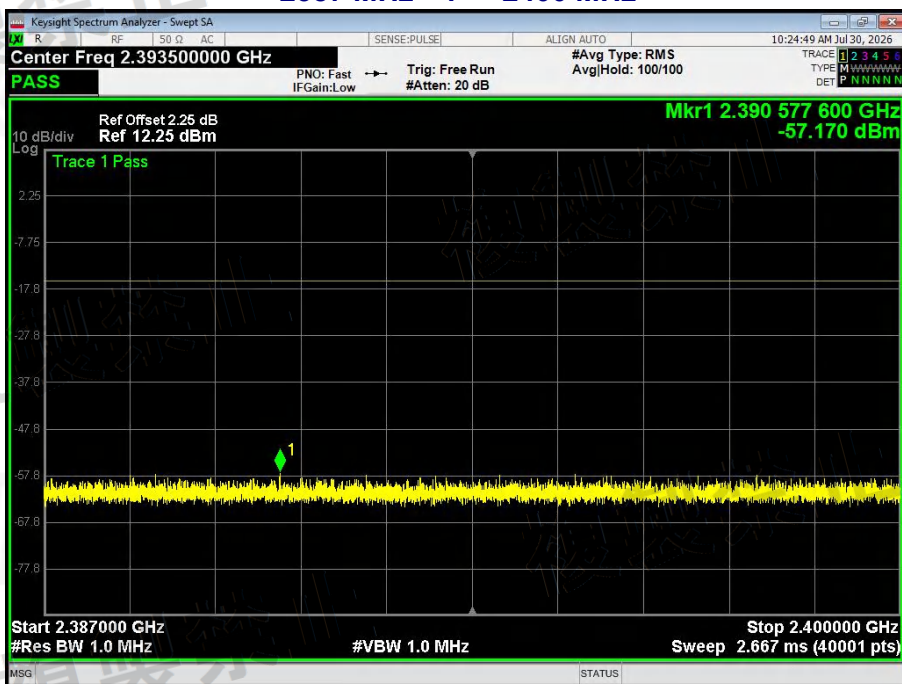
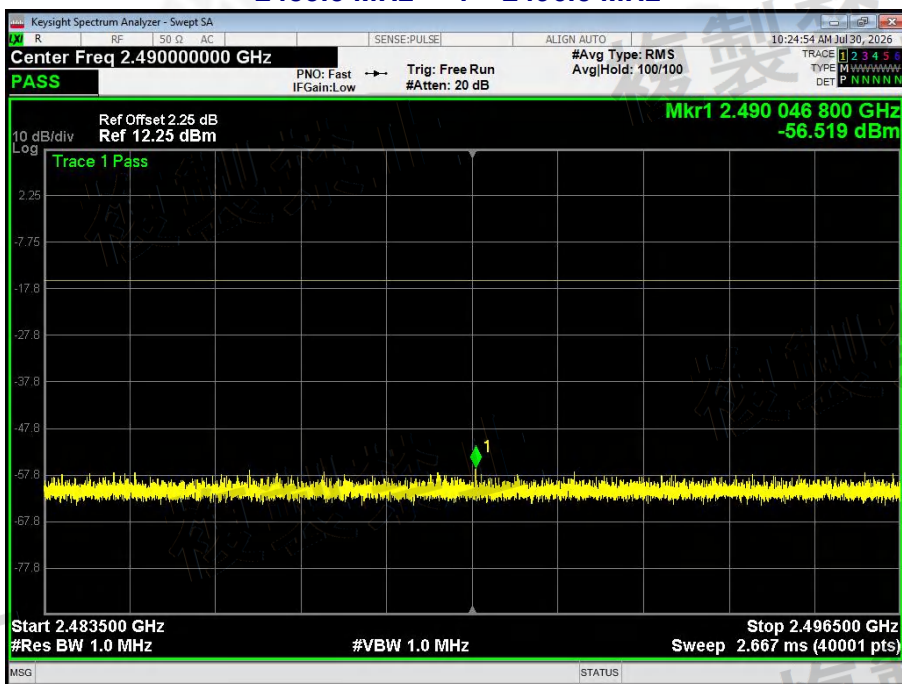




2387 MHz < f ≤ 2400 MHz

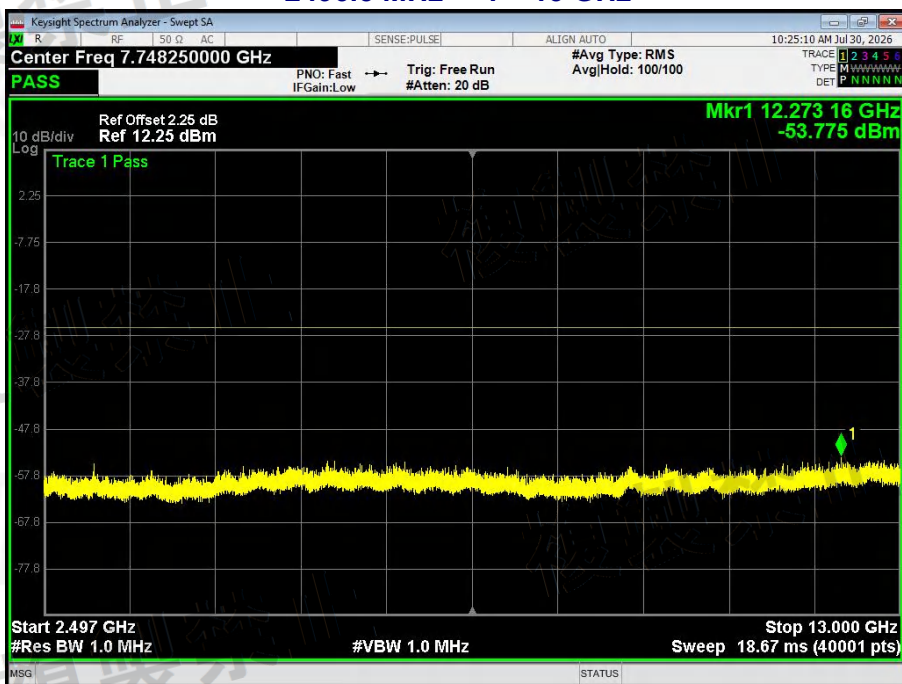


2483.5 MHz ≤ f < 2496.5 MHz





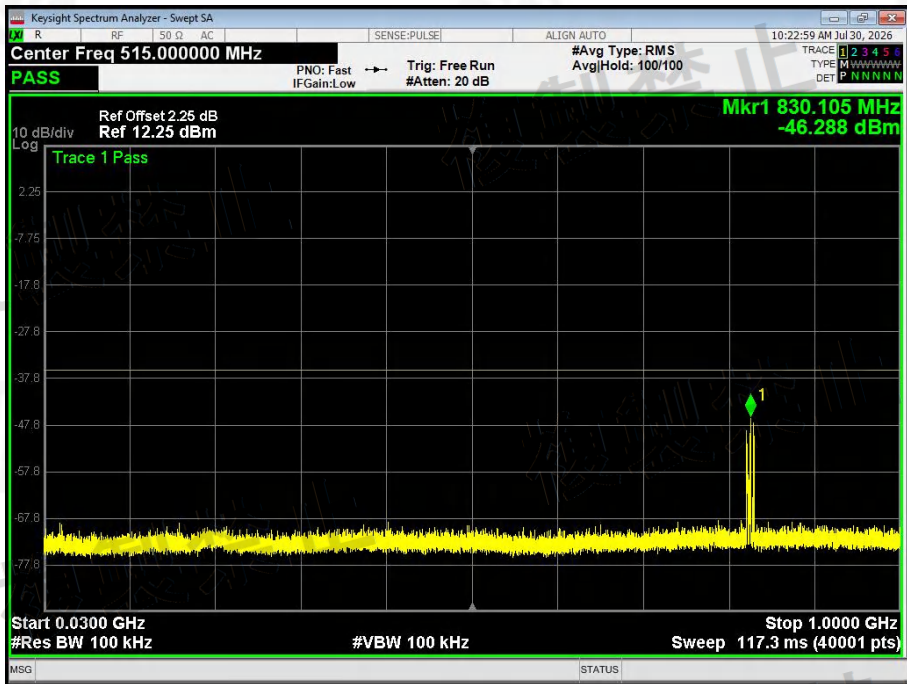
2496.5 MHz $\leq f < 13$ GHz



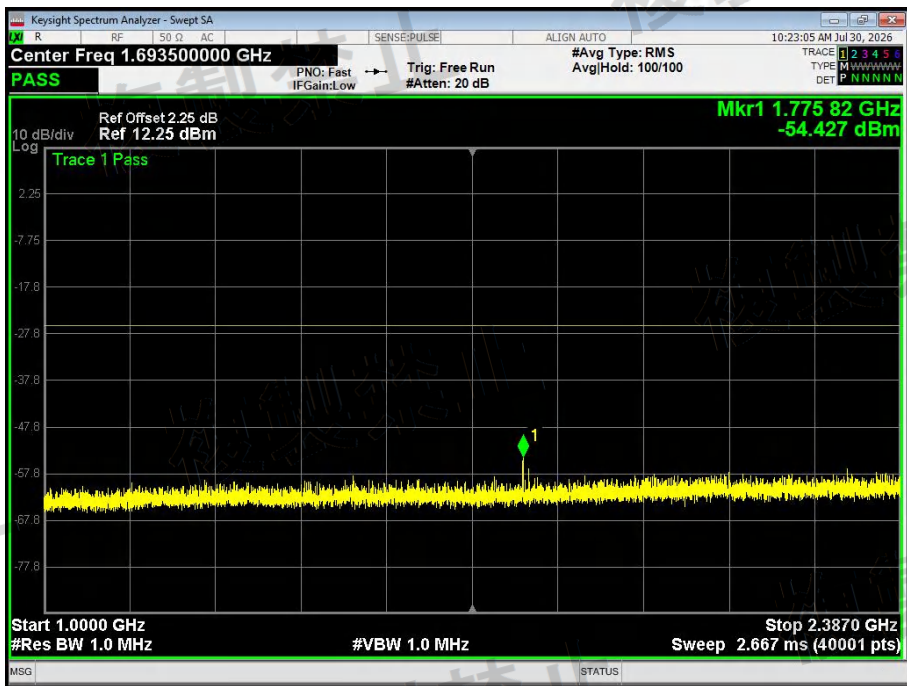


Test voltage	Normal	Channel (MHz)	Test 2442.00
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$30\text{ MHz} \leq f \leq 1000\text{ MHz}$

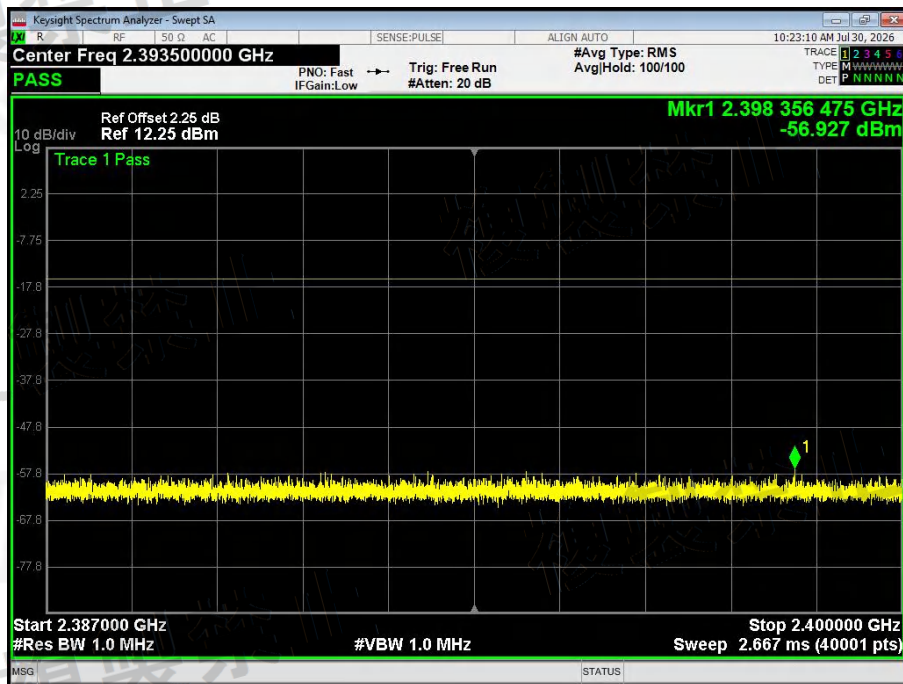


$1000\text{ MHz} < f \leq 2387\text{ MHz}$

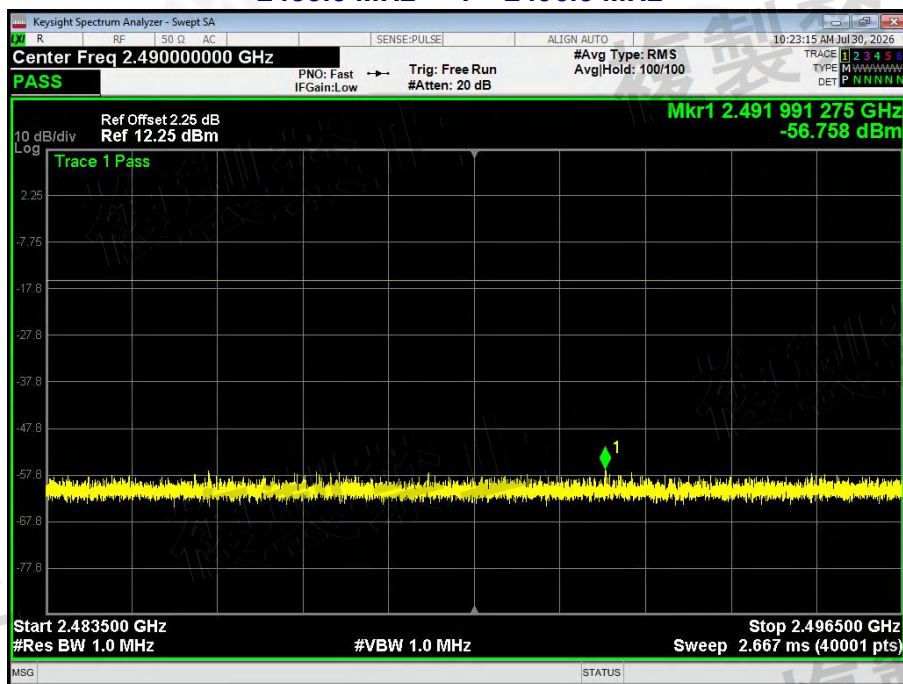




2387 MHz < f ≤ 2400 MHz

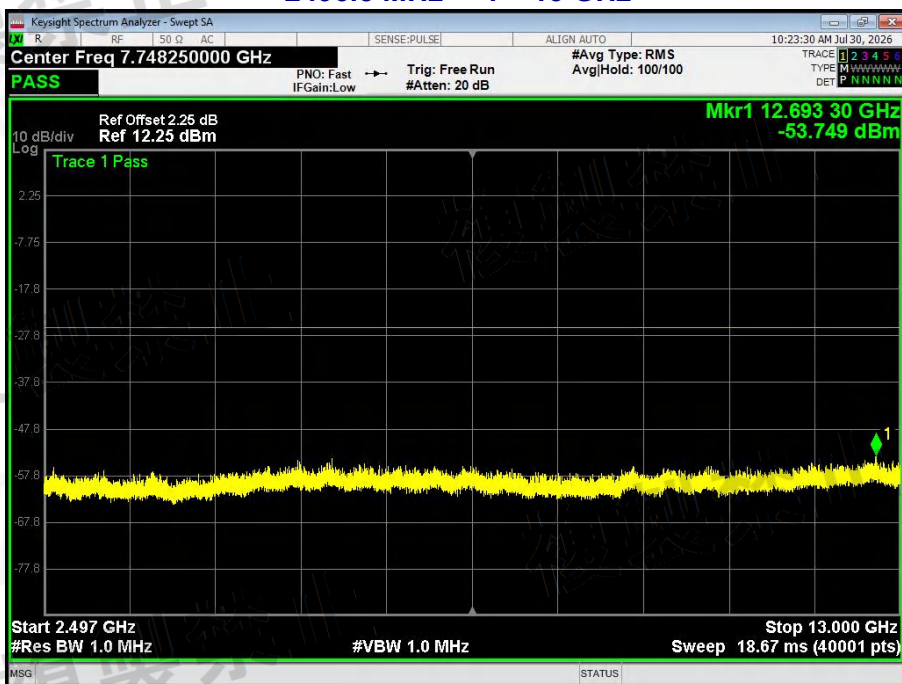


2483.5 MHz ≤ f < 2496.5 MHz





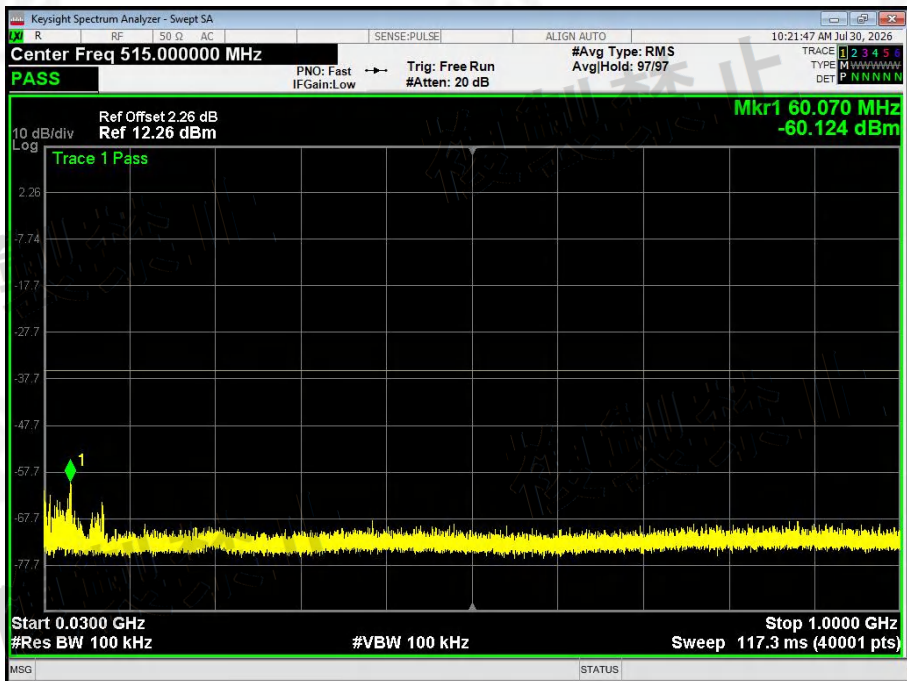
2496.5 MHz $\leq f < 13$ GHz



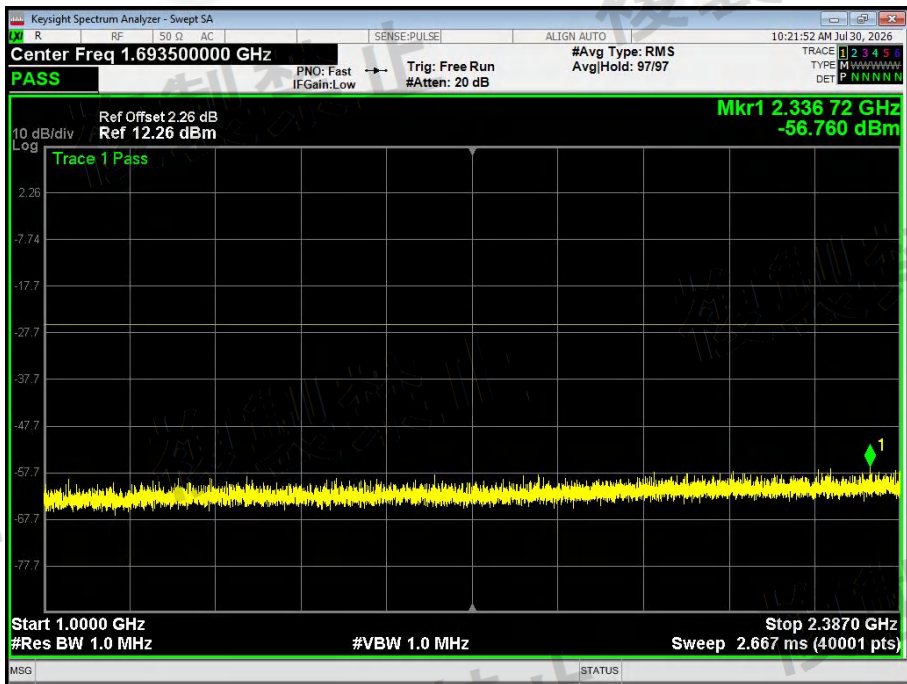


Test voltage	Normal	Test Channel (MHz)	2462.00
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$30\text{ MHz} \leq f \leq 1000\text{ MHz}$

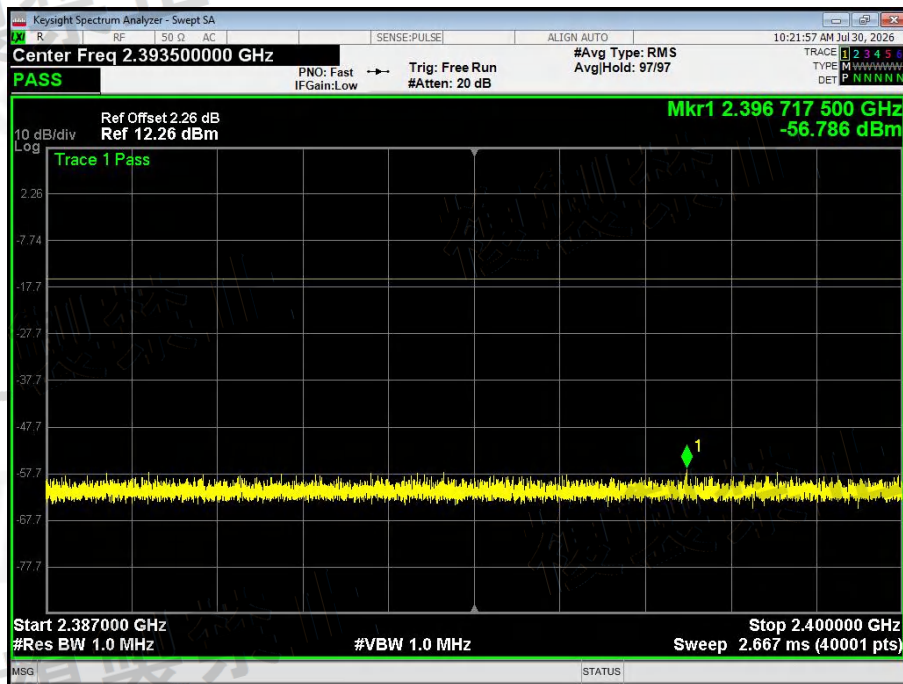


$1000\text{ MHz} < f \leq 2387\text{ MHz}$

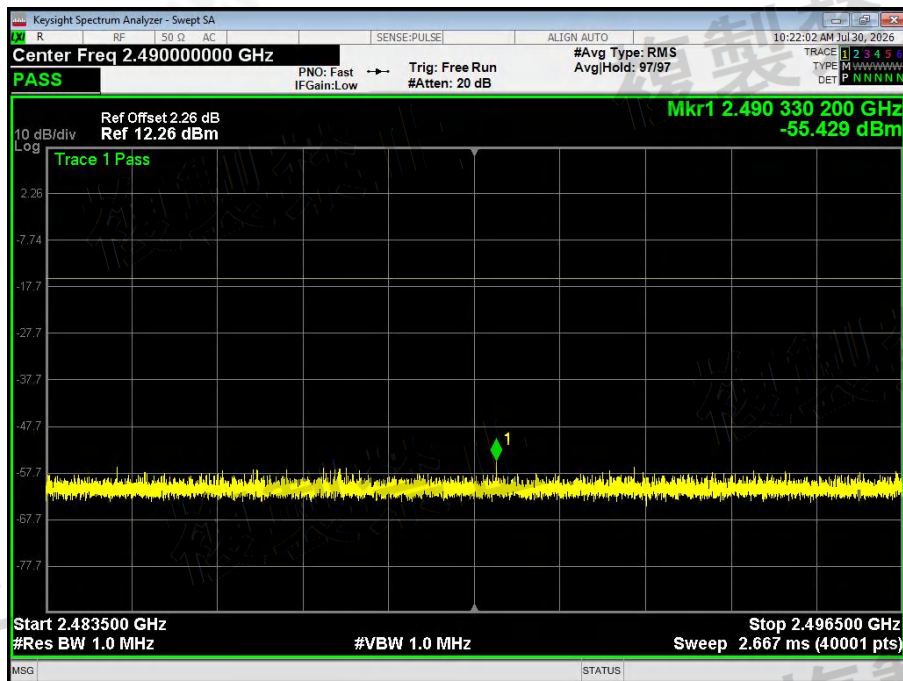




2387 MHz < f ≤ 2400 MHz

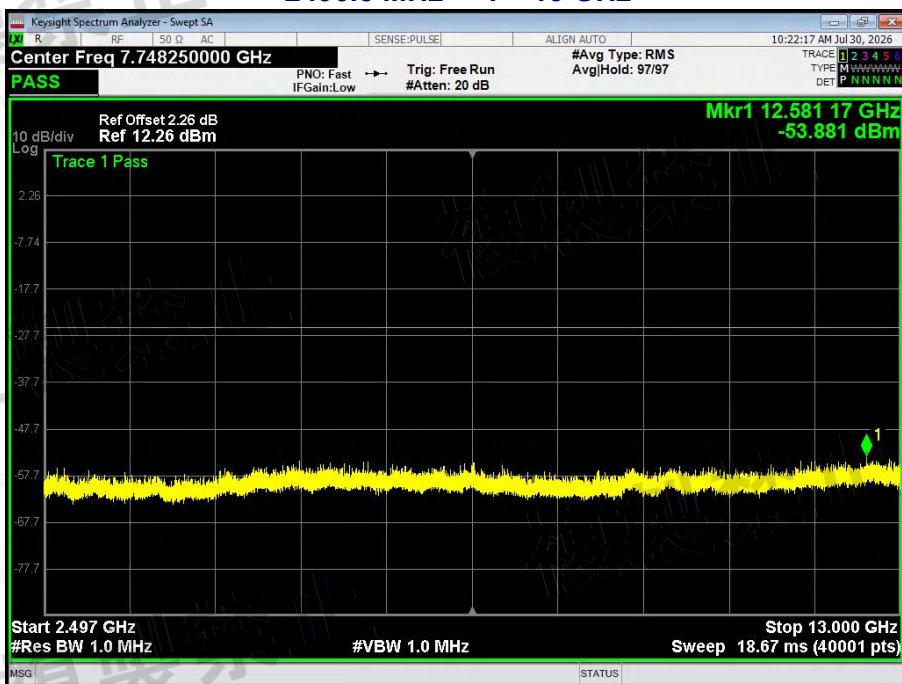


2483.5 MHz ≤ f < 2496.5 MHz





2496.5 MHz $\leq f < 13$ GHz

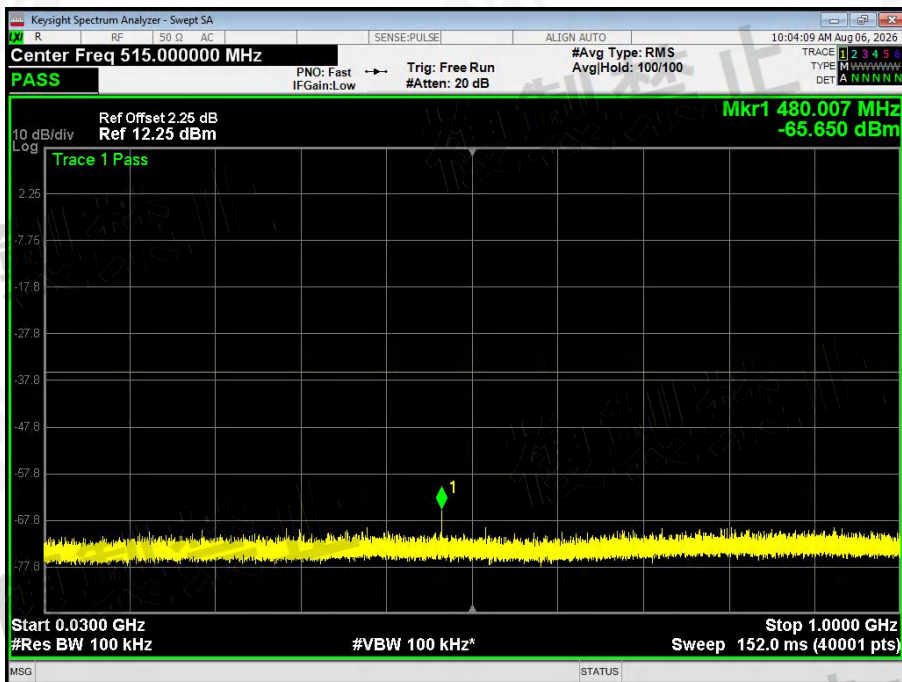




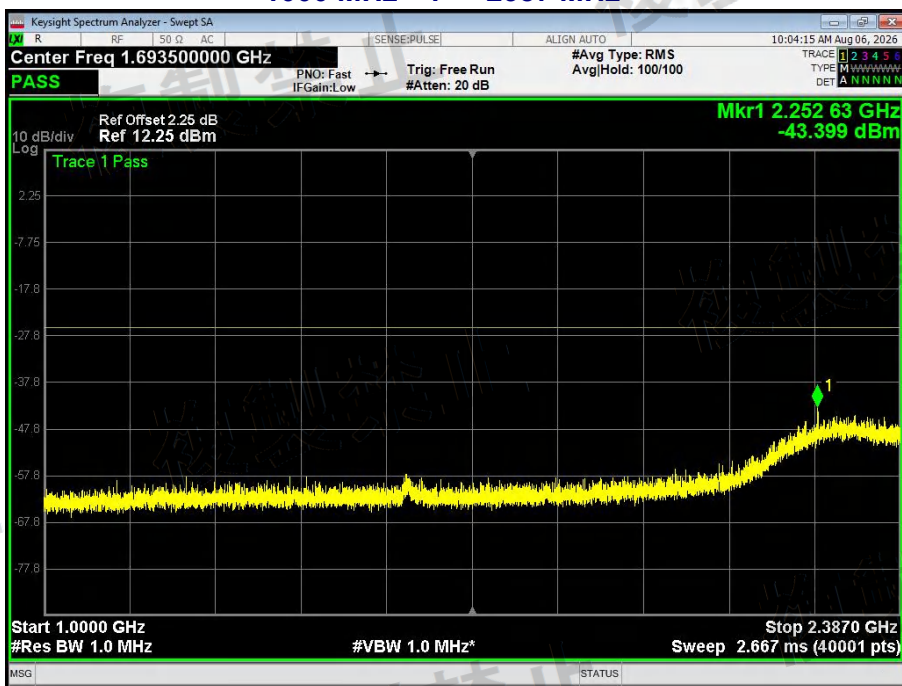
Modulation type: 802.11ax20

Test voltage	Normal	Test Channel (MHz)	2412.00
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$30\text{ MHz} \leq f \leq 1000\text{ MHz}$

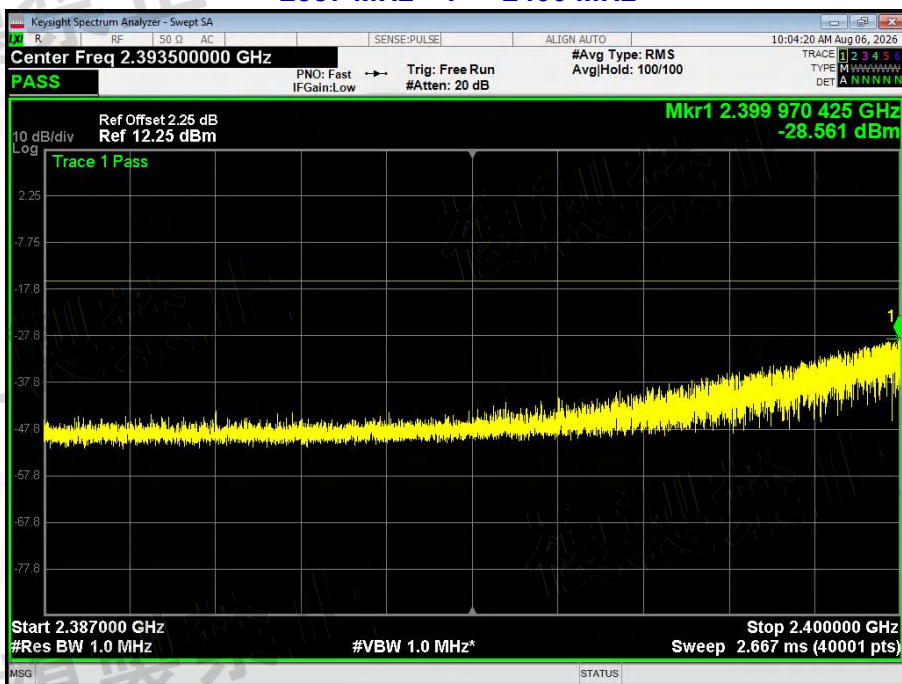


$1000\text{ MHz} < f \leq 2387\text{ MHz}$

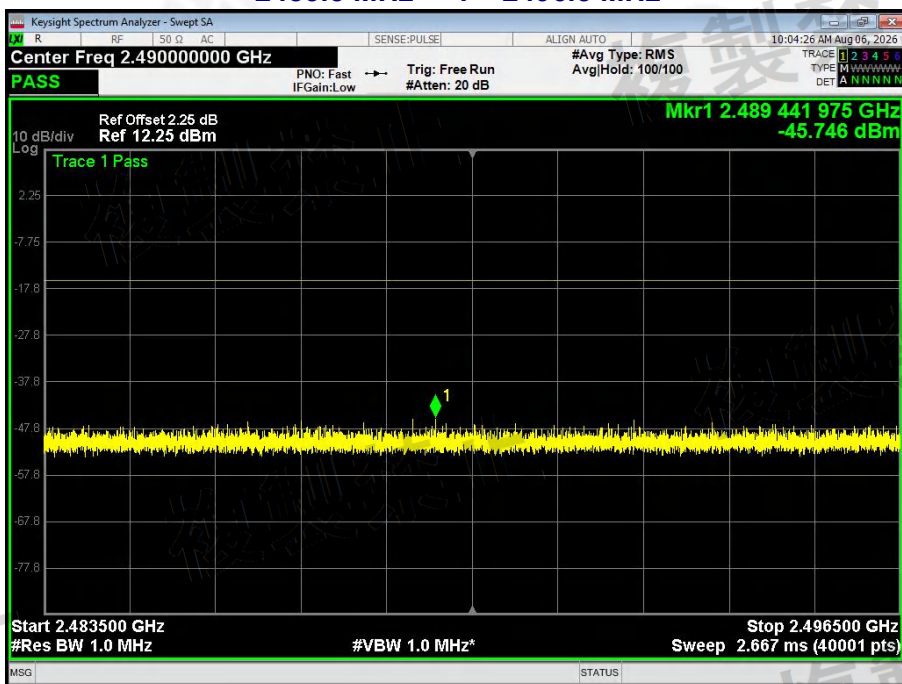




2387 MHz < f ≤ 2400 MHz

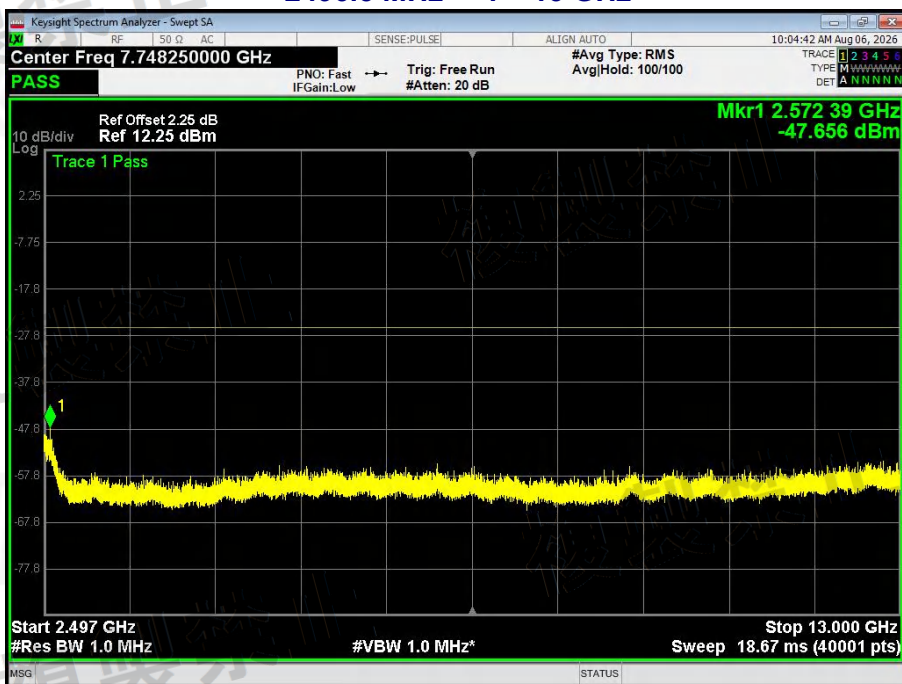


2483.5 MHz ≤ f < 2496.5 MHz





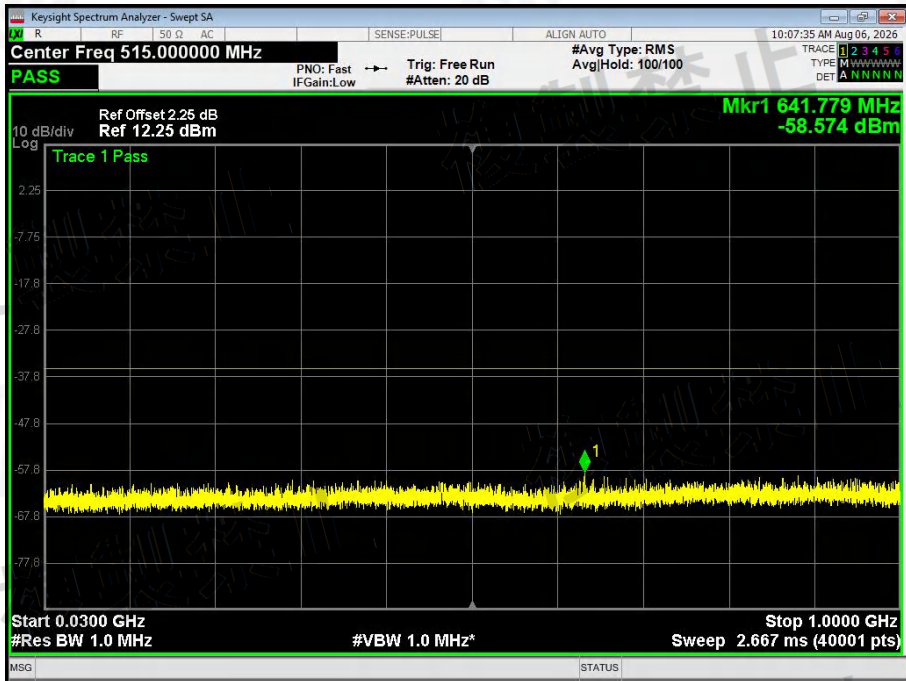
2496.5 MHz $\leq f < 13$ GHz



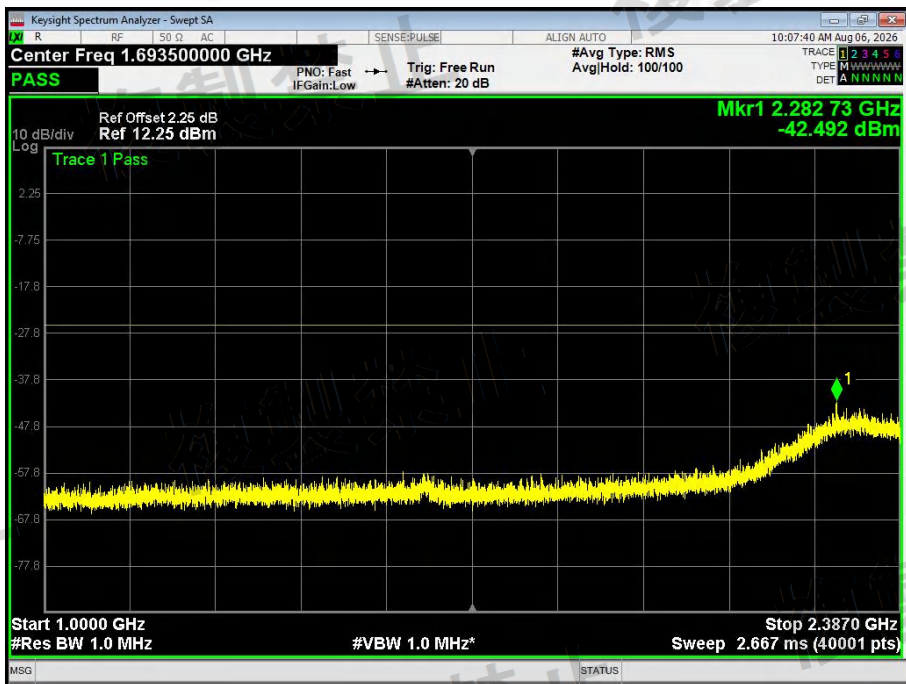


Test voltage	Normal	Test Channel (MHz)	2442.00
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$30\text{ MHz} \leq f \leq 1000\text{ MHz}$

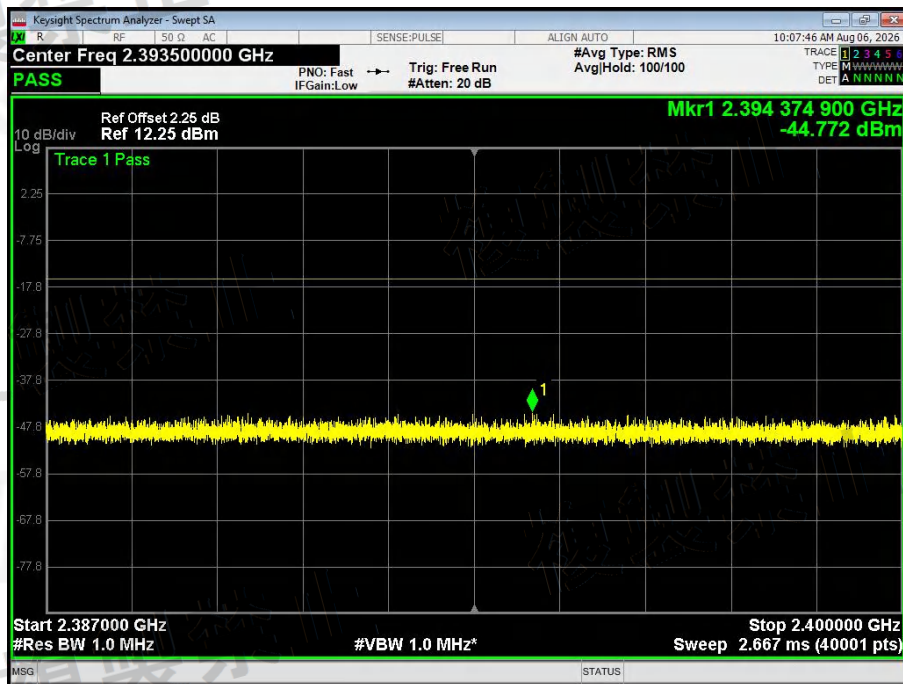


$1000\text{ MHz} < f \leq 2387\text{ MHz}$

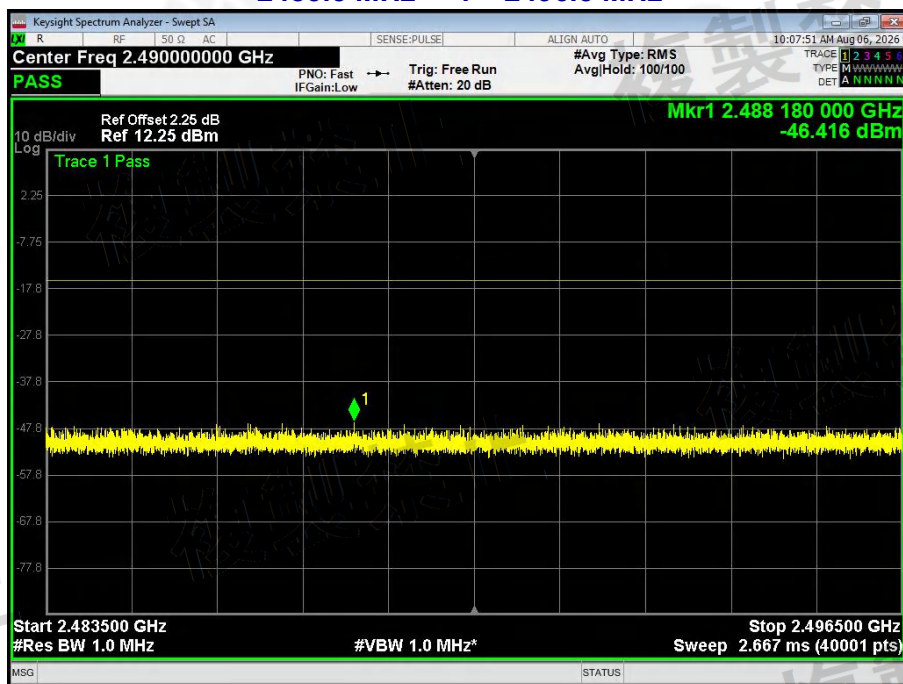




2387 MHz < f ≤ 2400 MHz

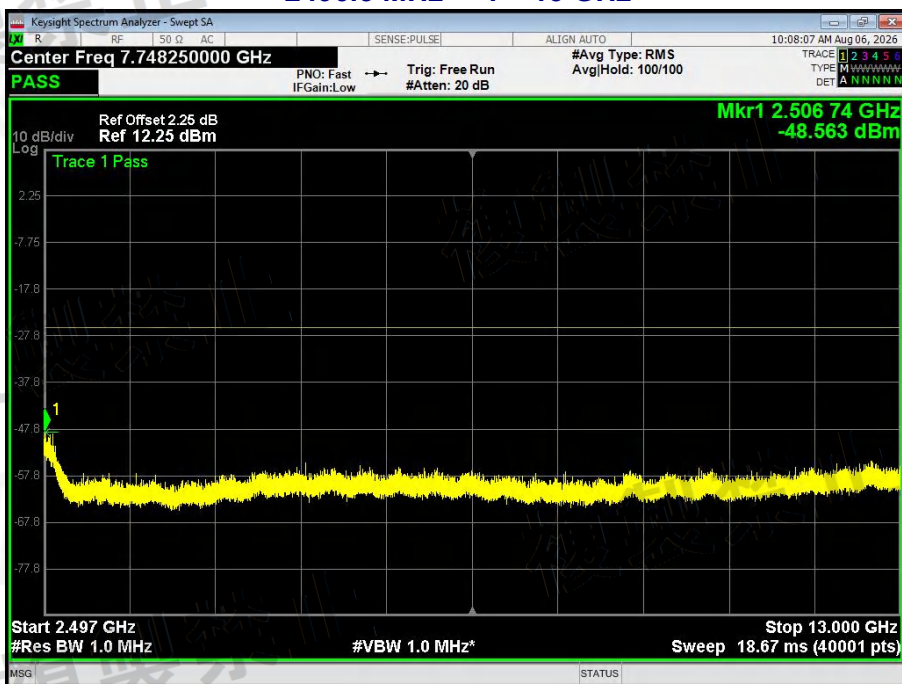


2483.5 MHz ≤ f < 2496.5 MHz





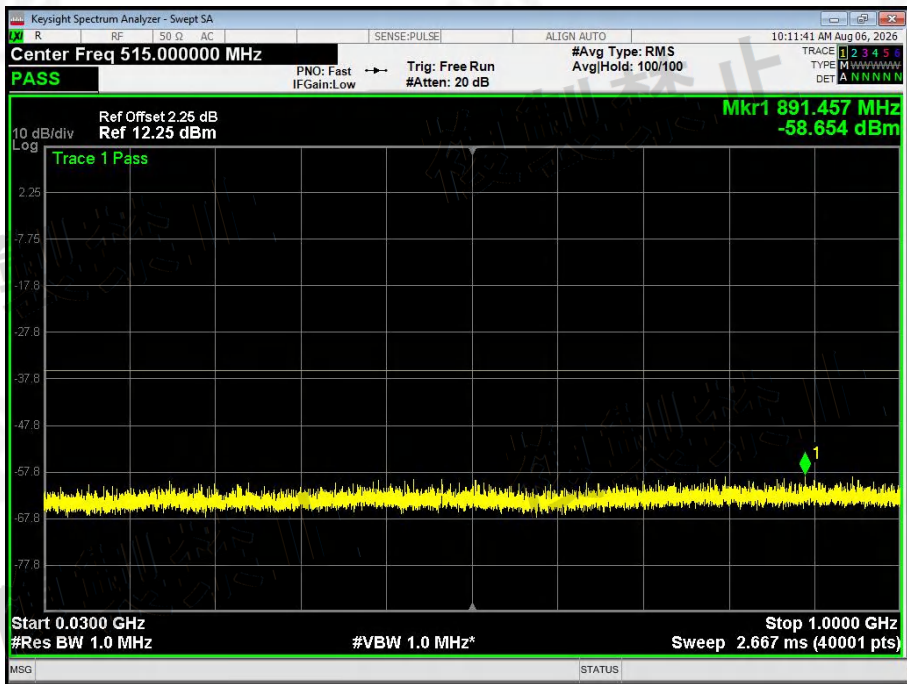
2496.5 MHz $\leq f < 13$ GHz



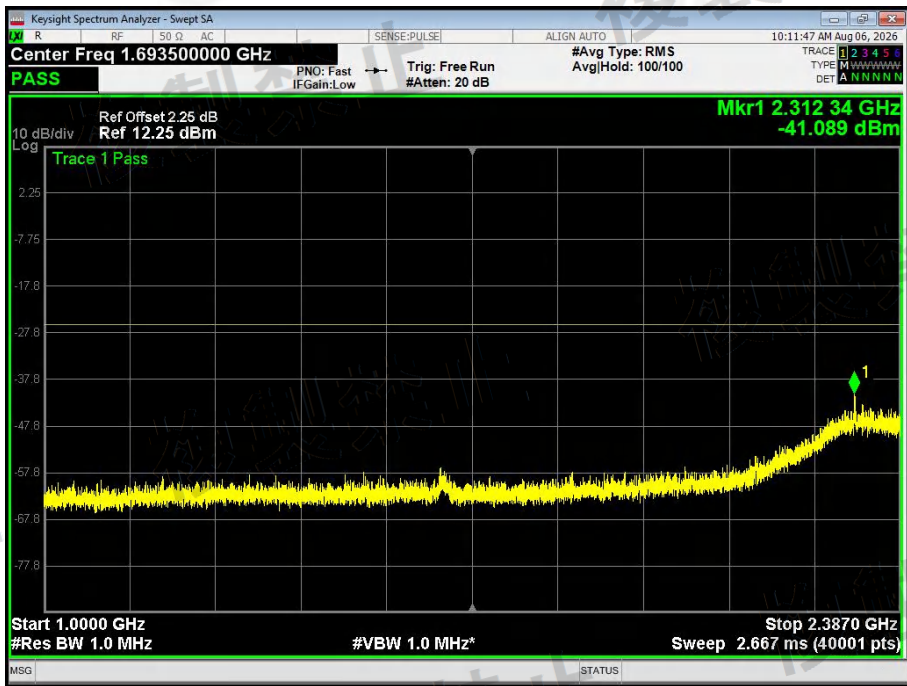


Test voltage	Normal	Test Channel (MHz)	2472.00
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$30\text{ MHz} \leq f \leq 1000\text{ MHz}$

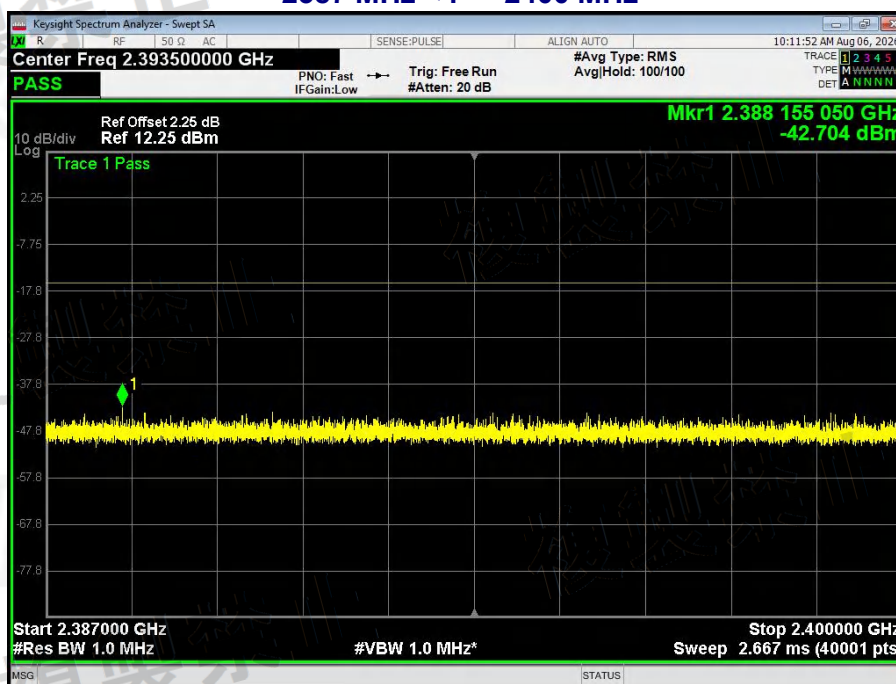


$1000\text{ MHz} < f \leq 2387\text{ MHz}$

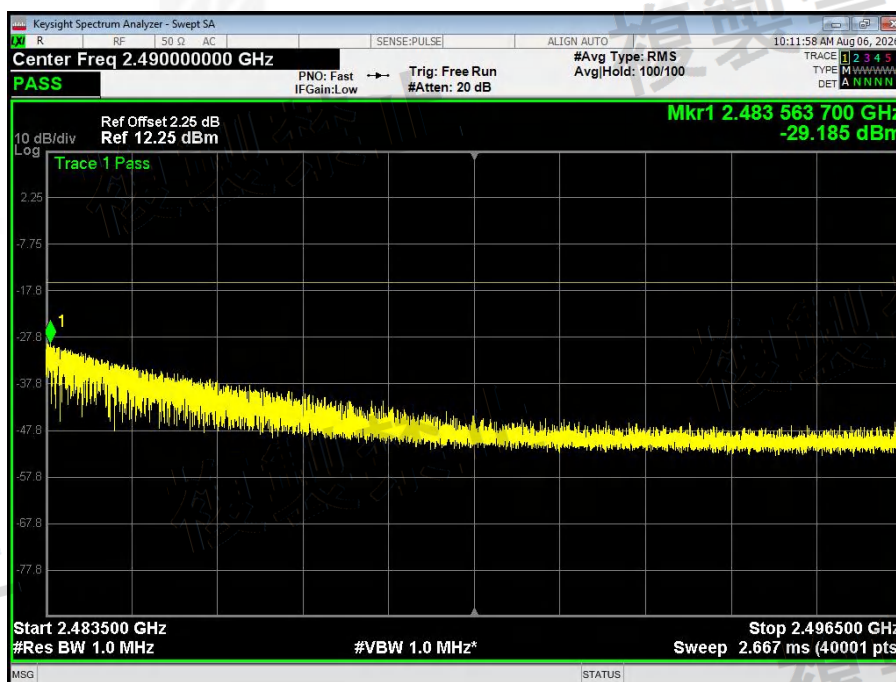




2387 MHz < f ≤ 2400 MHz

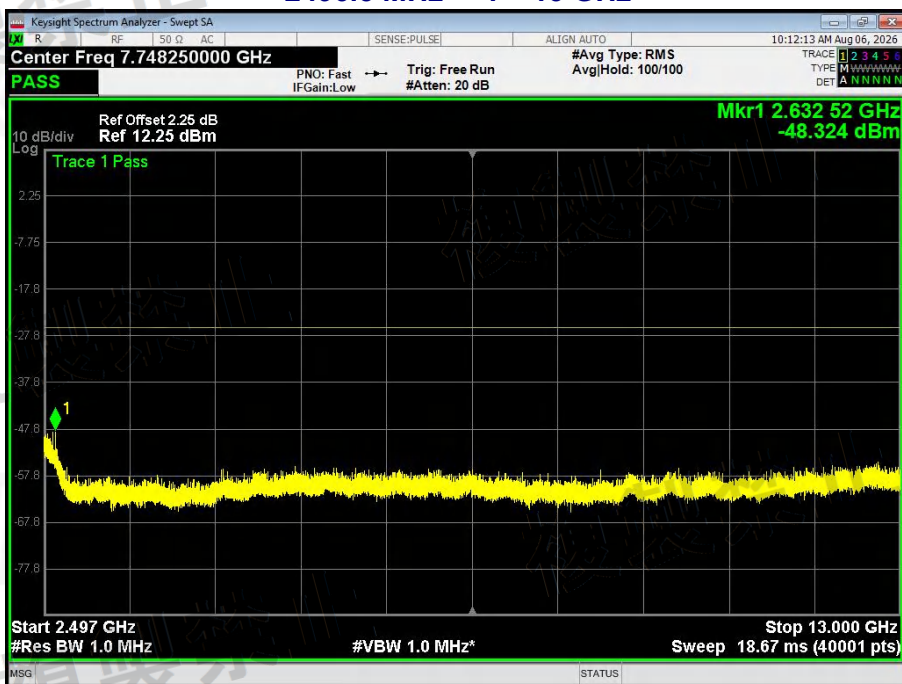


2483.5 MHz ≤ f < 2496.5 MHz





2496.5 MHz $\leq f < 13$ GHz

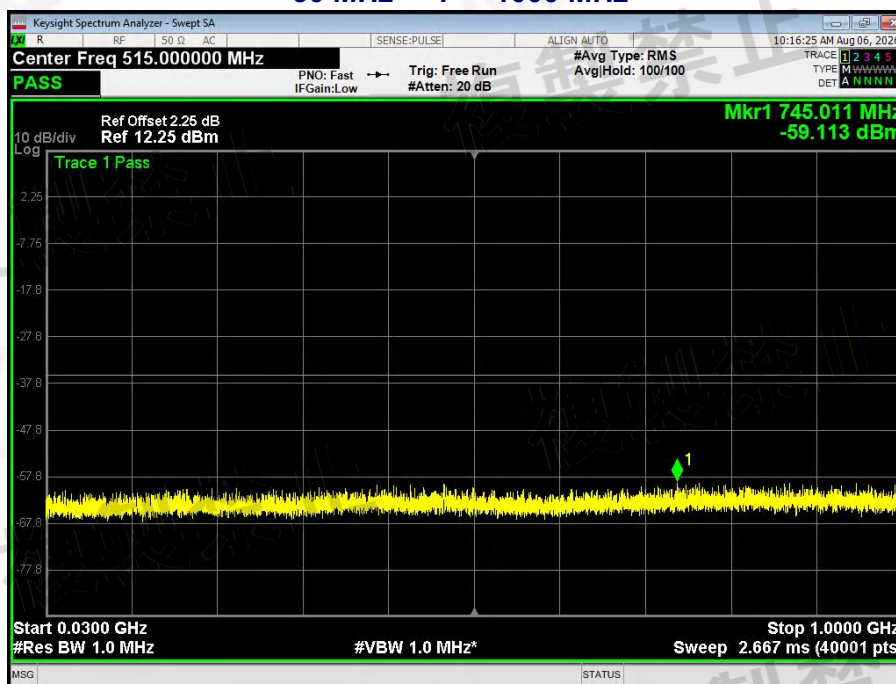




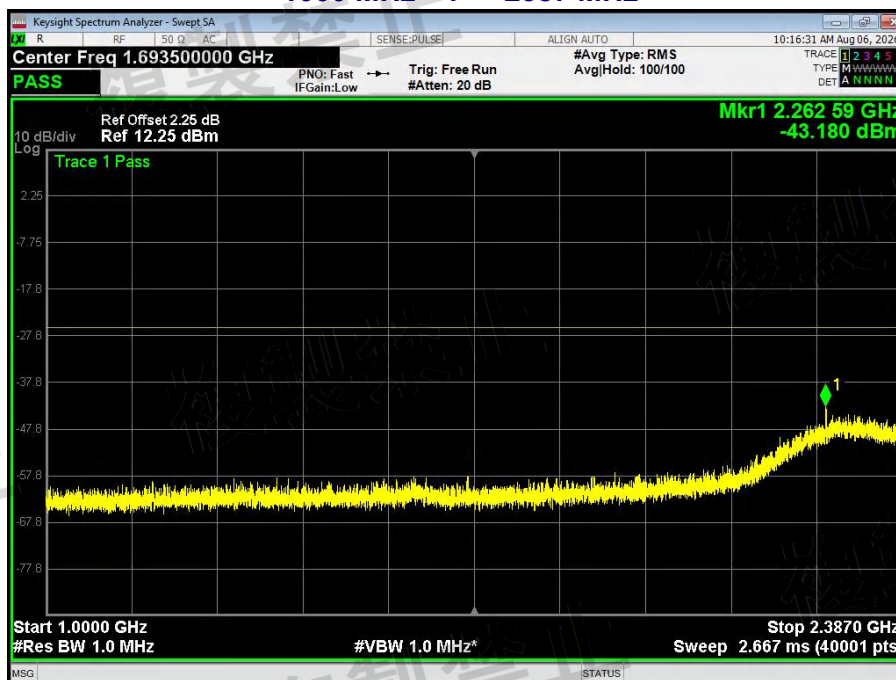
Modulation type: 802.11ax40

Test voltage	Normal	Test Channel (MHz)	2422.00
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$30 \text{ MHz} \leq f \leq 1000 \text{ MHz}$

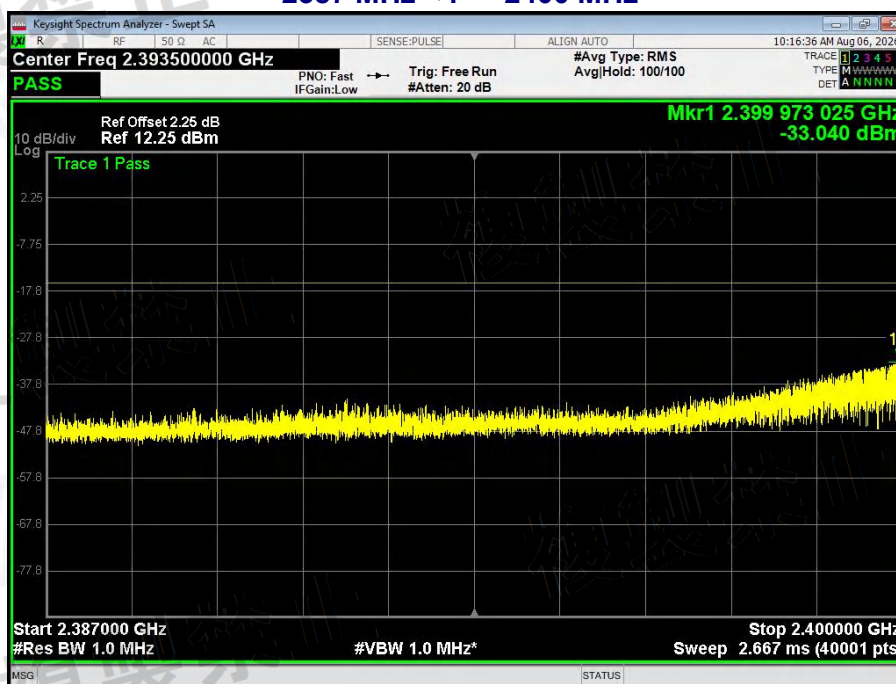


$1000 \text{ MHz} < f \leq 2387 \text{ MHz}$

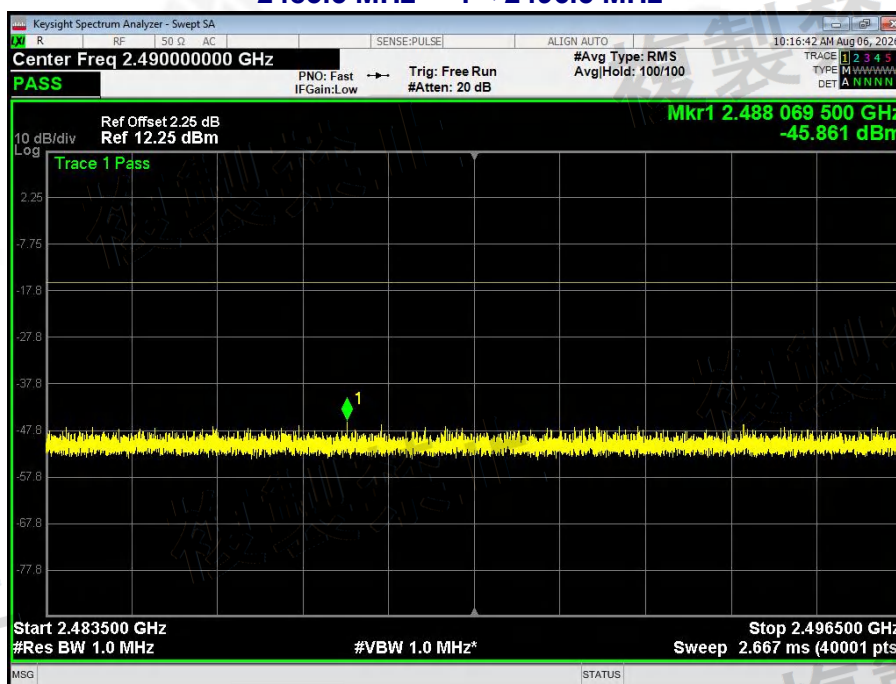




2387 MHz < f ≤ 2400 MHz

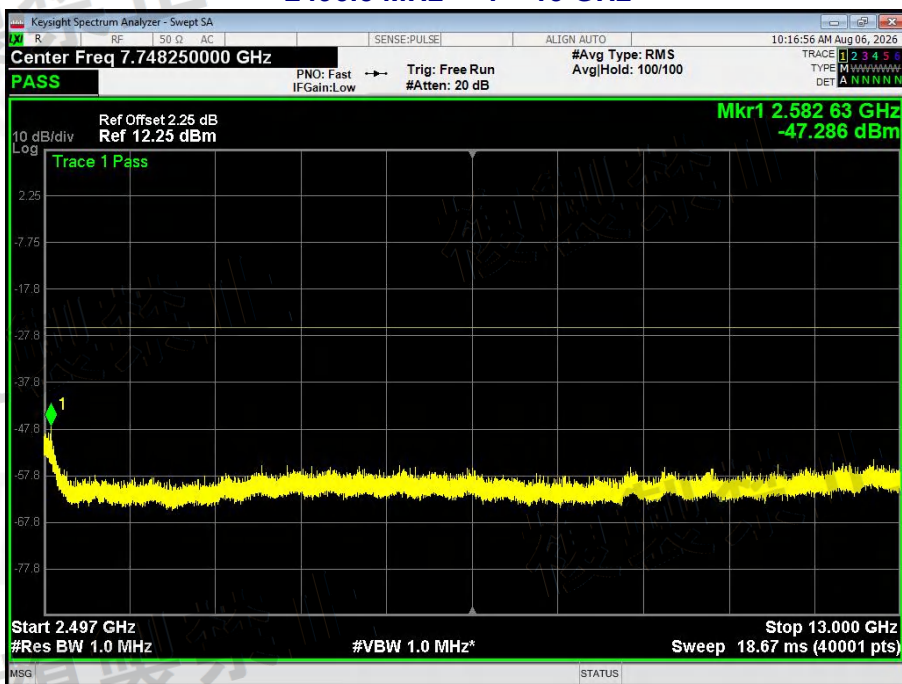


2483.5 MHz ≤ f < 2496.5 MHz





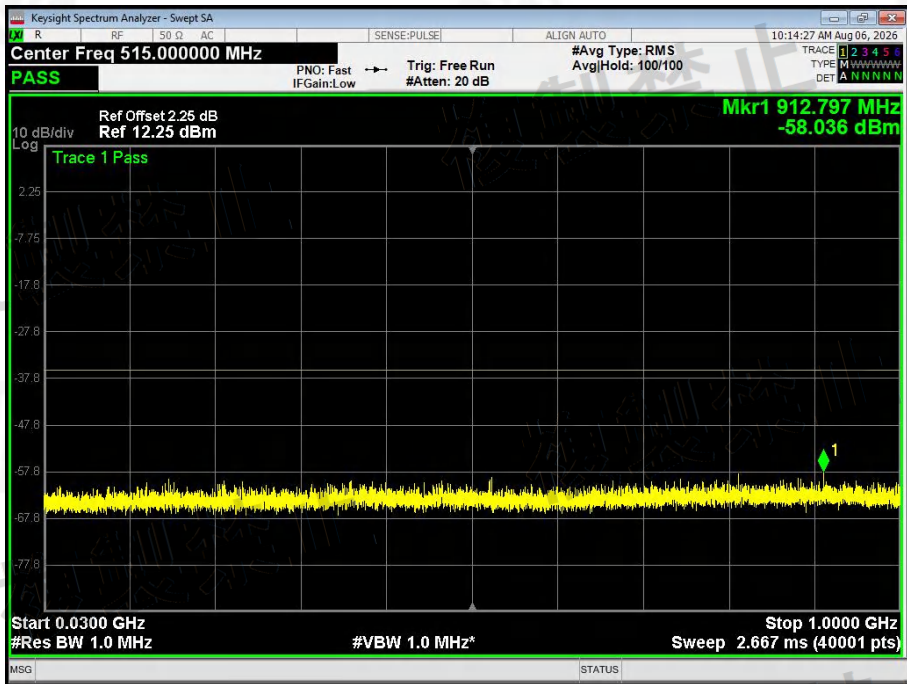
2496.5 MHz $\leq f < 13$ GHz



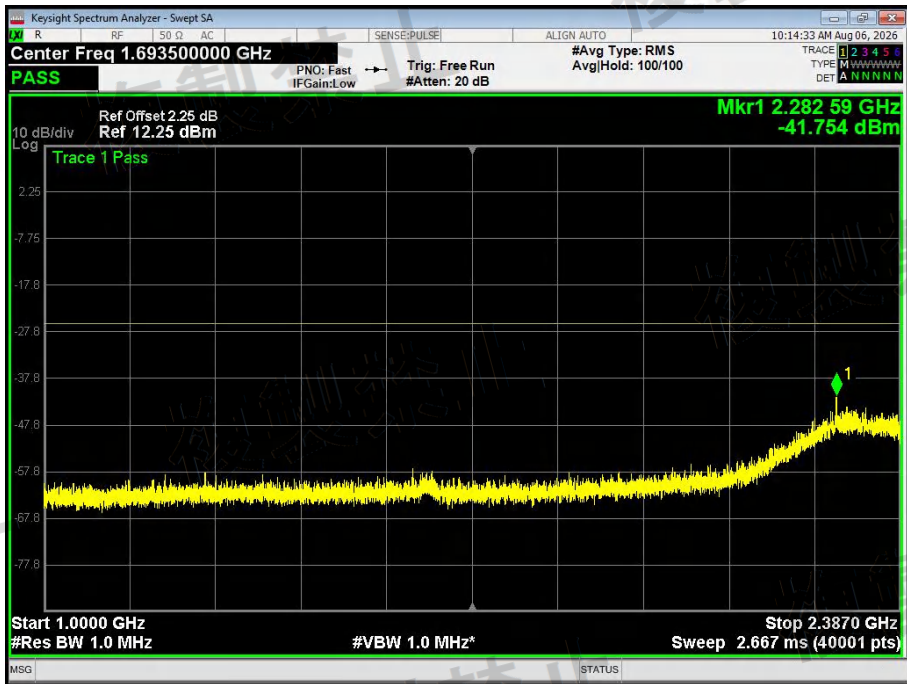


Test voltage	Normal	Channel (MHz)	Test 2442.00
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$30\text{ MHz} \leq f \leq 1000\text{ MHz}$

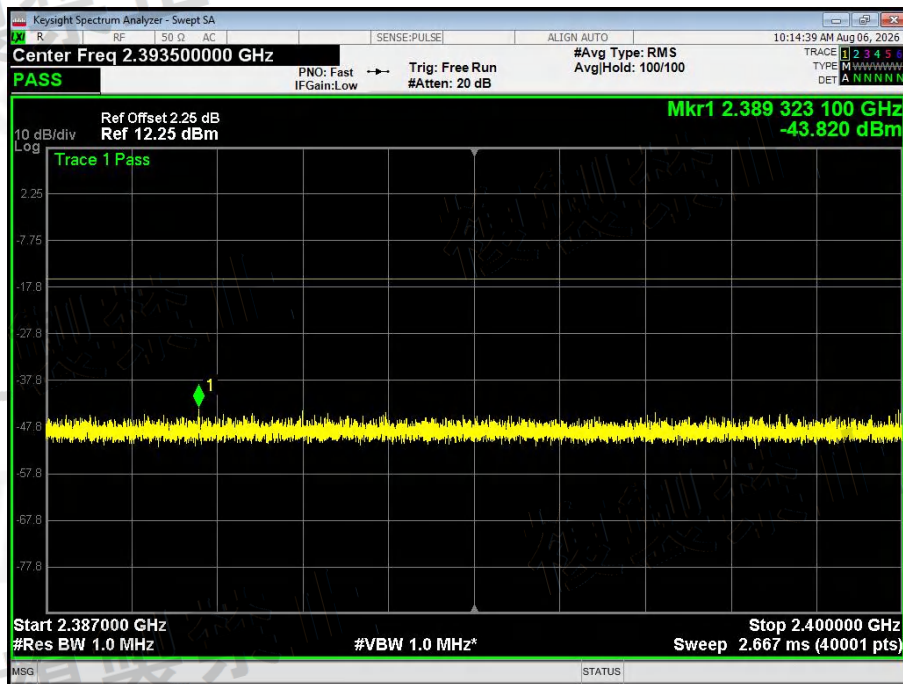


$1000\text{ MHz} < f \leq 2387\text{ MHz}$

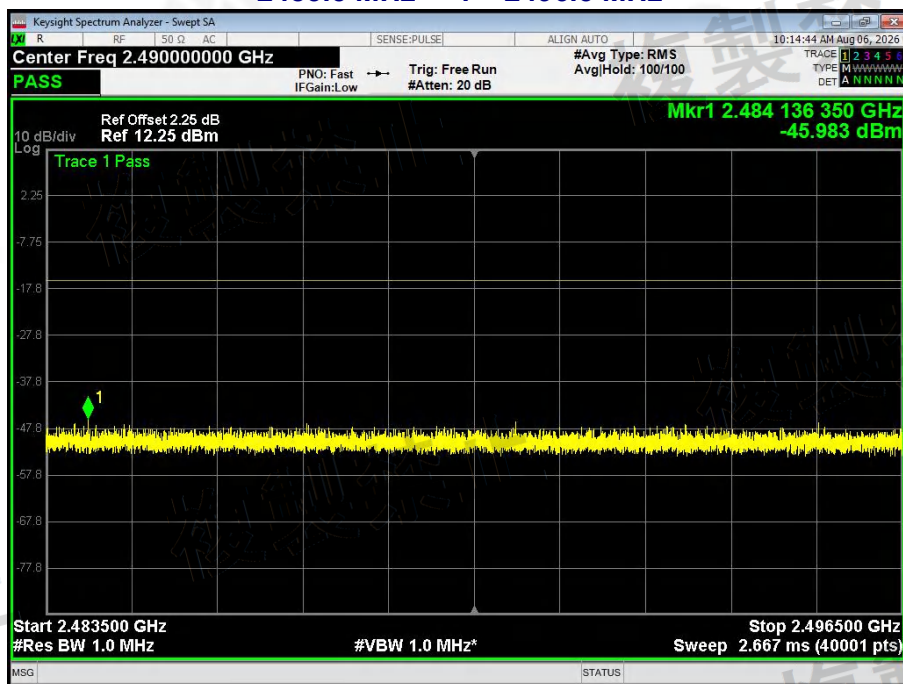




2387 MHz < f ≤ 2400 MHz

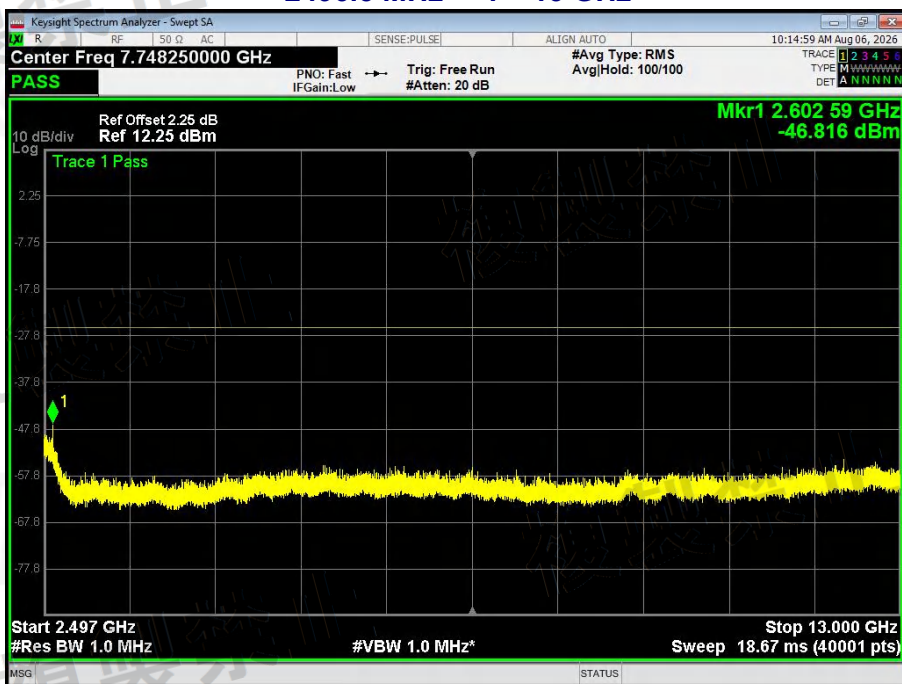


2483.5 MHz ≤ f < 2496.5 MHz





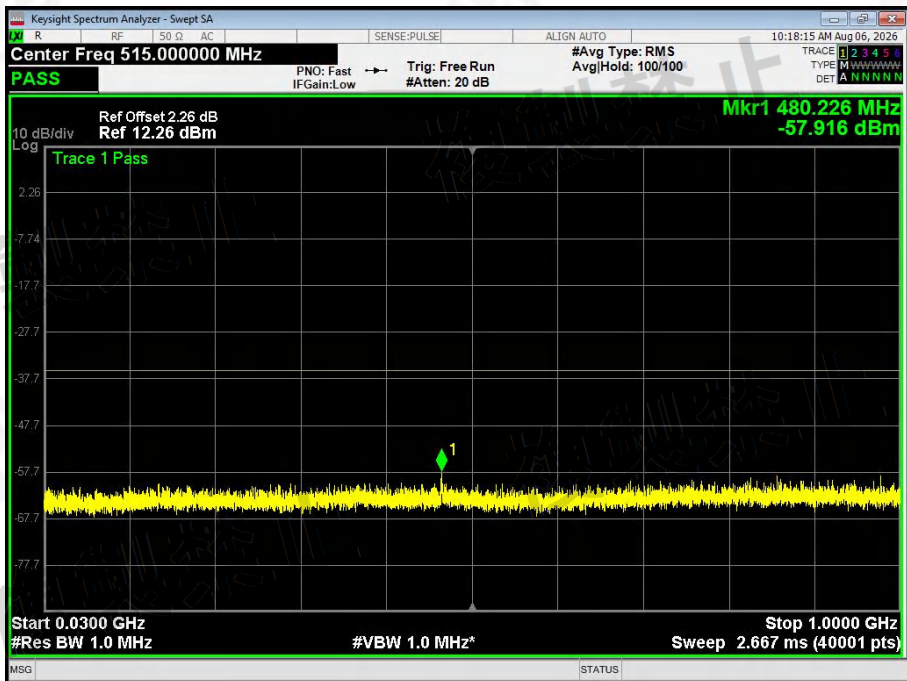
2496.5 MHz $\leq f < 13$ GHz



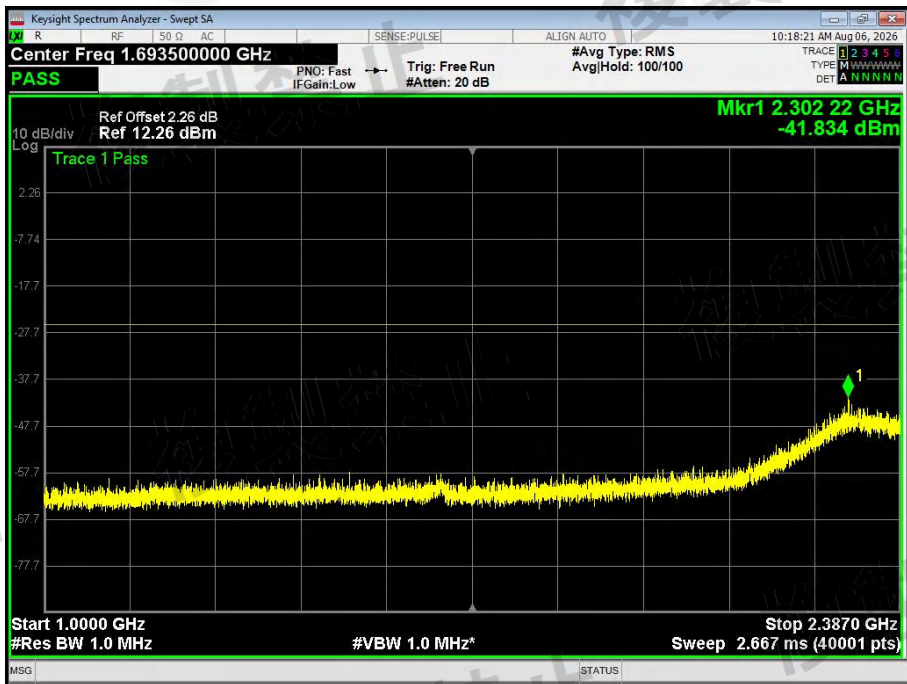


Test voltage	Normal	Test Channel (MHz)	2462.00
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$30\text{ MHz} \leq f \leq 1000\text{ MHz}$

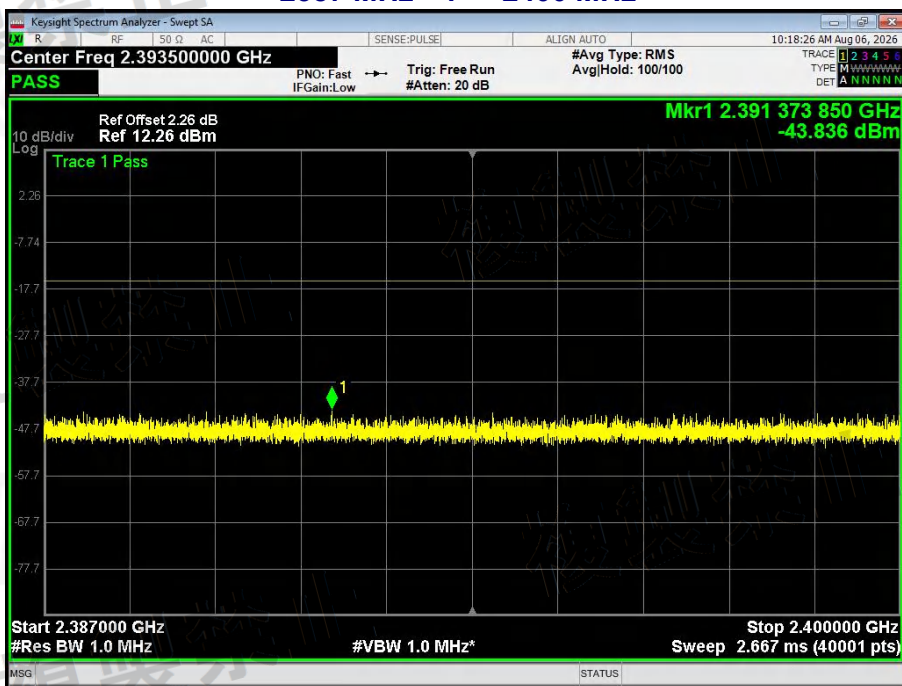


$1000\text{ MHz} < f \leq 2387\text{ MHz}$

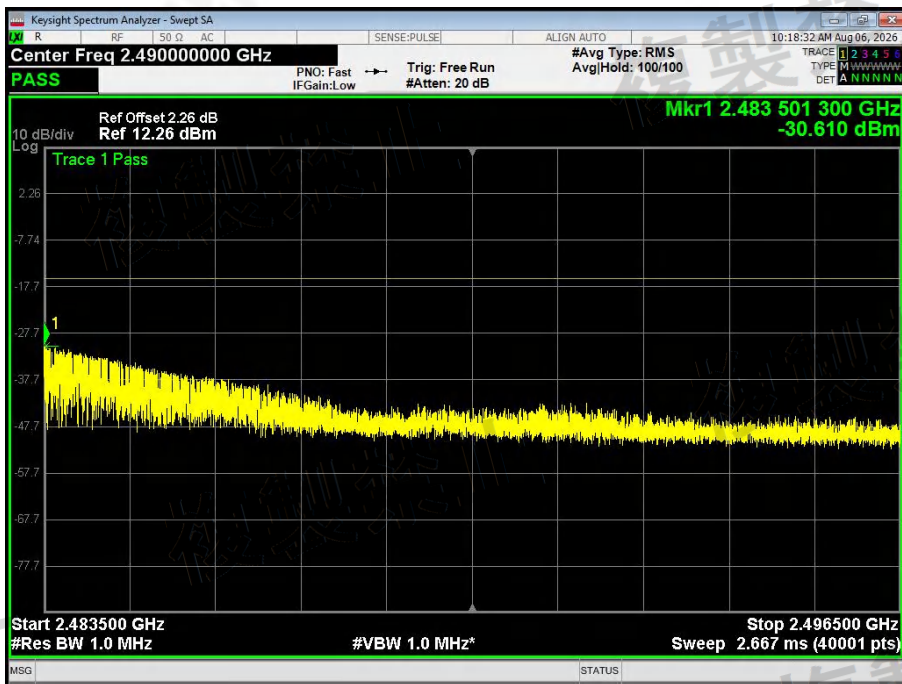




2387 MHz < f ≤ 2400 MHz

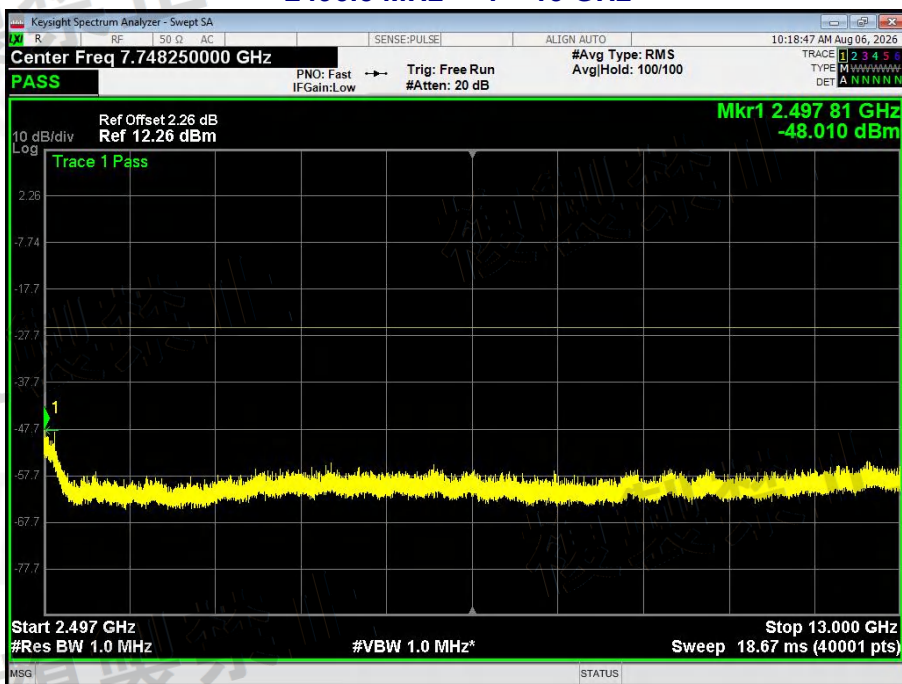


2483.5 MHz ≤ f < 2496.5 MHz





2496.5 MHz $\leq f < 13$ GHz





5.4 ANTENNA POWER ERROR MEASUREMENT & EIRP POWER

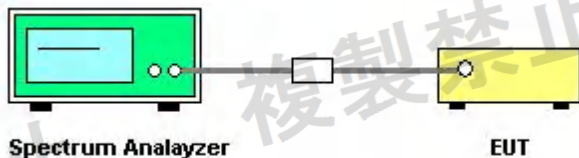
5.4.1 LIMIT

Item	Limits
Antenna Power Density	IEEE 802.11b/g/n20/ax20: 10mW/MHz IEEE 802.11n40/ax40: 5mW/MHz
EIRP Power	IEEE 802.11b/g/n20/ax20: 12.14dBm/MHz IEEE 802.11n40/ax40: 9.13dBm/MHz
Antenna Power Error	+20% (No lower limit)

5.4.2 TEST PROCEDURES

1. A power meter is connected on the EUT
2. The power meter indicates the measured power density "E".
3. Calculate antenna power density by the formula below $PD = Pt + 10 \cdot \log(1/x)$.
x: The duty cycle of the EUT in continuously transmitting mode(there the is duty cycle is 100%)
Pt: Output power of the SSG
4. Antenna Power Error is definition that actual measure antenna power tolerance
+20% (No lower limit) power range that base on manufacturer declare the conducted power density.

5.4.3 TEST SETUP LAYOUT



5.4.4 EST DEVIATION

There is no deviation with the original standard.

5.4.5 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

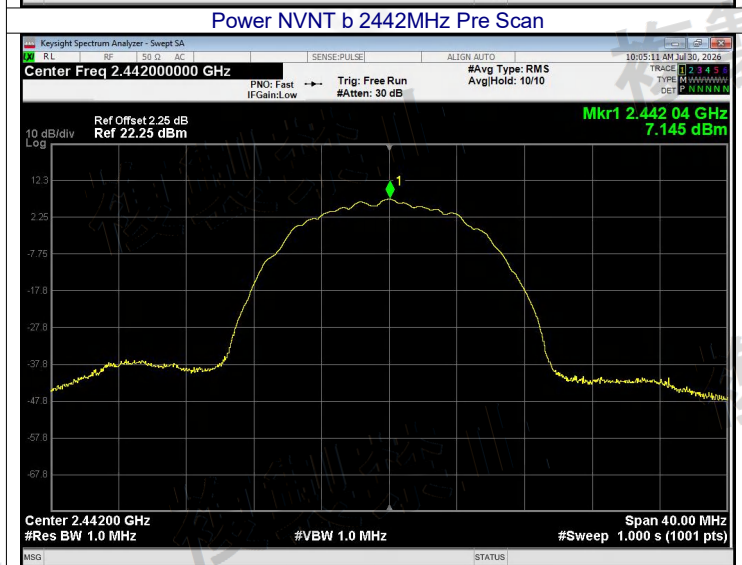
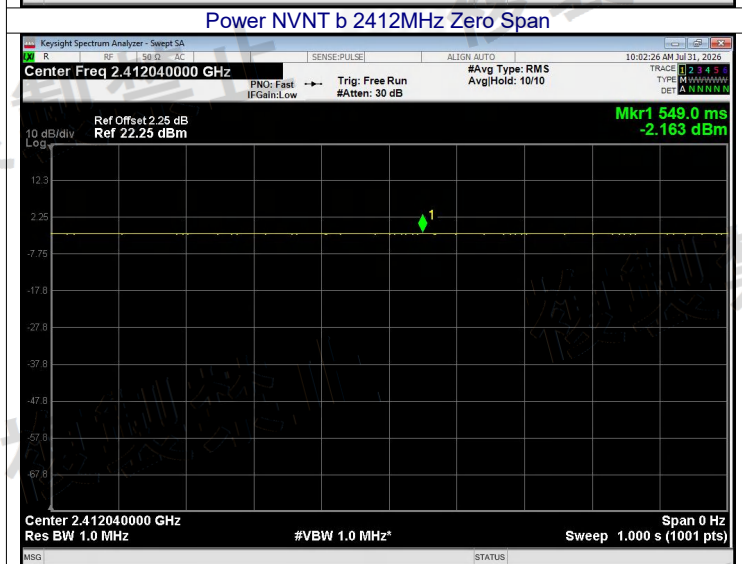
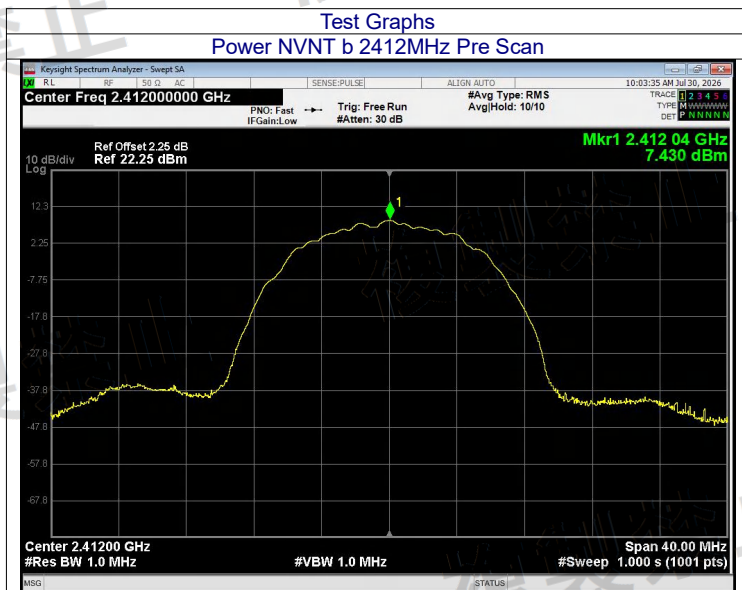


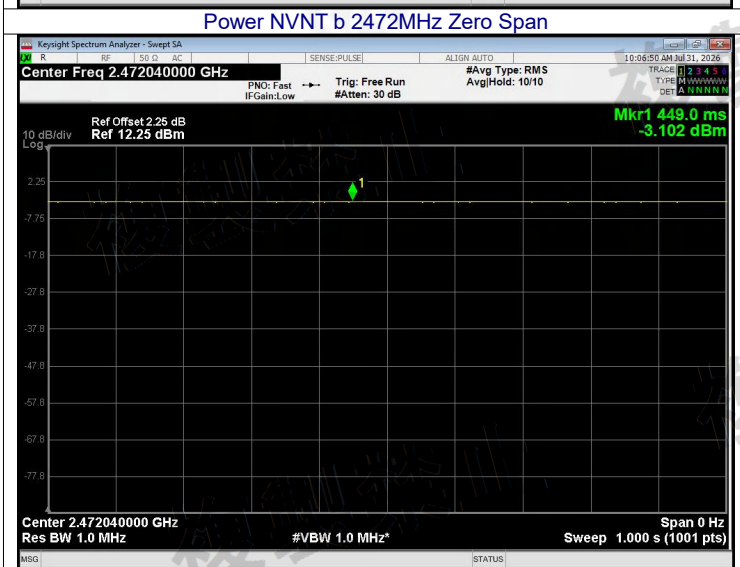
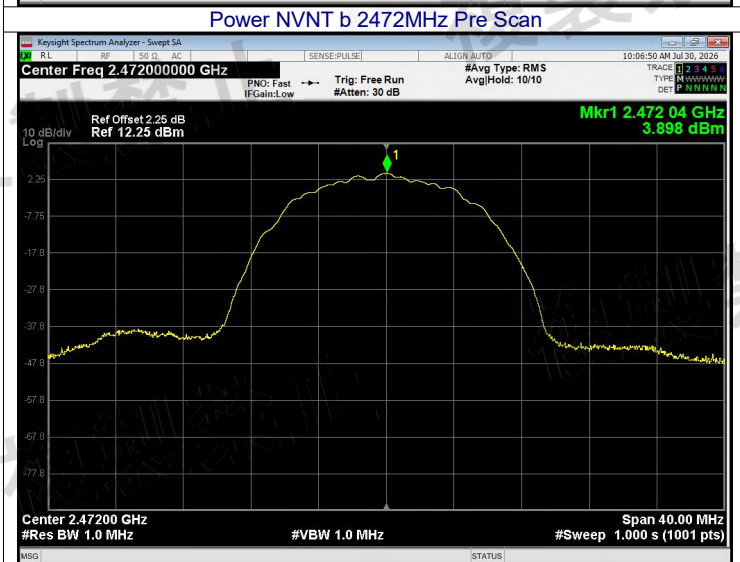
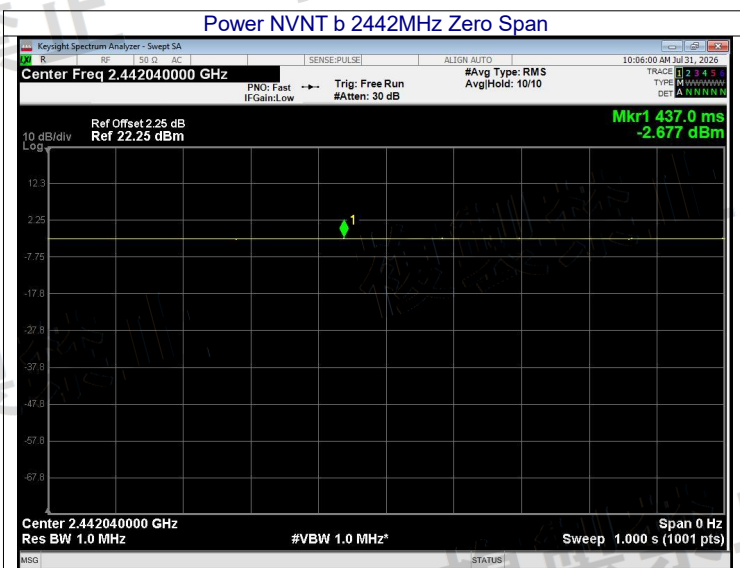
5.4.6 TEST RESULT

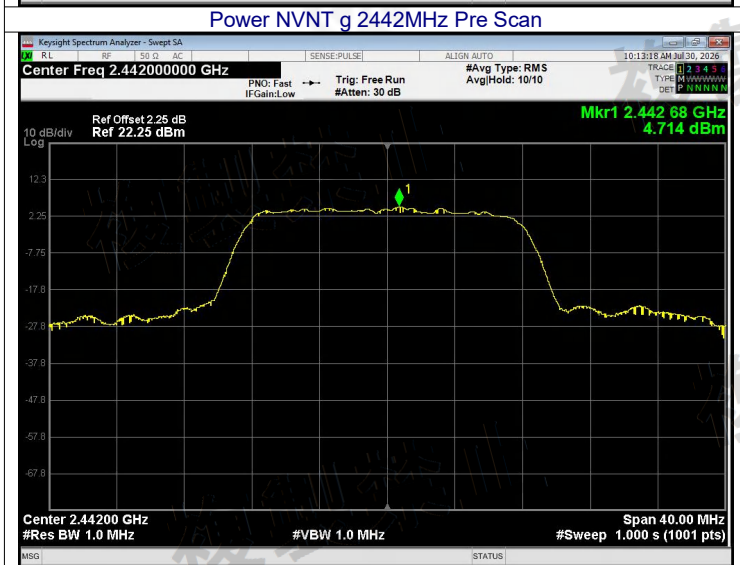
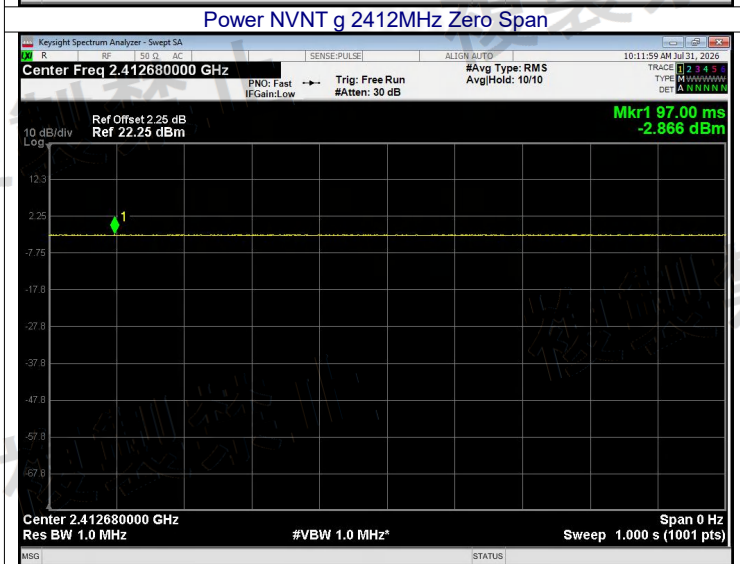
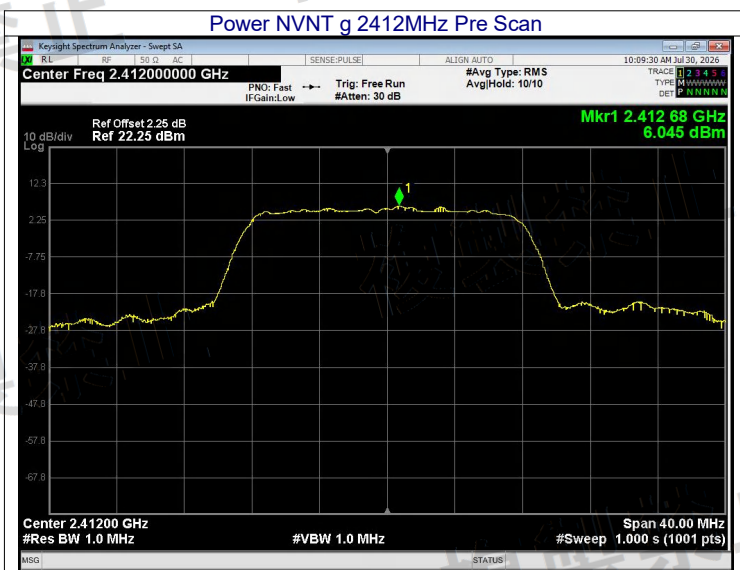
Test Frequency (MHz)	Antenna Power (dBm/MHz)	Antenna Power (mW/MHz)	Rated power density (mW/MHz)	Antenna Power Limits (mW/MHz)	Tolerance (%)	Tolerance Limit (%)	RESULT
Operation Mode:	Normal Voltage-IEEE 802.11b						
2412	-2.163	0.608	3	≤10	-79.73%	+ 20	PASS
2442	-2.677	0.54	3	≤10	-82.00%	+ 20	PASS
2472	-3.102	0.49	3	≤10	-83.67%	+ 20	PASS
Operation Mode:	Normal Voltage-IEEE 802.11g						
2412	-2.866	0.517	3	≤10	-82.77%	+ 20	PASS
2442	-3.216	0.477	3	≤10	-84.10%	+ 20	PASS
2472	-3.640	0.433	3	≤10	-85.57%	+ 20	PASS
Operation Mode:	Normal Voltage-IEEE 802.11n20						
2412	-3.684	0.428	3	≤10	-85.73%	+ 20	PASS
2442	-4.124	0.387	3	≤10	-87.10%	+ 20	PASS
2472	-4.482	0.356	3	≤10	-88.13%	+ 20	PASS
Operation Mode:	Normal Voltage-IEEE 802.11n40						
2422	-3.195	0.479	2	≤5	-76.05%	+ 20	PASS
2442	-3.366	0.461	2	≤5	-76.95%	+ 20	PASS
2462	-4.013	0.397	2	≤5	-80.15%	+ 20	PASS
Operation Mode:	Normal Voltage-IEEE 802.11ax20						
2412	-7.339	0.185	3	≤10	-93.83%	+ 20	PASS
2442	-7.821	0.165	3	≤10	-94.50%	+ 20	PASS
2472	-8.281	0.149	3	≤10	-95.03%	+ 20	PASS
Operation Mode:	Normal Voltage-IEEE 802.11ax40						
2422	-12.372	0.058	2	≤5	-97.10%	+ 20	PASS
2442	-7.975	0.159	2	≤5	-92.05%	+ 20	PASS
2462	-11.762	0.067	2	≤5	-96.65%	+ 20	PASS
Tolerance Limit : +20% (No lower limit)							

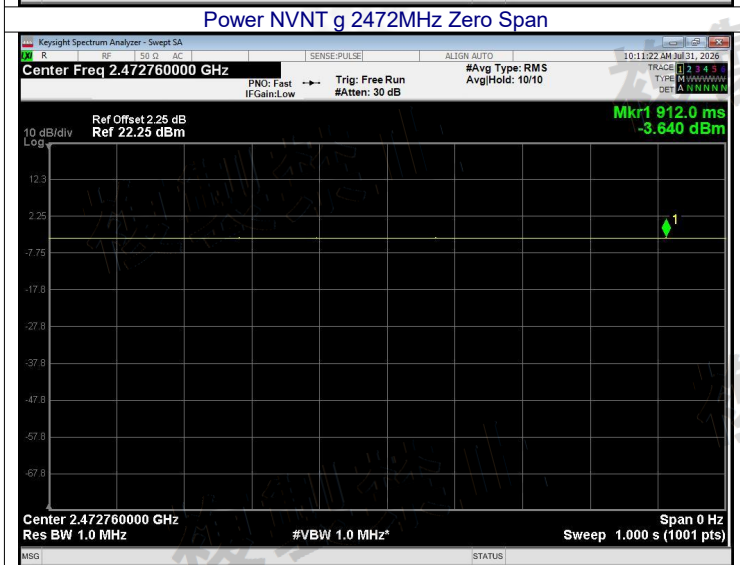
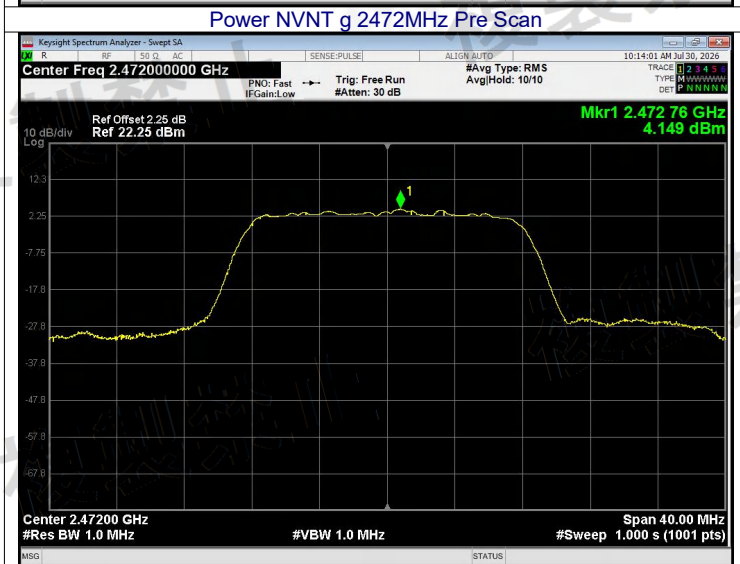


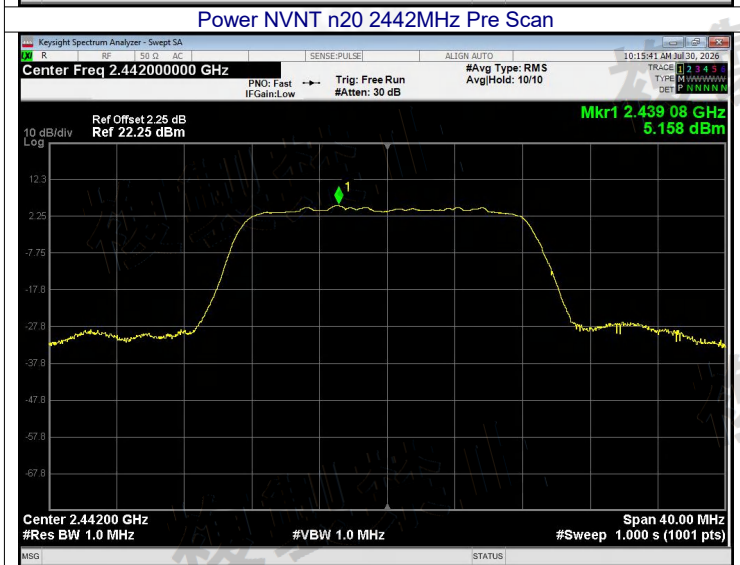
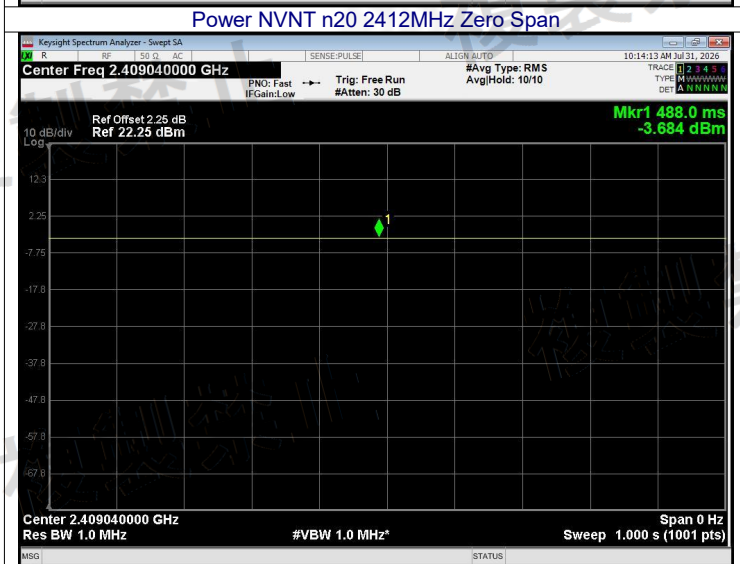
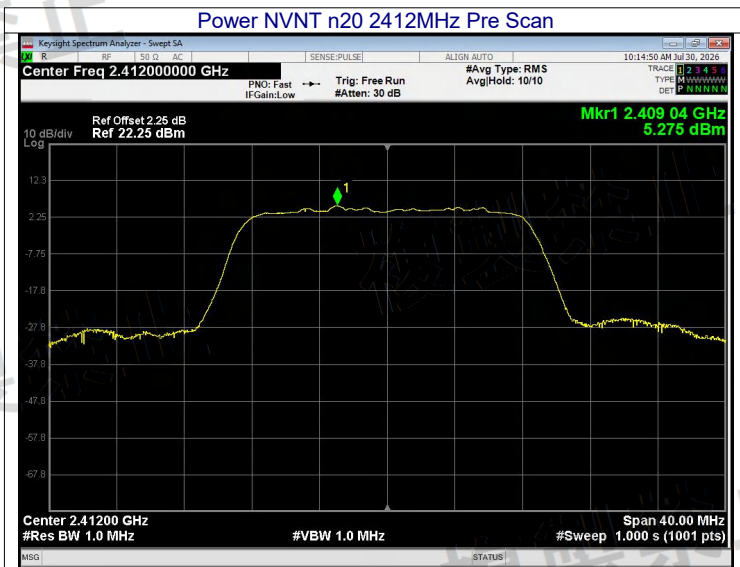
Test Frequency (MHz)	Antenna Power (dBm/MHz)	Antenna gain (dBi)	EIRP Power (dBm/MHz)	Limits (dBm/MHz)	RESULT
Operation Mode:	Normal Voltage-IEEE 802.11b				
2412	-2.163	3.25	1.087	≤12.14	PASS
2442	-2.677	3.25	0.573	≤12.14	PASS
2472	-3.102	3.25	0.148	≤12.14	PASS
Operation Mode:	Normal Voltage-IEEE 802.11g				
2412	-2.866	3.25	0.384	≤12.14	PASS
2442	-3.216	3.25	0.034	≤12.14	PASS
2472	-3.640	3.25	-0.39	≤12.14	PASS
Operation Mode:	Normal Voltage-IEEE 802.11n20				
2412	-3.684	3.25	-0.434	≤12.14	PASS
2442	-4.124	3.25	-0.874	≤12.14	PASS
2472	-4.482	3.25	-1.232	≤12.14	PASS
Operation Mode:	Normal Voltage-IEEE 802.11n40				
2422	-3.195	3.25	0.055	≤9.13	PASS
2442	-3.366	3.25	-0.116	≤9.13	PASS
2462	-4.013	3.25	-0.763	≤9.13	PASS
Operation Mode:	Normal Voltage-IEEE 802.11ax20				
2412	-7.339	3.25	-4.089	≤12.14	PASS
2442	-7.821	3.25	-4.571	≤12.14	PASS
2472	-8.281	3.25	-5.031	≤12.14	PASS
Operation Mode:	Normal Voltage-IEEE 802.11ax40				
2422	-12.372	3.25	-9.122	≤9.13	PASS
2442	-7.975	3.25	-4.725	≤9.13	PASS
2462	-11.762	3.25	-8.512	≤9.13	PASS
Note: EIRP Power = Antenna Power + Antenna Gain.					

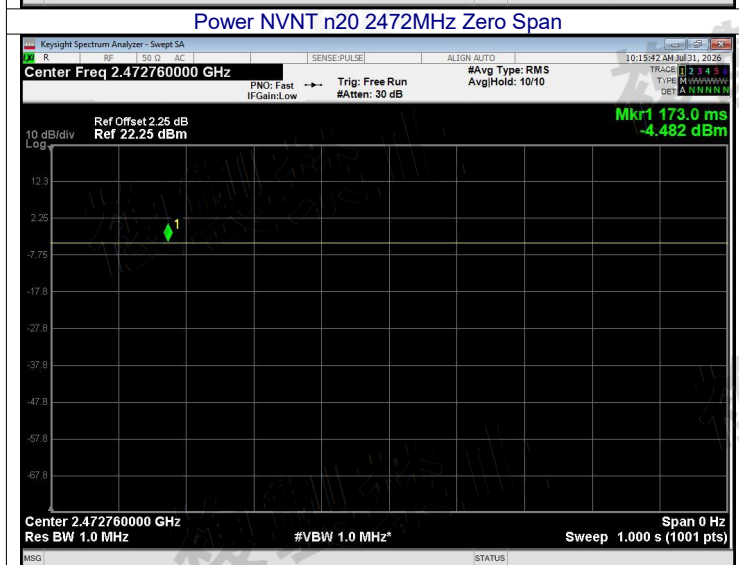
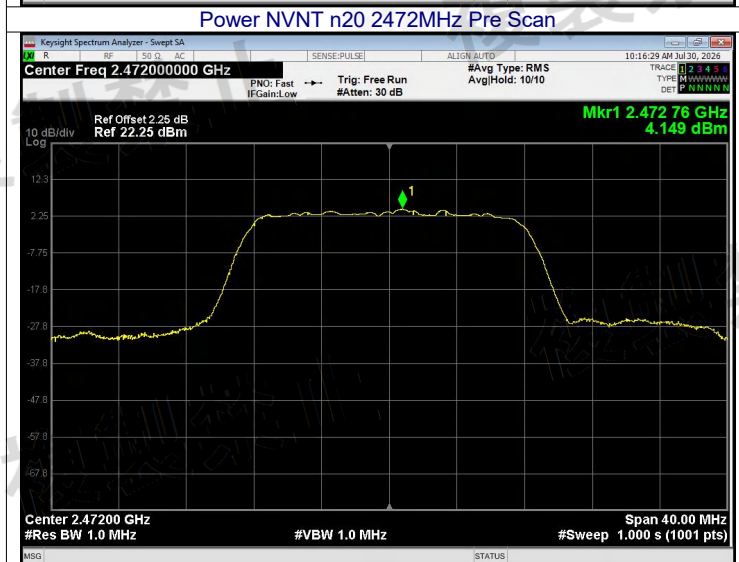
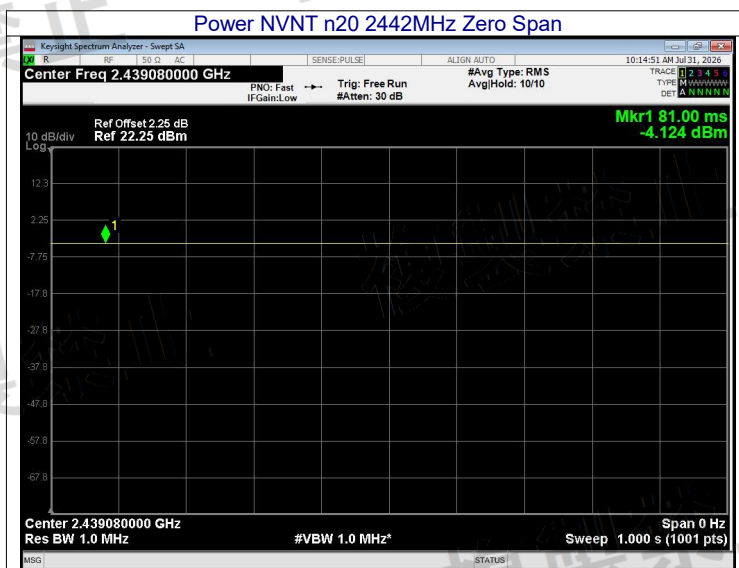


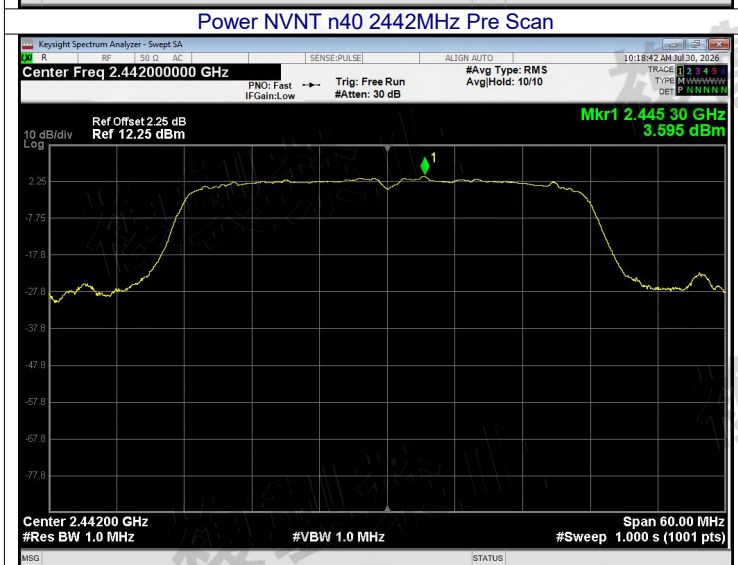
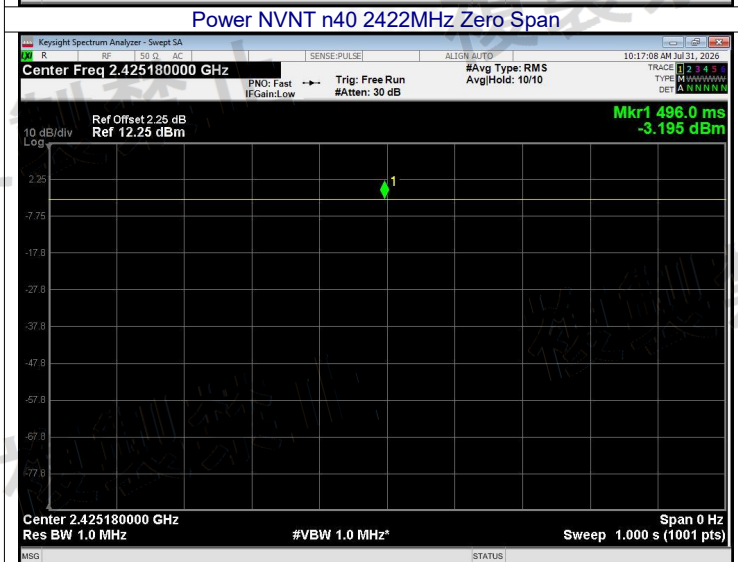
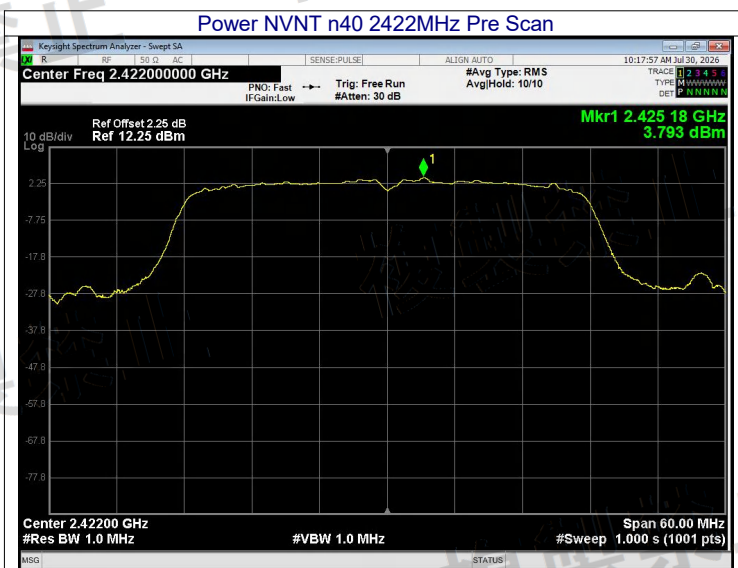


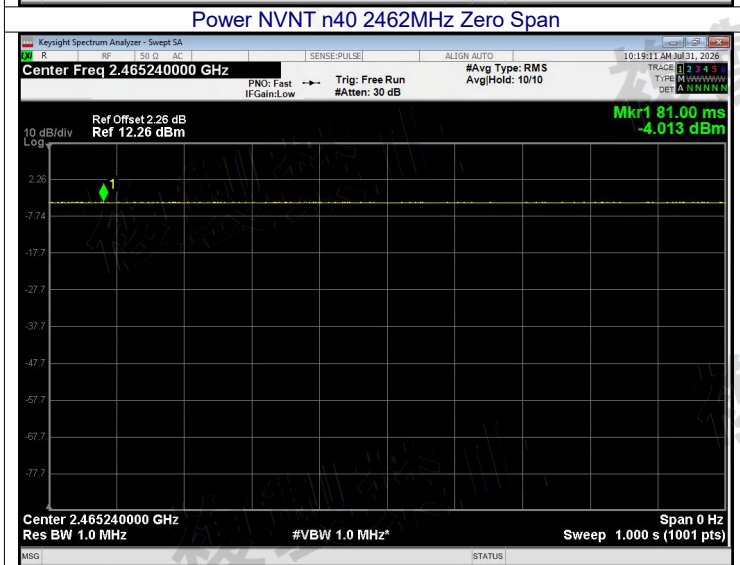
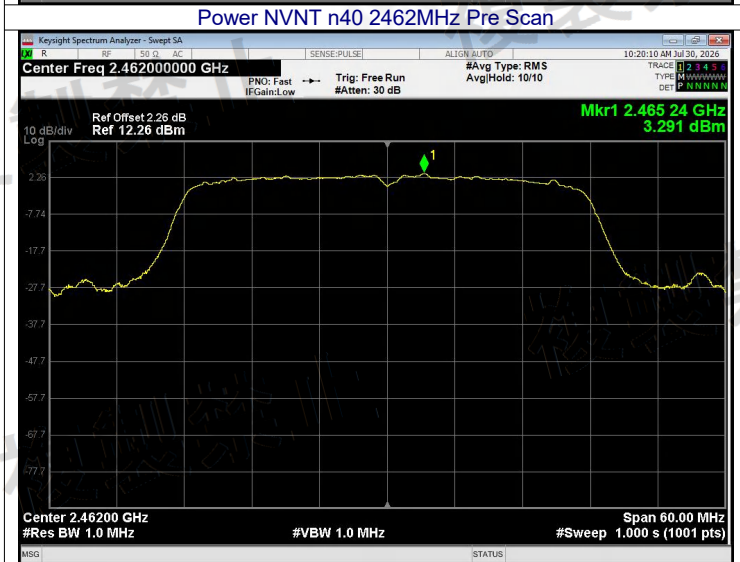
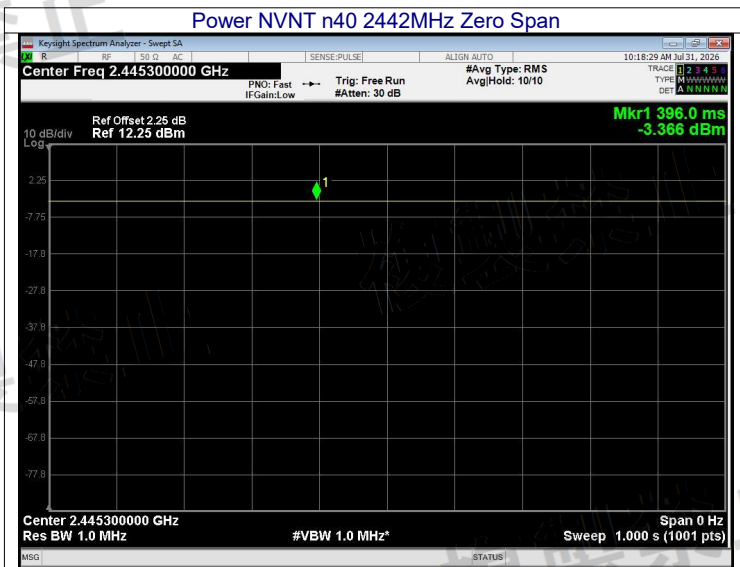


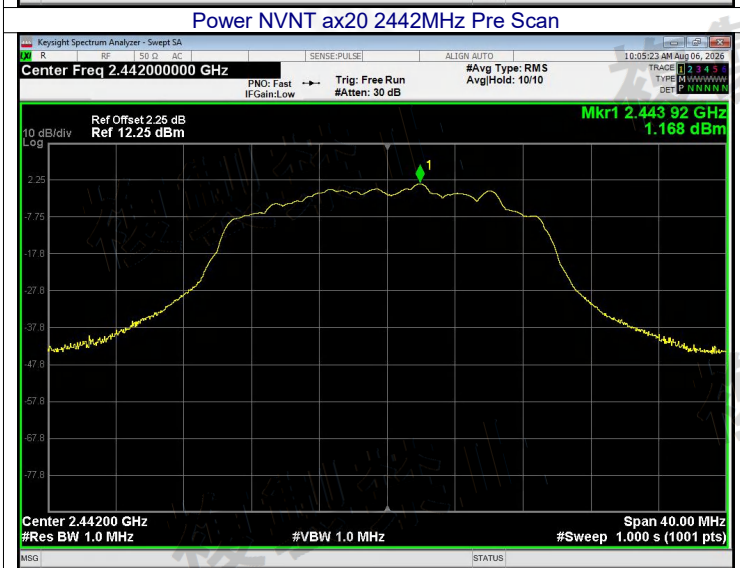
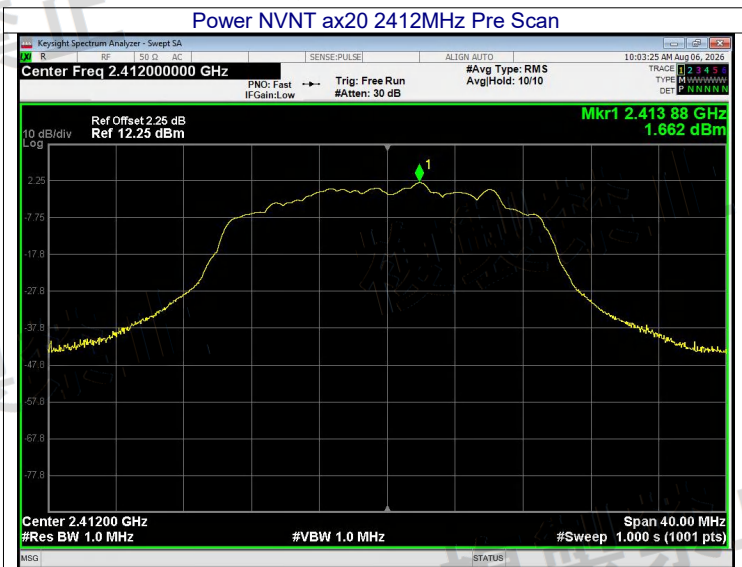














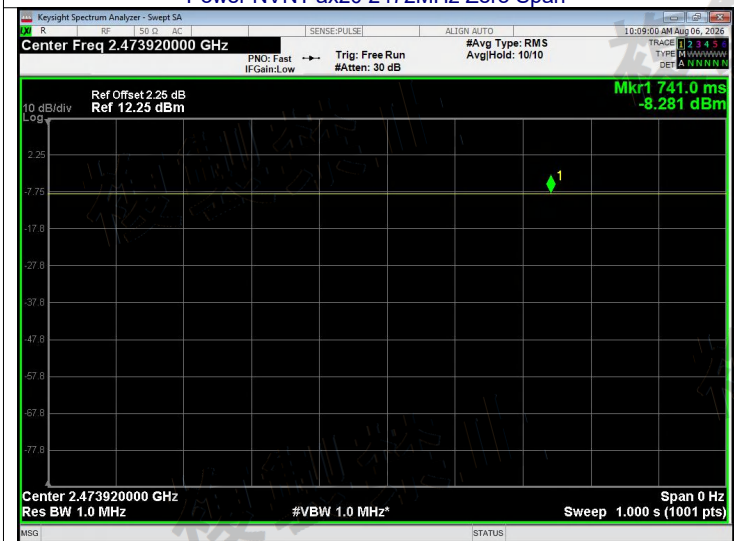
Power NVNT ax20 2442MHz Zero Span

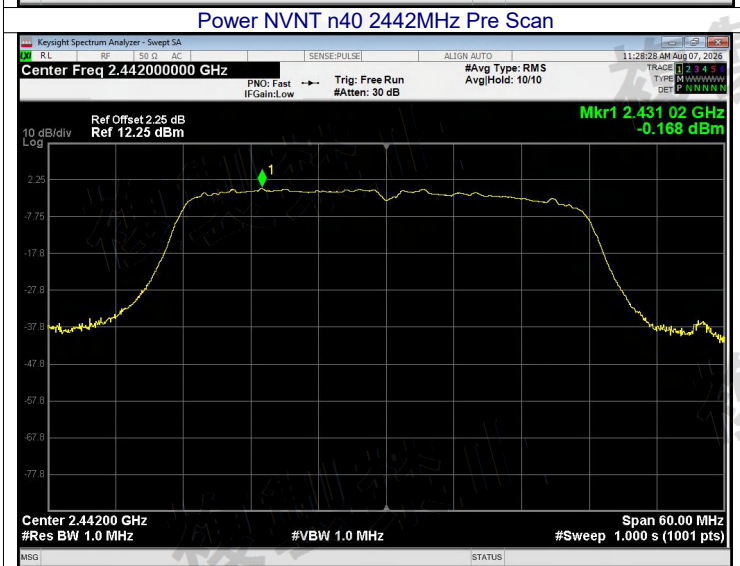
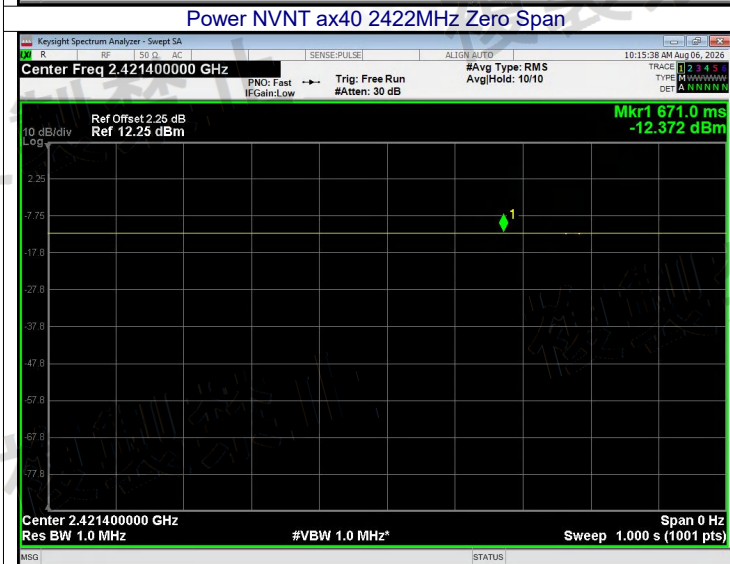
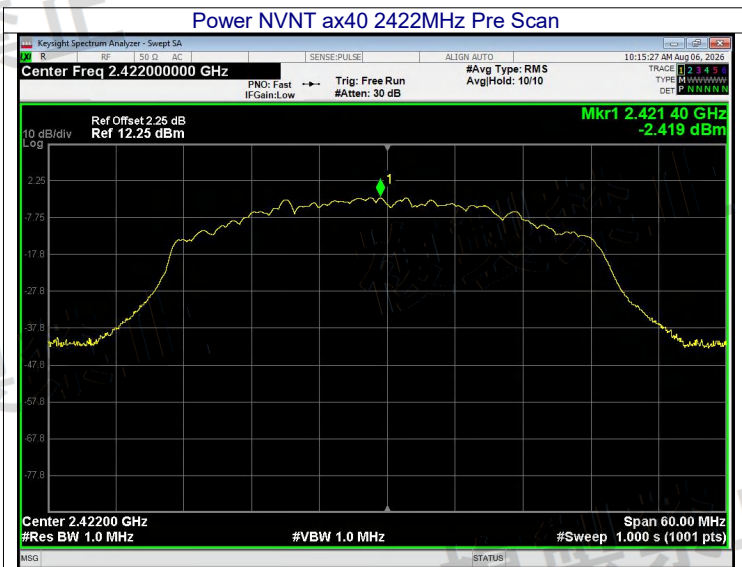


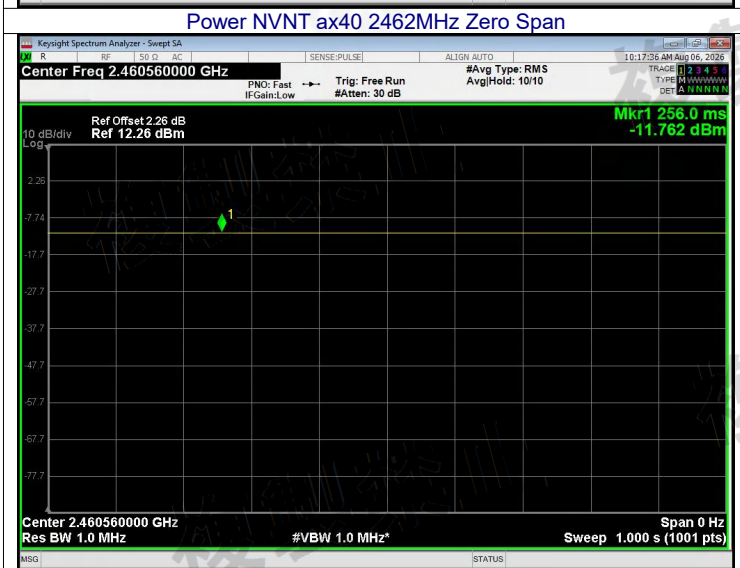
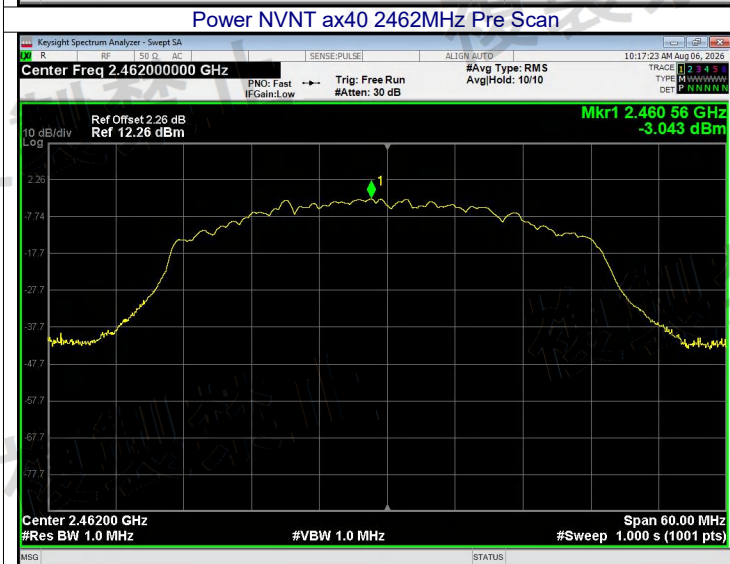
Power NVNT ax20 2472MHz Pre Scan



Power NVNT ax20 2472MHz Zero Span









5.5 IMITATION OF COLLATERAL EMISSION OF RECEIVER MEASUREMENT

5.5.1 LIMIT

Item	Limits
RX Spurious Emission:	$\leq 4\text{nW}$ ($f < 1\text{GHz}$)
	$\leq 20\text{nW}$ ($1\text{GHz} \leq f$)

5.5.2 MEASURING INSTRUMENTS AND SETTING

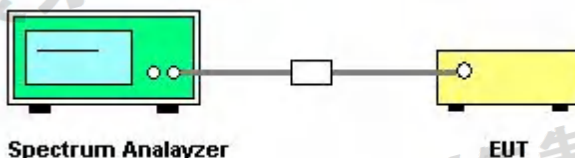
Please refer to section 5 in this report. The following table is the setting of Spectrum Analyzer.

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

5.5.3 TEST PROCEDURES

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) / 1MHz (above 1GHz emissions) / AT: 0dB / Ref: -17.75dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
3. 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
4. SA set RB: 1MHz and VB: 1MHz. Then adjust to start frequency 1000MHz and stop frequency 12500MHz. Search to mark peak reading value + cable loss shall be less than 20nW
5. 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.

5.5.4 TEST SETUP LAYOUT



5.5.6 TEST DEVIATION

There is no deviation with the original standard.

5.5.7 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously reception mode.



5.5.8 TEST RESULT

Test Voltage	Mode	Frequency (MHz)	Range (MHz)	Emission Frequency (MHz)	Max Value (dBm)	Max Value (nW)	Limit (nW)	Verdict
Normal	802.11b	2442	30-1000	50.006	-72.128	0.06126	4	Pass
Normal	802.11b	2442	1000-12500	5177.95	-61.028	0.78922	20	Pass
Normal	802.11g	2442	30-1000	50.006	-73.038	0.04968	4	Pass
Normal	802.11g	2442	1000-12500	2402.425	-66.304	0.23421	20	Pass
Normal	802.11n20	2442	30-1000	50.006	-72.459	0.05677	4	Pass
Normal	802.11n20	2442	1000-12500	5178.238	-61.645	0.68470	20	Pass
Normal	802.11n40	2442	30-1000	50.006	-73.385	0.04587	4	Pass
Normal	802.11n40	2442	1000-12500	2436.063	-67.449	0.17993	20	Pass
Normal	802.11ax20	2442	30-1000	286.007	-83.109	0.00489	4	Pass
Normal	802.11ax20	2442	1000-12500	2411.625	-58.738	1.33721	20	Pass
Normal	802.11ax40	2442	30-1000	233.991	-83.083	0.00492	4	Pass
Normal	802.11ax40	2442	1000-12500	2411.625	-57.086	1.95614	20	Pass

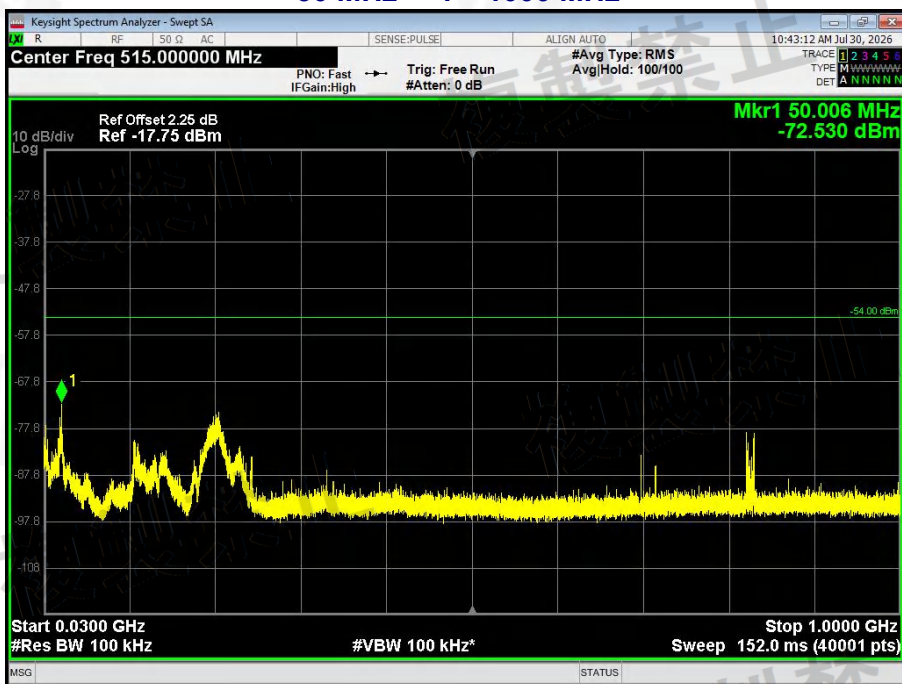
Note: All channels are tested , only the worst test data recorded was 2442MHz.



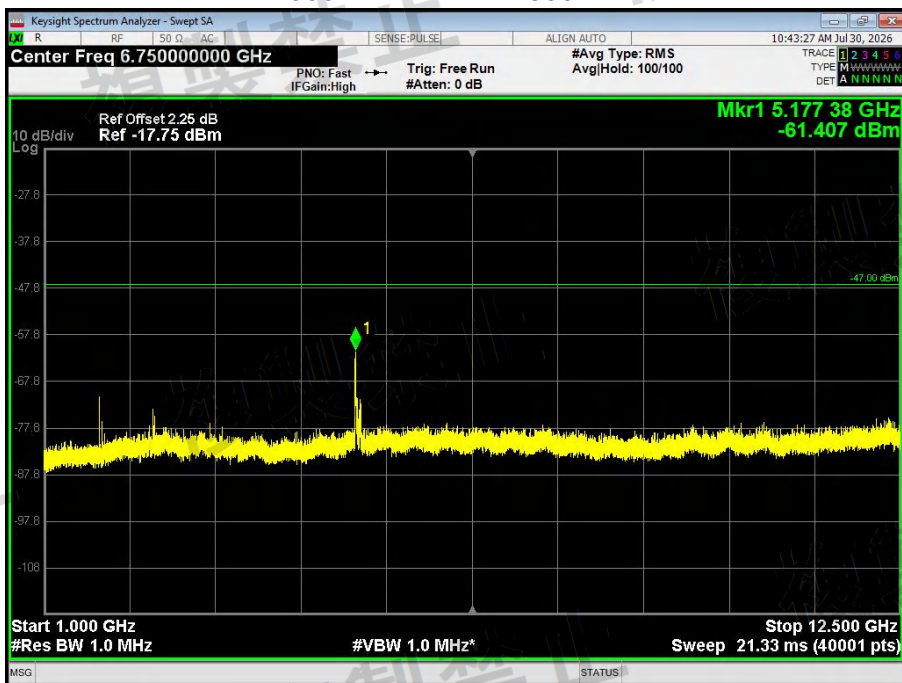
Modulation type: 802.11b

Test voltage	Normal	Test Channel	2442MHz
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$30\text{ MHz} \leq f < 1000\text{ MHz}$



$1000\text{ MHz} \leq f < 12500\text{ MHz}$

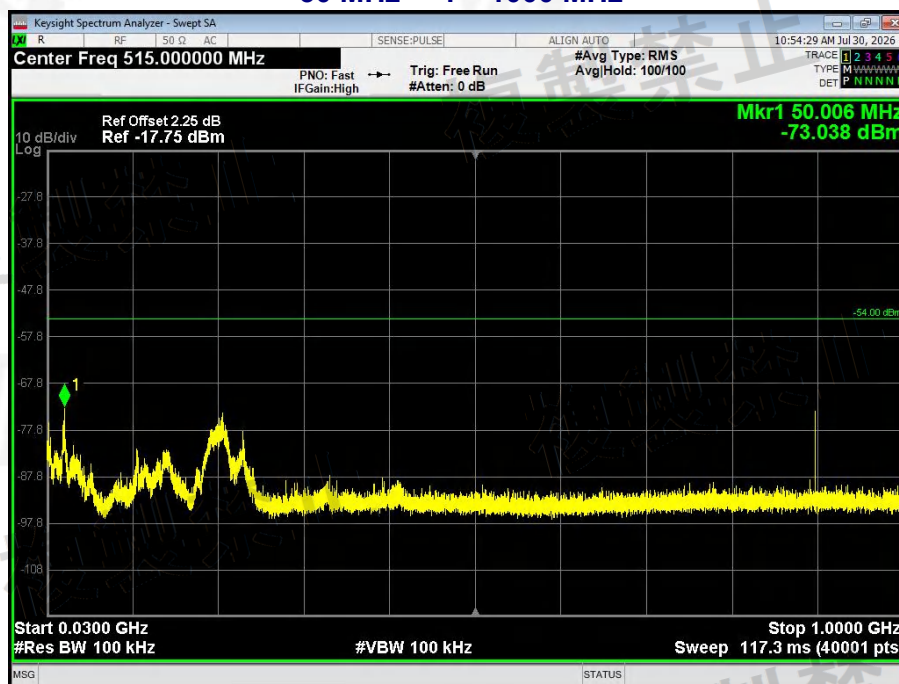




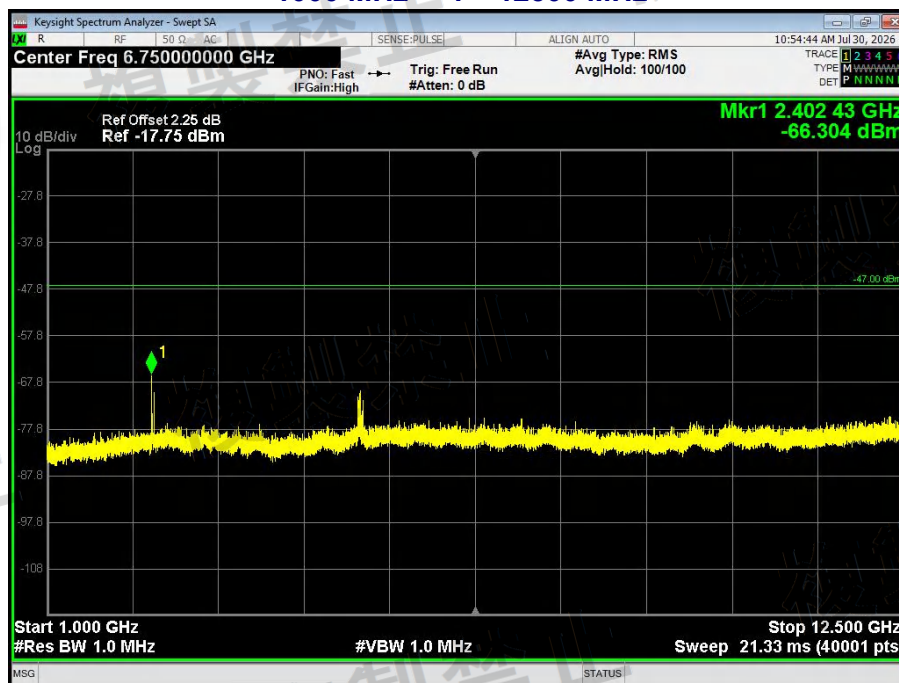
Modulation type: 802.11g

Test voltage	Normal	Test Channel	2442MHz
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$30\text{ MHz} \leq f < 1000\text{ MHz}$



$1000\text{ MHz} \leq f < 12500\text{ MHz}$





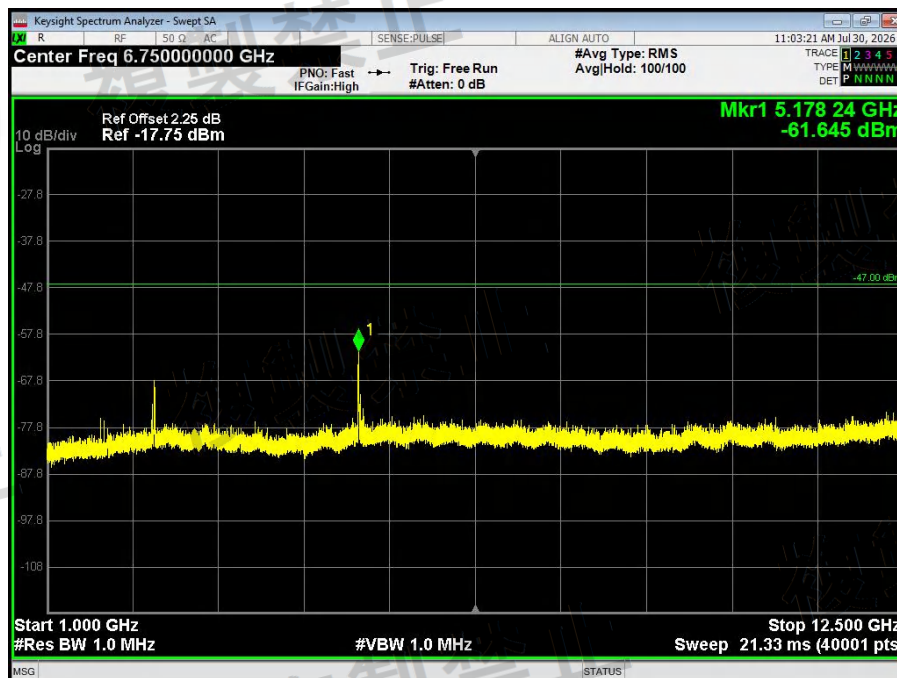
Modulation type: 802.11n20

Test voltage	Normal	Test Channel	2442MHz
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$30\text{ MHz} \leq f < 1000\text{ MHz}$



$1000\text{ MHz} \leq f < 12500\text{ MHz}$





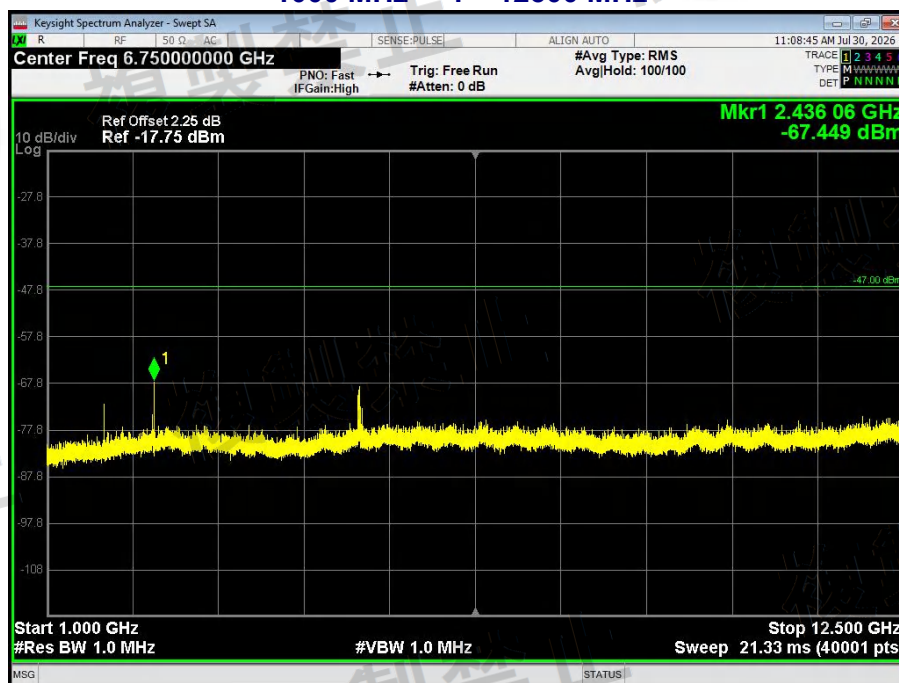
Modulation type: 802.11n40

Test voltage	Normal	Test Channel	2442MHz
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$30\text{ MHz} \leq f < 1000\text{ MHz}$



$1000\text{ MHz} \leq f < 12500\text{ MHz}$

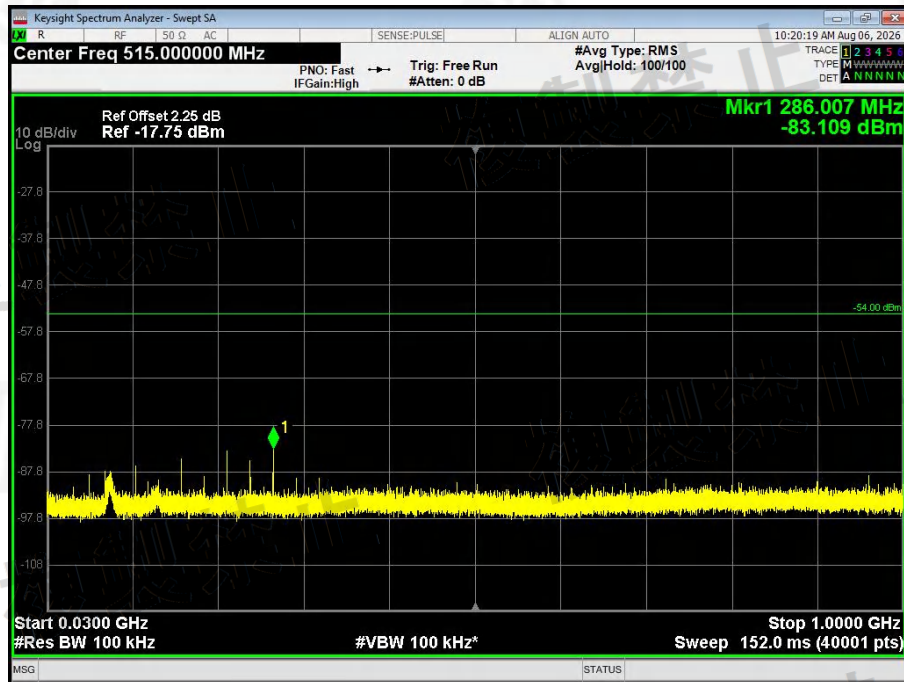




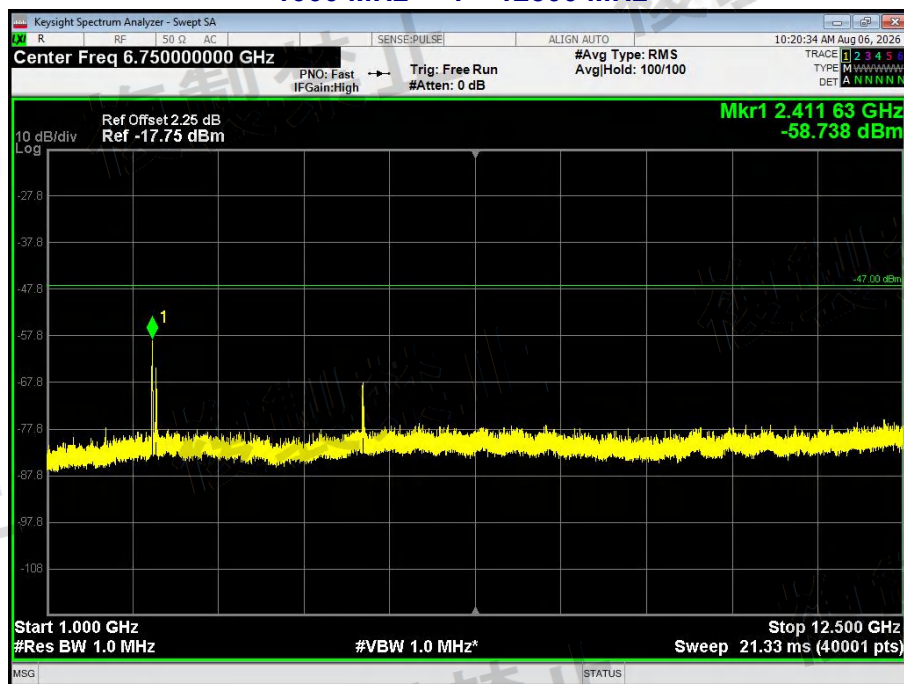
Modulation type: 802.11ax20

Test voltage	Normal	Test Channel	2442MHz
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$30\text{ MHz} \leq f < 1000\text{ MHz}$



$1000\text{ MHz} \leq f < 12500\text{ MHz}$

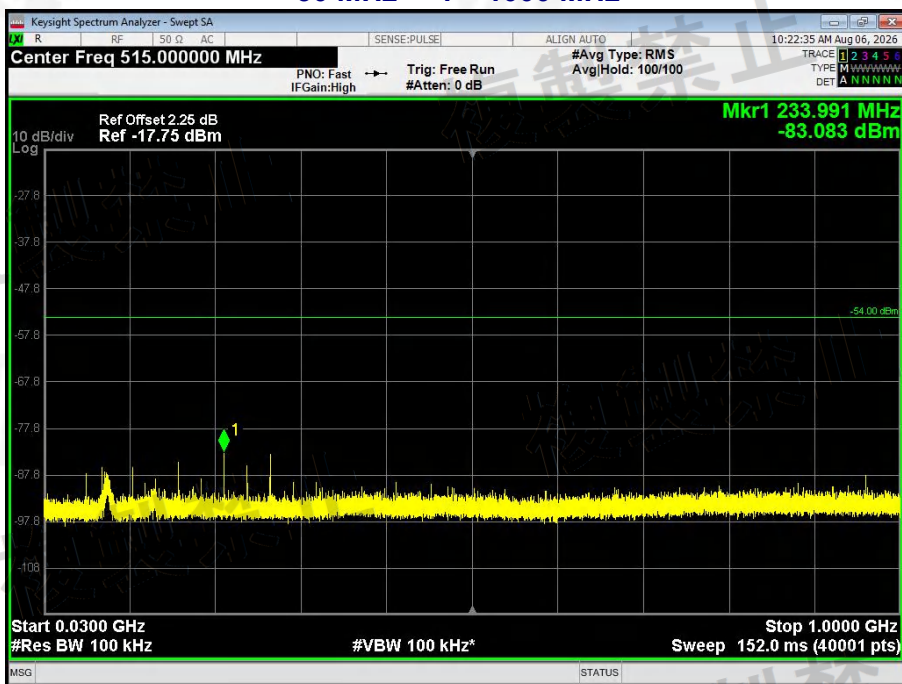




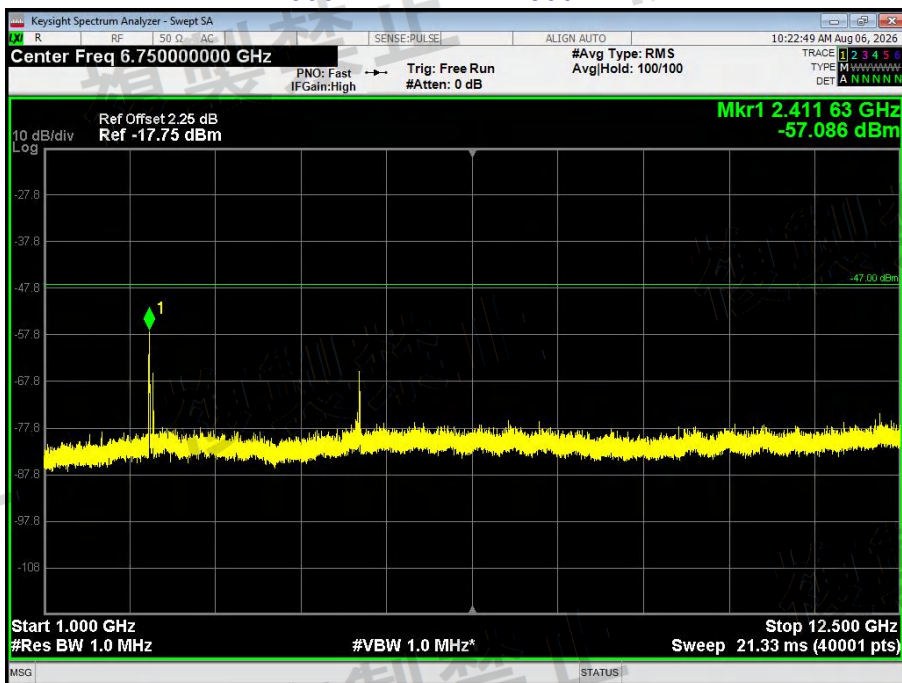
Modulation type: 802.11ax40

Test voltage	Normal	Test Channel	2442MHz
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$30\text{ MHz} \leq f < 1000\text{ MHz}$



$1000\text{ MHz} \leq f < 12500\text{ MHz}$





5.6 RADIO INTERFERENCE PREVENTION CAPABILITY MEASUREMENT

5.6.1 LIMIT

Item	Limits
Identification code	≥ 48 bits

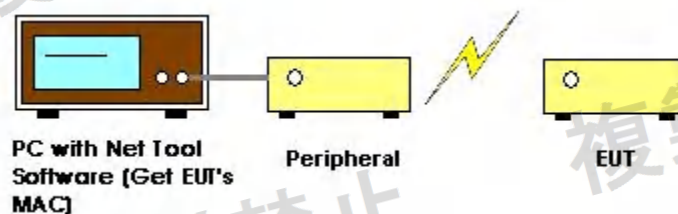
5.6.2 MEASURING ID CODE SOFTWARE

Item	Limits
MAC IP List	MAC Scan

5.6.3 TEST PROCEDURES

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

5.6.4 TEST SETUP LAYOUT



5.6.5 TEST DEVIATION

There is no deviation with the original standard.

5.6.6 EUT OPERATION DURING TEST

The EUT was programmed to be in normal transmitting mode.



5.6.7 TEST RESULT OF RADIO INTERFERENCE PREVENTION CAPABILIT

Temperature:	26°C	Relative Humidity:	50%
Pressure:	101kPa	Test Voltage:	Normal
Test Result:	PASS		

Transmitter Mode:	The transmitting mode (the identification code is more than 48 bits) of EUT is on normal operating, the interference prevention function is good.
Receiver Mode:	The transmitting mode of EUT is on normal operating, the interference prevention function is good.
MAC Address:	27-51-19-2B-E-6C



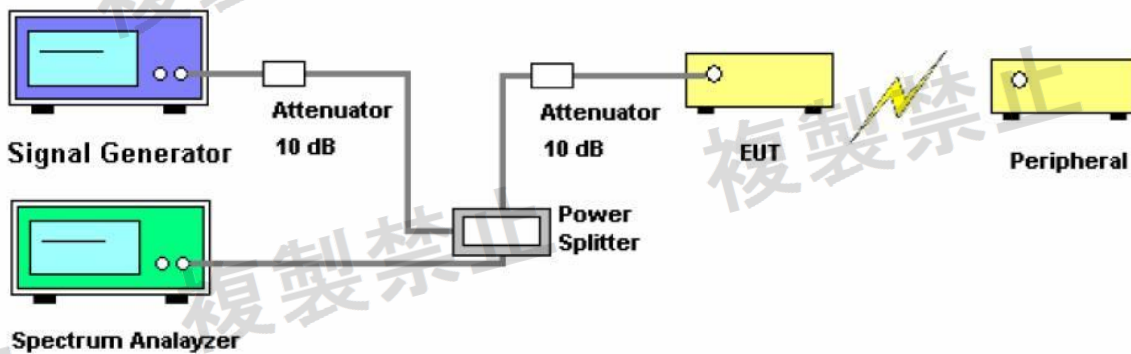
5.7 CARRIER SENSE CAPABILITY

5.7.1 LIMIT

EUT stop RF transmission signal after carrier inject to EUT

5.7.2 TEST PROCEDURE

Measurement System Diagram



1. SG adjusted the frequency as same as the EUT transmitted signal and emitted the absence of modulation from SG and power level is $[on\ 22.79 + G - 20 \cdot \log(f)\ dBm]$ (G is the antenna gain, f is the test frequency).
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,Span=50MHz,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 transmitted signal.



5.7.3 TEST RESULT

Test Mode	Test Channel (MHz)	Result		
		Normal Voltage	High Voltage	Low Voltage
802.11n40	2422	Pass	Pass	Pass
	2442	Pass	Pass	Pass
	2462	Pass	Pass	Pass
802.11ax40	2422	Pass	Pass	Pass
	2442	Pass	Pass	Pass
	2462	Pass	Pass	Pass

Note: The EUT cannot transmit radio when the field strength at maximal gain direction of receiving antenna power is over 100mV/m; and the EUT can start to transmit after carrier sensing.



6. EUT TEST PHOTO

Reference to the appendix I for details.

7. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

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