

ISED TEST REPORT FOR CERTIFICATION
On Behalf of

Hui Zhou Gaoshengda Technology Co., Ltd

WIFI+BT Module

Model Number: WKCT27M2501

IC: 12290A-WKCT27

Applicant :	Hui Zhou Gaoshengda Technology Co.,LTD
Address:	NO.75 Zhongkai Development Area, Huizhou, Guangdong, China
Prepared By:	EST Technology Co., Ltd.
	Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China
	Tel: 86-769-83081888-808

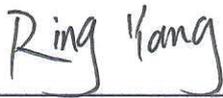
Report Number:	ESTE-R2201208
Date of Test:	Dec. 17, 2021~Jan. 18, 2022
Date of Report:	Jan. 24, 2022

TABLE OF CONTENTS

Description	Page
TEST REPORT VERIFICATION.....	3
1. GENERAL INFORMATION.....	5
1.1. Description of Device (EUT).....	5
1.2. The antenna information for EUT.....	7
1.3. Information of RF Cable.....	7
2. SUMMARY OF TEST.....	8
2.1. Summary of test result.....	8
2.2. Test Facilities.....	9
2.3. Measurement uncertainty for EST Technology Co., Ltd.....	10
2.4. Assistant equipment used for test.....	10
2.5. Block Diagram.....	10
2.6. Test Mode.....	11
2.7. Channel List.....	13
2.8. Power Setting of Test Software.....	14
2.9. Duty Cycle of Test Signal.....	15
2.10. Test Equipment List.....	19
3. 6DB BANDWIDTH & 26DB BANDWIDTH & 99% OCCUPIED BANDWIDTH.....	21
3.1. Limit.....	21
3.2. Test Setup.....	21
3.3. Spectrum Analyzer Setting.....	21
3.4. Test Procedure.....	22
3.5. Test Result.....	23
3.6. Test Result.....	26
4. MAXIMUM CONDUCTED OUTPUT POWER & EIRP POWER.....	46
4.1. Limit.....	46
4.2. Test Setup.....	46
4.3. Test Procedure.....	46
4.4. Test Result.....	47
5. POWER SPECTRAL DENSITY.....	49
5.1. Limit.....	49
5.2. Test Setup.....	49
5.3. Spectrum Analyzer Setting.....	49
5.4. Test Procedure.....	49
5.5. Test Result.....	50
6. UNWANTED EMISSIONS AND BAND EDGE.....	76
6.1. Limit.....	76
6.2. Test Setup.....	78
6.3. Spectrum Analyzer Setting.....	79
6.4. Test Procedure.....	80
6.5. Test Result.....	81
7. FREQUENCY STABILITY.....	134
7.1. Limit.....	134
7.2. Test Setup.....	134
7.3. Spectrum Analyzer Setting.....	134

7.4.	Test Procedure.....	135
7.5.	Test Result.....	136
8.	AC POWER LINE CONDUCTED EMISSIONS	140
8.1.	Limit.....	140
8.2.	Test Setup.....	140
8.3.	Spectrum Analyzer Setting.....	140
8.4.	Test Procedure.....	140
8.5.	Test Result.....	141
9.	TRANSMIT ANTENNA	143
9.1.	Limit.....	143
9.2.	Test Result.....	143
10.	TEST SETUP PHOTO.....	144
11.	EUT PHOTO.....	146

EST Technology Co., Ltd.

Applicant:	Hui Zhou Gaoshengda Technology Co.,LTD		
Address:	NO.75 Zhongkai Development Area, Huizhou, Guangdong, China		
Manufacturer:	Hui Zhou Gaoshengda Technology Co.,LTD		
Address:	NO.75 Zhongkai Development Area, Huizhou, Guangdong, China		
Factory:	Hui Zhou Gaoshengda Technology Co.,LTD		
Address:	NO.75 Zhongkai Development Area, Huizhou, Guangdong, China		
E.U.T:	WIFI+BT Module		
Model Number:	WKCT27M2501		
Power Supply:	DC 3.3V From PC		
Trade Name:	GSD	Serial No.:	-----
Date of Receipt:	Dec. 17, 2021	Date of Test:	Dec. 17, 2021~Jan. 18, 2022
Test Specification:	RSS-247 Issue 2 RSS-Gen Issue 5 ANSI C63.10:2013		
Test Result:	<p>The device described above is tested by EST Technology Co., Ltd. The measurement results were contained in this test report and EST Technology Co., Ltd. was assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the RSS-247 and RSS-Gen requirements.</p> <p style="text-align: center;">This report applies to above tested sample only and shall not be reproduced in part without written approval of EST Technology Co., Ltd.</p> <p style="text-align: right;">Date: Jan. 24, 2022</p>		
Prepared by:	Reviewed by:	Approved by:	
 _____ Ring Yang/ Assistant	 _____ Seven Wang / Engineer	 _____ Iceman Hu / Manager	
Other Aspects:	None.		
Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under tested			
This test report is based on a single evaluation of one sample of above mentioned products ,It is not permitted to be duplicated in extracts without written approval of EST Technology Co., Ltd.			

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

IC	:	12290A-WKCT27
Product Name	:	WIFI+BT Module
Model Number	:	WKCT27M2501
Software Version	:	V01
Hardware Version	:	V01
Operation frequency	:	5150MHz~5250MHz 5250MHz~5350MHz 5470MHz~5600MHz&5650MHz~5725MHz 5725MHz~5850MHz
Number of channel	:	5150MHz~5250MHz: IEEE 802.11a / n HT20 / ac VHT20: 4 Channels; IEEE 802.11n HT40 / ac VHT40: 2 Channels; IEEE 802.11ac VHT80: 1 Channel. 5250MHz~5350MHz: IEEE 802.11a / n HT20 / ac VHT20: 4 Channels; IEEE 802.11n HT40 / ac VHT40: 2 Channels; IEEE 802.11ac VHT80: 1 Channel. 5470MHz~5600MHz&5650MHz~5725MHz: IEEE 802.11a / n HT20 / ac VHT20: 8 Channels; IEEE 802.11n HT40 / ac VHT40: 3 Channels; IEEE 802.11ac VHT80: 1 Channel. 5725MHz~5850MHz: IEEE 802.11a / n HT20 / ac VHT20: 5 Channels; IEEE 802.11n HT40 / ac VHT40: 2 Channels; IEEE 802.11ac VHT80: 1 Channel.
Modulation	:	OFDM(QPSK, BPSK, 16-QAM, 64-QAM,256-QAM)
Transmit Data Rate	:	IEEE 802.11a: 54, 48, 36, 24, 18, 12, 9, 6Mbps; IEEE 802.11n: up 300Mbps; IEEE 802.11ac: up to 866.6Mbps;
Channels Spacing	:	IEEE 802.11a: 20MHz; IEEE 802.11n HT20: 20MHz; IEEE 802.11n HT40: 40MHz; IEEE 802.11ac VHT20: 20MHz; IEEE 802.11ac VHT40: 40MHz; IEEE 802.11ac VHT80: 80MHz;

Transmit Power	:	5150MHz~5250MHz	IEEE 802.11a: 12.975dBm IEEE 802.11n HT20: 11.086dBm IEEE 802.11n HT40: 12.092dBm IEEE 802.11ac VHT20: 11.636dBm IEEE 802.11ac VHT40: 12.163dBm IEEE 802.11ac VHT80: 12.912dBm
		5250MHz~5350MHz	IEEE 802.11a: 13.398dBm IEEE 802.11n HT20: 12.747dBm IEEE 802.11n HT40: 12.364dBm IEEE 802.11ac VHT20: 12.234dBm IEEE 802.11ac VHT40: 12.379dBm IEEE 802.11ac VHT80: 13.237dBm
		5470MHz~5600MHz& 5650MHz~5725MHz	IEEE 802.11a: 14.710dBm IEEE 802.11n HT20: 13.517dBm IEEE 802.11n HT40: 13.605dBm IEEE 802.11ac VHT20: 13.487dBm IEEE 802.11ac VHT40: 13.602dBm IEEE 802.11ac VHT80: 13.843dBm
		5725MHz~5850MHz	IEEE 802.11a: 13.221dBm IEEE 802.11n HT20: 12.530dBm IEEE 802.11n HT40: 14.043dBm IEEE 802.11ac VHT20: 12.489dBm IEEE 802.11ac VHT40: 14.109dBm IEEE 802.11ac VHT80: 14.898dBm
Sample Type	:	Prototype production	

Note:

For a more detailed features description, please refer to the manufacturer’s specifications or the user's manual.

1.2. The antenna information for EUT

Ant No.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	-	-	PCB	-	4.8
2	-	-	PCB	-	4.8

Note:

- (1) According to ANSI C63.10:2013 14.4.3.2.5 a):
 $\text{Directional gain} = 4.8\text{dBi} + 10 \times \log(2/1)\text{dB} = 7.81\text{dBi} > 6\text{dBi}$
 So, the output power limit and power spectral density should be reduced.
 For output Power:
 U-NII-3 Limit is $30\text{dBm} - (7.81\text{dBi} - 6\text{dBi}) = 28.19\text{dBm}$
 For power spectral density:
 U-NII-3 Limit is $30\text{dBm}/500\text{KHz} - (7.81\text{dBi} - 6\text{dBi}) = 28.19\text{dBm}/500\text{KHz}$
 After pre-test all antenna configurations, the worst case configuration as list below.
 This information is provided by the applicant.

TX Mode \ Ant No.	SISO Configuration	MIMO Configuration
IEEE 802.11a	Ant 1 and Ant 2	/
IEEE 802.11n HT20	/	Ant 1+Ant 2
IEEE 802.11n HT40	/	Ant 1+Ant 2
IEEE 802.11ac VHT20	/	Ant 1+Ant 2
IEEE 802.11ac VHT40	/	Ant 1+Ant 2
IEEE 802.11ac VHT80	/	Ant 1+Ant 2

1.3. Information of RF Cable

Cable Loss(dB)	Provided by
1.0	Hui Zhou Gaoshengda Technology Co.,LTD
Note: 1. The customer declared the loss value of the RF Cable, and the test results of this report only apply to the sample as received. 2. This information is provided by the applicant.	

2. SUMMARY OF TEST

2.1. Summary of test result

Report Section	Description of Test Item	FCC Standard Section	Results
3	6dB Bandwidth&26dB Bandwidth&99% Occupied Bandwidth	RSS-247 6.2.1.1 RSS-247 6.2.2.1 RSS-247 6.2.3.1 RSS-247 6.2.4.1 RSS-Gen 6.7	PASS
4	Maximum Conducted Output Power&EIRP Power	RSS-247 6.2.1.1 RSS-247 6.2.2.1 RSS-247 6.2.3.1 RSS-247 6.2.4.1	PASS
5	Power Spectral Density	RSS-247 6.2.1.1 RSS-247 6.2.2.1 RSS-247 6.2.3.1 RSS-247 6.2.4.1	PASS
6	Unwanted Emissions and Band Edge	RSS-247 6.2.1.2 RSS-247 6.2.2.2 RSS-247 6.2.3.2 RSS-247 6.2.4.2 RSS-Gen 8.9 RSS-Gen 8.10	PASS
7	Frequency Stability	RSS-Gen 8.11	PASS
8	AC Power Line Conducted Emissions	RSS-Gen 8.8	PASS
9	Transmit Antenna	RSS-Gen 6.8	PASS

Note:

(1) "N/A" denotes test is not applicable in this test report

2.2. Test Facilities

EMC Lab : Certificated by CNAS, CHINA
Registration No.: L5288
This Certificate is valid until: November 12, 2023

Certificated by FCC, USA
Designation Number: CN1215
This Certificate is valid until: January 31, 2022

Certificated by A2LA, USA
Registration No.: 4366.01
This Certificate is valid until: January 31, 2022

Certificated by Industry Canada
CAB identifier No.: CN0035
This Certificate is valid until: January 31, 2022

Certificated by VCCI, Japan
Registration No.:C-14103; T-20073; R-13663;
R-20103; G-20097
Date of registration: Apr. 20, 2020
This Certificate is valid until: Apr. 19, 2023

Certificated by TUV Rheinland, Germany
Registration No.: UA 50413872 0001
Date of registration: July 31, 2018

Certificated by Intertek
Registration No.: 2011-RTL-L2-64
Date of registration: November 08, 2018

Name of Firm : EST Technology Co., Ltd.

Site Location : Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China

2.3. Measurement uncertainty for EST Technology Co., Ltd.

Test Item	Uncertainty
Uncertainty for Conduction emission test	2.54dB
Uncertainty for spurious emissions test (Below 30MHz)	±1.62 dB
Uncertainty for Radiation Emission test (30MHz-1GHz)	3.62
Uncertainty for Radiation Emission test (1GHz to 18GHz)	4.86
Uncertainty for spurious emissions test (18GHz to 40GHz)	4.67
Uncertainty for radio frequency	7×10 ⁻⁸
Uncertainty for conducted RF Power	1.08dB
Uncertainty for Power density test	0.26dB
Temperature	±0.6°C
Humidity	±4.0 %
Volatage DC	±1.0%
Volatage (AC, <10KHz)	±1.5%

Note:

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

2.4. Assistant equipment used for test

Item	Equipment	Brand	Model Name/Type No.	IC ID	Series No.
A	Notebook	-	Thinkpad X280	-	-

Item	Shielded Type	Ferrite Core	Length	Note
-	-	-	-	-

2.5. Block Diagram

For radiated emissions test: EUT was placed on a turn table, which is 0.8 (or 1.5) meter high above ground.



(EUT: WIFI+BT Module)

2.6. Test Mode

Pre-scan has been combined all possible modulations and data rates to determine the worst case test mode, the worst case test mode was selected for the final test as listed below.

Test Item	Test Mode	Channel	Modulation	Data rate
6dB Bandwidth	IEEE 802.11a	149/157/165	OFDM	6Mbps
	IEEE 802.11n HT20	149/157/165	OFDM	MCS0
	IEEE 802.11n HT40	151/159	OFDM	MCS0
	IEEE 802.11ac VHT20	149/157/165	OFDM	MCS0
	IEEE 802.11ac VHT40	151/159	OFDM	MCS0
	IEEE 802.11ac VHT80	155	OFDM	MCS0
26dB Bandwidth	IEEE 802.11a	36/40/48/52/60/64/100/116/140	OFDM	6Mbps
	IEEE 802.11n HT20	36/40/48/52/60/64/100/116/140	OFDM	MCS0
	IEEE 802.11n HT40	38/46/54/62/102/114/134	OFDM	MCS0
	IEEE 802.11ac VHT20	36/40/48/52/60/64/100/116/140	OFDM	MCS0
	IEEE 802.11ac VHT40	38/46/54/62/102/114/134	OFDM	MCS0
	IEEE 802.11ac VHT80	42/58/106	OFDM	MCS0
99% Occupied Bandwidth	IEEE 802.11a	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	6Mbps
	IEEE 802.11n HT20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	MCS0
	IEEE 802.11n HT40	38/46/54/62/102/114/134/151/159	OFDM	MCS0
	IEEE 802.11ac VHT20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	MCS0
	IEEE 802.11ac VHT40	38/46/54/62/102/114/134/151/ 159	OFDM	MCS0
	IEEE 802.11ac VHT80	42/58/106/155	OFDM	MCS0
Maximum Conducted Output Power&EIRP Power	IEEE 802.11a	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	6Mbps
	IEEE 802.11n HT20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	MCS0
	IEEE 802.11n HT40	38/46/54/62/102/114/134/151/159	OFDM	MCS0
	IEEE 802.11ac VHT20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	MCS0
	IEEE 802.11ac VHT40	38/46/54/62/102/114/134/151/ 159	OFDM	MCS0
	IEEE 802.11ac VHT80	42/58/106/155	OFDM	MCS0

Power Spectral Density	IEEE 802.11a	36/40/48/52/60/64/100/116/140/149/157/165	OFDM	6Mbps
	IEEE 802.11n HT20	36/40/48/52/60/64/100/116/140/149/157/165	OFDM	MCS0
	IEEE 802.11n HT40	38/46/54/62/102/114/134/151/159	OFDM	MCS0
	IEEE 802.11ac VHT20	36/40/48/52/60/64/100/116/140/149/157/165	OFDM	MCS0
	IEEE 802.11ac VHT40	38/46/54/62/102/114/134/151/159	OFDM	MCS0
	IEEE 802.11ac VHT80	42/58/106/155	OFDM	MCS0
Unwanted Emissions and Band Edge(Above 1GHz)	IEEE 802.11a	36/40/48/52/60/64/100/116/140/149/157/165	OFDM	6Mbps
	IEEE 802.11n HT20	36/40/48/52/60/64/100/116/140/149/157/165	OFDM	MCS0
	IEEE 802.11n HT40	38/46/54/62/102/114/134/151/159	OFDM	MCS0
	IEEE 802.11ac VHT20	36/40/48/52/60/64/100/116/140/149/157/165	OFDM	MCS0
	IEEE 802.11ac VHT40	38/46/54/62/102/114/134/151/159	OFDM	MCS0
	IEEE 802.11ac VHT80	42/58/106/155	OFDM	MCS0
Unwanted Emissions Below 1GHz	IEEE 802.11a	100	OFDM	6Mbps
Frequency Stability	Unmodulation	36/64/100/149	N/A	N/A
AC Power Line Conducted Emissions	IEEE 802.11a	100	OFDM	6Mbps

Note:

1. In radiated measurement, the EUT had been pre-scan on the positioned of each 3 axis(X,Y,Z), the worst case was found when positioned on **X-plane**.

2.7. Channel List

Band	Mode	Channel	Frequency (MHz)	
5150MHz~5250MHz	IEEE 802.11a & n HT20 & ac VHT20	36	5180	
		40	5200	
		44	5220	
		48	5240	
	IEEE 802.11n HT40 & ac VHT40	38	5190	
		46	5230	
	IEEE 802.11ac VHT80	42	5210	
5250MHz~5350MHz	IEEE 802.11a & n HT20 & ac VHT20	52	5260	
		56	5280	
		60	5300	
		64	5320	
	IEEE 802.11n HT40 & ac VHT40	54	5270	
		62	5310	
	IEEE 802.11ac VHT80	58	5290	
5470MHz~5600MHz& 5650MHz~5725MHz	IEEE 802.11a & n HT20 & ac VHT20	100	5500	
		104	5520	
		108	5540	
		112	5560	
		116	5580	
		132	5660	
		136	5680	
		140	5700	
	IEEE 802.11n HT40 & ac VHT40	102	5510	
		110	5550	
		134	5670	
	IEEE 802.11ac VHT80	106	5530	
	5725MHz~5850MHz	IEEE 802.11a & n HT20 & ac VHT20	149	5745
			153	5765
157			5785	
161			5805	
165			5825	
IEEE 802.11n HT40 & ac VHT40		151	5755	
		159	5795	
IEEE 802.11ac VHT80		155	5775	

2.8. Power Setting of Test Software

Software Name	QATool_Dbg.exe		
5150MHz~5250MHz			
Frequency(MHz)	5180	5200	5240
IEEE 802.11a Setting	18	18	18
IEEE 802.11n HT20 Setting	17	17	17
IEEE 802.11ac VHT20 Setting	17	17	17
Frequency(MHz)	5190	5230	
IEEE 802.11n HT40 Setting	19	19	
IEEE 802.11ac VHT40 Setting	19	19	
Frequency(MHz)	5210		
IEEE 802.11ac VHT80 Setting	19		
5250MHz~5350MHz			
Frequency(MHz)	5260	5300	5320
IEEE 802.11a Setting	19	19	19
IEEE 802.11n HT20 Setting	19	19	19
IEEE 802.11ac VHT20 Setting	19	19	19
Frequency(MHz)	5270	5310	
IEEE 802.11n HT40 Setting	19	19	
IEEE 802.11ac VHT40 Setting	19	19	
Frequency(MHz)	5290		
IEEE 802.11ac VHT80 Setting	19		
5470MHz~5600MHz& 5650MHz~5725MHz			
Frequency(MHz)	5500	5580	5700
IEEE 802.11a Setting	19	19	19
IEEE 802.11n HT20 Setting	19	19	19
IEEE 802.11ac VHT20 Setting	19	19	19
Frequency(MHz)	5510	5670	
IEEE 802.11n HT40 Setting	19	19	
IEEE 802.11ac VHT40 Setting	19	19	
Frequency(MHz)	5530		
IEEE 802.11ac VHT80 Setting	19		
5725MHz~5850MHz			
Frequency(MHz)	5745	5785	5825
IEEE 802.11a Setting	19	19	19
IEEE 802.11n HT20 Setting	19	19	19
IEEE 802.11ac VHT20 Setting	19	19	19
Frequency(MHz)	5755	5795	
IEEE 802.11n HT40 Setting	19	19	
IEEE 802.11ac VHT40 Setting	19	19	
Frequency(MHz)	5775		
IEEE 802.11ac VHT80 Setting	19		

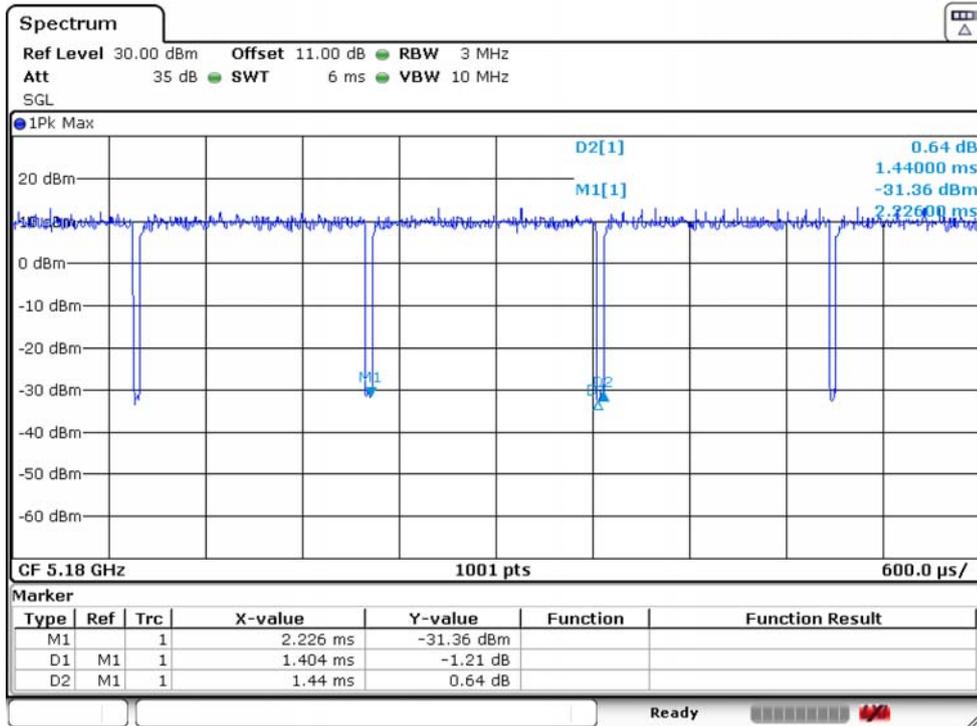
2.9. Duty Cycle of Test Signal

Temperature	25.4°C	Relative Humidity		56%	Test Voltage		DC 3.3V
Mode	Frequency (MHz)	On time (ms)	Total Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T (Hz)	VBW Setting (dB)
IEEE 802.11a	5180	1.40400	1.44000	97.50	0.11	712	712
IEEE 802.11n HT20	5180	1.31400	1.35000	97.33	0.12	761	761
IEEE 802.11ac VHT20	5180	1.32600	1.35600	97.79	0.10	754	754
IEEE 802.11n HT40	5190	0.66600	0.69600	95.69	0.19	1502	1502
IEEE 802.11ac VHT40	5190	0.66000	0.69600	94.83	0.23	1515	1515
IEEE 802.11ac VHT80	5210	0.33600	0.36600	91.80	0.37	2976	2976

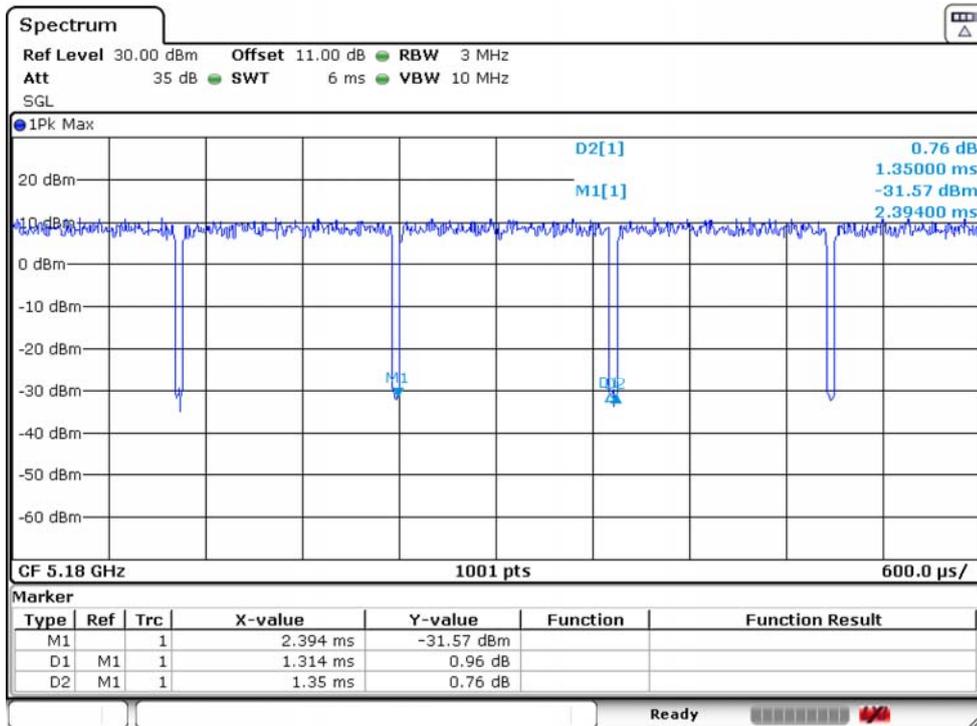
Note:

1. Duty Cycle=On Time/Total Time×100%.
2. Duty Factor=10×Log(1/Duty Cycle).
3. If duty cycle <98 %, the conducted average output power and average power spectral density should be add duty factor.
4. If duty cycle ≥98 %,the EUT is consider to be transmitting continuously,the conducted average output power and average power spectral density no need to add duty factor.
5. The on-time time is transmission duration(T).
6. The VBW Setting is use for RMS measurement in unwanted emissions and band edge(Above 1GHz) test.

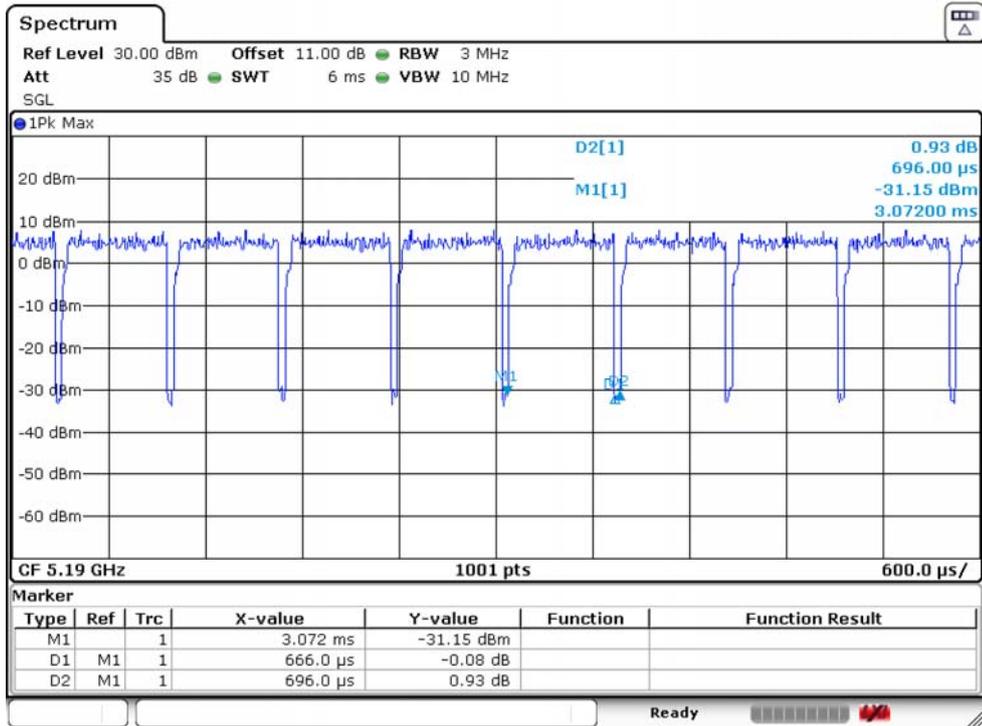
IEEE 802.11a 5180MHz



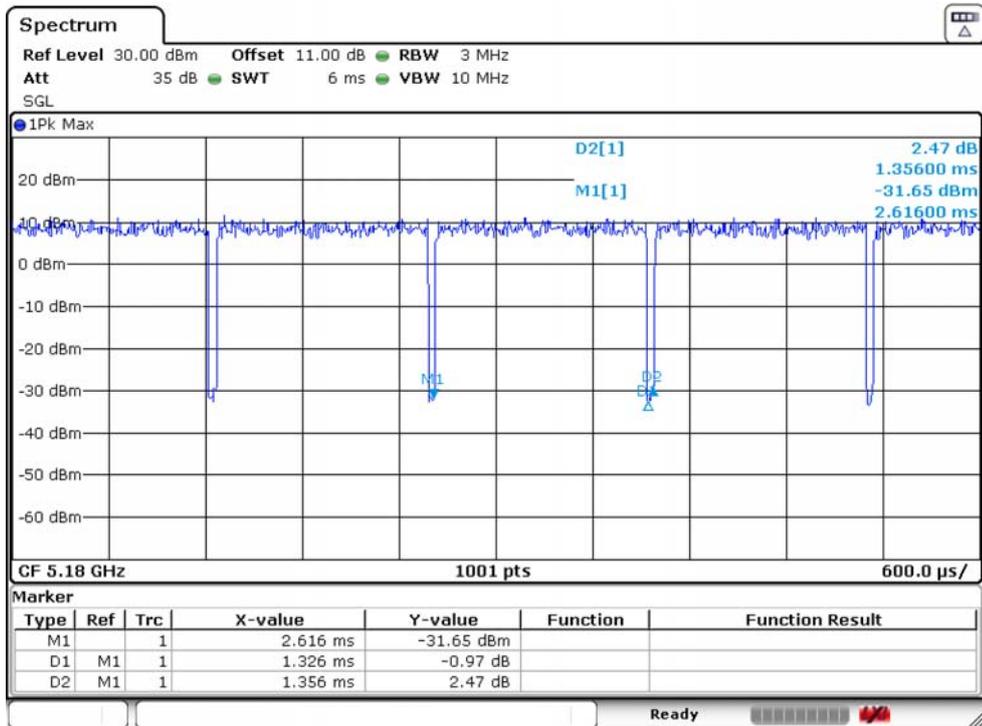
IEEE 802.11n HT20 5180MHz



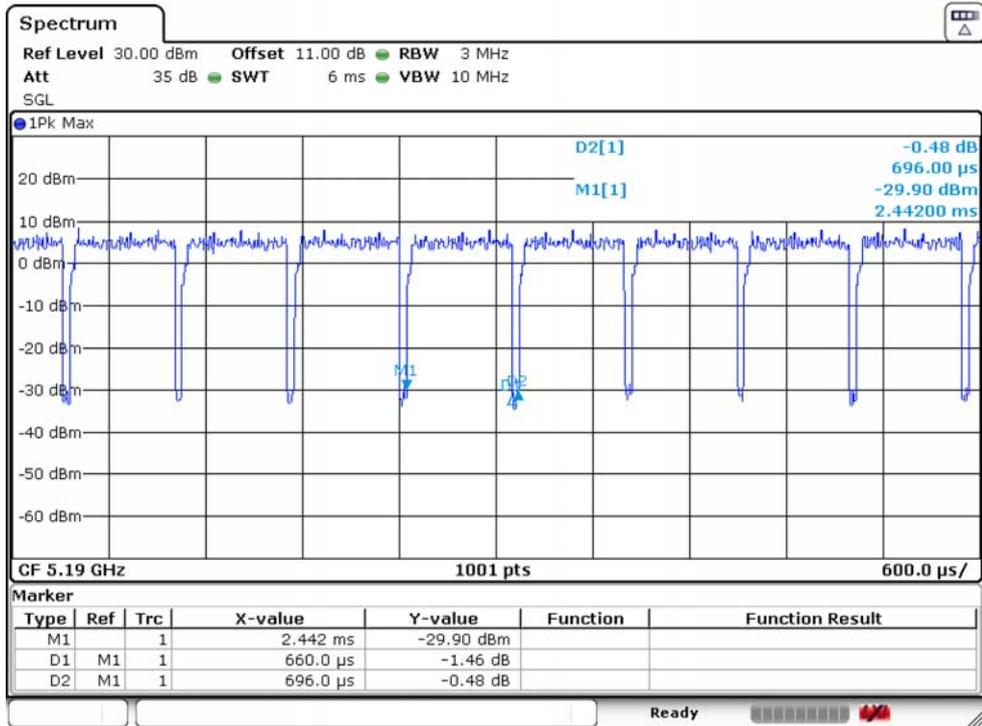
IEEE 802.11n HT40 5190MHz



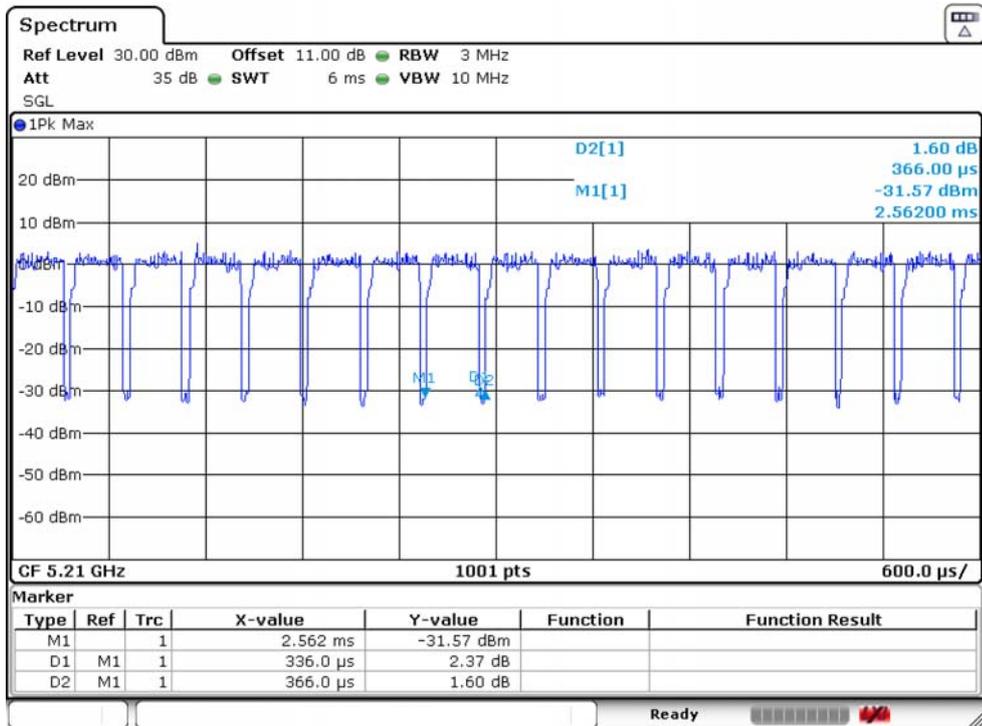
IEEE 802.11ac VHT20 5180MHz



IEEE 802.11ac VHT40 5190MHz



IEEE 802.11ac VHT80 5210MHz



2.10. Test Equipment List

For AC power conducted emissions test						
Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESHS30	EST-E001	LISAI	June 13,21	1 Year
Artificial Mains Network	Rohde & Schwarz	ENV216	EST-E002	LISAI	June 13,21	1 Year
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	EST-E078	LISAI	June 13,21	1 Year
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A

For radiated emissions test(9KHz-30MHz)						
Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESR7	EST-E047	LISAI	June 13,21	1 Year
Active Loop Antenna	SCHWARZECK	FMZB 1519B	EST-E054	LISAI	June 13,21	1 Year
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A
9kHz-30MHz Cable	N/A	EST-001	N/A	N/A	N/A	N/A

For radiated emissions test(30MHz-1000MHz)						
Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESR7	EST-E047	LISAI	June 13,21	1 Year
Bilog Antenna	Teseq	CBL 6111D	EST-E034	LISAI	June 13,21	1 Year
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A
30-1000MHz Cable	N/A	EST-002	N/A	N/A	N/A	N/A

For radiated emissions test(Above 1000MHz)						
Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
Horn Antenna	SCHWARZECK	BBHA 9120 D	EST-E031	LISAI	June 13,21	1 Year
Signal Amplifier	SCHWARZECK	BBV9718	EST-E032	LISAI	June 13,21	1 Year
Spectrum Analyzer	Rohde & Schwarz	FSV40	EST-E069	LISAI	July 19,21	1 Year
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A
Above 1GHz Cable	N/A	EST-003	N/A	N/A	N/A	N/A

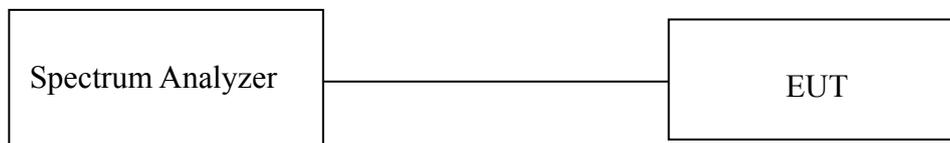
For connect EUT antenna terminal test						
Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
TS 8997	Rohde & Schwarz	/	/	/	/	/
Open Switch and Control Unit	Rohde & Schwarz	OSP-B157WB	EST-E036	LISAI	June 13,21	1 Year
Signal and Spectrum Analyzer	Rohde & Schwarz	FSV	EST-E037	LISAI	June 13,21	1 Year
Signal Generator	Rohde & Schwarz	SMB100A	EST-E038	LISAI	June 13,21	1 Year
Vector Signal Generator	Rohde & Schwarz	SMBV100A	EST-E039	LISAI	June 13,21	1 Year
Test Software	Rohde & Schwarz	WMS32	V10.50.00	N/A	N/A	N/A
Spectrum Analyzer	Rohde & Schwarz	FSV40	EST-E069	LISAI	July 19,21	1 Year
Temperature controller	Terchy	MHQ	EST-E101	LISAI	June 13,21	1 Year

3. 6dB BANDWIDTH & 26dB BANDWIDTH & 99% OCCUPIED BANDWIDTH

3.1. Limit

Frequency Band	Test Item	Limit
5150MHz~5250MHz	26dB Bandwidth&99% Occupied Bandwidth	N/A
5250MHz~5350MHz	26dB Bandwidth&99% Occupied Bandwidth	N/A
5470MHz~5600&5650MHz~5725MHz	26dB Bandwidth&99% Occupied Bandwidth	N/A
5725MHz-5850MHz	6dB Bandwidth&99% Occupied Bandwidth	6dB Bandwidth ≥ 500KHz

3.2. Test Setup



3.3. Spectrum Analyzer Setting

6dB Bandwidth	
Spectrum Parameters	Setting
RBW	100KHz
VBW	300KHz
Span	40MHz(20MHz Bandwidth mode) 60MHz(40MHz Bandwidth mode) 120MHz(80MHz Bandwidth mode)
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

26dB Bandwidth	
Spectrum Parameters	Setting
RBW	approximately 1% of the emission bandwidth
VBW	>RBW
Span	40MHz(20MHz Bandwidth mode) 60MHz(40MHz Bandwidth mode) 120MHz(80MHz Bandwidth mode)
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

99% Occupied Bandwidth	
Spectrum Parameters	Setting
RBW	1% to 5% of the OBW
VBW	approximately three times the RBW
Span	between 1.5 times and 5.0 times the OBW
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

3.4. Test Procedure

For 26dB Bandwidth Measurement :

- Connect EUT antenna terminal to the spectrum analyzer with RF cable.
- Spectrum analyzer setting parameters in accordance with section 3.3.
- Set the EUT transmit continuously with maximum output power.
- Allow trace to stabilize, measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the instrument. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
- Repeat above procedures until all modes and channels were measured.
- Record the results in the test report.

For 6dB Bandwidth Measurement :

- Connect EUT antenna terminal to the spectrum analyzer with RF cable.
- Spectrum analyzer setting parameters in accordance with section 3.3.
- Set the EUT transmit continuously with maximum output power.
- Allow trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
- Repeat above procedures until all modes and channels were measured.
- Record the results in the test report.

For 99% Occupied Bandwidth Measurement :

- Connect EUT antenna terminal to the spectrum analyzer with RF cable.
- Spectrum analyzer setting parameters in accordance with section 3.3.
- Set the EUT transmit continuously with maximum output power.
- Allow trace to stabilize, use the 99% power bandwidth function to measure bandwidth.
- Repeat above procedures until all modes and channels were measured.
- Record the results in the test report.

3.5. Test Result

Temperature	25.4℃	Relative Humidity		56%	Test Voltage	DC 3.3V
26dB Bandwidth&99% Occupied Bandwidth						
Frequency Band	Test Mode	Fre (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Conducted Output Power Limit Calculate (dBm)	EIRP Power Limit Calculate (dBm)
5150MH~5250MHz	IEEE 802.11a	5180	20.203	16.583		22.20
		5200	20.492	16.703		22.23
		5240	20.145	16.504		22.18
	IEEE 802.11n HT20	5180	20.260	17.543		22.44
		5200	20.260	17.622		22.46
		5240	20.087	17.543		22.44
	IEEE 802.11ac VHT20	5180	20.434	17.543		22.44
		5200	20.376	17.622		22.46
		5240	20.029	17.582		22.45
	IEEE 802.11n HT40	5190	40.410	36.524		23.01
		5230	40.410	36.603		23.01
	IEEE 802.11ac VHT40	5190	40.060	36.524		23.01
5230		40.170	36.603		23.01	
IEEE 802.11ac VHT80	5210	80.810	75.285		23.01	
5250MH~5350MHz	IEEE 802.11a	5260	20.318	16.504	23.18	29.18
		5300	20.029	16.504	23.18	29.18
		5320	19.971	16.504	23.18	29.18
	IEEE 802.11n HT20	5260	20.376	17.622	23.46	29.46
		5300	20.087	17.662	23.47	29.47
		5320	20.434	17.582	23.45	29.45
	IEEE 802.11ac VHT20	5260	20.203	17.543	23.44	29.44
		5300	20.029	17.582	23.45	29.45
		5320	19.971	17.582	23.45	29.45
	IEEE 802.11n HT40	5270	40.640	36.524	23.98	30.00
		5310	40.870	36.444	23.98	30.00
	IEEE 802.11ac VHT40	5270	40.170	36.524	23.98	30.00
		5310	40.290	36.444	23.98	30.00
	IEEE 802.11ac VHT80	5290	80.850	75.285	23.98	30.00

26dB Bandwidth&99% Occupied Bandwidth						
Frequency Band	Test Mode	Fre (MHz)	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Conducted Output Power Limit Calculate (dBm)	EIRP Power Limit Calculate (dBm)
5470MH~ 5600MH& 5650MH~ 5725MHz	IEEE 802.11a	5500	20.145	16.504	23.18	29.18
		5580	20.029	16.464	23.17	29.17
		5700	20.145	16.464	23.17	29.17
	IEEE 802.11n HT20	5500	20.029	17.582	23.45	29.45
		5580	20.203	17.582	23.45	29.45
		5700	20.376	17.582	23.45	29.45
	IEEE 802.11ac VHT20	5500	20.260	17.582	23.45	29.45
		5580	20.145	17.543	23.44	29.44
		5700	20.145	17.622	23.46	29.46
	IEEE 802.11n HT40	5510	40.640	36.444	23.98	30.00
		5670	40.640	36.444	23.98	30.00
	IEEE 802.11ac VHT40	5510	40.060	36.364	23.98	30.00
		5670	40.290	36.237	23.98	30.00
	IEEE 802.11ac VHT80	5530	80.580	75.285	23.98	30.00

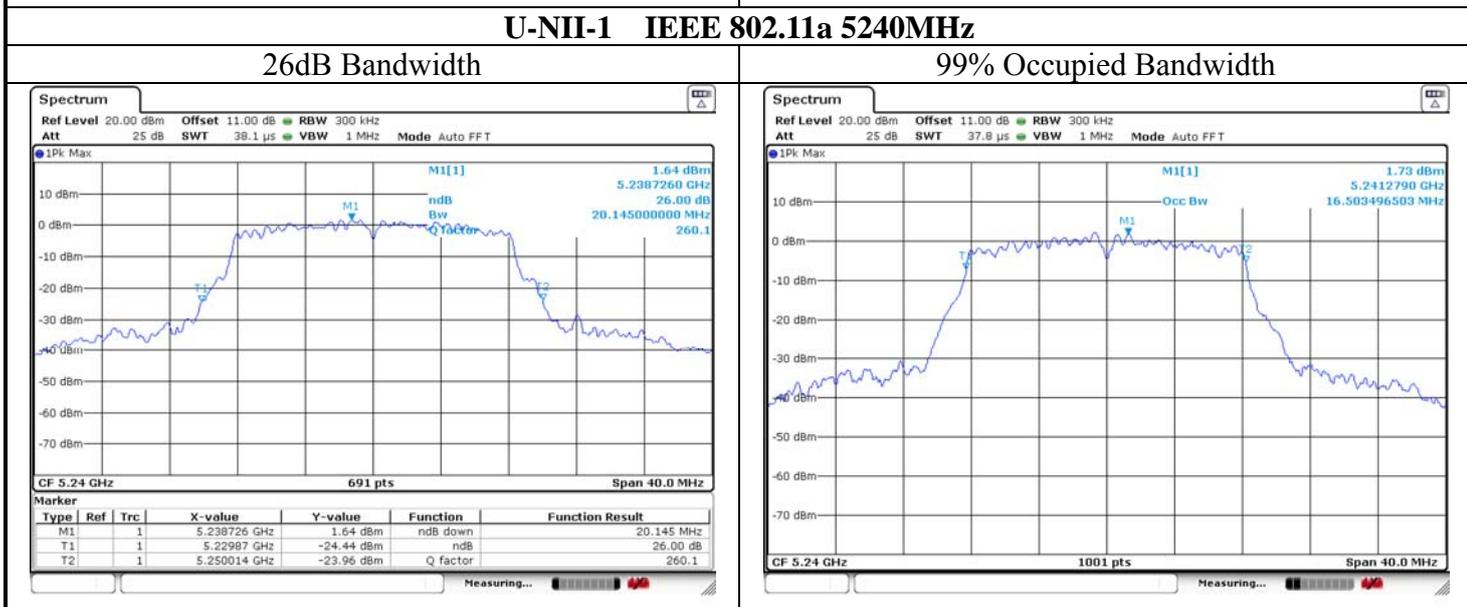
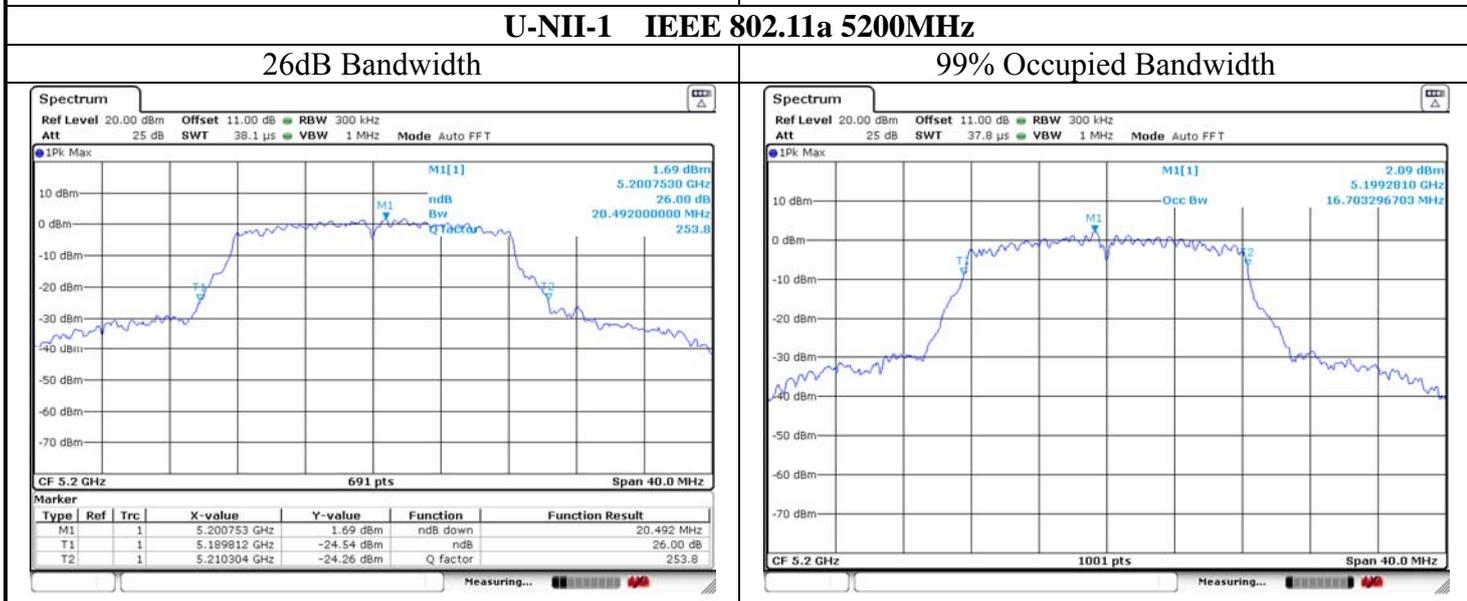
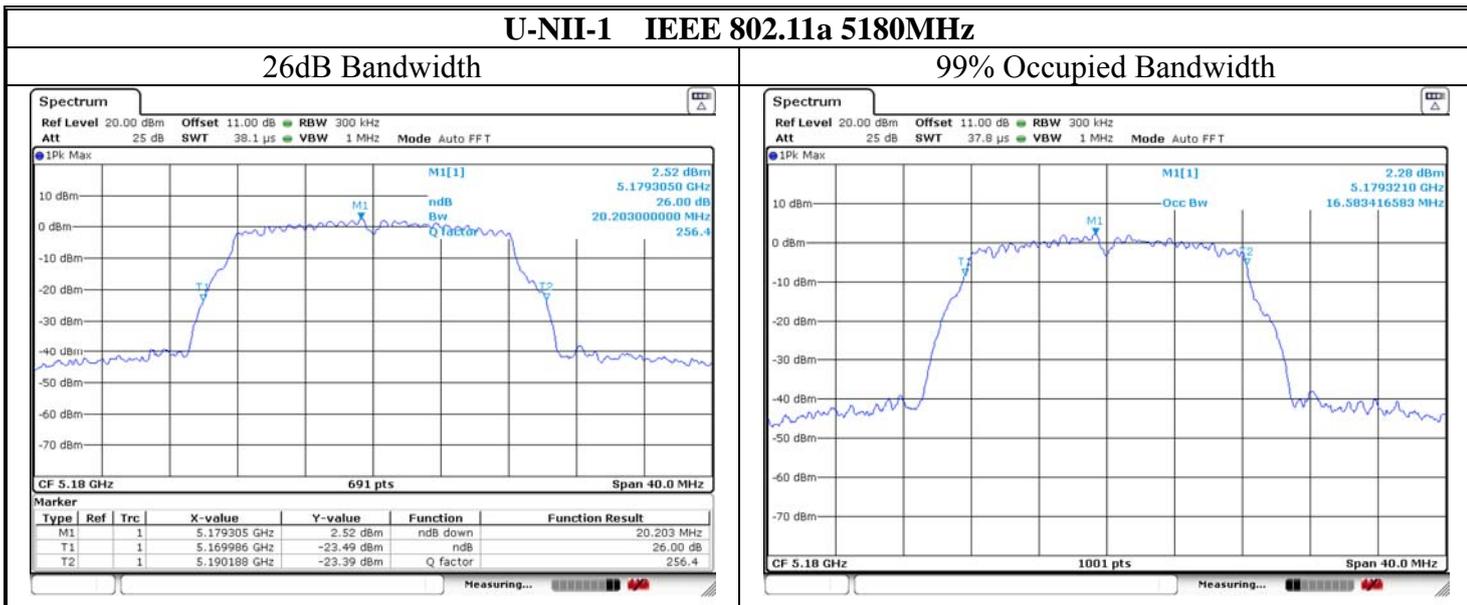
6dB Bandwidth&99% Occupied Bandwidth						
BAND	Test Mode	Fre (MHz)	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	6dB BW Min Limit (MHz)	Result
5725MHz~5850MHz	IEEE 802.11a	5745	15.105	16.464	0.5	PASS
		5785	15.105	16.504	0.5	PASS
		5825	15.105	16.504	0.5	PASS
	IEEE 802.11n HT20	5745	16.264	17.582	0.5	PASS
		5785	16.304	17.582	0.5	PASS
		5825	16.264	17.582	0.5	PASS
	IEEE 802.11ac VHT20	5745	16.224	17.543	0.5	PASS
		5785	16.304	17.543	0.5	PASS
		5825	16.344	17.543	0.5	PASS
	IEEE 802.11n HT40	5755	35.165	36.444	0.5	PASS
		5795	35.165	36.444	0.5	PASS
	IEEE 802.11ac VHT40	5755	35.085	36.524	0.5	PASS
		5795	35.165	36.444	0.5	PASS
	IEEE 802.11ac VHT80	5775	75.280	75.285	0.5	PASS

Note :

- a) In frequency band 5150-5250MHz ,for other devices than installed in vehicles, the maximum e.i.r.p. shall not exceed 200 mW or $10 + 10 \log_{10}B$, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz.
- b) In frequency band 5250-5350MHz ,for other devices than installed in vehicles :
 - a) The maximum conducted output power shall not exceed 250 mW or $11 + 10 \log_{10}B$, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band;
 - b) The maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log_{10}B$, dBm, whichever is less. B is the 99% emission bandwidth in megahertz.
- c) In Frequency bands 5470-5600MHz and 5650-5725MHz :
 - a) The maximum conducted output power shall not exceed 250 mW or $11 + 10 \log_{10}B$, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0MHz band;
 - b) The maximum e.i.r.p. shall not exceed 1.0 W or $17 + 10 \log_{10}B$, dBm, whichever is less. B is the 99% emission bandwidth in megahertz.

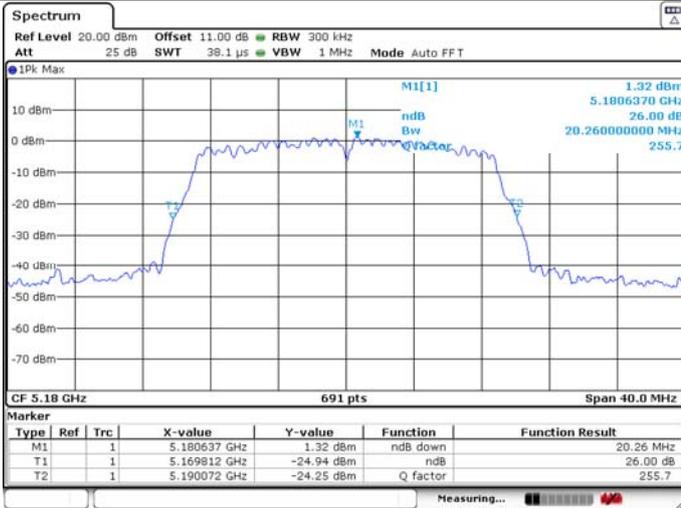
So,the Conducted Output Power Limit and EIRP Power Limit can calculate with 99% emission bandwidth.

3.6. Test Result

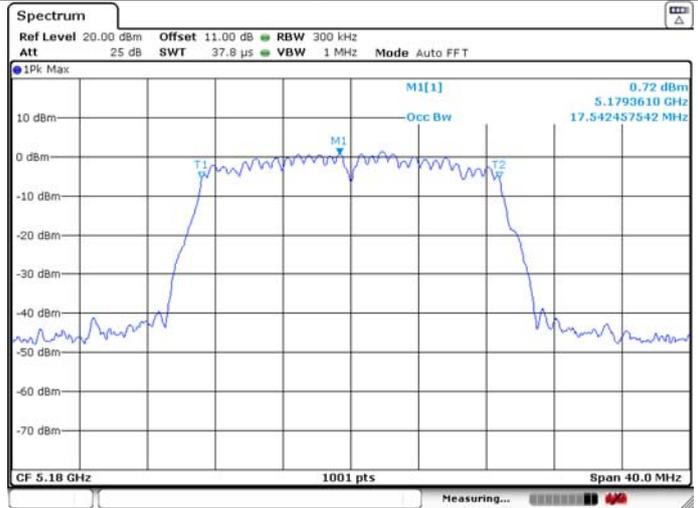


U-NII-1 IEEE 802.11n HT20 5180MHz

26dB Bandwidth

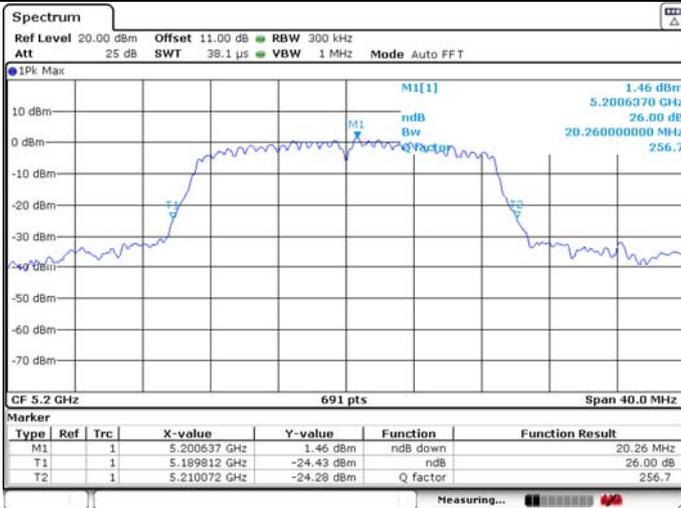


99% Occupied Bandwidth



U-NII-1 IEEE 802.11n HT20 5200MHz

26dB Bandwidth



99% Occupied Bandwidth



U-NII-1 IEEE 802.11n HT20 5240MHz

26dB Bandwidth



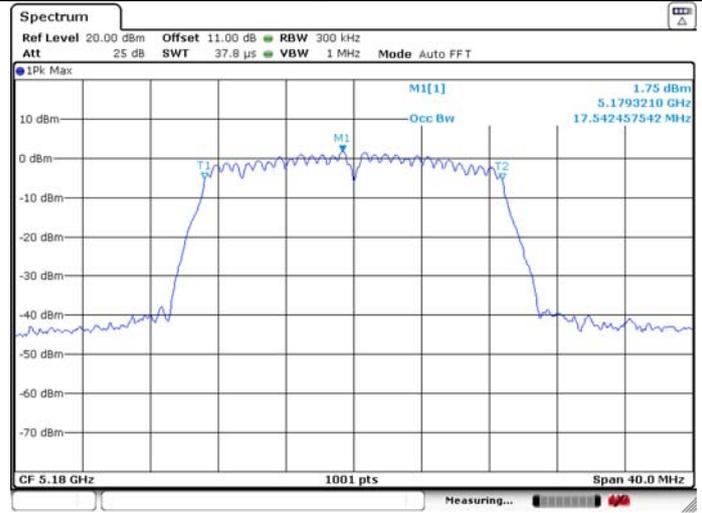
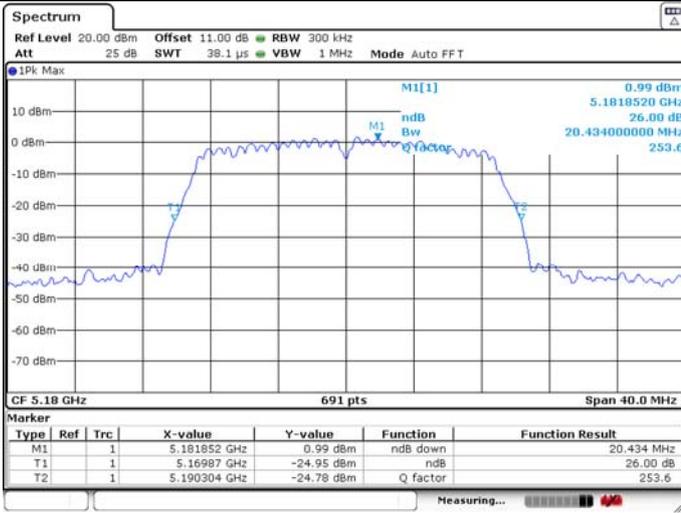
99% Occupied Bandwidth



U-NII-1 IEEE 802.11ac VHT20 5180MHz

26dB Bandwidth

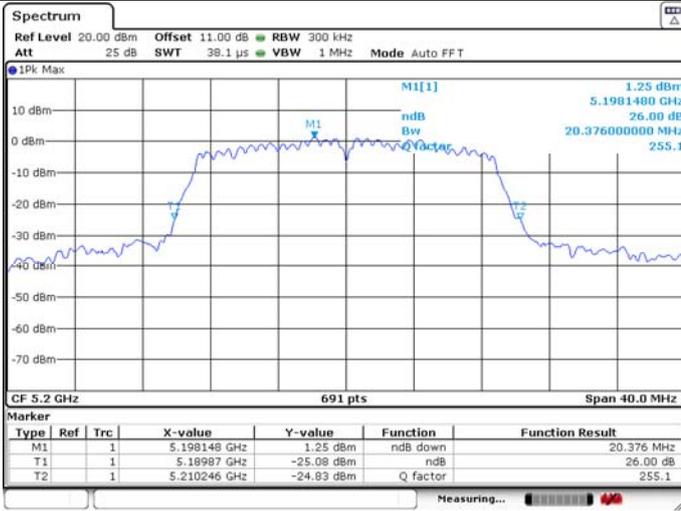
99% Occupied Bandwidth



U-NII-1 IEEE 802.11ac VHT20 5200MHz

26dB Bandwidth

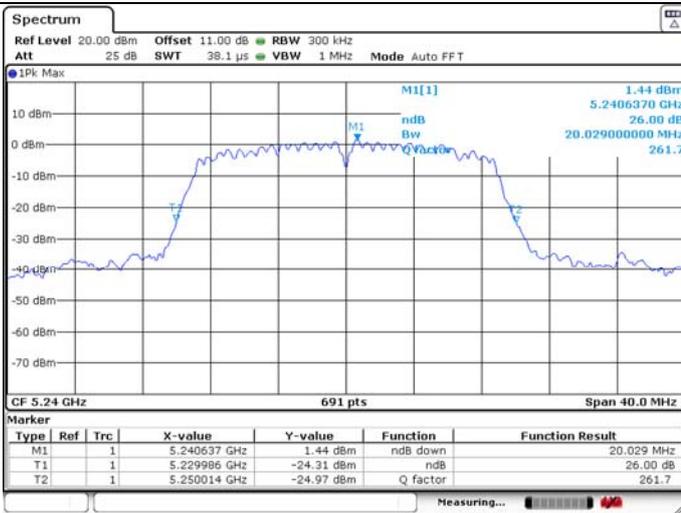
99% Occupied Bandwidth



U-NII-1 IEEE 802.11ac VHT20 5240MHz

26dB Bandwidth

99% Occupied Bandwidth



U-NII-1 IEEE 802.11n HT40 5190MHz

26dB Bandwidth

99% Occupied Bandwidth



U-NII-1 IEEE 802.11n HT40 5230MHz

26dB Bandwidth

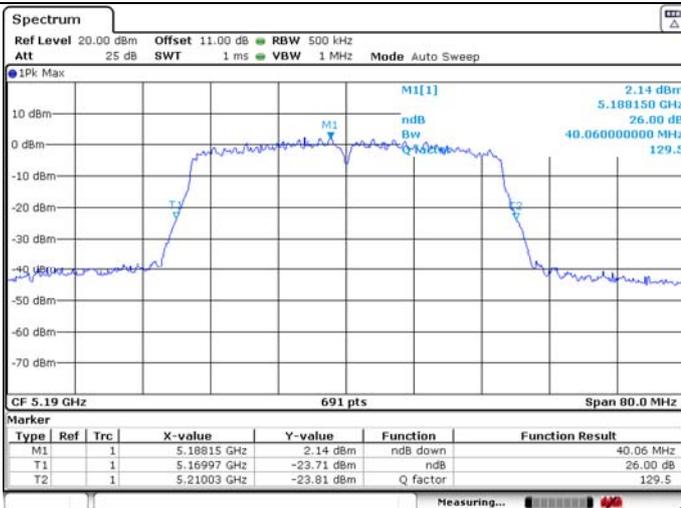
99% Occupied Bandwidth



U-NII-1 IEEE 802.11ac VHT40 5190MHz

26dB Bandwidth

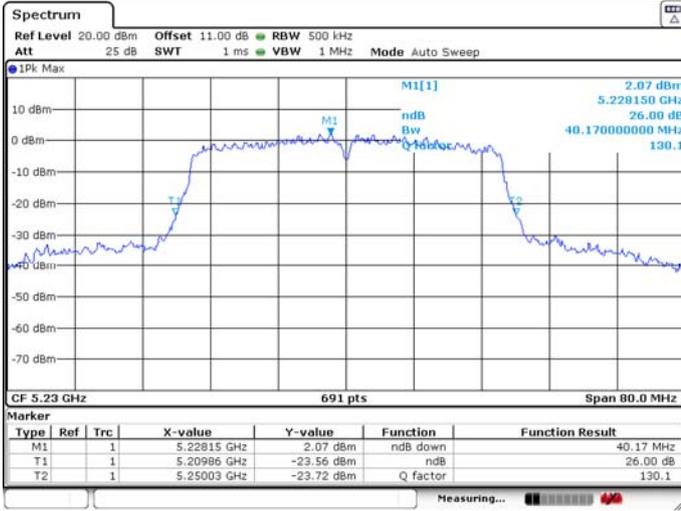
99% Occupied Bandwidth



U-NII-1 IEEE 802.11ac VHT40 5230MHz

26dB Bandwidth

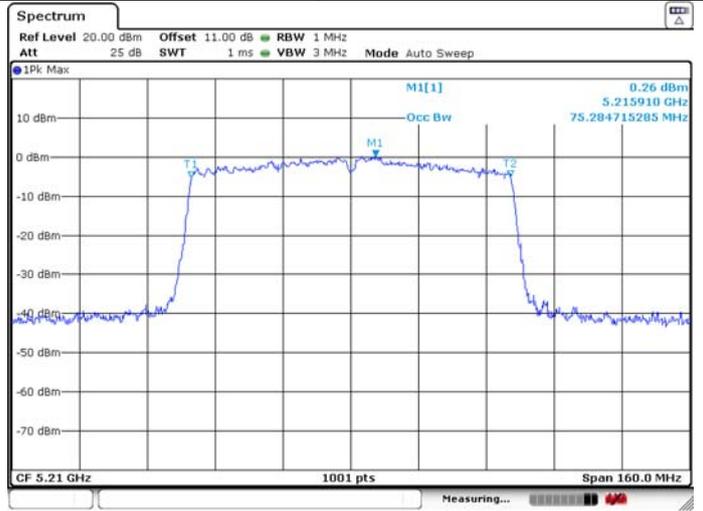
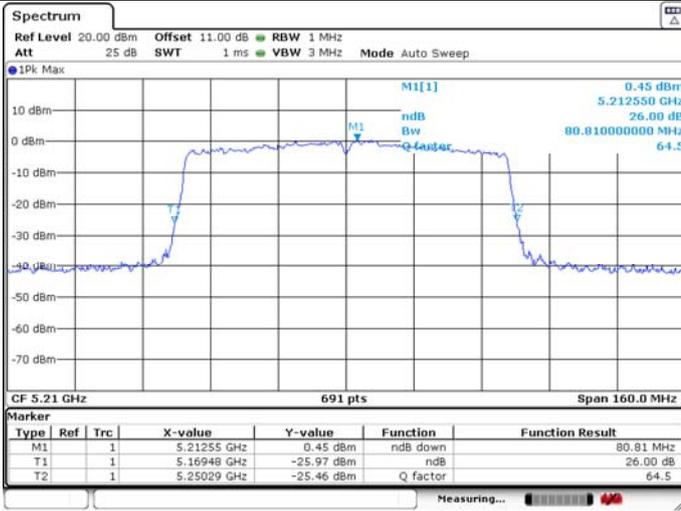
99% Occupied Bandwidth



U-NII-1 IEEE 802.11ac VHT80 5210MHz

26dB Bandwidth

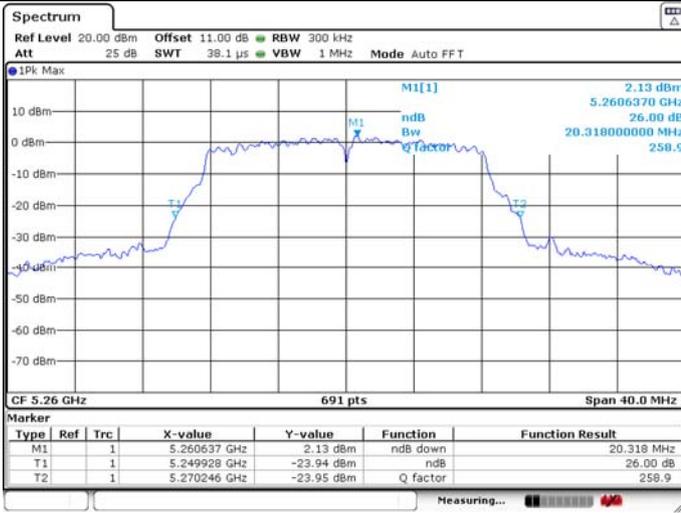
99% Occupied Bandwidth



U-NII-2A IEEE 802.11a 5260MHz

26dB Bandwidth

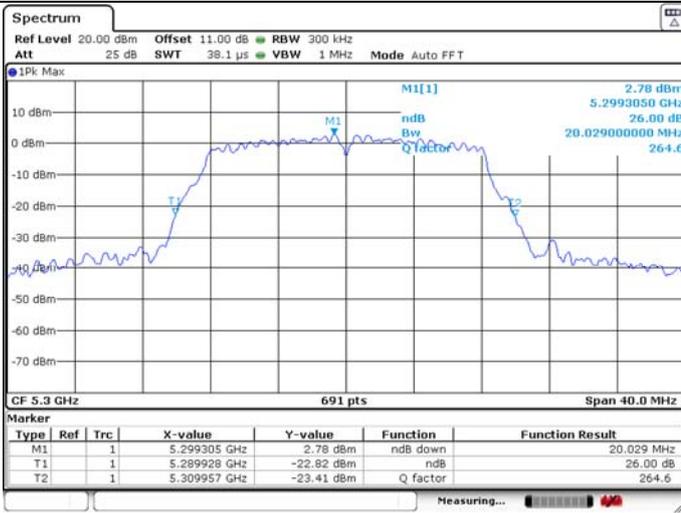
99% Occupied Bandwidth



U-NII-2A IEEE 802.11a 5300MHz

26dB Bandwidth

99% Occupied Bandwidth



U-NII-2A IEEE 802.11a 5320MHz

26dB Bandwidth

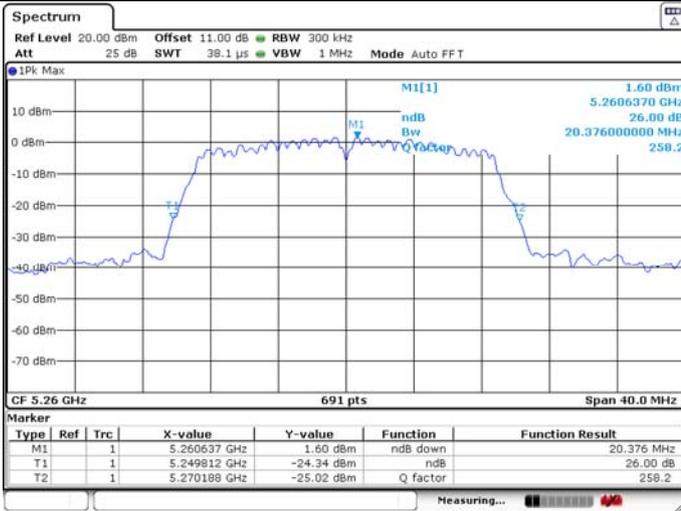
99% Occupied Bandwidth



U-NII-2A IEEE 802.11n HT20 5260MHz

26dB Bandwidth

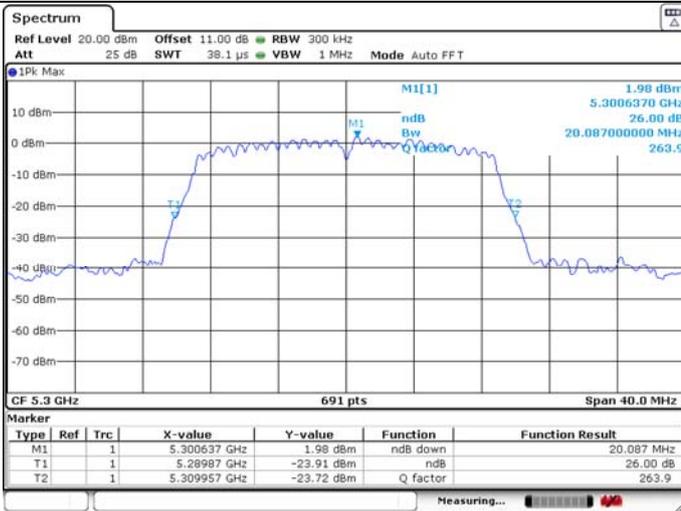
99% Occupied Bandwidth



U-NII-2A IEEE 802.11n HT20 5300MHz

26dB Bandwidth

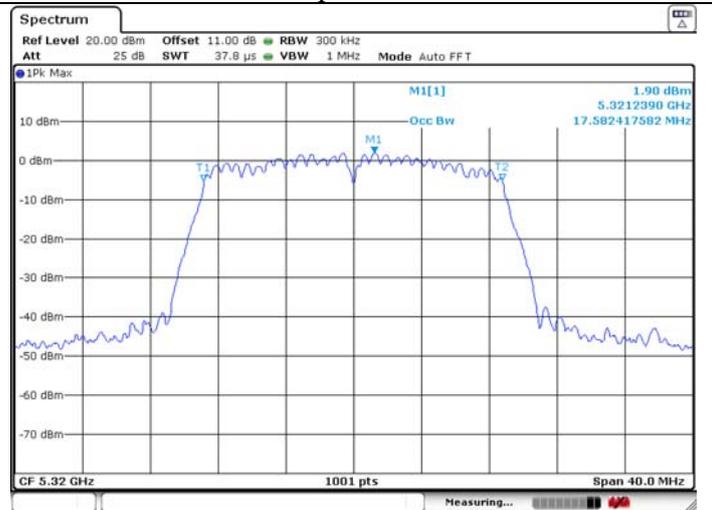
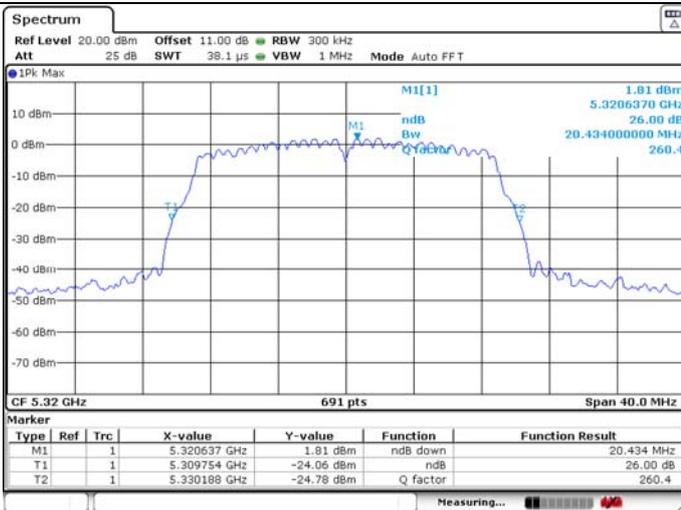
99% Occupied Bandwidth



U-NII-2A IEEE 802.11n HT20 5320MHz

26dB Bandwidth

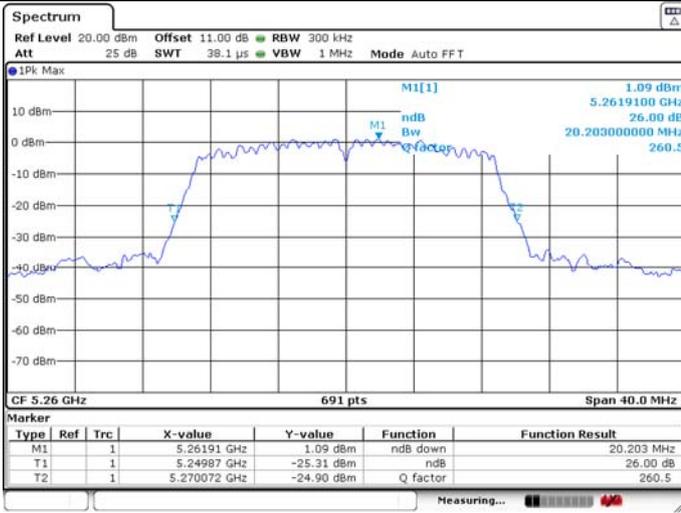
99% Occupied Bandwidth



U-NII-2A IEEE 802.11ac VHT20 5260MHz

26dB Bandwidth

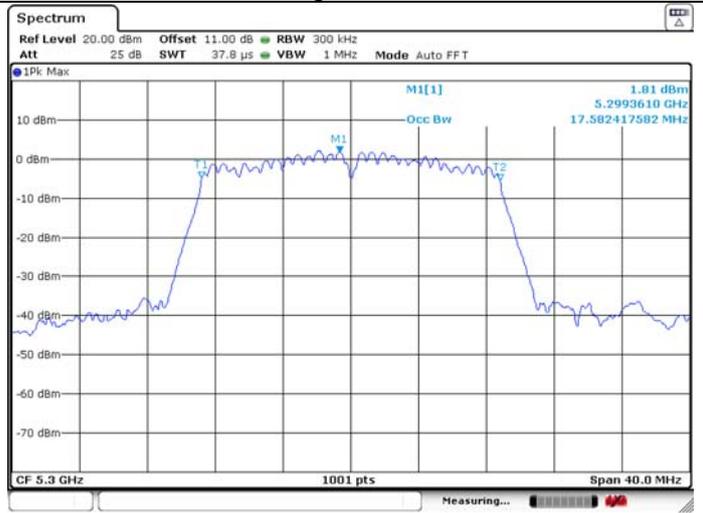
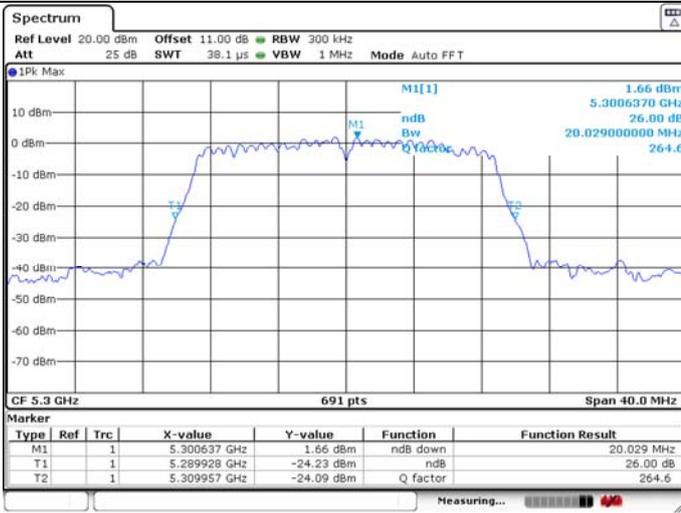
99% Occupied Bandwidth



U-NII-2A IEEE 802.11ac VHT20 5300MHz

26dB Bandwidth

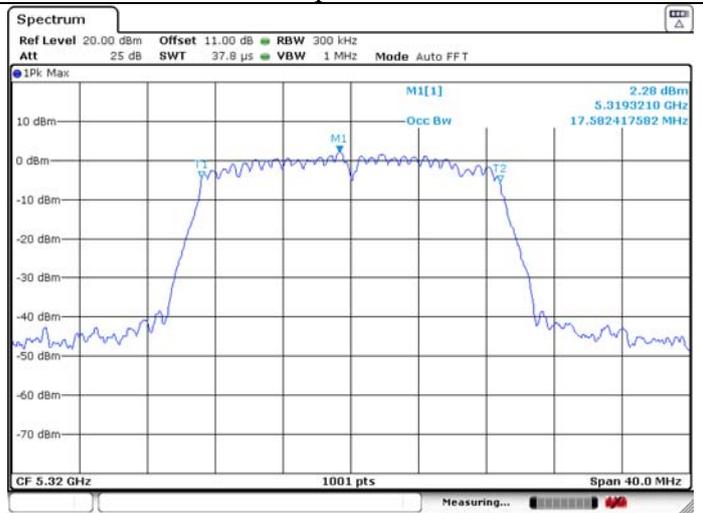
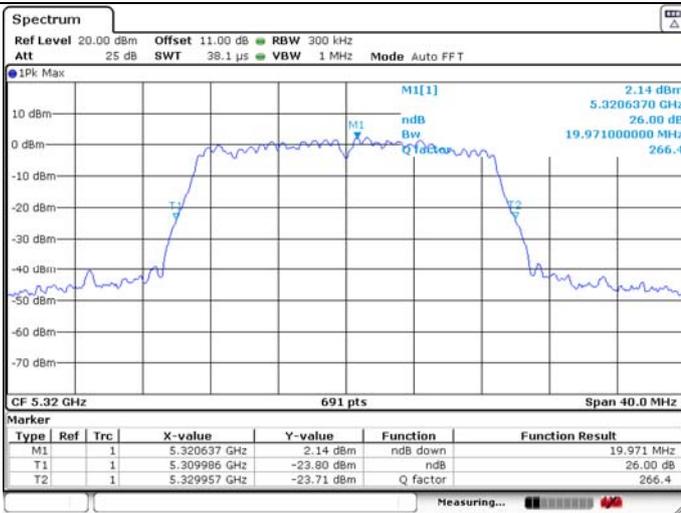
99% Occupied Bandwidth



U-NII-2A IEEE 802.11ac VHT20 5320MHz

26dB Bandwidth

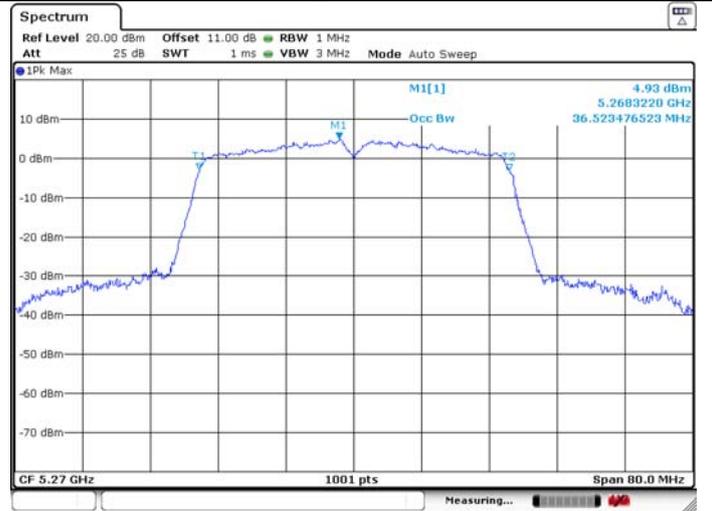
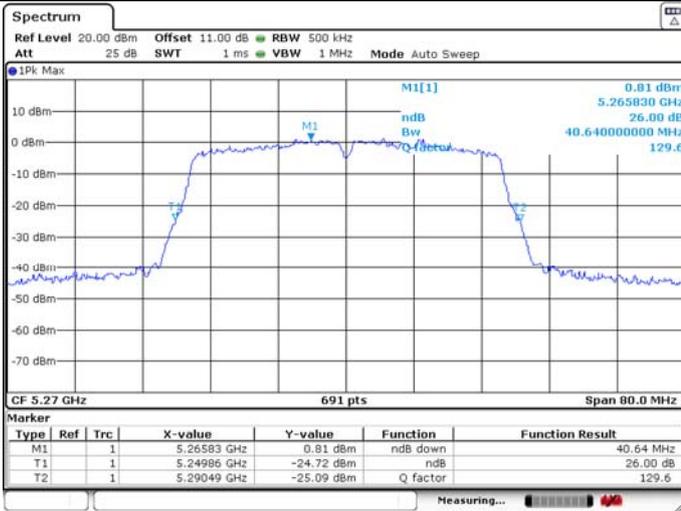
99% Occupied Bandwidth



U-NII-2A IEEE 802.11n HT40 5270MHz

26dB Bandwidth

99% Occupied Bandwidth



U-NII-2A IEEE 802.11n HT40 5310MHz

26dB Bandwidth

99% Occupied Bandwidth



U-NII-2A IEEE 802.11ac VHT40 5270MHz

26dB Bandwidth

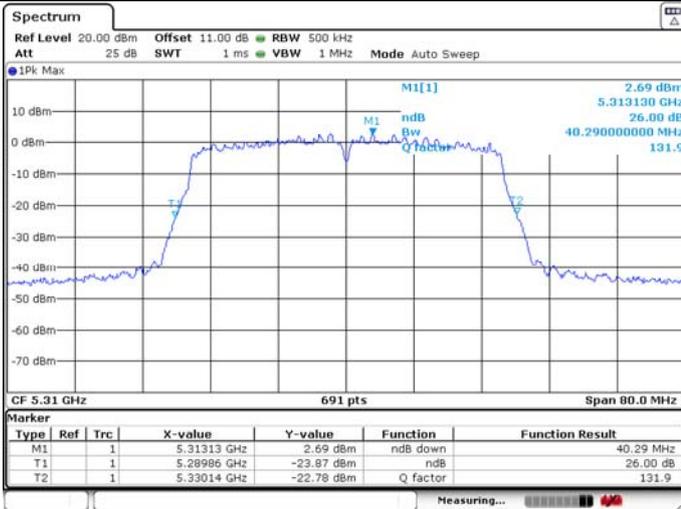
99% Occupied Bandwidth



U-NII-2A IEEE 802.11ac VHT40 5310MHz

26dB Bandwidth

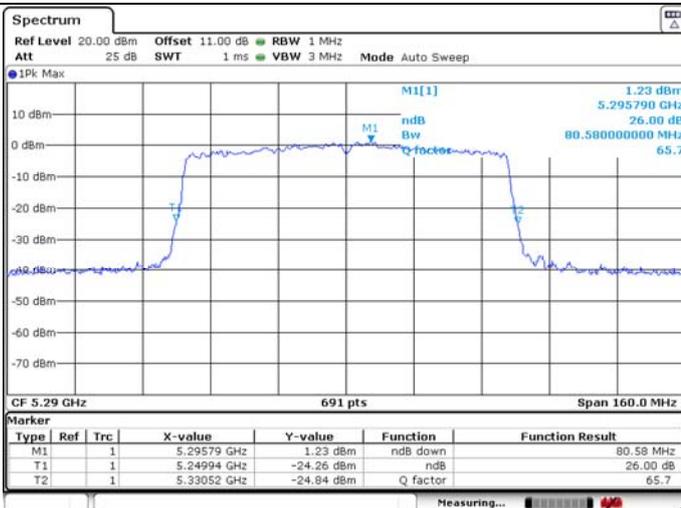
99% Occupied Bandwidth



U-NII-2A IEEE 802.11ac VHT80 5290MHz

26dB Bandwidth

99% Occupied Bandwidth



U-NII-2C IEEE 802.11a 5500MHz

26dB Bandwidth

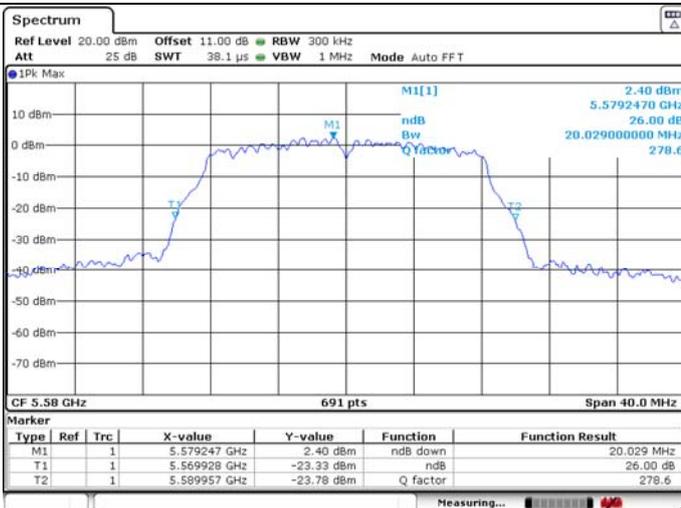


99% Occupied Bandwidth



U-NII-2C IEEE 802.11a 5580MHz

26dB Bandwidth

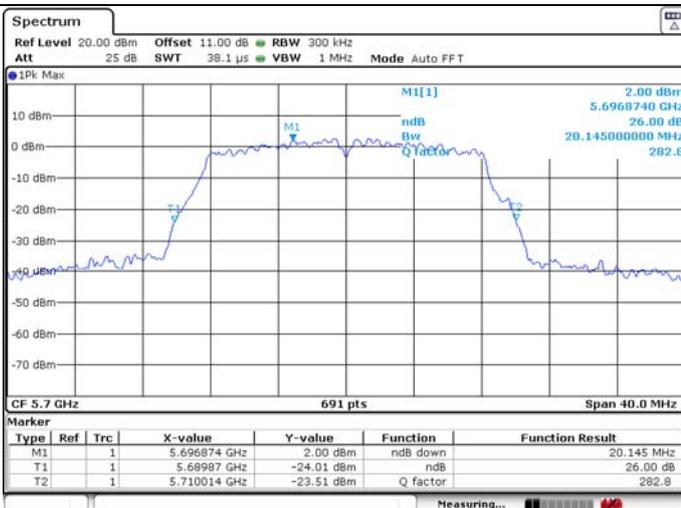


99% Occupied Bandwidth



U-NII-2C IEEE 802.11a 5700MHz

26dB Bandwidth



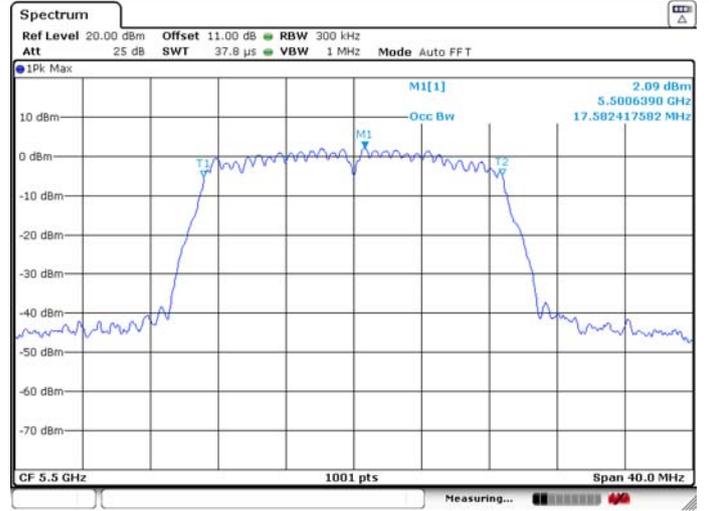
99% Occupied Bandwidth



U-NII-2C IEEE 802.11n HT20 5500MHz

26dB Bandwidth

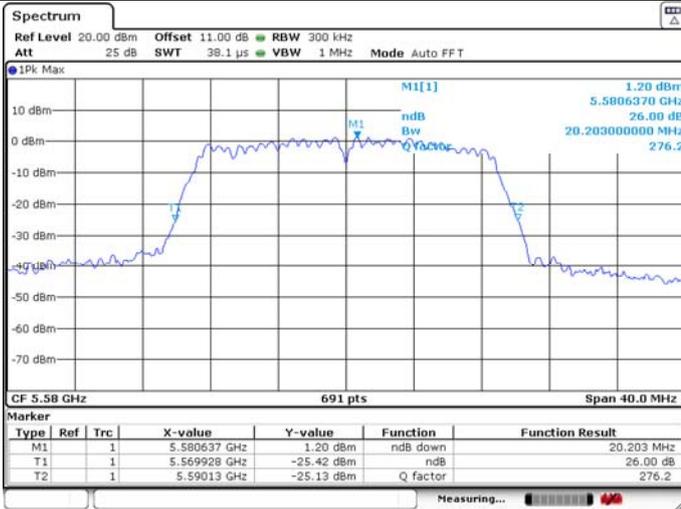
99% Occupied Bandwidth



U-NII-2C IEEE 802.11n HT20 5580MHz

26dB Bandwidth

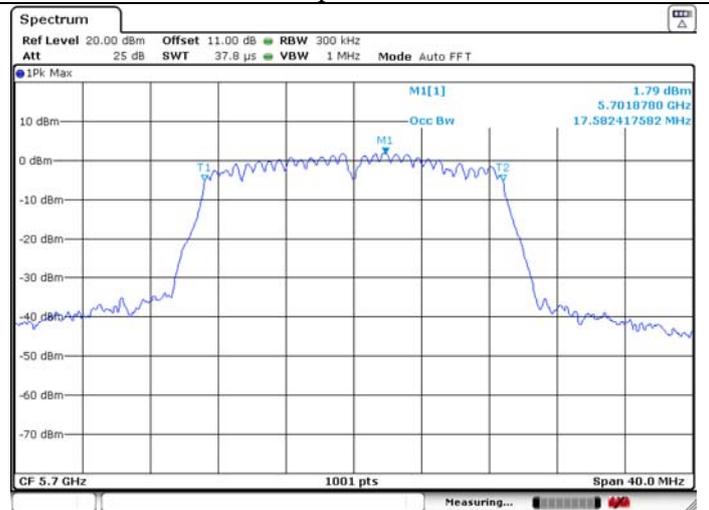
99% Occupied Bandwidth



U-NII-2C IEEE 802.11n HT20 5700MHz

26dB Bandwidth

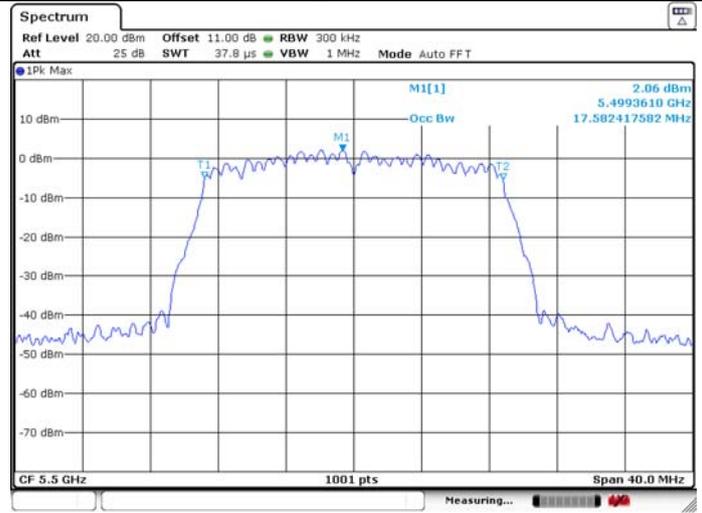
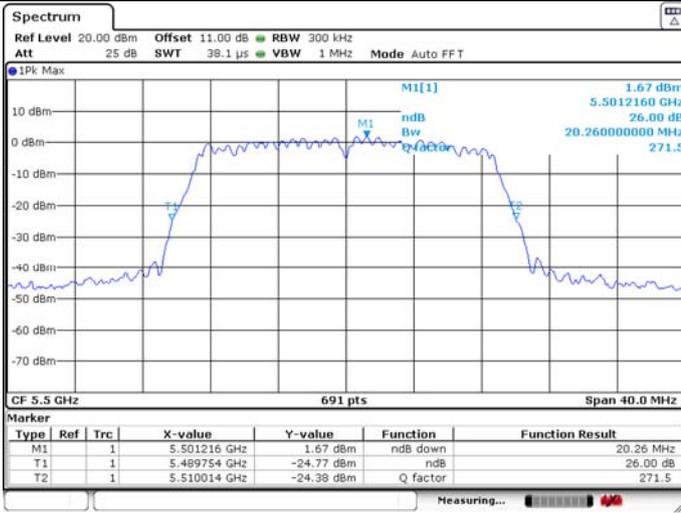
99% Occupied Bandwidth



U-NII-2C IEEE 802.11ac VHT20 5500MHz

26dB Bandwidth

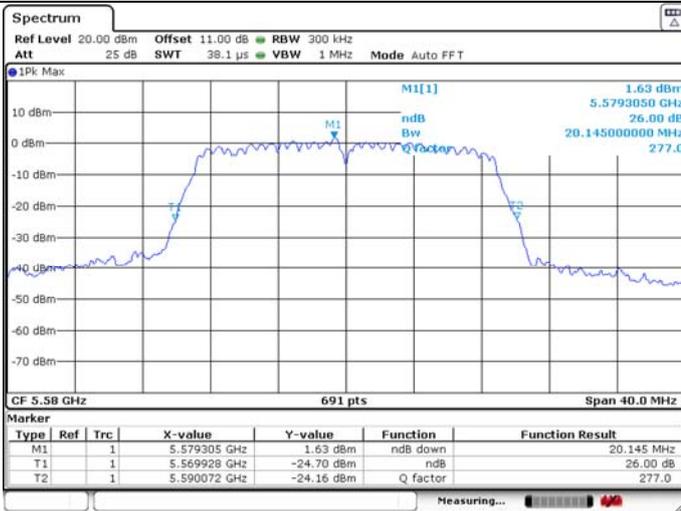
99% Occupied Bandwidth



U-NII-2C IEEE 802.11ac VHT20 5580MHz

26dB Bandwidth

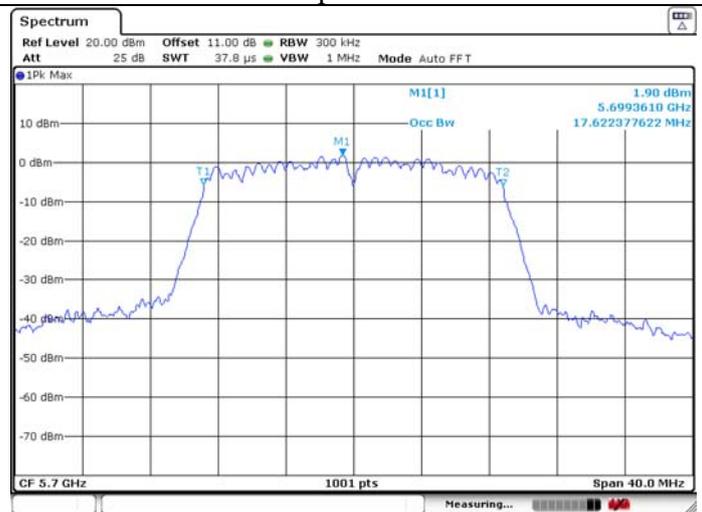
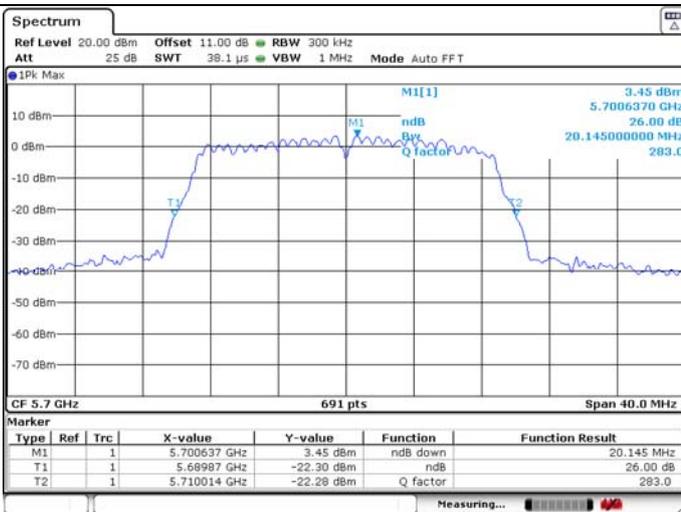
99% Occupied Bandwidth



U-NII-2C IEEE 802.11ac VHT20 5700MHz

26dB Bandwidth

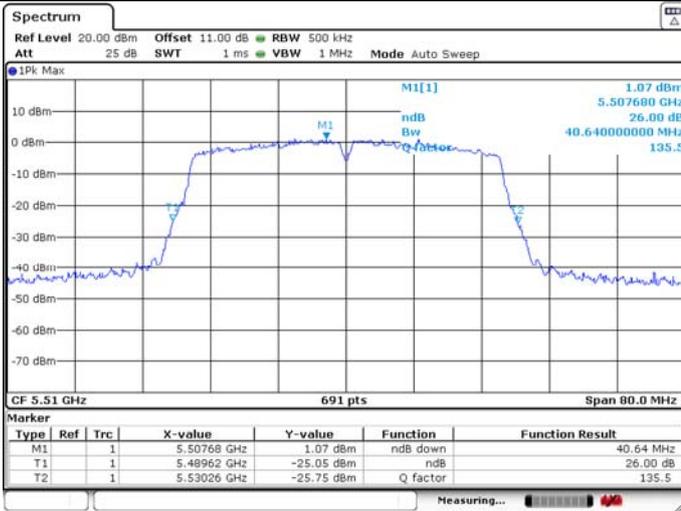
99% Occupied Bandwidth



U-NII-2C IEEE 802.11n HT40 5510MHz

26dB Bandwidth

99% Occupied Bandwidth



U-NII-2C IEEE 802.11n HT40 5670MHz

26dB Bandwidth

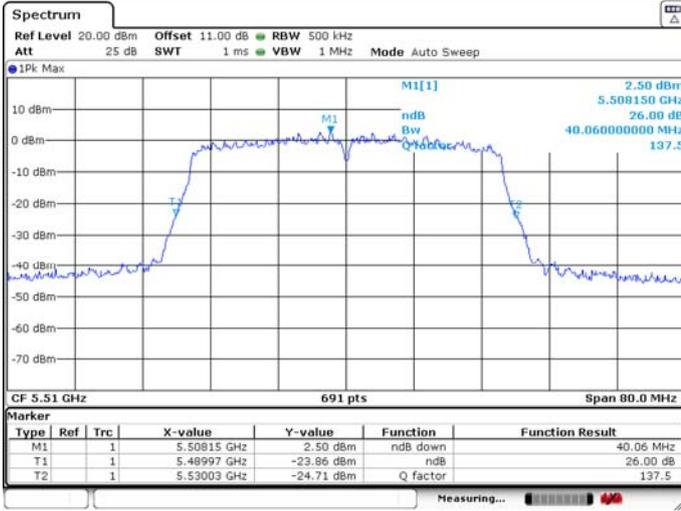
99% Occupied Bandwidth



U-NII-2C IEEE 802.11ac VHT40 5510MHz

26dB Bandwidth

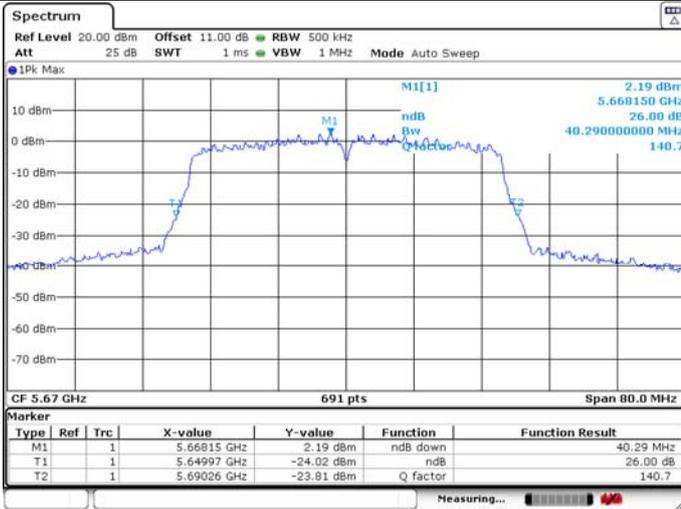
99% Occupied Bandwidth



U-NII-2C IEEE 802.11ac VHT40 5670MHz

26dB Bandwidth

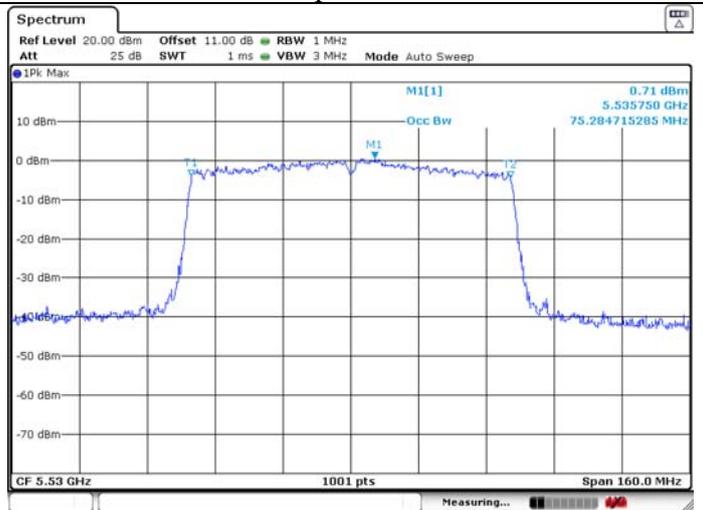
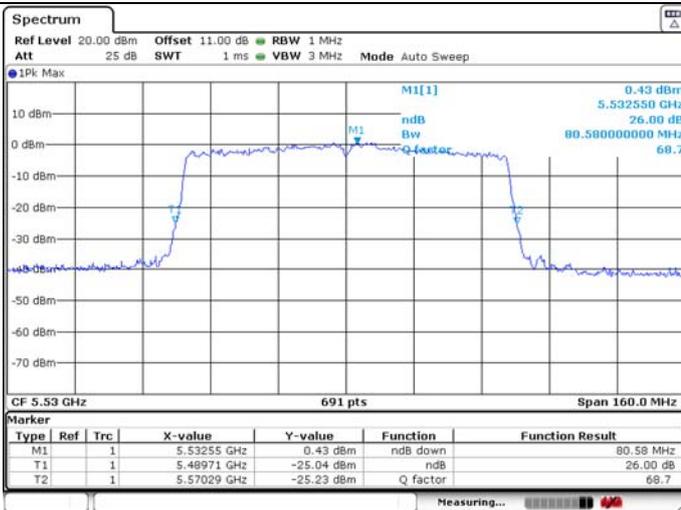
99% Occupied Bandwidth



U-NII-2C IEEE 802.11ac VHT80 5530MHz

26dB Bandwidth

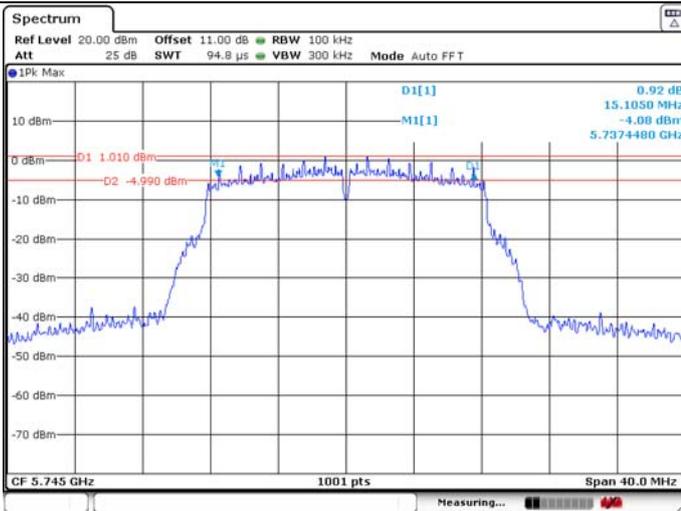
99% Occupied Bandwidth



U-NII-3 IEEE 802.11a 5745MHz

6dB Bandwidth

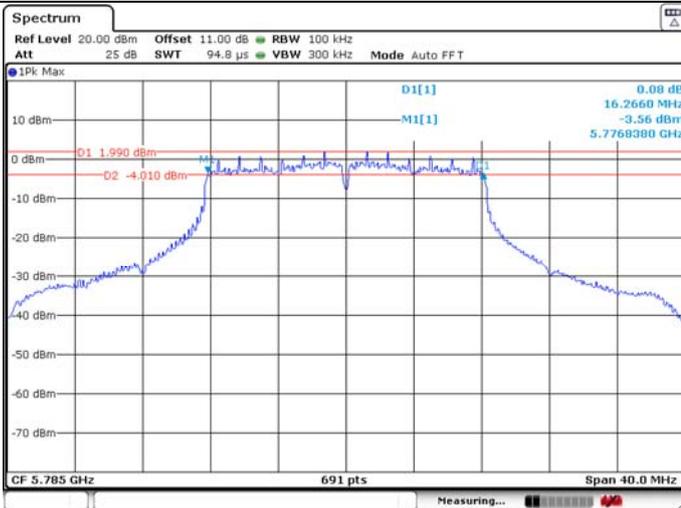
99% Occupied Bandwidth



U-NII-3 IEEE 802.11a 5785MHz

6dB Bandwidth

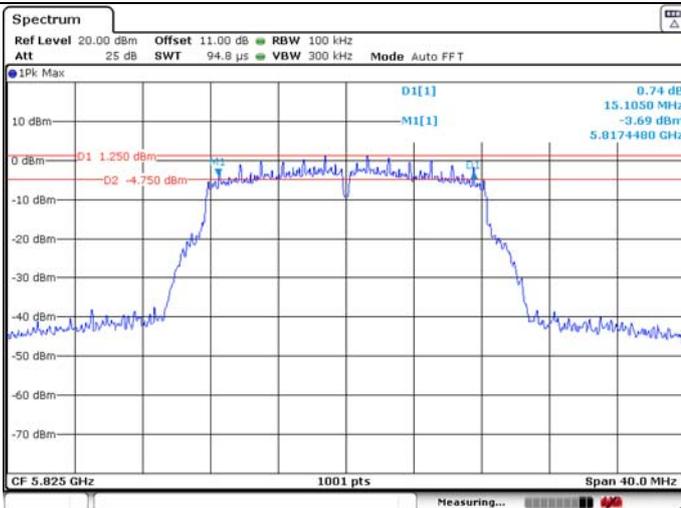
99% Occupied Bandwidth



U-NII-3 IEEE 802.11a 5825MHz

6dB Bandwidth

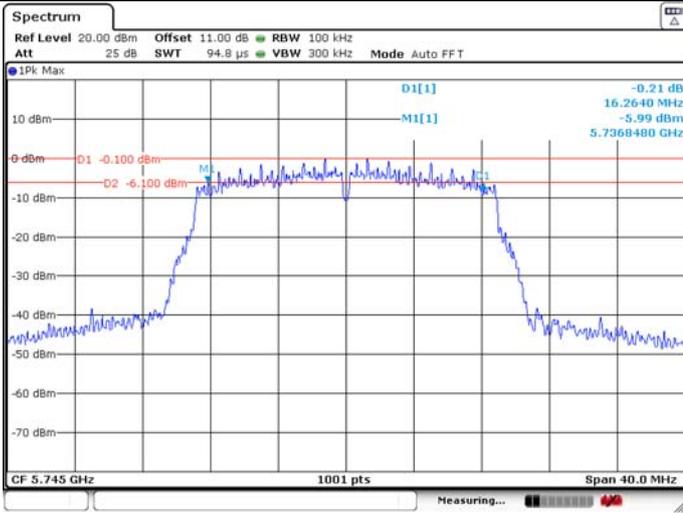
99% Occupied Bandwidth



U-NII-3 IEEE 802.11n HT20 5745MHz

6dB Bandwidth

99% Occupied Bandwidth



U-NII-3 IEEE 802.11n HT20 5785MHz

6dB Bandwidth

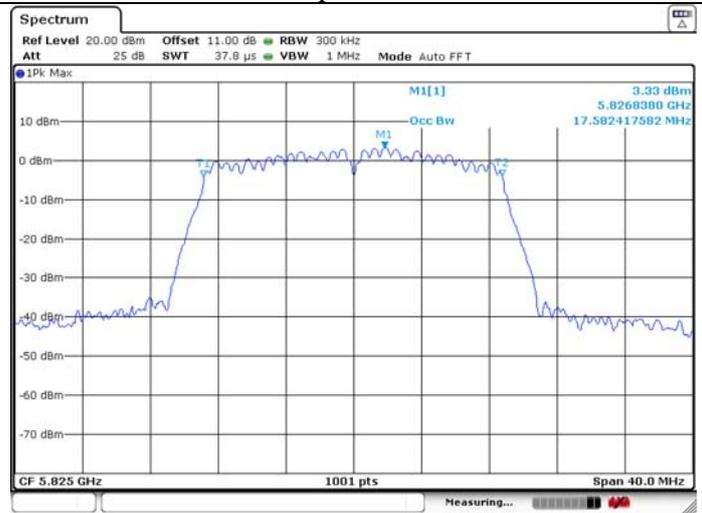
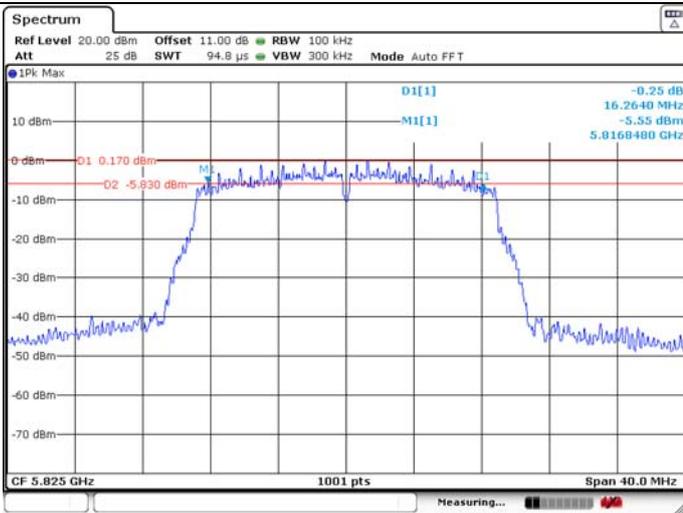
99% Occupied Bandwidth



U-NII-3 IEEE 802.11n HT20 5825MHz

6dB Bandwidth

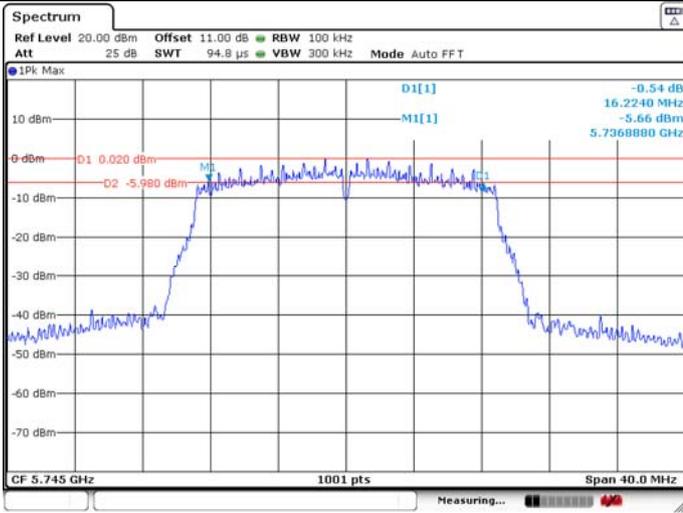
99% Occupied Bandwidth



U-NII-3 IEEE 802.11ac VHT20 5745MHz

6dB Bandwidth

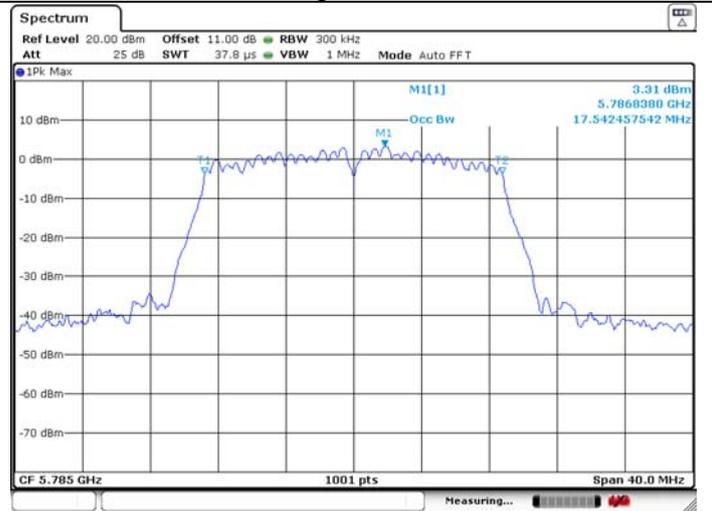
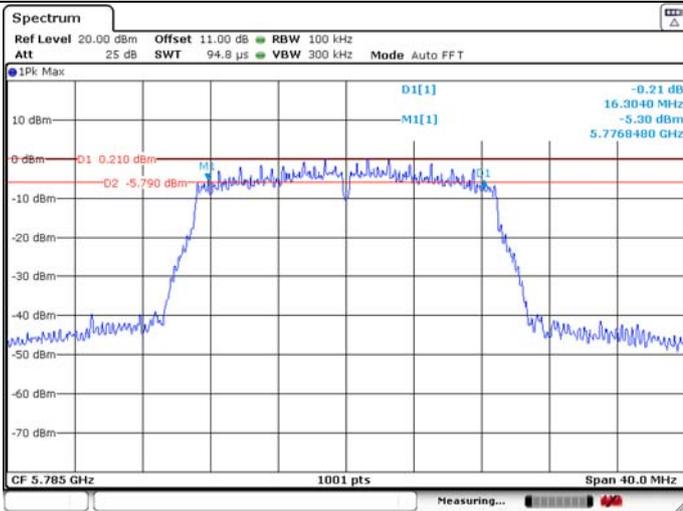
99% Occupied Bandwidth



U-NII-3 IEEE 802.11ac VHT20 5785MHz

6dB Bandwidth

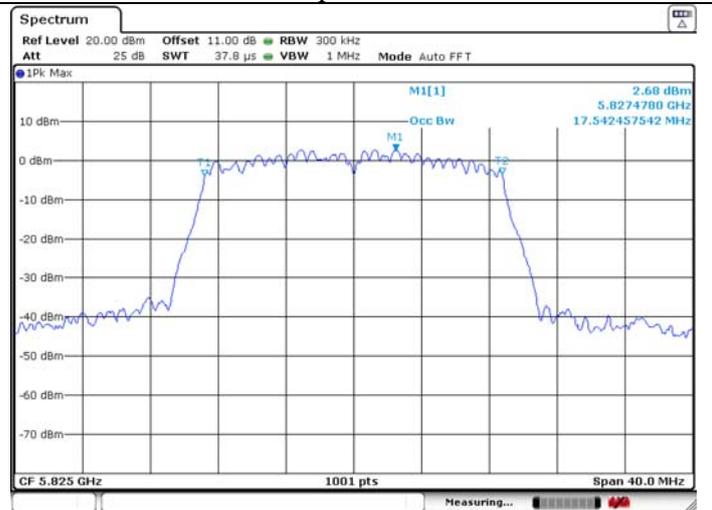
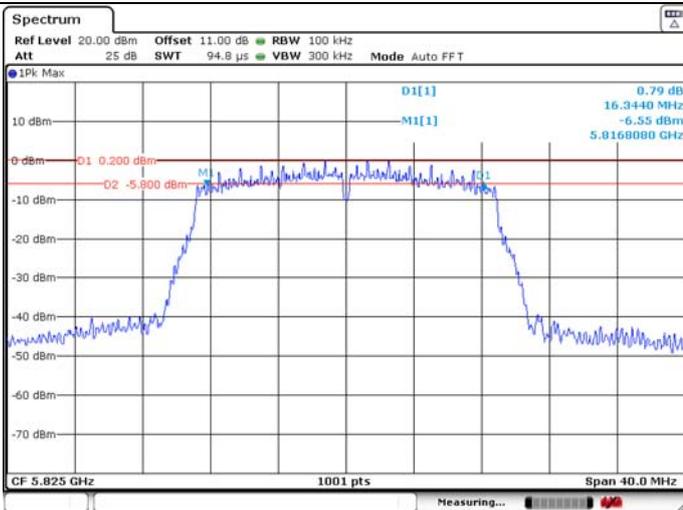
99% Occupied Bandwidth



U-NII-3 IEEE 802.11ac VHT20 5825MHz

6dB Bandwidth

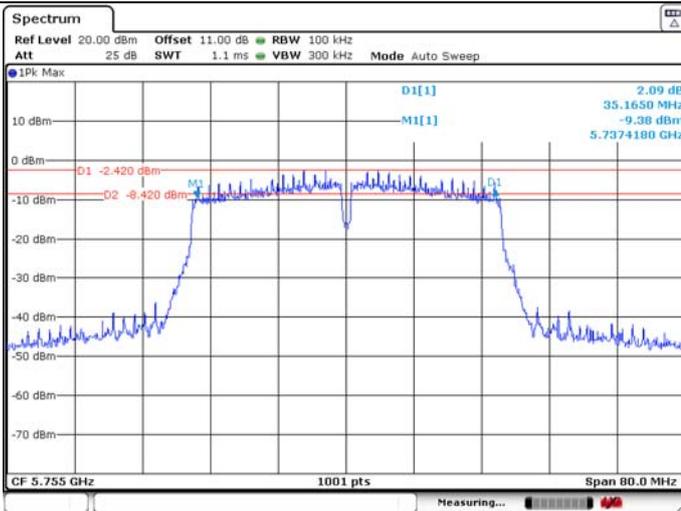
99% Occupied Bandwidth



U-NII-3 IEEE 802.11n HT40 5755MHz

6dB Bandwidth

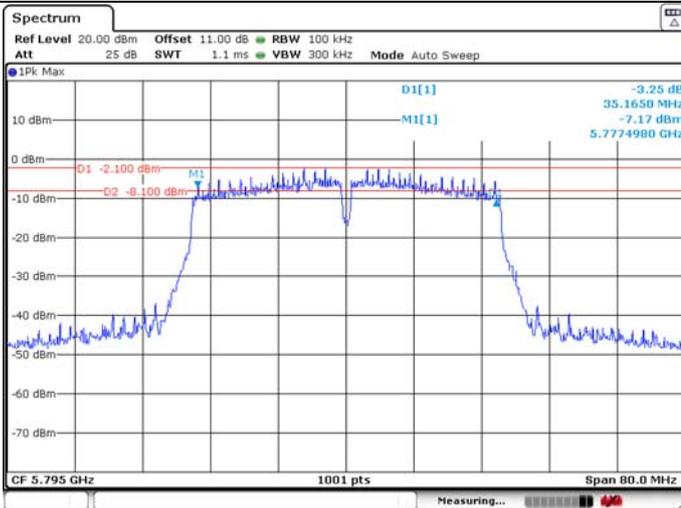
99% Occupied Bandwidth



U-NII-3 IEEE 802.11n HT40 5795MHz

6dB Bandwidth

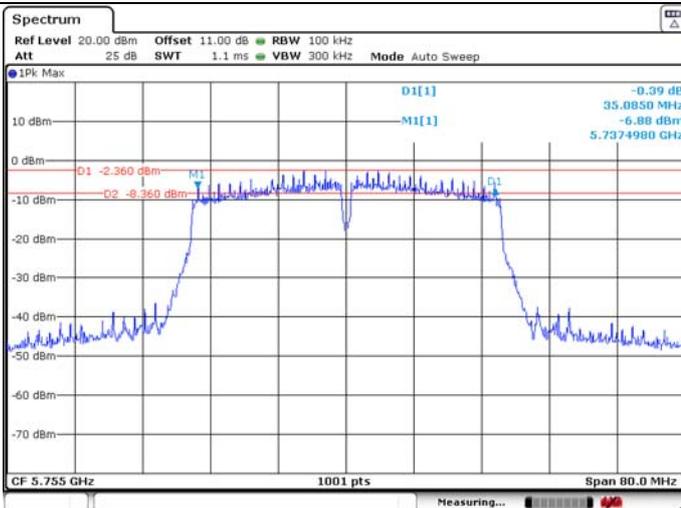
99% Occupied Bandwidth



U-NII-3 IEEE 802.11ac VHT40 5755MHz

6dB Bandwidth

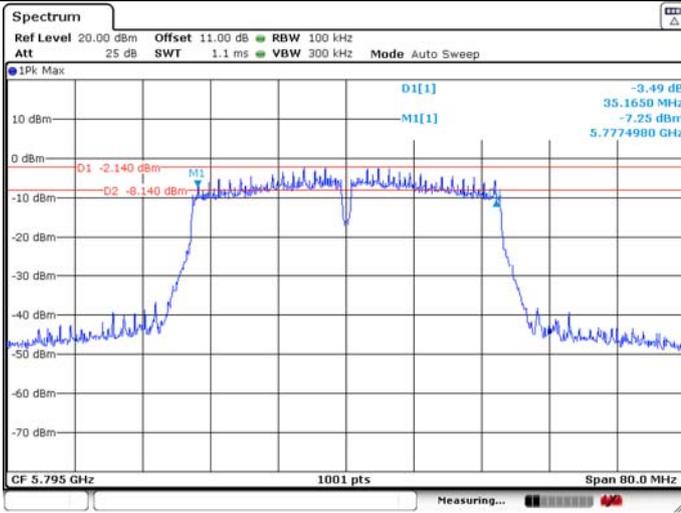
99% Occupied Bandwidth



U-NII-3 IEEE 802.11ac VHT40 5795MHz

6dB Bandwidth

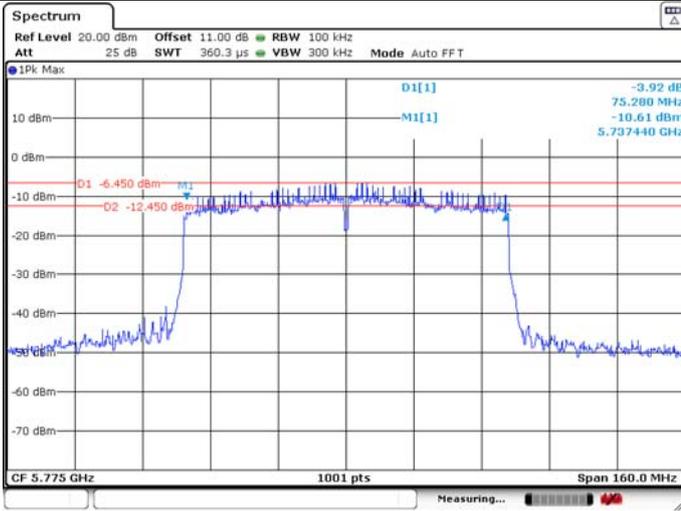
99% Occupied Bandwidth



U-NII-3 IEEE 802.11ac VHT80 5775MHz

6dB Bandwidth

99% Occupied Bandwidth



4. MAXIMUM CONDUCTED OUTPUT POWER&EIRP POWER

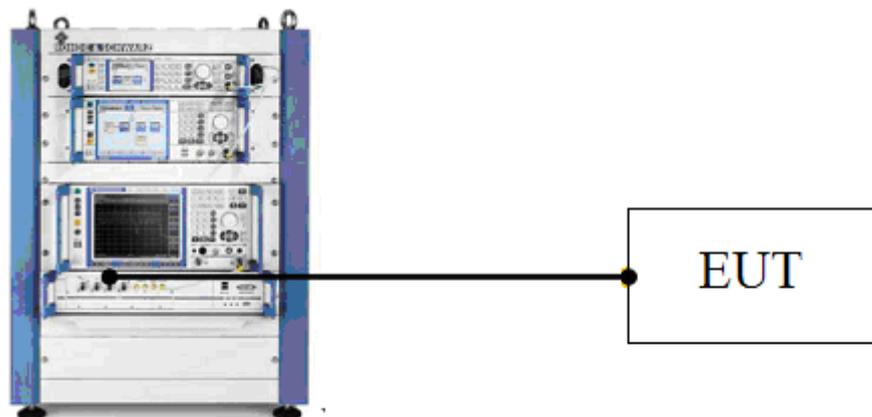
4.1. Limit

Frequency Band	Type of Devices	Maximum Conducted Output Power	EIRP Power
5150MHz~5250MHz	Devices Installed In Vehicles	N/A	30 mW or $1.76 + 10 \log_{10}B$, dBm, whichever is less
	Other Devices	N/A	200 mW or $10 + 10 \log_{10}B$, dBm, whichever power is less
5250MHz~5350MHz	Devices Installed In Vehicles	N/A	30 mW or $1.76 + 10 \log_{10}B$, dBm, whichever is less.
	Other Devices	250 mW or $11 + 10 \log_{10}B$, dBm, whichever is less.	1.0 W or $17 + 10 \log_{10}B$, dBm, whichever is less.
5470MHz~5600MHz& 5650MHz~5725MHz	All Devices	250 mW or $11 + 10 \log_{10}B$, dBm, whichever is less.	1.0 W or $17 + 10 \log_{10}B$, dBm, whichever is less.
5725MHz~5850MHz	All Devices	1W	N/A

Note:

1. B is the 99% emission bandwidth in megahertz.
2. For frequency bands 5150MHz~5250MHz,5250MHz~5350MHz, 5470MHz~5600MHz &5650MHz~5725MHz,the maximum conducted output power limit and EIRP Power calculate result refer to section 3.5.

4.2. Test Setup



4.3. Test Procedure

- a. Connect EUT antenna terminal to the OSP-B157WB with RF cable.
- b. Set the EUT transmit continuously with maximum output power.
- c. Through the test software in TS8897 to control a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.
- d. Repeat above procedures until all modes and channels were measured.

e. Record the results in the test report.

4.4. Test Result

Temperature	25.4°C	Relative Humidity			56%	Test Voltage		DC 3.3V	
Frequency Band	Test Mode	Fre (MHz)	Conducted AVG Output Power (dBm)		Total Conducted Output Power (dBm)	Total EIRP Power (dBm)	Conducted Output Power Limit (dBm)	EIRP Power Limit (dBm)	Result
			Ant 1	Ant 2					
5150MHz~5250MHz	IEEE 802.11a	5180	12.121	12.539	/	/	/	22.20	PASS
		5200	12.222	12.748	/	/	/	22.23	PASS
		5240	11.846	12.975	/	/	/	22.18	PASS
	IEEE 802.11n HT20	5180	10.483	10.726	/	18.42	/	22.44	PASS
		5200	10.609	10.895	/	18.56	/	22.46	PASS
		5240	10.853	11.086	/	18.78	/	22.44	PASS
	IEEE 802.11ac VHT20	5180	10.573	11.335	/	18.78	/	22.44	PASS
		5200	10.685	11.406	/	18.87	/	22.46	PASS
		5240	10.903	11.636	/	19.10	/	22.45	PASS
	IEEE 802.11n HT40	5190	11.847	11.277	/	19.38	/	23.01	PASS
		5230	12.092	11.611	/	19.67	/	23.01	PASS
	IEEE 802.11ac VHT40	5190	11.841	11.361	/	19.42	/	23.01	PASS
		5230	12.163	11.541	/	19.67	/	23.01	PASS
	IEEE 802.11ac VHT80	5210	12.476	12.912	/	20.51	/	23.01	PASS
5250MHz~5350MHz	IEEE 802.11a	5260	12.441	13.201	/	/	23.18	29.18	PASS
		5300	12.492	13.388	/	/	23.18	29.18	PASS
		5320	12.465	13.398	/	/	23.18	29.18	PASS
	IEEE 802.11n HT20	5260	10.915	12.021	14.51	19.31	23.46	29.46	PASS
		5300	12.747	12.102	15.45	20.25	23.47	29.47	PASS
		5320	12.722	12.248	15.50	20.30	23.45	29.45	PASS
	IEEE 802.11ac VHT20	5260	11.443	12.053	14.77	19.57	23.44	29.44	PASS
		5300	11.430	12.234	14.86	19.66	23.45	29.45	PASS
		5320	11.529	12.167	14.87	19.67	23.45	29.45	PASS
	IEEE 802.11n HT40	5270	12.293	11.758	15.04	19.84	23.98	30.00	PASS
		5310	12.364	11.848	15.12	19.92	23.98	30.00	PASS
	IEEE 802.11ac VHT40	5270	12.219	11.801	15.03	19.83	23.98	30.00	PASS
		5310	12.379	11.895	15.15	19.95	23.98	30.00	PASS
	IEEE 802.11ac VHT80	5290	12.878	13.237	16.07	20.87	23.98	30.00	PASS

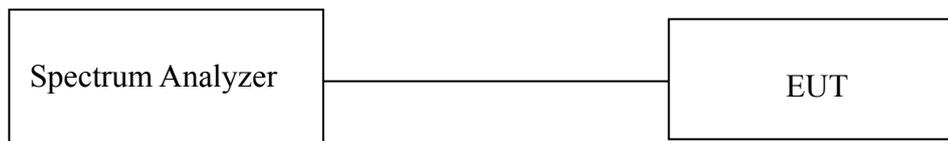
Frequency Band	Test Mode	Fre (MHz)	Conducted AVG Output Power (dBm)		Total Conducted Output Power (dBm)	Total EIRP Power (dBm)	Conducted Output Power Limit (dBm)	EIRP Power Limit (dBm)	Result
			Ant 1	Ant 2					
5470MHz~5600MHz&5650MHz~5725MHz	IEEE 802.11a	5500	12.882	13.845	/	/	23.18	29.18	PASS
		5580	13.151	14.219	/	/	23.17	29.17	PASS
		5700	13.767	14.710	/	/	23.17	29.17	PASS
	IEEE 802.11n HT20	5500	13.156	12.598	15.90	20.70	23.45	29.45	PASS
		5580	13.517	12.884	16.22	21.02	23.45	29.45	PASS
		5700	11.098	12.093	14.63	19.43	23.45	29.45	PASS
	IEEE 802.11ac VHT20	5500	11.860	12.629	15.27	20.07	23.45	29.45	PASS
		5580	12.226	12.925	15.60	20.40	23.44	29.44	PASS
		5700	12.802	13.487	16.17	20.97	23.46	29.46	PASS
	IEEE 802.11n HT40	5510	12.900	12.381	15.66	20.46	23.98	30.00	PASS
		5670	13.605	13.079	16.36	21.16	23.98	30.00	PASS
	IEEE 802.11ac VHT40	5510	12.817	12.344	15.60	20.40	23.98	30.00	PASS
5670		13.602	13.155	16.39	21.19	23.98	30.00	PASS	
IEEE 802.11ac VHT80	5530	13.436	13.843	16.65	21.45	23.98	30.00	PASS	
5725MHz~5850MHz	IEEE 802.11a	5745	11.490	13.160	/	/	30.0	/	PASS
		5785	11.536	13.221	/	/	30.0	/	PASS
		5825	11.551	13.209	/	/	30.0	/	PASS
	IEEE 802.11n HT20	5745	11.254	12.288	14.81	/	28.19	/	PASS
		5785	11.345	12.422	14.93	/	28.19	/	PASS
		5825	11.429	12.530	15.02	/	28.19	/	PASS
	IEEE 802.11ac VHT20	5745	10.553	12.355	14.56	/	28.19	/	PASS
		5785	10.563	12.339	14.55	/	28.19	/	PASS
		5825	10.699	12.489	14.70	/	28.19	/	PASS
	IEEE 802.11n HT40	5755	14.012	13.432	16.74	/	28.19	/	PASS
		5795	14.043	13.581	16.83	/	28.19	/	PASS
	IEEE 802.11ac VHT40	5755	13.962	13.523	16.76	/	28.19	/	PASS
		5795	14.109	13.593	16.87	/	28.19	/	PASS
	IEEE 802.11ac VHT80	5775	14.470	14.898	17.70	/	28.19	/	PASS

5. POWER SPECTRAL DENSITY

5.1. Limit

Frequency Band	Type of Devices	Conducted Power Spectral Density	EIRP Power Spectral Density
5150MHz~5250MHz	Devices Installed In Vehicles	N/A	N/A
	Other Devices	N/A	10dBm/MHz
5250MHz~5350MHz	Devices Installed In Vehicles	N/A	N/A
	Other Devices	11dBm/MHz	N/A
5470MHz~5600MHz&5650MHz~5725MHz	All Devices	11dBm/MHz	N/A
5725MHz~5850MHz	All Devices	30dBm/500KHz	N/A

5.2. Test Setup



5.3. Spectrum Analyzer Setting

Spectrum Parameters	Setting
RBW	1MHz(For frequency band(s):5150MHz~5250MHz,5250MHz~5350MHz,5470MHz~5600MHz&5650MHz~5725MHz) 500KHz(For frequency band :5725MHz~5850MHz)
VBW	3MHz(For frequency band(s):5150MHz~5250MHz,5250MHz~5350MHz,5470MHz~5600MHz&5650MHz~5725MHz) 2MHz(For frequency band :5725MHz~5850MHz)
Span	encompass the entire 26 dB EBW or 99% OBW of the signal
Sweep Time	Auto
Number of Sweep Point	$\geq 2 \times \text{SPAN}/\text{RBW}$
Detector	RMS(power averaging)
Trace Average	≥ 100 traces

5.4. Test Procedure

- Connect EUT antenna terminal to the spectrum analyzer with RF cable.
- Spectrum analyzer setting parameters in accordance with section 5.3.
- Set the EUT transmit continuously with maximum output power.
- Allow trace to stabilize, use the marker-to-peak function to set the marker to the average of the emission.
- If the duty cycle of test signal $< 98\%$, the result = max measured value + $10 \times \log(1/\text{duty cycle})$;
If the duty cycle of test signal $\geq 98\%$, the result = max measured value.
- Repeat above procedures until all modes and channels were measured.
- Record the results in the test report.

5.5. Test Result

Temperature		25.4°C	Relative Humidity		56%	Test Voltage	DC 3.3V	
Frequency Band	Test Mode	Fre (MHz)	Conducted Power Spectral Density (dBm/MHz)		Duty Factor (dB)	Total EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
			Ant 1	Ant 2				
5150MH~ 5250MHz	IEEE 802.11a	5180	2.66	3.18	0.11	/	10.00	PASS
		5200	2.79	2.98	0.11	/	10.00	PASS
		5240	2.92	3.22	0.11	/	10.00	PASS
	IEEE 802.11n HT20	5180	0.50	0.71	0.12	8.53	10.00	PASS
		5200	0.31	0.47	0.12	8.32	10.00	PASS
		5240	0.74	0.73	0.12	8.66	10.00	PASS
	IEEE 802.11ac VHT20	5180	0.40	0.72	0.10	8.47	10.00	PASS
		5200	0.28	0.58	0.10	8.34	10.00	PASS
		5240	0.63	0.71	0.10	8.58	10.00	PASS
	IEEE 802.11n HT40	5190	-0.43	0.26	0.19	7.93	10.00	PASS
		5230	-0.17	0.63	0.19	8.25	10.00	PASS
	IEEE 802.11ac VHT40	5190	-0.40	0.29	0.23	8.00	10.00	PASS
		5230	-0.34	0.68	0.23	8.24	10.00	PASS
	IEEE 802.11ac VHT80	5210	-4.31	-3.42	0.37	4.34	10.00	PASS

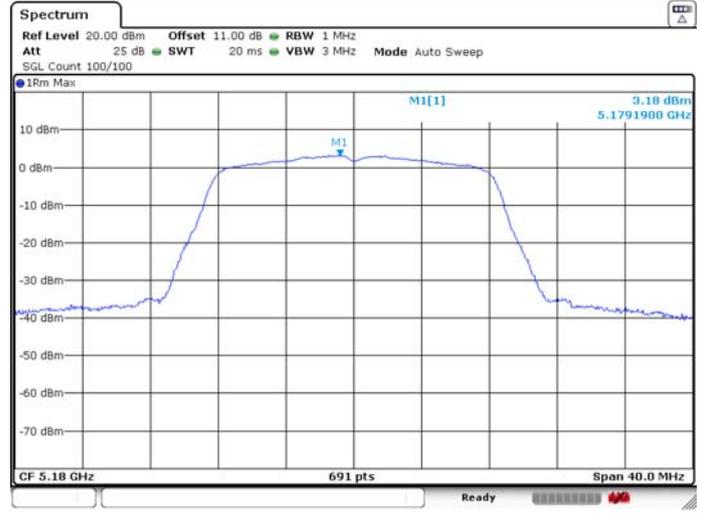
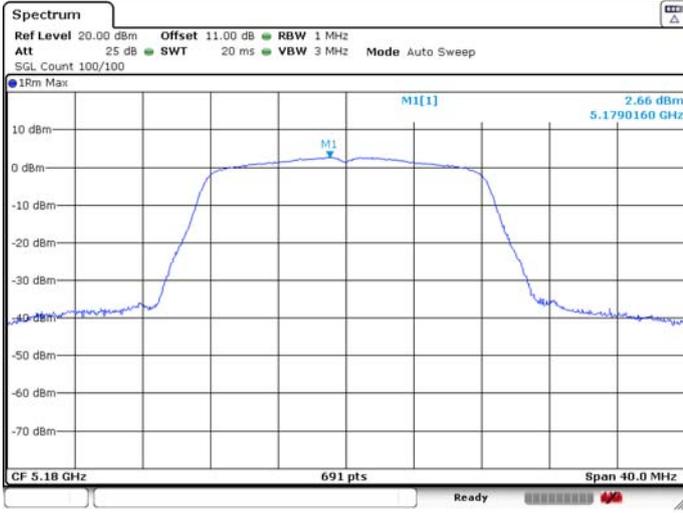
Frequency Band	Test Mode	Fre (MHz)	Conducted Power Spectral Density (dBm/MHz)		Duty Factor (dB)	Total Conducted Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
			Ant 1	Ant 2				
5250MH~5350MHz	IEEE 802.11a	5260	4.20	4.70	0.11	/	11.00	PASS
		5300	4.46	5.23	0.11	/	11.00	PASS
		5320	4.99	5.70	0.11	/	11.00	PASS
	IEEE 802.11n HT20	5260	2.97	3.77	0.12	6.52	11.00	PASS
		5300	3.28	4.29	0.12	6.94	11.00	PASS
		5320	3.75	4.73	0.12	7.40	11.00	PASS
	IEEE 802.11ac VHT20	5260	2.83	3.52	0.10	6.30	11.00	PASS
		5300	3.30	4.06	0.10	6.80	11.00	PASS
		5320	3.68	4.76	0.10	7.36	11.00	PASS
	IEEE 802.11n HT40	5270	0.34	0.92	0.19	3.84	11.00	PASS
		5310	0.80	1.35	0.19	4.29	11.00	PASS
	IEEE 802.11ac VHT40	5270	0.37	1.02	0.23	3.95	11.00	PASS
		5310	0.96	1.58	0.23	4.52	11.00	PASS
	IEEE 802.11ac VHT80	5290	-3.38	-2.86	0.37	0.27	11.00	PASS
5470MH~5600MH&5650MH~5725MHz	IEEE 802.11a	5500	4.40	5.59	0.11	/	11.00	PASS
		5580	3.13	4.81	0.11	/	11.00	PASS
		5700	3.53	5.14	0.11	/	11.00	PASS
	IEEE 802.11n HT20	5500	3.05	4.73	0.12	7.10	11.00	PASS
		5580	1.91	3.82	0.12	6.10	11.00	PASS
		5700	2.48	4.40	0.12	6.67	11.00	PASS
	IEEE 802.11ac VHT20	5500	3.03	1.67	0.10	5.51	11.00	PASS
		5580	1.76	3.67	0.10	5.93	11.00	PASS
		5700	2.37	4.16	0.10	6.46	11.00	PASS
	IEEE 802.11n HT40	5510	0.23	1.44	0.19	4.08	11.00	PASS
		5670	-0.52	1.09	0.19	3.56	11.00	PASS
	IEEE 802.11ac VHT40	5510	0.41	1.39	0.23	4.17	11.00	PASS
		5670	-0.47	1.18	0.23	3.67	11.00	PASS
	IEEE 802.11ac VHT80	5530	-4.33	-2.83	0.37	-0.13	11.00	PASS

Frequency Band	Test Mode	Fre (MHz)	Conducted Power Spectral Density (dBm/500KHz)		Duty Factor (dB)	Total Conducted Power Spectral Density (dBm/500KHz)	Limit (dBm/500KHz)	Result
			Ant 1	Ant 2				
5725MH~5850MHz	IEEE 802.11a	5745	1.83	3.74	0.11	/	30.00	PASS
		5785	2.51	3.72	0.11	/	30.00	PASS
		5825	2.18	3.87	0.11	/	30.00	PASS
	IEEE 802.11n HT20	5745	1.35	2.83	0.12	5.28	28.19	PASS
		5785	1.63	3.47	0.12	5.77	28.19	PASS
		5825	1.84	3.30	0.12	5.76	28.19	PASS
	IEEE 802.11ac VHT20	5745	1.14	2.54	0.10	5.00	28.19	PASS
		5785	1.75	2.79	0.10	5.41	28.19	PASS
		5825	1.68	3.17	0.10	5.60	28.19	PASS
	IEEE 802.11n HT40	5755	-1.28	-3.45	0.19	0.97	28.19	PASS
		5795	-1.06	0.35	0.19	2.90	28.19	PASS
	IEEE 802.11ac VHT40	5755	-1.44	-0.38	0.23	2.36	28.19	PASS
		5795	-1.21	0.12	0.23	2.75	28.19	PASS
	IEEE 802.11ac VHT80	5775	-5.36	-3.74	0.37	-1.09	28.19	PASS

U-NII-1 IEEE 802.11a 5180MHz

ANT 1

ANT 2



U-NII-1 IEEE 802.11a 5200MHz

ANT 1

ANT 2



U-NII-1 IEEE 802.11a 5240MHz

ANT 1

ANT 2



U-NII-1 IEEE 802.11n HT20 5180MHz

ANT 1

ANT 2



U-NII-1 IEEE 802.11n HT20 5200MHz

ANT 1

ANT 2



U-NII-1 IEEE 802.11n HT20 5240MHz

ANT 1

ANT 2



U-NII-1 IEEE 802.11ac VHT20 5180MHz

ANT 1

ANT 2



U-NII-1 IEEE 802.11ac VHT20 5200MHz

ANT 1

ANT 2



U-NII-1 IEEE 802.11ac VHT20 5240MHz

ANT 1

ANT 2



U-NII-1 IEEE 802.11n HT40 5190MHz

ANT 1

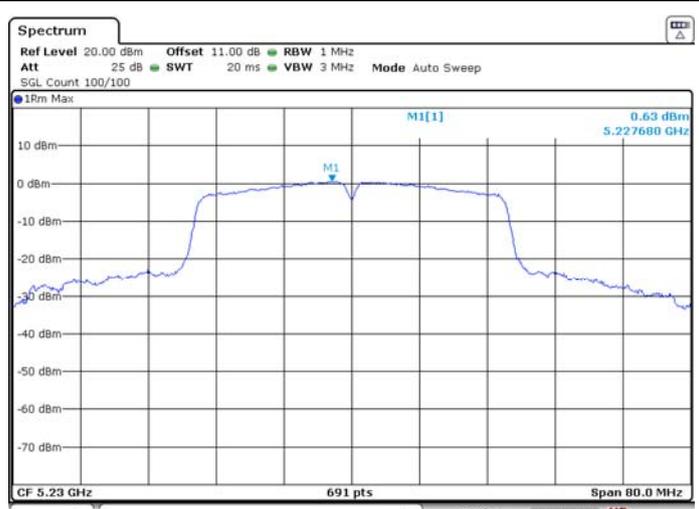
ANT 2



U-NII-1 IEEE 802.11n HT40 5230MHz

ANT 1

ANT 2



U-NII-1 IEEE 802.11ac VHT40 5190MHz

ANT 1

ANT 2



U-NII-1 IEEE 802.11ac VHT40 5230MHz

ANT 1

ANT 2



U-NII-1 IEEE 802.11ac VHT80 5210MHz

ANT 1

ANT 2



U-NII-2A IEEE 802.11a 5260MHz

ANT 1

ANT 2



U-NII-2A IEEE 802.11a 5300MHz

ANT 1

ANT 2



U-NII-2A IEEE 802.11a 5320MHz

ANT 1

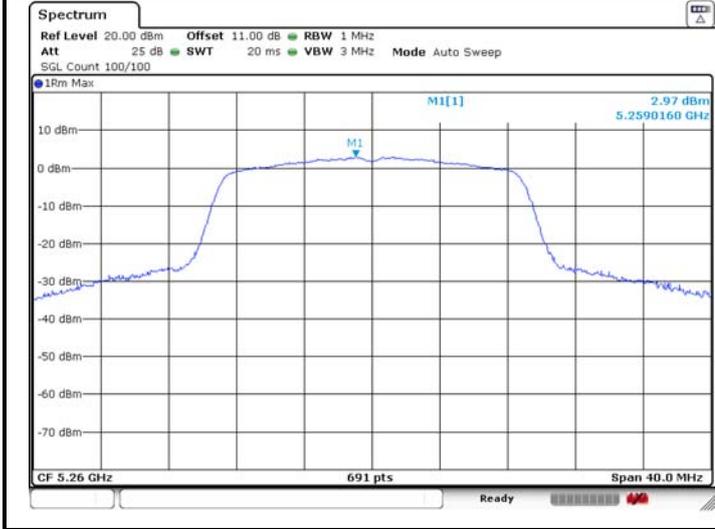
ANT 2



U-NII-2A IEEE 802.11n HT20 5260MHz

ANT 1

ANT 2



U-NII-2A IEEE 802.11n HT20 5300MHz

ANT 1

ANT 2



U-NII-2A IEEE 802.11n HT20 5320MHz

ANT 1

ANT 2



U-NII-2A IEEE 802.11ac VHT20 5260MHz

ANT 1

ANT 2



U-NII-2A IEEE 802.11ac VHT20 5300MHz

ANT 1

ANT 2



U-NII-2A IEEE 802.11ac VHT20 5320MHz

ANT 1

ANT 2



U-NII-2A IEEE 802.11n HT40 5270MHz

ANT 1

ANT 2



U-NII-2A IEEE 802.11n HT40 5310MHz

ANT 1

ANT 2



U-NII-2A IEEE 802.11ac VHT40 5270MHz

ANT 1

ANT 2



U-NII-2A IEEE 802.11ac VHT40 5310MHz

ANT 1

ANT 2



U-NII-2A IEEE 802.11ac VHT80 5290MHz

ANT 1

ANT 2



U-NII-2C 802.11a IEEE 5500MHz

ANT 1

ANT 2



U-NII-2C IEEE 802.11a 5580MHz

ANT 1

ANT 2



U-NII-2C IEEE 802.11a 5700MHz

ANT 1

ANT 2



U-NII-2C IEEE 802.11n HT20 5500MHz

ANT 1

ANT 2



U-NII-2C IEEE 802.11n HT20 5580MHz

ANT 1

ANT 2



U-NII-2C IEEE 802.11n HT20 5700MHz

ANT 1

ANT 2



U-NII-2C IEEE 802.11ac VHT20 5500MHz

ANT 1

ANT 2



U-NII-2C IEEE 802.11ac VHT20 5580MHz

ANT 1

ANT 2



U-NII-2C IEEE 802.11ac VHT20 5700MHz

ANT 1

ANT 2



U-NII-2C IEEE 802.11n HT40 5510MHz

ANT 1

ANT 2



U-NII-2C IEEE 802.11n HT40 5670MHz

ANT 1

ANT 2



U-NII-2C IEEE 802.11ac VHT40 5510MHz

ANT 1

ANT 2



U-NII-2C IEEE 802.11ac VHT40 5670MHz

ANT 1

ANT 2



U-NII-2C IEEE 802.11ac VHT80 5530MHz

ANT 1

ANT 2



U-NII-3 IEEE 802.11a 5745MHz

ANT 1

ANT 2



U-NII-3 IEEE 802.11a 5785MHz

ANT 1

ANT 2



U-NII-3 IEEE 802.11a 5825MHz

ANT 1

ANT 2



U-NI-3 IEEE 802.11n HT20 5745MHz

ANT 1

ANT 2



U-NII-3 IEEE 802.11n HT20 5785MHz

ANT 1

ANT 2



U-NII-3 IEEE 802.11n HT20 5825MHz

ANT 1

ANT 2



U-NII-3 IEEE 802.11ac VHT20 5745MHz

ANT 1

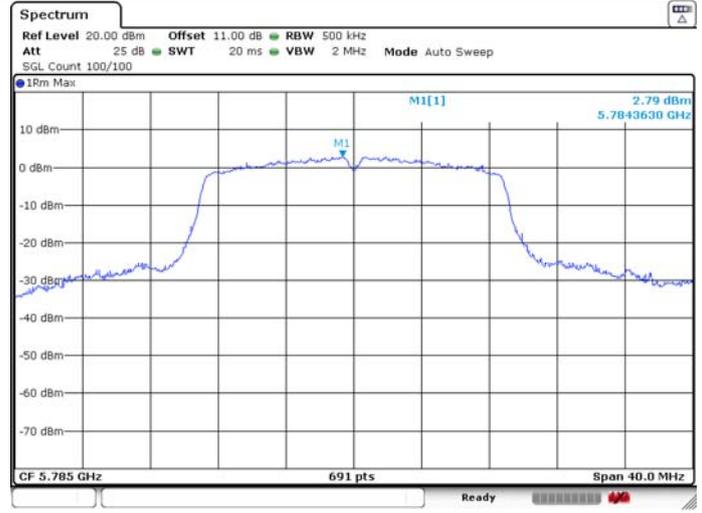
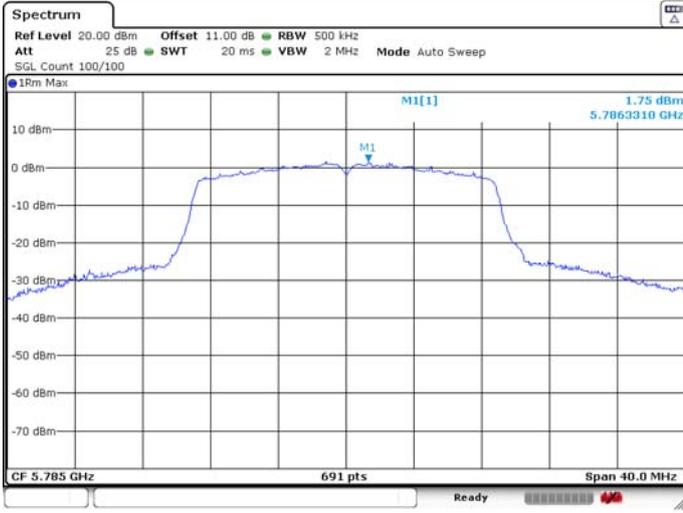
ANT 2



U-NII-3 IEEE 802.11ac VHT20 5785MHz

ANT 1

ANT 2



U-NII-3 IEEE 802.11ac VHT20 5825MHz

ANT 1

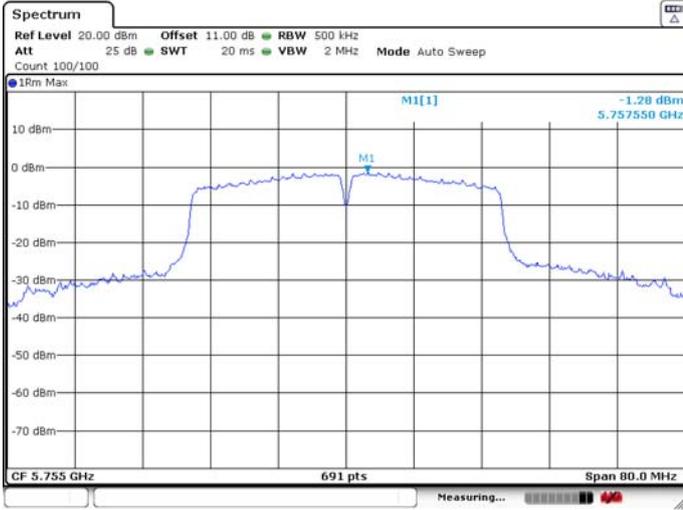
ANT 2



U-NII-3 IEEE 802.11n HT40 5755MHz

ANT 1

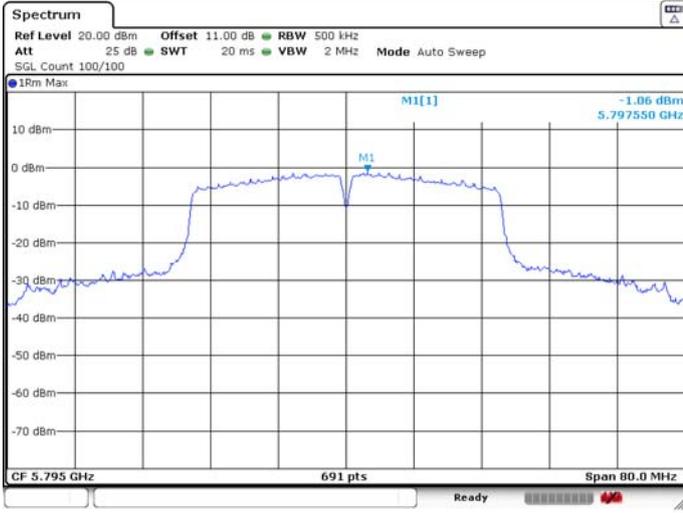
ANT 2



U-NII-3 IEEE 802.11n HT40 5795MHz

ANT 1

ANT 2



U-NII-3 IEEE 802.11ac VHT40 5755MHz

ANT 1

ANT 2



U-NII-3 IEEE 802.11ac VHT40 5795MHz

ANT 1

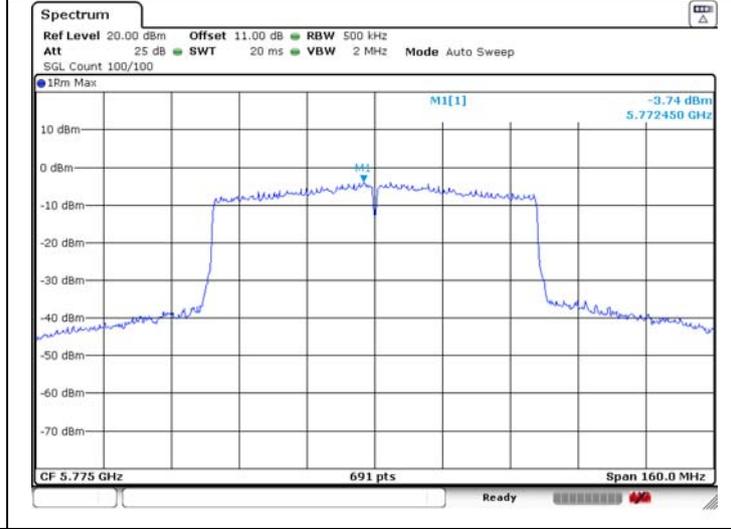
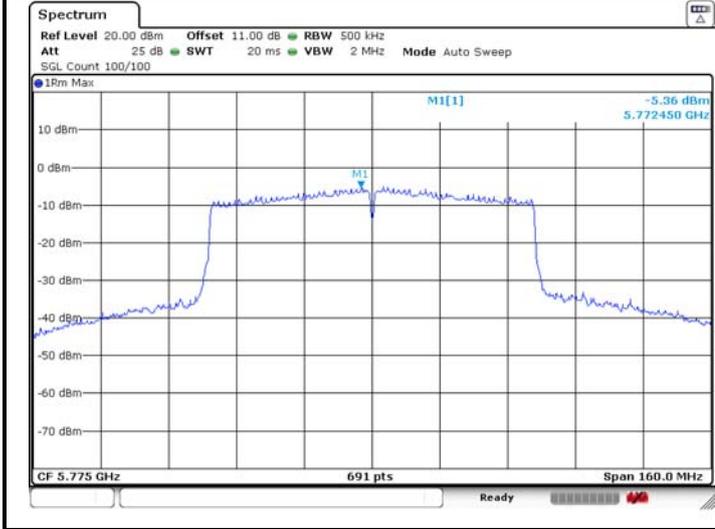
ANT 2



U-NII-3 IEEE 802.11ac VHT80 5775MHz

ANT 1

ANT 2



6. UNWANTED EMISSIONS AND BAND EDGE

6.1. Limit

The maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band:
 - a) All emissions outside the band 5250-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p.; or
 - b) All emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. and its power shall comply with the spectral power density for operation within the band 5150-5250 MHz.
- (3) For transmitters operating in the 5.47-5.60 GHz&5.65-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band:
 - a) 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;
 - b) 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;
 - c) 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and
 - d) -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

The unwanted emissions which fall in Restricted bands shall not exceed the field strength levels specified in the following table:

General field strength limits at frequencies below 30 MHz

Frequency	Magnetic field strength (H-Field) ($\mu\text{A/m}$)	Measurement distance (m)
9 - 490 kHz	$6.37/F$ (F in kHz)	300
490 - 1705 kHz	$63.7/F$ (F in kHz)	30
1.705 - 30 MHz	0.08	30

Note:

1. The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

General field strength limits at frequencies above 30 MHz

Frequency(MHz)	Field Strength($\mu\text{V/m}$ at 3 m)
30 - 88	100
88 - 216	150
216 - 960	200
Above 960	500

Note:

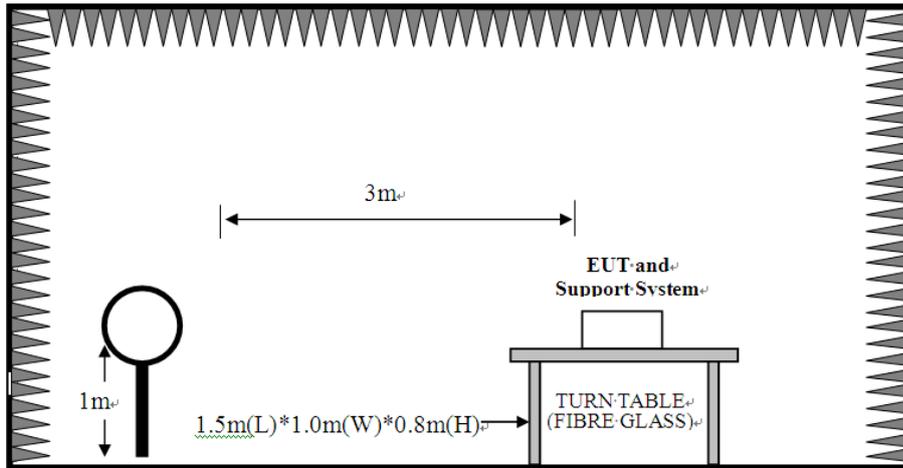
1. Emission level($\text{dB}\mu\text{V/m}$)= $20 \times \log(\text{Emission level } (\mu\text{V/m}))$.
2. The smaller limit shall apply at the cross point between two frequency bands.
3. Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

Restricted frequency band

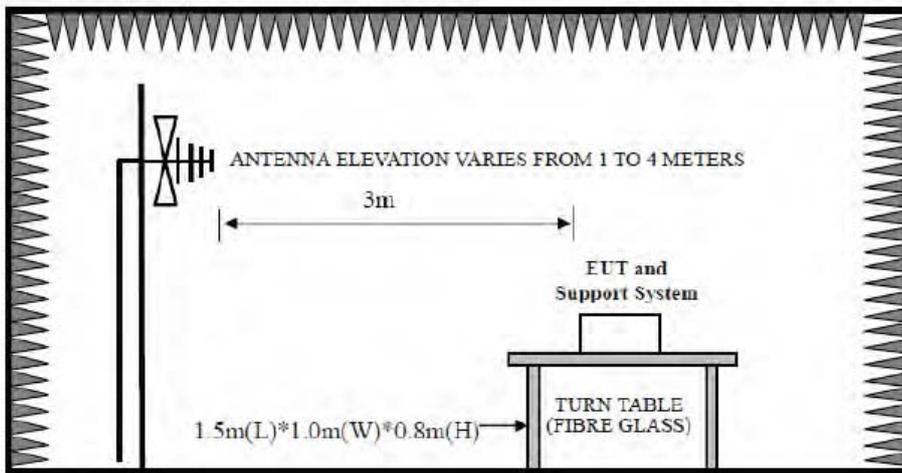
MHz	MHz	GHz
0.090 - 0.110	149.9 - 150.05	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.52525	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 - 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	
8.37625 - 8.38675	1718.8 - 1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 - 2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 - 13.41	3260 - 3267	
16.42 - 16.423	3332 - 3339	
16.69475 - 16.69525	3345.8 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 - 8500	
108 - 138	--	

6.2. Test Setup

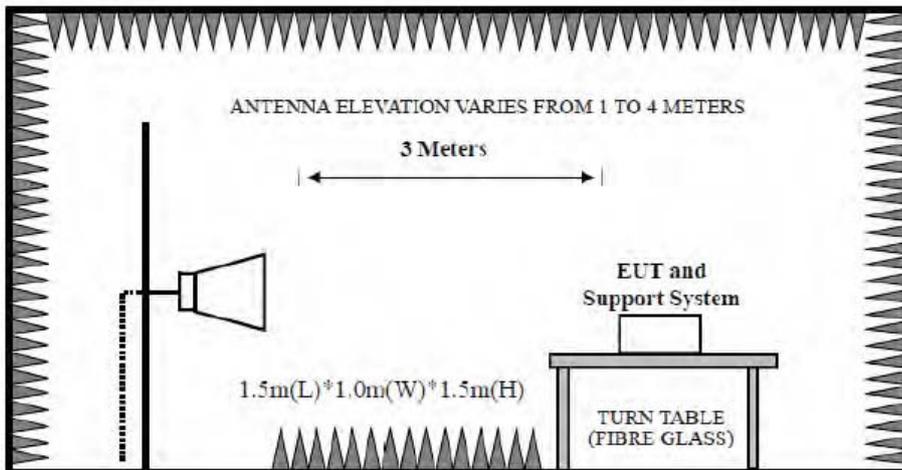
9kHz~30MHz



30~1000MHz



Above 1GHz



6.3. Spectrum Analyzer Setting

For 9KHz-150KHz

Spectrum Parameters	Setting
RBW	300Hz(for Peak&AVG)/CISPR 200Hz(for QP)
VBW	300Hz(for Peak&AVG)/CISPR 200Hz(for QP)
Start frequency	9KHz
Stop frequency	150KHz
Sweep Time	Auto
Detector	PEAK/QP/AVG
Trace Mode	Max Hold

Note : For 9KHz-90KHz&110KHz-150KHz,the detector is average,other frequency is CISPR QP detector.

For 150KHz-30MHz

Spectrum Parameters	Setting
RBW	9KHz
VBW	9KHz
Start frequency	150KHz
Stop frequency	30MHz
Sweep Time	Auto
Detector	QP
Trace Mode	Max Hold

Note : For 150KHz-490KHz,the detector is average,other frequency is CISPR QP detector.

For 30MHz-1000MHz

Spectrum Parameters	Setting
RBW	120KHz
VBW	300KHz
Start frequency	30MHz
Stop frequency	1GHz
Sweep Time	Auto
Detector	QP
Trace Mode	Max Hold

For Above 1000MHz

Spectrum Parameters	Setting	
RBW	1MHz	
VBW	PEAK Measurement	AVG Measurement
	3MHz	Duty cycle $\geq 98\%$, VBW=10Hz Duty cycle $< 98\%$, VBW $\geq 1/T$ Video bandwidth mode=RMS (power averaging)
Start frequency	1GHz	
Stop frequency	40GHz	
Sweep Time	Auto	
Detector	PEAK	
Trace Mode	Max Hold	

Note : T is the on-time time of the duty cycle,when EUT transmit continuously with maximum output power,unit is seconds. reference section 2.9 for the on-time time.

6.4. Test Procedure

- a. EUT was placed on a turn table, which is 0.8 meter high above ground for below 1GHz test, and which is 1.5 meter high above ground for above 1GHz test.
- b. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower.
- c. Set the EUT transmit continuously with maximum output power.
- d. The turn table can rotate 360 degrees to determine the position of the maximum emission level.
- e. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on test.
- f. Spectrum analyzer setting parameters in accordance with section 6.3.
- g. Repeat above procedures until all channels were measured.
- h. Record the results in the test report.
- i. IEEE 802.11a, IEEE 802.11n HT20, IEEE 802.11n HT40, IEEE 802.11ac VHT20, IEEE 802.11ac VHT40, IEEE 802.11ac VHT80 all have been tested, only worst case IEEE 802.11n HT20 is recorded.

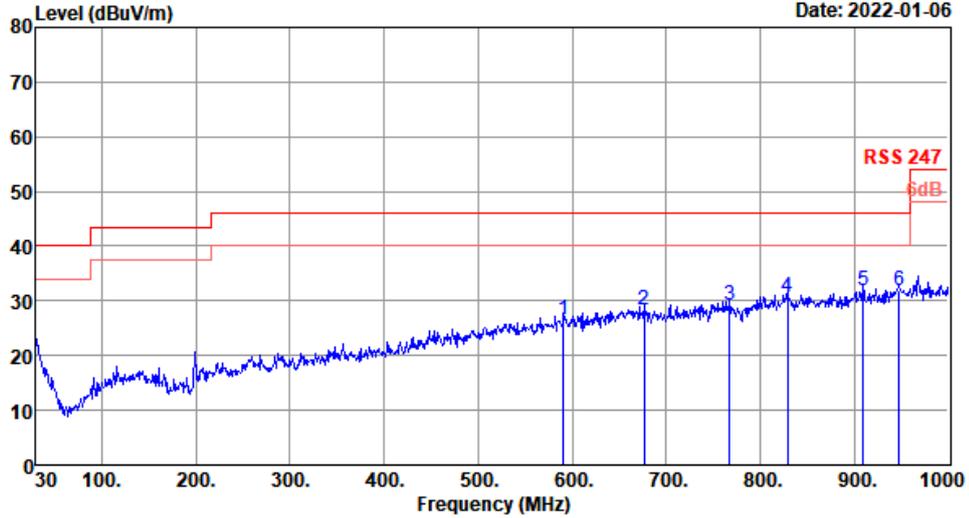
6.5. Test Result

Radiated Emissions Below 1GHz

EST Technology

Chilingxiang, Qishantou, Santun,
Houjie, Dongguan, Guangdong, China
Tel: +86-769-83081888
Fax: +86-769-83081878

Data: 25 File: \\EMC-966-3\test data\2022\RF\Gao Sheng Dai\WKCT27M2501.EM6 (46) Date: 2022-01-06



Site no. : 3# 966 Chamber Data no. : 25
 Dis. / Ant. : 3m 31218 Ant. pol. : VERTICAL
 Limit : RSS 247
 Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa
 Engineer : Carlos
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : TX Mode

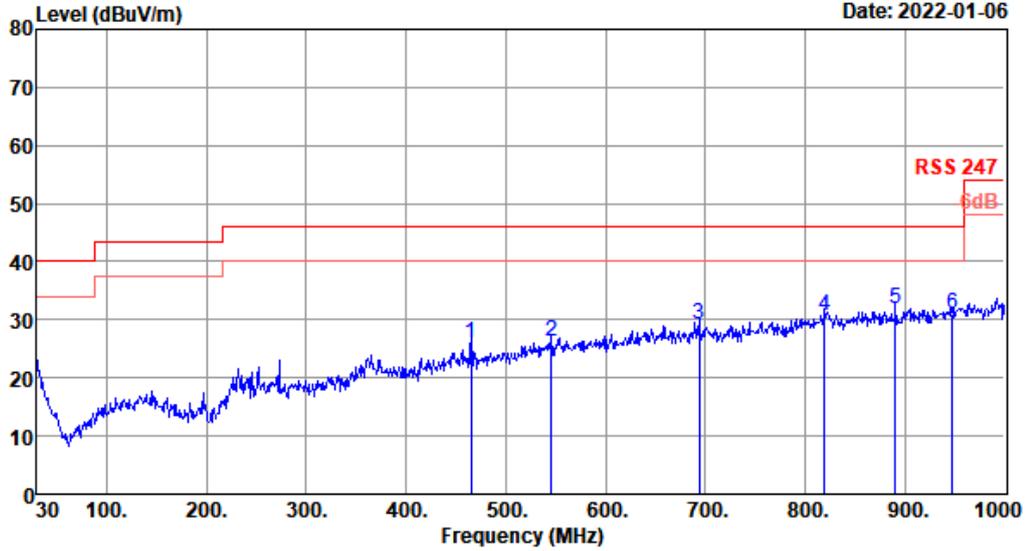
	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	590.66	20.11	2.52	3.99	26.62	46.00	19.38	QP
2	676.99	21.50	2.78	3.96	28.24	46.00	17.76	QP
3	767.20	22.47	3.04	3.60	29.11	46.00	16.89	QP
4	829.28	23.59	3.18	3.82	30.59	46.00	15.41	QP
5	909.79	24.50	3.34	4.06	31.90	46.00	14.10	QP
6	947.62	24.56	3.89	3.50	31.95	46.00	14.05	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.

Data: 26

File: \\EMC-966-3\test data\2022\RF\Gao Sheng Da\WKCT27M2501.EM6 (46)

Date: 2022-01-06

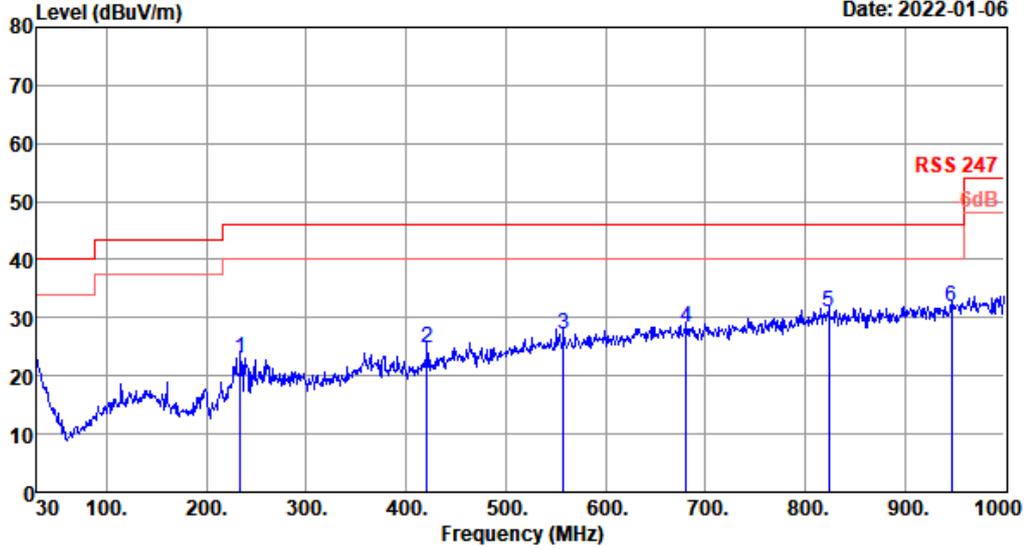


Site no. : 3# 966 Chamber Data no. : 26
 Dis. / Ant. : 3m 31218 Ant. pol. : HORIZONTAL
 Limit : RSS 247
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Carlos
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : TX Mode

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	465.53	17.81	2.25	5.96	26.02	46.00	19.98	QP
2	546.04	19.66	2.46	4.08	26.20	46.00	19.80	QP
3	693.48	21.44	2.70	5.03	29.17	46.00	16.83	QP
4	819.58	23.50	3.15	4.16	30.81	46.00	15.19	QP
5	890.39	23.50	3.30	4.94	31.74	46.00	14.26	QP
6	947.62	24.56	3.89	2.64	31.09	46.00	14.91	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.

Data: 27 File: \\EMC-966-3\test data\2022\RF\Gao Sheng Da\WKCT27M2501.EM6 (46) Date: 2022-01-06

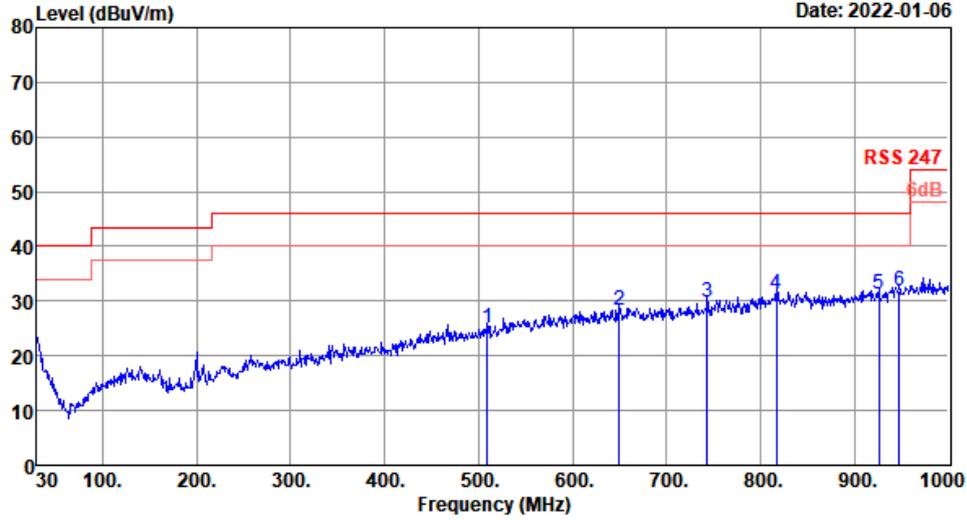


Site no. : 3# 966 Chamber Data no. : 27
 Dis. / Ant. : 3m 31218 Ant. pol. : HORIZONTAL
 Limit : RSS 247
 Env. / Ins. : Temp:23.6%;Humi:56%;Press:101.52kPa
 Engineer : Carlos
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : RX Mode

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	233.70	11.02	1.35	10.75	23.12	46.00	22.88	QP
2	420.91	16.92	1.87	6.10	24.89	46.00	21.11	QP
3	557.68	19.54	2.44	5.08	27.06	46.00	18.94	QP
4	680.87	21.49	2.75	4.08	28.32	46.00	17.68	QP
5	823.46	23.54	3.17	4.31	31.02	46.00	14.98	QP
6	946.65	24.54	3.93	3.26	31.73	46.00	14.27	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.

Data: 28 File: \\EMC-966-3\test data\2022\RF\Gao Sheng Dai\WKCT27M2501.EM6 (46) Date: 2022-01-06



Site no. : 3# 966 Chamber Data no. : 28
 Dis. / Ant. : 3m 31218 Ant. pol. : VERTICAL
 Limit : RSS 247
 Env. / Ins. : Temp:23.6'; Humi:56%; Press:101.52kPa
 Engineer : Carlos
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : RX Mode

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	509.18	18.68	2.32	3.98	24.98	46.00	21.02	QP
2	649.83	21.20	2.72	4.42	28.34	46.00	17.66	QP
3	742.95	21.83	3.13	4.71	29.67	46.00	16.33	QP
4	816.67	23.47	3.15	4.55	31.17	46.00	14.83	QP
5	926.28	24.06	3.44	3.70	31.20	46.00	14.80	QP
6	947.62	24.56	3.89	3.32	31.77	46.00	14.23	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.

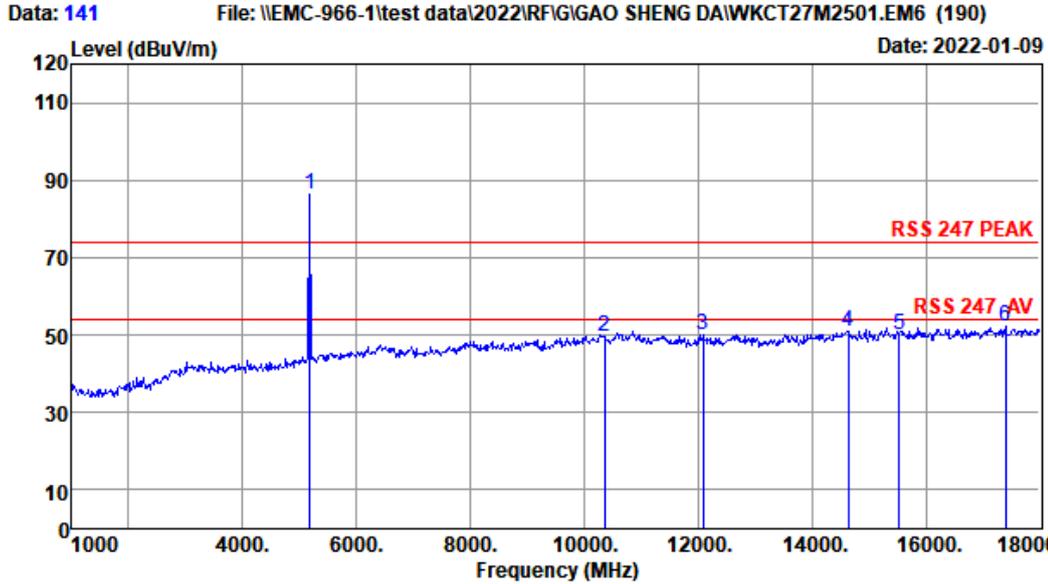
Note:

1. The amplitude of 9KHz to 30MHz spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.
2. All channels had been pre-test, only the worst case was reported.

Radiated Emissions Above 1G

EST Technology

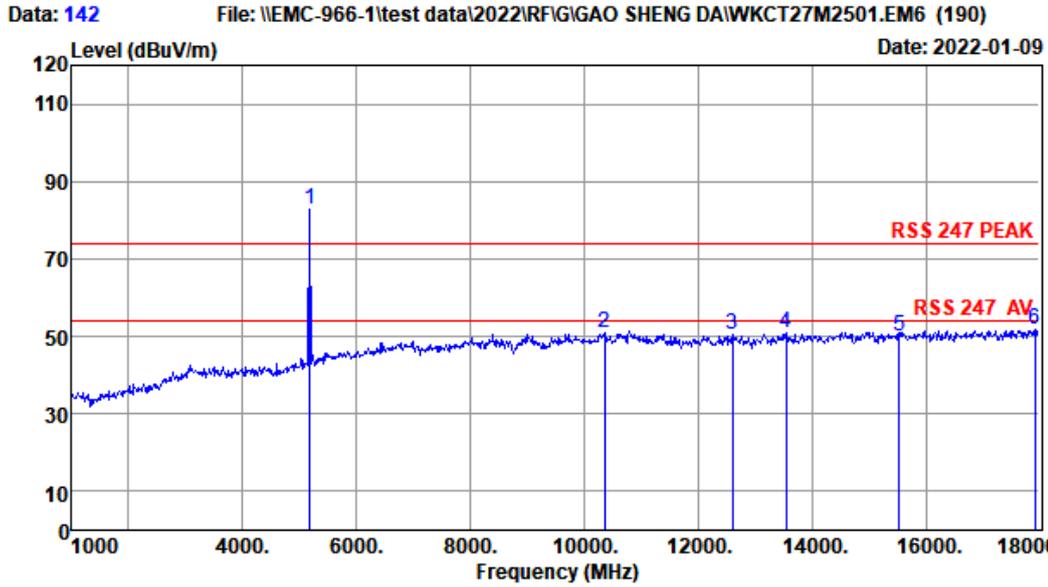
Chilingxiang, Qishantou, Santun,
Houjie, Dongguan, Guangdong, China
Tel: +86-769-83081888
Fax: +86-769-83081878



Site no. : 1# 966 Chamber Data no. : 141
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5180MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5180.00	32.20	3.52	34.63	85.07	86.16	74.00	-12.16	Peak
2	10360.00	39.27	5.99	34.31	38.70	49.65	74.00	24.35	Peak
3	12084.00	39.86	5.95	34.77	39.03	50.07	74.00	23.93	Peak
4	14634.00	40.97	6.88	34.49	37.73	51.09	74.00	22.91	Peak
5	15540.00	40.31	6.46	34.39	37.86	50.24	74.00	23.76	Peak
6	17405.00	44.15	7.82	34.36	34.45	52.06	74.00	21.94	Peak

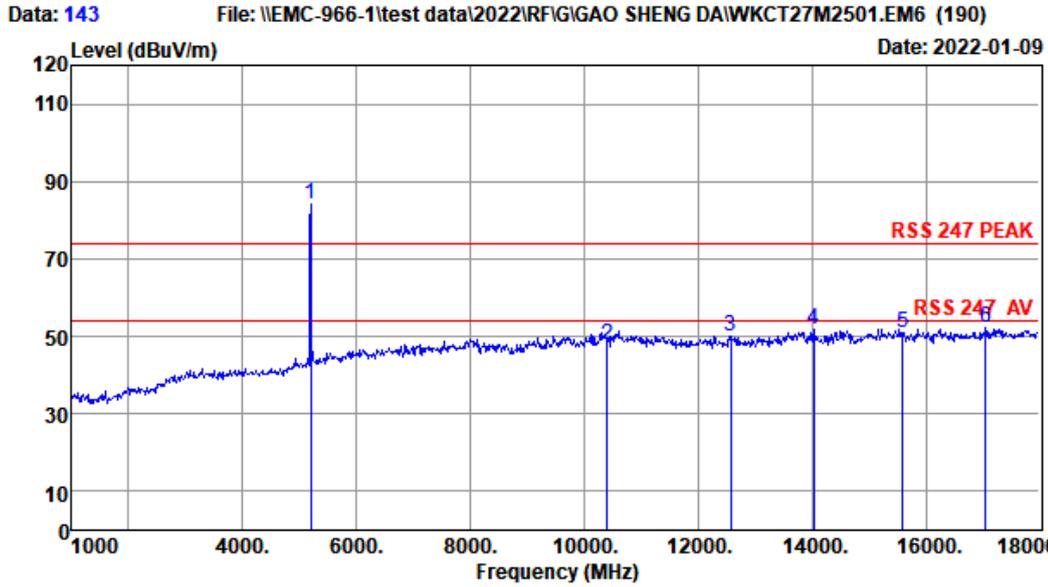
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 142
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5180MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5180.00	32.20	3.52	34.63	81.88	82.97	74.00	-8.97	Peak
2	10360.00	39.27	5.99	34.31	39.79	50.74	74.00	23.26	Peak
3	12611.00	39.59	6.22	34.56	39.45	50.70	74.00	23.30	Peak
4	13546.00	40.32	6.35	34.35	38.60	50.92	74.00	23.08	Peak
5	15540.00	40.31	6.46	34.39	37.80	50.18	74.00	23.82	Peak
6	17915.00	48.22	8.18	34.31	29.77	51.86	74.00	22.14	Peak

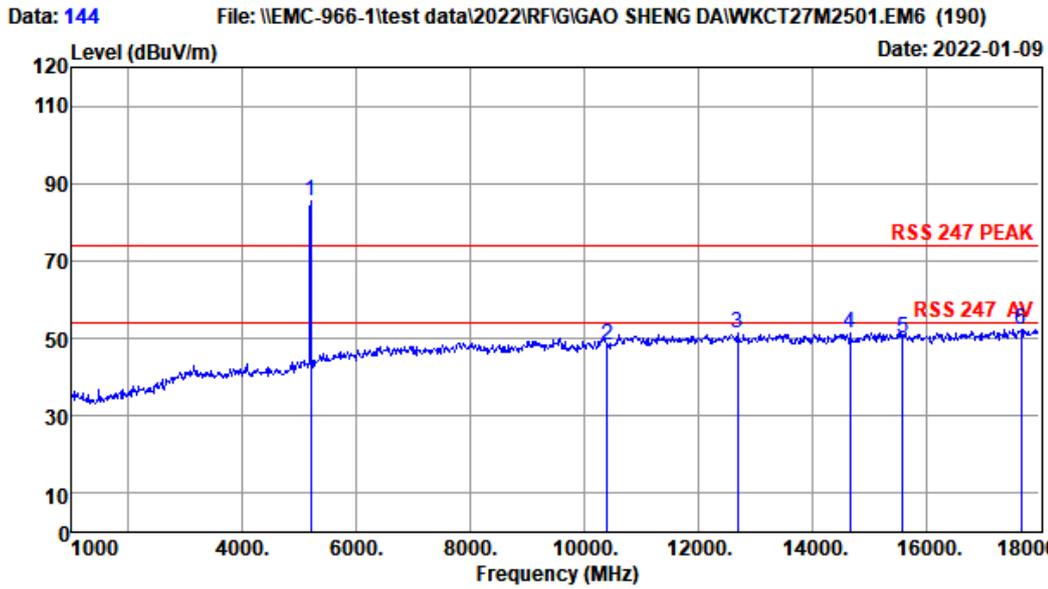
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 143
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5200MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5200.00	32.24	3.53	34.62	82.87	84.02	74.00	-10.02	Peak
2	10400.00	39.31	5.99	34.32	36.69	47.67	74.00	26.33	Peak
3	12577.00	39.61	6.22	34.57	38.99	50.25	74.00	23.75	Peak
4	14039.00	41.09	6.56	34.31	38.53	51.87	74.00	22.13	Peak
5	15600.00	40.24	6.53	34.36	38.44	50.85	74.00	23.15	Peak
6	17048.00	41.31	7.47	34.39	37.91	52.30	74.00	21.70	Peak

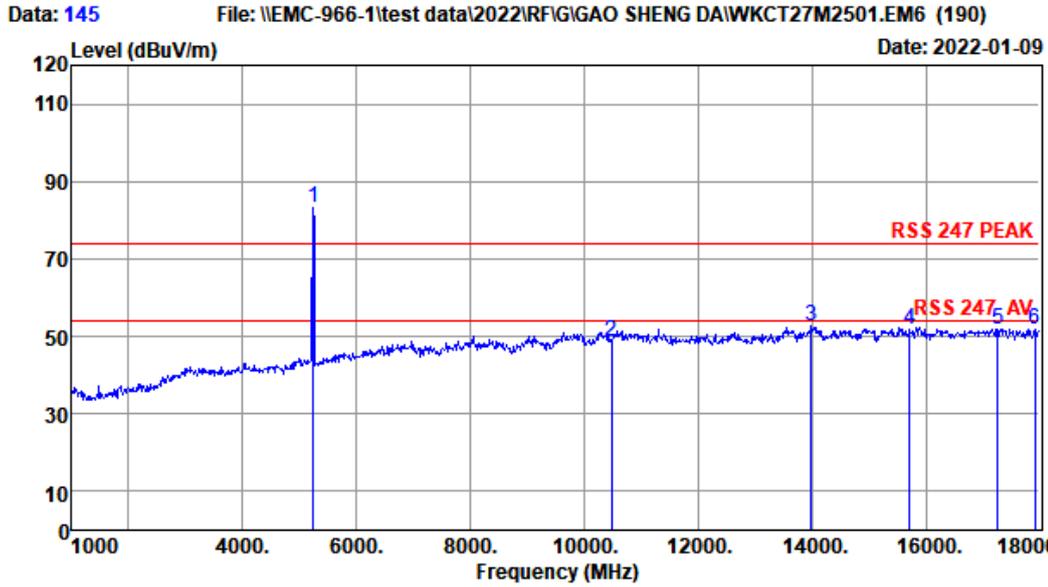
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 144
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5200MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5200.00	32.24	3.53	34.62	84.17	85.32	74.00	-11.32	Peak
2	10400.00	39.31	5.99	34.32	37.27	48.25	74.00	25.75	Peak
3	12696.00	39.55	6.23	34.52	39.92	51.18	74.00	22.82	Peak
4	14668.00	40.97	6.87	34.50	38.04	51.38	74.00	22.62	Peak
5	15600.00	40.24	6.53	34.36	37.79	50.20	74.00	23.80	Peak
6	17677.00	46.32	8.03	34.33	32.31	52.33	74.00	21.67	Peak

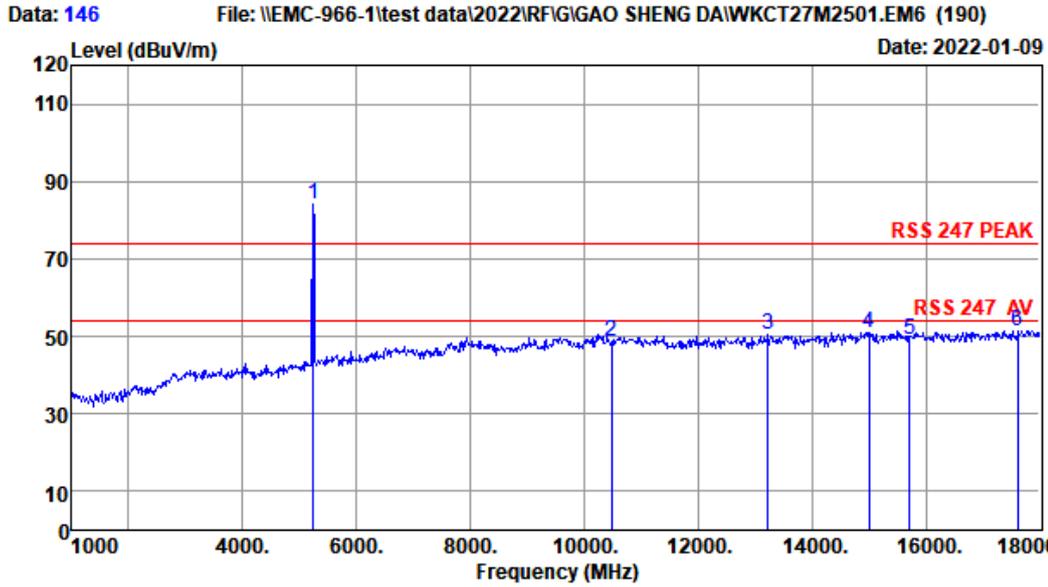
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 145
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5240MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5240.00	32.31	3.55	34.61	82.04	83.29	74.00	-9.29	Peak
2	10480.00	39.39	6.02	34.35	37.82	48.88	74.00	25.12	Peak
3	13988.00	41.07	6.52	34.30	39.21	52.50	74.00	21.50	Peak
4	15720.00	40.10	6.65	34.31	39.46	51.90	74.00	22.10	Peak
5	17269.00	43.07	7.69	34.37	35.59	51.98	74.00	22.02	Peak
6	17915.00	48.22	8.18	34.31	29.87	51.96	74.00	22.04	Peak

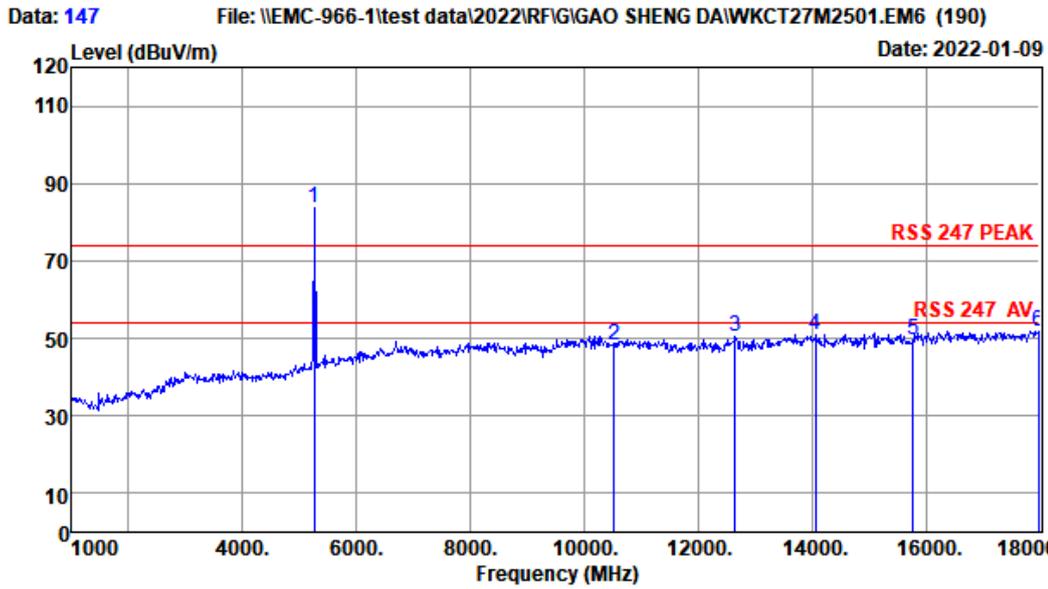
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 146
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5240MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5240.00	32.31	3.55	34.61	82.75	84.00	74.00	-10.00	Peak
2	10480.00	39.39	6.02	34.35	37.83	48.89	74.00	25.11	Peak
3	13223.00	39.77	6.30	34.38	38.89	50.58	74.00	23.42	Peak
4	15008.00	40.90	6.81	34.60	37.89	51.00	74.00	23.00	Peak
5	15720.00	40.10	6.65	34.31	36.81	49.25	74.00	24.75	Peak
6	17609.00	45.78	7.99	34.34	32.12	51.55	74.00	22.45	Peak

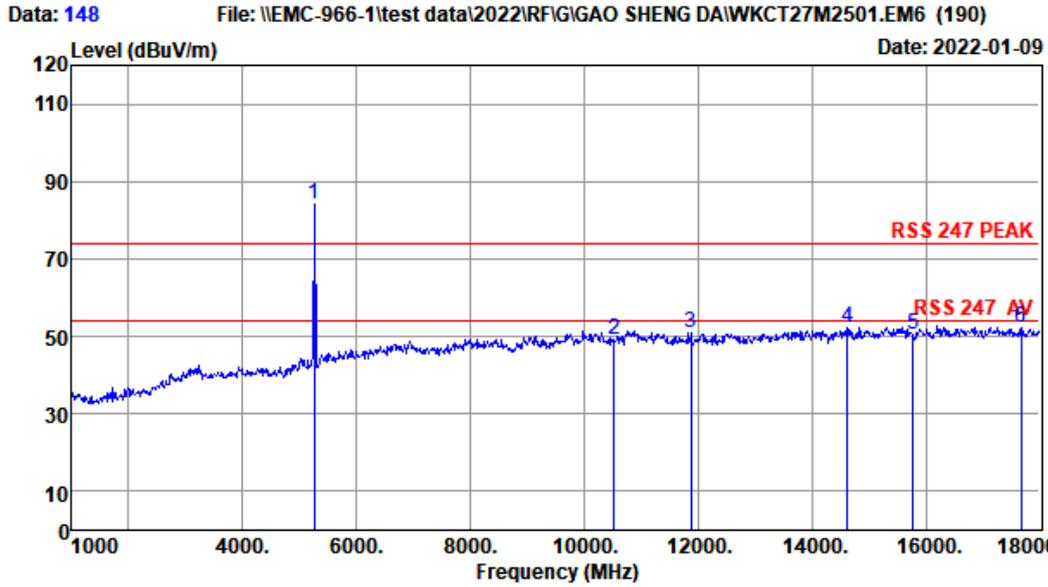
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 147
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5260MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5260.00	32.39	3.57	34.59	82.18	83.55	74.00	-9.55	Peak
2	10520.00	39.43	6.02	34.36	37.31	48.40	74.00	25.60	Peak
3	12645.00	39.58	6.23	34.54	39.20	50.47	74.00	23.53	Peak
4	14056.00	41.09	6.57	34.32	37.51	50.85	74.00	23.15	Peak
5	15780.00	40.05	6.69	34.29	37.17	49.62	74.00	24.38	Peak
6	17983.00	48.76	8.23	34.30	29.13	51.82	74.00	22.18	Peak

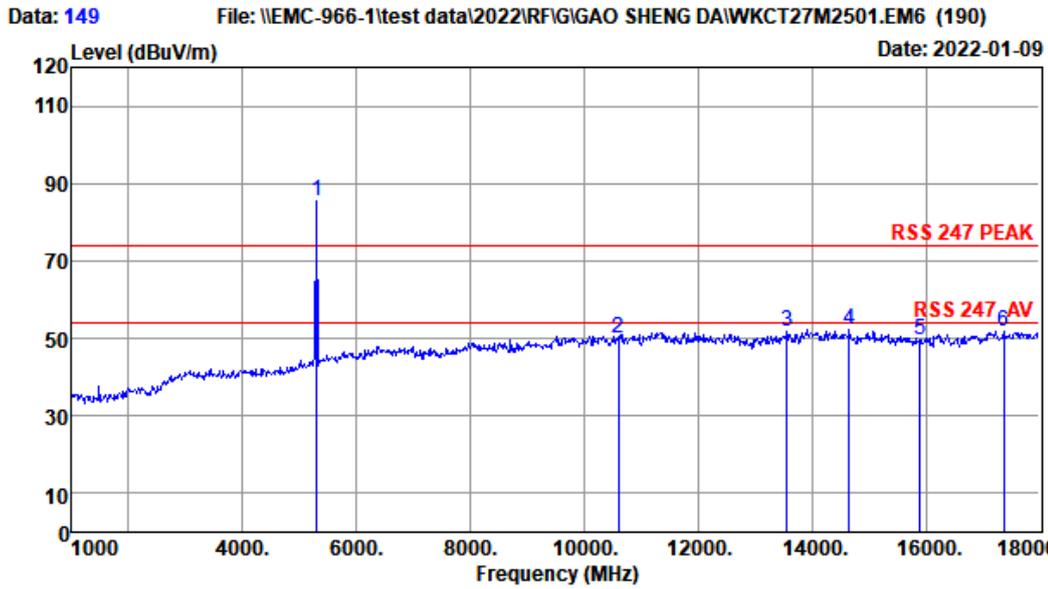
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 148
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5260MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5260.00	32.39	3.57	34.59	82.67	84.04	74.00	-10.04	Peak
2	10520.00	39.43	6.02	34.36	38.12	49.21	74.00	24.79	Peak
3	11880.00	39.90	5.96	34.76	40.01	51.11	74.00	22.89	Peak
4	14617.00	40.98	6.88	34.48	38.69	52.07	74.00	21.93	Peak
5	15780.00	40.05	6.69	34.29	38.07	50.52	74.00	23.48	Peak
6	17677.00	46.32	8.03	34.33	32.25	52.27	74.00	21.73	Peak

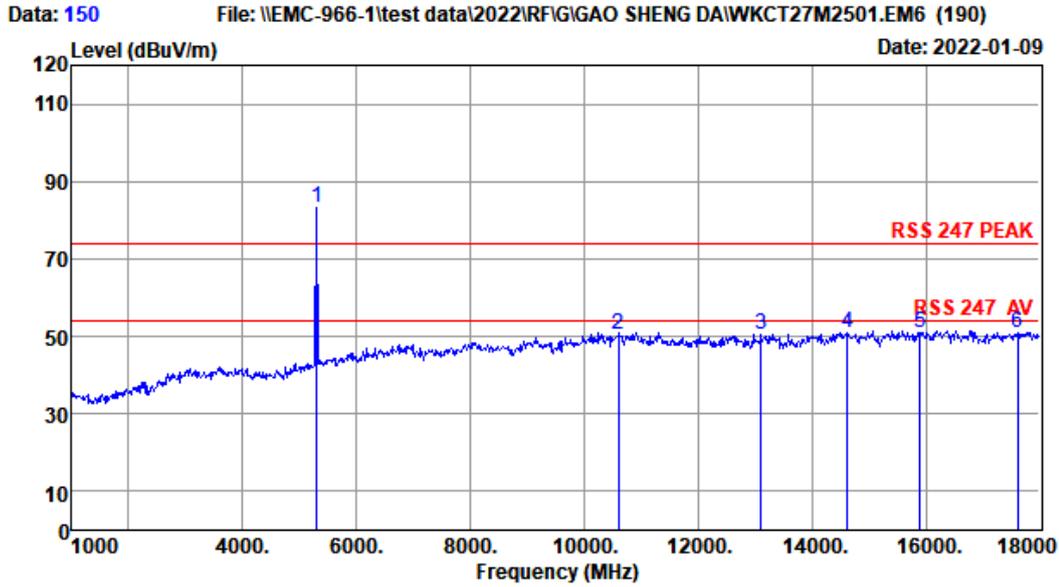
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 149
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5300MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5300.00	32.46	3.59	34.58	84.06	85.53	74.00	-11.53	Peak
2	10600.00	39.51	6.04	34.38	39.00	50.17	74.00	23.83	Peak
3	13563.00	40.35	6.36	34.34	39.53	51.90	74.00	22.10	Peak
4	14651.00	40.97	6.87	34.49	38.95	52.30	74.00	21.70	Peak
5	15900.00	39.91	6.81	34.24	37.23	49.71	74.00	24.29	Peak
6	17371.00	43.88	7.79	34.36	34.39	51.70	74.00	22.30	Peak

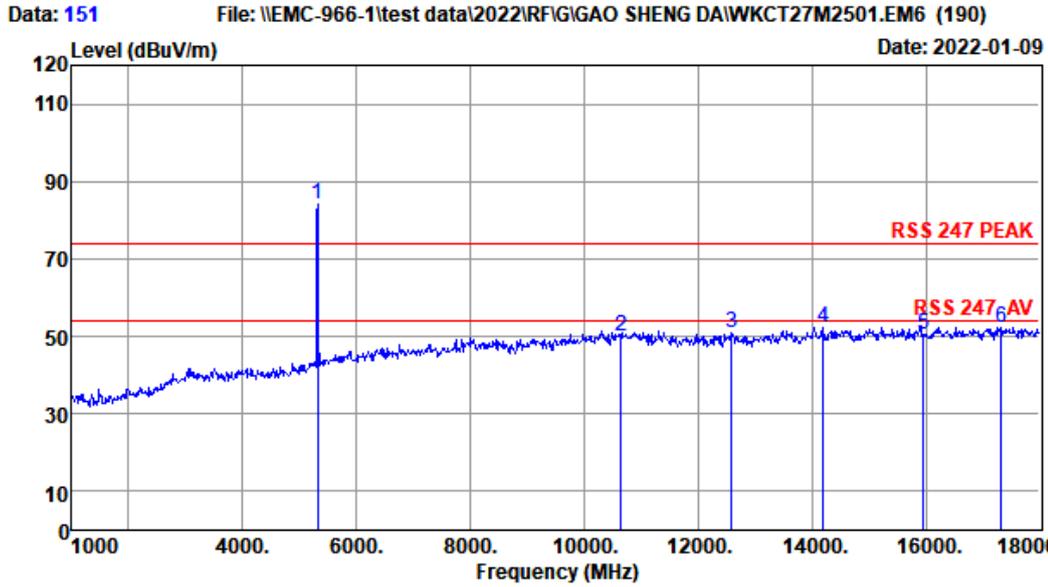
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 150
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5300MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5300.00	32.46	3.59	34.58	81.76	83.23	74.00	-9.23	Peak
2	10600.00	39.51	6.04	34.38	39.17	50.34	74.00	23.66	Peak
3	13104.00	39.57	6.28	34.39	38.97	50.43	74.00	23.57	Peak
4	14617.00	40.98	6.88	34.48	37.56	50.94	74.00	23.06	Peak
5	15900.00	39.91	6.81	34.24	38.63	51.11	74.00	22.89	Peak
6	17609.00	45.78	7.99	34.34	31.52	50.95	74.00	23.05	Peak

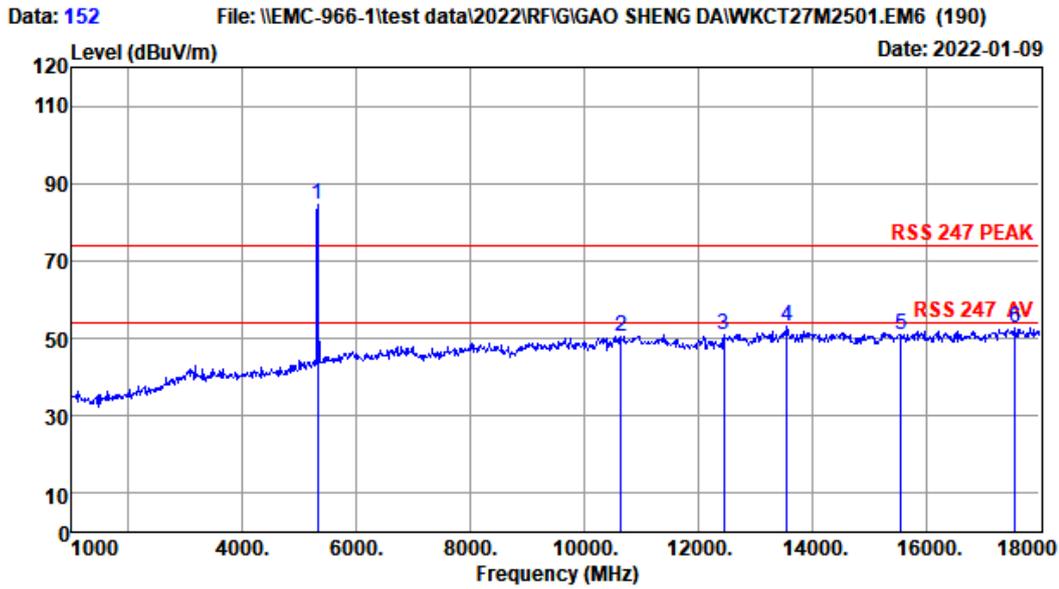
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 151
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5320MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5320.00	32.50	3.60	34.57	82.55	84.08	74.00	-10.08	Peak
2	10640.00	39.54	6.04	34.39	38.79	49.98	74.00	24.02	Peak
3	12594.00	39.60	6.22	34.56	39.68	50.94	74.00	23.06	Peak
4	14192.00	41.06	6.67	34.36	38.88	52.25	74.00	21.75	Peak
5	15960.00	39.84	6.88	34.21	38.08	50.59	74.00	23.41	Peak
6	17320.00	43.48	7.74	34.37	35.59	52.44	74.00	21.56	Peak

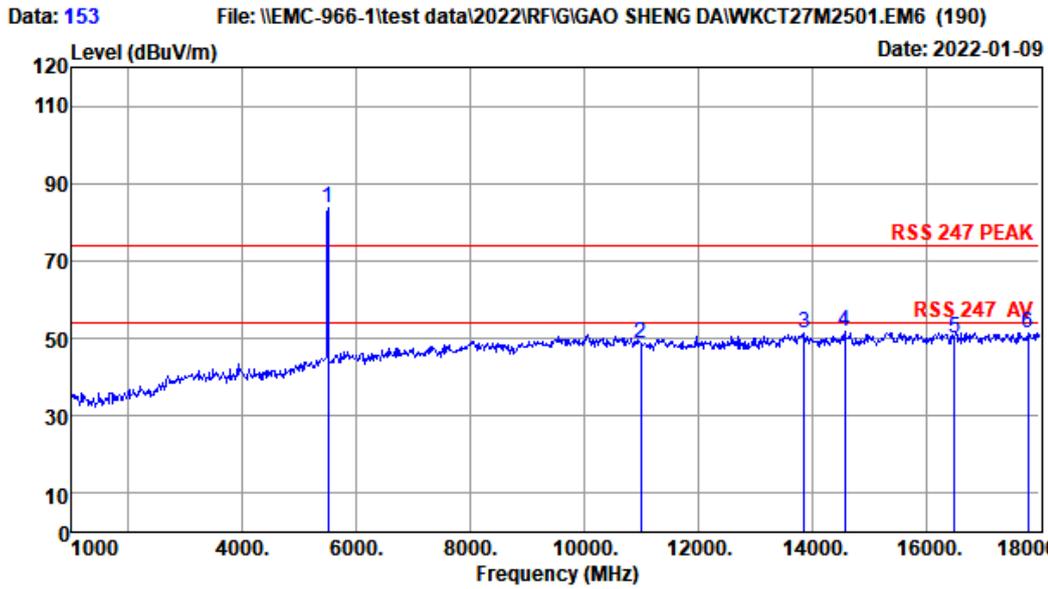
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 152
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5320MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5320.00	32.50	3.60	34.57	83.25	84.78	74.00	-10.78	Peak
2	10640.00	39.54	6.04	34.39	39.07	50.26	74.00	23.74	Peak
3	12458.00	39.67	6.19	34.62	39.61	50.85	74.00	23.15	Peak
4	13563.00	40.35	6.36	34.34	40.62	52.99	74.00	21.01	Peak
5	15570.00	40.27	6.50	34.37	38.47	50.87	74.00	23.13	Peak
6	17575.00	45.51	7.96	34.34	33.73	52.86	74.00	21.14	Peak

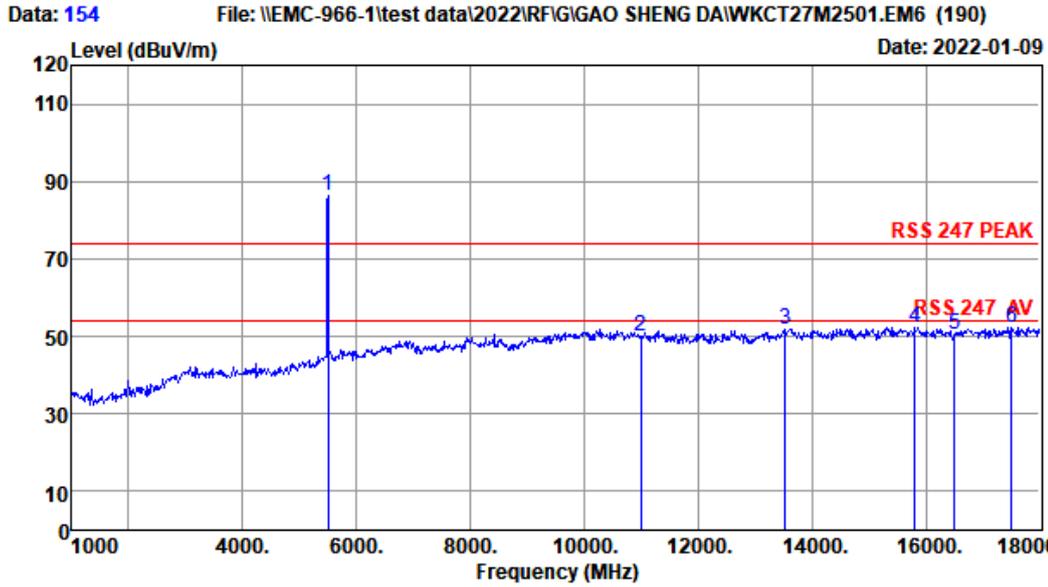
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 153
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5500MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5500.00	32.90	3.71	34.50	81.49	83.60	74.00	-9.60	Peak
2	11000.00	39.90	6.11	34.50	37.34	48.85	74.00	25.15	Peak
3	13869.00	40.87	6.48	34.31	38.14	51.18	74.00	22.82	Peak
4	14583.00	40.98	6.89	34.47	38.34	51.74	74.00	22.26	Peak
5	16500.00	40.36	7.12	34.30	36.72	49.90	74.00	24.10	Peak
6	17796.00	47.27	8.11	34.32	30.29	51.35	74.00	22.65	Peak

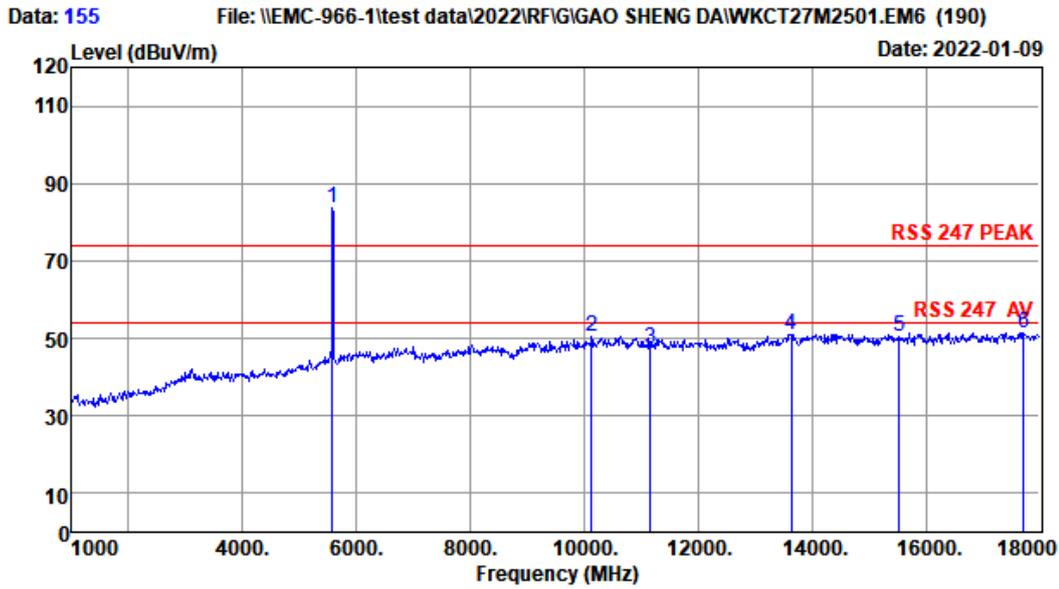
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 154
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5500MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5500.00	32.90	3.71	34.50	84.45	86.56	74.00	-12.56	Peak
2	11000.00	39.90	6.11	34.50	38.31	49.82	74.00	24.18	Peak
3	13529.00	40.29	6.34	34.35	39.59	51.87	74.00	22.13	Peak
4	15807.00	40.01	6.73	34.28	39.74	52.20	74.00	21.80	Peak
5	16500.00	40.36	7.12	34.30	37.37	50.55	74.00	23.45	Peak
6	17507.00	44.97	7.92	34.35	33.66	52.20	74.00	21.80	Peak

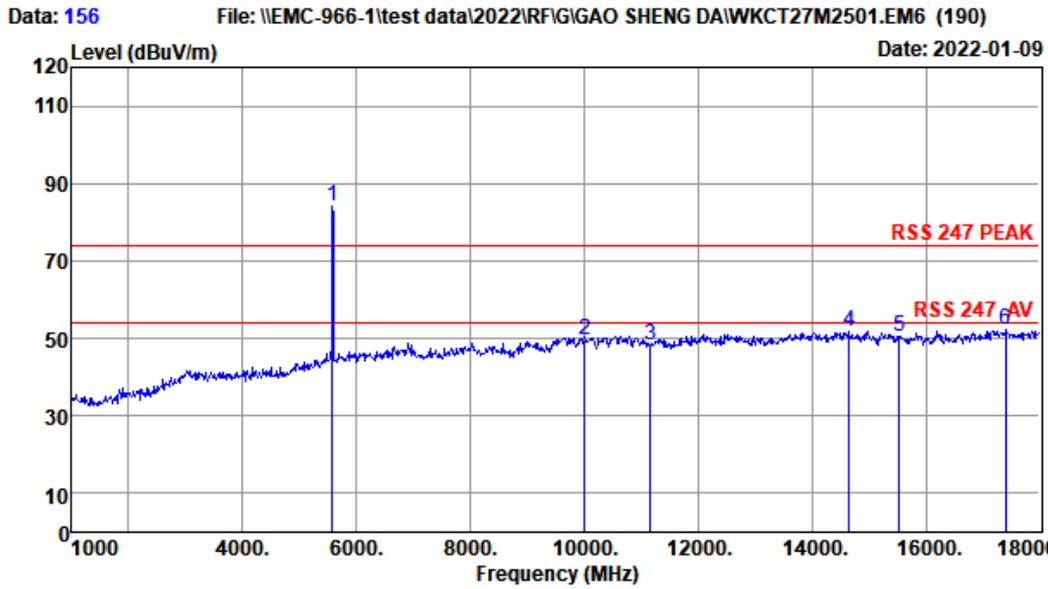
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 155
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5580MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5580.00	32.89	3.79	34.47	81.47	83.68	74.00	-9.68	Peak
2	10129.00	39.04	5.92	34.24	39.82	50.54	74.00	23.46	Peak
3	11160.00	39.90	6.12	34.55	36.05	47.52	74.00	26.48	Peak
4	13631.00	40.47	6.38	34.34	38.53	51.04	74.00	22.96	Peak
5	15540.00	40.31	6.46	34.39	38.27	50.65	74.00	23.35	Peak
6	17728.00	46.73	8.06	34.33	31.08	51.54	74.00	22.46	Peak

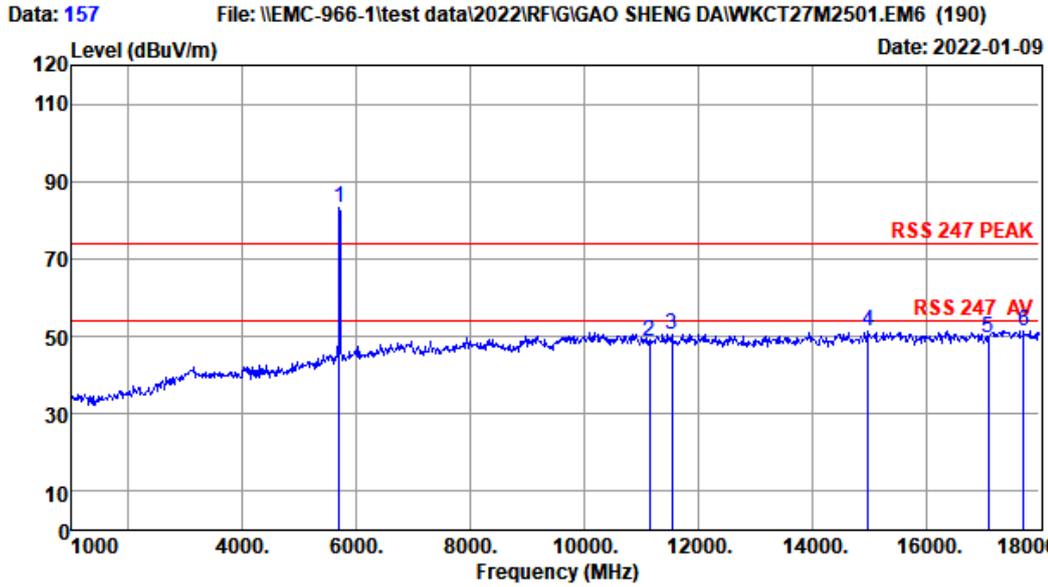
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 156
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5580MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5580.00	32.89	3.79	34.47	82.00	84.21	74.00	-10.21	Peak
2	10010.00	38.92	5.89	34.21	38.80	49.40	74.00	24.60	Peak
3	11160.00	39.90	6.12	34.55	36.74	48.21	74.00	25.79	Peak
4	14651.00	40.97	6.87	34.49	38.40	51.75	74.00	22.25	Peak
5	15540.00	40.31	6.46	34.39	38.08	50.46	74.00	23.54	Peak
6	17405.00	44.15	7.82	34.36	34.43	52.04	74.00	21.96	Peak

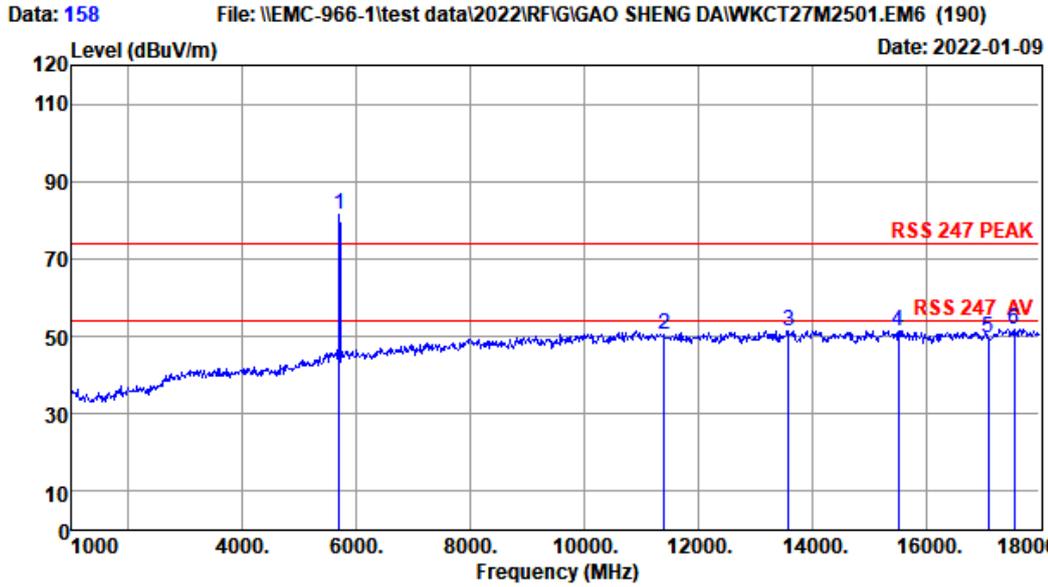
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 157
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5700MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5700.00	32.86	3.94	34.42	80.86	83.24	74.00	-9.24	Peak
2	11140.00	39.90	6.12	34.54	37.45	48.93	74.00	25.07	Peak
3	11540.00	39.90	6.13	34.66	39.24	50.61	74.00	23.39	Peak
4	14991.00	40.90	6.81	34.59	38.29	51.41	74.00	22.59	Peak
5	17100.00	41.71	7.52	34.39	34.96	49.80	74.00	24.20	Peak
6	17728.00	46.73	8.06	34.33	31.00	51.46	74.00	22.54	Peak

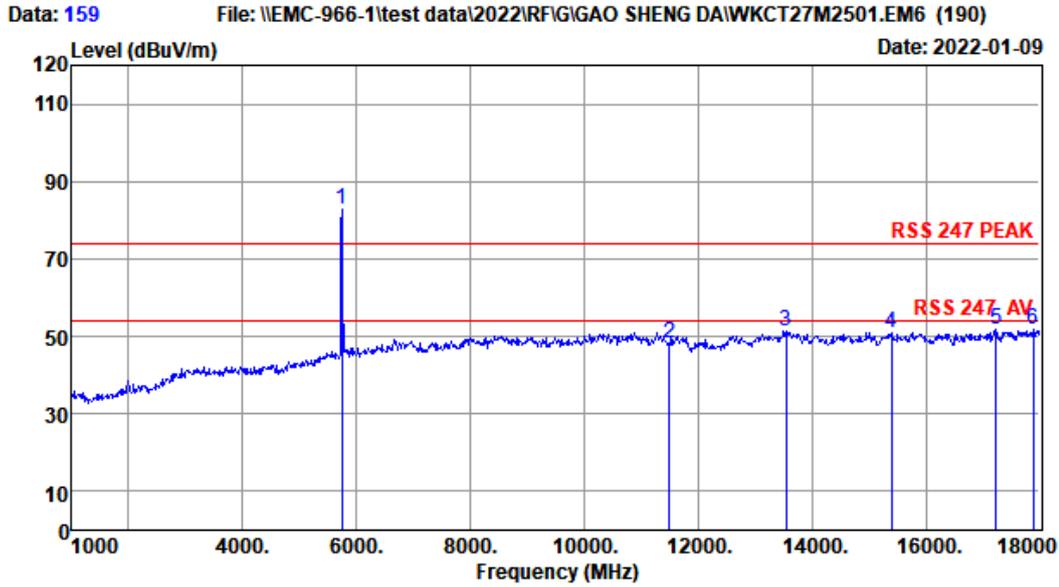
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 158
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5700MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5700.00	32.86	3.94	34.42	79.09	81.47	74.00	-7.47	Peak
2	11400.00	39.90	6.14	34.62	38.84	50.26	74.00	23.74	Peak
3	13597.00	40.41	6.37	34.34	39.13	51.57	74.00	22.43	Peak
4	15518.00	40.33	6.45	34.39	39.12	51.51	74.00	22.49	Peak
5	17100.00	41.71	7.52	34.39	34.72	49.56	74.00	24.44	Peak
6	17558.00	45.37	7.95	34.34	32.90	51.88	74.00	22.12	Peak

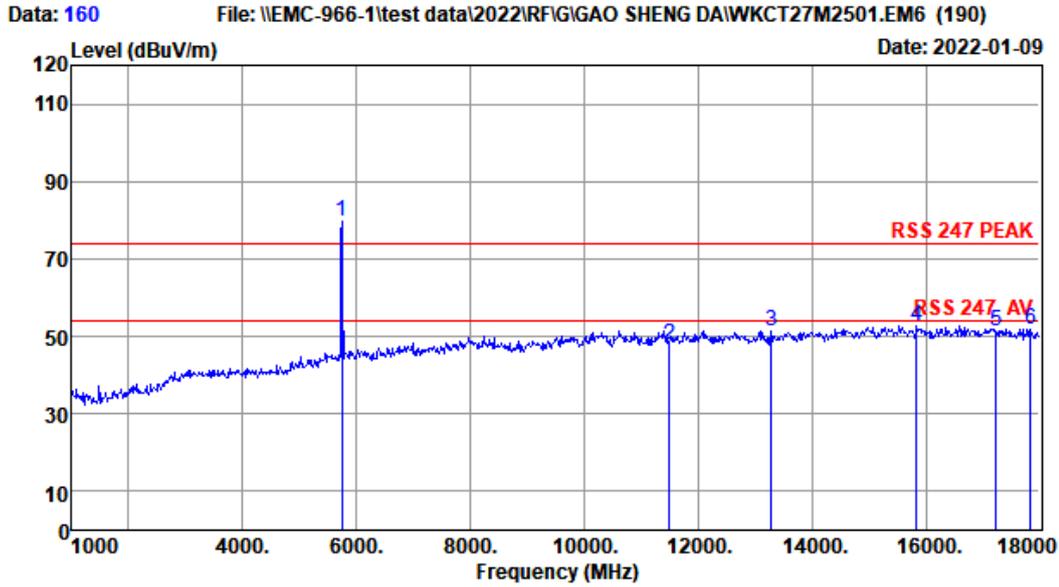
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 159
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5745MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5745.00	32.85	4.00	34.40	80.49	82.94	74.00	-8.94	Peak
2	11490.00	39.90	6.15	34.65	36.94	48.34	74.00	25.66	Peak
3	13546.00	40.32	6.35	34.35	39.00	51.32	74.00	22.68	Peak
4	15399.00	40.46	6.51	34.44	38.46	50.99	74.00	23.01	Peak
5	17235.00	42.80	7.65	34.38	35.59	51.66	74.00	22.34	Peak
6	17881.00	47.95	8.16	34.31	29.88	51.68	74.00	22.32	Peak

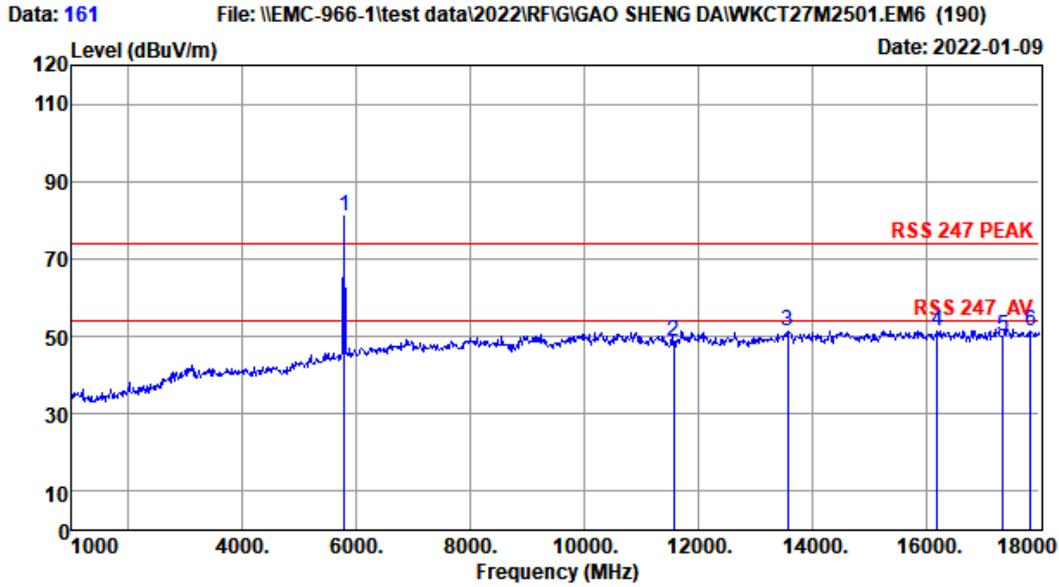
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 160
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5745MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5745.00	32.85	4.00	34.40	77.17	79.62	74.00	-5.62	Peak
2	11490.00	39.90	6.15	34.65	36.43	47.83	74.00	26.17	Peak
3	13291.00	39.89	6.31	34.37	39.65	51.48	74.00	22.52	Peak
4	15841.00	39.97	6.76	34.26	40.27	52.74	74.00	21.26	Peak
5	17235.00	42.80	7.65	34.38	35.46	51.53	74.00	22.47	Peak
6	17847.00	47.68	8.14	34.32	30.37	51.87	74.00	22.13	Peak

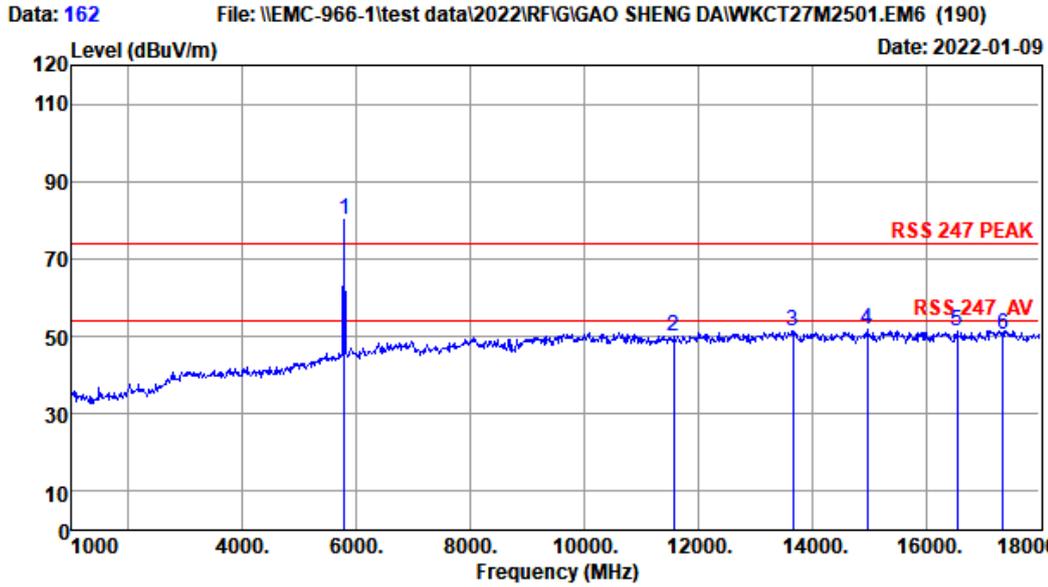
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 161
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5785MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5785.00	32.84	4.05	34.39	78.32	80.82	74.00	-6.82	Peak
2	11570.00	39.90	6.12	34.67	37.20	48.55	74.00	25.45	Peak
3	13580.00	40.38	6.36	34.34	38.85	51.25	74.00	22.75	Peak
4	16198.00	40.02	6.99	34.24	38.50	51.27	74.00	22.73	Peak
5	17355.00	43.75	7.77	34.36	33.02	50.18	74.00	23.82	Peak
6	17847.00	47.68	8.14	34.32	30.03	51.53	74.00	22.47	Peak

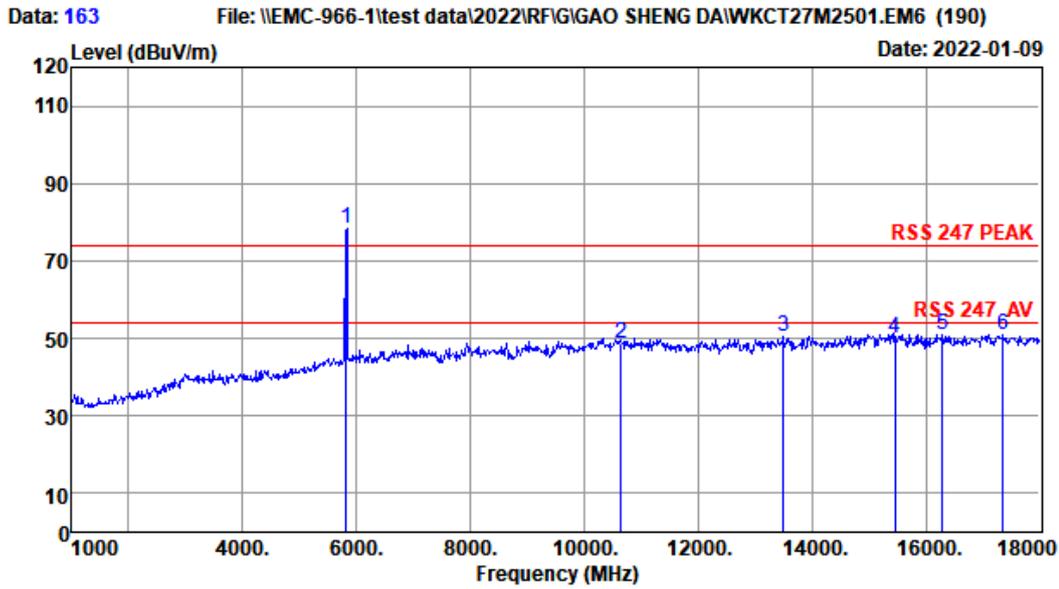
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 162
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5785MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5785.00	32.84	4.05	34.39	77.58	80.08	74.00	-6.08	Peak
2	11570.00	39.90	6.12	34.67	38.57	49.92	74.00	24.08	Peak
3	13665.00	40.52	6.40	34.33	38.90	51.49	74.00	22.51	Peak
4	14974.00	40.91	6.82	34.59	38.49	51.63	74.00	22.37	Peak
5	16555.00	40.42	7.15	34.31	37.94	51.20	74.00	22.80	Peak
6	17355.00	43.75	7.77	34.36	33.48	50.64	74.00	23.36	Peak

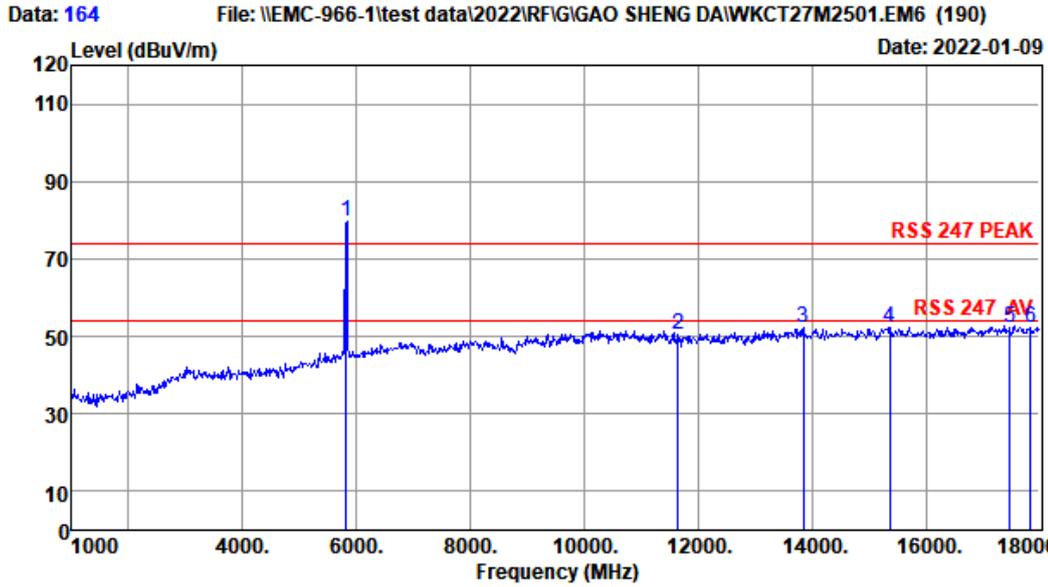
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 163
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5825MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5825.00	32.83	4.11	34.37	75.72	78.29	74.00	-4.29	Peak
2	10650.00	39.56	6.05	34.40	37.61	48.82	74.00	25.18	Peak
3	13495.00	40.24	6.33	34.35	38.17	50.39	74.00	23.61	Peak
4	15460.00	40.39	6.46	34.41	37.81	50.25	74.00	23.75	Peak
5	16300.00	40.14	7.04	34.26	37.90	50.82	74.00	23.18	Peak
6	17354.00	43.75	7.77	34.36	33.61	50.77	74.00	23.23	Peak

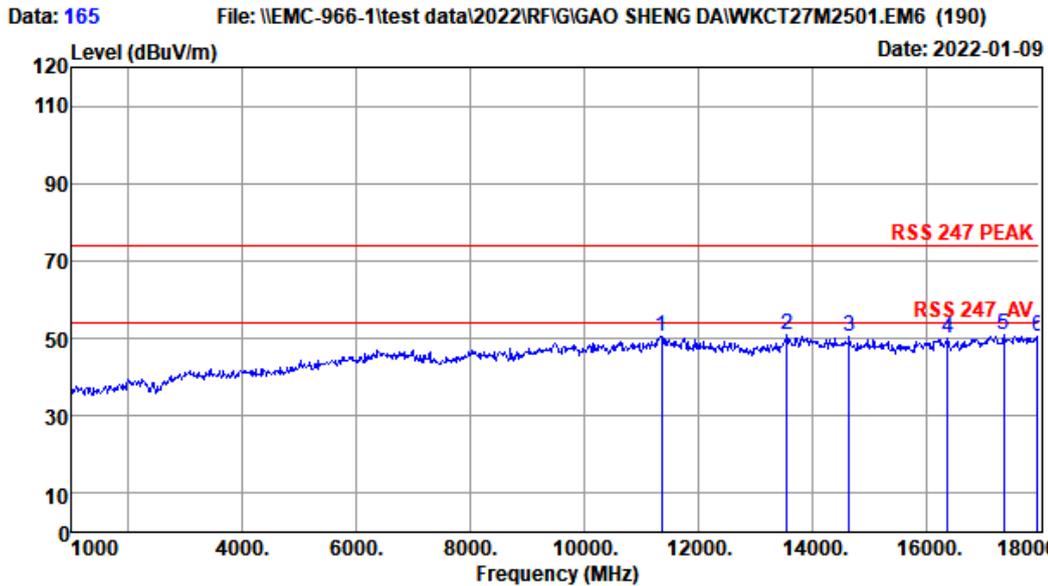
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 164
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5825MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5825.00	32.83	4.11	34.37	77.32	79.89	74.00	-5.89	Peak
2	11650.00	39.90	6.08	34.69	39.03	50.32	74.00	23.68	Peak
3	13852.00	40.84	6.47	34.32	39.35	52.34	74.00	21.66	Peak
4	15365.00	40.50	6.53	34.46	39.58	52.15	74.00	21.85	Peak
5	17475.00	44.70	7.89	34.35	34.12	52.36	74.00	21.64	Peak
6	17847.00	47.68	8.14	34.32	30.79	52.29	74.00	21.71	Peak

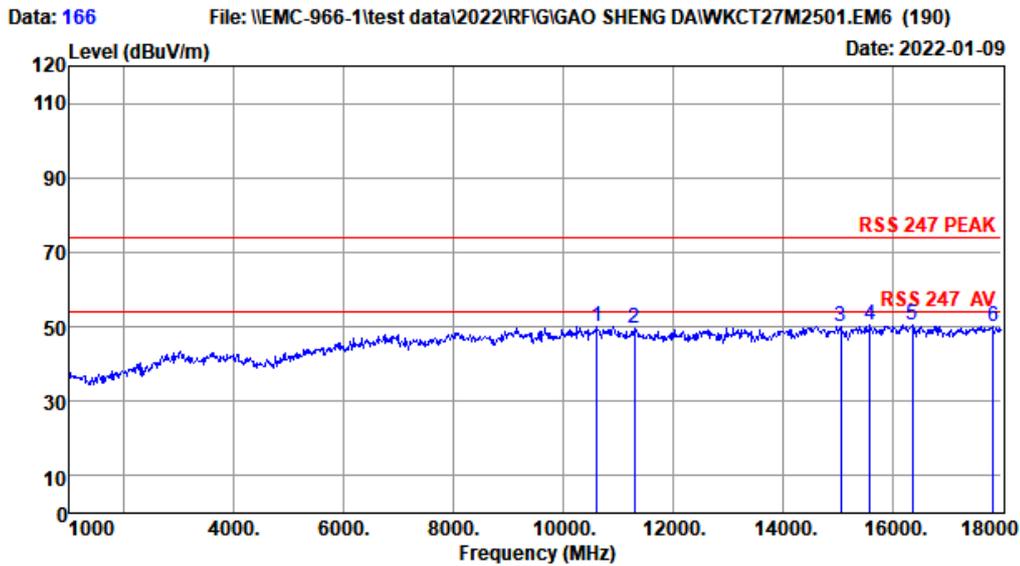
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 165
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : RX Mode

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	11353.00	39.90	6.14	34.61	39.00	50.43	74.00	23.57	Peak
2	13563.00	40.35	6.36	34.34	38.53	50.90	74.00	23.10	Peak
3	14651.00	40.97	6.87	34.49	36.95	50.30	74.00	23.70	Peak
4	16385.00	40.23	7.07	34.28	36.99	50.01	74.00	23.99	Peak
5	17371.00	43.88	7.79	34.36	33.39	50.70	74.00	23.30	Peak
6	17966.00	48.63	8.22	34.30	28.01	50.56	74.00	23.44	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 166
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : RX Mode

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	10622.00	39.53	6.04	34.39	38.81	49.99	74.00	24.01	Peak
2	11302.00	39.90	6.13	34.59	38.36	49.80	74.00	24.20	Peak
3	15059.00	40.84	6.77	34.58	37.18	50.21	74.00	23.79	Peak
4	15603.00	40.24	6.53	34.36	38.00	50.41	74.00	23.59	Peak
5	16368.00	40.21	7.06	34.27	37.53	50.53	74.00	23.47	Peak
6	17847.00	47.68	8.14	34.32	28.41	49.91	74.00	24.09	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.

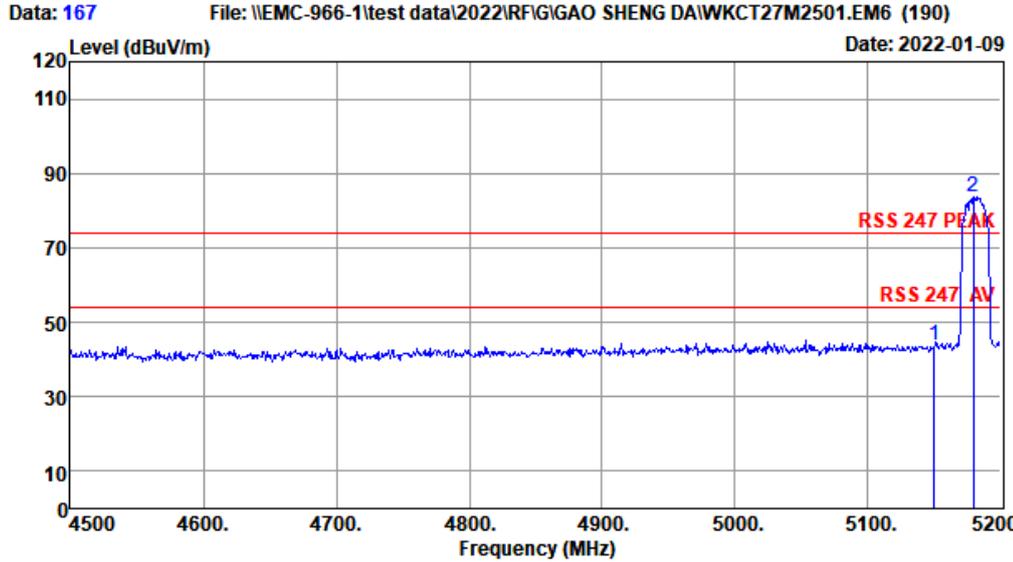
Note:

1. The amplitude of 18GHz to 40GHz spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

Radiated Band Edge

EST Technology

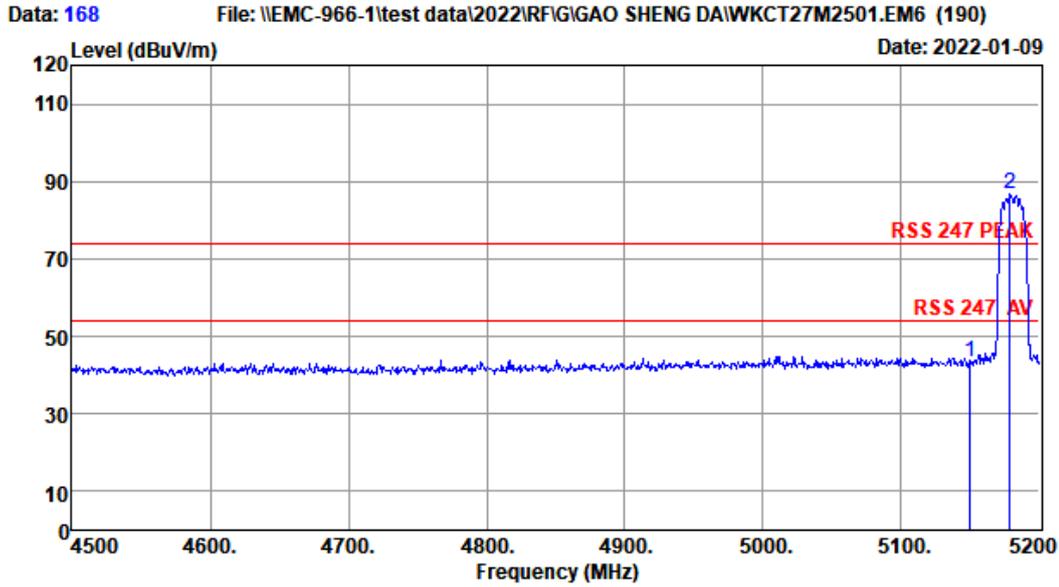
Chilingxiang, Qishantou, Santun,
Houjie, Dongguan, Guangdong, China
Tel: +86-769-83081888
Fax: +86-769-83081878



Site no. : 1# 966 Chamber Data no. : 167
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5180MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	32.13	3.50	34.64	42.92	43.91	74.00	30.09	Peak
2	5179.00	32.20	3.52	34.63	82.72	83.81	74.00	-9.81	Peak

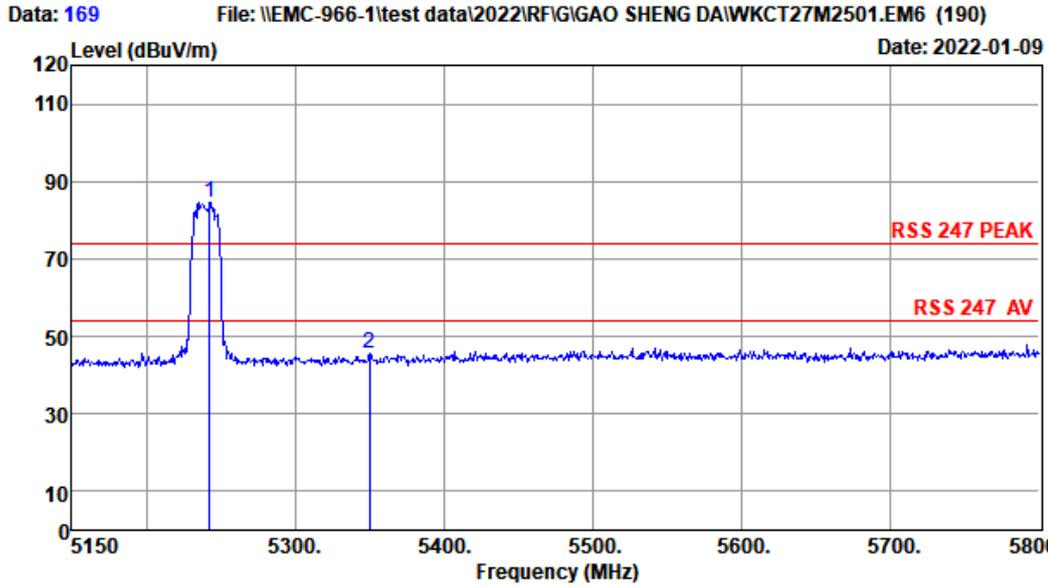
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 168
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5180MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	32.13	3.50	34.64	42.38	43.37	74.00	30.63	Peak
2	5178.30	32.20	3.52	34.63	85.62	86.71	74.00	-12.71	Peak

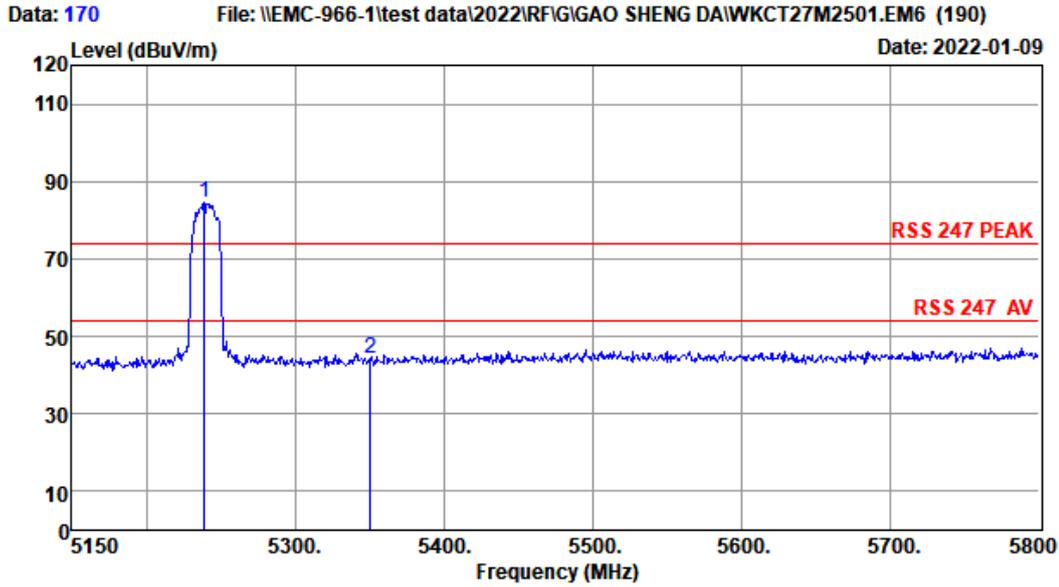
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 169
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5240MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5242.30	32.35	3.56	34.60	83.19	84.50	74.00	-10.50	Peak
2	5350.00	32.57	3.62	34.56	43.94	45.57	74.00	28.43	Peak

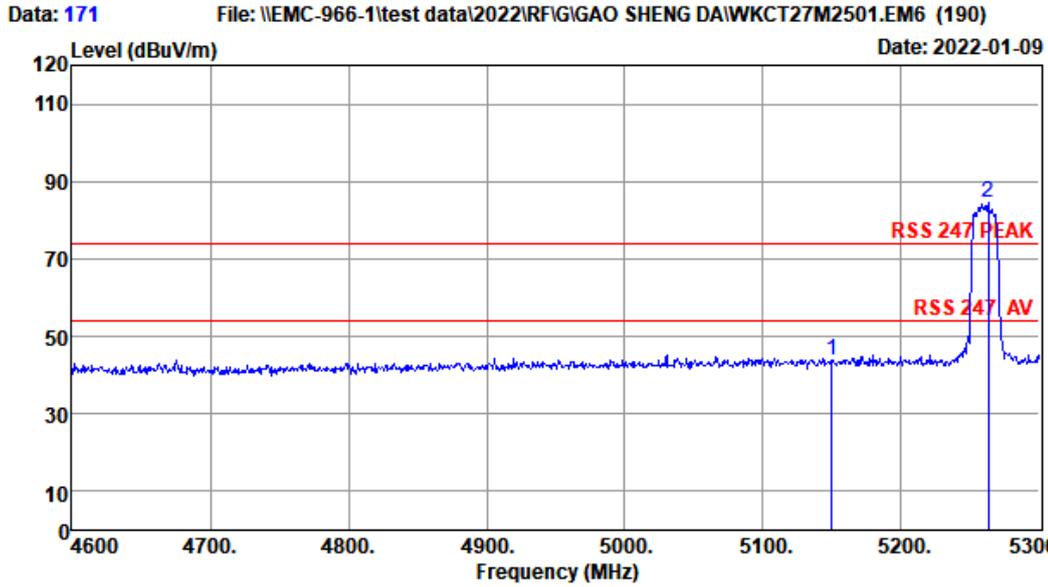
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 170
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5240MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5239.05	32.31	3.55	34.61	83.34	84.59	74.00	-10.59	Peak
2	5350.20	32.57	3.62	34.56	42.84	44.47	74.00	29.53	Peak

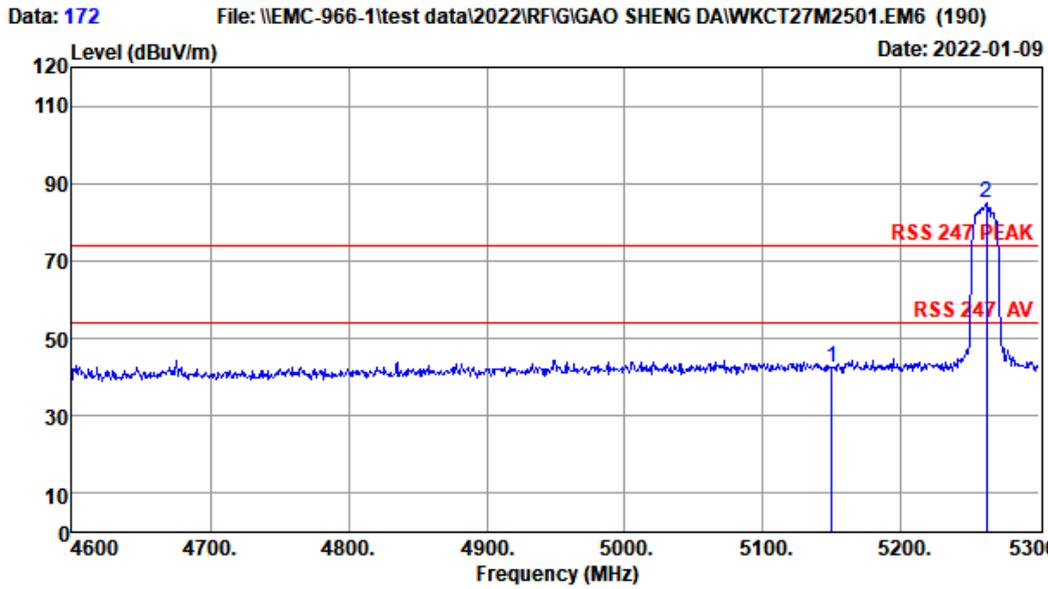
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 171
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5260MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	32.13	3.50	34.64	42.99	43.98	74.00	30.02	Peak
2	5262.90	32.39	3.57	34.59	83.35	84.72	74.00	-10.72	Peak

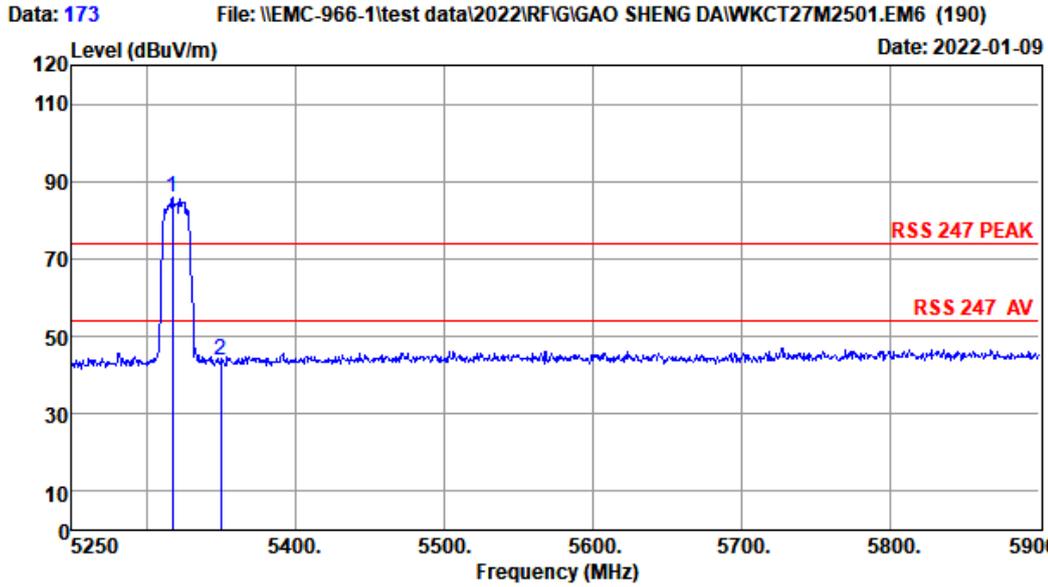
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 172
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5260MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	32.13	3.50	34.64	41.33	42.32	74.00	31.68	Peak
2	5261.50	32.39	3.57	34.59	83.63	85.00	74.00	-11.00	Peak

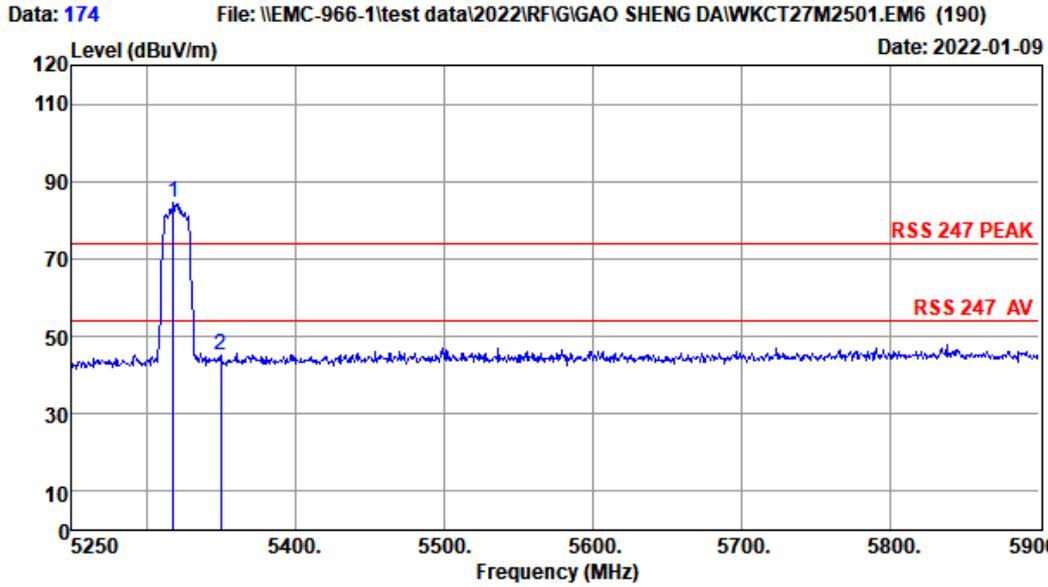
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 173
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5320MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5317.60	32.50	3.60	34.57	84.54	86.07	74.00	-12.07	Peak
2	5350.00	32.57	3.62	34.56	42.27	43.90	74.00	30.10	Peak

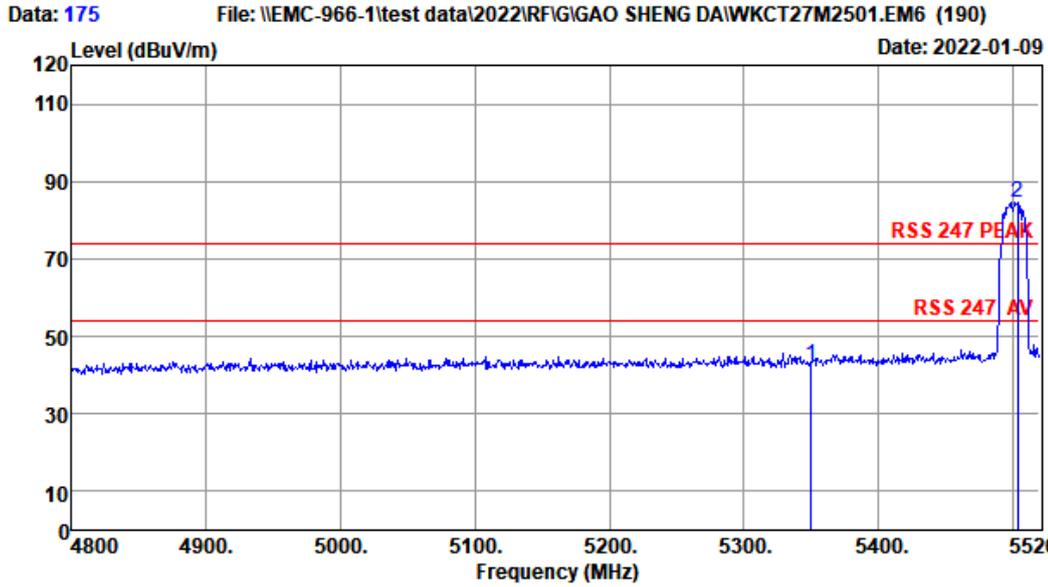
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 174
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5320MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5318.25	32.50	3.60	34.57	83.02	84.55	74.00	-10.55	Peak
2	5350.00	32.57	3.62	34.56	43.36	44.99	74.00	29.01	Peak

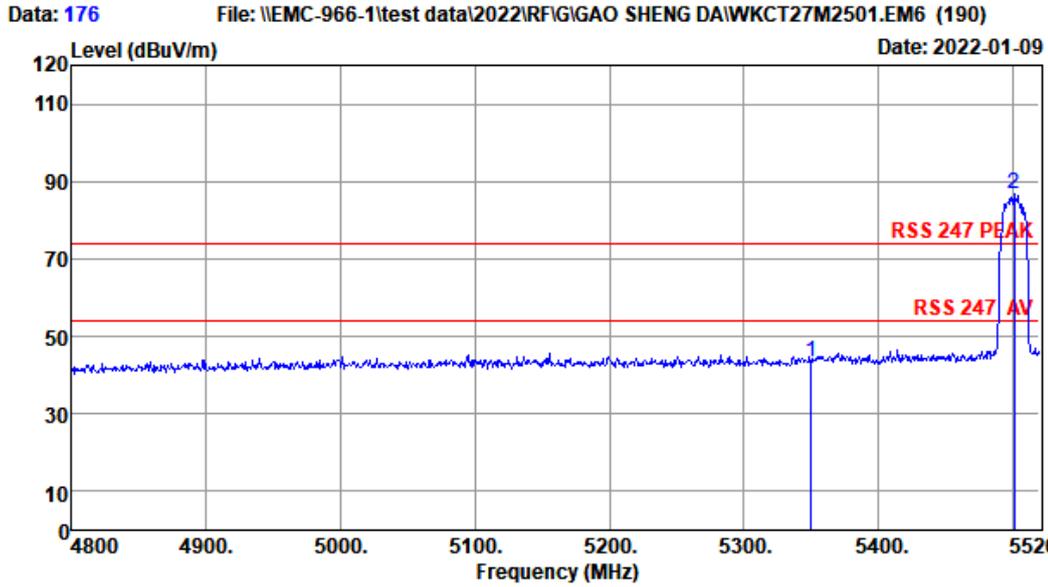
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 175
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5500MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5350.00	32.57	3.62	34.56	41.04	42.67	74.00	31.33	Peak
2	5503.44	32.90	3.71	34.50	82.45	84.56	74.00	-10.56	Peak

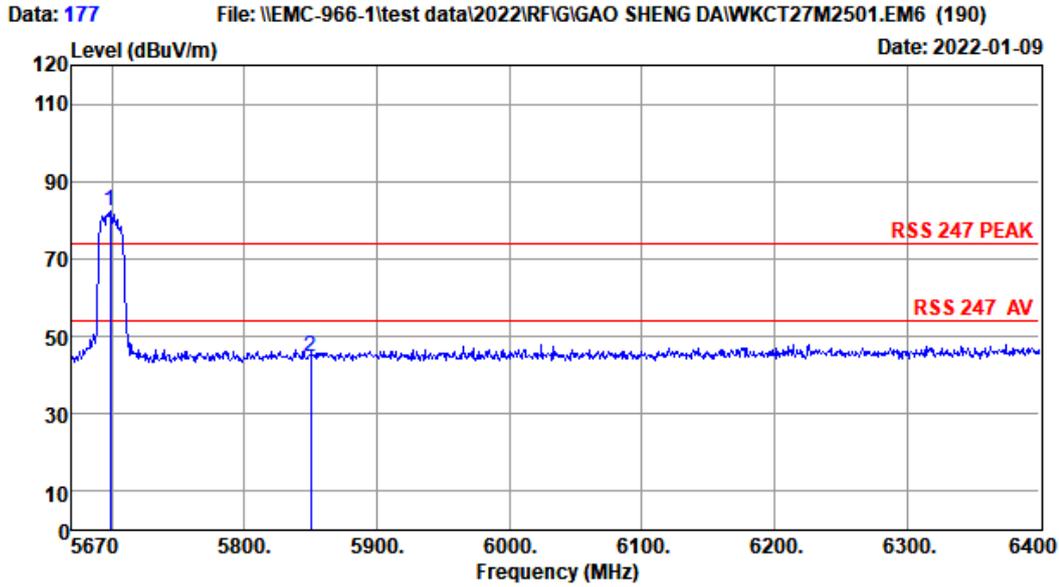
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 176
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5500MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5350.00	32.57	3.62	34.56	41.65	43.28	74.00	30.72	Peak
2	5501.28	32.90	3.71	34.50	84.68	86.79	74.00	-12.79	Peak

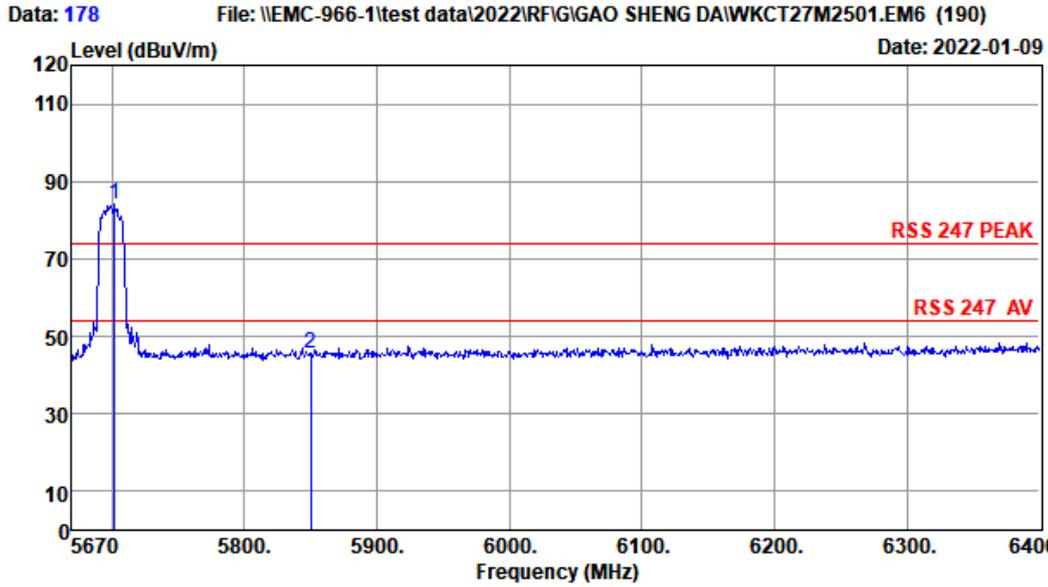
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 177
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5700MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5699.20	32.86	3.94	34.42	80.12	82.50	74.00	-8.50	Peak
2	5850.00	32.83	4.13	34.36	42.15	44.75	74.00	29.25	Peak

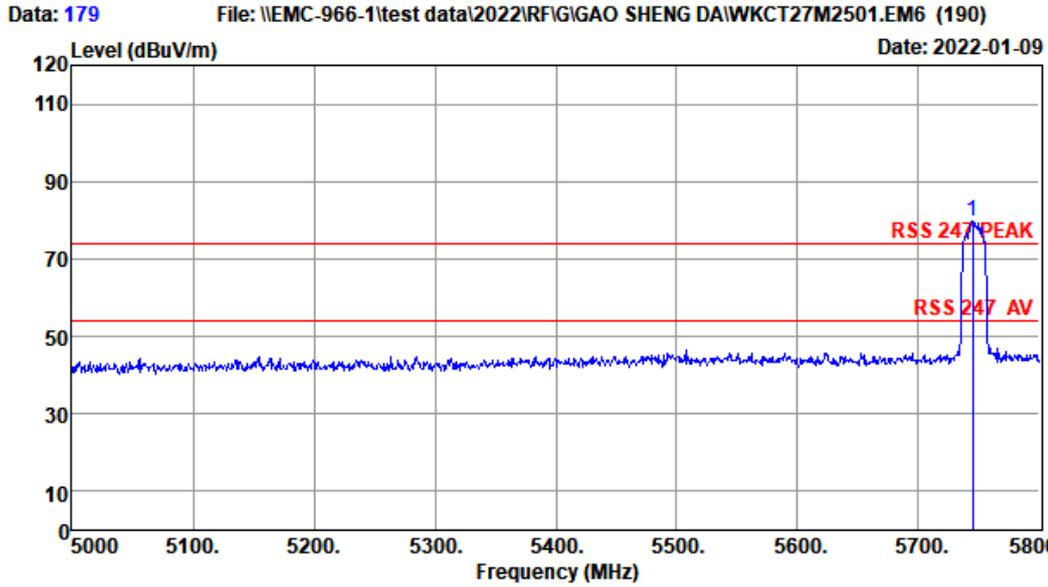
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 178
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5700MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5702.12	32.86	3.96	34.42	81.58	83.98	74.00	-9.98	Peak
2	5850.00	32.83	4.13	34.36	43.17	45.77	74.00	28.23	Peak

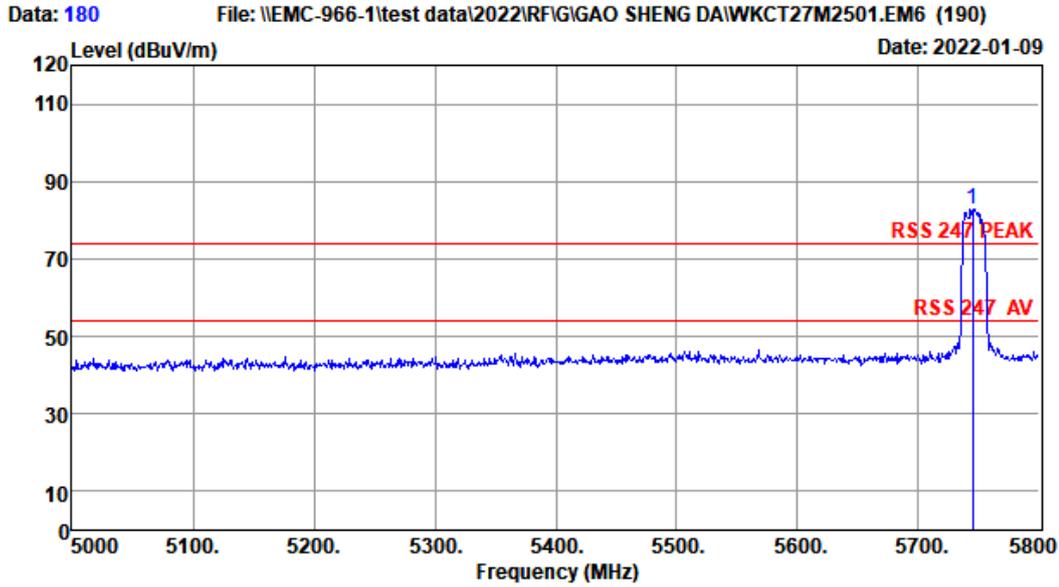
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 179
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5745MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5744.80	32.85	4.00	34.40	77.27	79.72	74.00	-5.72	Peak

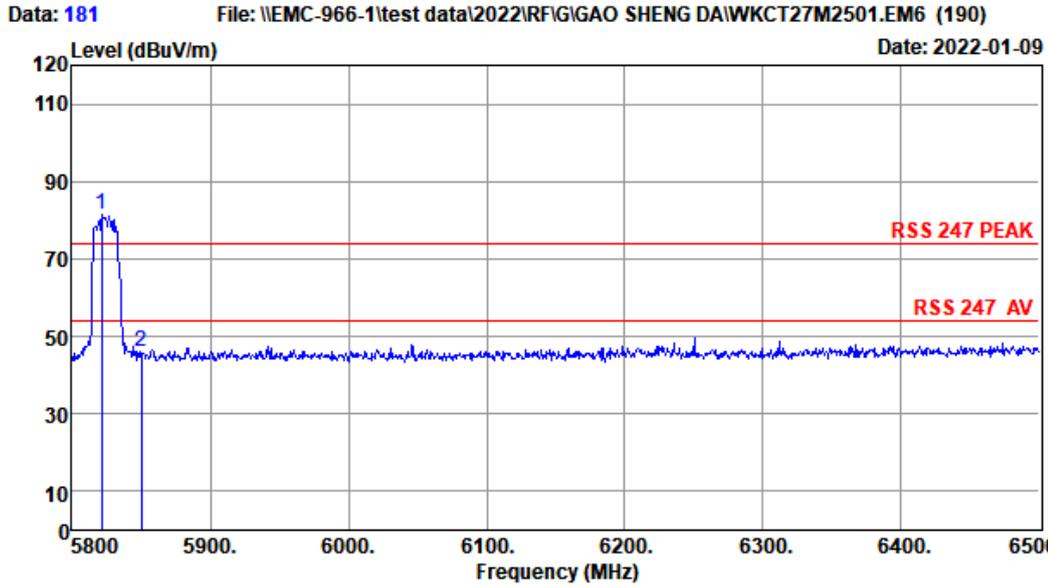
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 180
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5745MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	5744.80	32.85	4.00	34.40	80.56	83.01	74.00	-9.01	Peak

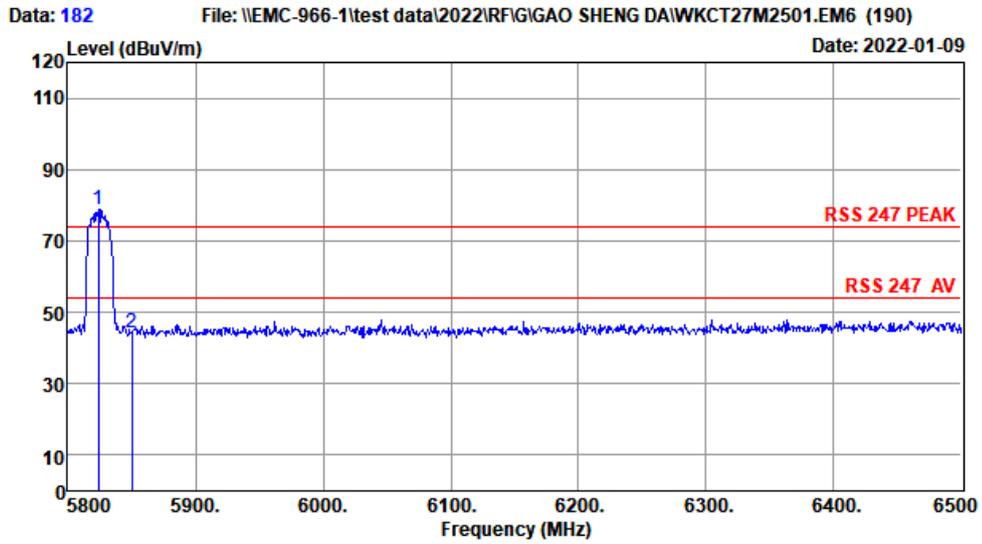
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 181
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : VERTICAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5825MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5821.70	32.83	4.11	34.37	78.99	81.56	74.00	-7.56	Peak
2	5850.00	32.83	4.13	34.36	43.27	45.87	74.00	28.13	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 182
 Dis. / Ant. : 3m ANT9120D 1-18G Ant. pol. : HORIZONTAL
 Limit : RSS 247 PEAK
 Env. / Ins. : Temp:22.8';Humi:53%;Press:101.52kPa
 Engineer : JBR
 EUT : WIFI+BT Module
 Power : DC 3.3V
 M/N : WKCT27M2501
 Test Mode : IEEE 802.11n HT20 TX 5825MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5823.80	32.83	4.11	34.37	76.22	78.79	74.00	-4.79	Peak
2	5850.00	32.83	4.13	34.36	41.81	44.41	74.00	29.59	Peak

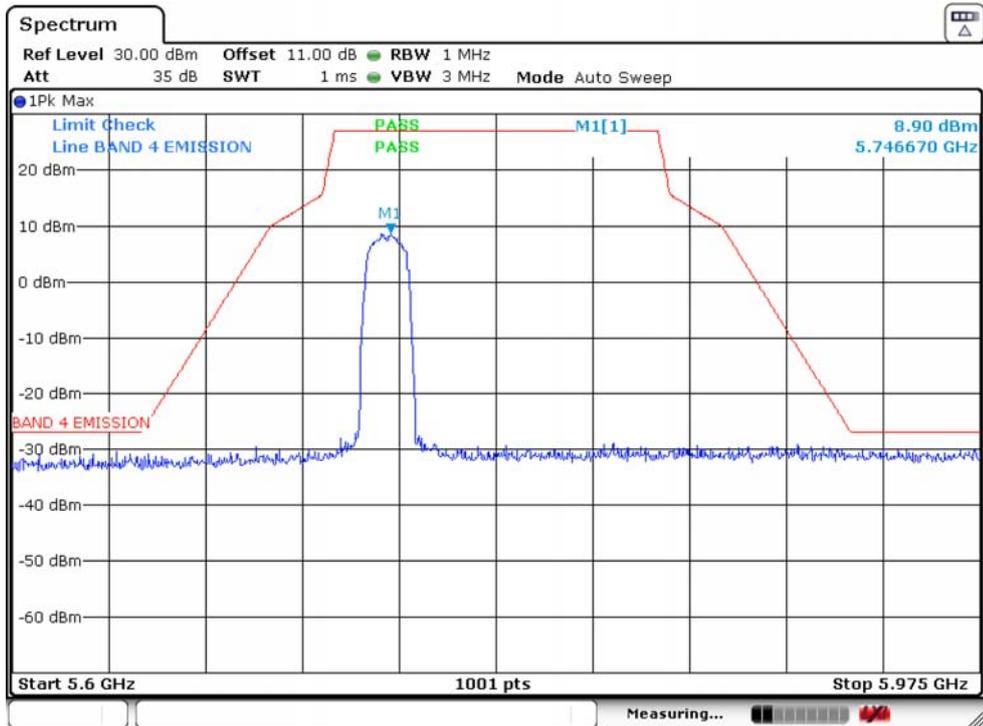
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. Margin= Limit - Emission Level.
 3. The emission levels that are 20dB below the official limit are not reported.

Note:

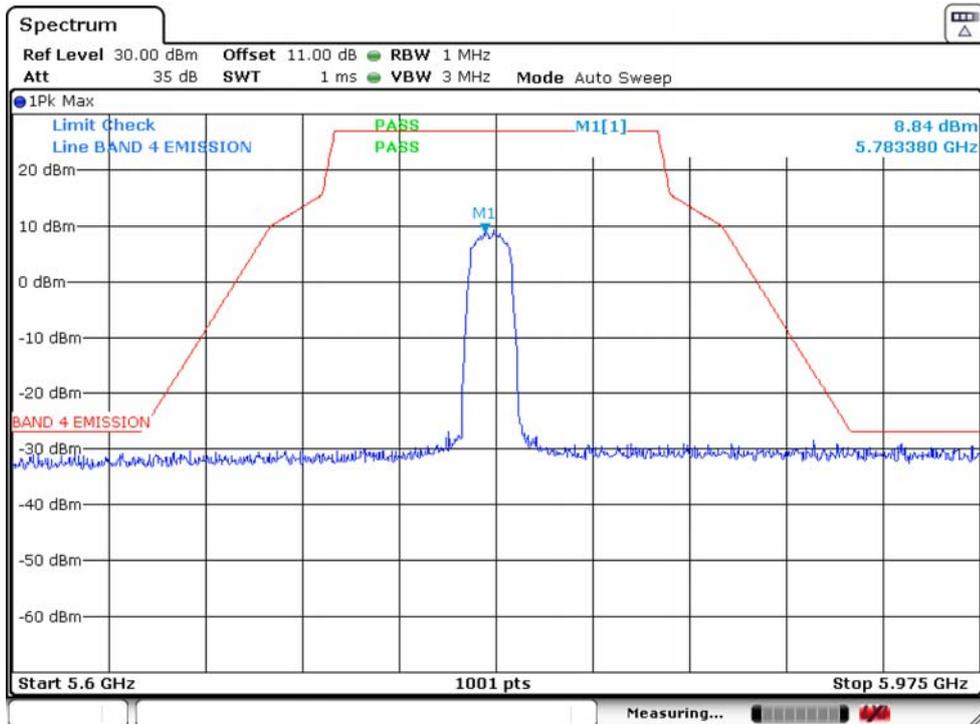
1. The amplitude of 18GHz to 40GHz spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.
2. All test mode had been pre-test, only Low/Middle/High Channel of the worst case modulation mode was reported

Band Edge

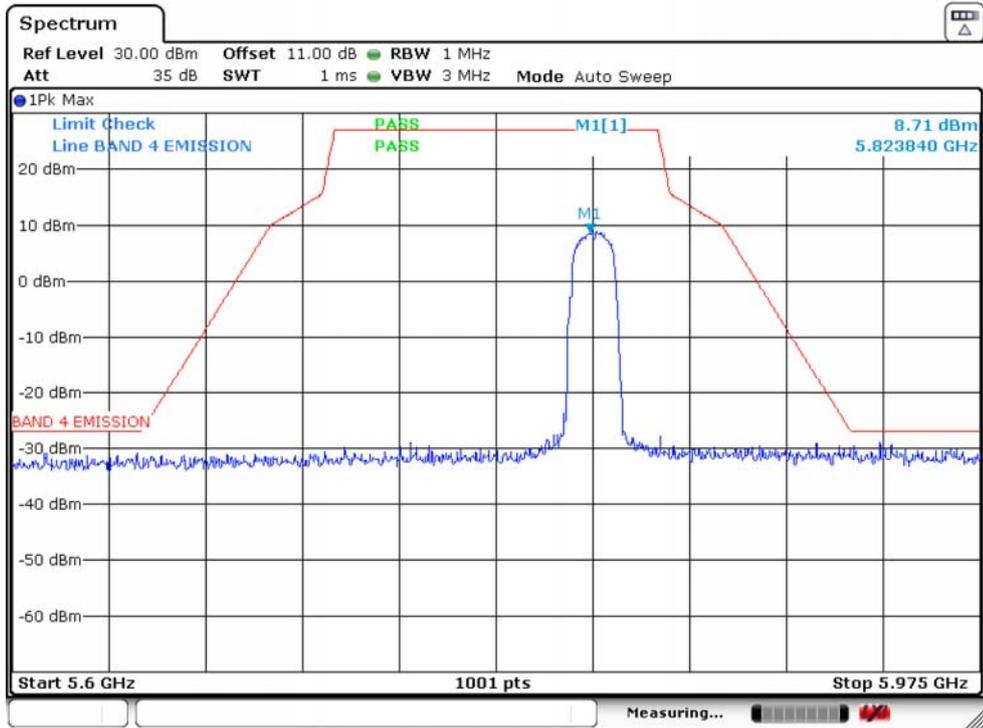
IEEE 802.11a 5745



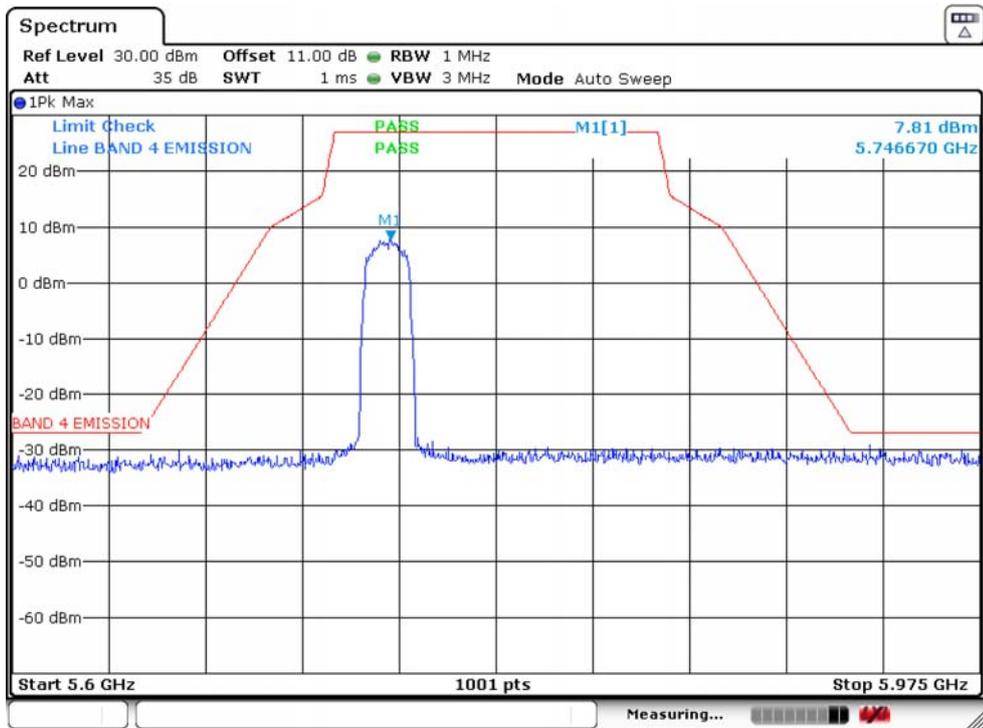
IEEE 802.11a 5785



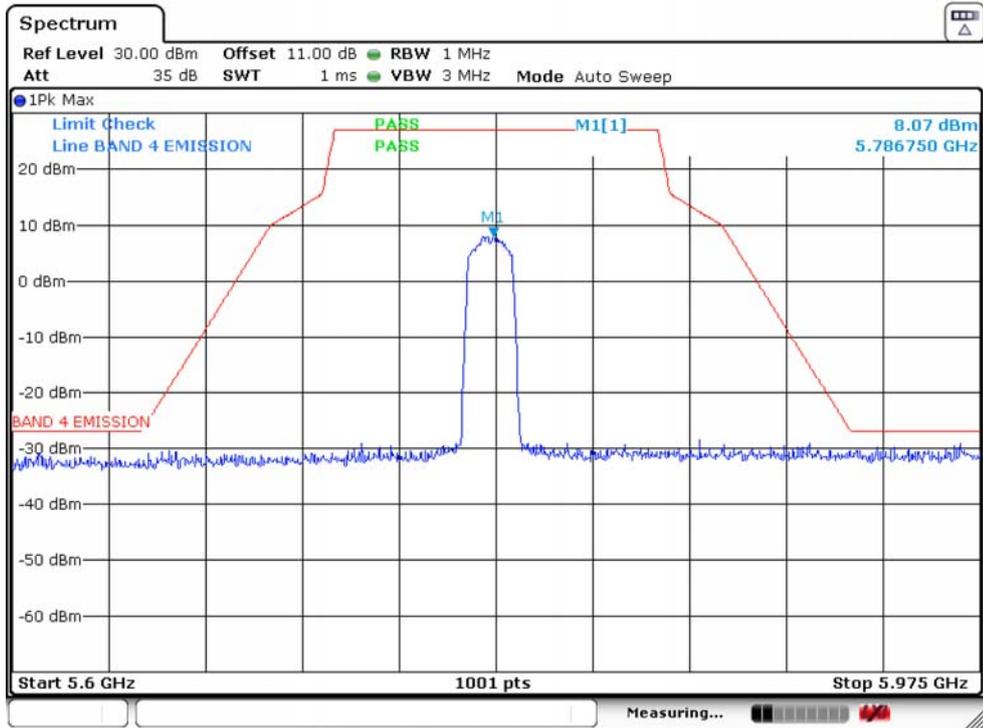
IEEE 802.11a 5825



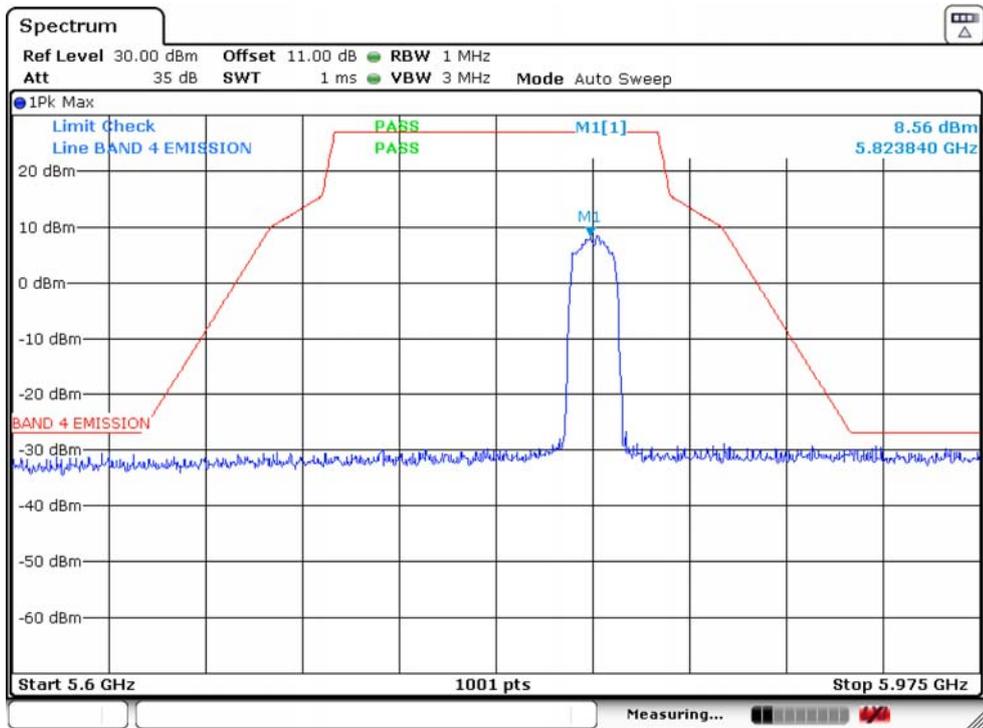
IEEE 802.11n HT20 5745



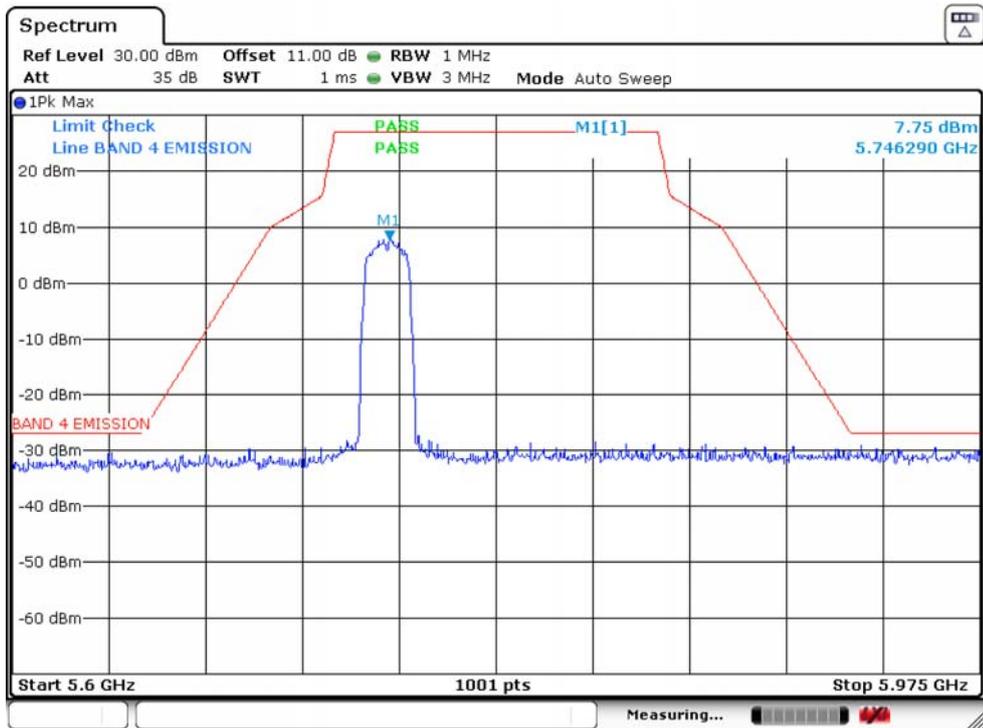
IEEE 802.11n HT20 5785



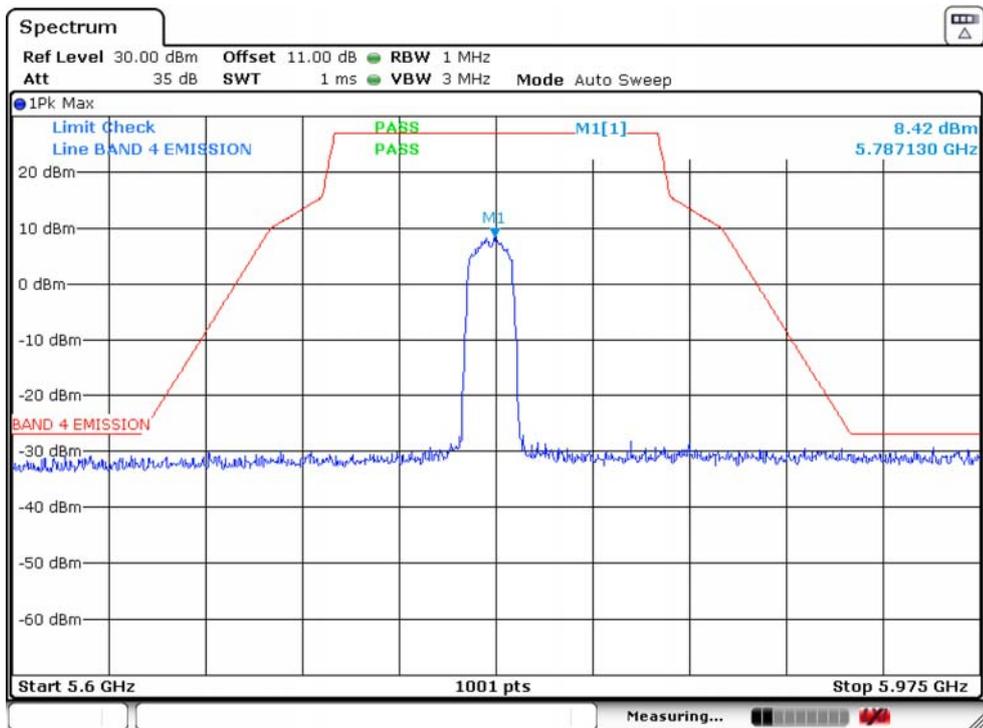
IEEE 802.11n HT20 5825



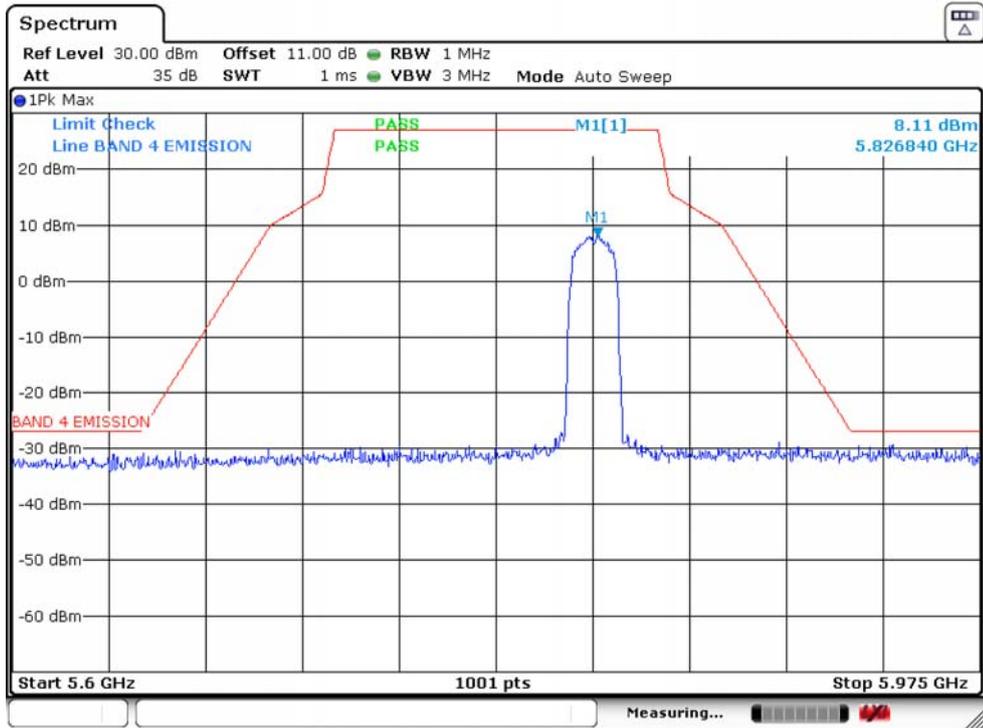
IEEE 802.11ac VHT20 5745



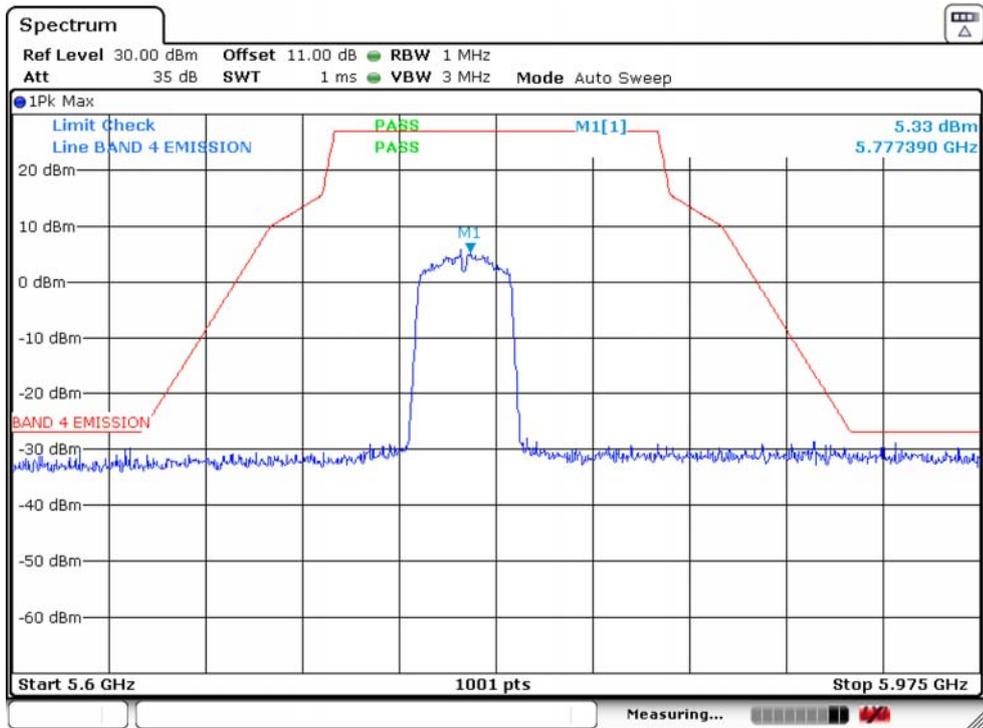
IEEE 802.11ac VHT20 5785



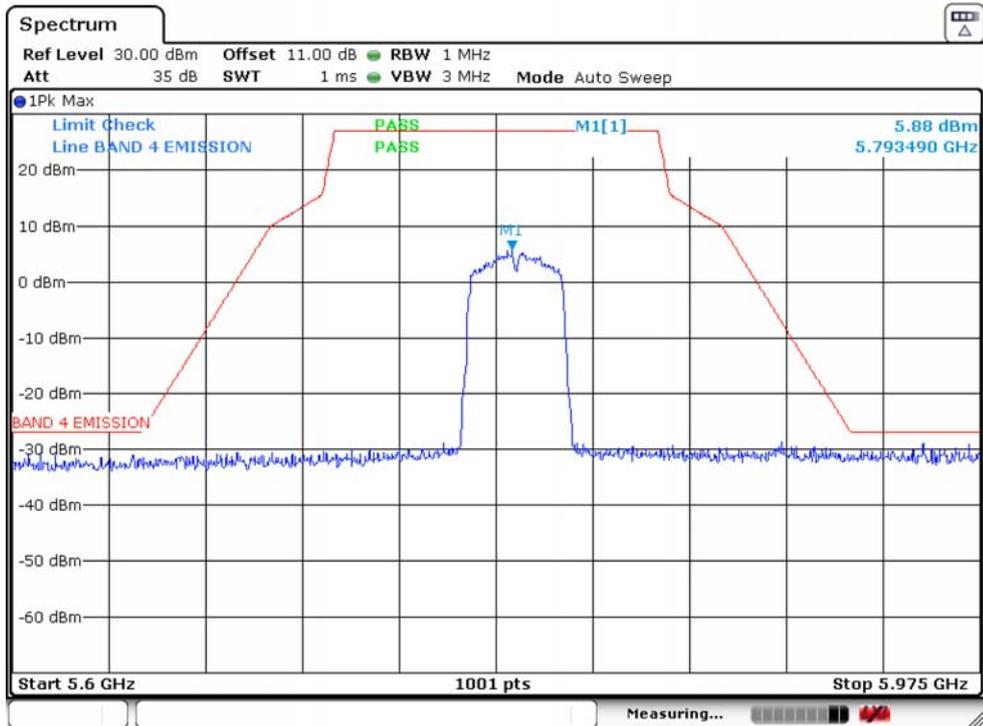
IEEE 802.11ac VHT20 5825



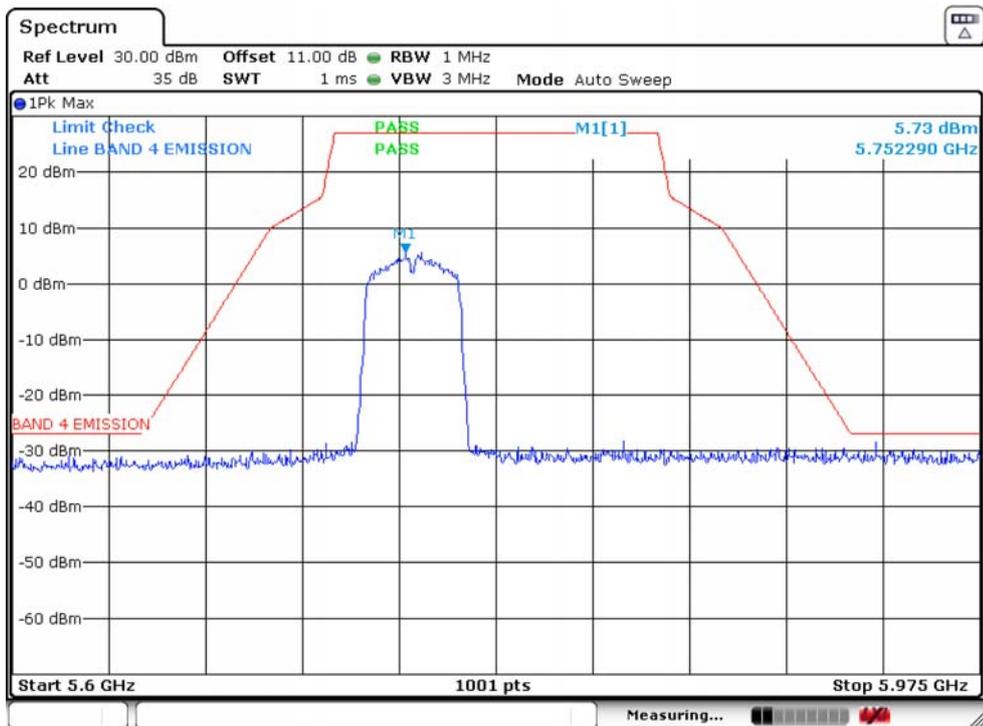
IEEE 802.11n HT40 5755



IEEE 802.11n HT40 5795



IEEE 802.11ac VHT40 5755

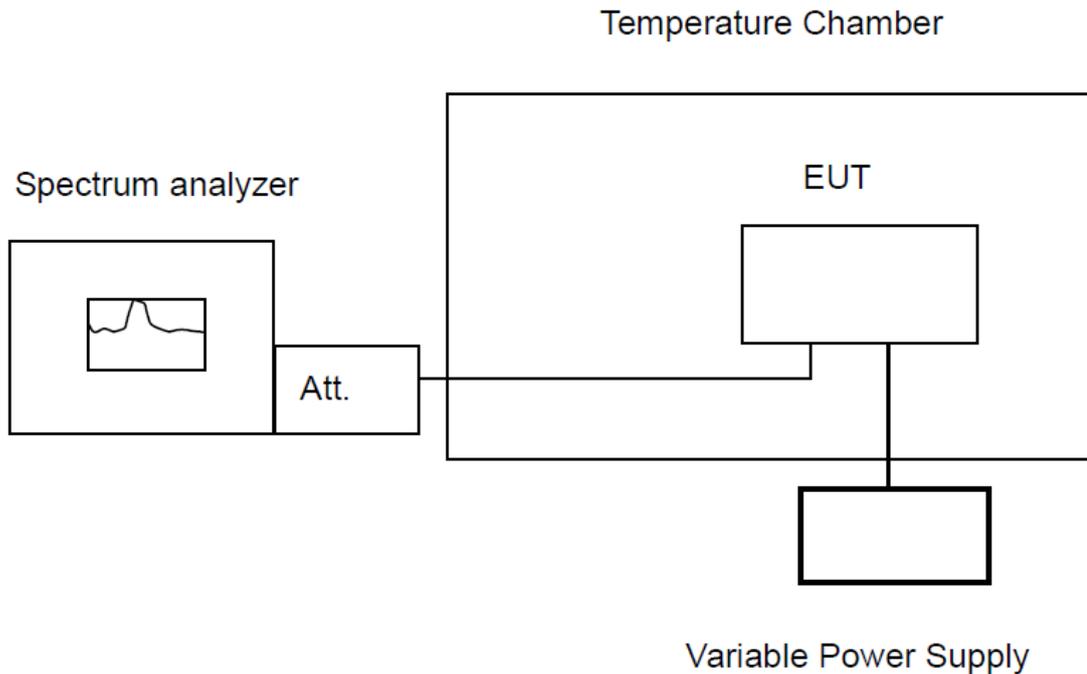


7. FREQUENCY STABILITY

7.1. Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the operational description.

7.2. Test Setup



7.3. Spectrum Analyzer Setting

Spectrum Parameters	Setting
RBW	10KHz
VBW	10KHz
Span	200KHz
Sweep Time	Auto
Detector	PEAK
Trace Mode	Max Hold

7.4. Test Procedure

For measurement frequency stability under temperature variation :

- a. Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT.
- b. Turn the EUT OFF and place it inside the environmental temperature chamber.
- c. Connect EUT antenna terminal to the spectrum analyzer with RF cable.
- d. Spectrum analyzer setting parameters in accordance with section 7.3.
- e. Set the temperature control on the chamber to the Specified temperature and allow the oscillator heater and the chamber temperature to stabilize.
- f. Turn the EUT ON with the rated voltage, and the EUT transmit continuously with maximum output power.
- g. Record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized.
- h. Repeat step d through step f to measured the temperature form -20°C to $+50^{\circ}\text{C}$ in 10°C steps.

For frequency stability under voltage variation:

- a. Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT.
- b. Turn the EUT OFF and place it inside the environmental temperature chamber.
- c. Connect EUT antenna terminal to the spectrum analyzer with RF cable.
- d. Spectrum analyzer setting parameters in accordance with section 7.3.
- e. Unless otherwise specified, set the temperature control on the chamber to the ambient room temperature ($+15^{\circ}\text{C}$ to $+25^{\circ}\text{C}$) and allow the oscillator heater and the chamber temperature to stabilize.
- f. Turn the EUT ON with the rated voltage, and the EUT transmit continuously with maximum output power.
- g. Record the operating frequency.
- h. Repeat step d through step f to measured the varied from 85% to 115% of the rated voltage.

7.5. Test Result

Frequency (MHz)	Voltage (V)	Temperature (°C)	Time (minutes)	Measurement Value (MHz)	Frequency Error (ppm)
5180	3.3	50	0	5179.9290070	-13.71
			2	5179.9210080	-15.25
			5	5179.9200080	-15.44
			10	5179.9286450	-13.78
	3.3	40	0	5179.9267430	-14.14
			2	5179.9268550	-14.12
			5	5179.9280760	-13.88
			10	5179.9261020	-14.27
	3.3	30	0	5179.9257490	-14.33
			2	5179.9266270	-14.16
			5	5179.9208340	-15.28
			10	5179.9250750	-14.46
	3.3	20	0	5179.9211230	-15.23
			2	5179.9261140	-14.26
			5	5179.9268960	-14.11
			10	5179.9219100	-15.08
	3.3	10	0	5179.9276690	-13.96
			2	5179.9258900	-14.31
			5	5179.9206090	-15.33
			10	5179.9204840	-15.35
	3.3	0	0	5179.9222590	-15.01
			2	5179.9275380	-13.99
			5	5179.9241650	-14.64
			10	5179.9266670	-14.16
	3.3	-10	0	5179.9279860	-13.90
			2	5179.9266520	-14.16
			5	5179.9249830	-14.48
			10	5179.9252280	-14.43
	3.3	-20	0	5179.9238150	-14.71
			2	5179.9219990	-15.06
			5	5179.9256080	-14.36
			10	5179.9202670	-15.39
	3.3	20	/	5179.9233320	-14.80
	3.2	20	/	5179.9285620	-13.79
	3.9	20	/	5179.9240030	-14.67
	MAX Frquency Error(ppm)				

Frequency (MHz)	Voltage (V)	Temperature (°C)	Time (minutes)	Measurement Value (MHz)	Frequency Error (ppm)
5320	3.3	50	0	5320.0010000	0.19
			2	5319.9600040	-7.52
			5	5319.9720030	-5.26
			10	5319.9815350	-3.47
	3.3	40	0	5319.9763790	-4.44
			2	5319.9936440	-1.19
			5	5319.9646290	-6.65
			10	5319.9783460	-4.07
	3.3	30	0	5319.9918480	-1.53
			2	5319.9634130	-6.88
			5	5319.9939270	-1.14
			10	5319.9790430	-3.94
	3.3	20	0	5319.9835440	-3.09
			2	5319.9875180	-2.35
			5	5320.0001560	0.03
			10	5319.9884420	-2.17
	3.3	10	0	5319.9849840	-2.82
			2	5319.9690470	-5.82
			5	5319.9981000	-0.36
			10	5319.9738370	-4.92
	3.3	0	0	5319.9915050	-1.60
			2	5319.9813440	-3.51
			5	5319.9906710	-1.75
			10	5319.9742690	-4.84
	3.3	-10	0	5319.9671280	-6.18
			2	5319.9818230	-3.42
			5	5319.9960150	-0.75
			10	5319.9998210	-0.03
	3.3	-20	0	5319.9611580	-7.30
			2	5319.9673920	-6.13
			5	5320.0008670	0.16
			10	5319.9749110	-4.72
3.3	20	/	5319.9917660	-1.55	
3.2	20	/	5319.9842390	-2.96	
3.9	20	/	5319.9843410	-2.94	
MAX Frquency Error(ppm)					0.19

Frequency (MHz)	Voltage (V)	Temperature (°C)	Time (minutes)	Measurement Value (MHz)	Frequency Error (ppm)
5500	3.3	50	0	5499.9240080	-13.82
			2	5499.9654740	-6.28
			5	5499.9264780	-13.37
			10	5499.9342800	-11.95
	3.3	40	0	5499.9342400	-11.96
			2	5499.9583790	-7.57
			5	5499.9278960	-13.11
			10	5499.9322660	-12.32
	3.3	30	0	5499.9620070	-6.91
			2	5499.9531270	-8.52
			5	5499.9358270	-11.67
			10	5499.9303460	-12.66
	3.3	20	0	5499.9549110	-8.20
			2	5499.9555910	-8.07
			5	5499.9302450	-12.68
			10	5499.9523710	-8.66
	3.3	10	0	5499.9289780	-12.91
			2	5499.9563470	-7.94
			5	5499.9635770	-6.62
			10	5499.9543830	-8.29
	3.3	0	0	5499.9553820	-8.11
			2	5499.9610540	-7.08
			5	5499.9341190	-11.98
			10	5499.9579800	-7.64
	3.3	-10	0	5499.9567630	-7.86
			2	5499.9648240	-6.40
			5	5499.9561650	-7.97
			10	5499.9498260	-9.12
	3.3	-20	0	5499.9372260	-11.41
			2	5499.9634850	-6.64
			5	5499.9594510	-7.37
			10	5499.9395130	-11.00
3.3	20	/	5499.9424900	-10.46	
3.2	20	/	5499.9450060	-10.00	
3.9	20	/	5499.9250330	-13.63	
MAX Frquency Error(ppm)					-6.28

Frequency (MHz)	Voltage (V)	Temperature (°C)	Time (minutes)	Measurement Value (MHz)	Frequency Error (ppm)
5745	3.3	50	0	5699.9430060	-10.00
			2	5700.0070000	1.23
			5	5700.0070000	1.23
			10	5699.9610820	-6.83
	3.3	40	0	5699.9478690	-9.15
			2	5699.9933760	-1.16
			5	5699.9664440	-5.89
			10	5699.9485150	-9.03
	3.3	30	0	5699.9772180	-4.00
			2	5699.9527520	-8.29
			5	5700.0007220	0.13
			10	5699.9612590	-6.80
	3.3	20	0	5700.0030440	0.53
			2	5699.9606780	-6.90
			5	5699.9985720	-0.25
			10	5699.9580450	-7.36
	3.3	10	0	5699.9623270	-6.61
			2	5699.9448960	-9.67
			5	5699.9477050	-9.17
			10	5699.9677760	-5.65
	3.3	0	0	5699.9869630	-2.29
			2	5699.9976600	-0.41
			5	5699.9733750	-4.67
			10	5700.0060610	1.06
	3.3	-10	0	5699.9602140	-6.98
			2	5700.0066040	1.16
			5	5699.9662710	-5.92
			10	5699.9826140	-3.05
	3.3	-20	0	5699.9887730	-1.97
			2	5699.9609760	-6.85
			5	5699.9481450	-9.10
			10	5699.9737310	-4.61
3.3	20	/	5699.9587250	-7.24	
3.2	20	/	5699.9869290	-2.29	
3.9	20	/	5699.9853800	-2.56	
MAX Frquency Error(ppm)					1.23

8. AC POWER LINE CONDUCTED EMISSIONS

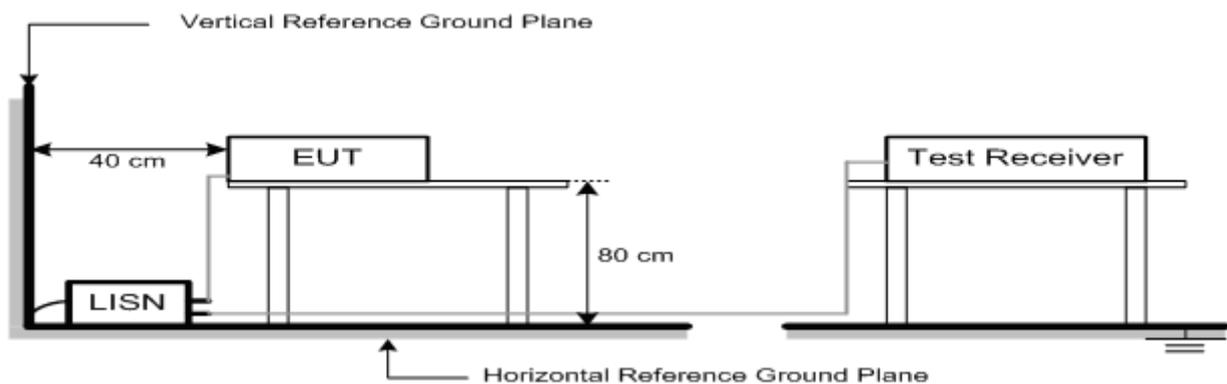
8.1. Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μ V)	Average Level dB(μ V)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes:

- * Decreasing linearly with logarithm of frequency.
- The lower limit shall apply at the transition frequencies.

8.2. Test Setup



8.3. Spectrum Analyzer Setting

Spectrum Parameters	Setting
RBW	9KHz
VBW	9KHz
Start frequency	150KHz
Stop frequency	30MHz
Sweep Time	Auto
Detector	QP/AVG
Trace Mode	Max Hold

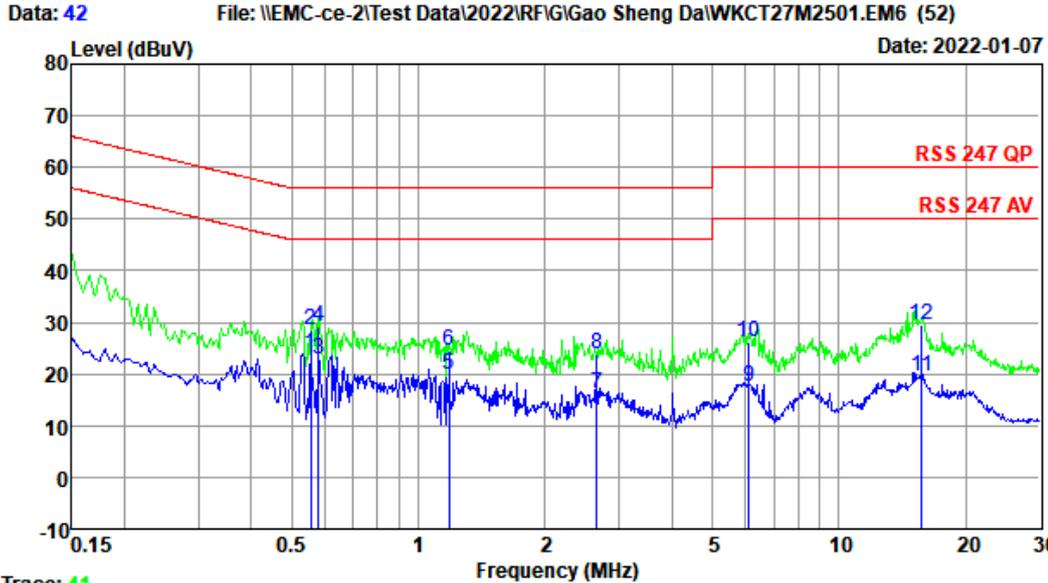
8.4. Test Procedure

- The EUT was placed on a non-metallic table, 80cm above the ground plane.
- The EUT Power connected to the power mains through a line impedance stabilization network.
- Provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs).
- Set the EUT transmit continuously with maximum output power.
- Spectrum analyzer setting parameters in accordance with section 8.3.
- The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Test.
- Record the results in the test report.

8.5. Test Result

EST Technology

Chilingxiang, Qishantou, Santun,
Houjie, Dongguan, Guangdong, China
Tel: +86-769-83081888
Fax: +86-769-83081878

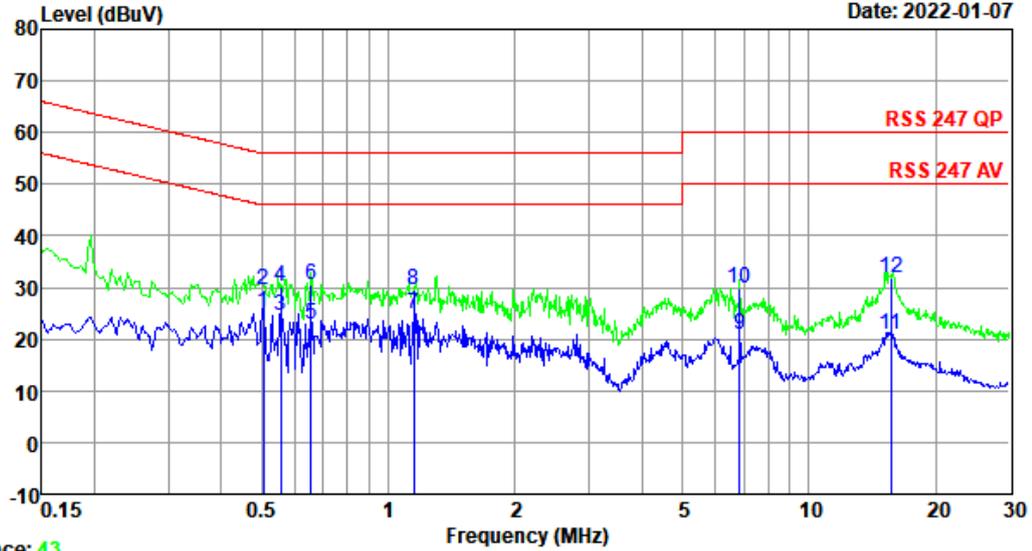


Trace: 41
 Site no. : 2#CE Shield Room Data no. : 42
 Env. / Ins. : Temp:22.8°C Humi:58% Press:101.30kPa. : LINE
 Limit : RSS 247 QP
 Engineer : ZSX
 EUT : WIFI+BT Module
 Power : DC 3.3V From PC Input AC 120V/60Hz
 M/N : WKCT27M2501
 Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.5552	9.84	0.05	13.88	23.77	46.00	22.23	Average
2	0.5552	9.84	0.05	18.79	28.68	56.00	27.32	QP
3	0.5792	9.83	0.05	13.05	22.93	46.00	23.07	Average
4	0.5792	9.83	0.05	19.43	29.31	56.00	26.69	QP
5	1.1844	9.92	0.06	9.95	19.93	46.00	26.07	Average
6	1.1844	9.92	0.06	14.50	24.48	56.00	31.52	QP
7	2.6500	9.95	0.07	6.27	16.29	46.00	29.71	Average
8	2.6500	9.95	0.07	13.79	23.81	56.00	32.19	QP
9	6.1209	9.90	0.07	7.73	17.70	50.00	32.30	Average
10	6.1209	9.90	0.07	16.27	26.24	60.00	33.76	QP
11	15.7179	9.86	0.08	9.67	19.61	50.00	30.39	Average
12	15.7179	9.86	0.08	19.61	29.55	60.00	30.45	QP

Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.
 2. If the average limit is met when using a quasi-peak detector,
 the EUT shall be deemed to meet both limits and measurement
 with average detector is unnecessary.

Data: 44 File: \\EMC-ce-2\Test Data\2022\RF\G\Gao Sheng Da\WKCT27M2501.EM6 (52) Date: 2022-01-07



Trace: 43
 Site no. : 2#CE Shield Room Data no. : 44
 Env. / Ins. : Temp:22.8°C Humi:58% Press:101.30kPa. : NEUTRAL
 Limit : RSS 247 QP
 Engineer : ZSX
 EUT : WIFI+BT Module
 Power : DC 3.3V From PC Input AC 120V/60Hz
 M/N : WKCT27M2501
 Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.5047	9.76	0.05	15.53	25.34	46.00	20.66	Average
2	0.5047	9.76	0.05	19.66	29.47	56.00	26.53	QP
3	0.5552	9.76	0.05	14.65	24.46	46.00	21.54	Average
4	0.5552	9.76	0.05	20.53	30.34	56.00	25.66	QP
5	0.6543	9.76	0.05	13.23	23.04	46.00	22.96	Average
6	0.6543	9.76	0.05	20.84	30.65	56.00	25.35	QP
7	1.1473	9.82	0.06	15.02	24.90	46.00	21.10	Average
8	1.1473	9.82	0.06	19.65	29.53	56.00	26.47	QP
9	6.8412	10.05	0.08	10.86	20.99	50.00	29.01	Average
10	6.8412	10.05	0.08	19.64	29.77	60.00	30.23	QP
11	15.6349	10.13	0.08	10.75	20.96	50.00	29.04	Average
12	15.6349	10.13	0.08	21.48	31.69	60.00	28.31	QP

Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.
 2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

9. TRANSMIT ANTENNA

9.1. Limit

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

For licence-exempt equipment with detachable antennas, the user manual shall also contain the following notice in a conspicuous location:

This radio transmitter [enter the device's ISED certification number] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

9.2. Test Result

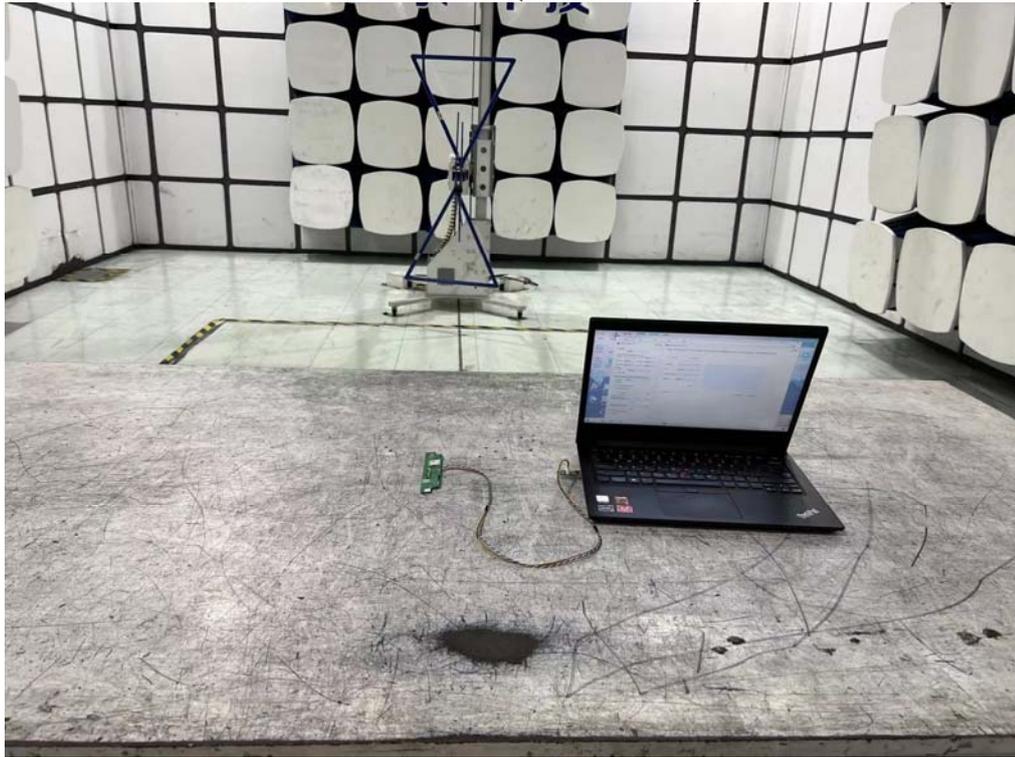
All antennas are listed in section 1.2. And the antennas used for this product is PCB antenna, So the notice does not need to be displayed in the user manual.

10. TEST SETUP PHOTO

Conducted Test



Radiated Test (Below 1GHz)

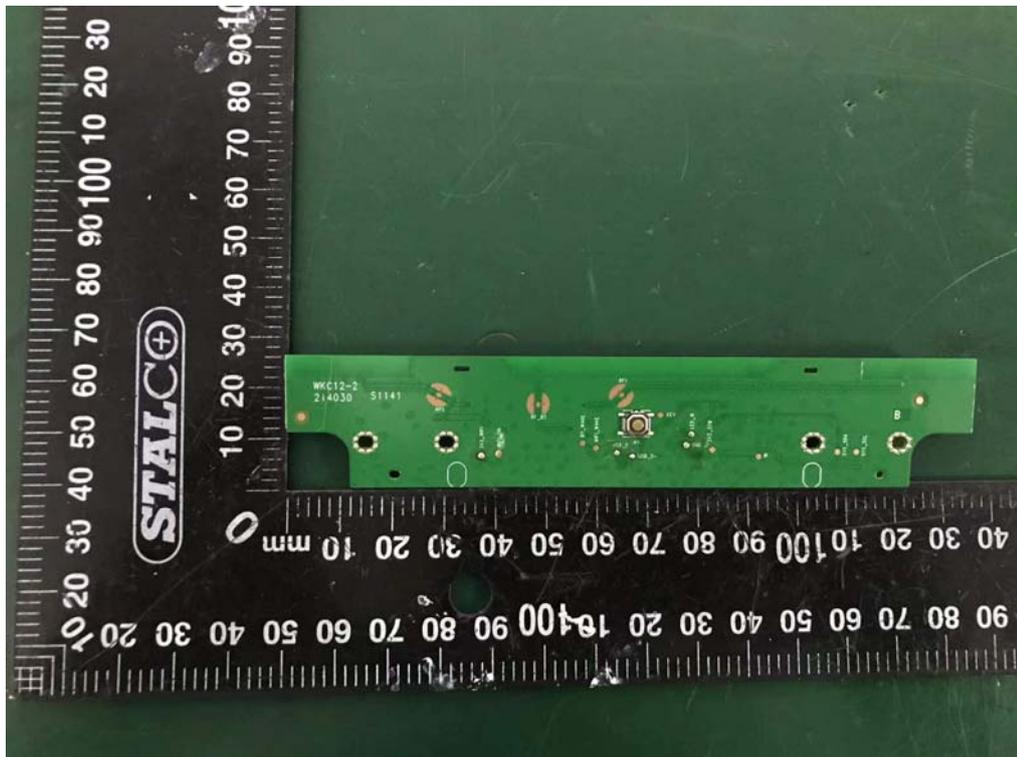
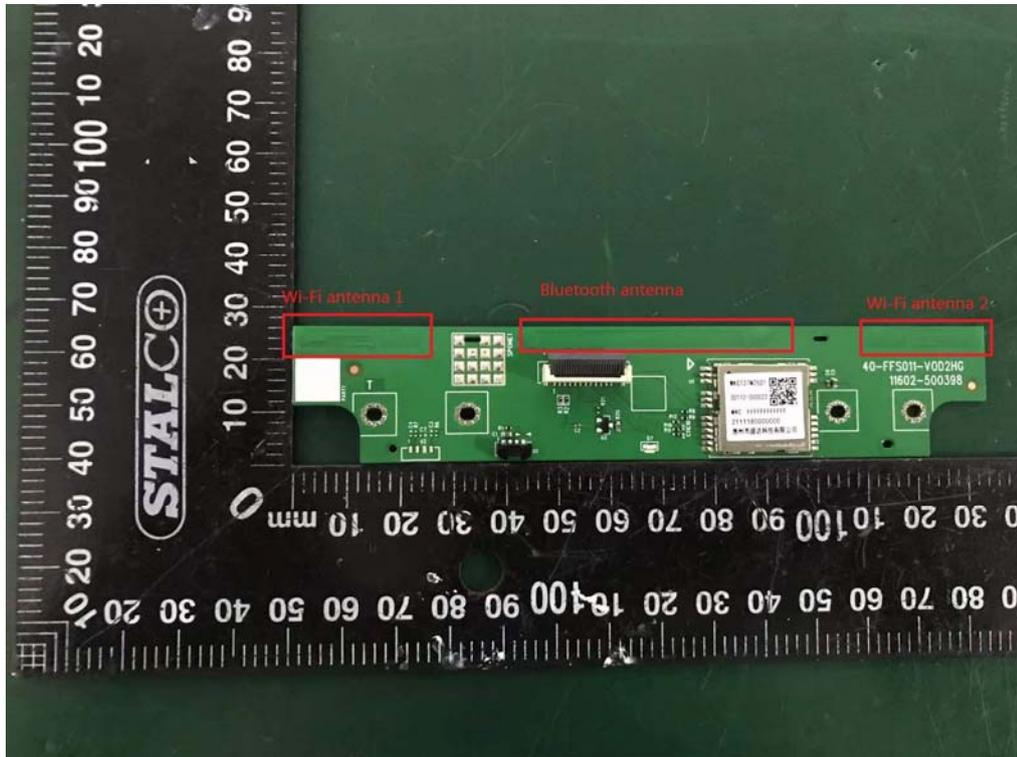


Radiated Test (Above 1GHz)

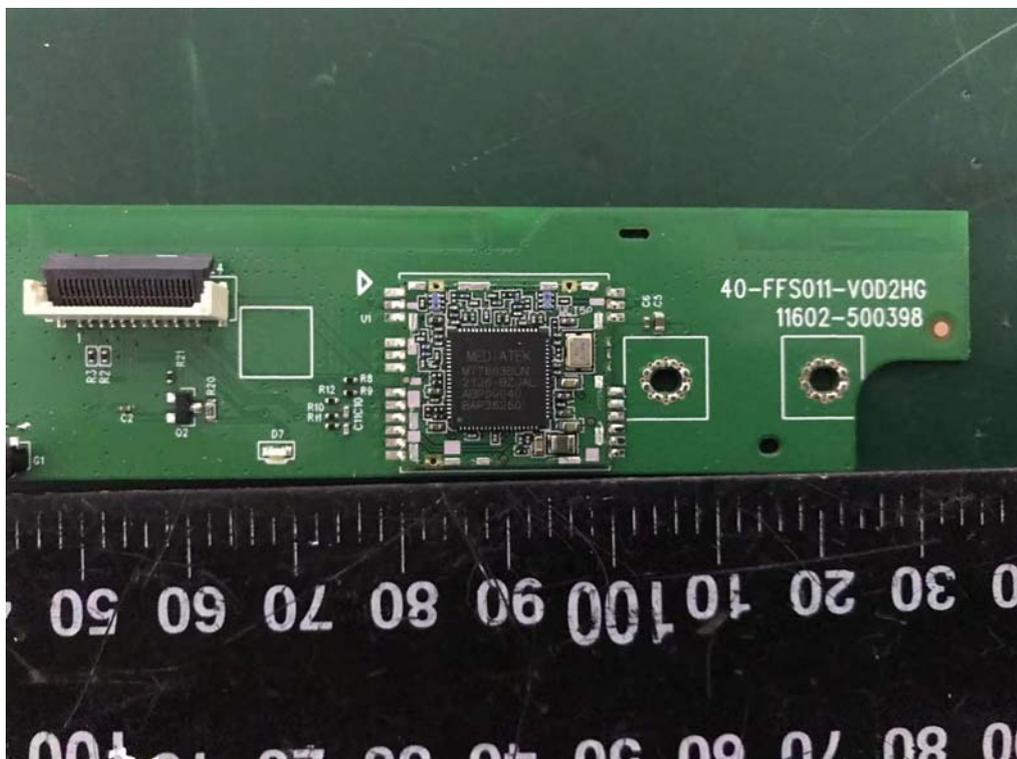
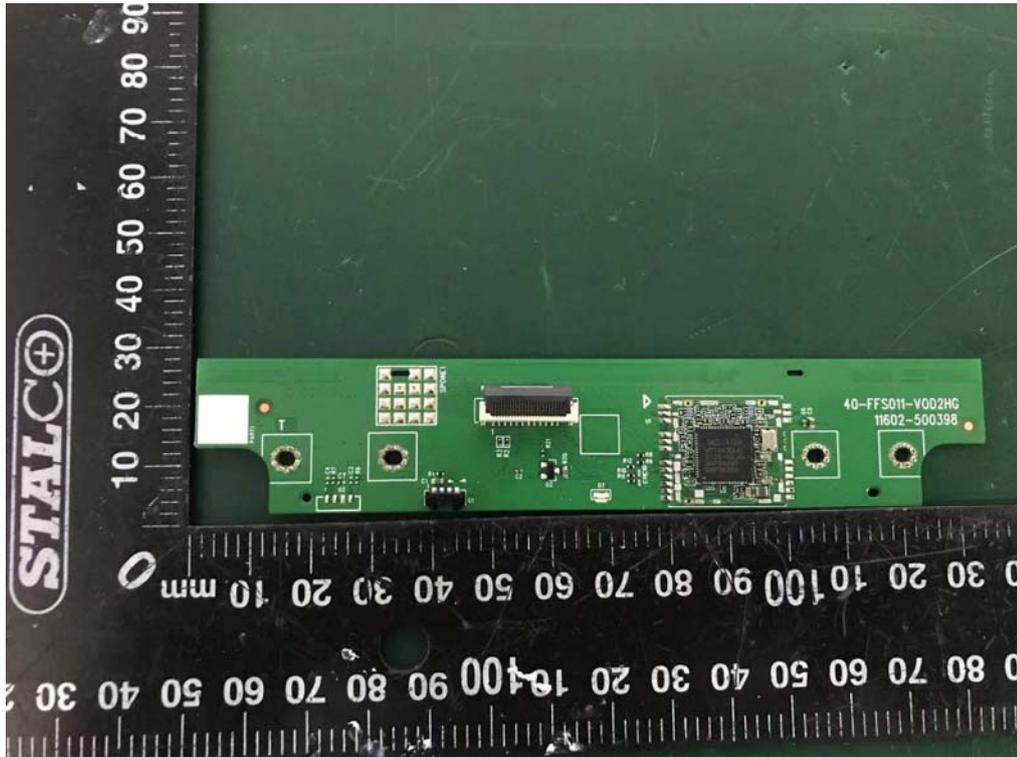


11. EUT PHOTO

External Photos
M/N: WKCT27M2501



External Photos
M/N: WKCT27M2501



End of Test Report