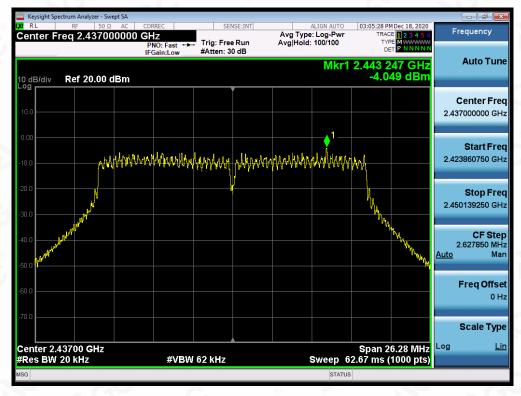




# 802.11n 20 TEST RESULT TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL

TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL



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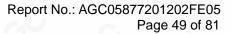
### TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL

802.11n 40 TEST RESULT

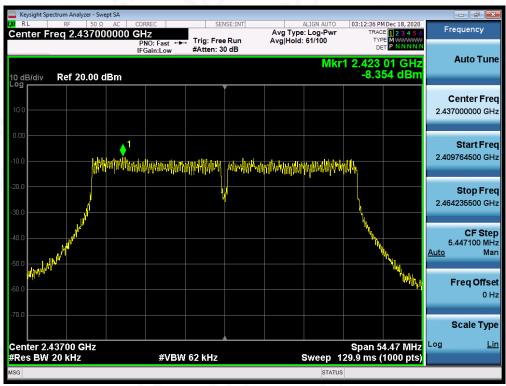
TEST PLOT OF SPECTRAL DENSITY FOR LOW CHANNEL



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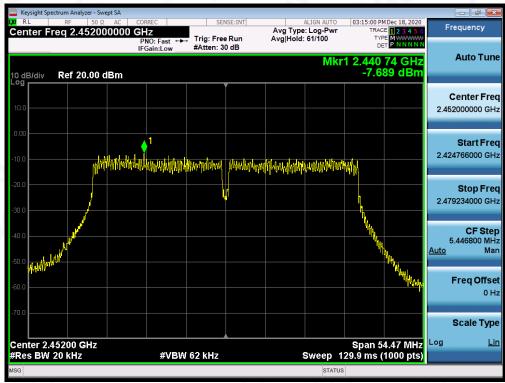






### TEST PLOT OF SPECTRAL DENSITY FOR MIDDLE CHANNEL

# TEST PLOT OF SPECTRAL DENSITY FOR HIGH CHANNEL



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## **11. RADIATED EMISSION**

### **11.1. MEASUREMENT PROCEDURE**

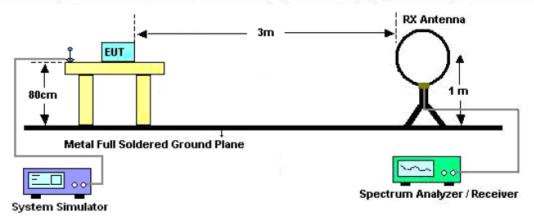
- 1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated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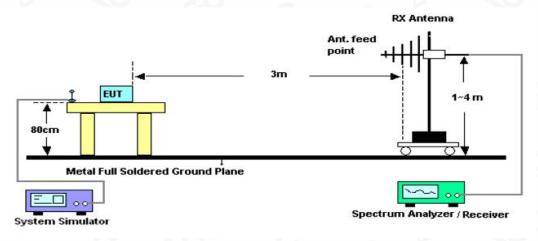


### 11.2. TEST SETUP

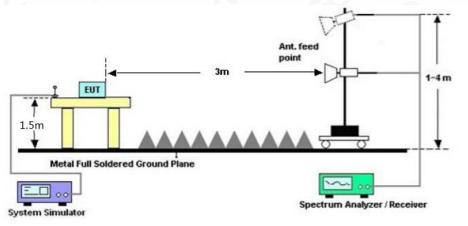
Radiated Emission Test-Setup Frequency Below 30MHz



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



### RADIATED EMISSION TEST SETUP ABOVE 1000MHz



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Attestation of Global Compliance(Shenzhen)Co., Ltd Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Web: http://cn.agc-cert.com/

### **11.3. LIMITS AND MEASUREMENT RESULT**

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

Frequencies (MHz)	Field Strength (micorvolts/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**

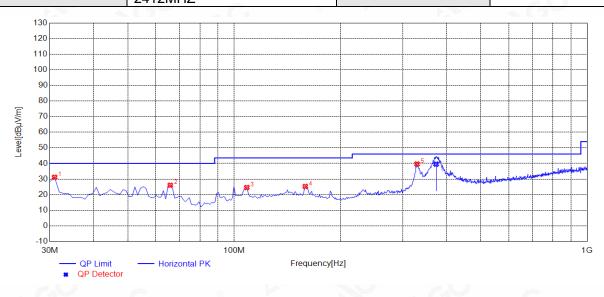
The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.

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### **RADIATED EMISSION BELOW 1GHZ**

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Horizontal



#### Peak data list

	NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
ſ	1	30.9700	31.18	10.02	40.00	8.82	100	242	Horizontal
ſ	2	65.8900	26.05	9.93	40.00	13.95	200	108	Horizontal
	3	108.5700	24.59	12.27	43.50	18.91	100	215	Horizontal
	4	159.0100	25.29	14.94	43.50	18.21	200	51	Horizontal
	5	329.7300	39.68	17.06	46.00	6.32	100	235	Horizontal

QP data list

NO.	Freq. [MHz]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	373.2943	18.74	39.56	46.00	6.44	101	228	Horizontal

### **RESULT: PASS**

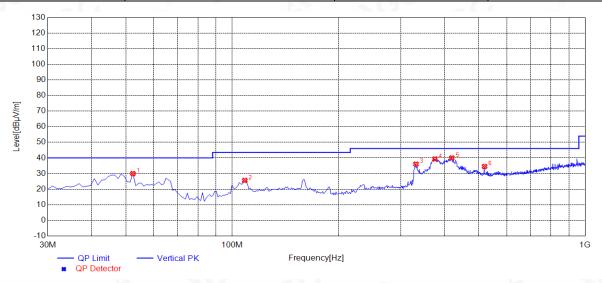
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### Report No.: AGC05877201202FE05 Page 54 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Vertical



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	52.3100	29.97	11.49	40.00	10.03	100	156	Vertical
2	108.5700	25.60	12.27	43.50	17.90	100	359	Vertical
3	331.6700	36.06	17.15	46.00	9.94	100	210	Vertical
4	375.3200	39.35	18.82	46.00	6.65	100	200	Vertical
5	418.9700	40.00	20.22	46.00	6.00	100	255	Vertical
6	518.8800	34.53	22.57	46.00	11.47	100	9	Vertical

### **RESULT: PASS**

Note: 1. Factor=Antenna Factor + Cable loss, Margin=Limit-Level.

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

3. All test modes had been pre-tested. The 802.11b at low channel is the worst case and recorded in the report.

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## **RADIATED EMISSION ABOVE 1GHZ**

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Horizontal

Frequency	Meter Reading	ter Reading Factor Emission Level Limits Margin				
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
4824.000	54.16	0.08	54.24	74	-19.76	peak
4824.000	45.97	0.08	46.05	54	-7.95	AVG
7236.000	50.08	2.21	52.29	74	-21.71	peak
7236.000	41.38	2.21	43.59	54	-10.41	AVG
	G	<u>s</u>			-00	-C
emark:		0	20			
actor = Ante	enna Factor + C	able Loss – F	Pre-amplifier.			8

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2412MHZ	Antenna	Vertical

Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
56.19	0.08	56.27	74	-17.73	peak
47.32	0.08	47.4	54	-6.6	AVG
51.66	2.21	53.87	74	-20.13	peak
42.74	2.21	44.95	54	-9.05	AVG
20	8				C
	- 61	8			
	56.19   47.32   51.66   42.74	56.19   0.08     47.32   0.08     51.66   2.21     42.74   2.21	56.190.0856.2747.320.0847.451.662.2153.87	56.19   0.08   56.27   74     47.32   0.08   47.4   54     51.66   2.21   53.87   74     42.74   2.21   44.95   54	56.19   0.08   56.27   74   -17.73     47.32   0.08   47.4   54   -6.6     51.66   2.21   53.87   74   -20.13     42.74   2.21   44.95   54   -9.05

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### Report No.: AGC05877201202FE05 Page 56 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
4874.000	56.34	0.14	56.48	74	-17.52	peak
4874.000	45.71	0.14	45.85	54	-8.15	AVG
7311.000	51.67	2.36	54.03	74	-19.97	peak
7311.000	41.59	2.36	43.95	54 💿	-10.05	AVG
- 61	8				Ċ	
0		8				8
emark:	0 20				NO N	-0
actor = Ante	enna Factor + Ca	ble Loss –	Pre-amplifier.			

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2437MHZ	Antenna	Vertical

Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(dBµV)	(dB) 💿	(dBµV/m)	(dBµV/m)	(dB)	value Type
55.37	0.14	55.51	74	-18.49	peak
45.18	0.14	45.32	54	-8.68	AVG
50.42	2.36	52.78	74	-21.22	peak
41.76	2.36	44.12	54	-9.88	AVG
	20			6	6
			A (0)		
	(dBµV) 55.37 45.18 50.42	(dBµV)   (dB)     55.37   0.14     45.18   0.14     50.42   2.36	(dBµV)   (dB)   (dBµV/m)     55.37   0.14   55.51     45.18   0.14   45.32     50.42   2.36   52.78	(dBµV)   (dB)   (dBµV/m)   (dBµV/m)     55.37   0.14   55.51   74     45.18   0.14   45.32   54     50.42   2.36   52.78   74	(dBµV)   (dB)   (dBµV/m)   (dBµV/m)   (dB)     55.37   0.14   55.51   74   -18.49     45.18   0.14   45.32   54   -8.68     50.42   2.36   52.78   74   -21.22

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#### Report No.: AGC05877201202FE05 Page 57 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2462MHZ	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4924.000	56.78	0.22	57	74	-17	peak
4924.000	45.16	0.22	45.38	54	-8.62	AVG
7386.000	50.29	2.64	52.93	74	-21.07	peak
7386.000	40.35	2.64	42.99	54	-11.01	AVG
- 6	8				6	
Remark:	-0				2.0	
actor = Ante	enna Factor + Ca	able Loss –	Pre-amplifier.			

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with date rate 1 2462MHZ	Antenna	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4924.000	56.18	0.22	56.4	74	-17.6	peak
4924.000	45.37	0.22	45.59	54	-8.41	AVG
7386.000	51.03	2.64	53.67	74	-20.33	peak
7386.000	41.75	2.64	44.39	54	-9.61	AVG
	©		G <sup>C</sup>	G	®	
emark:	C			7 6	G	
actor = Ante	enna Factor + C	able Loss – Pr	e-amplifier.			

### **RESULT: PASS**

### Note:

The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.

Factor = Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

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

All test modes had been pre-tested. The 802.11b mode is the worst case and recorded in the report.

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## **12. BAND EDGE EMISSION**

### **12.1. MEASUREMENT PROCEDURE**

Radiated restricted band edge measurements

The radiated restricted band edge measurements are measured with an EMI test receiver connected to the receive antenna while the EUT is transmitting

### 12.2. TEST SET-UP

same as 11.2

### Note:

1. Factor=Antenna Factor + Cable loss - Amplifier gain. Field Strength=Factor + Reading level

2. The factor had been edited in the "Input Correction" of the Spectrum Analyzer. So the Amplitude of test plots

is equal to Reading level plus the Factor in dB. Use the A dB( $\mu$ V) to represent the Amplitude. Use the F dB( $\mu$ V /m) to represent the Field Strength. So A=F.

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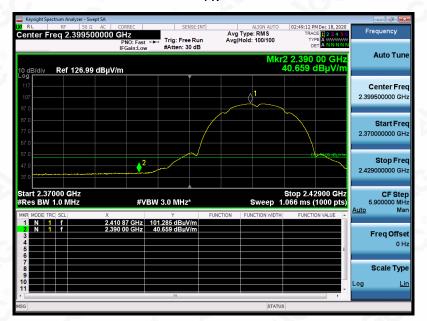


### 12.3. TEST RESULT

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2412MHZ	Antenna	Horizontal



AV



### **RESULT: PASS**

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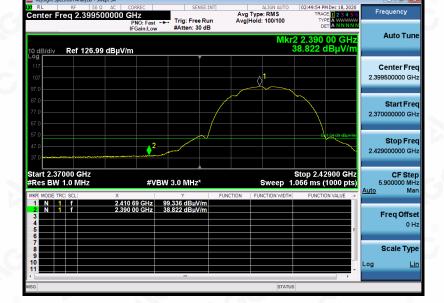


#### Report No.: AGC05877201202FE05 Page 60 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2412MHZ	Antenna	Vertical

ΡK





AV

### **RESULT: PASS**

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#### Report No.: AGC05877201202FE05 Page 61 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2462MHZ	Antenna	Horizontal

ΡK



#### AV



### **RESULT: PASS**

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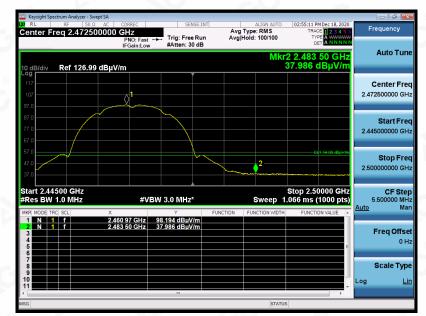
#### Report No.: AGC05877201202FE05 Page 62 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11b with data rate 1 2462MHZ	Antenna	Vertical

ΡK



#### AV



### **RESULT: PASS**

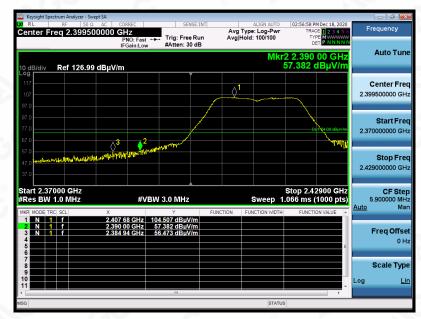
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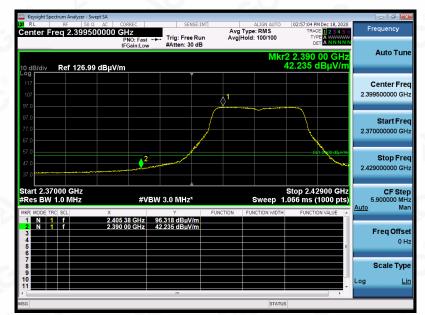
#### Report No.: AGC05877201202FE05 Page 63 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11g with data rate 6 2412MHZ	Antenna	Horizontal

ΡK



#### AV



### **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 Pasting/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 issuer of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



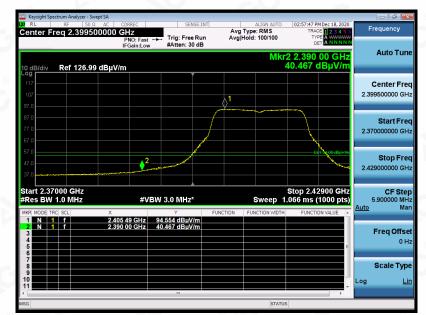
#### Report No.: AGC05877201202FE05 Page 64 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11g with data rate 6 2412MHZ	Antenna	Vertical

ΡK



#### AV



### **RESULT: PASS**

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#### Report No.: AGC05877201202FE05 Page 65 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11g with data rate 6 2462MHZ	Antenna	Horizontal

ΡK



## AV



### **RESULT: PASS**

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#### Report No.: AGC05877201202FE05 Page 66 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E	
Temperature	25°C	Relative Humidity	60%	
Pressure	960hPa	Test Voltage	Normal Voltage	
Test Mode	802.11g with data rate 6 2462MHZ	Antenna	Vertical	

ΡK



#### AV



### **RESULT: PASS**

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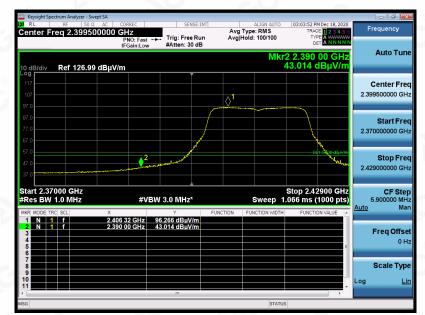
#### Report No.: AGC05877201202FE05 Page 67 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 20 with data rate 6.5 2412MHZ	Antenna	Horizontal

ΡK



#### AV



### **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 aphroization 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 issuence of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



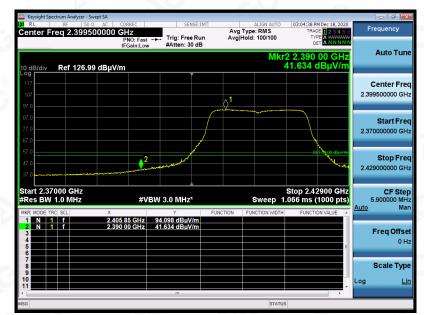
#### Report No.: AGC05877201202FE05 Page 68 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 20 with data rate 6.5 2412MHZ	Antenna	Vertical

ΡK



#### AV



### **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 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 15day after the issuer of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



#### Report No.: AGC05877201202FE05 Page 69 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 20 with data rate 6.5 2462MHZ	Antenna	Horizontal

ΡK



## AV



### **RESULT: PASS**

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the test results of 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 issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



#### Report No.: AGC05877201202FE05 Page 70 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 20 with data rate 6.5 2462MHZ	Antenna	Vertical

ΡK





### **RESULT: PASS**

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the test results of 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 issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



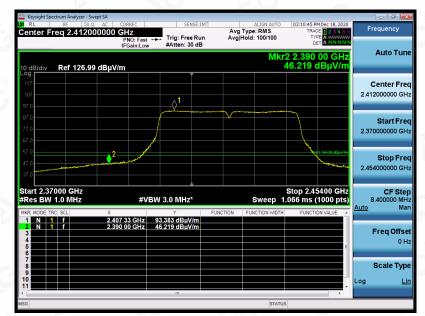
#### Report No.: AGC05877201202FE05 Page 71 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 40 with data rate 13.5 2422MHZ	Antenna	Horizontal

ΡK



#### AV



### **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 aphroization 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 issuence of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.

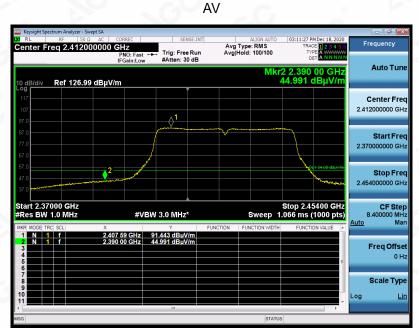


#### Report No.: AGC05877201202FE05 Page 72 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 40 with data rate 13.5 2422MHZ	Antenna	Vertical

ΡK





## **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 aphroization 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 issuence of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.

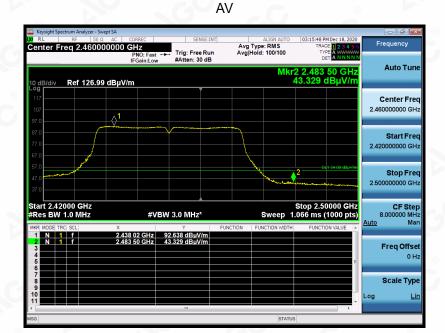


#### Report No.: AGC05877201202FE05 Page 73 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 40with data rate 13.5 2452MHZ	Antenna	Horizontal

ΡK





### **RESULT: PASS**

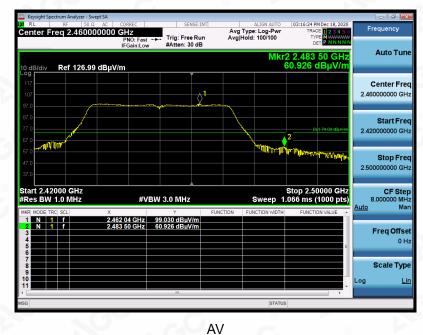
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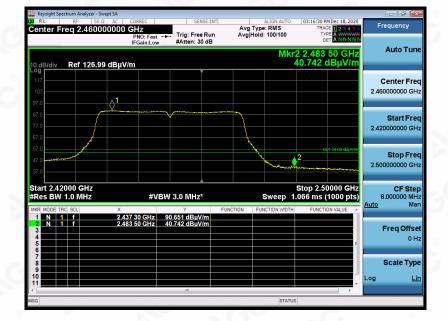


#### Report No.: AGC05877201202FE05 Page 74 of 81

EUT	IMILAB C30	Model Name	CMSXJ21E
Temperature	25°C	Relative Humidity	60%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n 40 with data rate 13.5 2452MHZ	Antenna	Vertical

ΡK





### **RESULT: PASS**

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## **13. FCC LINE CONDUCTED EMISSION TEST**

### **13.1. LIMITS OF LINE CONDUCTED EMISSION TEST**

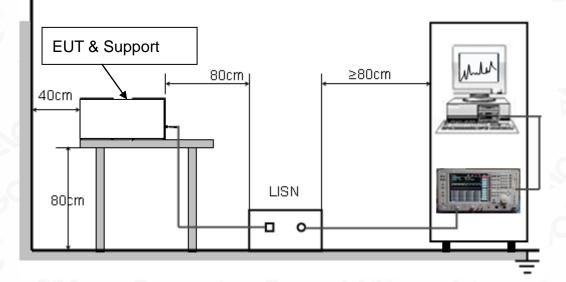
Francisco	Maximum RF Line Voltage					
Frequency	Q.P.( dBuV)	Average( dBuV)				
150kHz~500kHz	66-56	56-46				
500kHz~5MHz	56	46				
5MHz~30MHz	60	50				

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 0.50 MHz.

## **13.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST**



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### **13.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST**

- 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 equipments received AC120V/60Hz power from a LISN, if any.
- 5. The EUT received DC 5V power from adapter which received AC120V/60Hz power from 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.

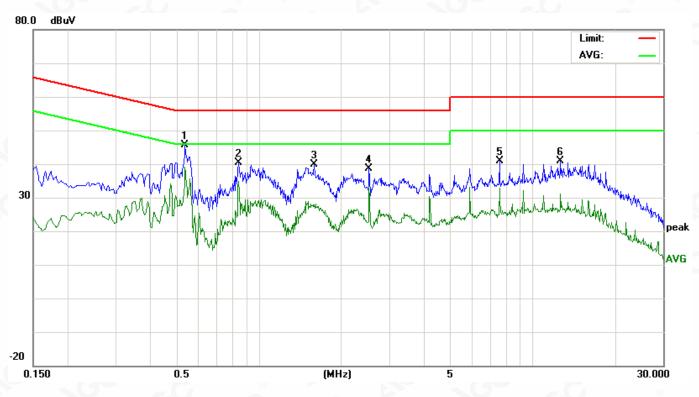
### 13.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- 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 condition(s) was reported on the Summary Data page.

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### 13.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST



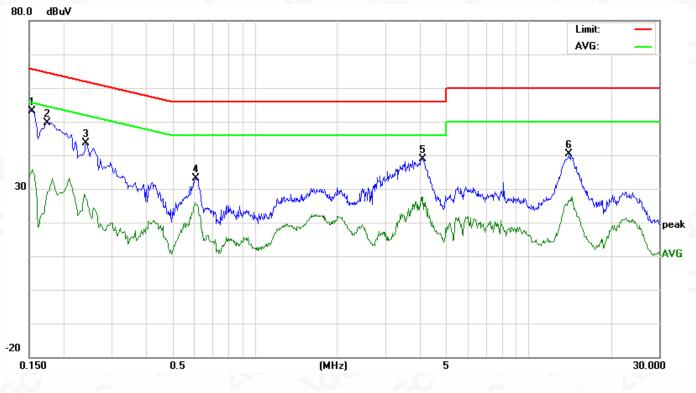
Line Conducted Emission Test Line 1-L

No.	Freq.	(ubuv)		Correct Factor		asuren (dBuV)			nit uV)		rgin IB)	P/F	
	(MHz)	Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG	
1	0.5380	31.91	N/A	25.25	13.77	45.68	N/A	39.02	56.00	46.00	-10.32	-6.98	Р
2	0.8460	26.69	N/A	21.07	13.81	40.50	N/A	34.88	56.00	46.00	-15.50	-11.12	Р
3	1.5940	26.06	N/A	14.11	13.73	39.79	N/A	27.84	56.00	46.00	-16.21	-18.16	Р
4	2.5340	25.22	N/A	20.10	13.51	38.73	N/A	33.61	56.00	46.00	-17.27	-12.39	Р
5	7.6060	27.32	N/A	19.45	13.43	40.75	N/A	32.88	60.00	50.00	-19.25	-17.12	Р
6	12.6820	27.43	N/A	17.78	13.40	40.83	N/A	31.18	60.00	50.00	-19.17	-18.82	Р

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Line Conducted Emission Test Line 2-N

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F
		Peak	QP	AVG	dB	Peak	QP	AVG	QP	AVG	QP	AVG	
1	0.1539	40.34	N/A	23.10	12.79	53.13	N/A	35.89	65.78	55.78	-12.65	-19.89	Р
2	0.1740	36.85	N/A	16.05	12.82	49.67	N/A	28.87	64.76	54.76	-15.09	-25.89	Р
3	0.2420	30.57	N/A	14.33	12.94	43.51	N/A	27.27	62.02	52.02	-18.51	-24.75	Р
4	0.6100	19.22	N/A	11.26	13.82	33.04	N/A	25.08	56.00	46.00	-22.96	-20.92	Р
5	4.1060	27.06	N/A	13.46	11.79	38.85	N/A	25.25	56.00	46.00	-17.15	-20.75	Р
6	14.0500	26.77	N/A	13.12	13.48	40.25	N/A	26.60	60.00	50.00	-19.75	-23.40	Р

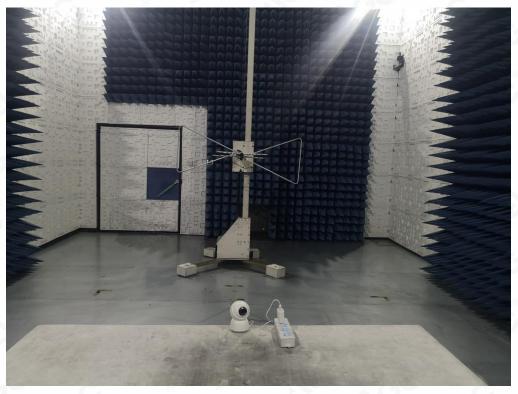
### **RESULT: PASS**

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated 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 writter 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 15day after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



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# **APPENDIX A: PHOTOGRAPHS OF TEST SETUP** FCC RADIATED EMISSION TEST SETUP BELOW 1GHZ



FCC RADIATED EMISSION TEST SETUP ABOVE 1GHZ



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the bedicated for the formation of the stamp. 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 issuer of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



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CONDUCTED EMISSION TEST SETUP

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## APPENDIX B: PHOTOGRAPHS OF EUT

Refer to the Report No.: AGC05877201202AP02

----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 "Dedicated Festiva/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 approximation 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 issues 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. The non-CMA report issued by AGC is only permitted to be used by the client as internal reference use and shall not be used for public demonstration purpose.

5. 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.

6. 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.

7. 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.

8. 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.

9. 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.

10. 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.

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