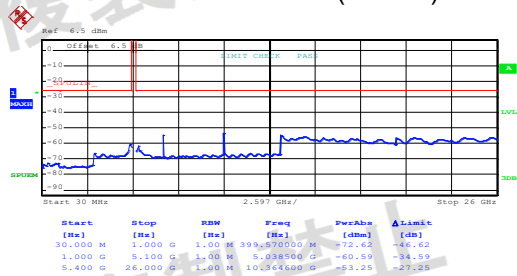
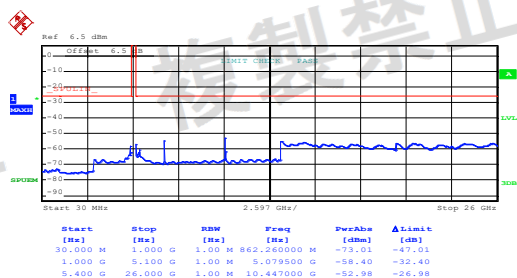


802.11n-HT40 (Band 1)



Date: 11.JUL.2019 10:39:39

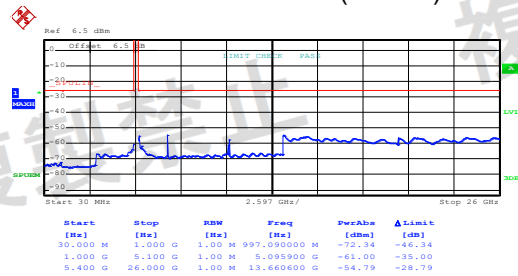
Lowest channel



Date: 11.JUL.2019 10:39:54

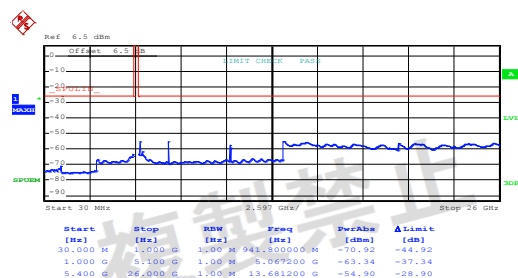
Highest channel

802.11n-HT40 (Band 2)



Date: 11.JUL.2019 14:11:13

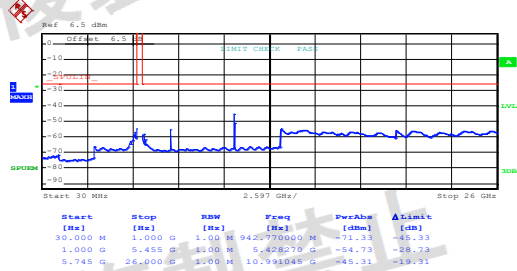
Lowest channel



Date: 11.JUL.2019 14:11:29

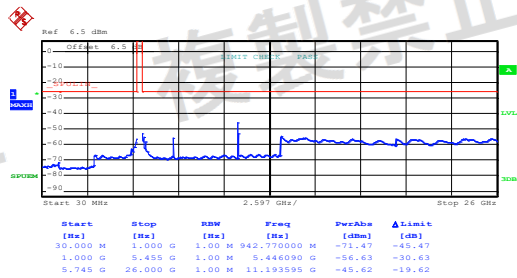
Highest channel

802.11a (Band 3)



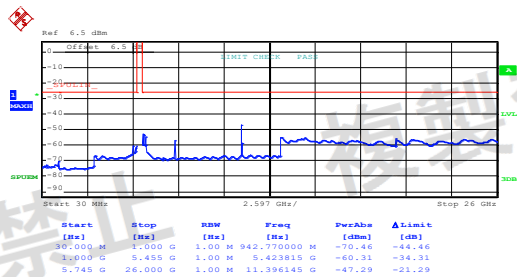
Date: 11.JUL.2019 14:03:05

Lowest channel



Date: 11.JUL.2019 14:03:23

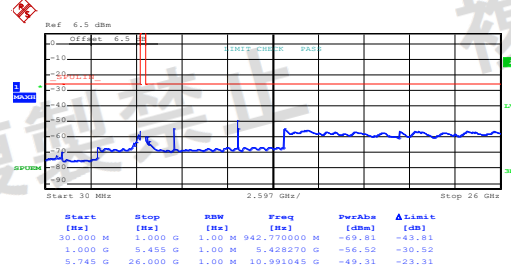
Middle channel



Date: 11.JUL.2019 14:03:39

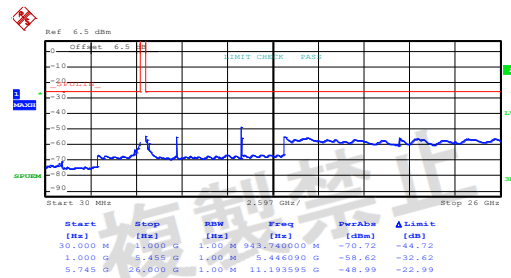
Highest channel

802.11n-HT20 (Band 3)



Date: 11.JUL.2019 14:04:59

Lowest channel



Date: 11.JUL.2019 14:04:42

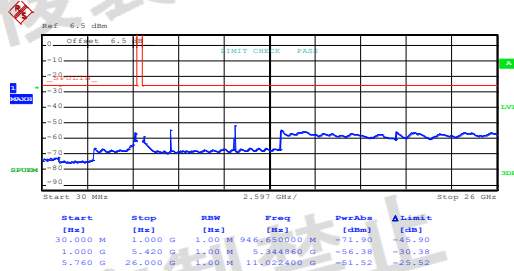
Middle channel



Date: 11.JUL.2019 14:04:05

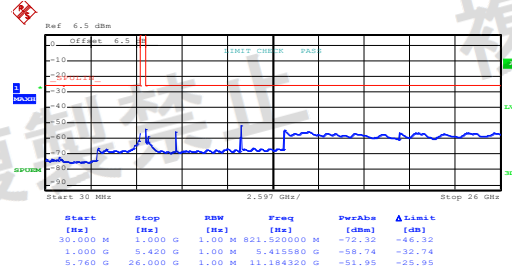
Highest channel

802.11n-HT40 (Band 3)



Date: 11.JUL.2019 14:13:57

Lowest channel



Date: 11.JUL.2019 14:14:18


Middle channel



Date: 11.JUL.2019 14:14:36

Highest channel

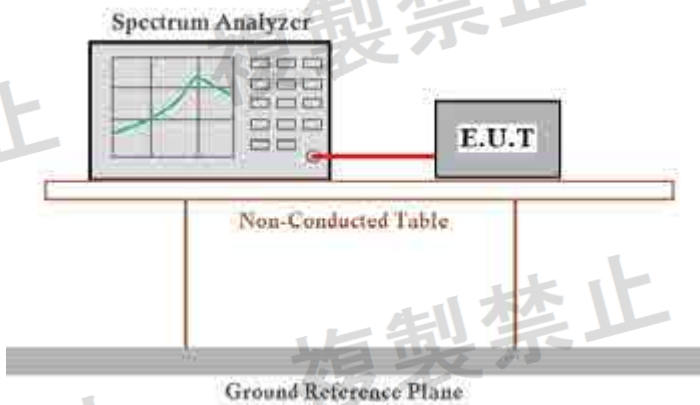
6.8 Transmitting rate

Test Requirement:	Article 2 paragraph 1 item (19-3)
Test Method:	Ordinance Regulating Radio Equipment No. 18, Article 49-20
Requirement:	$OBW \leq 19\text{MHz} \geq 20\text{Mbps}$ $19\text{ MHz} \leq OBW \leq 38\text{MHz} \geq 40\text{Mbps}$ $38\text{ MHz} \leq OBW \leq 78\text{MHz} \geq 80\text{Mbps}$ $78\text{ MHz} \leq OBW \leq 158\text{MHz} \geq 160\text{Mbps}$
Test setup:	
Test Procedure:	<ol style="list-style-type: none"> 1. Connect the EUT to Wireless AP by Wi-Fi function; 2. Connect the Wireless AP to Laptop by wired cable; 3. Run the throughput test software "iPerf"; 4. Record the transmitting rate; 5. Repeat above steps for all modes.
Test Instruments:	Refer to section 5.7 for details
Test results:	Pass.

Measurement Data:

Modes	Transmitting Rate	Result
Band 1		
802.11a	$\geq 20\text{Mbps}$	Pass
802.11n-HT20	$\geq 20\text{Mbps}$	Pass
802.11n-HT40	$\geq 40\text{Mbps}$	Pass
Band 2		
802.11a	$\geq 20\text{Mbps}$	Pass
802.11n-HT20	$\geq 20\text{Mbps}$	Pass
802.11n-HT40	$\geq 40\text{Mbps}$	Pass
Band 3		
802.11a	$\geq 20\text{Mbps}$	Pass
802.11n-HT20	$\geq 20\text{Mbps}$	Pass
802.11n-HT40	$\geq 40\text{Mbps}$	Pass

6.9 Transmitting burst length

Test Requirement:	Article 2 paragraph 1 item (19-3)
Test Method:	Ordinance Regulating Radio Equipment No. 18, Article 49-20
Requirement:	$\leq 4\text{ms}$
Test setup:	
Test Procedure:	<ol style="list-style-type: none"> 1. EUT have transmitted the maximum modulation signal and fixed channelize. 2. Setting of SA is following as: RBW: 1MHz / VBW: 3MHz / Span = 0 / Sweep time: 5ms / Sweep Mode: Single sweep / Detect mode: RMS / Trace mode: Max hold. 3. Press the Sweep Button, and captured at least on burst by SA; 4. Use the delta function to marker the burst length 5. When the trace completed, saved the plots; 6. Repeat above steps for applicable test frequencies and channel bandwidths.
Test Instruments:	Refer to section 5.7 for details
Test results:	Pass.

Measurement Data:

ANT0

Band 1

Modes	Transmitting burst length	Limit	Result
802.11a	1.404 ms	$\leq 4\text{ms}$	Pass
802.11n-HT20	1.314 ms		
802.11n-HT40	660 μs		

Band 2

Modes	Transmitting burst length	Limit	Result
802.11a	1.400 ms	$\leq 4\text{ms}$	Pass
802.11n-HT20	1.310 ms		
802.11n-HT40	660 μs		

Band 3

Modes	Transmitting burst length	Limit	Result
802.11a	1.400 ms	$\leq 4\text{ms}$	Pass
802.11n-HT20	1.310 ms		
802.11n-HT40	660 μs		

ANT1

Band 1

Modes	Transmitting burst length	Limit	Result
802.11a	1.400 ms	$\leq 4\text{ms}$	Pass
802.11n-HT20	1.310 ms		
802.11n-HT40	660 μs		

Band 2

Modes	Transmitting burst length	Limit	Result
802.11a	1.400 ms	$\leq 4\text{ms}$	Pass
802.11n-HT20	1.310 ms		
802.11n-HT40	660 μs		

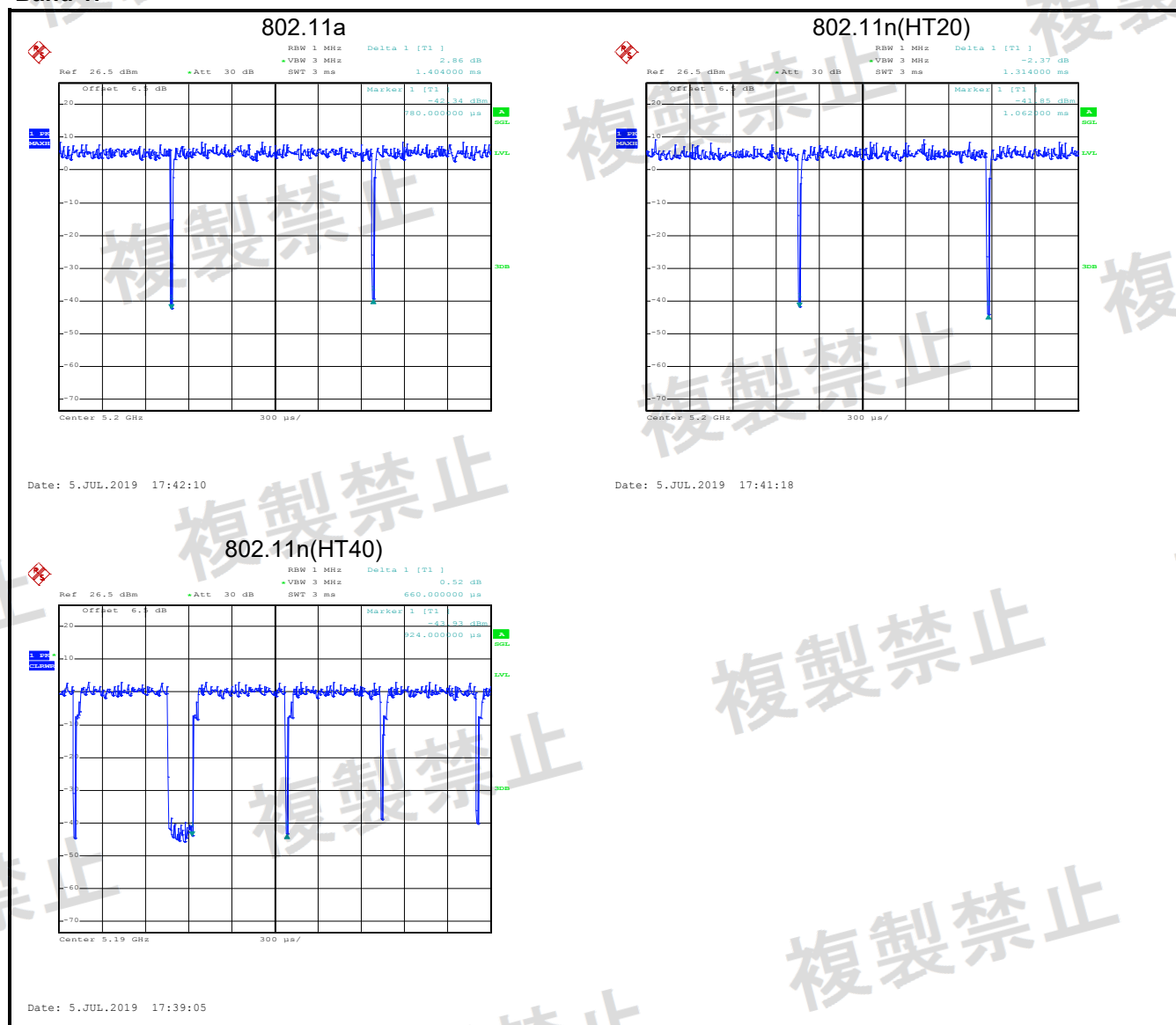
Band 3

Modes	Transmitting burst length	Limit	Result
802.11a	1.400 ms	$\leq 4\text{ms}$	Pass
802.11n-HT20	1.310 ms		
802.11n-HT40	660 μs		

Test plots as below:

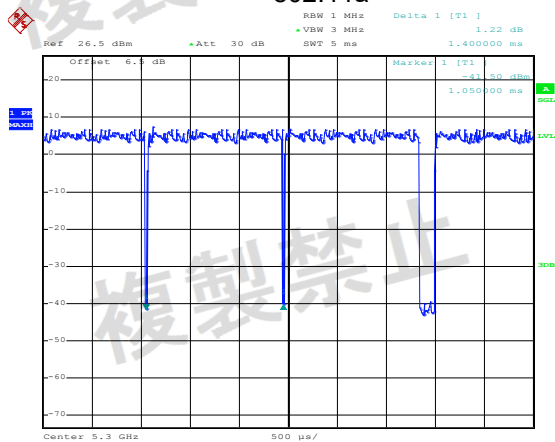
ANT0

Band 1:



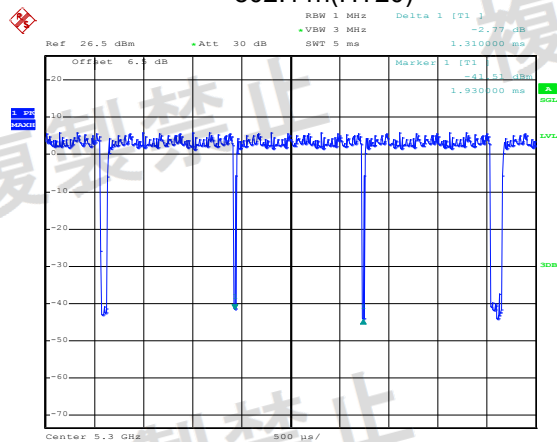
Band 2:

802.11a



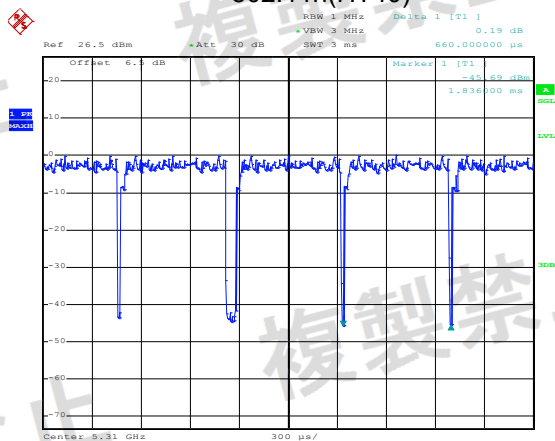
Date: 17.JUL.2019 19:02:57

802.11n(HT20)



Date: 17.JUL.2019 19:02:27

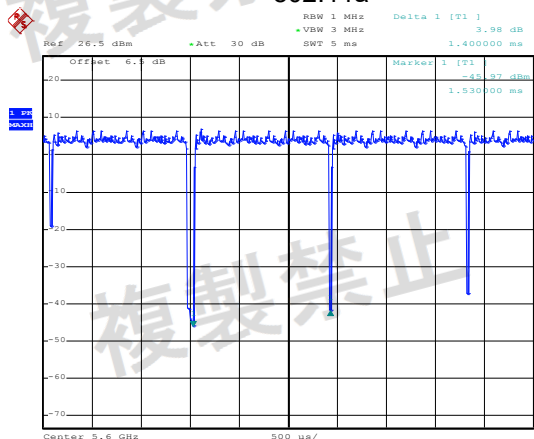
802.11n(HT40)



Date: 8.JUL.2019 14:19:55

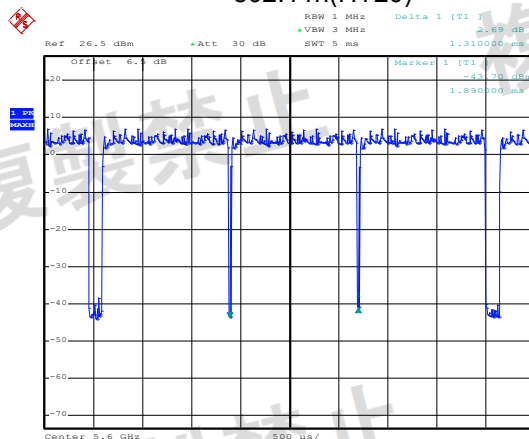
Band 3:

802.11a



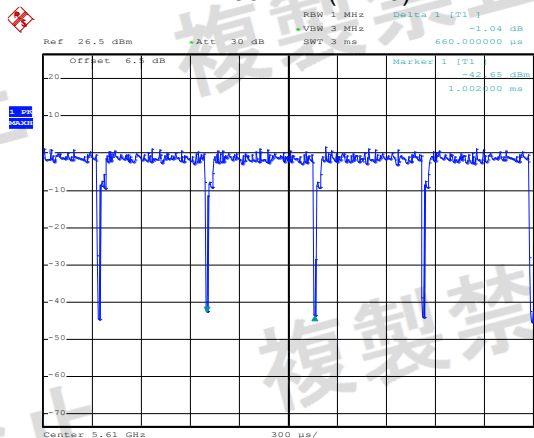
Date: 8.JUL.2019 15:08:14

802.11n(HT20)



Date: 8.JUL.2019 15:08:50

802.11n(HT40)

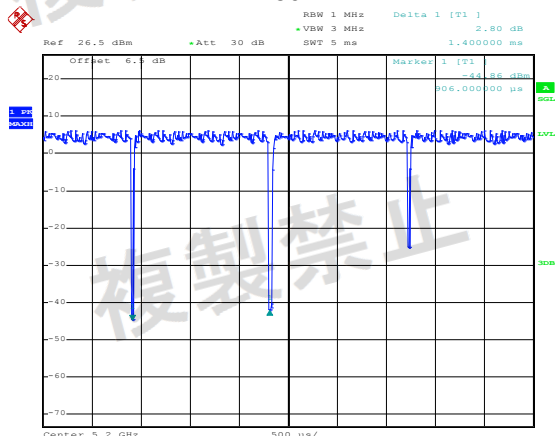


Date: 8.JUL.2019 15:09:30

ANT1

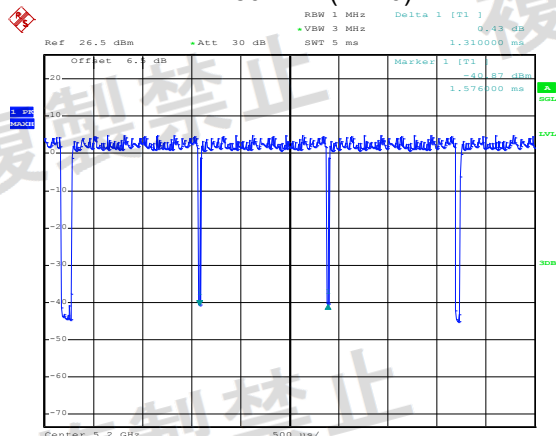
Band 1:

802.11a



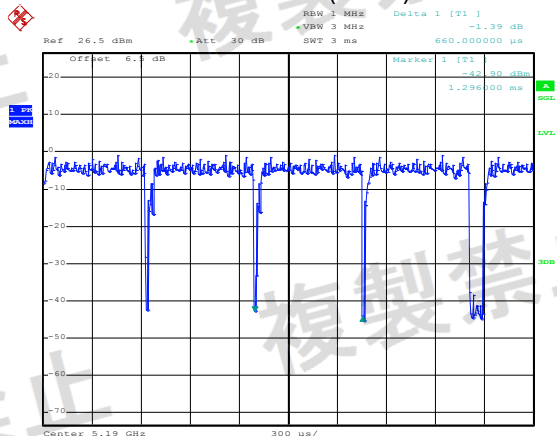
Date: 11.JUL.2019 10:57:12

802.11n(HT20)



Date: 11.JUL.2019 10:54:20

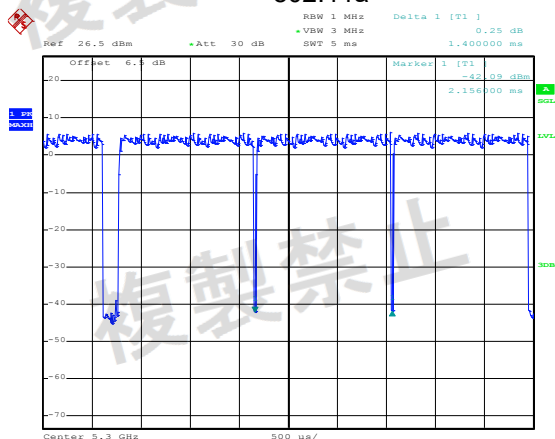
802.11n(HT40)



Date: 11.JUL.2019 10:53:44

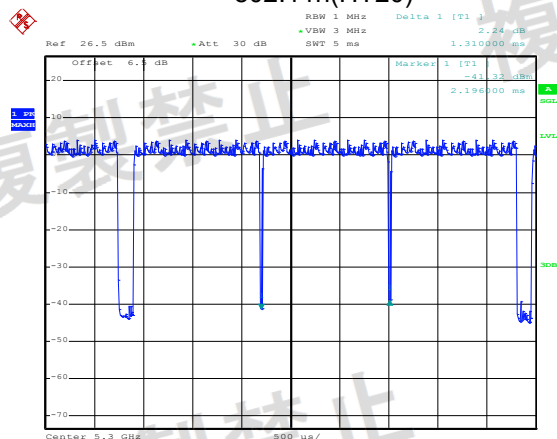
Band 2:

802.11a



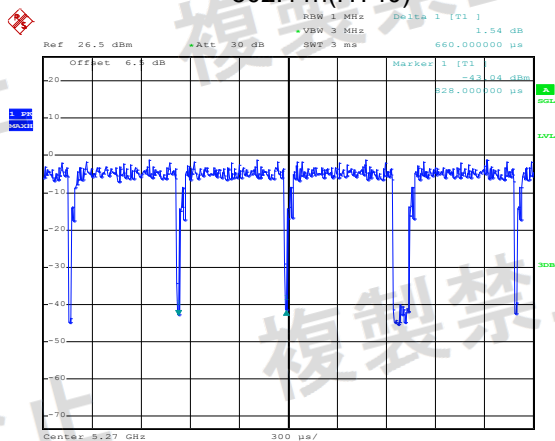
Date: 11.JUL.2019 10:56:41

802.11n(HT20)



Date: 11.JUL.2019 10:54:47

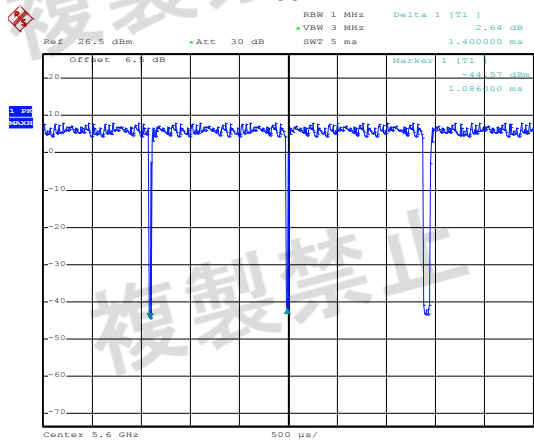
802.11n(HT40)



Date: 11.JUL.2019 10:53:16

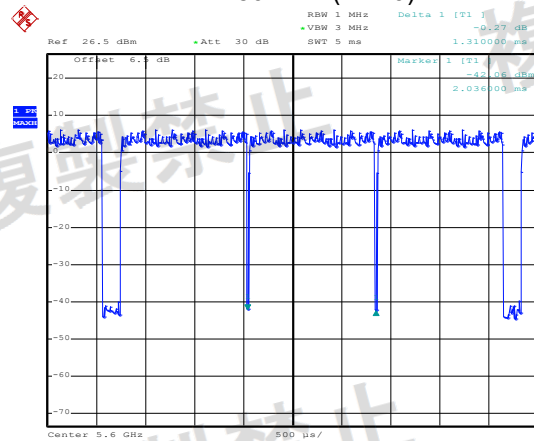
Band 3:

802.11a



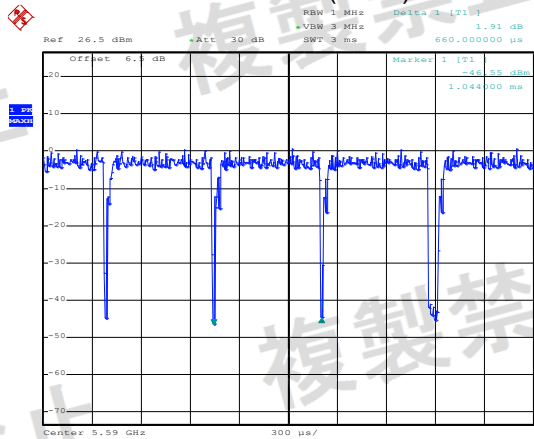
Date: 11.JUL.2019 10:56:12

802.11n(HT20)



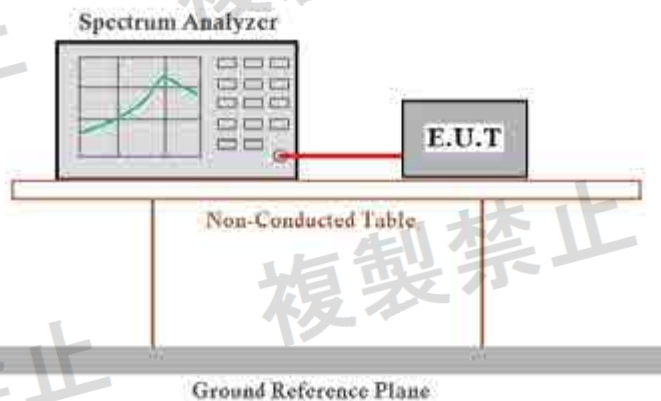
Date: 11.JUL.2019 10:55:47

802.11n(HT40)



Date: 11.JUL.2019 10:52:25

6.10 Limit of Secondary Radiated Emissions

Test Requirement:	Article 2 paragraph 1 item (19-3)
Test Method:	Appendix No.45 Notification No.88 of MIC, 2004 section 8
Equipment Setup:	RBW = 100 kHz, VBW = 100 kHz for below 1 GHz RBW = 1 MHz, VBW = 3 MHz for above 1 GHz
Limit:	≤ 4 nW for below 1 GHz, ≤ 20 nW for above 1 GHz
Test setup:	
Test procedure:	<ol style="list-style-type: none"> 1. EUT have the continuous reception mode and fixed only one channelize. 2. Setting of SA is following as RB / VB: 100 kHz (below 1GHz emissions) / 1 MHz (above 1GHz emissions) / AT: 10dB / Ref: 0dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold 3. SA set RB: 100 kHz and VB: 100 kHz. Then adjust to start frequency 30MHz and stop frequency 1000 MHz. Search to mark peak reading value + cable loss shall be less than 4nW 4. SA set RB: 1MHz and VB: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 26000 MHz. Search to mark peak reading value + cable loss shall be less than 20 nW 5. If power level of lower emissions are more than 1/10 of limit (.0.4nW for $f < 1$GHz, 2 nW for $f \geq 1$GHz), all those are to be indicated in the 2nd and 3rd lines. If others are 1/10 or less more of the limit, no necessary to be indicated.
Test Instruments:	Refer to section 5.7 for details
Test Uncertainty:	± 0.96 dB
Test results:	Pass

Measurement Data:

ANT0

Band 1:

Test mode: 802.11a						
Frequency Segments	Read Level			Limit	Unit	Result
	Lowest channel	Middle channel	Highest channel			
30MHz ~ 1GHz	-83.81	-83.37	-83.76	-54	dBm	Pass
1GHz ~ 10GHz	-76.76	-76.77	-76.72	-47		
10GHz ~26GHz	-64.43	-64.36	-64.22	-47		
Test mode: 802.11n-HT20						
Frequency Segments	Read Level			Limit	Unit	Result
	Lowest channel	Middle channel	Highest channel			
30MHz ~ 1GHz	-83.10	-83.80	-83.72	-54	dBm	Pass
1GHz ~ 10GHz	-76.69	-76.83	-76.68	-47		
10GHz ~ 26GHz	-64.51	-64.21	-64.42	-47		
Test mode: 802.11n-HT40						
Frequency Segments	Read Level			Limit	Unit	Result
	Lowest channel	Middle channel	Highest channel			
30MHz ~ 1GHz	-83.08	/	-83.89	-54	dBm	Pass
1GHz ~ 10GHz	-76.77	/	-76.86	-47		
10GHz ~ 26GHz	-64.23	/	-64.54	-47		

Band 3:

Test mode: 802.11a						
Frequency Segments	Read Level			Limit	Unit	Result
	Lowest channel	Middle channel	Highest channel			
30MHz ~ 1GHz	-84.18	-83.28	-83.20	-54	dBm	Pass
1GHz ~ 10GHz	-76.87	-76.82	-76.85	-47		
10GHz ~26GHz	-64.50	-64.49	-64.60	-47		
Test mode: 802.11n-HT20						
Frequency Segments	Read Level			Limit	Unit	Result
	Lowest channel	Middle channel	Highest channel			
30MHz ~ 1GHz	-83.30	-83.54	-83.27	-54	dBm	Pass
1GHz ~ 10GHz	-76.63	-76.74	-76.61	-47		
10GHz ~ 26GHz	-64.47	-64.46	-64.56	-47		
Test mode: 802.11n-HT40						
Frequency Segments	Read Level			Limit	Unit	Result
	Lowest channel	Middle channel	Highest channel			
30MHz ~ 1GHz	-83.85	-83.25	-83.06	-54	dBm	Pass
1GHz ~ 10GHz	-76.78	-76.86	-76.86	-47		
10GHz ~ 26GHz	-64.43	-64.47	-64.43	-47		

ANT1

Band 1:

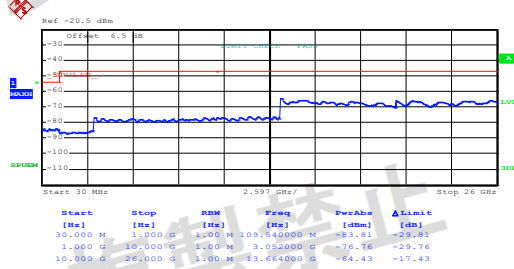
Test mode: 802.11a						
Frequency Segments	Read Level			Limit	Unit	Result
	Lowest channel	Middle channel	Highest channel			
30MHz ~ 1GHz	-83.63	-82.95	-83.27	-54	dBm	Pass
1GHz ~ 10GHz	-76.52	-76.90	-76.69	-47		
10GHz ~26GHz	-64.41	-64.33	-64.32	-47		
Test mode: 802.11n-HT20						
Frequency Segments	Read Level			Limit	Unit	Result
	Lowest channel	Middle channel	Highest channel			
30MHz ~ 1GHz	-83.82	-83.17	-83.91	-54	dBm	Pass
1GHz ~ 10GHz	-76.95	-76.85	-76.87	-47		
10GHz ~ 26GHz	-64.58	-64.44	-64.55	-47		
Test mode: 802.11n-HT40						
Frequency Segments	Read Level			Limit	Unit	Result
	Lowest channel	Middle channel	Highest channel			
30MHz ~ 1GHz	-83.69	/	-83.61	-54	dBm	Pass
1GHz ~ 10GHz	-76.81	/	-76.80	-47		
10GHz ~ 26GHz	-64.67	/	-64.52	-47		

Band 3:

Test mode: 802.11a						
Frequency Segments	Read Level			Limit	Unit	Result
	Lowest channel	Middle channel	Highest channel			
30MHz ~ 1GHz	-83.43	-83.28	-83.39	-54	dBm	Pass
1GHz ~ 10GHz	-76.87	-76.82	-76.84	-47		
10GHz ~26GHz	-64.38	-64.44	-64.48	-47		
Test mode: 802.11n-HT20						
Frequency Segments	Read Level			Limit	Unit	Result
	Lowest channel	Middle channel	Highest channel			
30MHz ~ 1GHz	-82.73	-83.25	-82.75	-54	dBm	Pass
1GHz ~ 10GHz	-76.68	-76.75	-64.92	-47		
10GHz ~ 26GHz	-64.61	-64.55	-64.50	-47		
Test mode: 802.11n-HT40						
Frequency Segments	Read Level			Limit	Unit	Result
	Lowest channel	Middle channel	Highest channel			
30MHz ~ 1GHz	-82.33	-82.73	-82.16	-54	dBm	Pass
1GHz ~ 10GHz	-76.16	-76.82	-76.83	-47		
10GHz ~ 26GHz	-64.45	-64.29	-64.39	-47		

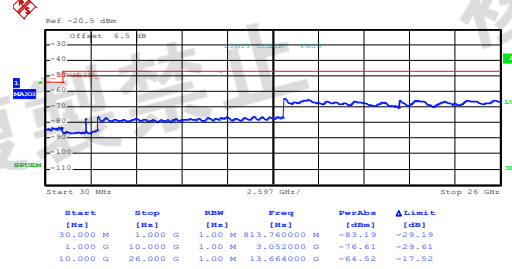
Test plot as follows:
ANT0

802.11a (Band 1)



Date: 17.JUL.2019 20:29:02

802.11a (Band 2)



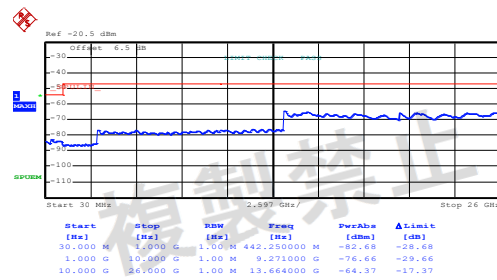
Date: 17.JUL.2019 20:29:29

Lowest channel



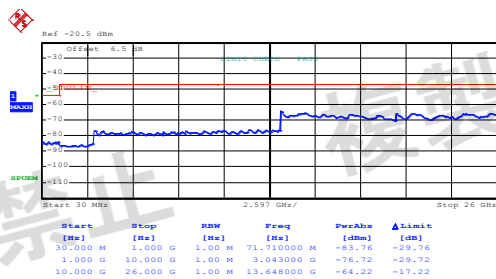
Date: 17.JUL.2019 20:25:01

Lowest channel



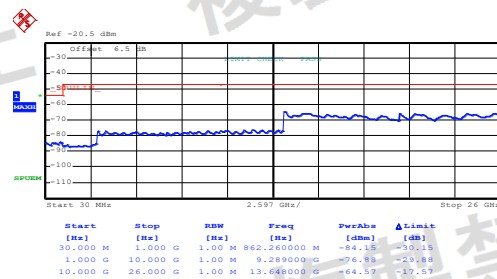
Date: 17.JUL.2019 20:30:14

Middle channel



Date: 17.JUL.2019 20:25:21

Middle channel

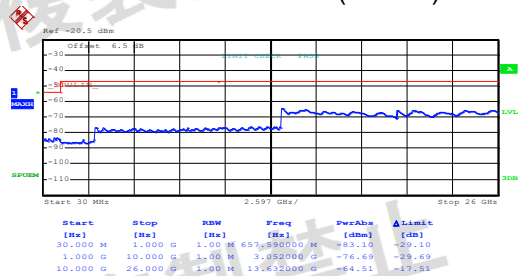


Date: 17.JUL.2019 20:30:34

Highest channel

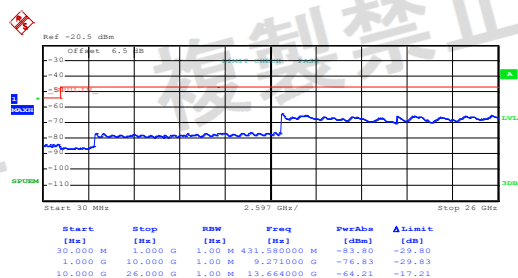
Highest channel

802.11n-HT20 (Band 1)



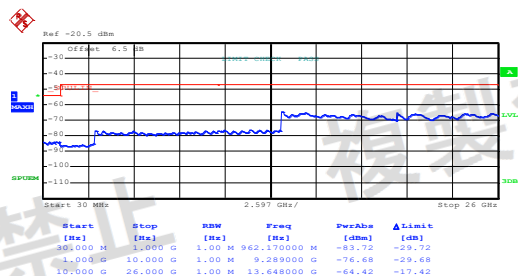
Date: 17.JUL.2019 20:26:28

Lowest channel



Date: 17.JUL.2019 20:26:54

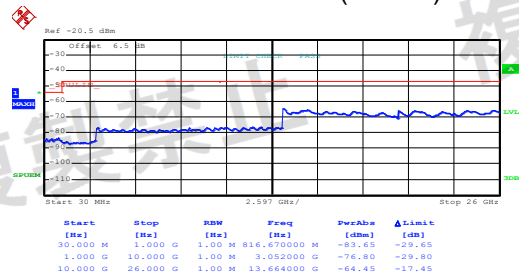
Middle channel



Date: 17.JUL.2019 20:27:27

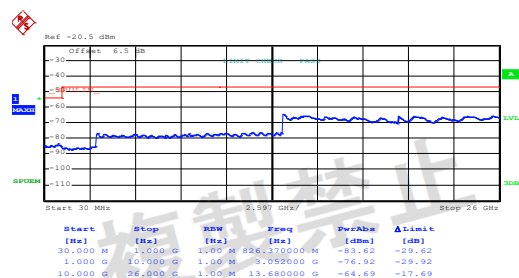
Highest channel

802.11n-HT20 (Band 2)



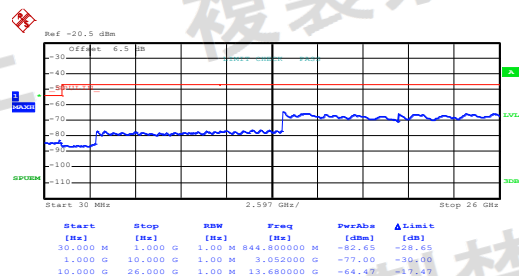
Date: 17.JUL.2019 20:30:56

Lowest channel



Date: 17.JUL.2019 20:31:44

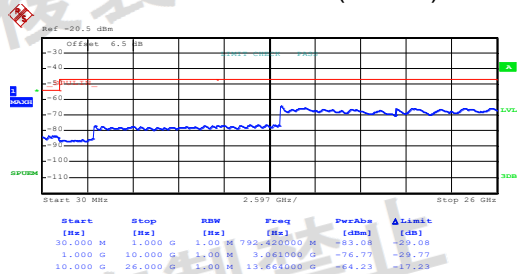
Middle channel



Date: 17.JUL.2019 20:33:17

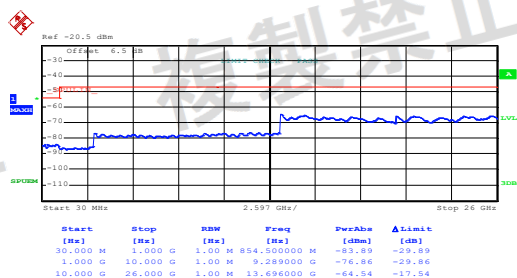
Highest channel

802.11n-HT40 (Band 1)



Date: 17.JUL.2019 20:28:14

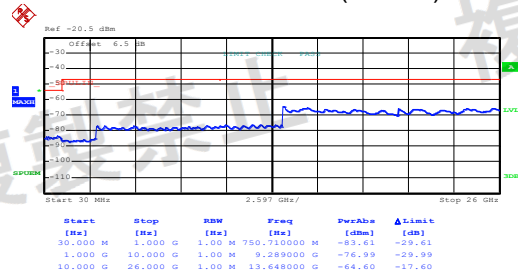
Lowest channel



Date: 17.JUL.2019 20:28:36

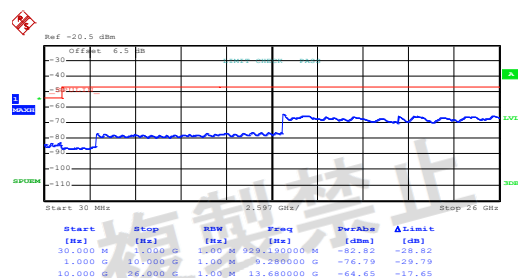
Highest channel

802.11n-HT40 (Band 2)



Date: 17.JUL.2019 20:34:13

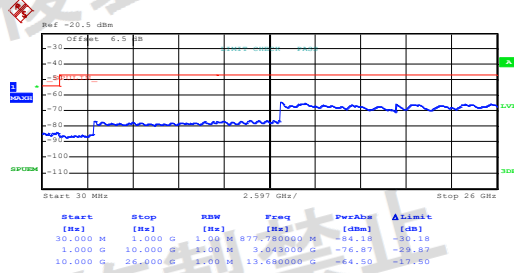
Lowest channel



Date: 17.JUL.2019 20:35:04

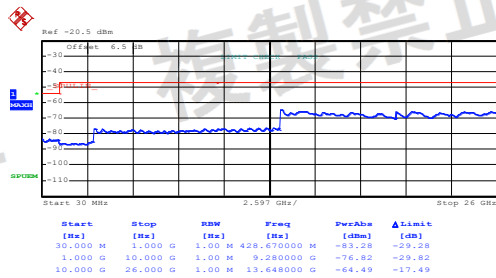
Highest channel

802.11a (Band 3)



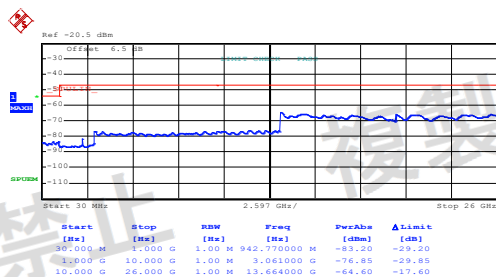
Date: 17.JUL.2019 20:35:32

Lowest channel



Date: 17.JUL.2019 20:36:11

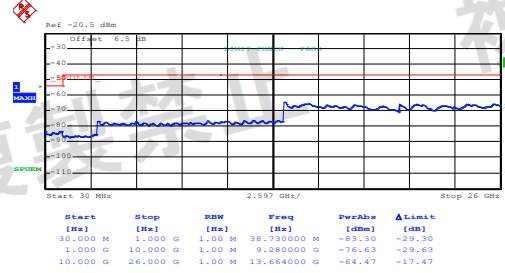
Middle channel



Date: 17.JUL.2019 20:37:12

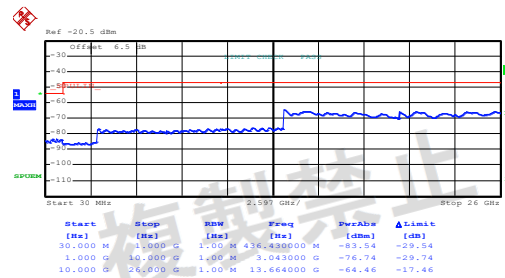
Highest channel

802.11n-HT20 (Band 3)



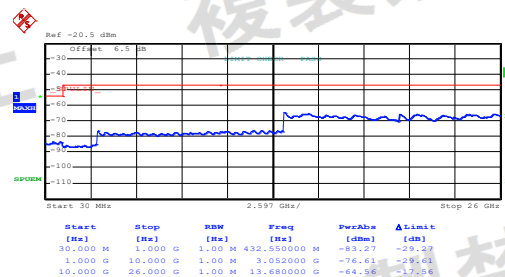
Date: 17.JUL.2019 20:37:44

Lowest channel



Date: 17.JUL.2019 20:38:37

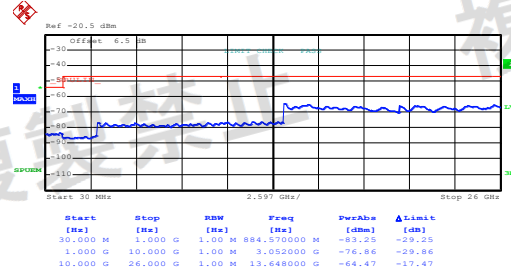
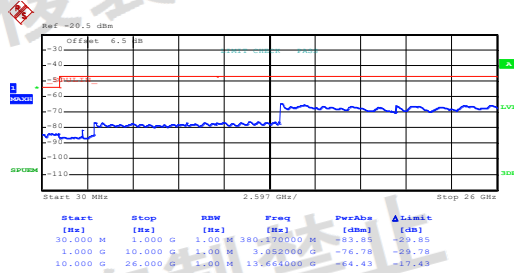
Middle channel



Date: 17.JUL.2019 20:39:21

Highest channel

802.11n-HT40 (Band 3)

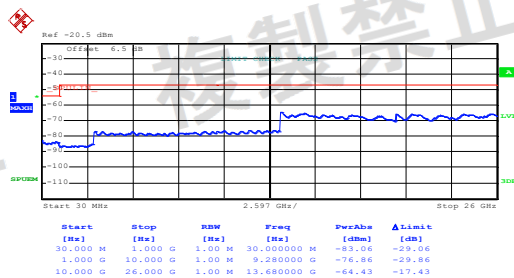


Date: 17.JUL.2019 20:40:07

Lowest channel

Date: 17.JUL.2019 20:41:23

Middle channel

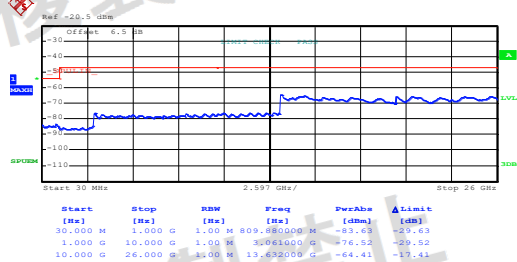


Date: 17.JUL.2019 20:43:01

Highest channel

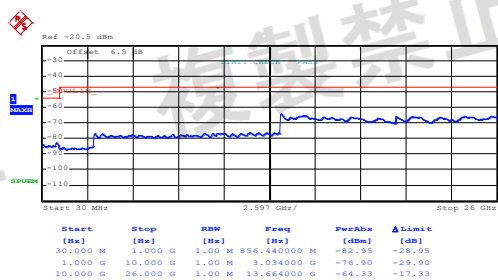
ANT1

802.11a (Band 1)



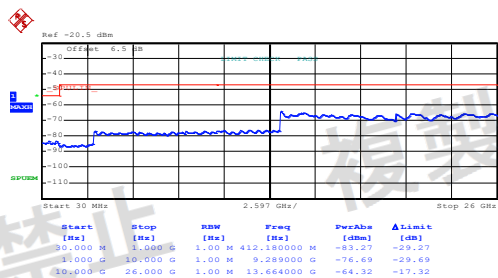
Date: 17.JUL.2019 20:24:49

Lowest channel



Date: 17.JUL.2019 20:25:11

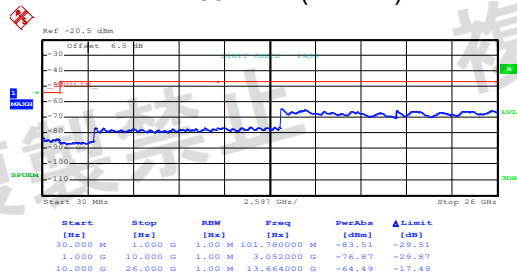
Middle channel



Date: 17.JUL.2019 20:25:56

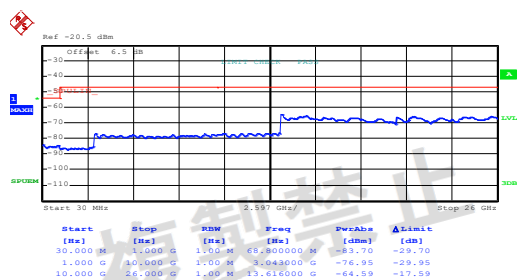
Highest channel

802.11a (Band 2)



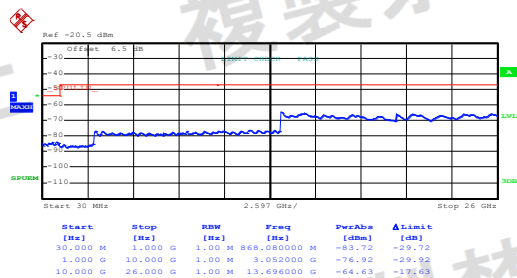
Date: 17.JUL.2019 20:29:41

Lowest channel



Date: 17.JUL.2019 20:30:24

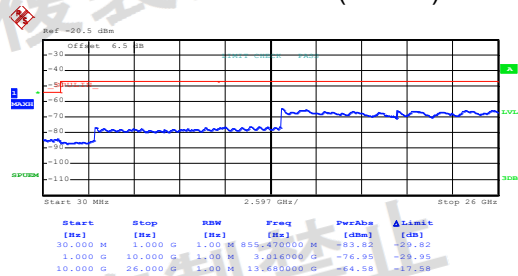
Middle channel



Date: 17.JUL.2019 20:30:43

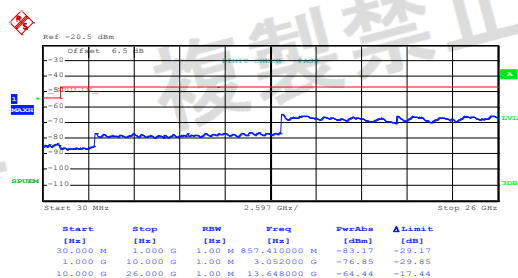
Highest channel

802.11n-HT20 (Band 1)



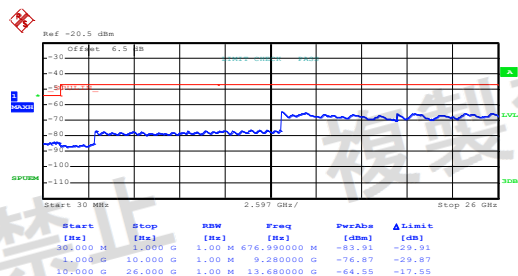
Date: 17.JUL.2019 20:26:39

Lowest channel



Date: 17.JUL.2019 20:27:06

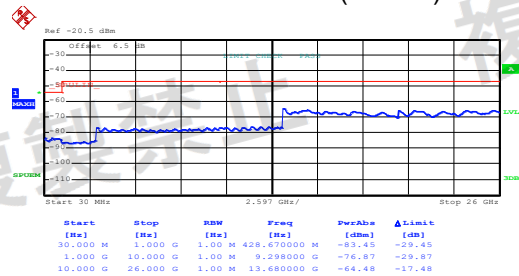
Middle channel



Date: 17.JUL.2019 20:27:39

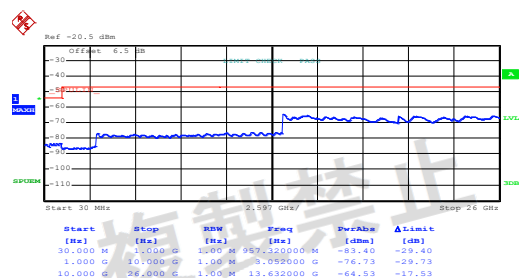
Highest channel

802.11n-HT20 (Band 2)



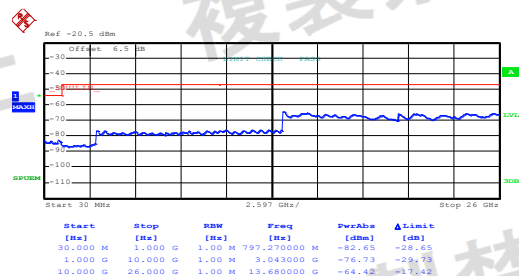
Date: 17.JUL.2019 20:31:31

Lowest channel



Date: 17.JUL.2019 20:32:33

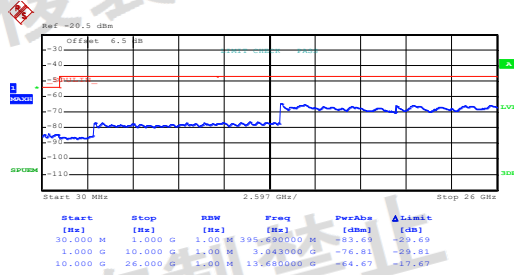
Middle channel



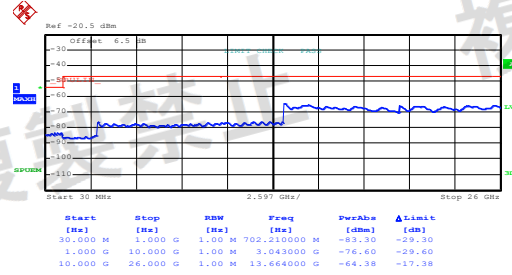
Date: 17.JUL.2019 20:33:57

Highest channel

802.11n-HT40 (Band 1)

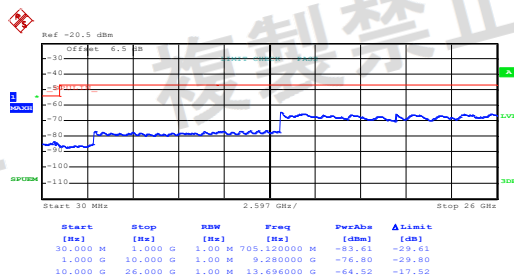


802.11n-HT40 (Band 2)



Date: 17.JUL.2019 20:28:22

Lowest channel

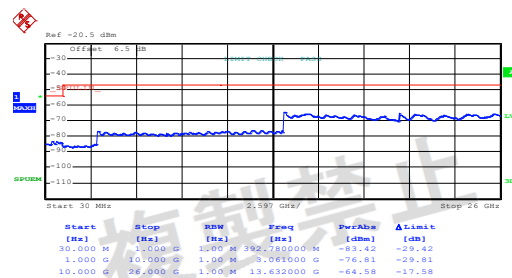


Date: 17.JUL.2019 20:28:44

Highest channel

Date: 17.JUL.2019 20:34:44

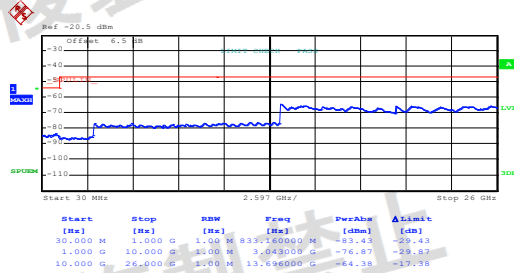
Lowest channel



Date: 17.JUL.2019 20:35:18

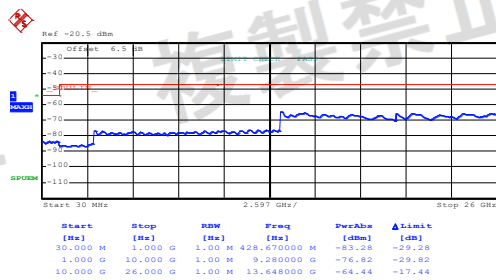
Highest channel

802.11a (Band 3)



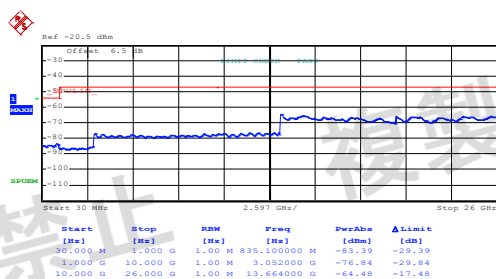
Date: 17.JUL.2019 20:35:48

Lowest channel



Date: 17.JUL.2019 20:36:54

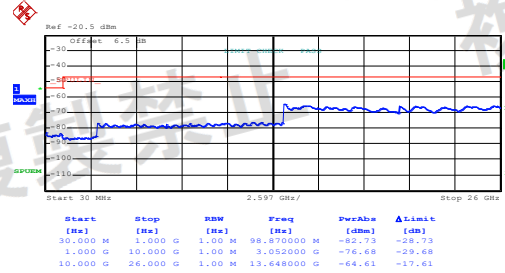
Middle channel



Date: 17.JUL.2019 20:37:23

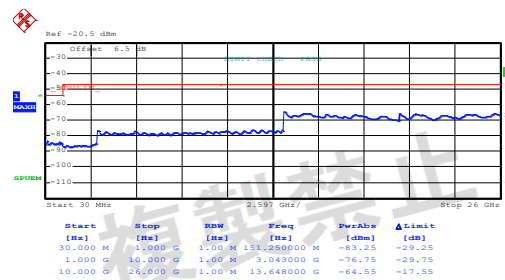
Highest channel

802.11n-HT20 (Band 3)



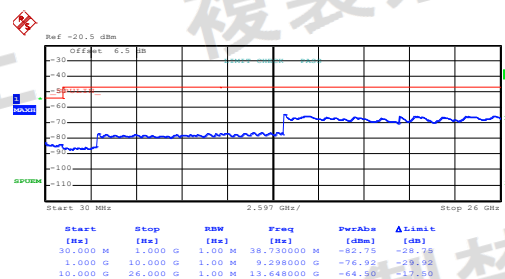
Date: 17.JUL.2019 20:38:09

Lowest channel



Date: 17.JUL.2019 20:38:47

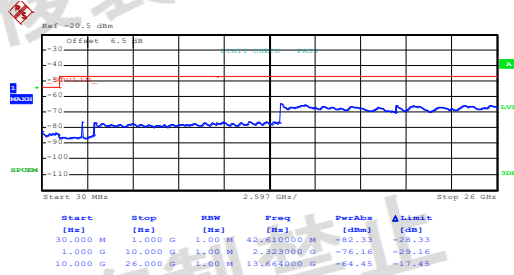
Middle channel



Date: 17.JUL.2019 20:39:45

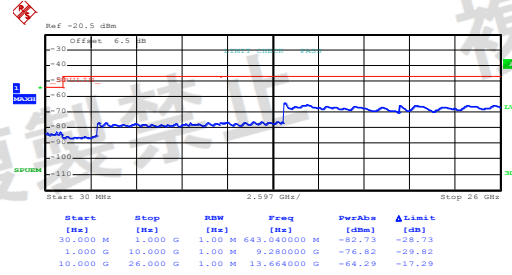
Highest channel

802.11n-HT40 (Band 3)



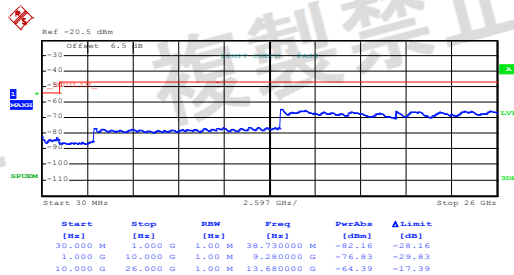
Date: 17.JUL.2019 20:40:37

Lowest channel



Date: 17.JUL.2019 20:42:20

Middle channel



Date: 17.JUL.2019 20:43:32

Highest channel

6.11 Carrier sense function

Test Requirement:	Article 2 paragraph 1 item (19)
Test Method:	Appendix No.45 Notification No.88 of MIC, 2004 section 12
Limit:	The radio equipment connected to telecommunication circuit equipment shall be equipped with a device which detects emissions radiated from another radio station and prevents interference, or a device which prevents interference by operation on a receive signal and a signal for diffusion for signal level detection.
Test setup:	<p>The diagram illustrates the test setup. A Vector Generator and a Spectrum Analyzer are connected to a common Divider. The other output of the Divider is connected to a Wireless AP, which is then connected to the EUT (Equipment Under Test).</p>
Test procedure:	<ol style="list-style-type: none"> 1. Set the EUT link with a peripheral, Wireless AP. 2. Set a signal generator (simulate a radio device which co-exists with EUT) at same frequency channel with a proper signal level (exceeding 100mV/m) output to act as interference signal. 3. Monitor the signal transmission between the EUT and peripheral, while the interference signal presents. The EUT would stop transmitting once it detects interference signal, then record it pass, otherwise, the result is fail.
Test Instruments:	Refer to section 5.7 for details
Test results:	Pass

Measurement Data:

5150MHz ~ 5350MHz					
Test Bandwidth	Test Channels	Result	Test Bandwidth	Test Channels	Result
20MHz	5180MHz	Pass	40MHz	5190MHz	Pass
	5240MHz	Pass		5230MHz	Pass
	5260MHz	Pass		5270MHz	Pass
	5320MHz	Pass		5310MHz	Pass
5470MHz ~ 5725MHz					
Test Bandwidth	Test Channels	Result	Test Bandwidth	Test Channels	Result
20MHz	5500MHz	Pass	40MHz	5510MHz	Pass
	5600MHz	Pass		5590MHz	Pass
	5700MHz	Pass		5670MHz	Pass

6.12 Dynamic Frequency Selection (Slave)

Test Requirement:	Article 2 paragraph 1 item (19-3) and Article 2 paragraph 1 item (19-3-2)
Test Method:	Ordinance Regulating Radio Equipment No. 18, Article 49-20
Requirement:	WAS/RLAN devices operating in slave mode (slave device) can be operated in a network controlled by a WAN/RLAN device operating in master mode (master device).
Results:	The EUT can be operated in a network controlled by a WAN/RLAN device operating in master mode.

6.13 Other requirements

Test Requirement:	Article 2 paragraph 1 item (19-3)				
Test Method:	Ordinance Regulating Radio Equipment No. 18, Article 49-20				
Requirement:	<ol style="list-style-type: none">1. Interference prevention function2. Shall be of the structure that RF and modulator sections including the antenna cannot be easily be opened.3. Shall be admitted to be use indoors, the warning information "Indoor Use Only" must be put on the equipment.4. More than 1 carrier in 1 MHz bandwidth. (Only for OFDM)				
Results:	<ol style="list-style-type: none">1. The only MAC address was used by EUT<table border="1"><thead><tr><th>MAC地址</th><th>IP地址</th></tr></thead><tbody><tr><td>90-56-82-AF-54-DC</td><td>192.168.1.100</td></tr></tbody></table>2. The RF and modulator section was protected by shielded cover and the structure of EUT uses special screws, which cannot be easily open by the user.3. "Indoor Use Only" will be put on label4. For OFDM modulation, the default subcarrier spacing is 312.5 kHz, so, there are about 3 subcarriers in 1 MHz bandwidth, meet the requirement.	MAC地址	IP地址	90-56-82-AF-54-DC	192.168.1.100
MAC地址	IP地址				
90-56-82-AF-54-DC	192.168.1.100				

7 Test Setup Photo



8 EUT Constructional Details

Reference to the test report No. CCISE190605601

-----End of report-----