

# Global United Technology Services Co., Ltd.

Report No.: GTS202301050004F01

# TEST REPORT

**Applicant:** MG Accessories & Distribution Inc.

**Address of Applicant:** 12650 NW 25th Street Suite 112, Miami, Florida 33182,

**United States** 

Manufacturer/Factory: MG Accessories & Distribution Inc.

12650 NW 25th Street Suite 112, Miami, Florida 33182, Address of

Manufacturer/Factory: **United States** 

**Equipment Under Test (EUT)** 

Product Name: **Smart Camera** 

Model No.: ARG-SV-8010WT

Add. Model No.: ARG-SV-8011, ARG-SV-8012, ARG-SV-8013, ARG-SV-

8040WT, ARG-SV-8041, ARG-SV-8042, ARG-SV-8070WT,

ARG-SV-8071, ARG-SV-8072

Trade Mark: N/A

2AUGW-0028779122 FCC ID:

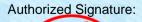
**Applicable standards:** FCC CFR Title 47 Part 15 Subpart C Section 15.247

Date of sample receipt: 2022-04-13

Date of Test: 2022-04-14 to 2022-04-20

Date of report issued: 2023-01-06

Test Result: PASS \*





**Robinson Luo Laboratory Manager** 

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver. Page 1 of 65

<sup>\*</sup> In the configuration tested, the EUT complied with the standards specified above.



# 2 Version

Report No.	Version No.	Date	Description	
GTSL202204000231F01	00	2022-04-26	Original	
GTS202301050004F01	01	2023-01-06	Change applicant, manufacturer and model number; Add factory.	

Prepared By:	Project Engineer	Date:	2023-01-06
Check By:	Reviewer	Date:	2023-01-06



# 3 Contents

		Pa	age
1	COV	/ER PAGE	1
2	VER	SION	2
3	(100	ITENTS	3
4		T SUMMARY	
5	GEN	IERAL INFORMATION	5
	5.1	GENERAL DESCRIPTION OF EUT	5
	5.2	TEST MODE	7
	5.3	DESCRIPTION OF SUPPORT UNITS	
	5.4	DEVIATION FROM STANDARDS	7
	5.5	ABNORMALITIES FROM STANDARD CONDITIONS	7
	5.6	TEST FACILITY	7
	5.7	TEST LOCATION	
	5.8	ADDITIONAL INSTRUCTIONS	7
6	TES	T INSTRUMENTS LIST	8
_	TEO	T DECLUTO AND MEACUREMENT DATA	40
7	IE5	T RESULTS AND MEASUREMENT DATA	10
	7.1	ANTENNA REQUIREMENT	10
	7.2	CONDUCTED EMISSIONS	
	7.3	CONDUCTED PEAK OUTPUT POWER	
	7.4	CHANNEL BANDWIDTH & 99% OCCUPY BANDWIDTH	
	7.5	POWER SPECTRAL DENSITY	
	7.6	BAND EDGES	
	7.6.		
	7.6.2		
	7.7	SPURIOUS EMISSION	
	7.7. 7.7.2	Conductor Environmental Management (Conductor)	
8	TES	T SETUP PHOTO	65
9	EUT	CONSTRUCTIONAL DETAILS	65



# 4 Test Summary

Test Item	Section	Result
Antenna requirement	FCC part 15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	FCC part 15.207	Pass
Conducted Peak Output Power	FCC part 15.247 (b)(3)	Pass
Channel Bandwidth & 99% OCB	FCC part 15.247 (a)(2)	Pass
Power Spectral Density	FCC part 15.247 (e)	Pass
Band Edge	FCC part 15.247(d)	Pass
Spurious Emission	FCC part 15.205/15.209	Pass

Remark: Test according to ANSI C63.10:2013 and RSS-Gen

Pass: The EUT complies with the essential requirements in the standard.

### **Measurement Uncertainty**

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radio Frequency	1	1 x 10 <sup>-7</sup>	(1)
Duty Cycle		0.37%	(1)
Occupied Bandwidth	1	2.8dB	(1)
RF Conducted Power	1	0.75dB	(1)
RF Power Density		3dB	(1)
Conducted Spurious Emissions	1	2.58dB	(1)
	9kHz-30MHz	3.1dB	(1)
	30MHz-200MHz	3.8039dB	(1)
Radiated Emission	200MHz-1GHz	3.9679dB	(1)
	1GHz-18GHz	4.29dB	(1)
	18GHz-40GHz	3.30dB	(1)
AC Power Line Conducted Emission	0.15MHz ~ 30MHz	3.44dB	(1)
Note (1): The measurement unce	ertainty is for coverage factor of ka	=2 and a level of confidence of 9	95%.



# 5 General Information

# 5.1 General Description of EUT

Product Name:	Smart Camera
Model No.:	ARG-SV-8010WT
Add. Model No.:	ARG-SV-8011, ARG-SV-8012, ARG-SV-8013, ARG-SV-8040WT, ARG-SV-8041, ARG-SV-8042, ARG-SV-8070WT, ARG-SV-8071, ARG-SV-8072
Serial No.:	N/A
Hardware Version:	1.0
Software Version:	1.0
Test sample(s) ID:	GTSL202204000231-1
Sample(s) Status:	Engineer sample
Sample(s) Status	Engineer sample
Channel numbers:	802.11b/802.11g /802.11n(HT20): 11
Channel separation:	5MHz
Modulation technology:	802.11b: Direct Sequence Spread Spectrum (DSSS)
	802.11g/802.11n(H20): 11
	Orthogonal Frequency Division Multiplexing (OFDM)
Antenna Type:	PCB Antenna
Antenna gain:	3.0dBi
Power supply:	5Vdc 1A

### Note:

Models ARG-SV-8010WT and models ARG-SV-8011, ARG-SV-8012, ARG-SV-8013, ARG-SV-8040WT, ARG-SV-8041, ARG-SV-8042, ARG-SV-8070WT, ARG-SV-8071, ARG-SV-8072 the difference is only to distinguish different sales areas of different customers, the model name is different, and the products are exactly the same.



Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

### Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Totalonal	Frequency (MHz)		
Test channel	802.11b/802.11g/802.11n(HT20)		
Lowest channel	2412MHz		
Middle channel	2437MHz	40	
Highest channel	2462MHz		



### 5.2 Test mode

Transmitting mode Keep the EUT in continuously transmitting mode

Remark: During the test, the dutycycle >98%, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Pre-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

Mode	802.11b	802.11g	802.11n(HT20)
Data rate	1Mbps	6Mbps	6.5Mbps

### 5.3 Description of Support Units

None.

### 5.4 Deviation from Standards

None.

### 5.5 Abnormalities from Standard Conditions

None.

### 5.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• FCC—Registration No.: 381383

Designation Number: CN5029

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files.

### • IC —Registration No.: 9079A

CAB identifier: CN0091

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing

NVLAP (LAB CODE:600179-0)

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

### 5.7 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

Tel: 0755-27798480 Fax: 0755-27798960

### 5.8 Additional Instructions

Test Software	Special test command provided by manufacturer	
Power level setup	Default	

Global United Technology Services Co., Ltd.

No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone,

Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102



# 6 Test Instruments list

Radi	Radiated Emission:							
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)		
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	July. 02 2020	July. 01 2025		
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A		
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June. 24 2021	June. 23 2022		
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 24 2021	June. 23 2022		
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 24 2021	June. 23 2022		
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 24 2021	June. 23 2022		
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A		
8	Coaxial Cable	GTS	N/A	GTS213	June. 24 2021	June. 23 2022		
9	Coaxial Cable	GTS	N/A	GTS211	June. 24 2021	June. 23 2022		
10	10 Coaxial cable GTS		N/A	GTS210	June. 24 2021	June. 23 2022		
11	Coaxial Cable	GTS	N/A	GTS212	June. 24 2021	June. 23 2022		
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 24 2021	June. 23 2022		
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 24 2021	June. 23 2022		
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 24 2021	June. 23 2022		
15	Band filter	Amindeon	82346	GTS219	June. 24 2021	June. 23 2022		
16	Power Meter	Anritsu	ML2495A	GTS540	June. 24 2021	June. 23 2022		
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 24 2021	June. 23 2022		
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 24 2021	June. 23 2022		
19	Splitter	Agilent	11636B	GTS237	June. 24 2021	June. 23 2022		
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 24 2021	June. 23 2022		
21	Breitband hornantenne	I SCHWARZBECK		GTS579	Oct. 17 2021	Oct. 16 2022		
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 17 2021	Oct. 16 2022		
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 17 2021	Oct. 16 2022		
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 24 2021	June. 23 2022		



RF C	RF Conducted Test:								
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)			
1	MXA Signal Analyzer	Agilent	N9020A	GTS566	June. 24 2021	June. 23 2022			
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 24 2021	June. 23 2022			
3	Spectrum Analyzer	Agilent	E4440A	GTS533	June. 24 2021	June. 23 2022			
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	June. 24 2021	June. 23 2022			
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	June. 24 2021	June. 23 2022			
6	USB RF Power Sensor	DARE	RPR3006W	GTS569	June. 24 2021	June. 23 2022			
7	RF Switch Box	Shongyi	RFSW3003328	GTS571	June. 24 2021	June. 23 2022			
8	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	June. 24 2021	June. 23 2022			

Gene	General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)	
1	Humidity/ Temperature Indicator	KTJ	TA328	GTS243	June. 24 2021	June. 23 2022	
2	Barometer	ChangChun	DYM3	GTS255	June. 24 2021	June. 23 2022	



### 7 Test results and Measurement Data

### 7.1 Antenna requirement

Standard requirement: FCC Part15 C Section 15.203 /247(c)

### 15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

### 15.247(c) (1)(i) requirement:

(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

### **EUT Antenna:**

The antennas are PCB antenna, the best case gain of the antennas are 3.0dBi, reference to the appendix III for details



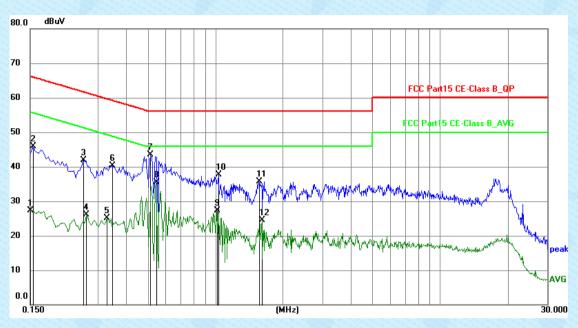
# 7.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207			
Test Method:	ANSI C63.10:2013			
Test Frequency Range:	150KHz to 30MHz			
Receiver setup:	RBW=9KHz, VBW=30KHz, S	weep time=auto		
Limit:	Fragues ov range (MHz)	Limit	(dBuV)	
	Frequency range (MHz)	Quasi-peak	Average	
	0.15-0.5	66 to 56*	56 to 46*	
	0.5-5	56	46	
	5-30 * Decreases with the logarithr	60	50	
Test setup:	Reference Plane			
Test presedure	AUX Equipment E.U.T Filter AC power  Remark EUT: Equipment Under Test LISN: Line Impedence Stabilization Network Test table height-0.8m			
Test procedure:	<ol> <li>The E.U.T and simulators a line impedance stabilization 500hm/50uH coupling impedance.</li> <li>The peripheral devices are LISN that provides a 500hm termination. (Please refer the photographs).</li> <li>Both sides of A.C. line are interference. In order to fine positions of equipment and according to ANSI C63.10:</li> </ol>	n network (L.I.S.N.). redance for the measuralso connected to the m/50uH coupling important of the block diagram of the checked for maximum difference call all of the interface call	This provides a uring equipment.  e main power through a edance with 50ohm of the test setup and m conducted sion, the relative ables must be changed	
Test Instruments:	Refer to section 6.0 for details			
Test mode:	Refer to section 5.2 for details			
Test environment:	Temp.: 25 °C Hun	nid.: 52%	Press.: 1012mbar	
Test voltage:	AC 120V, 60Hz			
Test results:	Pass			
100t 100dito.	1 400			



### Measurement data

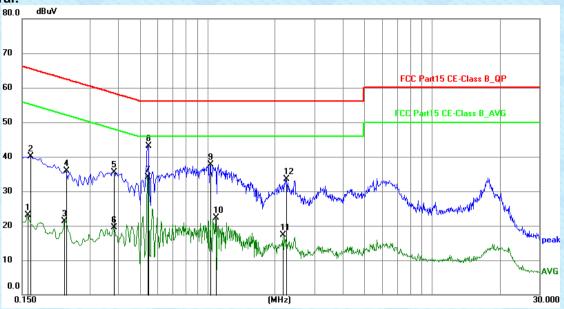
Line:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1500	17.50	9.81	27.31	56.00	-28.69	AVG	Р
2	0.1545	36.06	9.80	45.86	65.75	-19.89	QP	Р
3	0.2580	32.21	9.74	41.95	61.50	-19.55	QP	Р
4	0.2670	16.45	9.74	26.19	51.21	-25.02	AVG	Р
5	0.3300	15.30	9.73	25.03	49.45	-24.42	AVG	Р
6	0.3483	30.60	9.73	40.33	59.00	-18.67	QP	Р
7	0.5144	33.74	9.71	43.45	56.00	-12.55	QP	Р
8	0.5460	25.76	9.71	35.47	46.00	-10.53	AVG	Р
9	1.0184	17.65	9.64	27.29	46.00	-18.71	AVG	Р
10	1.0320	28.16	9.64	37.80	56.00	-18.20	QP	Р
11	1.5630	26.05	9.68	35.73	56.00	-20.27	QP	Р
12	1.6125	14.82	9.68	24.50	46.00	-21.50	AVG	Р



### Neutral:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1590	13.19	9.82	23.01	55.52	-32.51	AVG	Р
2	0.1635	30.31	9.81	40.12	65.28	-25.16	QP	Р
3	0.2310	11.61	9.76	21.37	52.41	-31.04	AVG	Р
4	0.2355	26.22	9.76	35.98	62.25	-26.27	QP	Р
5	0.3840	25.87	9.73	35.60	58.19	-22.59	QP	Р
6	0.3840	9.82	9.73	19.55	48.19	-28.64	AVG	Р
7	0.5415	24.32	9.71	34.03	46.00	-11.97	AVG	Р
8	0.5460	33.39	9.71	43.10	56.00	-12.90	QP	Р
9	1.0275	28.06	9.64	37.70	56.00	-18.30	QP	Р
10	1.0905	12.58	9.65	22.23	46.00	-23.77	AVG	Р
11	2.1750	7.64	9.72	17.36	46.00	-28.64	AVG	Р
12	2.2425	23.77	9.72	33.49	56.00	-22.51	QP	Р

### Notes:

- 1. An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3. Final Level = Receiver Read level + LISN Factor + Cable Loss
- 4. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits and measurement with the average detector receiver is unnecessary.



# 7.3 Conducted Peak Output Power

Test Requirement :	FCC Part15 C Section 15.247 (b)(3)		
Test Method :	KDB558074 D01 15.247 Meas Guidance v05r02		
Limit:	30dBm		
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane		
Test Instruments:	Refer to section 6.0 for details		
Test mode:	Refer to section 5.2 for details		
Test results:	Pass		

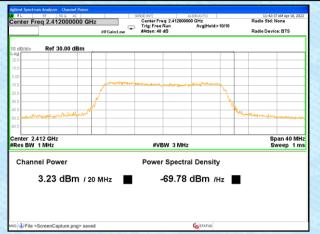
### **Measurement Data**

Test CH	Pea	Peak Output Power (dBm)			Result
	802.11b	802.11g	802.11n(HT20)	Limit(dBm)	Nesuit
Lowest	4.64	3.23	2.29		
Middle	3.85	1.90	0.91	30.00	Pass
Highest	2.43	1.90	1.54		

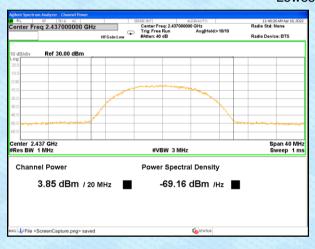
### Test plot as follows:



# 802.11g



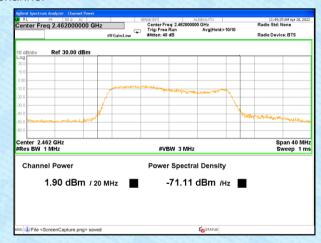
### Lowest channel





### Middle channel

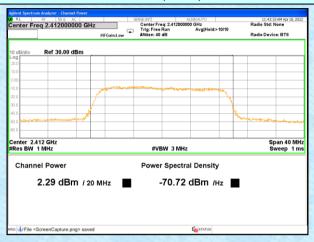




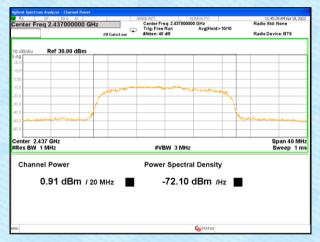
Highest channel



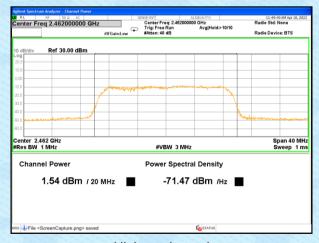
### 802.11n(HT20)



### Lowest channel



### Middle channel



Highest channel



# 7.4 Channel Bandwidth & 99% Occupy Bandwidth

Test Requirement :	FCC Part15 C Section 15.247 (a)(2)		
Test Method :	KDB558074 D01 15.247 Meas Guidance v05r02		
Limit:	>500KHz		
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane		
Test Instruments:	Refer to section 6.0 for details		
Test mode:	Refer to section 5.2 for details		
Test results:	Pass		

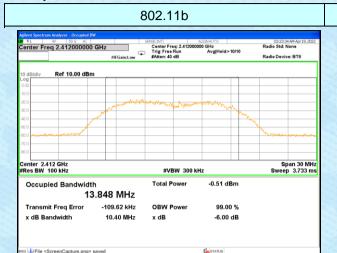
### **Measurement Data**

	Test CH	Channel Bandwidth (MHz)			Limit(KHz)	Result
1	Test Off	802.11b	802.11g	802.11n(HT20)	LIIIII((KI IZ)	Nesuit
	Lowest	10.40	16.39	17.13		
	Middle	9.498	16.45	17.11	>500	Pass
1000	Highest	10.21	16.46	17.42		

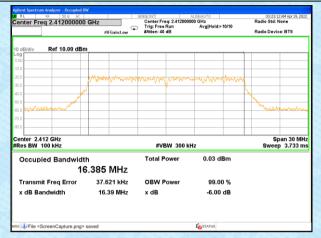
Test CH	99%	Result			
Test CH	802.11b	802.11g	802.11n(HT20)	Result	
Lowest	13.848	16.385	17.488		
Middle	13.182	16.358	17.483	Pass	
Highest	13.135	16.398	17.544		



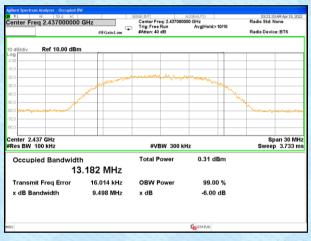
### Test plot as follows:

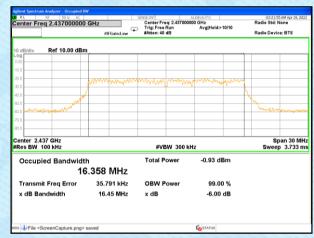


### 802.11g

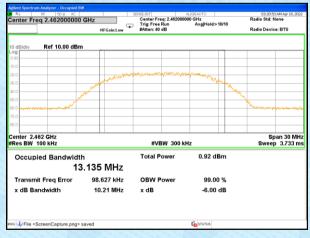


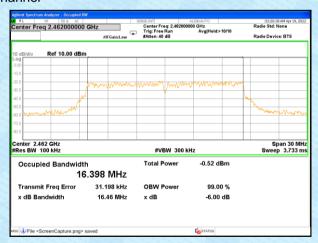
### Lowest channel





### Middle channel

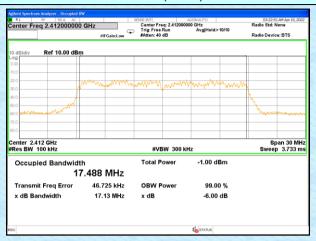




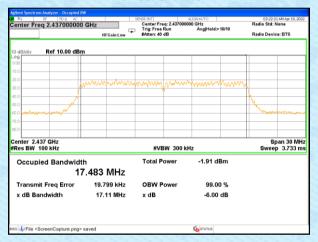
Highest channel



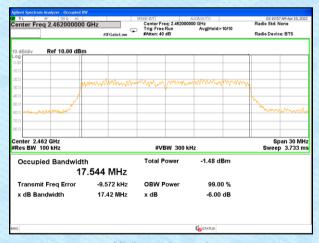
### 802.11n(HT20)



### Lowest channel



### Middle channel



Highest channel



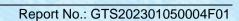
# 7.5 Power Spectral Density

Test Requirement:	FCC Part15 C Section 15.247 (e)			
Test Method:	KDB558074 D01 15.247 Meas Guidance v05r02			
Limit:	8dBm/3kHz			
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane			
Test Instruments:	Refer to section 6.0 for details			
Test mode:	Refer to section 5.2 for details			
Test results:	Pass			

### **Measurement Data**

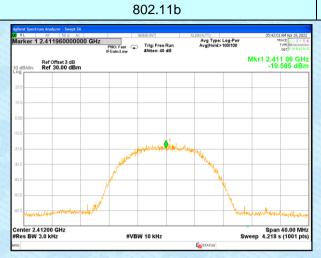
Test CH	Powe	Limit	Result		
1651 011	802.11b	802.11g	802.11n(HT20)	(dBm/3kHz)	Nesult
Lowest	-19.585	-31.403	-26.798		
Middle	-18.314	-31.889	-30.391	8.00	Pass
Highest	-17.463	-31.332	-28.782		

Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102 Telephone: +86 (0) 755 2779 8480 Fax: +86 (0) 755 2779 8960

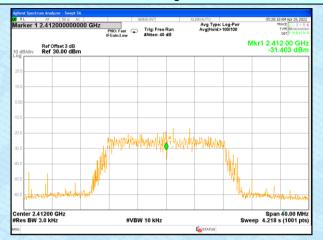




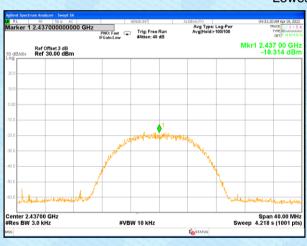
### Test plot as follows:

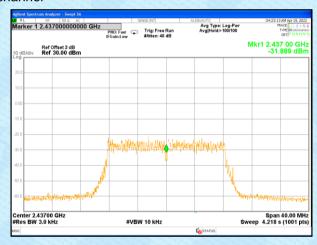


### 802.11g

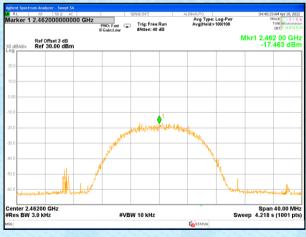


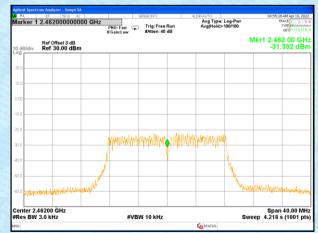
### Lowest channel





### Middle channel

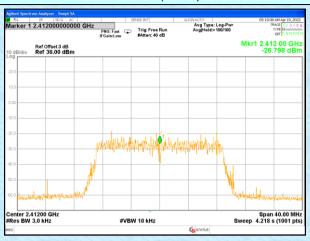




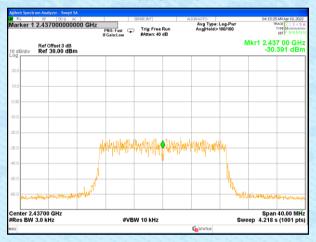
Highest channel



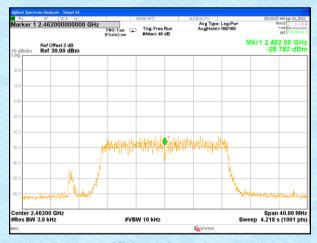
### 802.11n(HT20)



### Lowest channel



### Middle channel



Highest channel

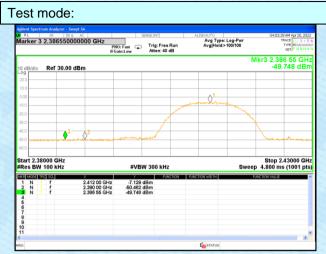


# 7.6 Band edges

# 7.6.1 Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.247 (d)		
Test Method:	KDB558074 D01 15.247 Meas Guidance v05r02		
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.		
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane		
Test Instruments:	Refer to section 6.0 for details		
Test mode:	Refer to section 5.2 for details		
Test results:	Pass		

### Test plot as follows:



802.11b



Lowest channel

Highest channel





802.11g



Lowest channel

Highest channel





802.11n(HT20)



Highest channel



### 7.6.2 Radiated Emission Method

Test Requirement:	FCC Part15 C S	Section 15,209	and 15.205			
Test Method:	ANSI C63.10: 2		3.10.10.200			
Test Frequency Range:			tested, only	the worst b	and's (2310MHz to	
Ι το τητο τη το 31	2500MHz) data					
Test site:	Measurement D					
Receiver setup:	Frequency	Detector	RBW	VBW	Value	
•	STATE OF THE PARTY	Peak	1MHz	3MHz	Peak	
	Above 1GHz	Average	1MHz	3MHz	Average	
Limit:	Freque		Limit (dBuV/		Value	
	54.00 Average					
	Above 1	GHz	74.0		Peak	
Test setup:	Tum Table		Test Antenna- < lm 4m >-  Receiver-  Pres	amplifier.		
Test Procedure:	the ground a determine the 2. The EUT was antenna, whis tower.  3. The antenna ground to de horizontal an measuremer  4. For each sus and then the and the rotathe maximum  5. The test-recesspecified Ba  6. If the emission the limit specified Ba  6. If the emission the BUT whave 10dB meak or average sheet.  7. The radiation And found the surface of the EUT who have 10dB meak or average sheet.	t a 3 meter care position of the set 3 meters che was mounted beight is varied termine the mand vertical polarit. Spected emission antenna was to table was turned reading. Ever system would be reported the strough of the strough would be reported age method as a measurement of a measurement of the strough would be reported as a measurement of the strough would be reported as a measurement of the strough would be reported as a measurement of the strough would be reported as a measurement of the strough would be reported as a measurement of the strough would be reported as a measurement of the strong would be reported a	nber. The tale highest race away from the away from the don the top of the from one naximum value rizations of the from 0 degree	ole was rotadiation. The interference of a variable meter to four end of the field me antenna was arrang this from 1 ragrees to 36 at Detect Field Mode, mode was stopped and then report the emission of the med in X, Y to is worse to diation.	r meters above the distrength. Both are set to make the ed to its worst case meter to 4 meters 0 degrees to find function and 10dB lower than and the peak values sions that did not using peak, quasi-	
Test Instruments:	worst case mode is recorded in the report.  Refer to section 6.0 for details					
Test mode:	Refer to section					
Test results:	Pass					
1 Ook 1 Oodillo.	. 400					

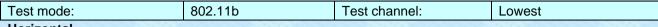


2430.0

### Measurement data:

2380.000

All antennas have test, only the worst case ANT 1 report.



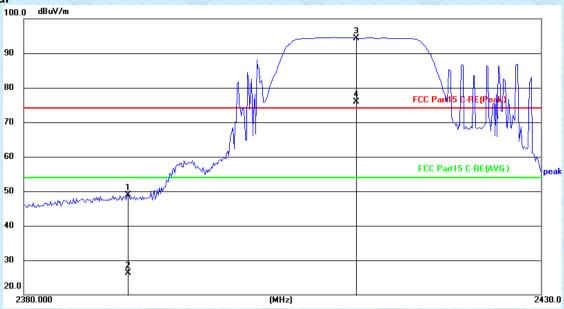
# Horizontal 100.0 dBuV/m 90 80 70 60 50 40 30 20.0

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	2390.000	19.88	26.32	46.20	74.00	-27.80	peak
2	2390.000	-1.80	26.32	24.52	54.00	-29.48	AVG
3	2412.000	68.91	26.36	95.27	74.00	21.27	peak
4	2412.000	42.01	26.36	68.37	54.00	14.37	AVG

(MHz)

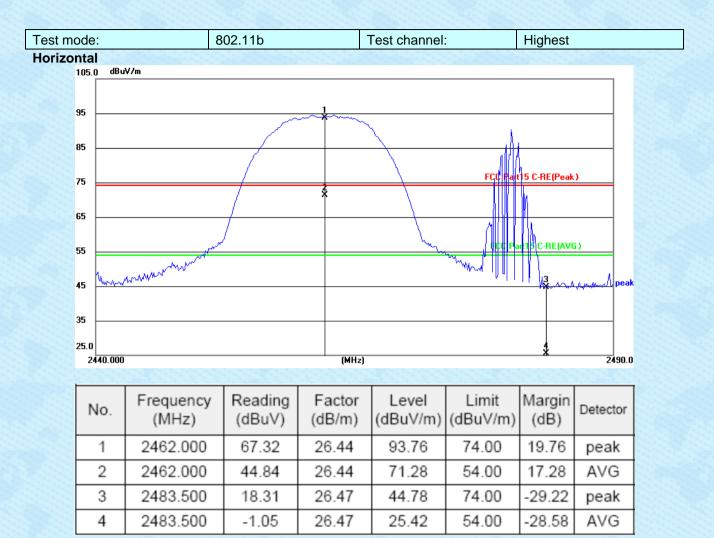


### Vertical



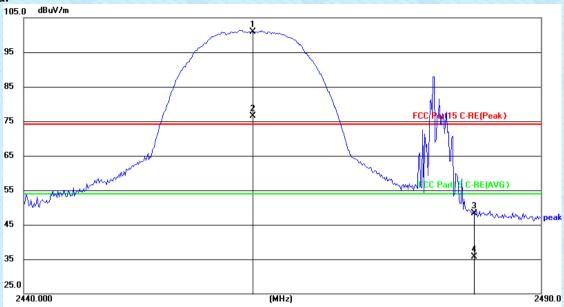
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	2390.000	22.57	26.32	48.89	74.00	-25.11	peak
2	2390.000	0.05	26.32	26.37	54.00	-27.63	AVG
3	2412.000	68.04	26.36	94.40	74.00	20.40	peak
4	2412.000	49.61	26.36	75.97	54.00	21.97	AVG





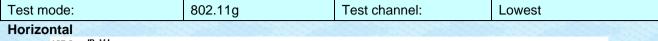


### Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	2462.000	74.40	26.44	100.84	74.00	26.84	peak
2	2462.000	50.03	26.44	76.47	54.00	22.47	AVG
3	2483.500	21.76	26.47	48.23	74.00	-25.77	peak
4	2483.500	9.26	26.47	35.73	54.00	-18.27	AVG



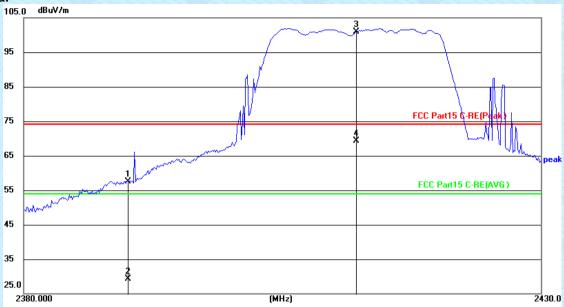




No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	2390.000	25.22	26.32	51.54	74.00	-22.46	peak
2	2390.000	-0.46	26.32	25.86	54.00	-28.14	AVG
3	2412.000	67.05	26.36	93.41	74.00	19.41	peak
4	2412.000	35.94	26.36	62.30	54.00	8.30	AVG



### Vertical

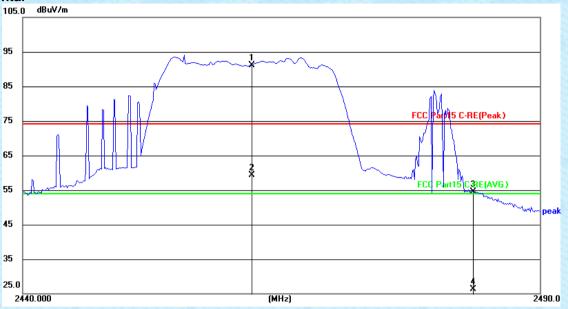


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	2390.000	31.14	26.32	57.46	74.00	-16.54	peak
2	2390.000	3.03	26.32	29.35	54.00	-24.65	AVG
3	2412.000	74.51	26.36	100.87	74.00	26.87	peak
4	2412.000	42.96	26.36	69.32	54.00	15.32	AVG



Test mode: 802.11g Test channel: Highest

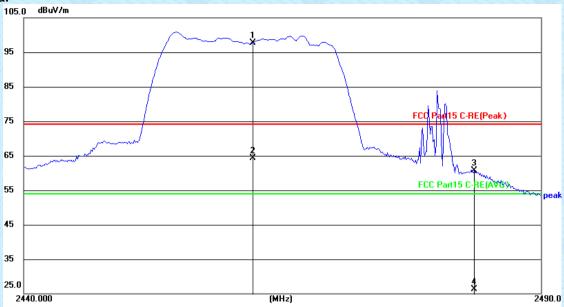
### Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	2462.000	64.67	26.44	91.11	74.00	17.11	peak
2	2462.000	32.80	26.44	59.24	54.00	5.24	AVG
3	2483.500	28.00	26.47	54.47	74.00	-19.53	peak
4	2483.500	-0.10	26.47	26.37	54.00	-27.63	AVG

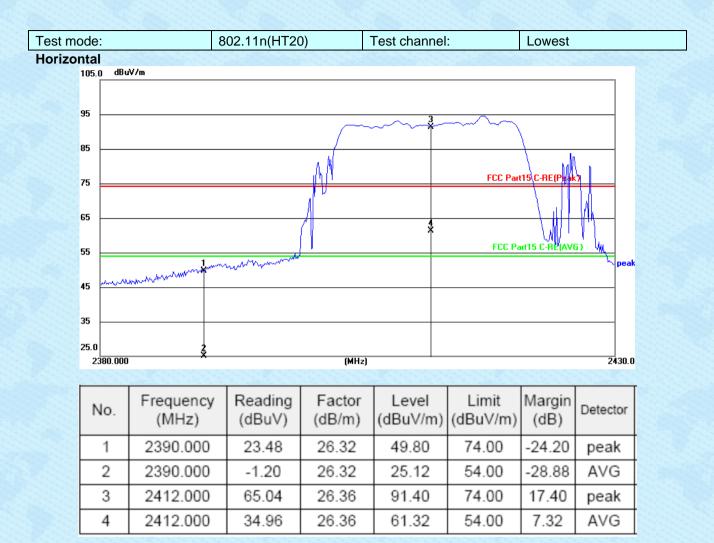


### Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	2462.000	71.32	26.44	97.76	74.00	23.76	peak
2	2462.000	37.94	26.44	64.38	54.00	10.38	AVG
3	2483.500	34.30	26.47	60.77	74.00	-13.23	peak
4	2483.500	-0.09	26.47	26.38	54.00	-27.62	AVG







### Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	2390.000	29.95	26.32	56.27	74.00	-17.73	peak
2	2390.000	0.53	26.32	26.85	54.00	-27.15	AVG
3	2412.000	72.11	26.36	98.47	74.00	24.47	peak
4	2412.000	37.09	26.36	63.45	54.00	9.45	AVG



3

4

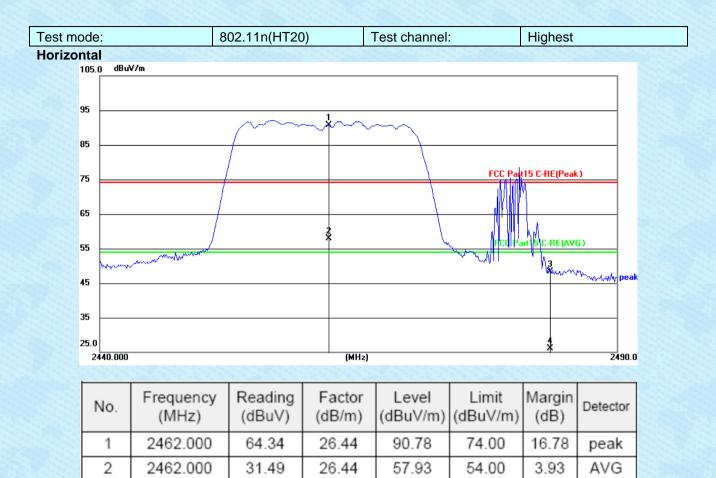
2483.500

2483.500

21.78

-0.33

Report No.: GTS202301050004F01



26.47

26.47

48.25

26.14

74.00

54.00

-25.75

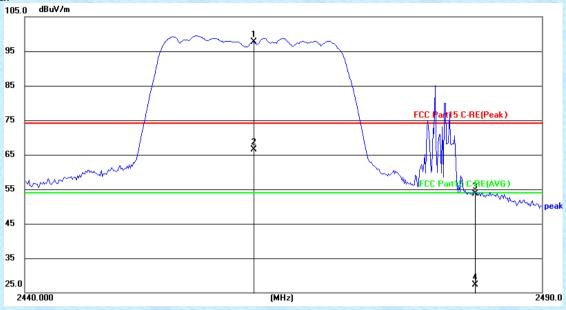
-27.86

peak

AVG



### Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
1	2462.000	71.24	26.44	97.68	74.00	23.68	peak
2	2462.000	40.08	26.44	66.52	54.00	12.52	AVG
3	2483.500	27.16	26.47	53.63	74.00	-20.37	peak
4	2483.500	0.79	26.47	27.26	54.00	-26.74	AVG

### Remarks:

- 1. Only the worst case Main Antenna test data.
- 2. The pre-test were performed on lowest, middle and highest frequencies, only the worst case's (lowest and highest frequencies) data was showed.
- 3. Final Level =Receiver Read level + Antenna Factor
- 4. The emission levels of other frequencies are very lower than the limit and not show in test report.



# 7.7 Spurious Emission

# 7.7.1 Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.247 (d)				
Test Method:	KDB558074 D01 15.247 Meas Guidance v05r02				
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.				
Test setup:	Spectrum Analyzer  E.U.T  Non-Conducted Table  Ground Reference Plane				
Test Instruments:	Refer to section 6.0 for details				
Test mode:	Refer to section 5.2 for details				
Test results:	Pass				

## Test plot as follows:

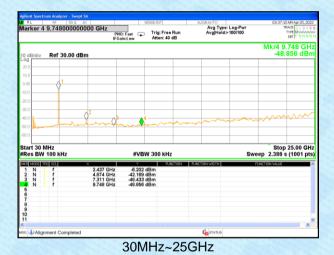
802.11b

Lowest channel

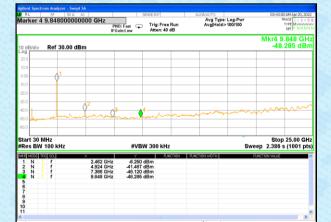


30MHz~25GHz

Middle channel



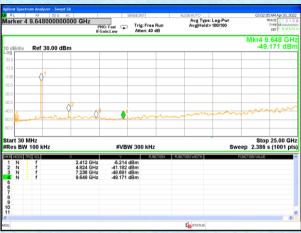
Highest channel



30MHz~25GHz

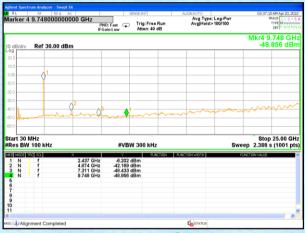
### 802.11g

### Lowest channel



30MHz~25GHz

### Middle channel



# Highest channel





30MHz~25GHz