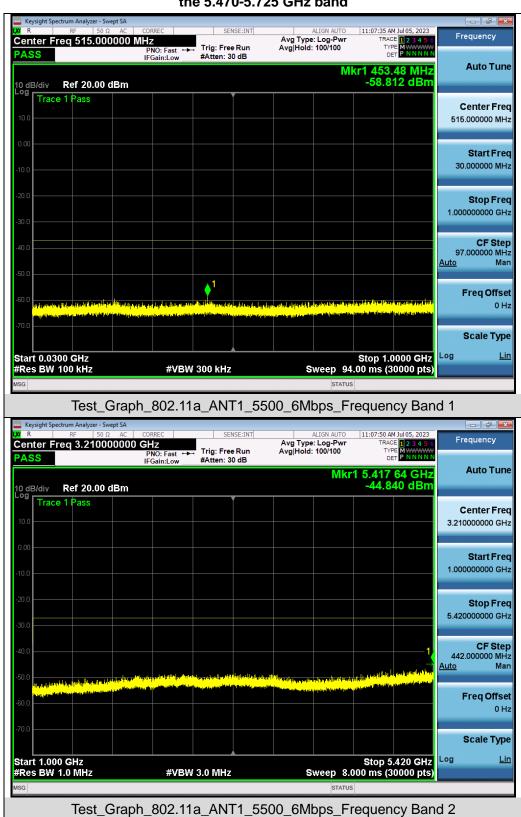
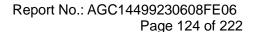


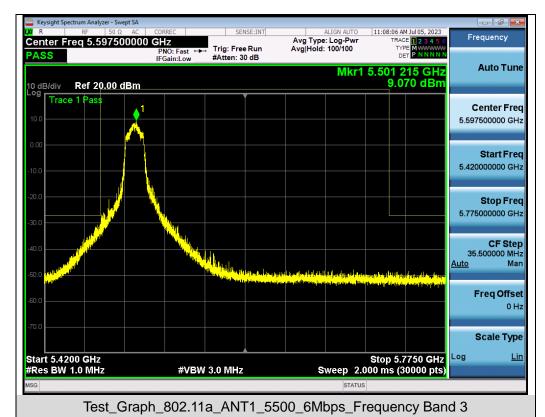


# Test Graphs of Spurious Emissions outside of the 5.470-5.725 GHz band for transmitters operating in the 5.470-5.725 GHz band

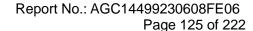




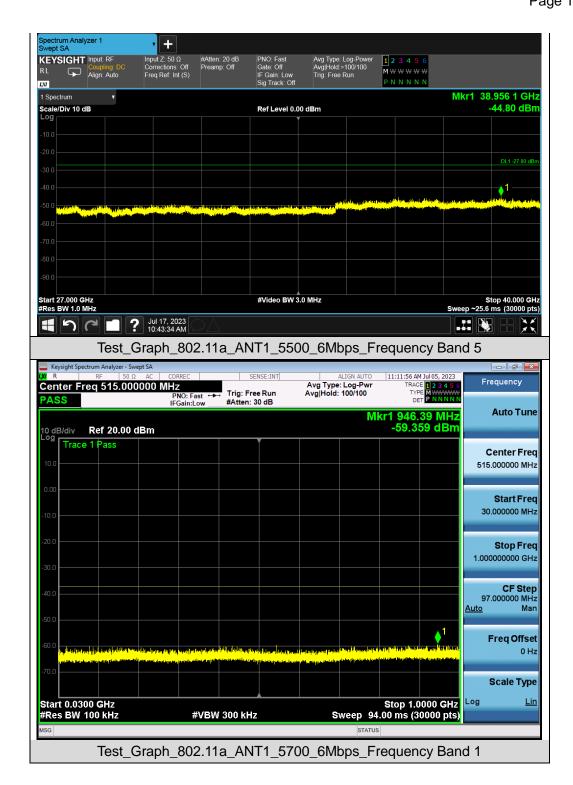


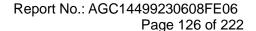










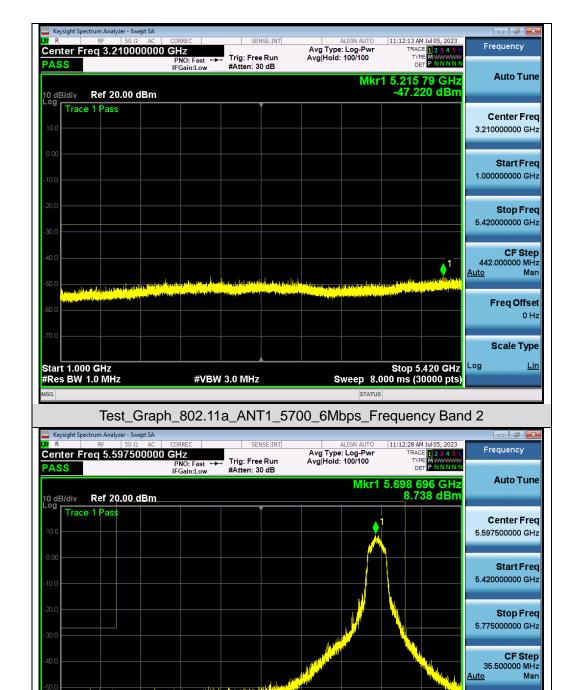


Freq Offset 0 Hz

Scale Type

Stop 5.7750 GHz Sweep 2.000 ms (30000 pts)



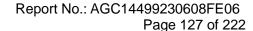


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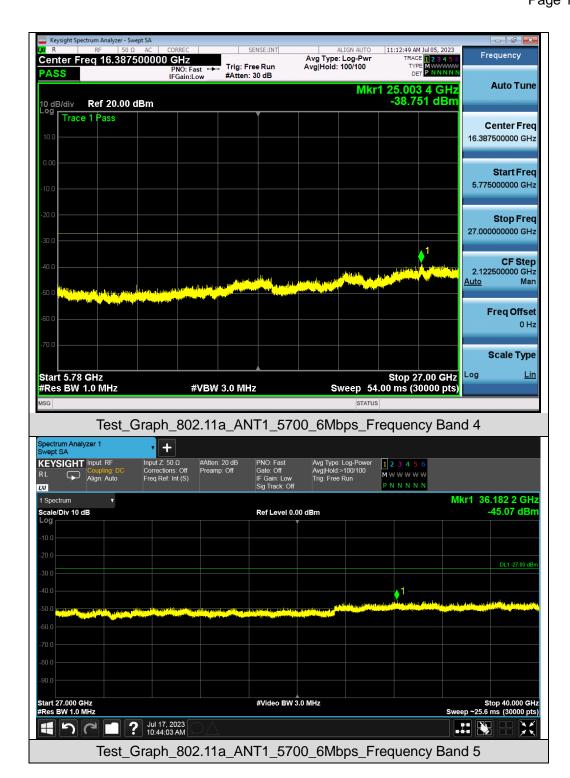
Test Graph 802.11a ANT1 5700 6Mbps Frequency Band 3

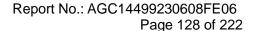
#VBW 3.0 MHz

Start 5.4200 GHz #Res BW 1.0 MHz





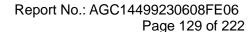




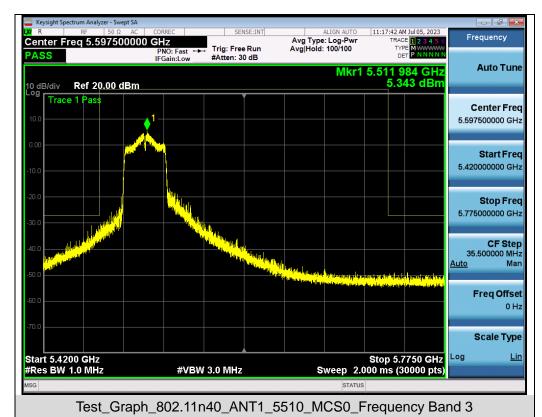




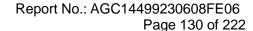




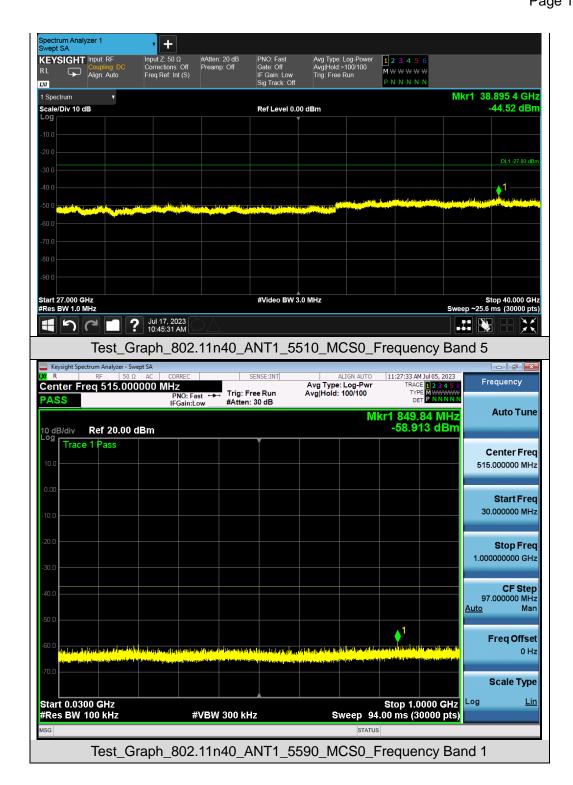


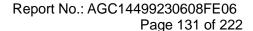




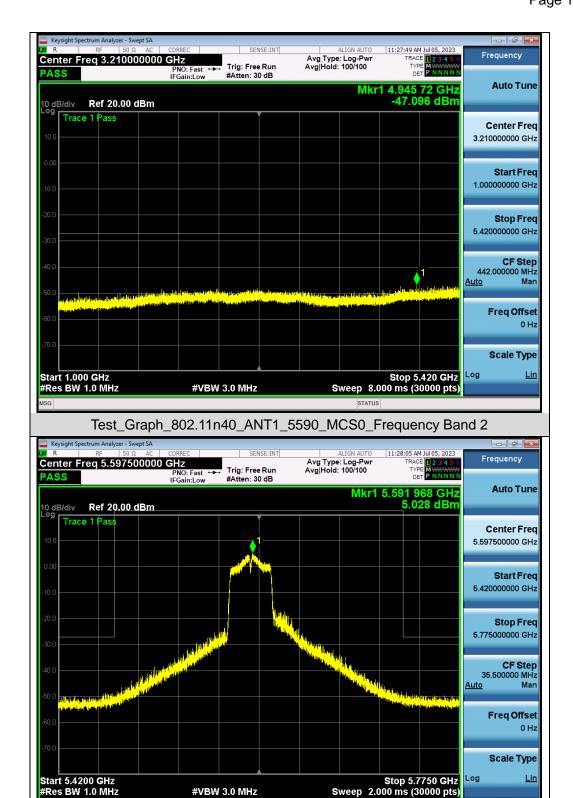




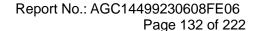




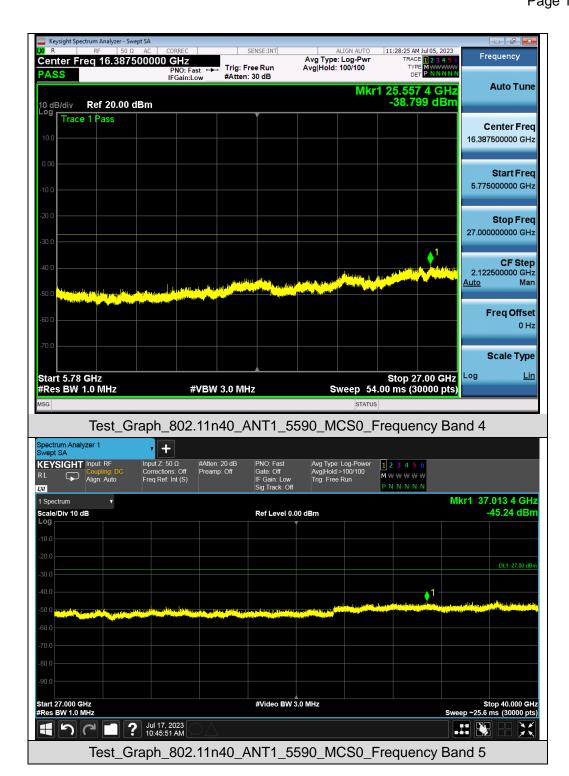


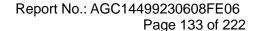


Test Graph 802.11n40 ANT1 5590 MCS0 Frequency Band 3









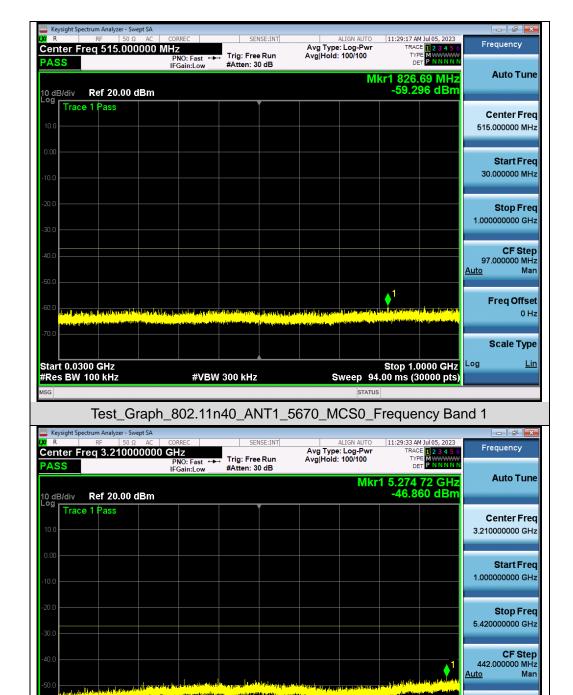
Freq Offset 0 Hz

Scale Type

Log

Stop 5.420 GHz Sweep 8.000 ms (30000 pts)



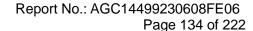


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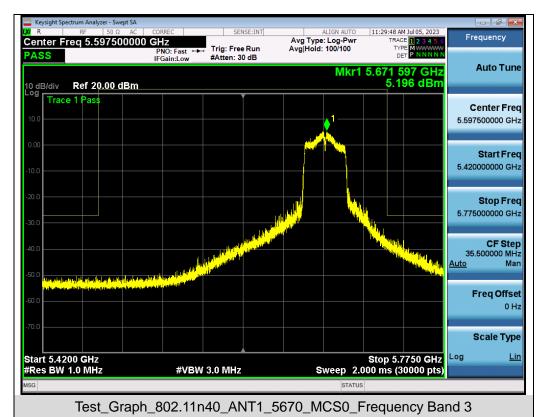
Test Graph 802.11n40 ANT1 5670 MCS0 Frequency Band 2

#VBW 3.0 MHz

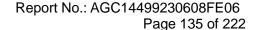
Start 1.000 GHz #Res BW 1.0 MHz



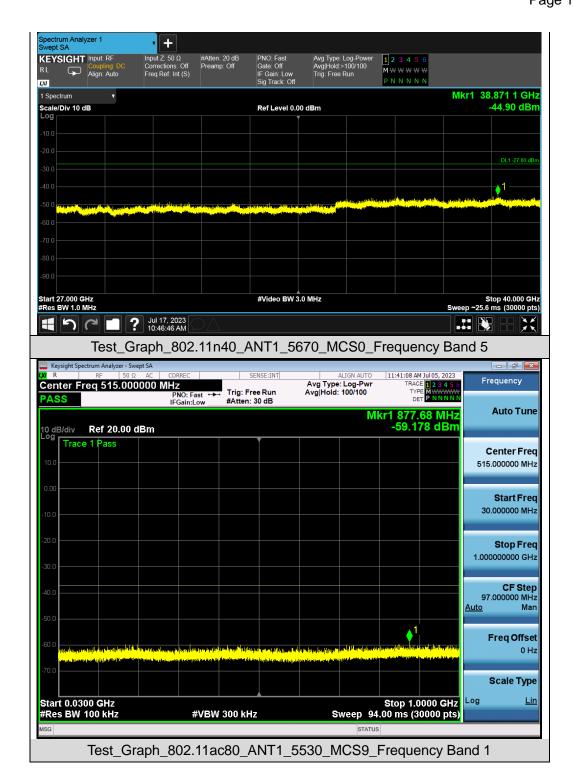


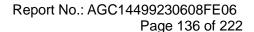




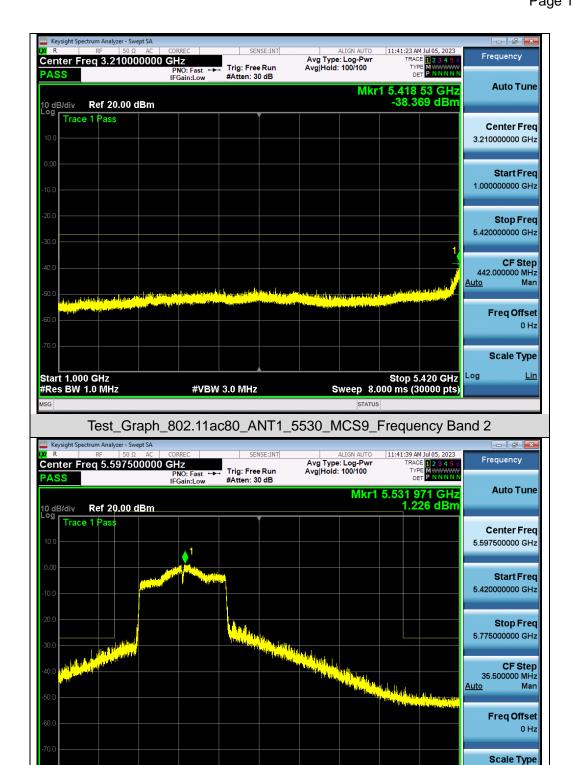










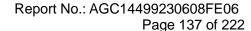


Test\_Graph\_802.11ac80\_ANT1\_5530\_MCS9\_Frequency Band 3

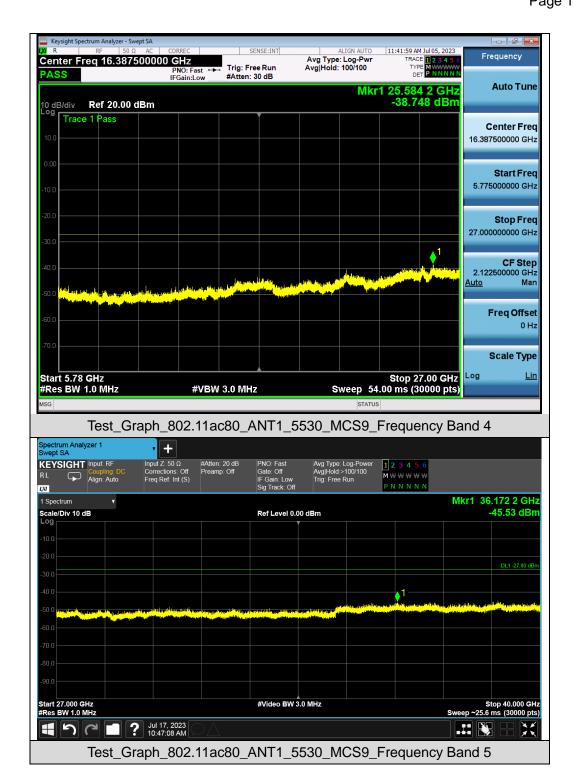
#VBW 3.0 MHz

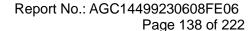
Stop 5.7750 GHz Sweep 2.000 ms (30000 pts) Log

Start 5.4200 GHz #Res BW 1.0 MHz

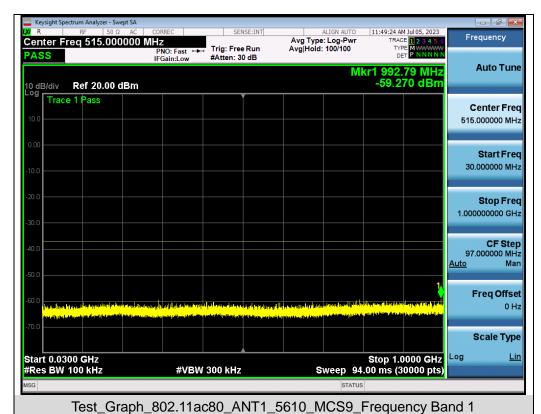






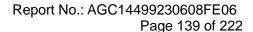






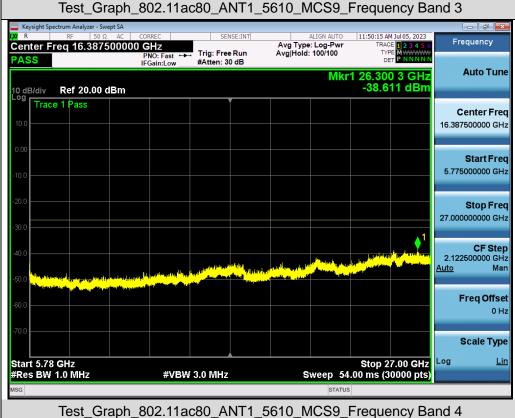


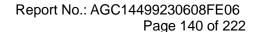
Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/



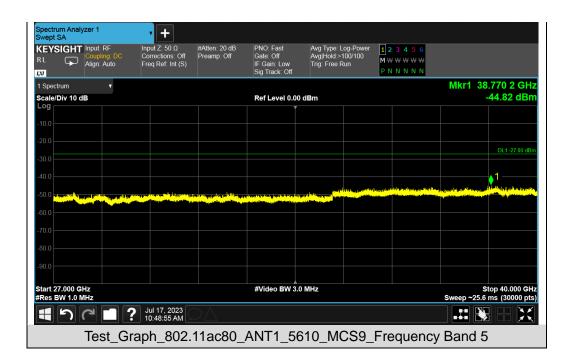




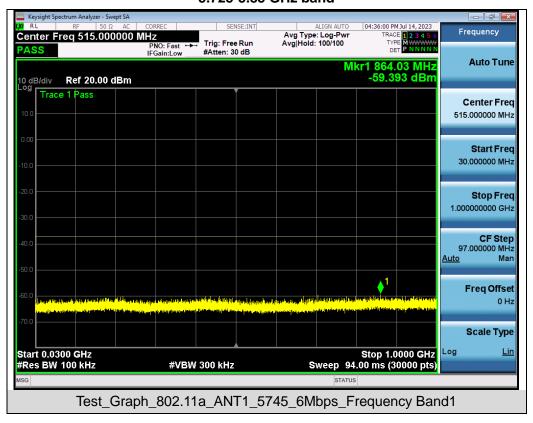


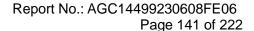




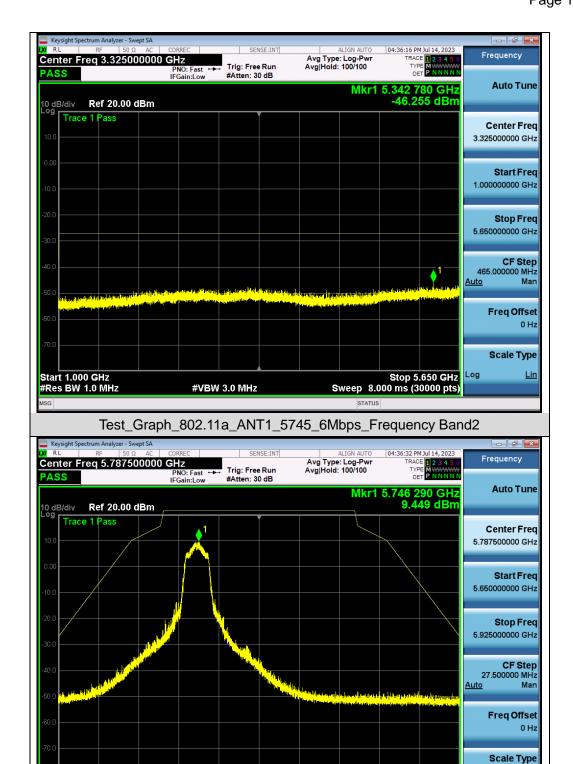


Test Graphs of Spurious Emissions outside of the 5.725-5.85 GHz band for transmitters operating in the 5.725-5.85 GHz band







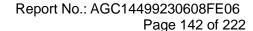


Test Graph 802.11a ANT1 5745 6Mbps Frequency Band3

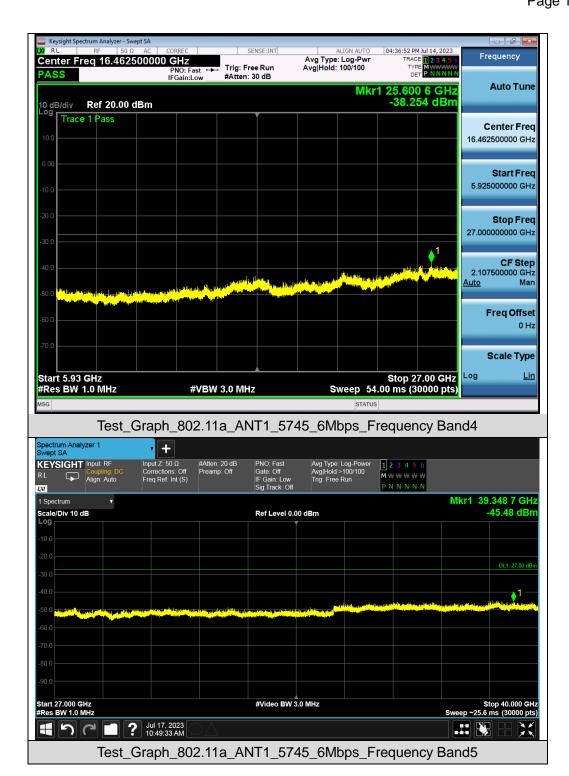
#VBW 3.0 MHz

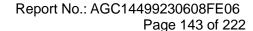
Stop 5.9250 GHz Sweep 2.000 ms (30000 pts)

Start 5.6500 GHz #Res BW 1.0 MHz

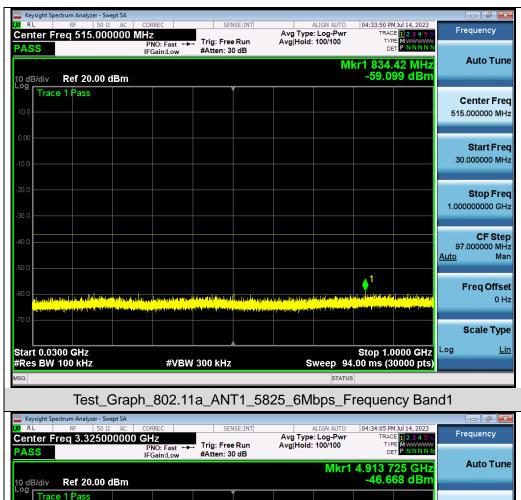


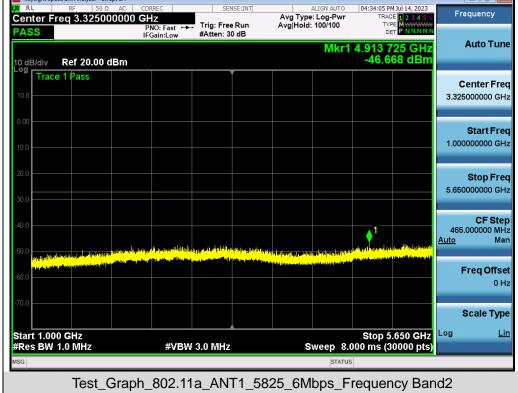


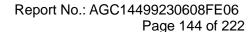




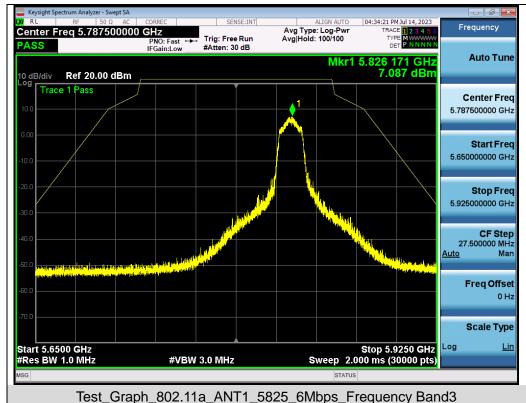




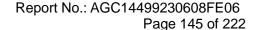




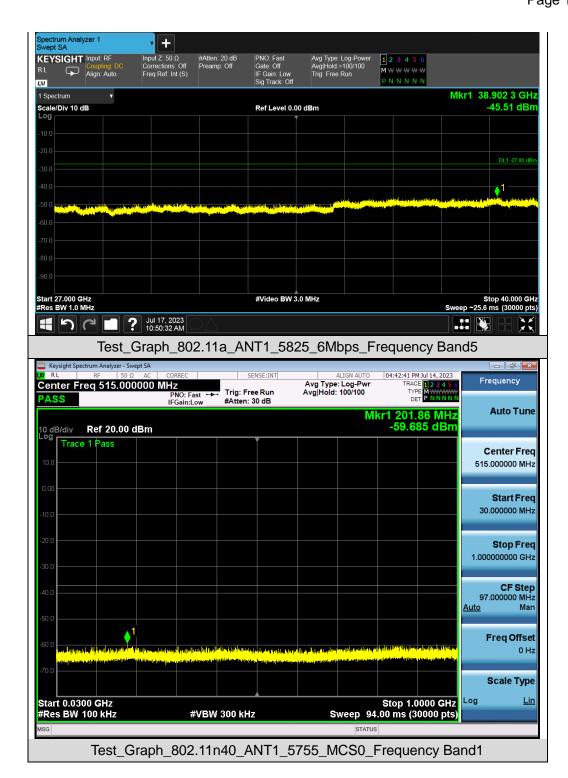


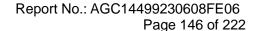












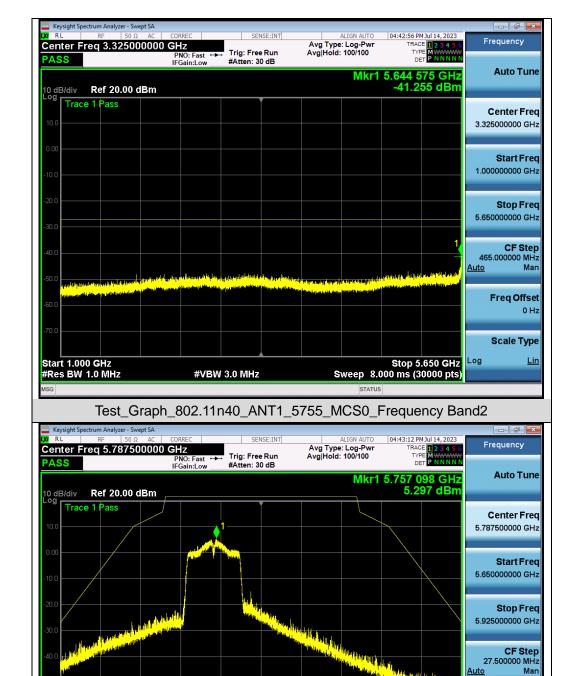
Freq Offset 0 Hz

Scale Type

Log

Stop 5.9250 GHz Sweep 2.000 ms (30000 pts)



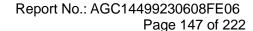


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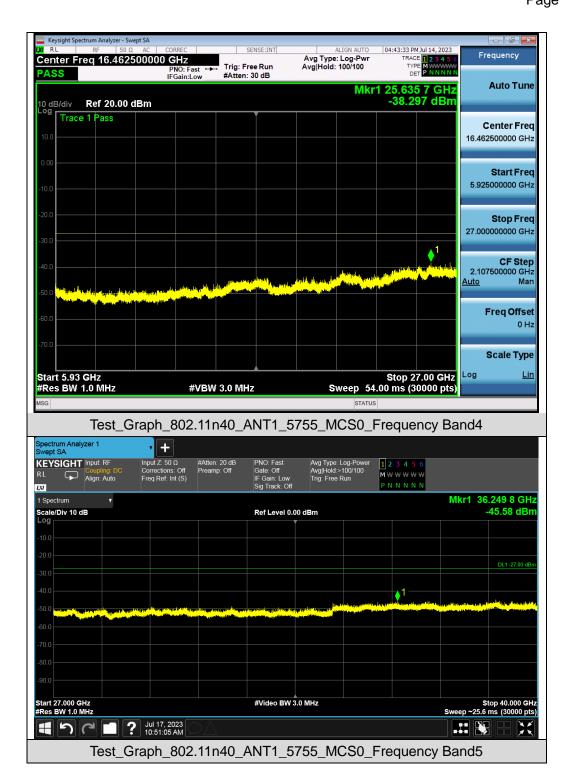
Test Graph 802.11n40 ANT1 5755 MCS0 Frequency Band3

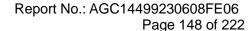
**#VBW 3.0 MHz** 

Start 5.6500 GHz #Res BW 1.0 MHz









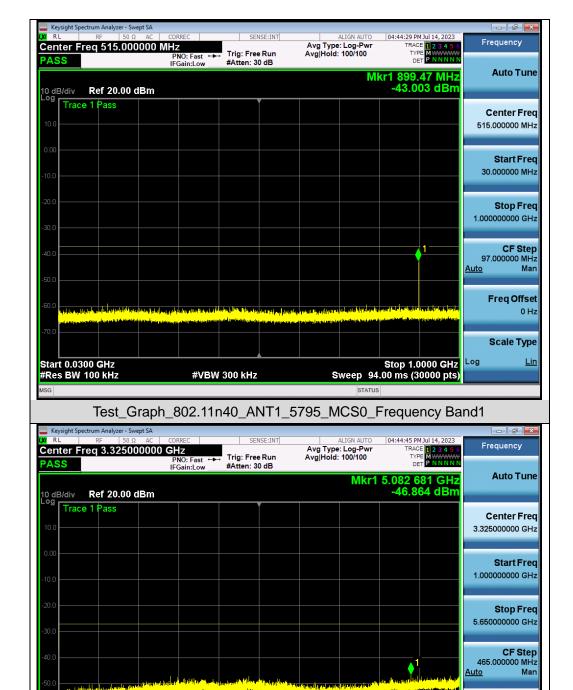
Freq Offset 0 Hz

Scale Type

Log

Stop 5.650 GHz Sweep 8.000 ms (30000 pts)



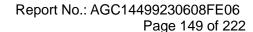


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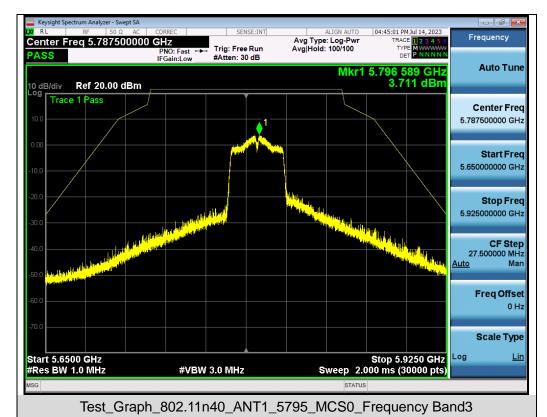
Test Graph 802.11n40 ANT1 5795 MCS0 Frequency Band2

#VBW 3.0 MHz

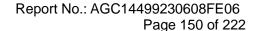
Start 1.000 GHz #Res BW 1.0 MHz



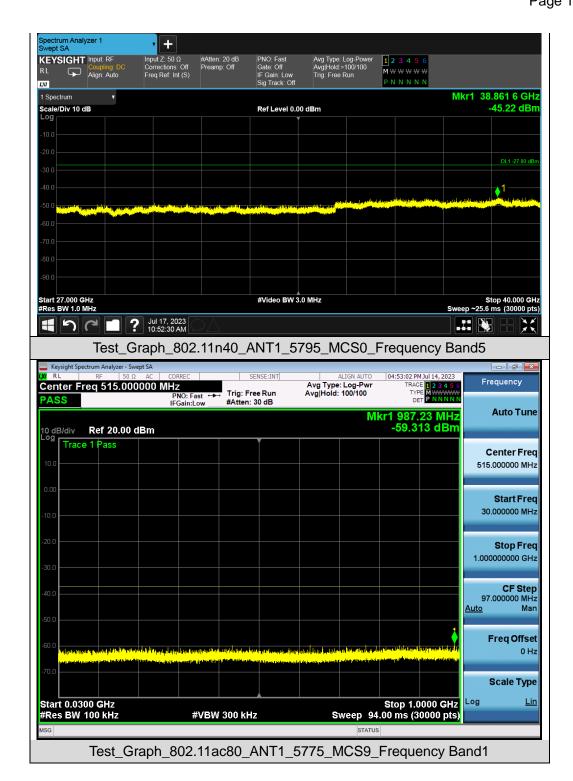


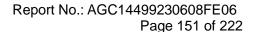












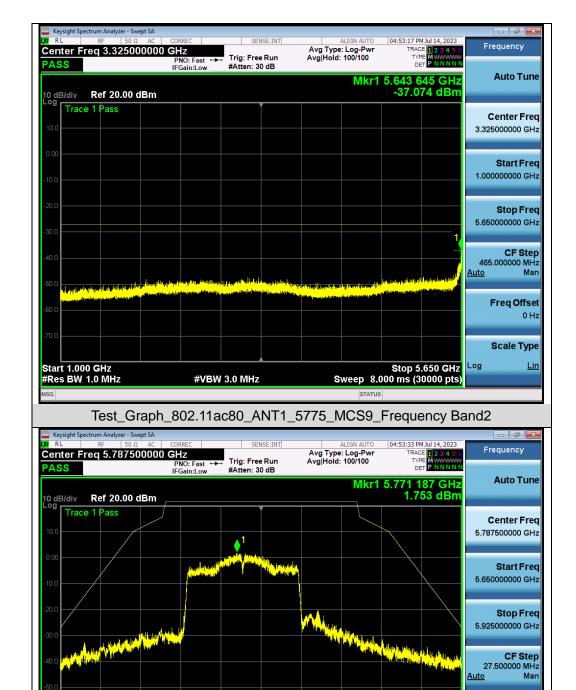
Freq Offset 0 Hz

Scale Type

Log

Stop 5.9250 GHz Sweep 2.000 ms (30000 pts)



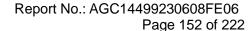


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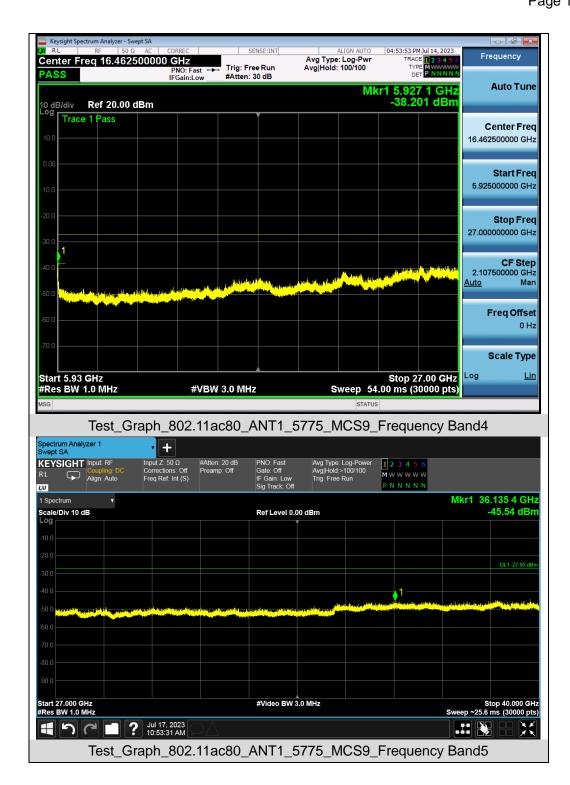
Test Graph 802.11ac80 ANT1 5775 MCS9 Frequency Band3

**#VBW 3.0 MHz** 

Start 5.6500 GHz #Res BW 1.0 MHz









## 10. RADIATED EMISSION

### **10.1 LIMITS OF RADIATED EMISSION TEST**

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

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

### NOTE:

- 1. The lower limit shall apply at the transition frequencies.
- 2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
- 3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

	Applicable to	Limit			
Restricted	789033 D02 General UNII Test	Field strength at 3m (dBuV/m)			
bands	Procedures New Rules v02r01	PK: 74	AV: 54		
Out of the restricted bands	Applicable to	EIRP Limit (dBm/MHz)	Equivalent field Strength at 3m (dBuV/m)		
	FCC 15.407(b)(1)		PK: 68.2		
	15.407(b)(2)	PK: -27			
	15.407(b)(3)				
	15.407(b)(4)	See Note 2			

Note 1: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

E = 
$$\frac{1000000 \sqrt{30 P}}{3}$$
 µV/m, where P is the eirp (Watts).

Note 2: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.



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## **10.2 MEASUREMENT PROCEDURE**

- The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.



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The following table is the setting of spectrum analyzer and receiver.

Receiver Parameter	Setting		
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP		
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP		
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP		

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04.Section G) Unwanted emissions measurement.

# (1) Procedure for Unwanted Emissions Measurements Below 1000MHz:

- RBW = 120 kHz
- VBW = 300 kHz
- Detector = Peak
- Trace mode = max hold

# (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz:

- RBW = 1 MHz
- VBW ≥ 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

## (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz:

- RBW = 1 MHz
- VBW = 10 Hz, when duty cycle is no less than 98 percent.
- VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

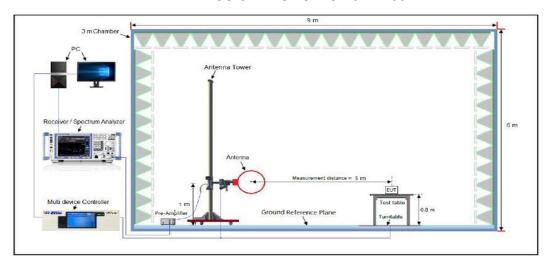
## (4) Procedures for Average Unwanted Emissions Measurements Above 1000MHz:

- RBW = 1 MHz
- VBW = 3 MHz Detector = power averaging (rms), set span/(# of points in sweep) ≥ RBW/2.
- Averaging type = power averaging (RMS)
- The correction factor shall be offset is 10  $\log (1/x)$ , where x is the duty cycle.

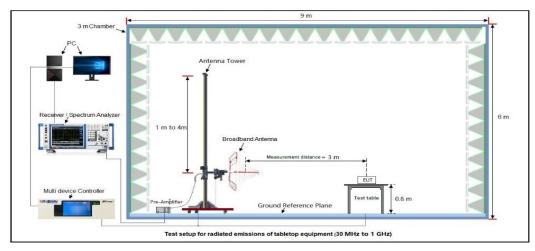


# 10.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)

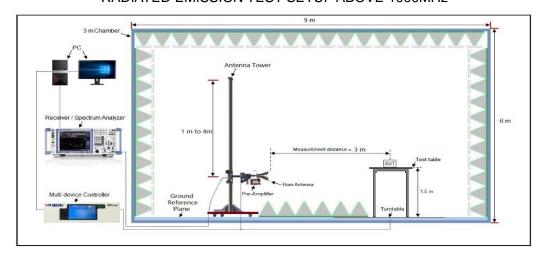
## RADIATED EMISSION TEST SETUP 9KHz-30MHz



## RADIATED EMISSION TEST SETUP 30MHz-1000MHz



# RADIATED EMISSION TEST SETUP ABOVE 1000MHz



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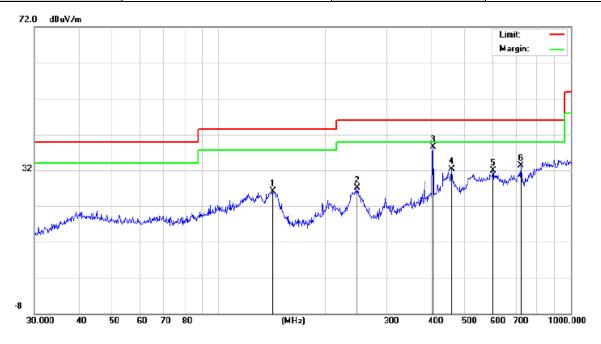
### **10.4 MEASUREMENT RESULT**

## **Radiated Emission Below 30MHz**

The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.

## Radiated emission from 30MHz to 1000MHz

EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5180MHz	Antenna	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	14	12.3243	11.20	14.85	26.05	43.50	-17.45	peak
2	24	17.6819	11.87	15.17	27.04	46.00	-18.96	peak
3	* 40	06.0880	18.00	20.52	38.52	46.00	-7.48	peak
4	4	59.1144	7.95	24.43	32.38	46.00	-13.62	peak
5	60	01.4265	6.85	25.11	31.96	46.00	-14.04	peak
6	72	21.7259	8.69	24.64	33.33	46.00	-12.67	peak

## **RESULT: PASS**



EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5180MHz	Antenna	Vertical



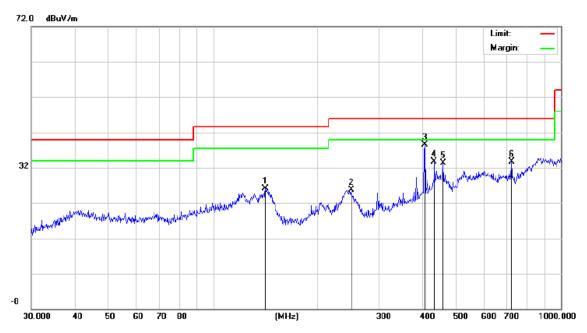
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		39.0245	17.01	16.58	33.59	40.00	-6.41	peak
2		406.0880	11.28	22.41	33.69	46.00	-12.31	peak
3		459.1144	13.27	25.24	38.51	46.00	-7.49	peak
4		513.6331	12.81	23.49	36.30	46.00	-9.70	peak
5	*	714.1734	13.96	28.60	42.56	46.00	-3.44	peak
6		945.4399	5.84	30.78	36.62	46.00	-9.38	peak

## **RESULT: PASS**



#### Radiated emission from 30MHz to 1000MHz

EUT	IP Phone	Model Name	X305	
Temperature	25°C	Relative Humidity	60%	
Pressure	960hPa	Test Voltage	DC 5V	
Test Mode	802.11a20 5260MHz	Antenna	Horizontal	

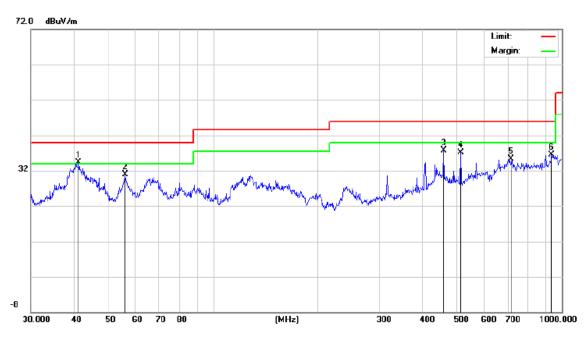


No. MI	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
	MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	141.3298	11.15	15.00	26.15	43.50	-17.35	peak
2	249.4250	10.53	15.12	25.65	46.00	-20.35	peak
3 *	406.0880	17.95	20.52	38.47	46.00	-7.53	peak
4	432.5457	10.30	23.50	33.80	46.00	-12.20	peak
5	459.1144	8.80	24.43	33.23	46.00	-12.77	peak
6	721.7259	9.11	24.64	33.75	46.00	-12.25	peak

#### **RESULT: PASS**



EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5260MHz	Antenna	Vertical



No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	*	41.1320	17.43	16.91	34.34	40.00	-5.66	peak
2		56.0007	13.82	17.06	30.88	40.00	-9.12	peak
3		459.1144	12.53	25.24	37.77	46.00	-8.23	peak
4		513.6331	13.59	23.49	37.08	46.00	-8.92	peak
5		716.6820	6.65	28.68	35.33	46.00	-10.67	peak
6		935.5463	6.18	30.40	36.58	46.00	-9.42	peak



#### Radiated emission from 30MHz to 1000MHz

EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5500MHz	Antenna	Horizontal

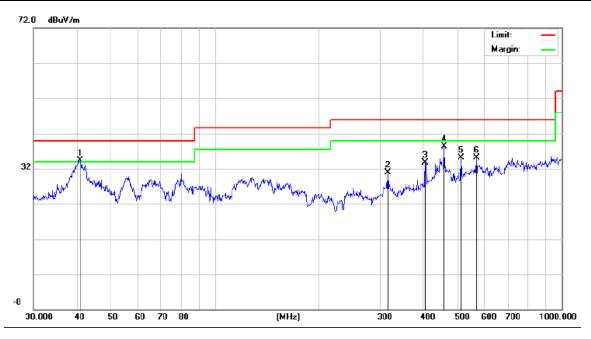


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	13	37.9028	10.55	15.33	25.88	43.50	-17.62	peak
2	23	39.1473	9.60	15.36	24.96	46.00	-21.04	peak
3	* 40	06.0880	14.45	20.52	34.97	46.00	-11.03	peak
4	43	32.5457	9.30	23.50	32.80	46.00	-13.20	peak
5	52	26.3967	7.86	24.78	32.64	46.00	-13.36	peak
6	72	21.7259	8.11	24.64	32.75	46.00	-13.25	peak

**RESULT: PASS** 



EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5500MHz	Antenna	Vertical



No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	*	41.1319	17.43	16.91	34.34	40.00	-5.66	peak
2		315.4806	10.98	19.98	30.96	46.00	-15.04	peak
3		404.6664	11.41	22.36	33.77	46.00	-12.23	peak
4		459.1143	13.03	25.24	38.27	46.00	-7.73	peak
5		513.6331	11.59	23.49	35.08	46.00	-10.92	peak
6		568.6127	10.01	25.03	35.04	46.00	-10.96	peak



#### Radiated emission from 30MHz to 1000MHz

EUT	IP Phone	Model Name	X305	
Temperature	25°C	Relative Humidity	60%	
Pressure	960hPa	Test Voltage	DC 5V	
Test Mode	802.11a20 5745MHz	Antenna	Horizontal	

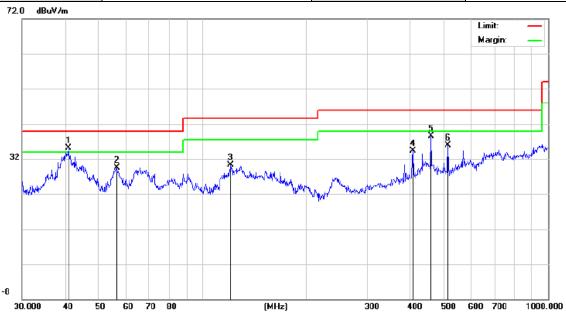


No. I	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	,
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	144	1.3348	11.94	14.55	26.49	43.50	-17.01	peak
2	* 406	0880.6	18.22	20.52	38.74	46.00	-7.26	peak
3	432	2.5457	10.64	23.50	34.14	46.00	-11.86	peak
4	459	9.1144	8.74	24.43	33.17	46.00	-12.83	peak
5	72′	1.7259	9.52	24.64	34.16	46.00	-11.84	peak
6	900	).1474	5.65	31.78	37.43	46.00	-8.57	peak

#### **RESULT: PASS**



EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5745MHz	Antenna	Vertical

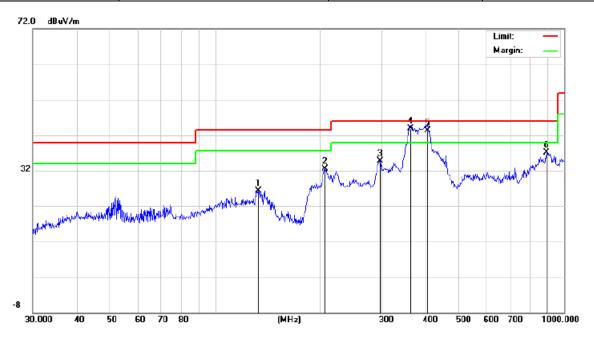


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	*	40.8446	18.24	16.91	35.15	40.00	-4.85	peak
2		56.3948	12.48	17.06	29.54	40.00	-10.46	peak
3	,	120.6991	12.52	17.72	30.24	43.50	-13.26	peak
4	4	406.0880	11.82	22.41	34.23	46.00	-11.77	peak
5	4	159.1144	13.36	25.24	38.60	46.00	-7.40	peak
6	í	513.6331	12.34	23.49	35.83	46.00	-10.17	peak



#### Radiated emission from 30MHz to 1000MHz

EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5180MHz	Antenna	Horizontal



No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		133.1511	10.71	15.61	26.32	43.50	-17.18	peak
2		206.3976	18.13	14.47	32.60	43.50	-10.90	peak
3		297.2241	19.47	15.28	34.75	46.00	-11.25	peak
4	*	362.9844	25.31	17.69	43.00	46.00	-3.00	QP
5	İ	406.0880	21.81	20.52	42.33	46.00	-3.67	QP
6		890.7278	6.56	30.64	37.20	46.00	-8.80	peak

**RESULT: PASS** 



EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5180MHz	Antenna	Vertical

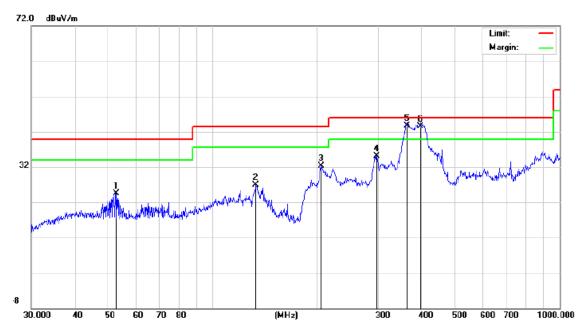


No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		32.7486	18.94	14.51	33.45	40.00	-6.55	peak
2	*	52.0251	19.26	17.02	36.28	40.00	-3.72	QP
3		147.9214	16.61	18.20	34.81	43.50	-8.69	peak
4		296.1836	17.45	18.80	36.25	46.00	-9.75	peak
5	İ	399.0302	19.96	22.16	42.12	46.00	-3.88	QP
6	İ	459.1144	15.09	25.24	40.33	46.00	-5.67	peak



#### Radiated emission from 30MHz to 1000MHz

EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5260MHz	Antenna	Horizontal

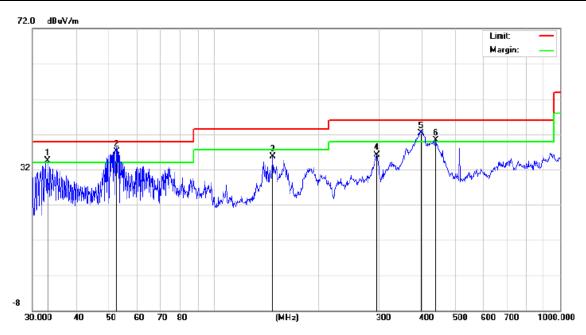


No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		52.5753	11.53	13.02	24.55	40.00	-15.45	peak
2		133.1511	11.38	15.61	26.99	43.50	-16.51	peak
3		204.9551	17.75	14.48	32.23	43.50	-11.27	peak
4		297.2241	19.87	15.28	35.15	46.00	-10.85	peak
5	*	362.9844	24.94	17.69	42.63	46.00	-3.37	QP
6	İ	397.6334	22.28	20.14	42.42	46.00	-3.58	QP

#### **RESULT: PASS**



EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5260MHz	Antenna	Vertical

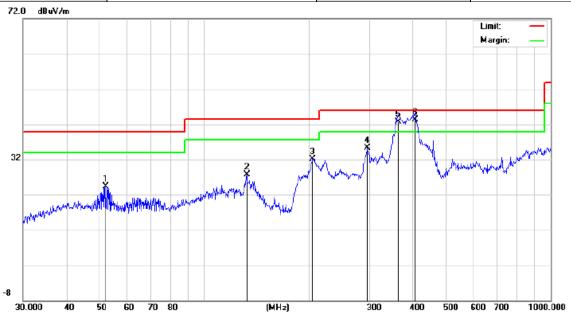


No. N	Mk. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
	MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1 !	33.2112	19.87	14.66	34.53	40.00	-5.47	peak
2 *	* 52.3912	19.18	17.02	36.20	40.00	-3.80	QP
3	147.9214	17.50	18.20	35.70	43.50	-7.80	peak
4	296.1836	17.33	18.80	36.13	46.00	-9.87	peak
5 !	397.6334	20.26	22.10	42.36	46.00	-3.64	QP
6 !	438.6554	14.34	25.88	40.22	46.00	-5.78	peak



#### Radiated emission from 30MHz to 1000MHz

EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5500MHz	Antenna	Horizontal

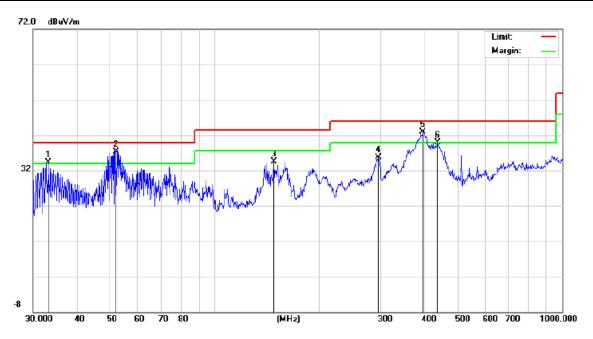


No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		51.8430	11.29	13.07	24.36	40.00	-15.64	peak
2		132.6850	12.14	15.64	27.78	43.50	-15.72	peak
3		205.6751	17.62	14.47	32.09	43.50	-11.41	peak
4		296.1836	20.13	15.19	35.32	46.00	-10.68	peak
5	İ	362.9844	24.06	17.69	41.75	46.00	-4.25	QP
6	*	406.0880	21.88	20.52	42.40	46.00	-3.60	QP

**RESULT: PASS** 



EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5500MHz	Antenna	Vertical

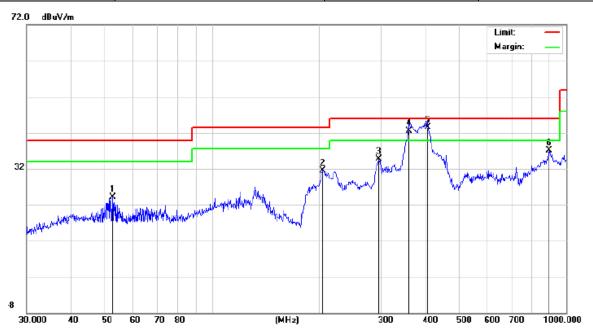


No.	Mk.	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	İ	33.2112	19.61	14.66	34.27	40.00	-5.73	peak
2	*	51.8430	19.24	17.02	36.26	40.00	-3.74	QP
3		147.9214	16.25	18.20	34.45	43.50	-9.05	peak
4		295.1469	17.02	18.78	35.80	46.00	-10.20	peak
5	İ	397.6334	20.90	22.10	43.00	46.00	-3.00	peak
6		438.6554	14.00	25.88	39.88	46.00	-6.12	peak



#### Radiated emission from 30MHz to 1000MHz

EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5745MHz	Antenna	Horizontal



No.	MI	c. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		52.3912	11.14	13.03	24.17	40.00	-15.83	peak
2		205.6751	17.10	14.47	31.57	43.50	-11.93	peak
3		296.1836	19.59	15.19	34.78	46.00	-11.22	peak
4	İ	360.4476	24.86	17.61	42.47	46.00	-3.53	QP
5	*	406.0880	21.99	20.52	42.51	46.00	-3.49	QP
6		896.9965	5.78	31.42	37.20	46.00	-8.80	peak

**RESULT: PASS** 



EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5745MHz	Antenna	Vertical



No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	İ	33.0950	20.31	14.62	34.93	40.00	-5.07	peak
2	İ	52.3912	19.25	17.02	36.27	40.00	-3.73	QP
3		73.8756	16.35	16.96	33.31	40.00	-6.69	peak
4		147.9214	16.78	18.20	34.98	43.50	-8.52	peak
5		296.1836	16.82	18.80	35.62	46.00	-10.38	peak
6	*	397.6334	19.97	22.11	42.08	46.00	-3.92	peak

**Note:** All test channels had been tested. The 802.11a20 at 5180MHz, 5260MHz, 5500MHz, 5745MHz are the worst case and recorded in the test report.

Factor = Antenna Factor + Cable loss - Amplifier gain, Margin= Level-Limit.

The "Factor" value can be calculated automatically by software of measurement system.



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#### Radiated emission above 1GHz

EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5180MHz	Antenna	Horizontal/Vertical

## RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
10360.042	48.99	9.14	58.13	68.20	-10.07	peak
15540.063	42.28	10.22	52.50	74.00	-21.50	peak
15540.063	33.05	10.22	43.27	54.00	-10.73	AVG
Remark:						
Factor = Anter	nna Factor + Cabl	e Loss – Pre-a	amplifier.			

## RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type	
10360.042	48.37	9.14	57.51	68.20	-10.69	peak	
15540.063	41.89	10.22	52.11	74.00	-21.89	peak	
15540.063	32.25	10.22	42.47	54.00	-11.53	AVG	
Remark:							
Factor = Antenna Factor + Cable Loss – Pre-amplifier.							
			•				



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5200MHz	Antenna	Horizontal/Vertical

## RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type	
10400.042	47.51	9.14	56.65	68.20	-11.55	peak	
15600.063	43.25	10.22	53.47	74.00	-20.53	peak	
15600.063	33.51	10.22	43.73	54.00	-10.27	AVG	
Remark:	•				•	1	
Factor = Antenna Factor + Cable Loss – Pre-amplifier.							

## RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type	
10400.042	48.78	9.14	57.92	68.20	-10.28	peak	
15600.063	42.97	10.22	53.19	74.00	-20.81	peak	
15600.063	32.89	10.22	43.11	54.00	-10.89	AVG	
Remark:							
Factor = Antenna Factor + Cable Loss – Pre-amplifier.							
			•				



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5240MHz	Antenna	Horizontal/Vertical

#### RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type		
10480.042	48.74	9.27	58.01	68.20	-10.19	peak		
15720.063	42.11	10.38	52.49	74.00	-21.51	peak		
15720.063	32.54	10.38	42.92	54.00	-11.08	AVG		
Remark:								
Factor = Antenna Factor + Cable Loss – Pre-amplifier.								

#### RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
10480.042	47.97	9.27	57.24	68.20	-10.96	peak
15720.063	42.58	10.38	52.96	74.00	-21.04	peak
15720.063	33.15	10.38	43.53	54.00	-10.47	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						



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#### Radiated emission above 1GHz

EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5260MHz	Antenna	Horizontal/Vertical

## RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type			
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type			
10520.051	47.36	9.31	56.67	68.20	-11.53	peak			
15780.033	41.18	10.42	51.60	74.00	-22.40	peak			
15780.033	32.76	10.42	43.18	54.00	-10.82	AVG			
Remark:	Remark:								
Factor = Antenna Factor + Cable Loss – Pre-amplifier.									

## RADIATED EMISSION ABOVE 1GHZ-Vertical

Meter Reading	Factor	Emission Level	Limits	Margin	Value Type		
(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type		
46.98	9.31	56.29	68.20	-11.91	peak		
40.56	10.42	50.98	74.00	-23.02	peak		
33.09	10.42	43.51	54.00	-10.49	AVG		
Factor = Antenna Factor + Cable Loss – Pre-amplifier.							
	(dBμV) 46.98 40.56 33.09	(dBµV) (dB) 46.98 9.31 40.56 10.42 33.09 10.42	(dBμV) (dB) (dBμV/m)   46.98 9.31 56.29   40.56 10.42 50.98   33.09 10.42 43.51	(dBμV) (dB) (dBμV/m) (dBμV/m)   46.98 9.31 56.29 68.20   40.56 10.42 50.98 74.00   33.09 10.42 43.51 54.00	(dBμV) (dB) (dBμV/m) (dBμV/m) (dBμV/m)   46.98 9.31 56.29 68.20 -11.91   40.56 10.42 50.98 74.00 -23.02   33.09 10.42 43.51 54.00 -10.49		



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5300MHz	Antenna	Horizontal/Vertical

## RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
10600.025	48.36	9.33	57.69	74.00	-16.31	peak
10600.025	32.87	9.33	42.20	54.00	-11.80	AVG
15900.036	47.39	10.44	57.83	74.00	-16.17	peak
15900.036	33.05	10.44	43.49	54.00	-10.51	AVG
Remark:						
Factor = Anter	na Factor + Cabl	e Loss – Pre-a	mplifier.			

## RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
10600.025	47.14	9.33	56.47	74.00	-17.53	peak
10600.025	33.25	9.33	42.58	54.00	-11.42	AVG
15900.036	48.26	10.44	58.70	74.00	-15.30	peak
15900.036	32.14	10.44	42.58	54.00	-11.42	AVG
Remark:						
Factor = Anten	ina Factor + Cabl	e Loss – Pre-	amplifier.			



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5320MHz	Antenna	Horizontal/Vertical

#### RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type			
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type			
10640.055	48.74	9.35	58.09	74.00	-15.91	peak			
10640.055	33.69	9.35	43.04	54.00	-10.96	AVG			
15960.042	41.56	10.46	52.02	74.00	-21.98	peak			
15960.042	30.87	10.46	41.33	54.00	-12.67	AVG			
Remark:	Remark:								
Factor = Antenna Factor + Cable Loss – Pre-amplifier.									

#### RADIATED EMISSION ABOVE 1GHZ-Vertical

Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
44.89	9.35	54.24	74.00	-19.76	peak
30.15	9.35	39.50	54.00	-14.50	AVG
40.21	10.46	50.67	74.00	-23.33	peak
31.59	10.46	42.05	54.00	-11.95	AVG
1					-
na Factor + Cabl	e Loss – Pre-	amplifier.			
		•			
	(dBµV) 44.89 30.15 40.21 31.59	(dBµV) (dB) 44.89 9.35 30.15 9.35 40.21 10.46 31.59 10.46	(dBμV) (dB) (dBμV/m)   44.89 9.35 54.24   30.15 9.35 39.50   40.21 10.46 50.67	(dBμV) (dB) (dBμV/m) (dBμV/m)   44.89 9.35 54.24 74.00   30.15 9.35 39.50 54.00   40.21 10.46 50.67 74.00   31.59 10.46 42.05 54.00	(dBμV) (dB) (dBμV/m) (dBμV/m) (dBμV/m)   44.89 9.35 54.24 74.00 -19.76   30.15 9.35 39.50 54.00 -14.50   40.21 10.46 50.67 74.00 -23.33   31.59 10.46 42.05 54.00 -11.95



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#### Radiated emission above 1GHz

EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5500MHz	Antenna	Horizontal/Vertical

## RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
11000.024	47.63	9.38	57.01	74.00	-16.99	peak
11000.024	32.51	9.38	41.89	54.00	-12.11	AVG
16500.033	48.05	10.51	58.56	68.20	-9.64	peak
Remark:						
Factor = Anter	na Factor + Cabl	e Loss – Pre-	amplifier.			

## RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
11000.024	49.36	9.38	58.74	74.00	-15.26	peak
11000.024	34.15	9.38	43.53	54.00	-10.47	AVG
16500.033	50.02	10.51	60.53	68.20	-7.67	peak
Remark:	l l					Į.
Factor = Anter	na Factor + Cabl	e Loss – Pre-	amplifier.			



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5600MHz	Antenna	Horizontal/Vertical

## RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
11200.035	46.69	9.38	56.07	74.00	-17.93	peak
11200.035	32.18	9.38	41.56	54.00	-12.44	AVG
16800.041	41.55	10.51	52.06	68.20	-16.14	peak
Remark:						
Factor = Anter	na Factor + Cabl	e Loss – Pre-a	mplifier.			

## RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
11200.035	43.36	9.38	52.74	74.00	-21.26	peak
11200.035	33.81	9.38	43.19	54.00	-10.81	AVG
16800.041	42.51	10.51	53.02	68.20	-15.18	peak
Remark:						
Factor = Anter	nna Factor + Cabl	e Loss – Pre-	amplifier.			



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5700MHz	Antenna	Horizontal/Vertical

#### RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type		
11400.058	46.25	9.41	55.66	74.00	-18.34	peak		
11400.058	33.52	9.41	42.93	54.00	-11.07	AVG		
17100.042	45.05	10.50	55.55	68.20	-12.65	peak		
Remark:								
Factor = Antenna Factor + Cable Loss – Pre-amplifier.								

#### RADIATED EMISSION ABOVE 1GHZ-Vertical

(dBµV)	(10)				Value Type			
	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type			
45.96	9.41	55.37	74.00	-18.63	peak			
34.11	9.41	43.52	54.00	-10.48	AVG			
46.15	10.50	56.65	68.20	-11.55	peak			
Factor = Antenna Factor + Cable Loss – Pre-amplifier.								
		•						
	34.11 46.15	34.11 9.41 46.15 10.50	34.11 9.41 43.52   46.15 10.50 56.65	34.11 9.41 43.52 54.00   46.15 10.50 56.65 68.20	34.11 9.41 43.52 54.00 -10.48   46.15 10.50 56.65 68.20 -11.55			



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5745MHz	Antenna	Horizontal/Vertical

## RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		
11490.042	48.36	9.42	57.78	74.00	-16.22	peak	
11490.042	31.79	9.42	41.21	54.00	-12.79	AVG	
17253.063	35.84	10.51	46.35	68.20	-21.85	peak	
Remark:						•	
Factor = Antenna Factor + Cable Loss – Pre-amplifier.							

## RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
11490.042	48.36	9.42	57.78	74.00	-16.22	peak
11490.042	33.51	9.42	42.93	54.00	-11.07	AVG
17253.063	39.15	10.51	49.66	68.20	-18.54	peak
Remark:						
Factor = Anten	na Factor + Cabl	e Loss – Pre-	amplifier.			



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5785MHz	Antenna	Horizontal/Vertical

#### RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type			
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type			
11570.042	46.58	9.42	56.00	74.00	-18.00	peak			
11570.042	33.52	9.42	42.94	54.00	-11.06	AVG			
17355.063	33.56	10.51	44.07	68.20	-24.13	peak			
Remark:	Remark:								
Factor = Antenna Factor + Cable Loss – Pre-amplifier.									

## RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type		
11570.042	48.52	9.42	57.94	74.00	-16.06	peak		
11570.042	34.15	9.42	43.57	54.00	-10.43	AVG		
17355.063	41.06	10.51	51.57	68.20	-16.63	peak		
Remark:								
Factor = Antenna Factor + Cable Loss – Pre-amplifier.								



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5825MHz	Antenna	Horizontal/Vertical

## RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type		
11650.042	48.15	9.62	57.77	74.00	-16.23	peak		
11650.042	31.59	9.62	41.21	54.00	-12.79	AVG		
17475.063	37.59	10.75	48.34	68.20	-19.86	peak		
Remark:								
Factor = Antenna Factor + Cable Loss – Pre-amplifier.								

## RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type		
11650.042	48.97	9.62	58.59	74.00	-15.41	peak		
11650.042	32.05	9.62	41.67	54.00	-12.33	AVG		
17475.063	37.69	10.75	48.44	68.20	-19.76	peak		
Remark:								
Factor = Antenna Factor + Cable Loss – Pre-amplifier.								



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#### Radiated emission above 1GHz

EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5180MHz	Antenna	Horizontal/Vertical

## RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
10360.042	47.85	9.14	56.99	68.20	-11.21	peak
15540.063	42.19	10.22	52.41	74.00	-21.59	peak
15540.063	32.52	10.22	42.74	54.00	-11.26	AVG
Remark:						
actor = Anter	na Factor + Cabl	e Loss – Pre-	amplifier		•	

#### ractor - Antenna ractor + Gable Loss - Pre-ampliller.

#### RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
10360.042	48.51	9.14	57.65	68.20	-10.55	peak
15540.063	40.28	10.22	50.50	74.00	-23.50	peak
15540.063	30.17	10.22	40.39	54.00	-13.61	AVG
Remark:	•					•
actor = Anten	na Factor + Cabl	e Loss – Pre-ar	mplifier.			



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5200MHz	Antenna	Horizontal/Vertical

#### RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
10400.042	48.51	9.14	57.65	68.20	-10.55	peak
15600.063	42.95	10.22	53.17	74.00	-20.83	peak
15600.063	31.52	10.22	41.74	54.00	-12.26	AVG
Remark:			•			
Factor = Anter	na Factor + Cabl	e Loss – Pre-a	amplifier.			

#### RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
10400.042	47.52	9.14	56.66	68.20	-11.54	peak
15600.063	43.05	10.22	53.27	74.00	-20.73	peak
15600.063	30.56	10.22	40.78	54.00	-13.22	AVG
Remark:						

Factor = Antenna Factor + Cable Loss - Pre-amplifier.



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5240MHz	Antenna	Horizontal/Vertical

#### RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
10480.042	47.12	9.27	56.39	68.20	-11.81	peak
15720.063	43.12	10.38	53.50	74.00	-20.50	peak
15720.063	32.05	10.38	42.43	54.00	-11.57	AVG
Remark:						
Factor = Anter	na Factor + Cabl	e Loss – Pre-ar	mplifier.			

## RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
10480.042	47.63	9.27	56.90	68.20	-11.30	peak
15720.063	44.02	10.38	54.40	74.00	-19.60	peak
15720.063	31.89	10.38	42.27	54.00	-11.73	AVG

Factor = Antenna Factor + Cable Loss - Pre-amplifier.



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#### Radiated emission above 1GHz

EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5260MHz	Antenna	Horizontal/Vertical

#### RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type	
10520.051	48.36	9.31	57.67	68.20	-10.53	peak	
15780.033	42.32	10.42	52.74	74.00	-21.26	peak	
15780.033	31.15	10.42	41.57	54.00	-12.43	AVG	
Remark:							
Factor = Antenna Factor + Cable Loss – Pre-amplifier.							

## RADIATED EMISSION ABOVE 1GHZ-Vertical

(10.14		Emission Level	Limits	Margin	Value Type
(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
47.52	9.31	56.83	68.20	-11.37	peak
41.34	10.42	51.76	74.00	-22.24	peak
32.05	10.42	42.47	54.00	-11.53	AVG
-	41.34 32.05	41.34 10.42 32.05 10.42	41.34 10.42 51.76	41.34 10.42 51.76 74.00   32.05 10.42 42.47 54.00	41.34 10.42 51.76 74.00 -22.24   32.05 10.42 42.47 54.00 -11.53



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5300MHz	Antenna	Horizontal/Vertical

## RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
10600.025	48.31	9.33	57.64	74.00	-16.36	peak
10600.025	31.08	9.33	40.41	54.00	-13.59	AVG
15900.036	42.25	10.44	52.69	74.00	-21.31	peak
15900.036	32.44	10.44	42.88	54.00	-11.12	AVG
Remark:						
actor = Anter	na Factor + Cabl	e Loss – Pre-	amplifier	•		•

# RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
10600.025	47.36	9.33	56.69	74.00	-17.31	peak
10600.025	33.63	9.33	42.96	54.00	-11.04	AVG
15900.036	43.36	10.44	53.80	74.00	-20.20	peak
15900.036	30.16	10.44	40.60	54.00	-13.40	AVG
Remark:						<u> </u>

Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5320MHz	Antenna	Horizontal/Vertical

#### RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
10640.055	47.12	9.35	56.47	74.00	-17.53	peak
10640.055	34.02	9.35	43.37	54.00	-10.63	AVG
15960.042	40.69	10.46	51.15	74.00	-22.85	peak
15960.042	30.58	10.46	41.04	54.00	-12.96	AVG
Remark:						
Factor = Anter	nna Factor + Cabl	e Loss – Pre-	amplifier.			

#### RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
10640.055	46.52	9.35	55.87	74.00	-18.13	peak
10640.055	35.17	9.35	44.52	54.00	-9.48	AVG
15960.042	45.25	10.46	55.71	74.00	-18.29	peak
15960.042	32.47	10.46	42.93	54.00	-11.07	AVG
Remark:						
actor = Anter	nna Factor + Cabl	e Loss – Pre-a	amplifier.			



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#### Radiated emission above 1GHz

EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5500MHz	Antenna	Horizontal/Vertical

#### RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type		
11000.024	51.96	9.38	61.34	74.00	-12.66	peak		
11000.024	33.05	9.38	42.43	54.00	-11.57	AVG		
16500.033	41.47	10.51	51.98	68.20	-16.22	peak		
Remark:								
Factor = Anter	Factor = Antenna Factor + Cable Loss – Pre-amplifier.							

## RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
11000.024	48.74	9.38	58.12	74.00	-15.88	peak
11000.024	31.96	9.38	41.34	54.00	-12.66	AVG
16500.033	42.58	10.51	53.09	68.20	-15.11	peak
emark:	1					

Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5600MHz	Antenna	Horizontal/Vertical

## RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type			
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type			
11200.035	47.69	9.38	57.07	74.00	-16.93	peak			
11200.035	33.82	9.38	43.20	54.00	-10.80	AVG			
16800.041	42.74	10.51	53.25	68.20	-14.95	peak			
Remark:									
Factor = Anten	Factor = Antenna Factor + Cable Loss – Pre-amplifier								

#### RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
11200.035	44.96	9.38	54.34	74.00	-19.66	peak
11200.035	34.05	9.38	43.43	54.00	-10.57	AVG
16800.041	41.69	10.51	52.20	68.20	-16.00	peak
emark:	!		!		1	

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Factor = Antenna Factor + Cable Loss - Pre-amplifier.



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5700MHz	Antenna	Horizontal/Vertical

#### RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
11400.058	47.52	9.38	56.90	74.00	-17.10	peak
11400.058	34.05	9.38	43.43	54.00	-10.57	AVG
17100.042	46.28	10.51	56.79	68.20	-11.41	peak
Remark:						
Factor = Anter	nna Factor + Cabl	e Loss – Pre-	amplifier.			·

#### RADIATED EMISSION ABOVE 1GHZ-Vertical

el Limits	Emission Level	Factor	Meter Reading	Frequency
(dBµV/m)	(dBµV/m)	(dB)	(dBµV)	(MHz)
74.00	56.34	9.38	46.96	11400.058
54.00	43.23	9.38	33.85	11400.058
68.20	57.53	10.51	47.02	17100.042
				Dama aulu
				Remark:
	mplifier.	e Loss – Pre-ar	na Factor + Cabl	Remark: Factor = Anten



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5745MHz	Antenna	Horizontal/Vertical

## RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type		
11490.042	49.19	9.42	58.61	74.00	-15.39	peak		
11490.042	33.12	9.42	42.54	54.00	-11.46	AVG		
17253.063	45.96	10.51	56.47	68.20	-11.73	peak		
Remark:								
Factor = Anter	Factor = Antenna Factor + Cable Loss – Pre-amplifier							

# RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
11490.042	48.96	9.42	58.38	74.00	-15.62	peak
11490.042	34.50	9.42	43.92	54.00	-10.08	AVG
17253.063	41.36	10.51	51.87	68.20	-16.33	peak
Remark:						
actor = Anter	nna Factor + Cabl	e Loss – Pre-	amplifier.			



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5785MHz	Antenna	Horizontal/Vertical

#### RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
11570.042	47.69	9.42	57.11	74.00	-16.89	peak
11570.042	34.52	9.42	43.94	54.00	-10.06	AVG
17355.053	46.35	10.51	56.86	68.20	-11.34	peak
Remark:						
actor = Anter	na Factor + Cabl	e Loss – Pre-	amplifier.			

## RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency Me	eter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	T value Type
11570.042	49.38	9.42	58.80	74.00	-15.20	peak
11570.042	33.24	9.42	42.66	54.00	-11.34	AVG
17355.053	42.62	10.51	53.13	68.20	-15.07	peak
Remark:						
mark: ctor = Antenna F	to a Cable	Las Des es				



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EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 48V
Test Mode	802.11a20 5825MHz	Antenna	Horizontal/Vertical

#### RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
11650.042	48.52	9.62	58.14	74.00	-15.86	peak
11650.042	32.52	9.62	42.14	54.00	-11.86	AVG
17475.063	38.05	10.75	48.80	68.20	-19.40	peak
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

#### RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
11650.042	47.93	9.62	57.55	74.00	-16.45	peak
11650.042	31.74	9.62	41.36	54.00	-12.64	AVG
17475.063	37.63	10.75	48.38	68.20	-19.82	peak
Remark:						
Factor = Anten	na Factor + Cabl	e Loss – Pre-ar	mplifier.			

#### Note:

- 1. All test channels had been tested. The 802.11a20 is the worst case and recorded in the test report.
- 2. Other frequencies radiation emission from 1GHz to 40GHz at least have 20dB margin and not recorded in the test report.
- 3. Factor = Antenna Factor + Cable loss Amplifier gain, Margin= Level-Limit.
- 4. The "Factor" value can be calculated automatically by software of measurement system.



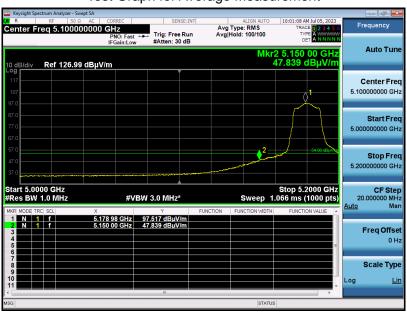
## Test result for band edge emission at restricted bands 5.150GHz~5.250GHz

EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5180MHz	Antenna	Horizontal

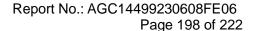
## Test Graph for Peak Measurement



Test Graph for Average Measurement



#### **RESULT: PASS**



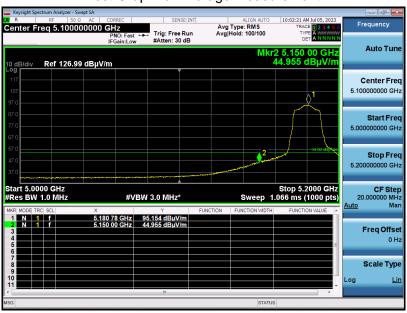


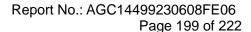
EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5180MHz	Antenna	Vertical

Test Graph for Peak Measurement



Test Graph for Average Measurement





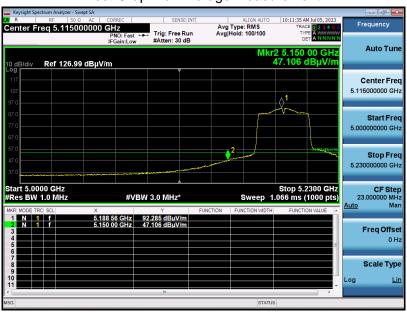


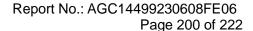
EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11n40 5190MHz	Antenna	Horizontal

Test Graph for Peak Measurement



Test Graph for Average Measurement





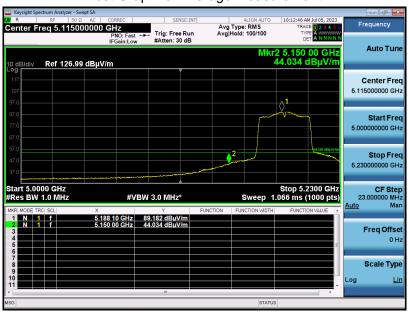


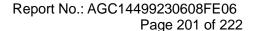
EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11n40 5190MHz	Antenna	Vertical

Test Graph for Peak Measurement



Test Graph for Average Measurement





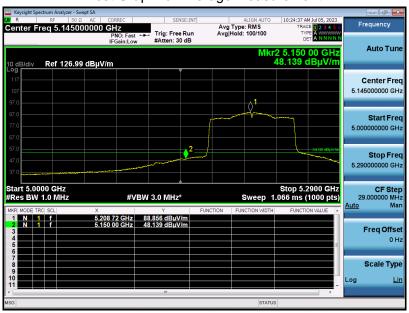


EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11ac80 5210MHz	Antenna	Horizontal

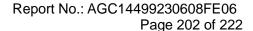
## Test Graph for Peak Measurement



Test Graph for Average Measurement



**RESULT: PASS** 



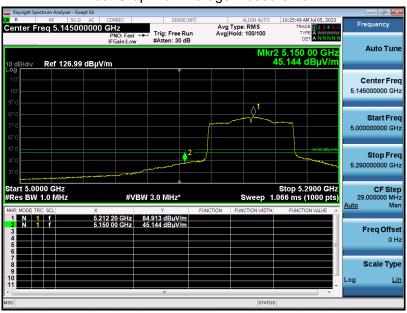


EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11ac80 5210MHz	Antenna	Vertical

## Test Graph for Peak Measurement



Test Graph for Average Measurement



**RESULT: PASS** 



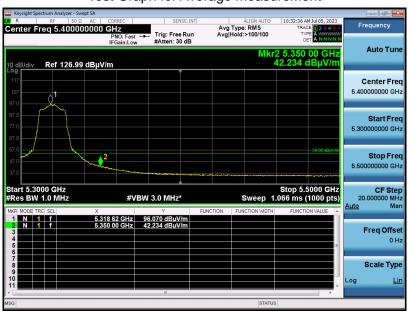
## Test result for band edge emission at restricted bands 5.25GHz~5.35GHz

EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5320MHz	Antenna	Horizontal

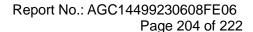
## Test Graph for Peak Measurement



Test Graph for Average Measurement



#### **RESULT: PASS**





EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11a20 5320MHz	Antenna	Vertical

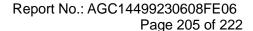
## Test Graph for Peak Measurement



Test Graph for Average Measurement



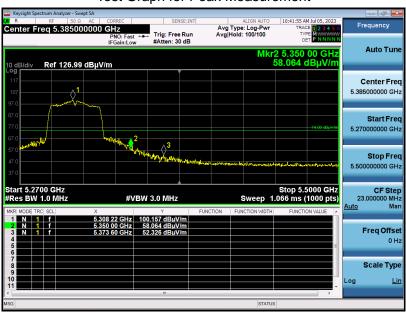
**RESULT: PASS** 





EUT	IP Phone	Model Name	X305
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	DC 5V
Test Mode	802.11n40 5310MHz	Antenna	Horizontal

Test Graph for Peak Measurement



Test Graph for Average Measurement

