

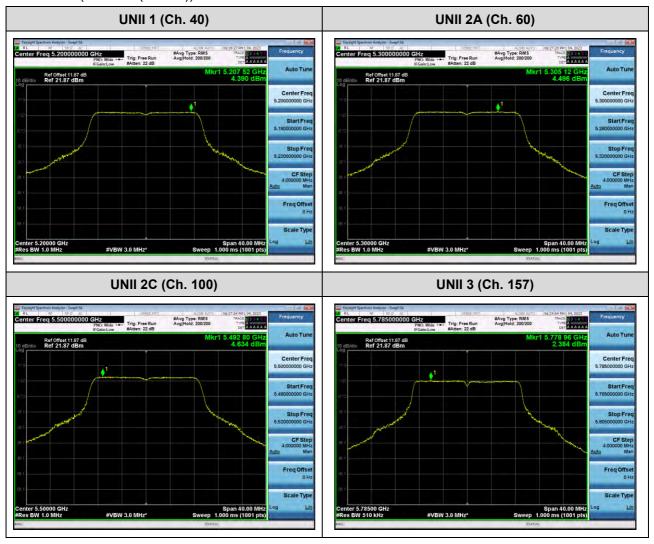
■ Test Plots(802.11n(HT40))



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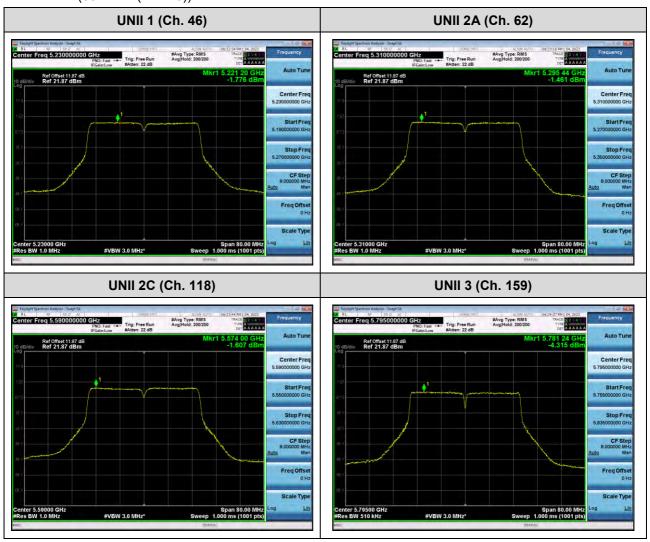
■ Test Plots(802.11ac(VHT20))



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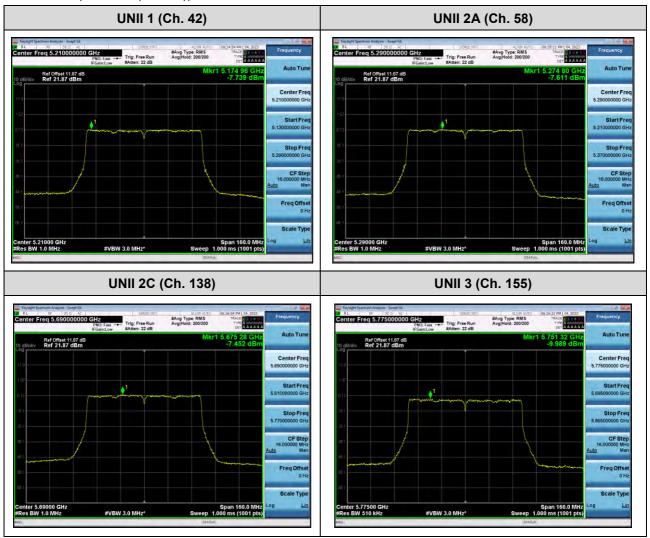
■ Test Plots(802.11ac(VHT40))



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■ Test Plots(802.11ac(VHT80))

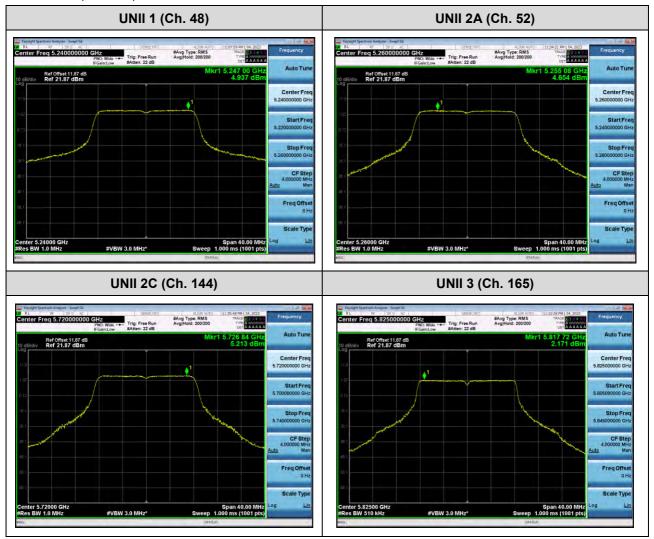


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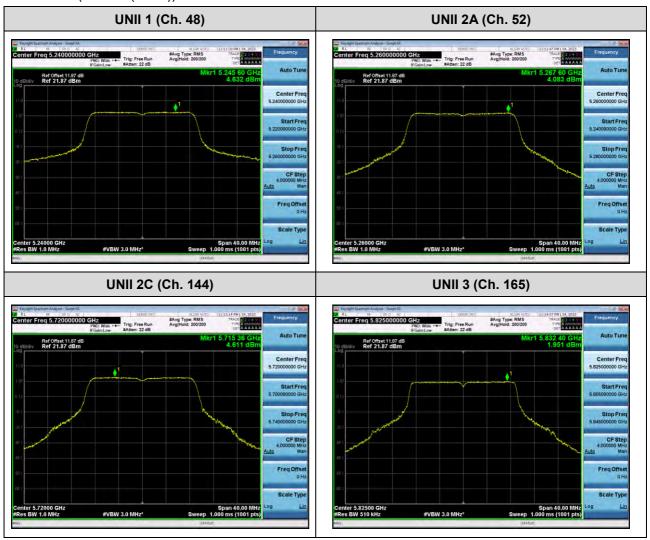
[MIMO Ant.2]

■ Test Plots(802.11a)





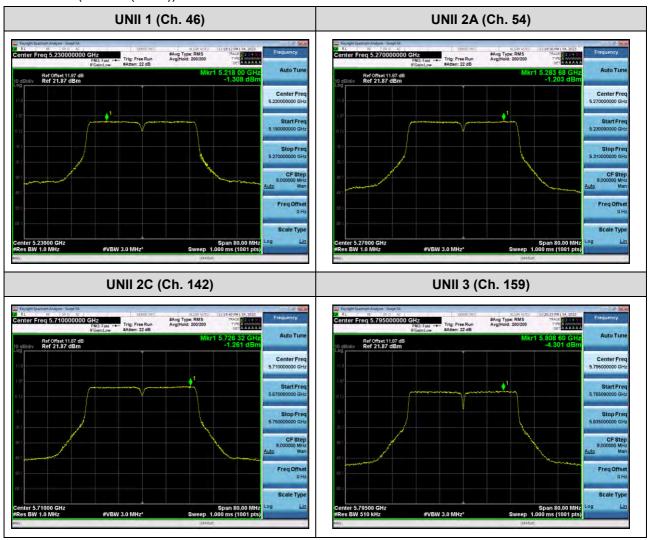
■ Test Plots(802.11n(HT20))



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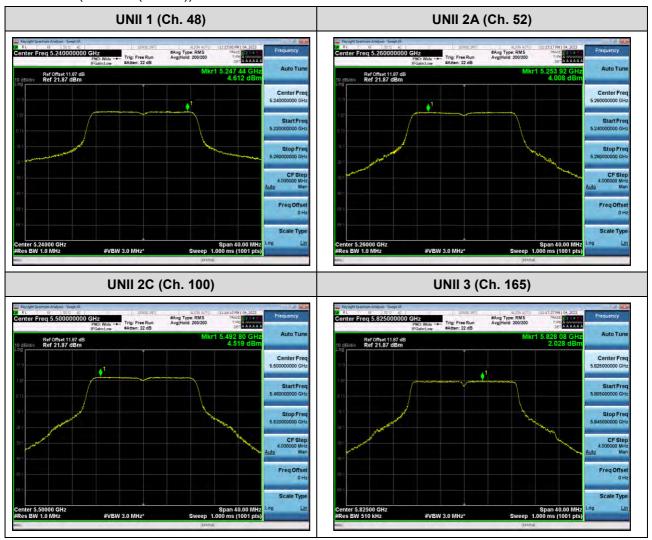
■ Test Plots(802.11n(HT40))



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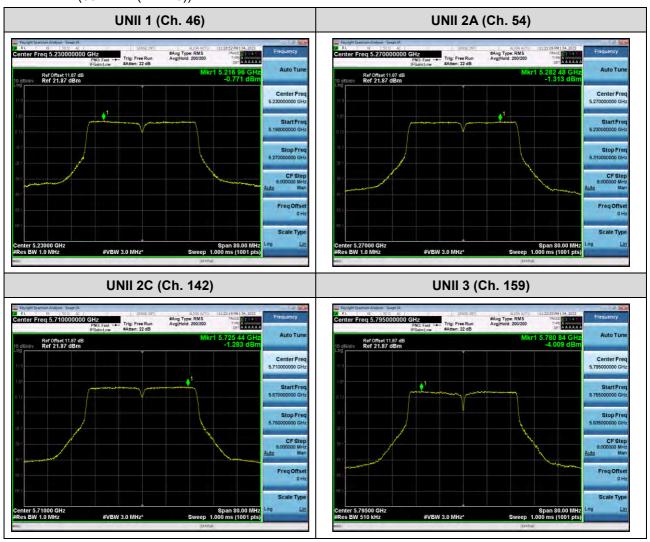
■ Test Plots(802.11ac(VHT20))



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■ Test Plots(802.11ac(VHT40))



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■ Test Plots(802.11ac(VHT80))



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10.6 FREQUENCY STABILITY. 10.6.1 80 MHz BW

[SISO Ant.2]

Startup after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,210,000,000 Hz

CHANNEL: 42

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5210046.93	46.93
100%		-30	5210009.93	9.93
100%		-20	5210091.62	91.62
100%		-10	5210047.37	47.37
100%	3.85	0	5210037.10	37.10
100%		+10	5210098.15	98.15
100%		+30	5210033.36	33.36
100%		+40	5210057.15	57.15
100%		+50	5210007.19	7.19
High	4.4	+20	5210007.08	7.08
Low	3.65	+20	5210019.96	19.96

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,290,000,000 Hz

CHANNEL: 58

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5290022.16	22.16
100%		-30	5290037.50	37.50
100%		-20	5290004.51	4.51
100%		-10	5290021.74	21.74
100%	3.85	0	5290080.88	80.88
100%		+10	5290061.40	61.4
100%		+30	5290001.45	1.45
100%		+40	5290034.31	34.31
100%		+50	5290011.06	11.06
High	4.4	+20	5210041.91	41.91
Low	3.65	+20	5210038.32	38.32

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 1 3 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2C
OPERATING FREQUENCY: 5,530,000,000 Hz
CHANNEL: 106
REFERENCE VOLTAGE: 3.85 VDC

Voltage **Power** Temp. Frequency Frequency (VDC) Error (kHz) (%) (°C) (kHz) 100% +20(Ref) 5530060.98 60.98 100% -30 5530016.83 16.83 100% -20 5530093.16 93.16 -10 100% 5530033.95 33.95 3.85 0 100% 49.28 5530049.28 100% +10 5530071.94 71.94 +30 87.81 100% 5530087.81 100% +40 5530049.47 49.47 100% +50 5530083.28 83.28 +20 High 4.4 5210063.11 63.11 Low 3.65 +20 5210005.49 5.49

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 1 4 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,775,000,000 Hz

CHANNEL: 155

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5775085.94	85.94
100%		-30	5775043.45	43.45
100%		-20	5775004.94	4.94
100%		-10	5775009.69	9.69
100%	3.85	0	5775088.84	88.84
100%		+10	5775015.60	15.6
100%		+30	5775047.48	47.48
100%		+40	5775083.75	83.75
100%		+50	5775019.57	19.57
High	4.4	+20	5210090.57	90.57
Low	3.65	+20	5210087.73	87.73

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 1 5 / 231 **HCT CO.,LTD.**



2 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,210,000,000 Hz

CHANNEL: 42

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5210080.37	80.37
100%		-30	5210062.03	62.03
100%		-20	5210063.39	63.39
100%		-10	5210014.81	14.81
100%	3.85	0	5210073.13	73.13
100%		+10	5210063.67	63.67
100%		+30	5210009.07	9.07
100%		+40	5210062.91	62.91
100%		+50	5210042.08	42.08
High	4.4	+20	5210008.94	8.94
Low	3.65	+20	5210014.67	14.67

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 1 6 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,290,000,000 Hz

CHANNEL: 58

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5290020.12	20.12
100%		-30	5290014.97	14.97
100%		-20	5290063.97	63.97
100%		-10	5290059.67	59.67
100%	3.85	0	5290032.57	32.57
100%		+10	5290047.42	47.42
100%		+30	5290028.09	28.09
100%		+40	5290073.44	73.44
100%		+50	5290072.05	72.05
High	4.4	+20	5210067.76	67.76
Low	3.65	+20	5210015.08	15.08

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 1 7 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2C
OPERATING FREQUENCY: 5,530,000,000 Hz
CHANNEL: 106

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5530016.68	16.68
100%		-30	5530038.26	38.26
100%		-20	5530085.97	85.97
100%		-10	5530092.39	92.39
100%	3.85	0	5530024.84	24.84
100%		+10	5530091.39	91.39
100%		+30	5530094.97	94.97
100%		+40	5530093.19	93.19
100%		+50	5530050.35	50.35
High	4.4	+20	5210010.14	10.14
Low	3.65	+20	5210051.59	51.59

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 1 8 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,775,000,000 Hz

CHANNEL: 155

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5775015.36	15.36
100%		-30	5775040.84	40.84
100%		-20	5775042.87	42.87
100%		-10	5775068.26	68.26
100%	3.85	0	5775004.29	4.29
100%		+10	5775041.69	41.69
100%		+30	5775065.08	65.08
100%		+40	5775068.16	68.16
100%		+50	5775042.09	42.09
High	4.4	+20	5210097.90	97.90
Low	3.65	+20	5210036.87	36.87

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 1 9 / 231 **HCT CO.,LTD.**



5 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,210,000,000 Hz

CHANNEL: 42

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5210035.35	35.35
100%		-30	5210084.57	84.57
100%		-20	5210099.93	99.93
100%		-10	5210062.47	62.47
100%	3.85	0	5210053.34	53.34
100%		+10	5210044.70	44.70
100%		+30	5210055.47	55.47
100%		+40	5210076.62	76.62
100%		+50	5210022.42	22.42
High	4.4	+20	5210037.51	37.51
Low	3.65	+20	5210066.72	66.72

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 2 0 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,290,000,000 Hz

CHANNEL: 58

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5290055.91	55.91
100%		-30	5290083.09	83.09
100%		-20	5290008.63	8.63
100%		-10	5290099.95	99.95
100%	3.85	0	5290074.71	74.71
100%		+10	5290082.47	82.47
100%		+30	5290068.87	68.87
100%		+40	5290072.37	72.37
100%		+50	5290028.13	28.13
High	4.4	+20	5210024.11	24.11
Low	3.65	+20	5210018.98	18.98

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 2 1 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2C

OPERATING FREQUENCY: 5,530,000,000 Hz

CHANNEL: 106

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5530055.37	55.37
100%		-30	5530016.63	16.63
100%		-20	5530009.61	9.61
100%		-10	5530086.74	86.74
100%	3.85	0	5530033.63	33.63
100%		+10	5530087.25	87.25
100%		+30	5530028.51	28.51
100%		+40	5530038.44	38.44
100%		+50	5530073.18	73.18
High	4.4	+20	5210043.82	43.82
Low	3.65	+20	5210054.11	54.11

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 2 2 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,775,000,000 Hz

CHANNEL: 155

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5775069.99	69.99
100%		-30	5775015.89	15.89
100%		-20	5775030.34	30.34
100%		-10	5775083.34	83.34
100%	3.85	0	5775051.58	51.58
100%		+10	5775009.67	9.67
100%		+30	5775045.34	45.34
100%		+40	5775043.38	43.38
100%		+50	5775056.44	56.44
High	4.4	+20	5210092.53	92.53
Low	3.65	+20	5210059.19	59.19

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 2 3 / 231 **HCT CO.,LTD.**



10 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,210,000,000 Hz

CHANNEL: 42

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5210053.55	53.55
100%		-30	5210045.82	45.82
100%		-20	5210052.12	52.12
100%		-10	5210038.61	38.61
100%	3.85	0	5210096.75	96.75
100%		+10	5210016.70	16.70
100%		+30	5210091.84	91.84
100%		+40	5210060.11	60.11
100%		+50	5210097.82	97.82
High	4.4	+20	5210073.86	73.86
Low	3.65	+20	5210077.56	77.56

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 2 4 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,290,000,000 Hz

CHANNEL: 58

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5290005.10	5.10
100%		-30	5290023.94	23.94
100%		-20	5290082.14	82.14
100%		-10	5290039.73	39.73
100%	3.85	0	5290053.33	53.33
100%		+10	5290053.94	53.94
100%		+30	5290022.08	22.08
100%		+40	5290014.66	14.66
100%		+50	5290021.04	21.04
High	4.4	+20	5210095.82	95.82
Low	3.65	+20	5210059.33	59.33

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 2 5 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2C
OPERATING FREQUENCY: 5,530,000,000 Hz
CHANNEL: 106
REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5530068.85	68.85
100%		-30	5530082.59	82.59
100%		-20	5530071.92	71.92
100%		-10	5530026.30	26.3
100%	3.85	0	5530039.91	39.91
100%		+10	5530029.82	29.82
100%		+30	5530013.76	13.76
100%		+40	5530039.89	39.89
100%		+50	5530096.77	96.77
High	4.4	+20	5210014.60	14.60
Low	3.65	+20	5210076.63	76.63

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 2 6 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,775,000,000 Hz

CHANNEL: 155

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5775046.92	46.92
100%		-30	5775099.57	99.57
100%		-20	5775019.52	19.52
100%		-10	5775088.81	88.81
100%	3.85	0	5775083.61	83.61
100%		+10	5775092.90	92.9
100%		+30	5775004.79	4.79
100%		+40	5775077.11	77.11
100%		+50	5775074.89	74.89
High	4.4	+20	5210049.57	49.57
Low	3.65	+20	5210018.92	18.92

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 2 7 / 231 **HCT CO.,LTD.**



[MIMO Ant.1]

Startup after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,210,000,000 Hz

CHANNEL: 42

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(°C)	(kHz)	Error (kHz)
100%		+20(Ref)	5210063.73	63.73
100%		-30	5210027.38	27.38
100%		-20	5210030.43	30.43
100%		-10	5210089.85	89.85
100%	3.85	0	5210096.22	96.22
100%		+10	5210002.73	2.73
100%		+30	5210062.44	62.44
100%		+40	5210009.30	9.30
100%		+50	5210064.88	64.88
High	4.4	+20	5210042.24	42.24
Low	3.65	+20	5210033.35	33.35

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 2 8 / 231 HCT CO.,LTD.



OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,290,000,000 Hz

CHANNEL: 58

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(°C)	(kHz)	Error (kHz)
100%		+20(Ref)	5290031.74	31.74
100%		-30	5290032.50	32.50
100%		-20	5290091.18	91.18
100%		-10	5290010.41	10.41
100%	3.85	0	5290020.92	20.92
100%		+10	5290067.48	67.48
100%		+30	5290070.71	70.71
100%		+40	5290059.07	59.07
100%		+50	5290060.90	60.90
High	4.4	+20	5210056.54	56.54
Low	3.65	+20	5210022.62	22.62

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 2 9 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2C
OPERATING FREQUENCY: 5,530,000,000 Hz
CHANNEL: 106
REFERENCE VOLTAGE: 3.85 VDC

Voltage **Power** Temp. Frequency Frequency (VDC) Error (kHz) (%) (°C) (kHz) 100% +20(Ref) 5530060.42 60.42 100% -30 5530053.71 53.71 100% -20 5530033.65 33.65 -10 100% 5530096.50 96.5 3.85 0 100% 69.86 5530069.86 100% +10 5530031.63 31.63 +30 7.8 100% 5530007.80 100% +40 5530085.03 85.03 100% +50 5530013.79 13.79 +20 High 4.4 5210078.33 78.33 Low 3.65 +20 5210095.28 95.28

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 3 0 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,775,000,000 Hz

CHANNEL: 155

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(°C)	(kHz)	Error (kHz)
100%		+20(Ref)	5775077.76	77.76
100%		-30	5775023.06	23.06
100%		-20	5775007.11	7.11
100%		-10	5775003.68	3.68
100%	3.85	0	5775072.98	72.98
100%		+10	5775014.87	14.87
100%		+30	5775001.93	1.93
100%		+40	5775041.29	41.29
100%		+50	5775089.92	89.92
High	4.4	+20	5210088.42	88.42
Low	3.65	+20	5210008.24	8.24

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 3 1 / 231 **HCT CO.,LTD.**



2 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,210,000,000 Hz

CHANNEL: 42

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5210030.05	30.05
100%		-30	5210055.24	55.24
100%		-20	5210046.60	46.60
100%		-10	5210015.84	15.84
100%	3.85	0	5210036.99	36.99
100%		+10	5210033.83	33.83
100%		+30	5210089.94	89.94
100%		+40	5210035.85	35.85
100%		+50	5210054.33	54.33
High	4.4	+20	5210025.37	25.37
Low	3.65	+20	5210070.91	70.91

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 3 2 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,290,000,000 Hz

CHANNEL: 58

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5290021.12	21.12
100%		-30	5290044.23	44.23
100%		-20	5290045.07	45.07
100%		-10	5290054.76	54.76
100%	3.85	0	5290052.18	52.18
100%		+10	5290061.18	61.18
100%		+30	5290025.82	25.82
100%		+40	5290075.54	75.54
100%		+50	5290026.55	26.55
High	4.4	+20	5210016.56	16.56
Low	3.65	+20	5210073.42	73.42

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 3 3 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2C
OPERATING FREQUENCY: 5,530,000,000 Hz
CHANNEL: 106
REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5530045.20	45.20
100%		-30	5530014.56	14.56
100%		-20	5530065.31	65.31
100%		-10	5530075.69	75.69
100%	3.85	0	5530079.84	79.84
100%		+10	5530088.99	88.99
100%		+30	5530003.32	3.32
100%		+40	5530042.27	42.27
100%		+50	5530027.51	27.51
High	4.4	+20	5210008.95	8.95
Low	3.65	+20	5210035.77	35.77

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 3 4 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,775,000,000 Hz

CHANNEL: 155

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5775083.51	83.51
100%		-30	5775054.14	54.14
100%		-20	5775007.36	7.36
100%		-10	5775014.10	14.1
100%	3.85	0	5775016.81	16.81
100%		+10	5775003.17	3.17
100%		+30	5775020.19	20.19
100%		+40	5775069.86	69.86
100%		+50	5775005.56	5.56
High	4.4	+20	5210077.48	77.48
Low	3.65	+20	5210046.12	46.12

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 3 5 / 231 **HCT CO.,LTD.**



5 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,210,000,000 Hz

CHANNEL: 42

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5210033.47	33.47
100%		-30	5210064.89	64.89
100%		-20	5210011.11	11.11
100%		-10	5210012.91	12.91
100%	3.85	0	5210020.50	20.50
100%		+10	5210004.12	4.12
100%		+30	5210096.07	96.07
100%		+40	5210081.66	81.66
100%		+50	5210082.13	82.13
High	4.4	+20	5210034.59	34.59
Low	3.65	+20	5210081.61	81.61

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 3 6 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,290,000,000 Hz

CHANNEL: 58

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5290048.52	48.52
100%]	-30	5290042.06	42.06
100%		-20	5290020.97	20.97
100%		-10	5290043.28	43.28
100%	3.85	0	5290090.28	90.28
100%		+10	5290058.37	58.37
100%		+30	5290007.40	7.4
100%]	+40	5290079.66	79.66
100%		+50	5290030.22	30.22
High	4.4	+20	5210094.89	94.89
Low	3.65	+20	5210083.76	83.76

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 3 7 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2C
OPERATING FREQUENCY: 5,530,000,000 Hz
CHANNEL: 106

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5530054.63	54.63
100%		-30	5530094.29	94.29
100%		-20	5530041.20	41.2
100%		-10	5530005.21	5.21
100%	3.85	0	5530013.10	13.1
100%		+10	5530017.05	17.05
100%		+30	5530005.59	5.59
100%		+40	5530023.66	23.66
100%		+50	5530049.17	49.17
High	4.4	+20	5210019.41	19.41
Low	3.65	+20	5210019.68	19.68

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 3 8 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,775,000,000 Hz

CHANNEL: 155

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5775076.79	76.79
100%		-30	5775094.11	94.11
100%		-20	5775094.37	94.37
100%		-10	5775053.78	53.78
100%	3.85	0	5775008.95	8.95
100%		+10	5775065.92	65.92
100%		+30	5775093.47	93.47
100%		+40	5775060.38	60.38
100%		+50	5775021.51	21.51
High	4.4	+20	5210023.04	23.04
Low	3.65	+20	5210047.52	47.52

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 3 9 / 231 **HCT CO.,LTD.**



10 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,210,000,000 Hz

CHANNEL: 42

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5210018.28	18.28
100%		-30	5210056.18	56.18
100%		-20	5210057.56	57.56
100%		-10	5210016.19	16.19
100%	3.85	0	5210021.46	21.46
100%		+10	5210021.78	21.78
100%		+30	5210071.13	71.13
100%		+40	5210029.39	29.39
100%		+50	5210060.87	60.87
High	4.4	+20	5210065.22	65.22
Low	3.65	+20	5210032.19	32.19

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 4 0 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,290,000,000 Hz

CHANNEL: 58

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(°C)	(kHz)	Error (kHz)
100%		+20(Ref)	5290086.91	86.91
100%		-30	5290001.21	1.21
100%		-20	5290086.41	86.41
100%		-10	5290038.61	38.61
100%	3.85	0	5290036.66	36.66
100%		+10	5290001.10	1.1
100%		+30	5290065.51	65.51
100%]	+40	5290009.78	9.78
100%		+50	5290066.76	66.76
High	4.4	+20	5210084.64	84.64
Low	3.65	+20	5210016.98	16.98

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 4 1 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2C
OPERATING FREQUENCY: 5,530,000,000 Hz
CHANNEL: 106

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5530072.36	72.36
100%		-30	5530026.62	26.62
100%		-20	5530083.73	83.73
100%		-10	5530097.22	97.22
100%	3.85	0	5530045.46	45.46
100%		+10	5530083.14	83.14
100%		+30	5530007.04	7.04
100%		+40	5530080.85	80.85
100%		+50	5530043.75	43.75
High	4.4	+20	5210012.21	12.21
Low	3.65	+20	5210088.54	88.54

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 4 2 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,775,000,000 Hz

CHANNEL: 155

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5775050.25	50.25
100%		-30	5775062.42	62.42
100%		-20	5775023.53	23.53
100%		-10	5775029.13	29.13
100%	3.85	0	5775097.77	97.77
100%		+10	5775067.89	67.89
100%		+30	5775090.04	90.04
100%		+40	5775018.48	18.48
100%		+50	5775002.05	2.05
High	4.4	+20	5210092.84	92.84
Low	3.65	+20	5210053.44	53.44

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 4 3 / 231 **HCT CO.,LTD.**



[MIMO Ant.2]

Startup after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,210,000,000 Hz

CHANNEL: 42

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5210020.80	20.80
100%		-30	5210015.99	15.99
100%		-20	5210025.45	25.45
100%		-10	5210077.51	77.51
100%	3.85	0	5210097.60	97.60
100%		+10	5210091.74	91.74
100%		+30	5210085.65	85.65
100%	1	+40	5210027.95	27.95
100%		+50	5210073.11	73.11
High	4.4	+20	5210011.10	11.10
Low	3.65	+20	5210021.34	21.34

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 4 4 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,290,000,000 Hz

CHANNEL: 58

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5290052.10	52.10
100%		-30	5290051.28	51.28
100%		-20	5290078.23	78.23
100%		-10	5290018.53	18.53
100%	3.85	0	5290021.37	21.37
100%		+10	5290091.52	91.52
100%		+30	5290068.99	68.99
100%		+40	5290008.21	8.21
100%		+50	5290014.47	14.47
High	4.4	+20	5210094.56	94.56
Low	3.65	+20	5210072.42	72.42

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 4 5 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2C
OPERATING FREQUENCY: 5,530,000,000 Hz
CHANNEL: 106

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5530018.93	18.93
100%		-30	5530032.75	32.75
100%		-20	5530012.50	12.5
100%		-10	5530073.71	73.71
100%	3.85	0	5530052.95	52.95
100%		+10	5530001.09	1.09
100%		+30	5530087.53	87.53
100%		+40	5530049.79	49.79
100%		+50	5530045.77	45.77
High	4.4	+20	5210099.57	99.57
Low	3.65	+20	5210066.67	66.67

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 4 6 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,775,000,000 Hz

CHANNEL: 155

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(°C)	(kHz)	Error (kHz)
100%		+20(Ref)	5775073.82	73.82
100%		-30	5775022.95	22.95
100%		-20	5775082.88	82.88
100%		-10	5775076.33	76.33
100%	3.85	0	5775042.83	42.83
100%		+10	5775021.63	21.63
100%		+30	5775070.69	70.69
100%		+40	5775005.21	5.21
100%		+50	5775080.66	80.66
High	4.4	+20	5210049.69	49.69
Low	3.65	+20	5210073.04	73.04

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 4 7 / 231 **HCT CO.,LTD.**



2 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,210,000,000 Hz

CHANNEL: 42

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5210040.54	40.54
100%		-30	5210005.06	5.06
100%		-20	5210031.17	31.17
100%		-10	5210009.95	9.95
100%	3.85	0	5210054.48	54.48
100%		+10	5210042.67	42.67
100%		+30	5210013.29	13.29
100%		+40	5210066.84	66.84
100%		+50	5210090.57	90.57
High	4.4	+20	5210081.05	81.05
Low	3.65	+20	5210094.60	94.60

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 4 8 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,290,000,000 Hz

CHANNEL: 58

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5290027.44	27.44
100%		-30	5290040.34	40.34
100%		-20	5290092.96	92.96
100%		-10	5290017.69	17.69
100%	3.85	0	5290015.43	15.43
100%		+10	5290074.63	74.63
100%		+30	5290091.38	91.38
100%		+40	5290085.22	85.22
100%		+50	5290087.82	87.82
High	4.4	+20	5210027.93	27.93
Low	3.65	+20	5210093.32	93.32

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 1 4 9 / 231 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 2C
OPERATING FREQUENCY: 5,530,000,000 Hz
CHANNEL: 106

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5530041.40	41.40
100%		-30	5530011.16	11.16
100%		-20	5530041.14	41.14
100%		-10	5530039.53	39.53
100%	3.85	0	5530066.68	66.68
100%		+10	5530058.93	58.93
100%		+30	5530061.13	61.13
100%		+40	5530039.57	39.57
100%		+50	5530013.82	13.82
High	4.4	+20	5210085.74	85.74
Low	3.65	+20	5210003.87	3.87

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,775,000,000 Hz

CHANNEL: 155

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency	
(%)	(VDC)	(℃)	(kHz)	Error (kHz)	
100%		+20(Ref)	5775084.84	84.84	
100%		-30	5775094.54	94.54	
100%		-20	5775054.88	54.88	
100%		-10	5775040.29	40.29	
100%	3.85	0	5775068.55	68.55	
100%		+10	5775084.51	84.51	
100%		+30	5775081.57	81.57	
100%		+40	5775066.05	66.05	
100%		+50	5775022.12	22.12	
High	4.4	+20	5210080.65	80.65	
Low	3.65	+20	5210069.44	69.44	

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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5 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,210,000,000 Hz

CHANNEL: 42

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(°C)	(kHz)	Error (kHz)
100%		+20(Ref)	5210038.10	38.10
100%		-30	5210080.17	80.17
100%		-20	5210004.85	4.85
100%		-10	5210028.89	28.89
100%	3.85	0	5210095.29	95.29
100%]	+10	5210048.96	48.96
100%		+30	5210065.39	65.39
100%]	+40	5210053.92	53.92
100%		+50	5210093.15	93.15
High	4.4	+20	5210002.49	2.49
Low	3.65	+20	5210024.12	24.12

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,290,000,000 Hz

CHANNEL: 58

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5290007.23	7.23
100%		-30	5290070.35	70.35
100%		-20	5290040.90	40.9
100%		-10	5290071.58	71.58
100%	3.85	0	5290038.16	38.16
100%		+10	5290060.23	60.23
100%		+30	5290053.35	53.35
100%		+40	5290013.77	13.77
100%		+50	5290043.21	43.21
High	4.4	+20	5210036.18	36.18
Low	3.65	+20	5210077.49	77.49

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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OPERATING BAND: UNII Band 2C
OPERATING FREQUENCY: 5,530,000,000 Hz
CHANNEL: 106

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency	
(%)	(VDC)	(℃)	(kHz)	Error (kHz)	
100%		+20(Ref)	5530096.56	96.56	
100%		-30	5530098.23	98.23	
100%		-20	5530072.63	72.63	
100%		-10	5530011.92	11.92	
100%	3.85	0	5530044.79	44.79	
100%		+10	5530005.09	5.09	
100%		+30	5530038.14	38.14	
100%		+40	5530056.96	56.96	
100%		+50	5530052.10	52.10	
High	4.4	+20	5210028.37	28.37	
Low	3.65	+20	5210041.76	41.76	

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,775,000,000 Hz

CHANNEL: 155

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(°C)	(kHz)	Error (kHz)
100%		+20(Ref)	5775035.21	35.21
100%		-30	5775004.65	4.65
100%		-20	5775046.12	46.12
100%		-10	5775010.64	10.64
100%	3.85	0	5775025.77	25.77
100%		+10	5775056.88	56.88
100%		+30	5775097.74	97.74
100%		+40	5775062.54	62.54
100%		+50	5775067.74	67.74
High	4.4	+20	5210072.77	72.77
Low	3.65	+20	5210023.49	23.49

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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10 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,210,000,000 Hz

CHANNEL: 42

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5210018.70	18.70
100%		-30	5210061.95	61.95
100%		-20	5210003.31	3.31
100%		-10	5210034.65	34.65
100%	3.85	0	5210053.34	53.34
100%		+10	5210082.25	82.25
100%		+30	5210025.17	25.17
100%		+40	5210081.43	81.43
100%		+50	5210050.19	50.19
High	4.4	+20	5210098.70	98.70
Low	3.65	+20	5210057.88	57.88

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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OPERATING BAND: UNII Band 2A

OPERATING FREQUENCY: 5,290,000,000 Hz

CHANNEL: 58

REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5290054.50	54.50
100%		-30	5290090.46	90.46
100%		-20	5290012.30	12.3
100%		-10	5290010.71	10.71
100%	3.85	0	5290093.40	93.4
100%		+10	5290081.12	81.12
100%		+30	5290094.28	94.28
100%		+40	5290088.17	88.17
100%		+50	5290094.56	94.56
High	4.4	+20	5210075.84	75.84
Low	3.65	+20	5210016.54	16.54

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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OPERATING BAND: UNII Band 2C
OPERATING FREQUENCY: 5,530,000,000 Hz
CHANNEL: 106

REFERENCE VOLTAGE: 3.85 VDC

Voltage **Power** Temp. Frequency Frequency (VDC) Error (kHz) (%) (°C) (kHz) 100% +20(Ref) 5530075.54 75.54 100% -30 5530069.19 69.19 100% -20 5530068.84 68.84 -10 100% 5530066.94 66.94 3.85 0 100% 51.64 5530051.64 100% +10 5530093.63 93.63 +30 11.34 100% 5530011.34 100% +40 5530088.19 88.19 100% +50 5530040.79 40.79 +20 47.44 High 4.4 5210047.44 Low 3.65 +20 5210007.70 7.70

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,775,000,000 Hz

CHANNEL: 155

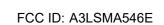
REFERENCE VOLTAGE: 3.85 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	(℃)	(kHz)	Error (kHz)
100%		+20(Ref)	5775020.79	20.79
100%	1	-30	5775049.42	49.42
100%		-20	5775049.42	49.42
100%		-10	5775087.28	87.28
100%	3.85	0	5775051.57	51.57
100%		+10	5775007.64	7.64
100%		+30	5775075.38	75.38
100%		+40	5775091.08	91.08
100%		+50	5775029.55	29.55
High	4.4	+20	5210017.96	17.96
Low	3.65	+20	5210091.82	91.82

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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10.7 STRADDLE CHANNEL 10.7.1 26 dB Bandwidth

[SISO Ant.2]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency	26 dB Bandwidth
		[[MHz]	[MHz]
802.11a				5707.48	17.52
802.11n(HT20)	UNII 2C	5720	144	5704.88	20.12
802.11ac(VHT20)				5704.80	20.20
802.11a				5733.04	8.04
802.11n(HT20)	UNII 3	5720	144	5735.36	10.36
802.11ac(VHT20)				5735.36	10.36

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11n(HT40)	LINIII 00	5710	142	5686.96	38.04
802.11ac(VHT40)	UNII 2C			5686.88	38.12
802.11n(HT40)	1.15.11.0	5710	142	5733.04	8.04
802.11ac(VHT40)	UNII 3			5732.88	7.88

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
902 11ac(\/UT90\	UNII 2C	5690	138	5646.00	79.00
802.11ac(VHT80)	UNII 3	5690	138	5734.16	9.16

Note:

[UNII 2C] 26 dB Bandwidth = 5 725 MHz - Measured Frequency[MHz]

[UNII 3C] 26 dB Bandwidth = Measured Frequency[MHz] - 5 725 MHz

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[MIMO Ant.1]

		Eroguenov		Measured	26 dB
Mode	Band	Frequency [MHz]	Channel	Frequency	Bandwidth
		[NIT12]		[MHz]	[MHz]
802.11a			144	5706.40	18.60
802.11n(HT20)	UNII 2C	5720		5704.68	20.32
802.11ac(VHT20)				5705.08	19.92
802.11a				5734.00	9.00
802.11n(HT20)	UNII 3	5720	144	5735.28	10.28
802.11ac(VHT20)				5735.00	10.00

		Fraguency		Measured	26 dB
Mode	Band	Frequency	Channel	Frequency	Bandwidth
		[MHz]		[MHz]	[MHz]
802.11n(HT40)	UNII 2C	5710	142	5686.48	38.52
802.11ac(VHT40)	UNII 2C			5685.68	39.32
802.11n(HT40)	LIMILO	5710	440	5733.28	8.28
802.11ac(VHT40)	802.11ac(VHT40) UNII 3		142	5732.80	7.80

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
902 11ac(\/UT90\	UNII 2C	5690	138	5646.96	78.04
802.11ac(VHT80)	UNII 3	5690	138	5733.04	8.04

Note:

[UNII 2C] 26 dB Bandwidth = 5 725 MHz - Measured Frequency[MHz] [UNII 3C] 26 dB Bandwidth = Measured Frequency[MHz] - 5 725 MHz

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[MIMO Ant.2]

		Eroguanov		Measured	26 dB
Mode	Band	Frequency [MHz]	Channel	Frequency	Bandwidth
		[1011 12]		[MHz]	[MHz]
802.11a			144	5707.48	17.52
802.11n(HT20)	UNII 2C	5720		5705.68	19.32
802.11ac(VHT20)				5705.48	19.52
802.11a				5733.80	8.80
802.11n(HT20)	UNII 3	5720	144	5734.16	9.16
802.11ac(VHT20)				5735.00	10.00

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11n(HT40)	UNII 2C	5710	142	5687.36	37.64
802.11ac(VHT40)	UNII 2C			5688.00	37.00
802.11n(HT40)	LIMILO	5710 14	440	5731.76	6.76
802.11ac(VHT40)	UNII 3		142	5732.24	7.24

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
902 11aa/\/UT90\	UNII 2C	5690	138	5646.96	78.04
802.11ac(VHT80)	UNII 3	5690	138	5732.88	7.88

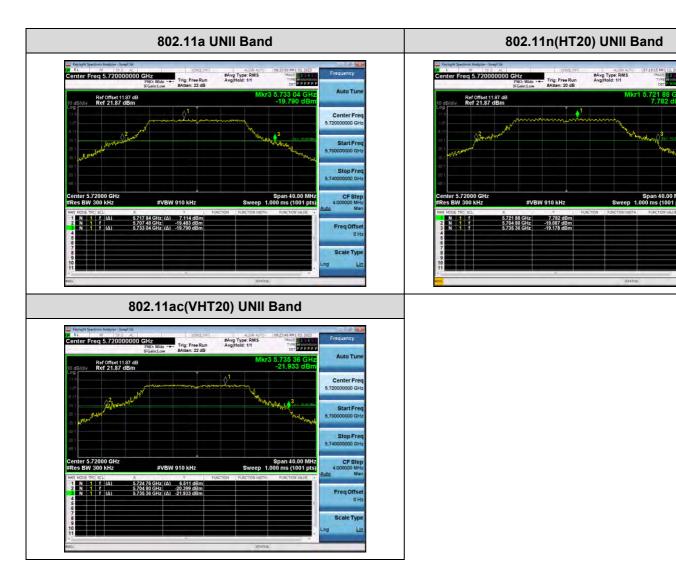
Note:

[UNII 2C] 26 dB Bandwidth = 5 725 MHz - Measured Frequency[MHz] [UNII 3C] 26 dB Bandwidth = Measured Frequency[MHz] - 5 725 MHz

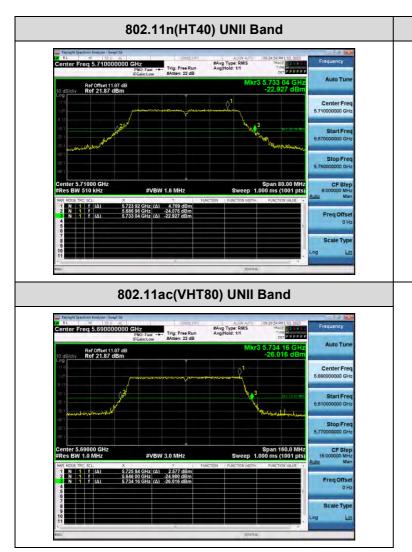
F-TP22-03 (Rev.00) 1 6 2 / 231 **HCT CO.,LTD.**

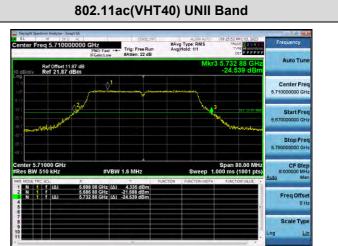


[SISO Ant.2]







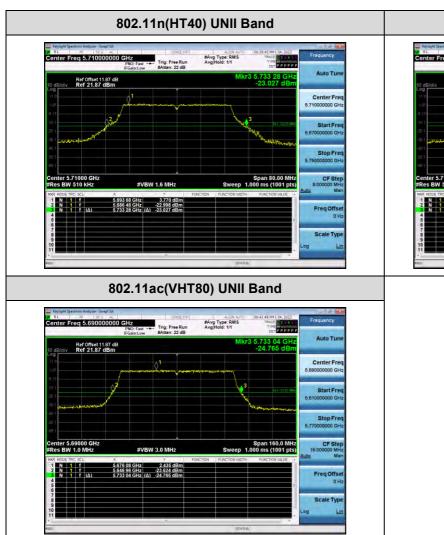




[MIMO Ant.1]









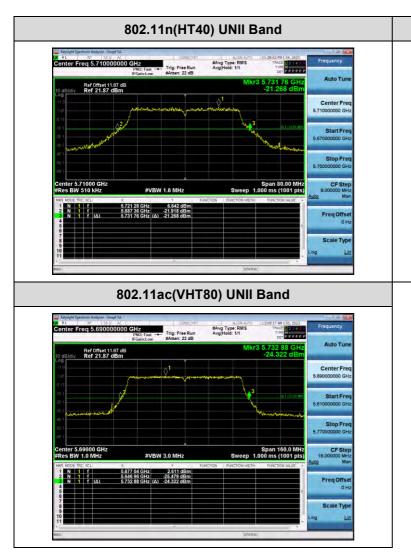


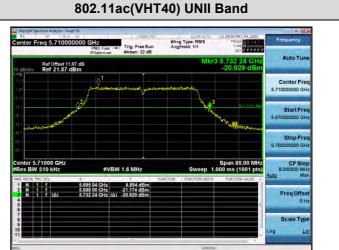
[MIMO Ant.2]













10.7.2 6 dB Bandwidth

Note:

6 dB Bandwidth = Measured Frequency[MHz] - 5 725MHz

[SISO Ant.2]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11a				5728.28	3.28	> 0.5
802.11n(HT20)	UNII 3	5720	144	5728.80	3.80	> 0.5
802.11ac(VHT20)				5728.80	3.80	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT40)	LIMII 2	5710	142	5728.24	3.24	> 0.5
802.11ac(VHT40)	UNII 3	5710	142	5728.24	3.24	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11ac(VHT80)	UNII 3	5690	138	5728.24	3.24	> 0.5

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[MIMO Ant.1]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11a				5728.20	3.20	> 0.5
802.11n(HT20)	UNII 3	5720	144	5728.80	3.80	> 0.5
802.11ac(VHT20)				5728.80	3.80	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT40)	LIMILO	5710	140	5728.24	3.24	> 0.5
802.11ac(VHT40)	UNII 3	5710	142	5728.24	3.24	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11ac(VHT80)	UNII 3	5690	138	5728.24	3.24	> 0.5

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[MIMO Ant.2]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11a				5728.20	3.20	> 0.5
802.11n(HT20)	UNII 3	5720	144	5728.84	3.84	> 0.5
802.11ac(VHT20)				5728.80	3.80	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT40)	UNII 3	5710	142	5728.24	3.24	> 0.5
802.11ac(VHT40)				5728.24	3.24	> 0.5

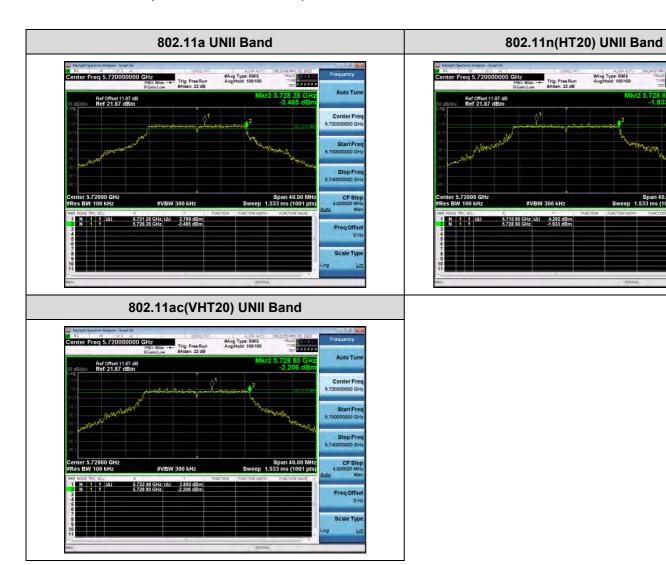
Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11ac(VHT80)	UNII 3	5690	138	5728.24	3.24	> 0.5

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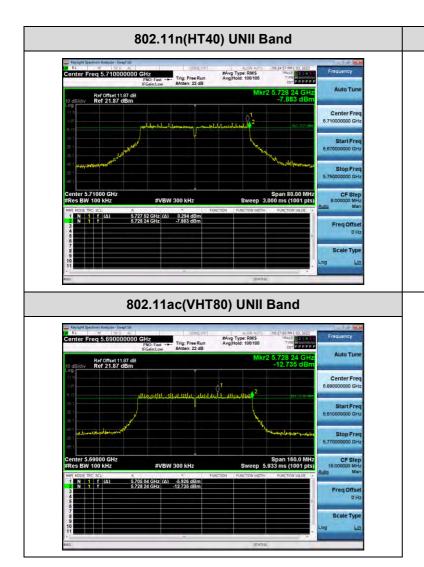


[SISO Ant.2]

■ Test Plots(Straddle 6 dB Bandwidth)



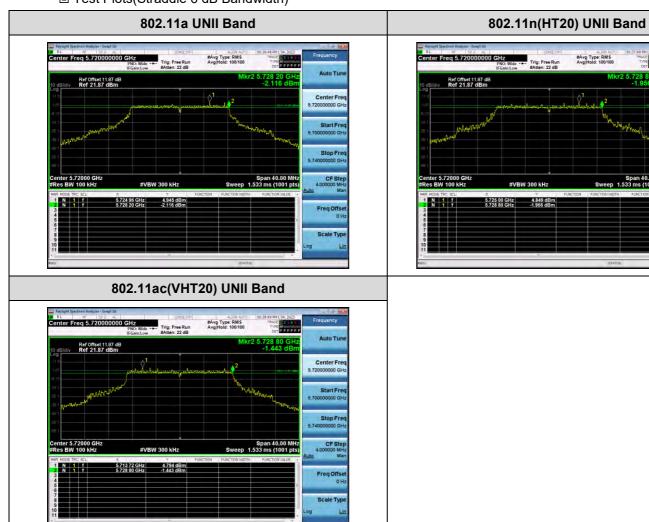




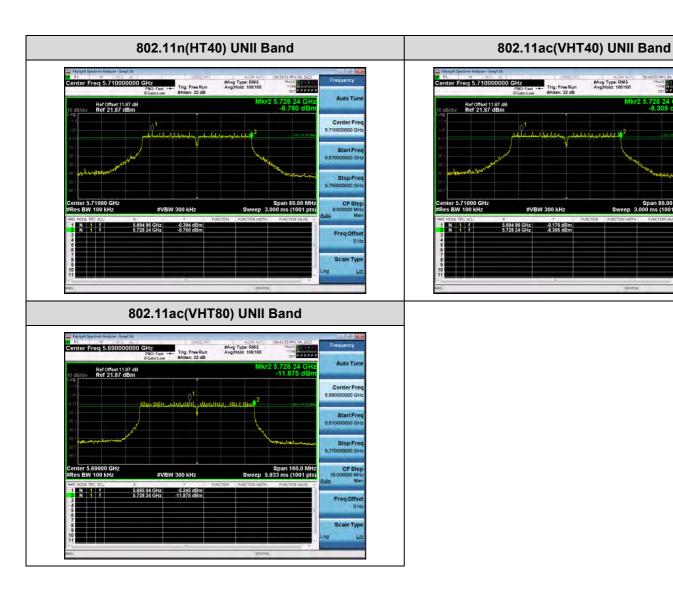


[MIMO Ant.1]

■ Test Plots(Straddle 6 dB Bandwidth)



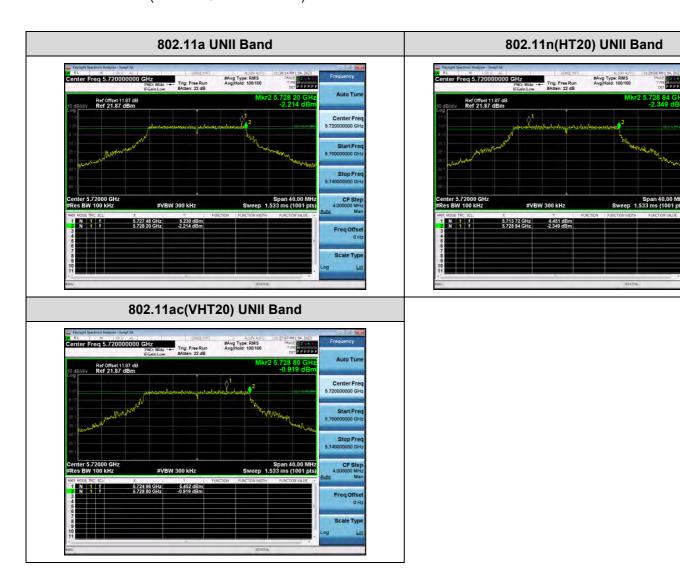




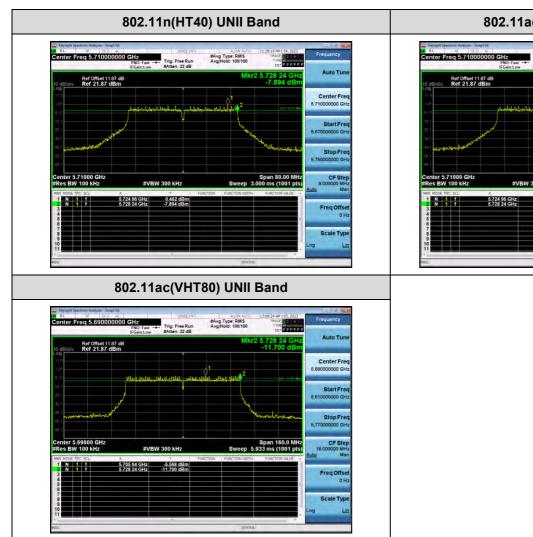


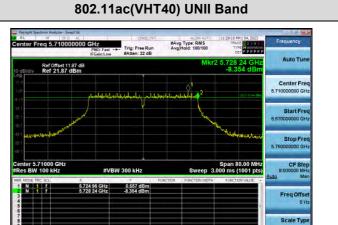
[MIMO Ant.2]

■ Test Plots(Straddle 6 dB Bandwidth)











10.7.3 Output Power

[SISO Ant.2]

Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
802.11a	5720		14.45	0.379	14.83	23.44	6 Mbps
802.11n(HT20)	(UNII 2C	144	14.30	0.374	14.67	23.98	MCS0
802.11ac(VHT20)	Band)		14.41	0.372	14.79	23.98	MCS0
802.11a	5720		8.49	0.379	8.87	30.00	6 Mbps
802.11n(HT20)	(UNII 3	144	8.81	0.374	9.19	30.00	MCS0
802.11ac(VHT20)	Band)		9.07	0.372	9.45	30.00	MCS0

Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT40)	5710 (UNII 2C	142	13.34	0.654	14.00	23.98	MCS0
802.11ac(VHT40)	Band)	142	13.32	0.707	14.03	23.98	MCS0
802.11n(HT40)	5710	142	3.40	0.654	4.05	30.00	MCS0
802.11ac(VHT40)	(UNII 3 Band)	142	3.62	0.707	4.33	30.00	MCS0

Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
	5690						
	(UNII 2C	138	9.65	1.321	10.97	23.98	MCS0
000 4455(V/UT00)	Band)						
802.11ac(VHT80)	5690						
	(UNII 3	138	-3.40	1.321	-2.08	30.00	MCS0
	Band)						

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[MIMO Ant.1]

Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
802.11a	5720		14.80	0.379	15.18	23.70	6 Mbps
802.11n(HT20)	(UNII 2C	144	14.70	0.575	15.27	23.98	MCS8
802.11ac(VHT20)	Band)		14.55	0.680	15.23	23.98	MCS0
802.11a	5720		8.89	0.379	9.27	30.00	6 Mbps
802.11n(HT20)	(UNII 3	144	9.25	0.575	9.82	30.00	MCS8
802.11ac(VHT20)	Band)		9.15	0.680	9.83	30.00	MCS0

Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT40)	5710	140	12.86	1.243	14.11	23.98	MCS8
802.11ac(VHT40)	(UNII 2C Band)	142	12.52	1.321	13.84	23.98	MCS0
802.11n(HT40)	5710	140	2.81	1.243	4.06	30.00	MCS8
802.11ac(VHT40)	(UNII 3 Band)	142	2.72	1.321	4.04	30.00	MCS0

Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
	5690						
	(UNII 2C	138	9.75	2.081	11.83	23.98	MCS0
902 11aa/\/UT90\	Band)						
802.11ac(VHT80)	5690						
	(UNII 3	138	-3.55	2.081	-1.47	30.00	MCS0
	Band)						

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[MIMO Ant.2]

Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
802.11a	5720		15.17	0.379	15.55	23.44	6 Mbps
802.11n(HT20)	(UNII 2C	144	14.86	0.575	15.43	23.86	MCS8
802.11ac(VHT20)	Band)		14.81	0.680	15.49	23.90	MCS0
802.11a	5720		9.25	0.379	9.63	30.00	6 Mbps
802.11n(HT20)	(UNII 3	144	9.41	0.575	9.98	30.00	MCS8
802.11ac(VHT20)	Band)		9.40	0.680	10.08	30.00	MCS0

Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT40)	5710 (UNII 2C	140	12.79	1.243	14.03	23.98	MCS8
802.11ac(VHT40)	Band)	142	12.81	1.321	14.13	23.98	MCS0
802.11n(HT40)	5710	142	2.81	1.243	4.05	30.00	MCS8
802.11ac(VHT40)	(UNII 3 Band)	142	2.81	1.321	4.13	30.00	MCS0

Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
	5690						
	(UNII 2C	138	9.11	2.081	11.19	23.98	MCS0
902 11aa/\/UT90\	Band)						
802.11ac(VHT80)	5690						
	(UNII 3	138	-4.11	2.081	-2.03	30.00	MCS0
	Band)						

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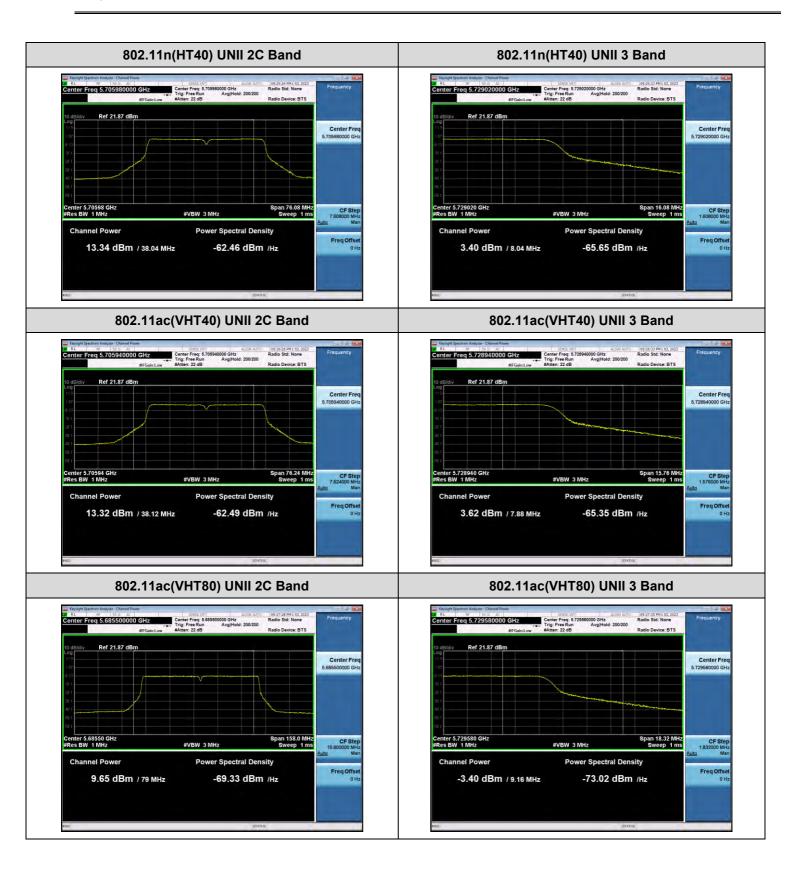


[SISO Ant.2]



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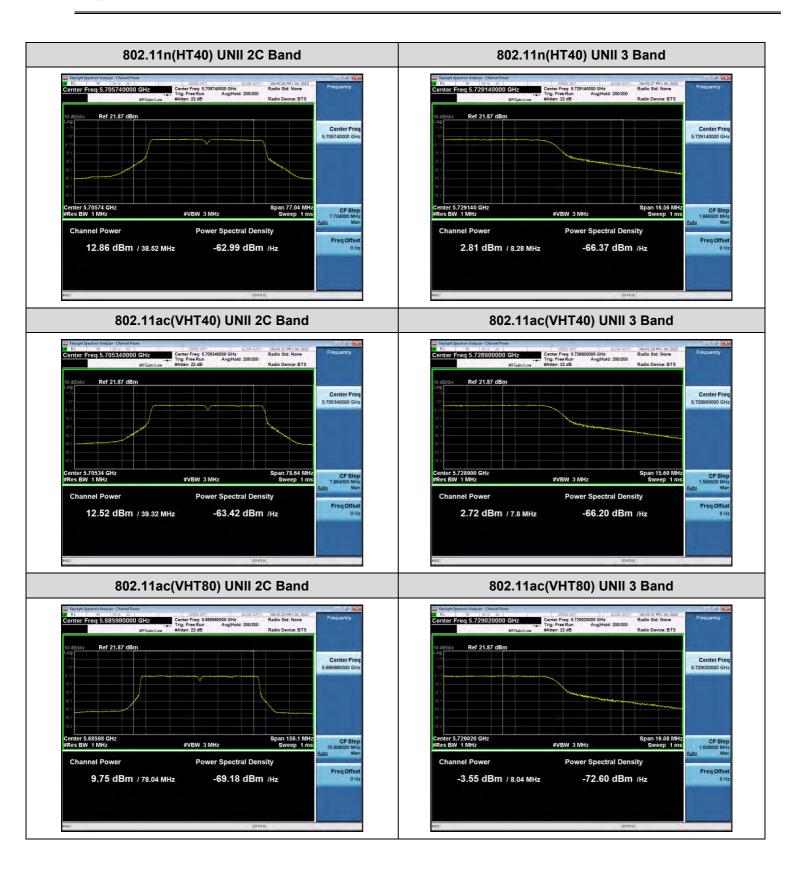
[MIMO Ant.1]

■ Test Plots



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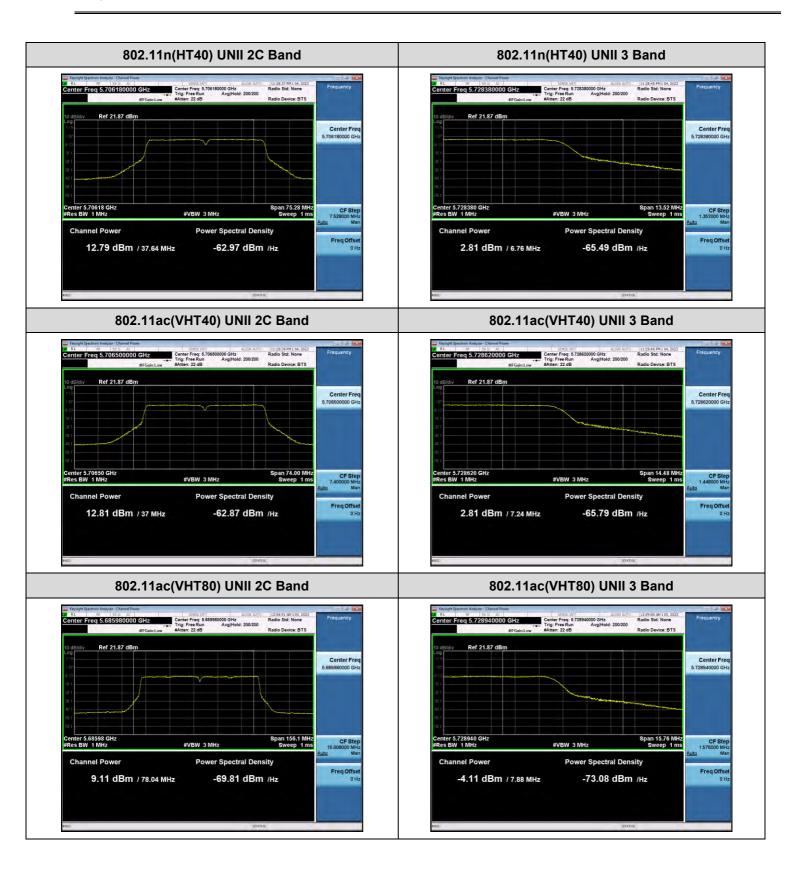
[MIMO Ant.2]

■ Test Plots



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10.7.4 Power Spectral Density

[SISO Ant.2]

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11a	5720		3.933	0.379	4.313	11 dBm/	6 Mbps
802.11n(HT20)	(UNII 2C	144	3.771	0.374	4.145		MCS0
802.11ac(VHT20)	Band)		3.987	0.372	4.359	MHz	MCS0
802.11a	5720		1.202	0.379	1.582	20 dDm/	6 Mbps
802.11n(HT20)	(UNII 3	144	0.744	0.374	1.118	30 dBm/	MCS0
802.11ac(VHT20)	Band)		0.925	0.372	1.297	500 kHz	MCS0

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT40)	5710 (UNII 2C	142	-0.726	0.654	-0.071	11 dBm/	MCS0
802.11ac(VHT40)	Band)	142	-0.863	0.707	-0.155	MHz	MCS0
802.11n(HT40)	5710	140	-3.758	0.654	-3.103	30 dBm/	MCS0
802.11ac(VHT40)	(UNII 3 Band)	142	-3.944	0.707	-3.237	500 kHz	MCS0

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
200.44 (A/UTOO)	5690 (UNII 2C Band)	138	-7.931	1.321	-6.610	11 dBm/ MHz	MCS0
802.11ac(VHT80)	5690 (UNII 3 Band)	138	-10.781	1.321	-9.460	30 dBm/ 500 kHz	MCS0

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[MIMO Ant.1]

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11a	5720		4.459	0.379	4.838	11 dBm/	6 Mbps
802.11n(HT20)	(UNII 2C	144	4.274	0.575	4.849	MHz	MCS8
802.11ac(VHT20)	Band)		3.988	0.680	4.668	IVI□∠	MCS0
802.11a	5720		1.582	0.379	1.961	20 dD/	6 Mbps
802.11n(HT20)	(UNII 3	144	1.303	0.575	1.878	30 dBm/	MCS8
802.11ac(VHT20)	Band)		0.873	0.680	1.553	500 kHz	MCS0

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT40)	5710	140	-1.471	1.243	-0.228	11 dBm/	MCS8
802.11ac(VHT40)	(UNII 2C Band)	142	-1.549	1.321	-0.228	MHz	MCS0
802.11n(HT40)	5710	440	-4.350	1.243	-3.107	30 dBm/	MCS8
802.11ac(VHT40)	(UNII 3 Band)	142	-4.800	1.321	-3.478	500 kHz	MCS0

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
902 44aa(\/\UT90\)	5690 (UNII 2C Band)	138	-7.735	2.081	-5.655	11 dBm/ MHz	MCS0
802.11ac(VHT80)	5690 (UNII 3 Band)	138	-10.874	2.081	-8.793	30 dBm/ 500 kHz	MCS0

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[MIMO Ant.2]

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11a	5720		4.851	0.379	5.231	11 dBm/	6 Mbps
802.11n(HT20)	(UNII 2C	144	4.383	0.575	4.958	MHz	MCS8
802.11ac(VHT20)	Band)		4.253	0.680	4.933	IVITZ	MCS0
802.11a	5720		2.050	0.379	2.429	20 dD/	6 Mbps
802.11n(HT20)	(UNII 3	144	1.384	0.575	1.959	30 dBm/	MCS8
802.11ac(VHT20)	Band)		1.426	0.680	2.106	500 kHz	MCS0

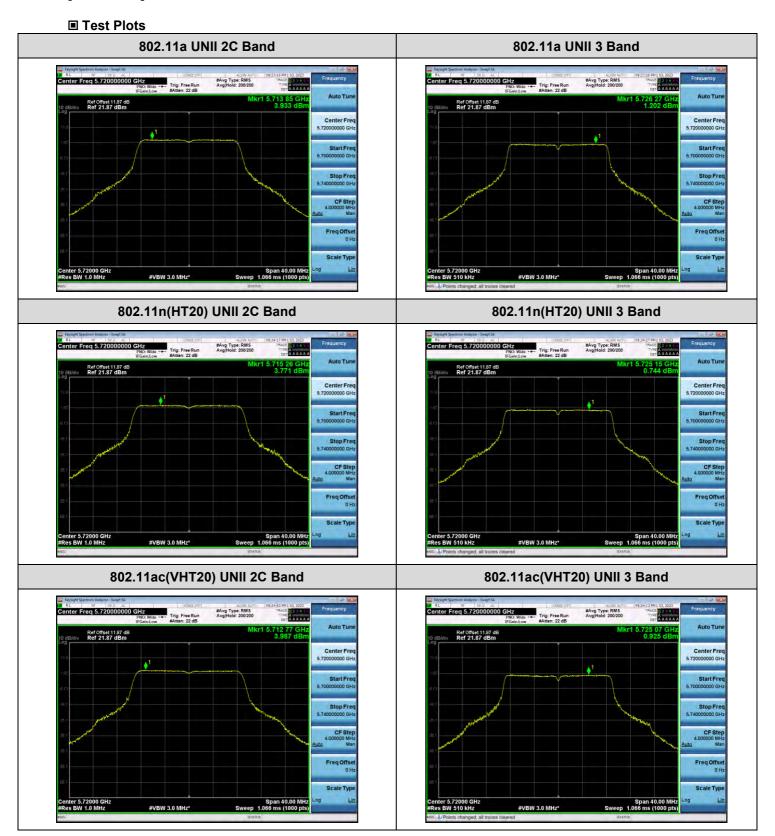
Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT40)	5710	140	-1.327	1.243	-0.084	11 dBm/	MCS8
802.11ac(VHT40)	(UNII 2C Band)	142	-1.256	1.321	0.065	MHz	MCS0
802.11n(HT40)	5710	440	-4.043	1.243	-2.799	30 dBm/	MCS8
802.11ac(VHT40)	(UNII 3 Band)	142	-4.208	1.321	-2.887	500 kHz	MCS0

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
902 44aa(\/\UT90\)	5690 (UNII 2C Band)	138	-8.209	2.081	-6.129	11 dBm/ MHz	MCS0
802.11ac(VHT80)	5690 (UNII 3 Band)	138	-11.186	2.081	-9.106	30 dBm/ 500 kHz	MCS0

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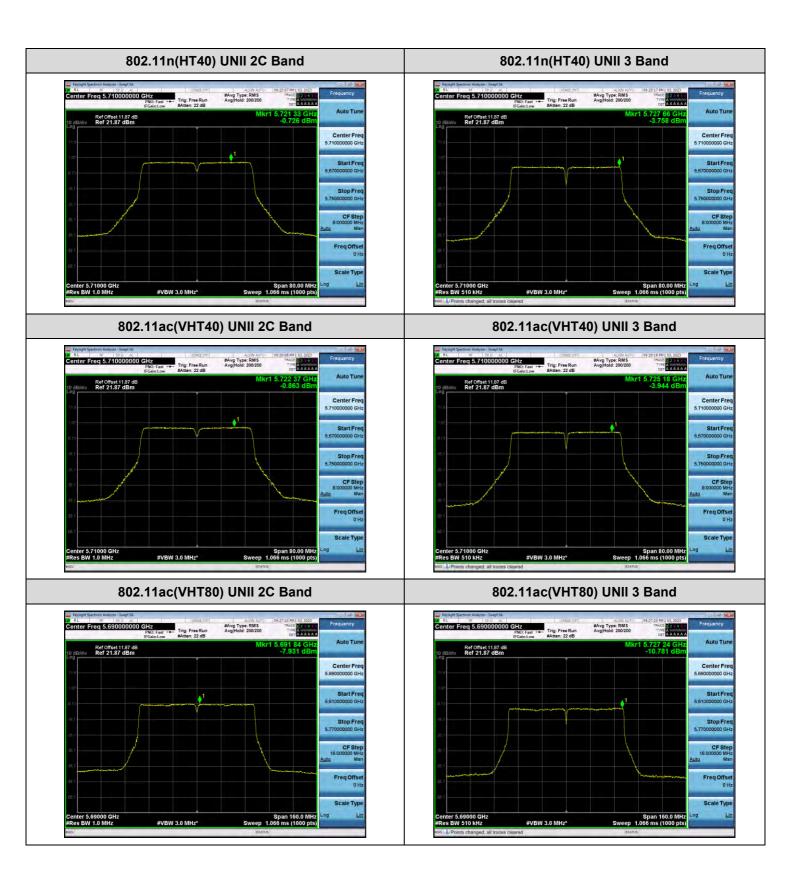


[SISO Ant.2]



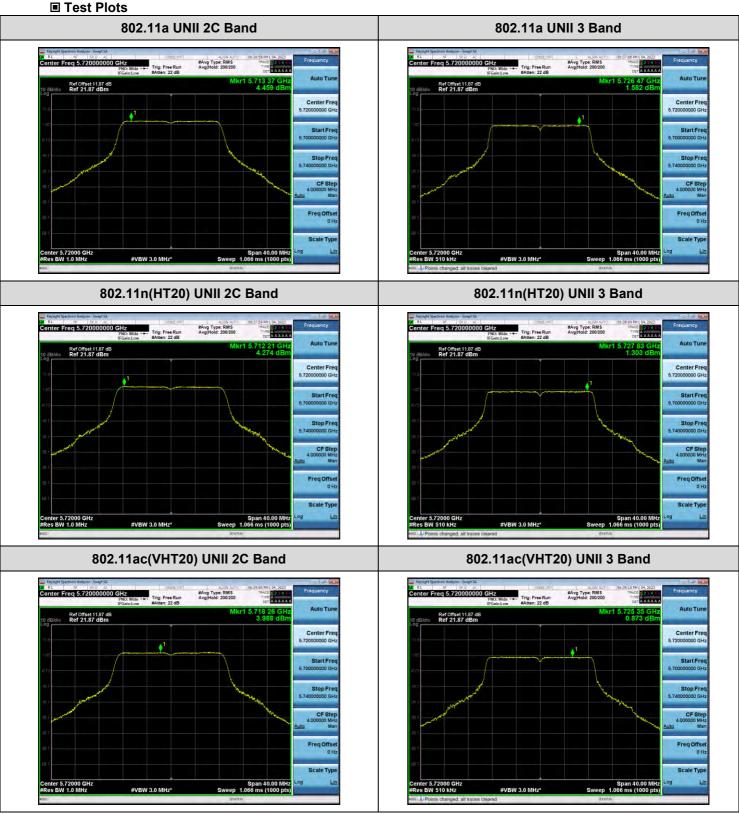
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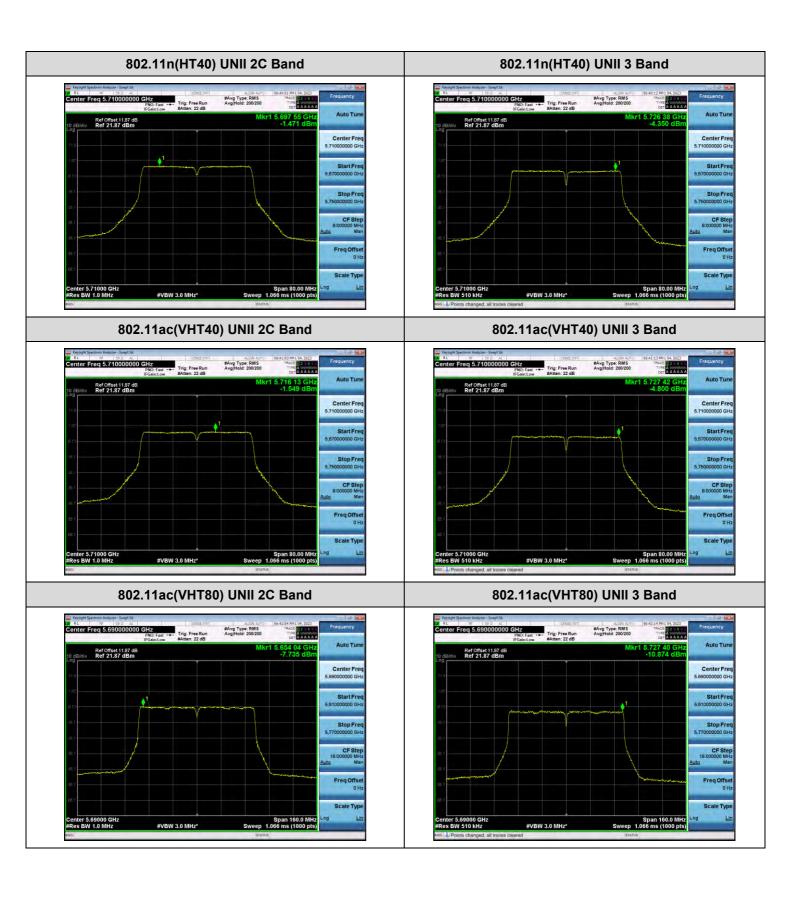


[MIMO Ant.1]



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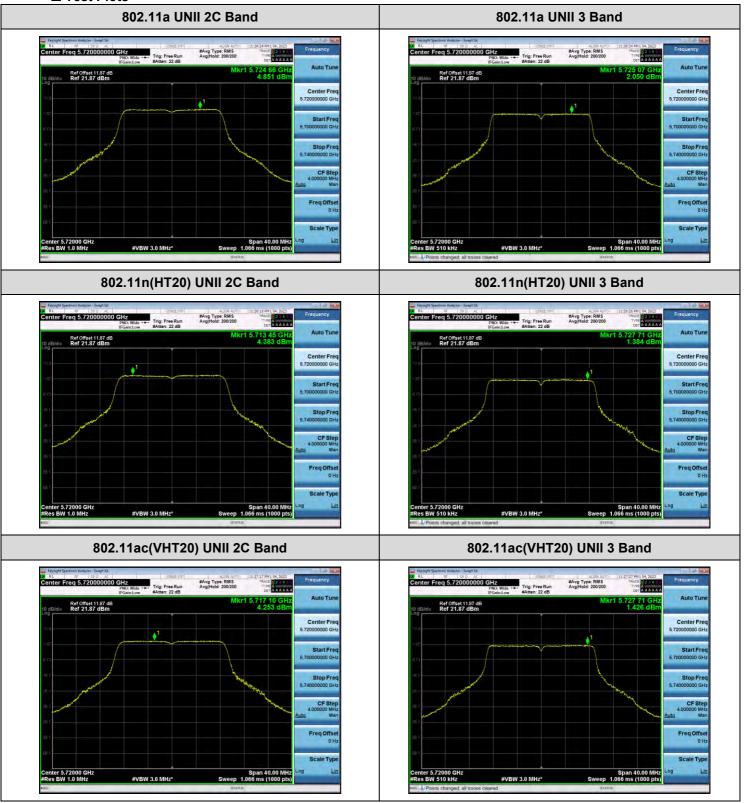






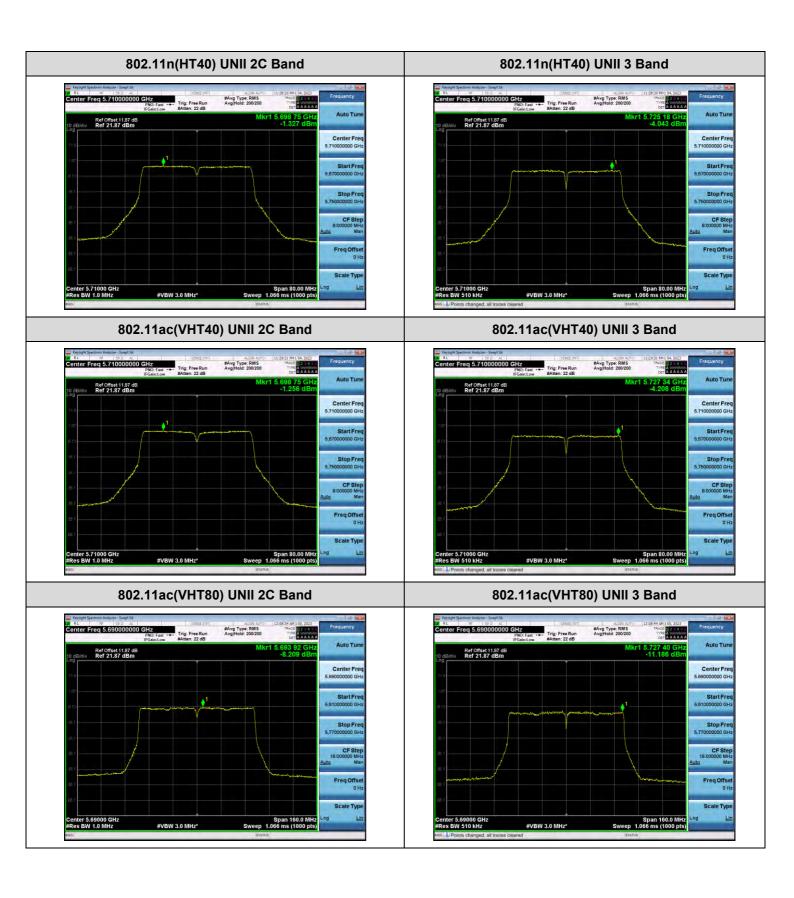
[MIMO Ant.2]

■ Test Plots



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10.8 RADIATED SPURIOUS EMISSIONS

Frequency Range: 9 kHz - 30 MHz

Frequency	Measured Value	A.F+D.F+C.L	POL	Total	Limit	Margin			
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]			
	No Critical peaks found								

Note:

- 1. The Measured Value of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
- 2. Distance extrapolation factor = 40log (specific distance / test distance) (dB)
- 3. Limit line = specific Limits ($dB\mu V$) + Distance extrapolation factor

Frequency Range: Below 1 GHz

Frequency	Measured Value	A.F+C.L	POL	Total	Limit	Margin
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]
		No Critical peal	s found			

Note:

1. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode

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[Ant.1&Ant.2_MIMO(CDD)]

Frequency Range : Above 1 GHz

Band: UNII 1

Operation Mode: 802.11 a

Transfer Rate: 6 Mbps

Operating Frequency 5180 MHz

Channel No. 36 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total	Limit	Margin [dB]	Measurement Type
							• •
10360	48.26	4.05	V	52.31	68.20	15.89	PK
15540	47.72	5.45	V	53.17	73.98	20.81	PK
15540	34.08	5.45	V	39.53	53.98	14.45	AV
10360	48.45	4.05	Н	52.50	68.20	15.70	PK
15540	47.63	5.45	Н	53.08	73.98	20.90	PK
15540	33.92	5.45	Н	39.37	53.98	14.61	AV

Band: UNII 1

Operation Mode: 802.11 a

Transfer Rate: 6 Mbps

Operating Frequency 5200 MHz

Channel No. 40 Ch

Frequency	Measured Value	CL+AF+DF-AG	POL	Total	Limit	Margin	Measurement
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	Туре
10400	49.58	4.24	V	53.82	68.20	14.38	PK
15600	48.61	4.10	V	52.71	73.98	21.27	PK
15600	34.30	4.10	V	38.40	53.98	15.58	AV
10400	50.20	4.24	Н	54.44	68.20	13.76	PK
15600	48.52	4.10	Н	52.62	73.98	21.36	PK
15600	34.29	4.10	Н	38.39	53.98	15.59	AV

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Band: UNII 1

Operation Mode: 802.11 a

Transfer Rate: 6 Mbps

Operating Frequency 5240 MHz

Channel No. 48 Ch

Frequency	Measured Value	CL+AF+DF-AG	POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
10480	49.63	3.81	V	53.44	68.20	14.76	PK
15720	47.92	3.78	V	51.70	73.98	22.28	PK
15720	34.23	3.78	V	38.01	53.98	15.97	AV
10480	50.12	3.81	Н	53.93	68.20	14.27	PK
15720	47.58	3.78	Н	51.36	73.98	22.62	PK
15720	34.22	3.78	Н	38.00	53.98	15.98	AV

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Band: UNII 2A
Operation Mode: 802.11 a
Transfer Rate: 6 Mbps
Operating Frequency 5260 MHz

Channel No. 52 Ch

Frequency	Measured Value	CL+AF+DF-AG	POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	.,,,,
10520	49.02	4.89	V	53.91	68.20	14.29	PK
15780	47.80	4.11	V	51.91	73.98	22.07	PK
15780	33.86	4.11	V	37.97	53.98	16.01	AV
10520	50.25	4.89	Н	55.14	68.20	13.06	PK
15780	47.29	4.11	Н	51.40	73.98	22.58	PK
15780	33.61	4.11	Н	37.72	53.98	16.26	AV

Band: UNII 2A
Operation Mode: 802.11 a
Transfer Rate: 6 Mbps
Operating Frequency 5300 MHz
Channel No. 60 Ch

Frequency	Measured Value	CL+AF+DF-AG	POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
10600	49.61	4.79	V	54.40	73.98	19.58	PK
10600	32.45	4.79	V	37.24	53.98	16.74	AV
15900	47.00	5.90	V	52.90	73.98	21.08	PK
15900	33.09	5.90	V	38.99	53.98	14.99	AV
10600	49.81	4.79	Н	54.60	73.98	19.38	PK
10600	32.72	4.79	Н	37.51	53.98	16.47	AV
15900	46.62	5.90	Н	52.52	73.98	21.46	PK
15900	32.75	5.90	Н	38.65	53.98	15.33	AV

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 Band :
 UNII 2A

 Operation Mode:
 802.11 a

 Transfer Rate:
 6 Mbps

Operating Frequency 5320 MHz

Channel No. 64 Ch

Frequency	Measured Value	CL+AF+DF-AG	POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	1,400
10640	51.33	4.36	V	55.69	73.98	18.29	PK
10640	38.27	4.36	V	42.63	53.98	11.35	AV
15960	48.39	4.80	V	53.19	73.98	20.79	PK
15960	33.63	4.80	V	38.43	53.98	15.55	AV
10640	51.53	4.36	Н	55.89	73.98	18.09	PK
10640	38.39	4.36	Н	42.75	53.98	11.23	AV
15960	48.31	4.80	Н	53.11	73.98	20.87	PK
15960	33.51	4.80	Н	38.31	53.98	15.67	AV

Band: UNII 2C

Operation Mode: 802.11 a

Transfer Rate: 6 Mbps

Operating Frequency 5500 MHz

Channel No. 100 Ch

Frequency	Measured Value	CL+AF+DF-AG	POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	31.
11000	49.28	4.35	V	53.63	73.98	20.35	PK
11000	38.58	4.35	V	42.93	53.98	11.05	AV
16500	46.82	7.38	V	54.20	68.20	14.00	PK
11000	50.51	4.35	Н	54.86	73.98	19.12	PK
11000	39.29	4.35	Н	43.64	53.98	10.34	AV
16500	46.69	7.38	Н	54.07	68.20	14.13	PK

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Band: UNII 2C
Operation Mode: 802.11 a
Transfer Rate: 6 Mbps

Operating Frequency 5600 MHz

Channel No. 120 Ch

Frequency	Measured Value	CL+AF+DF-AG	POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
11200	49.32	6.03	V	55.35	73.98	18.63	PK
11200	38.51	6.03	V	44.54	53.98	9.44	AV
16800	46.20	8.76	V	54.96	68.20	13.24	PK
11200	50.30	6.03	Н	56.33	73.98	17.65	PK
11200	38.83	6.03	Н	44.86	53.98	9.12	AV
16800	45.94	8.76	Н	54.70	68.20	13.50	PK

Band: UNII 2C

Operation Mode: 802.11 a

Transfer Rate: 6 Mbps

Operating Frequency 5720 MHz

Channel No. 144 Ch

Frequency	Measured Value	CL+AF+DF-AG	POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	.,,,,,
11440	49.14	4.52	V	53.66	73.98	20.32	PK
11440	37.32	4.52	V	41.84	53.98	12.14	AV
17160	46.27	8.48	V	54.75	68.20	13.45	PK
11440	49.21	4.52	Н	53.73	73.98	20.25	PK
11440	37.47	4.52	Н	41.99	53.98	11.99	AV
17160	46.52	8.48	Н	55.00	68.20	13.20	PK

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 Band :
 UNII 3

 Operation Mode:
 802.11 a

 Transfer Rate:
 6 Mbps

 Operating Frequency
 5745MHz

Channel No. 149 Ch

Frequency	Measured Value	CL+AF+DF-AG	POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	.,,,,,
11490	48.11	4.48	V	52.59	73.98	21.39	PK
11490	36.42	4.48	V	40.90	53.98	13.08	AV
17235	46.87	9.67	V	56.54	68.20	11.66	PK
11490	48.36	4.48	Н	52.84	73.98	21.14	PK
11490	36.58	4.48	Н	41.06	53.98	12.92	AV
17235	46.94	9.67	Н	56.61	68.20	11.59	PK

Band: UNII 3
Operation Mode: 802.11 a
Transfer Rate: 6 Mbps
Operating Frequency 5785 MHz
Channel No. 157 Ch

Frequency	Measured Value	CL+AF+DF-AG	POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V] [dBµV/m]		[dBµV/m]	[dB]	Турс
11570	47.36	5.01	V	52.37	73.98	21.61	PK
11570	35.38	5.01	V	40.39	53.98	13.59	AV
17355	46.59	9.97	V	56.56	68.20	11.64	PK
11570	47.89	5.01	Н	52.90	73.98	21.08	PK
11570	35.46	5.01	Н	40.47	53.98	13.51	AV
17355	46.74	9.97	Н	56.71	68.20	11.49	PK

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Band: UNII 3

Operation Mode: 802.11 a

Transfer Rate: 6 Mbps

Operating Frequency 5825 MHz

Channel No. 165 Ch

Frequency	Measured Value	CL+AF+DF-AG	POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
11650	47.99	4.94	V	52.93	73.98	21.05	PK
11650	35.57	4.94	V	40.51	53.98	13.47	AV
17475	47.59	10.07	V	57.66	68.20	10.54	PK
11650	48.24	4.94	Н	53.18	73.98	20.80	PK
11650	35.73	4.94	Н	40.67	53.98	13.31	AV
17475	47.85	10.07	Н	57.92	68.20	10.28	PK

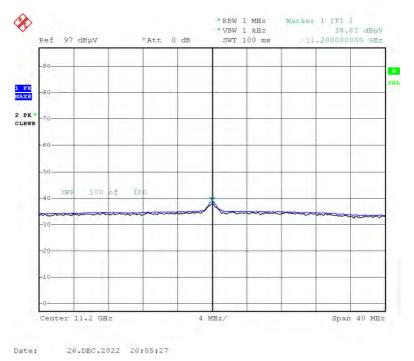
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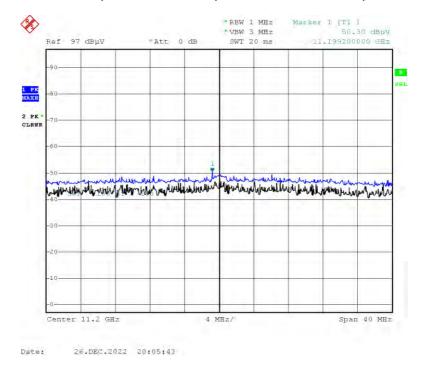
■ Test Plots

[Ant.1&Ant.2_MIMO(CDD)]

Radiated Spurious Emissions plot – Average Result (802.11a, Ch.120, 2nd, Spurious Emissions, Y-H)



Radiated Spurious Emissions plot – Peak Result (802.11a, Ch.120, 2nd, Spurious Emissions, Y-H)



Note:

Only the worst case plots for Radiated Spurious Emissions.

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10.9 RADIATED RESTRICTED BAND EDGE

[MIMO]

Band: UNII 1

Operation Mode: 802.11 a

Transfer Rate: 6 Mbps

Operating Frequency 5180 MHz

Channel No. 36 Ch

Frequency	Measured Value	Duty Cycle Factor	CL+AF+DF	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	. 7
5150	25.94	0.00	42.01	Н	67.94	73.98	6.04	PK
5150	3.51	0.38	42.01	Н	45.90	53.98	8.08	AV
5150	26.02	0.00	42.01	V	68.02	73.98	5.96	PK
5150	3.57	0.38	42.01	V	45.96	53.98	8.02	AV

Band: UNII 2A

Operation Mode: 802.11 a

Transfer Rate: 6 Mbps

Operating Frequency 5320 MHz

Channel No. 64 Ch

Frequency	Measured Value	Duty Cycle Factor	CL+AF+DF	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBµV]	[dB]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	Туре
5350	25.54	0.00	41.76	Н	67.30	73.98	6.68	PK
5350	1.69	0.38	41.76	Н	43.84	53.98	10.14	AV
5350	25.61	0.00	41.76	V	67.38	73.98	6.60	PK
5350	1.74	0.38	41.76	V	43.88	53.98	10.10	AV

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Band: UNII 2C

Operation Mode: 802.11 a

Transfer Rate: 6 Mbps

Operating Frequency 5500 MHz

Channel No. 100 Ch

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	CL+AF+DF	ANT. POL	Total	Limit	Margin	Measurement Type
5460	47.33	0.00	12.60	H	59.93	73.98	14.05	PK
5460	35.14	0.38	12.60	Н	48.12	53.98	5.86	AV
5470	46.72	0.00	12.85	Н	59.57	68.20	8.63	PK
5460	47.66	0.00	12.60	V	60.26	73.98	13.72	PK
5460	35.72	0.38	12.60	V	48.70	53.98	5.28	AV
5470	47.93	0.00	12.85	V	60.78	68.20	7.42	PK

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Band: UNII 1

Operation Mode: 802.11 n_HT20

Transfer MCS Index: 8

Operating Frequency 5180 MHz

Channel No. 36 Ch

Frequency	Measured Value	Duty Cycle Factor	CL+AF+DF	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
5150	26.92	0.00	42.01	Н	68.93	73.98	5.05	PK
5150	8.44	0.58	42.01	Н	51.02	53.98	2.96	AV
5150	26.31	0.00	42.01	V	68.31	73.98	5.67	PK
5150	8.52	0.58	42.01	V	51.10	53.98	2.88	AV

Band: UNII 2A

Operation Mode: 802.11 n_HT20

Transfer MCS Index: 8

Operating Frequency 5320 MHz

Channel No. 64 Ch

Frequency	Measured Value	Duty Cycle Factor	CL+AF+DF	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	Туре
5350	25.42	0.00	41.76	Н	67.18	73.98	6.80	PK
5350	0.64	0.58	41.76	Н	42.98	53.98	11.00	AV
5350	25.78	0.00	41.76	V	67.55	73.98	6.43	PK
5350	0.93	0.58	41.76	V	43.27	53.98	10.71	AV

F-TP22-03 (Rev.00) 2 0 7 / 231 **HCT CO.,LTD.**



Band: UNII 2C

Operation Mode: 802.11 n_HT20

Transfer MCS Index: 8

Operating Frequency 5500 MHz

Channel No. 100 Ch

Frequency	Measured Value	Duty Cycle Factor	CL+AF+DF	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
5460	47.52	0.00	12.60	Н	60.12	73.98	13.86	PK
5460	34.32	0.58	12.60	Н	47.49	53.98	6.49	AV
5470	48.00	0.00	12.85	Н	60.85	68.20	7.35	PK
5460	47.65	0.00	12.60	V	60.25	73.98	13.73	PK
5460	35.05	0.58	12.60	V	48.22	53.98	5.76	AV
5470	48.52	0.00	12.85	V	61.37	68.20	6.83	PK

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Band: UNII 1

Operation Mode: 802.11 ac_VHT20

Transfer MCS Index: 0

Operating Frequency 5180 MHz

Channel No. 36 Ch

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	CL+AF+DF	ANT. POL	Total	Limit [dBµV/m]	Margin	Measurement Type
5150	27.63	0.00	42.01	H	69.64	73.98	4.34	PK
5150	1.22	1.25	42.01	Н	44.47	53.98	9.51	AV
5150	27.72	0.00	42.01	V	69.73	73.98	4.25	PK
5150	1.28	1.25	42.01	V	44.53	53.98	9.45	AV

Band: UNII 2A

Operation Mode: 802.11 ac_VHT20

Transfer MCS Index: 0

Operating Frequency 5320 MHz

Channel No. 64 Ch

Frequency	Measured Value	Duty Cycle Factor	CL+AF+DF	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
5350	25.65	0.00	41.76	Н	67.41	73.98	6.57	PK
5350	-0.76	1.25	41.76	Н	42.25	53.98	11.73	AV
5350	25.78	0.00	41.76	V	67.54	73.98	6.44	PK
5350	-0.63	1.25	41.76	V	42.38	53.98	11.60	AV

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Band: UNII 2C

Operation Mode: 802.11 ac_VHT20

Transfer MCS Index: 0

Operating Frequency 5500 MHz

Channel No. 100 Ch

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	CL+AF+DF	ANT. POL	Total	Limit	Margin [dB]	Measurement Type
5460	47.63	0.00	12.60	Н	60.23	73.98	13.75	PK
5460	35.49	1.25	12.60	Н	49.33	53.98	4.65	AV
5470	48.54	0.00	12.85	Н	61.39	68.20	6.81	PK
5460	47.79	0.00	12.60	V	60.39	73.98	13.59	PK
5460	35.92	1.25	12.60	V	49.76	53.98	4.22	AV
5470	48.99	0.00	12.85	V	61.84	68.20	6.36	PK

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Band: UNII 1

Operation Mode: 802.11 n_HT40

Transfer MCS Index: 8

Operating Frequency 5190 MHz

Channel No. 38 Ch

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	CL+AF+DF	ANT. POL	Total	Limit [dBµV/m]	Margin	Measurement Type
5150	26.15	0.00	42.01	Н	68.16	73.98	5.82	PK
5150	1.42	0.68	42.01	Н	44.11	53.98	9.87	AV
5150	26.29	0.00	42.01	V	68.29	73.98	5.69	PK
5150	1.52	0.68	42.01	V	44.20	53.98	9.78	AV

Band: UNII 2A

Operation Mode: 802.11 n_HT40

Transfer MCS Index:

Operating Frequency 5310 MHz

Channel No. 62 Ch

Frequency	Measured Value	Duty Cycle Factor	CL+AF+DF	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	31
5350	26.68	0.00	41.76	Н	68.44	73.98	5.54	PK
5350	0.52	0.68	41.76	Н	42.97	53.98	11.01	AV
5350	26.97	0.00	41.76	V	68.74	73.98	5.24	PK
5350	0.54	0.68	41.76	V	42.98	53.98	11.00	AV

F-TP22-03 (Rev.00) 2 1 1 / 231 **HCT CO.,LTD.**



Band: UNII 2C

Operation Mode: 802.11 n_HT40

Transfer MCS Index: 8

Operating Frequency 5510 MHz

Channel No. 102 Ch

Frequency	Measured Value	Duty Cycle Factor	CL+AF+DF	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
5460	45.24	0.00	12.60	Н	57.84	73.98	16.14	PK
5460	33.54	0.68	12.60	Н	46.82	53.98	7.16	AV
5470	46.07	0.00	12.85	Н	58.92	68.20	9.28	PK
5460	45.86	0.00	12.60	V	58.46	73.98	15.52	PK
5460	33.83	0.68	12.60	V	47.11	53.98	6.87	AV
5470	46.39	0.00	12.85	V	59.24	68.20	8.96	PK

F-TP22-03 (Rev.00) 2 1 2 / 231 **HCT CO.,LTD.**



Band: UNII 1

Operation Mode: 802.11 ac_VHT40

Transfer MCS Index: 0

Operating Frequency 5190 MHz

Channel No. 38 Ch

Frequency	Measured Value	Duty Cycle Factor	CL+AF+DF	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	. 360
5150	26.19	0.00	42.01	Н	68.19	73.98	5.79	PK
5150	0.12	1.31	42.01	Н	43.43	53.98	10.55	AV
5150	26.29	0.00	42.01	V	68.30	73.98	5.68	PK
5150	0.15	1.31	42.01	V	43.47	53.98	10.51	AV

Band: UNII 2A

Operation Mode: 802.11 ac_VHT40

Transfer MCS Index: 0

Operating Frequency 5310 MHz

Channel No. 62 Ch

Frequency	Measured Value	Duty Cycle Factor	CL+AF+DF	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	туре
5350	24.94	0.00	41.76	Н	66.70	73.98	7.28	PK
5350	-0.63	1.31	41.76	Н	42.45	53.98	11.53	AV
5350	25.30	0.00	41.76	V	67.06	73.98	6.92	PK
5350	-0.51	1.31	41.76	V	42.57	53.98	11.41	AV

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Band: UNII 2C

Operation Mode: 802.11 ac_VHT40

Transfer MCS Index: 0

Operating Frequency 5510 MHz

Channel No. 102 Ch

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	CL+AF+DF [dB/m]	ANT. POL	Total	Limit [dBµV/m]	Margin [dB]	Measurement Type
5460	45.93	0.00	12.60	Н	58.53	73.98	15.45	PK
5460	33.75	1.31	12.60	Н	47.66	53.98	6.32	AV
5470	45.03	0.00	12.85	Н	57.88	68.20	10.32	PK
5460	46.09	0.00	12.60	V	58.69	73.98	15.29	PK
5460	33.88	1.31	12.60	V	47.79	53.98	6.19	AV
5470	45.10	0.00	12.85	V	57.95	68.20	10.25	PK

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Band: UNII 1

Operation Mode: 802.11 ac_VHT80

Transfer MCS Index:

Operating Frequency 5210 MHz

Channel No. 42 Ch

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	CL+AF+DF	ANT. POL	Total	Limit [dBµV/m]	Margin [dB]	Measurement Type
5150	26.19	0.00	42.01	Н	68.20	73.98	5.78	PK
5150	-1.73	2.07	42.01	Н	42.35	53.98	11.63	AV
5150	26.46	0.00	42.01	V	68.46	73.98	5.52	PK
5150	-1.67	2.07	42.01	V	42.42	53.98	11.56	AV

Band: UNII 2A

Operation Mode: 802.11 ac_VHT80

Transfer MCS Index: 0

Operating Frequency 5290 MHz

Channel No. 58 Ch

Frequency	Measured Value	Duty Cycle Factor	CL+AF+DF	ANT. POL	Total	Limit	Margin	Measurement
[MHz]	[dBµV]	[dB]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	Туре
5350	27.05	0.00	41.76	Н	68.82	73.98	5.16	PK
5350	-0.71	2.07	41.76	Н	43.13	53.98	10.85	AV
5350	27.14	0.00	41.76	V	68.91	73.98	5.07	PK
5350	-0.69	2.07	41.76	V	43.15	53.98	10.83	AV

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Band: UNII 2C

Operation Mode: 802.11 ac_VHT80

Transfer MCS Index: 0

Operating Frequency 5530 MHz

Channel No. 106 Ch

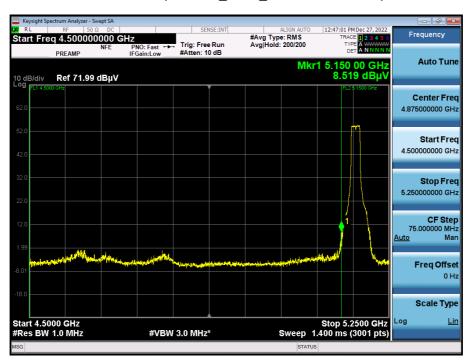
Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	CL+AF+DF	ANT. POL	Total	Limit [dBµV/m]	Margin [dB]	Measurement Type
5460	44.51	0.00	12.60	Н	57.11	73.98	16.87	PK
5460	32.49	2.07	12.60	Н	47.16	53.98	6.82	AV
5470	43.22	0.00	12.85	Н	56.07	68.20	12.13	PK
5460	44.76	0.00	12.60	V	57.36	73.98	16.62	PK
5460	32.74	2.07	12.60	V	47.41	53.98	6.57	AV
5470	43.57	0.00	12.85	V	56.42	68.20	11.78	PK

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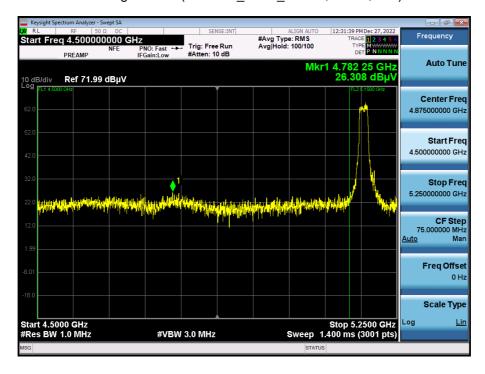


■ Test Plots(UNII 1, 2A, 2C) [Ant.1&Ant.2_MIMO(CDD)]

Peak Result (802.11 n_HT20_ MCS8, Ch.36, Y-V)



Average Result (802.11 n_HT20_ MCS8, Ch.36, Y-V)



Note:

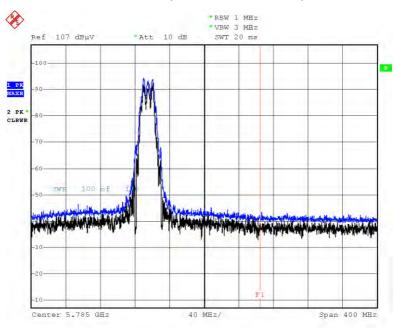
Only the worst case plots for Radiated Restricted Band Edge.

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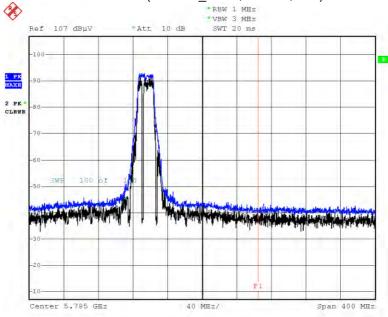
■ Test Plots(Straddle Channel) [MIMO]

Peak Result (802.11a, Ch.144, Y-V)



Date: 27.DEC.2022 19:34:10

Peak Result (802.11n_HT20, Ch.144, Y-V)

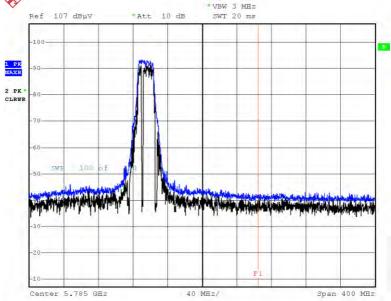


Date: 27.DEC.2022 19:35:22

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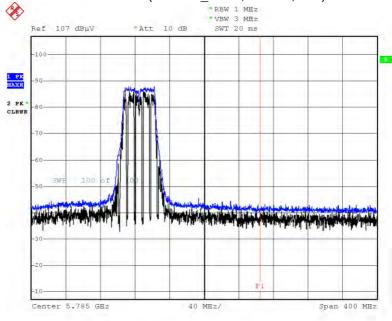






Date: 27.DEC.2022 19:36:22

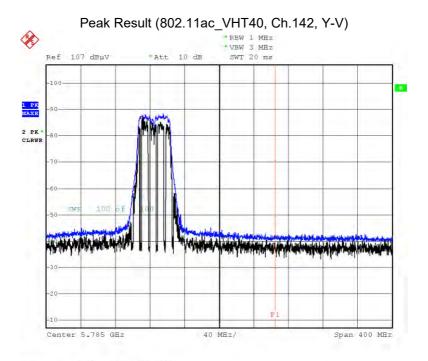
Peak Result (802.11n_HT40, Ch.142, Y-V)

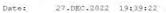


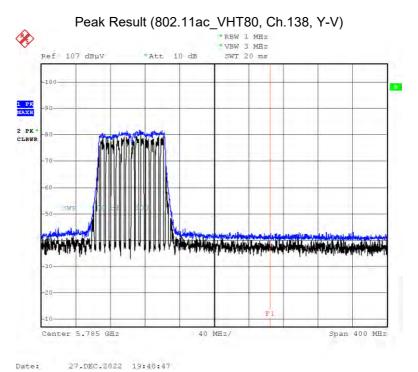
Date: 27.DEC.2022 19:38:01

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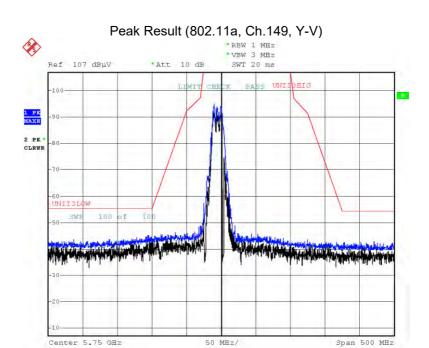
Note:

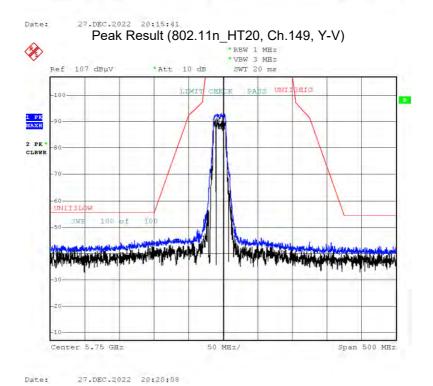
- 1. Only the worst case plots for Radiated Restricted Band Edge.
- 2. Red line: 5 850 MHz
- 3. Ambient Noise (Because of ambient noise, We attached only the worst plot without a data table)

F-TP22-03 (Rev.00) 2 2 0 / 231 HCT CO.,LTD.



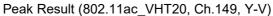
■ Test Plots(UNII 3) [MIMO]

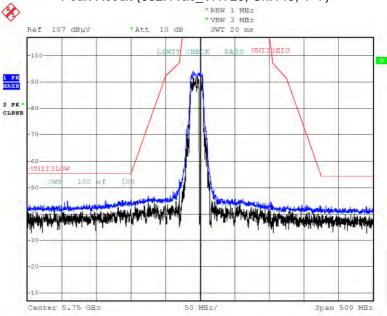




F-TP22-03 (Rev.00) 2 2 1 / 231 **HCT CO.,LTD.**

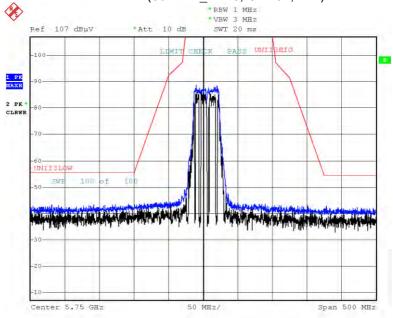






Date: 27.DEC.2022 20:18:30

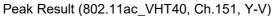
Peak Result (802.11n_HT40, Ch.151, Y-V)

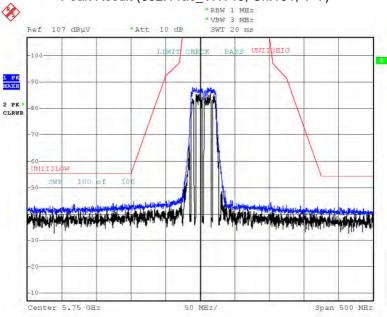


Date: 27.DEC.2022 20:21:40

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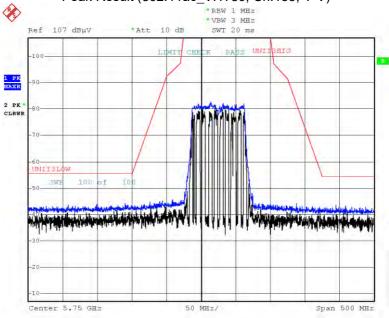






Date: 27.DEC.2022 20:23:17

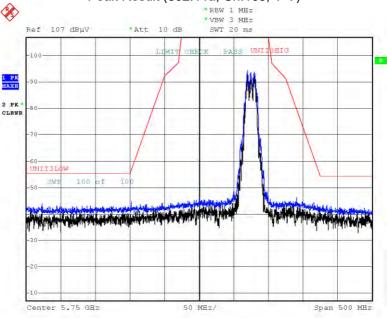
Peak Result (802.11ac_VHT80, Ch.155, Y-V)



Date: 27.DEC.2022 20:09:52

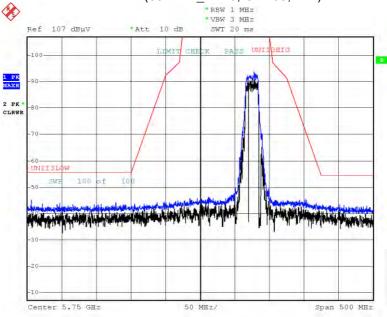






Date: 27.DEC.2022 20:11:13

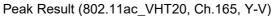
Peak Result (802.11n_HT20, Ch.165, Y-V)

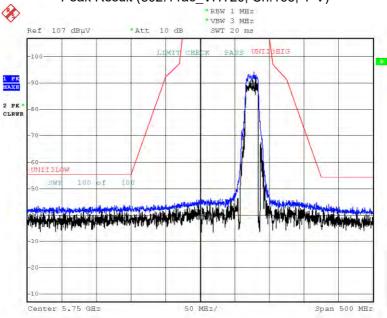


Date: 27.DEC.2022 20:12:45

F-TP22-03 (Rev.00) 2 2 4 / 231 **HCT CO.,LTD.**

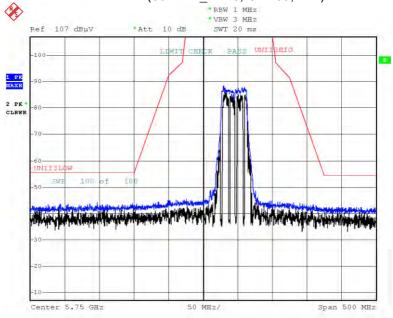






Date: 27.DEC.2022 20:14:12

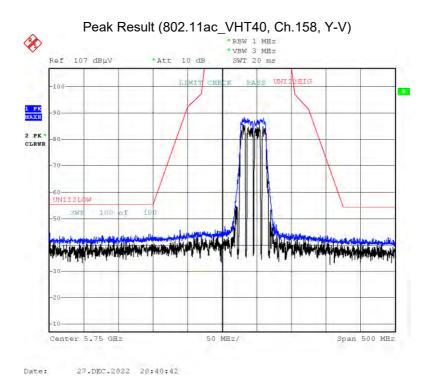
Peak Result (802.11n_HT40, Ch.159, Y-V)



Date: 27.DEC.2022 20:24:34

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Note:

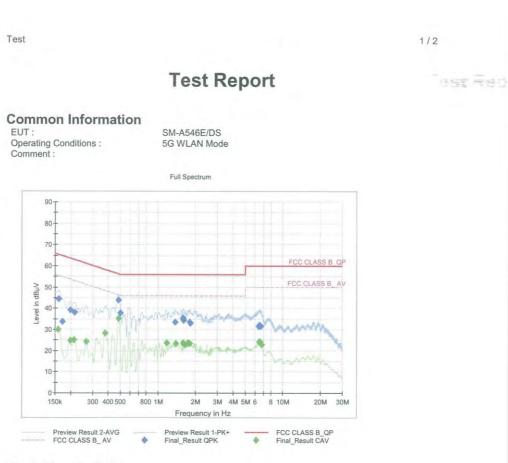
- 1. Only the worst case plots for U-NII-3 Out of Band e.i.r.p Emission.
- 2. U-NII-3 Low & High Band Edge RedLine is Final Test Limit about factor value compensation.

F-TP22-03 (Rev.00) 2 2 6 / 231 **HCT CO.,LTD.**



10.10 POWERLINE CONDUCTED EMISSIONS

Conducted Emissions



Final Result QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1613	44.48	65.40	20.92	9.000	N	OFF	9.6
0.1725	33.63	64.84	31.21	9.000	L1	OFF	9.7
0.1995	39.21	63.63	24.43	9.000	N	OFF	9.6
0.2153	38.09	63.00	24.91	9.000	L1	OFF	9.7
0.4830	43.79	56.29	12.49	9.000	L1	OFF	9.7
0.5000	37.66	56.00	18.34	9.000	L1	OFF	9.7
1.3798	33.48	56.00	22.52	9.000	L1	OFF	9.7
1.5935	35.01	56.00	20.99	9.000	L1	OFF	9.7
1.6003	35.50	56.00	20.50	9.000	L1	OFF	9.7
1.6048	34.47	56.00	21.53	9.000	L1	OFF	9.7
1.8050	33.53	56.00	22.47	9.000	L1	OFF	9.7
1.8163	32.85	56.00	23.15	9.000	L1	OFF	9.7
6.4355	31.57	60.00	28.43	9.000	L1	OFF	9.9
6.5120	32.10	60.00	27.90	9.000	L1	OFF	9.9
6.5278	31.93	60.00	28.07	9.000	L1	OFF	9.9
6.5413	31.78	60.00	28.22	9.000	L1	OFF	9.9
6.6313	31.31	60.00	28.69	9.000	L1	OFF	9.9
6.6718	31.70	60.00	28.30	9.000	L1	OFF	9.9

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Test 2/2

Final Result CAV

Frequency (MHz)	CAverage (dBμV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1590	30.11	55.52	25.41	9.000	L1	OFF	9.7
0.1995	24.80	53.63	28.84	9.000	L1	OFF	9.7
0.2130	25.10	53.09	27.99	9.000	L1	OFF	9.7
0.2670	24.35	51.21	26.87	9.000	L1	OFF	9.7
0.3773	28.34	48.34	20.00	9.000	L1	OFF	9.7
0.4853	35.11	46.25	11.14	9.000	L1	OFF	9.7
1.1705	23.63	46.00	22.37	9.000	L1	OFF	9.7
1.3865	23.48	46.00	22.52	9.000	L1	OFF	9.7
1.5980	23.73	46.00	22.27	9.000	L1	OFF	9.7
1.6520	22.86	46.00	23.14	9.000	L1	OFF	9.7
1.7398	23.62	46.00	22.38	9.000	L1	OFF	9.7
1.7983	23.47	46.00	22.53	9.000	L1	OFF	9.7
6.4648	23.93	50.00	26.07	9.000	L1	OFF	9.9
6.5210	24.09	50.00	25.91	9.000	L1	OFF	9.9
6.5300	24.02	50.00	25.98	9.000	L1	OFF	9.9
6.5953	24.11	50.00	25.89	9.000	L1	OFF	9.9
6.6853	23.20	50.00	26.80	9.000	L1	OFF	9.9
6.7640	22.66	50.00	27.34	9.000	L1	OFF	9.9



11. LIST OF TEST EQUIPMENT

Conducted Test

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
LISN	ENV216	Rohde & Schwarz	102245	08/22/2023	Annual
EMI Test Receiver	ESR	Rohde & Schwarz	101910	06/07/2023	Annual
Temperature Chamber	SU-642	ESPEC	0093008124	03/04/2023	Annual
Signal Analyzer	N9030A	Keysight	MY55410508	09/06/2023	Annual
Power Meter	N1911A	Agilent	MY45100523	03/24/2023	Annual
Power Sensor	N1921A	Agilent	MY57820067	03/24/2023	Annual
Directional Coupler	87300B	Agilent	3116A03621	11/02/2023	Annual
Power Splitter	11667B	Hewlett Packard	10545	02/03/2023	Annual
DC Power Supply	E3632A	Agilent	KR75305528	01/03/2024	Annual
Attenuator(10 dB)(DC-26.5 GHz)	8493C-010	Agilent	08285	06/21/2023	Annual
Attenuator(20 dB)	18N-20dB	Rohde & Schwarz	8	03/07/2023	Annual
Software	EMC32	Rohde & Schwarz	N/A	N/A	N/A
FCC WLAN&BT&BLE Conducted		HCT CO., LTD.	N/A	N/A	N/A
Test Software v3.0	N/A				
Bluetooth Tester	СВТ	Rohde & Schwarz	100808	02/22/2023	Annual

Note:

- 1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
- 2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

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Radiated Test

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
Controller(Antenna mast)	CO3000	Innco system	CO3000-4p	N/A	N/A
Antenna Position Tower	MA4640/800-XP-EP	Innco system	N/A	N/A	N/A
Controller	EM2090	Emco	060520	N/A	N/A
Turn Table	N/A	Ets	N/A	N/A	N/A
Loop Antenna	FMZB 1513	Rohde & Schwarz	1513-333	03/17/2024	Biennial
Hybrid Antenna	VULB 9168	Schwarzbeck	9168-0895	08/16/2024	Biennial
Horn Antenna	BBHA 9120D	Schwarzbeck	9120D-1191	11/18/2023	Biennial
Horn Antenna(15 GHz ~ 40 GHz)	BBHA9170	Schwarzbeck	BBHA9170124	04/12/2023	Biennial
Amp & Filter Bank Switch Controller	FBSM-01A	TNM system	0	N/A	N/A
Band Reject Filter	WRCJV2400/2483.5- 2370/2520-60/12SS	Wainwright Instruments	2	01/05/2024	Annual
Band Reject Filter	WRCJV12-4900- 5100-5900-6100- 50SS	Wainwright Instruments	5	06/13/2023	Annual
Band Reject Filter	WRCJV12-4900- 5100-5900-6100- 50SS	Wainwright Instruments	6	06/13/2023	Annual
Band Reject Filter	WRCJV5100/5850- 40/50-8EEK	Wainwright Instruments	1	02/07/2023	Annual
ATT(3 dB) + LNA2(6~18 GHz)	18B-03, CBL06185030	WEINSCHEL CERNEX	N/A	12/05/2023	Annual
ATT(10 dB) + LNA1(0.1~18 GHz)	56-10, CBLU1183540B-01	Api tech, CERNEX	N/A	12/05/2023	Annual
High Pass Filter	WHKX10-2700-3000- 18000-40SS	Wainwright Instruments	N/A	12/05/2023	Annual
High Pass Filter	WHKX8-6090-7000- 18000-40SS	Wainwright Instruments	N/A	12/05/2023	Annual
Thru	COAXIAL ATTENUATOR	T&M SYSTEM	N/A	12/05/2023	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/01/2023	Annual
Power Amplifier	CBL26405040	CERNEX	25956	03/11/2023	Annual
Bluetooth Tester	TC-3000C	TESCOM	3000C000175	04/05/2023	Annual
Spectrum Analyzer	FSP(9 kHz ~ 30 GHz)	Rohde & Schwarz	836650/016	09/06/2023	Annual
Spectrum Analyzer	FSV40-N(9 kHz ~ 30 GHz)	Rohde & Schwarz	101068-SZ	09/07/2023	Annual
Signal Analyzer	N9030A	Keysight	MY55410508	09/06/2023	Annual
Signal Analyzer	N9030A	Keysight	MY49431210	12/29/2023	Annual
Signal Analyzer	N9030A	Keysight	MY52350879	01/02/2024	Annual

Note:

- 1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
- 2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.
- 3. Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5(Version : 2017).

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12. ANNEX A_ TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-2301-FC056-P

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