



TEST REPORT

Applicant Name : M5Stack Technology Co., Ltd
Address : Block A10, Expo Bay South Coast, Fuhai Street,
Bao'an District, Shenzhen, China
Report Number: 2504T20282E-RF-07A

Test Standard (s)

Japan item 19 of Article 2 Paragraph 1

Sample Description

Product Type: M5Stam PLC
Model No.: Stam PLC
Trade Mark:



Date Received: 2025-05-08
Date of Test: 2025-05-21 to 2025-05-28
Report Date: 2025-05-30

Test Result:	The EUT complied with the standards above.
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Prepared and Checked By:

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EMC Engineer

Approved By:

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Bob Liao
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Note: The information marked “#” is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included but no need marked.
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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
Rev.00	2504T20282E-RF-07A	Original Report	2025-05-30

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product		M5Stam PLC
Tested Model		Stam PLC
Radio Type		BLE (1M&2M)
Technical Parameters	Modulation Type	GFSK
	Frequency Range	2402-2480 MHz
	Rated Output Power [#]	2 mW
	Antenna Gain [#]	3.98 dBi (provided by the applicant)
Nominal Power Supply [#]		DC 6-36V
Sample Serial Number		32J4-1 (Assigned by ATC, Shenzhen)
Sample/EUT Status		Good condition

Objective

The objective of the manufacturer is to demonstrate compliance with Radio Law of Japan item 19 of Article 2 Paragraph 1, rules and limits for this device.

Test Methodology

All measurements contained in this report were conducted with technical regulations of the Radio Law of Japan MIC Notice NO.88 Appendix No.43.

Unless otherwise stated there are no any additions to, deviations, or exclusions from the method.

Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the Floor 1, KuMaKe Building, Dongzhou Community, Guangming Street, Guangming District, Shenzhen, Guangdong, China.

EUT TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in engineering mode.

40 channels are provided for testing:

Channel	Frequency(MHz)	Channel	Frequency(MHz)
0	2402	20	2442
1	2404	21	2444
...	...	...	...
...	...	...	...
...	...	...	...
18	2438	38	2478
19	2440	39	2480

EUT was tested with channel 0, 19 and 39.

Test Voltage[#]

The EUT has a voltage buck converter: JW5712, the fluctuation of power supply to the RF circuit of EUT 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.

Voltage Condition	Input(V _{DC})	RF System Voltage(V _{DC})
NV	12.0	3.3
LV	10.8	3.3
HV	13.2	3.3

Test voltage: DC 12V(Normal Voltage) (It is provided by the applicant.)

EUT Exercise Software and Power Level[#]

"EspRFTestTool_v3.6" exercise software was made to the EUT tested and the power level was 9.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

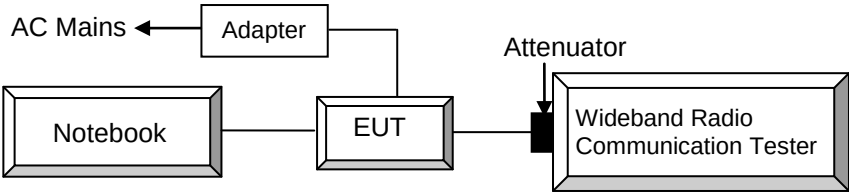
Manufacturer	Description	Model	Serial Number
LENOVO	Notebook	ThinkPad x240	SL10F31638JS
Shenzhen Wentong Electronics Co., LTD	Adapter [#]	WT200650	Unknown

External I/O Cable

Cable Description	Length (m)	From Port	To
USB Cable	0.5	Notebook	EUT
DC Cable	1.2	EUT	Adapter
RF cable	0.1	EUT	Attenuator

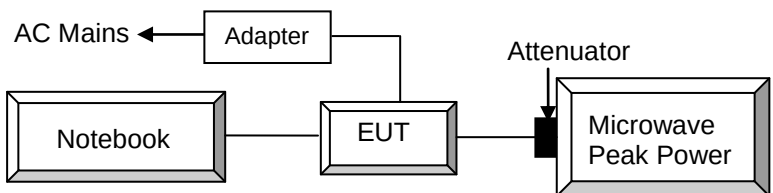
Configuration of Test Setup

For Interference Prevention Function:

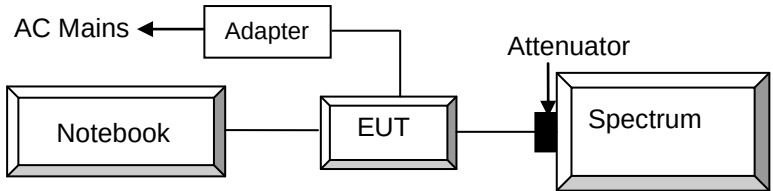


Note: Notebook views the identification code through the “EspRFTestTool_v3.6” software.

Antenna Output Power and Output Power Tolerance:



Other test items:



SUMMARY OF TEST RESULTS

MIC Notice No.88 Appendix No.43 Article 2, Paragraph 1, Item 19 Rules.

Item	Description of Test	Result
1	Frequency Tolerance	Compliance
2	Occupied Bandwidth	Compliance
3	Transmitter Spurious Emission and Unwanted Emission Intensity	Compliance
4	Antenna Output Power and Output Power Tolerance	Compliance
5	Receiver Spurious Emission and Unwanted Emission Intensity	Compliance
6	Carrier Sense Capability	Not Applicable**
7	Transmission Antenna Gain	Not Applicable
8	Transmission Radiation Angle Width	Not Applicable
9	Interference Prevention Function	Compliance
10	Frequency Hopping Dwell Time	Not Applicable*
11	Construction Protection Confirmation	Compliance

Not Applicable - This test item was not required for the output power less than 12.14 dBm (E.I.R.P).

Not Applicable* -Testing is only required for FHSS system devices.

Not Applicable**-The OBW of EUT is less than 26 MHz and the EUT is not radio control model aircraft.

Note: The cable loss is 0.5dB and the attenuator is 10 dB, which was added into all test results.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date	Calibration Authority	Calibration Method
WEINSCHTEL	10dB Attenuator	5324	AU 3842	2025/3/26	2026/3/25	BACL Cal	C
Anritsu	Microwave Peak Power Sensor	MA24418A	12619	2025/3/26	2026/3/25	BACL Cal	C
Rohde & Schwarz	Spectrum Analyzer	FSV-40	101948	2024/10/8	2025/10/7	BACL Cal	C
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	124441	2024/10/8	2025/10/7	BACL Cal	C

*** Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

Note

- A. Calibration conducted by the National Institute of Information and Communications Technology (NICT) (hereinafter referred to as"NICT")or a designated calibration agency under Article 102-18 paragraph (1)
- B. Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No.51of1992)
- C. Calibration conducted in foreign countries, which shall beequivalent to the calibration conducted by theNICT or a designated calibration agency under Article 102-18 paragraph(1)
- D.Calibration conducted by using measuring instruments and other equipment which shall have been given any of calibration, etc. listed above from A to C.

FREQUENCY TOLERANCE

Limit

- 50ppm or below

Test Procedure

Set the EUT to the measurement frequency without modulation.

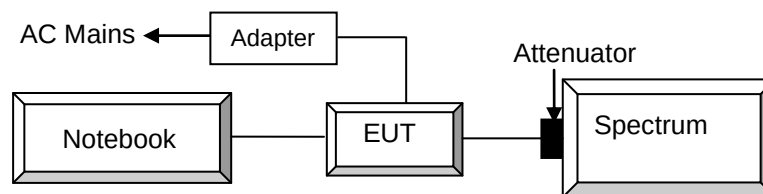
Setting of SA is following as:

- Center Frequency: Frequency to measure
- RBW: 30kHz, VBW: 30kHz
- Sweep Time: Auto or more
- Sweep Mode: Continuous sweep
- Detection Mode: Positive Peak
- Trace mode: MAX Hold

Record the peak spot frequency.

If the EUT can't set at un-modulation mode, measure the 10dBc center frequency.

Measurement System Diagram



Test Data

Test Result: Compliance, please refer to the Appendix.

OCCUPIED BANDWIDTH

Limit

- Occupied bandwidth: FH $\leq$ 83.5 MHz; OFDM, DS $\leq$ 26 MHz; Others $\leq$ 26 MHz

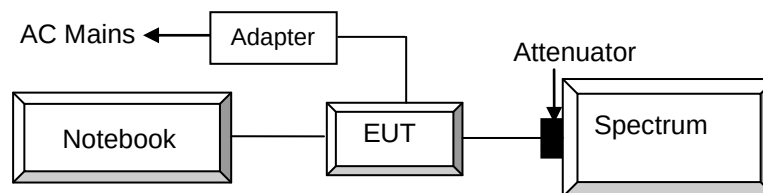
Test Procedure

1. Setting of SA is following as:

- Center Frequency: Frequency to measure
- RBW: 30 kHz, VBW: 30 kHz
- Span: 2.5MHz/5MHz
- Sweep time: Auto or more
- Log scale: 10dB/Div, Data points: 400 points or more
- Reference level: Enough level for maximum dynamic range
- Detection: Positive Peak
- Sweep mode: Continuous Sweep
- Marker: Spot

2. EUT have transmitted the maximum modulation signal and fixed channelize. SA set to 99% of occupied bandwidth to measure occupied bandwidth.

Measurement System Diagram



Test Data

Test Result: Compliance, please refer to the Appendix.

TRANSMITTER SPURIOUS EMISSION STRENGTH AND UNWANTED EMISSION INTENSITY

Limit

Frequency Band	Limit
Band I: 30MHz-1GHz	0.25μW/100kHz (-36dBm/100kHz)
Band II: 1GHz-2387MHz	2.5μW/MHz (-26dBm/MHz)
Band III: 2387MHz-2400MHz	25μW/MHz (-16dBm/MHz)
Band IV: 2483.5MHz-2496.5MHz	25μW/MHz (-16dBm/MHz)
Band V: 2496.5MHz-12.5GHz	2.5μW/MHz (-26dBm/MHz)

Test Procedure

Conditions of Application Equipment (EUT)

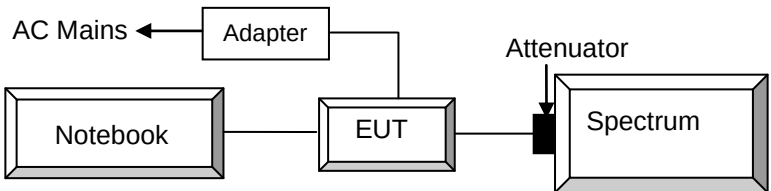
- The modulation state shall be in continuously transmitting mode.

Spectrum Analyzer Conditions:

- Span: Measuring Frequency Range
- RBW: 1MHz (frequency range; 1GHz over), 100kHz (frequency range; 30MHz to 1GHz)
- VBW: Same as RBW (1MHz or 100kHz)
- Sweep time: Auto(Minimum time to ensure measurement accuracy.)
- Data points: 400 points or more
- Reference level: Enough level for maximum dynamic range
- Detection: Positive Peak

If the measured value is under the technical standard value, do not need to measure more detail.

Measurement System Diagram



Test Data

Test Result: Compliance, please refer to the Appendix.

ANTENNA OUTPUT POWER AND ANTENNA POWER TOLERANCE

Limit

- ≤ 10 mW/MHz (OFDM (20MHz system), DSSS from 2400-2483.5 MHz)
- ≤ 5 mW/MHz (OFDM (40MHz system) from 2400-2483.5 MHz)
- ≤ 10 mW (other from 2400-2483.5 MHz)

The Output Power Tolerance must be within +20%, -80%.

EIRP

- ≤ 12.14 dBm/MHz (OFDM(20MHz system), DSSS from 2400-2483.5MHz)
- ≤ 9.13 dBm/MHz (OFDM(40MHz system), from 2400-2483.5MHz)
- ≤ 12.14 dBm (other from 2400-2483.5MHz)

Test Procedure

Step 1: Measure the total power by Power Meter in a state of non-hopping mode (with Average Sensor)

Step 2: If it's the burst wave, please measure the burst ratio. Then calculate the real total power by burst ratio.

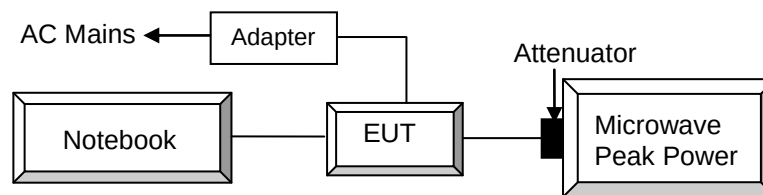
Step 3: Calculate the mean power.

Antenna output power (mW) = Antenna output power Reading (mW) / Burst Ratio

Note: The burst ratio has been calculated to result by power meter, so the equation updated as below:

Antenna output power (mW) = Antenna output power Reading (mW)

Measurement System Diagram



Test Data

Test Result: Compliance, please refer to the Appendix.

RECEIVER SPURIOUS EMISSION AND UNWANTED EMISSION INTENSITY

Limit

Frequency Band	Limit
Band VI: 30MHz-1GHz	4nW (-54dBm)
Band VII: 1GHz-12.5GHz	20nW (-47dBm)

Test Procedure

Conditions of Application Equipment (EUT)

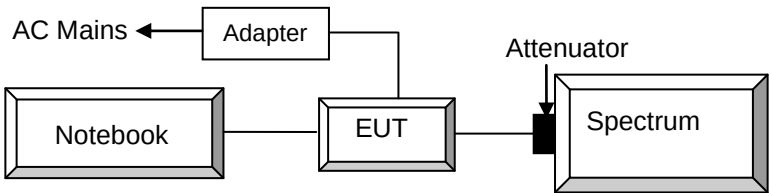
- The modulation state shall be “continuous receiving mode”.

Spectrum Analyzer Conditions

- Start Frequency: Start Frequency of frequency range to measure (30MHz or 1GHz)
- Stop Frequency: Stop Frequency of frequency range to measure (1GHz or 12.5GHz)
- Span: AUTO (Measurement Range)
- RBW: 100 kHz, VBW: 100 kHz for Frequency < 1 GHz
- RBW: 1MHz, VBW: 1MHz for Frequency > 1 GHz
- Sweep time: AUTO or more
- Sweep mode: Single Sweep
- Detection: Positive Peak
- Reference Level: Enough level for maximum dynamic range

If searched value is under the technical standard value, do not need to measure more detail.

Measurement System Diagram



Test Data

Test Result: Compliance, please refer to the Appendix.

INTERFERENCE PREVENTION FUNCTION

Requirement

The EUT shall have the interference prevention capability to transmit or to receive the identification automatically, so that sender and receiver shall exclude other equipment.

Test Procedure

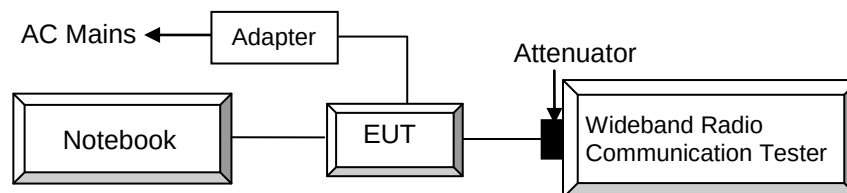
In the case that the EUT has the function of automatically transmitting the identification code:

1. Transmit the predetermined identification codes from EUT
2. Check the transmitted identification codes with the demodulator.

In the case of receiving the identification codes:

1. Transmit the predetermined identification codes from the counterpart.
2. Check if communication is normal
3. Transmit the signal other than predetermined ID codes from the counterpart.
4. Check if the EUT stops the transmission, or if it displays that identification codes are different from the predetermined ones.

Measurement System Diagram



Test Data

Please refer to the Appendix.

CONSTRUCTION PROTECTION CONFIRMATION

Limit

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

Confirmation Method

The device is tightly fastened with screws and is difficult to open. Please refer to the actual photo.

APPENDIX (TEST RESULTS)

Frequency Error

Test Information:

Sample No.:	32J4-1	Test Date:	2025/05/21
Test Site:	RF	Test Mode:	Transmitting
Tester:	Cayde Hou	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.9	Relative Humidity: (%)	52	ATM Pressure: (kPa)	100.2
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Test Condition: NV

Mode	Channel	F _c (MHz)	F _L (MHz)	F _H (MHz)	F ₀ (MHz)	Result (ppm)	Limit (ppm)	Verdict
BLE 1M	Low	2402	2401.67668	2402.35335	2402.01502	6.25	± 50	Pass
	Middle	2440	2439.67668	2440.35135	2440.01402	5.74		Pass
	High	2480	2479.67668	2480.34935	2480.01302	5.25		Pass
BLE 2M	Low	2402	2401.35736	2402.59459	2401.97598	-10.00		Pass
	Middle	2440	2439.35736	2440.59059	2439.97398	-10.66		Pass
	High	2480	2479.36136	2480.53854	2479.94995	-20.18		Pass

Note:

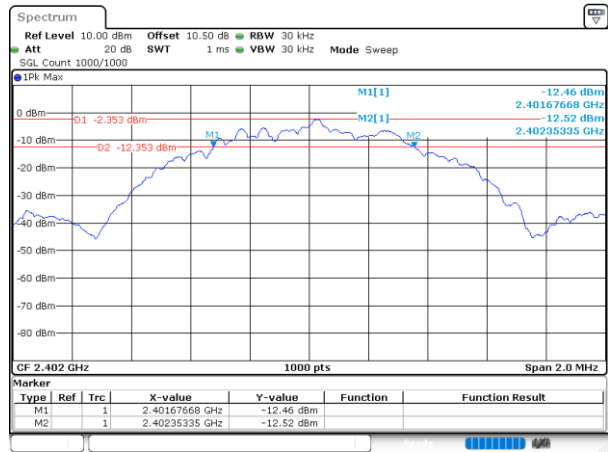
Result = (F₀ - F_c)/F_c*10⁶, where F₀= (F_L+F_H)/2

F_L is the lower edge of the 10dBc center frequency

F_H is the upper edge of the 10dBc center frequency.

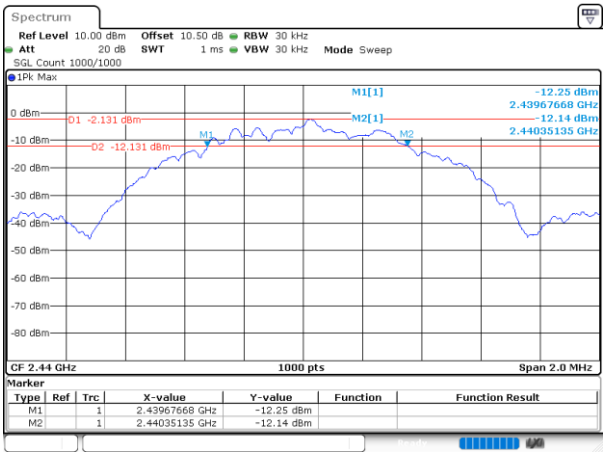
Test Condition: NV

BLE 1M_Low Channel



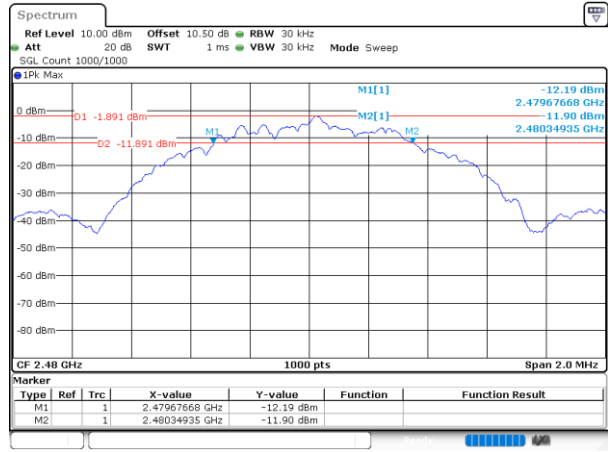
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:20:05

BLE 1M_Middle Channel



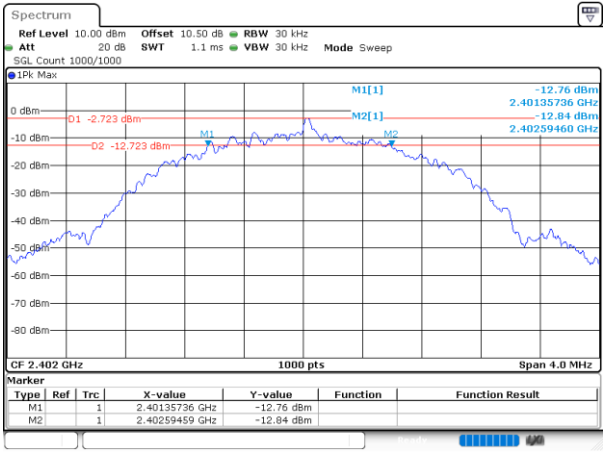
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:21:59

BLE 1M_High Channel



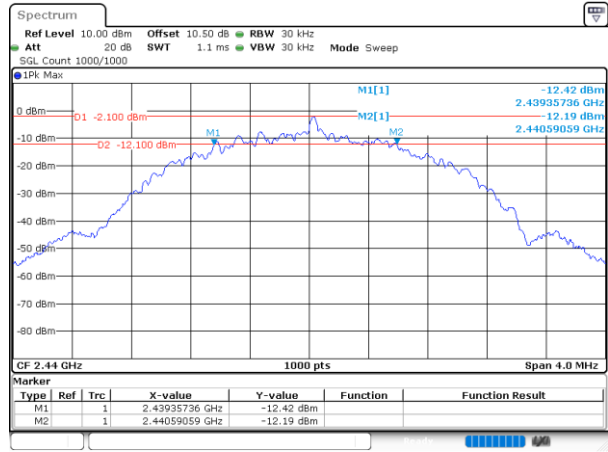
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:23:48

BLE 2M_Low Channel



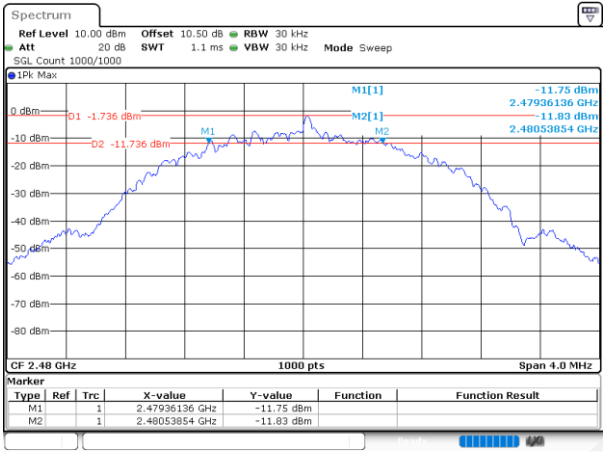
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:26:03

BLE 2M_Middle Channel



ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:27:54

BLE 2M_High Channel



ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:29:45

Occupied Bandwidth

Test Information:

Sample No.:	32J4-1	Test Date:	2025/05/21
Test Site:	RF	Test Mode:	Transmitting
Tester:	Cayde Hou	Test Result:	Pass

Environmental Conditions:

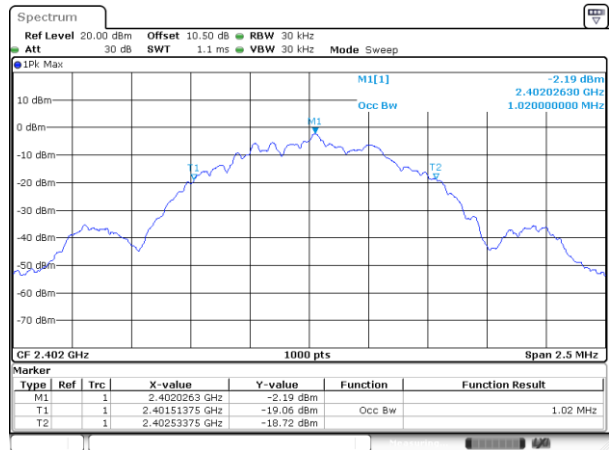
Temperature: (°C)	25.9	Relative Humidity: (%)	52	ATM Pressure: (kPa)	100.2
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Test Condition: NV

Mode	Occupied bandwidth (MHz)			Limit(MHz)	Verdict
	Low Channel	Middle Channel	High Channel		
BLE 1M	1.02	1.02	1.02	≤ 26	Pass
BLE 2M	2.015	2.01	2.01		Pass

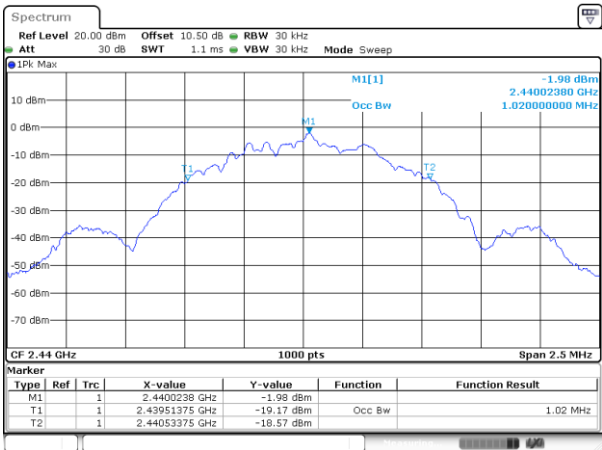
Test Condition: NV

BLE 1M_Low Channel



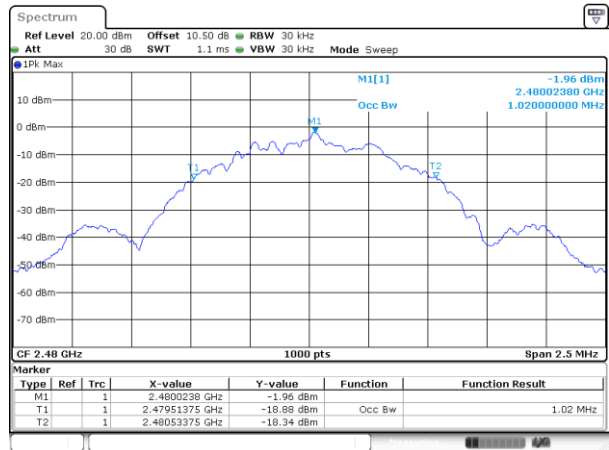
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:20:16

BLE 1M_Middle Channel



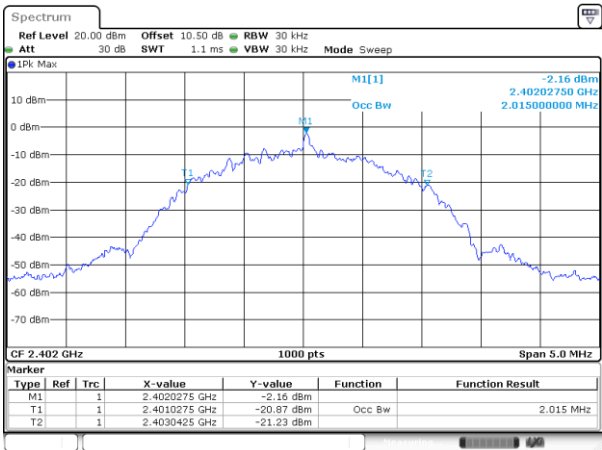
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:22:07

BLE 1M_High Channel



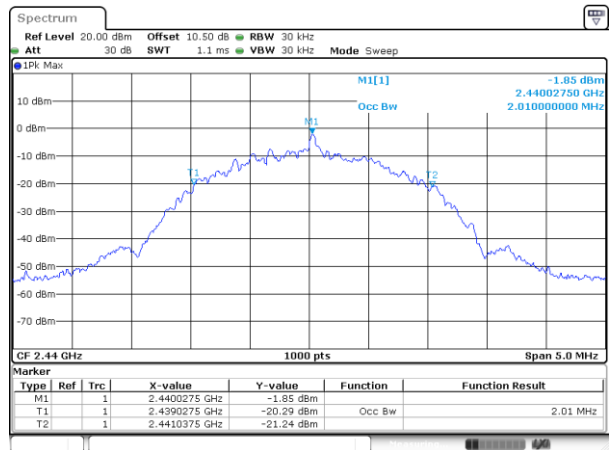
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:23:57

BLE 2M_Low Channel



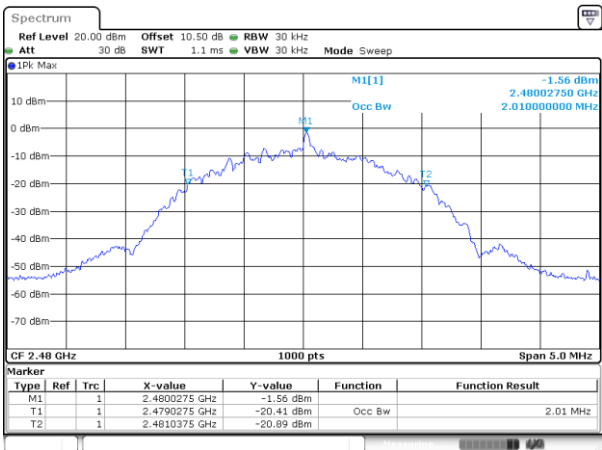
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:26:13

BLE 2M_Middle Channel



ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:28:05

BLE 2M_High Channel



ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:29:56

Transmitter Spurious Emission and Unwanted Emission Intensity

Test Information:

Sample No.:	32J4-1	Test Date:	2025/05/21
Test Site:	RF	Test Mode:	Transmitting
Tester:	Cayde Hou	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.9	Relative Humidity: (%)	52	ATM Pressure: (kPa)	100.2
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Test Condition: NV, BLE 1M

Channel	Test Band (RBW)	Frequency Range		Max.Emission Located(MHz)	Result (dBm/RBW)	Result (μW/RBW)	Limit (μW/RBW)	Verdict
		Start (MHz)	Stop (MHz)					
Low	Band I (100kHz)	30	1000	516.21	-47.97	0.016	0.25	Pass
	Band II (1MHz)	1000	2387	1379	-38.60	0.138	2.50	Pass
	Band III (1MHz)	2387	2400	2399.9903	-33.98	0.400	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2494.8133	-38.30	0.148	25	Pass
	Band V (1MHz)	2496.5	12500	5870.2	-33.29	0.469	2.50	Pass
Middle	Band I (100kHz)	30	1000	723.79	-47.72	0.017	0.25	Pass
	Band II (1MHz)	1000	2387	2377.64	-38.48	0.142	2.50	Pass
	Band III (1MHz)	2387	2400	2398.1378	-38.41	0.144	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2486.2333	-38.08	0.156	25	Pass
	Band V (1MHz)	2496.5	12500	6995.6	-33.54	0.443	2.50	Pass
High	Band I (100kHz)	30	1000	978.9	-47.40	0.018	0.25	Pass
	Band II (1MHz)	1000	2387	2037.82	-38.85	0.130	2.50	Pass
	Band III (1MHz)	2387	2400	2390.3443	-37.98	0.159	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2485.0763	-37.77	0.167	25	Pass
	Band V (1MHz)	2496.5	12500	6900.5	-33.92	0.406	2.50	Pass

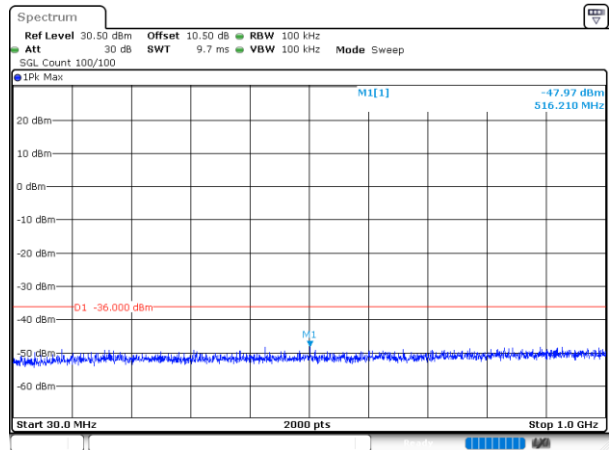
Test Condition: NV, BLE 2M

Channel	Test Band (RBW)	Frequency Range		Max.Emission Located(MHz)	Result (dBm/RBW)	Result (μW/RBW)	Limit (μW/RBW)	Verdict
		Start (MHz)	Stop (MHz)					
Low	Band I (100kHz)	30	1000	866.38	-46.70	0.021	0.25	Pass
	Band II (1MHz)	1000	2387	2111.33	-37.81	0.166	2.50	Pass
	Band III (1MHz)	2387	2400	2399.9968	-24.12	3.873	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2495.7038	-38.17	0.152	25	Pass
	Band V (1MHz)	2496.5	12500	6225.3	-33.36	0.461	2.50	Pass
Middle	Band I (100kHz)	30	1000	982.78	-47.96	0.016	0.25	Pass
	Band II (1MHz)	1000	2387	2310.37	-38.63	0.137	2.50	Pass
	Band III (1MHz)	2387	2400	2388.5958	-38.64	0.137	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2485.9928	-37.96	0.160	25	Pass
	Band V (1MHz)	2496.5	12500	5895.2	-32.73	0.533	2.50	Pass
High	Band I (100kHz)	30	1000	883.84	-47.19	0.019	0.25	Pass
	Band II (1MHz)	1000	2387	1103.68	-39.05	0.124	2.50	Pass

Channel	Test Band (RBW)	Frequency Range		Max.Emission Located(MHz)	Result (dBm/RBW)	Result (μW/RBW)	Limit (μW/RBW)	Verdict
		Start (MHz)	Stop (MHz)					
High	Band III (1MHz)	2387	2400	2393.9583	-38.39	0.145	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2490.4518	-37.79	0.166	25	Pass
	Band V (1MHz)	2496.5	12500	6935.6	-33.84	0.413	2.50	Pass

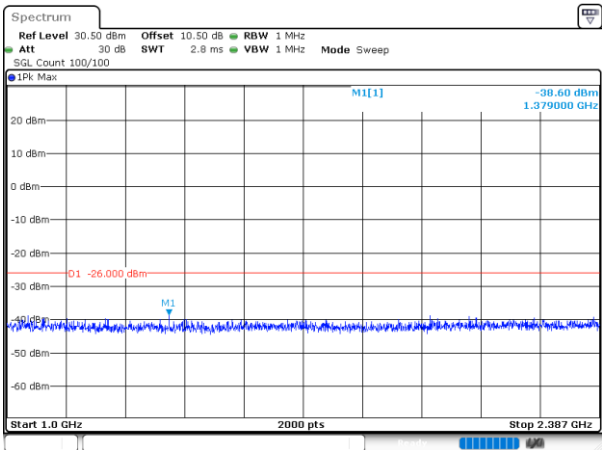
Test Condition: NV

BLE 1M_Low Channel(30MHz~1GHz)



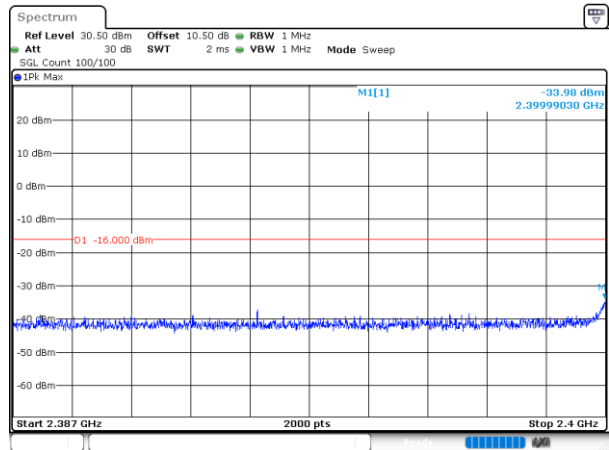
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:20:23

BLE 1M_Low Channel(1GHz~2.387GHz)



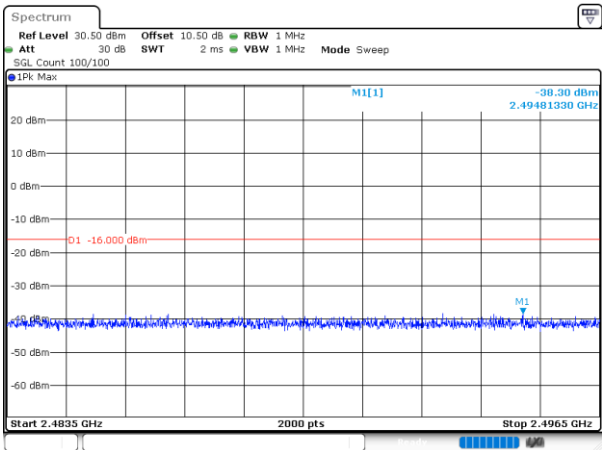
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:20:29

BLE 1M_Low Channel(2.387GHz~2.4GHz)



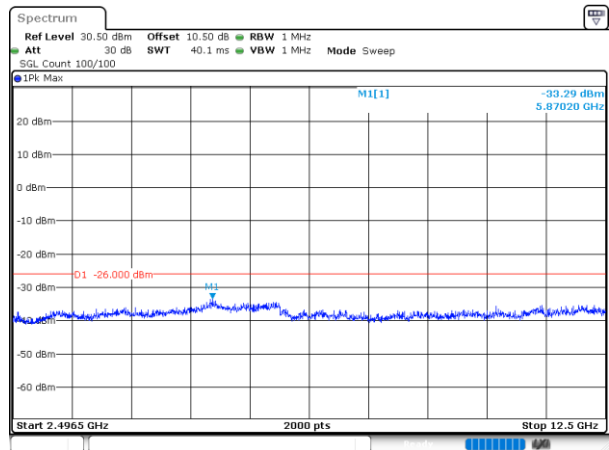
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:20:34

BLE 1M_Low Channel(2.4835GHz~2.4965GHz)



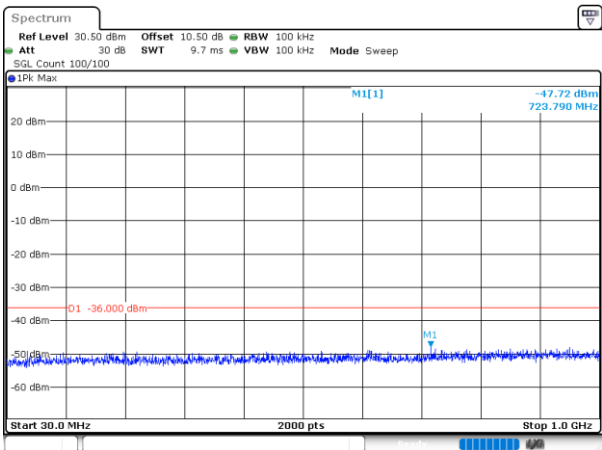
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Date: 21.MAY.2025 13:20:37

BLE 1M_Low Channel(2.4965GHz~12.5GHz)



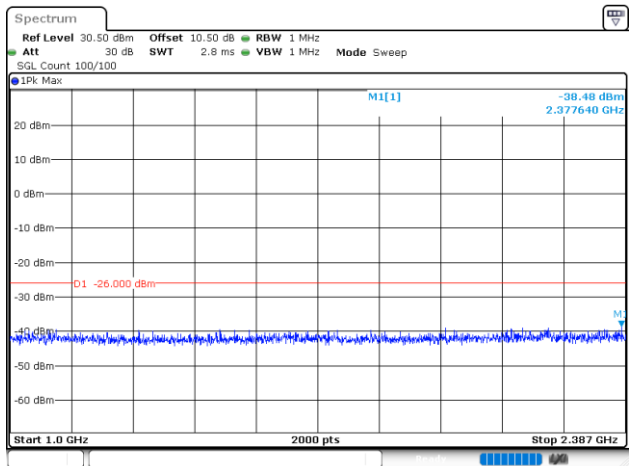
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Date: 21.MAY.2025 13:20:56

BLE 1M_Middle Channel(30MHz~1GHz)



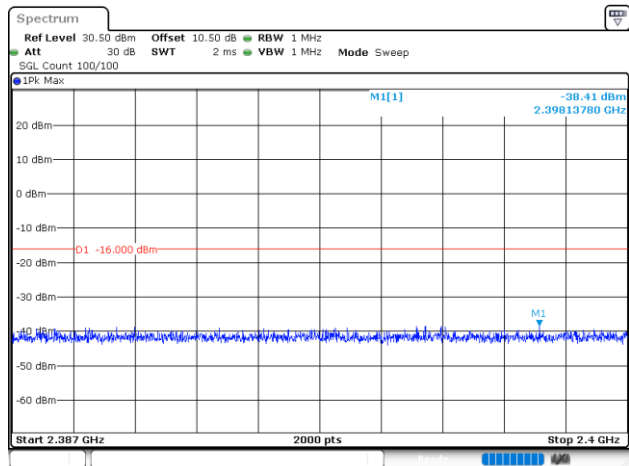
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:22:16

BLE 1M_Middle Channel(1GHz~2.387GHz)



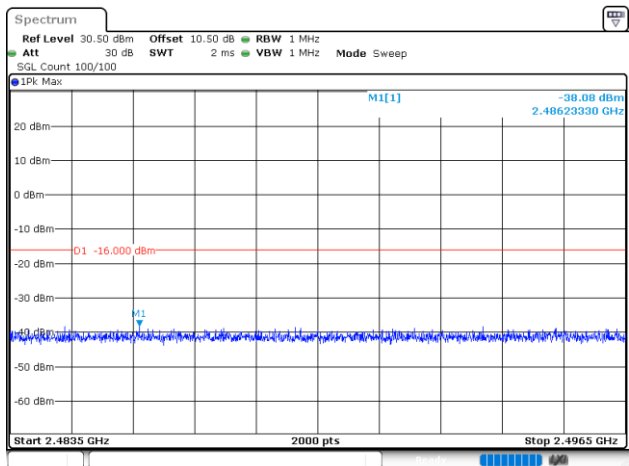
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:22:21

BLE 1M_Middle Channel(2.387GHz~2.4GHz)



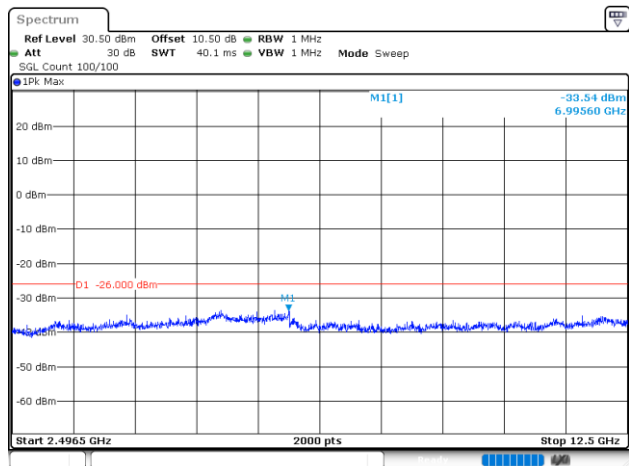
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Date: 21.MAY.2025 13:22:25

BLE 1M_Middle Channel(2.4835GHz~2.4965GHz)



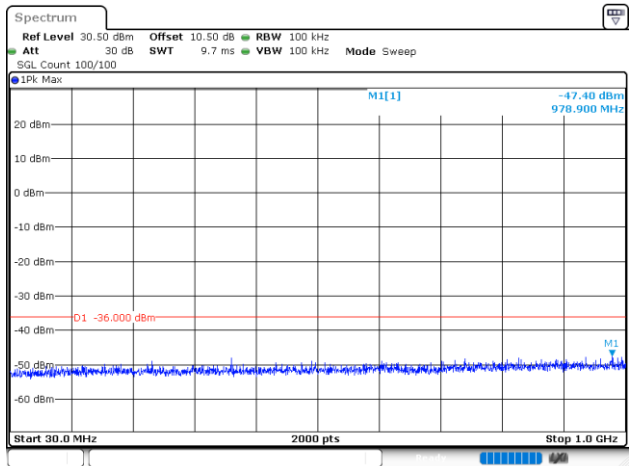
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Date: 21.MAY.2025 13:22:28

BLE 1M_Middle Channel(2.4965GHz~12.5GHz)



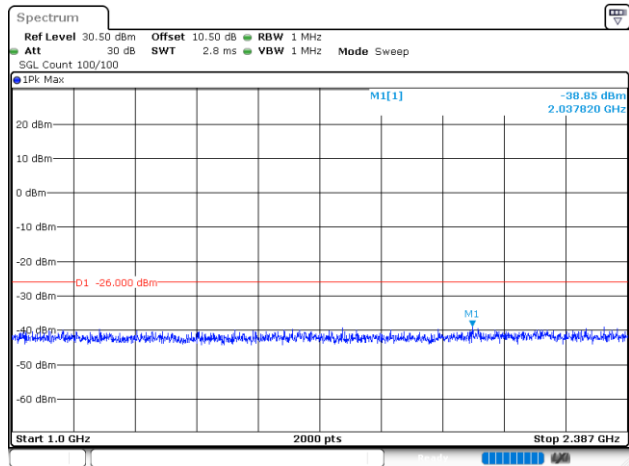
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:22:48

BLE 1M_High Channel(30MHz~1GHz)



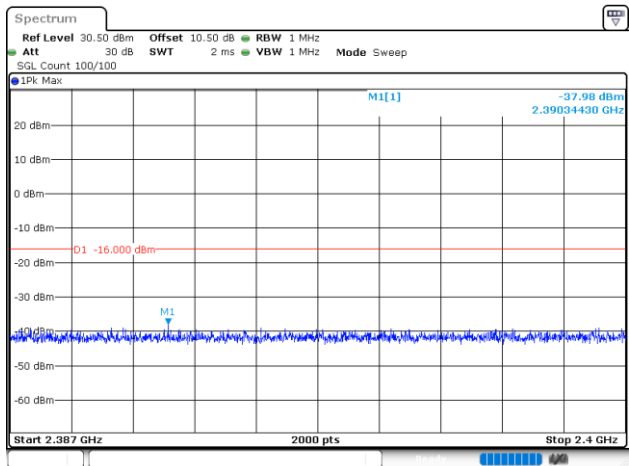
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:24:04

BLE 1M_High Channel(1GHz~2.387GHz)



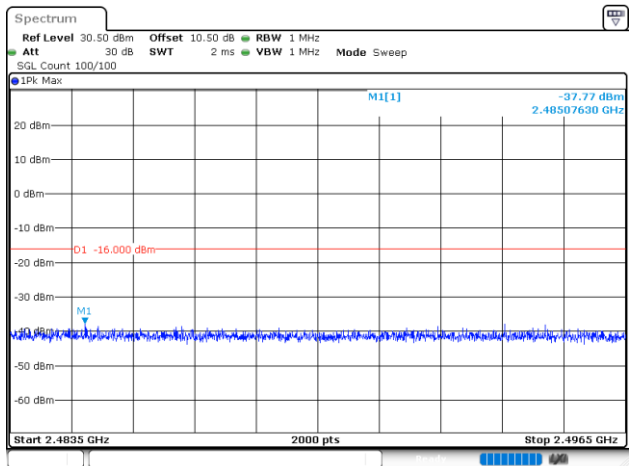
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Date: 21.MAY.2025 13:24:10

BLE 1M_High Channel(2.387GHz~2.4GHz)



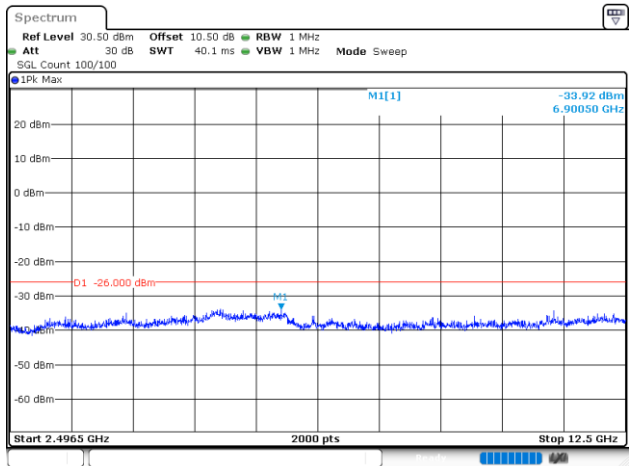
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Date: 21.MAY.2025 13:24:14

BLE 1M_High Channel(2.4835GHz~2.4965GHz)



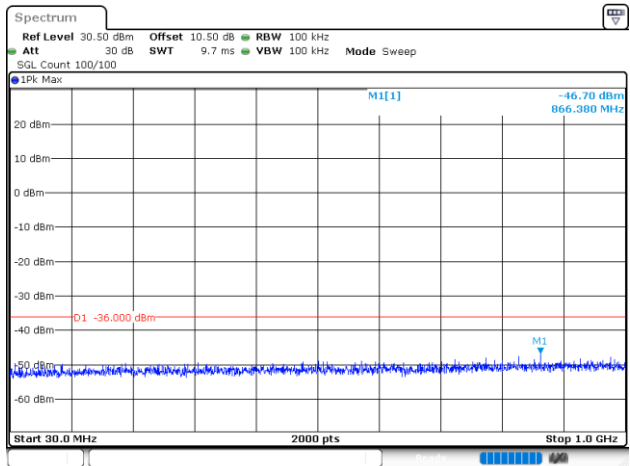
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:24:18

BLE 1M_High Channel(2.4965GHz~12.5GHz)



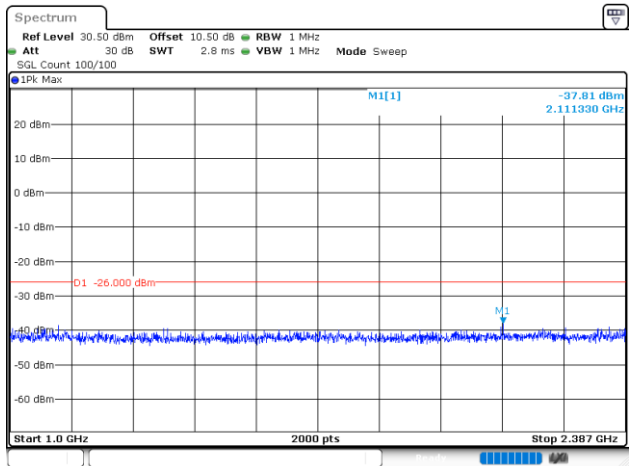
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:24:37

BLE 2M_Low Channel(30MHz~1GHz)



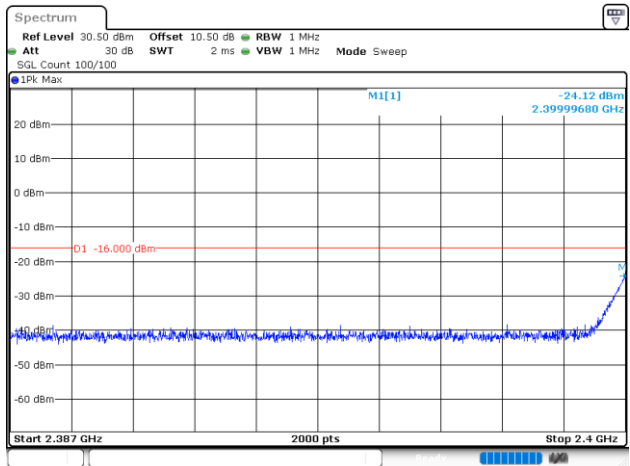
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:26:21

BLE 2M_Low Channel(1GHz~2.387GHz)



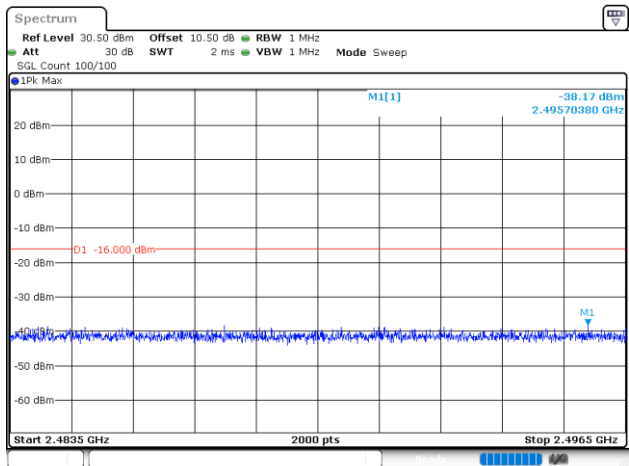
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Date: 21.MAY.2025 13:26:27

BLE 2M_Low Channel(2.387GHz~2.4GHz)



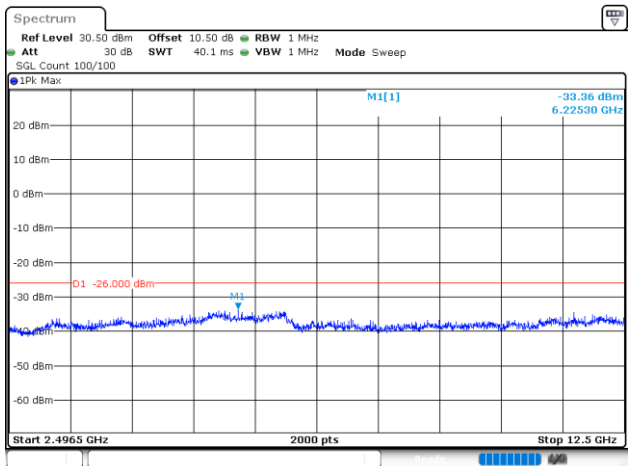
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Date: 21.MAY.2025 13:26:30

BLE 2M_Low Channel(2.4835GHz~2.4965GHz)



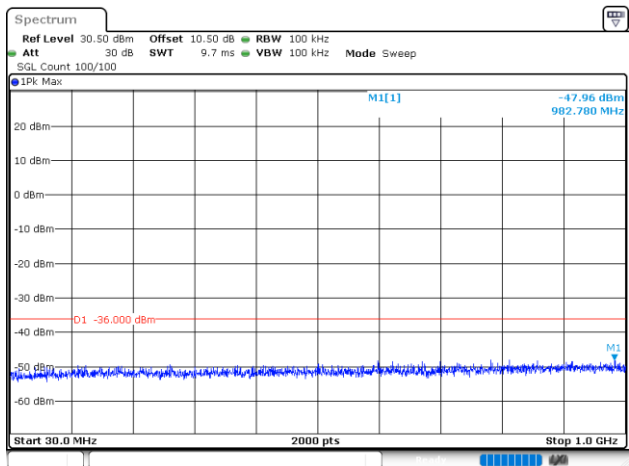
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:26:34

BLE 2M_Low Channel(2.4965GHz~12.5GHz)



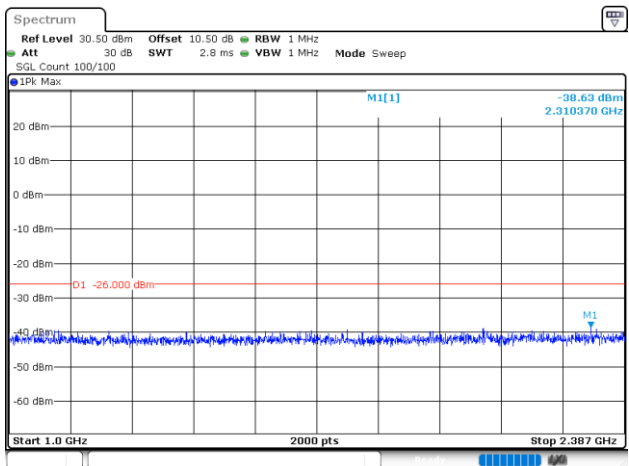
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:26:53

BLE 2M_Middle Channel(30MHz~1GHz)



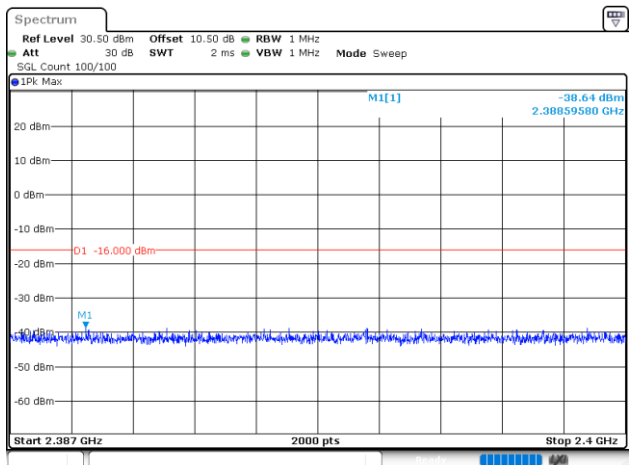
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Date: 21.MAY.2025 13:28:13

BLE 2M_Middle Channel(1GHz~2.387GHz)



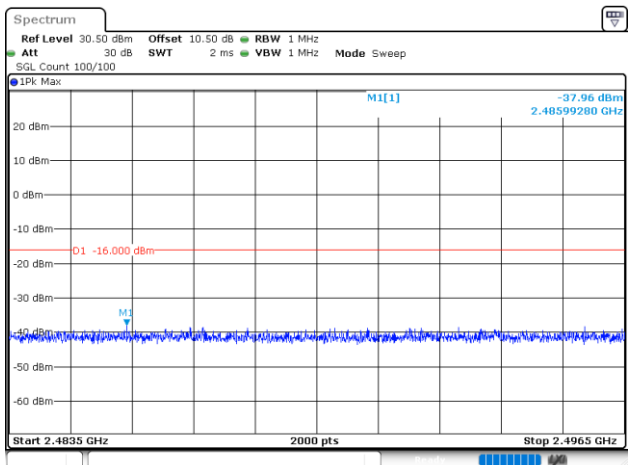
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Date: 21.MAY.2025 13:28:19

BLE 2M_Middle Channel(2.387GHz~2.4GHz)



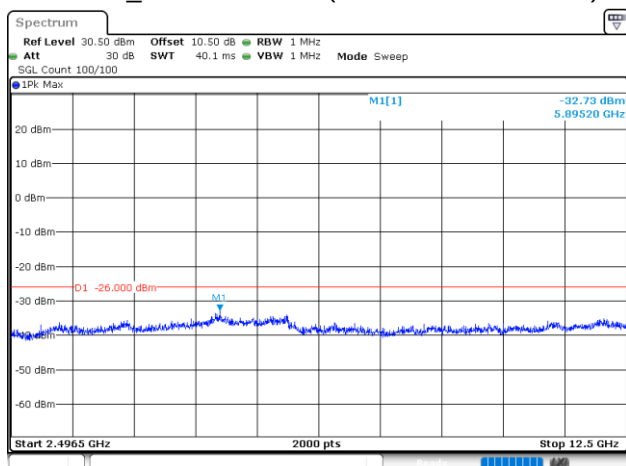
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Date: 21.MAY.2025 13:28:23

BLE 2M_Middle Channel(2.4835GHz~2.4965GHz)



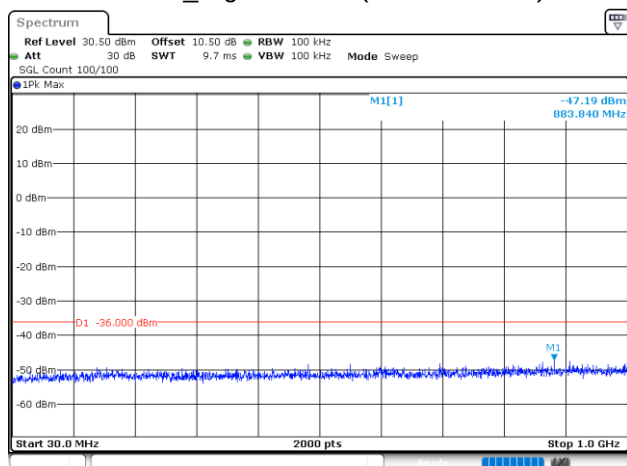
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Date: 21.MAY.2025 13:28:26

BLE 2M_Middle Channel(2.4965GHz~12.5GHz)



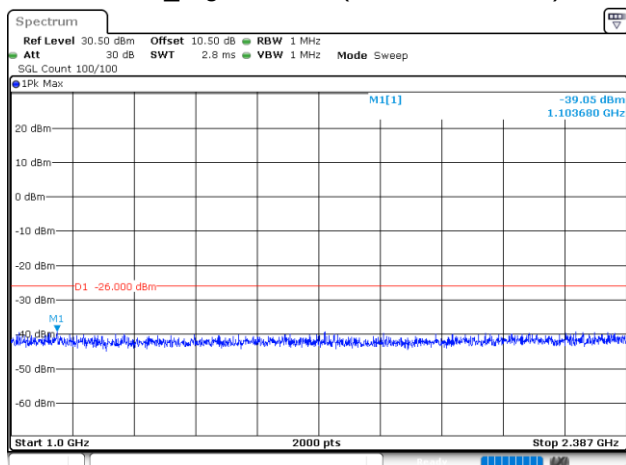
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:28:46

BLE 2M_High Channel(30MHz~1GHz)



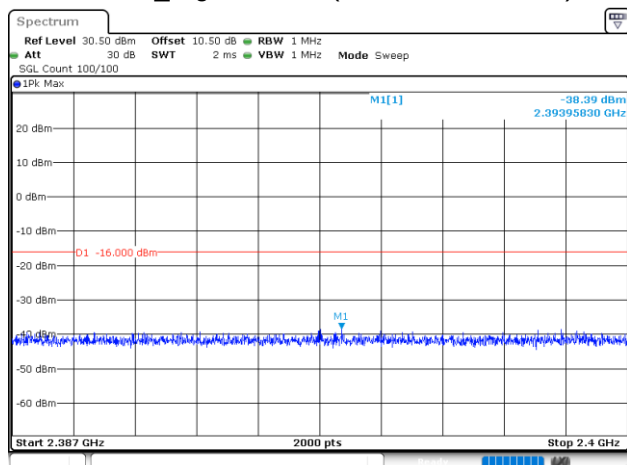
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:30:04

BLE 2M_High Channel(1GHz~2.387GHz)



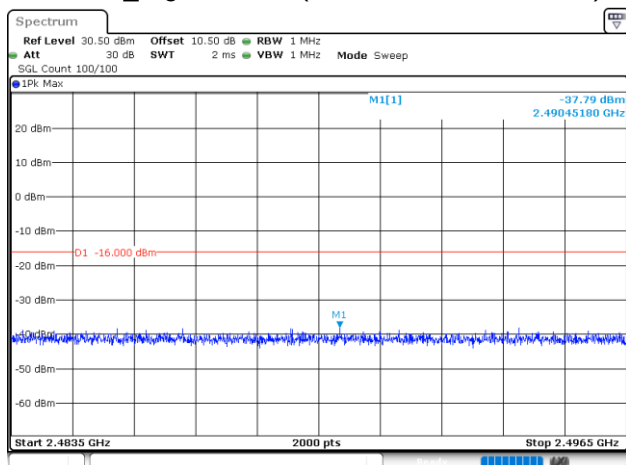
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:30:10

BLE 2M_High Channel(2.387GHz~2.4GHz)



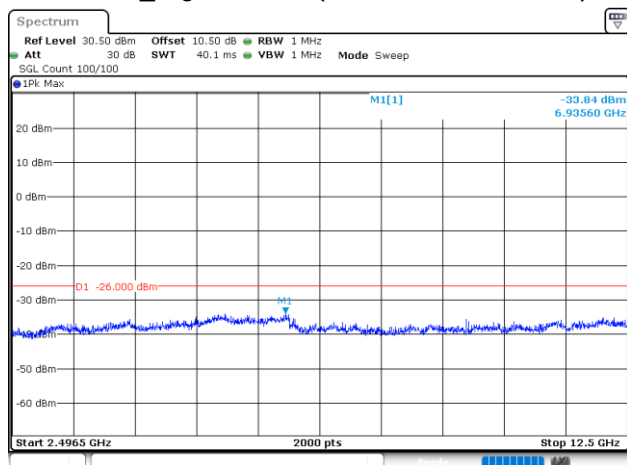
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:30:14

BLE 2M_High Channel(2.4835GHz~2.4965GHz)



ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:30:18

BLE 2M_High Channel(2.4965GHz~12.5GHz)



ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:30:37

Antenna Output Power and Output Power Tolerance

Test Information:

Sample No.:	32J4-1	Test Date:	2025/05/22
Test Site:	RF	Test Mode:	Transmitting
Tester:	Cayde Hou	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.6	Relative Humidity: (%)	53	ATM Pressure: (kPa)	100.2
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Test Condition: NV

Mode	Antenna gain (dBi)	Declared power (mW)
BLE 1M	3.98	2
BLE 2M		2

Mode	Channel	Conducted power(dBm)	Antenna output power(mW)		Antenna output tolerance(%)		EIRP (dBm)		Verdict
			Result	Limit	Result	Limit	Result	Limit	
BLE 1M	Low	0.50	1.122	≤ 10	-43.90	-80~+20	4.48	≤ 12.14	Pass
	Middle	1.17	1.309		-34.55		5.15		Pass
	High	1.50	1.413		-29.35		5.48		Pass
BLE 2M	Low	0.72	1.180	≤ 10	-41.00	-80~+20	4.70	≤ 12.14	Pass
	Middle	1.45	1.396		-30.20		5.43		Pass
	High	1.84	1.528		-23.60		5.82		Pass

Note:

Antenna output power(mW) = 10^{Conducted power(dBm) / 10}

Antenna output power tolerance(%) = (Antenna output power - Declared power) / Declared power * 100%

EIRP(dBm) = Conducted power(dBm) + Antenna gain.

Receiver Spurious Emission and Unwanted Emission Intensity

Test Information:

Sample No.:	32J4-1	Test Date:	2025/05/21
Test Site:	RF	Test Mode:	Transmitting
Tester:	Cayde Hou	Test Result:	Pass

Environmental Conditions:

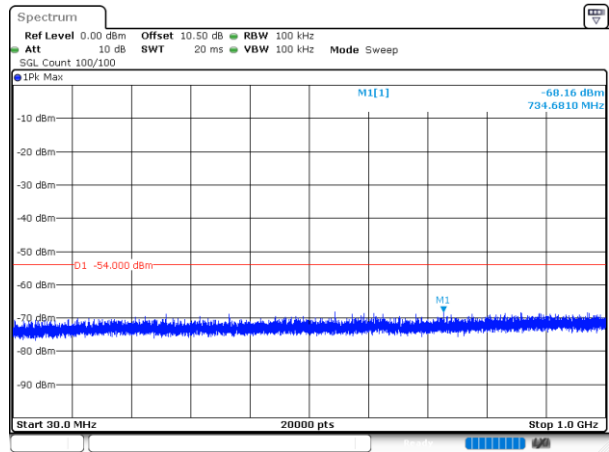
Temperature: (°C)	25.9	Relative Humidity: (%)	52	ATM Pressure: (kPa)	100.2
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Test Condition: NV

Mode	Channel	Test Band (RBW)	Frequency Range		Max.Emission Located(MHz)	Result (dBm)	Result (nW)	Limit (nW)	Verdict
			Start (MHz)	Stop (MHz)					
BLE 1M	Low	Band I (100kHz)	30	1000	734.681	-68.16	0.153	4	Pass
		Band II (1MHz)	1000	12500	5916.54	-54.03	3.954	20	Pass
	Middle	Band I (100kHz)	30	1000	898.514	-67.89	0.163	4	Pass
		Band II (1MHz)	1000	12500	1767.34	-50.79	8.337	20	Pass
	High	Band I (100kHz)	30	1000	963.455	-68.56	0.139	4	Pass
		Band II (1MHz)	1000	12500	6733.61	-53.13	4.864	20	Pass
BLE 2M	Low	Band I (100kHz)	30	1000	898.223	-68.21	0.151	4	Pass
		Band II (1MHz)	1000	12500	1770.21	-50.76	8.395	20	Pass
	Middle	Band I (100kHz)	30	1000	887.553	-67.50	0.178	4	Pass
		Band II (1MHz)	1000	12500	6966.49	-53.89	4.083	20	Pass
	High	Band I (100kHz)	30	1000	985.038	-67.52	0.177	4	Pass
		Band II (1MHz)	1000	12500	6899.21	-53.72	4.246	20	Pass

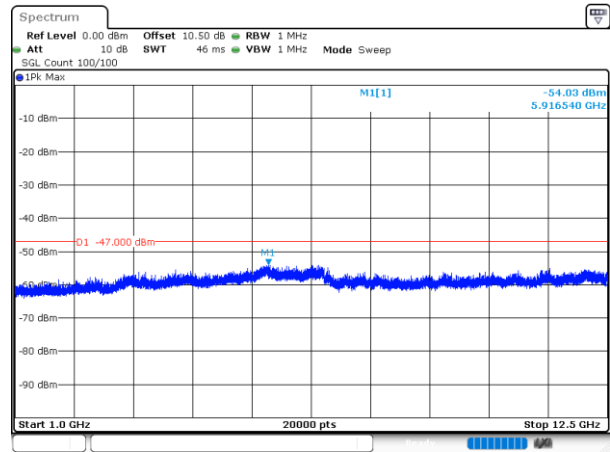
Test Condition: NV

BLE 1M_Low Channel(30MHz~1GHz)



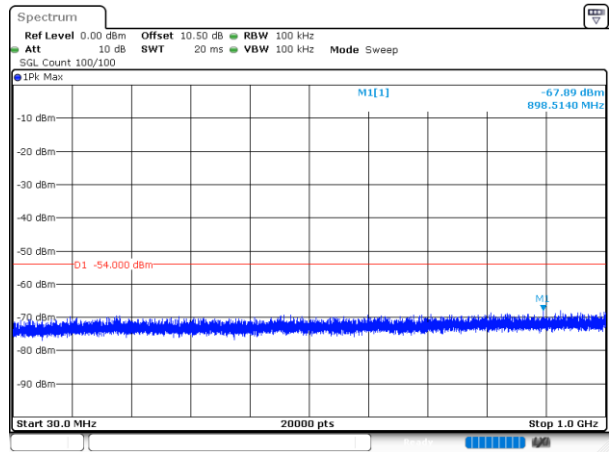
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:31:24

BLE 1M_Low Channel(1GHz~12.5GHz)



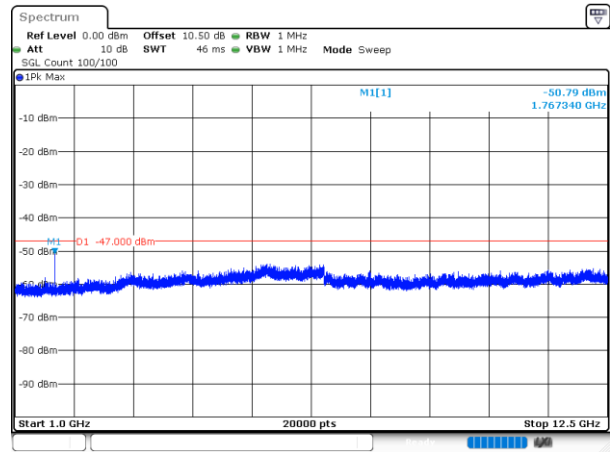
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:31:45

BLE 1M_Middle Channel(30MHz~1GHz)



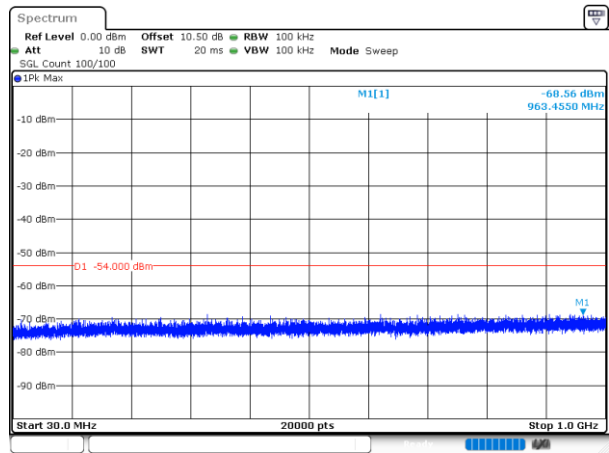
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:31:56

BLE 1M_Middle Channel(1GHz~12.5GHz)



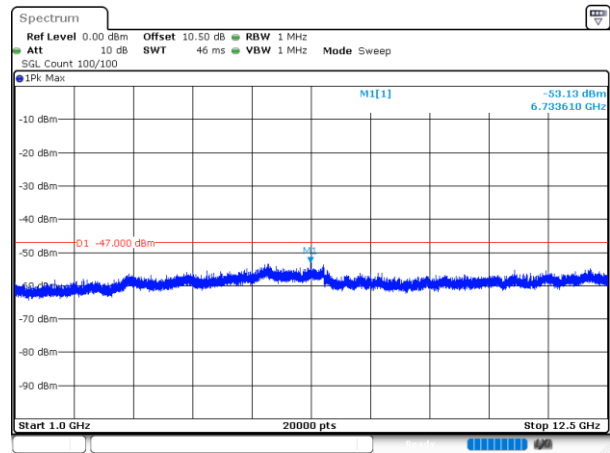
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:32:17

BLE 1M_High Channel(30MHz~1GHz)



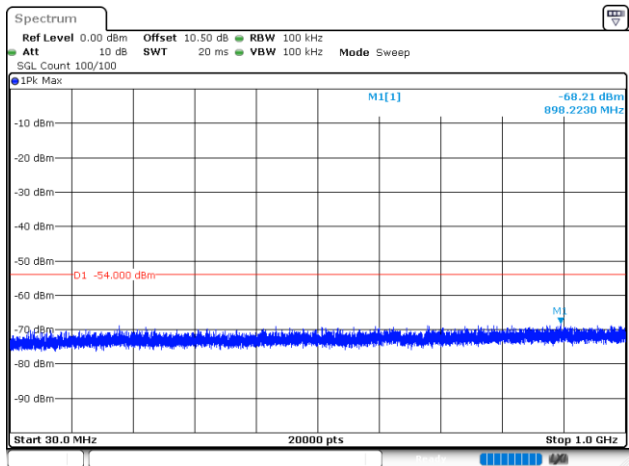
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:32:28

BLE 1M_High Channel(1GHz~12.5GHz)



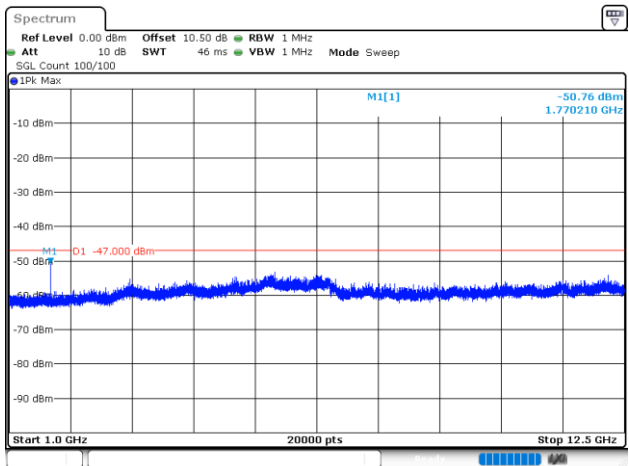
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Date: 21.MAY.2025 13:32:50

BLE 2M_Low Channel(30MHz~1GHz)



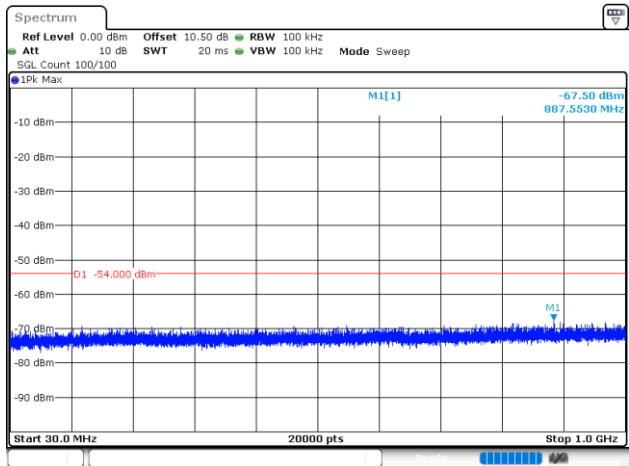
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BLE 2M_Low Channel(1GHz~12.5GHz)



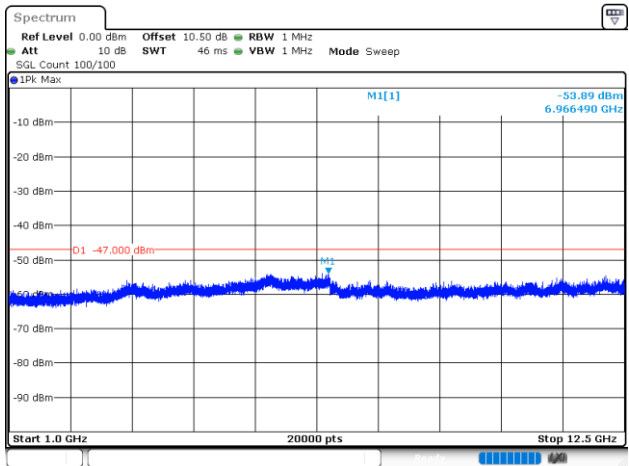
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Date: 21.MAY.2025 13:33:29

BLE 2M_Middle Channel(30MHz~1GHz)



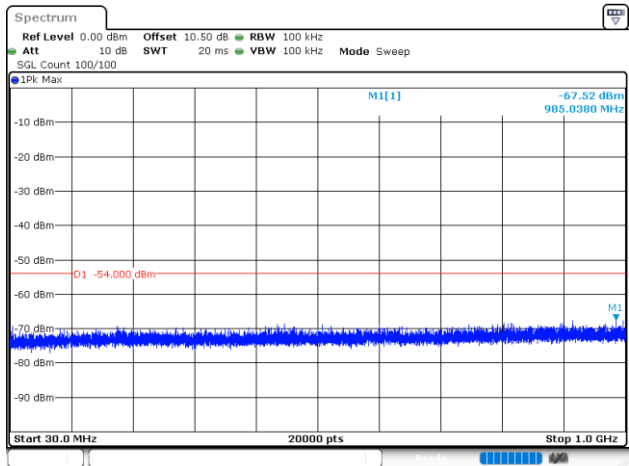
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:33:41

BLE 2M_Middle Channel(1GHz~12.5GHz)



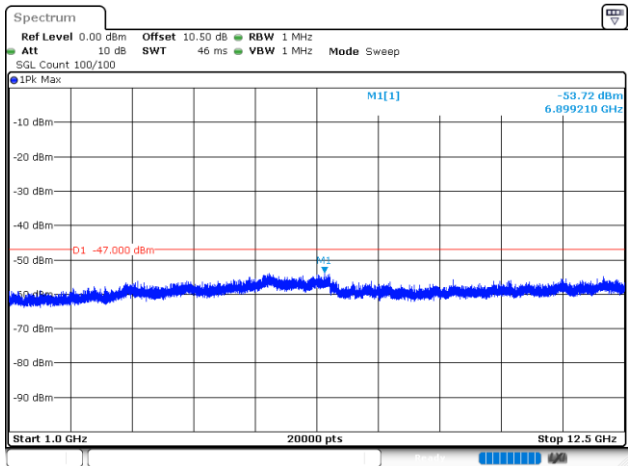
ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:34:02

BLE 2M_High Channel(30MHz~1GHz)



ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:34:13

BLE 2M_High Channel(1GHz~12.5GHz)



ProjectNo.:2504T20282E-RF Tester:Cayde Hou
Date: 21.MAY.2025 13:34:34

Interference Prevention Function

Test Information:

Sample No.:	32J4-1	Test Date:	2025/05/28
Test Site:	RF	Test Mode:	Communicating
Tester:	Cayde Hou	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.2	Relative Humidity: (%)	53	ATM Pressure: (kPa)	100.2
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Test Data

Test Result: Good.

EXHIBIT A - EUT PHOTOGRAPHS

Please refer to the Attachment: 2504T20282E-RF EUT EXTERNAL PHOTOGRAPHS and 2504T20282E-RF EUT INTERNAL PHOTOGRAPHS.

EXHIBIT B - TEST SETUP PHOTOGRAPHS

Please refer to the Attachment: 2504T20282E-RF-07A TEST SETUP PHOTOGRAPHS.

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