



Radio Test Report

Report No.: STS2607131W01

Issued for

株式会社アイシン

AISIN CORPORATION

〒448-8650 愛知県刈谷市朝日町二丁目 1 番地
2-1, Asahi-machi, Kariya, Aichi, 448-8650 JAPAN

Product Name: 車両通信インターフェース
Vehicle Communication Interface

Brand Name: N/A

Model Name: VCIAZ-9001

Series Model(s): N/A

Test Standards: Article 2 Paragraph 1 of Item 19-3
Notice No.88 Appendix No.45

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the ShenZhen STS Test Services Co., Ltd.



TEST REPORT

Applicant's Name 株式会社アイシン
AISIN CORPORATION
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2-1, Asahi-machi, Kariya, Aichi, 448-8650 JAPAN

Manufacturer's Name 株式会社アイシン
AISIN CORPORATION
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2-1, Asahi-machi, Kariya, Aichi, 448-8650 JAPAN

Test Specification:

Standard Article 2 Paragraph 1 of Item 19-3

Product Description

Product Name 車両通信インターフェース
Vehicle Communication Interface

Brand Name N/A

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Testing

Date of receipt of test item 18 Mar. 2026

Date (s) of performance of tests 18 Mar. 2026 ~ 16 Apr. 2026

Date of Issue 23 July 2026

Test Result **Pass**

Testing Engineer : Aaron Bu.

(Aaron Bu)

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(Bovey Yang)





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**Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	16 Apr. 2026	STS2603147W01	ALL	Initial Issue
01	23 July 2026	STS2607131W01	ALL	Update the applicant, manufacturer, product name, models, appearance and brand



1. SUMMARY OF TEST RESULTS

Ordinance Regulating Radio Equipment	Description of Test	Remark
Article 5	Frequency Error	PASS
Article 6	Occupied Bandwidth (99%)	PASS
Article 7	Unwanted Emission Intensity	PASS
Article 14	Antenna Power Error	PASS
Article 24.2	Limitation of Collateral Emission of Receiver	PASS
Article 49-20	High Frequency/modulation section cannot be opened easily	PASS
Article 49-20	Communication Method	PASS
Article 49-20	Modulation method	PASS
Article 49-20	Signal transmission rate	PASS
Article 49-20	Burst Length	PASS
Article 49-20	Isotropically radiated power	PASS
Article 49-20	Adjacent channel power tolerance	PASS
Article 5	Interference prevention function	PASS
Article 6	Carrier sense capability	PASS
Article 7	Number of carrier	PASS
Article 49-20	Dynamic Frequency Selection	N/A

NOTE:

- (1) "N/A" denotes test is not applicable in this test report.
- (2) Article 2 Paragraph 1 of Item 19-3.
- (3) This device has more than 1 subcarrier in 1MHz, compliances with the requirement.
- (4) This device has does not support hotspots and DFS not applicable.



1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add.: 101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 0.751\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.888\text{dB}$
3	Frequency tolerance	$\pm 0.03\text{ppm}$
4	Occupied Bandwidth	$\pm 3.6\%$
5	Transmission Burst Length	$\pm 0.7\%$
6	Adjacent channel Emitted	$\pm 0.5\text{dB}$



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	車両通信インターフェース Vehicle Communication Interface	
Brand Name	N/A	
Model Name	VCIAZ-9001	
Series Model(s)	N/A	
Serial model describing	N/A	
Product Description	Operation Frequency:	5.2G WLAN: 802.11a/n/ac/ax (20MHz): 5180~5240MHz 802.11n /ac/ax(40MHz):5190~5230MHz 802.11ac/ax (80MHz):5210MHz 5.3G WLAN: 802.11a/n/ac/ax (20MHz): 5260~5320MHz 802.11n /ac/ax(40MHz):5270~5310MHz 802.11ac/ax (80MHz):5290MHz 5.6G WLAN: 802.11a/n/ac/ax (20MHz): 5500~5720MHz 802.11n /ac/ax(40MHz):5510~5710MHz 802.11ac/ax (80MHz):5530~5690MHz
	Modulation Type:	802.11a(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11ac(OFDM): BPSK,QPSK,16-QAM,64-QAM,256-QAM 802.11ax(OFDM, OFDMA): BPSK,QPSK,16-QAM,64-QAM,256-QAM, 1024QAM
	Antenna Gain	ANT1:3.19 dBi ANT2: 2.76 dBi
	Based on the application, features, or specification exhibited in User Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User Manual.	
Rating	Input: 8-36VDC (powered by 12V or 24V car battery), ≤1A	
Adapter	N/A	
Battery	N/A	
Channel List	Please refer to the Note 1.	
Hardware version	V16	
Software version	N/A	



1.

Channel List for 802.11a/n/ac/ax							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	40	5200	44	5220	48	5240
52	5260	56	5280	60	5300	64	5320
100	5500	104	5520	108	5540	112	5560
116	5580	120	5600	124	5620	128	5640
132	5660	136	5680	140	5700	144	5720

Channel List for 802.11n/ac/ax							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230	54	5270	62	5310
102	5510	110	5550	118	5590	126	5630
134	5670	142	5710	--	--	--	--

Channel List for 802.11ac/ax							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	58	5290	106	5530	122	5610
138	5690						

Note:

Regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Carrier Frequency Channel:

Channel List for 802.11a/n/ac/ax(20MHz)		
Frequency Band	EUT Channel	Test Frequency (MHz)
U-NII-1	CH36	5180
U-NII-1	CH40	5200
U-NII-1	CH48	5240
U-NII-2A	CH52	5260
U-NII-2A	CH60	5300
U-NII-2A	CH64	5320
U-NII-2C	CH100	5500
U-NII-2C	CH120	5600
U-NII-2C	CH144	5720



Channel List for 802.11 n/ac/ax (40MHz)		
Frequency Band	EUT Channel	Test Frequency (MHz)
U-NII-1	CH 38	5190
U-NII-1	CH46	5230
U-NII-2A	CH 54	5270
U-NII-2A	CH62	5310
U-NII-2C	CH102	5510
U-NII-2C	CH118	5590
U-NII-2C	CH142	5710

Channel List for 802.11ac/ax (80MHz)		
Frequency Band	EUT Channel	Test Frequency (MHz)
U-NII-1	CH 42	5210
U-NII-2A	CH58	5290
U-NII-2C	CH106	5530
U-NII-2C	CH122	5610
U-NII-2C	CH138	5690

2.

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
A	TOXU	KC.IA.00702 KC.IA.00703	FPC	N/A	ANT1:3.19 ANT2: 2.76	WIFI Antenna



2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Worst Mode	Description	Data Rate
Mode 1	TX IEEE 802.11a HT20 CH36&CH40&CH48	6 Mbps
Mode 2	TX IEEE 802.11a HT20 CH52&CH60&CH64	6 Mbps
Mode 3	TX IEEE 802.11a HT20 CH100&CH120&CH144	6 Mbps
Mode 4	TX IEEE 802.11n HT20 CH36&CH40&CH48	MCS 0
Mode 5	TX IEEE 802.11ac VHT20 CH36&CH40&CH48	NSS1 MCS0
Mode 6	TX IEEE 802.11n HT20 CH52&CH60&CH64	MCS 0
Mode 7	TX IEEE 802.11ac VHT20 CH52&CH60&CH64	NSS1 MCS0
Mode 8	TX IEEE 802.11n HT20 CH100&CH120&CH144	MCS 0
Mode 9	TX IEEE 802.11ac VHT20 CH100&CH120&CH144	NSS1 MCS0
Mode 10	TX IEEE 802.11ax HE20 CH36&CH40&CH48	NSS1 MCS0
Mode 11	TX IEEE 802.11ax HE20 CH52&CH60&CH64	NSS1 MCS0
Mode 12	TX IEEE 802.11ax HE20 CH100&CH120&CH144	NSS1 MCS0
Mode 13	TX IEEE 802.11n HT40 CH38&CH46	MCS 0
Mode 14	TX IEEE 802.11ac VHT40 CH38&CH46	NSS1 MCS0
Mode 15	TX IEEE 802.11n VHT40 CH54 &CH62	MCS 0
Mode 16	TX IEEE 802.11ac VHT40 CH54 &CH62	NSS1 MCS0
Mode 17	TX IEEE 802.11n HT40 CH102&CH118&CH142	MCS 0
Mode 18	TX IEEE 802.11ac VHT40 CH102&CH118&CH142	NSS1 MCS0
Mode 19	TX IEEE 802.11ax HE40 CH38&CH46	NSS1 MCS0
Mode 20	TX IEEE 802.11ax HE40 CH54 &CH62	NSS1 MCS0
Mode 21	TX IEEE 802.11ax HE40 CH102&CH118&CH142	NSS1 MCS0
Mode 22	TX IEEE 802.11ac VHT80 CH42	NSS1 MCS0
Mode 23	TX IEEE 802.11ac VHT80 CH58	NSS1 MCS0
Mode 24	TX IEEE 802.11ac VHT80 CH106&122&CH138	NSS1 MCS0
Mode 25	TX IEEE 802.11ax HE80 CH42	NSS1 MCS0
Mode 26	TX IEEE 802.11ax HE80 CH58	NSS1 MCS0
Mode 27	TX IEEE 802.11ax HE80 CH106&CH122&CH138	NSS1 MCS0

Note: The 802.11ax only support full RU.



2.3 TABLE FOR PARAMETERS OF THE TEST SOFTWARE SETTING

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. the RF output power selection is for the setting of RF output power expected by the customer and going to be fixed on the firmware of the final end product.

RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_1 Power Class	ANT_2 Power Class	Software For Testing
WIFI(5G)	U-NII-1 (5150MHz-5250MHz)	802.11a	ANT1:3.19 ANT2: 2.76	12	12	CMD
		802.11n(HT20)		9	9	
		802.11n(HT40)		9	9	
		802.11ac(VHT20)		9	9	
		802.11ac(VHT40)		9	9	
		802.11ac(VHT80)		11	11	
		802.11ax(HE20)		8	8	
		802.11ax(HE40)		8	8	
		802.11ax(HE80)		8	8	
RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_1 Power Class	ANT_2 Power Class	Software For Testing
WIFI(5G)	U-NII-2A (5250MHz-5350MHz)	802.11a	ANT1:3.19 ANT2: 2.76	9	9	CMD
		802.11n(HT20)		7	7	
		802.11n(HT40)		7	7	
		802.11ac(VHT20)		7	7	
		802.11ac(VHT40)		7	7	
		802.11ac(VHT80)		8	8	
		802.11ax(HE20)		6	6	
		802.11ax(HE40)		6	6	
		802.11ax(HE80)		6	6	
RF Function	Type	Mode Or Modulation type	ANT Gain(dBi)	ANT_1 Power Class	ANT_2 Power Class	Software For Testing
WIFI(5G)	U-NII-2C (5470MHz-5725MHz)	802.11a	ANT1:3.19 ANT2: 2.76	14	14	CMD
		802.11n(HT20)		10	10	
		802.11n(HT40)		10	10	
		802.11ac(VHT20)		10	10	
		802.11ac(VHT40)		10	10	
		802.11ac(VHT80)		10	10	
		802.11ax(HE20)		10	10	
		802.11ax(HE40)		10	10	
		802.11ax(HE80)		10	10	



2.4 TEST CONDITIONS

The WIFI module was tested while in a continuous transmitter/receiver mode.

The EUT was tuned to a low, middle, and high channel for all tests. For all test case pre/scans were completed in all Modes to determine worst case levels.

During the measurement the environmental conditions were within the listed ranges:

- Temperature: 22°C
- Humidity: 52%
- Atmospheric pressure: 93 kpa

Power Supply Voltage Fluctuation Test

Voltage Fluctuation Test	Normal Voltage	High Voltage +10% of Normal Voltage	Low Voltage -10% of Normal Voltage
Input DC Power(V)	8-36	39.6	7.2
RF Chip Input DC Power(V)	3.211	3.225	3.204
Voltage Variation (%)	/	0.44	-0.22

Note:

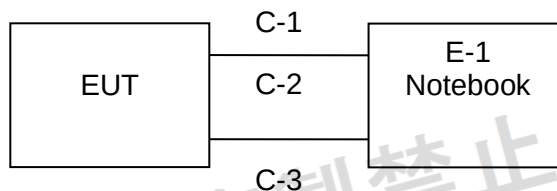
1. Voltage Variation (%)

= (RF chip Input high or Low Voltage - RF chip Input Normal Voltage)/ RF chip Input Normal Voltage* 100

2. RF chip Input DC power fluctuation is verified at the power input PIN of the RF chip.

When the input supply voltage to the EUT from the external power source is varied by +/- 10%, the output voltage had been confirmed that the fluctuation of power supply to the RF circuit of EUT (excluding power source) is equal to or less than +/-1%, and the DC power fluctuation at the power input PIN of the RF chip is equal to or less than +/-1%.Exempt extremely high and low supply voltage condition tests, EUT only operated in normal voltage to test all regulations.

2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED





2.6 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

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	Equipment	Mfr/Brand	Model/Type No.	Note
E-1	Notebook	DELL	Inspiron 3501	N/A
C-1	Serial port board	XES	WTYZK	N/A
C-2	USB Cable	MI	RYEW3A	N/A
C-3	USB Cable	ZTC	NB-A515A	N/A

Item	Equipment	Mfr/Brand	Length	Note
C-2	Shielded	NO	150cm	N/A
C-3	Shielded	NO	150cm	N/A

Note:1. For detachable type I/O cable should be specified the length in cm in 『Length』 column.



2.7 EQUIPMENTS LIST

RF Connected Test Equipment					
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Signal Generator	Keysight	N5182B	MY57301448	2025.09.26	2026.09.25
Signal Analyzer	Agilent	N9020A	MY51510623	2026.02.04	2027.02.03
Temperature & Humidity	SW-108	SuWei	N/A	2026.02.04	2027.02.03
Digital Oscilloscope	Tektronix	TDS1012B	C062149	2025.09.22	2026.09.21
Power Sensor	Keysight	U2021XA	MY56120038	2025.09.25	2026.09.24
Power Divider	eastsheep	PD-0.5/0.6-2S	B519	2026.02.24	2027.02.23
Attenuator	Agilent	8494B	DC-18G	2026.02.24	2027.02.23
DC power supply	HONGSHENG FENG	DPS-305AF	17064939	2025.09.22	2026.09.21
Switch control box	MW	MW100-RFCB	N/A	N/A	N/A
Test SW	MW	MTS 8310_2.0.0.0			

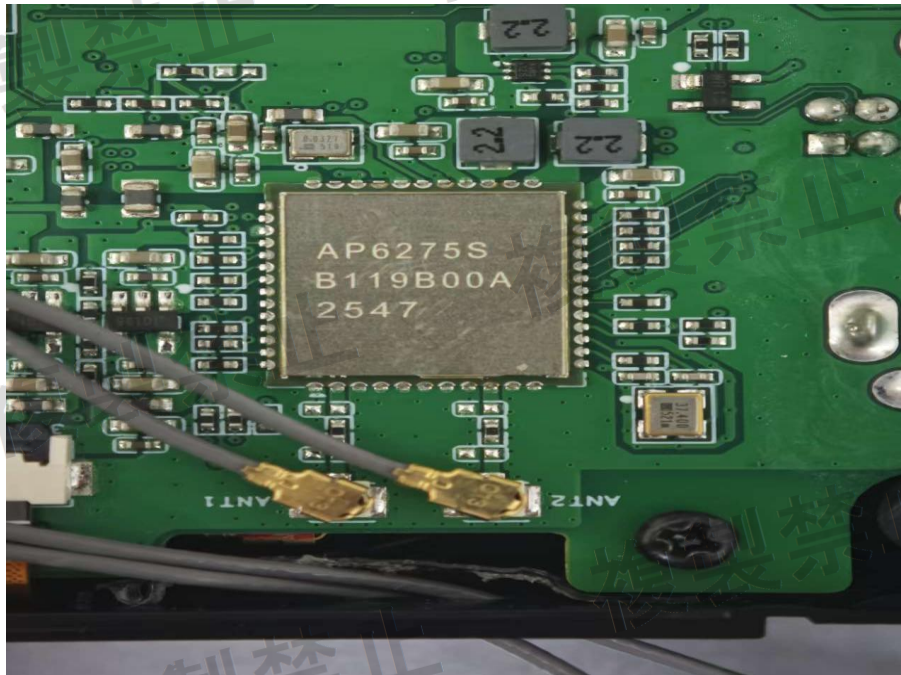
Test Equipment Calibration

All of the test equipment is effective use and calibration certification institution, GRGT, the address is No.8 Chuangyun Rd,Panyu District,Guangzhou,Guangdong,China

Note: The calibration agency listed on the table corresponds to item ii c) of Article 24-2 paragraph 4.

3. CONSTRUCTION PROTECTION CONFIRMATION

Our products apply for Japanese radio frequency (rf) certification. The high-frequency section and modulation section use SMT technology, not easy to change. We use the following methods to prevent unauthorized access and modification of RF and modulation parts. This wireless module uses a shielding cover to prevent users from disassembling and modifying it. For more information, see the following photo.



4. FREQUENCY ERROR

4.1 LIMIT

Item	Limits
Frequency Error	$\pm 20\text{ppm}$

4.2 TEST PROCEDURES

The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
RB / VB	10KHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

(1) In the case of unmodulated signal (continuous or continuous burst), measure the frequency directly by a spectrum analyzer.

(2) In the case of burst waves, the measurement shall be done for enough time in order to obtain the enough measuring accuracy, and the average of the measured values becomes the final value.

(3) In the case of a test mode with a specific frequency spectrum, measure the frequency of the specific spectrum by a spectrum analyzer.

(4) In the cases above, if the frequency equivalent to the test frequency is not directly measured in principle, it shall be obtained by necessary calculation.

In the case of modulated signal, if there is no specific spectrum measurable by a spectrum analyzer but a specific dip is observed, it is allowed to measure the frequency with the signal generator (synthesized). That is, observe a signal of the signal generator concurrently (or alternately) with the tested signal using the spectrum analyzer while setting the frequency of the signal generator to the position of the dip on the screen of the spectrum analyzer, and determine the frequency of the signal generator at the time as a measured value.

4.3 TEST SETUP



4.4 EUT OPERATION DURING TEST

The EUT was placed on the test table and programmed in un-modulation function.

4.5 TEST RESULT

Note: The test data please reference to attachment "STS2607131W01 _Appendix 5G WIFI".

5. ANTENNA POWER

5.1 LIMIT

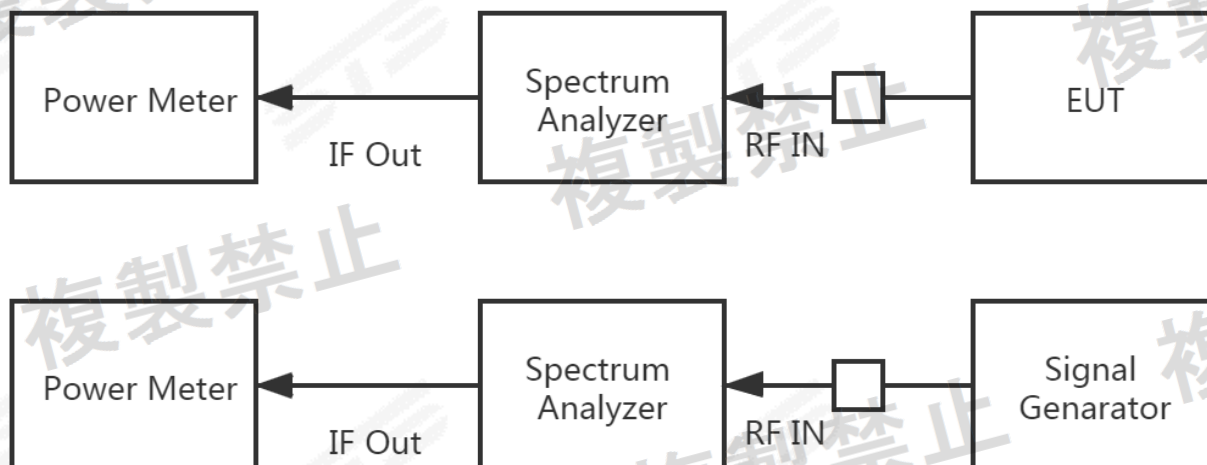
Item	Operation Band	Limits		
		20MHz system	40MHz system	80MHz system
Antenna Power	W52/W53	10mW/MHz or less	5mW/MHz or less	2.5mW/MHz or less
	W56	10mW/MHz or less	5mW/MHz or less	2.5mW/MHz or less
Radiation Power EIRP	W52	10mW/MHz or less	5mW/MHz or less	2.5mW/MHz or less
	W53	10mW/MHz or less:with TPC 5mW/MHz or less:without TPC	5mW/MHz or less:with TPC 2.5mW/MHz or less:without TPC	2.5mW/MHz or less:with TPC 1.25mW/MHz or less:without TPC
	W56	50mW/MHz or less:with TPC 25mW/MHz or less:without TPC	25mW/MHz or less:with TPC 12.5mW/MHz or less:without TPC	12.5mW/MHz or less:with TPC 6.25mW/MHz or less:without TPC
Antenna Power Error	W52/W53	+20%, -80% (Base on manufacturer declare Antenna power density)		
	W56	+50%, -50% (Base on manufacturer declare Antenna power density)		

5.2 TEST PROCEDURE

1. A power meter is connected on the IF output port of the spectrum analyzer.
2. EUT turn to test frequency channel and keep continuous transmitting.
3. Connected the equipment to be measured. Using the following settings of the spectrum analyzer in combination with "max hold" function, find the frequency of highest power output in the power envelope: center frequency equal to operation frequency; RBW & VBW: 1 MHz; detector mode: positive peak; averGaing: off; span: 3 times the spectrum width; amplitude: adjust for middle of the instrument' range.
4. Reading the output power from the Power meter as PEUT.
5. Turn the Signal generator to frequency channel the same as the EUT.
6. Using the following settings of the spectrum analyzer in combination with "max hold" function, find the frequency of highest power output in the power envelope: center frequency equal to operation frequency; RBW & VBW: 1 MHz; detector mode: positive peak; averGaing: off; span: 3 times the spectrum width; amplitude: adjust for middle of the instrument' range.
7. Turn the level of Signal generator, scan with the power meter until the power equal to PEUT, the level of Signal generator recorded as "P"
8. The antenna power of EUT is "P".
9. EIRP power="P"+antenna gain.



5.3 TEST SETUP



5.4 TEST DEVIATION

There is no deviation with the original standard.

5.5 TEST RESULT

Note: The test data please reference to attachment “STS2607131W01 _Appendix 5G WIFI”.



6. OCCUPIED BANDWITH

6.1 LIMIT

Item	Operation Band	Limits		
		20MHz system	40MHz system	80MHz system
Occupied BandWidth:	W52	$\leq 20\text{MHz}$	$\leq 40\text{MHz}$	$\leq 80\text{MHz}$
	W53	$\leq 20\text{MHz}$	$\leq 40\text{MHz}$	$\leq 80\text{MHz}$
	W56	$\leq 20\text{MHz}$	$\leq 40\text{MHz}$	$\leq 80\text{MHz}$

6.2 TEST PROCEDURES

- Setting of SA is following as: RB: 300KHz / VB:300KHz / SPAN: 40/80/160MHz
Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold.
- EUT have transmitted the maximum modulation signal and fixed channelize (For DSSS or OFDM Device) or continuous maximum power of hopping mode(For FHSS Device).
SA set to 99% of occupied bandwidth to measure occupied bandwidth.



6.3 TEST DEVIATION

There is no deviation with the original standard.

6.4 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

6.5 TEST RESULT

Note: The test data please reference to attachment "STS2607131W01 _Appendix 5G WIFI".



7. UNWANTED EMISSION STRENGTH

7.1 LIMIT

	Bandwidth(MHz)		Measured Frequency Range	Limit
W52	20	OBW≤18MHz	5142.0 MHz or less	2.5 μW/MHz
			5142.0 ~ 5150.0 MHz	15.0 μW/MHz
			5250.0 ~ 5251.0 MHz	$10.0^{1-(f-9)}$ mW/MHz
			5251.0 ~ 5260.0 MHz	$10.0^{1-(8/90)(f-11)}$ mW/MHz
			5260.0 ~ 5266.7 MHz	$10.0^{1.8-(6/50)(f-20)}$ mW/MHz
			5266.7 MHz or more	2.5 μW/MHz
		OBW:18-20M Hz	5142.0 MHz or less	2.5 μW/MHz
			5142.0 ~ 5150.0 MHz	15.0 μW/MHz
			5250.0 ~ 5250.2 MHz	$10^{1-(8/3)(f-9.75)}$ mW/MHz
			5250.2 ~ 5251.0 MHz	$10.0^{1-(f-9)}$ mW/MHz
			5251.0 ~ 5260.0 MHz	$10.0^{1-(8/90)(f-11)}$ mW/MHz
			5260.0 ~ 5266.7 MHz	$10.0^{1.8-(6/50)(f-20)}$ mW/MHz
			5266.7 MHz or more	2.5 μW/MHz
	40		5141.6 MHz or less	2.5 μW/MHz
			5141.6 ~ 5150.0 MHz	15.0 μW/MHz
			5250.0 ~ 5251.0 MHz	$10.0^{-(f-20)+\log(1/2)}$ mW/MHz
			5251.0 ~ 5270.0 MHz	$10.0^{-(8/190)(f-21)-1+\log(1/2)}$ mW/MHz
			5270.0 ~ 5278.4 MHz	$10.0^{-(3/50)(f-40)-1.8+\log(1/2)}$ mW/MHz
			5278.4 MHz or more	2.5 μW/MHz
	80		5123.2 MHz or less	2.5 μW/MHz
			5,123.2 - 5,150 MHz	15.0 μW/MHz
			5,250 - 5,251 MHz	$10.0^{-(f-40)+\log(1/4)}$ mW/MHz
			5,251 - 5,290 MHz	$10.0^{-(8/390)(f-41)-1+\log(1/4)}$ mW/MHz
			5,290 - 5,296.7 MHz	$10.0^{-(3/100)(f-80)-1.8+\log(1/4)}$ mW/MHz
			5296.7 MHz or more	2.5 μW/MHz



	Bandwidth(MHz)	Measured Frequency Range	Limit
W53	20	5233.3 MHz or less	2.5 μ W/MHz
		5233.3 ~ 5240.0 MHz	$10.0^{-1.8-(6/50)(f-20)}$ mW/MHz
		5240.0 ~ 5249.0 MHz	$10.0^{-1-(8/90)(f-11)}$ mW/MHz
		5249.0 ~ 5250.0 MHz	$10.0^{1-(f-9)}$ mW/MHz
		5350.0 MHz or more	2.5 μ W/MHz
	OBW:18-20MHz	5233.3 MHz or less	2.5 μ W/MHz
		5233.3 ~ 5240.0 MHz	$10.0^{-1.8-(6/50)(f-20)}$ mW/MHz
		5240.0 ~ 5249.0 MHz	$10.0^{-1-(8/90)(f-11)}$ mW/MHz
		5249.0 ~ 5249.8 MHz	$10.0^{1-(f-9)}$ mW/MHz
		5249.8 ~ 5250.0 MHz	$10^{1-(8/3)(f-9.75)}$ mW/MHz
		5350.0 MHz or more	2.5 μ W/MHz
	40	5221.6 MHz or less	2.5 μ W/MHz
		5221.6 ~ 5230.0 MHz	$10.0^{-(3/50)(f-40)-1.8+\log(1/2)}$ mW/MHz
		5230.0 ~ 5249.0 MHz	$10.0^{-(8/190)(f-21)-1+\log(1/2)}$ mW/MHz
		5249.0 ~ 5250.0 MHz	$10.0^{-(f-20)+\log(1/2)}$ mW/MHz
		5350.0 ~ 5358.4 MHz	15 μ W/MHz
		5358.4 MHz or more	2.5 μ W/MHz
	80	5203.3 MHz or less	2.5 μ W/MHz
		5203.3 ~ 5210.0 MHz	$10.0^{-(3/100)(f-80)-1.8+\log(1/4)}$ mW/MHz
		5210.0 ~ 5249.0 MHz	$10.0^{-(8/390)(f-41)-1+\log(1/4)}$ mW/MHz
		5249.0 ~ 5250.0 MHz	$10.0^{-(f-40)+\log(1/4)}$ mW/MHz
		5350.0 ~ 5376.8 MHz	15 μ W/MHz
		5376.8 MHz or more	2.5 μ W/MHz

	Bandwidth(MHz)	Measured Frequency Range	Limit
W56	20	5460 MHz or less	2.5 μ W/MHz
		5460.0 ~ 5470.0 MHz	12.5 μ W/MHz
		5745.0 ~ 5765.0 MHz	12.5 μ W/MHz
		Over 5765 MHz	2.5 μ W/MHz
	40	5460 MHz or less	12.5 μ W/MHz
		5460.0 ~ 5470.0 MHz	50 μ W/MHz
		5770 MHz or more	12.5 μ W/MHz
	80	5460 MHz or less	12.5 μ W/MHz
		5460.0 ~ 5469.5 MHz	50 μ W/MHz
		5469.5 ~ 5470.0 MHz	51.2 μ W/MHz
		5770 MHz or more	12.5 μ W/MHz

7.2 TEST PROCEDURES

The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
RB / VB	1MHz /1MHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

1. EUT have transmitted the maximum modulation signal and fixed channelize.
2. Setting of SA is following as: RB: 1MHz ,VB: 1MHz Sweep time: Auto Sweep Mode: Continuous sweep / Detect mode: Positive peak/ Trace mode: Max hold
3. Setting the frequency, then to mark peak reading value + cable loss shall be less section 7.1.

7.3 TEST SETUP



7.4 TEST DEVIATION

There is no deviation with the original standard.

7.5 TEST RESULT

Note: 1. Input compensation coefficient (dB) = Cable Loss (dB)+Gain (dBi)

2.The test data please reference to attachment “STS2607131W01 _Appendix 5G WIFI”.

8. SECONDARY RADIATED EMISSIONS

8.1 LIMIT

Item	Operation band	Limits	
RX Spurious Emission:	W52/W53	20MHz system	$\leq 4\text{nW}$ ($f \leq 1\text{GHz}$) $\leq 20\text{nW}$ ($1\text{GHz} \leq f \leq 26.5\text{GHz}$)
		40MHz system	
		80MHz system	
	W56	20MHz system	
		40MHz system	
		80MHz system	

8.2 TEST PROCEDURES

The following table is the setting of Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
RB	100 kHz (below 1GHz emissions) 1 MHz (above 1GHz emissions)
VB	100 kHz (below 1GHz emissions) 1 MHz (above 1GHz emissions)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

- EUT have the continuous reception mode and fixed only one channelize.
- Setting of SA is following as RB / VB: 100 kHz (below 1GHz emissions) / 1 MHz, (above 1GHz emissions) / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
- SA set RB: 100kHz and VB: 100kHz. Then adjust to start frequency 30MHz and stop frequency 1000MHz. Search to mark peak reading value + cable loss shall be less than 4nW.
- SA set RB: 1MHz and VB: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 26500MHz. Search to mark peak reading value + cable loss shall be less than 20nW.
- If power level of lower emissions are more than 1/10 of limit (.0.4nW for $f < 1\text{GHz}$, 2nW for $f \geq 1\text{GHz}$), 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.



8.3 TEST SETUP



8.4 TEST RESULT

Note: The test data please reference to attachment “STS2607131W01 _Appendix 5G WIFI”.

9. RADIO INTERFERENCE PREVENTION CAPABILITY MEASUREMENT

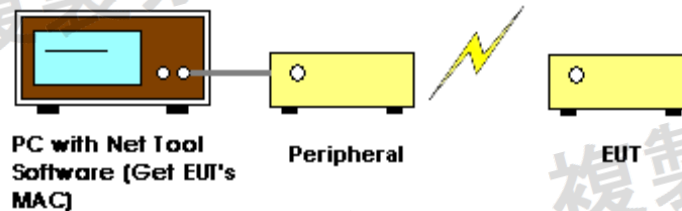
9.1 LIMIT

Item	Limits
Identification code	≥ 19 bits

9.2 TEST PROCEDURES

1. In the case that the EUT has the function of automatically transmitting the identification code:
 - a. Transmit the predetermined identification codes form EUT.
 - b. Check the transmitted identification codes with the demodulator.
2. In the case of receiving the identification ocde:
 - a. Transmit the predetermined identification codes form the counterpart.
 - b. Check if communication is normal.
 - c. Transmit the signals other than predetermined ID codes form the counterpart.
 - d. check if the EUT stops the transmission, or if it displays that idnetification codes are different from the predetermined ones

9.3 TEST SETUP



9.4 TEST DEVIATION

There is no deviation with the original standard.

9.5 EUT OPERATION DURING TEST

The EUT was programmed to be in normal transmitting mode.



9.6 TEST RESULT OF RADIO INTERFERENCE PREVENTION CAPABILIT

Note: The MAC Address is 78:E1:67:07:B5:3F

10. CARRIER SENSE CAPABILITY

10.1 INTERFERENCE PREVENTION FUNCTION

10.2 TEST REQUIREMENT

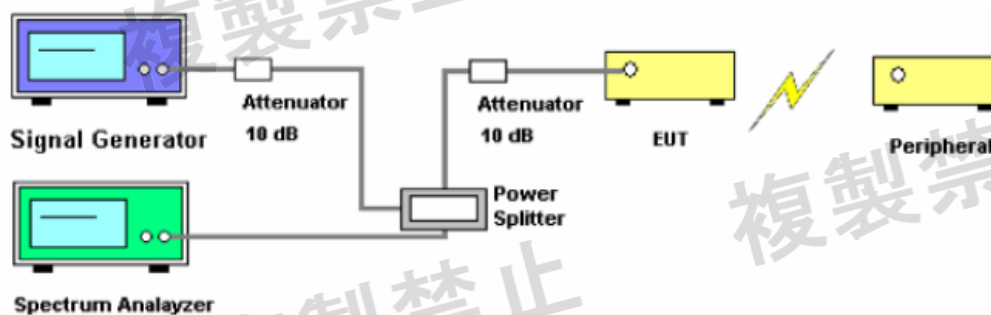
MIC Notice No.88 Appendix No.45

Article 2, Paragraph 1, Item 19-3 Rules

10.3 TEST PROCEDURE

1. SG adjusted the frequency as same as the EUT transmitted signal and emitted the absence of modulation from SG and power level is (Equal to the value of the electric field strength to 100mV / m).
2. Turn off the RF signal of the SG.
3. EUT have transmitted the maximum modulation signal and fixed channelize.
4. Setting of SA :RBW/VBW=1MHz/1MHz,,Sweep time=auto,Sweep mode=continuous, Detect mode=positive peak
5. SG RF signal on.
6. EUT shall be stop the transmitted any signal and SG RF signal off, the EUT will be continuous

❖ Measurement System Diagram



❖ Conditions of Application Equipment (EUT)

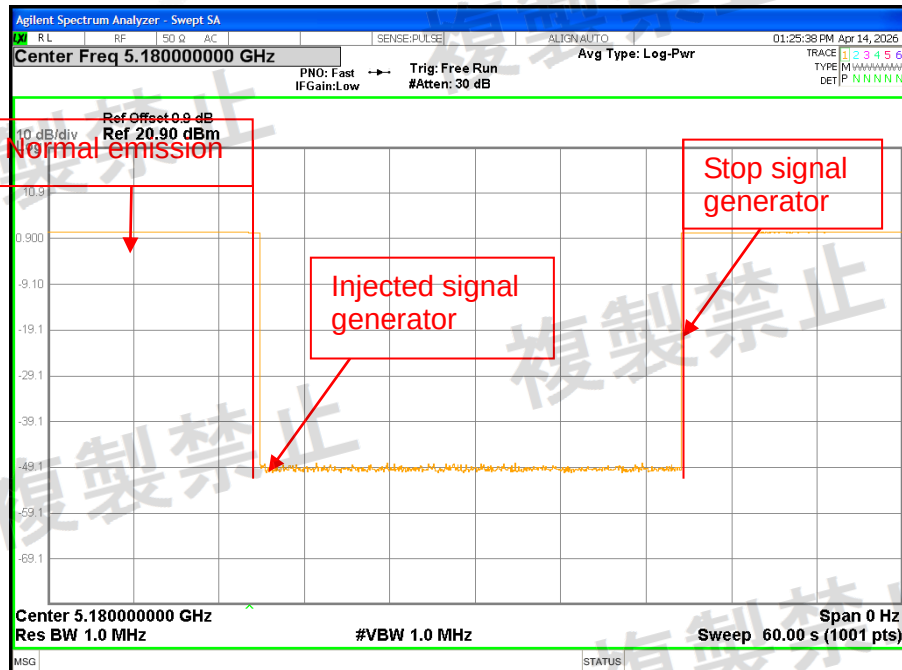
- The EUT state shall be "normal mode link with wireless router".



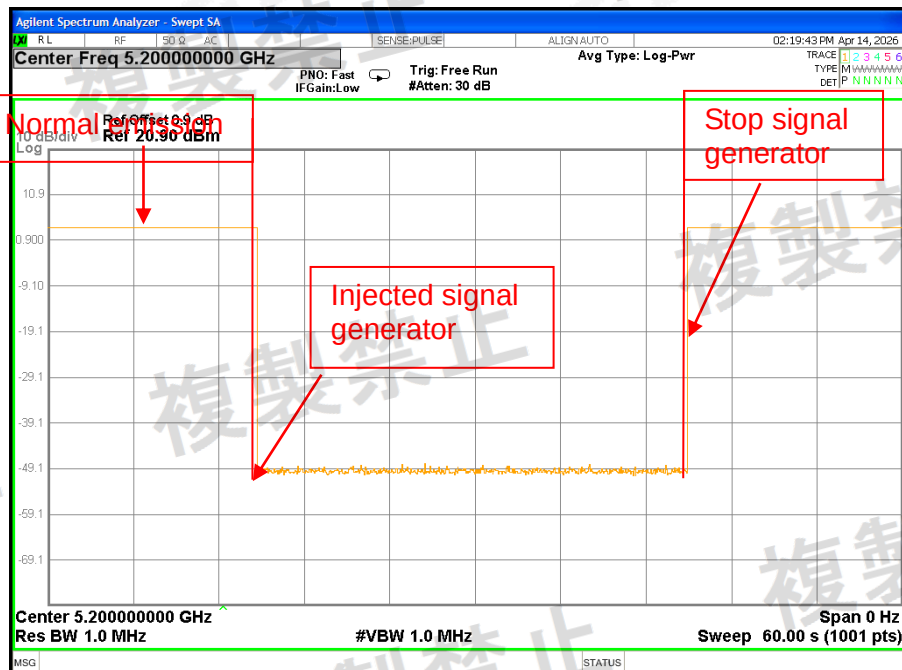
10.4 TEST RESULT

ANT 1
W52

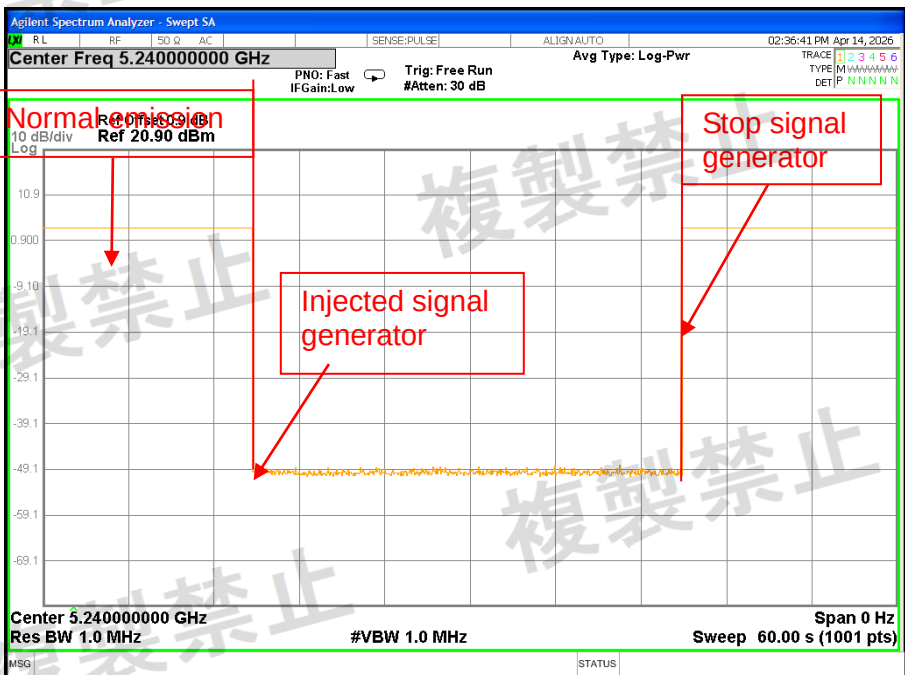
Channel 36 TX- 11a Mode



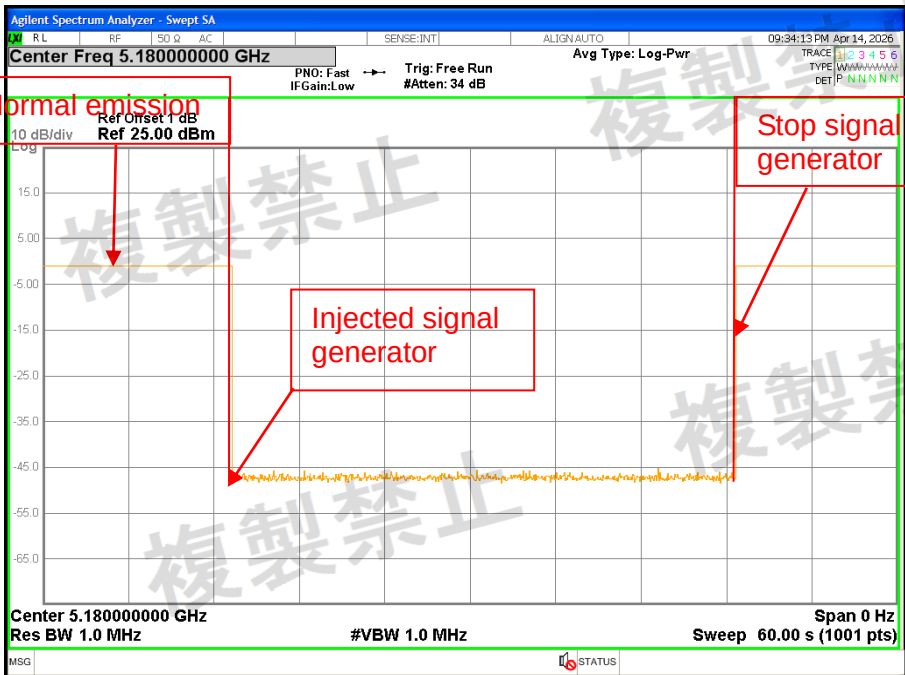
Channel 40 TX- 11a Mode



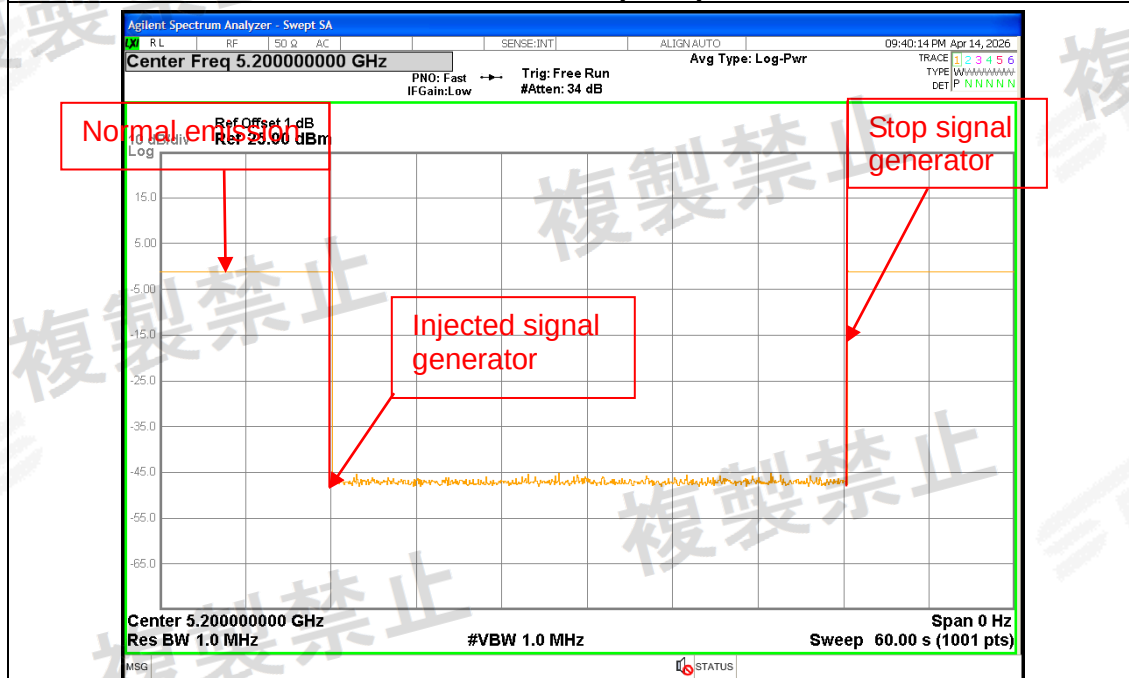
Channel 48 TX- 11a Mode



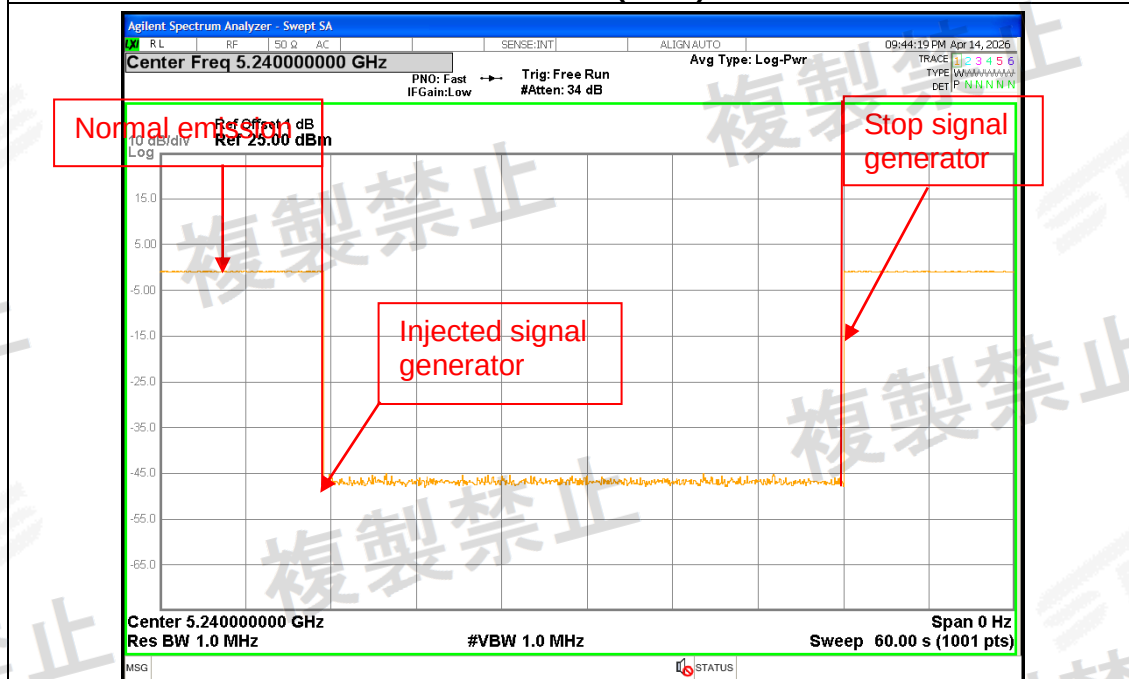
Channel 36TX- 11n(HT20) Mode



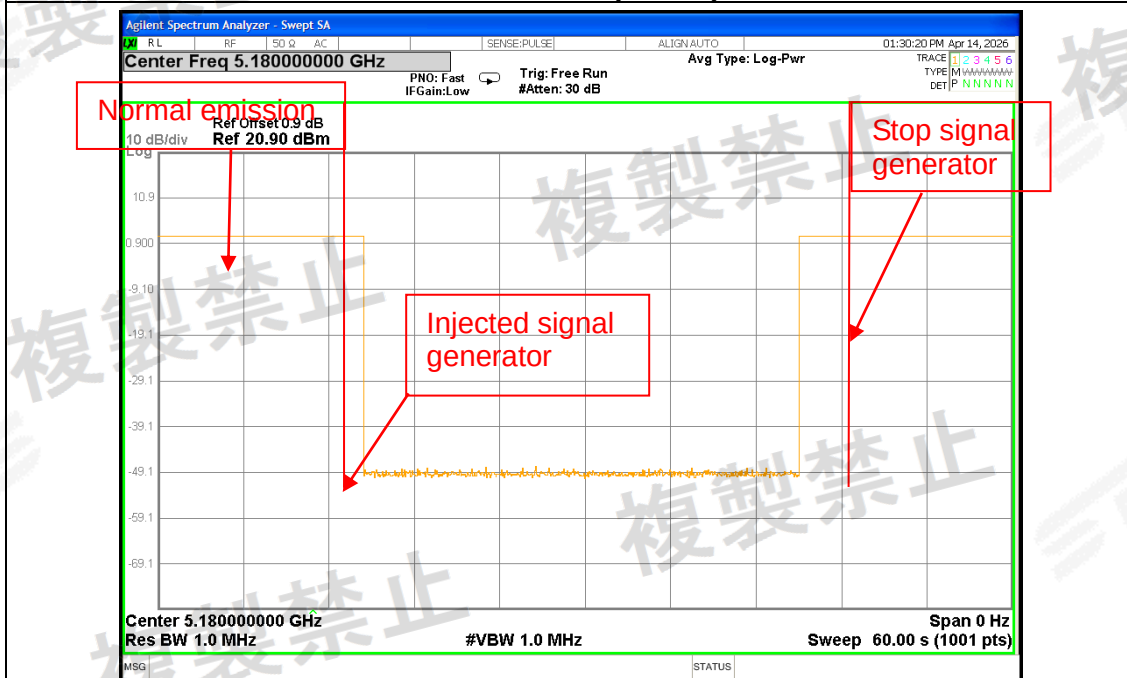
Channel 40TX- 11n(HT20) Mode



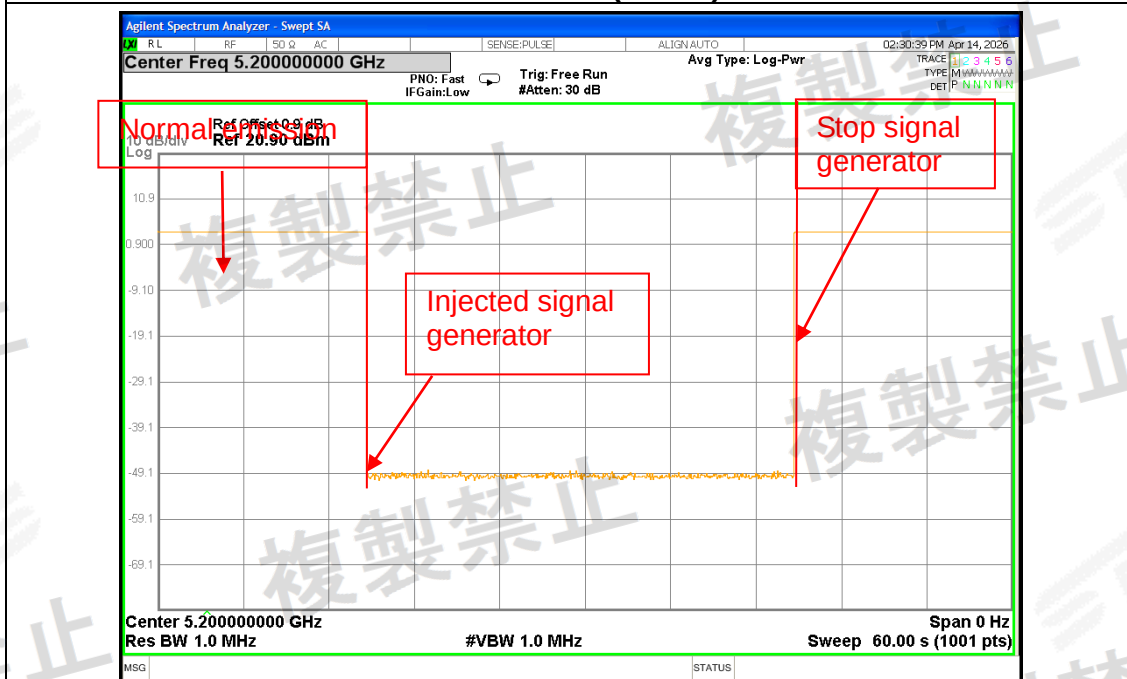
Channel 48TX- 11n(HT20) Mode



Channel 36TX- 11ac(VHT20) Mode

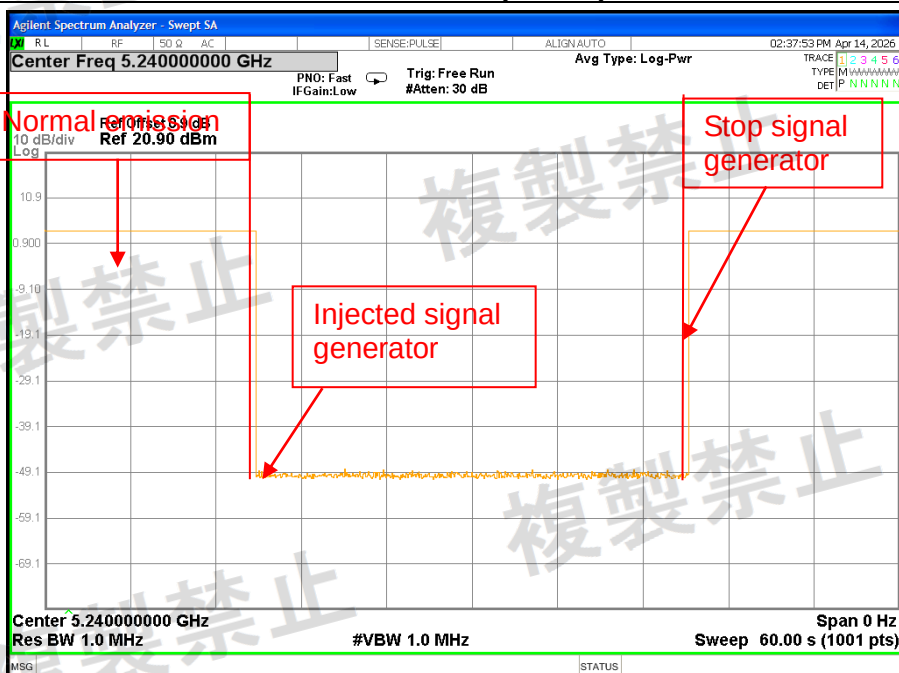


Channel 40TX- 11ac(VHT20) Mode

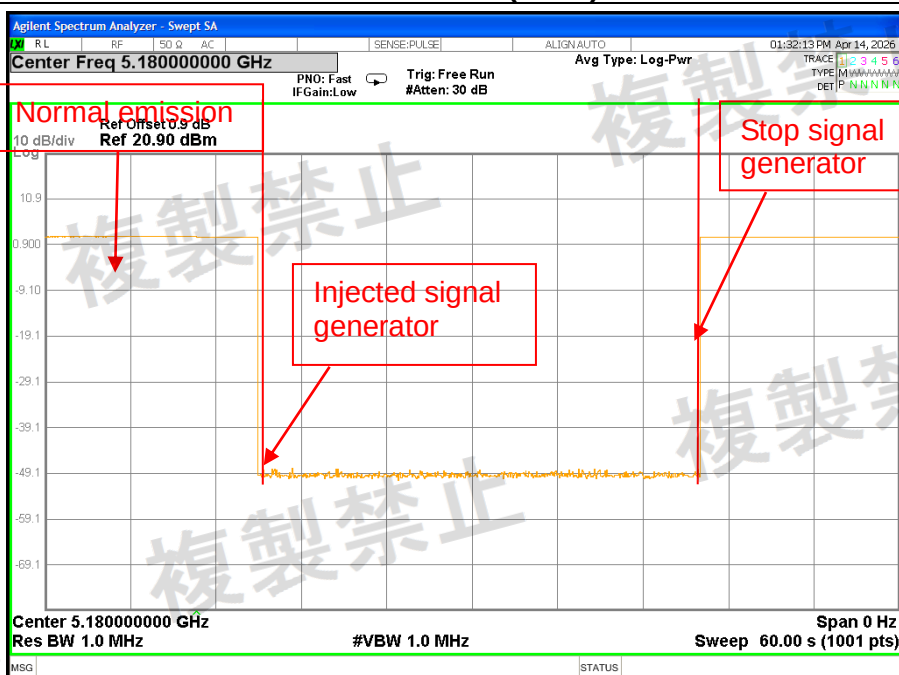


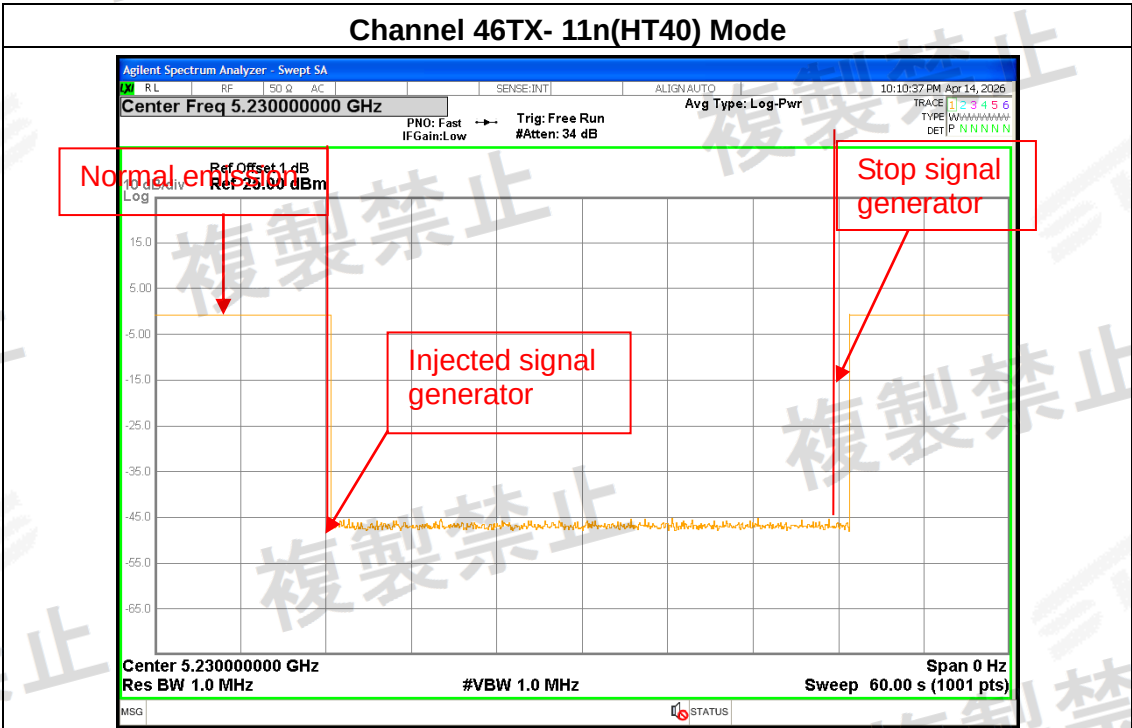
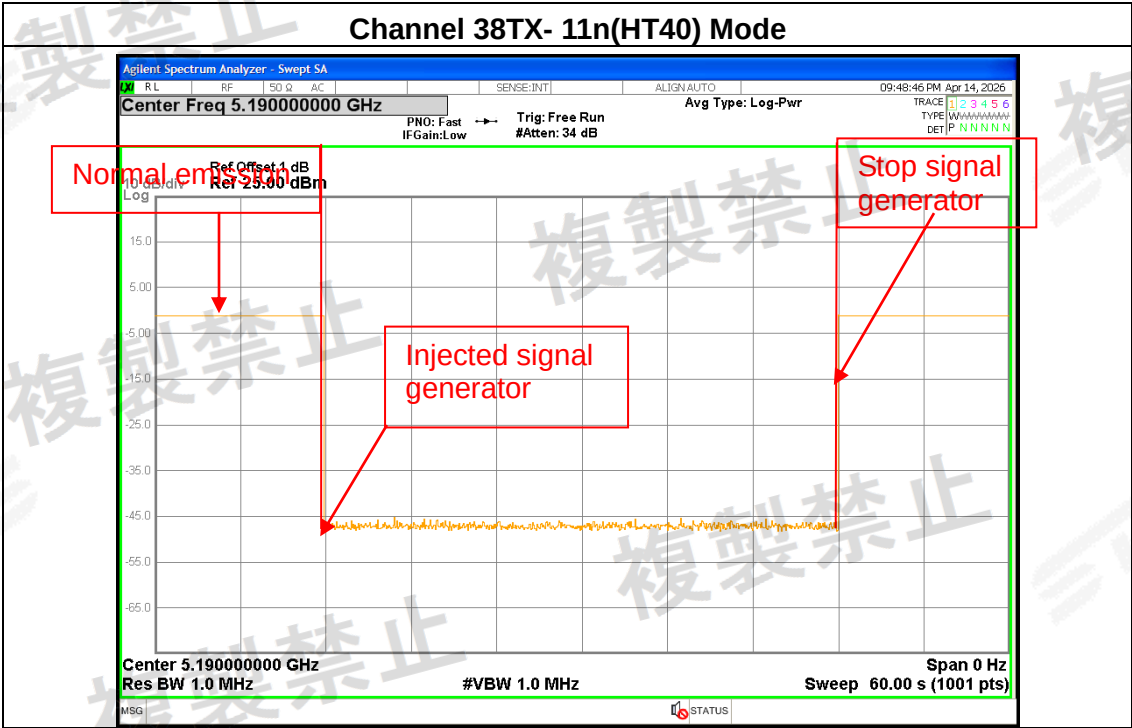


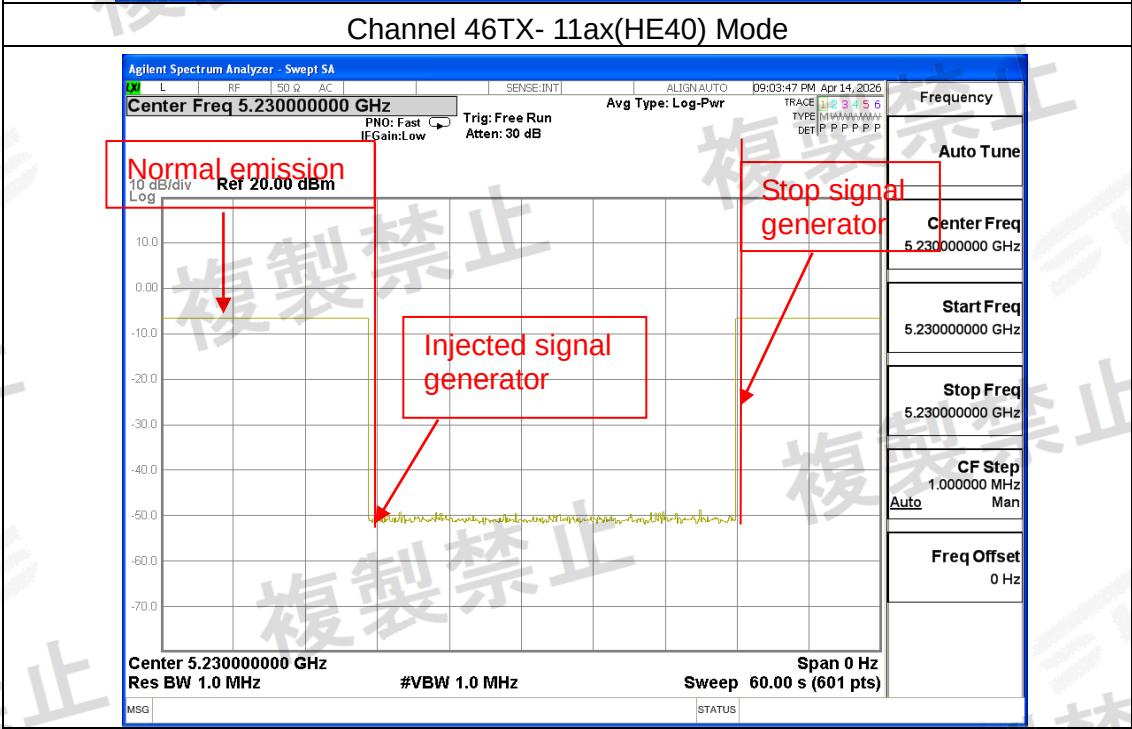
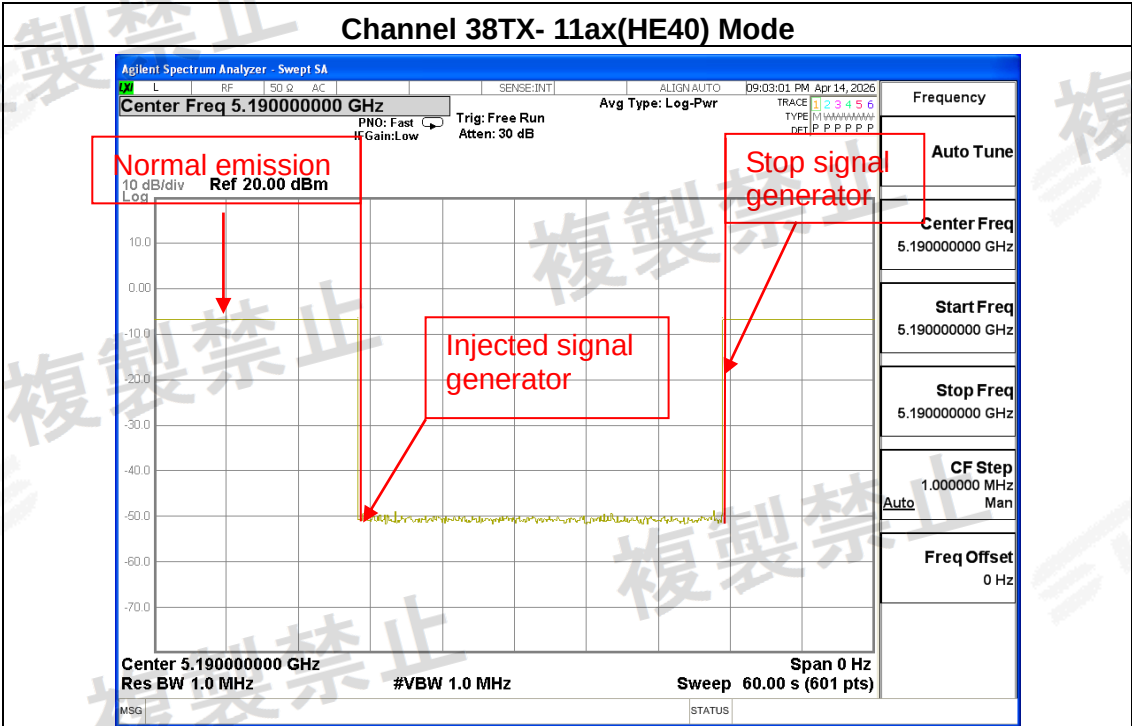
Channel 48TX- 11ac(VHT20) Mode

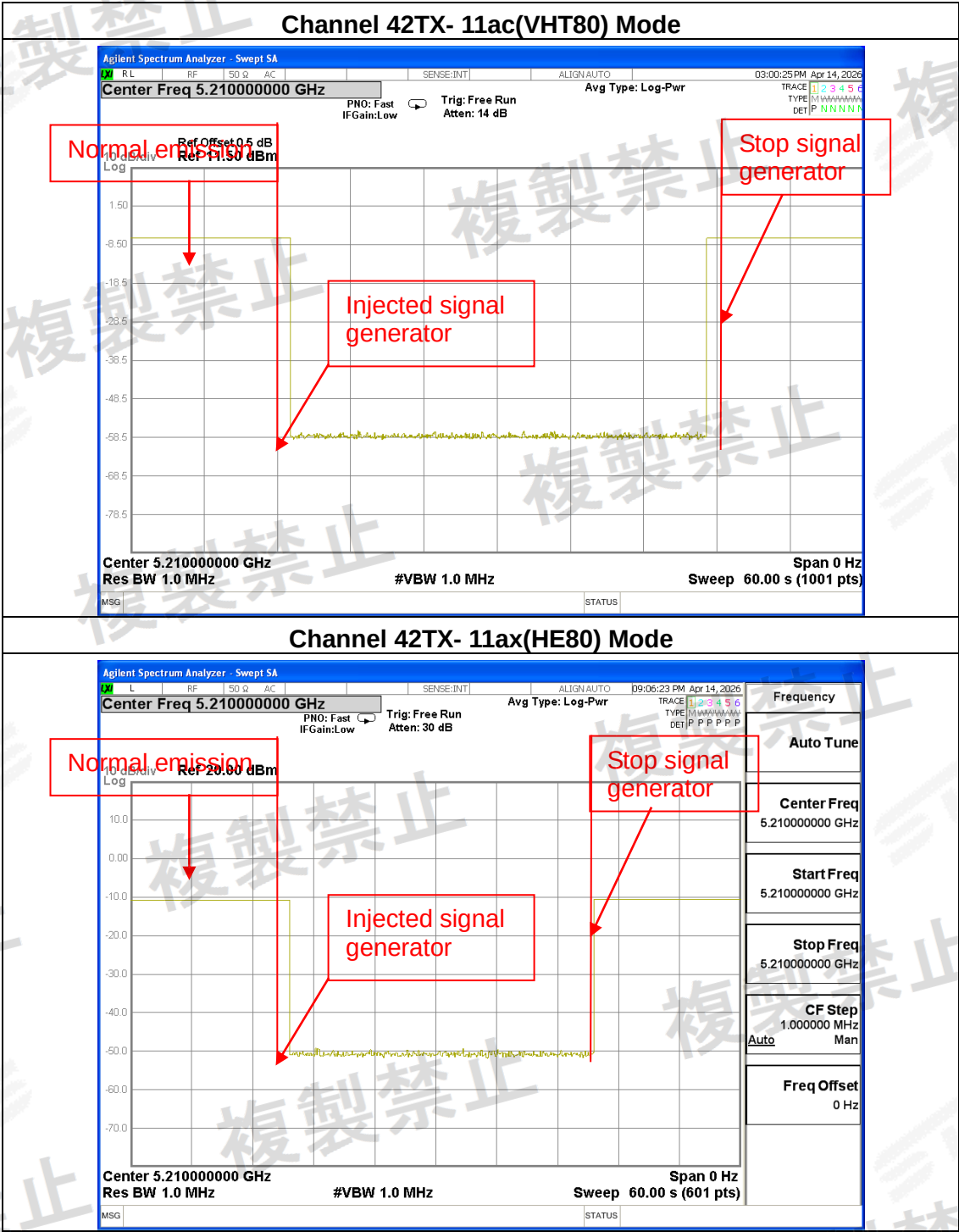


Channel 36TX- 11ax(HE20) Mode





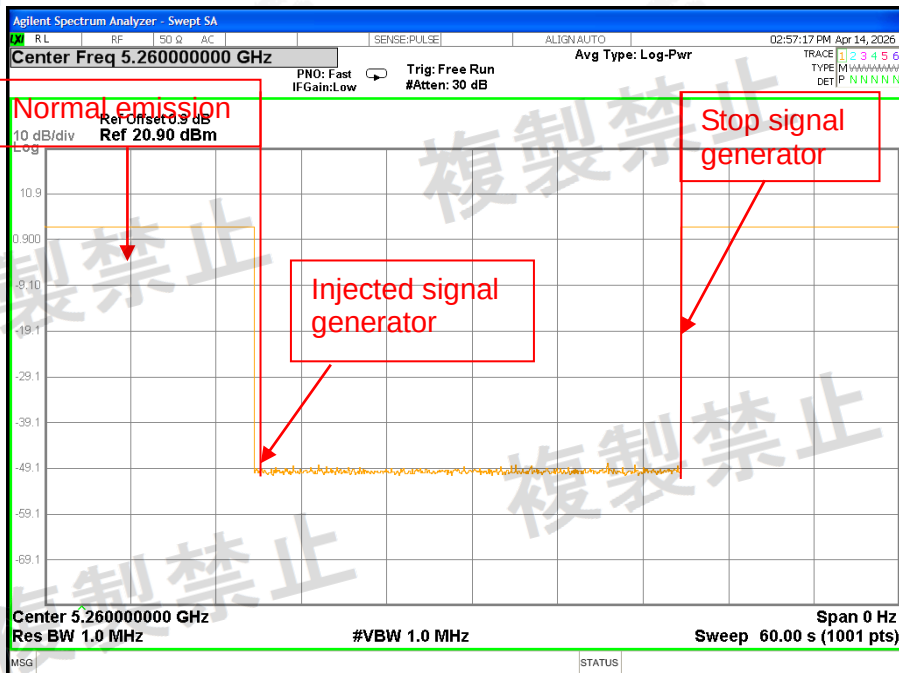




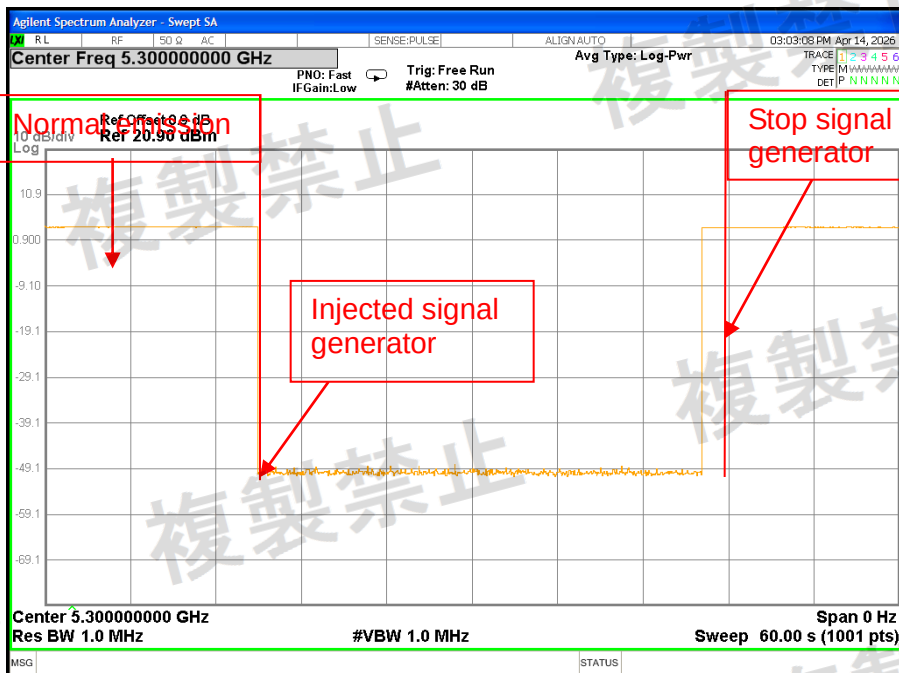


W53

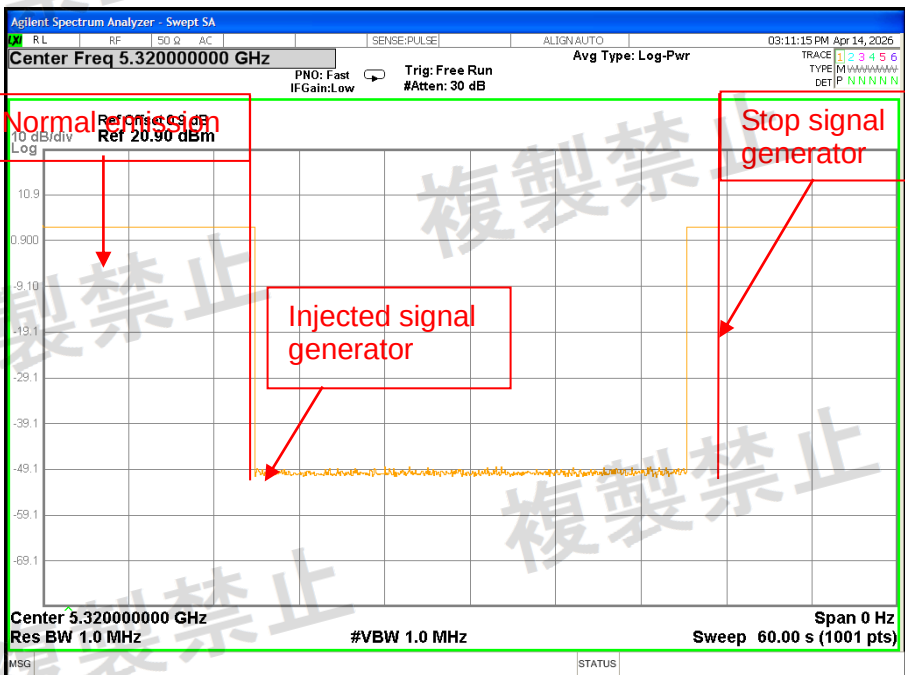
Channel 52 TX- 11a Mode



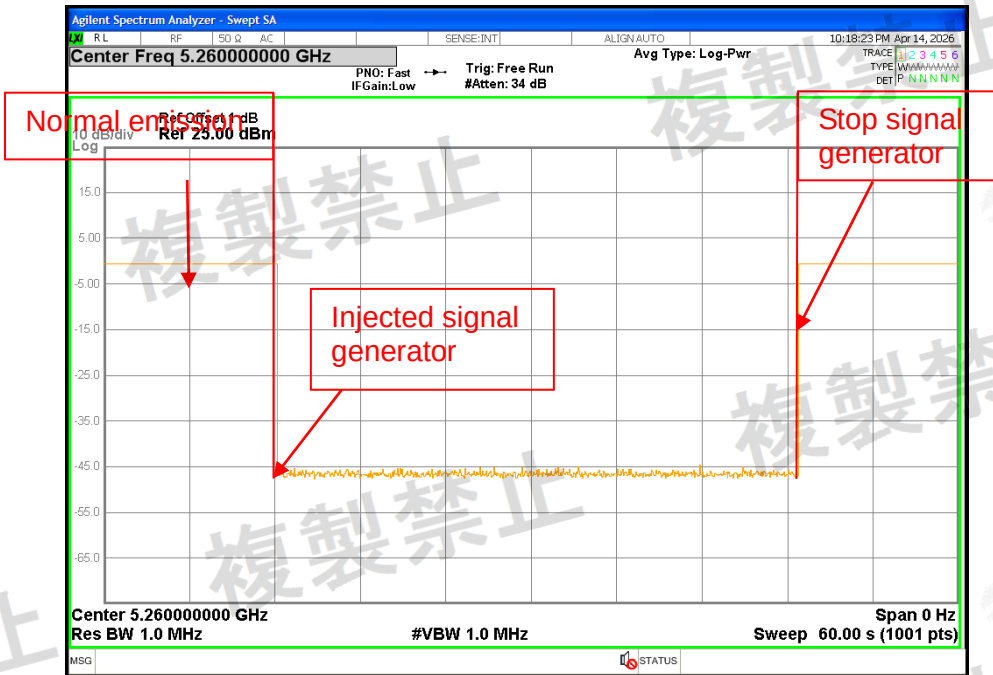
Channel 60 TX- 11a Mode

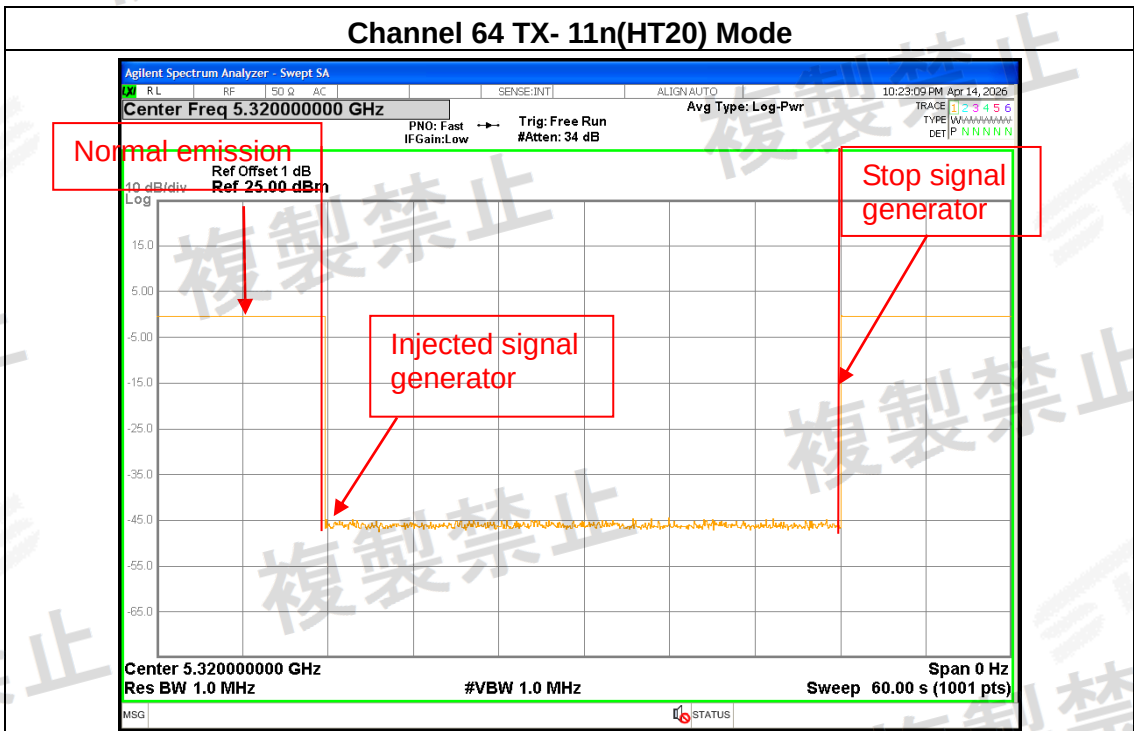
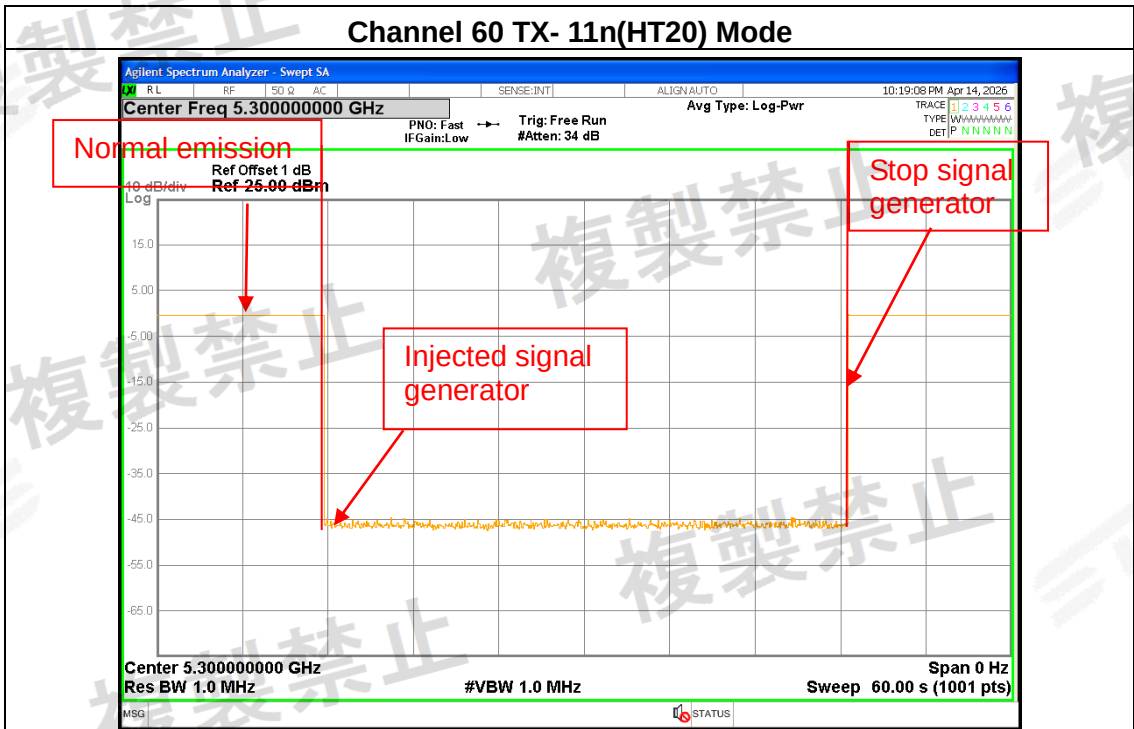


Channel 64 TX- 11a Mode

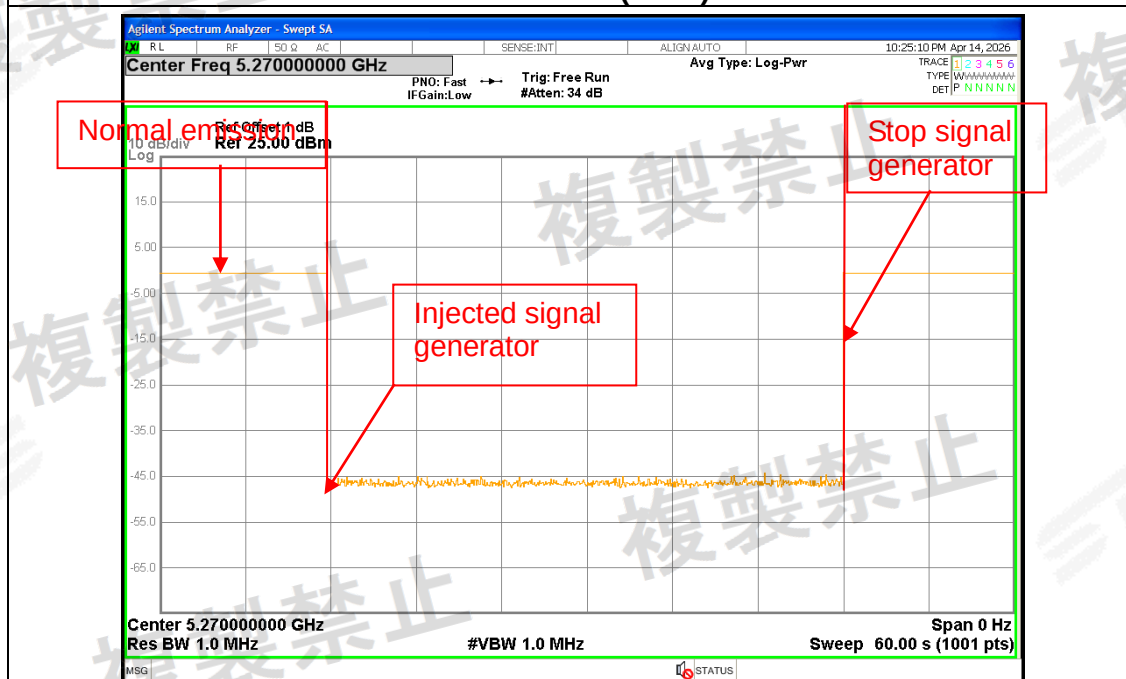


Channel 52 TX- 11n(HT20) Mode

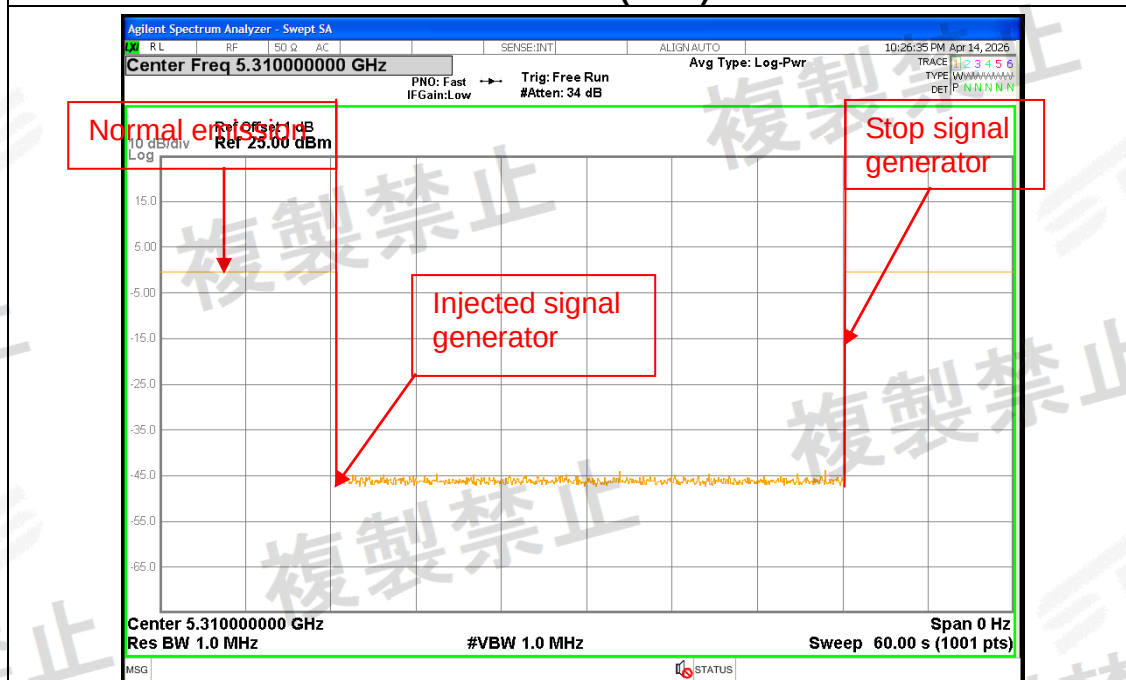




Channel 54 TX- 11n(HT40) Mode

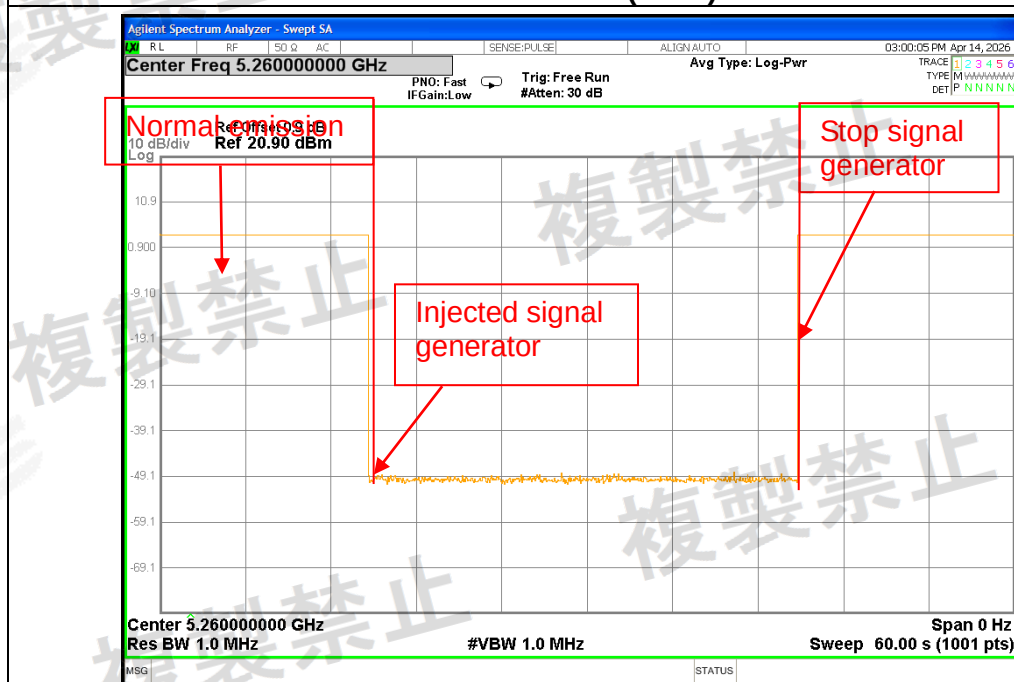


Channel 62 TX- 11n(HT40) Mode

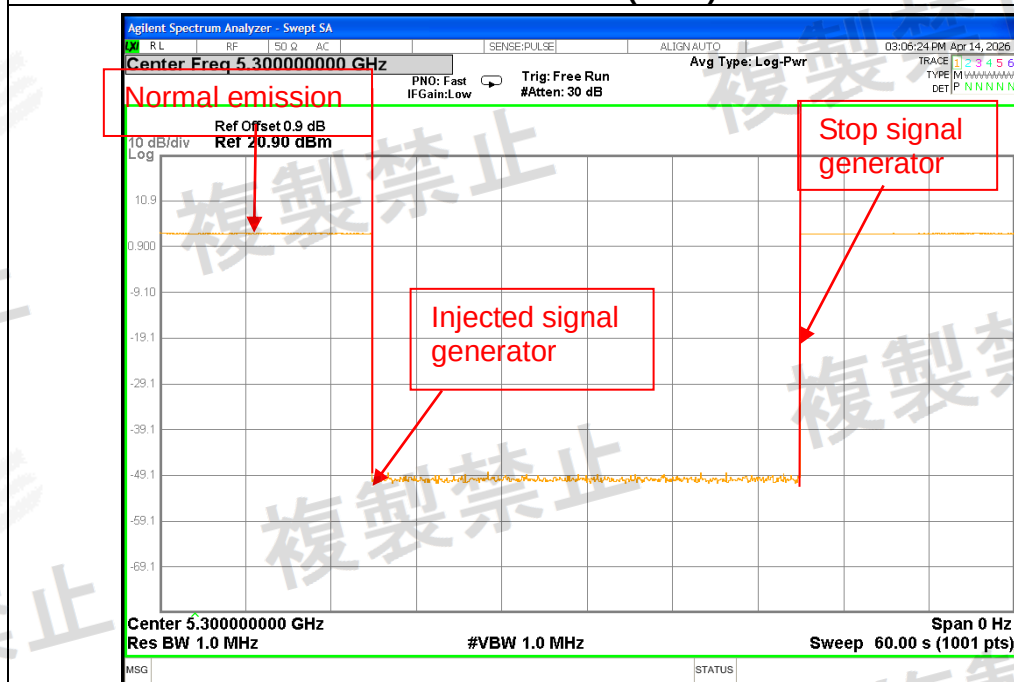




Channel 52 TX- 11ac(HT20) Mode

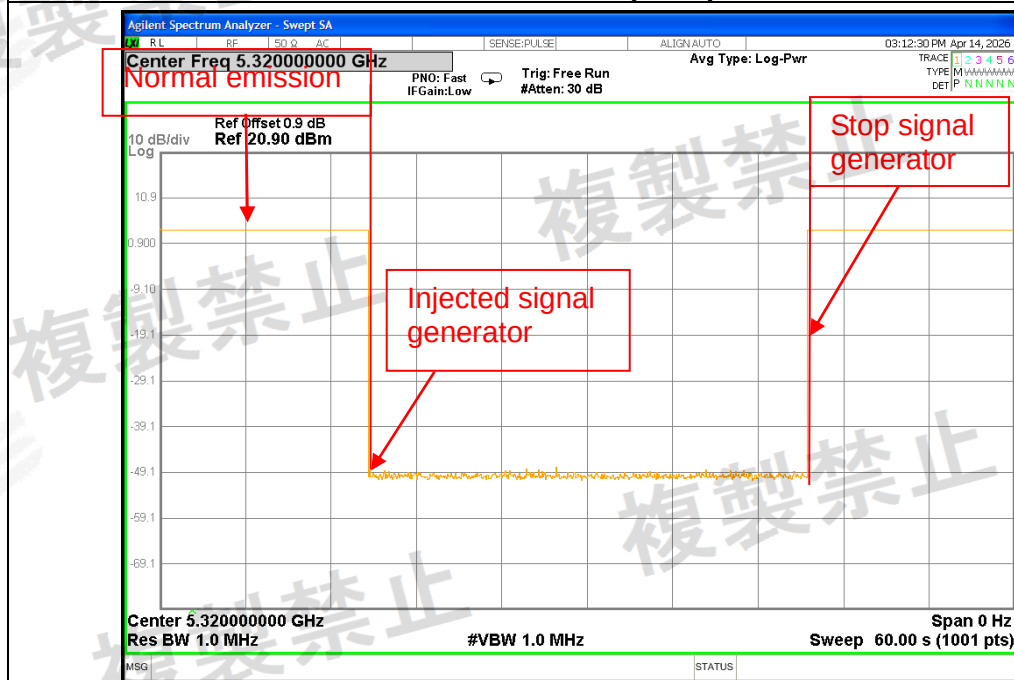


Channel 60 TX- 11ac(HT20) Mode

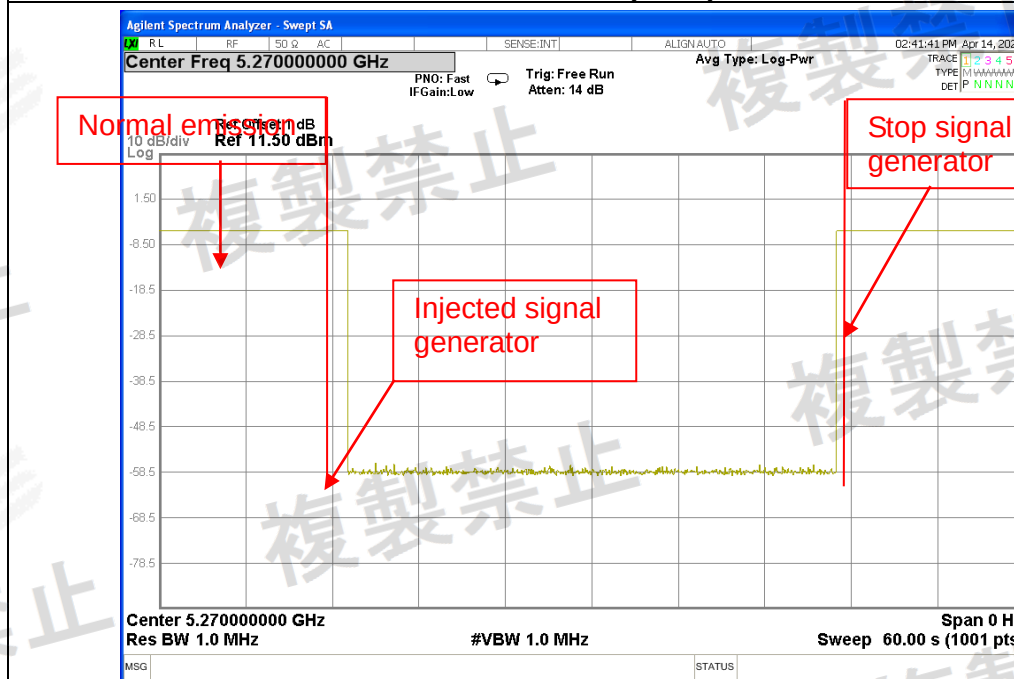




Channel 64 TX- 11ac(HT20) Mode

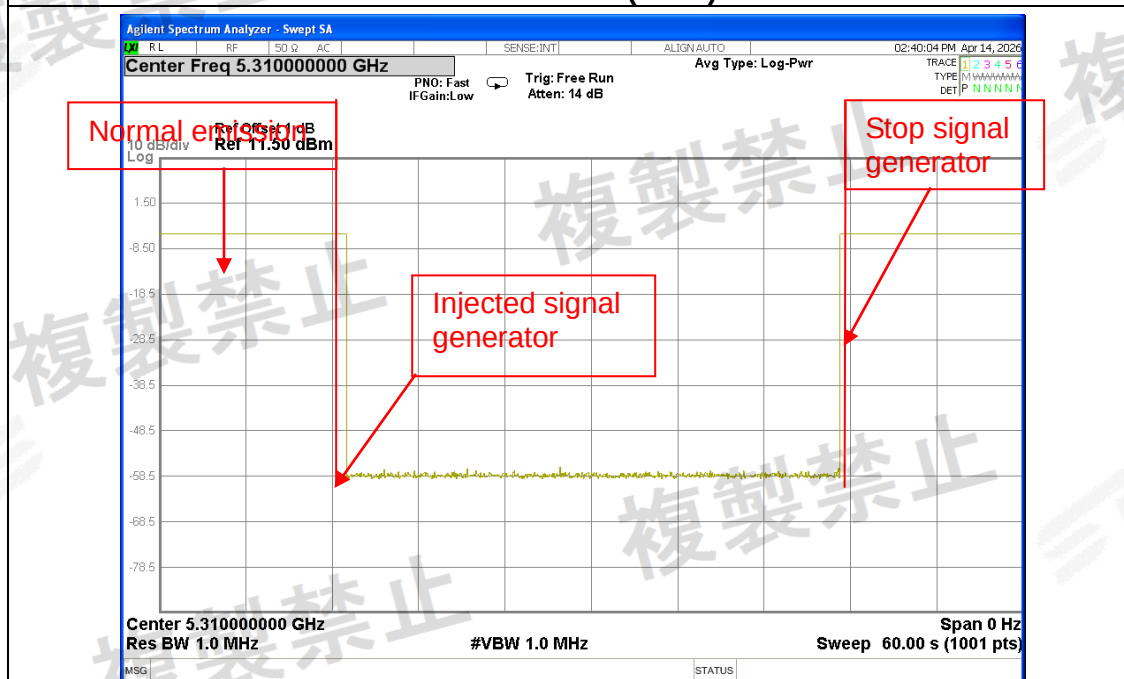


Channel 54 TX- 11ac(HT40) Mode

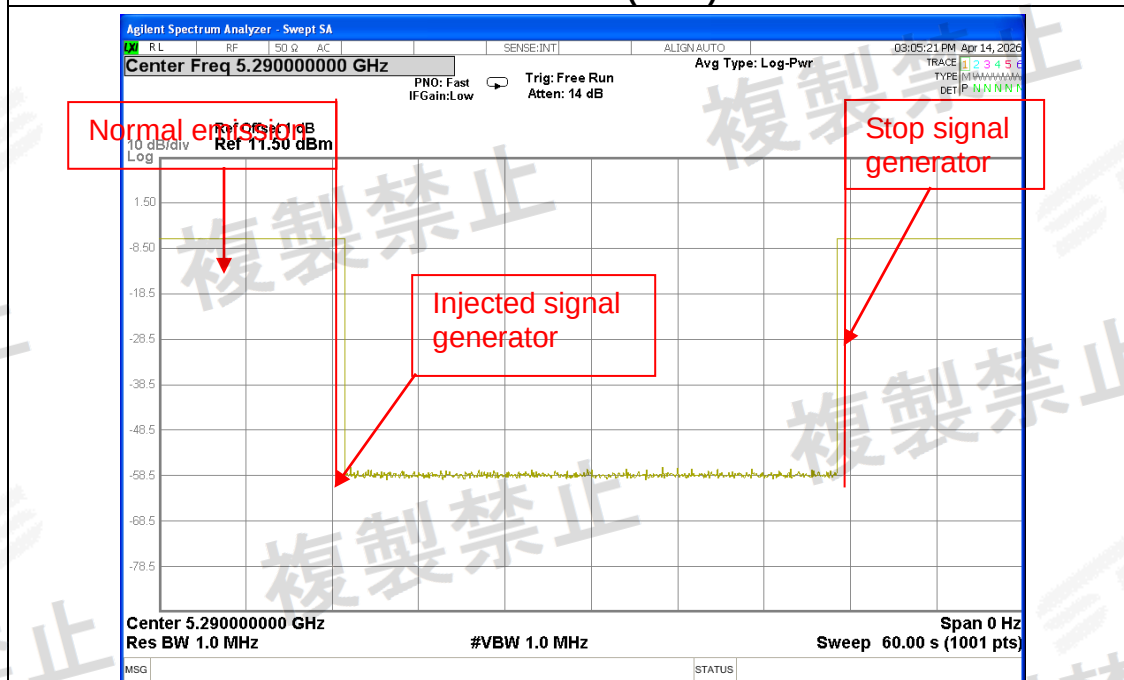




Channel 62 TX- 11ac(HT40) Mode

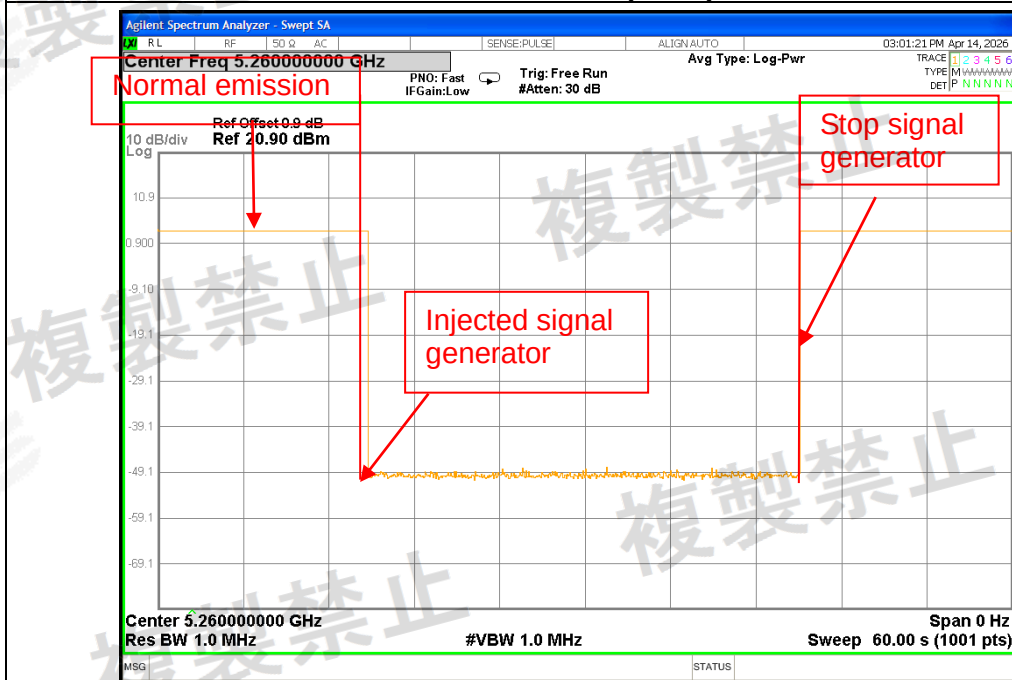


Channel 58 TX- 11ac(HT80) Mode

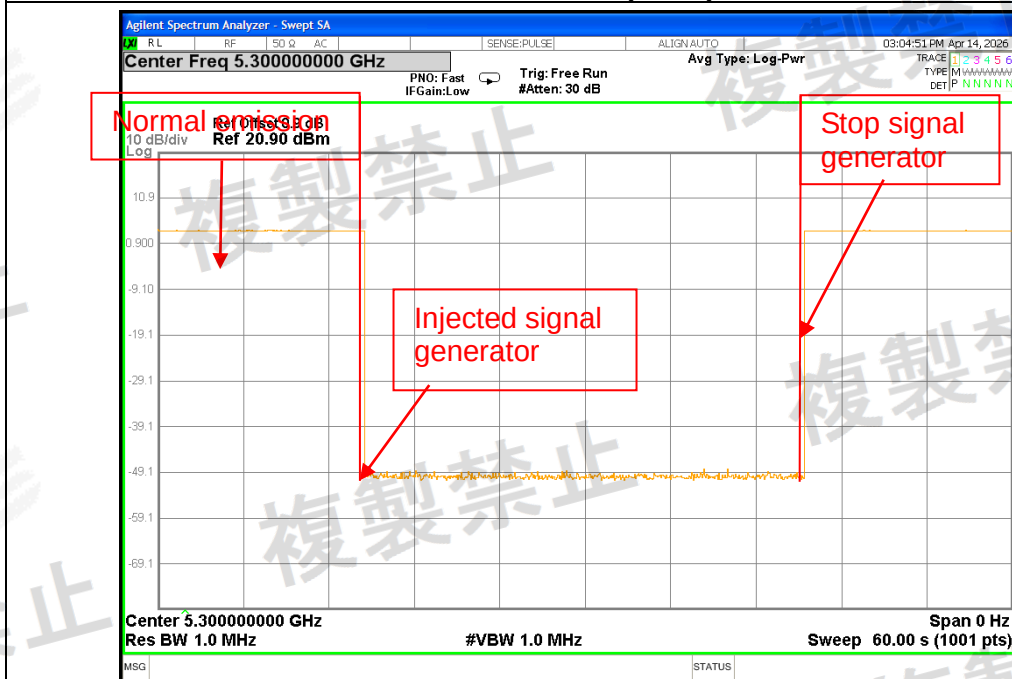




Channel 52 TX- 11ax(HE20) Mode

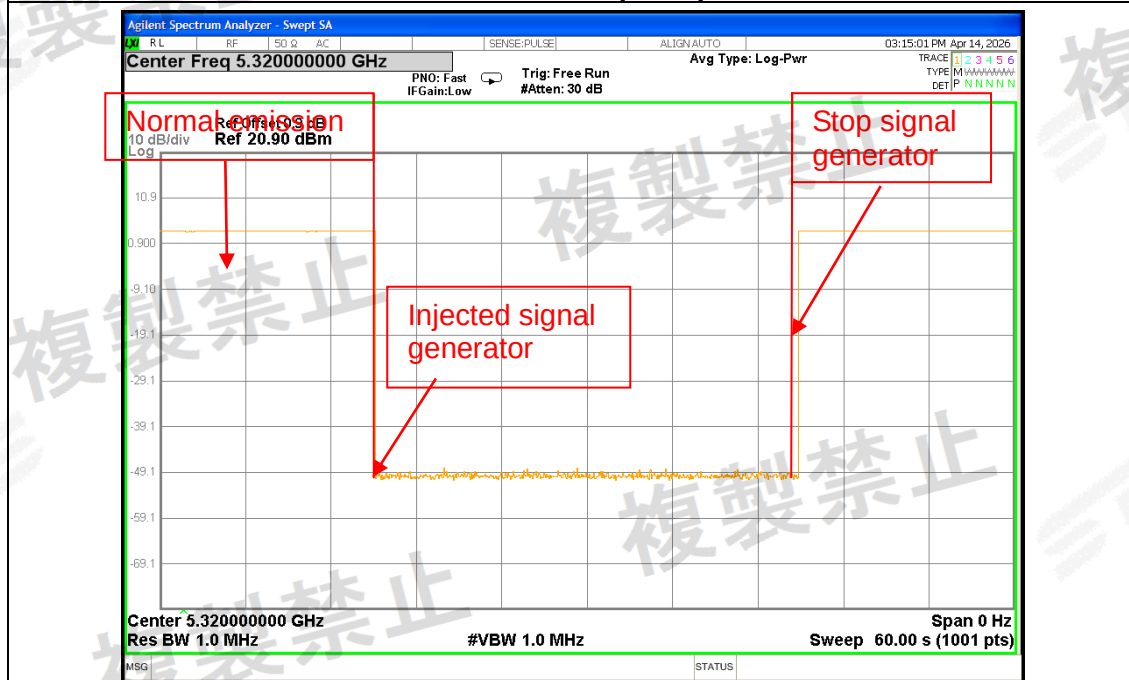


Channel 60 TX- 11ax(HE20) Mode

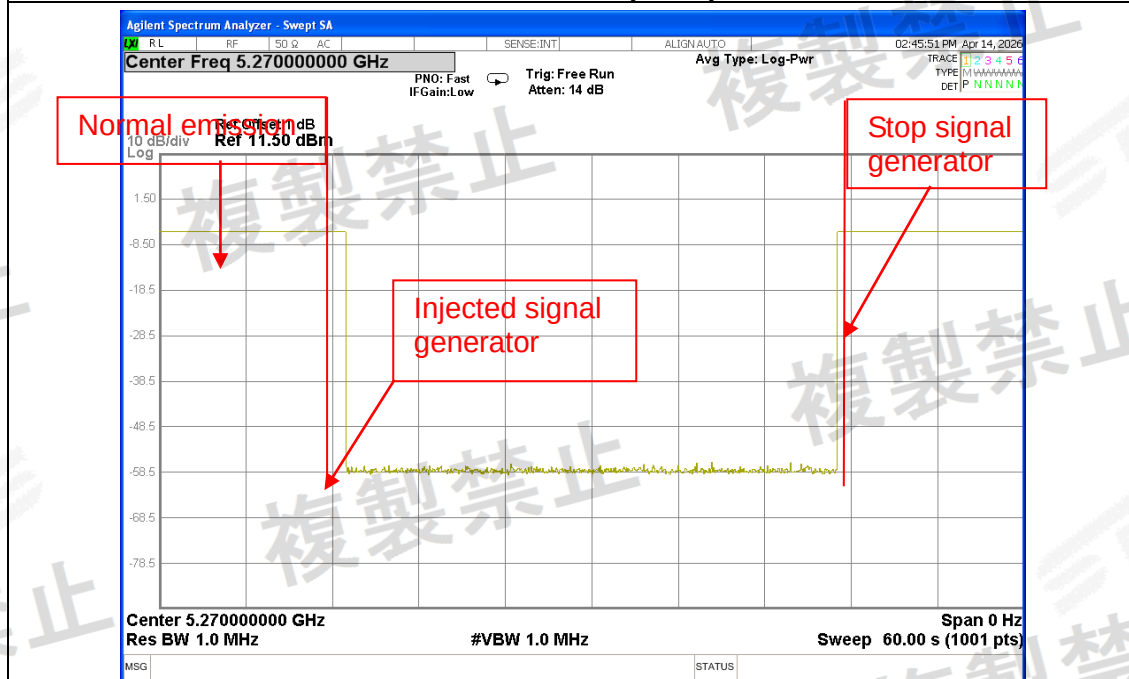




Channel 64 TX- 11ax(HE20) Mode



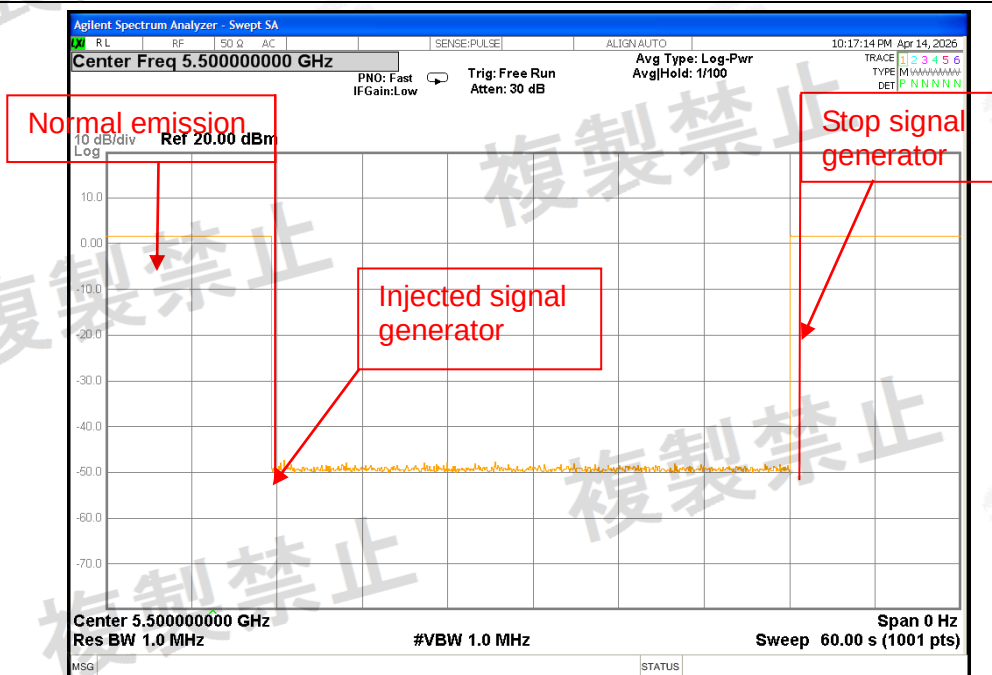
Channel 54 TX- 11ax(HE40) Mode



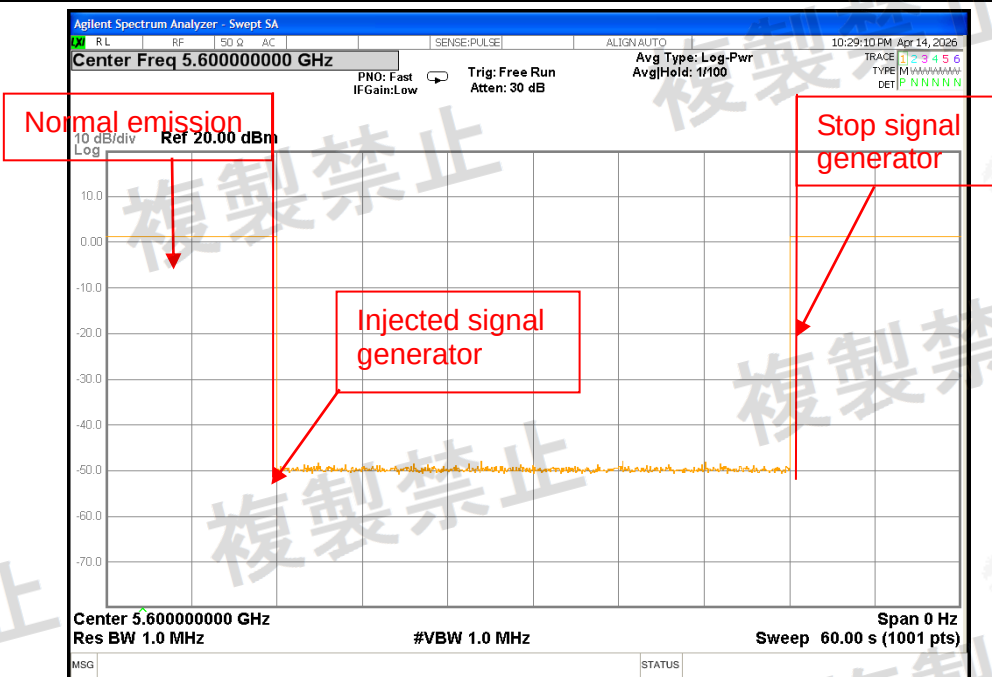


W56

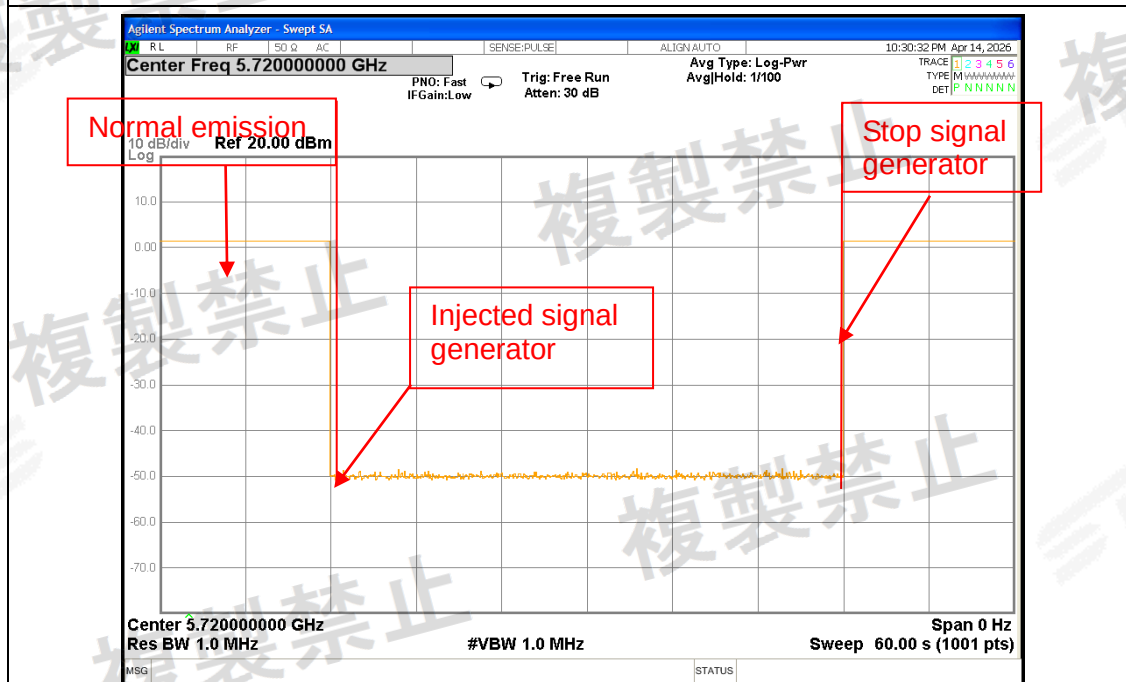
Channel 100 TX- 11a Mode



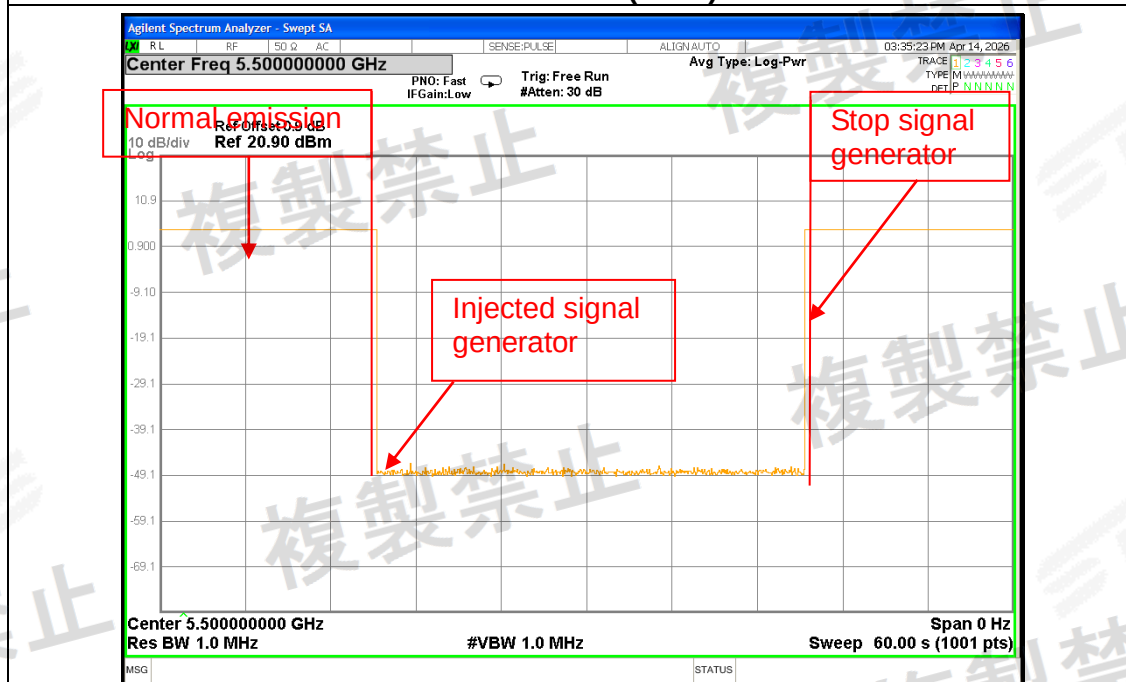
Channel 116 TX- 11a Mode



Channel 144 TX- 11a Mode

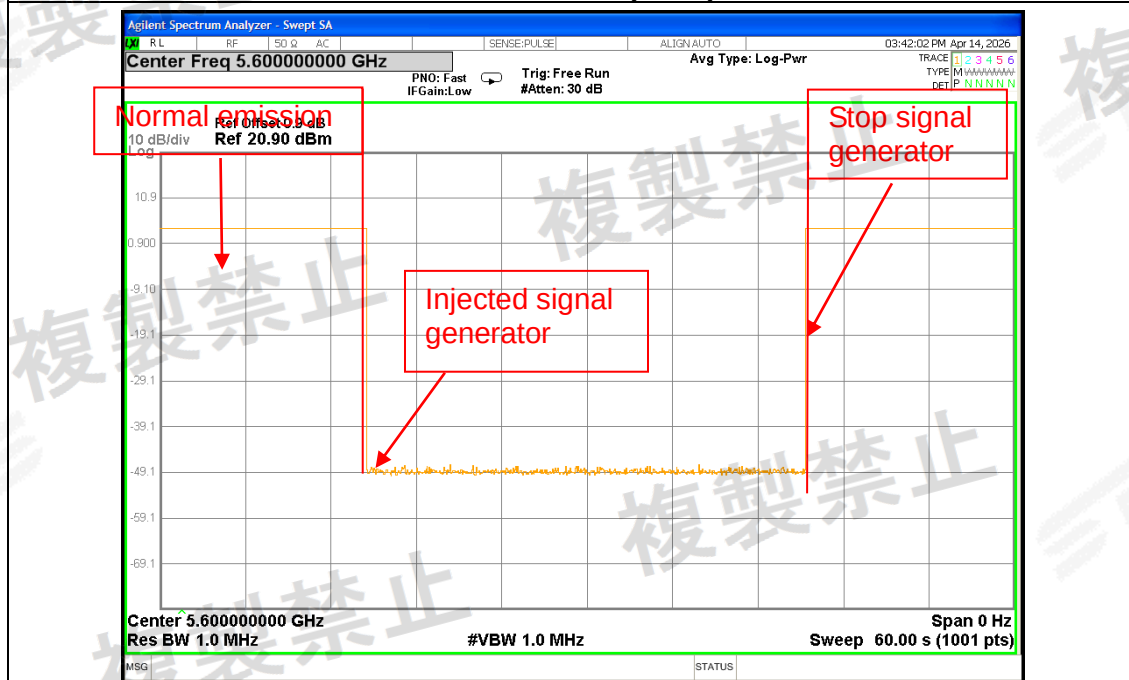


Channel 100 TX- 11n(HT20) Mode

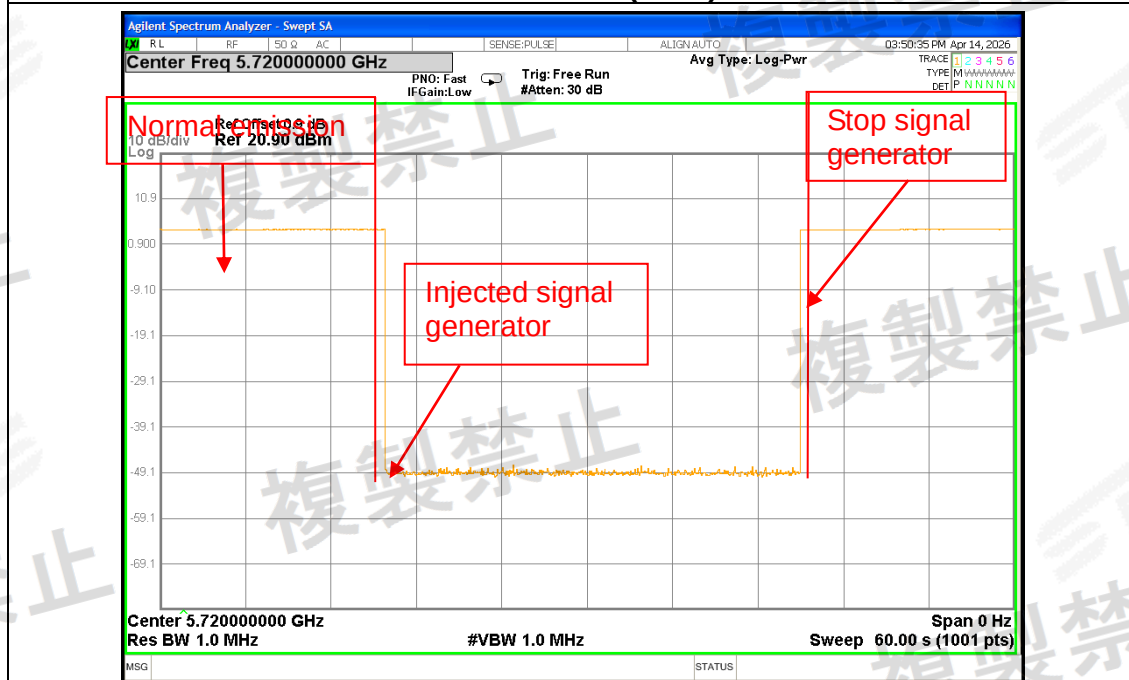


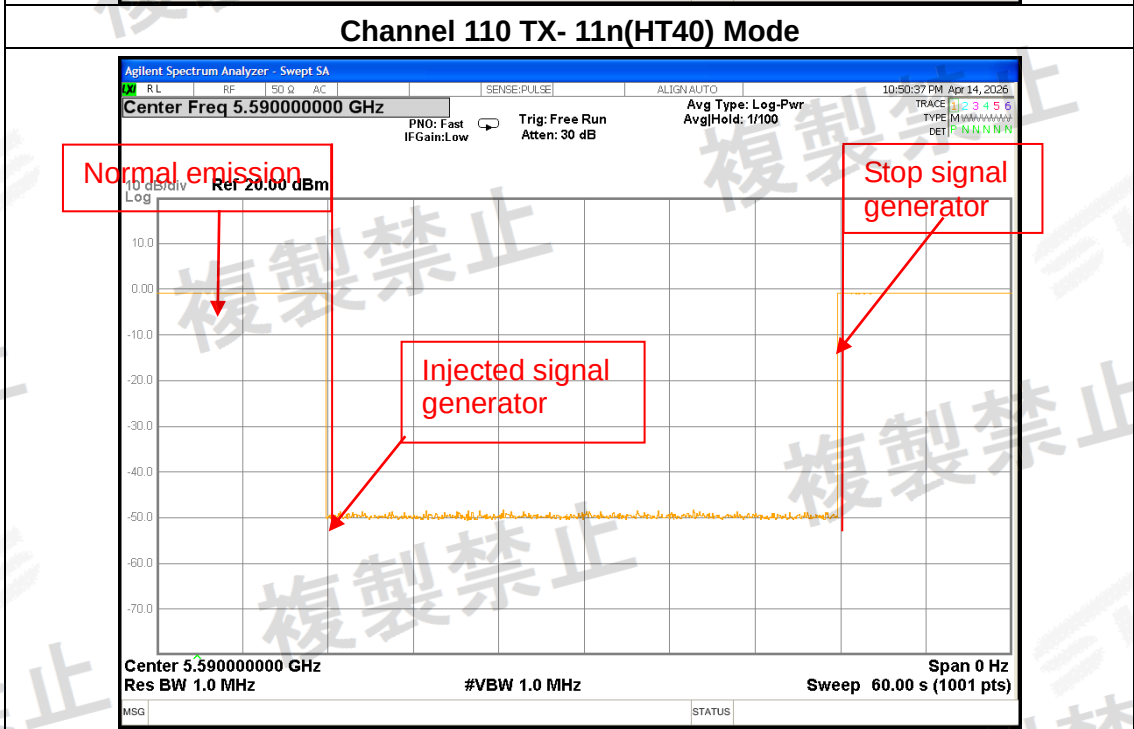
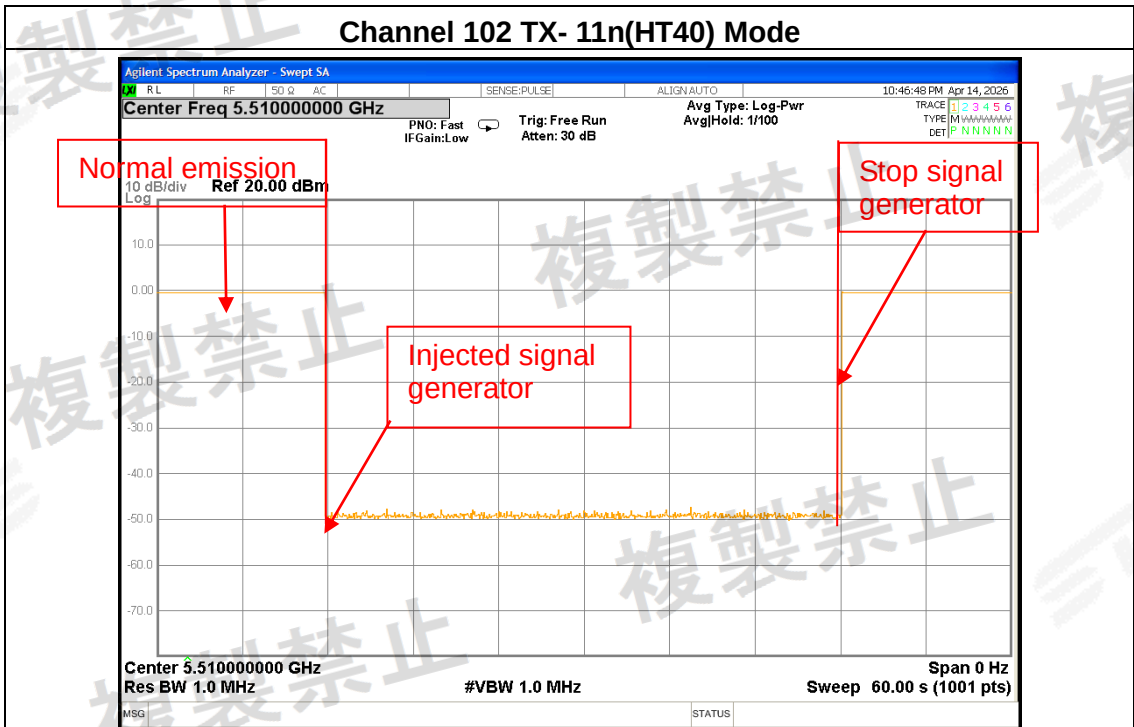


Channel 116 TX- 11n(HT20) Mode

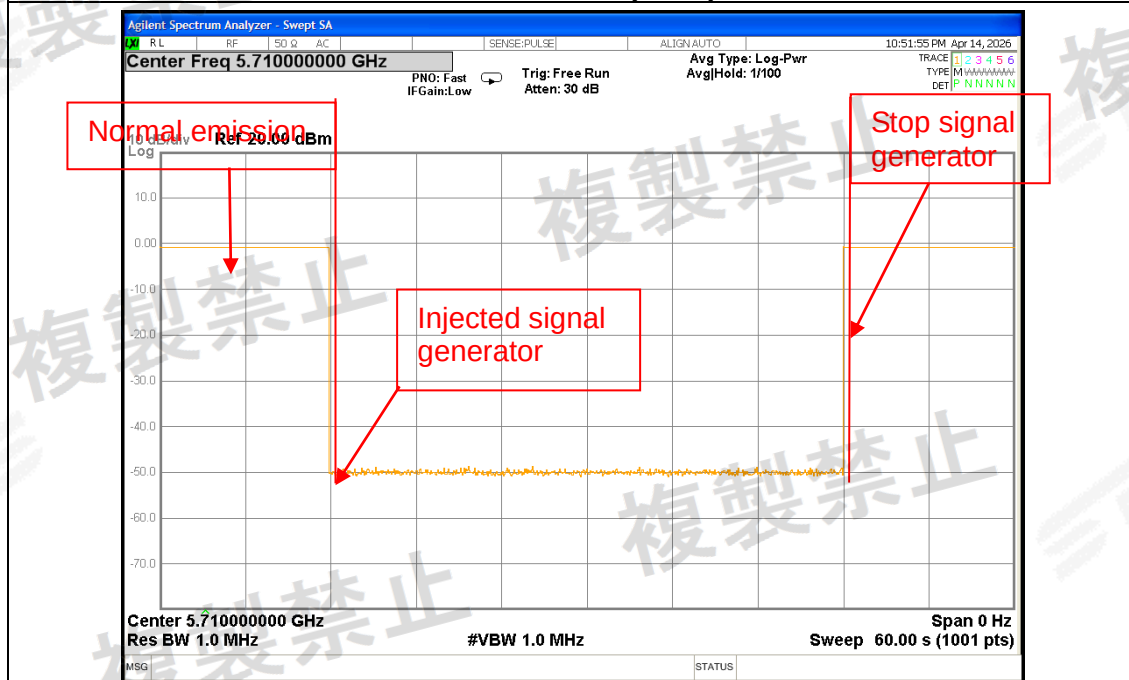


Channel 144 TX- 11n(HT20) Mode

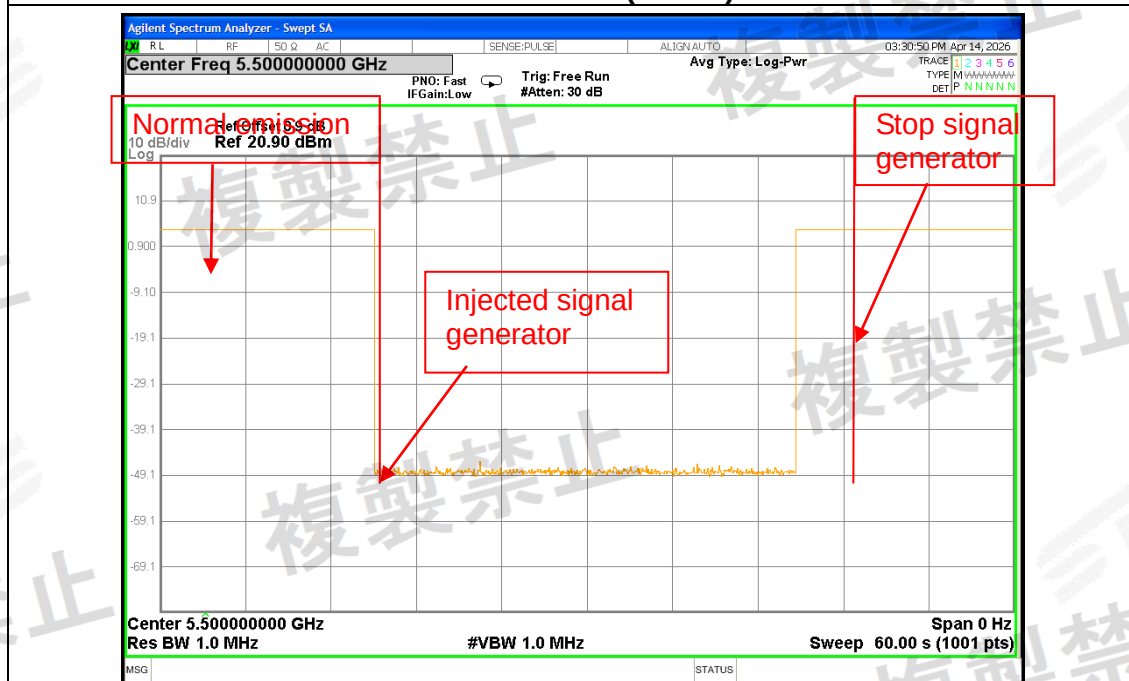




Channel 142 TX- 11n(HT40) Mode

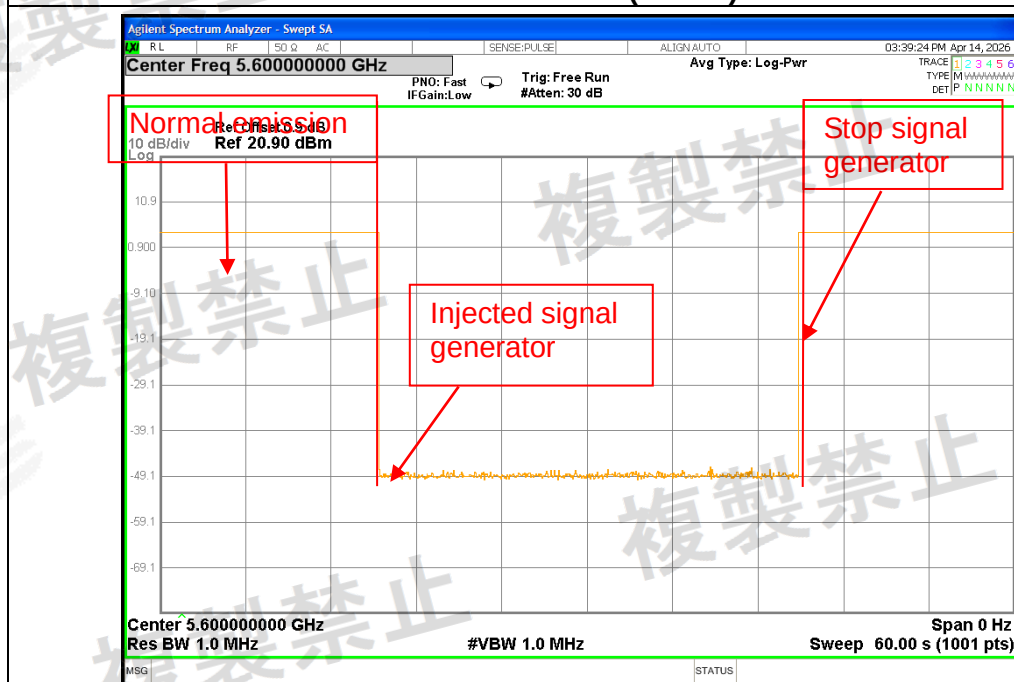


Channel 100 TX- 11ac(VHT20) Mode

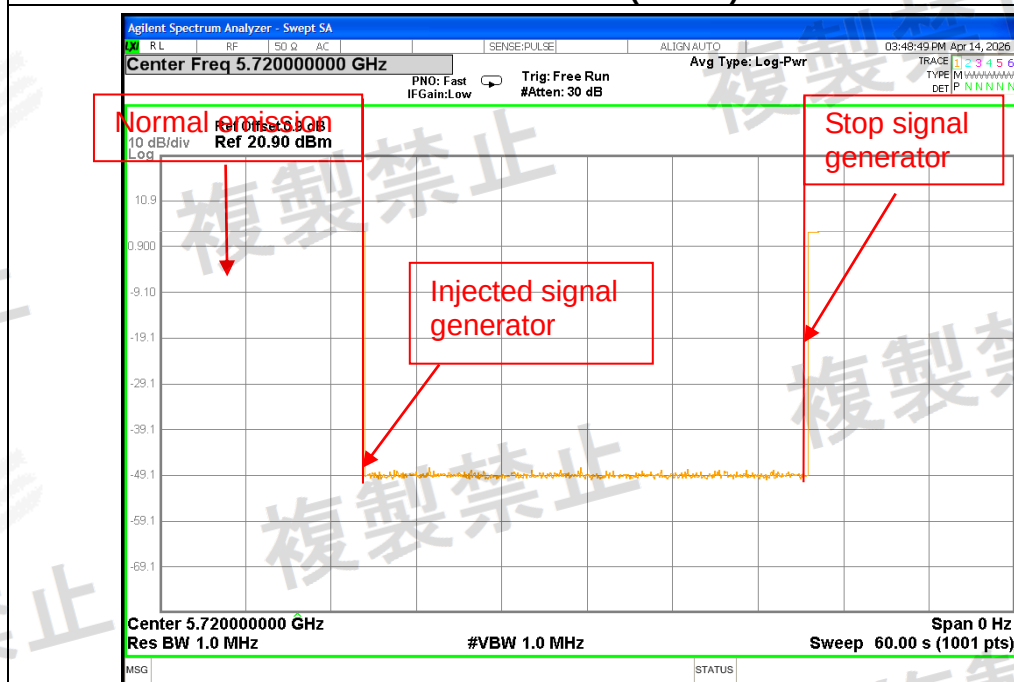




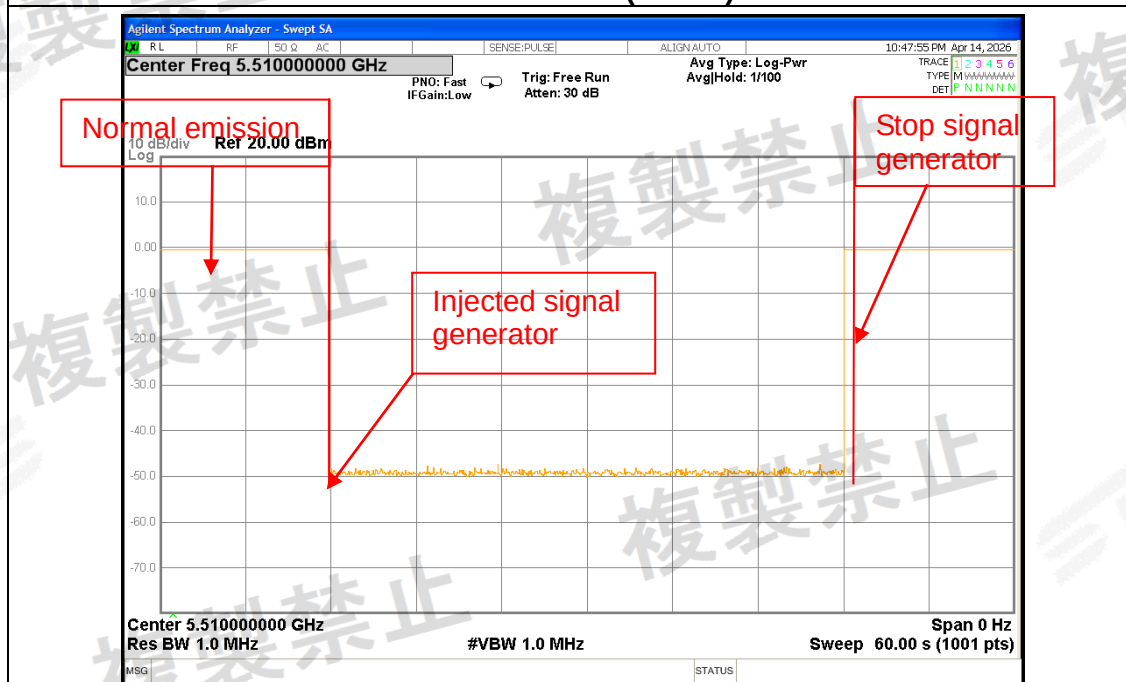
Channel 116 TX- 11 ac(VHT20) Mode



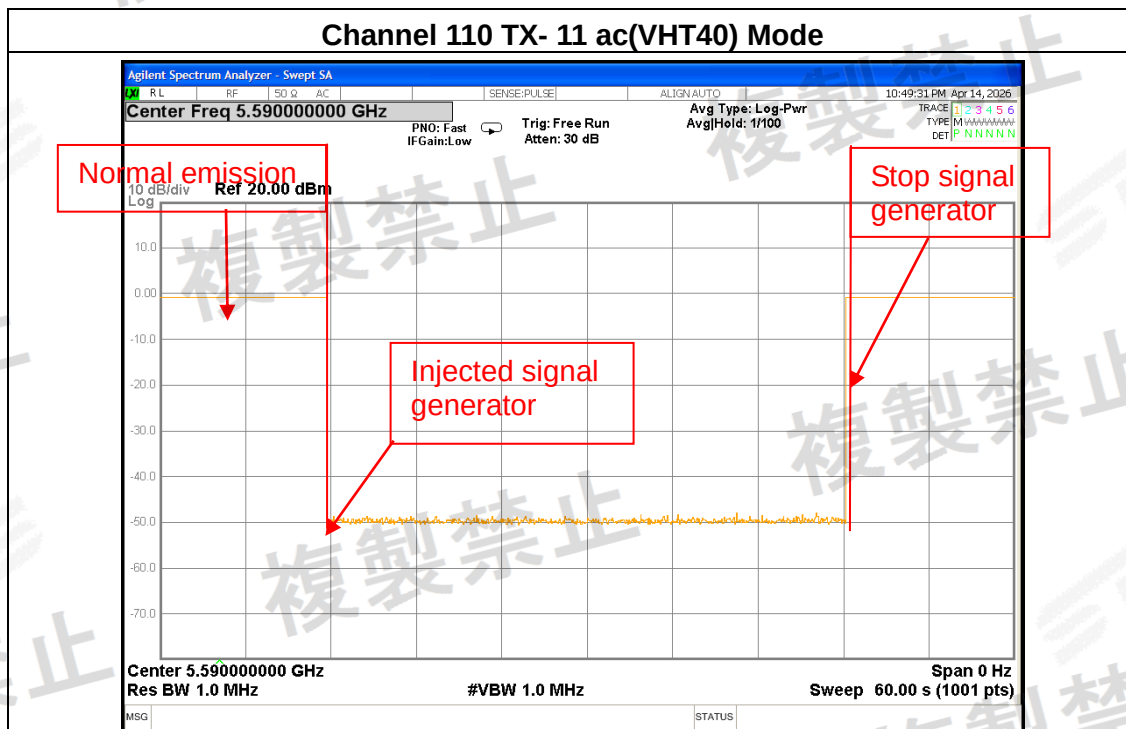
Channel 144 TX- 11 ac(VHT20) Mode

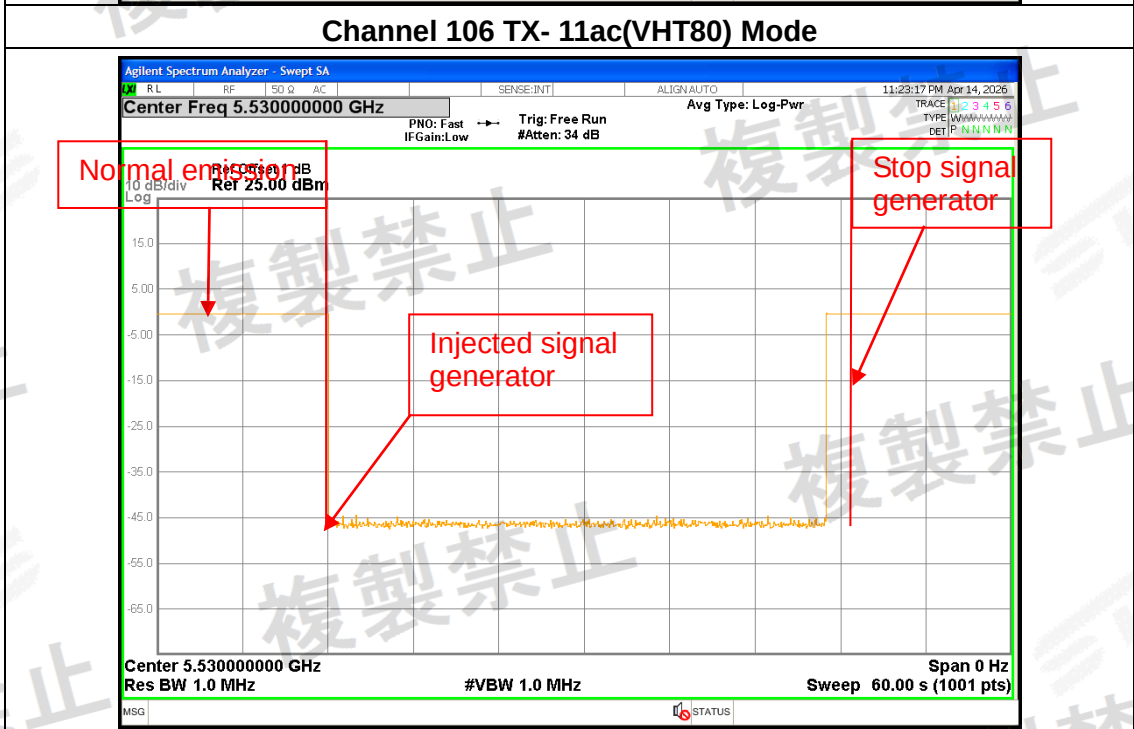
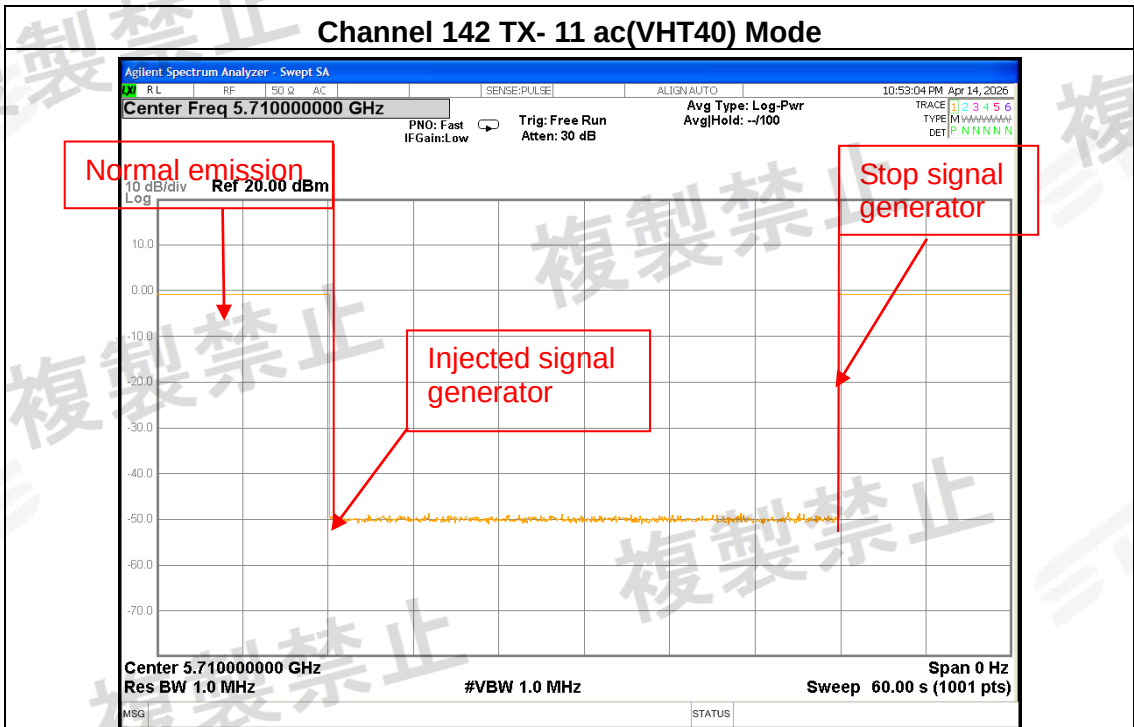


Channel 102 TX- 11ac(VHT40) Mode



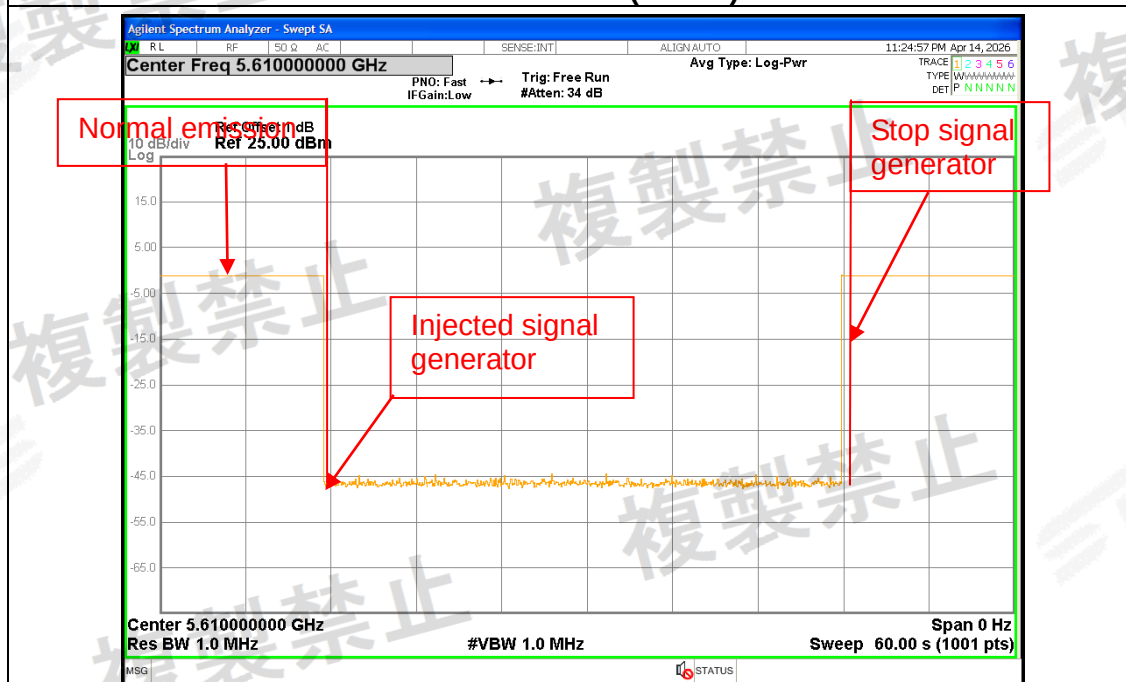
Channel 110 TX- 11 ac(VHT40) Mode



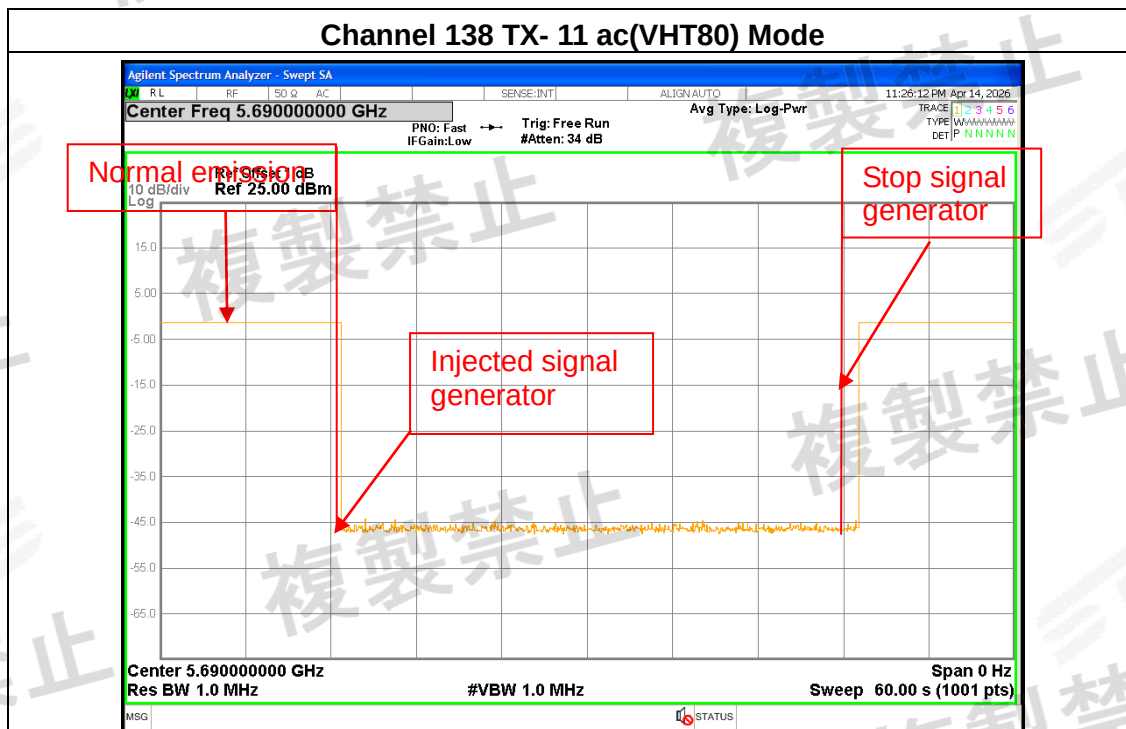




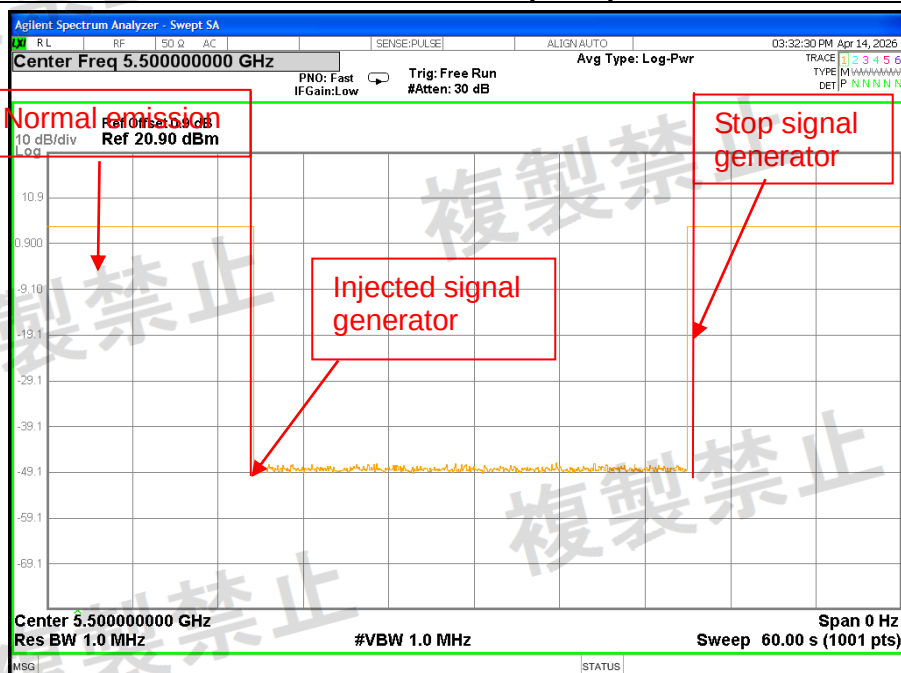
Channel 122 TX- 11 ac(VHT80) Mode



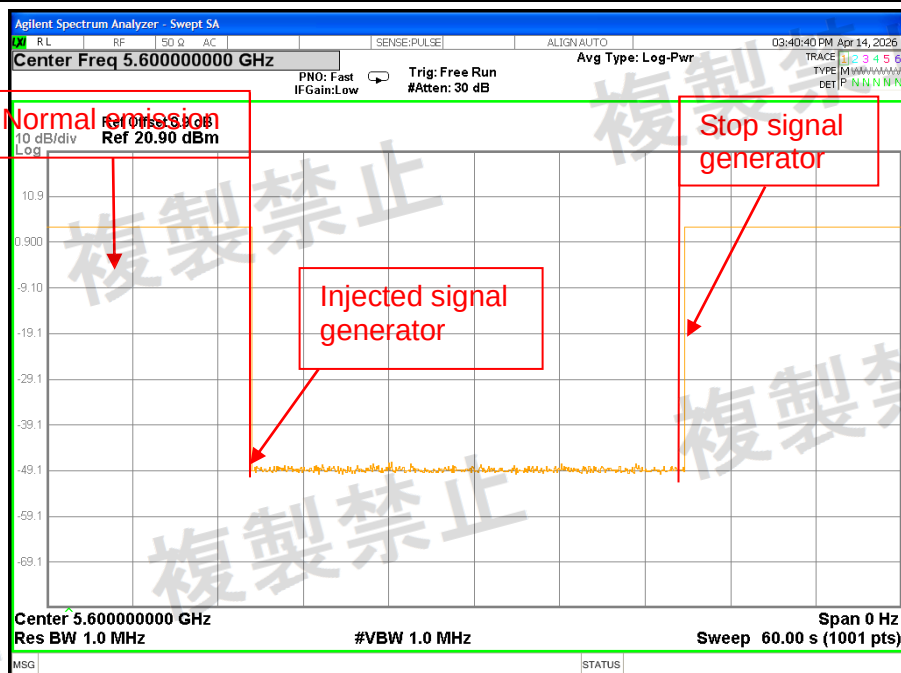
Channel 138 TX- 11 ac(VHT80) Mode

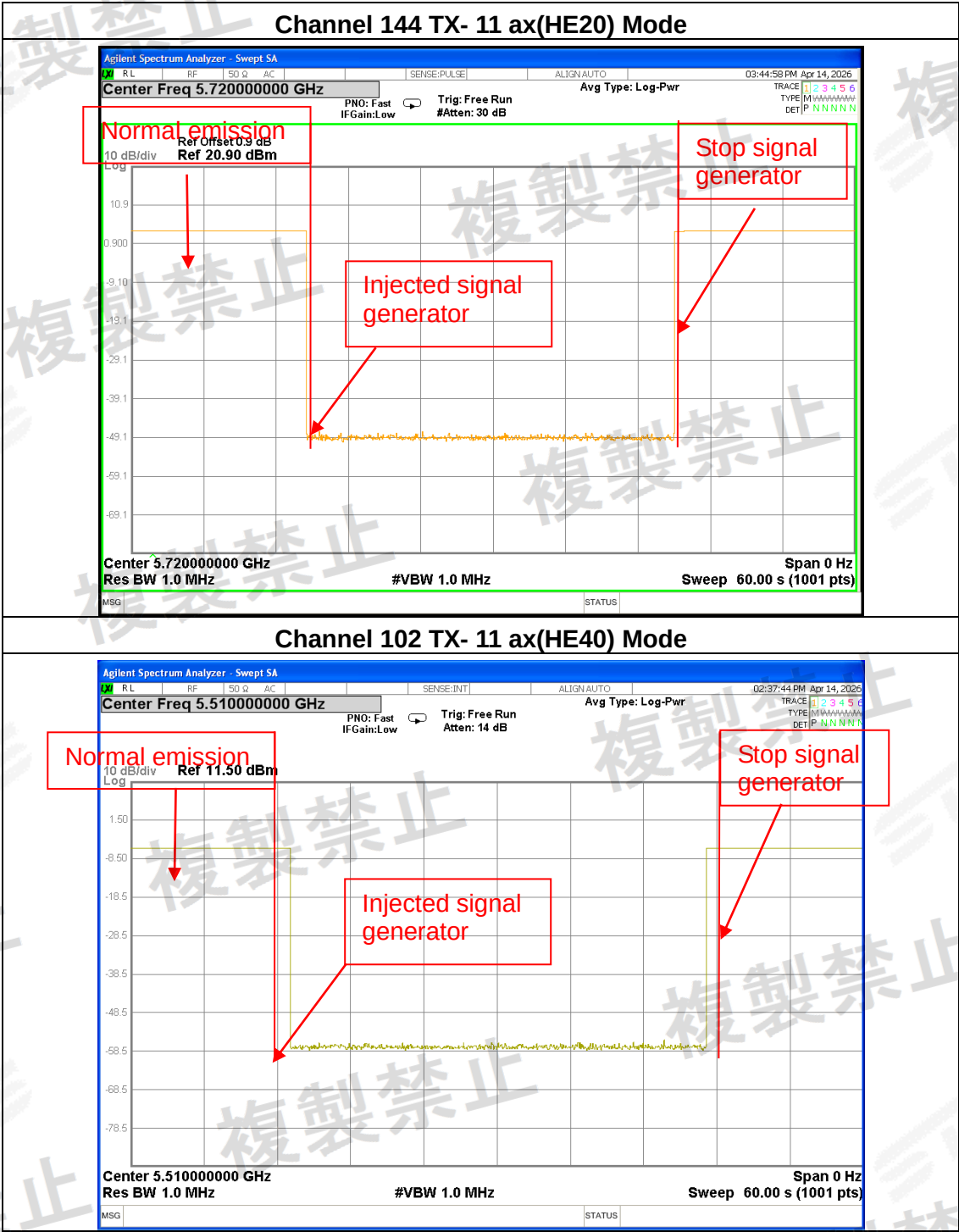


Channel 100 TX- 11 ax(HE20) Mode



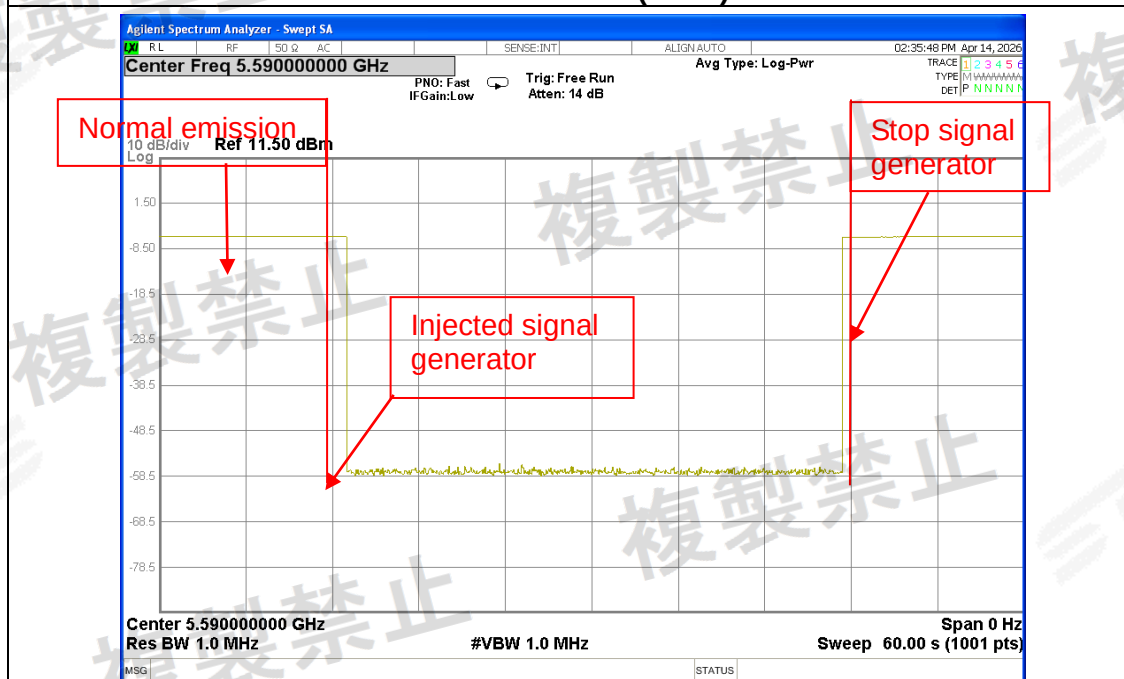
Channel 116 TX- 11 ax(HE20) Mode



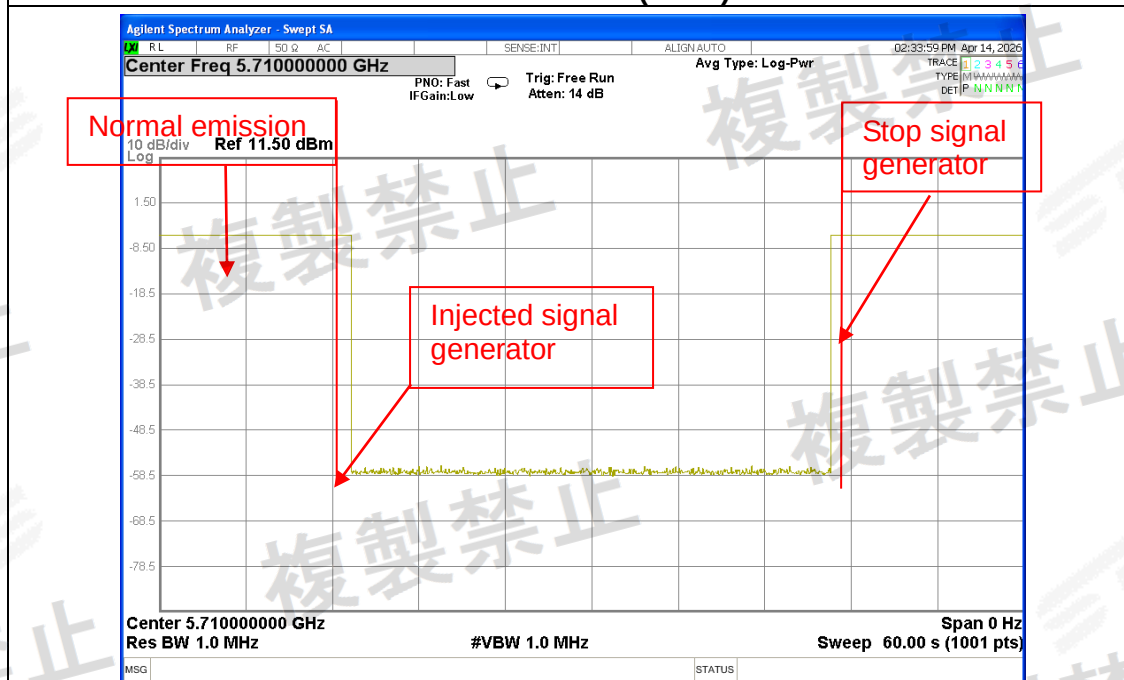


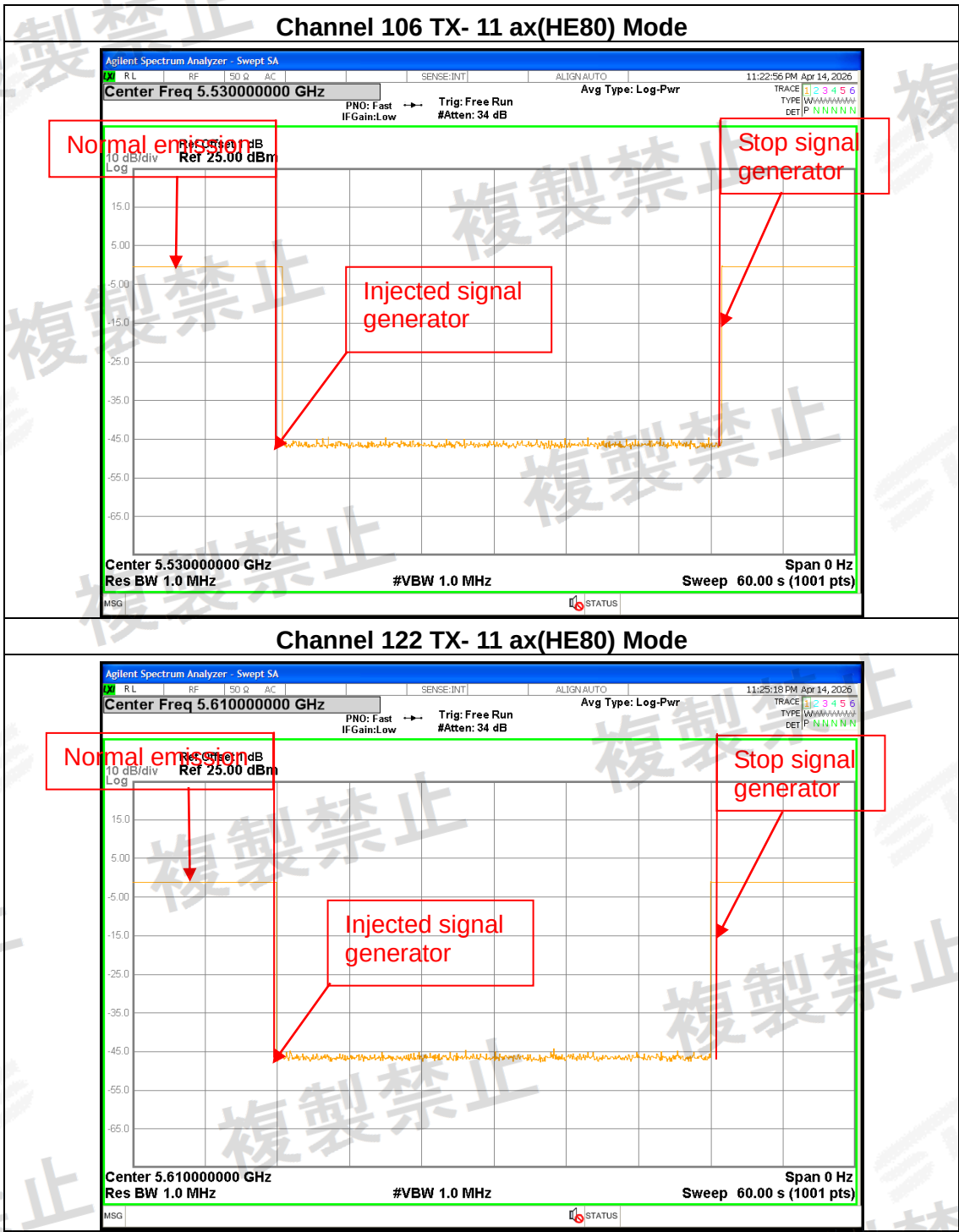


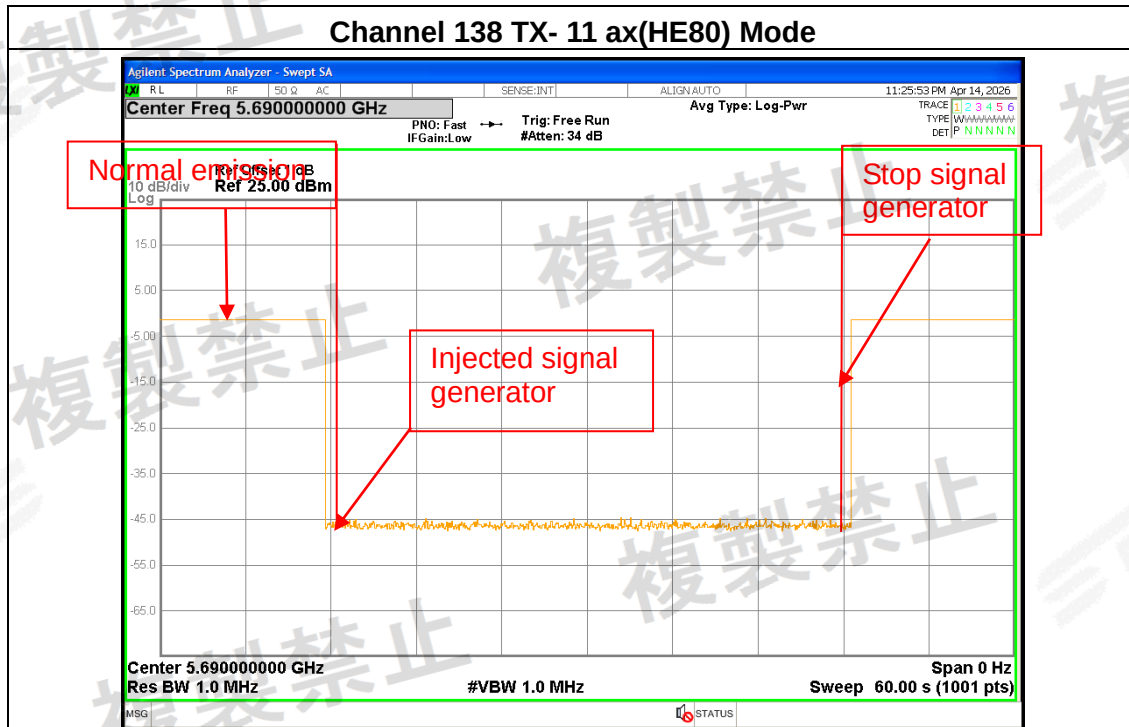
Channel 110 TX- 11 ax(HE40) Mode

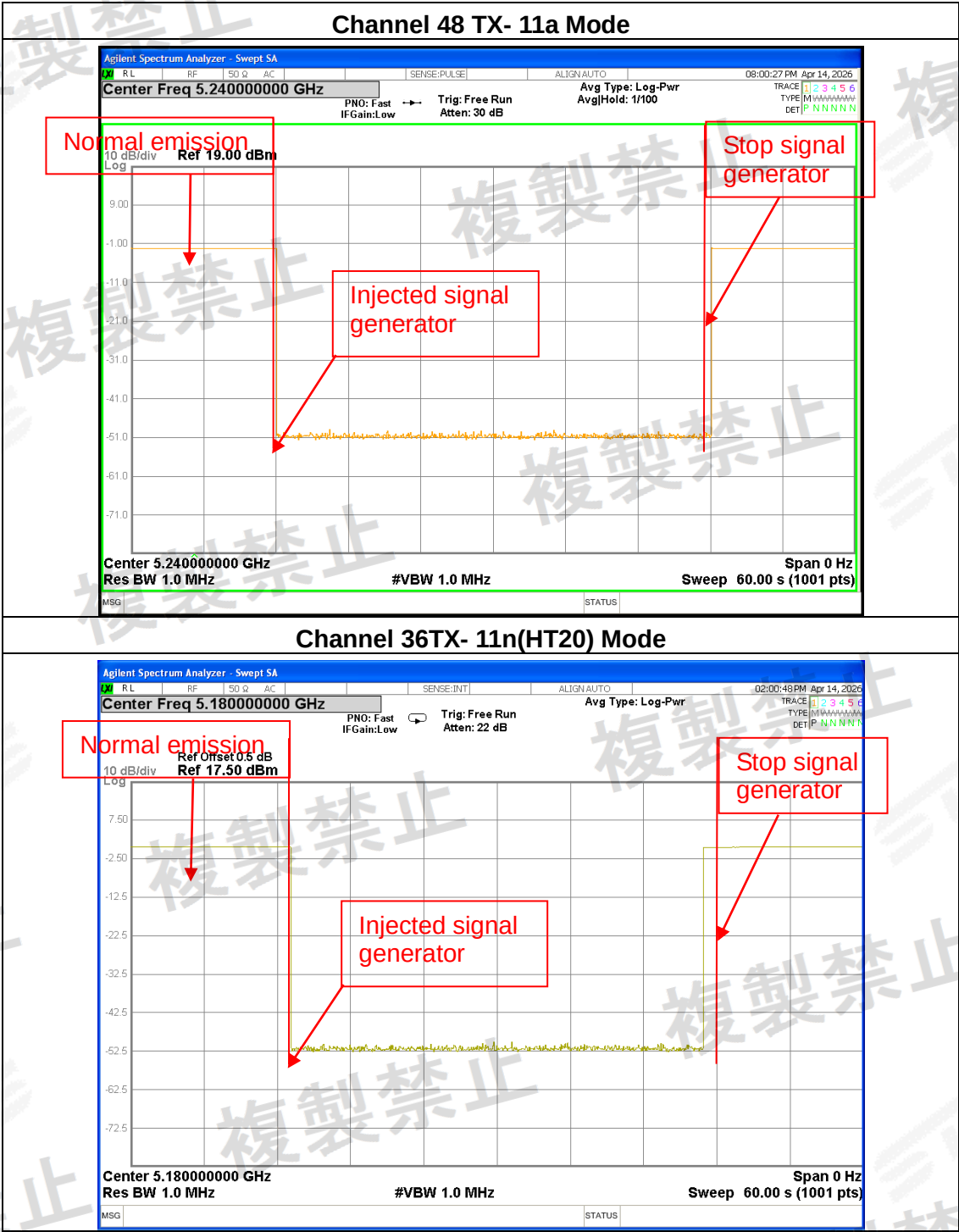


Channel 142 TX- 11 ax(HE40) Mode



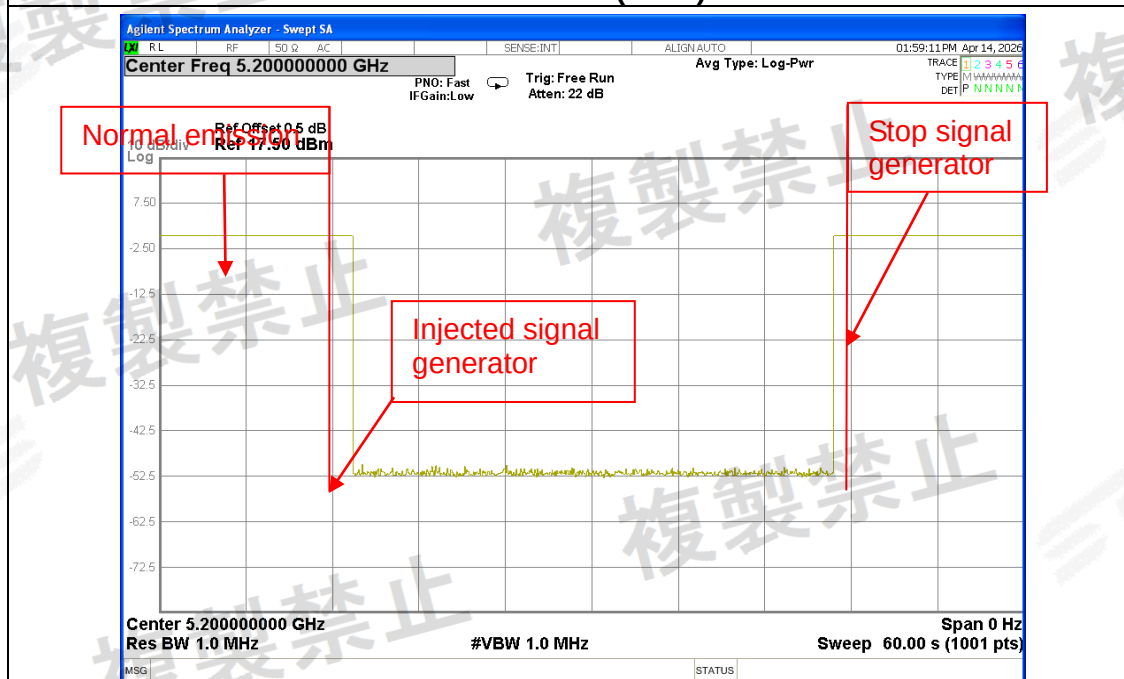




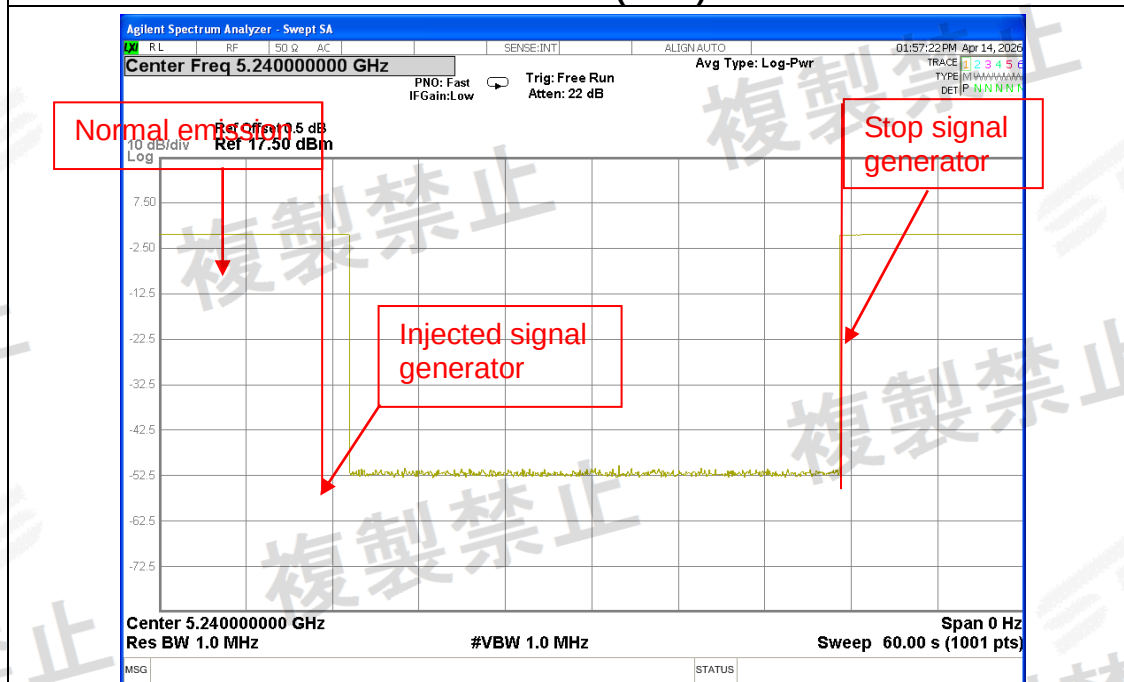




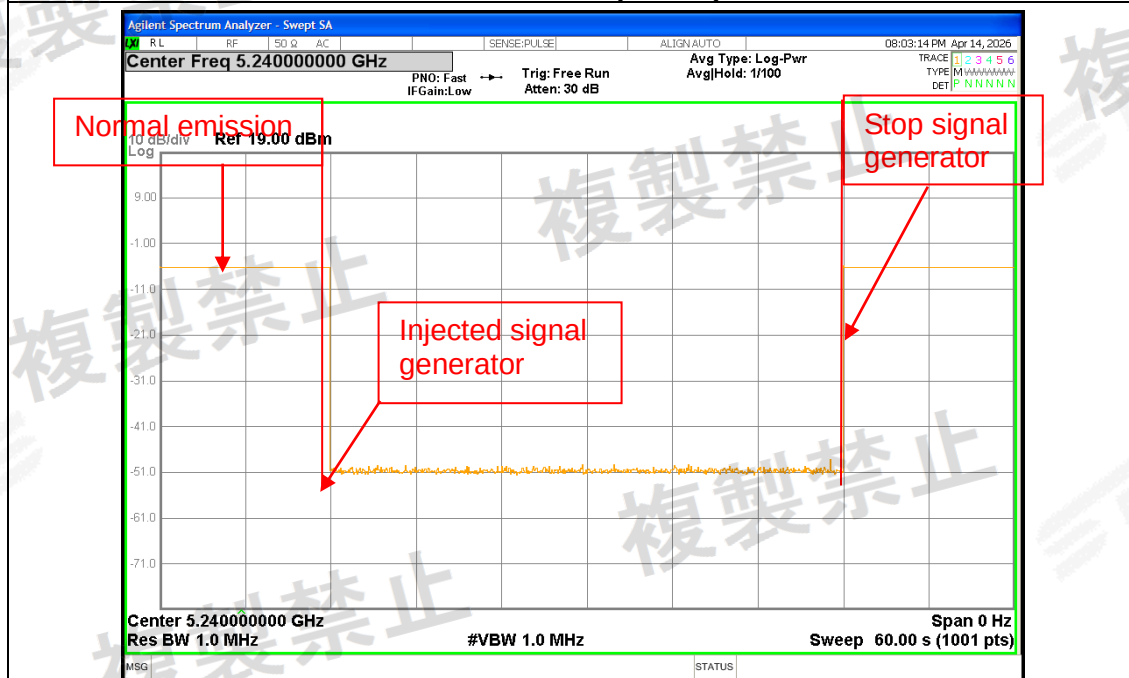
Channel 40TX- 11n(HT20) Mode



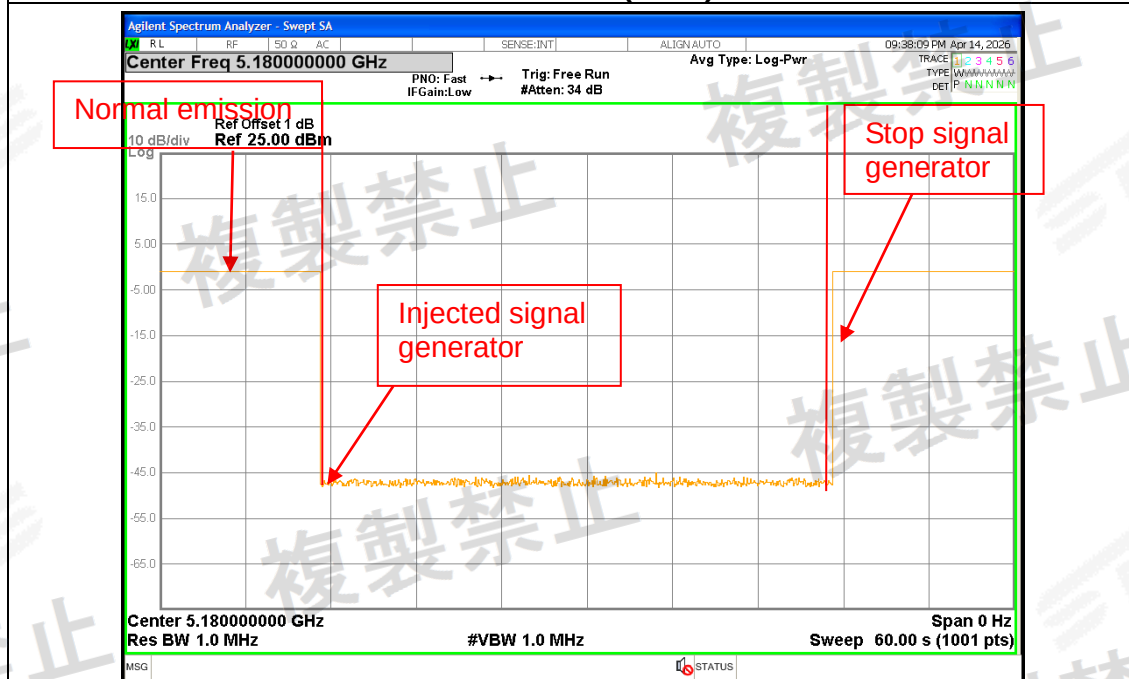
Channel 48TX- 11n(HT20) Mode



Channel 48TX- 11ac(VHT20) Mode

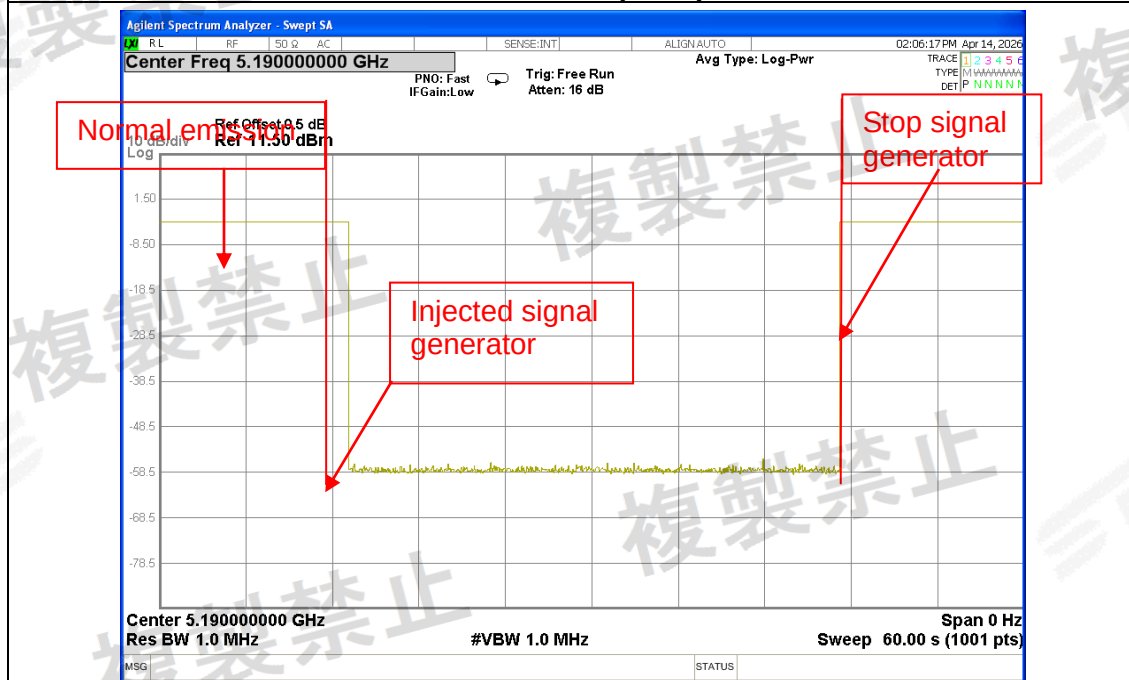


Channel 36TX- 11ax(HE20) Mode

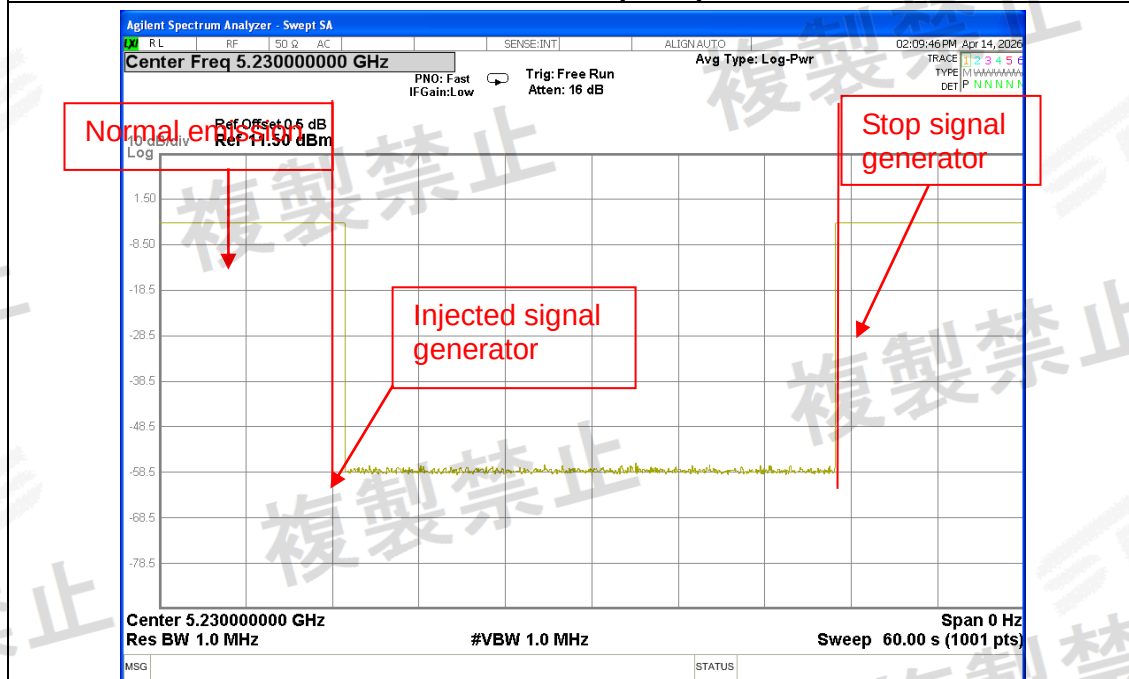


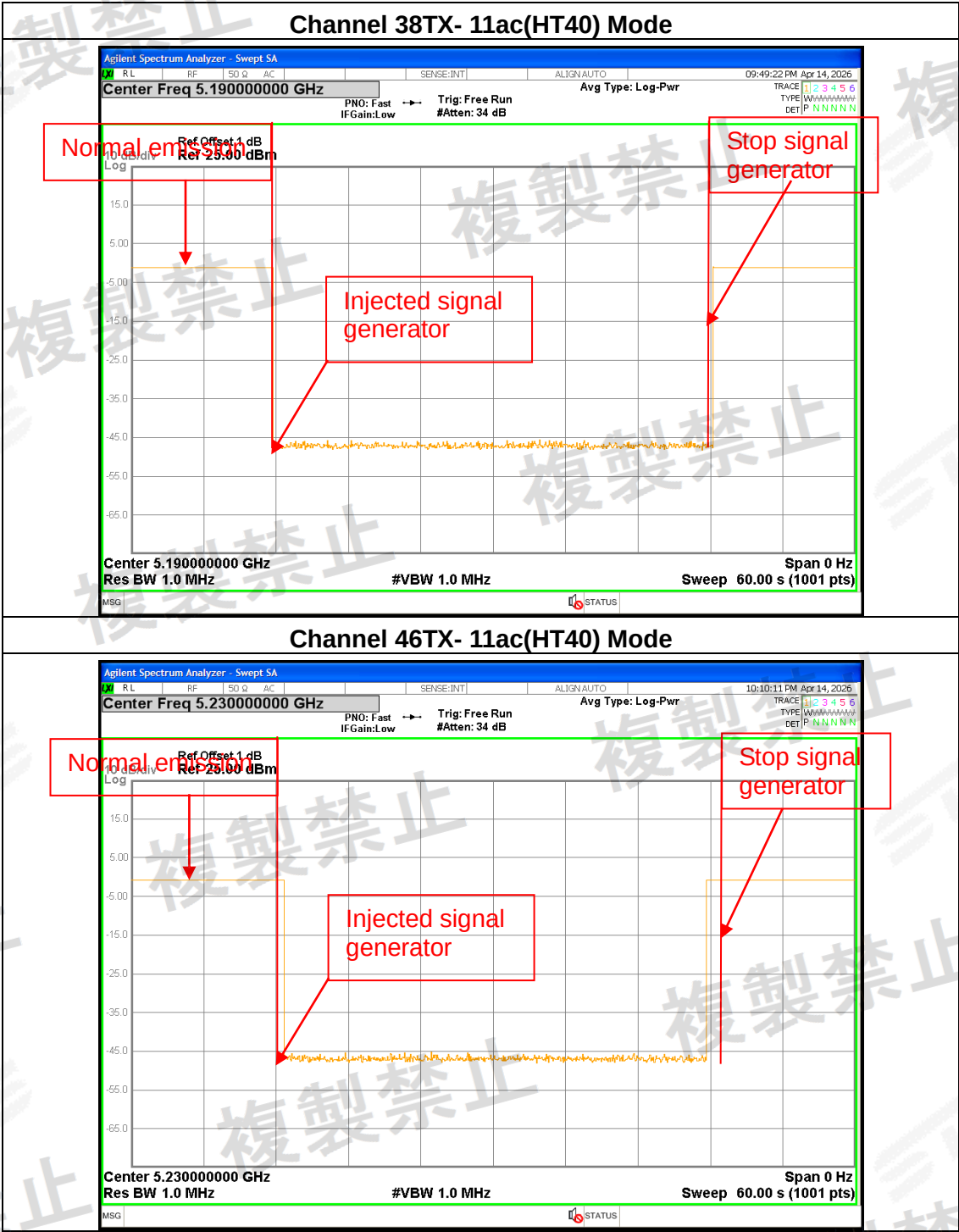


Channel 38TX- 11n(HT40) Mode

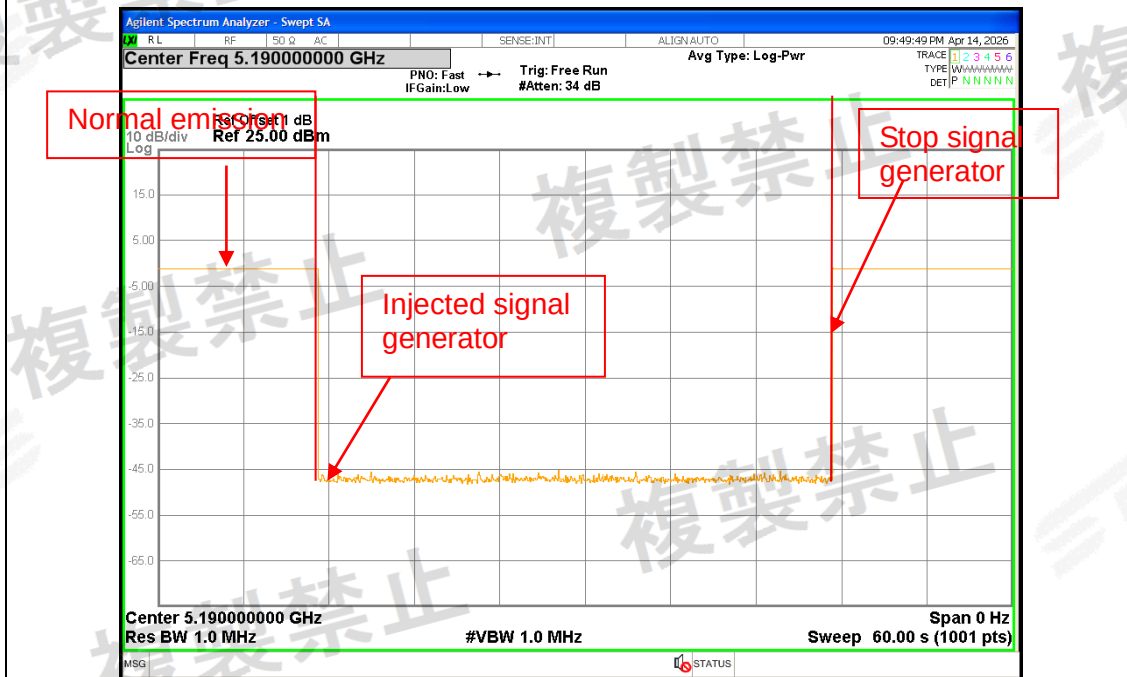


Channel 46TX- 11n(HT40) Mode

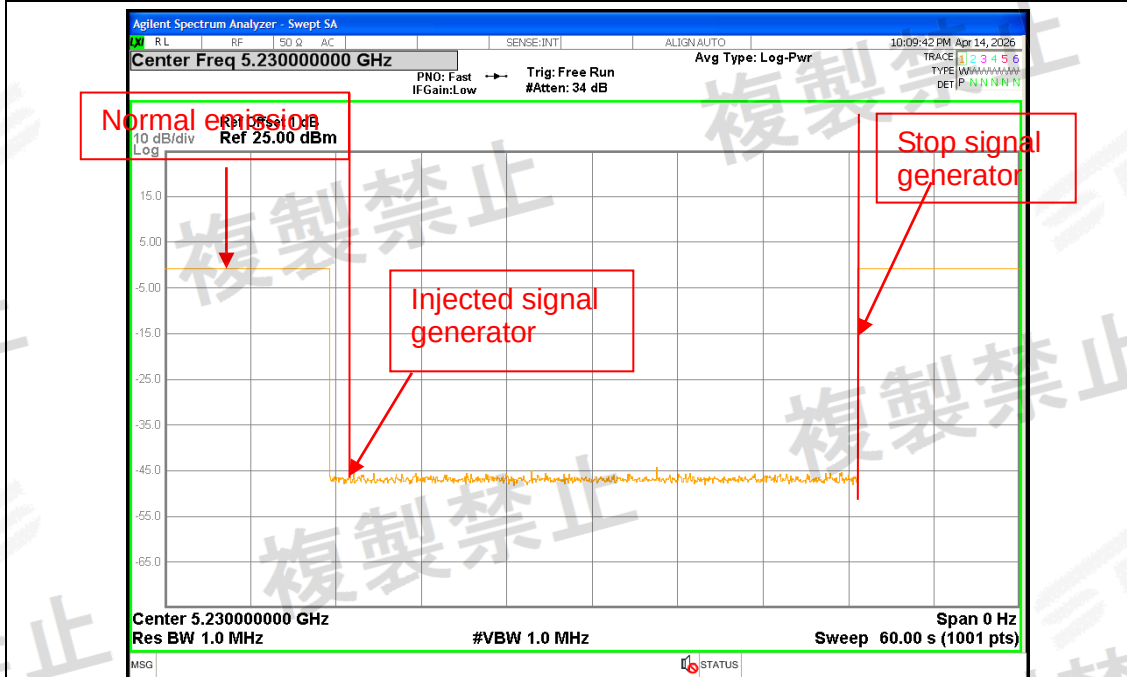




Channel 38TX- 11ax(HE40) Mode

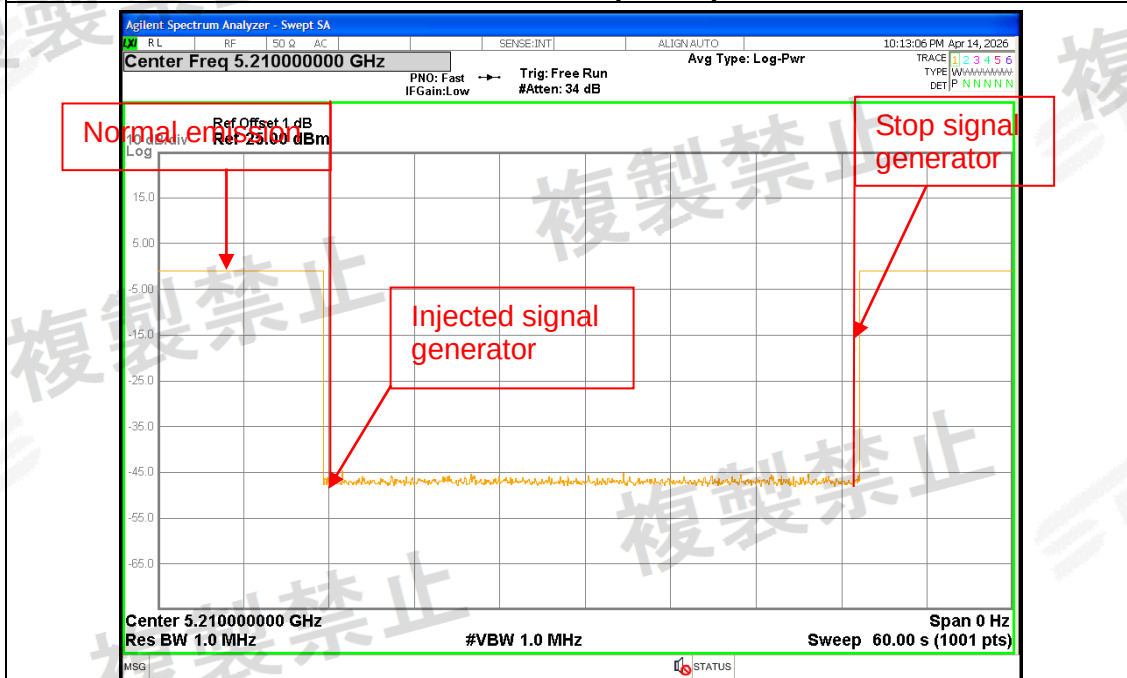


Channel 46TX- 11ax(HE40) Mode

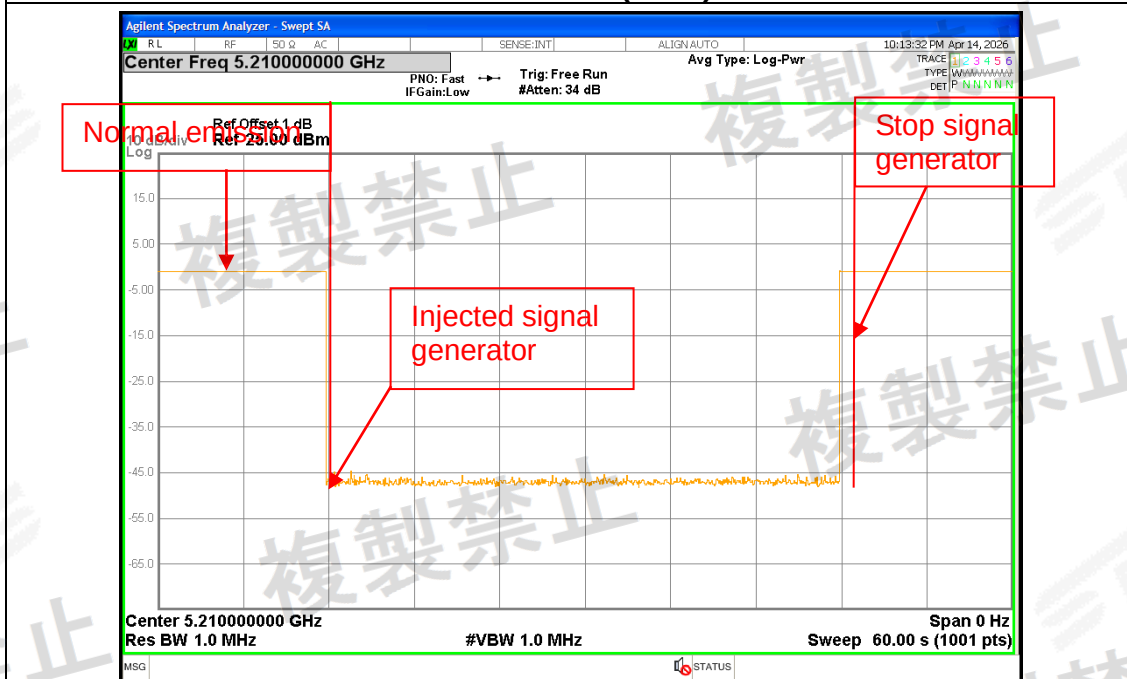




Channel 42TX- 11ac(VHT80) Mode

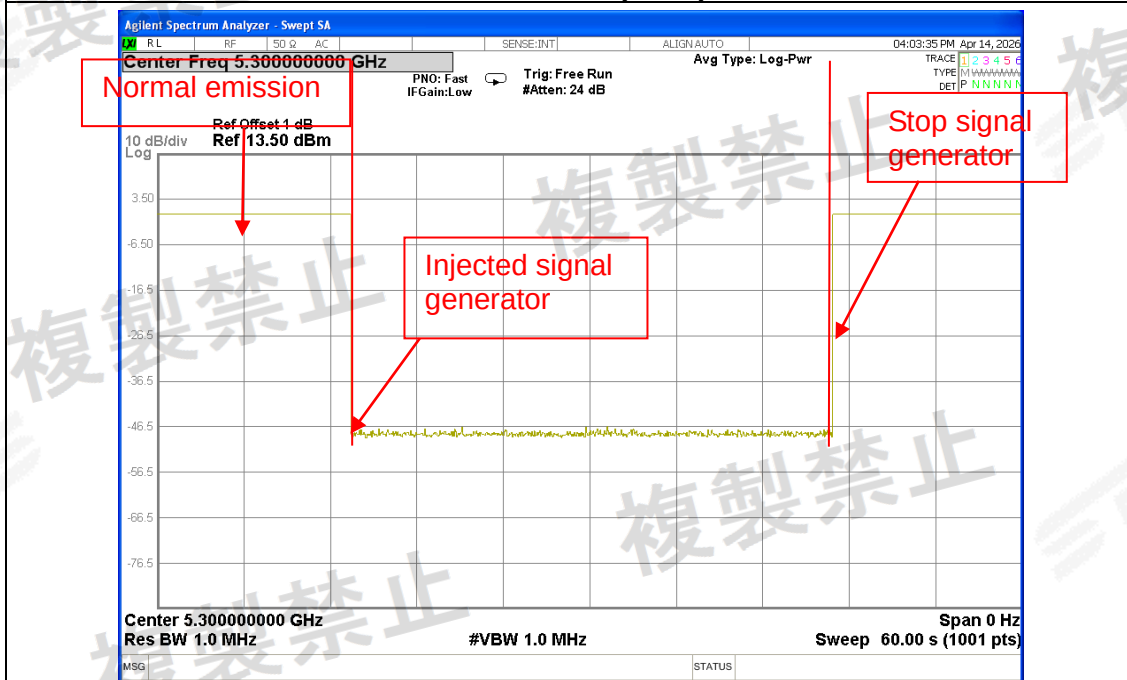


Channel 42TX- 11ax(HE80) Mode

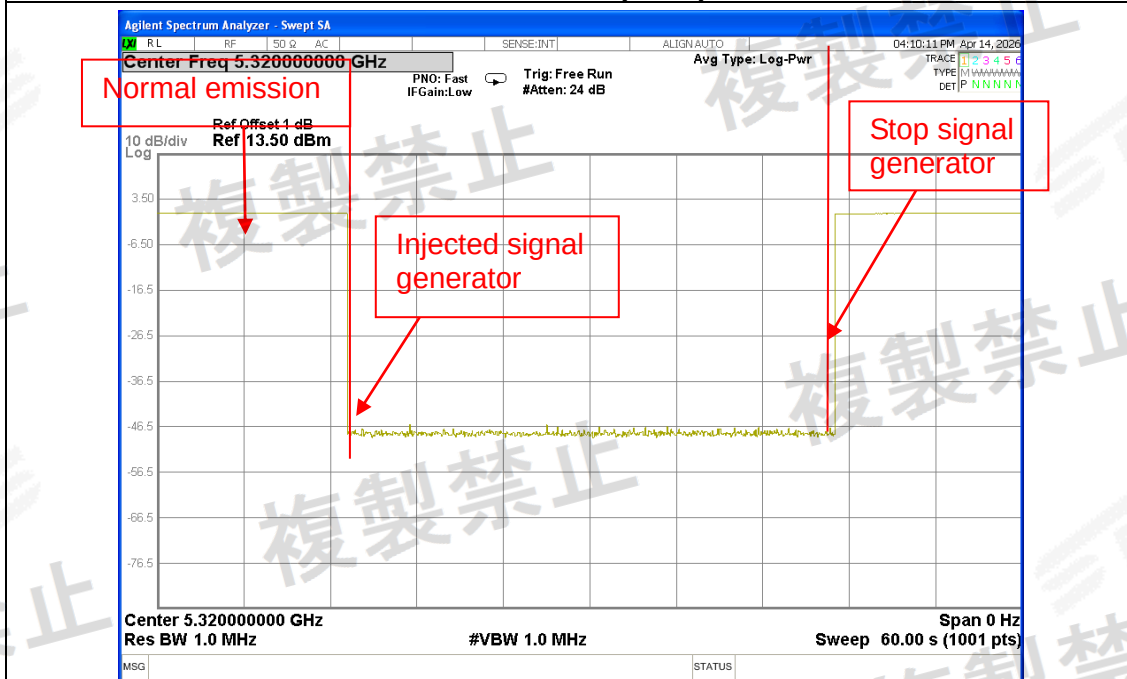




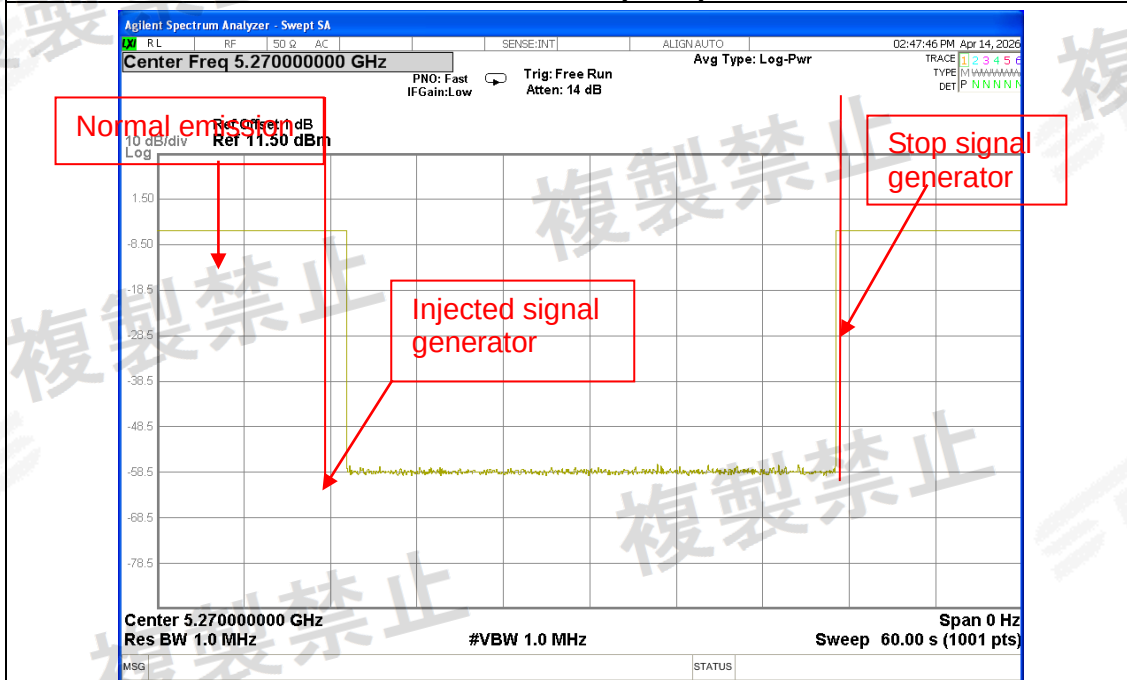
Channel 60 TX- 11n(HT20) Mode



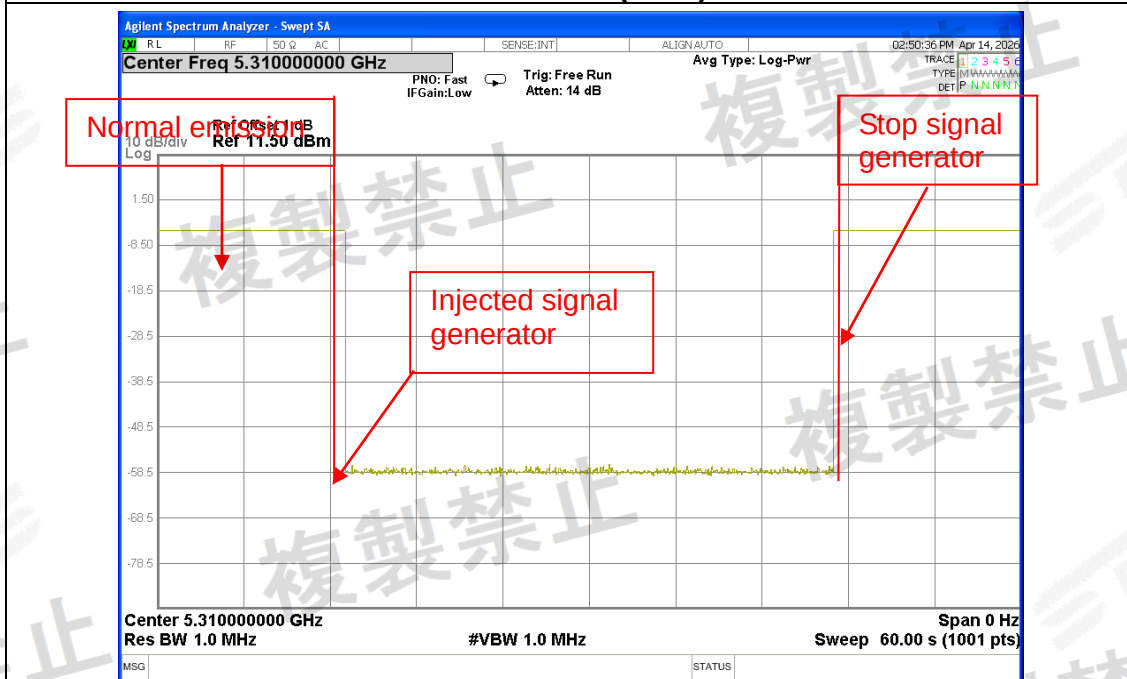
Channel 64 TX- 11n(HT20) Mode



Channel 54 TX- 11n(HT40) Mode

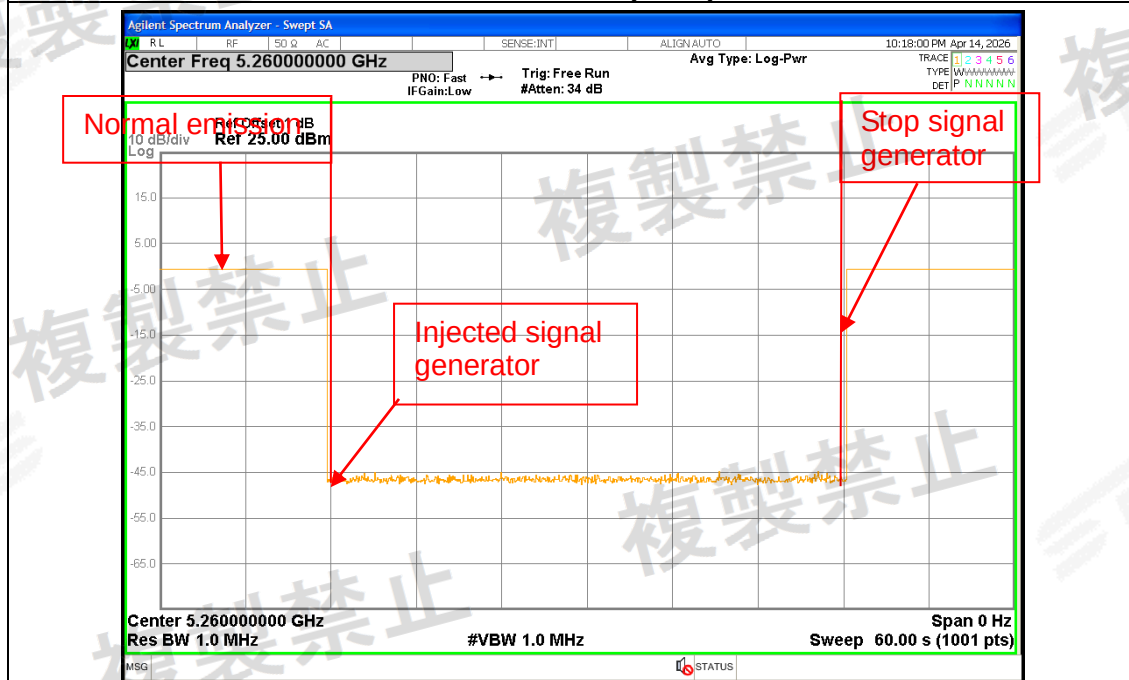


Channel 62 TX- 11n(HT40) Mode

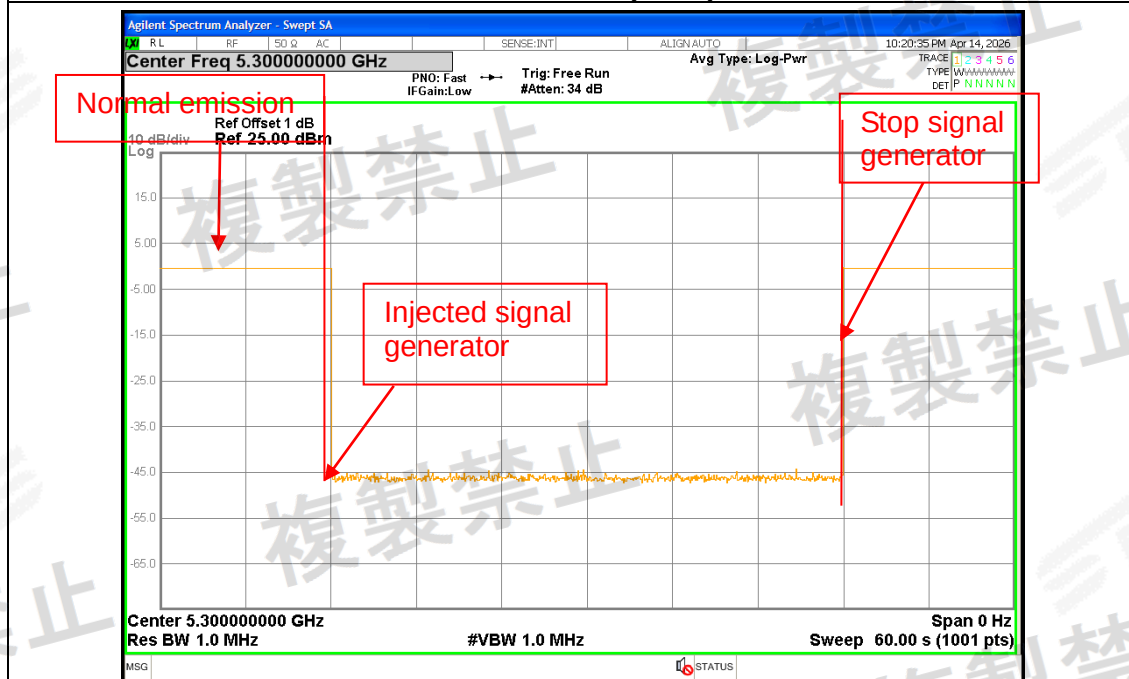


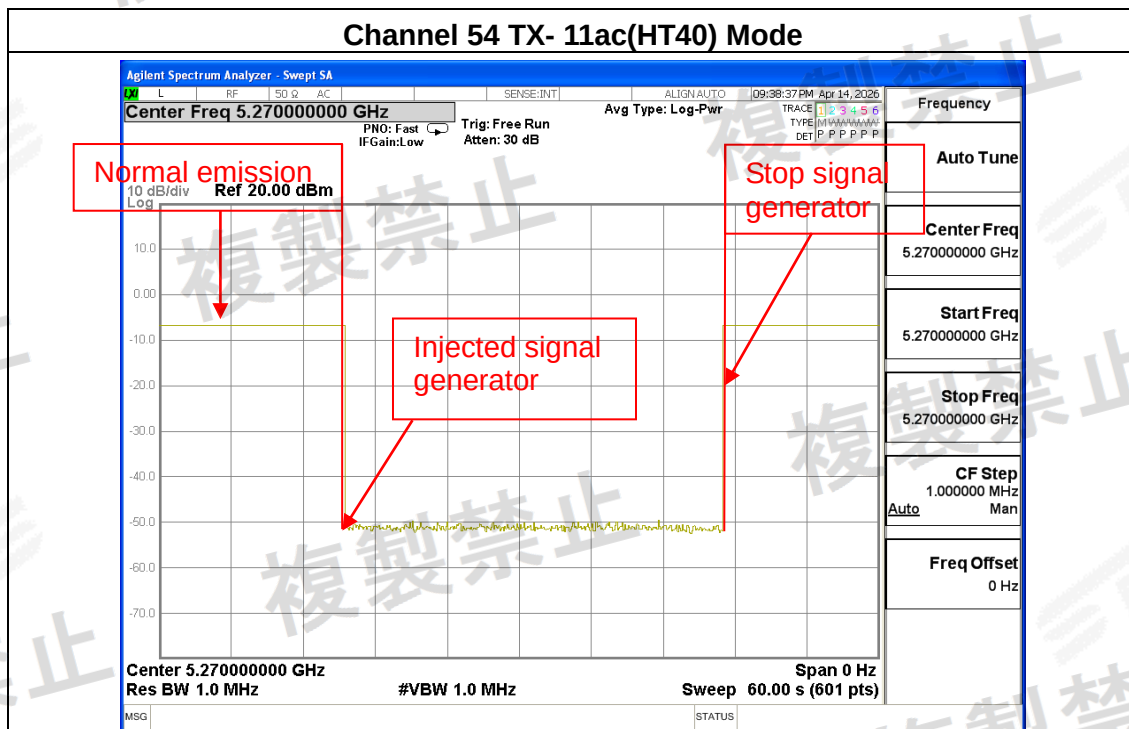
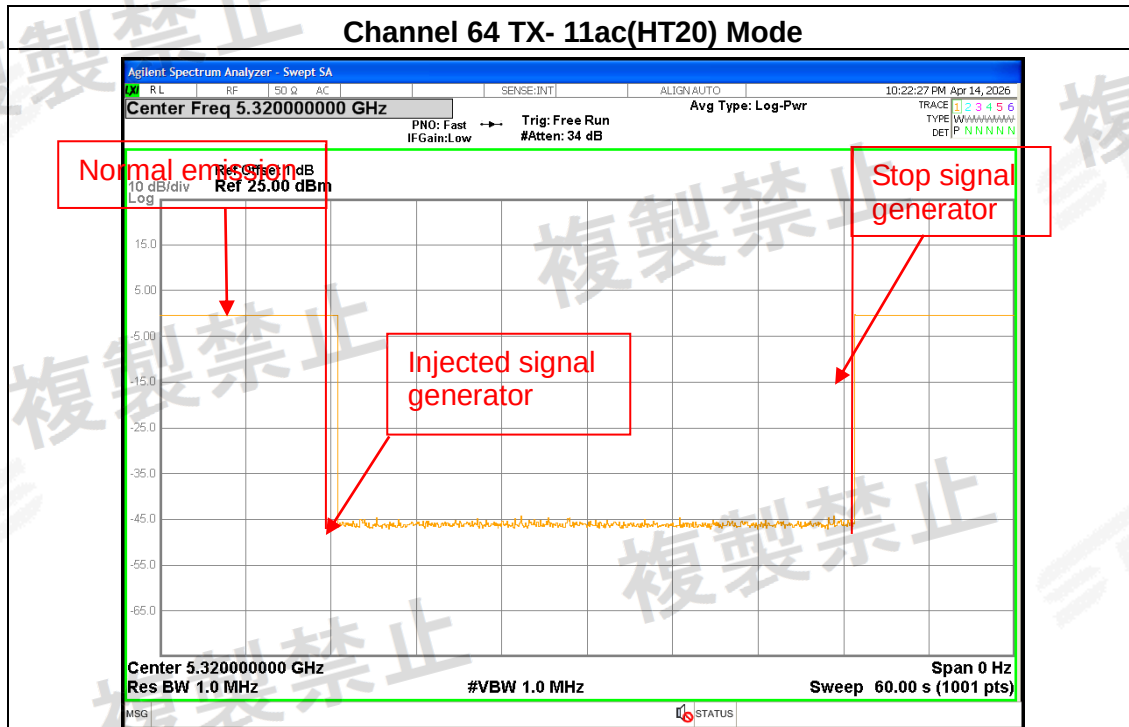


Channel 52 TX- 11ac(HT20) Mode



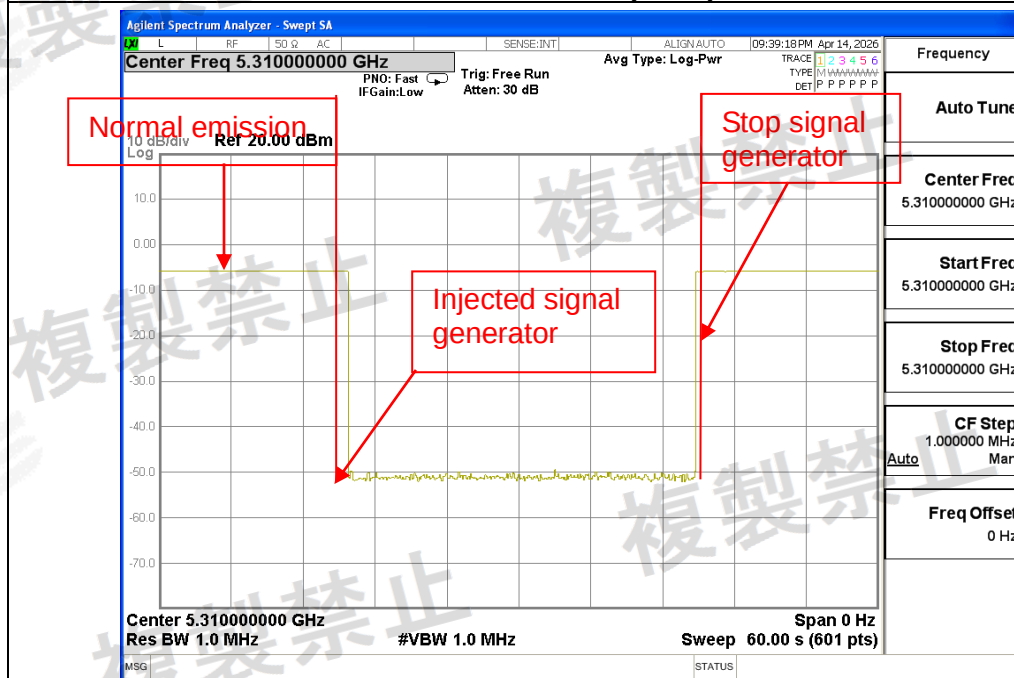
Channel 60 TX- 11ac(HT20) Mode



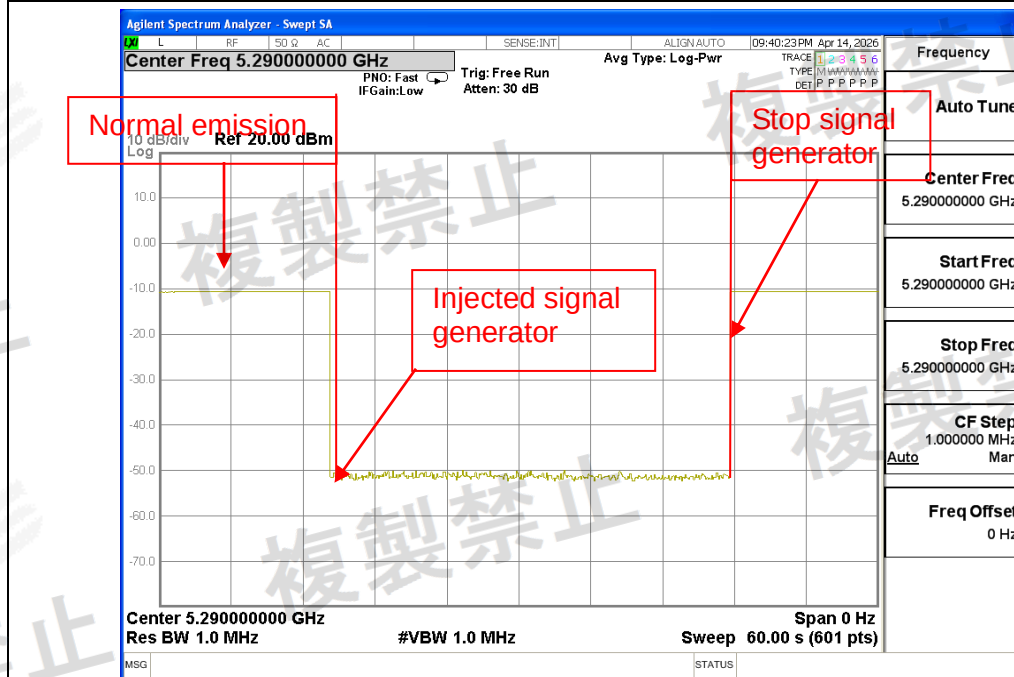




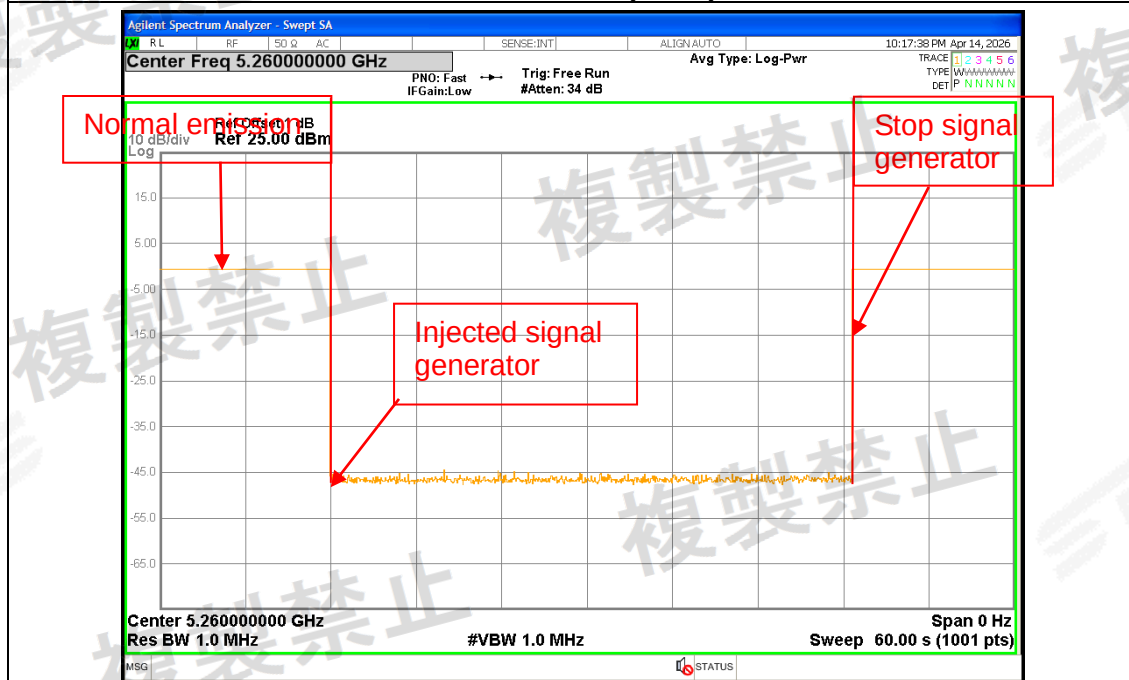
Channel 62 TX- 11ac(HT40) Mode



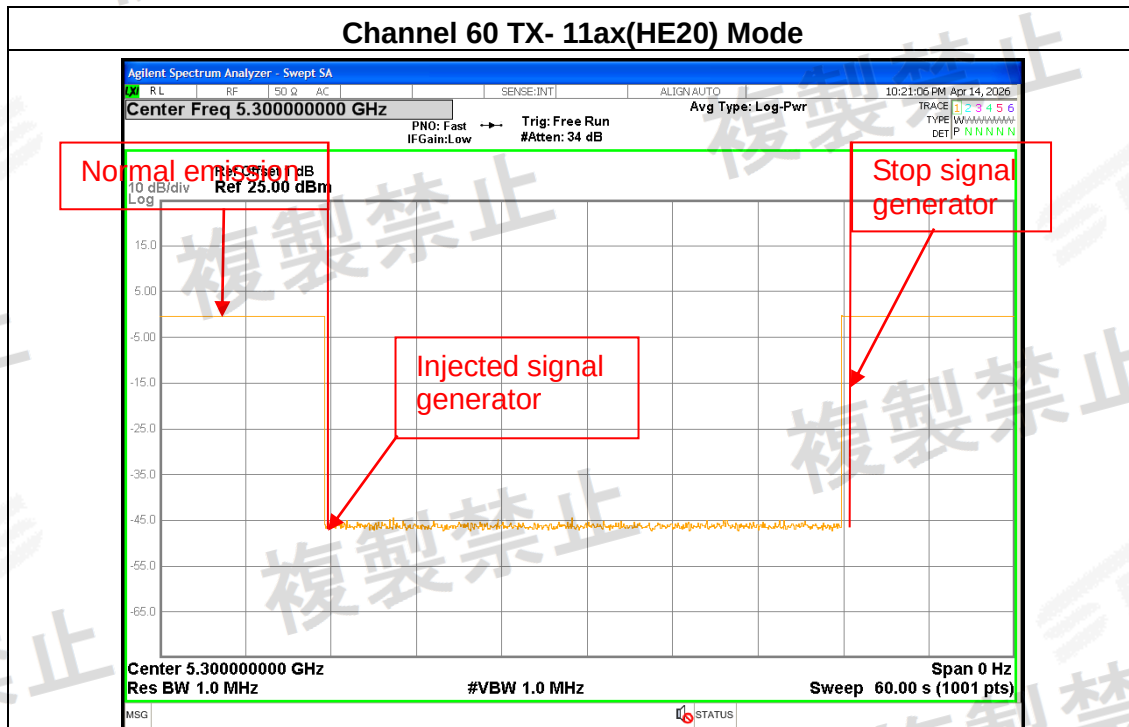
Channel 58 TX- 11ac(HT80) Mode



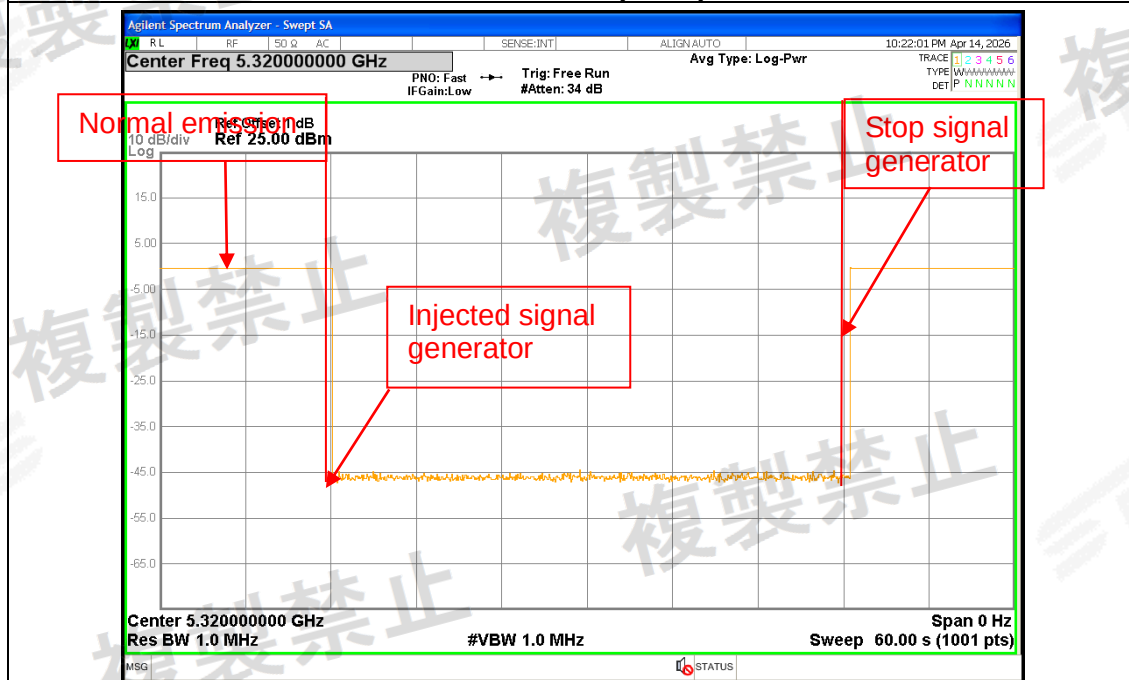
Channel 52 TX- 11ax(HE20) Mode



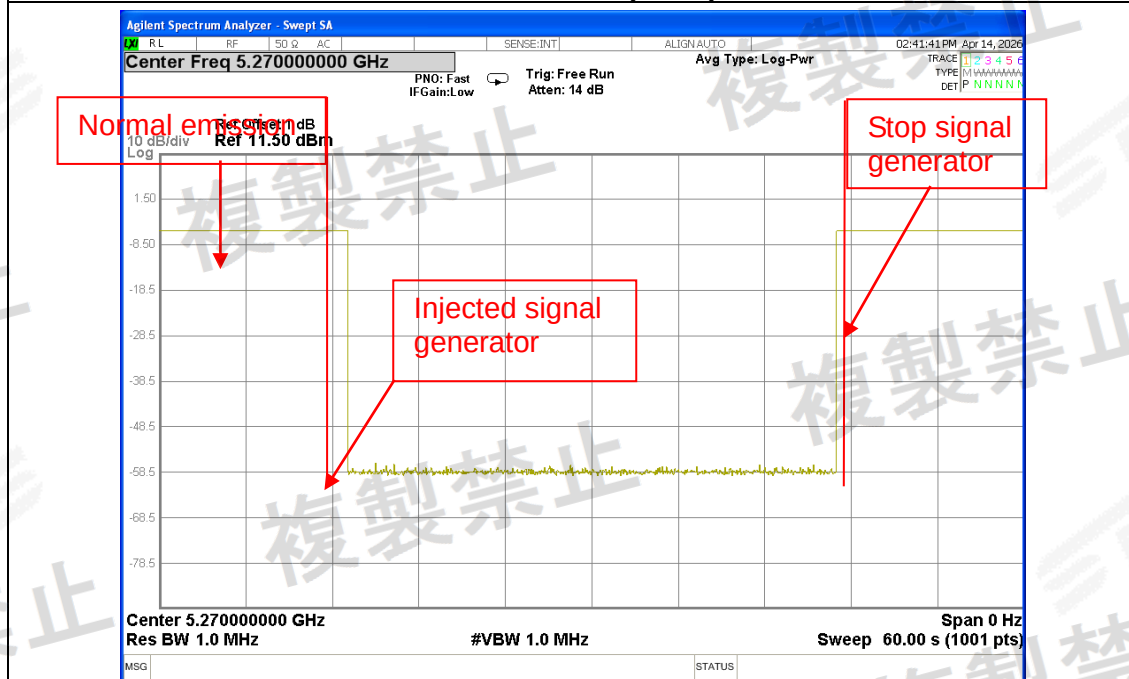
Channel 60 TX- 11ax(HE20) Mode



Channel 64 TX- 11ax(HE20) Mode

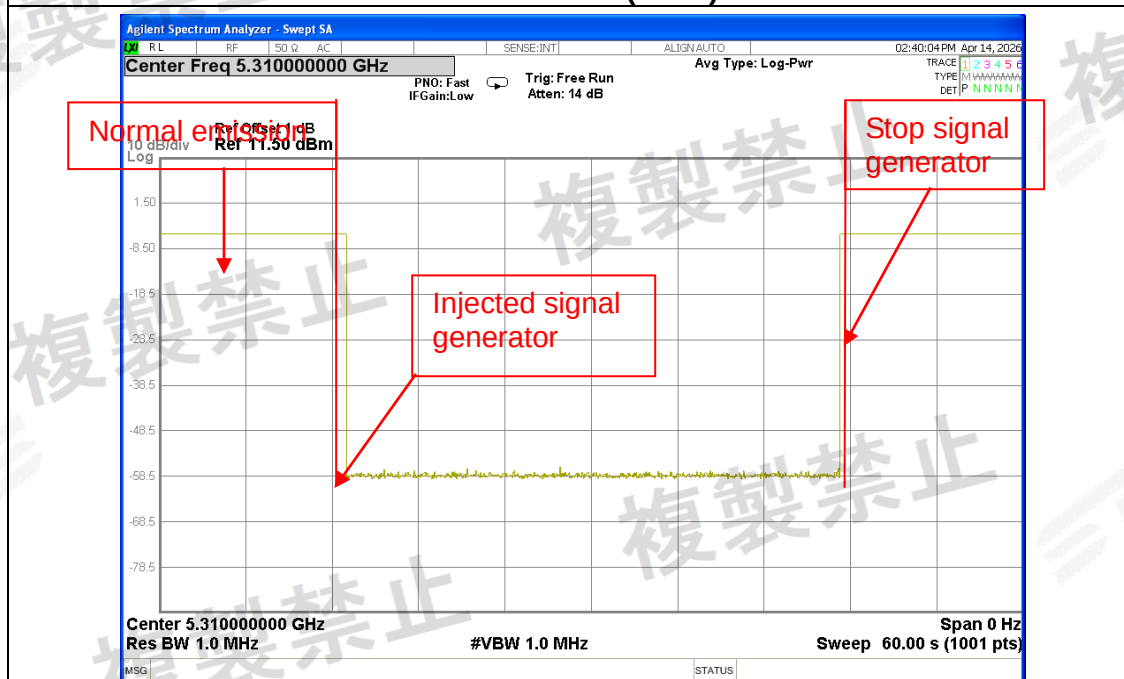


Channel 54 TX- 11ax(HE40) Mode

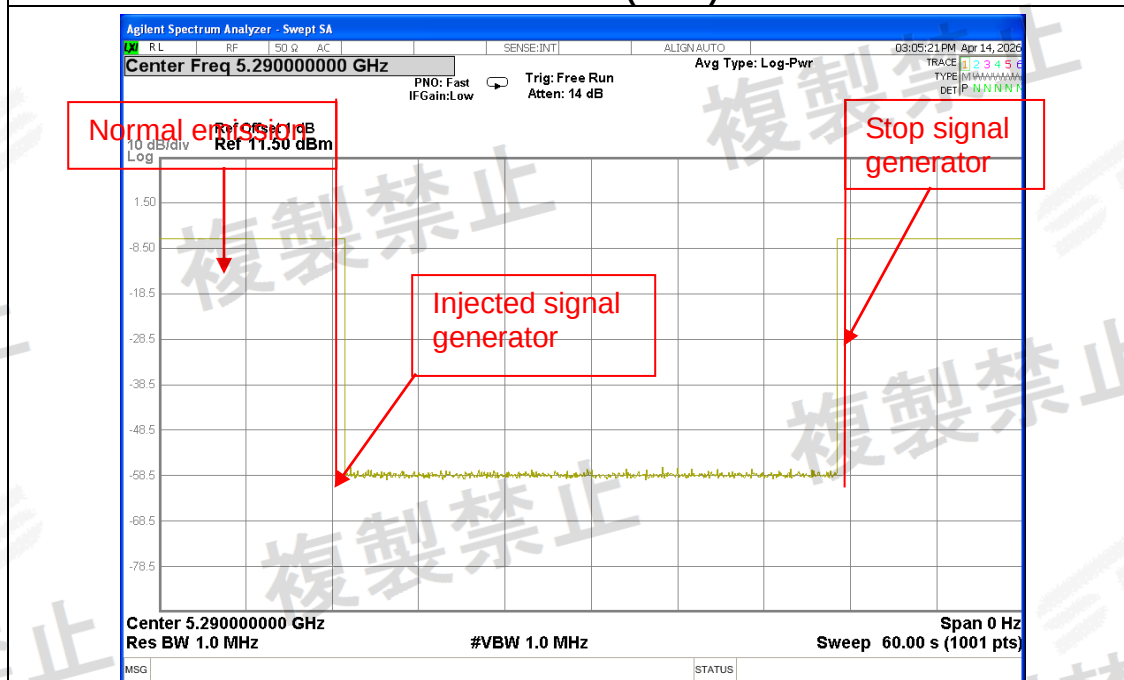




Channel 62 TX- 11ax(HE40) Mode



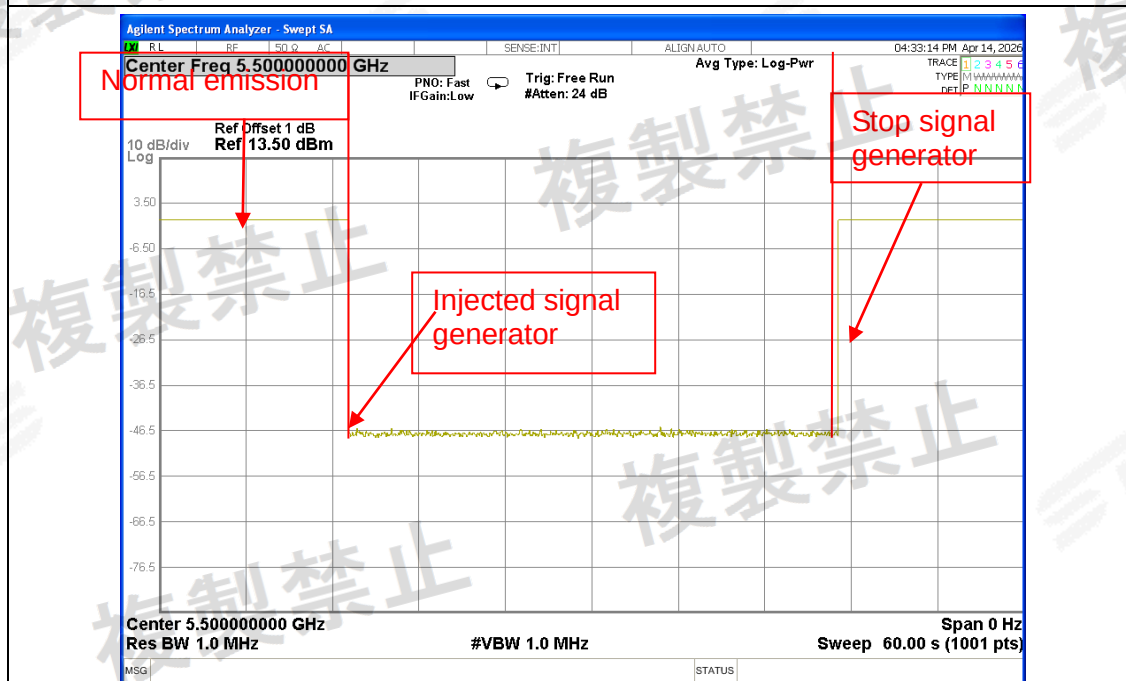
Channel 58 TX- 11ax(HE80) Mode



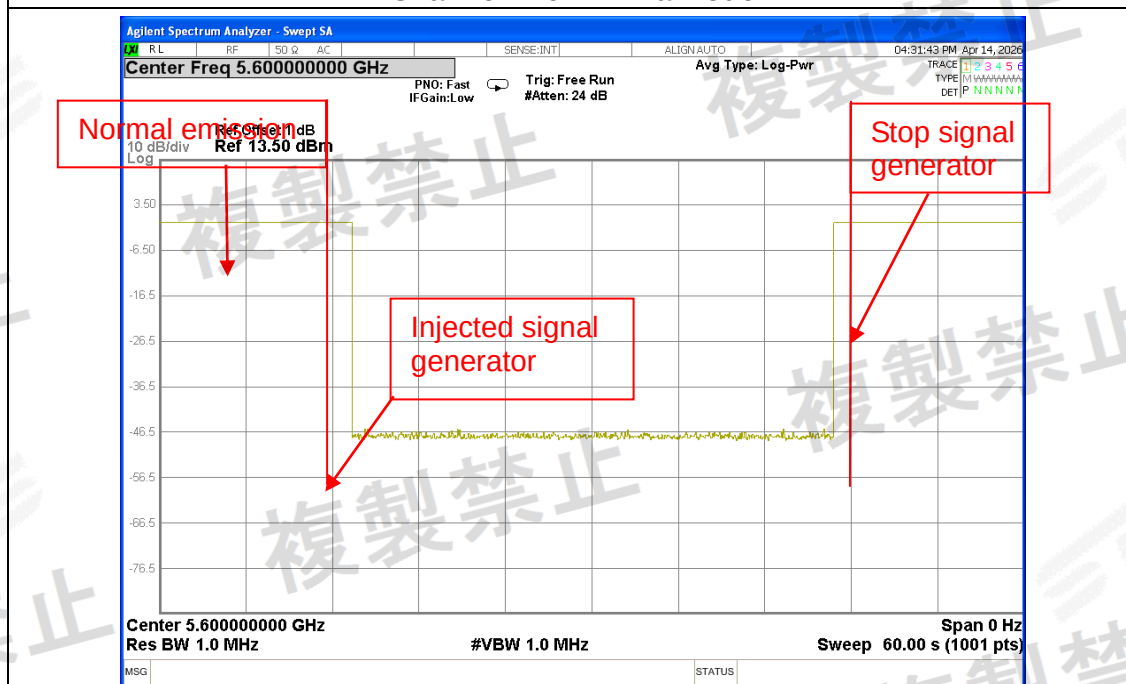


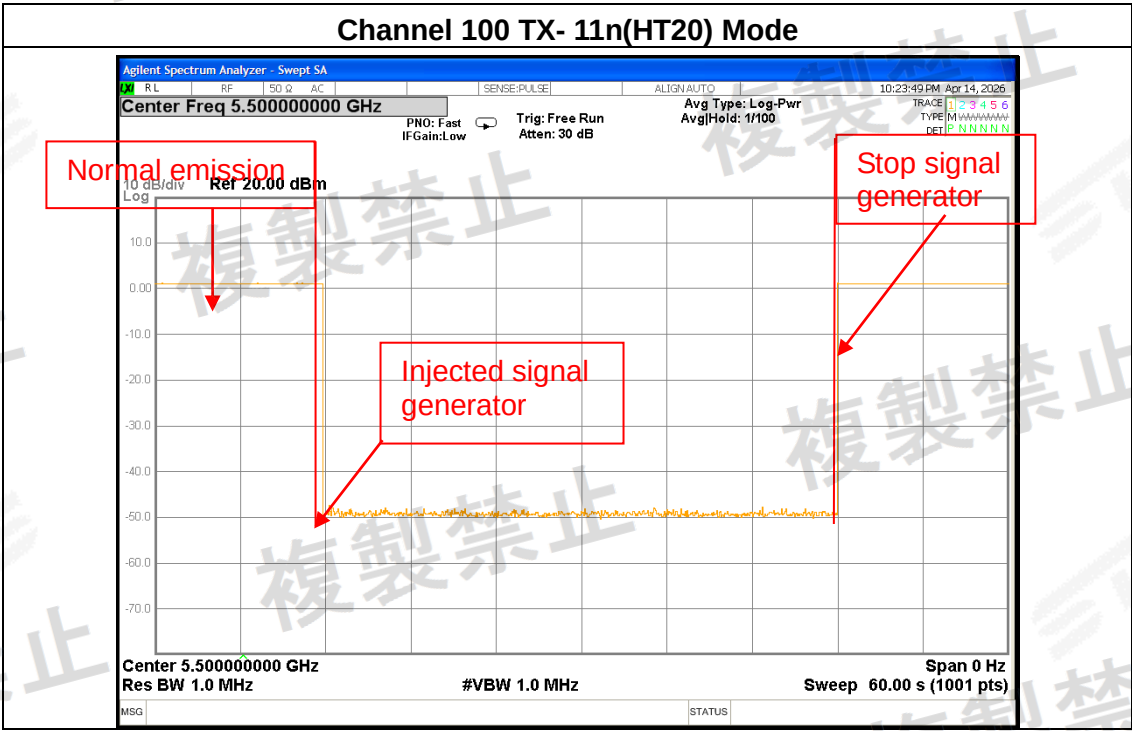
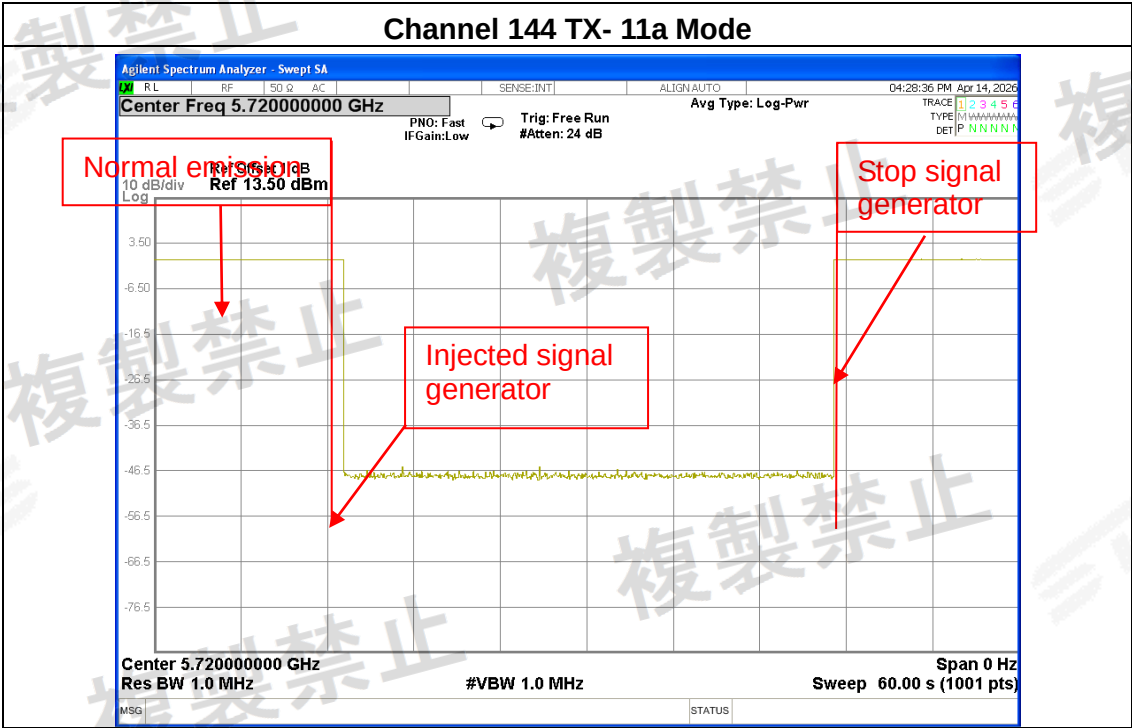
W56

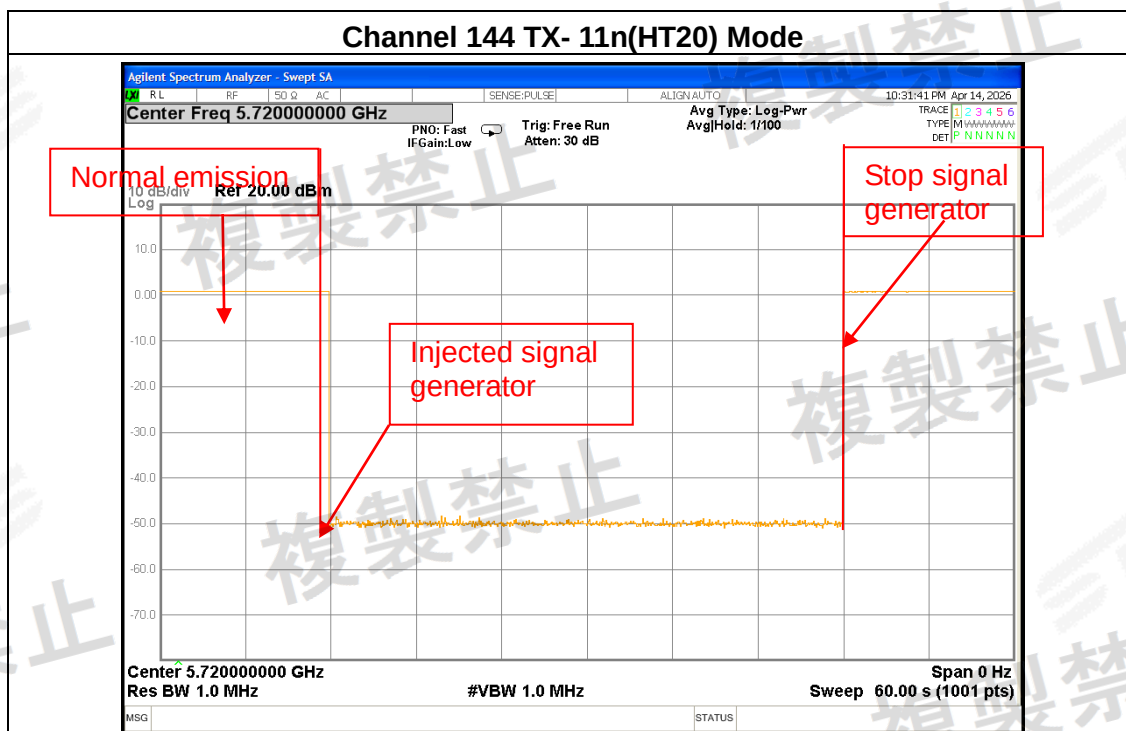
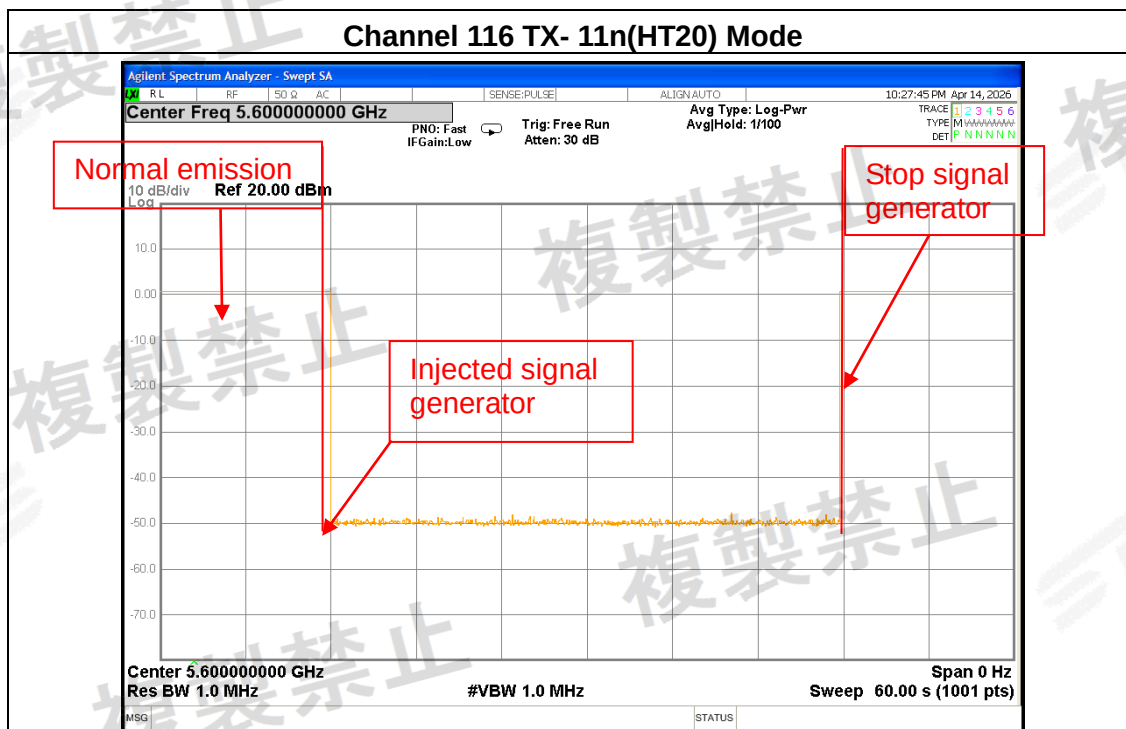
Channel 100 TX- 11a Mode

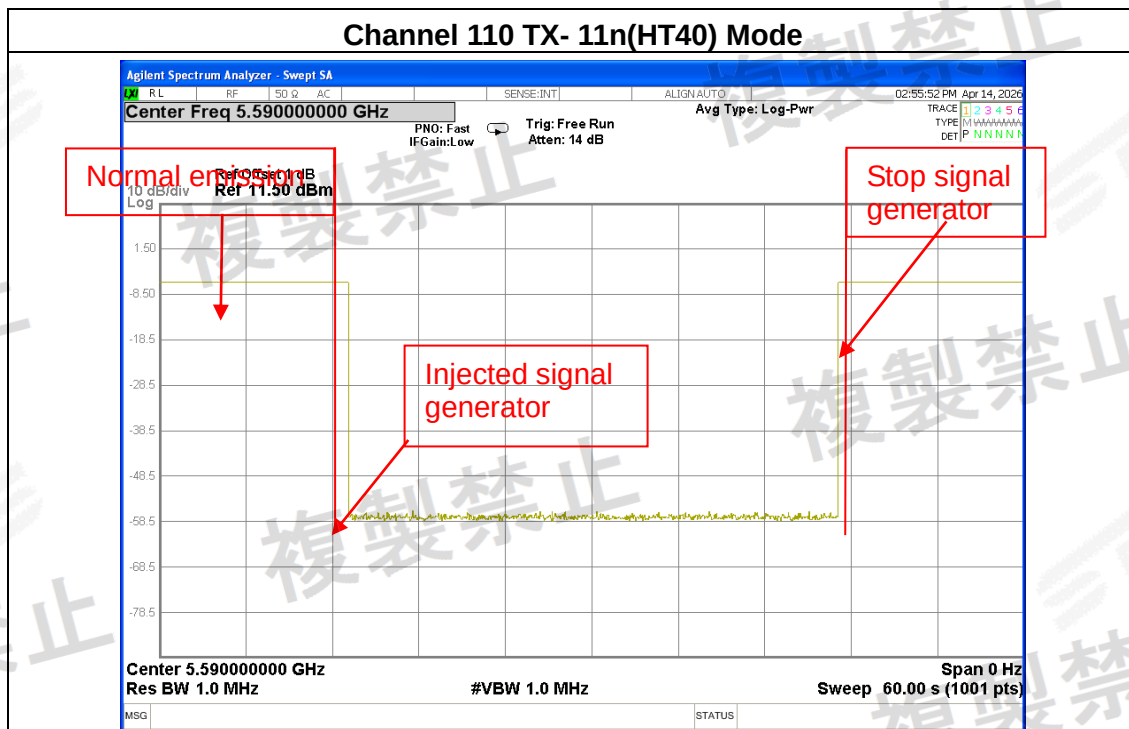
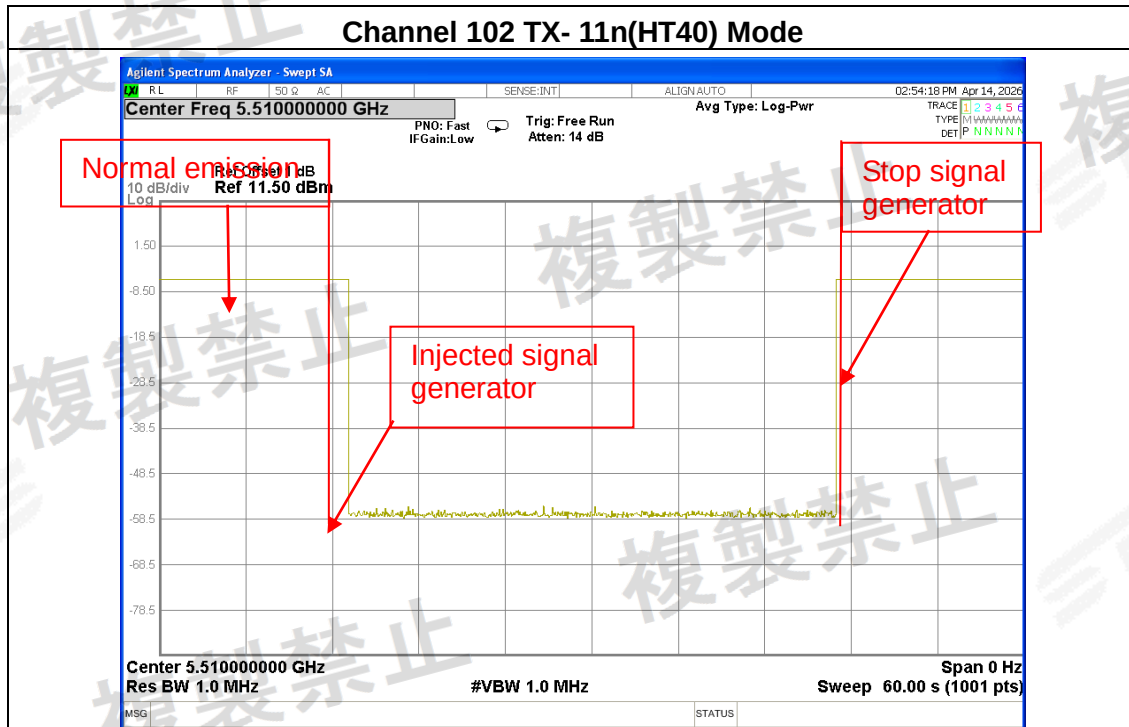


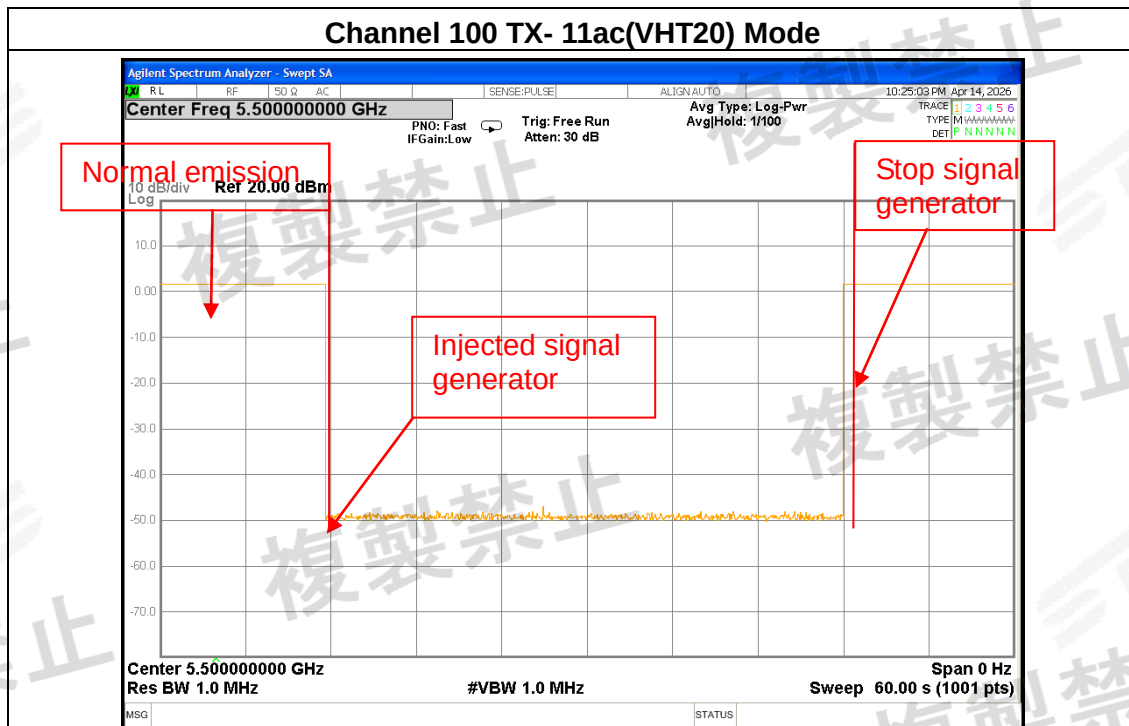
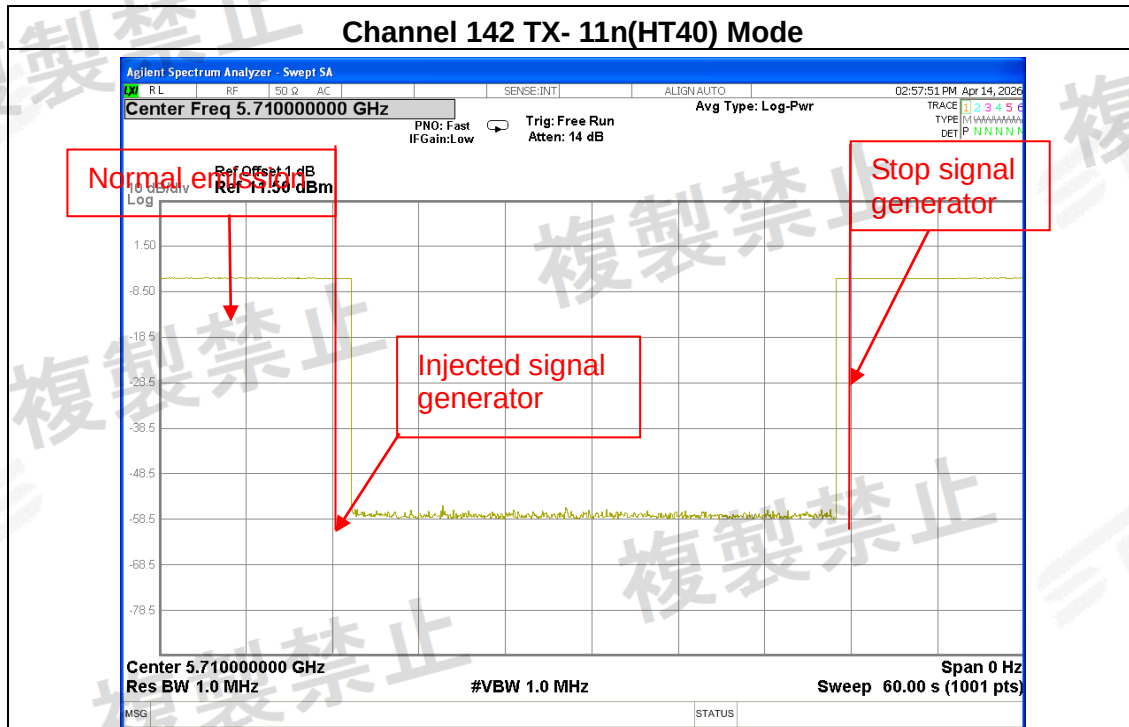
Channel 116 TX- 11a Mode



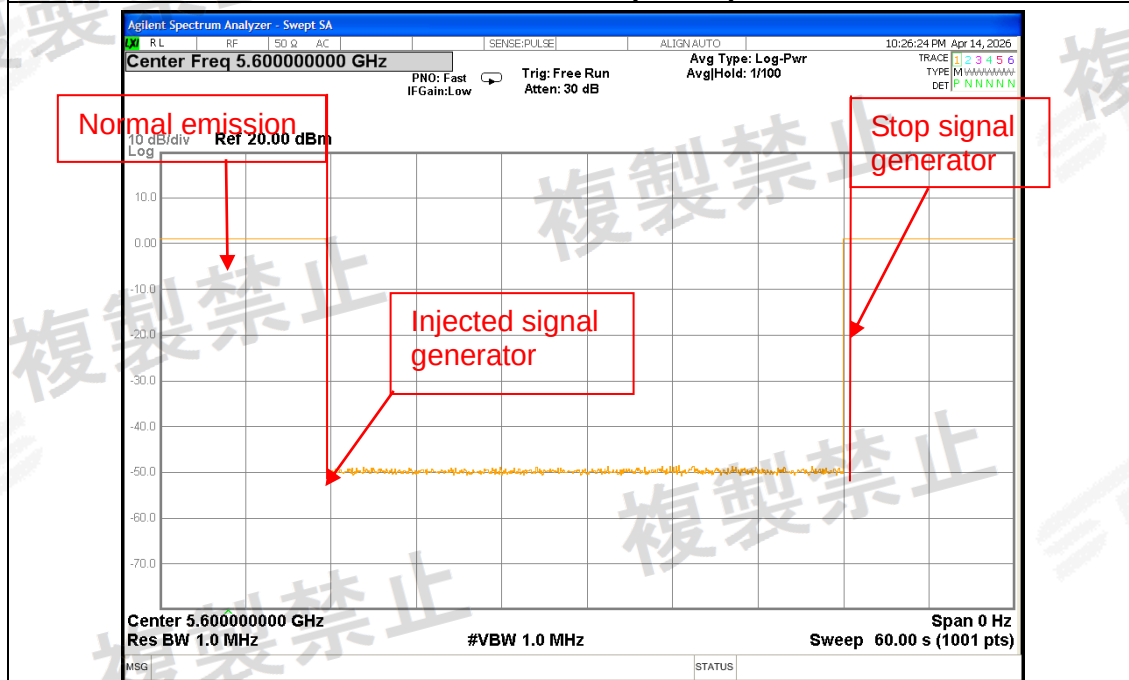




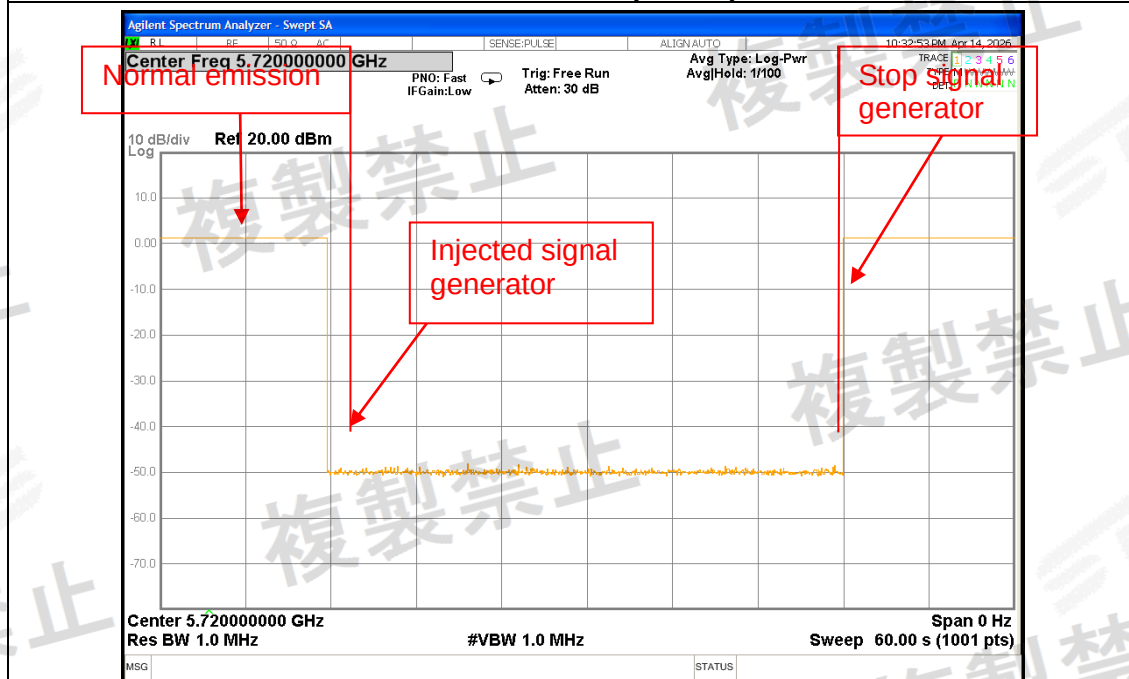




Channel 116 TX- 11 ac(VHT20) Mode

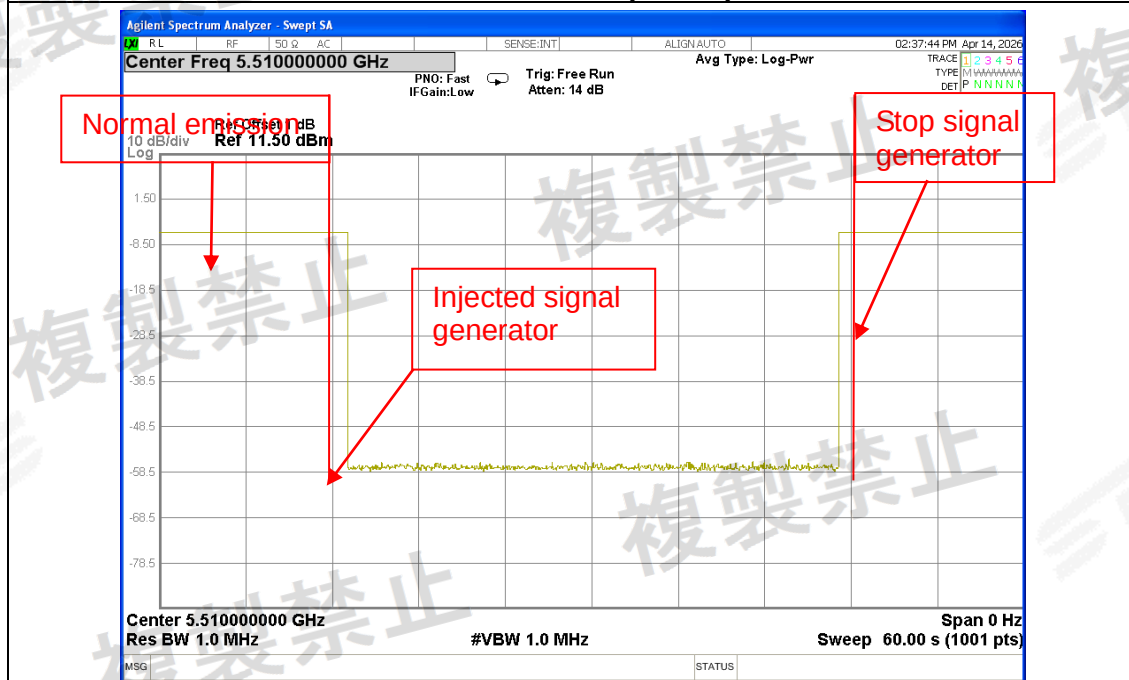


Channel 144 TX- 11 ac(VHT20) Mode

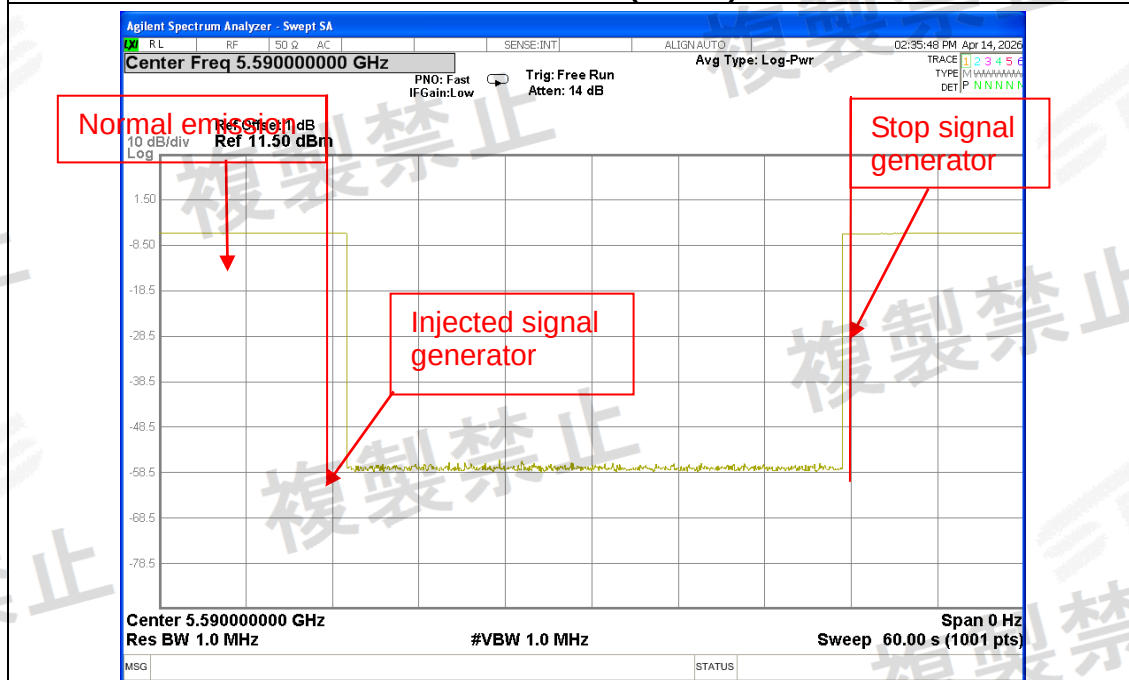




Channel 102 TX- 11ac(VHT40) Mode

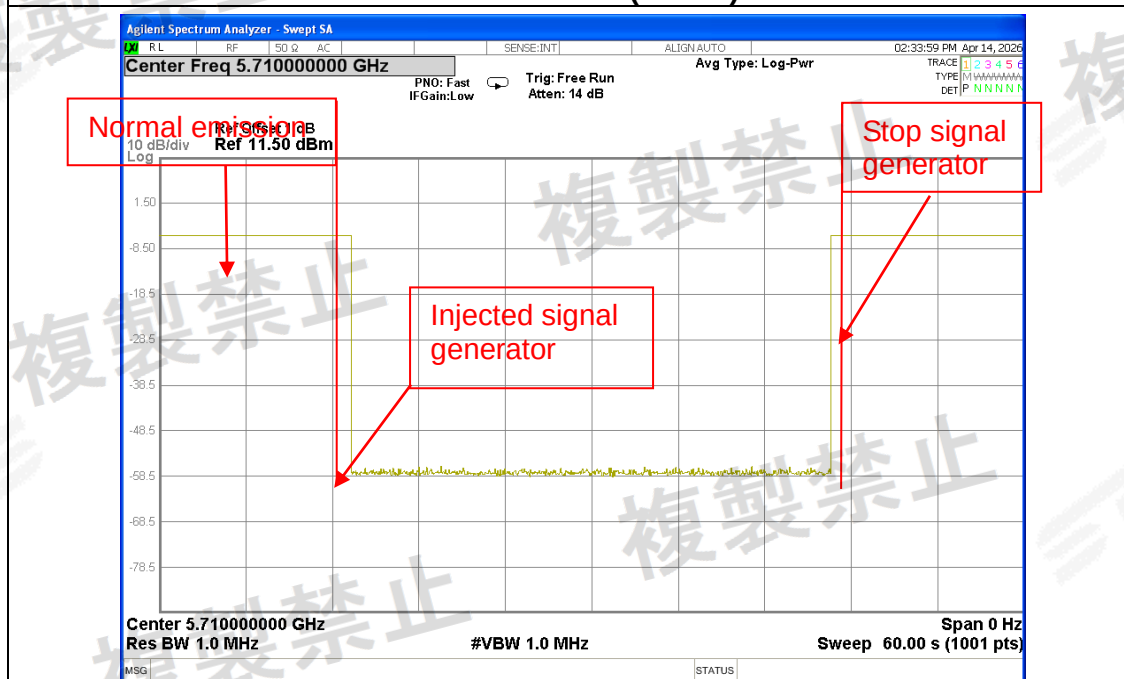


Channel 110 TX- 11 ac(VHT40) Mode

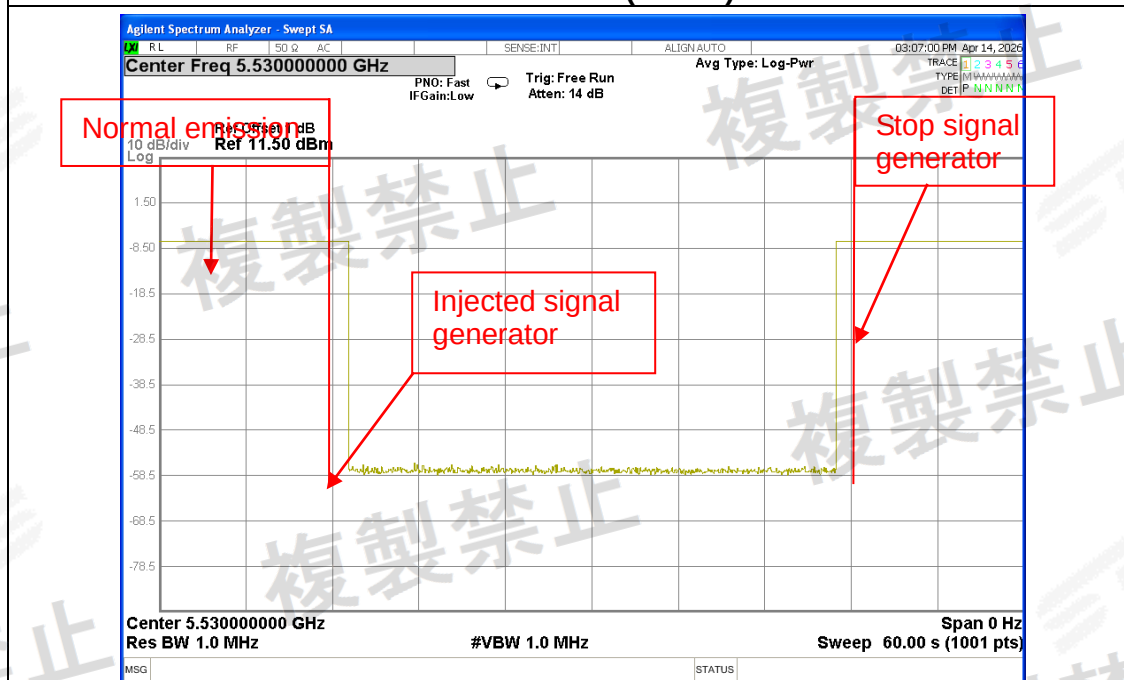




Channel 142 TX- 11 ac(VHT40) Mode

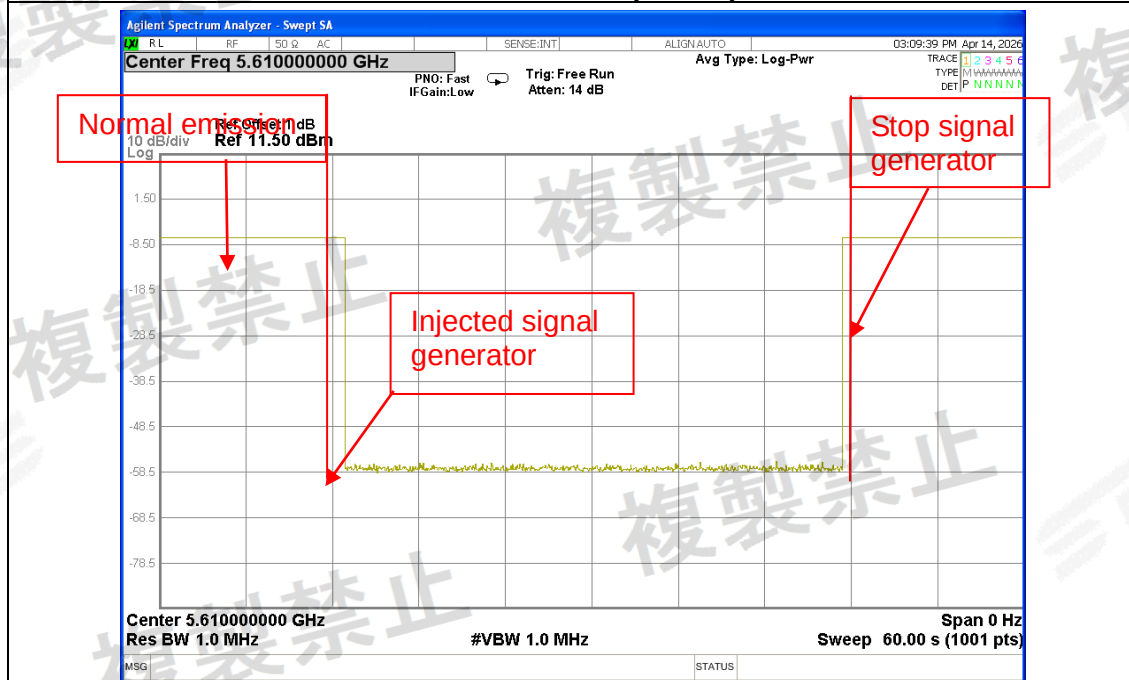


Channel 106 TX- 11ac(VHT80) Mode

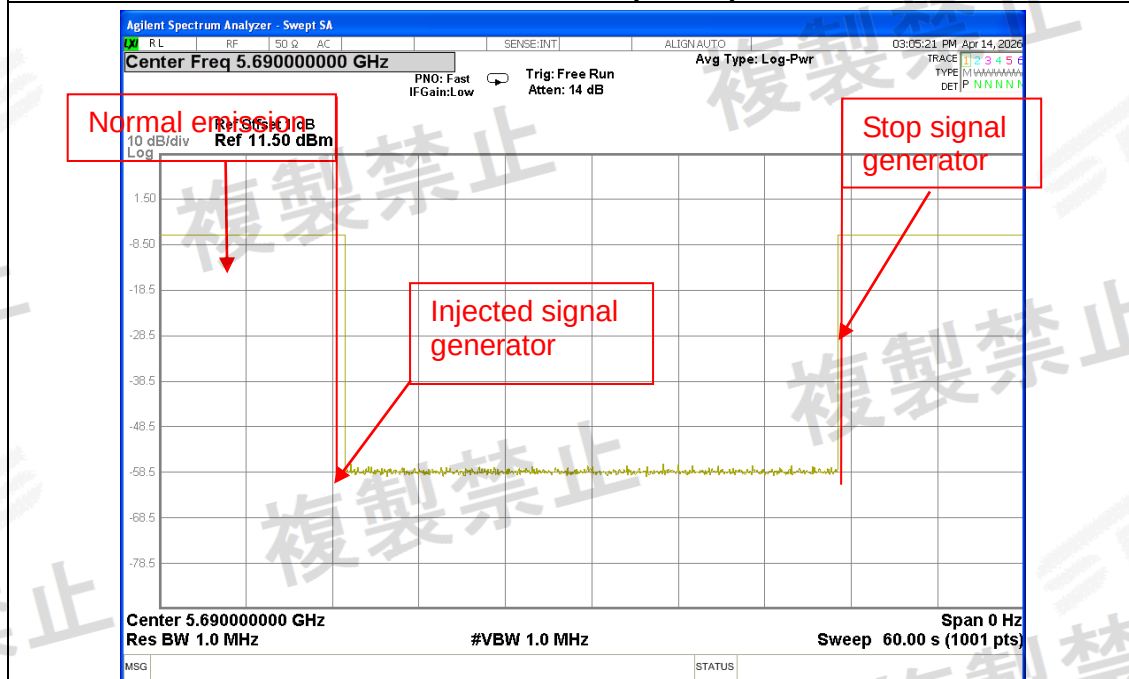




Channel 122 TX- 11 ac(VHT80) Mode

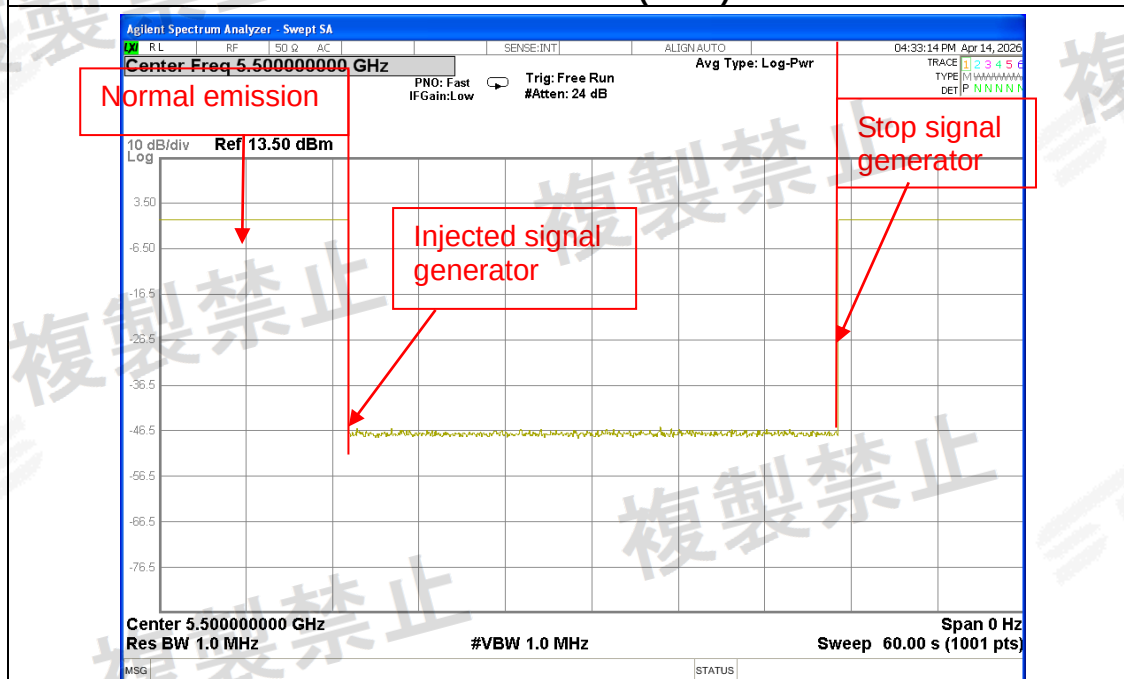


Channel 138 TX- 11 ac(VHT80) Mode

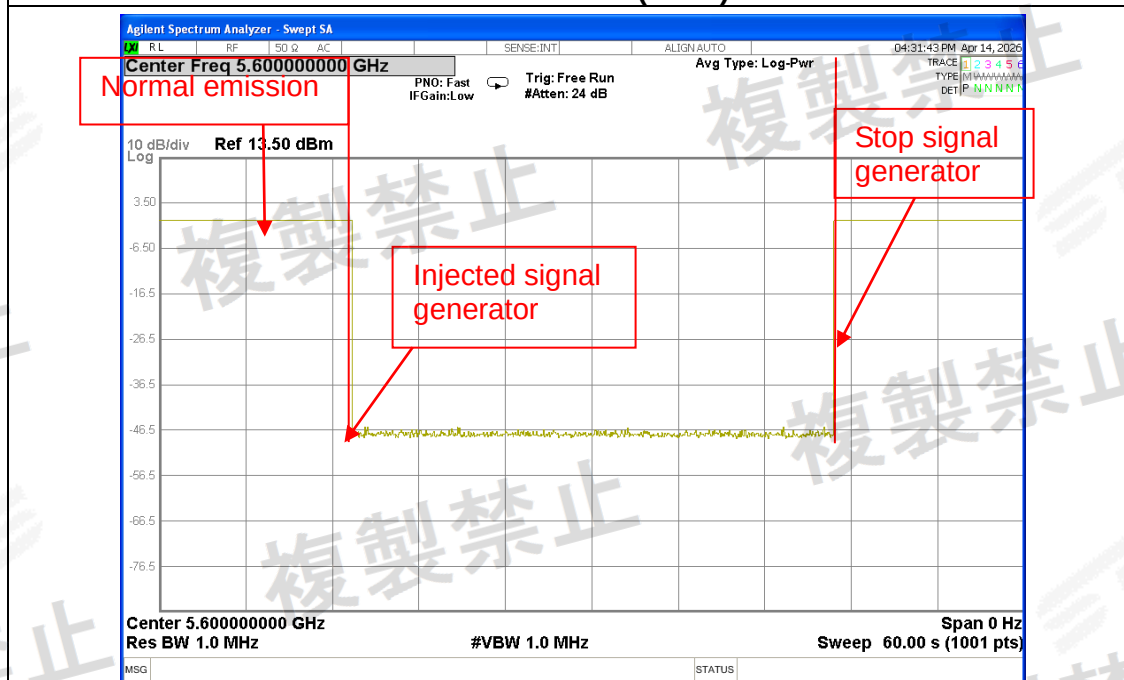




Channel 100 TX- 11 ax(HE20) Mode

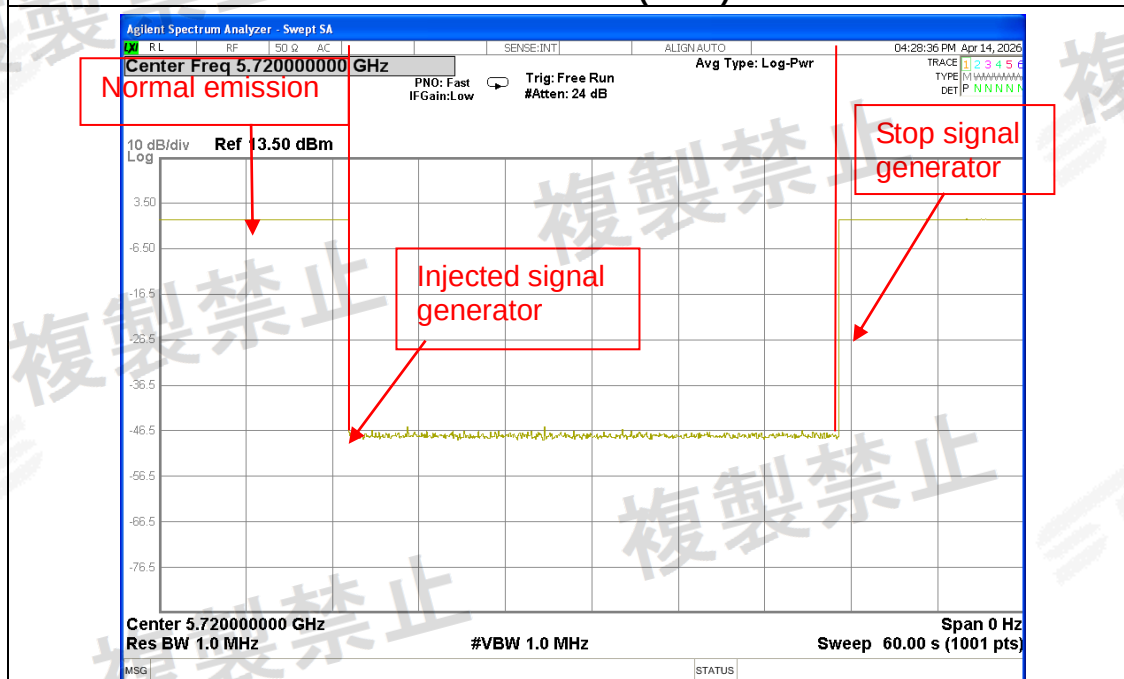


Channel 116 TX- 11 ax(HE20) Mode

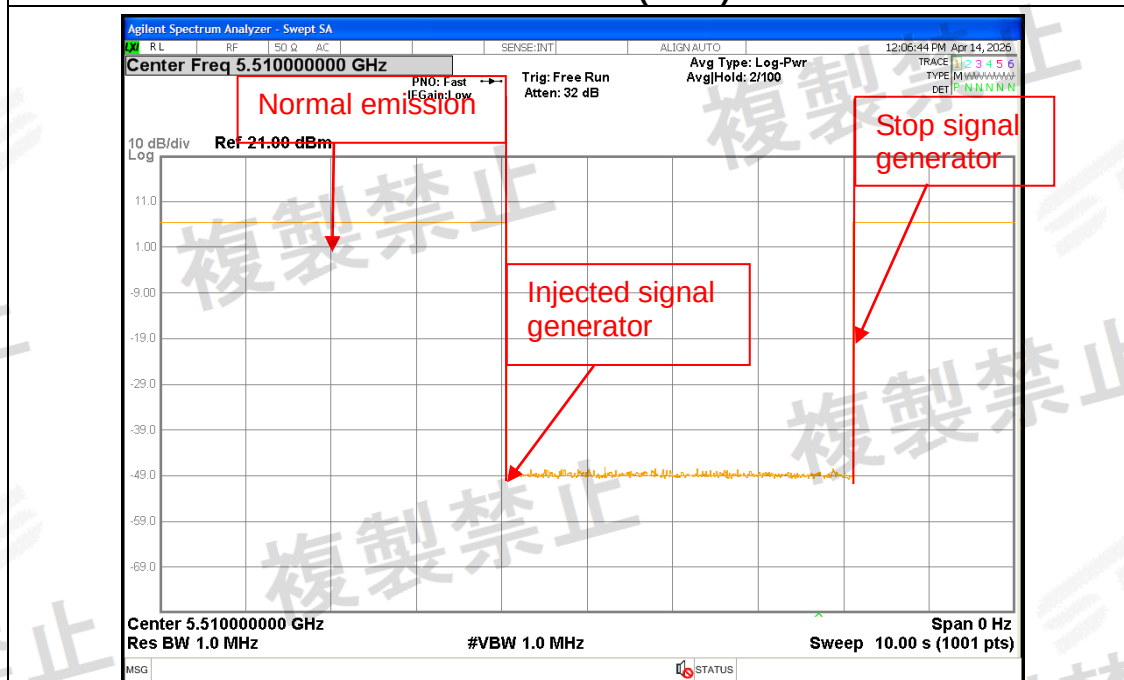




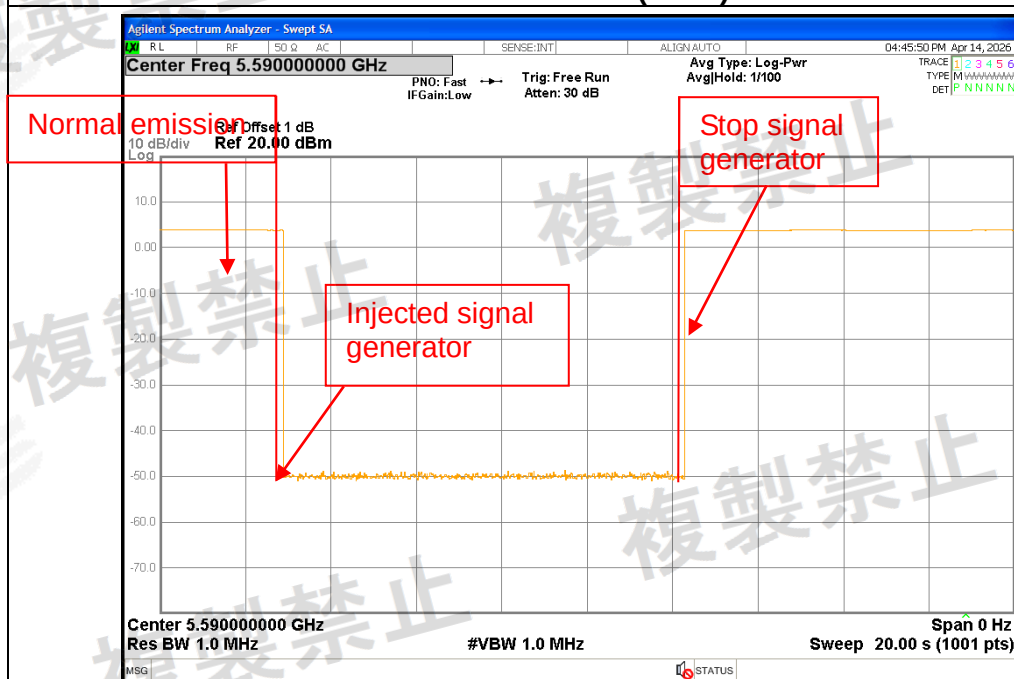
Channel 144 TX- 11 ax(HE20) Mode



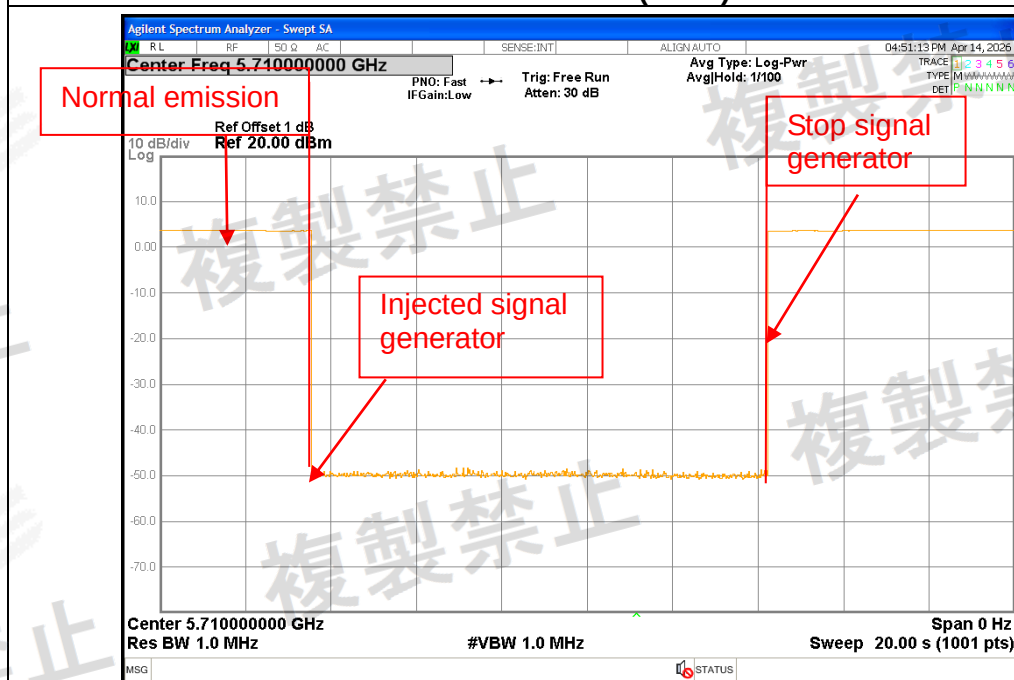
Channel 102 TX- 11 ax(HE40) Mode



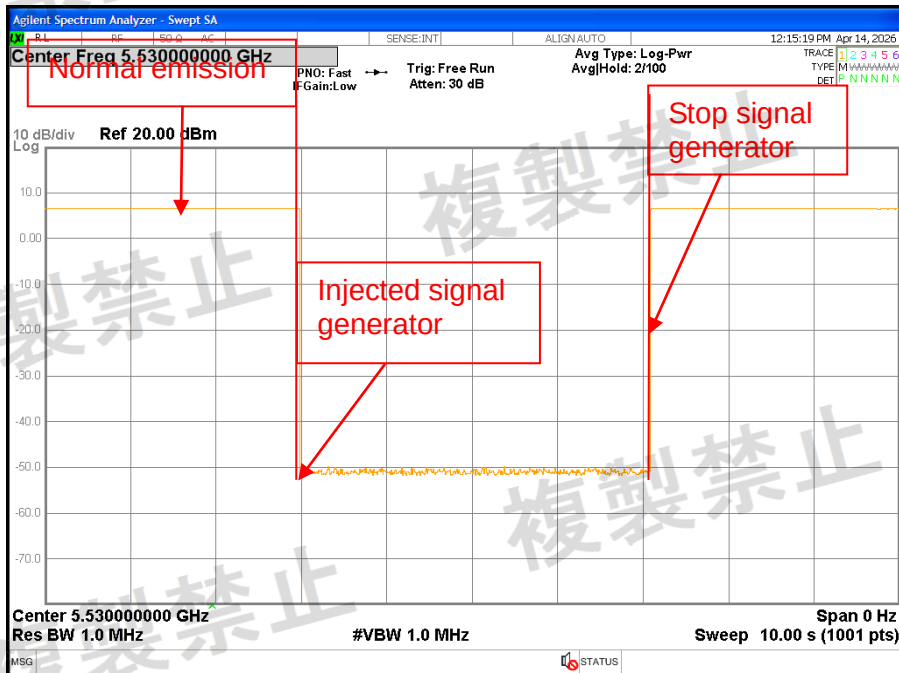
Channel 110 TX- 11 ax(HE40) Mode



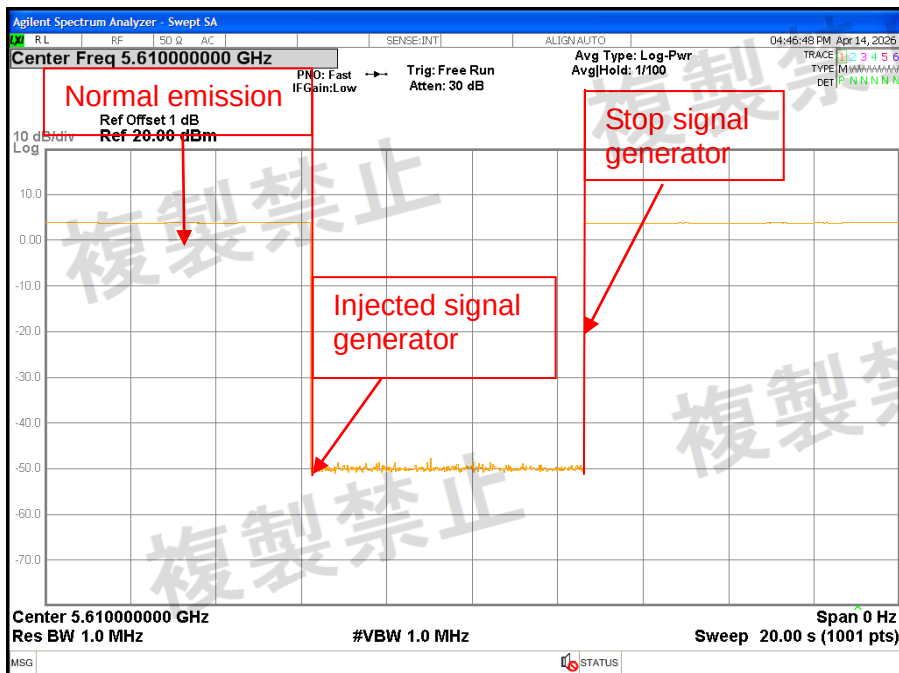
Channel 142 TX- 11 ax(HE40) Mode

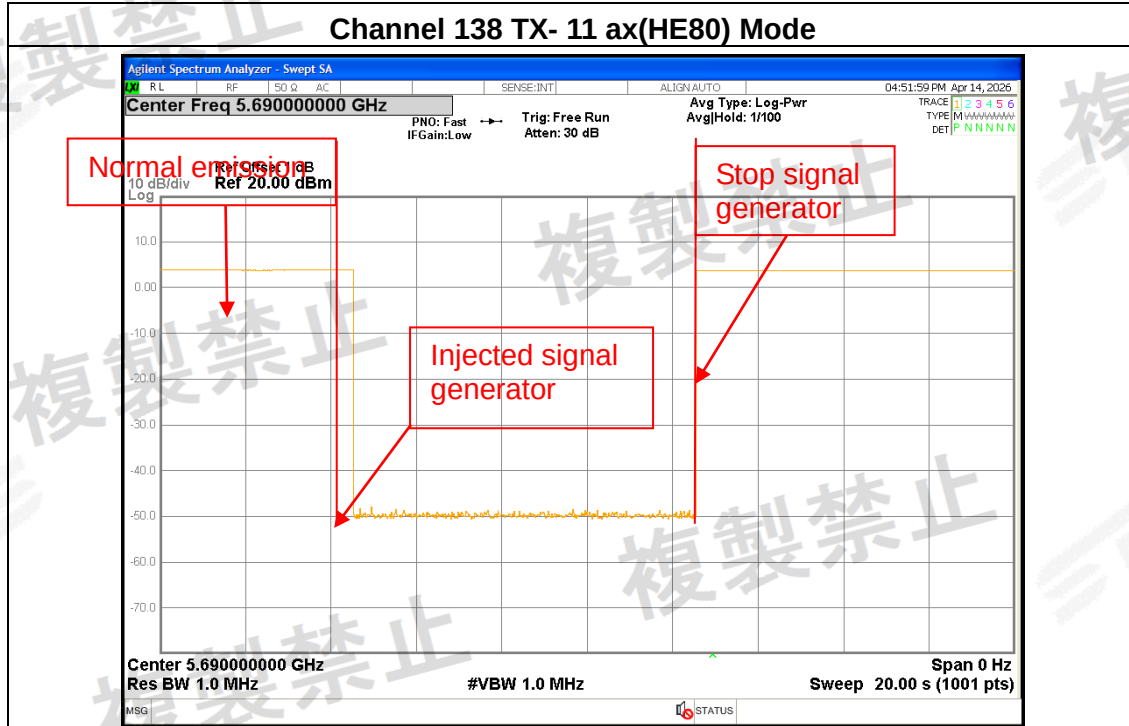


Channel 106 TX- 11 ax(HE80) Mode



Channel 122 TX- 11 ax(HE80) Mode







11. ADJACENT CHANNEL POWER

11.1 LIMIT

Item	Operation band	Occupied Bandwidth	Limits	
Adjacent Channel Power	W52/W53/W56	20MHz system	$F_c \pm 20\text{MHz} \pm 10\text{MHz}$	BW: -25dBc or less
			$F_c \pm 40\text{MHz} \pm 10\text{MHz}$	BW: -40dBc or less
		40MHz system	$F_c \pm 40\text{MHz} \pm 20\text{MHz}$	BW: -25dBc or less
			$F_c \pm 80\text{MHz} \pm 20\text{MHz}$	BW: -40dBc or less
		80MHz system	$F_c \pm 80\text{MHz} \pm 40\text{MHz}$	BW: -25dBc or less

11.2 TEST PROCEDURES

- Setting of SA is following as: RB: 300KHz / VB: 300KHz / SPAN: 100MHz/200MHz/400MHz
Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: peak
Trace mode: Max hold/ Sweep Time Auto

11.3 TEST SETUP



11.4 TEST DEVIATION

There is no deviation with the original standard.

11.5 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

11.6 TEST RESULT

Note: The test data please reference to attachment "STS2607131W01 _Appendix 5G WIFI".



12. BURST LENGTH

12.1 LIMIT

Item	Limits
Adjacent Channel Power:	8ms or less

12.2 TEST PROCEDURES

1. Connected the EUT's Antenna port to the Spectrum Analyzer by suitable attenuator,
Setting of SA is following as:
RB: 1MHz / VB: 1MHz
Sweep time: Auto
Detect mode: clear write
Trace mode: norma

12.3 TEST SETUP



12.4 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

12.5 TEST RESULT

Note: The test data please reference to attachment "STS2607131W01_Appendix 5G WIFI".



13. EUT TEST PHOTO

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

REPORT END