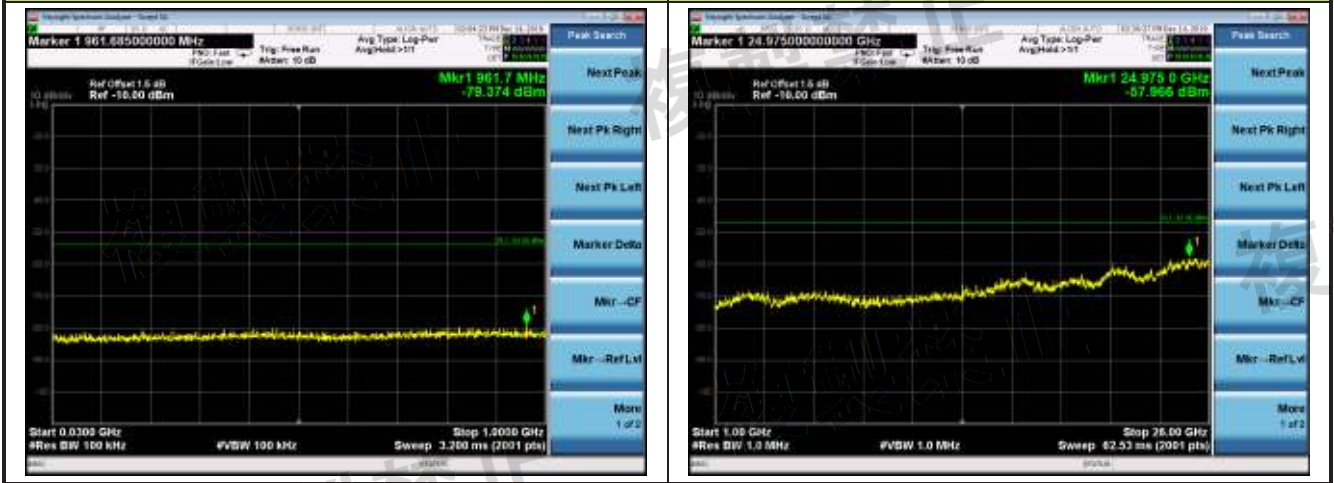


Receiver Spurious Emissions - Ant 1 / Ant 1 + 2

802.11ac-VHT20 - 5720MHz

30 ~ 1000MHz

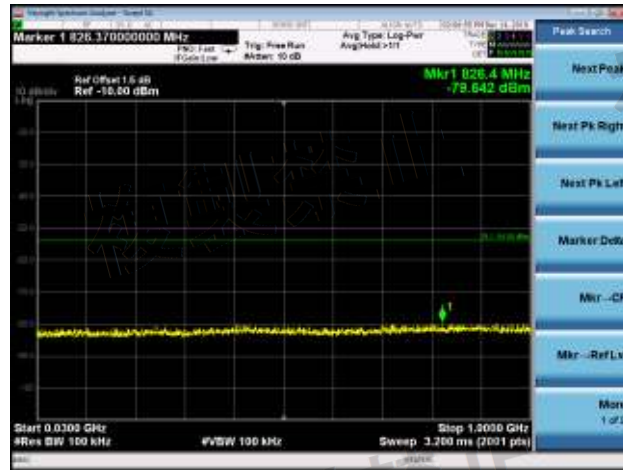
1000 ~ 26000MHz



Receiver Spurious Emissions - Ant 1 / Ant 1 + 2

802.11ac-VHT40 - 5190MHz

30 ~ 1000MHz

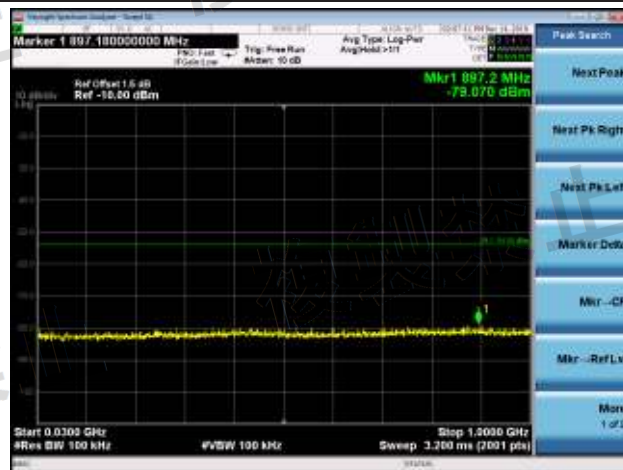


1000 ~ 26000MHz



802.11ac-VHT40 - 5230MHz

30 ~ 1000MHz

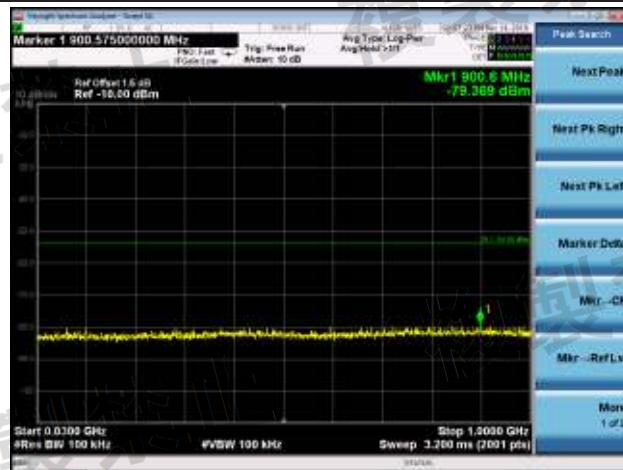


1000 ~ 26000MHz



802.11ac-VHT40 - 5270MHz

30 ~ 1000MHz



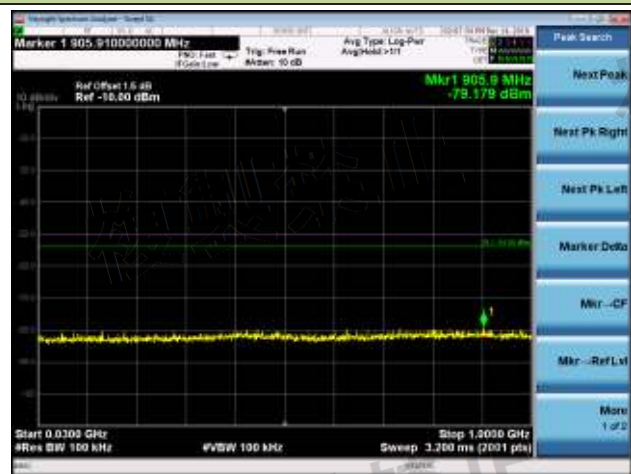
1000 ~ 26000MHz



Receiver Spurious Emissions - Ant 1 / Ant 1 + 2

802.11ac-VHT40 - 5310MHz

30 ~ 1000MHz

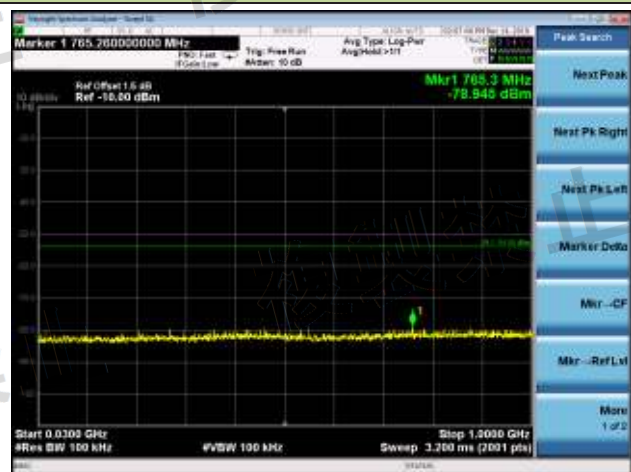


1000 ~ 26000MHz



802.11ac-VHT40 - 5510MHz

30 ~ 1000MHz

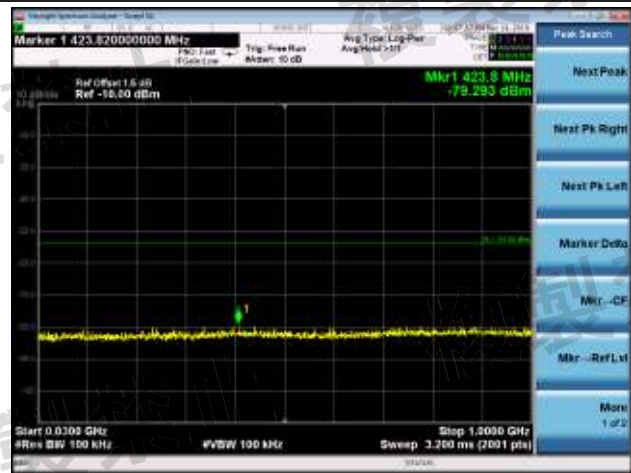


1000 ~ 26000MHz



802.11ac-VHT40 - 5590MHz

30 ~ 1000MHz



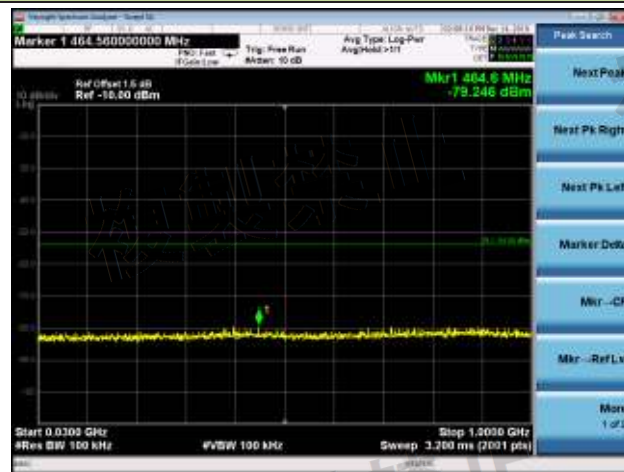
1000 ~ 26000MHz



Receiver Spurious Emissions - Ant 1 / Ant 1 + 2

802.11ac-VHT40 - 5670MHz

30 ~ 1000MHz

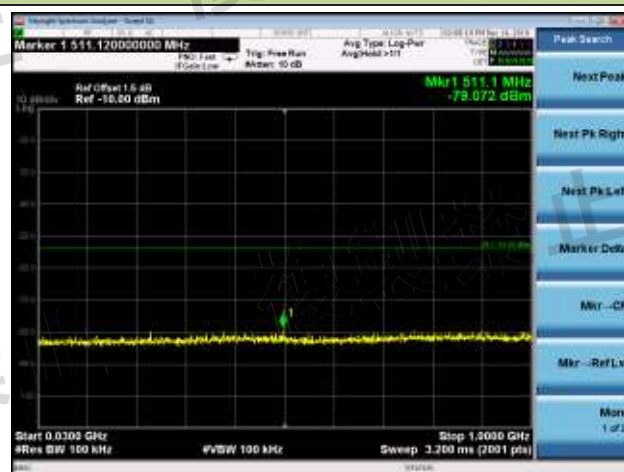


1000 ~ 26000MHz



802.11ac-VHT40 - 5710MHz

30 ~ 1000MHz



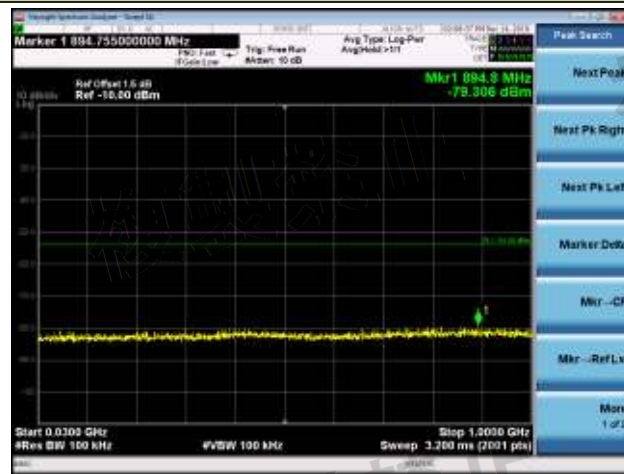
1000 ~ 26000MHz



Receiver Spurious Emissions - Ant 1 / Ant 1 + 2

802.11ac-VHT80 - 5210MHz

30 ~ 1000MHz

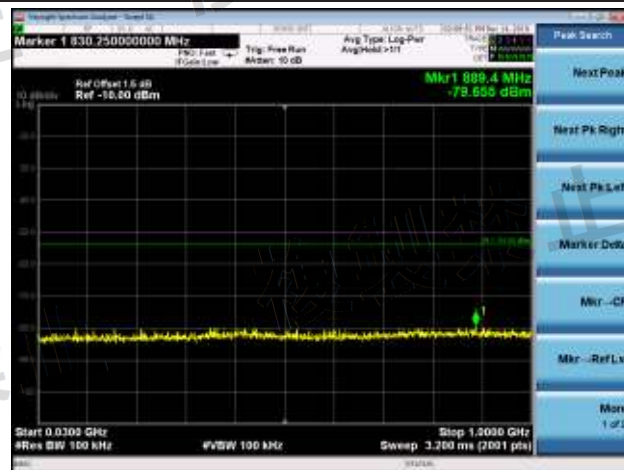


1000 ~ 26000MHz



802.11ac-VHT80 - 5290MHz

30 ~ 1000MHz

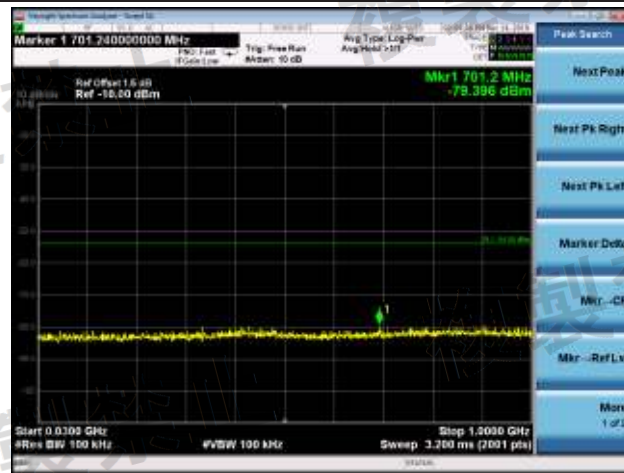


1000 ~ 26000MHz



802.11ac-VHT80 - 5530MHz

30 ~ 1000MHz



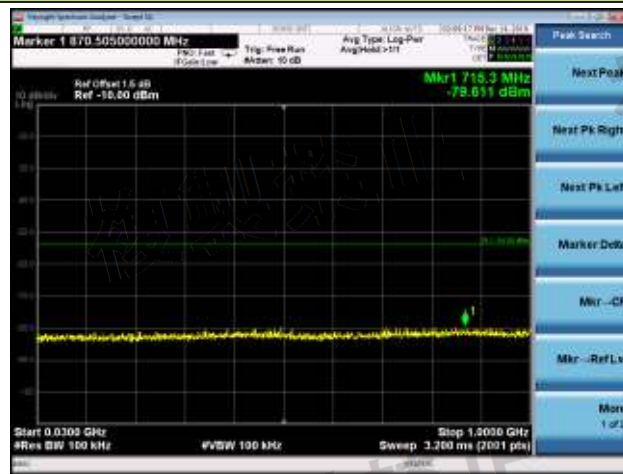
1000 ~ 26000MHz



Receiver Spurious Emissions - Ant 1 / Ant 1 + 2

802.11ac-VHT80 - 5610MHz

30 ~ 1000MHz

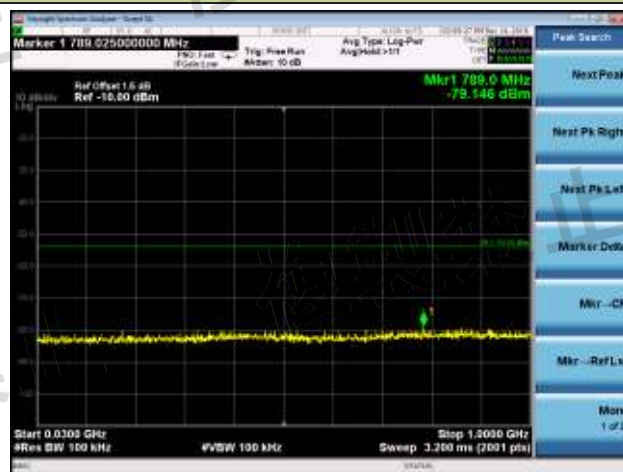


1000 ~ 26000MHz



802.11ac-VHT80 - 5690MHz

30 ~ 1000MHz



1000 ~ 26000MHz



5.8. Carrier Sensing

5.8.1. Test Limit

Stop transmission while carrier detecting.

Field intensity in the direction of the maximum gain of a receiving antenna: 100mV/m (It's a radiated testing detection threshold level).

Refer to ARIB STD-T71 V6_1, the conducted detection threshold level shows as below:

(6)式の電界強度 E を既定値の 100mV/m (100dB μ V/m) とし、 λ (m)を F (MHz) に変換し、 P を dBm 単位で表すと (7) 式を得る。

$$P[\text{dBm}] = 22.79 + G - 20\log F \quad \text{-----} \quad (7)$$

P : 受信機のアンテナ端子に入力される受信電力 [dBm]

G : 受信アンテナの絶対利得 [dBi]

F : キャリア周波数 [MHz]

5.8.2. Test Procedure Used

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

Link EUT and Access Point to Directional Coupler input port.

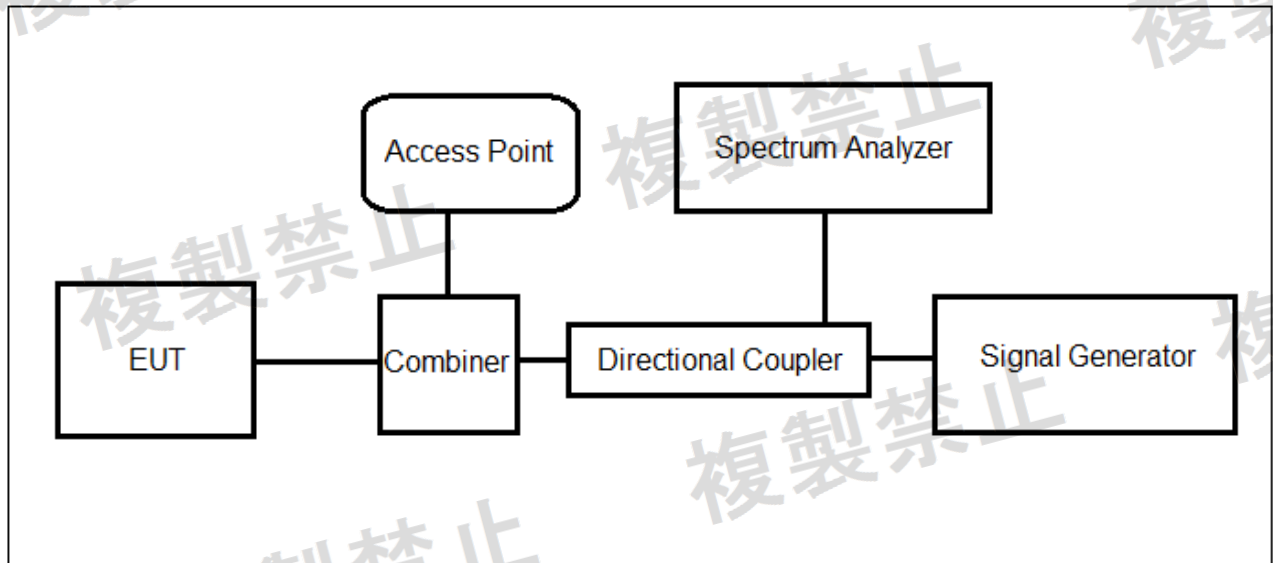
Link Signal Generator and Spectrum Analyzer to test port and output port in the Directional Coupler separately.

A positive Peak Detector function in Spectrum Analyzer must be used.

Set the Span to Zero.

Press the Signal Generator on and it will output the Carrier Signal. When the Link breaks off, wait a minute and press the Signal Generator off. After a while, reset the Link and done the test.

5.8.3. Test Setup

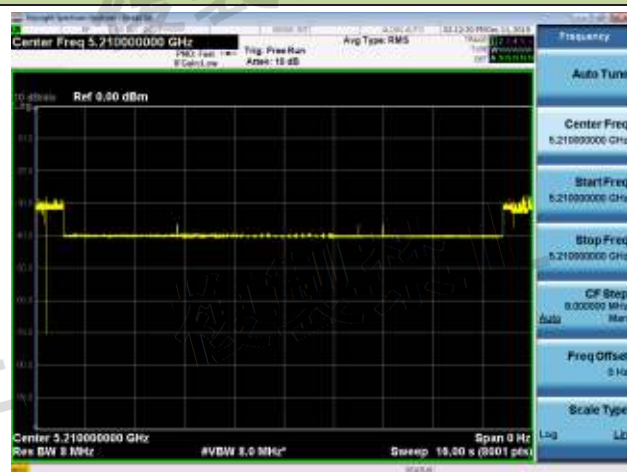


5.8.4. Test Result

EUT	Standalone VR Headset	Temperature	25°C
Test Engineer	Amy Zhang	Relative Humidity	55%
Test Item	Carrier Sensing	Test Date	2019/12/11

Carrier Sensing

802.11ac-VHT80 - 5210MHz



Signal Generator Power Level (dBm) =

Path Loss + G - 20log (F)

Path Loss: 22.79

G: Antenna Gain

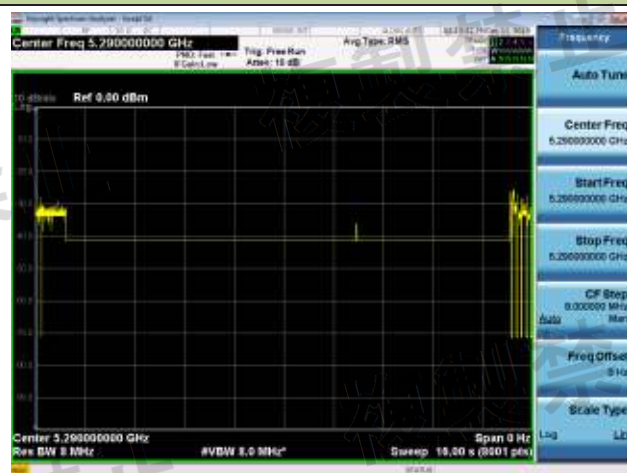
F: operation frequency

Power lever = 22.79 + 4.28 -20log (5210MHz)

= -47.27dBm

Test Result: Pass

802.11ac-VHT80 - 5290MHz



Signal Generator Power Level (dBm) =

Path Loss + G - 20log (F)

Path Loss: 22.79

G: Antenna Gain

F: operation frequency

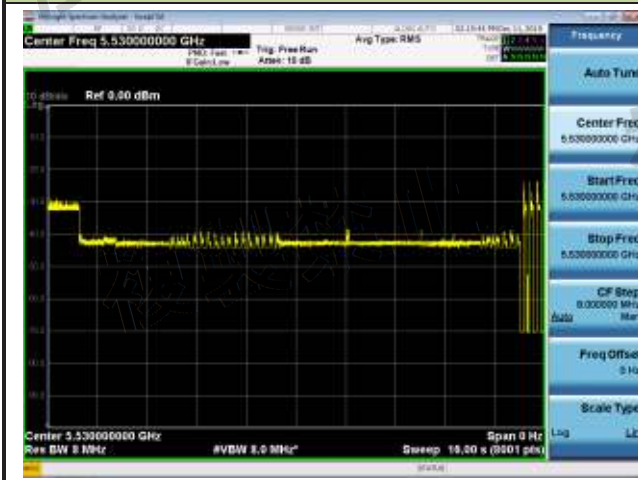
Power lever = 22.79 + 4.28 -20log (5290MHz)

= -47.40dBm

Test Result: Pass

Carrier Sensing

802.11ac-VHT80 - 5530MHz



Signal Generator Power Level (dBm) =

Path Loss + G - 20log (F)

Path Loss: 22.79

G: Antenna Gain

F: operation frequency

Power lever = 22.79 + 4.28 -20log (5530MHz)

= -47.78dBm

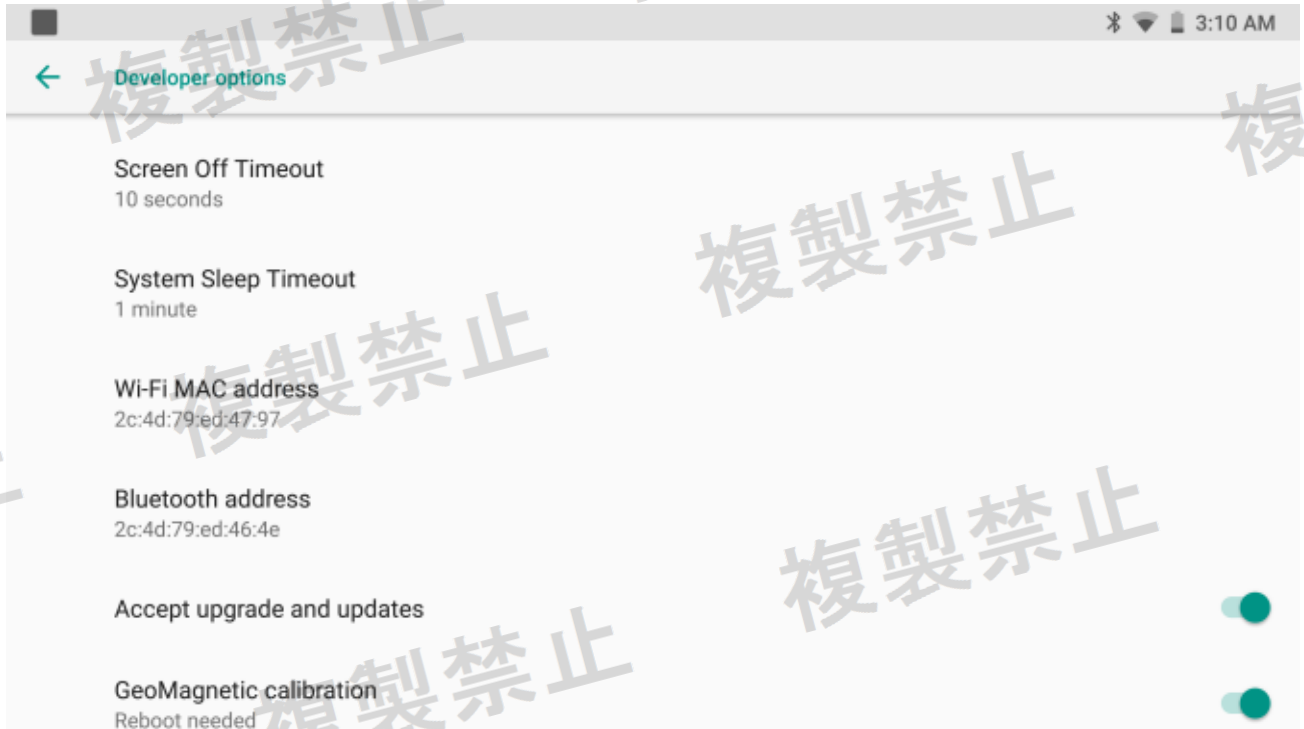
Test Result: Pass

5.9. For Interference Protection

When the DUT work on normal operation, we can read the DUT Mac address from the third party equipment.

For example, we can use the DOS interface of notebook to obtain the DUT Mac address.

So the DUT can have Interference prevention function.



Test Result:	Pass
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5.10. Transmission Burst Length

5.10.1. Test Limit

Transmission burst length must be 4ms or less.

5.10.2. Test Procedure Used

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

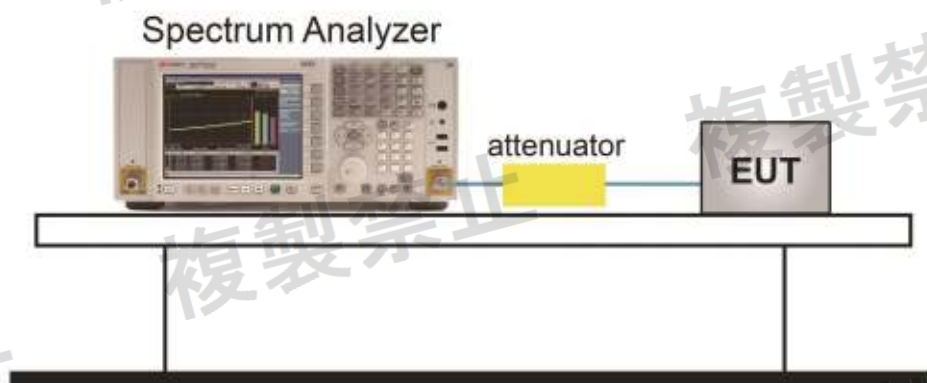
A positive peak detector function must be used.

The center frequency is set to the test frequency and the span is switched to zero.

The measurement instrument bandwidth must be set sufficiently with, and, the scan time set sufficiently slowly, to ensure all major modulation products are captured. Note that the measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result.

"Single sweep" mode may be used to capture a packet over a single scan.

5.10.3. Test Setup



5.10.4. Test Result

EUT	Standalone VR Headset	Temperature	25°C
Test Engineer	Dandy Li	Relative Humidity	53%
Test Item	Transmission Burst Length	Test Date	2019/12/14

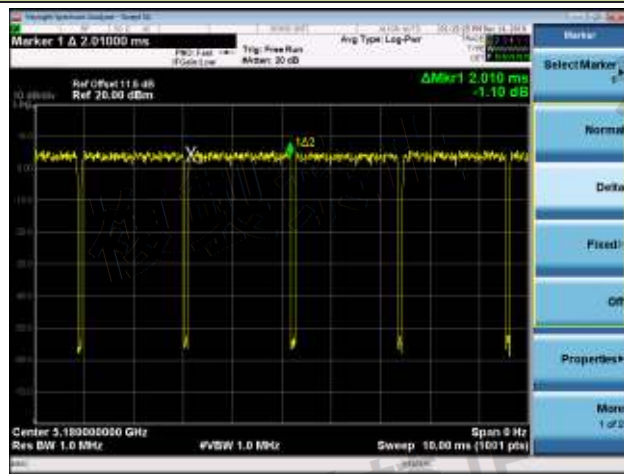
Test Mode	Frequency (MHz)	Reading Value (ms)	Limit (ms)	Result
802.11a	5180	2.01	≤ 8	Pass
	5220	2.01	≤ 8	Pass
	5240	2.01	≤ 8	Pass
	5260	2.01	≤ 8	Pass
	5300	2.01	≤ 8	Pass
	5320	2.01	≤ 8	Pass
	5500	2.01	≤ 8	Pass
	5600	2.03	≤ 8	Pass
	5700	2.04	≤ 8	Pass
	5720	2.05	≤ 8	Pass
802.11n-HT20	5180	1.90	≤ 8	Pass
	5220	1.91	≤ 8	Pass
	5240	1.92	≤ 8	Pass
	5260	1.92	≤ 8	Pass
	5300	1.91	≤ 8	Pass
	5320	1.90	≤ 8	Pass
	5500	1.91	≤ 8	Pass
	5600	1.90	≤ 8	Pass
	5700	1.91	≤ 8	Pass
	5720	1.89	≤ 8	Pass
802.11n-HT40	5190	0.91	≤ 8	Pass
	5230	0.91	≤ 8	Pass
	5270	0.91	≤ 8	Pass
	5310	0.91	≤ 8	Pass
	5510	0.92	≤ 8	Pass
	5590	0.92	≤ 8	Pass
	5670	0.92	≤ 8	Pass
	5710	0.91	≤ 8	Pass

Test Mode	Frequency (MHz)	Reading Value (ms)	Limit (ms)	Result
802.11ac-VHT20	5180	1.90	≤ 8	Pass
	5220	1.92	≤ 8	Pass
	5240	1.92	≤ 8	Pass
	5260	1.90	≤ 8	Pass
	5300	1.91	≤ 8	Pass
	5320	1.90	≤ 8	Pass
	5500	1.91	≤ 8	Pass
	5600	1.90	≤ 8	Pass
	5700	1.92	≤ 8	Pass
	5720	1.91	≤ 8	Pass
802.11ac-VHT40	5190	0.92	≤ 8	Pass
	5230	0.92	≤ 8	Pass
	5270	0.92	≤ 8	Pass
	5310	0.90	≤ 8	Pass
	5510	0.92	≤ 8	Pass
	5590	0.91	≤ 8	Pass
	5670	0.92	≤ 8	Pass
	5710	0.91	≤ 8	Pass
802.11ac-VHT80	5210	0.43	≤ 8	Pass
	5290	0.43	≤ 8	Pass
	5530	0.42	≤ 8	Pass
	5610	0.43	≤ 8	Pass
	5690	0.43	≤ 8	Pass

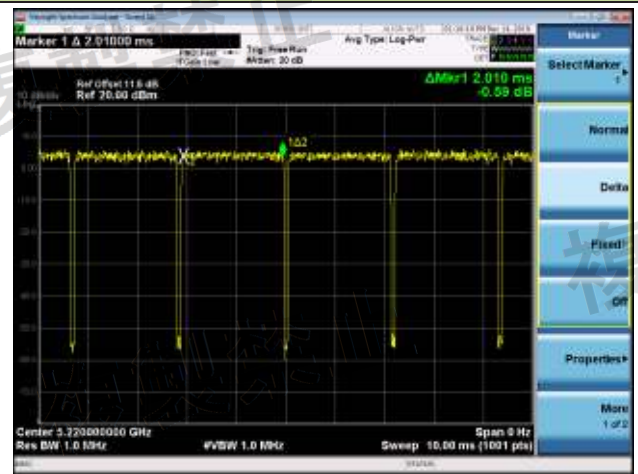
Transmission burst length - Ant 1 / Ant 1 + 2

802.11a

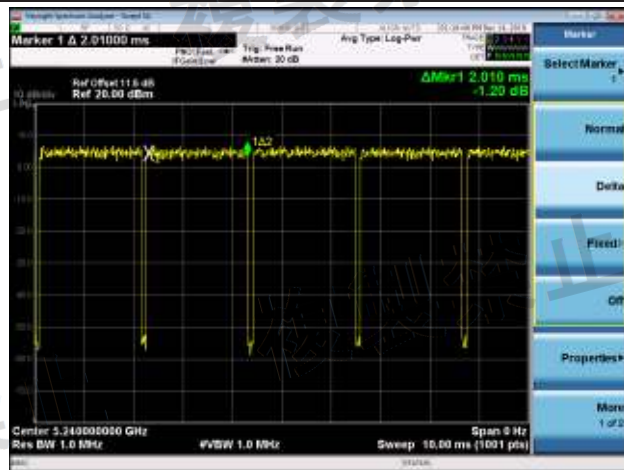
5180MHz



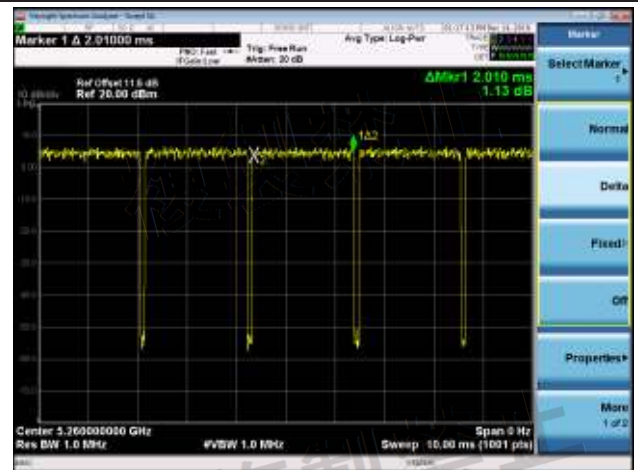
5220MHz



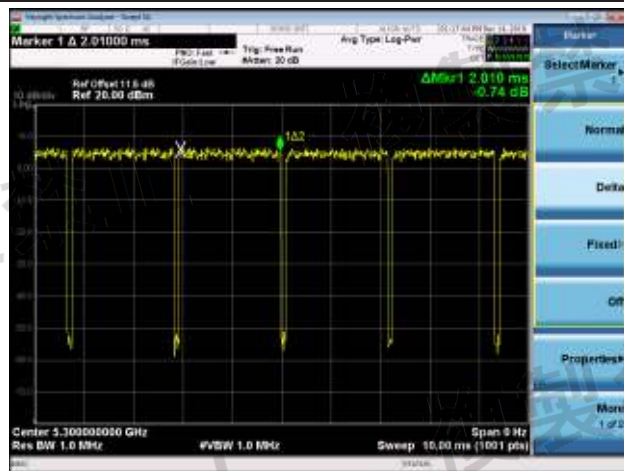
5240MHz



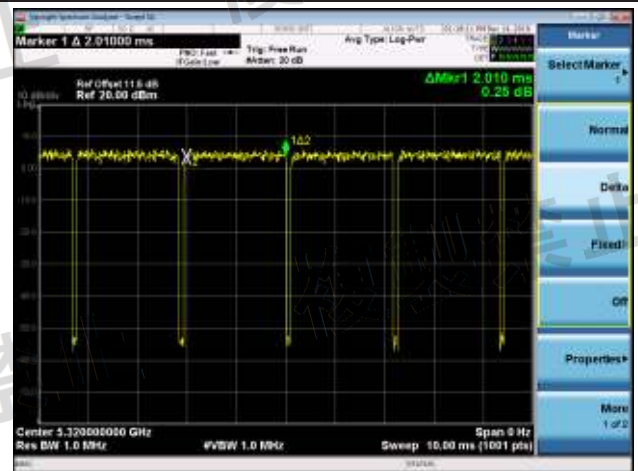
5260MHz



5300MHz



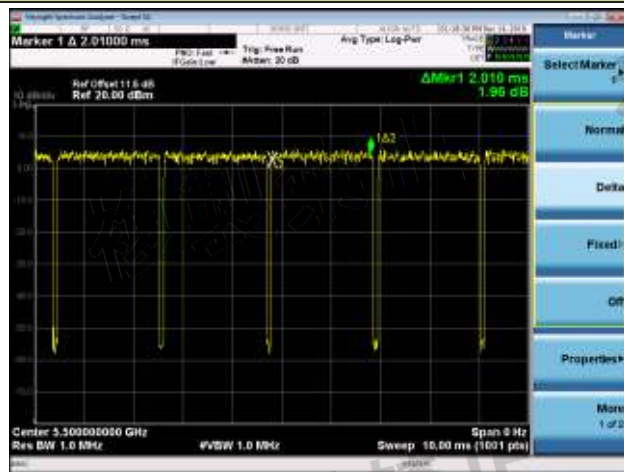
5320MHz



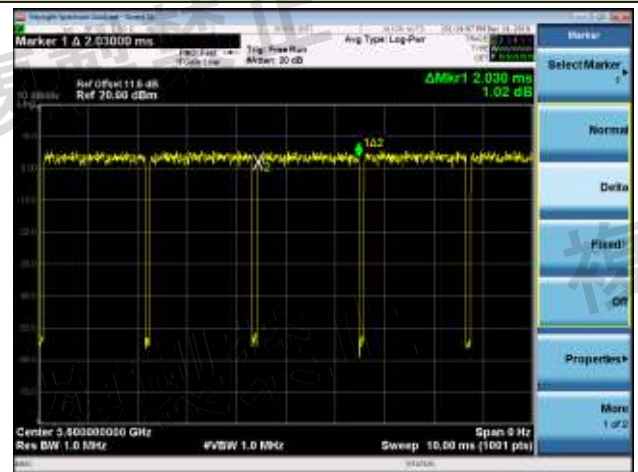
Transmission burst length - Ant 1 / Ant 1 + 2

802.11a

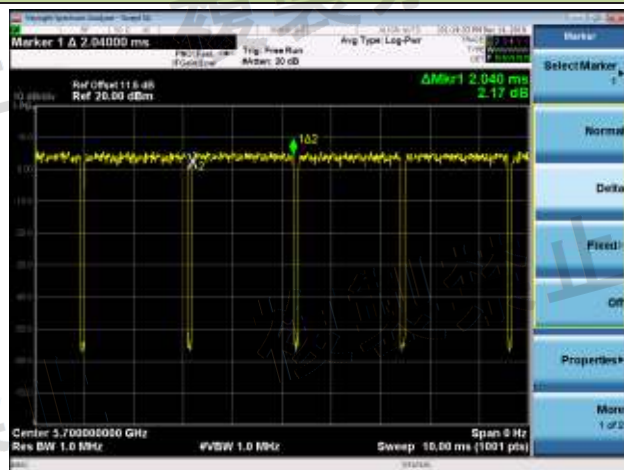
5500MHz



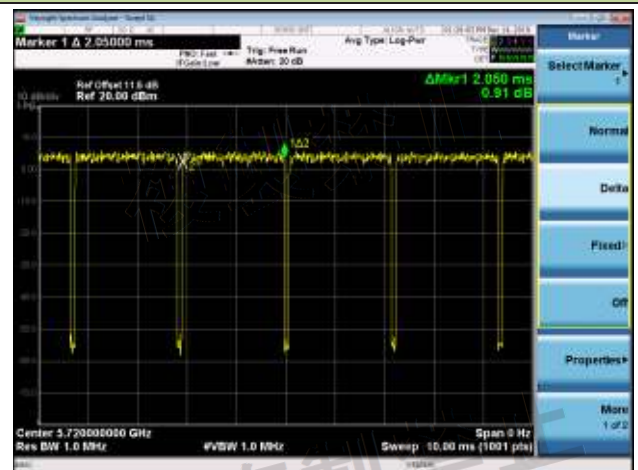
5600MHz



5700MHz



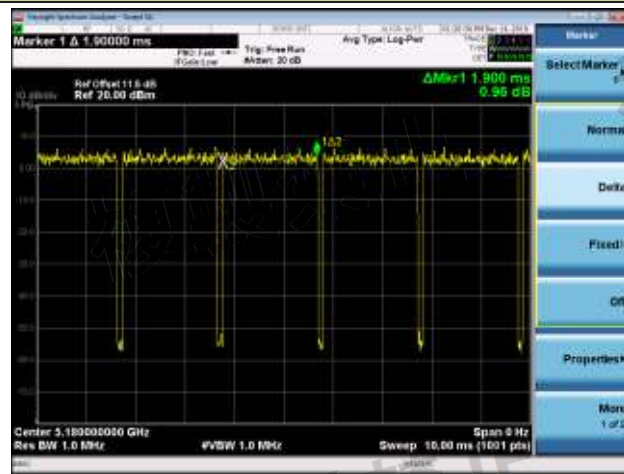
5720MHz



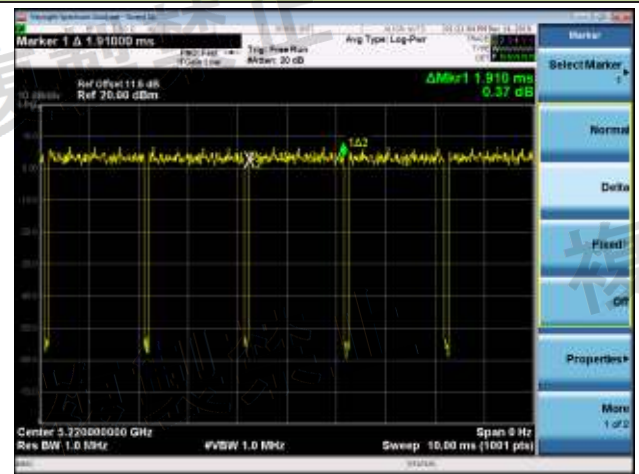
Transmission burst length - Ant 1 / Ant 1 + 2

802.11n-HT20

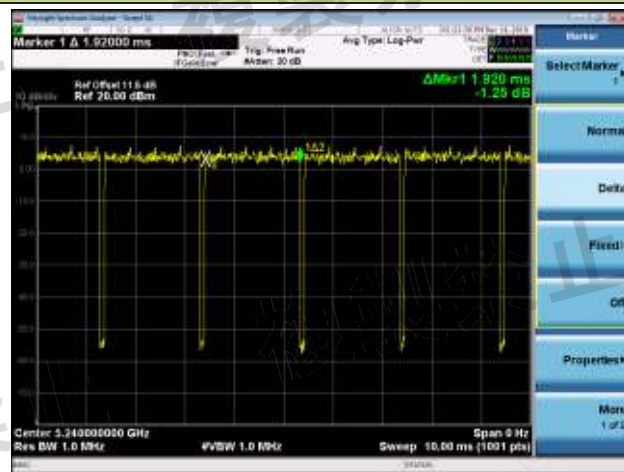
5180MHz



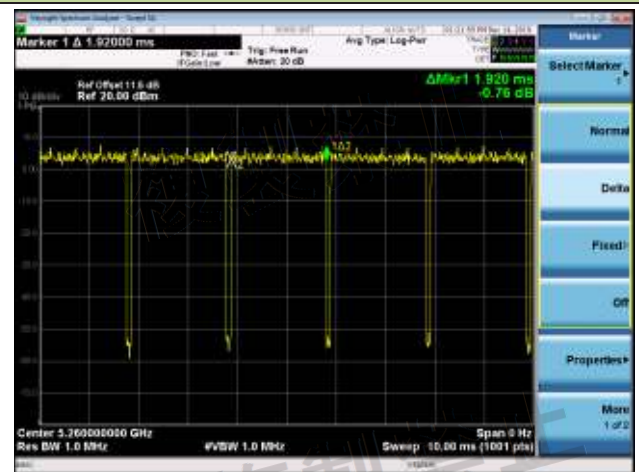
5220MHz



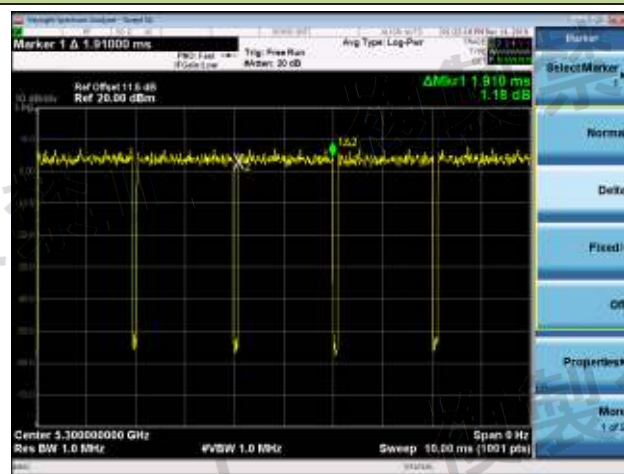
5240MHz



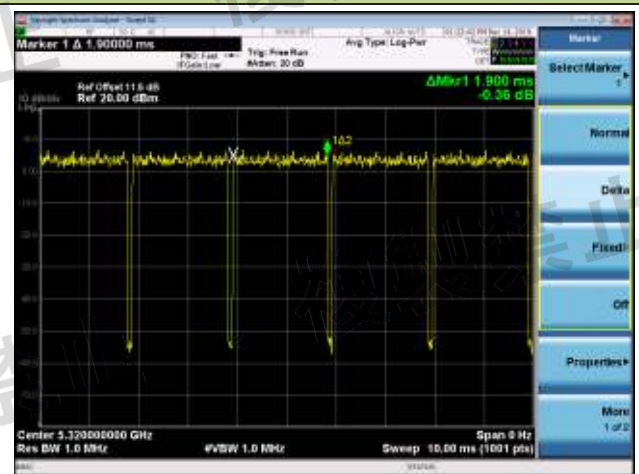
5260MHz



5300MHz



5320MHz



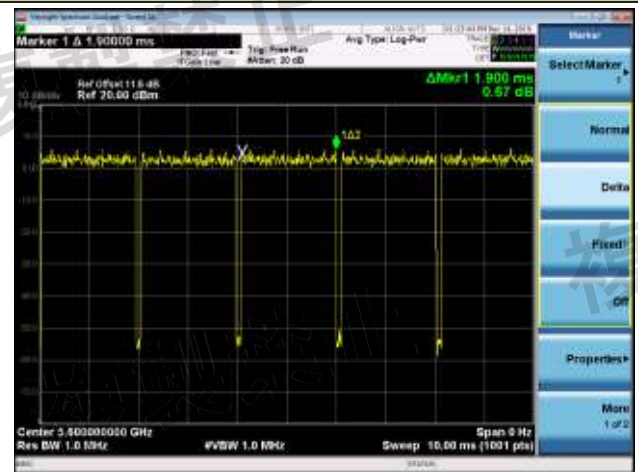
Transmission burst length - Ant 1 / Ant 1 + 2

802.11n-HT20

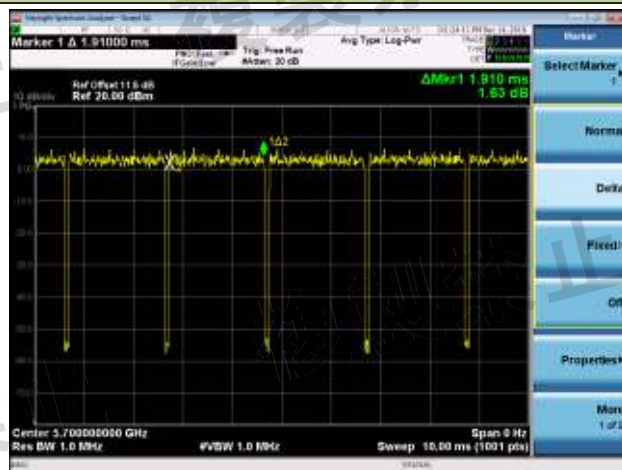
5500MHz



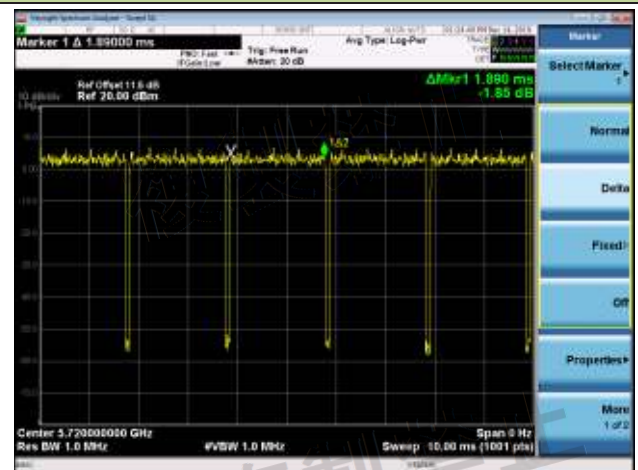
5600MHz



5700MHz



5720MHz



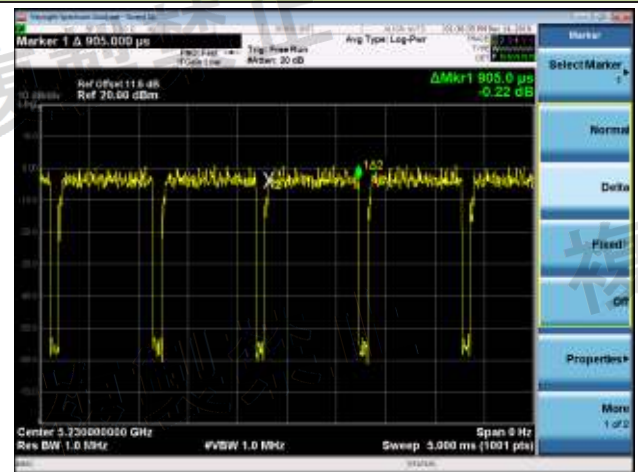
Transmission burst length - Ant 1 / Ant 1 + 2

802.11n-HT40

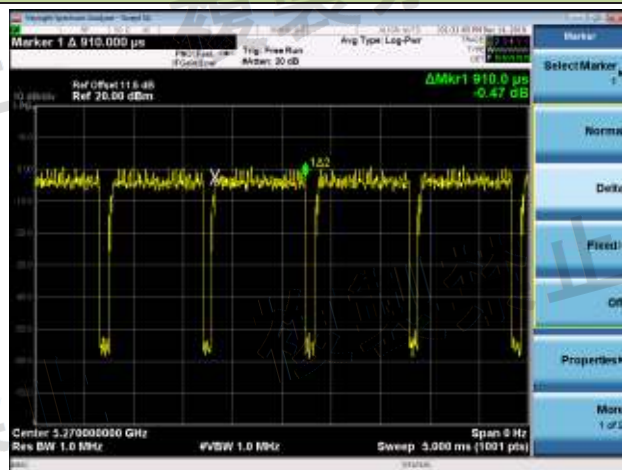
5190MHz



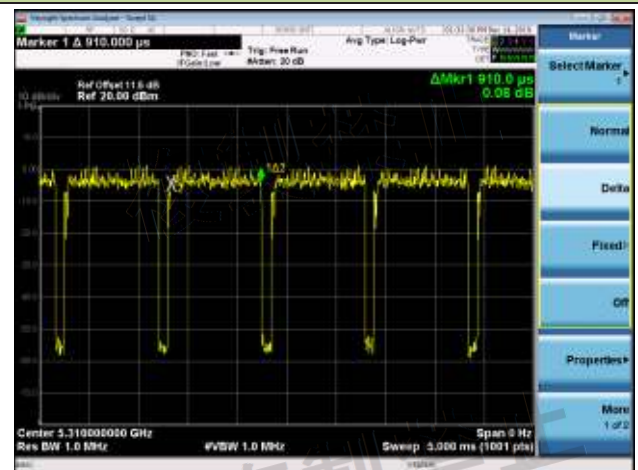
5230MHz



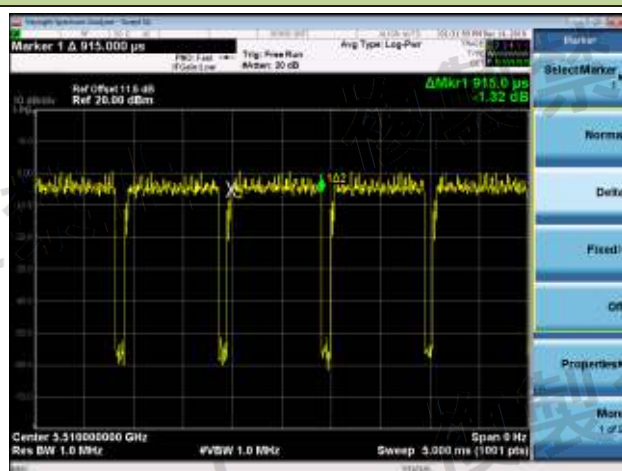
5270MHz



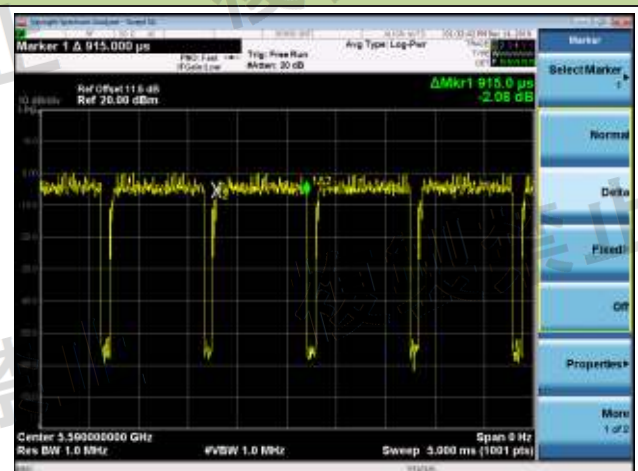
5310MHz



5510MHz



5590MHz



複製禁止

複製禁

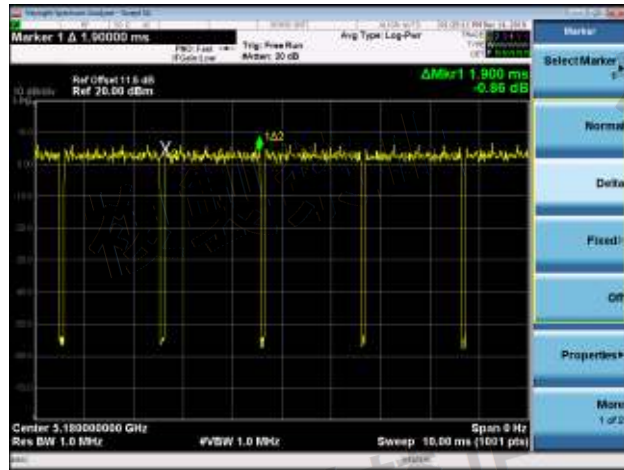
5710MHz



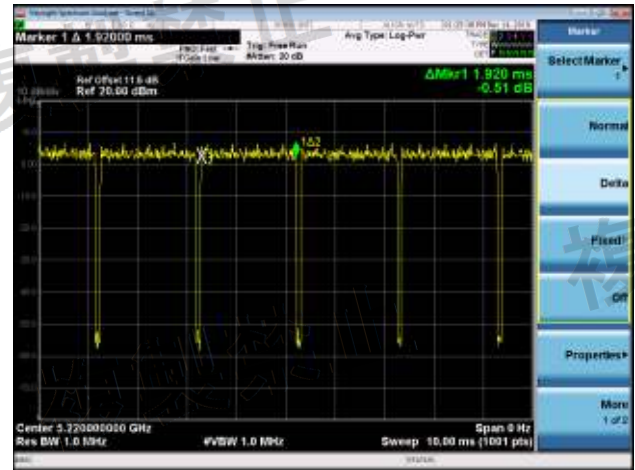
Transmission burst length - Ant 1 / Ant 1 + 2

802.11ac-VHT20

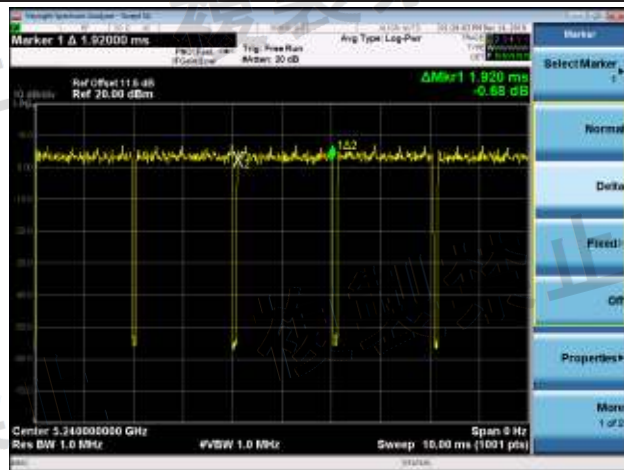
5180MHz



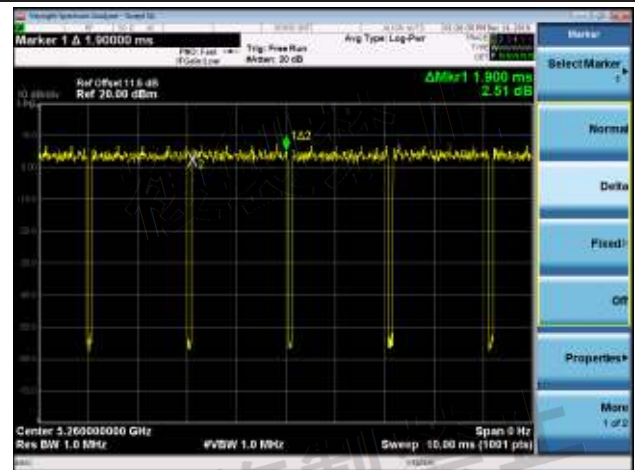
5220MHz



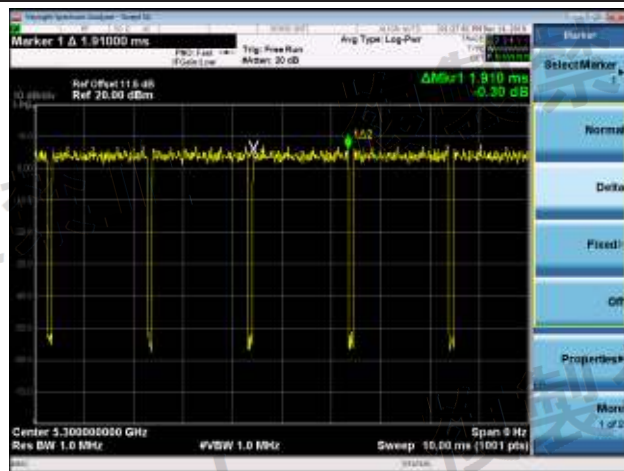
5240MHz



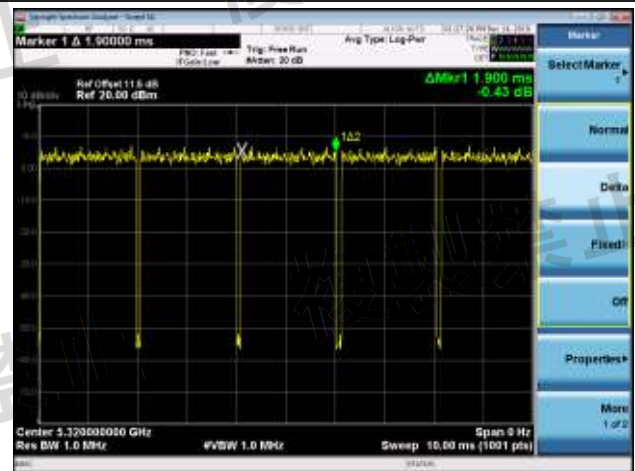
5260MHz



5300MHz



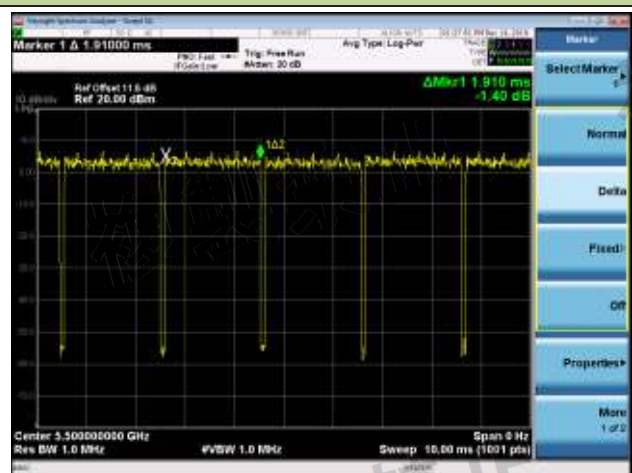
5320MHz



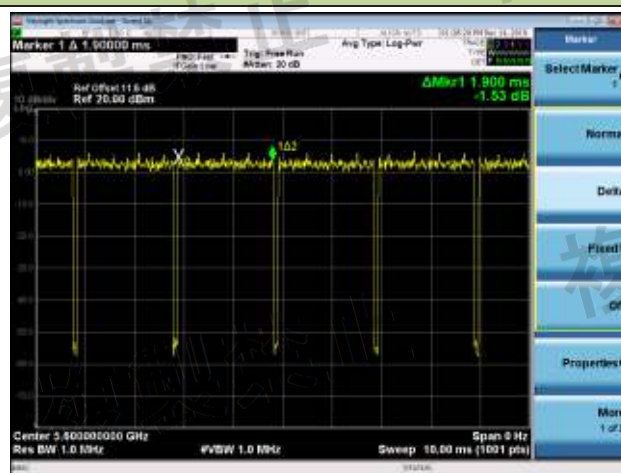
Transmission burst length - Ant 1 / Ant 1 + 2

802.11ac-VHT20

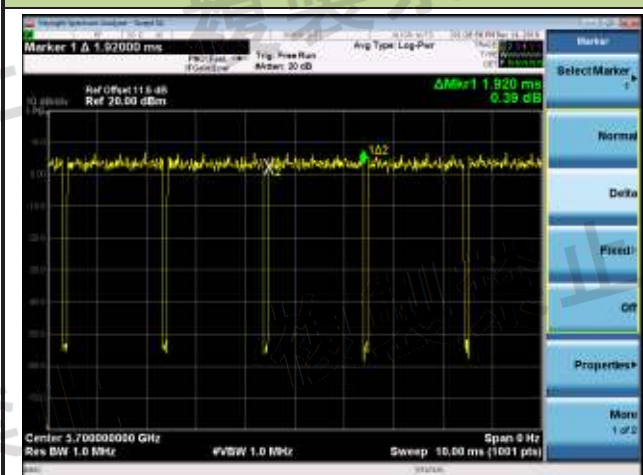
5500MHz



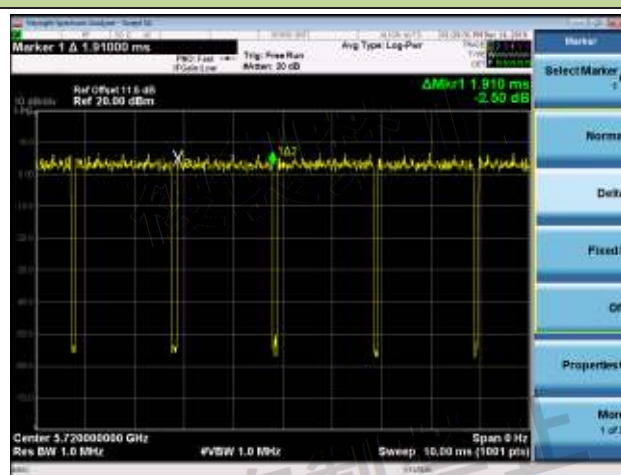
5600MHz



5700MHz



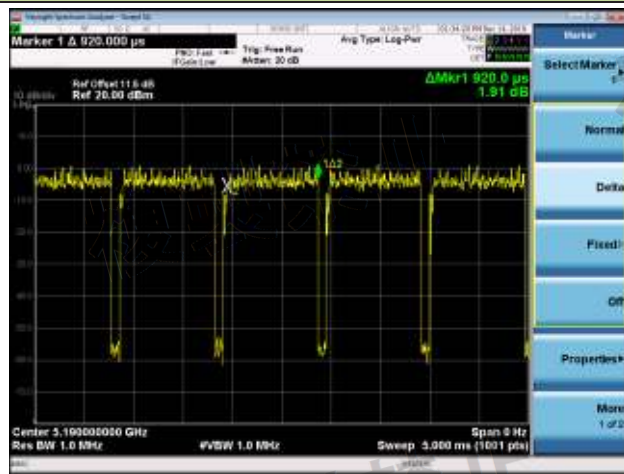
5720MHz



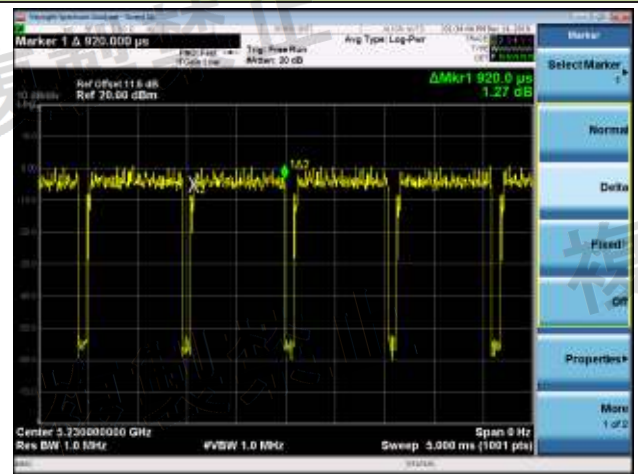
Transmission burst length - Ant 1 / Ant 1 + 2

802.11ac-VHT40

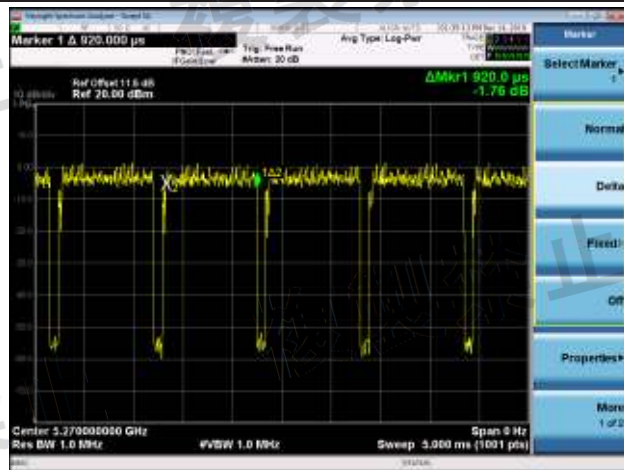
5190MHz



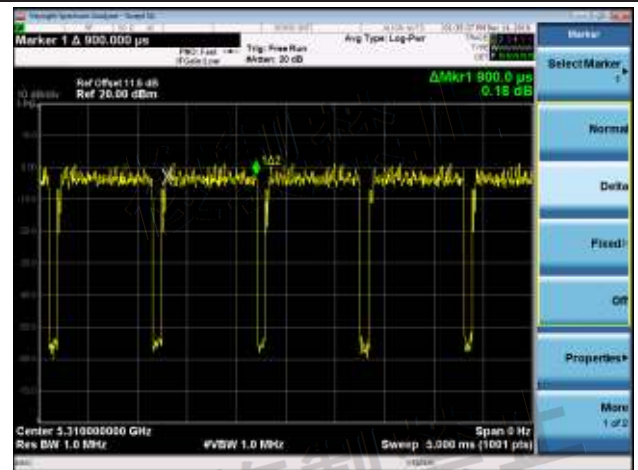
5230MHz



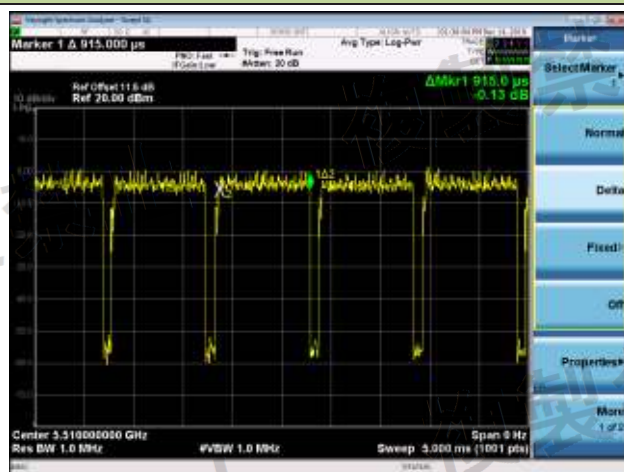
5270MHz



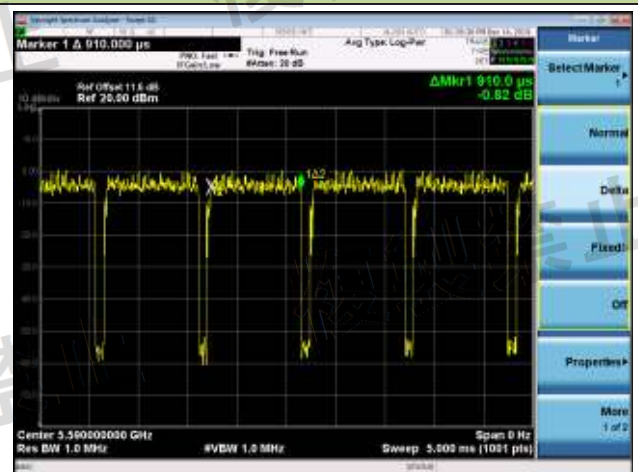
5310MHz



5510MHz



5590MHz

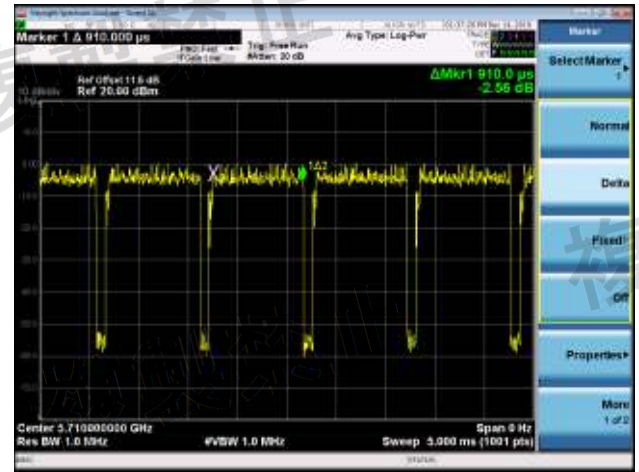
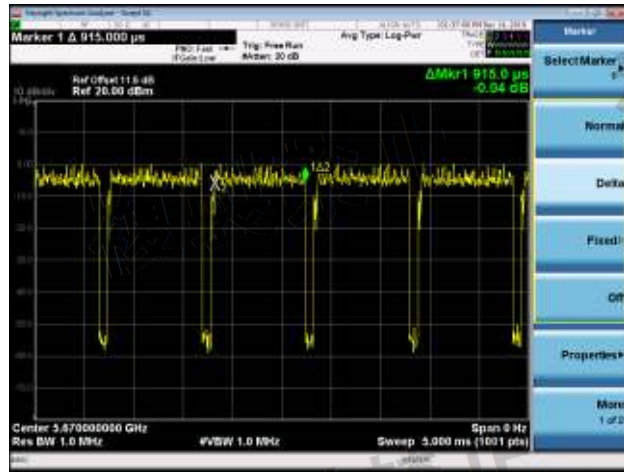


Transmission burst length - Ant 1 / Ant 1 + 2

802.11ac-VHT40

5670MHz

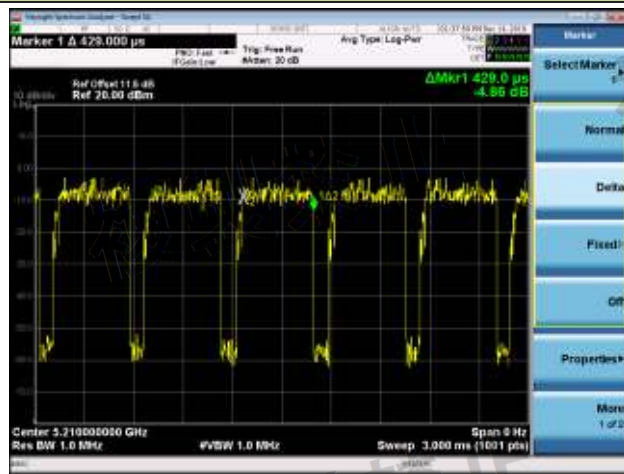
5710MHz



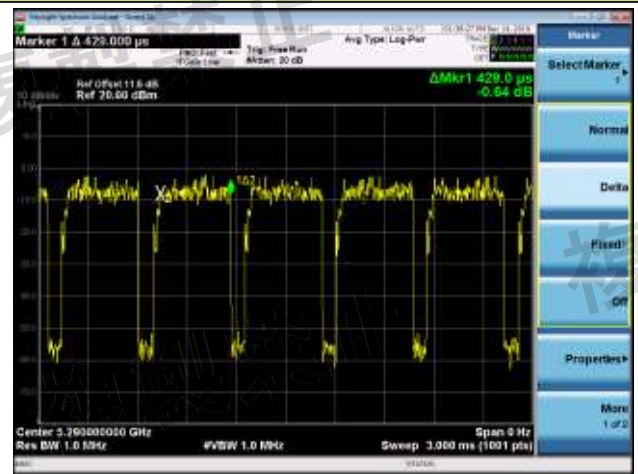
Transmission burst length - Ant 1 / Ant 1 + 2

802.11ac-VHT80

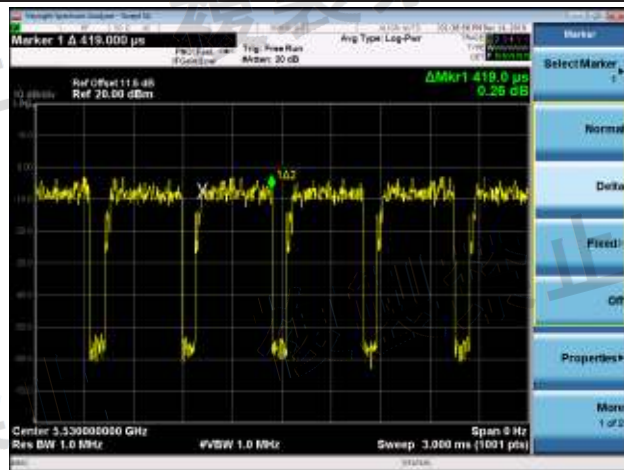
5210MHz



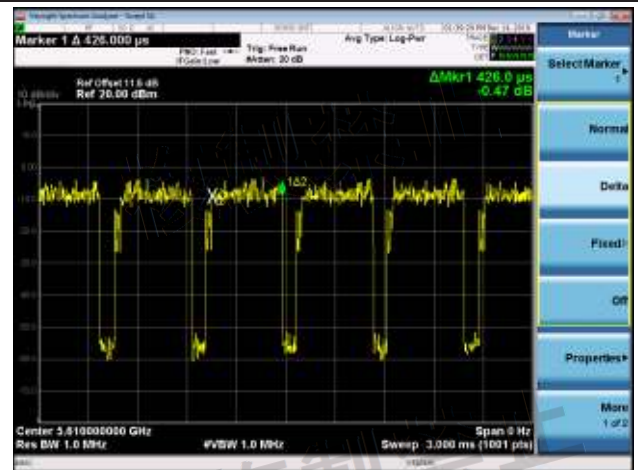
5290MHz



5530MHz



5610MHz



5690MHz



6. CONCLUSION

The data collected relate only the item(s) tested and show that the unit is compliance with MIC.

Notice No.88 Annex45.

The End



Appendix A - EUT Photograph

Refer to "1911RSU052-JE" file.