

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

Test\_Graph\_802.11ac80\_ANT1\_5775\_MCS9\_Frequency Band4



Page 75 of 99

#### 11. RADIATED EMISSION

#### 11.1. MEASUREMENT PROCEDURE

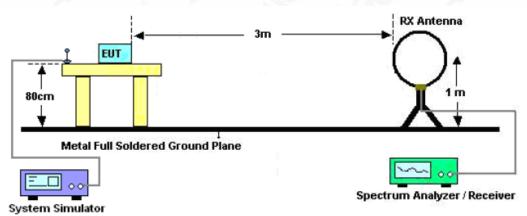
- 1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated 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.
- 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 3M 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.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pestud/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

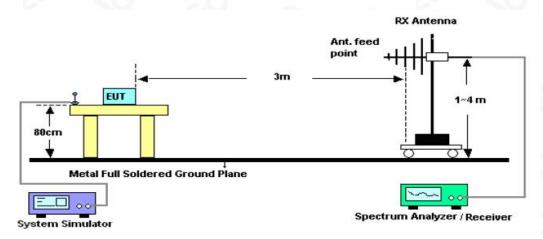


### 11.2. TEST SETUP

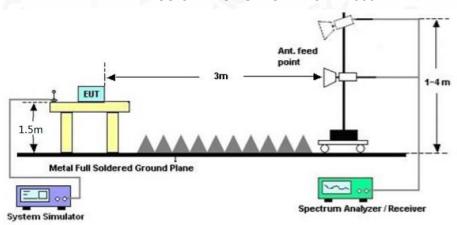
#### Radiated Emission Test-Setup Frequency Below 30MHz



#### RADIATED EMISSION TEST SETUP 30MHz-1000MHz



### RADIATED EMISSION TEST SETUP ABOVE 1000MHz



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the coefficient of stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC, the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 77 of 99

#### 11.3. LIMITS AND MEASUREMENT RESULT

15.209(a) Limit in the below table has to be followed

Frequencies (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: All modes were tested for restricted band radiated emission, the test records reported below are the worst result compared to other modes.

### 11.4. TEST 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.

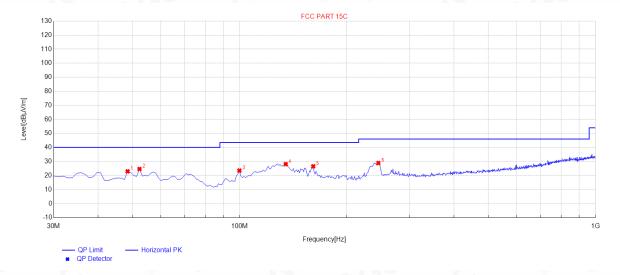
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Past not/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 78 of 99

### Radiated emission from 30MHz to 1000MHz

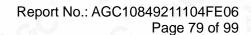
EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5180MHz	Antenna	Horizontal



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	48.43	23.01	11.53	40.00	16.99	100	327	Horizontal
2	52.31	24.66	11.49	40.00	15.34	100	164	Horizontal
3	99.84	23.55	11.30	43.50	19.95	100	151	Horizontal
4	134.76	28.16	14.49	43.50	15.34	100	96	Horizontal
5	160.95	26.60	14.84	43.50	16.90	100	33	Horizontal
6	245.34	28.95	13.88	46.00	17.05	100	59	Horizontal

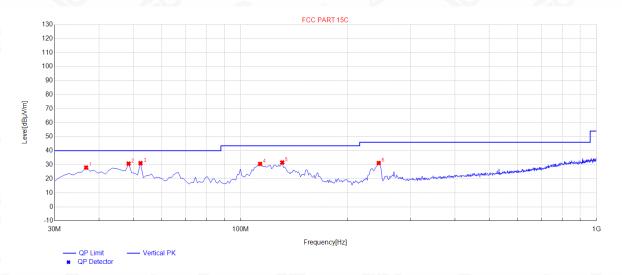
**RESULT: PASS** 

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Psychological Psycholo





EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5180MHz	Antenna	Vertical



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.79	27.97	10.73	40.00	12.03	100	80	Vertical
2	48.43	30.75	11.53	40.00	9.25	100	109	Vertical
3	52.31	31.14	11.49	40.00	8.86	100	130	Vertical
4	113.42	30.58	12.79	43.50	12.92	100	358	Vertical
5	130.88	31.59	14.21	43.50	11.91	100	135	Vertical
6	244.37	31.21	13.84	46.00	14.79	100	190	Vertical

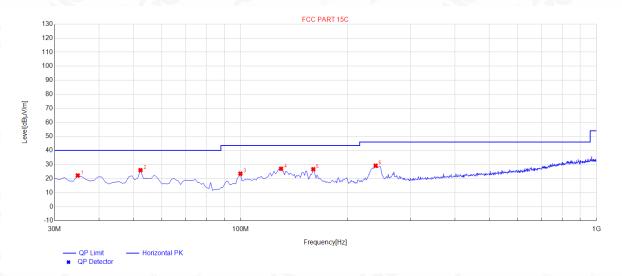
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 80 of 99

### Radiated emission from 30MHz to 1000MHz

EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5745MHz	Antenna	Horizontal



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	34.85	22.20	10.70	40.00	17.80	100	188	Horizontal
2	52.31	25.95	11.49	40.00	14.05	100	122	Horizontal
3	99.84	23.50	11.30	43.50	20.00	100	172	Horizontal
4	129.91	26.99	14.14	43.50	16.51	100	198	Horizontal
5	159.98	26.66	14.94	43.50	16.84	100	25	Horizontal
6	239.52	29.14	13.64	46.00	16.86	100	285	Horizontal

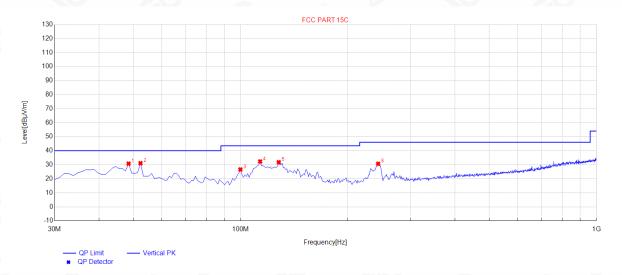
**RESULT: PASS** 

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Psychological Psycholo





EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5745MHz	Antenna	Vertical



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	48.43	30.77	11.53	40.00	9.23	100	339	Vertical
2	52.31	31.11	11.49	40.00	8.89	100	106	Vertical
3	99.84	26.61	11.30	43.50	16.89	100	318	Vertical
4	113.42	32.32	12.79	43.50	11.18	100	91	Vertical
5	127.97	31.75	14.01	43.50	11.75	100	115	Vertical
6	243.4	30.68	13.80	46.00	15.32	100	230	Vertical

### **RESULT: PASS**

**Note:** All test channels had been tested. The 802.11a20 at 5180MHz is the worst case and recorded in the test report.

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

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

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Residual Any report having not been stamped by the Bedicated Residual Any Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written exphorization of ACC where the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 82 of 99

### Radiated emission above 1GHz

EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
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	46.77	9.14	55.91	68.20	-12.29	peak	
15540.063	39.85	10.22	50.07	74.00	-23.93	peak	
15540.063	32.44	10.22	42.66	54.00	-11.34	AVG	
60		©			<u> </u>	8	
Remark:			8			- G	
actor = Anter	nna Factor + Cable	e Loss – Pre-	-amplifier.				

### RADIATED EMISSION ABOVE 1GHZ-Vertical

	Meter Reading	Factor	Emission Level	Limits	Margin	Value Tree	
(NALL=)							
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type	
10360.042	47.82	9.14	56.96	68.20	-11.24	peak	
15540.063	40.33	10.22	50.55	74.00	-23.45	peak	
15540.063	31.96	10.22	42.18	54.00	-11.82	AVG	
(8)							
Remark:	8						
actor = Antenna	Factor + Cable	Loss - Pre-	amplifier		0		

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Festing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 83 of 99

EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
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	49.73	9.14	58.87	68.20	-9.33	peak
15600.063	40.58	10.22	50.80	74.00	-23.20	peak
15600.063	33.17	10.22	43.39	54.00	-10.61	AVG
	3				@	
		®				@
Remark:			®			-6
Factor = Anter	nna Factor + Cab	le 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	46.22	9.14	55.36	68.20	-12.84	peak
15600.063	41.74	10.22	51.96	74.00	-22.04	peak
15600.063	32.62	10.22	42.84	54.00	-11.16	AVG
(8)			- 0	· (C)		
Remark:	(8)					
	na Factor + Cable					1

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Festing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 84 of 99

/Inspection The test results

EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5240MHz	Antenna	Horizontal/Vertical

### RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Time
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
10480.042	48.31	9.27	57.58	68.20	-10.62	peak
15720.063	42.17	10.38	52.55	74.00	-21.45	peak
15720.063	32.05	10.38	42.43	54.00	-11.57	AVG
Domorla				8	<u> </u>	
Remark:						
-actor = Anter	nna Factor + Cable	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
10480.042	46.91	9.27	56.18	68.20	-12.02	peak
15720.063	42.40	10.38	52.78	74.00	-21.22	peak
15720.063	31.69	10.38	42.07	54.00	-11.93	AVG
		@				
			8			
Remark:						
actor = Anter	nna Factor + Cabl	e Loss – Pre-	-amplifier.	8		
	8					

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the specificated for Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written perhorization of Ac presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issued for the requiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 85 of 99

/Inspection The test results

EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5745MHz	Antenna	Horizontal/Vertical

### RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Time
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
11490.042	46.13	9.42	55.55	74.00	-18.45	peak
11490.042	38.51	9.42	47.93	54.00	-6.07	AVG
17235.063	40.13	10.51	50.64	68.20	-17.56	peak
@				6		
Remark:	8			- 0	®	
actor = Anter	nna Factor + Cable	Loss – Pre-	amplifier.		a.C	0
		1				

### 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	45.92	9.42	55.34	74.00	-18.66	peak
11490.042	35.89	9.42	45.31	54.00	-8.69	AVG
17235.063	39.79	10.51	50.30	68.20	-17.90	peak
		<u> </u>				
			(8)			
Remark:						
actor = Anter	nna Factor + Cabl	e Loss – Pre-	-amplifier.	8		
	(3)					

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the specificated for Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of Ac presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issued Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 86 of 99

/Inspection The test results

EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5785MHz	Antenna	Horizontal/Vertical

### RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Time
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
11570.042	46.98	9.42	56.40	74.00	-17.60	peak
11570.042	36.63	9.42	46.05	54.00	-7.95	AVG
17355.063	42.08	10.51	52.59	68.20	-15.61	peak
-0		(a)		7.0		
Remark:			8			
actor = Anter	nna Factor + Cable	Loss – Pre-	amplifier.			100
(8)				8		

### RADIATED EMISSION ABOVE 1GHZ-Vertical

ading         Factor         Emission Level         Limits         Margin         Value Type           V)         (dB)         (dBμV/m)         (dBμV/m)         (dB)           5         9.42         57.67         74.00         -16.33         peak           2         9.42         46.34         54.00         -7.66         AVG           7         10.51         53.28         68.20         -14.92         peak
/) (dB) (dBμV/m) (dBμV/m) (dB) 5 9.42 57.67 74.00 -16.33 peak 2 9.42 46.34 54.00 -7.66 AVG 7 10.51 53.28 68.20 -14.92 peak
2 9.42 46.34 54.00 -7.66 AVG 7 10.51 53.28 68.20 -14.92 peak
7 10.51 53.28 68.20 -14.92 peak
L Cable Lose Dra amplifier
L Cable Loss - Dra amplifier
L Cable Loss - Dro amplifier
L Coble Loss Dra amplifier
+ Cable Loss – Pre-amplifier.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the steelicated resolution of the report is not permitted without the written authorization of AG presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issued to AGC by agc@agc-cert.com.



Page 87 of 99

EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
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	48.25	9.62	57.87	74.00	-16.13	peak
11650.042	37.19	9.62	46.81	54.00	-7.19	AVG
17475.063	42.87	10.75	53.62	68.20	-14.58	peak
					<u> </u>	
		(8)				@
Remark:						
actor = Anter	nna Factor + Cabl	e Loss – Pre-	amplifier.			10°
8				@		

### RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dBµV/m) (dB)	
11650.042	47.85	9.62	57.47	74.00	-16.53	peak
11650.042	36.74	9.62	46.36	54.00	-7.64	AVG
17475.063	41.16	10.75	51.91	68.20	-16.29	peak
		,0				
Remark:						
actor = Anter	nna Factor + Cable	Loss - Pre-	-amplifier.		@	
		>	@			(8)

Note: All test channels had been tested. The 802.11a20 is the worst case and recorded in the test report.

Other frequencies radiation emission from 1GHz to 40GHz at least have 20dB margin and not recorded in the test report.

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

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

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated restriction Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter perhorization of AGE. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



## Test result for band edge emission at restricted bands

EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5180MHz	Antenna	Horizontal

Test Graph for Peak Measurement



Test Graph for Average Measurement



**RESULT: PASS** 

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written perhorization of AGE. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5180MHz	Antenna	Vertical

Test Graph for Peak Measurement



Test Graph for Average Measurement



**RESULT: PASS** 

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the bedicated restriction Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

The test results

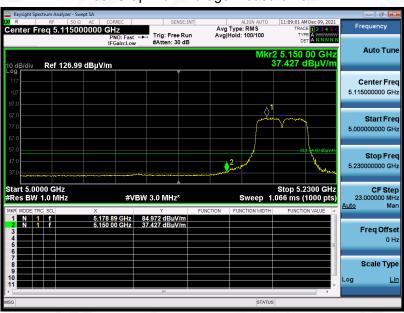


EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n40 5190MHz	Antenna	Horizontal

Test Graph for Peak Measurement



Test Graph for Average Measurement



**RESULT: PASS** 

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Belloaded Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written achorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

The test results

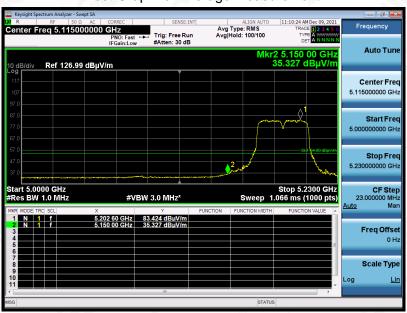


EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n40 5190MHz	Antenna	Vertical

Test Graph for Peak Measurement



Test Graph for Average Measurement



**RESULT: PASS** 

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Belloaded Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written achorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

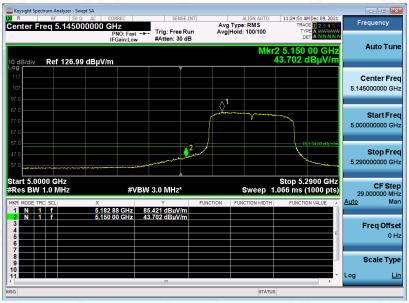


EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11ac80 5210MHz	Antenna	Horizontal

Test Graph for Peak Measurement



Test Graph for Average Measurement



**RESULT: PASS** 

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated restriction. Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter perhorization of AGE. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

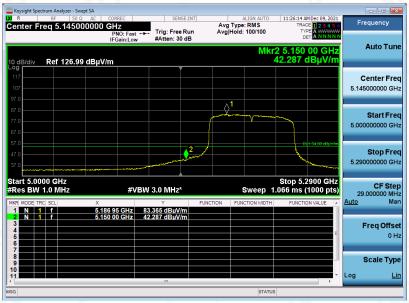


EUT	Brama L V2	Model Name	SoloProtect ID touch
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11ac80 5210MHz	Antenna	Vertical

## Test Graph for Peak Measurement



#### Test Graph for Average Measurement



**RESULT: PASS** 

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written appropriation of AGE. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 94 of 99

Note: 1. All the 20MHz bandwidth modulation had been tested, the 802.11a20 at 5180MHz was the worst case and record in his test report. All the 40MHz bandwidth modulation had been tested, the 802.11N40 at 5190MHz was the worst case and record in his test report. All the 80MHz bandwidth modulation had been tested, the 802.11AC80 at 5210MHz was the worst case and record in his test report.

- 2. The factor had been edited in the "Input Correction" of the Spectrum Analyzer.
- 3. Only the data of band edge emission at the restricted band 4.5GHz-5.15GHz and 5.35GHz-5.46GHz record in the report. Other restricted band 7.25GHz-7.77GHz were considered as ambient noise. No recording in the test report.
- 4.The sideband standard of U NII-3 frequency band is not defined, the transmitted signal does not fall in the restricted band, and the edge signal is far away from the edge of other restricted bands, and it is not recorded in the report.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Bedicated Residual Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGE the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



Page 95 of 99

### 12. LINE CONDUCTED EMISSION TEST

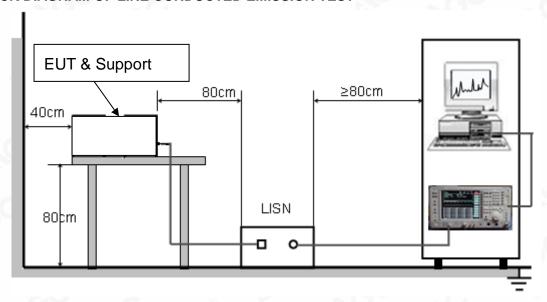
### 12.1. LIMITS OF LINE CONDUCTED EMISSION TEST

_	Maximum RF Line Voltage			
Frequency	Q.P (dBμV)	Average (dBμV)		
150kHz~500kHz	66-56	56-46		
500kHz~5MHz	56	46		
5MHz~30MHz	60	50		

### Note:

- 1. The lower limit shall apply at the transition frequency.
- 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50MHz.

### 12.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the content of the report is not permitted without the written authorization of AGC presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 96 of 99

#### 12.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. All support equipment received AC120V/60Hz power from a LISN, if any.
- 5. The EUT received charging voltage by adapter which received 120V/60Hzpower by a LISN.
- 6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 Ohm load; the second scan had Line 1 connected to a 50 Ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8. During the above scans, the emissions were maximized by cable manipulation.
- 9. The test mode(s) were scanned during the preliminary test.

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

### 12.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

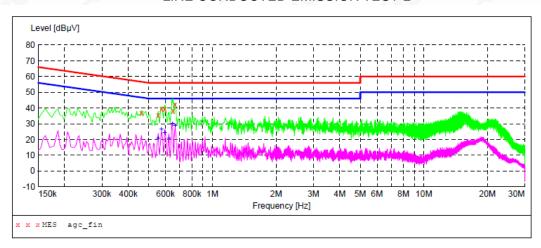
- 1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- 2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less – 2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 3. The test data of the worst case was reported on the Summary Data page.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC he test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



## 12.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

### LINE CONDUCTED EMISSION TEST-L



### MEASUREMENT RESULT: "agc fin"

2021/12/7 14:32

021/12// 11:	02					
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line
0.462000	36.60	5.5	57	20.1	QP	L1
0.554000	35.30	5.4	56	20.7	QP	L1
0.574000	39.60	5.4	56	16.4	QP	L1
0.594000	39.50	5.4	56	16.5	QP	L1
0.650000	38.00	5.4	56	18.0	QP	L1
0.666000						

### MEASUREMENT RESULT: "agc fin2"

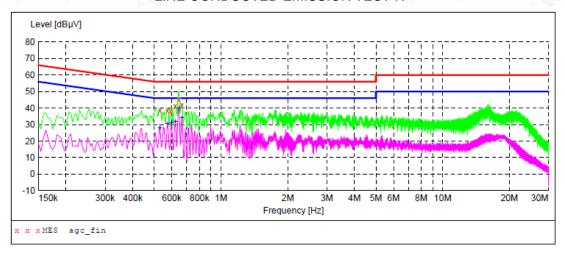
2021/12/7 14:32

2021/12// 14.	. 52					
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line
0.554000	20.90	5.4	46	25.1	AV	L1
0.574000	26.50	5.4	46	19.5	AV	L1
0.594000	24.20	5.4	46	21.8	AV	L1
0.622000	20.90	5.4	46	25.1	AV	L1
0.646000	30.20	5.4	46	15.8	AV	L1
0.666000	28.90	5.4	46	17.1	AV	L1

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



### LINE CONDUCTED EMISSION TEST-N



## MEASUREMENT RESULT: "agc fin"

2021/12/7 14:26

2021/12// 14.	20					
Frequency	Level	Transd	Limit	Margin	Detector	Line
MHz	dΒμV	dB	dΒμV	dB		
0.530000	38.50	5.4	56	17.5	QP	N
0.574000	38.60	5.4	56	17.4	QP	N
0.594000	38.10	5.4	56	17.9	QP	N
0.622000	41.20	5.4	56	14.8	QP	N
0.646000	45.40	5.4	56	10.6	QP	N
0.666000	41.70	5.4	56	14.3	QP	N

## MEASUREMENT RESULT: "agc fin2"

2021/12/7 14:26

2021/12// 14.	20					
Frequency				_	Detector	Line
MHz	dΒμV	dB	dBµV	dB		
0.530000	27.70	5.4	46	18.3	AV	N
0.574000	30.30	5.4	46	15.7	AV	N
0.598000	30.90	5.4	46	15.1	AV	N
0.622000	31.80	5.4	46	14.2	AV	N
0.646000	39.70	5.4	46	6.3	AV	N
0.666000	34.10	5.4	46	11.9	AV	N

**RESULT: PASS** 

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written appropriation of AGE. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 99 of 99

### **APPENDIX A: PHOTOGRAPHS OF TEST SETUP**

Refer to the Report No.: AGC10849211104AP02

**APPENDIX B: PHOTOGRAPHS OF EUT** 

Refer to the Report No.: AGC10849211104AP03

----END OF REPORT----

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the special dead resting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written appropriation of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



# Conditions of Issuance of Test Reports

- 1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").
- 2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
- 3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
- 4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
- 5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
- 6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
- 7. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
- 8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
- 9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated restriction Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written enhorization of AGC the test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.