▣ Test Plots(802.11ac(VHT20))

Note:

In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 36)	UNII 2A (Ch. 60)
	
UNII 2C (Ch. 100)	**UNII 3 (Ch. 157)**
	

▣ Test Plots(802.11ac(VHT40))

Note:

In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 38)	UNII 2A (Ch. 62)
	
UNII 2C (Ch. 102)	**UNII 3 (Ch. 151)**
	

▣ Test Plots(802.11ac(VHT80))

Note:

In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 42)	UNII 2A (Ch. 58)
	
UNII 2C (Ch. 106)	**UNII 3 (Ch. 155)**
	

10.6 FREQUENCY STABILITY.

10.6.1 80 MHz BW

Startup after the EUT is energized

OPERATING BAND:	UNII Band 1
OPERATING FREQUENCY:	5,210,000,000 Hz
CHANNEL:	42
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5210052.72	52.72
100%		-30	5210006.11	6.11
100%		-20	5210011.55	11.55
100%		-10	5210016.75	16.75
100%		0	5210025.65	25.65
100%		+10	5210028.54	28.54
100%		+30	5210035.15	35.15
100%		+40	5210043.24	43.24
100%		+50	5210060.80	60.80
High	3.47	+20	5210054.74	54.74
Low	3.65	+20	5210054.63	54.63

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.

OPERATING BAND:	UNII Band 2A
OPERATING FREQUENCY:	5,290,000,000 Hz
CHANNEL:	58
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5290052.76	52.76
100%		-30	5290007.93	7.93
100%		-20	5290015.13	15.13
100%		-10	5290019.79	19.79
100%		0	5290021.12	21.12
100%		+10	5290027.63	27.63
100%		+30	5290039.59	39.59
100%		+40	5290048.88	48.88
100%		+50	5290058.35	58.35
High	3.47	+20	5290050.28	50.28
Low	3.65	+20	5290055.33	55.33

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.

OPERATING BAND:	UNII Band 2C
OPERATING FREQUENCY:	5,530,000,000 Hz
CHANNEL:	106
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5530052.78	52.78
100%		-30	5530010.17	10.17
100%		-20	5530014.23	14.23
100%		-10	5530017.42	17.42
100%		0	5530021.65	21.65
100%		+10	5530026.10	26.10
100%		+30	5530037.69	37.69
100%		+40	5530046.59	46.59
100%		+50	5530054.77	54.77
High	3.47	+20	5530055.87	55.87
Low	3.65	+20	5530054.12	54.12

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.

OPERATING BAND:	UNII Band 3
OPERATING FREQUENCY:	5,775,000,000 Hz
CHANNEL:	155
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5775052.24	52.24
100%		-30	5775007.07	7.07
100%		-20	5775015.24	15.24
100%		-10	5775015.45	15.45
100%		0	5775023.38	23.38
100%		+10	5775028.16	28.16
100%		+30	5775040.12	40.12
100%		+40	5775047.62	47.62
100%		+50	5775054.02	54.02
High	3.47	+20	5775051.84	51.84
Low	3.65	+20	5775052.87	52.87

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.

2 minutes after the EUT is energized

OPERATING BAND:	UNII Band 1
OPERATING FREQUENCY:	5,210,000,000 Hz
CHANNEL:	42
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5210052.95	52.95
100%		-30	5210007.30	7.30
100%		-20	5210012.73	12.73
100%		-10	5210018.46	18.46
100%		0	5210023.53	23.53
100%		+10	5210029.85	29.85
100%		+30	5210038.98	38.98
100%		+40	5210050.89	50.89
100%		+50	5210060.04	60.04
High	3.47	+20	5210052.12	52.12
Low	3.65	+20	5210051.24	51.24

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.

OPERATING BAND:	UNII Band 2A
OPERATING FREQUENCY:	5,290,000,000 Hz
CHANNEL:	58
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5290053.38	53.38
100%		-30	5290008.85	8.85
100%		-20	5290011.49	11.49
100%		-10	5290018.75	18.75
100%		0	5290020.79	20.79
100%		+10	5290025.34	25.34
100%		+30	5290036.97	36.97
100%		+40	5290044.06	44.06
100%		+50	5290051.72	51.72
High	3.47	+20	5290052.29	52.29
Low	3.65	+20	5290055.18	55.18

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.

OPERATING BAND:	UNII Band 2C
OPERATING FREQUENCY:	5,530,000,000 Hz
CHANNEL:	106
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5530054.52	54.52
100%		-30	5530007.70	7.70
100%		-20	5530015.09	15.09
100%		-10	5530016.92	16.92
100%		0	5530021.26	21.26
100%		+10	5530029.90	29.90
100%		+30	5530040.61	40.61
100%		+40	5530042.13	42.13
100%		+50	5530052.86	52.86
High	3.47	+20	5530051.09	51.09
Low	3.65	+20	5530051.31	51.31

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.

OPERATING BAND:	UNII Band 3
OPERATING FREQUENCY:	5,775,000,000 Hz
CHANNEL:	155
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5775052.24	52.24
100%		-30	5775010.38	10.38
100%		-20	5775014.34	14.34
100%		-10	5775017.65	17.65
100%		0	5775020.99	20.99
100%		+10	5775025.34	25.34
100%		+30	5775037.84	37.84
100%		+40	5775049.59	49.59
100%		+50	5775056.35	56.35
High	3.47	+20	5775053.06	53.06
Low	3.65	+20	5775053.99	53.99

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.

5 minutes after the EUT is energized

OPERATING BAND:	UNII Band 1
OPERATING FREQUENCY:	5,210,000,000 Hz
CHANNEL:	42
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5210051.12	51.12
100%		-30	5210009.97	9.97
100%		-20	5210011.68	11.68
100%		-10	5210020.36	20.36
100%		0	5210023.93	23.93
100%		+10	5210030.11	30.11
100%		+30	5210037.97	37.97
100%		+40	5210042.44	42.44
100%		+50	5210050.12	50.12
High	3.47	+20	5210052.48	52.48
Low	3.65	+20	5210052.66	52.66

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.

OPERATING BAND:	UNII Band 2A
OPERATING FREQUENCY:	5,290,000,000 Hz
CHANNEL:	58
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5290051.23	51.23
100%		-30	5290006.04	6.04
100%		-20	5290012.95	12.95
100%		-10	5290020.19	20.19
100%		0	5290020.77	20.77
100%		+10	5290030.83	30.83
100%		+30	5290035.29	35.29
100%		+40	5290043.88	43.88
100%		+50	5290050.93	50.93
High	3.47	+20	5290052.73	52.73
Low	3.65	+20	5290054.58	54.58

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.

OPERATING BAND:	UNII Band 2C
OPERATING FREQUENCY:	5,530,000,000 Hz
CHANNEL:	106
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5530053.99	53.99
100%		-30	5530005.41	5.41
100%		-20	5530015.77	15.77
100%		-10	5530019.39	19.39
100%		0	5530024.59	24.59
100%		+10	5530030.69	30.69
100%		+30	5530039.41	39.41
100%		+40	5530045.65	45.65
100%		+50	5530053.91	53.91
High	3.47	+20	5530051.82	51.82
Low	3.65	+20	5530053.12	53.12

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.

OPERATING BAND:	UNII Band 3
OPERATING FREQUENCY:	5,775,000,000 Hz
CHANNEL:	155
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5775052.62	52.62
100%		-30	5775010.58	10.58
100%		-20	5775013.51	13.51
100%		-10	5775020.06	20.06
100%		0	5775022.71	22.71
100%		+10	5775028.89	28.89
100%		+30	5775037.18	37.18
100%		+40	5775046.22	46.22
100%		+50	5775060.66	60.66
High	3.47	+20	5775053.35	53.35
Low	3.65	+20	5775053.36	53.36

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.

10 minutes after the EUT is energized

OPERATING BAND:	UNII Band 1
OPERATING FREQUENCY:	5,210,000,000 Hz
CHANNEL:	42
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5210055.42	55.42
100%		-30	5210005.30	5.30
100%		-20	5210015.03	15.03
100%		-10	5210016.41	16.41
100%		0	5210021.14	21.14
100%		+10	5210030.47	30.47
100%		+30	5210036.75	36.75
100%		+40	5210049.67	49.67
100%		+50	5210053.84	53.84
High	3.47	+20	5210054.39	54.39
Low	3.65	+20	5210054.99	54.99

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.

OPERATING BAND:	UNII Band 2A
OPERATING FREQUENCY:	5,290,000,000 Hz
CHANNEL:	58
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5290050.16	50.16
100%		-30	5290006.77	6.77
100%		-20	5290015.08	15.08
100%		-10	5290015.16	15.16
100%		0	5290020.63	20.63
100%		+10	5290029.84	29.84
100%		+30	5290039.51	39.51
100%		+40	5290041.51	41.51
100%		+50	5290053.61	53.61
High	3.47	+20	5290051.52	51.52
Low	3.65	+20	5290051.82	51.82

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.

OPERATING BAND:	UNII Band 2C
OPERATING FREQUENCY:	5,530,000,000 Hz
CHANNEL:	106
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5530051.91	51.91
100%		-30	5530005.69	5.69
100%		-20	5530013.49	13.49
100%		-10	5530019.05	19.05
100%		0	5530022.85	22.85
100%		+10	5530029.50	29.50
100%		+30	5530040.51	40.51
100%		+40	5530042.88	42.88
100%		+50	5530059.27	59.27
High	3.47	+20	5530050.43	50.43
Low	3.65	+20	5530053.43	53.43

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.

OPERATING BAND:	UNII Band 3
OPERATING FREQUENCY:	5,775,000,000 Hz
CHANNEL:	155
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5775050.14	50.14
100%		-30	5775007.91	7.91
100%		-20	5775011.74	11.74
100%		-10	5775018.95	18.95
100%		0	5775024.48	24.48
100%		+10	5775028.55	28.55
100%		+30	5775037.66	37.66
100%		+40	5775040.55	40.55
100%		+50	5775058.20	58.20
High	3.47	+20	5775051.94	51.94
Low	3.65	+20	5775050.38	50.38

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.

10.7 STRADDLE CHANNEL

10.7.1 26 dB Bandwidth

[SISO Ant.2]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11a	UNII 2C	5720	144	5708.48	16.52
802.11n(HT20)				5704.68	20.32
802.11ac(VHT20)				5704.68	20.32
802.11a	UNII 3	5720	144	5732.56	7.56
802.11n(HT20)				5735.12	10.12
802.11ac(VHT20)				5735.04	10.04

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11n(HT40)	UNII 2C	5710	142	5684.56	40.44
802.11ac(VHT40)				5682.56	42.44
802.11n(HT40)	UNII 3	5710	142	5736.88	11.88
802.11ac(VHT40)				5737.44	12.44

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11ac(VHT80)	UNII 2C	5690	138	5647.44	77.56
	UNII 3	5690	138	5733.20	8.20

Note:

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

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

[MIMO Ant.1]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11n(HT20)	UNII 2C	5720	144	5706.84	18.16
802.11ac(VHT20)				5706.20	18.80
802.11n(HT20)	UNII 3	5720	144	5733.92	8.92
802.11ac(VHT20)				5734.48	9.48

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11n(HT40)	UNII 2C	5710	142	5683.04	41.96
802.11ac(VHT40)				5681.76	43.24
802.11n(HT40)	UNII 3	5710	142	5736.00	11.00
802.11ac(VHT40)				5737.68	12.68

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11ac(VHT80)	UNII 2C	5690	138	5647.28	77.72
	UNII 3	5690	138	5732.72	7.72

Note:

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

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

[MIMO Ant.2]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11n(HT20)	UNII 2C	5720	144	5707.16	17.84
802.11ac(VHT20)				5707.04	17.96
802.11n(HT20)	UNII 3	5720	144	5732.60	7.60
802.11ac(VHT20)				5732.88	7.88

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11n(HT40)	UNII 2C	5710	142	5678.88	46.12
802.11ac(VHT40)				5682.64	42.36
802.11n(HT40)	UNII 3	5710	142	5738.24	13.24
802.11ac(VHT40)				5740.40	15.40

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11ac(VHT80)	UNII 2C	5690	138	5647.28	77.72
	UNII 3	5690	138	5732.56	7.56

Note:

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

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

[SISO Ant.2]

▣ Test Plots (26 dB Bandwidth)

802.11a UNII Band	802.11n(HT20) UNII Band
	

802.11ac(VHT20) UNII Band


▣ Test Plots (26 dB Bandwidth)

802.11n(HT40) UNII Band	802.11ac(VHT40) UNII Band
	

802.11ac(VHT80) UNII Band


[MIMO Ant.1]

▣ Test Plots (26 dB Bandwidth)

802.11n(HT20) UNII Band	802.11ac(VHT20) UNII Band
	

802.11n(HT40) UNII Band


▣ Test Plots (26 dB Bandwidth)

802.11ac(VHT40) UNII Band	802.11ac(VHT80) UNII Band
	

[MIMO Ant.2]

▣ Test Plots (26 dB Bandwidth)

802.11n(HT20) UNII Band	802.11ac(VHT20) UNII Band
	

802.11n(HT40) UNII Band


▣ Test Plots (26 dB Bandwidth)

802.11ac(VHT40) UNII Band	802.11ac(VHT80) UNII Band
	

10.7.2 6 dB Bandwidth

[SISO Ant.2]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11a	UNII 3	5720	144	5728.24	3.24	> 0.5
802.11n(HT20)				5728.92	3.92	> 0.5
802.11ac(VHT20)				5728.88	3.88	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT40)	UNII 3	5710	142	5728.32	3.32	> 0.5
802.11ac(VHT40)				5728.32	3.32	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11ac(VHT80)	UNII 3	5690	138	5728.40	3.40	> 0.5

Note:

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

[MIMO Ant.1]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT20)	UNII 3	5720	144	5728.88	3.88	> 0.5
802.11ac(VHT20)				5728.88	3.88	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT40)	UNII 3	5710	142	5728.32	3.32	> 0.5
802.11ac(VHT40)				5728.32	3.32	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11ac(VHT80)	UNII 3	5690	138	5728.40	3.40	> 0.5

Note:

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

[MIMO Ant.2]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT20)	UNII 3	5720	144	5728.88	3.88	> 0.5
802.11ac(VHT20)				5728.88	3.88	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT40)	UNII 3	5710	142	5728.32	3.32	> 0.5
802.11ac(VHT40)				5728.32	3.32	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
802.11ac(VHT80)	UNII 3	5690	138	5728.40	3.40	> 0.5

Note:

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

[SISO Ant.2]

▣ Test Plots(UNII 3 Band 6 dB Bandwidth)

802.11a UNII Band	802.11n(HT20) UNII Band
	

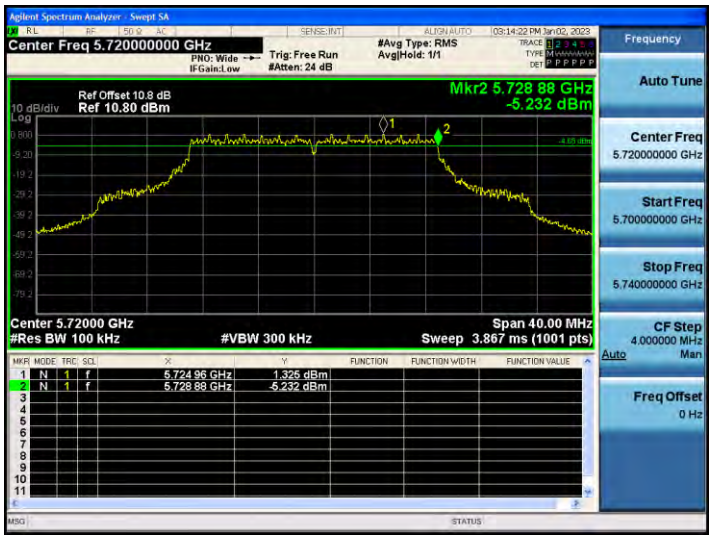
802.11ac(VHT20) UNII Band

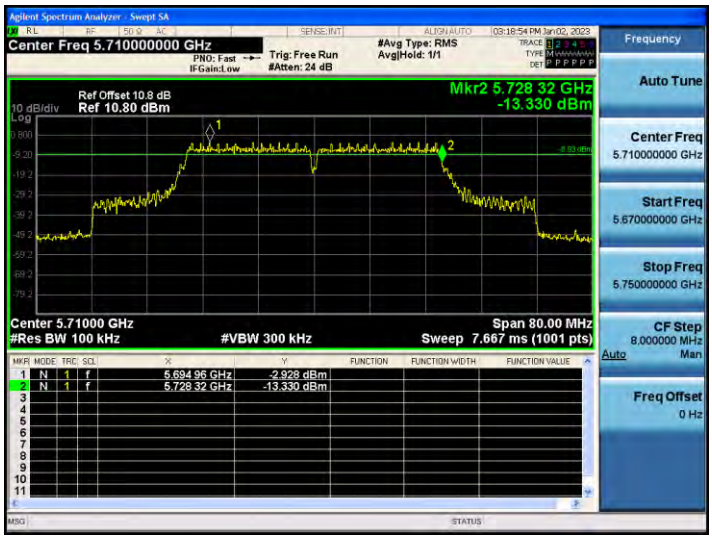

802.11n(HT40) UNII Band	802.11ac(VHT40) UNII Band
	

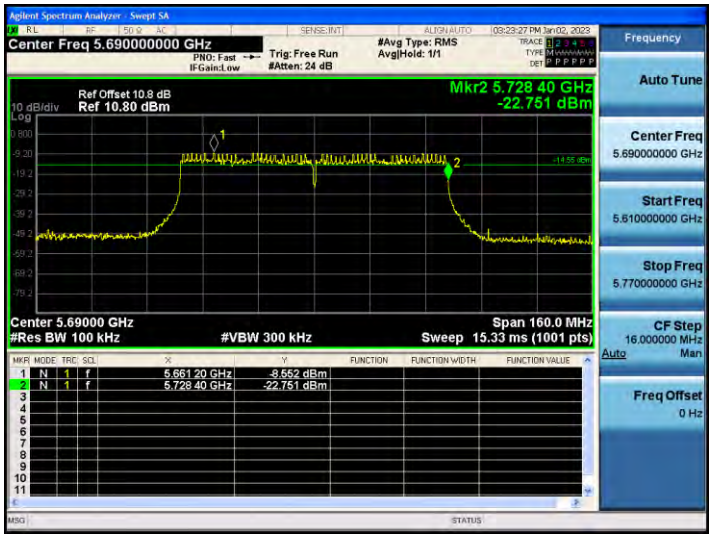
802.11ac(VHT80) UNII Band


[MIMO Ant.1]

▣ Test Plots(UNII 3 Band 6 dB Bandwidth)

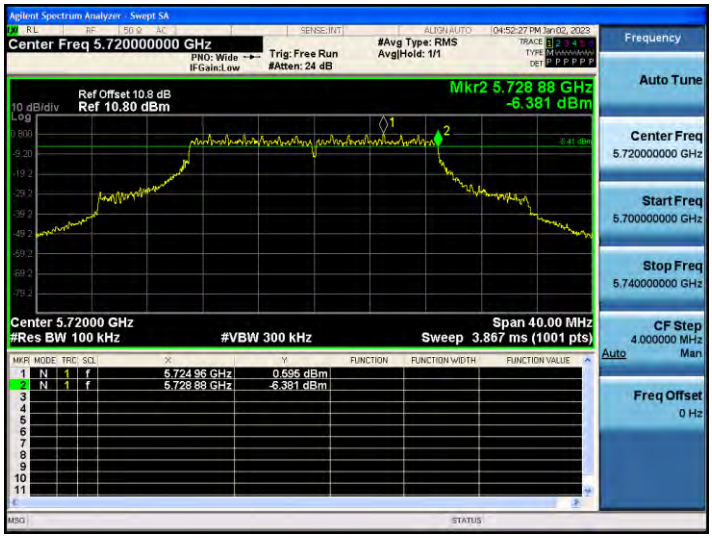
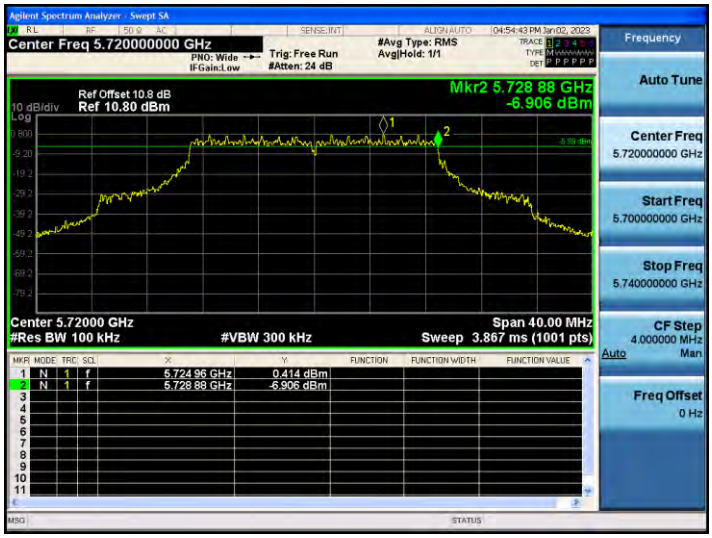
802.11n(HT20) UNII Band	802.11ac(VHT20) UNII Band
	

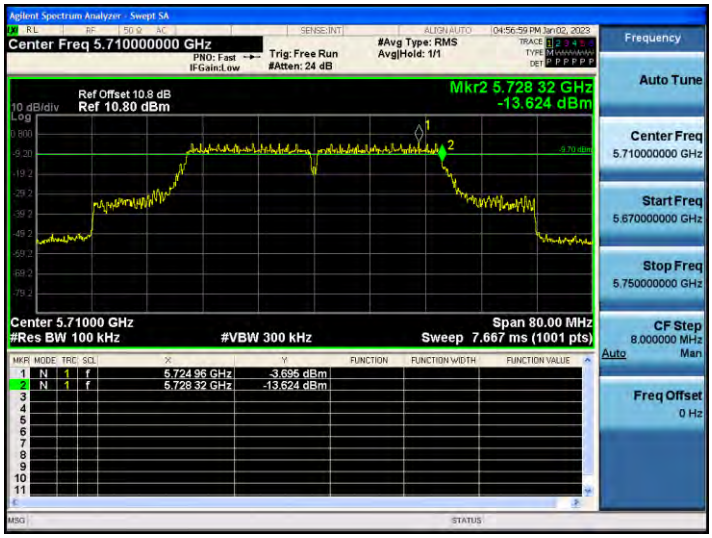
802.11n(HT40) UNII Band


802.11ac(VHT40) UNII Band	802.11ac(VHT80) UNII Band
	

[MIMO Ant.2]

▣ Test Plots(UNII 3 Band 6 dB Bandwidth)

802.11n(HT20) UNII Band	802.11ac(VHT20) UNII Band
	

802.11n(HT40) UNII Band


802.11ac(VHT40) UNII Band	802.11ac(VHT80) UNII Band
	

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 (UNII 2C Band)	144	13.23	1.540	14.77	23.18	36 Mbps
802.11n(HT20)			13.20	1.630	14.83	23.98	MCS4
802.11ac(VHT20)			13.19	1.646	14.84	23.98	MCS4
802.11a	5720 (UNII 3 Band)	144	7.31	1.540	8.85	30.00	36 Mbps
802.11n(HT20)			7.67	1.630	9.30	30.00	MCS4
802.11ac(VHT20)			7.77	1.646	9.42	30.00	MCS4

Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT40)	5710 (UNII 2C Band)	142	11.04	2.398	13.44	23.98	MCS4
802.11ac(VHT40)			11.04	2.409	13.45	23.98	MCS4
802.11n(HT40)	5710 (UNII 3 Band)	142	1.02	2.398	3.41	30.00	MCS4
802.11ac(VHT40)			1.14	2.409	3.55	30.00	MCS4

Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
802.11ac(VHT80)	5690 (UNII 2C Band)	138	7.02	4.086	11.10	23.98	MCS5
	5690 (UNII 3 Band)	138	-6.19	4.086	-2.10	30.00	MCS5

[MIMO Ant.1]

Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT20)	5720 (UNII 2C Band)	144	9.31	2.632	11.95	23.59	MCS12
802.11ac(VHT20)			9.37	2.317	11.69	23.74	MCS4
802.11n(HT20)	5720 (UNII 3 Band)	144	3.70	2.632	6.34	30.00	MCS12
802.11ac(VHT20)			3.74	2.317	6.06	30.00	MCS4

Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT40)	5710 (UNII 2C Band)	142	8.12	3.147	11.27	23.98	MCS11
802.11ac(VHT40)			7.84	3.583	11.42	23.98	MCS4
802.11n(HT40)	5710 (UNII 3 Band)	142	-1.76	3.147	1.39	30.00	MCS11
802.11ac(VHT40)			-2.02	3.583	1.57	30.00	MCS4

Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
802.11ac(VHT80)	5690 (UNII 2C Band)	138	3.82	4.594	8.41	23.98	MCS6
	5690 (UNII 3 Band)	138	-10.02	4.594	-5.42	30.00	MCS6

[MIMO Ant.2]

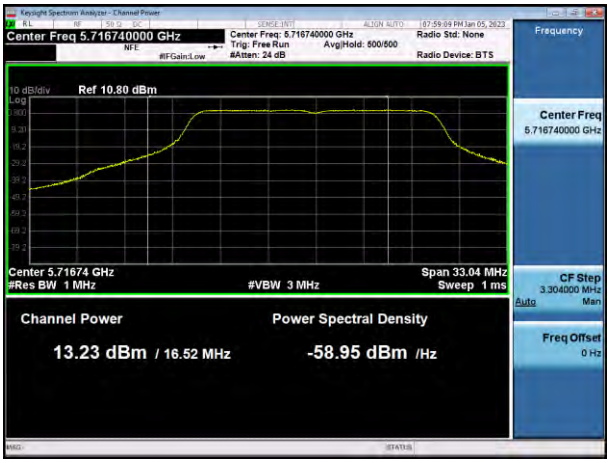
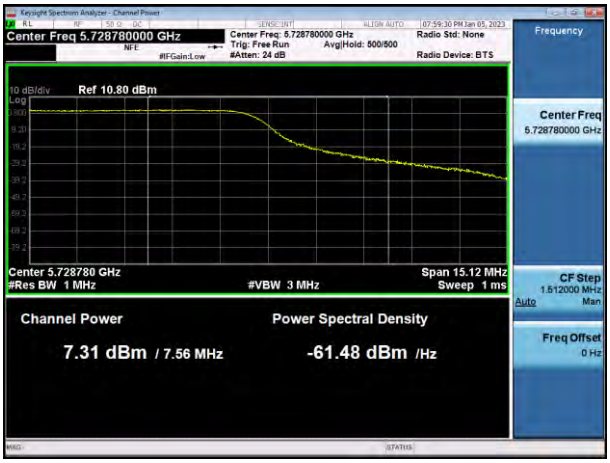
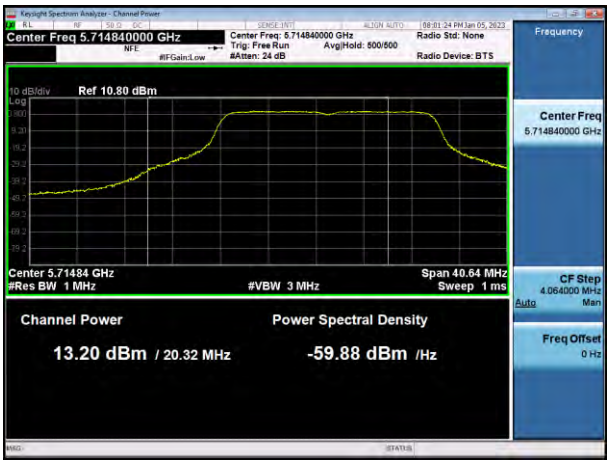
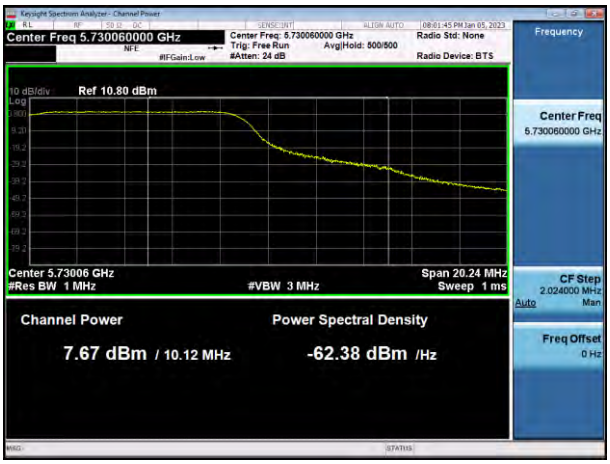
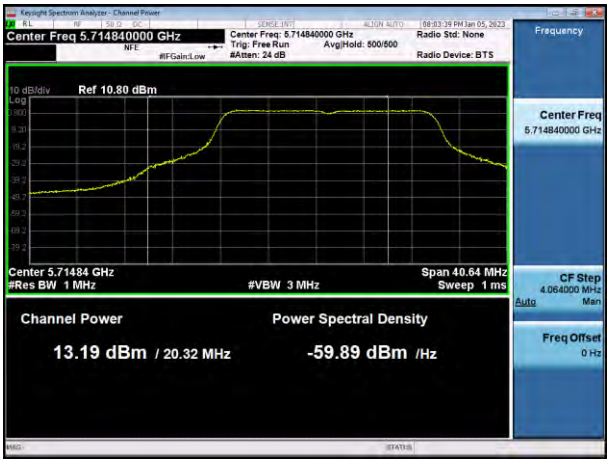
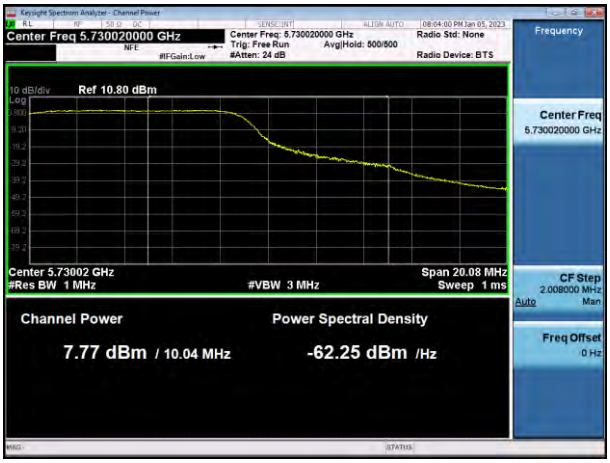
Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT20)	5720 (UNII 2C Band)	144	8.29	2.632	10.92	23.51	MCS12
802.11ac(VHT20)			8.25	2.317	10.56	23.54	MCS4
802.11n(HT20)	5720 (UNII 3 Band)	144	2.66	2.632	5.29	30.00	MCS12
802.11ac(VHT20)			2.56	2.317	4.88	30.00	MCS4

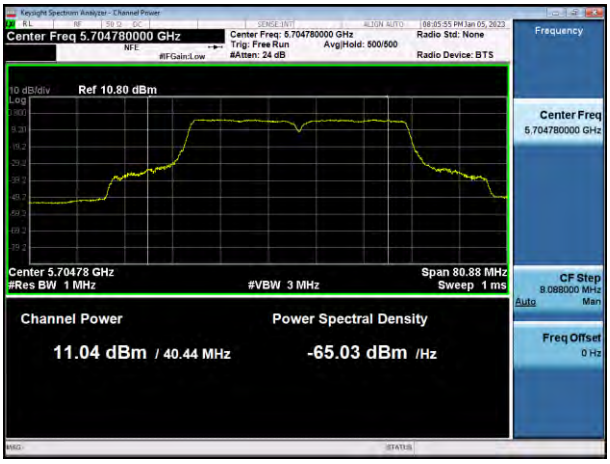
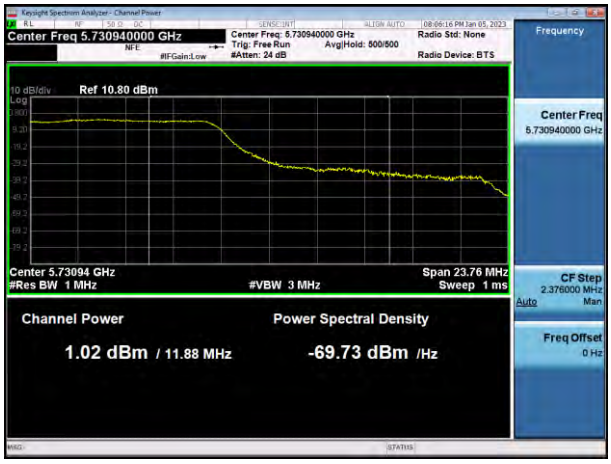
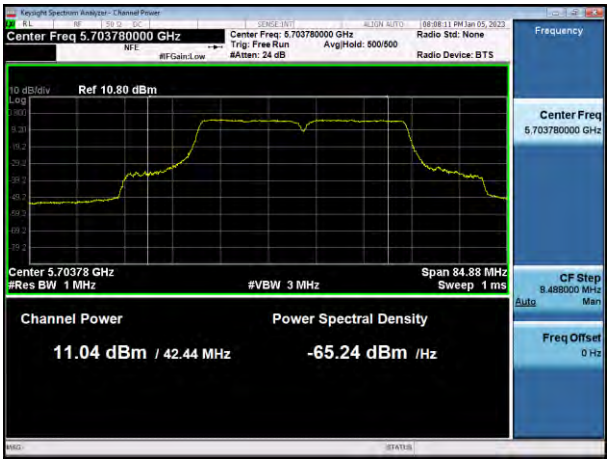
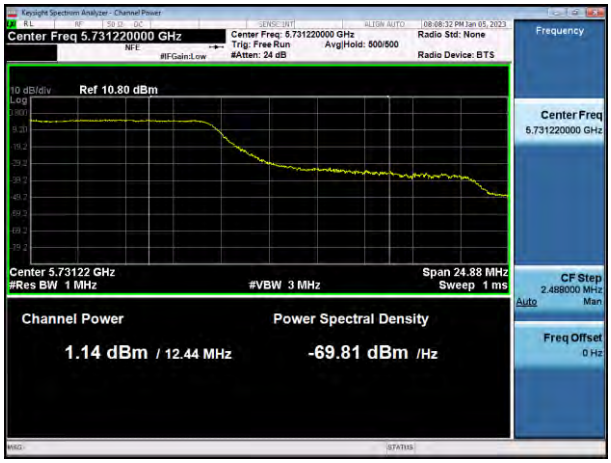
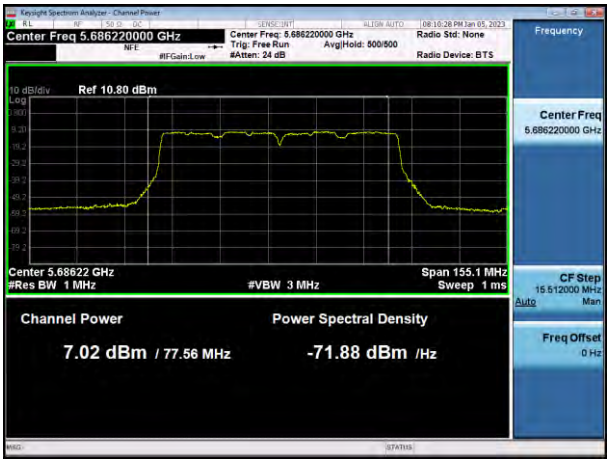
Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT40)	5710 (UNII 2C Band)	142	7.28	3.147	10.42	23.98	MCS11
802.11ac(VHT40)			6.91	3.583	10.49	23.98	MCS4
802.11n(HT40)	5710 (UNII 3 Band)	142	-2.74	3.147	0.41	30.00	MCS11
802.11ac(VHT40)			-3.02	3.583	0.56	30.00	MCS4

Mode	Frequency [MHz]	Channel	Measured Power [dBm]	Duty Cycle Factor [dB]	Total Power [dBm]	Limit [dBm]	Worstcase Datarate
802.11ac(VHT80)	5690 (UNII 2C Band)	138	3.21	4.594	7.80	23.98	MCS6
	5690 (UNII 3 Band)	138	-10.33	4.594	-5.73	30.00	MCS6

[SISO Ant.2]

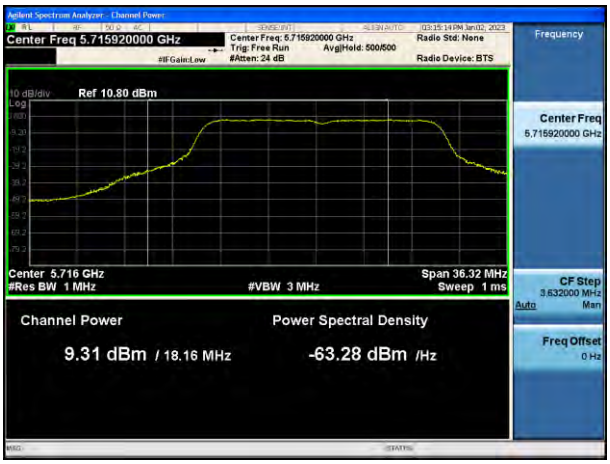
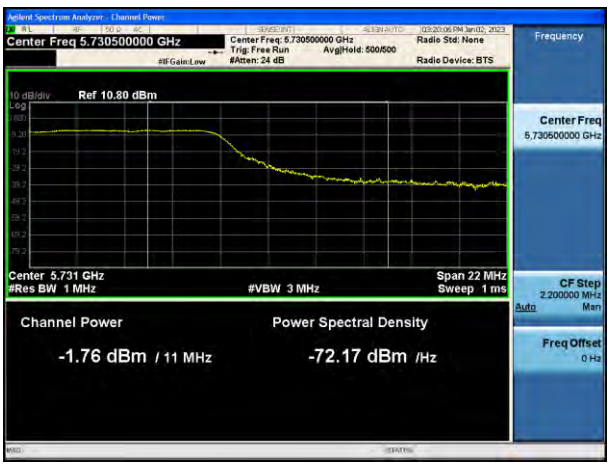
▣ Test Plots

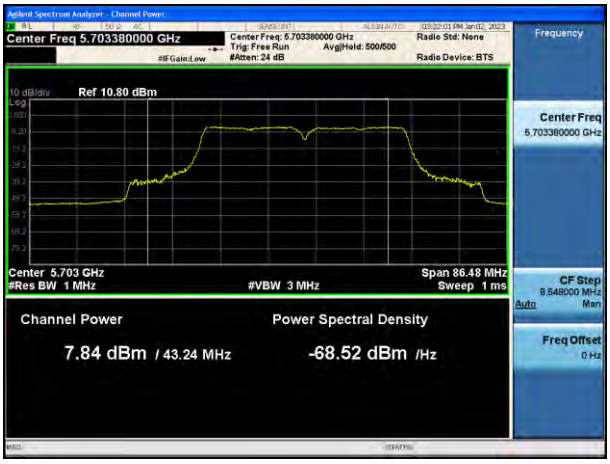
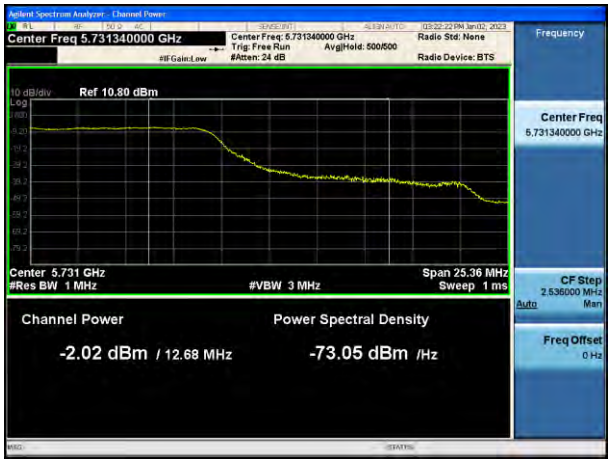
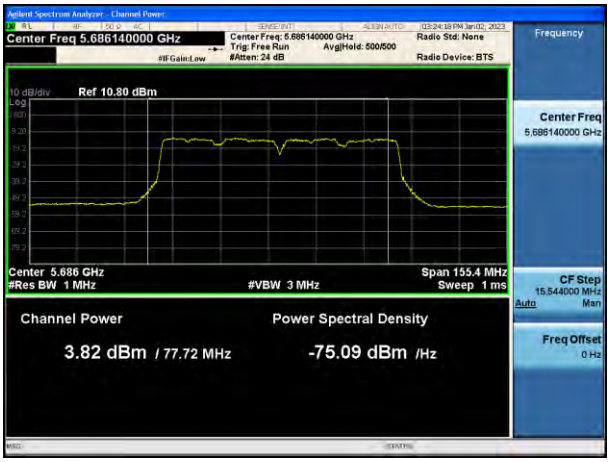
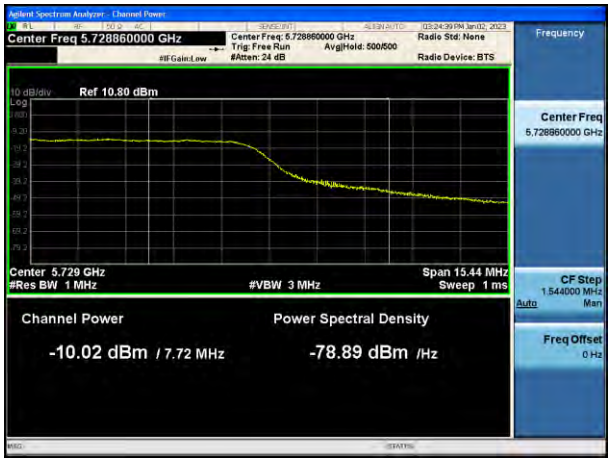
802.11a UNII 2C Band	802.11a UNII 3 Band
	
802.11n(HT20) UNII 2C Band	**802.11n(HT20) UNII 3 Band**
	
802.11ac(VHT20) UNII 2C Band	**802.11ac(VHT20) UNII 3 Band**
	

802.11n(HT40) UNII 2C Band	802.11n(HT40) UNII 3 Band
	
802.11ac(VHT40) UNII 2C Band	**802.11ac(VHT40) UNII 3 Band**
	
802.11ac(VHT80) UNII 2C Band	**802.11ac(VHT80) UNII 3 Band**
	

[MIMO Ant.1]

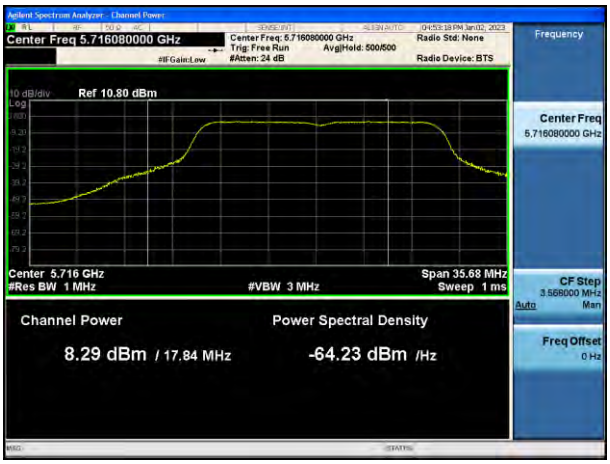
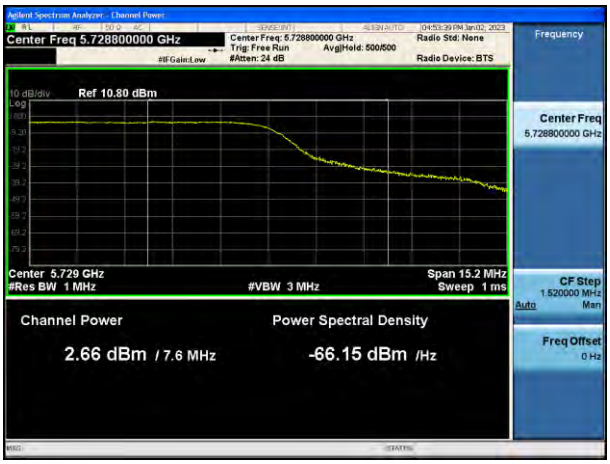
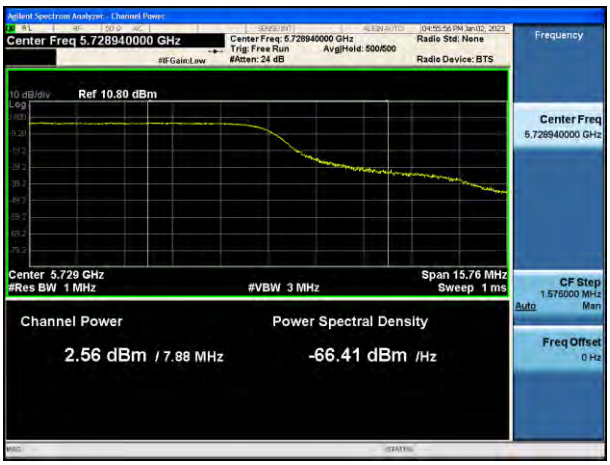
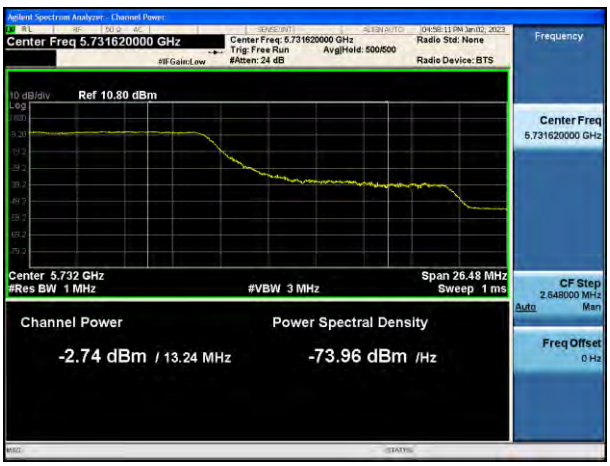
▣ Test Plots

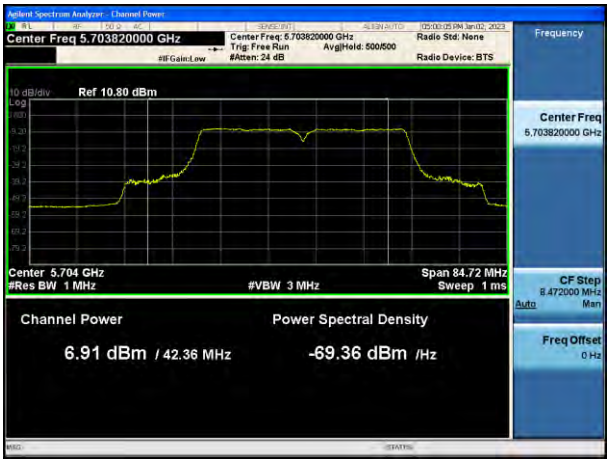
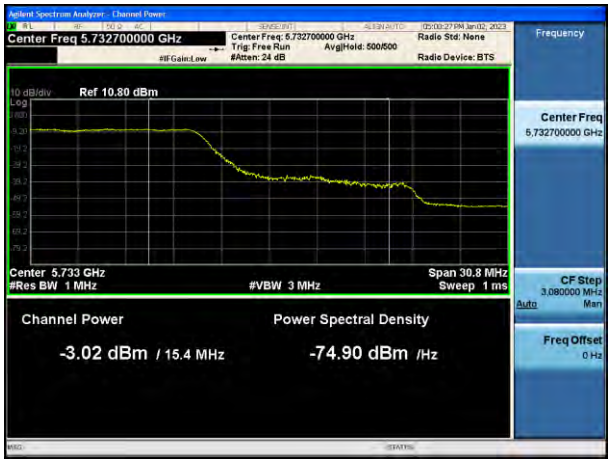
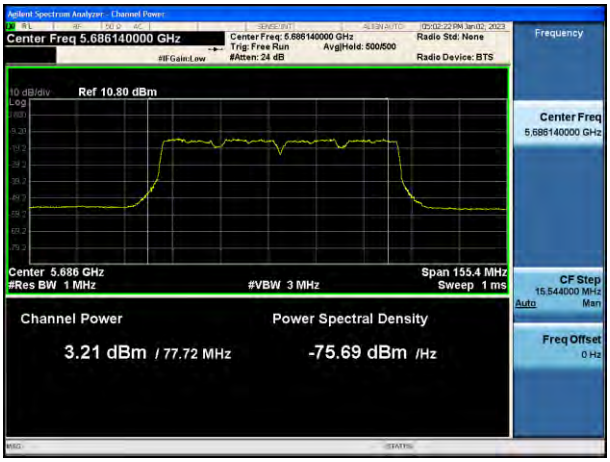
802.11n(HT20) UNII 2C Band	802.11n(HT20) UNII 3 Band
	
802.11ac(VHT20) UNII 2C Band	**802.11ac(VHT20) UNII 3 Band**
	
802.11n(HT40) UNII 2C Band	**802.11n(HT40) UNII 3 Band**
	

802.11ac(VHT40) UNII 2C Band	802.11ac(VHT40) UNII 3 Band
	
802.11ac(VHT80) UNII 2C Band	**802.11ac(VHT80) UNII 3 Band**
	

[MIMO Ant.2]

▣ Test Plots

802.11n(HT20) UNII 2C Band	802.11n(HT20) UNII 3 Band
	
802.11ac(VHT20) UNII 2C Band	**802.11ac(VHT20) UNII 3 Band**
	
802.11n(HT40) UNII 2C Band	**802.11n(HT40) UNII 3 Band**
	

802.11ac(VHT40) UNII 2C Band	802.11ac(VHT40) UNII 3 Band
	
802.11ac(VHT80) UNII 2C Band	**802.11ac(VHT80) UNII 3 Band**
	

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 (UNII 2C Band)	144	2.977	1.540	4.517	11 dBm/ MHz	36 Mbps
802.11n(HT20)			3.361	1.630	4.991		MCS4
802.11ac(VHT20)			3.085	1.646	4.731		MCS4
802.11a	5720 (UNII 3 Band)	144	-0.331	1.540	1.209	30 dBm/ 500 kHz	36 Mbps
802.11n(HT20)			-0.104	1.630	1.526		MCS4
802.11ac(VHT20)			-0.030	1.646	1.616		MCS4

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT40)	5710 (UNII 2C Band)	142	-2.962	2.398	-0.564	11 dBm/ MHz	MCS4
802.11ac(VHT40)			-2.661	2.409	-0.252		MCS4
802.11n(HT40)	5710 (UNII 3 Band)	142	-5.862	2.398	-3.464	30 dBm/ 500 kHz	MCS4
802.11ac(VHT40)			-6.021	2.409	-3.613		MCS4

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11ac(VHT80)	5690 (UNII 2C Band)	138	-9.559	4.086	-5.473	11 dBm/ MHz	MCS5
	5690 (UNII 3 Band)	138	-12.451	4.086	-8.365	30 dBm/ 500 kHz	MCS5

[MIMO Ant.1]

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT20)	5720 (UNII 2C Band)	144	-1.211	2.632	1.421	11 dBm/ MHz	MCS12
802.11ac(VHT20)			-0.859	2.317	1.458		MCS4
802.11n(HT20)	5720 (UNII 3 Band)	144	-3.950	2.632	-1.318	30 dBm/ 500 kHz	MCS12
802.11ac(VHT20)			-3.667	2.317	-1.350		MCS4

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT40)	5710 (UNII 2C Band)	142	-5.543	3.147	-2.396	11 dBm/ MHz	MCS11
802.11ac(VHT40)			-5.768	3.583	-2.184		MCS4
802.11n(HT40)	5710 (UNII 3 Band)	142	-9.656	3.147	-6.510	30 dBm/ 500 kHz	MCS11
802.11ac(VHT40)			-9.277	3.583	-5.694		MCS4

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11ac(VHT80)	5690 (UNII 2C Band)	138	-12.394	4.594	-7.800	11 dBm/ MHz	MCS6
	5690 (UNII 3 Band)	138	-17.276	4.594	-12.682	30 dBm/ 500 kHz	MCS6

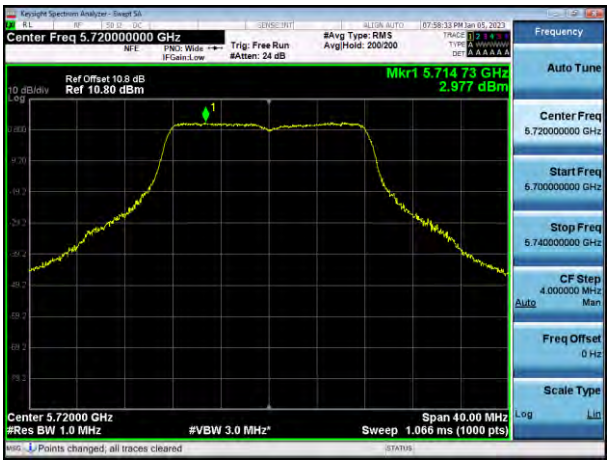
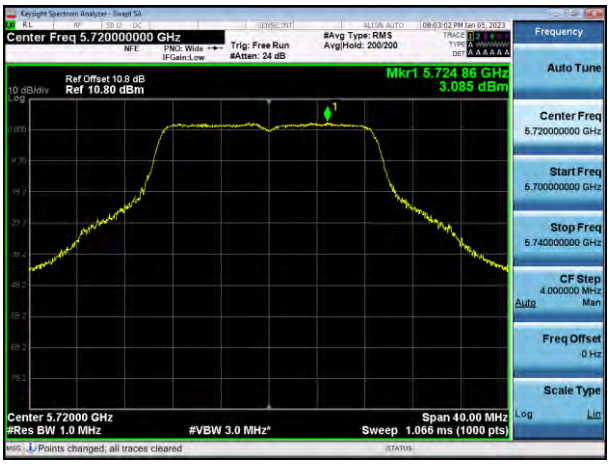
[MIMO Ant.2]

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT20)	5720 (UNII 2C Band)	144	-1.933	2.632	0.700	11 dBm/ MHz	MCS12
802.11ac(VHT20)			-2.035	2.317	0.282		MCS4
802.11n(HT20)	5720 (UNII 3 Band)	144	-4.505	2.632	-1.873	30 dBm/ 500 kHz	MCS12
802.11ac(VHT20)			-4.850	2.317	-2.533		MCS4

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11n(HT40)	5710 (UNII 2C Band)	142	-6.701	3.147	-3.554	11 dBm/ MHz	MCS11
802.11ac(VHT40)			-6.829	3.583	-3.246		MCS4
802.11n(HT40)	5710 (UNII 3 Band)	142	-8.953	3.147	-5.806	30 dBm/ 500 kHz	MCS11
802.11ac(VHT40)			-9.523	3.583	-5.939		MCS4

Mode	Frequency [MHz]	Channel	Measured Density [dBm]	Duty Cycle Factor [dB]	Total PSD [dBm]	Limit [dBm]	Worstcase Datarate
802.11ac(VHT80)	5690 (UNII 2C Band)	138	-13.424	4.594	-8.830	11 dBm/ MHz	MCS6
	5690 (UNII 3 Band)	138	-16.834	4.594	-12.240	30 dBm/ 500 kHz	MCS6

[SISO Ant.2]
▣ Test Plots

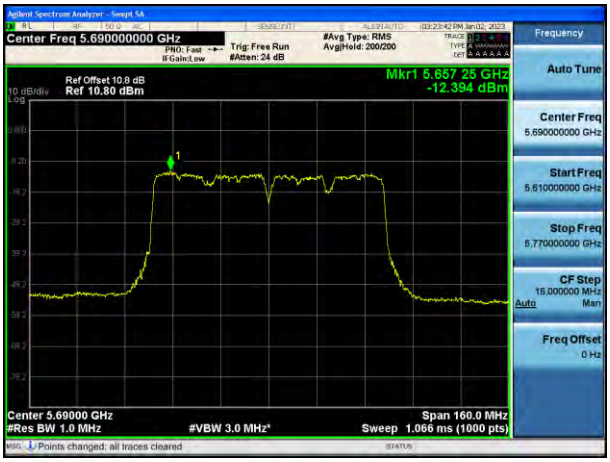
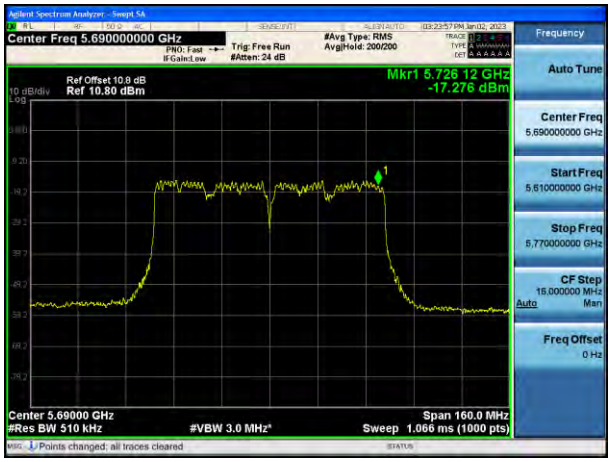
802.11a UNII 2C Band	802.11a UNII 3 Band
	
802.11n(HT20) UNII 2C Band	**802.11n(HT20) UNII 3 Band**
	
802.11ac(VHT20) UNII 2C Band	**802.11ac(VHT20) UNII 3 Band**
	

802.11n(HT40) UNII 2C Band	802.11n(HT40) UNII 3 Band
	
802.11ac(VHT40) UNII 2C Band	**802.11ac(VHT40) UNII 3 Band**
	
802.11ac(VHT80) UNII 2C Band	**802.11ac(VHT80) UNII 3 Band**
	

[MIMO Ant.1]

▣ Test Plots

802.11n(HT20) UNII 2C Band	802.11n(HT20) UNII 3 Band
	
802.11ac(VHT20) UNII 2C Band	**802.11ac(VHT20) UNII 3 Band**
	
802.11n(HT40) UNII 2C Band	**802.11n(HT40) UNII 3 Band**
	

802.11ac(VHT40) UNII 2C Band	802.11ac(VHT40) UNII 3 Band
	
802.11ac(VHT80) UNII 2C Band	**802.11ac(VHT80) UNII 3 Band**
	

[MIMO Ant.2]

▣ Test Plots

802.11n(HT20) UNII 2C Band	802.11n(HT20) UNII 3 Band
	
802.11ac(VHT20) UNII 2C Band	**802.11ac(VHT20) UNII 3 Band**
	
802.11n(HT40) UNII 2C Band	**802.11n(HT40) UNII 3 Band**
	

802.11ac(VHT40) UNII 2C Band	802.11ac(VHT40) UNII 3 Band
	
802.11ac(VHT80) UNII 2C Band	**802.11ac(VHT80) UNII 3 Band**
	

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 (dBμV) + 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 peaks 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

Frequency Range : Above 1 GHz

[SISO Ant.2]

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 [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
10360	53.62	-0.94	V	52.68	68.20	15.52	PK
15540	52.59	1.57	V	54.16	73.98	19.82	PK
15540	39.52	1.57	V	41.09	53.98	12.89	AV
10360	54.55	-0.94	H	53.61	68.20	14.59	PK
15540	51.86	1.57	H	53.43	73.98	20.55	PK
15540	38.62	1.57	H	40.19	53.98	13.79	AV

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5200 MHz
Channel No.	40 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
10400	52.67	-0.07	V	52.60	68.20	15.60	PK
15600	52.67	1.52	V	54.19	73.98	19.79	PK
15600	39.36	1.52	V	40.88	53.98	13.10	AV
10400	53.74	-0.07	H	53.67	68.20	14.53	PK
15600	51.84	1.52	H	53.36	73.98	20.62	PK
15600	38.12	1.52	H	39.64	53.98	14.34	AV

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5240 MHz
Channel No.	48 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
10480	53.55	-0.97	V	52.58	68.20	15.62	PK
15720	52.50	0.64	V	53.14	73.98	20.84	PK
15720	38.80	0.64	V	39.44	53.98	14.54	AV
10480	54.28	-0.97	H	53.31	68.20	14.89	PK
15720	51.39	0.64	H	52.03	73.98	21.95	PK
15720	37.84	0.64	H	38.48	53.98	15.50	AV

Band :	UNII 2A
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
10520	54.04	-1.06	V	52.99	68.20	15.22	PK
15780	51.59	0.59	V	52.18	73.98	21.80	PK
15780	38.51	0.59	V	39.10	53.98	14.88	AV
10520	54.63	-1.06	H	53.58	68.20	14.63	PK
15780	50.92	0.59	H	51.51	73.98	22.47	PK
15780	37.88	0.59	H	38.47	53.98	15.51	AV

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

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
10600	53.77	-0.61	V	53.16	73.98	20.82	PK
10600	40.63	-0.61	V	40.02	53.98	13.96	AV
15900	51.84	0.25	V	52.09	73.98	21.89	PK
15900	38.87	0.25	V	39.12	53.98	14.86	AV
10600	54.51	-0.61	H	53.90	73.98	20.08	PK
10600	41.44	-0.61	H	40.83	53.98	13.15	AV
15900	52.22	0.25	H	52.47	73.98	21.51	PK
15900	39.06	0.25	H	39.31	53.98	14.67	AV

Band :	UNII 2A
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
10640	53.64	-0.73	V	52.91	73.98	21.07	PK
10640	40.82	-0.73	V	40.09	53.98	13.89	AV
15960	51.47	0.53	V	52.00	73.98	21.98	PK
15960	38.93	0.53	V	39.46	53.98	14.52	AV
10640	54.09	-0.73	H	53.36	73.98	20.62	PK
10640	41.27	-0.73	H	40.54	53.98	13.44	AV
15960	52.45	0.53	H	52.98	73.98	21.00	PK
15960	39.27	0.53	H	39.80	53.98	14.18	AV

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]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
11000	52.17	-0.18	V	51.99	73.98	21.99	PK
11000	40.71	-0.18	V	40.53	53.98	13.45	AV
16500	53.68	0.60	V	54.28	68.20	13.92	PK
11000	53.43	-0.18	H	53.25	73.98	20.73	PK
11000	40.97	-0.18	H	40.79	53.98	13.19	AV
16500	54.23	0.60	H	54.83	68.20	13.37	PK

Band :	UNII 2C
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5600 MHz
Channel No.	120 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
11200	55.02	-1.01	V	54.01	73.98	19.97	PK
11200	42.65	-1.01	V	41.64	53.98	12.34	AV
16800	54.26	-0.07	V	54.19	68.20	14.01	PK
11200	56.00	-1.01	H	54.99	73.98	18.99	PK
11200	43.74	-1.01	H	42.73	53.98	11.25	AV
16800	55.24	-0.07	H	55.17	68.20	13.03	PK

Band :	UNII 2C
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5720 MHz
Channel No.	144 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
11440	54.07	-0.52	V	53.55	73.98	20.43	PK
11440	43.88	-0.52	V	43.36	53.98	10.62	AV
17160	53.42	0.64	V	54.06	68.20	14.14	PK
11440	**57.50**	**-0.52**	**H**	**56.98**	**73.98**	**17.00**	**PK**
11440	**44.95**	**-0.52**	**H**	**44.43**	**53.98**	**9.55**	**AV**
17160	54.23	0.64	H	54.87	68.20	13.33	PK

Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5745MHz
Channel No.	149 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
11490	55.88	-0.38	V	55.50	73.98	18.48	PK
11490	43.69	-0.38	V	43.31	53.98	10.67	AV
17235	53.44	1.04	V	54.48	68.20	13.72	PK
11490	56.37	-0.38	H	55.99	73.98	17.99	PK
11490	44.54	-0.38	H	44.16	53.98	9.82	AV
17235	52.67	1.04	H	53.71	68.20	14.49	PK

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

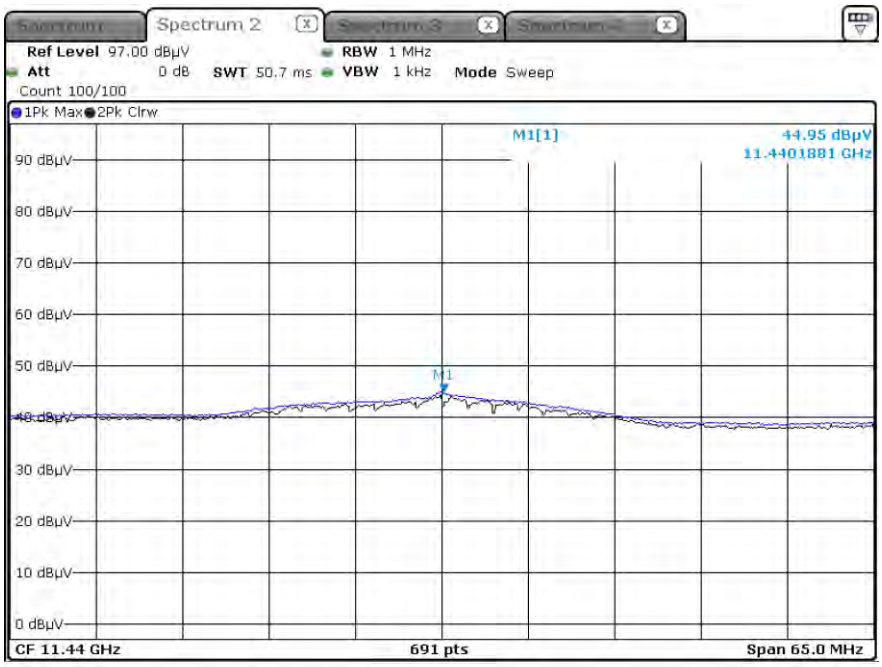
Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
11570	56.82	-0.29	V	56.53	73.98	17.46	PK
11570	43.67	-0.29	V	43.38	53.98	10.61	AV
17355	54.18	1.14	V	55.32	68.20	12.89	PK
11570	57.10	-0.29	H	56.81	73.98	17.18	PK
11570	44.71	-0.29	H	44.42	53.98	9.57	AV
17355	53.28	1.14	H	54.42	68.20	13.79	PK

Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5825 MHz
Channel No.	165 Ch

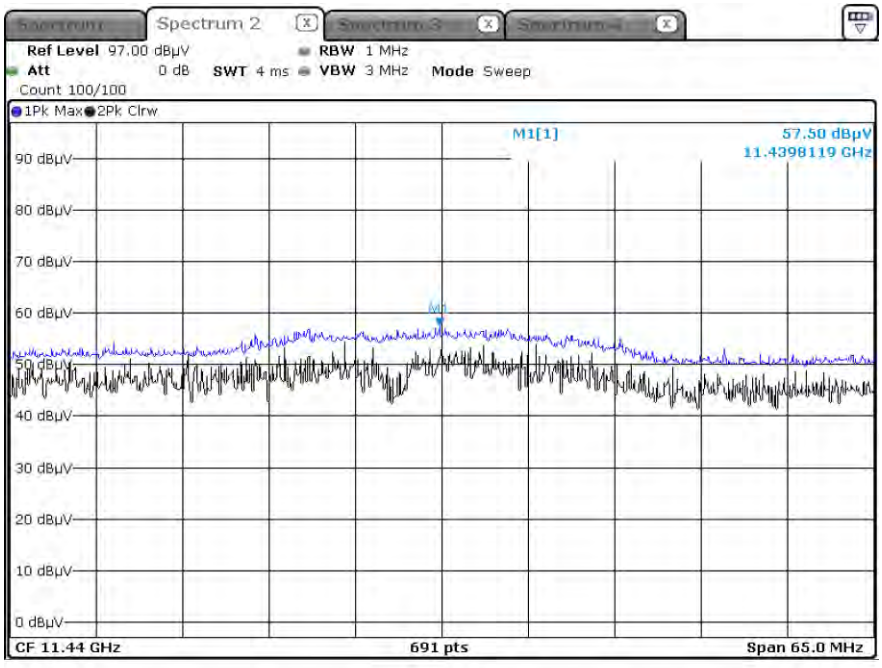
Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG [dB/m]	POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
11650	56.41	-1.16	V	55.25	73.98	18.73	PK
11650	44.32	-1.16	V	43.16	53.98	10.82	AV
17475	52.60	2.16	V	54.76	68.20	13.44	PK
11650	57.21	-1.16	H	56.05	73.98	17.93	PK
11650	45.33	-1.16	H	44.17	53.98	9.81	AV
17475	51.87	2.16	H	54.03	68.20	14.17	PK

▣ Test Plots

Radiated Spurious Emissions plot – Average Result (802.11a, Ch.144 Spurious Emissions, Y-H)



Radiated Spurious Emissions plot – Peak Result (802.11a, Ch.144 Spurious Emissions, Y-H)



10.9 RADIATED RESTRICTED BAND EDGE

[SISO Ant.2]

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+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5150	48.23	13.64	H	61.87	73.98	12.11	PK
5150	35.14	13.64	H	48.78	53.98	5.20	AV
5150	47.85	13.64	V	61.49	73.98	12.49	PK
5150	34.85	13.64	V	48.49	53.98	5.49	AV

Band :	UNII 2A
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5350	44.59	14.22	H	58.81	73.98	15.17	PK
5350	32.57	14.22	H	46.79	53.98	7.19	AV
5350	43.65	14.22	V	57.87	73.98	16.11	PK
5350	31.88	14.22	V	46.1	53.98	7.88	AV

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]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5460	44.31	14.69	H	59.00	73.98	14.98	PK
5460	33.02	14.69	H	47.71	53.98	6.27	AV
5470	45.80	15.03	H	60.83	68.20	7.37	PK
5460	43.51	14.69	V	58.20	73.98	15.78	PK
5460	32.77	14.69	V	47.46	53.98	6.52	AV
5470	45.29	15.03	V	60.32	68.20	7.88	PK

Band :	UNII 1
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5150	43.62	13.64	H	57.26	73.98	16.72	PK
5150	35.23	13.64	H	48.87	53.98	5.11	AV
5150	42.59	13.64	V	56.23	73.98	17.75	PK
5150	34.77	13.64	V	48.41	53.98	5.57	AV

Band :	UNII 2A
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5350	44.87	14.22	H	59.09	73.98	14.89	PK
5350	32.73	14.22	H	46.95	53.98	7.03	AV
5350	43.61	14.22	V	57.83	73.98	16.15	PK
5350	32.05	14.22	V	46.27	53.98	7.71	AV

Band :	UNII 2C
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5460	44.45	14.69	H	59.14	73.98	14.84	PK
5460	33.23	14.69	H	47.92	53.98	6.06	AV
5470	45.38	15.03	H	60.41	68.20	7.79	PK
5460	43.05	14.69	V	57.74	73.98	16.24	PK
5460	32.80	14.69	V	47.49	53.98	6.49	AV
5470	44.48	15.03	V	59.51	68.20	8.69	PK

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]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5150	45.22	13.64	H	58.86	73.98	15.12	PK
5150	32.55	13.64	H	46.19	53.98	7.79	AV
5150	44.51	13.64	V	58.15	73.98	15.83	PK
5150	32.03	13.64	V	45.67	53.98	8.31	AV

Band :	UNII 2A
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5350	44.40	14.22	H	58.62	73.98	15.36	PK
5350	32.68	14.22	H	46.90	53.98	7.08	AV
5350	43.69	14.22	V	57.91	73.98	16.07	PK
5350	31.87	14.22	V	46.09	53.98	7.89	AV

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]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5460	44.32	14.69	H	59.01	73.98	14.97	PK
5460	33.19	14.69	H	47.88	53.98	6.10	AV
5470	46.20	15.03	H	61.23	68.20	6.97	PK
5460	43.74	14.69	V	58.43	73.98	15.55	PK
5460	32.87	14.69	V	47.56	53.98	6.42	AV
5470	45.97	15.03	V	61.00	68.20	7.20	PK

Band :	UNII 1
Operation Mode:	802.11 n_HT40
Transfer MCS Index:	0
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5150	45.14	13.64	H	58.78	73.98	15.20	PK
5150	**36.07**	**13.64**	**H**	**49.71**	**53.98**	**4.27**	**AV**
5150	45.05	13.64	V	58.69	73.98	15.29	PK
5150	34.74	13.64	V	48.38	53.98	5.60	AV

Band :	UNII 2A
Operation Mode:	802.11 n_HT40
Transfer MCS Index:	0
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5350	52.11	14.22	H	66.33	73.98	7.65	PK
5350	34.98	14.22	H	49.20	53.98	4.78	AV
5350	31.28	14.22	V	45.50	73.98	28.48	PK
5350	33.88	14.22	V	48.10	53.98	5.88	AV

Band :	UNII 2C
Operation Mode:	802.11 n_HT40
Transfer MCS Index:	0
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5460	44.86	14.69	H	59.55	73.98	14.43	PK
5460	33.24	14.69	H	47.93	53.98	6.05	AV
5470	46.29	15.03	H	61.32	68.20	6.88	PK
5460	43.77	14.69	V	58.46	73.98	15.52	PK
5460	32.13	14.69	V	46.82	53.98	7.16	AV
5470	45.89	15.03	V	60.92	68.20	7.28	PK

Band :	UNII 1
Operation Mode:	802.11 ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5150	53.20	13.64	H	66.84	73.98	7.14	PK
5150	35.77	13.64	H	49.41	53.98	4.57	AV
5150	52.49	13.64	V	66.13	73.98	7.85	PK
5150	34.71	13.64	V	48.35	53.98	5.63	AV

Band :	UNII 2A
Operation Mode:	802.11 ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5350	51.15	14.22	H	65.37	73.98	8.61	PK
5350	35.22	14.22	H	49.44	53.98	4.54	AV
5350	50.21	14.22	V	64.43	73.98	9.55	PK
5350	34.42	14.22	V	48.64	53.98	5.34	AV

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]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5460	45.72	14.69	H	60.41	73.98	13.57	PK
5460	33.17	14.69	H	47.86	53.98	6.12	AV
5470	**46.62**	**15.03**	**H**	**61.65**	**68.20**	**6.55**	**PK**
5460	44.59	14.69	V	59.28	73.98	14.70	PK
5460	32.24	14.69	V	46.93	53.98	7.05	AV
5470	45.49	15.03	V	60.52	68.20	7.68	PK

Band :	UNII 1
Operation Mode:	802.11 ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5210 MHz
Channel No.	42 Ch

Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5150	45.05	13.64	H	58.69	73.98	15.29	PK
5150	34.16	13.64	H	47.8	53.98	6.18	AV
5150	44.18	13.64	V	57.82	73.98	16.16	PK
5150	33.52	13.64	V	47.16	53.98	6.82	AV

Band :	UNII 2A
Operation Mode:	802.11 ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5290 MHz
Channel No.	58 Ch

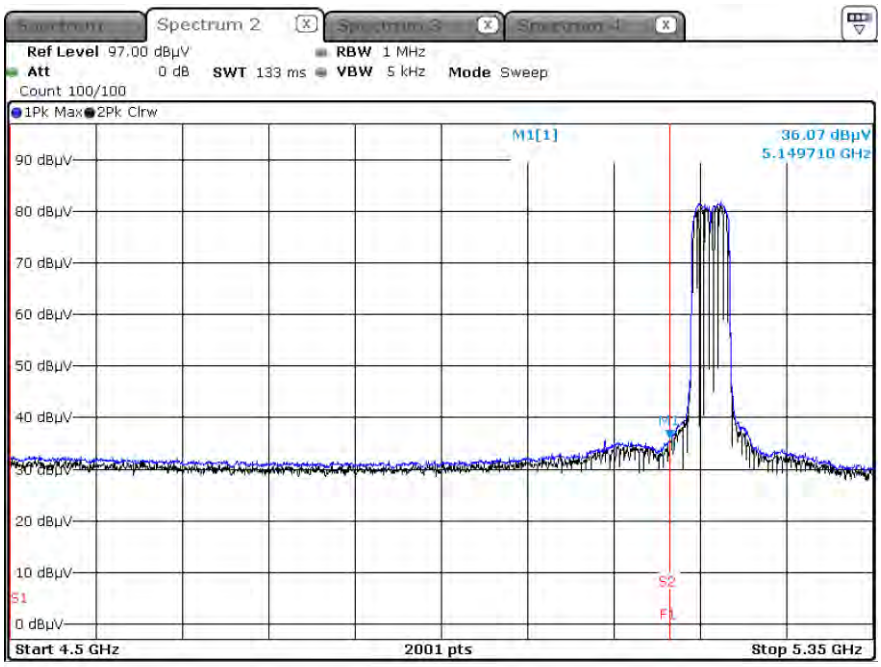
Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5350	44.77	14.22	H	58.99	73.98	14.99	PK
5350	34.45	14.22	H	48.67	53.98	5.31	AV
5350	44.06	14.22	V	58.28	73.98	15.70	PK
5350	33.78	14.22	V	48	53.98	5.98	AV

Band :	UNII 2C
Operation Mode:	802.11 ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5530 MHz
Channel No.	106 Ch

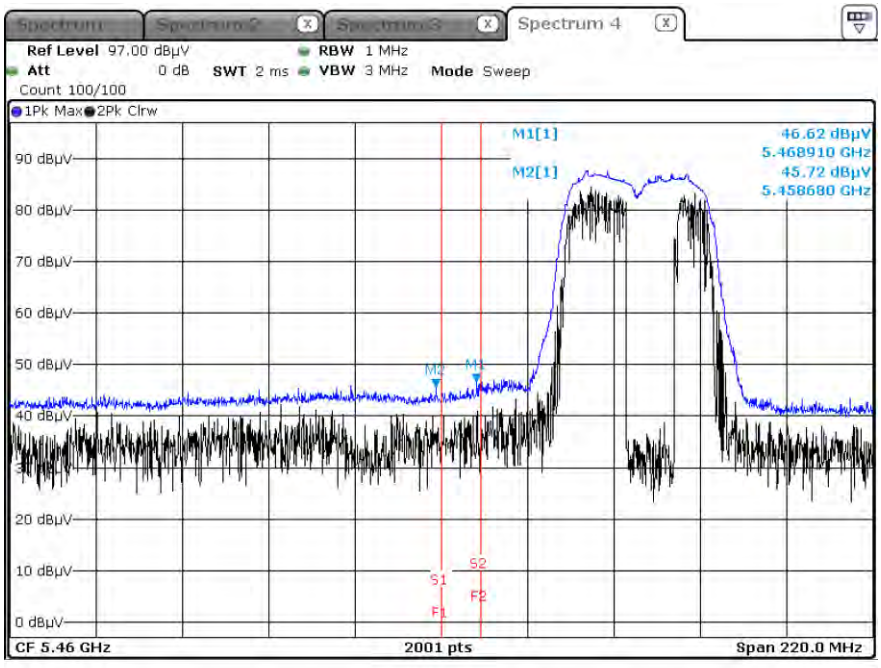
Frequency [MHz]	Measured Value [dBµV]	CL+AF+DF-AG+ATT [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
5460	43.31	14.69	H	58.00	73.98	15.98	PK
5460	33.30	14.69	H	47.99	53.98	5.99	AV
5470	43.69	15.03	H	58.72	68.20	9.48	PK
5460	43.05	14.69	V	57.74	73.98	16.24	PK
5460	33.05	14.69	V	47.74	53.98	6.24	AV
5470	43.52	15.03	V	58.55	68.20	9.65	PK

▣ Test Plots(UNII 1, 2A, 2C)

Average Result (802.11 n_HT40_ MCS0, Ch.38, Y-H)



Peak Result (802.11 ac_VHT40_ MCS0, Ch.102, Y-H)

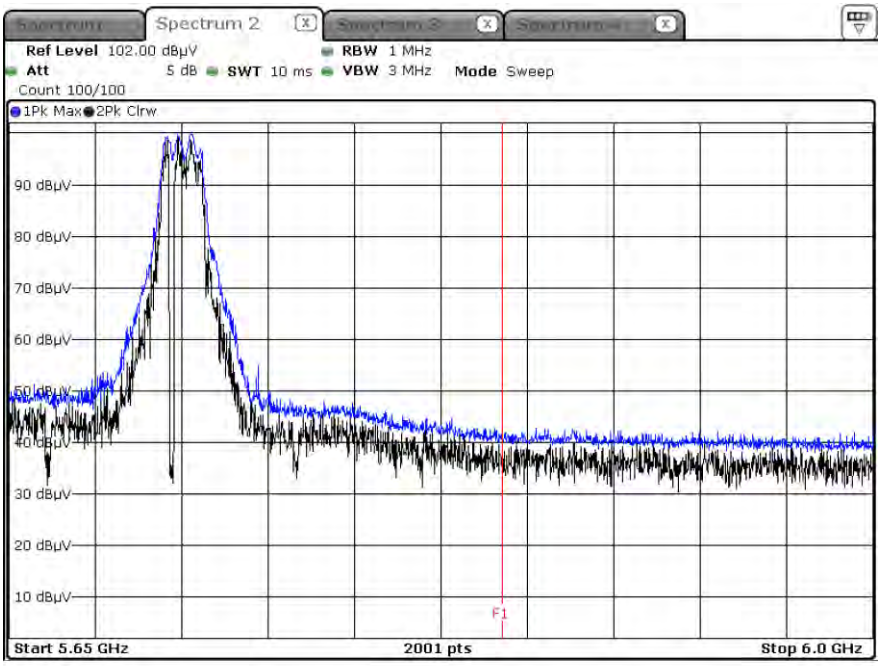


Note:

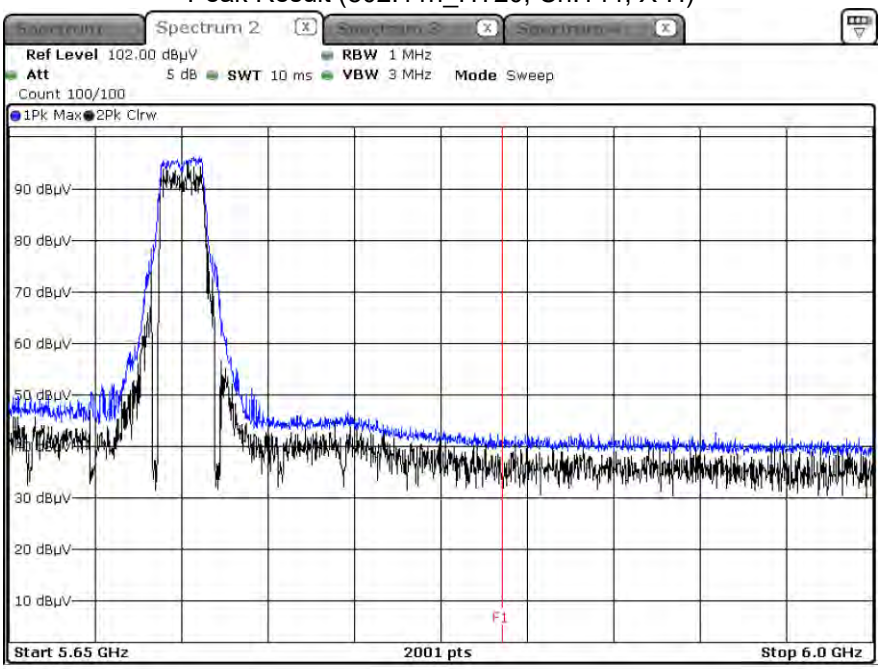
Only the worst case plots for Radiated Restricted Band Edge.

▣ Test Plots(Straddle Channel)

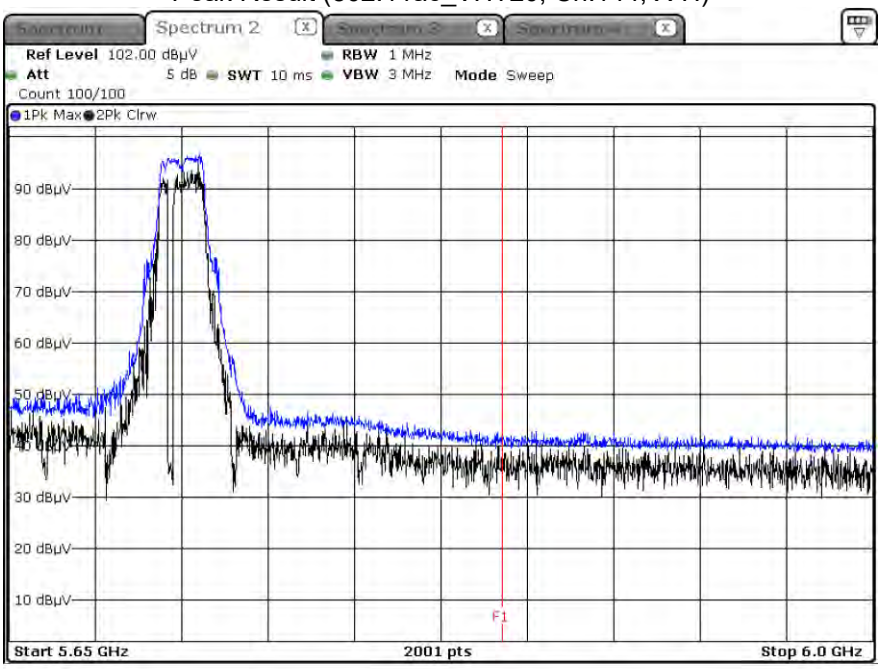
Peak Result (802.11a, Ch.144, X-H)



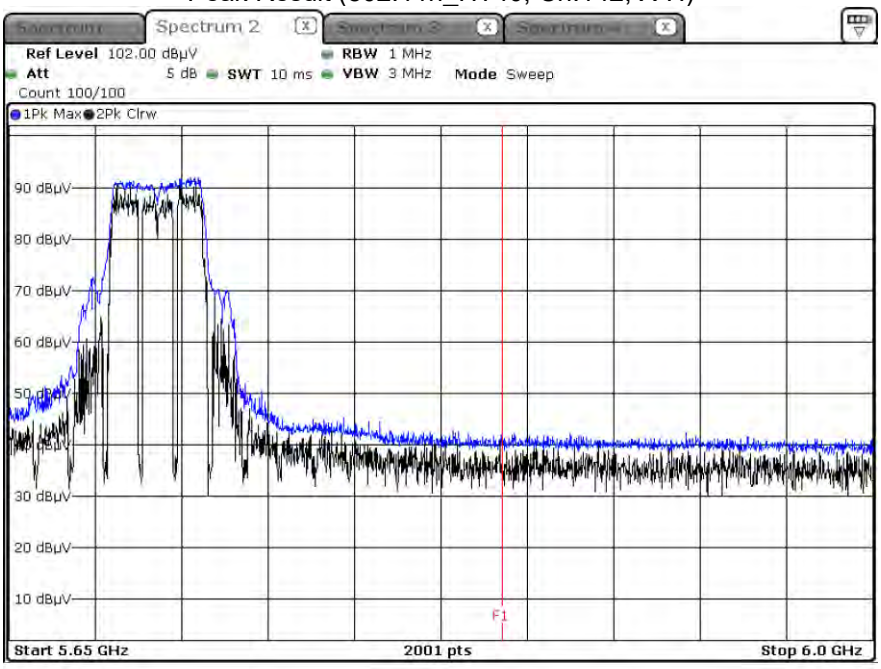
Peak Result (802.11n_HT20, Ch.144, X-H)



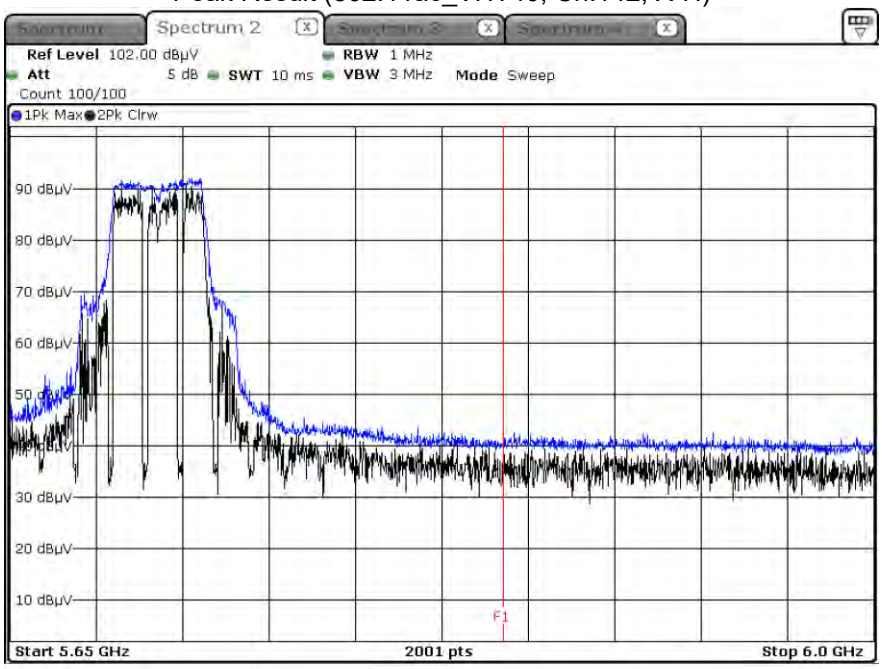
Peak Result (802.11ac_VHT20, Ch.144, X-H)



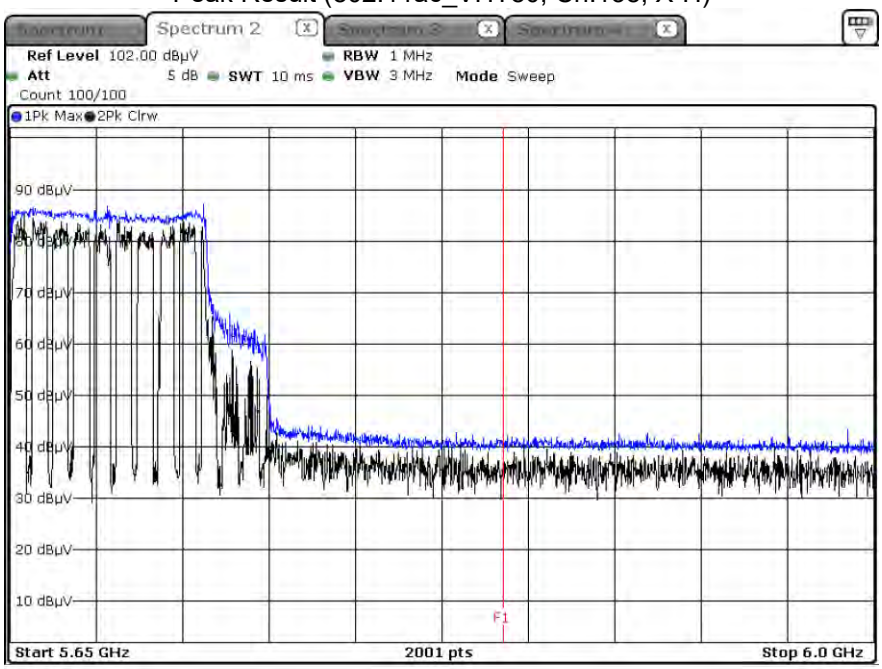
Peak Result (802.11n_HT40, Ch.142, X-H)



Peak Result (802.11ac_VHT40, Ch.142, X-H)



Peak Result (802.11ac_VHT80, Ch.138, X-H)

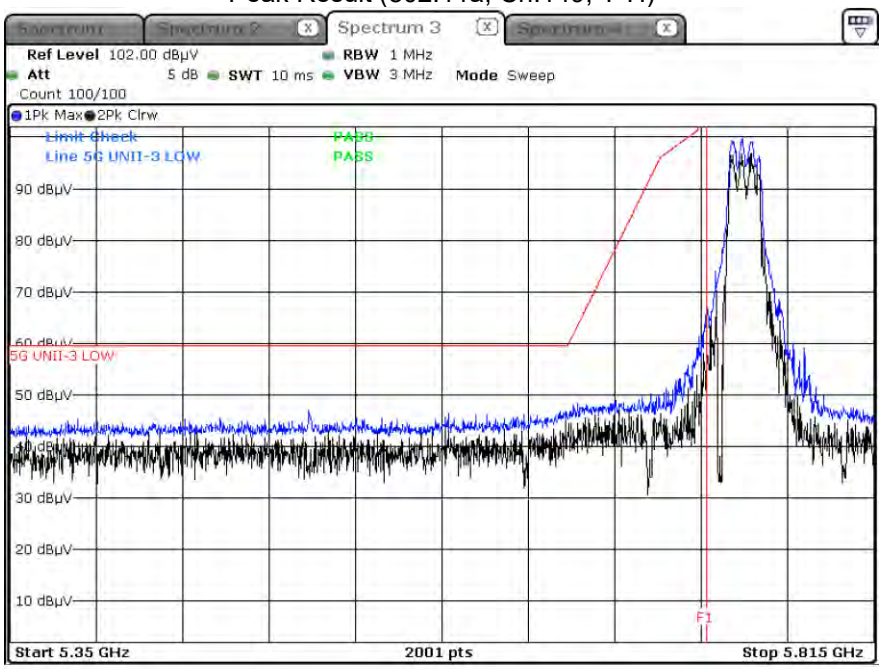


Note :

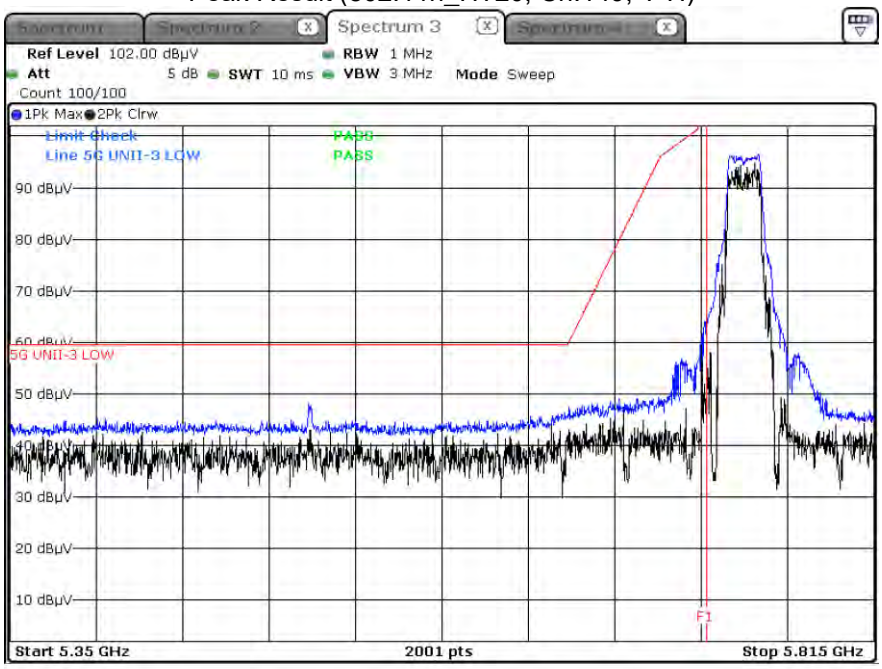
1. Only the worst case plots for Radiated Restricted Band Edge.
2. Red line : 5 850 MHz
3. Ambient Noise (Because of ambient noise, We attached only the worst plot without a data table)

▣ Test Plots(UNII 3)

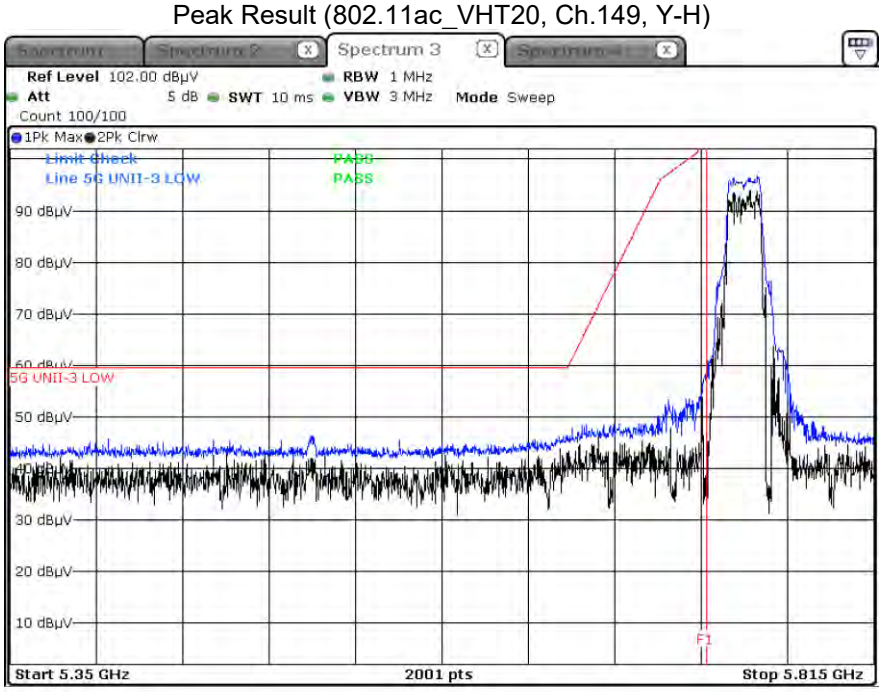
Peak Result (802.11a, Ch.149, Y-H)



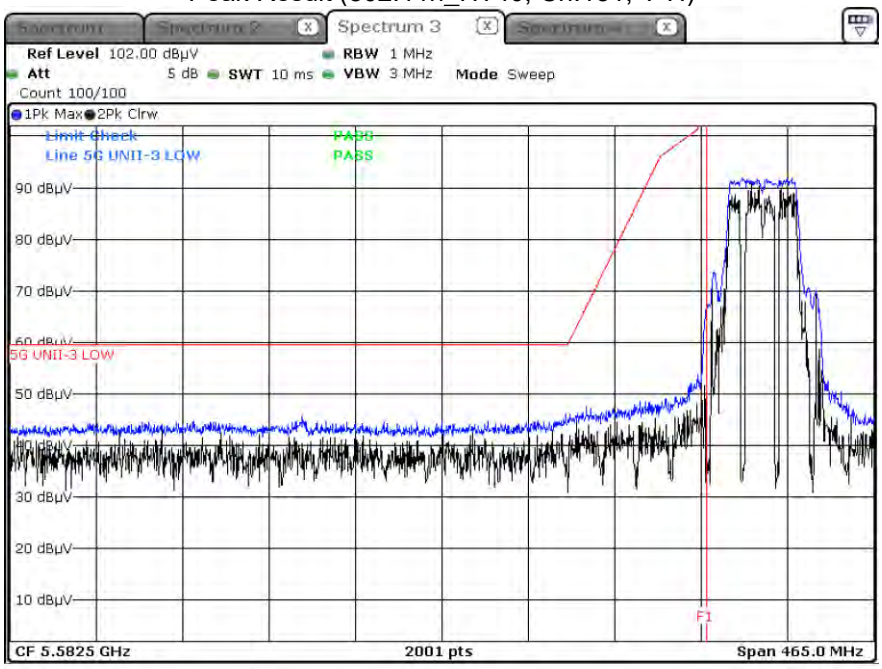
Peak Result (802.11n_HT20, Ch.149, Y-H)



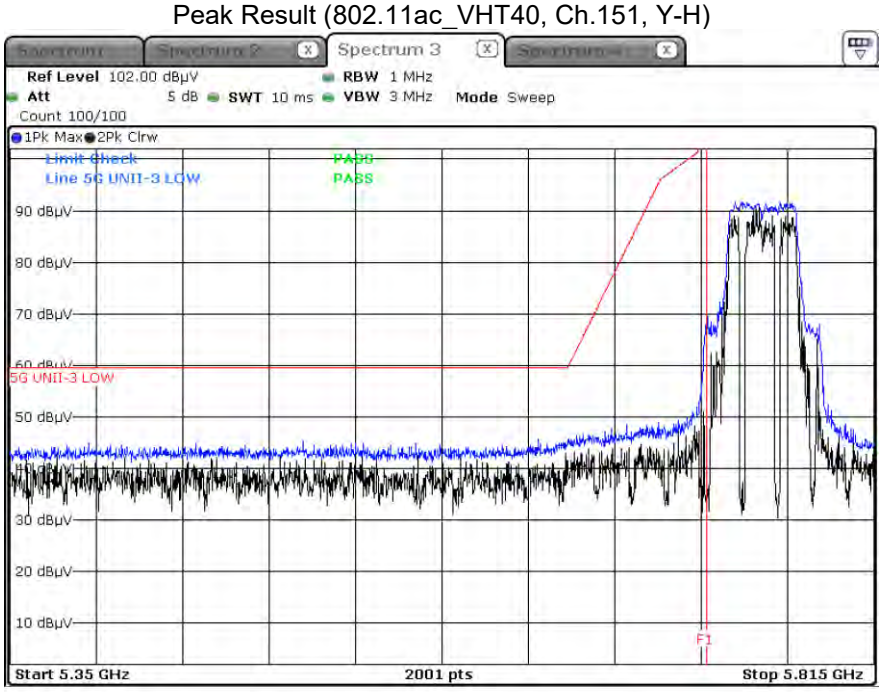
Peak Result (802.11ac_VHT20, Ch.149, Y-H)



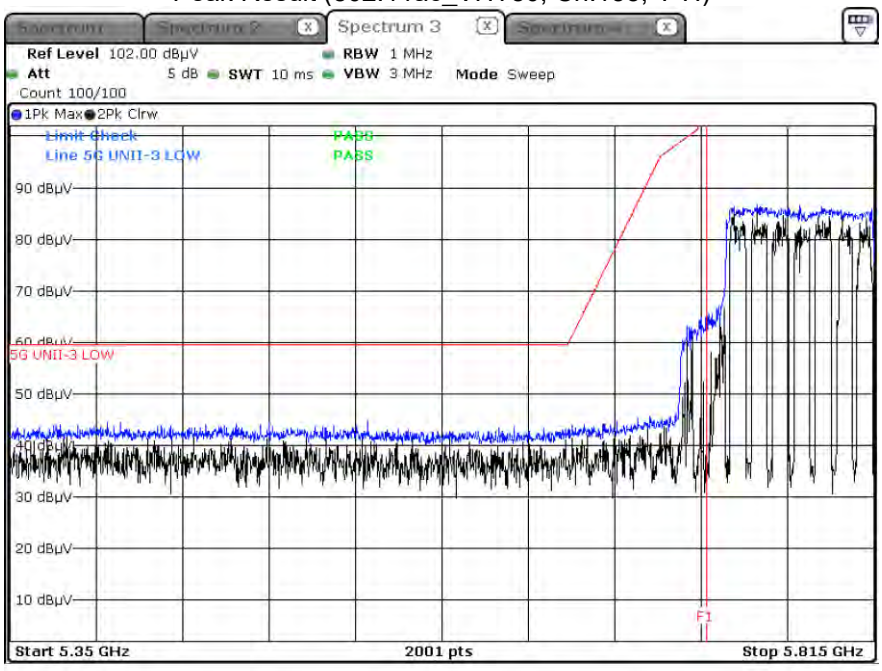
Peak Result (802.11n_HT40, Ch.151, Y-H)



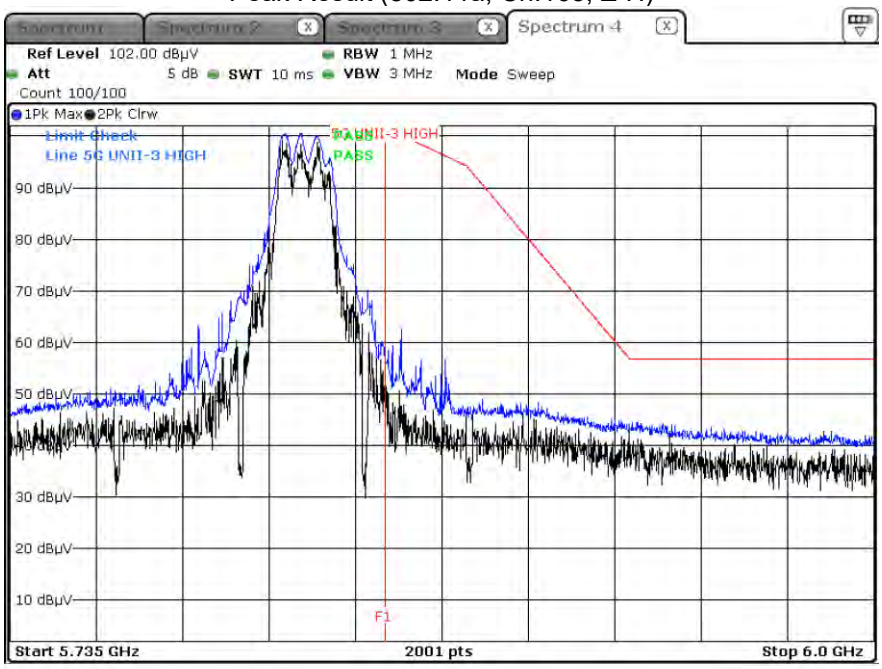
Peak Result (802.11ac_VHT40, Ch.151, Y-H)



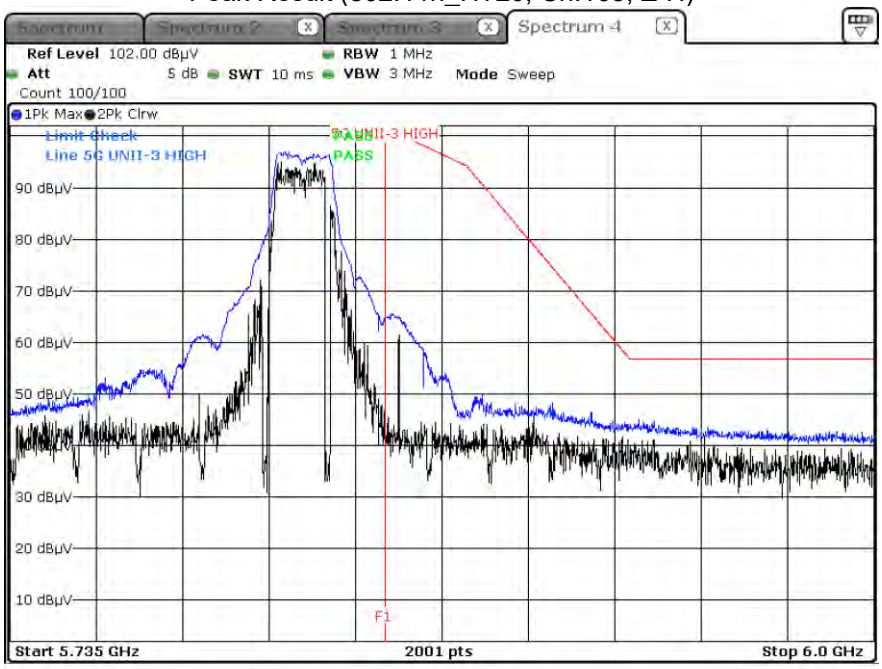
Peak Result (802.11ac_VHT80, Ch.155, Y-H)



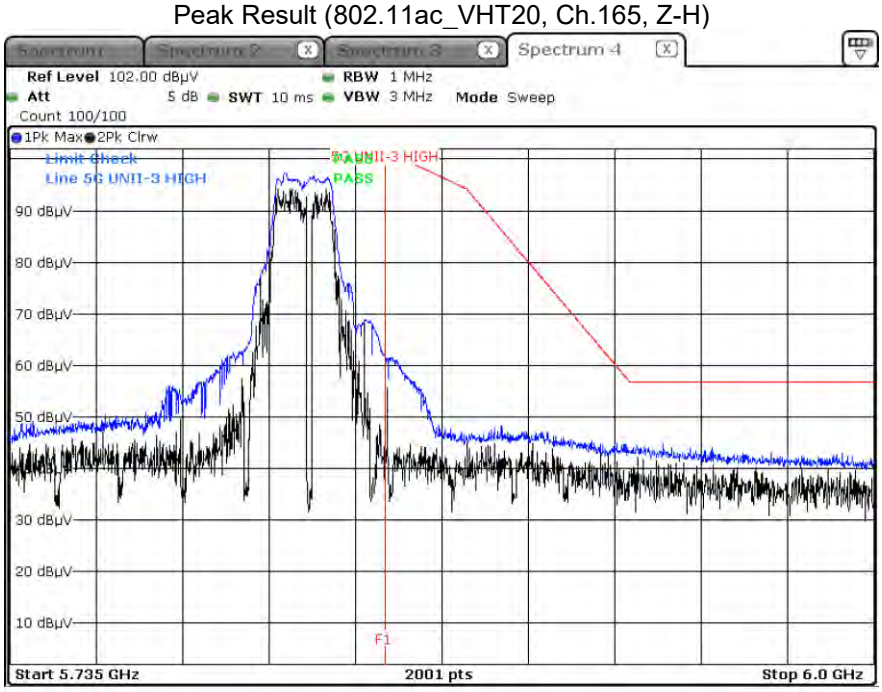
Peak Result (802.11a, Ch.165, Z-H)



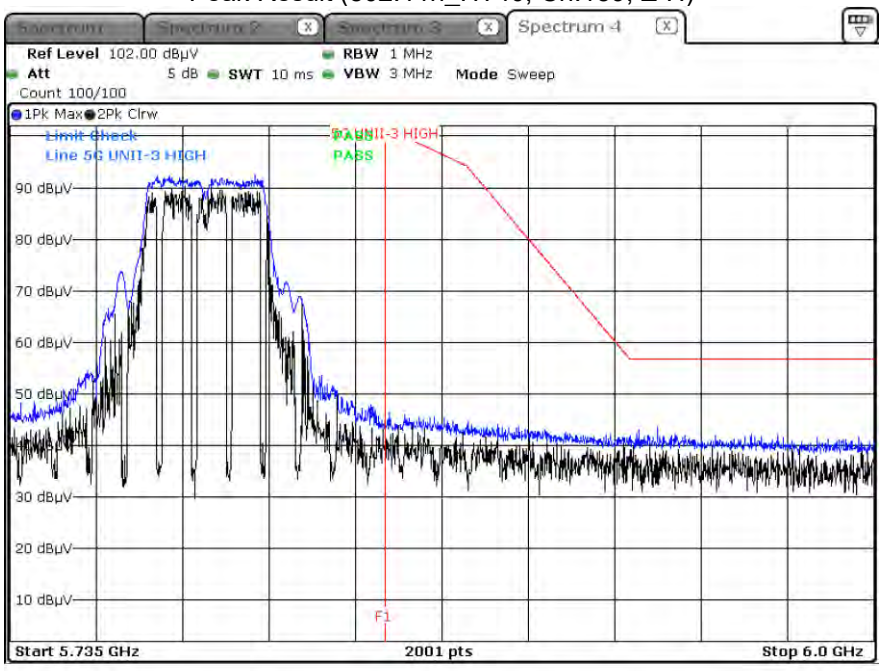
Peak Result (802.11n_HT20, Ch.165, Z-H)



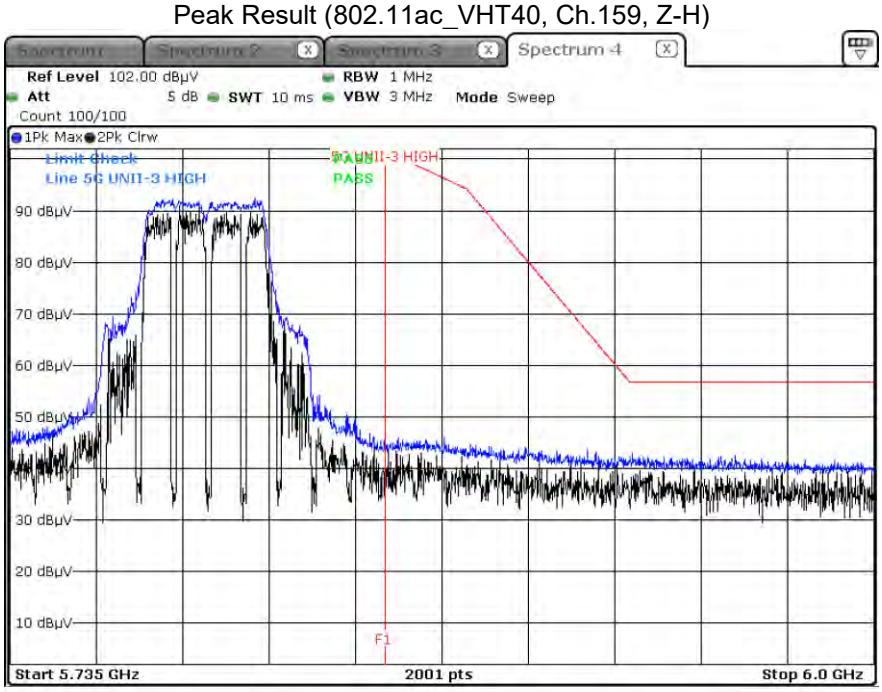
Peak Result (802.11ac_VHT20, Ch.165, Z-H)



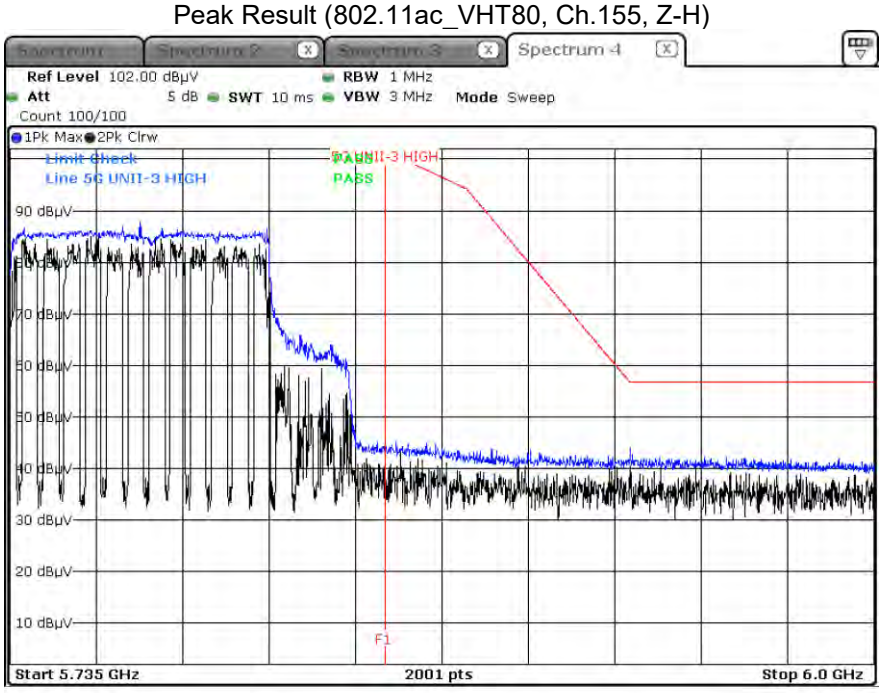
Peak Result (802.11n_HT40, Ch.159, Z-H)



Peak Result (802.11ac_VHT40, Ch.159, Z-H)



Peak Result (802.11ac_VHT80, Ch.155, Z-H)



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.

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10.10 POWERLINE CONDUCTED EMISSIONS

Conducted Emissions (Line 1)

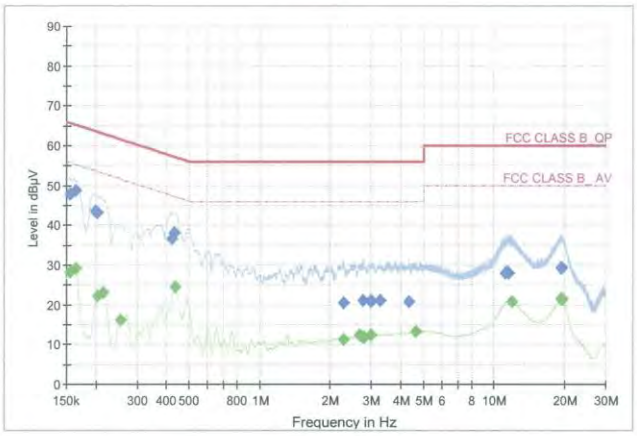
Test 1 / 2

Test Report

Common Information

EUT : SM-M546B/DS
Operating Conditions : 5G WLAN L1

Full Spectrum



Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1545	48.01	65.75	17.75	9.000	L1	OFF	9.7
0.1635	48.61	65.28	16.67	9.000	L1	OFF	9.7
0.1995	43.48	63.63	20.15	9.000	L1	OFF	9.7
0.2040	43.31	63.45	20.14	9.000	L1	OFF	9.7
0.4245	36.55	57.36	20.81	9.000	L1	OFF	9.7
0.4335	38.14	57.19	19.05	9.000	L1	OFF	9.7
2.2775	20.42	56.00	35.58	9.000	L1	OFF	9.8
2.7770	20.96	56.00	35.04	9.000	L1	OFF	9.8
2.9953	21.08	56.00	34.92	9.000	L1	OFF	9.8
3.0020	20.75	56.00	35.25	9.000	L1	OFF	9.8
3.2765	21.01	56.00	34.99	9.000	L1	OFF	9.8
4.3273	20.83	56.00	35.17	9.000	L1	OFF	9.8
11.1718	27.90	60.00	32.10	9.000	L1	OFF	10.1
11.3833	28.30	60.00	31.70	9.000	L1	OFF	10.1
11.4350	28.31	60.00	31.69	9.000	L1	OFF	10.1
11.5025	28.05	60.00	31.95	9.000	L1	OFF	10.1
19.3213	29.19	60.00	30.81	9.000	L1	OFF	10.3
19.4383	29.44	60.00	30.56	9.000	L1	OFF	10.3

2022-12-03 오후 5:16:17

Test 2 / 2

Final_Result_CAV

Frequency (MHz)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1545	28.17	55.75	27.58	9.000	L1	OFF	9.7
0.1635	29.16	55.28	26.12	9.000	L1	OFF	9.7
0.2040	22.21	53.45	31.24	9.000	L1	OFF	9.7
0.2153	22.94	53.00	30.06	9.000	L1	OFF	9.7
0.2535	16.06	51.64	35.58	9.000	L1	OFF	9.7
0.4358	24.42	47.14	22.72	9.000	L1	OFF	9.7
2.2775	11.29	46.00	34.71	9.000	L1	OFF	9.8
2.6668	12.37	46.00	33.63	9.000	L1	OFF	9.8
2.7748	11.91	46.00	34.09	9.000	L1	OFF	9.8
2.7793	11.95	46.00	34.05	9.000	L1	OFF	9.8
2.9953	12.49	46.00	33.51	9.000	L1	OFF	9.8
4.6400	13.17	46.00	32.83	9.000	L1	OFF	9.8
11.9120	20.79	50.00	29.21	9.000	L1	OFF	10.1
19.3010	21.56	50.00	28.44	9.000	L1	OFF	10.3
19.3415	21.46	50.00	28.54	9.000	L1	OFF	10.3
19.4495	21.48	50.00	28.52	9.000	L1	OFF	10.3
19.6048	21.41	50.00	28.59	9.000	L1	OFF	10.3
19.6655	21.33	50.00	28.67	9.000	L1	OFF	10.3

2022-12-03 오후 5:16:17

Conducted Emissions (Line 2)

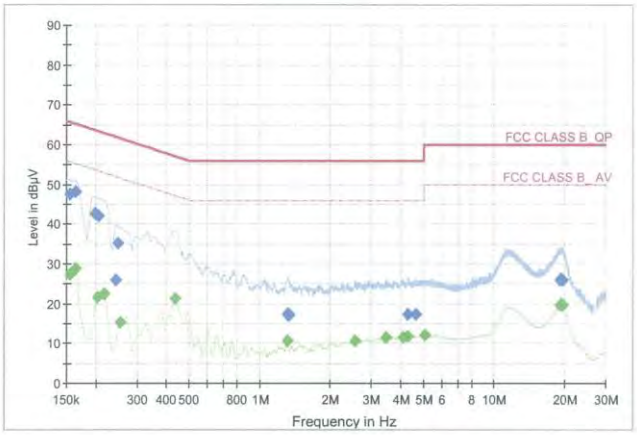
Test 1 / 2

Test Report

Common Information

EUT : SM-M546B/DS
Operating Conditions : 5G WLAN N

Full Spectrum



Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1545	47.56	65.75	18.19	9.000	N	OFF	9.6
0.1635	48.25	65.28	17.04	9.000	N	OFF	9.6
0.1995	42.75	63.63	20.88	9.000	N	OFF	9.6
0.2063	42.05	63.36	21.30	9.000	N	OFF	9.6
0.2423	25.96	62.02	36.06	9.000	N	OFF	9.6
0.2490	35.17	61.79	26.62	9.000	N	OFF	9.6
1.3123	17.31	56.00	38.69	9.000	N	OFF	9.7
1.3213	17.37	56.00	38.63	9.000	N	OFF	9.7
1.3258	17.43	56.00	38.57	9.000	N	OFF	9.7
1.3303	17.15	56.00	38.85	9.000	N	OFF	9.7
4.2890	17.18	56.00	38.82	9.000	N	OFF	9.8
4.6130	17.29	56.00	38.71	9.000	N	OFF	9.8
19.1660	26.05	60.00	33.95	9.000	N	OFF	10.4
19.2650	26.14	60.00	33.86	9.000	N	OFF	10.5
19.3235	26.34	60.00	33.66	9.000	N	OFF	10.5
19.3505	26.20	60.00	33.80	9.000	N	OFF	10.5
19.4765	25.96	60.00	34.04	9.000	N	OFF	10.5
19.5935	25.90	60.00	34.10	9.000	N	OFF	10.5

2022-12-03 오후 5:21:25

Test 2 / 2

Final_Result_CAV

Frequency (MHz)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.1545	27.47	55.75	28.28	9.000	N	OFF	9.6
0.1635	28.90	55.28	26.39	9.000	N	OFF	9.6
0.2040	21.69	53.45	31.75	9.000	N	OFF	9.6
0.2175	22.63	52.91	30.29	9.000	N	OFF	9.6
0.2535	15.34	51.64	36.31	9.000	N	OFF	9.6
0.4380	21.34	47.10	25.76	9.000	N	OFF	9.6
1.3123	10.71	46.00	35.29	9.000	N	OFF	9.7
2.5655	10.73	46.00	35.27	9.000	N	OFF	9.8
3.4633	11.43	46.00	34.57	9.000	N	OFF	9.8
4.1113	11.52	46.00	34.48	9.000	N	OFF	9.8
4.2868	11.69	46.00	34.31	9.000	N	OFF	9.8
5.0630	12.09	50.00	37.91	9.000	N	OFF	9.9
19.1638	19.75	50.00	30.25	9.000	N	OFF	10.4
19.2988	19.88	50.00	30.12	9.000	N	OFF	10.5
19.3190	19.92	50.00	30.08	9.000	N	OFF	10.5
19.3235	19.87	50.00	30.13	9.000	N	OFF	10.5
19.3505	19.85	50.00	30.15	9.000	N	OFF	10.5
19.6745	19.66	50.00	30.34	9.000	N	OFF	10.5

2022-12-03 오후 5:21:25

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	Agilent	MY52350879	01/02/2024	Annual
Power Measurement Set	OSP 120	Rohde & Schwarz	101231	06/14/2023	Annual
Power Meter	N1911A	Agilent	MY45100523	03/24/2023	Annual
Power Sensor	N1921A	Keysight	MY57820067	03/24/2023	Annual
Directional Coupler	87300B	Agilent	3116A03621	11/02/2023	Annual
Power Splitter	11667B	Hewlett Packard	05001	05/18/2023	Annual
DC Power Supply	E3632A	H.P	KR75303243	04/25/2023	Annual
Attenuator(10 dB)	8493C	Hewlett Packard	07560	06/14/2023	Annual
Software	EMC32	Rohde & Schwarz	N/A	N/A	N/A
FCC WLAN&BT&BLE Conducted Test Software v3.0	N/A	HCT CO., LTD.	N/A	N/A	N/A

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.

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	EM1000	Audix	060520	N/A	N/A
Turn Table	N/A	Audix	N/A	N/A	N/A
Loop Antenna	FMZB 1513	Rohde & Schwarz	1513-333	03/17/2024	Biennial
Hybrid Antenna	VULB 9168	Schwarzbeck	760	02/22/2023	Biennial
Horn Antenna	BBHA 9120D	Schwarzbeck	02299	03/24/2024	Biennial
Horn Antenna (15GHz ~ 40 GHz)	BBHA9170	Schwarzbeck	BBHA9170342	09/29/2024	Biennial
Spectrum Analyzer	FSV40-N	Rohde & Schwarz	102168	07/04/2023	Annual
Signal Analyzer	N9030A	Agilent	MY52350879	01/02/2024	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	WRCJV2400/2483.5-2370/2520-60/12SS	Wainwright Instruments	2	01/05/2024	Annual
Band Reject Filter	WRCJV5100/5850-40/50-8EEK	Wainwright Instruments	1	02/07/2023	Annual
High Pass Filter	WHK3.0/18G-10EF	Wainwright Instruments	8	01/21/2023	Annual
High Pass Filter	WHKX8-6090-7000-18000-40SS	Wainwright Instruments	25	01/21/2023	Annual
Attenuator (3 dB)	18B-03	Api tech.	1	01/21/2023	Annual
Attenuator(10 dB)	8493C-10	Agilent	08285	01/21/2023	Annual
Power Amplifier	CBLU1183540	CERNEX	22964	01/21/2023	Annual
Power Amplifier	CBL06185030	CERNEX	22965	01/21/2023	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/01/2023	Annual
Power Amplifier	CBL26405040	CERNEX	25956	03/11/2023	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.
3. Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5(Version : 2017).

12. ANNEX A_ TEST SETUP PHOTO

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

No.	Description
1	HCT-RF-2301-FC024-P