



TEST REPORT

Test item description: 55-inch Light Field Holographic Display

Trademark(s): 

Model/Type reference: ZX-GCD8-5525CX

Applicant's name: SHENZHEN IMAGETRU3D TECHNOLOGY CO.,LTD.
Room 610, Devisen Building, No.016, Gaoxin South 7th Road, High tech Zone
Address: Community, Yuehai Subdistrict, Nanshan District, Shenzhen, Guangdong, China

Manufacturer: SHENZHEN IMAGETRU3D TECHNOLOGY CO.,LTD.
Room 610, Devisen Building, No.016, Gaoxin South 7th Road, High tech Zone
Address: Community, Yuehai Subdistrict, Nanshan District, Shenzhen, Guangdong, China

Prepared By: Shenzhen CTB Testing Technology Co., Ltd.
Address: 1&2/F., Building A, No.26, Xinghe Road, Xinqiao, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, China

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Sample tested Date: May. 28, 2026 to Jun. 16, 2026

Issue Date: Jun. 16, 2026

Report No.: CTB26052806201RF04

Test Standards: MIC Notice No.88 Appendix No.45
Item 19-3

Test Results: PASS

Remark: This is 5G WIFI radio test report.

Compiled by:

Kai Chen

Kai Chen

Reviewed by:

Martin Feng

Martin Feng

Approved by:

Bin Mei / Director

Note: If there is any objection to the inspection results in this report, please submit a written report to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. The tested sample(s) and the sample information are provided by the applicant. The authenticity, accuracy, and completeness of the provided information are the sole responsibility of the applicant. Without written approval of Shenzhen CTB Testing Technology Co., Ltd. this report can't be reproduced except in full. The result decision rules of our laboratory are based solely on the direct comparison between the actual measured values of test results and the standard limits, without considering the measurement uncertainty. "★" indicates the testing items were fulfilled by subcontracted lab. "✖" indicates the items are not in CNAS accreditation scope.

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1.Version

Report No.	Issue Date	Description	Approved
CTB26052806201RF04	Jun. 16, 2026	Original	Valid

2.TEST PROCEDURES AND RESULTS

Test item	Test Requirement	Limit/Severity	Result
Antenna Requirement	Item 19-3 of Article 2 Paragraph 1	Notice 88 Appendix 43,B-1 (1)&(2)	PASS
Frequency Error	Item 19-3 of Article 2 Paragraph 1	+/-20ppm	PASS
Occupied Bandwidth (99%)	Item 19-3 of Article 2 Paragraph 1	W52: Occupied bandwidth: $\leq 20\text{MHz}$ (20MHz System, OFDM) Occupied bandwidth: $\leq 40\text{MHz}$ (40MHz System, OFDM) Occupied bandwidth: $\leq 80\text{MHz}$ (80MHz System, OFDM)	PASS
Adjacent Channel Emitted Power	Item 19-3 of Article 2 Paragraph 1	802.11a/n20/ac20: $F_c \pm 20\text{MHz} \pm 10\text{MHz BW} : -25\text{dBc}$ $F_c \pm 20\text{MHz} \pm 10\text{MHz BW} : -25\text{dBc}$ 802.11n40/ac40: $F_c \pm 40\text{MHz} \pm 20\text{MHz BW} : -25\text{dBc}$ $F_c \pm 80\text{MHz} \pm 20\text{MHz BW} : -40\text{dBc}$ 802.11ac80: $F_c \pm 80\text{MHz} \pm 40\text{MHz BW} : -25\text{dBc}$	PASS
Antenna Power and Tolerance	Item 19-3 of Article 2 Paragraph 1	(1)10mW/MHz(OFDM, DSSS:20MHz system), (2)5mW/MHz(OFDM:40MHz system), (3)2.5mW/MHz(OFDM:80MHz system), (4)10mW/MHz(except above methods), Tolerance : W52: -80%~+20%, W56:-50%~+50%.	PASS
Unwanted Emission Strength	Item 19-3 of Article 2 Paragraph 1	Attachment 1	PASS
Interference Prevention Function	Item 19-3 of Article 2 Paragraph 1	Article 49	PASS
Carrier sense capability	Item 19-3 of Article 2 Paragraph 1	Article 49	PASS
Construction Protection Confirmation	Item 19-3 of Article 2 Paragraph 1	Article 49	PASS
Transmission Burst Length	Item 19-3 of Article 2 Paragraph 1	8ms or less	PASS
Secondary Radiated Emission Strength	Item 19-3 of Article 2 Paragraph 1	(1)Below 1GHz:4nW/100kHz or less (2)1GHz or higher:20nW/MHz or less	PASS

Dynamic Frequency selection(DFS)	Item 19-3 of Article 2 Paragraph 1	WAS/RLAN devices operating in slave mode (slave device) can be operated in a network controlled by aWAN/RLAN device operating in master mode (master device).	N/A
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3.MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Parameter	Uncertainty
Frequency error / 99%&90% bandwidth	$\pm 54.3\text{Hz}$
Total RF power, conducted	$\pm 1.0\text{dB}$
Spurious emissions, conducted	$\pm 2.8\text{dB}$
DC and low frequency voltages	$\pm 3\%$
Humidity	$\pm 5.3\%$
Temperature	$\pm 0.59^{\circ}\text{C}$

4. GENERAL INFORMATION

4.1 GENERAL DESCRIPTION OF EUT

Model/Type reference:	ZX-GCD8-5525CX
Model Description:	N/A
Wi-Fi Specification:	IEEE 802.11a/n/ac
Hardware Version:	V1.0
Software Version:	V1.0
Operation Frequency:	IEEE 802.11a/n/ac(20M): 5150MHz ~5250MHz/ 4 channel IEEE 802.11n/ac(40M): 5150MHz ~5250MHz/ 2 channel IEEE 802.11ac(80M): 5150MHz ~5250MHz/ 1 channel
Rate Output power:	802.11a: 4mW/MHz 802.11ac(VHT20): 6mW/MHz, 802.11n(VHT20): 6mW/MHz, 802.11n(HT40): 3mW/MHz, 802.11ac(VHT40): 3mW/MHz 802.11ac80: 2mW/MHz
Type of Modulation:	OFDM
Antenna installation:	External antenna
Antenna Gain:	Ant 1: 2.13dBi Ant 2: 2.13dBi
Ratings:	AC 100V/60Hz

Note: For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

4.2 Channel list

For 802.11a/n/ac(20M) Operation in the 5150MHz ~5250 MHz band			
Channel	Frequency	Channel	Frequency
36	5180MHz	44	5220MHz
40	5200MHz	48	5240MHz
For 802.11n/ac(40M) Operation in the 5150MHz ~5250 MHz band			
Channel	Frequency	Channel	Frequency
38	5190MHz	46	5230MHz
For 802.11ac(80M) Operation in the 5150MHz ~5250 MHz band			
Channel	Frequency	Channel	Frequency
42	5210MHz	NA	NA

4.3Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Gain(dBi)	NOTE
1	N/A	5.2G antenna	External antenna	2.13dBi	N/A
2	N/A	5.2G antenna	External antenna	2.13dBi	N/A

4.4 DESCRIPTION OF TEST MODES

All test mode(s) and condition(s) mentioned were considered and evaluated respectively by performing full tests, the worst data were recorded and reported.

Test Mode	Tx/Rx	RF Channel		
		Low(L)	Middle(M)	High(H)
802.11a/n/ac(20M)	5150MHz ~5250 MHz	Channel 36	Channel 40	Channel 48
		5180MHz	5200MHz	5240MHz
802.11n/ac(40M)	5150MHz ~5250 MHz	Channel 38	N/A	Channel 46
		5190MHz	N/A	5230MHz
802.11ac(80M)	5150MHz ~5250 MHz	N/A	Channel 42	N/A
		N/A	5210MHz	N/A

4.5 TEST CONDITIONS

Supply Voltage					
	Adapter power V	Module input power V	Rated module power V	Tolerance (%)	
Normal	100	3.3	3.3		
+10%	110	3.3	3.3		0
-10%	90	3.3	3.3		0
Others					
Temperature (°C)		20-25			
Relative humidity		54 %.			
ATM Pressure:		1010 mbar			
Note 1: When the input voltage is reduced or increased by 10%, the regulator voltage changes of less than 1%. So the following test items are conducted in the normal voltage.					

4.6 Block diagram showing the configuration of system tested

Transmitting mode



4.7 DESCRIPTION OF SUPPORT UNITS(CONDUCTEDMODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Test item description	Trademark(s)	Model/Type reference	Note
1	55-inch Light Field Holographic Display	 臻像科技 ZHENXIANGKEJI	ZX-GCD8-5525CX	EUT
Item	Shielded Type	Ferrite Core	Length	Note

Note:

1. The support equipment was authorized by Declaration of Confirmation.
2. For detachable type I/O cable should be specified the length in cm in 『Length』 column.
3. “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

4.8 MEASUREMENT INSTRUMENTS LIST

No.	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY52090073	A.14.16	2027/5/13
2	Power Sensor	Agilent	U2021XA	MY56120032	/	2027/5/13
3	Power Sensor	Agilent	U2021XA	MY56120034	/	2027/5/13
4	Communication test set	R&S	CMW500	108058	V3.5.80	2027/5/13
5	Spectrum Analyzer	KEYSIGHT	N9020A	MY51289897	A.14.16	2027/5/13
6	Signal Generator	Agilent	N5181A	MY50140365	A.01.60	2027/5/13
7	Vector signal generator	Agilent	N5182A	MY47420195	A.01.87	2027/5/13
8	Communication test set	Agilent	E5515C	MY50102567	B.19.07 (E1962B)	2027/5/13
9	2.4 GHz Filter	Shenxiang	MSF2400-24 83.5MS-1154	20181015001	/	2027/5/15
10	5 GHz Filter	Shenxiang	MSF5150-58 50MS-1155	20181015001	/	2027/5/15
11	Filter	Xingbo	XBLBQ-DZA 120	190821-1-1	/	2027/5/16
12	BT&WI-FI Automatic test software	Microwave	MTS8310	Ver. 2.0.0.0	/	/
13	Temperature humidity chamber	Huihao	HT-HW-1000 L	/	/	2026/7/12
14	234G Automatic test software	Microwave	MTS8200	Ver. 2.0.0.0	/	/
15	966 chamber	C.R.T.	966	/	/	2027/6/21
16	Receiver	R&S	ESPI	100362	RF_ATTEN_7 (104489/003)	2027/5/14
17	Amplifier	HP	8447E	2945A02747	/	2027/5/14
18	Amplifier	Agilent	8449B	3008A01838	/	2027/5/13

19	TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	00869	/	2027/5/16
20	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA9120D	01911	/	2027/5/14
21	EMI test software	Fala	EZ-EMC	FA-03A2 RE	/	/
22	Power Meter	KEYSIGHT	N1912AP	N/A	A.05.00	2027/5/14
23	DC power supply	Agilent	E3640A	MY53050046	/	2027/5/14

Remark: Calibration institution "GRG METROLOGY & TEST GROUP Co., LTD."

Remark: Calibration based on Article 24-2, paragraph 4 of the Radio Act method c.

5. Antenna Requirement

Standard requirement
Applicable for equipment with an antenna terminal, including testing terminals) If an antenna connector is available, all relevant tests will be carried out conducted. If not, tests will be carried out in an anechoic room or with a suitable test-fixture.
EUT Antenna
The best case gain of the antenna is ANT1: 2.13dBi, ANT2: 2.13dBi. External antenna
Result: An antenna connector is available; all relevant tests will be carried out conducted.

6. Frequency Error

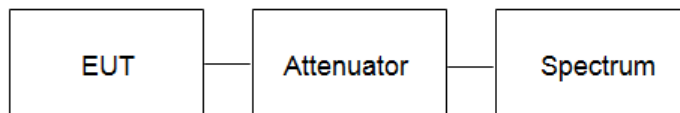
6.1 LIMIT

Item	Limits
Frequency Error	+/-20ppm

6.2 TEST PROCEDURE

1. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set center frequency of spectrum analyzer = operating frequency.
3. Set the spectrum analyzer as RBW=10kHz, VBW=10 kHz, Span = 1MHz.
- 4 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided emission is repetitive in nature.
5. Repeat above procedures until all frequency measured was complete.

6.3 Test Setup Block Diagram



6.4 TEST RESULT

ANT 1

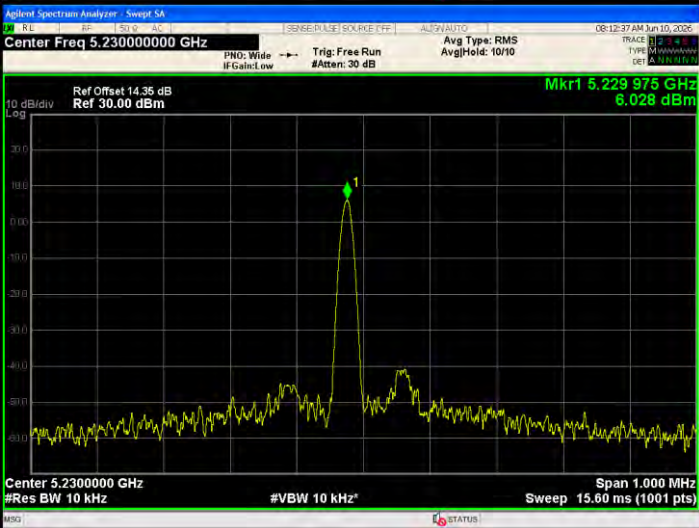
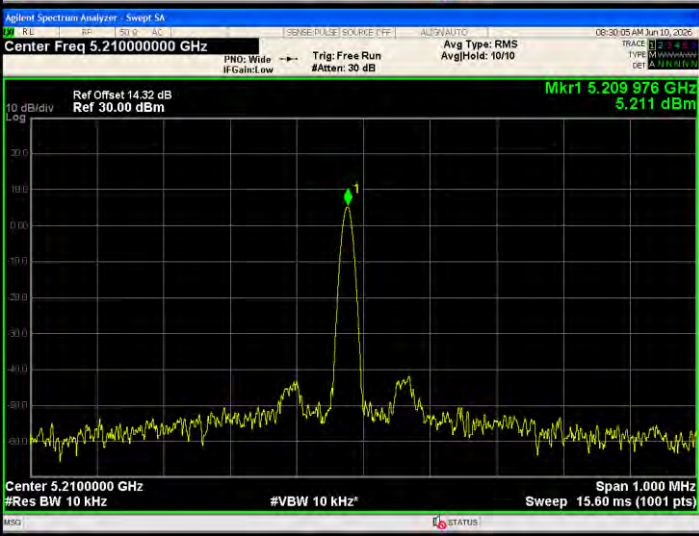
Test condition	Test Frequency	Measured	Tolerance	Test Result	Limit
	MHz	MHz	MHz	ppm	ppm
NVNT W52	5180	5179.976	-0.024	-4.633	+/-20
	5200	5199.975	-0.025	-4.808	+/-20
	5240	5239.975	-0.025	-4.771	+/-20
	5190	5189.975	-0.025	-4.817	+/-20
	5230	5229.975	-0.025	-4.780	+/-20
	5210	5209.976	-0.024	-4.607	+/-20

ANT 2

Test condition	Test Frequency	Measured	Tolerance	Test Result	Limit
	MHz	MHz	MHz	ppm	ppm
NVNT W52	5180	5179.975	-0.025	-4.826	+/-20
	5200	5199.975	-0.025	-4.808	+/-20
	5240	5239.975	-0.025	-4.771	+/-20
	5190	5189.975	-0.025	-4.817	+/-20
	5230	5229.975	-0.025	-4.780	+/-20
	5210	5209.975	-0.025	-4.798	+/-20

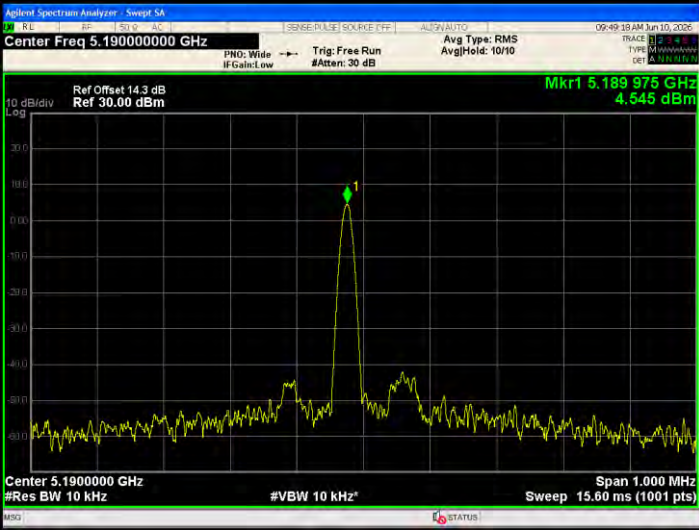
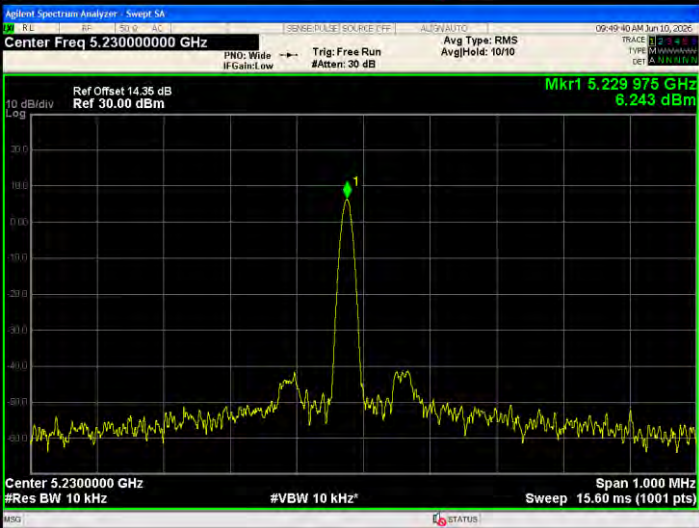
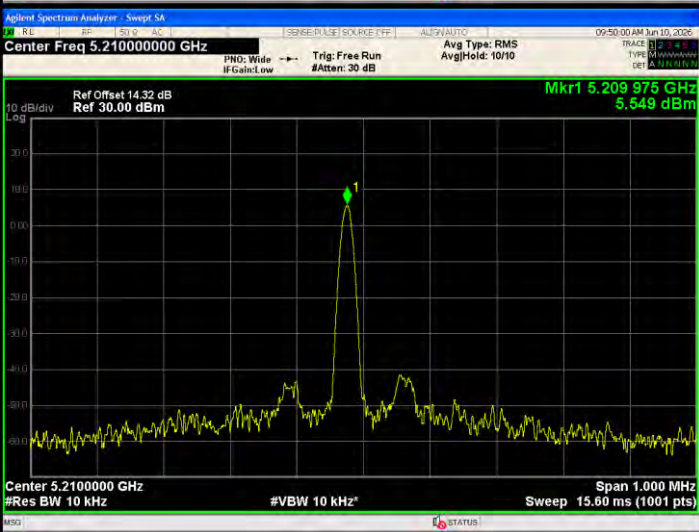
Test graph

Channel(MHz)	Test graph
5180	Agilent Spectrum Analyzer - Sweep SA Center Freq 5.180000000 GHz PNO: Wide IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: RMS AvgHold: 10/10 Ref Offset 14.29 dB Ref 30.00 dBm Mkr1 5.179 976 GHz 4.511 dBm Center 5.1800000 GHz #Res BW 10 kHz #VBW 10 kHz* Span 1.000 MHz Sweep 15.60 ms (1001 pts)
5200	Agilent Spectrum Analyzer - Sweep SA Center Freq 5.200000000 GHz PNO: Wide IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: RMS AvgHold: 10/10 Ref Offset 14.31 dB Ref 30.00 dBm Mkr1 5.199 976 GHz 4.899 dBm Center 5.2000000 GHz #Res BW 10 kHz #VBW 10 kHz* Span 1.000 MHz Sweep 15.60 ms (1001 pts)
5240	Agilent Spectrum Analyzer - Sweep SA Center Freq 5.240000000 GHz PNO: Wide IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: RMS AvgHold: 10/10 Ref Offset 14.36 dB Ref 30.00 dBm Mkr1 5.239 976 GHz 6.410 dBm Center 5.2400000 GHz #Res BW 10 kHz #VBW 10 kHz* Span 1.000 MHz Sweep 15.60 ms (1001 pts)

Channel(MHz)	Test graph
5190	 Agilent Spectrum Analyzer - Sweep SA Center Freq 5.19000000 GHz Ref Offset 14.3 dB Ref 30.00 dBm Mkr1 5.189 975 GHz 4.635 dBm Center 5.1900000 GHz #Res BW 10 kHz #VBW 10 kHz Span 1.000 MHz Sweep 15.60 ms (1001 pts)
5230	 Agilent Spectrum Analyzer - Sweep SA Center Freq 5.23000000 GHz Ref Offset 14.35 dB Ref 30.00 dBm Mkr1 5.229 975 GHz 6.028 dBm Center 5.2300000 GHz #Res BW 10 kHz #VBW 10 kHz Span 1.000 MHz Sweep 15.60 ms (1001 pts)
5210	 Agilent Spectrum Analyzer - Sweep SA Center Freq 5.21000000 GHz Ref Offset 14.32 dB Ref 30.00 dBm Mkr1 5.209 976 GHz 5.211 dBm Center 5.2100000 GHz #Res BW 10 kHz #VBW 10 kHz Span 1.000 MHz Sweep 15.60 ms (1001 pts)

Test graph

Channel(MHz)	Test graph
5180	Agilent Spectrum Analyzer - Sweep SA Center Freq 5.180000000 GHz PNO: Wide IF Gain: low Trig: Free Run #Atten: 30 dB Avg Type: RMS AvgHold: 10/10 Ref Offset 14.29 dB Ref 30.00 dBm Mkr1 5.179 975 GHz 4.320 dBm Center 5.1800000 GHz #Res BW 10 kHz #VBW 10 kHz* Span 1.000 MHz Sweep 15.60 ms (1001 pts)
5200	Agilent Spectrum Analyzer - Sweep SA Center Freq 5.200000000 GHz PNO: Wide IF Gain: low Trig: Free Run #Atten: 30 dB Avg Type: RMS AvgHold: 10/10 Ref Offset 14.31 dB Ref 30.00 dBm Mkr1 5.199 975 GHz 4.868 dBm Center 5.2000000 GHz #Res BW 10 kHz #VBW 10 kHz* Span 1.000 MHz Sweep 15.60 ms (1001 pts)
5240	Agilent Spectrum Analyzer - Sweep SA Center Freq 5.240000000 GHz PNO: Wide IF Gain: low Trig: Free Run #Atten: 30 dB Avg Type: RMS AvgHold: 10/10 Ref Offset 14.36 dB Ref 30.00 dBm Mkr1 5.239 975 GHz 6.590 dBm Center 5.2400000 GHz #Res BW 10 kHz #VBW 10 kHz* Span 1.000 MHz Sweep 15.60 ms (1001 pts)

Channel(MHz)	Test graph
5190	 Agilent Spectrum Analyzer - Sweep SA Center Freq 5.19000000 GHz Ref Offset 14.3 dB Ref 30.00 dBm Mkr1 5.189 975 GHz 4.545 dBm Center 5.19000000 GHz #Res BW 10 kHz #VBW 10 kHz Span 1.000 MHz Sweep 15.60 ms (1001 pts)
5230	 Agilent Spectrum Analyzer - Sweep SA Center Freq 5.23000000 GHz Ref Offset 14.35 dB Ref 30.00 dBm Mkr1 5.229 975 GHz 6.243 dBm Center 5.23000000 GHz #Res BW 10 kHz #VBW 10 kHz Span 1.000 MHz Sweep 15.60 ms (1001 pts)
5210	 Agilent Spectrum Analyzer - Sweep SA Center Freq 5.21000000 GHz Ref Offset 14.32 dB Ref 30.00 dBm Mkr1 5.209 975 GHz 5.549 dBm Center 5.21000000 GHz #Res BW 10 kHz #VBW 10 kHz Span 1.000 MHz Sweep 15.60 ms (1001 pts)

7. Occupied Bandwidth (99%)

7.1 LIMIT

W52:

Occupied bandwidth: $\leq 18\text{MHz}$ (20MHz System, DSSS)

Occupied bandwidth: $\leq 20\text{MHz}$ (20MHz System, OFDM)

Occupied bandwidth: $\leq 40\text{MHz}$ (40MHz System, OFDM)

Occupied bandwidth: $\leq 80\text{MHz}$ (80MHz System, OFDM)

7.2 TEST PROCEDURE

(1) Set up the spectrum analyzer as the follows:

Center frequency: Test frequency

Sweep bandwidth: 2 to 3.5 times of allowance

Resoluble bandwidth: less than 3% of allowance

Video bandwidth: Equivalent to resolvable bandwidth

Sweep time: Minimum time by which measuring accuracy is assured (In case of burst wave, 1 burst shall be contained per 1 sample)

Sampling points: More than 400 points

Sweep mode: Continuous sweeping

Detection mode: Positive peak

Display mode: Maximum holding

(2) Repeat the sweeping till no change was observed on the display and enter all values of data point to the computer as array variable.

(3) About all data, convert dB value to antilogarithm of electric power dimension.

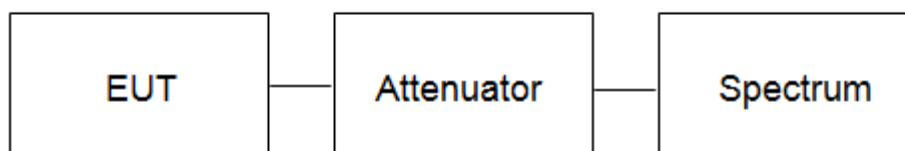
(4) Add up the electric power of all data and record it as "Sum total of electric power".

(5) Adding up data in order from the lowest frequency to upper frequencies, look for a limit point where the value reaches to 0.5% (5% in case of diffusion bandwidth) of "Sum total of electric power". Convert the limit point to frequency and record as "Lowest limit frequency".

(6) Adding up data in order from the highest frequency to lower frequencies, look for a limit point where the value reaches to 0.5% (5% in case of diffusion bandwidth) of "Sum total of electric power". Convert the limit point to frequency and record as "Highest limit frequency".

(7) Repeat above procedures until all frequency measured was complete.

7.3 TEST SETUP BLOCK DIAGRAM



7.4 TEST RESULT

W52 ANT 1

Normal Voltage			
Mode	Channel (MHz)	Occupy Bandwidth (MHz)	Limit (MHz)
802.11a	LCH	16.503	≤18
	MCH	16.499	
	HCH	16.523	
802.11ac(VHT20)	LCH	17.688	≤20
	MCH	17.684	
	HCH	17.703	
802.11ac(VHT40)	LCH	36.409	≤40
	MCH	/	
	HCH	36.440	
802.11ac(VHT80)	LCH	/	≤80
	MCH	75.660	
	HCH	/	
802.11n(HT20)	LCH	17.673	≤20
	MCH	17.669	
	HCH	17.684	
802.11n(HT40)	LCH	36.265	≤40
	MCH	/	
	HCH	36.256	
Result	Pass		

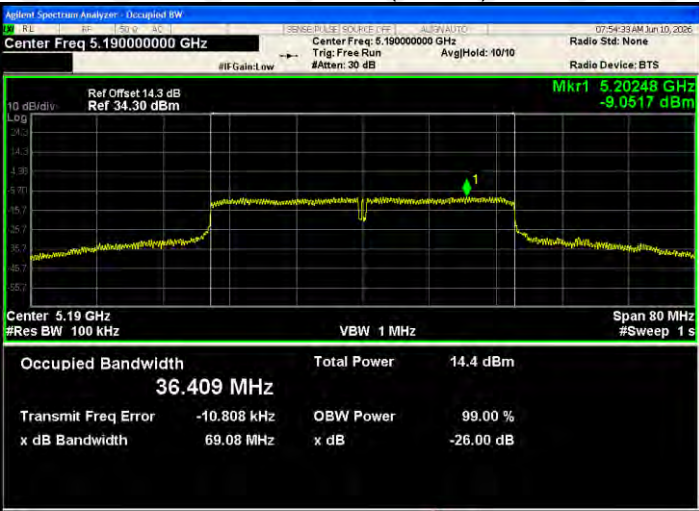
W52 ANT 2

Normal Voltage			
Mode	Channel (MHz)	Occupy Bandwidth (MHz)	Limit (MHz)
802.11a	LCH	16.501	≤18
	MCH	16.495	
	HCH	16.535	
802.11ac(VHT20)	LCH	17.687	≤20
	MCH	17.680	
	HCH	17.710	
802.11ac(VHT40)	LCH	36.326	≤40
	MCH	/	
	HCH	36.334	
802.11ac(VHT80)	LCH	/	≤80
	MCH	75.695	
	HCH	/	
802.11n(HT20)	LCH	17.671	≤20
	MCH	17.668	
	HCH	17.694	
802.11n(HT40)	LCH	36.324	≤40
	MCH	/	
	HCH	36.338	
Result	Pass		

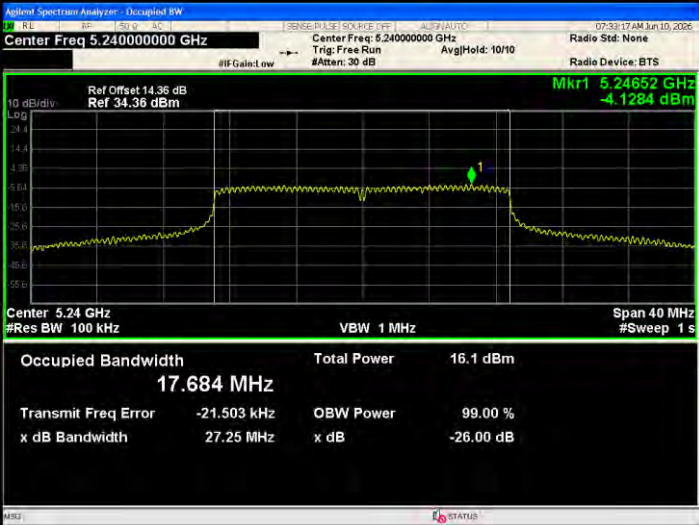
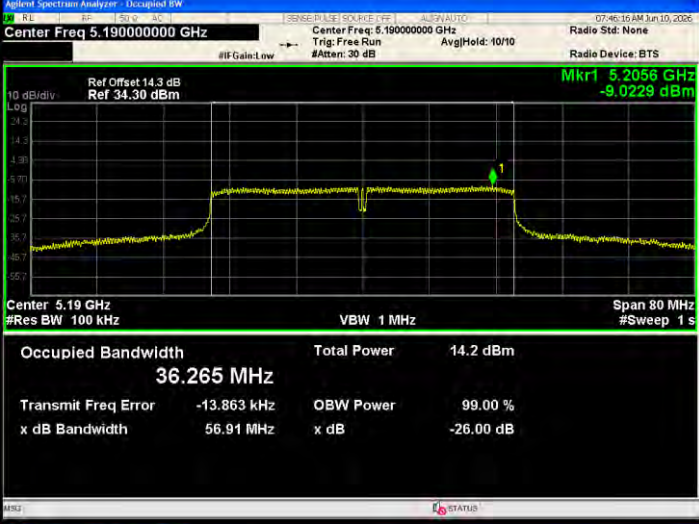
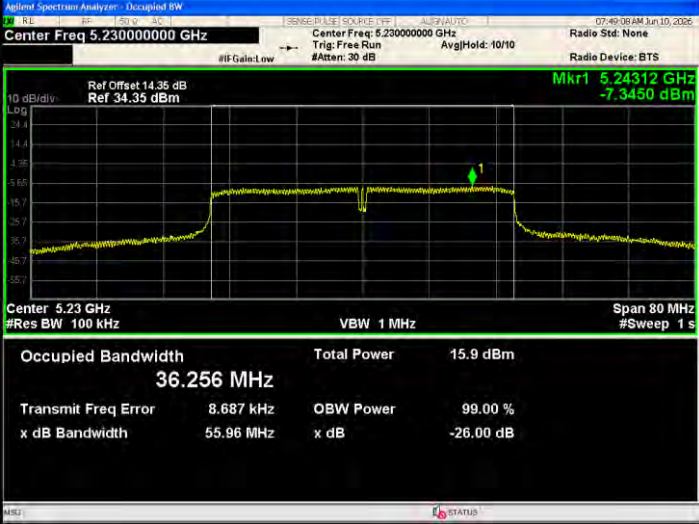
ANT 1

Channel(MHz)	W52:802.11a
5180	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Center Freq: 5.180000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 14.29 dB Ref 34.29 dBm Mkr1 5.1852 GHz -5.1852 dBm Center 5.18 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 16.503 MHz Total Power 13.8 dBm Transmit Freq Error -40.609 kHz OBW Power 99.00 % x dB Bandwidth 23.79 MHz x dB -26.00 dB
5200	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.200000000 GHz Center Freq: 5.200000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 14.31 dB Ref 34.31 dBm Mkr1 5.20684 GHz -5.20684 dBm Center 5.2 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 16.499 MHz Total Power 14.5 dBm Transmit Freq Error -33.202 kHz OBW Power 99.00 % x dB Bandwidth 23.81 MHz x dB -26.00 dB
5240	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.240000000 GHz Center Freq: 5.240000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 14.36 dB Ref 34.36 dBm Mkr1 5.24404 GHz -4.3510 dBm Center 5.24 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 16.523 MHz Total Power 15.8 dBm Transmit Freq Error -25.818 kHz OBW Power 99.00 % x dB Bandwidth 26.64 MHz x dB -26.00 dB

Channel(MHz)	W52:802.11ac(HT20)
5180	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Ref Offset 14.29 dB Ref 34.29 dBm Mkr1 5.1856 GHz -5.9570 dBm Center 5.18 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 17.688 MHz Total Power 14.3 dBm Transmit Freq Error -31.027 kHz OBW Power 99.00 % x dB Bandwidth 26.34 MHz x dB -26.00 dB
5200	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.200000000 GHz Ref Offset 14.31 dB Ref 34.31 dBm Mkr1 5.2056 GHz -5.4007 dBm Center 5.2 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 17.684 MHz Total Power 14.8 dBm Transmit Freq Error -22.860 kHz OBW Power 99.00 % x dB Bandwidth 26.92 MHz x dB -26.00 dB
5240	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.240000000 GHz Ref Offset 14.36 dB Ref 34.36 dBm Mkr1 5.2456 GHz -4.0977 dBm Center 5.24 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 17.703 MHz Total Power 16.1 dBm Transmit Freq Error -21.271 kHz OBW Power 99.00 % x dB Bandwidth 28.78 MHz x dB -26.00 dB

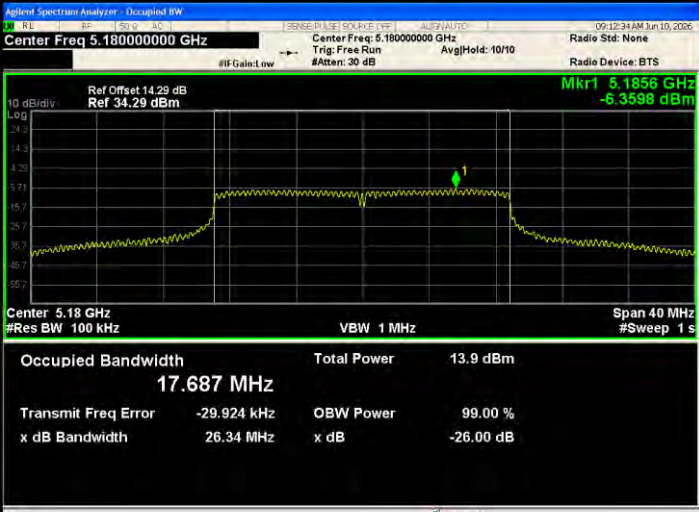
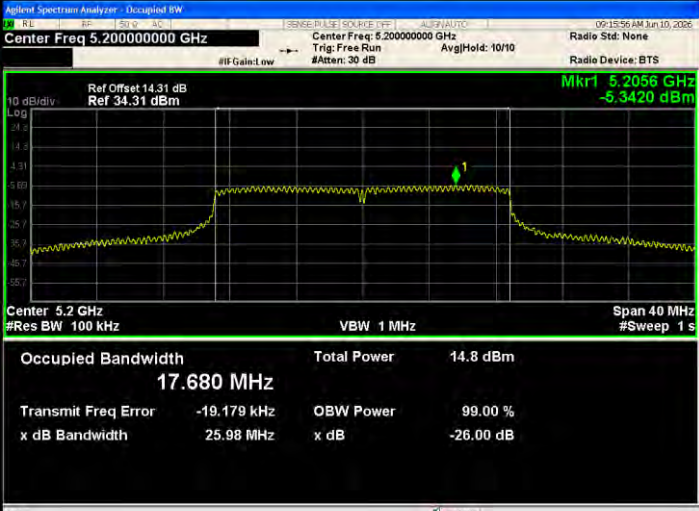
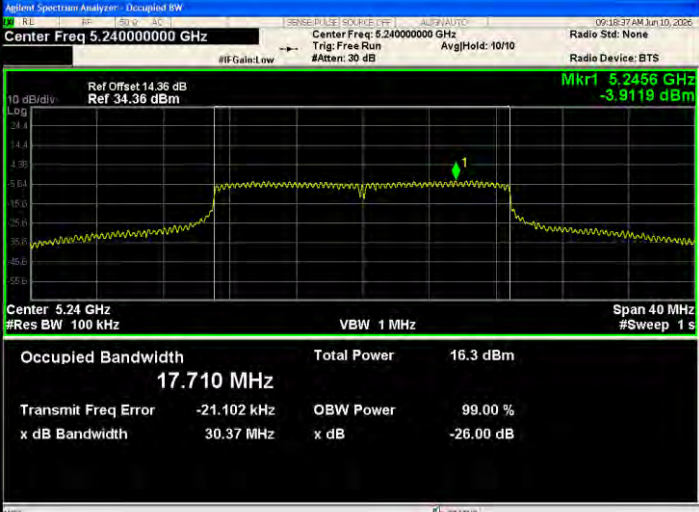
Channel(MHz)	W52:802.11ac(VHT40)
5190	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.190000000 GHz Ref Offset 14.3 dB Ref 34.30 dBm Mkr1 5.20248 GHz -9.0517 dBm Center 5.19 GHz #Res BW 100 kHz VBW 1 MHz Span 80 MHz #Sweep 1 s Occupied Bandwidth 36.409 MHz Total Power 14.4 dBm Transmit Freq Error -10.808 kHz OBW Power 99.00 % x dB Bandwidth 69.08 MHz x dB -26.00 dB
5230	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.230000000 GHz Ref Offset 14.35 dB Ref 34.35 dBm Mkr1 5.24248 GHz -7.5470 dBm Center 5.23 GHz #Res BW 100 kHz VBW 1 MHz Span 80 MHz #Sweep 1 s Occupied Bandwidth 36.440 MHz Total Power 15.8 dBm Transmit Freq Error 39.801 kHz OBW Power 99.00 % x dB Bandwidth 67.02 MHz x dB -26.00 dB

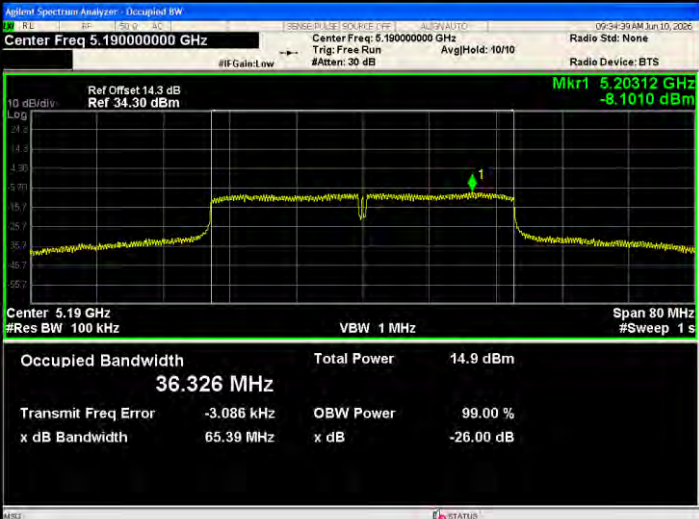
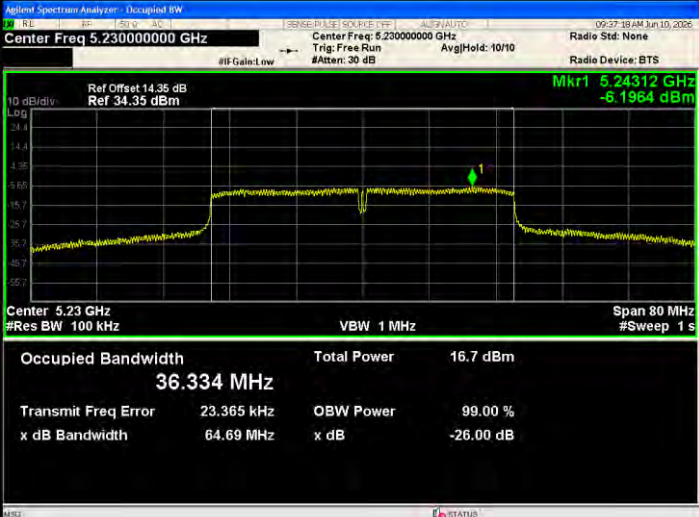
Channel(MHz)	W52:802.11ac (VHT80)
5210	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.210000000 GHz Ref Offset 14.32 dB Ref 34.32 dBm Mkr1 5.21 GHz -10.214 dBm Center 5.21 GHz #Res BW 100 kHz VBW 1 MHz Span 160 MHz #Sweep 1 s Occupied Bandwidth 75.660 MHz Total Power 14.7 dBm Transmit Freq Error 150.60 kHz OBW Power 99.00 % x dB Bandwidth 101.0 MHz x dB -26.00 dB
Channel(MHz)	W52:802.11n(HT20)
5180	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Ref Offset 14.29 dB Ref 34.29 dBm Mkr1 5.1862 GHz -6.3099 dBm Center 5.18 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 17.673 MHz Total Power 14.0 dBm Transmit Freq Error -29.521 kHz OBW Power 99.00 % x dB Bandwidth 25.71 MHz x dB -26.00 dB
5200	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.200000000 GHz Ref Offset 14.31 dB Ref 34.31 dBm Mkr1 5.2062 GHz -6.3934 dBm Center 5.2 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 17.669 MHz Total Power 14.8 dBm Transmit Freq Error -20.436 kHz OBW Power 99.00 % x dB Bandwidth 24.81 MHz x dB -26.00 dB

5240	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.24000000 GHz Ref Offset 14.36 dB Ref 34.36 dBm Mkr1 5.24652 GHz -4.1284 dBm Center 5.24 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 17.684 MHz Total Power 16.1 dBm Transmit Freq Error -21.503 kHz OBW Power 99.00 % x dB Bandwidth 27.25 MHz x dB -26.00 dB
Channel(MHz)	W52:802.11n(HT40)
5190	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.19000000 GHz Ref Offset 14.3 dB Ref 34.30 dBm Mkr1 5.2056 GHz -9.0229 dBm Center 5.19 GHz #Res BW 100 kHz VBW 1 MHz Span 80 MHz #Sweep 1 s Occupied Bandwidth 36.265 MHz Total Power 14.2 dBm Transmit Freq Error -13.863 kHz OBW Power 99.00 % x dB Bandwidth 56.91 MHz x dB -26.00 dB
5230	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.23000000 GHz Ref Offset 14.35 dB Ref 34.35 dBm Mkr1 5.24312 GHz -7.3450 dBm Center 5.23 GHz #Res BW 100 kHz VBW 1 MHz Span 80 MHz #Sweep 1 s Occupied Bandwidth 36.256 MHz Total Power 15.9 dBm Transmit Freq Error 8.687 kHz OBW Power 99.00 % x dB Bandwidth 55.96 MHz x dB -26.00 dB

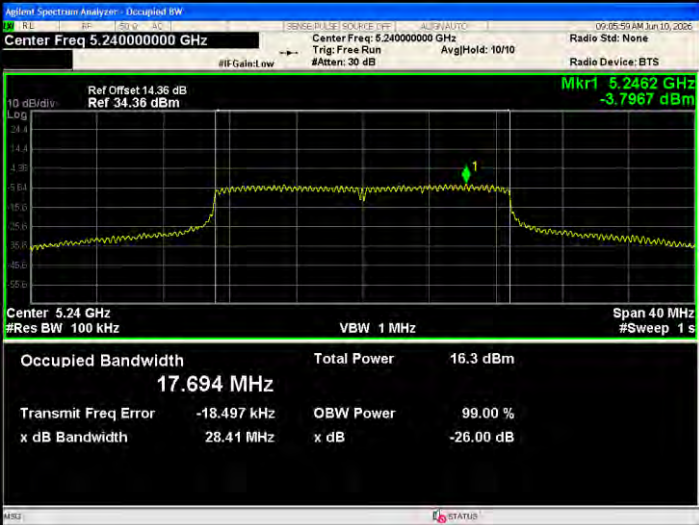
ANT 2

Channel(MHz)	W52:802.11a
5180	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Center Freq: 5.180000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 14.29 dB Ref 34.29 dBm Mkr1 5.18404 GHz -6.2782 dBm Center 5.18 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 16.501 MHz Total Power 13.9 dBm Transmit Freq Error -35.291 kHz OBW Power 99.00 % x dB Bandwidth 24.46 MHz x dB -26.00 dB
5200	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.200000000 GHz Center Freq: 5.200000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 14.31 dB Ref 34.31 dBm Mkr1 5.20404 GHz -5.2193 dBm Center 5.2 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 16.495 MHz Total Power 14.8 dBm Transmit Freq Error -25.940 kHz OBW Power 99.00 % x dB Bandwidth 23.23 MHz x dB -26.00 dB
5240	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.240000000 GHz Center Freq: 5.240000000 GHz Trig: Free Run Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 14.36 dB Ref 34.36 dBm Mkr1 5.2462 GHz -3.8639 dBm Center 5.24 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 16.535 MHz Total Power 16.3 dBm Transmit Freq Error -25.839 kHz OBW Power 99.00 % x dB Bandwidth 27.61 MHz x dB -26.00 dB

Channel(MHz)	W52:802.11ac(HT20)
5180	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Ref Offset 14.29 dB Ref 34.29 dBm Mkr1 5.1856 GHz -6.3598 dBm Center 5.18 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 17.687 MHz Total Power 13.9 dBm Transmit Freq Error -29.924 kHz OBW Power 99.00 % x dB Bandwidth 26.34 MHz x dB -26.00 dB
5200	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.200000000 GHz Ref Offset 14.31 dB Ref 34.31 dBm Mkr1 5.2056 GHz -6.3420 dBm Center 5.2 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 17.680 MHz Total Power 14.8 dBm Transmit Freq Error -19.179 kHz OBW Power 99.00 % x dB Bandwidth 25.98 MHz x dB -26.00 dB
5240	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.240000000 GHz Ref Offset 14.36 dB Ref 34.36 dBm Mkr1 5.2456 GHz -3.9119 dBm Center 5.24 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 17.710 MHz Total Power 16.3 dBm Transmit Freq Error -21.102 kHz OBW Power 99.00 % x dB Bandwidth 30.37 MHz x dB -26.00 dB

Channel(MHz)	W52:802.11ac(VHT40)
5190	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.190000000 GHz Ref Offset 14.3 dB Ref 34.30 dBm Mkr1 5.20312 GHz -8.1010 dBm Center 5.19 GHz #Res BW 100 kHz VBW 1 MHz Span 80 MHz #Sweep 1 s Occupied Bandwidth 36.326 MHz Total Power 14.9 dBm Transmit Freq Error -3.086 kHz OBW Power 99.00 % x dB Bandwidth 65.39 MHz x dB -26.00 dB
5230	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.230000000 GHz Ref Offset 14.35 dB Ref 34.35 dBm Mkr1 5.24312 GHz -6.1964 dBm Center 5.23 GHz #Res BW 100 kHz VBW 1 MHz Span 80 MHz #Sweep 1 s Occupied Bandwidth 36.334 MHz Total Power 16.7 dBm Transmit Freq Error 23.365 kHz OBW Power 99.00 % x dB Bandwidth 64.69 MHz x dB -26.00 dB

Channel(MHz)	W52:802.11ac (VHT80)
5210	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.210000000 GHz Ref Offset 14.32 dB Ref 34.32 dBm Mkr1 5.23688 GHz -9.8299 dBm Center 5.21 GHz #Res BW 100 kHz VBW 1 MHz Span 160 MHz #Sweep 1 s Occupied Bandwidth 75.695 MHz Total Power 15.1 dBm Transmit Freq Error 192.14 kHz OBW Power 99.00 % x dB Bandwidth 111.6 MHz x dB -26.00 dB
Channel(MHz)	W52:802.11n(HT20)
5180	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.180000000 GHz Ref Offset 14.29 dB Ref 34.29 dBm Mkr1 5.1862 GHz -6.3493 dBm Center 5.18 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 17.671 MHz Total Power 13.9 dBm Transmit Freq Error -27.013 kHz OBW Power 99.00 % x dB Bandwidth 25.70 MHz x dB -26.00 dB
5200	Agilent Spectrum Analyzer - Occupied BW Center Freq 5.200000000 GHz Ref Offset 14.31 dB Ref 34.31 dBm Mkr1 5.2062 GHz -6.3340 dBm Center 5.2 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 17.668 MHz Total Power 14.8 dBm Transmit Freq Error -16.773 kHz OBW Power 99.00 % x dB Bandwidth 24.79 MHz x dB -26.00 dB

5240	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.24000000 GHz Ref Offset 14.36 dB Ref 34.36 dBm Mkr1 5.2462 GHz -3.7967 dBm Center 5.24 GHz #Res BW 100 kHz VBW 1 MHz Span 40 MHz #Sweep 1 s Occupied Bandwidth 17.694 MHz Total Power 16.3 dBm Transmit Freq Error -18.497 kHz OBW Power 99.00 % x dB Bandwidth 28.41 MHz x dB -26.00 dB
Channel(MHz)	W52:802.11n(HT40)
5190	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.19000000 GHz Ref Offset 14.3 dB Ref 34.30 dBm Mkr1 5.2056 GHz -8.3911 dBm Center 5.19 GHz #Res BW 100 kHz VBW 1 MHz Span 80 MHz #Sweep 1 s Occupied Bandwidth 36.324 MHz Total Power 14.8 dBm Transmit Freq Error 181 Hz OBW Power 99.00 % x dB Bandwidth 65.63 MHz x dB -26.00 dB
5230	 Agilent Spectrum Analyzer - Occupied BW Center Freq 5.23000000 GHz Ref Offset 14.35 dB Ref 34.35 dBm Mkr1 5.2456 GHz -6.9706 dBm Center 5.23 GHz #Res BW 100 kHz VBW 1 MHz Span 80 MHz #Sweep 1 s Occupied Bandwidth 36.338 MHz Total Power 16.3 dBm Transmit Freq Error 26.360 kHz OBW Power 99.00 % x dB Bandwidth 63.49 MHz x dB -26.00 dB

8. Adjacent Channel Emitted Power

8.1 LIMIT

W52

For system OBW<20MHz

$F_c \pm 20\text{MHz} \pm 10\text{MHz BW} : -25\text{dBc}$

$F_c \pm 40\text{MHz} \pm 10\text{MHz BW} : -40\text{dBc}$

For system OBW≤20MHz

$F_c \pm 20\text{MHz} \pm 10\text{MHz BW} : -25\text{dBc}$

$F_c \pm 40\text{MHz} \pm 10\text{MHz BW} : -40\text{dBc}$

For system OBW≤40MHz

$F_c \pm 40\text{MHz} \pm 20\text{MHz BW} : -25\text{dBc}$

$F_c \pm 80\text{MHz} \pm 20\text{MHz BW} : -40\text{dBc}$

For system OBW≤80MHz

$F_c \pm 80\text{MHz} \pm 40\text{MHz BW} : -25\text{dBc}$

For system OBW≤80MHz +80MHz (Not adjacent band)

$F_c \pm 80\text{MHz} \pm 40\text{MHz BW} : -25\text{dBc}$

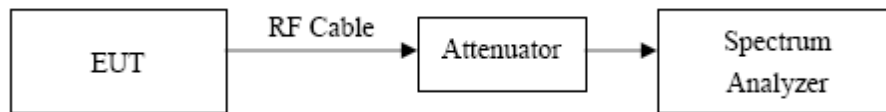
For system OBW≤160MHz

N/A

8.2 TEST PROCEDURE

- (1) A spectrum In case of conducted measurements, the radio device shall be connected to the measuring equipment via a suitable attenuator.
- (2) The measurement equipment shall be set for sample hold mode of operation.
- (3) the transmitter shall be operated at the receiving mode.
- (4) The resolution bandwidth shall be set to ref. the limits , and the sweep time shall be set to auto mode, to ensure all major modulation products are captured.
- (5) When the searched result is less than the specified limit, the maximum one shall be recorded, when the result is more than the specified limit, all measured values shall be recorded.
- (6) This measurement shall be repeated with the transmitter in standby mode where applicable.
- (7) Repeat above procedures until all frequency measured was complete.

8.3 TEST SETUP Block Diagram



8.4 TEST RESULT

W52 ANT1:

Normal Voltage						
Mode	detuning (MHz)		E.I.R.P (dBm/MHz)			Limit (dBm/MHz)
			LCH	MCH	HCH	
802.11a	20MHz	Lower	-26.18	-27.03	-27.21	-25dBc/20MHz
		Upper	-26	-26.32	-26	
	40MHz	Lower	-45.15	-46.02	-46.02	-40dBc/40MHz
		Upper	-45.98	-46.94	-47.09	
802.11ac(VHT20)	20MHz	Lower	-25.6	-26.36	-25.71	-25dBc/20MHz
		Upper	-26.27	-26.34	-25.24	
	40MHz	Lower	-45.06	-45.83	-46.23	-40dBc/40MHz
		Upper	-46.08	-46.81	-42.87	
802.11ac(VHT40)	40MHz	Lower	-25.83	/	-27.82	-25dBc/40MHz
		Upper	-25.01	/	-25.58	
	80MHz	Lower	-42.69	/	-42.45	-40dBc/80MHz
		Upper	-43.11	/	-43.52	
802.11ac(VHT80)	80MHz	Lower	/	-27.16	/	-25dBc/80MHz
		Upper	/	-25.15	/	
	160MHz	Lower	/	-40.91	/	-25dBc/80MHz
		Upper	/	-40.91	/	
802.11n(HT20)	20MHz	Lower	-26.04	-27.09	-28.37	-25dBc/20MHz
		Upper	-26.13	-26.5	-27.58	
	40MHz	Lower	-44.83	-46.11	-45.62	-40dBc/40MHz
		Upper	-46.18	-47.14	-41.65	
802.11n(HT40)	40MHz	Lower	-26.39	/	-27.05	-25dBc/40MHz
		Upper	-25.78	/	-25.12	
	80MHz	Lower	-42.88	/	-43.3	-40dBc/80MHz
		Upper	-41.34	/	-44.39	
Result	Pass					

W52 ANT2:

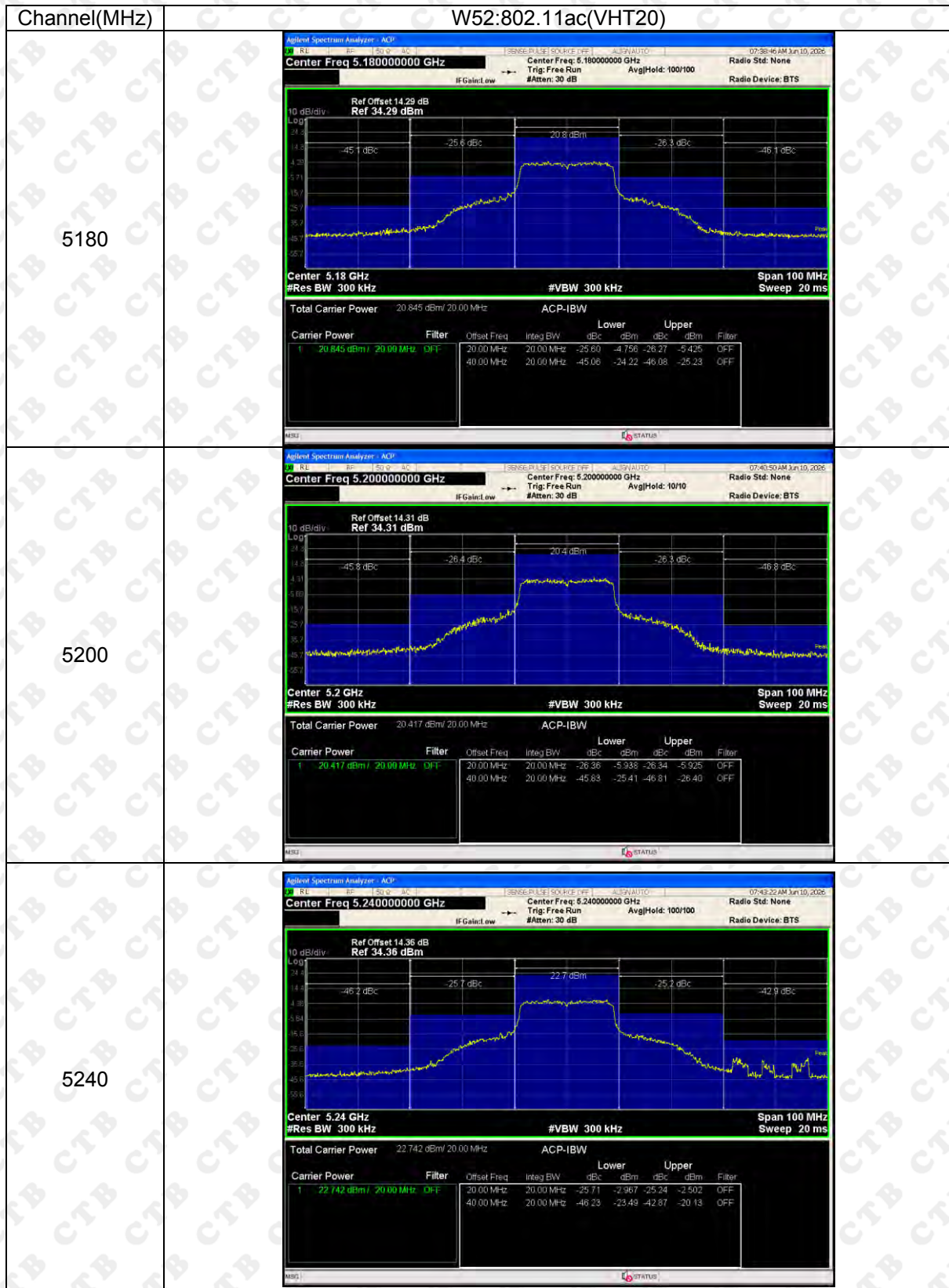
Normal Voltage						
Mode	detuning (MHz)		E.I.R.P (dBm/MHz)			Limit (dBm/MHz)
			LCH	MCH	HCH	
802.11a	20MHz	Lower	-26.52	-27.25	-26.89	-25dBc/20MHz
		Upper	-26.48	-26.37	-25.8	
	40MHz	Lower	-45.19	-46.29	-46.21	-40dBc/40MHz
		Upper	-46.17	-47.29	-40.04	
802.11ac(VHT20)	20MHz	Lower	-25.79	-26.79	-25.47	-25dBc/20MHz
		Upper	-26.29	-26.06	-25.02	
	40MHz	Lower	-45.12	-45.88	-46.18	-40dBc/40MHz
		Upper	-46.04	-47.12	-42.87	
802.11ac(VHT40)	40MHz	Lower	-28.04	/	-29.24	-25dBc/40MHz
		Upper	-27.4	/	-27.15	
	80MHz	Lower	-43.05	/	-43.52	-40dBc/80MHz
		Upper	-40.84	/	-44.55	
802.11ac(VHT80)	80MHz	Lower	/	-28.74	/	-25dBc/80MHz
		Upper	/	-25.8	/	
	160MHz	Lower	/	-40.41	/	-25dBc/80MHz
		Upper	/	-40.49	/	
802.11n(HT20)	20MHz	Lower	-26.07	-27.19	-26.97	-25dBc/20MHz
		Upper	-26.03	-26.1	-26.05	
	40MHz	Lower	-44.97	-45.89	-45.61	-40dBc/40MHz
		Upper	-45.95	-46.91	-40.2	
802.11n(HT40)	40MHz	Lower	-29.16	/	-28.54	-25dBc/40MHz
		Upper	-28.34	/	-26.23	
	80MHz	Lower	-41.95	/	-43.19	-40dBc/80MHz
		Upper	-42.26	/	-44.26	
Result	Pass					

W52 MIMO:

Normal Voltage						
Mode	detuning (MHz)		E.I.R.P (dBm/MHz)			Limit (dBm/MHz)
			LCH	MCH	HCH	
802.11a	20MHz	Lower	/	/	/	-25dBc/20MHz
		Upper	/	/	/	
	40MHz	Lower	/	/	/	-40dBc/40MHz
		Upper	/	/	/	
802.11ac(VHT20)	20MHz	Lower	-28.57	-28.76	-29	-25dBc/20MHz
		Upper	-28.29	-27.91	-28.35	
	40MHz	Lower	-45.5	-46.19	-46.22	-40dBc/40MHz
		Upper	-45.95	-46.23	-47.48	
802.11ac(VHT40)	40MHz	Lower	-28.63	/	-28.98	-25dBc/40MHz
		Upper	-27.67	/	-27.42	
	80MHz	Lower	-42.09	/	-43.74	-40dBc/80MHz
		Upper	-43.82	/	-45	
802.11ac(VHT80)	80MHz	Lower	/	-30.23	/	-25dBc/80MHz
		Upper	/	-27.98	/	
	160MHz	Lower	/	-41.02	/	-25dBc/80MHz
		Upper	/	-41.11	/	
802.11n(HT20)	20MHz	Lower	-28.51	-28.92	-28.95	-25dBc/20MHz
		Upper	-28.52	-28.01	-28.37	
	40MHz	Lower	-45.68	-46.12	-46.58	-40dBc/40MHz
		Upper	-46.04	-46.46	-47.53	
802.11n(HT40)	40MHz	Lower	-28.45	/	-28.74	-25dBc/40MHz
		Upper	-27.6	/	-27.14	
	80MHz	Lower	-40.39	/	-43.94	-40dBc/80MHz
		Upper	-43.88	/	-45.17	
Result	Pass					

ANT1:

Channel(MHz)	W52:802.11a
5180	Agilent Spectrum Analyzer - ACP Center Freq 5.180000000 GHz Center Freq: 5.180000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 14.29 dB Ref 34.29 dBm <



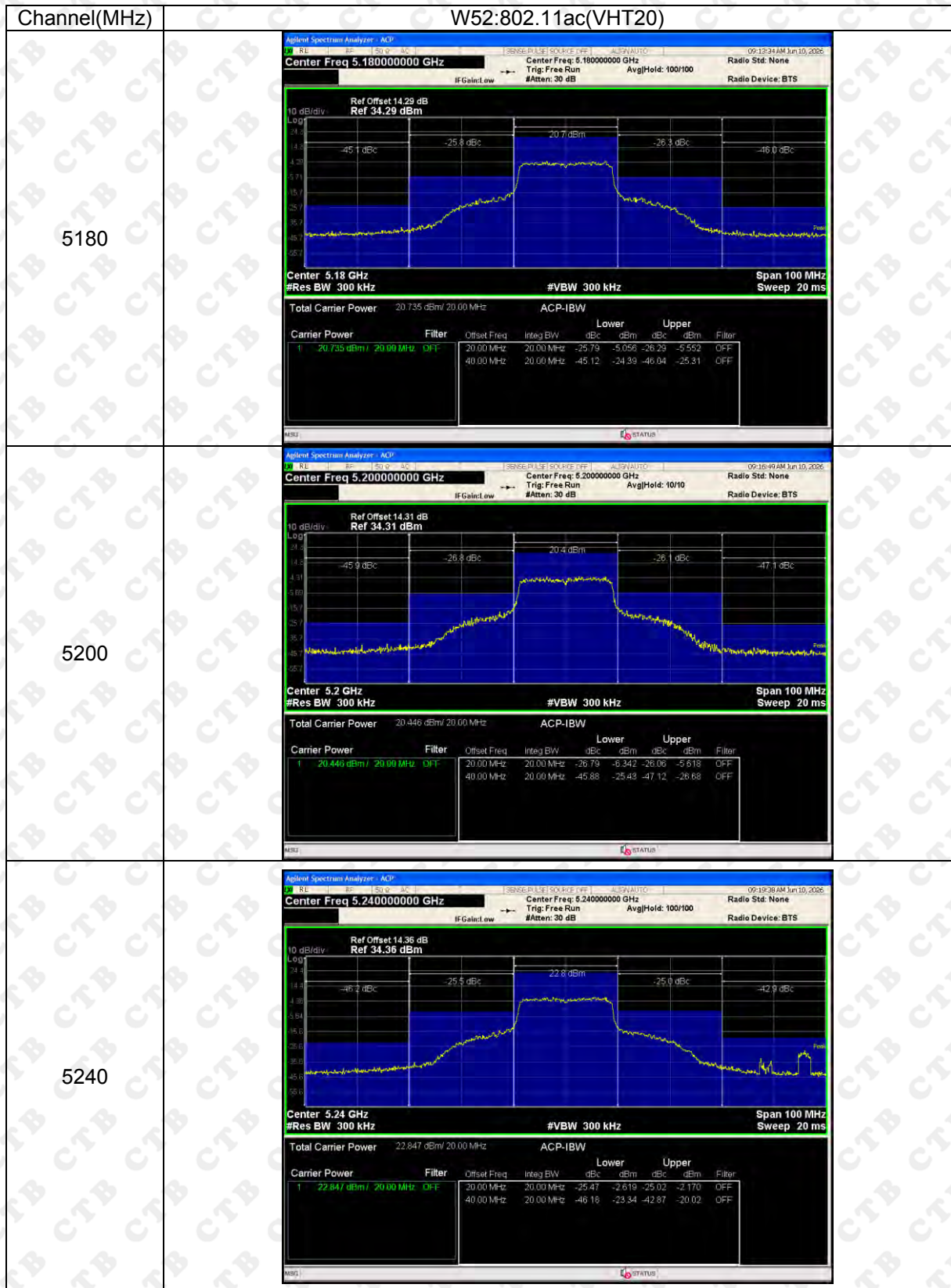


Channel(MHz)	W52:802.11n(HT20)																								
5180	Agilent Spectrum Analyzer - ACP Center Freq 5.180000000 GHz Center Freq: 5.180000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 14.29 dB Ref 34.29 dBm -44.8 dBc -26.0 dBc 21.0 dBm -26.1 dBc -46.2 dBc Center 5.18 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 20.956 dBm/ 20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>dBc</th><th>Lower dBm</th><th>Upper dBm</th><th>Filter</th></tr></thead><tbody><tr><td>1 20.956 dBm/ 20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-26.04</td><td>-5.084</td><td>-26.13</td><td>OFF</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-44.83</td><td>-23.88</td><td>-25.22</td><td>OFF</td></tr></tbody></table>	Carrier Power	Filter	Offset Freq	Integ BW	dBc	Lower dBm	Upper dBm	Filter	1 20.956 dBm/ 20.00 MHz	OFF	20.00 MHz	20.00 MHz	-26.04	-5.084	-26.13	OFF			40.00 MHz	20.00 MHz	-44.83	-23.88	-25.22	OFF
Carrier Power	Filter	Offset Freq	Integ BW	dBc	Lower dBm	Upper dBm	Filter																		
1 20.956 dBm/ 20.00 MHz	OFF	20.00 MHz	20.00 MHz	-26.04	-5.084	-26.13	OFF																		
		40.00 MHz	20.00 MHz	-44.83	-23.88	-25.22	OFF																		
5200	Agilent Spectrum Analyzer - ACP Center Freq 5.200000000 GHz Center Freq: 5.200000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 14.31 dB Ref 34.31 dBm -46.1 dBc -27.1 dBc 20.8 dBm -26.5 dBc -47.1 dBc Center 5.2 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 20.603 dBm/ 20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>dBc</th><th>Lower dBm</th><th>Upper dBm</th><th>Filter</th></tr></thead><tbody><tr><td>1 20.603 dBm/ 20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-27.09</td><td>-6.488</td><td>-26.50</td><td>OFF</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-46.11</td><td>-25.51</td><td>-26.53</td><td>OFF</td></tr></tbody></table>	Carrier Power	Filter	Offset Freq	Integ BW	dBc	Lower dBm	Upper dBm	Filter	1 20.603 dBm/ 20.00 MHz	OFF	20.00 MHz	20.00 MHz	-27.09	-6.488	-26.50	OFF			40.00 MHz	20.00 MHz	-46.11	-25.51	-26.53	OFF
Carrier Power	Filter	Offset Freq	Integ BW	dBc	Lower dBm	Upper dBm	Filter																		
1 20.603 dBm/ 20.00 MHz	OFF	20.00 MHz	20.00 MHz	-27.09	-6.488	-26.50	OFF																		
		40.00 MHz	20.00 MHz	-46.11	-25.51	-26.53	OFF																		
5240	Agilent Spectrum Analyzer - ACP Center Freq 5.240000000 GHz Center Freq: 5.240000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 14.36 dB Ref 34.36 dBm -45.6 dBc -28.4 dBc 21.4 dBm -27.6 dBc -41.6 dBc Center 5.24 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 21.417 dBm/ 20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>dBc</th><th>Lower dBm</th><th>Upper dBm</th><th>Filter</th></tr></thead><tbody><tr><td>1 21.417 dBm/ 20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-28.37</td><td>-6.958</td><td>-27.58</td><td>OFF</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-45.62</td><td>-24.20</td><td>-20.23</td><td>OFF</td></tr></tbody></table>	Carrier Power	Filter	Offset Freq	Integ BW	dBc	Lower dBm	Upper dBm	Filter	1 21.417 dBm/ 20.00 MHz	OFF	20.00 MHz	20.00 MHz	-28.37	-6.958	-27.58	OFF			40.00 MHz	20.00 MHz	-45.62	-24.20	-20.23	OFF
Carrier Power	Filter	Offset Freq	Integ BW	dBc	Lower dBm	Upper dBm	Filter																		
1 21.417 dBm/ 20.00 MHz	OFF	20.00 MHz	20.00 MHz	-28.37	-6.958	-27.58	OFF																		
		40.00 MHz	20.00 MHz	-45.62	-24.20	-20.23	OFF																		



ANT2:

Channel(MHz)	W52:802.11a																											
5180	Agilent Spectrum Analyzer - ACP Center Freq 5.180000000 GHz Ref Offset 14.29 dB Ref 34.29 dBm Center Freq: 5.180000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS 10 dB/div Log 24.5 14.5 4.5 35.7 25.7 15.7 5.7 0.7 -5.7 -15.7 -25.7 -35.7 45.2 dBc -26.5 dBc 20.8 dBm -26.5 dBc -48.2 dBc Center 5.18 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 20.763 dBm/ 20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>dBc</th><th>dBm</th><th>Lower</th><th>Upper</th><th>Filter</th></tr></thead><tbody><tr><td>1</td><td>20.763 dBm/ 20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>-26.52</td><td>-5.759</td><td>-26.48</td><td>-5.719</td><td>OFF</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-45.19</td><td>-34.42</td><td>-48.17</td><td>-25.40</td><td>OFF</td></tr></tbody></table>	Carrier Power	Filter	Offset Freq	Integ BW	dBc	dBm	Lower	Upper	Filter	1	20.763 dBm/ 20.00 MHz	OFF	20.00 MHz	-26.52	-5.759	-26.48	-5.719	OFF			40.00 MHz	20.00 MHz	-45.19	-34.42	-48.17	-25.40	OFF
Carrier Power	Filter	Offset Freq	Integ BW	dBc	dBm	Lower	Upper	Filter																				
1	20.763 dBm/ 20.00 MHz	OFF	20.00 MHz	-26.52	-5.759	-26.48	-5.719	OFF																				
		40.00 MHz	20.00 MHz	-45.19	-34.42	-48.17	-25.40	OFF																				
5200	Agilent Spectrum Analyzer - ACP Center Freq 5.200000000 GHz Ref Offset 14.31 dB Ref 34.31 dBm Center Freq: 5.200000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 10/10 Radio Std: None Radio Device: BTS 10 dB/div Log 24.5 14.5 4.5 35.7 25.7 15.7 5.7 0.7 -5.7 -15.7 -25.7 -35.7 46.3 dBc -27.3 dBc 20.8 dBm -26.4 dBc -47.3 dBc Center 5.2 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 20.592 dBm/ 20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>dBc</th><th>dBm</th><th>Lower</th><th>Upper</th><th>Filter</th></tr></thead><tbody><tr><td>1</td><td>20.592 dBm/ 20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>-27.25</td><td>-6.682</td><td>-26.37</td><td>-5.781</td><td>OFF</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-46.29</td><td>-25.69</td><td>-47.29</td><td>-26.69</td><td>OFF</td></tr></tbody></table>	Carrier Power	Filter	Offset Freq	Integ BW	dBc	dBm	Lower	Upper	Filter	1	20.592 dBm/ 20.00 MHz	OFF	20.00 MHz	-27.25	-6.682	-26.37	-5.781	OFF			40.00 MHz	20.00 MHz	-46.29	-25.69	-47.29	-26.69	OFF
Carrier Power	Filter	Offset Freq	Integ BW	dBc	dBm	Lower	Upper	Filter																				
1	20.592 dBm/ 20.00 MHz	OFF	20.00 MHz	-27.25	-6.682	-26.37	-5.781	OFF																				
		40.00 MHz	20.00 MHz	-46.29	-25.69	-47.29	-26.69	OFF																				
5240	Agilent Spectrum Analyzer - ACP Center Freq 5.240000000 GHz Ref Offset 14.36 dB Ref 34.36 dBm Center Freq: 5.240000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS 10 dB/div Log 24.5 14.5 4.5 35.7 25.7 15.7 5.7 0.7 -5.7 -15.7 -25.7 -35.7 46.2 dBc -26.9 dBc 22.2 dBm -25.6 dBc -40.0 dBc Center 5.24 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 22.215 dBm/ 20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>dBc</th><th>dBm</th><th>Lower</th><th>Upper</th><th>Filter</th></tr></thead><tbody><tr><td>1</td><td>22.215 dBm/ 20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>-26.89</td><td>-4.673</td><td>-25.80</td><td>-3.586</td><td>OFF</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-46.21</td><td>-24.00</td><td>-40.04</td><td>-17.82</td><td>OFF</td></tr></tbody></table>	Carrier Power	Filter	Offset Freq	Integ BW	dBc	dBm	Lower	Upper	Filter	1	22.215 dBm/ 20.00 MHz	OFF	20.00 MHz	-26.89	-4.673	-25.80	-3.586	OFF			40.00 MHz	20.00 MHz	-46.21	-24.00	-40.04	-17.82	OFF
Carrier Power	Filter	Offset Freq	Integ BW	dBc	dBm	Lower	Upper	Filter																				
1	22.215 dBm/ 20.00 MHz	OFF	20.00 MHz	-26.89	-4.673	-25.80	-3.586	OFF																				
		40.00 MHz	20.00 MHz	-46.21	-24.00	-40.04	-17.82	OFF																				





Channel(MHz)	W52:802.11n(HT20)																											
5180	Agilent Spectrum Analyzer - ACP Center Freq 5.180000000 GHz Center Freq: 5.180000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 14.29 dB Ref 34.29 dBm -45.0 dBc -26.1 dBc 20.7 dBm -26.0 dBc -15.9 dBc Center 5.18 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 20.711 dBm/ 20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>dBc</th><th>dBm</th><th>dBc</th><th>dBm</th><th>Filter</th></tr></thead><tbody><tr><td>1 20.711 dBm/ 20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-26.07</td><td>-5.362</td><td>-26.03</td><td>-5.315</td><td>OFF</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-44.97</td><td>-24.26</td><td>-45.95</td><td>-25.24</td><td>OFF</td></tr></tbody></table>	Carrier Power	Filter	Offset Freq	Integ BW	dBc	dBm	dBc	dBm	Filter	1 20.711 dBm/ 20.00 MHz	OFF	20.00 MHz	20.00 MHz	-26.07	-5.362	-26.03	-5.315	OFF			40.00 MHz	20.00 MHz	-44.97	-24.26	-45.95	-25.24	OFF
Carrier Power	Filter	Offset Freq	Integ BW	dBc	dBm	dBc	dBm	Filter																				
1 20.711 dBm/ 20.00 MHz	OFF	20.00 MHz	20.00 MHz	-26.07	-5.362	-26.03	-5.315	OFF																				
		40.00 MHz	20.00 MHz	-44.97	-24.26	-45.95	-25.24	OFF																				
5200	Agilent Spectrum Analyzer - ACP Center Freq 5.200000000 GHz Center Freq: 5.200000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 10/10 Radio Std: None Radio Device: BTS Ref Offset 14.31 dB Ref 34.31 dBm -45.9 dBc -27.2 dBc 20.5 dBm -26.0 dBc -16.9 dBc Center 5.2 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 20.526 dBm/ 20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>dBc</th><th>dBm</th><th>dBc</th><th>dBm</th><th>Filter</th></tr></thead><tbody><tr><td>1 20.526 dBm/ 20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-27.19</td><td>-6.662</td><td>-26.10</td><td>-5.571</td><td>OFF</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-45.89</td><td>-25.36</td><td>-46.91</td><td>-26.38</td><td>OFF</td></tr></tbody></table>	Carrier Power	Filter	Offset Freq	Integ BW	dBc	dBm	dBc	dBm	Filter	1 20.526 dBm/ 20.00 MHz	OFF	20.00 MHz	20.00 MHz	-27.19	-6.662	-26.10	-5.571	OFF			40.00 MHz	20.00 MHz	-45.89	-25.36	-46.91	-26.38	OFF
Carrier Power	Filter	Offset Freq	Integ BW	dBc	dBm	dBc	dBm	Filter																				
1 20.526 dBm/ 20.00 MHz	OFF	20.00 MHz	20.00 MHz	-27.19	-6.662	-26.10	-5.571	OFF																				
		40.00 MHz	20.00 MHz	-45.89	-25.36	-46.91	-26.38	OFF																				
5240	Agilent Spectrum Analyzer - ACP Center Freq 5.240000000 GHz Center Freq: 5.240000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 14.36 dB Ref 34.36 dBm -45.6 dBc -27.0 dBc 22.2 dBm -26.1 dBc -40.2 dBc Center 5.24 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 22.211 dBm/ 20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>dBc</th><th>dBm</th><th>dBc</th><th>dBm</th><th>Filter</th></tr></thead><tbody><tr><td>1 22.211 dBm/ 20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-26.97</td><td>-4.754</td><td>-26.05</td><td>-3.642</td><td>OFF</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-45.61</td><td>-23.40</td><td>-40.20</td><td>-17.99</td><td>OFF</td></tr></tbody></table>	Carrier Power	Filter	Offset Freq	Integ BW	dBc	dBm	dBc	dBm	Filter	1 22.211 dBm/ 20.00 MHz	OFF	20.00 MHz	20.00 MHz	-26.97	-4.754	-26.05	-3.642	OFF			40.00 MHz	20.00 MHz	-45.61	-23.40	-40.20	-17.99	OFF
Carrier Power	Filter	Offset Freq	Integ BW	dBc	dBm	dBc	dBm	Filter																				
1 22.211 dBm/ 20.00 MHz	OFF	20.00 MHz	20.00 MHz	-26.97	-4.754	-26.05	-3.642	OFF																				
		40.00 MHz	20.00 MHz	-45.61	-23.40	-40.20	-17.99	OFF																				



MIMO:

Channel(MHz)	W52:802.11ac(VHT20)																																																																																																													
5180	Agilent Spectrum Analyzer - ACP Center Freq 5.180000000 GHz Center Freq: 5.180000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 12.79 dB Ref 32.79 dBm -45.5 dBc -28.6 dBc 19.1 dBm -28.3 dBc -45.9 dBc Center 5.18 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 19.056 dBm/20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>Lower</th><th>Upper</th><th>Filter</th></tr></thead><tbody><tr><td>1 19.056 dBm/20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-28.57</td><td>-9.514</td><td>-28.23</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-45.50</td><td>-26.44</td><td>-45.95</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>-26.89</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>OFF</td></tr></tbody></table> <tr><td>5200</td><td> Agilent Spectrum Analyzer - ACP Center Freq 5.200000000 GHz Center Freq: 5.200000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 12.81 dB Ref 32.81 dBm -46.2 dBc -28.8 dBc 20.1 dBm -27.9 dBc -46.2 dBc Center 5.2 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 20.147 dBm/20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>Lower</th><th>Upper</th><th>Filter</th></tr></thead><tbody><tr><td>1 20.147 dBm/20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-28.76</td><td>-8.609</td><td>-27.91</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-46.19</td><td>-26.04</td><td>-46.23</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>-26.03</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>OFF</td></tr></tbody></table> <tr><td>5240</td><td> Agilent Spectrum Analyzer - ACP Center Freq 5.240000000 GHz Center Freq: 5.240000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 12.86 dB Ref 32.86 dBm -46.2 dBc -29.0 dBc 20.6 dBm -28.3 dBc -47.5 dBc Center 5.24 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 20.603 dBm/20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>Lower</th><th>Upper</th><th>Filter</th></tr></thead><tbody><tr><td>1 20.603 dBm/20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-29.00</td><td>-8.402</td><td>-28.35</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-46.22</td><td>-25.52</td><td>-47.48</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>-26.88</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>OFF</td></tr></tbody></table> </td></tr></td></tr>	Carrier Power	Filter	Offset Freq	Integ BW	Lower	Upper	Filter	1 19.056 dBm/20.00 MHz	OFF	20.00 MHz	20.00 MHz	-28.57	-9.514	-28.23			40.00 MHz	20.00 MHz	-45.50	-26.44	-45.95							-26.89							OFF	5200	Agilent Spectrum Analyzer - ACP Center Freq 5.200000000 GHz Center Freq: 5.200000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 12.81 dB Ref 32.81 dBm -46.2 dBc -28.8 dBc 20.1 dBm -27.9 dBc -46.2 dBc Center 5.2 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 20.147 dBm/20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>Lower</th><th>Upper</th><th>Filter</th></tr></thead><tbody><tr><td>1 20.147 dBm/20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-28.76</td><td>-8.609</td><td>-27.91</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-46.19</td><td>-26.04</td><td>-46.23</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>-26.03</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>OFF</td></tr></tbody></table> <tr><td>5240</td><td> Agilent Spectrum Analyzer - ACP Center Freq 5.240000000 GHz Center Freq: 5.240000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 12.86 dB Ref 32.86 dBm -46.2 dBc -29.0 dBc 20.6 dBm -28.3 dBc -47.5 dBc Center 5.24 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 20.603 dBm/20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>Lower</th><th>Upper</th><th>Filter</th></tr></thead><tbody><tr><td>1 20.603 dBm/20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-29.00</td><td>-8.402</td><td>-28.35</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-46.22</td><td>-25.52</td><td>-47.48</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>-26.88</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>OFF</td></tr></tbody></table> </td></tr>	Carrier Power	Filter	Offset Freq	Integ BW	Lower	Upper	Filter	1 20.147 dBm/20.00 MHz	OFF	20.00 MHz	20.00 MHz	-28.76	-8.609	-27.91			40.00 MHz	20.00 MHz	-46.19	-26.04	-46.23							-26.03							OFF	5240	Agilent Spectrum Analyzer - ACP Center Freq 5.240000000 GHz Center Freq: 5.240000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 12.86 dB Ref 32.86 dBm -46.2 dBc -29.0 dBc 20.6 dBm -28.3 dBc -47.5 dBc Center 5.24 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 20.603 dBm/20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>Lower</th><th>Upper</th><th>Filter</th></tr></thead><tbody><tr><td>1 20.603 dBm/20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-29.00</td><td>-8.402</td><td>-28.35</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-46.22</td><td>-25.52</td><td>-47.48</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>-26.88</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>OFF</td></tr></tbody></table>	Carrier Power	Filter	Offset Freq	Integ BW	Lower	Upper	Filter	1 20.603 dBm/20.00 MHz	OFF	20.00 MHz	20.00 MHz	-29.00	-8.402	-28.35			40.00 MHz	20.00 MHz	-46.22	-25.52	-47.48							-26.88							OFF
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5200	Agilent Spectrum Analyzer - ACP Center Freq 5.200000000 GHz Center Freq: 5.200000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 12.81 dB Ref 32.81 dBm -46.2 dBc -28.8 dBc 20.1 dBm -27.9 dBc -46.2 dBc Center 5.2 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 20.147 dBm/20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>Lower</th><th>Upper</th><th>Filter</th></tr></thead><tbody><tr><td>1 20.147 dBm/20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-28.76</td><td>-8.609</td><td>-27.91</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-46.19</td><td>-26.04</td><td>-46.23</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>-26.03</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>OFF</td></tr></tbody></table> <tr><td>5240</td><td> Agilent Spectrum Analyzer - ACP Center Freq 5.240000000 GHz Center Freq: 5.240000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 12.86 dB Ref 32.86 dBm -46.2 dBc -29.0 dBc 20.6 dBm -28.3 dBc -47.5 dBc Center 5.24 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 20.603 dBm/20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>Lower</th><th>Upper</th><th>Filter</th></tr></thead><tbody><tr><td>1 20.603 dBm/20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-29.00</td><td>-8.402</td><td>-28.35</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-46.22</td><td>-25.52</td><td>-47.48</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>-26.88</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>OFF</td></tr></tbody></table> </td></tr>	Carrier Power	Filter	Offset Freq	Integ BW	Lower	Upper	Filter	1 20.147 dBm/20.00 MHz	OFF	20.00 MHz	20.00 MHz	-28.76	-8.609	-27.91			40.00 MHz	20.00 MHz	-46.19	-26.04	-46.23							-26.03							OFF	5240	Agilent Spectrum Analyzer - ACP Center Freq 5.240000000 GHz Center Freq: 5.240000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 12.86 dB Ref 32.86 dBm -46.2 dBc -29.0 dBc 20.6 dBm -28.3 dBc -47.5 dBc Center 5.24 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 20.603 dBm/20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>Lower</th><th>Upper</th><th>Filter</th></tr></thead><tbody><tr><td>1 20.603 dBm/20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-29.00</td><td>-8.402</td><td>-28.35</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-46.22</td><td>-25.52</td><td>-47.48</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>-26.88</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>OFF</td></tr></tbody></table>	Carrier Power	Filter	Offset Freq	Integ BW	Lower	Upper	Filter	1 20.603 dBm/20.00 MHz	OFF	20.00 MHz	20.00 MHz	-29.00	-8.402	-28.35			40.00 MHz	20.00 MHz	-46.22	-25.52	-47.48							-26.88							OFF																																					
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5240	Agilent Spectrum Analyzer - ACP Center Freq 5.240000000 GHz Center Freq: 5.240000000 GHz Trig: Free Run #Atten: 30 dB Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 12.86 dB Ref 32.86 dBm -46.2 dBc -29.0 dBc 20.6 dBm -28.3 dBc -47.5 dBc Center 5.24 GHz #Res BW 300 kHz #VBW 300 kHz Span 100 MHz Sweep 20 ms Total Carrier Power 20.603 dBm/20.00 MHz ACP-IBW <table><thead><tr><th>Carrier Power</th><th>Filter</th><th>Offset Freq</th><th>Integ BW</th><th>Lower</th><th>Upper</th><th>Filter</th></tr></thead><tbody><tr><td>1 20.603 dBm/20.00 MHz</td><td>OFF</td><td>20.00 MHz</td><td>20.00 MHz</td><td>-29.00</td><td>-8.402</td><td>-28.35</td></tr><tr><td></td><td></td><td>40.00 MHz</td><td>20.00 MHz</td><td>-46.22</td><td>-25.52</td><td>-47.48</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>-26.88</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>OFF</td></tr></tbody></table>	Carrier Power	Filter	Offset Freq	Integ BW	Lower	Upper	Filter	1 20.603 dBm/20.00 MHz	OFF	20.00 MHz	20.00 MHz	-29.00	-8.402	-28.35			40.00 MHz	20.00 MHz	-46.22	-25.52	-47.48							-26.88							OFF																																																																										
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Channel(MHz)	W52:802.11n(HT20)
5180	Agilent Spectrum Analyzer - ACP Center Freq 5.180000000 GHz Trig: Free Run #Atten: 30 dB Center Freq: 5.180000000 GHz Avg/Hold: 100/100 Radio Std: None Radio Device: BTS Ref Offset 12.79 dB Ref 32.79 dBm 19.173 dBm 20.00 MHz 20.00



9. Antenna Power and Tolerance

9.1 LIMIT

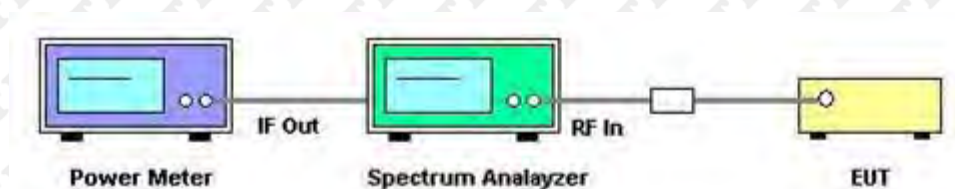
- (1) 10mW/MHz (OFDM, DSSS: 20MHz system),
 - (2) 5mW/MHz (OFDM: 40MHz system),
 - (3) 2.5mW/MHz (OFDM: 80MHz system),
 - (4) 1.25mW/MHz (OFDM: 160MHz system),
 - (5) 10mW/MHz (except above methods),
- Tolerance: W52/W53: -80%~+20%, W56: -50%~+50%.

9.2 TEST PROCEDURE

A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.

- (a) A sample detector function must be used.
- (b) A measurement instrument with an integrated 1MHz power bandwidth function may be used to automate the test process.
- (c) Connect the EUT to the RF input of the spectrum analyzer via a 50ohm attenuator.
- (d) Set the RBW = 1MHz, VBW = 1MHz, center of frequency = operating frequency, Sweep = Auto.
- (e) 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided emission is repetitive in nature.
- (f) Repeat above procedures until all frequency measured was complete.

9.3 Test Setup Block Diagram



9.4 TEST RESULT

W52

Mode	Channel (MHz)	Average burst power(dBm)	Antenna power (mW/MHz)	E.I.R.P (mW/MHz)	Limit (mW/MHz)	Rated output power (mW/MHz)	Tolerance (%)	Limit
802.11a ANT 1	LCH	2.792	1.902	3.106	10	3	-36.602	-80% ~ +20%
	MCH	3.388	2.182	3.563	10	3	-27.276	
	HCH	4.556	2.855	4.662	10	3	-4.835	
802.11a ANT 2	LCH	2.831	1.919	3.134	10	4	-52.022	
	MCH	3.595	2.288	3.737	10	4	-42.794	
	HCH	5.011	3.170	5.177	10	4	-20.743	

Mode	Channel (MHz)	Average burst power (dBm) ANT 1	Average burst power (dBm) ANT 2	Total Antenna Power (mW/MHz)	Rated power density (mW/MHz)	Antenna Gain (dBi)	EIRP (mW/MHz)	EIRP Limit (mW/MHz)	Tolerance (%)	Limit
802.11n (HT20)	LCH	2.684	2.585	3.669	6	2.13	5.991	10	-38.856	-80% ~ +20%
	MCH	3.431	3.379	4.381	6	2.13	7.154	10	-26.989	
	HCH	4.549	4.770	5.850	6	2.13	9.553	10	-2.508	
802.11ac (VHT20)	LCH	2.864	2.651	3.775	6	2.13	6.165	10	-37.084	
	MCH	3.422	3.301	4.337	6	2.13	7.083	10	-27.711	
	HCH	4.588	4.770	5.875	6	2.13	9.595	10	-2.079	
802.11n (HT40)	LCH	0.142	0.702	2.209	3	2.13	3.607	5	-26.377	
	HCH	1.491	1.621	2.862	3	2.13	4.674	5	-4.598	
802.11ac (VHT40)	LCH	0.271	1.089	2.349	3	2.13	3.837	5	-21.687	
	HCH	1.597	1.287	2.789	3	2.13	4.555	5	-7.021	
802.11ac (VHT80)	MCH	-1.812	-1.807	1.318	2	2.13	2.153	2.5	-34.075	

Note: P= Average burst power, G= Antenna Gain=2.13Bi
EIRP = Conducted Power + Antenna Gain

10. Unwanted Emissions Strength

10.1 LIMIT

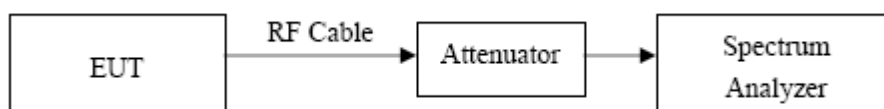
W52	
20MHz system	
OBW : 18MHz or less	OBW : 18 - 20 MHz
5,142 MHz or less : 2.5 μ W/MHz	5,142 MHz or less : 2.5 μ W/MHz
5,142 - 5,150 MHz : 15 μ W/MHz	5,142 - 5,150 MHz : 15 μ W/MHz
	5,250 - 5,250.2 MHz : $10^{1-(8/2)(f-9.75)}$ mW/MHz
5,250 - 5,251 MHz : $10^{1-(f-9)}$ mW/MHz	5,250.2 - 5,251 MHz : $10^{1-(f-9)}$ mW/MHz
5,251 - 5,260 MHz : $10^{-1-(8/90)(f-11)}$ mW/MHz	5,251 - 5,260 MHz : $10^{-1-(8/90)(f-11)}$ mW/MHz
5,260 - 5,266.7 MHz : $10^{-1.8-(6/50)(f-20)}$ mW/MHz	5,260 - 5,266.7 MHz : $10^{-1.8-(6/50)(f-20)}$ mW/MHz
5,266.7 MHz or more : 2.5 μ W/MHz	5,266.7 MHz or more : 2.5 μ W/MHz
f = MHz, Difference from 5240 (MHz)	f = MHz, Difference from 5240 (MHz)

40MHz system	80MHz system
5,141.6 MHz or less : 2.5 μ W/MHz	5,123.2 MHz or less : 2.5 μ W/MHz
5,141.6 - 5,150 MHz : 15 μ W/MHz	5,123.2 - 5,150 MHz : 15 μ W/MHz
5,250 - 5,251 MHz : $10^{-(f-20)+\log(1/2)}$ mW/MHz	5,250 - 5,251 MHz : $10^{-(f-40)+\log(1/4)}$ mW/MHz
5,251 - 5,270 MHz : $10^{-(8/190)(f-21)-1+\log(1/2)}$ mW/MHz	5,251 - 5,290 MHz : $10^{-(8/290)(f-41)-1+\log(1/4)}$ mW/MHz
5,270 - 5,278.4 MHz : $10^{-(2/50)(f-40)-1.8+\log(1/2)}$ mW/MHz	5,290 - 5,296.7 MHz : $10^{-(2/100)(f-80)-1.8+\log(1/4)}$ mW/MHz
5,278.4 MHz or more : 2.5 μ W/MHz	5,296.7 MHz or more : 2.5 μ W/MHz
f = MHz, Difference from 5230 (MHz)	f = MHz, Difference from 5210 (MHz)

10.2 TEST PROCEDURE

- (1) A spectrumIn case of conducted measurements, the radio device shall be connected to the measuring equipment via a suitable attenuator.
- (2) The measurement equipment shall be set for peak hold mode of operation.
- (3) the transmitter shall be operated at the highest output power, or, in the case of equipment able to operate at more than one power level, at the lowest and highest output powers;
- (4) The resolution bandwidth shall be set to 100kHz from 10MHz to 1GHz, the resolution bandwidth shall be set to 1MHz above 1GHz , and the sweep time shall be set to auto mode, to ensure all major modulation products are captured.
- (5) When the searched result is less than the specified limit, the maximum one shall be recorded, when the result is more than the specified limit, all measured values shall be recorded.
- (5) This measurement shall be repeated with the transmitter in standby mode where applicable.
- (6) Repeat above procedures until all frequency measured was complete.

10.3 TEST SETUP Block Diagram



10.4 TEST RESULT

W52 ANT 1

Test voltage	Test freq.	Test freq. range	Mkr(MHz)	Test result(dBm)	Limit Start(dBm)	Limit Stop (dBm)	Result
Normal Voltage	5180MHz	30MHz-5142MHz	2647.34	-39.31	-26	-26	PASS
		5142MHz-5150MHz	5148.38	-34.95	-18	-18	PASS
		5250MHz-5251MHz	5250.95	-38.25	0	-10	PASS
		5251MHz-5260MHz	5255.46	-37.52	-10	-18	PASS
		5260MHz-5266.7MHz	5266.47	-38.62	-18	-26	PASS
		5266.7MHz-26000MHz	25813.4	-34.62	-26	-26	PASS
	5200MHz	30MHz-5142MHz	2672.9	-39.16	-26	-26	PASS
		5142MHz-5150MHz	5149.79	-37.79	-18	-18	PASS
		5250MHz-5251MHz	5250.04	-38.65	0	-10	PASS
		5251MHz-5260MHz	5255.13	-37.63	-10	-18	PASS
		5260MHz-5266.7MHz	5260.62	-38.44	-18	-26	PASS
		5266.7MHz-26000MHz	25004.8	-34.9	-26	-26	PASS
	5240MHz	30MHz-5142MHz	3158.54	-39.3	-26	-26	PASS
		5142MHz-5150MHz	5148.12	-36.85	-18	-18	PASS
		5250MHz-5251MHz	5250.02	-9.1	0	-10	PASS
		5251MHz-5260MHz	5251.03	-14.47	-10	-18	PASS
		5260MHz-5266.7MHz	5260.18	-23.2	-18	-26	PASS
		5266.7MHz-26000MHz	25792.67	-34.9	-26	-26	PASS

802.11ac

Test voltage	Test freq.	Test freq. range	Mkr(MHz)	Test result	Limit Start(dBm)	Limit Stop (dBm)	Result
Normal Voltage	5180MHz	30MHz-5142MHz	3000.07	-39.56	-26	-26	PASS
		5142MHz-5150MHz	5149.79	-34.05	-18	-18	PASS
		5250MHz-5251MHz	5250.87	-38.56	0	-10	PASS
		5251MHz-5260MHz	5253.75	-38.04	-10	-18	PASS
		5260MHz-5266.7MHz	5260.38	-38.16	-18	-26	PASS
		5266.7MHz-26000MHz	25046.27	-34.82	-26	-26	PASS
	5200MHz	30MHz-5142MHz	4641.02	-37.01	-26	-26	PASS
		5142MHz-5150MHz	5149.2	-37.66	-18	-18	PASS
		5250MHz-5251MHz	5250.74	-38.36	0	-10	PASS

		5251MHz-5260MHz	5255.64	-38.69	-10	-18	PASS
		5260MHz-5266.7MHz	5264.27	-37.59	-18	-26	PASS
		5266.7MHz-26000MHz	24984.07	-34.74	-26	-26	PASS
	5240MHz	30MHz-5142MHz	3071.64	-38.97	-26	-26	PASS
		5142MHz-5150MHz	5148.81	-37.11	-18	-18	PASS
		5250MHz-5251MHz	5250.01	-7.42	0	-10	PASS
		5251MHz-5260MHz	5251.04	-11.39	-10	-18	PASS
		5260MHz-5266.7MHz	5260.25	-20.74	-18	-26	PASS
		5266.7MHz-26000MHz	5266.7	-32.42	-26	-26	PASS
Normal Voltage	5190MHz	30MHz-5141.6MHz	5141.6	-35.21	-26	-26	PASS
		5141.6MHz-5150MHz	5148.73	-21.96	-18	-18	PASS
		5250MHz-5251MHz	5250.78	-35.11	-3	-13	PASS
		5251MHz-5270MHz	5251.59	-37.28	-13	-21	PASS
		5270MHz-5278.4MHz	5275.04	-26.32	-21	-26	PASS
		5278.4MHz-26000MHz	5278.4	-33.81	-26	-26	PASS
	5230MHz	30MHz-5141.6MHz	4630.44	-29.67	-26	-26	PASS
		5141.6MHz-5150MHz	5143.31	-37.92	-18	-18	PASS
		5250MHz-5251MHz	5250.09	-20.77	-3	-13	PASS
		5251MHz-5270MHz	5251.38	-25.78	-13	-21	PASS
		5270MHz-5278.4MHz	5275	-24.42	-21	-26	PASS
		5278.4MHz-26000MHz	5278.4	-33.36	-26	-26	PASS
Normal Voltage	5210MHz	30MHz-5123.2MHz	3050.27	-39.21	-26	-26	PASS
		5123.2MHz-5150MHz	5143.57	-36.36	-18	-18	PASS
		5250MHz-5251MHz	5250.01	-25.31	-6	-16	PASS
		5251MHz-5290MHz	5251.43	-29.4	-16	-24	PASS
		5290MHz-5296.7MHz	5290.38	-36.99	-24	-26	PASS
		5296.7MHz-26000MHz	24985.54	-34.68	-26	-26	PASS

802.11n

Test voltage	Test freq.	Test freq. range	Mkr(MHz)	Test result	Limit Start(dBm)	Limit Stop (dBm)	Result
Normal Voltage	5180MHz	30MHz-5142MHz	3051.19	-39.66	-26	-26	PASS
		5142MHz-5150MHz	5147.66	-33.14	-18	-18	PASS
		5250MHz-5251MHz	5250.22	-38.1	0	-10	PASS
		5251MHz-5260MHz	5253.61	-38.69	-10	-18	PASS
		5260MHz-5266.7MHz	5265.43	-37.88	-18	-26	PASS
		5266.7MHz-26000MHz	25004.8	-34.93	-26	-26	PASS
	5200MHz	30MHz-5142MHz	2621.78	-39.47	-26	-26	PASS
		5142MHz-5150MHz	5144.27	-37.61	-18	-18	PASS
		5250MHz-5251MHz	5250.19	-38.28	0	-10	PASS
		5251MHz-5260MHz	5254.92	-38.05	-10	-18	PASS
		5260MHz-5266.7MHz	5260.14	-38.13	-18	-26	PASS
		5266.7MHz-26000MHz	25730.47	-34.82	-26	-26	PASS
	5240MHz	30MHz-5142MHz	2647.34	-39.62	-26	-26	PASS
		5142MHz-5150MHz	5149.2	-37.87	-18	-18	PASS
		5250MHz-5251MHz	5250.01	-6.78	0	-10	PASS
		5251MHz-5260MHz	5251.47	-13.49	-10	-18	PASS
		5260MHz-5266.7MHz	5260.29	-21.76	-18	-26	PASS
		5266.7MHz-26000MHz	5266.7	-31.94	-26	-26	PASS
Normal Voltage	5190MHz	30MHz-5141.6MHz	5141.6	-33.31	-26	-26	PASS
		5141.6MHz-5150MHz	5145.72	-22.23	-18	-18	PASS
		5250MHz-5251MHz	5250.39	-34.02	-3	-13	PASS
		5251MHz-5270MHz	5252.82	-36.04	-13	-21	PASS
		5270MHz-5278.4MHz	5274.8	-24.12	-21	-26	PASS
		5278.4MHz-26000MHz	25689.18	-35.04	-26	-26	PASS
	5230MHz	30MHz-5141.6MHz	4630.44	-28.03	-26	-26	PASS
		5141.6MHz-5150MHz	5141.89	-37.39	-18	-18	PASS
		5250MHz-5251MHz	5250.03	-21.12	-3	-13	PASS
		5251MHz-5270MHz	5251.17	-26.14	-13	-21	PASS
		5270MHz-5278.4MHz	5278.16	-29.35	-21	-26	PASS
		5278.4MHz-26000MHz	5278.4	-31.08	-26	-26	PASS

W52 ANT 2

Test voltage	Test freq.	Test freq. range	Mkr(MHz)	Test result(dBm)	Limit Start(dBm)	Limit Stop (dBm)	Result
Normal Voltage	5180MHz	30MHz-5142MHz	3143.21	-38.93	-26	-26	PASS
		5142MHz-5150MHz	5149.47	-34.02	-18	-18	PASS
		5250MHz-5251MHz	5250.84	-37.91	0	-10	PASS
		5251MHz-5260MHz	5255.6	-37.03	-10	-18	PASS
		5260MHz-5266.7MHz	5265.15	-38.71	-18	-26	PASS
		5266.7MHz-26000MHz	24984.07	-34.85	-26	-26	PASS
	5200MHz	30MHz-5142MHz	4630.8	-29.93	-26	-26	PASS
		5142MHz-5150MHz	5149.24	-37.89	-18	-18	PASS
		5250MHz-5251MHz	5250.06	-38.18	0	-10	PASS
		5251MHz-5260MHz	5256.43	-38.63	-10	-18	PASS
		5260MHz-5266.7MHz	5261.7	-38.82	-18	-26	PASS
		5266.7MHz-26000MHz	5287.43	-33.11	-26	-26	PASS
	5240MHz	30MHz-5142MHz	4630.8	-27.79	-26	-26	PASS
		5142MHz-5150MHz	5147.67	-37.66	-18	-18	PASS
		5250MHz-5251MHz	5250.13	-9.37	0	-10	PASS
		5251MHz-5260MHz	5251.06	-14.96	-10	-18	PASS
		5260MHz-5266.7MHz	5260.03	-23.28	-18	-26	PASS
		5266.7MHz-26000MHz	24984.07	-34.82	-26	-26	PASS

802.11ac

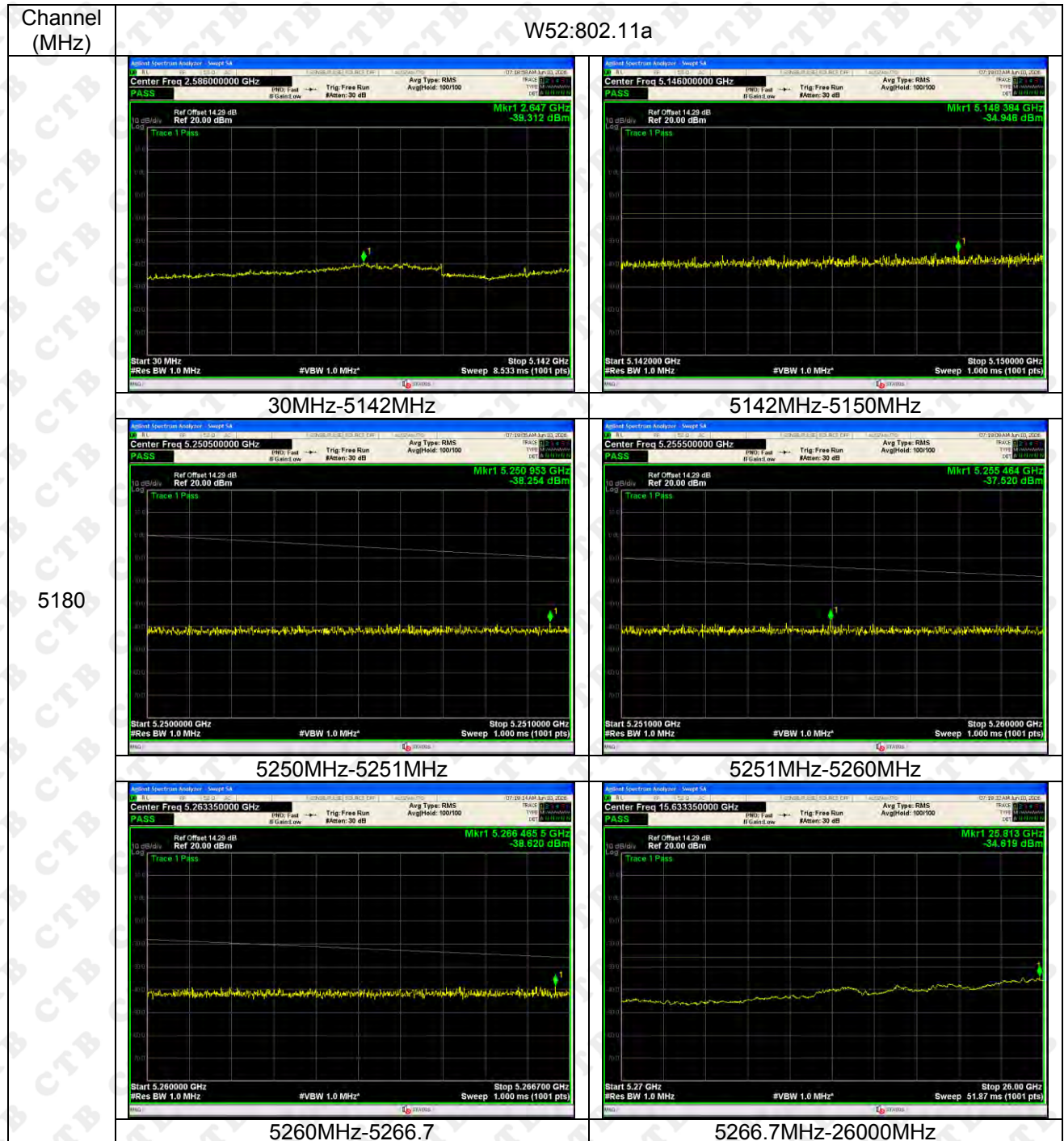
Test voltage	Test freq.	Test freq. range	Mkr(MHz)	Test result	Limit Start(dBm)	Limit Stop (dBm)	Result
Normal Voltage	5180MHz	30MHz-5142MHz	4630.8	-28.65	-26	-26	PASS
		5142MHz-5150MHz	5149.7	-35	-18	-18	PASS
		5250MHz-5251MHz	5250.11	-38.6	0	-10	PASS
		5251MHz-5260MHz	5255.62	-38.4	-10	-18	PASS
		5260MHz-5266.7MHz	5264.38	-39.11	-18	-26	PASS
		5266.7MHz-26000MHz	5287.43	-33.13	-26	-26	PASS
	5200MHz	30MHz-5142MHz	3158.54	-39.19	-26	-26	PASS
		5142MHz-5150MHz	5147.43	-37.71	-18	-18	PASS
		5250MHz-5251MHz	5250.22	-38.43	0	-10	PASS
		5251MHz-5260MHz	5256.51	-38.31	-10	-18	PASS
		5260MHz-5266.7MHz	5264.07	-38.67	-18	-26	PASS

	5240MHz	5266.7MHz-26000MHz	25730.47	-34.99	-26	-26	PASS
		30MHz-5142MHz	2652.46	-38.87	-26	-26	PASS
		5142MHz-5150MHz	5142.08	-37.67	-18	-18	PASS
		5250MHz-5251MHz	5250.02	-7.48	0	-10	PASS
		5251MHz-5260MHz	5251.12	-14.31	-10	-18	PASS
		5260MHz-5266.7MHz	5260.07	-23.02	-18	-26	PASS
		5266.7MHz-26000MHz	5266.7	-33.06	-26	-26	PASS
Normal Voltage	5190MHz	30MHz-5141.6MHz	5141.6	-34.73	-26	-26	PASS
		5141.6MHz-5150MHz	5149.97	-25.16	-18	-18	PASS
		5250MHz-5251MHz	5250.7	-37.24	-3	-13	PASS
		5251MHz-5270MHz	5251.46	-38	-13	-21	PASS
		5270MHz-5278.4MHz	5272.9	-32.42	-21	-26	PASS
		5278.4MHz-26000MHz	5278.4	-33.25	-26	-26	PASS
	5230MHz	30MHz-5141.6MHz	4630.44	-28.23	-26	-26	PASS
		5141.6MHz-5150MHz	5141.68	-37.22	-18	-18	PASS
		5250MHz-5251MHz	5250.05	-19.3	-3	-13	PASS
		5251MHz-5270MHz	5251.49	-24.9	-13	-21	PASS
		5270MHz-5278.4MHz	5272.81	-37.58	-21	-26	PASS
		5278.4MHz-26000MHz	5278.4	-29.97	-26	-26	PASS
Normal Voltage	5210MHz	30MHz-5123.2MHz	5123.2	-36.83	-26	-26	PASS
		5123.2MHz-5150MHz	5144.93	-25.8	-18	-18	PASS
		5250MHz-5251MHz	5250.06	-19.61	-6	-16	PASS
		5251MHz-5290MHz	5252.13	-20.72	-16	-24	PASS
		5290MHz-5296.7MHz	5291.11	-26.05	-24	-26	PASS
		5296.7MHz-26000MHz	25006.24	-35	-26	-26	PASS

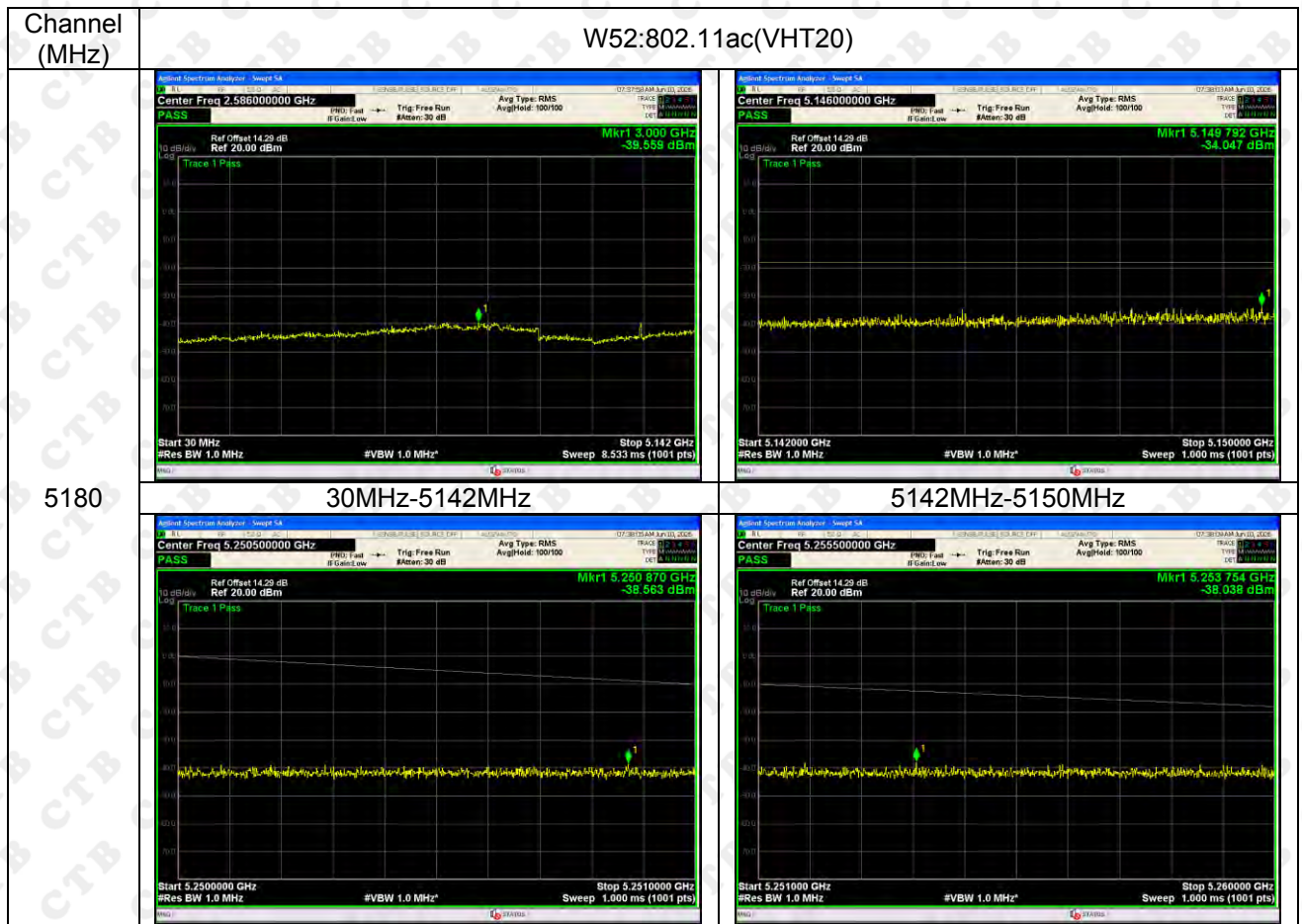
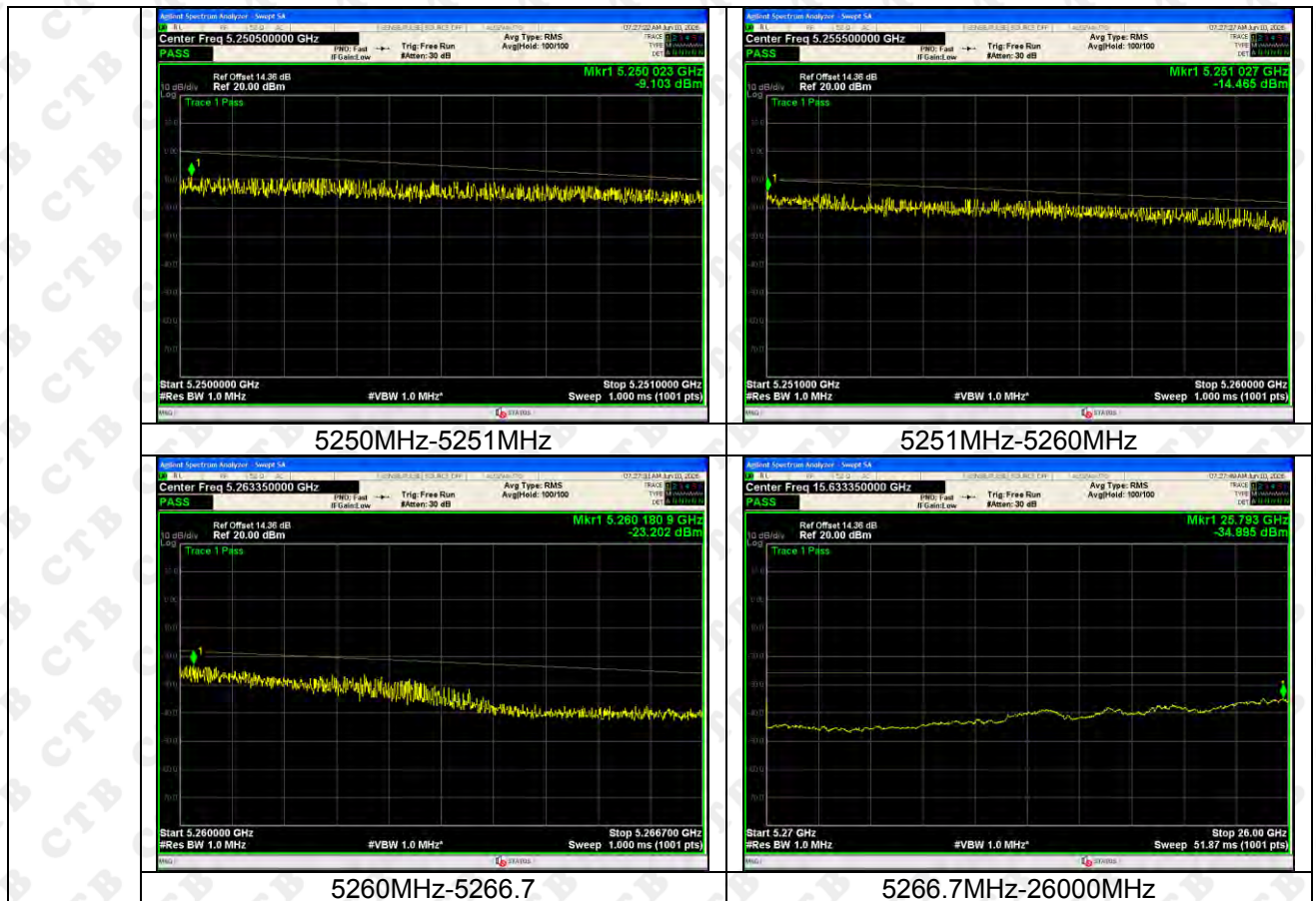
802.11n

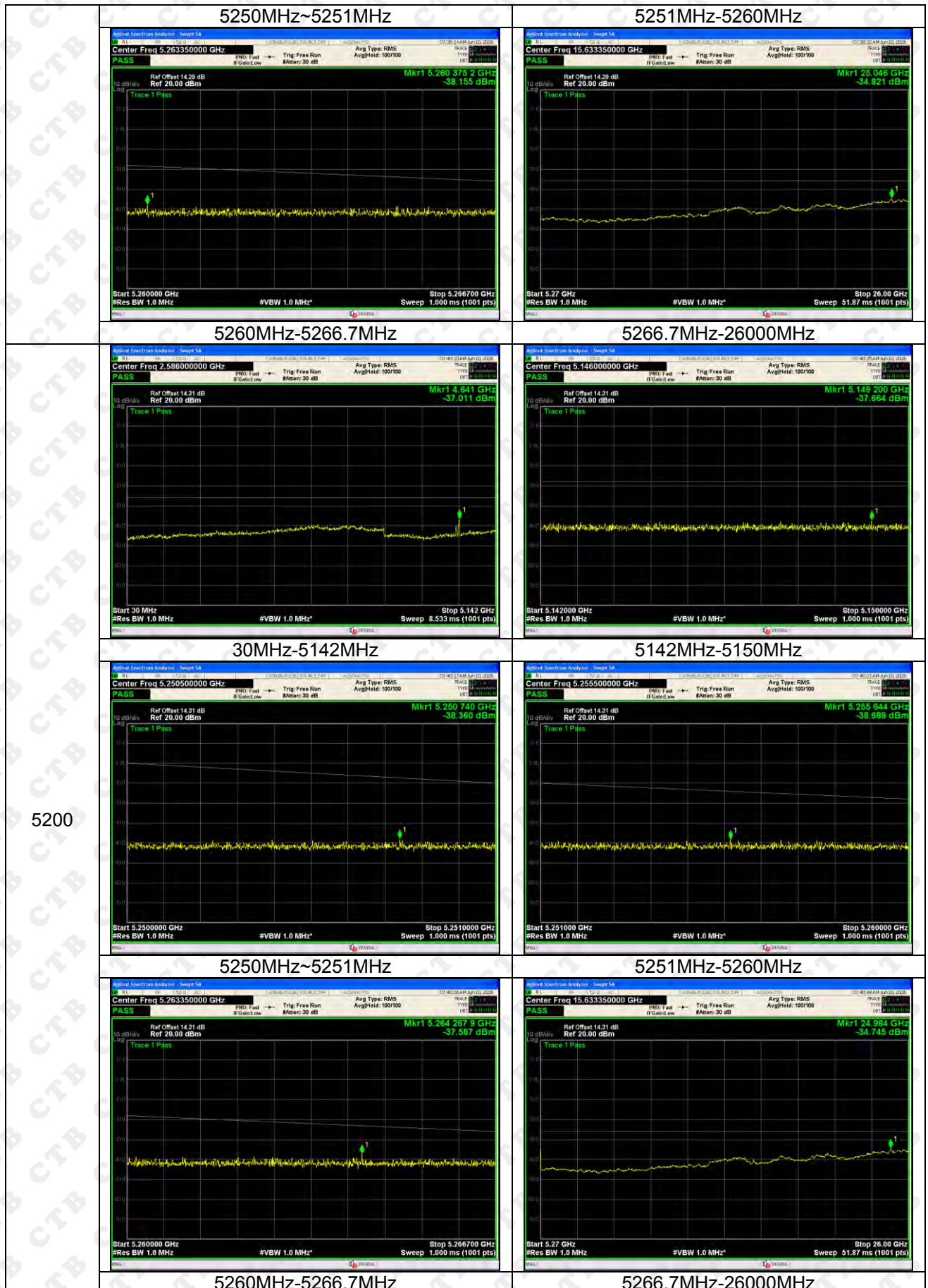
Test voltage	Test freq.	Test freq. range	Mkr(MHz)	Test result	Limit Start(dBm)	Limit Stop (dBm)	Result
Normal Voltage	5180MHz	30MHz-5142MHz	3168.77	-39.52	-26	-26	PASS
		5142MHz-5150MHz	5148.38	-34.44	-18	-18	PASS
		5250MHz-5251MHz	5250.49	-38.72	0	-10	PASS
		5251MHz-5260MHz	5257.61	-38.39	-10	-18	PASS
		5260MHz-5266.7MHz	5261.61	-38.57	-18	-26	PASS
		5266.7MHz-26000MHz	24984.07	-35.05	-26	-26	PASS
	5200MHz	30MHz-5142MHz	4630.8	-28.04	-26	-26	PASS
		5142MHz-5150MHz	5146.5	-37.6	-18	-18	PASS
		5250MHz-5251MHz	5250.82	-38.24	0	-10	PASS
		5251MHz-5260MHz	5256.39	-38.45	-10	-18	PASS
		5260MHz-5266.7MHz	5266.04	-38.31	-18	-26	PASS
		5266.7MHz-26000MHz	25067	-35.13	-26	-26	PASS
	5240MHz	30MHz-5142MHz	3173.88	-38.87	-26	-26	PASS
		5142MHz-5150MHz	5144.22	-38.05	-18	-18	PASS
		5250MHz-5251MHz	5250.01	-11.9	0	-10	PASS
		5251MHz-5260MHz	5251	-19.99	-10	-18	PASS
		5260MHz-5266.7MHz	5260.13	-37.4	-18	-26	PASS
		5266.7MHz-26000MHz	24984.07	-34.73	-26	-26	PASS
Normal Voltage	5190MHz	30MHz-5141.6MHz	5141.6	-37.23	-26	-26	PASS
		5141.6MHz-5150MHz	5147.1	-26.47	-18	-18	PASS
		5250MHz-5251MHz	5250.32	-37.5	-3	-13	PASS
		5251MHz-5270MHz	5252.41	-38.23	-13	-21	PASS
		5270MHz-5278.4MHz	5271.44	-33.58	-21	-26	PASS
		5278.4MHz-26000MHz	5278.4	-30.13	-26	-26	PASS
	5230MHz	30MHz-5141.6MHz	2677.81	-39.32	-26	-26	PASS
		5141.6MHz-5150MHz	5146.26	-37.65	-18	-18	PASS
		5250MHz-5251MHz	5250.15	-19.04	-3	-13	PASS
		5251MHz-5270MHz	5251.09	-23.27	-13	-21	PASS
		5270MHz-5278.4MHz	5272.32	-30.74	-21	-26	PASS
		5278.4MHz-26000MHz	25005.36	-34.47	-26	-26	PASS

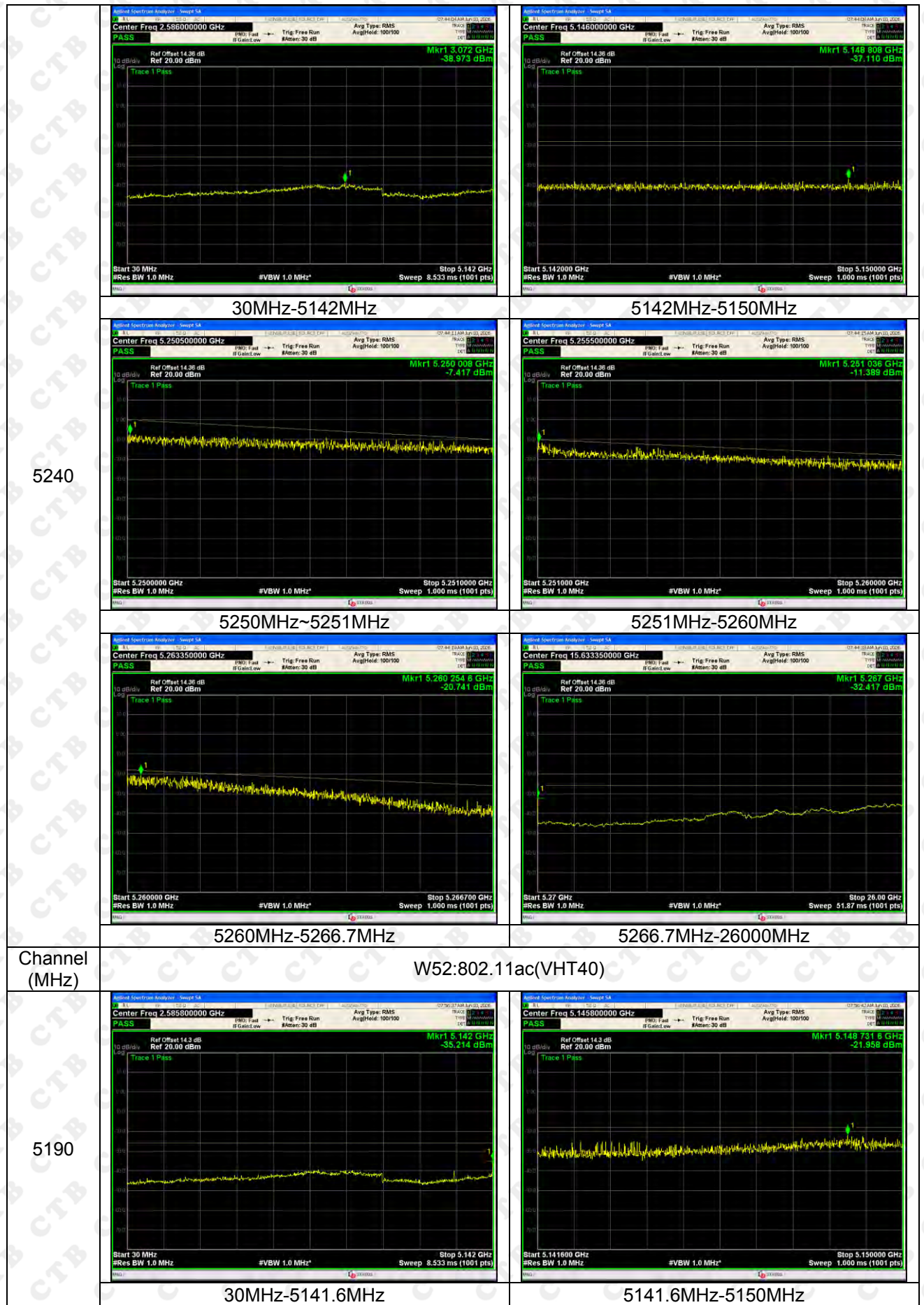
ANT 1

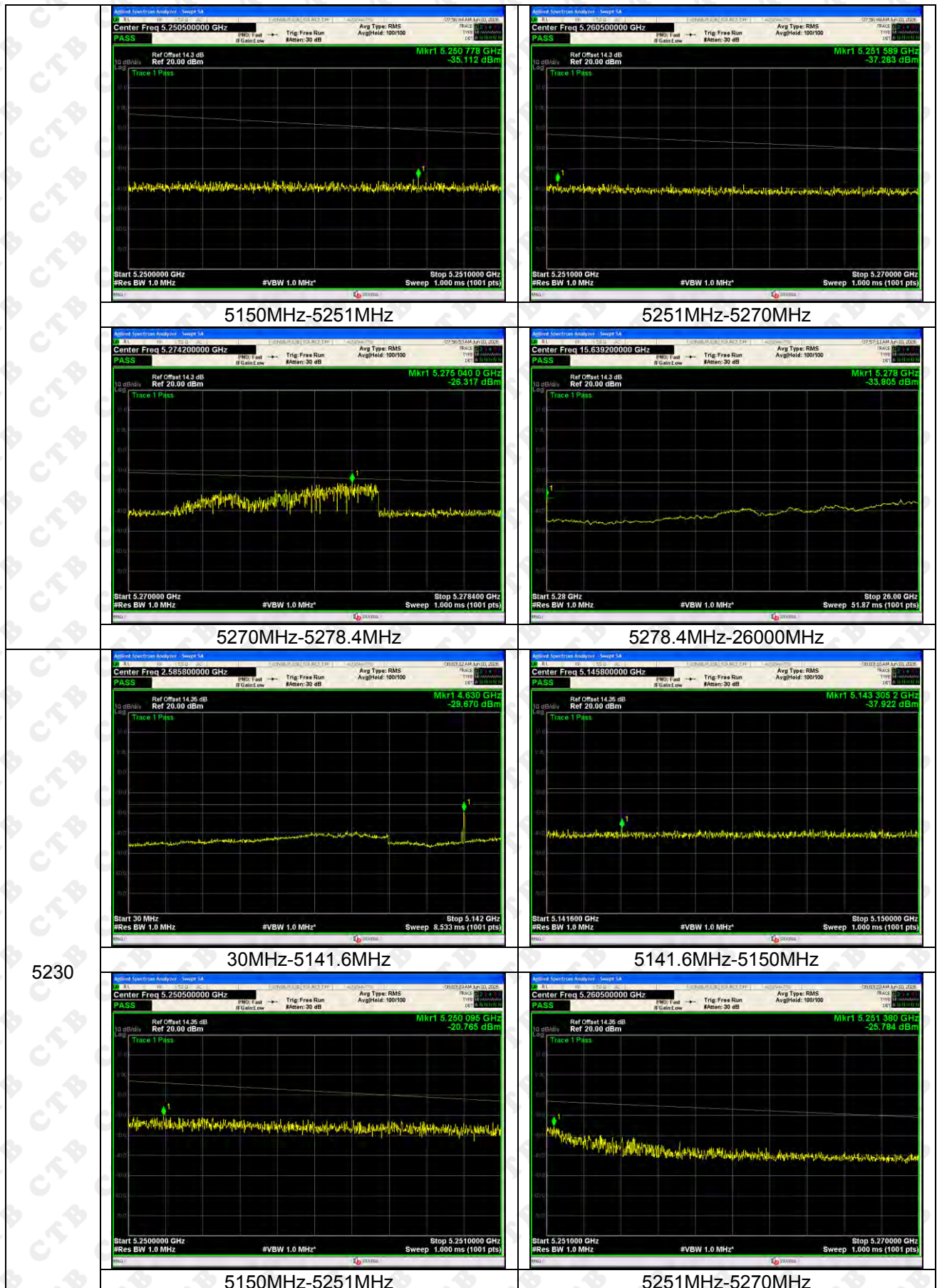




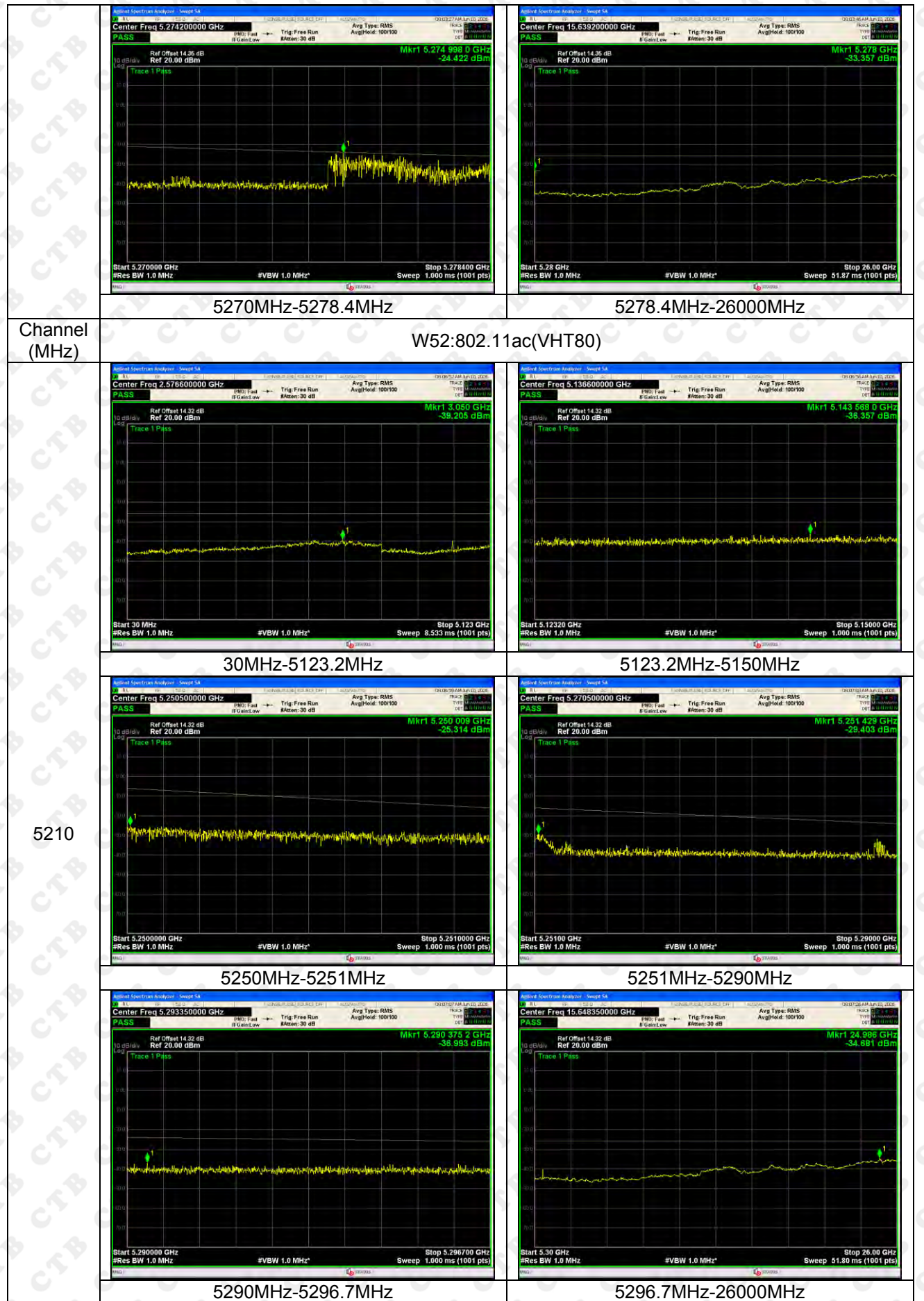


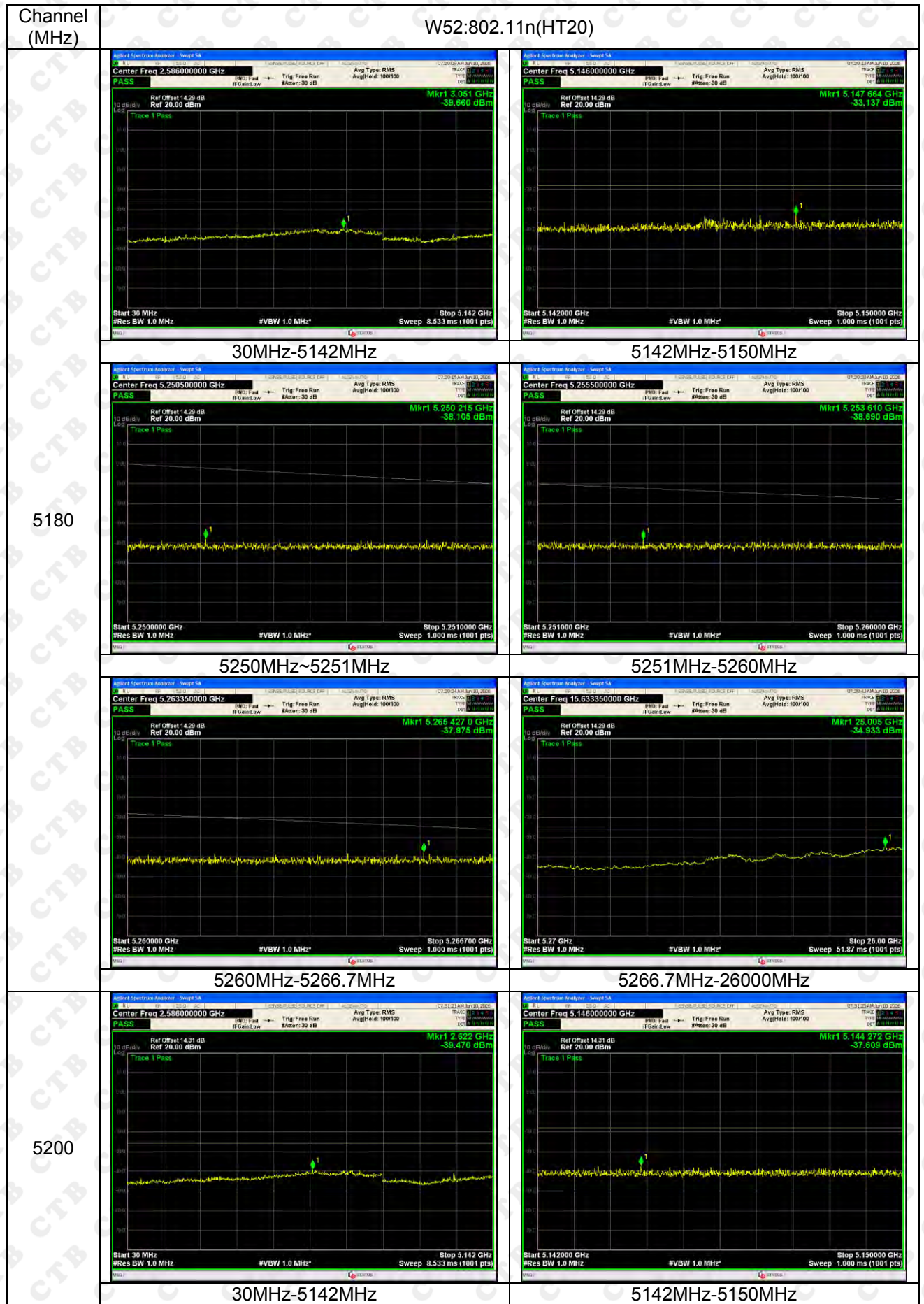


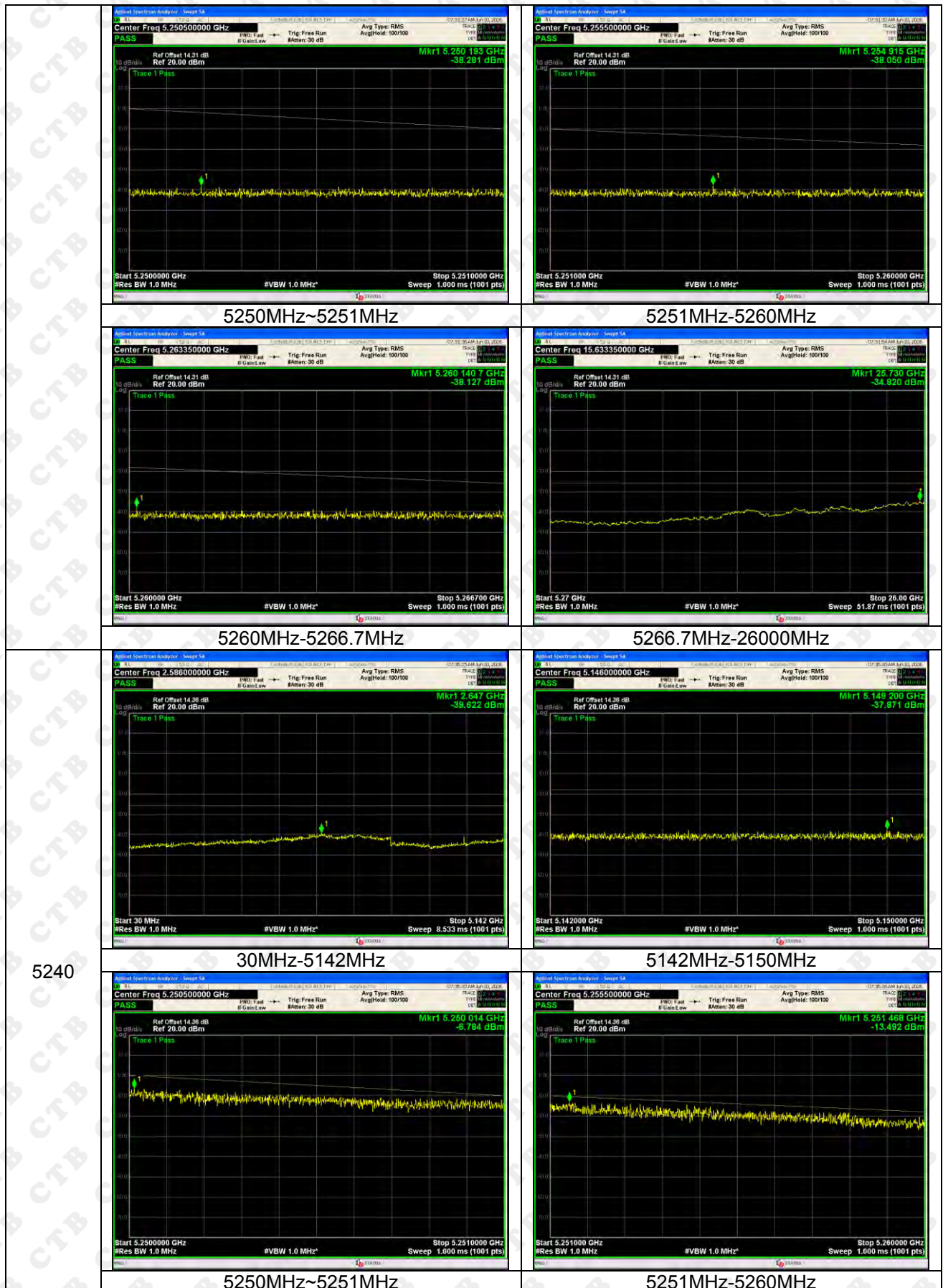


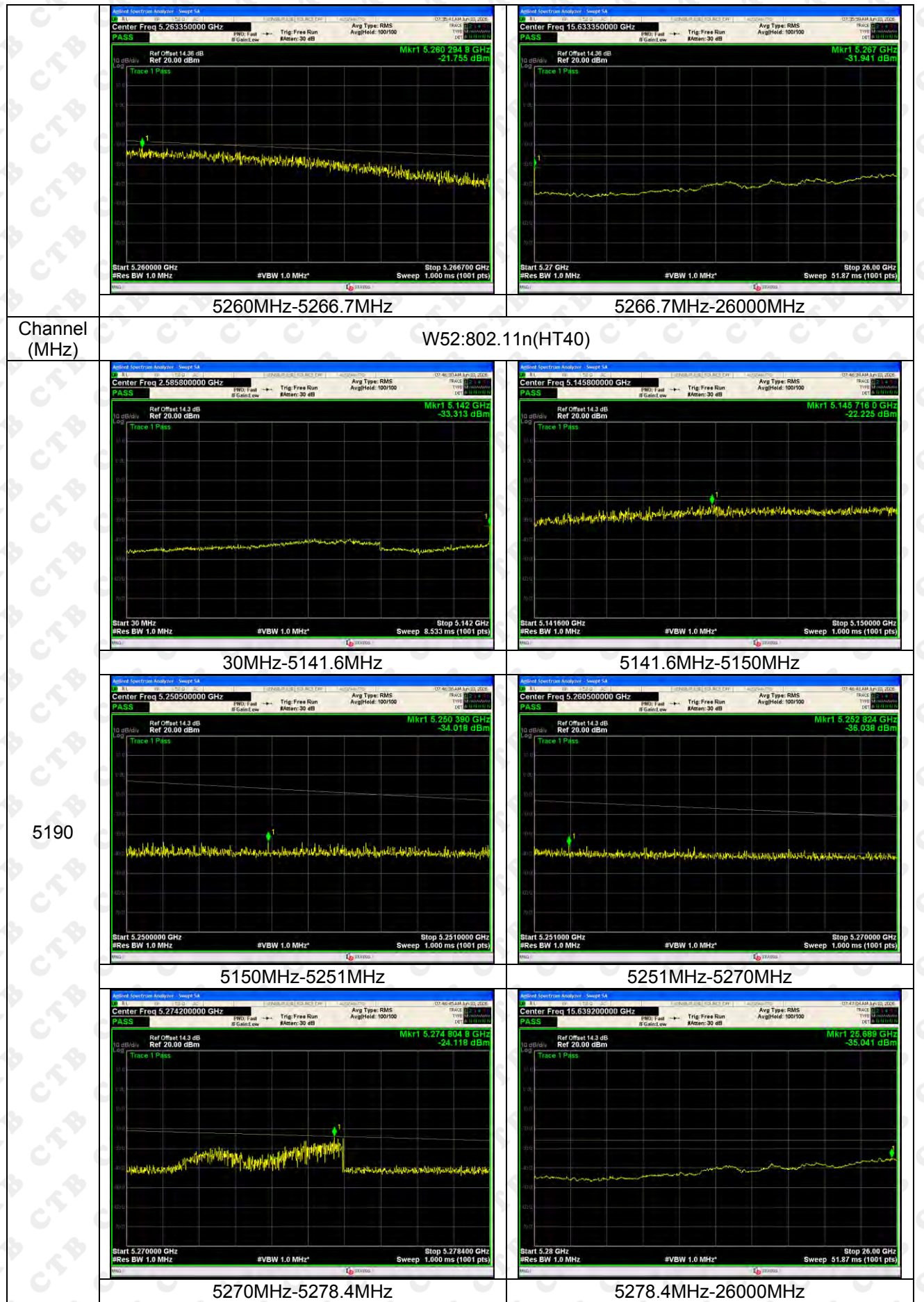


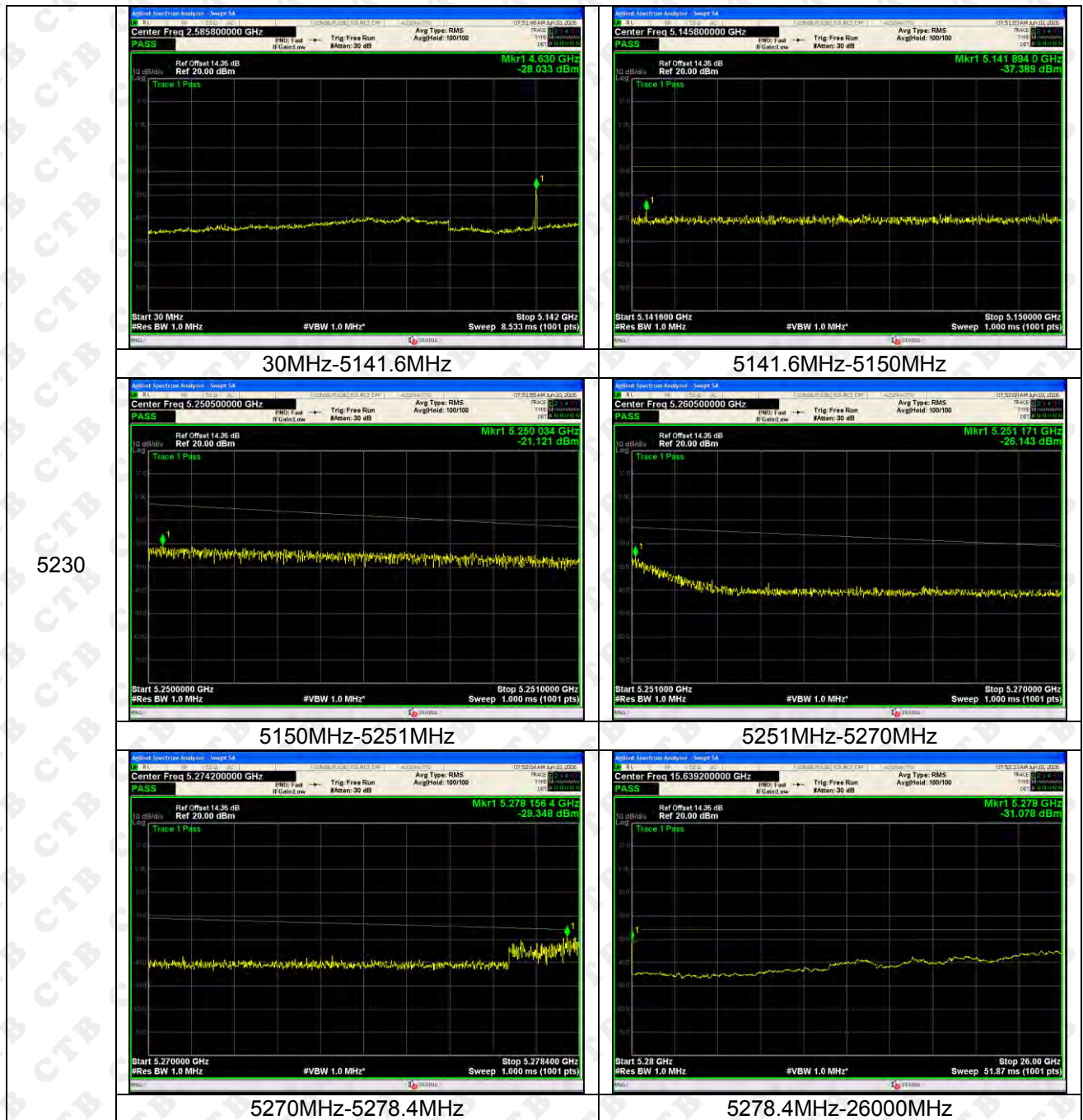
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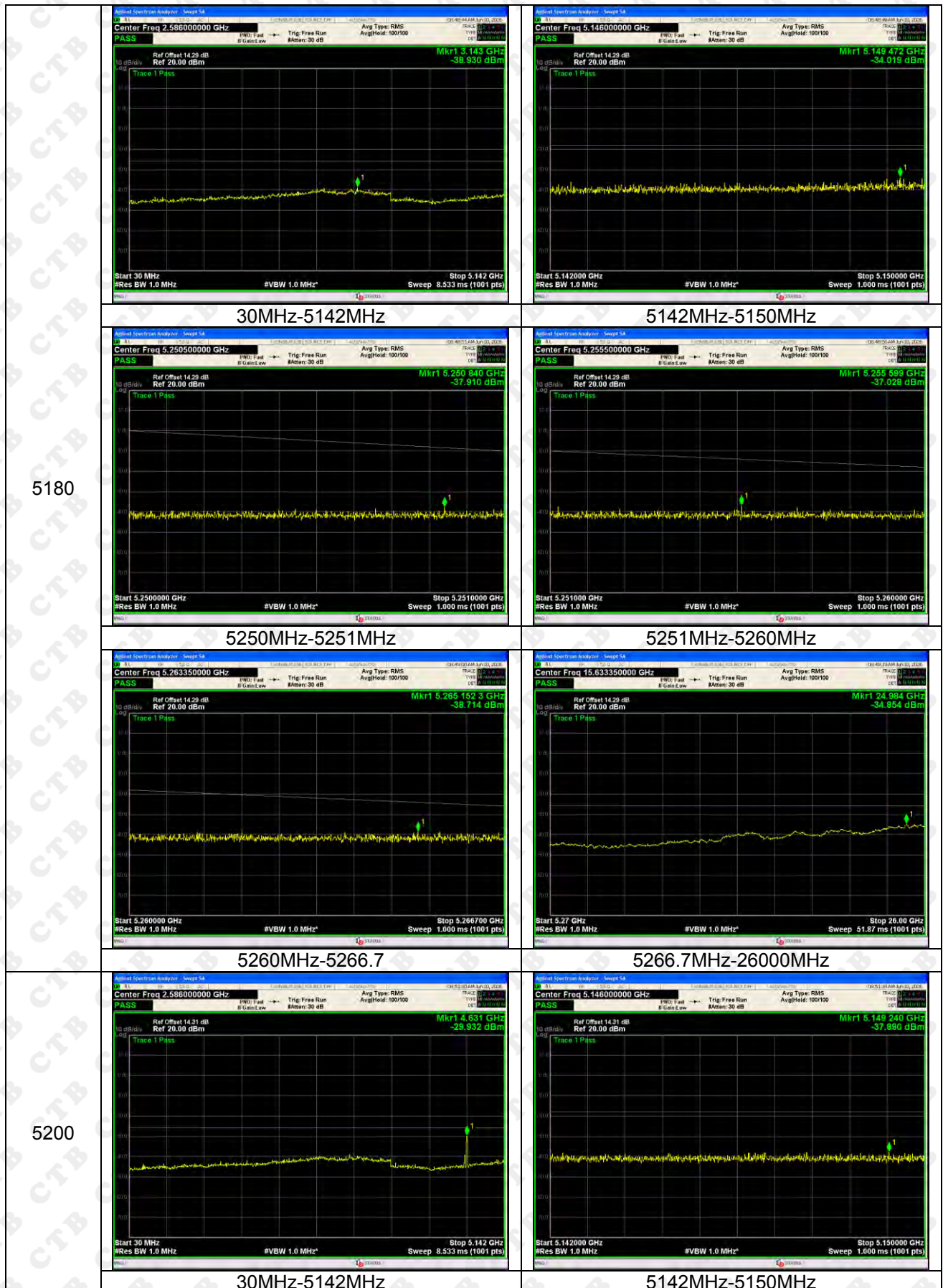






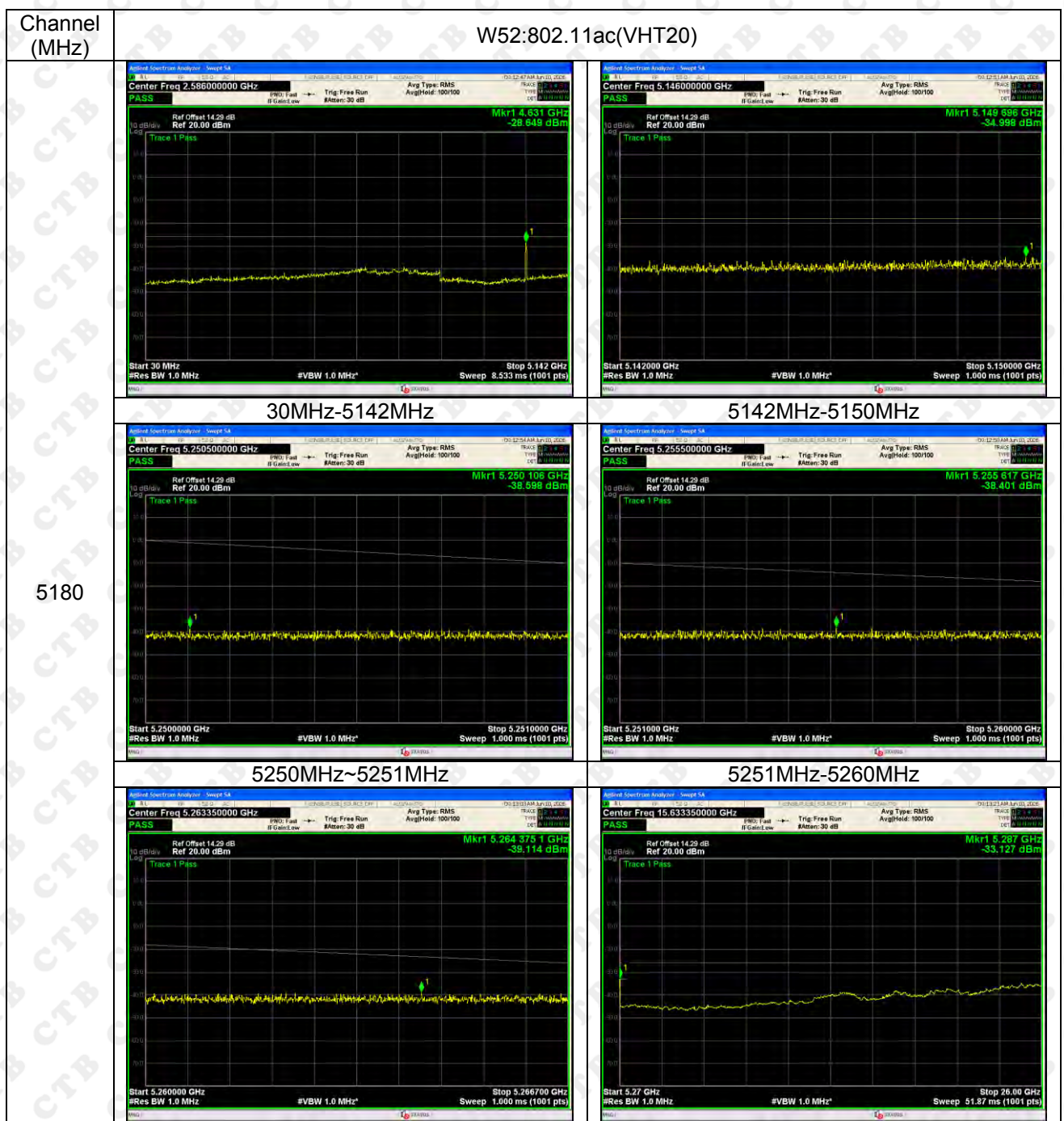
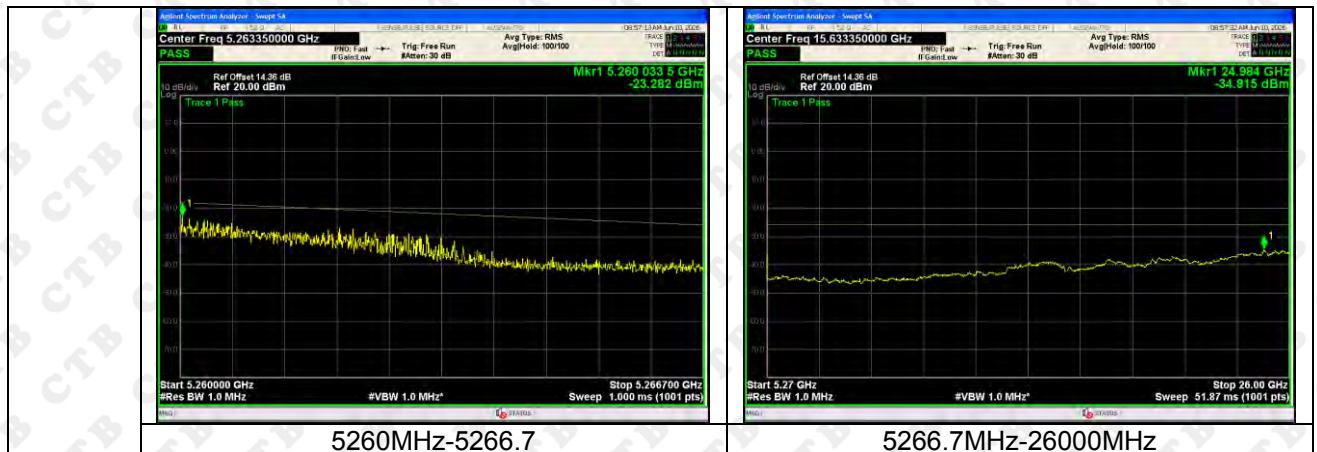
ANT 2

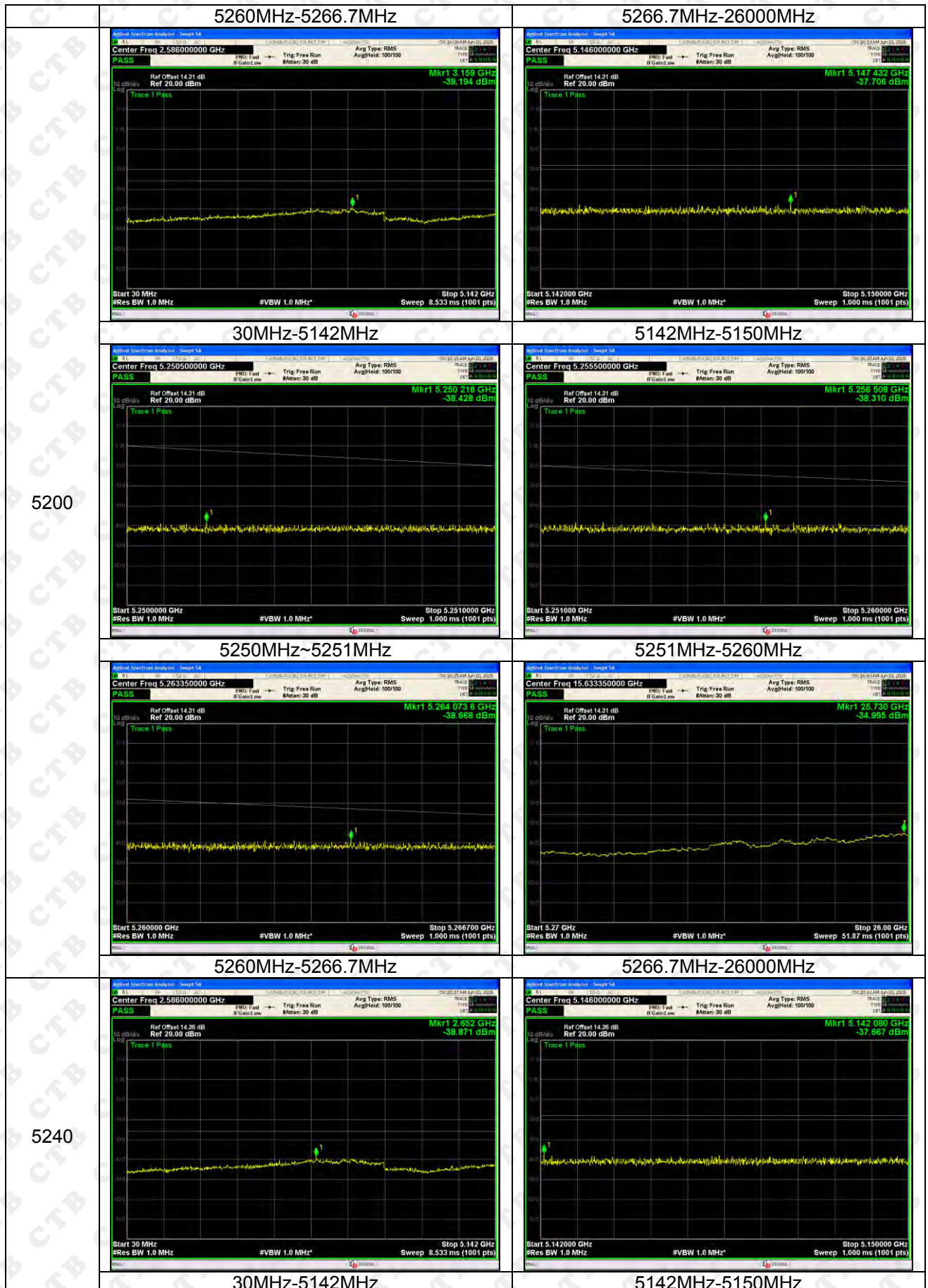
Channel (MHz)	W52:802.11a
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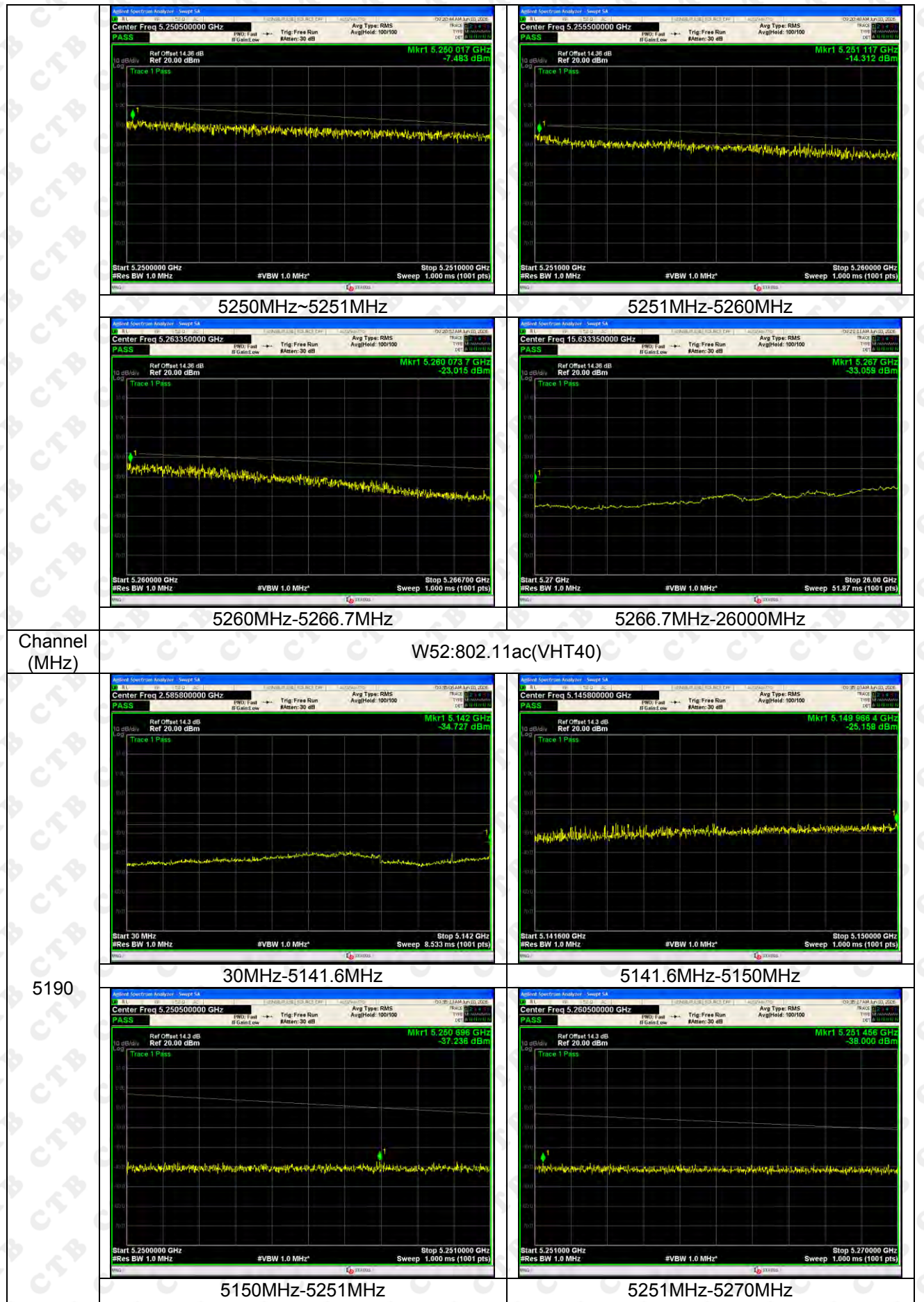


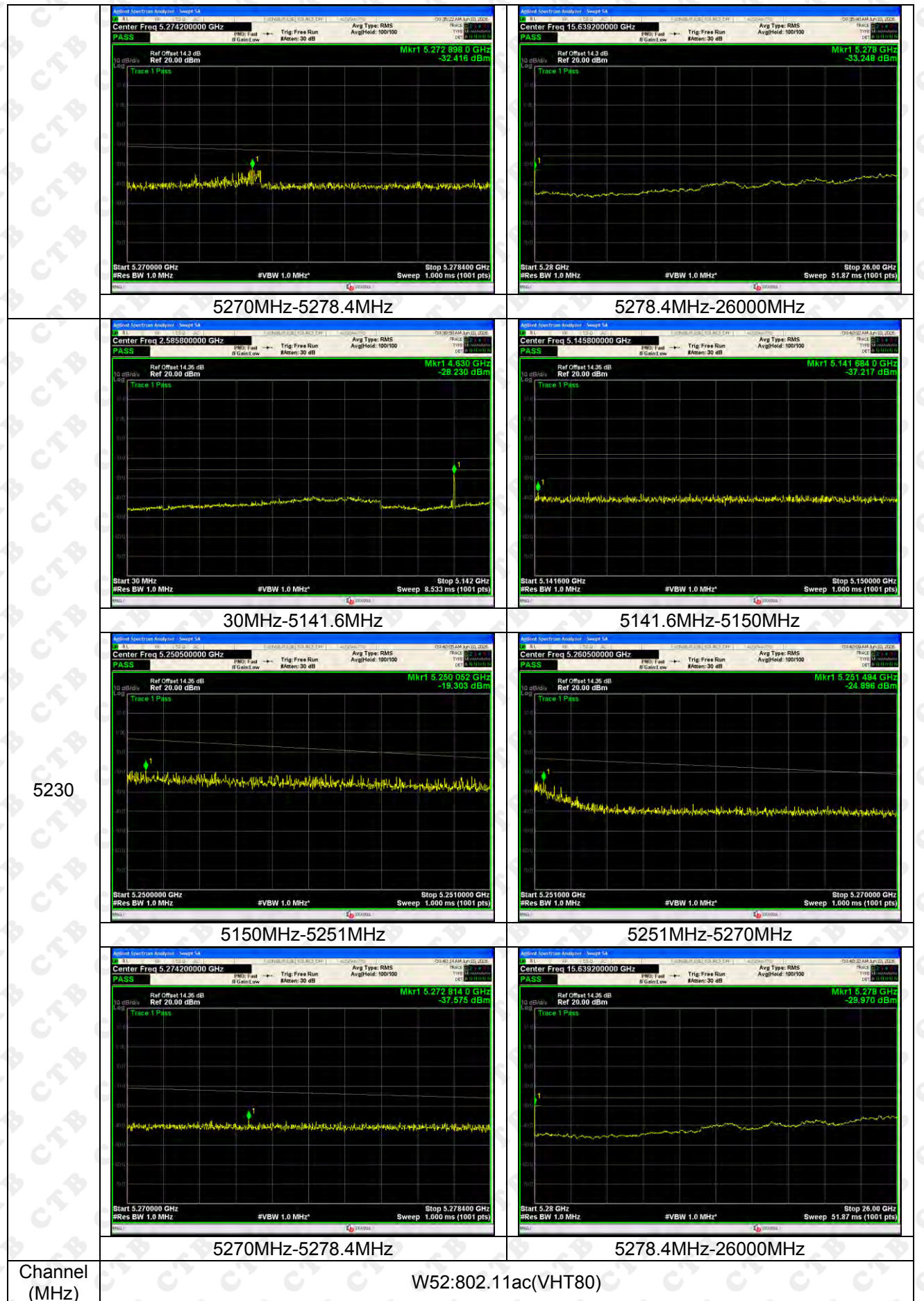


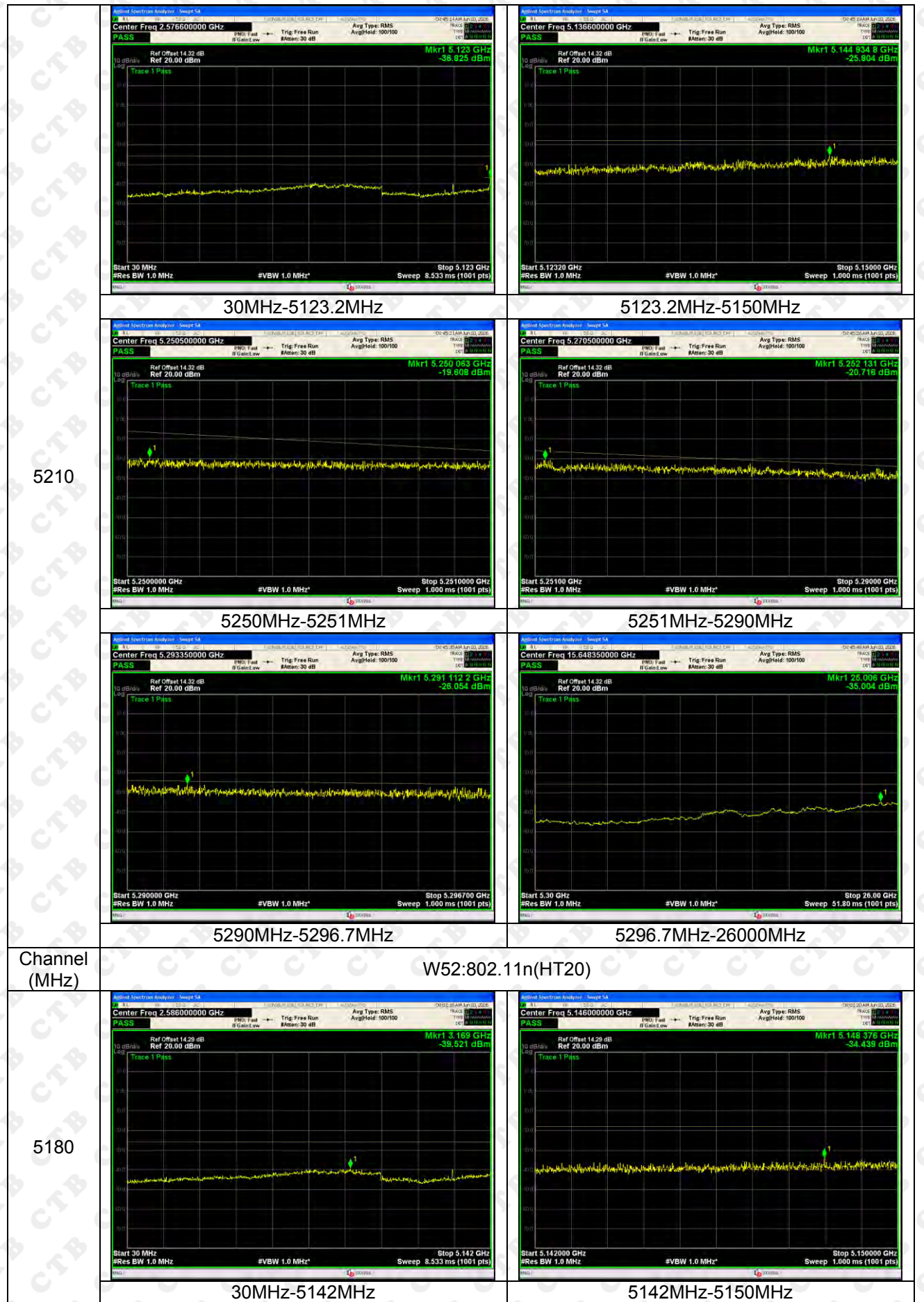
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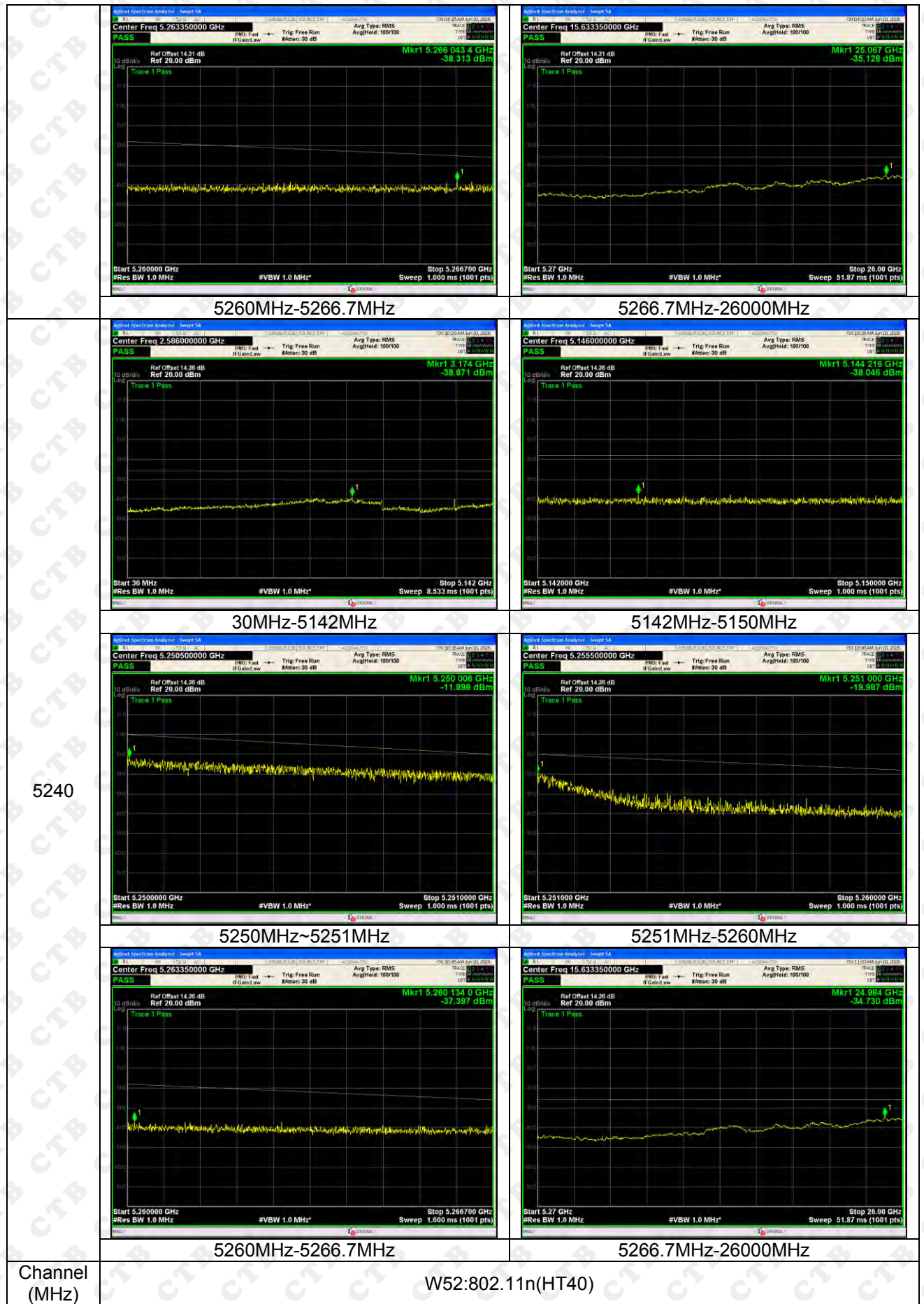


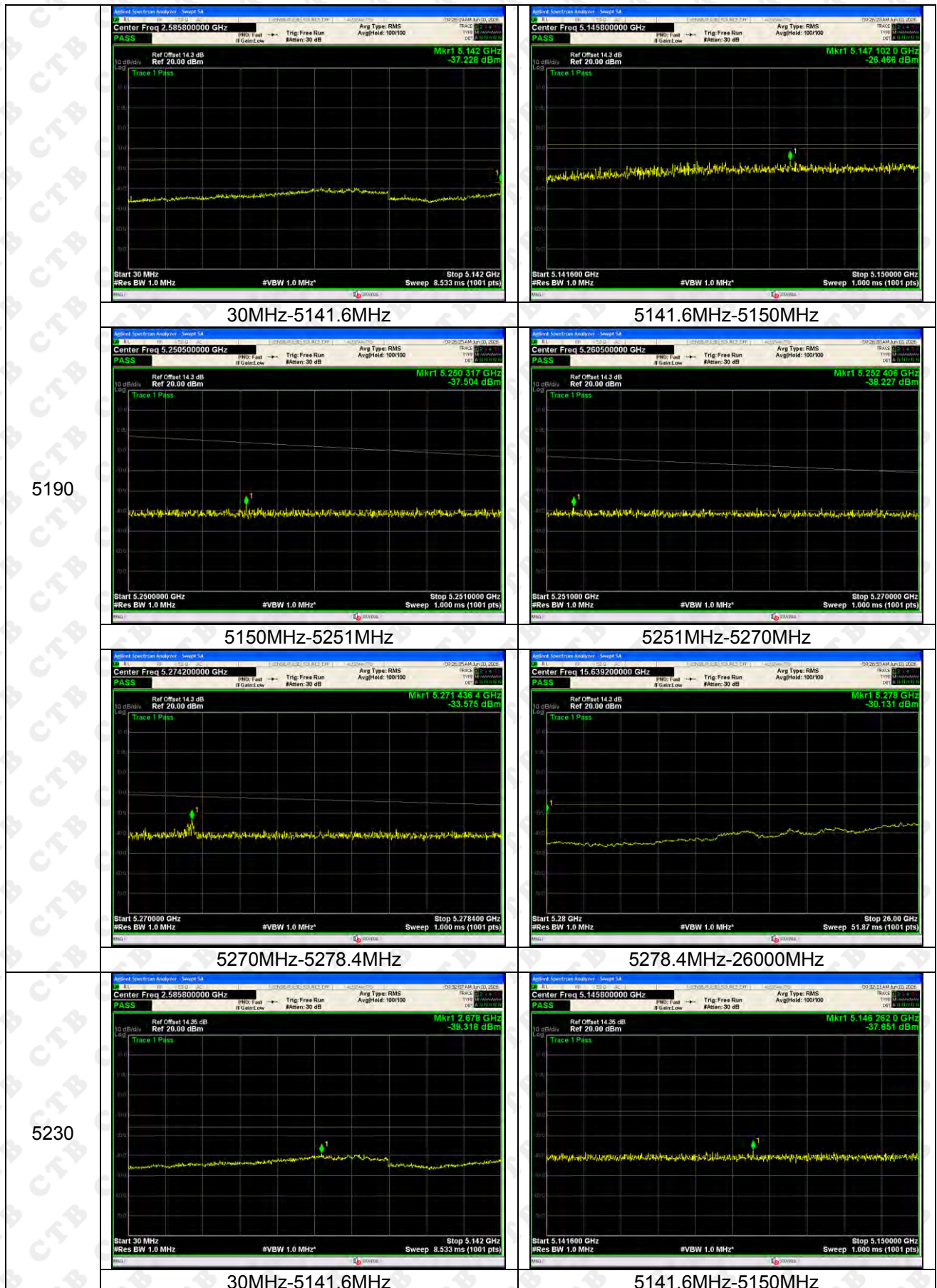


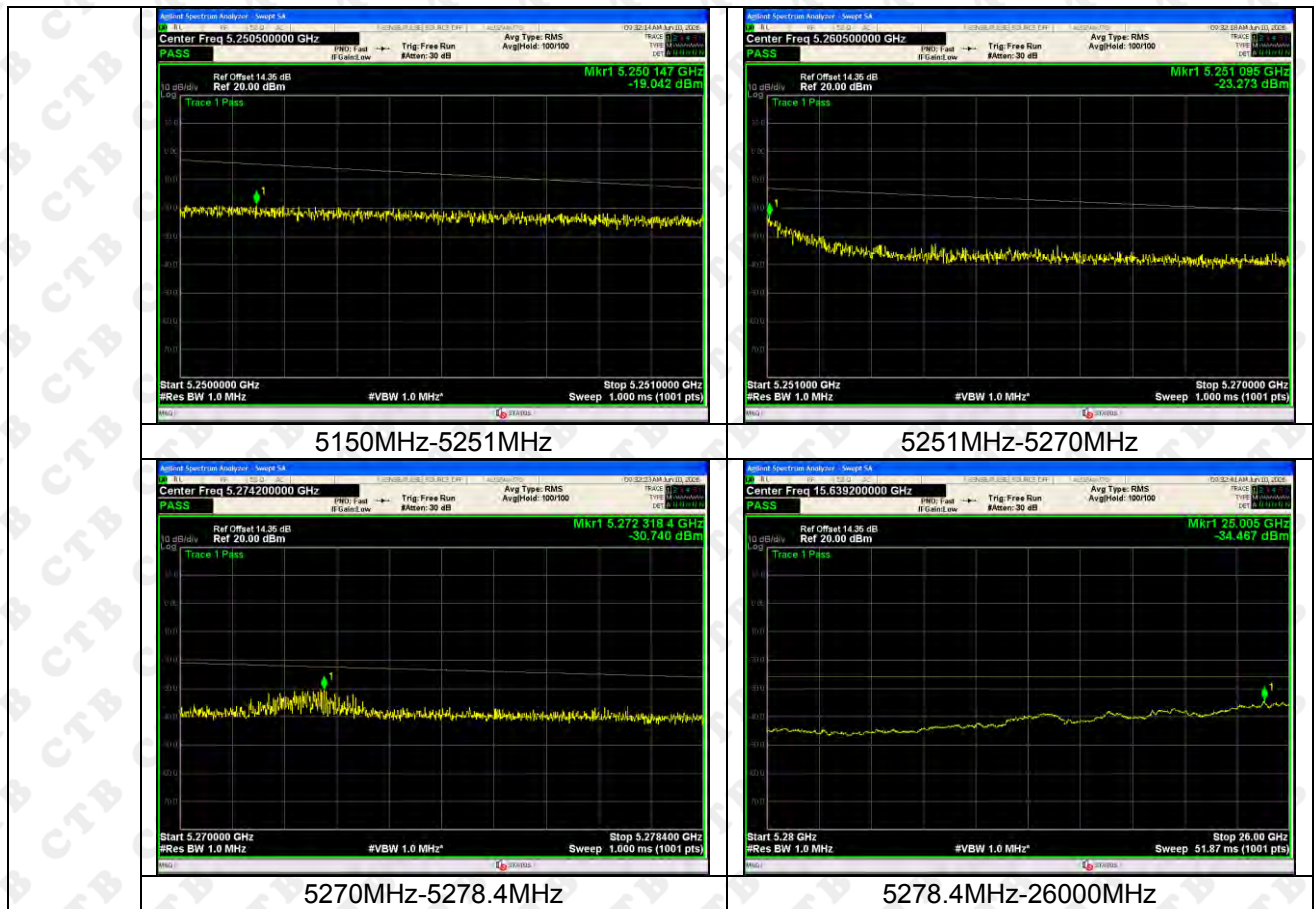












11. Interference Prevention Function

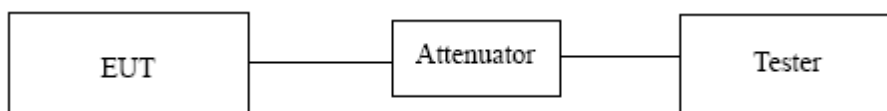
11.1 LIMIT

According to Item 19-3 of Article 2 Paragraph 1. The device shall have the function of automatic transmission or reception of identification code.

11.2 TEST PROCEDURE

1. Set the EUT in the usual operation condition
2. The radio equipment with automatic transmitting function of identification code
 - A. Transmit the assigned identification code from the radio equipment.
 - B. Confirm the identification code received by the demodulator.
3. The radio equipment with automatic receiving function of identification code
 - A. Transmit the assigned identification code from the opposite equipment.
 - B. Confirm that the usual communication is available.
 - C. Transmit the identification code distinct from the assigned one from the opposite equipment.
 - D. Confirm that the radio equipment is stopped or an indication is displayed as the identification code is different.
4. The identification function shall be recorded with "Good" or "No".

11.3 TEST SETUP LAYOUT



11.4 TEST RESULT

Transmitter:

The transmitting mode (the identification code is more than 48 bits) of EUT is on normal operating, the interference prevention function is good.

Receiver:

The transmitting mode of EUT is on normal operating, the interference prevention function is good.

MAC: 9C:A5:25:BA:87:F7

12. Carrier sense capability

12.1 LIMIT

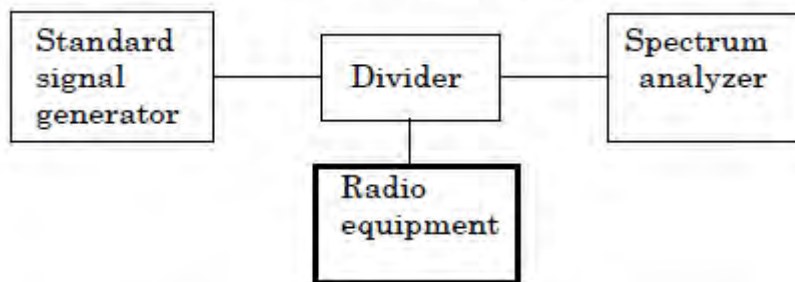
According to ORRE, art 49.20. The device shall have the carrier sensing function.

12.2 TEST PROCEDURE

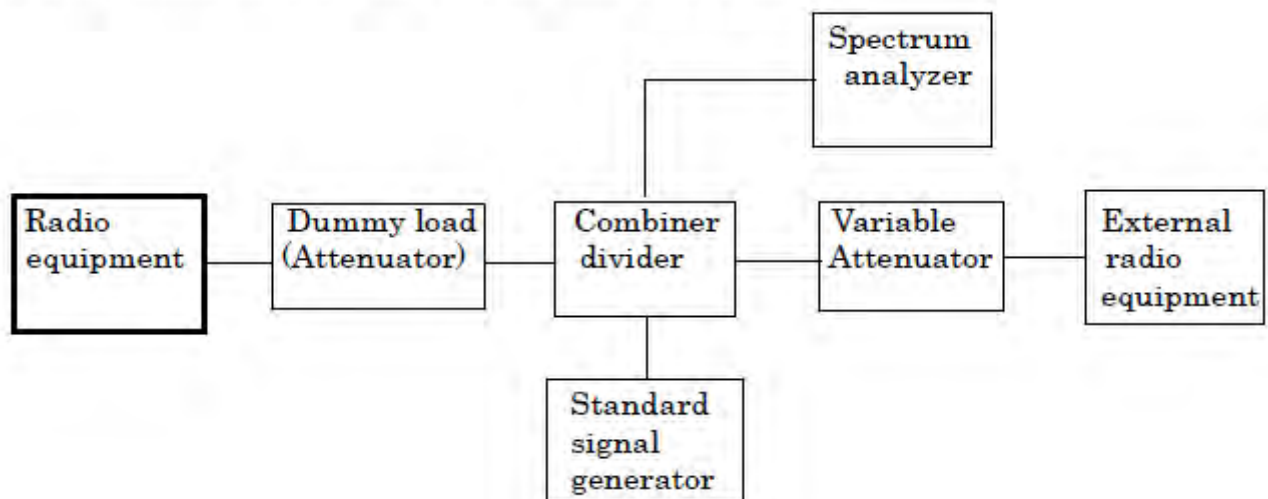
1. SG adjust the frequency as same as the EUT transmitted signal, unmodulation, power level 0dBm, Then turn off the RF signal
2. EUT have transmitted the maximum modulation signal and fixed channel
3. Setting of the SA following as RBW/VBW: 1/3MHz SPAN: 50MHz Sweep time: Auto continue PK
4. SG Signal on EUT shall be stop the transmitted, Then turn off the SG, The EUT shall be continuous transmitted signal.

12.3 TEST SETUP BLOCK DIAGRAM

(1) Test performed with the radio equipment to be tested only



(2) Test performed using the external radio equipment



12.4 TEST RESULT

EUT Stop RF transmission signal after carrier inject to EUT. Stop carrier inject, EUT will transmitting normal.)

13. Construction Protection Confirmation

13.1 Requirement

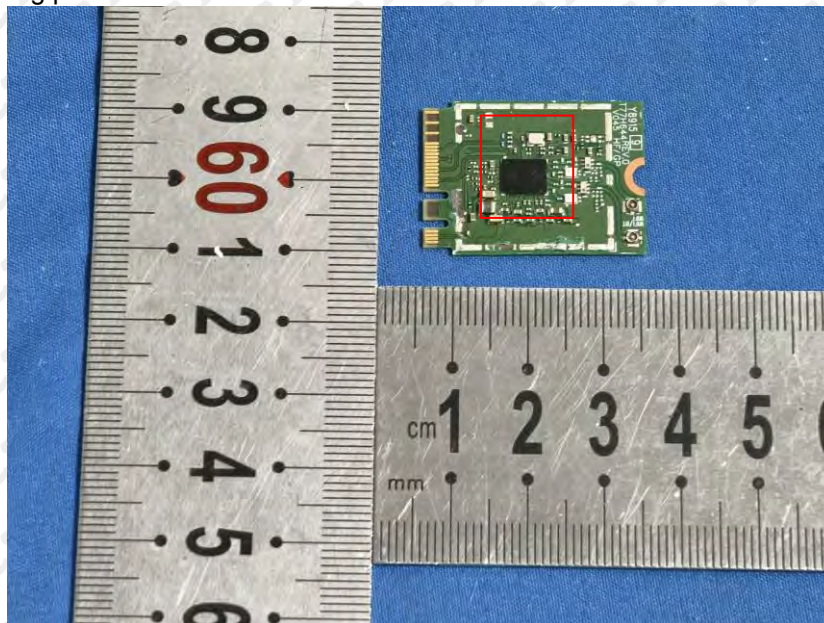
The high-frequency section and modulation section of the radio equipment except for the antenna system shall not be capable of being opened easily

13.2 Confirmation method

☐	Sealed with special screws.
☐	Plastic chassis is being welded using ultrasonic waves.
☐	Chassis is glued using a special adhesive.
☐	Metal covers are spot-fused.
☐	Cover is specially interlocked.
☐	RF and Modulation components are covered with shielding case and this shielding case is soldered.
☐	Shield case is welded ant RF and modulations parts, and ID-ROM is welded using BGA Method.
☐	Shield case is welded ant RF and modulations parts, and ID-ROM is glued at its lead with a special adhesive.
☐	Shield case is welded ant RF and modulations parts, and ID-ROM is glued with a non-transparent laminating agent.
☒	Other: All RF and modulation section packet in one IC, and IC is welded using BGA Method, and RF module is welded on the main board, end-User can't open it easily.

13.3 The photos of construction protection

The red circle is welding point.



14 Transmission Burst Length

14.1 LIMIT

8ms or less

14.2 TEST PROCEDURE

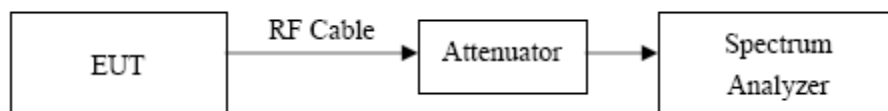
Enable EUT under transmission mode and connected it to the spectrum analyzer through antenna output port as the block diagram show in TEST CONFIGURATION

Use Spectrum's ACP measurement function and set spectrum analyzer as follow:

Spectrum Condition:

- (1) Frequency: test frequency
- (2) Span: 0Hz, RBW: 1MHz, VBW: 3MHz, Sweep time: Auto, Sweep mode: single
- (3) Detector mode: Peak, Indication mode: Max hold

14.3 TEST SETUP BLOCK DIAGRAM



14.4 TEST RESULT

W52 ANT 1

Normal Voltage			
Mode	Channel (MHz)	Read Level(dBm)	Limit (ms)
802.11a	LCH	0.174	8ms or less
	MCH	0.174	
	HCH	0.174	
802.11ac(VHT20)	LCH	0.146	
	MCH	0.146	
	HCH	0.146	
802.11ac(VHT40)	LCH	0.090	
	MCH	/	
	HCH	0.090	
802.11ac(VHT80)	LCH	/	
	MCH	0.067	
	HCH	/	
802.11n(HT20)	LCH	0.161	
	MCH	0.162	
	HCH	0.162	
802.11n(HT40)	LCH	0.098	
	MCH	/	
	HCH	0.098	

W52 ANT 2

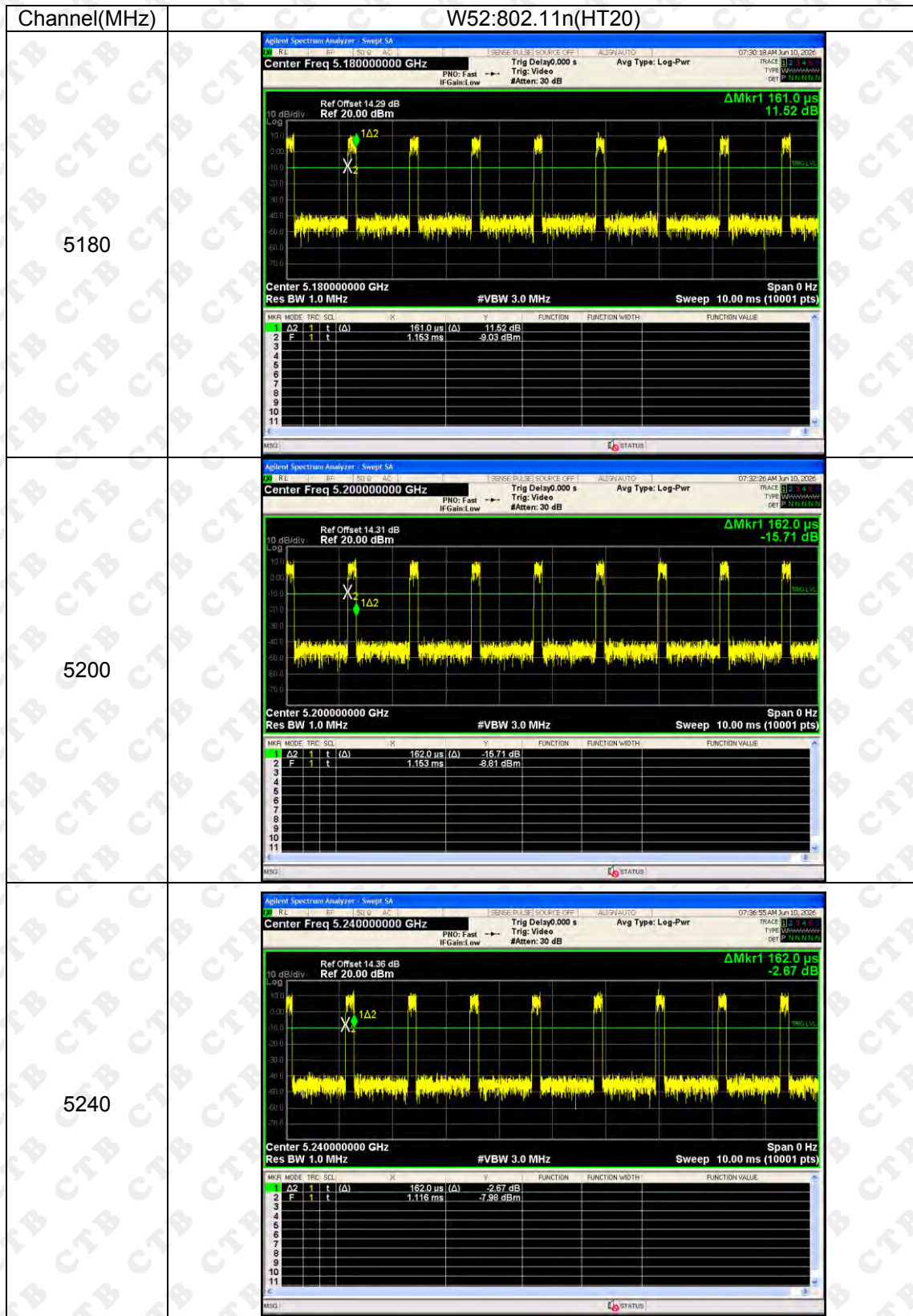
Normal Voltage			
Mode	Channel (MHz)	Read Level(dBm)	Limit (ms)
802.11a	LCH	0.174	8ms or less
	MCH	0.174	
	HCH	0.174	
802.11ac(VHT20)	LCH	0.146	
	MCH	0.146	
	HCH	0.146	
802.11ac(VHT40)	LCH	0.094	
	MCH	/	
	HCH	0.094	
802.11ac(VHT80)	LCH	/	
	MCH	0.066	
	HCH	/	
802.11n(HT20)	LCH	0.162	
	MCH	0.162	
	HCH	0.162	
802.11n(HT40)	LCH	0.098	
	MCH	/	
	HCH	0.098	

Test graph
ANT 1



Web: <http://www.ctb-lab.net> Page 92 of 115







ANT 2

Channel(MHz)	W52:802.11a																																																																																																												
5180	Agilent Spectrum Analyzer - Sweep SA Center Freq 5.180000000 GHz Ref Offset 14.29 dB Ref 20.00 dBm Trig Delay 0.000 s Trig: Video #Atten: 30 dB Avg Type: Log-Pwr Span 0 Hz Sweep 10.00 ms (10001 pts) ΔMkr1 174.0 μs 22.88 dB <table><tr><th>MKR</th><th>MODE</th><th>TRIG</th><th>SOL</th><th>X</th><th>Y</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr><tr><td>1</td><td>Δ2</td><td>1</td><td>t</td><td>(Δ)</td><td>174.0 μs (Δ)</td><td>22.88 dB</td><td></td><td></td></tr><tr><td>2</td><td>F</td><td>1</td><td>t</td><td></td><td>1.164 ms</td><td>-24.45 dBm</td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	MKR	MODE	TRIG	SOL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	Δ2	1	t	(Δ)	174.0 μs (Δ)	22.88 dB			2	F	1	t		1.164 ms	-24.45 dBm			3									4									5									6									7									8									9									10									11								
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5240	Agilent Spectrum Analyzer - Sweep SA Center Freq 5.240000000 GHz Ref Offset 14.36 dB Ref 20.00 dBm Trig Delay 0.000 s Trig: Video #Atten: 30 dB Avg Type: Log-Pwr Span 0 Hz Sweep 10.00 ms (10001 pts) ΔMkr1 174.0 μs -13.18 dB <table><tr><th>MKR</th><th>MODE</th><th>TRIG</th><th>SOL</th><th>X</th><th>Y</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr><tr><td>1</td><td>Δ2</td><td>1</td><td>t</td><td>(Δ)</td><td>174.0 μs (Δ)</td><td>-13.18 dB</td><td></td><td></td></tr><tr><td>2</td><td>F</td><td>1</td><td>t</td><td></td><td>1.166 ms</td><td>-7.42 dBm</td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	MKR	MODE	TRIG	SOL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	Δ2	1	t	(Δ)	174.0 μs (Δ)	-13.18 dB			2	F	1	t		1.166 ms	-7.42 dBm			3									4									5									6									7									8									9									10									11								
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15 Secondary Radiated Emitted Power

15.1 LIMIT

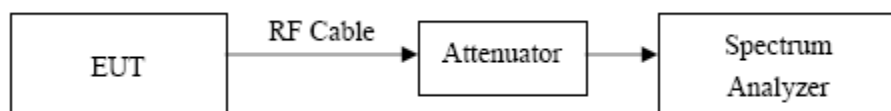
According to Item 19-3 of Article 2 Paragraph 1. The receiver spurious emissions shall not exceed the following limit:

- (1) Below 1GHz : 4nW/100kHz or less
- (2) 1GHz or more : 20nW/MHz or more

15.2 TEST PROCEDURE

- (1) A spectrumIn case of conducted measurements, the radio device shall be connected to the measuring equipment via a suitable attenuator.
- (2) The measurement equipment shall be set for peak hold mode of operation.
- (3) the transmitter shall be operated at the receiving mode.
- (4) The resolution bandwidth shall be set to 100kHz from 10MHz to 1GHz, the resolution bandwidth shall be set to 1MHz above 1GHz , and the sweep time shall be set to auto mode, to ensure all major modulation products are captured.
- (5) When the searched result is less than the specified limit, the maximum one shall be recorded, when the result is more than the specified limit, all measured values shall be recorded.
- (5) This measurement shall be repeated with the transmitter in standby mode where applicable.
- (6) Repeat above procedures until all frequency measured was complete.

15.3 TEST SETUP BLOCK DIAGRAM



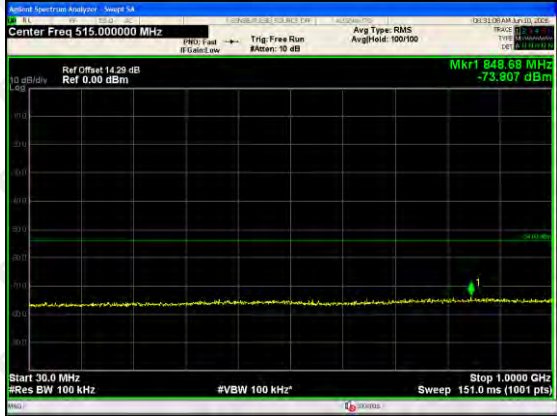
15.4 TEST RESULT
W52 ANT 1

Normal Voltage						
Mode	Channel (MHz)	Frequency(MHz)	Mkr(MHz)	Test result(dBm)	Limit (dBm)	Result
802.11a	LCH	30~1000	848.68	-73.81	-54	Pass
		1000~26000	25725	-54.97	-47	Pass
	MCH	30~1000	848.68	-73.77	-54	Pass
		1000~26000	25425	-55.42	-47	Pass
	HCH	30~1000	903.97	-73.87	-54	Pass
		1000~26000	5275	-53.46	-47	Pass
802.11ac(VHT20)	LCH	30~1000	882.63	-73.81	-54	Pass
		1000~26000	5275	-52.95	-47	Pass
	MCH	30~1000	901.06	-74.13	-54	Pass
		1000~26000	5275	-52.36	-47	Pass
	HCH	30~1000	936.95	-74.03	-54	Pass
		1000~26000	25000	-55.1	-47	Pass
802.11ac(VHT40)	LCH	30~1000	967.99	-74.06	-54	Pass
		1000~26000	25025	-54.72	-47	Pass
	HCH	30~1000	760.41	-74.04	-54	Pass
		1000~26000	25725	-55.09	-47	Pass
802.11ac(VHT80)	MCH	30~1000	910.76	-73.96	-54	Pass
		1000~26000	4625	-53.01	-47	Pass
802.11n(HT20)	LCH	30~1000	802.12	-74.11	-54	Pass
		1000~26000	25725	-55.22	-47	Pass
	MCH	30~1000	847.71	-73.78	-54	Pass
		1000~26000	5275	-52.8	-47	Pass
	HCH	30~1000	829.28	-74.1	-54	Pass
		1000~26000	24975	-55.11	-47	Pass
802.11n(HT40)	LCH	30~1000	874.87	-73.78	-54	Pass
		1000~26000	4625	-52.8	-47	Pass
	HCH	30~1000	831.22	-73.94	-54	Pass
		1000~26000	25000	-55.07	-47	Pass

W52 ANT 2

Normal Voltage						
Mode	Channel (MHz)	Frequency(MHz)	Mkr(MHz)	Test result(dBm)	Limit (dBm)	Result
802.11a	LCH	30~1000	901.06	-74.06	-54	Pass
		1000~26000	4625	-51.25	-47	Pass
	MCH	30~1000	923.37	-73.68	-54	Pass
		1000~26000	25000	-54.97	-47	Pass
	HCH	30~1000	795.33	-73.29	-54	Pass
		1000~26000	25025	-54.76	-47	Pass
802.11ac(VHT20)	LCH	30~1000	894.27	-74.23	-54	Pass
		1000~26000	5275	-50.57	-47	Pass
	MCH	30~1000	384.05	-74.16	-54	Pass
		1000~26000	4625	-52.47	-47	Pass
	HCH	30~1000	914.64	-73.69	-54	Pass
		1000~26000	4625	-51.99	-47	Pass
802.11ac(VHT40)	LCH	30~1000	735.19	-73.83	-54	Pass
		1000~26000	5275	-51.24	-47	Pass
	HCH	30~1000	820.55	-73.89	-54	Pass
		1000~26000	25000	-54.77	-47	Pass
802.11ac(VHT80)	MCH	30~1000	864.2	-74.14	-54	Pass
		1000~26000	5275	-50.62	-47	Pass
802.11n(HT20)	LCH	30~1000	832.19	-73.94	-54	Pass
		1000~26000	25725	-54.94	-47	Pass
	MCH	30~1000	904.94	-73.75	-54	Pass
		1000~26000	5275	-50.79	-47	Pass
	HCH	30~1000	811.82	-73.64	-54	Pass
		1000~26000	5275	-52.08	-47	Pass
802.11n(HT40)	LCH	30~1000	911.73	-73.91	-54	Pass
		1000~26000	24975	-55.02	-47	Pass
	HCH	30~1000	779.81	-73.78	-54	Pass
		1000~26000	25000	-55.14	-47	Pass

ANT 1

Channel (MHz)	W52:802.11a	
5180		
	30~1000MHz	1000~26000MHz
5200		
	30~1000MHz	1000~26000MHz
5240		
	30~1000MHz	1000~26000MHz

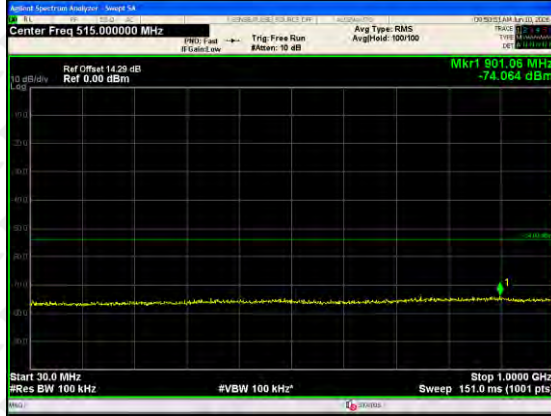
Channel (MHz)	W52:802.11ac(VHT20)	
5180		
	30~1000MHz	1000~26000MHz
5200		
	30~1000MHz	1000~26000MHz
5240		
	30~1000MHz	1000~26000MHz

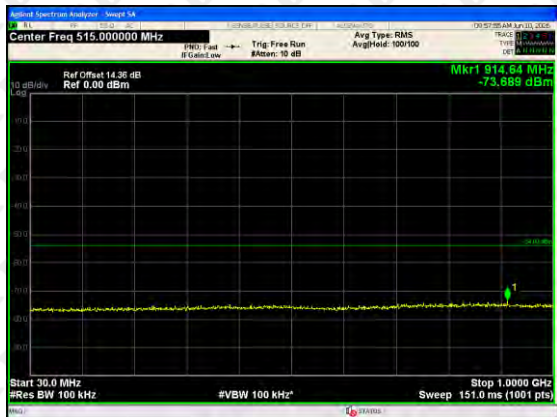
Channel (MHz)	W52:802.11ac(VHT40)	
5190		
	30~1000MHz	1000~26000MHz
5230		
	30~1000MHz	1000~26000MHz
Channel (MHz)	W52:802.11ac(VHT80)	
5210		
	30~1000MHz	1000~26000MHz

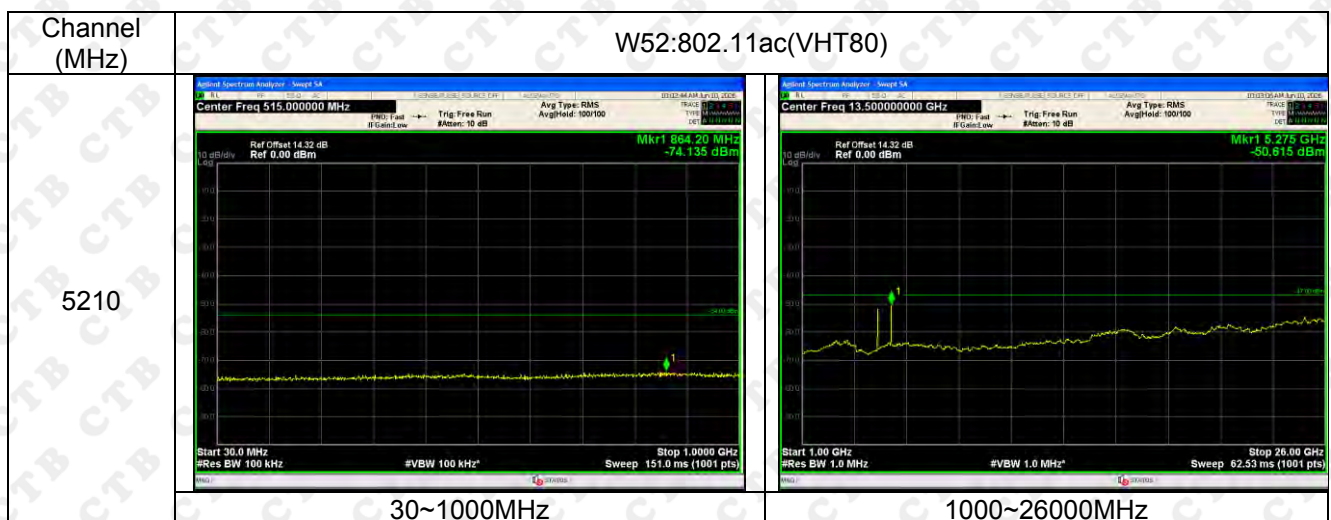
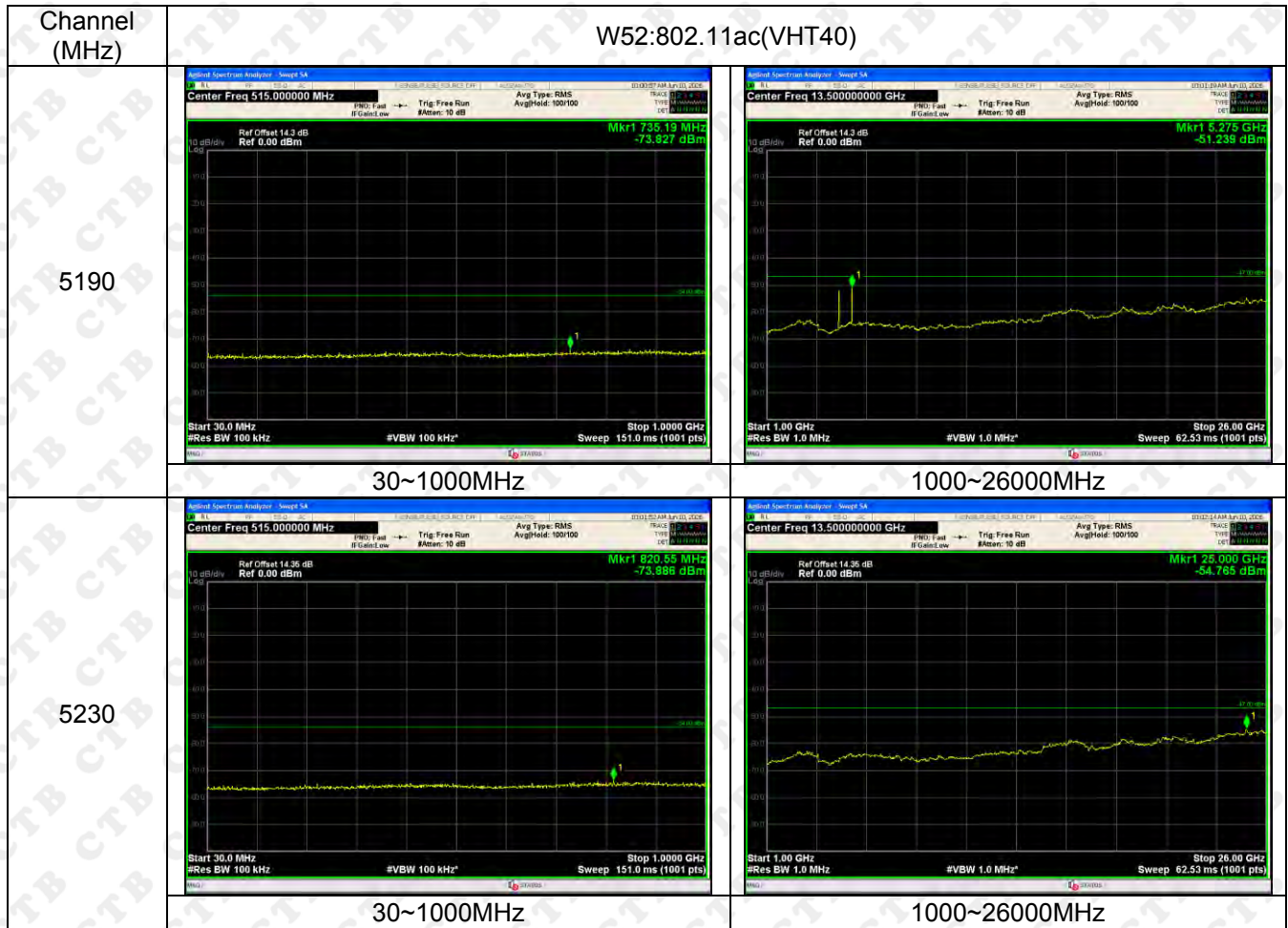
Channel (MHz)	W52:802.11 n(HT20)	
5180		
	30~1000MHz	1000~26000MHz
5200		
	30~1000MHz	1000~26000MHz
5240		
	30~1000MHz	1000~26000MHz

Channel (MHz)	W52:802.11n(HT40)	
5190		
	30~1000MHz	1000~26000MHz
5230		
	30~1000MHz	1000~26000MHz

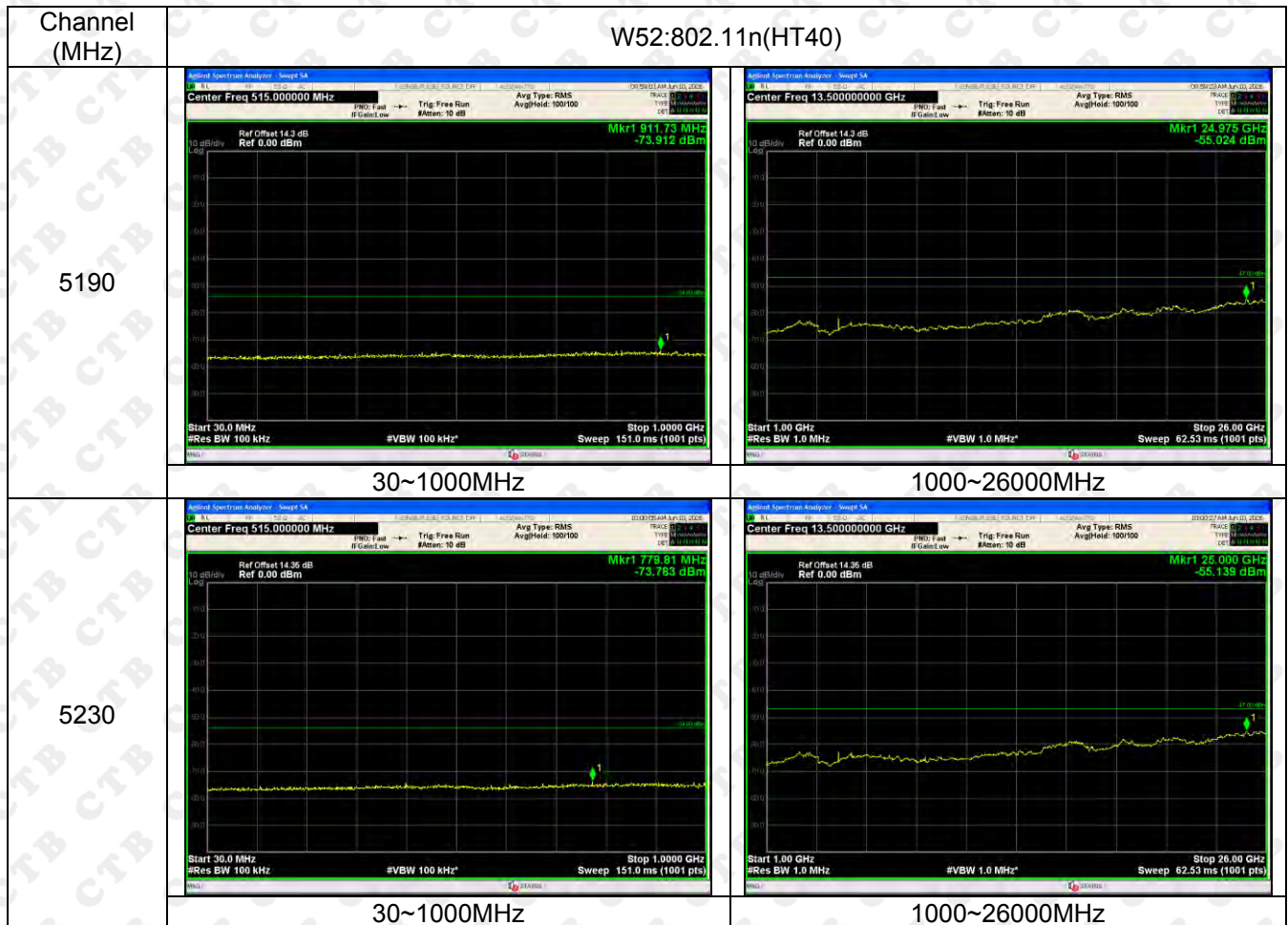
ANT 2

Channel (MHz)	W52:802.11a	
5180		
5200		
5240		

Channel (MHz)	W52:802.11ac(VHT20)	
5180		
	30~1000MHz	1000~26000MHz
5200		
	30~1000MHz	1000~26000MHz
5240		
	30~1000MHz	1000~26000MHz



Channel (MHz)	W52:802.11 n(HT20)	
5180		
	30~1000MHz	1000~26000MHz
5200		
	30~1000MHz	1000~26000MHz
5240		
	30~1000MHz	1000~26000MHz



16.DYNAMIC FREQUENCY SELECTION (SLAVE)

16.1 Standard Applicable

Article 2 paragraph 1 item (19-3)

16.2 TEST PROCEDURE

Ordinance Regulating Radio Equipment No. 18, Article 49-20

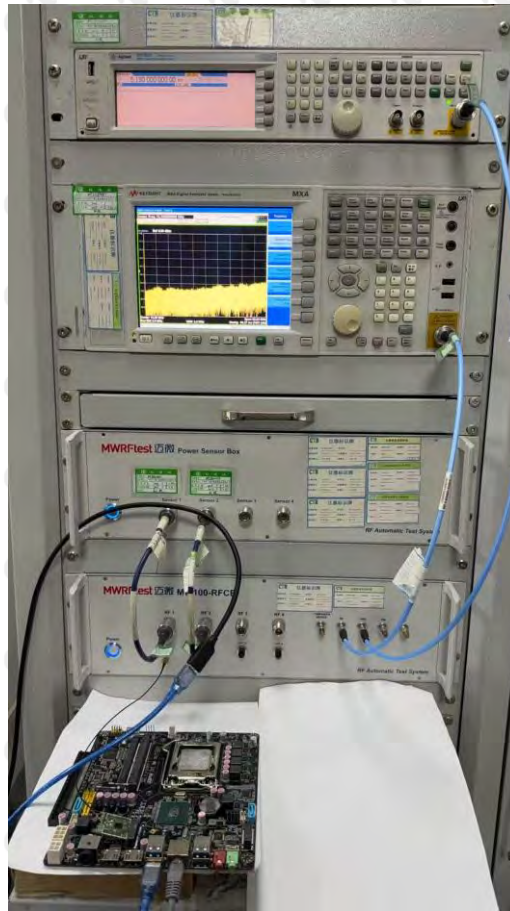
WAS/RLAN devices operating in slave mode (slave device) can be operated in a network controlled by aWAN/RLAN device operating in master mode (master device).

16.3 Summary of Test Results

Can be operated in a network controlled by a WAN/RLAN device operating in master mode.

Pass

17. EUT TEST PHOTO



***** END OF REPORT *****