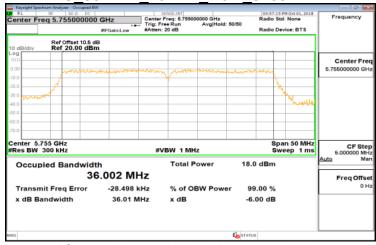




IC 802.11n 40MHz Main 5510MHz

IC 802.11n 40MHz Main 5755MHz





IC 802.11n 40MHz Main 5550MHz

IC 802.11n 40MHz Main 5795MHz





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Transmit Freq Error

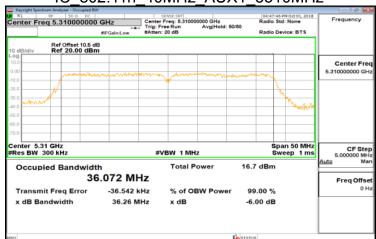
Report No.: ER/2018/80101

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IC 802.11n 40MHz AUX1 5190MHz

IC 802.11n 40MHz AUX1 5310MHz





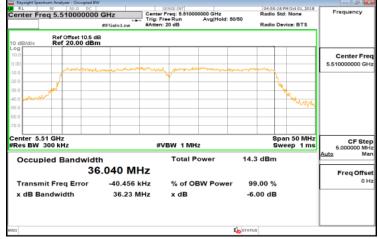
IC 802.11n 40MHz AUX1 5230MHz



% of OBW Power

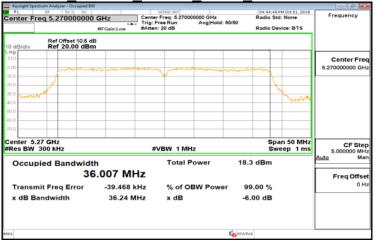
99.00 %

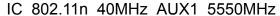
IC 802.11n 40MHz AUX1 5510MHz

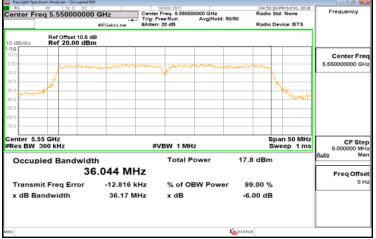


IC 802.11n 40MHz AUX1 5270MHz

36.29 MHz







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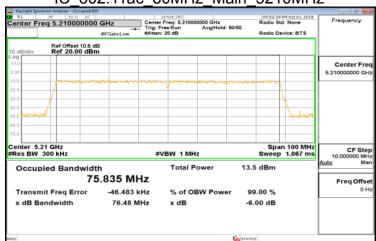


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IC 802.11n 40MHz AUX1 5670MHz

IC 802.11ac 80MHz Main 5210MHz

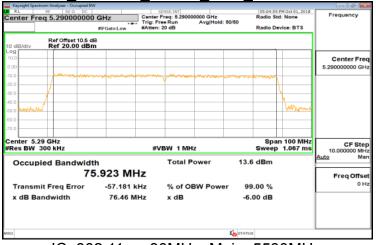




IC 802.11n 40MHz AUX1 5755MHz

IC 802.11ac 80MHz Main 5290MHz

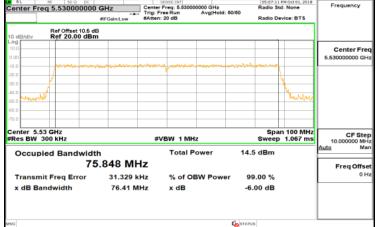




IC 802.11n 40MHz AUX1 5795MHz

IC 802.11ac 80MHz Main 5530MHz





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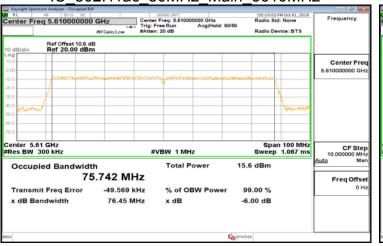
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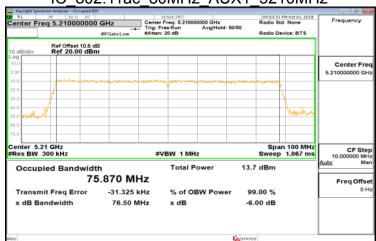


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IC 802.11ac 80MHz Main 5610MHz

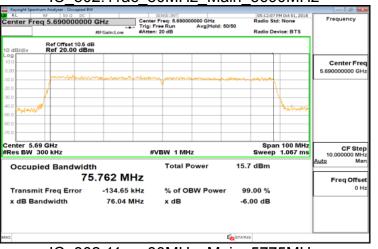
IC 802.11ac 80MHz AUX1 5210MHz

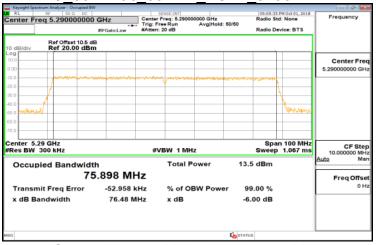




IC 802.11ac 80MHz Main 5690MHz

IC 802.11ac 80MHz AUX1 5290MHz

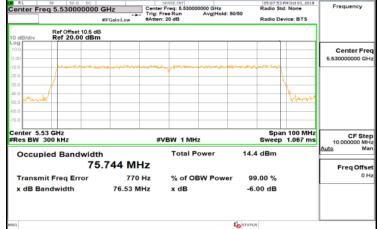




IC 802.11ac 80MHz Main 5775MHz

IC 802.11ac 80MHz AUX1 5530MHz





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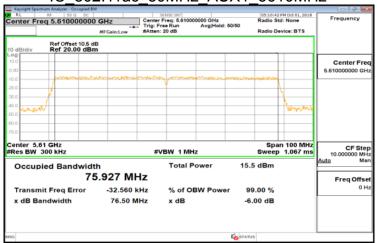
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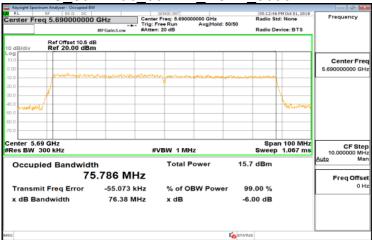


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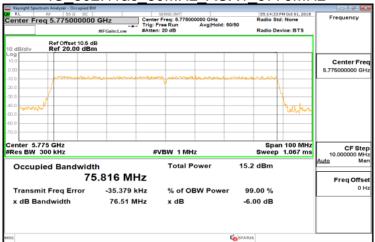
IC 802.11ac 80MHz AUX1 5610MHz



IC 802.11ac 80MHz AUX1 5690MHz



IC 802.11ac 80MHz AUX1 5775MHz



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MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

9.1 Standard Applicable

FCC

OPERZTION Band		EUT CATEGORY	LIMIT
		Access Point (Master device)	1 Watt(30dBm)
U-NII-1		Fixed point-to-point Access Ponit	1 Watt(30dBm)
	V	Mobile and portable client device	250mW(23.98dBm)
U-NII-2A	V		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)

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

ISED

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 log ₁₀ B EIRP shall not exceed 1.0 W or 17 + 10 log ₁₀ B, 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

For equipment operating in the band *5725-5850* MHz, If transmitting antennas of directional gain greater than 6 dBi are used, the Maximum transmit power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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Note:

As per FCC KDB 662911 D01

Unequal antenna gains, with equal transmit powers. For antenna gains given by G1, G2, ..., GN dBi.

- (i) If transmit signals are correlated, then Directional gain
- = $10 \log[(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/N_{ANT}] dBi$

[Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

The antenna gain is not grater than 6 dBi. Therefore, reduction of power is not required.

9.2 Measurement Procedure

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

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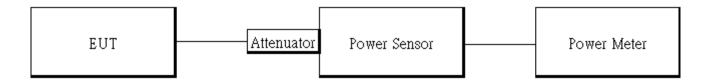


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9.3 Measurement Equipment Used

	SGS Conducted Room												
Name of Equip- ment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due								
Power Meter	Anritsu	ML2496A	1804001	2018/02/01	2019/01/31								
Power Sensor	Anritsu	MA2411B	1726104	2018/02/01	2019/01/31								
Power Sensor	Anritsu	MA2411B	1726107	2018/02/01	2019/01/31								
DC Power Supply	Anritsu	E3640A	MY52410006	2017/11/28	2018/11/27								
Attenuator	Mini-Circuit	BW-S10W2+	2	2018/01/02	2019/01/01								
DC Block	Mini-Circuits	BLK-18-S+	1	2018/01/02	2019/01/01								
Coaxial Cables	N/A	WK CE Cable	N/A	2018/01/02	2019/01/01								
Notebook	Lenovo	L430	R9-WGNK5	N/A	N/A								

9.4 Test Set-up



9.5 Measurement Result

Conducted output power (FCC) SISO

802.11n_HT20_Ch0

СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
140	5700	MCS0	12.68	18.519	23.98	or $11+10\log(B) =$	23.85	PASS

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802.11n HT40 Ch0

СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		
38	5190	MCS0	11.25	13.331		23.98		PASS
62	5310	MCS0	12.42	17.453	23.98	or 11+10log(B) =	26.81	PASS
102	5510	MCS0	10.31	10.736	23.98	or 11+10log(B) =	26.82	PASS

802.11ac VHT80 Ch0

СН	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
42	5210	MCS0	8.37	6.866	23.98	PASS
58	5290	MCS0	9.34	8.585	23.98 or 11+10log(B) = 29.98	PASS

MIMO

202 11a Ch0

	Eroguanav	Doto	TOTAL	TOTAL		REQUIRED		
CH	Frequency (MHz)	Data Rate	POWER	POWER		LIMIT		RESULT
	(IVITIZ)	Nate	(dBm)	(mW)		(dBm)		
36	5180	6	12.36	17.235		23.98		PASS
44	5220	6	12.48	17.718		23.98		PASS
48	5240	6	12.38	17.314		23.98		PASS
52	5260	6	12.47	17.677	23.98	or 11+10log(B) =	23.72	PASS
60	5300	6	12.51	17.841	23.98	or 11+10log(B) =	23.71	PASS
64	5320	6	12.29	16.959	23.98	or 11+10log(B) =	23.67	PASS
100	5500	6	12.17	16.497	23.98	or 11+10log(B) =	23.70	PASS
116	5580	6	12.20	16.611	23.98	or 11+10log(B) =	23.68	PASS
140	5700	6	12.35	17.195	23.98	or 11+10log(B) =	23.66	PASS
144	5720(U-NII 2C)	6	9.752532	9.446	23.98	or 11+10log(B) =	22.69	PASS
144	5720 (U-NII 3)	6	3.171555	2.076		30		PASS
149	5745	6	12.42	17.475		30		PASS
157	5785	6	12.05	16.048		30		PASS
165	5825	6	12.07	16.122		30		PASS

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802.11n_HT20_MIMO

011	Frequency	Data	g. POV	VER (dB	TOTAL	TOTAL		REQUIRED LIMIT		DEQUIT
СН	(MHz)	Rate	CH 0	CH 1	POWER (dBm)	POWER (mW)	(dBm)			RESULT
36	5180	MCS8	12.7	12.6	15.79	37.072		23.98		PASS
44	5220	MCS8	12.8	12.7	15.83	37.461		23.98		PASS
48	5240	MCS8	12.6	12.2	15.51	34.789		23.98		PASS
52	5260	MCS8	12.6	12.5	15.63	35.774	23.98	or 11+10log(B) =	24.01	PASS
60	5300	MCS8	12.4	12.3	15.42	34.083	23.98	or 11+10log(B) =	23.97	PASS
64	5320	MCS8	12.2	12.1	15.26	32.816	23.98	or 11+10log(B) =	23.86	PASS
100	5500	MCS8	12.4	12.2	15.40	33.929	23.98	or 11+10log(B) =	23.91	PASS
116	5580	MCS8	12.3	12.2	15.35	33.538	23.98	or 11+10log(B) =	23.95	PASS
140	5700	MCS8	11.4	11.4	14.49	27.513	23.98	or 11+10log(B) =	23.97	PASS
144	5720(U-NII 2C)	MCS8	9.5	8.93	11.61	16.719	23.98	or 11+10log(B) =	22.70	PASS
144	5720 (U-NII 3)	MCS8	3.05	2.96	3.73	3.997		30		PASS
149	5745	MCS8	12	12.3	15.27	32.946		30		PASS
157	5785	MCS8	12	12.3	15.26	32.824		30		PASS
165	5825	MCS8	12.1	12.3	15.32	33.320		30		PASS

802.11n HT40 MIMO

011	Frequency	Data	g. POW	/ER (dB		TOTAL		REQUIRED		DE0 T
СН	(MHz)		CH 0	CH 1	POWER (dBm)	POWER (mW)				RESULT
38	5190	MCS8	9.29	8.97	12.33	16.380		23.98		PASS
46	5230	MCS8	12.6	12.3	15.64	35.057		23.98		PASS
54	5270	MCS8	12.4	12.2	15.49	33.930	23.98	or 11+10log(B) =	27.03	PASS
62	5310	MCS8	11.2	11	14.29	25.738	23.98	or 11+10log(B) =	27.03	PASS
102	5510	MCS8	8.98	8.94	12.16	15.741	23.98	or 11+10log(B) =	27.01	PASS
110	5550	MCS8	12.3	12.3	15.49	33.926	23.98	or 11+10log(B) =	27.01	PASS
134	5670	MCS8	12.3	12.5	15.63	35.046	23.98	or 11+10log(B) =	27.01	PASS
142	5710(U-NII 2C)	MCS8	10.7	11	13.62	24.088	23.98	or 11+10log(B) =	26.42	PASS
142	5720 (U-NII 3)	MCS8	1.52	1.6	1.95	2.864		30		PASS
151	5755	MCS8	11.9	12.2	15.22	31.869		30		PASS
159	5795	MCS8	11.9	12.3	15.30	32.428		30		PASS

802.11ac VHT80 MIMO

011	Frequency	Data	Data g. POWER (dB			TOTAL		REQUIRED LIMIT		
СН	(MHz)	Rate	CH 0	CH 1	POWER (dBm)	POWER (mW)			RESULT	
42	5210	MCS0	7.21	7.13	10.38	10.424		23.98		PASS
58	5290	MCS0	7.43	7.28	10.56	10.879	23.98	or 11+10log(B) =	30.09	PASS
106	5530	MCS0	8.19	8.08	11.34	13.019	23.98	or 11+10log(B) =	30.09	PASS
122	5610	MCS0	9.07	9.39	12.44	16.762	23.98	or 11+10log(B) =	30.12	PASS
138	5690(U-NII 2C)	MCS0	8.47	8.58	11.58	14.241	23.98	or 11+10log(B) =	29.77	PASS
138	5690 (U-NII 3)	MCS0	0.56	0.66	0.77	2.302		30		PASS
155	5775	MCS0	8.89	9.21	12.26	16.081		30		PASS

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Conducted output power (IC) SISO

802.11n HT20 Ch0

Cł	1	Frequency (MHz)	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
14	0	5700	12.68	18.519	23.98	or 11+10log(B) =	23.47	PASS

802.11n HT40 Ch0

СН	Frequency (MHz)	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)			
62	5310	12.42	17.453	23.98	or 11+10log(B) =	26.57	PASS	
102	5510	10.31	10.736	23.98	or 11+10log(B) =	26.57	PASS	

802.11ac VHT80 Ch0

СН	Frequency (MHz)	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
58	5290	9.34	8.585	23.98	or 11+10log(B) =	29.80	PASS

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MIMO

802.11a Ch0

002.11a_							
СН	Frequency (MHz)	TOTAL POWER (dBm)	TOTAL POWER (mW)		REQUIRED LIMIT (dBm)		RESULT
52	5260	12.47	17.677	23.98	or 11+10log(B) =	23.22	PASS
60	5300	12.51	17.841	23.98	or 11+10log(B) =	23.23	PASS
64	5320	12.29	16.959	23.98	or 11+10log(B) =	23.21	PASS
100	5500	12.17	16.497	23.98	or 11+10log(B) =	23.22	PASS
116	5580	12.20	16.611	23.98	or 11+10log(B) =	23.23	PASS
140	5700	12.35	17.195	23.98	or 11+10log(B) =	23.20	PASS
149	5745	12.42	17.475		30		PASS
157	5785	12.05	16.048		30		PASS
165	5825	12.07	16.122		30		PASS

202 11n HT20 MIMO

002.1111									
СН	Frequency		RAGE NER	TOTAL POWER	TOTAL POWER		REQUIRED LIMIT		RESULT
	(MHz)	CH 0	CH 1	(dBm)	(mW)		(dBm)		REGOLI
52	5260	12.6	12.5	15.63	36.575	23.98	or 11+10log(B) =	23.47	PASS
60	5300	12.4	12.3	15.42	34.847	23.98	or 11+10log(B) =	23.47	PASS
64	5320	12.2	12.1	15.26	33.551	23.98	or 11+10log(B) =	23.47	PASS
100	5500	12.4	12.2	15.40	34.688	23.98	or 11+10log(B) =	23.46	PASS
116	5580	12.3	12.2	15.35	34.289	23.98	or 11+10log(B) =	23.47	PASS
140	5700	11.4	11.4	14.49	28.129	23.98	or 11+10log(B) =	23.47	PASS
149	5745	12	12.3	15.27	33.684		30		PASS
157	5785	12	12.3	15.26	33.559		30		PASS
165	5825	12.1	12.3	15.32	34.066		30		PASS

802.11n HT40 MIMO

<u> </u>	<u></u>								
СН	Frequency		RAGE NER	TOTAL POWER	TOTAL POWER		REQUIRED LIMIT		RESULT
	(MHz)	CH 0	CH 1	(dBm)	(mW)		(dBm)		I KEGGET
54	5270	12.4	12.2	15.49	35.436	23.98	or 11+10log(B) =	26.56	PASS
62	5310	11.2	11	14.29	26.881	23.98	or 11+10log(B) =	26.56	PASS
102	5510	8.98	8.94	12.16	16.440	23.98	or 11+10log(B) =	26.57	PASS
110	5550	12.3	12.3	15.49	35.432	23.98	or 11+10log(B) =	26.57	PASS
134	5670	12.3	12.5	15.63	36.601	23.98	or 11+10log(B) =	26.57	PASS
151	5755	11.9	12.2	15.22	33.283		30		PASS
159	5795	11.9	12.3	15.30	33.868		30		PASS

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802.11ac VHT80 MIMO

СН	Frequency		RAGE NER	TOTAL POWER	TOTAL POWER		REQUIRED LIMIT		RESULT
OII	(MHz)	CH 0	CH 1	(dBm)	(mW)		(dBm)		REGOLI
58	5290	7.43	7.28	10.56	11.385	23.98	or 11+10log(B) =	29.80	PASS
106	5530	8.19	8.08	11.34	13.623	23.98	or 11+10log(B) =	29.79	PASS
122	5610	9.07	9.39	12.44	17.541	23.98	or 11+10log(B) =	29.79	PASS
155	5775	8.89	9.21	12.26	16.829		30		PASS

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EIRP SISO

802.11n_HT20_Ch0

СН	Frequency (MHz)	TOTAL POWER (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)		REQUIRED LIMIT (dBm)		RESULT
140	5700	12.68	2.930	15.61	36.359	30	or 17+10log(B)=	29.47	PASS

802.11n HT40 Ch0

СН	Frequency (MHz)	TOTAL POWER (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)		REQUIRED LIMIT (dBm)		RESULT
38	5190	11.25	2.930	14.18	26.173	23.01	or 10+10log(B)=	25.57	PASS
62	5310	12.42	2.930	15.35	34.266	30	or 17+10log(B)=	32.57	PASS
102	5510	10.31	2.930	13.24	21.080	30	or 17+10log(B)=	32.57	PASS

802 11ac VHT80 Ch0

СН	Frequency (MHz)	TOTAL POWER (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)		REQUIRED LIMIT (dBm)		RESULT
42	5210	8.37	2.930	11.30	13.481	23.01	or 10+10log(B)=	28.80	PASS
58	5290	9.34	2.930	12.27	16.855	30	or 17+10log(B)=	35.80	PASS

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MIMO

802 11a Ch0

002.118	_0110								
СН	Frequency (MHz)	TOTAL POWER (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)		REQUIRED LIMIT (dBm)		RESULT
36	5180	12.36	2.930	15.29	33.838	23.01	or 10+10log(B)=	22.22	PASS
44	5220	12.48	2.930	15.41	34.786	23.01	or 10+10log(B)=	22.23	PASS
48	5240	12.38	2.930	15.31	33.995	23.01	or 10+10log(B)=	22.22	PASS
52	5260	12.47	2.930	15.40	34.706	30	or 17+10log(B)=	29.22	PASS
60	5300	12.51	2.930	15.44	35.027	30	or 17+10log(B)=	29.23	PASS
64	5320	12.29	2.930	15.22	33.297	30	or 17+10log(B)=	29.21	PASS
100	5500	12.17	2.930	15.10	32.390	30	or 17+10log(B)=	29.22	PASS
116	5580	12.20	2.930	15.13	32.614	30	or 17+10log(B)=	29.23	PASS
140	5700	12.35	2.930	15.28	33.760	30	or 17+10log(B)=	29.20	PASS

802 11n HT20 MIMO

СН	Frequency (MHz)	TOTAL POWER (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)		REQUIRED LIMIT (dBm)		RESULT
36	5180	15.79	5.940	21.73	148.832	23.01	or 10+10log(B)=	22.47	PASS
44	5220	15.83	5.940	21.77	150.392	23.01	or 10+10log(B)=	22.47	PASS
48	5240	15.51	5.940	21.45	139.666	23.01	or 10+10log(B)=	22.47	PASS
52	5260	15.63	5.940	21.57	143.619	30	or 17+10log(B)=	29.47	PASS
60	5300	15.42	5.940	21.36	136.833	30	or 17+10log(B)=	29.47	PASS
64	5320	15.26	5.940	21.20	131.745	30	or 17+10log(B)=	29.47	PASS
100	5500	15.40	5.940	21.34	136.211	30	or 17+10log(B)=	29.46	PASS
116	5580	15.35	5.940	21.29	134.643	30	or 17+10log(B)=	29.47	PASS
140	5700	14.49	5.940	20.43	110.453	30	or 17+10log(B)=	29.47	PASS

802.11n HT40 MIMO

СН	Frequency (MHz)	TOTAL POWER (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)		REQUIRED LIMIT (dBm)		RESULT
38	5190	12.33	5.940	18.27	67.176	23.01	or 10+10log(B)=	25.57	PASS
46	5230	15.64	5.940	21.58	143.768	23.01	or 10+10log(B)=	25.56	PASS
54	5270	15.49	5.940	21.43	139.146	30	or 17+10log(B)=	32.56	PASS
62	5310	14.29	5.940	20.23	105.553	30	or 17+10log(B)=	32.56	PASS
102	5510	12.16	5.940	18.10	64.554	30	or 17+10log(B)=	32.57	PASS
110	5550	15.49	5.940	21.43	139.131	30	or 17+10log(B)=	32.57	PASS
134	5670	15.63	5.940	21.58	143.723	30	or 17+10log(B)=	32.57	PASS

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802.11ac_VHT80_MIMO

	<u></u>									
СН	Frequency (MHz)	TOTAL POWER (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)		REQUIRED LIMIT (dBm)			
42	5210	10.38	5.940	16.32	42.835	23.01	or 10+10log(B)=	28.80	PASS	
58	5290	10.56	5.940	16.50	44.704	30	or 17+10log(B)=	35.80	PASS	
106	5530	11.34	5.940	17.28	53.496	30	or 17+10log(B)=	35.79	PASS	

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10 MAXIMUM POWER SPECTRAL DENSITY

10.1 Standard Applicable

FCC

OPERZTION Band		EUT CATEGORY	LIMIT
		Access Point (Master device)	17dBm/ MHz
U-NII-1	-1	Fixed point-to-point Access Ponit	17 UBITI/ IVII IZ
		Mobile and portable client device	11dBm/ MHz
U-NII-2A			11dBm/ MHz
U-NII-2C			11dBm/ MHz
U-NII-3			30dBm/ 500kHz

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

ISED

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

For equipment operating in the band 5725-5850 MHz, If transmitting antennas of directional gain greater than 6 dBi are used, the Maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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Note:

As per FCC KDB 662911 D01

Unequal antenna gains, with equal transmit powers. For antenna gains given by G1, G2, ..., GN dBi.

- (i) If transmit signals are correlated, then Directional gain
- = $10 \log[(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/N_{ANT}] dBi$

[Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

The antenna gain is not grater than 6 dBi. Therefore, reduction of power is not required.

10.2 Measurement Procedure

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

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

For U-NII-3 Band:

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

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

Note: For the test of PSD at MIMO mode, the highest emission of worst case employing Measure and add 10 log (N) technical is reported on this report after the comparison between Main Antenna at single transmitting mode and Aux that yields the higher value. The MIMO transmitting mode produces higher value of outcome

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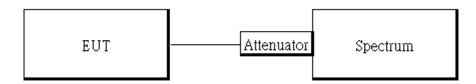


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10.3 **Measurement Equipment Used**

	SGS Conducted Room									
Name of Equip- ment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due					
Spectrum Analyzer	R&S	FSV-30	101398	2017/10/19	2018/10/18					
DC Power Supply	Anritsu	E3640A	MY52410006	2017/11/28	2018/11/27					
Temperature Chamber	TERCHY	MHG-120LF	911009	2018/05/18	2019/05/17					
Attenuator	Mini-Circuit	BW-S10W2+	2	2018/01/02	2019/01/01					
DC Block	Mini-Circuits	BLK-18-S+	1	2018/01/02	2019/01/01					
Coaxial Cables	N/A	WK CE Cable	N/A	2018/01/02	2019/01/01					
Notebook	Lenovo	L430	R9-WGNK5	N/A	N/A					

10.4 **Test Set-up**



10.5 **Measurement Result**

SISO

POWER DENSITY 802.11n HT20 MODE										
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Offset	Duty Factor	PPSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)				
5700	5700 1.28 10.50 0.10 1.38 11 -9.62									

L	POWER DENSITY 802.11n HT40 MODE									
Frequency (MHz) PSD W/O Duty Factor (dBm) Offset Duty Factor (dBm) PPSD With Duty Factor (dBm) Margin (dB)										
	5190	-4.96	10.50	0.19	-4.77	11	-15.77			
	5310	-3.25	10.50	0.19	-3.06	11	-14.06			
	5510	-5.4	10.50	0.19	-5.21	11	-16.21			

POWER DENSITY 802.11ac VHT80 MODE										
Frequency (MHz) PSD W/O Duty Factor (dBm) Offset Duty Factor (dBm) PPSD With Duty Factor (dBm) Margir (dB)										
5210	-10.90	10.50	0.20	-10.70	11	-21.70				
5290	5290 -9.54 10.50 0.20 -9.34 11 -20.34									

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MIMO

	POWER	R DENSIT	Y 802.11	a MODE			
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Offset	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)	
5180	0.58	10.50	0.04	0.62	11	-10.38	
5220	-0.20	10.50	0.04	-0.16	11	-11.16	
5240	0.37	10.50	0.04	0.41	11	-10.59	
5260	0.40	10.50	0.04	0.44	11	-10.56	
5300	-0.03	10.50	0.04	0.01	11	-10.99	
5320	-0.02	10.50	0.04	0.02	11	-10.98	
5500	-0.40	10.50	0.04	-0.36	11	-11.36	
5580	1.72	10.50	0.04	1.76	11	-9.24	
5700	1.30	10.50	0.04	1.34	11	-9.66	
5720 (U-NII 2C)	1.45	10.50	0.04	1.49	11	-9.51	
5720 (U-NII 3)	0.28	10.50	0.04	0.33	30	-29.67	
5745	5.04	10.50	-	5.04	30	-24.96	
5785	5.08	10.50	_	5.08	30	-24.92	
5825	5.33	10.50		5.33	30	-24.67	

	POWER DI	ENSITY 8	302.11n H	IT20 MODE			
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Offset	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)	
5180	3.59	10.50	0.10	3.69	11	-7.31	
5220	3.74	10.50	0.10	3.84	11	-7.16	
5240	3.04	10.50	0.10	3.14	11	-7.86	
5260	2.71	10.50	0.10	2.81	11	-8.19	
5300	2.69	10.50	0.10	2.79	11	-8.21	
5320	2.51	10.50	0.10	2.61	11	-8.39	
5500	2.28	10.50	0.10	2.38	11	-8.62	
5580	2.97	10.50	0.10	3.07	11	-7.93	
5700	2.17	10.50	0.10	2.27	11	-8.73	
5720 (U-NII 2C)	3.89	10.50	0.10	3.99	11	-7.01	
5720 (U-NII 3)	3.12	10.50	0.10	3.22	30	-26.78	
5745	7.48	10.50	-	7.48	30	-22.52	
5785	8.22	10.50	-	8.22	30	-21.78	
5825	7.47	10.50	-	7.47	30	-22.53	

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	POWER DI	ENSITY 8	302.11n H	IT40 MODE			
Frequency (MHz)	I DUIV Factor I Offset I		Duty Factor	1 Duty Factor		Margin (dB)	
5190	-3.43	10.50	0.19	-3.24	11	-14.24	
5230	-0.94	10.50	0.19	-0.75	11	-11.75	
5270	-0.66	10.50	0.19	-0.47	11	-11.47	
5310	-1.13	10.50	0.19	-0.94	11	-11.94	
5510	-4	10.50	0.19	-3.81	11	-14.81	
5550	0.27	10.50	0.19	0.46	11	-10.54	
5670	0.50	10.50	0.19	0.69	11	-10.31	
5710 (U-NII 2C)	0.66	10.50	0.19	0.85	11	-10.15	
5710 (U-NII 3)	-1.01	10.50	0.19	-0.82	30	-30.82	
5755	5.21	10.50	-	5.21	30	-24.79	
5795	5.31	10.50	-	5.31	30	-24.69	

	POWER DENSITY 802.11ac VHT80 MODE										
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Offset	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)					
5210	-8.78	10.50	0.20	-8.58	11	-19.58					
5290	-9.12	10.50	0.20	-8.92	11	-19.92					
5530	-8.35	10.50	0.20	-8.15	11	-19.15					
5610	-6.71	10.50	0.20	-6.51	11	-17.51					
5690 (U-NII 2C)	-5.05	10.50	0.20	-4.85	11	-15.85					
5690 (U-NII 3)	-13.95	10.50	0.20	-13.75	30	-43.75					
5775	-1.53	10.50	-	-1.53	30	-31.53					

SISO

EIRP spectral density 802.11ac VHT80 MODE									
Freq. (MHz)	PSD (dBm)	Ant. Gain (dBi)	EIRP SD (dBm)	Limit (dBm)	Margin (dB)				
5210	-10.70	2.93	-7.77	10	-17.77				

MIMO

E	EIRP spectral density 802.11a MODE					EIDI	Donostro	l donoit	N 902 11	n UTON I	MODE
Freq. (MHz)	PSD (dBm)	Ant. Gain (dBi)	EIRP SD (dBm)	Limit (dBm)	Margin (dB)	(MHz) (dBm) Gain SD (dBm) (d				Margin (dB)	
5180	0.62	2.93	3.55	10	-6.45	5180	3.69	(dBi) 5.94	9.63	10	-0.37
5220	-0.16	2.93	2.77	10	-7.23	5220	3.84	5.94	9.78	10	-0.22
5240	0.41	2.93	3.34	10	-6.66	5240	3.14	5.94	9.08	10	-0.92

EIRP spectral density 802.11n HT40 MODE											
Freq.	PSD	Ant.	EIRP	Limit	Margin	EIRP spectral density 802.11ac VHT80 MODE					
(MHz)	(dBm)	Gain (dBi)	SD (dBm)	(dBm)	(dB)	Freq.	PSD (dBm)	Ant. Gain	EIRP SD	Limit (dBm)	Margin
5180	-3.24	5.94	2.70	10	-7.30	(MHz)	(ubiii)	(dBi)	(dBm)	(ubiii)	(dB)
5220	-0.75	5.94	5.19	10	-4.81	5210	-8.58	5.94	-2.64	10	-12.64

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SISO 802.11n 20MHz 5700MHz

802.11n 40MHz 5510MHz

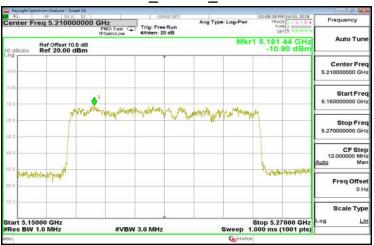




802.11n_40MHz_5190MHz

802.11ac_80MHz 5210MHz





802.11n_40MHz_5310MHz

802.11ac_80MHz_5290MHz





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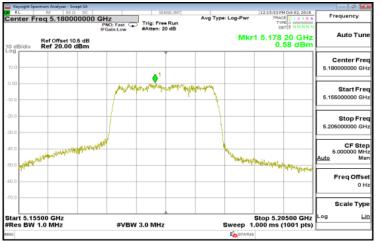
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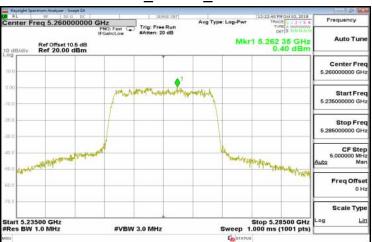


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MIMO 802.11a 20MHz 5180MHz

802.11a 20MHz 5260MHz





802.11a 20MHz 5220MHz

802.11a_20MHz_5300MHz





802.11a_20MHz_5240MHz

802.11a_20MHz_5320MHz





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802.11a 20MHz 5500MHz

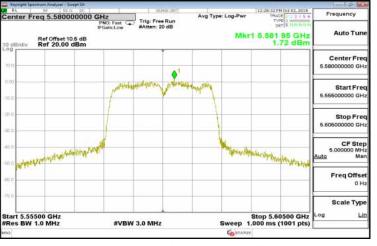
802.11a 20MHz 5720MHz





802.11a 20MHz 5580MHz

802.11a_20MHz_5745MHz





802.11a_20MHz_5700MHz

802.11a_20MHz_5785MHz





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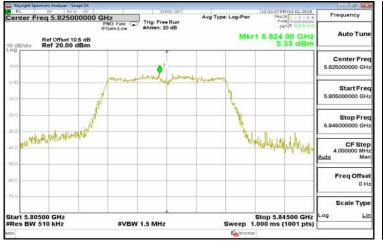
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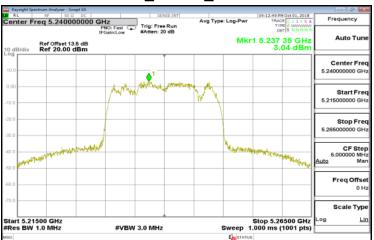


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802.11a 20MHz 5825MHz

802.11n 20MHz 5240MHz





802.11n_20MHz_5180MHz

802.11n_20MHz_5260MHz





802.11n_20MHz_5220MHz

802.11n_20MHz_5300MHz





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802.11n 20MHz 5320MHz

802.11n 20MHz 5700MHz





802.11n 20MHz 5500MHz

802.11n_20MHz_5720MHz

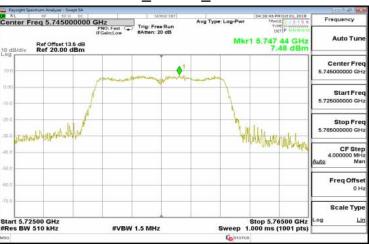




802.11n_20MHz_5580MHz

802.11n_20MHz_5745MHz





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802.11n 20MHz 5785MHz

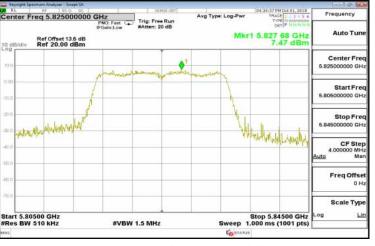
802.11n 40MHz 5230MHz





802.11n_20MHz_5825MHz

802.11n_40MHz_5270MHz





802.11n_40MHz_5190MHz

802.11n_40MHz_5310MHz





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802.11n 40MHz 5510MHz

802.11n 40MHz 5710MHz





802.11n_40MHz 5550MHz

802.11n_40MHz_5755MHz





802.11n_40MHz_5670MHz

802.11n_40MHz_5795MHz





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802.11ac 80MHz 5210MHz

802.11ac 80MHz 5610MHz





802.11ac_80MHz_5290MHz

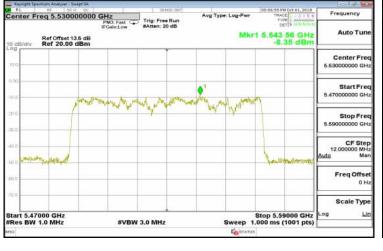
802.11ac_80MHz 5690MHz





802.11ac_80MHz_5530MHz

802.11ac_80MHz_5775MHz





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11 UNDESIRABLE RADIATED EMISSION MEASUREMENT

Standard Applicable 11.1

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

- 1. For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- 2. For transmitters operating in the 5.725-5.85 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	PK: -27 (dBm/MHz)	PK: 68.3 (dBµV/m)				
15.407(b)(3) RSS-247 6.2.3.2						
	PK:-27 (dBm/MHz) *1	PK: 68.2(dBµV/m) *1				
15.407(b)(4)(i)	PK:10 (dBm/MHz) *2	PK:105.2 (dBµV/m) *2				
RSS-247 6.2.4.2	PK:15.6 (dBm/MHz) *3 PK:27 (dBm/MHz) *4	PK: 110.8(dBµV/m) *3 PK:122.2 (dBµV/m) *4				

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

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

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^{*2} below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

^{*3} below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

^{*4} from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.



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

Field strength (microvolts/meter)	Distance (meters)		
2400/F(KHz)	300		
24000/F(KHz)	30		
30	30		
100	3		
150	3		
200	3		
500	3		
	(microvolts/meter) 2400/F(KHz) 24000/F(KHz) 30 100 150 200		

Note:

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

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11.2 **Measurement Equipment Used**

	SGS SAC-III							
Name of Equip- ment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due			
Bi-log Antenna	SCHWAZBECK	VULB9168	378	2017/12/29	2018/12/28			
Horn Antenna	Schwarzbeck	BBHA9120D	1441	2018/08/16	2019/08/15			
Horn Antenna	Schwarzbeck	BBHA9170	184	2017/12/12	2018/12/11			
Loop Antenna	ETS.LINDGREN	6502	148045	2018/09/25	2019/09/24			
3m Site NSA	SGS	966 chamber	N/A	2018/01/02	2019/01/01			
Spectrum Analyzer	Agilent	E4446A	MY51100003	2018/05/15	2019/05/14			
EMI Test Receiver	R&S	ESCI7	100335	2018/02/02	2019/02/01			
DC Power Supply	Anritsu	E3640A	MY52410006	2017/11/28	2018/11/27			
Pre-Amplifier	HP	8449B	3008A00578	2018/01/02	2019/01/01			
Pre-Amplifier	HP	8447D	2944A07676	2018/01/02	2019/01/01			
Pre-Amplifier	EMC Instru- ments	EMC184045B	980135	2017/10/27	2018/10/26			
Attenuator	Mini-Circuit	BW-S10W2+	2	2018/01/02	2019/01/01			
Filter 5150-5350 MHz	Micro-Tronics	BRM50703	1	2018/01/02	2019/01/01			
Filter 5470-5725 MHz	Micro-Tronics	BRM50704	1	2018/01/02	2019/01/01			
Filter 5725-5875 MHz	Micro-Tronics	BRM50705	1	2018/01/02	2019/01/01			
Low Loss Cable	Huber Suhner	966_RX	9	2018/01/02	2019/01/01			
Notebook	Lenovo	T440P	P0000564	N/A	N/A			

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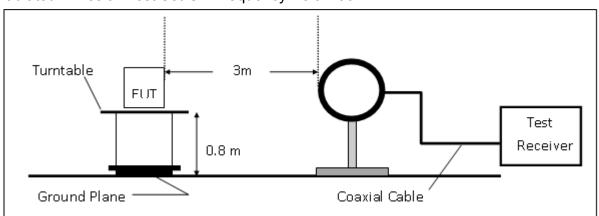
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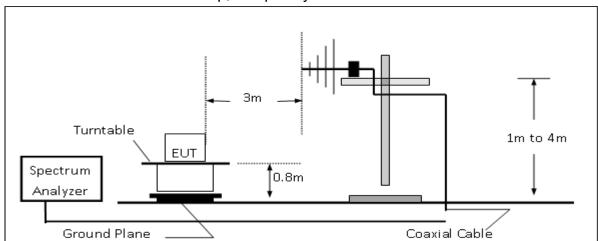
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11.3 **Test SET-UP**

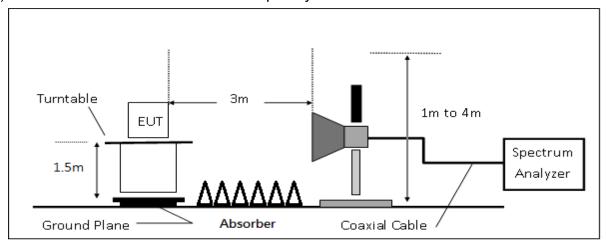
(A) Radiated Emission Test Set-UP Frequency Below 30MHz.



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



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



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11.4 **Measurement Procedure**

- 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.
- Set the spectrum analyzer as RBW=120 kHz and VBW=300 kHz for Peak Detector (PK) and 6. Quasi-peak (QP) at frequency below 1 GHz.
- Set the spectrum analyzer as RBW=1 MHz, VBW=3 MHz for Peak Detector at frequency 7. above 1 GHz.
- Set the spectrum analyzer as RBW=1 MHz, VBW=10 Hz (Duty cycle > 98%) or VBW ≥ 1/T 8. (Duty cycle < 98%) for Average Detector at frequency above 1 GHz.
- Maximum procedure was performed on the six highest emissions to ensure EUT compli-9. ance.
- 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	S .	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

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

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

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

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

11.7 **Measurement Result**

Refer to next page for tabular data sheets.

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

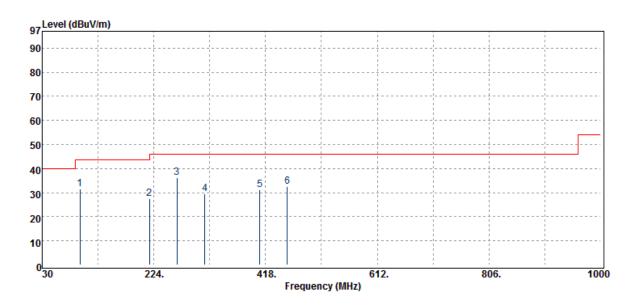
MIMO

802.11a 5150~5250 MHz

:2018-10-03 **Operation Band Test Date** :802.11aB1 Fundamental Frequency :5220 MHz Temp./Humi. :23 deg_C / 62 RH

Operation Mode :Tx CH MID Engineer :Wei

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



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
95.96	Peak	44.56	-12.91	31.65	43.50	-11.85
216.24	Peak	36.67	-9.14	27.53	46.00	-18.47
263.77	Peak	43.05	-6.88	36.17	46.00	-9.83
312.27	Peak	34.69	-5.24	29.45	46.00	-16.55
408.30	Peak	34.00	-2.95	31.05	46.00	-14.95
455.83	Peak	35.01	-2.34	32.67	46.00	-13.33

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Operation Band Fundamental Frequency Operation Mode

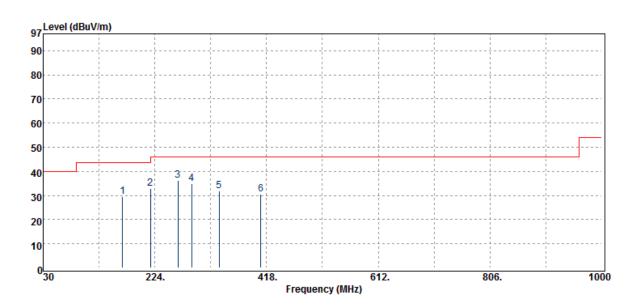
EUT Pol.

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

Test Date Temp./Humi. :2018-10-03 :23 deg_C / 62 RH

Engineer :Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dΒμV/m	dBµV/m	dB
167.74	Peak	36.99	-7.31	29.68	43.50	-13.82
216.24	Peak	42.19	-9.14	33.05	46.00	-12.95
263.77	Peak	43.29	-6.88	36.41	46.00	-9.59
288.02	Peak	40.66	-5.89	34.77	46.00	-11.23
335.55	Peak	36.89	-4.89	32.00	46.00	-14.00
408.30	Peak	33.39	-2.95	30.44	46.00	-15.56

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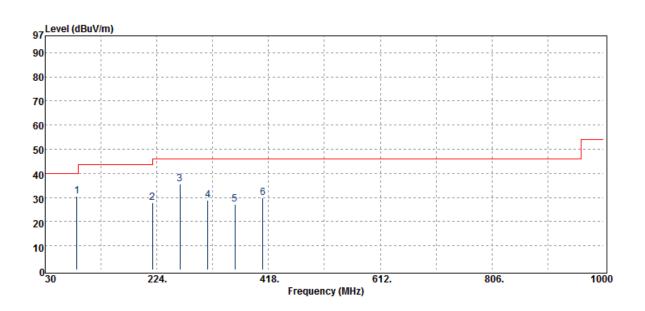
802.11a 5250~5350 MHz

Operation Band :802.11aB2 **Test Date** :2018-10-03

Fundamental Frequency :5300 MHz Temp./Humi. :23 deg_C / 62 RH

Operation Mode :Tx CH MID Engineer :Wei

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



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
85.29	Peak	43.29	-12.91	30.38	40.00	-9.62
216.24	Peak	36.97	-9.14	27.83	46.00	-18.17
263.77	Peak	42.49	-6.88	35.61	46.00	-10.39
312.27	Peak	33.99	-5.24	28.75	46.00	-17.25
359.80	Peak	31.52	-4.26	27.26	46.00	-18.74
408.30	Peak	32.70	-2.95	29.75	46.00	-16.25

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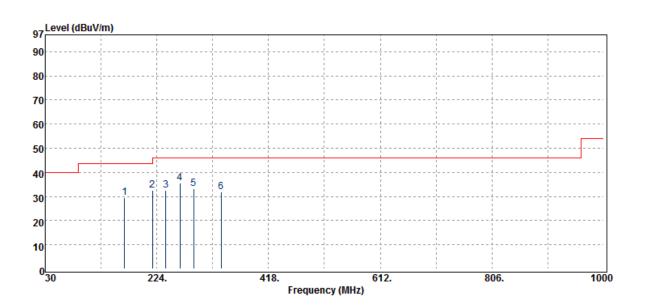
Operation Band Fundamental Frequency Operation Mode EUT Pol.

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

Test Date Temp./Humi. :2018-10-03 :23 deg_C / 62 RH

:Wei Engineer

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
167.74	Peak	36.97	-7.31	29.66	43.50	-13.84
216.24	Peak	41.77	-9.14	32.63	46.00	-13.37
239.52	Peak	40.52	-7.83	32.69	46.00	-13.31
263.77	Peak	42.49	-6.88	35.61	46.00	-10.39
288.02	Peak	39.04	-5.89	33.15	46.00	-12.85
335.55	Peak	36.83	-4.89	31.94	46.00	-14.06

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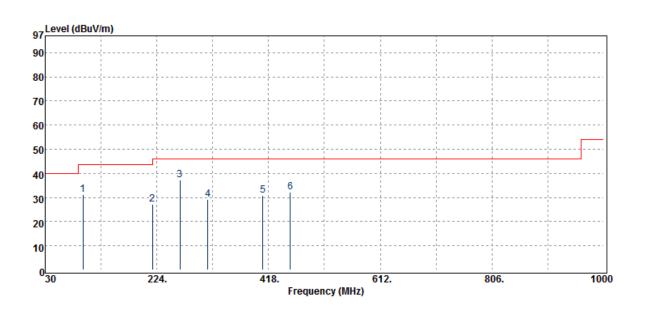
802.11a, 5470~5725 MHz

Operation Band :802.11aB3 **Test Date** :2018-10-03

Fundamental Frequency :5580 MHz Temp./Humi. :23 deg_C / 62 RH

Operation Mode :Tx CH MID Engineer :Wei

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



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@ 3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
95.96	Peak	43.98	-12.91	31.07	43.50	-12.43
216.24	Peak	36.23	-9.14	27.09	46.00	-18.91
263.77	Peak	44.23	-6.88	37.35	46.00	-8.65
312.27	Peak	34.60	-5.24	29.36	46.00	-16.64
408.30	Peak	33.95	-2.95	31.00	46.00	-15.00
455.83	Peak	34.53	-2.34	32.19	46.00	-13.81

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Operation Band Fundamental Frequency Operation Mode EUT Pol.

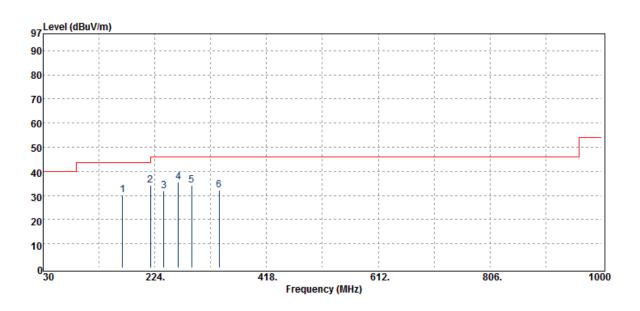
:802.11aB3 :5580 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi. Engineer

:2018-10-03 :23 deg_C / 62 RH

:Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBμV/m	dΒμV/m	dB
167.74	Peak	37.52	-7.31	30.21	43.50	-13.29
216.24	Peak	43.38	-9.14	34.24	46.00	-11.76
239.52	Peak	39.81	-7.83	31.98	46.00	-14.02
264.74	Peak	42.39	-6.83	35.56	46.00	-10.44
288.02	Peak	40.04	-5.89	34.15	46.00	-11.85
335.55	Peak	37.07	-4.89	32.18	46.00	-13.82

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Personal Results and the sample(s) tested and such sample(s) tested and sample(s) tested and such sample(s) tested and such sample(s) tested and s may be prosecuted to the fullest extent of the law.



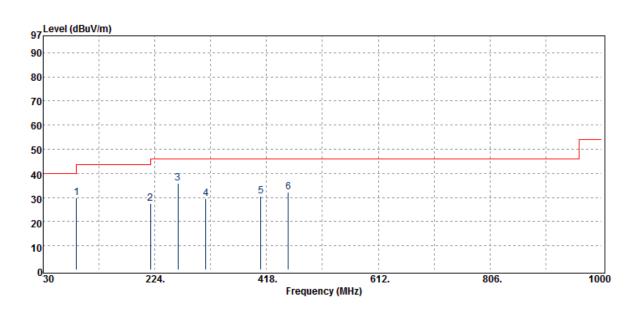
Page: 96 of 287

802.11a, 5725~5850 MHz

Operation Band :802.11aB4 **Test Date** :2018-10-03

Fundamental Frequency :5785 MHz Temp./Humi. :23 deg_C / 62 RH

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



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBμV/m	dBμV/m	dB
88.20	Peak	43.43	-13.39	30.04	43.50	-13.46
216.24	Peak	36.63	-9.14	27.49	46.00	-18.51
263.77	Peak	42.67	-6.88	35.79	46.00	-10.21
312.27	Peak	34.87	-5.24	29.63	46.00	-16.37
408.30	Peak	33.42	-2.95	30.47	46.00	-15.53
455.83	Peak	34.49	-2.34	32.15	46.00	-13.85

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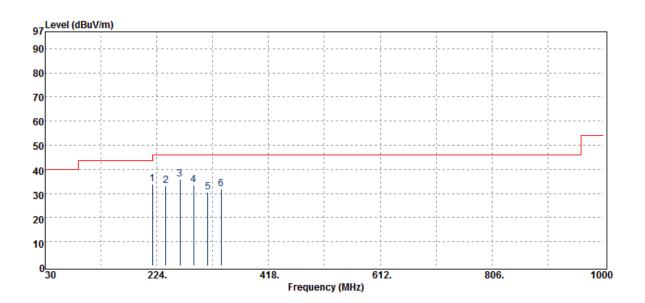
Operation Band Fundamental Frequency Operation Mode EUT Pol.

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

Test Date Temp./Humi. Engineer

:2018-10-03 :23 deg_C / 62 RH

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBμV/m	dBμV/m	dB
216.24	Peak	42.97	-9.14	33.83	46.00	-12.17
239.52	Peak	41.02	-7.83	33.19	46.00	-12.81
263.77	Peak	42.75	-6.88	35.87	46.00	-10.13
288.02	Peak	39.58	-5.89	33.69	46.00	-12.31
312.27	Peak	35.62	-5.24	30.38	46.00	-15.62
335.55	Peak	36.80	-4.89	31.91	46.00	-14.09

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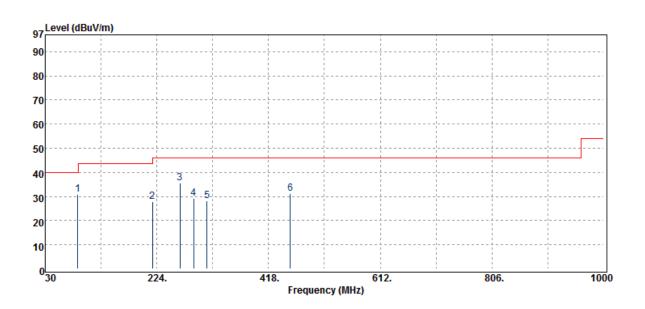
802.11ac VHT80, 5150~5250 MHz

Operation Band :802.11ac80B1 **Test Date** :2018-10-03

Fundamental Frequency :5210 MHz Temp./Humi. :23 deg_C / 62 RH

Operation Mode :Tx CH LOW Engineer :Wei

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



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBμV/m	dBμV/m	dB
86.26	Peak	43.93	-13.06	30.87	40.00	-9.13
216.24	Peak	37.10	-9.14	27.96	46.00	-18.04
263.77	Peak	42.57	-6.88	35.69	46.00	-10.31
288.02	Peak	35.21	-5.89	29.32	46.00	-16.68
311.30	Peak	33.43	-5.25	28.18	46.00	-17.82
455.83	Peak	33.64	-2.34	31.30	46.00	-14.70

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Operation Band Fundamental Frequency Operation Mode EUT Pol.

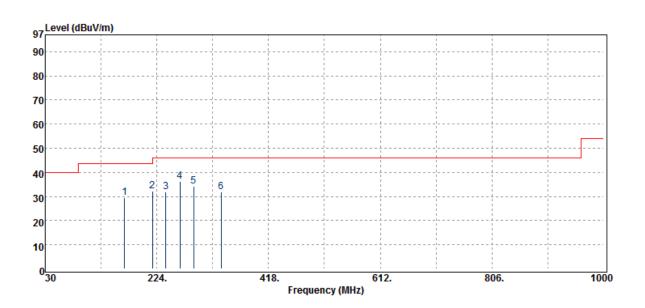
:802.11ac80B1 :5210 MHz :Tx CH LOW :E2 Plane

Test Date Temp./Humi. Engineer

:2018-10-03 :23 deg_C / 62 RH

:Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
167.74	Peak	37.01	-7.31	29.70	43.50	-13.80
216.24	Peak	41.51	-9.14	32.37	46.00	-13.63
239.52	Peak	39.83	-7.83	32.00	46.00	-14.00
263.77	Peak	43.15	-6.88	36.27	46.00	-9.73
288.02	Peak	40.19	-5.89	34.30	46.00	-11.70
335.55	Peak	36.84	-4.89	31.95	46.00	-14.05

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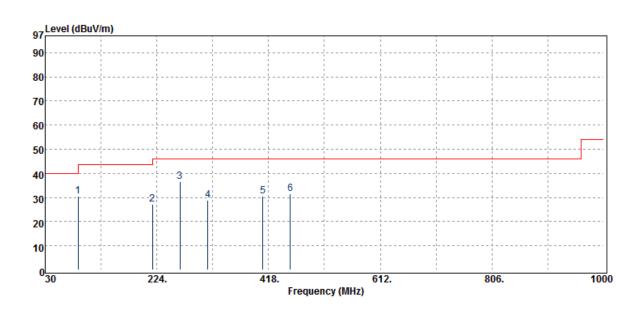
Page: 100 of 287

802.11ac VHT80, 5250~5350 MHz

Operation Band :802.11ac80B2 **Test Date** :2018-10-03

Fundamental Frequency :5290 MHz Temp./Humi. :23 deg_C / 62 RH

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



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dΒμV/m	dΒμV/m	dB
87.23	Peak	43.70	-13.23	30.47	40.00	-9.53
216.24	Peak	36.23	-9.14	27.09	46.00	-18.91
263.77	Peak	43.54	-6.88	36.66	46.00	-9.34
312.27	Peak	34.07	-5.24	28.83	46.00	-17.17
408.30	Peak	33.39	-2.95	30.44	46.00	-15.56
455.83	Peak	33.92	-2.34	31.58	46.00	-14.42

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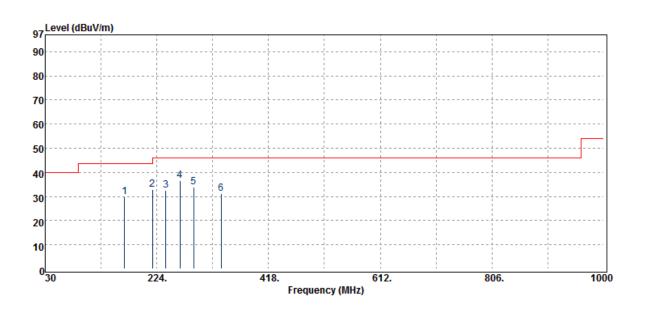
Operation Band Fundamental Frequency Operation Mode EUT Pol.

:802.11ac80B2 :5290 MHz :Tx CH HIGH :E2 Plane

Test Date :2018-10-03 Temp./Humi. :23 deg_C / 62 RH

Engineer :Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBμV/m	dBμV/m	dB
167.74	Peak	37.34	-7.31	30.03	43.50	-13.47
216.24	Peak	41.94	-9.14	32.80	46.00	-13.20
239.52	Peak	40.37	-7.83	32.54	46.00	-13.46
263.77	Peak	43.40	-6.88	36.52	46.00	-9.48
288.02	Peak	39.89	-5.89	34.00	46.00	-12.00
335.55	Peak	36.00	-4.89	31.11	46.00	-14.89

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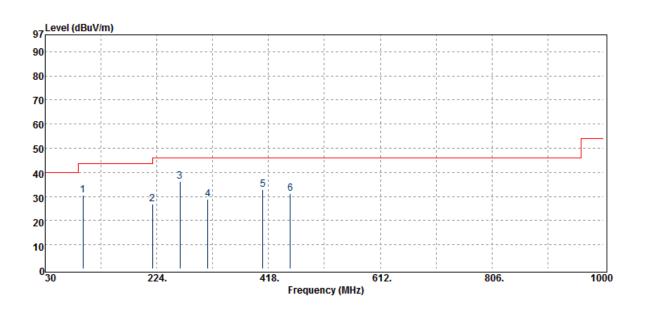
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802.11ac VHT80, 5470~5725 MHz

Operation Band :802.11ac80B3 **Test Date** :2018-10-03

Fundamental Frequency :5530 MHz Temp./Humi. :23 deg_C / 62 RH

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



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBμV/m	dBμV/m	dB
95.96	Peak	43.53	-12.91	30.62	43.50	-12.88
216.24	Peak	35.98	-9.14	26.84	46.00	-19.16
263.77	Peak	43.06	-6.88	36.18	46.00	-9.82
312.27	Peak	34.16	-5.24	28.92	46.00	-17.08
408.30	Peak	35.68	-2.95	32.73	46.00	-13.27
455.83	Peak	33.48	-2.34	31.14	46.00	-14.86

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Operation Band Fundamental Frequency Operation Mode EUT Pol.

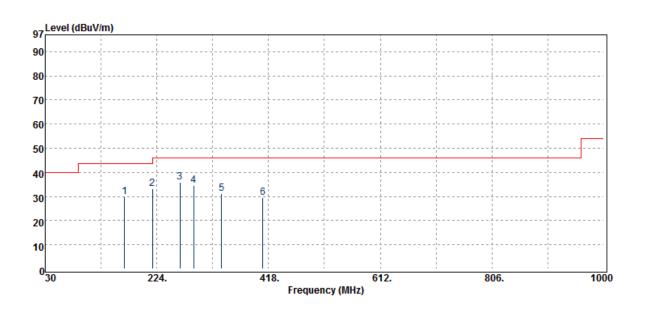
:802.11ac80B3 :5530 MHz :Tx CH LOW :E2 Plane

Test Date Temp./Humi. Engineer

:2018-10-03 :23 deg_C / 62 RH

:Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dΒμV/m	dB
167.74	Peak	37.11	-7.31	29.80	43.50	-13.70
216.24	Peak	42.31	-9.14	33.17	46.00	-12.83
263.77	Peak	42.66	-6.88	35.78	46.00	-10.22
288.02	Peak	40.50	-5.89	34.61	46.00	-11.39
336.52	Peak	35.93	-4.87	31.06	46.00	-14.94
408.30	Peak	32.47	-2.95	29.52	46.00	-16.48

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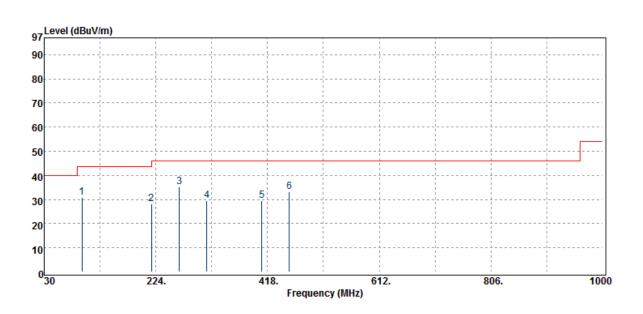
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802.11ac VHT80, 5725~5850 MHz

Operation Band :802.11ac80B4 **Test Date** :2018-10-03

Fundamental Frequency :5775 MHz Temp./Humi. :23 deg_C / 62 RH

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



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dΒμV/m	dBµV/m	dB
95.96	Peak	43.65	-12.91	30.74	43.50	-12.76
216.24	Peak	37.26	-9.14	28.12	46.00	-17.88
264.74	Peak	42.03	-6.83	35.20	46.00	-10.80
312.27	Peak	34.61	-5.24	29.37	46.00	-16.63
408.30	Peak	32.56	-2.95	29.61	46.00	-16.39
455.83	Peak	35.64	-2.34	33.30	46.00	-12.70

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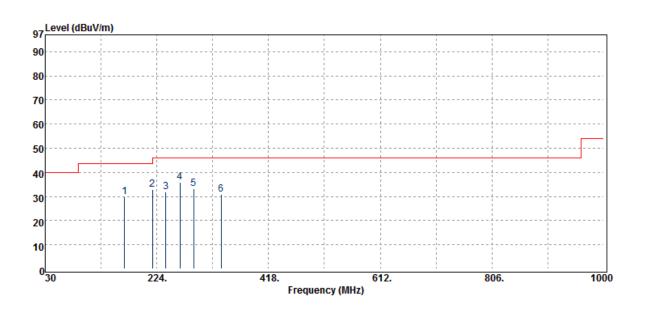
Operation Band Fundamental Frequency Operation Mode EUT Pol.

:802.11ac80B4 :5775 MHz :Tx CH LOW :E2 Plane

Test Date :2018-10-03 Temp./Humi. :23 deg_C / 62 RH :Wei

Engineer

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
167.74	Peak	37.16	-7.31	29.85	43.50	-13.65
216.24	Peak	41.98	-9.14	32.84	46.00	-13.16
239.52	Peak	39.67	-7.83	31.84	46.00	-14.16
263.77	Peak	42.73	-6.88	35.85	46.00	-10.15
288.02	Peak	39.17	-5.89	33.28	46.00	-12.72
335.55	Peak	35.91	-4.89	31.02	46.00	-14.98

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Above 1GHz Worst-Case Data:

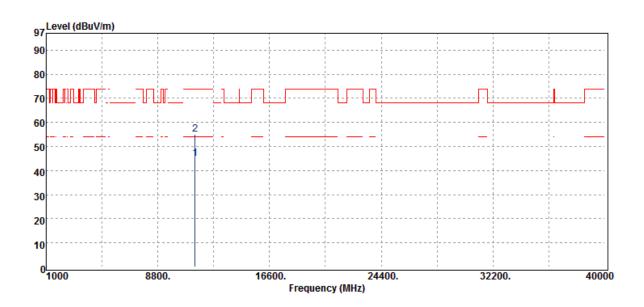
SISO

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

:802.11n20B3 **Test Date Operation Band** :2018-10-03

Fundamental Frequency :5700 MHz Temp./Humi. :23 deg_C / 62 RH Operation Mode :Tx CH HIGH Engineer :Wei

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



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11400.00	Average	23.27	21.62	44.89	54.00	-9.11
11400.00	Peak	33.33	21.62	54.95	74.00	-19.05

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Operation Band Fundamental Frequency Operation Mode EUT Pol.

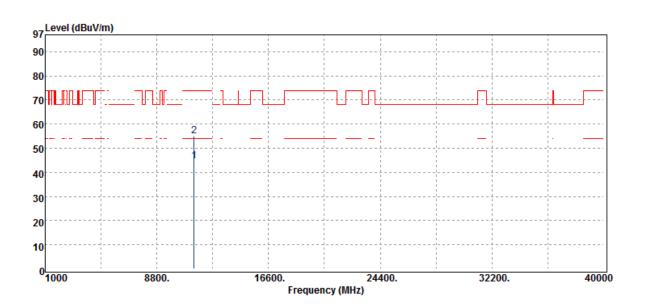
:802.11n20B3 :5700 MHz :Tx CH HIGH :E2 Plane

Test Date Temp./Humi. Engineer

:2018-10-03 :23 deg_C / 62 RH

:Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11400.00	Average	23.17	21.62	44.79	54.00	-9.21
11400.00	Peak	33.26	21.62	54.88	74.00	-19.12

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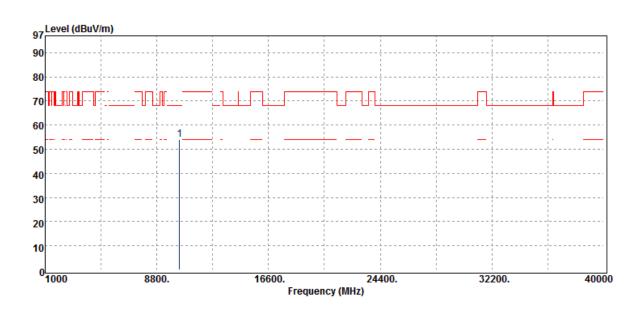
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Radiated Spurious Emission Measurement Result 802.11n HT40, 5150~5250 MHz

Operation Band :802.11n40B1 Test Date :2018-10-03

Fundamental Frequency :5190 MHz Temp./Humi. :23 deg_C / 62 RH Operation Mode :Tx CH LOW Engineer :Wei

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



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	
_	MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
	10380 00	Peak	34 26	19 78	54 04	68 20	-14 16

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:2018-10-03

:23 deg_C / 62 RH

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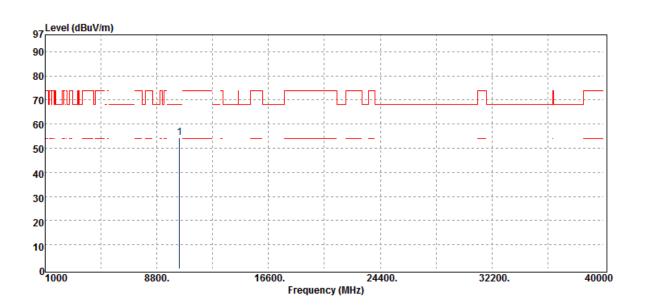
Operation Band Fundamental Frequency Operation Mode EUT Pol.

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

Test Date Temp./Humi.

:Wei Engineer

Measurement Antenna Pol. :HORIZONTAL



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m		
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
	10380.00	Peak	34.46	19.78	54.24	68.20	-13.96	_

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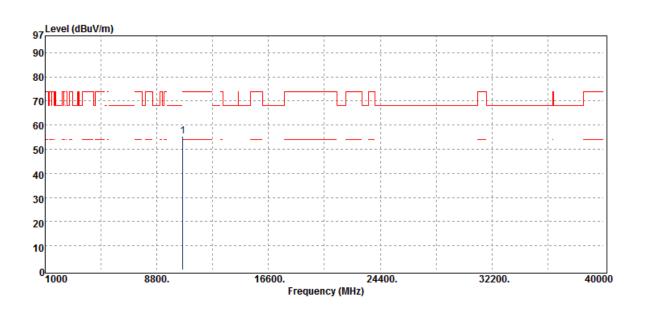
Page: 110 of 287

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

Operation Band :802.11n40B2 **Test Date** :2018-10-03

Fundamental Frequency :5310 MHz Temp./Humi. :23 deg_C / 62 RH :Tx CH HIGH

Operation Mode :Wei Engineer EUT Pol. :E2 Plane Measurement Antenna Pol. :VERTICAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@ 3m	_	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB	
10620.00	Peak	34.90	20.41	55.31	74.00	-18.69	

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Operation Band Fundamental Frequency Operation Mode EUT Pol.

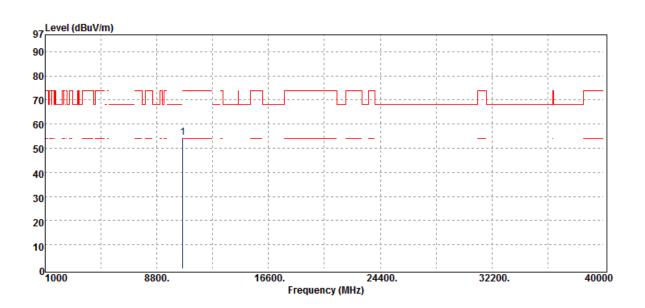
:802.11n40B2 :5310 MHz :Tx CH HIGH :E2 Plane

Test Date Temp./Humi. Engineer

:2018-10-03 :23 deg_C / 62 RH

:Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
10620.00	Peak	33.91	20.41	54.32	74.00	-19.68

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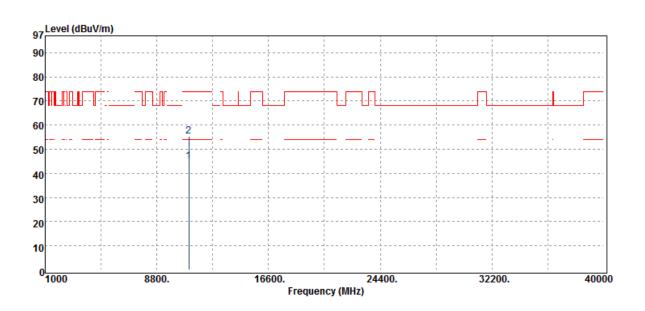
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Radiated Spurious Emission Measurement Result 802.11n HT40, 5470~5725 MHz

Operation Band :802.11n40B3 **Test Date** :2018-10-03

Fundamental Frequency :5510 MHz Temp./Humi. :23 deg_C / 62 RH **Operation Mode** :Tx CH LOW :Wei

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



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11020.00	Average	23.43	21.46	44.89	54.00	-9.11
11020.00	Peak	33.77	21.46	55.23	74.00	-18.77

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Operation Band Fundamental Frequency Operation Mode EUT Pol.

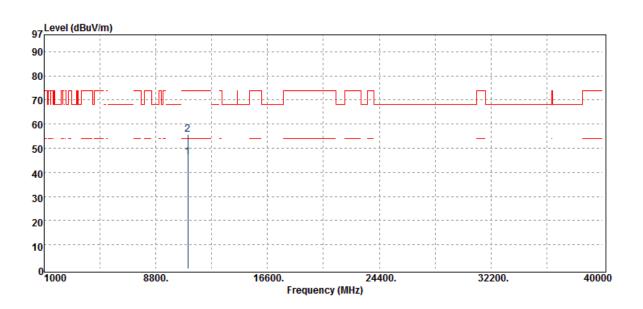
:802.11n40B3 :5510 MHz :Tx CH LOW :E2 Plane

Test Date Temp./Humi. Engineer

:2018-10-03 :23 deg_C / 62 RH

:Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@ 3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11020.00	Average	24.97	21.46	46.43	54.00	-7.57
11020.00	Peak	34.16	21.46	55.62	74.00	-18.38

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Personal Results and the sample(s) tested and such sample(s) tested and sample(s) tested and such sample(s) tested and such sample(s) tested and s may be prosecuted to the fullest extent of the law.

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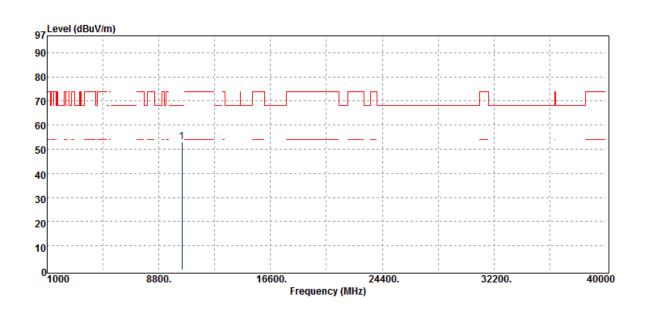
Radiated Spurious Emission Measurement Result 802.11ac VHT80, 5150~5250 MHz

Operation Band :802.11ac80B1 Test Date :2018-10-03

Fundamental Frequency :5210 MHz Temp./Humi. :23 deg_C / 62 RH

Operation Mode :Tx CH LOW Engineer :Wei

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



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m	_	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
	10420.00	Peak	33.02	19.99	53.01	68.20	-15.19	_

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Operation Band Fundamental Frequency Operation Mode EUT Pol.

:802.11ac80B1 :5210 MHz :Tx CH LOW :E2 Plane

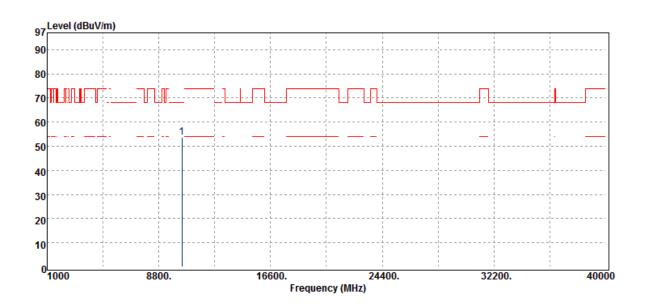
Test Date Temp./Humi. Engineer

:2018-10-03 :23 deg_C / 62 RH

:HORIZONTAL

:Wei

Measurement Antenna Pol.



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@ 3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
10420.00	Peak	33.68	19.99	53.67	68.20	-14.53

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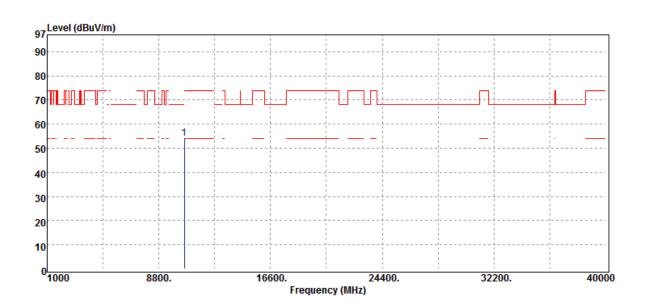
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Radiated Spurious Emission Measurement Result 802.11ac VHT80, 5250~5350 MHz

Operation Band :802.11ac80B2 **Test Date** :2018-10-03

Fundamental Frequency :5290 MHz Temp./Humi. :23 deg_C / 62 RH

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



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@ 3m	-	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10580.00	Peak	33.95	20.23	54.18	68.20	-14.02	_

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Operation Band Fundamental Frequency Operation Mode EUT Pol.

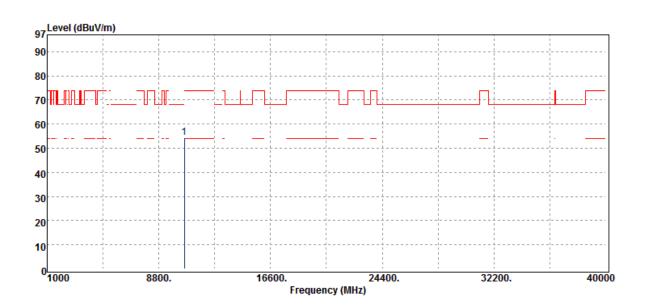
:802.11ac80B2 :5290 MHz :Tx CH HIGH :E2 Plane

Test Date Temp./Humi. Engineer

:2018-10-03 :23 deg_C / 62 RH

:Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@3m		
 MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
10580.00	Peak	34.25	20.23	54.48	68.20	-13.72	

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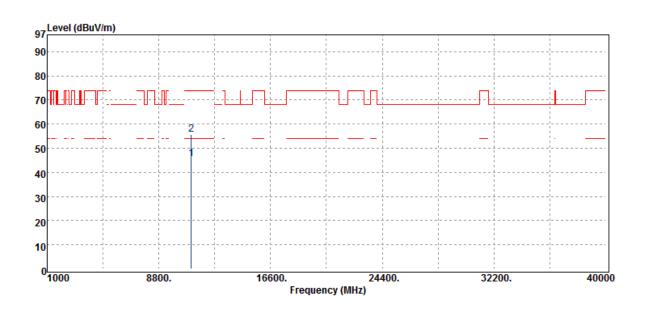
Radiated Spurious Emission Measurement Result 802.11ac VHT80, 5470~5725 MHz

Operation Band :802.11ac80B3 **Test Date** :2018-10-03

Fundamental Frequency :5530 MHz Temp./Humi. :23 deg_C / 62 RH

Operation Mode :Tx CH LOW Engineer :Wei

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



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@ 3m	_
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11060.00	Average	24.07	21.53	45.60	54.00	-8.40
11060.00	Peak	34.33	21.53	55.86	74.00	-18.14

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Operation Band Fundamental Frequency Operation Mode EUT Pol.

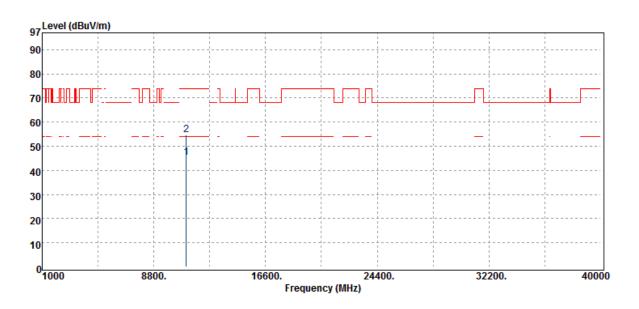
:802.11ac80B3 :5530 MHz :Tx CH LOW :E2 Plane

Test Date Temp./Humi. Engineer

:2018-10-03 :23 deg_C / 62 RH

:Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11060.00	Average	23.62	21.53	45.15	54.00	-8.85
11060.00	Peak	33.09	21.53	54.62	74.00	-19.38

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MIMO

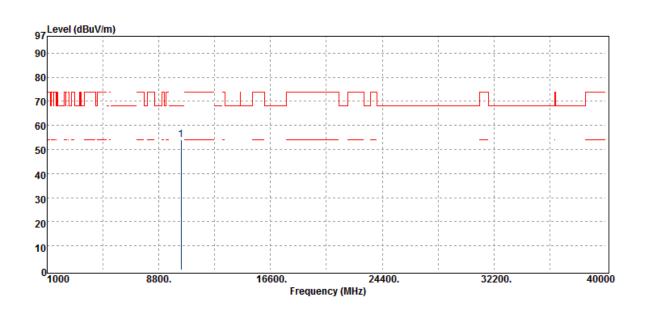
Radiated Spurious Emission Measurement Result 802.11a, 5150~5250 MHz

Operation Band :802.11aB1 **Test Date** :2018-10-02

Fundamental Frequency :5180 MHz Temp./Humi. :23 deg_C / 62 RH

Operation Mode :Tx CH LOW Engineer :Wei

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



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
10360.00	Peak	34.32	19.71	54.03	68.20	-14.17

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Operation Band Fundamental Frequency Operation Mode

EUT Pol.

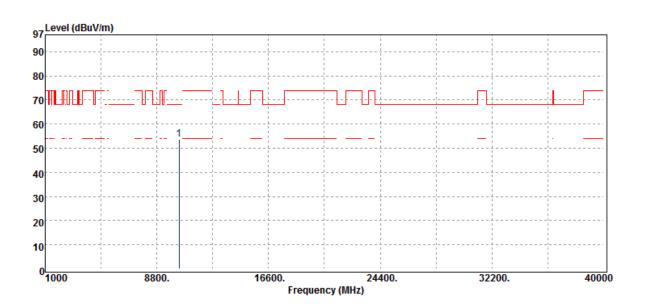
:802.11aB1 :5180 MHz :Tx CH LOW :E2 Plane

Test Date Temp./Humi. Engineer

:2018-10-02 :23 deg_C / 62 RH

:Wei

Measurement Antenna Pol. :HORIZONTAL



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode	Reading Level		FS	@3m	
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
	10360.00	Peak	34.02	19.71	53.73	68.20	-14.47

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Operation Band Fundamental Frequency Operation Mode

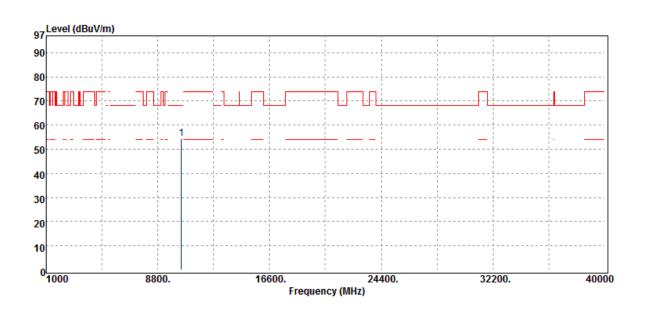
EUT Pol.

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

Test Date :2018-10-02 Temp./Humi. :23 deg_C / 62 RH

Engineer :Wei

Measurement Antenna Pol. :VERTICAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@ 3m	-
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10440.00	Peak	34.19	20.05	54.24	68.20	-13.96

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Operation Band Fundamental Frequency Operation Mode

EUT Pol.

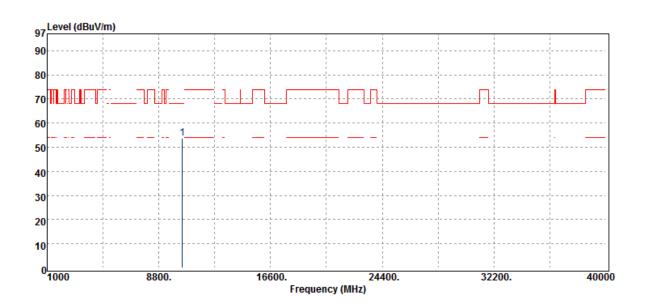
:802.11aB1 :5220 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi. Engineer

:2018-10-02 :23 deg_C / 62 RH

:Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@ 3m	_
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
10440.00	Peak	33.76	20.05	53.81	68.20	-14.39

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Personal Results and the sample(s) tested and such sample(s) tested and sample(s) tested and such sample(s) tested and such sample(s) tested and s may be prosecuted to the fullest extent of the law.



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Operation Band Fundamental Frequency Operation Mode

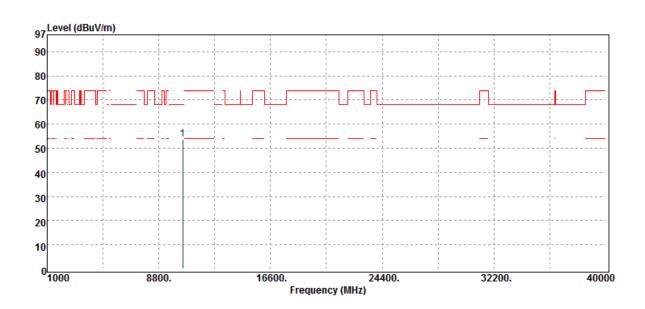
EUT Pol.

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

Test Date :2018-10-02 Temp./Humi. :23 deg_C / 62 RH

Engineer :Wei

Measurement Antenna Pol. :VERTICAL



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@ 3m		
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
	10480.00	Peak	33.71	20.07	53.78	68.20	-14.42	

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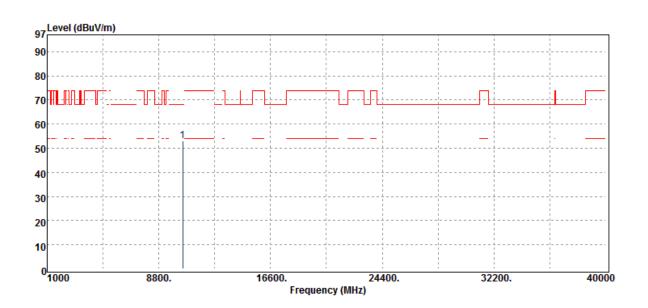
Operation Band Fundamental Frequency Operation Mode EUT Pol.

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

Test Date Temp./Humi. :2018-10-02 :23 deg_C / 62 RH

Engineer :Wei

Measurement Antenna Pol. :HORIZONTAL



Fre	eq. [Detector	Spectrum	Factor	Actual	Limit	Margin
		Mode R	eading Level		FS	@3m	-
MI	Hz Pl	K/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
1048	0.00	Peak	33.06	20.07	53.13	68.20	-15.07

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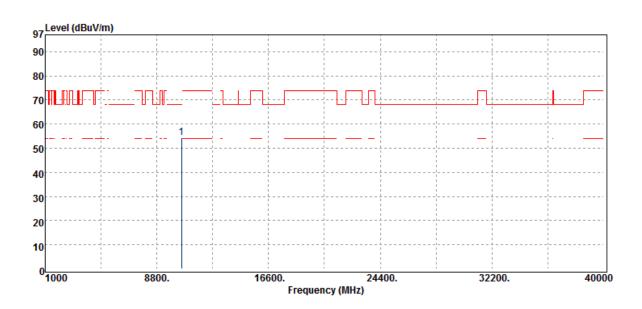
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Radiated Spurious Emission Measurement Result 802.11a, 5250MHz-5350MHz

Operation Band :802.11aB2 **Test Date** :2018-10-02

Fundamental Frequency :5260 MHz Temp./Humi. :23 deg_C / 62 RH :Wei :Tx CH LOW

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



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
10520 00	Peak	34 21	20.00	54 21	68 20	-13 99

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Operation Band Fundamental Frequency Operation Mode

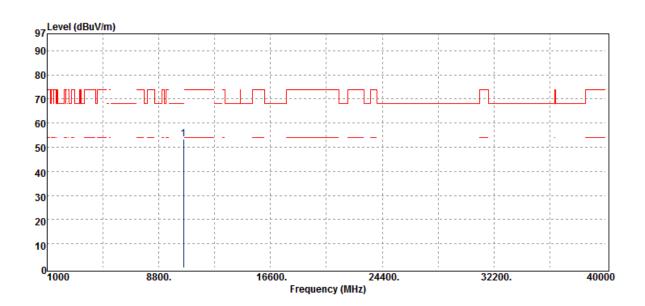
EUT Pol.

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

Test Date Temp./Humi. :2018-10-02 :23 deg_C / 62 RH

:Wei Engineer

Measurement Antenna Pol. :HORIZONTAL



	Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
		Mode	Reading Level		FS	@3m		
_	MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dΒμV/m	dB	
	10520.00	Peak	33.39	20.00	53.39	68.20	-14.81	_

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Personal Results and the sample(s) tested and such sample(s) tested and sample(s) tested and such sample(s) tested and such sample(s) tested and s may be prosecuted to the fullest extent of the law.



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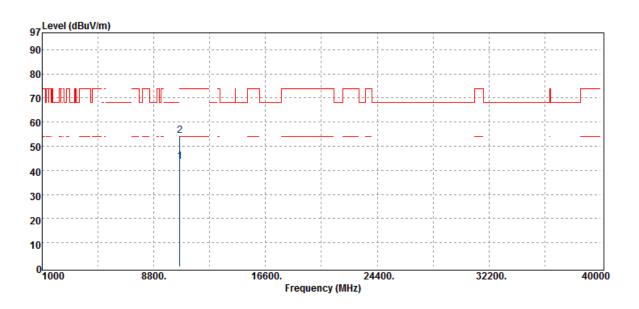
Operation Band Fundamental Frequency Operation Mode

EUT Pol.

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

Test Date :2018-10-02 Temp./Humi. :23 deg_C / 62 RH

Engineer :Kane Measurement Antenna Pol. :VERTICAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB
10600.00	Average	23.27	20.38	43.65	54.00	-10.35
10600.00	Peak	33.92	20.38	54.30	74.00	-19.70

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Personal Results and the sample(s) tested and such sample(s) tested and sample(s) tested and such sample(s) tested and such sample(s) tested and s may be prosecuted to the fullest extent of the law.



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Operation Band Fundamental Frequency Operation Mode

EUT Pol.

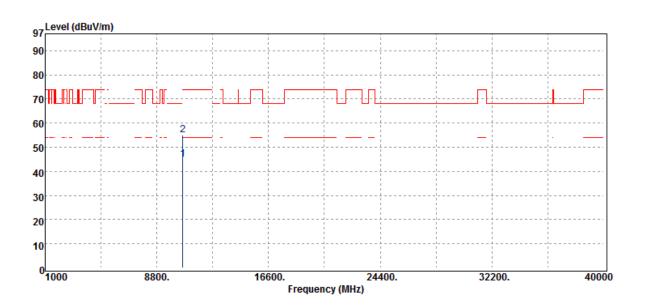
:802.11aB2 :5300 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi. Engineer

:2018-10-02 :23 deg_C / 62 RH

:Kane

Measurement Antenna Pol. :HORIZONTAL



Fred	. Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	z PK/QP/AV	dBµV	dB	dBµV/m	dBμV/m	dB
10600	.00 Average	24.67	20.38	45.05	54.00	-8.95
10600	.00 Peak	34.79	20.38	55.17	74.00	-18.83

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Personal Results and the sample(s) tested and such sample(s) tested and sample(s) tested and such sample(s) tested and such sample(s) tested and s may be prosecuted to the fullest extent of the law.



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Operation Band Fundamental Frequency Operation Mode

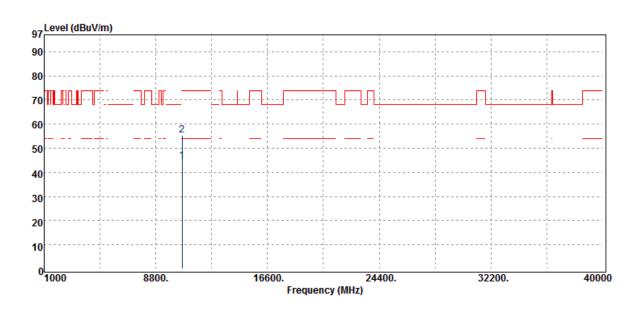
EUT Pol.

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

Test Date :2018-10-02 Temp./Humi. :23 deg_C / 62 RH

Engineer :Wei

Measurement Antenna Pol. :VERTICAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
10640.00	Average	24.33	20.44	44.77	54.00	-9.23
10640.00	Peak	34.92	20.44	55.36	74.00	-18.64

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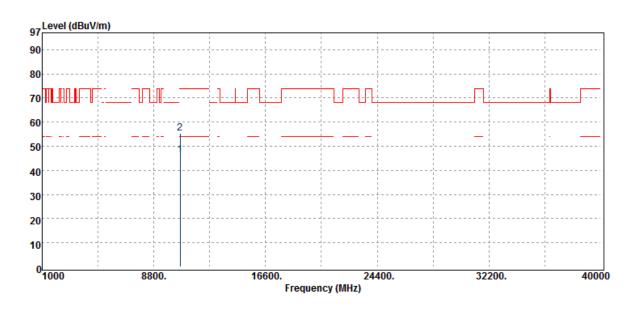
Operation Band Fundamental Frequency Operation Mode

EUT Pol.

:802.11aB2 :5320 MHz :Tx CH HIGH **Test Date** Temp./Humi. :2018-10-02 :23 deg_C / 62 RH

Engineer :Wei

:E2 Plane Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
10640.00	Average	25.83	20.44	46.27	54.00	-7.73
10640.00	Peak	35.08	20.44	55.52	74.00	-18.48

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Operation Mode

Report No.: ER/2018/80101

:Wei

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

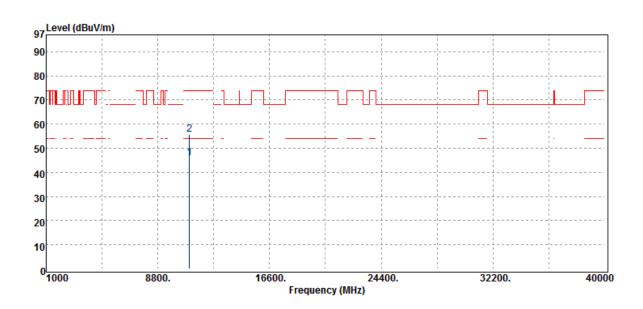
:Tx CH LOW

Operation Band :802.11aB3 **Test Date** :2018-10-02

Fundamental Frequency :5500 MHz Temp./Humi. :23 deg_C / 62 RH

Engineer

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



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	_
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11000.00	Average	24.71	21.37	46.08	54.00	-7.92
11000.00	Peak	34.34	21.37	55.71	74.00	-18.29

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Operation Band Fundamental Frequency Operation Mode EUT Pol.

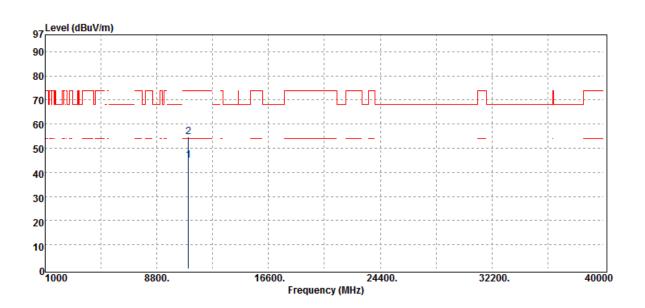
:802.11aB3 :5500 MHz :Tx CH LOW :E2 Plane

Test Date Temp./Humi. Engineer

:2018-10-02 :23 deg_C / 62 RH

:Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11000.00	Average	23.77	21.37	45.14	54.00	-8.86
11000.00	Peak	33.38	21.37	54.75	74.00	-19.25

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Personal Results and the sample(s) tested and such sample(s) tested and sample(s) tested and such sample(s) tested and such sample(s) tested and s may be prosecuted to the fullest extent of the law.



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Operation Band Fundamental Frequency Operation Mode

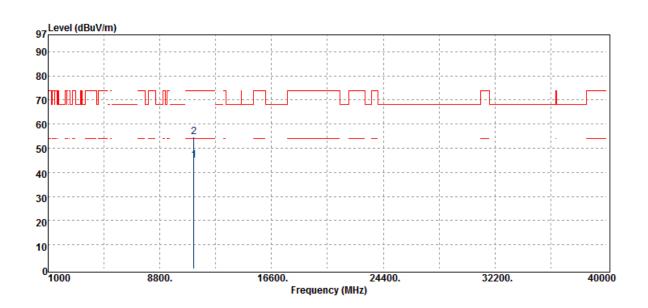
EUT Pol.

:802.11aB3 :5580 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi. :2018-10-02 :23 deg_C / 62 RH

Engineer :Wei

Measurement Antenna Pol. :VERTICAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBμV/m	dB
11160.00	Average	23.61	21.51	45.12	54.00	-8.88
11160.00	Peak	33.30	21.51	54.81	74.00	-19.19

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Personal Results and the sample(s) tested and such sample(s) tested and sample(s) tested and such sample(s) tested and such sample(s) tested and s may be prosecuted to the fullest extent of the law.



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Operation Band Fundamental Frequency Operation Mode

EUT Pol.

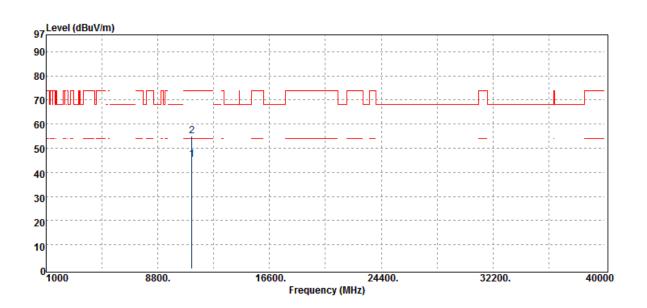
:802.11aB3 :5580 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi. Engineer

:2018-10-02 :23 deg_C / 62 RH

:Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	_
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11160.00	Average	23.91	21.51	45.42	54.00	-8.58
11160.00	Peak	33.44	21.51	54.95	74.00	-19.05

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Operation Band Fundamental Frequency Operation Mode

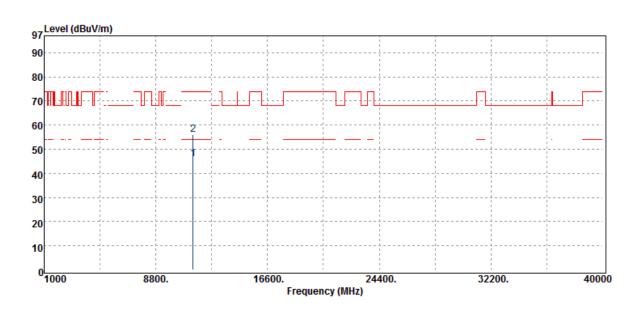
EUT Pol.

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

Test Date :2018-10-02 Temp./Humi. :23 deg_C / 62 RH

Engineer :Wei

Measurement Antenna Pol. :VERTICAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBµV/m	dBµV/m	dB
11400.00	Average	24.37	21.62	45.99	54.00	-8.01
11400.00	Peak	34.51	21.62	56.13	74.00	-17.87

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Personal Results and the sample(s) tested and such sample(s) tested and sample(s) tested and such sample(s) tested and such sample(s) tested and s may be prosecuted to the fullest extent of the law.



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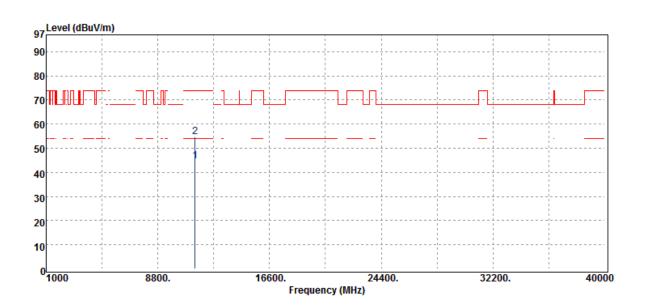
Operation Band Fundamental Frequency Operation Mode EUT Pol.

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

Test Date Temp./Humi. :2018-10-02 :23 deg_C / 62 RH

Engineer :Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	_
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11400.00	Average	22.87	21.62	44.49	54.00	-9.51
11400.00	Peak	32.96	21.62	54.58	74.00	-19.42

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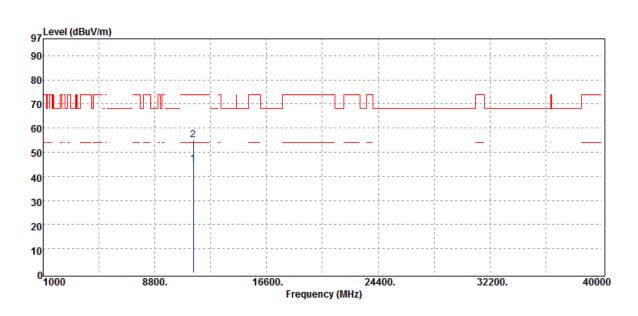
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Radiated Spurious Emission Measurement Result 802.11a, 5725~5850 MHz

Operation Band :802.11aB4 Test Date :2018-10-02

Fundamental Frequency :5745 MHz Temp./Humi. :23 deg_C / 62 RH Operation Mode :Tx CH LOW Engineer :Wei

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



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11490.00	Average	23.27	21.61	44.88	54.00	-9.12
11490.00	Peak	33.51	21.61	55.12	74.00	-18.88

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Operation Band Fundamental Frequency Operation Mode

EUT Pol.

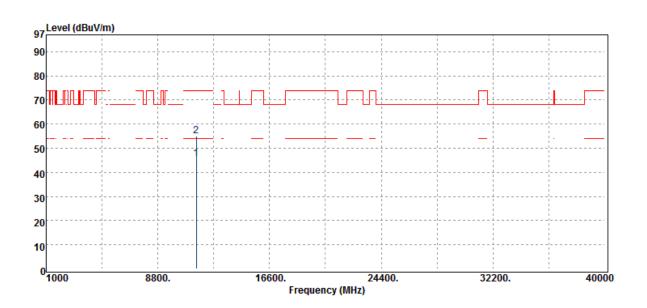
:802.11aB4 :5745 MHz :Tx CH LOW :E2 Plane

Test Date Temp./Humi. Engineer

:2018-10-02 :23 deg_C / 62 RH

:Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@ 3m	_
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11490.00	Average	23.92	21.61	45.53	54.00	-8.47
11490.00	Peak	33.39	21.61	55.00	74.00	-19.00

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Operation Band Fundamental Frequency Operation Mode

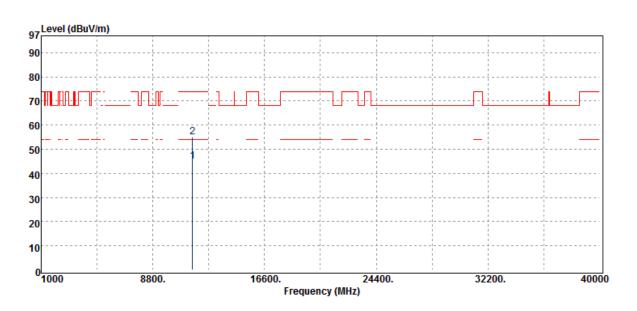
EUT Pol.

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

Test Date :2018-10-02 Temp./Humi. :23 deg_C / 62 RH

Engineer :Wei

Measurement Antenna Pol. :VERTICAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11570.00	Average	23.28	21.66	44.94	54.00	-9.06
11570.00	Peak	33.53	21.66	55.19	74.00	-18.81

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Operation Band Fundamental Frequency Operation Mode

EUT Pol.

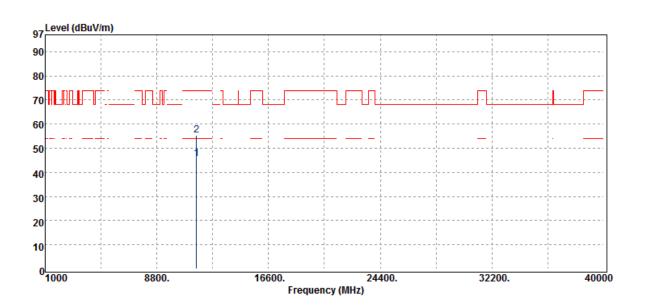
:802.11aB4 :5785 MHz :Tx CH MID :E2 Plane

Test Date Temp./Humi. Engineer

:2018-10-02 :23 deg_C / 62 RH

:Wei

Measurement Antenna Pol. :HORIZONTAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin
	Mode	Reading Level		FS	@3m	-
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBµV/m	dB
11570.00	Average	23.92	21.66	45.58	54.00	-8.42
11570.00	Peak	33.80	21.66	55.46	74.00	-18.54

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Operation Band Fundamental Frequency Operation Mode

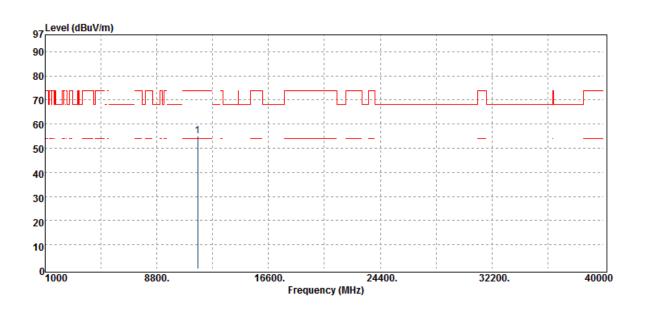
EUT Pol.

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

Test Date :2018-10-02 Temp./Humi. :23 deg_C / 62 RH

Engineer :Wei

Measurement Antenna Pol. :VERTICAL



Freq.	Detector	Spectrum	Factor	Actual	Limit	Margin	
	Mode	Reading Level		FS	@ 3m		
MHz	PK/QP/AV	dΒμV	dB	dBμV/m	dBμV/m	dB	
11650.00	Peak	33.40	21.60	55.00	74.00	-19.00	

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